Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC 01 00:02:34.7±2.8, 32°.09S×178°.33W, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=69.7km s-min=44.0km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.19	210	Pn	Pn	00 04 19.5	-1.6
	0.9nm,0.3s,baz=345,slow=10,SNR=7.2						
URZ				Sn	Sn	00 05 38.3	-5.3
	1.3nm,0.3s,baz=248,slow=21,SNR=6.3						
	3.4nm,0.5s						
ASAR	Alice Springs	42.76	269	P	P	00 10 34.8	+0.7
	0.5nm,0.7s,baz=110,slow=8.0,SNR=3.1						
	0.5nm,0.7s						
WRA	Warramunga Arr	43.90	274	P	P	00 10 43.0	-0.3
	0.6nm,0.4s,baz=112,slow=8.0,SNR=18						
	0.6nm,0.4s						
FINES	FINESS Array B	146.62	339	PKPbc	PKPdf	00 22 16.7	+0.8
	0.7nm,0.5s,baz=49,slow=4.5,SNR=16						

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*IGQ **01** 00:14:22±1.7, 1°N±7°×8°0W±1°0, h8^{km}*

*IDC **01** 00:14:24.8±1.5, 1°.04N×80°.42W, h0^{km}, mb3.5/4, mbtmp3.6/5, ML2.3/1, MS3.0/3, Error ellipse: s-maj=39.0km s-min=27.0km az=41.0*

ISC 01 00:14:23.7±1.0, 0°.72N±0°.05×80°.40W±0°.07, h10^{km}, n59, σ1^{s}67/53, mb3.7/3, MS3.0/3, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMA1	Acelerografo,	0.71	72	P	Pg	00 14 36.0	-1.4
AV21	Acelerografo,	0.85	94	P	Pg	00 14 40.0	-0.2
JAMA	Jama	0.99	169	P	Pg	00 14 41.0	-1.8
AV18	Acelerografo,	1.01	114	P	Pg	00 14 41.0	-2.1
FLF1	Flavio Alfaro-	1.21	152	P	Pb	00 14 45.0	-1.6
BV15	Puerto Quito-O	1.30	115	P	Pn	00 14 46.0	-1.9
PAC1	Pacto, Paraso	1.67	106	P	Pn	00 14 51.0	-2.1
APR1	Acelerografo,	1.94	113	P	Pn	00 14 56.0	-1.1
GGPC	Guagua Pichinc	2.01	116	P	Pn	00 14 56.0	-2.2
GGPT	Toaza - Volcan	2.01	118	P	Pn	00 14 56.0	-2.1
CUSE	Cuicocha Este	2.04	102	P	Pn	00 14 57.0	-1.5
CUIC	Cuicocha-Domo	2.08	101	P	Pn	00 14 57.0	-2.0
CUSW	Cuicocha Oeste	2.09	102	P	Pn	00 14 58.0	-1.2
URCU	Urcuqui	2.16	97	P	Pn	00 14 58.0	-2.2
ILLI	Illinizas Sur	2.20	130	P	Pn	00 14 59.0	-1.7
PPLP	Puerto Lpez	2.28	189	P	Pn	00 15 02.0	+0.6
CHMA	Chilma	2.34	86	P	Pn	00 14 59.0	-3.5
YAHU	Yahuarcocha	2.35	98	P	Pn	00 15 02.0	-0.8
BNAS	Cotopaxi Volca	2.37	126	P	Pn	00 15 03.0	0.0
BREF	Cotopaxi Volca	2.40	125	P	Pn	00 15 04.0	+0.4
BVC2	Cotopaxi Volca	2.41	125	P	Pn	00 15 04.0	+0.3
BMOR	Cotopaxi Volca	2.42	127	P	Pn	00 15 04.0	+0.2
ECEN	Cerro Negro	2.43	88	P	Pn	00 15 02.0	-2.0
BTAM	Cotopaxi Volca	2.44	125	P	Pn	00 15 04.0	0.0
CHL1	Volc¡n Chiles	2.46	88	P	Pn	00 15 02.0	-2.3
ANTG	Antisana-Guama	2.46	119	P	Pn	00 15 04.0	-0.4
CHL2	Volc¡n Chiles	2.48	88	P	Pn	00 15 02.0	-2.7
ANTM	Antisana-La Mi	2.51	120	P	Pn	00 15 04.0	-1.0
VCES	Cotopaxi	2.51	127	P	Pn	00 15 05.0	0.0
ANTS	Antisana-Sarah	2.54	118	P	Pn	00 15 05.0	-0.5
CMBC	Cumbal	2.58	85	*e*P	Pg	00 15 13.7	+0.4
CHSH	Refugio Sur-Vo	2.68	145	P	Pn	00 15 06.0	-1.4
PORT	Chimborazo Vol	2.71	143	P	Pn	00 15 07.0	-0.8
TAMH	Tambohuasha Ch	2.77	144	P	Pn	00 15 08.0	-0.6
JUI6	Juive	2.88	138	P	Pn	00 15 10.0	+0.1
BONI	La Bonita	2.88	95	P	Pn	00 15 10.0	+0.1
POND	Pondoa	2.88	137	P	Pn	00 15 10.0	0.0
GCUF	Volcan Galeras	3.10	81	*e*P	Pn	00 15 11.9	-1.2
GR1C	Gorgona, Isla	3.18	45	*e*P	Pn	00 15 09.6	-4.2
CRUC	La Cruz	3.55	76	*e*P	Pn	00 15 19.5	+0.3
SOTA	Rioblanco	4.04	70	*e*P	Pn	00 15 25.3	-0.8
PCON	Cinco Dias	4.31	68	*e*P	Pn	00 15 29.2	-0.6
GARC	Garzon, Huila	5.12	73	*e*P	Pn	00 15 40.5	-0.2
YOTC	Yotoco, Valle	5.19	51	*e*P	Pn	00 15 35.7	-5.9
PLMC	San Jos del P	5.85	45	*e*P	Pn	00 15 56.2	+5.7
ORTC	Ortega, Tolima	6.05	58	*e*P	Pn	00 15 54.9	+1.6
MACC	Macarena, Meta	6.70	78	*e*P	Pn	00 16 03.2	+1.0
CBOC	Ciudad Bolivar	6.73	41	*e*P	Pn	00 16 01.8	-1.0
GUY2C	Guyana, Caldas	6.73	48	*e*P	Pn	00 15 58.6	-4.5
ROSC	El Rosal	7.32	56	Pn	Pn	00 16 11.4	+0.3
	1.1nm,0.3s,baz=221,slow=19,SNR=1.5						
ROSC				Sn	Sn	00 17 35.5	+0.9
	1.0nm,0.3s,baz=84,slow=20,SNR=1.6						
	4.1nm,0.4s						
NORC	Norcasia	7.32	49	*e*P	Pn	00 16 16.9	+6.0
PTBC	PUERTO BERRIO,	8.28	46	*e*P	Pn	00 16 24.1	+0.1
LPAZ	La Paz	20.79	145	P	Pn	00 19 11.0	+2.8
	2.0nm,0.7s,baz=334,slow=14,SNR=10.0						
	2.0nm,0.7s						
CMIG	Matias Romero	21.63	320	LR	LR	00 26 05.9	
	comp=Z,56nm,18.4s,baz=200,slow=33						
SJG	San Juan	22.24	38	LR	LR	00 29 19.9	
	comp=Z,28nm,20.1s,baz=104,slow=41						
TKL	Tuckaleechee C	34.90	355	LR	LR	00 34 44.7	
	comp=Z,26nm,20.0s,baz=144,slow=35						
NVAR	Mina Array Bea	51.14	322	P	P	00 23 28.9	+1.7
	0.9nm,0.7s,baz=126,slow=7.5,SNR=5.9						
	0.9nm,0.7s						
YKA	Yellowknife Ar	66.73	343	P	P	00 25 14.3	-0.5
	0.2nm,0.9s,baz=134,slow=5.5,SNR=4.4						
	0.2nm,0.9s						
TORD	Torodi Ar. Bea	82.14	77	P	P	00 26 48.7	+3.2
	0.7nm,1.1s,baz=284,slow=4.6,SNR=3.9						
	0.7nm,1.1s						

NOU 01 00:20:16.6, 16°.21S×167°.33E, h9^{km}, MLv4.5/16, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.77	351	P	Pb	00 20 31.8	-0.3
DVP	Devils Point	1.72	152	P	Pn	00 20 46.5	-0.2
RTV	Rentapao	1.89	147	P	Pn	00 20 49.3	+0.2
LIFNC	LIFOU	4.54	181	P	Pn	00 21 26.4	+0.8
KOUNC	Koumac, New Ca	5.20	213	P	Pn	00 21 34.1	-0.4
MARNC	Mare, Loyalty	5.29	173	P	Pn	00 21 35.6	-0.2
DZM	Mont Dzumac	5.89	188	P	Pn	00 21 43.7	-0.5
NOUC	Port Laguerre	5.94	189	P	Pn	00 21 43.5	-1.3
ONTNC	Ouen Toro	6.12	188	P	Pn	00 21 47.1	-0.2
OUENC	Ouen Island, N	6.19	184	P	Pn	00 21 49.0	+0.7

NOU 01 00:32:03.7, 16°.29S×167°.43E, h16^{km}, MLv4.3/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.87	345	P	Pb	00 32 20.4	0.0
DVP	Devils Point	1.60	153	P	Pn	00 32 31.7	+0.3
RTV	Rentapao	1.77	148	P	Pn	00 32 33.2	-0.5
KOUNC	Koumac, New Ca	5.18	215	P	Pn	00 33 21.0	+0.4
YATNC	Mamie plateau,	5.76	185	P	Pn	00 33 27.5	-1.1
DZM	Mont Dzumac	5.83	189	P	Pn	00 33 29.4	-0.2
NOUC	Port Laguerre	5.88	190	P	Pn	00 33 30.3	+0.1

IDC 01 00:38:33.1±3.1, 31°.67S×178°.90W, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=68.3km s-min=46.4km az=112.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.34	205	Pn	Pn	00 40 21.3	-0.2
	0.8nm,0.3s,baz=169,slow=14,SNR=5.9						
URZ				Sn	Sn	00 41 38.4	-7.2
	28nm,0.3s,baz=352,slow=23,SNR=7.0						
	6.8nm,0.7s						
ASAR	Alice Springs	42.29	269	P	P	00 46 28.2	-0.4
	0.5nm,0.6s,baz=112,slow=7.5,SNR=6.5						
	0.5nm,0.6s						
WRA	Warramunga Arr	43.39	274	P	P	00 46 37.7	+0.1
	0.6nm,0.5s,baz=114,slow=7.5,SNR=14						
	0.6nm,0.5s						
FINES	FINESS Array B	146.06	339	PKPbc	PKPdf	00 58 13.4	+0.1
	1.2nm,0.9s,baz=29,slow=3.2,SNR=5.1						

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*IDC **01** 00:40:12.7±0.9, 40°.23S×176°.30E, h0^{km}, mb4.3/2, mbtmp4.1/4, ML3.6/2, MS3.3/5, Error ellipse: s-maj=32.8km s-min=21.7km az=123.0*

*NOU **01** 00:40:15.2, 40°.53S×176°.77E, h69^{km}, MLv4.6/10, North Island, New Zealand*

*NEIC **01** 00:40:17.3±2.9, 40°.30S±0°.05×176°.4E±0°.1, h31^{km}±4^{km}, mb4.4/8, Error ellipse: s-maj=12.6km s-min=5.6km az=110.0*

*WEL **01** 00:40:18.4±0.4, 40°S±3°×17°6E±°, h29^{km}±3^{km}, M4.3/17, ML4.7/17, MLv4.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=116.6*

ISC 01 00:40:17.9±0.5, 40°.30S±0°.02×176°.32E±0°.03, h32^{km}, n217, σ1^{s}30/231, mb4.3/6, MS3.3/4, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVHZ	Dannevirke	0.11	269	P	Pb	00 40 25.1	+1.4
DVHZ				S	Sb	00 40 30.0	+2.4
ANWZ	Angora Road	0.20	143	P	Pn	00 40 26.3	+1.5
ANWZ				S	Sn	00 40 32.2	+3.2
PRHZ	Porangahau	0.25	83	P	Pn	00 40 26.3	+1.0
PRHZ				S	Sn	00 40 32.8	+2.7
WPHZ	Waipukurau	0.25	22	P	Pn	00 40 26.2	+0.8
WPHZ				S	Sn	00 40 32.2	+2.0
TSZ	Takapari Road	0.36	311	P	Pn	00 40 27.5	+0.6
TSZ				S	Sn	00 40 34.0	+1.0
PRWZ	Pori Road	0.37	226	P	Pn	00 40 28.5	+1.5
PRWZ				S	Sn	00 40 36.1	+3.0
BFZ	Birch Farm	0.39	188	Pg	Pb	00 40 28.2	+1.5
BFZ				Sg	Sn	00 40 35.2	+1.6
BFZ	Birch Farm	0.39	188	P	Pb	00 40 28.2	+1.5
BFZ				S	Sn	00 40 35.7	+2.1
BFZ	Birch Farm	0.39	188	P	Pn	00 40 28.5	+1.2
PNHZ	Pukenui	0.39	347	P	Pn	00 40 27.9	+0.5
PNHZ				S	Sn	00 40 35.0	+1.2
POWZ	Post Office Ro	0.43	257	P	Pn	00 40 28.9	+1.0
POWZ				S	Sn	00 40 36.6	+2.0
PXZ	Pawanui	0.50	58	P	Pn	00 40 29.3	+0.5
TIWZ	Tintock	0.58	214	P	Pn	00 40 31.1	+1.1
CPWZ	Castlepoint	0.62	188	P	Pn	00 40 31.9	+1.4
CPWZ				S	Sn	00 40 42.1	+2.8
KAHZ	Kahuranaki	0.66	41	P	Pn	00 40 31.9	+0.8
MRZ	Mangatainoka R	0.67	237	P	Pn	00 40 32.1	+1.0
OHWZ	Ohakea	0.77	277	P	Pb	00 40 34.6	+1.7
BHHZ	Black Hill Sta	0.83	346	P	Pb	00 40 34.1	+0.2
HOWZ	Holdsworth Sta	0.85	225	P	Pn	00 40 34.5	+0.7
CKHZ	Cape Kidnapper	0.87	43	P	Pn	00 40 34.0	+0.2
TMWZ	Te Maipa	0.87	202	P	Pn	00 40 34.5	+0.5
KWHZ	Kaweka Forest	0.88	5	P	Pn	00 40 34.8	+0.7
MCHZ	McNeill Hill	0.90	19	P	Pb	00 40 35.2	+0.1
MOVZ	Moawhango	0.99	334	P	Pb	00 40 36.9	+0.3
OGWZ	Otaki Gorge	1.01	239	P	Pn	00 40 36.8	+0.9
MTW	Mount Morrison	1.06	215	P	Pn	00 40 36.7	+0.2
WNVZ	Wahianoa	1.12	330	P	Pb	00 40 39.0	+0.2
MTVZ	Mangateitei	1.12	324	P	Pb	00 40 39.1	+0.4
BKZ	Black Stump Fm	1.14	7		Pn	00 40 38.2	+0.6
BKZ				Sn	Sn	00 40 52.6	+0.4
BKZ	Black Stump Fm	1.14	7	P	Pn	00 40 38.2	+0.6
BKZ	Black Stump Fm	1.14	7	P	Pn	00 40 38.1	+0.4
TUVZ	Tukino	1.15	333	P	Pb	00 40 39.5	+0.2
WAZ	Wanganui	1.16	298	P	Pb	00 40 40.1	+0.8
ARHZ	Aropaoanui	1.16	27	P	Pn	00 40 38.5	+0.6
WHVZ	Whangaehu Hut	1.16	331	P	Pb	00 40 39.6	+0.1
TRVZ	Turoa	1.16	329	P	Pb	00 40 39.8	+0.2
DRZ	Dome Shelter	1.17	330	P	Pb	00 40 40.1	+0.2
FWVZ	Far West T-bar	1.20	330	P	Pb	00 40 40.0	-0.1
TRWZ	Traveller	1.20	203	P	Pn	00 40 38.6	+0.1
KIW	Kapiti Island	1.21	242	P	Pn	00 40 39.5	+0.9
SNVZ	South Ngauruho	1.23	335	P	Pb	00 40 40.5	-0.1
OTVZ	Oturere	1.24	336	P	Pb	00 40 40.6	-0.2
CAW	Cannon Point	1.25	229	P	Pn	00 40 39.5	+0.4
NGZ	Ngauruhoe	1.25	334	P	Pb	00 40 40.8	-0.2
ETVZ	East Tongariro	1.25	338	P	Pb	00 40 40.7	-0.3
PKVZ	Pokaka	1.25	323	P	Pb	00 40 41.0	0.0
NMHZ	Naumai	1.26	18	P	Pn	00 40 40.1	+0.8
TMVZ	Te Maari	1.27	338	P	Pb	00 40 40.9	-0.4
PAWZ	Paruwai Farm	1.28	212	P	Pn	00 40 39.5	0.0
NNVZ	North Ngauruho	1.28	335	P	Pb	00 40 41.2	-0.3
NTVZ	North Tongarir	1.29	337	P	Pb	00 40 41.3	-0.5
WTVZ	West Tongariro	1.31	334	P	Pb	00 40 41.5	-0.5
RITZ	Rihia Road	1.36	345	P	Pb	00 40 42.5	-0.4
MSWZ	Moikau Station	1.38	216		Pn	00 40 40.4	-0.5
MSWZ	Moikau Station	1.38	216	P	Pn	00 40 40.6	-0.3
KATZ	Kakaramea	1.41	340	P	Pb	00 40 43.0	-0.6
HATZ	Hinemaiaia	1.42	353	P	Pn	00 40 42.6	+1.1
RATZ	Rangitukua	1.49	343	P	Pn	00 40 43.8	+1.3
MTHZ	Maungataniwha	1.50	16	P	Pn	00 40 42.9	+0.2
RAHZ	Arahi	1.50	24	P	Pn	00 40 42.9	+0.3
PLWZ	Palliser	1.50	212		Pn	00 40 42.0	-0.6
PLWZ	Palliser	1.50	212	P	Pn	00 40 42.1	-0.6
WEL	Wellington	1.53	230	P	Pn	00 40 43.3	+0.2
BHW	Baring Head	1.56	224		Pn	00 40 43.1	-0.3
BHW	Baring Head	1.56	224	P	Pn	00 40 43.1	-0.3
SNZO	South Karori	1.59	230		Pn	00 40 43.6	-0.1
SNZO	South Karori	1.59	230	P	Pn	00 40 44.3	+0.6
KNZ	Kokohu	1.65	40	P	Pn	00 40 44.1	-0.5
WATZ	Wairara	1.65	344	P	Pn	00 40 45.6	+0.9
WHTZ	Whakaora	1.65	350	P	Pn	00 40 46.0	+1.3
MHGZ	Mahia Peninsul	1.68	48	P	Pn	00 40 44.7	-0.3
VRZ	Vera Road	1.68	314	P	Pn	00 40 46.7	+1.6
LREZ	Lake Rotokare	1.69	299	P	Pb	00 40 47.6	-0.8
SNGZ	Shannon Statio	1.71	28	P	Pn	00 40 45.5	+0.1
ALRZ	Allen Road	1.73	1	P	Pn	00 40 46.2	+0.4
RTZ	Ruatahuna	1.76	17	P	Pn	00 40 46.4	+0.2
WPRZ	Whakapapatarin	1.78	356	P	Pn	00 40 47.1	+0.7
PRRZ	Plateau Road	1.80	2	P	Pn	00 40 47.2	+0.6
TCW	Tory Channel	1.80	239	P	Pn	00 40 46.7	0.0
PRGZ	Paritu Road	1.83	42	P	Pn	00 40 46.5	-0.6
KUTZ	Kaahu Road	1.85	348	P	Pn	00 40 48.1	+0.8
MUGZ	Murupara	1.85	11	P	Pn	00 40 47.6	+0.2
DUWZ	D'Urville Isla	1.89	254	P	Pn	00 40 48.6	+0.6
HRRZ	Handcock Road	1.91	359	P	Pn	00 40 49.1	+0.9
PREZ	Palmer Road	1.92	299	P	Pb	00 40 51.1	-1.1
RIGZ	Rimuhau	1.94	36	P	Pn	00 40 48.2	-0.5
GRRZ	Galatos Road	1.95	355	P	Pn	00 40 49.7	+0.9
RRRZ	Republican Roa	1.96	5	P	Pn	00 40 49.0	0.0
MHEZ	Mangahewa	1.96	308	P	Pb	00 40 51.8	-1.2
DREZ	Durham Road	1.97	303	P	Pn	00 40 51.5	+2.5
HSRZ	Hossack Road	1.98	358	P	Pn	00 40 49.9	+0.7
RAGZ	Rawiri	1.99	26	P	Pn	00 40 49.1	-0.3
NEZ	North Egmont	2.00	300	P	Pn	00 40 52.1	+2.6
KHEZ	Kahui Hut	2.04	299	P	Pn	00 40 52.5	+2.4
HLRZ	Highlands Stat	2.04	1	P	Pb	00 40 53.6	-0.8
TLZ	Tolley Road	2.06	343	P	Pn	00 40 50.9	+0.6
TARZ	Mount Tarawera	2.06	4	P	Pn	00 40 50.8	+0.4
NMEZ	Namu Road	2.07	294	P	Pn	00 40 53.2	+2.7
PKE	Pukeiti	2.11	301	P	Pn	00 40 53.7	+2.7
HIZ	Hauiti	2.11	327		Pn	00 40 52.0	+1.0
HIZ	Hauiti	2.11	327	P	Pn	00 40 52.4	+1.5
HIZ	Hauiti	2.11	327	P	Pb	00 40 54.3	-1.2
TUWZ	Tuamarina	2.13	237		Pn	00 40 50.7	-0.5
TUWZ	Tuamarina	2.13	237	P	Pn	00 40 50.7	-0.5
URZ	Urewera	2.13	17	Pn	Pn	00 40 49.6	-1.6
	21nm,0.3s,baz=227,slow=6.3,SNR=52						
URZ				Sn	Sn	00 41 16.6	+0.1
	88nm,0.3s,baz=42,slow=21,SNR=7.4						
URZ				LR	LR	00 41 35.1	
	comp=Z,269nm,19.3s,baz=211,slow=40						
	44nm,0.4s						
URZ	Urewera	2.13	17		Pn	00 40 50.5	-0.7
URZ	Urewera	2.13	17	P	Pn	00 40 50.5	-0.7
URZ	Urewera	2.13	17	P	Pn	00 40 50.7	-0.5
NBEZ	Newall Road No	2.15	298	P	Pn	00 40 54.2	+2.7
CMWZ	Cape Campbell	2.15	227		Pn	00 40 51.7	+0.2
CMWZ	Cape Campbell	2.15	227	P	Pn	00 40 53.5	+2.0
MWZ	Matawai	2.17	26	P	Pn	00 40 51.1	-0.8
OMRZ	Omania	2.19	1	P	Pn	00 40 52.2	+0.2
TKGZ	Te Karaka	2.20	33	P	Pn	00 40 51.5	-0.7
EDRZ	Edgecumbe	2.21	9	P	Pn	00 40 52.2	-0.2
BSWZ	Blackbirch Sta	2.33	232		Pn	00 40 53.4	-0.5
BSWZ	Blackbirch Sta	2.33	232	P	Pn	00 40 53.4	-0.5
CNGZ	Carnagh Statio	2.33	40	P	Pn	00 40 53.4	-0.6
NNZ	Nelson	2.41	247		Pn	00 40 55.2	+0.2
NNZ	Nelson	2.41	247	P	Pn	00 40 55.3	+0.2
OPRZ	Ohinepanea	2.46	4	P	Pn	00 40 56.7	+1.0
KMRZ	Kaimai	2.47	353	P	Pn	00 40 56.5	+0.6
TWGZ	Tauwhareparae	2.48	32	P	Pn	00 40 56.2	+0.1
WHRZ	Whale Island	2.49	12	P	Pn	00 40 56.0	-0.2
RUGZ	Raukumara Rang	2.56	25	P	Pn	00 40 56.6	-0.7
TGRZ	Tauranga	2.56	359	P	Pn	00 40 57.7	+0.5
TOZ	Tahuroa Road	2.64	346	P	Pn	00 40 59.1	+0.9
TKNZ	Takaka Hill	2.66	253	P	Pn	00 40 59.3	+0.8
PUZ	Puketiti	2.69	35	P	Pn	00 40 57.4	-1.5
PKGZ	Pakihiroa	2.77	30	P	Pn	00 40 59.3	-0.7
HAZ	Te Kaha	2.78	25	P	Pn	00 40 59.3	-0.9
MRNZ	Matariki Terra	2.92	247	P	Pn	00 41 02.4	+0.4
QRZ	Quartz Range	2.93	258		Pn	00 41 02.2	0.0
QRZ	Quartz Range	2.93	258	P	Pn	00 41 02.3	0.0
QRZ	Quartz Range	2.93	258	P	Pn	00 41 02.7	+0.4
WMGZ	Waiomatatini S	2.96	34	P	Pn	00 41 01.5	-1.2
THZ	Tophouse	2.97	239		Pn	00 41 02.0	-0.8
THZ	Tophouse	2.97	239	P	Pn	00 41 01.9	-0.8
KHZ	Kahutara	2.98	224		Pn	00 41 01.1	-1.6
KHZ	Kahutara	2.98	224	P	Pn	00 41 01.2	-1.6
KHZ	Kahutara	2.98	224	P	Pn	00 41 01.3	-1.5
MXZ	Matakaoa Point	3.14	30		Pn	00 41 04.3	-0.8
MXZ	Matakaoa Point	3.14	30	P	Pn	00 41 04.2	-0.8
MKAZ	Moumakai	3.31	344	P	Pn	00 41 08.6	+1.1
AWAZ	Awhitu Peninsu	3.48	337	P	Pn	00 41 11.4	+1.6
ETAZ	East Tamaki Re	3.51	342	P	Pn	00 41 11.2	+1.0
KUZ	Kuaotunu	3.58	352	P	Pn	00 41 11.9	+0.7
WIAZ	Waiheke Island	3.62	345	P	Pn	00 41 12.6	+0.9
WTAZ	Waiatarua	3.63	337	P	Pn	00 41 14.0	+2.2
GVZ	Greta Valley S	3.63	222	P	Pn	00 41 11.4	-0.4
MBAZ	Motutapu North	3.69	342	P	Pn	00 41 13.7	+0.9
DSZ	Denniston Nort	3.71	246	P	Pn	00 41 12.5	-0.5
RVAZ	Riverhead Bore	3.78	338	P	Pn	00 41 16.0	+2.1
LTZ	Lake Taylor	3.92	229		Pn	00 41 14.1	-1.8
LTZ	Lake Taylor	3.92	229	P	Pn	00 41 14.3	-1.5
AMCZ	Amberley	3.97	222	P	Pn	00 41 15.5	-1.1
GRZ	Great Barrier	4.10	350	P	Pn	00 41 18.7	+0.4
OKCZ	Okains Bay	4.20	214	P	Pn	00 41 17.3	-2.4
MQZ	McQueen's Vall	4.36	218		Pn	00 41 19.1	-2.9
MQZ	McQueen's Vall	4.36	218	P	Pn	00 41 18.9	-3.0
AKCZ	Akaroa Harbour	4.38	214	P	Pn	00 41 20.1	-2.1
OXZ	Oxford	4.40	225		Pn	00 41 20.3	-2.1
OXZ	Oxford	4.40	225	P	Pn	00 41 20.6	-1.8
RACZ	Rakaia	4.63	221	P	Pn	00 41 23.6	-2.0
WACZ	Wakanui South	4.93	221	P	Pn	00 41 27.1	-2.6
WVZ	Waitaha Valley	5.01	235	P	Pn	00 41 29.0	-1.8
RPZ	Rata Peaks	5.20	227	Pn	Pn	00 41 32.2	-1.2
	2.0nm,0.3s,baz=308,slow=1.9,SNR=8.5						
RPZ				Sn	Sn	00 42 27.3	-5.0
	21nm,0.3s,baz=340,slow=21,SNR=29						
	4.6nm,0.3s						
RPZ	Rata Peaks	5.20	227		Pn	00 41 31.9	-1.5
RPZ	Rata Peaks	5.20	227	P	Pn	00 41 32.2	-1.2
RPZ	Rata Peaks	5.20	227	P	Pn	00 41 31.6	-1.8
ARCZ	Arundel	5.28	225	P	Pn	00 41 32.7	-1.9
GCSZ	Gaunt Creek Bo	5.40	234	P	Pn	00 41 35.8	-0.3
OUZ	Omahuta	5.51	336	Pn	Pn	00 41 38.2	+0.5
OUZ	Omahuta	5.51	336	P	Pn	00 41 39.2	+1.6
OUZ	Omahuta	5.51	336	P	Pn	00 41 39.1	+1.4
TMZ	Timaru	5.67	222	P	Pn	00 41 37.7	-2.1
FOZ	Fox Glacier	5.83	234	Pn	Pn	00 41 39.2	-2.8
LBZ	Lake Benmore	6.11	226	P	Pn	00 41 44.3	-1.6
CTZ	Chatham Island	6.28	125	P	Pn	00 41 48.2	-0.1
ODZ	Otahua Downs	6.32	220	Pn	Pn	00 41 45.6	-3.2
ODZ	Otahua Downs	6.32	220	P	Pn	00 41 46.2	-2.6
ODZ	Otahua Downs	6.32	220	P	Pn	00 41 46.3	-2.5
HHSZ	Highcliff Hill	6.98	215	P	Pn	00 41 56.7	-1.1
EAZ	Earnscleugh	7.13	224	P	Pn	00 41 57.7	-2.3
TUZ	Tuapeka	7.47	219	P	Pn	00 42 02.9	-1.7
MLZ	Mavora Lakes	7.87	227	Pn	Pn	00 42 08.4	-1.7
SYZ	Scrubby Hill	8.13	218	P	Pn	00 42 12.8	-0.8
DZM	Mont Dzumac	20.01	332	LR	LR	00 51 34.8	
	comp=Z,101nm,18.3s,baz=154,slow=34						
TOO	Toolangi	24.07	267	P	P	00 45 29.7	-0.7
TOO				IAmb	IAmb	00 45 37.5	
	comp=Z,25nm,1.3s						
RAR	Rarotonga	27.86	54	LR	LR	00 54 19.4	
	comp=Z,37nm,21.2s,baz=210,slow=30						
STKA	Stephens Creek	29.14	276	LR	LR	00 57 08.4	
	comp=Z,92nm,18.2s,baz=199,slow=35						
CTA	Charters Tower	32.63	299	LR	LR	00 58 30.4	
	comp=Z,81nm,18.8s,baz=84,slow=34						
COEN	Coen	39.09	303	P	P	00 47 42.1	-0.1
AS31	Alice Springs	39.20	282	P	P	00 47 40.8	-2.4
ASAR	Alice Springs	39.20	282	P	P	00 47 42.9	-0.3
	comp=Z,1.3nm,0.5s,baz=120,slow=6.6,SNR=34						
ASAR				PcP	PcP	00 49 50.8	-1.2
	comp=Z,0.3nm,0.8s,baz=108,slow=4.0,SNR=4.0						
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	39.20	282	P	P	00 47 41.8	-1.3
WR0	Warramunga Arr	40.96	287	P	P	00 47 57.1	-0.6
WR0				IAmb	IAmb	00 48 02.3	
	comp=Z,5.3nm,1.0s						
WRA	Warramunga Arr	41.12	287	P	P	00 47 58.5	-0.5
	comp=Z,5.1nm,0.6s,baz=125,slow=8.3,SNR=79						
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	41.12	287	P	P	00 47 57.5	-1.5
KNRA	Kununurra	47.91	287	P	P	00 48 53.9	+0.6
QSPA	South Pole Qui	49.83	180	P	P	00 49 09.4	+1.8
QSPA				IAmb	IAmb	00 49 11.4	
	comp=Z,2.4nm,1.1s						
SNAA	Sanae	68.33	180	P	P	00 51 16.5	+1.0
SNAA				IAmb	IAmb	00 51 30.1	
	comp=Z,6.0nm,1.5s						
YKA	Yellowknife Ar	116.34	29	PKP	PKPdf	00 58 57.2	+0.2
	comp=Z,0.3nm,0.7s,baz=251,slow=1.4,SNR=6.2						
YKA	Yellowknife Ar	116.34	29		PKPdf	00 58 56.3	-0.8
MKAR	Makanchi Array	120.33	307	PKP	PKPdf	00 59 04.1	-1.2
	comp=Z,0.3nm,0.6s,baz=187,slow=2.5,SNR=3.8						
MKAR	Makanchi Array	120.33	307		PKPdf	00 59 03.3	-2.0
GURO	Guroymak-BITLI	144.94	282		PKPab	00 59 50.9	-0.1
MARD	Mardin	145.49	280	PKPdf	PKPdf	00 59 52.5	-0.2
KEV	Kevo	146.40	341	PKPdf	PKPdf	00 59 53.4	+0.5
ARCES	ARCESS Array B	146.92	342	PKPbc	PKPdf	00 59 55.3	+1.4
	comp=Z,2.8nm,0.6s,baz=80,slow=1.8,SNR=24						
ARCES	ARCESS Array B	146.92	342		PKPdf	00 59 55.0	+1.1
BRTR	Keskin Array B	151.54	281	PKPbc	PKPbc	01 00 07.9	-0.7
	comp=Z,0.8nm,0.8s,baz=145,slow=5.7,SNR=7.7						
BRTR				PKPab	sPKPdf	01 00 16.1	-0.6
	comp=Z,1.1nm,0.8s,baz=142,slow=5.0,SNR=9.0						
BRTR	Keskin Array B	151.54	281	PKPbc	PKPbc	01 00 07.6	-1.0
FIA1	FINESS Array S	152.13	329	PKPbc	PKPbc	01 00 08.0	-1.0
FINES	FINESS Array B	152.13	329	PKPbc	PKPbc	01 00 08.1	-1.0
	comp=Z,1.8nm,0.7s,baz=22,slow=5.7,SNR=16						
FINES				PKPab	sPKPdf	01 00 17.2	+0.6
	comp=Z,0.9nm,0.6s,baz=62,slow=4.1,SNR=5.4						
FINES	FINESS Array B	152.13	329		PKPbc	01 00 07.9	-1.1
TORD	Torodi Ar. Bea	152.54	191	PKPbc	PKPbc	01 00 11.2	-0.2
	comp=Z,1.0nm,0.6s,baz=156,slow=3.4,SNR=16						
TORD				PKPab	pPKPbc	01 00 23.1	+1.1
	comp=Z,0.4nm,0.4s,baz=164,slow=3.7,SNR=10						

TAP 01 00:52:50.8, 24°.25N×121°.73E, h6^{km}, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.06	8	*e*S	Sg	00 52 53.8	+0.3
	baz=16						
ETL	Fush Village	0.14	227	P	Pg	00 52 54.7	+1.1
	baz=226						
ETL				S	Sg	00 52 57.1	+1.6
	baz=226						
NACB	Ninganchiao	0.15	238	P	Pg	00 52 54.8	+1.0
	baz=237						
NACB				S	Sg	00 52 57.5	+1.6
	baz=237						
ENA	Nanau	0.17	3	P	Pg	00 52 55.5	+1.2
	baz=5.0						
ENA				S	Sg	00 52 58.5	+1.8
	baz=5.0						
EWUT	Wuta	0.20	12	P	Pg	00 52 55.7	+1.0
	baz=12						
EWUT				S	Sg	00 52 58.8	+1.5
	baz=12						
TWD	Chiawan	0.21	216	P	Pg	00 52 55.8	+0.8
	baz=214						
TWD				S	Sg	00 52 59.0	+1.2
	baz=214						
ETLH	Xiulin Townshi	0.23	259	*e*P	Pg	00 52 56.4	+1.0
	baz=258						
ETLH				S	Sg	00 53 00.4	+1.9
	baz=258						
LATG	Datong	0.34	326	P	Pb	00 52 59.0	-0.3
	baz=326						
LATG				S	Sb	00 53 04.5	-0.4
	baz=326						
NNSB	Datong	0.36	299	P	Pb	00 52 59.5	-0.2
	baz=298						
NNSB				S	Sb	00 53 05.0	-0.7
	baz=298						
TWC	Suao	0.37	17	*e*P	Pg	00 52 58.8	+0.8
	baz=18						
TWC				*e*S	Sb	00 53 04.3	-1.4
	baz=18						
NNS	Nan Shan	0.38	300	*e*P	Pb	00 52 59.6	-0.3
	baz=299						

NNS				S	Sb	00 53 05.4	-0.6
	baz=299						
NDS	**Dongshan**	**0.38**	**358**	P	Pb	00 52 59.5	-0.4
	baz=357						
NDS				*e*S	Sb	00 53 05.5	-0.5
	baz=357						
ENTT	**Nioudou**	**0.41**	**339**	*e*P	Pb	00 53 00.4	-0.1
	baz=339						
ENTT				S	Sb	00 53 06.7	-0.4
	baz=339						
WHF	**Hehuan Shan**	**0.44**	**256**	P	Pb	00 53 00.5	-0.7
	baz=255						
WHF				S	Sb	00 53 07.1	-1.1
	baz=255						
TWE	**Neicheng**	**0.47**	**353**	*e*P	Pb	00 53 01.2	-0.2
	baz=354						
TWE				*e*S	Sb	00 53 08.1	-0.6
	baz=354						
ESL	**Shilin**	**0.52**	**212**	*e*P	Pb	00 53 01.9	-0.3
	baz=211						
FUSB	**Fushanzhiwuyua**	**0.52**	**345**	*e*P	Pb	00 53 02.3	-0.1
	baz=345						
FUSB				S	Sb	00 53 09.7	-0.5
	baz=345						
TDCB	**Techi**	**0.52**	**270**	*e*P	Pb	00 53 02.1	-0.3
	baz=269						
TDCB				*e*S	Sb	00 53 11.4	+1.1
	baz=269						
YHNB	**Yeheng**	**0.53**	**322**	*e*P	Pb	00 53 02.5	0.0
	baz=321						
NSK	**Sanguang**	**0.54**	**321**	*e*P	Pb	00 53 02.7	0.0
	baz=321						
NSK				*e*S	Sb	00 53 11.2	+0.4
	baz=321						
CHGB	**Renai**	**0.55**	**249**	P	Pb	00 53 02.6	-0.2
	baz=249						
CHGB				*e*S	Sb	00 53 11.5	+0.5
	baz=249						
NWLT	**Wulai**	**0.56**	**338**	*e*P	Pb	00 53 03.0	0.0
	baz=338						
OWD	**Renai**	**0.59**	**240**	*e*P	Pb	00 53 03.3	-0.2
	baz=239						
OWD				*e*S	Sb	00 53 12.7	+0.5
	baz=239						
WUSB	**Renai**	**0.62**	**245**	*e*P	Pb	00 53 03.9	-0.2
	baz=245						
WUSB				*e*S	Sb	00 53 13.4	+0.3
	baz=245						
EGFH	**Guangfu**	**0.65**	**206**	*e*S	Sb	00 53 14.1	+0.5
	baz=205						
NFF	**Wufeng Townshi**	**0.68**	**304**	*e*P	Pb	00 53 05.2	+0.2
	baz=303						
NFF				*e*S	Sb	00 53 15.3	+0.7
	baz=303						
WHP	**Taichung City**	**0.72**	**272**	*e*S	Sb	00 53 16.6	+0.7
	baz=271						
TIPB	**Shuangxi**	**0.72**	**7**	*e*P	Pb	00 53 05.8	0.0
	baz=6.0						
TIPB				*e*S	Sb	00 53 15.4	-0.5
	baz=6.0						
VWDT	**VWDT**	**0.73**	**228**	*e*P	Pb	00 53 05.6	-0.3
	baz=227						
VWDT				*e*S	Sb	00 53 17.2	+1.0
	baz=227						
LIOB	**Emei**	**0.76**	**301**	*e*S	Sb	00 53 18.4	+1.4
	baz=300						
NSTT	**Nanjuang**	**0.77**	**300**	*e*S	Sb	00 53 18.5	+1.4
	baz=299						
WCS	**Beigang Elemen**	**0.77**	**256**	*e*P	Pb	00 53 07.0	+0.3
	baz=255						
WCS				*e*S	Sn	00 53 18.9	-1.2
	baz=255						
HGSD	**Ruisui**	**0.81**	**200**	*e*P	Pb	00 53 06.9	-0.3
	baz=200						
HGSD				*e*S	Sb	00 53 19.2	+0.8
	baz=200						
NWF	**Wu-fen Shan**	**0.82**	**3**	*e*S	Sb	00 53 19.5	+0.8
	baz=3.0						
SMLT	**Sun Moon Lake**	**0.84**	**244**	*e*P	Pb	00 53 07.7	-0.2
	baz=243						
SMLT				*e*S	Sb	00 53 20.7	+1.2
	baz=243						
SXI1	**Grass Mountain**	**0.85**	**9**	*e*P	Pb	00 53 07.8	-0.1
	baz=8.0						
SXI1				*e*S	Sb	00 53 20.4	+0.8
	baz=8.0						
SSLB	**Suanglung**	**0.85**	**237**	*e*P	Pb	00 53 07.8	-0.1
	baz=236						
SSLB				*e*S	Sn	00 53 21.1	-1.0
	baz=236						
YM01	**YM01**	**0.90**	**351**	*e*P	Pb	00 53 09.0	+0.2
	baz=350						
YM01				*e*S	Sn	00 53 22.5	-0.9
	baz=350						
YULB	**Yu-li**	**0.94**	**205**	*e*P	Pb	00 53 09.4	-0.2
	baz=204						
ELDTW	**Lidau**	**1.25**	**212**	*e*P	Pg	00 53 14.4	-0.2
	baz=211						

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*ISK **01** 01:09:31.6, 36°.87N×26°.99E, h16^{km}, ML2.5/15*

*DDA **01** 01:09:32.3±0.0, 36°.86N×27°.01E, h7^{km}±1^{km}, ML2.1*

*THE **01** 01:09:32.7, 36°.87N×27°.03E, h10^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=1.2km s-min=0.6km az=223.0*

*ATH **01** 01:09:32.6, 36°.87N×27°.00E, h14^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=2.2km s-min=0.9km az=207.0*

ISC 01 01:09:32.5±0.8, **36°.86N**±0°.02×**27°.02E**±0°.03, **h14**^{km}±6^{km}, **n43**, σ**0^s.62**/65, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	**Kos Island**	**0.12**	**196**	P	**Pg**	**01 09 35.7**	**-0.1**
KOSK				S	**Sg**	**01 09 38.0**	**0.0**
KOSK				AML	AML	01 09 38.8	
	comp=N,19676μm,0.4s						
KOSK				AML	AML	01 09 41.5	
	comp=E,12462μm,0.5s						
KOSK	**Kos Island**	**0.12**	**196**	P	**Pg**	**01 09 35.7**	**-0.1**
KOSK				S	**Sg**	**01 09 37.9**	**-0.1**
	comp=E,3μm,0.4s						
KOSK	**Kos Island**	**0.12**	**196**	PG	**Pg**	**01 09 35.7**	**-0.1**
KOSK				SG	**Sg**	**01 09 38.1**	**0.0**
NISR	**Nisiros**	**0.27**	**160**	P	**Pg**	**01 09 38.5**	**+0.4**
NISR				S	**Sg**	**01 09 42.8**	**+0.8**
NISR				AML	AML	01 09 44.1	
	comp=E,1355μm,0.2s						
NISR				AML	AML	01 09 45.2	
	comp=N,1337μm,0.3s						
NISR	**Nisiros**	**0.27**	**160**	P	**Pg**	**01 09 38.4**	**+0.3**
NISR				S	**Sb**	**01 09 43.3**	**-0.2**
	comp=N,785nm,0.3s						
BODT	**Bodrum**	**0.31**	**50**	P	**Pg**	**01 09 38.8**	**-0.1**
BODT				S	**Sg**	**01 09 43.5**	**+0.3**
BODT	**Bodrum**	**0.31**	**50**	PG	**Pg**	**01 09 38.6**	**-0.3**
BODT				SG	**Sg**	**01 09 43.7**	**+0.5**
YKAV	**Yalikavak-Bodr**	**0.33**	**39**	PG	**Pg**	**01 09 38.9**	**-0.4**
YKAV				SG	**Sg**	**01 09 44.8**	**+0.8**
BDRM	**Kayabasi**	**0.40**	**59**	P	**Pg**	**01 09 40.1**	**-0.4**
BDRM				*i* AML	AML	01 09 46.0	
	comp=N,308nm,0.5s						
BDRM				*i* AML	AML	01 09 46.0	
	comp=N,135nm,0.5s						
BDRM				S	**Sg**	**01 09 46.1**	**+0.3**
DAT	**Datca**	**0.47**	**107**	P	**Pg**	**01 09 41.6**	**-0.2**
DAT				*i* AML	AML	01 09 50.0	
	comp=N,190nm,0.1s						
DAT				*i* AML	AML	01 09 50.0	
	comp=N,157nm,0.4s						
DDIM	**Aydin, Didim**	**0.62**	**17**	P	**Pg**	**01 09 44.6**	**0.0**
DDIM				*i* AML	AML	01 09 56.0	
	comp=N,165nm,0.6s						
DDIM				*i* AML	AML	01 09 57.0	
	comp=N,165nm,0.6s						
MLSB	**Milas**	**0.74**	**54**	PG	**Pg**	**01 09 46.7**	**-0.3**
MLSB				SG	**Sb**	**01 09 57.4**	**+0.1**
GCAM	**G?zelcaml?**	**0.85**	**12**	PG	**Pg**	**01 09 48.6**	**-0.4**
GCAM				SG	**Sb**	**01 10 01.2**	**+0.8**
GCAM	**G?zelcaml?**	**0.85**	**12**	P	**Pg**	**01 09 48.6**	**-0.4**
GCAM				S	**Sn**	**01 10 02.4**	**0.0**
GCAM				*i* AML	AML	01 10 04.0	
	comp=N,88nm,0.2s						
GCAM				*i* AML	AML	01 10 05.0	
	comp=N,124nm,0.2s						
SMG	**Samos**	**0.85**	**350**	P	**Pg**	**01 09 48.7**	**-0.4**
SMG				S	**Sg**	**01 10 00.1**	**-0.2**
SMG				AML	AML	01 10 03.9	
	comp=N,796μm,0.2s						
SMG				AML	AML	01 10 05.0	
	comp=E,568μm,0.4s						
SMG	**Samos**	**0.85**	**350**	P	**Pg**	**01 09 48.6**	**-0.4**
SMG				S	**Sn**	**01 10 01.4**	**-1.1**
	comp=E,342nm,0.3s						
TURN	**Turunc**	**0.99**	**95**	PG	**Pb**	**01 09 51.3**	**-0.1**
TURN				SG	**Sn**	**01 10 06.2**	**+0.5**
TURN	**Turunc**	**0.99**	**95**	P	**Pb**	**01 09 51.5**	**+0.1**
TURN				S	**Sn**	**01 10 05.7**	**0.0**
TURN				*i* AML	AML	01 10 08.0	
	comp=E,108nm,0.3s						
TURN				*i* AML	AML	01 10 08.0	
	comp=E,79nm,0.2s						
YER	**Yerkesik**	**1.05**	**75**	PG	**Pb**	**01 09 52.5**	**0.0**
AYDN	**Tasoluk**	**1.05**	**41**	P	**Pb**	**01 09 52.2**	**-0.3**
AYDN				S	**Sg**	**01 10 06.6**	**0.0**
AYDN				*i* AML	AML	01 10 10.0	
	comp=E,58nm,0.5s						
AYDN				*i* AML	AML	01 10 11.0	
	comp=E,52nm,0.4s						
ARG	**Arkhangelos**	**1.10**	**126**	P	**Pb**	**01 09 53.1**	**-0.3**
ARG				S	**Sb**	**01 10 07.9**	**+0.3**
ARG				AML	AML	01 10 10.2	
	comp=E,404μm,0.3s						
ARG				AML	AML	01 10 12.8	
	comp=N,245μm,0.4s						
ARG	**Arkhangelos**	**1.10**	**126**	P	**Pb**	**01 09 53.1**	**-0.3**
ARG				S	**Sb**	**01 10 07.7**	**+0.1**
	comp=N,165nm,0.3s						
ARG	**Arkhangelos**	**1.10**	**126**	PN	**Pb**	**01 09 53.1**	**-0.3**
MULA	**Mugla, Merkez-**	**1.11**	**69**	P	**Pb**	**01 09 53.7**	**+0.1**
MULA				S	**Sn**	**01 10 09.4**	**+0.4**
MULA				*i* AML	AML	01 10 12.0	
	comp=N,30nm,0.4s						
MULA				*i* AML	AML	01 10 16.0	
	comp=N,48nm,0.7s						
DGB	**zmir**	**1.19**	**355**	P	**Pn**	**01 09 53.9**	**-0.8**
DGB				S	**Sg**	**01 10 13.4**	**+2.5**
DGB				*i* AML	AML	01 10 16.0	
	comp=N,32nm,0.6s						
DGB				*i* AML	AML	01 10 16.0	
	comp=N,34nm,0.5s						
APE	**Apeiranthos**	**1.21**	**280**	P	**Pn**	**01 09 54.3**	**-0.8**
APE	**Apeiranthos**	**1.21**	**280**	P	**Pn**	**01 09 54.3**	**-0.8**
APE	**Apeiranthos**	**1.21**	**280**	PN	**Pn**	**01 09 54.2**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.28**	**33**	PN	**Pn**	**01 09 55.5**	**-0.7**
DALY	**Dalyan (Mula)**	**1.31**	**92**	PN	**Pn**	**01 09 56.2**	**-0.2**
KARP	**Karpathos**	**1.32**	**175**	P	**Pn**	**01 09 55.8**	**-0.8**
KARP	**Karpathos**	**1.32**	**175**	PN	**Pn**	**01 09 55.7**	**-0.8**
THR8	**Santorini-Mono**	**1.32**	**250**	P	**Pn**	**01 09 56.6**	**+0.1**
THR3	**Thira Island,**	**1.38**	**251**	P	**Pn**	**01 09 57.6**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.38**	**251**	P	**Pn**	**01 09 57.4**	**0.0**
THR6	**Thira Island,**	**1.40**	**249**	P	**Pn**	**01 09 57.9**	**+0.3**
BLCB	**Balcova**	**1.52**	**1**	PN	**Pn**	**01 09 58.8**	**-0.5**
URLA	**Izmir**	**1.53**	**347**	PN	**Pn**	**01 09 58.9**	**-0.6**
URLA	**Izmir**	**1.53**	**347**	P	**Pn**	**01 09 58.6**	**-0.9**
URLA				S	**Sg**	**01 10 24.0**	**+2.2**
FETY	**Fethiye**	**1.68**	**97**	PN	**Pn**	**01 10 01.4**	**0.0**
CHOS	**Chios island**	**1.70**	**334**	P	**Pn**	**01 10 02.6**	**+0.8**
CHOS	**Chios island**	**1.70**	**334**	PN	**Pn**	**01 10 01.2**	**-0.7**
CAME	**Cameli-Denizli**	**1.83**	**87**	PN	**Pn**	**01 10 03.6**	**-0.1**

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*NEIC **01** 01:15:43±1.7, 32°.60S±0°.04×71°.83W±0°.08, h19^{km}±10^{km}, mb3.6/2, ML4.0(GUC), Error ellipse: s-maj=10.1km s-min=5.7km az=82.0*

*GUC **01** 01:15:44.2±0.9, 32°.62S×71°.73W, h24^{km}±6^{km}, ML4.0*

ISC 01 01:15:42.7±1.0, **32°.59S**±0°.03×**71°.80W**±0°.05, **h22**^{km}±8^{km}, **n52**, σ**0^s.96**/70, **4C-7D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.43**	**87**		**Pb**	**01 15 51.8**	**+0.2**
VA06	**Catapilco**	**0.43**	**87**	⇓*i*P	**Pb**	**01 15 51.8**	**+0.2**
VA06				*i* S	**Sb**	**01 15 57.4**	**-0.2**
VA06				IAML		01 15 58.2	
	comp=E,34μm,0.4s						
VA01	**Torpederas**	**0.45**	**163**		**Pb**	**01 15 52.6**	**+0.6**
VA01	**Torpederas**	**0.45**	**163**	⇑*i*P	**Pb**	**01 15 52.6**	**+0.6**
VA01				*e*S	**Sb**	**01 15 58.8**	**+0.5**
ROC1	**El Roble**	**0.77**	**121**	Pg	**Pb**	**01 15 55.1**	**-2.5**
ROCH	**El Roble**	**0.77**	**120**	⇓*i*P	**Pb**	**01 15 57.7**	**+0.1**
ROCH				*e*S	**Sb**	**01 16 07.7**	**+0.1**
ROCH				IAML		01 16 10.1	
	comp=N,9μm,0.3s						
MT02	**Curacav**	**0.87**	**140**		**Pb**	**01 15 59.4**	**+0.2**
MT02	**Curacav**	**0.87**	**140**	*e*P	**Pb**	**01 15 59.2**	**0.0**
MT02				*e*S	**Sb**	**01 16 09.9**	**-0.5**
VA03	**San Esteban**	**1.07**	**100**		**Pn**	**01 16 02.1**	**-0.4**
VA03	**San Esteban**	**1.07**	**100**	⇓*i*P	**Pn**	**01 16 02.1**	**-0.4**
VA03				*e*S	**Sb**	**01 16 15.8**	**-0.4**
VA03				IAML		01 16 17.9	
	comp=E,13μm,0.2s						
VA05	**Santo Domingo**	**1.08**	**172**		**Pb**	**01 16 02.9**	**+0.2**
VA05	**Santo Domingo**	**1.08**	**172**	*e*P	**Pb**	**01 16 02.6**	**-0.1**
VA05				*e*S	**Sn**	**01 16 16.6**	**-0.1**
VA05				IAML		01 16 21.2	
	comp=E,5μm,0.3s						
PEL	**Peldehue**	**1.09**	**121**		**Pn**	**01 16 02.8**	**+0.1**
PEL	**Peldehue**	**1.09**	**121**	*e*P	**Pn**	**01 16 02.6**	**-0.1**
PEL				*e*S	**Sb**	**01 16 17.0**	**+0.2**
PEL				IAML		01 16 18.7	
	comp=E,5μm,0.2s						
MT05	**Renca**	**1.20**	**132**	Pn	**Pb**	**01 16 04.8**	**0.0**
MT05	**Renca**	**1.20**	**132**	⇓*i*P	**Pb**	**01 16 04.8**	**0.0**
MT05				*e*S	**Sn**	**01 16 20.3**	**+0.4**
MT05				IAML		01 16 21.9	
	comp=E,13μm,0.4s						
MT01	**Popeta**	**1.35**	**160**		**Pn**	**01 16 06.9**	**+0.6**
MT01	**Popeta**	**1.35**	**160**	*e*P	**Pn**	**01 16 06.8**	**+0.6**
MT01				IAML		01 16 27.9	
	comp=E,2μm,0.4s						
MT09	**Talagante**	**1.37**	**150**		**Pb**	**01 16 07.3**	**-0.4**
MT09	**Talagante**	**1.37**	**150**	*e*P	**Pb**	**01 16 07.4**	**-0.4**
MT09				*e*S	**Sn**	**01 16 24.4**	**+0.3**
MT09				IAML		01 16 29.4	
	comp=N,3μm,0.2s						
MT03	**Universidad Ad**	**1.41**	**130**		**Pb**	**01 16 08.2**	**-0.2**
MT03	**Universidad Ad**	**1.41**	**130**	⇓*i*P	**Pb**	**01 16 08.1**	**-0.3**
MT03				*e*S	**Sn**	**01 16 25.8**	**+0.6**
MT03				IAML		01 16 27.2	
	comp=N,15μm,0.2s						
FCH	**Farellones**	**1.47**	**121**	*e*P	**Pn**	**01 16 08.8**	**+0.6**
FCH				*e*S	**Sn**	**01 16 27.6**	**+0.7**
FCH				IAML		01 16 28.8	
	comp=E,2μm,0.2s						
CO02	**Combarbal**	**1.54**	**27**		**Pn**	**01 16 09.2**	**+0.3**
CO02	**Combarbal**	**1.54**	**27**	⇓*i*P	**Pn**	**01 16 09.1**	**+0.2**
CO02				*e*S	**Sn**	**01 16 28.0**	**-0.3**
BO04	**La Punta**	**1.72**	**145**		**Pb**	**01 16 13.2**	**-0.5**
BO04	**La Punta**	**1.72**	**145**	*e*P	**Pb**	**01 16 13.0**	**-0.6**
BO04				*e*S	**Sb**	**01 16 34.7**	**-0.1**
BO04				IAML		01 16 39.6	
	comp=N,2μm,0.4s						
LMEL	**Las Melosas**	**1.84**	**134**		**Pb**	**01 16 14.8**	**-0.9**
LMEL	**Las Melosas**	**1.84**	**134**	*e*P	**Pb**	**01 16 14.8**	**-0.9**
LMEL				*e*S	**Sb**	**01 16 38.5**	**+0.1**
LMEL				IAML		01 16 42.8	
	comp=N,2μm,0.1s						
BO01	**Tunca**	**1.90**	**162**	Pn	**Pn**	**01 16 15.1**	**+1.3**
BO01	**Tunca**	**1.90**	**162**	⇑*i*P	**Pb**	**01 16 15.5**	**-1.1**
BO01				*e*S	**Sb**	**01 16 39.0**	**-0.9**
BO03	**Pichilemu**	**1.91**	**184**	⇑*i*P	**Pn**	**01 16 14.8**	**+0.9**
CO06	**Fray Jorge**	**1.91**	**4**	Pn	**Pn**	**01 16 13.7**	**-0.2**
CO06	**Fray Jorge**	**1.91**	**4**	*e*P	**Pn**	**01 16 14.0**	**0.0**
CO06				*e*S	**Sn**	**01 16 38.0**	**+0.6**
CO06				IAML		01 16 44.7	
	comp=E,1μm,0.2s						
GO05	**Huala**	**2.42**	**182**		**Pn**	**01 16 21.9**	**+0.9**
GO05	**Huala**	**2.42**	**182**	⇑*i*P	**Pn**	**01 16 21.7**	**+0.8**
GO05				IAML		01 17 12.9	
	comp=E,298nm,0.5s						
GO04	**Tololo Observa**	**2.56**	**20**		**Pn**	**01 16 24.2**	**+1.1**
GO04	**Tololo Observa**	**2.56**	**20**	*e*P	**Pn**	**01 16 24.1**	**+1.1**
GO04				*e*S	**Sn**	**01 16 54.2**	**+0.6**
CO05	**La Serena**	**2.70**	**10**	*e*P	**Pn**	**01 16 25.5**	**+0.6**
CO05				IAML		01 17 10.3	
	comp=E,969nm,0.3s						
ZON	**Zonda**	**2.85**	**69**		**Pn**	**01 16 30.0**	**+3.1**
CO01	**Juntas del Tor**	**2.98**	**30**	Pn	**Pn**	**01 16 31.4**	**+2.5**
CO01	**Juntas del Tor**	**2.98**	**30**	*e*P	**Pn**	**01 16 31.3**	**+2.4**
CO01				*e*S	**Sn**	**01 17 06.7**	**+2.5**
CO01				IAML		01 17 15.3	
	comp=E,482nm,0.3s						
ML02	**Panimavida**	**3.18**	**174**		**Pn**	**01 16 33.2**	**+1.8**
ML02	**Panimavida**	**3.18**	**174**	*e*P	**Pn**	**01 16 33.0**	**+1.6**
ML02				IAML		01 17 28.2	
	comp=N,722nm,0.3s						
LCO	**Las Campanas**	**3.69**	**15**		**Pn**	**01 16 39.0**	**+0.3**
LCO	**Las Campanas**	**3.69**	**15**	⇓*i*P	**Pn**	**01 16 39.4**	**+0.7**
BI05	**Punta Hualpn**	**4.30**	**195**	Pn	**Pn**	**01 16 47.2**	**+0.3**
BI05	**Punta Hualpn**	**4.30**	**195**	*e*P	**Pn**	**01 16 46.7**	**-0.1**
AC04	**Llanos de Chal**	**4.41**	**8**	Pn	**Pn**	**01 16 48.4**	**+0.1**
AC04	**Llanos de Chal**	**4.41**	**8**	*e*P	**Pn**	**01 16 48.0**	**-0.3**
AC06	**Mina Casimiro**	**5.36**	**14**		**Pn**	**01 17 01.4**	**0.0**
LPAZ	**La Paz**	**16.57**	**12**	Pn	**Pn**	**01 19 32.4**	**-1.9**
LPAZ				IAmb	IAmb	01 19 57.5	
	comp=Z,5.0nm,1.4s						

NOU 01 01:17:21.7, 16°.31S×167°.41E, h12^{km}**, MLv4.1**/11, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.88**	**347**	P	Pb	01 17 39.0	+0.1
DVP	**Devils Point**	**1.59**	**152**	P	Pn	01 17 49.8	+0.1
KOUNC	**Koumac, New Ca**	**5.16**	**215**	P	Pn	01 18 38.5	-0.2
YATNC	**Mamie plateau,**	**5.74**	**185**	P	Pn	01 18 45.8	-1.0
DZM	**Mont Dzumac**	**5.80**	**189**	P	Pn	01 18 47.8	+0.1

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*IDC **01** 01:22:28.6±4.9, 64°.32S×173°.27E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML4.0/1, MS3.9/8, Error ellipse: s-maj=193.5km s-min=24.0km az=69.0*

*NEIC **01** 01:22:29.7±1.2, 64°.3S±0°.1×173°.9E±0°.2, h10^{km}±2^{km}, mb4.2/8, Error ellipse: s-maj=20.6km s-min=14.6km az=19.0*

ISC 01 01:22:28.8±2.0, **64°.2S**±0°.2×**174°.1E**±0°.4, **h10**^{km}, **n31**, σ**0^s.50**/15, **mb4.0**/6, **MS3.9**/7, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**12.39**	**315**	Pn	**Pn**	**01 25 24.7**	**-0.3**
SBA	**Scott Base**	**13.89**	**186**		**Pn**	**01 25 45.1**	**-0.3**
VNDA	**Vanda**	**13.90**	**191**	Pn	**Pn**	**01 25 45.4**	**-0.1**
	0.7nm,0.3s,baz=29,slow=15,SNR=54						
VNDA				LR	LR	01 30 00.1	
	comp=Z,362nm,18.7s,baz=26,slow=33						
	5.8nm,0.6s						
VNDA	**Vanda**	**13.90**	**191**		**Pn**	**01 25 45.6**	**+0.1**
RPZ	**Rata Peaks**	**20.61**	**354**	LR	LR	01 34 42.3	
	comp=Z,241nm,18.2s,baz=186,slow=36						
CASY	**Casey**	**25.69**	**237**	P	**P**	**01 27 58.6**	**+0.2**
CASY				IAmb	IAmb	01 28 17.8	
	comp=Z,4.3nm,1.0s						
QSPA	**South Pole Qui**	**25.88**	**180**	P	**P**	**01 28 00.8**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=29,slow=7.4,SNR=4.7						
QSPA				LR	LR	01 37 06.5	
	comp=Z,238nm,18.1s,baz=36,slow=34						
	comp=Z,2.3nm,0.9s						
QSPA	**South Pole Qui**	**25.88**	**180**	IAmb	IAmb	01 28 11.4	
	comp=Z,5.6nm,1.1s						
MAW	**Mawson**	**39.66**	**214**	LR	LR	01 46 22.1	
	comp=Z,164nm,19.8s,baz=153,slow=36						
SNAA	**Sanae**	**44.37**	**181**	P	**P**	**01 30 38.6**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=184,slow=11,SNR=3.1						
SNAA				LR	LR	01 47 53.2	
	comp=Z,130nm,20.5s,baz=116,slow=34						
	comp=Z,1.7nm,0.9s						
SNAA	**Sanae**	**44.37**	**181**	IAmb	IAmb	01 30 49.7	
	comp=Z,3.5nm,1.1s						
H01W1	**Cape Leeuwin H**	**46.20**	**280**	T	T	02 21 06.8	
	baz=147,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**46.20**	**280**	T	T	02 21 08.0	
	baz=147,slow=76,SNR=10.0						
H01W3	**Cape Leeuwin H**	**46.21**	**280**	T	T	02 21 07.3	
	baz=147,slow=76,SNR=9.5						
ASAR	**Alice Springs**	**48.29**	**308**	P	**P**	**01 31 09.8**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=163,slow=8.4,SNR=5.7						
	comp=Z,1.2nm,0.9s						
AS31	**Alice Springs**	**48.30**	**308**	P	**P**	**01 31 10.5**	**+0.5**
AFI	**Afiamalu**	**51.19**	**18**	LR	LR	01 48 59.2	
	comp=Z,112nm,19.6s,baz=124,slow=31						
WRA	**Warramunga Arr**	**51.59**	**310**	P	**P**	**01 31 34.5**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=157,slow=6.0,SNR=5.3						
	comp=Z,1.1nm,0.9s						
WRAB	**Tennant Creek**	**51.60**	**310**	P	**P**	**01 31 36.5**	**+1.4**
PSA00	**Pilbara Seismi**	**55.49**	**294**	P	**P**	**01 32 03.5**	**-0.1**
PSA00				IAmb	IAmb	01 32 12.4	
	comp=Z,7.1nm,1.4s						
H03S2	**Juan Fernandez**	**66.91**	**120**	T	T	02 46 35.6	
	baz=204						
H03S1	**Juan Fernandez**	**66.92**	**120**	T	T	02 46 43.6	
	baz=204						
H03S3	**Juan Fernandez**	**66.93**	**120**	T	T	02 46 35.7	
	baz=204						
SUR	**Sutherland**	**81.45**	**203**	LR	LR	02 08 38.1	
	comp=Z,72nm,19.7s,baz=186,slow=34						
H08S2	**Diego Garcia H**	**88.19**	**256**	T	T	03 13 38.5	
	baz=154,slow=76,SNR=42						
H08S1	**Diego Carcia H**	**88.20**	**256**	T	T	03 13 42.4	
	baz=154,slow=76,SNR=25						
H08S3	**Diego Garcia H**	**88.21**	**256**	T	T	03 13 47.1	
	baz=154,slow=76,SNR=50						
TSUM	**Tsumeb**	**94.89**	**202**	LR	LR	02 17 20.5	
	comp=Z,118nm,18.9s,baz=154,slow=35						
TSUM	**Tsumeb**	**94.89**	**202**	P	**P**	**01 35 50.9**	**-0.2**
BR131	**Keskin Array S**	**146.37**	**242**	PKPbc	**PKPab**	**01 42 10.1**	**+0.2**
BRTR	**Keskin Array B**	**146.37**	**242**	PKPbc	**PKPbc**	**01 42 08.9**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=150,slow=6.1,SNR=3.7						

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*JMA **01** 01:27:47.8±0.2, 24°.0N±0°.8×12°2E±°, h23^{km}, MV2.9/10, TAIWAN REGION*

*TAP **01** 01:27:49.7, 24°.22N×121°.75E, h11^{km}, ML3.5, C*

ISC 01 01:27:49.8±0.8, **24°.21N**±0°.01×**121°.76E**±0°.02, **h12**^{km}±5^{km}, **n107**, σ**0^s.62**/180, **24D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.10**	**350**	⇓*i*P	**Pg**	**01 27 52.6**	**0.0**
EHP				*i* S	**Sg**	**01 27 54.9**	**+0.2**
ETL	**Fush Village**	**0.13**	**249**	⇓*i*P	**Pg**	**01 27 53.1**	**0.0**
	baz=243						
ETL				*i* S	**Sg**	**01 27 55.7**	**+0.2**
	baz=243						
NACB	**Ninganchiao**	**0.15**	**258**	⇓*i*P	**Pg**	**01 27 53.3**	**-0.1**
	baz=245						
NACB				*i* S	**Sg**	**01 27 55.9**	**0.0**
	baz=245						
TWD	**Chiawan**	**0.20**	**230**	⇓*i*P	**Pg**	**01 27 54.0**	**-0.1**
	baz=225						
TWD				*i* S	**Sg**	**01 27 57.3**	**+0.3**
	baz=225						
ENA	**Nanau**	**0.22**	**355**	⇓*i*P	**Pg**	**01 27 54.5**	**-0.1**
	baz=360						
ENA				*i* S	**Sg**	**01 27 57.6**	**-0.1**
	baz=360						
EWUT	**Wuta**	**0.24**	**4**	P	**Pg**	**01 27 54.8**	**0.0**
	baz=7.0						
EWUT				*e*S	**Sg**	**01 27 58.5**	**+0.3**
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.25**	**270**	⇓*i*P	**Pg**	**01 27 55.1**	**0.0**
	baz=268						
ETLH				*i* S	**Sg**	**01 27 58.7**	**-0.1**
	baz=268						
HWA	**Hwalien**	**0.27**	**212**	*e*P	**Pb**	**01 27 56.3**	**-0.3**
	baz=217						
HWA				S	**Sb**	**01 28 01.3**	**+0.1**
	baz=217						
LATG	**Datong**	**0.39**	**327**	⇓*i*P	**Pg**	**01 27 57.7**	**+0.1**
	baz=327						
LATG				*i* S	**Sg**	**01 28 02.3**	**-0.5**
	baz=327						
TWC	**Suao**	**0.41**	**11**	⇓*i*P	**Pg**	**01 27 57.9**	**0.0**
	baz=7.0						
TWC				*i* S	**Sg**	**01 28 03.6**	**+0.2**
	baz=7.0						
NNSB	**Datong**	**0.41**	**303**	⇓*i*P	**Pg**	**01 27 58.1**	**+0.1**
	baz=302						
NNSB				*i* S	**Sg**	**01 28 03.5**	**+0.1**
	baz=302						
NNS	**Nan Shan**	**0.42**	**303**	⇓*i*P	**Pg**	**01 27 58.3**	**+0.1**
	baz=303						
NNS				*i* S	**Sg**	**01 28 04.1**	**+0.2**
	baz=303						

NDS	Dongshan baz=356	0.43	355	⇓*i*P	Pg	01 27 58.4	+0.1
NDS	baz=356			*i* S	Sg	01 28 03.3	-0.6
WHF	Hehuan Shan baz=261	0.46	262	⇓*i*P	Pg	01 27 58.9	0.0
WHF	baz=261			S	Sg	01 28 04.8	-0.3
ENTT	Nioudou baz=339	0.47	338	⇓*i*P	Pg	01 27 59.2	+0.2
ENTT	baz=339			*i* S	Sg	01 28 05.5	+0.3
ESL	Shilin baz=225	0.49	217	*e*P	Pg	01 27 59.4	-0.1
TWE	Neicheng baz=353	0.52	351	⇓*i*P	Pg	01 28 00.2	+0.2
TWE	baz=353			*i* S	Sg	01 28 07.3	+0.4
TWT	Tachien baz=274	0.54	275	*i* P	Pb	01 28 00.9	-0.4
TWT	baz=274			*i* S	Sb	01 28 08.0	-1.1
TDCB	Techi baz=274	0.55	275	⇓*i*P	Pb	01 28 01.0	-0.6
TDCB	baz=274			*i* S	Sg	01 28 07.8	-0.1
CHGB	Renai baz=247	0.56	255	⇓*i*P	Pb	01 28 00.9	-0.7
CHGB	baz=247			*i* S	Sb	01 28 08.8	-0.9
ILA	Ilan baz=355	0.56	359	*e*P	Pg	01 28 00.6	-0.1
ILA	baz=355			*e*S	Sb	01 28 09.1	-0.4
FUSB	Fushanzhiwuyua baz=345	0.57	344	⇓*i*P	Pg	01 28 01.2	+0.2
FUSB	baz=345			S	Sg	01 28 07.7	-0.9
YHNB	Yeheng baz=323	0.58	323	⇓*i*P	Pb	01 28 01.4	-0.6
YHNB	baz=323			S	Sg	01 28 08.6	-0.2
OWD	Renai baz=244	0.59	245	*e*P	Pg	01 28 01.4	0.0
OWD	baz=244			*e*S	Sg	01 28 09.2	0.0
NSK	Sanguang baz=322	0.59	322	⇓*i*P	Pb	01 28 01.6	-0.6
NSK	baz=322			S	Sg	01 28 09.1	-0.1
NWLT	Wulai baz=338	0.61	338	⇓*i*P	Pb	01 28 02.1	-0.5
NWLT	baz=338			*i* S	Sg	01 28 10.1	+0.1
EGFH	Guangfu baz=216	0.62	210	P	Pg	01 28 01.9	+0.1
EGFH	baz=216			*e*S	Sb	01 28 11.7	+0.5
WUSB	Renai baz=242	0.62	250	⇓*i*P	Pb	01 28 02.2	-0.6
WUSB	baz=242			S	Sg	01 28 09.3	-1.0
NTC	Toucheng baz=6.0	0.65	6	⇓P	Pg	01 28 02.5	+0.1
NTC	baz=6.0			*i* S	Sg	01 28 10.6	-0.4
EGS	baz=23	0.65	14	*e*P	Pg	01 28 02.7	+0.2
EGS	baz=23			*e*S	Sg	01 28 11.9	+0.7
NFF	Wufeng Townshi baz=306	0.72	306	*e*P	Pb	01 28 04.3	-0.2
NFF	baz=306			S	Sg	01 28 13.2	-0.2
VWDT	VWDT baz=231	0.72	232	*e*P	Pg	01 28 03.8	-0.1
VWDT	baz=231			*e*S	Sb	01 28 14.2	-0.1
WHP	Taichung City baz=275	0.75	276	*e*P	Pb	01 28 04.8	0.0
WHP	baz=275			S	Sb	01 28 14.6	-0.5
TIPB	Shuangxi baz=5.0	0.76	4	⇓*i*P	Pg	01 28 04.7	+0.1
TIPB	baz=5.0			*i* S	Sg	01 28 13.5	-1.2
HGSD	Ruisui baz=217	0.78	203	P	Pb	01 28 05.2	-0.1
HGSD	baz=217			*e*S	Sn	01 28 17.9	-0.4
NHDH	Xindian Distri baz=344	0.78	344	*e*P	Pb	01 28 05.1	-0.3
NHDH	baz=344			*e*S	Sg	01 28 14.8	-0.4
TWA	Mucha baz=349	0.79	348	*e*P	Pb	01 28 05.4	-0.1
TWA	baz=349			*e*S	Sg	01 28 15.1	-0.2
WCS	Beigang Elemen baz=259	0.79	259	*e*P	Pb	01 28 05.4	-0.1
WCS	baz=259			*e*S	Sg	01 28 13.9	-1.5
EHY	Hungye baz=219	0.81	210	*e*P	Pg	01 28 04.6	-0.8
EHY	baz=219			*e*S	Sb	01 28 17.8	+1.2
LIOB	Emei baz=303	0.81	303	*e*P	Pb	01 28 06.2	+0.3
LIOB	baz=303			*e*S	Sb	01 28 16.9	+0.2
NSTT	Nanjuang baz=301	0.81	302	*e*P	Pb	01 28 05.9	0.0
NSTT	baz=301			*e*S	Sb	01 28 16.7	-0.2
TWB1	Santiao Chiao baz=16	0.82	15	P	Pg	01 28 05.5	-0.3
TWB1	baz=16			*e*S	Sg	01 28 15.6	-1.0
SSLB	Suanglung baz=249	0.85	241	⇓*i*P	Pg	01 28 06.0	-0.2
SSLB	baz=249			S	Sg	01 28 16.7	-0.6
SMLT	Sun Moon Lake baz=238	0.85	248	*e*P	Pb	01 28 06.4	-0.2
SMLT	baz=238			S	Sg	01 28 17.1	-0.3
NWF	Wu-fen Shan baz=354	0.86	1	*i* P	Pb	01 28 06.8	0.0
NWF	baz=354			S	Sg	01 28 17.8	+0.1
TYC	Yuchr baz=241	0.88	250	*e*P	Pb	01 28 07.0	-0.1
TYC	baz=241			*e*S	Sg	01 28 17.9	-0.4
SXI1	Grass Mountain baz=354	0.89	7	*e*P	Pg	01 28 07.1	+0.1
TWQ1	Liyutan baz=279	0.91	279	*e*P	Pn	01 28 08.8	+0.3
TWQ1	baz=279			*e*S	Sn	01 28 20.8	-0.9
SBCB	Hsinchu baz=310	0.92	310	*e*P	Pn	01 28 09.0	+0.4
YULB	Yu-li baz=218	0.92	208	*e*P	Pg	01 28 06.0	-1.5
YULB	baz=218			*e*S	Sn	01 28 21.3	-0.5
NCU	National Centr baz=326	0.92	326	*e*P	Pn	01 28 08.8	+0.1
NCU	baz=326			*e*S	Sn	01 28 21.8	-0.1
NCUH	Zhongli baz=325	0.92	325	*e*P	Pn	01 28 08.9	+0.2
NCUH	baz=325			*e*S	Sn	01 28 21.9	+0.1
HSN	Hsinchu baz=302	0.93	310	*e*P	Pn	01 28 09.0	+0.2
HSN	baz=302			*e*S	Sn	01 28 21.7	-0.4
NSY	Sanyi baz=283	0.94	283	P	Pn	01 28 09.1	+0.2
NSY	baz=283			*e*S	Sn	01 28 22.1	-0.1
NMLH	Miaoli baz=290	0.94	291	*e*P	Pn	01 28 09.9	+0.9
NMLH	baz=290			*e*S	Sn	01 28 21.5	-0.9
TWS1	Kuangyinshan baz=349	0.94	341	*e*P	Pn	01 28 09.0	0.0
TWS1	baz=349			*e*S	Sn	01 28 22.2	-0.2
EYUL	Yuli baz=220	0.95	205	*e*P	Pb	01 28 08.0	-0.2
YM01	YM01 baz=350	0.95	350	*e*P	Pb	01 28 08.4	+0.1
YM01	baz=350			*e*S	Sg	01 28 20.2	-0.4
TCU	Taichung baz=267	0.99	267	*e*P	Pn	01 28 11.0	+1.4
ANP	Anpu baz=348	1.00	347	*e*P	Pb	01 28 09.4	+0.3
WJS	Zhushan baz=243	1.02	248	*e*P	Pn	01 28 10.2	+0.2
WJS	baz=243			*e*S	Sn	01 28 24.4	+0.1
YUS	Yu-Shan baz=226	1.03	226	P	Pb	01 28 09.7	-0.2
YUS	baz=226			*e*S	Sb	01 28 24.3	+0.7
WDJ	Dajia District baz=278	1.03	278	*e*P	Pn	01 28 10.5	+0.4
WNT1	Nantou City baz=249	1.03	253	*e*P	Pb	01 28 09.7	+0.1
WNT1	baz=249			*e*S	Sn	01 28 24.8	+0.2
WNT	Mingjian baz=247	1.04	252	*e*P	Pn	01 28 10.8	+0.6
WNT	baz=247			*e*S	Sn	01 28 25.5	+0.8
TWY	Chenhua baz=4.0	1.07	352	*e*P	Pn	01 28 11.5	+0.7
FULB	Fuli baz=218	1.09	203	*e*P	Pg	01 28 10.3	-0.6
WCHH	Zhanghua baz=264	1.10	264	*e*P	Pn	01 28 11.3	+0.2
JYNG	Yonagunijimaku	1.11	77	*e*P	Pg	01 28 11.1	-0.1
JYNG				S	Sn	01 28 26.9	+0.5
ALS	Alishan baz=232	1.12	232	*e*P	Pn	01 28 11.5	-0.1
ALS	baz=232			*e*S	Sb	01 28 26.4	+0.5
CHN5	Tsauling baz=240	1.16	239	*e*P	Pn	01 28 12.5	+0.5
CHN5	baz=240			*e*S	Sn	01 28 29.9	+2.0
YOJ	Yonaguni jima baz=66	1.17	77	*e*P	Pb	01 28 11.6	-0.4
YOJ	baz=66			*e*S	Sb	01 28 27.6	+0.5
YOJ	Yonaguni jima	1.17	77	P	Pb	01 28 11.9	0.0
YOJ				*e*S	Sn	01 28 28.6	+0.6
ELDTW	Lidau baz=227	1.22	214	*e*P	Pb	01 28 12.0	-1.0
ELDTW	baz=227			*e*S	Sn	01 28 29.8	+0.4
WDLH	Douliu baz=246	1.23	245	*e*P	Pg	01 28 13.7	+0.2
EDH	Donghe baz=186	1.30	199	*e*P	Pn	01 28 12.0	-1.8
WRL	Guolierlin Hig baz=257	1.30	257	*e*P	Pg	01 28 14.6	-0.2
WRL	baz=257			*e*S	Sn	01 28 33.9	+2.6
CHN2	Minshiung baz=242	1.35	241	*e*P	Pn	01 28 13.3	-1.3
WTK	Tuku baz=261	1.36	248	*e*P	Pg	01 28 16.0	+0.1
WTK	baz=261			*e*S	Sg	01 28 34.8	+1.2
CHN4	Tsaushan baz=233	1.37	232	*e*P	Pg	01 28 16.1	0.0
CHN4	baz=233			*e*S	Sg	01 28 36.8	+2.9
STYH	Taoyuan baz=223	1.37	221	*e*P	Pg	01 28 15.7	-0.5
STYH	baz=223			*e*S	Sg	01 28 34.3	+0.4
TPUB	Ta-pu baz=231	1.37	229	*e*P	Pg	01 28 16.1	-0.1
TPUB	baz=231			*e*S	Sg	01 28 35.0	+0.9
CHY	Chiayi baz=241	1.41	240	*e*P	Pg	01 28 17.4	+0.4
LONT	Longtian baz=206	1.42	204	*e*P	Pb	01 28 16.0	-0.3
WTP	Ta-pu baz=230	1.42	228	*e*P	Pg	01 28 16.9	-0.3
WTP	baz=230			*e*S	Sg	01 28 35.7	+0.1
TWG	Pinlang baz=190	1.52	205	*e*P	Pn	01 28 16.8	-0.1
TWGBT	Beinan baz=190	1.52	204	*e*P	Pn	01 28 17.1	+0.3
WSF	Szhu baz=249	1.52	248	*e*P	Pn	01 28 16.4	-0.4
SNST	Tainan City baz=232	1.52	230	*e*P	Pg	01 28 19.3	+0.3
CHN1	Nanshi baz=230	1.52	228	*e*P	Pg	01 28 18.6	-0.5
WSL	Shuilin Townsh baz=246	1.56	244	*e*P	Pb	01 28 18.3	-0.3
WSL	baz=246			*e*S	Sg	01 28 39.8	-0.2
ICHU	Yijhu baz=240	1.60	238	*e*P	Pb	01 28 19.4	+0.1
SCST	Cishan baz=225	1.76	222	*e*P	Pb	01 28 22.2	+0.2
SSD	Sandimen baz=230	1.79	216	*e*P	Pb	01 28 22.2	-0.3
IRIF	Iriomote-Funau	1.80	86	P	Pn	01 28 20.8	0.0
TSMG	Majia baz=229	1.81	215	*e*P	Pb	01 28 22.1	-0.9
TSMG	baz=229			*e*S	Sb	01 28 45.3	-0.3
HATJ	Hateruma jima	1.87	94	*e*P	Pn	01 28 21.9	+0.1
MASBT	Mashibuluo baz=205	1.90	213	*e*P	Pn	01 28 22.9	+0.9
JKRS	Kuro-shima	2.05	89	P	Pn	01 28 24.7	+0.5
PNG	Penghu baz=255	2.12	253	*e*P	Pb	01 28 26.6	-1.5
PHUB	P'eng-hu baz=254	2.12	251	*e*P	Pn	01 28 25.7	+0.6
SLIU	Shizi baz=194	2.17	204	*e*P	Pn	01 28 26.6	+0.8
JIJ	Ishigaki jima	2.18	85	P	Pn	01 28 25.7	-0.2
JIJ				*e*S	Sn	01 28 52.6	-0.3
VWUC	VWUC baz=278	2.24	291	*e*P	Pn	01 28 26.2	-0.6
JISG	Ishigakijimahi	2.36	80	S	Sn	01 28 57.7	+0.4
KNM	Kinmen baz=274	3.04	275	*e*P	Pn	01 28 39.4	+1.6
KNMB	Chin-men Tao baz=275	3.09	275	*e*P	Pn	01 28 38.1	-0.3

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*ISK **01** 01:30:29.8, 39°.72N×27°.91E, h5^{km}, ML2.8/28*
*DDA **01** 01:30:29.6±0.0, 39°.65N×27°.85E, h7^{km}±2^{km}, ML2.0*
ISC 01 01:30:29.9±1.0**, 39°.67N**±0°.02×**27°.87E**±0°.02**, h8**^{km}±9^{km}**, n46, σ0^s.61**/65**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALY	Balya	0.20	289	P	Pg	01 30 34.2	+0.2
BALY	comp=N,224nm,0.4s			*i* AML	AML	01 30 37.0	
BALY	comp=E,185nm,0.4s			*i* AML	AML	01 30 37.0	
BALY				S	Sg	01 30 37.4	+0.6
STEP	BALIKESIR_Sava	0.32	202	P	Pg	01 30 35.9	-0.3
STEP				S	Sg	01 30 40.8	+0.4
STEP	comp=N,212nm,0.6s			*i* AML	AML	01 30 41.0	
STEP	comp=E,320nm,0.3s			*i* AML	AML	01 30 41.0	
GONE	Gonen-Balikesi	0.40	339	PG	Pg	01 30 38.1	+0.4
GONE				SG	Sb	01 30 44.5	-1.0
DURS	Dursunbey	0.47	99	P	Pg	01 30 39.3	+0.2
DURS	comp=N,297nm,0.4s			*i* AML	AML	01 30 46.0	
DURS	comp=E,200nm,0.4s			*i* AML	AML	01 30 46.0	
DURS				S	Sb	01 30 46.2	-1.5
DST	Dursunbey	0.58	97	PG	Pb	01 30 41.8	-0.6
BUHA	Balikesir, Bur	0.64	255	P	Pg	01 30 41.7	-0.4
BUHA				S	Sg	01 30 50.6	+0.2
BUHA	comp=N,71nm,0.4s			*i* AML	AML	01 30 54.0	
BUHA	comp=E,103nm,0.3s			*i* AML	AML	01 30 55.0	
EDC	Edincik	0.67	360	PG	Pb	01 30 43.1	-0.8
EDC				SG	Sb	01 30 52.9	-0.5
KCTX	Karacabey (Bur	0.70	32	PG	Pg	01 30 43.3	-0.1
KCTX				SG	Sb	01 30 53.1	-1.1
AKHS	Akhisar	0.79	183	P	Pg	01 30 44.9	-0.2
AKHS				S	Sg	01 30 56.4	+0.9
AKHS	comp=E,60nm,0.3s			*i* AML	AML	01 30 58.0	
KRBG	Karabiga-Canak	0.84	329	PG	Pb	01 30 47.0	+0.2
ORLT	Orhaneli	0.87	64	PG	Pb	01 30 46.8	-0.6
DEMI	Demirci	0.91	134	P	Pb	01 30 47.6	-0.4
DEMI				S	Sg	01 30 59.2	0.0
DEMI	comp=N,49nm,0.3s			*i* AML	AML	01 31 03.0	
DEMI	comp=E,113nm,0.2s			*i* AML	AML	01 31 03.0	
ZEDA	zmir-Bergama	0.94	221	P	Pg	01 30 47.3	-0.6
ZEDA				S	Sb	01 31 01.4	+0.5
ZEDA	comp=E,55nm,0.4s			*i* AML	AML	01 31 02.0	
ZEDA	comp=N,57nm,0.3s			*i* AML	AML	01 31 04.0	
MRMT	Marmara Adasi	0.95	347	PG	Pb	01 30 48.5	-0.2
AYVA	Ayvalik	0.98	249	P	Pg	01 30 48.2	-0.5
AYVA				S	Sg	01 31 01.9	+0.4
AYVA	comp=E,60nm,0.7s			*i* AML	AML	01 31 05.0	
AYVA	comp=N,70nm,0.4s			*i* AML	AML	01 31 06.0	
BAYC	CANAKKALE_Bayr	1.02	274	P	Pg	01 30 48.7	-0.8
BAYC				S	Sg	01 31 02.0	-0.8
BAYC	comp=E,71nm,0.4s			*i* AML	AML	01 31 04.0	
BAYC	comp=N,79nm,0.3s			*i* AML	AML	01 31 05.0	
SMAA	Simav-Kutahya	1.03	123	PG	Pn	01 30 50.9	+0.1
MDNY	Mudanya-Bursa	1.04	48	PG	Pb	01 30 49.9	-0.3
SIMA	Simav-Kutahya	1.04	124	PG	Pn	01 30 50.7	-0.3
SIMA				SG	Sn	01 31 06.5	+0.7
ULDT	Uludag	1.08	64	P	Pb	01 30 50.6	-0.3
ULDT				S	Sb	01 31 05.8	+0.4
ULDT	comp=N,84nm,0.2s			*i* AML	AML	01 31 07.0	
ULDT	comp=E,72nm,0.5s			*i* AML	AML	01 31 08.0	
MAR6	Marsite Statio	1.13	336	PN	Pn	01 30 52.2	+0.1
RKY	Sarkoy-Tekirda	1.14	333	PN	Pb	01 30 51.9	-0.1
GZKV	Gazikoy-Tekird	1.15	339	PN	Pn	01 30 52.6	+0.3
STBT	Saitabat	1.15	65	P	Pb	01 30 51.9	-0.2
MAR3	Marsite Statio	1.16	338	PN	Pn	01 30 52.8	+0.4
ARMT	Armutlu	1.17	40	PN	Pn	01 30 52.4	-0.3
SHAP	Saphane-Kutahy	1.23	121	PN	Pn	01 30 53.8	+0.2
TVSB	Tavsanli	1.25	100	PN	Pn	01 30 54.0	+0.2
USAK	Uak-Merkez	1.31	137	P	Pn	01 30 54.5	-0.1
USAK				S	Sn	01 31 12.3	+0.1
USAK	comp=E,12nm,0.6s			*i* AML	AML	01 31 13.0	
USAK	comp=N,8.4nm,0.3s			*i* AML	AML	01 31 13.0	
TKR	Tekirdag	1.34	349	PN	Pg	01 30 55.9	+0.3
KOCA	Canakkale, Ayv	1.35	263	P	Pg	01 30 55.6	-0.1
KOCA				S	Sb	01 31 13.0	+0.1
KOCA	comp=N,35nm,0.2s			*i* AML	AML	01 31 15.0	
KOCA	comp=E,47nm,0.5s			*i* AML	AML	01 31 15.0	
TRML	Termal-Yalova	1.37	46	PN	Pg	01 30 56.0	-0.1
TRML				SN	Sn	01 31 15.2	+1.5
GDZ	Gediz	1.38	115	P	Pg	01 30 56.3	0.0
GDZ				S	Sb	01 31 13.8	-0.1
GDZ	comp=E,22nm,0.3s			*i* AML	AML	01 31 16.0	
GDZ	comp=N,12nm,0.3s			*i* AML	AML	01 31 16.0	
YLV	Yalova	1.46	52	PN	Pg	01 30 57.6	-0.3
SLVT	Silivri	1.58	9	PN	Pb	01 30 58.9	-0.4
ADVT	Abdulvahap	1.62	61	PN	Pb	01 30 59.9	-0.2
CTKS	Kestanelik-??a	1.64	17	PN	Pb	01 30 59.9	-0.4
CTKS				SN	Sg	01 31 21.8	-0.7
KAVV	Kandilli-Istan	1.66	33	PN	Pb	01 31 00.5	-0.2
ISK	Istanbul-Kandi	1.66	33	PN	Pb	01 31 00.1	-0.7
AUBOZ	BOZOYUK	1.68	81	PN	Pb	01 31 00.7	-0.5
HRT	Hereke	1.79	50	PN	Pb	01 31 02.0	-1.0
KLYT	Kilyos	1.81	29	PN	Pb	01 31 02.9	-0.5
BORA	Eskisehir	2.00	83	PN	Pn	01 31 05.2	+1.1
SILT	Sile	2.00	42	PN	Pb	01 31 05.4	-1.2
SAUV	Serdivan-Sakar	2.16	60	PN	Pn	01 31 07.3	+1.1
GULT	Gulveren	2.17	69	PN	Pn	01 31 07.6	+1.2

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*IDC **01** 01:41:22.3±3.0, 14°.20N×91°.94W, h0^{km}, mb3.7/4, mbtmp3.6/6, ML3.1/2, MS3.4/2, Error ellipse: s-maj=98.9km s-min=20.1km az=33.0*
ISC 01 01:41:28.1±2.3**, 14°.1N**±0°.4×**92°.1W**±0°.3**, h54**^{km}**, n9, σ1^s.16**/8**, mb3.8**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero 0.7nm,0.3s,baz=158,slow=11,SNR=7.1	4.06	319	Pn	Pn	01 42 25.9	-1.8
CMIG	1.9nm,0.3s,baz=117,slow=16,SNR=2.7			Sn	Sn	01 43 14.6	+0.7
CMIG	2.5nm,0.3s,baz=237,slow=23,SNR=2.4 1.9nm,0.2s			Lg	Lg	01 43 30.6	
TXAR	Lajitas Array baz=149,slow=9.5,SNR=3.0 0.2nm,0.6s	18.61	327	P	Pn	01 45 41.8	-0.2
LPIG	La Paz 25nm,0.3s,baz=174,slow=2.0,SNR=3.7	19.90	303	P	P	01 45 55.3	+0.1
SDV	Santo Domingo 2.1nm,0.4s,baz=276,slow=9.2,SNR=5.8 2.1nm,0.4s	21.63	101	P	P	01 46 13.6	-0.5
TKL	Tuckaleechee C comp=Z,54nm,18.4s,baz=172,slow=37	22.78	18	LR	LR	01 55 25.3	
NVAR	Mina Array Bea 0.9nm,0.8s,baz=146,slow=8.3,SNR=5.1 0.9nm,0.8s	33.59	321	P	P	01 48 04.4	+1.0
LPAZ	La Paz comp=Z,86nm,19.9s,baz=320,slow=34	38.32	141	LR	LR	02 03 26.5	
YKA	Yellowknife Ar 0.4nm,0.7s,baz=145,slow=7.4,SNR=5.8 0.4nm,0.7s	50.96	347	P	P	01 50 23.6	-0.4
INK	Inuvik 1.8nm,1.0s,baz=130,slow=7.2,SNR=4.0 1.8nm,1.0s	60.37	344	P	P	01 51 32.5	+1.3

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*BJI **01** 01:42:53.1±0.0, 23°.27S×179°.40E, h530^{km}, mb4.9/55, mB5.0/31*
*NOU **01** 01:42:53.0, 23°.63S×179°.51E, h543^{km}, ML4.8/100, South of Fiji Islands*
*NEIC **01** 01:42:54.8±2.0, 23°.60S±0°.08×179°.23E±0°.06, h542^{km}±4^{km}, mb4.9/161, Error ellipse: s-maj=11.8km s-min=8.4km az=164.0*
*IDC **01** 01:42:54.1±0.3, 23°.62S×179°.16E, h538^{km}±3^{km}, mb4.3/31, mbtmp5.1/34, Error ellipse: s-maj=8.1km s-min=7.7km az=13.0*
*GCMT **01** 01:42:55.8±0.2, 23°.75S±0°.02×179°.27E±0°.02, h542^{km}±1^{km}, MW5.4/127, Moment Tensor Solution. s127,c197; Duration: 1^s.3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.47±.03; $M_{\theta\theta}$0.56±.05; $M_{\phi\phi}$0.91±.05; $M_{r\theta}$0.99±.05; $M_{\theta\phi}$-0.77±.04; $M_{\phi r}$-0.43±.05; Best double couple: $M_0$1.84700×10^{17} NP1:ϕ_s156.00000°, δ31.00000°, λ-63.00000°. NP2:ϕ_s306.00000°, δ63.00000°, λ-105.00000°. Principal axes: T 1.8160, Plg17.0000°, Azm47.0000°; N 0.0620, Plg13.0000°, Azm313.0000°; P -1.8770, Plg68.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 01 01:42:53.7±0.3**, 23°.64S**±0°.03×**179°.30E**±0°.03**, h543**^{km}±2^{km}**, h544**^{km}**:pP-P, n902, σ1^s.60**/1080**, mb5.0**/161**, 67C-139D, Fault plane solution: NP1:**ϕ_s331.21445°**,** δ72.99970°, λ-92.59106°. **NP2:**ϕ_s160.01273°**,** δ17.19086°, λ-81.58903°. **Principal axes:** T Plg27.9548°, Azm63.2884°**;** N Plg2.4778°, Azm331.9725°**;** P Plg61.9161°, Azm237.3209°**; South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.99	349	P	P	01 44 31.4	-0.8
	120nm,0.5s,baz=152,slow=9.0,SNR=30						
MSVF				S	S	01 45 51.2	-1.3
	105nm,1.0s,baz=149,slow=18,SNR=0.9						
MSVF	Nonsavu	5.99	349		P	01 44 30.1	-2.1
MSVF	Nonsavu	5.99	349	P	P	01 44 31.9	-0.3
RIZ	Raoul Island	6.11	157	S	S	01 45 53.8	-0.3
RAO	Raoul Island	6.12	157	P	P	01 44 34.2	+1.2
	105nm,0.2s,baz=265,slow=22,SNR=2.0						
RAO				S	S	01 45 54.2	-0.1
	270nm,0.3s,baz=98,slow=20,SNR=4.7						
RAO	Raoul Island	6.12	157	P	P	01 44 33.9	+0.9
GLKZ	Green Lake	6.13	157	P	P	01 44 34.5	+1.4
GLKZ				S	S	01 45 50.3	-4.2
MARNC	Mare, Loyalty	10.63	279		P	01 45 17.6	-0.6
MARNC	Mare, Loyalty	10.63	279	P	P	01 45 18.6	+0.5
PINNC	Pines Island,	10.96	273		P	01 45 22.1	+0.6
PINNC	Pines Island,	10.96	273	P	P	01 45 23.0	+1.5
NIUE	Niue	11.02	68	P	P	01 45 21.7	-0.4
	baz=11						
NIUE				S	S	01 47 24.9	+0.7
	baz=11						
NIUE	Niue	11.02	68	P	P	01 45 21.8	-0.4
NIUE	Niue	11.02	68	P	P	01 45 21.0	-1.1
NFK	Norfolk Island	11.52	240	P	P	01 45 29.4	+2.2
	baz=12						
NFK	Norfolk Island	11.52	240	P	P	01 45 29.1	+1.9
LIFNC	LIFOU	11.53	282		P	01 45 27.0	-0.4
OUENC	Ouen Island, N	11.54	274		P	01 45 28.4	+0.9
OUENC	Ouen Island, N	11.54	274	P	P	01 45 29.3	+1.8
YATNC	Mamie plateau,	11.55	275	P	P	01 45 29.5	+1.8
ONTNC	Ouen Toro	11.91	274		P	01 45 31.8	+0.5
ONTNC	Ouen Toro	11.91	274	P	P	01 45 32.6	+1.2
DZM	Mont Dzumac	11.96	275	P	P	01 45 32.5	+0.6
	26nm,0.5s,baz=99,slow=16,SNR=33						
DZM				S	S	01 47 42.2	+0.1
	6.1nm,0.7s,baz=114,slow=23,SNR=0.8						
DZM	Mont Dzumac	11.96	275	*e*LR	LR	01 47 19.2	
	comp=Z,2µm,26.4s						
DZM	Mont Dzumac	11.96	275		P	01 45 32.2	+0.3
DZM	Mont Dzumac	11.96	275	P	P	01 45 33.4	+1.4
NOUC	Port Laguerre	12.08	275	P	P	01 45 34.0	+0.9
OUZ	Omahuta	12.56	202	P	P	01 45 39.8	+1.9
AFI	Afiamalu	12.84	43	P	P	01 45 38.0	-3.2
	345nm,0.6s,baz=215,slow=16,SNR=27						
AFI				S	S	01 47 52.4	-6.7
	44nm,0.5s,baz=205,slow=23,SNR=3.2						
AFI	Afiamalu	12.84	43	P	P	01 45 37.8	-3.5
AFI	Afiamalu	12.84	43	P	P	01 45 38.2	-3.0
WCZ	Waipu Caves	12.99	198	P	P	01 45 43.7	+1.4
KUZ	Kuaotunu	13.42	192	P	P	01 45 48.2	+1.4
MXZ	Matakaoa Point	13.90	183	P	P	01 45 50.4	-1.4
HAZ	Te Kaha	14.13	185	P	P	01 45 51.8	-2.4
HAZ				S	S	01 48 19.1	-3.7
WMGZ	Waiomatatini S	14.15	183	P	P	01 45 52.4	-2.0
WMGZ				S	S	01 48 20.2	-3.0
PKGZ	Pakihiroa	14.24	184	P	P	01 45 52.2	-3.2
WHRZ	Whale Island	14.31	187	P	P	01 45 56.9	+0.9
WHRZ				S	S	01 48 26.3	0.0
RUGZ	Raukumara Rang	14.35	185	P	P	01 45 53.7	-2.8
RUGZ				S	S	01 48 20.4	-6.8
PUZ	Puketiti	14.41	183	P	P	01 45 54.2	-2.9
PUZ				S	S	01 48 21.4	-6.8
TWGZ	Tauwhareparae	14.54	184	P	P	01 45 55.5	-2.9
TWGZ				S	S	01 48 25.5	-5.1
EDRZ	Edgecumbe	14.59	188	P	P	01 45 57.9	-1.1
EDRZ				S	S	01 48 29.7	-1.9
URZ	Urewera	14.69	187	P	P	01 45 57.1	-2.8
	502nm,0.7s,baz=25,slow=4.4,SNR=201						
URZ				S	S	01 48 25.1	-8.4
	160nm,0.8s,baz=214,slow=19,SNR=26						
URZ	Urewera	14.69	187	P	P	01 45 56.6	-3.3
URZ				S	S	01 48 27.8	-5.6
URZ	Urewera	14.69	187	P	P	01 45 57.8	-2.1
MWZ	Matawai	14.73	185	P	P	01 45 57.9	-2.5
MWZ				S	S	01 48 27.6	-6.6
TKGZ	Te Karaka	14.80	184	P	P	01 45 59.1	-2.0
TKGZ				S	S	01 48 30.6	-4.9
CNGZ	Carnagh Statio	14.83	183	P	P	01 45 58.7	-2.6
CNGZ				S	S	01 48 30.8	-5.1
RAGZ	Rawiri	14.90	186	P	P	01 46 00.5	-1.7
MUGZ	Murupara	14.95	188	P	P	01 45 59.8	-2.9
MUGZ				S	S	01 48 31.9	-6.3
RTZ	Ruatahuna	15.06	187	P	P	01 46 00.8	-3.0
RIGZ	Rimuhau	15.08	185	P	P	01 46 00.6	-3.3
RIGZ				S	S	01 48 35.2	-5.4
SNGZ	Shannon Statio	15.19	186	P	P	01 46 02.5	-2.6
PRGZ	Paritu Road	15.28	184	P	P	01 46 04.4	-1.7
HIZ	Hauiti	15.30	193	P	P	01 46 07.2	+0.9
MTHZ	Maungataniwha	15.31	187	P	P	01 46 01.7	-4.7
MRHZ	Matea Rd	15.35	189	P	P	01 46 01.6	-5.2
RAHZ	Arahi	15.35	187	P	P	01 46 03.8	-2.9
KNZ	Kokohu	15.40	185	P	P	01 46 04.3	-2.9
WHHZ	Waihua	15.49	186	P	P	01 46 01.6	-6.6
NMHZ	Naumai	15.55	187	P	P	01 46 05.9	-3.1
BKZ	Black Stump Fm	15.66	188	P	P	01 46 06.3	-3.7
BKZ	Black Stump Fm	15.66	188	P	P	01 46 07.2	-2.8
ARHZ	Aropaoanui	15.70	187	P	P	01 46 07.7	-2.6
NGZ	Ngauruhoe	15.80	191	P	P	01 46 09.8	-1.8
TUVZ	Tukino	15.88	190	P	P	01 46 10.3	-2.1
FWVZ	Far West T-bar	15.89	191	P	P	01 46 10.9	-1.5
MCHZ	McNeill Hill	15.91	187	P	P	01 46 07.9	-4.5
KWHZ	Kaweka Forest	15.93	188	P	P	01 46 08.3	-4.3
WNVZ	Wahianoa	15.95	190	P	P	01 46 10.6	-2.4
PKVZ	Pokaka	15.96	191	P	P	01 46 12.5	-0.5
MOVZ	Moawhango	16.00	190	P	P	01 46 10.6	-2.8
BHHZ	Black Hill Sta	16.04	189	P	P	01 46 06.3	-7.4
CKHZ	Cape Kidnapper	16.08	186	P	P	01 46 11.7	-2.4
KRHZ	Kereru	16.15	188	P	P	01 46 10.8	-4.0
KAHZ	Kahuranaki	16.24	187	P	P	01 46 12.1	-3.5
PNHZ	Pukenui	16.44	188	P	P	01 46 13.8	-3.7
PXZ	Pawanui	16.47	187	P	P	01 46 14.3	-3.5
WAZ	Wanganui	16.48	192	P	P	01 46 16.2	-1.6
WPHZ	Waipukurau	16.55	188	P	P	01 46 15.5	-3.0
TSZ	Takapari Road	16.61	189	P	P	01 46 16.0	-3.1
PRHZ	Porangahau	16.73	187	P	P	01 46 17.3	-2.8
DVHZ	Dannevirke	16.82	188	P	P	01 46 16.5	-4.5
OHWZ	Ohakea	16.86	191	P	P	01 46 19.9	-1.4
ANWZ	Angora Road	16.94	187	P	P	01 46 20.6	-1.4
POWZ	Post Office Ro	16.97	189	P	P	01 46 20.3	-2.0
BFZ	Birch Farm	17.19	188	P	P	01 46 22.3	-2.0
MRZ	Mangatainoka R	17.26	190	P	P	01 46 21.3	-3.6
OGWZ	Otaki Gorge	17.48	190	P	P	01 46 24.8	-2.2
HOWZ	Holdsworth Sta	17.50	190	P	P	01 46 23.9	-3.3
KIW	Kapiti Island	17.56	191	P	P	01 46 25.0	-2.8
DUWZ	D'Urville Isla	17.70	194	P	P	01 46 27.0	-2.0
CAW	Cannon Point	17.78	191	P	P	01 46 27.2	-2.5
TCW	Tory Channel	18.02	192	P	P	01 46 29.6	-2.3
SNZO	South Karori	18.04	191	P	P	01 46 32.0	0.0
QRZ	Quartz Range	18.06	197	P	P	01 46 32.3	0.0
QRZ	Quartz Range	18.06	197	P	P	01 46 33.2	+0.9
NNZ	Nelson	18.22	194	P	P	01 46 32.5	-1.2
TUWZ	Tuamarina	18.30	193	P	P	01 46 32.3	-2.1
BSWZ	Blackbirch Sta	18.59	193	P	P	01 46 36.9	-0.1
THZ	Tophouse	18.84	195		P	01 46 39.4	-0.1
THZ	Tophouse	18.84	195	P	P	01 46 38.4	-1.1
DSZ	Denniston Nort	19.11	197	P	P	01 46 42.1	+0.2
KHZ	Kahutara	19.33	193	P	P	01 46 42.6	-1.2
RAR	Rarotonga	19.50	87	P	P	01 46 44.4	-1.2
	44nm,0.9s,baz=225,slow=5.4,SNR=4.0						
RAR	Rarotonga	19.50	87	P	P	01 46 44.1	-1.6
RAR				IAmb	IAmb	01 46 46.5	
	comp=Z,62nm,0.9s						
LHI	Lord Howe Isla	19.56	242	P	P	01 46 45.0	-1.1
	baz=20,SNR=4.6						
LTZ	Lake Taylor	19.96	195	P	P	01 46 47.9	-1.7
INZ	Inchbonnie	20.12	197	P	P	01 46 49.8	-1.2
OXZ	Oxford	20.53	195	P	P	01 46 53.0	-1.7
RPZ	Rata Peaks	21.14	197	P	P	01 46 59.4	-0.9
	comp=Z,18nm,0.3s,baz=308,slow=2.4,SNR=44						
RPZ				S	S	01 50 17.6	-2.0
	comp=Z,14nm,0.7s,baz=121,slow=6.8,SNR=2.3						
	comp=Z,18nm,0.3s						
RPZ	Rata Peaks	21.14	197	P	P	01 46 59.7	-0.6
KNTN	Kanton	22.49	24	P	P	01 47 11.2	-1.5
KNTN	Kanton	22.49	24	P	P	01 47 11.6	-1.1
WKZ	Wanaka	22.74	199	P	P	01 47 12.8	-1.9
DCZ	Deep Cove	23.91	201	P	P	01 47 24.9	0.0
DCZ				IAmb	IAmb	01 47 25.9	
	comp=Z,54nm,1.2s						
ARMA	Armidale	25.52	249	P	P	01 47 41.4	+1.8
	baz=26,SNR=45						
ARMA	Armidale	25.52	249	P	P	01 47 40.5	+0.9
ARMA				IAmb	IAmb	01 47 42.0	
	comp=Z,32nm,0.7s						
ARMA	Armidale	25.52	249	P	P	01 47 41.4	+1.8
EIDS	Eidsvold	25.72	260	P	P	01 47 42.0	+0.8
	baz=26,SNR=32						
EIDS	Eidsvold	25.72	260	P	P	01 47 41.3	0.0
EIDS				IAmb	IAmb	01 47 42.7	
	comp=Z,20nm,0.7s						
EIDS					S	01 51 31.4	-0.7
EIDS	Eidsvold	25.72	260	P	P	01 47 42.1	+0.8
NTLH	Newcastle Hard	25.93	243	P	P	01 47 44.8	+1.7
MGCD	Mangrove Creek	26.49	243	P	P	01 47 49.7	+1.8
	baz=26,SNR=49						
MGCD	Mangrove Creek	26.49	243	P	P	01 47 49.8	+1.8
SYDH	Sydney Hard Ro	26.93	242	P	P	01 47 53.6	+1.8
RMQ	Roma	27.78	258	P	P	01 48 01.0	+1.6
	baz=28,SNR=56						
RMQ	Roma	27.78	258	P	P	01 48 01.0	+1.6
TBI	Tubuai	28.62	96	*e*LR	LR	01 54 38.8	
	comp=Z,747nm,27.5s						
CAN	Canberra	28.72	239	P	P	01 48 08.5	+1.0
CAN	Canberra	28.72	239	P	P	01 48 09.1	+1.6
CAN	Canberra	28.72	239	⇓P	P	01 48 08.6	+1.1
CAN				pP	pP	01 49 38.1	+2.7
PAE	Paea	29.68	84	*e*P	P	01 48 16.1	+0.1
	comp=Z,21nm,1.0s						
PPT2	Papeete2	29.71	84	*e*P	P	01 48 16.2	-0.1
	comp=Z,108nm,1.3s						
PPT2				*e*LR	LR	01 55 04.4	
	comp=Z,1µm,25.2s						
PPT	Papeete	29.71	84	P	P	01 48 17.7	+1.5
	comp=Z,32nm,0.4s,baz=37,slow=8.4,SNR=6.8						
	comp=Z,32nm,0.4s						
CMSA	Cobar Meteorol	30.72	248	P	P	01 48 25.7	+1.0
	baz=31,SNR=154						
CMSA	Cobar Meteorol	30.72	248	P	P	01 48 25.8	+1.0
CTA	Charters Tower	30.83	270	P	P	01 48 27.0	+1.1
	comp=Z,150nm,0.5s,baz=96,slow=9.9,SNR=484						
CTA				PcP	PcP	01 51 07.2	+1.0
	comp=Z,22nm,0.8s,baz=134,slow=1.8,SNR=5.9						
	comp=Z,150nm,0.5s						
CTAO	Charters Tower	30.83	270	P	P	01 48 26.4	+0.5
CTAO	Charters Tower	30.83	270	P	P	01 48 27.0	+1.1
CTAO	Charters Tower	30.83	270	⇓P	P	01 48 27.1	+1.1
QLP	Quilpie	31.83	257	P	P	01 48 35.0	+0.7
	baz=32,SNR=63						
QLP	Quilpie	31.83	257	P	P	01 48 35.1	+0.8
TOO	Toolangi	32.05	236	P	P	01 48 37.2	+1.1
	baz=32,SNR=38						
TOO	Toolangi	32.05	236	P	P	01 48 36.3	+0.2
TOO				IAmb	IAmb	01 48 37.7	
	comp=Z,32nm,0.7s						
TOO	Toolangi	32.05	236	P	P	01 48 37.2	+1.1
PMOR	Pomariorio Ree	32.07	80	*e*P	P	01 48 36.6	+0.2
	comp=Z,142nm,1.0s						
CORO	Coronation Par	32.16	229	P	P	01 48 37.6	+0.7
KRVT	Keravat (AS076	32.59	302	P	P	01 48 39.7	-1.2
	comp=Z,72nm,0.7s,baz=210,slow=3.0,SNR=12						
KRVT				S	S	01 53 10.4	-8.1
	comp=Z,18nm,0.6s,baz=158,slow=19,SNR=1.2						
	comp=Z,72nm,0.7s						
TAU	Tasmania Unive	32.65	226	P	P	01 48 40.6	-0.4
TAU				IAmb	IAmb	01 48 42.4	
	comp=Z,44nm,0.7s						
MTSU	Mount Surprise	33.09	273	P	P	01 48 46.0	+0.9
	baz=33,SNR=100						
MTSU	Mount Surprise	33.09	273	P	P	01 48 46.0	+0.9
GEXS	Deakin Univers	33.14	236	P	P	01 48 47.0	+1.7
BRAT	Ballarat	33.24	237	P	P	01 48 47.8	+1.7
PMG	Port Moresby	33.80	289	P	P	01 48 51.6	+0.5
	comp=Z,176nm,0.7s,baz=95,slow=5.0,SNR=58						
PMG				PcP	PcP	01 51 14.7	+0.2
	comp=Z,15nm,0.8s,baz=356,slow=8.8,SNR=3.2						
PMG				S	S	01 53 37.1	+0.2
	comp=Z,8.6nm,0.8s,baz=330,slow=21,SNR=4.1						
	comp=Z,176nm,0.7s						
PMG	Port Moresby	33.80	289	P	P	01 48 50.8	-0.4
PMG	Port Moresby	33.80	289	P	P	01 48 51.7	+0.5
PMG	Port Moresby	33.80	289	⇓P	P	01 48 51.6	+0.5
XMAS	Kiritimati	34.12	45	P	P	01 48 54.0	+0.3
XMAS	Kiritimati	34.12	45	P	P	01 48 53.9	+0.1
STKA	Stephens Creek	34.23	248	P	P	01 48 55.5	+0.9
	comp=Z,36nm,0.6s,baz=94,slow=11,SNR=64						
STKA				PcP	PcP	01 51 16.8	+1.2
	comp=Z,13nm,0.5s,baz=90,slow=4.6,SNR=4.9						
STKA				S	S	01 53 42.5	-0.6
	comp=Z,3.7nm,0.7s,baz=285,slow=18,SNR=2.4						
	comp=Z,36nm,0.6s						
STKA	Stephens Creek	34.23	248	P	P	01 48 55.1	+0.6
STKA					PcP	01 51 15.3	-0.3
ARPS	Mount Arapiles	34.70	239	P	P	01 48 59.1	+0.7
	baz=35,SNR=12						
ARPS	Mount Arapiles	34.70	239	P	P	01 48 59.1	+0.7
INKA	Innaminka	34.89	255	P	P	01 49 01.8	+1.7
COEN	Coen	35.44	279	P	P	01 49 05.7	+0.9
	baz=35,SNR=27						
COEN	Coen	35.44	279	P	P	01 49 05.0	+0.1
COEN				IAmb	IAmb	01 49 06.8	
	comp=Z,36nm,0.8s						
COEN	Coen	35.44	279	P	P	01 49 05.7	+0.9
HTT	Hallett	36.60	245	P	P	01 49 14.7	+0.5
	baz=37,SNR=22						
HTT	Hallett	36.60	245	P	P	01 49 14.7	+0.5
QIS	Mount Isa	36.83	267	P	P	01 49 16.3	0.0
	baz=37,SNR=15						
QIS	Mount Isa	36.83	267	P	P	01 49 16.4	+0.1
TWOA	Tennyson Woods	37.04	243	P	P	01 49 18.2	+0.4
LCRK	Leigh Creek	37.06	250	P	P	01 49 18.6	+0.6
NAPP	Napperby	37.22	246	P	P	01 49 20.0	+0.7
WHYH	Whyalla	37.70	246	P	P	01 49 23.8	+0.7
BBOO	Buckleboo	38.96	247	P	P	01 49 33.1	-0.3
	baz=39,SNR=6.3						
BBOO	Buckleboo	38.96	247	P	P	01 49 32.7	-0.7
BBOO	Buckleboo	38.96	247	P	P	01 49 33.5	+0.1
OOD	Oodnadatta	39.36	254	P	P	01 49 37.9	+1.2
MULG	Mulgathing	40.66	251	P	P	01 49 47.3	+0.2
AS31	Alice Springs	41.44	260	P	P	01 49 53.6	+0.1
AS31				IAmb	IAmb	01 49 55.1	
	comp=Z,42nm,1.2s						
AS31					S	01 55 27.9	-1.9
ASAR	Alice Springs	41.44	260	P	P	01 49 53.2	-0.3
	comp=Z,92nm,0.9s,baz=93,slow=8.1,SNR=371						
ASAR				PcP	PcP	01 51 39.2	+0.7
	comp=Z,23nm,0.9s,baz=105,slow=4.5,SNR=15						
ASAR				S	S	01 55 28.1	-1.8
	comp=Z,9.0nm,0.9s,baz=100,slow=15,SNR=14						
ASAR				PKiKP	PKiKP	01 58 42.4	-1.6
	comp=Z,0.6nm,0.5s,baz=129,slow=1.3,SNR=3.5						
	comp=Z,92nm,0.9s						
ASAR	Alice Springs	41.44	260		PcP	01 51 38.2	-0.3
TAOE	Nuku Hiva Isla	41.45	76	*e*P	P	01 49 54.3	+0.7
	comp=Z,295nm,1.0s						
TAOE	Nuku Hiva Isla	41.45	76	P	P	01 49 54.1	+0.4
WR0	Warramunga Arr	41.60	266	P	P	01 49 54.2	-0.5
WR0				IAmb	IAmb	01 49 55.3	
	comp=Z,57nm,1.0s						
WR0					S	01 55 28.8	-3.2
WRAB	Tennant Creek	41.78	266	P	P	01 49 55.8	-0.3
WRAB	Tennant Creek	41.78	266	P	P	01 49 55.6	-0.5
WRAB	Tennant Creek	41.78	266	⇓P	P	01 49 55.8	-0.3
WRAB				pP	PcP	01 51 40.7	+1.1
WRA	Warramunga Arr	41.78	266	P	P	01 49 55.6	-0.6
	comp=Z,78nm,0.9s,baz=90,slow=5.7,SNR=388						
WRA				pP	pP	01 51 31.4	-0.2
	comp=Z,3.2nm,0.6s,baz=102,slow=7.7,SNR=1.5						
WRA				PcP	PcP	01 51 40.0	+0.4
	comp=Z,16nm,0.9s,baz=100,slow=4.0,SNR=13						
WRA				S	S	01 55 31.0	-3.8
	comp=Z,16nm,1.0s,baz=101,slow=14,SNR=14						
WRA				PKiKP	PKiKP	01 58 43.4	-0.9
	comp=Z,0.8nm,0.5s,baz=75,slow=0.6,SNR=8.0						
	comp=Z,78nm,0.9s						
GENI	Genyem	43.23	293	P	P	01 50 08.0	+0.4
	comp=Z,124nm,1.2s						
KDU	Kakadu	45.62	275	P	P	01 50 25.1	-0.8
	baz=46,SNR=4.7						
KDU	Kakadu	45.62	275	P	P	01 50 25.8	-0.2
FORT	Forrest	45.80	249	P	P	01 50 26.7	-0.3
	baz=46,SNR=112						
FORT	Forrest	45.80	249	P	P	01 50 26.8	-0.3
FORT	Forrest	45.80	249	P	P	01 50 26.9	-0.2
WRKA	Warakurna	46.27	257	P	P	01 50 30.5	-0.3
	baz=46,SNR=293						
WRKA	Warakurna	46.27	257	P	P	01 50 30.8	0.0
MTN	Manton Dam	46.80	274	P	P	01 50 34.3	-0.6
	baz=47,SNR=15						
MTN	Manton Dam	46.80	274	P	P	01 50 33.6	-1.2
MTN				IAmb	IAmb	01 50 34.5	
	comp=Z,26nm,0.8s						
MTN	Manton Dam	46.80	274	P	P	01 50 34.5	-0.4
KNRA	Kununurra	48.05	270	P	P	01 50 44.3	+0.1
	baz=48,SNR=40						
KNRA	Kununurra	48.05	270	P	P	01 50 43.8	-0.4
KNRA	Kununurra	48.05	270	P	P	01 50 44.4	+0.1
KHLU	Kahalu`u	49.31	31	P	P	01 50 53.0	-0.6
HMH	Humu‘ula Sheep	49.52	32	P	P	01 50 55.5	+0.1
DRV	Dumont d'Urvil	49.58	199	⇓P	P	01 50 54.9	+0.2
DRV				pP	PcP	01 52 06.7	+0.4
DRV				pwP	pP	01 52 15.6	-20
HPAH	Hawaii Prepara	49.78	31	P	P	01 50 57.4	+0.4
FAKI	Fak Fak	49.89	287	P	P	01 50 56.9	-1.1
FAKI				IAmb	IAmb	01 50 57.9	
	comp=Z,29nm,0.8s						
FAKI	Fak Fak	49.89	287	P	P	01 50 57.6	-0.3
GUMO	Guam	50.03	314	P	P	01 50 58.8	0.0
	comp=Z,89nm,1.0s,baz=189,slow=19,SNR=2.1						
	comp=Z,89nm,1.0s						
FITZ	Fitzroy Crossi	50.21	266	pP	pP	01 52 42.0	+1.2
	comp=Z,11nm,0.9s,baz=107,slow=8.7,SNR=3.3						
FITZ				S	S	01 57 28.0	-4.3
	comp=Z,2.3nm,0.9s,baz=102,slow=13,SNR=3.9						
SIJI	Sorong	51.74	289	S	S	01 57 52.3	-0.8
	comp=Z,2.1nm,0.3s,baz=270,slow=20,SNR=1.9						
SWI	Sorong	51.75	289	P	P	01 51 11.3	-0.1
	comp=Z,2µmcomp=Z,226nm,0.9s						
MSAI	Masohi	52.62	285	P	P	01 51 17.2	-0.5
	comp=Z,890nmcomp=Z,11nm,0.6s						
AAI	Ambon	53.12	284	P	P	01 51 21.3	0.0
	comp=Z,2µmcomp=Z,92nm,1.1s						
KLBR	Kellerberrin	54.50	247	P	P	01 51 30.4	-0.3
	baz=54,SNR=34						
KLBR	Kellerberrin	54.50	247	P	P	01 51 30.4	-0.3
BATI	Baumata	54.57	274	S	S	01 58 33.7	+3.2
	comp=Z,5.8nm,0.3s,baz=148,slow=20,SNR=1.4						
MEEK	Meekatharra	54.57	253	P	P	01 51 30.6	-0.8
	baz=54,SNR=14						
MEEK	Meekatharra	54.57	253	P	P	01 51 30.8	-0.6
PSA00	Pilbara Seismi	54.58	260	P	P	01 51 30.5	-1.0
PSA00				IAmb	IAmb	01 51 32.2	
	comp=Z,44nm,1.1s						
PSA00	Pilbara Seismi	54.58	260	P	P	01 51 31.0	-0.5
VNDA	Vanda	54.59	185	P	P	01 51 32.0	+1.5
	comp=Z,7.5nm,0.5s,baz=4.7,slow=7.9,SNR=108						
	comp=Z,7.5nm,0.5s						
VNDA	Vanda	54.59	185	P	P	01 51 31.4	+0.9
VNDA	Vanda	54.59	185	⇓P	P	01 51 32.0	+1.4
VNDA				pP	PcP	01 52 26.4	+1.2
SBA	Scott Base	54.60	183	P	P	01 51 32.6	+2.0
SBA				IAmb	IAmb	01 51 34.6	
	comp=Z,118nm,1.1s						
SBA	Scott Base	54.60	183	⇓P	P	01 51 33.3	+2.7
SBA				⇓pP	PcP	01 52 27.1	+1.8
SBA				pwP	pP	01 52 37.9	-36
NWAO	Narrogin (SRO)	54.76	245	P	P	01 51 32.0	-0.5
NWAO				IAmb	IAmb	01 51 33.5	
	comp=Z,48nm,0.8s						
NWAO	Narrogin (SRO)	54.76	245	P	P	01 51 32.6	0.0
NWAO	Narrogin (SRO)	54.76	245	P	P	01 51 32.4	-0.2
RKGY	Rocky Gully	54.77	243	P	P	01 51 32.8	+0.2
	baz=55,SNR=12						
MBWA	Marble Bar	54.78	260	P	P	01 51 32.5	-0.4
MBWA				IAmb	IAmb	01 51 33.5	
	comp=Z,167nm,1.2s						
MBWA	Marble Bar	54.78	260	⇓P	P	01 51 32.5	-0.4
MBWA				pP	pwP	01 53 22.6	+0.8
LBMI	Labuha	55.14	287	P	P	01 51 36.1	+0.6
	comp=Z,63nm,0.7s						
BLDU	Ballidu	55.53	248	P	P	01 51 37.5	-0.5
	baz=56,SNR=41						
BLDU	Ballidu	55.53	248	P	P	01 51 37.4	-0.5
MUN	Mundaring	55.75	246	P	P	01 51 39.4	0.0
	baz=56,SNR=17						
MUN	Mundaring	55.75	246	P	P	01 51 39.4	0.0
SANI	Sanana	55.82	284	P	P	01 51 39.4	-0.8
	comp=Z,960nmcomp=Z,71nm,0.9s						
SANI	Sanana	55.82	284	P	P	01 51 39.6	-0.6
TNTI	Ternate	55.94	288	P	P	01 51 40.5	-0.5
TNTI				IAmb	IAmb	01 51 41.9	
	comp=Z,133nm,1.0s						
TNTI	Ternate	55.94	288	P	P	01 51 41.1	+0.1
	comp=Z,160nm,0.9s						
MORW	Morawa	56.36	250	P	P	01 51 43.5	-0.3
	baz=56,SNR=20						
MORW	Morawa	56.36	250	IAmb	IAmb	01 51 44.5	
	comp=Z,156nm,1.2s						
MORW	Morawa	56.36	250	P	P	01 51 43.5	-0.3
MMRI	Maumere	56.46	275	IAmb	IAmb	01 51 45.4	
	comp=Z,78nm,0.8s						
MMRI	Maumere	56.46	275	P	P	01 51 44.4	-0.2
	comp=Z,88nm,0.9s						
MMRI	Maumere	56.46	275	P	P	01 51 44.5	-0.2
	comp=Z,124nm,1.1s						
BBSI	Bau Bau	57.41	279	P	P	01 51 52.5	+1.4
	comp=Z,8.0nm,0.8s						
CCD	Concordia, Ant	58.81	195	⇓P	P	01 52 00.6	+0.5
CCD				x	x	01 52 42.8	
LUWI	Luwuk	59.14	284	P	P	01 52 02.3	-0.5
LUWI				IAmb	IAmb	01 52 04.1	
	comp=Z,98nm,1.0s						
LUWI	Luwuk	59.14	284	P	P	01 52 02.9	+0.1
	comp=Z,119nm,1.2s						
LUWI	Luwuk	59.14	284	P	P	01 52 03.3	+0.5
	comp=Z,119nm,1.2s						
GIRL	Giralia	59.35	257	P	P	01 52 05.2	+1.1
	baz=59,SNR=11						
GIRL	Giralia	59.35	257	P	P	01 52 04.3	+0.2
GIRL	Giralia	59.35	257	P	P	01 52 05.2	+1.1
BKSI	Bulukumba	59.69	278	P	P	01 52 05.9	-0.6
	comp=Z,1µmcomp=Z,128nm,0.9s						
CASY	Casey	60.06	206	P	P	01 52 08.1	+0.1
CASY				IAmb	IAmb	01 52 09.1	
	comp=Z,113nm,1.1s						
CASY	Casey	60.06	206	⇓P	P	01 52 08.2	+0.1
BNSI	Bone	60.09	279	P	P	01 52 09.7	+0.6
	comp=Z,951nmcomp=Z,70nm,1.3s						
KAPI	Kappang	60.16	278	P	P	01 52 08.8	-0.7
KAPI	Kappang	60.16	278	P	P	01 52 09.7	+0.1
KAPI	Kappang	60.16	278	P	P	01 52 09.5	-0.1
APSI	Ampana	60.20	283	P	P	01 52 10.5	+0.6
	comp=Z,757nmcomp=Z,57nm,1.1s						
PLAI	Plampang	60.47	273	P	P	01 52 11.3	-0.3
	comp=Z,3µmcomp=Z,272nm,0.9s						
PLAI	Plampang	60.47	273	P	P	01 52 11.4	-0.2
MRSI	Marisa	60.57	285	P	P	01 52 11.7	-0.6
	comp=Z,40nm,0.7s						
SPSI	Sidrap Palu	60.57	279	P	P	01 52 11.0	-1.3
	comp=Z,51nm,0.8s						
DAV	Davao City (W)	60.67	293	P	P	01 52 12.0	-0.9
	comp=Z,351nm,0.6s						
TTSI	Tana Toraja	60.91	280	P	P	01 52 15.0	+0.4
	comp=Z,29nm,1.0s						
TOLI2	Tolitoli	61.89	285	P	P	01 52 19.7	-1.3
TOLI2				IAmb	IAmb	01 52 21.2	
	comp=Z,60nm,1.0s						
TOLI2	Tolitoli	61.89	285	P	P	01 52 20.3	-0.7
MPSI	Mapaga	62.33	284	P	P	01 52 23.0	-0.8
	comp=Z,80nm,0.9s						
IGBI	Denpasar	62.88	272	P	P	01 52 27.6	+0.2
	comp=Z,2µmcomp=Z,195nm,1.2s						
JAGI	Jajag, Banyuwa	63.92	272	P	P	01 52 33.0	-1.0
	comp=Z,1µmcomp=Z,94nm,1.1s						
JAGI	Jajag, Banyuwa	63.92	272	P	P	01 52 33.1	-1.0
KMMI	Kalianget	64.63	273	P	P	01 52 38.3	-0.2
	comp=Z,162nm,1.2s						
GMJI	Gumukmas	64.64	272	P	P	01 52 38.1	-0.5
	comp=Z,72nm,1.1s						
BLJI	Banyuglugur	64.70	273	P	P	01 52 39.0	0.0
	comp=Z,53nm,0.8s						
BBKI	Banjar Baru	65.25	277	P	P	01 52 43.2	+0.7
	comp=Z,79nm,1.5s						
MYLDM	Lahad Datu	65.81	288	IAmb	IAmb	01 53 06.0	
	comp=Z,63nm,1.5s						
GRJI	Gresik	66.04	273	P	P	01 52 48.1	+0.7
	comp=Z,2µmcomp=Z,229nm,0.9s						
PWJI	Pagerwojo	66.24	272	P	P	01 52 48.3	-0.3
	comp=Z,112nm,0.8s						
QSPA	South Pole Qui	66.44	180	P	P	01 52 50.6	+1.4

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                comp=Z,77nm,0.6s,baz=341,slow=0.5,SNR=439
                comp=Z,77nm,0.6s
QSPA   South Pole Qui    66.44 180    P        P         01 52 50.5 +1.4
QSPA   South Pole Qui    66.44 180  ⇓P        P         01 52 50.7 +1.5
PCJI   Pacitan           66.75 271    P        P         01 52 51.9 +0.1
                comp=Z,3µmcomp=Z,414nm,0.8s
UGM    Wanagama          67.46 271    P        P         01 52 55.1  -1.1
CMJI   Cimerak           69.41 270    P        P         01 53 07.3  -0.6
                comp=Z,68nm,1.1s
STKI   Sintang           69.77 279    P        P         01 53 11.0 +0.9
JOW    Kunigami          70.34 312    IAmb     IAmb      01 53 15.0
                comp=Z,75nm,1.0s
JOW    Kunigami          70.34 312    P        P         01 53 14.0 +0.8
CNJI   Cibinong          70.80 270    P        P         01 53 15.3  -0.9
                comp=Z,2µmcomp=Z,183nm,0.9s
MJAR   Matsushiro Arr    71.32 326    P        P         01 53 18.4  -0.3
                comp=Z,14nm,0.8s,baz=150,slow=7.3,SNR=27
                comp=Z,14nm,0.8s
MJAR   Matsushiro Arr    71.32 326    P        P         01 53 18.4  -0.3
MAJO   Matsushiro        71.32 326    P        P         01 53 19.3 +0.5
MAJO                                  IAmb     IAmb      01 53 20.2
                comp=Z,24nm,0.9s
MAJO   Matsushiro        71.32 326    P        P         01 53 19.3 +0.5
CBJI   Citeko            71.39 271    P        P         01 53 19.2  -0.5
KSM    Kuching           71.43 280    P        P         01 53 19.4  -0.5
KSM                                   IAmb     IAmb      01 53 21.1
                comp=Z,88nm,1.0s
KSM    Kuching           71.43 280    P        P         01 53 20.2 +0.3
DBJI   Dramaga           71.43 271    P        P         01 53 20.1 +0.2
                comp=Z,180nm,1.1s
JSU    Suzuyama          72.05 317    IAmb     IAmb      01 53 24.3
                comp=Z,41nm,0.7s
YOJ    Yonaguni jima     72.56 307    P        P         01 53 26.4 +0.2
JNU    Nakatsue          72.91 319    IAmb     IAmb      01 53 29.1
                comp=Z,27nm,0.9s
JNU    Nakatsue          72.91 319    P        P         01 53 28.6 +0.6
JHS    Saijyo            72.93 322    P        P         01 53 28.3 +0.3
JHS                                   IAmb     IAmb      01 53 30.3
                comp=Z,84nm,1.3s
TWG    Pinlang           73.04 305    IAmb     IAmb      01 53 27.9
                comp=Z,31nm,0.6s
YULB   Yu-li             73.20 306    IAmb     IAmb      01 53 36.0
                comp=Z,29nm,1.3s
NACB   Ninganchiao       73.43 306    P        P         01 53 30.2  -0.9
NACB                                  IAmb     IAmb      01 53 31.6
                comp=Z,58nm,0.9s
TPUB   Ta-pu             73.64 305    IAmb     IAmb      01 53 31.7
                comp=Z,66nm,0.9s
TPUB   Ta-pu             73.64 305    P        P         01 53 31.4  -1.0
                comp=Z,86nm,1.0s
SSLB   Suanglung         73.68 306    IAmb     IAmb      01 53 32.4
                comp=Z,41nm,0.8s
SSLB   Suanglung         73.68 306    P        P         01 53 31.9  -0.8
PPBI   Pangkal Pinang    73.72 275    P        P         01 53 33.6 +0.5
YHNB   Yeheng            73.89 307    IAmb     IAmb      01 53 34.7
                comp=Z,38nm,0.9s
YHNB   Yeheng            73.89 307    P        P         01 53 34.4 +0.6
KASI   Kota Agung        73.89 271    P        P         01 53 32.9  -1.2
                comp=Z,1µmcomp=Z,136nm,1.0s
TATO   Taipei            73.98 307    P        P         01 53 33.6  -0.6
TATO   Taipei            73.98 307    P        P         01 53 34.3   0.0
LWLI   Liwa              74.49 271    P        P         01 53 37.2  -0.4
                comp=Z,8µmcomp=Z,158nm,0.8s
ASAJ   Asahikawa         75.35 334    P        P         01 53 42.6 +1.1
                comp=Z,15nm,0.8s,baz=116,slow=2.0,SNR=5.5
                comp=Z,15nm,0.8s
MNAI   Manna             75.76 271    P        P         01 53 43.6  -1.0
DSRI   Dabo              75.82 276    P        P         01 53 44.7  -0.2
                comp=Z,31nm,1.0s
BELA   Belgrano 2        76.77 173    P        P         01 53 48.9  -0.1
TJN    Taejon            77.24 319    P        P         01 53 51.5  -0.6
MYKOM  Kota Tinggi       77.41 278    P        P         01 53 53.0  -0.6
MYKOM                                 IAmb     IAmb      01 53 54.4
                comp=Z,36nm,0.7s
KSRS   Korea Array       77.64 320    P        P         01 53 55.5 +1.3
                comp=Z,9.2nm,0.8s,baz=136,slow=5.5,SNR=28
                comp=Z,9.2nm,0.8s
KSAR   Wonju Array Be    77.65 320    P        P         01 53 54.0  -0.3
KS19   Wonju Array Si    77.70 320    IAmb     IAmb      01 53 56.1
                comp=Z,25nm,1.1s
DLV    T  Lat            77.70 289    IAmb     IAmb      01 53 57.4
                comp=Z,51nm,0.9s
DLV    T  Lat            77.70 289    P        P         01 53 56.4 +1.1
MAW    Mawson            77.77 201    P        P         01 53 55.6 +1.1
                comp=Z,56nm,0.5s,baz=131,slow=5.8,SNR=102
                comp=Z,56nm,0.5s
MAW    Mawson            77.77 201    P        P         01 53 55.5 +1.1
MAW                                   IAmb     IAmb      01 53 56.6
                comp=Z,41nm,1.2s
PETK   Petropavlovsk-    78.70 347    P        P         01 54 00.2 +0.6
                comp=Z,25nm,1.0s,baz=134,slow=6.4,SNR=10
                comp=Z,25nm,1.0s
PETK   Petropavlovsk-    78.70 347    P        P         01 53 59.8 +0.2
PMSA   Palmer Station    79.40 157    P        P         01 54 04.8 +1.6
                comp=Z,86nm,0.9s,baz=39,slow=4.3,SNR=17
                comp=Z,86nm,0.9s
PMSA   Palmer Station    79.40 157    IAmb     IAmb      01 54 05.3
                comp=Z,77nm,0.8s
NJ2    Nanjing           80.01 311  ⇓P        P         01 54 08.0 +1.1
NJ2                                   pmax     pmax
                comp=Z,30nm,1.2s
USA0B  Ussuriysk Arra    80.20 328    IAmb     IAmb      01 54 10.5
                comp=Z,70nm,1.4s
USRK   Ussuriysk Ar.     80.20 328    P        P         01 54 09.2 +1.5
                comp=Z,10.0nm,0.7s,baz=116,slow=4.4,SNR=23
                comp=Z,10.0nm,0.7s
USRK   Ussuriysk Ar.     80.20 328    P        P         01 54 08.7 +1.0
SISI   Saibi             80.50 273    P        P         01 54 08.2  -1.8
                comp=Z,26nm,1.3s
IPM    Ipoh              81.09 279    IAmb     IAmb      01 54 13.7
                comp=Z,51nm,0.6s
IPM    Ipoh              81.09 279    P        P         01 54 13.4 +0.4
MDJ    Mudanjiang        81.69 327    IAmb     IAmb      01 54 18.1
                comp=Z,45nm,1.2s
MDJ    Mudanjiang        81.69 327    P        P         01 54 17.0 +1.6
MDJ                                   pmax     pmax
                comp=Z,36nm,0.8s
MDJ                                   pmax     pmax
                comp=Z,320nm,3.9s
MDJ    Mudanjiang        81.69 327    P        P         01 54 16.3 +0.9
KULM   Kulim             81.77 279    P        P         01 54 16.1  -0.4
KULM                                  IAmb     IAmb      01 54 17.4
                comp=Z,32nm,0.9s
MG04   Isla Riesco       82.25 145    P        P         01 54 20.4 +2.2
MG05   Puerto Natales    82.32 143    P        P         01 54 19.7 +1.1
MG05                                  IAmb     IAmb      01 54 21.2
                comp=Z,70nm,0.9s
WHN    Wuhan             82.33 308 ⇓iP        P         01 54 19.9 +1.0
WHN                                   S        S         02 03 49.8  -0.4
WHN                                   pmax     pmax
                comp=Z,62nm,0.8s
USHA   Ushuaia           82.87 147    P        P         01 54 24.0 +2.7
                comp=Z,18nm,1.0s,baz=267,slow=5.8,SNR=3.6
                comp=Z,18nm,1.0s
GSI    Gunungsitoli      82.94 275    IAmb     IAmb      01 54 24.1
                comp=Z,55nm,0.7s
GSI    Gunungsitoli      82.94 275    P        P         01 54 22.5 +0.1
                comp=Z,108nm,1.0s
GSI    Gunungsitoli      82.94 275    P        P         01 54 23.4 +1.0
VES    Vestal, Richgr    83.00  46    P        P         01 54 23.9 +1.7
                baz=234
BFSC   Mount Baldy Ra    83.04  48    P        P         01 54 24.5 +1.9
                baz=235
MONP2  Monument Peak     83.14  50    P        P         01 54 25.7 +2.4
                baz=236
IKP    In-Ko-Pah, Jac    83.23  50    P        P         01 54 26.1 +2.5
                baz=236
O02D   Mt. Diablo Mer    83.28  41    P        P         01 54 26.3 +2.8
                baz=231
CN2    Changchun         83.30 324 ⇓iP        P         01 54 24.4 +0.9
CN2                                  eS        S         02 04 03.0 +3.8
CN2                                   pmax     pmax
                comp=Z,60nm,1.3s
ISA    Isabella, Lake    83.31  47    P        P         01 54 24.9 +1.1
ISA                                            pP        01 56 22.5 +1.6
ISA    Isabella, Lake    83.31  47    P        P         01 54 25.7 +1.9
                baz=235
PFO    Pinyon Flats O    83.52  49    P        P         01 54 26.2 +1.2
                comp=Z,1.5nm,0.6s,baz=310,slow=7.9,SNR=1.4
                comp=Z,1.5nm,0.6s
PFO    Pinyon Flats O    83.52  49    IAmb     IAmb      01 54 34.0
                comp=Z,3.5nm,0.9s
BNX    BinXian           83.59 326  ⇓P        P         01 54 25.3 +0.4
BNX                                   pmax     pmax
                comp=Z,37nm,0.9s
BNX                                   pmax     pmax
                comp=Z,210nm,5.0s
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TIA    Tai'an            83.59 314    P        P         01 54 26.3 +1.2
TIA                                   pmax     pmax
                comp=Z,55nm,0.8s
M02C   Callahan          84.00  40    P        P         01 54 30.0 +2.9
                baz=231
BELC   Belle Mtn. Jos    84.05  49    P        P         01 54 29.7 +2.1
                baz=236
SRIT   Nakonsritamara    84.09 282    P        P         01 54 28.9 +0.8
SRIT                                  IAmb     IAmb      01 54 30.2
                comp=Z,44nm,0.9s
MPMC   Manual Prospec    84.19  47    P        P         01 54 30.2 +1.8
                baz=235
GSC    Goldstone, Bar    84.22  48    P        P         01 54 30.7 +2.3
                baz=236
BC3    Big Chuckawall    84.24  50    P        P         01 54 31.0 +2.5
                baz=237
HEC    Hector,Ludlow     84.28  48    P        P         01 54 30.9 +2.2
                baz=236
YBH    Yreka Blue Hor    84.29  40    P        P         01 54 30.8 +2.2
                comp=Z,2.0nm,0.5s,baz=308,slow=3.3,SNR=7.7
YBH                                   pP       pwP       01 56 27.1  -0.6
                comp=Z,2.0nm,0.8s,baz=315,slow=2.9,SNR=2.3
                comp=Z,2.0nm,0.5s
GLA    Glamis            84.35  50    IAmb     IAmb      01 54 32.8
                comp=Z,14nm,0.9s
GLA    Glamis            84.35  50    P        P         01 54 31.7 +2.7
                baz=237
BEKR   Beckworth         84.57  42    P        P         01 54 31.3 +1.2
BEKR                                  pP       pP        01 56 27.6 +0.1
TROLL  Troll, Antarti    84.58 181    P        P         01 54 29.9 +0.2
GMRC   Granite Mounta    84.72  49    P        P         01 54 32.9 +2.0
                baz=237
IRM    Iron Mountain     84.73  49    P        P         01 54 33.3 +2.5
                baz=237
L04D   Klamath Falls     84.83  39    P        P         01 54 33.4 +2.1
                baz=232
TUQ    Turquoise Moun    84.89  48    P        P         01 54 33.6 +1.8
                baz=236
SNAA   Sanae             84.93 179    P        P         01 54 31.0  -0.3
SNAA                                  S        S         02 04 14.2  -0.4
SNAA   Sanae             84.93 179    P        P         01 54 31.0  -0.3
                comp=Z,11nm,0.4s,baz=208,slow=7.8,SNR=220
                comp=Z,11nm,0.4s
SNAA   Sanae             84.93 179    P        P         01 54 30.9  -0.3
SNAA                                  IAmb     IAmb      01 54 31.6
                comp=Z,17nm,0.6s
NVAR   Mina Array Bea    85.01  44    P        P         01 54 33.8 +1.4
                comp=Z,2.6nm,0.7s,baz=227,slow=8.6,SNR=18
NVAR                                  pP       pP        01 56 31.5 +1.4
                comp=Z,4.2nm,0.9s,baz=219,slow=5.3,SNR=9.3
NVAR                                  PKKPbc   PKKPbc    02 12 36.5  -0.2
                comp=Z,0.5nm,0.6s,baz=66,slow=3.9,SNR=4.6
NVAR                                  PKPPKP   P'P'df    02 20 42.3 +1.4
                comp=Z,0.5nm,0.7s,baz=90,slow=4.4,SNR=3.5
                comp=Z,2.6nm,0.7s
NVAR   Mina Array Bea    85.01  44    P        P         01 54 33.1 +0.7
LHMI   Lhok Sumawe       85.10 278    P        P         01 54 35.7 +2.6
LHMI   Lhok Sumawe       85.10 278    P        P         01 54 33.9 +0.8
VNA3   Neumayer Olymp    85.17 177    P        P         01 54 32.1  -0.3
VNA3                                  S        S         02 04 16.7  -0.1
VNA3   Neumayer Olymp    85.17 177    pP       pP        01 56 33.6 +4.1
KVN    Kaiserville       85.50  44    P        P         01 54 35.0 +0.3
PDMCI  Parker Dam,Lak    85.51  50    P        P         01 54 36.9 +2.4
                baz=238
TPH    Tonopah           85.51  45    IAmb     IAmb      01 54 37.5
                comp=Z,21nm,0.9s
TPNV   Topopah Spring    85.51  46    P        P         01 54 36.5 +1.8
                baz=236
VNA2   Neumayer--Watz    85.58 178    P        P         01 54 34.4 +0.1
                baz=184,slow=4.0
VNA2                                  S        S         02 04 19.9  -0.7
J04D   Umpqua Nationa    85.58  39    P        P         01 54 37.6 +2.6
                baz=232
AY01   Puyuhuapi         85.73 137    P        P         01 54 36.8 +1.3
AY01                                  IAmb     IAmb      01 54 38.4
                comp=Z,40nm,1.1s
ENH    Enshi             85.77 305    P        P         01 54 35.9  -0.1
VNA1   Neumayer--Stat    85.82 177    P        P         01 54 35.5   0.0
VNA1   Neumayer--Stat    85.82 177    pP       pP        01 56 33.8 +1.0
LYN    LuoYang           85.83 310 ⇓iP        P         01 54 37.7 +1.6
LYN                                   pP       pwP       01 56 35.7  -2.6
LYN                                   SKS      SKSac     02 04 12.5 +2.5
LYN                                   S        S         02 04 27.2 +3.1
LYN                                   pmax     pmax
                comp=Z,50nm,1.5s
LYN                                   pmax     pmax
                comp=Z,400nm,5.5s
HNS    HongShan          85.86 314  ⇓P        P         01 54 37.5 +1.4
HNS                                   pmax     pmax
                comp=Z,33nm,1.7s
SLVN   Son La            85.91 295    IAmb     IAmb      01 54 39.5
                comp=Z,25nm,1.3s
J05D   Fort Rock, OR     86.11  39    P        P         01 54 39.6 +2.2
                baz=232
MA2    Magadan           86.17 346    P        P         01 54 37.5 +0.4
MA2                                   IAmb     IAmb      01 54 38.7
                comp=Z,43nm,1.1s
MA2    Magadan           86.17 346    P        P         01 54 37.2 +0.1
O19K   Port Alsworth     86.27  13    P        P         01 54 38.1 +0.6
                baz=204
BJT    Baijiatuau        86.39 317    P        P         01 54 39.2 +0.6
BJT                                   IAmb     IAmb      01 54 40.5
                comp=Z,13nm,0.8s
BJI    Beijing           86.40 317    P        P         01 54 39.7 +1.1
BJI                                   pP       pP        01 56 36.0 +0.3
BJI                                   SKS      SKSac     02 04 11.7  -1.5
BJI                                   S        ScS       02 04 33.3  -1.5
BJI                                   pmax     pmax
                comp=Z,19nm,1.6s
PINE   Pine Mountain     86.59  39    P        P         01 54 41.3 +1.6
PINE                                  IAmb     IAmb      01 54 43.3
                comp=Z,29nm,1.4s
LL05   Los Muermos       86.65 134    IAmb     IAmb      01 54 42.8
                comp=Z,46nm,0.9s
I05D   Terrebonne, OR    86.69  38    P        P         01 54 42.0 +2.0
                baz=232
R11A   Troy Canyon, C    86.73  46    P        P         01 54 42.1 +1.6
                baz=236
TUC    Tucson            86.87  53    P        P         01 54 42.7 +1.6
TUC                                   pP       pP        01 56 41.1 +1.6
TUC    Tucson            86.87  53    P        P         01 54 44.0 +2.8
                baz=240
E04D   Cinebar           87.39  36    P        P         01 54 45.9 +2.8
                baz=231
319A   Douglas           87.52  54    IAmb     IAmb      01 54 48.3
                comp=Z,12nm,0.8s
TIY    Taiyuan           87.54 313   eP        P         01 54 46.0 +1.8
TIY                                   SKS      SKSac     02 04 20.0  -0.4
TIY                                   pmax     pmax
                comp=Z,50nm,0.5s
I07A   Izee              87.59  39    P        P         01 54 46.0 +1.7
I07A                                  IAmb     IAmb      01 54 47.6
                comp=Z,12nm,1.0s
I07A                                  pP       pP        01 56 43.1 +0.5
D03D   Eldon             87.73  35    P        P         01 54 47.2 +2.5
                baz=231
J08A   Circle Bar Ran    87.77  40    IAmb     IAmb      01 54 48.3
                comp=Z,22nm,1.3s
U15A   North Rim         87.91  49    IAmb     IAmb      01 54 49.2
                comp=Z,8.3nm,0.8s
L19K   White Mountain    87.99  12    P        P         01 54 45.8 +0.2
L19K                                  IAmb     IAmb      01 54 47.8
                comp=Z,24nm,1.1s
L19K                                  pP       pP        01 56 45.0 +1.6
L19K   White Mountain    87.99  12    P        P         01 54 47.0 +1.4
                baz=204
XAN    Xi'an             88.08 308    P        P         01 54 48.2 +1.5
XAN                                   pP       pP        01 56 41.0  -3.3
XAN                                   S        S         02 04 48.4 +3.1
XAN                                   pmax     pmax
                comp=Z,49nm,1.1s
XAN                                   pmax     pmax
                comp=Z,340nm,6.0s
WUAZ   Wupatki           88.08  50    P        P         01 54 49.9 +3.1
                baz=239
D05A   Enumclaw          88.09  36    IAmb     IAmb      01 54 50.0
                comp=Z,22nm,1.0s
HPIG                     88.18  60    P        P         01 54 48.9 +1.3
HPIG                                  IAmb     IAmb      01 54 50.6
                comp=Z,6.9nm,0.7s
CBB    Campbell River    88.19  32    IAmb     IAmb      01 54 49.5
                comp=Z,11nm,0.9s
ELK    Elko              88.27  44    P        P         01 54 49.5 +1.8
                comp=Z,4.2nm,0.9s,baz=269,slow=4.8,SNR=13
ELK                                   pP       pP        01 56 47.5 +1.2
                comp=Z,1.0nm,0.8s,baz=233,slow=6.9,SNR=3.1
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ELK                                   PP       PP        01 58 22.9  -2.6
                comp=Z,0.9nm,0.8s,baz=248,slow=6.5,SNR=4.7
                comp=Z,4.2nm,0.9s
PKCU   Pink Cliffs       88.43  48    IAmb     IAmb      01 54 52.1
                comp=Z,12nm,0.9s
TTA    Tatalina          88.47  11    P        P         01 54 49.4 +1.5
                baz=203
KMI    Kunming           88.58 298  ⇓P        P         01 54 51.1 +1.6
KMI                                   pmax     pmax
                comp=Z,24nm,0.8s
XLT    XiLinHaoTe        88.67 320   eP        P         01 54 50.1 +0.8
XLT                                   pP       pP        01 56 47.2   0.0
XLT                                   SKS      SKSac     02 04 24.9  -1.9
XLT                                   S        S         02 04 46.4  -4.0
XLT                                   pmax     pmax
                comp=Z,23nm,1.3s
XLT                                   pmax     pmax
                comp=Z,88nm,4.3s
A04D   Lummi Island      88.67  34    P        P         01 54 51.7 +2.7
                baz=231
B05A   Bryant            88.71  35    P        P         01 54 51.3 +2.1
                baz=232
ZAIG   Zacatecas         88.82  65    P        P         01 54 52.1 +1.4
ZAIG                                  IAmb     IAmb      01 54 54.5
                comp=Z,7.9nm,1.0s
MTPU   Mount Pierson     88.83  47    IAmb     IAmb      01 54 54.4
                comp=Z,20nm,1.5s
CM31   Chiang Mai Arr    88.83 291    P        P         01 54 52.0 +1.5
CM31   Chiang Mai Arr    88.83 291    P        P         01 54 53.5 +2.9
                SNR=11
CMAR   Chiang Mai Arr    88.83 291    P        P         01 54 52.3 +1.7
                comp=Z,13nm,0.9s,baz=135,slow=3.3,SNR=62
CMAR                                  pP       pP        01 56 49.5 +1.3
                comp=Z,3.4nm,1.0s,baz=125,slow=3.7,SNR=2.9
CMAR                                  PP       PP        01 58 30.2 +0.2
                comp=Z,0.7nm,0.3s,baz=130,slow=5.6,SNR=4.9
CMAR                                  PKKPbc   PKKPbc    02 12 26.6 +0.2
                comp=Z,2.6nm,0.7s,baz=288,slow=4.4,SNR=7.3
                comp=Z,13nm,0.9s
CMAR   Chiang Mai Arr    88.83 291    P        P         01 54 51.2 +0.7
CMAR                                           pP        01 56 48.3   0.0
PLCA   Paso Flores       88.91 134    P        P         01 54 52.5 +1.8
                comp=Z,10.0nm,0.9s,baz=211,slow=6.1,SNR=20
PLCA                                  pP       pP        01 56 51.5 +2.0
                comp=Z,3.0nm,0.9s,baz=214,slow=4.4,SNR=4.2
                comp=Z,10.0nm,0.9s
PLCA   Paso Flores       88.91 134    IAmb     IAmb      01 54 53.2
                comp=Z,19nm,1.1s
LC01   Cunco             88.94 132    P        P         01 54 51.7 +0.9
CHTO   Chiang Mai        88.98 291    P        P         01 54 52.2 +0.9
CHTO   Chiang Mai        88.98 291    P        P         01 54 53.0 +1.7
CHTO   Chiang Mai        88.98 291    P        P         01 54 52.5 +1.2
121A   Cookes Peak, D    89.19  54    P        P         01 54 54.9 +2.8
                baz=241
K20K   Telida            89.22  12    P        P         01 54 52.3 +1.0
                baz=204
CAST   Castle Rocks      89.65  12    IAmb     IAmb      01 54 53.7
                comp=Z,10nm,1.0s
CAST   Castle Rocks      89.65  12    P        P         01 54 52.9  -0.4
                baz=206
Q16A   Castle Valley     89.96  47    IAmb     IAmb      01 54 59.4
                comp=Z,8.2nm,0.8s
PZH    PanZhiHua         90.00 299    P        P         01 54 57.8 +1.9
PZH                                   pmax     pmax
                comp=Z,7.0nm,0.8s
PZH                                   pmax     pmax
                comp=Z,100nm,5.3s
TMUT   Trail Mountain    90.13  47    IAmb     IAmb      01 54 59.9
                comp=Z,15nm,0.8s
B08A   Colville Reser    90.23  36    P        P         01 54 57.2 +0.8
HLID   Hailey            90.33  42    P        P         01 54 59.4 +2.3
                baz=237
HVU    Hansel Valley     90.39  44    IAmb     IAmb      01 54 59.8
                comp=Z,7.1nm,0.7s
CD2    Chengdu           90.40 304    P        P         01 54 59.2 +1.6
CD2                                   S        S         02 05 08.5 +2.0
CD2                                   sS       sS        02 08 37.5  -1.0
CD2                                   pmax     pmax
                comp=Z,50nm,0.9s
CD2                                   pmax     pmax
                comp=Z,170nm,4.1s
C09A   Chrisman Ranch    90.47  37    P        P         01 54 58.6 +1.1
C09A                                  IAmb     IAmb      01 54 59.8
                comp=Z,7.7nm,1.1s
C09A                                  pP       pP        01 56 57.0 +0.7
SRU    San Rafael Swe    90.49  47    IAmb     IAmb      01 55 00.8
                comp=Z,12nm,0.8s
P17A   Butcher Ranch,    90.53  47    IAmb     IAmb      01 55 01.4
                comp=Z,15nm,1.4s
MNTX   Cornudas Mount    90.59  56    P        P         01 55 00.6 +2.1
                baz=242
BTO    Baotou            90.66 315   eP        P         01 55 00.7 +2.1
TX31   Lajitas Ar. Si    90.84  58    IAmb     IAmb      01 55 03.1
                comp=Z,22nm,1.1s
TX32   Lajitas Array     90.84  58    IAmb     IAmb      01 55 03.1
                comp=Z,7.4nm,1.1s
TXAR   Lajitas Array     90.84  58    P        P         01 55 02.3 +2.5
                comp=Z,3.6nm,0.8s,baz=214,slow=6.7,SNR=42
TXAR                                  pP       pP        01 56 59.6 +0.6
                comp=Z,2.3nm,0.9s,baz=216,slow=5.9,SNR=7.2
TXAR                                  S        SKSac     02 04 40.6 +0.7
                comp=Z,0.4nm,1.0s,baz=216,slow=7.2,SNR=2.9
TXAR                                  PKKPbc   PKKPbc    02 12 21.0  -1.0
                comp=Z,0.9nm,0.6s,baz=144,slow=2.7,SNR=12
                comp=Z,3.6nm,0.8s
TXAR   Lajitas Array     90.84  58    P        P         01 55 00.7 +0.9
TXAR                                  pP       pP        01 56 59.4 +0.4
YUK3   Moose Creek       91.03  18    P        P         01 55 01.6 +1.6
                baz=216
ANMO   Albuquerque       91.31  52    P        P         01 55 02.8 +0.9
                comp=Z,1.6nm,0.8s,baz=204,slow=7.5,SNR=7.4
                comp=Z,1.6nm,0.8s
ANMO   Albuquerque       91.31  52    P        P         01 55 03.1 +1.2
ANMO                                  pP       pP        01 57 00.7  -0.5
ANMO   Albuquerque       91.31  52    P        P         01 55 03.6 +1.7
                baz=242
NEW    Newport           91.37  37    pP       pP        01 57 01.6 +1.0
                comp=Z,1.9nm,0.8s,baz=314,slow=2.5,SNR=2.1
BO01   Tunca             91.74 129    IAmb     IAmb      01 55 05.1
                comp=Z,13nm,1.1s
BILL   Bilibino          91.91 355    P        P         01 55 04.6 +0.9
BILL                                  IAmb     IAmb      01 55 05.7
                comp=Z,12nm,1.1s
ILAR   Eielson Array     91.93  14    P        P         01 55 03.8   0.0
                comp=Z,1.1nm,0.9s,baz=232,slow=5.8,SNR=7.8
ILAR                                  pP       pP        01 57 01.8  -0.5
                comp=Z,2.5nm,0.9s,baz=210,slow=5.6,SNR=8.4
ILAR                                  PP       PP        01 58 50.5  -2.8
                comp=Z,3.6nm,1.1s,baz=220,slow=6.2,SNR=4.8
ILAR                                  PKiKP    PKiKP     01 59 49.0  -1.3
                comp=Z,0.3nm,0.6s,baz=235,slow=4.0,SNR=4.1
ILAR                                  PKKP     PKKPdf    02 12 16.8  -1.2
                comp=Z,0.5nm,0.7s,baz=16,slow=2.4,SNR=4.6
                comp=Z,1.1nm,0.9s
S22A   4UR Ranch, Cre    92.36  50    P        P         01 55 08.5 +1.8
                baz=242
K27K   Chicken           92.44  16    P        P         01 55 07.6 +1.5
                baz=215
J26L   Joseph Creek      92.46  15    P        P         01 55 07.8 +1.4
                baz=214
O20A   White River Ci    92.53  47    P        P         01 55 09.1 +1.7
                baz=241
LZH    Lanzhou           92.71 308   eP        P         01 55 10.3 +2.0
LZH                                   pmax     pmax
                comp=Z,37nm,1.0s
M30M   Minto, Yukon      92.72  19    P        P         01 55 08.6 +1.0
                baz=220
PDAR   Pinedale Array    92.95  44    P        P         01 55 10.4 +1.1
                comp=Z,1.0nm,0.8s,baz=208,slow=3.0,SNR=10
PDAR                                  pP       pP        01 57 07.7  -0.8
                comp=Z,1.6nm,0.9s,baz=212,slow=3.2,SNR=6.4
PDAR                                  PP       PP        01 58 59.9  -2.1
                comp=Z,4.6nm,1.3s,baz=243,slow=6.5,SNR=5.7
PDAR                                  PKKP     PKKPdf    02 12 14.9  -0.6
                comp=Z,0.2nm,0.4s,baz=91,slow=6.2,SNR=4.0
                comp=Z,1.0nm,0.8s
PDAR   Pinedale Array    92.95  44    P        P         01 55 08.7  -0.6
PDAR                                  pP       pP        01 57 08.5   0.0
BOZ    Bozeman (W)       93.09  41    P        P         01 55 11.4 +1.7
                baz=239
DAWY   Dawson            93.16  17    P        P         01 55 10.7 +1.2
                baz=217
T25A   Trinidad          93.78  51    P        P         01 55 14.8 +1.5
                baz=243
ULN    Ulaanbaatar       96.11 320    P        P         01 55 23.3  -0.2
ULN                                   IAmb     IAmb      01 55 25.8
                comp=Z,9.1nm,1.2s
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ULN                                   pP       pP       01 57 23.0 +0.9
ULN   Ulaanbaatar        96.11 320    P        P        01 55 23.9 +0.5
SONM  Songino Array      96.49 320    P        P        01 55 25.7 +0.6
      comp=Z,1.3nm,0.5s,baz=157,slow=8.0,SNR=4.5
      comp=Z,1.3nm,0.5s
SONM  Songino Array      96.49 320    P        P        01 55 25.7 +0.6
SONM                                  IAmb     IAmb     01 55 26.6
      comp=Z,6.5nm,1.1s
SONM                                  pP       pP       01 57 23.1 -0.7
AC02  Maricunga          97.02 123    IAmb     IAmb     01 55 30.8
      comp=Z,10nm,1.2s
GTA   Gaotai             97.03 310   ⇓P        Pdif     01 55 28.8 +1.1
GTA                                   pP       pP       01 57 28.6 +2.2
GTA                                   pmax     pmax
      comp=Z,7.0nm,1.4s
INK   Inuvik             97.95  16    pP       pP       01 57 31.9 +2.0
      comp=Z,5.0nm,1.1s,baz=208,slow=4.9,SNR=6.0
INK                                   PKKP     PKKPbc   02 12 02.5 -2.0
      comp=Z,0.9nm,0.6s,baz=34,slow=3.6,SNR=3.4
YKA   Yellowknife Ar    100.41  26    P        Pdif     01 55 43.4 +1.5
      comp=Z,0.2nm,0.6s,baz=248,slow=4.0,SNR=3.2
YKA                                   pP       pP       01 57 43.0 +1.4
      comp=Z,1.6nm,1.1s,baz=237,slow=4.1,SNR=7.5
YKA                                   PP       PP       01 59 55.4 -2.2
      comp=Z,0.9nm,0.9s,baz=233,slow=6.8,SNR=6.3
YKA                                   PKiKP    PKiKP    02 00 05.5 +0.3
      comp=Z,0.5nm,0.7s,baz=241,slow=1.2,SNR=8.2
YKA                                   PKKPbc   PKKPbc   02 11 54.9 -2.6
      comp=Z,0.8nm,0.5s,baz=42,slow=2.4,SNR=19
CPUP  Villa Florida     106.07 129    PP       PP       02 00 42.4 +3.2
      comp=Z,1.1nm,0.5s,baz=129,slow=4.0,SNR=3.1
ZALV  Zalesovo Beam     111.34 321    PKiKP    PKiKP    02 00 25.0 -0.8
      comp=Z,1.5nm,0.4s,baz=101,slow=1.9,SNR=9.2
ZALV                                  PKKPbc   PKKPbc   02 11 23.2 -0.7
      comp=Z,0.4nm,0.3s,baz=35,slow=24,SNR=3.2
ZALV                                  PKKPab   PKKPab   02 11 34.9 +1.8
      comp=Z,0.4nm,0.5s,baz=256,slow=5.8,SNR=3.9
MKAR  Makanchi Array    111.51 313    Pdiff    Pdif     01 56 30.7 -1.1
      comp=Z,0.7nm,0.8s,baz=104,slow=5.4,SNR=5.8
MKAR                                  PKiKP    PKiKP    02 00 25.9 -0.5
      comp=Z,2.2nm,0.6s,baz=82,slow=1.4,SNR=31
MKAR                                  PKKPbc   PKKPbc   02 11 23.4 +0.1
      comp=Z,1.6nm,0.8s,baz=285,slow=4.8,SNR=13
MKAR                                  PKKPab   PKKPab   02 11 34.4 +1.7
      comp=Z,3.5nm,0.7s,baz=276,slow=3.9,SNR=19
SDV   Santo Domingo     111.85  90    PKiKP    PKiKP    02 00 26.9 -1.3
      comp=Z,2.5nm,0.7s,baz=341,slow=2.4,SNR=4.7
KURK  Kurchatov         114.57 317    PKiKP    PKPdf    02 00 30.4 -1.7
KURK  Kurchatov         114.57 317    P        PKPdf    02 00 31.8 -0.2
KSH   Kashi             114.60 304    PKP      PKiKP    02 00 34.4 +1.8
ULHL  Ulahol            114.89 307    P        PKiKP    02 00 33.7 +0.4
      SNR=12
BOOM  Boomskoye usch115.16 307                 PKPdf    02 00 32.7 -1.0
VOI   Vohitsoka         115.31 229    P        PKiKP    02 00 35.0 +0.4
TKM2  Tokmak 2          115.48 308    P        PKPdf    02 00 34.1 -0.2
      SNR=11
NIL   Nilore            115.56 297    PKPdf    PKPdf    02 00 33.4 -1.1
CHMS  Chumysh           116.10 308    P        PKPdf    02 00 35.3 -0.1
      SNR=5.9
UCH   Uchtor            116.16 307    P        PKiKP    02 00 36.6 +0.6
      SNR=14
AAK   Ala-Archa         116.23 307    PKPdf    PKiKP    02 00 35.8  0.0
AAK   Ala-Archa         116.23 307    P        PKiKP    02 00 35.7  0.0
USP   Ospenovka         116.32 308    P        PKPdf    02 00 35.6 -0.2
      SNR=8.6
AML   Almayashu         116.74 307    P        PKiKP    02 00 37.4 +0.4
      SNR=19
AML   Almayashu         116.74 307    P        PKiKP    02 00 37.2 +0.1
EKS2  Erkin-Say         116.76 307    P        PKiKP    02 00 37.0 +0.3
      SNR=5.3
DRK   Karamyk           117.77 303    PKPdf    PKiKP    02 00 39.8 +0.8
KBL   Kabul             119.15 298    PKPdf    PKiKP    02 00 41.7 -0.1
KBL   Kabul             119.15 298    P        PKiKP    02 00 42.3 +0.5
      SNR=9.5
KKAR  Karatay Array     119.20 307    PKPdf    PKPdf    02 00 41.0 -0.2
BDFB  Brasilia          119.48 126    PKP      PKPdf    02 00 42.5 -0.3
      comp=Z,8.3nm,0.8s,baz=173,slow=1.5,SNR=12
BDFB  Brasilia          119.48 126    PKPdf    PKPdf    02 00 41.5 -1.2
BRVK  Borovoye          119.89 319    PKPdf    PKPdf    02 00 42.0 -0.2
BRVK  Borovoye          119.89 319    P        PKPdf    02 00 42.1 -0.1
SUR   Sutherland        120.62 201    PKP      PKPdf    02 00 44.7  0.0
      comp=Z,27nm,0.8s,baz=91,slow=1.5,SNR=30
SUR   Sutherland        120.62 201    P        PKiKP    02 00 44.8  0.0
PKME  Peaks-Kenny Pk    121.25  50    P        PKiKP    02 00 45.2  0.0
      baz=267
NOR   Nord              121.60   3   eP        PKPdf    02 00 44.5 -0.3
BOSA  Boshof            122.34 207    PKP      PKiKP    02 00 48.5 +0.3
      comp=Z,13nm,0.8s,baz=138,slow=1.5,SNR=18
BOSA  Boshof            122.34 207             PKiKP    02 00 48.2  0.0
BOSA  Boshof            122.34 207   i P       PKiKP    02 00 48.8 +0.5
BOSA  Boshof            122.34 207   i P       PKiKP    02 00 48.8 +0.5
SCHQ  Schefferville     122.68  39    PKP      PKPdf    02 00 47.1 -0.4
      comp=Z,6.9nm,1.0s,baz=340,slow=2.1,SNR=7.6
SCHQ                                  PKKPbc   PKKPab   02 10 43.8 +0.4
      comp=Z,2.4nm,0.6s,baz=93,slow=5.0,SNR=12
SCHQ  Schefferville     122.68  39    PKPdf    PKPdf    02 00 46.7 -0.8
KBS   Kingsbay          124.35 357   ePKPdf    PKiKP    02 00 50.5  0.0
SPA0  Spitsbergen Ar    124.81 356   ePKPdf    PKiKP    02 00 51.5 +0.1
JLN   Jalan Bani Buh    124.97 281    P        PKiKP    02 00 53.2 -0.1
HAL   Halifax           125.28  51    PKPdf    PKPdf    02 00 52.8  0.0
LBTB  Lobatse           125.33 210    PKPdf    PKPdf    02 00 53.4 -0.4
WSAR  Wadi Sarin        125.92 282    P        PKiKP    02 00 55.3  0.0
MHTO  MHTO              125.99 279    P        PKiKP    02 00 55.2 -0.2
      SNR=7.2
HSPB  Hornsund (broa    125.99 356   ePKPdf    PKPdf    02 00 52.6 -0.6
DAG   Danmarks Havn     126.08   5   i P       PKPdf    02 00 52.0 -1.4
DQM   DQM               126.11 278    P        PKiKP    02 00 55.9 +0.3
JMDO  Jabal Madar       126.20 281    P        PKPdf    02 00 55.3  0.0
ARU   Arti              126.29 324    PKP      PKiKP    02 00 54.7 -0.2
      comp=Z,7.5nm,0.5s,baz=98,slow=1.6,SNR=44
ARU   Arti              126.29 324    PKPdf    PKPdf    02 00 54.5 +0.1
SMDO  Samad             126.41 282    P        PKiKP    02 00 56.4 +0.1
      SNR=7.0
BIDO  Bidbid            126.44 283    P        PKiKP    02 00 57.0 +0.8
      SNR=5.4
ABKAR Akbulak array     126.57 315             PKPdf    02 00 54.4 -0.7
GBN   Guysborough       126.73  50    PKPdf    PKPdf    02 00 55.6  0.0
SOCY  Socotra           127.01 268    P        PKiKP    02 00 57.8 +0.1
BSY   Bisya             127.10 281    P        PKPdf    02 00 56.6 -0.4
HOQ   Hoqain            127.18 282    P        PKiKP    02 00 59.0 +1.3
      SNR=5.4
AKTO  Aktyubinsk        127.67 316    PKP      PKPdf    02 00 57.2  0.0
      comp=Z,11nm,0.9s,baz=88,slow=3.1,SNR=31
MATP  Matopo            127.77 215   i P       PKiKP    02 00 59.4 +0.2
MATP  Matopo            127.77 215   i P       PKiKP    02 00 59.4 +0.2
DMTO  DMTO              127.87 275    P        PKPdf    02 00 58.8 +0.2
BLWY  Bulawayo          127.94 216   i P       PKiKP    02 00 59.4 -0.2
BLWY  Bulawayo          127.94 216   i P       PKiKP    02 00 59.4 -0.2
BJO1  Bjornoya          128.04 353   ePKPdf    PKiKP    02 00 58.1 +0.3
DBG   Daneborg          128.24   7   eP        PKPdf    02 00 56.8 -0.9
GEYT  Alibeck           128.28 300    PKP      PKiKP    02 00 59.4 -0.2
      comp=Z,7.6nm,0.7s,baz=106,slow=5.3,SNR=13
UOSS  Minazif           128.45 284    P        PKPdf    02 00 59.4 -0.1
RBK   Rabkut            128.49 274    P        PKiKP    02 01 00.4 -0.1
HATD  Hatta, Dubai      128.49 284    P        PKiKP    02 00 59.9 -0.4
ASHO  Ashiyiah          128.53 283    P        PKiKP    02 01 01.0 +0.6
      SNR=5.5
DY2G  Dye2              128.53  21   eP        PKPdf    02 00 58.2 -0.5
MASF  Masafi            128.57 284    P        PKPdf    02 00 58.7 -1.1
SHME  Shamm             128.71 285    P        PKiKP    02 01 00.5 -0.2
DOK   Doka              128.86 275    P        PKPdf    02 01 00.4  0.0
ICESG Greenland Ices    128.92  17   eP        PKPdf    02 00 58.2 -1.3
FAQ   Al Faqa, Dubai    128.96 283    P        PKPdf    02 01 00.6 +0.2
WHFO  Wadi Hawf         129.00 274    P        PKPdf    02 01 00.6 -0.1
ABTO  Aybut             129.28 274    P        PKiKP    02 01 01.8 -0.4
      SNR=5.5
KIRV  Kirov             130.37 328    PKP      PKPdf    02 01 01.6 -0.4
      comp=Z,17nm,0.4s,baz=166,slow=1.0,SNR=13
MZR   Muzera            130.50 281    P        PKiKP    02 01 04.7 +0.3
HAMF  Hammerfest        130.88 350   ePKPdf    PKPdf    02 01 02.1 -0.6
ARA0  ARCESS Array S    131.50 348   ePKPdf    PKPdf    02 01 04.1 +0.2
ARCES ARCESS Array B    131.50 348    PKhKP    PKPpre   02 00 56.5
      comp=Z,2.2nm,0.8s,baz=2.7,slow=1.9,SNR=13
ARCES                                 PKP      PKPdf    02 01 04.1 +0.1
      comp=Z,11nm,0.7s,baz=38,slow=2.2,SNR=42
ARCES                                 SKPab    SKPab    02 03 40.3 +0.3
      comp=Z,8.7nm,0.6s,baz=28,slow=4.1,SNR=18
LSZ   Lusaka            132.11 219             PKPdf    02 01 07.2 +0.4
JETT  Jettan, Norway    132.37 350   ePKPdf    PKPdf    02 01 04.5 -1.1
KTK1  Kautokeino        132.37 349   ePKPdf    PKiKP    02 01 06.5 -0.3
TRO   Tromso            132.52 351   ePKPdf    PKPdf    02 01 05.7 -0.2
BELG  Belogornoye       133.53 321    PKP      PKPdf    02 01 08.7 +0.5
      comp=Z,56nm,1.0s,baz=82,slow=2.4,SNR=7.7
BELG                                  SKPab    SKPab    02 03 47.8 -1.4
      comp=Z,26nm,0.8s,baz=144,slow=1.3,SNR=6.1
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KLMR  Klimovskoe        133.67 334   ePKPdf    PKPdf    02 01 06.4 -1.8
KLMR                                  AMP               02 01 13.3
      comp=Z,14nm,1.1s
KLMR                                 epPKPdf   pPKPdf   02 03 13.1 -1.2
KLMR                                 ePP       PP       02 03 45.1  0.0
KIBK  Kibwezi           134.31 241    PKPdf    PKPdf    02 01 10.8 -0.2
KIBK  Kibwezi           134.31 241    P        PKiKP    02 01 11.7 -0.8
STEI  Steigen           134.62 352   ePKPdf    PKPdf    02 01 10.0 +0.2
RCBR  Riachuelo         134.86 126    PKP      PKPdf    02 01 12.7 +0.7
RCBR                                  SKPbc    SKPbc    02 03 51.6 -0.1
      comp=Z,20nm,0.8s,baz=264,slow=5.3,SNR=6.9
FAUS  Fauske            135.13 351   ePKPdf    PKiKP    02 01 11.7 -0.7
KMBO  Kilima Mbogo      135.66 242    PKP      PKPdf    02 01 14.3 +0.5
      comp=Z,2.8nm,0.4s,baz=97,slow=4.1,SNR=6.6
KMBO                                  SKP               02 03 56.5
      comp=Z,2.0nm,0.3s,baz=200,slow=1.6,SNR=3.6
KMBO  Kilima Mbogo      135.66 242    PKPdf    PKPdf    02 01 13.1 -0.6
KONS  Konsvik           136.25 352   ePKPdf    PKPdf    02 01 13.5 +0.6
FINES FINESS Array B    137.99 341    PKhKP    PKPpre   02 01 05.8
      comp=Z,1.8nm,0.5s,baz=33,slow=3.5,SNR=19
FINES                                 PKP      PKPdf    02 01 16.8 +0.6
      comp=Z,4.6nm,0.6s,baz=42,slow=3.2,SNR=14
FINES                                 SKP               02 04 00.6
      comp=Z,20nm,0.9s,baz=56,slow=3.5,SNR=24
FINES                                 SKPab    SKPab    02 04 09.1 +0.5
      comp=Z,3.9nm,0.8s,baz=44,slow=5.8,SNR=4.2
OBN   Obninsk           138.22 329    PKP      PKPdf    02 01 16.2 -0.5
      comp=Z,4.6nm,0.7s,baz=96,slow=10,SNR=7.9
OBN                                   SKP               02 04 01.5
      comp=Z,2.2nm,0.6s,baz=33,slow=1.2,SNR=3.9
OBN   Obninsk           138.22 329    PKPdf    PKPdf    02 01 16.7 -0.1
OBN                                            SKPbc    02 04 00.2  0.0
GNI   Garni             138.53 304    PKhKP    PKPpre   02 01 09.3
      comp=Z,1.2nm,0.4s,baz=243,slow=4.5,SNR=2.1
GNI                                   PKP      PKPdf    02 01 17.9 -0.3
      comp=Z,7.3nm,0.8s,baz=3.4,slow=8.8,SNR=8.3
GNI   Garni             138.53 304    PKPdf    PKPdf    02 01 18.6 +0.5
GNI   Garni             138.53 304    P        PKiKP    02 01 19.5 -0.9
KVAR  Kislovodsk Arr    139.20 311    PKP      PKPdf    02 01 20.2 +1.0
      comp=Z,1.4nm,0.5s,baz=266,slow=22,SNR=3.6
KIV   Kislovodsk        139.21 311    PKPdf    PKPdf    02 01 18.5 -0.6
MEF   Metsahovi         139.47 341   eP        PKiKP    02 01 21.7 +0.3
MEF                                  eP        PKPdf    02 01 21.8 +2.9
RAF   Rauma             139.55 343   eP        PKPdf    02 01 11.9 -7.1
RAF                                  eP        PKiKP    02 01 12.0  -10
AAL   Aland             140.73 344   eP        PKPdf    02 01 15.6 -5.6
AAL                                  eP        PKiKP    02 01 15.6 -8.4
DOMB  Dombas            141.04 353   ePKPdf    PKPdf    02 01 16.6 -5.2
MBAR  Mbarara           141.10 236             PKPdf    02 01 20.4 -3.1
MBAR  Mbarara           141.10 236    P        PKPdf    02 01 20.5 -3.0
AKN   Aaknes            141.12 354   ePKPdf    PKPdf    02 01 17.5 -4.4
UPP   Uppsala           141.59 345   eP        PKPdf    02 01 18.0 -4.7
UPP                                  eP        PKPdf    02 01 18.0 -4.7
NB2   NORSAR Subarra141.72 351        PKP      PKPdf    02 01 18.6 -4.5
      comp=Z,15nm,1.1s,baz=16,slow=3.2
NOA   NORSAR Array B 141.72 351       PKhKP    PKPpre   02 01 19.1
      comp=Z,7.7nm,0.7s,baz=16,slow=4.7,SNR=52
NOA                                   SKPbc    SKiKP    02 04 10.6 -0.2
      comp=Z,3.4nm,0.7s,baz=15,slow=4.2,SNR=11
FOO   Floro             141.86 356   ePKPdf    PKPdf    02 01 20.2 -2.9
NAO01 NORSAR Array S 141.96 351       PKPdf    PKPdf    02 01 20.8 -2.6
NC602 NORSAR Array S 141.97 350      ePKPdf    PKPdf    02 01 19.6 -3.8
MARD  Mardin            142.04 301             PKPdf    02 01 21.7 -2.8
KTUT  Trabzon           142.06 307   ⇓P        PKPdf    02 01 20.1 -4.1
HFS   Hagfors           142.16 348    PKhKP    PKPpre   02 01 20.1
      comp=Z,20nm,0.4s,baz=264,slow=40,SNR=36
HFS                                   SKPbc    SKiKP    02 04 11.3 -0.3
      comp=Z,4.6nm,0.8s,baz=333,slow=12,SNR=6.9
HYA   Hoyanger          142.19 355   ePKPdf    PKPdf    02 01 21.9 -1.9
SLIT  Slitere, Latvi    142.21 340   eP        PKPdf    02 01 20.4 -3.5
SLIT                                 eP        PKiKP    02 01 20.6 -6.5
IDID  Didziasalis       142.41 334   eP        PKPdf    02 01 22.4 -1.9
IDID                                 eP        PKiKP    02 01 22.6 -5.0
SUE   Sulen             142.41 356   ePKPdf    PKPdf    02 01 21.1 -3.1
SKAR  Skarslia          142.46 353   ePKPdf    PKPdf    02 01 22.0 -2.3
ISAL  Salakas           142.47 335   eP        PKPdf    02 01 25.5 +1.0
ISAL                                 eP        PKiKP    02 01 25.8 -2.0
MNK   Minsk             142.52 333   i PKP     PKPdf    02 01 22.0 -2.6
      comp=E,2.0nm,1.7s
MNK                                  i PKP     PKPdf    02 01 22.0 -2.6
      comp=N,14nm,1.1s
MNK                                  i PKP     PKPdf    02 01 22.0 -2.6
      comp=Z,38nm,0.9s,baz=46
MNK                                  i pPKP    pPKPdf   02 03 28.9 -2.0
MNK                                  i PP      PP       02 04 37.3 -1.9
MNK                                  i PPP     PPP      02 07 51.9
MNK                                  i SKKS             02 17 00.8
MNK                                  i SS      SS       02 22 34.7 +3.0
MNK                                  i SSS     SSS      02 28 01.7
MNK                                  i LRM     MLR      03 05 43.6
MNK                                  i LRM     MLR      03 05 44.9
      comp=E,2.0nm,9.3s
MNK                                  i LRM     MLR      03 05 46.2
      comp=N,51nm,27.1s
NACGM Naroch            142.69 334   ePKP      PKPdf    02 01 21.4 -3.5
OSL   Oslo              142.85 350   ePKPdf    PKPdf    02 01 22.8 -2.2
ASK   Askoy             142.95 355   ePKPdf    PKPdf    02 01 23.3 -1.9
VIKU  Vikbolandet       143.02 345   eP        PKPab    02 01 22.9 +0.1
VIKU                                 eP        PKPbc    02 01 22.9 -0.4
BER   Bergen            143.04 355   ePKPbc    PKPbc    02 01 23.4  0.0
KONO  Kongsberg         143.29 351    PKPdf    PKPbc    02 01 24.1 -0.1
KONO  Kongsberg         143.29 351   ePKPab    PKPbc    02 01 24.4 +0.2
PABE  Paberze           143.32 337   eP        PKPbc    02 01 24.8 +0.4
PABE                                 eP        PKPab    02 01 24.9 +0.8
ODD1  Odda              143.39 354   ePKPbc    PKPbc    02 01 24.5  0.0
PBUR  Paburge           143.63 339   eP        PKPbc    02 01 25.8 +0.5
PBUR                                 eP        PKPdf    02 01 25.9 -0.6
STRU  Stroemstad        143.64 350   i P       PKPbc    02 01 25.4 +0.2
BLS5  Blasjo            143.89 354   ePKPab    PKPdf    02 01 26.7 -0.2
KMY   Karmoy            144.21 355   ePKPdf    PKPdf    02 01 27.8 +0.5
AKASG Malin Array Be    144.41 327    PKP      PKPbc    02 01 27.8 -0.2
      comp=N,16nm,0.5s,baz=46,slow=4.0,SNR=118
AKASG                                 pPKP     pPKPdf   02 03 33.9 -0.4
      comp=N,4.4nm,0.8s,baz=46,slow=4.0,SNR=3.9
AKASG                                 SKPbc    SKiKP    02 04 17.1 +0.5
      comp=N,1.3nm,0.5s,baz=50,slow=3.0,SNR=5.1
TJOU  Tjoern            144.51 349   i P       PKPbc    02 01 28.0  0.0
BORU  Boraas            144.67 347   i P       PKPdf    02 01 28.3 +0.1
SUW   Suwalki           144.76 336   ePKP      PKPbc    02 01 29.2 +0.3
HOMB  Homborsund        144.78 352   i P       PKPab    02 01 29.5  0.0
HOMB  Homborsund        144.78 352   ePKPbc    PKPbc    02 01 29.1 +0.3
SNART Snartemo          144.87 353   i P       PKPab    02 01 29.8 -0.1
SNART Snartemo          144.87 353   ePKPab    PKPab    02 01 29.9  0.0
MQOL  MQOL              144.97 273   i P       PKPab    02 01 31.9 +0.4
MQOL                                 i                  02 01 38.6
      baz=247,slow=18
ONAU  Onsala            145.06 348   i P       PKPbc    02 01 29.5 -0.2
DIKM  Dikmen            145.12 310   ⇑P        PKPab    02 01 31.1 -0.4
BLEU  Blekinge          145.20 344   i P       PKPbc    02 01 30.0 -0.2
FABU  Falkenberg        145.27 347   i P       PKPbc    02 01 30.1 -0.2
OVD   Ostervraa, Den    145.44 350   i P       PKPbc    02 01 31.5 +0.7
DEL   Delary            145.51 346   eP        PKPbc    02 01 30.6 -0.4
DEL                                  eP        PKPbc    02 01 30.7 -0.4
DEL   Delary            145.51 346   i P       PKPbc    02 01 31.0 -0.1
BNN   Bunyan            145.53 305             PKPdf    02 01 31.0 +0.5
ASF   Jabal al Asfar    145.84 293    PKPbc    PKPdf    02 01 32.0 +0.8
      comp=N,36nm,0.8s,baz=120,slow=1.7,SNR=50
GOET  G??ttrup          145.87 350   i P       PKPab    02 01 33.0 -0.8
BZK   Bozkurt           145.88 311   ⇓P        PKPbc    02 01 33.2 +0.6
ASCN  Ascension         145.90 155    PKPbc    PKPbc    02 01 33.4 -0.1
KAC   Achnashellach     146.01   4   eP        PKPbc    02 01 32.6 +0.2
MCD   Coleburn Disti    146.04   2   eP        PKPbc    02 01 32.5  0.0
BJUU  Bjuv              146.07 346   i P       PKPbc    02 01 33.0 +0.3
KPL   Plockton          146.14   5   eP        PKPbc    02 01 32.2 -0.6
LUNU  Lund              146.38 346   i P       PKPbc    02 01 33.9 +0.4
SORM  Soroca            146.41 324   ⇓P        PKPbc    02 01 34.0 +0.2
MUD   Monsted U'grnd    146.43 350   i P       PKPbc    02 01 34.2 +0.6
PURM  Purcari           146.47 321   ⇓P        PKPbc    02 01 34.7 +0.6
BSD   Bornholm Skovb    146.49 344   eP        PKPbc    02 01 33.7 -0.1
BSD                                  eP        PKiKP    02 01 34.0 -2.0
BSD   Bornholm Skovb    146.49 344   i P       PKPbc    02 01 34.2 +0.3
COP   Copenhagen        146.55 346   i P       PKPbc    02 01 34.6 +0.7
BHL   Bhannes           146.68 296   eP        PKPdf    02 01 32.4 -0.2
SHBL  Chebaa            146.69 295   eP        PKPdf    02 01 32.9 +0.3
DRUM  Mains of Drumt    146.74   2   eP        PKPbc    02 01 34.2 -0.3
DQRL  Deir Qamar        146.78 296   eP        PKPdf    02 01 33.5 +0.8
KIS   Kishinev          146.82 322   ePKP      PKPbc    02 01 35.0  0.0
      comp=N,40nm,0.7s
MILM  Milestii Mici     146.86 322   ePKHKP    PKPpre   02 01 32.0
MILM  Milestii Mici     146.86 322   i PKiKP   PKPbc    02 01 35.0 -0.1
MILM                                 i pPKP    pPKPdf   02 03 37.0 -1.6
MILM  Milestii Mici     146.86 322   ⇑P        PKPbc    02 01 35.1  0.0
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BR131 Keskin Array S    146.91 307    P        PKPdf    02 01 33.0 +0.2
      SNR=34
BRTR  Keskin Array B    146.91 307    PKPbc    PKPbc    02 01 35.9 +0.2
      comp=N,21nm,0.7s,baz=138,slow=4.0,SNR=63
BRTR                                  pPKPbc   pPKPab   02 03 39.9 -0.2
      comp=N,7.7nm,1.1s,baz=169,slow=3.7,SNR=4.3
LLD   Lille Linde       146.93 346   i P       PKPbc    02 01 35.7 +0.7
MMAI  Mount Meron Ar    147.01 295    PKPbc    PKPbc    02 01 35.2 -0.8
      comp=N,12nm,0.5s,baz=170,slow=24,SNR=51
MMAI                                  pPKPbc   pPKPbc   02 03 40.0 -0.1
      comp=N,1.6nm,0.7s,baz=78,slow=15,SNR=2.1
INVG  Invergeldie, C    147.16   3   eP        PKPbc    02 01 35.7 +0.1
LAWE  Loch Awe, Argy    147.23   5   eP        PKPbc    02 01 36.3 +0.5
BEL   Belsk             147.37 335   ePKP      PKiKP    02 01 37.4 -0.6
IAS   Iasi              147.40 323   ⇓P        PKPbc    02 01 36.8 +0.3
LEOM  Leova             147.44 322   ⇑P        PKPbc    02 01 36.9 +0.3
GKP   Gorka Klasztor    147.44 340   ePKP      PKPbc    02 01 37.1 +0.7
ANTO  Ankara            147.48 308    PKPbc    PKPdf    02 01 34.2 +0.6
BR231 Keskin MP Arra    147.50 308    PKPbc    PKPbc    02 01 37.5 +0.3
VASR  Vaslui            147.60 322   ⇓P        PKPbc    02 01 37.8 +0.7
JAWL  J.Aulia           147.66 261   i P       PKiKP    02 01 39.2 -0.5
JAWL                                 i                  02 01 45.7
      baz=345,slow=8.6
PGBU  Gleniffer braes   147.75   4   eP        PKPbc    02 01 36.9 -0.3
TLCR                    147.81 319   ⇑P        PKPbc    02 01 38.2 +0.6
VLDR  Vladesti          147.88 321   ⇑P        PKiKP    02 01 38.8 -0.4
BIR   Birlad            147.91 322   ⇓P        PKiKP    02 01 38.7 -0.5
VARL  Varlezi           147.99 321   ⇑P        PKiKP    02 01 39.0 -0.4
JURR  Jurilovca         147.99 318   ⇓P        PKPbc    02 01 38.5 +0.4
SCTR  Scanteiesti       148.03 321   ⇑P        PKiKP    02 01 39.2 -0.3
GHRR                    148.15 322   ⇓P        PKiKP    02 01 40.0 +0.2
SLCR  Slobozia Conac    148.21 321   ⇓P        PKiKP    02 01 39.6 -0.2
CFR   Carcaliu          148.22 320   ⇓P        PKPbc    02 01 39.1 +0.4
TPGR  Topolog           148.22 319   ⇓P        PKiKP    02 01 39.5 -0.4
SCHL  Schela            148.22 320   ⇑P        PKiKP    02 01 39.4 -0.5
KWP   Kalwaria Pacla    148.23 331   ePKP      PKiKP    02 01 39.2 -0.6
TESR  Tescani           148.31 323   ⇓P        PKPbc    02 01 39.2 +0.3
BURAR Bucovina Array    148.40 326   ⇓P        PKiKP    02 01 39.9 -0.4
MDUB  Mudurnu           148.40 310    PKPbc    PKPbc    02 01 39.7 +0.3
PANC  Panciu            148.41 321   ⇑P        PKiKP    02 01 39.9 -0.4
TIRR  Tirgusor          148.44 318   ⇓P        PKPbc    02 01 39.7 +0.5
TIRR  Tirgusor          148.44 318   ⇓P        PKPbc    02 01 39.7 +0.5
TIRR  Tirgusor          148.44 318             PKPdf    02 01 34.0 -1.0
TIRR                                  PKPbc    PKiKP    02 01 40.1 -0.3
NEWG  New Galloway      148.45   4   eP        PKPbc    02 01 38.1 -0.8
EFOR  EFORIE            148.50 317   ⇑P        PKiKP    02 01 40.4 -0.1
MFTR  Murfatlar         148.58 318   ⇓P        PKiKP    02 01 40.4 -0.2
HARR  Harsova           148.61 319   ⇑P        PKiKP    02 01 40.2 -0.5
TLBR  Topalu            148.61 319   ⇑P        PKiKP    02 01 40.6 -0.2
VRI   Vrincioaia        148.65 322   ⇑P        PKPbc    02 01 40.0 +0.2
MANR  Mangalia          148.66 317   ⇓P        PKiKP    02 01 40.9  0.0
PLOR  Plostina          148.70 322   ⇓P        PKPbc    02 01 40.2 +0.3
CVDA  Cernavoda         148.73 318   ⇓P        PKiKP    02 01 40.6 -0.3
GRER                    148.79 321   ⇑P        PKiKP    02 01 41.3 +0.2
EDMD  Edmundbyers       148.83   1   eP        PKPbc    02 01 39.7 -0.2
BISRR Bisoca            148.84 321   ⇓P        PKiKP    02 01 41.4 +0.1
KOLS  Kolonicke sedl    148.93 330   ePKP      PKiKP    02 01 41.9 +0.6
KOLS                                 epKP               02 03 52.0
COVR  Voineasa-Covas    148.96 322   ⇑P        PKPbc    02 01 40.4 -0.2
PSN   Preselentsi       148.98 317   eP        PKPbc    02 01 41.0 +0.4
ICOR  Ion Corvin        148.99 318   ⇓P        PKiKP    02 01 41.6 +0.1
AMRR  Amara             149.01 319   ⇓P        PKiKP    02 01 41.7 +0.2
OJC   Ojcow             149.02 334   ePKP      PKPbc    02 01 40.9 +0.4
PGOR  Pogoanele         149.05 320   ⇑P        PKiKP    02 01 41.9 +0.3
MRWI  Hamdab            149.07 267   i P       PKPbc    02 01 41.5 -0.1
MRWI                                 i                  02 01 45.7
      baz=125,slow=5.6
NEHR  Nehoiu            149.15 321   ⇑P        PKPbc    02 01 41.0  0.0
ARCR  ARCALIA           149.19 326   ⇓P        PKiKP    02 01 41.9  0.0
ISR   Istrita           149.19 321   ⇑P        PKiKP    02 01 41.8 -0.2
BMR   Baia Mare         149.23 327   ⇓P        PKiKP    02 01 41.7 -0.2
MLR   Muntele Rosu      149.31 322   ⇑P        PKPbc    02 01 41.8 +0.3
MLR   Muntele Rosu      149.31 322    PKPbc    PKPbc    02 01 41.6 +0.1
      comp=N,13nm,0.5s,baz=1.0,slow=3.4,SNR=43
MLR                                   pPKPab   pPKPbc   02 03 46.8 +0.4
      comp=N,15nm,1.2s,baz=161,slow=1.5,SNR=3.7
MLR   Muntele Rosu      149.31 322    PKPdf    PKPdf    02 01 36.3 -0.2
MLR   Muntele Rosu      149.31 322   ⇑P        PKPbc    02 01 41.7 +0.1
CRVS  Cervenica-Dubn    149.32 331   ePKP      PKPdf    02 01 37.0 +0.8
CRVS                                 e                  02 01 42.4
CRVS                                 epKP               02 03 52.8
RASA  Rasa              149.33 319   ⇓P        PKiKP    02 01 42.3 +0.1
DOPR  Dopca             149.34 323   ⇓P        PKiKP    02 01 42.5 +0.2
LEHL  Lehliu            149.39 319   ⇑P        PKiKP    02 01 42.4 +0.1
NIE   Niedzica          149.44 333   ePKP      PKiKP    02 01 43.8 +1.4
TGMR  Targu Mures       149.46 325   ⇑P        PKiKP    02 01 42.9 +0.4
SECR                    149.51 321   ⇑P        PKiKP    02 01 42.5 -0.2
PLAR  PLOIESTI          149.60 321   ⇑P        PKiKP    02 01 42.8  0.0
SULR                    149.61 320   ⇓P        PKiKP    02 01 42.5 -0.3
HPK   Haverah Park      149.72   1   eP        PKPbc    02 01 42.2 +0.2
PRD   Provadia          149.72 317   eP        PKiKP    02 01 43.0 -0.1
MDB   Medias            149.78 324   ⇓P        PKiKP    02 01 43.6 +0.4
CBBR  Cluj-Babes-Bol    149.81 326   ⇑P        PKiKP    02 01 43.2  0.0
KSP   Ksiaz             149.81 338   ePKP      PKiKP    02 01 43.5 +0.4
CJR   Cluj-Napoca       149.82 326   ⇑P        PKiKP    02 01 43.4 +0.1
VOIR                    149.85 322   ⇑P        PKiKP    02 01 43.6 +0.2
MESR  Meseseni          149.86 327   ⇓P        PKiKP    02 01 43.5 +0.2
OKC   Ostrava-Krasne    149.98 335   ePKPDF    PKPdf    02 01 37.9 +0.7
OKC                                 ⇑ePKP      PKiKP    02 01 43.2 -0.2
LANS  Liptovska Anna    149.99 333   ePKP      PKiKP    02 01 44.9 +1.4
LANS                                 epKP               02 03 54.0
SGRR  Singureni         150.03 320   ⇑P        PKPbc    02 01 43.0 -0.1
KECS  Kecovo            150.06 331   ePKP      PKiKP    02 01 44.6 +1.0
RAZG  Razgrad           150.07 318   ⇓P        PKPbc    02 01 43.5 +0.2
OSTC  Ostas             150.08 338   ePKPDF    PKPbc    02 01 42.1 -1.0
OSTC                                ⇑ePKP      PKiKP    02 01 44.3 +0.7
OSTC                                 epPKP     pPKPbc   02 03 48.4 +0.3
CHVC  Chvalec           150.11 338   ePKPDF    PKPdf    02 01 37.9 +0.5
CHVC                                ⇑ePKP      PKiKP    02 01 43.9 +0.2
CHVC                                 epPKP     pPKPbc   02 03 48.3 +0.1
ARR   Arges             150.12 323   ⇓P        PKiKP    02 01 44.5 +0.5
UPC   Upice             150.19 338⇑ePKP        PKiKP    02 01 44.0 +0.2
UPC                                  epPKP     pPKPbc   02 03 48.7 +0.3
LTVH  Ltavrtes, Hu      150.21 328   ⇓P        PKiKP    02 01 44.5 +0.5
DPC   Dobruska-Polom    150.22 338   ePKPDF    PKPdf    02 01 38.2 +0.5
DPC                                 ⇑ePKP      PKiKP    02 01 44.4 +0.4
DPC                                  ePKPAB    PKPab    02 01 53.1 +1.1
DPC                                  epPKP     pPKPbc   02 03 48.6 +0.1
DRGR                    150.22 327   ⇓P        PKiKP    02 01 44.0 -0.1
STFAR Stefanesti-Arg    150.25 322   ⇑P        PKPbc    02 01 43.5 -0.1
MORC  Moravsky Berou    150.25 336   ⇓P        PKiKP    02 01 44.4 +0.3
MORC  Moravsky Berou    150.25 336   ePKP      PKPdf    02 01 38.4 +0.7
MORC                                 e                  02 01 44.3
LBWR  Ladybower, Pea    150.27   1   eP        PKPbc    02 01 43.4  0.0
KRLC  Kraliky           150.29 337   ePKPDF    PKPdf    02 01 38.2 +0.4
KRLC                                ⇑ePKP      PKiKP    02 01 44.3 +0.2
KRLC                                 epPKP     pPKPbc   02 03 48.1 -0.6
CLL   Collm             150.42 342    PKPdf    PKPdf    02 01 37.1 -0.7
CLL                                   PKPbc    PKiKP    02 01 44.3  0.0
CLL                                   PKPab    PKPab    02 01 53.3 +0.6
CLL   Collm             150.42 342   ePKPdf    PKPdf    02 01 39.0 +1.2
CLL                                 ⇓iPKPbc    PKiKP    02 01 44.5 +0.2
      comp=Z,118nm,1.1s
CLL                                 ⇑iPKPab    PKPab    02 01 53.4 +0.7
      comp=Z,46nm,1.3s
CLL                                  epPKPbc   pPKPbc   02 03 49.0 +0.1
CLL                                  epPKPab   pPKPab   02 03 54.0 +1.1
CLL                                  eSKPdf    SKPdf    02 04 21.0 +1.0
CLL                                  esPKPab   sPKPab   02 04 49.0 +2.6
CLL                                  ex        x        02 07 03.0
CLL                                  ePPP      PPP      02 08 42.0
CLL                                  ePPPP              02 11 13.0
CLL                                  eSKKSac   SKKSac   02 11 23.0 +1.7
CLL                                  ex        x        02 12 42.0
CLL                                  eSKSP              02 14 52.0
CLL                                  epSKSP             02 17 34.0
CLL                                  eSS       SS       02 23 48.0  -11
CLL                                  eSSP      SSP      02 24 42.0
CLL                                  eSKSSKSacS'S'ac    02 24 55.0 +2.7
CLL                                  eSSS      SSS      02 29 54.0
HUMR  Humele            150.44 321   ⇑P        PKPbc    02 01 43.9 -0.1
BORR  Bors              150.47 328   ⇑P        PKiKP    02 01 45.1 +0.6
COPA  Copaceanca        150.53 320   ⇑P        PKPbc    02 01 44.4 +0.2
BRG   Berggiesshubel    150.53 341⇓ePKPf                02 01 38.9
BRG                                   Amp               02 01 40.8
      comp=Z,13nm,1.4s
BRG                                 ⇑iPKP      PKiKP    02 01 45.1 +0.6
BRG                                   Amp               02 01 46.2
      comp=Z,68nm,0.6s
BRG                                   pPKP     pPKPbc   02 03 49.2 -0.1
BRG                                   Amp               02 03 57.0
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,32nm,1.4s						
LOT	Lotru	150.55	324	⇓P	PKPbc	02 01 44.2	-0.2
SZH	Strazhica	150.59	318	eP	PKPbc	02 01 44.0	-0.4
JMB	Yambol	150.61	316	eP	PKiKP	02 01 45.0	+0.1
PVCC	Panska Ves	150.65	340	⇑ePKP	PKiKP	02 01 44.8	0.0
PVCC				epPKP	pPKPab	02 03 53.7	-0.2
DEV	Deva	150.73	325	⇓P	PKiKP	02 01 45.0	0.0
FOEL	Foel Wylfa	150.73	3	eP	PKPbc	02 01 44.6	+0.1
PSZ	Piszkesteto	150.75	331	⇓P	PKiKP	02 01 45.2	0.0
VYHS	Vyhne	150.76	333	ePKP	PKiKP	02 01 45.4	+0.3
VYHS				epKP		02 03 55.9	
KOLL	Kolacno	150.88	333	ePKP	PKPdf	02 01 39.0	+0.4
KOLL				e		02 01 45.8	
KOLL				epKP		02 03 56.3	
JAVC	Velka Javorina	150.95	335	ePKP	PKPdf	02 01 40.5	+1.7
JAVC				e		02 01 47.1	
PVL	Pavlikeni	150.98	319	eP	PKiKP	02 01 46.0	+0.3
VRAC	Vranov	150.99	336	⇑P	PKiKP	02 01 45.5	-0.1
VRAC	Vranov	150.99	336	PKP	PKPdf	02 01 39.3	+0.4
	comp=Z,0.7nm,0.4s,baz=148,slow=1.7,SNR=5.9						
VRAC				PKPbc	PKiKP	02 01 45.9	+0.4
	comp=Z,5.1nm,0.4s,baz=54,slow=1.3,SNR=18						
VRAC				pPKPbc	pPKPbc	02 03 49.7	-0.8
	comp=Z,3.1nm,1.0s,baz=290,slow=2.8,SNR=2.7						
VRAC	Vranov	150.99	336	ePKP	PKPdf	02 01 38.8	0.0
VRAC				e		02 01 45.6	
VRAC				e		02 01 56.5	
AKAS	Kas	151.02	303		PKPbc	02 01 44.6	-1.2
BSZH	Besenyszg	151.04	330	⇑P	PKiKP	02 01 46.3	+0.6
VLAD	Vladila	151.08	321	⇓P	PKiKP	02 01 46.2	+0.3
SIRR	Siria	151.11	327	⇑P	PKiKP	02 01 46.2	+0.3
GZR	Gura Zlata	151.12	324	⇓P	PKPbc	02 01 45.8	+0.1
PRU	Pruhonice	151.12	339	ePKPDF	PKPdf	02 01 39.5	+0.5
PRU				⇑ePKP	PKiKP	02 01 45.9	+0.1
PRU				epPKP	pPKPbc	02 03 50.6	-0.1
KRUC	Moravsky	151.27	336	ePKP	PKPdf	02 01 39.6	+0.4
KRUC				e		02 01 46.3	
KRUC				e		02 01 57.4	
SMOL	Smolenice	151.32	334	ePKP	PKiKP	02 01 47.4	+1.2
SMOL				e		02 01 58.2	
SRE	Strehaia	151.36	323	⇓P	PKiKP	02 01 46.8	+0.3
TREC	Trest	151.40	338	⇑ePKP	PKiKP	02 01 46.7	+0.3
TREC				ePKPAB	PKPab	02 01 57.9	+1.0
DIM	Dimitrovgrad	151.49	316	eP	PKiKP	02 01 47.0	+0.2
MODS	Modra-Piesok	151.50	334	ePKP	PKPdf	02 01 40.6	+1.0
MODS				e		02 01 47.6	
MODS				e		02 01 58.6	
MODS				epKP		02 03 57.4	
SRO	Srobarova	151.51	333	ePKP	PKiKP	02 01 47.1	+0.5
SRO				e		02 01 58.9	
SRO				epKP		02 03 58.2	
NKC	Novy Kostel	151.54	342	⇑ePKP	PKiKP	02 01 46.9	+0.2
NKC				ePKPAB	PKPab	02 01 58.7	+1.2
NKC				epPKP	pPKPbc	02 03 52.0	+0.3
RSBS	Rosebush, Pemb	151.56	5	eP	PKPbc	02 01 45.6	-0.8
BZS	Buzias	151.58	326	⇓P	PKiKP	02 01 46.8	0.0
ZST	Bratislava	151.71	334	ePKP	PKPdf	02 01 41.3	+1.4
ZST				e		02 01 47.8	
ZST				e		02 01 59.3	
ZST				epKP		02 03 58.0	
DJES	Djerdap	151.73	324	⇑P	PKiKP	02 01 47.1	-0.1
KDZ	Kurdzhali	151.78	316	eP	PKPbc	02 01 47.0	-0.2
MONM	Monmouth	151.80	3	eP	PKPbc	02 01 46.2	-0.6
PLD	Plovdiv	151.98	317	eP	PKPbc	02 01 47.0	-0.6
BANR	Banloc	151.98	326	⇓P	PKiKP	02 01 48.5	+0.9
PGB	Panagyurishte	152.07	318	eP	PKiKP	02 01 48.0	-0.1
MDVR	Moldovita	152.09	325	⇓P	PKiKP	02 01 48.0	-0.1
SWN1	Swindon	152.16	1	eP	PKPbc	02 01 47.0	-0.6
KHC	Kasperske Hory	152.18	340	ePKPDF	PKPdf	02 01 40.8	+0.2
KHC				⇑ePKP	PKiKP	02 01 48.0	0.0
KHC				ePKPAB	PKPab	02 02 01.4	+1.2
KHC				epPKP	pPKPbc	02 03 52.6	-0.7
RZN	Rozhen	152.20	316	eP	PKPbc	02 01 48.0	-0.4
CKRC	Cesky Krumlov	152.21	338	ePKPDF	PKPdf	02 01 40.3	-0.4
CKRC				⇑ePKP	PKiKP	02 01 48.5	+0.4
CKRC				ePKPAB	PKPab	02 02 01.5	+1.1
CKRC				epPKP	pPKPbc	02 03 52.6	-0.8
BLKB	Belogradchik	152.31	322	⇑P	PKPbc	02 01 48.3	0.0
GERES	GERESS Array B	152.39	339	PKP	PKPdf	02 01 41.3	+0.2
	comp=Z,1.2nm,0.8s,baz=87,slow=2.9,SNR=11						
GERES				PKPbc	PKiKP	02 01 48.8	+0.3
	comp=Z,5.1nm,0.6s,baz=45,slow=2.8,SNR=40						
GERES				pPKPbc	pPKPbc	02 03 53.1	-0.8
	comp=Z,2.3nm,0.9s,baz=62,slow=3.2,SNR=5.8						
CONA	Conrad Observa	152.41	336	eP	PKPdf	02 01 41.1	0.0
	comp=Z,8.3nm,1.2s,SNR=5.2						
CONA				eP	PKiKP	02 01 49.1	+0.5
	comp=Z,31nm,1.2s						
CONA				eP	PKPab	02 02 02.5	+1.2
	comp=Z,17nm,0.8s						
CONA				eP	pPKPab	02 03 59.0	-2.3
	comp=Z,14nm,1.1s,SNR=8.3						
RONA	Rosalia, Austr	152.43	335	eP	PKPdf	02 01 40.8	-0.2
	comp=Z,11nm,1.4s						
RONA				eP	PKiKP	02 01 49.0	+0.4
	comp=Z,15nm,0.6s						
RONA				eP	PKPab	02 02 02.8	+1.5
	comp=Z,27nm,1.4s						
RONA				eP	pPKPab	02 03 58.9	-2.4
	comp=Z,14nm,1.1s,SNR=7.7						
BEBN	Eben Emael	152.44	351	dPKiKP	PKiKP	02 01 48.9	+0.5
BEBN				dPKPab	PKPab	02 02 01.6	+0.4
MEM	Membach	152.58	351	dPKPdf	PKPdf	02 01 41.8	+0.7
MEM				dPKiKP	PKiKP	02 01 49.0	+0.3
MEM				dPKPab	PKPab	02 02 02.1	+0.4
BTNL	Ternell	152.58	351	dPKPdf	PKPdf	02 01 41.5	+0.4
BTNL				dPKiKP	PKPbc	02 01 48.6	0.0
BTNL				dPKPab	PKPab	02 02 01.7	-0.2
VTS	Vitosha	152.59	319	⇓P	PKPab	02 02 03.8	+1.4
VTS	Vitosha	152.59	319	PKPdf	PKPdf	02 01 40.9	-0.7
VTS				PKPbc	PKiKP	02 01 49.6	+0.4
VTS				PKPab	PKPab	02 02 04.5	+2.1
VTS	Vitosha	152.59	319	eP	PKPbc	02 01 49.0	-0.1
BSTI	Sart Tilman	152.66	351	dPKPdf	PKPdf	02 01 42.0	+0.8
BSTI				dPKiKP	PKiKP	02 01 49.3	+0.4
BSTI				dPKPab	PKPab	02 02 03.1	+1.0
FRGS	Fruska Gora	152.81	327	⇓P	PKPbc	02 01 48.9	-0.5
BHOU	Houvegnez	152.82	351	dPKPdf	PKPdf	02 01 42.0	+0.5
BHOU				dPKiKP	PKiKP	02 01 49.8	+0.5
BHOU				dPKPab	PKPab	02 02 02.3	-0.6
BOVS	Bovan	152.84	323	⇑P	PKPbc	02 01 48.8	-0.7
BCLA	Clavier	152.86	352	dPKPab	PKPab	02 02 02.8	-0.2
MMB	Musomiste	152.88	317	eP	PKPbc	02 01 49.0	-0.6
SNF	Seneffe	152.90	353	dPKiKP	PKiKP	02 01 49.8	+0.5
SNF				dPKPbc	PKPab	02 02 03.8	+0.7
BGES	Gesves	152.92	352	dPKiKP	PKiKP	02 01 49.7	+0.2
BGES				dPKPab	PKPab	02 02 03.5	+0.3
BMRD	Maredsous	153.04	352	dPKPdf	PKPdf	02 01 42.5	+0.8
BMRD				dPKiKP	PKiKP	02 01 49.7	0.0
BMRD				dPKPab	PKPab	02 02 04.0	+0.2
MOA	Molln	153.06	337	eP	PKPdf	02 01 41.5	-0.4
	comp=Z,7.7nm,1.9s						
MOA				eP	PKiKP	02 01 49.9	0.0
	comp=Z,4.1nm,0.7s						
MOA				eP	PKPab	02 02 05.1	+1.1
	comp=Z,9.0nm,1.1s						
MOA				eP	pPKPab	02 04 01.1	-2.8
	comp=Z,5.5nm,1.1s						
ARSA	Arzberg	153.10	335	eP	PKPdf	02 01 41.2	-0.8
	comp=Z,1.8nm,0.8s						
ARSA				eP	PKPbc	02 01 49.7	-0.2
	comp=Z,3.6nm,0.8s						
KKB	Krupnik	153.12	318	eP	PKPbc	02 01 48.0	-2.1
RCHB	Rochefort	153.13	352	dPKiKP	PKiKP	02 01 50.1	+0.2
RCHB				dPKPab	PKPab	02 02 04.4	+0.3
DOU	Dourbes	153.27	352	dPKPdf	PKPdf	02 01 42.9	+0.8
DOU				dPKiKP	PKiKP	02 01 50.7	+0.5
DOU				dPKPab	PKPab	02 02 04.8	0.0
BIOA	Bad Ischl, Aus	153.41	338	eP	PKPdf	02 01 41.7	-0.7
	comp=Z,8.7nm,1.2s						
BIOA				eP	PKiKP	02 01 50.9	+0.3
	comp=Z,6.1nm,0.9s						
BIOA				eP	PKPab	02 02 06.6	+1.1
	comp=Z,15nm,1.1s						
BIOA				eP	pPKPab	02 04 01.5	-3.9
	comp=Z,8.5nm,1.0s						
KOGS	Kog	153.46	333	i PKPdf	PKPdf	02 01 41.9	-0.6
KOGS				i PKPbc	PKPbc	02 01 50.6	-0.1
KOGS				i pPKPbc	pPKPbc	02 04 00.5	+4.3
WLF	Walferdange	153.47	350	dPKPdf	PKPdf	02 01 42.9	+0.5
WLF				dPKiKP	PKiKP	02 01 51.6	+1.0
WLF				dPKPab	PKPab	02 02 06.2	+0.6
VAY	Valandovo	153.75	318	i P	PKPab	02 02 07.9	+0.7
SOKA	Soboth	153.76	335	eP	PKPdf	02 01 42.9	-0.1
	comp=Z,14nm,1.4s						
SOKA				eP	PKiKP	02 01 52.2	+0.7
	comp=Z,21nm,1.7s						
SOKA				eP	PKPab	02 02 07.4	+0.3
	comp=Z,12nm,1.1s						
SOKA				eP	pPKPab	02 04 02.1	-4.9
	comp=Z,12nm,1.1s						
STIP	Stip	153.76	319	i P	PKPab	02 02 07.4	+0.2
KBA	Koelnbreinsper	154.04	338	eP	PKPdf	02 01 42.7	-0.8
	comp=Z,3.0nm,0.9s						
KBA				eP	PKPab	02 02 09.6	+1.2
	comp=Z,5.8nm,0.6s						
KBA				eP	pPKPbc	02 04 01.6	+3.8
	comp=Z,11nm,1.1s						
SKO	Skopje	154.04	320	i P	PKPab	02 02 10.5	+2.1
OBKA	Obir	154.08	335	eP	PKPdf	02 01 42.1	-1.4
	comp=Z,10nm,1.9s						
OBKA				eP	PKPab	02 02 08.7	+0.2
	comp=Z,6.7nm,0.8s						
OBKA				eP	pPKPbc	02 04 02.4	+4.7
	comp=Z,8.2nm,1.4s						
MYKA	Terra Mystica	154.32	337	eP	PKiKP	02 01 52.4	-0.2
	comp=Z,5.8nm,0.6s						
MYKA				eP	PKPab	02 02 09.3	-0.2
	comp=Z,9.0nm,0.7s						
BFO	Black Forest	154.34	346		PKPdf	02 01 43.1	-0.6
BFO				PKPbc	PKPbc	02 01 52.6	+0.1
BFO					PKPab	02 02 09.4	-0.1
WATA	Walderalm	154.39	340	eP	PKPdf	02 01 43.3	-0.7
	comp=Z,11nm,1.2s,SNR=5.8						
WATA				eP	PKiKP	02 01 52.7	-0.1
	comp=Z,3.3nm,0.5s						
WATA				eP	pPKPbc	02 04 03.8	+5.3
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	154.44	340	eP	PKPdf	02 01 43.8	-0.3
	comp=Z,16nm,1.3s,SNR=7.8						
WTTA				eP	PKiKP	02 01 52.8	-0.2
	comp=Z,8.0nm,0.6s						
WTTA				eP	PKPab	02 02 10.8	+0.6
	comp=Z,9.5nm,0.6s						
LJU	Ljubljana	154.48	335	i PKPdf	PKPdf	02 01 43.8	-0.1
LJU				i PKPbc	PKPbc	02 01 53.1	+0.2
LJU				i PKPab	PKPab	02 02 10.2	+0.1
LJU				epPKPbc	pPKPbc	02 04 03.2	+4.7
LJU				epPKPab	pPKPab	02 04 10.8	+0.9
RETA	Reutte	154.50	342	eP	PKPab	02 02 10.9	+0.6
	comp=Z,22nm,1.2s,SNR=6.1						
RETA				eP	pPKPab	02 04 05.1	-4.9
	comp=Z,5.7nm,1.2s						
MOTA	Moosalm	154.53	341	eP	PKPdf	02 01 43.6	-0.6
	comp=Z,12nm,1.1s,SNR=7.9						
MOTA				eP	PKiKP	02 01 52.7	-0.4
	comp=Z,14nm,1.2s						
MOTA				eP	PKPab	02 02 11.1	+0.7
	comp=Z,26nm,1.3s,SNR=4.3						
CRNS	Crni Vrh	154.55	335	i PKPdf	PKPdf	02 01 43.7	-0.4
CRNS				i PKPbc	PKiKP	02 01 53.0	-0.1
CRNS				i PKPab	PKPab	02 02 10.1	-0.4
SQTA	Sankt Quirin	154.61	341	eP	PKPdf	02 01 43.9	-0.3
	comp=Z,13nm,1.1s,SNR=7.1						
SQTA				eP	PKPbc	02 01 53.3	+0.1
	comp=Z,5.7nm,0.6s						
SQTA				eP	PKPab	02 02 11.5	+0.8
	comp=Z,20nm,1.4s,SNR=4.9						
ABTA	Abfaltersbach	154.61	338	eP	PKPdf	02 01 43.3	-0.9
	comp=Z,16nm,1.0s,SNR=11						
ABTA				i P	PKiKP	02 01 52.9	-0.3
	comp=Z,6.4nm,0.6s						
ABTA				eP	PKPab	02 02 10.8	0.0
	comp=Z,10nm,1.0s						
ABTA				eP	pPKPbc	02 04 02.8	+3.9
	comp=Z,12nm,1.3s						
ECH	Echery	154.69	348	PKPdf	PKPdf	02 01 44.1	-0.1
ECH				PKPab	PKPab	02 02 10.7	-0.3
DAVA	Damuels	154.93	343	eP	PKPdf	02 01 44.9	+0.2
	comp=Z,5.6nm,1.0s						
DAVA				eP	PKPab	02 02 12.9	+0.7
	comp=Z,11nm,0.9s						
FETA	Feichten	154.93	341	eP	PKPdf	02 01 44.8	0.0
	comp=Z,8.8nm,1.0s,SNR=6.9						
FETA				eP	PKPab	02 02 13.4	+1.2
	comp=Z,11nm,1.1s						
FETA				eP	pPKPbc	02 04 03.9	+4.2
	comp=Z,10nm,1.3s						
OHR	Ohrid	154.95	319	i P	PKPab	02 02 13.9	+1.5
IDI	Anoyia	154.95	303	PKPbc	PKPbc	02 01 54.8	+0.5
	comp=Z,17nm,1.1s,baz=349,slow=18,SNR=8.3						
PDG	Podgorica	154.99	323	⇑P	PKPab	02 02 12.9	+0.5
PDG	Podgorica	154.99	323	PKPdf	PKPdf	02 01 44.5	-0.2
PDG				PKPab	PKPab	02 02 12.1	-0.3
TIR	Tirane	155.35	321	⇓P	PKPab	02 02 15.0	+1.0
DAVOX	Davos/Dischmat	155.39	342	PKP	PKPdf	02 01 45.8	+0.4
	comp=Z,5.6nm,0.9s,baz=169,slow=1.6,SNR=9.5						
TEOL	Teolo	156.11	338		PKPdf	02 01 45.4	-0.7
TEOL				PKPab	PKPab	02 02 16.8	-0.4
TIP	Timpagrande	158.56	320	⇑P	PKPab	02 02 28.7	+0.6
POLO	Lamas de Olo	161.34	17	ePKPdf	PKPdf	02 01 49.1	-3.4
PVRL	Vila Real	161.46	17	ePKPdf	PKPdf	02 01 51.5	-1.0
MVO	Moncorvo	161.74	15	ePKPdf	PKPdf	02 01 54.1	+1.2
PVIS	Viseu	161.93	18	ePKPdf	PKPdf	02 01 52.8	-0.2
LIC	Lamto	162.19	166	ePKIKP	PKPdf	02 01 53.7	-0.3
	comp=Z,43nm,1.1s						
LIC	Lamto	162.19	166	ePKP1	PKPab	02 02 45.9	+1.6
	comp=Z,56nm,0.9s						
MTE	Manteigas	162.32	17	ePKPdf	PKPdf	02 01 54.7	+1.2
KIC	Kosan Boka	162.39	167	ePKIKP	PKPdf	02 01 53.3	-0.9
	comp=Z,20nm,0.9s						
KIC	Kosan Boka	162.39	167	ePKP1	PKPab	02 02 46.0	+0.8
	comp=Z,51nm,0.9s						
TIC	Toumodi	162.60	166	ePKIKP	PKPdf	02 01 53.8	-0.6
TIC	Toumodi	162.60	166	ePKP1	PKPab	02 02 47.0	+0.8
DBIC	Dimbokro	162.66	166	PKP	PKPdf	02 01 54.5	0.0
	comp=Z,15nm,0.9s,baz=72,slow=1.0,SNR=11						
DBIC				PKPab	PKPab	02 02 47.1	+0.7
	comp=Z,25nm,1.0s,baz=203,slow=5.9,SNR=12						
DBIC				PP	PP	02 06 29.9	-1.2
	comp=Z,4.7nm,1.0s,baz=118,slow=1.5,SNR=3.0						
DBIC	Dimbokro	162.66	166		PKPdf	02 01 52.8	-1.7
DBIC				PKPab	PKPab	02 02 46.4	0.0
PCBR	Castelo Branco	162.86	18	ePKPdf	PKPdf	02 01 54.0	+0.1
ESDC	Sonseca Array	163.78	9	PKP	PKPdf	02 01 55.5	+0.7
	comp=Z,1.4nm,1.1s,baz=344,slow=3.6,SNR=6.7						
ESDC				PKPab	PKPab	02 02 51.1	+0.3
	comp=Z,4.1nm,1.1s,baz=349,slow=4.4,SNR=8.9						
ESDC	Sonseca Array	163.78	9	PKPdf	PKPdf	02 01 54.5	-0.4
ESDC					PKPab	02 02 50.8	-0.1
EVO	Evora	163.90	21	ePKPdf	PKPdf	02 01 55.3	+0.4
PNCL	Nicolau / Gran	164.10	23	ePKPdf	PKPdf	02 01 56.9	+1.8
MORF	Marmelete	164.76	25	ePKPdf	PKPdf	02 01 57.3	+1.5
KEST	Kesra	165.13	326	PKPab	PKPab	02 02 57.7	+0.6
	comp=Z,4.6nm,0.8s,baz=65,slow=14,SNR=2.4						
TORD	Torodi Ar. Bea	169.32	193	PKP	PKPdf	02 01 59.1	-0.5
	comp=Z,14nm,1.1s,baz=268,slow=0.9,SNR=40						
TORD				PKPab	PKPab	02 03 15.9	+0.1
	comp=Z,28nm,0.9s,baz=163,slow=4.4,SNR=55						
TORD				PP	PP	02 07 04.7	-0.4
	comp=Z,10nm,1.1s,baz=163,slow=2.9,SNR=13						
MDT	Midelt	170.23	20	PKP	PKPdf	02 02 01.1	+1.2
	comp=Z,13nm,0.9s,baz=255,slow=0.6,SNR=16						
KOWA	Kowa	170.38	160		PKPdf	02 01 59.0	-1.2
KOWA				PKPab	PKPab	02 03 20.8	+0.3

KRSC 01 01:48:27.0±2.0, 54°.25N×158°.56E, h271km±18km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GNL	Ganaly	0.66	214	eP	Pn	01 49 03.1	+0.1
KOK	Koryaka	0.96	177	eP	Pn	01 49 05.4	+1.2
AVH	Avacha	0.99	174	eP	Pn	01 49 04.9	+0.6
UGLR	Uglovaya	1.05	171	eP	Pn	01 49 06.0	+1.3
TUMR	Tumrok	1.39	41	eP	Pn	01 49 07.8	+1.3
TUMD	Tumrok D	1.43	47	eP	Pn	01 49 07.7	+1.0
SPN	Mys Shipunski	1.44	142	eP	Pn	01 49 07.0	+0.1
SPN				eS	S	01 49 36.7	-1.7
KRMR	Karymshinskiy	1.44	190	eP	Pn	01 49 07.2	+0.3
MTVR	Mutnovka	1.78	187	eP	Pn	01 49 11.5	+1.9
MTVR				eS	S	01 49 45.1	+1.8
KBG	Krutoberegovo	3.11	48	eP	Pn	01 49 22.9	+1.2
KBG				eS	S	01 50 05.8	+0.4
KBTR	Krutoberegovo	3.13	49	eP	Pn	01 49 23.0	+1.0
BKI	Bering	4.40	74	eS	S	01 50 31.1	-0.4

IGQ ***01*** *01:49:03±0.5, 0°N±2°×8°0W±°, h5km*
VAO ***01*** *01:49:16.8±0.6, 0°.49N×78°.28W, h10km, mb4.5*
ISC 01 01:49:03.9±0.8, 0°.17N±0°.03×80°.06W±0°.04, h15km, n108, σ1s.60/108, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	Magdalena	0.37	130	P	Pn	01 49 15.0	+0.2
JAMA	Jama	0.45	199	P	Pg	01 49 13.0	+0.1
JAMA				S	Sn	01 49 23.0	-0.8
FLF1	Flavio Alfaro-	0.56	157	P	Pn	01 49 18.0	+0.5
FLF1				S	Sn	01 49 30.0	+3.4
AV18	Acelerografo,	0.60	76	P	Pb	01 49 17.0	+0.9
CAB1	Cabo Pasado-Ma	0.66	214	P	Sn	01 49 33.0	+4.1
AV21	Acelerografo,	0.71	46	P	Pg	01 49 17.0	-0.8
AMA1	Acelerografo,	0.83	24	P	Pb	01 49 18.0	-2.1
AMA1				S	Sb	01 49 30.0	-1.2
BV15	Puerto Quito-O	0.84	91	P	Pn	01 49 21.0	-0.2
BV15				S	Sn	01 49 36.0	+2.7
PAC1	Pacto, Paraso	1.27	86	P	Pn	01 49 27.0	-0.3
HPAL	Hacienda Las P	1.46	105	P	Pg	01 49 31.0	-1.1
APR1	Acelerografo,	1.46	98	P	Pb	01 49 31.0	-0.1
PINO	Pino	1.49	103	P	Pb	01 49 31.0	-0.6
GGPT	Toaza - Volcan	1.49	105	P	Pb	01 49 31.0	-0.6
TERV	Terraza Guagua	1.50	103	P	Pg	01 49 32.0	-0.8
GGPC	Guagua Pichinc	1.50	103	P	Pg	01 49 32.0	-0.9
JUA2	San Juan 2	1.50	105	P	Pg	01 49 32.0	-0.9
YANA	Yana	1.52	101	P	Pb	01 49 32.0	0.0
ILLI	Illinizas Sur	1.59	123	P	Pb	01 49 33.0	-0.4
PAST	Pastocalle	1.66	121	P	Pg	01 49 35.0	-0.8
CUSE	Cuicocha Este	1.67	85	P	Pb	01 49 34.0	-0.6
CUIC	Cuicocha-Domo	1.71	85	P	Pn	01 49 34.0	+0.5
AV11	Acelerografo,	1.71	98	P	Pg	01 49 36.0	-0.7
CUSW	Cuicocha Oeste	1.71	86	P	Pb	01 49 35.0	-0.4
COTA	Cotacachi	1.73	84	P	Pb	01 49 35.0	-0.7
PITA	Cotopaxi Volc	1.78	114	P	Pg	01 49 37.0	-1.2
NAS2	Nasa	1.79	117	P	Pg	01 49 37.0	-1.3
BNAS	Cotopaxi Volca	1.79	118	P	Pg	01 49 37.0	-1.3
ALIT	Ecuador-Imbabu	1.81	70	P	Pn	01 49 35.0	+0.3
BREF	Cotopaxi Volca	1.82	117	P	Pg	01 49 38.0	-1.0
URCU	Urcuqui	1.82	81	P	Pn	01 49 36.0	+0.8
BMOR	Cotopaxi Volca	1.83	119	P	Pg	01 49 38.0	-1.2
BVC2	Cotopaxi Volca	1.84	116	P	Pg	01 49 38.0	-1.4
VC1	Cotopaxi 1	1.84	116	P	Pg	01 49 38.0	-1.4
PPLP	Puerto Lpez	1.84	203	P	Pb	01 49 37.0	-0.4
BTAM	Cotopaxi Volca	1.86	117	P	Pb	01 49 38.0	0.0
TAMB	Tambo	1.90	117	P	Pg	01 49 39.0	-1.4
VCES	Cotopaxi	1.92	120	P	Pb	01 49 39.0	0.0
ANTG	Antisana-Guama	1.92	110	P	Pb	01 49 39.0	-0.1
AIB2	Ibarra (Univer	1.96	85	P	Pb	01 49 40.0	+0.4
ANTM	Antisana-La Mi	1.97	111	P	Pb	01 49 39.0	-0.8
ANTI	Antisana	2.00	108	P	Pb	01 49 40.0	-0.3
YAHU	Yahuarcocha	2.00	84	P	Pb	01 49 40.0	-0.2
ANTS	Antisana-Sarah	2.00	109	P	Pb	01 49 40.0	-0.4
CHSH	Refugio Sur-Vo	2.03	144	P	Pb	01 49 41.0	0.0
ANGU	Angureal	2.06	93	P	Pg	01 49 43.0	-0.5
CAYR	Refugio Cayamb	2.06	94	P	Pb	01 49 41.0	-0.4
PORT	Chimborazo Vol	2.07	142	P	Pb	01 49 41.0	-0.5
CAYA	Cayambe	2.07	93	P	Pb	01 49 42.0	+0.4
CHMA	Chilma	2.11	71	P	Pn	01 49 38.0	-1.0
TAMH	Tambohuasha Ch	2.13	143	P	Pb	01 49 42.0	-0.5
LNGL	El Angel-Carch	2.13	75	P	Pn	01 49 41.0	+1.5
PIAT	Ana Tenorio	2.14	123	P	Pb	01 49 42.0	-0.6
IGUA	Igualata	2.17	139	P	Pb	01 49 43.0	-0.3
ECEN	Cerro Negro	2.19	73	P	Pn	01 49 41.0	+0.7
CHL1	Volc¡n Chiles	2.20	74	P	Pn	01 49 41.0	+0.5
CHL2	Volc¡n Chiles	2.23	74	P	Pn	01 49 41.0	+0.1
JUI6	Juive	2.24	135	P	Pb	01 49 44.0	-0.3
BBIL	Ulba Tungurahu	2.25	136	P	Pb	01 49 44.0	-0.5
POND	Pondoa	2.25	134	P	Pb	01 49 44.0	-0.5
RETU	Refugio	2.28	135	P	Pb	01 49 45.0	-0.1
BMAS	Trigal station	2.29	136	P	Pb	01 49 44.0	-1.2
ARRY	Arrayan	2.31	136	P	Pb	01 49 45.0	-0.5
BPAT	Tungurahua Vol	2.32	136	P	Pb	01 49 45.0	-0.8
TULM	Tulcn-Chalpat	2.34	76	P	Pn	01 49 44.0	+1.7
CMBC	Cumbal	2.36	71	eP	Pn	01 49 44.5	+1.9
CMBC	Cumbal	2.36	71	P	Pb	01 49 45.0	-1.5
BONI	La Bonita	2.55	84	P	Pb	01 49 48.0	-1.5
SANGA	Volcan Sangay	2.78	143	P	Pb	01 49 52.0	-1.5
CCUFI	Cufio, Nario	2.91	69	eP	Pn	01 49 52.8	+2.6
GCUF	Volcan Galeras	2.91	69	eP	Pn	01 49 52.2	+2.0
ISPG	Isla Puna-Puer	3.12	182	P	Pb	01 49 57.0	-2.1
GR1C	Gorgona, Isla	3.39	34	eP	Pn	01 49 52.4	-3.9
CRUC	La Cruz	3.41	66	eP	Pn	01 49 59.4	+2.5
BOSC	San Juan Bosco	3.65	155	P	Pb	01 50 06.0	-2.2
ARNL	Arenillas	3.69	180	P	Pn	01 50 03.0	+2.6
SOTA	Rioblanco	3.97	60	eP	Pn	01 50 05.6	+0.9
PCON	Cinco Dias	4.25	60	eP	Pn	01 50 09.9	+1.3
MALC	Bahia Malaga	4.69	35	eP	Pn	01 50 16.9	+2.7
MARP	Paez Belalcaza	4.89	57	eP	Pn	01 50 19.1	+1.9
GARC	Garzon, Huila	4.99	66	eP	Pn	01 50 20.6	+2.0
BETC	Betania	5.25	62	eP	Pn	01 50 24.8	+2.9
YOTC	Yotoco, Valle	5.31	44	eP	Pn	01 50 21.9	-0.9
PLMC	San Jos del P	6.03	39	eP	Pn	01 50 33.8	+1.1
ORTC	Ortega, Tolima	6.08	52	eP	Pn	01 50 35.4	+2.0
MACC	Macarena, Meta	6.51	72	eP	Pn	01 50 41.5	+2.2
GUY2C	Guyana, Caldas	6.87	43	eP	Pn	01 50 45.9	+1.2
CBOC	Ciudad Bolivar	6.95	35	eP	Pn	01 50 51.5	+6.0
NORC	Norcasia	7.46	44	eP	Pn	01 50 55.9	+3.6
HELC	Santa Helena	7.50	37	eP	Pn	01 50 56.1	+3.0
DBBC	Dabeiba	7.81	29	eP	Pn	01 51 07.5	+10
SPBC	San Pablo de B	8.09	48	eP	Pn	01 51 02.1	+1.1
PTBC	PUERTO BERRIO,	8.45	41	eP	Pn	01 51 07.7	+1.8
ZARC	Zaragoza, Cauc	8.94	35	eP	Pn	01 51 17.2	+4.6
RUSC	La Rusia	8.99	51	eP	Pn	01 51 17.2	+3.5
CZSB	Cruzeiro do Su	10.74	137	eP	Pn	01 51 38.9	+1.6
ETMB	Extrema	16.98	126	eP	Pn	01 52 59.1	-1.9
BOAV	Boa Vista	19.66	83	eP	P	01 53 26.6	-5.9
LPAZ	La Paz	20.15	145	eP	Pn	01 53 44.6	+4.3
VILB	Vilhena	23.62	124	eP	P	01 54 16.9	+2.2
MALB	Monte Alegre	25.87	95	eP	P	01 54 34.6	-0.7
PDRB	Porto dos Gac	25.96	118	eP	P	01 54 36.3	+0.1
CLDB	Colider	26.50	115	eP	P	01 54 40.5	-0.5
SNDB	Serra Nova Dou	31.00	114	eP	P	01 55 21.2	0.0
SDBA	SAO DESIDERIO	37.05	111	eP	P	01 56 13.3	-0.5
GDU01	Guandu, BA	42.40	111	eP	P	01 56 58.1	-0.2
CMC01	Camacan, BA	42.91	113	eP	P	01 57 02.5	0.0
GUA01	Guaratinga, BA	43.03	115	eP	P	01 57 05.2	+1.8
NBAN	Anadia - AL	44.66	104	eP	P	01 57 15.4	-1.1

ATH 01 01:59:17.7, 38°.48N×20°.54E, h19km±4km, ML1.0/1, Error ellipse: s-maj=4.5km s-min=0.9km az=64.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.17	34	P	Pg	01 59 22.2	-0.1
EVGI				S	Sg	01 59 25.2	-0.1
NYDR	Nydri-Lefkada	0.26	29	P	Pb	01 59 23.8	0.0
NYDR				S	Sg	01 59 28.0	+0.2
DMLN	Damoulianata-K	0.28	208	P	Pg	01 59 23.8	-0.1
DMLN				S	Sb	01 59 28.2	0.0
VLS	Valsamata	0.31	172	P	Pg	01 59 24.0	-0.4
VLS				S	Sg	01 59 29.0	-0.1
VLS				AML	AML	01 59 29.4	
	comp=E,102µm,0.1s						
VLS				AML	AML	01 59 29.7	
	comp=N,58µm,0.2s						
LKD2	Lefkada island	0.32	17	P	Pg	01 59 23.9	-0.8
LKD2				S	Sb	01 59 29.7	0.0
PSDA	Pessada-Kefalo	0.37	174	P	Pg	01 59 25.4	-0.1
PSDA				S	Sb	01 59 31.0	-0.2

IDC ***01*** *02:03:16.5±1.7, 16°.44S×175°.56W, h232km±25km, mb3.5/4, mbtmp4.2/6, Error ellipse: s-maj=123.1km s-min=16.6km az=144.0*
ISC 01 02:03:17.6±1.5, 16°.4S±0°.5×175°.5W±0°.3, h250km, n8, σ1s.06/10, mb3.6/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.37	56	P	Pn	02 04 26.8	+0.9
	29nm,0.2s,baz=217,slow=1.8,SNR=10.0						
AFI				S	S	02 05 18.5	-1.6
	128nm,0.4s,baz=228,slow=23,SNR=16						
DZM	Mont Dzumac	17.95	249	P	P	02 07 08.9	-0.9
	6.7nm,0.8s,baz=18,slow=8.6,SNR=1.8						
STKA	Stephens Creek	41.78	240	P	P	02 10 43.0	0.0
	3.7nm,0.6s,baz=83,slow=11,SNR=5.1						

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                 3.7nm,0.6s
WRA   Warramunga Arr    47.65 258  P       P        02 11 29.2  0.0
        0.7nm,0.7s,baz=91,slow=7.2,SNR=29
WRA                                PcP     PcP      02 12 54.5 -0.2
        0.5nm,0.8s,baz=87,slow=3.6,SNR=1.4
        0.7nm,0.7s
ASAR  Alice Springs     47.88 253  P       P        02 11 31.4 +0.4
        7.3nm,0.5s,baz=88,slow=8.5,SNR=150
        7.3nm,0.5s
ILAR  Eielson Array     83.82  12  P       P        02 15 19.7 +1.1
        0.3nm,0.5s,baz=222,slow=5.6,SNR=5.6
        0.3nm,0.5s
BRTR  Keskin Array B   145.60 318  PKPbc   PKPab    02 22 28.1 +0.2
        0.5nm,0.8s,baz=90,slow=5.2,SNR=4.5
GERES GERESS Array B   146.77 349  PKPbc   PKPab    02 22 30.6 -1.4
        0.2nm,0.5s,baz=90,slow=5.3,SNR=1.9
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*BER **01** 02:25:37.4±2.6, 79°.33N×3°.53E, h10km, ML1.9, Confirmed Earthquake*

*DNK **01** 02:25:38.8±2.9, 79°.32N×3°.80E, h39km±68km, Mc3.6, ML1.6*

*IEPN **01** 02:25:40.0, 79°.07N×3°.96E, h10km*

ISC 01 02:25:34.9±1.2**, 79°.27N**±0°.06×**3°.40E**±0°.05**, h16km, n21, σ2s.57**/40**, 1C, Greenland Sea**

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Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
KBS   Kingsbay           1.66  98  eP      Pn       02 26 04.4 +1.1
KBS                                eS      Sn       02 26 22.3 -1.8
KBS   Kingsbay           1.66  98  eP      Pn       02 26 04.8 +1.6
KBS                                eS      Sn       02 26 22.6 -1.7
KBS                                 IAML            02 26 23.5
        comp=Z,15nm,0.4s
KBS   Kingsbay           1.66  98  eP      Pn       02 26 04.9 +1.6
KBS                                eS      Sn       02 26 22.4 -1.8
BRBB  Barentsburg B      2.44 114  eP      Pn       02 26 16.1 +2.1
BRBB                               eS      Sn       02 26 42.8 -0.6
BRBA  Barentsburg A      2.46 114  eP      Pn       02 26 16.7 +2.5
BRBA                               eS      Sn       02 26 43.2 -0.7
BRBA                                IAML            02 26 45.5
        comp=Z,19nm,0.7s
SPA0  Spitsbergen Ar     2.77 107  eP      Pn       02 26 21.2 +2.6
SPA0                               eS      Sn       02 26 51.4 -0.2
SPA0                                IAML            02 26 59.6
        comp=Z,14nm,0.6s
SPA0  Spitsbergen Ar     2.77 107⇑iP      Pn       02 26 21.2 +2.6
SPA0                               eS      Sn       02 26 51.6  0.0
HSPB  Hornsund (broa     3.38 126  eP      Pn       02 26 28.5 +1.6
HSPB                               eS      Sn       02 27 06.0 -0.7
HSPB                                IAML            02 27 07.7
        comp=Z,5.3nm,0.6s
HSPB  Hornsund (broa     3.38 126  eP      Pn       02 26 28.3 +1.4
HSPB                               eS      Sn       02 27 05.5 -1.2
NOR   Nord               4.06 315  i P     Pn       02 26 38.0 +1.8
NOR   Nord               4.06 315  eP      Pn       02 26 38.1 +2.0
NOR                                eS      Sn       02 27 20.7 -2.5
DAG   Danmarks Havn      5.20 252  i P     Pn       02 26 53.0 +1.1
DAG                                eS      Sn       02 27 48.7 -2.7
DAG                                 IAML            02 27 52.1
        comp=Z,2.4nm,0.4s
DAG   Danmarks Havn      5.20 252  eP      Pn       02 26 53.9 +2.0
DAG                                eS      Sn       02 27 47.4 -4.0
HOPEN Hopen              5.30 110  eP      Pn       02 26 55.2 +2.1
HOPEN                              eS      Sn       02 27 51.1 -2.5
HOPEN                               IAML            02 28 01.4
        comp=Z,4.3nm,0.7s
HOPEN Hopen              5.30 110  eP      Pn       02 26 55.3 +2.1
HOPEN                              eS      Sn       02 27 51.0 -2.7
BJO1  Bjornoya           5.94 136  eP      Pn       02 27 04.2 +2.2
BJO1  Bjornoya           5.94 136   P      Pn       02 27 04.2 +2.2
BJO1                                S      Sn       02 28 05.7 -3.8
DBG   Daneborg           7.29 239  eP      Pn       02 27 24.1 +3.7
DBG                                eS      Sn       02 28 37.9 -4.7
DBG   Daneborg           7.29 239  eP      Pn       02 27 23.1 +2.7
DBG                                eS      Sn       02 28 38.5 -4.1
ZFI2  Zemlya Franca-     7.65  57  eP      Pn       02 27 27.8 +2.4
ZFI2                               eS      Sn       02 28 47.7 -3.9
        comp=Z,6.9nm,1.2s
ZFI   Zemlya Franca-     7.66  57  eP      Pn       02 27 27.2 +1.7
ZFI                                eS      Sn       02 28 46.8 -4.9
        comp=Z,6.6nm,1.2s
```

IDC 01 02:29:44.3±3.7**, 2°.91S×139°.55E, h0km, mb3.2**/3**, mbtmp3.4**/4**, ML3.7**/1**, MS4.1**/1**, Error ellipse: s-maj=113.6km s-min=30.8km az=92.0, Near north coast of Irian Jaya**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
WRA   Warramunga Arr    17.68 196  P       Pn       02 33 51.9 -0.3
        0.3nm,0.3s,baz=14,slow=12,SNR=25
        0.6nm,0.5s
FITZ  Fitzroy Crossi    20.34 221  P       P        02 34 22.7 +0.4
        0.9nm,0.5s,baz=90,slow=9.7
        0.9nm,0.5s
ASAR  Alice Springs     21.35 194  P       P        02 34 32.9 -0.4
        0.5nm,0.7s,baz=30,slow=11,SNR=7.2
        0.5nm,0.7s
RAO   Raoul Island      48.12 127  LR      LR       02 58 27.6
        comp=Z,172nm,18.4s,baz=137,slow=36
MKAR  Makanchi Array    70.46 322  P       P        02 41 00.9 +0.2
        0.2nm,0.5s,baz=106,slow=5.7,SNR=1.8
        0.2nm,0.5s
```

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*IDC **01** 02:30:21.4±4.0, 10°.09S×161°.16E, h38km±32km, mb3.5/6, mbtmp3.7/7, ML3.2/1, Error ellipse: s-maj=29.0km s-min=27.0km az=94.0*

ISC 01 02:30:23.9±1.0**, 10°.2S**±0°.1×**161°.0E**±0°.1**, h67km, n8, σ1s.86**/9**, mb3.6**/6**, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
HNR   Honiara            1.28 305  Pn      Pn       02 30 43.4 -2.4
        150nm,0.3s,baz=168,slow=2.4,SNR=11
HNR                                Sn      Sn       02 31 02.4 +0.1
        263nm,0.3s,baz=21,slow=23,SNR=13
DZM   Mont Dzumac       12.94 157  Pn      Pn       02 33 23.7 -1.2
        0.1nm,0.3s,baz=344,slow=18,SNR=6.8
        4.4nm,0.9s
WRA   Warramunga Arr    27.49 246  P       P        02 36 07.1 +2.9
        0.5nm,0.5s,baz=76,slow=9.0,SNR=5.2
        0.5nm,0.5s
ASAR  Alice Springs     29.13 239  P       P        02 36 19.8 +1.0
        0.3nm,0.5s,baz=61,slow=10,SNR=5.3
        0.3nm,0.5s
FITZ  Fitzroy Crossi    35.15 253  P       P        02 37 11.7 +0.2
        1.3nm,0.9s,baz=73,slow=11,SNR=1.6
        1.3nm,0.9s
ILAR  Eielson Array     84.21  20  P       P        02 42 47.5 -0.2
        0.2nm,0.4s,baz=245,slow=4.5,SNR=4.2
        0.2nm,0.4s
MKAR  Makanchi Array    89.72 318  P       P        02 43 16.9 +2.0
        0.2nm,0.5s,baz=106,slow=4.5,SNR=2.9
        0.2nm,0.5s
YKA   Yellowknife Ar    96.34  28  P       P        02 43 45.2 +0.3
        0.2nm,0.6s,baz=265,slow=4.8,SNR=2.1
        0.2nm,0.6s
```

VAO 01 02:33:28.3±0.2**, 9°.82S×50°.25W, h0km, mbR3.8, Brazil**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
SNDB  Serra Nova Dou     2.37 206  eP      Pn       02 34 07.8 -0.7
SNDB                               eS      Sn       02 34 39.4 +1.0
SMTB  Santa Maria do     2.79  70  eP      Pn       02 34 14.9 +0.6
SMTB                               eS      Sn       02 34 49.3 +0.5
PEXB  Peixe              2.97 140  eP      Pn       02 34 16.9 +0.2
PEXB                               eS      Sn       02 34 52.7 -0.4
PRPB  Parauapebas        3.65   7  eP      Pn       02 34 26.8 +0.7
CLDB  Colider            5.56 259  eP      Pn       02 34 52.9 +0.5
CLDB                               eS      Sn       02 35 57.7 +0.7
SDBA  SAO DESIDERIO      5.84 117  eP      Pn       02 34 56.2 -0.1
PDRB  Porto dos Gac      6.61 254  eP      Pn       02 35 07.3 +0.4
PDRB                               eS      Sn       02 36 22.7 -0.4
ITTB  Itaituba           7.68 314  eP      Pn       02 35 22.4 +0.9
JANB  Januaria           7.79 133  eP      Pn       02 35 22.3 -0.8
SALV  Santo Antonio      8.04 221  eP      Pn       02 35 26.8 +0.3
IPMB  Ipameri, GO        8.35 167  eP      Pn       02 35 30.9 +0.2
MALB  Monte Alegre       8.87 333  eP      Pn       02 35 37.2 -0.6
ROSB  Rosrio             9.18  42  eP      Pn       02 35 41.2 -0.9
MCPB  Macapa, AP         9.57 349  eP      Pn       02 35 46.3 -1.1
NBPN  Ponto Novo - B     9.94  97  eP      Pn       02 35 52.7 +0.1
VILB  Vilhena           10.24 251  eP      Pn       02 35 56.2 -0.5
PTLB  Pontes e Lacer    10.32 236  eP      Pn       02 35 57.4 -0.3
DIAM  Diamantina, MG    10.56 144  eP      Pn       02 36 01.5 +0.3
GDU01 Guandu, BA        11.14 111  eP      Pn       02 36 09.0  0.0
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*IDC **01** 02:34:19.3±6.5, 56°.22S×25°.86W, h42km±59km, mb4.4/8, mbtmp4.5/9, ML3.9/1, MS3.8/1, Error ellipse: s-maj=33.8km s-min=16.9km az=61.0*

*NEIC **01** 02:34:21.6±1.7, 56°.26S±0°.10×26°.21W±0°.10, h58km±6km, mb4.7/16, Error ellipse: s-maj=15.2km s-min=5.8km az=159.0*

ISC 01 02:34:20.1±0.6**, 56°.25S**±0°.09×**26°.1W**±0°.1**, h50km, n44, σ0s.95**/36**, mb4.5**/9**, South Sandwich Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
HOPE  Hope Point         6.26 284  Pn      Pn       02 35 50.2 +0.4
VNA1  Neumayer--Stat    16.39 159  P       Pn       02 38 06.1 -0.2
VNA3  Neumayer Olymp    16.61 161  P       Pn       02 38 09.1  0.0
VNA2  Neumayer--Watz    16.78 159  P       Pn       02 38 10.8 -0.5
        baz=324,slow=13
ESPZ  Base Esperanza    16.96 232  Pn      Pn       02 38 13.7 +0.2
ESPZ                               IAmb    IAmb     02 38 26.9
        comp=Z,97nm,1.2s
SNAA  Sanae             18.32 157  P       P        02 38 31.1 +1.3
SNAA  Sanae             18.32 157  P       P        02 38 29.1 -0.7
        comp=Z,0.4nm,0.3s,baz=343,slow=11,SNR=9.0
        comp=Z,1.8nm,0.7s
TROLL Troll, Antarti    19.80 154  P       P        02 38 47.5 +1.4
BELA  Belgrano 2        21.93 185  P       P        02 39 07.2 -1.6
BELA                               IAmb    IAmb     02 39 13.6
        comp=Z,14nm,0.9s
COYC  Coyhaique         30.34 271  P       P        02 40 27.9 +1.1
AY01  Puyuhuapi         31.37 272  P       P        02 40 35.9 +0.1
QSPA  South Pole Qui    34.00 180  P       P        02 40 58.8  0.0
        comp=Z,13nm,0.6s,baz=184,slow=2.4,SNR=148
        comp=Z,13nm,0.6s
QSPA  South Pole Qui    34.00 180  P       P        02 40 59.4 +0.6
CPUP  Villa Florida     37.40 310  P       P        02 41 28.1  0.0
        comp=Z,3.7nm,0.7s,baz=146,slow=7.1,SNR=12
        comp=Z,3.7nm,0.7s
CPUP  Villa Florida     37.40 310  IAmb    IAmb     02 41 29.4
        comp=Z,12nm,1.4s
GO05  Huala             37.52 285  P       P        02 41 26.1 -3.0
SUR   Sutherland        40.10  74  LR      LR       02 54 30.8
        comp=Z,106nm,18.2s,baz=240,slow=30
LVC   Limon Verde       45.93 299  P       P        02 42 38.9 +0.7
        comp=Z,6.5nm,0.6s,baz=138,slow=7.8
        comp=Z,6.5nm,0.6s
LVC   Limon Verde       45.93 299  IAmb    IAmb     02 42 39.7
        comp=Z,6.6nm,0.7s
VNDA  Vanda             46.41 182  P       P        02 42 41.2 +0.4
        comp=Z,3.4nm,0.6s,baz=185,slow=7.3,SNR=45
        comp=Z,3.4nm,0.6s
VNDA  Vanda             46.41 182  P       P        02 42 41.8 +0.9
VNDA                               IAmb    IAmb     02 42 42.1
        comp=Z,3.7nm,0.6s
PB01  IPOC Station P    47.54 300  P       P        02 42 50.8 +0.3
H10S2 ASCENSION HYDR48.02  15      T       T        03 35 42.8
        baz=189,slow=74,SNR=4.1
H10S3 ASCENSION HYDR48.02  15      T       T        03 35 44.6
        baz=31,slow=74,SNR=5.7
H10N1 ASCENSION HYDR49.14  15      T       T        03 37 06.2
        baz=188,slow=76,SNR=4.0
H10N3 ASCENSION HYDR49.14  15      T       T        03 37 08.5
        baz=188,slow=76,SNR=5.4
H10N2 ASCENSION HYDR49.15  15      T       T        03 37 08.8
        baz=188,slow=76,SNR=5.8
LPAZ  La Paz            50.99 304  P       P        02 43 18.4 +1.0
        comp=Z,3.1nm,0.3s,baz=136,slow=5.3,SNR=33
        comp=Z,3.1nm,0.3s
LPAZ  La Paz            50.99 304  P       P        02 43 18.6 +1.0
LPAZ                               IAmb    IAmb     02 43 23.3
        comp=Z,5.8nm,0.7s
VOI   Vohitsoka         62.59  89  P       P        02 44 38.8 -0.3
MDP   Montagnes des     64.90 331  P       P        02 44 54.5 +0.3
        comp=Z,7.5nm,1.0s,baz=135,slow=4.3,SNR=1.6
        comp=Z,7.5nm,1.0s
OTAV  Otavalo           70.27 303  P       P        02 45 28.4 -0.2
TORD  Torodi Ar. Bea    72.93  28  P       P        02 45 43.8 -0.1
        comp=Z,5.2nm,0.8s,baz=198,slow=6.4,SNR=44
        comp=Z,5.2nm,0.8s
ASAR  Alice Springs     98.61 162  P       P        02 47 53.1 -0.6
        comp=Z,0.5nm,0.8s,baz=176,slow=3.5,SNR=1.7
        comp=Z,0.5nm,0.8s
FINES FINESS Array B   124.27  27  PKP     PKPdf    02 53 10.7 -1.0
        comp=Z,0.6nm,0.7s,baz=222,slow=1.9,SNR=5.6
ARCES ARCESS Array B   130.90  21  PKP     PKPdf    02 53 22.5 -1.7
        comp=Z,2.1nm,0.9s,baz=222,slow=1.2,SNR=4.9
YKA   Yellowknife Ar   136.73 317  PKP     PKPdf    02 53 35.6 +0.4
        comp=Z,0.5nm,0.7s,baz=125,slow=2.3,SNR=8.0
A36M  Sachs Harbour    144.70 328  PKPdf   PKPab    02 53 48.5 +0.2
INK   Inuvik           146.34 320  PKPbc   PKPbc    02 53 54.5 +0.9
DAWY  Dawson           147.38 311  PKPbc   PKPdf    02 53 55.9 +1.7
BCAR  Beaver Creek A   148.09 309  PKPbc   PKPbc    02 53 58.9 +0.2
SONM  Songino Array    150.13  86  PKPbc   PKPbc    02 54 04.6 +0.2
        comp=Z,0.7nm,0.4s,baz=248,slow=1.6,SNR=2.8
ILAR  Eielson Array    150.70 311  PKPbc   PKPbc    02 54 05.5 +0.4
        comp=Z,4.4nm,0.9s,baz=121,slow=1.4,SNR=30
ILAR  Eielson Array    150.70 311          PKPbc    02 54 05.2 +0.1
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*IDC **01** 02:35:29.7±1.9, 6°.04S×154°.66E, h43km±17km, mb4.1/20, mbtmp4.3/24, ML4.5/3, MS3.9/44, Error ellipse: s-maj=13.9km s-min=13.7km az=85.0*

*BJI **01** 02:35:33.8±0.0, 6°.17S×154°.35E, h64km, mb4.7/23, mB5.0/11, Ms4.6/1, Ms7 4.3/1*

*GCMT **01** 02:35:34.7±0.3, 6°.57S±0°.02×154°.76E±0°.02, h81km±4km, MW4.9/70, Moment Tensor Solution. s25,c27; s70,c84; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.24±.18; Mθθ-1.66±.20; Mφφ1.90±.19; Mrθ1.04±.09; Mθφ1.74±.18; Mφr-1.60±.08; Best double couple: M0 3.13800×10¹⁶ NP1:φs245.00000°, δ53.00000°, λ-6.00000°. NP2: φs338.00000°, δ85.00000°, λ-143.00000°. Principal axes: T 3.0300, Plg21.0000°, Azm106.0000°; N 0.2140, Plg53.0000°, Azm345.0000°; P -3.2460, Plg29.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 02:35:35.7±1.7, 6°.26S±0°.08×154°.57E±0°.08, h77km±6km, mb4.8/35 Error ellipse: s-maj=13.1km s-min=9.9km az=49.0*

*DJA **01** 02:35:36.2±0.5, 6°S±3°×15°5E±°, h90km±5km, M4.8/32, mB5.1/9, mb4.8/32, MLv5.2/2, Mw(mB)4.5/9*

ISC 01 02:35:32.5±0.4**, 6°.24S**±0°.06×**154°.65E**±0°.05**, h61km, n129, σ1s.51**/104**, mb4.8**/52**, 1C-1D, Bougainville-Solomon Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC       h  m  s    ISC
RABL  Rabaul             3.20 309          Pn       02 36 22.6 +2.2
KRVT  Keravat (AS076     3.24 306  P       Pn       02 36 19.7 -1.2
        92nm,0.3s,baz=303,slow=2.3,SNR=18
KRVT                               S       Sn       02 36 59.4 +1.0
        485nm,0.4s,baz=81,slow=23,SNR=7.2
KRVT                               LR      LR       02 37 43.1
        comp=Z,1µm,20.4s,baz=260,slow=42
HNR   Honiara            6.13 122  P       Pn       02 37 00.5 -0.1
        30nm,0.3s,baz=230,slow=6.0,SNR=5.5
HNR                                S       Sn       02 38 12.9 +3.5
        248nm,0.4s,baz=200,slow=10.0,SNR=2.0
        127nm,0.5s
HNR   Honiara            6.13 122  Pn      Pn       02 37 03.7 +3.1
PMG   Port Moresby       8.06 247  P       Pn       02 37 24.2 -2.8
        3.5nm,0.3s,baz=252,slow=12,SNR=3.3
PMG                                S       Sn       02 38 59.4 +2.7
        132nm,1.0s,baz=208,slow=21,SNR=22
PMG                                LR      LR       02 40 34.3
        comp=Z,1µm,20.5s,baz=23,slow=37
PMG   Port Moresby       8.06 247  Pn      Pn       02 37 29.2 +2.2
MANU  Manus Island       8.37 300          Pn       02 37 33.1 +1.8
COEN  Coen              13.65 235  Pn      Pn       02 38 45.4 +2.1
CTA   Charters Tower    16.00 210  P       Pn       02 39 13.5 -0.3
        0.4nm,0.3s,baz=32,slow=13,SNR=4.2
CTA                                LR      LR       02 44 35.4
        comp=Z,612nm,21.2s,baz=56,slow=34
        9.3nm,0.9s
CTAO  Charters Tower    16.00 210          P        02 39 14.9 -1.4
CTAO                               IAmb    IAmb     02 39 20.1
        comp=Z,100nm,1.4s
SMPI  Sarmi             16.45 284  P       P        02 39 19.5 -1.7
        comp=Z,628nmcomp=Z,34nm,1.9s
EIDS  Eidsvold          19.33 190  P       Pn       02 39 54.4 -0.2
DZM   Mont Dzumac       19.43 145  P       P        02 39 53.9 -0.3
        comp=Z,1.9nm,0.3s,baz=319,slow=15,SNR=14
DZM                                LR      LR       02 45 48.5
        comp=Z,227nm,20.7s,baz=28,slow=32
        comp=Z,15nm,0.7s
DZM   Mont Dzumac       19.43 145  eP      Pn       02 39 55.0 -0.9
        comp=Z,69nm,1.4s
DZM                                eLR     LR       02 45 00.2
        comp=Z,291nm,24.1s
DZM   Mont Dzumac       19.43 145  P       Pn       02 39 55.3 -0.6
DZM                                IAmb    IAmb     02 39 59.9
        comp=Z,67nm,1.5s
ONTNC Ouen Toro         19.63 146  P       Pn       02 39 57.1 -1.0
ONTNC                              IAmb    IAmb     02 40 02.0
        comp=Z,44nm,1.0s
FAKI  Fak Fak           22.57 277  P       P        02 40 28.3 +0.3
FAKI  Fak Fak           22.57 277  P       P        02 40 29.4 +1.4
        comp=Z,61nm,1.6s
SIJI  Sorong            23.93 282  P       P        02 40 39.6 -1.6
        comp=Z,8.1nm,0.4s,baz=61,slow=6.4,SNR=20
        comp=Z,8.1nm,0.4s
SWI   Sorong            23.94 282  P       P        02 40 41.6 +0.4
        comp=Z,866nmcomp=Z,31nm,1.5s
WRAB  Tennant Creek     23.96 233  P       P        02 40 41.8 +0.4
WRA   Warramunga Arr    23.98 233  P       P        02 40 41.6 +0.1
        comp=Z,89nm,1.2s,baz=57,slow=9.5,SNR=75
WRA                                PcP     PcP      02 44 22.7 +0.1
        comp=Z,1.3nm,0.8s,baz=64,slow=2.4,SNR=3.9
WRA                                ScP     ScP      02 47 55.7 -0.2
        comp=Z,1.1nm,0.9s,baz=57,slow=2.8,SNR=4.8
WRA                                LR      LR       02 49 39.6
        comp=Z,590nm,21.8s,baz=65,slow=35
WRA   Warramunga Arr    23.98 233  P       P        02 40 41.4 -0.1
MTN   Manton Dam        24.09 252  P       P        02 40 42.8 +0.2
ARMA  Armidale          24.22 186  P       P        02 40 45.0 +1.3
ARMA                               IAmb    IAmb     02 40 46.1
        comp=Z,73nm,1.4s
MSVF  Nonsavu           25.55 119  LR      LR       02 50 11.5
        comp=Z,375nm,20.3s,baz=231,slow=34
AS31  Alice Springs     26.43 227  P       P        02 41 03.5 -0.3
ASAR  Alice Springs     26.43 227  P       P        02 41 04.0 +0.1
        comp=Z,6.5nm,0.5s,baz=59,slow=8.7,SNR=133
ASAR                               PcP     PcP      02 44 28.7 +0.7
        comp=Z,0.8nm,0.8s,baz=58,slow=2.6,SNR=4.2
ASAR                               ScP     ScP      02 48 04.4 +1.5
        comp=Z,0.7nm,0.8s,baz=26,slow=4.2,SNR=3.9
ASAR                               LR      LR       02 51 03.6
        comp=Z,494nm,21.4s,baz=69,slow=35
        comp=Z,6.5nm,0.5s
ASAR  Alice Springs     26.43 227  P       P        02 41 03.0 -0.9
KNRA  Kununurra         27.06 248  P       P        02 41 09.7 +0.2
H11S3 WAKE ISLAND Hy 27.29  26     T       T        03 09 11.8
        baz=206,slow=76,SNR=6.8
H11S2 WAKE ISLAND Hy 27.30  26     T       T        03 09 19.3
        baz=206,slow=76,SNR=54
H11S1 WAKE ISLAND Hy 27.31  26     T       T        03 09 20.1
        baz=206,slow=76,SNR=55
LBMI  Labuha            27.65 281  P       P        02 41 16.2 +1.3
        comp=Z,871nmcomp=Z,53nm,1.3s
STKA  Stephens Creek    28.28 204  P       P        02 41 19.4 -0.9
        comp=Z,6.7nm,0.7s,baz=35,slow=12,SNR=13
STKA                               LR      LR       02 52 12.5
        comp=Z,402nm,21.8s,baz=24,slow=35
        comp=Z,6.7nm,0.7s
STKA  Stephens Creek    28.28 204  P       P        02 41 19.3 -0.9
SANI  Sanana            28.88 277  P       P        02 41 26.0 +0.2
        comp=Z,35nm,1.1s
FITZ  Fitzroy Crossi    30.65 245  P       P        02 41 40.3 -1.2
        comp=Z,7.8nm,0.8s,baz=69,slow=7.2,SNR=16
FITZ                               LR      LR       02 54 01.9
        comp=Z,444nm,21.9s,baz=76,slow=36
        comp=Z,7.8nm,0.8s
BATI  Baumata           30.91 261  P       P        02 41 43.4 -0.4
        comp=Z,6.7nm,0.3s,baz=121,slow=21,SNR=6.0
BATI                               LR      LR       02 55 37.4
        comp=Z,291nm,21.7s,baz=101,slow=39
        comp=Z,6.7nm,0.3s
DAV   Davao City (W)    31.87 294  LR      LR       02 54 46.8
        comp=Z,98nm,19.2s,baz=146,slow=36
LUWI  Luwuk             32.22 278  P       P        02 41 55.9 +0.6
        comp=Z,117nm,1.3s
MMRI  Maumere           32.22 264  P       P        02 41 56.4 +1.1
        comp=Z,38nm,0.5s
GTOI  Gorontalo         32.31 281  P       P        02 41 57.7 +1.6
        comp=Z,157nmcomp=Z,12nm,1.8s
MRSI  Marisa            33.32 280  P       P        02 42 05.3 +0.4
        comp=Z,15nm,1.2s
APSI  Ampana            33.35 278  P       P        02 42 06.0 +0.9
        comp=Z,53nm,1.3s
AFI   Afiamalu          33.89 106  LR      LR       02 54 53.0
        comp=Z,206nm,19.5s,baz=148,slow=34
TOLI2 Tolitoli          34.59 281  P       P        02 42 15.4 -0.5
TOLI2                              IAmb    IAmb     02 42 16.4
        comp=Z,19nm,1.2s
KAPI  Kappang           34.75 270  LR      LR       02 58 13.1
        comp=Z,73nm,20.9s,baz=68,slow=39
MPSI  Mapaga            35.29 279  P       P        02 42 21.8 -0.2
        comp=Z,29nm,1.2s
PSA00 Pilbara Seismi    36.94 242  P       P        02 42 35.9  0.0
PSA00                              IAmb    IAmb     02 42 36.9
        comp=Z,22nm,1.4s
URZ   Urewera           37.83 151  P       P        02 42 42.6 -0.7
        comp=Z,2.6nm,0.4s,baz=348,slow=21,SNR=2.1
URZ                                LR      LR       02 57 41.9
        comp=Z,198nm,18.0s,baz=31,slow=35
        comp=Z,2.6nm,0.4s
URZ   Urewera           37.83 151  IAmb    IAmb     02 42 54.3
        comp=Z,19nm,1.3s
RPZ   Rata Peaks        40.02 161  P       P        02 43 01.7 +0.2
        comp=Z,4.7nm,0.8s,baz=50,slow=11,SNR=3.6
RPZ                                LR      LR       02 57 02.6
        comp=Z,218nm,20.4s,baz=314,slow=32
        comp=Z,4.7nm,0.8s
RPZ   Rata Peaks        40.02 161  IAmb    IAmb     02 43 20.2
        comp=Z,20nm,1.3s
JAGI  Jajag, Banyuwa    40.21 264  P       P        02 43 01.4 -2.1
        comp=Z,31nm,1.2s
PWJI  Pagerwojo         42.54 265  P       P        02 43 22.6  0.0
        comp=Z,41nm,1.2s
KSM   Kuching           44.92 278  P       P        02 43 41.3 -0.5
KSM                                IAmb    IAmb     02 43 43.5
        comp=Z,23nm,1.4s
MJAR  Matsushiro Arr    45.26 341  LR      LR       03 01 26.4
        comp=Z,33nm,21.3s,baz=162,slow=34
RAR   Rarotonga         46.52 113 ⇓P       P        02 44 03.3 +9.0
RAR                                pP      sP       02 44 24.6 +7.6
LEM   Lembang           46.72 267  LR      LR       03 07 33.3
        comp=Z,71nm,18.5s,baz=166,slow=41
KSRS  Korea Array       50.11 332  P       P        02 44 17.7 -3.9
        comp=Z,1.1nm,0.8s,baz=145,slow=7.9,SNR=3.2
        comp=Z,1.1nm,0.8s
KSAR  Wonju Array Be    50.12 332  P       P        02 44 22.8 +1.2
NJ2   Nanjing           51.12 320 eP       P        02 44 31.2 +1.9
NJ2                                pmax    pmax
        comp=Z,8.0nm,0.5s
MYKOM Kota Tinggi       51.34 277  P       P        02 44 30.5 -0.8
MYKOM                              IAmb    IAmb     02 44 31.9
        comp=Z,15nm,1.3s
USRK  Ussuriysk Ar.     54.20 340  P       P        02 44 48.8 -3.1
        comp=Z,0.7nm,0.6s,baz=99,slow=8.9,SNR=2.0
        comp=Z,0.7nm,0.6s
PPT   Papeete           55.54 107  LR      LR       03 07 51.0
        comp=Z,27nm,18.1s,baz=283,slow=35
PSI   Prapat            56.36 278  LR      LR       03 16 31.2
        comp=Z,70nm,18.8s,baz=95,slow=44
KLR   Kul'dur           58.74 343  LR      LR       03 11 09.6
        comp=Z,46nm,19.9s,baz=184,slow=36
PETK  Petropavlovsk-    59.17   2  P       P        02 45 24.1 -2.8
        comp=Z,7.0nm,1.0s,baz=126,slow=7.3,SNR=1.6
PETK                               LR      LR       03 07 17.1
        comp=Z,111nm,21.9s,baz=181,slow=32
        comp=Z,7.0nm,1.0s
CMAR  Chiang Mai Arr    60.15 295  P       P        02 45 34.5 +0.1
        comp=Z,2.5nm,0.7s,baz=122,slow=4.5,SNR=14
CMAR                               LR      LR       03 12 49.5
        comp=Z,17nm,18.9s,baz=90,slow=37
        comp=Z,2.5nm,0.7s
CMAR  Chiang Mai Arr    60.15 295  P       P        02 45 34.9 +0.6
CHTO  Chiang Mai        60.26 296  P       P        02 45 35.7 +0.6
CHTO                               IAmb    IAmb     02 45 36.8
        comp=Z,15nm,1.4s
PZH   PanZhiHua         60.70 305  P       P        02 45 41.3 +3.2
PZH                                pmax    pmax
        comp=Z,10.0nm,0.7s
PZH                                pmax    pmax
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	comp=Z,100nm,4.7s						
XLT	XiLinHaoTe	60.84	329	eP	P	02 45 40.5	+1.8
XLT				pP	sP	02 45 59.6	-2.1
XLT				sP	pP	02 46 07.1	+12
XLT				pmax	pmax		
	comp=Z,15nm,1.0s						
XLT				pmax	pmax		
	comp=Z,91nm,4.9s						
SHEM	Shemya Is, Ala	61.02	13	LR	LR	03 10 48.2	
	comp=Z,150nm,19.1s,baz=198,slow=35						
CD2	Chengdu	61.06	310	P	P	02 45 41.6	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	63.54	315	eP	P	02 45 43.8	-13
LZH				pP	pP	02 46 06.4	-6.7
LZH				sP	pwP	02 46 14.0	+0.9
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
MA2	Magadan	65.67	358	LR	LR	03 12 02.3	
	comp=Z,35nm,21.2s,baz=148,slow=34						
GTA	Gaotai	67.95	317	⇑P	P	02 46 28.4	+3.0
GTA				pP	pP	02 46 38.6	-2.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	68.18	328	P	P	02 46 27.4	+0.8
SONM	Songino Array	68.52	327	LR	LR	03 17 38.0	
	comp=Z,29nm,18.8s,baz=262,slow=37						
SONM	Songino Array	68.52	327	P	P	02 46 30.6	+1.9
SHL	Shillong	68.62	300	P	P	02 46 29.8	-0.1
SEY	Seymchan	68.99	359	LR	LR	03 11 28.4	
	comp=Z,54nm,20.6s,baz=278,slow=31						
CCD	Concordia, Ant	71.11	188	P	P	02 46 44.4	-0.1
CCD				pP	sP	02 47 05.6	-1.2
VNDA	Vanda	71.34	178	P	P	02 46 45.0	-0.4
	comp=Z,1.5nm,1.1s,baz=38,slow=4.4,SNR=2.8						
VNDA				LR	LR	03 14 07.2	
	comp=Z,60nm,18.1s,baz=337,slow=32						
	comp=Z,1.5nm,1.1s						
VNDA	Vanda	71.34	178	P	P	02 46 46.5	+1.1
VNDA				pP	pP	02 46 59.0	-2.0
BILL	Bilibino	74.56	5	P	P	02 47 05.6	+1.1
BILL				IAmb	IAmb	02 47 07.1	
	comp=Z,6.7nm,0.9s						
KDAK	Kodiak Island	76.64	26	LR	LR	03 15 38.3	
	comp=Z,99nm,21.8s,baz=251,slow=32						
WMQ	Urumqi	78.04	317	eP	P	02 47 27.7	+2.9
IMAR	Indian Mountai	81.12	19	P	P	02 47 43.0	+2.0
MK31	Makanchi Array	82.61	319	P	P	02 47 50.3	+1.0
MKAR	Makanchi Array	82.61	319	P	P	02 47 47.2	-2.1
	comp=Z,1.6nm,0.8s,baz=98,slow=6.4,SNR=12						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	82.61	319	P	P	02 47 50.0	+0.8
ILAR	Eielson Array	82.80	22	P	P	02 47 47.0	-2.8
	comp=Z,0.8nm,0.8s,baz=259,slow=5.9,SNR=7.7						
ILAR				LR	LR	03 19 12.6	
	comp=Z,230nm,20.3s,baz=183,slow=32						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	82.80	22	P	P	02 47 51.8	+2.0
J25K	Salcha River,	83.28	22	P	P	02 47 52.1	-0.2
J25K				IAmb	IAmb	02 47 54.4	
	comp=Z,7.3nm,1.2s						
ZALV	Zalesovo Beam	83.36	326	P	P	02 47 51.0	-2.0
	comp=Z,1.3nm,0.6s,baz=114,slow=6.6,SNR=5.7						
ZALV				LR	LR	03 25 01.6	
	comp=Z,44nm,21.7s,baz=76,slow=36						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	83.36	326	P	P	02 47 51.8	-1.1
QSPA	South Pole Qui	83.73	180	P	P	02 47 54.1	-0.8
QSPA				IAmb	IAmb	02 47 56.1	
	comp=Z,10.0nm,0.9s						
MAW	Mawson	84.96	203	LR	LR	03 21 48.0	
	comp=Z,81nm,20.8s,baz=90,slow=33						
BOOM	Boomskoye usch	85.91	313	P	P	02 48 08.0	+1.7
KURK	Kurchatov	86.03	322	P	P	02 48 06.2	-0.2
KURK				IAmb	IAmb	02 48 08.8	
	comp=Z,5.0nm,1.3s						
KURBB	Kurchatov Arra	86.06	322	P	P	02 48 05.1	-1.5
	comp=Z,0.5nm,0.6s,baz=106,slow=3.8,SNR=6.0						
	comp=Z,0.5nm,0.6s						
BBB	Bella Bella	87.12	37	LR	LR	03 19 40.4	
	comp=Z,108nm,21.2s,baz=240,slow=30						
DLBC	Dease Lake	87.67	31	LR	LR	03 19 42.0	
	comp=Z,128nm,21.6s,baz=242,slow=30						
NRIK	Noril'sk	87.91	341	P	P	02 48 13.6	-1.6
	comp=Z,1.9nm,0.6s,baz=86,slow=5.3,SNR=3.7						
	comp=Z,1.9nm,0.6s						
NRIK	Noril'sk	87.91	341	IAmb	IAmb	02 48 15.4	
	comp=Z,2.8nm,0.8s						
YBH	Yreka Blue Hor	88.64	48	LR	LR	03 22 50.7	
	comp=Z,267nm,19.6s,baz=289,slow=32						
INK	Inuvik	89.13	21	LR	LR	03 26 49.4	
	comp=Z,146nm,18.7s,baz=206,slow=35						
NVAR	Mina Array Bea	91.52	52	P	P	02 48 33.2	+0.2
	comp=Z,2.6nm,0.9s,baz=255,slow=7.0,SNR=13						
NVAR				LR	LR	03 24 41.1	
	comp=Z,89nm,19.3s,baz=257,slow=32						
	comp=Z,2.6nm,0.9s						
NVAR	Mina Array Bea	91.52	52	P	P	02 48 33.9	+0.9
KVN	Kaiserville	91.75	51	P	P	02 48 35.7	+1.6
KVN				IAmb	IAmb	02 48 37.0	
	comp=Z,3.9nm,1.0s						
QSM	Queen of Sheba	92.39	54	P	P	02 48 38.1	+1.3
QSM				IAmb	IAmb	02 48 40.1	
	comp=Z,4.8nm,1.1s						
PFO	Pinyon Flats O	92.49	57	LR	LR	03 26 03.4	
	comp=Z,99nm,18.1s,baz=278,slow=33						
RPN	Rapa Nui	92.52	117	LR	LR	03 21 41.9	
	comp=Z,74nm,22.0s,baz=330,slow=30						
NEW	Newport	93.42	42	LR	LR	03 24 12.8	
	comp=Z,316nm,20.9s,baz=287,slow=31						
R11A	Troy Canyon, C	93.64	52	IAmb	IAmb	02 48 45.9	
	comp=Z,4.3nm,1.2s						
PRN	Pahroc Range	93.98	53	P	P	02 48 46.0	+1.7
ELK	Elko	94.11	50	LR	LR	03 24 45.0	
	comp=Z,99nm,20.0s,baz=259,slow=31						
YKA	Yellowknife Ar	95.83	28	P	P	02 48 51.1	-0.9
	comp=Z,0.6nm,0.9s,baz=261,slow=4.3,SNR=6.1						
	comp=Z,0.6nm,0.9s						
LPIG	La Paz	97.11	67	LR	LR	03 25 11.2	
	comp=Z,111nm,21.0s,baz=224,slow=31						
WSAR	Wadi Sarin	97.94	293	LR	LR	03 35 59.7	
	comp=Z,21nm,19.9s,baz=154,slow=37						
PDAR	Pinedale Array	98.45	48	P	P	02 49 02.1	-2.5
	comp=Z,0.4nm,0.7s,baz=211,slow=0.9,SNR=3.9						
PDAR				LR	LR	03 30 24.2	
	comp=Z,89nm,18.3s,baz=278,slow=34						
	comp=Z,0.4nm,0.7s						
ARU	Arti	98.53	326	LR	LR	03 35 43.0	
	comp=Z,29nm,19.9s,baz=92,slow=37						
SDV	Santo Domingo	135.06	84	PKP	PKPdf	02 54 45.8	-0.5
	comp=Z,3.1nm,0.3s,baz=320,slow=6.8,SNR=4.9						
BDFB	Brasilia	148.75	134	PKPbc	PKiKP	02 55 15.1	-0.6
	comp=Z,2.5nm,0.7s,baz=230,slow=8.0,SNR=3.4						
BDFB	Brasilia	148.75	134		PKPbc	02 55 13.1	-1.2
TORD	Torodi Ar. Bea	152.49	286	PKPbc	PKPbc	02 55 21.6	-1.4
	comp=Z,1.8nm,0.7s,baz=80,slow=1.9,SNR=17						
TORD				PKPab	PKPab	02 55 31.9	-1.6
	comp=Z,1.1nm,0.7s,baz=76,slow=2.6,SNR=7.1						

GUC 01 02:39:02.1±0.8, 30°.44S×71°.63W, h32^{km}±3^{km}, ML3.6, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.23	180	⇑iP	Pb	02 39 08.5	-0.6
CO06				eS	Sb	02 39 12.6	-1.1
CO06				IAML		02 39 13.4	
	comp=E,22µm,0.1s						
CO05	La Serena	0.62	34	⇓iP	Pb	02 39 14.1	-0.5
CO05				eS	Sb	02 39 22.8	-0.4
CO05				IAML		02 39 23.9	
	comp=N,3µm,0.4s						
GO04	Tololo Observa	0.77	70	eP	Pn	02 39 16.8	-0.2
GO04				eS	Sn	02 39 26.9	-0.6
CO02	Combarbal	0.94	145	⇓iP	Pn	02 39 19.5	+0.3
CO02				eS	Sb	02 39 32.1	0.0
CO02				IAML		02 39 35.3	
	comp=E,4µm,0.3s						
CO01	Juntas del Tor	1.41	71	eP	Pb	02 39 27.0	-1.0
LCO	Las Campanas	1.64	30	i P	Pn	02 39 29.7	+0.8
LCO				i S	Sn	02 39 50.6	+1.6
VA06	Catapilco	2.13	172	eP	Pn	02 39 35.7	+0.3
VA06				IAML		02 40 12.4	
	comp=N,311nm,0.2s						
AC04	Llanos de Chal	2.28	13	eP	Pn	02 39 37.3	-0.2
VA03	San Esteban	2.50	159	eP	Pn	02 39 42.2	+1.7
VA03				IAML		02 40 23.8	
	comp=E,265nm,0.5s						
ROCH	El Roble	2.58	168	eP	Pb	02 39 42.6	-5.3
ROCH				eP	Pn	02 39 39.9	-1.9
ROCH				IAML		02 40 27.6	
	comp=E,253nm,0.5s						
PEL	Peldehue	2.81	164	eP	Pn	02 39 46.0	+1.1
PEL				IAML		02 40 31.1	
	comp=E,122nm,0.3s						
MT02	Curacav	2.84	172	eP	Pn	02 39 45.8	+0.6
MT05	Renca	3.04	166	eP	Pn	02 39 49.2	+1.2
FCH	Farellones	3.10	159	eP	Pn	02 39 51.4	+2.4
FCH				IAML		02 40 40.6	
	comp=E,107nm,0.3s						
MT03	Universidad Ad	3.19	163	eP	Pn	02 39 51.7	+1.5
MT03				IAML		02 40 44.9	
	comp=E,199nm,0.3s						
VA05	Santo Domingo	3.21	180	eP	Pn	02 39 49.8	-0.5
VA05				IAML		02 40 43.9	
	comp=N,136nm,0.5s						
MT09	Talagante	3.37	171	eP	Pn	02 39 53.5	+0.9
MT09				IAML		02 40 52.5	
	comp=N,142nm,0.8s						
MT01	Popeta	3.43	175	eP	Pn	02 39 53.8	+0.5
MT01				IAML		02 40 50.0	
	comp=E,62nm,0.4s						
LMEL	Las Melosas	3.61	161	eP	Pn	02 39 57.9	+2.0

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*IDC **01** 02:55:30.4±1.3, 40°.90N×31°.72E, h0^{km}, mb2.8/2, mbtmp3.2/4, ML3.6/2, MS2.5/1, Error ellipse: s-maj=35.8km s-min=8.2km az=51.0*

*ISK **01** 02:55:31.5, 40°.86N×31°.71E, h5^{km}, ML3.8/51*

*DDA **01** 02:55:31.7±0.0, 40°.85N×31°.73E, h13^{km}±2^{km}, MW3.6*

*MCSM **01** 02:55:32.5±0.5, 41°N±3°×3°2E±°, h12^{km}±2^{km}, mb3.8*

ISC 01 02:55:31.7±0.9, 40°.92N±0°.02×31°.76E±0°.02, h12^{km}±7^{km}, n143, σ1^{s}29/178, 35C-16D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YIGI	Dzce	0.24	281	P	Pg	02 55 37.4	+0.6
YIGI				S	Sg	02 55 41.0	+0.7
YIGI				i AML	AML	02 55 41.0	
	comp=E,8µm,0.5s						
YIGI				i AML	AML	02 55 42.0	
	comp=N,4µm,0.2s						
KIBS	BOLU	0.50	172	P	Pg	02 55 41.0	-0.5
KIBS				S	Sg	02 55 47.1	-1.0
KIBS				i AML	AML	02 55 50.0	
	comp=E,2µm,0.4s						
KIBS				i AML	AML	02 55 53.0	
	comp=N,2µm,0.6s						
YUVA	Yuva-Kibriscik	0.53	186	PG	Pg	02 55 41.5	-0.5
YUVA				SG	Sg	02 55 48.5	-0.5
MDUB	Mudurnu	0.62	224	PG	Pg	02 55 42.8	-0.9
MDUB	Mudurnu	0.62	224	Pg	Pg	02 55 42.8	-0.9
MDUB				Sg	Sg	02 55 51.6	-0.3
SAFT	Safranbolu	0.77	65	PG	Pn	02 55 47.9	-0.4
SAFT				SG	Sn	02 55 59.0	-0.8
BTIN	Bartın	0.81	27	P	Pn	02 55 48.9	0.0
BTIN				S	Sn	02 56 00.5	-0.3
BTIN				i AML	AML	02 56 03.0	
	comp=N,1µm,0.3s						
BTIN				i AML	AML	02 56 06.0	
	comp=E,1µm,0.3s						
GULT	Gulveren	1.07	243	PG	Pb	02 55 50.8	-1.3
GULT				SG	Sb	02 56 05.7	-0.3
AUMIH	MIHALICIK	1.07	192	PG	Pb	02 55 51.2	-0.9
KAYN	Sakarya, Kayna	1.08	273	P	Pb	02 55 51.9	-0.4
KAYN				S	Sb	02 56 05.0	-1.3
KAYN				i AML	AML	02 56 08.0	
	comp=N,597nm,0.4s						
KAYN				i AML	AML	02 56 09.0	
	comp=E,1µm,0.4s						
SAUV	Serdivan-Sakar	1.10	261	PG	Pb	02 55 51.7	-1.0
KURC	Kurucasile-Bar	1.19	38	PN	Pb	02 55 52.7	-1.4
PELI	Kastamonı-Ara	1.23	71	P	Pg	02 55 56.5	+1.1
PELI				S	Sn	02 56 14.4	+3.0
PELI				i AML	AML	02 56 15.0	
	comp=N,468nm,0.5s						
PELI				i AML	AML	02 56 15.0	
	comp=E,682nm,0.6s						
GPA	Golpazari	1.27	241	PN	Pn	02 55 54.5	-0.8
LOD	Lodumlu	1.28	143	PN	Pn	02 55 55.6	+0.2
ANTO	Ankara	1.31	143	PN	Pb	02 55 56.4	+0.2
ELDT	Eldivan	1.33	108	P	Pg	02 55 57.8	+0.5
ELDT				S	Sg	02 56 16.0	+1.3
ELDT				i AML	AML	02 56 21.0	
	comp=N,839nm,0.3s						
ELDT				i AML	AML	02 56 22.0	
	comp=E,544nm,0.5s						
BORA	Eskisehir	1.44	224	PN	Pn	02 55 57.4	-0.2
CANT	Cankiri	1.44	102	PN	Pg	02 55 59.5	+0.1
SVRH	Sivrihisar-ESK	1.48	187	PN	Pn	02 55 58.5	+0.3
SVRH				SN	Sn	02 56 18.0	+0.6
AUSIV	SIVRIHISAR	1.48	187	PN	Pn	02 55 58.6	+0.3
AUSIV	SIVRIHISAR	1.48	187	P	Pn	02 55 58.5	+0.3
AUSIV				S	Sn	02 56 18.6	+1.0
AUSIV				i AML	AML	02 56 20.0	
	comp=N,394nm,0.3s						
SGAZ	Eskisehir, Sey	1.56	207	P	Pn	02 55 59.9	+0.7
SGAZ				S	Sn	02 56 20.0	+0.7
SGAZ				i AML	AML	02 56 23.0	
	comp=E,413nm,0.7s						
SGAZ				i AML	AML	02 56 24.0	
	comp=N,506nm,0.7s						
ESKT	Eskisehir	1.56	207	PN	Pn	02 55 59.6	+0.3
HRT	Hereke	1.59	267	PN	Pn	02 56 00.5	+0.8
KMON	Kastamonu	1.59	73	PN	Pg	02 56 01.5	-0.7
ADVT	Abdulvahap	1.61	253	PN	Pn	02 56 00.0	+0.1
SILT	Sile	1.62	279	PN	Pn	02 56 01.4	+1.4
BILE	Bilecik/Merkez	1.62	243	P	Pn	02 55 59.7	-0.5
BILE				S	Sn	02 56 22.7	+1.6
BILE				i AML	AML	02 56 26.0	
	comp=N,537nm,0.5s						
BILE				i AML	AML	02 56 27.0	
	comp=E,473nm,0.5s						
CIFT	Cifteler, Eski	1.64	199	PN	Pn	02 56 00.2	-0.2
AUBOZ	BOZOYUK	1.66	233	PN	Pn	02 56 01.4	+0.8
TOS	Tosya	1.71	85	PN	Pg	02 56 03.7	-0.9
AFSR	Afar-Bala (An	1.78	145	PN	Pn	02 56 02.9	+0.7
IZI	Iznik	1.84	252	PN	Pn	02 56 04.1	+1.0
YLV	Yalova	1.85	260	PN	Pn	02 56 03.6	+0.3
YLV	Yalova	1.85	260	Pn	Pn	02 56 03.5	+0.3
BRTR	Keskin Array B	1.86	129	Pn	Pn	02 56 04.2	+0.8
	14nm,0.3s,baz=303,slow=15,SNR=240						
BRTR				Lg	Lg	02 56 32.3	
	88nm,0.3s,baz=298,slow=25,SNR=47						
BRTR	Keskin Array B	1.86	129	PN	Pn	02 56 04.3	+0.8
KKUL	Konya-Kulu	1.96	153	P	Pn	02 56 05.5	+0.8
KKUL				i AML	AML	02 56 38.0	
	comp=E,239nm,1.0s						
KKUL				i AML	AML	02 56 46.0	
	comp=N,188nm,1.0s						
BZK	Bozkurt	1.98	57	⇓P	Pg	02 56 10.2	+0.5
BZK				⇑S	Sg	02 56 39.1	+3.8
BZK	Bozkurt	1.98	57	PN	Pg	02 56 08.6	-1.0
TRML	Termal-Yalova	1.99	262	PN	Pn	02 56 06.3	+1.2
ANDZ	Kutahya, Merke	2.00	226	P	Pn	02 56 04.9	-0.5
ANDZ				S	Sn	02 56 32.3	+1.9
ANDZ				i AML	AML	02 56 38.0	
	comp=N,171nm,0.4s						
ANDZ				i AML	AML	02 56 44.0	
	comp=E,150nm,0.5s						
KIZT	Kizilcal	2.04	177	PN	Pn	02 56 05.9	+0.1
KAVV	Kandilli-Istan	2.05	275	PN	Pn	02 56 07.5	+1.6
ISK	Istanbul-Kandi	2.05	275	PN	Pn	02 56 07.4	+1.5
KLYT	Kilyos	2.08	280	PN	Pn	02 56 07.8	+1.4
KULU	Kulu	2.10	153	PN	Pb	02 56 08.5	-1.2
ULDT	Uludag	2.15	250	P	Pn	02 56 07.2	-0.3
ULDT				S	Sb	02 56 39.4	+2.2
ULDT				i AML	AML	02 56 44.0	
	comp=E,208nm,0.4s						
ULDT				i AML	AML	02 56 45.0	
	comp=N,208nm,0.5s						
KAMT	Kaman	2.15	135	PN	Pn	02 56 08.5	+1.1
ARMT	Armutlu	2.23	262	PN	Pn	02 56 09.1	+0.7
MDNY	Mudanya-Bursa	2.26	257	PN	Pn	02 56 09.9	+1.1
BGKT	Bogazkoy	2.28	278	PN	Pn	02 56 09.8	+0.8
TVSB	Tavsanli	2.29	231	PN	Pn	02 56 09.5	+0.1
AVCI	Avcilar-stanb	2.31	273	PN	Pn	02 56 10.3	+0.9
CORM	Corum	2.31	108	PN	Pb	02 56 11.9	-1.3
ORLT	Orhaneli	2.35	249	PN	Pn	02 56 11.4	+1.3
SERE	Sereflikochisa	2.41	144	PN	Pn	02 56 11.5	+0.6
YAYX	Yaylak	2.53	141	PN	Pn	02 56 14.5	+1.9
SHUT	Suhut-Afyon	2.54	202	PN	Pn	02 56 13.2	+0.5
GEDZ	Gediz	2.60	225	PN	Pn	02 56 14.7	+1.1
KCTX	Karacabey (Bur	2.67	257	PN	Pn	02 56 16.1	+1.6
SLVT	Silivri	2.71	278	PN	Pn	02 56 16.7	+1.8
SHAP	Saphane-Kutahy	2.72	227	PN	Pn	02 56 16.4	+1.2
DIKM	Dikmen	2.73	73	⇓P	Pg	02 56 23.4	-0.6
DIKM				⇑S	Sg	02 56 59.2	-0.3
DIKM	Dikmen	2.73	73	PN	Pb	02 56 18.4	-2.0
DIKM	Dikmen	2.73	73	Pn	Pb	02 56 18.1	-2.3
DST	Dursunbey	2.74	242	PN	Pn	02 56 16.1	+0.6
LADK	Ladik-KONYA	2.75	170	PN	Pn	02 56 15.8	+0.1
SMAA	Simav-Kutahya	2.80	231	PN	Pn	02 56 17.3	+1.0
SIMA	Simav-Kutahya	2.81	230	PN	Pn	02 56 17.1	+0.6
KOZK	Kozakli-Nevseh	2.93	125	PN	Pn	02 56 19.9	+1.8
KONT	Konya--Tatoy	3.00	171	PN	Pn	02 56 20.5	+1.4
YOZ	Yozgat	3.00	114	PN	Pn	02 56 21.4	+2.2
EDC	Edincik	3.02	260	PN	Pn	02 56 20.6	+1.3
CRLT	Corlu	3.06	275	PN	Pn	02 56 20.5	+0.8
GULA	Gulagac	3.20	143	PN	Pn	02 56 23.5	+1.7
GZKV	Gazikoy-Tekird	3.37	269	PN	Pn	02 56 25.7	+1.7
KULA	Kula-Manisa	3.39	226	PN	Pn	02 56 25.6	+1.2
MAR3	Marsite Statio	3.40	269	PN	Pn	02 56 25.9	+1.5
MAR6	Marsite Statio	3.42	268	PN	Pn	02 56 26.4	+1.6
SUTC	Sutluce-Ispart	3.49	190	PN	Pn	02 56 26.9	+1.1
SEYD	Seydisehir-KON	3.51	179	PN	Pn	02 56 26.8	+0.8
KALB	Balgarevo	3.52	316	⇓P	Pn	02 56 27.6	+1.5
KALB				⇓S	Sn	02 57 07.1	-0.5
BCK	Bucak	3.57	195	PN	Pn	02 56 28.0	+1.1
MANR	Mangalia	3.73	322	⇑P	Pn	02 56 30.7	+1.7
MANR				⇑S	Sn	02 57 13.6	+0.7
EFOR	EFORIE	3.92	325	⇑P	Pn	02 56 33.1	+1.5
EFOR				⇑S	Sn	02 57 17.7	+0.3
EZN	Ezine	4.29	257	Pn	Pn	02 56 37.3	+0.6
TIRR	Tirgusor	4.32	326	⇑P	Pn	02 56 38.5	+1.4
TIRR				⇑S	Sn	02 57 27.2	-0.1
ALN	Alexandroupoli	4.33	272	Pn	Pn	02 56 37.7	+0.4
ICOR	Ion Corvin	4.34	319	⇑P	Pn	02 56 39.1	+1.8
ICOR				⇑S	Sn	02 57 27.9	+0.1
CVDA	Cernavoda	4.38	322	⇑P	Pn	02 56 40.0	+2.0
CVDA				⇑S	Sn	02 57 29.0	0.0
TLBR	Topalu	4.54	324	⇑P	Pn	02 56 42.1	+1.9
TLBR				⇓S	Sn	02 57 32.5	-0.3
TPGR	Topolog	4.64	329	⇓P	Pn	02 56 42.4	+0.8
TPGR				⇓S	Sn	02 57 34.9	-0.4
HARR	Harsova	4.71	324	⇑P	Pn	02 56 44.1	+1.6
RDO	Rodhopi	4.71	275	Pn	Pn	02 56 43.3	+0.8
SMTH	Samothraki Isl	4.76	267	Pn	Pn	02 56 43.0	-0.2
TLCR		4.78	334	⇑P	Pn	02 56 44.4	+1.0
TLCR				⇑S	Sn	02 57 38.2	-0.6
SIGR	SIGRI	4.84	251	Pn	Pn	02 56 44.7	+0.4
AMRR	Amara	4.92	320	⇓S	Sn	02 57 42.7	+0.4
CFR	Carcaliu	5.02	329	⇓P	Pn	02 56 48.1	+1.4
CFR				⇓S	Sn	02 57 43.8	-0.8
ISR	Istrita	5.68	319	⇓P	Pn	02 56 58.4	+2.5
ISR				⇑S	Sn	02 58 00.9	-0.2
COPA	Copaceanca	5.81	306	⇑P	Pn	02 56 58.7	+1.2
BISRR	Bisoca	5.92	323	⇑P	Pn	02 57 01.6	+2.4
BISRR				⇑S	Sn	02 58 07.2	+0.3
NEHR	Nehoiu	6.03	320	⇓P	Pn	02 57 03.0	+2.4
LEOM	Leova	6.11	337	⇑P	Pn	02 57 04.4	+2.7
VRI	Vrincioaia	6.16	325	⇑P	Pn	02 57 04.9	+2.5
PLOR	Plostina	6.18	325	⇑P	Pn	02 57 04.8	+2.1
SRS	Serrai	6.18	275	Pn	Pn	02 57 03.6	+0.8
MLR	Muntele Rosu	6.24	319	⇓P	Pn	02 57 05.9	+2.3
MLR	Muntele Rosu	6.24	319	Pn	Pn	02 57 05.5	+1.8
	0.3nm,0.3s,baz=139,slow=9.3,SNR=4.7						
MLR				Sn	Sn	02 58 14.0	-1.0
	0.3nm,0.3s,baz=143,slow=20,SNR=1.7						
MLR				LR	LR	02 59 59.1	
	comp=Z,49nm,21.4s,baz=292,slow=43						
	1.6nm,0.3s						
COVR	Voineasa-Covas	6.38	322	⇑P	Pn	02 57 07.5	+2.0
COVR				⇑S	Sn	02 58 18.3	+0.2
VASR	Vaslui	6.40	335	⇑P	Pn	02 57 07.6	+1.9
VTS	Vitosha	6.60	288	⇑P	Pn	02 57 09.7	+1.2
VOIR		6.67	315	⇑P	Pn	02 57 11.6	+2.1
VOIR				⇓S	Sn	02 58 25.0	-0.4
TESR	Tescani	6.71	328	⇑P	Pn	02 57 12.2	+2.3
ARR	Arges	6.85	313	⇑P	Pn	02 57 13.9	+1.9
DOPR	Dopca	6.86	320	⇓P	Pn	02 57 14.2	+2.3
DOPR				⇓S	Sn	02 58 30.0	+0.1
LOT	Lotru	7.39	310	⇑P	Pn	02 57 20.7	+1.3
GZR	Gura Zlata	7.95	307	⇑P	Pn	02 57 27.9	+1.0
BURAR	Bucovina Array	8.18	327	⇑P	Pn	02 57 32.4	+2.3
CJR	Cluj-Napoca	8.27	317	⇑P	Pn	02 57 33.3	+1.9
KMPD	K-Podol'skiy	8.52	336	Pn	Pn	02 57 35.0	+0.2
	3.2nm,0.6s						
DRGR		8.79	315	⇑P	Pn	02 57 39.3	+0.8
LUBAR	Lubar, Ukraine	9.43	344	Pn	Pn	02 57 47.0	-0.3
	2.5nm,1.0s						
AK07	Malin Array Si	9.80	350	Pn	Pn	02 57 52.0	-0.3
AK06	Malin Array Si	9.84	350	Pn	Pn	02 57 52.8	+0.1
AK10	Malin Array Si	9.84	351	Pn	Pn	02 57 52.7	-0.1
AK10				pP		02 57 56.8	
AK09	Malin Array Si	9.85	351	Pn	Pn	02 57 52.6	-0.4
AK09				pP		02 57 56.3	
AK05	Malin Array Si	9.87	350	Pn	Pn	02 57 53.2	0.0
AK05				pP		02 57 56.6	
AK08	Malin Array Si	9.88	351	Pn	Pn	02 57 53.1	-0.2
AK08				pP		02 57 57.3	
AK02	Malin Array Si	9.90	350	Pn	Pn	02 57 54.0	+0.3
AK11	Malin Array Si	9.93	350	Pn	Pn	02 57 54.1	+0.1
AK16	Malin Array Si	9.93	350	Pn	Pn	02 57 54.2	+0.2
AK01	Malin Array Si	9.94	351	Pn	Pn	02 57 54.2	+0.1
AKASG	Malin Array Be	9.95	351	Pn	Pn	02 57 53.5	-0.8
	2.5nm,0.3s,baz=167,slow=22,SNR=14						
AKASG				Sn	Sn	02 59 39.9	-5.8
	0.7nm,0.3s,baz=168,slow=28,SNR=2.1						
	0.4nm,0.3s						
AKBB	Malin Array Si	9.95	351	Pn	Pn	02 57 54.3	+0.1
	1.7nm,0.6s						
AK17	Malin Array Si	9.95	350	Pn	Pn	02 57 55.0	+0.7
AK15	Malin Array Si	9.95	350	Pn	Pn	02 57 54.3	0.0
AK03	Malin Array Si	9.97	351	Pn	Pn	02 57 54.6	0.0
MI30	MI30,Zelenitsa	10.14	347	Pn	Pn	02 57 57.5	+0.6
FINES	FINESS Array B	20.85	352	P	P	03 00 11.9	-1.1
	1.0nm,0.9s,baz=163,slow=9.9,SNR=2.2						
	1.0nm,0.9s						
NOA	NORSAR Array B	23.75	335	P	P	03 00 44.0	+0.5
	0.1nm,0.4s,baz=142,slow=11,SNR=1.2						
	0.1nm,0.4s						

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*ANF **01** 03:13:29.4±0.3, 36°.85N×98°.14W, h7^{km}, ML3.0/8, Error ellipse: s-maj=2.9km s-min=2.5km az=170.0*

*TUL **01** 03:13:29.3±1.0, 36°.86N±0°.03×98°.15W±0°.03, h7^{km}±7^{km}, ML2.8, mb_Lg2.3/23(NEIC), Error ellipse: s-maj=5.9km s-min=1.7km az=142.0*

*NEIC **01** 03:13:29.4±0.6, 36°.85N±0°.03×98°.15W±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=1.6km az=137.0*

ISC 01 03:13:29.5±0.8, 36°.85N±0°.03×98°.14W±0°.04, h10^{km}, n37, σ0^{s}63/37, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.84	236	Pg	Pg	03 13 45.2	-0.4
U32A	Winter Ranch,	0.84	236	P	Pg	03 13 45.2	-0.4
	baz=55						
U32A				S	Sg	03 13 56.6	0.0
	baz=55						
T35A	Sooner Cattle	1.30	87		Pn	03 13 53.2	-0.6
T35B	Sooner Cattle	1.30	87	P	Pn	03 13 53.6	-0.1
	baz=268						
T35B				S	Sn	03 14 11.4	+0.2
	baz=268						
OKCFA	Oklahoma City	1.54	159	S	Sg	03 14 18.6	-0.2
	baz=339						
R32A	Long Quarter,	1.63	344		Pn	03 13 58.7	+0.4
R32A	Long Quarter,	1.63	344	P	Pb	03 13 59.1	-0.6
	baz=164						
R32A				S	Sb	03 14 20.7	+0.2
	baz=164						
FNO	Franklin	1.70	159	Pn	Pn	03 13 59.6	+0.4
TUL1	Leonard	2.11	116		Pn	03 14 05.6	+0.8
TUL1				IAmb_Lg		03 14 37.5	
	comp=Z,19nm,0.8s						
TUL1	Leonard	2.11	116	P	Pb	03 14 06.6	-1.3
	baz=297						
TUL1				Sb	Sb	03 14 35.6	+1.5
	baz=297						

WMOK	Wichita Mounta	2.17	194	Pn	Pn	03 14 05.0	-0.8
X34A	Smith Ranch, M	2.26	174		Pn	03 14 07.5	+0.7
CBKS	Cedar Bluff	2.33	328	Pn	Pn	03 14 08.3	+0.3
KSU1	Kansas State U	2.55	28	Pn	Pn	03 14 10.9	0.0
KSU1	 comp=Z,9.8nm,0.8s			IAmb_Lg		03 14 50.8	
KSU1	Kansas State U baz=209	2.55	28	Pb	Pb	03 14 15.7	+0.4
X37A	Clayton	3.19	134	Pn	Pn	03 14 19.3	-0.3
X37A	 comp=Z,12nm,0.8s			IAmb_Lg		03 15 19.7	
X37A	Clayton baz=316	3.19	134	S	Sn	03 14 58.8	+1.1
HHAR	Hobbs	3.42	98	Pn	Pn	03 14 22.6	-0.3
AMTX	Amarillo comp=Z,10nm,0.8s	3.48	237	IAmb_Lg		03 15 19.8	
Z35A	Perchaven, San baz=348	3.58	168	P	Pn	03 14 26.3	+1.2
W39A	Magazine	3.90	114	Pn	Pn	03 14 28.8	-0.6
S39A	Bolivar	3.93	76	Pn	Pn	03 14 29.0	-0.9
S39A	 comp=Z,6.8nm,0.7s			IAmb_Lg		03 15 41.3	
S39A	Bolivar baz=259	3.93	76	P	Pn	03 14 30.6	+0.8
KSCO	Kaye Shedlock' comp=Z,7.3nm,0.8s	4.15	303	IAmb_Lg		03 15 47.8	
U40A	Yellville	4.28	95	Pn	Pn	03 14 34.6	-0.1
MIAR	Mount Ida	4.37	120	Pn	Pn	03 14 35.3	-0.6
MIAR	 comp=Z,6.0nm,0.7s			IAmb_Lg		03 15 59.5	
P38A	Dawn	4.56	51	Pn	Pn	03 14 38.1	-0.4
P38A	 comp=Z,5.9nm,0.7s			IAmb_Lg		03 16 02.3	
MSTX	Muleshoe comp=Z,4.7nm,0.8s	4.75	234	IAmb_Lg		03 16 03.9	
R40A	Maddies Statio	4.88	71	Pn	Pn	03 14 42.8	-0.1
R40A	 comp=Z,6.0nm,0.8s			IAmb_Lg		03 16 09.2	
X40A	Basin Creek Fa	4.92	117	Pn	Pn	03 14 42.9	-0.6
FCAR	Ozark Folk Cen	4.95	99	Pn	Pn	03 14 43.8	0.0
FCAR	 comp=Z,4.8nm,0.8s			IAmb_Lg		03 16 12.7	
WHAR	Wooly Hollow	4.99	106	Pn	Pn	03 14 44.6	+0.2
W41B	Gary Mavity, V	5.06	108	Pn	Pn	03 14 45.8	+0.5
L34A	Svendsen Farm, comp=Z,7.7nm,0.7s	5.29	14	IAmb_Lg		03 16 24.5	
P40A	Paris	5.49	59	Pn	Pn	03 14 51.2	-0.1
CCM	Cathedral Cave	5.61	76	Pn	Pn	03 14 53.4	+0.4
CCM	 comp=Z,3.7nm,0.8s			IAmb_Lg		03 16 24.9	
LCAR	Lake Charles	5.68	96	Pn	Pn	03 14 53.6	-0.3

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*IDC **01** 03:25:30.1±4.5, 5°.43S×147°.36E, h193^{km}±46^{km}, mb3.4/3, mbtmp4.0/5, MS3.0/2, Error ellipse: s-maj=68.3km s-min=25.8km az=138.0*

*NEIC **01** 03:25:32.3±2.1, 5°.3S±0°.1×147°.1E±0°.2, h210^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=30.8km s-min=8.4km az=121.0*

ISC 01 03:25:30.5±0.9, **5°.37S**±0°.09×**147°.0E**±0°.1, **h195**^{km}, **n17, σ1^{s}.69**/16, **mb4.0**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby 33nm,0.3s,baz=12,slow=15,SNR=37	4.01	178	P	Pn	03 26 32.8	+0.5
PMG	 46nm,0.5s,baz=330,slow=20,SNR=7.4			S	Sn	03 27 18.6	-2.3
PMG	Port Moresby	4.01	178		Pn	03 26 33.1	+0.8
KRVT	Keravat (AS076 14nm,0.5s,baz=252,slow=13,SNR=3.6	5.10	78	P	Pn	03 26 47.5	+1.4
HNR	Honiara comp=Z,49nm,18.9s,baz=331,slow=33	13.44	108	LR	LR	03 32 46.0	
WB0	Warramunga Arr	18.86	220	P	P	03 29 37.9	+1.8
WB0	 comp=Z,3.9nm,0.8s			IAmb	IAmb	03 29 46.1	
WR0	Warramunga Arr	18.91	219	P	P	03 29 37.4	+0.7
WRA	Warramunga Arr comp=Z,2.6nm,0.4s,baz=42,slow=12,SNR=88	19.03	219	P	P	03 29 39.2	+1.3
WRA	 comp=Z,0.5nm,0.8s,baz=29,slow=2.1,SNR=1.7			PcP	PcP	03 33 55.3	+0.9
WRA	Warramunga Arr comp=Z,0.2nm,1.1s	19.03	219	IAmb	IAmb	03 29 47.1	
KNRA	Kununurra	20.65	239	P	P	03 29 57.5	+2.3
KNRA	 comp=Z,4.8nm,0.8s			IAmb	IAmb	03 29 58.8	
AS31	Alice Springs	22.15	213	P	P	03 30 11.8	+1.2
AS31	 comp=Z,2.8nm,0.3s			IAmb	IAmb	03 30 21.5	
ASAR	Alice Springs comp=Z,1.9nm,0.8s,baz=50,slow=8.1,SNR=22 comp=Z,1.9nm,0.8s	22.15	213	P	P	03 30 11.9	+1.2
FITZ	Fitzroy Crossi comp=Z,4.9nm,0.4s,baz=50,slow=11,SNR=42 comp=Z,4.9nm,0.4s	24.42	237	P	P	03 30 33.3	+2.0
YAK	Yakutsk comp=Z,14nm,18.1s,baz=264,slow=37	68.52	351	LR	LR	04 07 26.1	
MAKZ	Makanchi	77.23	320	P	P	03 37 01.5	-1.6
MAKZ	 comp=Z,1.5nm,0.5s			IAmb	IAmb	03 37 03.9	
ILAR	Eielson Array comp=Z,0.2nm,0.7s,baz=261,slow=5.0,SNR=4.6 comp=Z,0.2nm,0.7s	84.90	23	P	P	03 37 42.0	-1.1
TORD	Torodi Ar. Bea comp=Z,0.2nm,0.4s,baz=67,slow=4.4,SNR=5.8	144.95	285	PKPbc	PKPbc	03 44 44.9	-0.2
TORD	Torodi Ar. Bea	144.95	285		PKPbc	03 44 42.4	-2.7

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*IDC **01** 03:35:30.1±2.0, 1°.86N×127°.22E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML3.4/1, MS2.5/1, Error ellipse: s-maj=119.6km s-min=25.1km az=69.0*

*DJA **01** 03:35:43.6±0.6, 2°N±4°×12°7E±°, h126^{km}±8^{km}, M3.5/6, MLv3.5/6*

ISC 01 03:35:44.2±1.2, **1°.71N**±0°.09×**127°.35E**±0°.09, **h128**^{km}, **n10, σ1^{s}.01**/9, **mb3.5**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.94	179	P	Pn	03 36 07.1	+0.7
SGSI	Sangihe	2.67	317	P	Pn	03 36 26.1	-0.5
SANI	Sanana	3.98	200	P	Pn	03 36 42.5	-1.2
GTOI	Gorontalo	4.47	256	P	Pn	03 36 50.7	+0.5
SWI	Sorong	4.67	123	P	Pn	03 36 52.7	-0.2
DAV	Davao City (W) comp=Z,45nm,18.6s,baz=222,slow=42	5.61	342	LR	LR	03 39 18.0	
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=14,slow=12,SNR=1.7 1.5nm,1.0s	19.76	185	P	P	03 40 03.4	-0.9
WRA	Warramunga Arr 1.0nm,0.4s,baz=341,slow=10,SNR=21 1.0nm,0.4s	22.59	163	P	P	03 40 33.8	-0.4
ASAR	Alice Springs 0.1nm,0.3s,baz=341,slow=10,SNR=4.8 0.1nm,0.3s	26.02	166	P	P	03 41 07.2	+1.6
MKAR	Makanchi Array 0.2nm,0.3s,baz=123,slow=8.8,SNR=5.0 0.2nm,0.3s	59.56	326	P	P	03 45 34.3	0.0

IDC 01 03:37:57.5±3.0, **32°.91S**×**178°.68W, h0**^{km}, **mb3.4**/2, **mbtmp3.5**/3, **ML3.2**/1, **MS3.6**/1, **Error ellipse: s-maj=72.3km s-min=37.0km az=115.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera 0.6nm,0.3s,baz=14,slow=1.3,SNR=1.4	6.34	212	Pn	Pn	03 39 32.1	-0.1
URZ	 0.6nm,0.3s,baz=108,slow=20,SNR=2.0 7.1nm,1.0s			Sn	Sn	03 40 44.5	-0.8
ASAR	Alice Springs 0.5nm,0.7s,baz=114,slow=7.9,SNR=2.7 0.5nm,0.7s	42.46	270	P	P	03 45 53.1	-1.3
WRA	Warramunga Arr 0.2nm,0.3s,baz=114,slow=8.0,SNR=8.3 0.2nm,0.3s	43.67	275	P	P	03 46 05.1	+0.8
QSPA	South Pole Qui comp=Z,62nm,22.0s,baz=116,slow=29	57.21	180	LR	LR	04 05 42.4	
FINES	FINESS Array B 1.4nm,0.9s,baz=38,slow=3.0,SNR=5.9	147.28	338	PKPbc	PKPbc	03 57 41.3	-0.8

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*IDC **01** 03:41:56.4±6.1, 13°.17N×91°.12W, h0^{km}, mb3.5/4, mbtmp3.5/6, ML3.7/2, Error ellipse: s-maj=110.5km s-min=50.9km az=176.0*

*GCG **01** 03:42:02.7±0.7, 13°.39N×91°.58W, h29^{km}±9^{km}, MD3.9*

ISC 01 03:42:03.1±2.3, **13°.4N**±0°.2×**91°.4W**±0°.1, **h28**^{km}, **n10, σ0^{s}.77**/11, **mb3.6**/4, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	1.17	27	*e*P	Pb	03 42 25.0	+0.3
PCG	Pacaya	1.24	38	*e*P	Pb	03 42 26.4	+0.3
STG3	Santiaguito 3,	1.31	352	*e*P	Pn	03 42 25.7	0.0
NBG	Las Nubes	1.55	41	*e*P	Pb	03 42 32.0	+0.6
CMIG	Matias Romero 0.9nm,0.3s,baz=135,slow=8.2,SNR=15	4.98	318	Pn	Pn	03 43 16.3	+0.3
CMIG	 2.0nm,0.3s,baz=235,slow=17,SNR=2.2 2.6nm,0.4s			Sn	Sn	03 44 12.5	-0.2
TXAR	Lajitas Array 0.1nm,0.3s,baz=155,slow=14,SNR=11 0.7nm,0.7s	19.52	326	P	Pn	03 46 29.7	-0.1
TKL	Tuckaleechee C 2.3nm,0.9s,baz=192,slow=11,SNR=5.1 2.3nm,0.9s	23.20	16	P	P	03 47 06.9	-0.8
NVAR	Mina Array Bea 0.5nm,0.7s,baz=133,slow=8.7,SNR=5.3 0.5nm,0.7s	34.50	321	P	P	03 48 50.5	+1.3
YKA	Yellowknife Ar 0.4nm,0.6s,baz=148,slow=7.6,SNR=7.3 0.4nm,0.6s	51.74	347	P	P	03 51 06.4	-1.3
ILAR	Eielson Array 0.5nm,0.9s,baz=156,slow=4.9,SNR=4.1 0.5nm,0.9s	63.62	337	P	P	03 52 31.0	-0.2

IDC 01 03:49:17.8±2.4, **5°.48S**×**129°.73E, h228**^{km}±37^{km}, **mb2.7**/1, **mbtmp3.4**/5, **Error ellipse: s-maj=66.2km s-min=16.7km az=86.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong 3.4nm,0.2s,baz=240,slow=20,SNR=10	4.83	19	P	Pn	03 50 32.7	+1.9
SIJI	 21nm,0.3s,baz=235,slow=23,SNR=27			S	S	03 51 28.1	-0.5
FITZ	Fitzroy Crossi 1.5nm,0.6s,baz=27,slow=6.8	13.17	197	P	P	03 52 18.4	-0.2
FITZ	 0.6nm,0.3s,baz=24,slow=20,SNR=1.3			S	S	03 54 37.8	-4.5
WRA	Warramunga Arr 0.5nm,0.9s,baz=347,slow=13,SNR=2.3	15.06	163	P	P	03 52 40.3	+0.6
WRA	 0.3nm,0.4s,baz=333,slow=22,SNR=2.3			S	S	03 55 25.9	-0.4
ASAR	Alice Springs 0.3nm,0.4s,baz=352,slow=12,SNR=2.3	18.53	168	P	P	03 53 17.1	-0.6
MKAR	Makanchi Array 0.3nm,0.8s,baz=110,slow=9.4,SNR=2.1 0.3nm,0.8s	66.81	327	P	P	03 59 44.7	-0.4

TAP 01 04:17:38.1, 24°.19N×**121°.80E, h15**^{km}, **ML3.5, 2D, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village baz=337	0.13	335	*e*P	Pg	04 17 41.6	-0.3
EHP	 baz=337			*e*S	Sb	04 17 44.7	-0.4
ETL	Fush Village baz=259	0.17	259	*i* P	Pg	04 17 42.4	+0.1
ETL	 baz=259			*e*S	Sb	04 17 45.8	-0.4
NACB	Ninganchiao baz=265	0.19	265	*i* P	Pg	04 17 42.5	-0.1
NACB	 baz=265			*i* S	Sg	04 17 45.9	+0.2
TWD	Chiawan baz=245	0.22	239	*i* P	Pg	04 17 43.2	+0.1
TWD	 baz=245			*i* S	Sb	04 17 47.2	-0.4
ENA	Nanau baz=347	0.24	347	⇓*i*P	Pg	04 17 43.6	+0.1
ENA	 baz=347			S	Sg	04 17 47.5	+0.3
EWUT	Wuta baz=355	0.25	356	⇓*i*P	Pg	04 17 43.9	+0.2
EWUT	 baz=355			*i* S	Sb	04 17 48.1	-0.5
HWA	Hwalien baz=228	0.28	220	*e*P	Pb	04 17 45.1	+0.3
HWA	 baz=228			*e*S	Sb	04 17 51.0	+1.7
ETLH	Xiulin Townshi baz=273	0.29	273	P	Pb	04 17 44.9	-0.2
ETLH	 baz=273			*e*S	Sb	04 17 49.9	+0.1
TWC	Suao baz=6.0	0.42	6	P	Pb	04 17 47.0	-0.2
TWC	 baz=6.0			*e*S	Sb	04 17 53.2	-0.1
LATG	Datong baz=322	0.42	324	P	Pg	04 17 47.0	+0.2
LATG	 baz=322			S	Sb	04 17 53.6	0.0
NDS	Dongshan baz=348	0.45	350	P	Pb	04 17 47.5	-0.2
NDS	 baz=348			S	Sb	04 17 53.9	-0.3
NNSB	Datong baz=301	0.45	302	P	Pb	04 17 47.5	-0.3
NNSB	 baz=301			*e*S	Sb	04 17 54.0	-0.4
NNS	Nan Shan baz=302	0.46	302	*i* P	Pb	04 17 47.8	-0.3
NNS	 baz=302			S	Sg	04 17 54.0	+0.2
WHF	Hehuan Shan baz=265	0.49	265	*e*P	Pg	04 17 48.1	0.0
WHF	 baz=265			*e*S	Sb	04 17 55.5	-0.4
ENTT	Nioudou baz=333	0.49	334	P	Pb	04 17 48.6	0.0
ENTT	 baz=333			*e*S	Sb	04 17 55.8	+0.2
ESL	Shilin baz=227	0.50	222	P	Pg	04 17 48.4	+0.2
ESL	 baz=227			*e*S	Sb	04 17 55.6	-0.3
TWE	Neicheng baz=347	0.54	347	P	Pb	04 17 49.3	0.0
TWE	 baz=347			*e*S	Sb	04 17 57.1	+0.2
ILA	Ilan baz=350	0.57	355	*e*P	Pb	04 17 50.2	+0.4
ILA	 baz=350			*e*S	Sb	04 17 57.5	-0.3
TWT	Tachien baz=275	0.57	276	*e*P	Pb	04 17 50.3	+0.3
TWT	 baz=275			*e*S	Sb	04 17 58.4	+0.4
CHGB	Renai baz=252	0.59	257	*e*P	Pg	04 17 49.7	-0.1
CHGB	 baz=252			*e*S	Sb	04 17 58.8	+0.4
TDCB	Techi baz=276	0.59	276	*e*P	Pg	04 17 49.6	-0.3
TDCB	 baz=276			*e*S	Sb	04 17 58.6	+0.2
FUSB	Fushanzhiwuyua baz=332	0.60	341	*e*P	Pb	04 17 50.4	+0.1
FUSB	 baz=332			S	Sb	04 17 58.8	+0.1
OWD	Renai baz=253	0.62	248	*e*P	Pg	04 17 50.4	+0.1
OWD	 baz=253			*e*S	Sb	04 17 59.5	+0.2
EGFH	Guangfu baz=221	0.62	213	P	Pb	04 17 51.0	+0.3
NSK	Sanguang baz=319	0.63	320	*e*P	Pb	04 17 51.1	+0.2
NSK	 baz=319			*e*S	Sb	04 17 59.9	+0.4
NWLT	Wulai baz=334	0.64	335	P	Pg	04 17 50.9	+0.1
NWLT	 baz=334			*e*S	Sb	04 17 60.0	+0.1
WUSB	Renai baz=248	0.66	252	*e*P	Pg	04 17 50.6	-0.4
WUSB	 baz=248			*e*S	Sb	04 18 00.8	+0.4
NTC	Toucheng baz=1.0	0.66	2	*e*P	Pb	04 17 51.6	+0.2
EGS	 baz=10.0	0.66	10	*e*P	Pb	04 17 51.3	0.0
VWDT	VWDT baz=241	0.74	234	*e*P	Pn	04 17 53.6	-0.5
VWDT	 baz=241			*e*S	Sn	04 18 04.6	-0.5
NFF	Wufeng Townshi baz=304	0.76	305	*e*P	Pb	04 17 53.8	+0.6
NFF	 baz=304			*e*S	Sb	04 18 03.5	+0.1
HGSD	Ruisui baz=198	0.78	206	*e*P	Pb	04 17 53.6	+0.3
TIPB	Shuangxi baz=352	0.78	2	*e*P	Pb	04 17 53.8	+0.4
TIPB	 baz=352			*e*S	Sb	04 18 04.4	+0.6
WHP	Taichung City baz=276	0.78	276	*e*P	Pn	04 17 54.4	-0.4
WHP	 baz=276			*e*S	Sn	04 18 05.2	-1.1
NHDH	Xindian Distri baz=335	0.81	342	*e*P	Pg	04 17 53.7	-0.2
TWA	Mucha baz=344	0.81	346	*e*P	Pn	04 17 55.0	0.0
EHY	Hungye baz=222	0.81	213	*e*P	Pb	04 17 54.2	+0.3
WCS	Beigang Elemen baz=261	0.82	261	*e*P	Pg	04 17 54.6	+0.4
TWB1	Santiao Chiao baz=5.0	0.83	12	*e*P	Pn	04 17 54.9	-0.4
LIOB	Emei baz=302	0.85	302	*e*P	Pn	04 17 55.8	+0.3
NSTT	Nanjuang baz=300	0.85	301	*e*P	Pn	04 17 55.6	+0.1
NSTT	 baz=300			*e*S	Sn	04 18 07.0	-0.7
SSLB	Suanglung baz=251	0.87	243	*e*P	Pn	04 17 55.5	-0.4
SSLB	 baz=251			*e*S	Sg	04 18 07.4	+0.8
NWF	Wu-fen Shan baz=350	0.88	359	*e*P	Pn	04 17 56.2	+0.2
NWF	 baz=350			*e*S	Sg	04 18 07.3	+0.5
SXI1	Grass Mountain baz=6.0	0.90	4	*e*P	Pn	04 17 57.5	+1.2
YULB	Yu-li baz=209	0.92	210	*e*P	Pg	04 17 56.0	0.0
YULB	 baz=209			*e*S	Sg	04 18 08.3	+0.2
EYUL	Yuli baz=217	0.95	208	*e*P	Pn	04 17 57.3	+0.4
SBCB	Hsinchu baz=307	0.95	309	*e*P	Pn	04 17 58.0	+1.0
NCUH	Zhongli baz=320	0.95	324	*e*P	Pn	04 17 57.8	+0.8
NCU	National Centr baz=318	0.95	324	*e*P	Pn	04 17 58.2	+1.2
HSN	Hsinchu baz=314	0.97	309	*e*P	Pn	04 17 58.1	+0.9
YM01	YM01 baz=346	0.97	348	*e*P	Pn	04 17 57.4	+0.1
NMLH	Miaoli baz=290	0.98	291	*e*P	Pn	04 17 58.4	+1.0
NTST	Danshui baz=340	1.02	342	*e*P	Pg	04 17 58.8	+0.9
ANP	Anpu baz=344	1.02	346	*e*P	Pn	04 17 58.1	+0.1
YUS	Yu-Shan baz=228	1.04	228	*e*P	Pn	04 17 58.6	-0.1
WJS	Zhushan baz=243	1.05	250	*e*P	Pg	04 17 59.7	+1.3
WNT	Mingjian baz=245	1.07	253	*e*P	Pg	04 18 00.2	+1.4
WDJ	Dajia District baz=278	1.07	279	*e*P	Pg	04 17 59.1	+0.3
TWY	Chenhua baz=349	1.09	350	*e*P	Pg	04 18 00.2	+0.9
ALS	Alishan baz=225	1.14	234	*e*P	Pg	04 18 00.4	+0.2
YOJ	Yonaguni jima baz=65	1.14	76	*e*P	Pg	04 18 00.2	+0.1
WCHH	Zhanghua baz=264	1.14	265	*e*P	Pg	04 18 02.0	+1.8
CHKT	Chengkung baz=185	1.16	200	*e*P	Pn	04 17 59.4	-0.4
CHN5	Tsauling baz=235	1.19	240	*e*P	Pg	04 18 02.1	+1.0
ELDTW	Lidau baz=203	1.23	216	*e*P	Pn	04 18 00.2	-0.7
WDLH	Douliu baz=247	1.26	247	*e*P	Pg	04 18 03.1	+0.7
EDH	Donghe baz=187	1.30	201	*e*P	Pn	04 18 00.6	-1.1
WRL	Guolierlin Hig baz=257	1.33	258	*e*P	Pb	04 18 03.1	+0.3
STYH	Taoyuan baz=209	1.38	223	*e*P	Pb	04 18 04.0	+0.3
WTK	Tuku baz=235	1.39	249	*e*P	Pg	04 18 04.4	-0.5
TPUB	Ta-pu baz=214	1.39	231	*e*P	Pg	04 18 04.8	-0.1
LONT	Longtian baz=207	1.42	206	*e*P	Pn	04 18 02.0	-1.4
CHY	Chiayi baz=241	1.44	242	*e*P	Pg	04 18 06.1	+0.3
WTP	Ta-pu baz=213	1.44	229	*e*P	Pg	04 18 05.7	-0.1
TWK	Hsinying baz=231	1.52	233	*e*P	Pb	04 18 06.3	+0.3
CHN1	Nanshi baz=229	1.54	230	*e*P	Pg	04 18 07.7	-0.1
SGST	Jiashian baz=211	1.57	226	*e*P	Pb	04 18 06.6	-0.3
WSL	Shuilin Townsh baz=245	1.59	245	*e*P	Pb	04 18 07.2	0.0
ICHU	Yijhu baz=238	1.62	240	*e*P	Pb	04 18 08.1	+0.4
TSMG	Majia baz=206	1.82	216	*e*P	Pb	04 18 11.3	+0.1
EAST	Anshuo baz=197	2.00	206	*e*P	Pn	04 18 11.8	+0.4

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*NEIC **01** 04:24:26.2±1.8, 30°.28S±0°.05×72°.21W±0°.06, h10^{km}±1^{km}, mb4.2/5, ML3.8(GUC), Error ellipse: s-maj=9.4km s-min=8.4km az=298.0*

*IDC **01** 04:24:26.5±1.0, 30°.12S×71°.89W, h0^{km}, mb3.9/5, mbtmp3.8/9, ML3.7/4, MS3.0/1, Error ellipse: s-maj=28.6km s-min=21.4km az=126.0*

*GUC **01** 04:24:27.8±0.8, 30°.40S×72°.04W, h33^{km}±4^{km}, ML3.8*

ISC 01 04:24:25.4±1.8, **30°.40S**±0°.04×**72°.18W**±0°.06, **h7**^{km}±11^{km}, **n64, σ1^{s}.75**/65, **mb4.2**/5, **1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.55	121	Pg	Pg	04 24 38.2	+2.1
CO06	Fray Jorge	0.55	121	⇑*i*P	Pg	04 24 38.0	+2.0
CO06				*e*S	Sb	04 24 45.5	0.0
CO06	 comp=N,6μm,0.4s			IAML		04 24 49.1	
CO05	La Serena	0.94	60		Pb	04 24 44.1	-0.1
CO05	La Serena	0.94	60	*e*P	Pb	04 24 44.0	-0.1
CO05				*e*S	Sb	04 24 56.0	-0.9
CO05	 comp=E,5μm,0.4s			IAML		04 24 59.8	
GO04	Tololo Observa	1.22	80		Pn	04 24 49.0	-0.2
GO04	Tololo Observa	1.22	80	*e*P	Pn	04 24 48.7	-0.4
GO04				*e*S	Sn	04 25 04.5	-1.5
CO02	Combarbal	1.30	129		Pg	04 24 50.9	+0.5
CO02	Combarbal	1.30	129	*e*P	Pb	04 24 50.5	+0.3
CO02				*e*S	Sg	04 25 07.1	-0.1
CO02	 comp=N,6μm,0.8s			IAML		04 25 11.1	
CO01	Juntas del Tor	1.85	78	Pn	Pb	04 24 59.1	-0.8
CO01	Juntas del Tor	1.85	78	*e*P	Pb	04 24 59.1	-0.8
CO01				*e*S	Sb	04 25 22.8	-0.6
CO01	 comp=N,725nm,0.4s			IAML		04 25 26.6	
LCO	Las Campanas	1.89	43	Pn	Pn	04 24 57.9	-0.5
LCO	Las Campanas	1.89	43	*e*P	Pn	04 24 57.9	-0.5
VA06	Catapilco	2.29	161		Pb	04 25 06.0	-1.0
VA06	Catapilco	2.29	161	*e*P	Pn	04 25 04.7	+1.1
VA06				IAML		04 25 47.7	

	comp=N,724nm,0.7s						
AC04	Llanos de Chal	2.39	24	Pn	Pn	04 25 04.0	-1.0
AC04	Llanos de Chal	2.39	24	*e*P	Pn	04 25 03.8	-1.2
AC04				IAML		04 25 52.2	
	comp=N,358nm,0.6s						
VA01	Torpederas	2.66	170	Pn	Pn	04 25 10.2	+1.5
VA03	San Esteban	2.74	150		Pb	04 25 12.4	-2.5
VA03	San Esteban	2.74	150	*e*P	Pn	04 25 12.1	+2.1
VA03				IAML		04 26 04.5	
	comp=N,567nm,0.4s						
ROCH	El Roble	2.76	159	*e*P	Pb	04 25 11.8	-3.4
ROCH				*e*P	Pn	04 25 09.2	-1.1
ROCH				IAML		04 26 01.1	
	comp=N,567nm,0.5s						
ROC1	El Roble	2.76	159		Pn	04 25 09.4	-0.9
MT02	Curacav	2.99	163		Pb	04 25 16.5	-2.5
MT02	Curacav	2.99	163	*e*P	Pn	04 25 14.5	+1.1
PEL	Peldehue	3.02	155		Pn	04 25 16.4	+2.6
ZON	Zonda	3.22	112		Pb	04 25 20.9	-2.1
MT05	Renca	3.23	158	Pn	Pb	04 25 20.0	-3.2
MT05	Renca	3.23	158	*e*P	Pn	04 25 18.6	+1.9
MT05				IAML		04 26 17.2	
	comp=E,521nm,0.3s						
VA05	Santo Domingo	3.29	172	Pn	Pn	04 25 19.2	+1.8
VA05	Santo Domingo	3.29	172	*e*P	Pn	04 25 18.0	+0.6
VA05				IAML		04 26 30.5	
	comp=N,195nm,0.6s						
FCH	Farellones	3.34	152	*e*P	Pb	04 25 21.8	-3.4
FCH				IAML		04 26 27.6	
	comp=N,82nm,0.7s						
MT03	Universidad Ad	3.40	156	*e*P	Pn	04 25 21.7	+2.7
MT03				IAML		04 26 17.8	
	comp=E,352nm,0.4s						
AC06	Mina Casimiro	3.42	28		Pn	04 25 18.1	-1.2
AC06	Mina Casimiro	3.42	28	*e*P	Pn	04 25 18.7	-0.6
AC06				IAML		04 26 17.9	
	comp=E,190nm,0.7s						
MT09	Talagante	3.52	164	*e*P	Pn	04 25 22.5	+1.7
MT09				IAML		04 26 19.8	
	comp=E,166nm,0.7s						
MT01	Popeta	3.55	167	*e*P	Pn	04 25 21.8	+0.8
MT01				IAML		04 26 25.1	
	comp=E,96nm,0.4s						
BO04	La Punta	3.82	160	*e*P	Pn	04 25 26.9	+2.0
LMEL	Las Melosas	3.83	155	*e*P	Pn	04 25 27.6	+2.6
BO01	Tunca	4.09	167	Pn	Pn	04 25 29.5	+1.1
BO01	Tunca	4.09	167	*e*P	Pn	04 25 29.6	+1.2
AC02	Maricunga	4.45	38	Pn	Pn	04 25 32.4	-1.4
AC02	Maricunga	4.45	38	*e*P	Pn	04 25 34.4	+0.7
AC01	Pan de Azucar	4.46	19	Pn	Pn	04 25 31.5	-2.0
AC01	Pan de Azucar	4.46	19	*e*P	Pn	04 25 31.1	-2.3
PB14	IPOC Station P	5.96	16	Pn	Pn	04 25 52.0	-2.4
H03N1	Juan Fernandez	6.48	240	Pn	Pn	04 26 06.3	+5.4
	baz=209,slow=71						
H03N1				T	T	04 33 30.0	
	baz=68,slow=72,SNR=835						
H03N2	Juan Fernandez	6.49	240	Pn	Pn	04 26 05.3	+4.2
	baz=209,slow=71						
H03N2				T	T	04 33 13.1	
	baz=68,slow=72,SNR=736						
H03N3	Juan Fernandez	6.49	240	Pn	Pn	04 26 01.2	0.0
	baz=209,slow=71						
H03N3				T	T	04 33 22.0	
	baz=68,slow=72,SNR=860						
H03S1	Juan Fernandez	6.66	237	Pn	Pn	04 26 02.0	-1.4
LVC	Limon Verde	8.29	21	Pn	Pn	04 26 23.7	-2.8
	comp=E,0.6nm,0.3s,baz=212,slow=10,SNR=6.1						
LVC				Lg	Lg	04 28 35.4	
	comp=E,0.9nm,0.3s,baz=288,slow=20,SNR=3.1						
	comp=E,1.5nm,0.3s						
PLCA	Paso Flores	10.40	173	Pn	Pn	04 27 01.4	+6.4
	comp=E,0.4nm,0.3s,baz=341,slow=10,SNR=8.4						
	comp=E,1.1nm,0.5s						
CPUP	Villa Florida	13.69	76	Pn	Pn	04 27 38.0	-2.0
	comp=E,0.1nm,0.3s,baz=194,slow=18,SNR=2.2						
CPUP				LR	LR	04 33 16.5	
	comp=E,67nm,19.5s,baz=218,slow=40						
	comp=E,1.5nm,0.8s						
LPAZ	La Paz	14.52	16	Pn	Pn	04 27 49.9	-2.2
	comp=E,0.1nm,0.3s,baz=209,slow=7.9,SNR=2.3						
	comp=E,0.7nm,0.5s						
BDFB	Brasilia	26.57	62	P	P	04 30 04.0	-0.5
	comp=E,2.8nm,0.6s,baz=239,slow=5.7,SNR=8.8						
	comp=E,2.8nm,0.6s						
BDFB	Brasilia	26.57	62	IAmb	IAmb	04 30 18.4	
	comp=Z,12nm,1.5s						
TXAR	Lajitas Array	66.55	330	P	P	04 35 18.4	+2.2
	comp=Z,0.4nm,0.7s,baz=151,slow=7.0,SNR=6.0						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	80.50	333	P	P	04 36 41.1	+2.8
	comp=Z,0.1nm,0.6s,baz=191,slow=9.1,SNR=1.8						
	comp=Z,0.1nm,0.6s						
TORD	Torodi Ar. Bea	83.11	70	P	P	04 36 53.0	+0.6
	comp=Z,1.2nm,0.8s,baz=262,slow=4.6,SNR=6.0						
	comp=Z,1.2nm,0.8s						
SCHQ	Schefferville	85.00	3	P	P	04 37 01.5	+0.4
	comp=Z,1.4nm,0.8s,baz=235,slow=14,SNR=2.2						
	comp=Z,1.4nm,0.8s						
SCHQ	Schefferville	85.00	3	IAmb	IAmb	04 37 07.6	
	comp=Z,4.7nm,1.4s						
H11S2	WAKE ISLAND Hy	125.62	272	T	T	07 02 19.9	
	baz=114,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	125.63	272	T	T	07 02 17.1	
	baz=114,slow=74,SNR=20						
H11S3	WAKE ISLAND Hy	125.64	272	T	T	07 02 14.5	
	baz=114,slow=74,SNR=17						
ZALV	Zalesovo Beam	151.19	29	PKPbc	PKiKP	04 44 19.6	0.0
	comp=Z,2.0nm,0.6s,baz=290,slow=4.0,SNR=9.1						
ZALV				PKPab	PKPab	04 44 26.9	0.0
	comp=Z,1.1nm,0.4s,baz=317,slow=3.3,SNR=4.3						
MKAR	Makanchi Array	154.35	43	PKPbc	PKiKP	04 44 26.7	+0.3
	comp=Z,0.2nm,0.5s,baz=7.8,slow=3.2,SNR=2.3						
MKAR				PKPab	PKPab	04 44 39.9	-0.6
	comp=Z,0.1nm,0.5s,baz=346,slow=5.2,SNR=3.1						

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*MDD **01** 04:52:12.0±0.5, 36.°54N×5.°86W, h11^{km}, mb_Lg2.9/15, Error ellipse: s-maj=5.6km s-min=2.9km az=14.0*
*SFS **01** 04:52:11.0, 35.°50N×5.°80W, h11^{km}, ML2.9, PATERNA DE RIVERA (CADIZ)*
*IGIL **01** 04:52:12.2, 36.°54N×5.°86W, h11^{km}*
*LDG **01** 04:52:13.1±0.3, 36.°58N×5.°84W, h11^{km}, Ml2.4/3, Error ellipse: s-maj=7.1km s-min=3.4km az=174.0*
*INMG **01** 04:52:14.0±2.0, 36.°62N×5.°85W, h19^{km}±4^{km}, ML2.6, Error ellipse: s-maj=4.0km s-min=2.8km az=34.0*
*CNRM **01** 04:52:16.5, 36.°41N×5.°83W, h50^{km}, ml2.3*
ISC 01 04:52:12.0±1.0, **36.°58N**±0.°03×**5.°81W**±0.°02, **h14**^{km}±7^{km}, **n57**, σ**2.^{s}29**/98, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNIL	Conil	0.29	223	P	Pb	04 52 20.0	+1.1
ESPR	Espera	0.29	353	Pg	Pg	04 52 17.0	-1.1
ESPR				Sg	Sg	04 52 23.6	+1.4
ESPR				*i* Vmb_Lg		04 52 25.7	
EJIF	Jimena Fronter	0.30	115	Pg	Pg	04 52 17.4	-1.0
EJIF				Sg	Sb	04 52 26.4	+2.3
SFS	San Fernando	0.34	250	P	Pb	04 52 20.4	+0.7
SFS				S	Sb	04 52 26.8	+1.8
LIJA	Lijar	0.46	45	P	Pg	04 52 19.0	-2.2
LIJA				S	Sg	04 52 26.5	-1.0
EMIJ	Mijas	0.84	91	Pn	Pg	04 52 27.5	-0.8
EMIJ				Sn	Sb	04 52 41.9	+2.5
EMIJ				*i* Vmb_Lg		04 52 44.8	
SMIR	Smir Dam	0.96	159	P	Pb	04 52 31.5	+1.2
SMIR				S	Sb	04 52 43.8	+0.8
EMAL	Malaga-Limoner	1.13	80	P	Pb	04 52 33.2	0.0
EMAL				S	Sg	04 52 50.6	+2.2
EMIN	Mina Concepcio	1.37	330	Pn	Pn	04 52 36.2	-0.4
EMIN				Sn	Sn	04 52 54.3	-0.3
EMIN				*i* Vmb_Lg		04 52 57.8	
EGOR	Sierra Gorda,	1.47	68	Pn	Pn	04 52 37.7	-0.4
EGOR				Sn	Sn	04 52 55.6	-1.5
EGOR				Sg	Sb	04 53 00.7	+3.1
EGOR				*i* Vmb_Lg		04 53 08.3	
ECAB	El Cabril	1.53	12	Pn	Pn	04 52 38.8	-0.1
ECAB				Sn	Sn	04 52 57.7	-0.8
ECAB				*i* Vmb_Lg		04 53 02.5	
EGRO	El Granado	1.64	306	Pn	Pn	04 52 39.1	-1.3
EGRO				Sn	Sn	04 53 01.5	+0.2
EGRO				*i* Vmb_Lg		04 53 06.6	
PVAQ	Vaqueiros	1.73	299	*e*Pn	Pn	04 52 40.5	-1.1
PVAQ				*e*Sg	Sb	04 53 07.0	+1.8
PVAQ				A	A	04 53 12.2	
	32nm,0.3s						
PVAQ	Vaqueiros	1.73	299	P	Pn	04 52 42.7	+1.0
PVAQ				S	Sb	04 53 06.6	+1.4
ELGU	Los Guajares,	1.78	80	Pn	Pn	04 52 43.7	+1.3
ELGU				Sg	Sb	04 53 09.9	+3.3
ELGU				*i* Vmb_Lg		04 53 18.0	
PBDV	Barranco-do-Ve	1.82	292	*e*Pn	Pn	04 52 42.2	-0.7
PBDV				*e*Sg	Sb	04 53 09.5	+1.7
PBDV				A	A	04 53 14.8	
	22nm,0.5s						
EADA	Adamuz	1.86	31	Pn	Pn	04 52 42.5	-1.0
EADA				Sn	Sn	04 53 09.7	+2.8
EADA				*i* Vmb_Lg		04 53 12.8	
PBAR	Barrancos	1.87	329	*e*Sg	Sn	04 53 10.0	+3.1
PCVE	Castro Verde	2.07	301	*e*Pn	Pn	04 52 45.3	-0.9
PCVE				*e*Sg	Sb	04 53 16.5	+1.7
PCVE				A	A	04 53 26.2	
	25nm,0.6s						
PBEJ	Beja	2.18	312	*e*Sg	Sb	04 53 19.8	+1.6
MESJ	Messejana	2.30	304	*e*P	Pn	04 52 48.0	-1.4
EBAD	Badajoz	2.37	337	Pn	Pn	04 52 49.8	-0.7
EBAD				*i* Vmb_Lg		04 53 29.7	
PFVI	Vila Bisbo	2.48	284	*e*Pn	Pn	04 52 52.6	+0.7
PFVI				*e*Sn	Sn	04 53 21.4	-0.6
PFVI				A	A	04 53 41.8	
	12nm,0.7s						
PTEO	Sao Teotonio	2.52	293	*e*Pg	Pb	04 52 58.7	+1.7
PTEO				*e*Sg	Sb	04 53 30.9	+3.1
PTEO				A	A	04 53 42.2	
	17nm,0.5s						
AKLM	AKL	2.61	142	P	Pn	04 52 54.6	+0.9
AKLM				S	Sn	04 53 23.4	-1.8
EVO	Evora	2.62	319	P	Pn	04 52 54.1	+0.3
EVO				S	Sn	04 53 21.0	-4.4
EVO	Evora	2.62	319	*e*Pn	Pn	04 52 53.4	-0.4
EVO	Evora	2.62	319	*e*Pg	Pb	04 52 59.0	+0.3
EVO				*e*Sg	Sb	04 53 33.1	+2.4
EVO				A	A	04 53 49.8	
	23nm,0.5s						
PNCL	Nicolau / Gran	2.65	306	*e*Pn	Pn	04 52 53.8	-0.5
PNCL	Nicolau / Gran	2.65	306	*e*Pg	Pb	04 53 00.3	+1.1
PNCL				*e*Sg	Sb	04 53 34.3	+2.7
PNCL				A	A	04 53 39.3	
	16nm,1.0s						
GOG	Mont Gurugu	2.66	120	P	Pn	04 52 53.5	-0.9
GOG				S	Sn	04 53 25.0	-1.5
PESTR	Estremoz	2.68	329	*e*Sg	Sb	04 53 33.9	+1.4
PESTR				A	A	04 53 40.5	
	22nm,0.7s						
PESTR	Estremoz	2.68	329	P	Pb	04 53 01.7	+1.9
PESTR				S	Sb	04 53 34.0	+1.4
PMRV	Marv??o	3.11	337	*e*Pn	Pn	04 53 00.0	-0.5
PMRV				*e*Sn	Sn	04 53 36.0	-1.5
PMRV				*e*Sg	Sb	04 53 48.2	+3.5
PMRV				A	A	04 53 52.9	
	34nm,0.7s						
PMTG	Montargil	3.13	323	*e*Pn	Pn	04 53 00.4	-0.5
PMTG				*e*Sg	Sb	04 53 48.7	+3.2
PMTG				A	A	04 54 02.8	
	16nm,1.0s						
PAB	San Pablo	3.18	21	Pn	Pn	04 53 01.4	-0.2
PAB				Sg	Sb	04 53 50.5	+3.6
PAB				*i* Vmb_Lg		04 53 54.2	
PACT	Alcochete	3.24	313	*e*Sg	Sg	04 53 56.7	+0.6
PACT				A	A	04 54 14.9	
	24nm,0.6s						
ESDC	Sonseca Array	3.42	25	Pn	Pn	04 53 03.6	-1.2
ESDC				Sg	Sg	04 54 01.0	-0.7
ESDC				*i* Vmb_Lg		04 54 01.6	
EPLA	Plasencia	3.48	357	Pn	Pn	04 53 04.5	-1.3
EPLA				Sn	Sn	04 53 45.3	-1.6
PCBR	Castelo Branco	3.51	339	*e*Pn	Pn	04 53 05.9	-0.2
PCBR				*e*Sg	Sb	04 54 00.2	+3.9
PCBR				A	A	04 54 08.6	
	15nm,0.6s						
PSBE	So Bento	3.76	322	*e*Pn	Pn	04 53 09.0	-0.5
PSBE				*e*Sg	Sg	04 54 11.7	-1.0
PSBE				A	A	04 54 18.7	
	17nm,0.6s						
MD31	MD31	3.80	167	P	Pn	04 53 10.4	+0.1
MD31				S	Sn	04 53 53.0	-1.8
MTE	Manteigas	4.05	341	*e*Sg	Sb	04 54 18.1	+6.2
MTE				A	A	04 54 26.8	
	26nm,0.5s						
PCAS	Casmilo, Conde	4.06	329	*e*Sg	Sg	04 54 21.9	-0.4
PCAS				A	A	04 54 28.1	
	12nm,0.5s						
UCM	Universidad Co	4.23	28	P	Pn	04 53 17.8	+1.7
UCM				S	Sn	04 54 06.6	+1.3
GUD	Guadarrama	4.26	17	Pn	Pn	04 53 15.6	-0.9
GUD				*i* Vmb_Lg		04 54 33.1	
PVIS	Viseu	4.44	339	*e*Sg	Sb	04 54 29.9	+6.8
PVIS				A	A	04 54 38.2	
	7.2nm,0.5s						
MVO	Moncorvo	4.67	349	*e*Sg	Sb	04 54 35.5	+5.6
MVO				A	A	04 54 49.0	
	12nm,0.5s						
PVRL	Vila Real	4.92	343	*e*Sn	Sn	04 54 17.8	-4.4
PVRL				*e*Sg	Sg	04 54 46.8	-3.0
PVRL				A	A	04 54 48.8	
	8.0nm,0.7s						
ETOR	Torete	5.15	34	Pn	Pn	04 53 27.7	-1.1
ETOR				Sn	Sn	04 54 26.6	-1.5
ETOR				*i* Vmb_Lg		04 54 59.1	
PBRG	Braganca	5.27	352	*e*Sg	Sg	04 54 56.5	-4.5
PBRG				A	A	04 55 02.1	
	6.8nm,0.5s						
SJPF	Ste Jean	7.42	27	*e*Pn	Pn	04 53 59.7	-0.1
SJPF				*e*Sn	Sn	04 55 18.2	-5.5
	0.3nm,0.3s						
ETSF	Etsaut	7.50	31	*e*Pn	Pn	04 54 00.7	-0.2
ETSF				*e*Sn	Sn	04 55 20.2	-5.5
	0.2nm,0.2s						
EPF	Esparros	7.99	34	*e*Pn	Pn	04 54 07.6	-0.1
EPF				*e*Sn	Sn	04 55 32.3	-5.6
	0.2nm,0.2s						
LFF	La Frestale	9.71	29	*e*Pn	Pn	04 54 30.1	-1.1
RJF	Les Rejaudoux	10.32	30	*e*Pn	Pn	04 54 39.2	-0.4
QUIF	Quistinic	11.50	9	*e*Pn	Pn	04 54 54.6	-1.0

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*TUL **01** 05:00:11±0.9, 36.°53N±0.°01×98.°46W±0.°01, h5^{km}±6^{km}, ML2.7, mb_Lg2.1/13(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=161.0*
NEIC 01 05:00:11.2±0.9, **36.°52N**±0.°01×**98.°44W**±0.°01, **h5**^{km}±2^{km}, **Error ellipse: s-maj=3.0km s-min=2.1km az=271.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.47	253	Pg	Pg	05 00 20.1	-0.1
U32A				Sg	Sg	05 00 26.9	+0.5
ADOK	Arcadia Dam	1.23	135	Pg	Pg	05 00 34.3	-0.4
OKCFA	Oklahoma City	1.37	144	Pn	Pn	05 00 36.4	-0.5
OKCSW	OKLAHOMA CITY	1.38	144	Pn	Pn	05 00 36.7	-0.4
FNO	Franklin	1.52	146		Pn	05 00 39.0	0.0
T35A	Sooner Cattle	1.60	75		Pn	05 00 40.4	+0.3
WMOK	Wichita Mounta	1.80	189		Pn	05 00 43.0	+0.1
R32A	Long Quarter,	1.91	354	IAmb_Lg		05 01 11.2	
	comp=Z,8.5nm,0.8s						
TUL1	Leonard	2.23	105		Pn	05 00 49.0	+0.3
KSU1	Kansas State U	2.96	29	IAmb_Lg		05 01 49.7	
	comp=Z,5.0nm,0.7s						
AMTX	Amarillo	3.10	239	IAmb_Lg		05 01 49.4	
	comp=Z,6.4nm,0.8s						
Z35A	Perchaven, San	3.33	163	Pn	Pn	05 01 02.9	-1.0
HHAR	Hobbs	3.64	92		Pn	05 01 08.3	+0.1
HHAR				IAmb_Lg		05 02 14.4	
	comp=Z,4.1nm,0.7s						
U40A	Yellville	4.51	90		Pn	05 01 21.0	+0.9
P38A	Dawn	4.96	50	IAmb_Lg		05 03 00.7	
	comp=Z,4.0nm,1.0s						

IDC 01 05:02:22.4±2.1, **31.°09S**×**177.°50W**, **h205**^{km}±14^{km}, **mb3.1**/2, **mbtmp3.8**/4, **Error ellipse: s-maj=39.1km s-min=23.2km az=131.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.86	349	P	Pn	05 03 00.4	+0.4
	1μm,0.3s,baz=107,slow=7.1,SNR=29						
RAO				S	S	05 03 22.0	-6.8
	349nm,0.2s,baz=95,slow=21,SNR=1.9						
URZ	Urewera	8.42	210	P	Pn	05 04 19.8	-1.2
	2.0nm,0.4s,baz=125,slow=22,SNR=7.0						
DZM	Mont Dzumac	16.92	298	P	P	05 06 05.3	-1.1
	3.7nm,0.5s,baz=168,slow=5.5,SNR=7.4						
ASAR	Alice Springs	43.51	267	P	P	05 10 07.0	+1.1
	0.4nm,0.5s,baz=100,slow=7.0,SNR=8.3						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.56	273	P	P	05 10 13.7	-0.6
	0.7nm,0.5s,baz=109,slow=7.9,SNR=27						
	0.7nm,0.5s						
FINES	FINESS Array B	145.94	340	PKPbc	PKPdf	05 21 36.5	+0.5
	1.1nm,0.5s,baz=60,slow=4.5,SNR=18						
NOA	NORSAR Array B	149.49	352	PKPbc	PKPbc	05 21 46.6	0.0
	0.7nm,0.9s,baz=21,slow=2.9,SNR=1.5						
AKASG	Malin Array Be	152.10	322	PKPbc	PKPbc	05 21 51.6	-1.4
	0.4nm,0.2s,baz=36,slow=5.5,SNR=4.2						

TAP 01 05:25:37.7, 24.°21N×121.°77E, h17^{km}, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	344	*e*S	Sg	05 25 42.7	-1.0
	baz=346						
ETL	Fush Village	0.15	248	*e*P	Pb	05 25 42.5	+0.5
	baz=250						
ETL				S	Sb	05 25 45.0	+0.2
	baz=250						
NACB	Ninganchiao	0.17	256	P	Pg	05 25 42.1	0.0
	baz=258						
NACB				S	Sb	05 25 45.2	-0.1
	baz=258						
TWD	Chiawan	0.21	230	P	Pg	05 25 42.7	0.0
	baz=237						
TWD				*i* S	Sb	05 25 46.7	+0.1
	baz=237						
ENA	Nanau	0.21	352	*i* P	Pg	05 25 43.0	+0.1
	baz=350						
ENA				*i* S	Sb	05 25 46.8	0.0
	baz=350						
EWUT	Wuta	0.23	1	*i* P	Pg	05 25 43.2	+0.1
	baz=357						
EWUT				S	Sb	05 25 47.1	-0.1
	baz=357						
ETLH	Xiulin Townshi	0.27	269	P	Pb	05 25 44.0	-0.1
	baz=269						
ETLH				*i* S	Sb	05 25 48.8	+0.5
	baz=269						
LATG	Datong	0.39	325	P	Pb	05 25 46.8	+0.5
	baz=323						
LATG				S	Sb	05 25 53.0	+1.0
	baz=323						
NNSB	Datong	0.41	301	*e*P	Pb	05 25 47.0	+0.4
	baz=300						
NNSB				*e*S	Sb	05 25 53.5	+0.8
	baz=300						
YOJ	Yonaguni jima	1.16	77	*e*P	Pb	05 25 59.5	+0.3
	baz=67						

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*IDC **01** 05:25:43.4±0.9, 24.°17N×122.°14E, h0^{km}, mb3.7/13, mbtmp3.7/13, MS3.5/17, Error ellipse: s-maj=29.2km s-min=20.7km az=70.0*
*JMA **01** 05:25:46.6±0.1, 24.°1N±0.°8×121.°7E±0.°8, h32^{km}, MV3.9/11, TAIWAN REGION*
*NIED **01** 05:25:46.6, 24.°08N×121.°69E, h32^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.18; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$0.55; $M_{r\theta}$1.17; $M_{\theta\phi}$0.55; $M_{\phi r}$-0.97; Fault plane solution: $M_0$1.59000×10^{15} NP1: ϕ_s233.00000°, δ21.00000°, λ1.00000°. NP2:ϕ_s142.00000°, δ90.00000°, λ111.00000°.*
*ASIES **01** 05:25:47.7, 24.°27N×121.°81E, h17^{km}, MW4.0*
*TAP **01** 05:25:47.5, 24.°23N×121.°83E, h13^{km}, ML4.5, B*
*BJI **01** 05:25:47.0±0.0, 24.°19N×121.°87E, h9^{km}, mb4.3/11, mB4.4/7, ML3.9/7, Ms4.0/11, Ms7 3.9/10*
ISC 01 05:25:47.0±0.8, **24.°20N**±0.°01×**121.°85E**±0.°02, **h13**^{km}±5^{km}, **n180**, σ**1.^{s}19**/265, **mb3.6**/13, **MS3.5**/15, **8C-32D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.14	317	⇓*i*P	Pg	05 25 50.6	0.0
	baz=314						
EHP				*i* S	Sg	05 25 53.1	0.0
	baz=314						
ETL	Fush Village	0.21	258	*i* P	Pb	05 25 52.1	-0.7
	baz=248						
ETL				S	Sb	05 25 56.0	-0.6
	baz=248						
NACB	Ninganchiao	0.23	263	⇑*i*P	Pb	05 25 52.3	-0.8
	baz=255						
NACB				*i* S	Sb	05 25 56.4	-0.8
	baz=255						
ENA	Nanau	0.24	336	⇓*i*P	Pg	05 25 52.2	0.0
	baz=339						
ENA				*i* S	Sg	05 25 55.5	-0.3
	baz=339						
EWUT	Wuta	0.25	345	⇓*i*P	Pg	05 25 52.3	0.0
	baz=347						
EWUT				*i* S	Sg	05 25 55.6	-0.3
	baz=347						
TWD	Chiawan	0.26	242	*i* P	Pb	05 25 53.0	-0.6
	baz=234						
TWD				*e*S	Sb	05 25 57.8	-0.3
	baz=234						
HWA	Hwalien	0.32	225	*i* P	Pb	05 25 55.6	+1.0
	baz=218						
HWA				*e*S	Sn	05 26 03.0	-0.8
	baz=218						
ETLH	Xiulin Townshi	0.34	271	⇓*i*P	Pb	05 25 54.2	-0.7
	baz=265						
ETLH				*e*S	Sb	05 25 59.2	-1.1
	baz=265						
ETM	Tongmen	0.40	234	*i* P	Pb	05 25 56.0	0.0
	baz=229						
ETM				*e*S	Sb	05 26 02.5	+0.4
	baz=229						
TWC	Suao	0.40	360	⇓*i*P	Pg	05 25 55.2	+0.1
	baz=4.0						
TWC				*i* S	Sg	05 26 00.7	+0.1
	baz=4.0						
TEYL	Yanliau Villag	0.41	215	P	Pb	05 25 57.0	+0.9
	baz=213						
TEYL				*e*S	Sn	05 26 05.4	-0.6
	baz=213						
LATG	Datong	0.44	318	⇓*i*P	Pg	05 25 56.0	+0.1
	baz=317						
LATG				S	Sg	05 26 01.8	0.0
	baz=317						
NDS	Dongshan	0.44	344	⇓*i*P	Pg	05 25 56.0	+0.1
	baz=345						
NDS				*i* S	Sg	05 26 01.6	-0.2
	baz=345						
NNSB	Datong	0.48	298	⇓*i*P	Pg	05 25 56.8	+0.3
	baz=295						
NNSB				*e*S	Sg	05 26 03.2	+0.1
	baz=295						
NNS	Nan Shan	0.49	298	*e*P	Pg	05 25 57.0	+0.2
	baz=296						
NNS				*e*S	Sg	05 26 03.5	0.0
	baz=296						
NDT	Datong Townshi	0.50	322	⇓*i*P	Pg	05 25 57.3	+0.3
	baz=322						
NDT				S	Sg	05 26 03.9	+0.3
	baz=322						
ENTT	Nioudou	0.51	329	⇓*i*P	Pg	05 25 57.2	+0.3
	baz=330						
ENTT				*i* S	Sg	05 26 03.9	+0.1
	baz=330						
WHF	Hehuan Shan	0.54	264	⇓*i*P	Pb	05 25 58.2	-0.4
	baz=260						
WHF				*e*S	Sb	05 26 05.9	-0.4
	baz=260						
TWE	Neicheng	0.54	342	⇓*i*P	Pg	05 25 57.9	+0.2
	baz=344						
TWE				S	Sg	05 26 04.9	+0.1
	baz=344						
ESL	Shilin	0.54	224	*i* P	Pb	05 25 58.9	+0.5
	baz=220						
ESL				*e*S	Sn	05 26 08.1	-1.4
	baz=220						
FUSS	Fushou	0.55	275	⇓*i*P	Pg	05 25 57.5	-0.5
	baz=271						
FUSS				*i* S	Sg	05 26 05.3	-0.1
	baz=271						
ILA	Ilan	0.57	351	⇓P	Pg	05 25 58.6	+0.5
	baz=353						

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ILA                               eS    Sg      05 26 06.3 +0.6
      baz=353
TEGC  Jichi Village     0.57 210  eP    Pn      05 26 00.3 -0.5
      baz=206
FUSB  Fushanzhiwuyua    0.60 337⇓iP     Pg      05 25 59.2 +0.4
      baz=337
FUSB                               S    Sg      05 26 06.8 -0.1
      baz=337
TWT   Tachien           0.62 275  eP    Pb      05 26 00.3 +0.6
      baz=271
TWT                               eS    Sb      05 26 08.1 -0.4
      baz=271
CHGB  Renai             0.63 257  eP    Pb      05 26 00.2 +0.1
      baz=254
CHGB                              eS    Sb      05 26 08.4 -0.5
      baz=254
TDCB  Techi             0.63 275⇓eP     Pb      05 26 00.2 +0.1
      baz=272
TDCB                              eS    Sb      05 26 08.3 -0.6
      baz=272
YHNB  Yeheng            0.63 317⇓iP     Pb      05 25 59.8 -0.2
      baz=316
YHNB                              eS    Sg      05 26 07.8 -0.1
      baz=316
EGS                     0.64   7   P    Pg      05 25 59.9 +0.3
      baz=10.0
EGS                               eS    Sg      05 26 08.4 +0.3
      baz=10.0
NTC   Toucheng          0.65 358⇓iP     Pg      05 25 59.8 +0.1
      baz=360
NTC                               eS    Sg      05 26 07.8 -0.5
      baz=360
NSK   Sanguang          0.65 316  i P   Pb      05 26 00.1 -0.2
      baz=316
NSK                               eS    Sg      05 26 07.9 -0.4
      baz=316
NWLT  Wulai             0.65 331  i P   Pg      05 25 59.9 +0.2
      baz=331
NWLT                              eS    Sg      05 26 07.8 -0.6
      baz=331
EGFH  Guangfu           0.66 216 ⇓P     Pb      05 26 00.8 +0.5
      baz=213
EGFH                              eS    Sn      05 26 11.8 -0.5
      baz=213
OWD   Renai             0.66 248  eP    Pb      05 26 00.6  0.0
      baz=245
OWD                               eS    Sn      05 26 10.9 -1.7
      baz=245
WUSB  Renai             0.70 253 ⇓P     Pb      05 26 01.5 +0.3
      baz=250
WUSB                              eS    Sn      05 26 11.8 -1.7
      baz=250
TIPB  Shuangxi          0.77 358⇓iP     Pg      05 26 02.0 +0.1
      baz=360
TIPB                              eS    Sg      05 26 11.7 -0.2
      baz=360
VWDT  VWDT              0.79 235  eP    Pn      05 26 03.3 -0.5
      baz=233
VWDT                              eS    Sn      05 26 16.0 +0.6
      baz=233
NFF   Wufeng Townshi    0.79 303 ⇑P     Pb      05 26 02.9 +0.2
      baz=301
NFF                               eS    Sg      05 26 12.4 -0.4
      baz=301
HGSD  Ruisui            0.81 209⇓eP     Pn      05 26 03.9 -0.3
      baz=207
HGSD                              eS    Sn      05 26 22.2 +6.2
      baz=207
TWA   Mucha             0.81 343  eP    Pb      05 26 03.1 +0.1
      baz=344
TWA                               eS    Sg      05 26 13.2 -0.2
      baz=344
NHDH  Xindian Distri    0.81 339  eP    Pb      05 26 03.1 +0.1
      baz=339
NHDH                              eS    Sg      05 26 13.1 -0.3
      baz=339
TWB1  Santiao Chiao     0.81   9⇓iP     Pg      05 26 02.7 -0.1
      baz=11
TWB1                              eS    Sg      05 26 12.8 -0.6
      baz=11
WHP   Taichung City     0.83 275  eP    Pn      05 26 03.9 -0.6
      baz=273
WHP                               eS    Sb      05 26 14.6 +0.2
      baz=273
TATO  Taipei            0.83 337⇑eP     Pb      05 26 03.5 +0.1
      baz=338
TATO                              eS    Sg      05 26 13.9 -0.2
      baz=338
WPL   Puli Township     0.84 257  eP    Pn      05 26 03.8 -0.7
      baz=255
WPL                               eS    Sb      05 26 15.2 +0.6
      baz=255
EHY   Hungye            0.85 215  eP    Pb      05 26 03.4 -0.2
      baz=212
DPDB  Guoxing           0.86 259   P    Pn      05 26 04.6 -0.3
      baz=256
DPDB                              eS    Sb      05 26 15.7 +0.4
      baz=256
NWF   Wu-fen Shan       0.86 356 ⇓P     Pb      05 26 04.3 +0.3
      baz=357
NWF                               eS    Sg      05 26 15.3 +0.2
      baz=357
WFSB  Wu-fen Shan       0.86 356 ⇓P     Pb      05 26 04.3 +0.3
      baz=357
WFSB                              eS    Sg      05 26 15.3 +0.2
      baz=357
WCS   Beigang Elemen    0.87 260⇓eP     Pn      05 26 04.7 -0.3
      baz=258
WCS                               eS    Sb      05 26 15.7 +0.1
      baz=258
NHY   Taipei            0.87 343  eP    Pn      05 26 04.8 -0.2
      baz=343
NHY                               eS    Sb      05 26 15.8 +0.3
      baz=343
NJD   Zhudong           0.87 308  eP    Pn      05 26 05.3 +0.2
      baz=306
BACT  New Taipei Cit    0.87 335  eP    Pn      05 26 05.9 +0.9
      baz=335
LIOB  Emei              0.88 300 ⇑P     Pn      05 26 04.9 -0.2
      baz=299
LIOB                              eS    Sb      05 26 16.4 +0.6
      baz=299
NSTT  Nanjuang          0.88 299 ⇑P     Pn      05 26 04.8 -0.4
      baz=298
NSTT                              eS    Sb      05 26 16.1 +0.2
      baz=298
TAP1  Taipei            0.88 340  eP    Pn      05 26 05.2  0.0
      baz=340
TAP1                              eS    Sg      05 26 15.7 +0.1
      baz=340
SXI1  Grass Mountain    0.89   2⇓iP     Pg      05 26 04.5 +0.3
      baz=3.0
SXI1                              eS    Sg      05 26 14.5 -1.3
      baz=3.0
TAP   Taipei            0.89 339  eP    Pn      05 26 05.2 -0.1
      baz=340
TAP                               eS    Sb      05 26 16.3 +0.3
      baz=340
SSLB  Suanglung         0.92 243  eP    Pn      05 26 05.3 -0.4
      baz=241
SSLB                              eS    Sn      05 26 18.1 -0.7
      baz=241
SMLT  Sun Moon Lake     0.93 250  eP    Pn      05 26 05.6 -0.3
      baz=247
SMLT                              eS    Sn      05 26 18.4 -0.6
      baz=247
NTY   Taoyuan           0.94 328  eP    Pn      05 26 06.8 +0.9
      baz=327
NTY                               eS    Sn      05 26 18.8 -0.4
      baz=327
TNOU  National Taiwa    0.94 356⇓eP     Pg      05 26 05.7 +0.4
      baz=357
TNOU                              eS    Sg      05 26 17.2 -0.5
      baz=357
HSN1  Hsinchu           0.95 307  eP    Pn      05 26 06.8 +0.8
      baz=306
YULB  Yu-li             0.95 212  eP    Pg      05 26 04.9 -0.6
      baz=210
TYC   Yuchr             0.95 252  eP    Pn      05 26 06.4 +0.3
      baz=250
ECBN  Changbin          0.96 202  eP    Pn      05 26 06.5 +0.4
      baz=201
NCU   National Centr    0.97 322  eP    Pn      05 26 06.8 +0.4
      baz=322
NCU                               eS    Sg      05 26 18.5  0.0
      baz=322
NCUH  Zhongli           0.97 322⇑eP     Pn      05 26 06.8 +0.4
      baz=321
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NCUH                              eS    Sn      05 26 19.9 -0.1
      baz=321
YM01  YM01              0.97 345  eP    Pg      05 26 06.3 +0.4
      baz=345
YM01                              eS    Sg      05 26 18.4 -0.1
      baz=345
TWS1  Kuangyinshan      0.97 336  eP    Pn      05 26 06.7 +0.3
      baz=337
TWS1                              eS    Sb      05 26 19.2 +0.6
      baz=337
SBCB  Hsinchu           0.98 307  eP    Pn      05 26 07.1 +0.6
      baz=306
SBCB                              eS    Sn      05 26 20.3 +0.1
      baz=306
EYUL  Yuli              0.98 210  eP    Pn      05 26 06.1 -0.4
      baz=208
TWF1  Yuli              0.99 211  eP    Pb      05 26 05.5 -0.5
      baz=209
TWQ1  Liyutan           0.99 279  eP    Pn      05 26 07.6 +0.9
      baz=277
HSN   Hsinchu           1.00 307  eP    Pn      05 26 07.3 +0.6
      baz=308
HSN                               eS    Sn      05 26 23.0 +2.3
      baz=308
YM08  YM08              1.01 347  eP    Pb      05 26 06.6 +0.2
      baz=347
NWRT  Kuosheng          1.01 350  eP    Pb      05 26 06.5 +0.2
      baz=351
NJN   Zhunan            1.01 298  eP    Pn      05 26 08.0 +1.1
      baz=297
NSY   Sanyi             1.01 282  eP    Pn      05 26 08.1 +1.1
      baz=281
NSY                               eS    Sn      05 26 22.1 +0.9
      baz=281
NMLH  Miaoli            1.02 289  eP    Pn      05 26 08.2 +1.1
      baz=288
NMLH                              eS    Sn      05 26 21.4 +0.2
      baz=288
ANP   Anpu              1.02 343  eP    Pn      05 26 07.4 +0.2
      baz=344
ANP                               eS    Sb      05 26 20.0 -0.1
      baz=344
NTST  Danshui           1.02 339  eP    Pn      05 26 07.6 +0.5
      baz=339
NTST                              eS    Sn      05 26 21.8 +0.5
      baz=339
JYNG  Yonagunijimaku    1.03  76   P    Pn      05 26 07.5 +0.4
JYNG                               S    Sn      05 26 23.3 +1.8
WWF   Wufeng            1.06 262  eP    Pn      05 26 09.9 +2.3
      baz=260
TCU   Taichung          1.07 267  eP    Pn      05 26 09.8 +2.0
      baz=265
TCU                               eS    Sn      05 26 26.4 +3.9
      baz=265
NHW   Xinwu Township    1.08 318  eP    Pn      05 26 08.6 +0.7
      baz=317
YUS   Yu-Shan           1.09 229  eP    Pn      05 26 08.6 +0.2
      baz=227
YOJ   Yonaguni jima     1.09  76 ⇓P     Pn      05 26 08.3 +0.3
      baz=78
YOJ                               eS    Sn      05 26 25.6 +2.7
      baz=78
YOJ   Yonaguni jima     1.09  76   P    Pg      05 26 08.7 +0.7
YOJ                               eS    Sn      05 26 25.3 +2.4
TWY   Chenhua           1.09 348  eP    Pg      05 26 08.7 +0.7
      baz=349
WJS   Zhushan           1.09 250⇓eP     Pn      05 26 09.6 +1.5
      baz=248
WJS                               eS    Sn      05 26 26.1 +3.1
      baz=248
WDJ   Dajia District    1.11 278  eP    Pg      05 26 10.3 +1.8
      baz=276
WDJ                               eS    Sn      05 26 26.8 +3.3
      baz=276
WNT   Mingjian          1.11 253  eP    Pg      05 26 10.1 +1.6
      baz=251
WNT                               eS    Sn      05 26 27.4 +3.9
      baz=251
FULB  Fuli              1.12 207  eP    Pg      05 26 08.5 -0.2
      baz=206
FULB                              eS    Sn      05 26 26.0 +2.2
      baz=206
ALS   Alishan           1.18 234⇓eP     Pg      05 26 10.3 +0.5
      baz=232
ALS                               eS    Sn      05 26 27.2 +1.6
      baz=232
WYL   Yuanlin Townsh    1.19 258  eP    Pg      05 26 11.0 +1.1
      baz=257
CHKT  Chengkung         1.19 202  eP    Pg      05 26 09.6 -0.3
      baz=200
WCHH  Zhanghua          1.19 264  eP    Pg      05 26 11.3 +1.4
      baz=262
WCHH                              eS    Sn      05 26 28.4 +3.1
      baz=262
CHN5  Tsauling          1.23 241  eP    Pg      05 26 11.4 +0.7
      baz=239
CHN5                              eS    Sn      05 26 30.7 +4.1
      baz=239
ELDTW Lidau             1.27 217  eP    Pn      05 26 09.6 -0.9
      baz=215
WGK   Gukeng            1.29 247  eP    Pg      05 26 12.8 +1.1
      baz=245
WGK                               eS    Sg      05 26 32.6 +4.1
      baz=245
WDLH  Douliu            1.30 247  eP    Pg      05 26 12.9 +0.8
      baz=245
WDLH                              eS    Sg      05 26 32.8 +3.7
      baz=245
EDH   Donghe            1.32 202  eP    Pn      05 26 11.0 -0.2
      baz=201
WRL   Guolierlin Hig    1.38 258  eP    Pg      05 26 14.1 +0.5
      baz=256
WRL                               eS    Sg      05 26 33.4 +1.9
      baz=256
STYH  Taoyuan           1.42 224  eP    Pg      05 26 13.5 -0.9
      baz=223
STYH                              eS    Sg      05 26 32.9  0.0
      baz=223
CHN2  Minshiung         1.43 242  eP    Pb      05 26 13.4  0.0
      baz=241
CHN4  Tsaushan          1.43 234  eP    Pg      05 26 14.6  0.0
      baz=232
CHN4                              eS    Sg      05 26 34.1 +1.0
      baz=232
WTK   Tuku              1.43 249  eP    Pg      05 26 14.4 -0.1
      baz=248
WTK                               eS    Sg      05 26 35.5 +2.3
      baz=248
TPUB  Ta-pu             1.43 231  eP    Pg      05 26 14.3 -0.3
      baz=230
STYT  Tauyuan           1.44 224  eP    Pg      05 26 14.0 -0.7
      baz=222
LONT  Longtian          1.45 207  eP    Pn      05 26 12.5 -0.5
      baz=206
WTP   Ta-pu             1.48 230⇓eP     Pg      05 26 15.2 -0.3
      baz=228
WTP                               eS    Sg      05 26 36.5 +1.8
      baz=228
CHY   Chiayi            1.48 242  eP    Pg      05 26 15.9 +0.4
      baz=240
TWGBT Beinan            1.55 207  eP    Pn      05 26 13.4 -1.0
      baz=206
TWG   Pinlang           1.55 208  eP    Pn      05 26 13.4 -1.0
      baz=206
TWK   Hsinying          1.56 233  eP    Pg      05 26 16.8 -0.2
      baz=232
LDUT  Ludao             1.56 193  eP    Pn      05 26 14.0 -0.5
      baz=192
CHN1  Nanshi            1.58 230  eP    Pg      05 26 16.6 -0.8
      baz=229
SNST  Tainan City       1.58 232  eP    Pg      05 26 17.3 -0.1
      baz=230
TTN   Taitung           1.58 204  eP    Pg      05 26 16.6 -0.8
      baz=203
WSF   Szhu              1.59 250  eP    Pg      05 26 17.3 -0.4
      baz=248
SGST  Jiashian          1.61 226  eP    Pb      05 26 16.4 -0.3
      baz=225
WSL   Shuilin Townsh    1.63 246  eP    Pg      05 26 17.6 -0.7
      baz=244
ICHU  Yijhu             1.67 240  eP    Pg      05 26 18.1 -0.9
      baz=239
IRIF  Iriomote-Funau    1.72  85   P    Pn      05 26 17.9 +1.2
IRIF                              eS    Sb      05 26 41.4 +1.3
HATJ  Hateruma jima     1.79  94  eS    Sn      05 26 41.4 +1.1
ECL   Taimali           1.80 207  eP    Pb      05 26 18.6 -1.2
      baz=206
SCST  Cishan            1.81 224  eP    Pg      05 26 20.7 -1.0
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      baz=222
SHHT  Tainan City       1.81 230  eP    Pg      05 26 21.3 -0.5
      baz=228
SSD   Sandimen          1.83 218  eP    Pb      05 26 20.2 -0.2
      baz=216
TSMG  Majia             1.86 217  eP    Pb      05 26 21.0 +0.2
      baz=216
TWM1  Shoushan          1.90 224⇑eP     Pg      05 26 23.1 -0.4
      baz=222
MASBT Mashibuluo        1.94 215  eP    Pb      05 26 21.2 -1.0
      baz=214
JKRS  Kuro-shima        1.97  89   P    Pb      05 26 21.9 -0.9
JKRS                              eS    Sb      05 26 48.1 +0.8
EAST  Anshuo            2.03 207  eP    Pn      05 26 21.3 +0.3
      baz=206
TAWH  Dawu Township     2.06 206  eP    Pb      05 26 24.2  0.0
      baz=205
JIJ   Ishigaki jima     2.10  85   P    Pn      05 26 23.1 +1.3
JIJ                                S    Sn      05 26 49.5 +1.6
PNG   Penghu            2.19 254  eP    Pb      05 26 24.8 -1.7
      baz=252
PHUB  P'eng-hu          2.19 252  eP    Pn      05 26 24.4 +1.2
      baz=251
SLIU  Shizi             2.20 206  eP    Pb      05 26 26.3 -0.4
      baz=205
WDGT  Dungji            2.21 245  eP    Pb      05 26 25.4 -1.6
      baz=244
JISG  Ishigakijimahi    2.28  80   P    Pn      05 26 25.9 +1.6
JISG                              eS    Sb      05 26 54.9 -1.2
VWUC  VWUC              2.32 290  eP    Pn      05 26 25.3 +0.4
      baz=289
VWUC                              eS    Sn      05 26 53.2 -0.1
      baz=289
MATB  Ma-tsu            2.59 319  eP    Pn      05 26 28.7  0.0
      baz=318
MATB                              eS    Sn      05 26 59.5 -0.6
      baz=318
PTMZ  Houxiangcun       2.62 289  eP    Pn      05 26 27.3 -1.8
      baz=288
PTMZ                              eS    Sn      05 26 58.4 -2.3
      baz=288
JTJ   Tarama            2.64  80  eP    Pn      05 26 31.2 +1.9
QZH   Quanzhou          3.06 285⇑iPn    Pn      05 26 35.8 +0.8
QZH                               Sn    Sn      05 27 11.0 -0.5
QZH                               smax  smax
      comp=N,200nm,0.6s
QZH                               smax  smax
      comp=E,150nm,0.5s
QZH                               LR    LR
      comp=Z,620nm,11.0s
MHZQ  Yeshan            3.18 307  eP    Pn      05 26 36.5 -0.2
      baz=306
SSE   Sheshan           6.89 355   P    Pn      05 27 28.1 +0.4
SSE                               pmax  pmax
      comp=Z,23nm,0.5s
SSE                               pmax  pmax
      comp=Z,51nm,4.5s
SSE                               LR    LR
      comp=N,320nm,10.7s
SSE                               LR    LR
      comp=E,170nm,11.1s
NJ2   Nanjing           8.25 342  eP    Pn      05 27 45.8 -0.6
NJ2                               S     Sn      05 29 21.2 +1.7
NJ2                               pmax  pmax
      comp=Z,29nm,0.8s
NJ2                               smax  smax
      comp=N,58nm,0.8s
NJ2                               smax  smax
      comp=E,59nm,0.8s
NJ2                               LR    LR
      comp=N,690nm,11.3s
NJ2                               LR    LR
      comp=E,360nm,12.8s
NJ2                               LR    LR
      comp=Z,800nm,11.2s
WHN   Wuhan             9.18 315  P     Pn      05 28 01.6 +2.4
WHN                               S     Sn      05 29 45.1 +2.8
WHN                               LR    LR
      comp=N,1µm,8.0s
WHN                               LR    LR
      comp=E,1µm,9.6s
WHN                               LR    LR
      comp=Z,2µm,10.7s
KSRS  Korea Array      14.20  20  Pn    Pn      05 29 08.2 +0.5
      0.1nm,0.3s,baz=200,slow=12,SNR=1.8
KSRS                              LR    LR      05 35 27.3
      comp=Z,101nm,18.3s,baz=200,slow=41
XAN   Xi'an            14.94 314  P     P       05 29 26.5 +2.9
XAN                               pP    Pn      05 29 30.6  +13
XAN                               pmax  pmax
      comp=Z,4.0nm,1.2s
XAN                               LR    LR
      comp=N,220nm,9.0s
XAN                               LR    LR
      comp=E,380nm,10.1s
XAN                               LR    LR
      comp=Z,530nm,11.5s
CD2   Chengdu          17.37 297  P     P       05 29 52.5 +2.0
CD2                               LR    LR
      comp=Z,310nm,7.8s
CD2                               LR    LR
      comp=Z,270nm,10.8s
MJAR  Matsushiro Arr   18.69  45  LR    LR      05 38 22.0
      comp=Z,66nm,19.2s,baz=184,slow=41
CN2   Changchun        19.77   8  eP    Pn      05 30 20.0 +1.7
CN2                               pmax  pmax
      comp=Z,10.0nm,0.6s
CN2                               LR    LR
      comp=Z,300nm,13.0s
CN2                               LR    LR
      comp=Z,200nm,13.0s
CN2                               LR    LR
      comp=Z,400nm,13.0s
CMAR  Chiang Mai Arr   22.08 259  P     P       05 30 43.6 +1.6
      comp=Z,1.0nm,0.4s,baz=68,slow=9.8,SNR=1.8
CMAR                              LR    LR      05 40 32.2
      comp=Z,35nm,18.1s,baz=155,slow=40
      comp=Z,1.0nm,0.4s
ASAJ  Asahikawa        26.12  35  LR    LR      05 42 16.9
      comp=Z,117nm,18.7s,baz=161,slow=38
KLR   Kul'dur          26.16  15  P     P       05 31 19.6 -1.4
      comp=Z,0.3nm,0.2s,baz=354,slow=21,SNR=3.2
KLR                               LR    LR      05 42 35.7
      comp=Z,96nm,19.4s,baz=226,slow=39
      comp=Z,0.3nm,0.2s
SONM  Songino Array    26.59 336  P     P       05 31 25.0  0.0
      comp=Z,3.9nm,1.0s,baz=147,slow=8.1,SNR=2.7
SONM                              LR    LR      05 43 17.0
      comp=Z,159nm,18.6s,baz=82,slow=39
      comp=Z,3.9nm,1.0s
WMQ   Urumqi           34.08 314  eP    P       05 32 34.7 +3.4
YAK   Yakutsk          38.19   6  LR    LR      05 50 35.6
      comp=Z,61nm,19.2s,baz=265,slow=39
MKAR  Makanchi Array   38.75 316  P     P       05 33 10.8 -0.3
      comp=Z,0.4nm,0.6s,baz=104,slow=8.9,SNR=13
      comp=Z,0.4nm,0.6s
ZALV  Zalesovo Beam    40.56 327  P     P       05 33 26.2 +0.2
      comp=Z,0.9nm,0.5s,baz=119,slow=8.9,SNR=1.9
ZALV                              LR    LR      05 51 35.6
      comp=Z,44nm,21.5s,baz=66,slow=38
      comp=Z,0.9nm,0.5s
MA2   Magadan          40.74  22  LR    LR      05 51 02.0
      comp=Z,64nm,18.5s,baz=218,slow=37
KURBB Kurchatov Arra   42.48 320  P     P       05 33 42.2 +0.4
      comp=Z,1.2nm,1.1s,baz=110,slow=9.2,SNR=3.3
      comp=Z,1.2nm,1.1s
AAK   Ala-Archa        42.98 307  LR    LR      05 54 31.3
      comp=Z,50nm,18.2s,baz=108,slow=40
WRA   Warramunga Arr   45.54 163  P     P       05 34 03.9 -2.7
      comp=Z,0.5nm,0.7s,baz=343,slow=8.4,SNR=2.4
      comp=Z,0.5nm,0.7s
ASAR  Alice Springs    49.00 165  P     P       05 34 31.5 -2.1
      comp=Z,0.6nm,0.9s,baz=348,slow=8.5,SNR=1.9
      comp=Z,0.6nm,0.9s
CTA   Charters Tower   50.03 150  LR    LR      05 57 23.0
      comp=Z,36nm,18.1s,baz=60,slow=38
ARU   Arti             55.46 323  LR    LR      06 02 38.7
      comp=Z,34nm,19.4s,baz=113,slow=40
KIRV  Kirov            60.55 325  LR    LR      06 03 53.7
      comp=Z,42nm,19.7s,baz=58,slow=38
ILAR  Eielson Array    68.92  27  P     P       05 36 49.2 -2.1
      comp=Z,0.1nm,0.5s,baz=292,slow=7.4,SNR=1.5
      comp=Z,0.1nm,0.5s
SPITS Spitsbergen Ar   69.59 348  LR    LR      06 11 14.5
      comp=Z,21nm,18.6s,baz=194,slow=39
FINES FINESS Array B   71.73 330  P     P       05 37 08.4 -0.2
      comp=Z,0.7nm,0.7s,baz=46,slow=5.9,SNR=8.6
      comp=Z,0.7nm,0.7s
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BRTR	Keskin Array B	73.65	307	P	P	05 37 19.6	-1.1
	comp=Z,0.5nm,0.7s,baz=140,slow=6.4,SNR=5.3						
	comp=Z,0.5nm,0.7s						
HFS	Hagfors	77.84	331	LR	LR	06 15 54.3	
	comp=Z,56nm,18.0s,baz=40,slow=39						
NOA	NORSAR Array B	78.49	332	P	P	05 37 46.6	-1.1
	comp=Z,0.4nm,0.8s,baz=63,slow=5.4,SNR=2.0						
NOA				LR	LR	06 15 43.1	
	comp=Z,32nm,20.5s,baz=355,slow=38						
	comp=Z,0.4nm,0.8s						
RAO	Raoul Island	78.58	129	LR	LR	06 05 26.6	
	comp=Z,76nm,20.4s,baz=128,slow=30						
YKA	Yellowknife Ar	82.71	23	P	P	05 38 08.3	-2.0
	comp=Z,0.5nm,0.8s,baz=307,slow=4.8,SNR=6.2						
	comp=Z,0.5nm,0.8s						

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*IDC **01** 05:27:40.1±1.3,2°.39S×139°.58E,h0^{km},mb3.6/5, mbtmp3.6/6,ML4.1/2,Error ellipse: s-maj=34.0km s-min=23.9km az=97.0*

*DJA **01** 05:27:43.0±1.2,2°S±13°×13°9E±°,h38^{km}±17^{km},M4.0/4, MLv4.0/4*

ISC 01 05:27:40.4±2.2,1°.6S±0°.2×139°.3E±0°.1,h35^{km},n12, σ2^{s}.63/9,mb3.8/5,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.76	237	P	Pn	05 27 56.1	+1.5
GENI	Genyem	1.31	141	P	Pn	05 28 02.9	+0.7
GENI				S	Sn	05 28 21.5	+3.0
WAMI	Wamena	2.39	195	P	Pn	05 28 18.3	+1.3
SRPI	Serui, Papua	3.12	264	P	Pn	05 28 28.6	+1.5
BAKI	Biak	3.26	277	P	Pn	05 28 30.3	+1.3
KRVT	Keravat (AS076	12.95	102	Pn	Pn	05 30 38.3	-3.8
	7.6nm,0.3s,baz=295,slow=2.6,SNR=4.5						
WRA	Warramunga Arr	18.91	195	P	P	05 31 54.5	-3.7
	0.3nm,0.3s,baz=15,slow=12,SNR=5.0						
	0.8nm,0.5s						
FITZ	Fitzroy Crossi	21.23	218	P	P	05 32 22.3	-1.2
	0.8nm,0.8s,baz=39,slow=13,SNR=2.4						
	0.8nm,0.8s						
ASAR	Alice Springs	22.59	193	P	P	05 32 35.0	-3.1
	0.6nm,0.4s,baz=18,slow=11,SNR=13						
	0.6nm,0.4s						
CMAR	Chiang Mai Arr	44.44	299	P	P	05 35 57.0	+8.6
	0.7nm,0.3s,baz=96,slow=6.4,SNR=4.3						
	0.7nm,0.3s						
MKAR	Makanchi Array	69.28	322	P	P	05 38 54.6	+10
	0.6nm,0.7s,baz=118,slow=7.8,SNR=4.2						
	0.6nm,0.7s						
ILAR	Eielson Array	84.54	24	P	P	05 40 18.6	+8.9
	0.6nm,0.9s,baz=246,slow=5.8,SNR=4.9						
	0.6nm,0.9s						

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*NEIC **01** 05:37:39.7±0.7,37°.21N±0°.04×97°.89W±0°.02,h5^{km}±2^{km}, Error ellipse: s-maj=6.6km s-min=3.4km az=174.0*

*ANF **01** 05:37:39.4±0.2,37°.22N×97°.90W,h4^{km},ML4.1/17,Error ellipse: s-maj=3.3km s-min=2.4km az=58.0*

ISC 01 05:37:38.9±0.6,37°.20N±0°.02×97°.92W±0°.03,h10^{km},n139, σ1^{s}.64/147,Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.16	104	Pg	Pn	05 38 01.0	-0.3
T35B	Sooner Cattle	1.16	104	P	Pn	05 38 00.9	-0.3
	baz=285,SNR=778						
T35B				S	Sn	05 38 15.9	-1.2
	baz=285						
U32A	Winter Ranch,	1.20	227		Pg	05 38 02.2	+0.4
U32A	Winter Ranch,	1.20	227	P	Pg	05 38 02.2	+0.4
	baz=47,SNR=74						
R32A	Long Quarter,	1.37	333		Pg	05 38 05.0	-0.1
R32A	Long Quarter,	1.37	333	P	Pg	05 38 05.0	-0.1
	baz=152,SNR=115						
R32A				S	Sg	05 38 22.9	+0.1
	baz=152						
OKCFA	Oklahoma City	1.82	168	Pn	Pb	05 38 12.0	-0.4
OKCFA	Oklahoma City	1.82	168	P	Pb	05 38 11.9	-0.4
	baz=349,SNR=32						
OKCFA				S	Sg	05 38 36.6	-0.9
	baz=349						
OKCSW	OKLAHOMA CITY	1.84	168	Pn	Pb	05 38 12.2	-0.4
FNO	Franklin	1.99	168		Pb	05 38 13.9	-1.2
TUL1	Leonard	2.15	126		Pb	05 38 16.2	-1.7
TUL1	Leonard	2.15	126	P	Pb	05 38 16.1	-1.7
	baz=308,SNR=200						
TUL1				S	Sg	05 38 45.9	-2.0
	baz=308						
TUL1	Leonard	2.15	126	P	Pb	05 38 16.1	-1.7
	baz=308,SNR=94						
TUL1				S	Sb	05 38 45.0	+0.5
	baz=308						
CBKS	Cedar Bluff	2.15	319	Pn	Pb	05 38 17.2	-0.7
CBKS	Cedar Bluff	2.15	319	P	Pb	05 38 17.0	-1.0
	baz=137,SNR=86						
CBKS	Cedar Bluff	2.15	319	P	Pb	05 38 17.0	-1.0
	baz=137,SNR=31						
CBKS				S	Sg	05 38 46.5	-1.6
	baz=137						
KSU1	Kansas State U	2.16	28		Pb	05 38 17.5	-0.5
KSU1				IAmb_Lg		05 38 49.0	
	comp=Z,157nm,0.7s						
KSU1	Kansas State U	2.16	28	P	Pb	05 38 17.3	-0.7
	baz=208,SNR=17						
KSU1	Kansas State U	2.16	28	P	Pb	05 38 17.3	-0.7
	baz=208,SNR=8.0						
KSU1				S	Sg	05 38 45.2	-3.0
	baz=208						
WMOK	Wichita Mounta	2.56	196	P	Pb	05 38 22.5	-2.3
	baz=16,SNR=9.5						
WMOK	Wichita Mounta	2.56	196	P	Pb	05 38 22.6	-2.3
	baz=16,SNR=11						
WMOK				S	Sb	05 38 54.8	-1.5
	baz=16						
HHAR	Hobbs	3.33	105	Pn	Pn	05 38 32.8	+1.8
HHAR	Hobbs	3.33	105	P	Pn	05 38 32.7	+1.7
	baz=288						
X37A	Clayton	3.33	141	Pn	Pn	05 38 32.9	+1.9
X37A				IAmb_Lg		05 39 33.3	
	comp=Z,86nm,0.8s						
X37A	Clayton	3.33	141	P	Pn	05 38 32.8	+1.9
	baz=323,SNR=280						
X37A				S	Sn	05 39 13.5	+2.9
	baz=323						
N33B	J Bar K, Exete	3.55	6	P	Pn	05 38 35.1	+1.1
	baz=186,SNR=13						
N33B				S	Sn	05 39 17.0	+1.0
	baz=186						
N33A	J Bar K, Exete	3.55	6	Pn	Pn	05 38 34.6	+0.6
N33A				IAmb_Lg		05 39 34.2	
	comp=Z,83nm,0.9s						
S39A	Bolivar	3.69	81	Pn	Pn	05 38 37.0	+1.1
S39A				IAmb_Lg		05 39 40.5	
	comp=Z,67nm,0.7s						
AMTX	Amarillo	3.83	234	Pn	Pn	05 38 39.7	+1.8
AMTX				IAmb_Lg		05 39 44.9	
	comp=Z,102nm,0.9s						
AMTX	Amarillo	3.83	234	Sn	Sn	05 39 27.1	+4.1
	baz=52						
AMTX				Sb	Sg	05 39 40.2	-1.5
	baz=52						
W39A	Magazine	3.90	120	Pn	Pn	05 38 39.9	+1.1
W39A	Magazine	3.90	120	P	Pn	05 38 39.7	+0.9
	baz=302,SNR=21						
W39A	Magazine	3.90	120	Pn	Pn	05 38 39.7	+0.9
	baz=302,SNR=24						
W39A				Pb	Pb	05 38 49.2	+1.5
	baz=302						
W39A				S	Sn	05 39 27.9	+3.2
	baz=302						
Z35A	Perchaven, San	3.90	172	Pn	Pn	05 38 40.1	+1.2
Z35A	Perchaven, San	3.90	172	P	Pn	05 38 40.7	+1.8
	baz=353,SNR=6.5						
Z35A				S	Sn	05 39 26.8	+2.1
	baz=353						
N35A	Tabor	4.06	25	Pn	Pn	05 38 42.0	+1.0
KSCO	Kaye Shedlock’	4.13	297	Pn	Pn	05 38 44.1	+2.0
KSCO				IAmb_Lg		05 40 02.3	
	comp=Z,56nm,0.8s						
KSCO	Kaye Shedlock’	4.13	297	P	Pn	05 38 44.4	+2.4
	baz=114						
U40A	Yellville	4.16	100	Pn	Pn	05 38 43.5	+1.2
U40A				IAmb_Lg		05 39 54.2	
	comp=Z,96nm,0.8s						
U40A	Yellville	4.16	100	P	Pn	05 38 43.8	+1.5
	baz=283,SNR=96						
U40A				P	Pn	05 38 43.8	+1.5
	baz=283,SNR=96						
U40A	Yellville	4.16	100	P	Pn	05 38 43.6	+1.2
	baz=283,SNR=31						
U40A				S	Sn	05 39 33.5	+2.5
	baz=283						
BGNE	Belgrade	4.20	358	IAmb_Lg		05 40 02.4	
	comp=Z,84nm,0.8s						
BGNE	Belgrade	4.20	358	P	Pn	05 38 44.8	+1.8
	baz=177						
BGNE				S	Sn	05 39 33.6	+1.4
	baz=177						
P38A	Dawn	4.21	54	Pn	Pn	05 38 44.2	+1.1
P38A	Dawn	4.21	54	P	Pn	05 38 44.8	+1.7
	baz=236,SNR=8.4						
MIAR	Mount Ida	4.41	126		Pn	05 38 47.5	+1.6
MIAR				IAmb_Lg		05 40 01.1	
	comp=Z,81nm,0.9s						
MIAR	Mount Ida	4.41	126	P	Pn	05 38 47.4	+1.5
	baz=309,SNR=44						
MIAR	Mount Ida	4.41	126	P	Pn	05 38 47.4	+1.5
	baz=309,SNR=6.2						
MIAR				S	Sn	05 39 39.4	+2.0
	baz=309						
MGMO	Mountain Grove	4.51	89		Pn	05 38 48.4	+1.1
MGMO				IAmb_Lg		05 40 00.9	
	comp=Z,89nm,0.8s						
R40A	Maddies Statio	4.61	75		Pn	05 38 49.4	+0.9
R40A				IAmb_Lg		05 40 08.0	
	comp=Z,40nm,0.8s						
Z38A	Mt. Pleasant	4.61	148		Pn	05 38 49.5	+0.9
Z38A				IAmb_Lg		05 40 12.3	
	comp=Z,52nm,0.8s						
Z38A	Mt. Pleasant	4.61	148	P	Pn	05 38 50.1	+1.5
	baz=330,SNR=9.4						
ABTX	Abilene, Hawle	4.78	198	S	Sn	05 39 48.2	+1.7
	baz=17						
FCAR	Ozark Folk Cen	4.85	104		Pn	05 38 52.6	+0.7
FCAR				IAmb_Lg		05 40 14.0	
	comp=Z,68nm,0.8s						
OGNE	Ogallala	4.92	321	IAmb_Lg		05 40 14.9	
	comp=Z,70nm,0.8s						
OGNE	Ogallala	4.92	321	P	Pn	05 38 56.2	+3.3
	baz=138						
OGNE				Sn	Sn	05 39 52.6	+2.7
	baz=138						
OGNE				Sb	Sg	05 40 12.9	-3.8
	baz=138						
WHAR	Wooly Hollow	4.94	111		Pn	05 38 54.4	+1.3
X40A	Basin Creek Fa	4.94	122		Pn	05 38 54.5	+1.3
X40A	Basin Creek Fa	4.94	122	P	Pn	05 38 54.6	+1.5
	baz=305						
W41B	Gary Mavity, V	5.02	112		Pn	05 38 54.6	+0.5
W41B				IAmb_Lg		05 40 18.3	
	comp=Z,64nm,0.7s						
W41B	Gary Mavity, V	5.02	112	P	Pn	05 38 55.3	+1.1
	baz=296,SNR=27						
W41B	Gary Mavity, V	5.02	112	P	Pn	05 38 55.2	+1.1
	baz=296						
W41B				Sb	Sg	05 40 14.2	-5.7
	baz=296						
MSTX	Muleshoe	5.10	232		Pn	05 38 57.1	+1.6
N38A	Joes South For	5.12	44	Pn	Pn	05 38 56.6	+1.1
N38A				IAmb_Lg		05 40 26.3	
	comp=Z,50nm,0.7s						
P40A	Paris	5.17	62		Pn	05 38 57.1	+0.9
T25A	Trinidad	5.18	271	Pn	Pn	05 38 58.4	+1.7
T25A				IAmb_Lg		05 40 28.0	
	comp=Z,56nm,0.8s						
T25A	Trinidad	5.18	271	Pn	Pn	05 38 58.3	+1.7
	baz=87,SNR=6.2						
T25A				Pg	Pg	05 39 16.4	-1.7
	baz=87						
T25A				Sb	Sg	05 40 19.3	-6.0
	baz=87						
WHTX	Lake Whitney,	5.21	176		Pn	05 38 58.0	+1.1
WHTX	Lake Whitney,	5.21	176	P	Pn	05 38 58.4	+1.5
	baz=356,SNR=18						
WHTX	Lake Whitney,	5.21	176	P	Pn	05 38 58.4	+1.5
	baz=356						
WHTX				S	Sn	05 39 56.8	-0.3
	baz=356						
WLAR	White Oak Lake	5.26	130		Pn	05 38 58.8	+1.2
WLAR				IAmb_Lg		05 40 29.3	
	comp=Z,46nm,1.0s						
CCM	Cathedral Cave	5.37	79		Pn	05 38 59.9	+0.9
CCM	Cathedral Cave	5.37	79	P	Pn	05 39 00.3	+1.3
	baz=263,SNR=9.5						
CCM	Cathedral Cave	5.37	79	P	Pn	05 39 00.2	+1.2
	baz=263						
237A	Washetta, Mont	5.47	161	Pn	Pn	05 39 01.3	+0.8
237A				IAmb_Lg		05 40 47.1	
	comp=Z,45nm,0.9s						
237A	Washetta, Mont	5.47	161	P	Pn	05 39 01.2	+0.8
	baz=342,SNR=6.2						
LCAR	Lake Charles	5.56	100		Pn	05 39 02.7	+1.1
LCAR				IAmb_Lg		05 40 35.6	
	comp=Z,34nm,0.9s						
Z41A	Richland Creek	5.75	132	Pn	Pn	05 39 05.0	+0.8
Z41A				IAmb_Lg		05 40 52.1	
	comp=Z,43nm,0.7s						
Z41A	Richland Creek	5.75	132	P	Pn	05 39 05.4	+1.2
	baz=315						
Z41A				S	Sn	05 40 10.0	-0.3
	baz=315						
SCIA	State Center	5.94	36	IAmb_Lg		05 40 56.2	
	comp=Z,48nm,0.8s						
Q24A	Divide	5.97	289		Pn	05 39 08.8	+1.2
Q24A				IAmb_Lg		05 40 55.6	
	comp=Z,39nm,0.8s						
Q24A	Divide	5.97	289	P	Pn	05 39 09.1	+1.6
	baz=105						
Q24A				S	Sn	05 40 18.3	+2.3
	baz=105						
CCAR	Cane Creek	5.99	121	IAmb_Lg		05 40 54.8	
	comp=Z,63nm,1.1s						
FVM	French Village	6.00	80		Pn	05 39 08.2	+0.5
PBMO	Poplar Bluff	6.01	92	Pn	Pn	05 39 08.1	+0.2
PBMO				IAmb_Lg		05 40 55.5	
	comp=Z,68nm,0.7s						
SLM	Saint Louis	6.24	74	IAmb_Lg		05 40 53.7	
	comp=Z,45nm,0.9s						
435B	Jarrell	6.41	177	IAmb_Lg		05 41 18.3	
	comp=Z,41nm,0.8s						
N41A	Harden Midland	6.52	55	IAmb_Lg		05 41 08.5	
	comp=Z,61nm,1.0s						
ISCO	Idaho Springs	6.56	296	Pn	Pn	05 39 17.1	+1.4
ISCO				IAmb_Lg		05 41 13.4	
	comp=Z,27nm,0.8s						
ISCO	Idaho Springs	6.56	296	P	Pn	05 39 17.8	+2.0
	baz=111,SNR=23						
ISCO	Idaho Springs	6.56	296	P	Pn	05 39 17.7	+2.0
	baz=111,SNR=12						
ECSD	EROS Data Cent	6.60	8		Pn	05 39 16.6	+0.7
ECSD	EROS Data Cent	6.60	8	P	Pn	05 39 16.5	+0.5
	baz=189,SNR=17						
ECSD	EROS Data Cent	6.60	8	P	Pn	05 39 16.4	+0.5
	baz=189						
ECSD				S	Sn	05 40 29.5	-1.7
	baz=189						
K38A	Parkersburg	6.72	34	IAmb_Lg		05 41 23.9	
	comp=Z,57nm,1.0s						
JCT	Junction City	6.89	194	IAmb_Lg		05 41 30.2	
	comp=Z,34nm,0.9s						
S44A	Carbondale	6.91	83	Pn	Pn	05 39 21.1	+0.9
S44A				IAmb_Lg		05 41 26.7	
	comp=Z,56nm,0.8s						
S44A	Carbondale	6.91	83	P	Pn	05 39 21.1	+0.9
	baz=269,SNR=9.6						
SIUC	Southern Illin	6.94	83	Pn	Pn	05 39 21.0	+0.4
P43A	Skaggs, Pawnee	7.03	67	Pn	Pn	05 39 22.6	+0.8
L40A	Anamosa	7.09	45	Pn	Pn	05 39 23.4	+0.8
L40A				IAmb_Lg		05 41 26.5	
	comp=Z,30nm,0.9s						
PHWY	Pilot Hill	7.14	307	Pn	Pn	05 39 24.3	+0.8
Q44A	Meyer Farm, Va	7.23	74	IAmb_Lg		05 41 33.5	
	comp=Z,44nm,0.9s						
N23A	Red Feather La	7.25	303	Pn	Pn	05 39 26.7	+1.6
N23A				IAmb_Lg		05 41 30.8	
	comp=Z,46nm,0.8s						
N23A	Red Feather La	7.25	303	P	Pn	05 39 27.3	+2.2
	baz=118,SNR=7.5						
N23A				S	Sn	05 40 47.6	0.0
	baz=118						
ANMO	Albuquerque	7.27	254	Pn	Pn	05 39 26.6	+1.2
SUSD	Miller	7.27	354	IAmb_Lg		05 41 44.5	
	comp=Z,44nm,1.0s						
SUSD	Miller	7.27	354	S	Sn	05 40 44.8	-3.0
	baz=173						
W45A	Hickory Valley	7.35	104	Pn	Pn	05 39 26.6	+0.3
OXF	Oxford	7.42	109	Pn	Pn	05 39 27.5	+0.4
OXF				IAmb_Lg		05 41 42.5	
	comp=Z,36nm,0.8s						
OXF	Oxford	7.42	109	P	Pn	05 39 28.0	+0.9
	baz=294						
OXF				S	Sn	05 40 51.3	0.0
	baz=294						
HDIL	Hopedale	7.51	61	P	Pn	05 39 29.7	+1.3
	baz=246,SNR=8.7						
Y45A	Yeager Farm, C	7.60	114	IAmb_Lg		05 41 52.0	
	comp=Z,37nm,0.7s						
I37A	Lemond, Waseca	7.62	25	IAmb_Lg		05 41 53.0	
	comp=Z,29nm,0.8s						
OLIL	Olney	7.91	76	IAmb_Lg		05 42 03.7	
	comp=Z,32nm,0.9s						
O44A	Mansfield	7.96	65	Pn	Pn	05 39 35.4	+0.8
O44A				IAmb_Lg		05 41 51.0	
	comp=Z,25nm,0.8s						
Y22D	IRIS PASSCAL I	7.96	250	IAmb_Lg		05 42 05.1	
	comp=Z,30nm,0.9s						
LENM	Lemitar	7.96	250	Pn	Pn	05 39 36.3	+1.5
L42A	Oliver, Polo	7.97	50	IAmb_Lg		05 41 58.0	
	comp=Z,28nm,0.9s						
WVT	Waverly	8.18	95		Pn	05 39 38.0	+0.4
JFWS	Jewell Farm	8.19	44	Pn	Pn	05 39 38.7	+0.9
JFWS				IAmb_Lg		05 42 10.0	
	comp=Z,22nm,0.8s						
JFWS	Jewell Farm	8.19	44	P	Pn	05 39 38.7	+0.9
	baz=228						
MNTX	Cornudas Mount	8.25	230	Pn	Pn	05 39 39.8	+1.1
MNTX	Cornudas Mount	8.25	230	P	Pn	05 39 40.2	+1.6
	baz=46,SNR=6.4						
MNTX	Cornudas Mount	8.25	230	P	Pn	05 39 40.2	+1.6
	baz=46						
MNTX				S	Sn	05 41 11.7	-0.2
	baz=46						
PLAL	Pickwick Lake	8.27	103	Pn	Pn	05 39 39.7	+0.8
PLAL				IAmb_Lg		05 42 22.3	
	comp=Z,18nm,0.9s						
RSSD	Black Hills	8.32	328	P	Pn	05 39 43.2	+3.4
	baz=144						
RWWY	Rawlins	8.47	305	IAmb_Lg		05 42 20.5	
	comp=Z,20nm,0.8s						
K22A	Casper	8.56	312	Pn	Pn	05 39 44.4	+1.5
K22A				IAmb_Lg		05 42 25.0	
	comp=Z,22nm,0.8s						
F33A	5 Mile Ranch,	8.71	8	IAmb_Lg		05 42 15.8	
	comp=Z,20nm,0.9s						
833A	Chaparral WMA,	8.94	188	IAmb_Lg		05 42 34.3	
	comp=Z,16nm,1.0s						
Z47A	Carrollton	9.00	113	IAmb_Lg		05 42 37.4	
	comp=Z,17nm,0.9s						
BLO	Bloomington	9.19	74		Pn	05 39 52.3	+0.9
TX04	Lajitas Array	9.20	213	Pn	Pn	05 39 53.4	+1.7
TX31	Lajitas Ar. Si	9.20	213	Pn	Pn	05 39 53.4	+1.6
E28A	Huff	9.59	348	IAmb_Lg		05 42 53.4	
	comp=Z,17nm,0.8s						
LRAL	Lakeview Retre	9.87	112	Pn	Pn	05 40 01.6	+0.9
D32A	Dogwood Acres,	9.95	4	IAmb_Lg		05 43 05.6	
	comp=Z,16nm,0.9s						
BW06	Boulder Array	10.51	305	P	Pn	05 40 10.8	+1.0
	baz=118						

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*IDC **01** 05:40:59.4±2.3,38°.23N×142°.29E,h0^{km},mb3.5/3, mbtmp3.4/4,ML2.5/1,Error ellipse: s-maj=47.5km s-min=35.2km az=43.0*

*JMA **01** 05:41:07.8±0.1,37°.7N±0°.3×142°.0E±0°.7,h34^{km}±2^{km}, MV3.7/32,E OFF FUKUSHIMA PREF*

*NIED **01** 05:41:07.8,37°.69N×141°.98E,h34^{km},MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.10; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$1.34; $M_{r\theta}$0.76; $M_{\theta\phi}$-0.10; $M_{\phi r}$-0.50; Fault plane solution: $M_0$1.54000×10^{14} NP1: ϕ_s201.00000°,δ39.00000°,λ-46.00000°. NP2: ϕ_s330.00000°,δ63.00000°,λ-119.00000°.*

ISC 01 05:41:04.0±2.0,37°.69N±0°.05×142°.08E±0°.08,h13^{km}±11^{km}, n22,σ1^{s}.23/27,mb3.7/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.79	322	*i* P	Pn	05 41 21.8	+1.0
JIKH				S	Sb	05 41 31.4	+1.2
JMST	Minamisoumatoc	0.94	273	*i* P	Pn	05 41 23.7	+0.7
JMST				S	Sb	05 41 35.0	+0.4
JIO	Ouri	0.96	323	*i* P	Pn	05 41 24.4	+1.3
JIO				S	Sb	05 41 35.7	+0.7
JFK	Kawauchi	1.01	252	*i* P	Pn	05 41 24.7	+0.8
JFK				S	Sb	05 41 36.6	+0.1
JMM	Marumori	1.03	280	*i* P	Pn	05 41 25.2	+1.0
JMM				S	Sb	05 41 37.3	+0.1
ONAJ	Iwakimizuishiy	1.17	240	P	Pn	05 41 27.0	+0.7
ONAJ				*e*S	Sg	05 41 40.9	-1.0
JOU	Okura	1.30	302	*i* P	Pn	05 41 29.9	+2.0
JOU				S	Sn	05 41 45.8	+0.5
JFT	Otama	1.39	264	*i* P	Pg	05 41 31.2	+0.4
JFT				S	Sb	05 41 48.0	+0.4
JMK	Ichinoseki	1.43	332	*i* P	Pg	05 41 31.9	+0.4
JMK				S	Sb	05 41 48.3	-0.4
JYS	Shirataka	1.68	289	P	Pg	05 41 35.6	-0.6
JYK	Kaneyama	1.82	313	P	Pb	05 41 37.4	+0.1
JOM	Ohasama	1.88	341	*i* P	Pb	05 41 38.4	+0.1
JOM				*e*S	Sb	05 42 01.0	-0.8
MJAR	Matsushiro Arr	3.30	251	Pn	Pn	05 41 57.3	+1.9
	0.4nm,0.3s,baz=71,slow=20,SNR=10						
MJAR				Sn	Sb	05 42 42.6	+0.2
	0.3nm,0.3s,baz=190,slow=20,SNR=1.5						
	2.6nm,0.3s						
H11N2	WAKE ISLAND Hy	28.04	123	T	T	06 16 18.6	
	baz=316,slow=75						
H11N1	WAKE ISLAND Hy	28.05	123	T	T	06 16 33.1	
	baz=316						
H11N3	WAKE ISLAND Hy	28.06	123	T	T	06 16 29.7	
	baz=316,slow=75						
H11S1	WAKE ISLAND Hy	28.79	125	T	T	06 17 21.9	
	baz=317,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	28.79	125	T	T	06 17 20.8	
	baz=317,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	28.80	125	T	T	06 17 18.6	
	baz=317,slow=76,SNR=15						
MKAR	Makanchi Array	44.22	302	P	P	05 49 09.1	-3.8
	0.2nm,0.8s,baz=68,slow=8.0,SNR=1.8						
	0.2nm,0.8s						
WRA	Warramunga Arr	57.78	189	P	P	05 50 56.1	+1.1
	0.6nm,0.5s,baz=2.3,slow=7.3,SNR=14						
	0.6nm,0.5s						
ASAR	Alice Springs	61.51	189	P	P	05 51 21.9	+1.3
	0.4nm,0.7s,baz=12,slow=6.8,SNR=5.0						
	0.4nm,0.7s						

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*IDC **01** 05:50:48.9±1.0,6°.29N×126°.94E,h0^{km},mb3.7/7, mbtmp3.7/7,Error ellipse: s-maj=38.3km s-min=17.8km az=60.0*

ISC 01 05:50:58.1±0.9,6°.06N±0°.10×126°.6E±0°.1,h71^{km},n12, σ1^{s}.99/14,mb3.4/7,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.43	315	Pn	Pn	05 51 18.5	-3.7
	54nm,0.3s,baz=154,slow=11,SNR=1.8						
DAV				Sn	Sn	05 51 38.2	-2.1
	57nm,0.3s,baz=78,slow=3.2,SNR=3.9						
GSPH	General Santos	1.64	271	⇓*i*P	Pn	05 51 23.9	-1.2
GSPH				*i* S	Sn	05 51 45.8	+0.2
KCP	Kidapawan	1.77	302	⇑*e*P	Pn	05 51 26.6	-0.2
KCP				*i* S	Sn	05 51 50.9	+2.3
BUKP	Musuan	2.37	320	⇓*e*P	Pn	05 51 38.2	+3.4
BUKP				*e*S	Sn	05 52 10.7	+7.8
PAGZ	Pagadian	3.65	299	⇓*e*P	Pn	05 51 39.1	-13
FITZ	Fitzroy Crossi	24.02	182	P	P	05 56 07.9	+1.3
	0.5nm,0.5s,baz=358,slow=9.7,SNR=1.4						
	0.5nm,0.5s						
WRA	Warramunga Arr	26.94	164	P	P	05 56 33.6	+0.6
	0.5nm,0.6s,baz=339,slow=10,SNR=8.5						
	0.5nm,0.6s						
ASAR	Alice Springs	30.39	167	P	P	05 57 03.9	+0.1
	0.3nm,0.6s,baz=338,slow=6.6,SNR=4.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	55.59	324	P	P	06 00 27.8	+1.3
	0.2nm,0.4s,baz=108,slow=9.3,SNR=2.6						

	0.2nm,0.4s						
ILAR	Eielson Array	83.07	26	P	P	06 03 14.5	-1.2
	0.4nm,0.9s,baz=231,slow=5.0,SNR=5.4						
	0.4nm,0.9s						
ARCES	ARCESS Array B	88.23	340	P	P	06 03 40.0	-1.2
	1.6nm,0.9s,baz=92,slow=6.3,SNR=1.5						
	1.6nm,0.9s						
FINES	FINESS Array B	89.73	332	P	P	06 03 48.4	0.0
	1.0nm,0.9s,baz=64,slow=4.4,SNR=3.9						
	1.0nm,0.9s						

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*FUNV **01** 06:01:04.3, 8°.53N×71°.43W, h1^{km}, MW3.6*

ISC 01 06:01:04.0±1.3, **8°.58N**±0°.05×**71°.41W**±0°.03, **h3**^{km}±12^{km}, **n22**, σ**0**^{s}**97**/32, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.62	118	eP	Pg	06 01 15.8	-0.1
SOCV	Socops	0.62	118	⇑iP	Pg	06 01 15.9	0.0
SOCV				eS	Sg	06 01 24.9	+1.0
SDV	Santo Domingo	0.82	68	eP	Pg	06 01 20.6	+0.7
CAPV	Capacho	1.14	232	eP	Pb	06 01 25.9	-0.7
CAPV				eS	Sg	06 01 40.1	-0.7
PAMC	Pamplona, Colo	1.77	226	eP	Pg	06 01 38.0	-0.1
PAMC				eS	Sg	06 02 01.9	+0.7
OCAC	Ocana	1.92	260	eP	Pb	06 01 38.8	-1.0
OCAC				eS	Sg	06 02 04.9	-1.0
SANV	Sanarito	2.06	63	eP	Pn	06 01 40.1	+0.4
SANV				eS	Sn	06 02 06.7	+0.7
DABV	Dabajuro	2.45	18	eP	Pn	06 01 46.0	+1.1
DABV				eS	Sn	06 02 15.2	-0.2
SIQV	Siquisique	2.59	37	eP	Pn	06 01 46.6	-0.3
SIQV				eS	Sn	06 02 18.6	-0.3
BARC	Barichara	2.64	222	eP	Pb	06 01 51.1	-1.1
BARC				eS	Sb	06 02 25.6	+0.4
CRJC	Cerrejon, Guaj	2.83	329	eP	Pn	06 01 51.0	+0.8
CRJC				eS	Sn	06 02 24.5	-0.3
RUSC	La Rusia	3.14	212	eP	Pn	06 01 56.6	+1.8
MAPV	Macapo	3.17	67	eP	Pn	06 01 54.8	-0.1
MAPV				eS	Sn	06 02 32.6	-0.5
BAUV	El Baul	3.35	84	eP	Pn	06 01 57.6	+0.3
BAUV				eS	Sn	06 02 36.6	-0.9
ZARC	Zaragoza, Cauc	3.58	253	eP	Pn	06 02 00.7	+0.2
PTBC	PUERTO BERRIO,	3.64	236	eP	Pn	06 02 01.2	-0.1
SPBC	San Pablo de B	3.93	222	eP	Pn	06 02 06.8	+1.5
SJCC	San Jacinto, C	3.95	290	eP	Pn	06 02 06.6	+1.1
BENV	Beln	4.00	70	eP	Pn	06 02 06.5	+0.2
UREC	San Jos de Ur	4.17	259	eP	Pn	06 02 11.6	+3.0
CACV	CAICARA DEL OR	4.92	101	eP	Pb	06 02 25.8	-5.1
BIRV	Birongo	5.41	69	eP	Pn	06 02 25.4	-0.2

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*IDC **01** 06:02:49.8±3.6, 51°.13N×174°.28W, h0^{km}, mb3.1/3, mbtmp3.2/4, ML3.6/1, Error ellipse: s-maj=90.4km s-min=38.3km az=1.0*

*AEIC **01** 06:02:56±0.8, 51°.4N±0°.1×174°.4W±0°.1, h20^{km}±9^{km}, ML3.1, Error ellipse: s-maj=22.2km s-min=6.2km az=150.0*

*NEIC **01** 06:02:59.1±0.9, 51°.54N±0°.05×174°.42W±0°.05, h36^{km}±72^{km}, Error ellipse: s-maj=8.8km s-min=2.7km az=205.0*

ISC 01 06:02:56.1±1.4, **51°.3N**±0°.2×**174°.2W**±0°.1, **h35**^{km}, **n23**, σ**0**^{s}**57**/16, **mb3.0**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.89	0		Pn	06 03 11.9	-0.1
KOFP	Korovin Flat P	0.96	4		Pn	06 03 13.7	+0.6
KOKL	Mount Kliuchef	1.00	360		Pn	06 03 14.3	+0.5
GSMY	Great Sitkin M	1.36	303		Pn	06 03 18.2	-0.4
GSTR	Great Sitkin T	1.39	305		Pn	06 03 19.2	+0.1
GSTD	Great Sitkin T	1.42	302		Pn	06 03 19.1	-0.3
ADK	Adak	1.65	291		Pn	06 03 22.5	-0.1
KIWB	Kanaga Island	1.92	287		Pn	06 03 18.7	-7.6
KIKV	Kanaga Island	1.94	288		Pn	06 03 26.7	+0.2
KIMD	Kanaga Island	1.95	284		Pn	06 03 26.6	-0.1
TAPA	Tanaga Point A	2.31	284		Pn	06 03 32.2	+0.5
TAFP	Tanaga Falls P	2.43	285		Pn	06 03 34.3	+1.0
TASE	Tanaga Southea	2.45	284		Pn	06 03 34.6	+1.0
ILAR	Eielson Array	19.54	36	P	P	06 07 20.2	-0.1
	0.2nm,0.3s,baz=235,slow=9.0,SNR=12						
	0.5nm,0.5s						
YKA	Yellowknife Ar	33.17	47	P	P	06 09 29.5	+0.6
	0.1nm,0.6s,baz=278,slow=9.1,SNR=1.5						
	0.1nm,0.6s						
H11N2	WAKE ISLAND Hy	34.86	212	T	T	06 47 02.0	
	baz=20						
H11N3	WAKE ISLAND Hy	34.87	212	T	T	06 47 10.9	
	baz=20						
H11N1	WAKE ISLAND Hy	34.88	212	T	T	06 47 17.4	
	baz=20						
H11S1	WAKE ISLAND Hy	36.06	212	T	T	06 49 03.9	
	baz=19						
H11S2	WAKE ISLAND Hy	36.08	212	T	T	06 48 59.0	
	baz=19						
H11S3	WAKE ISLAND Hy	36.08	212	T	T	06 49 03.9	
	baz=19						
PDAR	Pinedale Array	43.56	75	P	P	06 10 55.9	-0.7
	0.2nm,0.7s,baz=289,slow=11,SNR=2.3						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	61.22	316	P	P	06 13 06.7	-0.3
	0.3nm,0.6s,baz=39,slow=7.0,SNR=2.3						
	0.3nm,0.6s						

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*FUNV **01** 06:04:35.3, 8°.48N×71°.43W, h5^{km}, MW3.3*

ISC 01 06:04:35.3±1.3, **8°.47N**±0°.07×**71°.38W**±0°.03, **h15**^{km}±11^{km}, **n13**, σ**1**^{s}**30**/22, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.55	110	eP	Pg	06 04 46.1	-0.1
SOCV	Socops	0.55	110	eP	Pg	06 04 46.3	0.0
SOCV				eS	Sg	06 04 55.0	+1.4
CAPV	Capacho	1.10	237	eP	Pg	06 04 55.6	-1.1
CAPV				eS	Sb	06 05 10.4	-0.2
PAMC	Pamplona, Colo	1.73	229	eP	Pg	06 05 08.5	0.0
PAMC				eS	Sg	06 05 32.6	+1.6
OCAC	Ocana	1.93	263	eP	Pn	06 05 09.1	+1.3
OCAC				eS	Sg	06 05 35.3	-2.3
DABV	Dabajuro	2.54	17	eP	Pn	06 05 16.9	+0.9
DABV				eS	Sn	06 05 47.8	+1.0
SIQV	Siquisique	2.66	36	eP	Pn	06 05 18.3	+0.6
SIQV				eS	Sn	06 05 50.4	+0.6
CRJC	Cerrejon, Guaj	2.93	330	eP	Pn	06 05 22.2	+0.7
MAPV	Macapo	3.19	65	eP	Pn	06 05 26.1	+1.1
MAPV				eS	Sn	06 06 02.9	+0.1
BAUV	El Baul	3.33	82	eP	Pn	06 05 27.6	+0.6
BAUV				eS	Sn	06 06 06.8	+0.4
SJCC	San Jacinto, C	4.01	291	eP	Pn	06 05 37.3	+1.0
BENV	Beln	4.02	68	eP	Pn	06 05 36.9	+0.5
BENV				eS	Sn	06 06 22.4	-0.9
CACV	CAICARA DEL OR	4.88	100	eP	Pb	06 05 56.2	-4.4
CACV				eS	Sb	06 06 55.8	-3.4

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*IDC **01** 06:08:59.9±0.7, 15°.33N×118°.86E, h0^{km}, mb4.0/11, mbtmp4.0/13, ML4.6/2, MS3.1/3, Error ellipse: s-maj=35.1km s-min=13.8km az=54.0*

*MAN **01** 06:09:03.2, 15°.53N×119°.08E, h23^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

ISC 01 06:09:04.4±0.7, **15°.49N**±0°.07×**118°.98E**±0°.09, **h29**^{km}, **n21**, σ**0**^{s}**82**/20, **mb4.1**/12, **4C-1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	2.34	126	Pn	Pn	06 09 41.3	+0.2
	242nm,0.3s,baz=208,slow=4.0,SNR=9.2						
TGY				Sn	Sn	06 10 09.9	+1.0
	51nm,0.3s,baz=40,slow=13,SNR=3.7						
	543nm,0.3s						
TGY	Tagaytay City	2.34	126	⇑eP	Pn	06 09 37.0	-4.0
PGP	Puerto Galera	2.75	136	⇑eP	Pn	06 09 46.4	-0.3
PGP				iS	Sn	06 10 04.6	-14
LQP	Lukban	2.83	119	⇑eP	Pn	06 09 47.9	0.0
APYP	Conner	3.20	42	⇑eP	Pn	06 09 52.3	-0.5
APYP				eS	Sn	06 10 29.5	-0.6
JCNP	Jose Panganiba	3.79	108	⇓eP	Pn	06 10 00.8	-0.1
CMAR	Chiang Mai Arr	19.39	282	P	P	06 13 27.5	-0.8
	0.5nm,0.3s,baz=100,slow=7.2,SNR=0.8						
CMAR				LR	LR	06 21 17.9	
	comp=Z,26nm,18.0s,baz=105,slow=38						
	0.7nm,0.3s						
KSRS	Korea Array	23.27	18	P	P	06 14 10.9	+1.3
	1.0nm,0.7s,baz=201,slow=10.0,SNR=3.7						
	1.0nm,0.7s						
WRA	Warramunga Arr	38.31	156	P	P	06 16 21.1	-1.7
	2.7nm,0.7s,baz=331,slow=10.0,SNR=39						
	2.7nm,0.7s						
ASAR	Alice Springs	41.56	159	P	P	06 16 48.9	-0.9
	2.1nm,0.5s,baz=339,slow=7.0,SNR=50						
	2.1nm,0.5s						
MKAR	Makanchi Array	43.61	323	P	P	06 17 07.7	+1.5
	1.3nm,0.8s,baz=133,slow=9.3,SNR=10.0						
	1.3nm,0.8s						
AAK	Ala-Archa	46.63	315	LR	LR	06 38 11.6	
	comp=Z,21nm,21.2s,baz=188,slow=38						
ZALV	Zalesovo Beam	46.71	333	P	P	06 17 30.6	0.0
	1.0nm,0.5s,baz=116,slow=6.8,SNR=4.2						
	1.0nm,0.5s						
KURBB	Kurchatov Arra	47.78	326	P	P	06 17 39.8	+0.8
	1.9nm,0.9s,baz=120,slow=8.4,SNR=14						
	1.9nm,0.9s						
AKTO	Aktyubinsk	59.78	320	P	P	06 19 07.4	+0.6
	1.3nm,0.5s,baz=81,slow=6.5,SNR=6.4						
	1.3nm,0.5s						
ARU	Arti	60.98	326	P	P	06 19 14.7	-0.2
	1.4nm,0.4s,baz=148,slow=14,SNR=6.1						
	1.4nm,0.4s						
KIRV	Kirov	66.27	328	P	P	06 19 49.9	+0.2
	17nm,0.4s,baz=88,slow=3.6,SNR=4.3						
KBZ	Khabaz	69.46	311	P	P	06 20 09.9	-0.2
	1.9nm,0.9s,baz=270,slow=3.5,SNR=5.1						
	1.9nm,0.9s						
SPITS	Spitsbergen Ar	77.51	348	LR	LR	06 59 25.6	
	comp=Z,22nm,18.1s,baz=44,slow=39						
FINES	FINESS Array B	77.92	331	P	P	06 20 59.1	-0.3
	0.9nm,0.8s,baz=83,slow=7.9,SNR=8.1						
	0.9nm,0.8s						
HFS	Hagfors	84.11	331	P	P	06 21 33.1	+0.6
	0.5nm,0.6s,baz=357,slow=24,SNR=2.0						
	0.5nm,0.6s						

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*IDC **01** 06:12:07.7±1.0, 37°.21N×88°.96W, h0^{km}, mb3.3/1, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=18.7km s-min=8.8km az=22.0*

*ANF **01** 06:12:09.8±0.3, 37°.20N×89°.01W, h13^{km}±2^{km}, ML4.2/17, Error ellipse: s-maj=2.2km s-min=1.5km az=68.0*

*NEIC **01** 06:12:09.6±1.1, 37°.21N±0°.01×89°.00W±0°.02, h15^{km}±1^{km}, Error ellipse: s-maj=2.0km s-min=1.9km az=170.0*

*SLM **01** 06:12:10.0±1.2, 37°.21N±0°.01×88°.99W±0°.02, h16^{km}±5^{km}, Md3.4/28, mb_Lg3.5/175(NEIC), Error ellipse: s-maj=2.1km s-min=1.9km az=154.0*

ISC 01 06:12:09.2±1.0, **37°.20N**±0°.02×**88°.96W**±0°.02, **h15**^{km}±8^{km}, **n265**, σ**0**^{s}**98**/280, **Southern Illinois**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T45A	Paducah	0.30	125		Pb	06 12 16.7	+0.3
T45A				Sg	Sb	06 12 22.0	+0.8
T45B	Paducah	0.30	126	P	Pb	06 12 16.9	+0.5
	baz=306,SNR=1000						
T45B				S	Sb	06 12 22.0	+0.8
	baz=306						
CHRM	Charleston	0.47	224		Pb	06 12 19.2	-0.1
CHRM					Sg	06 12 25.7	+0.7
FMKY	Fulgham	0.53	176		Pb	06 12 20.3	+0.1
S44A	Carbondale	0.55	334		Pg	06 12 19.9	-0.3
S44A				Sg	Sg	06 12 27.4	-0.2
S44A	Carbondale	0.55	334	P	Pg	06 12 20.1	-0.1
	baz=156,SNR=1000						
S44A				S	Sg	06 12 27.3	-0.2
	baz=156						
SIUC	Southern Illin	0.56	338		Pg	06 12 20.2	-0.1
SIUC				Sg	Sg	06 12 27.7	0.0
EPRM	East Prairie	0.58	214		Pb	06 12 21.0	-0.1
EPRM					Sb	06 12 29.3	+0.2
DWDM	Dogwood	0.59	227		Pg	06 12 20.9	+0.2
DWDM					Sb	06 12 29.3	-0.1
HENM	Henderson Moun	0.63	221		Pg	06 12 21.9	+0.3
HENM					Sb	06 12 30.8	+0.1
MATM	Matthews	0.67	231		Pg	06 12 22.3	0.0
MATM					Sg	06 12 31.6	+0.5
HICK	Hickman	0.69	199		Pb	06 12 23.0	0.0
HICK				Sg	Sb	06 12 32.7	+0.4
SJMO	Saint John’s B	0.70	217		Pg	06 12 23.0	+0.1
SJMO					Sb	06 12 32.8	+0.1
KEWM	Kewanee	0.71	226		Pg	06 12 23.1	0.0
KEWM					Sb	06 12 33.0	0.0
GUAMO	Guam	0.77	247		Pg	06 12 23.8	-0.4
NMMO	New Madrid	0.77	219		Pg	06 12 24.3	0.0
NMMO					Sb	06 12 35.0	+0.3
COKM	Charter Oak	0.78	232		Pg	06 12 24.2	-0.3
COKM					Sg	06 12 34.9	+0.1
NMEM	New Madrid Sch	0.80	219		Pg	06 12 24.8	0.0
CATM	Catron	0.80	224		Pg	06 12 24.7	-0.1
WALK	Watson Lake	0.81	216		Pg	06 12 24.9	0.0
PARMO	Parma	0.83	231		Pg	06 12 25.0	-0.4
PARMO				IAmb_Lg		06 12 37.1	
	comp=Z,515nm,0.7s						
FLPT	Flippin	0.84	201		Pg	06 12 25.6	+0.1
UTMT	University of	0.85	175		Pb	06 12 25.9	+0.2
MARMO	Marston	0.88	221		Pg	06 12 26.1	-0.1
MARMO					Sb	06 12 38.0	+0.4
PENMO	Penman	0.92	216		Pg	06 12 26.8	-0.2
PPLM	Point Pleasant	0.94	213		Pg	06 12 27.2	-0.1
WYBT	Wynnburg	0.95	207		Pg	06 12 27.6	-0.1
BRNM	Bernie	0.96	241		Pg	06 12 26.9	-0.8
MLDM	Malden	0.96	234		Pg	06 12 27.2	-0.6
GLAT	Glass	0.96	196		Pg	06 12 27.8	0.0
PGVM	Portageville	0.96	221		Pg	06 12 27.5	-0.3
POBM	Portage Bay	0.97	216		Pg	06 12 27.7	-0.3
PVMO	Portageville	0.98	218		Pg	06 12 27.9	-0.3
TOPM	Tallapoosa	1.00	229		Pg	06 12 28.1	-0.5
BETM	Bethany	1.06	237		Pg	06 12 28.8	-0.9
WADM	Wardell	1.07	219		Pg	06 12 29.4	-0.4
MIST	Miston	1.11	203		Pb	06 12 30.4	+0.2
LNXT	Lenox	1.17	202		Pb	06 12 31.4	+0.2
LNXT	Lenox	1.17	202	P	Pb	06 12 31.3	+0.1
	baz=20,SNR=398						
LNXT				S	Sn	06 12 47.7	+0.8
	baz=20						
PBMO	Poplar Bluff	1.25	251		Pn	06 12 31.8	-0.4
PBMO	Poplar Bluff	1.25	251	P	Pn	06 12 31.8	-0.4
	baz=69,SNR=264						
USIN	University of	1.28	53	Pn	Pn	06 12 32.8	+0.2
PEBM	Pemiscott Bayo	1.30	214		Pn	06 12 33.4	+0.5
HALT	Halls	1.32	194		Pn	06 12 33.2	0.0
WVT	Waverly	1.40	139	Pn	Pn	06 12 34.8	+0.5
WVT	Waverly	1.40	139	P	Pn	06 12 34.7	+0.5
	baz=320,SNR=506						
WVT	Waverly	1.40	139	P	Pn	06 12 34.7	+0.5
	baz=320						
WVT				S	Sb	06 12 53.4	+0.7
	baz=320						
FVM	French Village	1.41	304		Pn	06 12 34.4	-0.1
FVM	French Village	1.41	304	P	Pn	06 12 34.2	-0.2
	baz=124,SNR=467						
FVM				S	Sn	06 12 52.3	-0.5
	baz=124						
T47A	Sharon Grove	1.49	97		Pn	06 12 36.2	+0.6
T47A	Sharon Grove	1.49	97	P	Pn	06 12 36.2	+0.6
	baz=279,SNR=1000						
GNAR	Gosnell	1.50	215		Pn	06 12 36.2	+0.6
OLIL	Olney	1.68	24		Pn	06 12 39.0	+0.9
OLIL	Olney	1.68	24	P	Pn	06 12 39.2	+1.1
	baz=205,SNR=43						
OLIL				S	Sb	06 13 01.3	+0.5
	baz=205						
Q44A	Meyer Farm, Va	1.71	358		Pn	06 12 39.4	+0.9
Q44A	Meyer Farm, Va	1.71	358	P	Pn	06 12 39.4	+0.9
	baz=179,SNR=434						
Q44A				S	Sb	06 13 02.0	+0.4
	baz=179						
T42A	Van Buren	1.72	265		Pn	06 12 39.0	+0.3
T42A	Van Buren	1.72	265	P	Pn	06 12 38.9	+0.3
	baz=83						
T42A				S	Sn	06 13 01.1	+0.7
	baz=83						
SLM	Saint Louis	1.76	325		Pn	06 12 39.6	+0.3
SLM	Saint Louis	1.76	325	P	Pn	06 12 39.9	+0.7
	baz=145,SNR=20						
SLM				S	Sn	06 13 02.5	+1.1
	baz=145						
CCM	Cathedral Cave	2.01	296		Pn	06 12 43.5	+0.9
CCM	Cathedral Cave	2.01	296	P	Pn	06 12 43.5	+0.9
	baz=114,SNR=339						
CCM	Cathedral Cave	2.01	296	P	Pn	06 12 43.6	+0.9
	baz=114						
W45A	Hickory Valley	2.04	185		Pn	06 12 42.8	-0.3
W45A	Hickory Valley	2.04	185	P	Pn	06 12 42.9	-0.3
	baz=4.4,SNR=84						
LCAR	Lake Charles	2.10	238		Pn	06 12 44.6	+0.7
LCAR	Lake Charles	2.10	238	P	Pn	06 12 44.7	+0.9
	baz=56,SNR=26						
HBAR	Harrisburg	2.14	221		Pn	06 12 44.8	+0.4
HBAR	Harrisburg	2.14	221	Sb	Sb	06 13 15.9	+2.0
	baz=38						
MET	Memphis--Engin	2.21	201		Pn	06 12 45.7	+0.2
V48A	Smith Brothers	2.25	130		Pn	06 12 47.5	+1.5
V48A	Smith Brothers	2.25	130	P	Pn	06 12 47.5	+1.5
	baz=311,SNR=174						
PLAL	Pickwick Lake	2.32	162		Pn	06 12 47.1	+0.2
CLTN	Cedars of Leba	2.38	117		Pn	06 12 49.5	+1.7
P43A	Skaggs, Pawnee	2.48	350		Pn	06 12 50.8	+1.6
P43A				IAmb_Lg		06 13 31.6	
	comp=Z,221nm,1.0s						
P43A	Skaggs, Pawnee	2.48	350	P	Pn	06 12 50.7	+1.5
	baz=170,SNR=89						
U49A	Red Boiling Sp	2.64	104		Pn	06 12 53.3	+2.0
U49A				IAmb_Lg		06 13 36.3	
	comp=Z,142nm,0.8s						
U49A	Red Boiling Sp	2.64	104	P	Pn	06 12 52.9	+1.6
	baz=286,SNR=72						
MGMO	Mountain Grove	2.65	270		Pn	06 12 52.2	+0.8
OXF	Oxford	2.70	188	Pn	Pn	06 12 52.6	+0.5
OXF				IAmb_Lg		06 13 41.7	
	comp=Z,155nm,0.7s						
OXF	Oxford	2.70	188	P	Pn	06 12 52.7	+0.5
	baz=7.1,SNR=49						
OXF	Oxford	2.70	188	P	Pn	06 12 52.7	+0.5
	baz=7.1						
BLO	Bloomington	2.75	43		Pn	06 12 54.5	+1.6
BLO				IAmb_Lg		06 13 44.4	
	comp=Z,205nm,0.8s						
P46A	Rosedale	2.78	29	Pn	Pn	06 12 54.5	+1.3
R40A	Maddies Statio	2.84	294		Pn	06 12 54.9	+0.8
R40A				IAmb_Lg		06 13 43.3	
	comp=Z,115nm,0.7s						
R40A	Maddies Statio	2.84	294	P	Pn	06 12 54.9	+0.8
	baz=112,SNR=136						
FCAR	Ozark Folk Cen	2.87	244		Pn	06 12 55.4	+1.0
O44A	Mansfield	2.98	7		Pn	06 12 57.1	+1.1
O44A				IAmb_Lg		06 13 52.3	
	comp=Z,174nm,0.8s						
O44A	Mansfield	2.98	7	P	Pn	06 12 57.0	+1.0
	baz=188,SNR=107						
SWET	Sewanee	3.14	128		Pn	06 13 00.4	+2.1
SWET				IAmb_Lg		06 13 56.3	
	comp=Z,126nm,0.7s						
X48A	Hartselle	3.15	150		Pn	06 12 59.1	+0.8
X48A	Hartselle	3.15	150	P	Pn	06 12 58.9	+0.6
	baz=331,SNR=39						
R49A	Shelbyville	3.19	69		Pn	06 13 00.3	+1.3
R49A	Shelbyville	3.19	69	P	Pn	06 13 00.3	+1.3
	baz=252,SNR=66						
R49A				P	Pn	06 13 00.3	+1.3
	baz=252,SNR=66						
U40A	Yellville	3.24	256		Pn	06 13 00.5	+0.9
U40A				IAmb_Lg		06 13 55.8	
	comp=Z,132nm,0.8s						
U40A	Yellville	3.24	256	P	Pn	06 13 00.2	+0.6
	baz=73,SNR=152						
U40A				P	Pn	06 13 00.2	+0.6
	baz=73,SNR=152						
U40A	Yellville	3.24	256	P	Pn	06 13 00.3	+0.6
	baz=73						
T50A	Nancy	3.29	92		Pn	06 13 02.0	+1.7
T50A	Nancy	3.29	92	P	Pn	06 13 01.8	+1.4
	baz=275						
T50A				P	Pn	06 13 01.8	+1.4
	baz=275						
WHAR	Wooly Hollow	3.30	236		Pn	06 13 01.1	+0.7
WHAR				IAmb_Lg		06 14 02.3	
	comp=Z,150nm,0.8s						
W41B	Gary Mavity, V	3.34	234		Pn	06 13 01.6	+0.6
W41B	Gary Mavity, V	3.34	234	P	Pn	06 13 01.4	+0.5
	baz=51,SNR=126						
W41B	Gary Mavity, V	3.34	234	P	Pn	06 13 01.4	+0.5
	baz=51						
W41B				Sb	Sb	06 13 51.4	+2.7
	baz=51						
Y45A	Yeager Farm, C	3.36	188	Pn	Pn	06 13 01.7	+0.5
Y45A				IAmb_Lg		06 14 00.8	
	comp=Z,101nm,0.8s						
Y45A	Yeager Farm, C	3.36	188	P	Pn	06 13 01.6	+0.5
	baz=7.5,SNR=55						
HDIL	Hopedale	3.37	356		Pn	06 13 02.7	+1.4
HDIL				IAmb_Lg		06 13 58.8	
	comp=Z,116nm,0.8s						
P40A	Paris	3.37	315		Pn	06 13 02.5	+1.2
P40A	Paris	3.37	315	P	Pn	06 13 02.5	+1.2
	baz=133,SNR=38						
SFIN	Lafayette	3.50	24		Pn	06 13 04.0	+1.0
SFIN				IAmb_Lg		06 14 09.9	
	comp=Z,154nm,0.7s						
SFIN	Lafayette	3.50	24	P	Pn	06 13 03.9	+0.8
	baz=206,SNR=28						
SFIN	Lafayette	3.50	24	P	Pn	06 13 03.9	+0.8
	baz=206						
S39A	Bolivar	3.51	279		Pn	06 13 04.0	+0.7
S39A				IAmb_Lg		06 13 58.3	
	comp=Z,128nm,1.0s						
S39A	Bolivar	3.51	279	P	Pn	06 13 03.8	+0.5
	baz=97,SNR=46						
W50A	Signal Mountai	3.56	123	Pn	Pn	06 13 05.1	+1.1
W50A	Signal Mountai	3.56	123	P	Pn	06 13 05.1	+1.1
	baz=305,SNR=23						
P48A	Milroy	3.58	50		Pn	06 13 04.9	+0.6
P48A	Milroy	3.58	50	P	Pn	06 13 04.8	+0.5
	baz=232,SNR=30						
P48A				P	Pn	06 13 04.8	+0.5
	baz=232,SNR=30						
UALR	University of	3.66	230	Pn	Pn	06 13 05.5	+0.2
UALR				IAmb_Lg		06 14 10.2	
	comp=Z,158nm,0.8s						
FPAL	Fort Paine	3.79	133		Pn	06 13 08.9	+1.7
R50A	Paris	3.83	72		Pn	06 13 08.9	+1.2
R50A	Paris	3.83	72	P	Pn	06 13 08.8	+1.2
	baz=255,SNR=40						
R50A				P	Pn	06 13 08.8	+1.2
	baz=255,SNR=40						
Y49A	Blount Mountai	3.92	147		Pn	06 13 09.4	+0.3
Y49A	Blount Mountai	3.92	147	P	Pn	06 13 09.3	+0.3
	baz=329,SNR=55						
V51A	Loudon	3.96	109		Pn	06 13 11.2	+1.7
V51A				IAmb_Lg		06 14 16.9	
	comp=Z,143nm,0.8s						
V51A	Loudon	3.96	109	P	Pn	06 13 11.0	+1.5
	baz=292,SNR=66						
CPCT	Cooper Cave	3.98	115	Pn	Pn	06 13 11.7	+2.0
CCAR	Cane Creek	4.00	216		Pn	06 13 10.7	+0.7
CCAR				IAmb_Lg		06 14 18.9	
	comp=Z,106nm,0.7s						
CCAR	Cane Creek	4.00	216	P	Pn	06 13 11.4	+1.5
	baz=34,SNR=7.7						
Z47A	Carrollton	4.05	169		Pn	06 13 11.3	+0.6
Z47A	Carrollton	4.05	169	P	Pn	06 13 11.3	+0.6
	baz=350,SNR=44						
P49A	Miami Univ. Ec	4.07	54		Pn	06 13 11.5	+0.5
P49A				IAmb_Lg		06 14 24.7	
	comp=Z,93nm,0.8s						
P49A	Miami Univ. Ec	4.07	54	P	Pn	06 13 11.2	+0.3
	baz=237,SNR=16						
P49A	Miami Univ. Ec	4.07	54	P	Pn	06 13 11.3	+0.3
	baz=237						
HHAR	Hobbs	4.11	259		Pn	06 13 11.9	+0.4
HHAR	Hobbs	4.11	259	P	Pn	06 13 11.7	+0.2
	baz=75						
X40A	Basin Creek Fa	4.15	231		Pn	06 13 12.2	+0.1
X51A	Calhoun	4.24	127		Pn	06 13 15.0	+1.7
X51A				IAmb_Lg		06 14 37.4	
	comp=Z,79nm,1.0s						
M44A	Midewin, Midew	4.25	9	Pn	Pn	06 13 14.1	+0.6
O48B	Farmland	4.26	43	P	Pn	06 13 13.9	+0.3
	baz=226,SNR=9.6						
O48B	Farmland	4.26	43	P	Pn	06 13 13.9	+0.3
	baz=226						
S51A	Beattyville	4.29	82		Pn	06 13 15.5	+1.4
S51A				IAmb_Lg		06 14 26.4	
	comp=Z,122nm,0.8s						
S51A	Beattyville	4.29	82	P	Pn	06 13 15.3	+1.3

	baz=266,SNR=18						
S51A				P	Pn	06 13 15.3	+1.3
	baz=266,SNR=18						
P38A	Dawn	4.34	305	Pn	Pn	06 13 15.0	+0.3
P38A	Dawn	4.34	305	P	Pn	06 13 14.9	+0.3
	baz=123,SNR=60						
TZTN	Tazewell	4.38	97		Pn	06 13 17.1	+1.8
TZTN				IAmb_Lg		06 14 29.8	
	comp=Z,127nm,0.9s						
TZTN	Tazewell	4.38	97	P	Pn	06 13 17.0	+1.6
	baz=280,SNR=32						
TZTN	Tazewell	4.38	97	P	Pn	06 13 17.0	+1.8
	baz=280						
W39A	Magazine	4.38	244		Pn	06 13 16.0	+0.6
W39A				IAmb_Lg		06 14 35.4	
	comp=Z,76nm,0.9s						
W39A	Magazine	4.38	244	P	Pn	06 13 15.9	+0.6
	baz=61,SNR=50						
W39A	Magazine	4.38	244	P	Pn	06 13 15.9	+0.6
	baz=61						
LRAL	Lakeview Retre	4.45	158		Pn	06 13 15.8	-0.4
LRAL				IAmb_Lg		06 14 36.4	
	comp=Z,74nm,0.9s						
LRAL	Lakeview Retre	4.45	158	P	Pn	06 13 15.8	-0.4
	baz=339,SNR=24						
LRAL	Lakeview Retre	4.45	158	P	Pn	06 13 15.8	-0.4
	baz=339						
TKL	Tuckaleechee C	4.45	109	Pn	Pn	06 13 17.6	+1.4
	comp=Z,0.8nm,0.3s,baz=287,slow=11,SNR=28						
TKL				Pg	Pb	06 13 27.0	-0.1
	comp=Z,5.4nm,0.3s,baz=297,slow=18,SNR=13						
TKL				Sn	Sn	06 14 09.9	+2.1
	comp=Z,5.1nm,0.3s,baz=153,slow=20,SNR=3.7						
TKL				Lg	Lg	06 14 25.7	
	comp=Z,43nm,0.3s,baz=186,slow=22,SNR=31						
	comp=Z,2.4nm,0.3s						
TKL	Tuckaleechee C	4.45	109		Pn	06 13 17.7	+1.5
TKL				IAmb_Lg		06 14 37.6	
	comp=Z,66nm,0.9s						
N47A	Urbana	4.47	34		Pn	06 13 16.2	-0.2
N47A				IAmb_Lg		06 14 38.1	
	comp=Z,106nm,0.7s						
V52A	Sevierville	4.52	106	Pn	Pn	06 13 18.5	+1.3
V52A	Sevierville	4.52	106	P	Pn	06 13 18.4	+1.3
	baz=289,SNR=37						
146A	Union	4.55	181		Pn	06 13 18.5	+0.9
W52A	Murphy	4.58	116		Pn	06 13 19.4	+1.4
W52A				IAmb_Lg		06 14 32.8	
	comp=Z,117nm,0.8s						
MIAR	Mount Ida	4.59	236		Pn	06 13 18.9	+0.7
MIAR				IAmb_Lg		06 14 35.1	
	comp=Z,79nm,0.7s						
MIAR	Mount Ida	4.59	236	P	Pn	06 13 18.8	+0.7
	baz=53,SNR=46						
MIAR	Mount Ida	4.59	236	P	Pn	06 13 18.8	+0.7
	baz=53						
O49A	Covington	4.69	49	Pn	Pn	06 13 19.7	+0.2
Q51A	Peebles	4.79	66		Pn	06 13 21.6	+0.7
Q51A	Peebles	4.79	66	P	Pn	06 13 21.6	+0.7
	baz=250,SNR=18						
Q51A				P	Pn	06 13 21.6	+0.7
	baz=250,SNR=18						
L42A	Oliver, Polo	4.83	354		Pn	06 13 21.7	+0.2
L42A				IAmb_Lg		06 14 42.7	
	comp=Z,77nm,0.9s						
WLAR	White Oak Lake	4.87	225	Pn	Pn	06 13 22.5	+0.4
N38A	Joes South For	4.90	318		Pn	06 13 22.1	-0.3
143A	Socs Landing,	4.91	205	Pn	Pn	06 13 22.5	-0.1
143A				IAmb_Lg		06 14 54.0	
	comp=Z,75nm,0.8s						
Z51A	Franklin	4.95	140	Pn	Pn	06 13 24.0	+0.8
Z41A	Richland Creek	5.03	220	Pn	Pn	06 13 24.1	-0.1
Z41A				IAmb_Lg		06 14 58.9	
	comp=Z,91nm,0.8s						
L40A	Anamosa	5.17	341		Pn	06 13 26.2	+0.1
L40A				IAmb_Lg		06 15 03.1	
	comp=Z,70nm,0.8s						
L40A	Anamosa	5.17	341	P	Pn	06 13 26.2	+0.1
	baz=160,SNR=20						
V53A	Saluda	5.18	105		Pn	06 13 27.4	+1.0
V53A				IAmb_Lg		06 14 56.6	
	comp=Z,59nm,0.7s						
V53A	Saluda	5.18	105	P	Pn	06 13 27.3	+1.0
	baz=289,SNR=22						
V53A				P	Pn	06 13 27.3	+1.0
	baz=289,SNR=22						
L46A	Eue Claire	5.23	22	Pn	Pn	06 13 27.0	0.0
N49A	Columbus Grove	5.26	43	IAmb_Lg		06 14 59.8	
	comp=Z,66nm,0.8s						
K43A	Burlington	5.52	5	Pn	Pn	06 13 31.0	0.0
K43A				IAmb_Lg		06 15 05.1	
	comp=Z,73nm,0.9s						
Q52A	Bidwell	5.56	69		Pn	06 13 32.2	+0.7
Q52A				IAmb_Lg		06 15 09.3	
	comp=Z,64nm,0.9s						
Q52A	Bidwell	5.56	69	P	Pn	06 13 32.5	+1.0
	baz=254,SNR=22						
Q52A				P	Pn	06 13 32.5	+1.0
	baz=254,SNR=22						
ACSO	Alum Creek Sta	5.57	55		Pn	06 13 31.8	+0.2
ACSO				IAmb_Lg		06 15 12.4	
	comp=Z,85nm,0.8s						
TUL1	Leonard	5.65	259	Pn	Pn	06 13 32.2	-0.5
TUL1				IAmb_Lg		06 15 06.1	
	comp=Z,66nm,0.9s						
TUL1	Leonard	5.65	259	P	Pn	06 13 32.3	-0.5
	baz=75,SNR=20						
TUL1	Leonard	5.65	259	P	Pn	06 13 32.3	-0.5
	baz=75						
250A	Grady	5.66	156	IAmb_Lg		06 15 12.2	
	comp=Z,72nm,0.8s						
R53A	Hurricane	5.66	76		Pn	06 13 33.8	+0.9
R53A				IAmb_Lg		06 15 16.6	
	comp=Z,68nm,0.9s						
152A	Waverly Hall	5.70	141	IAmb_Lg		06 15 12.4	
	comp=Z,70nm,0.7s						
SCIA	State Center	5.74	326	Pn	Pn	06 13 33.8	-0.1
SCIA	State Center	5.74	326	S	Sn	06 14 37.2	-2.4
	baz=144						
U54A	Nelsons Funny	5.76	95	Pn	Pn	06 13 35.2	+0.9
JFWS	Jewell Farm	5.80	351		Pn	06 13 34.9	+0.2
JFWS				IAmb_Lg		06 15 21.3	
	comp=Z,55nm,0.7s						
JFWS	Jewell Farm	5.80	351	P	Pn	06 13 35.0	+0.2
	baz=170,SNR=35						
JFWS	Jewell Farm	5.80	351	P	Pn	06 13 34.9	+0.2
	baz=170						
X37A	Clayton	5.82	245		Pn	06 13 35.6	+0.5
X37A				IAmb_Lg		06 15 12.0	
	comp=Z,68nm,0.8s						
X37A	Clayton	5.82	245	P	Pn	06 13 35.6	+0.5
	baz=61,SNR=15						
GOGA	Godfrey	5.86	128	IAmb_Lg		06 15 13.8	
	comp=Z,76nm,0.7s						
P52A	Corning	5.88	63		Pn	06 13 36.5	+0.6
L48A	N Adams	5.89	35	Pn	Pn	06 13 36.0	-0.1
T35A	Sooner Cattle	6.05	270	Pn	Pn	06 13 37.9	-0.3
T35A				IAmb_Lg		06 15 25.5	
	comp=Z,90nm,0.8s						
S54A	Dingess, Beckl	6.11	82		Pn	06 13 39.5	+0.5
S54A				IAmb_Lg		06 15 26.3	
	comp=Z,44nm,0.7s						
HODGE	Hodges	6.20	117	Pn	Pn	06 13 40.9	+0.7
BRAL	Brewton	6.21	165	IAmb_Lg		06 15 36.3	
	comp=Z,86nm,0.8s						
M50A	Fremont	6.22	46	IAmb_Lg		06 15 30.3	
	comp=Z,52nm,0.7s						
O52A	Adamsville	6.29	60	IAmb_Lg		06 15 28.1	
	comp=Z,90nm,1.0s						
KSU1	Kansas State U	6.33	290		Pn	06 13 41.6	-0.3
KSU1	Kansas State U	6.33	290	P	Pn	06 13 41.7	-0.3
	baz=105,SNR=17						
KSU1	Kansas State U	6.33	290	P	Pn	06 13 41.7	-0.3
	baz=105						
KSU1				Sb	Sb	06 15 23.1	+8.6
	baz=105						
N51A	Ashland	6.33	52	IAmb_Lg		06 15 29.5	
	comp=Z,79nm,0.9s						
P53A	Whipple	6.37	67		Pn	06 13 42.9	+0.2
P53A				IAmb_Lg		06 15 32.2	
	comp=Z,74nm,0.9s						
P53A	Whipple	6.37	67	P	Pn	06 13 42.9	+0.2
	baz=252,SNR=22						
P53A				P	Pn	06 13 42.9	+0.2
	baz=252,SNR=22						
V55A	Taylorsville	6.38	100	IAmb_Lg		06 15 34.3	
	comp=Z,49nm,0.8s						
KMSC	Kings Mountain	6.50	106	Pn	Pn	06 13 45.3	+1.0
KMSC				IAmb_Lg		06 15 35.2	
	comp=Z,56nm,0.9s						
AAM	Ann Arbor	6.53	37	IAmb_Lg		06 15 48.5	
	comp=Z,60nm,0.8s						
154A	Montrose	6.63	132	IAmb_Lg		06 15 58.0	
	comp=Z,72nm,0.7s						
Q54A	Coxs Mills	6.65	72		Pn	06 13 46.9	+0.4
Q54A				IAmb_Lg		06 15 45.8	
	comp=Z,47nm,0.9s						
Q54A	Coxs Mills	6.65	72	P	Pn	06 13 46.8	+0.4
	baz=257						
Q54A				P	Pn	06 13 46.8	+0.4
	baz=257						
I42A	Draeger Farm,	6.69	0	Pn	Pn	06 13 46.4	-0.5
I42A				IAmb_Lg		06 15 44.7	
	comp=Z,43nm,0.7s						
I42A	Draeger Farm,	6.69	0	P	Pn	06 13 47.8	+0.8
	baz=180,SNR=13						
O53A	New Philadelph	6.78	61		Pn	06 13 47.9	-0.3
O53A				IAmb_Lg		06 15 47.8	
	comp=Z,79nm,0.9s						
I40A	Norwalk	6.81	350	Pn	Pn	06 13 48.4	-0.2
I40A				IAmb_Lg		06 15 57.9	
	comp=Z,38nm,0.7s						
JSC	Jenkinsville	6.90	113	IAmb_Lg		06 15 48.0	
	comp=Z,44nm,0.8s						
R55A	Marlinton	7.09	79	Pn	Pn	06 13 52.5	0.0
FNO	Franklin	7.09	257	Pn	Pn	06 13 52.0	-0.5
N53A	Lisbon	7.28	58	Pn	Pn	06 13 54.8	-0.3
M52A	Chesterland	7.31	51	Pn	Pn	06 13 55.5	-0.1
H43A	Windswept, Lux	7.32	7	Pn	Pn	06 13 55.5	-0.1
H43A				IAmb_Lg		06 16 19.4	
	comp=Z,44nm,0.7s						
O54A	Avella	7.34	63	Pn	Pn	06 13 56.0	+0.1
O54A				IAmb_Lg		06 16 02.7	
	comp=Z,61nm,0.9s						
BIRD	Birdtown, Kers	7.34	108	Pn	Pn	06 13 56.2	+0.2
K50A	Casco	7.39	39	IAmb_Lg		06 16 04.9	
	comp=Z,64nm,0.8s						
W57A	Gilead	7.53	103	Pn	Pn	06 13 58.7	+0.2
W57A				IAmb_Lg		06 16 13.4	
	comp=Z,35nm,0.8s						
MCWV	Mont Chateau	7.56	68	Pn	Pn	06 13 58.2	-0.8
MCWV				IAmb_Lg		06 16 10.0	
	comp=Z,44nm,1.0s						
I37A	Lemond, Waseca	7.60	335	IAmb_Lg		06 16 12.0	
	comp=Z,38nm,0.9s						
Y57A	Sumter	7.66	112	IAmb_Lg		06 16 33.2	
	comp=Z,70nm,0.8s						
M53A	WI Miller and	7.69	54	Pn	Pn	06 14 00.6	-0.1
M53A	WI Miller and	7.69	54	P	Pn	06 14 00.4	-0.3
	baz=239						
G40A	Rib Lake	8.12	354	Pn	Pn	06 14 06.3	-0.3
G40A	Rib Lake	8.12	354	P	Pn	06 14 06.1	-0.5
	baz=173,SNR=9.7						
ALLY	Alegheny Colle	8.14	54		Pn	06 14 06.7	-0.1
ALLY				IAmb_Lg		06 16 24.6	
	comp=Z,39nm,0.8s						
I49A	Point Hope	8.19	33	IAmb_Lg		06 16 51.0	
	comp=Z,49nm,0.9s						
NHSC	New Hope	8.26	117	IAmb_Lg		06 16 31.6	
	comp=Z,58nm,0.7s						
ERPA	Erie	8.48	52	IAmb_Lg		06 16 33.2	
	comp=Z,33nm,0.7s						
SPMN	Marine on St.	8.53	341	Pn	Pn	06 14 11.9	-0.3
ECSD	EROS Data Cent	8.76	321	P	Pn	06 14 14.2	-1.1
	baz=136,SNR=16						
JSRW	J. Sargeant Re	8.82	83	Pn	Pn	06 14 15.9	-0.4
R58B	Mineral	8.83	82	Pn	Pn	06 14 16.0	-0.3
COWI	Conover	8.90	359		Pn	06 14 17.1	-0.2
COWI				IAmb_Lg		06 16 54.5	
	comp=Z,28nm,1.1s						
M55A	Ridgway	8.97	58	Pn	Pn	06 14 18.3	0.0
T59A	Double "B" Far	9.12	88	Pn	Pn	06 14 19.4	-0.8
K31A	O'Neill	9.28	309	IAmb_Lg		06 17 17.3	
	comp=Z,54nm,0.8s						
E43A	Lone Tree Farm	9.29	8	Pn	Pn	06 14 21.5	-1.1
F36A	Milaca	9.31	340		Pn	06 14 22.4	-0.5
WVNY	West Valley, N	9.51	54	Pn	Pn	06 14 25.7	0.0
WVNY	West Valley, N	9.51	54	P	Pn	06 14 25.5	-0.2
	baz=240,SNR=6.8						
E38A	The Farm, Brul	9.60	349	IAmb_Lg		06 17 28.9	
	comp=Z,26nm,1.1s						
E46A	Sault Ste Mari	9.80	19	Pn	Pn	06 14 28.1	-1.5
E46A				IAmb_Lg		06 17 27.8	
	comp=Z,24nm,0.9s						
D41A	Chassel	9.86	2	IAmb_Lg		06 17 32.3	
	comp=Z,38nm,0.8s						
M57A	Sunshine Farm,	10.06	62	Pn	Pn	06 14 33.0	-0.2
N58A	Sunbury	10.20	65	Pn	Pn	06 14 33.6	-1.5
SADO	Sadowa	10.59	41	Pn	Pn	06 14 39.4	-1.0
	comp=Z,0.3nm,0.3s,baz=270,slow=10,SNR=1.8						
SADO				Sn	Sn	06 16 29.7	-9.0
	comp=Z,0.9nm,0.3s,baz=280,slow=9.0,SNR=3.9						
SADO				Lg	Lg	06 17 30.1	
	comp=Z,1.7nm,0.3s,baz=268,slow=8.7,SNR=2.2						
	comp=Z,0.9nm,0.3s						
ULM	Lac du Bonnet	13.97	341	Pn	Pn	06 15 21.8	-4.7
	comp=Z,0.5nm,0.3s,baz=162,slow=10,SNR=2.3						
ULM				Lg	Lg	06 19 17.5	
	comp=Z,0.3nm,0.3s,baz=67,slow=22,SNR=1.3						
	comp=Z,1.8nm,0.5s						
ANMO	Albuquerque	14.34	266	Lg	Lg	06 19 37.1	
	comp=Z,0.1nm,0.3s,baz=162,slow=22,SNR=1.9						
TXAR	Lajitas Array	14.58	242	Pn	Pn	06 15 32.1	-3.1
	comp=Z,0.1nm,0.3s,baz=60,slow=13,SNR=5.9						
TXAR				Lg	Lg	06 19 40.6	
	comp=Z,0.1nm,0.3s,baz=69,slow=25,SNR=2.4						
	comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	16.73	296	Pn	Pn	06 16 03.4	+0.1
	comp=Z,0.1nm,0.3s,baz=105,slow=18,SNR=3.0						
PDAR				Lg	Lg	06 20 45.4	
	baz=105,slow=34,SNR=1.8						
	comp=Z,0.1nm,0.5s						
ILAR	Eielson Array	43.48	328	P	P	06 20 11.3	-0.2
	comp=Z,0.2nm,0.5s,baz=100,slow=8.6,SNR=1.9						
	comp=Z,0.2nm,0.5s						

IDC ***01*** *06:16:07.9±3.0, 36°.08N×70°.87E, h87^{km}±26^{km}, mb3.8/19, mbtmp4.2/23, MS2.9/2, Error ellipse: s-maj=20.4km s-min=14.7km az=10.0*

MOS ***01*** *06:16:11.0±1.0, 36°.42N×70°.86E, h113^{km}, mb4.4/18, Error ellipse: s-maj=7.6km s-min=3.7km az=81.6*

NEIC ***01*** *06:16:12.7±2.7, 36°.40N±0°.04×70°.73E±0°.07, h115^{km}±5^{km}, mb4.4/37, Error ellipse: s-maj=8.5km s-min=5.0km az=101.0*

BJI ***01*** *06:16:12.2±0.0, 36°.60N×70°.74E, h127^{km}, mb4.5/20, mB4.6/8*

NNC ***01*** *06:16:12.3±2.2, 36°.58N×70°.67E, h117^{km}±24^{km}, mb4.0, mpv4.6, Error ellipse: s-maj=21.4km s-min=10.9km az=157.0*

ISC 01 06:16:11.0±0.4**, 36°.42N**±0°.04×**70°.80E**±0°.04**, h100**^{km}**, n234,** σ**1^{s}.65**/249**, mb4.3**/45**, 12C-10D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.36	218	PN	Pn	06 16 51.2	+2.7
KBL	Kabul	2.36	218		Pn	06 16 51.2	+2.7
KBL				Sn	Sn	06 17 20.0	+2.8
CHGR	Chuyangaron	2.58	330	PN	Pn	06 16 53.3	+2.0
CHGR	Chuyangaron	2.58	330		Pn	06 16 53.3	+2.0
GAR	Garm	2.60	352		Pn	06 16 54.3	+2.8
CEP	Cherat	2.75	160	P	Pn	06 16 55.8	+2.3
CEP				S	Sn	06 17 30.0	+3.8
DRK	Karamyk	3.15	14		Pn	06 17 02.4	+3.4
CHCP	Chirah Chowk	3.42	143	P	Pn	06 17 04.4	+2.0
NIL	Nilore	3.42	143	PN	Pn	06 17 04.1	+1.7
NIL	Nilore	3.42	143	Pn	Pn	06 17 04.1	+1.7
BTK	Batken	3.63	0	PN	Pn	06 17 08.9	+3.7
BTK	Batken	3.63	0		Pn	06 17 08.9	+3.7
THW	Thamme Wali	3.70	168	P	Pn	06 17 07.5	+1.3
SARP	Sargodha	4.75	160	P	Pn	06 17 20.3	0.0
KSH	Kashi	5.12	51	P	Pn	06 17 24.4	-1.0
KSH				S	Sn	06 18 14.8	-8.5
KSH				smax	smax		
	comp=N,1µm,0.7s						
KSH				smax	smax		
	comp=E,650nm,0.5s						
IUG	Iuzhnay	5.75	354	*d* *i*PN	Pn	06 17 35.5	+1.7
IUG	Iuzhnay	5.75	354	⇓*i*P	Pn	06 17 35.5	+1.7
	baz=354						
AML	Almayashu	6.12	21	P	Pn	06 17 40.6	+1.4
	SNR=269						
UCH	Uchtor	6.47	25	P	Pn	06 17 45.1	+1.2
	SNR=31						
DZA	Taraz	6.47	3	*e*PN	Pn	06 17 45.2	+1.6
DZA	Taraz	6.47	3	*e*P	Pn	06 17 45.3	+1.6
	baz=3.6						
DZA				*e*S	Sn	06 18 57.4	+1.4
	baz=3.6						
BRLS	Borolday	6.64	354	*e*PN	Pn	06 17 43.6	-2.3
BRLS	Borolday	6.64	354	*e*P	Pn	06 17 43.6	-2.3
	baz=353						
EKS2	Erkin-Say	6.64	19	P	Pn	06 17 47.3	+1.3
	SNR=35						
KK31	Karatay Array	6.67	358	PN	Pn	06 17 47.3	+0.9
KK31	Karatay Array	6.67	358		Pn	06 17 47.4	+1.0
KK31	Karatay Array	6.67	358	P	Pn	06 17 47.3	+0.9
	35nm,0.5s,baz=189,slow=14,SNR=386						
KK31				⇓S	Sn	06 18 58.9	-2.0
	8.8nm,0.3s,baz=177,slow=34,SNR=3.7						
KKAR	Karatay Array	6.67	358	PN	Pn	06 17 47.4	+1.0
KKAR	Karatay Array	6.67	358		Pn	06 17 47.4	+1.0
AAK	Ala-Archa	6.83	24	P	Pn	06 17 50.0	+1.4
	28nm,0.3s,baz=192,slow=4.5,SNR=84						
AAK				S	Sn	06 19 03.3	-1.6
	65nm,0.7s,baz=148,slow=23,SNR=16						
AAK	Ala-Archa	6.83	24	*i* PN	Pn	06 17 49.9	+1.3
AAK	Ala-Archa	6.83	24	Pn	Pn	06 17 49.9	+1.3
BHK	Bhakra	6.83	135	*e*PN	Pn	06 17 47.8	-0.8
BHK				*e*SN	Sn	06 19 01.8	-3.1
KBK	Karagaybulak	7.00	26	P	Pn	06 17 53.5	+2.5
	SNR=13						
FRU1	Bishkek	7.03	24	PN	Pn	06 17 53.1	+1.8
FRU1	Bishkek	7.03	24		Pn	06 17 53.0	+1.8
ULHL	Ulahol	7.18	34	P	Pn	06 17 54.2	+0.8
	SNR=18						
CHMS	Chumysh	7.24	24	P	Pn	06 17 55.1	+1.1
	SNR=38						
CHMS	Chumysh	7.24	24	PN	Pn	06 17 55.1	+1.1
CHMS	Chumysh	7.24	24	⇑P	Pn	06 17 55.2	+1.2
	27nm,0.3s						
CHMS				⇑S	Sn	06 19 13.5	-1.1
	77nm,0.9s						
BOOM	Boomskoye usch	7.25	32	PN	Pn	06 17 55.2	+0.9
BOOM	Boomskoye usch	7.25	32		Pn	06 17 55.2	+0.9
HRA	Herat	7.28	256	Pn	Pn	06 17 55.5	+0.7
USP	Ospenovka	7.40	21	P	Pn	06 17 57.1	+0.8
	SNR=12						
TKM2	Tokmak 2	7.47	28	P	Pn	06 17 58.1	+0.8
	SNR=30						
TKM2	Tokmak 2	7.47	28	PN	Pn	06 17 57.5	+0.2
TKM2	Tokmak 2	7.47	28	⇑P	Pn	06 17 57.5	+0.2
	14nm,0.7s						
TKM2				S	Sn	06 19 20.0	-0.5
SMLA	Simla	7.48	133	*e*P	Pn	06 17 56.6	-0.7
SMLA				*e*S	Sn	06 19 15.4	-5.1
SMLA				IAML		06 19 20.3	
	comp=N,305nm,0.4s						
SMLA				IAML		06 19 21.6	
	comp=E,239nm,0.3s						
KDJ	Kajisay	7.54	39	PN	Pn	06 17 59.6	+1.2
KDJ	Kajisay	7.54	39		Pn	06 17 59.6	+1.2
TARG	Taragay, Kyrgy	7.60	44		Pn	06 17 60.0	+0.7
SGDS	Sogindy	7.61	22	*e*PN	Pn	06 17 59.4	+0.3
SGDS				pmax	pmax		
	comp=Z,4.0nm,0.2s						
SGDS	Sogindy	7.61	22	*e*P	Pn	06 17 59.4	+0.3
	comp=Z,4.5nm,0.2s,baz=22						
TNSS	Tian-Shan	8.12	34	*e*PN	Pn	06 18 06.8	+0.4
TNSS	Tian-Shan	8.12	34	*e*P	Pn	06 18 06.8	+0.4
	baz=34						
MDOK	Medeo	8.27	34	*e*PN	Pn	06 18 09.3	+1.2
MDOK	Medeo	8.27	34	*e*P	Pn	06 18 09.4	+1.2
	baz=34						
MDOK				*e*S	Sn	06 19 41.2	+1.3
	baz=34						
MDOK	Medeo	8.27	34	⇑P	Pn	06 18 08.9	+0.7
	comp=Z,12nm,0.6s						
PRZ	Przheval'sk	8.43	42	PN	Pn	06 18 11.3	+0.9
PRZ	Przheval'sk	8.43	42		Pn	06 18 11.3	+0.9
KUU	Kurty	8.58	28	*e*PN	Pn	06 18 12.3	+0.1
KUU	Kurty	8.58	28	*e*P	Pn	06 18 12.4	+0.1
	baz=28						
DDI	Dehra Dun	8.59	133	*e*x	x	06 17 44.7	
SATY	Saty	8.84	39	*e*PN	Pn	06 18 17.6	+1.7
SATY	Saty	8.84	39	*e*P	Pn	06 18 17.6	+1.7
	baz=40						
BTLS	Baital	8.95	15	*i* PN	Pn	06 18 17.2	-0.1
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BTLS	Baital	8.95	15	*i* P	Pn	06 18 17.3	-0.1
	comp=Z,2.5nm,0.5s,baz=15						
BTLS				*e*S	Sn	06 19 56.2	-0.1
	baz=15						
UZB	Uzynbulak	9.22	41	*e*P	Pn	06 18 22.7	+1.6
UZB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
UZB	Uzynbulak	9.22	41	*e*P	Pn	06 18 22.8	+1.6
	comp=Z,1.9nm,0.4s,baz=41						
KPKS	Kokpek	9.28	38	*e*P	Pn	06 18 22.2	+0.4
KPKS				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KPKS	Kokpek	9.28	38	*e*P	Pn	06 18 22.2	+0.4
	comp=Z,1.4nm,0.2s,baz=39						
NDI	New Delhi	9.42	143	*e*P	Pn	06 18 26.0	+2.2
NDI				*e*S	Sn	06 20 01.0	-7.0
PDGK	Podgornoye	9.60	41	P	Pn	06 18 24.8	-1.4
PDGK	Podgornoye	9.60	41	⇓P	Pn	06 18 24.8	-1.4
	comp=Z,6.2nm,0.9s						
GEYT	Alibeck	10.23	282	P	Pn	06 18 33.2	-1.7
	comp=Z,7.1nm,0.4s,baz=134,slow=6.4,SNR=12						
GEYT				S	Sn	06 20 23.2	-4.4
	comp=Z,5.2nm,0.3s,baz=107,slow=19,SNR=2.4						
GEYT	Alibeck	10.23	282		Pn	06 18 33.9	-1.0
GYA0	ALIBECK ARRAY	10.23	282	P	Pn	06 18 34.5	-0.3
GYA0				S	Sn	06 20 23.2	-4.4
GYA0B	ALIBECK ARRAY	10.23	282		Pn	06 18 32.9	-1.9
GYA0B	ALIBECK ARRAY	10.23	282	⇓P	Pn	06 18 34.5	-0.3
GYA0B				⇑S	Sn	06 20 23.2	-4.4
TDK	Taldyqorghan	10.33	32	*e*P	Pn	06 18 37.8	+1.8
TDK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TDK	Taldyqorghan	10.33	32	*e*P	Pn	06 18 37.9	+1.9
	comp=Z,6.5nm,0.5s,baz=32						
OTUK	Ortayu	11.87	5	P	Pn	06 18 54.2	-2.5
OTUK	Ortayu	11.87	5	⇑P	Pn	06 18 54.2	-2.5
	comp=Z,9.9nm,0.8s						
JHNI	Jhansi	12.78	147	*e*P	Pn	06 19 05.7	-3.2
JHNI				*e*S	Sn	06 21 17.7	-12
PYUN	Piuthan	13.23	125	*e*Pn	Pn	06 19 11.8	-3.2
PYUN				*e*Sn	Sn	06 21 28.5	-12
MAKZ	Makanchi	13.31	35	P	Pn	06 19 17.1	+1.3
MAKZ	Makanchi	13.31	35	Pn	Pn	06 19 17.1	+1.3
MAKZ	Makanchi	13.31	35	⇑P	Pn	06 19 14.9	-0.9
	comp=Z,9.2nm,0.8s						
MK31	Makanchi Array	13.45	36	P	Pn	06 19 18.8	+1.2
MK31	Makanchi Array	13.45	36		Pn	06 19 18.8	+1.2
MKAR	Makanchi Array	13.45	36	P	Pn	06 19 17.1	-0.5
	comp=Z,2.8nm,0.7s,baz=226,slow=14,SNR=20						
MKAR	Makanchi Array	13.45	36	*i* P	Pn	06 19 19.6	+2.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DANN	Dangsing	13.58	123	*e*Pn	Pn	06 19 16.5	-3.2
DANN				*e*Sn	Sn	06 21 36.0	-13
	comp=Z,55nm,0.6s						
KOLN	Koldanda	13.85	125	*e*Pn	Pn	06 19 19.9	-3.2
KOLN				*e*Sn	Sn	06 21 42.6	-13
	comp=Z,36nm,0.5s						
BHPL	Bhopal	14.33	155	*e*P	Pn	06 19 25.9	-3.3
BHPL				*e*S	Sn	06 21 54.4	-13
GKN	Gorkha	14.40	122	*e*Pn	Pn	06 19 27.1	-3.1
GKN				*e*Sn	Sn	06 21 54.5	-14
	comp=Z,40nm,0.4s						
WMQ	Urumqi	14.87	55	*e*P	Pn	06 19 38.7	+2.7
DMN	Daman	14.97	122	*e*Pn	Pn	06 19 34.8	-2.7
DMN				*e*Sn	Sn	06 22 09.0	-14
KKN	Kakani	14.97	121	*e*Pn	Pn	06 19 34.7	-2.9
KKN				*e*Sn	Sn	06 22 09.1	-14
	comp=Z,9.0nm,0.3s						
AB31	Akbulak array	15.07	332	*e*P	Pn	06 19 37.3	-1.1
AB31				S	Sn	06 22 16.7	-8.0
AB31	Akbulak array	15.07	332	⇓P	Pn	06 19 37.3	-1.1
	comp=Z,11nm,0.5s,baz=141,slow=12,SNR=364						
ABKAR	Akbulak array	15.07	332		Pn	06 19 37.6	-0.9
ABKAR				IAmb	IAmb	06 19 40.0	

	comp=Z,19nm,0.6s						
ABKAR	Akbulak array	15.07	332	Pn	Pn	06 19 37.9	-0.6
PKIN	Phulchoki	15.19	121	ePn	Pn	06 19 37.7	-2.6
PKIN				eSn	Sn	06 22 13.5	-15
	comp=Z,48nm,0.5s						
PKI	Pulchoki	15.20	121	ePn	Pn	06 19 37.5	-3.0
PKI				eSn	Sn	06 22 13.4	-15
	comp=Z,46nm,0.8s						
KURBB	Kurchatov Arra	15.25	19	P	Pn	06 19 37.8	-2.8
	comp=Z,9.4nm,0.7s,baz=212,slow=10,SNR=10.0						
KURBB	Kurchatov Arra	15.25	19	P	Pn	06 19 40.7	+0.2
KURBB	Kurchatov Arra	15.25	19	⇑P	Pn	06 19 40.8	+0.2
	comp=Z,13nm,0.8s						
GUN	Gumba	15.32	119	ePn	Pn	06 19 38.7	-3.3
GUN				eSn	Sn	06 22 17.2	-14
	comp=Z,53nm,0.7s						
KURK	Kurchatov	15.36	19	⇓eP	Pn	06 19 44.2	+2.3
KURK	Kurchatov	15.36	19	Pn	Pn	06 19 41.3	-0.7
SEM	Semipalatinsk	15.55	23	eP	Pn	06 19 45.2	+0.5
SEM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SEM	Semipalatinsk	15.55	23	eP	Pn	06 19 45.2	+0.5
	comp=Z,4.6nm,0.8s,baz=23						
JIRN	Jiri	15.69	119	ePn	Pn	06 19 44.4	-2.3
JIRN				eSn	Sn	06 22 25.4	-15
	comp=Z,5.6nm,1.0s						
RAMN	Ramite	16.41	121	ePn	Pn	06 19 53.6	-2.0
RAMN				eSn	Sn	06 22 43.3	-14
	comp=Z,20nm,0.3s						
BRVK	Borovoye	16.64	359	P	Pn	06 19 57.8	-0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BRVK	Borovoye	16.64	359		Pn	06 19 57.8	-0.1
BRVK	Borovoye	16.64	359	⇓P	Pn	06 19 57.4	-0.5
	comp=Z,5.1nm,0.6s						
AKTO	Aktyubinsk	16.77	331	P	Pn	06 20 00.8	+1.3
	comp=Z,22nm,0.5s,baz=143,slow=12,SNR=50						
AKTO				S	Sn	06 22 53.3	-12
	comp=Z,2.5nm,0.8s,baz=118,slow=14,SNR=1.9						
AKTO	Aktyubinsk	16.77	331	⇓P	Pn	06 19 59.7	+0.2
	comp=Z,24nm,0.6s						
TAPN	Taplejung	16.95	117	ePn	Pn	06 20 00.9	-1.4
TAPN				eSn	Sn	06 22 55.0	-16
	comp=Z,16nm,0.6s						
ODAN	Odare	17.02	119	ePn	Pn	06 20 01.6	-1.4
ODAN				eSn	Sn	06 22 57.0	-15
	comp=Z,29nm,0.6s						
ZAA0	Zalesovo Array	20.05	25	P	P	06 20 35.9	0.0
ZAA0				IAmb	IAmb	06 20 37.6	
	comp=Z,17nm,0.6s						
ZAA0	Zalesovo Array	20.05	25	⇑P	P	06 20 34.6	-1.3
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	20.05	25	P	P	06 20 36.3	+0.4
	comp=Z,20nm,0.6s,baz=222,slow=11,SNR=64						
	comp=Z,20nm,0.6s						
ZALV	Zalesovo Beam	20.05	25	iP	P	06 20 36.2	+0.3
ZALV				pmax	pmax		
	comp=Z,20nm,0.6s						
ZALV	Zalesovo Beam	20.05	25	P	P	06 20 35.9	0.0
GROC	Groznyy	20.32	297	P	P	06 20 38.7	-0.3
GROC				e*PP	pP	06 21 00.1	+1.8
GROC				e*SS	sS	06 24 55.3	+1.4
GROC				pmax	pmax		
	comp=Z,20nm,0.6s						
GNI	Garni	20.77	288	P	P	06 20 44.3	+0.4
	comp=Z,21nm,0.8s,baz=162,slow=24,SNR=4.4						
	comp=Z,21nm,0.8s						
GNI	Garni	20.77	288	P	P	06 20 44.0	+0.1
GNI				IAmb	IAmb	06 20 49.6	
	comp=Z,29nm,0.9s						
SHL	Shillong	21.02	115	P	P	06 20 47.0	+0.2
SHL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SHL	Shillong	21.02	115	P	P	06 20 47.0	+0.2
SVE	Sverdlovsk	21.52	345	eP	P	06 20 53.5	+1.8
SVE				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEI	Tsey	21.63	295	eP	P	06 20 55.0	+1.8
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	Arti	21.65	341	P	P	06 20 54.5	+1.4
	comp=Z,3.7nm,0.6s,baz=153,slow=4.6,SNR=14						
ARU				LR	LR	06 29 56.6	
	comp=Z,22nm,21.4s,baz=94,slow=38						
	comp=Z,3.7nm,0.6s						
ARU	Arti	21.65	341c	iP	P	06 20 54.8	+1.7
ARU						06 21 28.1	
ARU				S	S	06 24 48.6	+1.8
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	Arti	21.65	341	P	P	06 20 52.2	-0.9
ARU				IAmb	IAmb	06 20 57.7	
	comp=Z,9.8nm,0.7s						
KBZ	Khabaz	22.49	298	P	P	06 21 04.0	+1.9
	comp=Z,1.5nm,0.7s,baz=128,slow=7.7,SNR=3.8						
	comp=Z,1.5nm,0.7s						
KBZ	Khabaz	22.49	298	⇑eP	P	06 21 03.9	+1.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KVAR	Kislovodsk Arr	22.68	298	P	P	06 21 04.4	+0.3
	comp=Z,1.7nm,0.5s,baz=307,slow=19,SNR=1.2						
	comp=Z,1.7nm,0.5s						
KIV	Kislovodsk	22.68	298	eP	P	06 21 04.6	+0.5
KIV				eS	S	06 25 04.6	-0.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	Kislovodsk	22.68	298	P	P	06 21 04.4	+0.4
BELG	Belogornoye	22.85	322	P	P	06 21 06.3	+0.8
	comp=Z,15nm,0.7s,baz=334,slow=5.6,SNR=5.6						
	comp=Z,15nm,0.7s						
BELG	Belogornoye	22.85	322	⇓eP	P	06 21 05.7	+0.2
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA	Gaotai	23.04	74	eP	P	06 21 08.0	+0.3
GTA				pP	pP	06 21 31.1	+2.4
KNGR	Kungurtug, Tuv	23.84	45	iP	P	06 21 16.9	+2.0
SOC	Sochi	24.76	296	eP	P	06 21 23.4	+0.3
SOC				eS	S	06 25 37.7	-0.4
SOC				pmax	pmax		
	comp=Z,14nm,0.7s						
ANN	Anapa	26.53	299	eP	P	06 21 36.6	-2.5
ANN				e*PP	pP	06 22 02.9	+1.3
ANN				e		06 22 25.9	
ANN				eS	S	06 26 01.1	-4.9
ANN				pmax	pmax		
	comp=Z,11nm,0.7s						
PZH	PanZhiHua	28.08	102	P	P	06 21 54.7	+1.4
PZH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
BRTR	Keskin Array B	29.30	288	P	P	06 22 04.5	+0.4
	comp=Z,0.5nm,0.6s,baz=106,slow=8.1,SNR=3.0						
	comp=Z,0.5nm,0.6s						
OBN	Obninsk	29.89	320	eP	P	06 22 10.5	+1.7
OBN				e		06 23 14.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKASG	Malin Array Be	32.87	309	P	P	06 22 35.2	+0.2
	comp=Z,0.5nm,0.4s,baz=79,slow=8.1,SNR=6.4						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	32.87	309	iP	P	06 22 36.2	+1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	32.87	309	P	P	06 22 33.9	-1.1
NRIK	Noril'sk	34.23	10	iP	P	06 22 46.0	-0.7
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR	Muntele Rosu	34.68	299	P	P	06 22 51.5	+0.5
	comp=Z,2.5nm,0.8s,baz=112,slow=20,SNR=4.8						
	comp=Z,2.5nm,0.8s						
FIA1	FINESS Array S	37.46	326	P	P	06 23 15.9	+1.6
FIA1				IAmb	IAmb	06 23 33.0	
	comp=Z,12nm,1.4s						
FINES	FINESS Array B	37.46	326	P	P	06 23 15.8	+1.5
	comp=Z,3.3nm,0.6s,baz=113,slow=8.7,SNR=28						
FINES				LR	LR	06 40 51.2	
	comp=Z,30nm,18.4s,baz=34,slow=39						
	comp=Z,3.3nm,0.6s						
FINES	FINESS Array B	37.46	326	P	P	06 23 15.9	+1.6
FINES	FINESS Array B	37.46	326	P	P	06 23 15.9	+1.6
NJ2	Nanjing	39.64	82	eP	P	06 23 32.9	-0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KEV	Kevo	40.81	338	P	P	06 23 43.6	+1.5
KEV				pmax	pmax		
	comp=Z,17nm,1.2s						
KEV	Kevo	40.81	338	P	P	06 23 43.6	+1.5
ARA0	ARCESS Array S	41.15	338	eP	P	06 23 46.1	+1.2
ARCES	ARCESS Array B	41.15	338	P	P	06 23 46.5	+1.6
	comp=Z,3.3nm,0.6s,baz=113,slow=8.3,SNR=29						
	comp=Z,3.3nm,0.6s						
ARCES	ARCESS Array B	41.15	338	P	P	06 23 46.6	+1.6
ARCES				IAmb	IAmb	06 23 47.3	
	comp=Z,5.4nm,0.8s						
KTK1	Kautokeino	41.62	336	eP	P	06 23 49.7	+0.9
HAMF	Hammerfest	42.24	339	eP	P	06 23 55.4	+1.7
JETT	Jettan, Norway	42.77	337	eP	P	06 23 58.5	+0.4
HFS	Hagfors	43.03	322	P	P	06 24 00.8	+0.5
	comp=Z,0.7nm,0.4s,baz=260,slow=41,SNR=5.5						
	comp=Z,0.7nm,0.4s						
TRO	Tromso	43.27	336	eP	P	06 24 02.2	+0.1
FAUS	Fauske	43.80	333	eP	P	06 24 07.3	+1.0
MOR8	Moi Rana	43.80	331	eP	P	06 24 07.0	+0.6
STEI	Steigen	43.97	333	eP	P	06 24 08.8	+1.1
NC405	NORSAR Array S	44.11	323	P	P	06 24 09.4	+0.5
YAK	Yakutsk	44.12	35	iP	P	06 24 08.0	-1.0
YAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NC602	NORSAR Array S	44.16	323	eP	P	06 24 10.0	+0.7
NC303	NORSAR Array S	44.29	323	P	P	06 24 11.8	+1.4
NC303				IAmb	IAmb	06 24 12.0	
	comp=Z,8.7nm,1.0s						
NB2	NORSAR Subarra	44.34	323	P	P	06 24 11.1	+0.2
	comp=Z,3.2nm,0.7s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.34	323	P	P	06 24 11.1	+0.2
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.34	323	P	P	06 24 10.8	0.0
	comp=Z,1.4nm,0.5s,baz=97,slow=7.8,SNR=20						
	comp=Z,1.4nm,0.5s						
KONS	Konsvik	44.40	331	eP	P	06 24 10.9	-0.2
NBO00	NORSAR Array S	44.56	323	P	P	06 24 13.0	+0.4
KONO	Kongsberg	45.04	321	eP	P	06 24 16.7	+0.4
BJO1	Bjornoya	45.29	343	eP	P	06 24 19.7	+1.6
DOMB	Dombas	45.46	324	eP	P	06 24 21.0	+1.3
TIXI	Tiksi	45.90	22	⇑iP	P	06 24 23.9	+0.9
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TIXI	Tiksi	45.90	22	P	P	06 24 22.7	-0.3
AKN	Aaknes	46.44	324	eP	P	06 24 28.4	+1.0
BER	Bergen	47.20	322	eP	P	06 24 33.0	-0.2
FOO	Floro	47.35	324	eP	P	06 24 35.1	+0.8
SPB2	Spitsbergen Ar	47.53	347	P	P	06 24 37.8	+2.2
SPA0	Spitsbergen Ar	47.53	347	eP	P	06 24 36.9	+1.3
SPITS	Spitsbergen Ar	47.53	347	P	P	06 24 37.0	+1.4
	comp=Z,1.5nm,0.4s,baz=132,slow=11,SNR=15						
	comp=Z,1.5nm,0.4s						
SPITS	Spitsbergen Ar	47.53	347	P	P	06 24 37.5	+1.9
SPITS				pmax	pmax		
	comp=Z,14nm,1.2s						
KBS	Kingsbay	48.65	347	P	P	06 24 45.0	+0.8
KBS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBS	Kingsbay	48.65	347	P	P	06 24 45.0	+0.8
KBS				IAmb	IAmb	06 24 57.9	
	comp=Z,10.0nm,1.0s						
EUNU	Eureka	63.07	356	P	P	06 26 29.9	+2.8
TORD	Torodi Ar. Bea	65.56	269	P	P	06 26 41.6	-2.6
	comp=Z,1.7nm,0.6s,baz=44,slow=5.4,SNR=9.7						
	comp=Z,1.7nm,0.6s						
SMY	Shemya	69.12	39	P	P	06 27 07.3	+1.2
SMY				pmax	pmax		
	comp=Z,165nm,1.3s						
SMY	Shemya	69.12	39	P	P	06 27 07.3	+1.2
TOLK	Toolik Lake Re	71.04	15	P	P	06 27 17.7	+0.1
IMAR	Indian Mountai	72.29	18	P	P	06 27 25.3	+0.1
BMAR	Burnt Mountain	73.05	14	P	P	06 27 31.4	+1.7
C36M	Paulatuk	73.97	5	P	P	06 27 35.0	+0.1
C36M				IAmb	IAmb	06 27 38.5	
	comp=Z,10nm,1.1s						
INK	Inuvik	74.00	9	P	P	06 27 36.4	+1.3
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	Inuvik	74.00	9	P	P	06 27 36.4	+1.3
INK				IAmb	IAmb	06 27 37.1	
	comp=Z,3.5nm,0.7s						
K20K	Telida	74.34	19	P	P	06 27 37.1	-0.1
K20K				IAmb	IAmb	06 27 46.4	
	comp=Z,8.6nm,1.4s						
LBTB	Lobatse	74.51	222	P	P	06 27 38.8	0.0
LBTB				pmax	pmax		
	comp=Z,24nm,1.5s						
LBTB	Lobatse	74.51	222	P	P	06 27 38.8	0.0
CAST	Castle Rocks	74.81	18	P	P	06 27 40.5	+0.6
CAST				IAmb	IAmb	06 27 41.7	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	74.90	16	P	P	06 27 40.5	+0.1
	comp=Z,0.4nm,0.8s,baz=333,slow=6.8,SNR=4.3						
	comp=Z,0.4nm,0.8s						
PPLA	Purkeypile	75.21	19	P	P	06 27 42.5	+0.1
PPLA				IAmb	IAmb	06 27 57.7	
	comp=Z,14nm,1.3s						
KNRA	Kununurra	75.32	122	P	P	06 27 43.8	+0.3
RND	Reindeer	75.62	17	P	P	06 27 43.9	-0.7
RND				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RND	Reindeer	75.62	17	P	P	06 27 43.9	-0.7
RND				IAmb	IAmb	06 27 53.0	
	comp=Z,7.6nm,1.2s						
SCRK	Sand Creek	76.21	15	P	P	06 27 48.2	+0.2
L27K	Beaver Creek,	77.47	15	P	P	06 27 56.8	+1.8
L27K				IAmb	IAmb	06 28 23.5	
	comp=Z,8.3nm,1.5s						
BCAR	Beaver Creek A	77.48	15	P	P	06 27 55.8	+0.7
BOSA	Boshof	77.58	220	P	P	06 27 55.6	-0.6
BOSA				pmax	pmax		
	comp=Z,20nm,1.5s						
BOSA	Boshof	77.58	220	P	P	06 27 55.6	-0.6
YKA	Yellowknife Ar	81.33	3	P	P	06 28 15.8	-0.1
	comp=Z,1.0nm,0.5s,baz=352,slow=5.4,SNR=29						
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	81.33	3	P	P	06 28 15.7	-0.2
WB0	Warramunga Arr	82.00	122	P	P	06 28 20.3	+0.2
WB0				IAmb	IAmb	06 28 24.8	
	comp=Z,6.0nm,1.2s						
WRA	Warramunga Arr	82.09	122	P	P	06 28 18.2	-2.3
	comp=Z,0.9nm,0.4s,baz=325,slow=4.9,SNR=33						
	comp=Z,0.9nm,0.4s						
WRA	Warramunga Arr	82.09	122	P	P	06 28 20.2	-0.3
WRA	Warramunga Arr	82.09	122	P	P	06 28 20.1	-0.3
WRAB	Tennant Creek	82.09	122	P	P	06 28 18.6	-1.9
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WRAB	Tennant Creek	82.09	122	P	P	06 28 18.6	-1.9
WRAB				IAmb	IAmb	06 28 20.3	
	comp=Z,5.6nm,1.1s						
WB2	Warramunga Arr	82.09	122	P	P	06 28 18.6	-2.0
ASAR	Alice Springs	84.34	125	P	P	06 28 29.8	-2.3
	comp=Z,0.9nm,0.6s,baz=319,slow=4.9,SNR=14						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	84.34	125	P	P	06 28 30.8	-1.3
ASAR	Alice Springs	84.34	125	P	P	06 28 30.8	-1.3
COEN	Coen	84.52	112	P	P	06 28 31.9	-1.3

IDC ***01*** *06:31:51.3±1.7, 44°.40N×147°.23E, h0^{km}, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=43.0km s-min=34.9km az=105.0*

MOS ***01*** *06:32:00.6±0.7, 44°.18N×147°.56E, h104^{km}, mb3.6/2, Error ellipse: s-maj=18.5km s-min=13.9km az=74.1*

MOS Felt (III) at Malokuril'skoye.

JMA ***01*** *06:32:03.5±0.3, 44°N±1°×14°7E±°, h91^{km}, MV3.8/33, E OFF HOKKAIDO*

SKHL ***01*** *06:32:03.1±0.3, 44°.30N×147°.30E, h100^{km}±3^{km}, mb5.0/4, msha5.9/2*

ISC 01 06:32:01.4±1.1**, 44°.14N**±0°.07×**147°.49E**±0°.07**, h93**^{km}±8^{km}**, n50,** σ1^{s}.**21**/63**, mb3.5**/7**, 4C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.13	14c	iPN	Pn	06 32 23.6	+0.8
KUR				iS	Sn	06 32 39.1	+0.3
KUR				pmax	pmax		
	comp=N,73nm,0.4s						
KUR				pmax	pmax		
	comp=E,101nm,0.4s						
KUR				pmax	pmax		
	comp=Z,386nm,0.4s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,586nm,0.3s						
KUR	Kuril'sk	1.13	14	iP	Pn	06 32 23.6	+0.8
KUR				AMB	AMB	06 32 24.0	
	comp=E,70nm,0.4s						
KUR				AMB	AMB	06 32 24.0	
	comp=E,100nm,0.4s						
KUR				AMB	AMB	06 32 24.0	
	comp=E,390nm,0.4s						
KUR				iS	Sn	06 32 39.1	+0.3
KUR				A	A	06 32 40.3	
	comp=E,1µm,0.3s						
KUR				A	A	06 32 40.3	
	comp=E,590nm,0.3s						
YUK	Yuzh-Kuril'sk	1.18	266c	iPN	Pn	06 32 23.8	+0.5
YUK				iS	Sn	06 32 39.0	-0.8
YUK				pmax	pmax		
	comp=N,316nm,0.2s						
YUK				pmax	pmax		
	comp=E,460nm,0.2s						
YUK				pmax	pmax		
	comp=Z,937nm,0.2s						
YUK				smax	smax		
	comp=E,3µm,0.2s						
YUK				smax	smax		
	comp=N,1µm,0.1s						
YUK	Yuzh-Kuril'sk	1.18	266	iP	Pn	06 32 23.8	+0.5
YUK				AMB	AMB	06 32 24.1	
	comp=N,670nm,0.2s						
YUK				iS	Sn	06 32 39.1	-0.8
YUK				A	A	06 32 40.6	
	comp=N,1µm,0.2s						
YUK				A	A	06 32 40.6	
	comp=N,2µm,0.2s						
NEM2	Nemuro 2	1.48	239	P	Pn	06 32 27.5	+0.5
NEM2				eS	Sn	06 32 45.5	-1.0
NMR	Nemuro--Hokkai	1.49	240	⇑iPN	Pn	06 32 27.5	+0.4
NMR				iS	Sn	06 32 45.6	-1.0
NMR	Nemuro--Hokkai	1.49	240	iP	Pn	06 32 27.6	+0.4
NMR				iS	Sn	06 32 45.7	-0.9
RUSJ	Misakicho	1.62	270	ePN	Pn	06 32 30.3	+1.6
RUSJ				eS	Sn	06 32 51.2	+1.7
JRA	Rausu	1.72	264	eP	Pn	06 32 31.2	+1.2
JRA				eS	Sn	06 32 52.5	+0.6
JNSB	Nemuroshibetsu	1.83	260	eP	Pn	06 32 33.0	+1.5
JNSB				eS	Sn	06 32 55.3	+0.9
JKHN	Kushirohamanak	1.99	239	eP	Pn	06 32 34.4	+0.8
JKHN				eS	Sn	06 32 57.1	-1.1
JNK	Nakash	2.08	256	eP	Pn	06 32 35.7	+1.0
JNK				eS	Sn	06 32 59.9	-0.3
AKK	Akkeshi	2.23	241	iP	Pn	06 32 37.1	+0.5
AKK				eS	Sn	06 33 02.2	-1.4
JAK	Akkeshi	2.33	242	P	Pn	06 32 38.5	+0.6
JAK				eS	Sn	06 33 04.8	-1.2
JTKR	Abashiri--Toko	2.59	268	eP	Pn	06 32 42.7	+1.3
JTKR				eS	Sn	06 33 12.2	0.0
JAR	Ashorobuto	2.83	254	P	Pn	06 32 46.4	+1.8
JAR				eS	Sn	06 33 19.0	+1.1
JOB	Onbets	2.93	246	eP	Pn	06 32 47.3	+1.3
JOB				eS	Sn	06 33 20.2	-0.2
JMP	Maruseppu	2.98	269	eP	Pn	06 32 48.1	+1.4
JMP				eS	Sn	06 33 21.9	+0.2
JCH	Churui	3.37	245	eP	Pn	06 32 52.9	+0.9
JCH				eS	Sn	06 33 29.9	-1.1
JKK2	Kamakawa 2	3.43	267	eP	Pn	06 32 54.9	+2.1
ASAJ	Asahikawa	3.52	271	eP	Pn	06 32 56.0	+2.0
JSE	Soyaes	3.60	285	eP	Pn	06 32 56.4	+1.3
ERM	Erimo	3.82	238d	iPN	Pn	06 33 00.4	+2.5
JNBK	Urakawa-nobuka	3.93	243	eP	Pn	06 32 59.9	+0.4
JWK2	Keihoku	4.16	288	eP	Pn	06 33 04.9	+2.4
YSS	Yuzh-Sakhalins	4.36	312	⇓ePN	Pn	06 33 06.0	+0.7
YSS	Yuzh-Sakhalins	4.36	312	eP	Pn	06 33 06.0	+0.7
YSS				AMB	AMB	06 33 07.6	
	comp=N,20nm,0.3s						
UGL	Uglegorsk	6.20	325	eP	Pn	06 33 30.8	+0.6
UGL				AMB	AMB	06 33 32.0	
	comp=N,50nm,0.7s						
TEY	Ternei	7.83	280	eP	Pn	06 33 52.7	+0.3
GRNR	Gornyy	10.01	315	eP	Pn	06 34 20.7	-1.4
ZEA	Zeya	16.35	313	eP	Pn	06 35 42.5	-2.6
SEY	Seymchan	19.05	7	⇑eP	P	06 36 16.2	+0.4
SEY	Seymchan	19.05	7	eP	P	06 36 16.2	+0.4
BILL	Bilibino	25.92	16	eP	P	06 37 22.3	-2.1
BILL				e		06 38 06.5	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	WAKE ISLAND Hy	29.23	140	T	T	07 08 47.8	
	baz=330,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	29.25	140	T	T	07 08 52.5	
	baz=330,slow=76,SNR=54						
H11N3	WAKE ISLAND Hy	29.25	140	T	T	07 08 58.3	
	baz=330,slow=76,SNR=71						
H11S1	WAKE ISLAND Hy	30.21	142	T	T	07 10 05.1	
	baz=331,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	30.22	142	T	T	07 10 04.9	
	baz=331,slow=76,SNR=94						
H11S2	WAKE ISLAND Hy	30.23	142	T	T	07 10 06.4	
	baz=331,slow=76,SNR=88						
MKAR	Makanchi Array	44.63	297	P	P	06 40 02.0	-2.3
	comp=Z,0.3nm,0.5s,baz=76,slow=8.9,SNR=5.1						
	comp=Z,0.3nm,0.5s						
KURK	Kurchatov	45.52	304	P	P	06 40 11.6	+0.3
KURK	Kurchatov	45.52	304	eP	P	06 40 11.6	+0.3
KURBB	Kurchatov Arra	45.61	304	P	P	06 40 11.6	-0.4
	comp=Z,0.3nm,0.4s,baz=70,slow=8.2,SNR=1.4						
	comp=Z,0.3nm,0.4s						
SIJI	Sorong	47.09	202	P	P	06 40 26.1	+2.2
	comp=Z,3.7nm,0.5s,baz=31,slow=13,SNR=2.0						
	comp=Z,3.7nm,0.5s						
YKA	Yellowknife Ar	55.34	34	P	P	06 41 25.7	+0.6
	comp=Z,0.2nm,0.7s,baz=310,slow=8.2,SNR=2.8						
	comp=Z,0.2nm,0.7s						
YKA	Yellowknife Ar	55.34	34	iP	P	06 41 25.3	+0.3
FINES	FINESS Array B	64.64	333	P	P	06 42 27.5	-1.1
	comp=Z,0.6nm,0.7s,baz=30,slow=8.5,SNR=4.2						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	64.64	333	iP	P	06 42 28.2	-0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KBZ	Khabaz	69.73	312	P	P	06 43 01.6	+0.6
	comp=Z,1.7nm,0.6s,baz=62,slow=7.9,SNR=6.1						
	comp=Z,1.7nm,0.6s						

IDC 01 06:52:12.4±2.1**, 2°.78N**×**126°.83E, h0**^{km}**, mb3.2**/4**, mbtmp3.3**/4**, Error ellipse: s-maj=122.9km s-min=27.0km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	20.78	183	P	Pn	06 56 57.0	-0.6
	1.4nm,1.0s,baz=350,slow=11,SNR=1.7						
	1.4nm,1.0s						
WRA	Warramunga Arr	23.75	162	P	P	06 57 26.4	-0.3
	0.4nm,0.4s,baz=339,slow=10,SNR=15						
	0.4nm,0.4s						
ASAR	Alice Springs	27.17	166	P	P	06 57 57.1	-0.8
	0.1nm,0.3s,baz=351,slow=9.9,SNR=4.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	58.39	326	P	P	07 02 09.8	0.0
	0.2nm,0.5s,baz=128,slow=8.3,SNR=1.6						
	0.2nm,0.5s						

DJA ***01*** *06:54:21.5±0.4, 5°N±4°×12°6E±°, h70^{km}±6^{km}, M4.4/12, mb4.5/8, mB4.8/5, MLv4.5/12, Mw(mB)4.1/5*

MAN ***01*** *06:54:23.0, 4°.45N×126°.05E, h14^{km}, mb5.0, ML3.9, MS3.9, Hypocentre not reviewed by the ISC*

NEIC ***01*** *06:54:23.6±2.5, 4°.54N±0°.07×126°.35E±0°.09, h82^{km}±11^{km}, mb4.1/14, Error ellipse: s-maj=14.2km s-min=9.6km az=69.0*

IDC ***01*** *06:54:23.3±3.5, 4°.54N×126°.29E, h90^{km}±34^{km}, mb3.9/14, mbtmp4.2/15, MS3.4/2, Error ellipse: s-maj=30.1km s-min=13.2km az=81.0*

ISC 01 06:54:22.5±0.5**, 4°.52N**±0°.05×**126°.44E**±0°.07**, h85**^{km}**, n61,** σ1^{s}.**86**/65**, mb4.1**/20**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.23	228	P	Pn	06 54 44.7	+0.1
SGSI				S	Sn	06 55 01.2	-0.1
SGSI	Sangihe	1.23	228	P	Pn	06 54 44.7	+0.1
DAV	Davao City (W)	2.67	341	S	Sn	06 55 40.8	+5.7
	189nm,0.4s,baz=221,slow=22,SNR=1.9						

DAV	**Davao City (W)**	**2.67**	**341**	Pn	**Pn**	**06 55 03.9**	**+0.3**
KCP	**Kidapawan**	**2.81**	**332**	⇑*i*P	**Pn**	**06 55 07.0**	**+1.5**
KCP				*i* S	**Sn**	**06 55 41.9**	**+3.3**
BUKP	**Musuan**	**3.61**	**338**	⇓*e*P	**Pn**	**06 55 18.4**	**+2.2**
BUKP				*e*S	**Sn**	**06 55 49.7**	**-8.0**
TNTI	**Ternate**	**3.84**	**166**	Pn	**Pn**	**06 55 20.4**	**+1.1**
TNTI	**Ternate**	**3.84**	**166**	P	**Pn**	**06 55 20.6**	**+1.3**
PAGZ	**Pagadian**	**4.49**	**318**	⇑*e*P	**Pn**	**06 55 29.4**	**+1.3**
PAGZ				*e*S	**Sn**	**06 56 19.8**	**+0.6**
GTOI	**Gorontalo**	**5.16**	**222**	P	**Pn**	**06 55 37.6**	**+0.3**
	0.2nm770nm35nm,0.5s						
GTOI	**Gorontalo**	**5.16**	**222**	P	**Pn**	**06 55 37.2**	**-0.1**
	0.2nm772nm35nm,0.5s						
MRSI	**Marisa**	**6.03**	**228**	P	**Pn**	**06 55 50.2**	**+1.1**
	0.6nm3μm90nm,0.5s						
MRSI	**Marisa**	**6.03**	**228**	P	**Pn**	**06 55 50.2**	**+1.1**
	0.6nm3μm90nm,0.5s						
SANI	**Sanana**	**6.54**	**184**	P	**Pn**	**06 55 54.1**	**-2.0**
	0.3nm3μm20nm,0.5s						
SANI	**Sanana**	**6.54**	**184**	P	**Pn**	**06 55 54.3**	**-1.8**
	3μm20nm,0.5s						
TOLI2	**Tolitoli**	**6.59**	**239**	Pn	**Pn**	**06 55 56.3**	**-0.5**
LUWI	**Luwuk**	**6.63**	**214**	Pn	**Pn**	**06 55 59.6**	**+2.2**
LUWI	**Luwuk**	**6.63**	**214**	P	**Pn**	**06 55 58.6**	**+1.3**
	0.9nm173nm,0.6s						
LUWI	**Luwuk**	**6.63**	**214**	P	Pn	06 56 02.6	+5.3
	174nm,0.6s						
SWI	**Sorong**	**7.20**	**138**	P	**Pn**	**06 56 05.1**	**+0.1**
	0.1nm18nm,0.5s						
SIJI	**Sorong**	**7.20**	**138**	P	**Pn**	**06 56 07.0**	**+1.8**
	8.9nm,0.3s,baz=174,slow=21,SNR=6.0						
SIJI				S	**Sn**	**06 57 21.7**	**-3.9**
	6.7nm,0.7s,baz=188,slow=23,SNR=1.2						
MPSI	**Mapaga**	**7.75**	**238**	P	**Pn**	**06 56 11.3**	**-1.2**
	0.1nm11nm,0.9s						
MPSI	**Mapaga**	**7.75**	**238**	P	**Pn**	**06 56 10.8**	**-1.7**
MYLDM	**Lahad Datu**	**7.94**	**275**	Pn	**Pn**	**06 56 15.9**	**+0.7**
TTSI	**Tana Toraja**	**10.01**	**221**	P	**Pn**	**06 56 47.3**	**+3.8**
KAPI	**Kappang**	**11.59**	**215**	LR	LR	07 01 44.0	
	comp=Z,33nm,20.0s,baz=338,slow=38						
MTN	**Manton Dam**	**17.87**	**165**	P	**P**	**06 58 25.1**	**0.0**
MTN				IAmb	IAmb	06 58 38.5	
	comp=Z,12nm,1.2s						
TWG	**Pinlang**	**18.92**	**345**	P	**P**	**06 58 35.5**	**-1.1**
YULB	**Yu-li**	**19.41**	**346**	P	**P**	**06 58 40.0**	**-2.0**
SSLB	**Suanglung**	**19.87**	**345**	P	**P**	**06 58 47.5**	**+0.5**
SSLB				IAmb	IAmb	06 58 47.7	
	comp=Z,10nm,0.6s						
KNRA	**Kununurra**	**20.20**	**174**	P	Pn	06 58 52.1	-1.1
FITZ	**Fitzroy Crossi**	**22.49**	**182**	P	**P**	**06 59 17.1**	**+2.1**
	comp=Z,1.2nm,0.4s,baz=353,slow=7.7,SNR=5.0						
	comp=Z,1.2nm,0.4s						
WB0	**Warramunga Arr**	**25.37**	**162**	P	**P**	**06 59 43.5**	**+1.6**
WB0				IAmb	IAmb	07 00 06.4	
	comp=Z,7.1nm,0.9s						
WRAB	**Tennant Creek**	**25.52**	**163**	P	**P**	**06 59 45.8**	**+2.6**
WRAB				IAmb	IAmb	06 59 57.5	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**25.52**	**163**	P	**P**	**06 59 43.5**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=339,slow=10,SNR=9.3						
WRA				PcP	**PcP**	**07 03 12.9**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=344,slow=2.2,SNR=1.8						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**25.52**	**163**	P	**P**	**06 59 43.4**	**+0.2**
WB2	**Warramunga Arr**	**25.52**	**163**	P	**P**	**06 59 44.5**	**+1.2**
WB2				IAmb	IAmb	07 00 08.7	
	comp=Z,5.9nm,0.9s						
WR0	**Warramunga Arr**	**25.60**	**162**	P	**P**	**06 59 46.5**	**+2.5**
WR0				IAmb	IAmb	07 00 12.4	
	comp=Z,7.3nm,1.2s						
PSA00	**Pilbara Seismi**	**26.73**	**194**	P	**P**	**06 59 55.0**	**+0.9**
PSA00				IAmb	IAmb	07 00 14.6	
	comp=Z,6.9nm,1.1s						
ASAR	**Alice Springs**	**28.95**	**166**	P	**P**	**07 00 14.8**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=344,slow=7.2,SNR=13						
ASAR				PcP	**PcP**	**07 03 21.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=350,slow=3.2,SNR=2.7						
	comp=Z,0.8nm,0.5s						
ASAR	**Alice Springs**	**28.95**	**166**	P	**P**	**07 00 13.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.23**	**299**	P	**P**	**07 00 24.9**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=116,slow=6.1,SNR=1.6						
	comp=Z,1.1nm,0.3s						
KSRS	**Korea Array**	**32.81**	**2**	P	**P**	**07 00 48.3**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=181,slow=9.5,SNR=11						
	comp=Z,2.0nm,0.6s						
SHL	**Shillong**	**39.18**	**306**	P	**P**	**07 01 41.7**	**-0.9**
SHL				IAmb	IAmb	07 01 42.9	
	comp=Z,4.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**39.82**	**6**	P	**P**	**07 01 48.2**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=177,slow=5.8,SNR=3.0						
	comp=Z,2.1nm,0.7s						
MDJ	**Mudanjiang**	**40.03**	**3**	P	**P**	**07 01 51.0**	**+1.8**
KLR	**Kul'dur**	**44.78**	**5**	P	**P**	**07 02 26.9**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=208,slow=3.4,SNR=4.4						
	comp=Z,1.7nm,0.5s						
MKAR	**Makanchi Array**	**56.75**	**325**	P	**P**	**07 03 57.1**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=117,slow=7.8,SNR=29						
MKAR				PcP	**PcP**	**07 04 52.5**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=124,slow=3.2,SNR=7.3						
	comp=Z,1.3nm,0.4s						
MA2	**Magadan**	**58.01**	**14**	P	**P**	**07 04 06.7**	**+0.5**
	baz=131,slow=20						
ZALV	**Zalesovo Beam**	**59.76**	**333**	P	**P**	**07 04 17.3**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=125,slow=8.6,SNR=3.5						
	comp=Z,0.8nm,0.4s						
SEY	**Seymchan**	**61.33**	**13**	P	**P**	**07 04 29.8**	**+0.9**
	baz=72,slow=20						
NRIK	**Noril'sk**	**69.60**	**346**	P	**P**	**07 05 22.4**	**+0.3**
	comp=Z,5.0nm,0.6s,baz=131,slow=6.0,SNR=11						
	comp=Z,5.0nm,0.6s						
NRIK	**Noril'sk**	**69.60**	**346**	P	**P**	**07 05 22.8**	**+0.6**
KVAR	**Kislovodsk Arr**	**82.38**	**314**	LR	LR	07 47 54.0	
	comp=Z,111nm,21.1s,baz=82,slow=39						
ILAR	**Eielson Array**	**84.52**	**25**	P	**P**	**07 06 46.4**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=267,slow=4.3,SNR=5.1						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**89.61**	**340**	P	**P**	**07 07 09.8**	**-0.7**
	comp=Z,3.8nm,0.6s,baz=83,slow=6.2,SNR=26						
	comp=Z,3.8nm,0.6s						
FINES	**FINESS Array B**	**91.00**	**332**	P	**P**	**07 07 16.4**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=86,slow=5.0,SNR=21						
	comp=Z,0.7nm,0.4s						
NB2	**NORSAR Subarra**	**97.95**	**334**	P	**P**	**07 07 47.9**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=67,slow=4.6						
NB2	**NORSAR Subarra**	**97.95**	**334**	P	**P**	**07 07 47.9**	**-1.0**
	baz=67,slow=4.6						
NOA	**NORSAR Array B**	**97.95**	**334**	P	**P**	**07 07 48.2**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=65,slow=4.5,SNR=8.0						
	comp=Z,1.3nm,0.7s						
SCHQ	**Schefferville**	**119.83**	**9**	PKP	**PKiKP**	**07 13 03.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=11,slow=10.0,SNR=0.9						

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*IDC **01** 07:00:16.4±12.0, 13°.41N×92°.26W, h0^{km}, mb3.3/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=246.6km s-min=115.8km az=9.0*

*MEX **01** 07:00:25.3±0.5, 14°.01N×93°.35W, h20^{km}±999^{km}, MD4.0*

ISC 01 07:00:31.7±1.8, **14°.4N**±0°.1×**93°.16W**±0°.06, **h35**^{km}, **n12**, σ**2^{s}.08**/21, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.99**	**61**	*i* P	**Pn**	**07 00 46.4**	**-2.6**
THIG				*i* S	**Sn**	**07 01 03.3**	**+1.5**
PATR	**El Naranjo**	**1.13**	**53**	*i* P	**Pn**	**07 00 48.7**	**-2.5**
PATR				*i* S	**Sn**	**07 01 07.3**	**+1.7**
CHUJ	**Union Juarez**	**1.21**	**57**	*e*P	**Pn**	**07 00 49.7**	**-2.7**
CHUJ				*i* S	**Sn**	**07 01 08.7**	**+1.0**
PAVE	**Pavencul**	**1.22**	**52**	*i* P	**Pn**	**07 00 50.3**	**-2.1**
PAVE				*i* S	**Sn**	**07 01 06.5**	**-1.3**
PCIG		**1.26**	**358**	*e*P	**Pn**	**07 00 50.7**	**-2.2**
PCIG				*i* S	**Sn**	**07 01 07.2**	**-1.5**
CCIG	**Comitan**	**2.09**	**28**	*e*P	**Pn**	**07 01 06.0**	**+1.6**
CCIG				*e*S	**Sn**	**07 01 27.8**	**-1.4**
TGIG		**2.33**	**1**	*i* P	**Pn**	**07 01 08.8**	**+1.1**
TGIG				*e*S	**Sn**	**07 01 35.0**	**-0.1**
UXUV	**UXUV**	**3.02**	**342**	*e*P	**Pn**	**07 01 17.4**	**+0.3**
UXUV				*e*S	**Sn**	**07 01 48.9**	**-3.1**
CMIG	**Matias Romero**	**3.12**	**328**	*e*P	**Pn**	**07 01 16.5**	**-1.9**
CMIG				*e*S	**Sn**	**07 01 53.0**	**-1.5**
TXAR	**Lajitas Array**	**17.73**	**328**	P	**P**	**07 04 40.3**	**+3.8**
	baz=153,slow=12,SNR=2.5						
	0.5nm,1.0s						
NVAR	**Mina Array Bea**	**32.63**	**322**	P	**P**	**07 07 01.7**	**+1.2**
	0.2nm,0.7s,baz=139,slow=8.4,SNR=1.9						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	**50.35**	**347**	P	**P**	**07 09 23.8**	**-1.1**
	0.4nm,0.7s,baz=149,slow=7.3,SNR=7.6						
	0.4nm,0.7s						

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*IDC **01** 07:08:13.4±3.4, 4°.59N×95°.04E, h74^{km}±31^{km}, mb3.8/13, mbtmp4.1/15, MS3.0/3, Error ellipse: s-maj=34.6km s-min=14.8km az=51.0*

*NEIC **01** 07:08:17.9±1.6, 4°.99N±0°.08×95°.52E±0°.05, h97^{km}±7^{km}, mb4.4/29, Error ellipse: s-maj=11.6km s-min=7.0km az=186.0*

*DJA **01** 07:08:22.2±3.8, 5°N±13°×9°6E±3°0, h62^{km}±52^{km}, M3.8/6, mb4.0/1, MLv3.6/6*

ISC 01 07:08:16.5±0.6, **4°.92N**±0°.07×**95°.40E**±0°.07, **h89**^{km}, **n75**, σ**1^{s}.22**/72, **mb4.3**/32, **2C-1D**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**1.57**	**79**		**Pn**	**07 08 43.6**	**+0.6**
LHMI				Sn	**Sn**	**07 09 00.9**	**-2.3**
LHMI	**Lhok Sumawe**	**1.57**	**79**	P	**Pn**	**07 08 44.1**	**+1.1**
KCSI	**Kotacane, Aceh**	**2.74**	**120**	P	**Pn**	**07 08 56.4**	**-2.2**
PSI	**Prapat**	**4.10**	**121**	P	**Pn**	**07 09 16.2**	**-0.7**
	8.2nm,0.3s,baz=327,slow=10,SNR=10						
PSI				S	**Sn**	**07 10 06.2**	**+2.3**
	30nm,0.9s,baz=95,slow=21,SNR=3.4						
PSI				LR	LR	07 11 17.8	
	comp=Z,198nm,21.0s,baz=250,slow=43						
RPSI	**Rantau Prapat**	**4.16**	**122**		**Pn**	**07 09 16.2**	**-1.4**
GSI	**Gunungsitoli**	**4.20**	**149**	Pn	**Pn**	**07 09 20.1**	**+1.9**
GSI	**Gunungsitoli**	**4.20**	**149**	P	**Pn**	**07 09 16.6**	**-1.7**
KULM	**Kulim**	**5.24**	**86**	Pn	**Pn**	**07 09 32.7**	**+0.3**
SRIT	**Nakonsritamara**	**5.54**	**49**		**Pn**	**07 09 35.1**	**-1.3**
IPM	**Ipoh**	**5.62**	**94**	Pn	**Pn**	**07 09 36.7**	**-0.9**
PBA	**Port Blair**	**7.19**	**339**	Pn	**Pn**	**07 09 58.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**13.89**	**14**	P	**Pn**	**07 11 34.1**	**+4.6**
	6.3nm,0.7s,baz=207,slow=11,SNR=11						
CMAR				LR	LR	07 16 36.3	
	comp=Z,67nm,21.4s,baz=200,slow=35						
CMAR	**Chiang Mai Arr**	**13.89**	**14**	Pn	**Pn**	**07 11 29.7**	**+0.2**
DLV	**T Lat**	**14.70**	**61**	Pn	**Pn**	**07 11 37.7**	**-2.4**
PALK	**Pallekele**	**14.80**	**280**	LR	LR	07 16 44.6	
	comp=Z,59nm,19.8s,baz=206,slow=35						
XMIS	**Christmas Isla**	**18.40**	**146**	P	**P**	**07 12 25.0**	**+0.4**
KMI	**Kunming**	**21.29**	**19**	⇑P	P	07 13 06.6	+10
KMI				pP	pP	07 13 20.0	+6.6
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
PZH	**PanZhiHua**	**22.30**	**15**	P	**P**	**07 13 07.4**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
H08S2	**Diego Garcia H**	**26.04**	**241**	T	T	07 40 43.1	
	baz=61,slow=75,SNR=98						
H08S3	**Diego Garcia H**	**26.04**	**242**	T	T	07 40 42.8	
	baz=61,slow=75,SNR=112						
H08S1	**Diego Carcia H**	**26.06**	**242**	T	T	07 40 44.0	
	baz=61,slow=75,SNR=63						
XAN	**Xi'an**	**31.58**	**22**	P	**P**	**07 14 31.8**	**+1.1**
XAN				pP	pP	07 14 38.3	-13
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
HNS	**HongShan**	**36.83**	**26**	⇑P	**P**	**07 15 18.9**	**+2.9**
HNS				pmax	pmax		
	comp=Z,21nm,0.9s						
KSH	**Kashi**	**38.66**	**336**	P	**P**	**07 15 31.3**	**-0.3**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**39.33**	**351**	⇓P	**P**	**07 15 36.5**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,39nm,0.7s						
TARG	**Taragay, Kyrgy**	**39.88**	**339**	P	**P**	**07 15 42.7**	**+0.7**
KDJ	**Kajisay**	**40.45**	**339**	P	**P**	**07 15 46.2**	**-0.3**
DRK	**Karamyk**	**40.48**	**331**	P	**P**	**07 15 47.1**	**+0.2**
GAR	**Garm**	**40.84**	**330**	P	**P**	**07 15 49.2**	**-0.4**
GAR				IAmb	IAmb	07 15 55.7	
	comp=Z,5.6nm,0.6s						
ULHL	**Ulahol**	**40.89**	**338**	P	**P**	**07 15 51.0**	**+0.9**
	SNR=6.9						
BOOM	**Boomskoye usch**	**41.22**	**338**	P	**P**	**07 15 52.7**	**0.0**
BOOM				IAmb	IAmb	07 15 54.3	
	comp=Z,7.5nm,0.7s						
BTK	**Batken**	**41.40**	**331**	P	**P**	**07 15 54.8**	**+0.6**
BTK				IAmb	IAmb	07 15 56.9	
	comp=Z,7.2nm,0.8s						
UCH	**Uchtor**	**41.54**	**336**	P	**P**	**07 15 57.1**	**+1.3**
	SNR=9.5						
TKM2	**Tokmak 2**	**41.72**	**338**	P	**P**	**07 15 57.9**	**+1.0**
	SNR=5.3						
AML	**Almayashu**	**41.79**	**336**	P	**P**	**07 15 58.9**	**+1.1**
	SNR=11						
AAK	**Ala-Archa**	**41.90**	**337**	P	**P**	**07 15 58.4**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=168,slow=6.4,SNR=8.2						
	comp=Z,2.6nm,0.5s						
AAK	**Ala-Archa**	**41.90**	**337**	P	**P**	**07 15 58.1**	**-0.1**
AAK				IAmb	IAmb	07 16 01.3	
	comp=Z,5.0nm,0.8s						
FRU1	**Bishkek**	**41.99**	**337**	P	**P**	**07 16 00.6**	**+1.6**
USP	**Ospenovka**	**42.43**	**337**	P	**P**	**07 16 03.2**	**+0.8**
	SNR=12						
MK31	**Makanchi Array**	**43.23**	**347**	P	**P**	**07 16 08.8**	**-0.1**
MK31				IAmb	IAmb	07 16 09.8	
	comp=Z,4.5nm,1.3s						
MKAR	**Makanchi Array**	**43.23**	**347**	P	**P**	**07 16 08.4**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=166,slow=8.4,SNR=8.6						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**43.23**	**347**	P	**P**	**07 16 08.8**	**-0.1**
MAKZ	**Makanchi**	**43.31**	**347**	P	**P**	**07 16 09.1**	**-0.4**
MAKZ				IAmb	IAmb	07 16 29.1	
	comp=Z,3.2nm,0.6s						
KSRS	**Korea Array**	**43.93**	**38**	P	**P**	**07 16 15.9**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=223,slow=8.4,SNR=5.6						
	comp=Z,1.2nm,0.7s						
ULN	**Ulaanbaatar**	**43.94**	**11**	P	**P**	**07 16 12.7**	**-2.0**
ULN				IAmb	IAmb	07 16 14.8	
	comp=Z,1.8nm,0.5s						
KK31	**Karatay Array**	**43.94**	**334**	P	**P**	**07 16 15.1**	**+0.4**
KKAR	**Karatay Array**	**43.94**	**334**	P	**P**	**07 16 13.1**	**-1.5**
KKAR	**Karatay Array**	**43.94**	**334**	P	**P**	**07 16 13.8**	**-0.9**
KKAR				IAmb	IAmb	07 16 16.8	
	comp=Z,2.6nm,0.9s						
WB0	**Warramunga Arr**	**45.52**	**124**	P	**P**	**07 16 27.2**	**-0.3**
WB0				IAmb	IAmb	07 16 28.2	
	comp=Z,5.5nm,0.9s						
WRA	**Warramunga Arr**	**45.56**	**124**	P	**P**	**07 16 27.3**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=303,slow=9.0,SNR=25						
	comp=Z,4.8nm,0.9s						
WRA	**Warramunga Arr**	**45.56**	**124**	P	**P**	**07 16 27.9**	**+0.1**
WRAB	**Tennant Creek**	**45.56**	**124**	P	**P**	**07 16 27.8**	**-0.1**
WRAB				IAmb	IAmb	07 16 28.9	
	comp=Z,7.7nm,0.9s						
WR0	**Warramunga Arr**	**45.73**	**124**	P	**P**	**07 16 28.9**	**-0.3**
WR0				IAmb	IAmb	07 16 30.4	
	comp=Z,9.9nm,1.0s						
ASAR	**Alice Springs**	**47.09**	**129**	P	**P**	**07 16 38.7**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=311,slow=8.2,SNR=8.0						
	comp=Z,0.8nm,0.8s						
GEYT	**Alibeck**	**47.23**	**319**	P	**P**	**07 16 39.3**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=156,slow=10,SNR=2.6						
	comp=Z,1.5nm,0.5s						
KURBB	**Kurchatov Arra**	**47.70**	**346**	P	**P**	**07 16 44.9**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=170,slow=6.9,SNR=18						
KURBB				PcP	**PcP**	**07 18 12.5**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=153,slow=2.9,SNR=4.9						
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**47.76**	**346**	P	**P**	**07 16 44.8**	**+0.3**
ZAA0	**Zalesovo Array**	**49.63**	**352**	P	**P**	**07 16 58.7**	**-0.1**
ZAA0				IAmb	IAmb	07 16 59.9	
	comp=Z,6.6nm,1.4s						
ZALV	**Zalesovo Beam**	**49.63**	**352**	P	**P**	**07 16 58.8**	**0.0**
	comp=Z,2.0nm,0.6s,baz=181,slow=7.6,SNR=7.5						
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**49.63**	**352**	P	**P**	**07 16 58.6**	**-0.2**
BRVK	**Borovoye**	**52.23**	**341**	P	**P**	**07 17 18.1**	**-0.1**
ABKAR	**Akbulak array**	**53.41**	**332**	P	**P**	**07 17 27.0**	**0.0**
ABKAR				IAmb	IAmb	07 17 41.9	
	comp=Z,2.5nm,0.8s						
KLR	**Kul'dur**	**53.81**	**29**	P	**P**	**07 17 32.1**	**+2.2**
	comp=Z,1.4nm,0.6s,baz=272,slow=6.4,SNR=7.7						
	comp=Z,1.4nm,0.6s						
BR131	**Keskin Array S**	**65.30**	**312**	P	**P**	**07 18 48.1**	**-1.3**
BRTR	**Keskin Array B**	**65.30**	**312**	P	P	07 18 47.5	-1.9
	comp=Z,1.0nm,0.6s,baz=130,slow=8.0,SNR=7.1						
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**69.87**	**11**	P	**P**	**07 19 17.3**	**0.0**
TIXI				IAmb	IAmb	07 19 17.8	
	comp=Z,2.8nm,0.7s						
BURAR	**Bucovina Array**	**73.06**	**318**	P	**P**	**07 19 37.1**	**-0.1**
BUR08	**Bucovina Ar. S**	**73.08**	**318**	P	**P**	**07 19 37.2**	**-0.1**
FINES	**FINESS Array B**	**75.89**	**332**	P	**P**	**07 19 52.8**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=107,slow=5.2,SNR=20						
	comp=Z,0.9nm,0.3s						
FINES	**FINESS Array B**	**75.89**	**332**	P	**P**	**07 19 52.6**	**-0.4**
KECS	**Kecovo**	**76.34**	**319**	*e*P	**P**	**07 19 57.0**	**+1.1**
OJC	**Ojcow**	**77.03**	**320**	P	**P**	**07 20 00.2**	**+0.4**
OJC				IAmb	IAmb	07 20 00.4	
	comp=Z,3.4nm,0.7s						
ARCES	**ARCESS Array B**	**78.45**	**340**	P	**P**	**07 20 05.8**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=91,slow=5.0,SNR=12						
	comp=Z,1.4nm,0.6s						
ARCES	**ARCESS Array B**	**78.45**	**340**	P	**P**	**07 20 07.3**	**0.0**
ARCES				IAmb	IAmb	07 20 28.5	
	comp=Z,7.9nm,1.4s						
GERES	**GERESS Array B**	**80.85**	**319**	P	**P**	**07 20 19.3**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=270,slow=23,SNR=2.2						
	comp=Z,0.4nm,0.4s						

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*NEIC **01** 07:08:41.9±1.9, 22°.62N±0°.08×94°.72E±0°.10, h79^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=13.7km s-min=9.9km az=59.0*

*IDC **01** 07:08:43.4±2.4, 22°.62N×94°.51E, h100^{km}±26^{km}, mb3.9/7, mbtmp4.2/8, MS3.2/1, Error ellipse: s-maj=31.2km s-min=12.7km az=49.0*

ISC 01 07:08:44.1±0.7, **22°.69N**±0°.10×**94°.34E**±0°.09, **h106**^{km}, **n44**, σ**1^{s}.99**/55, **mb4.1**/14, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**2.49**	**270**	P	**Pn**	**07 09 24.9**	**+1.8**
	0.9nm,0.4s,baz=180,slow=24,SNR=1.9						
BRDH				S	**Sn**	**07 09 56.7**	**+3.5**
	2.8nm,0.3s,baz=360,slow=24,SNR=34						
SHL	**Shillong**	**3.64**	**322**		**Pn**	**07 09 39.7**	**+1.0**
SHL				Sn	**Sn**	**07 10 17.9**	**-3.0**
CM14	**Chiang Mai Arr**	**6.02**	**134**	Pn	Pn	07 10 03.2	-7.5
CM31	**Chiang Mai Arr**	**6.03**	**133**	Pn	Pn	07 10 01.8	-9.0
CMAR	**Chiang Mai Arr**	**6.03**	**133**	P	**Pn**	**07 10 08.2**	**-2.7**
	4.9nm,0.2s,baz=311,slow=13,SNR=7.3						
LSA	**Lhasa**	**7.55**	**338**		**Pn**	**07 10 32.5**	**+0.7**
ODAN	**Odare**	**7.56**	**305**	*e*Pn	**Pn**	**07 10 32.7**	**+1.0**
ODAN				*e*Sn	**Sn**	**07 11 54.0**	**-1.9**
TAPN	**Taplejung**	**7.59**	**309**	*e*Pn	**Pn**	**07 10 33.2**	**+0.9**
RAMN	**Ramite**	**8.21**	**303**	*e*Pn	**Pn**	**07 10 41.4**	**+0.8**
RAMN				*e*Sn	**Sn**	**07 12 10.2**	**-1.6**
	108nm,0.3s						
JIRN	**Jiri**	**8.88**	**306**	*e*Pn	**Pn**	**07 10 50.6**	**+0.7**
JIRN				*e*Sn	**Sn**	**07 12 26.3**	**-2.1**
GUN	**Gumba**	**9.25**	**306**	*e*Pn	**Pn**	**07 10 55.3**	**+0.4**
GUN				*e*Sn	**Sn**	**07 12 35.3**	**-2.0**
	248nm,0.4s						
PKI	**Pulchoki**	**9.44**	**303**	*e*Pn	**Pn**	**07 10 57.8**	**+0.4**
PKI				*e*Sn	**Sn**	**07 12 39.0**	**-2.8**
PKIN	**Phulchoki**	**9.45**	**303**	*e*Pn	**Pn**	**07 10 57.8**	**+0.3**
PKIN				*e*Sn	**Sn**	**07 12 39.5**	**-2.5**
	102nm,0.3s						
KKN	**Kakani**	**9.64**	**304**	*e*Pn	**Pn**	**07 11 00.0**	**-0.1**
KKN				*e*Sn	**Sn**	**07 12 43.9**	**-2.8**
	51nm,0.2s						
DMN	**Daman**	**9.69**	**302**	*e*Pn	**Pn**	**07 11 00.6**	**-0.1**
DMN				*e*Sn	**Sn**	**07 12 45.0**	**-2.9**
GKN	**Gorkha**	**10.24**	**303**	*e*Pn	**Pn**	**07 11 08.0**	**-0.2**
GKN				*e*Sn	**Sn**	**07 12 58.3**	**-2.9**
	177nm,0.3s						
KOLN	**Koldanda**	**10.96**	**300**	*e*Pn	**Pn**	**07 11 17.2**	**-0.7**
KOLN				*e*Sn	**Sn**	**07 13 13.7**	**-4.8**
	133nm,0.4s						
DANN	**Dangsing**	**11.09**	**303**	*e*Pn	**Pn**	**07 11 19.6**	**-0.1**
DANN				*e*Sn	**Sn**	**07 13 17.7**	**-4.2**
	56nm,0.4s						
PYUN	**Piuthan**	**11.58**	**300**	*e*Pn	**Pn**	**07 11 25.3**	**-1.0**
PYUN				*e*Sn	**Sn**	**07 13 29.1**	**-4.7**
	47nm,0.4s						
TARG	**Taragay, Kyrgy**	**23.51**	**328**	P	**P**	**07 13 47.6**	**+2.6**
TARG				IAmb	IAmb	07 13 48.2	
	comp=Z,5.1nm,0.6s						
KDJ	**Kajisay**	**24.12**	**328**	P	**P**	**07 13 52.9**	**+2.7**
KDJ				IAmb	IAmb	07 13 54.8	
	comp=Z,5.0nm,0.9s						
BOOM	**Boomskoye usch**	**25.00**	**326**	P	**P**	**07 14 00.6**	**+2.3**
AAK	**Ala-Archa**	**25.86**	**325**	P	**P**	**07 14 07.7**	**+1.8**
	comp=Z,1.7nm,0.6s,baz=120,slow=3.3,SNR=5.1						
	comp=Z,1.7nm,0.6s						
AAK	**Ala-Archa**	**25.86**	**325**	P	**P**	**07 14 07.9**	**+2.0**
MK31	**Makanchi Array**	**25.95**	**341**	P	**P**	**07 14 08.0**	**+1.5**
MK31				IAmb	IAmb	07 14 08.7	
	comp=Z,6.9nm,1.1s						
MKAR	**Makanchi Array**	**25.95**	**341**	P	**P**	**07 14 08.0**	**+1.5**
	comp=Z,2.2nm,0.4s,baz=144,slow=11,SNR=39						
	comp=Z,2.2nm,0.4s						
MKAR	**Makanchi Array**	**25.95**	**341**	P	**P**	**07 14 07.7**	**+1.2**
KURBB	**Kurchatov Arra**	**30.50**	**340**	P	**P**	**07 14 47.5**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=141,slow=7.7,SNR=5.5						
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**32.04**	**349**	P	**P**	**07 15 00.4**	**0.0**
	comp=Z,1.2nm,0.3s,baz=176,slow=8.9,SNR=7.8						
	comp=Z,1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**32.04**	**349**	P	**P**	**07 15 00.1**	**-0.3**
ABKAR	**Akbulak array**	**37.91**	**323**	P	**P**	**07 15 52.2**	**+1.3**
ABKAR				IAmb	IAmb	07 15 53.4	
	comp=Z,1.9nm,0.9s						
BELG	**Belogornoye**	**46.28**	**322**	LR	LR	07 39 14.6	
	comp=Z,31nm,21.9s,baz=130,slow=39						
WRA	**Warramunga Arr**	**57.62**	**134**	P	**P**	**07 18 21.9**	**-1.4**
	comp=Z,3.5nm,0.7s,baz=322,slow=7.4,SNR=24						
	comp=Z,3.5nm,0.7s						
WRA	**Warramunga Arr**	**57.62**	**134**	P	**P**	**07 18 21.3**	**-2.1**
WRAB	**Tennant Creek**	**57.62**	**134**	P	**P**	**07 18 22.2**	**-1.2**
WB2	**Warramunga Arr**	**57.63**	**134**	P	**P**	**07 18 22.1**	**-1.4**
WR0	**Warramunga Arr**	**57.77**	**134**	P	**P**	**07 18 22.9**	**-1.5**
WR0				IAmb	IAmb	07 18 24.2	
	comp=Z,4.9nm,0.7s						
AS31	**Alice Springs**	**60.02**	**138**	P	**P**	**07 18 39.3**	**-0.6**
AS31				IAmb	IAmb	07 18 39.4	
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**60.02**	**138**	P	**P**	**07 18 39.0**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=322,slow=7.1,SNR=25						
	comp=Z,2.3nm,0.6s						
ARCES	**ARCESS Array B**	**61.56**	**338**	P	**P**	**07 18 50.7**	**+1.0**
	comp=Z,3.7nm,1.1s,baz=37,slow=9.6,SNR=1.9						
	comp=Z,3.7nm,1.1s						
VOI	**Vohitsoka**	**64.11**	**230**	P	**P**	**07 19 08.5**	**+1.1**
LSZ	**Lusaka**	**74.93**	**246**	P	**P**	**07 20 15.7**	**+1.6**
LSZ				IAmb	IAmb	07 20 16.1	
	comp=Z,2.4nm,0.5s						
BMAR	**Burnt Mountain**	**80.23**	**20**	P	**P**	**07 20 43.0**	**+0.4**
ROSC	**El Rosal**	**150.48**	**337**	PKPbc	**PKPbc**	**07 28 24.9**	**+0.1**
	comp=Z,7.7nm,0.8s,baz=90,slow=12,SNR=4.0						

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*IDC **01** 07:22:42.9±0.5, 7°.79N×126°.30E, h0^{km}, mb4.1/23, mbtmp4.1/25, ML4.4/3, MS3.5/35, Error ellipse: s-maj=15.7km s-min=8.6km az=113.0*

*MAN **01** 07:22:47.2, 7°.65N×126°.26E, h29^{km}, mb5.1, ML4.0, MS4.1, Hypocentre not reviewed by the ISC*

*NEIC **01** 07:22:50.2±1.6, 7°.65N±0°.06×126°.02E±0°.05, h42^{km}±7^{km}, mb4.8/37, Error ellipse: s-maj=8.6km s-min=7.6km az=207.0*

*BJI **01** 07:22:50.6±0.0, 7°.83N×125°.74E, h30^{km}, mb4.5/41, mB4.8/20, Ms4.2/19, Ms7 3.9/21*

*DJA **01** 07:22:53.0±1.1, 7°N±9°×12°6E±°, h13^{km}±5^{km}, M4.8/18, mB5.3/11, mb4.8/18, MLv4.9/6, Mw(mB)4.7/11*

ISC 01 07:22:48.1±0.7, **7°.69N**±0°.03×**126°.09E**±0°.05, **h30**^{km}±4^{km}, **n153**, σ**1^{s}.47**/139, **mb4.5**/45, **MS3.7**/37, **10C-5D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.80**	**220**	Pg	**Pn**	**07 23 02.8**	**-0.5**
	2μm,0.3s,baz=262,slow=4.0,SNR=280						
DAV				Lg	Lg	07 23 16.6	
	1μm,0.3s,baz=238,slow=22,SNR=7.3						
DAV	**Davao City (W)**	**0.80**	**220**		**Pn**	**07 23 03.0**	**-0.3**
DAV				Sn	**Sn**	**07 23 15.0**	**+0.8**
BUKP	**Musuan**	**1.04**	**281**	⇓*i*P	**Pb**	**07 23 07.5**	**0.0**
BUKP				*i* S	**Sn**	**07 23 19.7**	**-0.6**
KCP	**Kidapawan**	**1.20**	**236**	⇑*i*P	**Pn**	**07 23 09.1**	**+0.1**
KCP				*i* S	**Sb**	**07 23 25.5**	**0.0**

CGP	Cagayan de Oro	1.58	299	⇑iP	Pb	07 23 16.0	-0.7
CGP				iS	Sb	07 23 37.5	+1.1
CTBH	Cotabato--PC H	1.89	256	⇑iP	Pn	07 23 19.2	+0.9
GSPH	General Santos	1.95	216	⇓iP	Pn	07 23 19.5	+0.1
GSPH				eS	Sb	07 24 08.8	+22
SCPH	Surigao	2.17	344	⇑eP	Pb	07 23 24.8	-1.9
PAGZ	Pagadian	2.69	274	⇑iP	Pn	07 23 31.1	+1.7
MSLP	Maasin	2.72	333	⇓eP	Pn	07 23 31.1	+1.3
MSLP				eS	Sn	07 24 01.1	-0.6
DCPH	Dipolog City	2.86	288	⇑eP	Pb	07 23 35.9	-2.5
SNPH	Sibulan	3.27	300	⇑iP	Pn	07 23 39.8	+2.4
SNPH				iS	Sn	07 24 17.7	+2.2
LLP	Lapu-Lapu	3.35	321	⇓eP	Pn	07 23 41.3	+2.8
LLP				eS	Sb	07 24 23.1	-4.3
CNOP	Candoni, Negro	4.02	302	⇑eP	Pn	07 23 50.0	+2.3
CNOP				eS	Sb	07 24 45.6	-1.0
RCP	Roxas	5.07	320	⇑eP	Pn	07 24 05.2	+3.0
TNTI	Ternate	6.98	169	Pn	Pn	07 24 29.9	+1.5
TNTI	Ternate	6.98	169	P	Pn	07 24 31.9	+3.5
	0.6nm2μm191nm,1.2s						
GTOI	Gorontalo	7.65	204	P	Pn	07 24 36.9	-0.7
	0.3nm1μm69nm,0.7s						
MYLDM	Lahad Datu	7.95	252	Pn	Pn	07 24 41.6	0.0
MRSI	Marisa	8.27	210	P	Pn	07 24 46.6	+0.5
	0.3nm1μm72nm,0.9s						
LBMI	Labuha	8.39	170	P	Pn	07 24 50.5	+2.8
	1μm80nm,1.0s						
TOLI2	Tolitoli	8.41	219	Pn	Pn	07 24 46.8	-1.2
LUWI	Luwuk	9.28	201		Pn	07 24 60.0	0.0
LUWI	Luwuk	9.28	201	P	Pn	07 25 01.5	+1.5
	6μm154nm,1.2s						
APSI	Ampana	9.62	208	P	Pn	07 25 06.2	+1.5
	613nm49nm,1.1s						
SANI	Sanana	9.67	181	P	Pn	07 25 03.8	-1.5
	2μm121nm,0.8s						
SWI	Sorong	9.93	149	P	Pn	07 25 11.5	+2.6
	23nm,0.7s						
SIJI	Sorong	9.94	149	Pn	Pn	07 25 08.2	-0.9
	1.8nm,0.3s,baz=232,slow=3.7,SNR=5.0						
SIJI				LR	LR	07 29 30.6	
	comp=Z,138nm,19.3s,baz=44,slow=41						
	6.1nm,0.4s						
FAKI	Fak Fak	12.19	150	Pn	Pn	07 25 40.2	+0.4
TTSI	Tana Toraja	12.36	211	P	Pn	07 25 44.1	+1.9
	1μm20nm,0.8s						
SPSI	Sidrap Palu	13.18	209	P	Pn	07 25 55.9	+2.5
	17nm,0.9s						
BNSI	Bone	13.41	207	P	Pn	07 26 00.0	+3.5
	51nm,1.1s						
KAPI	Kappang	14.11	207	Pn	Pn	07 26 07.3	+1.2
	1.4nm,0.3s,baz=39,slow=11,SNR=3.8						
	5.8nm,0.5s						
KAPI	Kappang	14.11	207	Pn	Pn	07 26 06.4	+0.3
BKSI	Bulukumba	14.23	205	P	Pn	07 26 09.5	+1.8
SBUM	Sibu	14.76	250		Pn	07 26 14.1	-0.9
BBKI	Banjar Baru	15.77	226	P	P	07 26 31.1	-0.8
	20nm,0.8s						
TWG	Pinlang	15.80	343		P	07 26 32.1	-0.1
SMPI	Sarmi	15.84	127	P	P	07 26 34.1	+1.5
	2μm26nm,1.0s						
YULB	Yu-li	16.28	344	Pn	Pn	07 26 35.9	+1.1
TPUB	Ta-pu	16.39	342		P	07 26 39.5	+0.8
TPUB				IAmb	IAmb	07 26 58.4	
	comp=Z,164nm,1.9s						
MMRI	Maumere	16.66	193	P	P	07 26 41.4	-0.3
	comp=Z,101nm,0.9s						
KSM	Kuching	16.90	249	Pn	Pn	07 26 40.2	-2.4
NACB	Ninganchiao	16.95	346	Pn	Pn	07 26 43.7	+0.5
BATI	Baumata	17.94	188	Pn	Pn	07 26 54.9	-0.6
	comp=Z,3.5nm,0.3s,baz=79,slow=0.8,SNR=7.8						
BATI	Baumata	17.94	188	P	P	07 26 56.6	+0.7
	comp=Z,45nm,0.8s						
JOW	Kunigami	19.16	6	LR	LR	07 35 57.6	
	comp=Z,120nm,18.6s,baz=100,slow=42						
JOW	Kunigami	19.16	6	P	Pn	07 27 10.8	+0.6
JOW				IAmb	IAmb	07 27 18.0	
	comp=Z,37nm,1.0s						
GUMO	Guam	19.36	71	LR	LR	07 35 42.6	
	comp=Z,42nm,18.3s,baz=244,slow=41						
QIZ	Qiongzhong	19.40	307	P	P	07 27 11.2	-0.7
QIZ				S	S	07 30 47.4	-2.4
QIZ				LR	LR		
	comp=Z,190nm,13.3s						
QIZ				LR	LR		
	comp=Z,180nm,15.1s						
QIZ				LR	LR		
	comp=Z,150nm,17.7s						
MTN	Manton Dam	21.00	166	P	P	07 27 29.6	+0.3
MTN				IAmb	IAmb	07 27 38.8	
	comp=Z,27nm,1.1s						
KNRA	Kununurra	23.36	174	P	P	07 27 53.4	-0.8
KNRA				IAmb	IAmb	07 28 02.3	
	comp=Z,29nm,0.7s						
NJ2	Nanjing	25.16	345	eP	P	07 28 12.5	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FITZ	Fitzroy Crossi	25.62	181	P	P	07 28 14.8	-0.3
	comp=Z,1.7nm,0.3s,baz=323,slow=4.7,SNR=27						
FITZ				LR	LR	07 40 03.3	
	comp=Z,99nm,18.9s,baz=13,slow=40						
	comp=Z,1.7nm,0.3s						
JNU	Nakatsue	25.70	9	P	P	07 28 17.4	+1.6
	comp=Z,2.0nm,0.7s,baz=326,slow=20,SNR=1.2						
PMG	Port Moresby	26.99	129	LR	LR	07 40 45.4	
	comp=Z,59nm,20.5s,baz=324,slow=40						
PSI	Prapat	27.48	261	P	P	07 28 32.2	+0.1
	comp=Z,1.3nm,0.4s,baz=321,slow=13,SNR=1.3						
	comp=Z,1.3nm,0.4s						
RPSI	Rantau Prapat	27.50	261	P	P	07 28 32.2	0.0
CMAR	Chiang Mai Arr	28.49	295	P	P	07 28 40.2	-0.8
	comp=Z,0.9nm,0.4s,baz=360,slow=23,SNR=4.2						
	comp=Z,0.9nm,0.4s						
WRA	Warramunga Arr	28.63	164	P	P	07 28 40.6	-1.6
	comp=Z,0.9nm,0.6s,baz=333,slow=11,SNR=18						
WRA				LR	LR	07 41 12.4	
	comp=Z,89nm,20.7s,baz=340,slow=39						
	comp=Z,0.9nm,0.6s						
KSAR	Wonju Array Be	29.67	3	P	P	07 28 49.9	-1.3
KSRS	Korea Array	29.68	3	P	P	07 28 48.8	-2.5
	comp=Z,0.7nm,0.8s,baz=186,slow=9.8,SNR=2.4						
KSRS				LR	LR	07 43 05.5	
	comp=Z,55nm,18.0s,baz=190,slow=41						
	comp=Z,0.7nm,0.8s						
PSA00	Pilbara Seismi	29.71	192	P	P	07 28 50.7	-1.1
XAN	Xi'an	30.64	331	P	P	07 28 59.2	-0.8
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	Matsushiro Arr	30.78	19	P	P	07 28 59.3	-1.8
	comp=Z,1.7nm,0.6s,baz=193,slow=9.2,SNR=3.0						
MJAR				LR	LR	07 41 35.7	
	comp=Z,64nm,19.0s,baz=207,slow=37						
	comp=Z,1.7nm,0.6s						
HNS	HongShan	31.34	342	eP	P	07 29 13.5	+7.6
HNS				LR	LR		
	comp=Z,120nm,17.1s						
HNS				LR	LR		
	comp=Z,140nm,17.3s						
AS31	Alice Springs	32.08	166	P	P	07 29 13.1	+0.4
ASAR	Alice Springs	32.08	166	P	P	07 29 12.2	-0.5
	comp=Z,1.3nm,0.5s,baz=341,slow=6.9,SNR=28						
	comp=Z,1.3nm,0.5s						
LZH	Lanzhou	34.82	328	eP	P	07 29 38.9	+2.3
LZH				pP	sP	07 29 48.7	-0.4
LZH				sP	pP	07 29 54.9	+9.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				LR	LR		
	comp=Z,210nm,17.9s						
LZH				LR	LR		
	comp=Z,240nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,18.8s						
USA0B	Ussuriysk Arra	36.74	7	P	P	07 29 51.2	-1.5
USA0B				IAmb	IAmb	07 29 59.4	
	comp=Z,9.0nm,0.8s						
USRK	Ussuriysk Ar.	36.74	7	P	P	07 29 49.3	-3.4
	comp=Z,1.5nm,0.6s,baz=204,slow=8.7,SNR=2.1						
USRK				LR	LR	07 46 05.1	
	comp=Z,57nm,18.6s,baz=185,slow=38						
	comp=Z,1.5nm,0.6s						
USRK	Ussuriysk Ar.	36.74	7	P	P	07 29 53.1	+0.4
MDJ	Mudanjiang	36.92	4	P	P	07 29 59.6	+5.4
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.7s						
SHL	Shillong	37.12	303	P	P	07 29 57.2	+0.6
ASAJ	Asahikawa	39.05	19	P	P	07 30 09.2	-3.0
	comp=Z,3.7nm,0.6s,baz=0.4,slow=21,SNR=1.9						
ASAJ				LR	LR	07 46 52.6	
	comp=Z,108nm,19.3s,baz=166,slow=37						
	comp=Z,3.7nm,0.6s						
GTA	Gaotai	39.42	327	eP	P	07 30 18.0	+2.4
GTA				pP	sP	07 30 30.8	+2.6
GTA				sP	pP	07 30 35.0	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,6.8s						
GTA				LR	LR		
	comp=Z,130nm,18.3s						
GTA				LR	LR		
	comp=Z,170nm,18.3s						
GTA				LR	LR		
	comp=Z,160nm,20.3s						
GOMU	GeErMu	40.25	319	P	P	07 30 25.5	+2.7
GOMU				pP	pP	07 30 28.6	-3.1
GOMU				sP	sP	07 30 33.1	-2.3
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,80nm,4.9s						
GOMU				LR	LR		
	comp=Z,91nm,15.7s						
GOMU				LR	LR		
	comp=Z,140nm,15.0s						
GOMU				LR	LR		
	comp=Z,160nm,15.2s						
NWAO	Narrogin (SRO)	41.26	191	P	P	07 30 30.1	-0.6
NWAO				IAmb	IAmb	07 31 43.2	
	comp=Z,43nm,1.2s						
H11N1	WAKE ISLAND Hy	41.29	69	T	T	08 14 20.3	
	baz=265,slow=74,SNR=50						
H11N2	WAKE ISLAND Hy	41.29	69	T	T	08 14 28.6	
	baz=265,slow=74,SNR=35						
H11N3	WAKE ISLAND Hy	41.30	69	T	T	08 14 26.4	
	baz=265,slow=74,SNR=50						
BBOO	Buckleboo	41.37	167	P	P	07 30 31.7	0.0
KLR	Kul'dur	41.68	6	P	P	07 30 32.5	-1.4
	comp=Z,0.6nm,0.4s,baz=226,slow=6.3,SNR=4.1						
KLR				LR	LR	07 48 53.6	
	comp=Z,46nm,18.9s,baz=219,slow=38						
	comp=Z,0.6nm,0.4s						
STKA	Stephens Creek	42.03	160	P	P	07 30 37.0	-0.1
	comp=Z,2.9nm,0.5s,baz=324,slow=9.4,SNR=5.2						
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	42.03	160	P	P	07 30 37.2	+0.1
SONM	Songino Array	43.38	341	LR	LR	07 50 21.4	
	comp=Z,54nm,18.8s,baz=270,slow=38						
WMQ	Urumqi	49.16	324	eP	P	07 31 35.8	+2.3
WMQ				LR	LR		
	comp=Z,300nm,19.3s						
WMQ				LR	LR		
	comp=Z,370nm,21.1s						
WMQ				LR	LR		
	comp=Z,130nm,21.3s						
DZM	Mont Dzumac	49.38	128	P	P	07 31 35.9	+0.4
PETK	Petropavlovsk-	52.05	24	P	P	07 31 53.9	-1.2
	comp=Z,6.0nm,1.2s,baz=206,slow=6.3,SNR=1.7						
PETK				LR	LR	07 54 06.7	
	comp=Z,33nm,19.7s,baz=229,slow=36						
	comp=Z,6.0nm,1.2s						
PETK	Petropavlovsk-	52.05	24	P	P	07 31 57.2	+2.2
MK31	Makanchi Array	53.98	324	P	P	07 32 11.0	+1.6
MK31				IAmb	IAmb	07 32 18.2	
	comp=Z,12nm,0.8s						
MKAR	Makanchi Array	53.98	324	P	P	07 32 10.6	+1.1
	comp=Z,9.7nm,0.8s,baz=124,slow=8.1,SNR=102						
	comp=Z,9.7nm,0.8s						
MKAR	Makanchi Array	53.98	324	P	P	07 32 10.9	+1.5
MAKZ	Makanchi	54.17	324	P	P	07 32 11.0	+0.2
MAKZ				IAmb	IAmb	07 32 19.1	
	comp=Z,10nm,0.8s						
MAKZ	Makanchi	54.17	324	P	P	07 32 12.3	+1.5
MAKZ				pP	pP	07 32 18.2	-1.8
MAKZ				sP	sP	07 32 27.1	+3.6
YAK	Yakutsk	54.30	2	LR	LR	07 55 30.8	
	comp=Z,30nm,20.7s,baz=268,slow=36						
KDJ	Kajisay	55.02	317	P	P	07 32 17.2	0.0
KDJ				IAmb	IAmb	07 32 26.6	
	comp=Z,4.6nm,0.8s						
MA2	Magadan	55.06	15	LR	LR	07 55 35.7	
	comp=Z,30nm,20.1s,baz=204,slow=36						
MA2	Magadan	55.06	15	P	P	07 32 18.6	+1.6
MA2				IAmb	IAmb	07 32 38.5	
	comp=Z,23nm,1.8s						
NIL	Nilore	55.07	306	P	P	07 32 17.7	+0.2
BOOM	Boomskoye usch	56.01	317	P	P	07 32 23.7	-0.6
ZAA0	Zalesovo Array	56.81	332	P	P	07 32 29.6	+0.1
ZAA0				IAmb	IAmb	07 32 36.3	
	comp=Z,6.3nm,0.9s						
ZALV	Zalesovo Beam	56.81	332	P	P	07 32 28.6	-0.9
	comp=Z,1.8nm,0.5s,baz=123,slow=8.0,SNR=8.2						
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	56.81	332	P	P	07 32 29.2	-0.3
AAK	Ala-Archa	57.05	316	LR	LR	07 59 37.9	
	comp=Z,99nm,21.8s,baz=98,slow=39						
KURK	Kurchatov	58.10	327	P	P	07 32 39.3	+0.6
KURK	Kurchatov	58.10	327	⇓P	P	07 32 39.5	+0.8
KURK				pP	pP	07 32 46.2	-1.7
SEY	Seymchan	58.35	14	LR	LR	07 56 24.9	
	comp=Z,38nm,21.9s,baz=300,slow=35						
BRVK	Borovoye	63.76	326	P	P	07 33 17.0	-0.2
BRVK				IAmb	IAmb	07 33 25.3	
	comp=Z,8.3nm,0.8s						
BRVK	Borovoye	63.76	326	⇑P	P	07 33 18.1	+0.9
BRVK				pP	pP	07 33 24.0	-2.5
RPZ	Rata Peaks	65.35	146	LR	LR	07 58 53.2	
	comp=Z,53nm,21.8s,baz=316,slow=33						
NRIK	Noril'sk	66.46	346	P	P	07 33 33.5	-0.9
	comp=Z,1.2nm,0.6s,baz=360,slow=21,SNR=2.4						
NRIK				LR	LR	08 05 49.2	
	comp=Z,62nm,18.4s,baz=153,slow=39						
	comp=Z,1.2nm,0.6s						
NRIK	Noril'sk	66.46	346	P	P	07 33 34.4	0.0
GEYT	Alibeck	67.96	308	LR	LR	08 06 09.1	
	comp=Z,34nm,20.4s,baz=148,slow=38						
ABKAR	Akbulak array	68.72	320	P	P	07 33 48.5	-0.5
AKTO	Aktyubinsk	70.20	321	LR	LR	08 06 54.1	
	comp=Z,72nm,20.4s,baz=104,slow=38						
ARU	Arti	71.28	327	LR	LR	08 09 49.8	
	comp=Z,44nm,18.1s,baz=359,slow=40						
ARU	Arti	71.28	327	P	P	07 34 03.7	-0.9
ARU				IAmb	IAmb	07 34 05.2	
	comp=Z,6.0nm,0.7s						
KIRV	Kirov	76.54	328	LR	LR	08 12 28.8	
	comp=Z,59nm,18.2s,slow=39						
BELG	Belogornoye	76.92	322	LR	LR	08 10 26.9	
	comp=Z,35nm,19.7s,baz=309,slow=37						
GNI	Garni	78.49	309	LR	LR	08 15 54.3	
	comp=Z,32nm,18.3s,baz=78,slow=41						
KBZ	Khabaz	79.83	313	LR	LR	08 13 48.8	
	comp=Z,52nm,21.2s,baz=77,slow=38						
H23K	Yukon River	80.73	25	P	P	07 34 59.5	+1.2
H23K				IAmb	IAmb	07 35 12.9	
	comp=Z,19nm,1.8s						
TOLK	Toolik Lake Re	80.82	22	P	P	07 35 00.3	+1.4
TOLK				IAmb	IAmb	07 38 03.5	
	comp=Z,16nm,1.8s						
KLMR	Klimovskoe	81.67	330	eP	P	07 35 02.7	-0.7
KLMR				AMP		07 35 04.2	
	comp=Z,15nm,0.9s						
ILAR	Eielson Array	81.83	26	P	P	07 35 03.5	-0.7
	comp=Z,0.3nm,0.6s,baz=251,slow=5.0,SNR=7.1						
	comp=Z,0.3nm,0.6s						
BMAR	Burnt Mountain	82.70	23	P	P	07 35 10.0	+1.3
RIDG	Independent Ri	82.75	27	P	P	07 35 09.4	+0.3
MENT	Mentasta	83.30	27	P	P	07 35 13.4	+1.5
MENT				IAmb	IAmb	07 35 15.5	
	comp=Z,27nm,1.8s						
OBN	Obninsk	83.49	325	LR	LR	08 15 17.1	
	comp=Z,12nm,18.3s,baz=172,slow=38						
SPITS	Spitsbergen Ar	86.50	349	LR	LR	08 18 35.3	
	comp=Z,28nm,19.5s,baz=236,slow=39						
ARCES	ARCESS Array B	86.54	340	P	P	07 35 27.9	-0.1
	comp=Z,2.8nm,0.9s,baz=270,slow=0.6,SNR=4.0						
	comp=Z,2.8nm,0.9s						
ARCES	ARCESS Array B	86.54	340	P	P	07 35 28.6	+0.6
BRTR	Keskin Array B	87.03	310	P	P	07 35 30.9	-0.4
	comp=Z,0.4nm,0.7s,baz=102,slow=5.7,SNR=2.2						
	comp=Z,0.4nm,0.7s						
VNDA	Vanda	87.40	173	P	P	07 35 32.4	+0.4
	comp=Z,0.5nm,0.9s,baz=211,slow=6.5,SNR=2.0						
	comp=Z,0.5nm,0.9s						
VNDA	Vanda	87.40	173	P	P	07 35 32.5	+0.6
VNDA				IAmb	IAmb	07 37 29.2	
	comp=Z,9.6nm,1.7s						
FIA1	FINESS Array S	88.07	332	P	P	07 35 35.6	+0.1
FIA1				IAmb	IAmb	07 35 42.3	
	comp=Z,11nm,1.2s						
FINES	FINESS Array B	88.07	332	P	P	07 35 35.1	-0.4
	comp=Z,3.4nm,0.8s,baz=96,slow=5.6,SNR=15						
FINES				LR	LR	08 17 11.0	
	comp=Z,42nm,21.0s,baz=66,slow=37						
	comp=Z,3.4nm,0.8s						
FINES	FINESS Array B	88.07	332	P	P	07 35 35.4	-0.2
AKASG	Malin Array Be	88.44	321	P	P	07 35 37.2	-0.4
	comp=Z,0.8nm,0.6s,baz=84,slow=4.6,SNR=2.0						
AKASG				LR	LR	08 19 54.2	
	comp=Z,26nm,18.5s,baz=356,slow=39						
	comp=Z,0.8nm,0.6s						
MEF	Metsahovi	89.15	331	eP	P	07 35 40.4	-0.3
RAF	Rauma	90.20	332	eP	P	07 35 45.5	-0.1
PABE	Paberze	90.53	326	eP	P	07 35 46.0	-1.2
RES	Resolute Bay	94.06	10	LR	LR	08 23 42.9	
	comp=Z,22nm,18.1s,baz=70,slow=39						
HFS	Hagfors	94.25	332	LR	LR	08 21 24.9	
	comp=Z,60nm,20.6s,baz=72,slow=37						
KECS	Kecovo	94.49	320	eP	P	07 36 05.5	-0.2
NB2	NORSAR Subarra	94.98	334	P	P	07 36 07.0	-0.7
	comp=Z,1.5nm,1.0s,baz=65,slow=5.1						
NOA	NORSAR Array B	94.98	334	P	P	07 36 07.2	-0.5
	comp=Z,0.6nm,0.8s,baz=64,slow=4.7,SNR=2.3						
NOA				LR	LR	08 23 28.5	
	comp=Z,37nm,19.0s,baz=50,slow=38						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	96.17	24	P	P	07 36 11.6	-1.4
	comp=Z,0.4nm,0.7s,baz=301,slow=4.7,SNR=5.5						
	comp=Z,0.4nm,0.7s						
VRAC	Vranov	96.67	322	LR	LR	08 21 56.2	
	comp=Z,36nm,20.5s,baz=122,slow=37						
GERES	GERESS Array B	98.61	322	LR	LR	08 23 15.9	
	comp=Z,31nm,18.9s,baz=74,slow=37						
TXAR	Lajitas Array	119.62	50	PKP	PKPdf	07 41 35.0	-0.9
	comp=Z,0.1nm,0.6s,baz=284,slow=1.0,SNR=1.8						
TORD	Torodi Ar. Bea	121.03	290	PKP	PKPdf	07 41 37.1	-1.8
	comp=Z,0.4nm,0.8s,baz=62,slow=1.9,SNR=2.3						

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*IDC **01** 07:28:36.5±1.7, 34°.44N×24°.12E, h0^{km}, mb3.4/4, mbtmp3.3/6, ML3.5/2, MS2.5/2, Error ellipse: s-maj=39.1km s-min=27.4km az=137.0*

*ATH **01** 07:28:39.0, 34°.37N×23°.60E, h13^{km}±3^{km}, ML3.2/7, Error ellipse: s-maj=3.9km s-min=2.3km az=28.0*

*THE **01** 07:28:40.1, 34°.40N×23°.64E, h14^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=3.2km s-min=1.4km az=135.0*

*GII **01** 07:28:47.0±0.0, 35°.27N×25°.21E, h1^{km}*

ISC 01 07:28:39.0±1.7**, 34°.33N**±0°.06×**23°.81E**±0°.06**, h15^{km}**±10^{km}**, n27, σ2^{s}12**/35**, mb3.3**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.56	24	P	Pg	07 28 50.7	+0.6
GVD				AML	AML	07 29 02.9	
	comp=E,6471μm,0.4s						
GVD				AML	AML	07 29 04.8	
	comp=N,6440μm,0.5s						
GVD	Gavdhos	0.56	24	P	Pg	07 28 50.6	+0.6
GVD				S	Sb	07 29 00.1	+1.8
	comp=N,3μm,0.5s						
GVDS	Gavdos	0.57	24	P	Pg	07 28 50.4	+0.3
GVDS				S	Sb	07 28 59.8	+1.4
	comp=N,2μm,0.4s						
KNDR	Palaiochora Ch	0.91	353	P	Pg	07 28 55.8	-0.9
KNDR				S	Sg	07 29 07.3	-1.4
KNDR				AML	AML	07 29 10.1	
	comp=E,2767μm,0.6s						
KNDR				AML	AML	07 29 14.1	
	comp=N,3439μm,0.5s						
SIVA	Sivas	1.07	50	P	Pb	07 29 01.0	+1.8
SIVA				S	Sn	07 29 17.4	+3.3
SIVA				AML	AML	07 29 25.2	
	comp=E,2933μm,0.7s						
SIVA				AML	AML	07 29 30.8	
	comp=N,1876μm,0.6s						
TMBK	Timbaki Herakl	1.08	46	P	Pb	07 29 01.2	+1.9
TMBK				AML	AML	07 29 25.3	
	comp=E,1645μm,0.6s						
TMBK				AML	AML	07 29 29.2	
	comp=N,1954μm,0.7s						
IMMV	Iera Moni Meta	1.14	7	P	Pg	07 28 59.9	-1.1
IMMV				S	Sg	07 29 14.7	-1.3
IMMV				AML	AML	07 29 18.7	
	comp=E,3028μm,0.8s						
IMMV				AML	AML	07 29 19.8	
	comp=N,3602μm,0.5s						
IMMV	Iera Moni Meta	1.14	7	P	Pg	07 28 59.9	-1.1
IMMV				S	Sg	07 29 15.1	-0.8
	comp=N,2μm,0.6s						
PRNS	Prines Rethymn	1.18	28	P	Pg	07 29 00.6	-1.2
PRNS				S	Sg	07 29 16.7	-0.5
	comp=N,300nm,0.5s						
CHAN	Chania	1.21	9	P	Pb	07 29 00.7	-0.8
CHAN				AML	AML	07 29 22.3	
	comp=N,2621μm,0.7s						
CHAN				AML	AML	07 29 25.9	
	comp=E,1951μm,0.7s						
RODP	Rodopos	1.23	358	P	Pb	07 29 01.5	-0.5
RODP				S	Sb	07 29 16.4	-1.3
	comp=E,160nm,0.4s						
IDI	Anoyia	1.31	42	P	Pb	07 29 04.0	+0.7
IDI				AML	AML	07 29 26.6	
	comp=E,467μm,0.5s						
IDI				AML	AML	07 29 28.9	
	comp=N,532μm,0.8s						
IDI	Anoyia	1.31	42	P	Pb	07 29 03.9	+0.7
IDI				S	Sn	07 29 21.3	+1.4
	comp=N,250nm,0.7s						
ANKY	Antikythira Is	1.59	345	P	Pn	07 29 06.0	-0.6
KTHA	Kythira Island	2.02	343	P	Pn	07 29 13.1	+0.6
KTHR	Kythira	2.04	341	P	Pn	07 29 14.2	+1.4
BRTR	Keskin Array B	9.53	53	Pn	Pn	07 30 52.6	-3.0
	comp=N,0.1nm,0.3s,baz=233,slow=14,SNR=1.7						
BRTR				LR	LR	07 35 02.7	
	comp=N,23nm,18.5s,baz=266,slow=42						
	comp=N,0.3nm,0.7s						
KZIT	Kziot	9.55	108	Sn	Sn	07 32 37.3	-5.8
DSI	Dead Sea	10.10	103	Pn	Pn	07 31 01.7	-1.7
DSI				Sn	Sn	07 32 48.3	-8.1
PRNI	Paran	10.26	110	Pn	Pn	07 31 06.7	+1.0
PRNI				Sn	Sn	07 32 55.4	-5.0
MBRI	Mt Berech	10.44	113	Pn	Pn	07 31 10.6	+2.4
MBRI				Sn	Sn	07 33 01.4	-3.6
DAVOX	Davos/Dischmat	16.30	324	LR	LR	07 41 04.3	
	comp=N,22nm,18.4s,baz=73,slow=46						
GERES	GERESS Array B	16.34	336	Pn	Pn	07 32 29.5	+1.8
	comp=N,0.2nm,0.3s,baz=134,slow=11,SNR=2.1						
	comp=N,0.2nm,0.4s						
FINES	FINESS Array B	27.18	2	P	P	07 34 18.5	-3.0
	comp=N,0.9nm,1.1s,baz=185,slow=14,SNR=0.9						
	comp=N,0.9nm,1.1s						
NOA	NORSAR Array B	27.94	347	P	P	07 34 29.2	+0.8
	comp=N,0.1nm,0.4s,baz=149,slow=11,SNR=1.3						
	comp=N,0.1nm,0.4s						
TORD	Torodi Ar. Bea	29.11	229	P	P	07 34 41.1	+2.0
	comp=N,0.2nm,0.5s,baz=60,slow=5.6,SNR=1.5						
	comp=N,0.2nm,0.5s						
MKAR	Makanchi Array	45.16	56	P	P	07 36 53.1	-1.8
	comp=N,0.7nm,0.5s,baz=269,slow=8.1,SNR=9.8						
	comp=N,0.7nm,0.5s						

WEL 01 07:29:24.5±1.4**, 34°S**±42°×**17°9W**±4°2**, h389^{km}**±32^{km}**, M4.3**/7**, mB5.0**/4**, ML4.6**/7**, MLv4.2**/7**, Mw(mB)4.4**/4**, Error ellipse: s-maj=0.1km s-min=0.0km az=135.6, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.04	211	P	Pn	07 30 34.1	-2.0
MXZ				S	S	07 31 33.1	-1.1
WMGZ	Waiomatatini S	4.21	208	P	Pn	07 30 38.0	+0.2
WMGZ				S	S	07 31 38.0	+0.7
PKGZ	Pakihiroa	4.41	210	S	S	07 31 41.0	-0.1
HAZ	Te Kaha	4.43	214	P	Pn	07 30 41.1	+1.1
HAZ				S	S	07 31 41.3	+0.1
PUZ	Puketiti	4.49	208	P	Pn	07 30 40.0	-0.7
PUZ				S	S	07 31 43.0	+0.5

RUGZ	Raukumara Rang	4.65	213	P	Pn	07 30 44.0	+1.7
TWGZ	Tauwhareparae	4.69	209	P	Pn	07 30 43.0	+0.3
TWGZ				S	S	07 31 46.6	+0.4
URZ	Urewera	5.15	215	P	Pn	07 30 49.8	+2.4
URZ				S	S	07 31 56.3	+1.5
TMVZ	Te Maari	6.51	218	P	Pn	07 31 01.5	-0.8
NTVZ	North Tongarir	6.51	219	P	Pn	07 31 01.4	-0.9
ETVZ	East Tongariro	6.52	218	P	Pn	07 31 01.8	-0.7
NNVZ	North Ngauruho	6.57	219	P	Pn	07 31 02.0	-1.0

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*IDC **01** 07:45:31.0±1.0, 52°.48S×13°.85E, h0^{km}, mb4.0/7, mbtmp4.0/7, MS3.6/11, Error ellipse: s-maj=37.3km s-min=24.8km az=88.0*

*NEIC **01** 07:45:32.1±1.5, 52°.5S±0°.1×14°.2E±0°.3, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=31.8km s-min=15.9km az=128.0*

ISC 01 07:45:32.0±0.7**, 52°.4S**±0°.1×**14°.0E**±0°.2**, h10**^{km}**, n34, σ0^s.88**/17**, mb4.2**/8**, MS3.7**/11**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TROLL	Troll, Antarti	20.30	190	P	Pn	07 50 10.0	+0.3
SUR	Sutherland	20.63	16	P	Pn	07 50 14.6	+0.8
	5.7nm,0.9s,baz=177,slow=16,SNR=2.3						
SUR				LR	LR	07 55 58.2	
	comp=Z,170nm,20.7s,baz=188,slow=30						
	5.7nm,0.9s						
SUR	Sutherland	20.63	16	P	P	07 50 13.0	+1.4
SNAA	Sanae	20.71	195	P	Pn	07 50 13.9	-0.6
SNAA	Sanae	20.71	195	P	P	07 50 12.0	-0.2
	14nm,0.9s,baz=29,slow=8.7,SNR=32						
	14nm,0.9s						
SNAA	Sanae	20.71	195	P	P	07 50 12.0	-0.2
SNAA				IAmb	IAmb	07 50 18.2	
	comp=Z,19nm,0.9s						
VNA2	Neumayer--Watz	20.93	200	P	P	07 50 15.6	+1.2
	baz=24,slow=11						
VNA3	Neumayer Olymp	21.65	201	P	P	07 50 23.2	+1.0
BOSA	Boshof	25.21	24	LR	LR	07 58 33.3	
	comp=Z,154nm,21.6s,baz=189,slow=31						
BOSA	Boshof	25.21	24	P	P	07 50 56.7	-1.1
BOSA				IAmb	IAmb	07 51 20.8	
	comp=Z,16nm,1.4s						
LBTB	Lobatse	28.74	22	LR	LR	08 01 12.0	
	comp=Z,127nm,19.3s,baz=162,slow=33						
BELA	Belgrano 2	30.89	198	P	P	07 51 47.1	-0.9
BELA				IAmb	IAmb	07 52 10.4	
	comp=Z,6.6nm,1.4s						
TSUM	Tsumeb	33.27	6	LR	LR	08 03 04.1	
	comp=Z,67nm,21.8s,baz=150,slow=32						
TSUM	Tsumeb	33.27	6	P	P	07 52 09.4	-0.2
TSUM				IAmb	IAmb	07 52 32.8	
	comp=Z,7.6nm,1.1s						
QSPA	South Pole Qui	37.81	180	P	P	07 52 48.7	+0.5
	comp=Z,2.7nm,1.0s,baz=235,slow=4.8,SNR=5.0						
QSPA				LR	LR	08 07 23.9	
	comp=Z,57nm,20.7s,baz=254,slow=35						
	comp=Z,2.7nm,1.0s						
QSPA	South Pole Qui	37.81	180	P	P	07 52 47.5	-0.8
QSPA				IAmb	IAmb	07 52 49.7	
	comp=Z,7.1nm,1.2s						
LSZ	Lusaka	38.73	22	LR	LR	08 06 50.6	
	comp=Z,114nm,20.5s,baz=156,slow=33						
RER	Riviere de l'E	44.73	62	P	P	07 53 45.1	-0.3
VNDA	Vanda	48.78	171	P	P	07 54 16.6	+0.2
	comp=Z,1.0nm,0.9s,baz=214,slow=3.6,SNR=6.3						
	comp=Z,1.0nm,0.9s						
VNDA	Vanda	48.78	171	P	P	07 54 16.3	-0.2
KMBO	Kilima Mbogo	54.68	29	LR	LR	08 18 13.8	
	comp=Z,55nm,18.1s,baz=80,slow=36						
H01W2	Cape Leeuwin H	68.77	120	T	T	09 12 23.5	
	baz=222						
H01W3	Cape Leeuwin H	68.79	120	T	T	09 12 24.3	
	baz=222						
H01W1	Cape Leeuwin H	68.79	120	T	T	09 12 29.3	
	baz=222						
LPAZ	La Paz	72.52	266	P	P	07 57 00.1	+0.3
	comp=Z,1.4nm,0.9s,baz=133,slow=6.7,SNR=6.3						
	comp=Z,1.4nm,0.9s						
LPAZ	La Paz	72.52	266	IAmb	IAmb	07 57 01.2	
	comp=Z,2.2nm,0.9s						
EIL	Elat	83.77	18	LR	LR	08 34 48.3	
	comp=Z,45nm,18.2s,baz=8.5,slow=35						
MMAI	Mount Meron Ar	87.11	18	LR	LR	08 38 22.2	
	comp=Z,32nm,18.0s,baz=38,slow=36						
IDI	Anoyia	87.86	9	LR	LR	08 38 50.7	
	comp=Z,29nm,18.4s,baz=56,slow=36						
ASAR	Alice Springs	87.94	127	P	P	07 58 22.3	+0.2
	comp=Z,0.9nm,0.7s,baz=207,slow=5.2,SNR=10						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	91.30	126	P	P	07 58 39.3	+1.5
	comp=Z,0.5nm,1.0s,baz=197,slow=3.0,SNR=2.3						
	comp=Z,0.5nm,1.0s						
KBZ	Khabaz	98.96	21	LR	LR	08 44 23.5	
	comp=Z,29nm,18.3s,baz=180,slow=36						
H07S1	FLORES T-PHASE	99.52	326	T	T	09 49 02.5	
	SNR=12						
YKA	Yellowknife Ar	151.37	311	PKPbc	PKPbc	08 05 23.4	-1.0
	comp=Z,0.7nm,0.7s,baz=93,slow=2.1,SNR=9.3						

IDC 01 08:26:03.1±2.2**, 5°.31S**×**131°.72E, h0**^{km}**, mb3.7**/1**, mbtmp3.6**/5**, ML3.6**/4**, Error ellipse: s-maj=104.0km s-min=24.4km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.43	354	Pn	Pn	08 27 11.9	+0.3
	5.8nm,0.3s,baz=198,slow=16,SNR=44						
SIJI				Sn	Sn	08 27 57.6	-6.3
	3.5nm,0.3s,baz=211,slow=22,SNR=8.5						
	10nm,0.3s						
FITZ	Fitzroy Crossi	14.03	205	Pn	Pn	08 29 22.4	-0.9
	0.1nm,0.3s,baz=25,slow=7.8,SNR=9.6						
FITZ				Sn	Sn	08 31 48.2	-12
	0.2nm,0.3s,baz=329,slow=12,SNR=1.8						
	0.7nm,0.7s						
WRA	Warramunga Arr	14.77	170	Pn	Pn	08 29 32.4	-1.0
	0.3nm,0.3s,baz=355,slow=13,SNR=23						
WRA				Sn	Sn	08 32 10.4	-7.6
	0.9nm,0.3s,baz=350,slow=24,SNR=12						
	0.4nm,0.5s						
ASAR	Alice Springs	18.38	174	P	P	08 30 20.4	+0.8
	0.2nm,0.3s,baz=356,slow=14,SNR=15						
ASAR				S	Sn	08 33 33.4	-12
	0.3nm,0.6s,baz=342,slow=18,SNR=2.2						
	1.5nm,0.9s						
MKAR	Makanchi Array	67.77	326	P	P	08 37 02.7	-0.1
	0.3nm,0.4s,baz=108,slow=8.1,SNR=6.2						
	0.3nm,0.4s						

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*NEIC **01** 08:55:52.4±2.2, 30°.33S±0°.04×72°.15W±0°.03, h10^{km}±2^{km}, mb4.2/4, ML3.6(GUC), Error ellipse: s-maj=8.1km s-min=3.2km az=204.0*

*IDC **01** 08:55:52.8±1.5, 30°.09S×71°.87W, h0^{km}, mb3.9/3, mbtmp3.8/6, ML3.7/3, MS3.6/1, Error ellipse: s-maj=40.6km s-min=31.6km az=91.0*

*GUC **01** 08:55:53.9±0.5, 30°.37S×72°.00W, h28^{km}±2^{km}, ML3.8*

ISC 01 08:55:52.2±1.1**, 30°.30S**±0°.03×**72°.04W**±0°.06**, h7**^{km}±6^{km}**, n61, σ1^s.36**/69**, mb4.2**/3**, 2C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.51	137	Pg	Pb	08 56 03.7	+0.1
CO06				Sg	Sb	08 56 11.0	-0.1
CO06	Fray Jorge	0.51	137	eP	Pb	08 56 03.4	-0.1
CO06				i S	Sb	08 56 11.1	-0.1
CO06				IAML		08 56 12.1	
	comp=E,9μm,0.3s						
CO05	La Serena	0.79	62		Pn	08 56 09.6	-0.2
CO05	La Serena	0.79	62	⇑eP	Pn	08 56 09.2	-0.6
CO05				eS	Sn	08 56 21.4	-0.5
CO05				IAML		08 56 24.3	
	comp=E,5μm,0.4s						
GO04	Tololo Observa	1.08	84		Pn	08 56 14.2	+0.2
GO04	Tololo Observa	1.08	84	eP	Pn	08 56 14.0	0.0
GO04				eS	Sb	08 56 27.1	-0.7
CO02	Combarbal	1.27	135		Pn	08 56 16.1	-0.4
CO02	Combarbal	1.27	135	eP	Pn	08 56 16.1	-0.4
CO02				eS	Sn	08 56 33.5	-0.4
CO02				IAML		08 56 36.5	
	comp=N,7μm,0.3s						
CO01	Juntas del Tor	1.72	80		Pg	08 56 24.7	-0.4
CO01	Juntas del Tor	1.72	80	eP	Pg	08 56 24.7	-0.4
CO01				eS	Sg	08 56 47.5	+0.1
CO01				IAML		08 56 52.4	
	comp=N,801nm,0.4s						
LCO	Las Campanas	1.73	43		Pn	08 56 24.0	+1.0
LCO	Las Campanas	1.73	43	eP	Pn	08 56 23.3	+0.3
LCO				eS	Sg	08 56 47.8	-0.2
AC04	Llanos de Chal	2.25	22	Pn	Pn	08 56 29.5	-0.4
AC04	Llanos de Chal	2.25	22	eP	Pn	08 56 29.5	-0.4
AC04				eS	Sb	08 57 00.8	-0.5
AC04				IAML		08 57 17.7	
	comp=N,393nm,0.6s						
VA06	Catapilco	2.34	164		Pn	08 56 30.4	-0.7
VA06	Catapilco	2.34	164	⇑iP	Pn	08 56 30.2	-0.9
VA06				eS	Sb	08 57 01.6	-2.2
VA06				IAML		08 57 10.5	
	comp=E,972nm,0.3s						
VA03	San Esteban	2.77	153		Pn	08 56 37.8	+0.7
ROCH	El Roble	2.80	162	eP	Pb	08 56 37.4	-5.4
ROCH				eP	Pn	08 56 34.9	-2.8
ROCH				eS	Sb	08 57 13.9	-3.5
ROCH				eS	Sn	08 57 14.5	+2.6
ROCH				IAML		08 57 24.2	
	comp=N,479nm,0.4s						
ROCH				IAML		08 57 26.6	
	comp=N,788nm,0.4s						
ROC1	El Roble	2.81	162	Pn	Pn	08 56 35.2	-2.5
MT02	Curacav	3.05	166		Pn	08 56 40.6	-0.2
MT02	Curacav	3.05	166	eP	Pn	08 56 40.5	-0.4
MT02				eS	Sn	08 57 19.1	+1.5
MT02				IAML		08 57 39.5	
	comp=E,119nm,0.6s						
PEL	Peldehue	3.06	158		Pn	08 56 41.5	+0.5
MT05	Renca	3.28	161		Pn	08 56 43.8	-0.3
MT05	Renca	3.28	161	eP	Pn	08 56 45.3	+1.3
MT05				eS	Sn	08 57 24.8	+1.5
AC06	Mina Casimiro	3.28	27		Pn	08 56 44.8	+0.7
AC06	Mina Casimiro	3.28	27	⇓iP	Pn	08 56 44.5	+0.4
AC06				eS	Sg	08 57 37.4	-0.3
AC06				IAML		08 57 44.1	
	comp=E,172nm,0.6s						
VA05	Santo Domingo	3.37	174		Pn	08 56 43.9	-1.3
MT03	Universidad Ad	3.44	158		Pn	08 56 47.0	+0.7
MT09	Talagante	3.58	166		Pn	08 56 48.3	0.0
MT01	Popeta	3.62	170		Pn	08 56 47.5	-1.1
MT01	Popeta	3.62	170	i P	Pn	08 56 47.5	-1.1
MT01				IAML		08 57 50.6	
	comp=E,104nm,0.6s						
LMEL	Las Melosas	3.87	157		Pn	08 56 53.3	+1.1
BO04	La Punta	3.87	162		Pn	08 56 52.5	+0.3
BO01	Tunca	4.16	169	Pn	Pn	08 56 55.3	-0.8
AC02	Maricunga	4.30	37	Pn	Pn	08 57 00.0	+1.6
AC01	Pan de Azucar	4.33	17	Pn	Pn	08 56 56.9	-1.5
GO05	Huala	4.70	179		Pn	08 57 01.2	-2.4
ML02	Panimavida	5.47	175		Pn	08 57 14.3	+0.2
H03N1	Juan Fernandez	6.63	240	T	T	09 04 35.5	
	baz=69,slow=72,SNR=1547						
H03N2	Juan Fernandez	6.64	240	T	T	09 04 34.9	
	baz=69,slow=72,SNR=1228						
H03N3	Juan Fernandez	6.64	240	T	T	09 04 33.1	
	baz=69,slow=72,SNR=1063						
PB15	IPOC Station P	7.43	19	Pn	Pn	08 57 39.9	-1.4
PB04	IPOC Station P	8.11	13	Pn	Pn	08 57 48.3	-2.3
LVC	Limon Verde	8.16	21	Pn	Pn	08 57 49.3	-2.1
	comp=E,0.4nm,0.3s,baz=322,slow=22,SNR=2.2						
LVC				Lg	Lg	08 59 48.1	
	comp=E,0.7nm,0.3s,baz=123,slow=4.4,SNR=3.5						
	comp=E,1.4nm,0.3s						
LVC	Limon Verde	8.16	21		Pn	08 57 49.6	-1.8
LC01	Cunco	8.58	179		Pn	08 57 54.5	-2.3
PB09	IPOC Station P	8.83	17	Pn	Pn	08 57 59.8	-0.7
PLCA	Paso Flores	10.48	174	Pn	Pn	08 58 27.3	+4.4
	comp=E,0.3nm,0.3s,baz=11,slow=19,SNR=6.0						
	comp=E,0.8nm,0.4s						
ITQB	Itaqui	13.38	91	Pn	Pn	08 59 01.6	-0.9
LPAZ	La Paz	14.40	15	Pn	Pn	08 59 15.1	-2.0
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=1.9						
	comp=E,1.0nm,0.6s						
BDFB	Brasilia	26.42	62	P	P	09 01 29.9	+0.1
	comp=E,3.7nm,0.7s,baz=228,slow=7.7,SNR=7.2						
	comp=E,3.7nm,0.7s						
BDFB	Brasilia	26.42	62	P	P	09 01 30.4	+0.6
ROSC	El Rosal	35.01	356	LR	LR	09 15 31.7	
	comp=E,82nm,18.8s,baz=299,slow=34						
TXAR	Lajitas Array	66.53	330	P	P	09 06 44.2	+1.4
	comp=E,0.2nm,0.5s,baz=158,slow=8.6,SNR=4.4						
	comp=E,0.2nm,0.5s						
TXAR	Lajitas Array	66.53	330	P	P	09 06 44.7	+1.8
TORD	Torodi Ar. Bea	82.96	70	P	P	09 08 18.8	+0.4
	comp=E,1.2nm,0.8s,baz=237,slow=4.7,SNR=5.9						
	comp=E,1.2nm,0.8s						
H11S2	WAKE ISLAND Hy	125.74	272	T	T	11 33 40.6	
	baz=115,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	125.75	272	T	T	11 33 37.2	
	baz=115,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	125.76	272	T	T	11 33 40.8	
	baz=115,slow=75,SNR=22						
ZALV	Zalesovo Beam	151.05	29	PKPbc	PKiKP	09 15 46.1	+0.1
	comp=E,2.3nm,0.7s,baz=320,slow=3.4,SNR=9.7						
ZALV	Zalesovo Beam	151.05	29		PKiKP	09 15 46.6	+0.6
ZALV				PKPab	sPKPab	09 15 56.2	+1.6

NOU 01 08:59:16.9, 16°.30S×**167°.44E, h14**^{km}**, MLv4.2**/15**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.59	153	P	Pn	08 59 44.8	+0.2
RTV	Rentapao	1.76	148	P	Pn	08 59 47.0	0.0
KOUNC	Koumac, New Ca	5.18	215	P	Pn	09 00 34.6	+0.6
MARNC	Mare, Loyalty	5.18	174	P	Pn	09 00 34.2	+0.1
YATNC	Mamie plateau,	5.75	185	P	Pn	09 00 40.9	-1.0
DZM	Mont Dzumac	5.82	189	P	Pn	09 00 42.0	-0.9
	15nm,0.5s						
NOUC	Port Laguerre	5.87	190	P	Pn	09 00 43.6	+0.1
ONTNC	Ouen Toro	6.05	189	P	Pn	09 00 46.0	0.0
PINNC	Pines Island,	6.28	180	P	Pn	09 00 49.8	+0.7

IDC 01 09:38:34.4±7.8**, 31°.34S**×**179°.31E, h467**^{km}±98^{km}**, mb2.7**/2**, mbtmp3.6**/3**, Error ellipse: s-maj=104.2km s-min=37.1km az=9.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.13	194	P	P	09 40 22.4	+1.7
	1.6nm,0.3s,baz=307,slow=20,SNR=12						
URZ				S	S	09 41 45.7	-2.3
	3.8nm,0.6s,baz=307,slow=20,SNR=2.4						
ASAR	Alice Springs	40.77	269	P	P	09 45 33.8	0.0
	0.3nm,0.5s,baz=103,slow=7.3,SNR=9.1						
	0.3nm,0.5s						
WRA	Warramunga Arr	41.84	275	P	P	09 45 42.3	-0.1
	0.6nm,0.4s,baz=111,slow=7.9,SNR=19						
	0.6nm,0.4s						
FINES	FINESS Array B	145.19	338	PKPbc	PKPdf	09 57 16.9	-0.3
	0.4nm,0.5s,baz=30,slow=4.6,SNR=10						

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*IDC **01** 09:48:00.8±2.9, 16°.63S×177°.98W, h459^{km}±23^{km}, mb2.7/4, mbtmp3.6/5, Error ellipse: s-maj=195.1km s-min=23.7km az=155.0*

ISC 01 09:47:58.9±1.7**, 17°.5S**±0°.6×**177°.5W**±0°.2**, h450**^{km}**, n6, σ1^s.40**/6**, mb3.1**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.21	266	P	P	09 49 16.2	+0.2
	160nm,0.8s,baz=91,slow=7.4,SNR=65						
HNR	Honiara	23.30	287	P	P	09 52 31.0	+0.7
WRA	Warramunga Arr	45.52	259	P	P	09 55 36.1	-1.0
	0.3nm,0.8s,baz=94,slow=6.8,SNR=1.6						
	0.3nm,0.8s						
ASAR	Alice Springs	45.70	254	P	P	09 55 38.4	-0.1
	0.5nm,0.5s,baz=87,slow=8.0,SNR=15						
	0.5nm,0.5s						
NVAR	Mina Array Bea	78.55	44	P	P	09 59 11.5	-1.5
	0.4nm,0.8s,baz=232,slow=10,SNR=2.4						
	0.4nm,0.8s						
TXAR	Lajitas Array	85.07	57	P	P	09 59 48.0	+1.5
	0.3nm,0.8s,baz=205,slow=5.5,SNR=4.1						
	0.3nm,0.8s						

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*IDC **01** 09:54:06.5±1.4, 2°.98S×128°.60E, h0^{km}, mb3.5/3, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=43.5km s-min=24.9km az=75.0*

*DJA **01** 09:54:08.9±0.4, 3°S±3°×12°9E±°, h10^{km}, M3.2/6, MLv3.2/6*

ISC 01 09:54:08.2±0.9**, 2°.92S**±0°.07×**128°.73E**±0°.06**, h10**^{km}**, n10, σ0^s.84**/12**, mb3.6**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.47	154	P	Pb	09 54 18.8	+0.3
MSAI				S	Sb	09 54 25.5	0.0
AAI	Ambon	0.93	215	P	Pb	09 54 27.3	+0.9
LBMI	Labuha	2.58	332	P	Pn	09 54 49.8	-0.2
SANI	Sanana	2.87	287	P	Pn	09 54 54.5	+0.5
SWI	Sorong	3.25	51	P	Pn	09 55 00.6	+1.3
SIJI	Sorong	3.26	51	Pn	Pn	09 55 00.1	+0.8
	6.3nm,0.3s,baz=243,slow=11,SNR=9.3						
SIJI				Sn	Sn	09 55 37.6	-0.6
	2.2nm,0.3s,baz=160,slow=23,SNR=6.5						
	14nm,0.4s						
WRA	Warramunga Arr	17.78	162	P	Pn	09 58 14.4	-1.6
	0.2nm,0.3s,baz=341,slow=12,SNR=12						
	1.1nm,0.8s						
ASAR	Alice Springs	21.22	167	P	P	09 58 54.4	-0.1
	1.3nm,0.3s,baz=343,slow=9.8,SNR=41						
	1.3nm,0.3s						
MKAR	Makanchi Array	64.14	326	P	P	10 04 42.9	0.0
	0.2nm,0.5s,baz=108,slow=4.7,SNR=2.1						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	68.39	328	P	P	10 05 09.8	-0.3
	0.3nm,0.7s,baz=132,slow=6.5,SNR=2.6						
	0.3nm,0.7s						

NOU 01 09:56:26.2, 15°.99S×**167°.57E, h24**^{km}**, MLv4.3**/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.65	327	P	Pb	09 56 39.2	+0.4
DVP	Devils Point	1.82	161	P	Pn	09 56 56.1	0.0
RTV	Rentapao	1.97	156	P	Pn	09 56 59.0	+0.9
LIFNC	LIFOU	4.77	184	P	Pn	09 57 37.1	+0.5
MARNC	Mare, Loyalty	5.48	176	P	Pn	09 57 46.0	-0.4
	1.2nm,1.9s						
KOUNC	Koumac, New Ca	5.50	214	P	Pn	09 57 46.6	-0.1
YATNC	Mamie plateau,	6.07	186	P	Pn	09 57 53.8	-0.7
	20nm,0.9s						
DZM	Mont Dzumac	6.14	190	P	Pn	09 57 54.9	-0.7
NOUC	Port Laguerre	6.20	191	P	Pn	09 57 56.7	+0.5
	22nm,1.2s						
ONTNC	Ouen Toro	6.37	189	P	Pn	09 57 59.1	+0.5
	38nm,1.6s						

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*IDC **01** 09:57:25.5±1.3, 15°.47S×166°.01E, h0^{km}, mb4.0/6, mbtmp3.9/7, ML3.8/1, MS3.2/1, Error ellipse: s-maj=35.0km s-min=25.8km az=97.0*

*NEIC **01** 09:57:31.2±1.3, 15°.34S±0°.07×166°.04E±0°.05, h35^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=13.7km s-min=5.4km az=327.0*

ISC 01 09:57:30.8±0.7**, 15°.43S**±0°.07×**166°.02E**±0°.09**, h36**^{km}**, n29, σ1^s.32**/30**, mb4.0**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.14	91	Pn	Pn	09 57 50.4	+0.2
KOUNC	Koumac, New Ca	5.36	198	Pn	Pn	09 58 49.4	+1.2
DZM	Mont Dzumac	6.62	177	Pn	Pn	09 59 01.8	-3.9
	1.9nm,0.3s,baz=334,slow=21,SNR=2.4						
DZM				Sn	Sn	10 00 19.1	-0.9
	1.0nm,0.3s,baz=274,slow=23,SNR=1.6						
DZM				LR	LR	10 01 25.6	
	comp=Z,214nm,19.9s,baz=14,slow=36						
	6.5nm,0.4s						
DZM	Mont Dzumac	6.62	177		Pn	09 59 05.5	-0.2
ONTNC	Ouen Toro	6.86	177		Pn	09 59 10.6	+1.8
OUENC	Ouen Island, N	7.00	174	Pn	Pn	09 59 13.2	+2.4
PINNC	Pines Island,	7.27	170	Pn	Pn	09 59 16.8	+2.3
HNR	Honiara	8.41	314	Pn	Pn	09 59 31.3	+1.1
EIDS	Eidsvold	17.13	232	Pn	Pn	10 01 27.2	-0.2
ARMA	Armidale	19.93	219	P	Pn	10 02 00.6	-0.9
ARMA				IAmb	IAmb	10 02 06.9	
	comp=Z,17nm,1.2s						
STKA	Stephens Creek	27.63	229	P	P	10 03 14.6	-0.5
	comp=Z,3.0nm,0.9s,baz=33,slow=7.9,SNR=4.2						
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	27.63	229	P	P	10 03 16.3	+1.2
WRA	Warramunga Arr	30.49	257	P	P	10 03 40.1	-0.5
	comp=Z,0.7nm,1.0s,baz=89,slow=8.8,SNR=3.6						
	comp=Z,0.7nm,1.0s						
AS31	Alice Springs	31.30	250	P	P	10 03 47.7	-0.1
ASAR	Alice Springs	31.30	250	P	P	10 03 47.5	-0.3
	comp=Z,1.1nm,0.7s,baz=71,slow=10.0,SNR=10						
	comp=Z,1.1nm,0.7s						
ASAR	Alice Springs	31.30	250	P	P	10 03 47.7	-0.1
BBOO	Buckleboo	32.20	232	P	P	10 03 55.9	+0.3
BBOO				IAmb	IAmb	10 04 21.5	
	comp=Z,33nm,1.4s						
FORT	Forrest	37.91	240	P	P	10 04 44.5	-0.3
PSA00	Pilbara Seismi	44.09	255	IAmb	IAmb	10 05 34.1	
	comp=Z,2.1nm,0.8s						
PSA00				P	P	10 05 34.1	-1.7
VNDA	Vanda	62.14	181	P	P	10 07 48.5	+0.7
	comp=Z,0.7nm,0.6s,baz=3.6,slow=5.4,SNR=8.4						
	comp=Z,0.7nm,0.6s						
VNDA	Vanda	62.14	181	P	P	10 07 49.2	+1.4
VNDA				IAmb	IAmb	10 07 52.2	
	comp=Z,2.5nm,1.3s						
SBA	Scott Base	62.44	180	P	P	10 07 51.2	+1.4
SBA				IAmb	IAmb	10 07 53.2	
	comp=Z,5.4nm,1.1s						
QSPA	South Pole Qui	74.60	180	P	P	10 09 06.5	+0.4
QSPA				IAmb	IAmb	10 09 10.3	
	comp=Z,6.3nm,1.4s						
IMAR	Indian Mountai	86.55	15	P	P	10 10 10.3	+0.6
ILAR	Eielson Array	87.56	18	P	P	10 10 14.9	+0.4
	comp=Z,0.7nm,0.8s,baz=238,slow=5.3,SNR=7.2						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	87.56	18	P	P	10 10 15.0	+0.4
CLRS	Cowichan Lake	88.78	38	P	P	10 10 19.6	-1.2
SNAA	Sanae	92.79	184	P	P	10 10 38.1	-1.1
MKAR	Makanchi Array	96.88	317	P	P	10 10 58.4	+0.1
	comp=Z,0.5nm,0.6s,baz=119,slow=5.8,SNR=4.0						
	comp=Z,0.5nm,0.6s						

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*IDC **01** 09:59:26.5±1.4, 0°.05S×80°.45W, h0^{km}, mb3.4/4, mbtmp3.5/4, MS3.5/2, Error ellipse: s-maj=139.8km s-min=28.9km az=57.0*

*IGQ **01** 09:59:26±0.7, 0°S±3°×8°1W±°, h10^{km}*

ISC 01 09:59:27.4±2.0**, 0°.29S**±0°.05×**80°.89W**±0°.06**, h8**^{km}±12^{km}**, n75, σ1^s.37**/81**, mb3.6**/3**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	0.69	88	P	Pg	09 59 41.0	+0.4
JAMA				S	Sn	09 59 53.0	-1.4
FLF1	Flavio Alfaro-	1.05	94	P	Pb	09 59 48.0	+0.1
FLF1				S	Sn	10 00 07.0	+3.7
MAG1	Magdalena	1.14	79	P	Pg	09 59 49.0	-0.3
PPLP	Puerto Lpez	1.26	175	P	Pn	09 59 51.0	-0.3
PPLP				S	Sb	10 00 05.0	-2.7
PPLP	Puerto Lpez	1.26	175	P	Pn	09 59 48.0	-3.3
PPLP				S	Sb	10 00 05.0	-2.7
AV18	Acelerografo,	1.53	67	P	Pn	09 59 55.0	-0.1
BV15	Puerto Quito-O	1.73	75	P	Pn	09 59 56.0	-1.7
BV15				S	Sb	10 00 20.0	-1.2
ILLI	Illinizas Sur	2.21	101	P	Pn	10 00 04.0	-0.8
HPAL	Hacienda Las P	2.24	88	P	Pn	10 00 04.0	-1.1
GGPT	Toaza - Volcan	2.27	88	P	Pn	10 00 04.0	-1.6
PAST	Pastocalle	2.29	100	P	Pn	10 00 05.0	-0.8
JUA2	San Juan 2	2.29	88	P	Pn	10 00 05.0	-0.9
PINO	Pino	2.29	87	P	Pn	10 00 05.0	-1.0
TERV	Terraza Guagua	2.29	87	P	Pn	10 00 05.0	-1.0
GGPC	Guagua Pichinc	2.30	87	P	Pn	10 00 05.0	-1.1
YANA	Yana	2.33	86	P	Pn	10 00 06.0	-0.4
CHSH	Refugio Sur-Vo	2.35	121	P	Pn	10 00 07.0	+0.1
CAMI	Rancho Maria	2.42	99	P	Pn	10 00 08.0	+0.3
PORT	Chimborazo Vol	2.42	119	P	Pn	10 00 07.0	-0.8
BNAS	Cotopaxi Volca	2.44	99	P	Pn	10 00 08.0	0.0
NAS2	Nasa	2.45	98	P	Pn	10 00 09.0	+0.8
TAMH	Tambohuasha Ch	2.45	121	P	Pn	10 00 08.0	-0.2
BMOR	Cotopaxi Volca	2.47	100	P	Pn	10 00 09.0	+0.5

PITA	Cotopaxi Volc	2.47	96	P	Pn	10 00 09.0	+0.6
BREF	Cotopaxi Volca	2.48	99	P	Pn	10 00 09.0	+0.3
BVC2	Cotopaxi Volca	2.51	98	P	Pn	10 00 09.0	0.0
BTAM	Cotopaxi Volca	2.52	99	P	Pn	10 00 10.0	+0.8
VCES	Cotopaxi	2.55	102	P	Pn	10 00 10.0	+0.5
TAMB	Tambo	2.56	99	P	Pn	10 00 10.0	+0.4
CUSE	Cuicocha Este	2.56	77	P	Pn	10 00 08.0	-1.6
CUIC	Cuicocha-Domo	2.60	77	P	Pn	10 00 09.0	-1.1
CUSW	Cuicocha Oeste	2.60	77	P	Pn	10 00 10.0	-0.2
COTA	Cotacachi	2.63	76	P	Pn	10 00 10.0	-0.6
ANTG	Antisana-Guama	2.65	95	P	Pn	10 00 11.0	+0.1
BBIL	Ulba Tungurahu	2.67	116	P	Pn	10 00 12.0	+1.0
JUI6	Juive	2.67	115	P	Pn	10 00 12.0	+1.0
ANTM	Antisana-La Mi	2.68	95	P	Pn	10 00 12.0	+0.7
POND	Pondoa	2.69	115	P	Pn	10 00 12.0	+0.7
BMAS	Trigal station	2.70	117	P	Pn	10 00 12.0	+0.6
ARRY	Arrayan	2.72	116	P	Pn	10 00 13.0	+1.2
PIAT	Ana Tenorio	2.72	105	P	Pn	10 00 13.0	+1.2
ANTS	Antisana-Sarah	2.73	94	P	Pn	10 00 13.0	+0.9
URCU	Urcuqui	2.73	75	P	Pn	10 00 12.0	0.0
ANTI	Antisana	2.73	93	P	Pn	10 00 13.0	+0.9
BPAT	Tungurahua Vol	2.74	116	P	Pn	10 00 14.0	+1.9
YAHU	Yahuarcocha	2.89	77	P	Pn	10 00 16.0	+1.8
ANGU	Angureal	2.90	83	P	Pn	10 00 16.0	+1.5
CHMA	Chilma	3.05	68	P	Pn	10 00 14.0	-2.2
LNGL	El Angel-Carch	3.06	71	P	Pn	10 00 17.0	+0.4
ECEN	Cerro Negro	3.12	69	P	Pn	10 00 17.0	-0.4
CHL1	Volc¡n Chiles	3.13	70	P	Pn	10 00 17.0	-0.6
CHL2	Volc¡n Chiles	3.16	70	P	Pn	10 00 18.0	0.0
CMBC	Cumbal	3.30	68	eP	Pn	10 00 21.1	+1.3
ARNL	Arenillas	3.34	166	P	Pn	10 00 20.0	0.0
BONI	La Bonita	3.44	78	P	Pn	10 00 24.0	+2.4
BOSC	San Juan Bosco	3.72	140	P	Pn	10 00 29.0	+3.7
GCUF	Volcan Galeras	3.85	67	eP	Pn	10 00 29.1	+1.6
GCUF				i		10 01 21.4	
	comp=Z,15nm,0.5s						
GR1C	Gorgona, Isla	4.25	40	eP	Pn	10 00 33.2	+0.7
CRUC	La Cruz	4.35	65	eP	Pn	10 00 35.2	+1.0
ZUMB	Zumba	4.87	159	P	Pn	10 00 44.0	+2.9
SOTA	Rioblanco	4.91	61	eP	Pn	10 00 42.6	+0.6
SOTA				eS	Sn	10 01 38.8	-0.5
SOTA				i		10 01 55.4	
	comp=Z,28nm,0.6s						
PCON	Cinco Dias	5.19	60	eP	Pn	10 00 46.4	+0.5
PCON				eS	Sn	10 01 47.1	+0.8
PCON				i		10 01 56.4	
	comp=Z,20nm,0.5s						
GARC	Garzon, Huila	5.93	65	eP	Pn	10 00 56.7	+0.8
YOTC	Yotoco, Valle	6.21	47	eP	Pn	10 01 00.6	+1.0
YOTC				eS	Sn	10 02 07.2	-3.8
YOTC				i		10 02 12.9	
	comp=Z,8.8nm,0.4s						
GUY2C	Guyana, Caldas	7.77	45	eP	Pn	10 01 09.5	-12
GUY2C				i		10 02 56.5	
	comp=Z,5.2nm,0.6s						
CBOC	Ciudad Bolivar	7.81	38	eP	Pn	10 01 23.4	+1.8
CBOC				i		10 03 09.1	
	comp=Z,2.5nm,0.6s						
ROSC	El Rosal	8.31	52	Pn	Pn	10 01 28.3	-0.3
	comp=Z,0.5nm,0.3s,baz=110,slow=20,SNR=1.2						
LPAZ	La Paz	20.28	142	P	P	10 04 03.9	-0.4
	comp=Z,2.4nm,1.0s,baz=319,slow=8.1,SNR=5.1						
	comp=Z,2.4nm,1.0s						
MDP	Montagnes des	28.72	79	LR	LR	10 17 08.2	
	comp=Z,71nm,18.0s,baz=228,slow=38						
BDFB	Brasilia	35.86	117	LR	LR	10 22 02.9	
	comp=Z,103nm,18.9s,baz=215,slow=38						
TXAR	Lajitas Array	36.62	325	P	P	10 06 34.5	0.0
	comp=Z,0.1nm,0.4s,baz=133,slow=7.5,SNR=2.4						
TXAR				PcP	PcP	10 08 58.2	+0.5
	comp=Z,0.1nm,0.7s,baz=165,slow=3.7,SNR=2.0						
	comp=Z,0.1nm,0.4s						
NVAR	Mina Array Bea	51.63	323	P	P	10 08 36.7	+1.8
	comp=Z,0.5nm,0.6s,baz=131,slow=8.3,SNR=6.2						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	67.55	344	P	P	10 10 23.7	-0.3
	comp=Z,0.4nm,0.7s,baz=134,slow=6.2,SNR=8.6						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	138.67	232	PKP	PKPdf	10 18 54.2	-0.9
	comp=Z,0.3nm,0.8s,baz=98,slow=2.5,SNR=2.2						
WRA	Warramunga Arr	140.06	238	PKP	PKPdf	10 18 58.2	+0.6
	comp=Z,0.5nm,0.6s,baz=104,slow=1.7,SNR=10						

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*IDC **01** 10:21:06.6±3.5, 15°.98N×91°.45W, h0^{km}, mb3.9/3, mbtmp3.6/5, ML3.1/2, MS4.2/1, Error ellipse: s-maj=74.3km s-min=23.6km az=4.0*

*GCG **01** 10:21:07.0±1.1, 15°.87N×91°.39W, h12^{km}±20^{km}, MD4.0*

ISC 01 10:21:09.4±0.8**, 15°.81N**±0°.07×**91°.43W**±0°.07**, h30^{km}, n11, σ1^{s}.35**/14**, mb3.7**/3**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.10	187	eP	Pn	10 21 28.0	-0.9
STG3				eS	Sb	10 21 44.8	+0.8
FUG	Fuego 3	1.47	157	eP	Pb	10 21 35.0	-1.1
NBG	Las Nubes	1.60	139	eP	Pn	10 21 36.2	+0.3
NBG				eS	Sb	10 21 58.3	-0.1
PCG	Pacaya	1.62	150	eP	Pb	10 21 37.5	-1.3
MRL	Marmol	1.83	113	eP	Pn	10 21 38.2	-0.9
CMIG	Matias Romero	3.55	292	Pn	Pn	10 22 02.2	-0.3
	1.3nm,0.3s,baz=110,slow=7.1,SNR=9.0						
CMIG				Pg	Pb	10 22 09.3	-2.2
	3.9nm,0.3s,baz=110,slow=15,SNR=17						
CMIG				Sn	Sn	10 22 44.6	+1.2
	4.3nm,0.3s,baz=113,slow=23,SNR=3.9						
CMIG				Lg	Lg	10 22 56.1	
	7.6nm,0.3s,baz=40,slow=20,SNR=8.8						
CMIG				LR	LR	10 23 39.0	
	comp=Z,107nm,20.2s,baz=42,slow=44						
	4.7nm,0.4s						
TXAR	Lajitas Array	17.56	322	P	P	10 25 12.2	-0.7
	baz=146,slow=12,SNR=3.3						
	0.2nm,0.7s						
NVAR	Mina Array Bea	32.65	319	P	P	10 27 40.8	+1.8
	0.4nm,0.6s,baz=129,slow=9.7,SNR=5.3						
	0.4nm,0.6s						
YKA	Yellowknife Ar	49.41	346	P	P	10 29 55.1	-1.1
	0.5nm,0.7s,baz=145,slow=7.7,SNR=11						
	0.5nm,0.7s						
JMIC	Jan Mayen	72.87	20	LR	LR	11 06 47.3	
	comp=Z,136nm,19.8s,baz=312,slow=38						
PETK	Petropavlovsk-	89.47	326	P	P	10 34 05.5	+1.9
	5.5nm,1.0s,baz=72,slow=4.7,SNR=3.6						
	5.5nm,1.0s						

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*IDC **01** 10:21:40.9±0.7, 15°.01N×123°.25E, h0^{km}, mb3.8/12, mbtmp3.9/13, ML4.1/1, MS2.8/3, Error ellipse: s-maj=24.1km s-min=14.4km az=73.0*

*MAN **01** 10:21:46.7, 15°.11N×122°.97E, h25^{km}, mb4.9, ML3.8, MS3.8, Hypocentre not reviewed by the ISC*

*NEIC **01** 10:21:46.0±0.6, 15°.0N±0°.1×123°.2E±0°.2, h30^{km}±6^{km}, mb4.4/18, Error ellipse: s-maj=27.5km s-min=13.4km az=74.0*

ISC 01 10:21:43.5±1.8**, 15°.03N**±0°.05×**123°.18E**±0°.07**, h16^{km}**±11^{km}**, n48, σ0^{s}.85**/51**, mb4.2**/21**, 5C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCNP	Jose Panganiba	0.88	212	⇓iP	Pn	10 22 02.1	+0.9
JCNP				i S	Sg	10 22 12.7	+0.5
GQP	Guinayangan	1.33	212	⇑eP	Pg	10 22 09.2	0.0
GQP				i S	Sb	10 22 25.5	+0.6
LQP	Lukban	1.83	240	⇑eP	Pn	10 22 15.7	+1.2
LQP				i S	Sn	10 22 36.6	-0.9
TGY	Tagaytay City	2.36	247	Pn	Pn	10 22 22.7	+1.0
	48nm,0.3s,baz=196,slow=5.0,SNR=1.7						
TGY				Sn	Sb	10 22 54.6	0.0
	112nm,0.3s,baz=162,slow=22,SNR=4.3						
	184nm,0.3s						
TGY	Tagaytay City	2.36	247	⇑eP	Pb	10 22 24.5	-1.3
PGP	Puerto Galera	2.64	235	⇑eP	Pn	10 22 27.8	+2.2
PGP				i S	Sn	10 22 57.2	-0.1
APYP	Conner	3.37	327	⇑eP	Pn	10 22 33.0	-2.5
APYP				eS	Sn	10 23 14.1	-1.1
YULB	Yu-li	8.50	348	Pn	Pn	10 23 46.9	+0.9
JOW	Kunigami	12.66	21	LR	LR	10 29 45.7	
	comp=Z,25nm,18.4s,baz=214,slow=38						
SBUM	Sibu	16.53	222	P	P	10 25 38.0	+0.6
KAPI	Kappang	20.21	190	LR	LR	10 34 11.4	
	comp=Z,32nm,21.0s,baz=336,slow=37						
CM31	Chiang Mai Arr	23.45	282	P	P	10 26 52.8	+0.3
CM31				IAmb	IAmb	10 26 53.8	
	comp=Z,4.0nm,0.5s						
CMAR	Chiang Mai Arr	23.45	282	P	P	10 26 52.0	-0.4
	comp=Z,0.8nm,0.6s,baz=90,slow=6.8,SNR=9.4						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	23.45	282	P	P	10 26 52.8	+0.3
USRK	Ussuriysk Ar.	30.02	13	P	P	10 27 51.9	+0.3
	comp=Z,1.8nm,0.7s,baz=200,slow=7.2,SNR=7.0						
	comp=Z,1.8nm,0.7s						
USRK	Ussuriysk Ar.	30.02	13	P	P	10 27 52.2	+0.6
FITZ	Fitzroy Crossi	33.01	176	P	P	10 28 17.1	-1.0
	comp=Z,0.7nm,0.4s,baz=25,slow=7.9,SNR=6.5						
	comp=Z,0.7nm,0.4s						
KLR	Kul'dur	34.82	10	LR	LR	10 43 13.0	
	comp=Z,21nm,18.6s,baz=236,slow=37						
COEN	Coen	34.94	145	P	P	10 28 35.1	+0.1
COEN				IAmb	IAmb	10 28 40.8	
	comp=Z,23nm,1.5s						
SONM	Songino Array	35.54	340	P	P	10 28 40.6	+0.7
	comp=Z,1.2nm,0.6s,baz=170,slow=19,SNR=6.2						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	35.54	340	P	P	10 28 40.0	+0.1
WB0	Warramunga Arr	36.30	162	P	P	10 28 45.5	-1.0
WB0				IAmb	IAmb	10 29 02.1	
	comp=Z,3.7nm,1.1s						
WRAB	Tennant Creek	36.44	162	P	P	10 28 47.0	-0.8
WRAB				IAmb	IAmb	10 28 49.4	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	36.45	162	P	P	10 28 46.6	-1.2
	comp=Z,0.6nm,0.5s,baz=344,slow=9.1,SNR=14						
	comp=Z,0.6nm,0.5s						
WRA	Warramunga Arr	36.45	162	P	P	10 28 47.2	-0.6
WB2	Warramunga Arr	36.45	162	P	P	10 28 47.2	-0.6
WB2				IAmb	IAmb	10 29 15.7	
	comp=Z,7.9nm,1.3s						
WR0	Warramunga Arr	36.52	162	P	P	10 28 47.6	-0.8
WR0				IAmb	IAmb	10 29 03.6	
	comp=Z,7.1nm,1.4s						
AS31	Alice Springs	39.87	165	P	P	10 29 16.5	-0.2
ASAR	Alice Springs	39.87	165	P	P	10 29 16.7	+0.1
	comp=Z,0.4nm,0.3s,baz=340,slow=7.5,SNR=27						
	comp=Z,0.4nm,0.3s						
ASAR	Alice Springs	39.87	165	P	P	10 29 16.3	-0.4
FORT	Forrest	45.79	174	P	P	10 30 04.2	-0.3
MKAR	Makanchi Array	46.44	322	P	P	10 30 10.5	+0.9
	comp=Z,0.8nm,0.7s,baz=119,slow=10.0,SNR=7.3						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	46.44	322	P	P	10 30 10.0	+0.4
NWAO	Narrogin (SRO)	48.03	187	P	P	10 30 20.8	-1.2
ZALV	Zalesovo Beam	49.02	331	P	P	10 30 28.6	-0.9
	comp=Z,0.4nm,0.4s,baz=120,slow=8.7,SNR=2.1						
	comp=Z,0.4nm,0.4s						
BBOO	Buckleboo	49.14	166	P	P	10 30 30.1	-0.5
STKA	Stephens Creek	49.88	159	P	P	10 30 36.4	+0.2
	comp=Z,2.1nm,0.7s,baz=323,slow=18,SNR=3.5						
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	49.88	159	P	P	10 30 36.0	-0.2
STKA				IAmb	IAmb	10 30 41.5	
	comp=Z,2.6nm,1.4s						
KURK	Kurchatov	50.46	325	P	P	10 30 41.1	+0.7
KURK				IAmb	IAmb	10 30 42.1	
	comp=Z,3.9nm,0.9s						
ABKAR	Akbulak array	61.33	318	P	P	10 31 58.4	0.0
ARCES	ARCESS Array B	78.70	339	P	P	10 33 45.5	+0.8
	comp=Z,3.0nm,1.1s,baz=72,slow=5.8,SNR=2.3						
	comp=Z,3.0nm,1.1s						
FINES	FINESS Array B	80.29	331	P	P	10 33 53.0	-0.5
	comp=Z,2.7nm,1.1s,baz=72,slow=6.2,SNR=4.4						
	comp=Z,2.7nm,1.1s						
FINES	FINESS Array B	80.29	331	P	P	10 33 53.4	-0.1
EUNU	Eureka	83.81	5	P	P	10 34 11.9	+0.2
EUNU				IAmb	IAmb	10 34 39.2	
	comp=Z,5.4nm,1.4s						
BURAR	Bucovina Array	84.30	318	P	P	10 34 15.1	+0.2
NC405	NORSAR Array S	86.92	333	P	P	10 34 27.8	+0.2
RES	Resolute Bay	87.34	9	P	P	10 34 30.3	+1.0
RES				IAmb	IAmb	10 34 31.6	
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	90.62	23	P	P	10 34 45.0	0.0
	comp=Z,0.2nm,0.8s,baz=297,slow=4.5,SNR=2.2						
	comp=Z,0.2nm,0.8s						

NNC 01 10:35:15.5±11.0**, 36°.99N**×**70°.18E, h139^{km}**±210^{km}**, mb2.8, mpv3.5, 1C-4D, Error ellipse: s-maj=110.7km s-min=61.3km az=175.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.12	2	⇓P	Pn	10 36 45.0	+1.4
	0.8nm,0.3s,baz=181,slow=13,SNR=18						
KK31				⇓S	Sn	10 37 50.6	-1.8
	0.4nm,0.3s,baz=184,slow=24,SNR=3.9						
TKM2	Tokmak 2	7.24	33	⇓P	Pn	10 36 57.3	-1.5
	2.6nm,0.5s						
TKM2				⇓S	Sn	10 38 21.1	+1.4
	0.6nm,0.5s						
AB31	Akbulak array	14.35	332	⇑P	Pn	10 38 32.2	+0.2
	0.3nm,0.4s,baz=162,slow=12,SNR=12						

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*IDC **01** 10:35:30.5±0.4, 18°.13N×61°.51W, h0^{km}, mb4.3/24, mbtmp4.4/27, ML3.9/3, MS4.1/50, Error ellipse: s-maj=13.2km s-min=11.5km az=109.0*

*TRN **01** 10:35:33.9, 18°.09N×61°.61W, h25^{km}, MD5.1*

*GCMT **01** 10:35:36.5±0.3, 18°.08N±0°.02×61°.40W±0°.02, h21^{km}±1^{km}, MW5.0/87, Moment Tensor Solution. s28,c30; s87,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.98±.20; $M_{\theta\theta}$-0.64±.12; $M_{\phi\phi}$-1.34±.12; $M_{r\theta}$-0.50±.18; $M_{\theta\phi}$1.56±.07; $M_{\phi r}$2.32±.25; Best double couple: $M_0$3.32800×10^{16} NP1:ϕ_s118.00000°, δ27.00000°, λ50.00000°. NP2: ϕ_s342.00000°, δ69.00000°, λ109.00000°. Principal axes: T 3.1940, Plg61.0000°, Azm279.0000°; N 0.2660, Plg17.0000°, Azm155.0000°; P -3.4630, Plg22.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 10:35:36.5±1.5, 18°.10N±0°.07×61°.65W±0°.07, h32^{km}±4^{km}, mb4.8/121 Error ellipse: s-maj=11.9km s-min=7.4km az=224.0*

ISC 01 10:35:35.2±0.5**, 18°.14N**±0°.03×**61°.63W**±0°.04**, h28^{km}**±3^{km}**, n444, σ1^{s}.24**/433**, mb4.7**/79**, MS4.1**/49**, 4C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.49	198		Pb	10 35 45.1	-0.4
ANWB	Willy Bob	0.49	198	eP	Pb	10 35 45.0	-0.5
ANWB				eS	Sn	10 35 53.4	-0.7
ANDO	Antigua, Disas	1.04	191	eP	Pn	10 35 53.0	-0.9
ANDO				eS	Sb	10 36 07.7	-0.3
ANBD	Bethesda, Anti	1.10	187	eP	Pn	10 35 53.4	-1.3
ANBD				eS	Sn	10 36 09.4	+0.5
BPA	Boggy Peak	1.11	191	eP	Pn	10 35 53.6	-1.3
BPA				eS	Sn	10 36 09.9	+0.5
SKOC	St. Kitts, UWI	1.35	231	eP	Pb	10 35 59.5	-0.4
SKOC				eS	Sb	10 36 17.2	+0.4
SMRT	St. Maarten	1.38	266		Pb	10 35 59.2	-1.2
SMRT	St. Maarten	1.38	266	eP	Pb	10 35 59.4	-1.0
SMRT				eS	Sb	10 36 18.1	+0.4
SEUS	St. Eustatius	1.44	244		Pb	10 36 00.6	-0.9
SEUS	St. Eustatius	1.44	244	eP	Pb	10 36 00.8	-0.7
SEUS				eS	Sb	10 36 19.1	-0.3
MBFL	Flemmings, Mon	1.50	202	eP	Pn	10 36 00.7	+0.5
MBFL				eS	Sn	10 36 19.0	+0.3
MLYT	Lee's Yard	1.51	201	eP	Pn	10 36 00.7	+0.3
MLYT				eS	Sn	10 36 19.6	+0.4
ABD	La Joyeuse, An	1.66	175		Pn	10 36 02.6	+0.1
ABD	La Joyeuse, An	1.66	175	eP	Pn	10 36 01.9	-0.6
ABD				eS	Sn	10 36 23.8	+0.9
GDSD	La Dsirade Is	1.90	163		Pn	10 36 04.9	-0.8
CBE	Ff, Capester	2.06	179		Pn	10 36 08.5	+0.4
CBE	Ff, Capester	2.06	179	eP	Pn	10 36 07.4	-0.6
MAGL	Barre de l’ile	2.21	171		Pn	10 36 10.9	+0.9
MAGL	Barre de l’ile	2.21	171	eP	Pn	10 36 10.6	+0.6
MAGL				eS	Sn	10 36 35.7	-0.7
TBG	Guadaloupe-3	2.28	180	eP	Pn	10 36 11.3	+0.4
TBG				eS	Sn	10 36 40.4	+2.3
TDBA	Terre de Bas,	2.28	180		Pn	10 36 10.9	-0.2
TDBA	Terre de Bas,	2.28	180	eP	Pn	10 36 11.4	+0.4
TDBA				eS	Sn	10 36 38.7	+0.5
MDVC	Dominica, Viel	2.52	175	eP	Pn	10 36 13.8	-0.5
DSLB	Salisbury	2.70	176	eP	Pn	10 36 17.7	+0.9
MDN	Morne-Daniel	2.82	175	eP	Pn	10 36 18.2	-0.2
CDVI	St. Croix	3.01	263	Pn	Pn	10 36 22.1	+1.0
CDVI	St. Croix	3.01	263	eP	Pn	10 36 22.1	+1.0
STVI	Saint Thomas	3.17	274		Pn	10 36 22.8	-0.4
PCM	Pelee Case Pet	3.33	173	eP	Pn	10 36 26.2	+0.7
BAMF	Morne Balai	3.34	172	eS	Pn	10 36 26.7	+1.1
BAMF	Morne Balai	3.34	172	eP	Pn	10 36 27.5	+1.9
CXM	Morne La Croix	3.34	172	eS	Pn	10 36 26.0	+0.2
CXM	Morne La Croix	3.34	172	eP	Pn	10 36 26.5	+0.8
GBMF	Grand Be	3.36	172	eP	Pn	10 36 26.8	+0.9
PML	Morne Lenard	3.37	173	eP	Pn	10 36 27.2	+1.2
FDF	Fort de France	3.42	172		Pn	10 36 26.0	-0.8
FDF	Fort de France	3.42	172	eP	Pn	10 36 26.2	-0.5
ILAM	Ilet Lapin Mar	3.43	168		Pn	10 36 26.3	-0.5
ILAM	Ilet Lapin Mar	3.43	168	eP	Pn	10 36 26.8	0.0
ILAM				eS	Sn	10 37 04.8	-1.7
CUPR	Culebra, Puert	3.48	273	Pn	Pn	10 36 27.4	-0.1
ZAM	Aeronautique	3.60	171	eP	Pn	10 36 29.1	0.0
ZAM				eS	Sn	10 37 13.6	+2.9
LPMF	Morne Lapointe	3.60	170	eP	Pn	10 36 29.5	+0.3
LPMF				eS	Sn	10 37 10.6	-0.3
TRMF	Trois Ilets	3.63	171	eP	Pn	10 36 29.7	+0.2
MVM	Montagne Vaucl	3.64	169	eP	Pn	10 36 30.5	+0.8
MVM				eS	Sn	10 37 11.3	-0.4
BIM	Bigot	3.65	171		Pn	10 36 29.8	-0.1
BIM	Bigot	3.65	171	eP	Pn	10 36 30.5	+0.7
MTP	Monte Pirata	3.73	270	Pn	Pn	10 36 31.0	+0.1
MPOM	Morne Pois Mar	3.75	169		Pn	10 36 30.9	-0.3
MPOM	Morne Pois Mar	3.75	169	eP	Pn	10 36 30.9	-0.3
HUMP	Col San Antoni	4.01	271		Pn	10 36 34.5	-0.4
CBYP	Canovanas	4.02	272		Pn	10 36 34.6	-0.4
SLBI	Saint Lucia, B	4.14	171	eP	Pn	10 36 36.8	+0.2
SLBI	Saint Lucia, B	4.14	171	eS	Sn	10 37 23.4	-0.8
PDPR	Patillas Dam,	4.18	269		Pn	10 36 37.8	+0.6
GCPR	Guaynabo City	4.24	273		Pn	10 36 37.1	-0.8
SJG	San Juan	4.30	270	Pn	Pn	10 36 39.4	+0.6
	24nm,0.3s,baz=82,slow=13,SNR=74						
SJG				Sn	Sn	10 37 29.0	+1.0
	27nm,0.3s,baz=84,slow=20,SNR=1.9						
SJG				LR	LR	10 38 39.0	
	comp=Z,5µm,18.9s,baz=70,slow=43						
	339nm,0.7s						
SJG	San Juan	4.30	270		Pn	10 36 39.1	+0.3
SJG	San Juan	4.30	270	eP	Pn	10 36 39.2	+0.5
MCLT	Moule a Chique	4.46	171	eP	Pn	10 36 41.7	+0.7
EMPR	Esperanza - Ma	4.67	275		Pn	10 36 43.3	-0.5
ICMP	Isla Caja de M	4.67	268		Pn	10 36 43.5	-0.4
CELP	Cerrillos	4.71	270		Pn	10 36 45.2	+0.7
OBIP	Obispado Ponce	4.74	270		Pn	10 36 45.0	+0.2
SVB	Belmont	4.86	176	eP	Pn	10 36 47.4	+0.9
AOPR	Arecibo Observ	4.88	273		Pn	10 36 46.0	-0.7
AOPR	Arecibo Observ	4.88	273	eP	Pn	10 36 46.7	0.0
AOPR	Arecibo Observ	4.88	273	eS	Sn	10 37 43.4	+1.1
MLPR	Magueyes Islan	5.16	269		Pn	10 36 50.2	-0.4
CRPR	Cabo Rojo, PR	5.22	269		Pn	10 36 51.1	-0.2
AGPR	Aguadilla, PR	5.22	274		Pn	10 36 50.9	-0.5
PRSN	Puerto Rico Se	5.25	272		Pn	10 36 51.4	-0.4
BBGH	Gun Hill	5.36	158	eP	Pn	10 36 54.4	+1.1
BBSP	Saint Philip	5.43	157	eP	Pn	10 36 54.7	+0.4
GCMP	Grenada, Carri	5.63	178	eP	Pn	10 36 57.3	+0.2
GRGR	Grenville	5.98	180	eP	Pn	10 37 02.7	+0.8
TOSP	Speyside	6.89	171	eP	Pn	10 37 17.0	+2.6
DR12	Loma Pena Alta	7.39	276		Pn	10 37 21.1	-0.2
SC01	Santiago de lo	8.71	280		Pn	10 37 38.0	-1.5
BIRV	Birongo	8.85	211		Pn	10 37 41.5	+0.2
SDDR	Presa de Saban	9.20	277		Pn	10 37 44.8	-1.3
SDDR	Presa de Saban	9.20	277	eP	Sn	10 39 26.0	-2.8
LGNH	Logne	10.43	274		Pn	10 38 01.6	-1.4
BAUV	El Baul	11.06	215		Pn	10 38 11.9	+0.2
URIC	Uribia, Colomb	11.88	239		Pn	10 38 24.4	+1.5
URIC	Uribia, Colomb	11.88	239	eP	Pn	10 38 25.6	+2.7
SDV	Santo Domingo	12.70	225	Pn	Pn	10 38 35.5	+1.3
	2.6nm,0.3s,baz=65,slow=11,SNR=12						
SDV				LR	LR	10 43 39.0	
	comp=Z,1µm,21.4s,baz=52,slow=38						
	9.4nm,0.4s						
SDV	Santo Domingo	12.70	225		Pn	10 38 36.1	+1.9
SDV	Santo Domingo	12.70	225	eP	Pn	10 38 36.7	+2.5
CRJC	Cerrejon, Guaj	12.99	238	eP	Pn	10 38 36.6	-1.5
SMRC	Santa Marta, M	14.02	242	eP	P	10 38 56.8	-2.9
LL1C	La Loma 1 Cana	14.39	235	eP	Pn	10 38 57.0	-0.1
OCAC	Ocana	15.04	231		Pn	10 39 06.2	+0.1
OCAC	Ocana	15.04	231	eP	Pn	10 39 07.6	+1.5
MTDJ	Mount Denham	15.12	273		Pn	10 39 04.3	-2.8
MTDJ	Mount Denham	15.12	273	eP	P	10 39 12.6	+0.6
PAMC	Pamplona, Colo	15.22	227	eP	Pn	10 39 09.4	+0.7
TAMC	Tame, Arauca	15.29	222	eP	Pn	10 39 09.9	+0.7
SJCC	San Jacinto, C	15.49	240		Pn	10 39 11.8	0.0
SJCC	San Jacinto, C	15.49	240	eP	P	10 39 14.2	-1.9
MDP	Montagnes des	15.66	145	Pn	Pn	10 39 06.9	-7.1
	1.2nm,0.3s,baz=336,slow=14,SNR=21						
MDP				Sn	Sn	10 41 49.8	-17
	1.9nm,0.3s,baz=56,slow=7.9,SNR=8.9						
BOAV	Boa Vista	15.69	176	eP	Pn	10 39 12.7	-1.7
BARC	Barichara	16.09	226	eP	Pn	10 39 19.9	+0.1
RUSC	La Rusia	16.53	224	eP	Pn	10 39 26.0	+0.3
ZARC	Zaragoza, Cauc	16.67	232	P	Pn	10 39 26.1	-0.9
ZARC	Zaragoza, Cauc	16.67	232	eP	Pn	10 39 25.0	-2.1
PTBC	PUERTO BERRIO,	17.02	229	eP	Pn	10 39 30.8	-0.6
UREC	San Jos de Ur	17.02	234	eP	Pn	10 39 31.4	-0.1
LCBC	Los crdobas,	17.04	239	eP	P	10 39 34.4	+1.3
PTGC	Puerto Gaitan,	17.26	218	eP	Pn	10 39 35.0	+0.7
SPBC	San Pablo de B	17.37	226	eP	Pn	10 39 35.2	-0.6
LCCY	Blossom Villag	17.53	278	P	Pn	10 39 37.2	-0.5
CHIC	Chingaza	17.90	223	eP	Pn	10 39 42.7	0.0
NORC	Norcasia	17.99	228	eP	Pn	10 39 42.1	-1.3
HELC	Santa Helena	18.03	231	eP	Pn	10 39 44.2	-0.1
ROSC	El Rosal	18.13	225	P	P	10 39 46.5	+0.8
	7.6nm,0.3s,baz=93,slow=13,SNR=14						
ROSC				LR	LR	10 48 11.8	
	comp=Z,3µm,19.6s,baz=22,slow=42						
	64nm,0.6s						
ROSC	El Rosal	18.13	225	P	P	10 39 46.1	+0.5
ROSC				IAmb	IAmb	10 39 51.6	
	comp=Z,62nm,0.7s						
ROSC	El Rosal	18.13	225	eP	P	10 39 46.8	+1.1
UPD2	Meteti	18.56	241	eP	P	10 39 50.1	0.0
GUY2C	Guyana, Caldas	18.58	228	eP	Pn	10 39 51.0	0.0
CBOC	Ciudad Bolivar	18.60	231	eP	P	10 39 50.2	-0.5
GUVC	San Jose del G	18.89	216	eP	P	10 39 52.6	-1.0
ORTC	Ortega, Tolima	19.44	225	eP	P	10 39 59.5	-0.2
PLMC	San Jos del P	19.45	229	eP	P	10 39 58.7	-1.2
PRVC	Isla de Provid	19.57	259	P	P	10 39 59.4	-1.6
UPA	Univ. de Panam	19.63	245	eP	P	10 40 00.4	-1.3
BCIP	Isla Barro Col	19.80	246	P	P	10 40 03.0	-0.5
BCIP				IAmb	IAmb	10 40 07.5	
	comp=Z,41nm,0.8s						
BCIP	Isla Barro Col	19.80	246	eP	P	10 40 02.9	-0.7
MACC	Macarena, Meta	19.91	218	eP	P	10 40 03.8	-1.0
MACC	Macarena, Meta	19.91	218	eP	P	10 40 04.2	-0.6
YOTC	Yotoco, Valle	20.14	227	eP	P	10 40 05.7	-1.7
MCPB	Macapa, AP	20.66	152	eP	Pn	10 40 14.1	-1.2
MALC	Bahia Malaga	20.82	229	eP	P	10 40 15.2	+0.6
AZU	Azuero	20.86	243	eP	P	10 40 14.1	-1.0
GARC	Garzon, Huila	20.89	222	eP	P	10 40 15.0	-0.7
MALB	Monte Alegre	21.15	159	eP	P	10 40 20.3	+2.1
MACA	Manacapuru-AM	21.19	177	eP	P	10 40 19.7	+1.1
CRUC	La Cruz	22.31	224	eP	P	10 40 29.7	-1.3
BRU2	Volcan	22.47	248	P	P	10 40 30.3	-2.3
BATAN	Batan	22.54	252	P	P	10 40 31.9	-1.3
ESPN	Las Esperanzas	22.66	258	P	P	10 40 33.9	-0.5
ESPN				IAmb	IAmb	10 40 38.1	
	comp=Z,30nm,0.7s						
SRBA	San Rafael, Bu	22.88	250	P	P	10 40 35.3	-1.5
SRBA				IAmb	IAmb	10 40 39.4	
	comp=Z,26nm,0.8s						
PEZE	Perez Zeledon,	23.10	251	P	P	10 40 39.2	+0.1
PEZE				IAmb	IAmb	10 40 42.8	
	comp=Z,28nm,0.8s						
ITTB	Itaituba	23.11	165	eP	P	10 40 40.1	+1.0
RIMA	Rio Macho	23.11	252	P	P	10 40 39.3	0.0
RIMA				IAmb	IAmb	10 40 42.4	
	comp=Z,30nm,0.9s						
HDC	Heredia	23.25	253	P	P	10 40 40.3	-0.3
HDC				IAmb	IAmb	10 40 50.6	
	comp=Z,32nm,0.9s						
BIRD	Birdtown, Kers	23.49	318	P	P	10 40 42.5	-0.2
ACON	Acoyapa	23.54	258	P	P	10 40 42.6	-0.7
ACON				IAmb	IAmb	10 40 46.3	

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      comp=Z,22nm,0.8s
TBTG  Tabatinga, AM    23.64 201 eP    P     10 40 48.2 +3.9
JTS   Las Juntas de    23.90 254  P    P     10 40 46.0 -0.8
JTS   Las Juntas de    23.90 254 eP    P     10 40 45.8 -1.0
MATN  Matagalpa        23.97 261  P    P     10 40 47.1 -0.4
MATN                              IAmb IAmb  10 40 48.8
      comp=Z,15nm,0.7s
JSRW  J. Sargeant Re   24.13 327  P    P     10 40 49.1 +0.4
TMAB  Tom-Au,PA,Br     24.36 145 eP    P     10 40 53.8 +2.8
T57A  Hurt             24.36 324  P    P     10 40 50.9 +0.1
S57A  Dark Hollow, R   24.75 326  P    P     10 40 54.8 +0.4
GOGA  Godfrey          24.78 312  P    P     10 40 54.5 -0.2
GOGA  Godfrey          24.78 312  P    P     10 40 56.0 +1.2
      baz=123
352A  Blakely          24.91 307  P    P     10 40 55.3 -0.5
352A                              IAmb IAmb  10 41 12.2
      comp=Z,28nm,1.0s
TGUH  Tegucigalpa,Un   24.96 264  P    P     10 40 55.9 -0.8
TGUH                              IAmb IAmb  10 41 08.3
      comp=Z,35nm,1.1s
BG3   Lake Jocassee    25.30 316  P    P     10 40 59.8 +0.4
BG3                               IAmb IAmb  10 41 06.5
      comp=Z,17nm,0.9s
152A  Waverly Hall     25.30 309  P    P     10 40 59.6 +0.2
152A                              IAmb IAmb  10 41 15.7
      comp=Z,34nm,1.5s
Y52A  Lilburn          25.44 312  P    P     10 41 00.8 +0.1
Z51A  Franklin         25.96 310  P    P     10 41 05.8 +0.5
250A  Grady            26.15 306  P    P     10 41 07.4 +0.3
250A                              IAmb IAmb  10 41 22.2
      comp=Z,34nm,1.1s
TKL   Tuckaleechee C   26.25 316  P    P     10 41 08.6 +0.5
      comp=Z,4.9nm,0.7s,baz=139,slow=12,SNR=11
TKL                               S    S     10 45 55.0  +16
      comp=Z,1.7nm,0.7s,baz=167,slow=13,SNR=1.7
TKL                               LR   LR    10 50 02.8
      comp=Z,284nm,21.8s,baz=134,slow=33
      comp=Z,4.9nm,0.7s
TKL   Tuckaleechee C   26.25 316  P    P     10 41 08.1 +0.1
SSPA  Standing Stone   26.43 331  P    P     10 41 13.3 +3.7
      baz=143
V51A  Loudon           26.72 316  P    P     10 41 12.8 +0.5
V51A                              IAmb IAmb  10 41 37.7
      comp=Z,15nm,1.0s
R53A  Hurricane        26.82 323  P    P     10 41 13.4 +0.3
R53A                              IAmb IAmb  10 41 20.9
      comp=Z,12nm,0.7s
PRPB  Parauapebas      26.83 153 eP    P     10 41 16.3 +2.9
MTO3  Montecristo      26.87 266  P    P     10 41 13.8 -0.2
MTO3                              IAmb IAmb  10 41 18.4
      comp=Z,16nm,0.9s
SNET  Serv Nac Est T   26.90 265  P    P     10 41 12.9 -1.2
PETF  Flores           26.95 272  P    P     10 41 14.3 -0.2
W50A  Signal Mountai   27.03 314  P    P     10 41 14.7 -0.4
LRAL  Lakeview Retre   27.17 308  P    P     10 41 20.8 +4.4
      baz=117
SWET  Sewanee          27.47 313  P    P     10 41 18.2 -0.8
M55A  Ridgway          27.49 331  P    P     10 41 19.1  0.0
Z47A  Carrollton       28.05 307  P    P     10 41 24.9 +0.7
Z47A                              IAmb IAmb  10 41 39.6
      comp=Z,20nm,1.1s
U49A  Red Boiling Sp   28.07 316  P    P     10 41 24.9 +0.5
V48A  Smith Brothers   28.36 313  P    P     10 41 26.9 -0.1
PLAL  Pickwick Lake    28.87 311  P    P     10 41 31.8 +0.3
PLAL                              IAmb IAmb  10 41 33.5
      comp=Z,10nm,0.8s
CCIG  Comitan          29.19 271  P    P     10 41 33.8 -0.9
WVT   Waverly          29.26 313  P    P     10 41 35.2 +0.2
WVT   Waverly          29.26 313  P    P     10 41 35.7 +0.7
      baz=121
CLDB  Colider          29.40 168 eP    P     10 41 39.2 +2.8
O49A  Covington        29.43 323  P    P     10 41 36.1 -0.4
OXF   Oxford           29.63 309  P    P     10 41 38.8 +0.6
OXF   Oxford           29.63 309  P    P     10 41 39.3 +1.1
      baz=116,SNR=7.3
W45A  Hickory Valley   29.75 310  P    P     10 41 39.1 -0.3
PDRB  Porto dos Gac    29.96 170 eP    P     10 41 42.2 +1.0
NBPS  Pedro II - PI    29.96 136 eP    P     10 41 45.0 +3.6
NBMO  Morrinhos-CE     30.12 133 eP    P     10 41 46.4 +3.7
USIN  University of    30.13 316  P    P     10 41 43.0 +0.4
SMTB  Santa Maria do   30.20 152 eP    P     10 41 46.0 +2.6
T45A  Paducah          30.28 314  P    P     10 41 43.9 -0.1
SADO  Sadowa           30.33 335  P    P     10 41 44.6 +0.4
SADO                              IAmb IAmb  10 41 57.2
      comp=Z,12nm,1.1s
143A  Socs Landing,    30.42 304  P    P     10 41 45.9 +0.7
PARMO Parma            30.87 312  P    P     10 41 50.1 +0.9
SNDB  Serra Nova Dou   31.61 160 eP    P     10 41 57.5 +1.6
CMIG  Matias Romero    31.69 273  LR   LR    10 54 05.4
      comp=Z,222nm,21.9s,baz=55,slow=35
FVM   French Village   31.99 314  P    P     10 41 59.2 +0.1
FVM                               IAmb IAmb  10 42 02.7
      comp=Z,7.0nm,0.7s
W41B  Gary Mavity, V   32.02 308  P    P     10 41 59.5 +0.1
W41B                              IAmb IAmb  10 42 14.6
      comp=Z,20nm,1.1s
W41B  Gary Mavity, V   32.02 308  P    P     10 42 00.3 +1.0
      baz=114,SNR=11
WHAR  Wooly Hollow     32.10 308  P    P     10 42 00.6 +0.6
WHAR                              IAmb IAmb  10 42 01.8
      comp=Z,12nm,0.8s
WLAR  White Oak Lake   32.11 305  P    P     10 41 59.8 -0.4
X40A  Basin Creek Fa   32.19 307  P    P     10 42 01.4 +0.6
X40A                              IAmb IAmb  10 42 16.1
      comp=Z,14nm,0.8s
X40A  Basin Creek Fa   32.19 307  P    P     10 42 02.2 +1.4
      baz=112,SNR=7.0
FCAR  Ozark Folk Cen   32.23 309  P    P     10 42 01.3 +0.1
FCAR                              IAmb IAmb  10 42 02.5
      comp=Z,9.9nm,0.6s
P43A  Skaggs, Pawnee   32.26 317  P    P     10 42 02.6 +1.2
CCM   Cathedral Cave   32.59 314  P    P     10 42 04.7 +0.4
CCM                               IAmb IAmb  10 42 05.7
      comp=Z,13nm,0.7s
CCM   Cathedral Cave   32.59 314  P    P     10 42 05.0 +0.8
      baz=119
CCM   Cathedral Cave   32.59 314 ⇑P    P     10 42 04.8 +0.6
CCM                               pP   pwP   10 42 16.9 +0.3
HDIL  Hopedale         32.63 319  P    P     10 42 04.8 +0.1
HDIL  Hopedale         32.63 319  P    P     10 42 06.0 +1.4
      baz=125,SNR=6.7
MIAR  Mount Ida        32.78 306  P    P     10 42 06.5 +0.5
MIAR  Mount Ida        32.78 306  P    P     10 42 06.8 +0.8
      baz=112
GLMI  Grayling         32.82 329  P    P     10 42 06.7 +0.5
GLMI  Grayling         32.82 329  P    P     10 42 07.8 +1.6
      baz=137
MGMO  Mountain Grove   32.88 311  P    P     10 42 07.2 +0.3
MGMO                              IAmb IAmb  10 42 08.3
      comp=Z,13nm,0.8s
U40A  Yellville        32.96 310  P    P     10 42 08.2 +0.7
U40A                              IAmb IAmb  10 42 09.0
      comp=Z,9.5nm,0.8s
U40A  Yellville        32.96 310  P    P     10 42 08.0 +0.5
      baz=115,SNR=8.1
W39A  Magazine         33.19 307  P    P     10 42 11.1 +1.6
W39A  Magazine         33.19 307  P    P     10 42 11.2 +1.7
      baz=113,SNR=10
R40A  Maddies Statio   33.41 313  P    P     10 42 11.6 +0.2
R40A                              IAmb IAmb  10 42 12.6
      comp=Z,9.9nm,0.7s
NNA   Nana             33.49 208  P    P     10 42 11.3 -1.1
      comp=Z,13nm,0.6s,baz=352,slow=9.3,SNR=12
NNA                               LR   LR    10 58 22.1
      comp=Z,549nm,22.0s,baz=358,slow=41
      comp=Z,13nm,0.6s
NNA   Nana             33.49 208  P    P     10 42 11.8 -0.7
NNA   Nana             33.49 208  P    P     10 42 11.6 -0.8
NNA                              ⇓pP   sP    10 42 21.1 -2.1
L42A  Oliver, Polo     33.71 321  P    P     10 42 15.3 +1.3
HHAR  Hobbs            33.73 309  P    P     10 42 15.0 +0.7
HHAR                              IAmb IAmb  10 42 24.1
      comp=Z,7.2nm,0.7s
E46A  Sault Ste Mari   33.81 331  P    P     10 42 16.4 +1.5
SIV   San Ignacio      33.92 179  P    P     10 42 15.4 -0.7
      comp=Z,13nm,0.5s,baz=12,slow=5.2,SNR=1.8
      comp=Z,13nm,0.5s
NBMA  Muriti-CE        33.94 136 eP    P     10 42 19.9 +3.6
SALV  Santo Antonio    34.33 170 eP    P     10 42 20.6 +1.0
SDBA  SAO DESIDERIO    34.55 150 eP    P     10 42 22.6 +1.0
LPAZ  La Paz           34.81 191  P    P     10 42 23.6 -0.8
      comp=Z,1.6nm,0.8s,baz=34,slow=2.1,SNR=6.5
LPAZ                              LR   LR    10 57 32.7
      comp=Z,476nm,19.0s,baz=352,slow=38
      comp=Z,1.6nm,0.8s
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LPAZ  La Paz           34.81 191  P    P     10 42 22.9 -1.5
LPAZ  La Paz           34.81 191 eP    P     10 42 26.6 +2.2
LPAZ  La Paz           34.81 191  P    P     10 42 24.1 -0.3
RCBR  Riachuelo        34.81 131  LR   LR    10 55 04.6
      comp=Z,148nm,18.9s,baz=100,slow=34
P38A  Dawn             34.91 314  P    P     10 42 25.1 +0.7
TUL1  Leonard          34.97 307  P    P     10 42 25.7 +0.7
      baz=112,SNR=9.3
WHTX  Lake Whitney,    35.09 300  P    P     10 42 27.0 +0.9
      baz=105
NBPN  Ponto Novo - B   35.74 142 eP    P     10 42 35.1 +3.3
SCIA  State Center     35.85 318  P    P     10 42 33.5 +1.0
      baz=122
833A  Chaparral WMA,   36.02 293  P    P     10 42 34.5 +0.3
833A                              IAmb IAmb  10 42 35.2
      comp=Z,16nm,0.9s
833A  Chaparral WMA,   36.02 293  P    P     10 42 34.4 +0.2
      baz=98,SNR=9.8
JCT   Junction City    36.72 297  P    P     10 42 40.2  0.0
      baz=101
KSU1  Kansas State U   36.81 312  P    P     10 42 40.7 -0.1
      baz=115,SNR=5.5
SCHQ  Schefferville    36.84 355  P    P     10 42 41.5 +0.7
      comp=Z,5.8nm,0.8s,baz=176,slow=7.1,SNR=12
SCHQ                              LR   LR    10 55 51.6
      comp=Z,216nm,20.4s,baz=161,slow=33
      comp=Z,5.8nm,0.8s
SCHQ  Schefferville    36.84 355  P    P     10 42 42.0 +1.2
F36A  Milaca           38.23 323  P    P     10 42 53.8 +1.1
F36A                              IAmb IAmb  10 43 05.2
      comp=Z,8.7nm,0.8s
BGNE  Belgrade         38.85 314  P    P     10 42 59.0 +0.9
      baz=116
ECSD  EROS Data Cent   38.93 319  P    P     10 42 59.0 +0.4
ECSD                              IAmb IAmb  10 43 03.2
      comp=Z,9.8nm,0.7s
ECSD  EROS Data Cent   38.93 319  P    P     10 42 59.0 +0.4
      baz=120,SNR=15
B35A  Bob, Littlefor   39.84 326  P    P     10 43 06.9 +0.8
B35A                              IAmb IAmb  10 43 18.3
      comp=Z,12nm,0.8s
TXAR  Lajitas Array    39.87 294  P    P     10 43 07.2 +0.4
      comp=Z,5.0nm,0.6s,baz=110,slow=7.7,SNR=44
TXAR                              PcP  PcP   10 45 13.3 +1.0
      comp=Z,0.4nm,0.6s,baz=91,slow=4.5,SNR=2.1
TXAR                              LR   LR    11 06 24.5
      comp=Z,74nm,18.0s,baz=82,slow=46
      comp=Z,5.0nm,0.6s
TXAR  Lajitas Array    39.87 294  P    P     10 43 06.7 -0.1
TX31  Lajitas Ar. Si   39.87 294  P    P     10 43 07.2 +0.4
TX32  Lajitas Array    39.87 294  P    P     10 43 06.8 +0.1
PB07  IPOC Station P   40.44 192  P    P     10 43 09.7 -1.8
PB07                              IAmb IAmb  10 43 10.3
      comp=Z,9.6nm,0.7s
PCMB  Pacaembu         40.79 165 eP    P     10 43 16.5 +2.3
AGMN  Agassiz Nation   40.95 325  P    P     10 43 15.6 +0.3
      baz=125
BB19B Bebedouro        41.03 161 eP    P     10 43 20.0 +3.8
LVC   Limon Verde      41.12 190  P    P     10 43 16.3 -1.1
      comp=Z,4.4nm,0.8s,baz=22,slow=9.7,SNR=3.3
LVC                               LR   LR    11 01 37.0
      comp=Z,593nm,20.2s,baz=350,slow=38
      comp=Z,4.4nm,0.8s
KSCO  Kaye Shedlock'   41.14 309  P    P     10 43 18.1 +0.9
      baz=109,SNR=6.3
NAN01 Guarapari, ES    41.55 148 eP    P     10 43 23.2 +2.7
MNTX  Cornudas Mount   41.64 297  P    P     10 43 21.9 +0.6
      baz=98,SNR=5.7
T25A  Trinidad         41.95 306  P    P     10 43 24.9 +0.9
      baz=105,SNR=5.5
ULM   Lac du Bonnet    42.10 327  P    P     10 43 23.0 -1.7
      comp=Z,4.1nm,0.7s,baz=128,slow=9.6,SNR=6.3
ULM                               LR   LR    11 00 45.4
      comp=Z,138nm,19.7s,baz=136,slow=36
      comp=Z,4.1nm,0.7s
FRTB  Fartura          42.88 164 eP    P     10 43 33.4 +2.0
ANMO  Albuquerque      43.07 302  LR   LR    11 02 40.6
      comp=Z,145nm,21.6s,baz=102,slow=38
ANMO  Albuquerque      43.07 302  P    P     10 43 34.3 +1.2
      baz=101
ANMO  Albuquerque      43.07 302  P    P     10 43 34.6 +1.5
ANMO                              sP   pwP   10 43 50.0 +4.1
ISCO  Idaho Springs    43.58 309  P    P     10 43 38.5 +1.3
      baz=107
121A  Cookes Peak, D   43.78 298  P    P     10 43 40.5 +1.7
      baz=98
RSSD  Black Hills      43.91 316  P    P     10 43 40.7 +0.9
RSSD  Black Hills      43.91 316  P    P     10 43 40.6 +0.9
      baz=112
RSSD  Black Hills      43.91 316  P    P     10 43 40.7 +0.9
RSSD                              pP   sP    10 43 48.7 -1.2
RSSD                              sP   pwP   10 43 55.8 +3.4
S22A  4UR Ranch, Cre   43.96 306  P    P     10 43 40.6 +0.3
      baz=104
N23A  Red Feather La   44.14 310  P    P     10 43 42.9 +1.2
      baz=108
CPUP  Villa Florida    44.40 174  P    P     10 43 42.5 -1.0
      comp=Z,3.0nm,0.7s,baz=351,slow=5.1,SNR=5.5
      comp=Z,3.0nm,0.7s
K22A  Casper           45.10 313  P    P     10 43 49.5 +0.3
K22A                              IAmb IAmb  10 43 50.9
      comp=Z,11nm,0.8s
K22A  Casper           45.10 313  P    P     10 43 50.1 +0.9
      baz=109,SNR=8.2
LPIG  La Paz           45.62 286  LR   LR    11 06 05.1
      comp=Z,129nm,20.8s,baz=102,slow=40
W18A  Petrified Fore   45.75 302  P    P     10 43 55.8 +1.2
      baz=99
FRB   Frobisher Bay    45.81 356  LR   LR    11 01 07.7
      comp=Z,102nm,19.9s,baz=194,slow=34
TUC   Tucson           46.27 298  P    P     10 44 00.1 +1.6
      baz=96
TUC   Tucson           46.27 298  P    P     10 43 59.8 +1.2
TUC                               pP   sP    10 44 07.5 -1.1
LAO   LASA Array       46.32 318  P    P     10 43 59.6 +1.0
      baz=113,SNR=7.7
WUAZ  Wupatki          47.14 302  P    P     10 44 06.9 +1.6
      baz=98
BW06  Boulder Array    47.27 312  P    P     10 44 06.9 +0.5
BW06                              IAmb IAmb  10 44 07.9
      comp=Z,9.4nm,0.8s
BW06  Boulder Array    47.27 312  P    P     10 44 07.0 +0.7
      baz=106,SNR=14
PD31  Pinedale Array   47.27 312  P    P     10 44 07.0 +0.7
PD31                              IAmb IAmb  10 44 07.9
      comp=Z,8.4nm,0.8s
PDAR  Pinedale Array   47.27 312  P    P     10 44 06.9 +0.5
      comp=Z,7.5nm,0.7s,baz=114,slow=9.5,SNR=85
PDAR                              LR   LR    11 06 48.3
      comp=Z,178nm,18.1s,baz=116,slow=40
      comp=Z,7.5nm,0.7s
PDAR  Pinedale Array   47.27 312  P    P     10 44 06.5 +0.2
RLMT  Red Lodge        47.76 315  P    P     10 44 11.1 +1.0
RLMT  Red Lodge        47.76 315  P    P     10 44 11.2 +1.0
      baz=108,SNR=17
REDW  Red Top Meadow   48.34 312  P    P     10 44 15.1 +0.5
REDW                              IAmb IAmb  10 44 32.9
      comp=Z,7.1nm,1.0s
YMR   Madison River    48.78 314  P    P     10 44 19.8 +1.8
YMR                               IAmb IAmb  10 44 25.1
      comp=Z,9.7nm,0.7s
YHL   Hebgen Lake      48.98 314  P    P     10 44 20.6 +1.0
CCUT  Cedar City       49.01 304  P    P     10 44 20.4 +0.5
DUG   Dugway, Tooele   49.04 308  P    P     10 44 19.6 -0.4
DUG                               IAmb IAmb  10 44 22.2
      comp=Z,5.8nm,0.9s
DUG   Dugway, Tooele   49.04 308  P    P     10 44 21.1 +1.1
      baz=101
EGMT  Eagleton         49.05 319  P    P     10 44 19.8  0.0
EGMT                              IAmb IAmb  10 44 24.8
      comp=Z,8.6nm,0.9s
EGMT  Eagleton         49.05 319  P    P     10 44 20.9 +1.1
      baz=110
QLMT  Earthquake Lak   49.14 314  P    P     10 44 22.4 +1.6
HVU   Hansel Valley    49.34 310  P    P     10 44 22.9 +0.7
HVU                               IAmb IAmb  10 44 24.6
      comp=Z,5.7nm,0.8s
BGU   Big Grassy Mou   49.35 309  P    P     10 44 22.4 +0.1
BGU                               IAmb IAmb  10 44 35.7
      comp=Z,8.7nm,0.9s
SFJD  Kangerlussuaq    49.35   6  LR   LR    11 05 32.3
      comp=Z,286nm,18.7s,baz=192,slow=36
BOZ   Bozeman (W)      49.50 315  P    P     10 44 24.4 +1.1
BOZ                               IAmb IAmb  10 44 28.8
      comp=Z,7.1nm,0.8s
BOZ   Bozeman (W)      49.50 315  P    P     10 44 24.4 +1.1
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      baz=107,SNR=20
YUH   Yuha Desert      50.63 298  P    P     10 44 32.5 +0.5
YUH                               IAmb IAmb  10 44 34.6
      comp=Z,6.9nm,0.8s
HLID  Hailey           50.91 312  P    P     10 44 35.3 +1.2
      baz=103,SNR=9.4
ELK   Elko             50.96 308  LR   LR    11 09 14.5
      comp=Z,247nm,18.1s,baz=104,slow=40
MONP2 Monument Peak    51.06 298  P    P     10 44 37.4 +1.9
      baz=93,SNR=6.8
PFO   Pinyon Flats O   51.13 299  LR   LR    11 10 45.5
      comp=Z,74nm,18.3s,baz=106,slow=41
MSO   Missoula         51.38 316  P    P     10 44 38.1 +0.5
      baz=106
JTMT  Jette            51.85 317  P    P     10 44 42.3 +1.2
JTMT                              IAmb IAmb  10 44 46.8
      comp=Z,5.1nm,0.6s
PLID  Pearl Lake       52.35 313  P    P     10 44 45.2 +0.2
EDW2  Edwards Air Fo   52.47 300  P    P     10 44 46.9 +1.1
      baz=93
NVAR  Mina Array Bea   53.00 305  P    P     10 44 50.6 +0.7
      comp=Z,1.1nm,0.7s,baz=99,slow=6.1,SNR=10.0
NVAR                              LR   LR    11 07 57.5
      comp=Z,237nm,20.8s,baz=98,slow=37
      comp=Z,1.1nm,0.7s
H10N3 ASCENSION HYDR53.20 115     T    T     11 42 05.9
      baz=299,slow=75,SNR=100
H10N2 ASCENSION HYDR53.20 115     T    T     11 42 07.0
      baz=299,slow=75,SNR=102
H10N1 ASCENSION HYDR53.22 115     T    T     11 42 07.5
      baz=299,slow=75,SNR=89
H10S3 ASCENSION HYDR53.61 116     T    T     11 42 38.3
      baz=287,slow=74,SNR=64
H10S2 ASCENSION HYDR53.63 116     T    T     11 42 37.6
      baz=293,slow=74,SNR=19
BORG  Borgarnes        53.80  20  LR   LR    11 03 38.5
      comp=Z,166nm,21.0s,baz=227,slow=31
NEW   Newport          53.83 317  LR   LR    11 09 33.9
      comp=Z,136nm,19.3s,baz=108,slow=38
NEW   Newport          53.83 317  P    P     10 44 55.8 +0.2
      baz=104,SNR=22
ESDC  Sonseca Array    53.89  54  P    P     10 44 55.0 -1.2
      comp=Z,0.6nm,0.7s,baz=274,slow=7.2,SNR=7.4
      comp=Z,0.6nm,0.7s
I07A  Izee             54.62 312  P    P     10 45 02.1 +0.6
I07A                              IAmb IAmb  10 45 14.0
      comp=Z,8.4nm,1.0s
KOWA  Kowa             55.23  85  P    P     10 45 05.0 -1.1
KOWA                              IAmb IAmb  10 45 06.7
      comp=Z,8.7nm,0.9s
KOWA  Kowa             55.23  85  P    P     10 45 05.6 -0.6
J05D  Fort Rock, OR    55.75 310  P    P     10 45 10.5 +0.7
      baz=97
TRQA  Tornquist        55.90 180  P    P     10 45 10.9 +0.4
TRQA                              IAmb IAmb  10 45 11.8
      comp=Z,5.9nm,0.8s
I05D  Terrebonne, OR   55.97 312  P    P     10 45 12.6 +1.4
      baz=98
K04D  Chiloquin, OR    56.05 310  P    P     10 45 13.4 +1.6
      baz=96
TIC   Toumodi          56.26  94 eP    P     10 45 12.6 -1.0
LIC   Lamto            56.38  95 eP    P     10 45 14.1 -0.3
      comp=Z,18nm,1.0s
DBIC  Dimbokro         56.41  94  P    P     10 45 14.1 -0.5
      comp=Z,10nm,0.6s,baz=300,slow=6.7,SNR=23
      comp=Z,10nm,0.6s
DBIC  Dimbokro         56.41  94  P    P     10 45 13.9 -0.7
DBIC  Dimbokro         56.41  94  P    P     10 45 14.1 -0.5
DBIC                              pP   pwP   10 45 26.2 -1.0
KIC   Kosan Boka       56.61  94 eP    P     10 45 15.5 -0.6
      comp=Z,12nm,0.5s
YBH   Yreka Blue Hor   56.67 308  LR   LR    11 10 19.4
      comp=Z,123nm,19.9s,baz=115,slow=37
B05A  Bryant           57.08 316  P    P     10 45 17.7 -1.2
      baz=100
YKA   Yellowknife Ar   57.32 334  P    P     10 45 20.0 -0.3
      comp=Z,6.3nm,0.7s,baz=107,slow=7.4,SNR=63
      comp=Z,6.3nm,0.7s
EKA   Eskdalemuir Ar   57.44  35  LR   LR    11 06 40.5
      comp=Z,217nm,18.5s,baz=187,slow=33
CLRS  Cowichan Lake    58.51 317  P    P     10 45 28.9  0.0
CLRS                              IAmb IAmb  10 45 34.0
      comp=Z,9.0nm,0.8s
PLCA  Paso Flores      59.16 188  P    P     10 45 33.0 -0.5
      comp=Z,2.6nm,0.7s,baz=4.2,slow=9.0,SNR=8.3
PLCA                              LR   LR    11 14 33.1
      comp=Z,224nm,19.8s,baz=15,slow=40
      comp=Z,2.6nm,0.7s
PLCA  Paso Flores      59.16 188  P    P     10 45 33.2 -0.3
PLCA                              IAmb IAmb  10 45 33.6
      comp=Z,5.1nm,0.9s
RES   Resolute Bay     59.36 350  LR   LR    11 11 57.8
      comp=Z,131nm,18.6s,baz=113,slow=37
TOA0  Torodi Ar. Sit   60.93  85  P    P     10 45 44.7 -1.5
TOA0                              IAmb IAmb  10 45 45.9
      comp=Z,5.0nm,0.8s
TORD  Torodi Ar. Bea   60.93  85  P    P     10 45 44.9 -1.3
      comp=Z,3.6nm,0.7s,baz=293,slow=6.5,SNR=26
      comp=Z,3.6nm,0.7s
TORD  Torodi Ar. Bea   60.93  85  P    P     10 45 44.5 -1.7
TORD                              IAmb IAmb  10 45 45.9
      comp=Z,3.7nm,0.8s
LL01  San Ignacio de   61.03 189  P    P     10 45 46.6 +0.4
BBB   Bella Bella      61.48 320  LR   LR    11 12 19.9
      comp=Z,166nm,20.3s,baz=97,slow=36
TGTN  Hyland Airport   63.11 330  P    P     10 46 02.2 +2.1
      baz=102
KEST  Kesra            64.39  59  P    P     10 46 09.2 +0.1
      comp=Z,5.7nm,0.7s,baz=84,slow=3.8,SNR=5.4
      comp=Z,5.7nm,0.7s
DAVOX Davos/Dischmat   64.40  46  LR   LR    11 09 13.5
      comp=Z,138nm,21.0s,baz=258,slow=31
ALE   Alert            64.42 360  P    P     10 46 07.8 -0.5
RPN   Rapa Nui         64.54 227  LR   LR    11 12 50.5
      comp=Z,80nm,18.1s,baz=242,slow=35
FARO  Faro, Yukon      65.60 331  P    P     10 46 17.7 +1.3
      baz=98
NB2   NORSAR Subarra   65.99  31  P    P     10 46 20.8 +1.9
      comp=Z,3.3nm,1.0s,baz=262,slow=6.5
NOA   NORSAR Array B   65.99  31  P    P     10 46 20.1 +1.2
      comp=Z,0.7nm,0.7s,baz=263,slow=6.4,SNR=5.1
NOA                               LR   LR    11 12 00.2
      comp=Z,201nm,18.6s,baz=260,slow=33
      comp=Z,0.7nm,0.7s
M31M  Drury Creek, Y   66.08 331  P    P     10 46 21.3 +1.9
      baz=97
INK   Inuvik           66.60 337  P    P     10 46 23.0 +0.4
INK                               IAmb IAmb  10 46 26.8
      comp=Z,8.3nm,0.8s
INK   Inuvik           66.60 337  P    P     10 46 22.8 +0.3
      baz=100
GERES GERESS Array B   66.95  44  P    P     10 46 24.7 -0.7
      comp=Z,0.5nm,0.5s,baz=268,slow=6.5,SNR=4.2
      comp=Z,0.5nm,0.5s
HFS   Hagfors          67.14  32  LR   LR    11 09 56.7
      comp=Z,171nm,21.8s,baz=280,slow=31
M30M  Minto, Yukon     67.23 331  P    P     10 46 28.2 +1.4
      baz=94
DAWY  Dawson           68.49 332  P    P     10 46 36.0 +1.3
DAWY  Dawson           68.49 332  P    P     10 46 35.9 +1.2
      baz=93
BVCY  Beaver Creek     69.11 331  P    P     10 46 40.6 +2.0
      baz=91
EGAK  Eagle            69.29 333  P    P     10 46 40.6 +1.0
EGAK                              IAmb IAmb  10 46 44.3
      comp=Z,5.3nm,0.8s
EGAK  Eagle            69.29 333  P    P     10 46 40.2 +0.7
      baz=92
BCAR  Beaver Creek A   69.54 331  P    P     10 46 42.2 +1.0
L27K  Beaver Creek,    69.56 331  P    P     10 46 42.7 +1.4
      baz=90
M27K  Edge Creek, AK   69.58 331  P    P     10 46 42.9 +1.3
      baz=90
K27K  Chicken          69.67 332  P    P     10 46 43.3 +1.4
      baz=90
SPITS Spitsbergen Ar   69.90  12  LR   LR    11 14 07.6
      comp=Z,96nm,20.2s,baz=26,slow=33
L26K  Log Cabin Wild   70.25 331  P    P     10 46 46.9 +1.3
      baz=89
J26L  Joseph Creek     70.32 333  P    P     10 46 46.9 +0.8
      baz=89
SCRK  Sand Creek       70.52 332  P    P     10 46 48.9 +1.5
      baz=89
BMAR  Burnt Mountain   70.70 336  P    P     10 46 49.7 +1.4
J25K  Salcha River,    71.10 333  P    P     10 46 51.3 +0.5
      baz=88
PAX   Paxson           71.22 331  P    P     10 46 52.8 +1.2
      baz=87
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IL31		**71.74**	**333**	P	**P**	**10 46 55.0**	**+0.5**
IL31				IAmb	IAmb	10 47 06.3	
	comp=Z,5.6nm,0.8s						
ILAR	**Eielson Array**	**71.74**	**333**	P	**P**	**10 46 54.5**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=102,slow=5.2,SNR=26						
ILAR				LR	LR	11 21 17.8	
	comp=Z,162nm,19.1s,baz=174,slow=38						
	comp=Z,3.5nm,0.8s						
ILAR	**Eielson Array**	**71.74**	**333**	P	**P**	**10 46 54.7**	**+0.2**
H24K	**Noodor Dome**	**72.08**	**334**	P	**P**	**10 46 57.5**	**+0.9**
	baz=86						
ARCES	**ARCESS Array B**	**72.15**	**22**	P	**P**	**10 46 54.6**	**-2.3**
	comp=Z,1.4nm,0.7s,baz=310,slow=5.7,SNR=4.6						
ARCES				LR	LR	11 12 04.1	
	comp=Z,52nm,21.0s,baz=295,slow=30						
	comp=Z,1.4nm,0.7s						
TOLK	**Toolik Lake Re**	**72.51**	**337**	P	**P**	**10 46 59.7**	**+0.5**
	baz=85						
NEA2	**Nenana**	**72.69**	**333**	P	**P**	**10 47 00.4**	**+0.1**
	baz=84						
I23K	**Minto, Yukon-K**	**72.76**	**334**	P	**P**	**10 47 00.9**	**+0.4**
	baz=84						
H23K	**Yukon River**	**72.77**	**334**	P	**P**	**10 47 01.9**	**+1.2**
	baz=84						
COLD	**Coldfoot**	**72.89**	**336**	P	**P**	**10 47 02.8**	**+1.4**
	baz=84						
USHA	**Ushuaia**	**72.91**	**184**	LR	LR	11 23 02.2	
	comp=Z,267nm,21.8s,baz=83,slow=39						
FINES	**FINESS Array B**	**73.16**	**30**	P	**P**	**10 47 01.9**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=255,slow=3.7,SNR=9.1						
FINES				LR	LR	11 16 31.9	
	comp=Z,216nm,18.7s,baz=264,slow=34						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**73.16**	**30**	P	**P**	**10 47 02.1**	**-0.9**
TRF	**Thorofare Moun**	**73.35**	**332**	P	**P**	**10 47 05.4**	**+1.0**
BPAW	**Bear Paw Mtn.**	**73.58**	**333**	P	**P**	**10 47 05.5**	**0.0**
	baz=82						
H21K	**Melozitna Rive**	**74.12**	**334**	P	**P**	**10 47 08.6**	**-0.1**
H21K	**Melozitna Rive**	**74.12**	**334**	P	**P**	**10 47 08.0**	**-0.7**
	baz=81						
CAST	**Castle Rocks**	**74.16**	**332**	P	**P**	**10 47 08.9**	**0.0**
	baz=81						
CHUM	**Lake Minchumin**	**74.19**	**333**	P	**P**	**10 47 09.4**	**+0.4**
	baz=81						
IMAR	**Indian Mountai**	**74.46**	**335**	P	**P**	**10 47 11.6**	**+1.1**
BURAR	**Bucovina Array**	**74.73**	**44**	⇑P	**P**	**10 47 12.5**	**-0.2**
BURAR	**Bucovina Array**	**74.73**	**44**	P	**P**	**10 47 13.2**	**+0.6**
J20K	**Nowinta River**	**74.93**	**333**	P	**P**	**10 47 13.6**	**+0.3**
	baz=80						
K20K	**Telida**	**75.05**	**332**	P	**P**	**10 47 12.1**	**-2.0**
	baz=80						
M19K	**Big River Lodg**	**75.47**	**331**	P	**P**	**10 47 17.6**	**+1.1**
	baz=79						
MLR	**Muntele Rosu**	**75.62**	**47**	⇑P	**P**	**10 47 18.4**	**+0.5**
L19K	**White Mountain**	**75.63**	**331**	P	**P**	**10 47 20.8**	**+3.4**
	baz=79						
PLOR	**Plostina**	**76.03**	**46**	⇓P	**P**	**10 47 21.9**	**+1.8**
VRI	**Vrincioaia**	**76.08**	**46**	⇑P	**P**	**10 47 20.5**	**+0.1**
AKASG	**Malin Array Be**	**76.71**	**41**	P	**P**	**10 47 23.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=301,slow=7.2,SNR=1.7						
	comp=Z,0.2nm,0.4s						
OBN	**Obninsk**	**79.90**	**35**	LR	LR	11 20 16.3	
	comp=Z,52nm,19.5s,baz=286,slow=34						
TAOE	**Nuku Hiva Isla**	**81.97**	**258**	*e*S	**S**	**10 58 05.9**	**-0.1**
BRTR	**Keskin Array B**	**82.55**	**51**	P	**P**	**10 47 54.6**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=276,slow=3.6,SNR=5.8						
BRTR				LR	LR	11 21 36.3	
	comp=Z,132nm,20.4s,baz=302,slow=34						
	comp=Z,0.8nm,0.7s						
PMSA	**Palmer Station**	**82.68**	**181**	LR	LR	11 26 58.0	
	comp=Z,316nm,18.5s,baz=350,slow=37						
MMAI	**Mount Meron Ar**	**85.98**	**57**	LR	LR	11 25 59.1	
	comp=Z,32nm,18.5s,baz=18,slow=35						
TSUM	**Tsumeb**	**86.16**	**111**	LR	LR	11 18 27.4	
	comp=Z,194nm,21.7s,baz=330,slow=30						
BELG	**Belogornoye**	**86.99**	**35**	LR	LR	11 25 06.5	
	comp=Z,252nm,19.1s,baz=323,slow=34						
KBZ	**Khabaz**	**87.69**	**45**	LR	LR	11 28 51.3	
	comp=Z,72nm,18.2s,baz=293,slow=36						
PPT	**Papeete**	**93.46**	**253**	LR	LR	11 24 37.9	
	comp=Z,70nm,19.6s,baz=76,slow=32						
PPT2	**Papeete2**	**93.47**	**253**	*e*LR	LR	11 20 03.9	
	comp=Z,122nm,22.0s						
SEY	**Seymchan**	**94.90**	**345**	LR	LR	11 35 38.7	
	comp=Z,62nm,18.5s,baz=20,slow=38						
TBI	**Tubuai**	**95.10**	**247**	*e*LR	LR	11 20 27.3	
	comp=Z,69nm,25.0s						
SNAA	**Sanae**	**97.92**	**164**	LR	LR	11 37 27.0	
	comp=Z,36nm,18.0s,baz=100,slow=38						
SNAA	**Sanae**	**97.92**	**164**	P	**P**	**10 49 05.3**	**-2.6**
SNAA				IAmb	IAmb	10 49 30.4	
	comp=Z,6.4nm,1.5s						
MA2	**Magadan**	**98.18**	**344**	LR	LR	11 36 12.3	
	comp=Z,79nm,19.9s,baz=36,slow=37						
KMBO	**Kilima Mbogo**	**98.79**	**88**	LR	LR	11 31 33.8	
	comp=Z,214nm,19.7s,baz=270,slow=34						
YAK	**Yakutsk**	**99.59**	**355**	LR	LR	11 33 28.2	
	comp=Z,115nm,21.7s,baz=86,slow=35						
ATD	**Arta Tunnel**	**99.87**	**74**	LR	LR	11 34 59.7	
	comp=Z,151nm,18.3s,baz=358,slow=36						
WMQ	**Urumqi**	**112.23**	**24**	*e*P	**PKiKP**	**10 54 08.3**	**-0.3**
XLT	**XiLinHaoTe**	**118.23**	**2**	*e*P	**PKPdf**	**10 54 17.0**	**-3.1**
XLT				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XLT				pmax	pmax		
	comp=Z,70nm,4.3s						
NJ2	**Nanjing**	**130.09**	**359**	*e*P	**PKPdf**	**10 54 41.2**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	**PanZhiHua**	**132.77**	**20**	PKP	**PKPdf**	**10 54 47.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**138.92**	**29**	PKP	**PKPdf**	**10 55 01.1**	**+1.2**
	comp=Z,0.4nm,0.2s,baz=317,slow=3.7,SNR=4.2						
CMAR	**Chiang Mai Arr**	**138.92**	**29**		**PKPdf**	**10 55 00.7**	**+0.9**
STKA	**Stephens Creek**	**154.97**	**232**	PKPab	**PKPab**	**10 55 50.4**	**+0.2**
	comp=Z,2.0nm,1.0s,baz=31,slow=4.5,SNR=3.9						
ASAR	**Alice Springs**	**164.49**	**247**	PKP	**PKPdf**	**10 55 36.3**	**-0.7**
	comp=Z,0.3nm,0.9s,baz=101,slow=0.9,SNR=2.6						
ASAR				PKPab	**PKPab**	**10 56 31.6**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=105,slow=3.9,SNR=41						
ASAR	**Alice Springs**	**164.49**	**247**	PKPdf	**PKPdf**	**10 55 35.5**	**-1.6**
ASAR					**PKPab**	**10 56 31.2**	**-0.7**
WRA	**Warramunga Arr**	**164.80**	**261**	PKP	**PKPdf**	**10 55 36.7**	**-0.7**
	comp=Z,0.9nm,1.1s,baz=66,slow=0.8,SNR=4.1						
WRA				PKPab	**PKPab**	**10 56 33.3**	**0.0**
	comp=Z,1.1nm,0.9s,baz=92,slow=4.3,SNR=7.3						

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*NEIC **01** 10:38:52.3±2.3, 6°.93S±0°.09×154°.2E±0°.1, h37^{km}±7^{km}, mb4.1/19, Error ellipse: s-maj=15.9km s-min=13.3km az=103.0*

*IDC **01** 10:38:53.4±4.3, 6°.87S×154°.04E, h50^{km}±33^{km}, mb3.7/8, mbtmp4.0/11, ML3.0/3, MS3.0/2, Error ellipse: s-maj=36.1km s-min=15.0km az=98.0*

ISC 01 10:38:51.2±0.6**, 6°.93S**±0°.07×**154°.18E**±0°.09**, h35^{km}, n38, σ1^s.35**/41**, mb4.0**/18**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.37**	**320**	P	**Pn**	**10 39 42.6**	**+1.2**
	7.4nm,0.3s,baz=331,slow=3.0,SNR=16						
KRVT				S	**Sn**	**10 40 19.8**	**-0.5**
	80nm,0.3s,baz=163,slow=21,SNR=10						
	17nm,0.2s						
RABL	**Rabaul**	**3.38**	**323**	Pn	**Pn**	**10 39 42.9**	**+1.4**
PMG	**Port Moresby**	**7.38**	**250**	P	**Pn**	**10 40 37.3**	**+0.8**
	1.5nm,0.3s,baz=38,slow=17,SNR=3.9						
PMG				LR	LR	10 43 15.5	
	comp=Z,76nm,18.9s,baz=68,slow=36						
	9.4nm,0.5s						
PMG	**Port Moresby**	**7.38**	**250**	Pn	**Pn**	**10 40 39.8**	**+3.3**
CTA	**Charters Tower**	**15.18**	**210**	P	**P**	**10 42 25.6**	**-2.1**
	0.1nm,0.3s,baz=31,slow=18,SNR=2.7						
CTA				LR	LR	10 47 21.7	
	comp=Z,62nm,18.0s,baz=48,slow=34						
	2.8nm,0.8s						
CTAO	**Charters Tower**	**15.18**	**210**	P	**P**	**10 42 28.2**	**+0.4**
WR0	**Warramunga Arr**	**23.05**	**234**	P	**P**	**10 43 53.0**	**-0.6**
WR0				IAmb	IAmb	10 44 03.9	
	comp=Z,8.0nm,1.4s						
WB0	**Warramunga Arr**	**23.07**	**234**	P	**P**	**10 43 53.4**	**-0.4**
WB0				IAmb	IAmb	10 44 14.9	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**23.18**	**234**	P	**P**	**10 43 54.4**	**-0.7**
WRAB				IAmb	IAmb	10 43 59.5	
	comp=Z,4.1nm,1.0s						
WB2	**Warramunga Arr**	**23.19**	**234**	P	**P**	**10 43 54.3**	**-0.8**
WB2				IAmb	IAmb	10 43 54.8	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**23.20**	**234**	P	**P**	**10 43 54.4**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=55,slow=8.8,SNR=6.8						
WRA				PcP	**PcP**	**10 47 44.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=62,slow=2.8,SNR=5.8						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**23.20**	**234**	P	**P**	**10 43 53.3**	**-1.9**
AS31	**Alice Springs**	**25.62**	**227**	P	**P**	**10 44 17.5**	**-0.1**
ASAR	**Alice Springs**	**25.62**	**227**	P	**P**	**10 44 17.3**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=58,slow=9.5,SNR=18						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**25.62**	**227**	P	**P**	**10 44 17.8**	**+0.1**
KNRA	**Kununurra**	**26.38**	**249**	P	**P**	**10 44 23.2**	**-1.2**
KNRA				IAmb	IAmb	10 44 33.4	
	comp=Z,12nm,1.3s						
STKA	**Stephens Creek**	**27.46**	**204**	P	**P**	**10 44 35.7**	**+1.6**
FITZ	**Fitzroy Crossi**	**29.95**	**246**	P	**P**	**10 44 56.1**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=90,slow=8.6						
	comp=Z,1.4nm,0.5s						
BBOO	**Buckleboo**	**30.78**	**211**	P	**P**	**10 45 01.7**	**-1.8**
TOO	**Toolangi**	**31.51**	**193**	P	**P**	**10 45 07.7**	**-2.2**
TOO				IAmb	IAmb	10 45 17.7	
	comp=Z,18nm,1.1s						
FORT	**Forrest**	**34.09**	**223**	P	**P**	**10 45 32.5**	**0.0**
KNTN	**Kanton**	**34.22**	**85**	P	**P**	**10 45 34.1**	**+0.3**
NIUE	**Niue**	**36.91**	**113**	P	**P**	**10 45 56.8**	**-0.1**
KSAR	**Wonju Array Be**	**50.52**	**333**	P	**P**	**10 47 42.5**	**-3.5**
SONM	**Songino Array**	**68.85**	**328**	P	**P**	**10 49 50.5**	**-1.8**
	comp=Z,3.3nm,1.0s,baz=138,slow=5.2,SNR=5.7						
	comp=Z,3.3nm,1.0s						
SONM	**Songino Array**	**68.85**	**328**	P	**P**	**10 49 54.1**	**+1.8**
SONM				IAmb	IAmb	10 49 55.5	
	comp=Z,3.3nm,1.0s						
VNDA	**Vanda**	**70.67**	**178**	P	**P**	**10 50 03.6**	**+0.7**
VNDA				IAmb	IAmb	10 50 06.7	
	comp=Z,2.0nm,1.4s						
MK31	**Makanchi Array**	**82.82**	**319**	P	**P**	**10 51 14.2**	**+2.2**
MK31				IAmb	IAmb	10 51 15.6	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**82.82**	**319**	P	**P**	**10 51 13.2**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=112,slow=4.7,SNR=14						
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**83.05**	**180**	P	**P**	**10 51 14.2**	**+1.2**
QSPA				IAmb	IAmb	10 51 42.3	
	comp=Z,1.5nm,1.1s						
ILAR	**Eielson Array**	**83.61**	**22**	P	**P**	**10 51 15.2**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=249,slow=5.1,SNR=11						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**83.67**	**326**	P	**P**	**10 51 16.0**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=72,slow=4.8,SNR=4.8						
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	**83.67**	**326**	P	**P**	**10 51 16.4**	**+0.2**
J25K	**Salcha River,**	**84.09**	**22**	P	**P**	**10 51 18.1**	**-0.1**
J25K				IAmb	IAmb	10 51 35.9	
	comp=Z,1.8nm,1.2s						
BMAR	**Burnt Mountain**	**85.76**	**20**	P	**P**	**10 51 27.4**	**+0.9**
NVAR	**Mina Array Bea**	**92.31**	**52**	P	**P**	**10 51 59.4**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=247,slow=6.0,SNR=5.4						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**152.23**	**285**	PKPbc	**PKPbc**	**10 58 44.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=24,slow=2.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**152.23**	**285**	PKPdf	**PKPdf**	**10 58 36.8**	**-0.8**
TORD					**PKiKP**	**10 58 44.9**	**+0.3**

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*NOU **01** 10:51:53.0, 37°.52S×176°.72E, h242^{km}, MLv3.9/8, North Island, New Zealand*

*WEL **01** 10:51:58.2±0.8, 37°S±5°×17°7E±°, h191^{km}±6^{km}, M2.8/38, MLv2.8/38, Error ellipse: s-maj=0.0km s-min=0.0km az=32.0*

ISC 01 10:51:52.0±1.9**, 37°.55S**±0°.06×**176°.54E**±0°.06**, h239^{km}**±10^{km}**, n147, σ2^s.49**/157**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.29**	**232**	P	**Pn**	**10 52 24.1**	**+1.2**
OPRZ	**Ohinepanea**	**0.29**	**178**	P	**Pn**	**10 52 24.0**	**+1.0**
MYRZ	**Mayor Island**	**0.36**	**318**	P	**Pn**	**10 52 24.5**	**+1.3**
MARZ	**Manawahe**	**0.45**	**167**	P	**Pn**	**10 52 25.2**	**+1.9**
KARZ	**Kaharoa**	**0.52**	**207**	P	**Pn**	**10 52 25.2**	**+1.6**
KMRZ	**Kaimai**	**0.56**	**238**	P	**Pn**	**10 52 25.3**	**+1.5**
OMRZ	**Omania**	**0.57**	**194**	P	**Pn**	**10 52 25.4**	**+1.7**
NGRZ	**Ngongotaha**	**0.62**	**207**	P	**Pn**	**10 52 25.9**	**+1.9**
TARZ	**Mount Tarawera**	**0.68**	**183**	P	**Pn**	**10 52 26.8**	**+2.6**
RRRZ	**Republican Roa**	**0.79**	**182**	P	**Pn**	**10 52 26.6**	**+1.9**
URZ	**Urewera**	**0.84**	**148**	P	**Pn**	**10 52 26.2**	**+1.3**
URZ				S	**S**	**10 52 48.0**	**-2.7**
URZ	**Urewera**	**0.84**	**148**	P	**Pn**	**10 52 26.0**	**+1.2**
TOZ	**Tahuroa Road**	**0.85**	**257**	P	**Pn**	**10 52 26.6**	**+1.7**
TOZ				S	**S**	**10 52 50.1**	**-0.6**
HRRZ	**Handcock Road**	**0.86**	**194**	P	**Pn**	**10 52 27.2**	**+2.1**
GRRZ	**Galatos Road**	**0.87**	**203**	P	**Pn**	**10 52 27.3**	**+2.3**
MUGZ	**Murupara**	**0.94**	**169**	P	**Pn**	**10 52 27.3**	**+1.9**
MUGZ				S	**S**	**10 52 49.5**	**-2.3**
PRRZ	**Plateau Road**	**0.95**	**187**	P	**Pn**	**10 52 27.8**	**+2.3**
RUGZ	**Raukumara Rang**	**0.99**	**115**	P	**Pn**	**10 52 26.5**	**+0.7**
RUGZ				S	**S**	**10 52 49.3**	**-3.0**
HAZ	**Te Kaha**	**1.00**	**102**	P	**Pn**	**10 52 26.9**	**+1.2**
HAZ				S	**S**	**10 52 49.9**	**-2.3**
WPRZ	**Whakapapatarin**	**1.01**	**197**	P	**Pn**	**10 52 28.4**	**+2.6**
ALRZ	**Allen Road**	**1.02**	**189**	P	**Pn**	**10 52 28.1**	**+2.3**
KUZ	**Kuaotunu**	**1.04**	**321**	P	**Pn**	**10 52 26.8**	**+0.8**
KUTZ	**Kaahu Road**	**1.09**	**211**	P	**Pn**	**10 52 29.3**	**+3.0**
MWZ	**Matawai**	**1.10**	**135**	P	**Pn**	**10 52 28.0**	**+1.6**
TLZ	**Tolley Road**	**1.11**	**225**	P	**Pn**	**10 52 28.7**	**+2.2**
RTZ	**Ruatahuna**	**1.12**	**162**	P	**Pn**	**10 52 28.4**	**+1.9**
RTZ				S	**S**	**10 52 52.4**	**-1.3**
RAGZ	**Rawiri**	**1.17**	**144**	P	**Pn**	**10 52 29.5**	**+2.7**
RAGZ				S	**S**	**10 52 53.5**	**-0.8**
MKAZ	**Moumakai**	**1.19**	**292**	P	**Pn**	**10 52 28.4**	**+1.4**
MKAZ				S	**S**	**10 52 53.0**	**-1.3**
PKGZ	**Pakihiroa**	**1.26**	**106**	P	**Pn**	**10 52 29.5**	**+2.0**
MRHZ	**Matea Rd**	**1.28**	**184**	P	**Pn**	**10 52 29.8**	**+2.2**
MRHZ				S	**S**	**10 52 54.3**	**-1.4**
TWGZ	**Tauwhareparae**	**1.30**	**119**	P	**Pn**	**10 52 30.4**	**+2.7**
MTHZ	**Maungataniwha**	**1.32**	**170**	P	**Pn**	**10 52 30.2**	**+2.4**
WATZ	**Wairara**	**1.32**	**209**	P	**Pn**	**10 52 30.6**	**+2.8**
WIAZ	**Waiheke Island**	**1.36**	**303**	P	**Pn**	**10 52 29.5**	**+1.4**
TKGZ	**Te Karaka**	**1.36**	**131**	P	**Pn**	**10 52 30.5**	**+2.4**
SNGZ	**Shannon Statio**	**1.38**	**153**	P	**Pn**	**10 52 30.8**	**+2.6**
HATZ	**Hinemaiaia**	**1.38**	**195**	P	**Pn**	**10 52 30.7**	**+2.4**
MXZ	**Matakaoa Point**	**1.40**	**91**	P	**Pn**	**10 52 30.3**	**+1.9**
MXZ				S	**S**	**10 52 55.4**	**-1.6**
ETAZ	**East Tamaki Re**	**1.42**	**294**	P	**Pn**	**10 52 30.3**	**+1.7**
RAHZ	**Arahi**	**1.43**	**163**	P	**Pn**	**10 52 31.6**	**+3.0**
RATZ	**Rangitukua**	**1.45**	**205**	P	**Pn**	**10 52 31.5**	**+2.7**
PUZ	**Puketiti**	**1.45**	**111**	P	**Pn**	**10 52 30.9**	**+2.1**
RIGZ	**Rimuhau**	**1.50**	**141**	P	**Pn**	**10 52 32.1**	**+2.9**
WMGZ	**Waiomatatini S**	**1.51**	**101**	P	**Pn**	**10 52 31.5**	**+2.3**
RITZ	**Rihia Road**	**1.52**	**201**	P	**Pn**	**10 52 32.5**	**+3.2**
MBAZ	**Motutapu North**	**1.53**	**300**	P	**Pn**	**10 52 31.1**	**+1.7**
NMHZ	**Naumai**	**1.56**	**172**	P	**Pn**	**10 52 32.9**	**+3.3**
GRZ	**Great Barrier**	**1.56**	**326**	P	**Pn**	**10 52 30.8**	**+1.1**
AWAZ	**Awhitu Peninsu**	**1.59**	**287**	P	**Pn**	**10 52 31.6**	**+1.6**
CNGZ	**Carnagh Statio**	**1.61**	**126**	P	**Pn**	**10 52 33.3**	**+3.3**
BKZ	**Black Stump Fm**	**1.61**	**181**	P	**Pn**	**10 52 32.2**	**+2.1**
BKZ	**Black Stump Fm**	**1.61**	**181**	P	**Pn**	**10 52 32.6**	**+2.5**
HIZ	**Hauiti**	**1.64**	**234**	P	**Pn**	**10 52 33.0**	**+2.8**
HIZ	**Hauiti**	**1.64**	**234**	P	**Pn**	**10 52 33.1**	**+2.8**
ABAZ	**Army Bay**	**1.67**	**304**	P	**Pn**	**10 52 32.3**	**+1.8**
WTAZ	**Waiatarua**	**1.69**	**291**	P	**Pn**	**10 52 32.4**	**+1.6**
TMVZ	**Te Maari**	**1.69**	**203**	P	**Pn**	**10 52 33.6**	**+2.7**
ETVZ	**East Tongariro**	**1.71**	**202**	P	**Pn**	**10 52 33.7**	**+2.7**
KNZ	**Kokohu**	**1.72**	**149**	P	**Pn**	**10 52 33.7**	**+2.9**
PRGZ	**Paritu Road**	**1.73**	**143**	P	**Pn**	**10 52 33.9**	**+2.9**
WTVZ	**West Tongariro**	**1.73**	**205**	P	**Pn**	**10 52 34.0**	**+2.8**
NNVZ	**North Ngauruho**	**1.74**	**205**	P	**Pn**	**10 52 34.1**	**+2.8**
ARHZ	**Aropaoanui**	**1.75**	**168**	P	**Pn**	**10 52 34.3**	**+3.2**
OTVZ	**Oturere**	**1.75**	**203**	P	**Pn**	**10 52 34.1**	**+2.7**
SNVZ	**South Ngauruho**	**1.78**	**203**	P	**Pn**	**10 52 34.6**	**+2.9**
NGZ	**Ngauruhoe**	**1.78**	**204**	P	**Pn**	**10 52 34.7**	**+3.1**
TUVZ	**Tukino**	**1.85**	**202**	P	**Pn**	**10 52 35.0**	**+2.8**
FWVZ	**Far West T-bar**	**1.87**	**204**	P	**Pn**	**10 52 35.4**	**+2.8**
KWHZ	**Kaweka Forest**	**1.87**	**183**	P	**Pn**	**10 52 35.3**	**+3.0**
WHVZ	**Whangaehu Hut**	**1.88**	**203**	P	**Pn**	**10 52 35.5**	**+2.8**
MCHZ	**McNeill Hill**	**1.89**	**176**	P	**Pn**	**10 52 35.8**	**+3.3**
WNVZ	**Wahianoa**	**1.92**	**202**	P	**Pn**	**10 52 35.5**	**+2.6**
MHGZ	**Mahia Peninsul**	**1.92**	**147**	P	**Pn**	**10 52 35.9**	**+3.2**
MOVZ	**Moawhango**	**1.95**	**198**	P	**Pn**	**10 52 35.3**	**+2.2**
BHHZ	**Black Hill Sta**	**1.97**	**191**	P	**Pn**	**10 52 35.6**	**+2.3**
PKVZ	**Pokaka**	**1.97**	**208**	P	**Pn**	**10 52 36.1**	**+2.9**
MTVZ	**Mangateitei**	**2.02**	**204**	P	**Pn**	**10 52 36.1**	**+2.4**
KRHZ	**Kereru**	**2.09**	**184**	P	**Pn**	**10 52 37.1**	**+2.7**
VRZ	**Vera Road**	**2.11**	**221**	P	**Pn**	**10 52 38.0**	**+3.6**
CKHZ	**Cape Kidnapper**	**2.14**	**169**	P	**Pn**	**10 52 38.1**	**+3.3**
KAHZ	**Kahuranaki**	**2.25**	**173**	P	**Pn**	**10 52 39.1**	**+3.2**
PNHZ	**Pukenui**	**2.37**	**186**	P	**Pn**	**10 52 39.7**	**+2.6**
WCZ	**Waipu Caves**	**2.39**	**312**	P	**Pn**	**10 52 39.2**	**+2.0**
PXZ	**Pawanui**	**2.49**	**174**	P	**Pn**	**10 52 41.1**	**+2.9**
WPHZ	**Waipukurau**	**2.51**	**182**	P	**Pn**	**10 52 41.2**	**+2.7**
WAZ	**Wanganui**	**2.52**	**209**	P	**Pn**	**10 52 41.5**	**+3.0**
LREZ	**Lake Rotokare**	**2.54**	**221**	P	**Pn**	**10 52 42.8**	**+4.0**
TSZ	**Takapari Road**	**2.54**	**190**	P	**Pn**	**10 52 41.2**	**+2.4**
NEZ	**North Egmont**	**2.58**	**228**	P	**Pn**	**10 52 43.8**	**+4.6**
PREZ	**Palmer Road**	**2.59**	**226**	P	**Pn**	**10 52 43.6**	**+4.3**
PKE	**Pukeiti**	**2.59**	**230**	P	**Pn**	**10 52 43.7**	**+4.3**
PRHZ	**Porangahau**	**2.71**	**179**	P	**Pn**	**10 52 43.3**	**+2.8**
DVHZ	**Dannevirke**	**2.76**	**186**	P	**Pn**	**10 52 43.4**	**+2.3**
OHWZ	**Ohakea**	**2.82**	**200**	P	**Pn**	**10 52 44.8**	**+3.2**
POWZ	**Post Office Ro**	**2.90**	**192**	P	**Pn**	**10 52 45.0**	**+2.4**
ANWZ	**Angora Road**	**2.90**	**181**	P	**Pn**	**10 52 45.3**	**+2.7**
PRWZ	**Pori Road**	**3.03**	**188**	P	**Pn**	**10 52 46.6**	**+2.6**
MRZ	**Mangatainoka R**	**3.19**	**193**	P	**Pn**	**10 52 47.8**	**+2.0**
TIWZ	**Tintock**	**3.26**	**189**	P	**Pn**	**10 52 49.1**	**+2.5**
TIWZ	**Tintock**	**3.26**	**189**	P	**S**	**10 53 29.7**	**-0.1**
OUZ	**Omahuta**	**3.33**	**313**	P	**Pn**	**10 52 49.7**	**+2.3**
OUZ	**Omahuta**	**3.33**	**313**	P	**Pn**	**10 52 49.7**	**+2.3**
CPWZ	**Castlepoint**	**3.36**	**184**	P	**S**	**10 53 33.2**	**+1.3**
OGWZ	**Otaki Gorge**	**3.43**	**198**	P	**Pn**	**10 52 50.6**	**+2.1**
HOWZ	**Holdsworth Sta**	**3.44**	**193**	P	**S**	**10 53 31.8**	**-1.6**
KIW	**Kapiti Island**	**3.54**	**201**	P	**Pn**	**10 52 51.5**	**+1.7**
TMWZ	**Te Maipa**	**3.59**	**188**	P	**Pn**	**10 52 52.0**	**+1.6**
TMWZ	**Te Maipa**	**3.59**	**188**	P	**S**	**10 53 31.7**	**-4.8**
MTW	**Mount Morrison**	**3.69**	**192**	P	**Pn**	**10 52 53.1**	**+1.6**
MTW	**Mount Morrison**	**3.69**	**192**	P	**S**	**10 53 32.4**	**-6.3**
CAW	**Cannon Point**	**3.73**	**197**	P	**Pn**	**10 52 53.8**	**+1.8**
DUWZ	**D’Urville Isla**	**3.83**	**211**	P	**Pn**	**10 52 55.2**	**+2.0**
TRWZ	**Traveller**	**3.90**	**190**	P	**Pn**	**10 52 56.0**	**+2.0**
TRWZ	**Traveller**	**3.90**	**190**	P	**S**	**10 53 40.8**	**-2.3**
PAWZ	**Paruwai Farm**	**3.92**	**192**	P	**S**	**10 53 38.4**	**-5.2**
WEL	**Wellington**	**3.97**	**200**	P	**Pn**	**10 52 56.8**	**+2.0**
MSWZ	**Moikau Station**	**3.99**	**194**	P	**Pn**	**10 52 56.5**	**+1.5**
MSWZ	**Moikau Station**	**3.99**	**194**	P	**S**	**10 53 42.4**	**-2.6**
TCW	**Tory Channel**	**4.05**	**205**	P	**Pn**	**10 52 57.5**	**+1.7**
BHW	**Baring Head**	**4.06**	**198**	P	**S**	**10 53 44.8**	**-1.8**
PLWZ	**Palliser**	**4.13**	**194**	P	**Pn**	**10 52 58.2**	**+1.4**
PLWZ	**Palliser**	**4.13**	**194**	P	**S**	**10 53 42.0**	**-6.3**
TUWZ	**Tuamarina**	**4.36**	**207**	P	**Pn**	**10 53 01.3**	**+1.8**
TUWZ	**Tuamarina**	**4.36**	**207**	P	**S**	**10 53 50.8**	**-2.4**
NNZ	**Nelson**	**4.41**	**213**	P	**Pn**	**10 53 01.2**	**+1.2**
TKNZ	**Takaka Hill**	**4.45**	**218**	P	**Pn**	**10 53 02.5**	**+1.9**
QRZ	**Quartz Range**	**4.52**	**222**	P	**Pn**	**10 53 03.1**	**+1.7**
QRZ	**Quartz Range**	**4.52**	**222**	P	**Pn**	**10 53 03.5**	**+2.1**
BSWZ	**Blackbirch Sta**	**4.64**	**206**	P	**Pn**	**10 53 05.0**	**+2.1**
MRNZ	**Matariki Terra**	**4.83**	**216**	P	**Pn**	**10 53 07.8**	**+2.6**
THZ	**Tophouse**	**5.06**	**213**	P	**Pn**	**10 53 10.1**	**+2.0**
KHZ	**Kahutara**	**5.38**	**204**	P	**Pn**	**10 53 13.6**	**+1.7**
KHZ	**Kahutara**	**5.38**	**204**	P	**Pn**	**10 53 13.8**	**+1.9**
DSZ	**Denniston Nort**	**5.56**	**220**	P	**Pn**	**10 53 15.4**	**+1.1**
GVZ	**Greta Valley S**	**6.04**	**205**	P	**Pn**	**10 53 21.7**	**+1.5**
LTZ	**Lake Taylor**	**6.16**	**211**	P	**Pn**	**10 53 23.3**	**+1.4**
INZ	**Inchbonnie**	**6.48**	**216**	P	**Pn**	**10 53 27.4**	**+1.7**
OKCZ	**Okains Bay**	**6.71**	**202**	P	**Pn**	**10 53 30.7**	**+2.0**
OXZ	**Oxford**	**6.71**	**209**	P	**Pn**	**10 53 29.7**	**+0.9**
MQZ	**McQueen’s Vall**	**6.82**	**204**	P	**Pn**	**10 53 30.3**	**+0.2**
RACZ	**Rakaia**	**7.02**	**207**	P	**Pn**	**10 53 33.7**	**+1.1**
WACZ	**Wakanui South**	**7.31**	**208**	P	**Pn**	**10 53 38.2**	**+1.9**
RPZ	**Rata Peaks**	**7.44**	**212**	P	**Pn**	**10 53 39.4**	**+1.4**
RPZ	**Rata Peaks**	**7.44**	**212**	P	**Pn**	**10 53 40.3**	**+2.4**
TMZ	**Timaru**	**8.01**	**210**	P	**Pn**	**10 53 47.0**	**+1.8**
ODZ	**Otahua Downs**	**8.70**	**209**	P	**Pn**	**10 53 56.4**	**+2.4**
ODZ	**Otahua Downs**	**8.70**	**209**	P	**Pn**	**10 53 56.7**	**+2.7**

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*IDC **01** 11:05:39.0±2.8, 19°.02S×176°.80W, h0^{km}, mb3.8/3, mbtmp3.7/4, ML4.4/1, MS3.5/2, Error ellipse: s-maj=93.9km s-min=39.8km az=150.0*

*NEIC **01** 11:06:34.7±1.3, 19°.0S±0°.1×176°.7W±0°.2, h634^{km}±20^{km}, mb4.2/17, Error ellipse: s-maj=23.6km s-min=18.3km az=100.0*

ISC 01 11:06:33.6±1.2**, 19°.0S**±0°.2×**177°.0W**±0°.1**, h600^{km}, n25, σ0^s.96**/21**, mb4.0**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.91**	**285**	P	**P**	**11 08 05.2**	**-0.7**
NIUE	**Niue**	**6.66**	**91**	P	**P**	**11 08 21.6**	**+1.0**
OUZ	**Omahuta**	**18.16**	**206**	P	**P**	**11 10 10.8**	**+0.3**
OUZ				IAmb	IAmb	11 10 26.0	
	comp=Z,38nm,1.4s						
LHI	**Lord Howe Isla**	**24.92**	**235**	P	**P**	**11 11 12.2**	**+1.1**
RPZ	**Rata Peaks**	**26.58**	**200**	LR	LR	11 19 54.9	
	comp=Z,61nm,20.3s,baz=227,slow=32						
FOZ	**Fox Glacier**	**26.83**	**202**	P	**P**	**11 11 27.3**	**-0.4**
WHZ	**Wether Hill Ro**	**29.54**	**202**	P	**P**	**11 11 51.6**	**+0.3**
EIDS	**Eidsvold**	**30.20**	**252**	P	**P**	**11 11 58.5**	**+1.4**
EIDS				IAmb	IAmb	11 12 23.1	
	comp=Z,16nm,1.4s						
CTAO	**Charters Tower**	**34.63**	**262**	P	**P**	**11 12 35.2**	**+0.5**
CTAO				IAmb	IAmb	11 12 57.3	
	comp=Z,8.9nm,1.4s						
WR0	**Warramunga Arr**	**45.59**	**260**	P	**P**	**11 14 02.6**	**+0.8**
WB0	**Warramunga Arr**	**45.76**	**261**	P	**P**	**11 14 03.2**	**+0.2**
WB0				IAmb	IAmb	11 14 31.4	
	comp=Z,5.4nm,1.2s						
WB2	**Warramunga Arr**	**45.77**	**260**	P	**P**	**11 14 04.0**	**+0.8**
WB2				IAmb	IAmb	11 14 13.2	
	comp=Z,8.2nm,1.5s						
WRAB	**Tennant Creek**	**45.77**	**260**	P	**P**	**11 14 03.3**	**+0.1**
WRAB				IAmb	IAmb	11 14 28.0	
	comp=Z,7.2nm,1.5s						
WRA	**Warramunga Arr**	**45.78**	**260**	P	**P**	**11 14 03.9**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.6,SNR=43						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**45.78**	**260**	P	**P**	**11 14 03.7**	**+0.4**
AS31	**Alice Springs**	**45.81**	**255**	P	**P**	**11 14 04.3**	**+0.9**
ASAR	**Alice Springs**	**45.81**	**255**	P	**P**	**11 14 04.2**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=88,slow=7.4,SNR=34						
	comp=Z,2.5nm,0.9s						
ASAR	**Alice Springs**	**45.81**	**255**	P	**P**	**11 14 03.9**	**+0.4**
KNRA	**Kununurra**	**51.74**	**265**	P	**P**	**11 14 45.6**	**-1.6**
KNRA				IAmb	IAmb	11 14 45.9	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**59.90**	**242**	P	**P**	**11 15 42.8**	**-0.3**
NWAO				IAmb	IAmb	11 16 10.7	
	comp=Z,18nm,1.1s						
GIRL	**Giralia**	**63.89**	**254**	P	**P**	**11 16 08.1**	**-1.0**
QSPA	**South Pole Qui**	**71.02**	**180**	P	**P**	**11 16 49.9**	**-2.1**
ILAR	**Eielson Array**	**86.68**	**12**	P	P	11 18 24.0	+10
	comp=Z,0.3nm,1.0s,baz=218,slow=5.6,SNR=1.8						
	comp=Z,0.3nm,1.0s						
SNAA	**Sanae**	**89.43**	**178**	P	P	11 18 22.6	-4.6
SNAA				IAmb	IAmb	11 18 26.1	
	comp=Z,6.5nm,1.4s						
TIXI	**Tiksi**	**97.59**	**345**	LR	LR	12 02 54.3	
	comp=Z,37nm,18.6s,baz=184,slow=35						

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*MOS **01** 11:08:53.7±0.0, 42°.61N×45°.59E, h17^{km}, MPVA3.5*

*NORS **01** 11:08:54.0±0.0, 42°.53N×45°.54E, h4^{km}, MPVA3.5*

*DRS **01** 11:08:57.7±0.0, 42°.67N×45°.50E, h20^{km}*

*TIF **01** 11:09:08.6, 42°.75N×45°.30E, h35^{km}±1^{km}*

ISC 01 11:08:55.4±1.0**, 42°.63N**±0°.02×**45°.55E**±0°.02**, h12^{km}**±9^{km}**, n35, σ1^s.25**/67**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.50**	**86**	*e*Pg	**Pb**	**11 09 05.7**	**-0.4**
BTLR				*e*Sg	**Sb**	**11 09 12.3**	**-1.0**
DVE	**Vedeno**	**0.54**	**52**	*e*Pg	**Pg**	**11 09 05.7**	**-0.2**
DVE				*e*Sg	**Sb**	**11 09 14.0**	**-0.5**
GROC	**Groznyy**	**0.60**	**17**	*e*Pg	**Pb**	**11 09 07.9**	**0.0**
GROC				*e*Sg	**Sn**	**11 09 18.0**	**-1.5**
KMGR	**Komgaron**	**0.66**	**311**	*e*Pg	**Pg**	**11 09 08.3**	**0.0**
KMGR				*e*Sg	**Sn**	**11 09 19.8**	**-1.3**
MTEO	**Meteo**	**0.75**	**274**	P	**Pg**	**11 09 08.9**	**-1.2**
MTEO				S	**Sg**	**11 09 17.6**	**-2.5**
GUDG	**Gudauri**	**0.81**	**259**	P	**Pg**	**11 09 10.1**	**-1.1**
GUDG				S	**Sg**	**11 09 20.1**	**-1.8**
XNZR	**Khunzakh**	**0.86**	**95**	*e*Pg	**Pg**	**11 09 11.7**	**-0.3**
XNZR				*e*Sg	**Sb**	**11 09 24.1**	**+0.2**

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DLMR  Dylym              0.91  61 ePg   Pb    11 09 12.5 -0.7
DLMR                              eSg   Sb    11 09 24.2 -0.9
UNCR  Uncukul            0.92  84 ePg   Pg    11 09 13.2 -0.1
UNCR                              eSg   Sg    11 09 25.2  0.0
LACR  Lac                0.95 283 ePg   Pb    11 09 12.2 -1.6
LACR                              eSg   Sg    11 09 26.4 +0.3
DBC   Dubki              1.02  67 ePg   Pn    11 09 15.6  0.0
DBC                               eSg   Sn    11 09 29.5 -0.4
KRNR  Karanay            1.02  78 ePg   Pb    11 09 14.8 -0.3
KRNR                              eSg   Sb    11 09 27.9 -0.5
BTKR  Batakoyurt         1.05 315 ePg   Pn    11 09 17.3 +1.3
BTKR                              eSg   Sn    11 09 33.1 +2.6
ARKR  Arakani            1.06  91 ePg   Pb    11 09 15.7 -0.1
ARKR                              eSg   Sn    11 09 30.2 -0.8
GNBR  Gunib              1.07 102 ePg   Pg    11 09 16.2 +0.1
GNBR                              eSg   Sg    11 09 30.4 +0.3
ARNR  Ardon              1.08 301 ePg   Pg    11 09 17.3 +1.1
ARNR                              eSg   Sn    11 09 33.2 +1.8
BTNK  Botanikuri         1.10 211  P    Pb    11 09 10.7 -5.7
BTNK                               S    Sb    11 09 26.3 -4.3
BUJR  Buynaksk           1.16  80 ePg   Pn    11 09 17.2 -0.3
BUJR                              eSg   Sn    11 09 32.3 -1.0
KORR  Kora               1.18 293 ePg   Pg    11 09 18.1 -0.2
KORR                              eSg   Sg    11 09 34.9 +1.3
TRKR  Terskaya           1.25 332 ePg   Pg    11 09 19.8 +0.3
TRKR                              eSg   Sg    11 09 37.6 +1.9
KMKR  Kumukh             1.25 113 ePg   Pb    11 09 19.1  0.0
KMKR                              eSg   Sn    11 09 35.5 -0.2
DDFL  Dedoflistskaro     1.25 160  P    Pg    11 09 23.1 +3.5
STDR  Stavd-Durt         1.32 305 ePg   Pg    11 09 21.0 +0.2
STDR                              eSg   Sg    11 09 40.5 +2.5
LSNR  Lesken             1.42 298 ePg   Pb    11 09 21.6 -0.4
LSNR                              eSg   Sg    11 09 41.8 +0.5
PRTR  Priterechnaya      1.46 321 ePg   Pb    11 09 22.4  0.0
PRTR                              eSg   Sg    11 09 43.7 +1.4
DIGR  Digorskoe uzhe     1.48 281 ePg   Pn    11 09 21.8 -0.3
TRLG  Trialeti           1.53 225  P    Pb    11 09 23.9 +0.1
TRLG                               S    Sb    11 09 43.8 +0.5
URKR  Urkarakh           1.61 106 ePg   Pb    11 09 24.6 -0.5
URKR                              eSg   Sb    11 09 45.8 +0.3
BRNG  Burnasheti         1.63 232  P    Pb    11 09 25.5  0.0
BRNG                               S    Sg    11 09 48.4 +0.5
DMNI  Dmanisi            1.65 218  P    Pn    11 09 25.2 +0.9
DMNI                               S    Sb    11 09 47.1 +0.5
AKT   Akhty              1.99 125 ePg   Pb    11 09 30.4 -1.2
AKT                               eSg   Sb    11 09 56.3  0.0
NEY   Neytrino           2.17 288 ePg   Pb    11 09 34.2 -0.6
NEY                               eSg   Sb    11 10 02.6 +1.0
KBZ   Khabaz             2.23 300 ePn   Pb    11 09 33.9 -1.8
KBZ                               eSn   Sb    11 10 02.3 -0.9
SHA1  Shidzhatmaz        2.39 299 ePn   Pn    11 09 35.8 +1.2
SHA1                              eSn   Sb    11 10 08.2 +0.2
KIV0  Kislovodsk Arr     2.47 303 ePn   Pn    11 09 36.3 +0.7
KIV0                              eSn   Sb    11 10 08.1 -2.2
```

GUC 01 11:12:10.7±0.6**,25°.01S**×**69°.65W,h114**^{km}±5^{km}**,ML3.5,**
5C-2D,Northern Chile

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                    Op    ISC       h  m  s     ISC
PB14  IPOC Station P     0.79 299  eP    Pn        11 12 31.2 +0.6
PB14                               eS    Sn        11 12 46.5 +0.9
AC01  Pan de Azucar      1.42 217  eP    Pn        11 12 37.6 +0.7
AC01                               i S   Sn        11 12 57.7 +0.9
AC01                                IAML           11 13 01.4
      comp=E,490nm,0.1s
PB10  IPOC Station P     1.71 331  eP    Pn        11 12 41.0 +0.7
PB10                               eS    Sn        11 13 03.8 +1.1
PB15  IPOC Station P     1.80   5⇑eP    Pn        11 12 42.6 +0.9
PB15                               eS    Sn        11 13 06.7 +1.5
AC02  Maricunga          1.88 166  eP    Pn        11 12 43.3 +0.4
AC02                               eS    Sn        11 13 09.3 +2.0
AC02                                IAML           11 13 10.5
      comp=E,409nm,0.3s
PB06  IPOC Station P     2.29   2  eP    Pn        11 12 48.7 +0.9
PB06                               eS    Sn        11 13 17.7 +1.5
PB06                                IAML           11 13 24.4
      comp=E,226nm,0.3s
AC06  Mina Casimiro      2.42 195⇑eP    Pn        11 12 49.2 -0.1
AC06                               eS    Sn        11 13 20.1 +1.2
AC06                                IAML           11 13 29.9
      comp=E,182nm,0.2s
AF01  San Pedro de A     2.45  34  eP    Pn        11 12 51.1 +1.2
AF01                               eS    Sn        11 13 21.9 +2.0
LVC   Limon Verde        2.48  16⇑eP    Pn        11 12 51.4 +0.9
LVC                                eS    Sn        11 13 22.3 +1.5
PB04  IPOC Station P     2.70 350⇓iP    Pn        11 12 53.6 +0.4
PB04                               i S   Sn        11 13 32.1 +6.3
PB04                                IAML           11 13 38.1
      comp=E,138nm,0.5s
PB09  IPOC Station P     3.22   7⇑iP    Pn        11 13 01.4 +1.4
PB09                               eS    Sn        11 13 40.7 +2.8
PB09                                IAML           11 13 55.5
      comp=N,102nm,0.2s
PB07  IPOC Station P     3.28 356⇑iP    Pn        11 13 01.0 +0.3
PB07                               i S   Sn        11 13 45.1 +5.9
PB07                                IAML           11 13 55.0
      comp=E,95nm,0.5s
AC04  Llanos de Chal     3.43 202  eP    Pn        11 13 01.5 -1.0
AC04                               eS    Sn        11 13 42.2 -0.4
PB02  IPOC Station P     3.68 356⇓iP    Pn        11 13 06.1 +0.1
PB02                               eS    Sn        11 13 57.6 +8.8
PB02                                IAML           11 14 05.5
      comp=E,125nm,0.2s
```

NOU 01 11:16:36.1,16°.04S×**167°.51E,h17**^{km}**,MLv3.9**/12**,**
Vanuatu Islands,Vanuatu Islands

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                    Op    ISC       h  m  s     ISC
SANVU Saraoutou          0.66 333  P     Pg        11 16 49.0 -0.1
DVP   Devils Point       1.80 159  P     Pn        11 17 06.6 +0.3
RTV   Rentapao           1.95 153  P     Pn        11 17 09.2 +0.8
KOUNC Koumac, New Ca     5.43 214  P     Pn        11 17 56.0 -0.3
MARNC Mare, Loyalty      5.43 175  P     Pn        11 17 56.7 +0.3
YATNC Mamie plateau,     6.02 185  P     Pn        11 18 04.0 -0.4
DZM   Mont Dzumac        6.08 189  P     Pn        11 18 05.4  0.0
```

BJI ***01*** *11:25:55.6*±*0.0,28°.81N*×*142°.64E,h7*^{km}*,mb4.6/59,*
mB4.8/25,Ms4.1/31,Ms7 3.8/33

IDC ***01*** *11:25:57.6*±*0.5,28°.84N*×*142°.58E,h0*^{km}*,mb4.3/27,*
mbtmp4.4/32,ML3.9/5,MS3.7/27,Error ellipse:
s-maj=15.9km s-min=11.2km az=92.0

JMA ***01*** *11:26:00.9*±*0.1,28°.9N*±*1°.0*×*14°2E*±*°,h50*^{km}*,MD4.7/27,*
MV4.6/27,NEAR CHICHIJIMA ISLAND

NIED ***01*** *11:26:00.9,28°.85N*×*141°.86E,h50*^{km}*,MW4.6,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{16}*Nm;*
M_{rr}*0.13;* $M_{\theta\theta}$*-0.08;* $M_{\phi\phi}$*-0.05;* $M_{r\theta}$*-0.50;* $M_{\theta\phi}$*0.18;* $M_{\phi r}$*0.88;*
Fault plane solution: M_0*1.04000×*10^{16} *NP1:*ϕ_s*99.00000°,*
δ*7.00000°,*λ*39.00000°. NP2:*ϕ_s*331.00000°,*δ*85.00000°,*
λ*96.00000°.*

NEIC ***01*** *11:26:01.7*±*2.3,28°.96N*±*0°.05*×*142°.77E*±*0°.10,h31*^{km}±*4*^{km}*,*
mb4.8/98 Error ellipse: s-maj=12.7km s-min=7.8km
az=85.0

ISC 01 11:26:01.1±0.3**,28°.90N**±0°.04×**142°.63E**±0°.06**,h27**^{km}**,n249,**
σ**1**^{s}**.39**/236**,mb4.7**/88**,MS3.8**/33**,2C-5D,Bonin Islands**
region

```
Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                    Op    ISC       h  m  s     ISC
CBIJ  Chichi jima        1.84 192  P     Pn        11 26 29.9 -1.1
CBIJ                               S     Sn        11 26 51.1 -2.3
CBIJ  Chichi jima        1.84 192  A     A         11 26 29.9
      comp=E,16nm,4.3s,comp=E,13nm,5.2s
JCJ   Chichijima         1.84 192  Pn    Pn        11 26 29.9 -1.0
      29nm,0.3s,baz=8.2,slow=19,SNR=41
JCJ                                Sn    Sn        11 26 51.2 -2.2
      208nm,0.3s,baz=278,slow=23,SNR=12
JCJ   Chichijima         1.84 192  Pn    Pn        11 26 28.9 -2.0
JHH2  Haha-jima-NKT2     2.30 190  P     Pn        11 26 36.4 -0.8
JHH2  Haha-jima-NKT2     2.30 190  A     A         11 26 36.4
      comp=E,15nm,5.5s,comp=E,7.0nm,5.6s
JHJ2  Mitsune            4.84 331  Pn    Pn        11 27 10.5 -1.6
JHJ   Hachijo jima 2     4.86 331  Pn    Pn        11 27 12.2 -0.3
      16nm,0.3s,baz=71,slow=20,SNR=5.4
JHJ                                Sn    Sn        11 28 05.3 -2.5
      21nm,0.3s,baz=68,slow=22,SNR=2.0
      90nm,0.5s
BSO3  Boso 3             6.15 344  P     Pn        11 27 29.6 -0.3
BSO4  Boso 4             6.37 343  P     Pn        11 27 32.9 -0.2
JOD2  Odawara 2          7.02 336 eP     Pn        11 27 42.0 -0.1
JHU   Hanno              7.49 339  P     Pn        11 27 46.9 -1.6
JYT   Yasato             7.59 345  Pn    Pn        11 27 47.9 -2.0
JYT   Yasato             7.59 345  P     Pn        11 27 49.3 -0.6
JYT                               eS     Sn        11 29 12.4 -2.6
JRY   Ryogami san        7.76 337  P     Pn        11 27 52.2 -0.1
JAG   Ashikaga           7.96 341  P     Pn        11 27 53.9 -1.2
INU   Inuyama            8.00 325        Pn        11 27 55.9 +0.4
JGF   Kuroka             8.03 328  Pn    Pn        11 27 56.8 +0.8
MJAR  Matsushiro Arr     8.48 335  Pn    Pn        11 28 02.1  0.0
      1.4nm,0.3s,baz=162,slow=11,SNR=88
MJAR                               Sn    Sn        11 29 35.2 -1.8
      0.4nm,0.3s,baz=282,slow=7.5,SNR=1.6
      13nm,0.5s
MJAR  Matsushiro Arr     8.48 335        Pn        11 28 01.8 -0.3
MAJO  Matsushiro         8.48 335  Pn    Pn        11 28 01.7 -0.5
MJB9  Matsu-Tunnel       8.48 335        Pn        11 28 02.1 -0.1
JMM   Marumori           9.07 351        Pn        11 28 07.2 -3.0
JSD   Sado               9.81 339  Pn    Pn        11 28 18.7 -1.6
JHS   Saijyo            10.11 309  Pn    Pn        11 28 24.1 -0.4
JMZ   Minamidaito 2     10.59 256  Pn    Pn        11 28 31.5 +0.3
JNU   Nakatsue          10.92 296  Pn    Pn        11 28 41.6 +5.9
JTM   Tenmabayashi      11.93 354  Pn    Pn        11 28 46.8 -2.5
JOW   Kunigami          12.87 264  LR    LR        11 33 14.8
      comp=Z,286nm,21.9s,baz=326,slow=34
ERM   Erimo             13.09   2  Pn    Pn        11 28 59.9 -5.4
JEW   Eniwo             13.94 356  Pn    Pn        11 29 13.8 -3.0
TJN   Taejon            14.85 304  P     P         11 29 36.7 +1.9
KSRS  Korea Array       14.96 309  Pn    Pn        11 29 32.7 +2.0
      1.1nm,0.3s,baz=116,slow=12,SNR=22
      9.9nm,0.8s
KSAR  Wonju Array Be    14.98 308  Pn    Pn        11 29 29.6 -1.5
KS19  Wonju Array Si    15.03 309  Pn    Pn        11 29 29.6 -2.0
JKA   Kamikawa-asahi    15.18 360        Pn        11 29 32.2 -1.4
ASAJ  Asahikawa         15.19 360  Pn    Pn        11 29 32.6 -1.1
      0.9nm,0.3s,baz=215,slow=13,SNR=7.1
ASAJ                               LR    LR        11 36 37.7
      comp=Z,219nm,21.1s,baz=180,slow=42
      3.9nm,0.5s
USA0B Ussuriysk Arra    17.47 334  P     Pn        11 30 01.7 -1.0
USRK  Ussuriysk Ar.     17.47 334  P     Pn        11 30 02.1 -0.6
      0.8nm,0.3s,baz=136,slow=11,SNR=7.2
      7.1nm,0.7s
USRK  Ussuriysk Ar.     17.47 334  P     Pn        11 30 01.2 -1.6
MDJ   Mudanjiang        18.80 330  P     P         11 30 18.6 +0.2
MDJ   Mudanjiang        18.80 330  P     P         11 30 18.7 +0.2
MDJ                                pmax  pmax
      comp=Z,14nm,0.7s
MDJ                                pmax  pmax
      comp=Z,210nm,3.5s
TATO  Taipei            19.25 263  P     Pn        11 30 25.2 +0.7
TATO                               IAmb  IAmb      11 30 30.9
      comp=Z,132nm,1.4s
NACB  Ninganchiao       19.39 261  P     P         11 30 24.7 -0.4
YHNB  Yeheng            19.43 262  P     Pn        11 30 26.3 -0.6
YHNB                               IAmb  IAmb      11 30 32.2
      comp=Z,63nm,1.4s
YULB  Yu-li             19.91 259  P     Pn        11 30 32.4 -0.1
YULB                               IAmb  IAmb      11 30 38.0
      comp=Z,65nm,1.2s
SSLB  Suanglung         20.07 260  P     Pn        11 30 34.2 -0.2
CN2   Changchun         20.25 322 eP     P         11 30 34.3  0.0
CN2                               eS     S         11 34 10.3  -10
CN2                                pmax  pmax
      comp=Z,10.0nm,1.3s
CN2                                LR    LR
      comp=Z,400nm,14.0s
CN2                                LR    LR
      comp=Z,300nm,14.0s
CN2                                LR    LR
      comp=Z,300nm,19.0s
TPUB  Ta-pu             20.52 259  P     Pn        11 30 39.7  0.0
TPUB                               IAmb  IAmb      11 30 42.1
      comp=Z,110nm,1.5s
BNX   BinXian           20.65 329 ⇓P     P         11 30 39.4 +0.8
BNX                                pmax  pmax
      comp=Z,130nm,1.0s
BNX                                pmax  pmax
      comp=Z,530nm,4.7s
NJ2   Nanjing           20.72 285 eP     Pn        11 30 41.2 -0.7
NJ2                                pmax  pmax
      comp=Z,23nm,0.5s
KLR   Kul'dur           21.94 341  P     P         11 30 52.8 +0.4
      comp=Z,7.8nm,0.6s,baz=169,slow=12,SNR=16
      comp=Z,7.8nm,0.6s
TIA   Tai'an            22.66 295  P     P         11 30 59.2 -1.1
TIA                                S     S         11 35 05.0 -1.8
TIA                                pmax  pmax
      comp=Z,7.0nm,0.7s
TIA                                LR    LR
      comp=Z,250nm,12.1s
TIA                                LR    LR
      comp=Z,160nm,10.0s
H11N2 WAKE ISLAND Hy 23.89 107     T     T         11 56 33.5
      baz=296,slow=74,SNR=17
H11N1 WAKE ISLAND Hy 23.89 107     T     T         11 56 26.0
      baz=296,slow=74,SNR=20
H11N3 WAKE ISLAND Hy 23.91 107     T     T         11 56 31.0
      baz=296,slow=74,SNR=21
H11S3 WAKE ISLAND Hy 24.30 110     T     T         11 56 55.0
H11S1 WAKE ISLAND Hy 24.30 110     T     T         11 56 55.0
H11S2 WAKE ISLAND Hy 24.32 110     T     T         11 56 55.0
BJI   Beijing           24.39 304  P     P         11 31 15.7 -1.4
BJI                                pmax  pmax
      comp=Z,12nm,1.4s
BJI                                LR    LR
      comp=Z,160nm,17.3s
BJI                                LR    LR
      comp=Z,220nm,16.3s
BJI                                LR    LR
      comp=Z,250nm,15.4s
WHN   Wuhan             24.59 281 ⇓P     P         11 31 19.2 +0.2
HNS   HongShan          24.80 297 ⇓P     P         11 31 19.6 -1.2
HNS                                S     S         11 35 46.4 +4.7
HNS                                pmax  pmax
      comp=Z,9.0nm,1.1s
HNS                                LR    LR
      comp=Z,150nm,15.7s
HNS                                LR    LR
      comp=Z,280nm,16.7s
HNS                                LR    LR
      comp=Z,250nm,15.7s
XLT   XiLinHaoTe        25.94 312 eP     P         11 31 31.3  0.0
XLT                                pmax  pmax
      comp=Z,18nm,1.1s
XLT                                pmax  pmax
      comp=Z,110nm,4.8s
HKPS  Hong Kong Po S    26.48 262  P     P         11 31 36.2  0.0
HIA   Hailar            26.82 326  P     P         11 31 41.6 +2.6
HIA                                IAmb  IAmb      11 31 43.7
      comp=Z,42nm,1.3s
DAV   Davao City (W)    27.03 220  LR    LR        11 43 33.5
      comp=Z,94nm,19.2s,baz=81,slow=39
ENH   Enshi             28.80 281  P     P         11 31 57.4 +0.4
ENH                                IAmb  IAmb      11 31 58.1
      comp=Z,26nm,1.4s
XAN   Xi'an             29.12 289  P     P         11 31 59.2 -0.6
XAN                                pP    pP        11 32 02.7 -3.6
XAN                                pmax  pmax
      comp=Z,10.0nm,1.0s
MA2   Magadan           31.17   8  P     P         11 32 18.5 +1.0
      comp=Z,1.3nm,0.4s,baz=322,slow=24,SNR=2.0
      comp=Z,1.3nm,0.4s
SIJI  Sorong            31.54 202  P     P         11 32 20.4 -0.8
      comp=Z,3.1nm,0.4s,baz=30,slow=18,SNR=5.0
SIJI                               LR    LR        11 42 29.6
      comp=Z,126nm,21.0s,baz=53,slow=32
      comp=Z,3.1nm,0.4s
GYA   Guiyang           31.87 274 ⇓P     P         11 32 24.1 -0.1
GYA                                pmax  pmax
      comp=Z,24nm,1.2s
GYA                                LR    LR
      comp=Z,180nm,18.9s
MYLDM Lahad Datu        32.85 229  P     P         11 32 34.4 +1.7
MYLDM                              IAmb  IAmb      11 32 50.5
      comp=Z,13nm,0.9s
SHEM  Shemya Is, Ala    33.23  35  LR    LR        11 45 04.9
      comp=Z,67nm,19.0s,baz=102,slow=34
ULN   Ulaanbaatar       33.31 314  P     P         11 32 36.8 +0.1
ULN                                IAmb  IAmb      11 32 39.9
      comp=Z,9.1nm,0.9s
ULN   Ulaanbaatar       33.31 314  P     P         11 32 37.8 +1.1
ULN                                pP    sP        11 32 46.1 +0.4
LZH   Lanzhou           33.32 293 eP     P         11 32 35.8 -1.1
LZH                                pP    pP        11 32 41.8 -1.7
LZH                                pmax  pmax
      comp=Z,16nm,1.3s
LZH                                LR    LR
      comp=Z,220nm,19.2s
LZH                                LR    LR
      comp=Z,480nm,19.5s
LZH                                LR    LR
      comp=Z,150nm,19.5s
CD2   Chengdu           33.64 283  P     P         11 32 39.9 +0.3
CD2                                pmax  pmax
      comp=Z,10.0nm,0.6s
CD2                                LR    LR
      comp=Z,240nm,15.1s
CD2                                LR    LR
      comp=Z,230nm,16.5s
SONM  Songino Array     33.71 314  P     P         11 32 40.9 +0.8
      comp=Z,6.8nm,0.8s,baz=120,slow=8.2,SNR=37
      comp=Z,6.8nm,0.8s
SONM  Songino Array     33.71 314  P     P         11 32 40.3 +0.2
SONM                               IAmb  IAmb      11 32 43.2
      comp=Z,9.5nm,1.1s
YAK   Yakutsk           34.22 349  P     P         11 32 43.5 -0.6
YAK                                IAmb  IAmb      11 33 12.6
      comp=Z,14nm,0.8s
TOLI2 Tolitoli          34.62 221  P     P         11 32 48.4 +0.3
TOLI2                              IAmb  IAmb      11 33 11.8
      comp=Z,15nm,0.8s
SEY   Seymchan          34.63   8  P     P         11 32 48.6 +0.9
      comp=Z,1.8nm,0.4s,baz=180,slow=21,SNR=7.8
      comp=Z,1.8nm,0.4s
SANI  Sanana            34.66 210  P     P         11 32 47.0 -1.5
      comp=Z,13nm,0.8s
MPSI  Mapaga            35.76 221  P     P         11 32 56.0 -1.9
      comp=Z,5.3nm,0.9s
PZH   PanZhiHua         36.15 276  P     P         11 33 01.1 -0.4
PZH                                pmax  pmax
      comp=Z,20nm,1.2s
PZH                                pmax  pmax
      comp=Z,120nm,4.7s
GTA   Gaotai            36.65 298 ⇓P     P         11 33 04.9 -0.6
GTA                                pP    pP        11 33 09.7 -2.1
GTA                                sP    sP        11 33 12.6 -1.9
GTA                                pmax  pmax
      comp=Z,6.0nm,1.0s
GTA                                pmax  pmax
      comp=Z,48nm,5.2s
GTA                                LR    LR
      comp=Z,150nm,15.1s
GTA                                LR    LR
      comp=Z,290nm,19.1s
GTA                                LR    LR
      comp=Z,160nm,15.9s
KAPI  Kappang           40.27 217  LR    LR        11 48 45.9
      comp=Z,27nm,21.2s,baz=52,slow=34
CHTO  Chiang Mai        41.00 266  P     P         11 33 41.7 -0.4
CHTO  Chiang Mai        41.00 266  P     P         11 33 42.2 +0.2
CM31  Chiang Mai Arr    41.13 265  P     P         11 33 43.1 -0.1
CMAR  Chiang Mai Arr    41.13 265  P     P         11 33 43.5 +0.3
      comp=Z,1.8nm,0.8s,baz=53,slow=8.0,SNR=11
CMAR                               LR    LR        11 51 60.0
      comp=Z,81nm,20.2s,baz=65,slow=38
      comp=Z,1.8nm,0.8s
CMAR  Chiang Mai Arr    41.13 265  P     P         11 33 42.6 -0.5
COEN  Coen              42.61 179  P     P         11 33 55.8 +0.7
MTN   Manton Dam        42.96 197  P     P         11 33 57.1 -0.8
MTN                                IAmb  IAmb      11 34 00.6
      comp=Z,12nm,0.8s
TIXI  Tiksi             43.46 354  P     P         11 34 00.4 -1.0
TIXI  Tiksi             43.46 354  P     P         11 34 02.2 +0.8
TIXI                               sP    pwP       11 34 14.6 -2.0
SHL   Shillong          44.97 278  P     P         11 34 13.1 -1.2
SHL                                IAmb  IAmb      11 34 15.3
      comp=Z,26nm,1.5s
SRIT  Nakonsritamara    45.15 252  P     P         11 34 16.6 +1.0
SRIT                               IAmb  IAmb      11 34 34.2
      comp=Z,12nm,1.0s
WMQ   Urumqi            45.86 304 eP     P         11 34 21.5 +0.4
WMQ                                pP    pP        11 34 26.7 -0.8
WMQ                                pmax  pmax
      comp=Z,19nm,1.5s
KULM  Kulim             46.12 248  P     P         11 34 22.5 -0.8
JAGI  Jajag, Banyuwa    46.20 221  P     P         11 34 23.1 -0.9
JAGI                               IAmb  IAmb      11 34 26.2
      comp=Z,14nm,0.7s
IPM   Ipoh              46.29 246  P     P         11 34 24.1 -0.6
KNRA  Kununurra         46.30 199  P     P         11 34 24.0 -0.6
KNRA                               IAmb  IAmb      11 34 28.7
      comp=Z,6.6nm,0.6s
ZAA0  Zalesovo Array    48.40 318  P     P         11 34 40.8 +0.2
ZAA0                               IAmb  IAmb      11 34 47.4
      comp=Z,11nm,1.2s
ZALV  Zalesovo Beam     48.40 318  P     P         11 34 41.3 +0.7
      comp=Z,4.0nm,0.4s,baz=96,slow=7.8,SNR=22
      comp=Z,4.0nm,0.4s
ZALV  Zalesovo Beam     48.40 318  P     P         11 34 40.6  0.0
ODAN  Odare             48.49 281 eP     P         11 34 42.2 +0.2
CTAO  Charters Tower    48.83 175  P     P         11 34 43.8 -0.4
CTAO                               IAmb  IAmb      11 34 49.4
      comp=Z,17nm,1.5s
WB0   Warramunga Arr    49.03 190  P     P         11 34 45.0 -0.9
RAMN  Ramite            49.15 282 eP     P         11 34 47.2 +0.1
      comp=Z,24nm,0.4s
WR0   Warramunga Arr    49.20 190  P     P         11 34 45.6 -1.4
WRAB  Tennant Creek     49.20 190  P     P         11 34 46.1 -1.0
WRAB  Tennant Creek     49.20 190  P     P         11 34 46.9 -0.2
WB2   Warramunga Arr    49.21 190  P     P         11 34 46.0 -1.1
WRA   Warramunga Arr    49.21 190  P     P         11 34 47.0 -0.2
      comp=Z,18nm,0.7s,baz=13,slow=8.8,SNR=65
      comp=Z,18nm,0.7s
WRA   Warramunga Arr    49.21 190  P     P         11 34 45.7 -1.5
GUN   Gumba             49.51 283 eP     P         11 34 49.8 -0.1
MK31  Makanchi Array    49.65 308  P     P         11 34 50.5 +0.1
MKAR  Makanchi Array    49.65 308  P     P         11 34 51.0 +0.6
      comp=Z,3.8nm,0.7s,baz=90,slow=9.5,SNR=34
MKAR                               PcP   PcP       11 36 12.9 +1.5
      comp=Z,0.9nm,0.5s,baz=90,slow=6.7,SNR=4.7
MKAR                               LR    LR        11 56 51.1
      comp=Z,85nm,20.4s,baz=73,slow=37
      comp=Z,3.8nm,0.7s
MKAR  Makanchi Array    49.65 308  P     P         11 34 49.9 -0.4
MAKZ  Makanchi          49.86 308  P     P         11 34 52.1 +0.1
MAKZ                               IAmb  IAmb      11 34 54.0
      comp=Z,4.4nm,0.6s
PKI   Pulchoki          50.00 283 eP     P         11 34 53.7  0.0
PKIN  Phulchoki         50.01 283 eP     P         11 34 53.5 -0.2
KKN   Kakani            50.05 283 eP     P         11 34 54.1 +0.2
DMN   Daman             50.25 283 eP     P         11 34 55.7 +0.2
      comp=Z,9.1nm,0.4s
GKN   Gorkha            50.54 284 eP     P         11 34 57.8 +0.2
GSI   Gunungsitoli      50.94 246  P     P         11 34 59.9 -0.6
GSI                                IAmb  IAmb      11 35 05.0
      comp=Z,14nm,0.9s
GSI   Gunungsitoli      50.94 246  P     P         11 35 00.0 -0.5
      comp=Z,24nm,1.3s
SEM   Semipalatinsk     50.98 313 eP     P         11 35 00.7 +0.1
      comp=Z,7.6nm,1.0s,baz=313
SEM                               i S    S         11 42 19.8 +3.8
      baz=313
SEM                               i LR   LR        11 56 57.6
      baz=313
SEM                               i LRM  MLR       11 59 15.4
      baz=313
NRIK  Noril'sk          51.12 338  P     P         11 35 01.8 +0.8
      comp=Z,6.4nm,0.8s,baz=120,slow=7.1,SNR=10
NRIK                               LR    LR        11 59 04.2
      comp=Z,102nm,18.0s,baz=148,slow=39
      comp=Z,6.4nm,0.8s
NRIK  Noril'sk          51.12 338  P     P         11 35 01.2 +0.2
NRIK                               IAmb  IAmb      11 35 15.6
      comp=Z,9.9nm,1.1s
DANN  Dangsing          51.19 284 eP     P         11 35 02.4 -0.2
KOLN  Koldanda          51.49 284 eP     P         11 35 05.2 +0.5
PYUN  Piuthan           51.91 284 eP     P         11 35 07.7 -0.2
      comp=Z,66nm,0.4s
KURK  Kurchatov         52.02 314  P     P         11 35 08.1 +0.1
KURK  Kurchatov         52.02 314  P     P         11 35 09.1 +1.0
KURK                               pP    sP        11 35 18.2 +0.9
KURK                               sP    pwP       11 35 21.4 -0.3
KURBB Kurchatov Arra    52.07 313  LR    LR        11 58 05.6
      comp=Z,83nm,19.9s,baz=56,slow=37
UZB   Uzynbulak         52.20 304 eP     P         11 35 10.1 +0.3
      baz=304
UZB                               i S    S         11 42 36.8 +3.9
      baz=304
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KPKS	Kokpek	52.41	304	eP	P	11 35 11.6	+0.3
	baz=304						
TDK	Taldyqorghan	52.45	306	eP	P	11 35 12.1	+0.6
	comp=Z,4.5nm,0.4s,baz=306						
ZHN	Zhinishke	52.62	304	eP	P	11 35 13.1	+0.2
	baz=304						
K20K	Telida	52.64	30	P	P	11 35 11.1	-1.5
K20K				IAmb	IAmb	11 35 39.3	
	comp=Z,12nm,1.2s						
SATY	Saty	52.66	304	eP	P	11 35 13.4	+0.3
	baz=304						
KDAK	Kodiak Island	52.69	38	P	P	11 35 13.6	+0.6
	comp=Z,4.7nm,0.5s,baz=321,slow=1.8,SNR=7.1						
KDAK				LR	LR	11 56 43.3	
	comp=Z,130nm,20.4s,baz=273,slow=35						
	comp=Z,4.7nm,0.5s						
KDAK	Kodiak Island	52.69	38	P	P	11 35 12.4	-0.6
PRZ	Przheval'sk	52.73	303	P	P	11 35 14.8	+1.1
AS31	Alice Springs	52.93	190	P	P	11 35 14.4	-0.7
ASAR	Alice Springs	52.94	190	P	P	11 35 14.5	-0.6
	comp=Z,1.1nm,0.6s,baz=8.1,slow=7.0,SNR=34						
	comp=Z,1.1nm,0.6s						
IMAR	Indian Mountai	53.26	27	P	P	11 35 15.4	-1.7
TARG	Taragay, Kyrgy	53.27	302	P	P	11 35 17.9	-0.1
CHKK	Chushkaly	53.59	305	eP	P	11 35 20.0	+0.2
	baz=305						
MDOK	Medeo	53.63	304	i P	P	11 35 21.3	+1.0
	baz=304						
KDJ	Kajisay	53.67	303	P	P	11 35 21.2	+0.5
AAA	Alma-Ata	53.72	304	eP	P	11 35 22.2	+1.3
	comp=Z,11nm,0.6s,baz=304						
TNSS	Tian-Shan	53.72	304	eP	P	11 35 22.2	+0.9
	baz=304						
KUU	Kurty	54.05	305	⇑iP	P	11 35 23.6	+0.4
	comp=Z,5.7nm,0.8s,baz=305						
BOOM	Boomskoye usch	54.53	303	P	P	11 35 27.0	+0.1
BOOM				IAmb	IAmb	11 35 29.4	
	comp=Z,5.7nm,0.6s						
EIDS	Eidsvold	54.57	171	P	P	11 35 27.5	+0.5
EIDS				IAmb	IAmb	11 35 37.7	
	comp=Z,14nm,1.3s						
PSA00	Pilbara Seismi	54.78	206	P	P	11 35 28.2	-0.4
PSA00				IAmb	IAmb	11 35 29.5	
	comp=Z,5.4nm,0.8s						
NEA2	Nenana	55.00	29	P	P	11 35 27.6	-2.1
NEA2				IAmb	IAmb	11 35 33.4	
	comp=Z,8.7nm,1.0s						
KSH	Kashi	55.01	300	P	P	11 35 34.6	+4.2
KSH				PcP	PcP	11 36 37.6	+5.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BTLS	Baital	55.52	307	⇑iP	P	11 35 34.2	+0.4
	comp=Z,5.0nm,0.7s,baz=307						
AAK	Ala-Archa	55.56	304	LR	LR	11 58 54.7	
	comp=Z,67nm,19.9s,baz=51,slow=36						
AAK	Ala-Archa	55.56	304	P	P	11 35 34.5	+0.1
IL31		55.95	29	P	P	11 35 34.8	-1.7
IL31				IAmb	IAmb	11 35 51.2	
	comp=Z,13nm,1.5s						
ILAR	Eielson Array	55.95	29	P	P	11 35 37.3	+0.8
	comp=Z,1.8nm,0.9s,baz=259,slow=5.7,SNR=12						
ILAR				LR	LR	11 59 10.2	
	comp=Z,34nm,19.5s,baz=258,slow=36						
	comp=Z,1.8nm,0.9s						
BRVK	Borovoye	57.05	317	P	P	11 35 46.0	+1.4
BRVK				IAmb	IAmb	11 35 52.8	
	comp=Z,7.8nm,0.8s						
BRVK	Borovoye	57.05	317	P	P	11 35 45.9	+1.4
BRVK				sP	pwP	11 35 58.5	+0.3
L26K	Log Cabin Wild	57.45	31	P	P	11 35 47.3	0.0
L26K				IAmb	IAmb	11 35 51.4	
	comp=Z,11nm,1.4s						
DZA	Taraz	57.81	305	eP	P	11 35 50.6	+0.5
	baz=305						
KK31	Karatay Array	58.36	305	P	P	11 35 54.3	+0.3
KK31				IAmb	IAmb	11 35 56.3	
	comp=Z,16nm,1.2s						
KKAR	Karatay Array	58.36	305	P	P	11 35 54.1	+0.1
IUG	Iuzhnay	58.90	304	eP	P	11 35 59.3	+1.4
	baz=304						
DAWY	Dawson	59.19	30	P	P	11 36 01.6	+2.1
DAWY				IAmb	IAmb	11 36 14.5	
	comp=Z,8.3nm,1.1s						
ARMA	Armidale	59.61	171	P	P	11 36 04.4	+1.6
EPYK	Eagle Plains	60.17	27	P	P	11 36 05.8	-0.3
EPYK				IAmb	IAmb	11 36 21.7	
	comp=Z,12nm,1.1s						
CHGR	Chuyangaron	60.37	300	P	P	11 36 08.3	+0.3
STKA	Stephens Creek	60.45	181	P	P	11 36 08.1	-0.2
	comp=Z,2.5nm,0.7s,baz=349,slow=9.7,SNR=4.3						
	comp=Z,2.5nm,0.7s						
STKA	Stephens Creek	60.45	181	P	P	11 36 07.6	-0.8
FORT	Forrest	60.95	194	P	P	11 36 11.2	-0.5
INK	Inuvik	61.23	25	P	P	11 36 14.3	+1.1
	comp=Z,5.1nm,0.9s,baz=324,slow=3.9,SNR=16						
	comp=Z,5.1nm,0.9s						
INK	Inuvik	61.23	25	P	P	11 36 12.8	-0.5
INK				IAmb	IAmb	11 36 28.0	
	comp=Z,12nm,1.0s						
AFI	Afiamalu	61.26	128	LR	LR	11 57 59.0	
	comp=Z,34nm,19.5s,baz=119,slow=31						
KBL	Kabul	61.58	296	P	P	11 36 16.7	+0.2
M31M	Drury Creek, Y	61.65	32	P	P	11 36 15.3	-0.9
M31M				IAmb	IAmb	11 36 32.0	
	comp=Z,5.0nm,0.9s						
BBOO	Buckleboo	61.69	186	P	P	11 36 15.2	-1.5
POO	Poona	63.06	277	ex	x	11 36 21.0	
ARU	Arti	63.25	322	P	P	11 36 27.0	0.0
ARU	Arti	63.25	322	P	P	11 36 27.8	+0.8
ARU				x	x	11 36 31.3	
ARU				pP	sP	11 36 37.5	+1.9
ABKAR	Akbulak array	64.13	314	P	P	11 36 33.3	+0.4
C36M	Paulatuk	64.43	23	P	P	11 36 34.5	-0.1
DLBC	Dease Lake	64.51	36	LR	LR	12 02 42.5	
	comp=Z,69nm,20.9s,baz=270,slow=34						
AKTO	Aktyubinsk	65.02	315	LR	LR	12 06 06.9	
	comp=Z,85nm,19.2s,baz=77,slow=37						
NWAO	Narrogin (SRO)	66.04	203	P	P	11 36 44.4	-1.0
TOO	Toolangi	66.18	178		P	11 36 46.6	+0.4
TOO				IAmb	IAmb	11 36 51.4	
	comp=Z,13nm,0.9s						
HRA	Herat	66.96	298	P	P	11 36 52.8	+1.1
HRA				IAmb	IAmb	11 36 54.1	
	comp=Z,11nm,1.2s						
EUNU	Eureka	68.06	8	P	P	11 36 57.5	-0.3
EUNU				IAmb	IAmb	11 37 12.0	
	comp=Z,6.3nm,1.1s						
GEYT	Alibeck	68.86	302	P	P	11 37 04.1	+0.7
	comp=Z,3.9nm,0.8s,baz=345,slow=4.6,SNR=5.1						
GEYT				LR	LR	12 09 35.8	
	comp=Z,71nm,18.6s,baz=68,slow=38						
	comp=Z,3.9nm,0.8s						
GEYT	Alibeck	68.86	302	P	P	11 37 02.8	-0.6
GEYT				IAmb	IAmb	11 37 08.6	
	comp=Z,9.7nm,1.2s						
GYA0B	ALIBECK ARRAY	68.86	302	P	P	11 37 03.4	0.0
GYA0B				IAmb	IAmb	11 37 08.5	
	comp=Z,14nm,1.2s						
YKA	Yellowknife Ar	70.37	29	P	P	11 37 13.2	+1.0
	comp=Z,2.6nm,0.8s,baz=295,slow=6.3,SNR=25						
	comp=Z,2.6nm,0.8s						
YKA	Yellowknife Ar	70.37	29	P	P	11 37 12.6	+0.3
KLMR	Klimovskoe	71.22	330	eP	P	11 37 16.7	-0.7
KLMR				AMP		11 37 19.9	
	comp=Z,13nm,1.4s						
NLWA	Neilton Lookou	71.56	46	P	P	11 37 19.2	-0.6
NLWA				IAmb	IAmb	11 37 24.7	
	comp=Z,8.9nm,1.0s						
ARCES	ARCESS Array B	71.97	341	P	P	11 37 22.7	+0.8
	comp=Z,2.5nm,0.8s,baz=71,slow=9.1,SNR=4.9						
	comp=Z,2.5nm,0.8s						
ARCES	ARCESS Array B	71.97	341	P	P	11 37 22.1	+0.3
ARCES				IAmb	IAmb	11 37 26.9	
	comp=Z,12nm,1.4s						
WSAR	Wadi Sarin	74.16	288	LR	LR	12 15 23.5	
	comp=Z,38nm,18.3s,baz=129,slow=40						
YBH	Yreka Blue Hor	74.60	51	LR	LR	12 04 34.2	
	comp=Z,93nm,21.0s,baz=284,slow=31						
RAR	Rarotonga	74.61	125	LR	LR	12 05 19.4	
	comp=Z,96nm,20.4s,baz=283,slow=32						
BKZ	Black Stump Fm	74.72	153	P	P	11 37 39.2	+0.9
BKZ				IAmb	IAmb	11 38 01.3	
	comp=Z,20nm,1.5s						
NEW	Newport	75.32	43	P	P	11 37 40.5	-1.5
NNZ	Nelson	75.35	157	P	P	11 37 41.4	-0.5
FIA1	FINESS Array S	76.50	334	P	P	11 37 49.3	+1.0
FIA1				IAmb	IAmb	11 37 57.5	
	comp=Z,14nm,1.4s						
FINES	FINESS Array B	76.50	334	P	P	11 37 49.0	+0.7
	comp=Z,1.2nm,0.5s,baz=63,slow=5.5,SNR=27						
	comp=Z,1.2nm,0.5s						
KBZ	Khabaz	77.07	313	P	P	11 37 53.5	+1.7
	comp=Z,5.4nm,0.9s,baz=80,slow=3.9,SNR=14						
	comp=Z,5.4nm,0.9s						
KIV	Kislovodsk	77.10	313	P	P	11 37 53.6	+1.4
KIV				IAmb	IAmb	11 37 59.3	
	comp=Z,7.9nm,0.9s						
ONI	Oni	77.23	312	P	P	11 37 51.7	-1.3
ONI				IAmb	IAmb	11 38 00.8	
	comp=Z,17nm,1.5s						
JTMT	Jette	77.24	42	P	P	11 37 51.9	-1.1
JTMT				IAmb	IAmb	11 38 08.0	
	comp=Z,6.6nm,1.1s						
NVAR	Mina Array Bea	79.10	52	P	P	11 38 05.6	+2.0
	comp=Z,2.3nm,1.0s,baz=272,slow=5.1,SNR=8.1						
NVAR				LR	LR	12 07 27.4	
	comp=Z,90nm,20.5s,baz=348,slow=31						
	comp=Z,2.3nm,1.0s						
BOZ	Bozeman (W)	79.90	43	P	P	11 38 08.4	+0.7
ELK	Elko	80.06	49	LR	LR	12 11 15.6	
	comp=Z,73nm,18.9s,baz=293,slow=34						
NACGM	Naroch	80.11	328	eP	P	11 38 09.3	+0.9
PABE	Paberze	81.02	330	P	P	11 38 11.3	-2.0
GWY	Greenwater Val	81.32	54	P	P	11 38 13.0	-2.5
AKASG	Malin Array Be	81.40	324	P	P	11 38 15.9	+0.5
	comp=Z,1.5nm,0.4s,baz=49,slow=5.3,SNR=12						
	comp=Z,1.5nm,0.4s						
AKASG	Malin Array Be	81.40	324	P	P	11 38 15.2	-0.2
AKBB	Malin Array Si	81.40	324	P	P	11 38 15.5	+0.1
NC405	NORSAR Array S	81.86	338	P	P	11 38 18.1	+0.4
NC204	NORSAR Array S	82.05	339	P	P	11 38 19.3	+0.6
NC204				IAmb	IAmb	11 38 34.6	
	comp=Z,19nm,1.1s						
NB2	NORSAR Subarra	82.08	338	P	P	11 38 19.2	+0.3
	comp=Z,2.3nm,0.6s,baz=42,slow=5.3						
NOA	NORSAR Array B	82.08	338	P	P	11 38 19.2	+0.3
	comp=Z,1.6nm,0.5s,baz=42,slow=5.0,SNR=9.0						
	comp=Z,1.6nm,0.5s						
PDAR	Pinedale Array	82.66	45	P	P	11 38 23.6	+1.0
	comp=Z,1.0nm,0.9s,baz=289,slow=4.5,SNR=5.4						
PDAR				LR	LR	12 09 54.2	
	comp=Z,44nm,21.8s,baz=305,slow=32						
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	82.66	45	P	P	11 38 22.8	+0.2
SOCY	Socotra	83.04	280	P	P	11 38 19.4	-5.3
BNN	Bunyan	84.10	311	P	P	11 38 30.5	+0.6
BR131	Keskin Array S	85.06	313	P	P	11 38 35.5	+0.8
BR131				IAmb	IAmb	11 38 36.8	
	comp=Z,7.8nm,0.9s						
BRTR	Keskin Array B	85.06	313	P	P	11 38 36.2	+1.5
	comp=Z,2.8nm,0.8s,baz=110,slow=3.4,SNR=19						
	comp=Z,2.8nm,0.8s						
BRTR	Keskin Array B	85.06	313	P	P	11 38 35.9	+1.2
BURAR	Bucovina Array	85.36	323	P	P	11 38 36.0	0.0
PV11	David Mesa, Pa	85.53	48	P	P	11 38 35.2	-2.0
PV13	Radium Mtn., P	85.65	49		P	11 38 38.6	+0.8
PV13				IAmb	IAmb	11 38 41.1	
	comp=Z,10nm,1.4s						
ULM	Lac du Bonnet	85.72	33	LR	LR	12 15 08.5	
	comp=Z,31nm,21.9s,baz=324,slow=34						
ANMO	Albuquerque	89.02	50	LR	LR	12 15 43.2	
	comp=Z,48nm,20.6s,baz=108,slow=34						
GERES	GERESS Array B	90.17	329	P	P	11 39 00.6	+1.5
	comp=Z,0.3nm,0.4s,baz=126,slow=20,SNR=3.5						
	comp=Z,0.3nm,0.4s						
LPIG	La Paz	92.28	61	LR	LR	12 14 36.6	
	comp=Z,29nm,18.6s,baz=208,slow=32						
TXAR	Lajitas Array	94.21	53	P	P	11 39 20.1	+1.9
	comp=Z,0.6nm,0.6s,baz=301,slow=2.4,SNR=8.8						
TXAR				LR	LR	12 18 52.2	
	comp=Z,37nm,19.3s,baz=307,slow=34						
	comp=Z,0.6nm,0.6s						
TXAR	Lajitas Array	94.21	53	P	P	11 39 19.5	+1.4
LPAZ	La Paz	149.05	73	PKPbc	PKiKP	11 45 49.4	0.0
	comp=Z,2.4nm,0.8s,baz=201,slow=8.5,SNR=6.4						
PLCA	Paso Flores	150.49	122	PKPbc	PKiKP	11 45 52.9	+1.8
	comp=Z,1.1nm,0.8s,baz=32,slow=16,SNR=2.4						

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*IDC **01** 11:27:08.0±12.0, 24°.25N×125°.53E, h0^{km}, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=333.4km s-min=61.8km az=178.0*

*JMA **01** 11:27:29.6±0.2, 26°N±2°×12°6E±°, h106^{km}±4^{km}, MV3.9/23, NW OFF MIYAKOJIMA ISLAND*

*NIED **01** 11:27:29.6, 25°.88N×125°.53E, h106^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.16; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$1.87; $M_{r\theta}$2.71; $M_{\theta\phi}$-7.86; $M_{\phi r}$4.36; Fault plane solution: $M_0$9.47000×10^{14} NP1: ϕ_s279.00000°, δ62.00000°, λ-166.00000°. NP2: ϕ_s182.00000°, δ78.00000°, λ-29.00000°.*

ISC 01 11:27:29.6±0.8**, 25°.9N**±0°.1×**125°.55E**±0°.07**, h105**^{km}±11^{km}**,**
n26, σ0ˢ.92/46**, mb3.7**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.99	196	i P	Pn	11 27 50.8	+0.5
JIKM				S	Sn	11 28 05.9	-0.1
JIRB	Irabujima	1.10	198	P	Pn	11 27 51.7	+0.1
JIRB				S	Sn	11 28 07.3	-0.8
JOGS	Gusukube	1.13	187	i P	Pn	11 27 52.4	+0.6
JOGS				S	Sn	11 28 08.6	0.0
JMJ2	Miyako jima3	1.16	190	P	Pn	11 27 52.6	+0.5
JMJ2				S	Sn	11 28 08.9	-0.1
JKE	Kume jima 2	1.20	68	i P	Pn	11 27 53.4	+0.8
JKE				eS	Sn	11 28 10.4	+0.4
JTJ	Tarama	1.46	212	P	Pn	11 27 56.0	+0.4
JTJ				S	Sn	11 28 14.4	-0.8
JAGN	Aguni-jima	1.68	65	i P	Pn	11 27 59.1	+0.8
JAGN				S	Sn	11 28 20.5	+0.4
JISG	Ishigakijimahi	1.71	221	i P	Pn	11 27 59.0	+0.3
JISG				S	Sn	11 28 19.8	-1.1
JIJ	Ishigaki jima	1.98	220	i P	Pn	11 28 01.9	-0.2
JIJ				S	Sn	11 28 24.5	-2.4
JJT3	Tamagusuku3	2.03	82	i P	Pn	11 28 03.5	+0.8
JJT3				S	Sn	11 28 28.1	-0.1
JKRS	Kuro-shima	2.15	221	P	Pn	11 28 04.3	0.0
JKRS				S	Sn	11 28 29.7	-1.2
IRIF	Iriomote-Funau	2.26	227	i P	Pn	11 28 05.7	0.0
IRIF				S	Sn	11 28 32.8	-0.6
JNTH	Nagotoyohara	2.31	74	i P	Pn	11 28 06.7	+0.3
JNTH				S	Sn	11 28 33.2	-1.4
HATJ	Hateruma jima	2.41	221	P	Pn	11 28 07.5	-0.2
HATJ				S	Sn	11 28 35.8	-1.1
JIH	Iheya	2.45	62	i P	Pn	11 28 08.8	+0.5
JIH				S	Sn	11 28 37.4	-0.5
JOW	Kunigami	2.62	68	P	Pn	11 28 10.4	-0.1
JOW				S	Sn	11 28 40.5	-1.4
YOJ	Yonaguni jima	2.70	239	P	Pn	11 28 12.3	+0.8
YOJ				eS	Sn	11 28 44.5	+0.8
JYNG	Yonagunijimaku	2.75	239	P	Pn	11 28 13.1	+0.9
JYNG				eS	Sn	11 28 45.3	+0.3
JYRO	Yoronjima	2.84	66	P	Pn	11 28 13.2	-0.1
JYRO				eS	Sn	11 28 45.0	-2.0
JOKE	Okinoerabujima	3.08	61	P	Pn	11 28 16.3	-0.3
JOKE				eS	Sn	11 28 50.8	-2.0
XAN	Xi'an	16.53	303	P	Pn	11 31 13.4	-1.8
XAN				pP	P	11 31 18.1	+2.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ILAR	Eielson Array	65.88	28	P	P	11 38 03.6	-0.1
	comp=Z,0.2nm,0.4s,baz=262,slow=4.6,SNR=8.7						
	comp=Z,0.2nm,0.4s						
ARCES	ARCESS Array B	69.44	338	P	P	11 38 26.4	+0.4
	comp=Z,1.9nm,0.8s,baz=74,slow=8.9,SNR=1.6						
	comp=Z,1.9nm,0.8s						
INK	Inuvik	70.15	23	P	P	11 38 31.8	+1.4
	comp=Z,4.5nm,0.9s,baz=293,slow=7.4,SNR=5.4						
	comp=Z,4.5nm,0.9s						
NOA	NORSAR Array B	78.54	333	P	P	11 39 19.0	-0.3
	comp=Z,0.7nm,0.6s,baz=57,slow=5.4,SNR=4.2						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	79.84	24	P	P	11 39 27.0	+0.8
	comp=Z,0.5nm,0.4s,baz=302,slow=5.2,SNR=18						
	comp=Z,0.5nm,0.4s						

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*JMA **01** 12:09:21.4±0.1, 24°.0N±0°.4×121°.6E±0°.6, h22^{km}, MV3.0/10, TAIWAN REGION*

*TAP **01** 12:09:23.3, 24°.23N×121°.74E, h10^{km}, ML3.6, C*

ISC 01 12:09:22.4±0.8**, 24°.25N**±0°.02×**121°.83E**±0°.02**, h13**^{km}±5^{km}**,**
n118, σ1ˢ.28/170**, 8C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	310	⇓iP	Pg	12 09 26.0	+0.6
	baz=4.0						
EHP				i S	Sg	12 09 27.9	+0.4
	baz=4.0						
ENA	Nanau	0.20	337	⇓iP	Pb	12 09 27.8	-0.2
	baz=1.0						
ENA				i S	Sb	12 09 30.6	-1.0
	baz=1.0						
EWUT	Wuta	0.20	348	⇓iP	Pb	12 09 28.1	+0.1
	baz=8.0						
EWUT				i S	Sb	12 09 31.3	-0.5
	baz=8.0						
ETL	Fush Village	0.20	245	⇓iP	Pg	12 09 26.7	-0.2
	baz=228						
ETL				i S	Sg	12 09 29.2	-0.8
	baz=228						
NACB	Ninganchiao	0.22	251	⇓iP	Pg	12 09 26.9	-0.3
	baz=239						
NACB				i S	Sg	12 09 29.6	-0.9
	baz=239						
TWD	Chiawan	0.27	232	⇓iP	Pg	12 09 27.7	-0.3
	baz=221						
TWD				i S	Sg	12 09 30.7	-1.0
	baz=221						
ETLH	Xiulin Townshi	0.32	263	⇓iP	Pg	12 09 28.6	-0.3
	baz=265						
ETLH				S	Sg	12 09 32.0	-1.2
	baz=265						
HWA	Hwalien	0.34	217	eP	Pg	12 09 29.9	+0.7
	baz=214						
HWA				eS	Sg	12 09 35.1	+1.4
	baz=214						
TWC	Suao	0.36	3	⇑iP	Pb	12 09 31.3	+0.5
	baz=8.0						
TWC				S	Sb	12 09 36.2	-0.2
	baz=8.0						
LATG	Datong	0.40	317	⇓iP	Pb	12 09 31.1	-0.4
	baz=327						
LATG				i S	Sg	12 09 35.4	-0.3
	baz=327						
NDS	Dongshan	0.40	346	⇓iP	Pb	12 09 31.7	+0.3
	baz=356						
NDS				S	Sb	12 09 36.7	-0.8
	baz=356						
NNSB	Datong	0.44	294	⇓iP	Pg	12 09 31.6	+0.3
	baz=301						
NNSB				i S	Sg	12 09 36.7	-0.4
	baz=301						
NNS	Nan Shan	0.46	295	⇓iP	Pg	12 09 31.7	+0.3
	baz=302						
NNS				S	Sg	12 09 37.2	-0.4
	baz=302						
ENTT	Nioudou	0.46	329	⇓iP	Pb	12 09 32.5	+0.1
	baz=339						
ENTT				eS	Sb	12 09 38.4	-0.8
	baz=339						
TWE	Neicheng	0.49	343	⇑iP	Pb	12 09 33.5	+0.5
	baz=353						
TWE				i S	Sb	12 09 40.1	-0.1
	baz=353						
WHF	Hehuan Shan	0.52	259	⇓iP	Pg	12 09 32.4	-0.3
	baz=259						
WHF				i S	Sg	12 09 38.4	-1.4
	baz=259						
ILA	Ilan	0.52	352	eP	Pn	12 09 34.2	-1.4
	baz=1.0						
ILA				eS	Sn	12 09 41.6	-2.8
	baz=1.0						
FUSB	Fushanzhiwuyua	0.56	337	⇑iP	Pb	12 09 34.5	+0.4
	baz=345						
FUSB				i S	Sb	12 09 41.3	-0.7
	baz=345						
ESL	Shilin	0.56	220	⇓iP	Pg	12 09 32.9	-0.5
	baz=223						
ESL				eS	Sg	12 09 40.4	-0.4
	baz=223						
YHNB	Yeheng	0.59	316	⇑iP	Pb	12 09 34.8	+0.1
	baz=322						
YHNB				S	Sg	12 09 42.1	+0.3
	baz=322						
NSK	Sanguang	0.60	315	⇑iP	Pb	12 09 35.0	+0.1
	baz=322						
NSK				S	Sg	12 09 42.7	+0.4
	baz=322						
EGS		0.60	9	eP	Pn	12 09 35.9	-0.9
	baz=26						
NWLT	Wulai	0.60	331	⇑iP	Pb	12 09 35.5	+0.6
	baz=338						
NWLT				i S	Sb	12 09 42.8	-0.7
	baz=338						
NTC	Toucheng	0.61	0	⇑P	Pn	12 09 35.6	-1.1
	baz=7.0						
TDCB	Techi	0.61	271	⇓iP	Pg	12 09 34.5	+0.1
	baz=273						
TDCB				i S	Sg	12 09 41.3	-1.2
	baz=273						
CHGB	Renai	0.62	253	⇓iP	Pg	12 09 34.5	-0.1
	baz=245						
CHGB				i S	Sg	12 09 41.3	-1.6
	baz=245						
OWD	Renai	0.66	244	⇓iP	Pg	12 09 34.9	-0.4
	baz=242						
OWD				eS	Sg	12 09 42.2	-1.9
	baz=242						
EGFH	Guangfu	0.68	212	eP	Pg	12 09 35.7	+0.1
	baz=215						
EGFH				eS	Sg	12 09 44.2	-0.3
	baz=215						
WUSB	Renai	0.69	249	⇓iP	Pg	12 09 35.8	-0.2
	baz=240						
WUSB				i S	Sg	12 09 43.6	-1.5
	baz=240						
TIPB	Shuangxi	0.72	0	⇑iP	Pn	12 09 37.9	-0.6
	baz=6.0						
TIPB				eS	Sn	12 09 47.1	-2.3
	baz=6.0						
NFF	Wufeng Townshi	0.75	301	P	Pg	12 09 37.5	+0.5
	baz=305						
NFF				eS	Sg	12 09 46.8	-0.1
	baz=305						
TWA	Mucha	0.76	343	P	Pn	12 09 38.7	-0.3
	baz=339						
NHDH	Xindian Distri	0.77	339	eP	Pn	12 09 38.7	-0.2
	baz=345						
NHDH				eS	Sb	12 09 47.6	-0.3
	baz=345						
TWB1	Santiao Chiao	0.77	11	eP	Pn	12 09 39.0	-0.1
	baz=9.0						
VWDT	VWDT	0.79	232	P	Pg	12 09 37.3	-0.5
	baz=230						
VWDT				eS	Sg	12 09 46.0	-2.2
	baz=230						
WHP	Taichung City	0.80	272	P	Pg	12 09 38.3	+0.3
	baz=274						
WHP				S	Sg	12 09 48.0	-0.6
	baz=274						
NWF	Wu-fen Shan	0.82	357	eP	Pn	12 09 40.2	+0.4
	baz=353						
NWF				eS	Sn	12 09 50.4	-1.6
	baz=353						
HGSD	Ruisui	0.83	206	eP	Pg	12 09 39.3	+0.7
	baz=219						
LIOB	Emei	0.84	299	eP	Pb	12 09 39.8	+0.9
	baz=302						
LIOB				eS	Sg	12 09 48.5	-1.1
	baz=302						
TAP	Taipei	0.84	340	eP	Pn	12 09 40.6	+0.5
	baz=345						
TAP				eS	Sn	12 09 51.5	-0.8
	baz=345						
NSTT	Nanjuang	0.84	297	P	Pb	12 09 39.5	+0.5
	baz=301						
NSTT				S	Sg	12 09 49.6	-0.2
	baz=301						
SXI1	Grass Mountain	0.85	3	P	Pn	12 09 40.5	+0.3
	baz=352						
WCS	Beigang Elemen	0.85	258	eP	Pg	12 09 38.9	0.0
	baz=258						
WCS				eS	Sg	12 09 47.3	-2.9
	baz=258						
EHY	Hungye	0.87	212	eP	Pg	12 09 38.4	-0.8
	baz=208						
SSLB	Suanglung	0.92	240	⇓iP	Pb	12 09 39.5	-0.7
	baz=239						

SSLB				S	**Sg**	**12 09 49.8**	**-2.4**
	baz=239						
SMLT	**Sun Moon Lake**	**0.92**	**247**	P	**Pg**	**12 09 39.8**	**-0.4**
	baz=237						
SMLT				*e*S	**Sg**	**12 09 50.5**	**-1.8**
	baz=237						
NCU	**National Centr**	**0.93**	**321**	P	**Pn**	**12 09 42.0**	**+0.8**
	baz=320						
NCUH	**Zhongli**	**0.93**	**321**	*e*P	**Pn**	**12 09 41.9**	**+0.7**
	baz=320						
YM01	**YM01**	**0.93**	**346**	P	**Pn**	**12 09 41.8**	**+0.6**
	baz=350						
TWS1	**Kuangyinshan**	**0.93**	**337**	*e*P	**Pn**	**12 09 42.2**	**+0.9**
	baz=341						
SBCB	**Hsinchu**	**0.94**	**306**	*e*P	**Pn**	**12 09 41.8**	**+0.5**
	baz=309						
TYC	**Yuchr**	**0.95**	**249**	P	**Pb**	**12 09 40.3**	**-0.5**
	baz=239						
TYC				*e*S	**Sb**	**12 09 51.0**	**-2.2**
	baz=239						
HSN	**Hsinchu**	**0.96**	**306**	*e*P	**Pn**	**12 09 42.7**	**+1.1**
	baz=301						
TWQ1	**Liyutan**	**0.96**	**276**	*e*P	**Pn**	**12 09 42.4**	**+0.7**
	baz=278						
TWQ1				*e*S	**Sg**	**12 09 54.1**	**+0.4**
	baz=278						
ANP	**Anpu**	**0.98**	**344**	P	**Pn**	**12 09 42.8**	**+0.8**
	baz=348						
NTST	**Danshui**	**0.98**	**340**	*e*P	**Pn**	**12 09 42.7**	**+0.8**
	baz=344						
YULB	**Yu-li**	**0.98**	**210**	*e*P	**Pb**	**12 09 40.7**	**-0.5**
	baz=219						
NSY	**Sanyi**	**0.98**	**280**	*e*P	**Pn**	**12 09 42.6**	**+0.6**
	baz=282						
NMLH	**Miaoli**	**0.99**	**287**	*e*P	**Pn**	**12 09 43.4**	**+1.4**
	baz=290						
EYUL	**Yuli**	**1.01**	**207**	*e*P	**Pb**	**12 09 43.1**	**+1.3**
	baz=219						
JYNG	**Yonagunijimaku**	**1.04**	**78**	P	**Pn**	**12 09 44.9**	**+2.1**
JYNG				S	**Sn**	**12 10 01.5**	**+4.3**
TWY	**Chenhua**	**1.05**	**349**	*e*P	**Pn**	**12 09 44.4**	**+1.5**
	baz=353						
TCU	**Taichung**	**1.05**	**265**	*e*P	**Pn**	**12 09 44.8**	**+1.8**
	baz=266						
WDJ	**Dajia District**	**1.09**	**276**	P	**Pg**	**12 09 44.8**	**+1.5**
	baz=277						
WJS	**Zhushan**	**1.09**	**247**	*e*P	**Pb**	**12 09 43.8**	**+0.7**
	baz=242						
WJS				*e*S	**Sb**	**12 09 56.6**	**-0.6**
	baz=242						
YUS	**Yu-Shan**	**1.10**	**227**	P	**Pb**	**12 09 43.4**	**-0.2**
	baz=225						
YUS				*e*S	**Sb**	**12 09 56.5**	**-1.5**
	baz=225						
YOJ	**Yonaguni jima**	**1.10**	**79**	P	**Pn**	**12 09 45.4**	**+1.8**
	baz=68						
YOJ	**Yonaguni jima**	**1.10**	**79**	P	**Pn**	**12 09 45.9**	**+2.2**
YOJ				S	**Sn**	**12 10 03.2**	**+4.4**
WNT	**Mingjian**	**1.10**	**251**	P	**Pb**	**12 09 44.6**	**+1.1**
	baz=246						
WNT				*e*S	**Sb**	**12 09 58.9**	**+1.1**
	baz=246						
FULB	**Fuli**	**1.15**	**205**	*e*P	**Pn**	**12 09 44.2**	**-0.1**
	baz=217						
WCHH	**Zhanghua**	**1.17**	**262**	*e*P	**Pb**	**12 09 45.8**	**+1.3**
	baz=262						
WCHH				*e*S	**Sg**	**12 10 02.7**	**+2.6**
	baz=262						
ALS	**Alishan**	**1.19**	**232**	*e*P	**Pn**	**12 09 44.9**	**-0.2**
	baz=231						
CHKT	**Chengkung**	**1.22**	**200**	*e*P	**Pn**	**12 09 44.9**	**-0.2**
	baz=183						
CHN5	**Tsauling**	**1.23**	**239**	P	**Pn**	**12 09 46.4**	**+0.9**
	baz=238						
CHN5				S	**Sb**	**12 10 03.3**	**+1.8**
	baz=238						
ELDTW	**Lidau**	**1.29**	**215**	*e*P	**Pn**	**12 09 44.9**	**-1.3**
	baz=214						
WDLH	**Douliu**	**1.30**	**245**	*e*P	**Pn**	**12 09 47.6**	**+1.3**
	baz=245						
EDH	**Donghe**	**1.35**	**201**	*e*P	**Pn**	**12 09 46.0**	**-1.1**
	baz=185						
WRL	**Guolierlin Hig**	**1.37**	**256**	*e*P	**Pn**	**12 09 48.3**	**+1.0**
	baz=256						
CHN2	**Minshiung**	**1.43**	**240**	*e*P	**Pb**	**12 09 49.9**	**+1.0**
	baz=240						
WTK	**Tuku**	**1.43**	**247**	*e*P	**Pn**	**12 09 48.7**	**+0.7**
	baz=233						
CHN4	**Tsaushan**	**1.44**	**232**	*e*P	**Pn**	**12 09 49.7**	**+1.5**
	baz=232						
STYH	**Taoyuan**	**1.44**	**222**	*e*P	**Pn**	**12 09 48.2**	**-0.1**
	baz=222						
TPUB	**Ta-pu**	**1.44**	**230**	*e*P	**Pn**	**12 09 49.8**	**+1.5**
	baz=229						
LONT	**Longtian**	**1.48**	**206**	*e*P	**Pn**	**12 09 47.6**	**-1.2**
	baz=205						
CHY	**Chiayi**	**1.48**	**240**	*e*P	**Pn**	**12 09 50.5**	**+1.6**
	baz=240						
WTP	**Ta-pu**	**1.49**	**228**	*e*P	**Pn**	**12 09 50.3**	**+1.3**
	baz=228						
TWK	**Hsinying**	**1.56**	**232**	*e*P	**Pn**	**12 09 51.9**	**+1.8**
	baz=232						
TWGBT	**Beinan**	**1.58**	**206**	*e*P	**Pn**	**12 09 47.3**	**-2.8**
	baz=189						
TWG	**Pinlang**	**1.58**	**206**	*e*P	**Pn**	**12 09 48.8**	**-1.4**
	baz=189						
WSF	**Szhu**	**1.59**	**248**	*e*P	**Pn**	**12 09 51.7**	**+1.4**
	baz=248						
CHN1	**Nanshi**	**1.59**	**229**	*e*P	**Pn**	**12 09 52.4**	**+2.1**
	baz=229						
SGST	**Jiashian**	**1.62**	**225**	*e*P	**Pn**	**12 09 52.0**	**+1.1**
	baz=215						
WSL	**Shuilin Townsh**	**1.63**	**244**	*e*P	**Pn**	**12 09 52.7**	**+1.8**
	baz=244						
ICHU	**Yijhu**	**1.67**	**238**	*e*P	**Pn**	**12 09 53.3**	**+2.0**
	baz=239						
IRIF	**Iriomote-Funau**	**1.74**	**87**	P	**Pb**	**12 09 54.3**	**+0.1**
IRIF				*e*S	**Sg**	**12 10 18.9**	**+0.5**
SHHT	**Tainan City**	**1.82**	**228**	*e*P	**Pb**	**12 09 56.7**	**+1.1**
	baz=230						
SCST	**Cishan**	**1.82**	**222**	*e*P	**Pn**	**12 09 55.9**	**+2.4**
	baz=224						
ECL	**Taimali**	**1.83**	**206**	*e*P	**Pn**	**12 09 55.9**	**+2.3**
	baz=191						
SSD	**Sandimen**	**1.85**	**217**	*e*P	**Pn**	**12 09 55.7**	**+1.8**
	baz=217						
TSMG	**Majia**	**1.88**	**215**	*e*P	**Pn**	**12 09 56.2**	**+1.9**
	baz=228						
TWM1	**Shoushan**	**1.91**	**223**	*e*P	**Pb**	**12 09 58.7**	**+1.4**
	baz=222						
MASBT	**Mashibuluo**	**1.96**	**214**	*e*P	**Pn**	**12 09 56.2**	**+0.8**
	baz=204						
JKRS	**Kuro-shima**	**1.99**	**90**	P	**Pb**	**12 09 58.5**	**-0.1**
JKRS				*e*S	**Sg**	**12 10 25.8**	**-0.7**
EAST	**Anshuo**	**2.06**	**206**	*e*P	**Pn**	**12 09 57.4**	**+0.6**
	baz=193						
SSPT	**Xinbi**	**2.10**	**214**	*e*P	**Pn**	**12 09 59.2**	**+1.9**
	baz=207						
JIJ	**Ishigaki jima**	**2.12**	**86**	P	**Pb**	**12 09 59.6**	**-1.1**
JIJ				*e*S	**Sg**	**12 10 28.6**	**-1.9**
PNG	**Penghu**	**2.19**	**252**	*e*P	**Pn**	**12 10 00.4**	**+1.9**
	baz=253						
PHUB	**P'eng-hu**	**2.19**	**251**	*e*P	**Pn**	**12 09 59.4**	**+0.9**
	baz=252						
WDGT	**Dungji**	**2.21**	**244**	*e*P	**Pn**	**12 10 00.1**	**+1.3**
	baz=245						
SLIU	**Shizi**	**2.23**	**205**	*e*P	**Pn**	**12 09 59.5**	**+0.4**
	baz=194						
LYUB	**Lan-yu**	**2.24**	**186**	*e*P	**Pn**	**12 09 56.5**	**-2.9**
	baz=186						
VWUC	**VWUC**	**2.29**	**289**	*e*P	**Pn**	**12 09 59.8**	**-0.1**
	baz=277						
JISG	**Ishigakijimahi**	**2.29**	**81**	*e*P	**Pb**	**12 10 01.8**	**-1.9**
JISG				*e*S	**Sb**	**12 10 32.0**	**+0.1**
VCHM	**Qimei**	**2.43**	**245**	*e*P	**Pn**	**12 10 02.7**	**+0.9**
	baz=232						
JTJ	**Tarama**	**2.65**	**81**	P	**Pb**	**12 10 07.8**	**-2.0**
KNM	**Kinmen**	**3.10**	**274**	*e*P	**Pn**	**12 10 13.3**	**+2.3**
	baz=273						
KNMB	**Chin-men Tao**	**3.14**	**275**	*e*P	**Pn**	**12 10 11.5**	**-0.2**
	baz=275						
AXDP	**Jialang**	**3.57**	**281**	*e*P	**Pn**	**12 10 17.9**	**+0.3**
	baz=281						

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*IDC **01** 12:10:25.9±3.6,46°.86N×152°.30E,h70^{km}±29^{km},mb3.3/11, mbtmp3.6/13,Error ellipse: s-maj=59.9km s-min=18.5km az=162.0*

ISC 01 12:10:25.7±1.7**,46°.8N**±0°.3×**152°.3E**±0°.2**,h67**^{km}**,n22,** σ**0^s.86**/13**,mb3.5**/11**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.17**	**27**	P	**Pn**	**12 12 08.7**	**+0.9**
	2.4nm,0.9s,baz=201,slow=28,SNR=2.3						
ASAJ	**Asahikawa**	**7.34**	**252**	P	**Pn**	**12 12 10.6**	**+0.5**
	2.1nm,0.4s,baz=159,slow=15,SNR=1.3						
H11N2	**WAKE ISLAND Hy**	**29.57**	**151**	T	T	12 47 43.2	
	baz=340,slow=76,SNR=52						
H11N1	**WAKE ISLAND Hy**	**29.58**	**151**	T	T	12 47 43.6	
	baz=340,slow=76,SNR=35						
H11N3	**WAKE ISLAND Hy**	**29.59**	**151**	T	T	12 47 43.2	
	baz=340,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**30.65**	**152**	T	T	12 49 04.5	
	baz=340,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**30.66**	**152**	T	T	12 48 58.3	
	baz=340,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**30.67**	**152**	T	T	12 49 05.9	
	baz=340,slow=76,SNR=19						
SONM	**Songino Array**	**30.77**	**289**	P	**P**	**12 16 33.8**	**-0.8**
	0.3nm,0.3s,baz=24,slow=44,SNR=5.1						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**36.83**	**39**	P	**P**	**12 17 25.1**	**-1.7**
	0.3nm,0.7s,baz=294,slow=28,SNR=4.2						
	0.3nm,0.7s						
INK	**Inuvik**	**41.87**	**32**	P	**P**	**12 18 08.3**	**-0.4**
	1.2nm,0.8s,baz=280,slow=6.1,SNR=2.0						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**46.39**	**297**	P	**P**	**12 18 45.4**	**+0.2**
	0.1nm,0.5s,baz=65,slow=8.1,SNR=2.2						
	0.1nm,0.5s						
YKA	**Yellowknife Ar**	**51.19**	**37**	P	**P**	**12 19 20.9**	**-0.6**
	0.2nm,0.4s,baz=298,slow=6.9,SNR=11						
	0.2nm,0.4s						
ARCES	**ARCESS Array B**	**57.58**	**341**	P	**P**	**12 20 08.5**	**+0.6**
	0.8nm,0.8s,baz=55,slow=7.8,SNR=1.0						
	0.8nm,0.8s						
FINES	**FINESS Array B**	**63.71**	**334**	P	**P**	**12 20 49.8**	**+0.2**
	0.8nm,0.5s,baz=34,slow=7.1,SNR=13						
	0.8nm,0.5s						
PDAR	**Pinedale Array**	**65.15**	**53**	P	**P**	**12 21 00.9**	**+1.2**
	0.5nm,0.9s,baz=316,slow=10,SNR=2.5						
	0.5nm,0.9s						
AKASG	**Malin Array Be**	**71.15**	**326**	P	**P**	**12 21 36.8**	**0.0**
	0.5nm,0.3s,baz=34,slow=6.7,SNR=6.2						
	0.5nm,0.3s						
BRTR	**Keskin Array B**	**77.93**	**316**	P	**P**	**12 22 16.1**	**-0.3**
	0.4nm,0.7s,baz=223,slow=2.7,SNR=3.6						
	0.4nm,0.7s						
GERES	**GERESS Array B**	**78.12**	**333**	P	**P**	**12 22 17.1**	**-0.2**
	0.4nm,0.5s,baz=46,slow=3.9,SNR=3.6						
	0.4nm,0.5s						
H03N2	**Juan Fernandez**	**139.32**	**90**	T	T	15 05 00.8	
H03N1	**Juan Fernandez**	**139.33**	**90**	T	T	15 05 00.9	
	baz=309,slow=74,SNR=3.3						
H03N3	**Juan Fernandez**	**139.33**	**90**	T	T	15 05 08.4	
	baz=80,slow=74,SNR=3.4						

TRN 01 12:22:24.3,18°.11N×61°.61W,h30^{km},MD4.0,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.47**	**200**	*e*P	Pn	12 22 35.5	+0.4
ANWB				*e*S	Sn	12 22 44.7	+2.3
ANDO	**Antigua, Disas**	**1.02**	**192**	*e*P	Pb	12 22 43.3	0.0
ANDO				*e*S	Sb	12 22 57.5	+1.2
ANBD	**Bethesda, Anti**	**1.07**	**188**	*e*P	Pb	12 22 43.9	-0.3
ANBD				*e*S	Sb	12 23 00.4	+2.5
BPA	**Boggy Peak**	**1.09**	**192**	*e*P	Pb	12 22 44.1	-0.5
BPA				*e*S	Sb	12 23 00.4	+2.0
SKOC	**St. Kitts, UWI**	**1.34**	**233**	*e*P	Pb	12 22 48.9	+0.1
SMRT	**St. Maarten**	**1.39**	**268**	*e*P	Pb	12 22 49.9	+0.2
SEUS	**St. Eustatius**	**1.44**	**245**	*e*P	Pn	12 22 49.3	+0.9
MBFL	**Flemmings, Mon**	**1.47**	**203**	*e*P	Pb	12 22 50.9	-0.1
MLYT	**Lee's Yard**	**1.49**	**202**	*e*P	Pb	12 22 51.4	0.0
ABD	**La Joyeuse, An**	**1.64**	**176**	*e*P	Pb	12 22 52.6	-1.2
ABD				*e*S	Sb	12 23 12.9	-1.1
CBE	**Ff, Capester**	**2.03**	**180**	*e*P	Pb	12 22 58.6	-2.0
MAGL	**Barre de l'ile**	**2.18**	**172**	*e*P	Pb	12 23 00.8	-2.2
TBG	**Guadaloupe-3**	**2.25**	**181**	*e*P	Pn	12 23 01.5	+1.9
TDBA	**Terre de Bas,**	**2.25**	**181**	*e*P	Pn	12 23 01.7	+2.1
TDBA				*e*S	Sb	12 23 29.1	-2.6
DSLB	**Salisbury**	**2.67**	**176**	*e*P	Pn	12 23 07.4	+2.1
CDVI	**St. Croix**	**3.02**	**264**	*e*P	Pn	12 23 12.8	+2.7
PCM	**Pelee Case Pet**	**3.30**	**173**	*e*P	Pn	12 23 17.9	+3.8
BIM	**Bigot**	**3.62**	**172**	*e*P	Pn	12 23 20.4	+2.1
MPOM	**Morne Pois Mar**	**3.72**	**169**	*e*P	Pn	12 23 21.4	+1.6
SLBI	**Saint Lucia, B**	**4.11**	**171**	*e*P	Pn	12 23 25.9	+0.8
SJG	**San Juan**	**4.31**	**271**	*e*P	Pn	12 23 30.1	+2.2
AOPR	**Arecibo Observ**	**4.89**	**274**	*e*P	Pn	12 23 37.6	+1.7
AOPR	**Arecibo Observ**	**4.89**	**274**	*e*S	Sn	12 24 31.8	+0.2

IDC 01 13:01:59.5±7.9**,38°.10S×178°.45W,h182**^{km}±44^{km}**,** **mb2.9**/3**,mbtmp3.4**/4**,Error ellipse: s-maj=95.6km s-min=27.1km az=50.0,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.50**	**266**	P	Pn	13 02 56.1	+1.8
	4.2nm,0.6s,baz=249,slow=3.6,SNR=8.7						
URZ				S	Sn	13 03 36.3	-0.9
	4.3nm,0.7s,baz=135,slow=22,SNR=1.7						
VNDA	**Vanda**	**40.42**	**186**	P	P	13 09 18.7	-0.7
	0.3nm,0.3s,baz=8.9,slow=14,SNR=6.2						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**42.89**	**275**	P	P	13 09 41.2	+1.0
	0.2nm,0.4s,baz=119,slow=7.9,SNR=8.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.56**	**280**	P	P	13 09 52.5	-1.0
	0.3nm,0.5s,baz=118,slow=7.8,SNR=7.5						
	0.3nm,0.5s						

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*IDC **01** 13:04:38.5±2.3,23°.87S×179°.31E,h537^{km}±21^{km},mb3.1/4, mbtmp4.2/6,Error ellipse: s-maj=37.6km s-min=21.2km az=124.0*

*NEIC **01** 13:04:39.1±1.1,23°.78S±0°.05×179°.3E±0°.1,h544^{km}±9^{km}, mb4.3/26,Error ellipse: s-maj=18.6km s-min=5.7km az=78.0*

ISC 01 13:04:37.9±0.7**,23°.86S**±0°.08×**179°.4E**±0°.1**,h537**^{km}**,n47,** σ**0^s.91**/47**,mb4.1**/17**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.22**	**348**	P	**P**	**13 06 18.7**	**+0.6**
	5.5nm,0.4s,baz=244,slow=22,SNR=13						
PINNC	**Pines Island,**	**11.02**	**274**	P	**P**	**13 07 06.8**	**+0.5**
ONTNC	**Ouen Toro**	**11.97**	**275**	P	**P**	**13 07 16.6**	**+0.4**
AFI	**Afiamalu**	**12.97**	**42**	P	**P**	**13 07 25.9**	**-0.9**
MXZ	**Matakaoa Point**	**13.69**	**184**	P	**P**	**13 07 36.0**	**+2.3**
URZ	**Urewera**	**14.48**	**187**	P	**P**	**13 07 42.4**	**+0.4**
	12nm,0.6s,baz=306,slow=23,SNR=11						
URZ				S	**S**	**13 10 12.5**	**-1.3**
	3.5nm,0.8s,baz=117,slow=21,SNR=1.9						
URZ	**Urewera**	**14.48**	**187**	P	**P**	**13 07 41.3**	**-0.7**
BFZ	**Birch Farm**	**16.97**	**188**	P	**P**	**13 08 06.9**	**+0.1**
QRZ	**Quartz Range**	**17.86**	**197**	P	**P**	**13 08 17.5**	**+2.5**
QRZ				IAmb	IAmb	13 08 19.4	
	comp=Z,17nm,0.9s						
NNZ	**Nelson**	**18.01**	**195**	P	**P**	**13 08 17.9**	**+1.5**
THZ	**Tophouse**	**18.64**	**195**	P	**P**	**13 08 23.7**	**+1.5**
WHZ	**Wether Hill Ro**	**23.84**	**200**	P	**P**	**13 09 09.7**	**+0.8**
WHZ				IAmb	IAmb	13 09 35.0	
	comp=Z,22nm,1.2s						
EIDS	**Eidsvold**	**25.73**	**261**	P	**P**	**13 09 23.7**	**-2.2**
EIDS				IAmb	IAmb	13 09 40.8	
	comp=Z,12nm,1.4s						
CAN	**Canberra**	**28.65**	**240**	P	**P**	**13 09 53.1**	**+1.7**
CTAO	**Charters Tower**	**30.88**	**270**	P	**P**	**13 10 11.5**	**+0.6**
CTAO				IAmb	IAmb	13 10 35.9	
	comp=Z,11nm,1.4s						
PMG	**Port Moresby**	**33.92**	**290**	P	**P**	**13 10 36.3**	**-0.4**
STKA	**Stephens Creek**	**34.19**	**248**	P	**P**	**13 10 39.2**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=315,slow=8.6,SNR=2.9						
	comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**34.19**	**248**	IAmb	IAmb	13 10 41.5	
	comp=Z,1.7nm,1.2s						
COEN	**Coen**	**35.52**	**279**	P	**P**	**13 10 50.8**	**+0.7**
COEN				IAmb	IAmb	13 10 58.8	
	comp=Z,12nm,1.2s						
AS17	**Alice Springs**	**41.38**	**261**	P	**P**	**13 11 37.8**	**+0.2**
AS18	**Alice Springs**	**41.38**	**261**	P	**P**	**13 11 37.7**	**+0.1**
AS31	**Alice Springs**	**41.45**	**261**	P	**P**	**13 11 38.1**	**0.0**
ASAR	**Alice Springs**	**41.45**	**261**	P	**P**	**13 11 38.4**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=90,slow=7.1,SNR=21						
ASAR				PcP	**PcP**	**13 13 23.6**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=104,slow=3.2,SNR=4.1						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**41.45**	**261**	P	**P**	**13 11 38.1**	**0.0**
WR0	**Warramunga Arr**	**41.63**	**266**	P	**P**	**13 11 38.9**	**-0.6**
WR8	**Warramunga Arr**	**41.67**	**266**	P	**P**	**13 11 39.3**	**-0.6**
WR8				IAmb	IAmb	13 11 45.3	
	comp=Z,8.3nm,1.4s						
WR4	**Warramunga Arr**	**41.75**	**266**	P	**P**	**13 11 40.0**	**-0.6**
WB1	**Warramunga Ar.**	**41.81**	**266**	P	**P**	**13 11 40.5**	**-0.5**
WB2	**Warramunga Arr**	**41.81**	**266**	P	**P**	**13 11 40.4**	**-0.5**
WB2				IAmb	IAmb	13 11 47.8	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**41.81**	**266**	P	**P**	**13 11 40.5**	**-0.5**
WRAB				IAmb	IAmb	13 11 45.1	
	comp=Z,8.9nm,1.4s						
WRA	**Warramunga Arr**	**41.82**	**266**	P	**P**	**13 11 40.6**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=90,slow=5.8,SNR=110						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**41.82**	**266**	IAmb	IAmb	13 11 41.2	
	comp=Z,0.2nm,0.8s						
MTN	**Manton Dam**	**46.86**	**275**	P	**P**	**13 12 19.1**	**-0.9**
MTN				IAmb	IAmb	13 12 29.6	
	comp=Z,14nm,1.3s						
KNRA	**Kununurra**	**48.09**	**270**	P	**P**	**13 12 29.1**	**-0.1**
KNRA				IAmb	IAmb	13 12 50.2	
	comp=Z,8.7nm,1.2s						
NWAO	**Narrogin (SRO)**	**54.71**	**246**	P	**P**	**13 13 15.6**	**-1.3**
NWAO				IAmb	IAmb	13 13 28.9	
	comp=Z,9.5nm,1.1s						
MBWA	**Marble Bar**	**54.79**	**260**	P	**P**	**13 13 16.4**	**-1.3**
MBWA				IAmb	IAmb	13 13 17.7	
	comp=Z,11nm,1.4s						
JSU	**Suzuyama**	**72.25**	**317**	P	**P**	**13 15 09.1**	**+0.1**
JSU				IAmb	IAmb	13 15 23.5	
	comp=Z,12nm,1.3s						
ADK	**Adak**	**75.50**	**3**	P	**P**	**13 15 26.7**	**-0.1**
PETK	**Petropavlovsk-**	**78.93**	**347**	P	**P**	**13 15 45.8**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=123,slow=5.5,SNR=5.4						
	comp=Z,2.6nm,0.9s						
M19K	**Big River Lodg**	**88.03**	**12**	P	**P**	**13 16 31.0**	**+0.4**
M19K				IAmb	IAmb	13 16 59.4	
	comp=Z,5.4nm,1.3s						
CM18	**Chiang Mai Arr**	**88.92**	**291**	P	**P**	**13 16 36.1**	**+0.4**
ARCES	**ARCESS Array B**	**131.73**	**348**	PKP	**PKPdf**	**13 22 49.8**	**+0.6**
	comp=Z,1.5nm,1.0s,baz=54,slow=2.1,SNR=5.8						
ARCES	**ARCESS Array B**	**131.73**	**348**		**PKPdf**	**13 22 49.1**	**0.0**
FINES	**FINESS Array B**	**138.22**	**341**	PKhKP	PKPpre	13 22 54.3	
	comp=Z,1.4nm,0.9s,baz=56,slow=3.4,SNR=4.2						
FINES				PKP	**PKPdf**	**13 23 01.3**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=42,slow=27,SNR=4.7						
FINES	**FINESS Array B**	**138.22**	**341**	PKPdf	**PKPdf**	**13 23 01.4**	**0.0**
AKASG	**Malin Array Be**	**144.62**	**327**	PKP	**PKPdf**	**13 23 12.9**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=39,slow=4.5,SNR=6.7						
BRTR	**Keskin Array B**	**147.08**	**307**	PKPbc	**PKPbc**	**13 23 21.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=117,slow=4.3,SNR=4.4						

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*IDC **01** 13:06:10.6±1.1,36°.51N×98°.71W,h0^{km},mb3.3/1, mbtmp3.3/5,ML3.6/4,MS3.0/1,Error ellipse: s-maj=14.8km s-min=13.7km az=152.0*

*NEIC **01** 13:06:11.7±1.0,36°.47N±0°.03×98°.73W±0°.04,h10^{km}±5^{km}, Error ellipse: s-maj=5.6km s-min=2.2km az=46.0*

*TUL **01** 13:06:11.5±1.1,36°.47N±0°.04×98°.75W±0°.05,h8^{km}±5^{km}, ML3.7,mb_Lg3.5/101(NEIC),Error ellipse: s-maj=6.1km s-min=5.4km az=129.0*

*ANF **01** 13:06:12.0±0.4,36°.46N×98°.78W,h8^{km},ML4.2/14,Error ellipse: s-maj=4.5km s-min=3.8km az=165.0*

ISC 01 13:06:11.7±0.6**,36°.48N**±0°.03×**98°.65W**±0°.03**,h10**^{km}**,n138,** σ**1^s.39**/126**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.30**	**250**	Pg	**Pg**	**13 06 16.3**	**-1.3**
U32A				Sg	**Sg**	**13 06 20.0**	**-1.6**
U32A	**Winter Ranch,**	**0.30**	**250**	P	**Pg**	**13 06 16.3**	**-1.3**
	baz=66,SNR=429						
U32A				S	**Sg**	**13 06 20.0**	**-1.6**
	baz=66						
OKCFA	**Oklahoma City**	**1.44**	**137**	Pn	**Pg**	**13 06 38.5**	**-0.9**
OKCFA	**Oklahoma City**	**1.44**	**137**	P	**Pg**	**13 06 38.6**	**-0.7**
	baz=315,SNR=19						
OKCFA				S	**Sg**	**13 06 58.7**	**+0.6**
	baz=315						
OKCSW	**OKLAHOMA CITY**	**1.46**	**137**	Pn	**Pg**	**13 06 38.8**	**-0.8**
FNO	**Franklin**	**1.59**	**140**		**Pg**	**13 06 41.0**	**-1.1**
WMOK	**Wichita Mounta**	**1.74**	**183**		**Pb**	**13 06 41.9**	**-1.8**
WMOK	**Wichita Mounta**	**1.74**	**183**	P	**Pn**	**13 06 41.6**	**-0.4**
	baz=0.8,SNR=170						
WMOK	**Wichita Mounta**	**1.74**	**183**	P	**Pn**	**13 06 41.6**	**-0.4**
	baz=0.8						
T35A	**Sooner Cattle**	**1.78**	**75**	Pn	**Pb**	**13 06 43.9**	**-0.4**
T35B	**Sooner Cattle**	**1.78**	**75**	P	**Pb**	**13 06 43.9**	**-0.4**
	baz=257,SNR=146						
T35B				S	**Sg**	**13 07 09.5**	**+0.7**
	baz=257						
R32A	**Long Quarter,**	**1.94**	**359**	Pn	**Pb**	**13 06 46.0**	**-1.1**
R32A	**Long Quarter,**	**1.94**	**359**	P	**Pb**	**13 06 45.8**	**-1.4**
	baz=181,SNR=136						
R32A				S	**Sg**	**13 07 12.7**	**-1.3**
	baz=181						
X34A	**Smith Ranch, M**	**1.99**	**160**	Pn	**Pb**	**13 06 47.2**	**-0.8**
X34A				IAmb_Lg		13 07 20.7	
	comp=Z,261nm,0.8s						
TUL1	**Leonard**	**2.38**	**103**	Pn	**Pn**	**13 06 51.4**	**+0.6**
TUL1				IAmb_Lg		13 07 27.6	
	comp=Z,134nm,0.8s						
TUL1	**Leonard**	**2.38**	**103**	P	**Pn**	**13 06 52.0**	**+1.2**
	baz=284,SNR=163						
TUL1				S	**Sg**	**13 07 26.4**	**-1.9**
	baz=284						
TUL1	**Leonard**	**2.38**	**103**	P	**Pn**	**13 06 52.0**	**+1.2**
	baz=284						
TUL1				S	**Sg**	**13 07 26.4**	**-1.9**
	baz=284						
CBKS	**Cedar Bluff**	**2.48**	**340**	Pn	**Pn**	**13 06 52.4**	**+0.2**
CBKS				IAmb_Lg		13 07 31.4	
	comp=Z,164nm,0.9s						
CBKS	**Cedar Bluff**	**2.48**	**340**	S	**Sb**	**13 07 27.5**	**+0.4**
	baz=161						
AMTX	**Amarillo**	**2.93**	**238**	Pn	**Pn**	**13 06 56.4**	**-2.0**
AMTX				IAmb_Lg		13 07 42.8	
	comp=Z,235nm,0.8s						
AMTX	**Amarillo**	**2.93**	**238**	Sb	**Sb**	**13 07 40.3**	**+0.3**
	baz=56						
KSU1	**Kansas State U**	**3.08**	**31**		**Pn**	**13 07 00.6**	**+0.2**
KSU1				IAmb_Lg		13 07 51.7	
	comp=Z,118nm,1.1s						
KSU1	**Kansas State U**	**3.08**	**31**	P	**Pn**	**13 07 02.3**	**+2.0**
	baz=213,SNR=22						
KSU1	**Kansas State U**	**3.08**	**31**	P	**Pn**	**13 07 02.4**	**+2.0**
	baz=213						
KSU1				Sb	**Sg**	**13 07 47.7**	**-2.8**
	baz=213						
X37A	**Clayton**	**3.27**	**124**	Pn	**Pn**	**13 07 04.0**	**+1.0**
X37A				IAmb_Lg		13 08 04.2	
	comp=Z,138nm,0.8s						
X37A	**Clayton**	**3.27**	**124**	P	**Pn**	**13 07 04.2**	**+1.2**
	baz=305,SNR=33						
Z35A	**Perchaven, San**	**3.35**	**159**	Pn	**Pn**	**13 07 05.1**	**+1.1**
Z35A	**Perchaven, San**	**3.35**	**159**	P	**Pn**	**13 07 05.3**	**+1.3**
	baz=339,SNR=20						
HHAR	**Hobbs**	**3.81**	**92**		**Pn**	**13 07 11.1**	**+0.7**
HHAR				IAmb_Lg		13 08 16.6	
	comp=Z,73nm,0.7s						
ABTX	**Abilene, Hawle**	**3.93**	**192**	Pn	**Pn**	**13 07 11.6**	**-0.5**
KSCO	**Kaye Shedlock'**	**4.04**	**310**	IAmb_Lg		13 08 26.7	
	comp=Z,102nm,0.8s						
W39A	**Magazine**	**4.16**	**107**	Pn	**Pn**	**13 07 16.1**	**+0.9**
W39A				IAmb_Lg		13 08 32.5	
	comp=Z,111nm,0.8s						
W39A	**Magazine**	**4.16**	**107**	P	**Pn**	**13 07 16.3**	**+1.1**
	baz=289,SNR=19						
W39A				Sb	**Sg**	**13 08 23.3**	**-1.9**
	baz=289						
W39A	**Magazine**	**4.16**	**107**	P	**Pn**	**13 07 16.3**	**+1.1**
	baz=289						
MSTX	**Muleshoe**	**4.20**	**235**	IAmb_Lg		13 08 26.9	
	comp=Z,96nm,0.8s						
N33B	**J Bar K, Exete**	**4.35**	**12**	S	**Sn**	**13 08 09.2**	**+0.5**

	baz=194						
N33A	J Bar K, Exete	4.36	12	Pn	Pn	13 07 17.6	-0.3
N33A				IAmb_Lg		13 08 38.9	
	comp=Z,122nm,1.0s						
Z38A	Mt. Pleasant	4.41	136	IAmb_Lg		13 08 33.7	
	comp=Z,118nm,0.8s						
Z38A	Mt. Pleasant	4.41	136	Sb	Sg	13 08 30.9	-2.2
	baz=317						
S39A	Bolivar	4.43	73	Pn	Pn	13 07 19.5	+0.6
S39A				IAmb_Lg		13 08 39.2	
	comp=Z,90nm,0.8s						
S39A	Bolivar	4.43	73	P	Pn	13 07 20.1	+1.1
	baz=256,SNR=14						
MIAR	Mount Ida	4.57	113		Pn	13 07 21.7	+0.9
MIAR				IAmb_Lg		13 08 49.8	
	comp=Z,71nm,0.7s						
MIAR	Mount Ida	4.57	113	P	Pn	13 07 22.4	+1.5
	baz=296,SNR=20						
MIAR	Mount Ida	4.57	113	P	Pn	13 07 22.3	+1.5
	baz=296						
WHTX	Lake Whitney,	4.59	167	Pn	Pn	13 07 21.1	+0.1
T25A	Trinidad	4.67	280		Pn	13 07 21.3	-1.1
T25A				IAmb_Lg		13 08 35.8	
	comp=Z,66nm,0.8s						
T25A	Trinidad	4.67	280	P	Pn	13 07 22.0	-0.4
	baz=97						
U40A	Yellville	4.68	90	Pn	Pn	13 07 22.8	+0.4
U40A				IAmb_Lg		13 08 49.1	
	comp=Z,132nm,1.0s						
BGNE	Belgrade	4.94	4	Pn	Pn	13 07 25.8	-0.1
BGNE				IAmb_Lg		13 08 56.2	
	comp=Z,75nm,0.9s						
N35A	Tabor	4.97	27	Pn	Pn	13 07 27.7	+1.4
237A	Washetta, Mont	5.05	151	IAmb_Lg		13 09 01.1	
	comp=Z,80nm,0.8s						
P38A	Dawn	5.12	51	Pn	Pn	13 07 29.2	+0.9
P38A				IAmb_Lg		13 09 07.3	
	comp=Z,76nm,0.9s						
P38A	Dawn	5.12	51	P	Pn	13 07 30.0	+1.6
	baz=234,SNR=13						
X40A	Basin Creek Fa	5.15	111	Pn	Pn	13 07 29.6	+0.8
X40A				IAmb_Lg		13 09 02.1	
	comp=Z,71nm,0.7s						
MGMO	Mountain Grove	5.17	81	Pn	Pn	13 07 30.1	+1.0
MGMO				IAmb_Lg		13 08 58.1	
	comp=Z,69nm,0.8s						
OGNE	Ogallala	5.18	330	Pn	Pn	13 07 28.1	-1.2
OGNE				IAmb_Lg		13 09 05.2	
	comp=Z,94nm,0.8s						
WHAR	Wooly Hollow	5.30	101	Pn	Pn	13 07 31.6	+0.7
WHAR				IAmb_Lg		13 09 06.3	
	comp=Z,83nm,0.9s						
FCAR	Ozark Folk Cen	5.32	94	Pn	Pn	13 07 31.4	+0.4
FCAR				IAmb_Lg		13 09 10.0	
	comp=Z,62nm,0.8s						
WLAR	White Oak Lake	5.33	120	Pn	Pn	13 07 32.3	+1.0
WLAR				IAmb_Lg		13 09 06.0	
	comp=Z,96nm,1.1s						
W41B	Gary Mavity, V	5.37	102	Pn	Pn	13 07 32.1	+0.3
W41B				IAmb_Lg		13 09 05.9	
	comp=Z,55nm,0.8s						
R40A	Maddies Statio	5.40	69	Pn	Pn	13 07 32.6	+0.4
UALR	University of	5.41	106	Pn	Pn	13 07 33.2	+0.8
UALR				IAmb_Lg		13 09 14.7	
	comp=Z,55nm,0.8s						
Q24A	Divide	5.71	298	Pn	Pn	13 07 35.4	-1.4
Q24A				IAmb_Lg		13 09 12.3	
	comp=Z,60nm,0.8s						
435B	Jarrell	5.75	171	Pn	Pn	13 07 36.9	-0.2
435B				IAmb_Lg		13 09 25.7	
	comp=Z,54nm,0.8s						
NATX	Nacogdoches	5.76	144	IAmb_Lg		13 09 28.5	
	comp=Z,82nm,0.9s						
L34A	Svendsen Farm,	5.76	17	Pn	Pn	13 07 37.0	-0.2
Z41A	Richland Creek	5.79	122	IAmb_Lg		13 09 29.7	
	comp=Z,70nm,0.7s						
P40A	Paris	6.04	58	Pn	Pn	13 07 41.5	+0.5
N38A	Joes South For	6.04	43	Pn	Pn	13 07 41.5	+0.4
JCT	Junction City	6.06	189	IAmb_Lg		13 09 36.7	
	comp=Z,52nm,0.7s						
LCAR	Lake Charles	6.07	92	Pn	Pn	13 07 42.3	+0.8
CCM	Cathedral Cave	6.12	73	Pn	Pn	13 07 42.7	+0.7
K31A	O'Neill	6.14	359	Pn	Pn	13 07 42.9	+0.5
K31A				IAmb_Lg		13 09 31.0	
	comp=Z,81nm,0.9s						
CCAR	Cane Creek	6.19	112	IAmb_Lg		13 09 46.4	
	comp=Z,47nm,0.8s						
ISCO	Idaho Springs	6.41	303	Pn	Pn	13 07 46.0	-0.4
ANMO	Albuquerque	6.53	259	Pn	Pn	13 07 48.5	+0.5
	comp=Z,0.2nm,0.3s,baz=87,slow=11,SNR=3.8						
ANMO				Pg	Pb	13 08 07.7	+2.2
	comp=Z,1.2nm,0.3s,baz=68,slow=16,SNR=9.1						
ANMO				Lg	Lg	13 09 31.5	
	comp=Z,2.1nm,0.3s,baz=343,slow=22,SNR=3.3						
	comp=Z,1.0nm,0.5s						
ANMO	Albuquerque	6.53	259	Pn	Pn	13 07 47.2	-0.7
PBMO	Poplar Bluff	6.62	85	Pn	Pn	13 07 49.9	+0.9
FVM	French Village	6.73	75	Pn	Pn	13 07 51.5	+0.9
FVM				IAmb_Lg		13 09 56.8	
	comp=Z,75nm,0.8s						
HKT	Hockley	6.93	159	Pn	Pn	13 07 52.3	-0.8
GNAR	Gosnell	7.00	92	IAmb_Lg		13 10 00.2	
	comp=Z,76nm,0.8s						
Y22D	IRIS PASSCAL I	7.17	253	IAmb_Lg		13 10 17.2	
	comp=Z,69nm,0.8s						
N23A	Red Feather La	7.21	310	Pn	Pn	13 07 55.9	-1.4
PVMO	Portageville	7.22	88	IAmb_Lg		13 10 08.0	
	comp=Z,71nm,0.8s						
MNTX	Cornudas Mount	7.34	231	IAmb_Lg		13 10 11.3	
	comp=Z,37nm,0.9s						
LNXT	Lenox	7.41	90	IAmb_Lg		13 10 11.5	
	comp=Z,73nm,0.7s						
ECSD	EROS Data Cent	7.41	12	Pn	Pn	13 07 58.9	-1.0
N41A	Harden Midland	7.42	53	Pn	Pn	13 08 00.7	+0.7
HICK	Hickman	7.59	87	Pn	Pn	13 08 03.3	+1.0
S44A	Carbondale	7.61	78	Pn	Pn	13 08 03.7	+1.2
SIUC	Southern Illin	7.64	78	Pn	Pn	13 08 03.5	+0.5
OXF	Oxford	7.79	102	Pn	Pn	13 08 05.7	+0.7
W45A	Hickory Valley	7.80	97	IAmb_Lg		13 10 24.7	
	comp=Z,54nm,0.8s						
P43A	Skaggs, Pawnee	7.87	64	Pn	Pn	13 08 07.1	+1.0
UTMT	University of	7.89	88	IAmb_Lg		13 10 38.8	
	comp=Z,54nm,0.8s						
Y45A	Yeager Farm, C	7.90	107	IAmb_Lg		13 10 46.4	
	comp=Z,32nm,0.8s						
SUSD	Miller	7.96	358	IAmb_Lg		13 10 34.4	
	comp=Z,40nm,0.8s						
L40A	Anamosa	8.02	44	Pn	Pn	13 08 08.4	+0.3
TX31	Lajitas Ar. Si	8.28	212	Pn	Pn	13 08 11.1	-0.8
TX32	Lajitas Array	8.28	212	Pn	Pn	13 08 11.2	-0.7
TXAR	Lajitas Array	8.28	212	Pn	Pn	13 08 10.9	-0.9
	comp=Z,0.5nm,0.3s,baz=40,slow=12,SNR=30						
TXAR				Pg	Pb	13 08 41.3	+6.1
	comp=Z,1.1nm,0.3s,baz=34,slow=13,SNR=16						
TXAR				Lg	Lg	13 10 25.0	
	comp=Z,0.9nm,0.3s,baz=218,slow=36,SNR=2.3						
	comp=Z,0.7nm,0.3s						
TXAR	Lajitas Array	8.28	212	Pn	Pn	13 08 11.2	-0.6
HDIL	Hopedale	8.39	58	Pn	Pn	13 08 13.9	+0.7
RWWY	Rawlins	8.44	311	IAmb_Lg		13 10 49.5	
	comp=Z,32nm,0.9s						
I37A	Lemond, Waseca	8.53	26	IAmb_Lg		13 10 48.6	
	comp=Z,40nm,0.9s						
K22A	Casper	8.65	318	IAmb_Lg		13 10 51.3	
	comp=Z,54nm,0.9s						
RSSD	Black Hills	8.67	333	Pn	Pn	13 08 17.8	+0.5
RSSD				IAmb_Lg		13 10 59.1	
	comp=Z,44nm,1.0s						
PLAL	Pickwick Lake	8.73	97	Pn	Pn	13 08 19.3	+1.3
WVT	Waverly	8.75	89	Pn	Pn	13 08 17.7	-0.5
O44A	Mansfield	8.80	62	Pn	Pn	13 08 19.6	+0.6
JFWS	Jewell Farm	9.12	43	Pn	Pn	13 08 24.1	+0.8
JFWS				IAmb_Lg		13 11 08.8	
	comp=Z,49nm,0.7s						
T47A	Sharon Grove	9.29	83	Pn	Pn	13 08 26.0	+0.5
M44A	Midewin, Midew	9.61	56	Pn	Pn	13 08 29.3	-0.7
I40A	Norwalk	9.62	37	IAmb_Lg		13 11 23.0	
	comp=Z,45nm,1.0s						
SPMN	Marine on St.	9.79	25	Pn	Pn	13 08 33.9	+1.4
BLO	Bloomington	9.97	71	Pn	Pn	13 08 35.7	+0.8
F36A	Milaca	10.14	21	Pn	Pn	13 08 37.1	-0.1
PDAR	Pinedale Array	10.49	310	Pn	Pn	13 08 41.6	-0.7
	comp=Z,0.1nm,0.3s,baz=106,slow=16,SNR=2.2						
PDAR				Lg	Lg	13 11 37.7	
	comp=Z,0.9nm,0.3s,baz=119,slow=31,SNR=7.7						
	comp=Z,0.1nm,0.3s						
I42A	Draeger Farm,	10.50	42	Pn	Pn	13 08 42.1	0.0
G40A	Rib Lake	10.86	33	Pn	Pn	13 08 47.7	+0.6
CPCT	Cooper Cave	11.50	91	Pn	Pn	13 08 56.6	+0.7
V51A	Loudon	11.59	89	Pn	Pn	13 08 57.9	+0.8
TKL	Tuckaleechee C	12.07	89	Pn	Pn	13 09 03.2	-0.6
	comp=Z,0.3nm,0.3s,baz=240,slow=11,SNR=4.4						
TKL				Lg	Lg	13 12 24.7	
	comp=Z,0.3nm,0.3s,baz=168,slow=16,SNR=2.3						
	comp=Z,1.3nm,0.5s						
TKL	Tuckaleechee C	12.07	89	Pn	Pn	13 09 03.3	-0.5
S51A	Beattyville	12.09	80	Pn	Pn	13 09 04.0	+0.1
N49A	Columbus Grove	12.14	64	Pn	Pn	13 09 03.4	-1.2
L48A	N Adams	12.30	59	Pn	Pn	13 09 06.4	-0.5
Q51A	Peebles	12.38	74	Pn	Pn	13 09 07.5	-0.5
EYMN	Ely	12.62	23	Pn	Pn	13 09 10.3	-0.8
CMIG	Matias Romero	19.60	169	LR	LR	13 21 40.7	
	comp=Z,38nm,18.4s,baz=116,slow=47						
YKA	Yellowknife Ar	27.86	344	P	P	13 12 03.1	+1.9
	comp=Z,0.4nm,0.9s,baz=146,slow=9.6,SNR=4.7						
	comp=Z,0.4nm,0.9s						
VNA3	Neumayer Olymp	123.75	157	PKPdf	PKiKP	13 25 11.3	+2.5
VNA3				SKS	SKSdf	13 32 21.2	+1.2
VNA1	Neumayer--Stat	124.05	156	PKPdf	PKiKP	13 25 10.2	+0.9
VNA1	Neumayer--Stat	124.05	156	PP	PP	13 26 55.7	+1.7
VNA1	Neumayer--Stat	124.05	156	Pdiff	Pdif	13 21 52.6	+10
VNA2	Neumayer--Watz	124.39	157	PKPdf	PKiKP	13 25 12.6	+2.5
SNAA	Sanae	125.97	157	PKPdf	PKiKP	13 25 14.1	+0.8
TROLL	Troll, Antarti	127.68	157	PKPdf	PKiKP	13 25 18.2	+1.4

NEIC ***01*** *13:21:45.1±1.1, 19°.22N±0°.09×145°.7E±0°.2, h117^{km}±4^{km}, mb4.3/25, Error ellipse: s-maj=23.9km s-min=12.6km az=86.0*

IDC ***01*** *13:21:46.1±3.0, 19°.21N×145°.73E, h130^{km}±29^{km}, mb3.4/11, mbtmp3.8/12, Error ellipse: s-maj=27.3km s-min=16.1km az=95.0*

ISC 01 13:21:47.8±0.6, **19°.14N**±0°.07×**145°.6E**±0°.2, **h150^{km}, n52, σ0^{s}.75**/48, **mb4.0**/24, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.56	187	P	Pn	13 23 08.3	-0.5
	16nm,0.3s,baz=105,slow=2.7,SNR=7.3						
GUMO				S	Sn	13 24 11.4	-0.6
	18nm,0.4s,baz=346,slow=22,SNR=1.7						
GUMO	Guam	5.56	187		Pn	13 23 07.8	-1.0
MJB2	Matsu-Sugadair	18.49	341	Pn	Pn	13 25 53.3	-1.1
H11S3	WAKE ISLAND Hy	19.96	88	T	T	13 46 57.3	
	baz=275,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	19.97	88	T	T	13 46 55.3	
	baz=275,slow=74,SNR=9.8						
H11S2	WAKE ISLAND Hy	19.98	88	T	T	13 46 55.9	
	baz=275,slow=74,SNR=11						
YSS	Yuzh-Sakhalins	27.84	356	P	P	13 27 21.8	-1.3
KLR	Kul'dur	32.03	343	P	P	13 28 01.1	+1.0
	1.3nm,0.5s,baz=191,slow=6.7,SNR=5.7						
	1.3nm,0.5s						
MTN	Manton Dam	34.83	205	P	P	13 28 25.1	+0.5
KNRA	Kununurra	38.36	207	P	P	13 28 55.5	+1.0
KNRA				IAmb	IAmb	13 29 05.8	
	comp=Z,8.0nm,1.3s						
WB0	Warramunga Arr	40.20	196	P	P	13 29 10.4	+0.7
WB0				IAmb	IAmb	13 29 21.1	
	comp=Z,5.7nm,1.4s						
WB9	Warramunga Arr	40.22	196	P	P	13 29 10.8	+0.9
WB9				IAmb	IAmb	13 29 13.0	
	comp=Z,9.3nm,1.4s						
WRAB	Tennant Creek	40.37	196	P	P	13 29 12.0	+0.9
WRA	Warramunga Arr	40.38	196	P	P	13 29 12.0	+0.8
	comp=Z,0.5nm,0.3s,baz=8.8,slow=8.2,SNR=28						
	comp=Z,0.5nm,0.3s						
WRA	Warramunga Arr	40.38	196	IAmb	IAmb	13 29 15.7	
	comp=Z,0.3nm,1.5s						
SONM	Songino Array	42.75	321	P	P	13 29 32.7	+2.2
	comp=Z,0.2nm,0.4s,baz=340,slow=23,SNR=1.9						
	comp=Z,0.2nm,0.4s						
AS16	Alice Springs	44.02	195	P	P	13 29 42.1	+1.4
AS14	Alice Springs	44.03	196	P	P	13 29 41.9	+1.1
ASAR	Alice Springs	44.05	196	P	P	13 29 42.5	+1.6
	comp=Z,0.3nm,0.5s,baz=21,slow=12,SNR=12						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	58.10	314	P	P	13 31 24.5	-1.1
	comp=Z,0.7nm,0.7s,baz=94,slow=12,SNR=6.4						
	comp=Z,0.7nm,0.7s						
H21K	Melozitna Rive	61.12	25	P	P	13 31 46.3	+0.4
H21K				IAmb	IAmb	13 32 14.9	
	comp=Z,6.6nm,1.4s						
BPAW	Bear Paw Mtn.	61.40	27	P	P	13 31 47.0	-0.9
BPAW				IAmb	IAmb	13 31 49.7	
	comp=Z,7.5nm,1.4s						
TRF	Thorofare Moun	61.53	27	P	P	13 31 48.2	-0.7
I23K	Minto, Yukon-K	62.35	26	P	P	13 31 54.7	+0.6
I23K				IAmb	IAmb	13 32 04.8	
	comp=Z,3.6nm,1.3s						
SCM	Sheep Creek Mo	62.50	30	P	P	13 31 55.1	-0.2
H24K	Noodor Dome	63.12	25	P	P	13 31 59.4	+0.1
H24K				IAmb	IAmb	13 32 22.9	
	comp=Z,4.9nm,1.5s						
TOLK	Toolik Lake Re	63.22	22	P	P	13 32 00.7	+0.8
TOLK				IAmb	IAmb	13 32 29.5	
	comp=Z,4.4nm,1.5s						
ILAR	Eielson Array	63.29	26	P	P	13 31 58.7	-1.6
	comp=Z,0.3nm,0.5s,baz=254,slow=6.1,SNR=5.7						
	comp=Z,0.3nm,0.5s						
RIDG	Independent Ri	63.97	28	P	P	13 32 04.8	-0.1
RIDG				IAmb	IAmb	13 32 16.1	
	comp=Z,8.4nm,1.3s						
DOT	Dot Lake	64.30	28	P	P	13 32 06.4	-0.6
DOT				IAmb	IAmb	13 32 31.5	
	comp=Z,8.2nm,1.4s						
BM05	Burnt Mountain	64.75	24	P	P	13 32 10.9	+1.0
BCAR	Beaver Creek A	65.24	29	P	P	13 32 13.1	0.0
INK	Inuvik	69.00	23	P	P	13 32 36.4	-0.3
	comp=Z,1.3nm,1.0s,baz=252,slow=3.2,SNR=1.6						
	comp=Z,1.3nm,1.0s						
INK	Inuvik	69.00	23	P	P	13 32 36.4	-0.3
C36M	Paulatuk	72.37	22	P	P	13 32 57.0	0.0
ABKAR	Akbulak array	72.97	317	P	P	13 33 01.6	+0.6
EUNU	Eureka	77.31	8	P	P	13 33 26.0	+0.7
EUNU				IAmb	IAmb	13 33 45.6	
	comp=Z,12nm,1.5s						
YKAR1	New YK Array r	77.49	28	P	P	13 33 26.7	+0.2
YKA	Yellowknife Ar	77.64	28	P	P	13 33 27.4	0.0
	comp=Z,0.6nm,0.5s,baz=286,slow=5.6,SNR=15						
	comp=Z,0.6nm,0.5s						
YKAB3	New Yellowknif	77.66	28	P	P	13 33 27.6	+0.1
RES	Resolute Bay	79.02	14	P	P	13 33 35.0	+0.3
K05A	Summer Lake	79.76	48	P	P	13 33 39.1	-0.5
K05A				IAmb	IAmb	13 34 02.6	
	comp=Z,5.5nm,1.3s						
ARCES	ARCESS Array B	82.05	342	P	P	13 33 51.3	+0.3
ARCES				IAmb	IAmb	13 33 52.1	
	comp=Z,3.6nm,1.1s						
KVN	Kaiserville	82.89	51	P	P	13 33 56.1	-0.1
NVAR	Mina Array Bea	82.94	52	P	P	13 33 57.0	+0.6
	comp=Z,0.8nm,0.6s,baz=263,slow=6.2,SNR=9.7						
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	82.94	52	P	P	13 33 56.4	-0.1
LRM	Limekiln Ridge	84.48	43	P	P	13 34 04.3	0.0
BOZ	Bozeman (W)	85.10	43	P	P	13 34 07.5	+0.3
FINES	FINESS Array B	86.45	335	P	P	13 34 13.2	-0.1
	comp=Z,0.4nm,0.4s,baz=58,slow=7.2,SNR=3.7						
	comp=Z,0.4nm,0.4s						
FINES	FINESS Array B	86.45	335	P	P	13 34 12.8	-0.5
PDAR	Pinedale Array	87.58	45	P	P	13 34 19.4	0.0
	comp=Z,0.3nm,0.5s,baz=177,slow=1.1,SNR=3.5						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	87.58	45	P	P	13 34 19.2	-0.3

IDC ***01*** *13:23:56.6±1.3, 23°.84N×121°.43E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=62.6km s-min=24.0km az=83.0*

TAP ***01*** *13:23:58.7, 23°.95N×121°.61E, h7^{km}, ML3.8, C*

JMA ***01*** *13:23:58.6±0.3, 24°.0N±0°.9×12°2E±°, h0^{km}, MV3.2/12, TAIWAN REGION*

ISC 01 13:23:58.7±0.7, **23°.93N**±0°.01×**121°.63E**±0°.02, **h10^{km}**±4^{km}, **n144, σ0^{s}.82**/210, **mb3.5**/5, **2C-37D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.05	335	⇑iP	Pg	13 24 00.6	-0.1
	baz=5.0						
HWA				eS	Sg	13 24 01.9	-0.2
	baz=5.0						
TEYL	Yanliau Villag	0.07	202	⇑iP	Pg	13 24 00.7	-0.2
	baz=190						
TEYL				i S	Sg	13 24 02.5	0.0
	baz=190						
ETM	Tongmen	0.13	284	⇓iP	Pg	13 24 01.5	-0.2
	baz=278						
ETM				i S	Sg	13 24 03.3	-0.5
	baz=278						
TWD	Chiawan	0.15	349	⇓iP	Pg	13 24 01.9	-0.1
	baz=358						
TWD				i S	Sg	13 24 04.5	+0.1
	baz=358						
ESL	Shilin	0.21	236	⇓iP	Pg	13 24 03.1	-0.1
	baz=236						
ESL				i S	Sg	13 24 06.0	-0.1
	baz=236						
ETL	Fush Village	0.22	359	⇓iP	Pg	13 24 03.3	-0.1
	baz=3.0						
ETL				i S	Sg	13 24 06.3	-0.2
	baz=3.0						
TEGC	Jichi Village	0.24	200	⇓iP	Pg	13 24 05.0	+1.4
	baz=193						
TEGC				i S	Sg	13 24 09.8	+3.0
	baz=193						
NACB	Ninganchiao	0.24	353	⇓iP	Pg	13 24 03.5	-0.2
	baz=356						
NACB				i S	Sg	13 24 05.9	-1.1
	baz=356						
ETLH	Xiulin Townshi	0.30	334	⇓iP	Pg	13 24 04.7	-0.1
	baz=335						
ETLH				S	Sg	13 24 09.1	+0.2
	baz=335						
EGFH	Guangfu	0.32	215	eP	Pg	13 24 05.5	+0.4
	baz=225						
EGFH				S	Sb	13 24 10.5	-1.3
	baz=225						
WHF	Hehuan Shan	0.39	302	⇓iP	Pg	13 24 06.4	-0.2
	baz=302						
WHF				eS	Sg	13 24 11.7	-0.2
	baz=302						
OWD	Renai	0.41	273	⇓iP	Pg	13 24 07.0	+0.1
	baz=272						
OWD				i S	Sb	13 24 12.8	-1.8
	baz=272						
CHGB	Renai	0.43	287	⇓iP	Pb	13 24 07.5	-1.1
	baz=286						
CHGB				S	Sb	13 24 13.6	-1.6
	baz=286						
WUSB	Renai	0.47	277	⇓iP	Pb	13 24 08.2	-0.9
	baz=286						
WUSB				i S	Sb	13 24 14.6	-1.6
	baz=286						
HGSD	Ruisui	0.48	203	⇓P	Pb	13 24 09.2	0.0
	baz=208						
VWDT	VWDT	0.48	248	⇓iP	Pb	13 24 08.5	-0.7
	baz=248						
VWDT				S	Sg	13 24 13.9	-0.5
	baz=248						
ENA	Nanau	0.50	12	⇓iP	Pg	13 24 08.5	0.0
	baz=14						
ENA				eS	Sg	13 24 15.2	0.0
	baz=14						
EHY	Hungye	0.51	213	eP	Pg	13 24 08.7	+0.1
	baz=222						
EHY				eS	Sb	13 24 16.9	-0.3
	baz=222						
TWT	Tachien	0.52	308	⇓iP	Pb	13 24 09.3	-0.7
	baz=306						
TWT				S	Sb	13 24 17.3	-0.4
	baz=306						
EWUT	Wuta	0.53	15	⇓iP	Pg	13 24 09.1	+0.1
	baz=16						
EWUT				eS	Sg	13 24 15.4	-0.5
	baz=16						
TDCB	Techi	0.53	307	⇓iP	Pb	13 24 09.4	-0.9
	baz=307						
TDCB				eS	Sg	13 24 16.0	-0.1
	baz=307						
NNSB	Datong	0.54	336	⇓iP	Pb	13 24 09.4	-1.0
	baz=328						
NNSB				eS	Sg	13 24 14.6	-1.8
	baz=328						
NNS	Nan Shan	0.55	335	⇓iP	Pb	13 24 09.6	-1.0
	baz=329						
NNS				eS	Sg	13 24 15.9	-0.9
	baz=329						
LATG	Datong	0.60	351	⇓iP	Pg	13 24 10.4	-0.1
	baz=352						
LATG				eS	Sg	13 24 18.2	-0.3
	baz=352						
YULB	Yu-li	0.62	209	P	Pg	13 24 10.2	-0.5
	baz=219						
YULB				eS	Sg	13 24 18.8	-0.1
	baz=219						
SSLB	Suanglung	0.63	257	⇓iP	Pb	13 24 11.2	-0.7
	baz=266						
SSLB				eS	Sg	13 24 19.1	-0.2
	baz=266						
EYUL	Yuli	0.65	206	eP	Pn	13 24 13.5	-0.5
	baz=222						
WCS	Beigang Elemen	0.67	281	⇓iP	Pb	13 24 12.1	-0.3
	baz=281						
WCS				eS	Sb	13 24 20.8	-0.9
	baz=281						
SMLT	Sun Moon Lake	0.67	266	⇓iP	Pb	13 24 12.1	-0.4
	baz=266						
SMLT				S	Sb	13 24 20.5	-1.4
	baz=266						
NDS	Dongshan	0.70	7	⇓iP	Pg	13 24 12.3	+0.1
	baz=7.0						
NDS				eS	Sb	13 24 22.1	-0.6
	baz=7.0						
TWC	Suao	0.70	17	⇓iP	Pg	13 24 12.3	0.0
	baz=18						
TWC				eS	Sg	13 24 21.3	-0.2
	baz=18						
ENTT	Nioudou	0.70	355	⇓iP	Pb	13 24 12.5	-0.6
	baz=357						
ENTT				eS	Sg	13 24 21.6	0.0
	baz=357						
TYC	Yuchr	0.70	268	eP	Pb	13 24 12.6	-0.5
	baz=268						
TYC				eS	Sg	13 24 21.3	-0.2
	baz=268						
WHP	Taichung City	0.71	299	⇓iP	Pb	13 24 13.1	-0.2
	baz=290						
WHP				eS	Sb	13 24 23.3	+0.2
	baz=290						
YUS	Yu-Shan	0.76	235	i P	Pb	13 24 14.2	-0.1
	baz=235						
YUS				eS	Sg	13 24 23.5	+0.1
	baz=235						
YHNB	Yeheng	0.77	343	⇓iP	Pb	13 24 13.8	-0.4
	baz=343						
YHNB				eS	Sg	13 24 22.9	-0.7
	baz=343						
NSK	Sanguang	0.78	342	⇓iP	Pb	13 24 13.9	-0.5
	baz=343						
NSK				eS	Sg	13 24 23.8	-0.1
	baz=343						
TWE	Neicheng	0.78	3	⇓iP	Pb	13 24 14.0	-0.4
	baz=4.0						
TWE				eS	Sb	13 24 24.5	-0.6
	baz=4.0						
FULB	Fuli	0.79	203	eP	Pb	13 24 14.8	+0.2
	baz=222						
FUSB	Fushanzhiwuyua	0.82	358	⇓iP	Pb	13 24 14.7	-0.4
	baz=358						
FUSB				eS	Sb	13 24 26.2	-0.1
	baz=358						
WJS	Zhushan	0.83	262	eP	Pn	13 24 16.2	-0.2
	baz=263						
WJS				eS	Sb	13 24 26.7	+0.3
	baz=263						
ILA	Ilan	0.83	8	eP	Pb	13 24 15.7	+0.4
	baz=8.0						
NFF	Wufeng Townshi	0.84	326	⇓iP	Pb	13 24 15.3	-0.1
	baz=327						
NFF				eS	Sb	13 24 26.5	-0.2
	baz=327						
NWLT	Wulai	0.85	352	eP	Pb	13 24 15.3	-0.3
	baz=352						
NWLT				eS	Sg	13 24 25.9	-0.2
	baz=352						
ALS	Alishan	0.86	241	P	Pb	13 24 15.9	0.0
	baz=250						
CHKT	Chengkung	0.86	196	eP	Pg	13 24 15.3	0.0
	baz=182						

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CHKT                               eS    Sn    13 24 29.7 +0.1
      baz=182
WNT   Mingjian          0.86 266   eP    Pn    13 24 16.8 -0.2
      baz=267
WNT                                eS    Sn    13 24 28.4 -1.2
      baz=267
TWQ1  Liyutan           0.88 298  ⇓iP    Pn    13 24 16.7 -0.5
      baz=298
TWQ1                               eS    Sn    13 24 28.4 -1.7
      baz=298
TCU   Taichung          0.90 284   eP    Pn    13 24 17.5 +0.2
      baz=283
NSTT  Nanjuang          0.90 321  ⇓iP    Pn    13 24 16.6 -0.8
      baz=321
NSTT                               eS    Sb    13 24 28.6 +0.2
      baz=321
LIOB  Emei              0.90 322  ⇓iP    Pn    13 24 16.8 -0.6
      baz=322
LIOB                               eS    Sb    13 24 28.5 -0.1
      baz=322
NSY   Sanyi             0.93 301  ⇓iP    Pn    13 24 17.8  0.0
      baz=302
NSY                                eS    Sn    13 24 29.6 -1.6
      baz=302
ELDTW Lidau             0.93 217   eP    Pg    13 24 15.6 -1.0
      baz=220
CHN5  Tsauling          0.93 249    P    Pn    13 24 17.8 -0.2
      baz=240
CHN5                               eS    Sn    13 24 31.1 -0.3
      baz=240
NTC   Toucheng          0.94  11   eP    Pb    13 24 16.7 -0.3
      baz=1.0
EGS                     0.95  17   eP    Pn    13 24 17.6 -0.4
      baz=17
NMLH  Miaoli            0.97 308   eP    Pn    13 24 18.7 +0.3
      baz=308
NMLH                               eS    Sn    13 24 31.7 -0.6
      baz=308
WCHH  Zhanghua          0.99 279    P    Pn    13 24 19.3 +0.7
      baz=280
WCHH                               eS    Sn    13 24 33.9 +1.3
      baz=280
WDJ   Dajia District    0.99 295   eP    Pn    13 24 19.6 +0.9
      baz=295
WDJ                                eS    Sn    13 24 32.8  0.0
      baz=295
EDH   Donghe            1.00 197   eP    Pg    13 24 17.0 -1.0
      baz=183
EDH                                eS    Sn    13 24 33.3 +0.3
      baz=183
WDLH  Douliu            1.03 256   eP    Pn    13 24 19.6 +0.5
      baz=259
WDLH                               eS    Sn    13 24 34.6 +1.0
      baz=259
NHDH  Xindian Distri    1.03 355    P    Pn    13 24 18.9 -0.2
      baz=355
NHDH                               eS    Sg    13 24 31.0 -0.9
      baz=355
SBCB  Hsinchu           1.03 326   eP    Pn    13 24 19.8 +0.5
      baz=326
SBCB                               eS    Sn    13 24 34.8 +0.9
      baz=326
TWA   Mucha             1.04 358   eP    Pn    13 24 19.1 -0.3
      baz=348
TWA                                eS    Sg    13 24 31.7 -0.6
      baz=348
TIPB  Shuangxi          1.05  10  ⇓iP    Pb    13 24 18.9  0.0
      baz=1.0
TIPB                               eS    Sn    13 24 33.5 -0.8
      baz=1.0
HSN   Hsinchu           1.05 325    P    Pn    13 24 19.9 +0.4
      baz=328
HSN                                eS    Sn    13 24 34.2 -0.1
      baz=328
STYH  Taoyuan           1.09 226   eP    Pn    13 24 20.1 +0.1
      baz=234
STYH                               eS    Sn    13 24 34.5 -0.7
      baz=234
NCUH  Zhongli           1.10 339   eP    Pn    13 24 21.2 +1.0
      baz=337
NCU   National Centr    1.11 339    P    Pn    13 24 21.3 +1.0
      baz=349
NCU                                eS    Sn    13 24 37.6 +2.0
      baz=349
TAP   Taipei            1.11 354   eP    Pn    13 24 20.6 +0.4
      baz=355
TAP                                eS    Sn    13 24 35.4 -0.1
      baz=355
TPUB  Ta-pu             1.11 236    P    Pn    13 24 20.5 +0.1
      baz=238
TPUB                               eS    Sn    13 24 37.5 +1.7
      baz=238
CHN4  Tsaushan          1.11 239   i P   Pn    13 24 21.0 +0.6
      baz=242
TWB1  Santiao Chiao     1.12  17    P    Pn    13 24 20.3 -0.1
      baz=9.0
TWB1                               eS    Sb    13 24 34.6 -0.2
      baz=9.0
LONT  Longtian          1.12 204   eP    Pn    13 24 20.4 -0.1
      baz=208
CHN2  Minshiung         1.13 249    P    Pn    13 24 21.7 +1.2
      baz=253
NWF   Wu-fen Shan       1.14   7    P    Pn    13 24 20.8  0.0
      baz=5.0
WRL   Guolierlin Hig    1.14 269   eP    Pn    13 24 21.3 +0.5
      baz=270
WRL                                eS    Sn    13 24 38.0 +1.5
      baz=270
WTP   Ta-pu             1.15 234   eP    Pn    13 24 21.1 +0.2
      baz=237
WTK   Tuku              1.16 258   eP    Pn    13 24 21.2 +0.2
      baz=261
WTK                                eS    Sn    13 24 38.1 +1.2
      baz=261
SXI1  Grass Mountain    1.18  11    P    Pn    13 24 21.6 +0.3
      baz=357
TWS1  Kuangyinshan      1.18 351   eP    Pn    13 24 21.4 +0.1
      baz=359
TWS1                               eS    Sn    13 24 38.8 +1.5
      baz=359
CHY   Chiayi            1.19 249   eP    Pg    13 24 22.2 +0.8
      baz=267
CHY                                eS    Sn    13 24 39.4 +1.9
      baz=267
YM01  YM01              1.21 358   eP    Pg    13 24 21.9 -0.1
      baz=354
TWG   Pinlang           1.22 205   eP    Pn    13 24 19.6 -2.2
      baz=209
TWGBT Beinan            1.22 204   eP    Pn    13 24 19.4 -2.4
      baz=209
NTST  Danshui           1.23 353   eP    Pg    13 24 22.2 -0.3
      baz=350
TWK   Hsinying          1.24 238   eP    Pg    13 24 22.8 +0.3
      baz=241
ANP   Anpu              1.25 356   eP    Pn    13 24 22.1 -0.3
      baz=354
CHN1  Nanshi            1.25 234   eP    Pg    13 24 22.9 +0.1
      baz=249
SNST  Tainan City       1.26 236   eP    Pg    13 24 22.8  0.0
      baz=239
LDUT  Ludao             1.26 187   eP    Pn    13 24 20.5 -1.9
      baz=169
SGST  Jiashian          1.28 229   eP    Pn    13 24 22.4 -0.2
      baz=218
JYNG  Yonagunijimaku    1.31  67    P    Pn    13 24 23.3 +0.2
JYNG                               eS    Sg    13 24 41.7 +0.8
WSL   Shuilin Townsh    1.35 253   eP    Pg    13 24 24.6 +0.1
      baz=268
ICHU  Yijhu             1.36 245   eP    Pg    13 24 24.6 -0.2
      baz=251
YOJ   Yonaguni jima     1.37  67   eP    Pn    13 24 23.6 -0.3
      baz=68
YOJ   Yonaguni jima     1.37  67    P    Pn    13 24 23.9  0.0
YOJ                                eS    Sg    13 24 42.9 +0.1
CHN8  Yiju              1.42 246   eP    Pg    13 24 26.4 +0.4
      baz=251
CHN3  Shinhua           1.44 234   eP    Pg    13 24 27.8 +1.4
      baz=240
ECL   Taimali           1.47 205   eP    Pn    13 24 24.4 -0.8
      baz=180
SCST  Cishan            1.47 225   eP    Pg    13 24 27.4 +0.4
      baz=217
SHHT  Tainan City       1.48 233   eP    Pg    13 24 27.1 -0.1
      baz=239
SSD   Sandimen          1.50 218   eP    Pb    13 24 26.4 -0.1
      baz=224
TSMG  Majia             1.52 217   eP    Pb    13 24 27.0  0.0
      baz=210
TWM1  Shoushan          1.56 225   eP    Pg    13 24 29.1 +0.4
      baz=232
SGLT  Jiouru            1.59 221   eP    Pg    13 24 29.0 -0.3
      baz=215
MASBT Mashibuluo        1.60 215   eP    Pn    13 24 26.7 -0.4
      baz=196
EAST  Anshuo            1.70 205   eP    Pn    13 24 28.6 +0.1
      baz=186
TAWH  Dawu Township     1.73 203   eP    Pn    13 24 28.7 -0.1
      baz=180
SSPT  Xinbi             1.74 214   eP    Pb    13 24 30.6 -0.2
      baz=210
SLIU  Shizi             1.87 204   eP    Pb    13 24 31.9 -1.1
      baz=187
LAY   Lan-yu            1.89 182   eP    Pn    13 24 29.1 -2.0
      baz=164
LYUB  Lan-yu            1.92 181   eP    Pn    13 24 28.6 -3.0
      baz=165
WDGT  Dungji            1.93 250   eP    Pn    13 24 32.3 +0.8
      baz=255
PHUB  P'eng-hu          1.93 258   eP    Pn    13 24 31.7 +0.1
      baz=262
PNG   Penghu            1.93 260   eP    Pn    13 24 32.2 +0.6
      baz=264
WLCH  Liuqiu            1.95 216   eP    Pb    13 24 34.4 +0.1
      baz=226
IRIF  Iriomote-Funau    1.96  78    P    Pn    13 24 32.3 +0.3
HATJ  Hateruma jima     2.00  86   eS    Sn    13 24 57.5  0.0
VCHM  Qimei             2.14 251   eP    Pn    13 24 34.6 +0.1
      baz=257
JKRS  Kuro-shima        2.20  82   eP    Pn    13 24 35.6 +0.3
JKRS                               eS    Sn    13 25 03.9 +1.3
JIJ   Ishigaki jima     2.34  79   eP    Pn    13 24 36.9 -0.4
JIJ                                 S    Sn    13 25 04.9 -1.1
JISG  Ishigakijimahi    2.53  75    P    Pn    13 24 39.6 -0.3
JISG                                S    Sn    13 25 10.0 -0.8
JTJ   Tarama            2.89  75    P    Pn    13 24 45.3 +0.5
JTJ                                eS    Sn    13 25 20.9 +1.2
KNM   Kinmen            2.96 280   eP    Pn    13 24 47.4 +1.7
      baz=281
KNMB  Chin-men Tao      3.00 281   eP    Pn    13 24 46.3  0.0
      baz=282
LYJJ  Jianjiangzhen     3.10 327   eP    Pn    13 24 47.6 -0.1
      baz=312
MHZQ  Yeshan            3.19 313   eP    Pn    13 24 49.3 +0.3
      baz=311
AXDP  Jialang           3.47 287   eP    Pn    13 24 52.6 -0.1
      baz=287
JMJ2  Miyako jima3      3.47  76   eS    Sn    13 25 33.0 -1.0
ZPLA  Ao Xicun          3.55 271   eP    Pn    13 24 54.3 +0.5
      baz=274
SXFK  Yanhouchang       4.36 305   eP    Pn    13 25 04.8 -0.3
      baz=304
KSRS  Korea Array      14.52  20   Pn    Pn    13 27 27.1 +2.8
      baz=202,slow=11,SNR=2.3
      1.2nm,0.5s
ZALV  Zalesovo Beam    40.67 327    P    P     13 31 38.5 -0.5
      0.6nm,0.5s,baz=96,slow=12,SNR=3.7
      0.6nm,0.5s
H11N1 WAKE ISLAND Hy   42.10  87    T    T     14 17 08.4
      baz=276,slow=75,SNR=15
H11N2 WAKE ISLAND Hy   42.10  87    T    T     14 17 13.1
      baz=276,slow=75,SNR=15
H11N3 WAKE ISLAND Hy   42.11  87    T    T     14 17 09.7
      baz=276,slow=75,SNR=11
H11S3 WAKE ISLAND Hy   42.22  88    T    T     14 16 52.9
      baz=284,slow=74,SNR=47
H11S1 WAKE ISLAND Hy   42.23  88    T    T     14 16 53.6
      baz=284,slow=74,SNR=38
H11S2 WAKE ISLAND Hy   42.24  88    T    T     14 16 54.2
      baz=284,slow=74,SNR=36
WRA   Warramunga Arr   45.34 163    P    P     13 32 16.0 -1.2
      0.4nm,0.9s,baz=345,slow=8.7,SNR=2.6
      0.4nm,0.9s
ASAR  Alice Springs    48.80 165    P    P     13 32 43.7 -0.5
      0.3nm,0.8s,baz=338,slow=6.7,SNR=4.3
      0.3nm,0.8s
ILAR  Eielson Array    69.25  27    P    P     13 35 06.8 +1.2
      0.4nm,0.8s,baz=295,slow=8.2,SNR=4.7
      0.4nm,0.8s
YKA   Yellowknife Ar   83.04  23    P    P     13 36 23.3 -0.8
      0.7nm,0.8s,baz=314,slow=5.0,SNR=11
      0.7nm,0.8s
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*IDC **01** 13:30:04.9±1.2, 24°.04N×121°.71E, h0^{km}, mb3.3/5, mbtmp3.3/6, ML3.1/1, Error ellipse: s-maj=55.8km s-min=23.6km az=72.0*
*TAP **01** 13:30:06.7, 23°.95N×121°.61E, h8^{km}, ML3.5, C*
*JMA **01** 13:30:06.7±0.3, 24°N±1°×12°2E±°, h0^{km}, MV2.8/11, TAIWAN REGION*
ISC 01 13:30:06.6±0.8**, 23°.93N**±0°.01×**121°.64E**±0°.02**, h10**^{km}±5^{km}**, n123,** σ0^{s}91/178**, mb3.1**/5**, 1C-29D, Taiwan**

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Code  Station Name       Δ°  AZ°   Phase ID       Time       Res
                                   Op    ISC     h  m  s     ISC
HWA   Hwalien           0.06 323  ⇑iP    Pg    13 30 08.6  0.0
      baz=10.0
HWA                                i S   Sg    13 30 10.1  0.0
      baz=10.0
TWD   Chiawan           0.15 344  ⇓iP    Pg    13 30 10.1 +0.1
      baz=358
TWD                                i S   Sg    13 30 12.3  0.0
      baz=358
ESL   Shilin            0.22 238  ⇓iP    Pg    13 30 11.0 -0.2
      baz=236
ESL                                i S   Sg    13 30 14.1 -0.2
      baz=236
ETL   Fush Village      0.23 356   i P   Pg    13 30 11.3 +0.1
      baz=3.0
ETL                                i S   Sg    13 30 14.5 +0.1
      baz=3.0
NACB  Ninganchiao       0.24 350  ⇓iP    Pg    13 30 11.6  0.0
      baz=356
NACB                               i S   Sg    13 30 14.0 -0.9
      baz=356
ETLH  Xiulin Townshi    0.31 332  ⇓iP    Pg    13 30 12.8  0.0
      baz=335
ETLH                               i S   Sg    13 30 16.4 -0.6
      baz=335
EGFH  Guangfu           0.33 217   eP    Pg    13 30 13.5 +0.4
      baz=222
EGFH                               eS    Sg    13 30 18.4 +0.9
      baz=222
WHF   Hehuan Shan       0.40 302  ⇓iP    Pg    13 30 14.5 -0.2
      baz=303
WHF                                 S    Sg    13 30 19.9 -0.2
      baz=303
OWD   Renai             0.43 273  ⇓iP    Pg    13 30 15.0  0.0
      baz=273
OWD                                eS    Sg    13 30 20.6  0.0
      baz=273
CHGB  Renai             0.45 287  ⇓iP    Pg    13 30 15.5 +0.2
      baz=287
CHGB                               i S   Sb    13 30 21.9 -1.5
      baz=287
HGSD  Ruisui            0.48 204   eP    Pb    13 30 17.1  0.0
      baz=210
WUSB  Renai             0.48 277  ⇓iP    Pg    13 30 16.3 +0.3
      baz=286
WUSB                                S    Sg    13 30 22.0 -0.4
      baz=286
VWDT  VWDT              0.49 249  ⇓iP    Pg    13 30 16.5 +0.3
      baz=249
VWDT                               i S   Sg    13 30 21.1 -1.6
      baz=249
ENA   Nanau             0.50  10  ⇓iP    Pg    13 30 16.6 +0.2
      baz=12
EHY   Hungye            0.52 215   i P   Pg    13 30 16.7 +0.1
      baz=223
EHY                                eS    Sg    13 30 23.4  0.0
      baz=223
EWUT  Wuta              0.53  14   ⇓P    Pg    13 30 17.2 +0.3
      baz=15
TWT   Tachien           0.53 307  ⇓iP    Pg    13 30 17.3 +0.3
      baz=307
TWT                                eS    Sg    13 30 24.3 +0.2
      baz=307
TDCB  Techi             0.54 306  ⇓iP    Pg    13 30 17.5 +0.3
      baz=307
TDCB                               eS    Sg    13 30 24.5 +0.1
      baz=307
NNSB  Datong            0.55 334  ⇓iP    Pg    13 30 17.5 +0.2
      baz=336
NNSB                               eS    Sg    13 30 22.9 -1.6
      baz=336
NNS   Nan Shan          0.56 334  ⇓iP    Pg    13 30 17.7 +0.2
      baz=336
NNS                                eS    Sg    13 30 24.6 -0.3
      baz=336
LATG  Datong            0.61 350  ⇓iP    Pg    13 30 18.5 +0.1
      baz=341
YULB  Yu-li             0.62 210   i P   Pg    13 30 18.6 -0.1
      baz=217
SSLB  Suanglung         0.65 257  ⇓iP    Pg    13 30 19.2 +0.1
      baz=267
SSLB                               i S   Sg    13 30 27.1 -0.5
      baz=267
EYUL  Yuli              0.65 207   eP    Pb    13 30 20.5 +0.5
      baz=222
WCS   Beigang Elemen    0.68 281  ⇓iP    Pb    13 30 20.1 -0.3
      baz=281
WCS                                eS    Sg    13 30 28.5 -0.1
      baz=281
SMLT  Sun Moon Lake     0.68 266  ⇓iP    Pb    13 30 20.1 -0.5
      baz=266
SMLT                                S    Sg    13 30 28.9 +0.2
      baz=266
TWC   Suao              0.70  16   eP    Pg    13 30 20.4 +0.3
      baz=11
NDS   Dongshan          0.70   6  ⇓iP    Pg    13 30 20.5 +0.4
      baz=7.0
NDS                                eS    Sg    13 30 29.0 -0.3
      baz=7.0
ENTT  Nioudou           0.71 354  ⇓iP    Pg    13 30 20.6 +0.4
      baz=356
ENTT                               eS    Sb    13 30 30.8  0.0
      baz=356
TYC   Yuchr             0.72 268    P    Pg    13 30 20.7 +0.2
      baz=268
TYC                                 S    Sg    13 30 28.8 -1.0
      baz=268
WHP   Taichung City     0.72 299  ⇓iP    Pb    13 30 21.1 -0.2
      baz=290
WHP                                eS    Sb    13 30 31.4  0.0
      baz=290
YUS   Yu-Shan           0.77 235    P    Pg    13 30 22.0 +0.5
      baz=235
YUS                                eS    Sg    13 30 32.2 +0.5
      baz=235
YHNB  Yeheng            0.77 342  ⇓iP    Pb    13 30 21.9 -0.2
      baz=343
YHNB                               eS    Sg    13 30 31.5 -0.1
      baz=343
NSK   Sanguang          0.78 341  ⇓iP    Pb    13 30 22.1 -0.3
      baz=342
NSK                                eS    Sg    13 30 31.8 -0.2
      baz=342
TWE   Neicheng          0.79   2  ⇓iP    Pg    13 30 22.2 +0.4
      baz=4.0
TWE                                eS    Sg    13 30 32.1 +0.1
      baz=4.0
FULB  Fuli              0.80 204   eP    Pb    13 30 22.8 +0.2
      baz=222
FULB                               eS    Sn    13 30 36.7 +0.8
      baz=222
FUSB  Fushanzhiwuyua    0.82 357  ⇓iP    Pg    13 30 22.9 +0.4
      baz=357
FUSB                                S    Sg    13 30 33.7 +0.4
      baz=357
WJS   Zhushan           0.84 263    P    Pb    13 30 24.3 +1.0
      baz=263
WJS                                eS    Sb    13 30 34.2 -0.5
      baz=263
NFF   Wufeng Townshi    0.84 326   ⇓P    Pb    13 30 23.4  0.0
      baz=326
NFF                                eS    Sb    13 30 34.5 -0.3
      baz=326
NWLT  Wulai             0.85 351  ⇓iP    Pg    13 30 23.3 +0.3
      baz=352
NWLT                               eS    Sg    13 30 33.9 -0.2
      baz=352
CHKT  Chengkung         0.87 197    P    Pg    13 30 23.2 -0.1
      baz=181
CHKT                               eS    Sb    13 30 37.8 +2.4
      baz=181
ALS   Alishan           0.87 241   eP    Pb    13 30 23.9 -0.1
      baz=251
WNT   Mingjian          0.88 267   i P   Pb    13 30 24.6 +0.8
      baz=267
WNT                                 S    Sb    13 30 37.2 +1.5
      baz=267
NSTT  Nanjuang          0.91 320   eP    Pb    13 30 24.7 +0.3
      baz=321
NSTT                               eS    Sb    13 30 36.1 -0.5
      baz=321
TCU   Taichung          0.91 284    P    Pn    13 30 25.5 +0.1
      baz=284
LIOB  Emei              0.91 321  ⇓iP    Pb    13 30 25.0 +0.5
      baz=322
LIOB                               eS    Sb    13 30 36.6  0.0
      baz=322
NTC   Toucheng          0.93  11   eP    Pg    13 30 24.6 +0.1
      baz=360
ELDTW Lidau             0.94 218   eP    Pg    13 30 23.7 -0.9
      baz=221
NSY   Sanyi             0.94 301   eP    Pb    13 30 25.9 +1.0
      baz=301
CHN5  Tsauling          0.94 249    P    Pb    13 30 25.8 +0.7
      baz=240
CHN5                               eS    Sb    13 30 39.3 +1.6
      baz=240
EGS                     0.95  16   eP    Pb    13 30 26.3 +1.2
      baz=18
NMLH  Miaoli            0.98 308    P    Pb    13 30 26.4 +0.8
      baz=319
NMLH                               eS    Sn    13 30 40.3 -0.1
      baz=319
WCHH  Zhanghua          1.00 279    P    Pn    13 30 27.1 +0.4
      baz=280
WDJ   Dajia District    1.00 295   eP    Pb    13 30 26.4 +0.4
      baz=295
EDH   Donghe            1.00 198    P    Pg    13 30 25.2 -0.7
      baz=182
EDH                                eS    Sb    13 30 40.5 +1.1
      baz=182
NHDH  Xindian Distri    1.03 354   eP    Pb    13 30 27.5 +0.9
      baz=353
WDLH  Douliu            1.04 257    P    Pn    13 30 27.7 +0.5
      baz=259
WDLH                               eS    Sn    13 30 43.0 +1.2
      baz=259
SBCB  Hsinchu           1.04 325   eP    Pn    13 30 27.9 +0.7
      baz=325
TWA   Mucha             1.04 357    P    Pb    13 30 27.1 +0.3
      baz=348
TWA                                eS    Sg    13 30 40.6 +0.3
      baz=348
TIPB  Shuangxi          1.05   9    P    Pg    13 30 26.8 +0.1
      baz=354
HSN   Hsinchu           1.06 325   eP    Pn    13 30 28.9 +1.4
      baz=327
STYH  Taoyuan           1.10 226    P    Pg    13 30 27.1 -0.6
      baz=233
STYH                               eS    Sg    13 30 41.6 -0.3
      baz=233
NCUH  Zhongli           1.11 338   eP    Pn    13 30 29.2 +1.0
      baz=348
NCUH                               eS    Sn    13 30 45.9 +2.3
      baz=348
NCU   National Centr    1.11 338   eP    Pb    13 30 28.5 +0.6
      baz=349
NCU                                eS    Sn    13 30 45.5 +1.9
      baz=349
TWB1  Santiao Chiao     1.12  16   eP    Pg    13 30 27.9 -0.1
      baz=9.0
TPUB  Ta-pu             1.12 236   i P   Pb    13 30 28.7 +0.6
      baz=239
TPUB                               eS    Sb    13 30 44.1 +1.3
      baz=239
CHN4  Tsaushan          1.12 239    P    Pb    13 30 28.8 +0.7
      baz=234
CHN4                               eS    Sn    13 30 44.5 +0.7
      baz=234
LONT  Longtian          1.12 205   eP    Pg    13 30 27.0 -1.2
      baz=209
NWF   Wu-fen Shan       1.14   6    P    Pb    13 30 29.0 +0.6
      baz=4.0
CHN2  Minshiung         1.14 250    P    Pn    13 30 29.6 +1.0
      baz=267
CHN2                               eS    Sn    13 30 46.3 +2.1
      baz=267
WRL   Guolierlin Hig    1.16 269    P    Pn    13 30 29.5 +0.7
      baz=271
WRL                                eS    Sn    13 30 46.5 +1.8
      baz=271
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WTP	Ta-pu baz=238	1.16	234	P	Pb	13 30 29.3	+0.5
SXI1	Grass Mountain baz=355	1.18	10	P	Pb	13 30 29.6	+0.6
TWS1	Kuangyinshan baz=349	1.18	350	P	Pn	13 30 30.2	+1.0
CHY	Chiayi baz=265	1.20	249	eP	Pn	13 30 30.5	+1.2
CHY	baz=265			eS	Sn	13 30 47.4	+1.7
YM01	YM01 baz=354	1.21	357	P	Pn	13 30 30.6	+1.0
TWG	Pinlang baz=210	1.22	205	eP	Pg	13 30 29.2	-0.9
TWGBT	Beinan baz=210	1.22	205	eP	Pg	13 30 27.4	-2.7
NTST	Danshui baz=349	1.24	352	eP	Pn	13 30 31.4	+1.5
TWK	Hsinying baz=242	1.25	238	eP	Pb	13 30 30.8	+0.6
ANP	Anpu baz=353	1.25	355	P	Pg	13 30 30.3	-0.4
CHN1	Nanshi baz=239	1.26	234	eP	Pb	13 30 30.9	+0.4
LDUT	Ludao baz=167	1.26	187	eP	Pg	13 30 28.9	-1.9
SNST	Tainan City baz=241	1.27	236	eP	Pn	13 30 31.6	+1.3
SGST	Jiashian baz=218	1.29	229	eP	Pg	13 30 31.0	-0.3
JYNG	Yonagunijimaku	1.30	66	eP	Pg	13 30 31.3	-0.2
JYNG				S	Sb	13 30 49.9	+2.1
WSF	Szhu baz=261	1.33	258	eP	Pn	13 30 32.5	+1.3
TWY	Chenhua baz=345	1.34	358	eP	Pn	13 30 33.1	+1.8
YOJ	Yonaguni jima baz=69	1.36	67	eP	Pg	13 30 31.3	-1.4
WSL	Shuilin Townsh baz=257	1.36	253	eP	Pb	13 30 32.9	+0.8
ICHU	Yijhu baz=250	1.37	246	eP	Pg	13 30 32.5	-0.5
CHN8	Yiju baz=251	1.44	246	eP	Pb	13 30 34.7	+1.3
ECL	Taimali baz=179	1.47	206	eP	Pn	13 30 33.5	+0.4
SCST	Cishan baz=217	1.48	226	eP	Pb	13 30 35.0	+0.7
SSD	Sandimen baz=224	1.50	218	eP	Pn	13 30 34.3	+0.8
TSMG	Majia baz=211	1.53	217	eP	Pn	13 30 35.0	+1.0
TWM1	Shoushan baz=231	1.57	226	eP	Pg	13 30 37.0	+0.3
MASBT	Mashibuluo baz=208	1.61	215	eP	Pn	13 30 34.3	-0.7
EAST	Anshuo baz=185	1.71	205	eP	Pn	13 30 37.4	+1.0
SSPT	Xinbi baz=211	1.75	215	eP	Pn	13 30 38.5	+1.6
SLIU	Shizi baz=185	1.88	205	eP	Pn	13 30 40.0	+1.3
WDGT	Dungji baz=255	1.94	250	eP	Pn	13 30 40.2	+0.7
PHUB	P'eng-hu baz=262	1.94	258	eP	Pn	13 30 39.5	-0.1
PNG	Penghu baz=263	1.95	260	eP	Pn	13 30 40.2	+0.6
IRIF	Iriomote-Funau	1.95	78	P	Pn	13 30 41.0	+1.2
IRIF				eS	Sn	13 31 05.8	+1.5
HATJ	Hateruma jima	1.98	86	S	Sn	13 31 05.4	+0.3
VCHM	Qimei baz=256	2.15	251	eP	Pn	13 30 41.8	-0.7
JKRS	Kuro-shima	2.19	82	P	Pn	13 30 44.9	+1.9
JKRS				eS	Sn	13 31 12.7	+2.6
VWUC	VWUC baz=298	2.26	298	eP	Pn	13 30 43.1	-0.9
JIJ	Ishigaki jima	2.33	79	P	Pn	13 30 44.7	-0.2
JIJ				S	Sn	13 31 13.0	-0.5
JISG	Ishigakijimahi	2.52	74	P	Pn	13 30 48.3	+0.7
JISG				S	Sn	13 31 17.8	-0.6
MATB	Ma-tsu baz=309	2.69	326	eP	Pn	13 30 49.5	-0.5
JTJ	Tarama	2.88	75	S	Sn	13 31 27.4	+0.1
KNM	Kinmen baz=279	2.97	280	eP	Pn	13 30 55.7	+2.0
KNMB	Chin-men Tao baz=281	3.02	281	eP	Pn	13 30 54.1	-0.3
AXDP	Jialang baz=287	3.48	287	eP	Pn	13 31 00.6	-0.2
ZPLA	Ao Xicun baz=273	3.56	271	eP	Pn	13 31 01.9	+0.1
KSRS	Korea Array 0.1nm,0.3s,baz=198,slow=12,SNR=1.8 0.4nm,0.6s	14.51	20	Pn	Pn	13 33 28.8	-3.3
MKAR	Makanchi Array 0.3nm,0.7s,baz=100,slow=12,SNR=3.0 0.3nm,0.7s	38.81	316	P	P	13 37 31.0	-0.5
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=129,slow=3.9,SNR=2.5 0.4nm,0.4s	40.68	327	P	P	13 37 46.3	-0.7
WRA	Warramunga Arr 0.1nm,0.4s,baz=344,slow=8.6,SNR=1.3 0.1nm,0.4s	45.33	163	P	P	13 38 26.0	+1.0
ASAR	Alice Springs 0.2nm,0.9s,baz=338,slow=7.9,SNR=4.1 0.2nm,0.9s	48.79	165	P	P	13 38 52.0	0.0
YKA	Yellowknife Ar 0.4nm,0.8s,baz=316,slow=4.9,SNR=6.8 0.4nm,0.8s	83.04	23	P	P	13 42 31.6	-0.4

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*HEL **01** 13:30:31.3±0.0, 67°.19N×20°.69E, h1^{km}, ML1.8, ML2.3(UPP), Confirmed Induced event*

*KOLA **01** 13:30:31.5, 67°.25N×20°.35E, h0^{km}, ML2.0*

*IDC **01** 13:30:32.3±1.0, 67°.17N×21°.42E, h0^{km}, mbtmp2.7/4, ML2.1/4, Error ellipse: s-maj=18.1km s-min=6.8km az=106.0*

ISC 01 13:30:30.3±0.7**, 67°.19N**±0°.02×**20°.67E**±0°.03**, h0^{km}, n33, σ1.^{s}08**/51**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.08	208	i P	Pg	13 30 32.7	+0.9
DUNU				i S	Sg	13 30 33.9	+1.1
MASU	Masugnsbyn	0.58	62	i P	Pg	13 30 42.2	+0.7
RATU	Laukkuluspa	0.76	327	i P	Pg	13 30 45.0	+0.2
RATU				i S	Sg	13 30 54.8	+0.2
SALU	Saltoluokta	0.86	284	eP	Pg	13 30 46.2	-0.6
SALU	Saltoluokta	0.86	284	i P	Pg	13 30 47.0	+0.3
ERTU	Ertsjaerv	0.88	136	eP	Pg	13 30 46.9	-0.3
ERTU				eS	Sg	13 30 58.3	-0.2
NIKU	Nikkaluokta	0.92	318	eP	Pg	13 30 48.1	+0.1
PAJU	Pajala	0.97	99	eP	Pg	13 30 48.6	-0.3
LANU	Lannavaara	1.00	30	eP	Pg	13 30 49.3	-0.1
HARU	Harads	1.04	173	eP	Pg	13 30 49.8	-0.4
KOVU	Salmi	1.05	350	eP	Pg	13 30 50.3	-0.2
HEF	Hetta	1.67	42	eP	Pn	13 31 00.1	-0.6
HEF	Hetta	1.67	42	eP	Pn	13 31 00.9	+0.2
HEF				eS	Sn	13 31 22.1	-0.8
HEF	comp=Z,6.1nm,0.2s			MSG		13 31 26.6	
KALU	Kalix	1.72	140	ePG	Pn	13 31 01.9	+0.4
SJUU	Sjulsmark	1.73	167	eP	Pn	13 31 02.1	+0.5
KIF	Kilpisjarvi	1.82	2	eP	Pb	13 31 04.0	-0.5
KIF				eS	Sb	13 31 28.1	+0.3
KIF	comp=Z,13nm,0.2s			MSG		13 31 31.6	
TOF	Tornio	1.84	126	eP	Pn	13 31 03.9	+0.9
TOF				eS	Sn	13 31 28.0	+1.0
RNF	Rovaniemi	2.19	103	ePB	Pn	13 31 09.3	+1.4
STEI	Steigen	2.21	292	ePG	Pb	13 31 10.8	-0.3
STEI				eSG	Sg	13 31 40.4	-0.8
SGF	Sodankyl	2.29	81	ePB	Pn	13 31 10.9	+1.7
SGF				eSG	Sb	13 31 41.1	0.0
SGF	comp=Z,3.4nm,0.2s			MSG		13 31 43.4	
TRO	Tromso	2.54	346	ePB	Pb	13 31 15.9	-0.7
TRO				eSG	Sb	13 31 49.6	+1.3
ARA0	ARCESS Array S	2.96	35	eP	Pn	13 31 19.4	+0.9
ARCES	ARCESS Array B comp=Z,0.4nm,0.3s,baz=211,slow=14,SNR=48	2.96	35	Pn	Pn	13 31 19.5	+1.0
ARCES	comp=Z,0.4nm,0.3s,baz=211,slow=16,SNR=6.2			Pg	Pb	13 31 21.8	-2.1
ARCES	comp=Z,0.3nm,0.3s,baz=222,slow=26,SNR=1.9			Sn	Sn	13 31 55.4	+0.7
ARCES	comp=Z,0.5nm,0.3s,baz=218,slow=26,SNR=2.4 comp=Z,1.0nm,0.3s			Lg	Lg	13 31 58.1	
ARCES	ARCESS Array B	2.96	35	P	Pn	13 31 19.7	+1.2
ARCES				S	Sn	13 31 55.4	+0.7
UMAU	Umeaa	3.32	180	eP	Pn	13 31 24.6	+1.2
UMAU				eS	Sn	13 32 03.2	-0.4
KEV	Kevo	3.48	39	eP	Pn	13 31 26.4	+0.8
KEV	comp=Z,1.9nm,0.2s			MSG		13 32 20.5	
HEMU	Hemsoen	4.67	195	eS	Sn	13 32 35.7	-1.1
APA0	Apatity Array	4.78	79	P	Pn	13 31 45.4	+2.0
APA0				S	Sn	13 32 38.9	-0.5
PRVG	Vayda Guba	4.96	54	P	Pn	13 31 46.9	+1.0
PRVG				S	Sn	13 32 43.3	-0.4
LVZ	Lovozero	5.41	76	P	Pn	13 31 52.4	+0.2
LVZ				S	Sn	13 32 55.9	+0.9
FINES	FINESS Array B comp=Z,0.2nm,0.3s,baz=349,slow=14,SNR=12	6.23	155	Pn	Pn	13 32 04.6	+1.2
FINES	comp=Z,0.3nm,0.3s,baz=348,slow=23,SNR=7.1			Sn	Sn	13 33 13.7	-1.5
FINES	comp=Z,0.3nm,0.3s,baz=347,slow=25,SNR=3.4 comp=Z,0.5nm,0.4s			Lg	Lg	13 33 42.2	
NOA	NORSAR Array B baz=351,slow=14,SNR=1.5	7.42	218	Pn	Pn	13 32 22.7	+2.9
NOA	baz=290,slow=13,SNR=1.2			Sn	Sn	13 33 41.3	-3.3
NOA	baz=28,slow=10,SNR=2.3 comp=Z,0.3nm,0.7s			Lg	Lg	13 34 20.7	
HFS	Hagfors comp=Z,0.1nm,0.3s,baz=9.2,slow=19,SNR=1.3 comp=Z,0.2nm,0.4s	7.73	207	Pn	Pn	13 32 23.7	-0.2

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*JMA **01** 13:32:07.1±0.3, 24°N±1°×12°2E±°, h0^{km}, MV3.2/12, TAIWAN REGION*

*TAP **01** 13:32:07.2, 23°.95N×121°.62E, h8^{km}, ML3.9, C*

*IDC **01** 13:32:21.3±6.4, 23°.95N×121°.69E, h137^{km}±62^{km}, mb3.0/8, mbtmp3.5/9, MS2.5/1, Error ellipse: s-maj=27.9km s-min=17.6km az=75.0*

ISC 01 13:32:07.3±0.7**, 23°.94N**±0°.01×**121°.64E**±0°.02**, h9^{km}**±4^{km}**, n161, σ0.^{s}95**/251**, mb3.3**/8**, 10C-39D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien baz=344	0.05	323	⇑iP	Pg	13 32 09.2	+0.1
HWA	baz=344			S	Sg	13 32 10.8	+0.5
TEYL	Yanliau Villag baz=205	0.08	207	⇑iP	Pg	13 32 09.3	-0.1
TEYL	baz=205			S	Sg	13 32 11.2	+0.2
ETM	Tongmen baz=281	0.13	282	P	Pg	13 32 10.1	-0.1
ETM	baz=281			S	Sg	13 32 11.9	-0.4
TWD	Chiawan baz=353	0.15	345	⇓iP	Pg	13 32 10.6	+0.1
TWD	baz=353			i S	Sg	13 32 12.8	+0.2
ETL	Fush Village baz=359	0.22	357	⇓iP	Pg	13 32 12.0	+0.2
ETL	baz=359			i S	Sg	13 32 15.2	+0.3
ESL	Shilin baz=238	0.22	236	⇓iP	Pg	13 32 11.7	-0.2
ESL	baz=238			i S	Sg	13 32 14.6	-0.3
NACB	Ninganchiao baz=353	0.24	351	⇓iP	Pg	13 32 12.2	+0.1
NACB	baz=353			S	Sg	13 32 15.4	+0.1
TEGC	Jichi Village baz=195	0.24	201	P	Pg	13 32 13.5	+1.3
TEGC	baz=195			S	Sg	13 32 18.6	+3.1
ETLH	Xiulin Townshi baz=334	0.30	332	⇓iP	Pg	13 32 13.4	0.0
ETLH	baz=334			i S	Sg	13 32 17.2	-0.2
EGFH	Guangfu baz=221	0.33	216	⇓iP	Pg	13 32 14.1	+0.3
EGFH	baz=221			S	Sb	13 32 19.7	-1.1
WHF	Hehuan Shan baz=303	0.40	301	⇓iP	Pg	13 32 15.1	-0.2
WHF	baz=303			i S	Sb	13 32 21.4	-1.8
OWD	Renai baz=273	0.42	272	⇓iP	Pg	13 32 15.6	0.0
OWD	baz=273			eS	Sg	13 32 21.0	-0.2
CHGB	Renai baz=287	0.44	286	⇓iP	Pg	13 32 16.1	+0.2
CHGB	baz=287			i S	Sb	13 32 23.1	-1.1
WUSB	Renai baz=286	0.48	277	⇓iP	Pg	13 32 16.9	+0.3
WUSB	baz=286			i S	Sg	13 32 23.4	+0.4
HGSD	Ruisui baz=185	0.48	204	P	Pb	13 32 17.8	-0.2
HGSD	baz=185			eS	Sb	13 32 26.8	+1.5
VWDT	VWDT baz=249	0.49	248	⇓iP	Pg	13 32 17.1	+0.3
VWDT	baz=249			S	Sg	13 32 23.5	+0.3
ENA	Nanau baz=11	0.50	11	⇓iP	Pg	13 32 17.2	+0.2
ENA	baz=11			S	Sg	13 32 23.8	+0.3
EHY	Hungye baz=220	0.52	214	⇑iP	Pg	13 32 17.2	-0.1
EWUT	Wuta baz=14	0.52	14	⇓iP	Pg	13 32 17.6	+0.2
EWUT	baz=14			S	Sg	13 32 24.8	+0.5
TWT	Tachien baz=307	0.53	307	⇓iP	Pb	13 32 18.0	-0.8
TWT	baz=307			i S	Sb	13 32 25.8	-0.8
TDCB	Techi baz=307	0.54	306	⇓iP	Pb	13 32 18.1	-1.0
TDCB	baz=307			S	Sg	13 32 25.1	+0.2
NNSB	Datong baz=336	0.54	335	⇓iP	Pg	13 32 18.1	+0.3
NNSB	baz=336			S	Sg	13 32 24.4	-0.5
NNS	Nan Shan baz=336	0.55	334	⇓iP	Pg	13 32 18.3	+0.2
NNS	baz=336			S	Sg	13 32 25.6	+0.2
LATG	Datong baz=351	0.60	350	⇓iP	Pg	13 32 19.1	+0.1
LATG	baz=351			S	Sb	13 32 28.1	-0.7
WPL	Puli Township baz=278	0.63	277	⇓iP	Pb	13 32 19.8	-0.6
WPL	baz=278			eS	Sg	13 32 27.7	+0.1
YULB	Yu-li baz=218	0.63	210	⇑iP	Pg	13 32 19.1	-0.3
YULB	baz=218			S	Sg	13 32 28.1	+0.5
ECBN	Changbin baz=181	0.64	195	eP	Pb	13 32 20.5	-0.2
ECBN	baz=181			eS	Sb	13 32 31.4	+1.6
SSLB	Suanglung baz=267	0.64	257	⇓iP	Pg	13 32 19.9	+0.1
SSLB	baz=267			i S	Sg	13 32 27.6	-0.5
DPDB	Guoxing baz=279	0.66	278	⇓P	Pb	13 32 20.5	-0.5
DPDB	baz=279			eS	Sg	13 32 28.9	+0.3
EYUL	Yuli baz=221	0.66	206	eP	Pb	13 32 20.6	-0.4
TWF1	Yuli baz=221	0.66	208	eP	Pg	13 32 19.8	-0.2
WCS	Beigang Elemen baz=281	0.67	280	eP	Pb	13 32 20.7	-0.5
WCS	baz=281			eS	Sb	13 32 29.7	-1.1
SMLT	Sun Moon Lake baz=266	0.68	265	⇑iP	Pb	13 32 20.7	-0.7
SMLT	baz=266			i S	Sg	13 32 29.6	+0.3
NDS	Dongshan baz=6.0	0.70	6	⇓iP	Pb	13 32 21.0	-0.7
NDS	baz=6.0			S	Sb	13 32 30.4	-1.0
TWC	Suao baz=8.0	0.70	16	⇓iP	Pg	13 32 21.0	+0.2
TWC	baz=8.0			S	Sg	13 32 30.2	+0.4
ENTT	Nioudou baz=356	0.70	355	⇓iP	Pb	13 32 21.2	-0.6
ENTT	baz=356			eS	Sb	13 32 30.5	-1.0
TYC	Yuchr baz=279	0.71	267	P	Pb	13 32 21.3	-0.7
TYC	baz=279			S	Sg	13 32 30.2	-0.2
WHP	Taichung City baz=291	0.72	298	⇓iP	Pb	13 32 21.7	-0.3
WHP	baz=291			S	Sb	13 32 31.2	-0.8
YHNB	Yeheng baz=343	0.77	342	⇓iP	Pb	13 32 22.5	-0.4
YHNB	baz=343			S	Sg	13 32 32.0	-0.1
YUS	Yu-Shan baz=243	0.77	235	P	Pb	13 32 22.7	-0.5
YUS	baz=243			eS	Sg	13 32 32.7	+0.4
NSK	Sanguang baz=342	0.78	341	⇓iP	Pb	13 32 22.6	-0.5
NSK	baz=342			S	Sg	13 32 32.5	+0.1
TWE	Neicheng baz=3.0	0.78	2	⇓iP	Pb	13 32 22.7	-0.3
TWE	baz=3.0			S	Sb	13 32 33.4	-0.4
FULB	Fuli baz=217	0.80	203	eP	Pb	13 32 23.7	+0.3
FULB	baz=217			eS	Sn	13 32 37.9	+1.0
FUSB	Fushanzhiwuyua baz=357	0.82	357	⇓iP	Pb	13 32 23.5	-0.3
FUSB	baz=357			S	Sb	13 32 34.7	-0.3
ILA	Ilan baz=357	0.83	7	eP	Pb	13 32 23.9	0.0
NFF	Wufeng Townshi baz=326	0.84	326	⇓iP	Pb	13 32 24.0	-0.1
NFF	baz=326			S	Sg	13 32 33.6	-0.7
WJS	Zhushan baz=263	0.84	262	eP	Pb	13 32 24.1	0.0
WJS	baz=263			eS	Sn	13 32 36.5	-1.4
NWLT	Wulai baz=352	0.84	352	⇓iP	Pb	13 32 23.9	-0.3
NWLT	baz=352			i S	Sg	13 32 34.7	+0.1
WWF	Wufeng baz=283	0.86	277	P	Pn	13 32 26.0	+0.3
CHKT	Chengkung baz=183	0.87	197	⇓iP	Pg	13 32 24.0	0.0
CHKT	baz=183			S	Sn	13 32 38.4	-0.2
ALS	Alishan baz=241	0.87	241	⇓iP	Pb	13 32 24.5	-0.3
ALS	baz=241			eS	Sg	13 32 35.4	-0.1
WNT	Mingjian baz=267	0.87	266	eP	Pn	13 32 25.1	-0.7
WNT	baz=267			eS	Sn	13 32 37.7	-1.0
TWQ1	Liyutan baz=299	0.89	298	P	Pn	13 32 25.4	-0.7
TWQ1	baz=299			S	Sn	13 32 38.1	-0.9
NSTT	Nanjuang baz=321	0.90	320	⇓iP	Pb	13 32 25.3	+0.2
NSTT	baz=321			S	Sb	13 32 36.9	-0.4
TCU	Taichung baz=280	0.90	284	P	Pn	13 32 26.2	0.0
TCU	baz=280			S	Sn	13 32 40.2	+0.8
LIOB	Emei baz=322	0.90	321	⇓iP	Pn	13 32 25.5	-0.8
LIOB	baz=322			eS	Sb	13 32 36.8	-0.6
ECS	Chishang baz=200	0.92	205	eP	Pn	13 32 27.7	+1.2
NTC	Toucheng baz=2.0	0.93	11	⇑iP	Pb	13 32 25.5	-0.1
NSY	Sanyi baz=302	0.93	301	⇓iP	Pn	13 32 26.6	-0.1
NSY	baz=302			S	Sn	13 32 39.8	-0.3
ELDTW	Lidau baz=213	0.94	217	P	Pg	13 32 24.1	-1.2
CHN5	Tsauling baz=239	0.94	249	⇓iP	Pn	13 32 26.3	-0.6
CHN5	baz=239			S	Sn	13 32 40.4	-0.2
EGS	baz=18	0.94	17	eP	Pn	13 32 26.7	0.0
NMLH	Miaoli baz=309	0.97	308	eP	Pn	13 32 27.5	+0.3
NMLH	baz=309			eS	Sn	13 32 41.1	-0.1
WCHH	Zhanghua baz=280	1.00	278	eP	Pn	13 32 27.8	+0.3
WCHH	baz=280			eS	Sn	13 32 43.7	+2.0
WDJ	Dajia District baz=296	1.00	294	eP	Pn	13 32 28.1	+0.6
WDJ	baz=296			eS	Sn	13 32 42.6	+0.8
HSN1	Hsinchu baz=326	1.01	326	eP	Pn	13 32 28.8	+1.1
EDH	Donghe baz=184	1.01	198	eP	Pg	13 32 26.0	-0.7
EDH	baz=184			eS	Sn	13 32 41.8	-0.2
WGK	Gukeng baz=258	1.02	256	i P	Pn	13 32 28.3	+0.5
WGK	baz=258			eS	Sn	13 32 43.2	+1.1
NHDH	Xindian Distri baz=354	1.02	354	eP	Pn	13 32 27.6	-0.3
NHDH	baz=354			eS	Sn	13 32 41.4	-1.0
WDLH	Douliu baz=259	1.04	256	eP	Pn	13 32 28.4	+0.3
WDLH	baz=259			eS	Sn	13 32 43.0	+0.3
SBCB	Hsinchu baz=325	1.04	325	eP	Pn	13 32 28.7	+0.6
TWA	Mucha baz=348	1.04	357	⇑iP	Pn	13 32 28.0	-0.1
TWA	baz=348			S	Sn	13 32 41.9	-0.9
TATO	Taipei baz=353	1.04	353	i P	Pn	13 32 28.2	+0.1
TIPB	Shuangxi baz=1.0	1.04	9	eP	Pb	13 32 27.7	+0.1
HSN	Hsinchu baz=328	1.05	325	eP	Pn	13 32 29.2	+0.9
STYH	Taoyuan baz=233	1.10	226	eP	Pb	13 32 28.3	-0.2
STYH	baz=233			eS	Sb	13 32 43.3	+0.4
TAP	Taipei baz=354	1.10	354	eP	Pn	13 32 29.6	+0.7
TAP	baz=354			eS	Sn	13 32 44.1	-0.3
NCUH	Zhongli baz=348	1.10	338	eP	Pn	13 32 29.9	+0.9
NCUH	baz=348			eS	Sn	13 32 46.3	+1.9
NCU	National Centr baz=349	1.11	338	eP	Pn	13 32 29.9	+0.9
NCU	baz=349			eS	Sn	13 32 47.6	+3.2

TWB1	Santiao Chiao	1.11	17	P	Pn	13 32 29.0	-0.1
	baz=10.0						
STYT	Tauyuan	1.12	226	iP	Pn	13 32 29.6	+0.3
	baz=207						
CHN4	Tsaushan	1.12	239	⇑iP	Pn	13 32 29.4	+0.2
	baz=231						
CHN4				iS	Sn	13 32 47.4	+2.5
	baz=231						
TPUB	Ta-pu	1.12	236	⇑P	Pb	13 32 28.9	0.0
	baz=237						
TPUB				S	Sn	13 32 45.2	+0.3
	baz=237						
LONT	Longtian	1.13	204	eP	Pg	13 32 28.8	-0.2
	baz=211						
LONT				eS	Sn	13 32 44.9	-0.1
	baz=211						
NWF	Wu-fen Shan	1.14	7	eP	Pn	13 32 29.7	+0.2
	baz=356						
NWF				eS	Sb	13 32 44.3	+0.2
	baz=356						
WFSB	Wu-fen Shan	1.14	7	iP	Pn	13 32 29.9	+0.4
	baz=8.0						
CHN2	Minshiung	1.14	249	iP	Pn	13 32 30.5	+1.1
	baz=252						
WRL	Guolierlin Hig	1.15	268	P	Pn	13 32 30.0	+0.3
	baz=271						
WRL				eS	Sn	13 32 46.2	+0.6
	baz=271						
WTP	Ta-pu	1.16	234	⇑iP	Pn	13 32 29.9	0.0
	baz=235						
WTP				S	Sn	13 32 47.7	+1.7
	baz=235						
WTK	Tuku	1.17	258	eP	Pn	13 32 30.0	+0.1
	baz=261						
WTK				eS	Sn	13 32 47.3	+1.3
	baz=261						
SXI1	Grass Mountain	1.17	11	eP	Pn	13 32 30.2	+0.2
	baz=3.0						
SXI1				eS	Sn	13 32 46.0	-0.2
	baz=3.0						
TWS1	Kuangyinshan	1.17	350	eP	Pn	13 32 30.4	+0.5
	baz=358						
TWS1				eS	Sn	13 32 48.7	+2.6
	baz=358						
NHW	Xinwu Township	1.19	333	eP	Pn	13 32 31.7	+1.5
	baz=321						
NHW				eS	Sn	13 32 49.4	+2.8
	baz=321						
CHY	Chiayi	1.20	249	eP	Pn	13 32 31.0	+0.8
	baz=252						
CHY				eS	Sn	13 32 47.9	+1.3
	baz=252						
YM01	YM01	1.20	357	P	Pn	13 32 30.5	0.0
	baz=5.0						
YM01				eS	Sn	13 32 46.7	-0.3
	baz=5.0						
TNOU	National Taiwa	1.21	6	eP	Pn	13 32 31.8	+1.3
	baz=7.0						
TWG	Pinlang	1.23	205	eP	Pb	13 32 28.1	-2.6
	baz=199						
TWGBT	Beinan	1.23	205	eP	Pb	13 32 28.2	-2.5
	baz=199						
NTST	Danshui	1.23	352	eP	Pg	13 32 31.8	+0.8
	baz=352						
NTST				eS	Sn	13 32 50.5	+2.9
	baz=352						
WTCT	Ta-ch'eng	1.24	267	eP	Pg	13 32 31.0	-0.1
	baz=270						
WTCT				eS	Sn	13 32 49.0	+1.2
	baz=270						
ANP	Anpu	1.25	355	eP	Pb	13 32 29.3	-1.8
	baz=357						
TWK	Hsinying	1.25	238	eP	Pg	13 32 31.5	+0.2
	baz=239						
TWK				eS	Sn	13 32 49.1	+1.1
	baz=239						
CHN1	Nanshi	1.26	234	⇓P	Pg	13 32 31.8	+0.3
	baz=236						
CHN1				S	Sn	13 32 50.9	+2.5
	baz=236						
SNST	Tainan City	1.27	236	eP	Pg	13 32 32.0	+0.4
	baz=238						
SNST				eS	Sn	13 32 50.3	+1.9
	baz=238						
LDUT	Ludao	1.27	187	eP	Pn	13 32 28.9	-2.3
	baz=171						
LDUT				eS	Sb	13 32 46.2	-1.7
	baz=171						
SGST	Jiashian	1.29	229	eP	Pn	13 32 30.8	-0.7
	baz=206						
JYNG	Yonagunijimaku	1.30	67	P	Pb	13 32 31.9	0.0
JYNG				eS	Sn	13 32 50.5	+1.3
SLGT	Liugui	1.31	224	iP	Pg	13 32 33.2	+0.8
	baz=203						
WSF	Szhu	1.33	257	eP	Pg	13 32 33.0	+0.2
	baz=261						
WSF				eS	Sn	13 32 51.6	+1.7
	baz=261						
TWY	Chenhua	1.33	359	eP	Pg	13 32 34.1	+1.2
	baz=346						
WSL	Shuilin Townsh	1.36	253	eP	Pg	13 32 33.5	+0.1
	baz=269						
WSL				eS	Sg	13 32 52.0	+1.0
	baz=269						
YOJ	Yonaguni jima	1.36	67	eP	Pn	13 32 32.3	-0.2
	baz=70						
YOJ	Yonaguni jima	1.36	67	eP	Pn	13 32 32.6	+0.1
YOJ				S	Sg	13 32 51.6	+0.6
ICHU	Yijhu	1.37	245	eP	Pg	13 32 33.5	-0.1
	baz=250						
ICHU				eS	Sg	13 32 53.5	+2.1
	baz=250						
CHN8	Yiju	1.43	246	eP	Pg	13 32 34.7	-0.2
	baz=248						
CHN3	Shinhua	1.45	234	eP	Pg	13 32 36.0	+0.9
	baz=232						
ECL	Taimali	1.48	205	⇓eP	Pn	13 32 31.8	-2.3
	baz=180						
SCST	Cishan	1.48	225	eP	Pg	13 32 35.7	0.0
	baz=204						
SHHT	Tainan City	1.49	233	eP	Pg	13 32 36.3	+0.3
	baz=230						
SSD	Sandimen	1.50	218	eP	Pn	13 32 34.2	-0.3
	baz=216						
SSD				eS	Sg	13 32 56.4	+0.7
	baz=216						
TSMG	Majia	1.53	217	eP	Pn	13 32 34.9	+0.1
	baz=198						
TWM1	Shoushan	1.57	225	eP	Pg	13 32 38.4	+0.9
	baz=222						
MASBT	Mashibuluo	1.61	215	eP	Pn	13 32 35.1	-0.8
	baz=196						
EAST	Anshuo	1.71	205	eP	Pb	13 32 38.3	-0.7
	baz=182						
TAW	Tawu	1.71	204	eP	Pb	13 32 38.9	-0.1
	baz=196						
TAWH	Dawu Township	1.73	204	eP	Pn	13 32 37.4	-0.2
	baz=181						
SSPT	Xinbi	1.75	214	eP	Pb	13 32 39.6	0.0
	baz=196						
SLIU	Shizi	1.88	204	eP	Pn	13 32 40.5	+0.8
	baz=187						
LAY	Lan-yu	1.89	182	eP	Pn	13 32 38.1	-1.7
	baz=175						
WDGT	Dungji	1.94	250	eP	Pn	13 32 40.8	+0.4
	baz=251						
PHUB	P'eng-hu	1.94	258	eP	Pn	13 32 40.9	+0.4
	baz=263						
PHUB				eS	Sb	13 33 06.6	-0.5
	baz=263						
PNG	Penghu	1.94	259	eP	Pn	13 32 41.0	+0.4
	baz=265						
PNG				eS	Sb	13 33 07.0	-0.3
	baz=265						
IRIF	Iriomote-Funau	1.95	78	P	Pn	13 32 41.2	+0.5
IRIF				eS	Sn	13 33 06.0	+0.7
HATJ	Hateruma jima	1.99	86	eS	Sn	13 33 06.3	+0.1
VCHM	Qimei	2.15	251	eP	Pn	13 32 42.6	-0.8
	baz=252						
JKRS	Kuro-shima	2.19	82	P	Pn	13 32 44.6	+0.7
JKRS				eS	Sn	13 33 12.1	+0.9
VWUC	VWUC	2.25	298	eP	Pn	13 32 44.1	-0.7
	baz=299						
JIJ	Ishigaki jima	2.33	79	P	Pn	13 32 45.5	-0.3
JIJ				S	Sn	13 33 13.4	-1.2
JISG	Ishigakijimahi	2.52	75	P	Pn	13 32 48.4	-0.2
JISG				eS	Sn	13 33 19.0	-0.5
MATB	Ma-tsu	2.69	326	eP	Pn	13 32 51.1	+0.3
	baz=309						
JTJ	Tarama	2.88	75	P	Pn	13 32 54.7	+1.2
JTJ				S	Sn	13 33 29.5	+1.2
LYJJ	Jianjiangzhen	3.11	327	eP	Pn	13 32 57.0	+0.5
	baz=312						
XPSS	Dashiqiu	3.25	337	eP	Pn	13 32 58.1	-0.5
	baz=333						
JMJ2	Miyako jima3	3.46	76	eS	Sn	13 33 43.7	+1.1
AXDP	Jialang	3.48	287	eP	Pn	13 33 01.4	-0.2
	baz=287						
ZPLA	Ao Xicun	3.56	271	eP	Pn	13 33 03.0	+0.3
	baz=273						
KSRS	Korea Array	14.51	20	P	P	13 35 40.4	+0.8
	2.0nm,0.6s,baz=201,slow=11,SNR=8.0						
CMAR	Chiang Mai Arr	21.84	260	P	P	13 37 04.8	+4.5
	0.4nm,0.3s,baz=165,slow=29,SNR=5.1						
CMAR				LR	LR	13 45 49.5	
	comp=Z,13nm,20.5s,baz=90,slow=37						
	0.4nm,0.3s						
MKAR	Makanchi Array	38.80	316	P	P	13 39 32.8	+0.3
	0.4nm,0.5s,baz=95,slow=9.9,SNR=5.6						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	40.67	327	P	P	13 39 46.2	-1.6
	0.6nm,0.5s,baz=159,slow=9.2,SNR=3.6						
	0.6nm,0.5s						
H11N1	WAKE ISLAND Hy	42.09	87	T	T	14 25 18.6	
	baz=276,slow=75,SNR=9.3						
H11N2	WAKE ISLAND Hy	42.09	87	T	T	14 25 15.4	
	baz=276,slow=75,SNR=9.5						
H11N3	WAKE ISLAND Hy	42.10	87	T	T	14 25 14.1	
	baz=276,slow=75,SNR=4.7						
H11S3	WAKE ISLAND Hy	42.21	88	T	T	14 25 03.1	
	baz=283,slow=74,SNR=32						
H11S1	WAKE ISLAND Hy	42.22	88	T	T	14 25 26.2	
	baz=283,slow=74,SNR=36						
H11S2	WAKE ISLAND Hy	42.23	88	T	T	14 25 02.5	
	baz=283,slow=74,SNR=22						
KURBB	Kurchatov Arra	42.56	320	P	P	13 40 03.2	-0.2
	0.4nm,0.6s,baz=112,slow=9.8,SNR=4.5						
	0.4nm,0.6s						
WRA	Warramunga Arr	45.34	163	P	P	13 40 25.0	-1.0
	0.2nm,0.6s,baz=344,slow=8.5,SNR=1.5						
	0.2nm,0.6s						
ASAR	Alice Springs	48.80	165	P	P	13 40 52.5	-0.5
	0.1nm,0.4s,baz=341,slow=6.9,SNR=7.5						
	0.1nm,0.4s						
ILAR	Eielson Array	69.24	27	P	P	13 43 12.4	-2.0
	0.2nm,0.7s,baz=309,slow=6.2,SNR=5.1						
	0.2nm,0.7s						
YKA	Yellowknife Ar	83.03	23	P	P	13 44 32.2	-0.7
	0.6nm,0.8s,baz=313,slow=4.9,SNR=9.9						
	0.6nm,0.8s						

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*IDC **01** 13:53:45.9±0.5, 57°.93S×25°.24W, h0^{km}, mb4.6/10, mbtmp4.6/11, ML4.6/1, MS3.8/25, Error ellipse: s-maj=23.8km s-min=15.9km az=68.0*

*NEIC **01** 13:53:51.4±1.3, 58°.0S±0°.1×25°.3W±0°.1, h35^{km}±1^{km}, mb4.8/65, Error ellipse: s-maj=18.1km s-min=8.2km az=196.0*

ISC 01 13:53:52.7±0.4**, 58°.01S**±0°.06×**25°.38W**±0°.09**, h49^{km}, n177, σ1^{s}.09**/157**, mb4.8**/37**, MS3.8**/23**, 2C-3D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.24	296		Pn	13 55 36.1	+0.3
VNA1	Neumayer--Stat	14.60	157	P	Pn	13 57 15.1	-1.0
VNA3	Neumayer Olymp	14.81	160	P	Pn	13 57 17.7	-1.1
VNA2	Neumayer--Watz	15.00	157	P	Pn	13 57 20.1	-1.2
	baz=318,slow=14						
SNAA	Sanae	16.55	155	P	Pn	13 57 40.7	-0.4
SNAA	Sanae	16.55	155	Pn	Pn	13 57 40.2	-0.8
	2.2nm,0.3s,baz=320,slow=14,SNR=47						
SNAA				Sn	Sn	14 00 32.0	-11
	0.1nm,0.3s,baz=317,slow=14,SNR=2.6						
SNAA				LR	LR	14 02 42.1	
	comp=Z,186nm,20.2s,baz=304,slow=32						
	6.3nm,0.4s						
SNAA	Sanae	16.55	155		Pn	13 57 40.4	-0.6
TROLL	Troll, Antarti	18.05	152	P	P	13 57 59.4	-0.2
PMSA	Palmer Station	19.44	234	LR	LR	14 04 25.8	
	comp=Z,499nm,18.9s,baz=88,slow=33						
PMSA	Palmer Station	19.44	234	Pn	Pn	13 58 20.4	+4.1
EFI	East Falkland	19.71	275	P	P	13 58 18.1	+0.3
EFI				IAmb	IAmb	13 58 36.1	
	comp=Z,106nm,1.2s						
BELA	Belgrano 2	20.21	186	P	P	13 58 23.0	+0.1
SMAI	San Martin Ant	20.98	224	P	P	13 58 31.0	-0.3
USHA	Ushuaia	23.72	259	LR	LR	14 06 05.8	
	comp=Z,417nm,21.5s,baz=280,slow=31						
DSPA	Despedida	24.02	261	P	P	13 59 02.4	-0.2
MG02	Cerro Sombrero	25.09	263	P	P	13 59 11.6	-0.7
MG05	Puerto Natales	27.38	263	P	P	13 59 33.6	+0.5
MG05				IAmb	IAmb	13 59 36.0	
	comp=Z,25nm,0.8s						
GO09	Cerro Castillo	27.51	264	P	P	13 59 34.7	+0.5
GO09				IAmb	IAmb	13 59 50.3	
	comp=Z,20nm,0.7s						
TRQA	Tornquist	31.01	294	P	P	14 00 05.7	+0.3
AY01	Puyuhuapi	31.86	274	P	P	14 00 12.9	+0.1
AY01				IAmb	IAmb	14 00 16.4	
	comp=Z,8.7nm,0.8s						
QSPA	South Pole Qui	32.24	180	P	P	14 00 17.1	+1.0
	comp=Z,6.3nm,0.7s,baz=202,slow=2.9,SNR=52						
QSPA				LR	LR	14 13 31.6	
	comp=Z,112nm,18.2s,baz=215,slow=37						
	comp=Z,6.3nm,0.7s						
QSPA	South Pole Qui	32.24	180	P	P	14 00 16.9	+0.8
QSPA				IAmb	IAmb	14 00 17.7	
	comp=Z,9.4nm,0.8s						
QSPA	South Pole Qui	32.24	180	⇑P	P	14 00 17.1	+1.0
QSPA				pP	pP	14 00 28.0	0.0
LL02	Futaleuf	32.28	277	P	P	14 00 17.6	+1.2
LL02				IAmb	IAmb	14 00 24.4	
	comp=Z,12nm,1.1s						
PLTB	Pedras Altas	32.54	312	P	P	14 00 18.5	-0.4
PLTB				IAmb	IAmb	14 00 24.8	
	comp=Z,26nm,1.5s						
PLTB	Pedras Altas	32.54	312	eP	P	14 00 18.9	0.0
PLCA	Paso Flores	33.34	281	P	P	14 00 26.1	+0.3
	comp=Z,6.2nm,0.8s,baz=146,slow=8.5,SNR=17						
PLCA				PcP	PcP	14 03 06.4	-0.2
	comp=Z,2.0nm,0.8s,baz=199,slow=6.3,SNR=4.0						
PLCA				LR	LR	14 13 51.6	
	comp=Z,164nm,18.0s,baz=140,slow=36						
	comp=Z,6.2nm,0.8s						
PLCA	Paso Flores	33.34	281	P	P	14 00 25.8	0.0
PLCA				IAmb	IAmb	14 00 27.2	
	comp=Z,7.0nm,0.8s						
PLCA	Paso Flores	33.34	281	eP	P	14 00 26.2	+0.3
PLCA	Paso Flores	33.34	281	⇓P	P	14 00 26.1	+0.3
PLCA				pP	pP	14 00 33.1	-4.6
LL04	Puerto Octay	34.18	279	P	P	14 00 32.4	-0.6
LL04				IAmb	IAmb	14 00 33.6	
	comp=Z,15nm,0.9s						
LC01	Cunco	35.38	282	P	P	14 00 43.4	0.0
LC01				IAmb	IAmb	14 00 44.7	
	comp=Z,14nm,1.4s						
ITQB	Itaqui	35.60	309	P	P	14 00 44.0	-1.4
ITQB				IAmb	IAmb	14 00 45.0	
	comp=Z,21nm,1.2s						
ITQB	Itaqui	35.60	309	eP	P	14 00 45.0	-0.4
ITAB	Concordia	36.04	317	P	P	14 00 49.9	+0.8
ITAB				IAmb	IAmb	14 00 52.3	
	comp=Z,34nm,1.4s						
ITAB	Concordia	36.04	317	eP	P	14 00 50.0	+0.8
BI05	Punta Hualpn	37.68	283	P	P	14 01 03.5	+0.5
BI05				IAmb	IAmb	14 01 03.9	
	comp=Z,19nm,0.7s						
MAW	Mawson	37.99	142	LR	LR	14 13 51.1	
	comp=Z,93nm,22.0s,baz=250,slow=32						
MAW	Mawson	37.99	142	P	P	14 01 05.1	-0.1
VAO	Valinhos	38.27	327	eP	P	14 01 10.2	+1.9
PTGB	Pitanga	38.32	319	eP	P	14 01 09.5	+0.9
FRTB	Fartura	38.75	323	eP	P	14 01 13.2	+1.1
CPUP	Villa Florida	38.84	311	P	P	14 01 12.0	-0.9
	comp=Z,3.7nm,0.8s,baz=146,slow=6.9,SNR=6.3						
CPUP				PcP	PcP	14 03 22.8	-0.3
	comp=Z,1.4nm,0.3s,baz=190,slow=4.9,SNR=4.0						
CPUP				LR	LR	14 17 16.3	
	comp=Z,48nm,18.9s,baz=200,slow=36						
	comp=Z,3.7nm,0.8s						
CPUP	Villa Florida	38.84	311	IAmb	IAmb	14 01 15.1	
	comp=Z,5.5nm,1.0s						
CPUP	Villa Florida	38.84	311	eP	P	14 01 12.3	-0.6
CPUP	Villa Florida	38.84	311	P	P	14 01 12.1	-0.8
ALF01	Guarapari-ES	38.99	337	eP	P	14 01 16.2	+2.1
BSCB	Bom Sucesso	39.58	331	eP	P	14 01 20.6	+1.5
RIB01	Linhares ES	40.19	338	eP	P	14 01 25.8	+1.6
SUR	Sutherland	40.27	71	LR	LR	14 13 47.7	
	comp=Z,195nm,18.6s,baz=226,slow=30						
BB19B	Bebedouro	40.56	326	eP	P	14 01 28.5	+1.3
PCMB	Pacaembu	40.92	322	eP	P	14 01 30.9	+0.8
SJMB	Sao Joao De Ma	40.94	337	eP	P	14 01 31.5	+1.2
CO01	Juntas del Tor	41.49	293	P	P	14 01 35.5	+0.4
NAN01	Guarapari, ES	41.56	339	eP	P	14 01 36.3	+0.9
DIAM	Diamantina, MG	41.89	333	eP	P	14 01 39.4	+1.1
LCO	Las Campanas	42.58	293	P	P	14 01 43.7	-0.3
GUA01	Guaratinga, BA	42.73	339	eP	P	14 01 46.6	+1.7
IPMB	Ipameri, GO	43.38	327	eP	P	14 01 51.9	+1.6
AC04	Llanos de Chal	43.43	293	P	P	14 01 50.1	-0.4
AC04				IAmb	IAmb	14 02 07.0	
	comp=Z,17nm,1.2s						
AQDB	Aquidauana	43.51	317	P	P	14 01 50.6	-0.6
AQDB	Aquidauana	43.51	317	eP	P	14 01 50.7	-0.5
AC02	Maricunga	43.64	296	P	P	14 01 52.1	-0.7
CMC01	Camacan, BA	43.87	340	eP	P	14 01 55.7	+1.5
SBA	Scott Base	44.19	184	P	P	14 01 57.8	+1.8
SBA	Scott Base	44.19	184	⇓P	P	14 01 58.4	+2.4
SBA				pP	pP	14 02 07.8	-0.6
VNDA	Vanda	44.66	182	P	P	14 02 01.4	+1.6
	comp=Z,6.7nm,0.7s,baz=190,slow=6.7,SNR=44						
VNDA				LR	LR	14 18 52.9	
	comp=Z,68nm,20.5s,baz=180,slow=34						
	comp=Z,6.7nm,0.7s						
VNDA	Vanda	44.66	182	P	P	14 02 01.2	+1.5
VNDA				IAmb	IAmb	14 02 02.4	
	comp=Z,8.3nm,0.8s						
VNDA	Vanda	44.66	182	⇑P	P	14 02 01.3	+1.6
JANB	Januaria	45.17	334	eP	P	14 02 05.0	+0.5
GDU01	Guandu, BA	45.49	340	eP	P	14 02 08.0	+1.0
BDFB	Brasilia	45.56	329	P	P	14 02 08.6	+0.9
	comp=Z,9.6nm,0.8s,baz=173,slow=8.1,SNR=9.6						
	comp=Z,9.6nm,0.8s						
BDFB	Brasilia	45.56	329	P	P	14 02 07.0	-0.7
BDFB				IAmb	IAmb	14 02 09.8	
	comp=Z,16nm,1.1s						
BOSA	Boshof	45.56	72	LR	LR	14 16 53.3	
	comp=Z,124nm,20.4s,baz=191,slow=30						
PP1B	Ponte de Pedra	45.87	319	eP	P	14 02 10.4	+0.4
LVC	Limon Verde	47.14	300	LR	LR	14 23 41.2	
	comp=Z,55nm,19.2s,baz=179,slow=38						
LVC	Limon Verde	47.14	300	P	P	14 02 19.6	-0.7
LVC	Limon Verde	47.14	300	eP	P	14 02 19.7	-0.6
SALV	Santo Antonio	47.72	319	eP	P	14 02 24.7	+0.2
SDBA	SAO DESIDERIO	47.86	334	eP	P	14 02 26.5	+0.8
NBLA	Lagarto - SE	47.86	343	eP	P	14 02 26.5	+0.9
PB09	IPOC Station P	47.99	300	P	P	14 02 26.6	-0.2
PB09				IAmb	IAmb	14 02 31.5	
	comp=Z,11nm,1.2s						
PB07	IPOC Station P	48.35	299	P	P	14 02 28.8	-0.8
PB07				IAmb	IAmb	14 02 38.5	
	comp=Z,5.8nm,0.8s						
NBPN	Ponto Novo - B	48.41	340	eP	P	14 02 30.7	+0.9
LBTB	Lobatse	48.69	70	LR	LR	14 19 44.3	
	comp=Z,120nm,18.5s,baz=194,slow=32						
PB01	IPOC Station P	48.76	300	P	P	14 02 32.1	-0.5
PB01				IAmb	IAmb	14 02 32.6	
	comp=Z,5.2nm,0.8s						
NBAN	Anadia - AL	48.95	346	eP	P	14 02 34.9	+0.9
PEXB	Peixe	49.01	330	eP	P	14 02 35.4	+1.0
PTLB	Pontes e Lacer	49.39	315	eP	P	14 02 37.4	+0.1
H10S2	ASCENSION HYDR	49.63	14	T	T	14 57 15.4	
	baz=188,slow=74,SNR=10.0						
H10S3	ASCENSION HYDR	49.63	14	T	T	14 57 18.1	
	baz=32,slow=74,SNR=12						
TSUM	Tsumeb	49.84	57	LR	LR	14 19 44.7	
	comp=Z,61nm,18.3s,baz=146,slow=31						
PB11	IPOC Station P	49.95	301	P	P	14 02 41.0	-0.7
PB11				IAmb	IAmb	14 02 47.1	
	comp=Z,6.2nm,0.9s						
SNDB	Serra Nova Dou	49.98	326	eP	P	14 02 43.0	+1.2
H10N1	ASCENSION HYDR	50.75	14	T	T	14 58 37.5	
	baz=230,slow=79,SNR=12						
H10N3	ASCENSION HYDR	50.75	14	T	T	14 58 39.2	
	baz=230,slow=79,SNR=61						
H10N2	ASCENSION HYDR	50.77	14	T	T	14 58 38.7	
	baz=230,slow=79,SNR=11						
PB16	IPOC Station P	51.12	302	P	P	14 02 50.3	-0.8
NBMA	Muriti-CE	51.57	343	eP	P	14 02 54.4	+0.5
SMTB	Santa Maria do	51.93	332	eP	P	14 02 57.9	+1.4
NBPV	Pedro Velho	52.03	347	eP	P	14 02 58.3	+1.1
PDRB	Porto dos Gac	52.06	320	eP	P	14 02 57.7	+0.2
VILB	Vilhena	52.08	315	eP	P	14 02 57.9	+0.3
LPAZ	La Paz	52.31	305	P	P	14 02 59.8	-0.2
	comp=Z,3.1nm,0.5s,baz=153,slow=5.5,SNR=18						
	comp=Z,3.1nm,0.5s						
LPAZ	La Paz	52.31	305	P	P	14 02 59.1	-0.9
LPAZ	La Paz	52.31	305	eP	P	14 03 00.1	+0.1
CLDB	Colider	52.44	321	eP	P	14 03 00.1	-0.2
RCBR	Riachuelo	52.69	347	LR	LR	14 22 16.7	
	comp=Z,40nm,18.5s,baz=321,slow=32						
PRPB	Parauapebas	55.09	330	eP	P	14 03 21.1	+1.4
DRV	Dumont d'Urvil	55.16	173	P	P	14 03 17.8	-1.7
SAML	Samuel	56.88	314	⇓P	P	14 03 32.1	-0.3
SAML				pP	pP	14 03 40.1	-4.9
ETMB	Extrema	57.29	310	eP	P	14 03 34.6	-0.7
LSZ	Lusaka	58.21	66	LR	LR	14 25 34.0	
	comp=Z,127nm,18.6s,baz=172,slow=33						
TMAB	Tom-Au,PA,Br	58.30	333	eP	P	14 03 44.4	+2.0
ITTB	Itaituba	58.53	324	eP	P	14 03 44.4	+0.5
NNA	Nana	60.05	298	LR	LR	14 28 17.0	
	comp=Z,41nm,21.8s,baz=160,slow=34						
MALB	Monte Alegre	60.46	326	eP	P	14 03 58.2	+1.0
MCPB	Macapa, AP	61.25	329	eP	P	14 04 04.0	+1.4
MACA	Manacapuru-AM	61.30	319	eP	P	14 04 02.1	-0.9
RPN	Rapa Nui	64.28	260	LR	LR	14 25 17.4	
	comp=Z,63nm,21.5s,baz=233,slow=29						
LIC	Lamto	66.11	22	eP	P	14 04 35.8	+1.2
	comp=Z,25nm,1.5s						
KIC	Kosan Boka	66.30	22	eP	P	14 04 36.4	+0.6
	comp=Z,11nm,0.9s						
BOAV	Boa Vista	66.43	321	eP	P	14 04 36.2	-0.5
TIC	Toumodi	66.52	22	eP	P	14 04 37.8	+0.6
DBIC	Dimbokro	66.57	22	P	P	14 04 37.6	+0.1
	comp=Z,5.5nm,0.8s,baz=202,slow=5.9,SNR=7.1						
DBIC				LR	LR	14 28 30.5	
	comp=Z,46nm,18.3s,baz=154,slow=31						
	comp=Z,5.5nm,0.8s						
DBIC	Dimbokro	66.57	22	P	P	14 04 37.4	-0.1
DBIC				IAmb	IAmb	14 04 38.5	
	comp=Z,18nm,1.2s						
OTAV	Otavalo	71.56	303	P	P	14 04 53.7	-15
MBAR	Mbarara	72.21	61	LR	LR	14 34 52.8	
	comp=Z,49nm,18.0s,baz=210,slow=34						
TOA0	Torodi Ar. Sit	74.31	27	P	P	14 05 24.9	+0.2
TOA0				IAmb	IAmb	14 05 26.0	
	comp=Z,7.6nm,0.8s						
TORD	Torodi Ar. Bea	74.31	27	P	P	14 05 24.9	+0.2
	comp=Z,6.1nm,0.7s,baz=199,slow=6.1,SNR=46						
	comp=Z,6.1nm,0.7s						
TORD	Torodi Ar. Bea	74.31	27	P	P	14 05 24.8	+0.1
KMBO	Kilima Mbogo	74.86	67	LR	LR	14 36 07.4	
	comp=Z,85nm,18.4s,baz=112,slow=34						
BAUV	El Baul	75.16	316	P	P	14 05 29.8	+0.1
BAUV				IAmb	IAmb	14 05 31.1	
	comp=Z,19nm,0.9s						
WHZ	Wether Hill Ro	75.88	190	P	P	14 05 34.6	+1.1
WHZ				IAmb	IAmb	14 05 38.0	
	comp=Z,26nm,1.2s						
GRGR	Grenville	75.94	323	P	P	14 05 34.9	+0.8
BIRV	Birongo	75.94	318	P	P	14 05 34.8	+0.6
SDV	Santo Domingo	76.09	314	eP	P	14 05 33.8	-1.5
ODZ	Otahua Downs	76.45	192	P	P	14 05 37.9	+1.1
ODZ				IAmb	IAmb	14 05 42.1	
	comp=Z,24nm,1.3s						
ZARC	Zaragoza, Cauc	76.51	309	P	P	14 05 35.7	-1.6
ZARC				IAmb	IAmb	14 05 37.0	
	comp=Z,5.5nm,0.8s						
MQZ	McQueen's Vall	77.54	193	P	P	14 05 43.6	+0.7
MQZ				IAmb	IAmb	14 05 44.0	
	comp=Z,16nm,1.1s						
LTZ	Lake Taylor	78.50	193	P	P	14 05 49.1	+0.8
LTZ				IAmb	IAmb	14 05 53.6	
	comp=Z,7.2nm,0.8s						
MAGL	Barre de l'ile	79.42	325	P	P	14 05 54.5	+1.1
THZ	Tophouse	79.42	194	P	P	14 05 53.9	+0.5
THZ				IAmb	IAmb	14 05 59.9	
	comp=Z,14nm,0.6s						

GDHS	Morne Mazeau,	79.87	325	P	P	14 05 57.4	+1.4
NNZ	Nelson	79.90	194	P	P	14 05 56.4	+0.5
BKZ	Black Stump Fm	81.47	197	P	P	14 06 05.4	+1.0
BKZ				IAmb	IAmb	14 06 19.8	
	comp=Z,17nm,1.3s						
HIZ	Hauiti	82.35	196	P	P	14 06 08.9	-0.1
STVI	Saint Thomas	82.83	322	P	P	14 06 11.7	+0.2
PDPR	Patillas Dam,	82.87	321	P	P	14 06 10.8	-0.9
CUPR	Culebra, Puert	82.89	322	P	P	14 06 11.4	-0.4
CBYP	Canovanas	83.05	322	P	P	14 06 12.4	-0.3
OBIP	Obispado Ponce	83.09	321	P	P	14 06 11.9	-0.9
CELP	Cerrillos	83.11	321	P	P	14 06 11.8	-1.2
ORTG	Ortega, Santa	83.69	301	P	P	14 06 16.4	+0.2
ATD	Arta Tunnel	88.54	66	LR	LR	14 44 32.8	
	comp=Z,87nm,18.8s,baz=15,slow=34						
MTO3	Montecristo	89.02	299	P	P	14 06 41.7	-0.7
MTO3				IAmb	IAmb	14 06 42.9	
	comp=Z,6.0nm,0.8s						
STKA	Stephens Creek	89.79	169	P	P	14 06 46.2	+0.5
	comp=Z,1.0nm,0.3s,baz=218,slow=6.2,SNR=3.9						
	comp=Z,1.0nm,0.3s						
STKA	Stephens Creek	89.79	169	IAmb	IAmb	14 06 46.8	
	comp=Z,2.3nm,1.3s						
PPT	Papeete	91.80	232	LR	LR	14 39 37.1	
	comp=Z,50nm,18.2s,baz=134,slow=30						
MDT	Midelt	92.14	17	LR	LR	14 43 06.9	
	comp=Z,48nm,18.4s,baz=154,slow=32						
ASAR	Alice Springs	96.82	161	P	P	14 07 17.6	-0.7
	comp=Z,1.3nm,0.8s,baz=179,slow=3.9,SNR=17						
ASAR				LR	LR	14 48 17.5	
	comp=Z,44nm,20.6s,baz=224,slow=34						
	comp=Z,1.3nm,0.8s						
ESDC	Sonseca Array	98.96	17	LR	LR	14 51 27.2	
	comp=Z,31nm,18.5s,baz=167,slow=35						
WRA	Warramunga Arr	100.53	161	P	Pdif	14 07 33.4	-1.5
	comp=Z,0.5nm,0.8s,baz=204,slow=5.2,SNR=2.8						
PDAR	Pinedale Array	122.20	300	PKP	PKPdf	14 12 41.5	+0.1
	comp=Z,0.4nm,0.5s,baz=123,slow=4.9,SNR=3.7						
NVAR	Mina Array Bea	123.05	291	PKP	PKiKP	14 12 43.8	+0.5
	comp=Z,0.8nm,0.8s,baz=170,slow=2.5,SNR=5.4						
CMAR	Chiang Mai Arr	123.46	110	PKP	PKPdf	14 12 43.8	-0.4
	comp=Z,2.0nm,0.7s,baz=231,slow=4.2,SNR=14						
CMAR	Chiang Mai Arr	123.46	110		PKPdf	14 12 43.9	-0.3
FINES	FINESS Array B	125.66	28	PKP	PKPdf	14 12 46.6	-0.4
	comp=Z,1.1nm,0.6s,baz=164,slow=1.1,SNR=12						
AAK	Ala-Archa	129.69	71	PKP	PKPdf	14 12 55.7	+0.1
	comp=Z,1.5nm,0.6s,baz=222,slow=4.1,SNR=5.0						
ARCES	ARCESS Array B	132.40	22	PKP	PKPdf	14 12 59.6	-0.1
	comp=Z,1.1nm,0.7s,baz=264,slow=1.2,SNR=6.4						
MKAR	Makanchi Array	136.56	72	PKhKP	PKPpre	14 13 00.1	
	comp=Z,0.2nm,0.6s,baz=336,slow=2.7,SNR=3.5						
MKAR				PKP	PKPdf	14 13 07.1	-1.1
	comp=Z,0.7nm,0.8s,baz=264,slow=3.4,SNR=6.4						
YKA	Yellowknife Ar	138.28	316	PKhKP	PKPpre	14 13 00.7	
	comp=Z,0.4nm,0.7s,baz=121,slow=3.0,SNR=7.6						
YKA				PKP	PKPdf	14 13 09.1	-1.7
	comp=Z,4.5nm,0.8s,baz=124,slow=2.0,SNR=5.2						
YKA	Yellowknife Ar	138.28	316	PKPdf	PKPdf	14 13 11.2	+0.4
SONM	Songino Array	149.83	88	PKPbc	PKPbc	14 13 36.3	-0.1
	comp=Z,5.2nm,0.8s,baz=228,slow=2.8,SNR=32						
SONM	Songino Array	149.83	88		PKPbc	14 13 35.8	-0.6
NRIK	Noril'sk	149.89	41	PKPbc	PKPbc	14 13 35.9	+0.2
	comp=Z,2.4nm,0.6s,baz=320,slow=1.5,SNR=4.1						
ILAR	Eielson Array	152.14	309	PKPbc	PKPbc	14 13 41.0	0.0
	comp=Z,9.9nm,0.9s,baz=87,slow=0.8,SNR=50						

TRN 01 13:59:37.4, 18°07N×61°62W, h25^{km}, MD3.9, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.43	202	eP	Pn	13 59 48.1	+0.2
ANWB				eS	Sn	13 59 55.9	+1.0
ANBD	Bethesda, Anti	1.02	188	eP	Pn	13 59 56.2	+0.1
ANBD				eS	Sn	14 00 12.2	+2.6
BPA	Boggy Peak	1.04	193	eP	Pb	13 59 56.8	0.0
BPA				eS	Sn	14 00 11.9	+1.8
SKOC	St. Kitts, UWI	1.31	234	eP	Pb	14 00 02.5	+1.1
SMRT	St. Maarten	1.39	270	eP	Pb	14 00 02.1	-0.5
SMRT				eS	Sb	14 00 20.9	+1.0
SEUS	St. Eustatius	1.42	246	eP	Pb	14 00 04.4	+1.2
SEUS				eS	Sb	14 00 22.1	+1.2
MBFL	Flemmings, Mon	1.43	204	eP	Pb	14 00 03.4	0.0
MBFL				eS	Sb	14 00 22.0	+0.8
MLYT	Lee's Yard	1.45	202	eP	Pb	14 00 03.1	-0.5
MLYT				eS	Sb	14 00 23.6	+1.9
ABD	La Joyeuse, An	1.59	176	eP	Pb	14 00 05.9	-0.2
ABD				eS	Sb	14 00 26.9	+1.2
CBE	Ff, Capester	1.99	180	eP	Pb	14 00 11.4	-1.5
CBE				eS	Sn	14 00 34.8	+1.3
MAGL	Barre de l'ile	2.13	171	eP	Pb	14 00 13.7	-1.6
MAGL				eS	Sb	14 00 39.2	-2.1
TDBA	Terre de Bas,	2.21	180	eP	Pb	14 00 14.8	-1.8
TDBA				eS	Sb	14 00 41.6	-1.9
MPOM	Morne Pois Mar	3.67	168	eP	Pn	14 00 34.3	+1.7
MPOM				eS	Sn	14 01 17.4	+2.3
AOPR	Arecibo Observ	4.89	274	eP	Pn	14 00 51.0	+1.6
AOPR	Arecibo Observ	4.89	274	eS	Sn	14 01 46.2	+1.0

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*TUL **01** 14:02:32.8±0.9, 35°53N±0°02×97°26W±0°02, h7^{km}±4^{km}, ML2.8, mb_Lg2.6/38(NEIC), Error ellipse: s-maj=3.1km s-min=1.8km az=123.0*

NEIC 01 14:02:33.0±0.7, **35°54N**±0°01×**97°28W**±0°02, **h9**^{km}±4^{km}, **Error ellipse: s-maj=3.0km s-min=1.4km az=119.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.02	327	Pg	Pg	14 02 34.4	-0.2
OK001				Sg	Sg	14 02 35.5	-0.3
OK009	Oakdale Elemen	0.13	287	Pg	Pg	14 02 36.0	+0.2
OK009				Sg	Sg	14 02 38.4	+0.5
ADOK	Arcadia Dam	0.13	324	Pg	Pg	14 02 36.3	+0.3
OKCSW	OKLAHOMA CITY	0.19	224	Pg	Pg	14 02 37.0	0.0
OKCFA	Oklahoma City	0.19	228	Pg	Pg	14 02 37.0	+0.1
FNO	Franklin	0.30	200	Pg	Pg	14 02 39.0	0.0
X34A	Smith Ranch, M	1.05	206	Pg	Pg	14 02 52.8	-0.3
TUL1	Leonard	1.26	73	Pn	Pn	14 02 55.7	-1.1
WMOK	Wichita Mounta	1.47	237	Pn	Pn	14 02 59.3	-0.4
T35A	Sooner Cattle	1.50	24	Pn	Pn	14 02 59.7	-0.5
U32A	Winter Ranch,	1.63	301	Pn	Pn	14 03 02.3	+0.4
X37A	Clayton	1.83	121		Pn	14 03 04.6	0.0
X37A				IAmb_Lg		14 03 34.5	
	comp=Z,12nm,0.9s						
Z35A	Perchaven, San	2.21	180	IAmb_Lg		14 03 48.2	
	comp=Z,16nm,0.7s						
HHAR	Hobbs	2.81	74	Pn	Pn	14 03 17.9	-0.1
W39A	Magazine	2.88	96	Pn	Pn	14 03 18.6	-0.3
KSU1	Kansas State U	3.59	8	IAmb_Lg		14 04 30.8	
	comp=Z,10nm,1.0s						
X40A	Basin Creek Fa	3.79	105	IAmb_Lg		14 04 37.4	
	comp=Z,9.8nm,0.9s						
S39A	Bolivar	3.83	55	Pn	Pn	14 03 32.2	0.0
W41B	Gary Mavity, V	4.13	94	IAmb_Lg		14 04 49.9	
	comp=Z,8.6nm,0.8s						
FCAR	Ozark Folk Cen	4.21	84	IAmb_Lg		14 04 48.9	
	comp=Z,6.0nm,0.8s						
143A	Socs Landing,	5.63	119	IAmb_Lg		14 05 44.0	
	comp=Z,31nm,0.8s						
PBMO	Poplar Bluff	5.67	75	IAmb_Lg		14 05 31.9	
	comp=Z,5.0nm,0.7s						
GNAR	Gosnell	5.92	84	IAmb_Lg		14 05 36.1	
	comp=Z,32nm,0.8s						
T25A	Trinidad	5.97	288	IAmb_Lg		14 05 44.1	
	comp=Z,5.7nm,0.8s						
Y45A	Yeager Farm, C	6.58	103	IAmb_Lg		14 06 16.3	
	comp=Z,12nm,0.8s						
S44A	Carbondale	6.80	69	IAmb_Lg		14 06 10.9	
	comp=Z,26nm,0.7s						
344A	Westbrook Farm	6.82	125	IAmb_Lg		14 06 08.5	
	comp=Z,18nm,0.8s						
T45A	Paducah	7.12	76	IAmb_Lg		14 06 18.7	
	comp=Z,20nm,1.0s						
Q44A	Meyer Farm, Va	7.39	61	IAmb_Lg		14 06 44.1	
	comp=Z,12nm,0.7s						
OLIL	Olney	7.99	64	IAmb_Lg		14 06 51.8	
	comp=Z,21nm,1.1s						

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*IDC **01** 14:04:07.9±1.7, 2°68S×127°93E, h0^{km}, mb3.4/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=44.3km s-min=27.9km az=77.0*

*DJA **01** 14:04:15.8±0.4, 3°S±2°×12°9E±°, h10^{km}, M3.4/6, MLv3.4/6*

ISC 01 14:04:17.7±1.2, **3°02S**±0°06×**128°77E**±0°07, **h33**^{km}, **n9**, σ**0^{s}80**/10, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.36	153	P	Pn	14 04 25.9	-0.8
MSAI				S	Sn	14 04 32.0	-0.5
AAI	Ambon	0.87	221	P	Pb	14 04 34.4	-0.1
AAI				S	Sb	14 04 47.1	+1.2
LBMI	Labuha	2.69	332	P	Pn	14 04 58.0	-0.6
SANI	Sanana	2.94	289	P	Pn	14 05 01.5	-0.6
SWI	Sorong	3.29	49	P	Pn	14 05 06.7	-0.2
SIJI	Sorong	3.29	49	Pn	Pn	14 05 07.1	+0.2
	4.1nm,0.3s,baz=243,slow=16,SNR=14						
	7.9nm,0.3s						
WRA	Warramunga Arr	17.68	162	P	P	14 08 21.8	-0.4
	0.1nm,0.3s,baz=340,slow=12,SNR=6.1						
	0.5nm,0.6s						
ASAR	Alice Springs	21.12	167	P	P	14 09 00.9	+1.1
	0.9nm,0.4s,baz=342,slow=9.6,SNR=42						
	0.9nm,0.4s						
MKAR	Makanchi Array	64.25	326	P	P	14 14 40.0	-10
	0.2nm,0.6s,baz=146,slow=13,SNR=2.4						
	0.2nm,0.6s						

IDC 01 14:04:48.9±1.7, **3°00S**×**128°55E**, **h0**^{km}, **mb3.5**/2, **mbtmp3.6**/5, **ML3.3**/3, **Error ellipse: s-maj=43.6km s-min=26.5km az=87.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.44	52	Pn	Pn	14 05 42.2	-1.6
	4.6nm,0.3s,baz=225,slow=20,SNR=11						
SIJI				Sn	Sn	14 06 21.4	-4.0
	1.7nm,0.3s,baz=219,slow=20,SNR=1.7						
	11nm,0.3s						
FITZ	Fitzroy Crossi	15.28	191	Pn	Pn	14 08 27.6	+1.6
	baz=15,slow=16,SNR=2.2						
	1.5nm,0.9s						
WRA	Warramunga Arr	17.77	162	P	P	14 08 58.3	-0.4
	0.2nm,0.3s,baz=336,slow=12,SNR=10						
	0.5nm,0.3s						
ASAR	Alice Springs	21.19	166	P	P	14 09 35.9	-0.3
	0.7nm,0.3s,baz=348,slow=12,SNR=3.1						
	0.7nm,0.3s						
MKAR	Makanchi Array	64.11	327	P	P	14 15 25.3	+0.3
	0.3nm,0.6s,baz=121,slow=6.9,SNR=2.6						
	0.3nm,0.6s						

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*NIED **01** 14:06:58.5, 33°26N×134°04E, h26^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.90; $M_{\theta\theta}$-2.30; $M_{\phi\phi}$1.40; $M_{r\theta}$-0.40; $M_{\theta\phi}$-0.15; $M_{\phi r}$-0.31; Fault plane solution: $M_0$1.95000×10^{14} NP1: ϕ_s131.00000°, δ66.00000°, λ166.00000°. NP2: ϕ_s227.00000°, δ77.00000°, λ24.00000°.*

JMA 01 14:06:58.5±0.1, **33°3N**±0°2×**134°0E**±0°3, **h26**^{km}, **MV3.8**/40, **6D, TOSA BAY REGION, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRT2	Murotomisaki 2	0.15	35	P	Pb	14 07 03.7	-0.2
MRT2				S	Sb	14 07 07.0	-0.4
JMN	Monobe	0.48	344	⇓P	Pb	14 07 08.6	0.0
JMN				⇓S	Sb	14 07 15.5	+0.1
JKHR	Kochiharuno	0.52	299	⇓P	Pb	14 07 09.0	-0.1
JKHR				⇓S	Sb	14 07 16.2	0.0
JAI	Aioi	0.63	33	⇓iP	Pb	14 07 10.7	-0.3
JAI				⇓S	Sb	14 07 18.9	-0.6
JKU	Kubokawa	0.82	273	iP	Pb	14 07 13.2	-1.0
JKU				S	Sb	14 07 24.6	-0.3
JET	Tanbara	0.97	302	iP	Pn	14 07 15.5	-1.0
JET				S	Sb	14 07 28.0	-1.3
JJS	Sakaide	1.11	355	P	Pn	14 07 17.6	-0.8
JJS				S	Sn	14 07 32.1	-0.8
JTO	Tosashimizu	1.11	249	P	Pn	14 07 18.4	0.0
JTO				S	Sn	14 07 32.8	-0.1
UWA2	Uwa jima 2	1.19	268	P	Pn	14 07 18.5	-1.0
UWA2				S	Sn	14 07 34.8	+0.1

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*IDC **01** 14:12:45.8±1.3, 14°56S×166°67E, h0^{km}, mb4.3/3, mbtmp4.2/4, ML3.8/1, MS3.1/2, Error ellipse: s-maj=55.6km s-min=29.8km az=95.0*

*NOU **01** 14:12:47.0, 14°48S×166°26E, h0^{km}, mb4.4/11, Vanuatu Islands*

*NEIC **01** 14:12:51.2±1.1, 14°57S±0°10×166°5E±0°1, h35^{km}±2^{km}, mb4.7/7, Error ellipse: s-maj=20.2km s-min=15.7km az=69.0*

ISC 01 14:12:50.2±0.9, **14°55S**±0°08×**166°40E**±0°09, **h28**^{km}, **n24**, σ**0^{s}86**/26, **mb4.5**/8, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.18	139	Pn	Pn	14 13 10.9	0.0
SANVU				Sn	Sb	14 13 28.6	+1.6
SANVU	Saraoutou	1.18	139	P	Pb	14 13 11.4	-0.7
DVP	Devils Point	3.59	152	P	Pn	14 13 45.1	+1.0
KOUNC	Koumac, New Ca	6.30	198	Pn	Pn	14 14 21.6	+0.3
KOUNC	Koumac, New Ca	6.30	198	P	Pn	14 14 21.3	0.0
DZM	Mont Dzumac	7.48	180	Pn	Pn	14 14 37.3	-0.3
	1.4nm,0.3s,baz=354,slow=19,SNR=25						
DZM				Sn	Sn	14 16 00.0	-1.6
	0.2nm,0.3s,baz=305,slow=23,SNR=1.2						
DZM				LR	LR	14 17 17.0	
	comp=Z,137nm,19.9s,baz=334,slow=36						
	7.1nm,0.6s						
DZM	Mont Dzumac	7.48	180	P	Pn	14 14 37.8	+0.2
NOUC	Port Laguerre	7.51	181	P	Pn	14 14 38.9	+0.9
ONTNC	Ouen Toro	7.71	180	Pn	Pn	14 14 40.9	+0.1
ONTNC	Ouen Toro	7.71	180	P	Pn	14 14 41.6	+0.8
PINNC	Pines Island,	8.08	173	P	Pn	14 14 47.1	+1.3
STKA	Stephens Creek	28.47	228	P	P	14 18 44.0	+0.9
CMAR	Chiang Mai Arr	74.11	294	P	P	14 24 25.9	+1.4
	0.9nm,0.3s,baz=142,slow=4.6,SNR=6.1						
CMAR				LR	LR	14 56 00.6	
	comp=Z,13nm,20.4s,baz=220,slow=35						
	0.9nm,0.3s						
QSPA	South Pole Qui	75.47	180	P	P	14 24 30.4	-1.4
QSPA				IAmb	IAmb	14 24 43.0	
	comp=Z,5.0nm,1.2s						
CAST	Castle Rocks	84.08	17	P	P	14 25 18.5	+0.5
CAST				IAmb	IAmb	14 25 18.9	
	comp=Z,5.0nm,1.0s						
KTH	Kantishna Hill	84.52	18	P	P	14 25 20.1	-0.3
TRF	Thorofare Moun	84.63	18	P	P	14 25 21.1	+0.1
TRF				IAmb	IAmb	14 25 35.8	
	comp=Z,10nm,1.4s						
GLB	Gilahina Butte	85.33	22	P	P	14 25 24.3	-0.2
GLB				IAmb	IAmb	14 25 32.8	
	comp=Z,9.2nm,1.2s						
IMAR	Indian Mountai	85.61	15	P	P	14 25 25.9	+0.2
IL13	Eielson Array	86.57	18	P	P	14 25 29.9	-0.5
ILAR	Eielson Array	86.62	18	P	P	14 25 30.4	-0.3
	comp=Z,1.6nm,0.7s,baz=238,slow=5.2,SNR=19						
	comp=Z,1.6nm,0.7s						
IL18	Eielson Array	86.64	18	P	P	14 25 30.5	-0.3
J25K	Salcha River,	86.97	19		P	14 25 31.9	-0.7
J25K				IAmb	IAmb	14 25 34.7	
	comp=Z,4.6nm,1.0s						
YKA	Yellowknife Ar	97.78	27	P	P	14 26 21.6	-0.9
	comp=Z,0.6nm,0.8s,baz=256,slow=4.6,SNR=6.5						
	comp=Z,0.6nm,0.8s						

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*IDC **01** 14:23:12.3±1.1, 32°52N×130°63E, h0^{km}, mb3.5/5, mbtmp3.6/9, ML3.1/4, MS2.9/6, Error ellipse: s-maj=24.2km s-min=9.7km az=108.0*

*JMA **01** 14:23:14.1±0.1, 32°6N±0°2×130°7E±0°2, h8^{km}±1^{km}, MD3.9/19, MV4.0/19, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

*NIED **01** 14:23:14.1, 32°56N×130°68E, h8^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.20; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$0.61; $M_{r\theta}$3.10; $M_{\theta\phi}$5.51; $M_{\phi r}$-0.86; Fault plane solution: $M_0$6.37000×10^{14} NP1: ϕ_s360.00000°, δ62.00000°, λ-173.00000°. NP2: ϕ_s266.00000°, δ84.00000°, λ-28.00000°.*

ISC 01 14:23:14.7±0.9, **32°55N**±0°03×**130°69E**±0°06, **h10**^{km}±7^{km}, **n27**, σ**1^{s}30**/18, **mb3.5**/5, **MS3.0**/3, **2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.10	92	P	Pg	14 23 16.6	-0.7
JIU3				S	Sg	14 23 18.6	-0.6
JIU3	Izumi3	0.10	92	A	A	14 23 16.6	
	comp=E,182nm,0.3s,comp=E,110nm,0.3s						
JZO	Okuchi	0.42	191	⇓iP	Pg	14 23 22.4	-0.5
JZO				⇓S	Sg	14 23 28.2	-0.2
JZO	Okuchi	0.42	191	A	A	14 23 22.4	
	comp=E,17nm,0.4s,comp=E,24nm,0.7s						
JTA	Tamana	0.43	342	iP	Pg	14 23 22.5	-0.7
JTA				S	Sg	14 23 28.3	-0.6
JHD	Hondo	0.48	260	A	A	14 23 23.3	
	comp=E,7.0nm,1.4s,comp=E,16nm,1.6s						
JNU	Nakatsue	0.59	15	Pg	Pg	14 23 24.9	-1.2
	175nm,0.3s,baz=238,slow=7.1,SNR=392						
JNU				Lg	Lg	14 23 32.8	
	1µm,0.3s,baz=291,slow=18,SNR=36						
JNU				LR	LR	14 23 53.5	
	comp=Z,283nm,21.1s,baz=312,slow=64						
JKIT	Kitakata	0.65	83	A	A	14 23 26.7	
	comp=E,15nm,0.4s,comp=E,18nm,0.3s						
JTZ	Takazaki	0.73	153	iP	Pg	14 23 29.0	+0.2
JTSN	Tsuno	0.75	114	A	A	14 23 28.7	
	comp=E,5.0nm,1.9s,comp=E,9.0nm,0.8s						
JHHC	Hyugahichiya	0.81	98	A	A	14 23 29.7	
	comp=E,8.0nm,0.7s,comp=E,9.0nm,1.4s						
JFI	Itaya	0.91	344	A	A	14 23 31.2	
	comp=E,6.0nm,0.3s,comp=E,4.0nm,1.0s						
JSU	Suzuyama	1.06	191	A	A	14 23 34.2	
	comp=E,3.0nm,2.6s,comp=E,3.0nm,0.5s						
JKI	Kunimi	1.30	34	A	A	14 23 38.2	
	comp=E,3.0nm,1.2s,comp=E,9.0nm,0.9s						
JTY	Toyota	1.73	10	A	A	14 23 44.8	
	comp=E,4.0nm,3.4s,comp=E,2.0nm,0.6s						
KSRS	Korea Array	5.39	336	Pn	Pn	14 24 35.0	0.0
	0.3nm,0.3s,baz=156,slow=14,SNR=4.2						
KSRS				Pg	Pb	14 24 52.1	+3.2
	1.2nm,0.3s,baz=152,slow=17,SNR=11						
KSRS				Lg	Lg	14 25 56.0	
	0.7nm,0.3s,baz=157,slow=30,SNR=4.6						
KSRS				LR	LR	14 26 46.7	
	comp=Z,99nm,18.4s,baz=160,slow=40						
	0.6nm,0.3s						
MJAR	Matsushiro Arr	7.37	55	Pn	Pn	14 25 03.0	+0.7
	0.3nm,0.3s,baz=236,slow=13,SNR=13						
MJAR				Lg	Lg	14 27 09.3	
	baz=309,slow=40,SNR=1.9						
MJAR				LR	LR	14 27 24.3	
	comp=Z,12nm,20.3s,baz=226,slow=34						
	1.4nm,0.4s						
JHJ	Hachijo jima 2	7.67	83	Pn	Pn	14 25 07.5	+1.1
	3.6nm,0.3s,baz=268,slow=18,SNR=1.4						
	101nm,1.0s						
ASAJ	Asahikawa	14.83	35	LR	LR	14 31 52.2	
	comp=Z,40nm,18.2s,baz=250,slow=35						
KLR	Kul'dur	16.68	2	Pn	Pn	14 27 09.8	+1.4
	0.1nm,0.3s,baz=229,slow=17,SNR=1.6						
	0.4nm,0.4s						
GUMO	Guam	22.90	142	LR	LR	14 35 32.6	
	comp=Z,26nm,21.9s,baz=270,slow=32						
SONM	Songino Array	23.89	317	P	P	14 28 28.1	-0.5
	1.0nm,0.6s,baz=133,slow=9.8,SNR=7.2						
SONM				LR	LR	14 38 58.6	
	comp=Z,45nm,18.7s,baz=159,slow=40						
	1.0nm,0.6s						
BATI	Baumata	43.05	190	LR	LR	14 50 26.7	
	comp=Z,81nm,19.2s,baz=216,slow=38						
WRA	Warramunga Arr	52.31	176	P	P	14 32 25.0	-1.6
	0.6nm,1.0s,baz=356,slow=8.2,SNR=1.8						
	0.6nm,1.0s						
ASAR	Alice Springs	55.99	176	P	P	14 32 52.2	-1.2
	0.4nm,0.9s,baz=9.3,slow=14,SNR=2.8						
	0.4nm,0.9s						
ILAR	Eielson Array	57.89	30	P	P	14 33 06.2	-0.2
	0.4nm,0.7s,baz=281,slow=7.1,SNR=3.5						
	0.4nm,0.7s						
FINES	FINESS Array B	68.45	330	P	P	14 34 15.0	-1.5
	0.7nm,0.5s,baz=67,slow=6.4,SNR=7.1						
	0.7nm,0.5s						

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*JMA **01** 14:27:47.2±0.0, 32°6N±0°1×130°7E±0°2, h8^{km}, MV3.4/20, SOUTHERN KUMAMOTO PREF*

JMA Felt II J1 at SOUTHERN KUMAMOTO PREF .

*IDC **01** 14:27:48.0±2.9, 32°71N×130°52E, h0^{km}, mb3.3/1, mbtmp3.1/3, ML2.4/2, Error ellipse: s-maj=32.1km s-min=14.4km az=149.0*

ISC 01 14:27:48.4±1.0, **32°59N**±0°04×**130°65E**±0°06, **h11**^{km}, **n7**, σ**2^{s}06**/11, **2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.14	104	⇓P	Pg	14 27 50.0	-1.8
JIU3				⇓S	Sg	14 27 52.0	-2.2
JTA	Tamana	0.39	346	iP	Pg	14 27 55.1	-1.1
JTA				S	Sg	14 28 00.5	-0.8
JZO	Okuchi	0.45	185	P	Pg	14 27 56.2	-1.0
JZO				S	Sg	14 28 02.5	-0.6
JNU	Nakatsue	0.57	20	Pg	Pg	14 27 57.5	-2.0
	96nm,0.3s,baz=211,slow=7.1,SNR=332						
JNU				Lg	Lg	14 28 05.2	
	271nm,0.3s,baz=217,slow=20,SNR=29						
KSRS	Korea Array	5.35	336	Pn	Pn	14 29 06.9	-1.2
	0.1nm,0.3s,baz=155,slow=17,SNR=2.1						
KSRS				Pg	Pb	14 29 24.1	+2.3
	0.5nm,0.3s,baz=154,slow=17,SNR=3.0						
KSRS				Lg	Lg	14 30 28.5	
	0.3nm,0.3s,baz=200,slow=35,SNR=1.3						
	0.8nm,0.8s						
MJAR	Matsushiro Arr	7.38	56	Pn	Pn	14 29 39.5	+3.4
	0.1nm,0.3s,baz=246,slow=14,SNR=2.0						
	0.7nm,0.5s						
SONM	Songino Array	23.84	317	P	P	14 33 01.0	-0.7
	0.3nm,0.3s,baz=116,slow=12,SNR=3.0						
	0.3nm,0.3s						

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*IDC **01** 14:49:13.1±0.6, 56°77N×123°04E, h0^{km}, mb3.7/16, mbtmp3.7/23, ML3.8/5, MS2.9/6, Error ellipse: s-maj=14.4km s-min=9.7km az=136.0*

*MOS **01** 14:49:13.7±1.7, 56°90N×123°28E, h11^{km}, mb4.1/8, MS3.1/4, Error ellipse: s-maj=9.1km s-min=6.5km az=87.8*

*YARS **01** 14:49:14.9±0.0, 56°83N×123°15E, h22^{km}*

*NEIC **01** 14:49:15.2±2.3, 56°76N±0°08×123°0E±0°2, h15^{km}±4^{km}, mb4.3/16, Error ellipse: s-maj=13.5km s-min=11.3km az=111.0*

ISC 01 14:49:14.2±0.4, **56°90N**±0°03×**123°11E**±0°02, **h10**^{km}, **n102**, σ**2^{s}38**/127, **mb4.0**/27, **MS3.3**/5, **5C-8D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKLR	Yuktali	0.86	249	P	Pg	14 49 30.5	-0.2
YKLR						14 49 42.2	
YKLR	Yuktali	0.86	249	iPg	Pg	14 49 30.5	-0.2
	483nm,0.5s						
YKLR				eSg	Sb	14 49 42.2	-0.6
	820nm,0.2s						
CLNS	Chul'man	0.98	93	P	Pg	14 49 32.5	-0.5
CLNS	Chul'man	0.98	93	ePg	Pg	14 49 32.5	-0.5
CLNS				iPg	Pg	14 49 32.5	-0.5
CLNS				iPg	Pg	14 49 32.5	-0.5
IENR	Iengra	1.18	124	P	Pb	14 49 35.2	-1.5
IENR						14 49 50.8	
IENR	Iengra	1.18	124	iPg	Pb	14 49 35.2	-1.5
	121nm,0.2s						
IENR				eSg	Sb	14 49 50.8	-1.3
	1µm,0.3s						
KHNR	Khani	1.72	272	P	Pg	14 49 46.8	-0.3
KHNR						14 50 09.5	
KHN	Khani	1.82	272	ePg	Pb	14 49 46.8	-0.8
	86nm,0.1s						
KHN				eSg	Sb	14 50 09.4	-1.0
	2µm,0.1s						
CRS	Chara	2.66	272	P	Pb	14 50 03.2	+1.4
CRS						14 50 38.7	
CRS	Chara	2.66	272	ePg	Pb	14 50 03.2	+1.4
	294nm,0.7s						
CRS				eSg	Sg	14 50 38.6	-0.7
	398nm,0.7s						
TUP	Tupik	3.06	217	P	Pb	14 50 07.8	-0.9
TUP						14 50 51.0	
TUP	Tupik	3.06	217	ePg	Pb	14 50 07.8	-0.9
	267nm,0.4s						

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TUP                                  eSg    Sg     14 50 51.0 -1.4
       2µm,0.8s
OLMR   Olekminsk            3.75 339 P      Pn     14 50 13.5 +1.6
OLMR                                               14 50 57.2
OLMR   Olekminsk            3.75 339 ePn    Pn     14 50 13.5 +1.6
OLMR                                 ePg    Pg     14 50 23.8 -2.1
       6.4nm,0.1s
OLMR                                 eSn    Sn     14 50 57.1 +1.1
OLMR                                 eSn    Sn     14 50 57.1 +1.1
OLMR                                 eSg    Sg     14 51 14.2 -0.2
       186nm,0.4s
OLMR                                 eSg    Sg     14 51 14.2 -0.2
       974nm,0.8s
BMKR   Bomnak               3.91 122 P      Pb     14 50 25.3 +2.2
BMKR   Bomnak               3.91 122 ePg    Pb     14 50 25.3 +2.2
       130nm,0.6s
BMKR                                 eSg    Sg     14 51 16.8 -2.8
       780nm,0.8s
ZEA    Zeya                 3.96 142 eP     Pn     14 50 14.9  0.0
ZEA                                  eS     Sn     14 50 57.7 -3.6
ZEA                                   pmax  pmax
       comp=Z,100nm,0.8s
ZEA                                   pmax  pmax
       comp=E,140nm,0.6s
ZEA                                   pmax  pmax
       comp=Z,140nm,0.7s
ZEA                                   smax  smax
       comp=E,800nm,1.1s
ZEA                                   smax  smax
       comp=N,330nm,0.6s
ZEA                                   smax  smax
       comp=E,1µm,0.7s
ZEA    Zeya                 3.96 142 ePg    Pb     14 50 24.5 +0.6
       comp=E,100nm,0.8s
ZEA                                  eSg    Sg     14 51 16.3 -4.8
       comp=E,800nm,1.1s
TBGR   Tabaga               5.95  31 ePn    Pn     14 50 43.6 +1.4
TBGR                                 ePg    Pg     14 51 03.4 -4.6
       comp=E,1.4nm,0.1s
TBGR                                 eSn    Sn     14 51 50.9 +0.5
TBGR                                 eSn    Sn     14 51 50.9 +0.5
TBGR                                 eSg    Sg     14 52 22.8 -2.2
       comp=E,403nm,0.4s
YAK    Yakutsk              6.13  30 Pn     Pn     14 50 45.5 +0.8
       comp=E,0.2nm,0.3s,baz=210,slow=7.9,SNR=23
YAK                                  Sn     Sn     14 51 53.9 -0.9
       comp=E,0.2nm,0.3s,baz=172,slow=17,SNR=1.9
YAK                                  Lg     Lg     14 52 22.4
       comp=E,0.9nm,0.3s,baz=137,slow=23,SNR=9.5
YAK                                  LR     LR     14 52 43.6
       comp=E,32nm,19.7s,baz=266,slow=34
       comp=E,4.2nm,0.3s
YAK    Yakutsk              6.13  30 eP     Pn     14 50 45.7 +1.0
YAK                                  e             14 51 54.1
YAK                                   pmax  pmax
       comp=Z,26nm,0.6s
YAK                                   pmax  pmax
       comp=N,4.0nm,0.3s
YAK                                   pmax  pmax
       comp=Z,17nm,0.5s
YAK                                   smax  smax
       comp=E,18nm,0.5s
YAK                                   smax  smax
       comp=N,34nm,0.6s
YAK                                   smax  smax
       comp=N,128nm,0.6s
YAK                                   smax  smax
       comp=E,184nm,0.6s
YAK    Yakutsk              6.13  30 Pn     Pn     14 50 45.7 +1.0
VTMR   Vitim                6.14 299 P      Pn     14 50 45.8 +1.0
VTMR                                               14 51 55.0
VTMR   Vitim                6.14 299 i Pn   Pn     14 50 45.8 +1.0
VTMR                                 i Pn   Pn     14 50 45.8 +1.0
VTMR                                 ePg    Pg     14 51 07.3 -4.3
       comp=E,5.2nm,0.2s
VTMR                                 eSn    Sn     14 51 55.0  0.0
VTMR                                 eSn    Sn     14 51 55.0  0.0
VTMR                                 eSg    Sg     14 52 28.7 -2.3
       comp=E,101nm,0.3s
HIA    Hailar               7.91 196 P      Pn     14 51 06.3 -2.9
HIA    Hailar               7.91 196 Pn     Pn     14 51 06.3 -2.9
KLR    Kul'dur              9.27 142 Pn     Pn     14 51 26.6 -1.2
       comp=E,0.4nm,0.3s,baz=324,slow=14,SNR=12
KLR                                  Sn     Sn     14 53 01.4  -11
       comp=E,0.5nm,0.3s,baz=290,slow=15,SNR=6.9
KLR                                  Lg     Lg     14 54 01.6
       comp=E,1.4nm,0.3s,baz=264,slow=12,SNR=12
KLR                                  LR     LR     14 55 37.1
       comp=E,34nm,21.1s,baz=233,slow=42
       comp=E,0.9nm,0.3s
KLR    Kul'dur              9.27 142deP     Pn     14 51 27.6 -0.2
KLR                                  MLR    MLR
       comp=Z,160nm,12.0s
BNX    BinXian             11.49 165 ⇑P     Pn     14 51 57.6 -0.6
BNX                                  smax   smax
       comp=N,93nm,0.9s
BNX                                  smax   smax
       comp=E,270nm,1.3s
IRK    Irkutsk             11.87 255 eP     Pn     14 52 06.5 +3.1
IRK                                  pmax   pmax
       comp=Z,86nm,0.2s
ULN    Ulaanbaatar         13.31 234⇓eP     P      14 52 28.7 -4.3
ULN                                  pmax   pmax
       comp=Z,2.0nm,1.0s
SONM   Songino Array       13.63 235 Pn     Pn     14 52 27.3 -0.1
       comp=Z,0.1nm,0.3s,baz=52,slow=19,SNR=3.2
SONM                                 Sn     Sn     14 55 00.0 +1.1
       comp=Z,0.2nm,0.3s,baz=46,slow=16,SNR=2.1
SONM                                 Lg     Lg     14 56 20.1
       comp=Z,1.1nm,0.3s,baz=45,slow=23,SNR=6.5
       comp=Z,0.4nm,0.3s
USA0B  Ussuriysk Arra      13.90 152 P      Pn     14 52 27.5 -3.5
USA0B  Ussuriysk Arra      13.90 152 Pn     Pn     14 52 27.5 -3.5
USRK   Ussuriysk Ar.       13.90 152 Pn     Pn     14 52 31.5 +0.5
       comp=Z,1.0nm,0.5s,baz=344,slow=21,SNR=2.2
USRK                                 Sn     Sn     14 55 08.6 +3.4
       comp=Z,0.2nm,0.3s,baz=249,slow=20,SNR=2.4
USRK                                 Lg     Lg     14 56 34.6
       comp=Z,0.2nm,0.3s,baz=199,slow=32,SNR=2.3
MA2    Magadan             14.76  68 Pn     Pn     14 52 44.2 +1.5
       comp=Z,0.1nm,0.3s,baz=191,slow=18,SNR=1.5
MA2                                  Lg     Lg     14 56 49.9
       comp=Z,0.2nm,0.3s,baz=282,slow=3.6,SNR=1.5
MA2                                  LR     LR     14 59 03.5
       comp=Z,16nm,19.3s,baz=254,slow=40
       comp=Z,0.6nm,0.3s
TIXI   Tiksi               15.00   7 Pn     Pn     14 52 42.7 -3.2
       comp=Z,1.8nm,0.5s,baz=161,slow=12,SNR=13
TIXI                                 Sn     Sn     14 55 21.5  -10
       comp=Z,48nm,0.3s,baz=92,slow=23,SNR=4.1
TIXI                                 Lg     Lg     14 57 18.4
       baz=268,slow=24
TIXI   Tiksi               15.00   7⇓eP     Pn     14 52 44.3 -1.6
TIXI                                 pmax   pmax
       comp=Z,9.0nm,0.8s
TIXI                                 MLR    MLR
       comp=Z,129nm,12.0s
SEY    Seymchan            15.77  55 Pn     Pn     14 52 56.7 +0.8
       comp=Z,0.1nm,0.3s,baz=262,slow=14,SNR=9.5
SEY                                  Lg     Lg     14 57 29.0
       comp=Z,0.1nm,0.3s,baz=351,slow=20,SNR=8.5
       comp=Z,2.3nm,0.9s
SEY    Seymchan            15.77  55⇓eP     Pn     14 52 56.5 +0.6
KNGR   Kungurtug, Tuv      16.33 258⇓eP     P      14 53 06.7 +0.3
NRIK   Noril'sk            19.94 323 P      Pn     14 53 47.0 -0.5
       comp=Z,3.4nm,0.6s,baz=116,slow=8.6,SNR=5.3
NRIK                                 S      S      14 57 21.0 -8.7
       comp=Z,2.3nm,0.6s,baz=158,slow=19,SNR=1.7
NRIK                                 Lg     Lg     14 59 42.1
       comp=Z,0.6nm,0.3s,baz=168,slow=17,SNR=2.0
NRIK                                 LR     LR     15 02 07.5
       comp=Z,74nm,19.7s,baz=121,slow=39
       comp=Z,3.4nm,0.6s
NRIK   Noril'sk            19.94 323⇓eP     Pn     14 53 47.4 -0.1
NRIK                                 pmax   pmax
       comp=Z,9.0nm,1.2s
NRIK   Noril'sk            19.94 323 P      Pn     14 53 47.7 +0.2
PEA1   Petropavlovsk-      20.06  86 P      Pn     14 53 49.5 +0.5
PEA0B  Petropavlovsk-      20.06  86 P      Pn     14 53 49.2 +0.2
PEA0B                                pmax   pmax
       comp=Z,45nm,1.4s
PEA0B  Petropavlovsk-      20.06  86 P      Pn     14 53 49.2 +0.2
PETK   Petropavlovsk-      20.06  86 P      P      14 53 47.7 +0.4
       comp=Z,9.1nm,0.9s,baz=251,slow=14,SNR=7.9
       comp=Z,9.1nm,0.9s
ZALV   Zalesovo Beam       21.74 278 P      P      14 54 06.3 +1.0
       comp=Z,0.7nm,0.6s,baz=60,slow=18,SNR=3.8
ZALV                                 Lg     Lg     15 00 39.3
       comp=Z,0.1nm,0.3s,baz=27,slow=23,SNR=1.4
       comp=Z,0.7nm,0.6s
BILL   Bilibino            22.30  43 eP     P      14 54 13.3 +2.0
BILL                                 ePPP   PPP    14 54 44.7
BILL                                 eS     S      14 58 14.8 -1.4
BILL                                 pmax   pmax
       comp=Z,7.0nm,1.0s
BILL                                 MLR    MLR
       comp=Z,82nm,18.0s
BILL   Bilibino            22.30  43 P      P      14 54 14.8 +3.5
BILL                                 IAmb   IAmb   14 54 14.8
       comp=Z,13nm,1.4s
KURK   Kurchatov           26.60 276⇑eP     P      14 54 57.2 +5.0
KURK                                 pmax   pmax
       comp=Z,2.0nm,1.3s
KURK   Kurchatov           26.60 276 P      P      14 54 52.7 +0.4
KURK   Kurchatov           26.60 276 IAmb   IAmb   14 54 58.1
       comp=Z,1.4nm,0.9s
KURBB  Kurchatov Arra      26.69 276 P      P      14 54 52.7 -0.4
       comp=Z,1.0nm,0.8s,baz=64,slow=9.6,SNR=6.0
       comp=Z,1.0nm,0.8s
MK31   Makanchi Array      26.78 265⇑eP     P      14 54 58.5 +4.5
MKAR   Makanchi Array      26.78 265 P      P      14 54 53.8 -0.2
       comp=Z,0.3nm,0.7s,baz=66,slow=12,SNR=3.0
MKAR                                 LR     LR     15 05 53.7
       comp=Z,76nm,19.0s,baz=64,slow=37
       comp=Z,0.3nm,0.7s
AAK    Ala-Archa           33.71 266ceP     P      14 55 57.3 +1.9
AAK                                  pmax   pmax
       comp=Z,4.0nm,2.5s
ABKAR  Akbulak array       37.45 286 P      P      14 56 28.6 +1.4
IMAR   Indian Mountai      37.85  41 P      P      14 56 31.8 +1.4
TOLK   Toolik Lake Re      38.06  36 P      P      14 56 34.3 +2.0
TOLK                                 IAmb   IAmb   14 56 39.7
       comp=Z,6.8nm,1.5s
H24K   Noodor Dome         40.02  40 P      P      14 56 51.0 +2.3
H24K                                 IAmb   IAmb   14 56 51.8
       comp=Z,10nm,1.4s
BMAR   Burnt Mountain      40.29  37 P      P      14 56 53.6 +2.7
IL31                       40.94  41 P      P      14 56 57.8 +1.5
IL31                                 IAmb   IAmb   14 56 58.7
       comp=Z,7.9nm,1.5s
ILAR   Eielson Array       40.94  41 P      P      14 56 57.6 +1.4
       comp=Z,1.1nm,0.9s,baz=292,slow=7.9,SNR=12
       comp=Z,1.1nm,0.9s
EUNU   Eureka              42.24   7 P      P      14 57 08.0 +1.2
EUNU                                 IAmb   IAmb   14 57 34.3
       comp=Z,7.6nm,1.4s
CMAR   Chiang Mai Arr      42.42 215 P      P      14 57 09.3 +0.4
       comp=Z,0.3nm,0.3s,baz=354,slow=6.6,SNR=2.1
       comp=Z,0.3nm,0.3s
M24K   Tolsona, Glenn      42.72  44 P      P      14 57 13.2 +2.3
OBN    Obninsk             45.31 306 eP     P      14 57 34.9 +3.3
OBN                                  e             14 59 11.1
OBN                                  e             14 59 18.3
OBN                                  ePPP   PPP    14 59 59.1
OBN                                  pmax   pmax
       comp=Z,4.0nm,0.4s
OBN                                  MLR    MLR
       comp=Z,25nm,13.0s
FIC4   FINESS Array S      45.49 318 P      P      14 57 34.0 +1.0
FIA0   FINESS Array S      45.50 318 P      P      14 57 33.9 +0.9
FIA0   FINESS Array S      45.50 318 P      P      14 57 33.9 +0.9
FINES  FINESS Array B      45.50 318 P      P      14 57 33.9 +0.9
       comp=Z,2.3nm,0.9s,baz=46,slow=6.3,SNR=5.9
       comp=Z,2.3nm,0.9s
FINES  FINESS Array B      45.50 318 i P    P      14 57 36.9 +3.8
FINES                                pmax   pmax
       comp=Z,2.0nm,0.8s
FINES  FINESS Array B      45.50 318 P      P      14 57 33.8 +0.7
RES    Resolute Bay        46.28  13 P      P      14 57 41.8 +2.7
RES                                  pmax   pmax
       comp=Z,3.0nm,1.3s
RES    Resolute Bay        46.28  13 P      P      14 57 41.8 +2.7
RES                                  IAmb   IAmb   14 58 00.2
       comp=Z,2.8nm,1.2s
TULEG  Thule               46.60   4 i P    P      14 57 45.1 +3.5
TULEG                                eS     P      14 57 48.0 +6.4
KIV    Kislovodsk          49.89 291 eP     P      14 58 09.8 +2.2
KIV                                  pmax   pmax
       comp=Z,9.0nm,1.1s
KIV                                  MLR    MLR
       comp=Z,18nm,16.0s
KBZ    Khabaz              49.95 291 P      P      14 58 08.7 +0.9
       comp=Z,1.4nm,0.8s,baz=350,slow=6.1,SNR=2.5
       comp=Z,1.4nm,0.8s
KBZ    Khabaz              49.95 291⇓eP     P      14 58 09.2 +1.4
KBZ                                  pmax   pmax
       comp=Z,2.0nm,1.1s
SIT    Sitka               50.20  44 P      P      14 58 11.9 +2.4
SIT    Sitka               50.20  44 P      P      14 58 11.9 +2.4
NOA    NORSAR Array B      50.89 324 P      P      14 58 15.5 +0.7
       comp=Z,0.3nm,0.7s,baz=40,slow=7.1,SNR=3.3
       comp=Z,0.3nm,0.7s
NC605  NORSAR Array S      51.03 324 P      P      14 58 17.0 +1.2
AKASG  Malin Array Be      51.57 306 P      P      14 58 19.9  0.0
       comp=Z,0.5nm,0.5s,baz=43,slow=9.5,SNR=4.5
       comp=Z,0.5nm,0.5s
ANN    Anapa               51.93 296 eP     P      14 58 18.7 -4.0
ANN                                  e             15 00 20.1
ANN                                  eS     S      15 05 37.0 -8.4
ANN                                  pmax   pmax
       comp=Z,49nm,1.2s
YKAB0  New Yellowknif      52.72  29 P      P      14 58 29.3 +0.9
YKA    Yellowknife Ar      52.81  30 P      P      14 58 29.8 +0.8
       comp=Z,0.9nm,0.7s,baz=329,slow=7.1,SNR=12
       comp=Z,0.9nm,0.7s
YKA    Yellowknife Ar      52.81  30ceP     P      14 58 30.0 +1.0
YKA                                  pmax   pmax
       comp=Z,1.0nm,0.7s
BR131  Keskin Array S      57.58 294⇓eP     P      14 59 03.9 -0.1
BRTR   Keskin Array B      57.58 294 P      P      14 59 05.3 +1.3
       comp=Z,1.1nm,0.7s,baz=57,slow=5.2,SNR=6.2
       comp=Z,1.1nm,0.7s
DAVOX  Davos/Dischmat      62.70 315 LR     LR     15 29 11.8
       comp=Z,21nm,19.0s,baz=138,slow=38
NVAR   Mina Array Bea      71.86  47 P      P      15 00 39.2 +2.0
       comp=Z,0.4nm,0.7s,baz=294,slow=4.3,SNR=4.1
       comp=Z,0.4nm,0.7s
KNRA   Kununurra           72.46 174 P      P      15 00 38.8 -1.7
WC2    Warramunga Arr      77.11 169 P      P      15 01 06.9 -0.6
WC2                                  IAmb   IAmb   15 01 12.0
       comp=Z,6.7nm,1.2s
WRAB   Tennant Creek       77.12 169 P      P      15 01 05.9 -1.6
WRAB                                 pmax   pmax
       comp=Z,8.0nm,1.5s
WRAB   Tennant Creek       77.12 169 P      P      15 01 05.9 -1.6
WRAB                                 IAmb   IAmb   15 01 22.1
       comp=Z,8.3nm,1.4s
WRA    Warramunga Arr      77.13 169 P      P      15 01 06.7 -0.9
       comp=Z,0.6nm,0.7s,baz=352,slow=6.7,SNR=11
       comp=Z,0.6nm,0.7s
WRA    Warramunga Arr      77.13 169 i P    P      15 01 08.1 +0.5
WRA                                  pmax   pmax
       comp=Z,1.0nm,0.7s
WRA    Warramunga Arr      77.13 169 IAmb   IAmb   15 01 13.5
       comp=Z,0.3nm,1.3s
ASAR   Alice Springs       80.77 170 P      P      15 01 26.9 -0.6
       comp=Z,0.3nm,0.8s,baz=354,slow=6.9,SNR=4.3
       comp=Z,0.3nm,0.8s
```

NOU ***01*** *14:49:53.7,22°.30S×168°.97E,h0^{km},MLv3.0/6,New Caledonia*

IDC 01 14:49:18.7±5.1**,21°.92S×171°.52E,h0^{km},mb3.6**/4**,mbtmp3.6**/5**,ML3.7**/1**,Error ellipse: s-maj=100.7km s-min=66.6km az=16.0,Southeast of Loyalty Islands**

```
Code   Station Name           Δ°  AZ°   Phase ID          Time    Res
                                     Op     ISC        h  m  s    ISC
PINNC  Pines Island,        3.83 259 P      Pn     14 50 20.0 +1.0
YATNC  Mamie plateau,       4.30 267 P      Pn     14 50 27.9 +2.5
OUENC  Ouen Island, N       4.36 263 P      Pn     14 50 28.0 +1.7
DZM    Mont Dzumac          4.71 267 Pn     Pn     14 50 32.8 +1.6
       3.3nm,0.3s,baz=83,slow=16,SNR=70
DZM                                  Sn     Sn     14 51 25.7 -0.9
       1.2nm,0.3s,baz=98,slow=22,SNR=2.1
       7.9nm,0.3s
DZM    Mont Dzumac          4.71 267 P      Pn     14 50 33.1 +1.9
ONTNC  Ouen Toro            4.71 264 P      Pn     14 50 33.6 +2.5
NOUC   Port Laguerre        4.84 267 P      Pn     14 50 35.0 +2.1
CTA    Charters Tower      23.65 270 P      P      14 54 31.5 -0.4
       0.6nm,0.5s,baz=74,slow=20,SNR=1.0
       0.6nm,0.5s
STKA   Stephens Creek      28.39 243 P      P      14 55 15.0 +0.1
       0.9nm,0.3s,baz=78,slow=14,SNR=1.9
       0.9nm,0.3s
ASAR   Alice Springs       34.66 260 P      P      14 56 10.6 +0.4
       0.6nm,1.0s,baz=82,slow=8.7,SNR=6.1
       0.6nm,1.0s
WRA    Warramunga Arr      34.73 266 P      P      14 56 10.1 -0.7
       0.3nm,1.0s,baz=97,slow=8.4,SNR=4.6
       0.3nm,1.0s
```

JMA 01 14:57:41.6±0.1**,24°.2N**±0°.3×**123°.8E**±0°.3**,h14^{km}**±1^{km}**,MV2.8**/9**,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

```
Code   Station Name           Δ°  AZ°   Phase ID          Time    Res
                                     Op     ISC        h  m  s    ISC
IRIF   Iriomote-Funau       0.11 343 i P    Pg     14 57 44.9  0.0
IRIF                                 S      Sg     14 57 47.3 +0.2
HATJ   Hateruma jima        0.18 168 i P    Pg     14 57 45.6 -0.2
HATJ                                 S      Sg     14 57 48.8 +0.2
JKRS   Kuro-shima           0.22  88 i P    Pg     14 57 46.8 +0.2
JKRS                                 S      Sg     14 57 50.0 +0.1
JIJ    Ishigaki jima        0.37  69 i P    Pg     14 57 48.9 -0.2
JIJ                                  S      Sg     14 57 54.5 +0.4
JISG   Ishigakijimahi       0.61  54 i P    Pg     14 57 53.5 -0.1
JISG                                 S      Sg     14 58 01.7  0.0
YOJ    Yonaguni jima        0.73 289 P      Pg     14 57 55.8  0.0
YOJ                                  eS     Sg     14 58 05.2 -0.2
JYNG   Yonagunijimaku       0.78 287 P      Pg     14 57 56.8 -0.1
JYNG                                 S      Sg     14 58 07.1  0.0
JTJ    Tarama               0.95  64 P      Pb     14 57 59.8  0.0
JTJ                                  S      Sg     14 58 13.0 +0.6
```

TAP 01 14:58:36.7,24°.23N×121°.75E,h10^{km},ML1.5,D,Taiwan

```
Code   Station Name           Δ°  AZ°   Phase ID          Time    Res
                                     Op     ISC        h  m  s    ISC
EHP    Heping Village       0.08 357 eP     Pg     14 58 40.5 +1.4
       baz=1.0
ETL    Fush Village         0.13 237 eP     Pb     14 58 40.8 -0.6
       baz=236
ETL                                  eS     Sg     14 58 43.6 +1.5
       baz=236
NACB   Ninganchiao          0.15 247 P      Pb     14 58 41.0 -0.6
       baz=247
NACB                                 S      Sg     14 58 43.9 +1.4
       baz=247
ENA    Nanau                0.20 359 P      Pb     14 58 41.8 -0.6
ENA                                  S      Sg     14 58 45.3 +1.6
TWD    Chiawan              0.20 222 eP     Pg     14 58 41.6 +0.6
       baz=220
TWD                                  eS     Sg     14 58 45.6 +1.7
       baz=220
EWUT   Wuta                 0.21   8 P      Pb     14 58 42.0 -0.7
       baz=7.0
EWUT                                 S      Sg     14 58 45.8 +1.5
       baz=7.0
ETLH   Xiulin Townshi       0.24 264 eP     Pb     14 58 42.9 -0.4
       baz=264
ETLH                                 eS     Sg     14 58 46.8 +1.6
       baz=264
ETM    Tongmen              0.35 221 P      Pb     14 58 44.5 -0.5
       baz=221
LATG   Datong               0.36 326 eP     Pg     14 58 43.9 -0.1
       baz=326
NNSB   Datong               0.39 301 eS     Sb     14 58 51.4 -0.3
       baz=300
NNS    Nan Shan             0.40 301 eS     Sb     14 58 51.8 -0.3
       baz=301
ENTT   Nioudou              0.44 338 eP     Pb     14 58 46.9 +0.3
       baz=338
ENTT                                 eS     Sb     14 58 53.3 +0.1
       baz=338
WHF    Hehuan Shan          0.45 259 eP     Pb     14 58 46.6 -0.4
       baz=258
WHF                                  eS     Sb     14 58 53.2 -0.7
       baz=258
```

NOU 01 15:12:11.0,16°.16S×167°.37E,h6^{km},MLv4.4/17**,Vanuatu Islands,Vanuatu Islands**

```
Code   Station Name           Δ°  AZ°   Phase ID          Time    Res
                                     Op     ISC        h  m  s    ISC
SANVU  Saraoutou            0.73 347 P      Pg     15 12 25.5 +0.5
DVP    Devils Point         1.74 153 P      Pn     15 12 41.4 -0.4
RTV    Rentapao             1.91 148 P      Pn     15 12 44.4 +0.3
KOUNC  Koumac, New Ca       5.26 213 P      Pn     15 13 29.8 -0.4
MARNC  Mare, Loyalty        5.33 173 P      Pn     15 13 30.1 -1.0
YATNC  Mamie plateau,       5.88 184 P      Pn     15 13 37.6 -1.2
DZM    Mont Dzumac          5.95 188 P      Pn     15 13 40.1 +0.4
NOUC   Port Laguerre        6.00 190 P      Pn     15 13 40.2 -0.1
ONTNC  Ouen Toro            6.18 188 P      Pn     15 13 43.1 +0.3
OUENC  Ouen Island, N       6.25 184 P      Pn     15 13 44.7 +1.0
PINNC  Pines Island,        6.42 179 P      Pn     15 13 46.5 +0.4
```

NOU ***01*** *15:25:06.9,29°.63S×137°.07E,h0^{km},MLv4.0/16,South Australia*

AUST ***01*** *15:25:07.8±0.8,29°.68S×137°.16E,h10^{km},Error ellipse: s-maj=8.9km s-min=8.1km az=26.0*

IDC ***01*** *15:25:08.0±3.0,29°.42S×137°.42E,h0^{km},mbtmp3.5/4,ML3.5/4,Error ellipse: s-maj=52.5km s-min=15.6km az=49.0*

ISC 01 15:25:06.3±0.7**,29°.60S**±0°.04×**137°.09E**±0°.04**,h10^{km},n30,σ2^{s}.12**/43**,South Australia**

```
Code   Station Name           Δ°  AZ°   Phase ID          Time    Res
                                     Op     ISC        h  m  s    ISC
LCRK   Leigh Creek          1.29 131 P      Pn     15 25 31.1 +0.7
       baz=1.2
LCRK                                 S      Sb     15 25 47.3 +0.1
       baz=1.2
LCRK   Leigh Creek          1.29 131 P      Pg     15 25 31.6 +0.6
OOD    Oodnadatta           2.18 325 P      Pb     15 25 46.2 +0.3
       baz=2.3
OOD                                  S      Sb     15 26 15.3 +2.2
       baz=2.3
MULG   Mulgathing           2.72 255 P      Pn     15 25 51.8 +1.7
       baz=2.8,SNR=58
MULG                                 S      Sn     15 26 26.5 +3.5
       baz=2.8
MULG   Mulgathing           2.72 255 P      Pn     15 25 51.8 +1.7
BBOO   Buckleboo            3.32 195 P      Pn     15 25 59.2 +0.9
       baz=3.3
BBOO                                 S      Sn     15 26 37.7 -0.1
       baz=3.3
BBOO   Buckleboo            3.32 195 P      Pn     15 25 59.1 +0.9
NAPP   Napperby             3.68 166 P      Pn     15 26 05.5 +2.2
INKA   Innaminka            3.71  61 P      Pn     15 26 06.1 +2.4
       baz=3.7
INKA                                 S      Sn     15 26 47.9 +0.5
       baz=3.7
INKA   Innaminka            3.71  61 P      Pn     15 26 06.7 +3.0
HTT    Hallett              4.12 158 P      Pn     15 26 10.7 +1.3
STKA   Stephens Creek       4.49 121 Pn     Pn     15 26 15.8 +1.3
       0.9nm,0.3s,baz=308,slow=13,SNR=12
STKA                                 Sn     Sn     15 27 06.4 -0.3
       3.3nm,0.3s,baz=308,slow=19,SNR=8.2
STKA                                 Lg     Lg     15 27 25.5
       3.9nm,0.3s,baz=357,slow=19,SNR=4.0
       2.0nm,0.3s
TWOA   Tennyson Woods       5.56 167 P      Pn     15 26 30.4 +1.3
ASAR   Alice Springs        6.56 334 Pn     Pn     15 26 46.1 +3.1
       0.5nm,0.3s,baz=148,slow=14,SNR=51
ASAR                                 Sn     Sn     15 27 58.1 +0.1
       1.7nm,0.3s,baz=155,slow=22,SNR=18
ASAR                                 Lg     Lg     15 28 35.1
       0.6nm,0.3s,baz=152,slow=27,SNR=6.0
       1.5nm,0.5s
QLP    Quilpie              6.99  66 P      Pn     15 26 49.1 +0.3
       baz=7.0
QLP                                  S      Sn     15 28 06.8 -1.5
       baz=7.0
QLP    Quilpie              6.99  66 P      Pn     15 26 51.4 +2.6
CMSA   Cobar Meteorol       7.66 107 P      Pn     15 26 59.1 +1.1
FORT   Forrest              7.91 259 P      Pn     15 27 01.6 +0.3
       baz=7.9
FORT                                 S      Sn     15 28 27.3 -3.5
       baz=7.9
FORT   Forrest              7.91 259 P      Pn     15 27 02.4 +1.1
       27nm,0.9s
ARPS   Mount Arapiles       8.18 152 P      Pn     15 27 04.6 -0.5
       baz=8.1
ARPS                                 S      Sn     15 28 34.6 -2.9
```

	baz=8.1						
ARPS	Mount Arapiles	8.18	152	P	Pn	15 27 05.8	+0.8
WRKA	Warakurna	9.05	298	P	Pn	15 27 18.5	+1.4
QIS	Mount Isa	9.29	15	P	Pn	15 27 21.3	+0.9
	baz=9.4,SNR=4.8						
QIS				S	Sn	15 29 02.3	-2.8
	baz=9.4						
QIS	Mount Isa	9.29	15	P	Pn	15 27 23.0	+2.6
WRA	Warramunga Arr	9.94	345	Pn	Pn	15 27 30.4	+1.1
	0.4nm,0.3s,baz=163,slow=13,SNR=30						
WRA				Sn	Sn	15 29 18.2	-2.8
	0.3nm,0.3s,baz=170,slow=24,SNR=2.1						
WRA				Lg	Lg	15 30 19.7	
	baz=166,slow=28						
	0.6nm,0.3s						
WRAB	Tennant Creek	9.95	345	P	Pn	15 27 31.1	+1.7
RMQ	Roma	10.76	76	P	Pn	15 27 41.1	+0.5
CTA	Charters Tower	12.60	43	Pn	Pn	15 28 05.1	-0.6
	0.4nm,0.3s,baz=204,slow=15,SNR=12						
	1.0nm,0.3s						
CTAO	Charters Tower	12.60	43	P	Pn	15 28 07.5	+1.8
FITZ	Fitzroy Crossi	15.51	315	Pn	Pn	15 28 44.0	-1.2
	0.1nm,0.3s,baz=137,slow=12,SNR=2.4						
FITZ				Sn	Sn	15 31 29.9	-7.2
	0.1nm,0.3s,baz=305,slow=24,SNR=1.1						

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*IDC **01** 15:25:40.4±1.3, 11°.79N×125°.55E, h0km, mb3.7/7, mbtmp3.7/7, MS3.1/3, Error ellipse: s-maj=87.9km s-min=28.0km az=67.0*

*MAN **01** 15:25:46.7, 11°.76N×125°.48E, h40km, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*

ISC 01 15:25:46.5±0.9**, 11°.81N**±0°.06×**125°.5E**±0°.1**, h36km, n22, σ2s.62**/16**, mb3.7**/7**, 2C-3D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	1.79	202	⇓*i*P	Pn	15 26 17.0	+2.1
MSLP				*i* S	Sn	15 26 40.6	+4.2
LLP	Lapu-Lapu	2.14	226	⇑*e*P	Pn	15 26 19.5	-0.2
LLP				*i* S	Sn	15 26 49.8	+4.7
RCP	Roxas	2.75	265	⇑*e*P	Pn	15 26 28.5	+0.4
CNOP	Candoni, Negro	3.46	236	⇓*e*P	Pn	15 26 37.8	-0.1
CNOP				*e*S	Sn	15 27 12.9	-4.8
JCNP	Jose Panganiba	3.71	312	⇓*e*P	Pn	15 26 43.3	+2.0
JCNP				*e*S	Sn	15 27 27.1	+3.4
LQP	Lukban	4.52	301	*e*P	Pn	15 26 48.8	-3.8
DAV	Davao City (W)	4.71	180	LR	LR	15 28 56.9	
	comp=Z,40nm,21.9s,baz=27,slow=42						
ASAR	Alice Springs	36.19	167	P	P	15 32 44.6	-1.3
	0.2nm,0.4s,baz=343,slow=6.6,SNR=2.2						
	0.2nm,0.4s						
SONM	Songino Array	39.34	340	P	P	15 33 10.4	-1.9
	0.2nm,0.4s,baz=146,slow=10,SNR=2.4						
	0.2nm,0.4s						
H11S3	WAKE ISLAND Hy	40.20	75	T	T	16 16 35.4	
	baz=270,slow=74						
H11S1	WAKE ISLAND Hy	40.21	75	T	T	16 16 32.5	
	baz=270						
H11S2	WAKE ISLAND Hy	40.22	75	T	T	16 16 33.4	
	baz=270,slow=74						
H11N1	WAKE ISLAND Hy	40.48	73	T	T	16 16 42.4	
	baz=265,slow=75,SNR=21						
H11N2	WAKE ISLAND Hy	40.49	73	T	T	16 16 45.4	
	baz=265,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	40.50	73	T	T	16 16 43.8	
	baz=265,slow=75,SNR=22						
MKAR	Makanchi Array	50.38	322	P	P	15 34 39.8	-0.3
	0.6nm,0.6s,baz=118,slow=9.0,SNR=6.4						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	54.41	325	P	P	15 35 09.9	+0.1
	1.5nm,0.6s,baz=127,slow=7.0,SNR=17						
	1.5nm,0.6s						
OBN	Obninsk	79.83	324	LR	LR	16 15 30.9	
	comp=Z,8.1nm,18.2s,baz=332,slow=38						
ARCES	ARCESS Array B	82.51	340	P	P	15 38 04.8	-0.3
	1.7nm,0.7s,baz=69,slow=6.6,SNR=8.7						
	1.7nm,0.7s						
FINES	FINESS Array B	84.21	332	P	P	15 38 13.2	-0.8
	0.2nm,0.3s,baz=77,slow=4.0,SNR=8.0						
	0.2nm,0.3s						
MAW	Mawson	90.89	200	LR	LR	16 18 34.5	
	comp=Z,52nm,18.7s,baz=140,slow=35						
YKA	Yellowknife Ar	92.65	24	P	P	15 38 54.8	+0.5
	0.1nm,0.5s,baz=298,slow=4.5,SNR=2.3						
	0.1nm,0.5s						

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*IDC **01** 15:32:42.0±0.7, 17°.40S×167°.74E, h0km, mb4.0/16, mbtmp4.0/18, ML4.7/2, MS3.7/19, Error ellipse: s-maj=19.4km s-min=18.6km az=115.0*

*NEIC **01** 15:32:44.0±1.5, 17°.47S±0°.05×167°.75E±0°.05, h10km±1km, mb4.4/12, Error ellipse: s-maj=11.0km s-min=3.5km az=317.0*

*NOU **01** 15:32:45.1, 17°.50S×167°.66E, h11km, MLv4.5/19, Vanuatu Islands*

ISC 01 15:32:45.2±0.5**, 17°.48S**±0°.05×**167°.68E**±0°.05**, h19km, n68, σ1s.20**/56**, mb4.1**/16**, MS3.6**/18**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.54	117	P	Pn	15 32 56.5	-1.4
RTV	Rentapao	0.78	114	P	Pn	15 33 00.6	-0.5
SANVU	Saraoutou	2.07	347		Pn	15 33 18.2	-0.7
SANVU	Saraoutou	2.07	347	P	Pn	15 33 19.1	+0.2
LIFNC	LIFOU	3.31	187	Pn	Pn	15 33 34.9	-1.0
LIFNC	LIFOU	3.31	187	P	Pn	15 33 36.8	+0.9
MARNC	Mare, Loyalty	3.99	175	Pn	Pn	15 33 43.7	-1.6
MARNC	Mare, Loyalty	3.99	175	P	Pn	15 33 45.6	+0.2
KOUNC	Koumac, New Ca	4.43	226		Pn	15 33 50.7	-0.7
KOUNC	Koumac, New Ca	4.43	226	P	Pn	15 33 52.0	+0.6
YATNC	Mamie plateau,	4.62	189	P	Pn	15 33 53.8	-0.1
DZM	Mont Dzumac	4.71	194	Pn	Pn	15 33 54.9	-0.4
	3.7nm,0.3s,baz=41,slow=19,SNR=27						
DZM				Sn	Sn	15 34 45.5	-4.1
	4.0nm,0.3s,baz=310,slow=23,SNR=7.1						
	9.1nm,0.4s						
DZM	Mont Dzumac	4.71	194	P	Pn	15 33 55.8	+0.4
NOUC	Port Laguerre	4.78	196	P	Pn	15 33 56.8	+0.7
ONTNC	Ouen Toro	4.94	193	Pn	Pn	15 33 58.7	+0.3
ONTNC	Ouen Toro	4.94	193	P	Pn	15 33 59.1	+0.7
OUENC	Ouen Island, N	4.97	189	Pn	Pn	15 33 59.2	+0.3
OUENC	Ouen Island, N	4.97	189	P	Pn	15 33 59.2	+0.3
PINNC	Pines Island,	5.11	182	Pn	Pn	15 34 01.2	+0.4
PINNC	Pines Island,	5.11	182	P	Pn	15 34 02.0	+1.3
MSVF	Nonsavu	9.89	93	Pn	Pn	15 35 05.0	-1.6
	0.7nm,0.3s,baz=192,slow=22,SNR=1.3						
MSVF				Sn	Sn	15 37 02.0	+4.9
	0.2nm,0.3s,baz=266,slow=14,SNR=1.6						
MSVF				LR	LR	15 38 14.0	
	comp=Z,1µm,19.2s,baz=237,slow=34						
	4.5nm,0.8s						
AFI	Afiamalu	20.09	83	LR	LR	15 43 13.1	
	comp=Z,210nm,20.7s,baz=168,slow=32						
KRVT	Keravat (AS076	20.16	309	P	P	15 37 18.0	-0.6
	6.6nm,0.8s,baz=231,slow=20,SNR=1.6						
	6.6nm,0.8s						
CTA	Charters Tower	20.45	259	P	Pn	15 37 23.7	-0.2
	3.2nm,0.7s,baz=86,slow=12,SNR=3.4						
CTA				LR	LR	15 44 36.3	
	comp=Z,218nm,19.1s,baz=81,slow=35						
	3.2nm,0.7s						
CTAO	Charters Tower	20.45	259	P	P	15 37 22.3	+0.6
CTAO				IAmb	IAmb	15 37 36.9	
	comp=Z,10nm,0.9s						
PMG	Port Moresby	21.49	289	LR	LR	15 44 01.7	
	comp=Z,90nm,18.1s,baz=116,slow=32						
URZ	Urewera	22.29	160	P	P	15 37 42.7	+1.4
	comp=Z,6.7nm,0.9s,baz=328,slow=20,SNR=3.4						
	comp=Z,6.7nm,0.9s						
URZ	Urewera	22.29	160	P	P	15 37 41.1	-0.3
URZ				IAmb	IAmb	15 38 01.3	
	comp=Z,33nm,1.5s						
CMSA	Cobar Meteorol	24.35	231	P	P	15 38 03.8	+1.8
THZ	Tophouse	24.61	171	P	P	15 38 05.3	+0.9
STKA	Stephens Creek	27.60	234	P	P	15 38 32.4	+0.9
	comp=Z,2.0nm,0.7s,baz=52,slow=10,SNR=5.6						
STKA				LR	LR	15 48 14.7	
	comp=Z,130nm,18.5s,baz=27,slow=34						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	27.60	234	IAmb	IAmb	15 38 46.7	
	comp=Z,3.3nm,1.0s						
RAR	Rarotonga	30.90	102	LR	LR	15 51 07.1	
	comp=Z,64nm,18.0s,baz=202,slow=36						
WRAB	Tennant Creek	31.63	260	P	P	15 39 07.0	-0.3
WRAB				IAmb	IAmb	15 39 30.2	
	comp=Z,6.0nm,1.2s						
WRA	Warramunga Arr	31.64	260	P	P	15 39 06.5	-1.0
	comp=Z,1.0nm,0.9s,baz=80,slow=6.0,SNR=4.6						
WRA				PcP	PcP	15 41 58.8	-0.6
	comp=Z,0.3nm,0.8s,baz=77,slow=7.5,SNR=4.0						
WRA				LR	LR	15 50 43.8	
	comp=Z,127nm,19.3s,baz=16,slow=34						
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	31.64	260	IAmb	IAmb	15 39 14.3	
	comp=Z,0.4nm,1.3s						
AS17	Alice Springs	32.08	253	P	P	15 39 11.2	0.0
AS31	Alice Springs	32.16	253	P	P	15 39 11.4	-0.6
ASAR	Alice Springs	32.16	253	P	P	15 39 11.7	-0.3
	comp=Z,3.7nm,0.9s,baz=79,slow=8.4,SNR=49						
ASAR				LR	LR	15 51 39.5	
	comp=Z,206nm,19.8s,baz=98,slow=35						
	comp=Z,3.7nm,0.9s						
KNRA	Kununurra	37.30	267	P	P	15 39 56.1	-0.3
KNRA				IAmb	IAmb	15 40 06.7	
	comp=Z,7.1nm,0.9s						
GUMO	Guam	38.21	322	LR	LR	15 57 07.8	
	comp=Z,36nm,19.3s,baz=135,slow=38						
SIJI	Sorong	39.42	291	LR	LR	15 56 56.0	
	comp=Z,85nm,18.7s,baz=158,slow=37						
FITZ	Fitzroy Crossi	39.97	263	P	P	15 40 19.9	+1.1
	comp=Z,2.1nm,0.6s,baz=96,slow=6.0,SNR=3.5						
	comp=Z,2.1nm,0.6s						
PPT	Papeete	40.70	97	LR	LR	15 53 31.1	
	comp=Z,79nm,21.7s,baz=290,slow=31						
BATI	Baumata	43.26	274	P	P	15 40 47.0	+1.1
	comp=Z,11nm,0.8s,baz=117,slow=2.3,SNR=3.8						
BATI				LR	LR	16 00 29.4	
	comp=Z,142nm,18.1s,baz=126,slow=38						
	comp=Z,11nm,0.8s						
KAPI	Kappang	48.47	279	LR	LR	15 59 56.8	
	comp=Z,64nm,21.2s,baz=155,slow=34						
JHJ	Hachijo jima 2	56.94	332	LR	LR	16 02 30.1	
	comp=Z,111nm,20.2s,baz=90,slow=31						
MJAR	Matsushiro Arr	60.52	333	P	P	15 42 53.6	-0.5
	comp=Z,0.8nm,0.7s,baz=140,slow=12,SNR=2.3						
MJAR				LR	LR	16 06 25.8	
	comp=Z,7.8nm,21.6s,baz=196,slow=34						
	comp=Z,0.8nm,0.7s						
QSPA	South Pole Qui	72.56	180	P	P	15 44 10.6	-0.3
	comp=Z,3.0nm,0.9s,baz=355,slow=4.0,SNR=7.3						
	comp=Z,3.0nm,0.9s						
QSPA	South Pole Qui	72.56	180	P	P	15 44 10.9	0.0
CMAR	Chiang Mai Arr	76.43	294	P	P	15 44 34.0	-0.1
	comp=Z,1.4nm,0.9s,baz=128,slow=4.7,SNR=8.5						
	comp=Z,1.4nm,0.9s						
CMAR	Chiang Mai Arr	76.43	294	P	P	15 44 33.8	-0.2
MAW	Mawson	79.50	202	P	P	15 44 51.4	+1.2
	comp=Z,1.6nm,0.6s,baz=88,slow=15,SNR=2.4						
	comp=Z,1.6nm,0.6s						
SEY	Seymchan	81.05	353	P	P	15 44 57.4	-1.0
	comp=Z,0.7nm,0.7s,baz=179,slow=10,SNR=4.0						
	comp=Z,0.7nm,0.7s						
BELA	Belgrano 2	83.97	175	P	P	15 45 13.6	-0.1
SONM	Songino Array	84.93	324	P	P	15 45 19.9	+0.8
	comp=Z,0.4nm,0.8s,baz=157,slow=4.4,SNR=2.7						
	comp=Z,0.4nm,0.8s						
SONM	Songino Array	84.93	324	IAmb	IAmb	15 45 33.2	
	comp=Z,4.9nm,1.3s						
PFO	Pinyon Flats O	88.28	54	LR	LR	16 17 13.4	
	comp=Z,64nm,20.1s,baz=102,slow=30						
NVAR	Mina Array Bea	88.76	49	P	P	15 45 38.3	+0.2
	comp=Z,0.5nm,1.0s,baz=255,slow=10,SNR=2.5						
NVAR				LR	LR	16 18 53.7	
	comp=Z,40nm,18.3s,baz=242,slow=31						
	comp=Z,0.5nm,1.0s						
ILAR	Eielson Array	89.01	18	P	P	15 45 37.6	-0.8
	comp=Z,0.2nm,0.8s,baz=251,slow=5.6,SNR=1.9						
	comp=Z,0.2nm,0.8s						
LPIG	La Paz	90.00	65	LR	LR	16 19 26.6	
	comp=Z,53nm,18.1s,baz=215,slow=31						
ELK	Elko	91.83	48	LR	LR	16 22 20.4	
	comp=Z,46nm,18.3s,baz=266,slow=32						
ARCES	ARCESS Array B	123.00	345	PKP	PKiKP	15 51 39.6	-0.3
	comp=Z,2.3nm,1.0s,baz=64,slow=4.1,SNR=7.7						
FINES	FINESS Array B	128.41	338	PKP	PKiKP	15 51 50.3	-0.5
	comp=Z,0.3nm,0.5s,baz=38,slow=3.4,SNR=1.5						
WTTA	Wattenberg	144.35	332	*e*P	P	15 52 24.0	-1.2
	comp=Z,6.7nm,1.6s						
RETA	Reutte	144.57	333	P	P	15 52 21.1	-0.1
	comp=Z,5.0nm,1.5s						
FETA	Feichten	144.94	332	P	P	15 52 22.1	+0.8
	comp=Z,3.1nm,0.7s						
DAVA	Damuels	145.11	333	*e*P	P	15 52 17.8	+0.3
	comp=Z,3.9nm,0.8s						

RSPR 01 15:41:37.5, 19°.54N×64°.68W, h25km±17km**, 1C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJVI	Gifft Hill Sch	1.21	184	⇓*e*P	Pn	15 41 56.9	-2.0
SJVI	Gifft Hill Sch	1.21	184	*e*S	Sn	15 42 11.3	-3.1
CUPR	Culebra, Puert	1.35	205	⇑*e*P	Pn	15 41 58.4	-2.5
CUPR	Culebra, Puert	1.35	205	*e*S	Sn	15 42 15.3	-2.7
MTP	Monte Pirata	1.66	210	⇓*e*P	Pn	15 42 03.0	-2.1
MTP	Monte Pirata	1.66	210	*e*S	Sn	15 42 22.8	-2.7

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*IDC **01** 15:56:37.0±1.2, 9°.85S×119°.07E, h0km, mb3.7/6, mbtmp3.9/12, ML4.0/6, MS3.6/3, Error ellipse: s-maj=36.2km s-min=17.5km az=45.0*

*DJA **01** 15:56:42.3±0.9, 10°S±3°×11°9E±°, h25km±9km, M4.3/16, mb4.6/8, mB4.7/3, MLv4.2/16, Mw(mB)3.9/3*

ISC 01 15:56:42.4±0.6**, 9°.74S**±0°.05×**119°.28E**±0°.04**, h35km, n43, σ1s.60**/45**, mb3.8**/6**, MS3.8**/3**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.74	301	P	Pn	15 57 09.9	-0.2
PLAI				S	Sn	15 57 30.5	-0.6
MMRI	Maumere	3.12	70	P	Pn	15 57 29.2	+0.2
MMRI	Maumere	3.12	70	P	Pn	15 57 29.2	+0.2
BSSI	Bau Bau, Buton	3.77	19	P	Pn	15 57 38.8	+0.8
BSSI				S	Sn	15 58 20.4	-0.7
DNP	Denpasar	4.16	284	P	Pn	15 57 45.0	+1.6
IGBI	Denpasar	4.18	282	P	Pn	15 57 45.2	+1.5
IGBI				S	Sn	15 58 31.5	+0.1
BATI	Baumata	4.34	97	Pn	Pn	15 57 48.0	+2.1
	18nm,0.3s,baz=212,slow=0.6,SNR=44						
BATI				Sn	Sn	15 58 37.6	+2.3
	9.5nm,0.3s,baz=3.0,slow=21,SNR=8.9						
	40nm,0.3s						
BATI	Baumata	4.34	97	P	Pn	15 57 48.3	+2.4
BATI				S	Sn	15 58 37.1	+1.8
SRBI	Singaraja	4.34	292	P	Pn	15 57 47.0	+1.1
SRBI				S	Sn	15 58 38.1	+2.7
BKSI	Bulukumba	4.46	11	P	Pn	15 57 48.8	+1.2
KAPI	Kappang	4.71	6	Pn	Pn	15 57 52.7	+1.7
	8.5nm,0.3s,baz=130,slow=6.4,SNR=12						
KAPI				Sn	Sn	15 58 43.0	-1.5
	7.3nm,0.3s,baz=221,slow=19,SNR=12						
	14nm,0.3s						
KAPI	Kappang	4.71	6	P	Pn	15 57 53.9	+2.9
JAGI	Jajag, Banyuwa	5.22	284	P	Pn	15 57 58.8	+0.8
	0.3nm1µm51nm,0.5s						
BBSI	Bau Bau	5.33	38	P	Pn	15 57 59.8	+0.3
	0.0nm62nm6.3nm,0.8s						
ABJI	Asem Bagus	5.35	291	P	Pn	15 58 00.1	+0.3
	0.3nm55nm,0.7s						
SPSI	Sidrap Palu	5.75	5	P	Pn	15 58 04.4	-0.9
	0.1nm38nm,0.6s						
GMJI	Gumukmas	5.95	284	P	Pn	15 58 09.2	+1.2
	0.2nm41nm,0.7s						
TTSI	Tana Toraja	6.67	5	P	Pn	15 58 17.7	-0.2
	0.1nm35nm,0.9s						
BBKI	Banjar Baru	7.64	324	P	Pn	15 58 31.2	0.0
FITZ	Fitzroy Crossi	10.35	144	Pn	Pn	15 59 07.7	-0.7
	0.6nm,0.3s,baz=336,slow=10,SNR=36						
FITZ				Sn	Sn	16 00 56.9	-6.3
	1.6nm,0.3s,baz=12,slow=20,SNR=9.5						
	2.5nm,0.4s						
KNRA	Kununurra	10.97	124	P	Pn	15 59 16.7	-0.2
PSA00	Pilbara Seismi	11.78	177	P	Pn	15 59 28.5	+0.5
SAUI	Saumlaki	12.00	83	P	Pn	15 59 31.6	+0.5
	64nm,0.6s						
MTN	Manton Dam	12.02	106	P	Pn	15 59 30.1	-1.3
GIRL	Giralia	13.72	200	P	Pn	15 59 56.0	+1.6
SIJI	Sorong	14.82	54	Pn	Pn	16 00 10.3	+0.7
	1.1nm,0.3s,baz=144,slow=23,SNR=6.8						
	6.8nm,0.7s						
MEEK	Meekatharra	16.82	182	P	P	16 00 37.8	+0.6
WRKA	Warakurna	17.47	152	P	Pn	16 00 43.6	+0.2
WRA	Warramunga Arr	17.73	127	P	Pn	16 00 44.8	-1.8
	0.4nm,0.3s,baz=297,slow=13,SNR=35						
WRA				S	Sn	16 03 51.4	-12
	0.5nm,0.5s,baz=302,slow=25,SNR=2.5						
	2.6nm,0.6s						
WRAB	Tennant Creek	17.73	127	P	Pn	16 00 46.2	-0.4
ASAR	Alice Springs	19.67	137	P	Pn	16 01 09.7	-0.4
	0.3nm,0.3s,baz=313,slow=9.9,SNR=36						
ASAR				S	S	16 04 37.5	-11
	0.3nm,0.4s,baz=304,slow=22,SNR=1.8						
	3.1nm,0.7s						
PSI	Prapat	23.80	301	P	P	16 01 51.1	-1.2
	4.4nm,0.8s,baz=176,slow=4.2,SNR=5.8						
	4.4nm,0.8s						
CTA	Charters Tower	27.98	115	LR	LR	16 14 57.9	
	comp=Z,73nm,18.6s,baz=264,slow=39						
CMAR	Chiang Mai Arr	34.46	324	P	P	16 03 27.7	+0.6
	0.3nm,0.5s,baz=160,slow=7.1,SNR=2.2						
	0.3nm,0.5s						
H08S2	Diego Garcia H	46.27	269	T	T	16 54 31.3	
	baz=96,slow=75,SNR=42						
H08S3	Diego Garcia H	46.28	269	T	T	16 54 31.6	
	baz=96,slow=75,SNR=37						
H08S1	Diego Carcia H	46.29	269	T	T	16 54 32.5	
	baz=96,slow=75,SNR=16						
KSRS	Korea Array	47.63	9	P	P	16 05 16.8	+1.7
	0.5nm,0.6s,baz=194,slow=10.0,SNR=1.9						
	0.5nm,0.6s						
SONM	Songino Array	58.45	350	P	P	16 06 34.4	-0.4
	0.5nm,0.6s,baz=165,slow=8.0,SNR=4.6						
	0.5nm,0.6s						
MKAR	Makanchi Array	65.23	333	P	P	16 07 19.7	-0.7
	0.6nm,0.5s,baz=150,slow=6.3,SNR=7.2						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	69.82	339	P	P	16 07 48.1	-1.1
	0.5nm,0.5s,baz=184,slow=10,SNR=2.9						
	0.5nm,0.5s						
KMBO	Kilima Mbogo	81.96	270	LR	LR	16 44 50.3	
	comp=Z,37nm,18.1s,baz=88,slow=35						
MBAR	Mbarara	88.47	270	LR	LR	16 46 08.9	
	comp=Z,32nm,19.4s,baz=86,slow=34						

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*IDC **01** 16:21:28.8±1.2, 8°.39S×119°.07E, h0km, mb3.8/4, mbtmp3.8/9, ML3.6/5, MS2.9/1, Error ellipse: s-maj=38.6km s-min=13.5km az=53.0*

*DJA **01** 16:21:33.8±0.6, 8°S±4°×11°9E±°, h23km±7km, M3.9/13, mb4.0/4, mB4.5/1, MLv3.8/13, Mw(mB)3.7/1*

ISC 01 16:21:34.8±0.7**, 8°.19S**±0°.04×**119°.33E**±0°.04**, h35km, n32, σ1s.76**/36**, mb3.7**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.66	248	P	Pn	16 22 02.3	+0.8
PLAI				S	Sn	16 22 23.2	+1.5
PLAI	Plampang	1.66	248	P	Pn	16 22 03.3	+1.8
BSSI	Bau Bau, Buton	2.34	29	P	Pn	16 22 11.2	+0.4
BSSI				S	Sn	16 22 39.3	+1.0
MMRI	Maumere	2.91	99	P	Pn	16 22 19.2	+0.6
MMRI	Maumere	2.91	99	P	Pn	16 22 19.5	+0.9
BKSI	Bulukumba	2.96	15	P	Pn	16 22 20.1	+0.8
BKSI				S	Sn	16 22 54.5	+0.9
KAPI	Kappang	3.19	8	Pn	Pn	16 22 22.5	0.0
	3.7nm,0.3s,baz=216,slow=7.8,SNR=15						
KAPI				Sn	Sn	16 22 58.1	-1.1
	3.8nm,0.3s,baz=189,slow=14,SNR=3.7						
	9.7nm,0.3s						
KAPI	Kappang	3.19	8	P	Pn	16 22 23.3	+0.9
BNSI	Bone	3.85	12	P	Pn	16 22 32.5	+1.0
SRBI	Singaraja	4.08	271	P	Pn	16 22 35.5	+0.7
BATI	Baumata	4.72	115	Pn	Pn	16 22 45.0	+1.4
	1.4nm,0.3s,baz=291,slow=8.6,SNR=2.2						
BATI				Sn	Sn	16 23 42.7	+5.6
	baz=28,slow=17						
	3.8nm,0.3s						
BATI	Baumata	4.72	115	P	Pn	16 22 43.2	-0.4
JAGI	Jajag, Banyuwa	5.13	267	P	Pn	16 22 49.2	-0.1
	0.2nm48nm,0.9s						
JAGI	Jajag, Banyuwa	5.13	267	P	Pn	16 22 51.1	+1.8
TTSI	Tana Toraja	5.14	5	P	Pn	16 22 52.2	+2.9
	0.1nm509nm23nm,1.0s						
KMMI	Kalianget	5.44	282	P	Pn	16 22 54.7	+1.2
FITZ	Fitzroy Crossi	11.60	149	Pn	Pn	16 24 16.4	-1.6
	0.1nm,0.3s,baz=309,slow=3.9,SNR=3.3						
FITZ				Sn	Sn	16 26 20.6	-5.7
	0.3nm,0.3s,baz=187,slow=19,SNR=5.9						
FITZ				LR	LR	16 28 33.9	
	comp=Z,59nm,19.2s,baz=309,slow=37						
	1.2nm,0.7s						
LEM	Lembang	11.70	276	Pn	Pn	16 24 13.6	-5.8
	3.5nm,0.3s,baz=343,slow=19,SNR=3.8						
	6.2nm,0.5s						
KNRA	Kununurra	11.85	130	P	Pn	16 24 20.8	-0.5
MTN	Manton Dam	12.48	113	P	Pn	16 24 28.8	-1.3
MEEK	Meekatharra	18.36	182	P	Pn	16 25 47.6	+0.9
WRA	Warramunga Arr	18.64	130	P	Pn	16 25 49.0	-1.2
	0.3nm,0.3s,baz=307,slow=12,SNR=25						
	1.0nm,0.5s						
WRAB	Tennant Creek	18.64	130	P	Pn	16 25 49.8	-0.4
WRKA	Warakurna	18.81	154	P	Pn	16 25 53.2	+1.0
ASAR	Alice Springs	20.78	139	P	Pn	16 26 13.1	-2.5
	3.2nm,0.5s,baz=313,slow=8.6,SNR=22						
ASAR				S	Sn	16 30 04.5	-4.8
	0.6nm,0.7s,baz=312,slow=24,SNR=5.1						
	3.2nm,0.5s						
QIS	Mount Isa	23.13	124	P	P	16 26 37.9	-0.2
COEN	Coen	24.08	106	P	P	16 26 47.0	-0.2
OOD	Oodnadatta	24.88	144	P	P	16 26 54.4	0.0
STKA	Stephens Creek	31.37	142	P	P	16 27 52.5	+0.1
	1.6nm,0.4s,baz=334,slow=9.2,SNR=6.6						
	1.6nm,0.4s						
CMSA	Cobar Meteorol	33.79	137	P	P	16 28 14.5	+0.9
SONM	Songino Array	56.95	350	P	P	16 31 17.3	+0.5
	0.2nm,0.4s,baz=148,slow=8.4,SNR=2.5						
	0.2nm,0.4s						
MKAR	Makanchi Array	63.90	333	P	P	16 32 03.3	-0.8
	0.5nm,0.7s,baz=150,slow=7.5,SNR=5.2						
	0.5nm,0.7s						

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*IDC **01** 16:24:07.0±1.6, 3°.77S×151°.60E, h206km±23km, mb3.4/3, mbtmp4.0/3, Error ellipse: s-maj=97.1km s-min=39.9km az=125.0*

*NEIC **01** 16:24:08.7±0.5, 4°.2S±0°.2×151°.9E±0°.3, h207km±11km, mb4.4/6, Error ellipse: s-maj=41.0km s-min=24.5km az=63.0*

ISC 01 16:24:07.7±1.3**, 4°.3S**±0°.4×**151°.9E**±0°.4**, h200km, n13, σ2s.05**/13**, mb4.4**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.12	87	P	Pn	16 24 35.8	+2.0
	36nm,0.4s,baz=207,slow=2.2,SNR=22						
KRVT				S	Sn	16 24 48.5	-5.5
	10nm,0.3s,baz=196,slow=23,SNR=3.0						
RABL	Rabaul	0.28	64	Pn	Pn	16 24 35.8	+1.6
MTN	Manton Dam	22.21	246	P	P	16 28 46.8	-1.3
MTN				IAmb	IAmb	16 29 09.8	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	23.10	226	P	P	16 28 56.4	+0.3
WRAB				IAmb	IAmb	16 28 57.3	
	comp=Z,9.9nm,0.5s						
WB2	Warramunga Arr	23.11	226	P	P	16 28 56.5	+0.3
WB2				IAmb	IAmb	16 28 57.4	
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	23.12	226	P	P	16 28 56.5	+0.3
	comp=Z,4.8nm,0.3s,baz=48,slow=9.5,SNR=91						
	comp=Z,4.8nm,0.3s						
WRA	Warramunga Arr	23.12	226	IAmb	IAmb	16 28 57.2	
	comp=Z,0.1nm,0.9s						
AS17	Alice Springs	25.87	220	P	P	16 29 21.0	-0.2
AS31	Alice Springs	25.92	220	P	P	16 29 22.1	+0.4
AS31				IAmb	IAmb	16 29 41.7	
	comp=Z,1.0nm,1.2s						
ASAR	Alice Springs	25.93	220	P	P	16 29 21.3	-0.4
	comp=Z,0.2nm,0.5s,baz=49,slow=8.4,SNR=4.5						
	comp=Z,0.2nm,0.5s						
FITZ	Fitzroy Crossi	29.12	240	P	P	16 29 49.4	-0.8
	comp=Z,0.7nm,0.3s,baz=59,slow=10,SNR=15						
	comp=Z,0.7nm,0.3s						
BBOO	Buckleboo	31.99	206	P	P	16 30 15.3	+0.2
TORD	Torodi Ar. Bea	149.31	289	PKPbc	PKPdf	16 43 30.8	+1.5
	comp=Z,0.1nm,0.4s,baz=98,slow=2.2,SNR=1.1						

*IDC **01** 16:25:30.8±1.0, 18°.09N×61°.42W, h0^{km}, mb3.4/5, mbtmp3.6/7, ML3.7/2, Error ellipse: s-maj=31.9km s-min=18.5km az=58.0*
*TRN **01** 16:25:36.5, 18°.04N×61°.60W, h31^{km}, MD4.2*
ISC 01 16:25:34.7±1.9**, 18°.18N**±0°.06×**61°.52W**±0°.06**, h24**^{km}±13^{km}**, n40, σ1^{s}.30**/53**, mb3.5**/5**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.57	206	eP	Pb	16 25 46.5	+0.4
ANWB				eS	Sn	16 25 56.1	+0.2
ANDO	Antigua, Disas	1.10	195	eP	Pn	16 25 54.2	-0.5
ANDO				eS	Sb	16 26 07.6	-1.5
ANBD	Bethesda, Anti	1.15	192	eP	Pn	16 25 55.4	+0.1
ANBD				eS	Sb	16 26 10.2	-0.3
BPA	Boggy Peak	1.17	196	eP	Pn	16 25 55.0	-0.7
BPA				eS	Sb	16 26 09.9	-1.3
SKI	Saint Kitts	1.43	234	eP	Pb	16 26 00.7	-0.1
SKOC	St. Kitts, UWI	1.45	233	eP	Pb	16 26 00.5	-0.6
SKOC				eS	Sn	16 26 16.6	-1.2
SMRT	St. Maarten	1.48	265	eP	Pb	16 26 01.4	-0.2
SMRT				eS	Sb	16 26 21.1	+1.1
SEUS	St. Eustatius	1.55	244	eP	Pb	16 26 02.4	-0.3
SEUS				eS	Sn	16 26 20.2	+0.1
MBFL	Flemmings, Mon	1.57	205	eP	Pn	16 26 01.5	+0.4
MBFL	Flemmings, Mon	1.57	205	e	Sb	16 26 23.6	+1.0
MLYT	Lee's Yard	1.58	204	eP	Pn	16 26 01.8	+0.4
MLYT	Lee's Yard	1.58	204	e	Sb	16 26 25.6	+2.6
ABD	La Joyeuse, An	1.70	179	eP	Pn	16 26 03.8	+0.9
ABD				eS	Sn	16 26 23.9	+0.1
H05N1	Guadeloupe/Mar	1.91	166	Pn	Pn	16 26 04.2	-1.6
H05N1				Sn	Sn	16 26 26.1	-2.9
CBE	Ff, Capester	2.10	182	eP	Pn	16 26 09.3	+0.8
CBE				eS	Sn	16 26 33.9	+0.1
MAGL	Barre de l'ile	2.23	174	eP	Pn	16 26 12.2	+1.9
MAGL				eS	Sn	16 26 36.4	-0.6
TBG	Guadaloupe-3	2.32	183	eP	Pn	16 26 11.2	-0.2
TDBA	Terre de Bas,	2.32	183	eP	Pn	16 26 12.3	+0.9
TDBA				eS	Sn	16 26 39.5	+0.3
MDVC	Dominica, Viel	2.56	177	eP	Pn	16 26 16.0	+1.4
DSLB	Salisbury	2.73	178	eP	Pn	16 26 18.3	+1.2
PCM	Pelee Case Pet	3.36	175	eP	Pn	16 26 28.6	+2.9
BAMF	Morne Balai	3.37	174	eP	Pn	16 26 27.7	+1.9
ILAM	Ilet Lapin Mar	3.44	169	eP	Pn	16 26 28.4	+1.5
ILAM				eS	Sn	16 27 06.5	-0.4
FDF	Fort de France	3.45	174	eS	Sn	16 27 05.5	-1.6
LPMF	Morne Lapointe	3.63	171	eP	Pn	16 26 30.5	+1.1
BIM	Bigot	3.67	173	eP	Pn	16 26 31.2	+1.2
BIM				eS	Sn	16 27 12.4	-0.1
MPOM	Morne Pois Mar	3.77	170	eP	Pn	16 26 32.1	+0.8
MPOM				eS	Sn	16 27 15.0	0.0
SLBI	Saint Lucia, B	4.17	173	eP	Pn	16 26 38.3	+1.4
SLBI	Saint Lucia, B	4.17	173	eS	Sn	16 27 24.9	+0.1
SJG	San Juan	4.40	270	Pn	Pn	16 26 40.0	0.0
	4.8nm,0.3s,baz=65,slow=16,SNR=12						
SJG				Sn	Sn	16 27 27.5	-3.0
	3.6nm,0.3s,baz=270,slow=20,SNR=1.4						
	11nm,0.3s						
MDP	Montagnes des	15.63	145	Pn	Pn	16 29 10.2	-3.4
	0.2nm,0.3s,baz=4.6,slow=5.6,SNR=1.7						
MDP				Sn	Sn	16 31 54.2	-12
	0.2nm,0.3s,baz=174,slow=10,SNR=1.4						
	6.0nm,1.0s						
TXAR	Lajitas Array	39.94	294	P	P	16 33 08.2	+0.8
	0.3nm,0.6s,baz=114,slow=9.0,SNR=5.1						
	0.3nm,0.6s						
PDAR	Pinedale Array	47.32	312	P	P	16 34 07.5	+0.7
	0.3nm,0.7s,baz=106,slow=9.5,SNR=2.9						
	0.3nm,0.7s						
H10N3	ASCENSION HYDR	53.12	115	T	T	17 32 14.1	
	baz=299,slow=75,SNR=7.0						
H10N2	ASCENSION HYDR	53.13	115	T	T	17 32 15.7	
	baz=299,slow=75,SNR=6.1						
H10N1	ASCENSION HYDR	53.14	115	T	T	17 32 16.8	
	baz=299,slow=75,SNR=7.6						
YKA	Yellowknife Ar	57.33	334	P	P	16 35 21.4	+0.9
	0.5nm,0.8s,baz=107,slow=7.5,SNR=5.7						
	0.5nm,0.8s						
TORD	Torodi Ar. Bea	60.83	85	P	P	16 35 44.7	-0.8
	0.5nm,0.8s,baz=270,slow=7.1,SNR=2.7						
	0.5nm,0.8s						
ILAR	Eielson Array	71.75	333	P	P	16 36 55.4	+0.7
	0.3nm,0.7s,baz=73,slow=5.2,SNR=2.5						
	0.3nm,0.7s						
ASAR	Alice Springs	164.59	247	PKPab	PKPab	16 46 32.3	-0.2
	0.3nm,0.6s,baz=114,slow=3.6,SNR=5.8						

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*NEIC **01** 16:27:21.1±1.6, 57°.84N±0°.02×156°.3W±0°.1, h128^{km}±14^{km}, Error ellipse: s-maj=10.0km s-min=2.4km az=82.0*
AEIC 01 16:27:22.6±1.3**, 57°.86N**±0°.06×**156°.3W**±0°.1**, h124**^{km}±8^{km}**, ML2.7**/39**, ML2.9**/40(NEIC)**, Error ellipse: s-maj=10.7km s-min=7.5km az=115.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANNE	Aniakchak Nort	1.34	226		Pn	16 27 47.5	-1.0
ANNW	Aniakchak Nort	1.37	230		Pn	16 27 48.4	-0.5
ANPB	Aniakchak Plen	1.51	226		Pn	16 27 49.2	-1.2
P18K	Big Mountain,	1.64	20		Pn	16 27 51.1	-0.8
P18K					Sn	16 28 13.6	-0.6
SII	Sitkinak Islan	1.74	138		Pn	16 27 52.0	-1.0
SII					Sn	16 28 15.6	-0.8
SII	Sitkinak Islan	1.74	138	IAML		16 28 24.7	
	comp=E,162nm,2.9s						
SII				IAML		16 28 47.3	
	comp=N,124nm,2.4s						
OHAK	Old Harbor	1.75	110		Pn	16 27 52.2	-0.9
OHAK					Sn	16 28 15.2	-1.2
OHAK	Old Harbor	1.75	110	IAML		16 28 39.9	
	comp=N,68nm,4.4s						
Q19K	Cape Douglas,	1.76	51		Pn	16 27 52.9	-0.5
Q19K	Cape Douglas,	1.76	51	IAML		16 28 31.2	
	comp=E,140nm,1.6s						
Q19K				IAML		16 28 56.2	
	comp=N,71nm,1.8s						
KDAK	Kodiak Island	1.99	91		Pn	16 27 55.3	-0.8
KDAK					Sn	16 28 20.5	-1.2
KDAK	Kodiak Island	1.99	91	IAML		16 28 50.4	
	comp=N,60nm,4.1s						
KDAK				IAML		16 28 51.2	
	comp=N,71nm,3.1s						
O18K	Koktuh Hills	2.08	15		Pn	16 27 56.4	-0.8
VNHG	Veniaminof 1	2.27	225		Pn	16 27 58.5	-1.1
O19K	Port Alsworth	2.56	23	Pn	Pn	16 28 02.7	-0.5
O19K				IAML		16 28 23.5	
	comp=N,26nm,4.8s						
N18K	Kilae Creek	2.84	4		Pn	16 28 05.6	-1.2
N19K	Bonanza Creek	3.11	17		Pn	16 28 09.9	-0.5
N19K	Bonanza Creek	3.11	17	IAML		16 30 03.2	
	comp=N,17nm,4.3s						
CNPM	China Poot	3.13	56		Pn	16 28 10.2	-0.5
CNPM	China Poot	3.13	56	IAML		16 29 21.0	
	comp=N,54nm,4.0s						
CNPM				IAML		16 29 50.8	
	comp=E,55nm,2.3s						
RDWB	Redoubt West	3.18	33		Pn	16 28 09.9	-1.5
RSO	Redoubt South	3.19	33	Pn	Pn	16 28 10.7	-0.9
SVW2	Sparrevohn	3.27	6	Pn	Pn	16 28 11.5	-1.0
SVW2				IAML		16 29 32.1	
	comp=N,15nm,4.8s						
DFR	Drift River	3.31	33		Pn	16 28 13.4	+0.3
BRLK	Bradley Lake	3.40	54		Pn	16 28 12.8	-1.5
BRLK	Bradley Lake	3.40	54	IAML		16 29 18.0	
	comp=E,41nm,4.7s						
BRLK				IAML		16 29 32.9	
	comp=N,60nm,4.1s						
SDPT	Sand Point	3.41	224		Pn	16 28 12.4	-2.0
BRSE	Bradley Lake S	3.46	55		Pn	16 28 13.8	-1.1
SLKM	Skilak Lake	4.10	47		Pn	16 28 22.4	-1.1
M19K	Big River Lodg	4.17	13		Pn	16 28 23.8	-0.6
M19K	Big River Lodg	4.17	13	IAML		16 31 02.2	
	comp=E,17nm,4.7s						
M19K				IAML		16 31 11.2	
	comp=N,14nm,4.5s						
SEW	Seward	4.20	55		Pn	16 28 24.1	-0.6
STLK	Strandline Lak	4.30	30		Pn	16 28 26.3	+0.2
L19K	White Mountain	4.40	9		Pn	16 28 26.9	-0.5
L19K	White Mountain	4.40	9	IAML		16 29 46.0	
	comp=N,18nm,4.4s						
L19K				IAML		16 30 59.6	
	comp=E,17nm,4.5s						
RC01	Rabbit Creek A	4.66	43		Pn	16 28 29.3	-1.6
PWL	Port Wells	5.07	50	Pn	Pn	16 28 35.2	-1.1
PMR	Palmer	5.21	41	Pn	Pn	16 28 37.0	-1.3
KNK	Knik Glacier	5.34	45		Pn	16 28 37.8	-2.3
GHO	Glory Hole Cre	5.41	40		Pn	16 28 38.6	-2.4
CUT	Chulitna	5.47	31	Pn	Pn	16 28 41.0	-0.7
K20K	Telida	5.63	10		Pn	16 28 43.2	-0.7
SML	Sawmill	5.64	42		Pn	16 28 41.3	-2.9
FID	Port Fidalgo	5.81	56	Pn	Pn	16 28 43.8	-2.5
CAST	Castle Rocks	5.95	19	Pn	Pn	16 28 48.0	-0.3
SCM	Sheep Creek Mo	6.03	45		Pn	16 28 47.0	-2.4
DIV	Divide	6.28	54	Pn	Pn	16 28 51.4	-1.4
TRF	Thorofare Moun	6.34	25	Pn	Pn	16 28 52.2	-1.4
WAT6	Susitna Watana	6.37	38		Pn	16 28 51.0	-3.1
KLU	Klutina	6.39	51		Pn	16 28 52.3	-2.0
J20K	Nowinta River	6.43	8	Pn	Pn	16 28 54.0	-0.7
M24K	Tolsona, Glenn	6.63	46	Pn	Pn	16 28 56.1	-1.3
RND	Reindeer	6.66	30	Pn	Pn	16 28 55.6	-2.3
BMRM	Bremner River	6.73	58	Pn	Pn	16 28 57.6	-1.3
BPAW	Bear Paw Mtn.	6.77	20	Pn	Pn	16 28 57.4	-1.9
DHY	Denali Highway	6.84	36	Pn	Pn	16 28 57.3	-3.1
N25K	Chitina, Valde	7.00	53	Pn	Pn	16 29 01.4	-1.1
GLB	Gilahina Butte	7.27	55	Pn	Pn	16 29 04.5	-1.6
VRDI	Verde Repeater	7.35	57	Pn	Pn	16 29 05.9	-1.4
PAX	Paxson	7.41	42	Pn	Pn	16 29 05.3	-2.7
NEA2	Nenana	7.60	24	Pn	Pn	16 29 07.6	-2.9
CCB	Clear Creek Bu	7.94	27		Pn	16 29 11.7	-3.3
H21K	Melozitna Rive	8.00	10	Pn	Pn	16 29 14.8	-1.1
I23K	Minto, Yukon-K	8.03	21	Pn	Pn	16 29 13.7	-2.5
M26K	Nabesna, AK	8.05	50	Pn	Pn	16 29 15.4	-1.1
MDM	Murphy Dome	8.10	25	Pn	Pn	16 29 14.0	-3.2
RIDG	Independent Ri	8.12	39	Pn	Pn	16 29 15.8	-1.8
IL13	Eielson Array	8.23	29	Pn	Pn	16 29 15.7	-3.2
IM04	Indian Mountai	8.23	7	Pn	Pn	16 29 18.3	-0.7
IMAR	Indian Mountai	8.24	7	Pn	Pn	16 29 18.1	-1.1
IL31		8.27	29		Pn	16 29 16.3	-3.2
ILAR	Eielson Array	8.27	29	Pn	Pn	16 29 15.8	-3.7
DOT	Dot Lake	8.33	41	Pn	Pn	16 29 18.5	-1.9
M27K	Edge Creek, AK	8.49	52	Pn	Pn	16 29 21.9	-0.7
SCRK	Sand Creek	8.57	39	Pn	Pn	16 29 20.9	-2.8
J25K	Salcha River,	8.57	33		Pn	16 29 20.1	-3.5
BC01	Beaver Creek A	8.84	48	Pn	Pn	16 29 25.8	-1.4
L27K	Beaver Creek,	8.84	48	Pn	Pn	16 29 25.8	-1.4
YKA	Yellowknife Ar	20.96	60	P	P	16 31 54.1	-1.2

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*IDC **01** 16:32:34.1±1.0, 16°.03S×167°.40E, h0^{km}, mb3.9/10, mbtmp4.0/11, ML4.8/1, MS3.3/9, Error ellipse: s-maj=30.5km s-min=20.2km az=119.0*
*NEIC **01** 16:32:36.3±0.8, 16°.14S±0°.05×167°.6E±0°.1, h16^{km}±6^{km}, mb4.4/8, Error ellipse: s-maj=14.6km s-min=5.7km az=74.0*
*NOU **01** 16:32:36.4, 16°.23S×167°.27E, h0^{km}, MLv5.0/18, Vanuatu Islands*
ISC 01 16:32:39.7±0.7**, 16°.14S**±0°.04×**167°.37E**±0°.09**, h39**^{km}**, n43, σ1^{s}.31**/40**, mb3.9**/11**, MS3.2**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.70	347	Pg	Pn	16 32 51.7	-1.5
SANVU				Sg	Sn	16 33 02.0	-0.9
SANVU	Saraoutou	0.70	347	P	Pn	16 32 52.1	-1.1
DVP	Devils Point	1.76	154	P	Pn	16 33 07.8	+0.1
RTV	Rentapao	1.93	149	P	Pn	16 33 10.4	+0.3
LIFNC	LIFOU	4.62	181	Pn	Pn	16 33 44.0	-3.0
LIFNC	LIFOU	4.62	181	P	Pn	16 33 44.5	-2.5
KOUNC	Koumac, New Ca	5.27	213	Pn	Pn	16 33 55.0	-1.0
KOUNC	Koumac, New Ca	5.27	213	P	Pn	16 33 55.3	-0.7
MARNC	Mare, Loyalty	5.35	173		Pn	16 33 55.1	-2.0
MARNC	Mare, Loyalty	5.35	173	P	Pn	16 33 55.2	-1.9
YATNC	Mamie plateau,	5.91	184	P	Pn	16 34 02.3	-2.4
DZM	Mont Dzumac	5.96	188	Pn	Pn	16 34 04.5	-1.2
	21nm,0.3s,baz=309,slow=13,SNR=115						
DZM				Sn	Sn	16 35 10.3	-2.4
	14nm,0.3s,baz=318,slow=24,SNR=8.9						
DZM				LR	LR	16 36 04.5	
	comp=Z,121nm,18.4s,baz=35,slow=35						
	45nm,0.3s						
DZM	Mont Dzumac	5.96	188	P	Pn	16 34 04.4	-1.2
NOUC	Port Laguerre	6.02	189	P	Pn	16 34 05.2	-1.0
ONTNC	Ouen Toro	6.20	188	Pn	Pn	16 34 07.4	-1.3
ONTNC	Ouen Toro	6.20	188	P	Pn	16 34 07.8	-0.9
OUENC	Ouen Island, N	6.27	184	Pn	Pn	16 34 08.8	-0.9
OUENC	Ouen Island, N	6.27	184	P	Pn	16 34 09.4	-0.2
PINNC	Pines Island,	6.44	179		Pn	16 34 11.8	-0.2
PINNC	Pines Island,	6.44	179	P	Pn	16 34 11.8	-0.2
MSVF	Nonsavu	10.35	100	LR	LR	16 38 25.5	
	comp=Z,377nm,18.3s,baz=191,slow=34						
EIDS	Eidsvold	17.77	236		P	16 36 45.4	+0.7
ARMA	Armidale	20.24	223	Pn	Pn	16 37 14.3	+0.4
ARMA				IAmb	IAmb	16 37 24.5	
	comp=Z,15nm,1.2s						
AFI	Afiamalu	20.27	87	LR	LR	16 43 05.8	
	comp=Z,69nm,19.3s,baz=154,slow=31						
CTA	Charters Tower	20.44	256	P	P	16 37 15.6	+1.6
	comp=Z,3.4nm,0.8s,baz=74,slow=9.3,SNR=4.9						
CTA				LR	LR	16 44 07.9	
	comp=Z,64nm,19.6s,baz=83,slow=34						
	comp=Z,3.4nm,0.8s						
CTAO	Charters Tower	20.44	256		P	16 37 16.1	+2.1
CTAO				IAmb	IAmb	16 37 23.2	
	comp=Z,15nm,0.8s						
URZ	Urewera	23.65	161	P	P	16 37 48.9	+1.4
	comp=Z,2.0nm,0.5s,baz=308,slow=18,SNR=1.6						
	comp=Z,2.0nm,0.5s						
STKA	Stephens Creek	28.17	232	P	P	16 38 29.0	+0.4
	comp=Z,0.4nm,0.4s,baz=82,slow=15,SNR=1.5						
STKA				LR	LR	16 48 42.2	
	comp=Z,64nm,18.6s,baz=213,slow=34						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	31.60	258	P	P	16 38 58.3	-0.8
	comp=Z,0.4nm,0.8s,baz=86,slow=9.0,SNR=3.0						
	comp=Z,0.4nm,0.8s						
AS31	Alice Springs	32.28	251	P	P	16 39 05.1	+0.1
AS31				IAmb	IAmb	16 39 12.2	
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	32.28	251	P	P	16 39 05.0	0.0
	comp=Z,1.7nm,0.7s,baz=79,slow=9.0,SNR=27						
ASAR				LR	LR	16 51 23.9	
	comp=Z,64nm,20.9s,baz=98,slow=35						
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	32.28	251	P	P	16 39 05.3	+0.2
GUMO	Guam	36.97	322	LR	LR	16 52 37.6	
	comp=Z,27nm,19.8s,baz=158,slow=33						
FITZ	Fitzroy Crossi	39.87	261	P	P	16 40 10.8	+0.9
	comp=Z,1.4nm,1.0s,baz=88,slow=8.5,SNR=2.1						
FITZ				LR	LR	16 56 12.7	
	comp=Z,44nm,18.6s,baz=87,slow=36						
	comp=Z,1.4nm,1.0s						
JAGI	Jajag, Banyuwa	52.43	272	P	P	16 41 50.7	+1.9
JNU	Nakatsue	60.12	325	LR	LR	17 06 44.6	
	comp=Z,21nm,20.7s,baz=228,slow=34						
PETK	Petropavlovsk-	69.46	354	P	P	16 43 43.8	0.0
	comp=Z,4.9nm,0.9s,baz=165,slow=6.2,SNR=5.7						
	comp=Z,4.9nm,0.9s						
QSPA	South Pole Qui	73.90	180	P	P	16 44 10.4	-0.1
SEY	Seymchan	79.68	353	P	P	16 44 42.9	0.0
	comp=Z,1.0nm,0.7s,baz=76,slow=23,SNR=5.6						
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	83.68	324	P	P	16 45 03.9	-0.5
	comp=Z,0.4nm,0.3s,baz=153,slow=5.6,SNR=1.9						
	comp=Z,0.4nm,0.3s						
CAST	Castle Rocks	85.31	17	P	P	16 45 11.6	-0.7
CAST				IAmb	IAmb	16 45 32.6	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	87.83	18	P	P	16 45 24.1	-0.5
	comp=Z,0.4nm,0.8s,baz=238,slow=4.8,SNR=3.3						
	comp=Z,0.4nm,0.8s						
ARCES	ARCESS Array B	121.63	345	PKP	PKiKP	16 51 28.3	-0.5
	comp=Z,0.9nm,0.8s,baz=65,slow=2.4,SNR=9.9						

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*IDC **01** 16:36:39.6±1.0, 18°.09N×61°.49W, h0^{km}, mb3.8/8, mbtmp4.0/11, ML3.6/3, MS3.4/16, Error ellipse: s-maj=31.9km s-min=19.8km az=19.0*
*NEIC **01** 16:36:44.4±1.1, 18°.18N±0°.05×61°.62W±0°.06, h21^{km}±4^{km}, mb4.6/8, Error ellipse: s-maj=9.2km s-min=7.3km az=59.0*
*TRN **01** 16:36:44.5, 18°.05N×61°.59W, h26^{km}, MD3.8*
ISC 01 16:36:44.0±1.7**, 18°.15N**±0°.06×**61°.57W**±0°.05**, h26**^{km}±12^{km}**, n98, σ1^{s}.03**/98**, mb3.9**/11**, MS3.5**/12**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.52	203	Pg	Pb	16 36 54.6	-0.1
ANWB	Willy Bob	0.52	203	eP	Pb	16 36 54.8	+0.1
ANWB				eS	Sb	16 37 02.8	+0.9
ANDO	Antigua, Disas	1.06	193	eP	Pn	16 37 03.3	+0.1
ANDO				eS	Sn	16 37 18.9	+1.7
ANBD	Bethesda, Anti	1.11	190	eP	Pn	16 37 02.9	-1.1
ANBD				eS	Sb	16 37 20.5	+1.7
BPA	Boggy Peak	1.14	194	eP	Pn	16 37 04.3	0.0
BPA				eS	Sb	16 37 19.7	+0.3
SKOC	St. Kitts, UWI	1.40	232	eP	Pb	16 37 09.1	-0.4
SKOC				eS	Sb	16 37 27.3	+0.4
SMRT	St. Maarten	1.43	266		Pn	16 37 08.7	+0.4
SMRT	St. Maarten	1.43	266	eP	Pn	16 37 08.9	+0.6
SMRT				eS	Sb	16 37 28.1	+0.1
NVBH	Bath Hotel, Ne	1.43	224	eP	Pb	16 37 09.7	-0.4
SEUS	St. Eustatius	1.50	244		Pn	16 37 09.9	+0.7
SEUS	St. Eustatius	1.50	244	eP	Pb	16 37 10.7	-0.4
SEUS				eS	Sb	16 37 29.9	+0.2
MBFL	Flemmings, Mon	1.52	204	eP	Pn	16 37 09.9	+0.3
MBFL				eS	Sn	16 37 28.5	-0.1
MLYT	Lee's Yard	1.54	203	eP	Pn	16 37 10.7	+0.8
MLYT				eS	Sn	16 37 29.2	+0.1
ABD	La Joyeuse, An	1.67	177	eP	Pn	16 37 02.0	-10
GDHS	Morne Mazeau,	1.88	186		Pn	16 37 15.2	+0.6
GDSD	La Dsirade Is	1.89	165		Pn	16 37 15.1	+0.4
CBE	Ff, Capester	2.07	181		Pn	16 37 17.6	+0.4
CBE	Ff, Capester	2.07	181	eP	Pn	16 37 19.0	+1.8
MAGL	Barre de l'ile	2.21	173	Pn	Pn	16 37 20.5	+1.5
MAGL	Barre de l'ile	2.21	173	eP	Pn	16 37 20.7	+1.7
MAGL				eS	Sn	16 37 45.5	0.0
TBG	Guadaloupe-3	2.29	182	eP	Pn	16 37 21.8	+1.7
TDBA	Terre de Bas,	2.29	182		Pn	16 37 21.8	+1.6
TDBA	Terre de Bas,	2.29	182	eP	Pn	16 37 21.8	+1.6
TDBA				eS	Sn	16 37 47.5	0.0
MDVC	Dominica, Viel	2.53	176	e	Pb	16 37 28.7	-0.1
MDVC				eS	Sn	16 37 53.3	-0.1
DSLB	Salisbury	2.70	177	eP	Pn	16 37 27.3	+1.4
DSLB				eS	Sn	16 37 58.5	+0.8
MDN	Morne-Daniel	2.82	176	eP	Pn	16 37 28.9	+1.4
CDVI	St. Croix	3.07	263	Pn	Pn	16 37 28.0	-2.8
CDVI	St. Croix	3.07	263	eP	Pn	16 37 33.5	+2.8
STVI	Saint Thomas	3.22	274		Pn	16 37 32.8	-0.1
GBMF	Grand Be	3.36	173	eP	Pn	16 37 36.0	+1.1
FDF	Fort de France	3.42	173	Pn	Pn	16 37 36.5	+0.8
FDF	Fort de France	3.42	173	eP	Pn	16 37 36.3	+0.5
ILAM	Ilet Lapin Mar	3.43	169	e	Pn	16 37 33.2	-2.5
ILAM				eS	Sn	16 38 14.6	-1.0
CUPR	Culebra, Puert	3.53	273	Pn	Pn	16 37 37.0	-0.2
BIM	Bigot	3.65	172	Pn	Pn	16 37 39.6	+0.7
BIM	Bigot	3.65	172	eP	Pn	16 37 40.1	+1.3
BIM				eS	Sn	16 38 19.8	-1.3
MPOM	Morne Pois Mar	3.75	169	Pn	Pn	16 37 41.1	+0.9
MPOM	Morne Pois Mar	3.75	169	eP	Pn	16 37 41.0	+0.7
MPOM				eS	Sn	16 38 22.6	-1.0
MTP	Monte Pirata	3.79	270		Pn	16 37 41.0	+0.3
HUMP	Col San Antoni	4.07	271	Pn	Pn	16 37 44.9	+0.3
SLBI	Saint Lucia, B	4.15	172	e	Pn	16 37 45.3	-0.3
SLBI	Saint Lucia, B	4.15	172	eP	Pn	16 37 45.8	+0.1
PDPR	Patillas Dam,	4.24	269	Pn	Pn	16 37 47.4	+0.6
GCPR	Guaynabo City	4.29	273	Pn	Pn	16 37 46.9	-0.8
SJG	San Juan	4.35	270	Pn	Pn	16 37 48.7	+0.2
	4.0nm,0.3s,baz=228,slow=23,SNR=9.0						
SJG				Sn	Sn	16 38 38.0	-0.4
	2.6nm,0.3s,baz=6.5,slow=4.1,SNR=3.1						
SJG				LR	LR	16 39 48.8	
	comp=Z,634nm,19.0s,baz=82,slow=43						
	58nm,0.9s						
SJG	San Juan	4.35	270	e	Pn	16 37 49.4	+0.9
EMPR	Esperanza - Ma	4.72	275	Pn	Pn	16 37 54.0	+0.4
CELP	Cerrillos	4.76	270		Pn	16 37 53.8	-0.4
OBIP	Obispado Ponce	4.79	269		Pn	16 37 54.5	0.0
AOPR	Arecibo Observ	4.93	273		Pn	16 37 57.0	+0.6
AOPR	Arecibo Observ	4.93	273	e	Pn	16 37 57.3	+0.8
AOPR	Arecibo Observ	4.93	273	eS	Sn	16 38 53.7	+1.0
CRPR	Cabo Rojo, PR	5.27	269	Pn	Pn	16 38 01.4	+0.3
BBGH	Gun Hill	5.34	158	Pn	Pn	16 38 03.4	+1.2
DR12	Loma Pena Alta	7.44	276		Pn	16 38 30.8	-0.1
BANI	BANI	8.35	273	Pn	Pn	16 38 43.5	-0.1
BIRV	Birongo	8.89	211	Pn	Pn	16 38 51.5	+0.7
SDDR	Presa de Saban	9.25	277		Pn	16 38 55.0	-0.8
SDDR	Presa de Saban	9.25	277	e	Pn	16 38 55.7	-0.2
SDV	Santo Domingo	12.74	225	Pn	Pn	16 39 41.8	-2.0
	2.8nm,0.3s,baz=344,slow=11,SNR=2.3						
SDV				LR	LR	16 44 59.1	
	comp=Z,172nm,20.5s,baz=54,slow=39						
	6.9nm,0.3s						
SJCC	San Jacinto, C	15.54	240	P	P	16 40 25.9	+0.2
SJCC	San Jacinto, C	15.54	240	eP	P	16 40 25.7	0.0
MDP	Montagnes des	15.63	145	Pn	Pn	16 40 18.9	-3.9
	0.2nm,0.3s,baz=331,slow=16,SNR=1.4						
MDP				LR	LR	16 46 13.9	
	comp=Z,80nm,20.7s,baz=288,slow=37						
	3.0nm,0.7s						
ROSC	El Rosal	18.18	225	LR	LR	16 49 31.0	
	comp=Z,313nm,18.8s,baz=34,slow=42						
HODGE	Hodges	24.44	315	P	P	16 41 59.9	-0.8
HODGE				IAmb	IAmb	16 42 12.1	
	comp=Z,28nm,1.3s						
CMIG	Matias Romero	31.74	273	LR	LR	16 56 15.0	
	comp=Z,26nm,19.7s,baz=21,slow=37						
LPAZ	La Paz	34.83	191	LR	LR	16 58 22.2	
	comp=Z,81nm,21.6s,baz=359,slow=37						
TX31	Lajitas Ar. Si	39.91	294	P	P	16 44 16.9	+0.6
TXAR	Lajitas Array	39.91	294	P	P	16 44 16.7	+0.5
	comp=Z,0.6nm,0.7s,baz=114,slow=9.0,SNR=9.9						
TXAR				LR	LR	17 07 26.1	
	comp=Z,26nm,18.2s,baz=64,slow=46						
	comp=Z,0.6nm,0.7s						
NRS	Narsarsuaq	44.47	11	P	P	16 44 53.5	+0.9
PDAR	Pinedale Array	47.30	312	P	P	16 45 16.2	+0.6
	comp=Z,1.0nm,0.7s,baz=108,slow=9.0,SNR=5.7						
	comp=Z,1.0nm,0.7s						
LKWY	Lake	48.39	314	P	P	16 45 24.5	+0.4
LKWY				IAmb	IAmb	16 45 25.5	
	comp=Z,3.4nm,0.5s						
ELK	Elko	51.00	308	LR	LR	17 10 33.6	
	comp=Z,48nm,18.1s,baz=208,slow=40						
MDT	Midelt	52.88	62	LR	LR	17 03 34.7	
	comp=Z,35nm,20.9s,baz=172,slow=31						
NVAR	Mina Array Bea	53.03	305	P	P	16 46 00.4	+1.2
	comp=Z,1.0nm,0.9s,baz=118,slow=7.6,SNR=5.7						
	comp=Z,1.0nm,0.9s						
H10N3	ASCENSION HYDR	53.15	115	T	T	17 43 19.5	
	baz=299,slow=75						
H10N2	ASCENSION HYDR	53.16	115	T	T	17 43 24.8	
	baz=299,slow=75						
H10N1	ASCENSION HYDR	53.17	115	T	T	17 43 19.5	
	baz=299,slow=75						
BORG	Borgarnes	53.77	20	LR	LR	17 06 32.4	
	comp=Z,21nm,18.7s,baz=252,slow=33						
NEW	Newport	53.86	317	LR	LR	17 10 25.1	
	comp=Z,41nm,19.6s,baz=128,slow=38						
DBIC	Dimbokro	56.35	94	P	P	16 46 23.8	+0.5
	comp=Z,3.1nm,0.8s,baz=323,slow=5.9,SNR=3.7						
	comp=Z,3.1nm,0.8s						
YKA	Yellowknife Ar	57.33	334	P	P	16 46 29.3	-0.2
	comp=Z,0.8nm,0.7s,baz=106,slow=7.3,SNR=12						
	comp=Z,0.8nm,0.7s						
YKAB9	New Yellowknif	57.37	334	P	P	16 46 30.1	+0.3
YKAR4	New YK Array r	57.41	334	P	P	16 46 30.3	+0.2
TOA0	Torodi Ar. Sit	60.88	85	P	P	16 46 54.8	-0.1
TOA0				IAmb	IAmb	16 47 17.6	
	comp=Z,4.8nm,1.4s						
TORD	Torodi Ar. Bea	60.88	85	P	P	16 46 53.4	-1.5
	comp=Z,0.8nm,0.8s,baz=292,slow=6.7,SNR=4.0						
	comp=Z,0.8nm,0.8s						
TORD	Torodi Ar. Bea	60.88	85	P	P	16 46 54.8	-0.1
DAVOX	Davos/Dischmat	64.35	46	LR	LR	17 10 14.0	
	comp=Z,16nm,21.9s,baz=266,slow=31						
NOA	NORSAR Array B	65.95	31	LR	LR	17 13 18.6	
	comp=Z,35nm,18.9s,baz=260,slow=33						
INK	Inuvik	66.61	337	P	P	16 47 32.1	+0.4
	comp=Z,1.3nm,0.7s,baz=80,slow=9.1,SNR=5.2						
	comp=Z,1.3nm,0.7s						
INK	Inuvik	66.61	337	IAmb	IAmb	16 47 49.9	
	comp=Z,9.9nm,1.4s						
BCAR	Beaver Creek A	69.56	331	P	P	16 47 51.7	+1.3
IL31		71.75	333	P	P	16 48 04.1	+0.4
ILAR	Eielson Array	71.75	333	P	P	16 48 03.1	-0.7
	comp=Z,0.6nm,0.7s,baz=95,slow=5.6,SNR=2.2						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	73.12	30	LR	LR	17 17 22.5	
	comp=Z,41nm,19.1s,baz=322,slow=33						
MLR	Muntele Rosu	75.58	47	LR	LR	17 20 02.2	
	comp=Z,21nm,18.1s,baz=86,slow=34						

SHEM	**Shemya Is, Ala**	**94.60**	**330**	LR	LR	17 35 27.7	
	comp=Z,98nm,18.1s,baz=106,slow=37						
ASAR	**Alice Springs**	**164.54**	**247**	PKPab	**PKPab**	**16 57 40.8**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=104,slow=4.3,SNR=6.5						

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*DJA **01** 16:38:08.3±1.1, 4°S±3°×12°6E±°, h29km±11km, M4.1/12, mB4.8/7, mb4.3/9, MLv4.0/12, Mw(mB)4.1/7*

*IDC **01** 16:38:15.7±7.7, 4°.23S×126°.85E, h100km±86km, mb3.1/2, mbtmp3.7/4, ML3.5/2, MS2.4/1, Error ellipse: s-maj=70.4km s-min=21.7km az=88.0*

ISC 01 16:38:08.3±1.0**, 4°.21S**±0°.07×**126°.37E**±0°.06**, h33**km**, n15, σ1s.28**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.89**	**74**	P	**Pn**	**16 38 37.2**	**-1.2**
AAI				S	**Sn**	**16 38 59.1**	**-2.0**
SANI	**Sanana**	**2.18**	**350**	P	**Pn**	**16 38 40.6**	**-1.7**
SANI				S	**Sn**	**16 39 05.2**	**-2.9**
MSAI	**Masohi**	**2.69**	**72**	P	**Pn**	**16 38 49.8**	**+0.4**
MSAI				S	**Sn**	**16 39 20.1**	**-0.8**
LBMI	**Labuha**	**3.72**	**18**	P	**Pn**	**16 39 03.5**	**0.0**
LBMI				S	**Sn**	**16 39 47.6**	**+1.3**
LUWI	**Luwuk**	**4.77**	**311**	P	**Pn**	**16 39 16.7**	**-1.3**
KMSI	**Cibinong**	**5.32**	**333**	P	**Pn**	**16 39 24.9**	**-0.5**
	0.3nm763nm43nm,0.7s						
APSI	**Ampana**	**5.74**	**305**	P	**Pn**	**16 39 30.9**	**-0.4**
	0.2nm1µm49nm,1.0s						
SWI	**Sorong**	**5.91**	**56**	P	**Pn**	**16 39 34.1**	**+0.5**
	0.2nm932nm22nm,0.8s						
SWI				S	**Sn**	**16 40 41.0**	**+0.8**
	0.2nm932nm22nm,0.8s						
SIJI	**Sorong**	**5.91**	**56**	P	**Pn**	**16 39 34.2**	**+0.6**
	7.1nm,0.3s,baz=259,slow=23,SNR=42						
SIJI				S	**Sn**	**16 40 39.9**	**-0.4**
	5.5nm,0.3s,baz=194,slow=22,SNR=8.3						
SIJI				LR	LR	16 41 43.8	
	comp=Z,38nm,20.4s,baz=122,slow=38 17nm,0.2s						
BSSI	**Bau Bau, Buton**	**6.16**	**252**	P	**Pn**	**16 39 37.5**	**+0.4**
	0.1nm9.5nm,1.5s						
MRSI	**Marisa**	**6.42**	**316**	P	**Pn**	**16 39 40.4**	**-0.2**
	0.5nm2µm99nm,0.6s						
MPSI	**Mapaga**	**7.88**	**305**	P	**Pn**	**16 40 01.5**	**+0.7**
	0.1nm524nm18nm,0.8s						
WRA	**Warramunga Arr**	**17.46**	**154**	P	**Pn**	**16 42 08.2**	**-1.3**
	0.1nm,0.3s,baz=339,slow=12,SNR=8.2 1.0nm,0.8s						
ASAR	**Alice Springs**	**20.67**	**160**	P	**P**	**16 42 46.0**	**+0.3**
	1.1nm,0.7s,baz=343,slow=12,SNR=17 1.1nm,0.7s						
MKAR	**Makanchi Array**	**63.94**	**328**	P	**P**	**16 48 40.3**	**+2.0**
	0.4nm,0.7s,baz=127,slow=8.3,SNR=3.8 0.4nm,0.7s						

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*IDC **01** 16:38:55.7±1.0, 17°.99N×61°.52W, h0km, mb3.6/6, mbtmp3.7/8, ML3.6/2, Error ellipse: s-maj=29.9km s-min=21.8km az=30.0*

*TRN **01** 16:39:00.9, 18°.05N×61°.59W, h25km, MD4.1*

ISC 01 16:38:59.8±2.0**, 18°.17N**±0°.06×**61°.49W**±0°.06**, h26**km±13km**, n38, σ1s.33**/55**, mb3.7**/6**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.57**	**209**	*e*P	**Pb**	**16 39 11.1**	**-0.1**
ANWB				*e*S	**Sb**	**16 39 19.2**	**+0.2**
ANDO	**Antigua, Disas**	**1.10**	**197**	*e*P	**Pn**	**16 39 19.6**	**0.0**
ANDO				*e*S	**Sn**	**16 39 34.3**	**+0.4**
ANBD	**Bethesda, Anti**	**1.14**	**193**	*e*P	**Pn**	**16 39 20.8**	**+0.6**
ANBD				*e*S	**Sn**	**16 39 35.2**	**+0.2**
BPA	**Boggy Peak**	**1.17**	**197**	*e*P	**Pn**	**16 39 20.6**	**0.0**
BPA				*e*S	**Sn**	**16 39 35.4**	**-0.3**
SKI	**Saint Kitts**	**1.45**	**235**	*e*P	**Pn**	**16 39 25.5**	**+1.1**
SKOC	**St. Kitts, UWI**	**1.47**	**234**	*e*P	**Pn**	**16 39 25.3**	**+0.7**
SKOC				*e*S	**Sn**	**16 39 43.2**	**+0.2**
SMRT	**St. Maarten**	**1.51**	**266**	*e*P	**Pn**	**16 39 25.9**	**+0.7**
SMRT				*e*S	**Sn**	**16 39 45.3**	**+1.2**
SEUS	**St. Eustatius**	**1.57**	**245**	*e*P	**Pn**	**16 39 27.5**	**+1.4**
SEUS				*e*S	**Sn**	**16 39 46.6**	**+1.1**
MBFL	**Flemmings, Mon**	**1.57**	**206**	*e*P	**Pn**	**16 39 27.4**	**+1.4**
MBFL				*e*S	**Sn**	**16 39 47.2**	**+1.7**
MLYT	**Lee's Yard**	**1.58**	**205**	*e*P	**Pn**	**16 39 27.6**	**+1.3**
MLYT				*e*S	**Sn**	**16 39 46.4**	**+0.4**
ABD	**La Joyeuse, An**	**1.68**	**180**	*e*S	**Sn**	**16 39 49.6**	**+1.2**
CBE	**Ff, Capester**	**2.09**	**183**	*e*P	**Pn**	**16 39 35.0**	**+1.8**
MAGL	**Barre de l'ile**	**2.21**	**175**	*e*P	**Pn**	**16 39 37.2**	**+2.3**
MAGL				*e*S	**Sn**	**16 40 03.5**	**+2.0**
TBG	**Guadaloupe-3**	**2.31**	**184**	*e*P	**Pn**	**16 39 38.5**	**+2.3**
TBG				*e*S	**Sn**	**16 40 05.0**	**+1.2**
TDBA	**Terre de Bas,**	**2.31**	**183**	*e*P	**Pn**	**16 39 38.3**	**+2.0**
TDBA				*e*S	**Sn**	**16 40 04.3**	**+0.4**
MDVC	**Dominica, Viel**	**2.54**	**178**	*e*P	**Pn**	**16 39 41.2**	**+1.8**
MDVC				*e*S	**Sn**	**16 40 10.6**	**+1.0**
DSLB	**Salisbury**	**2.71**	**179**	*e*P	**Pn**	**16 39 42.1**	**+0.2**
DSLB				*e*S	**Sn**	**16 40 13.6**	**-0.3**
CDVI	**St. Croix**	**3.14**	**263**	*e*P	**Pn**	**16 39 48.7**	**+1.0**
GBMF	**Grand Be**	**3.37**	**175**	*e*P	**Pn**	**16 39 52.6**	**+1.7**
PML	**Morne Lenard**	**3.38**	**175**	*e*P	**Pn**	**16 39 53.9**	**+2.8**
ILAM	**Ilet Lapin Mar**	**3.43**	**170**	*e*P	**Pn**	**16 39 52.9**	**+1.3**
ILAM				*e*S	**Sn**	**16 40 30.6**	**-0.8**
FDF	**Fort de France**	**3.43**	**174**	*e*P	**Pn**	**16 39 52.8**	**+1.0**
FDF				*e*S	**Sn**	**16 40 32.6**	**+1.0**
BIM	**Bigot**	**3.65**	**174**	*e*P	**Pn**	**16 39 57.2**	**+2.4**
BIM				*e*S	**Sn**	**16 40 37.1**	**+0.1**
MPOM	**Morne Pois Mar**	**3.75**	**171**	*e*P	**Pn**	**16 39 57.8**	**+1.7**
MPOM				*e*S	**Sn**	**16 40 39.4**	**0.0**
SLBI	**Saint Lucia, B**	**4.15**	**173**	*e*P	**Pn**	**16 40 03.0**	**+1.4**
SLBI	**Saint Lucia, B**	**4.15**	**173**	*e*S	**Sn**	**16 40 49.0**	**-0.3**
SJG	**San Juan**	**4.43**	**270**	Pn	**Pn**	**16 40 05.7**	**+0.3**
	5.0nm,0.3s,baz=108,slow=19,SNR=1.5						
SJG				Sn	**Sn**	**16 40 56.7**	**+0.6**
	3.7nm,0.3s,baz=286,slow=20,SNR=1.9 24nm,0.5s						
MDP	**Montagnes des**	**15.60**	**145**	Pn	**Pn**	**16 42 35.5**	**-2.7**
	0.2nm,0.3s,baz=331,slow=10,SNR=2.3						
MDP				Sn	Sn	16 45 17.3	-13
	0.3nm,0.3s,baz=75,slow=19,SNR=1.7 7.7nm,1.0s						
LPAZ	**La Paz**	**34.86**	**191**	P	**P**	**16 45 46.5**	**-3.3**
	0.4nm,0.4s,baz=233,slow=5.1,SNR=2.0 0.4nm,0.4s						
TXAR	**Lajitas Array**	**39.98**	**294**	P	**P**	**16 46 32.4**	**-0.2**
	0.4nm,0.7s,baz=111,slow=9.9,SNR=6.3 0.4nm,0.7s						
PDAR	**Pinedale Array**	**47.34**	**312**	P	**P**	**16 47 32.1**	**+0.2**
	0.5nm,0.6s,baz=105,slow=10,SNR=4.9						
PDAR				PcP	**PcP**	**16 49 03.4**	**+0.9**
	0.2nm,0.4s,baz=116,slow=4.1,SNR=2.4 0.5nm,0.6s						
H10N3	**ASCENSION HYDR**	**53.09**	**115**	T	T	17 45 31.8	
	baz=299,slow=75						
H10N2	**ASCENSION HYDR**	**53.10**	**115**	T	T	17 45 34.5	
	baz=299,slow=75						
H10N1	**ASCENSION HYDR**	**53.11**	**115**	T	T	17 45 38.0	
	baz=299,slow=75						
YKA	**Yellowknife Ar**	**57.35**	**334**	P	**P**	**16 48 45.9**	**+0.3**
	0.6nm,0.7s,baz=106,slow=7.4,SNR=6.1 0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**60.80**	**85**	P	**P**	**16 49 10.8**	**+0.5**
	0.8nm,0.9s,baz=283,slow=5.2,SNR=5.9 0.8nm,0.9s						
ILAR	**Eielson Array**	**71.78**	**333**	P	**P**	**16 50 20.4**	**+0.6**
	0.6nm,0.8s,baz=92,slow=6.5,SNR=4.4 0.6nm,0.8s						
ASAR	**Alice Springs**	**164.61**	**247**	PKPab	**PKPab**	**16 59 57.6**	**+0.2**
	0.2nm,0.5s,baz=102,slow=4.0,SNR=8.1						

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*AUST **01** 17:00:38.4±0.6, 36°.92S×144°.23E, h0km, Error ellipse: s-maj=6.7km s-min=6.1km az=56.0*

*IDC **01** 17:00:42.4±6.7, 36°.96S×142°.89E, h0km, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=129.6km s-min=47.9km az=84.0*

ISC 01 17:00:37.2±1.0**, 36°.97S**±0°.06×**144°.12E**±0°.05**, h10**km**, n16, σ2s.23**/20**, Victoria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMTC	**Mt Clear Colle**	**0.67**	**197**	P	**Pn**	**17 00 52.7**	**+0.1**
	baz=0.7						
AUMAG	**Moama Anglican**	**1.01**	**30**	P	**Pg**	**17 00 56.3**	**-0.2**
	baz=0.9						
TOO	**Toolangi**	**1.25**	**119**	P	**Pn**	**17 01 01.4**	**+0.8**
	baz=1.2						
TOO				S	**Sb**	**17 01 17.1**	**+0.2**
	baz=1.2						
ARPS	**Mount Arapiles**	**1.84**	**276**	P	**Pg**	**17 01 11.8**	**-0.6**
	baz=1.9,SNR=102						
ARPS				S	**Sg**	**17 01 38.8**	**+2.5**
	baz=1.9						
AUMTS	**Mt Stromlo**	**4.28**	**69**	P	**Pn**	**17 01 44.2**	**+1.8**
	baz=4.2						
AUMHS	**Melrose High S**	**4.33**	**70**	P	**Pn**	**17 01 44.1**	**+1.0**
	baz=4.2						
CNB	**Canberra Magne**	**4.55**	**70**	P	**Pn**	**17 01 47.3**	**+1.1**
	baz=4.5						
STKA	**Stephens Creek**	**5.49**	**337**	Pn	**Pn**	**17 02 01.2**	**+2.2**
	1.6nm,0.3s,baz=160,slow=9.7,SNR=28						
STKA				Sn	**Sn**	**17 03 01.8**	**-0.5**
	1.1nm,0.3s,baz=231,slow=19,SNR=6.7						
STKA				Lg	Lg	17 03 28.6	
	1.0nm,0.3s,baz=48,slow=21,SNR=4.1 4.5nm,0.3s						
HTT	**Hallett**	**5.53**	**308**	P	**Pn**	**17 02 01.3**	**+1.7**
	baz=5.6,SNR=7.5						
CMSA	**Cobar Meteorol**	**5.58**	**14**	P	**Pn**	**17 02 01.1**	**+0.9**
	baz=5.5						
BBOO	**Buckleboo**	**7.82**	**300**	P	**Pn**	**17 02 32.8**	**+1.8**
	baz=7.9,SNR=10.0						
LCRK	**Leigh Creek**	**8.15**	**321**	P	**Pn**	**17 02 38.3**	**+2.7**
	baz=8.2,SNR=4.6						
INKA	**Innaminka**	**9.63**	**342**	P	**Pn**	**17 02 56.6**	**+0.7**
	baz=9.6,SNR=3.9						
OOD	**Oodnadatta**	**11.59**	**320**	P	**Pn**	**17 03 24.5**	**+1.8**
	baz=12,SNR=4.3						
ASAR	**Alice Springs**	**15.91**	**324**	Pn	**Pn**	**17 04 19.9**	**-1.4**
	0.1nm,0.3s,baz=147,slow=12,SNR=10						
ASAR				Sn	**Sn**	**17 07 10.9**	**-6.8**
	baz=151,slow=23,SNR=4.0 0.2nm,0.5s						
WRA	**Warramunga Arr**	**19.00**	**331**	P	**Pn**	**17 05 00.6**	**+0.9**
	baz=160,slow=13,SNR=2.1 0.5nm,1.0s						

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*IDC **01** 17:06:43.8±2.2, 15°.93S×167°.17E, h0km, mb3.5/3, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=57.8km s-min=37.4km az=126.0*

*NOU **01** 17:06:46.8, 15°.92S×166°.95E, h2km, MLv4.2/9, Vanuatu Islands*

ISC 01 17:06:47.3±1.0**, 15°.90S**±0°.06×**167°.2E**±0°.1**, h27**km**, n9, σ2s.21**/10**, mb3.5**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.45**	**3**	P	**Pn**	**17 06 57.3**	**-0.7**
DVP	**Devils Point**	**2.06**	**152**	P	**Pb**	**17 07 24.5**	**+0.5**
KOUNC	**Koumac, New Ca**	**5.38**	**210**	P	**Pn**	**17 08 06.2**	**+0.3**
DZM	**Mont Dzumac**	**6.18**	**186**	Pn	**Pn**	**17 08 16.3**	**-0.7**
	0.4nm,0.3s,baz=303,slow=3.2,SNR=2.0						
DZM				Sn	**Sn**	**17 09 22.3**	**-4.5**
	0.9nm,0.3s,baz=227,slow=20,SNR=2.1 7.8nm,1.0s						
DZM	**Mont Dzumac**	**6.18**	**186**	P	**Pn**	**17 08 17.4**	**+0.5**
NOUC	**Port Laguerre**	**6.22**	**187**	P	**Pn**	**17 08 20.3**	**+2.8**
WRA	**Warramunga Arr**	**31.47**	**258**	P	**P**	**17 13 08.8**	**+1.7**
	0.4nm,1.0s,baz=88,slow=9.1,SNR=2.9 0.4nm,1.0s						
ASAR	**Alice Springs**	**32.19**	**251**	P	**P**	**17 13 12.3**	**-1.0**
	0.5nm,0.8s,baz=80,slow=9.3,SNR=5.7 0.5nm,0.8s						
ILAR	**Eielson Array**	**87.66**	**18**	P	**P**	**17 19 33.8**	**+0.9**
	0.3nm,0.5s,baz=233,slow=5.4,SNR=2.4 0.3nm,0.5s						

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*ISK **01** 17:08:02.9, 39°.38N×44°.04E, h20km, ML2.8/4*

*DDA **01** 17:08:02.7±0.0, 39°.42N×44°.10E, h7km±3km, ML1.8*

ISC 01 17:08:02.1±1.1**, 39°.39N**±0°.05×**44°.11E**±0°.07**, h9**km**, n8, σ0s.52**/12**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.29**	**211**	PG	**Pb**	**17 08 09.3**	**-0.2**
CLDR				SG	**Sb**	**17 08 13.8**	**-0.7**
CLDR	**Caldiran**	**0.29**	**211**	P	**Pb**	**17 08 09.6**	**+0.1**
IGDI	**IGDIR**	**0.48**	**357**	P	**Pg**	**17 08 11.2**	**-0.2**
IGDI				S	**Sb**	**17 08 19.0**	**-0.9**
IGDI				*i* AML	AML	17 08 20.0	
	comp=E,75nm,0.2s						
IGDI				*i* AML	AML	17 08 23.0	
	comp=N,67nm,0.6s						
ERCV	**ERCIS-VAN**	**0.70**	**239**	PG	**Pb**	**17 08 16.2**	**-0.4**
KOTA	**Agri, Merkez-K**	**0.81**	**301**	P	**Pg**	**17 08 17.8**	**0.0**
AGRB	**Hanur-Agry**	**0.88**	**283**	PG	**Pb**	**17 08 19.5**	**-0.2**
AGRB				SG	**Sb**	**17 08 31.7**	**0.0**
GNI	**Garni**	**0.90**	**32**	PG	**Pn**	**17 08 21.5**	**+0.4**
GNI				SG	**Sn**	**17 08 35.0**	**+0.6**
EATA	**Eleskirt**	**1.33**	**291**	P	**Pg**	**17 08 28.2**	**+0.4**

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*IDC **01** 17:10:54.0±2.1, 15°.06S×178°.90W, h447km±33km, mb2.9/6, mbtmp3.6/7, Error ellipse: s-maj=115.6km s-min=18.8km az=154.0*

ISC 01 17:10:53.9±1.6**, 15°.1S**±0°.6×**178°.9W**±0°.5**, h450**km**, n8, σ0s.34**/5**, mb3.2**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.96**	**228**	P	**P**	**17 12 08.7**	**-0.1**
	8.6nm,0.4s,baz=95,slow=24,SNR=15						
WRA	**Warramunga Arr**	**44.77**	**257**	P	**P**	**17 18 26.2**	**0.0**
	0.2nm,0.4s,baz=96,slow=8.4,SNR=15 0.2nm,0.4s						
ASAR	**Alice Springs**	**45.19**	**252**	P	**P**	**17 18 29.8**	**+0.3**
	1.2nm,0.4s,baz=86,slow=8.3,SNR=46 1.2nm,0.4s						
NVAR	**Mina Array Bea**	**77.72**	**44**	P	P	17 22 04.0	+0.5
	0.3nm,0.5s,baz=225,slow=7.3,SNR=4.3 0.3nm,0.5s						
ILAR	**Eielson Array**	**83.25**	**13**	P	P	17 22 32.0	+0.5
	0.2nm,0.4s,baz=233,slow=5.3,SNR=5.9 0.2nm,0.4s						
TXAR	**Lajitas Array**	**84.87**	**58**	P	P	17 22 41.2	+0.6
	0.3nm,0.6s,baz=219,slow=7.0,SNR=4.3 0.3nm,0.6s						
PDAR	**Pinedale Array**	**85.62**	**44**	P	**P**	**17 22 44.2**	**+0.2**
	0.2nm,0.5s,baz=208,slow=3.3,SNR=4.7 0.2nm,0.5s						
ARCES	**ARCESS Array B**	**123.47**	**350**	PKP	**PKiKP**	**17 28 58.4**	**-0.4**
	1.2nm,1.0s,baz=20,slow=2.9,SNR=4.8						

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*JMA **01** 17:16:26.6±0.1, 24°.8N±0°.6×122°.3E±0°.2, h0km, MV2.7/10, TAIWAN REGION*

*TAP **01** 17:16:26.9, 24°.90N×122°.27E, h13km, ML3.0, C*

ISC 01 17:16:26.6±1.0**, 24°.77N**±0°.02×**122°.26E**±0°.02**, h9**km±9km**, n81, σ1s.00**/126**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.31**	**285**	*e*P	**Pb**	**17 16 33.9**	**-0.4**
	baz=259						
EGS				*e*S	**Sb**	**17 16 38.4**	**-1.1**
	baz=259						
TWB1	**Santiao Chiao**	**0.34**	**315**	*e*P	**Pg**	**17 16 33.1**	**-0.4**
	baz=288						
TWB1				*e*S	**Sg**	**17 16 37.5**	**-0.6**
	baz=288						
NTC	**Toucheng**	**0.40**	**283**	*e*P	**Pb**	**17 16 35.7**	**-0.2**
	baz=263						
TWC	**Suao**	**0.40**	**247**	*e*P	**Pb**	**17 16 36.1**	**+0.2**
	baz=232						
TWC				*e*S	**Sb**	**17 16 42.2**	**0.0**
	baz=232						
TIPB	**Shuangxi**	**0.44**	**298**	*e*P	**Pg**	**17 16 36.0**	**+0.6**
	baz=279						
TIPB				*e*S	**Sg**	**17 16 42.1**	**+0.9**
	baz=279						
ILA	**Ilan**	**0.46**	**270**	*e*P	**Pb**	**17 16 37.0**	**0.0**
	baz=243						
SXI1	**Grass Mountain**	**0.48**	**313**	P	**Pg**	**17 16 35.9**	**-0.1**
	baz=294						
SXI1				*e*S	**Sg**	**17 16 42.2**	**-0.1**
	baz=294						
NDS	**Dongshan**	**0.51**	**255**	*e*P	**Pb**	**17 16 38.0**	**+0.2**
	baz=234						
NDS				*e*S	**Sb**	**17 16 47.0**	**+1.6**
	baz=234						
NWF	**Wu-fen Shan**	**0.53**	**305**	*e*P	**Pg**	**17 16 37.5**	**+0.5**
	baz=290						
NWF				*e*S	**Sg**	**17 16 44.7**	**+0.7**
	baz=290						
WFSB	**Wu-fen Shan**	**0.53**	**305**	P	**Pg**	**17 16 37.2**	**+0.3**
	baz=290						
WFSB				S	**Sg**	**17 16 44.3**	**+0.4**
	baz=290						
TWE	**Neicheng**	**0.54**	**265**	*e*P	**Pb**	**17 16 38.5**	**+0.2**
	baz=242						
TWE				*e*S	**Sb**	**17 16 46.8**	**+0.7**
	baz=242						
EWUT	**Wuta**	**0.54**	**234**	*e*P	**Pn**	**17 16 40.0**	**-0.6**
	baz=216						
EWUT				*e*S	**Sb**	**17 16 47.9**	**+1.7**
	baz=216						
TNOU	**National Taiwa**	**0.58**	**311**	P	**Pg**	**17 16 37.9**	**-0.1**
	baz=298						
TNOU				*e*S	**Sg**	**17 16 45.6**	**0.0**
	baz=298						
FUSB	**Fushanzhiwuyua**	**0.61**	**270**	*e*P	**Pb**	**17 16 39.7**	**+0.2**
	baz=257						
FUSB				*e*S	**Sb**	**17 16 49.3**	**+1.0**
	baz=257						
ENTT	**Nioudou**	**0.64**	**259**	*e*P	**Pn**	**17 16 40.9**	**-1.0**
	baz=239						
ENTT				*e*S	**Sn**	**17 16 50.2**	**-2.1**
	baz=239						
NWLT	**Wulai**	**0.69**	**271**	P	**Pb**	**17 16 41.6**	**+0.8**
	baz=260						
NWLT				*e*S	**Sb**	**17 16 51.4**	**+0.9**
	baz=260						
NHDH	**Xindian Distri**	**0.69**	**287**	P	**Pb**	**17 16 41.2**	**+0.3**
	baz=275						
NHDH				S	**Sb**	**17 16 51.2**	**+0.5**
	baz=275						
NWRT	**Kuosheng**	**0.70**	**309**	*e*P	**Pg**	**17 16 40.3**	**+0.2**
	baz=305						
NWRT				*e*S	**Sg**	**17 16 49.0**	**-0.2**
	baz=305						
JYNG	**Yonagunijimaku**	**0.70**	**116**	P	**Pg**	**17 16 40.4**	**+0.3**
JYNG				S	**Sb**	**17 16 50.4**	**-0.3**
LATG	**Datong**	**0.70**	**251**	P	**Pn**	**17 16 42.1**	**-0.8**
	baz=242						
LATG				*e*S	**Sn**	**17 16 52.7**	**-1.2**
	baz=242						
TATO	**Taipei**	**0.73**	**287**	P	**Pb**	**17 16 41.8**	**+0.3**
	baz=275						
TATO				*e*S	**Sb**	**17 16 51.9**	**+0.3**
	baz=275						
YM01	**YM01**	**0.73**	**301**	P	**Pg**	**17 16 41.1**	**+0.3**
	baz=290						
YM01				*e*S	**Sg**	**17 16 51.3**	**+1.0**
	baz=290						
TAP	**Taipei**	**0.73**	**292**	*e*P	**Pb**	**17 16 41.7**	**0.0**
	baz=293						
TAP				*e*S	**Sb**	**17 16 51.6**	**-0.2**
	baz=293						
YM08	**YM08**	**0.74**	**305**	*e*P	**Pg**	**17 16 40.8**	**-0.2**
	baz=294						
YM08				*e*S	**Sg**	**17 16 50.1**	**-0.4**
	baz=294						
YOJ	**Yonaguni jima**	**0.75**	**114**	*e*P	**Pg**	**17 16 41.3**	**+0.2**
	baz=122						
YOJ	**Yonaguni jima**	**0.75**	**114**	P	**Pg**	**17 16 41.0**	**-0.1**
YOJ				S	**Sg**	**17 16 51.0**	**+0.2**
BACT	**New Taipei Cit**	**0.78**	**288**	*e*P	**Pb**	**17 16 43.3**	**+1.0**
	baz=277						
TWY	**Chenhua**	**0.78**	**311**	*e*P	**Pg**	**17 16 41.7**	**0.0**
	baz=288						
TWY				*e*S	**Sg**	**17 16 52.7**	**+0.7**
	baz=288						
ANP	**Anpu**	**0.79**	**302**	*e*P	**Pg**	**17 16 42.2**	**+0.3**
	baz=292						
ANP				*e*S	**Sg**	**17 16 52.6**	**+0.4**
	baz=292						
YHNB	**Yeheng**	**0.81**	**263**	*e*P	**Pb**	**17 16 43.3**	**+0.4**
	baz=270						
YHNB				*e*S	**Sn**	**17 16 55.7**	**-0.7**
	baz=270						
NSK	**Sanguang**	**0.82**	**264**	*e*P	**Pn**	**17 16 43.8**	**-0.7**
	baz=271						
NSK				*e*S	**Sn**	**17 16 56.5**	**-0.4**
	baz=271						
TWS1	**Kuangyinshan**	**0.83**	**294**	*e*P	**Pb**	**17 16 43.3**	**0.0**
	baz=295						
TWS1				*e*S	**Sb**	**17 16 54.9**	**+0.3**
	baz=295						
NTST	**Danshui**	**0.83**	**299**	*e*P	**Pb**	**17 16 43.8**	**+0.5**
	baz=289						
NTST				*e*S	**Sb**	**17 16 54.8**	**+0.1**
	baz=289						
ETL	**Fush Village**	**0.84**	**224**	*e*P	**Pn**	**17 16 44.7**	**+0.1**
	baz=219						
ETL				*e*S	**Sn**	**17 16 57.0**	**-0.2**
	baz=219						
NACB	**Ninganchiao**	**0.84**	**226**	P	**Pn**	**17 16 44.5**	**-0.2**
	baz=221						
NACB				*e*S	**Sn**	**17 16 56.9**	**-0.3**
	baz=221						
NNSB	**Datong**	**0.86**	**247**	P	**Pn**	**17 16 45.0**	**-0.2**
	baz=231						
NNSB				*e*S	**Sn**	**17 16 57.4**	**-0.6**
	baz=231						
NNS	**Nan Shan**	**0.87**	**248**	P	**Pn**	**17 16 45.2**	**0.0**
	baz=231						
NNS				*e*S	**Sn**	**17 16 58.2**	**+0.2**
	baz=231						
ETLH	**Xiulin Townshi**	**0.90**	**232**	*e*P	**Pn**	**17 16 45.7**	**+0.2**
	baz=216						
ETLH				*e*S	**Sn**	**17 16 58.6**	**-0.1**
	baz=216						
TWD	**Chiawan**	**0.91**	**222**	*e*P	**Pn**	**17 16 46.1**	**+0.4**
	baz=217						
TWD				*e*S	**Sn**	**17 16 59.6**	**+0.8**
	baz=217						
NFF	**Wufeng Townshi**	**1.04**	**263**	*e*P	**Pn**	**17 16 47.5**	**-0.1**
	baz=269						
ETM	**Tongmen**	**1.06**	**221**	*e*P	**Pn**	**17 16 48.8**	**+1.1**
	baz=218						
ETM				*e*S	**Sn**	**17 17 04.6**	**+2.0**
	baz=218						
WHF	**Hehuan Shan**	**1.09**	**236**	*e*P	**Pn**	**17 16 49.6**	**+1.1**
	baz=231						
WHF				*e*S	**Sn**	**17 17 04.5**	**+0.5**
	baz=231						
TWT	**Tachien**	**1.11**	**243**	*e*P	**Pn**	**17 16 49.5**	**+1.0**
	baz=229						
NHW	**Xinwu Township**	**1.12**	**283**	*e*P	**Pg**	**17 16 47.5**	**-0.8**
	baz=275						
NHW				*e*S	**Sb**	**17 17 03.1**	**+0.1**
	baz=275						
LIOB	**Emei**	**1.14**	**264**	*e*P	**Pn**	**17 16 48.9**	**+0.1**
	baz=258						
NSTT	**Nanjuang**	**1.15**	**264**	*e*P	**Pn**	**17 16 49.1**	**+0.2**
	baz=257						
NSTT				*e*S	**Sn**	**17 17 06.0**	**+1.2**
	baz=257						
ESL	**Shilin**	**1.21**	**219**	*e*P	**Pn**	**17 16 51.2**	**+1.4**
	baz=217						
CHGB	**Renai**	**1.21**	**235**	*e*P	**Pn**	**17 16 51.5**	**+1.5**
	baz=231						
OWD	**Renai**	**1.27**	**231**	*e*P	**Pn**	**17 16 52.5**	**+1.8**
	baz=228						
WHP	**Taichung City**	**1.29**	**248**	*e*P	**Pn**	**17 16 52.5**	**+1.6**
	baz=243						
WUSB	**Renai**	**1.29**	**234**	*e*P	**Pn**	**17 16 52.9**	**+1.9**
	baz=230						
WUSB				*e*S	**Sn**	**17 17 10.9**	**+2.3**
	baz=230						
NSY	**Sanyi**	**1.41**	**256**	*e*P	**Pg**	**17 16 53.6**	**0.0**
	baz=268						
IRIF	**Iriomote-Funau**	**1.41**	**107**	P	**Pn**	**17 16 52.7**	**+0.2**
IRIF				S	**Sb**	**17 17 11.4**	**+0.3**
WCS	**Beigang Elemen**	**1.42**	**240**	*e*P	**Pg**	**17 16 54.9**	**+1.1**
	baz=224						
VWDT	**VWDT**	**1.43**	**226**	*e*P	**Pg**	**17 16 55.0**	**+0.9**
	baz=223						
HGSD	**Ruisui**	**1.48**	**211**	*e*P	**Pg**	**17 16 55.6**	**+0.6**
	baz=197						
EHY	**Hungye**	**1.52**	**214**	*e*P	**Pg**	**17 16 55.0**	**-0.8**
	baz=214						
SMLT	**Sun Moon Lake**	**1.52**	**235**	*e*P	**Pg**	**17 16 57.4**	**+1.6**
	baz=215						
SSLB	**Suanglung**	**1.54**	**231**	*e*P	**Pg**	**17 16 57.0**	**+0.9**
	baz=228						
SSLB				*e*S	**Sg**	**17 17 19.5**	**+3.4**
	baz=228						

HATJ	Hateruma jima	1.58	116	P	Pn	17 16 55.6	+0.8
HATJ				S	Sg	17 17 16.9	-0.4
YULB	Yu-li	1.62	213	eP	Pb	17 16 56.0	-0.8
	baz=213						
EYUL	Yuli	1.65	211	eP	Pg	17 16 57.0	-1.3
	baz=212						
JKRS	Kuro-shima	1.68	108	P	Pn	17 16 57.1	+0.9
JKRS				S	Sn	17 17 19.0	+1.1
JIJ	Ishigaki jima	1.76	103	P	Pn	17 16 58.0	+0.7
FULB	Fuli	1.79	210	eP	Pg	17 16 59.5	-1.5
	baz=194						
ALS	Alishan	1.82	227	eP	Pg	17 17 01.5	-0.2
	baz=209						
CHN5	Tsauling	1.85	231	eP	Pg	17 17 02.2	0.0
	baz=231						
JISG	Ishigakijimahi	1.88	95	P	Pn	17 16 59.9	+1.0
ELDTW	Lidau	1.94	216	eP	Pg	17 17 02.7	-1.1
	baz=203						
EDH	Donghe	1.99	206	eP	Pb	17 17 01.6	-1.4
	baz=194						
WTK	Tuku	2.02	238	eP	Pb	17 17 02.8	-0.7
	baz=238						
TPUB	Ta-pu	2.08	226	eP	Pg	17 17 05.0	-1.6
	baz=209						
WTP	Ta-pu	2.13	225	eP	Pg	17 17 05.8	-1.7
	baz=209						
TWK	Hsinying	2.20	228	eP	Pg	17 17 06.8	-2.1
	baz=228						
WSL	Shuilin Townsh	2.23	237	eP	Pb	17 17 05.6	-1.5
	baz=237						
CHN1	Nanshi	2.23	226	eP	Pb	17 17 05.9	-1.3
	baz=226						
SSD	Sandimen	2.50	217	eP	Pb	17 17 10.3	-1.4
	baz=203						
MATB	Ma-tsu	2.50	304	eP	Pn	17 17 05.6	-2.0
	baz=299						
VWUC	VWUC	2.56	276	eP	Pn	17 17 07.0	-1.3
	baz=272						
MASBT	Mashibuluo	2.61	215	eP	Pb	17 17 11.4	-2.3
	baz=203						
MASBT				eS	Sb	17 17 44.0	-1.8
	baz=203						
EAST	Anshuo	2.70	209	eP	Pb	17 17 12.8	-2.4
	baz=199						

*IDC **01** 17:20:03.9±0.6,52.°24N×169.°36W,h0^{km},mb4.4/31,mbtmp4.4/34,ML4.1/3,MS3.6/41,Error ellipse: s-maj=18.0km s-min=10.3km az=175.0*

*BJI **01** 17:20:05.0±0.0,52.°20N×169.°20W,h30^{km},mb4.9/47,mB4.9/21,Ms4.4/14,Ms7 4.1/14*

*AEIC **01** 17:20:06±2.3,52.°07N±0.°07×169.°29W±0.°08,h27^{km}±6^{km},Error ellipse: s-maj=10.0km s-min=7.3km az=186.0*

*NEIC **01** 17:20:07.2±2.3,52.°18N±0.°05×169.°22W±0.°07,h23^{km}±7^{km},mb4.3/46,ML4.2/33(AEIC),Error ellipse: s-maj=8.4km s-min=4.9km az=143.0*

*MOS **01** 17:20:08.1±1.0,52.°39N×169.°55W,h29^{km},mb4.9/33,Error ellipse: s-maj=12.2km s-min=6.0km az=100.9*

ISC 01 17:20:07.4±0.8,**52.°22N**±0.°07×**169.°29W**±0.°04,**h23**^{km}±4^{km},**n458**,σ**1.^{s}33**/428,**mb4.8**/104,**MS3.7**/46,**29C-18D,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.80	19		Pn	17 20 23.3	0.0
NIKH	Nikolski High	0.80	19		Sn	17 20 36.6	+2.1
NIKH	Nikolski High	0.80	19	P	Pn	17 20 23.5	+0.2
	baz=196,SNR=172						
OKFG	Magazine Ridge	1.46	34		Pb	17 20 33.0	-0.9
OKFG					Sb	17 20 53.6	+1.7
MGOD	Makushin Gods	2.15	42		Pn	17 20 42.8	+0.9
UNV	Unalaska Valle	2.34	45	Pn	Pn	17 20 45.3	+0.9
UNV	Unalaska Valle	2.34	45		Sn	17 21 14.2	+1.8
UNV	Unalaska Valle	2.34	45	P	Pn	17 20 45.3	+0.9
	baz=224,SNR=59						
MTBL	Makushin Table	2.36	41		Pn	17 20 46.3	+1.6
AKBBA	Akutan Broad B	2.77	46		Pn	17 20 52.1	+1.9
AKUT	Akutan	2.86	46	Pn	Pn	17 20 53.2	+1.7
AKSA	Akutan Strait	2.89	47		Pn	17 20 54.1	+2.1
KOFP	Korovin Flat P	2.95	273		Pn	17 20 54.5	+1.6
ATKA	Atka Island	3.02	272		Pn	17 20 54.3	+0.6
ATKA					Sn	17 21 29.7	+0.7
KOKL	Mount Kliuchef	3.02	274		Pn	17 20 55.5	+1.7
WECS	Westdahl Cape	3.56	48		Pn	17 21 04.5	+3.3
SSLS	Shishaldin Sou	4.03	50		Pn	17 21 10.2	+2.5
GSTR	Great Sitkin T	4.17	271	Pn	Pn	17 21 10.0	+0.5
GSMY	Great Sitkin M	4.17	270		Pn	17 21 11.2	+1.6
GSTD	Great Sitkin T	4.22	271		Pn	17 21 11.9	+1.6
FALS	False Pass	4.39	51	Pn	Pn	17 21 16.1	+3.6
ADK	Adak	4.57	269	P	Pn	17 21 16.5	+1.4
ADK	Adak	4.57	269	Pn	Pn	17 21 16.5	+1.4
KIWB	Kanaga Island	4.87	269		Pn	17 21 20.7	+1.6
KIMD	Kanaga Island	4.93	268		Pn	17 21 21.2	+1.3
SPIA	Saint Paul Isl	5.00	354	Pn	Pn	17 21 24.5	+3.6
SPIA	Saint Paul Isl	5.00	354	P	Pn	17 21 24.5	+3.6
	baz=173,SNR=9.2						
TAFP	Tanaga Falls P	5.37	270		Pn	17 21 27.4	+1.3
TASE	Tanaga Southea	5.41	269		Pn	17 21 28.3	+1.6
SDPT	Sand Point	6.09	56		Pn	17 21 39.2	+3.3
SHEM	Shemya Is, Ala	10.15	279	Pn	Pn	17 22 31.0	-0.5
	1.7nm,0.3s,baz=90,slow=19,SNR=0.9						
SHEM				LR	LR	17 26 11.8	
	comp=Z,355nm,21.1s,baz=114,slow=36						
	74nm,1.2s						
OHAK	Old Harbor	10.52	55	Pn	Pn	17 22 36.0	-0.6
P18K	Big Mountain,	10.68	42	P	Pn	17 22 42.5	+3.7
	baz=233,SNR=11						
O18K	Koktuh Hills	10.96	40	P	Pn	17 22 45.5	+2.8
	baz=231,SNR=6.3						
KDAK	Kodiak Island	11.08	53	Pn	Pn	17 22 44.6	+0.3
	2.2nm,0.3s,baz=270,slow=8.1,SNR=17						
KDAK				Sn	Sn	17 24 40.3	-7.0
	0.4nm,0.3s,baz=180,slow=20,SNR=1.0						
KDAK	Kodiak Island	11.08	53	⇓eP	Pn	17 22 44.7	+0.4
KDAK	Kodiak Island	11.08	53	P	Pn	17 22 45.1	+0.9
	baz=246						
Q19K	Cape Douglas,	11.10	47	Pn	Pn	17 22 44.4	-0.1
Q19K	Cape Douglas,	11.10	47	P	Pn	17 22 46.2	+1.6
	baz=239						
N18K	Kilae Creek	11.24	36	P	Pn	17 22 51.7	+5.2
	baz=226						
O19K	Port Alsworth	11.53	40	P	Pn	17 22 53.9	+3.6
	baz=232						
GAMB	Gambell	11.66	355	Pn	Pn	17 22 55.3	+3.2
GAMB	Gambell	11.66	355	P	Pn	17 22 56.6	+4.5
	baz=173						
N19K	Bonanza Creek	11.85	38	P	Pn	17 22 59.7	+4.9
	baz=230						
RSO	Redoubt South	12.31	41	Pn	Pn	17 23 03.2	+2.0
M19K	Big River Lodg	12.61	34	P	P	17 23 10.8	-5.6
	baz=226						
L19K	White Mountain	12.65	32	P	P	17 23 11.3	-5.6
	baz=224						
TTA	Tatalina	12.85	28	P	Pn	17 23 11.6	+3.1
TTA	Tatalina	12.85	28	Pn	Pn	17 23 11.6	+3.1
TTA	Tatalina	12.85	28	P	Pn	17 23 13.6	+5.1
	baz=219						
SPU	Mount Spurr	13.01	40	Pn	Pn	17 23 12.9	+2.3
L20K	Farewell, AK	13.19	33	P	Pn	17 23 17.7	+4.7
	baz=225						
SEW	Seward	13.54	47	Pn	Pn	17 23 17.9	+0.1
SEW	Seward	13.54	47	P	Pn	17 23 18.4	+0.6
	baz=243						
O22K	Cooper Landing	13.60	45	Pn	Pn	17 23 18.2	-0.4
O22K	Cooper Landing	13.60	45	P	Pn	17 23 19.6	+1.0
	baz=241,SNR=8.4						
K20K	Telida	13.76	30	P	Pn	17 23 24.5	+3.8
	baz=222						
RC01	Rabbit Creek A	13.90	43	Pn	Pn	17 23 23.3	+0.6
RC01	Rabbit Creek A	13.90	43	P	Pn	17 23 23.8	+1.1
	baz=239						
PPLA	Purkeypile	14.04	34	Pn	Pn	17 23 28.3	+3.5
PPLA	Purkeypile	14.04	34	P	P	17 23 31.6	-0.8
	baz=228						
GCSA	Galena City Sc	14.10	22	P	P	17 23 29.9	-2.9
	baz=213						
J20K	Nowinta River	14.35	28	P	P	17 23 33.5	-2.2
	baz=220						
CAST	Castle Rocks	14.43	32	Pn	Pn	17 23 31.6	+1.6
CAST	Castle Rocks	14.43	32	P	P	17 23 37.2	+0.6
	baz=227,SNR=7.1						
KNK	Knik Glacier	14.60	43	Pn	Pn	17 23 30.9	-1.3
CHUM	Lake Minchumin	14.68	31	P	P	17 23 40.9	+1.6
	baz=225						
SML	Sawmill	14.85	42	Pn	Pn	17 23 33.7	-2.0
M23K	Glacier View	15.09	42	P	Pn	17 23 38.1	-0.7
	baz=240						
FID	Port Fidalgo	15.15	47	Pn	Pn	17 23 37.5	-2.1
BPAW	Bear Paw Mtn.	15.25	32		P	17 23 44.2	-1.6
BPAW				IAmb	IAmb	17 23 47.0	
	comp=Z,19nm,0.8s						
BPAW	Bear Paw Mtn.	15.25	32	P	P	17 23 44.3	-1.4
	baz=227,SNR=14						
SCM	Sheep Creek Mo	15.27	42	P	Pn	17 23 39.6	-1.7
SCM				pmax	pmax		
	comp=Z,165nm,1.9s						
SCM	Sheep Creek Mo	15.27	42	Pn	Pn	17 23 39.6	-1.7
SCM	Sheep Creek Mo	15.27	42	P	Pn	17 23 40.1	-1.2
	baz=240,SNR=5.3						
WAT6	Susitna Watana	15.49	40	P	Pn	17 23 43.8	-0.5
	baz=237						
KLU	Klutina	15.71	45	Pn	Pn	17 23 45.3	-1.7
KLU				IAmb	IAmb	17 23 57.7	
	comp=Z,25nm,0.7s						
KLU	Klutina	15.71	45	P	Pn	17 23 45.7	-1.4
	baz=244,SNR=9.8						
I21K	Tanana	15.72	28	P	P	17 23 53.2	+2.4
	baz=222,SNR=5.3						
H21K	Melozitna Rive	15.85	26	Pn	Pn	17 23 46.7	-2.1
H21K	Melozitna Rive	15.85	26	P	P	17 23 52.1	-0.3
	baz=219,SNR=5.9						
M24K	Tolsona, Glenn	15.88	42	P	Pn	17 23 48.8	-0.5
	baz=242						
DHY	Denali Highway	15.90	38	Pn	Pn	17 23 49.3	-0.2
DHY	Denali Highway	15.90	38	P	Pn	17 23 50.3	+0.8
	baz=237						
BMRM	Bremner River	16.08	47	Pn	Pn	17 23 49.9	-1.9
BMRM				IAmb	IAmb	17 24 02.8	
	comp=Z,28nm,0.9s						
BMRM	Bremner River	16.08	47	P	Pn	17 23 50.5	-1.3
	baz=248						
NEA2	Nenana	16.21	32	Pn	Pn	17 23 53.7	+0.4
NEA2	Nenana	16.21	32	P	Pn	17 23 54.1	+0.8
	baz=229						
N25K	Chitina, Valde	16.33	45	P	Pn	17 23 53.9	-1.1
	baz=246						
HARP	HAARP	16.44	42	P	Pn	17 23 56.0	-0.3
	baz=242						
WRH	Wood River Hil	16.46	34	Pn	Pn	17 23 54.9	-1.6
I23K	Minto, Yukon-K	16.48	31	Pn	Pn	17 23 56.4	-0.3
I23K				IAmb	IAmb	17 24 19.9	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	16.48	31	P	P	17 23 59.5	+0.2
	baz=227,SNR=7.1						
PAX	Paxson	16.59	40	P	Pn	17 23 57.7	-0.5
PAX				pmax	pmax		
	comp=Z,11nm,1.2s						
PAX	Paxson	16.59	40	Pn	Pn	17 23 57.7	-0.5
PAX	Paxson	16.59	40	P	Pn	17 23 57.6	-0.7
	baz=240						
GLB	Gilahina Butte	16.62	46	Pn	Pn	17 23 57.9	-0.7
GLB				IAmb	IAmb	17 24 32.8	
	comp=Z,15nm,0.8s						
VRDI	Verde Repeater	16.70	47	Pn	Pn	17 23 57.2	-2.5
VRDI				IAmb	IAmb	17 24 30.6	
	comp=Z,25nm,1.1s						
COLA	College	16.79	33	⇓eP	P	17 24 01.6	-1.1
H23K	Yukon River	16.89	29	P	P	17 24 07.3	+3.4
	baz=225						
IL31		17.05	34	Pn	Pn	17 24 03.1	-0.8
IL31				IAmb	IAmb	17 24 27.9	
	comp=Z,30nm,1.8s						
ILAR	Eielson Array	17.05	34	P	Pn	17 24 02.1	-1.9
	comp=Z,0.3nm,0.3s,baz=229,slow=12,SNR=21						
ILAR				PcP	PcP	17 28 47.2	-0.8
	comp=Z,0.6nm,0.6s,baz=266,slow=3.4,SNR=6.4						
	comp=Z,1.2nm,0.6s						
RIDG	Independent Ri	17.22	38	Pn	Pn	17 24 04.9	-1.2
RIDG	Independent Ri	17.22	38	P	P	17 24 07.8	+0.2
	baz=239						
MENT	Mentasta	17.28	42	Pn	Pn	17 24 05.4	-1.5
M26K	Nabesna, AK	17.35	44	Pn	Pn	17 24 06.8	-1.0
M26K				IAmb	IAmb	17 24 16.3	
	comp=Z,30nm,1.5s						
M26K	Nabesna, AK	17.35	44	P	Pn	17 24 06.9	-0.9
	baz=246						
H24K	Noodor Dome	17.40	30	P	P	17 24 11.1	+1.5
	baz=228,SNR=5.8						
BARN	Barnard Glacie	17.46	49	Pn	Pn	17 24 07.2	-2.0
BARN				IAmb	IAmb	17 25 03.3	
	comp=Z,63nm,1.6s						
L26K	Log Cabin Wild	17.47	42		Pn	17 24 09.3	+0.1
L26K	Log Cabin Wild	17.47	42	P	Pn	17 24 09.5	+0.3
	baz=243						
DOT	Dot Lake	17.47	39		Pn	17 24 08.9	-0.4
DOT				IAmb	IAmb	17 24 22.6	
	comp=Z,40nm,2.0s						
J25K	Salcha River,	17.49	36	P	Pn	17 24 08.2	-1.3
	baz=236,SNR=6.4						
SCRK	Sand Creek	17.67	38		Pn	17 24 11.7	0.0
SCRK				IAmb	IAmb	17 24 23.0	
	comp=Z,25nm,1.7s						
SCRK	Sand Creek	17.67	38	P	Pn	17 24 12.0	+0.3
	baz=240						
COLD	Coldfoot	17.73	25	P	P	17 24 15.1	+1.9
	baz=221						
M27K	Edge Creek, AK	17.81	45		Pn	17 24 13.1	-0.5
M27K				IAmb	IAmb	17 24 20.8	
	comp=Z,33nm,1.2s						
J26L	Joseph Creek	18.09	37	P	Pn	17 24 16.6	-0.3
	baz=239,SNR=16						
L27K	Beaver Creek,	18.11	43	P	Pn	17 24 16.5	-0.6
L27K	Beaver Creek,	18.11	43	P	Pn	17 24 16.8	-0.3
	baz=246						
BCAR	Beaver Creek A	18.13	43		Pn	17 24 16.7	-0.7
YUK3	Moose Creek	18.23	47	P	P	17 24 20.0	+1.0
	baz=251						
K27K	Chicken	18.43	40	P	Pn	17 24 25.2	+4.2
	baz=242						
YUK4	Talbot Arm	18.94	49	P	Pn	17 24 30.5	+3.0
	baz=254						
TOLK	Toolik Lake Re	18.97	22		Pn	17 24 28.1	+0.7
TOLK	Toolik Lake Re	18.97	22	P	Pn	17 24 28.2	+0.7
	baz=220,SNR=10						
YUK6	Outpost Mounta	18.98	51	P	Pn	17 24 29.4	+1.6
	baz=256						
HYT	Haines Junctio	19.36	51	P	Pn	17 24 33.4	+1.0
HYT	Haines Junctio	19.36	51	P	Pn	17 24 33.9	+1.6
	baz=258,SNR=14						
PET	Petropavlovsk	19.40	285	P	P	17 24 29.7	-1.7
BMAR	Burnt Mountain	19.44	29	P	Pn	17 24 32.5	-0.7
BILL	Bilibino	19.76	333	⇓eP	Pn	17 24 36.6	-0.3
BILL				pmax	pmax		
	comp=Z,19nm,1.1s						
BILL				MLR	MLR		
	comp=Z,125nm,20.0s						
PEA0B	Petropavlovsk-	19.95	286	⇓iP	P	17 24 38.1	+0.6
PEA0B	Petropavlovsk-	19.95	286	P	P	17 24 37.8	+0.3
PETK	Petropavlovsk-	19.95	286	P	P	17 24 37.1	-0.4
	comp=Z,5.2nm,0.3s,baz=92,slow=12,SNR=132						
PETK				LR	LR	17 32 45.5	
	comp=Z,91nm,20.4s,baz=91,slow=38						
	comp=Z,21nm,0.5s						
PETK	Petropavlovsk-	19.95	286	P	P	17 24 37.3	-0.2
PETK	Petropavlovsk-	19.95	286	P	P	17 24 37.3	-0.2
M30M	Minto, Yukon	20.12	46	P	Pn	17 24 40.4	-0.9
M30M	Minto, Yukon	20.12	46	P	Pn	17 24 42.3	+1.0
	baz=254						
SKAG	Skagway	20.22	56	P	Pn	17 24 42.8	+0.4
	baz=264						
N31M	Braeburn, Yuko	20.32	50	P	Pn	17 24 44.6	+1.0
	baz=258,SNR=5.9						
I29M	Ogilvie Camp,	20.47	38	P	P	17 24 41.9	-1.2
I29M				IAmb	IAmb	17 25 06.8	
	comp=Z,6.5nm,0.7s						
I29M	Ogilvie Camp,	20.47	38	P	P	17 24 41.8	-1.3
	baz=245						
WHY	Whitehorse	20.60	52	P	Pn	17 24 47.4	+0.4
	baz=261,SNR=8.4						
M31M	Drury Creek, Y	21.11	48	P	P	17 24 50.0	-0.1
M31M				IAmb	IAmb	17 24 56.2	
	comp=Z,14nm,0.9s						
M31M	Drury Creek, Y	21.11	48	P	P	17 24 51.9	+1.8
	baz=258,SNR=9.5						
EPYK	Eagle Plains	21.50	36	P	P	17 24 53.6	-0.6
EPYK				IAmb	IAmb	17 24 59.8	
	comp=Z,15nm,0.7s						
EPYK	Eagle Plains	21.50	36	P	P	17 24 53.6	-0.6
	baz=244,SNR=12						
FARO	Faro, Yukon	21.59	48	P	P	17 24 56.8	+1.5
	baz=259						
MMPY	Sheldon Lake,	22.62	48	P	P	17 25 09.6	+3.3
	baz=260						
SEY	Seymchan	22.81	313	P	P	17 25 07.3	-0.8
	comp=Z,4.5nm,0.8s,baz=99,slow=11,SNR=23						
SEY				PcP	PcP	17 28 59.2	+0.6
	comp=Z,3.5nm,0.7s,baz=100,slow=5.5,SNR=12						
	comp=Z,4.5nm,0.8s						
SEY	Seymchan	22.81	313	⇑eP	P	17 25 07.9	-0.2
SEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DLBC	Dease Lake	22.92	59	P	P	17 25 10.7	+1.2
	comp=Z,7.0nm,1.1s,baz=247,slow=12,SNR=5.3						
DLBC				LR	LR	17 34 08.5	
	comp=Z,153nm,20.0s,baz=258,slow=37						
	comp=Z,7.0nm,1.1s						
MA2	Magadan	23.27	304	P	P	17 25 12.7	-0.2
	comp=Z,21nm,0.9s,baz=86,slow=9.2,SNR=28						
MA2				LR	LR	17 35 25.9	
	comp=Z,112nm,18.7s,baz=112,slow=40						
	comp=Z,21nm,0.9s						
MA2	Magadan	23.27	304	d iP	P	17 25 14.2	+1.3
MA2				pmax	pmax		
	comp=Z,19nm,0.8s						
MA2	Magadan	23.27	304	P	P	17 25 13.1	+0.2
MA2				IAmb	IAmb	17 25 15.4	
	comp=Z,16nm,0.8s						
INK	Inuvik	23.45	33	P	P	17 25 13.2	-1.4
	comp=Z,7.4nm,0.6s,baz=245,slow=10,SNR=37						
INK				PcP	PcP	17 29 00.1	+0.3
	comp=Z,3.0nm,0.8s,baz=322,slow=1.2,SNR=4.9						
	comp=Z,7.4nm,0.6s						
INK	Inuvik	23.45	33	P	P	17 25 13.6	-1.0
INK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
INK	Inuvik	23.45	33	P	P	17 25 13.6	-1.0
INK				IAmb	IAmb	17 25 15.8	
	comp=Z,7.7nm,0.7s						
INK	Inuvik	23.45	33	P	P	17 25 13.3	-1.2
	baz=244,SNR=9.1						
TGTN	Hyland Airport	23.88	51	P	P	17 25 21.7	+2.7
	baz=266,SNR=5.3						
BBB	Bella Bella	25.00	74	LR	LR	17 33 10.5	
	comp=Z,95nm,20.7s,baz=291,slow=31						
C36M	Paulatuk	27.03	34	P	P	17 25 47.3	+0.1
C36M	Paulatuk	27.03	34	P	P	17 25 47.3	+0.1
	baz=254						
B05A	Bryant	30.02	78	P	P	17 26 17.4	+3.3
	baz=295						
YKA	Yellowknife Ar	30.31	49	P	P	17 26 17.5	+1.0
	comp=Z,2.3nm,0.5s,baz=274,slow=8.1,SNR=77						
YKA				PcP	PcP	17 29 16.4	+0.2
	comp=Z,1.2nm,0.9s,baz=283,slow=2.3,SNR=4.6						
YKA				ScP	ScP	17 32 57.8	+1.1
	comp=Z,0.5nm,0.8s,baz=279,slow=2.8,SNR=5.7						
YKA				LR	LR	17 40 39.9	
	comp=Z,126nm,18.1s,baz=292,slow=41						
	comp=Z,2.3nm,0.5s						
YKA	Yellowknife Ar	30.31	49	iP	P	17 26 17.8	+1.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAJ	Asahikawa	32.57	275	LR	LR	17 38 22.5	
	comp=Z,122nm,21.6s,baz=53,slow=34						
TIXI	Tiksi	32.89	329	P	P	17 26 38.6	-0.5
	comp=Z,1.9nm,0.6s,baz=92,slow=24,SNR=23						
TIXI				PcP	PcP	17 29 23.3	+0.3
	comp=Z,2.4nm,0.8s,baz=90,slow=20,SNR=7.4						
	comp=Z,1.9nm,0.6s						
TIXI	Tiksi	32.89	329	P	P	17 26 39.2	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	32.89	329	P	P	17 26 39.2	+0.1
TIXI				IAmb	IAmb	17 26 39.9	
	comp=Z,2.9nm,0.8s						
YBH	Yreka Blue Hor	32.93	90	LR	LR	17 37 36.4	
	comp=Z,117nm,20.8s,baz=282,slow=32						
NEW	Newport	33.00	76	P	P	17 26 40.3	-0.1
	comp=Z,3.7nm,0.8s,baz=303,slow=6.3,SNR=6.7						
NEW				LR	LR	17 39 22.2	
	comp=Z,65nm,18.6s,baz=303,slow=35						
	comp=Z,3.7nm,0.8s						
NEW	Newport	33.00	76	P	P	17 26 42.2	+1.8
	baz=297						
EDM	Edmonton	33.17	66	P	P	17 26 40.6	-1.2
EDM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EDM	Edmonton	33.17	66	P	P	17 26 40.6	-1.2
YAK	Yakutsk	33.31	311	LR	LR	17 40 22.9	
	comp=Z,149nm,19.3s,baz=86,slow=37						
YAK	Yakutsk	33.31	311	eP	P	17 26 41.8	-1.0
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
ERM	Erimo	33.37	271	P	P	17 26 43.8	+0.2
ERM				pmax	pmax		
	comp=Z,20nm,1.1s						
ERM	Erimo	33.37	271	P	P	17 26 43.8	+0.2
MSO	Missoula	35.58	76	P	P	17 27 03.1	+0.3
	baz=299						
RES	Resolute Bay	36.49	25	LR	LR	17 46 21.3	
	comp=Z,140nm,18.2s,baz=246,slow=43						
RES	Resolute Bay	36.49	25	P	P	17 27 09.9	-0.2
RES				pmax	pmax		
	comp=Z,4.0nm,1.3s						
RES	Resolute Bay	36.49	25	P	P	17 27 09.9	-0.2
RES				IAmb	IAmb	17 27 10.9	
	comp=Z,4.1nm,1.2s						
KLR	Kul'dur	36.55	289	P	P	17 27 09.8	-1.1
	comp=Z,6.2nm,0.6s,baz=74,slow=7.6,SNR=33						
KLR				LR	LR	17 42 47.5	
	comp=Z,157nm,19.5s,baz=60,slow=37						
	comp=Z,6.2nm,0.6s						
KLR	Kul'dur	36.55	289	⇑iP	P	17 27 09.5	-1.5
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HLID	Hailey	37.00	81	P	P	17 27 15.2	+0.1
	baz=303						
ZEA	Zeya	37.11	298	eP	P	17 27 14.9	-0.8
ZEA				MLR	MLR		
	comp=Z,100nm,16.0s						
H11N2	WAKE ISLAND Hy	37.36	219	T	T	18 07 48.2	
	baz=24,slow=76						
H11N3	WAKE ISLAND Hy	37.37	219	T	T	18 07 46.4	
	baz=24,slow=76						
H11N1	WAKE ISLAND Hy	37.38	219	T	T	18 07 47.6	
	baz=24,slow=76						
EGMT	Eagleton	37.47	72	P	P	17 27 20.7	+1.8
	baz=299,SNR=7.6						
BOZ	Bozeman (W)	37.59	77	P	P	17 27 21.2	+1.2
	baz=301						
NVAR	Mina Array Bea	37.61	91	P	P	17 27 19.7	-0.7
	comp=Z,0.2nm,0.6s,baz=309,slow=5.7,SNR=2.5						
ELK	Elko	38.10	86	LR	LR	17 40 59.1	
	comp=Z,127nm,19.7s,baz=292,slow=33						
H11S1	WAKE ISLAND Hy	38.55	218	T	T	18 08 38.3	
	baz=23,slow=76						
H11S2	WAKE ISLAND Hy	38.56	218	T	T	18 08 39.0	
	baz=23,slow=76						
H11S3	WAKE ISLAND Hy	38.57	218	T	T	18 08 42.1	
	baz=23,slow=76						
USRK	Ussuriysk Ar.	38.97	282	LR	LR	17 45 52.0	
	comp=Z,69nm,18.2s,baz=32,slow=40						
RLMT	Red Lodge	39.25	76	P	P	17 27 35.8	+1.8
	baz=302						
R11A	Troy Canyon, C	39.34	89	P	P	17 27 45.3	+10
	baz=308						
MJAR	Matsushiro Arr	39.74	268	P	P	17 27 37.6	-0.4
	comp=Z,1.4nm,0.6s,baz=32,slow=5.9,SNR=8.4						
MJAR				LR	LR	17 41 37.4	
	comp=Z,81nm,20.9s,baz=58,slow=33						
	comp=Z,1.4nm,0.6s						
MAJO	Matsushiro	39.74	268	⇑eP	P	17 27 39.2	+1.2
MAJO				pmax	pmax		
	comp=Z,14nm,1.4s						
BW06	Boulder Array	40.39	79	P	P	17 27 45.1	+1.5
	baz=305,SNR=6.2						
PDAR	Pinedale Array	40.39	79	P	P	17 27 44.8	+1.2
	comp=Z,2.4nm,0.6s,baz=301,slow=4.1,SNR=23						
PDAR				LR	LR	17 41 39.1	
	comp=Z,71nm,18.1s,baz=325,slow=32						
	comp=Z,2.4nm,0.6s						
BNX	BinXian	40.86	287	⇓P	P	17 27 45.8	-1.3
BNX				pmax	pmax		
	comp=Z,26nm,0.6s						
BNX				pmax	pmax		

	comp=Z,310nm,4.6s						
FCC	Fort Churchill	41.00	50	P	P	17 27 48.9	+0.8
FCC				pmax	pmax		
	comp=Z,23nm,1.1s						
FCC	Fort Churchill	41.00	50	P	P	17 27 48.9	+0.8
PFO	Pinyon Flats O	41.88	95	LR	LR	17 41 28.0	
	comp=Z,148nm,19.3s,baz=323,slow=31						
BOD	Bodaibo	42.12	309	eP	P	17 27 56.5	-0.8
BOD				pmax	pmax		
	comp=Z,18nm,0.8s						
O20A	White River Ci	42.74	81	P	P	17 28 03.9	+1.1
	baz=307						
CN2	Changchun	43.10	286	eP	P	17 28 04.7	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
MDND	Maddock	43.41	67	P	P	17 28 09.2	+1.3
	baz=303						
ULM	Lac du Bonnet	44.18	62	LR	LR	17 46 07.0	
	comp=Z,76nm,20.9s,baz=302,slow=35						
AGMN	Agassiz Nation	45.25	64	P	P	17 28 22.4	-0.2
	baz=304						
KSRS	Korea Array	45.47	277	P	P	17 28 25.1	+0.7
	comp=Z,7.0nm,0.8s,baz=53,slow=7.5,SNR=21						
KSRS				LR	LR	17 48 13.4	
	comp=Z,36nm,19.4s,baz=50,slow=37						
	comp=Z,7.0nm,0.8s						
TJN	Taejon	46.51	276	c iP	P	17 28 33.0	+0.4
TJN	Taejon	46.51	276	P	P	17 28 32.8	+0.2
JNU	Nakatsue	46.51	270	P	P	17 28 32.8	0.0
	comp=Z,5.8nm,0.7s,baz=348,slow=2.8,SNR=3.0						
	comp=Z,5.8nm,0.7s						
NRIK	Noril'sk	46.58	332	P	P	17 28 32.7	0.0
	comp=Z,2.7nm,0.5s,baz=63,slow=9.9,SNR=7.3						
	comp=Z,2.7nm,0.5s						
NRIK	Noril'sk	46.58	332	P	P	17 28 32.8	0.0
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	Noril'sk	46.58	332	P	P	17 28 32.8	0.0
NRIK				IAmb	IAmb	17 28 33.7	
	comp=Z,7.3nm,1.1s						
T25A	Trinidad	46.95	82	P	P	17 28 38.3	+1.9
	baz=310						
ANMO	Albuquerque	47.13	86	LR	LR	17 45 51.2	
	comp=Z,75nm,19.9s,baz=332,slow=33						
ANMO	Albuquerque	47.13	86	⇓eP	P	17 28 35.5	-2.3
ANMO				pmax	pmax		
	comp=Z,9.0nm,3.7s						
ECSD	EROS Data Cent	47.48	70	P	P	17 28 39.7	-0.5
ECSD				IAmb	IAmb	17 28 52.4	
	comp=Z,8.2nm,1.2s						
ECSD	EROS Data Cent	47.48	70	P	P	17 28 39.8	-0.5
	baz=307,SNR=5.7						
XLT	XiLinHaoTe	48.50	291	eP	P	17 28 49.0	+0.8
XLT				pP	pwP	17 28 59.7	+2.6
XLT				sP	sP	17 29 02.1	+5.2
XLT				pmax	pmax		
	comp=Z,14nm,0.9s						
XLT				pmax	pmax		
	comp=Z,91nm,4.1s						
SPA0	Spitsbergen Ar	49.82	358	eP	P	17 28 57.7	0.0
SPITS	Spitsbergen Ar	49.82	358	P	P	17 28 57.5	-0.2
	comp=Z,2.5nm,0.5s,baz=39,slow=5.4,SNR=17						
	comp=Z,2.5nm,0.5s						
DAG	Danmarks Havn	49.93	8	i P	P	17 28 57.0	-1.6
DAG				IAmb	IAmb	17 28 58.9	
	comp=Z,9.5nm,0.8s						
ULN	Ulaanbaatar	51.05	301	c iP	P	17 29 07.5	-0.1
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	Ulaanbaatar	51.05	301	P	P	17 29 06.9	-0.7
ULN				IAmb	IAmb	17 29 08.4	
	comp=Z,6.5nm,0.8s						
SONM	Songino Array	51.42	301	P	P	17 29 10.3	-0.1
	comp=Z,3.5nm,0.7s,baz=55,slow=7.4,SNR=28						
SONM				PcP	PcP	17 30 24.9	+0.3
	comp=Z,1.1nm,0.5s,baz=36,slow=2.3,SNR=6.2						
SONM				LR	LR	17 52 48.9	
	comp=Z,175nm,19.0s,baz=51,slow=38						
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	51.42	301	P	P	17 29 10.0	-0.3
SONM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	51.42	301	P	P	17 29 10.0	-0.3
SONM				IAmb	IAmb	17 29 11.4	
	comp=Z,6.6nm,1.1s						
ZAK	Zakamensk	51.44	305	eP	P	17 29 10.0	-0.4
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MOY	Mondy	51.78	308	eP	P	17 29 13.2	+0.2
MOY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DBG	Daneborg	52.05	10	i P	P	17 29 12.7	-1.8
DBG				IAmb	IAmb	17 29 14.7	
	comp=Z,11nm,0.7s						
LPIG	La Paz	52.42	99	LR	LR	17 47 54.7	
	comp=Z,36nm,19.5s,baz=240,slow=32						
SFJD	Kangerlussuaq	52.49	26	LR	LR	17 55 37.5	
	comp=Z,66nm,18.0s,baz=317,slow=41						
SFJD	Kangerlussuaq	52.49	26	i P	P	17 29 17.4	-0.4
SFJD				IAmb	IAmb	17 29 19.3	
	comp=Z,10nm,0.8s						
TXAR	Lajitas Array	52.70	89	P	P	17 29 20.6	+0.6
	comp=Z,1.0nm,0.5s,baz=300,slow=5.6,SNR=19						
TXAR				LR	LR	17 49 35.1	
	comp=Z,74nm,19.4s,baz=316,slow=34						
	comp=Z,1.0nm,0.5s						
TIA	Tai'an	52.82	283	⇓P	P	17 29 21.4	+0.6
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
BJO1	Bjornoya	53.44	357	eP	P	17 29 23.5	-1.2
ICESG	Greenland Ices	53.50	20	i P	P	17 29 24.1	-1.6
ICESG				IAmb	IAmb	17 29 25.9	
	comp=Z,6.7nm,0.6s						
HDIL	Hopedale	53.70	69	P	P	17 29 27.1	0.0
	baz=311						
DY2G	Dye2	54.03	25	i P	P	17 29 28.2	-1.2
DY2G				IAmb	IAmb	17 29 31.2	
	comp=Z,3.3nm,0.6s						
U40A	Yellville	54.43	75	P	P	17 29 31.7	-0.9
	baz=313						
W39A	Magazine	54.66	76	P	P	17 29 33.2	-1.0
	baz=313						
MIAR	Mount Ida	55.23	77	P	P	17 29 38.6	+0.3
	baz=313						
SCHQ	Schefferville	55.51	43	P	P	17 29 40.7	+0.6
	comp=Z,11nm,0.9s,baz=325,slow=8.0,SNR=17						
	comp=Z,11nm,0.9s						
O48B	Farmland	56.25	66	P	P	17 29 44.8	-0.8
	baz=313,SNR=5.9						
SADO	Sadowa	56.48	59	LR	LR	17 52 51.4	
	comp=Z,41nm,19.2s,baz=260,slow=35						
LYN	LuoYang	56.73	285	⇑P	P	17 29 49.7	+0.6
LYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LYN				LR	LR		
	comp=Z,120nm,19.6s						
P49A	Miami Univ. Ec	56.99	67	P	P	17 29 50.1	-0.8
	baz=313						
HAMF	Hammerfest	57.09	355	eP	P	17 29 50.8	-0.3
ZALV	Zalesovo Beam	57.57	318	P	P	17 29 54.4	-0.3
	comp=Z,1.9nm,0.6s,baz=42,slow=7.0,SNR=7.6						
ZALV				PcP	PcP	17 30 48.3	+0.5
	comp=Z,1.8nm,0.6s,baz=30,slow=6.6,SNR=4.9						
ZALV				LR	LR	17 56 04.7	
	comp=Z,48nm,19.4s,baz=68,slow=38						
	comp=Z,1.9nm,0.6s						
ARA0	ARCESS Array S	58.08	354	eP	P	17 29 57.8	-0.3
ARCES	ARCESS Array B	58.08	354	P	P	17 29 57.3	-0.8
	comp=Z,1.5nm,0.5s,baz=24,slow=7.7,SNR=22						
ARCES				LR	LR	17 57 11.8	
	comp=Z,54nm,18.6s,baz=12,slow=38						
	comp=Z,1.5nm,0.5s						
TRO	Tromso	58.31	357	eP	P	17 29 59.9	+0.2
JETT	Jettan, Norway	58.33	356	eP	P	17 30 00.4	+0.5
WHN	Wuhan	58.41	280	⇓P	P	17 30 01.6	+0.7
WHN				pmax	pmax		
	comp=Z,46nm,0.7s						
KTK1	Kautokeino	58.73	355	eP	P	17 30 03.0	+0.3
XAN	Xi'an	59.19	287	P	P	17 29 52.1	-14
XAN				pP	pP	17 30 06.8	-6.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LOF	Lofoten	59.95	359	eP	P	17 30 11.3	+0.2
SSPA	Standing Stone	60.00	61	P	P	17 30 10.7	-1.2
SSPA	Standing Stone	60.00	61	P	P	17 30 12.1	+0.2
	baz=315						
STEI	Steigen	60.12	358	eP	P	17 30 12.0	-0.3
GTA	Gaotai	60.59	297	⇑P	P	17 30 15.6	-0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,56nm,6.8s						
GTA				LR	LR		
	comp=Z,48nm,19.9s						
GTA				LR	LR		
	comp=Z,140nm,18.7s						
GTA				LR	LR		
	comp=Z,140nm,15.9s						
FAUS	Fauske	60.67	358	eP	P	17 30 16.1	+0.1
LZH	Lanzhou	60.69	292	eP	P	17 30 17.5	+0.7
LZH				pP	pP	17 30 23.5	+0.3
LZH				sP	pwP	17 30 26.8	-0.4
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=Z,310nm,19.9s						
LZH				LR	LR		
	comp=Z,250nm,18.5s						
LZH				LR	LR		
	comp=Z,190nm,17.2s						
KONS	Konsvik	61.60	359	eP	P	17 30 22.5	+0.2
MOR8	Moi Rana	61.91	358	eP	P	17 30 23.1	-1.3
KMSC	Kings Mountain	61.99	68	P	P	17 30 25.4	0.0
	baz=316						
KURK	Kurchatov	62.52	318	c iP	P	17 30 28.3	-0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURBB	Kurchatov Arra	62.63	318	P	P	17 30 28.9	-0.5
PRGR	Permogore	63.14	342	eP	P	17 30 29.4	-3.3
NSS	Namsos	63.59	359	eP	P	17 30 35.7	+0.2
WMQ	Urumqi	63.66	308	eP	P	17 30 37.8	+1.3
BRVK	Borovoye	63.86	325	c iP	P	17 30 37.3	-0.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MK31	Makanchi Array	63.94	313	d iP	P	17 30 37.9	-0.4
MKAR	Makanchi Array	63.94	313	P	P	17 30 37.4	-0.8
	comp=Z,3.0nm,0.8s,baz=54,slow=6.7,SNR=26						
MKAR				LR	LR	17 59 18.3	
	comp=Z,69nm,19.7s,baz=28,slow=37						
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	63.94	313	i P	P	17 30 37.9	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	64.78	333	c iP	P	17 30 43.3	-0.2
ARU						17 31 15.9	
ARU						17 33 02.3	
ARU				S	S	17 39 22.4	0.0
ARU				SS	SS	17 43 29.7	-2.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TBLU	Trondheim	64.87	0	eP	P	17 30 42.8	-1.2
KLMR	Klimovskoe	64.94	345	eP	P	17 30 43.2	-1.2
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KLMR	Klimovskoe	64.94	345	eP	P	17 30 43.3	-1.2
KLMR				AMP		17 30 44.9	
	comp=Z,9.0nm,1.1s						
KIRV	Kirov	65.16	339	⇓eP	P	17 30 46.0	+0.1
MOL	Molde	65.53	2	eP	P	17 30 48.4	+0.2
VALR	Valaam	65.63	349	ceP	P	17 30 48.6	-0.3
VALR				pmax	pmax		
	comp=Z,12nm,1.1s						
GOMU	GeErMu	65.64	298	P	P	17 30 49.8	-0.1
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,94nm,5.4s						
GOMU				LR	LR		
	comp=Z,110nm,16.1s						
GOMU				LR	LR		
	comp=Z,66nm,15.0s						
GOMU				LR	LR		
	comp=Z,87nm,15.7s						
AFI	Afiamalu	65.89	183	LR	LR	17 54 45.1	
	comp=Z,12nm,19.7s,baz=190,slow=32						
AKN	Aaknes	65.91	2	eP	P	17 30 50.9	+0.1
FINES	FINESS Array B	66.03	352	P	P	17 30 51.2	-0.3
	comp=Z,8.9nm,0.8s,baz=17,slow=9.0,SNR=42						
FINES				LR	LR	18 04 22.1	
	comp=Z,32nm,18.1s,baz=10.0,slow=40						
	comp=Z,8.9nm,0.8s						
FINES	FINESS Array B	66.03	352	i P	P	17 30 51.4	-0.1
FINES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DOMB	Dombas	66.08	1	eP	P	17 30 51.3	-0.6
FOO	Floro	66.44	3	eP	P	17 30 54.6	+0.5
RAF	Rauma	66.76	354	eP	P	17 30 56.1	-0.1
HYA	Hoyanger	66.91	2	eP	P	17 30 57.0	-0.1
OTUK	Ortayu	66.99	320	P	P	17 30 57.7	-0.2
NB2	NORSAR Subarra	67.09	360	P	P	17 30 58.4	0.0
	comp=Z,2.8nm,0.6s,baz=0.3,slow=6.5						
NB2	NORSAR Subarra	67.09	360	P	P	17 30 58.4	0.0
	baz=0.3,slow=6.5						
NOA	NORSAR Array B	67.09	360	P	P	17 30 58.3	0.0
	comp=Z,5.1nm,0.7s,baz=0.5,slow=6.3,SNR=22						
NOA				LR	LR	18 02 30.0	
	comp=Z,16nm,18.2s,baz=300,slow=38						
	comp=Z,5.1nm,0.7s						
MEF	Metsahovi	67.38	353	eP	P	17 31 00.2	+0.1
NC602	NORSAR Array S	67.40	360	eP	P	17 30 59.3	-1.0
AAL	Aland	67.71	355	eP	P	17 31 02.0	-0.2
PDGK	Podgornoye	67.88	313	P	P	17 31 03.6	-0.2
UPP	Uppsala	68.14	356	eP	P	17 31 04.9	0.0
ODD1	Odda	68.18	2	eP	P	17 31 04.2	-1.0
BLS5	Blasjo	68.66	2	eP	P	17 31 08.6	+0.3
PZH	PanZhiHua	68.91	286	P	P	17 31 11.3	+0.9
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
MDOK	Medeo	69.10	314	P	P	17 31 11.3	-0.2
DAV	Davao City (W)	69.32	254	LR	LR	17 57 19.4	
	comp=Z,43nm,20.2s,baz=60,slow=32						
KMI	Kunming	69.35	285	⇑P	P	17 31 13.4	+0.1
KMI				pP	sP	17 31 22.1	-0.1
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
VIKU	Vikbolandet	69.53	357	eP	P	17 31 13.9	+0.3
TKM2	Tokmak 2	69.93	315	P	P	17 31 17.4	+0.7
	SNR=8.5						
TKM2	Tokmak 2	69.93	315	P	P	17 31 15.5	-1.2
SLIT	Slitere, Latvi	70.10	353	eP	P	17 31 17.4	+0.3
USP	Ospenovka	70.13	316	P	P	17 31 18.2	+0.6
	SNR=15						
AKTO	Aktyubinsk	70.17	330	LR	LR	18 06 20.4	
	comp=Z,42nm,18.2s,baz=33,slow=40						
AKTO	Aktyubinsk	70.17	330	P	P	17 31 17.7	0.0
ULHL	Ulahol	70.19	314	P	P	17 31 19.0	+0.8
	SNR=9.8						
KBK	Karagaybulak	70.43	315	P	P	17 31 20.3	+0.6
	SNR=10						
AB31	Akbulak array	70.59	328	i P	P	17 31 20.0	-0.3
AAK	Ala-Archa	70.64	315	LR	LR	18 05 18.1	
	comp=Z,53nm,18.4s,baz=62,slow=38						
AAK	Ala-Archa	70.64	315	c iP	P	17 31 21.4	+0.5
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN	Obninsk	70.90	345	eP	P	17 31 20.5	-1.5
OBN				e		17 31 41.2	
OBN				e		17 33 54.8	
OBN				ePPP	PPP	17 35 42.6	
OBN				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN				MLR	MLR		
	comp=Z,32nm,18.0s						
EKS2	Erkin-Say	70.93	316	P	P	17 31 23.3	+0.7
	SNR=13						
UCH	Uchtor	70.96	315	P	P	17 31 24.3	+1.1
	SNR=5.2						
BELG	Belogornoye	71.24	337	ceP	P	17 31 24.1	0.0
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AML	Almayashu	71.40	316	P	P	17 31 27.0	+1.2
	SNR=13						
PPT	Papeete	71.58	160	LR	LR	17 55 18.8	
	comp=Z,60nm,21.2s,baz=324,slow=30						
DEL	Delary	71.64	358	eP	P	17 31 26.8	+0.3
KK31	Karatay Array	71.93	318	i P	P	17 31 28.6	0.0
IDID	Didziasalis	72.01	350	eP	P	17 31 29.3	+0.5
PABE	Paberze	72.08	352	eP	P	17 31 29.9	+0.8
NACGM	Naroch	72.41	350	eP	P	17 31 31.8	+0.6
KSH	Kashi	72.51	313	P	P	17 31 36.3	+4.1
KSH				pmax	pmax		
	comp=Z,19nm,0.9s						
SUW	Suwalki	73.63	352	eP	P	17 31 38.1	-0.3
VORR	Voronezh	73.73	342	eP	P	17 31 39.7	+0.7
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
VSR	Storozhevoye	74.17	342	eP	P	17 31 40.8	-0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	Malin Array Be	76.27	348	P	P	17 31 53.1	-0.5
	comp=Z,4.7nm,0.5s,baz=18,slow=5.9,SNR=18						
	comp=Z,4.7nm,0.5s						
AKBB	Malin Array Si	76.27	348	⇑eP	P	17 31 52.9	-0.7
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TAPN	Taplejung	76.28	297	eP	P	17 31 54.5	0.0
	comp=Z,23nm,0.7s						
CMAR	Chiang Mai Arr	76.70	283	P	P	17 31 57.0	+0.4
	comp=Z,8.0nm,0.9s,baz=25,slow=6.6,SNR=65						
CMAR				LR	LR	18 10 11.6	
	comp=Z,34nm,18.1s,baz=65,slow=39						
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	76.70	283	i P	P	17 31 57.4	+0.8
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	76.83	359	i P	P	17 31 57.3	+0.5
CLL				e*PP	pwP	17 32 07.0	+0.1
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	Collm	76.83	359	i P	P	17 31 57.3	+0.5
	comp=Z,7.0nm,1.0s						
CLL				esP	pwP	17 32 07.0	+0.1
GUN	Gumba	76.83	299	eP	P	17 31 57.9	+0.2
	comp=Z,37nm,0.7s						
JIRN	Jiri	76.86	298	eP	P	17 31 58.5	+0.6
RAMN	Ramite	77.20	297	eP	P	17 31 59.5	-0.2
	comp=Z,20nm,0.6s						
KSP	Ksiaz	77.21	356	eP	P	17 31 59.9	+0.9
BRG	Berggiesshubel	77.25	358	i P	P	17 32 00.2	+0.9
BRG				Amp		17 32 00.9	
	comp=Z,4.9nm,0.8s						
BRG				ex	x	17 32 03.8	
BRG				Amp		17 32 05.1	
	comp=Z,2.5nm,0.7s						
BRG	Berggiesshubel	77.25	358	i P	P	17 32 00.1	+0.9
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKN	Kakani	77.25	299	eP	P	17 32 00.5	+0.6
	comp=Z,7.8nm,0.5s						
PKI	Pulchoki	77.36	299	eP	P	17 32 00.5	-0.1
PKIN	Phulchoki	77.36	299	eP	P	17 32 01.0	+0.4
GKN	Gorkha	77.43	299	eP	P	17 32 01.4	+0.6
	comp=Z,28nm,0.9s						
CHVC	Chvalec	77.47	357	eP	P	17 32 01.0	+0.5
DMN	Daman	77.49	299	eP	P	17 32 02.0	+0.7
OSTC	Ostas	77.50	356	eP	P	17 32 01.0	+0.4
UPC	Upice	77.55	357	eP	P	17 32 02.0	+1.1
UPC	Upice	77.55	357	eP	P	17 32 02.0	+1.1
PVCC	Panska Ves	77.58	357	eP	P	17 32 02.0	+0.9
PVCC	Panska Ves	77.58	357	eP	P	17 32 02.0	+0.9
DANN	Dangsing	77.62	300	eP	P	17 32 02.9	+0.8
	comp=Z,53nm,0.8s						
DPC	Dobruska-Polom	77.70	356	eP	P	17 32 02.7	+0.9
DPC	Dobruska-Polom	77.70	356	eP	P	17 32 02.7	+0.9
NKC	Novy Kostel	77.92	359	eP	P	17 32 03.8	+0.8
NKC	Novy Kostel	77.92	359	eP	P	17 32 03.8	+0.8
KRLC	Kraliky	77.95	356	eP	P	17 32 03.6	+0.4
KRLC	Kraliky	77.95	356	eP	P	17 32 03.6	+0.4
KWP	Kalwaria Pacla	78.02	352	eP	P	17 32 04.4	+0.9
PRU	Pruhonice	78.12	357	eP	P	17 32 04.7	+0.6
PRU	Pruhonice	78.12	357	eP	P	17 32 04.7	+0.6
OKC	Ostrava-Krasne	78.12	355	eP	P	17 32 05.0	+0.9
OKC	Ostrava-Krasne	78.12	355	eP	P	17 32 05.0	+0.9
KOLN	Koldanda	78.17	300	eP	P	17 32 05.6	+0.6
	comp=Z,24nm,1.0s						
MORC	Moravsky Berou	78.22	355	⇓P	P	17 32 05.4	+0.7
MORC	Moravsky Berou	78.22	355	P	P	17 32 06.0	+1.3
MORC	Moravsky Berou	78.22	355	eP	P	17 32 05.2	+0.5
PYUN	Piuthan	78.23	301	eP	P	17 32 05.9	+0.6
	comp=Z,45nm,0.9s						
NIE	Niedzica	78.41	354	eP	P	17 32 07.7	+2.0
VRAC	Vranov	78.73	356	⇑P	P	17 32 08.6	+1.2
VRAC	Vranov	78.73	356	P	P	17 32 09.1	+1.6
VRAC	Vranov	78.73	356	eP	P	17 32 08.4	+0.9
LANS	Liptovska Anna	78.73	354	eP	P	17 32 09.3	+1.7
LANS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LANS	Liptovska Anna	78.73	354	eP	P	17 32 09.3	+1.7
KOLS	Kolonicke sedl	78.75	352	eP	P	17 32 12.8	+5.2
KOLS	Kolonicke sedl	78.75	352	eP	P	17 32 12.8	+5.2
SORM	Soroca	78.90	348	⇑P	P	17 32 08.4	+0.1
KRUC	Moravsky	78.98	356	eP	P	17 32 09.5	+0.6
KHC	Kasperske Hory	79.00	358	c iP	P	17 32 10.0	+1.0
KHC				pmax	pmax		
	comp=Z,22nm,1.3s						
KHC	Kasperske Hory	79.00	358	eP	P	17 32 09.5	+0.5
JAVC	Velka Javorina	79.13	355	eP	P	17 32 11.1	+1.4
GOF	Gofitskoye	79.18	337	⇑eP	P	17 32 11.3	+1.3
GERES	GERESS Array B	79.28	358	P	P	17 32 11.1	+0.4
	comp=Z,2.1nm,0.8s,baz=18,slow=4.6,SNR=12						
	comp=Z,2.1nm,0.8s						
CKRC	Cesky Krumlov	79.29	358	eP	P	17 32 11.2	+0.6
VYHS	Vyhne	79.43	355	eP	P	17 32 12.4	+1.1
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	Vyhne	79.43	355	eP	P	17 32 12.4	+1.1
SMOL	Smolenice	79.48	355	eP	P	17 32 13.3	+1.7
SMOL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SMOL	Smolenice	79.48	355	eP	P	17 32 13.3	+1.7
MODS	Modra-Piesok	79.63	356	eP	P	17 32 13.9	+1.5
MODS				pmax	pmax		
	comp=Z,30nm,1.1s						
MODS	Modra-Piesok	79.63	356	eP	P	17 32 13.9	+1.5
BURAR	Bucovina Array	79.77	350	⇓P	P	17 32 13.5	+0.2
BURAR	Bucovina Array	79.77	350	P	P	17 32 15.2	+1.9
ZST	Bratislava	79.81	356	eP	P	17 32 15.3	+1.9
ZST				pmax	pmax		
	comp=Z,33nm,1.1s						
ZST	Bratislava	79.81	356	eP	P	17 32 15.3	+1.9
PSZ	Piszkesteto	79.93	354	P	P	17 32 14.6	+0.5
CONA	Conrad Observa	80.14	356	eP	P	17 32 16.5	+1.2
	comp=Z,7.9nm,0.8s						
KIV	Kislovodsk	80.31	337	⇓P	P	17 32 17.7	+1.4
KIV	Kislovodsk	80.31	337	eP	P	17 32 17.2	+0.9
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
RONA	Rosalia, Austr	80.35	356	eP	P	17 32 17.7	+1.4
	comp=Z,5.4nm,1.1s						
ARCR	ARCALIA	80.39	351	⇑P	P	17 32 17.8	+1.3
KBZ	Khabaz	80.47	337	P	P	17 32 17.8	+0.8
	comp=Z,7.2nm,0.8s,baz=54,slow=2.4,SNR=26						
	comp=Z,7.2nm,0.8s						
KBZ	Khabaz	80.47	337	ceP	P	17 32 17.9	+0.9
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NCK	Nalchik	80.52	336	⇓iP	P	17 32 18.9	+1.6
NCK				pmax	pmax		
	comp=Z,29nm,0.7s						
CSKK	Cskako	80.59	355	P	P	17 32 19.2	+1.6
BORR	Bors	80.62	352	⇑P	P	17 32 22.2	+4.5
ANN	Anapa	80.65	341	eP	P	17 32 16.4	-1.5
ANN				e*PP	sP	17 32 25.8	-1.3
ANN				eS	S	17 42 22.5	-1.1
ANN				pmax	pmax		
	comp=Z,20nm,0.9s						
MOTA	Moosalm	80.82	360	eP	P	17 32 19.9	+0.9
	comp=Z,10.0nm,1.2s,SNR=5.4						
MPLH	Magyarpolny	80.82	355	P	P	17 32 19.2	+0.3
WATA	Walderalm	80.82	359	eP	P	17 32 19.6	+0.6
	comp=Z,11nm,1.2s						
ARSA	Arzberg	80.83	357	eP	P	17 32 20.3	+1.4
	comp=Z,6.5nm,1.0s,SNR=5.4						
WTTA	Wattenberg	80.89	359	eP	P	17 32 20.7	+1.2
	comp=Z,5.7nm,0.7s						
SQTA	Sankt Quirin	80.94	360	eP	P	17 32 20.8	+1.2

	comp=Z,10.0nm,0.9s,SNR=5.9						
KBA	**Koelnbreinsper**	**81.06**	**358**	*e*P	**P**	**17 32 21.9**	**+1.6**
	comp=Z,8.1nm,0.7s						
FETA	**Feichten**	**81.14**	**360**	*e*P	**P**	**17 32 21.9**	**+1.2**
	comp=Z,8.5nm,0.9s						
GEYT	**Alibeck**	**81.18**	**324**	P	**P**	**17 32 21.4**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=13,slow=7.9,SNR=9.8						
	comp=Z,5.4nm,0.8s						
DAVOX	**Davos/Dischmat**	**81.38**	**1**	LR	LR	18 09 44.5	
	comp=Z,26nm,19.8s,baz=272,slow=37						
DOPR	**Dopca**	**81.38**	**350**	⇑P	**P**	**17 32 23.0**	**+1.1**
ABTA	**Abfaltersbach**	**81.40**	**359**	*e*P	**P**	**17 32 22.9**	**+0.8**
	comp=Z,14nm,1.5s						
SOKA	**Soboth**	**81.41**	**357**	*e*P	**P**	**17 32 23.2**	**+1.1**
	comp=Z,11nm,1.0s,SNR=11						
MLR	**Muntele Rosu**	**81.79**	**349**	⇑P	**P**	**17 32 25.7**	**+1.5**
KOVH	**Kovagotottos**	**81.87**	**355**	P	**P**	**17 32 24.4**	**0.0**
BZS	**Buzias**	**82.09**	**352**	⇑P	**P**	**17 32 25.9**	**+0.3**
TPGR	**Topolog**	**82.11**	**347**	⇑P	**P**	**17 32 26.0**	**+0.3**
GZR	**Gura Zlata**	**82.21**	**351**	⇑P	**P**	**17 32 26.5**	**+0.2**
HARR	**Harsova**	**82.33**	**348**	⇑P	**P**	**17 32 27.4**	**+0.5**
TIRR	**Tirgusor**	**82.50**	**347**	⇓P	**P**	**17 32 28.8**	**+1.1**
GNI	**Garni**	**83.37**	**334**	LR	LR	18 16 35.4	
	comp=Z,27nm,18.4s,baz=353,slow=41						
GNI	**Garni**	**83.37**	**334**	⇓*e*P	**P**	**17 32 33.7**	**+1.2**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VTS	**Vitosha**	**84.92**	**351**	⇓P	**P**	**17 32 40.5**	**+0.1**
VTS	**Vitosha**	**84.92**	**351**	P	**P**	**17 32 44.7**	**+4.3**
BR131	**Keskin Array S**	**86.28**	**342**	⇑*e*P	**P**	**17 32 48.0**	**+0.8**
BRTR	**Keskin Array B**	**86.28**	**342**	P	**P**	**17 32 47.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=29,slow=1.5,SNR=6.9						
BRTR				LR	LR	18 17 54.3	
	comp=Z,16nm,19.1s,baz=353,slow=40						
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**86.28**	**342**	*i* P	**P**	**17 32 48.0**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**86.95**	**232**	P	**P**	**17 32 49.4**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=37,slow=5.9,SNR=7.6						
	comp=Z,1.2nm,0.9s						
WRA	**Warramunga Arr**	**86.95**	**232**	*i* P	**P**	**17 32 50.0**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ESDC	**Sonseca Array**	**87.60**	**11**	P	**P**	**17 32 53.4**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=350,slow=4.9,SNR=17						
	comp=Z,3.1nm,0.9s						
ASAR	**Alice Springs**	**90.33**	**230**	P	**P**	**17 33 05.5**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=29,slow=4.4,SNR=18						
	comp=Z,1.2nm,0.7s						
IDI	**Anoyia**	**91.98**	**348**	LR	LR	18 19 16.6	
	comp=Z,12nm,20.0s,baz=78,slow=39						
PALK	**Pallekele**	**96.30**	**290**	LR	LR	18 20 42.4	
	comp=Z,32nm,20.0s,baz=236,slow=38						
H03N2	**Juan Fernandez**	**115.83**	**112**	T	T	19 45 33.7	
	baz=322,slow=78						
H03N1	**Juan Fernandez**	**115.84**	**112**	T	T	19 45 35.3	
	baz=322,slow=78						
H03N3	**Juan Fernandez**	**115.84**	**112**	T	T	19 45 44.3	
	baz=322,slow=78						
BOSA	**Boshof**	**154.05**	**330**	PKPbc	**PKiKP**	**17 40 05.3**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=14,slow=3.7,SNR=5.2						

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*SOME **01** 17:32:03.9, 39°.65N×73°.72E, h10^{km}*
*KRNET **01** 17:32:05.4±0.1, 39°.63N×73°.94E, mb3.3*
*ISU **01** 17:32:07, 39°.57N×73°.95E, h26^{km}*
*NNC **01** 17:32:08.3±5.1, 39°.77N×73°.68E, h0^{km}, mb3.6, mpv3.2,*
Error ellipse: s-maj=40.8km s-min=22.0km az=177.0
ISC 01 17:32:05.5±1.0**, 39°.74N**±0°.04×**73°.94E**±0°.02**, h14**^{km}±8^{km}**,**
n58, σ2^{s}.05/100**, 29C-17D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.18**	**312**	⇑*i*P	**Pn**	**17 32 29.4**	**+1.7**
	baz=16						
OHH				⇑*i*S	**Sn**	**17 32 46.8**	**+3.2**
	baz=16						
ANR	**Andizhan**	**1.57**	**310**	P	**Pg**	**17 32 38.3**	**+2.6**
ANR				S	**Sg**	**17 33 01.7**	**+5.5**
DRK	**Karamyk**	**1.67**	**262**	⇓*i*P	**Pg**	**17 32 36.6**	**-1.0**
	baz=66						
DRK				⇓*i*S	**Sg**	**17 32 59.5**	**+0.1**
	baz=66						
SHAK	**Shakhimardan**	**1.71**	**278**	P	**Pg**	**17 32 37.3**	**-1.0**
SHAK				S	**Sg**	**17 33 01.3**	**+0.9**
FRG	**Fergana**	**1.77**	**292**	P	**Pg**	**17 32 40.1**	**+0.7**
FRG				S	**Sg**	**17 33 05.5**	**+3.1**
CHMI	**Chimion**	**1.93**	**287**	P	**Pg**	**17 32 42.7**	**+0.2**
CHMI				S	**Sg**	**17 33 10.1**	**+2.6**
MINT	**Mingtut**	**2.38**	**289**	P	**Pg**	**17 32 51.4**	**+0.2**
MINT				S	**Sg**	**17 33 24.6**	**+2.5**
AML	**Almayashu**	**2.39**	**356**	P	**Pg**	**17 32 50.3**	**-1.1**
	SNR=14						
BTK	**Batken**	**2.42**	**278**	⇓*i*P	**Pb**	**17 32 48.7**	**-0.2**
	baz=81						
BTK				⇓*i*S	**Sg**	**17 33 20.3**	**-3.0**
	baz=81						
UCH	**Uchtor**	**2.52**	**10**	P	**Pg**	**17 32 52.5**	**-1.3**
	SNR=29						
UCH	**Uchtor**	**2.52**	**10**	⇑*i*P	**Pb**	**17 32 51.4**	**+0.6**
	baz=9.0						
UCH				⇑*i*S	**Sg**	**17 33 25.0**	**-1.6**
	baz=9.0						
ARK	**Arkit**	**2.54**	**324**	⇑*i*P	**Pb**	**17 32 51.5**	**+0.5**
	baz=26						
ARK				⇑*i*S	**Sg**	**17 33 25.4**	**-1.8**
	baz=26						
CHDK	**Chadak**	**2.73**	**298**	S	**Sg**	**17 33 34.4**	**+1.3**
TRKS	**Terek-Say**	**2.78**	**311**	⇑*i*P	**Pb**	**17 32 53.7**	**-1.3**
	baz=12						
TRKS				⇑*i*S	**Sb**	**17 33 29.1**	**+0.1**
	baz=12						
GAR	**Garm**	**2.90**	**256**	⇑*i*P	**Pb**	**17 32 54.8**	**-2.3**
	baz=59						
GAR				⇑*i*S	**Sb**	**17 33 30.8**	**-1.7**
	baz=59						
EKS2	**Erkin-Say**	**2.92**	**358**	P	**Pb**	**17 32 58.8**	**+1.4**
	SNR=7.8						
EKS2	**Erkin-Say**	**2.92**	**358**	⇑*i*P	**Pb**	**17 32 57.2**	**-0.2**
	baz=58						
EKS2				⇑*i*S	**Sb**	**17 33 34.6**	**+1.6**
	baz=58						
KBK	**Karagaybulak**	**3.01**	**14**	P	**Pg**	**17 33 00.7**	**-2.5**
	SNR=6.3						
KBK	**Karagaybulak**	**3.01**	**14**	⇑*i*P	**Pb**	**17 32 58.3**	**-0.7**
	baz=14						
KBK				⇑*i*S	**Sb**	**17 33 37.0**	**+1.4**
	baz=14						
MRKS	**Merke**	**3.05**	**350**	*e*P	**Pg**	**17 33 02.5**	**-1.3**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**17 33 43.5**	**+0.2**
	15nm,0.3s						
MRKS	**Merke**	**3.05**	**350**	Pg	**Pg**	**17 33 02.5**	**-1.3**
	1.8nm,0.2s						
MRKS				Lg	Lg	17 33 43.5	
	15nm,0.3s						
ULHL	**Ulahol**	**3.05**	**34**	P	**Pg**	**17 33 04.0**	**+0.1**
	SNR=7.3						
ULHL	**Ulahol**	**3.05**	**34**	⇓*i*P	**Pb**	**17 32 58.6**	**-1.1**
	baz=33						
ULHL				⇓*i*S	**Sb**	**17 33 37.5**	**+0.7**
	baz=33						
FRU1	**Bishkek**	**3.11**	**9**	⇑*i*P	**Pb**	**17 32 59.9**	**-0.7**
	baz=9.0						
FRU1				⇑*i*S	**Sb**	**17 33 39.7**	**+1.3**
	baz=9.0						
BOOM	**Boomskoye usch**	**3.13**	**28**	⇑*i*P	**Pb**	**17 32 59.7**	**-1.4**
	baz=27						
BOOM				⇑*i*S	**Sb**	**17 33 39.3**	**+0.1**
	baz=27						
CHMS	**Chumysh**	**3.31**	**10**	⇓*i*P	**Pb**	**17 33 02.4**	**-1.6**
	baz=10.0						
CHMS				⇓*i*S	**Sb**	**17 33 43.4**	**-0.8**
	baz=10.0						
TKM2	**Tokmak 2**	**3.41**	**21**	⇑Pn	**Pb**	**17 33 05.5**	**-0.4**
	0.8nm,0.5s						
TKM2				⇑Pg	**Pg**	**17 33 14.6**	**+3.8**
	1.4nm,0.3s						
TKM2				⇓Lg	Lg	17 33 55.8	
	7.8nm,0.5s						
TKM2	**Tokmak 2**	**3.41**	**21**	⇓*i*P	**Pb**	**17 33 04.0**	**-1.8**
	baz=20						
TKM2				⇓*i*S	**Sb**	**17 33 46.7**	**-0.6**
	baz=20						
KDJ	**Kajisay**	**3.42**	**45**	⇓*i*P	**Pb**	**17 33 03.6**	**-2.4**
	baz=44						
KDJ				⇓*i*S	**Sb**	**17 33 46.0**	**-1.6**
	baz=44						
CHMG	**Chimgan**	**3.49**	**302**	S	**Sb**	**17 33 50.5**	**+1.0**
USP	**Ospenovka**	**3.55**	**7**	P	**Pg**	**17 33 12.2**	**-1.2**
	SNR=5.7						
USP	**Ospenovka**	**3.55**	**7**	⇑*i*P	**Pb**	**17 33 05.9**	**-2.1**
	baz=6.0						
USP				⇑*i*S	**Sb**	**17 33 49.7**	**-1.3**
	baz=6.0						
KST	**Kastek**	**3.63**	**24**	*e*P	**Pg**	**17 33 15.0**	**-0.1**
	1.8nm,0.3s						
KST				*e*S	**Sg**	**17 34 04.8**	**+2.7**
	32nm,0.7s						
SGDS	**Sogindy**	**3.74**	**8**	*e*P	**Pg**	**17 33 16.4**	**-0.8**
	5.2nm,0.3s						
SGDS				*e*S	**Sg**	**17 34 07.2**	**+1.5**
	22nm,0.7s						
SGDS	**Sogindy**	**3.74**	**8**	Pg	**Pg**	**17 33 16.4**	**-0.8**
	5.2nm,0.3s						
SGDS				Lg	Lg	17 34 08.8	
	22nm,0.7s						
IUG	**Iuzhnay**	**3.81**	**310**	*e*P	**Pb**	**17 33 10.3**	**-2.3**
	45nm,0.4s						
IUG				*e*S	**Sb**	**17 33 56.6**	**-2.0**
	34nm,0.5s						
IUG	**Iuzhnay**	**3.81**	**310**	Pg	**Pb**	**17 33 10.3**	**-2.3**
	45nm,0.4s						
IUG				Lg	Lg	17 33 57.7	
	34nm,0.5s						
CHGR	**Chuyangaron**	**3.87**	**255**	⇑*i*P	**Pn**	**17 33 08.1**	**+3.5**
	baz=57						
CHGR				⇑*i*S	**Sn**	**17 33 53.8**	**+3.9**
	baz=57						
MTBS	**Maitube**	**3.87**	**28**	*e*P	**Pg**	**17 33 19.5**	**-0.1**
	2.7nm,0.2s						
MTBS				*e*S	**Sg**	**17 34 12.3**	**+2.7**
	11nm,0.3s						
TNSS	**Tian-Shan**	**4.00**	**34**	*e*P	**Pg**	**17 33 22.1**	**+0.1**
	8.0nm,0.5s						
TNSS				*e*S	**Sg**	**17 34 16.8**	**+3.0**
	7.5nm,0.7s						
ANVS	**Anan'yevo**	**4.14**	**42**	⇓*i*P	Pb	17 33 13.7	-4.5
	baz=41						
ANVS				⇓*i*S	**Sb**	**17 34 03.5**	**-4.6**
	baz=41						
MDOK	**Medeo**	**4.14**	**33**	*e*P	**Pg**	**17 33 24.1**	**-0.7**
	9.2nm,0.5s						
MDOK				*e*S	**Sg**	**17 34 20.4**	**+1.9**
	14nm,0.6s						
KRBS	**Karabastau**	**4.16**	**18**	*e*P	**Pg**	**17 33 23.9**	**-1.3**
	1.8nm,0.6s						
KRBS				*e*S	**Sg**	**17 34 19.7**	**+0.7**
	7.1nm,0.4s						
KOTS	**Kotyrbulak**	**4.22**	**33**	*e*P	**Pg**	**17 33 25.8**	**-0.6**
	7.5nm,0.5s						
KOTS				*e*S	**Sg**	**17 34 23.4**	**+2.3**
	27nm,0.8s						
KK31	**Karatay Array**	**4.23**	**324**	Pn	Pb	17 33 14.2	-5.4
	0.4nm,0.3s,baz=120,slow=9.3,SNR=13						
KK31				Pg	**Pg**	**17 33 25.1**	**-1.4**
	1.0nm,0.3s,baz=150,slow=16,SNR=9.8						
KK31				⇑Sn	**Sb**	**17 34 08.2**	**-2.4**
	2.7nm,0.3s,baz=144,slow=25,SNR=6.5						
KKAR	**Karatay Array**	**4.23**	**324**	⇑*i*P	Pb	17 33 14.6	-5.1
	baz=25						
KKAR				⇑*i*S	**Sb**	**17 34 05.6**	**-5.0**
	baz=25						
PRZ	**Przheval'sk**	**4.34**	**49**	⇓*i*P	Pb	17 33 16.5	-5.2
	baz=48						
PRZ				⇓*i*S	**Sn**	**17 34 08.3**	**+6.5**
	baz=48						
KTBS	**Karatobe**	**4.47**	**26**	*e*P	**Pg**	**17 33 29.8**	**-1.2**
	1.6nm,0.4s						
KTBS				*e*S	**Sg**	**17 34 30.5**	**+1.6**
	19nm,0.5s						
KUU	**Kurty**	**4.52**	**23**	*e*P	**Pg**	**17 33 31.1**	**-0.9**
	1.9nm,0.4s						
KUU				*e*S	**Sg**	**17 34 32.4**	**+1.8**
	16nm,0.4s						
CHKK	**Chushkaly**	**4.70**	**28**	*e*P	**Pg**	**17 33 34.3**	**-1.1**
	0.8nm,0.1s						
CHKK				*e*S	**Sg**	**17 34 38.1**	**+1.8**
	10nm,0.8s						
SATY	**Saty**	**4.72**	**44**	*e*P	**Pg**	**17 33 34.9**	**-0.9**
	3.4nm,0.4s						
SATY				*e*S	**Sg**	**17 34 38.8**	**+1.8**
	15nm,0.6s						
SATY	**Saty**	**4.72**	**44**	Pg	**Pg**	**17 33 33.8**	**-2.1**
	2.0nm,0.2s						
SATY				Lg	Lg	17 34 38.1	
	9.0nm,0.7s						
ZHN	**Zhinishke**	**4.81**	**43**	*e*P	**Pg**	**17 33 37.1**	**-0.5**
	4.8nm,0.2s						
ZHN				*e*S	**Sg**	**17 34 42.3**	**+2.5**
	12nm,0.2s						
UZB	**Uzynbulak**	**5.12**	**47**	*e*P	**Pg**	**17 33 42.9**	**-0.5**
	1.5nm,0.1s						
UZB				*e*S	**Sg**	**17 34 52.4**	**+2.7**
	6.3nm,0.6s						
KPKS	**Kokpek**	**5.15**	**42**	*e*P	**Pg**	**17 33 43.5**	**-0.5**
	2.1nm,0.2s						
KPKS				*e*S	**Sg**	**17 34 53.8**	**+3.1**
	14nm,0.7s						
BTLS	**Baital**	**5.30**	**1**	*e*P	**Pg**	**17 33 44.6**	**-2.3**
	1.9nm,0.4s						
BTLS				*e*S	**Sg**	**17 34 55.8**	**+0.4**
	4.5nm,0.7s						
ARXS	**Arharly**	**5.33**	**32**	*e*P	**Pg**	**17 33 45.6**	**-1.8**
	3.9nm,0.5s						
ARXS				*e*S	**Sg**	**17 34 57.6**	**+1.2**
	8.2nm,0.5s						
PDGK	**Podgornoye**	**5.50**	**48**	⇑Pg	**Pg**	**17 33 48.6**	**-2.1**
	2.9nm,0.7s						
PDGK				⇑Lg	Lg	17 35 02.1	
	6.5nm,0.8s						

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*TAP **01** 17:53:41.5, 24°.90N×122°.30E, h12^{km}, ML3.4, C*
*JMA **01** 17:53:42.1±0.1, 24°.9N±0°.5×122°.4E±0°.2, h38^{km}±2^{km},*
MV2.7/9, TAIWAN REGION
ISC 01 17:53:40.4±1.1**, 24°.92N**±0°.03×**122°.40E**±0°.02**, h19**^{km}±3^{km}**,**
n105, σ0^{s}.72/159**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.38**	**284**	*e*P	**Pg**	**17 53 48.3**	**-0.1**
	baz=282						
TWB1				*e*S	**Sg**	**17 53 52.8**	**-1.0**
	baz=282						
EGS		**0.43**	**260**	*e*P	**Pg**	**17 53 49.2**	**0.0**
	baz=251						
EGS				*e*S	**Sg**	**17 53 54.8**	**-0.4**
	baz=251						
SXI1	**Grass Mountain**	**0.50**	**290**	P	**Pb**	**17 53 51.1**	**+0.4**
	baz=290						
SXI1				S	**Sb**	**17 53 57.5**	**-0.3**
	baz=290						
NTC	**Toucheng**	**0.52**	**263**	*e*P	**Pg**	**17 53 50.7**	**-0.2**
	baz=270						
NTC				*e*S	**Sb**	**17 53 57.9**	**-0.1**
	baz=270						
TIPB	**Shuangxi**	**0.52**	**276**	*e*P	**Pb**	**17 53 50.9**	**-0.1**
	baz=286						
TIPB				*e*S	**Sg**	**17 53 57.2**	**-0.8**
	baz=286						
NWF	**Wu-fen Shan**	**0.58**	**285**	*e*P	**Pg**	**17 53 52.4**	**+0.4**
	baz=290						
NWF				*e*S	**Sb**	**17 53 59.8**	**0.0**
	baz=290						
WFSB	**Wu-fen Shan**	**0.58**	**285**	P	**Pg**	**17 53 52.3**	**+0.3**
	baz=290						
WFSB				S	**Sb**	**17 54 00.1**	**+0.4**
	baz=290						
TWC	**Suao**	**0.58**	**238**	*e*P	**Pb**	**17 53 51.3**	**-0.7**
	baz=234						
TWC				*e*S	**Sb**	**17 53 58.2**	**-1.7**
	baz=234						
ILA	**Ilan**	**0.61**	**256**	*e*P	**Pb**	**17 53 52.0**	**-0.3**
	baz=241						
ILA				*e*S	**Sg**	**17 54 00.8**	**+0.1**
	baz=241						
TNOU	**National Taiwa**	**0.61**	**292**	P	**Pg**	**17 53 53.0**	**+0.4**
	baz=297						
TNOU				S	**Sg**	**17 54 01.3**	**+0.6**
	baz=297						
NDS	**Dongshan**	**0.68**	**245**	*e*P	**Pb**	**17 53 53.1**	**-0.6**
	baz=235						
NDS				*e*S	**Sb**	**17 54 02.4**	**-0.3**
	baz=235						
JYNG	**Yonagunijimaku**	**0.68**	**133**	P	**Pn**	**17 53 55.2**	**+0.1**
JYNG				*e*S	**Sn**	**17 54 04.8**	**-0.4**
TWE	**Neicheng**	**0.69**	**254**	*e*P	**Pb**	**17 53 53.4**	**-0.4**
	baz=242						
TWE				*e*S	**Sb**	**17 54 02.9**	**-0.1**
	baz=242						
YOJ	**Yonaguni jima**	**0.72**	**129**	P	**Pn**	**17 53 56.5**	**+0.9**
YOJ	**Yonaguni jima**	**0.72**	**129**	*e*P	**Pn**	**17 53 55.8**	**+0.2**
	baz=110						
YOJ				*e*S	**Sn**	**17 54 06.0**	**-0.2**
	baz=110						
YOJ	**Yonaguni jima**	**0.72**	**129**	P	**Pn**	**17 53 55.8**	**+0.2**
YOJ				*e*S	**Sn**	**17 54 05.8**	**-0.4**
NWRT	**Kuosheng**	**0.72**	**293**	*e*P	**Pn**	**17 53 55.1**	**-0.5**
	baz=297						
NWRT				*e*S	**Sg**	**17 54 04.5**	**+0.1**
	baz=297						
EWUT	**Wuta**	**0.73**	**230**	*e*P	**Pb**	**17 53 54.2**	**-0.4**
	baz=226						
TWA	**Mucha**	**0.74**	**275**	*e*P	**Pn**	**17 53 55.4**	**-0.5**
	baz=277						
TWA				*e*S	**Sb**	**17 54 04.4**	**-0.1**
	baz=277						
FUSB	**Fushanzhiwuyua**	**0.75**	**258**	*e*P	**Pb**	**17 53 54.8**	**-0.1**
	baz=257						
FUSB				*e*S	**Sb**	**17 54 04.3**	**-0.6**
	baz=257						
NHY	**Taipei**	**0.76**	**279**	*e*P	**Pg**	**17 53 55.3**	**0.0**
	baz=282						
NHY				*e*S	**Sg**	**17 54 05.6**	**+0.2**
	baz=282						
ENA	**Nanau**	**0.77**	**231**	*e*P	**Pb**	**17 53 55.1**	**-0.1**
	baz=218						
ENA				*e*S	**Sb**	**17 54 03.6**	**-1.8**
	baz=218						
YM08	**YM08**	**0.78**	**290**	P	**Pn**	**17 53 55.9**	**-0.5**
	baz=294						
YM08				*e*S	**Sg**	**17 54 05.6**	**-0.5**
	baz=294						
YM01	**YM01**	**0.78**	**287**	P	**Pn**	**17 53 56.2**	**-0.3**
	baz=290						
YM01				*e*S	**Sg**	**17 54 06.1**	**-0.1**
	baz=290						
NHDH	**Xindian Distri**	**0.79**	**273**	*e*P	**Pn**	**17 53 56.5**	**-0.1**
	baz=275						
NHDH				*e*S	**Sg**	**17 54 06.2**	**-0.2**
	baz=275						
ENTT	**Nioudou**	**0.80**	**250**	*e*P	**Pg**	**17 53 56.2**	**0.0**
	baz=248						
ENTT				*e*S	**Sb**	**17 54 06.0**	**-0.3**
	baz=248						
TAP	**Taipei**	**0.82**	**279**	*e*P	**Pn**	**17 53 56.7**	**-0.2**
	baz=281						
TAP				*e*S	**Sg**	**17 54 07.2**	**0.0**
	baz=281						
NSM	**Shimen**	**0.82**	**297**	*e*P	**Pn**	**17 53 57.4**	**+0.4**
	baz=287						
NSM				*e*S	**Sn**	**17 54 08.3**	**-0.3**
	baz=287						
NWLT	**Wulai**	**0.82**	**260**	*e*P	**Pb**	**17 53 56.1**	**0.0**
	baz=260						
NWLT				*e*S	**Sb**	**17 54 06.8**	**-0.2**
	baz=260						
TATO	**Taipei**	**0.83**	**274**	*e*P	**Pn**	**17 53 56.9**	**-0.2**
	baz=276						
TATO				*e*S	**Sb**	**17 54 07.0**	**+0.1**
	baz=276						
ANP	**Anpu**	**0.84**	**289**	*e*P	**Pn**	**17 53 57.1**	**-0.3**
	baz=292						
ANP				*e*S	**Sg**	**17 54 07.7**	**-0.3**
	baz=292						
BACT	**New Taipei Cit**	**0.87**	**275**	*e*P	**Pn**	**17 53 58.0**	**+0.3**
	baz=277						
BACT				*e*S	**Sg**	**17 54 08.8**	**-0.2**
	baz=277						
LATG	**Datong**	**0.88**	**244**	P	**Pg**	**17 53 57.4**	**-0.2**
	baz=242						
LATG				*e*S	**Sb**	**17 54 08.1**	**-0.4**
	baz=242						
NTST	**Danshui**	**0.89**	**286**	*e*P	**Pn**	**17 53 58.3**	**+0.3**
	baz=289						
NTST				*e*S	**Sn**	**17 54 09.8**	**-0.6**
	baz=289						
TWS1	**Kuangyinshan**	**0.91**	**282**	*e*P	**Pn**	**17 53 58.3**	**+0.1**
	baz=295						
TWS1				*e*S	**Sg**	**17 54 09.9**	**-0.1**
	baz=295						
YHNB	**Yeheng**	**0.96**	**255**	P	**Pb**	**17 53 58.7**	**+0.2**
YHNB	**Yeheng**	**0.96**	**255**	*e*P	**Pb**	**17 53 58.4**	**-0.1**
	baz=272						
YHNB				*e*S	**Sb**	**17 54 10.8**	**-0.1**
	baz=272						
NSK	**Sanguang**	**0.97**	**256**	*e*P	**Pb**	**17 53 58.8**	**+0.1**
	baz=271						
NSK				*e*S	**Sb**	**17 54 11.3**	**0.0**
	baz=271						
NTY	**Taoyuan**	**1.00**	**275**	*e*P	**Pg**	**17 53 59.6**	**-0.3**
	baz=261						
NTY				*e*S	**Sg**	**17 54 12.7**	**-0.4**
	baz=261						
ETL	**Fush Village**	**1.03**	**223**	*e*P	**Pb**	**17 53 59.8**	**+0.1**
	baz=215						
NACB	**Ninganchiao**	**1.04**	**225**	*e*P	**Pb**	**17 53 59.6**	**-0.2**
	baz=222						
NACB				*e*S	**Sb**	**17 54 11.5**	**-1.6**
	baz=222						
NNSB	**Datong**	**1.04**	**242**	*e*P	**Pn**	**17 54 00.1**	**0.0**
	baz=230						
NNSB				*e*S	**Sb**	**17 54 13.3**	**0.0**
	baz=230						
NNS	**Nan Shan**	**1.04**	**243**	*e*P	**Pn**	**17 54 00.4**	**+0.2**
	baz=230						
NNS				*e*S	**Sb**	**17 54 12.8**	**-0.6**
	baz=230						
ETLH	**Xiulin Townshi**	**1.09**	**230**	*e*P	**Pn**	**17 54 01.1**	**+0.2**
	baz=217						
ETLH				*e*S	**Sb**	**17 54 13.5**	**-1.2**
	baz=217						
NCU	**National Centr**	**1.10**	**273**	*i* S	**Sg**	**17 54 16.8**	**+0.6**
	baz=274						
TWD	**Chiawan**	**1.11**	**221**	*e*P	**Pb**	**17 54 01.1**	**+0.1**
	baz=227						
TWD				S	**Sb**	**17 54 14.7**	**-0.4**
	baz=227						
NFF	**Wufeng Townshi**	**1.20**	**256**	*e*P	**Pb**	**17 54 02.6**	**+0.1**
	baz=269						
NFF				*e*S	**Sn**	**17 54 18.3**	**+0.3**
	baz=269						
NHW	**Xinwu Township**	**1.23**	**274**	*e*P	**Pb**	**17 54 03.0**	**0.0**
	baz=275						
NHW				*e*S	**Sb**	**17 54 17.9**	**-0.6**
	baz=275						
ETM	**Tongmen**	**1.26**	**221**	*e*P	**Pb**	**17 54 03.7**	**+0.1**
	baz=226						
ETM				*e*S	**Sn**	**17 54 20.1**	**+0.7**
	baz=226						
TEYL	**Yanliau Villag**	**1.27**	**215**	*e*P	**Pb**	**17 54 04.5**	**+0.7**
	baz=213						
LIOB	**Emei**	**1.28**	**258**	*e*P	**Pb**	**17 54 03.9**	**-0.1**
	baz=258						
WHF	**Hehuan Shan**	**1.29**	**233**	P	**Pb**	**17 54 04.8**	**+0.5**
	baz=231						
WHF				*e*S	**Sb**	**17 54 19.8**	**-0.8**
	baz=231						
SBCB	**Hsinchu**	**1.29**	**265**	*e*P	**Pb**	**17 54 04.0**	**-0.1**
	baz=283						
SBCB				*e*S	**Sg**	**17 54 22.9**	**+0.7**
	baz=283						
NSTT	**Nanjuang**	**1.30**	**258**	*e*P	**Pb**	**17 54 04.0**	**-0.3**
	baz=257						
NSTT				*e*S	**Sb**	**17 54 20.9**	**+0.3**
	baz=257						
HSN	**Hsinchu**	**1.30**	**265**	*e*S	**Sb**	**17 54 21.4**	**+0.8**
	baz=267						
TDCB	**Techi**	**1.31**	**240**	*e*P	**Pg**	**17 54 05.2**	**-0.5**
	baz=228						
TDCB				*e*S	**Sb**	**17 54 21.4**	**+0.4**
	baz=228						
IRIF	**Iriomote-Funau**	**1.35**	**115**	P	**Pb**	**17 54 04.9**	**-0.2**
CHGB	**Renai**	**1.40**	**233**	*e*P	**Pb**	**17 54 06.7**	**+0.5**
	baz=231						
CHGB				*e*S	**Sb**	**17 54 23.8**	**0.0**
	baz=231						
ESL	**Shilin**	**1.41**	**219**	*e*P	**Pb**	**17 54 06.2**	**+0.1**
	baz=217						

WHP	Taichung City	1.47	244	*e*P	Pg	17 54 07.9	-0.8
	baz=234						
OWD	Renai	1.47	229	*e*P	Pb	17 54 07.5	+0.3
	baz=228						
WUSB	Renai	1.49	232	*e*P	Pb	17 54 08.1	+0.6
	baz=230						
WUSB				*e*S	Sb	17 54 26.0	-0.1
	baz=230						
EGFH	Guangfu	1.53	216	*e*P	Pb	17 54 08.0	-0.2
	baz=198						
TWQ1	Liyutan	1.58	249	*e*P	Pg	17 54 11.2	+0.3
	baz=265						
WCS	Beigang Elemen	1.60	238	*e*P	Pg	17 54 10.4	-0.9
	baz=224						
JKRS	Kuro-shima	1.62	114	P	Pb	17 54 09.6	-0.1
VWDT	VWDT	1.63	225	*e*P	Pb	17 54 10.2	+0.3
	baz=230						
VWDT				*e*S	Sb	17 54 29.8	-0.3
	baz=230						
HGSD	Ruisui	1.68	212	*e*P	Pb	17 54 11.0	+0.3
	baz=197						
JIJ	Ishigaki jima	1.68	109	*e*P	Pb	17 54 10.7	-0.2
JIJ				*e*S	Sb	17 54 31.6	-0.1
WDJ	Dajia District	1.70	251	*e*P	Pg	17 54 13.4	+0.3
	baz=268						
SMLT	Sun Moon Lake	1.71	233	*e*P	Pb	17 54 12.3	+0.9
	baz=216						
EHY	Hungye	1.71	215	*e*P	Pn	17 54 10.3	+1.0
	baz=213						
TYC	Yuchr	1.73	235	*e*P	Pg	17 54 12.7	-1.0
	baz=233						
SSLB	Suanglung	1.73	230	P	Pb	17 54 12.3	+0.6
SSLB	Suanglung	1.73	230	*e*P	Pb	17 54 11.9	+0.3
	baz=230						
JISG	Ishigakijimahi	1.77	100	P	Pb	17 54 12.3	-0.1
YULB	Yu-li	1.82	214	*e*P	Pn	17 54 11.5	+0.7
	baz=213						
EYUL	Yuli	1.85	212	*e*P	Pb	17 54 12.5	-1.1
	baz=212						
WNT	Mingjian	1.87	237	*e*P	Pb	17 54 14.6	+0.6
	baz=237						
YUS	Yu-Shan	1.94	223	*e*P	Pb	17 54 14.7	-0.8
	baz=223						
FULB	Fuli	1.99	211	*e*P	Pn	17 54 14.4	+1.3
	baz=192						
ALS	Alishan	2.02	226	*e*P	Pb	17 54 16.4	-0.3
	baz=227						
CHN5	Tsauling	2.05	230	*e*P	Pb	17 54 17.2	+0.1
	baz=231						
ELDTW	Lidau	2.13	216	*e*P	Pn	17 54 16.4	+1.2
	baz=203						
EDH	Donghe	2.18	207	*e*P	Pn	17 54 17.2	+1.5
	baz=191						
CHN4	Tsaushan	2.27	227	*e*P	Pb	17 54 20.4	-0.4
	baz=228						
TPUB	Ta-pu	2.28	225	P	Pb	17 54 20.2	-0.8
TPUB	Ta-pu	2.28	225	*e*P	Pb	17 54 20.3	-0.7
	baz=209						
STYH	Taoyuan	2.29	221	*e*P	Pb	17 54 19.4	-1.7
	baz=206						
STYT	Tauyuan	2.30	221	*e*P	Pn	17 54 19.2	+1.8
	baz=205						
LONT	Longtian	2.31	210	*e*P	Pn	17 54 18.9	+1.4
	baz=211						
WTP	Ta-pu	2.33	225	*e*P	Pb	17 54 20.7	-1.1
	baz=225						
WSF	Szhu	2.36	238	*e*P	Pn	17 54 19.0	+0.9
	baz=239						
TWK	Hsinying	2.40	227	*e*P	Pb	17 54 22.1	-1.0
	baz=228						
WSL	Shuilin Townsh	2.42	235	*e*P	Pb	17 54 21.4	-2.0
	baz=236						
CHN1	Nanshi	2.43	225	*e*P	Pb	17 54 22.8	-0.8
	baz=226						
SGST	Jiashian	2.47	223	*e*P	Pn	17 54 21.2	+1.5
	baz=223						
MATB	Ma-tsu	2.53	300	*e*P	Pn	17 54 20.9	+0.4
	baz=300						
VWUC	VWUC	2.67	272	*e*P	Pn	17 54 22.1	-0.4
	baz=273						
MASBT	Mashibuluo	2.81	215	*e*P	Pn	17 54 26.1	+1.7
	baz=204						
MASBT				*e*S	Sn	17 54 59.4	+1.6
	baz=204						
EAST	Anshuo	2.90	210	*e*P	Pb	17 54 29.2	-2.3
	baz=198						
WDGT	Dungji	3.00	237	*e*P	Pn	17 54 28.5	+1.6
	baz=239						
SLIU	Shizi	3.06	209	*e*P	Pn	17 54 30.5	+2.6
	baz=199						
VCHM	Qimei	3.20	238	*e*P	Pn	17 54 31.4	+1.7
	baz=242						
VCHM				*e*S	Sn	17 55 07.8	+0.4
	baz=242						
KNMB	Chin-men Tao	3.67	264	*e*P	Pn	17 54 36.3	+0.1
	baz=264						

*IDC **01** 17:56:08.2±10.0, 46°.90N×152°.24E, h85^{km}±65^{km}, mb3.3/7, mbtmp3.6/8, ML2.0/1, MS2.4/1, Error ellipse: s-maj=105.2km s-min=28.7km az=1.0*

ISC 01 17:56:08.0±2.3**, 46°.9N**±0°.3×**152°.2E**±0°.2**, h85^{km}, n15, σ0s.50**/8**, mb3.6**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.16	27	P	Pn	17 57 50.0	+0.1
	0.1nm,0.3s,baz=206,slow=9.6,SNR=2.0						
	1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	29.62	151	T	T	18 33 49.6	
	baz=341,slow=76						
H11N1	WAKE ISLAND Hy	29.63	151	T	T	18 34 03.6	
	baz=341,slow=76						
H11N3	WAKE ISLAND Hy	29.63	151	T	T	18 33 59.5	
	baz=341,slow=76						
H11S1	WAKE ISLAND Hy	30.69	152	T	T	18 35 28.1	
	baz=341,slow=76						
H11S3	WAKE ISLAND Hy	30.70	152	T	T	18 35 23.5	
	baz=341,slow=76						
H11S2	WAKE ISLAND Hy	30.71	152	T	T	18 35 14.6	
	baz=341,slow=76						
GUMO	Guam	33.76	193	LR	LR	18 18 16.1	
	comp=Z,6.3nm,18.1s,baz=96,slow=39						
ILAR	Eielson Array	36.82	39	P	P	18 03 06.6	-0.7
	0.2nm,0.5s,baz=265,slow=8.1,SNR=2.4						
	0.2nm,0.5s						
INK	Inuvik	41.86	32	P	P	18 03 49.3	+0.2
	1.0nm,0.6s,baz=300,slow=8.6,SNR=5.3						
	1.0nm,0.6s						
KURBB	Kurchatov Arra	46.88	303	P	P	18 04 29.2	-0.3
	0.3nm,0.7s,baz=70,slow=8.3,SNR=2.3						
	0.3nm,0.7s						
FINES	FINESS Array B	63.66	334	P	P	18 06 29.3	-0.5
	0.4nm,0.3s,baz=45,slow=6.1,SNR=9.8						
	0.4nm,0.3s						
NOA	NORSAR Array B	67.91	341	P	P	18 06 57.6	+0.6
	0.4nm,0.5s,baz=27,slow=6.2,SNR=3.3						
	0.4nm,0.5s						
AKASG	Malin Array Be	71.10	326	P	P	18 07 17.1	+0.3
	0.6nm,0.4s,baz=26,slow=5.9,SNR=5.8						
	0.6nm,0.4s						
TXAR	Lajitas Array	77.95	60	P	P	18 07 57.1	+0.2
	0.2nm,0.4s,baz=317,slow=6.0,SNR=4.3						
	0.2nm,0.4s						

JMA 01 18:05:14.2±0.1**, 25°.0N**±0°.7×**125°.7E**±0°.7**, h51^{km}**±1^{km}**, MV2.5**/10**, NEAR MIYAKOJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	0.32	224	P	Pn	18 05 23.6	-0.1
JOGS				S	Sn	18 05 30.4	0.0
JIKM	Ikemajima	0.37	260	P	Pn	18 05 24.2	0.0
JIKM				S	Sn	18 05 31.2	0.0
JMJ2	Miyako jima3	0.38	230	P	Pn	18 05 24.2	0.0
JMJ2				S	Sn	18 05 31.8	+0.3
JIRB	Irabujima	0.46	250	P	Pn	18 05 24.9	-0.2
JIRB				S	Sn	18 05 32.8	-0.2
JTJ	Tarama	0.93	248	P	Pn	18 05 31.3	+0.3
JTJ				*e*S	Sn	18 05 44.0	+0.7
JISG	Ishigakijimahi	1.28	252	P	Pn	18 05 36.3	+0.6
JISG				*e*S	Sn	18 05 52.1	+0.3
JIJ	Ishigaki jima	1.50	246	P	Pn	18 05 39.4	+0.6
JIJ				S	Sn	18 05 58.4	+1.1
JKE	Kume jima 2	1.68	37	P	Pn	18 05 42.3	+1.1
IRIF	Iriomote-Funau	1.86	250	P	Pn	18 05 44.3	+0.6

*IDC **01** 18:24:56.0±4.5, 3°.28S×101°.00E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS3.4/3, Error ellipse: s-maj=197.1km s-min=21.7km az=55.0*

*DJA **01** 18:25:04.3±0.7, 3°S±4°×10°1E±°, h23^{km}±9^{km}, M3.5/7, MLv3.5/7*

ISC 01 18:25:04.7±1.0**, 3°.05S**±0°.08×**101°.32E**±0°.07**, h53^{km}, n19, σ0s.81**/13**, mb3.3**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.92	96	P	Pn	18 25 21.5	0.0
MASI				S	Sn	18 25 34.1	+0.2
KRJI	Kerinci	0.96	9	P	Pn	18 25 22.3	+0.2
KRJI				S	Sn	18 25 36.0	+1.1
PPSI	Pulau Pagai	1.34	282	P	Pn	18 25 27.5	+0.5
LWLI	Liwa	3.36	126	P	Pn	18 25 56.4	+1.6
KASI	Kota Agung	4.01	128	P	Pn	18 26 03.8	+0.2
SRBI	Singaraja	14.70	110	P	P	18 28 40.2	+5.6
DNP	Denpasar	14.90	113	P	P	18 28 47.0	+10
KAPI	Kappang	18.49	97	LR	LR	18 37 00.3	
	comp=Z,30nm,21.0s,baz=268,slow=39						
H08S2	Diego Garcia H	29.05	260	T	T	19 00 16.7	
	baz=81,slow=74,SNR=3.1						
H08S3	Diego Garcia H	29.06	260	T	T	19 00 16.3	
	baz=81,slow=74,SNR=4.6						
H08S1	Diego Carcia H	29.07	260	T	T	19 00 18.5	
	baz=81						
WRA	Warramunga Arr	36.33	120	P	P	18 32 03.0	-0.8
	0.3nm,0.7s,baz=308,slow=9.2,SNR=12						
	0.3nm,0.7s						
ASAR	Alice Springs	37.57	126	P	P	18 32 13.9	-0.4
	0.2nm,0.6s,baz=299,slow=7.8,SNR=11						
	0.2nm,0.6s						
SONM	Songino Array	50.87	4	P	P	18 34 00.9	+0.6
	0.1nm,0.4s,baz=181,slow=10,SNR=1.9						
	0.1nm,0.4s						
MKAR	Makanchi Array	52.40	344	P	P	18 34 11.3	-0.3
	0.4nm,0.6s,baz=153,slow=10.0,SNR=4.6						
	0.4nm,0.6s						
OPO	Ambohidratompo	55.13	250	LR	LR	18 54 46.0	
	comp=Z,58nm,18.1s,baz=128,slow=33						
ZALV	Zalesovo Beam	58.44	349	P	P	18 34 54.3	-0.6
	0.6nm,0.3s,baz=174,slow=4.2,SNR=4.8						
	0.6nm,0.3s						
MAW	Mawson	69.60	195	LR	LR	18 59 56.0	
	comp=Z,63nm,21.2s,baz=111,slow=30						
TXAR	Lajitas Array	144.70	40	PKPbc	PKPab	18 44 34.3	-0.9
	0.2nm,0.6s,baz=204,slow=2.0,SNR=2.6						

*NEIC **01** 18:32:18.1±2.9, 9°.3S±0°.1×122°.4E±0°.1, h113^{km}±8^{km}, mb4.0/9, Error ellipse: s-maj=24.0km s-min=9.3km az=216.0*

*IDC **01** 18:32:20.8±1.6, 9°.13S×122°.46E, h119^{km}±14^{km}, mb3.2/3, mbtmp3.9/6, Error ellipse: s-maj=83.9km s-min=16.0km az=59.0*

*DJA **01** 18:32:21.4±0.3, 9°S±4°×12°3E±°, h77^{km}±6^{km}, M4.0/9, mb4.3/7, MLv3.9/9*

ISC 01 18:32:18.1±0.7**, 9°.27S**±0°.07×**122°.48E**±0°.08**, h100^{km}, n41, σ2s.36**/45**, mb3.6**/4**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.68	339	Pn	Pn	18 32 36.7	+1.3
MMRI	Maumere	0.68	339	P	Pn	18 32 36.0	+0.7
MMRI				S	Sn	18 32 49.2	+1.0
MMRI	Maumere	0.68	339	P	Pn	18 32 36.5	+1.2
BATI	Baumata	1.49	129	P	Pn	18 32 49.2	+4.9
	69nm,0.4s,baz=294,slow=12,SNR=24						
BATI	Baumata	1.49	129	P	Pn	18 32 48.9	+4.6
BSSI	Bau Bau, Buton	3.68	327	P	Pn	18 33 14.1	+1.1
BBSI	Bau Bau	3.76	1	P	Pn	18 33 16.2	+2.1
BKSI	Bulukumba	4.57	329	P	Pn	18 33 25.9	+0.9
KAPI	Kappang	5.02	327	P	Pn	18 33 34.0	+2.9
	16nm,0.4s,baz=144,slow=7.5,SNR=13						
KAPI	Kappang	5.02	327	Pn	Pn	18 33 29.9	-1.3
KAPI	Kappang	5.02	327	P	Pn	18 33 34.5	+3.3
BNSI	Bone	5.38	334	P	Pn	18 33 38.6	+2.5
	0.1nm20nm,0.8s						
SANI	Sanana	7.98	26	P	Pn	18 34 14.2	+2.9
	0.1nm13nm,1.1s						
SANI	Sanana	7.98	26	P	Pn	18 34 13.5	+2.2
KNRA	Kununurra	8.84	137	Pn	Pn	18 34 23.9	+0.9
KNRA	Kununurra	8.84	137	P	Pn	18 34 24.1	+1.1
MTN	Manton Dam	9.20	113	Pn	Pn	18 34 28.4	+0.4
MTN	Manton Dam	9.20	113	P	Pn	18 34 28.8	+0.8
FITZ	Fitzroy Crossi	9.29	161	P	Pn	18 34 31.8	+2.6
	2.5nm,0.3s,baz=339,slow=10.0,SNR=77						
FITZ				S	Sn	18 36 10.5	-1.5
	8.8nm,0.3s,baz=134,slow=14,SNR=9.1						
TOLI2	Tolitoli	10.45	351	Pn	Pn	18 34 42.7	-2.3
WB0	Warramunga Arr	15.54	133	P	Pn	18 35 50.8	-1.0
WB0				IAmb	IAmb	18 35 57.8	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	15.62	134	P	Pn	18 35 51.2	-1.4
	comp=Z,1.1nm,0.4s,baz=311,slow=13,SNR=38						
WRA				S	Sn	18 38 40.5	-4.9
	comp=Z,3.0nm,0.7s,baz=312,slow=24,SNR=7.5						
WRA	Warramunga Arr	15.62	134	P	Pn	18 35 52.2	-0.4
WRAB	Tennant Creek	15.62	134	P	Pn	18 35 52.3	-0.4
WRAB				IAmb	IAmb	18 35 58.7	
	comp=Z,9.4nm,0.7s						
WRAB	Tennant Creek	15.62	134	P	Pn	18 35 53.8	+1.1
WB2	Warramunga Arr	15.62	134	P	Pn	18 35 52.2	-0.6
WB2				IAmb	IAmb	18 35 58.7	
	comp=Z,8.9nm,0.6s						
WR0	Warramunga Arr	15.77	134	P	Pn	18 35 53.9	-0.7
WRKA	Warakurna	16.63	161	P	P	18 36 10.4	+4.4
AS31	Alice Springs	18.00	144	P	P	18 36 19.2	-1.9
ASAR	Alice Springs	18.00	144	P	Pn	18 36 22.9	+0.9
	comp=Z,5.2nm,0.5s,baz=319,slow=12,SNR=74						
ASAR				S	S	18 39 35.0	-7.6
	comp=Z,2.2nm,0.7s,baz=322,slow=22,SNR=7.2						
ASAR				ScP	ScP	18 44 17.3	-1.0
	comp=Z,0.4nm,0.7s,baz=337,slow=1.7,SNR=4.3						
ASAR	Alice Springs	18.00	144	P	P	18 36 19.8	-1.3
QIS	Mount Isa	19.97	126	P	Pn	18 36 46.1	+0.9
COEN	Coen	20.79	105	P	P	18 36 52.8	+1.3
COEN				IAmb	IAmb	18 36 53.8	
	comp=Z,3.9nm,0.9s						
MTSU	Mount Surprise	22.95	115	P	P	18 37 17.0	+2.9
CTAO	Charters Tower	25.35	118	P	P	18 37 35.0	-1.0
CTAO				IAmb	IAmb	18 37 41.9	
	comp=Z,4.8nm,1.1s						
BBOO	Buckleboo	26.57	154	P	P	18 37 45.1	-1.8
STKA	Stephens Creek	28.64	144	P	P	18 38 08.6	+3.2
	comp=Z,1.1nm,0.5s,baz=323,slow=11,SNR=8.3						
	comp=Z,1.1nm,0.5s						
SONM	Songino Array	58.62	347	P	P	18 42 02.9	-1.8
	comp=Z,0.4nm,0.9s,baz=157,slow=7.7,SNR=2.3						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	66.31	331	P	P	18 42 55.7	-0.2
	comp=Z,0.2nm,0.4s,baz=132,slow=5.4,SNR=4.1						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	66.31	331	P	P	18 42 55.0	-0.9
QSPA	South Pole Qui	80.72	180	P	P	18 44 19.4	-0.8

*IDC **01** 18:41:06.7±8.8, 36°.24N×70°.72E, h166^{km}±81^{km}, mb3.0/6, mbtmp3.5/7, Error ellipse: s-maj=62.9km s-min=40.3km az=146.0*

*NNC **01** 18:41:15.2±7.6, 36°.94N×70°.71E, h202^{km}±97^{km}, mb2.9, mpv4.1, Error ellipse: s-maj=75.2km s-min=48.0km az=4.0*

ISC 01 18:41:12.9±1.6**, 36°.8N**±0°.1×**70°.7E**±0°.1**, h200^{km}, n18, σ1s.07**/20**, mb3.2**/5**, 1C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.86	23	P	Pn	18 42 38.2	-0.4
	SNR=106						
UCH	Uchtor	6.22	27	P	Pn	18 42 42.8	-0.5
	SNR=23						
KK31	Karatay Array	6.34	359	⇓P	Pn	18 42 44.6	+0.2
	4.6nm,0.4s,baz=173,slow=12,SNR=176						
KK31				⇑S	Sn	18 43 55.1	-2.0
	1.8nm,0.4s,baz=186,slow=21,SNR=6.8						
EKS2	Erkin-Say	6.37	21	P	Pn	18 42 44.9	0.0
	SNR=70						
KBK	Karagaybulak	6.75	28	P	Pn	18 42 50.1	+0.1
	SNR=6.8						
CHMS	Chumysh	6.98	26	P	Pn	18 42 52.3	-0.5
	SNR=7.5						
USP	Ospenovka	7.14	23	P	Pn	18 42 54.4	-0.4
	SNR=14						
TKM2	Tokmak 2	7.23	30	P	Pn	18 42 55.9	-0.3
	SNR=10						
TKM2	Tokmak 2	7.23	30	⇓P	Pn	18 42 55.7	-0.5
	7.4nm,0.4s						
TKM2				⇓S	Sn	18 44 17.4	-0.9
	1.8nm,0.6s						
MKAR	Makanchi Array	13.25	37	P	Pn	18 44 13.4	+0.1
	0.2nm,0.5s,baz=220,slow=13,SNR=2.7						
AB31	Akbulak array	14.72	331	P	P	18 44 34.4	+1.9
	0.2nm,0.3s,baz=143,slow=11,SNR=17						
AKTO	Aktyubinsk	16.42	330	⇓P	P	18 44 50.1	-1.1
	2.7nm,0.8s						
ZALV	Zalesovo Beam	19.80	25	P	P	18 45 28.7	+0.9
	1.0nm,0.5s,baz=220,slow=13,SNR=6.1						
	1.0nm,0.5s						
FINES	FINESS Array B	37.12	326	P	P	18 48 04.2	+0.4
	0.3nm,0.4s,baz=128,slow=12,SNR=4.7						
	0.3nm,0.4s						
ARCES	ARCESS Array B	40.80	338	P	P	18 48 35.6	+1.4
	2.0nm,1.0s,baz=106,slow=6.7,SNR=3.6						
	2.0nm,1.0s						
NOA	NORSAR Array B	44.01	323	P	P	18 49 01.0	+0.7
	0.4nm,0.7s,baz=102,slow=8.0,SNR=1.6						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	65.45	268	P	P	18 51 32.4	-2.3
	0.4nm,0.5s,baz=48,slow=5.5,SNR=4.6						
	0.4nm,0.5s						
YKA	Yellowknife Ar	81.00	2	P	P	18 53 05.1	+0.3
	0.1nm,0.5s,baz=350,slow=5.3,SNR=3.1						
	0.1nm,0.5s						

*IDC **01** 18:50:25.1±6.3, 37°.00N×72°.08E, h129^{km}±36^{km}, mb2.9/3, mbtmp3.4/8, Error ellipse: s-maj=89.9km s-min=24.7km az=150.0*

*NNC **01** 18:50:42.2±10.0, 38°.56N×72°.47E, h227^{km}±161^{km}, mb2.0, mpv3.1, Error ellipse: s-maj=139.2km s-min=62.2km az=179.0*

ISC 01 18:50:27.6±1.5**, 37°.4N**±0°.1×**71°.8E**±0°.1**, h130^{km}, n16, σ1s.36**/18**, mb3.3**/3**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.94	16	P	Pn	18 51 41.6	+1.5
	SNR=32						
UCH	Uchtor	5.24	22	P	Pn	18 51 45.7	+1.4
	SNR=24						
EKS2	Erkin-Say	5.46	15	P	Pn	18 51 48.9	+2.0
	SNR=5.7						
AAK	Ala-Archa	5.62	20	P	Pn	18 51 50.3	+1.2
	6.8nm,0.3s,baz=195,slow=6.5,SNR=22						
AAK				S	Sn	18 52 51.4	-1.1
	5.8nm,0.5s,baz=357,slow=21,SNR=17						
KK31	Karatay Array	5.79	350	P	Pn	18 51 53.4	+2.2
	1.1nm,0.2s,baz=166,slow=12,SNR=75						
KK31				⇑S	Sn	18 52 55.0	-1.4
	4.4nm,0.3s,baz=168,slow=24,SNR=4.6						
CHMS	Chumysh	6.02	21	P	Pn	18 51 55.8	+1.4
	SNR=6.8						
TKM2	Tokmak 2	6.22	26	P	Pn	18 51 58.3	+1.1
	SNR=5.6						
TKM2	Tokmak 2	6.22	26	⇓P	Pn	18 51 58.1	+0.9
	1.0nm,0.5s						
TKM2				⇓S	Sn	18 52 55.9	-11
	0.5nm,0.4s						
GEYT	Alibeck	10.89	277	P	Pn	18 53 00.1	+0.3
	1.0nm,0.3s,baz=112,slow=14,SNR=6.3						
MKAR	Makanchi Array	12.17	36	P	Pn	18 53 17.8	+1.2
	0.2nm,0.7s,baz=248,slow=15,SNR=2.0						
KURBB	Kurchatov Arra	14.06	18	P	P	18 53 43.6	-1.0
	0.3nm,0.8s,baz=209,slow=10,SNR=4.7						
AB31	Akbulak array	14.65	328	⇑P	P	18 53 50.4	-0.7
	0.1nm,0.2s,baz=131,slow=14,SNR=21						
ZALV	Zalesovo Beam	18.82	24	P	P	18 54 37.2	+0.2
	0.7nm,0.5s,baz=221,slow=10.0,SNR=3.8						
FINES	FINESS Array B	37.12	325	P	P	18 57 26.5	+1.3
	0.2nm,0.4s,baz=119,slow=11,SNR=1.2						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	66.41	269	P	P	19 01 02.1	-1.0
	0.4nm,1.0s,baz=37,slow=5.7,SNR=1.6						
	0.4nm,1.0s						
YKA	Yellowknife Ar	80.31	3	P	P	19 02 23.0	-0.7
	0.2nm,0.5s,baz=352,slow=5.3,SNR=5.1						
	0.2nm,0.5s						

TAP 01 18:52:14.1, 22°.64N×120°.68E, h25^{km}, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASBT	Mashibuluo	0.05	233	*i* P	Pb	18 52 18.7	+0.2
	baz=233						
MASBT				S	Sb	18 52 22.0	+0.6
	baz=233						
TSMG	Majia	0.07	333	P	Pb	18 52 18.9	+0.3
	baz=332						
TSMG				S	Sb	18 52 22.2	+0.7
	baz=332						
SSD	Sandimen	0.11	337	*e*P	Pb	18 52 19.3	+0.4
	baz=340						
SSD				*i* S	Sb	18 52 22.8	+0.7
	baz=340						
SSPT	Xinbi	0.19	213	P	Pb	18 52 19.9	+0.3
	baz=212						
SSPT				S	Sb	18 52 24.6	+1.3
	baz=212						
ECL	Taimali	0.26	100	*i* P	Pb	18 52 21.1	+0.6
	baz=100						
EAST	Anshuo	0.30	149	*e*P	Pb	18 52 21.9	+0.7
	baz=147						
EAST				*e*S	Sn	18 52 28.1	-0.7
	baz=147						
SLIU	Shizi	0.44	165	P	Pb	18 52 23.8	+0.4
	baz=165						
SLIU				*e*S	Sb	18 52 30.3	+0.7
	baz=165						

*NEIC **01** 18:56:05.9±2.0, 20°.75S±0°.06×169°.9E±0°.1, h63^{km}±5^{km}, mb5.1/66, Error ellipse: s-maj=14.6km s-min=8.0km az=67.0*

*BJI **01** 18:56:05.5±0.0, 20°.43S×170°.14E, h73^{km}, mb4.9/54, mB4.9/30, Ms4.9/9, Ms7 4.2/9*

*MOS **01** 18:56:05.5±0.9, 20°.79S×169°.81E, h73^{km}, mb5.2/15, Error ellipse: s-maj=10.3km s-min=9.7km az=25.7*

*GCMT **01** 18:56:07.9±0.3, 20°.80S±0°.02×169°.79E±0°.02, h84^{km}±2^{km}, MW4.9/88, Moment Tensor Solution. s40,c50; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.10; $M_{\theta\theta}$2.56±.12; $M_{\phi\phi}$0.05±.11; $M_{r\theta}$-0.16±.09; $M_{\theta\phi}$1.62±.10; $M_{\phi r}$1.00±.07; Best double couple: $M_0$3.20400×10^{16} NP1:ϕ_s85.00000°,δ47.00000°,λ-58.00000°. NP2: ϕ_s223.00000°,δ52.00000°,λ-119.00000°. Principal axes: T 3.3710, Plg3.0000°, Azm333.0000°; N -0.3370, Plg23.0000°, Azm242.0000°; P -3.0380, Plg67.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 18:56:07.9±1.2, 20°.82S×169°.82E, h83^{km}±9^{km}, mb4.5/32, mbtmp4.8/35, MS3.7/37 Error ellipse: s-maj=11.9km s-min=9.3km az=153.0*

*NOU **01** 18:56:10.0, 20°.81S×169°.70E, h87^{km}, mb5.0/65, Vanuatu Islands*

ISC 01 18:56:06.6±0.5**, 20°.84S**±0°.04×**169°.90E**±0°.05**, h76^{km}**±4^{km}**, n582, σ1s.21**/575**, mb5.0**/114**, 34C-61D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.86	249		Pn	18 56 36.5	0.0
MARNC	Mare, Loyalty	1.86	249	P	Pn	18 56 37.2	+0.7
LIFNC	LIFOU	2.49	271	Pn	Pn	18 56 44.4	-0.5
LIFNC	LIFOU	2.49	271	P	Pn	18 56 45.1	+0.2
PINNC	Pines Island,	2.88	232		Pn	18 56 50.0	-0.3
PINNC	Pines Island,	2.88	232	P	Pn	18 56 51.3	+1.0
YATNC	Mamie plateau,	3.05	246	P	Pn	18 56 52.8	+0.2
OUENC	Ouen Island, N	3.25	240	Pn	Pn	18 56 56.1	+0.8
OUENC	Ouen Island, N	3.25	240	P	Pn	18 56 56.7	+1.4
RTV	Rentapao	3.33	335	P	Pn	18 56 59.8	+3.3
DZM	Mont Dzumac	3.44	248	P	Pn	18 56 59.1	+1.1
	391nm,0.5s,baz=129,slow=4.9,SNR=409						
DZM				LR	LR	18 57 27.8	

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      comp=Z,96nm,20.5s,baz=48,slow=24
DZM                              S        Sn     18 57 36.8 -0.9
      2µm,0.9s,baz=18,slow=18,SNR=17
DZM   Mont Dzumac       3.44 248 ePn      Pn     18 56 58.0  0.0
DZM                              eSn      Sn     18 57 36.2 -1.6
DZM   Mont Dzumac       3.44 248 Pn       Pn     18 56 58.8 +0.8
DZM   Mont Dzumac       3.44 248 P        Pn     18 56 59.4 +1.4
DVP   Devils Point      3.49 332 P        Pn     18 57 00.9 +2.3
ONTNC Ouen Toro         3.52 245 Pn       Pn     18 56 59.7 +0.7
ONTNC Ouen Toro         3.52 245 P        Pn     18 57 00.2 +1.2
NOUC  Port Laguerre     3.58 249 P        Pn     18 57 01.0 +1.3
KOUNC Koumac, New Ca    5.26 272 Pn       Pn     18 57 23.2 +0.5
KOUNC Koumac, New Ca    5.26 272 P        Pn     18 57 25.1 +2.4
      288nm,0.4s
SANVU Saraoutou         5.94 334 Pn       Pn     18 57 31.9 -0.2
SANVU Saraoutou         5.94 334 P        Pn     18 57 33.3 +1.2
      680nm,0.5s
NFK   Norfolk Island    8.36 192 P        Pn     18 58 07.3 +2.2
      baz=8.5,SNR=28
NFK                              S        Sn     18 59 35.5 -2.4
      baz=8.5
NFK   Norfolk Island    8.36 192 P        Pn     18 58 07.3 +2.2
      603nm,1.3s
OUZ   Omahuta          14.69 168 P        Pn     18 59 32.0 +1.6
OUZ   Omahuta          14.69 168 P        P      18 59 34.6 -0.1
      37nm,1.3s
HNR   Honiara          14.85 318 P        Pn     18 59 30.5 -2.1
      27nm,0.4s,baz=167,slow=11,SNR=1.5
HNR   Honiara          14.85 318 P        P      18 59 36.5 -0.1
HNR   Honiara          14.85 318          P      18 59 36.5 -0.1
EIDS  Eidsvold         17.88 252 P        Pn     19 00 13.4 +3.0
      baz=18,SNR=3.8
EIDS  Eidsvold         17.88 252 P        Pn     19 00 13.9 +3.5
URZ   Urewera          18.45 162 P        Pn     19 00 19.2 +2.1
      15nm,0.8s,baz=289,slow=9.0,SNR=6.1
URZ                              LR       LR     19 06 03.1
      comp=Z,239nm,21.5s,baz=31,slow=32
URZ   Urewera          18.45 162 P        Pn     19 00 19.4 +2.3
AFI   Afiamalu         18.79  71 P        Pn     19 00 21.7 +0.3
      178nm,0.9s,baz=273,slow=16,SNR=11
AFI   Afiamalu         18.79  71 P        Pn     19 00 22.2 +0.8
AFI                              pmax     pmax
      comp=Z,228nm,1.1s
AFI   Afiamalu         18.79  71 P        Pn     19 00 22.2 +0.8
ARMA  Armidale         19.01 236 P        Pn     19 00 24.0 -0.1
      baz=19,SNR=10
ARMA  Armidale         19.01 236          P      19 00 21.2 -1.3
ARMA  Armidale         19.01 236 P        Pn     19 00 24.8 +0.8
      comp=Z,22nm,1.0s
BKZ   Black Stump Fm   19.13 164 P        Pn     19 00 25.3 +0.1
BKZ   Black Stump Fm   19.13 164 P        Pn     19 00 28.0 +2.8
      comp=Z,98nm,0.9s
QRZ   Quartz Range     20.05 174 P        Pn     19 00 36.9 +0.9
      comp=Z,32nm,1.4s
RMQ   Roma             20.15 250 P        Pn     19 00 38.3 +0.9
      baz=20,SNR=21
BFZ   Birch Farm       20.51 166 P        Pn     19 00 42.6 +1.2
      comp=Z,38nm,1.2s
KHZ   Kahutara         21.73 173 P        P      19 00 55.2 +3.6
      comp=Z,28nm,1.1s
CTA   Charters Tower   22.16 268 P        P      19 00 56.8 +0.2
      comp=Z,3.7nm,0.7s,baz=96,slow=7.7,SNR=4.0
CTA                              LR       LR     19 08 44.0
      comp=Z,163nm,21.9s,baz=90,slow=34
      comp=Z,3.7nm,0.7s
CTAO  Charters Tower   22.16 268 P        P      19 00 57.0 +0.5
CTAO                             pmax     pmax
      comp=Z,27nm,1.1s
CTAO  Charters Tower   22.16 268 P        P      19 00 57.0 +0.5
CTAO  Charters Tower   22.16 268 P        P      19 00 56.9 +0.5
      comp=Z,31nm,1.2s
RPZ   Rata Peaks       22.83 178 LR       LR     19 08 34.9
      comp=Z,298nm,20.8s,baz=334,slow=33
CNB   Canberra Magne   23.09 227 P        P      19 01 07.6 +1.5
      baz=23
CAN   Canberra         23.34 227 P        P      19 01 10.6 +2.1
      comp=Z,56nm,2.2s
RABL  Rabaul           23.90 311 P        P      19 01 14.4 +0.8
RABL                             IAmb     IAmb   19 01 23.1
      comp=Z,27nm,0.5s
RABL  Rabaul           23.90 311 P        P      19 01 14.4 +0.8
KRVT  Keravat (AS076   23.91 311 P        P      19 01 13.8 +0.1
      comp=Z,41nm,0.8s,baz=179,slow=5.0,SNR=7.9
      comp=Z,41nm,0.8s
CMSA  Cobar Meteorol   24.14 239 P        P      19 01 17.0 +1.4
      baz=24,SNR=46
CMSA  Cobar Meteorol   24.14 239 P        P      19 01 17.1 +1.4
      comp=Z,63nm,1.1s
QLP   Quilpie          24.16 251 P        P      19 01 16.8 +0.9
      baz=24,SNR=30
QLP   Quilpie          24.16 251 P        P      19 01 17.7 +1.8
      comp=Z,109nm,0.9s
MTSU  Mount Surprise   24.26 272 P        P      19 01 18.6 +1.8
      baz=24,SNR=18
MTSU  Mount Surprise   24.26 272 P        P      19 01 18.7 +1.8
      comp=Z,19nm,0.8s
PMG   Port Moresby     24.68 294 LR       LR     19 10 24.3
      comp=Z,361nm,18.8s,baz=98,slow=35
KNTN  Kanton           25.36  47 P        P      19 01 29.3 +2.5
      comp=Z,57nm,1.2s
TOO   Toolangi         26.93 226 P        P      19 01 42.2 +1.3
      baz=27,SNR=3.8
TOO   Toolangi         26.93 226 P        P      19 01 42.7 +1.8
      comp=Z,28nm,2.3s
INKA  Innaminka        27.40 250 P        P      19 01 45.8 +0.7
      comp=Z,23nm,0.7s
STKA  Stephens Creek   27.56 241 P        P      19 01 47.9 +1.3
      comp=Z,20nm,0.7s,baz=92,slow=11,SNR=35
STKA                             PcP      PcP    19 05 03.4 +0.6
      comp=Z,2.8nm,0.7s,baz=98,slow=2.5,SNR=4.1
STKA                             LR       LR     19 11 54.8
      comp=Z,170nm,20.1s,baz=32,slow=34
      comp=Z,20nm,0.7s
STKA  Stephens Creek   27.56 241diP       P      19 01 47.7 +1.1
STKA  Stephens Creek   27.56 241 P        P      19 01 47.9 +1.3
STKA                             PcP      PcP    19 05 03.4 +0.6
RAR   Rarotonga        28.29  96 LR       LR     19 10 55.7
      comp=Z,83nm,21.9s,baz=288,slow=31
QIS   Mount Isa        28.32 265 P        P      19 01 53.9 +0.4
      comp=Z,5.8nm,1.5s
MOO   Moorlands        28.78 216 P        P      19 01 59.4 +2.1
      baz=29,SNR=3.6
MOO   Moorlands        28.78 216 P        P      19 01 59.3 +2.1
LCRK  Leigh Creek      30.04 245 P        P      19 02 09.0 +0.5
      comp=Z,41nm,1.2s
HTT   Hallett          30.16 239 P        P      19 02 11.1 +1.4
      baz=30,SNR=12
HTT   Hallett          30.16 239 P        P      19 02 11.1 +1.4
      comp=Z,24nm,1.0s
NAPP  Napperby         30.72 240 P        P      19 02 15.6 +1.1
      comp=Z,20nm,1.0s
OOD   Oodnadatta       31.86 251 P        P      19 02 26.0 +1.4
      comp=Z,60nm,0.8s
BBOO  Buckleboo        32.33 241 P        P      19 02 29.6 +0.9
      baz=32,SNR=13
BBOO  Buckleboo        32.33 241 P        P      19 02 29.5 +0.8
      comp=Z,28nm,0.8s
WR0   Warramunga Arr   33.11 265 P        P      19 02 35.2 -0.5
WB0   Warramunga Arr   33.28 265 P        P      19 02 36.4 -0.7
WB0                              IAmb     IAmb   19 02 37.5
      comp=Z,17nm,1.1s
WB2   Warramunga Arr   33.29 265 P        P      19 02 36.9 -0.4
WRAB  Tennant Creek    33.29 265⇑iP       P      19 02 36.8 -0.5
WRAB                             pmax     pmax
      comp=Z,15nm,1.2s
WRAB  Tennant Creek    33.29 265 P        P      19 02 36.7 -0.6
WRAB                             IAmb     IAmb   19 02 37.6
      comp=Z,20nm,1.3s
WRAB  Tennant Creek    33.29 265 P        P      19 02 37.1 -0.2
      comp=Z,13nm,1.2s
WRA   Warramunga Arr   33.30 265 P        P      19 02 36.5 -0.8
      comp=Z,7.1nm,0.9s,baz=91,slow=7.7,SNR=80
WRA                              PcP      PcP    19 05 17.9 -0.1
      comp=Z,3.2nm,0.9s,baz=93,slow=3.5,SNR=6.8
WRA                              S        S      19 07 54.2 +1.6
      comp=Z,2.1nm,0.9s,baz=100,slow=16,SNR=7.4
WRA                              ScP      ScP    19 08 55.3 -0.5
      comp=Z,1.3nm,0.8s,baz=88,slow=4.0,SNR=6.2
WRA                              PKiKP    PKiKP  19 12 42.1 -1.6
      comp=Z,0.7nm,0.8s,baz=8.4,slow=0.1,SNR=7.9
WRA                              LR       LR     19 16 26.4
      comp=Z,264nm,18.1s,baz=236,slow=37
      comp=Z,7.1nm,0.9s
WRA   Warramunga Arr   33.30 265 P        P      19 02 36.6 -0.8
WRA                              PcP      PcP    19 05 18.1 +0.1
AS31  Alice Springs    33.38 258 P        P      19 02 38.2 +0.2
ASAR  Alice Springs    33.38 258 P        P      19 02 37.0 -1.1
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      comp=Z,22nm,0.9s,baz=94,slow=9.0,SNR=29
ASAR                             PcP      PcP    19 05 17.5 -0.7
      comp=Z,5.1nm,0.8s,baz=105,slow=3.0,SNR=12
ASAR                             ScP      ScP    19 08 55.5 -0.6
      comp=Z,1.9nm,0.8s,baz=100,slow=3.7,SNR=11
ASAR                             PKiKP    PKiKP  19 12 42.1 -1.6
      comp=Z,0.4nm,0.6s,baz=81,slow=1.4,SNR=7.5
ASAR                             LR       LR     19 15 26.0
      comp=Z,187nm,19.5s,baz=92,slow=35
      comp=Z,22nm,0.9s
ASAR  Alice Springs    33.38 258 P        P      19 02 38.0  0.0
ASAR                                             19 05 18.3
ASAR  Alice Springs    33.38 258 P        P      19 02 38.0  0.0
ASAR                             PcP      PcP    19 05 18.3  0.0
ASPA  Alice Springs    33.38 258 P        P      19 02 38.3 +0.2
      baz=34
MULG  Mulgathing       33.55 246 P        P      19 02 40.0 +0.6
      comp=Z,65nm,0.8s
KDU   Kakadu           36.67 277 P        P      19 03 06.5 +0.2
      baz=37,SNR=4.3
TBI   Tubuai           37.66 102 eLR      LR     19 12 48.9
      comp=Z,356nm,30.5s
MTN   Manton Dam       37.87 276 P        P      19 03 16.4  0.0
      baz=38,SNR=15
MTN   Manton Dam       37.87 276 P        P      19 03 16.5  0.0
MTN                              PcP      PcP    19 05 32.3 +0.8
MTN   Manton Dam       37.87 276 P        P      19 03 16.8 +0.3
      comp=Z,34nm,0.6s
PPT2  Papeete2         38.34  92 eLR      LR     19 13 42.0
      comp=Z,486nm,28.8s
PPT   Papeete          38.34  92 LR       LR     19 14 55.3
      comp=Z,235nm,21.5s,baz=258,slow=29
WRKA  Warakurna        38.43 256 P        P      19 03 21.5 +0.2
      baz=38,SNR=21
WRKA  Warakurna        38.43 256 P        P      19 03 21.4 +0.2
      comp=Z,29nm,1.2s
FORT  Forrest          38.75 247 P        P      19 03 23.9 +0.1
FORT  Forrest          38.75 247 P        P      19 03 25.0 +1.2
      comp=Z,58nm,1.2s
KNRA  Kununurra        39.32 270 P        P      19 03 28.5 -0.1
      baz=39,SNR=14
KNRA  Kununurra        39.32 270 P        P      19 03 28.6 -0.1
KNRA                             IAmb     IAmb   19 03 29.4
      comp=Z,26nm,0.8s
KNRA  Kununurra        39.32 270 P        P      19 03 28.7  0.0
      comp=Z,35nm,1.0s
WAKE  Wake Island      40.00 355 P        P      19 03 36.1 +2.0
      comp=Z,78nm,1.0s
FITZ  Fitzroy Crossi   41.72 266 LR       LR     19 21 36.5
      comp=Z,172nm,19.0s,baz=99,slow=37
GUMO  Guam             42.13 322 LR       LR     19 19 46.6
      comp=Z,61nm,20.0s,baz=138,slow=34
SIJI  Sorong           42.61 293 P        P      19 03 55.8  0.0
      comp=Z,7.8nm,0.8s,baz=105,slow=22,SNR=6.0
SIJI                             PcP      PcP    19 05 47.5 +0.6
      comp=Z,8.8nm,0.8s,baz=100,slow=12,SNR=4.4
SIJI                             LR       LR     19 21 34.3
      comp=Z,150nm,21.2s,baz=116,slow=36
      comp=Z,7.8nm,0.8s
BATI  Baumata          45.64 276 P        P      19 04 21.2 +1.3
      comp=Z,16nm,0.6s,baz=156,slow=19
BATI                             LR       LR     19 23 28.5
      comp=Z,206nm,20.7s,baz=149,slow=36
      comp=Z,16nm,0.6s
PSA00 Pilbara Seismi   46.50 260 P        P      19 04 25.2 -1.5
MBWA  Marble Bar       46.67 260 ⇑P       P      19 04 28.5 +0.5
MBWA                             pP       pP     19 04 46.6 +0.5
MEEK  Meekatharra      47.05 253 P        P      19 04 30.8 -0.1
      baz=47,SNR=7.2
MEEK  Meekatharra      47.05 253 P        P      19 04 30.6 -0.3
KLBR  Kellerberrin     47.61 246 P        P      19 04 34.7 -0.4
      baz=48,SNR=9.7
KLBR  Kellerberrin     47.61 246 P        P      19 04 34.8 -0.4
      comp=Z,60nm,0.7s
NWAO  Narrogin (SRO)   48.05 244 P        P      19 04 38.8 +0.2
      comp=Z,28nm,1.7s
BLDU  Ballidu          48.52 247 P        P      19 04 42.2  0.0
      comp=Z,11nm,0.5s
TAOE  Nuku Hiva Isla   49.55  84 eLR      LR     19 19 07.0
LUWI  Luwuk            50.01 287 P        P      19 04 54.0 +0.3
      comp=Z,69nm,0.4s
KAPI  Kappang          51.11 281 P        P      19 05 03.0 +1.0
      comp=Z,17nm,0.3s,baz=114,slow=2.2,SNR=9.3
KAPI                             LR       LR     19 27 50.6
      comp=Z,47nm,20.0s,baz=134,slow=37
      comp=Z,17nm,0.3s
KAPI  Kappang          51.11 281diP       P      19 05 03.1 +1.0
KAPI                             pmax     pmax
      comp=Z,32nm,1.2s
KAPI  Kappang          51.11 281 P        P      19 05 03.2 +1.2
      comp=Z,19nm,0.4s
DAV   Davao City (W)   51.61 298 LR       LR     19 26 52.2
      comp=Z,49nm,21.2s,baz=131,slow=36
TOLI2 Tolitoli         52.75 288 P        P      19 05 13.8 -0.4
TOLI2                            IAmb     IAmb   19 05 15.2
      comp=Z,23nm,0.9s
TOLI2 Tolitoli         52.75 288 P        P      19 05 15.1 +0.9
      comp=Z,28nm,0.9s
JCJ   Chichijima       54.69 329 LR       LR     19 25 46.9
      comp=Z,51nm,21.7s,baz=112,slow=33
VNDA  Vanda            56.86 182 P        P      19 05 44.0 +1.0
      comp=Z,2.9nm,0.7s,baz=0.5,slow=7.8,SNR=16
VNDA                             LR       LR     19 26 34.7
      comp=Z,82nm,19.6s,baz=9.0,slow=32
      comp=Z,2.9nm,0.7s
VNDA  Vanda            56.86 182 P        P      19 05 43.1 +0.1
VNDA  Vanda            56.86 182 P        P      19 05 43.8 +0.8
VNDA                             pP       pP     19 05 57.2 -4.4
VNDA                             sP       pwP    19 06 06.6 +1.9
SBA   Scott Base       57.08 181 P        P      19 05 46.3 +1.8
SBA                              pmax     pmax
      comp=Z,25nm,0.9s
SBA   Scott Base       57.08 181 P        P      19 05 46.2 +1.8
SBA                              IAmb     IAmb   19 05 47.4
      comp=Z,25nm,0.9s
SBA   Scott Base       57.08 181 ⇓P       P      19 05 46.4 +1.8
SBA                              pP       sP     19 06 09.8 -1.5
UGM   Wanagama         58.64 273 P        P      19 05 57.8 +1.3
      comp=Z,110nm,2.0s
CCD   Concordia, Ant   59.48 193 ⇓P       P      19 06 01.9 +0.1
CCD                              pP       pwP    19 06 24.8 +1.2
JHJ   Hachijo jima 2   60.88 331 LR       LR     19 33 23.6
      comp=Z,24nm,18.7s,baz=56,slow=37
LEM   Lembang          61.72 273 P        P      19 06 18.1 +0.4
      comp=Z,47nm,0.8s,baz=64,slow=7.4
LEM                              LR       LR     19 33 05.4
      comp=Z,87nm,20.5s,baz=166,slow=36
      comp=Z,47nm,0.8s
KSM   Kuching          62.34 283 P        P      19 06 20.6 -1.1
KSM                              IAmb     IAmb   19 06 23.0
      comp=Z,26nm,1.2s
KSM   Kuching          62.34 283 P        P      19 06 22.5 +0.9
      comp=Z,22nm,1.1s
MJAR  Matsushiro Arr   64.45 332 P        P      19 06 34.1 -0.9
      comp=Z,4.3nm,0.7s,baz=186,slow=7.4,SNR=15
MJAR                             LR       LR     19 33 27.7
      comp=Z,14nm,20.3s,baz=132,slow=35
      comp=Z,4.3nm,0.7s
MJAR  Matsushiro Arr   64.45 332 P        P      19 06 34.2 -0.9
MJAR                             pmax     pmax
      comp=Z,9.0nm,1.4s
MJAR  Matsushiro Arr   64.45 332 P        P      19 06 34.2 -0.9
MAJO  Matsushiro       64.45 332diP       P      19 06 34.9 -0.2
MAJO                             pmax     pmax
      comp=Z,13nm,1.3s
MAJO  Matsushiro       64.45 332 P        P      19 06 35.3 +0.2
MAJO                             IAmb     IAmb   19 06 36.0
      comp=Z,11nm,1.1s
MAJO  Matsushiro       64.45 332 P        P      19 06 36.3 +1.2
      comp=Z,7.9nm,0.6s
MAJO  Matsushiro       64.45 332 P        P      19 06 35.3 +0.2
MAJO                             pP       pP     19 06 50.5 -3.8
TPUB  Ta-pu            65.03 310 P        P      19 06 37.6 -1.6
TPUB                             IAmb     IAmb   19 06 39.5
      comp=Z,32nm,1.0s
TPUB  Ta-pu            65.03 310 P        P      19 06 39.8 +0.6
      comp=Z,33nm,1.4s
SSLB  Suanglung        65.11 310 P        P      19 06 38.5 -1.1
SSLB                             IAmb     IAmb   19 06 39.9
      comp=Z,21nm,1.1s
SSLB  Suanglung        65.11 310 P        P      19 06 39.9 +0.3
      comp=Z,17nm,1.1s
YHNB  Yeheng           65.36 311 P        P      19 06 42.9 +1.6
      comp=Z,30nm,1.9s
QSPA  South Pole Qui   69.22 180 P        P      19 07 05.8 +0.5
      comp=Z,35nm,1.0s,baz=11,slow=1.1,SNR=104
QSPA                             LR       LR     19 33 56.7
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      comp=Z,63nm,19.1s,baz=2.5,slow=33
      comp=Z,35nm,1.0s
QSPA  South Pole Qui   69.22 180 P        P      19 07 05.6 +0.4
QSPA                             IAmb     IAmb   19 07 06.8
      comp=Z,38nm,0.9s
QSPA  South Pole Qui   69.22 180 ⇓P       P      19 07 05.9 +0.6
QSPA                             pP       PcP    19 07 30.6 +2.1
ASAJ  Asahikawa        69.31 339 P        P      19 07 06.3 +0.6
      comp=Z,5.8nm,0.8s,baz=104,slow=15,SNR=3.8
ASAJ                             LR       LR     19 34 51.1
      comp=Z,14nm,19.5s,baz=161,slow=34
      comp=Z,5.8nm,0.8s
TJN   Taejon           69.67 324diP       P      19 07 09.3 +1.2
KSRS  Korea Array      70.17 326 P        P      19 07 11.7 +0.5
      comp=Z,2.9nm,0.9s,baz=138,slow=7.0,SNR=9.3
KSRS                             LR       LR     19 36 22.4
      comp=Z,21nm,20.5s,baz=130,slow=34
      comp=Z,2.9nm,0.9s
NJ2   Nanjing          71.78 316 eP       P      19 07 23.5 +2.4
NJ2                              pmax     pmax
      comp=Z,12nm,0.5s
IPM   Ipoh             72.02 282 P        P      19 07 21.6 -1.4
IPM                              IAmb     IAmb   19 07 24.0
      comp=Z,15nm,0.7s
IPM   Ipoh             72.02 282 P        P      19 07 23.0  0.0
      comp=Z,22nm,0.8s
PSI   Prapat           73.30 280 P        P      19 07 29.6 -1.1
      comp=Z,7.5nm,0.8s,baz=174,slow=5.9
PSI                              LR       LR     19 42 13.7
      comp=Z,40nm,18.2s,baz=174,slow=38
      comp=Z,7.5nm,0.8s
ADK   Adak             73.36   9 P        P      19 07 31.7 +1.8
      comp=Z,76nm,2.3s
USRK  Ussuriysk Ar.    73.43 333 P        P      19 07 31.6 +1.0
      comp=Z,3.9nm,0.8s,baz=160,slow=6.1,SNR=6.5
      comp=Z,3.9nm,0.8s
ATKA  Atka Island      74.04  10 P        P      19 07 35.4 +1.4
      comp=Z,68nm,1.3s
PETK  Petropavlovsk-   74.39 352 P        P      19 07 36.2 +0.2
      comp=Z,2.7nm,0.7s,baz=134,slow=6.4,SNR=8.0
PETK                             LR       LR     19 33 25.0
      comp=Z,86nm,20.2s,baz=145,slow=30
      comp=Z,2.7nm,0.7s
PETK  Petropavlovsk-   74.39 352 P        P      19 07 35.3 -0.7
MDJ   Mudanjiang       74.82 331 P        P      19 07 39.5 +0.8
MDJ                              pmax     pmax
      comp=Z,11nm,0.9s
MDJ                              pmax     pmax
      comp=Z,170nm,4.1s
TIA   Tai'an           75.54 318 ⇑P       P      19 07 43.7 +0.6
TIA                              pmax     pmax
      comp=Z,18nm,0.7s
NIKH  Nikolski High    75.78  13 P        P      19 07 44.4 +0.4
NIKH  Nikolski High    75.78  13 P        P      19 07 44.1 +0.1
      baz=200
CN2   Changchun        76.14 329 eP       P      19 07 47.0 +0.7
CN2                              pmax     pmax
      comp=Z,20nm,0.7s
UNV   Unalaska Valle   77.11  14 P        P      19 07 51.2 -0.3
UNV                              IAmb     IAmb   19 07 52.9
      comp=Z,27nm,0.8s
UNV   Unalaska Valle   77.11  14 P        P      19 07 51.5 +0.1
      baz=202
MAW   Mawson           77.19 202 P        P      19 07 53.0 +1.1
      comp=Z,18nm,0.7s,baz=113,slow=5.8,SNR=27
MAW                              LR       LR     19 39 08.2
      comp=Z,45nm,18.1s,baz=81,slow=33
      comp=Z,18nm,0.7s
MAW   Mawson           77.19 202 P        P      19 07 53.2 +1.3
MAW                              pmax     pmax
      comp=Z,5.0nm,0.8s
MAW   Mawson           77.19 202 P        P      19 07 53.2 +1.3
GYA   Guiyang          77.24 305⇑iP       P      19 07 54.0 +1.0
GYA                              pmax     pmax
      comp=Z,12nm,1.0s
LYN   LuoYang          77.53 315 ⇑P       P      19 07 55.4 +1.1
LYN                              pmax     pmax
      comp=Z,20nm,0.8s
LYN                              pmax     pmax
      comp=Z,110nm,6.1s
LYN                              LR       LR
      comp=Z,90nm,15.0s
LYN                              LR       LR
      comp=Z,100nm,15.5s
KLR   Kul'dur          77.58 336 P        P      19 07 55.0 +0.8
      comp=Z,3.6nm,0.7s,baz=126,slow=2.8,SNR=16
KLR                              LR       LR     19 36 48.6
      comp=Z,28nm,21.6s,baz=58,slow=32
      comp=Z,3.6nm,0.7s
KLR   Kul'dur          77.58 336diP       P      19 07 54.9 +0.7
KLR                              pmax     pmax
      comp=Z,16nm,1.7s
HNS   HongShan         77.80 318 ⇓P       P      19 07 56.5 +0.8
HNS                              pmax     pmax
      comp=Z,17nm,1.0s
BJI   Beijing          78.56 321 P        P      19 08 00.2 +0.3
BJI                              pmax     pmax
      comp=Z,13nm,0.7s
KMI   Kunming          79.64 302 ⇓P       P      19 08 08.1 +1.7
KMI                              pmax     pmax
      comp=Z,23nm,0.7s
KMI                              pmax     pmax
      comp=Z,81nm,4.2s
XAN   Xi'an            79.64 312 P        P      19 08 06.8 +0.8
XAN                              pP       pP     19 08 29.9 +4.0
XAN                              pmax     pmax
      comp=Z,21nm,0.9s
CMAR  Chiang Mai Arr   79.72 294 P        P      19 08 08.3 +1.6
      comp=Z,14nm,0.8s,baz=134,slow=4.2,SNR=123
CMAR                             PKKPbc   PKKPbc 19 26 53.5  0.0
      comp=Z,0.6nm,0.7s,baz=282,slow=4.3,SNR=5.9
      comp=Z,14nm,0.8s
CMAR  Chiang Mai Arr   79.72 294 i P      P      19 08 08.3 +1.6
CMAR                             pmax     pmax
      comp=Z,15nm,0.9s
CHTO  Chiang Mai       79.88 295 P        P      19 08 08.9 +1.4
CHTO                             pmax     pmax
      comp=Z,21nm,0.8s
CHTO  Chiang Mai       79.88 295 P        P      19 08 08.9 +1.4
CHTO                             IAmb     IAmb   19 08 10.0
      comp=Z,21nm,0.8s
BELA  Belgrano 2       80.46 175 P        P      19 08 09.1 -0.6
PZH   PanZhiHua        81.09 303 P        P      19 08 14.2 +0.2
PZH                              pmax     pmax
      comp=Z,10.0nm,0.8s
PZH                              pmax     pmax
      comp=Z,100nm,5.6s
XLT   XiLinHaoTe       81.09 324⇑iP       P      19 08 14.5 +0.9
XLT                              pmax     pmax
      comp=Z,14nm,1.2s
XLT                              pmax     pmax
      comp=Z,100nm,4.4s
MA2   Magadan          81.64 350 LR       LR     19 39 32.4
      comp=Z,86nm,21.1s,baz=159,slow=32
CD2   Chengdu          81.69 307 P        P      19 08 17.0 -0.1
CD2                              pmax     pmax
      comp=Z,10.0nm,0.7s
SMAI  San Martin Ant   82.12 162 P        P      19 08 19.1 +0.5
SMAI                             IAmb     IAmb   19 08 21.3
      comp=Z,18nm,0.7s
ZEA   Zeya             82.86 336 eP       P      19 08 23.2 +0.7
ZEA                              pmax     pmax
      comp=N,10.0nm,1.6s
ZEA                              pmax     pmax
      comp=Z,10.0nm,1.3s
OHAK  Old Harbor       83.65  19 P        P      19 08 26.0 -0.5
OHAK  Old Harbor       83.65  19 P        P      19 08 27.6 +1.2
      baz=214
LZH   Lanzhou          84.25 312 eP       P      19 08 32.0 +1.7
LZH                              eS       S      19 18 52.9 +3.0
LZH                              pmax     pmax
      comp=Z,27nm,1.1s
LZH                              pmax     pmax
      comp=Z,65nm,4.4s
KDAK  Kodiak Island    84.33  19 P        P      19 08 31.1 +1.2
      comp=Z,20nm,1.0s,baz=228,slow=3.0,SNR=7.5
      comp=Z,20nm,1.0s
KDAK  Kodiak Island    84.33  19⇑eP       P      19 08 30.8 +0.9
KDAK                             pmax     pmax
      comp=Z,102nm,1.6s
KDAK  Kodiak Island    84.33  19 P        P      19 08 31.0 +1.1
      baz=215
SEY   Seymchan         84.63 352 LR       LR     19 40 36.7
      comp=Z,89nm,20.6s,baz=294,slow=32
SEY   Seymchan         84.63 352⇓eP       P      19 08 30.1 -1.2
SEY                              pmax     pmax
      comp=Z,2.0nm,0.9s
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P18K  Big Mountain,      84.90  17    P        P        19 08 33.2 +0.3
P18K                                  IAmb     IAmb     19 08 35.8
      comp=Z,27nm,1.0s
P18K  Big Mountain,      84.90  17    P        P        19 08 33.0 +0.1
      baz=212
O18K  Koktuh Hills       85.30  17    P        P        19 08 35.1 +0.3
O18K                                  IAmb     IAmb     19 08 38.0
      comp=Z,18nm,0.9s
O18K  Koktuh Hills       85.30  17    P        P        19 08 35.1 +0.3
      baz=212
O19K  Port Alsworth      85.83  17    P        P        19 08 38.8 +1.4
      baz=213
PKM   Mcpherson Peak     86.68  51    P        P        19 08 44.6 +2.2
      baz=242
SMMC  Simmler            86.75  50    P        P        19 08 45.2 +2.6
      baz=242
TROLL Troll, Antarti     86.99 184    P        P        19 08 43.1 -0.2
O02D  Mt. Diablo Mer     87.18  45    P        P        19 08 47.2 +2.6
      baz=240,SNR=12
L19K  White Mountain     87.36  16    P        P        19 08 47.6 +2.7
      baz=213
ARVC  Arvin              87.50  51    P        P        19 08 48.2 +2.0
      baz=242
SNAA  Sanae              87.60 182    P        P        19 08 45.5 -0.6
SNAA  Sanae              87.60 182    LR       LR       19 44 58.0
      comp=Z,30nm,21.4s,baz=116,slow=33
SNAA  Sanae              87.60 182d iP       P        19 08 45.4 -0.8
SNAA                                  pmax     pmax
      comp=Z,23nm,1.3s
SNAA  Sanae              87.60 182    P        P        19 08 45.5 -0.6
SNAA                                  IAmb     IAmb     19 08 46.2
      comp=Z,10nm,0.7s
VES   Vestal, Richgr     87.65  50    P        P        19 08 47.9 +1.1
      baz=242
109C  Camp Elliot, M     87.76  54    P        P        19 08 48.7 +1.3
      baz=243
K02D  Willamette Mer     87.89  43    P        P        19 08 49.9 +1.9
      baz=239
O03E  Paynes Creek       87.90  45    P        P        19 08 49.5 +1.5
      baz=240,SNR=17
BFSC  Mount Baldy Ra     87.95  52    P        P        19 08 50.0 +1.4
      baz=243,SNR=5.6
EDW2  Edwards Air Fo     88.00  52    P        P        19 08 50.0 +1.4
      baz=243,SNR=10.0
ISA   Isabella, Lake     88.00  51    P        P        19 08 50.6 +1.9
      baz=243,SNR=17
MURC  Murrieta           88.01  53    P        P        19 08 50.0 +1.4
      baz=243
YBH   Yreka Blue Hor     88.02  44    P        P        19 08 49.7 +1.2
      comp=Z,8.5nm,0.8s,baz=183,slow=3.3,SNR=21
      comp=Z,8.5nm,0.8s
VNA3  Neumayer Olymp     88.16 180    P        P        19 08 48.1 -0.7
MONP2 Monument Peak      88.28  54    P        P        19 08 52.1 +1.9
      baz=244,SNR=9.3
M22K  Willow             88.28  18    P        P        19 08 52.0 +2.8
      baz=217
IKP   In-Ko-Pah, Jac     88.41  54    P        P        19 08 52.2 +1.6
      baz=244,SNR=6.8
VNA2  Neumayer--Watz     88.47 181    P        P        19 08 50.2  0.0
      baz=190,slow=3.0
LRMC  Laurel Mtn Rad     88.50  51    P        P        19 08 52.8 +1.8
      baz=243
ULN   Ulaanbaatar        88.51 323d iP       P        19 08 51.1 +0.3
ULN                                   pmax     pmax
      comp=Z,27nm,1.7s
ULN   Ulaanbaatar        88.51 323    P        P        19 08 50.4 -0.4
ULN                                   IAmb     IAmb     19 08 52.5
      comp=Z,25nm,1.4s
L04D  Klamath Falls      88.52  43    P        P        19 08 52.1 +1.1
      baz=240,SNR=6.4
PFO   Pinyon Flats O     88.57  53    P        P        19 08 52.9 +1.5
      comp=Z,8.9nm,0.9s,baz=265,slow=5.6,SNR=11
PFO                                   LR       LR       19 42 22.5
      comp=Z,32nm,18.5s,baz=196,slow=31
      comp=Z,8.9nm,0.9s
PFO   Pinyon Flats O     88.57  53⇓ eP       P        19 08 52.4 +1.0
PFO                                   pmax     pmax
      comp=Z,28nm,1.1s
PFO   Pinyon Flats O     88.57  53    P        P        19 08 52.8 +1.3
      baz=244,SNR=8.2
TPFO  Pinon Flats        88.57  53    P        P        19 08 52.6 +1.1
      baz=244,SNR=8.0
YAK   Yakutsk            88.57 342    LR       LR       19 45 08.6
      comp=Z,17nm,19.9s,baz=89,slow=33
YAK   Yakutsk            88.57 342c iP       P        19 08 50.4 -0.1
YAK                                   pmax     pmax
      comp=Z,16nm,1.7s
I03D  Drain, OR          88.61  42    P        P        19 08 52.6 +1.4
      baz=239
CWC   Cottonwood Cre     88.64  50    P        P        19 08 53.0 +1.3
      baz=243
BILL  Bilibino           88.66 359d iP       P        19 08 50.8  0.0
BILL                                 e                  19 12 22.9
BILL                                 ePPP     PPP      19 14 15.6
BILL                                  pmax     pmax
      comp=Z,9.0nm,1.3s
BILL                                  MLR      MLR
      comp=Z,95nm,19.0s
BILL  Bilibino           88.66 359    P        P        19 08 50.9  0.0
BILL                                  IAmb     IAmb     19 08 53.0
      comp=Z,6.1nm,0.9s
GTA   Gaotai             88.67 313   eP        P        19 08 52.8 +1.0
GTA                                   pmax     pmax
      comp=Z,10.0nm,1.0s
VNA1  Neumayer--Stat     88.75 181    P        P        19 08 51.0 -0.5
SWSC  Sam W. Stewart     88.78  54    P        P        19 08 53.8 +1.6
      baz=244,SNR=10.0
TIN   Tinemaha, Big      88.82  50    P        P        19 08 54.5 +2.0
      baz=243,SNR=5.5
SONM  Songino Array      88.86 323    P        P        19 08 53.0 +0.6
      comp=Z,7.0nm,0.9s,baz=130,slow=4.8,SNR=46
      comp=Z,7.0nm,0.9s
SONM  Songino Array      88.86 323    P        P        19 08 52.3 -0.1
SONM                                  IAmb     IAmb     19 08 53.9
      comp=Z,15nm,1.1s
MPMC  Manual Prospec     88.90  51    P        P        19 08 54.8 +1.7
      baz=243,SNR=12
GSC   Goldstone, Bar     89.06  52    P        P        19 08 55.2 +1.6
      baz=244,SNR=7.8
BELC  Belle Mtn. Jos     89.08  53    P        P        19 08 55.8 +1.9
      baz=244,SNR=29
CAST  Castle Rocks       89.10  16    P        P        19 08 51.7 -1.4
CAST                                  IAmb     IAmb     19 08 56.9
      comp=Z,4.8nm,0.8s
LHV   Little Huntoon     89.17  48    P        P        19 08 54.6 +0.6
HEC   Hector,Ludlow      89.20  52    P        P        19 08 56.4 +2.1
      baz=244,SNR=6.5
J20K  Nowinta River      89.22  15    P        P        19 08 56.7 +3.1
      baz=213
I04A  Tendick Farm,      89.24  42    P        P        19 08 55.6 +1.4
      baz=240
LCH   Last Change Ra     89.31  50    P        P        19 08 55.8 +0.9
LCH                                   IAmb     IAmb     19 08 57.2
      comp=Z,9.7nm,0.8s
BC3   Big Chuckawall     89.34  54    P        P        19 08 57.1 +2.1
      baz=244,SNR=13
NVAR  Mina Array Bea     89.39  48    P        P        19 08 56.8 +1.5
      comp=Z,15nm,0.8s,baz=226,slow=8.3,SNR=98
      comp=Z,15nm,0.8s
H04D  Lebanon            89.41  41    P        P        19 08 57.4 +2.4
      baz=240
GRAC  Grapevine Rang     89.41  50    P        P        19 08 57.1 +1.9
      baz=243
G03D  McMinnville, O     89.43  41    P        P        19 08 57.5 +2.5
      baz=239
NV11  Mina Array Sit     89.50  48    P        P        19 08 57.0 +1.3
FURC  Furnace Creek,     89.53  51    P        P        19 08 57.7 +2.1
      baz=244,SNR=16
GLA   Glamis             89.56  54    P        P        19 08 58.4 +2.4
      baz=245,SNR=12
GMRC  Granite Mounta     89.68  52    P        P        19 08 58.3 +1.7
      baz=244,SNR=15
K05A  Summer Lake        89.68  44    P        P        19 08 56.5 -0.1
SHOC  Shoshone, Teco     89.71  51    P        P        19 08 58.2 +1.6
      baz=244,SNR=5.8
J05D  Fort Rock, OR      89.73  43    P        P        19 08 58.7 +2.0
      baz=241,SNR=22
TUQ   Turquoise Moun     89.76  52    P        P        19 08 58.7 +1.7
      baz=244,SNR=19
IRM   Iron Mountain      89.79  53    P        P        19 08 59.0 +2.0
      baz=244,SNR=23
KVN   Kaiserville        89.82  48    P        P        19 08 58.6 +1.3
KVN                                   pmax     pmax
      comp=Z,25nm,0.6s
KVN   Kaiserville        89.82  48    P        P        19 08 58.6 +1.3
GLB   Gilahina Butte     89.97  20    P        P        19 08 57.1 -0.1
GLB                                   IAmb     IAmb     19 08 59.6
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      comp=Z,8.8nm,1.0s
TPH   Tonopah            89.99  49    P        P        19 08 58.1  0.0
TPH                                   pmax     pmax
      comp=Z,195nm,1.3s
TPH   Tonopah            89.99  49    P        P        19 08 58.0  0.0
I05D  Terrebonne, OR     90.18  42    P        P        19 09 00.2 +1.5
      baz=241
TPNV  Topopah Spring     90.19  50    P        P        19 09 00.4 +1.4
TPNV                                  pmax     pmax
      comp=Z,32nm,1.0s
TPNV  Topopah Spring     90.19  50    P        P        19 09 00.4 +1.4
TPNV  Topopah Spring     90.19  50    P        P        19 09 00.5 +1.5
      baz=244,SNR=34
NLWA  Neilton Lookou     90.19  38    P        P        19 08 59.9 +1.3
NLWA                                  IAmb     IAmb     19 09 01.5
      comp=Z,15nm,0.9s
BARN  Barnard Glacie     90.41  21    P        P        19 08 59.5  0.0
BBB   Bella Bella        90.47  33    LR       LR       19 40 30.5
      comp=Z,48nm,20.4s,baz=288,slow=29
E04D  Cinebar            90.53  40    P        P        19 09 02.6 +2.5
      baz=240
PDMCI Parker Dam,Lak     90.61  53    P        P        19 09 02.9 +2.1
      baz=245,SNR=13
214A  Organ Pipe Nat     90.65  56    P        P        19 09 02.9 +1.8
      baz=246
D03D  Eldon              90.72  39    P        P        19 09 03.3 +2.3
      baz=239
CBB   Campbell River     90.74  36    P        P        19 09 01.8 +0.8
GOMU  GeErMu             90.75 309    P        P        19 09 02.1 +0.2
GOMU                                  pmax     pmax
      comp=Z,4.0nm,0.9s
GOMU                                  pmax     pmax
      comp=Z,91nm,4.5s
H21K  Melozitna Rive     90.77  15    P        P        19 09 00.8  0.0
CLRS  Cowichan Lake      90.78  37    P        P        19 09 01.6 +0.4
CLRS                                  IAmb     IAmb     19 09 04.3
      comp=Z,8.7nm,0.9s
IMAR  Indian Mountai     90.82  14    P        P        19 09 01.0  0.0
BOD   Bodaibo            91.03 334   eP        P        19 09 01.5 -0.7
BOD                                   pmax     pmax
      comp=Z,10.0nm,1.5s
I07A  Izee               91.22  43    P        P        19 09 05.1 +1.6
R11A  Troy Canyon, C     91.27  49    P        P        19 09 04.8 +0.8
      baz=244,SNR=13
YUK3  Moose Creek        91.33  21    P        P        19 09 04.2 +0.5
      baz=225
MDM   Murphy Dome        91.35  17    P        P        19 09 02.8 -0.7
RIDG  Independent Ri     91.36  18    P        P        19 09 03.1 -0.5
RIDG                                  IAmb     IAmb     19 09 05.2
      comp=Z,9.4nm,1.2s
COLA  College            91.39  17⇑ iP       P        19 09 04.4 +0.8
COLA                                  pmax     pmax
      comp=Z,18nm,3.0s
IL31                     91.57  17    P        P        19 09 02.8 -1.6
IL31                                  IAmb     IAmb     19 09 13.1
      comp=Z,3.4nm,0.8s
ILAR  Eielson Array      91.57  17    P        P        19 09 03.2 -1.3
      comp=Z,1.6nm,0.7s,baz=234,slow=4.5,SNR=39
ILAR                                  PKKPbc   PKKPdf   19 26 23.8 -0.7
      comp=Z,0.6nm,0.9s,baz=5.7,slow=2.7,SNR=8.7
ILAR                                  LR       LR       19 46 27.9
      comp=Z,29nm,18.6s,baz=175,slow=33
      comp=Z,1.6nm,0.7s
YUK4  Talbot Arm         91.66  22    P        P        19 09 06.1 +0.8
      baz=227
B05A  Bryant             91.66  38    P        P        19 09 07.5 +2.2
      baz=240
HYT   Haines Junctio     91.71  23    P        P        19 09 04.7 -0.7
HYT                                   IAmb     IAmb     19 09 09.3
      comp=Z,6.4nm,1.0s
HYT   Haines Junctio     91.71  23    P        P        19 09 06.3 +0.8
      baz=228
SCRK  Sand Creek         91.80  19    P        P        19 09 04.6 -1.1
SCRK                                  IAmb     IAmb     19 09 10.5
      comp=Z,3.2nm,0.8s
SCRK  Sand Creek         91.80  19    P        P        19 09 05.9 +0.2
      baz=222
PALK  Pallekele          91.80 277    LR       LR       19 53 26.3
      comp=Z,15nm,18.8s,baz=245,slow=38
J25K  Salcha River,      91.87  18    P        P        19 09 05.9 -0.1
J25K                                  IAmb     IAmb     19 09 12.6
      comp=Z,8.1nm,1.4s
J25K  Salcha River,      91.87  18    P        P        19 09 06.4 +0.4
      baz=221
ZAK   Zakamensk          91.95 324   eP        P        19 09 06.6 -0.1
ZAK                                   pmax     pmax
      comp=Z,19nm,1.4s
J26L  Joseph Creek       92.31  18    P        P        19 09 08.8 +0.7
      baz=223
TUC   Tucson             92.37  56    P        P        19 09 10.9 +1.8
      baz=247
K27K  Chicken            92.41  19    P        P        19 09 09.1 +0.6
      baz=224
ELK   Elko               92.54  47    P        P        19 09 11.2 +1.2
      comp=Z,4.8nm,0.8s,baz=276,slow=4.2,SNR=16
      comp=Z,4.8nm,0.8s
WHY   Whitehorse         92.58  24    P        P        19 09 10.2 +0.8
      baz=230
COLD  Coldfoot           92.66  14    P        P        19 09 10.8 +1.3
      baz=217
N31M  Braeburn, Yuko     92.78  23    P        P        19 09 10.4 +0.2
      baz=229
M30M  Minto, Yukon       93.13  22    P        P        19 09 11.9  0.0
M30M  Minto, Yukon       93.13  22    P        P        19 09 11.9  0.0
      baz=229
DLBC  Dease Lake         93.17  27    P        P        19 09 12.6 +0.4
      comp=Z,4.1nm,1.0s,baz=192,slow=7.7,SNR=4.1
DLBC                                  LR       LR       19 41 48.9
      comp=Z,32nm,20.9s,baz=201,slow=29
      comp=Z,4.1nm,1.0s
WUAZ  Wupatki            93.17  53    P        P        19 09 14.3 +1.5
      baz=247
EGAK  Eagle              93.23  19    P        P        19 09 12.6 +0.5
      baz=225
W18A  Petrified Fore     94.26  54    P        P        19 09 19.2 +1.3
      baz=248
HLID  Hailey             94.29  45    P        P        19 09 19.0 +1.1
      baz=245
I29M  Ogilvie Camp,      94.50  19    P        P        19 09 18.4 +0.3
      baz=227
121A  Cookes Peak, D     94.80  57    P        P        19 09 22.6 +2.2
      baz=248
KNGR  Kungurtug, Tuv     95.28 322⇑ iP       P        19 09 21.6 -0.5
EPYK  Eagle Plains       95.67  19    P        P        19 09 23.2 -0.1
EPYK                                  IAmb     IAmb     19 09 24.9
      comp=Z,5.7nm,0.8s
EPYK  Eagle Plains       95.67  19    P        P        19 09 23.3 -0.1
      baz=229
ANMO  Albuquerque        96.70  55    P        P        19 09 29.9 +0.9
      comp=Z,1.3nm,0.5s,baz=232,slow=7.3,SNR=4.8
      comp=Z,1.3nm,0.5s
ANMO  Albuquerque        96.70  55⇑ iP       P        19 09 29.7 +0.7
ANMO                                  pmax     pmax
      comp=Z,6.0nm,2.5s
ANMO  Albuquerque        96.70  55    P        P        19 09 30.1 +1.1
      baz=249
PLCA  Paso Flores        96.93 138    P        P        19 09 30.4 +0.5
      comp=Z,2.2nm,0.9s,baz=233,slow=6.2,SNR=3.9
      comp=Z,2.2nm,0.9s
TXAR  Lajitas Array      96.98  61    P        P        19 09 31.4 +1.1
      comp=Z,1.2nm,0.7s,baz=221,slow=5.9,SNR=14
TXAR                                  PKKPbc   PKKPbc   19 26 11.2 -0.2
      comp=Z,0.5nm,0.9s,baz=114,slow=6.2,SNR=3.9
      comp=Z,1.2nm,0.7s
O20A  White River Ci     97.21  50    P        Pdif     19 09 33.2 +1.9
      baz=249
PDAR  Pinedale Array     97.24  47    P        Pdif     19 09 31.8 +0.4
      comp=Z,1.0nm,0.6s,baz=199,slow=2.7,SNR=9.3
PDAR                                  PKKPbc   PKKPbc   19 26 09.7 -1.7
      comp=Z,0.4nm,0.7s,baz=91,slow=7.4,SNR=4.7
      comp=Z,1.0nm,0.6s
S22A  4UR Ranch, Cre     97.40  53    P        Pdif     19 09 33.9 +1.6
      baz=249
INK   Inuvik             97.86  18    PKKPbc   PKKPbc   19 26 08.5 -1.9
      comp=Z,1.0nm,0.8s,baz=5.4,slow=4.5,SNR=4.7
WMQ   Urumqi             98.75 313   eP        Pdif     19 09 38.0 +0.1
WMQ                                   pmax     pmax
      comp=Z,13nm,0.7s
YKA   Yellowknife Ar    101.80  27    P        Pdif     19 09 51.4 +0.5
      comp=Z,1.1nm,0.7s,baz=250,slow=4.6,SNR=16
YKA                                   PKiKP    PKiKP    19 14 13.5 -0.1
      comp=Z,0.4nm,0.6s,baz=251,slow=1.3,SNR=7.2
YKA                                   PKKPbc   PKKPbc   19 25 54.8 -4.1
      comp=Z,0.2nm,0.6s,baz=56,slow=2.8,SNR=6.6
MKAR  Makanchi Array    103.30 315    Pdiff    Pdif     19 09 58.7 +0.7
      comp=Z,1.0nm,0.5s,baz=94,slow=5.2,SNR=14
MKAR                                  PKiKP    PKiKP    19 14 17.0 +0.1
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      comp=Z,0.4nm,0.5s,baz=199,slow=2.5,SNR=4.3
MKAR                                  PKKPbc   PKKPbc   19 25 52.0 -1.9
      comp=Z,0.2nm,0.5s,baz=274,slow=2.8,SNR=5.6
KURBB Kurchatov Arra    106.67 318    Pdiff    Pdif     19 10 14.2 +1.4
      comp=Z,0.2nm,0.6s,baz=99,slow=4.9,SNR=2.7
KURBB                                 PKiKP    PKiKP    19 14 21.7 -1.2
      comp=Z,0.6nm,0.6s,baz=112,slow=2.0,SNR=8.2
KURBB                                 PKKPbc   PKKPbc   19 25 42.1 -1.6
      comp=Z,0.3nm,0.5s,baz=274,slow=3.3,SNR=4.5
ULM   Lac du Bonnet     108.39  42    PKiKP    PKiKP    19 14 25.8 -0.3
      comp=Z,1.3nm,0.4s,baz=340,slow=11,SNR=3.3
RES   Resolute Bay      111.31  17    PKiKP    PKiKP    19 14 29.9 -1.1
      comp=Z,1.5nm,0.6s,baz=196,slow=3.2,SNR=12
RES                                   PKKPbc   PKKPbc   19 25 28.5 -0.9
      comp=Z,0.9nm,1.0s,baz=60,slow=3.2,SNR=4.0
TKL   Tuckaleechee C    114.80  59    PKP      PKPdf    19 14 37.8 -1.0
      comp=Z,0.9nm,0.6s,baz=151,slow=6.3,SNR=4.3
ARU   Arti              118.89 324  i PKIKP    PKPdf    19 14 45.1 -0.9
ARU                                                     19 16 03.6
ARU                                                     19 21 54.3
ARU                                   SS       SS       19 32 18.2 -1.5
GEYT  Alibeck           119.40 303    PKP      PKPdf    19 14 45.9 -1.8
      comp=Z,2.1nm,0.7s,baz=224,slow=8.3,SNR=5.4
AKTO  Aktyubinsk        119.66 317    PKP      PKPdf    19 14 46.8 -0.9
      comp=Z,3.1nm,0.7s,baz=116,slow=3.5,SNR=14
KBS   Kingsbay          120.97 355   ePKPdf    PKPdf    19 14 49.1 -0.3
SPA0  Spitsbergen Ar    121.24 354   ePKPdf    PKPdf    19 14 49.6 -0.4
FRB   Frobisher Bay     122.31  27    PKP      PKPdf    19 14 51.1 -1.2
      comp=Z,5.3nm,0.9s,baz=8.4,slow=5.3,SNR=5.7
HSPB  Hornsund (broa    122.37 353   ePKPdf    PKPdf    19 14 51.4 -0.8
LONY  Lake Ozonia       122.37  50    P        PKPdf    19 14 52.0 -1.1
      baz=272
L61B  Northampton       123.82  52    P        PKPdf    19 14 54.9 -1.0
      baz=272
DAG   Danmarks Havn     123.86   2  i P        PKPdf    19 14 52.7 -2.3
PRGR  Permogore         124.21 331   ePKIKP    PKPdf    19 14 51.1 -4.9
ILULI Ilulissat         125.62  17  i P        PKPdf    19 14 57.0 -1.6
SCHQ  Schefferville     125.83  37    PKP      PKPdf    19 14 58.6 -0.8
      comp=Z,2.5nm,0.6s,baz=266,slow=3.8,SNR=8.5
SCHQ  Schefferville     125.83  37             PKPdf    19 14 59.0 -0.4
BELG  Belogornoye       125.84 320ce PKIKP     PKPdf    19 14 58.4 -1.0
PKME  Peaks-Kenny Pk    126.07  49    P        PKPdf    19 14 59.7 -0.4
      baz=276
DBG   Daneborg          126.22   3  i P        PKPdf    19 14 58.5 -1.1
ARA0  ARCESS Array S    126.76 345   ePKPdf    PKPdf    19 15 00.6 -0.2
ARCES ARCESS Array B    126.76 345    PKP      PKPdf    19 15 00.6 -0.2
      comp=Z,3.1nm,0.5s,baz=74,slow=1.8,SNR=49
ARCES ARCESS Array B    126.76 345    PKIKP    PKiKP    19 15 01.2 -0.1
ARCES ARCESS Array B    126.76 345    PKPdf    PKiKP    19 15 01.2 -0.1
KLMR  Klimovskoe        127.23 332   ePKIKP    PKPdf    19 15 00.1 -1.7
KLMR                                  pmax     pmax
      comp=Z,14nm,1.4s
KLMR  Klimovskoe        127.23 332   ePKPdf    PKPdf    19 15 00.2 -1.6
KLMR                                  AMP               19 15 03.2
      comp=Z,14nm,1.4s
KTK1  Kautokeino        127.69 346   ePKPdf    PKPdf    19 15 02.3 -0.2
JETT  Jettan, Norway    127.90 347   ePdif     Pdif     19 11 46.7 -0.2
BDFB  Brasilia          128.04 131    PKP      PKPdf    19 15 03.9 -1.1
      comp=Z,3.6nm,0.6s,baz=227,slow=11,SNR=5.0
TRO   Tromso            128.14 348   ePKPdf    PKPdf    19 15 03.3 -0.1
DY2G  Dye2              128.83  18  i P        PKPdf    19 15 03.6 -1.5
STEI  Steigen           130.31 348   ePKPdf    PKPdf    19 15 07.0 -0.5
KBZ   Khabaz            130.67 310    PKP      PKiKP    19 15 09.6 -0.2
      comp=Z,1.5nm,0.9s,baz=132,slow=6.9,SNR=4.0
KBZ   Khabaz            130.67 310⇑ iPKIKP    PKiKP    19 15 10.7 +0.9
FAUS  Fauske            130.76 347   ePKPdf    PKPdf    19 15 08.6 +0.2
KIV   Kislovodsk        130.78 311  i PKIKP    PKiKP    19 15 09.8 -0.4
KIV                                   pmax     pmax
      comp=Z,2.0nm,1.0s
KIV                                   MLR      MLR
      comp=Z,23nm,23.0s
OBN   Obninsk           131.16 326   ePKIKP    PKPdf    19 15 09.4 -0.1
OBN                                  e                  19 17 31.7
OBN                                  ePPP      PPP      19 20 16.2
OBN                                   pmax     pmax
      comp=Z,4.0nm,1.0s
GBN   Guysborough       131.45  47    PKPdf    PKPdf    19 15 10.3 -0.1
IVI   Ivigtut           131.76  24  i P        PKPdf    19 15 09.6 -0.9
MOR8  Moi Rana          131.98 347   ePKPdf    PKPdf    19 15 10.9 +0.1
FINES FINESS Array B    132.29 337    PKhKP    PKPpre   19 14 58.0
      comp=Z,0.5nm,0.5s,baz=58,slow=4.7,SNR=5.1
FINES                                 PKP      PKPdf    19 15 11.6 +0.1
      comp=Z,1.5nm,0.6s,baz=71,slow=3.4,SNR=4.6
FINES                                 SKPbc    SKPbc    19 18 29.6 -1.9
      comp=Z,2.4nm,0.8s,baz=72,slow=6.2,SNR=8.4
NRS   Narsarsuaq        132.79  22  i P        PKPdf    19 15 11.7 -0.7
MEF   Metsahovi         133.73 337   eP        PKPdf    19 15 14.7 +0.6
NSS   Namsos            133.92 347   ePKPdf    PKPdf    19 15 14.6 +0.2
RAF   Rauma             134.08 339   eP        PKPdf    19 15 14.4 -0.4
TBLU  Trondheim         135.41 347   ePKPdf    PKPdf    19 15 17.6 +0.3
MNK   Minsk             135.83 329  i PKIKP    PKPdf    19 15 19.0 +0.8
MNK                                 i                   19 17 55.4
MNK                                 i PPP      PPP      19 20 54.8
MNK                                 i                   19 22 21.3
MNK                                 i SS       SS       19 35 51.2 +1.5
MNK                                 i SSS      SSS      19 40 55.9
MNK                                   pmax     pmax
      comp=E,3.0nm,1.9s
MNK                                   pmax     pmax
      comp=Z,9.0nm,1.3s
MNK                                   pmax     pmax
      comp=N,6.0nm,0.8s
MNK                                   MLR      MLR
      comp=N,18nm,12.0s
MNK                                   MLR      MLR
      comp=E,3.0nm,17.0s
MNK                                   MLR      MLR
      comp=Z,122nm,21.0s
MNK   Minsk             135.83 329  i PKP      PKPdf    19 15 19.1 +0.8
      comp=E,3.0nm,1.9s
MNK                                 i PKP      PKPdf    19 15 19.1 +0.8
      comp=N,6.0nm,0.8s
MNK                                 i PKP      PKPdf    19 15 19.1 +0.8
      comp=Z,9.0nm,1.3s,baz=56
MNK                                 i PP       PP       19 17 55.4 -1.9
MNK                                 i PPP      PPP      19 20 54.8
MNK                                 i SKS      SKSdf    19 22 21.3 -1.1
MNK                                 i SKKS     SKKSdf   19 32 02.6 -4.0
MNK                                 i SS       SS       19 35 51.2 +1.5
MNK                                 i SSS      SSS      19 40 56.0
MNK                                 i LR       LR       20 12 14.5
MNK                                 i LRM      MLR      20 15 45.1
      comp=N,18nm,12.4s
MNK                                 i LRM      MLR      20 15 48.2
      comp=E,3.0nm,17.2s
MNK                                 i LRM      MLR      20 15 54.6
      comp=Z,122nm,21.0s
IDID  Didziasalis       135.90 330   eP        PKiKP    19 15 19.9 -0.1
NACGM Naroch            136.12 330   ePKP      PKPdf    19 15 13.1 -5.7
PABE  Paberze           137.02 332   eP        PKiKP    19 15 21.9 -0.3
NB2   NORSAR Subarra    137.14 345    PKPdf    PKPdf    19 15 20.1 -0.5
      comp=Z,0.9nm,0.7s,baz=24,slow=1.8
NOA   NORSAR Array B    137.14 345    PKP      PKPdf    19 15 18.9 -1.8
      comp=Z,1.4nm,0.8s,baz=32,slow=1.9,SNR=6.5
AKASG Malin Array Be    137.14 324    PKP      PKPdf    19 15 18.7 -2.1
      comp=Z,1.7nm,0.6s,baz=67,slow=3.1,SNR=10
AKASG                                 SKPbc    SKPbc    19 18 46.0 -1.3
      comp=Z,1.3nm,0.7s,baz=46,slow=4.1,SNR=10
AKBB  Malin Array Si    137.14 324⇑ ePKIKP    PKPdf    19 15 20.1 -0.8
NC602 NORSAR Array S    137.32 344   ePKPdf    PKPdf    19 15 20.5 -0.4
VIKU  Vikbolandet       137.67 339   eP        PKPdf    19 15 22.5 +0.9
SKAR  Skarslia          138.13 347   ePKPdf    PKPdf    19 15 22.4 -0.1
BR131 Keskin Array S    138.27 307⇓ iPKIKP    PKiKP    19 15 25.0 -0.6
BRTR  Keskin Array B    138.27 307    PKhKP    PKPpre   19 15 15.8
      comp=Z,0.7nm,0.9s,baz=356,slow=8.7,SNR=1.5
BRTR                                  PKP      PKPdf    19 15 23.6  0.0
      comp=Z,1.8nm,0.8s,baz=130,slow=3.3,SNR=8.6
BRTR                                  SKPbc    SKPbc    19 18 50.0 -1.3
      comp=Z,0.3nm,0.5s,baz=123,slow=4.6,SNR=3.6
BLS5  Blasjo            139.67 347   ePdif     Pdif     19 12 37.7 -1.7
DEL   Delary            140.22 339   eP        PKPdf    19 15 25.9 -0.4
CFR   Carcaliu          140.32 317   ⇓P        PKPdf    19 15 25.6 -1.2
CFR   Carcaliu          140.32 317   ⇓PKIKP    PKPdf    19 15 25.6 -1.2
HARR  Harsova           140.66 316   ⇓P        PKPdf    19 15 26.7 -0.8
HARR  Harsova           140.66 316   ⇓PKIKP    PKPdf    19 15 26.7 -0.8
BUR01 Bucovina Ar. S    140.97 322   ⇑P        PKPdf    19 15 27.7 -0.4
MLR   Muntele Rosu      141.57 318   ⇑P        PKPdf    19 15 28.8 -0.5
MLR   Muntele Rosu      141.57 318    PKhKP    PKPpre   19 15 24.2
      comp=Z,1.0nm,0.6s,baz=162,slow=10,SNR=2.4
MLR   Muntele Rosu      141.57 318   ⇑PKIKP    PKPdf    19 15 28.8 -0.5
KOLS  Kolonicke sedl    141.89 325   ePKIKP    PKiKP    19 15 32.6 +0.1
KOLS  Kolonicke sedl    141.89 325   ePKP      PKiKP    19 15 32.6 +0.1
MESR  Meseseni          142.52 322   ⇓P        PKPdf    19 15 29.4 -1.3
DRGR                    142.85 322   ⇑P        PKPdf    19 15 28.8 -2.7
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DRGR		142.85	322	⇑PKIKP	PKPdf	19 15 28.8	-2.7
LANS	Liptovska Anna	143.22	327	ePKIKP	PKiKP	19 15 35.1	-0.2
LANS	Liptovska Anna	143.22	327	ePKP	PKiKP	19 15 35.1	-0.2
VLAD	Vladila	143.23	317	⇑P	PKPbc	19 15 30.4	+1.1
GZR	Gura Zlata	143.56	320	⇑P	PKPbc	19 15 30.0	-0.3
SIRR	Siria	143.75	322	⇑P	PKPbc	19 15 31.3	+0.5
MORC	Moravsky Berou	143.75	329	⇓P	PKPbc	19 15 30.4	-0.3
MORC	Moravsky Berou	143.75	329	⇓PKIKP	PKPbc	19 15 30.4	-0.3
MORC	Moravsky Berou	143.75	329	ePKP	PKPbc	19 15 30.3	-0.4
PSZ	Piszkesteto	143.76	325	⇑P	PKPbc	19 15 31.4	+0.6
PSZ	Piszkesteto	143.76	325	⇑PKIKP	PKPbc	19 15 31.4	+0.6
PSZ	Piszkesteto	143.76	325	PKP	PKPbc	19 15 30.9	+0.1
OSTC	Ostas	143.82	331	ePKP	PKPbc	19 15 30.6	-0.2
CHVC	Chvalec	143.87	332	ePKP	PKPbc	19 15 30.8	-0.2
KRLC	Kraliky	143.90	330	ePKIKP	PKPab	19 15 30.5	0.0
KRLC	Kraliky	143.90	330	ePKP	PKPab	19 15 30.5	0.0
DPC	Dobruska-Polom	143.92	331	ePKIKP	PKPab	19 15 30.7	+0.2
DPC	Dobruska-Polom	143.92	331	ePKP	PKPab	19 15 30.7	+0.2
UPC	Upice	143.94	331	ePKIKP	PKPbc	19 15 31.1	-0.1
UPC	Upice	143.94	331	ePKP	PKPbc	19 15 31.1	-0.1
VYHS	Vyhne	143.96	327	ePKIKP	PKPdf	19 15 32.3	-1.0
VYHS	Vyhne	143.96	327	ePKP	PKPdf	19 15 32.3	-1.0
RMGR	Halanga-Turnu	143.98	319	⇓P	PKPbc	19 15 32.2	+0.8
HERR	Herculane	144.04	319	⇓P	PKPbc	19 15 31.4	-0.2
DJES	Djerdap	144.09	319	⇓P	PKPbc	19 15 31.7	-0.1
BZS	Buzias	144.13	321	⇓P	PKPbc	19 15 31.8	-0.1
BZS	Buzias	144.13	321	⇓PKIKP	PKPbc	19 15 31.8	-0.1
JAVC	Velka Javorina	144.30	328	ePKP	PKPdf	19 15 33.6	-0.3
KAVA	Kavala	144.47	312	P	PKPab	19 15 32.9	+0.1
BLKB	Belogradchik	144.51	317	⇑P	PKPbc	19 15 33.8	+0.6
MDVR	Moldovita	144.52	320	⇑P	PKPbc	19 15 33.3	+0.1
VRAC	Vranov	144.52	330	⇑P	PKPbc	19 15 33.3	+0.3
VRAC	Vranov	144.52	330	PKP	PKPab	19 15 32.7	0.0
	comp=Z,7.5nm,1.0s,baz=49,slow=4.3,SNR=7.0						
VRAC	Vranov	144.52	330	⇑PKIKP	PKPbc	19 15 33.3	+0.3
VRAC	Vranov	144.52	330	ePKP	PKPbc	19 15 33.0	0.0
BANR	Banloc	144.54	321	⇑P	PKPdf	19 15 33.9	-0.4
PVCC	Panska Ves	144.56	333	ePKIKP	PKPbc	19 15 33.3	+0.2
PVCC	Panska Ves	144.56	333	ePKP	PKPbc	19 15 33.3	+0.2
BRG	Berggiesshubel	144.57	334	i PKP	PKPbc	19 15 33.1	0.0
BRG				Amp		19 15 35.5	
	comp=Z,19nm,0.7s						
BRG				ex	x	19 15 57.3	
BRG				Amp		19 15 59.9	
	comp=Z,14nm,1.4s						
BRG	Berggiesshubel	144.57	334	i PKIKP	PKPbc	19 15 33.1	0.0
BRG				e		19 15 57.3	
BRG				pmax	pmax		
	comp=Z,19nm,0.7s						
BRG				pmax	pmax		
	comp=Z,14nm,1.4s						
CLL	Collm	144.62	335	⇓iPKIKP	PKPab	19 15 32.8	-0.2
CLL				e		19 15 59.0	
CLL				pmax	pmax		
	comp=Z,18nm,0.7s						
CLL	Collm	144.62	335	⇓iPKPpre	PKPpre	19 15 32.8	
	comp=Z,18nm,0.7s						
CLL				i PKPdf	PKPdf	19 15 34.6	+0.3
	comp=Z,14nm,0.7s						
CLL				i x	x	19 15 35.8	
CLL				esPKPdf	pPKPdf	19 15 59.0	+3.7
CLL				eSKPdf	SKPbc	19 19 05.0	-1.9
VTS	Vitosha	144.63	316	⇑P	PKPdf	19 15 34.3	-0.5
VTS	Vitosha	144.63	316	⇑PKIKP	PKPdf	19 15 34.3	-0.5
VTS	Vitosha	144.63	316	PKPdf	PKPdf	19 15 34.4	-0.5
VTS	Vitosha	144.63	316	eP	PKPbc	19 15 34.0	+0.2
MMB	Musomiste	144.76	314	eP	PKPab	19 15 33.9	-0.1
NVR	Nevrokopi	144.77	313	P	PKPab	19 15 33.4	-0.6
KRUC	Moravsky	144.78	329	ePKP	PKPbc	19 15 34.0	+0.2
MODS	Modra-Piesok	144.82	328	ePKIKP	PKPdf	19 15 34.4	-0.4
MODS	Modra-Piesok	144.82	328	ePKP	PKPdf	19 15 34.4	-0.4
KOKK	Kokkinochori,	144.90	312	P	PKPab	19 15 33.5	-0.9
PRU	Pruhonice	144.97	332	ePKIKP	PKPbc	19 15 34.2	-0.2
PRU	Pruhonice	144.97	332	ePKP	PKPbc	19 15 34.2	-0.2
ZST	Bratislava	145.03	328	ePKIKP	PKPdf	19 15 35.4	+0.3
ZST	Bratislava	145.03	328	ePKP	PKPdf	19 15 35.3	+0.2
SRS	Serrai	145.05	313	P	PKPbc	19 15 33.9	-1.1
KKB	Krupnik	145.07	314	eP	PKPbc	19 15 34.8	-0.2
OUR	Ouranopolis	145.10	312	P	PKPbc	19 15 34.4	-0.7
BOVS	Bovan	145.12	318	⇑P	PKPbc	19 15 34.4	-0.7
EKA	Eskdalemuir Ar	145.16	353	PKPbc	PKPbc	19 15 34.2	-0.6
	comp=Z,10nm,0.4s,baz=0.3,slow=2.5,SNR=96						
EGYH	Egyhazaskeszo	145.42	327	PKP	PKiKP	19 15 38.1	-1.7
FRGS	Fruska Gora	145.44	322	⇓P	PKPdf	19 15 35.6	-0.4
FRGS	Fruska Gora	145.44	322	eP	PKPdf	19 15 34.4	-1.6
MPLH	Magyarpolny	145.48	326	PKP	PKPbc	19 15 36.1	0.0
PAIG	Paliouri	145.48	311	P	PKPdf	19 15 34.6	-1.5
MORH	Mrgy, Hungar	145.48	324	⇓P	PKPdf	19 15 35.8	-0.1
MORH	Mrgy, Hungar	145.48	324	⇓iP	PKPdf	19 15 35.6	-0.3
MORH	Mrgy, Hungar	145.48	324	PKP	PKPdf	19 15 35.9	0.0
SOP	Sopron	145.64	328	PKP	PKPab	19 15 38.0	+1.1
VAY	Valandovo	145.66	314	i P	PKPdf	19 15 35.7	-0.7
NKC	Novy Kostel	145.68	334	ePKP2	PKPab	19 15 37.1	+0.1
NKC	Novy Kostel	145.68	334	ePKP	PKPab	19 15 37.1	+0.1
STIP	Stip	145.75	315	i P	PKPdf	19 15 35.8	-0.8
RONA	Rosalia, Austr	145.76	328	eP	PKPab	19 15 37.3	-0.2
	comp=Z,9.6nm,0.7s,SNR=13						
CONA	Conrad Observa	145.82	328	i P	PKPab	19 15 37.6	-0.2
	comp=Z,22nm,1.1s,SNR=18						
KOVH	Kovagotottos	145.86	324	PKP	PKPbc	19 15 37.3	0.0
DIVS	Divibare	145.93	320	eP	PKPdf	19 15 36.2	-0.7
CKRC	Cesky Krumlov	145.93	331	ePKP	PKPdf	19 15 36.5	-0.2
KHC	Kasperske Hory	146.03	332	ePKIKP	PKPdf	19 15 36.3	-0.6
KHC	Kasperske Hory	146.03	332	ePKP	PKPdf	19 15 36.3	-0.6
KHC				ex	x	19 16 14.5	
SKO	Skopje	146.11	316	i P	PKPbc	19 15 38.1	-0.1
IDI	Anoyia	146.13	303	⇑P	PKPbc	19 15 38.7	+0.1
IDI	Anoyia	146.13	303	PKPbc	PKPbc	19 15 38.1	-0.4
	comp=Z,8.9nm,0.5s,baz=126,slow=5.5,SNR=17						
IDI	Anoyia	146.13	303	P	PKPdf	19 15 37.2	-0.3
GERES	GERESS Array B	146.19	331	PKP	PKPdf	19 15 36.9	-0.3
	comp=Z,8.2nm,0.7s,baz=79,slow=6.9,SNR=53						
GERES				PKPbc	PKPbc	19 15 38.1	-0.2
	comp=Z,7.8nm,0.7s,baz=33,slow=2.0,SNR=43						
GERES				SKPbc	SKPbc	19 19 09.7	-1.0
	comp=Z,0.6nm,0.7s,baz=5.7,slow=1.0,SNR=2.7						
LIT	Litokhoron	146.24	312	P	PKPdf	19 15 37.1	-0.4
BBLS	Lazići	146.41	320	eP	PKPbc	19 15 38.8	-0.3
ARSA	Arzberg	146.45	328	eP	PKPbc	19 15 39.2	+0.1
	comp=Z,3.1nm,0.8s						
RUDO	Rudo	146.57	320	⇓iP	PKPbc	19 15 39.0	-0.5
MOA	Molln	146.65	330	i P	PKPbc	19 15 39.7	0.0
	comp=Z,5.5nm,0.5s,SNR=7.0						
FNA	Florina	146.71	314	P	PKPdf	19 15 39.0	+0.7
GVDS	Gavdos	146.88	302	P	PKPbc	19 15 40.6	-0.1
GVD	Gavdhos	146.88	302	P	PKPbc	19 15 40.0	-0.7
PHP	Peshkopia	146.90	316	P	PKPbc	19 15 40.1	-0.5
OHR	Ohrid	146.94	315	i P	PKPbc	19 15 40.8	+0.1
UPM	Unac-Piva	147.08	319	eP	PKPbc	19 15 40.5	-0.7
KPRO	Kipourio	147.08	312	P	PKPdf	19 15 38.3	-0.7
SOKA	Soboth	147.09	327	eP	PKPbc	19 15 40.5	-0.5
	comp=Z,10nm,1.0s						
BLY	Banja Luka	147.19	323	⇓iP	PKPbc	19 15 41.2	0.0
EVR	Evrytania	147.21	310	P	PKPbc	19 15 41.3	-0.3
PDG	Podgorica	147.28	318	⇓P	PKPbc	19 15 40.3	-1.2
PDG	Podgorica	147.28	318		PKPbc	19 15 41.3	-0.2
PDG	Podgorica	147.28	318	⇓iP	PKPbc	19 15 41.1	-0.4
KLV	Kalavryta, Ach	147.31	309	P	PKPbc	19 15 41.2	-0.7
TIR	Tirane	147.44	316	⇓P	PKPbc	19 15 41.7	-0.3
TIR	Tirane	147.44	316	⇓PKP2	PKPbc	19 15 41.7	-0.3
CRES	Cresnjev	147.44	326	⇓iP	PKPbc	19 15 41.5	-0.4
MGRS	Mrkonjic Grad	147.45	323	eP	PKPbc	19 15 42.1	+0.1
DRME	Dracevica, Mon	147.45	317	⇓iP	PKPbc	19 15 41.6	-0.4
BRY	Bratogost	147.47	319	eP	PKPbc	19 15 41.1	-1.1
LSK	Leskovik	147.52	313	P	PKPbc	19 15 42.3	-0.1
SRKY	Kupres RS	147.61	322	eP	PKPdf	19 15 37.8	-2.0
BEBN	Eben Emael	147.62	341	dPKP	PKPab	19 15 46.3	+1.8
KBA	Koelnbreinsper	147.63	329	eP	PKPbc	19 15 41.6	-1.1
	comp=Z,4.0nm,0.6s						
BTNL	Ternell	147.67	341	dPKPdf	PKPdf	19 15 39.2	-0.3
BTNL				dPKPbc	PKPbc	19 15 41.6	-0.8
TREB	Trebinje	147.69	319	eP	PKPbc	19 15 41.7	-1.0
MEM	Membach	147.69	341	dPKPbc	PKPbc	19 15 42.2	-0.2
HCY	Herceg Novi	147.74	318	eP	PKPdf	19 15 41.2	+1.3
BOJS	Bojanci	147.76	326	i PKPbc	PKPbc	19 15 42.9	+0.1
LJU	Ljubljana	147.78	327	⇓iP	PKPbc	19 15 42.5	-0.3
LJU	Ljubljana	147.78	327	i PKPbc	PKPbc	19 15 42.6	-0.3
ITM	Ithomi	147.80	307	P	PKPbc	19 15 41.9	-1.3
MYKA	Terra Mystica	147.81	329	eP	PKPbc	19 15 41.8	-1.1
	comp=Z,5.7nm,0.7s						
BSTI	Sart Tilman	147.84	341	dPKPbc	PKPbc	19 15 42.9	+0.1
BSTI				dPKP	PKPab	19 15 45.7	+0.3
CRNS	Crni Vrh	147.89	327	i PKPbc	PKPbc	19 15 42.5	-0.6
BHOU	Houvegnez	147.91	340	dPKPbc	PKPbc	19 15 43.2	+0.2
BHOU				dPKP	PKPab	19 15 46.1	+0.3
BCLA	Clavier	148.07	341	dPKPab	PKPab	19 15 46.0	-0.3
LKD2	Lefkada island	148.08	311	P	PKPbc	19 15 43.5	-0.4
NYDR	Nydri-Lefkada	148.08	311	P	PKPbc	19 15 43.2	-0.6
BGES	Gesves	148.16	341	dPKPdf	PKPdf	19 15 40.5	+0.1
BGES				dPKPbc	PKPbc	19 15 43.0	-0.6
BGES				dPKPab	PKPab	19 15 46.3	-0.4
DRAG	Dragano-Lefkad	148.18	311	P	PKPbc	19 15 44.0	-0.1
WATA	Walderalm	148.26	331	eP	PKPbc	19 15 43.6	-0.7
	comp=Z,3.9nm,0.4s						
ABTA	Abfaltersbach	148.27	330	i P	PKPdf	19 15 39.8	-1.0
	comp=Z,11nm,0.7s						
KEK	Kerkira	148.27	313	P	PKPbc	19 15 44.1	-0.2
WTTA	Wattenberg	148.29	331	eP	PKPbc	19 15 43.9	-0.4
	comp=Z,8.2nm,0.6s						
RCHB	Rochefort	148.32	341	dPKPbc	PKPbc	19 15 43.6	-0.4
BMRD	Maredsous	148.33	342	dPKPbc	PKPbc	19 15 43.9	-0.2
SKDS	Skadanscina	148.38	327	⇓iP	PKPbc	19 15 43.8	-0.6
MOTA	Moosalm	148.46	332	i P	PKPbc	19 15 44.1	-0.7
	comp=Z,8.0nm,0.7s,SNR=5.9						
WLF	Walferdange	148.46	340	dPKPbc	PKPbc	19 15 44.7	+0.2
RETA	Reutte	148.50	332	eP	PKPbc	19 15 44.4	-0.4
	comp=Z,11nm,1.1s						
SQTA	Sankt Quirin	148.51	332	eP	PKPbc	19 15 44.5	-0.3
	comp=Z,9.5nm,0.6s,SNR=7.9						
DOU	Dourbes	148.57	342	dPKPbc	PKPbc	19 15 44.5	-0.2
DOU				dPKPab	PKPab	19 15 47.8	-0.5
FETA	Feichten	148.88	332	i P	PKPbc	19 15 45.5	-0.3
	comp=Z,6.8nm,0.6s,SNR=6.5						
DAVA	Damuels	149.04	333	eP	PKPbc	19 15 45.8	-0.5
	comp=Z,13nm,1.1s						
DAVOX	Davos/Dischmat	149.43	332	PKP	PKPdf	19 15 42.5	-0.2
	comp=Z,17nm,0.8s,baz=167,slow=11,SNR=7.0						
DAVOX				PKPbc	PKPbc	19 15 47.2	0.0
	comp=Z,14nm,0.7s,baz=233,slow=1.9,SNR=44						
MATE	Matera	149.85	317	⇓P	PKPdf	19 15 41.6	-1.7
TIP	Timpagrande	150.59	314	⇑P	PKPdf	19 15 45.4	+0.7
AQU	L'Aquila	150.83	323	eP	PKPbc	19 15 50.3	-0.3
KEST	Kesra	157.40	315	PKPab	PKPab	19 16 26.6	+0.5
	comp=Z,3.7nm,0.6s,baz=248,slow=4.5,SNR=4.3						
ESDC	Sonseca Array	160.50	346	PKPab	PKPab	19 16 38.5	-0.7
	comp=Z,1.1nm,0.7s,baz=10,slow=4.2,SNR=7.3						
LIC	Lamto	164.66	199	eP	PKPab	19 16 59.2	+1.2
	comp=Z,51nm,1.5s						
KIC	Kosan Boka	164.70	201	eP	PKPab	19 16 58.5	+0.3
	comp=Z,13nm,0.7s						
DBIC	Dimbokro	165.03	201	PKPab	PKPab	19 16 59.7	+0.1
	comp=Z,15nm,0.9s,baz=167,slow=5.9,SNR=13						
TIC	Toumodi	165.06	200	eP	PKPab	19 17 00.3	+0.5
TORD	Torodi Ar. Bea	166.38	238	PKP	PKPdf	19 16 02.7	-1.3
	comp=Z,1.6nm,0.9s,baz=357,slow=0.0,SNR=6.9						
TORD				PKPab	PKPab	19 17 05.4	-0.4
	comp=Z,1.4nm,0.7s,baz=96,slow=3.9,SNR=6.2						
TORD				PP	PP	19 20 51.5	-1.8
	comp=Z,0.8nm,0.9s,baz=134,slow=7.8,SNR=3.6						
TORD	Torodi Ar. Bea	166.38	238		PKPdf	19 16 03.6	-0.5

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*JMA **01** 19:10:42.3±0.1, 24°.0N±0°.6×121°.6E±0°.8, h23^{km}, MV2.7/9, TAIWAN REGION*

*TAP **01** 19:10:44.1, 24°.19N×121°.80E, h13^{km}, ML3.3, C*

ISC 01 19:10:43.7±0.8**, 24°.18N**±0°.02×**121°.86E**±0°.02**, h12**^{km}±5^{km}**, n111,** σ1^{s}**.08**/183**, 2C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.17	321	P	Pg	19 10 47.4	-0.2
	baz=338						
EHP				S	Sg	19 10 50.0	-0.3
	baz=338						
ETL	Fush Village	0.22	266	⇓iP	Pg	19 10 48.1	-0.2
	baz=259						
ETL				S	Sg	19 10 51.1	-0.5
	baz=259						
NACB	Ninganchiao	0.24	270	⇓iP	Pg	19 10 48.4	-0.4
	baz=266						
NACB				i S	Sg	19 10 51.5	-0.7
	baz=266						
TWD	Chiawan	0.26	248	⇓iP	Pg	19 10 49.0	-0.1
	baz=245						
TWD				i S	Sg	19 10 52.9	+0.2
	baz=245						
ENA	Nanau	0.27	337	⇓iP	Pg	19 10 49.4	0.0
	baz=348						
ENA				i S	Sg	19 10 53.2	0.0
	baz=348						
EWUT	Wuta	0.28	345	⇓iP	Pg	19 10 49.6	+0.2
	baz=354						
EWUT				i S	Sg	19 10 53.7	+0.4
	baz=354						
HWA	Hwalien	0.30	230	eP	Pb	19 10 51.0	0.0
	baz=229						
HWA				eS	Sb	19 10 57.0	+1.0
	baz=229						
ETLH	Xiulin Townshi	0.34	275	P	Pg	19 10 50.2	-0.5
	baz=274						
ETLH				S	Sg	19 10 54.9	-0.5
	baz=274						
TEYL	Yanliau Villag	0.39	218	P	Pb	19 10 52.7	+0.3
	baz=225						
TEYL				S	Sn	19 10 59.7	+3.1
	baz=225						
ETM	Tongmen	0.39	238	⇑P	Pg	19 10 51.8	+0.2
	baz=233						
ETM				eS	Sg	19 10 57.1	+0.3
	baz=233						
TWC	Suao	0.43	359	⇓iP	Pb	19 10 52.6	-0.6
	baz=6.0						
TWC				i S	Sg	19 10 58.7	+0.7
	baz=6.0						
LATG	Datong	0.47	320	⇓iP	Pg	19 10 52.8	-0.2
	baz=324						
LATG				i S	Sg	19 10 59.3	0.0
	baz=324						
NDS	Dongshan	0.47	344	⇓iP	Pg	19 10 53.3	+0.3
	baz=350						
NDS				i S	Sg	19 10 59.4	0.0
	baz=350						
NNSB	Datong	0.50	300	⇓iP	Pg	19 10 53.3	-0.2
	baz=303						
NNSB				i S	Sg	19 10 59.1	-1.1
	baz=303						
NNS	Nan Shan	0.52	301	⇓iP	Pg	19 10 53.5	-0.3
	baz=303						
NNS				i S	Sg	19 10 59.9	-0.8
	baz=303						
ESL	Shilin	0.53	227	⇑iP	Pb	19 10 54.3	-0.6
	baz=229						
ESL				S	Sb	19 11 02.6	+0.1
	baz=229						
ENTT	Nioudou	0.53	330	⇓iP	Pg	19 10 54.2	+0.1
	baz=335						
ENTT				i S	Sg	19 11 01.4	+0.1
	baz=335						
WHF	Hehuan Shan	0.54	267	⇓iP	Pg	19 10 54.1	-0.4
	baz=266						
WHF				i S	Sg	19 11 01.0	-0.7
	baz=266						
TEGC	Jichi Village	0.55	212	eP	Pn	19 10 55.5	-1.8
	baz=208						
TWE	Neicheng	0.57	342	⇓iP	Pg	19 10 55.1	+0.3
	baz=348						
TWE				i S	Sg	19 11 02.8	+0.4
	baz=348						
ILA	Ilan	0.60	350	eP	Pg	19 10 55.6	+0.3
	baz=350						
ILA				eS	Sg	19 11 03.9	+0.7
	baz=350						
TWT	Tachien	0.63	277	P	Pg	19 10 56.1	+0.2
	baz=276						
TWT				S	Sg	19 11 03.7	-0.6
	baz=276						
FUSB	Fushanzhiwuyua	0.63	337	⇓iP	Pg	19 10 56.3	+0.2
	baz=331						
FUSB				i S	Sg	19 11 04.3	-0.1
	baz=331						
CHGB	Renai	0.64	260	⇓iP	Pg	19 10 56.0	-0.1
	baz=251						
CHGB				S	Sg	19 11 04.4	-0.1
	baz=251						
EGFH	Guangfu	0.64	218	P	Pb	19 10 56.7	-0.1
	baz=230						
EGFH				S	Sn	19 11 06.9	-1.7
	baz=230						
TDCB	Techi	0.64	277	P	Pg	19 10 56.2	-0.1
	baz=277						
TDCB				S	Sg	19 11 03.9	-0.8
	baz=277						
YHNB	Yeheng	0.66	318	⇓iP	Pg	19 10 56.6	+0.1
	baz=321						
YHNB				S	Sg	19 11 04.7	-0.6
	baz=321						
OWD	Renai	0.66	251	P	Pg	19 10 56.5	-0.1
	baz=249						
OWD				eS	Sg	19 11 05.2	-0.1
	baz=249						
EGS		0.67	6	eP	Pn	19 10 57.6	-1.4
	baz=14						
EGS				eS	Sg	19 11 05.7	+0.2
	baz=14						
NSK	Sanguang	0.68	318	⇓iP	Pg	19 10 56.8	-0.1
	baz=320						
NSK				i S	Sg	19 11 05.8	0.0
	baz=320						
NTC	Toucheng	0.68	358	eP	Pb	19 10 57.2	-0.3
	baz=1.0						
NTC				eS	Sg	19 11 05.9	+0.1
	baz=1.0						
NWLT	Wulai	0.68	332	⇓iP	Pg	19 10 57.1	+0.2
	baz=335						
NWLT				S	Sg	19 11 05.8	-0.1
	baz=335						
WUSB	Renai	0.70	255	P	Pg	19 10 57.3	-0.1
	baz=254						
WUSB				S	Sg	19 11 06.0	-0.6
	baz=254						
VWDT	VWDT	0.78	238	P	Pg	19 10 59.0	+0.2
	baz=242						
VWDT				S	Sn	19 11 10.4	-1.7
	baz=242						
HGSD	Ruisui	0.79	210	eP	Pn	19 10 59.8	-0.8
	baz=198						
HGSD				eS	Sn	19 11 13.3	+1.0
	baz=198						
TIPB	Shuangxi	0.79	358	P	Pg	19 10 59.5	+0.4
TIPB				eS	Sb	19 11 07.7	-2.5
NFF	Wufeng Townshi	0.81	304	P	Pb	19 10 59.3	-0.5
	baz=306						
NFF				S	Sb	19 11 09.6	-1.2
	baz=306						
EHY	Hungye	0.83	217	P	Pb	19 10 59.2	-0.8
	baz=225						
TWB1	Santiao Chiao	0.84	8	eP	Pn	19 11 00.3	-1.0
	baz=10.0						
TWB1				eS	Sg	19 11 11.3	+0.4
	baz=10.0						
WHP	Taichung City	0.84	277	P	Pb	19 10 60.0	-0.3
	baz=277						
WHP				S	Sb	19 11 10.9	-0.6
	baz=277						
TWA	Mucha	0.84	343	eP	Pb	19 10 59.9	-0.3
	baz=337						
NHDH	Xindian Distri	0.84	339	eP	Pg	19 11 00.4	+0.5
	baz=341						
NHDH				eS	Sb	19 11 10.5	-1.0
	baz=341						
WCS	Beigang Elemen	0.87	262	P	Pb	19 11 00.6	-0.2
	baz=262						
WCS				eS	Sb	19 11 11.2	-1.1
	baz=262						
NWF	Wu-fen Shan	0.90	356	⇓iP	Pn	19 11 01.6	-0.6
	baz=351						
NWF				i S	Sb	19 11 12.9	-0.3
	baz=351						
LIOB	Emei	0.90	302	P	Pg	19 11 01.4	+0.3
	baz=303						
LIOB				eS	Sb	19 11 13.1	-0.2
	baz=303						
NSTT	Nanjuang	0.90	300	P	Pb	19 11 01.1	-0.2
	baz=302						
NSTT				S	Sb	19 11 12.3	-1.0
	baz=302						
SSLB	Suanglung	0.91	245	eP	Pb	19 11 01.1	-0.4
	baz=253						
SSLB				eS	Sb	19 11 12.4	-1.2
	baz=253						
SXI1	Grass Mountain	0.92	1	eP	Pn	19 11 01.9	-0.6
	baz=7.0						
SXI1				eS	Sb	19 11 12.9	-0.8
	baz=7.0						
TAP	Taipei	0.92	340	eP	Pn	19 11 02.0	-0.4
	baz=342						
TAP				eS	Sg	19 11 14.1	+0.6
	baz=342						
SMLT	Sun Moon Lake	0.92	252	P	Pb	19 11 01.4	-0.3
	baz=251						
SMLT				S	Sb	19 11 12.6	-1.4
	baz=251						
YULB	Yu-li	0.93	214	eP	Pb	19 11 00.6	-1.2
	baz=222						
TYC	Yuchr	0.95	254	eP	Pb	19 11 02.0	-0.1
	baz=253						
EYUL	Yuli	0.96	211	eP	Pn	19 11 02.6	-0.4
	baz=225						
NCUH	Zhongli	1.00	322	eP	Pg	19 11 03.8	+0.8
	baz=323						
NCU	National Centr	1.00	322	eP	Pb	19 11 02.1	-0.8
	baz=324						
YM01	YM01	1.00	345	P	Pg	19 11 03.5	+0.5
	baz=331						
SBCB	Hsinchu	1.00	308	eP	Pg	19 11 03.5	+0.4
	baz=310						
TWQ1	Liyutan	1.00	280	eP	Pg	19 11 04.4	+1.3
	baz=281						
TWQ1				eS	Sn	19 11 18.0	+0.3
	baz=281						
TWS1	Kuangyinshan	1.00	337	eP	Pg	19 11 03.8	+0.8
	baz=339						
HSN	Hsinchu	1.02	308	eP	Pg	19 11 04.0	+0.6
	baz=304						
HSN				eS	Sn	19 11 17.9	-0.2
	baz=304						
JYNG	Yonagunijimaku	1.03	74	P	Pn	19 11 05.8	+1.9
JYNG				S	Sn	19 11 21.7	+3.5
NMLH	Miaoli	1.04	291	eP	Pg	19 11 04.8	+1.1
	baz=292						
ANP	Anpu	1.05	343	eP	Pg	19 11 04.2	+0.2
	baz=345						
NTST	Danshui	1.05	339	eP	Pg	19 11 04.8	+0.8
	baz=328						
YUS	Yu-Shan	1.07	231	eP	Pb	19 11 04.1	-0.4
	baz=230						
TCU	Taichung	1.08	269	eP	Pg	19 11 05.8	+1.3
	baz=276						
TCU				eS	Sg	19 11 21.3	+2.7
	baz=276						
YOJ	Yonaguni jima	1.09	75	eP	Pg	19 11 05.8	+1.1
	baz=73						
YOJ				eS	Sn	19 11 23.4	+3.7
	baz=73						
YOJ	Yonaguni jima	1.09	75	P	Pg	19 11 06.6	+1.9
YOJ				S	Sn	19 11 23.7	+3.9
WJS	Zhushan	1.09	251	eP	Pg	19 11 04.9	+0.2
	baz=247						
WJS				eS	Sg	19 11 21.0	+2.0
	baz=247						
FULB	Fuli	1.10	208	eP	Pg	19 11 04.8	-0.1
	baz=222						
WNT	Mingjian	1.11	255	eP	Pg	19 11 06.1	+1.0
	baz=252						
WNT				eS	Sg	19 11 22.2	+2.5
	baz=252						
TWY	Chenhua	1.12	348	eP	Pg	19 11 06.1	+0.8
	baz=334						
WDJ	Dajia District	1.12	279	eP	Pg	19 11 06.1	+0.8
	baz=279						
WDJ				eS	Sg	19 11 22.2	+2.2
	baz=279						
CHKT	Chengkung	1.16	203	eP	Pn	19 11 04.4	-1.4
	baz=184						
ALS	Alishan	1.17	236	P	Pg	19 11 06.1	-0.1
	baz=225						
WCHH	Zhanghua	1.19	266	eP	Pg	19 11 07.7	+1.1
	baz=266						
WCHH				eS	Sg	19 11 25.0	+2.9
	baz=266						
CHN5	Tsauling	1.22	242	P	Pg	19 11 07.3	0.0
	baz=242						
CHN5				S	Sg	19 11 25.7	+2.5
	baz=242						
ELDTW	Lidau	1.25	218	P	Pn	19 11 05.9	-1.2
	baz=203						

EDH	Donghe	1.30	203	eP	Pn	19 11 06.9	-0.8
	baz=190						
WDLH	Douliu	1.30	248	eP	Pg	19 11 08.7	0.0
	baz=249						
WRL	Guolierlin Hig	1.38	259	eP	Pb	19 11 09.8	+0.4
	baz=260						
WRL				eS	Sg	19 11 29.3	+1.1
	baz=260						
STYH	Taoyuan	1.41	225	eP	Pg	19 11 10.1	-0.7
	baz=210						
CHN4	Tsaushan	1.42	235	P	Pg	19 11 10.6	-0.3
	baz=235						
CHN4				eS	Sg	19 11 31.6	+2.1
	baz=235						
TPUB	Ta-pu	1.42	233	eP	Pg	19 11 10.5	-0.5
	baz=233						
TPUB				eS	Sg	19 11 31.1	+1.6
	baz=233						
WTK	Tuku	1.43	250	eP	Pb	19 11 10.5	+0.2
	baz=236						
WTK				eS	Sg	19 11 32.0	+2.2
	baz=236						
WTP	Ta-pu	1.47	231	eP	Pg	19 11 11.4	-0.5
	baz=231						
WTP				eS	Sg	19 11 32.3	+1.3
	baz=231						
WTCT	Ta-ch'eng	1.48	258	eS	Sg	19 11 31.7	+0.5
	baz=259						
CHY	Chiayi	1.48	243	eP	Pg	19 11 11.8	-0.3
	baz=243						
CHY				eS	Sg	19 11 33.1	+1.9
	baz=243						
TWG	Pinlang	1.53	208	eP	Pn	19 11 09.4	-1.4
	baz=208						
TWGBT	Beinan	1.53	208	eP	Pn	19 11 08.8	-2.0
	baz=208						
LDUT	Ludao	1.54	194	eP	Pn	19 11 10.1	-0.9
	baz=182						
TWK	Hsinying	1.55	235	eP	Pg	19 11 12.8	-0.6
	baz=234						
TWK				eS	Sg	19 11 34.1	+0.6
	baz=234						
CHN1	Nanshi	1.57	231	eP	Pb	19 11 12.8	+0.2
	baz=232						
CHN1				eS	Sg	19 11 35.0	+0.9
	baz=232						
SNST	Tainan City	1.57	233	eP	Pg	19 11 14.1	+0.3
	baz=233						
WSF	Szhu	1.59	251	eP	Pg	19 11 13.6	-0.7
	baz=251						
WSF				eS	Sg	19 11 35.5	+0.6
	baz=251						
SGST	Jiashian	1.60	227	eP	Pb	19 11 12.5	-0.7
	baz=228						
WSL	Shuilin Townsh	1.63	247	eP	Pb	19 11 13.1	-0.5
	baz=247						
WSL				eS	Sg	19 11 36.5	+0.4
	baz=247						
ICHU	Yijhu	1.66	241	eP	Pb	19 11 13.9	-0.3
	baz=241						
IRIF	Iriomote-Funau	1.72	84	eP	Pg	19 11 15.8	-0.8
SCST	Cishan	1.79	225	eP	Pb	19 11 16.6	+0.1
	baz=225						
SSD	Sandimen	1.81	219	eP	Pb	19 11 15.9	-0.9
	baz=219						
TSMG	Majia	1.84	218	eP	Pb	19 11 16.9	-0.4
	baz=218						
MASBT	Mashibuluo	1.92	216	eP	Pn	19 11 16.5	+0.3
	baz=216						
JKRS	Kuro-shima	1.96	88	P	Pb	19 11 19.1	-0.3
JKRS				S	Sg	19 11 45.5	-1.4
EAST	Anshuo	2.01	208	eP	Pb	19 11 18.4	-1.8
	baz=196						
JIJ	Ishigaki jima	2.09	84	P	Pb	19 11 19.9	-1.7
JIJ				S	Sg	19 11 48.3	-2.7
PNG	Penghu	2.19	254	eP	Pn	19 11 20.2	+0.3
	baz=256						
PNG				eS	Sn	19 11 48.3	+1.3
	baz=256						
PHUB	P'eng-hu	2.19	253	eP	Pn	19 11 20.2	+0.2
	baz=254						
PHUB				eS	Sn	19 11 48.1	+1.1
	baz=254						
WDGT	Dungji	2.21	246	eP	Pn	19 11 21.3	+1.1
	baz=246						
JISG	Ishigakijimahi	2.27	79	P	Pb	19 11 22.8	-1.8
VWUC	VWUC	2.34	291	eP	Pn	19 11 21.4	-0.5
	baz=280						

ATH 01 19:13:46.6, 37°.51N×23°.60E, h18^{km}±6^{km}, ML1.9/2, Error ellipse: s-maj=6.1km s-min=1.0km az=301.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLY	Voula,Athens	0.37	24	P	Pg	19 13 54.3	-0.2
VLY				S	Sg	19 13 59.7	0.0
VLY				AML	AML	19 14 00.4	
	comp=E,339µm,0.3s						
VLY				AML	AML	19 14 03.4	
	comp=N,209µm,0.4s						
KRND	KRANIDI	0.38	250	P	Pg	19 13 54.4	-0.1
KRND				S	Sb	19 14 00.4	0.0
EPID	Epidavros	0.40	285	P	Pg	19 13 54.4	-0.4
EPID				S	Sg	19 14 00.5	+0.1
ATHU	Athens Univers	0.48	18	P	Pg	19 13 56.0	-0.3
ATHU				S	Sb	19 14 03.6	+0.2
PTL	Penteli	0.58	21	P	Pg	19 13 57.5	-0.6
PTL				S	Sg	19 14 06.0	+0.1
DION	Dionisos Attik	0.62	25	P	Pg	19 13 58.6	-0.4
VIL2	Platees	0.75	340	P	Pb	19 13 59.9	-1.3
VIL2				S	Sb	19 14 10.1	-1.0
VIL2				AML	AML	19 14 11.1	
	comp=N,343µm,0.5s						
VIL2				AML	AML	19 14 14.8	
	comp=E,450µm,0.6s						
KARY	Karystos	0.84	52	P	Pg	19 14 03.4	+0.3
ATAL	Atalanti	1.26	339	P	Pg	19 14 10.6	-0.4

*IDC **01** 19:27:06.8±1.0, 15°.92S×167°.19E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.9/1, MS3.1/3, Error ellipse: s-maj=29.8km s-min=24.4km az=122.0*

*NOU **01** 19:27:08.8, 16°.11S×167°.08E, h3^{km}, MLv4.7/16, Vanuatu Islands*

ISC 01 19:27:08.7±0.7**, 16°.10S**±0°.07×**167°.1E**±0°.1**, h10^{km}, n20,** σ1^s**29**/20**, mb4.0**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.65	7	P	Pg	19 27 22.0	+0.6
DVP	Devils Point	1.91	148	P	Pn	19 27 42.0	+0.7
RTV	Rentapao	2.09	144	P	Pn	19 27 44.9	+1.0
KOUNC	Koumac, New Ca	5.18	211	P	Pn	19 28 26.9	+0.5
MARNC	Mare, Loyalty	5.42	171	P	Pn	19 28 30.8	+1.2
YATNC	Mamie plateau,	5.93	182	P	Pn	19 28 36.1	-0.6
DZM	Mont Dzumac	5.98	186	Pn	Pn	19 28 37.3	-0.1
	2.6nm,0.3s,baz=15,slow=5.2,SNR=30						
DZM				Sn	Sn	19 29 43.6	-2.4
	3.2nm,0.3s,baz=147,slow=22,SNR=1.3						
DZM				LR	LR	19 30 42.4	
	comp=Z,197nm,19.6s,baz=32,slow=35						
	5.3nm,0.3s						
DZM	Mont Dzumac	5.98	186	P	Pn	19 28 37.4	0.0
NOUC	Port Laguerre	6.02	187	P	Pn	19 28 38.1	+0.2
ONTNC	Ouen Toro	6.21	186	P	Pn	19 28 41.7	+1.2
OUENC	Ouen Island, N	6.29	182	P	Pn	19 28 43.0	+1.4
CTA	Charters Tower	20.23	256	P	P	19 31 46.2	+2.0
	2.3nm,0.9s,baz=83,slow=13,SNR=2.2						
CTA				LR	LR	19 37 56.7	
	comp=Z,42nm,21.9s,baz=10.0,slow=32						
	2.3nm,0.9s						
AFI	Afiamalu	20.49	87	LR	LR	19 37 44.5	
	comp=Z,64nm,20.0s,baz=188,slow=31						
URZ	Urewera	23.76	160	P	P	19 32 23.3	+2.0
	4.6nm,0.4s,baz=302,slow=22,SNR=6.0						
	4.6nm,0.4s						
WRA	Warramunga Arr	31.38	258	P	P	19 33 30.2	+0.2
	0.6nm,0.8s,baz=89,slow=9.1,SNR=5.0						
	0.6nm,0.8s						
ASAR	Alice Springs	32.08	251	P	P	19 33 36.0	-0.2
	1.8nm,0.8s,baz=78,slow=9.3,SNR=13						
	1.8nm,0.8s						
SONM	Songino Array	83.51	324	P	P	19 39 37.1	+0.2
	0.4nm,0.8s,baz=106,slow=4.8,SNR=2.9						
	0.4nm,0.8s						
ILAR	Eielson Array	87.86	18	P	P	19 39 55.8	-2.3
	0.4nm,0.6s,baz=240,slow=5.0,SNR=16						
	0.4nm,0.6s						
YKA	Yellowknife Ar	98.82	27	P	P	19 40 47.1	-1.4
	0.3nm,0.7s,baz=255,slow=4.4,SNR=4.9						
	0.3nm,0.7s						
ARCES	ARCESS Array B	121.53	345	PKP	PKPdf	19 46 02.3	+0.3
	1.7nm,0.9s,baz=64,slow=2.1,SNR=4.0						

*MAN **01** 19:29:12.4, 14°.16N×120°.26E, h79^{km}, mb4.8, ML3.7, MS3.7, Hypocentre not reviewed by the ISC*

*IDC **01** 19:29:13.2±0.6, 14°.16N×120°.76E, h116^{km}±6^{km}, mb3.3/10, mbtmp3.6/10, Error ellipse: s-maj=37.7km s-min=17.9km az=63.0*

ISC 01 19:29:13.2±0.7**, 14°.04N**±0°.07×**120°.52E**±0°.10**, h120^{km}, n17,** σ1^s**36**/24**, mb3.5**/10**, 2C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.41	81	P	Pn	19 29 29.9	-0.8
	1µm,0.4s,baz=291,slow=2.6,SNR=30						
TGY				S	Sn	19 29 42.9	-1.0
	4µm,0.4s,baz=69,slow=17,SNR=16						
TGY	Tagaytay City	0.41	81⇑	eP	Pn	19 29 29.9	-0.8
TGY				iS	Sn	19 29 42.7	-1.2
PGP	Puerto Galera	0.68	142⇑	iP	Pn	19 29 31.6	-0.8
PGP				iS	Sn	19 29 45.5	-1.5
LQP	Lukban	0.99	86⇓	eP	Pn	19 29 35.1	-0.3
LQP				iS	Sn	19 29 53.9	+1.9
GQP	Guinayangan	1.87	94⇓	eP	Pn	19 29 43.8	-1.3
JCNP	Jose Panganiba	2.12	83⇓	iP	Pn	19 29 49.5	+1.3
APYP	Conner	3.86	10⇓	eP	Pn	19 30 09.9	-1.1
APYP				eS	Sn	19 30 53.8	-1.9
CMAR	Chiang Mai Arr	21.18	285	P	P	19 33 52.0	+2.9
	0.6nm,0.9s,baz=95,slow=7.7,SNR=7.4						
	0.6nm,0.9s						
SONM	Songino Array	35.69	344	P	P	19 36 00.5	+0.4
	3.7nm,0.6s,baz=163,slow=10,SNR=45						
	3.7nm,0.6s						
WRA	Warramunga Arr	36.40	158	P	P	19 36 06.7	+0.3
	0.2nm,0.6s,baz=331,slow=10,SNR=1.2						
WRA				pP	pP	19 36 31.8	-1.6
	0.5nm,0.8s,baz=334,slow=9.7,SNR=2.6						
	0.2nm,0.6s						
ASAR	Alice Springs	39.69	161	P	P	19 36 35.0	+1.1
	0.3nm,0.8s,baz=330,slow=7.3,SNR=2.3						
ASAR				pP	pP	19 36 58.8	-2.4
	0.3nm,0.6s,baz=339,slow=7.2,SNR=2.8						
	0.3nm,0.8s						
MKAR	Makanchi Array	45.66	324	P	P	19 37 22.9	+1.0
	0.7nm,0.7s,baz=130,slow=9.1,SNR=8.7						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	48.68	333	P	P	19 37 44.7	-0.4
	0.4nm,0.3s,baz=139,slow=9.0,SNR=2.7						
	0.4nm,0.3s						
ARCES	ARCESS Array B	78.71	339	P	P	19 41 02.1	+0.2
	1.1nm,0.7s,baz=69,slow=6.6,SNR=8.9						
	1.1nm,0.7s						
FINES	FINESS Array B	79.91	331	P	P	19 41 08.2	-0.3
	0.4nm,0.6s,baz=64,slow=8.7,SNR=6.0						
	0.4nm,0.6s						
NOA	NORSAR Array B	86.88	333	P	P	19 41 43.3	-1.0
	0.5nm,0.6s,baz=64,slow=4.9,SNR=2.0						
	0.5nm,0.6s						
YKA	Yellowknife Ar	92.53	22	P	P	19 42 11.4	+0.7
	0.1nm,0.5s,baz=307,slow=4.5,SNR=2.6						
	0.1nm,0.5s						

IDC 01 19:35:56.6±1.8**, 3°.13S×141°.33E, h0^{km}, mb3.3**/3**, mbtmp3.3**/4**, ML3.5**/1**, MS3.4**/1**, Error ellipse: s-maj=81.9km s-min=27.9km az=102.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.05	202	P	P	19 40 10.0	+0.4
	0.1nm,0.3s,baz=19,slow=13,SNR=10.0						
	0.6nm,0.6s						
ASAR	Alice Springs	21.64	199	P	P	19 40 48.3	-0.5
	0.5nm,0.7s,baz=29,slow=11,SNR=7.5						
	0.5nm,0.7s						
H11S3	WAKE ISLAND Hy	32.94	48	T	T	20 16 10.3	
	baz=231,slow=74,SNR=8.4						
H11S2	WAKE ISLAND Hy	32.95	48	T	T	20 16 12.0	
	baz=231						
H11S1	WAKE ISLAND Hy	32.96	48	T	T	20 16 12.8	
	baz=231,slow=74,SNR=5.2						
H11N1	WAKE ISLAND Hy	33.85	47	T	T	20 17 15.4	
	baz=229,slow=76,SNR=32						
H11N2	WAKE ISLAND Hy	33.87	47	T	T	20 17 20.1	
	baz=229,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	33.87	47	T	T	20 17 20.2	
	baz=229,slow=76,SNR=17						
JHJ	Hachijo jima 2	36.08	358	LR	LR	19 56 33.1	
	comp=Z,54nm,19.9s,baz=84,slow=34						
MKAR	Makanchi Array	71.73	322	P	P	19 47 21.1	+0.4
	0.2nm,0.7s,baz=122,slow=7.3,SNR=2.5						
	0.2nm,0.7s						
ILAR	Eielson Array	85.14	24	P	P	19 48 34.0	-0.4
	0.2nm,0.8s,baz=256,slow=4.8,SNR=1.9						
	0.2nm,0.8s						

*IDC **01** 19:38:06.8±1.1, 2°.94S×142°.41E, h0^{km}, mb4.0/10, mbtmp4.0/13, ML4.0/3, MS3.5/10, Error ellipse: s-maj=32.5km s-min=17.7km az=100.0*

*DJA **01** 19:38:18.0±0.4, 3°S±7°×14°2E±°, h10^{km}, M4.4/12, mB5.2/4, mb4.3/12, MLv4.4/4, Mw(mB)4.5/4*

ISC 01 19:38:09.5±0.7**, 3°.0S**±0°.1×**142°.71E**±0°.08**, h27^{km}, n37,** σ2^s**46**/21**, mb4.1**/14**, MS3.5**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	4.12	284	P	Pn	19 39 05.7	-5.0
SRPI	Serui, Papua	6.56	280	P	Pn	19 39 42.7	-1.6
BAKI	Biak	6.84	285	P	Pn	19 39 42.4	-5.7
	0.1nm47nm,0.7s						
KRVT	Keravat (AS076	9.39	98	Pn	Pn	19 40 30.8	+7.7
	0.7nm,0.3s,baz=267,slow=23,SNR=0.9						
KRVT				Sn	Sn	19 42 05.2	-2.7
	7.2nm,0.3s,baz=243,slow=17,SNR=9.7						
SIJI	Sorong	11.63	280	Pn	Pn	19 40 50.2	-3.7
	0.9nm,0.3s,baz=82,slow=9.4,SNR=5.8						
SIJI				LR	LR	19 46 17.5	
	comp=Z,301nm,19.2s,baz=52,slow=43						
	3.3nm,0.4s						
LBMI	Labuha	15.38	278	P	Pn	19 41 41.6	-3.3
	10nm,0.9s						
WRA	Warramunga Arr	18.73	205	P	P	19 42 25.1	-1.2
	0.5nm,0.3s,baz=14,slow=12,SNR=23						
WRA				LR	LR	19 49 50.1	
	comp=Z,180nm,19.5s,baz=78,slow=38						
	2.2nm,0.8s						
BATI	Baumata	20.22	248	P	P	19 42 41.0	-1.7
	0.7nm,0.3s,baz=11,slow=5.2,SNR=3.5						
	13nm,0.7s						
BATI	Baumata	20.22	248	P	Pn	19 42 49.9	+5.2
	14nm,0.7s						
BBSI	Bau Bau	20.24	262	P	Pn	19 43 07.4	+22
APSI	Ampana	21.15	275	P	P	19 42 57.0	+4.3
	19nm,1.5s						
ASAR	Alice Springs	22.25	202	P	P	19 43 04.0	-0.5
	2.4nm,1.0s,baz=29,slow=9.7,SNR=8.1						
ASAR				LR	LR	19 52 02.6	
	comp=Z,195nm,18.4s,baz=39,slow=38						
	2.4nm,1.0s						
FITZ	Fitzroy Crossi	22.48	227	P	P	19 43 07.0	+0.1
	5.9nm,1.0s,baz=68,slow=8.9,SNR=7.2						
FITZ				LR	LR	19 51 45.3	
	comp=Z,165nm,20.0s,baz=51,slow=37						
	5.9nm,1.0s						
BNSI	Bone	22.60	266	P	P	19 43 12.1	+3.8
	16nm,1.0s						
TTSI	Tana Toraja	22.86	269	P	P	19 43 18.3	+7.2
	973nm14nm,1.1s						
SPSI	Sidrap Palu	22.92	267	P	P	19 43 16.1	+4.4
	11nm,1.2s						
MPSI	Mapaga	23.04	278	P	P	19 43 12.2	-0.7
	8.3nm,1.0s						
STKA	Stephens Creek	28.75	182	P	P	19 44 07.2	+2.3
	2.1nm,0.8s,baz=341,slow=16,SNR=3.4						
STKA				LR	LR	19 57 12.0	
	comp=Z,109nm,18.9s,baz=16,slow=40						
	2.1nm,0.8s						
H11S3	WAKE ISLAND Hy	31.83	47	T	T	20 18 30.8	
	baz=231,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	31.84	47	T	T	20 18 32.0	
	baz=231,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	31.85	47	T	T	20 18 25.2	
	baz=231,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	32.76	45	T	T	20 19 31.5	
	baz=229,slow=76,SNR=196						
H11N2	WAKE ISLAND Hy	32.78	45	T	T	20 19 34.4	
	baz=229,slow=76,SNR=241						
H11N3	WAKE ISLAND Hy	32.78	45	T	T	20 19 37.6	
	baz=229,slow=76,SNR=118						
ASAJ	Asahikawa	46.90	360	LR	LR	20 13 14.0	
	comp=Z,13nm,18.0s,baz=38,slow=45						
USRK	Ussuriysk Ar.	47.95	350	P	P	19 46 46.6	+0.9
	2.6nm,0.7s,baz=178,slow=8.7,SNR=3.5						
	2.6nm,0.7s						
CMAR	Chiang Mai Arr	48.07	298	P	P	19 46 45.2	-1.9
	0.7nm,0.2s,baz=119,slow=7.3,SNR=1.6						
	0.7nm,0.2s						
SONM	Songino Array	59.75	332	P	P	19 48 12.8	+0.6
	0.2nm,0.6s,baz=134,slow=8.2,SNR=2.7						
	0.2nm,0.6s						
SHEM	Shemya Is, Ala	61.49	21	LR	LR	20 16 29.3	
	comp=Z,20nm,18.0s,baz=106,slow=37						
MA2	Magadan	62.70	5	LR	LR	20 12 54.3	
	comp=Z,7.7nm,22.0s,baz=138,slow=33						
MKAR	Makanchi Array	72.48	321	P	P	19 49 34.3	+0.4
	0.7nm,0.8s,baz=131,slow=5.6,SNR=7.0						
	0.7nm,0.8s						
ZALV	Zalesovo Beam	74.22	329	P	P	19 49 43.7	-0.2
	0.4nm,0.3s,baz=142,slow=5.1,SNR=4.0						
	0.4nm,0.3s						
MAW	Mawson	83.37	202	LR	LR	20 27 23.3	
	comp=Z,32nm,18.2s,baz=78,slow=36						
ILAR	Eielson Array	84.45	24	P	P	19 50 41.0	+1.5
	0.8nm,0.8s,baz=257,slow=4.7,SNR=9.9						
	0.8nm,0.8s						
YBH	Yreka Blue Hor	95.40	49	LR	LR	20 27 26.2	
	comp=Z,39nm,19.3s,baz=307,slow=31						
KBZ	Khabaz	99.16	314	P	Pdif	19 51 50.6	+2.0
	1.0nm,0.8s,baz=65,slow=8.8,SNR=3.5						
	1.0nm,0.8s						
LPAZ	La Paz	144.00	123	PKP	PKiKP	19 57 47.0	-0.9
	1.8nm,0.8s,baz=226,slow=0.3,SNR=9.2						

*IDC **01** 19:40:30.5±2.0, 13°.52N×89°.31W, h0^{km}, mb4.1/6, mbtmp4.2/7, ML4.0/1, MS3.5/15, Error ellipse: s-maj=46.4km s-min=36.8km az=23.0*

*UCR **01** 19:40:33.6±1.2, 13°.06N×90°.00W, h19^{km}±3^{km}, ML4.5, mb4.3(NEIC)*

*INET **01** 19:40:33.2±0.5, 13°.05N×90°.03W, h10^{km}±4^{km}, MW3.9*

*SNET **01** 19:40:33.5±1.2, 13°.05N×90°.00W, h19^{km}±3^{km}, ML4.5*

*NEIC **01** 19:40:36.3±2.1, 13°.18N±0°.08×89°.96W±0°.06, h40^{km}±14^{km}, mb4.3/15, Md4.6(SNET), Error ellipse: s-maj=12.2km s-min=8.2km az=204.0*

*GCG **01** 19:40:46.8±0.3, 14°.63N×90°.74W, h83^{km}±9^{km}, MD4.2*

ISC 01 19:40:32.4±1.4**, 13°.13N**±0°.05×**90°.04W**±0°.03**, h17^{km}**±8^{km}**, n135,** σ1^s**13**/145**, mb4.4**/13**, MS3.4**/15**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.77	48	eP	Pn	19 40 48.8	+0.1
JAYA				eS	Sn	19 41 00.2	+0.2
JAYA				IAML		19 41 03.1	
	comp=Z,22µm,0.2s						
JAYA	Jayaque - finc	0.77	48	eP	Pn	19 40 48.8	+0.1
JAYA				eS	Sn	19 41 00.2	+0.2
JAYA				IAML		19 41 03.1	
	comp=Z,22µm,0.2s						
LALI	Alcalda de L	0.78	63	eP	Pn	19 40 48.6	-0.1
LALI				eS	Sg	19 40 58.4	+0.3
LALI	Alcalda de L	0.78	63	eP	Pn	19 40 48.6	-0.1
LALI				eS	Sg	19 40 58.4	+0.3
LALI	Alcalda de L	0.78	63	eP	Pn	19 40 48.6	-0.1
CEVE	Cerro Verde	0.80	30	eP	Pn	19 40 49.4	+0.2
CEVE				eS	Sn	19 41 02.8	+2.0
CEVE				IAML		19 41 07.1	
	comp=Z,12µm,0.2s						
CEVE	Cerro Verde	0.80	30	eP	Pn	19 40 49.4	+0.2
CEVE				eS	Sn	19 41 02.8	+2.0
CEVE				IAML		19 41 07.1	
	comp=Z,12µm,0.2s						
NUBE	Las Nubes	0.81	18	eP	Pn	19 40 49.4	+0.2
NUBE				eS	Sn	19 41 01.2	+0.4
NUBE	Las Nubes	0.81	18	eP	Pn	19 40 49.4	+0.2
NUBE				eS	Sn	19 41 01.2	+0.4
SBLS	San Blas	0.81	30	eP	Pn	19 40 49.4	+0.1
SBLS	San Blas	0.81	30	eP	Pn	19 40 49.4	+0.1
SNJE	San Jose	0.84	30	eP	Pn	19 40 50.0	+0.2
SNJE	San Jose	0.84	30	eP	Pn	19 40 50.0	+0.2
LOAL	Lomas de Alarc	0.90	16	eP	Pn	19 40 51.2	+0.9
LOAL				eS	Sn	19 41 04.7	+1.8
LOAL	Lomas de Alarc	0.90	16	eP	Pn	19 40 51.2	+0.9
LOAL				eS	Sn	19 41 04.7	+1.8
ITCA	Escuela Especi	0.91	54	eP	Pn	19 40 51.4	+0.8
ITCA	Escuela Especi	0.91	54	eP	Pn	19 40 51.4	+0.8
CEDA	San Andres	0.91	43	eP	Pn	19 40 51.1	+0.6
CEDA				eS	Sn	19 41 04.6	+1.3
CEDA	San Andres	0.91	43	eP	Pn	19 40 51.1	+0.6
CEDA				eS	Sn	19 41 04.6	+1.3
CEDA	San Andres	0.91	43	eP	Pn	19 40 51.1	+0.6
SLOZ	Alcaldia de Sa	0.92	15	eP	Pn	19 40 51.4	+0.7
SLOZ				eS	Sn	19 41 05.2	+1.7
BOQS	Boqueron	0.95	51	eP	Pn	19 40 52.0	+0.8
BOQS	Boqueron	0.95	51	eP	Pn	19 40 52.0	+0.8
SNET	Serv Nac Est T	0.96	55		Pn	19 40 51.3	+0.2
SNET	Serv Nac Est T	0.96	55	eP	Pn	19 40 51.7	+0.5
UEES	Universidad Ev	0.97	53	eP	Pn	19 40 52.2	+0.8
UEES	Universidad Ev	0.97	53	eP	Pn	19 40 52.2	+0.8
UNIC	Universidad Ca	0.97	29	eP	Pn	19 40 52.0	+0.7
UNIC	Universidad Ca	0.97	29	eP	Pn	19 40 52.0	+0.7
SEMO	Seminario San	0.97	54	eP	Pn	19 40 51.9	+0.5
UTEC	Universidad Te	0.99	55	eP	Pn	19 40 52.3	+0.7
UTEC	Universidad Te	0.99	55	eP	Pn	19 40 52.3	+0.7
IGN	Direccin Gen	1.02	55	eP	Pg	19 40 52.3	0.0
IGN	Direccin Gen	1.02	55	eP	Pg	19 40 52.3	0.0
UDBS	Universidad Do	1.03	56	eP	Pg	19 40 52.5	0.0
UDBS	Universidad Do	1.03	56	eP	Pg	19 40 52.5	0.0
AEIL	Aeropuerto Ilo	1.06	58	eP	Pg	19 40 52.9	-0.1
AEIL	Aeropuerto Ilo	1.06	58	eP	Pg	19 40 52.9	-0.1
LFRS	El Faro	1.07	63	eP	Pb	19 40 52.7	+0.2
LFRS	El Faro	1.07	63	eP	Pb	19 40 52.7	+0.2
LFU	La Fuente	1.09	55	eP	Pg	19 40 53.8	+0.2
LFU	La Fuente	1.09	55	eP	Pg	19 40 53.8	+0.2
SJTE	Alcalda de S	1.11	64	eP	Pb	19 40 52.8	-0.4
SJTE	Alcalda de S	1.11	64	eP	Pb	19 40 52.8	-0.4
PAVA	Las Pavas	1.22	61	eP	Pb	19 40 55.2	+0.2
PAVA	Las Pavas	1.22	61	eP	Pb	19 40 55.2	+0.2
PAVA	Las Pavas	1.22	61	eP	Pb	19 40 55.5	+0.4
COEG	Centro de Oper	1.23	66	eP	Pn	19 40 55.1	+0.3
COEG	Centro de Oper	1.23	66	eP	Pn	19 40 55.1	+0.3
COEG	Centro de Oper	1.23	66	eP	Pn	19 40 55.1	+0.3
SNVI	San Vicente	1.26	67	eP	Pn	19 40 55.7	+0.4
SNVI	San Vicente	1.26	67	eP	Pn	19 40 55.7	+0.4
PCG	Pacaya	1.37	336	eP	Pb	19 40 58.5	+0.7
SCLA	Alcaldia de Sa	1.39	66	eP	Pb	19 40 58.0	0.0
SCLA				eS	Sg	19 41 17.6	+0.1
SCLA	Alcaldia de Sa	1.39	66	eP	Pb	19 40 58.0	0.0
SCLA				eS	Sg	19 41 17.6	+0.1
MTO3	Montecristo	1.42	27		Pb	19 40 58.9	+0.3
MTO3	Montecristo	1.42	27	eP	Pb	19 40 59.0	+0.3
MTO3				eS	Sg	19 41 19.2	+0.7
MTO3	Montecristo	1.42	27	eP	Pb	19 40 59.0	+0.3
MTO3				eS	Sg	19 41 19.2	+0.7
MTO3	Montecristo	1.42	27	eP	Pb	19 40 58.9	+0.3
LLGN	La Laguna	1.48	46	eP	Pb	19 40 59.8	+0.3
LLGN				eS	Sg	19 41 20.5	+0.3
LLGN	La Laguna	1.48	46	eP	Pb	19 40 59.8	+0.3
LLGN				eS	Sg	19 41 20.5	+0.3
NBG	Las Nubes	1.48	348	eP	Pg	19 41 00.9	-0.2
PQSS	Presa 15 de Se	1.52	71	eP	Pn	19 40 59.4	+0.6
PQSS	Presa 15 de Se	1.52	71	eP	Pn	19 40 59.4	+0.6
FUG	Fuego 3	1.53	329	eP	Pn	19 40 59.6	+0.5
ESQI	Esquipulas	1.57	25		Pb	19 41 01.4	+0.3
ESQI	Esquipulas	1.57	25	eP	Pb	19 41 01.8	+0.7
ESQI				eS	Sg	19 41 23.3	0.0
PACA	Pacayal	1.70	78	eP	Pn	19 41 02.4	+1.0
PACA	Pacayal	1.70	78	eP	Pn	19 41 02.4	+1.0
LCY	Lacayo	1.72	80	eP	Pn	19 41 02.7	+1.0

LCY	Lacayo	1.72	80	*e*P	Pn	19 41 02.7	+1.0
RANC	El Ranchito	1.73	80	*e*P	Pn	19 41 01.9	+0.1
RANC	El Ranchito	1.73	80	*e*P	Pn	19 41 01.9	+0.1
MRL	Marmol	1.97	10	*e*P	Pb	19 41 08.3	+0.3
RTAL	Retalhuleu	2.13	311		Pn	19 41 07.1	-0.1
STG3	Santiaguito 3,	2.17	317	*e*P	Pn	19 41 04.6	-3.3
CSGN	Cosiguina Volc	2.42	93	*e*P	Pn	19 41 10.5	-0.8
HUEH	Huehuetenango	2.60	327		Pb	19 41 17.0	-1.7
HUEH	Huehuetenango	2.60	327	*e*P	Pn	19 41 16.4	+2.5
HUEH				*e*S	Sb	19 41 50.6	+0.1
HUEH	Huehuetenango	2.60	327	*e*P	Pn	19 41 16.4	+2.5
HUEH				*e*S	Sb	19 41 50.6	+0.1
HUEH	Huehuetenango	2.60	327	*e*P	Pn	19 41 16.8	+2.9
TGUH	Tegucigalpa,Un	2.84	71	Pn	Pn	19 41 17.9	+0.8
TGUH	Tegucigalpa,Un	2.84	71	*e*P	Pn	19 41 17.9	+0.8
CRIN	San Cristobal	2.94	98		Pn	19 41 19.8	+1.3
CNGN	Cerro Negro	3.31	101		Pn	19 41 23.3	-0.2
CCIG	Comitan	3.74	327		Pn	19 41 31.7	+2.2
MATN	Matagalpa	4.01	92	Pn	Pn	19 41 33.6	+0.4
BOAB	BOACO BROADBAN	4.32	99		Pn	19 41 36.6	-0.7
HZTE	Horizontes, Gu	4.96	118		Pn	19 41 47.9	+1.7
ORTG	Ortega, Santa	5.26	121	Pn	Pn	19 41 51.8	+1.5
DUNO	Dulce Nombre,	5.38	124		Pn	19 41 53.1	+1.1
JTS	Las Juntas de	5.72	119		Pn	19 41 58.3	+1.6
CMIG	Matias Romero	6.12	311	Pn	Pn	19 42 05.3	+3.2
	comp=Z,3.6nm,0.3s,baz=104,slow=10.0,SNR=28						
CMIG				Sn	Sn	19 43 13.9	+2.1
	comp=Z,5.2nm,0.3s,baz=277,slow=23,SNR=4.9						
	comp=Z,18nm,0.5s						
RIMA	Rio Macho	6.91	118		Pn	19 42 15.2	+2.1
SRBA	San Rafael, Bu	7.61	120	Pn	Pn	19 42 24.9	+2.2
TXAR	Lajitas Array	20.50	324	P	Pn	19 45 12.7	+0.7
	comp=Z,3.1nm,0.7s,baz=147,slow=11,SNR=37						
	comp=Z,3.1nm,0.7s						
TXAR	Lajitas Array	20.50	324	P	P	19 45 10.3	+0.5
TX31	Lajitas Ar. Si	20.50	324	P	P	19 45 10.8	+1.0
TX31				IAmb	IAmb	19 45 14.9	
	comp=Z,14nm,0.8s						
TX32	Lajitas Array	20.50	324	P	P	19 45 10.0	+0.2
Y49A	Blount Mountai	20.90	8	P	P	19 45 12.8	-1.2
Y49A				IAmb	IAmb	19 45 28.7	
	comp=Z,14nm,1.1s						
OXF	Oxford	21.30	1	P	P	19 45 17.8	-0.4
OXF				IAmb	IAmb	19 45 41.0	
	comp=Z,33nm,1.1s						
MIAR	Mount Ida	21.56	352	P	P	19 45 22.5	+1.4
WHAR	Wooly Hollow	22.16	355	P	P	19 45 28.6	+1.1
WHAR				IAmb	IAmb	19 45 47.0	
	comp=Z,27nm,1.4s						
WVT	Waverly	22.99	5	P	P	19 45 35.0	-1.2
WVT				IAmb	IAmb	19 45 39.6	
	comp=Z,5.4nm,0.8s						
TKL	Tuckaleechee C	23.13	13	P	P	19 45 35.8	-2.0
	comp=Z,2.9nm,0.7s,baz=198,slow=13,SNR=4.5						
TKL				LR	LR	19 55 26.2	
	comp=Z,138nm,19.3s,baz=191,slow=40						
MNTX	Cornudas Mount	23.25	325	P	P	19 45 38.5	-0.5
SIUC	Southern Illin	24.50	2	P	P	19 45 50.1	-0.7
V58A	Windy Hill, Pi	24.62	22	P	P	19 45 49.9	-2.1
V58A				IAmb	IAmb	19 45 53.2	
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	24.85	358	P	P	19 45 52.9	-1.1
CCM				IAmb	IAmb	19 45 54.4	
	comp=Z,5.5nm,0.9s						
121A	Cookes Peak, D	25.24	323	P	P	19 45 58.0	+0.2
121A				IAmb	IAmb	19 46 02.0	
	comp=Z,7.0nm,0.8s						
NNA	Nana	28.18	152	LR	LR	19 55 08.8	
	comp=Z,55nm,21.4s,baz=304,slow=31						
SADO	Sadowa	32.88	14	LR	LR	20 00 57.1	
	comp=Z,99nm,19.1s,baz=308,slow=38						
S11A	Rachel	33.49	321	P	P	19 47 11.9	+0.8
PDAR	Pinedale Array	34.02	334	P	P	19 47 16.7	+1.0
	comp=Z,0.5nm,0.8s,baz=133,slow=6.3,SNR=3.1						
PDAR				PcP	PcP	19 49 54.0	+0.5
	comp=Z,0.6nm,1.0s,baz=117,slow=5.2,SNR=2.2						
PDAR				LR	LR	20 03 56.4	
	comp=Z,62nm,19.0s,baz=138,slow=41						
	comp=Z,0.5nm,0.8s						
NVAR	Mina Array Bea	35.55	320	P	P	19 47 31.5	+2.5
	comp=Z,8.0nm,0.8s,baz=135,slow=6.9,SNR=56						
NVAR				PcP	PcP	19 49 59.1	+1.1
	comp=Z,0.7nm,0.7s,baz=139,slow=3.8,SNR=5.2						
	comp=Z,8.0nm,0.8s						
LHV	Little Huntoon	35.57	320	P	P	19 47 31.6	+2.8
RYN	Ryan	35.81	320	P	P	19 47 31.8	+0.6
RYN				IAmb	IAmb	19 47 35.3	
	comp=Z,3.2nm,0.9s						
LPAZ	La Paz	36.38	143	LR	LR	20 02 49.8	
	comp=Z,64nm,19.1s,baz=300,slow=37						
ULM	Lac du Bonnet	37.32	354	P	P	19 47 41.2	-2.4
	comp=Z,5.5nm,0.7s,baz=165,slow=9.3,SNR=7.6						
ULM				LR	LR	20 05 50.0	
	comp=Z,78nm,18.3s,baz=189,slow=41						
	comp=Z,5.5nm,0.7s						
YBH	Yreka Blue Hor	40.23	321	LR	LR	20 06 45.6	
	comp=Z,82nm,18.2s,baz=156,slow=39						
LVC	Limon Verde	41.11	150	LR	LR	20 03 00.7	
	comp=Z,53nm,18.4s,baz=244,slow=33						
NEW	Newport	41.63	333	LR	LR	20 07 03.6	
	comp=Z,33nm,20.7s,baz=134,slow=38						
SCHQ	Schefferville	45.40	19	P	P	19 48 46.6	-3.3
	comp=Z,4.5nm,0.5s,baz=226,slow=7.7,SNR=16						
	comp=Z,4.5nm,0.5s						
H03N2	Juan Fernandez	47.51	167	T	T	20 39 58.1	
	baz=346,slow=76,SNR=11						
H03N1	Juan Fernandez	47.51	167	T	T	20 40 00.7	
	baz=346,slow=76,SNR=13						
H03N3	Juan Fernandez	47.52	167	T	T	20 39 59.7	
	baz=346,slow=76,SNR=11						
YKA	Yellowknife Ar	52.32	346	P	P	19 49 41.2	-1.7
	comp=Z,1.4nm,0.8s,baz=145,slow=8.1,SNR=18						
YKA				LR	LR	20 14 32.6	
	comp=Z,32nm,19.3s,baz=298,slow=39						
	comp=Z,1.4nm,0.8s						
FRB	Frobisher Bay	52.75	12	LR	LR	20 12 17.1	
	comp=Z,78nm,20.8s,baz=32,slow=36						
SFJD	Kangerlussuaq	59.78	17	LR	LR	20 16 11.1	
	comp=Z,44nm,18.3s,baz=247,slow=36						
INK	Inuvik	61.82	343	LR	LR	20 21 58.7	
	comp=Z,73nm,18.2s,baz=190,slow=40						
NOA	NORSAR Array B	83.99	29	LR	LR	20 28 38.6	
	comp=Z,16nm,19.6s,baz=30,slow=35						
NRIK	Noril'sk	97.72	1	LR	LR	20 40 19.2	
	comp=Z,41nm,20.5s,baz=304,slow=37						
WRA	Warramunga Arr	137.02	255	PKP	PKiKP	19 59 59.2	+2.0
	comp=Z,0.4nm,0.6s,baz=85,slow=2.0,SNR=8.2						
PZH	PanZhiHua	138.97	344	PKP	PKPdf	19 59 58.2	-0.8
CMAR	Chiang Mai Arr	147.39	344	PKPbc	PKPdf	20 00 15.2	+1.3
	comp=Z,1.1nm,0.6s,baz=345,slow=3.3,SNR=11						

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*MAN **01** 19:52:46.0, 14°.19N×120°.25E, h80^{km}, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*

*IDC **01** 19:52:46.8±1.0, 14°.05N×120°.64E, h114^{km}±12^{km}, mb2.8/3, mbtmp3.2/3, Error ellipse: s-maj=47.8km s-min=25.5km az=59.0*

ISC 01 19:52:47.1±1.0, **14°.0N**±0°.1×**120°.5E**±0°.1, **h120**^{km}, **n7, σ1^{s}.54**/11, **mb3.0**/3, **3C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.44	73	P	Pn	19 53 03.5	-1.2
	637nm,0.3s,baz=255,slow=1.6,SNR=14						
TGY				S	Sn	19 53 17.3	-0.8
	672nm,0.4s,baz=81,slow=22,SNR=5.7						
TGY	Tagaytay City	0.44	73	⇑*e*P	Pn	19 53 03.5	-1.2
TGY				*e*S	Sn	19 53 16.1	-2.0
PGP	Puerto Galera	0.64	137	⇑*e*P	Pn	19 53 05.0	-1.1
PGP				*i* S	Sn	19 53 20.0	-0.3
LQP	Lukban	1.02	82	⇑*e*P	Pn	19 53 08.9	-0.5
LQP				*i* S	Sn	19 53 28.9	+2.6
CMAR	Chiang Mai Arr	21.17	285	P	P	19 57 24.8	+1.8
	0.3nm,0.5s,baz=98,slow=7.6,SNR=5.0						
	0.3nm,0.5s						
SONM	Songino Array	35.74	344	P	P	19 59 34.2	-0.2
	0.5nm,0.5s,baz=166,slow=8.8,SNR=6.1						
	0.5nm,0.5s						
WRA	Warramunga Arr	36.35	158	P	P	19 59 40.2	+0.5
	0.2nm,0.8s,baz=323,slow=11,SNR=0.9						
	0.2nm,0.8s						

TAP 01 19:57:31.7, 24°.77N×121°.68E, h47^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWE	Neicheng	0.05	192	P	Pn	19 57 38.8	-0.3
	baz=175						
TWE				S	Sn	19 57 44.3	+0.1
	baz=175						
FUSB	Fushanzhiwuyua	0.08	265	*e*P	Pn	19 57 39.0	-0.3
	baz=265						
FUSB				*e*S	Sn	19 57 44.2	-0.4
	baz=265						
NDS	Dongshan	0.14	165	*e*S	Sn	19 57 44.7	-0.1
	baz=165						
NWLT	Wulai	0.16	274	*e*P	Pn	19 57 39.4	-0.2
	baz=273						
NWLT				*e*S	Sn	19 57 44.9	-0.2
	baz=273						
ENTT	Nioudou	0.16	219	P	Pn	19 57 39.4	-0.2
	baz=216						
ENTT				*e*S	Sn	19 57 45.0	-0.1
	baz=216						
TWC	Suao	0.22	135	*e*P	Pn	19 57 39.9	0.0
	baz=133						
TIPB	Shuangxi	0.24	33	*e*P	Pn	19 57 39.9	-0.3
	baz=33						
LATG	Datong	0.27	211	P	Pn	19 57 40.3	-0.2
	baz=210						
LATG				*e*S	Sn	19 57 46.6	-0.1
	baz=210						
YHNB	Yeheng	0.29	251	P	Pn	19 57 40.4	-0.2
	baz=250						
YHNB				*e*S	Sn	19 57 46.8	-0.2
	baz=250						
NSK	Sanguang	0.30	253	*e*P	Pn	19 57 40.5	-0.2
	baz=251						
NSK				*e*S	Sn	19 57 46.9	-0.2
	baz=251						
YM01	YM01	0.39	345	*e*P	Pn	19 57 41.7	0.0
	baz=345						
YM01				*e*S	Sn	19 57 48.5	-0.1
	baz=345						
NNS	Nan Shan	0.43	221	*e*S	Sn	19 57 49.2	-0.3
	baz=219						
NNSB	Datong	0.43	219	*e*P	Pn	19 57 42.1	-0.1
	baz=218						
NNSB				*e*S	Sn	19 57 49.2	-0.4
	baz=218						
NFF	Wufeng Townshi	0.53	255	*e*P	Pn	19 57 43.2	0.0
	baz=255						
NFF				*e*S	Sn	19 57 51.8	+0.3
	baz=255						

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*SNET **01** 20:23:12.4±1.1, 13°.07N×90°.02W, h20^{km}±14^{km}, ML3.2*

*GCG **01** 20:23:15.6±0.3, 13°.24N×90°.05W, h68^{km}±71^{km}, MD3.4*

ISC 01 20:23:11.6±2.6, **13°.0N**±0°.1×**89°.99W**±0°.06, **h19**^{km}±4^{km}, **n11, σ0^{s}.54**/19, **1C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.82	40	*e*P	Pg	20 23 27.6	-0.2
JAYA				*e*S	Sg	20 23 39.0	+0.3
JAYA				IAML		20 23 42.2	
	comp=Z,936nm,0.4s						
CEVE	Cerro Verde	0.88	24	*e*P	Pg	20 23 28.9	0.0
CEVE				*e*S	Sg	20 23 40.9	+0.4
CEVE				IAML		20 23 44.4	
	comp=Z,751nm,0.2s						
NUBE	Las Nubes	0.90	13	*e*P	Pb	20 23 28.2	-0.5
NUBE				*e*P	Pb	20 23 28.2	-0.5
NUBE				*e*P	Pg	20 23 28.6	-0.6
CEDA	San Andres	0.97	37	*e*P	Pb	20 23 29.7	-0.2
CEDA				*e*S	Sg	20 23 43.4	+0.1
CEDA				IAML		20 23 51.5	
	comp=Z,740nm,0.3s						
SLOZ	Alcaldia de Sa	1.02	11	*e*P	Pb	20 23 30.3	-0.4
SLOZ				*e*S	Sb	20 23 44.3	+0.5
SJTE	Alcalda de S	1.12	58	*e*P	Pn	20 23 32.4	-0.1
SJTE				*e*S	Sn	20 23 47.7	+0.2
COEG	Centro de Oper	1.23	61	*e*P	Pn	20 23 34.0	0.0
PQSS	Presa 15 de Se	1.52	67	*e*P	Pn	20 23 38.3	+0.5
NBG	Las Nubes	1.59	348	*e*P	Pn	20 23 39.8	+0.7
FUG	Fuego 3	1.64	330	*e*P	Pn	20 23 40.2	+0.5
FUG				⇑*e*S	Sn	20 23 59.3	-1.0
STG3	Santiaguito 3,	2.27	318	*e*P	Pn	20 23 49.1	+0.7

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*IDC **01** 20:34:24.8±1.8, 4°.34S×94°.51E, h0^{km}, mb3.5/7, mbtmp3.7/9, ML4.6/3, Error ellipse: s-maj=47.5km s-min=21.1km az=50.0*

*DJA **01** 20:34:29.4±0.6, 5°S±3°×9°5E±°, h90^{km}±11^{km}, M4.8/15, mB5.2/9, mb5.0/15, MLv5.2/6, Mw(mB)4.5/9*

ISC 01 20:34:25.9±1.2, **4°.4S**±0°.1×**94°.69E**±0°.09, **h10**^{km}, **n25, σ1^{s}.83**/26, **mb3.5**/8, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SISI	Saibi	5.35	55	P	Pn	20 35 48.1	+2.3
	1.0nm4µm178nm,0.5s						
SISI				S	Sn	20 36 46.6	-0.9
	1.0nm4µm178nm,0.5s						
PPSI	Pulau Pagai	5.55	73	P	Pn	20 35 49.8	+1.2
	1.2nm3µm322nm,0.9s						
PPSI				S	Sn	20 36 50.2	-2.3
	1.2nm3µm322nm,0.9s						
GSI	Gunungsitoli	6.36	27	P	Pn	20 35 59.9	+0.2
	0.5nm120nm,0.7s						
GSI				S	Sn	20 37 14.2	+1.8
	0.5nm120nm,0.7s						
PPI	Padang Panjang	6.92	56	P	Pn	20 36 09.4	+2.0
PPI				S	Sn	20 37 25.8	-0.4
KRJI	Kerinci	7.14	71	P	Pn	20 36 11.4	+0.9
	1.0nm2µm129nm,0.5s						
KRJI				S	Sn	20 37 29.9	-1.9
	1.0nm2µm129nm,0.5s						
MNAI	Manna	8.24	90	P	Pn	20 36 23.8	-1.8
	101nm,0.9s						
PSI	Prapat	8.31	31	Pn	Pn	20 36 26.1	-0.5
	3.1nm,0.3s,baz=191,slow=5.2,SNR=23						
	11nm,0.5s						
KCSI	Kotacane, Aceh	8.45	21	P	Pn	20 36 27.9	-0.6
	802nm36nm,0.8s						
LWLI	Liwa	9.36	94	P	Pn	20 36 38.1	-2.9
	2µm51nm,0.6s						
KASI	Kota Agung	9.83	97	P	Pn	20 36 45.6	-1.8
	1µm50nm,0.6s						
PPBI	Pangkal Pinang	11.64	79	P	Pn	20 37 11.9	-0.3
	14nm,0.6s						
CBJI	Citeko	12.27	100	P	Pn	20 37 19.3	-1.5
	76nm,0.5s						
LEM	Lembang	13.09	101	Pn	Pn	20 37 35.0	+2.8
	7.2nm,0.3s,baz=181,slow=14,SNR=5.2						
PALK	Pallekele	18.15	310	P	Pn	20 38 34.4	-3.9
	1.7nm,0.3s,baz=231,slow=12,SNR=13						
PALK				S	Sn	20 41 39.8	-21
	5.3nm,0.5s,baz=305,slow=20,SNR=6.8						
	4.8nm,0.4s						
H08S2	Diego Garcia H	22.31	261	T	T	21 01 32.5	
	baz=82,slow=74						
H08S3	Diego Garcia H	22.31	261	T	T	21 01 22.0	
	baz=82,slow=74						
H08S1	Diego Carcia H	22.33	261	T	T	21 01 26.6	
	baz=82						
CMAR	Chiang Mai Arr	23.10	10	P	P	20 39 30.4	-1.7
	0.4nm,0.5s,baz=202,slow=9.6,SNR=5.9						
	0.4nm,0.5s						
WRA	Warramunga Arr	41.57	115	P	P	20 42 15.4	+1.2
	0.5nm,0.9s,baz=287,slow=9.4,SNR=3.1						
	0.5nm,0.9s						
ASAR	Alice Springs	42.37	121	P	P	20 42 23.0	+2.3
	0.6nm,0.9s,baz=292,slow=5.9,SNR=3.2						
	0.6nm,0.9s						
GTA	Gaotai	43.85	6	*e*P	P	20 42 36.8	+4.3
GTA				sP	pwP	20 42 44.2	+3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	52.14	349	P	P	20 43 37.0	+0.5
	comp=Z,0.5nm,0.9s,baz=118,slow=5.7,SNR=3.7						
	comp=Z,0.5nm,0.9s						
SONM	Songino Array	53.02	10	P	P	20 43 44.5	+1.4
	comp=Z,0.5nm,0.7s,baz=189,slow=9.0,SNR=4.4						
	comp=Z,0.5nm,0.7s						
KURBB	Kurchatov Arra	56.55	348	P	P	20 44 08.1	-0.3
	comp=Z,0.5nm,0.9s,baz=169,slow=6.3,SNR=3.1						
	comp=Z,0.5nm,0.9s						
ZALV	Zalesovo Beam	58.72	353	P	P	20 44 24.2	+0.6
	comp=Z,2.1nm,0.7s,baz=186,slow=5.6,SNR=7.0						
	comp=Z,2.1nm,0.7s						

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*IDC **01** 20:38:44.4±0.8, 60°.22N×153°.05W, h111^{km}±8^{km}, mb4.2/35, mbtmp4.6/39, MS3.2/10, Error ellipse: s-maj=8.4km s-min=7.2km az=49.0*

*MOS **01** 20:38:44.7±0.9, 60°.23N×153°.01W, h128^{km}, mb4.4/30, Error ellipse: s-maj=10.4km s-min=5.4km az=97.1*

*NEIC **01** 20:38:45.8±1.6, 60°.13N±0°.03×152°.99W±0°.07, h130^{km}±3^{km}, Error ellipse: s-maj=5.1km s-min=4.9km az=201.0*

*AEIC **01** 20:38:46±1.8, 60°.11N±0°.03×152°.99W±0°.05, h130^{km}±3^{km}, ML4.7, mb4.8/106(NEIC), ML4.8/130(NEIC), Mwr4.7/28(SLM), Error ellipse: s-maj=5.1km s-min=2.0km az=143.0*

*NEIC **01** 20:38:46, 60°.14N×152°.90W, h134^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.00; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$0.37; $M_{r\theta}$-0.74; $M_{\theta\phi}$1.01; $M_{\phi r}$-0.13; Fault plane solution: $M_0$1.32000×10^{16} NP1:ϕ_s170.00000°, δ55.00000°, λ-180.00000°. NP2:ϕ_s80.00000°, δ90.00000°, λ-35.00000°. Principal axes: T 1.3143, Plg24.0000°, Azm131.0000°; N 0.0008, Plg55.0000°, Azm260.0000°; P -1.3151, Plg24.0000°, Azm29.0000°;*

ISC 01 20:38:45.8±0.4, **60°.19N**±0°.03×**152°.97W**±0°.03, **h128**^{km}±3^{km}, **n773, σ1^{s}.33**/790, **mb4.7**/154, **92C-160D, Fault plane solution: NP1:**ϕ_s267.02695°, δ73.41730°, λ27.69027°. **NP2:**ϕ_s168.50873°, δ63.55334°, λ161.41222°. **Principal axes:** T Plg31.1130°, Azm130.0294°; N Plg58.0646°, Azm295.5656°; P Plg6.4948°, Azm36.0895°; **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
O20K	Slope Mountain	0.20	121		Pn	20 39 04.0	+0.6
O20K					Sn	20 39 17.0	+0.3
O20K	Slope Mountain	0.20	121	P	Pn	20 39 04.0	+0.6
	baz=280,SNR=248						
RED	Redoubt Volcan	0.25	23		Pn	20 39 04.2	+0.7
RED					Sn	20 39 17.7	+0.7
RSO	Redoubt South	0.30	21		Pn	20 39 04.6	+0.7
RDWB	Redoubt West	0.31	12		Pn	20 39 04.4	+0.6
RDWB					Sn	20 39 18.2	+0.7
RDJH	Redoubt Jeurge	0.41	11		Pn	20 39 04.9	+0.7
RDJH					Sn	20 39 19.4	+1.2
OPT	Oil Point	0.55	194		Pn	20 39 05.2	+0.3
P19K	Oil Pt	0.55	194		Pn	20 39 05.2	+0.3
P19K				Sn	Sn	20 39 19.4	+0.1
P19K	Oil Pt	0.55	194	P	Pn	20 39 05.1	+0.2
	baz=14,SNR=544						
O19K	Port Alsworth	0.68	271		Pn	20 39 06.1	+0.5
O19K				IAML		20 39 21.7	
	comp=E,25µm,0.5s						
O19K	Port Alsworth	0.68	271		Sn	20 39 20.8	+0.1
O19K	Port Alsworth	0.68	271	P	Pn	20 39 06.1	+0.5
	baz=96,SNR=497						
AUL	Augustine Lava	0.84	197		Pn	20 39 07.1	+0.2
AUL					Sn	20 39 22.8	-0.2
AU22	Augustine Moun	0.84	194		Pn	20 39 07.0	+0.1
AU22					Sn	20 39 22.6	-0.4
AU2	Augustine Isla	0.84	194		Pn	20 39 07.0	0.0
HOM	Homer	0.85	128		Pn	20 39 07.8	+0.7
HOM				IAML		20 39 25.6	
	comp=E,51µm,0.7s						
HOM	Homer	0.85	128		Sn	20 39 23.9	+0.7
HOM	Homer	0.85	128	P	Pn	20 39 07.7	+0.7
	baz=305,SNR=70						
AUH	Augustine H	0.86	196		Pn	20 39 07.3	+0.1
AUQ	Augustine Qik'	0.86	195		Pn	20 39 07.4	+0.1
N19K	Bonanza Creek	0.98	311		Pn	20 39 08.8	+0.5
N19K	Bonanza Creek	0.98	311		Sn	20 39 25.1	-0.3
N19K	Bonanza Creek	0.98	311	P	Pn	20 39 08.8	+0.5
	baz=133,SNR=1000						
CAPN	Captain Cook N	1.07	56		Pn	20 39 11.8	+2.7
CAPN				IAML		20 39 32.6	
	comp=N,25µm,0.8s						
CAPN	Captain Cook N	1.07	56	P	Pn	20 39 11.7	+2.7
	baz=235,SNR=15						
CNPM	China Poot	1.10	126	Pn	Pn	20 39 09.7	+0.4
CNPM				IAML		20 39 28.6	
	comp=E,33µm,0.9s						
CNPM				IAML		20 39 28.6	
	comp=N,37µm,0.8s						
CNPM	China Poot	1.10	126		Sn	20 39 27.1	-0.2
SPWE	Spurr West	1.11	10		Pn	20 39 11.4	+1.8
CKN	Chakachatna No	1.11	20		Pn	20 39 11.1	+1.5
BRLK	Bradley Lake	1.13	111	Pn	Pn	20 39 10.1	+0.4
BRLK				IAML		20 39 29.3	
	comp=E,26µm,0.8s						
BRLK				IAML		20 39 29.0	
	comp=N,22µm,0.5s						
O18K	Koktuh Hills	1.17	255		Pn	20 39 10.1	0.0
O18K					Sn	20 39 28.1	-0.6
O18K	Koktuh Hills	1.17	255	P	Pn	20 39 10.1	0.0
	baz=76						
SPCG	Spurr Capps Gl	1.20	22		Pn	20 39 11.8	+1.3
SPCG					Sn	20 39 30.3	+0.9
BRSE	Bradley Lake S	1.21	111		Pn	20 39 11.0	+0.5
BRSE					Sn	20 39 28.5	-0.7
BRSE	Bradley Lake S	1.21	111	P	Pn	20 39 11.0	+0.5
	baz=289,SNR=461						
Q19K	Cape Douglas,	1.31	196	Pn	Pn	20 39 11.0	-0.5
Q19K				IAML		20 39 37.4	
	comp=E,10µm,0.7s						
Q19K	Cape Douglas,	1.31	196	P	Pn	20 39 10.9	-0.7
	baz=15,SNR=336						
P18K	Big Mountain,	1.39	236		Pn	20 39 12.0	-0.5
P18K					Sn	20 39 31.2	-1.6
P18K	Big Mountain,	1.39	236	P	Pn	20 39 11.9	-0.6
	baz=56						
SLKM	Skilak Lake	1.40	75		Pn	20 39 12.8	+0.2
STLK	Strandline Lak	1.43	22		Pn	20 39 14.2	+1.3
N18K	Kilae Creek	1.53	290		Pn	20 39 14.4	+0.4
N18K	Kilae Creek	1.53	290		Sn	20 39 35.4	-0.1
N18K	Kilae Creek	1.53	290	P	Pn	20 39 14.3	+0.3
	baz=110,SNR=1000						
SVW2	Sparrevohn	1.58	307		Pn	20 39 15.0	+0.5
SVW2	Sparrevohn	1.58	307		Sn	20 39 36.9	+0.4
O22K	Cooper Landing	1.64	78		Pn	20 39 15.8	+0.5
O22K				IAML		20 39 46.1	
	comp=E,11µm,0.8s						
O22K				IAML		20 39 47.5	
	comp=N,15µm,0.8s						
O22K	Cooper Landing	1.64	78	P	Pn	20 39 15.7	+0.5
	baz=259,SNR=70						
FIS	Fire Island	1.66	53		Pn	20 39 17.2	+1.8
FIS				IAML		20 39 42.8	
	comp=N,11µm,1.0s						
FIS				IAML		20 39 44.4	
	comp=E,6µm,1.2s						
SEW	Seward	1.76	91		Pn	20 39 16.6	0.0
SEW	Seward	1.76	91		Sn	20 39 38.9	-1.3
SEW	Seward	1.76	91	P	Pn	20 39 16.5	-0.1
	baz=272,SNR=42						
RC01	Rabbit Creek A	1.83	59		Pn	20 39 18.0	+0.5
RC01				IAML		20 39 43.4	
	comp=N,6µm,0.6s						
RC01				IAML		20 39 43.5	
	comp=E,8µm,0.3s						
RC01	Rabbit Creek A	1.83	59	P	Pn	20 39 17.9	+0.5
	baz=240,SNR=127						
M19K	Big River Lodg	1.86	339		Pn	20 39 19.0	+1.2
M19K					Sn	20 39 43.9	+1.6
M19K	Big River Lodg	1.86	339	P	Pn	20 39 19.0	+1.2
	baz=159						
M22K	Willow	2.10	40		Pn	20 39 21.6	+0.9
M22K	Willow	2.10	40		Sn	20 39 48.7	+1.2
M22K	Willow	2.10	40	P	Pn	20 39 21.6	+0.9
	baz=222,SNR=371						
L19K	White Mountain	2.20	336		Pn	20 39 23.0	+1.0
L19K	White Mountain	2.20	336	P	Pn	20 39 23.0	+1.0
	baz=156,SNR=1000						
L20K	Farewell, AK	2.34	350		Pn	20 39 25.3	+1.5
L20K	Farewell, AK	2.34	350	P	Pn	20 39 25.4	+1.5
	baz=169,SNR=624						
PMR	Palmer	2.35	51	P	Pn	20 39 23.5	-0.3
PMR						20 39 51.8	
PMR	Palmer	2.35	51		Pn	20 39 23.5	-0.3
PMR	Palmer	2.35	51	P	Pn	20 39 23.4	-0.3
	baz=234,SNR=100						
PWL	Port Wells	2.39	72		Pn	20 39 23.9	-0.5
PWL				IAML		20 39 54.2	
	comp=E,5µm,0.4s						
PWL				IAML		20 39 56.0	

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          comp=N,4µm,0.5s
PWL   Port Wells        2.39  72  P      Pn     20 39 23.8  -0.5
          baz=254
KDAK  Kodiak Island     2.42 175  P      Pn     20 39 23.0  -1.7
          comp=N,876nm,0.3s,baz=37,slow=8.7,SNR=3878
KDAK                              S      Sn     20 39 51.4  -3.3
KDAK                              LR     LR     20 40 10.5
          comp=N,818nm,18.0s,baz=34,slow=35
KDAK  Kodiak Island     2.42 175  Pn     Pn     20 39 23.0  -1.7
KDAK                              IAML          20 39 53.2
          comp=N,6µm,0.5s
KDAK  Kodiak Island     2.42 175  P      Pn     20 39 23.0  -1.7
          baz=355
KNK   Knik Glacier      2.53  59         Pn     20 39 25.9  -0.2
KNK                               IAML          20 39 58.0
          comp=N,3µm,0.2s
KNK                               IAML          20 39 58.3
          comp=E,3µm,0.9s
KNK   Knik Glacier      2.53  59  P      Pn     20 39 25.9  -0.3
          baz=242,SNR=122
GHO   Glory Hole Cre    2.53  49         Pn     20 39 26.2  -0.1
GHO                               IAML          20 39 58.1
          comp=N,3µm,0.9s
GHO                               IAML          20 39 58.4
          comp=E,4µm,0.8s
GHO   Glory Hole Cre    2.53  49         Sn     20 39 56.6  -0.8
CUT   Chulitna          2.58  29         Pn     20 39 27.5  +0.8
CUT                               IAML          20 40 02.2
          comp=N,5µm,0.7s
CUT   Chulitna          2.58  29  P      Pn     20 39 27.5  +0.8
          baz=211,SNR=214
PPLA  Purkeypile        2.75   7         Pn     20 39 30.9  +1.8
PPLA  Purkeypile        2.75   7  P      Pn     20 39 30.8  +1.8
          baz=188,SNR=415
SML   Sawmill           2.78  52         Pn     20 39 29.1  -0.3
SML                               IAML          20 40 05.1
          comp=E,3µm,1.4s
SML                               IAML          20 40 06.7
          comp=N,3µm,1.0s
SML   Sawmill           2.78  52         Sn     20 40 01.4  -1.7
SML   Sawmill           2.78  52  P      Pn     20 39 29.2  -0.3
          baz=235,SNR=159
OHAK  Old Harbor        2.98 183  Pn     Pn     20 39 29.6  -2.3
OHAK                              IAML          20 40 05.8
          comp=N,2µm,0.8s
OHAK                              IAML          20 40 10.5
          comp=E,2µm,0.6s
OHAK  Old Harbor        2.98 183  P      Pn     20 39 29.6  -2.3
          baz=2.9,SNR=54
GLI   Glacier Island    2.98  74  P      Pn     20 39 30.6  -1.4
          baz=258,SNR=16
M23K  Glacier View      3.02  55  P      Pn     20 39 32.2  -0.3
          baz=239,SNR=220
TT01  Tatalina          3.10 333         Pn     20 39 34.3  +0.9
TTA   Tatalina          3.12 333  P      Pn     20 39 34.3  +0.5
TTA   Tatalina          3.12 333  Pn     Pn     20 39 34.3  +0.5
TTA   Tatalina          3.12 333  P      Pn     20 39 34.3  +0.5
          baz=152,SNR=894
SCM   Sheep Creek Mo    3.21  57  P      Pn     20 39 34.7  -0.2
SCM   Sheep Creek Mo    3.21  57         Pn     20 39 34.6  -0.2
SCM   Sheep Creek Mo    3.21  57  P      Pn     20 39 34.8  -0.2
          baz=240,SNR=200
K20K  Telida            3.23 351         Pn     20 39 36.5  +1.4
K20K  Telida            3.23 351  P      Pn     20 39 36.5  +1.4
          baz=171,SNR=905
JPK   Jack Peak         3.26  72         Pn     20 39 34.9  -0.7
FID   Port Fidalgo      3.26  77         Pn     20 39 34.1  -1.5
FID                               IAML          20 40 18.0
          comp=E,2µm,0.7s
CAST  Castle Rocks      3.27   7         Pn     20 39 36.5  +0.7
CAST  Castle Rocks      3.27   7  P      Pn     20 39 36.7  +1.0
          baz=188,SNR=365
VMT   TAPS TI Valdez    3.38  72         Pn     20 39 36.6  -0.5
Q23K  Middleton Isla    3.43 100         Pn     20 39 37.3  -0.5
Q23K  Middleton Isla    3.43 100  P      Pn     20 39 38.1  +0.3
          baz=284
MID   Middleton Isla    3.44 100  P      Pn     20 39 37.6  -0.2
MID   Middleton Isla    3.44 100  Pn     Pn     20 39 37.6  -0.2
MID                               IAML          20 40 19.9
          comp=E,3µm,1.2s
WAT6  Susitna Watana    3.48  44         Pn     20 39 38.7  +0.1
WAT6  Susitna Watana    3.48  44  P      Pn     20 39 38.7  +0.1
          baz=228,SNR=654
TRF   Thorofare Moun    3.51  20         Pn     20 39 39.5  +0.5
TRF   Thorofare Moun    3.51  20  IAML          20 40 22.0
          comp=N,2µm,0.8s
TRF                               IAML          20 40 23.8
          comp=E,1µm,0.6s
KTH   Kantishna Hill    3.52  15         Pn     20 39 39.4  +0.4
KTH                               IAML          20 40 22.8
          comp=E,1µm,0.9s
KTH                               IAML          20 40 24.3
          comp=N,2µm,0.9s
EYAK  Cordova Ski Ar    3.60  81         Pn     20 39 40.6  +0.5
EYAK  Cordova Ski Ar    3.60  81  P      Pn     20 39 39.2  -0.9
          baz=266,SNR=16
DIV   Divide            3.67  72         Pn     20 39 40.5  -0.5
KLU   Klutina           3.69  66         Pn     20 39 40.9  -0.4
KLU   Klutina           3.69  66  IAML          20 40 25.1
          comp=E,2µm,0.9s
KLU   Klutina           3.69  66  P      Pn     20 39 40.9  -0.4
          baz=251,SNR=211
SII   Sitkinak Islan    3.69 191         Pn     20 39 39.0  -2.4
SII   Sitkinak Islan    3.69 191  IAML          20 40 26.9
          comp=E,2µm,0.8s
SII                               IAML          20 40 34.0
          comp=N,3µm,0.8s
SII   Sitkinak Islan    3.69 191  P      Pn     20 39 38.9  -2.4
          baz=9.5,SNR=15
CHUM  Lake Minchumin    3.72   4         Pn     20 39 42.6  +1.0
CHUM  Lake Minchumin    3.72   4  P      Pn     20 39 42.7  +1.0
          baz=185,SNR=410
RND   Reindeer          3.78  29  P      Pn     20 39 42.8  +0.4
RND   Reindeer          3.78  29  Pn     Pn     20 39 42.8  +0.4
RND                               IAML          20 40 34.3
          comp=E,783nm,1.0s
M24K  Tolsona, Glenn    3.81  57         Pn     20 39 43.3  +0.4
M24K  Tolsona, Glenn    3.81  57  P      Pn     20 39 43.4  +0.4
          baz=242,SNR=126
DHY   Denali Highway    3.94  40         Pn     20 39 45.0  +0.4
DHY   Denali Highway    3.94  40  IAML          20 40 34.5
          comp=E,1µm,0.7s
DHY                               IAML          20 40 36.7
          comp=N,1µm,1.0s
DHY   Denali Highway    3.94  40  P      Pn     20 39 45.1  +0.4
          baz=225,SNR=405
BPAW  Bear Paw Mtn.     4.04  12         Pn     20 39 45.6  -0.3
BPAW  Bear Paw Mtn.     4.04  12  IAML          20 40 33.0
          comp=N,592nm,0.8s
BPAW                              IAML          20 40 34.2
          comp=E,685nm,0.7s
BPAW  Bear Paw Mtn.     4.04  12  P      Pn     20 39 45.5  -0.3
          baz=194,SNR=563
J20K  Nowinta River     4.04 353         Pn     20 39 47.4  +1.5
J20K  Nowinta River     4.04 353  IAML          20 40 38.7
          comp=E,594nm,1.3s
J20K  Nowinta River     4.04 353  P      Pn     20 39 47.4  +1.5
          baz=172,SNR=665
PS11  TAPS Pump St11    4.10  59         Pn     20 39 47.2  +0.5
RAGM  Ragged Mountai    4.13  84         Pn     20 39 46.8  -0.4
BMRM  Bremner River     4.20  76         Pn     20 39 47.5  -0.6
BMRM  Bremner River     4.20  76  IAML          20 40 38.2
          comp=E,1µm,0.8s
BMRM  Bremner River     4.20  76  P      Pn     20 39 47.3  -0.7
          baz=262,SNR=95
ANNW  Aniakchak Nort    4.24 223         Pn     20 39 48.9  +0.3
BWN   Browne            4.32  21         Pn     20 39 50.5  +0.9
BWN   Browne            4.32  21  IAML          20 41 03.5
          comp=N,1µm,1.0s
BWN                               IAML          20 41 16.1
          comp=E,1µm,1.2s
N25K  Chitina, Valde    4.33  67         Pn     20 39 49.6  -0.2
N25K  Chitina, Valde    4.33  67  IAML          20 40 42.2
          comp=E,1µm,1.0s
N25K                              IAML          20 40 43.3
          comp=N,1µm,0.8s
N25K  Chitina, Valde    4.33  67  P      Pn     20 39 49.6  -0.2
          baz=254,SNR=434
HMT   Hamilton          4.34  84         Pn     20 39 51.2  +1.3
HARP  HAARP             4.37  56         Pn     20 39 50.6  +0.3
HARP  HAARP             4.37  56  P      Pn     20 39 50.7  +0.4
          baz=242,SNR=40
ANPB  Aniakchak Plen    4.39 222         Pn     20 39 50.1  -0.5
PAX   Paxson            4.54  49  P      Pn     20 39 53.0  +0.4
PAX   Paxson            4.54  49  Pn     Pn     20 39 53.0  +0.4
PAX   Paxson            4.54  49  P      Pn     20 39 53.1  +0.4
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          baz=235,SNR=105
CHIR  Chirikof Islan    4.60 199         Pn     20 39 50.6  -2.7
CHIR  Chirikof Islan    4.60 199  IAML          20 40 41.5
          comp=N,924nm,0.5s
CHIR                              IAML          20 40 43.3
          comp=E,542nm,0.5s
CHIR  Chirikof Islan    4.60 199  P      Pn     20 39 50.8  -2.5
          baz=17,SNR=5.8
GLB   Gilahina Butte    4.66  70         Pn     20 39 54.0  -0.1
GLB   Gilahina Butte    4.66  70  IAML          20 40 48.1
          comp=N,1µm,0.8s
GLB                               IAML          20 40 48.5
          comp=E,865nm,0.8s
PS10  TAPS Pump St10    4.71  43         Pn     20 39 56.1  +1.2
NEA2  Nenana            4.78  21         Pn     20 39 55.6  -0.1
NEA2  Nenana            4.78  21  IAML          20 40 52.0
          comp=E,524nm,0.7s
NEA2                              IAML          20 40 52.7
          comp=N,367nm,1.1s
NEA2  Nenana            4.78  21  P      Pn     20 39 55.4  -0.3
          baz=204,SNR=1000
VRDI  Verde Repeater    4.79  73         Pn     20 39 55.7  -0.4
VRDI  Verde Repeater    4.79  73  IAML          20 40 52.6
          comp=N,689nm,0.7s
VRDI                              IAML          20 40 55.3
          comp=E,638nm,0.8s
GRIN  Grindle Hills     4.81  85         Pn     20 39 56.8  +0.7
BGLC  Bering Glacier    4.84  87  P      Pn     20 39 58.7  +2.2
          baz=274
KHIT  Khitrov Hills     4.84  83         Pn     20 39 55.3  -1.3
WRH   Wood River Hil    4.87  26         Pn     20 39 56.5  -0.3
WRH   Wood River Hil    4.87  26  IAML          20 40 53.3
          comp=N,795nm,1.0s
WRH                               IAML          20 40 55.6
          comp=E,560nm,0.9s
GCSA  Galena City Sc    4.92 340         Pn     20 39 58.8  +1.2
GCSA  Galena City Sc    4.92 340  P      Pn     20 39 58.7  +1.2
          baz=157,SNR=102
K24K  Donnelly Dome     4.96  40  P      Pn     20 40 00.1  +1.9
          baz=226,SNR=333
I21K  Tanana            5.03   5         Pn     20 39 59.3  +0.3
I21K  Tanana            5.03   5  P      Pn     20 39 59.3  +0.3
          baz=186,SNR=740
WAX   Waxell Ridge      5.04  83         Pn     20 39 58.3  -0.9
SNH   Sunshine Point    5.06  86  Pn     Pn     20 40 01.6  +2.1
SNH                               IAML          20 40 56.8
          comp=E,927nm,0.7s
SNH                               IAML          20 40 58.1
          comp=N,791nm,1.1s
CCB   Clear Creek Bu    5.08  26         Pn     20 39 59.5  -0.2
CCB   Clear Creek Bu    5.08  26  IAML          20 40 57.7
          comp=E,588nm,0.9s
CCB                               IAML          20 40 58.8
          comp=N,359nm,1.2s
VNHG  Veniaminof 1      5.15 222         Pn     20 40 00.6  -0.2
MENT  Mentasta          5.21  54         Pn     20 40 02.0  +0.4
PS08  TAPS Pump Stn8    5.22  31         Pn     20 40 01.8  +0.2
RIDG  Independent Ri    5.23  44         Pn     20 40 02.5  +0.7
RIDG  Independent Ri    5.23  44  P      Pn     20 40 02.5  +0.7
          baz=230,SNR=253
VNFG  Fog Glacier, M    5.23 225         Pn     20 40 02.1  +0.2
I23K  Minto, Yukon-K    5.25  17         Pn     20 40 02.8  +0.8
I23K  Minto, Yukon-K    5.25  17  IAML          20 41 03.7
          comp=N,375nm,1.1s
I23K  Minto, Yukon-K    5.25  17  P      Pn     20 40 02.3  +0.3
          baz=200,SNR=1000
TCOL  CIGO, UAF Yank    5.26  24         Pn     20 40 02.6  +0.4
TCOL  CIGO, UAF Yank    5.26  24  P      Pn     20 40 02.5  +0.4
          baz=209,SNR=205
COLA  College           5.27  25d iP     Pn     20 40 02.3  +0.1
COLA  College           5.27  25         Pn     20 40 02.1  -0.1
MDM   Murphy Dome       5.27  23         Pn     20 40 01.8  -0.5
MDM   Murphy Dome       5.27  23  IAML          20 41 03.5
          comp=E,340nm,0.8s
MDM                               IAML          20 41 08.2
          comp=N,354nm,0.8s
ISLE  Juniper Island    5.29  81         Pn     20 40 03.0  +0.3
KIAG  Kiagna River      5.29  77         Pn     20 40 02.5  -0.2
M26K  Nabesna, AK       5.30  61         Pn     20 40 03.0  +0.3
M26K  Nabesna, AK       5.30  61  IAML          20 41 06.3
          comp=E,734nm,0.7s
M26K  Nabesna, AK       5.30  61  P      Pn     20 40 03.0  +0.3
          baz=249,SNR=753
BALM  Baldy             5.30  76         Pn     20 40 02.8  -0.1
IL31                    5.40  29         Pn     20 40 04.0   0.0
ILAR  Eielson Array     5.40  29  P      Pn     20 40 03.9  -0.1
          comp=E,887nm,0.6s,baz=216,slow=14,SNR=4692
ILAR                              S      Sn     20 40 59.7  -5.2
          comp=E,267nm,0.8s,baz=219,slow=21,SNR=8.6
L26K  Log Cabin Wild    5.40  54         Pn     20 40 04.6  +0.5
L26K  Log Cabin Wild    5.40  54  P      Pn     20 40 04.6  +0.5
          baz=242,SNR=73
DOT   Dot Lake          5.46  47         Pn     20 40 04.8   0.0
H21K  Melozitna Rive    5.49   1         Pn     20 40 05.6  +0.3
H21K  Melozitna Rive    5.49   1  P      Pn     20 40 05.6  +0.3
          baz=181,SNR=580
POKR  Poker Plat Res    5.57  25         Pn     20 40 06.4  +0.2
POKR  Poker Plat Res    5.57  25  P      Pn     20 40 06.3   0.0
          baz=210,SNR=229
PS07  TAPS Pump Stn7    5.58  21         Pn     20 40 06.9  +0.5
BARN  Barnard Glacie    5.64  76         Pn     20 40 08.5  +1.1
J25K  Salcha River,     5.67  35         Pn     20 40 08.1  +0.3
J25K  Salcha River,     5.67  35  P      Pn     20 40 08.1  +0.3
          baz=222,SNR=665
SCRK  Sand Creek        5.68  44         Pn     20 40 07.7  -0.2
SCRK  Sand Creek        5.68  44  P      Pn     20 40 07.7  -0.2
          baz=232,SNR=211
M27K  Edge Creek, AK    5.78  63         Pn     20 40 10.1  +0.9
M27K  Edge Creek, AK    5.78  63  P      Pn     20 40 09.9  +0.7
          baz=252
IM03                    5.83 357         Pn     20 40 10.5  +0.8
IMAR  Indian Mountai    5.83 357  Pn     Pn     20 40 10.6  +0.8
H23K  Yukon River       5.87  14         Pn     20 40 11.3  +0.9
H23K  Yukon River       5.87  14  P      Pn     20 40 09.8  -0.5
          baz=197,SNR=1000
PS06  TAPS Pump Stn6    5.88  13         Pn     20 40 11.4  +1.0
TABL  Table Mountain    5.88  82         Pn     20 40 11.3  +0.5
L27K  Beaver Creek,     6.04  57         Pn     20 40 12.9  +0.2
L27K  Beaver Creek,     6.04  57  P      Pn     20 40 12.9  +0.2
          baz=246,SNR=152
BC03                    6.06  57         Pn     20 40 13.2  +0.3
BCAR  Beaver Creek A    6.06  57         Pn     20 40 13.2  +0.2
SAMH  Samovar Hills     6.09  85         Pn     20 40 14.6  +1.2
YUK2  White River       6.12  70         Pn     20 40 14.6  +0.8
H24K  Noodor Dome       6.13  20         Pn     20 40 13.9  +0.1
H24K  Noodor Dome       6.13  20  P      Pn     20 40 14.0  +0.1
          baz=204,SNR=505
J26L  Joseph Creek      6.16  41  P      Pn     20 40 14.2  -0.1
          baz=229,SNR=232
BVCY  Beaver Creek      6.25  64         Pn     20 40 16.5  +1.1
BVCY  Beaver Creek      6.25  64  P      Pn     20 40 16.5  +1.1
          baz=254,SNR=160
SDPT  Sand Point        6.29 223         Pn     20 40 14.2  -1.8
SDPT  Sand Point        6.29 223  P      Pn     20 40 14.3  -1.8
          baz=37
YUK3  Moose Creek       6.29  70         Pn     20 40 17.0  +0.8
YUK3  Moose Creek       6.29  70  P      Pn     20 40 16.8  +0.6
          baz=260,SNR=245
PCA   Pinnacle          6.35  85         Pn     20 40 17.6  +0.7
PINM  Pinnacle          6.35  85  P      Pn     20 40 17.5  +0.6
          baz=276
K27K  Chicken           6.40  48         Pn     20 40 17.4  -0.1
K27K  Chicken           6.40  48  P      Pn     20 40 17.2  -0.2
          baz=238
PS05  TAPS Pump Stn5    6.73   8         Pn     20 40 23.0  +1.1
PS4A  Pavlof South-4    6.79 228         Pn     20 40 22.5  -0.2
PNL   Peninsula         6.84  88         Pn     20 40 23.4  -0.1
PNL   Peninsula         6.84  88  P      Pn     20 40 23.9  +0.5
          baz=280,SNR=14
YUK4  Talbot Arm        7.11  74  P      Pn     20 40 28.2  +1.0
          baz=266,SNR=29
EGAK  Eagle             7.15  45         Pn     20 40 27.2  -0.3
EGAK  Eagle             7.15  45  P      Pn     20 40 27.4  -0.1
          baz=235,SNR=117
COLD  Coldfoot          7.17   9         Pn     20 40 28.0  +0.2
COLD  Coldfoot          7.17   9  P      Pn     20 40 28.2  +0.3
          baz=191,SNR=931
YUK6  Outpost Mounta    7.24  78         Pn     20 40 29.1  +0.2
YUK6  Outpost Mounta    7.24  78  P      Pn     20 40 29.2  +0.2
          baz=270,SNR=21
ANM   Nome              7.24 313  P      Pn     20 40 29.6  +0.8
ANM   Nome              7.24 313         Pn     20 40 29.6  +0.8
ANM   Nome              7.24 313  P      Pn     20 40 29.8  +1.0
          baz=122,SNR=28
YUK7  Dusty Glacier     7.36  81         Pn     20 40 31.2  +0.6
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DAWY  Dawson            7.45  53  P      Pn     20 40 32.4  +0.7
          baz=244,SNR=43
HYT   Haines Junctio    7.66  79         Pn     20 40 35.0  +0.5
HYT   Haines Junctio    7.66  79  P      Pn     20 40 34.7  +0.1
          baz=272,SNR=19
FALS  False Pass        7.75 231         Pn     20 40 35.4  -0.2
FALS  False Pass        7.75 231  P      Pn     20 40 35.4  -0.2
          baz=42,SNR=6.7
BRPK  Brown Peak        8.03 231         Pn     20 40 38.8  -0.7
J29M  Klondike Camp     8.08  52  P      Pn     20 40 41.3  +1.1
          baz=244,SNR=42
M30M  Minto, Yukon      8.12  66         Pn     20 40 41.1  +0.4
M30M  Minto, Yukon      8.12  66  P      Pn     20 40 41.0  +0.3
          baz=260,SNR=47
BM03  Burnt Mountain    8.14  23         Pn     20 40 39.6  -1.3
I29M  Ogilvie Camp,     8.48  46         Pn     20 40 45.4  -0.1
I29M  Ogilvie Camp,     8.48  46  P      Pn     20 40 45.3  -0.1
          baz=239,SNR=92
N31M  Braeburn, Yuko    8.49  74  Pn     Pn     20 40 45.8  +0.1
N31M  Braeburn, Yuko    8.49  74  P      Pn     20 40 45.6  -0.1
          baz=268,SNR=12
WESE  West Dahl East    8.49 233         Pn     20 40 45.7  -0.1
TOLK  Toolik Lake Re    8.62   8         Pn     20 40 48.9  +1.6
TOLK  Toolik Lake Re    8.62   8  P      Pn     20 40 48.6  +1.4
          baz=191,SNR=660
TNA   Tin City          8.69 315         Pn     20 40 49.8  +1.6
TNA   Tin City          8.69 315  P      Pn     20 40 49.6  +1.4
          baz=122
SKAG  Skagway           8.91  87  Pn     Pn     20 40 52.5  +1.2
SKAG  Skagway           8.91  87  P      Pn     20 40 53.9  +2.6
          baz=282,SNR=17
WHY   Whitehorse        8.96  79         Pn     20 40 51.8  -0.3
WHY   Whitehorse        8.96  79  P      Pn     20 40 52.1  +0.1
          baz=274,SNR=23
RDOG  Red Dog Mine      9.00 335         Pn     20 40 52.9  +0.5
RDOG  Red Dog Mine      9.00 335  P      Pn     20 40 53.1  +0.7
          baz=147,SNR=22
M31M  Drury Creek, Y    9.19  69         Pn     20 40 55.5  +0.5
M31M  Drury Creek, Y    9.19  69  P      Pn     20 40 56.2  +1.2
          baz=265,SNR=63
AKBBA Akutan Broad B    9.31 235         Pn     20 40 55.9  -0.8
BESE  Bessie Mountai    9.38  92  Pn     Pn     20 40 59.8  +2.2
GAMB  Gambell           9.51 300  P      Pn     20 41 01.6  +2.4
          baz=104
EPYK  Eagle Plains      9.57  43         Pn     20 40 59.3  -0.8
EPYK  Eagle Plains      9.57  43  P      Pn     20 40 59.3  -0.8
          baz=237,SNR=139
FARO  Faro, Yukon       9.68  69  P      Pn     20 41 03.5  +1.9
          baz=266,SNR=57
MTBL  Makushin Table    9.71 236         Pn     20 41 01.7  -0.4
JIS   Juneau Island     9.71  93         Pn     20 41 03.7  +1.7
SIT   Sitka             9.72 101  P      Pn     20 41 02.0  -0.1
SIT   Sitka             9.72 101         Pn     20 41 01.9  -0.1
SIT   Sitka             9.72 101  P      Pn     20 41 02.1  +0.1
          baz=296
UNV   Unalaska Valle    9.73 235         Pn     20 41 00.5  -1.7
UNV   Unalaska Valle    9.73 235  P      Pn     20 41 00.8  -1.5
          baz=44
PS01  TAPS Pump Stn    10.28   8         Pn     20 41 09.8  +0.3
MMPY  Sheldon Lake,    10.67  67  P      Pn     20 41 16.6  +1.6
          baz=266,SNR=47
A21K  Barrow           11.28 354         Pn     20 41 21.7  -1.2
A21K  Barrow           11.28 354  P      Pn     20 41 21.6  -1.2
          baz=171,SNR=48
NIKH  Nikolski High    11.33 237         Pn     20 41 22.2  -1.6
NIKH  Nikolski High    11.33 237  P      Pn     20 41 22.1  -1.6
          baz=44
CRAG  Craig            11.57 105  Pn     Pn     20 41 26.6  -0.1
CRAG  Craig            11.57 105  P      Pn     20 41 27.1  +0.4
          baz=302
INK   Inuvik           11.68  38  P      Pn     20 41 27.5  -0.7
          comp=E,49nm,0.8s,baz=217,slow=15,SNR=70
INK                               S      Sn     20 43 35.6  -0.9
          comp=E,29nm,0.9s,baz=63,slow=2.5,SNR=4.0
INK   Inuvik           11.68  38  P      Pn     20 41 28.0  -0.1
INK   Inuvik           11.68  38         Pn     20 41 28.0  -0.1
INK   Inuvik           11.68  38  P      Pn     20 41 27.4  -0.7
          baz=235,SNR=89
DLBC  Dease Lake       11.84  88  P      Pn     20 41 31.7  +1.3
          comp=E,6.1nm,0.4s,baz=281,slow=11,SNR=19
DLBC                              S      Sn     20 43 39.4  -1.2
          comp=E,12nm,0.5s,baz=324,slow=27,SNR=3.4
DLBC                              LR     LR     20 46 00.3
          comp=E,100nm,19.2s,baz=205,slow=37
TGTN  Hyland Airport   12.09  73  P      Pn     20 41 35.3  +1.6
          baz=274,SNR=20
DIB   Dawson Inlet,    13.21 113  Pn     Pn     20 41 48.5  +0.3
RUBB  Prince Rupert    13.58 106  P      Pn     20 41 55.3  +2.4
HG4B  Hotspring        14.40 114  P      Pn     20 42 03.9  +0.5
C36M  Paulatuk         15.19  41  Pn     Pn     20 42 11.5  -1.6
C36M  Paulatuk         15.19  41  P      Pn     20 42 11.5  -1.6
          baz=247,SNR=34
BBB   Bella Bella      15.90 109  P      P      20 42 23.9  +0.7
          comp=E,16nm,0.7s,baz=310,slow=10,SNR=8.9
BBB                               S      Sn     20 45 16.4  -2.1
          comp=E,8.9nm,1.0s,baz=106,slow=17,SNR=1.6
A36M  Sachs Harbour    16.09  31  P      Pn     20 42 24.2  -0.1
A36M  Sachs Harbour    16.09  31  P      Pn     20 42 24.1  -0.2
          baz=237,SNR=31
YKA   Yellowknife Ar   18.36  66  P      Pn     20 42 51.4  -0.3
          comp=E,106nm,0.5s,baz=278,slow=10.0,SNR=1758
YKA                               PcP    PcP    20 47 15.6  +0.3
          comp=E,1.1nm,0.4s,baz=291,slow=1.3,SNR=6.1
YKA                               ScP    ScP    20 50 38.2  -0.3
          comp=E,8.8nm,0.7s,baz=288,slow=2.0,SNR=47
YKA                               LR     LR     20 50 43.8
          comp=E,26nm,21.2s,baz=342,slow=39
YKA   Yellowknife Ar   18.36  66  P      Pn     20 42 50.9  -0.8
YKA   Yellowknife Ar   18.36  66  P      Pn     20 42 50.9  -0.8
BILL  Bilibino         19.10 311c iP     Pn     20 42 59.8  -0.5
BILL                              pmax   pmax
          comp=Z,13nm,1.0s
PGC   Sidney           20.50 111  P      P      20 43 11.9  -1.4
PGC                               IAmb   IAmb   20 43 16.8
          comp=Z,38nm,0.8s
B04A  Port Angeles     20.90 112  P      P      20 43 15.7  -2.0
B05A  Bryant           21.40 110  P      P      20 43 26.0  +2.9
          baz=315,SNR=22
D03D  Eldon            21.47 113  P      P      20 43 26.7  +2.9
          baz=317,SNR=14
EDM   Edmonton         22.55  90  P      P      20 43 35.2  +0.3
EDM                               pmax   pmax
          comp=Z,13nm,0.7s
EDM   Edmonton         22.55  90  P      P      20 43 35.2  +0.3
B08A  Colville Reser   22.65 106  P      P      20 43 36.8  +0.9
B08A                              IAmb   IAmb   20 43 39.2
          comp=Z,31nm,0.7s
G03D  McMinnville, O   23.15 117  P      P      20 43 43.2  +2.6
          baz=321
I02E  Swisshome, OR    23.76 120  P      P      20 43 44.6  -1.5
I02E                              IAmb   IAmb   20 43 50.7
          comp=Z,62nm,1.1s
I02E  Swisshome, OR    23.76 120  P      P      20 43 47.4  +1.3
          baz=323
NEW   Newport          23.78 104  P      P      20 43 48.4  +2.0
          comp=Z,28nm,0.8s,baz=316,slow=8.0,SNR=60
          comp=Z,28nm,0.8s
NEW   Newport          23.78 104  P      P      20 43 46.5  +0.1
NEW                               pmax   pmax
          comp=Z,25nm,0.8s
NEW   Newport          23.78 104  P      P      20 43 46.5  +0.1
NEW                               IAmb   IAmb   20 43 49.4
          comp=Z,25nm,0.8s
NEW   Newport          23.78 104  P      P      20 43 48.6  +2.2
          baz=313,SNR=31
H04D  Lebanon          23.92 117  P      P      20 43 49.8  +2.2
          baz=322
G05D  Wamic, OR        24.00 114  P      P      20 43 51.0  +2.7
          baz=320
F07A  Phinny Hill Vi   24.15 111  P      P      20 43 51.9  +2.3
I03D  Drain, OR        24.30 119  P      P      20 43 53.9  +2.8
          baz=323,SNR=5.7
J01E  Myrtle Point     24.48 121  P      P      20 43 56.3  +3.6
          baz=324
I04A  Tendick Farm,    24.64 118  P      P      20 43 56.9  +2.7
          baz=322,SNR=8.6
I05D  Terrebonne, OR   24.69 116  P      P      20 43 57.1  +2.5
          baz=321,SNR=13
WALA  Waterton Lakes   24.82  99  P      P      20 43 57.2  +1.4
K02D  Willamette Mer   24.97 121  P      P      20 44 00.4  +3.1
          baz=324,SNR=12
RES   Resolute Bay     25.14  32  P      P      20 43 58.5  +0.2
          comp=Z,8.4nm,0.6s,baz=261,slow=11,SNR=40
          comp=Z,8.4nm,0.6s
RES   Resolute Bay     25.14  32  P      P      20 43 58.9  +0.6
RES                               pmax   pmax
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      comp=Z,15nm,0.9s
RES   Resolute Bay    25.14  32    P      P      20 43 58.9 +0.6
J04D  Umpqua Nationa  25.21 118    P      P      20 44 02.7 +3.1
      baz=323
PINE  Pine Mountain   25.29 116    P      P      20 44 02.5 +2.3
PINE                               IAmb   IAmb   20 44 04.2
      comp=Z,19nm,0.8s
F10A  Beach Ranch, E  25.36 108    P      P      20 44 02.5 +1.8
SEY   Seymchan        25.51 300    P      P      20 44 03.2 +1.4
      comp=Z,1.4nm,0.4s,baz=82,slow=9.5,SNR=18
      comp=Z,1.4nm,0.4s
SEY   Seymchan        25.51 300⇑eP     P      20 44 04.0 +2.2
SEY                                pmax   pmax
      comp=Z,14nm,3.5s
JTMT  Jette           25.52 102    P      P      20 44 03.5 +1.3
JTMT                               ScP    ScP    20 50 56.9 -0.3
J05D  Fort Rock, OR   25.56 117    P      P      20 44 05.5 +2.9
      baz=322
L04D  Klamath Falls   25.95 120    P      P      20 44 08.5 +2.4
      baz=324
BMO   Blue Mountains  26.15 110    P      P      20 44 10.0 +2.1
BMO                                pmax   pmax
      comp=Z,16nm,0.7s
BMO   Blue Mountains  26.15 110    P      P      20 44 10.0 +2.1
BMO                                IAmb   IAmb   20 44 11.1
      comp=Z,16nm,0.7s
YBH   Yreka Blue Hor  26.17 121    P      P      20 44 10.5 +2.4
      comp=Z,9.1nm,0.8s,baz=351,slow=4.4,SNR=28
      comp=Z,9.1nm,0.8s
MSO   Missoula        26.33 103    P      P      20 44 11.1 +1.6
      baz=315,SNR=6.0
PLID  Pearl Lake      26.59 108    P      P      20 44 12.4 +0.3
KMPM  Mount Pierce    26.67 125    P      P      20 44 14.1 +1.5
KMPM                               IAmb   IAmb   20 44 16.3
      comp=Z,17nm,0.8s
O02D  Mt. Diablo Mer  27.43 123    P      P      20 44 22.0 +2.7
      baz=327
EUNU  Eureka          27.43  20    P      P      20 44 18.9  0.0
HRY   Holter Researc  27.44 101    P      P      20 44 20.4 +1.0
PEA0B Petropavlovsk-  27.45 277    P      P      20 44 19.1 -0.2
PEA0B                              pmax   pmax
      comp=Z,15nm,1.1s
PEA0B Petropavlovsk-  27.45 277    P      P      20 44 19.1 -0.2
PETK  Petropavlovsk-  27.45 277    P      P      20 44 20.0 +0.7
      comp=Z,3.3nm,0.9s,baz=70,slow=12,SNR=2.9
      comp=Z,3.3nm,0.9s
PETK  Petropavlovsk-  27.45 277    P      P      20 44 19.5 +0.2
PETK  Petropavlovsk-  27.45 277    P      P      20 44 19.5 +0.2
MA2   Magadan         27.52 294    P      P      20 44 21.1 +1.2
      comp=Z,6.8nm,0.5s,baz=62,slow=10,SNR=15
      comp=Z,6.8nm,0.5s
MA2   Magadan         27.52 294d iP     P      20 44 22.1 +2.2
MA2                                pmax   pmax
      comp=Z,9.0nm,1.3s
EGMT  Eagleton        27.57  97    P      P      20 44 21.0 +0.5
EGMT                               IAmb   IAmb   20 44 22.7
      comp=Z,12nm,0.8s
EGMT  Eagleton        27.57  97    P      P      20 44 21.8 +1.3
      baz=312,SNR=8.8
O03E  Paynes Creek    27.74 122    P      P      20 44 23.1 +0.9
O03E  Paynes Creek    27.74 122    P      P      20 44 24.3 +2.1
      baz=326,SNR=17
MFID  Camas Ranch     27.94 110    P      P      20 44 23.8 -0.1
MFID                               IAmb   IAmb   20 44 26.9
      comp=Z,15nm,0.8s
MCMT  McKenzie Canyo  28.30 105    P      P      20 44 28.7 +1.5
BOZ   Bozeman (W)     28.33 102    P      P      20 44 28.9 +1.5
BOZ                                pmax   pmax
      comp=Z,9.0nm,0.7s
BOZ   Bozeman (W)     28.33 102    P      P      20 44 28.9 +1.5
BOZ   Bozeman (W)     28.33 102    P      P      20 44 29.6 +2.2
      baz=316,SNR=14
HLID  Hailey          28.49 108    P      P      20 44 30.2 +1.3
HLID  Hailey          28.49 108    P      P      20 44 31.0 +2.1
      baz=319,SNR=16
BEKR  Beckworth       28.72 120    P      P      20 44 33.1 +2.2
BEKR                               IAmb   IAmb   20 44 34.1
      comp=Z,14nm,0.8s
YHL   Hebgen Lake     29.09 103    P      P      20 44 36.6 +2.3
YHL                                IAmb   IAmb   20 44 37.9
      comp=Z,15nm,0.8s
FCC   Fort Churchill  29.09  67    P      P      20 44 34.4 +0.6
FCC                                pmax   pmax
      comp=Z,29nm,0.9s
FCC   Fort Churchill  29.09  67    P      P      20 44 34.4 +0.6
PAHR  Pah Rah Range   29.27 119    P      P      20 44 36.1 +0.3
PAHR                               IAmb   IAmb   20 44 39.1
      comp=Z,15nm,1.0s
YHH   Holmes Hill     29.30 103    P      P      20 44 37.5 +1.4
YHH                                IAmb   IAmb   20 44 39.5
      comp=Z,16nm,0.7s
MPK   Martis Peak     29.33 121    P      P      20 44 38.1 +1.6
MPK                                IAmb   IAmb   20 44 40.0
      comp=Z,27nm,0.9s
PNTR  Pine Nut        29.69 120    P      P      20 44 41.5 +1.9
PNTR                               IAmb   IAmb   20 44 43.1
      comp=Z,21nm,0.8s
PNTR                               ScP    ScP    20 51 10.8 +0.6
YPP   Pitchstone Pla  29.70 103    P      P      20 44 40.9 +1.2
H17A  Grant Village   29.72 103    P      P      20 44 43.8 +4.0
      baz=317,SNR=8.5
RLMT  Red Lodge       29.83 100    P      P      20 44 43.8 +3.1
      baz=316
FLWY  Flagg Ranch     29.89 103    P      P      20 44 43.4 +2.1
YERR  Yerington       29.93 120    P      P      20 44 41.5 -0.2
MOOW  Moose Ponds     30.11 104    P      P      20 44 45.1 +1.8
TPAW  Teton Pass      30.21 104    P      P      20 44 46.5 +2.3
LAO   LASA Array      30.23  95    P      P      20 44 46.7 +2.6
      baz=314
CMB   Columbia Colle  30.24 122    P      P      20 44 43.9 -0.3
CMB                                pmax   pmax
      comp=Z,5.0nm,0.9s
CMB   Columbia Colle  30.24 122    P      P      20 44 43.9 -0.3
ELK   Elko            30.29 113    LR     LR     20 57 36.8
      comp=Z,32nm,18.2s,baz=330,slow=37
ELK   Elko            30.29 113    P      P      20 44 46.2 +1.3
ELK                                pmax   pmax
      comp=Z,16nm,1.0s
ELK   Elko            30.29 113    P      P      20 44 46.1 +1.3
ELK                                IAmb   IAmb   20 44 48.6
      comp=Z,16nm,0.9s
KVN   Kaiserville     30.37 118    P      P      20 44 47.0 +1.4
KVN                                pmax   pmax
      comp=Z,14nm,1.0s
KVN   Kaiserville     30.37 118    P      P      20 44 47.0 +1.4
KVN                                IAmb   IAmb   20 44 49.0
      comp=Z,14nm,1.0s
RYN   Ryan            30.54 119    P      P      20 44 47.7 +0.7
RYN                                IAmb   IAmb   20 44 50.2
      comp=Z,11nm,0.8s
NVAR  Mina Array Bea  30.80 119    P      P      20 44 51.7 +2.3
      comp=Z,14nm,0.7s,baz=311,slow=8.7,SNR=128
NVAR                               ScP    ScP    20 51 14.3 +0.5
      comp=Z,2.3nm,0.7s,baz=292,slow=2.9,SNR=20
NVAR                               LR     LR     20 55 16.3
      comp=Z,46nm,20.9s,baz=335,slow=32
      comp=Z,14nm,0.7s
NVAR  Mina Array Bea  30.80 119    P      P      20 44 51.1 +1.7
NV11  Mina Array Sit  30.86 119    P      P      20 44 51.8 +2.0
NV11                               IAmb   IAmb   20 44 53.3
      comp=Z,13nm,0.8s
BGU   Big Grassy Mou  31.18 110    P      P      20 44 54.2 +1.6
OMMB  Old Mammoth Mi  31.18 121    P      P      20 44 54.8 +2.0
OMMB                               IAmb   IAmb   20 44 56.7
      comp=Z,17nm,0.8s
MLAC  Mammoth, Mammo31.24 121      P      P      20 44 57.4 +4.1
      baz=327
TIXI  Tiksi           31.34 323    P      P      20 44 54.1 +0.7
      comp=Z,1.6nm,0.5s,baz=93,slow=22,SNR=21
TIXI                               ScP    ScP    20 51 11.6 -3.2
      comp=Z,1.6nm,0.6s,baz=90,slow=22,SNR=11
TIXI                               LR     LR     20 59 57.0
      comp=Z,20nm,19.4s,baz=242,slow=41
      comp=Z,1.6nm,0.5s
TIXI  Tiksi           31.34 323⇑iP     P      20 44 54.2 +0.7
TIXI                               pmax   pmax
      comp=Z,4.0nm,1.3s
TIXI  Tiksi           31.34 323    P      P      20 44 53.6 +0.2
TIXI                               ScP    ScP    20 51 12.0 -2.7
BW06  Boulder Array   31.42 104    P      P      20 44 57.2 +2.3
      baz=319,SNR=12
PD31  Pinedale Array  31.42 104    P      P      20 44 55.1 +0.3
PDAR  Pinedale Array  31.42 104    P      P      20 44 56.9 +2.1
      comp=Z,10nm,0.8s,baz=315,slow=5.2,SNR=63
PDAR                               ScP    ScP    20 51 14.8 -1.0
      comp=Z,0.4nm,0.7s,baz=86,slow=1.9,SNR=4.8
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      comp=Z,10nm,0.8s
PDAR  Pinedale Array  31.42 104    P      P      20 44 56.7 +1.9
DUG   Dugway, Tooele  31.86 111    P      P      20 44 59.9 +1.4
DUG                                pmax   pmax
      comp=Z,14nm,0.8s
DUG   Dugway, Tooele  31.86 111    P      P      20 44 59.9 +1.4
DUG                                IAmb   IAmb   20 45 01.8
      comp=Z,14nm,0.8s
DUG   Dugway, Tooele  31.86 111    P      P      20 45 00.9 +2.4
      baz=322,SNR=14
TIN   Tinemaha, Big   31.98 121    P      P      20 45 03.4 +3.8
      baz=328
R11A  Troy Canyon, C  32.07 116    P      P      20 45 02.4 +1.9
R11A                               IAmb   IAmb   20 45 03.6
      comp=Z,11nm,0.9s
R11A  Troy Canyon, C  32.07 116    P      P      20 45 02.7 +2.2
      baz=325,SNR=24
NLU   North Lily Min  32.39 110    P      P      20 45 05.2 +1.9
NLU                                IAmb   IAmb   20 45 06.4
      comp=Z,19nm,0.8s
CWC   Cottonwood Cre  32.56 121    P      P      20 45 07.8 +3.0
      baz=328
VES   Vestal, Richgr  32.65 123    P      P      20 45 07.6 +2.3
      baz=329
PSUT  Pine Spring     32.70 114    P      P      20 45 07.7 +1.7
PSUT                               IAmb   IAmb   20 45 09.5
      comp=Z,16nm,1.0s
SMMC  Simmler         32.72 125    P      P      20 45 08.7 +2.7
      baz=330
TPNV  Topopah Spring  32.93 118    P      P      20 45 10.2 +2.3
TPNV                               pmax   pmax
      comp=Z,10.0nm,0.7s
TPNV  Topopah Spring  32.93 118    P      P      20 45 10.2 +2.3
TPNV                               IAmb   IAmb   20 45 10.8
      comp=Z,10nm,0.7s
TPNV  Topopah Spring  32.93 118    P      P      20 45 10.3 +2.3
      baz=327,SNR=17
K22A  Casper          32.99 101    P      P      20 45 10.4 +2.0
      baz=318,SNR=6.9
ULM   Lac du Bonnet   33.03  81    P      P      20 45 10.1 +1.6
      comp=Z,8.5nm,0.6s,baz=303,slow=8.5,SNR=11
      comp=Z,8.5nm,0.6s
ULM   Lac du Bonnet   33.03  81⇑eP     P      20 45 09.4 +1.0
ISA   Isabella, Lake  33.06 122    P      P      20 45 11.2 +2.2
      baz=329,SNR=9.0
FURC  Furnace Creek,  33.07 119    P      P      20 45 11.8 +3.0
      baz=327,SNR=6.5
RDMU  Red Mountain    33.10 107    P      P      20 45 09.8 +0.4
RDMU                               IAmb   IAmb   20 45 13.4
      comp=Z,24nm,1.0s
RSSD  Black Hills     33.14  97    P      P      20 45 09.5 -0.3
RSSD                               pmax   pmax
      comp=Z,19nm,1.0s
RSSD  Black Hills     33.14  97    P      P      20 45 09.5 -0.3
RSSD                               IAmb   IAmb   20 45 12.9
      comp=Z,19nm,1.0s
RSSD  Black Hills     33.14  97    P      P      20 45 12.1 +2.3
      baz=316
MPMC  Manual Prospec  33.14 121    P      P      20 45 12.6 +2.8
      baz=328,SNR=13
PKM   Mcpherson Peak  33.16 125    P      P      20 45 13.0 +3.0
      baz=330,SNR=8.9
TMUT  Trail Mountain  33.32 110    P      P      20 45 12.5 +1.0
TMUT                               IAmb   IAmb   20 45 14.9
      comp=Z,16nm,0.9s
ARVC  Arvin           33.37 123    P      P      20 45 14.2 +2.7
      baz=329
LRMC  Laurel Mtn Rad  33.55 121    P      P      20 45 15.6 +2.3
      baz=328,SNR=10
Q16A  Castle Valley   33.64 110    P      P      20 45 16.3 +2.2
SHPR  Sheep Range     33.78 117    P      P      20 45 17.1 +1.8
SHOC  Shoshone, Teco  33.80 119    P      P      20 45 18.1 +2.8
      baz=328
EDW2  Edwards Air Fo  33.93 122    P      P      20 45 18.3 +1.9
      baz=329
O20A  White River Ci  34.07 106    P      P      20 45 20.2 +2.4
      baz=321,SNR=22
GSC   Goldstone, Bar  34.08 121    P      P      20 45 20.3 +2.5
      baz=328,SNR=13
AGMN  Agassiz Nation  34.31  84    P      P      20 45 21.4 +1.8
      baz=312,SNR=7.2
TUQ   Turquoise Moun  34.34 119    P      P      20 45 23.0 +2.8
      baz=328,SNR=9.9
N23A  Red Feather La  34.60 102    P      P      20 45 24.7 +2.2
      baz=320,SNR=7.6
BFSC  Mount Baldy Ra  34.62 123    P      P      20 45 25.3 +2.7
      baz=329,SNR=7.2
HEC   Hector,Ludlow   34.68 120    P      P      20 45 25.4 +2.4
      baz=328
GMRC  Granite Mounta  35.01 120    P      P      20 45 28.3 +2.4
      baz=328,SNR=14
U15A  North Rim       35.14 114    ScP    ScP    20 51 30.1 +1.1
PV07  Paradox Valley  35.21 108    P      P      20 45 28.4 +0.7
PV07                               IAmb   IAmb   20 45 30.6
      comp=Z,20nm,0.9s
YAK   Yakutsk         35.37 307    LR     LR     21 01 38.2
      comp=Z,36nm,18.5s,baz=90,slow=39
YAK   Yakutsk         35.37 307⇓eP     P      20 45 29.4 +1.0
YAK                                pmax   pmax
      comp=Z,10.0nm,0.8s
SMCO  Snowmass        35.43 105    P      P      20 45 28.9 -0.8
BELC  Belle Mtn. Jos  35.53 121    P      P      20 45 32.3 +1.9
      baz=329,SNR=10.0
ISCO  Idaho Springs   35.60 103    P      P      20 45 31.1  0.0
ISCO                               pmax   pmax
      comp=Z,3.0nm,0.9s
ISCO  Idaho Springs   35.60 103    P      P      20 45 31.1  0.0
ISCO  Idaho Springs   35.60 103    P      P      20 45 33.6 +2.4
      baz=321,SNR=5.3
PFO   Pinyon Flats O  35.66 122⇑eP     P      20 45 33.2 +1.7
PFO                                pmax   pmax
      comp=Z,21nm,1.1s
PFO   Pinyon Flats O  35.66 122    P      P      20 45 33.4 +1.9
      baz=329,SNR=5.1
IRM   Iron Mountain   35.77 120    P      P      20 45 34.7 +2.4
      baz=328,SNR=15
BC3   Big Chuckawall  36.06 120    P      P      20 45 36.7 +1.9
      baz=329
PDMCI Parker Dam,Lak  36.08 118    P      P      20 45 37.2 +2.3
      baz=328,SNR=7.0
MVCO  Mesa Verde      36.27 109    P      P      20 45 38.0 +1.3
MVCO                               IAmb   IAmb   20 45 39.4
      comp=Z,12nm,0.7s
MVCO  Mesa Verde      36.27 109    P      P      20 45 38.7 +2.0
      baz=324,SNR=10.0
MONP2 Monument Peak   36.30 122    P      P      20 45 39.3 +2.3
      baz=330,SNR=7.1
WUAZ  Wupatki         36.31 114    P      P      20 45 37.8 +0.8
WUAZ  Wupatki         36.31 114    P      P      20 45 39.6 +2.6
      baz=326,SNR=47
Q24A  Divide          36.48 104    P      P      20 45 41.2 +2.6
      baz=322,SNR=7.8
OGNE  Ogallala        36.48  98    P      P      20 45 40.3 +2.0
      baz=319
SWSC  Sam W. Stewart  36.52 121    P      P      20 45 40.5 +2.0
      baz=330
NOR   Nord            36.52  10  i P      P      20 45 37.6 -0.5
NOR                                IAmb   IAmb   20 45 40.6
      comp=Z,15nm,1.3s
S22A  4UR Ranch, Cre  36.63 107    P      P      20 45 42.6 +2.7
      baz=323,SNR=14
IKP   In-Ko-Pah, Jac  36.64 122    P      P      20 45 42.1 +2.3
      baz=330,SNR=5.2
EYMN  Ely             36.71  81    P      P      20 45 40.4 +0.3
EYMN  Ely             36.71  81    P      P      20 45 41.3 +1.2
      baz=313,SNR=6.3
GLA   Glamis          36.84 120    P      P      20 45 43.7 +2.2
      baz=329,SNR=5.2
FRB   Frobisher Bay   37.12  47    LR     LR     21 03 23.7
      comp=Z,48nm,19.1s,baz=100,slow=40
ECSD  EROS Data Cent  37.12  90    P      P      20 45 44.2 +0.6
ECSD  EROS Data Cent  37.12  90    P      P      20 45 44.9 +1.3
      baz=316,SNR=5.6
SDCO  Great Sand Dun  37.27 105    P      P      20 45 47.7 +2.5
      baz=322,SNR=12
W18A  Petrified Fore  37.39 112    P      P      20 45 48.2 +2.1
      baz=326
E38A  The Farm, Brul  37.60  83    P      P      20 45 48.0 +0.3
KSCO  Kaye Shedlock'  37.67 101    P      P      20 45 51.0 +2.5
      baz=321
BGNE  Belgrade        38.06  94    P      P      20 45 53.7 +2.1
      baz=318
T25A  Trinidad        38.28 105    P      P      20 45 56.3 +2.6
      baz=323,SNR=9.5
214A  Organ Pipe Nat  38.66 119    P      P      20 45 59.0 +2.4
      baz=329,SNR=8.5
ANMO  Albuquerque     39.06 109ceP     P      20 46 01.9 +1.7
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ANMO                               pmax   pmax
      comp=Z,4.0nm,0.7s
ANMO  Albuquerque     39.06 109    P      P      20 46 01.2 +1.0
ANMO  Albuquerque     39.06 109    P      P      20 46 02.4 +2.2
      baz=325
TUC   Tucson          39.26 116    P      P      20 46 03.4 +1.7
TUC                                pmax   pmax
      comp=Z,10.0nm,1.0s
TUC   Tucson          39.26 116    P      P      20 46 03.4 +1.7
TUC   Tucson          39.26 116    P      P      20 46 04.3 +2.6
      baz=328
Y22D  IRIS PASSCAL I  39.56 110    P      P      20 46 07.6 +3.3
      baz=326
E43A  Lone Tree Farm  40.02  80    P      P      20 46 08.3 +0.6
DAG   Danmarks Havn   40.31  15  i P      P      20 46 09.0 -0.8
DAG                                IAmb   IAmb   20 46 09.8
      comp=Z,18nm,0.8s
121A  Cookes Peak, D  40.44 113    P      P      20 46 12.9 +1.3
121A                               IAmb   IAmb   20 46 15.2
      comp=Z,19nm,0.8s
121A  Cookes Peak, D  40.44 113    P      P      20 46 14.3 +2.7
      baz=327,SNR=14
KSU1  Kansas State U  40.58  95    P      P      20 46 14.0 +1.5
      baz=320,SNR=6.4
KBS   Kingsbay        40.84   4  eP     P      20 46 16.0 +2.0
JFWS  Jewell Farm     40.89  86    P      P      20 46 15.3 +0.3
JFWS                               pmax   pmax
      comp=Z,12nm,0.7s
JFWS  Jewell Farm     40.89  86    P      P      20 46 15.3 +0.3
JFWS                               IAmb   IAmb   20 46 18.3
      comp=Z,12nm,0.7s
JFWS  Jewell Farm     40.89  86    P      P      20 46 16.0 +1.0
      baz=317
SFJD  Kangerlussuaq   41.02  36    P      P      20 46 16.3 +0.6
SFJD                               pmax   pmax
      comp=Z,37nm,0.7s
SFJD  Kangerlussuaq   41.02  36    P      P      20 46 16.3 +0.6
SFJD  Kangerlussuaq   41.02  36  i P      P      20 46 15.4 -0.3
SFJD                               IAmb   IAmb   20 46 17.0
      comp=Z,22nm,0.7s
L40A  Anamosa         41.04  88    P      P      20 46 16.5 +0.4
L40A                               IAmb   IAmb   20 46 24.4
      comp=Z,16nm,0.8s
E46A  Sault Ste Mari  41.34  78    P      P      20 46 20.2 +1.7
AMTX  Amarillo        41.40 104    P      P      20 46 21.5 +2.2
      baz=324
MSTX  Muleshoe        41.62 106    P      P      20 46 23.1 +2.0
      baz=325,SNR=9.8
SPA0  Spitsbergen Ar  41.73   3  eP     P      20 46 20.9 -0.5
SPITS Spitsbergen Ar  41.73   3    P      P      20 46 19.8 -1.6
SPITS                              pmax   pmax
      comp=Z,37nm,0.9s
SPB2  Spitsbergen Ar  41.73   3    P      P      20 46 21.2 -0.2
DBG   Daneborg        42.17  17  i P      P      20 46 24.4 -0.5
DBG                                IAmb   IAmb   20 46 27.3
      comp=Z,12nm,0.6s
MNTX  Cornudas Mount  42.25 111    P      P      20 46 28.3 +2.2
MNTX                               IAmb   IAmb   20 46 29.5
      comp=Z,18nm,0.8s
MNTX  Cornudas Mount  42.25 111    P      P      20 46 28.7 +2.5
      baz=327,SNR=32
T35A  Sooner Cattle   42.33  97    P      P      20 46 27.2 +0.5
T35A                               IAmb   IAmb   20 46 28.8
      comp=Z,18nm,0.9s
ICESG Greenland Ices  42.49  29  i P      P      20 46 28.1 +0.1
ICESG                              IAmb   IAmb   20 46 28.8
      comp=Z,42nm,0.8s
KLR   Kul'dur         42.49 290⇓eP     P      20 46 28.4 +0.5
KLR                                pmax   pmax
      comp=Z,10.0nm,2.1s
DY2G  Dye2            42.63  35  i P      P      20 46 29.1  0.0
DY2G                               IAmb   IAmb   20 46 30.2
      comp=Z,19nm,0.6s
HSPB  Hornsund (broa  42.87   4  eP     P      20 46 31.7 +1.1
HDIL  Hopedale        43.13  87    P      P      20 46 34.0 +0.9
      baz=319
VLDQ  Val d'Or        43.39  71    P      P      20 46 34.4 -0.7
SCHQ  Schefferville   43.45  57    P      P      20 46 35.9 +0.4
      comp=Z,14nm,0.6s,baz=319,slow=7.3,SNR=62
SCHQ                               ScP    ScP    20 51 59.6 -0.8
      comp=Z,3.6nm,0.8s,baz=321,slow=4.0,SNR=4.4
      comp=Z,14nm,0.6s
SCHQ  Schefferville   43.45  57    P      P      20 46 36.0 +0.5
SCHQ                               IAmb   IAmb   20 46 36.5
      comp=Z,13nm,0.7s
TUL1  Leonard         43.47  97    P      P      20 46 37.3 +1.3
      baz=322
HOPEN Hopen           43.55   1  eP     P      20 46 35.5 -0.5
NRIK  Noril'sk        43.74 333    P      P      20 46 38.3 +0.7
      comp=Z,28nm,0.6s,baz=54,slow=6.4,SNR=35
NRIK                               LR     LR     21 07 46.1
      comp=Z,28nm,19.1s,baz=272,slow=40
      comp=Z,28nm,0.6s
NRIK  Noril'sk        43.74 333d iP     P      20 46 38.0 +0.4
NRIK                               pmax   pmax
      comp=Z,28nm,0.6s
NRIK  Noril'sk        43.74 333    P      P      20 46 37.2 -0.4
BOD   Bodaibo         44.14 310  eP     P      20 46 40.9 -0.1
BOD                                pmax   pmax
      comp=Z,7.0nm,1.0s
ABTX  Abilene, Hawle  44.22 104    P      P      20 46 41.8 -0.3
ABTX                               IAmb   IAmb   20 46 43.8
      comp=Z,12nm,0.6s
ABTX  Abilene, Hawle  44.22 104    P      P      20 46 43.5 +1.5
      baz=325,SNR=6.7
U40A  Yellville       44.58  94    P      P      20 46 46.1 +1.3
      baz=322
AAM   Ann Arbor       44.62  81    P      P      20 46 46.6 +1.6
      baz=318
TXAR  Lajitas Array   45.03 111    P      P      20 46 50.6 +2.0
      comp=Z,13nm,0.9s,baz=321,slow=6.4,SNR=60
TXAR                               ScP    ScP    20 52 06.7 -0.8
      comp=Z,1.6nm,0.8s,baz=222,slow=1.7,SNR=5.9
      comp=Z,13nm,0.9s
TXAR  Lajitas Array   45.03 111    P      P      20 46 50.5 +1.9
W39A  Magazine        45.04  96    P      P      20 46 49.2 +0.9
      baz=323
O48B  Farmland        45.41  84    P      P      20 46 51.7 +0.3
      baz=320,SNR=5.4
BJO1  Bjornoya        45.47   3  eP     P      20 46 51.2 -0.1
MIAR  Mount Ida       45.66  97    P      P      20 46 54.1 +0.9
      baz=323,SNR=5.3
JCT   Junction City   45.91 106    P      P      20 46 57.1 +1.8
JCT                                pmax   pmax
      comp=Z,110nm,0.7s
JCT   Junction City   45.91 106    P      P      20 46 57.1 +1.8
JCT   Junction City   45.91 106    P      P      20 46 57.4 +2.0
      baz=326,SNR=56
TRQ   Mont Tremblant  46.12  71    P      P      20 46 57.7 +0.8
TRQ                                IAmb   IAmb   20 46 58.2
      comp=Z,17nm,0.8s
ACSO  Alum Creek Sta  46.51  83    P      P      20 47 01.0 +1.1
      baz=320
ERPA  Erie            46.56  78    P      P      20 47 01.7 +1.4
      baz=319
435B  Jarrell         46.73 103    P      P      20 47 03.8 +2.1
      baz=326
M53A  WI Miller and   46.73  80    P      P      20 47 02.7 +1.1
M53A  WI Miller and   46.73  80    P      P      20 47 02.9 +1.3
      baz=319,SNR=9.0
WVNY  West Valley, N  47.02  77    P      P      20 47 04.8 +1.0
WVNY                               IAmb   IAmb   20 47 06.0
      comp=Z,23nm,0.8s
WVT   Waverly         47.27  90    P      P      20 47 07.3 +1.5
WVT                                pmax   pmax
      comp=Z,4.0nm,0.8s
WVT   Waverly         47.27  90    P      P      20 47 07.3 +1.5
WVT   Waverly         47.27  90    P      P      20 47 07.1 +1.2
      baz=322
LONY  Lake Ozonia     47.30  72    P      P      20 47 06.3 +0.3
      baz=318,SNR=5.3
O53A  New Philadelph  47.37  81    P      P      20 47 07.3 +0.7
      baz=320
P52A  Corning         47.39  82    P      P      20 47 07.2 +0.4
      baz=320
FRNY  Flat Rock       47.61  71    P      P      20 47 07.9 -0.5
FRNY                               IAmb   IAmb   20 47 08.9
      comp=Z,12nm,0.8s
OXF   Oxford          47.76  93    P      P      20 47 09.5 -0.1
OXF                                pmax   pmax
      comp=Z,30nm,0.8s
OXF   Oxford          47.76  93    P      P      20 47 09.4 -0.1
OXF   Oxford          47.76  93    P      P      20 47 11.0 +1.4
      baz=323,SNR=7.3
833A  Chaparral WMA,  47.90 107    P      P      20 47 12.7 +1.9
      baz=327
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NCB	Newcomb	47.95	72	P	P	20 47 11.1	0.0
NCB				IAmb	IAmb	20 47 11.9	
	comp=Z,6.5nm,0.6s						
D62A	Allapoint, All	48.05	66	P	P	20 47 12.4	+0.7
D62A				IAmb	IAmb	20 47 13.3	
	comp=Z,21nm,0.8s						
HKT	Hockley	48.27	102	⇑eP	P	20 47 15.5	+2.0
HKT				pmax	pmax		
	comp=Z,15nm,1.4s						
BINY	Binghamton	48.45	75	P	P	20 47 16.1	+1.2
	baz=319,SNR=14						
SSPA	Standing Stone	48.71	78	P	P	20 47 18.2	+1.3
SSPA				IAmb	IAmb	20 47 18.5	
	comp=Z,12nm,0.8s						
SSPA	Standing Stone	48.71	78	P	P	20 47 18.2	+1.3
	baz=320						
G62A	West of Eustis	48.76	69	P	P	20 47 17.7	+0.5
G62A				IAmb	IAmb	20 47 18.7	
	comp=Z,14nm,0.7s						
MAJO	Matsushiro	48.78	273	⇑eP	P	20 47 17.4	-0.1
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	48.78	273	P	P	20 47 17.1	-0.4
	comp=Z,2.2nm,0.8s,baz=38,slow=8.4,SNR=5.7						
	comp=Z,2.2nm,0.8s						
LBNH	Lisbon	48.84	71	P	P	20 47 17.4	-0.4
	baz=319						
F63A	Nahmakanta, Br	49.05	67	P	P	20 47 19.7	+0.2
F63A				IAmb	IAmb	20 47 21.1	
	comp=Z,12nm,0.8s						
BATG	Bathurst New B	49.25	64	P	P	20 47 21.5	+0.6
BATG				IAmb	IAmb	20 47 22.5	
	comp=Z,18nm,1.0s						
F64A	Sherman	49.28	67	P	P	20 47 21.6	+0.4
PKME	Peaks-Kenny Pk	49.30	68	P	P	20 47 21.9	+0.6
	baz=319						
CN2	Changchun	49.43	289	eP	P	20 47 22.9	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HAMF	Hammerfest	49.44	1	eP	P	20 47 21.4	-0.5
Y49A	Blount Mountai	49.78	91	P	P	20 47 24.1	-0.9
Y49A				IAmb	IAmb	20 47 32.0	
	comp=Z,7.2nm,0.6s						
ODNJ	Ogdensburg	49.97	75	P	P	20 47 26.6	+0.2
TRO	Tromso	50.34	4	eP	P	20 47 28.9	+0.1
PAL	Palisades	50.36	75	P	P	20 47 30.1	+0.8
	baz=320						
JETT	Jettan, Norway	50.47	3	eP	P	20 47 29.6	-0.2
ARA0	ARCESS Array S	50.57	1	eP	P	20 47 30.1	-0.5
ARCES	ARCESS Array B	50.57	1	P	P	20 47 29.7	-0.9
	comp=Z,2.2nm,0.5s,baz=3.1,slow=6.6,SNR=26						
	comp=Z,2.2nm,0.5s						
ARCES	ARCESS Array B	50.57	1	P	P	20 47 30.1	-0.5
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	50.57	1	P	P	20 47 30.1	-0.5
KTK1	Kautokeino	51.07	2	eP	P	20 47 33.9	-0.4
DRLN	Deer Lake	51.45	57	P	P	20 47 37.1	-0.3
LOF	Lofoten	51.61	6	eP	P	20 47 38.0	-0.2
STEI	Steigen	51.90	6	eP	P	20 47 40.0	-0.4
FAUS	Fauske	52.44	6	eP	P	20 47 44.7	+0.3
GBN	Guysborough	52.71	62	P	P	20 47 46.7	0.0
GBN				IAmb	IAmb	20 47 48.3	
	comp=Z,13nm,0.8s						
KSRS	Korea Array	53.15	282	P	P	20 47 50.8	+0.7
	comp=Z,4.2nm,0.8s,baz=33,slow=6.7,SNR=13						
	comp=Z,4.2nm,0.8s						
STOK	Stokkvaagen	53.36	7	eP	P	20 47 50.8	-0.4
XLT	XiLinHaoTe	53.66	296	eP	P	20 47 53.3	-0.6
XLT				pP	pP	20 48 21.5	-2.4
XLT				sP	sP	20 48 36.7	-1.4
XLT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,81nm,5.1s						
MOY	Mondy	53.72	312	eP	P	20 47 56.1	+1.9
ULN	Ulaanbaatar	54.40	305	d iP	P	20 48 00.4	+1.1
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	54.40	305	P	P	20 48 00.5	+1.2
ULN				IAmb	IAmb	20 48 01.3	
	comp=Z,7.2nm,0.7s						
SONM	Songino Array	54.69	306	P	P	20 48 02.9	+1.6
	comp=Z,12nm,0.7s,baz=41,slow=6.9,SNR=113						
SONM				ScP	ScP	20 52 46.7	-1.8
	comp=Z,0.9nm,0.9s,baz=103,slow=3.2,SNR=4.0						
	comp=Z,12nm,0.7s						
SONM	Songino Array	54.69	306	P	P	20 48 02.7	+1.3
SONM				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	Songino Array	54.69	306	P	P	20 48 02.7	+1.3
SONM				IAmb	IAmb	20 48 03.9	
	comp=Z,13nm,0.8s						
NSS	Namsos	55.08	8	eP	P	20 48 03.6	-0.1
KNGR	Kungurtug, Tuv	55.86	313	⇑iP	P	20 48 11.5	+1.9
ZALV	Zalesovo Beam	57.23	324	P	P	20 48 19.8	+0.6
	comp=Z,24nm,0.6s,baz=30,slow=7.1,SNR=85						
	comp=Z,24nm,0.6s						
DOMB	Dombas	57.32	10	eP	P	20 48 18.7	-1.0
PRGR	Permogore	57.66	350	eP	P	20 48 21.4	-0.6
SUE	Sulen	57.87	13	eP	P	20 48 23.7	+0.3
NB2	NORSAR Subarra	58.49	9	P	P	20 48 26.8	-1.0
	comp=Z,2.3nm,0.7s,baz=351,slow=6.9						
NB2	NORSAR Subarra	58.49	9	P	P	20 48 26.8	-1.0
	baz=351,slow=6.9						
NOA	NORSAR Array B	58.49	9	P	P	20 48 27.1	-0.7
	comp=Z,4.3nm,0.8s,baz=352,slow=7.0,SNR=15						
	comp=Z,4.3nm,0.8s						
BER	Bergen	58.59	12	eP	P	20 48 26.2	-2.2
SKAR	Skarslia	58.59	11	eP	P	20 48 27.9	-0.7
FINES	FINESS Array B	58.70	1	P	P	20 48 28.4	-0.8
	comp=Z,2.8nm,0.6s,baz=9.3,slow=9.1,SNR=14						
	comp=Z,2.8nm,0.6s						
NC602	NORSAR Array S	58.81	9	eP	P	20 48 30.0	0.0
KLMR	Klimovskoe	58.91	353	eP	P	20 48 28.8	-1.8
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	Klimovskoe	58.91	353	eP	P	20 48 28.8	-1.8
KLMR				AMP		20 48 38.3	
	comp=Z,13nm,1.4s						
CMIG	Matias Romero	59.62	110	P	P	20 48 36.0	-0.1
	comp=Z,4.1nm,0.6s,baz=356,slow=5.2,SNR=7.0						
	comp=Z,4.1nm,0.6s						
KONO	Kongsberg	59.73	10	eP	P	20 48 36.4	+0.1
KIRV	Kirov	60.27	347	ceP	P	20 48 40.0	0.0
ARU	Arti	61.08	341	d iP	P	20 48 44.8	-0.7
ARU				*PP	pP	20 49 16.6	0.0
ARU						20 49 24.7	
ARU				S	S	20 56 54.6	+0.7
ARU				pmax	pmax		
	comp=Z,11nm,0.6s						
KURK	Kurchatov	61.88	326	d iP	P	20 48 51.0	0.0
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	Kurchatov	61.88	326	P	P	20 48 50.7	-0.3
KURK				IAmb	IAmb	20 48 52.0	
	comp=Z,8.7nm,0.8s						
NJ2	Nanjing	61.90	286	eP	P	20 48 50.6	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BRVK	Borovoye	61.91	332	d iP	P	20 48 50.4	-0.7
BRVK				pmax	pmax		
	comp=Z,27nm,1.7s						
BRVK	Borovoye	61.91	332	P	P	20 48 50.8	-0.4
BRVK				IAmb	IAmb	20 48 52.0	
	comp=Z,11nm,0.7s						
BVAR	Borovoye Array	61.91	332	P	P	20 48 50.7	-0.5
	comp=Z,4.7nm,0.7s						
	comp=Z,4.7nm,0.7s						
BORU	Boraas	61.98	9	eP	P	20 48 50.1	-1.4
KURBB	Kurchatov Arra	61.99	326	P	P	20 48 51.9	+0.2
	comp=Z,6.4nm,0.6s,baz=28,slow=6.7,SNR=48						
KURBB				PP	PP	20 51 05.0	-4.0
	comp=Z,1.7nm,0.9s,baz=29,slow=9.3,SNR=4.3						
	comp=Z,6.4nm,0.6s						
ONAU	Onsala	62.16	9	iP	P	20 48 51.7	-1.0
EKA	Eskdalemuir Ar	62.35	19	P	P	20 48 54.0	-0.1
	comp=Z,14nm,0.6s,baz=329,slow=5.3,SNR=50						
	comp=Z,14nm,0.6s						
DEL	Delary	63.22	8	iP	P	20 48 59.0	-0.8
BLEU	Blekinge	63.52	7	iP	P	20 49 01.2	-0.5
BJUU	Bjuv	63.55	9	iP	P	20 49 01.5	-0.5
LUNU	Lund	64.02	9	iP	P	20 49 04.6	-0.5
MK31	Makanchi Array	64.30	321	d iP	P	20 49 06.5	-0.6
MKAR	Makanchi Array	64.30	321	P	P	20 49 06.8	-0.3
	comp=Z,2.7nm,0.7s,baz=41,slow=6.0,SNR=28						
	comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	64.30	321	P	P	20 49 06.6	-0.5
MKAR	Makanchi Array	64.30	321	P	P	20 49 06.6	-0.5
GTA	Gaotai	64.33	305	eP	P	20 49 08.1	+0.5
GTA				sP	PcP	20 49 40.1	-1.0
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	Makanchi	64.38	321	P	P	20 49 08.5	+0.9
MAKZ	Makanchi	64.38	321	P	P	20 49 07.5	-0.1
OBN	Obninsk	64.80	354	eP	P	20 49 10.7	+0.6
OBN				e*PP	pP	20 49 38.6	-2.7
OBN				e		20 49 43.4	
OBN				e*SP	sP	20 49 58.7	+3.4
OBN				e		20 51 34.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMQ	Urumqi	65.14	316	eP	P	20 49 17.7	+5.1
LZH	Lanzhou	65.44	300	eP	P	20 49 15.2	+0.4
LZH				pP	pP	20 49 46.8	+0.8
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
BELG	Belogornoye	66.56	346	ceP	P	20 49 21.7	+0.3
BELG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKTO	Aktyubinsk	66.92	339	P	P	20 49 22.9	-1.0
	comp=Z,3.9nm,0.5s,baz=30,slow=4.9,SNR=13						
	comp=Z,3.9nm,0.5s						
ABKAR	Akbulak array	67.70	337	P	P	20 49 28.3	-0.4
VORR	Voronezh	68.06	352	eP	P	20 49 31.4	+0.5
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SNF	Seneffe	68.14	15	dP	P	20 49 31.4	0.0
	comp=Z,10.0nm,0.6s						
BSTI	Sart Tilman	68.23	15	dP	P	20 49 32.3	+0.3
	comp=Z,4.9nm,0.7s						
MEM	Membach	68.26	14	dP	P	20 49 32.4	+0.2
	comp=Z,7.8nm,0.6s						
CLL	Collm	68.28	9	iP	P	20 49 32.1	-0.2
CLL				i *PP	pP	20 50 06.8	+2.9
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	Collm	68.28	9	iP	P	20 49 32.1	-0.2
	comp=Z,7.0nm,1.0s						
CLL				i pP	pP	20 50 06.8	+2.9
BTNL	Ternell	68.30	14	dP	P	20 49 32.4	0.0
	comp=Z,6.9nm,1.0s						
BCLA	Clavier	68.36	15	κP	P	20 49 32.8	0.0
	comp=Z,7.1nm,0.6s						
BGES	Gesves	68.36	15	κP	P	20 49 32.7	-0.2
	comp=Z,7.1nm,0.7s						
BMRD	Maredsous	68.40	15	dP	P	20 49 33.3	+0.2
	comp=Z,7.8nm,0.8s						
BHOU	Houvegnez	68.51	14	dP	P	20 49 34.2	+0.4
DOU	Dourbes	68.58	15	dP	P	20 49 33.9	-0.3
	comp=Z,5.9nm,0.9s						
RCHB	Rochefort	68.61	15	κP	P	20 49 34.1	-0.3
	comp=Z,13nm,0.7s						
BRG	Berggiesshubel	68.79	9	eP	P	20 49 36.0	+0.4
BRG				Amp		20 49 38.3	
	comp=Z,8.0nm,1.0s						
BRG	Berggiesshubel	68.79	9	eP	P	20 49 35.9	+0.4
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WLF	Walferdange	69.20	14	dP	P	20 49 38.1	0.0
	comp=Z,8.9nm,1.0s						
CHVC	Chvalec	69.22	7	eP	P	20 49 38.3	+0.1
OSTC	Ostas	69.27	7	eP	P	20 49 38.8	+0.3
UPC	Upice	69.30	7	eP	P	20 49 38.9	+0.2
UPC	Upice	69.30	7	eP	P	20 49 38.9	+0.2
NKC	Novy Kostel	69.31	10	eP	P	20 49 38.4	-0.3
NKC	Novy Kostel	69.31	10	eP	P	20 49 38.4	-0.3
AKASG	Malin Array Be	69.45	359	P	P	20 49 38.2	-1.3
	comp=Z,0.9nm,0.4s,baz=6.6,slow=5.7,SNR=5.4						
	comp=Z,0.9nm,0.4s						
AKASG	Malin Array Be	69.45	359	iP	P	20 49 38.5	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	69.45	359	⇑eP	P	20 49 38.9	-0.7
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.4s						
DPC	Dobruska-Polom	69.48	7	eP	P	20 49 39.7	-0.1
DPC	Dobruska-Polom	69.48	7	eP	P	20 49 39.7	-0.1
PRU	Pruhonice	69.72	9	eP	P	20 49 41.6	+0.4
PRU	Pruhonice	69.72	9	eP	P	20 49 41.6	+0.4
KRLC	Kraliky	69.78	7	eP	P	20 49 41.7	0.0
KRLC	Kraliky	69.78	7	eP	P	20 49 41.7	0.0
MORC	Moravsky Berou	70.12	7	P	P	20 49 44.4	+0.6
MORC	Moravsky Berou	70.12	7	eP	P	20 49 43.4	-0.4
CLF	Chambon-Foret	70.28	17	P	P	20 49 43.7	-0.9
CLF				IAmb	IAmb	20 49 45.5	
	comp=Z,18nm,0.8s						
AAK	Ala-Archa	70.41	325	P	P	20 49 46.3	+0.5
	comp=Z,0.8nm,0.4s,baz=63,slow=5.1,SNR=6.0						
	comp=Z,0.8nm,0.4s						
AAK	Ala-Archa	70.41	325	⇑eP	P	20 49 46.5	+0.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KHC	Kasperske Hory	70.49	9	⇑iP	P	20 49 45.6	-0.5
KHC				pmax	pmax		
	comp=Z,18nm,1.1s						
KHC	Kasperske Hory	70.49	9	eP	P	20 49 45.5	-0.5
VRAC	Vranov	70.53	7	⇑P	P	20 49 46.6	+0.4
VRAC	Vranov	70.53	7	P	P	20 49 47.9	+1.7
VRAC	Vranov	70.53	7	eP	P	20 49 46.5	+0.3
KRUC	Moravsky	70.77	7	eP	P	20 49 47.8	+0.2
GERES	GERESS Array B	70.79	9	P	P	20 49 48.0	+0.1
	comp=Z,1.6nm,0.6s,baz=338,slow=5.7,SNR=6.2						
	comp=Z,1.6nm,0.6s						
LANS	Liptovska Anna	70.85	5	eP	P	20 49 49.4	+1.2
LANS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
LANS	Liptovska Anna	70.85	5	eP	P	20 49 49.4	+1.2
CKRC	Cesky Krumlov	70.86	9	eP	P	20 49 48.0	-0.2
JAVC	Velka Javorina	71.05	7	eP	P	20 49 50.6	+1.2
CRVS	Cervenica-Dubn	71.17	4	eP	P	20 49 51.1	+1.0
CRVS				pmax	pmax		
	comp=Z,12nm,1.6s						
CRVS	Cervenica-Dubn	71.17	4	eP	P	20 49 51.1	+1.0
VYHS	Vyhne	71.47	6	eP	P	20 49 52.4	+0.5
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VYHS	Vyhne	71.47	6	eP	P	20 49 52.4	+0.5
MODS	Modra-Piesok	71.51	7	eP	P	20 49 51.8	-0.3
MODS				pmax	pmax		
	comp=Z,80nm,2.4s						
MODS	Modra-Piesok	71.51	7	eP	P	20 49 51.8	-0.3
MOA	Molln	71.82	9	eP	P	20 49 54.3	+0.3
	comp=Z,9.0nm,1.4s						
CONA	Conrad Observa	71.86	8	eP	P	20 49 55.1	+0.8
	comp=Z,5.3nm,0.9s,SNR=5.1						
BIOA	Bad Ischl, Aus	71.93	9	eP	P	20 49 54.8	+0.1
	comp=Z,2.2nm,0.5s						
SORM	Soroca	72.03	359	⇑P	P	20 49 55.2	0.0
MOTA	Moosalm	72.04	11	eP	P	20 49 55.8	+0.3
	comp=Z,9.1nm,1.1s,SNR=4.9						
PSZ	Piszkesteto	72.10	5	P	P	20 49 56.2	+0.4
PSZ	Piszkesteto	72.10	5	P	P	20 49 56.9	+1.2
WATA	Walderalm	72.10	11	eP	P	20 49 55.9	+0.1
	comp=Z,17nm,1.2s,SNR=7.9						
WTTA	Wattenberg	72.18	11	iP	P	20 49 56.8	+0.4
	comp=Z,6.9nm,0.5s,SNR=11						
SQTA	Sankt Quirin	72.18	11	eP	P	20 49 56.6	+0.3
	comp=Z,8.9nm,0.7s,SNR=9.2						
FETA	Feichten	72.33	12	eP	P	20 49 57.8	+0.6
	comp=Z,11nm,1.1s,SNR=6.9						
DAVOX	Davos/Dischmat	72.48	12	P	P	20 49 58.6	+0.4
	comp=Z,5.0nm,0.6s,baz=325,slow=5.7,SNR=16						
	comp=Z,5.0nm,0.6s						
KBA	Koelnbreinsper	72.51	10	eP	P	20 49 59.1	+0.8
	comp=Z,7.1nm,0.8s						
BUR08	Bucovina Ar. S	72.52	1	P	P	20 49 58.2	-0.1
BURAR	Bucovina Array	72.55	1	⇑P	P	20 49 58.4	-0.1
TUE	Stuetta	72.72	13	P	P	20 50 00.5	+0.9
TUE				IAmb	IAmb	20 50 01.2	
	comp=Z,12nm,0.7s						
SOKA	Soboth	73.05	9	eP	P	20 50 02.1	+0.8
	comp=Z,2.4nm,0.5s,SNR=4.9						
OBKA	Obir	73.18	9	eP	P	20 50 02.3	+0.2
	comp=Z,12nm,0.6s,SNR=9.3						
MORH	Mrgy, Hungar	73.74	6	⇑P	P	20 50 05.2	-0.1
PGAV	Gavieira, Arco	74.16	27	eP	P	20 50 09.2	+1.2
DOPR	Dopca	74.20	1	⇑P	P	20 50 08.6	+0.6
BZS	Buzias	74.46	4	⇑P	P	20 50 09.4	-0.1
PZH	PanZhiHua	74.55	296	P	P	20 50 13.1	+2.6
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
GZR	Gura Zlata	74.72	3	⇓P	P	20 50 11.7	+0.5
POLO	Lamas de Olo	74.83	26	eP	P	20 50 12.5	+0.6
PVRL	Vila Real	74.94	26	eP	P	20 50 13.3	+0.9
CFR	Carcaliu	74.99	359	⇑P	P	20 50 12.3	-0.2
ANN	Anapa	75.03	352	eP	P	20 50 09.7	-3.1
ANN				e*PP	pP	20 50 40.8	-4.0
ANN				e		20 53 02.5	
ANN				eS	S	20 59 35.5	-4.3
ANN				e*SS	sS	21 00 28.3	-6.8
ANN				eSS	SS	21 04 26.8	-2.9
ANN				pmax	pmax		
	comp=Z,13nm,1.0s						
MVO	Moncorvo	75.20	26	eP	P	20 50 14.6	+0.6
HERR	Herculane	75.22	3	⇓P	P	20 50 13.4	-0.6
KIV	Kislovodsk	75.43	348	⇑P	P	20 50 15.2	0.0
KIV	Kislovodsk	75.43	348	eP	P	20 50 14.6	-0.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PVIS	Viseu	75.44	27	eP	P	20 50 16.0	+0.7
KBZ	Khabaz	75.63	348	P	P	20 50 15.8	-0.4
	comp=Z,1.8nm,0.7s,baz=247,slow=4.0,SNR=7.8						
KBZ				LR	LR	21 26 12.8	
	comp=Z,16nm,18.2s,baz=42,slow=38						
	comp=Z,1.8nm,0.7s						
KBZ	Khabaz	75.63	348	⇑iP	P	20 50 16.5	+0.3
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NCK	Nalchik	75.79	348	⇑eP	P	20 50 17.8	+0.6
NCK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MTE	Manteigas	75.82	27	eP	P	20 50 18.1	+0.6
PCAS	Casmilo, Conde	75.93	27	eP	P	20 50 18.6	+0.5
PCBR	Castelo Branco	76.37	27	eP	P	20 50 21.0	+0.5
PSBE	So Bento	76.38	28	eP	P	20 50 21.4	+0.8
ZEI	Tsey	76.45	347	eP	P	20 50 20.5	-0.7
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BLKB	Belogradchik	76.49	3	⇑P	P	20 50 21.4	+0.3
PMRV	Marv??o	76.78	27	eP	P	20 50 23.1	+0.2
PMAFR	Mafra	76.80	28	eP	P	20 50 23.6	+0.7
PMTG	Montargil	76.94	27	eP	P	20 50 23.8	+0.1
PESTR	Estremoz	77.27	27	eP	P	20 50 26.1	+0.5
ESDC	Sonseca Array	77.28	24	P	P	20 50 26.0	+0.3
	comp=Z,8.5nm,0.9s,baz=344,slow=5.5,SNR=42						
	comp=Z,8.5nm,0.9s						
EVO	Evora	77.50	27	eP	P	20 50 27.4	+0.6
PNCL	Nicolau / Gran	77.78	28	eP	P	20 50 29.2	+0.8
PVAQ	Vaqueiros	78.64	28	eP	P	20 50 34.1	+0.9
PBDV	Barranco-do-Ve	78.75	28	eP	P	20 50 35.2	+1.4
BR131	Keskin Array S	80.30	355	⇑eP	P	20 50 42.1	-0.2
BRTR	Keskin Array B	80.30	355	P	P	20 50 41.9	-0.3
	comp=Z,0.9nm,0.5s,baz=3.9,slow=3.2,SNR=7.8						
	comp=Z,0.9nm,0.5s						
BRTR	Keskin Array B	80.30	355	iP	P	20 50 42.0	-0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GKN	Gorkha	80.34	311	eP	P	20 50 43.2	+0.5
DANN	Dangsing	80.35	312	eP	P	20 50 43.2	+0.2
	comp=Z,37nm,1.0s						
RAMN	Ramite	80.53	309	eP	P	20 50 44.2	+0.3
	comp=Z,6.8nm,0.5s						
PYUN	Piuthan	80.87	312	eP	P	20 50 46.0	+0.4
	comp=Z,4.8nm,0.6s						
KOLN	Koldanda	80.94	312	eP	P	20 50 45.5	-0.5
CMAR	Chiang Mai Arr	82.80	295	P	P	20 50 54.3	-1.3
	comp=Z,0.5nm,0.7s,baz=28,slow=6.2,SNR=6.7						
	comp=Z,0.5nm,0.7s						
CMAR	Chiang Mai Arr	82.80	295	iP	P	20 50 54.9	-0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KEST	Kesra	83.32	14	P	P	20 50 58.1	0.0
	comp=Z,12nm,0.8s,baz=345,slow=5.3,SNR=9.8						
	comp=Z,12nm,0.8s						
BOSA	Boshof	148.41	3	PKPbc	PKPbc	20 58 15.7	-1.1
	comp=Z,6.8nm,0.6s,baz=9.7,slow=2.9,SNR=22						

NOU 01 20:39:27.1, 16°.09S×167°.56E, h0km, MLv4.5/5, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.73	332	P	Pg	20 39 41.0	0.0
SANVU	Saraoutou	0.73	332	P	Pg	20 39 41.1	+0.1
DVP	Devils Point	1.73	160	P	Pn	20 39 57.8	-0.7
RTV	Rentapao	1.89	154	P	Pn	20 40 00.6	0.0
MARNC	Mare, Loyalty	5.38	175	P	Pn	20 40 48.8	+0.1
KOUNC	Koumac, New Ca	5.42	215	P	Pn	20 40 48.5	-0.7
YATNC	Mamie plateau,	5.97	186	P	Pn	20 40 55.7	-1.1
NOUC	Port Laguerre	6.10	191	P	Pn	20 40 58.5	0.0
ONTNC	Ouen Toro	6.27	189	P	Pn	20 41 01.5	+0.6
OUENC	Ouen Island, N	6.33	186	P	Pn	20 41 01.8	0.0

IDC 01 20:39:27.3±4.8, 36°.25N×71°.23E, h73km±31km, mb3.4/6, mbtmp3.7/11, Error ellipse: s-maj=51.5km s-min=18.6km az=152.0

NNC 01 20:39:34.1±3.9, 36°.72N×71°.14E, h123km±55km, mb3.5, mpv4.1, Error ellipse: s-maj=34.0km s-min=27.4km az=166.0

ISC 01 20:39:28.2±0.8, 36°.19N±0°.07×71°.46E±0°.07, h200km, n32, σ4s.39/40, mb3.4/5, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.18	16	P	Pn	20 40 57.7	-0.4
	SNR=35						
UCH	Uchtor	6.48	21	P	Pn	20 41 02.3	+0.3
	SNR=5.7						
EKS2	Erkin-Say	6.71	15	P	Pn	20 41 04.7	+0.1
	SNR=18						
AAK	Ala-Archa	6.85	19	P	Pn	20 41 07.0	+0.4
	5.7nm,0.5s,baz=202,slow=7.9,SNR=24						
AAK				S	Sn	20 42 19.8	-4.9
	2.7nm,0.4s,baz=330,slow=15,SNR=3.5						
KK31	Karatay Array	6.94	354	⇑P	Pn	20 41 06.4	-1.2
	14nm,0.3s,baz=178,slow=13,SNR=799						
KK31				⇑S	Sn	20 42 17.8	-8.8
	2.2nm,0.3s,baz=181,slow=27,SNR=8.6						
TKM2	Tokmak 2	7.44	24	P	Pn	20 41 15.0	+0.7
	SNR=7.6						
TKM2	Tokmak 2	7.44	24	⇑P	Pn	20 41 14.7	+0.4
	2.8nm,0.6s						
TKM2				⇑S	Sn	20 42 34.9	-3.7
	2.3nm,0.6s						
USP	Ospenovka	7.45	17	P	Pn	20 41 13.9	-0.2
	SNR=7.3						
GEYT	Alibeck	10.80	283	P	Pn	20 41 57.0	-0.8
	0.9nm,0.3s,baz=103,slow=13,SNR=7.8						
GEYT				S	Sn	20 43 51.9	-6.4
	1.8nm,0.3s,baz=273,slow=32,SNR=8.2						
PYUN	Piuthan	12.66	126	ePn	P	20 42 26.3	+0.9
PYUN				eSn	Sn	20 44 38.7	-4.4
	24nm,0.4s						
DANN	Dangsing	13.01	123	ePn	P	20 42 29.4	0.0
DANN				eSn	S	20 44 46.0	-5.4
	22nm,0.5s						
KOLN	Koldanda	13.28	126	ePn	P	20 42 34.3	+2.0
KOLN				eSn	S	20 44 52.9	-4.8
	11nm,0.5s						
MKAR	Makanchi Array	13.33	34	P	P	20 42 34.7	+2.2
	0.3nm,0.8s,baz=215,slow=14,SNR=3.5						
GKN	Gorkha	13.82	122	ePn	P	20 42 40.7	+2.4
GKN				eSn	S	20 45 05.3	-5.0
	14nm,0.3s						
DMN	Daman	14.39	123	ePn	P	20 42 47.9	+3.2
DMN				eSn	S	20 45 18.3	-5.3
KKN	Kakani	14.40	122	eSn	S	20 45 17.5	-6.1
	15nm,0.5s						
PKIN	Phulchoki	14.61	122	ePn	P	20 42 51.6	+4.4
PKIN				eSn	S	20 45 23.3	-5.3
PKI	Pulchoki	14.63	122	ePn	P	20 42 51.9	+4.5
PKI				eSn	S	20 45 23.5	-5.5
GUN	Gumba	14.74	120	ePn	P	20 42 52.5	+3.9
GUN				eSn	S	20 45 26.1	-5.6
KURBB	Kurchatov Arra	15.30	17	P	P	20 43 00.3	+6.1
	0.7nm,0.7s,baz=205,slow=11,SNR=7.2						
AB31	Akbulak array	15.53	331	P	P	20 42 58.2	+1.5
	1.6nm,0.4s,baz=139,slow=13,SNR=130						
RAMN	Ramite	15.84	121	ePn	Pn	20 43 07.5	+6.6

RAMN				*e*Sn	**S**	**20 45 52.0**	**-4.7**
	7.4nm,0.5s						
TAPN	**Taplejung**	**16.37**	**118**	*e*Pn	**Pn**	**20 43 13.8**	**+6.4**
TAPN				*e*Sn	**S**	**20 46 03.2**	**-4.9**
ODAN	**Odare**	**16.45**	**120**	*e*Sn	**S**	**20 46 05.9**	**-3.5**
AKTO	**Aktyubinsk**	**17.23**	**330**	P	**Pn**	**20 43 22.2**	**+5.2**
	1.4nm,0.4s,baz=139,slow=14,SNR=6.4						
AKTO	**Aktyubinsk**	**17.23**	**330**	⇓P	**Pn**	**20 43 20.5**	**+3.5**
	4.8nm,1.0s						
ZALV	**Zalesovo Beam**	**20.05**	**23**	P	Pn	20 43 52.8	+2.5
	1.5nm,0.3s,baz=204,slow=11,SNR=13						
	1.5nm,0.3s						
FINES	**FINESS Array B**	**37.95**	**326**	P	P	20 46 36.5	+10
	0.3nm,0.3s,baz=126,slow=9.1,SNR=7.4						
	0.3nm,0.3s						
ARCES	**ARCESS Array B**	**41.57**	**338**	P	P	20 47 07.0	+11
	0.7nm,0.6s,baz=108,slow=8.0,SNR=7.3						
	0.7nm,0.6s						
NOA	**NORSAR Array B**	**44.85**	**323**	P	P	20 47 32.8	+11
	0.2nm,0.5s,baz=93,slow=9.0,SNR=1.6						
	0.2nm,0.5s						
TIXI	**Tiksi**	**45.92**	**22**	P	P	20 47 42.6	+12
	1.0nm,0.4s,baz=270,slow=21,SNR=3.7						
	1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**66.08**	**269**	P	P	20 50 04.2	+10
	0.8nm,1.0s,baz=56,slow=5.3,SNR=2.8						
	0.8nm,1.0s						

IDC ***01*** *20:45:28.6±2.5, 16°.57S×71°.56W, h155^{km}±23^{km}, mb3.4/4, mbtmp3.9/6, MS2.2/1, Error ellipse: s-maj=27.5km s-min=18.6km az=110.0*

GUC ***01*** *20:45:30.4±0.4, 16°.80S×71°.77W, h80^{km}±7^{km}, ML3.6*

ISC 01 20:45:22.5±0.8**, 16°.48S**±0°.06×**72°.00W**±0°.09**, h92**^{km}**, n23, σ2^{s}.07**/26**, mb3.7**/4**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**2.65**	**143**	*e*P	**Pn**	**20 46 06.0**	**+2.5**
PB12				*i* S	**Sn**	**20 46 32.6**	**-2.3**
PB12				IAML		20 46 48.5	
	comp=N,530nm,0.3s						
PB16	**IPOC Station P**	**3.01**	**128**	*e*P	**Pn**	**20 46 11.9**	**+3.2**
PB16				IAML		20 46 57.0	
	comp=N,230nm,0.6s						
LPAZ	**La Paz**	**3.71**	**88**	P	**Pn**	**20 46 20.1**	**+1.8**
	comp=N,34nm,0.4s,baz=282,slow=9.1,SNR=99						
LPAZ				S	**Sn**	**20 47 01.6**	**+0.3**
	comp=N,30nm,0.8s,baz=45,slow=13,SNR=8.9						
LPAZ				LR	LR	20 47 16.1	
	comp=N,36nm,19.6s,baz=211,slow=33						
PB11	**IPOC Station P**	**3.95**	**146**	*e*P	**Pn**	**20 46 23.1**	**+2.1**
PB11				*i* S	**Sn**	**20 47 04.5**	**-1.8**
TA01	**Diego Aracena**	**4.41**	**157**	*e*P	**Pn**	**20 46 29.3**	**+2.2**
TA01				*i* S	**Sn**	**20 47 15.7**	**-1.6**
PB08	**IPOC Station P**	**4.53**	**144**	*e*P	**Pn**	**20 46 31.7**	**+2.6**
PB08				*i* S	**Sn**	**20 47 19.6**	**-1.2**
PB07	**IPOC Station P**	**5.59**	**159**	*e*P	**Pn**	**20 46 45.7**	**+2.4**
PB07				*i* S	**Sn**	**20 47 44.2**	**-2.0**
PB09	**IPOC Station P**	**5.89**	**154**	*e*P	**Pn**	**20 46 50.2**	**+2.8**
PB09				*i* S	**Sn**	**20 47 52.2**	**-1.5**
NNA	**Nana**	**6.48**	**313**	S	Sn	20 48 19.2	+11
	comp=N,5.1nm,0.5s,baz=245,slow=22,SNR=6.5						
LVC	**Limon Verde**	**6.75**	**155**	P	**Pn**	**20 47 01.5**	**+2.2**
	comp=N,5.4nm,0.2s,baz=354,slow=8.1,SNR=13						
LVC				S	**Sn**	**20 48 16.3**	**+1.3**
	comp=N,14nm,0.3s,baz=182,slow=17,SNR=11						
H03N1	**Juan Fernandez**	**18.00**	**199**	T	T	21 08 04.0	
	baz=21,slow=74,SNR=400						
H03N2	**Juan Fernandez**	**18.01**	**199**	T	T	21 08 03.5	
	baz=21,slow=74,SNR=296						
H03N3	**Juan Fernandez**	**18.02**	**199**	T	T	21 08 02.7	
	baz=21,slow=74,SNR=507						
PDAR	**Pinedale Array**	**68.33**	**331**	P	**P**	**20 56 15.7**	**+1.6**
	comp=N,0.4nm,0.7s,baz=134,slow=8.5,SNR=4.6						
	comp=N,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**69.76**	**323**	P	**P**	**20 56 24.8**	**+1.7**
	comp=N,0.2nm,0.5s,baz=154,slow=8.7,SNR=2.9						
	comp=N,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.54**	**73**	P	**P**	**20 57 11.3**	**-3.0**
	comp=N,0.8nm,0.5s,baz=262,slow=4.6,SNR=13						
	comp=N,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**85.52**	**342**	P	**P**	**20 57 49.0**	**-0.8**
	comp=N,1.3nm,0.6s,baz=134,slow=5.1,SNR=28						
	comp=N,1.3nm,0.6s						
ASAR	**Alice Springs**	**132.75**	**213**	PKP	**PKPdf**	**21 04 27.4**	**-0.2**
	comp=N,0.2nm,0.6s,baz=106,slow=1.6,SNR=2.0						
WRA	**Warramunga Arr**	**135.51**	**217**	PKP	**PKPdf**	**21 04 33.3**	**+0.5**
	comp=N,0.3nm,0.4s,baz=136,slow=1.9,SNR=12						
ZALV	**Zalesovo Beam**	**138.48**	**21**	PKP	**PKPdf**	**21 04 34.8**	**-2.4**
	comp=N,1.0nm,0.5s,baz=346,slow=3.1,SNR=4.5						
MKAR	**Makanchi Array**	**143.01**	**30**	PKP	PKPab	21 04 41.4	+0.4
	comp=N,0.1nm,0.4s,baz=324,slow=2.1,SNR=2.1						
MJAR	**Matsushiro Arr**	**146.61**	**313**	PKPbc	**PKPbc**	**21 04 53.1**	**-0.8**
	comp=N,3.3nm,0.8s,baz=113,slow=2.2,SNR=8.0						
SONM	**Songino Array**	**148.71**	**2**	PKPbc	**PKPdf**	**21 04 56.5**	**+1.1**
	comp=N,0.5nm,0.3s,baz=318,slow=2.0,SNR=9.6						

ISK ***01*** *21:06:14.2, 37°.22N×28°.49E, h19^{km}, ML1.8/10*

ISC 01 21:06:14.1±1.0**, 37°.25N**±0°.05×**28°.54E**±0°.04**, h14**^{km}**, n12, σ1^{s}.17**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MULA	**Mugla, Merkez-**	**0.18**	**273**	S	**Pg**	**21 06 21.5**	**+3.1**
YER	**Yerkesik**	**0.24**	**242**	PG	**Pb**	**21 06 19.3**	**-0.9**
YER				SG	**Sb**	**21 06 22.9**	**-1.4**
TAVA	**DENIZLI_Tavas**	**0.37**	**53**	P	**Pg**	**21 06 21.6**	**+0.1**
DALY	**Dalyan (Mula)**	**0.44**	**168**	PG	**Pb**	**21 06 23.2**	**-0.4**
DALY				SG	**Sb**	**21 06 30.1**	**+0.1**
TURN	**Turunc**	**0.53**	**207**	PG	**Pb**	**21 06 24.3**	**-0.9**
MLSB	**Milas**	**0.61**	**275**	PG	**Pb**	**21 06 26.0**	**-0.6**
MLSB				SG	**Sb**	**21 06 34.6**	**-0.5**
CAME	**Cameli-Denizli**	**0.68**	**116**	PG	**Pb**	**21 06 28.3**	**+0.5**
FETY	**Fethiye**	**0.75**	**145**	PG	**Pb**	**21 06 29.2**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**0.87**	**324**	PG	**Pn**	**21 06 31.8**	**-0.3**
DAT	**Datca**	**0.93**	**236**	PG	**Pn**	**21 06 31.9**	**-1.0**
BODT	**Bodrum**	**1.00**	**260**	PG	**Pn**	**21 06 33.4**	**-0.4**
ARG	**Arkhangelos**	**1.08**	**198**	PG	**Pn**	**21 06 34.1**	**-0.8**

GII ***01*** *21:08:06.0±0.0, 27°.17N×34°.42E, h1^{km}, mb4.0/1, MD3.8/3, Mm3.9/4*

HLW ***01*** *21:08:16.6, 27°.95N×34°.10E, h5^{km}±1^{km}, Md3.0, Ml4.0*

SGS ***01*** *21:08:18.4, 27°.90N×34°.11E, h20^{km}, Ml3.1*

ISC 01 21:08:16.7±1.1**, 27°.95N**±0°.03×**34°.10E**±0°.03**, h10**^{km}±8^{km}**, n43, σ0^{s}.76**/51**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.14**	**292**	P	**Pg**	**21 08 20.1**	**+0.1**
	baz=295						
TR1				S	**Sg**	**21 08 22.0**	**-0.3**
	baz=295						
TR2	**Tor 2**	**0.55**	**322**	P	**Pg**	**21 08 27.0**	**-0.3**
	baz=324						
HKAT	**Jabal Katrina**	**0.57**	**350**	P	**Pg**	**21 08 27.5**	**-0.5**
	baz=352						
HHRG	**Al Ghardaqah**	**0.87**	**213**	P	**Pn**	**21 08 35.6**	**+0.6**
	baz=206						
HHRG				S	**Sn**	**21 08 49.3**	**+1.6**
	baz=206						
HDHB	**Dhahab**	**0.89**	**31**	P	**Pg**	**21 08 33.9**	**0.0**
	baz=30						
TAYS	**Tayyib Ism**	**0.90**	**49**	P	**Pg**	**21 08 34.4**	**+0.3**
BDAS	**Al Bad`**	**1.00**	**61**	S	**Sg**	**21 08 49.5**	**+0.5**
BDAS	**Al Bad`**	**1.00**	**61**	P	**Pg**	**21 08 35.7**	**-0.2**
HRDS	**Abu Rudays**	**1.04**	**317**	P	**Pg**	**21 08 36.1**	**-0.6**
	baz=318						
AYUS	**`Aynunah**	**1.06**	**77**	P	**Pg**	**21 08 36.4**	**-0.7**
NUB	**Nuweibaa**	**1.17**	**24**	P	**Pg**	**21 08 38.1**	**-1.1**
	baz=24						
HAQS	**Haql**	**1.31**	**33**	S	**Sg**	**21 08 57.9**	**-0.9**
HAQS	**Haql**	**1.31**	**33**	P	**Pn**	**21 08 41.0**	**0.0**
HBST	**Basata**	**1.38**	**24**	P	**Pn**	**21 08 42.1**	**+0.2**
	baz=23						
JLOS		**1.45**	**57**	S	**Sb**	**21 09 01.2**	**-1.3**
JLOS		**1.45**	**57**	P	**Pn**	**21 08 42.8**	**-0.3**
JMOS	**Jabal al Moall**	**1.50**	**36**	P	**Pn**	**21 08 43.6**	**0.0**
HQLS		**1.58**	**32**	P	**Pn**	**21 08 44.6**	**-0.3**
HQLS		**1.58**	**32**	S	**Sn**	**21 09 04.6**	**-0.8**
EIL	**Elat**	**1.86**	**23**	Pn	**Pn**	**21 08 48.7**	**0.0**
EIL				Sn	**Sg**	**21 09 18.8**	**+2.1**
ZAF	**Zafarana**	**1.90**	**314**	P	**Pn**	**21 08 49.0**	**-0.2**
	baz=315						
MBRI	**Mt Berech**	**1.97**	**21**	Pn	**Pn**	**21 08 50.5**	**+0.3**
SUZ	**Suez**	**2.19**	**330**	P	**Pn**	**21 08 53.4**	**+0.3**
	baz=330						
KRMI	**Paran Flat**	**2.22**	**14**	Pn	**Pn**	**21 08 53.9**	**+0.3**
HRFI	**Mount Harif**	**2.23**	**21**	Pn	**Pn**	**21 08 54.1**	**+0.4**
HRFI				Sn	**Sg**	**21 09 29.4**	**+1.0**
ASUT		**2.32**	**257**	P	**Pn**	**21 08 54.8**	**-0.1**
	baz=257						
WJHS		**2.37**	**120**	P	**Pn**	**21 08 55.4**	**-0.3**
PRNI	**Paran**	**2.52**	**18**	Pn	**Pn**	**21 08 57.9**	**+0.2**
PRNI				Sn	**Sg**	**21 09 38.1**	**+0.5**
NBNS	**Bani Suef**	**2.56**	**286**	P	**Pn**	**21 08 58.4**	**+0.1**
	baz=286						
NBNS				S	**Sn**	**21 09 28.2**	**-1.4**
	baz=286						
NADB	**Abo Dabab**	**2.63**	**172**	P	**Pn**	**21 08 58.8**	**-0.3**
	baz=171						
HHAG	**Hagoal**	**2.66**	**319**	P	**Pn**	**21 08 59.8**	**+0.2**
	baz=320						
HSAF	**As Saff**	**2.79**	**307**	P	**Pn**	**21 09 01.8**	**+0.4**
	baz=308						
KOT	**Kottamia**	**2.80**	**315**	P	**Pn**	**21 09 00.8**	**-0.8**
	baz=316						
TAMRE	**El Minia**	**2.83**	**265**	P	**Pn**	**21 09 01.7**	**-0.3**
	baz=266						
KZIT	**Kziot**	**2.95**	**5**	Pn	**Pn**	**21 09 04.0**	**+0.3**
KZIT				Sn	**Sg**	**21 09 50.6**	**-1.0**
HNAT	**Natroun**	**3.49**	**299**	P	**Pn**	**21 09 11.4**	**+0.5**
	baz=300						
YTIR	**Yattir**	**3.51**	**14**	Pn	**Pn**	**21 09 11.6**	**+0.2**
YTIR				Sn	**Sb**	**21 10 03.3**	**+1.6**
MSBI	**Mazada**	**3.52**	**18**	Pn	**Pn**	**21 09 12.1**	**+0.7**
RYAN	**Fayoum**	**3.55**	**289**	P	**Pn**	**21 09 11.9**	**+0.1**
	baz=290						
DSI	**Dead Sea**	**3.77**	**17**	Pn	**Pn**	**21 09 16.3**	**+1.4**
SLTI	**Sal'it**	**4.35**	**11**	Pn	**Pn**	**21 09 24.4**	**+1.6**
KASR	**Kasr**	**4.42**	**192**	P	**Pn**	**21 09 23.9**	**0.0**
	baz=193						
MABD	**Mabed**	**5.21**	**198**	P	**Pn**	**21 09 35.0**	**+0.3**
	baz=199						

DDA ***01*** *21:08:29.9±0.0, 37°.29N×28°.47E, h7^{km}±2^{km}, ML1.5*

ISK ***01*** *21:08:29.7, 37°.21N×28°.51E, h14^{km}, ML2.0/10*

ISC 01 21:08:30.0±0.9**, 37°.25N**±0°.02×**28°.50E**±0°.02**, h11**^{km}±7^{km}**, n32, σ0^{s}.57**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MULA	**Mugla, Merkez-**	**0.14**	**272**	P	**Pb**	**21 08 34.1**	**-0.7**
MULA				S	**Sg**	**21 08 36.0**	**+0.1**
MULA	**Mugla, Merkez-**	**0.14**	**272**	P	**Pg**	**21 08 33.7**	**+0.2**
YER	**Yerkesik**	**0.21**	**236**	PG	**Pb**	**21 08 34.9**	**-1.0**
YER				SG	**Sg**	**21 08 37.9**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.39**	**57**	P	**Pg**	**21 08 37.7**	**-0.2**
TAVA				S	**Sg**	**21 08 42.9**	**-0.3**
TAVA				*i* AML	AML	21 08 46.0	
	comp=N,68nm,0.3s						
TAVA	**DENIZLI_Tavas**	**0.39**	**57**	S	**Sg**	**21 08 43.2**	**0.0**
TAVA				*i* AML	AML	21 08 45.0	
	comp=E,53nm,0.3s						
TAVA				*i* AML	AML	21 08 46.0	
	comp=N,68nm,0.3s						
DALY	**Dalyan (Mula)**	**0.45**	**164**	PG	**Pg**	**21 08 38.4**	**-0.5**
DALY				SG	**Sg**	**21 08 44.6**	**-0.2**
TURN	**Turunc**	**0.52**	**203**	PG	**Pg**	**21 08 39.7**	**-0.4**
TURN				SG	**Sg**	**21 08 47.1**	**+0.2**
TURN	**Turunc**	**0.52**	**203**	P	**Pg**	**21 08 39.3**	**-0.8**
TURN	**Turunc**	**0.52**	**203**	P	**Pg**	**21 08 39.3**	**-0.8**
MLSB	**Milas**	**0.58**	**275**	PG	**Pb**	**21 08 41.7**	**-0.5**
MLSB				SG	**Sb**	**21 08 49.8**	**-0.6**
AYDN	**Tasoluk**	**0.64**	**310**	P	**Pb**	**21 08 43.4**	**+0.1**
AYDN				S	**Sg**	**21 08 51.1**	**+0.1**
AYDN	**Tasoluk**	**0.64**	**310**	P	**Pb**	**21 08 43.1**	**-0.2**
AYDN				S	**Sg**	**21 08 50.4**	**-0.6**
CAEL	**Denizli, Camel**	**0.67**	**101**	P	**Pb**	**21 08 43.8**	**0.0**
CAEL	**Denizli, Camel**	**0.67**	**101**	P	**Pb**	**21 08 43.3**	**-0.4**
CAME	**Cameli-Denizli**	**0.71**	**115**	PG	**Pg**	**21 08 43.5**	**-0.4**
CAME				SG	**Sg**	**21 08 53.6**	**+0.4**
FETY	**Fethiye**	**0.77**	**142**	PG	**Pg**	**21 08 44.4**	**-0.6**
FETY	**Fethiye**	**0.77**	**142**	P	**Pn**	**21 08 47.4**	**+0.5**
FETY	**Fethiye**	**0.77**	**142**	P	**Pb**	**21 08 45.8**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**0.85**	**325**	PG	**Pb**	**21 08 47.2**	**+0.4**
GOLH	**Golhisar**	**0.85**	**91**	P	**Pg**	**21 08 45.5**	**-1.0**
GOLH				S	**Sb**	**21 08 59.3**	**+1.0**
GOLH	**Golhisar**	**0.85**	**91**	P	**Pg**	**21 08 44.9**	**-1.5**
GOLH				S	**Sb**	**21 08 58.9**	**+0.7**
BDRM	**Kayabasi**	**0.86**	**258**	P	**Pg**	**21 08 46.5**	**-0.2**
BDRM	**Kayabasi**	**0.86**	**258**	P	**Pg**	**21 08 46.1**	**-0.6**
DAT	**Datca**	**0.90**	**235**	PG	**Pg**	**21 08 47.2**	**-0.3**
DAT	**Datca**	**0.90**	**235**	P	**Pb**	**21 08 47.7**	**0.0**
DAT				S	**Sn**	**21 09 02.6**	**+0.8**
DAT	**Datca**	**0.90**	**235**	P	**Pg**	**21 08 47.1**	**-0.4**
DAT				S	**Sn**	**21 09 02.4**	**+0.6**
DAT				*i* AML	AML	21 09 04.0	
	comp=E,12nm,0.4s						
BODT	**Bodrum**	**0.97**	**259**	PG	**Pb**	**21 08 48.8**	**0.0**
ARG	**Arkhangelos**	**1.07**	**196**	PG	**Pg**	**21 08 49.9**	**-0.8**
GCAM	**G?zelcaml?**	**1.10**	**294**	PN	**Pn**	**21 08 51.7**	**+0.3**
GCAM	**G?zelcaml?**	**1.10**	**294**	P	**Pn**	**21 08 51.3**	**0.0**
PASA	**Karahalli, USA**	**1.35**	**35**	P	**Pn**	**21 08 54.6**	**-0.2**
USAK	**Uak-Merkez**	**1.52**	**16**	P	**Pg**	**21 08 58.6**	**-0.6**

CNRM ***01*** *21:13:33.8, 35°.53N×3°.89W, h25^{km}, ml2.1*

MDD ***01*** *21:13:34.9±0.5, 35°.48N×3°.86W, h0^{km}, mb_Lg2.5/11, Error ellipse: s-maj=4.3km s-min=3.0km az=9.0*

SFS ***01*** *21:13:34.0, 35°.47N×3°.86W, ML2.5, ALBORAN SUR*

INMG ***01*** *21:13:35.5±1.3, 35°.56N×3°.83W, h0^{km}±5^{km}, ML2.1, Error ellipse: s-maj=3.4km s-min=3.3km az=21.0*

ISC 01 21:13:33.8±1.0**, 35°.50N**±0°.02×**3°.87W**±0°.02**, h11**^{km}±9^{km}**, n31, σ1^{s}.51**/56**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.28**	**191**	P	**Pg**	**21 13 40.1**	**+0.5**
PALE				S	**Sg**	**21 13 44.7**	**+1.2**
PVLZ	**Peæn de**	**0.47**	**227**	P	**Pb**	**21 13 44.9**	**+0.7**
PVLZ				S	**Sb**	**21 13 52.2**	**+1.0**
GOG	**Mont Gurugu**	**0.77**	**111**	P	**Pg**	**21 13 49.4**	**+0.7**
GOG				S	**Sg**	**21 13 59.1**	**+0.4**
WMELI	**Melilla**	**0.77**	**103**	P	**Pg**	**21 13 48.9**	**+0.1**
WMELI				S	**Sg**	**21 13 59.2**	**+0.3**
EMEL	**Melilla**	**0.78**	**104**	Pg	**Pg**	**21 13 48.2**	**-0.6**
EMEL				Sg	**Sg**	**21 13 59.8**	**+0.8**
EALB	**Alboran**	**0.81**	**57**	Pg	**Pg**	**21 13 49.1**	**-0.5**
EALB				Sg	**Sg**	**21 14 00.7**	**+0.5**
EALB				*i* Vmb_Lg		21 14 03.1	
AKLM	**AKL**	**0.98**	**179**	P	**Pn**	**21 13 54.4**	**+0.7**
SMIR	**Smir Dam**	**1.24**	**279**	P	**Pg**	**21 13 55.0**	**-2.7**
SMIR				S	**Sg**	**21 14 11.6**	**-2.2**
EMIJ	**Mijas**	**1.29**	**326**	Pg	**Pn**	**21 13 58.5**	**+0.7**
EMIJ				Sg	**Sn**	**21 14 15.7**	**+0.5**
EMIJ				*i* Vmb_Lg		21 14 23.5	
EMAL	**Malaga-Limoner**	**1.34**	**341**	P	**Pb**	**21 13 59.1**	**+0.1**
EMAL				S	**Sn**	**21 14 16.7**	**+0.4**
TAF	**Taforalt**	**1.38**	**119**	P	**Pn**	**21 13 58.2**	**-0.8**
ELGU	**Los Guajares,**	**1.38**	**8**	Pg	**Pn**	**21 13 58.1**	**-1.0**
ELGU				Sg	**Sg**	**21 14 17.0**	**-1.5**
ELGU				*i* Vmb_Lg		21 14 20.9	
JBK	**JBK**	**1.58**	**137**	P	**Pn**	**21 14 01.0**	**-1.0**
JBK				S	**Sn**	**21 14 18.8**	**-3.7**
EJIF	**Jimena Fronter**	**1.61**	**307**	Pn	**Pg**	**21 14 04.2**	**-0.5**
EJIF				Sn	**Sg**	**21 14 24.7**	**-0.8**
EBER	**Berja**	**1.61**	**29**	Pn	**Pn**	**21 14 01.7**	**-0.7**
EBER				Sn	**Sn**	**21 14 23.4**	**+0.1**
EBER				*i* Vmb_Lg		21 15 05.1	
EGOR	**Sierra Gorda,**	**1.62**	**353**	*i* Vmb_Lg		21 14 01.7	
EGOR				Pn	**Pg**	**21 14 03.8**	**-1.2**
EGOR				Sn	**Sg**	**21 14 24.6**	**-1.5**
IFR	**Ifrane**	**2.23**	**208**	P	**Pn**	**21 14 12.8**	**+1.9**
IFR				S	**Sn**	**21 14 34.5**	**-4.0**
EQES	**Quesada**	**2.39**	**15**	Pn	**Pb**	**21 14 15.5**	**-1.4**
EQES				Sn	**Sn**	**21 14 44.5**	**+2.1**
EQES				*i* Vmb_Lg		21 14 51.3	
MD31	**MD31**	**2.72**	**196**	P	**Pn**	**21 14 18.5**	**+0.9**
MD31				S	**Sn**	**21 14 49.8**	**-0.7**
EADA	**Adamuz**	**2.73**	**348**	Pn	**Pn**	**21 14 19.7**	**+2.1**
EADA				Sn	**Sn**	**21 14 52.7**	**+2.1**
ECAB	**El Cabril**	**2.86**	**335**	Pn	**Pb**	**21 14 23.2**	**-1.7**
ECAB				Sn	**Sn**	**21 14 55.4**	**+1.6**
ECAB				*i* Vmb_Lg		21 15 09.5	
EMIN	**Mina Concepcio**	**3.19**	**316**	Pn	**Pn**	**21 14 25.4**	**+1.4**
EMIN				Sn	**Sn**	**21 15 02.2**	**+0.1**
EMIN				*i* Vmb_Lg		21 15 11.9	
EGRO	**El Granado**	**3.55**	**306**	Pn	**Pn**	**21 14 30.4**	**+1.5**
EGRO				Sn	**Sn**	**21 15 10.0**	**-0.7**
EGRO				*i* Vmb_Lg		21 16 04.1	
PVAQ	**Vaqueiros**	**3.64**	**303**	*e*Pn	**Pn**	**21 14 31.6**	**+1.5**
PVAQ				*e*Sn	**Sn**	**21 15 14.4**	**+1.4**
ETOB	**Tobarra**	**3.65**	**30**	Pn	**Pn**	**21 14 32.8**	**+2.5**
ETOB				*i* Vmb_Lg		21 15 26.2	
PBAR	**Barrancos**	**3.69**	**317**	*e*Sn	**Sn**	**21 15 14.4**	**+0.2**
PBDV	**Barranco-do-Ve**	**3.71**	**299**	*e*Pn	**Pn**	**21 14 32.5**	**+1.4**
PBDV				*e*Sn	**Sn**	**21 15 14.6**	**-0.2**
PBDV				A	A	21 15 23.4	
	3.8nm,0.8s						
PCVE	**Castro Verde**	**3.97**	**304**	*e*Pn	**Pn**	**21 14 36.4**	**+1.7**
PCVE				*e*Sn	**Sn**	**21 15 22.0**	**+0.7**
PCVE				A	A	21 15 25.6	
	2.2nm,0.9s						
EBAD	**Badajoz**	**4.11**	**323**	P	**Pn**	**21 14 38.7**	**+2.2**
EBAD				S	**Sn**	**21 15 25.1**	**+0.5**
EBAD				*i* Vmb_Lg		21 15 26.7	
PNCL	**Nicolau / Gran**	**4.56**	**306**	*e*Pn	**Pn**	**21 14 44.1**	**+1.4**
PMTG	**Montargil**	**4.97**	**317**	*e*Pn	**Pn**	**21 14 51.0**	**+2.5**

IDC ***01*** *21:15:55.9±1.0, 59°.75N×150°.76W, h0^{km}, mb3.3/1, mbtmp3.2/4, ML3.2/3, Error ellipse: s-maj=36.1km s-min=9.0km az=113.0*

NEIC ***01*** *21:15:57.1±1.0, 59°.99N±0°.03×151°.68W±0°.05, h59^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=3.4km az=196.0*

AEIC ***01*** *21:15:57±1.0, 59°.99N±0°.03×151°.65W±0°.05, h56^{km}±5^{km}, ML3.4, ML3.6/138(NEIC), Error ellipse: s-maj=3.6km s-min=3.5km az=168.0*

ISC 01 21:15:57.3±0.9**, 59°.97N**±0°.03×**151°.63W**±0°.03**, h64**^{km}±7^{km}**, n190, σ0^{s}.92**/200**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOM	**Homer**	**0.31**	**182**		**Pn**	**21 16 07.4**	**-0.5**
HOM				Sn	**Sn**	**21 16 15.8**	**+0.3**
HOM				IAML		21 16 16.1	
	comp=E,4µm,0.3s						
HOM	**Homer**	**0.31**	**182**	P	**Pn**	**21 16 07.6**	**-0.2**
	baz=0.3						
BRLK	**Bradley Lake**	**0.43**	**119**		**Pn**	**21 16 08.2**	**-0.7**
BRLK	**Bradley Lake**	**0.43**	**119**		**Sn**	**21 16 16.8**	**-0.5**
BRLK				IAML		21 16 17.7	
	comp=E,11µm,0.4s						
BRLK				IAML		21 16 18.0	
	comp=N,14µm,0.1s						
CNPM	**China Poot**	**0.49**	**156**		**Pn**	**21 16 08.9**	**-0.5**
CNPM				Sn	**Sn**	**21 16 18.0**	**-0.3**
BRSE	**Bradley Lake S**	**0.50**	**117**		**Pn**	**21 16 09.0**	**-0.6**
BRSE					**Sn**	**21 16 18.0**	**-0.5**
BRSE	**Bradley Lake S**	**0.50**	**117**	P	**Pn**	**21 16 09.0**	**-0.6**
	baz=299						
BRSE				S	**Sn**	**21 16 18.0**	**-0.5**
	baz=299						
O20K	**Slope Mountain**	**0.51**	**283**		**Pn**	**21 16 09.1**	**-0.6**
O20K	**Slope Mountain**	**0.51**	**283**	P	**Pn**	**21 16 09.1**	**-0.6**
	baz=100						
RED	**Redoubt Volcan**	**0.73**	**309**		**Pn**	**21 16 11.1**	**-1.1**
RED					**Sn**	**21 16 22.0**	**-1.1**
RSO	**Redoubt South**	**0.75**	**312**		**Pn**	**21 16 11.4**	**-1.1**
RDWB	**Redoubt West**	**0.80**	**311**		**Pn**	**21 16 11.9**	**-1.1**
RDWB					**Sn**	**21 16 23.1**	**-1.6**
CAPN	**Captain Cook N**	**0.83**	**16**		**Pn**	**21 16 13.9**	**+0.6**
CAPN				Sn	**Sn**	**21 16 26.9**	**+1.7**
CAPN	**Captain Cook N**	**0.83**	**16**	P	**Pn**	**21 16 13.9**	**+0.6**
	baz=198						
RDJH	**Redoubt Jeurge**	**0.85**	**317**		**Pn**	**21 16 12.7**	**-1.1**
RDJH					**Sn**	**21 16 24.8**	**-1.1**
OPT	**Oil Point**	**0.87**	**249**		**Pn**	**21 16 13.5**	**-0.4**
OPT	**Oil Point**	**0.87**	**249**	P	**Pn**	**21 16 13.5**	**-0.4**
	baz=66						
P19K	**Oil Pt**	**0.87**	**249**		**Pn**	**21 16 13.4**	**-0.5**
P19K				Sn	**Sn**	**21 16 25.3**	**-0.8**
P19K	**Oil Pt**	**0.87**	**249**	P	**Pn**	**21 16 13.5**	**-0.4**
	baz=66						
P19K				S	**Sn**	**21 16 25.3**	**-0.8**
	baz=66						
SLKM	**Skilak Lake**	**0.88**	**52**		**Pn**	**21 16 12.5**	**-1.5**
AU22	**Augustine Moun**	**1.06**	**236**		**Pn**	**21 16 16.3**	**+0.1**
AU22					**Sn**	**21 16 31.2**	**+0.8**
AU2	**Augustine Isla**	**1.07**	**237**		**Pn**	**21 16 16.5**	**+0.1**
O22K	**Cooper Landing**	**1.08**	**61**		**Pn**	**21 16 15.8**	**-0.6**
O22K				Sn	**Sn**	**21 16 30.7**	**0.0**
O22K	**Cooper Landing**	**1.08**	**61**	P	**Pn**	**21 16 15.9**	**-0.6**
	baz=244						
AUL	**Augustine Lava**	**1.09**	**238**		**Pn**	**21 16 16.8**	**+0.2**
AUQ	**Augustine Qik'**	**1.10**	**237**		**Pn**	**21 16 16.8**	**+0.1**
SEW	**Seward**	**1.10**	**82**		**Pn**	**21 16 16.3**	**-0.4**
SEW	**Seward**	**1.10**	**82**	P	**Pn**	**21 16 16.3**	**-0.4**
	baz=265						
AUH	**Augustine H**	**1.10**	**237**		**Pn**	**21 16 17.2**	**+0.3**
SPU	**Mount Spurr**	**1.23**	**350**	Pn	**Pn**	**21 16 16.9**	**-1.7**
CKN	**Chakachatna No**	**1.29**	**348**		**Pn**	**21 16 18.7**	**-0.6**
SPCG	**Spurr Capps Gl**	**1.34**	**352**		**Pn**	**21 16 19.4**	**-0.7**
FIS	**Fire Island**	**1.37**	**30**	Pn	**Pn**	**21 16 20.4**	**+0.2**
FIS				IAML		21 16 42.7	
	comp=E,1µm,0.7s						
O19K	**Port Alsworth**	**1.37**	**281**	Pn	**Pn**	**21 16 19.6**	**-0.6**
O19K	**Port Alsworth**	**1.37**	**281**	P	**Pn**	**21 16 19.7**	**-0.5**
	baz=98						
SPWE	**Spurr West**	**1.39**	**341**		**Pn**	**21 16 20.2**	**-0.4**
RC01	**Rabbit Creek A**	**1.46**	**39**	Pn	**Pn**	**21 16 21.1**	**-0.4**
RC01				IAML		21 16 42.6	
	comp=N,939nm,0.3s						
RC01				IAML		21 16 44.3	
	comp=E,997nm,0.3s						
RC01	**Rabbit Creek A**	**1.46**	**39**	P	**Pn**	**21 16 21.1**	**-0.4**
	baz=221						
Q19K	**Cape Douglas,**	**1.47**	**225**		**Pn**	**21 16 22.0**	**+0.4**
Q19K	**Cape Douglas,**	**1.47**	**225**	P	**Pn**	**21 16 22.2**	**+0.6**
	baz=43						
STLK	**Strandline Lak**	**1.54**	**356**		**Pn**	**21 16 22.3**	**-0.3**
N19K	**Bonanza Creek**	**1.65**	**302**		**Pn**	**21 16 23.4**	**-0.7**
N19K					**Sn**	**21 16 43.3**	**-1.2**
N19K	**Bonanza Creek**	**1.65**	**302**	IAML		21 16 44.0	
	comp=N,554nm,0.5s						
N19K	**Bonanza Creek**	**1.65**	**302**	P	**Pn**	**21 16 23.4**	**-0.7**
	baz=119						
N19K				S	**Sn**	**21 16 43.3**	**-1.2**
	baz=119						
O18K	**Koktuh Hills**	**1.81**	**268**		**Pn**	**21 16 25.5**	**-0.6**
O18K	**Koktuh Hills**	**1.81**	**268**	IAML		21 16 48.5	
	comp=E,374nm,0.5s						
O18K				IAML		21 16 53.3	
	comp=N,403nm,0.7s						
O18K	**Koktuh Hills**	**1.81**	**268**	P	**Pn**	**21 16 25.5**	**-0.6**
	baz=84						
PWL	**Port Wells**	**1.86**	**60**		**Pn**	**21 16 26.1**	**-0.8**
PWL				IAML		21 16 55.6	
	comp=E,612nm,0.5s						
PWL				IAML		21 16 58.1	
	comp=N,973nm,0.6s						
PWL	**Port Wells**	**1.86**	**60**	P	**Pn**	**21 16 25.9**	**-1.0**
	baz=243						
P18K	**Big Mountain,**	**1.92**	**254**		**Pn**	**21 16 27.1**	**-0.6**
P18K					**Sn**	**21 16 50.1**	**-0.7**
P18K	**Big Mountain,**	**1.92**	**254**	P	**Pn**	**21 16 27.0**	**-0.6**
	baz=70						
P18K				S	**Sn**	**21 16 50.1**	**-0.7**
	baz=70						
M22K	**Willow**	**1.93**	**22**		**Pn**	**21 16 27.5**	**-0.3**
PMR	**Palmer**	**2.04**	**36**		**Pn**	**21 16 28.5**	**-0.7**
PMR				IAML		21 16 59.8	
	comp=E,274nm,0.5s						
PMR	**Palmer**	**2.04**	**36**	P	**Pn**	**21 16 28.5**	**-0.7**
	baz=219						
KNK	**Knik Glacier**	**2.13**	**46**	Pn	**Pn**	**21 16 29.8**	**-0.6**
KNK				IAML		21 17 02.9	
	comp=N,752nm,0.7s						
KNK	**Knik Glacier**	**2.13**	**46**	P	**Pn**	**21 16 29.9**	**-0.6**
	baz=229						
N18K	**Kilae Creek**	**2.24**	**290**	Pn	**Pn**	**21 16 31.1**	**-0.9**
N18K	**Kilae Creek**	**2.24**	**290**	P	**Pn**	**21 16 31.1**	**-0.9**
	baz=106						
GHO	**Glory Hole Cre**	**2.24**	**35**		**Pn**	**21 16 32.1**	**0.0**
GHO				IAML		21 17 02.9	

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      comp=N,459nm,0.7s
GHO                                  IAML              21 17 06.2
      comp=E,433nm,0.5s
KDAK  Kodiak Island       2.25 193   Pn       Pn       21 16 31.5 -0.7
      comp=E,4.2nm,0.3s,baz=38,slow=11,SNR=116
KDAK                                 Pg                21 16 36.6
      comp=E,21nm,0.3s,baz=26,slow=11,SNR=13
KDAK                                 Sn       Sn       21 16 56.4 -2.4
      comp=E,16nm,0.3s,baz=42,slow=15,SNR=8.1
KDAK                                 Lg       Lg       21 17 05.4
      comp=E,36nm,0.3s,baz=315,slow=13,SNR=18
      comp=E,12nm,0.3s
KDAK  Kodiak Island       2.25 193   Pn       Pn       21 16 31.4 -0.7
KDAK                                 IAML              21 17 08.1
      comp=E,239nm,0.6s
KDAK                                 IAML              21 17 10.4
      comp=E,327nm,0.7s
SVW2  Sparrevohn          2.26 302            Pn       21 16 31.1 -1.2
M19K  Big River Lodg      2.36 326            Pn       21 16 33.3 -0.4
M19K  Big River Lodg      2.36 326   IAML              21 17 01.7
      comp=E,226nm,0.3s
M19K  Big River Lodg      2.36 326   P        Pn       21 16 33.3 -0.4
      baz=144
GLI   Glacier Island      2.42  66            Pn       21 16 33.4 -1.2
GLI                                  IAML              21 17 10.2
      comp=E,319nm,0.4s
GLI                                  IAML              21 17 12.1
      comp=N,282nm,0.4s
GLI   Glacier Island      2.42  66   P        Pn       21 16 32.5 -2.0
      baz=250
SML   Sawmill             2.45  40   Pn       Pn       21 16 34.8 -0.1
SML                                  IAML              21 17 12.2
      comp=N,286nm,0.7s
SML                                  IAML              21 17 12.3
      comp=E,368nm,0.9s
SML   Sawmill             2.45  40   P        Pn       21 16 34.3 -0.6
      baz=223
CUT   Chulitna            2.53  14            Pn       21 16 36.2 +0.3
CUT                                  IAML              21 17 12.6
      comp=E,464nm,0.3s
CUT                                  IAML              21 17 14.7
      comp=N,418nm,0.4s
KELA  Mount Kelaz         2.62 236            Pn       21 16 37.2  0.0
M23K  Glacier View        2.64  45   P        Pn       21 16 37.0 -0.5
      baz=228
FID   Port Fidalgo        2.67  71            Pn       21 16 35.9 -2.0
FID                                  IAML              21 17 06.7
      comp=N,322nm,0.2s
FID                                  IAML              21 17 09.5
      comp=E,284nm,0.3s
JPK   Jack Peak           2.71  64            Pn       21 16 36.9 -1.6
L19K  White Mountain      2.72 326   Pn       Pn       21 16 38.1 -0.4
L19K  White Mountain      2.72 326   P        Pn       21 16 38.2 -0.4
      baz=143
L20K  Farewell, AK        2.74 338            Pn       21 16 38.4 -0.5
L20K  Farewell, AK        2.74 338   P        Pn       21 16 38.4 -0.5
      baz=156
SCM   Sheep Creek Mo      2.81  46            Pn       21 16 39.9 +0.1
SCM                                  IAML              21 17 23.9
      comp=N,200nm,1.0s
SCM                                  IAML              21 17 29.0
      comp=E,222nm,1.2s
SCM   Sheep Creek Mo      2.81  46   P        Pn       21 16 39.1 -0.7
      baz=231
OHAK  Old Harbor          2.89 198            Pn       21 16 40.2 -0.6
OHAK                                 IAML              21 17 26.9
      comp=N,156nm,1.0s
OHAK                                 IAML              21 17 29.7
      comp=E,145nm,0.8s
OHAK  Old Harbor          2.89 198   P        Pn       21 16 39.9 -0.9
      baz=16
PPLA  Purkeypile          2.95 355            Pn       21 16 42.0 +0.3
PPLA  Purkeypile          2.95 355   P        Pn       21 16 42.3 +0.5
      baz=175
EYAK  Cordova Ski Ar      2.98  76   Pn       Pn       21 16 41.2 -0.9
DIV   Divide              3.12  66            Pn       21 16 43.0 -1.0
KLU   Klutina             3.19  59            Pn       21 16 44.0 -1.0
KLU   Klutina             3.19  59   IAML              21 17 24.1
      comp=E,141nm,0.3s
KLU                                  IAML              21 17 32.9
      comp=N,227nm,0.5s
KLU   Klutina             3.19  59   P        Pn       21 16 44.0 -1.0
      baz=244
WAT6  Susitna Watana      3.22  34            Pn       21 16 45.5  0.0
WAT6  Susitna Watana      3.22  34   P        Pn       21 16 45.5  0.0
      baz=218
M24K  Tolsona, Glenn      3.41  49            Pn       21 16 48.0  0.0
M24K  Tolsona, Glenn      3.41  49   IAML              21 17 49.5
      comp=N,226nm,1.0s
M24K  Tolsona, Glenn      3.41  49   P        Pn       21 16 48.0  0.0
      baz=234
CAST  Castle Rocks        3.47 357            Pn       21 16 48.1 -0.6
CAST  Castle Rocks        3.47 357   P        Pn       21 16 48.1 -0.6
      baz=176
GOAT  Goat Mountain       3.49  77            Pn       21 16 46.9 -2.2
RAGM  Ragged Mountai      3.50  80   Pn       Pn       21 16 48.1 -1.1
RAGM                                 IAML              21 17 28.2
      comp=E,174nm,0.4s
K20K  Telida              3.59 342            Pn       21 16 50.4 -0.1
K20K  Telida              3.59 342   P        Pn       21 16 50.4 -0.1
      baz=160
KTH   Kantishna Hill      3.61   5            Pn       21 16 51.6 +0.8
KTH   Kantishna Hill      3.61   5   IAML              21 17 39.6
      comp=E,87nm,0.8s
KTH                                  IAML              21 18 02.3
      comp=N,91nm,1.0s
BMRM  Bremner River       3.62  71   Pn       Pn       21 16 49.4 -1.4
BMRM                                 IAML              21 17 49.0
      comp=N,118nm,0.8s
BMRM                                 IAML              21 17 49.6
      comp=E,125nm,0.7s
BMRM  Bremner River       3.62  71   P        Pn       21 16 48.9 -1.9
      baz=257
TT01  Tatalina            3.62 326            Pn       21 16 50.4 -0.5
KAIM  Kayak Island        3.63  88   Pn       Pn       21 16 48.5 -2.4
TTA   Tatalina            3.64 327            Pn       21 16 50.6 -0.5
TTA   Tatalina            3.64 327   P        Pn       21 16 50.6 -0.5
      baz=143
SII   Sitkinak Islan      3.68 203   Pn       Pn       21 16 51.3 -0.3
RND   Reindeer            3.69  20   Pn       Pn       21 16 52.3 +0.5
HMT   Hamilton            3.70  81   Pn       Pn       21 16 52.2 +0.3
HMT                                  IAML              21 18 22.1
      comp=N,121nm,2.9s
DHY   Denali Highway      3.72  31            Pn       21 16 52.8 +0.5
DHY                                  IAML              21 17 47.4
      comp=E,67nm,0.7s
DHY                                  IAML              21 17 50.2
      comp=N,65nm,0.7s
DHY   Denali Highway      3.72  31   P        Pn       21 16 52.7 +0.4
      baz=215
N25K  Chitina, Valde      3.81  62            Pn       21 16 52.4 -1.2
N25K  Chitina, Valde      3.81  62   IAML              21 17 53.6
      comp=E,57nm,0.6s
N25K                                 IAML              21 18 00.1
      comp=N,58nm,0.9s
N25K  Chitina, Valde      3.81  62   P        Pn       21 16 52.4 -1.2
      baz=248
CHUM  Lake Minchumin      3.94 356            Pn       21 16 56.0 +0.9
CHUM  Lake Minchumin      3.94 356   P        Pn       21 16 56.0 +0.9
      baz=175
SUCK  Suckling Hills      3.94  85   Pn       Pn       21 16 55.1 -0.1
HARP  HAARP               3.97  49            Pn       21 16 55.5 -0.1
HARP  HAARP               3.97  49   P        Pn       21 16 55.5 -0.1
      baz=235
BERG  Berg Lake           3.98  80   Pn       Pn       21 16 52.2 -3.5
BERG                                 IAML              21 17 48.0
      comp=N,135nm,1.8s
GLB   Gilahina Butte      4.11  66   Pn       Pn       21 16 56.1 -1.5
GLB                                  IAML              21 18 00.7
      comp=N,71nm,0.6s
GLB                                  IAML              21 18 06.6
      comp=E,41nm,0.8s
BPAW  Bear Paw Mtn.       4.16   4   Pn       Pn       21 16 58.3 +0.1
BPAW  Bear Paw Mtn.       4.16   4   P        Pn       21 16 58.5 +0.4
      baz=185
PAX   Paxson              4.21  42            Pn       21 16 59.2 +0.2
PAX   Paxson              4.21  42   P        Pn       21 16 59.2 +0.2
      baz=227
VRDI  Verde Repeater      4.22  69   Pn       Pn       21 16 58.7 -0.5
VRDI                                 IAML              21 18 03.4
      comp=N,40nm,0.7s
BWN   Browne              4.34  13   Pn       Pn       21 16 58.7 -1.9
BWN                                  IAML              21 18 30.1
      comp=E,100nm,1.0s
BWN                                  IAML              21 18 30.7
      comp=N,91nm,1.5s
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J20K  Nowinta River       4.38 345   Pn       Pn       21 17 01.2  0.0
J20K  Nowinta River       4.38 345   P        Pn       21 17 01.4 +0.1
      baz=163
ISLE  Juniper Island      4.67  78   Pn       Pn       21 17 03.6 -1.6
ISLE                                 IAML              21 18 35.9
      comp=N,73nm,1.7s
ISLE                                 IAML              21 19 00.3
      comp=E,44nm,4.6s
CHIR  Chirikof Islan      4.67 209   Pn       Pn       21 17 04.3 -0.9
KIAG  Kiagna River        4.69  74            Pn       21 17 04.7 -0.9
NEA2  Nenana              4.79  13            Pn       21 17 06.2 -0.6
NEA2  Nenana              4.79  13   P        Pn       21 17 06.6 -0.2
      baz=196
WRH   Wood River Hil      4.81  19            Pn       21 17 06.5 -0.6
WRH                                  IAML              21 18 39.7
      comp=E,25nm,1.2s
MENT  Mentasta            4.82  48   Pn       Pn       21 17 06.1 -1.1
MENT                                 IAML              21 19 43.9
      comp=N,54nm,0.1s
MENT                                 IAML              21 19 47.4
      comp=E,68nm,0.1s
M26K  Nabesna, AK         4.83  56            Pn       21 17 06.6 -0.8
RIDG  Independent Ri      4.96  37            Pn       21 17 09.1  0.0
RIDG                                 IAML              21 18 27.8
      comp=N,67nm,1.0s
RIDG                                 IAML              21 18 28.3
      comp=E,55nm,0.9s
RIDG  Independent Ri      4.96  37   P        Pn       21 17 09.6 +0.4
      baz=224
L26K  Log Cabin Wild      5.01  49            Pn       21 17 09.7 -0.2
L26K                                 IAML              21 18 34.6
      comp=E,41nm,0.4s
L26K                                 IAML              21 18 37.6
      comp=N,33nm,0.5s
CCB   Clear Creek Bu      5.02  19            Pn       21 17 09.6 -0.3
BARN  Barnard Glacie      5.04  73   Pn       Pn       21 17 10.7 +0.2
BARN                                 IAML              21 18 06.6
      comp=N,28nm,2.6s
BARN                                 IAML              21 18 44.1
      comp=E,26nm,1.2s
PS08  TAPS Pump Stn8      5.11  24            Pn       21 17 11.2  0.0
DOT   Dot Lake            5.14  41   Pn       Pn       21 17 11.3 -0.3
TCOL  CIGO, UAF Yank      5.22  18   Pn       Pn       21 17 12.0 -0.7
COLA  College             5.22  18   Pn       Pn       21 17 12.1 -0.6
I21K  Tanana              5.23 358            Pn       21 17 13.1 +0.2
I21K  Tanana              5.23 358   IAML              21 19 05.8
      comp=N,27nm,3.4s
I21K                                 IAML              21 19 09.8
      comp=E,20nm,3.0s
I21K  Tanana              5.23 358   P        Pn       21 17 13.1 +0.2
      baz=178
MDM   Murphy Dome         5.25  16            Pn       21 17 12.8 -0.2
MDM                                  IAML              21 18 54.7
      comp=E,20nm,2.0s
TABL  Table Mountain      5.25  80   Pn       Pn       21 17 13.0 -0.3
TABL                                 IAML              21 18 45.3
      comp=N,53nm,3.0s
TABL                                 IAML              21 18 45.7
      comp=E,40nm,3.2s
M27K  Edge Creek, AK      5.29  59   Pn       Pn       21 17 13.4 -0.4
M27K                                 IAML              21 19 48.9
      comp=N,19nm,4.1s
M27K                                 IAML              21 19 50.4
      comp=E,19nm,4.3s
IL31                      5.30  23            Pn       21 17 13.6 -0.1
ILAR  Eielson Array       5.30  23   Pn       Pn       21 17 13.8  0.0
      comp=E,1.6nm,0.3s,baz=206,slow=14,SNR=26
ILAR                                 Sn       Sn       21 18 10.7 -2.6
      comp=E,2.5nm,0.3s,baz=201,slow=24,SNR=8.2
      comp=E,2.3nm,0.3s
ILAR  Eielson Array       5.30  23   Pn       Pn       21 17 13.2 -0.6
I23K  Minto, Yukon-K      5.30  10            Pn       21 17 13.2 -0.6
I23K                                 IAML              21 19 03.2
      comp=N,17nm,0.8s
SCRK  Sand Creek          5.40  39   Pn       Pn       21 17 14.4 -0.8
SCRK                                 IAML              21 18 42.6
      comp=N,21nm,1.1s
SCRK                                 IAML              21 18 51.3
      comp=E,24nm,0.7s
SCRK  Sand Creek          5.40  39   P        Pn       21 17 14.3 -0.9
      baz=226
J25K  Salcha River,       5.50  29            Pn       21 17 16.5  0.0
J25K  Salcha River,       5.50  29   P        Pn       21 17 16.5  0.0
      baz=215
POKR  Poker Plat Res      5.52  19   Pn       Pn       21 17 16.2 -0.5
L27K  Beaver Creek,       5.62  52   Pn       Pn       21 17 17.6 -0.6
BCAR  Beaver Creek A      5.64  52   Pn       Pn       21 17 18.0 -0.4
H21K  Melozitna Rive      5.73 355            Pn       21 17 20.1 +0.4
J26L  Joseph Creek        5.90  36   P        Pn       21 17 22.0  0.0
      baz=224
H23K  Yukon River         5.95   8   Pn       Pn       21 17 23.1 +0.4
H23K  Yukon River         5.95   8   P        Pn       21 17 22.9 +0.2
      baz=190
K27K  Chicken             6.06  44   Pn       Pn       21 17 21.2 -3.0
IM03                      6.11 352            Pn       21 17 25.0 +0.2
IMAR  Indian Mountai      6.11 352            Pn       21 17 24.6 -0.3
H24K  Noodor Dome         6.13  15            Pn       21 17 25.0 -0.1
H24K  Noodor Dome         6.13  15   P        Pn       21 17 25.0 -0.1
      baz=198
SDPT  Sand Point          6.63 230   Pn       Pn       21 17 30.4 -1.5
HYT   Haines Junctio      7.05  77   Pn       Pn       21 17 34.3 -3.5
COLD  Coldfoot            7.31   4   Pn       Pn       21 17 41.0 -0.2
M30M  Minto, Yukon        7.61  64   Pn       Pn       21 17 43.9 -1.5
ANM   Nome                7.89 312   Pn       Pn       21 17 49.4 +0.3
N31M  Braeburn, Yuko      7.91  72   Pn       Pn       21 17 50.2 +0.7
BM03  Burnt Mountain      8.09  20            Pn       21 17 51.1 -0.9
BMAR  Burnt Mountain      8.11  20   Pn       Pn       21 17 51.3 -0.8
I29M  Ogilvie Camp,       8.16  43            Pn       21 17 52.9  0.0
BESE  Bessie Mountai      8.70  92   Pn       Pn       21 18 00.5 +0.2
TOLK  Toolik Lake Re      8.75   5   Pn       Pn       21 18 00.3 -0.6
JIS   Juneau Island       9.03  93   Pn       Pn       21 18 04.6  0.0
YKA   Yellowknife Ar     17.83  66   P        Pn       21 20 00.8 +0.1
      comp=E,0.1nm,0.3s,baz=276,slow=9.9,SNR=15
      comp=E,0.2nm,0.5s
YKA   Yellowknife Ar     17.83  66   P        P        21 20 01.0 +0.4
PDAR  Pinedale Array     30.72 105   P        P        21 22 08.5 +2.3
      comp=E,0.2nm,0.7s,baz=297,slow=5.0,SNR=2.3
      comp=E,0.2nm,0.7s
PDAR  Pinedale Array     30.72 105   P        P        21 22 06.7 +0.5
```

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*IDC **01** 21:17:01.9±0.8, 50°.57S×162°.48E, h0km, mb4.5/6, mbtmp4.5/7, ML3.7/1, MS3.9/26, Error ellipse: s-maj=40.4km s-min=18.0km az=68.0*

*NEIC **01** 21:17:04.1±1.8, 50°.59S±0°.06×162°.5E±0°.2, h21km±3km, mb4.5/14, Error ellipse: s-maj=15.8km s-min=8.7km az=98.0*

ISC 01 21:17:02.5±0.5**, 50°.59S**±0°.07×**162°.54E**±0°.10**, h10km, n79, σ0s.95**/54**, mb4.4**/13**, MS3.9**/25**, Auckland Islands region**

```
Code  Station Name         Δ°  AZ°     Phase ID           Time      Res
                                     Op       ISC        h  m  s    ISC
MCQ   Macquarie Isla      4.48 208   Pn       Pn       21 18 07.7 -2.8
PYZ   Puysegur Point      5.21  34   Pn       Pn       21 18 20.2 -0.3
WHZ   Wether Hill Ro      5.93  40            Pn       21 18 30.2 -0.1
DCZ   Deep Cove           5.99  33   Pn       Pn       21 18 30.4 -0.7
MLZ   Mavora Lakes        6.43  38            Pn       21 18 37.5 +0.3
MLZ                                           Sn       21 19 50.0 -0.6
WKZ   Wanaka              7.23  40   Pn       Pn       21 18 47.6 -0.7
ODZ   Otahua Downs        7.78  48   Pn       Pn       21 18 55.8 +0.1
LBZ   Lake Benmore        8.08  43   Pn       Pn       21 18 59.0 -0.8
URZ   Urewera            16.10  46   Pn       P        21 20 51.6 -0.5
      0.3nm,0.3s,baz=290,slow=19,SNR=3.1
URZ                                  LR       LR       21 27 29.9
      comp=Z,477nm,18.1s,baz=211,slow=39
      9.4nm,0.9s
URZ   Urewera            16.10  46            Pn       21 20 48.6 -0.2
ARMA  Armidale           21.74 334   P        P        21 21 53.3 -0.8
ARMA                                 IAmb     IAmb     21 22 05.4
      comp=Z,13nm,1.1s
STKA  Stephens Creek     24.30 312   P        P        21 22 21.8 +1.8
      comp=Z,6.1nm,0.9s,baz=142,slow=12,SNR=10
STKA                                 LR       LR       21 31 01.7
      comp=Z,350nm,18.2s,baz=175,slow=35
      comp=Z,6.1nm,0.9s
STKA  Stephens Creek     24.30 312   P        P        21 22 18.7 -1.3
VNDA  Vanda              27.04 180   P        P        21 22 45.7 +1.3
      comp=Z,4.2nm,1.0s,baz=351,slow=9.3,SNR=12
VNDA                                 LR       LR       21 31 22.0
      comp=Z,207nm,19.0s,baz=14,slow=32
      comp=Z,4.2nm,1.0s
VNDA  Vanda              27.04 180   P        P        21 22 44.7 +0.4
VNDA                                 IAmb     IAmb     21 22 46.6
      comp=Z,8.0nm,1.1s
DZM   Mont Dzumac        28.63   8   LR       LR       21 32 25.1
      comp=Z,214nm,19.1s,baz=172,slow=32
CTA   Charters Tower     33.05 331   LR       LR       21 36 02.9
      comp=Z,242nm,18.1s,baz=152,slow=34
ASAR  Alice Springs      34.86 310   P        P        21 23 54.8 +0.9
      comp=Z,11nm,0.8s,baz=145,slow=8.5,SNR=94
ASAR                                 PcP      PcP      21 26 26.9 +0.2
      comp=Z,1.3nm,0.8s,baz=140,slow=3.4,SNR=7.3
ASAR                                 LR       LR       21 38 10.6
      comp=Z,194nm,18.2s,baz=148,slow=36
      comp=Z,11nm,0.8s
ASAR  Alice Springs      34.86 310   P        P        21 23 53.6 -0.2
ASAR                                          PcP      21 26 26.7  0.0
AS31  Alice Springs      34.86 310   P        P        21 23 53.2 -0.6
AS31                                 IAmb     IAmb     21 23 55.6
      comp=Z,4.0nm,0.8s
MSVF  Nonsavu            35.05  26   LR       LR       21 36 34.6
      comp=Z,185nm,18.0s,baz=202,slow=34
WR0   Warramunga Arr     37.73 314   P        P        21 24 17.1 -1.3
WR0                                  IAmb     IAmb     21 24 19.5
      comp=Z,19nm,1.0s
WB2   Warramunga Arr     37.83 314   P        P        21 24 18.4 -0.9
WRA   Warramunga Arr     37.84 314   P        P        21 24 19.4 +0.1
      comp=Z,14nm,0.9s,baz=145,slow=8.1,SNR=66
WRA                                  PcP      PcP      21 26 36.0 +0.3
      comp=Z,2.4nm,0.7s,baz=152,slow=2.8,SNR=23
WRA                                  LR       LR       21 39 50.6
      comp=Z,357nm,18.1s,baz=38,slow=36
      comp=Z,14nm,0.9s
WRA   Warramunga Arr     37.84 314   P        P        21 24 18.0 -1.3
WRA                                           PcP      21 26 33.5 -2.1
WB0   Warramunga Arr     37.97 314   P        P        21 24 19.9 -0.5
WB0                                  IAmb     IAmb     21 24 21.3
      comp=Z,16nm,1.1s
WB0                                  PcP      PcP      21 26 36.5 +0.5
H01W1 Cape Leeuwin H     38.11 275   T        T        22 04 36.2
      baz=130,slow=76,SNR=16
H01W2 Cape Leeuwin H     38.12 275   T        T        22 04 34.6
      baz=130,slow=76,SNR=16
H01W3 Cape Leeuwin H     38.13 275   T        T        22 04 34.1
      baz=130,slow=76,SNR=15
QSPA  South Pole Qui     39.53 180   P        P        21 24 34.7 +1.5
      comp=Z,5.5nm,0.8s,baz=14,slow=2.1,SNR=18
QSPA                                 PcP      PcP      21 26 41.1 +0.6
      comp=Z,1.5nm,0.6s,baz=330,slow=16,SNR=8.3
QSPA                                 LR       LR       21 37 56.7
      comp=Z,117nm,19.9s,baz=30,slow=32
      comp=Z,5.5nm,0.8s
QSPA  South Pole Qui     39.53 180   P        P        21 24 33.5 +0.3
QSPA                                 IAmb     IAmb     21 24 35.4
      comp=Z,8.8nm,0.9s
QSPA                                 PcP      PcP      21 26 41.0 +0.6
PMG   Port Moresby       42.98 337   LR       LR       21 40 33.0
      comp=Z,158nm,18.2s,baz=160,slow=33
FITZ  Fitzroy Crossi     43.72 304   LR       LR       21 42 57.1
      comp=Z,236nm,18.3s,baz=148,slow=36
PSA00 Pilbara Seismi     44.13 295   P        P        21 25 11.0 -0.1
PSA00                                IAmb     IAmb     21 25 12.2
      comp=Z,5.2nm,0.8s
MBWA  Marble Bar         44.52 295   P        P        21 25 14.6 +0.4
MAW   Mawson             47.88 211   LR       LR       21 45 54.3
      comp=Z,72nm,18.3s,baz=94,slow=36
PPT   Papeete            50.29  67   LR       LR       21 45 45.3
      comp=Z,24nm,18.5s,baz=292,slow=34
BELA  Belgrano 2         51.37 175   P        P        21 26 05.9 -0.7
BELA                                 IAmb     IAmb     21 26 08.8
      comp=Z,5.6nm,1.1s
BATI  Baumata            51.38 308   LR       LR       21 47 53.4
      comp=Z,383nm,18.3s,baz=188,slow=36
SIJI  Sorong             56.19 321   LR       LR       21 51 38.7
      comp=Z,89nm,19.8s,baz=18,slow=37
TROLL Troll, Antarti     56.89 187   P        P        21 26 47.4 +0.4
SNAA  Sanae              57.60 185   P        P        21 26 52.5 +0.5
SNAA  Sanae              57.60 185   LR       LR       21 50 18.8
      comp=Z,97nm,18.3s,baz=109,slow=35
SNAA  Sanae              57.60 185   P        P        21 26 52.5 +0.5
KAPI  Kappang            57.80 307   LR       LR       21 51 59.3
      comp=Z,94nm,18.4s,baz=144,slow=36
VNA3  Neumayer Olymp     58.35 183   P        P        21 26 57.8 +0.7
MPSI  Mapaga             62.33 310   P        P        21 27 26.7 +1.7
      comp=Z,18nm,0.9s
LEM   Lembang            62.95 294   LR       LR       21 53 41.6
      comp=Z,135nm,19.4s,baz=259,slow=35
PLCA  Paso Flores        77.88 142   LR       LR       21 54 26.8
      comp=Z,71nm,20.9s,baz=184,slow=29
H03S2 Juan Fernandez     80.00 132   T        T        22 57 43.1
      SNR=23
H03S1 Juan Fernandez     80.01 132   T        T        22 57 46.5
      SNR=20
H03S3 Juan Fernandez     80.02 132   T        T        22 57 42.8
      SNR=22
H03N3 Juan Fernandez     80.32 132   T        T        22 58 09.2
      baz=216,slow=72,SNR=20
H03N2 Juan Fernandez     80.33 132   T        T        22 58 06.7
      baz=216,slow=72,SNR=44
H03N1 Juan Fernandez     80.33 132   T        T        22 58 09.3
      baz=216,slow=72,SNR=11
JOW   Kunigami           82.83 330   LR       LR       22 07 16.1
      comp=Z,44nm,18.1s,baz=132,slow=36
H08S2 Diego Garcia H     84.18 265   T        T        23 02 05.2
      baz=141,slow=76,SNR=11
H08S1 Diego Carcia H     84.19 265   T        T        23 02 10.4
      baz=141,slow=76,SNR=8.3
H08S3 Diego Garcia H     84.20 265   T        T        23 02 06.4
      baz=141,slow=76,SNR=11
CMAR  Chiang Mai Arr     88.47 302   P        P        21 29 56.9 +1.9
      comp=Z,3.2nm,0.9s,baz=163,slow=3.8,SNR=24
CMAR                                 LR       LR       22 10 02.7
      comp=Z,35nm,20.3s,baz=30,slow=36
      comp=Z,3.2nm,0.9s
CMAR  Chiang Mai Arr     88.47 302   P        P        21 29 55.0  0.0
PALK  Pallekele          90.41 281   LR       LR       22 02 49.3
      comp=Z,49nm,21.8s,baz=244,slow=30
KSRS  Korea Array        92.81 333   LR       LR       22 08 48.3
      comp=Z,21nm,20.9s,baz=240,slow=34
CPUP  Villa Florida      95.69 145   LR       LR       22 07 21.1
      comp=Z,82nm,21.1s,baz=202,slow=32
ASAJ  Asahikawa          95.91 346   LR       LR       22 07 48.9
      comp=Z,46nm,21.9s,baz=73,slow=32
NNA   Nana               99.13 121   LR       LR       22 05 51.0
      comp=Z,37nm,18.8s,baz=210,slow=30
KURBB Kurchatov Arra    123.47 311   PKP      PKiKP    21 35 59.1 -0.1
      comp=Z,0.1nm,0.4s,baz=140,slow=1.3,SNR=4.2
TIXI  Tiksi             124.25 348   PKP      PKiKP    21 36 01.2 +1.1
      comp=Z,0.2nm,0.3s,baz=271,slow=24,SNR=3.6
TORD  Torodi Ar. Bea    139.53 210   PKhKP    PKPpre   21 36 21.4
      comp=Z,0.7nm,0.9s,baz=142,slow=2.4,SNR=3.7
BRTR  Keskin Array B    143.05 273   PKhKP    PKPpre   21 36 32.9
      comp=Z,0.6nm,0.7s,baz=124,slow=6.1,SNR=5.4
SPITS Spitsbergen Ar    149.67 347   PKPbc    PKiKP    21 36 51.7  0.0
      comp=Z,5.8nm,0.8s,baz=119,slow=6.8,SNR=7.0
AKASG Malin Array Be    150.78 289   PKPbc    PKiKP    21 36 54.2 -0.4
      comp=Z,2.0nm,0.5s,baz=81,slow=3.0,SNR=18
ARCES ARCESS Array B    152.29 329   PKPbc    PKiKP    21 36 57.5 +0.3
      comp=Z,1.3nm,0.6s,baz=56,slow=2.2,SNR=11
FINES FINESS Array B    153.86 311   PKPbc    PKiKP    21 37 00.8 +0.1
      comp=Z,1.5nm,0.7s,baz=116,slow=4.4,SNR=8.9
FINES FINESS Array B    153.86 311            PKiKP    21 37 00.5 -0.2
KEST  Kesra             155.62 243   PKPab    PKPab    21 37 23.8 +1.5
      comp=Z,3.6nm,0.7s,baz=230,slow=3.4,SNR=2.2
KEST  Kesra             155.62 243            PKPab    21 37 20.9 -1.4
GERES GERESS Array B    159.84 277   PKPab    PKPab    21 37 39.8 -0.5
      comp=Z,0.2nm,0.3s,baz=138,slow=4.8,SNR=3.6
GERES GERESS Array B    159.84 277            PKPab    21 37 39.0 -1.3
```

IDC 01 21:19:06.8±11.0**, 6°.25S**×**11°.37W, h0km, mb3.6**/4**, mbtmp3.7**/4**, MS3.0**/1**, Error ellipse: s-maj=440.5km s-min=102.3km az=143.0, Ascension Island region**

```
Code  Station Name         Δ°  AZ°     Phase ID           Time      Res
                                     Op       ISC        h  m  s    ISC
H10N2 ASCENSION HYDR      3.47 243   T        T        21 23 50.4
      baz=66,slow=74,SNR=561
H10N1 ASCENSION HYDR      3.47 243   T        T        21 23 44.6
      baz=66,slow=74,SNR=702
H10N3 ASCENSION HYDR      3.49 243   T        T        21 23 45.5
      baz=66,slow=74,SNR=482
H10S2 ASCENSION HYDR      4.22 230   T        T        21 24 39.4
      baz=166,slow=74,SNR=34
H10S3 ASCENSION HYDR      4.23 230   T        T        21 24 42.6
      baz=54,slow=74,SNR=56
DBIC  Dimbokro           14.39  27   LR       LR       21 27 23.5
      comp=Z,61nm,18.9s,baz=172,slow=34
TORD  Torodi Ar. Bea     23.23  34   P        P        21 24 15.8 -0.1
      3.5nm,1.0s,baz=210,slow=10,SNR=11
      3.5nm,1.0s
```

GERES	GERESS Array B	59.09	19	P	P	21 29 09.0	0.0
	0.3nm,0.6s,baz=190,slow=3.8,SNR=2.3						
	0.3nm,0.6s						
AKASG	Malin Array Be	66.64	27	P	P	21 29 59.3	+0.2
	0.1nm,0.2s,baz=229,slow=6.7,SNR=5.2						
	0.1nm,0.2s						
FINES	FINESS Array B	73.48	18	P	P	21 30 40.6	-0.2
	0.9nm,0.9s,baz=212,slow=4.9,SNR=2.5						
	0.9nm,0.9s						

ISC 01 21:28:57.2±1.2, 45°.81N±0°.04×12°.93E±0°.04, h13km±9km, n12, σ0ˢ.30/16, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLI	Talmassons	0.17	46	*e*Sg	Sg	21 29 03.9	+0.1
TLI	Talmassons	0.17	46⇑	*e*Pg	Pg	21 29 01.1	+0.1
CAE	Caneva	0.40	301	*e*Pg	Pg	21 29 05.3	+0.1
CAE				*e*Sg	Sb	21 29 11.8	-0.4
MLNI	Malnisio	0.41	327	*e*Pg	Pg	21 29 05.5	+0.1
MLNI				*e*Sg	Sb	21 29 12.6	+0.1
BUA	Buia	0.43	18	*e*Sg	Sb	21 29 13.4	+0.2
BUA	Buia	0.43	18	*e*Pg	Pg	21 29 06.0	+0.2
COLI	Coloredo	0.45	44	*e*Sg	Sb	21 29 13.7	-0.1
COLI	Coloredo	0.45	44	*e*Pg	Pg	21 29 06.2	0.0
BAD	Bernadia	0.48	27	*e*Sg	Sb	21 29 14.5	-0.1
BAD	Bernadia	0.48	27	*e*Pg	Pg	21 29 06.5	-0.2
BRJN	Brijuni	1.07	147	*e*Pg	Pg	21 29 17.7	-0.1
BRJN				Sg	Sn	21 29 33.1	+0.5
SMRN	Sveta Marina	1.16	131	*e*Pg	Pb	21 29 18.6	-0.4
SMRN				Sg	Sb	21 29 34.4	+0.5

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*IDC **01** 21:31:28.3±1.0, 40°.31N×105°.75E, h0km, mb3.4/7, mbtmp3.5/10, ML3.2/3, MS2.7/4, Error ellipse: s-maj=27.6km s-min=16.5km az=82.0*

ISC 01 21:31:30.0±0.8, 40°.18N±0°.09×105°.7E±0°.1, h10km, n21, σ1ˢ.57/19, mb3.8/10, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	7.67	3	Pn	Pn	21 33 21.2	-0.6
	0.9nm,0.3s,baz=182,slow=13,SNR=21						
SONM				Pg	Pb	21 33 47.6	+4.4
	0.9nm,0.3s,baz=187,slow=16,SNR=5.3						
SONM				Lg	Lg	21 35 28.1	
	3.5nm,0.3s,baz=184,slow=31,SNR=8.2						
	1.5nm,0.3s						
KSRS	Korea Array	17.50	92	LR	LR	21 42 58.6	
	comp=Z,9.8nm,19.6s,baz=215,slow=40						
MKAR	Makanchi Array	18.22	299	P	Pn	21 35 41.7	-1.2
	0.1nm,0.3s,baz=98,slow=14,SNR=7.4						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	19.72	321	P	P	21 35 58.2	-1.2
	0.1nm,0.3s,baz=134,slow=12,SNR=2.0						
ZALV				LR	LR	21 43 27.7	
	comp=Z,23nm,18.4s,baz=130,slow=37						
	0.5nm,0.5s						
GUN	Gumba	20.45	239	*e*P	P	21 36 08.7	+0.7
	16nm,0.4s						
KLR	Kul'dur	20.50	55	P	P	21 36 06.9	-1.2
	1.9nm,0.8s,baz=287,slow=11,SNR=3.1						
	1.9nm,0.8s						
RAMN	Ramite	20.64	236	*e*P	P	21 36 10.4	+0.5
	3.7nm,0.3s						
KKN	Kakani	20.93	240	*e*P	P	21 36 13.9	+0.9
PKI	Pulchoki	20.98	239	*e*P	P	21 36 14.0	+0.2
GKN	Gorkha	21.22	242	*e*P	P	21 36 16.7	+0.6
	7.0nm,0.4s						
DANN	Dangsing	21.59	244	*e*P	P	21 36 21.3	+1.0
	13nm,0.5s						
KURBB	Kurchatov Arra	21.65	308	P	P	21 36 19.4	-1.1
	1.5nm,0.9s,baz=112,slow=11,SNR=6.9						
	1.5nm,0.9s						
KOLN	Koldanda	22.07	243	*e*P	P	21 36 25.7	+0.4
	22nm,0.9s						
PYUN	Piuthan	22.28	244	*e*P	P	21 36 28.2	+0.6
	10nm,0.6s						
CMAR	Chiang Mai Arr	22.42	197	P	P	21 36 29.8	+0.9
	0.4nm,0.6s,baz=7.0,slow=10,SNR=2.1						
	0.4nm,0.6s						
MJAR	Matsushiro Arr	25.64	88	LR	LR	21 46 07.1	
	comp=Z,11nm,20.9s,baz=172,slow=34						
TIXI	Tiksi	33.62	13	P	P	21 38 08.1	-2.1
	0.2nm,0.2s,baz=270,slow=23,SNR=1.3						
	0.2nm,0.2s						
GEYT	Alibeck	36.70	282	LR	LR	21 56 02.1	
	comp=Z,58nm,18.1s,baz=50,slow=40						
WRA	Warramunga Arr	65.48	150	P	P	21 42 14.2	+0.9
	0.4nm,0.8s,baz=342,slow=7.6,SNR=2.7						
	0.4nm,0.8s						
ASAR	Alice Springs	68.73	152	P	P	21 42 35.1	+1.2
	0.5nm,0.6s,baz=343,slow=6.4,SNR=5.3						
	0.5nm,0.6s						
YKA	Yellowknife Ar	72.66	18	P	P	21 42 55.6	-1.8
	0.2nm,0.3s,baz=319,slow=8.4,SNR=6.7						
	0.2nm,0.3s						

IDC 01 21:33:51.9±1.9, 4°.59S×145°.12E, h0km, mb3.2/2, mbtmp3.4/3, ML3.8/1, Error ellipse: s-maj=142.7km s-min=31.0km az=118.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.52	214	P	P	21 38 10.0	-0.1
	0.3nm,0.3s,baz=35,slow=11,SNR=24						
	0.5nm,0.3s						
ASAR	Alice Springs	21.84	209	P	P	21 38 45.9	-0.3
	0.3nm,0.5s,baz=41,slow=8.0,SNR=9.0						
	0.3nm,0.5s						
ILAR	Eielson Array	84.94	24	P	P	21 46 29.1	+0.4
	0.2nm,0.6s,baz=260,slow=3.6,SNR=2.8						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	142.92	286	PKP	PKPdf	21 53 27.3	-1.4
	0.3nm,0.9s,baz=107,slow=3.5,SNR=1.6						

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*IDC **01** 21:39:09.1±2.1, 9°.53N×122°.97E, h0km, mb3.4/4, mbtmp3.4/4, MS3.4/1, Error ellipse: s-maj=277.4km s-min=24.4km az=65.0*

*MAN **01** 21:39:12.4, 9°.27N×122°.16E, h13km, mb4.6, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*

ISC 01 21:39:15.5±1.1, 9°.13N±0°.08×122°.26E±0°.09, h35km, n9, σ2ˢ.00/11, mb3.5/4, 2C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.98	78⇑	*i*P	Pn	21 39 31.9	-1.1
SNPH				*i* S	Sn	21 39 45.1	-0.5
DCPH	Dipolog City	1.21	117⇓	*e*P	Pn	21 39 38.6	+2.7
LLP	Lapu-Lapu	2.05	55⇑	*i*P	Pn	21 39 46.5	-1.1
LLP				*i* S	Sn	21 40 13.9	+2.0
RCP	Roxas	2.46	11⇓	*e*P	Pn	21 39 53.6	+0.5
RCP				*e*S	Sn	21 40 25.9	+3.9
WRA	Warramunga Arr	31.24	158	P	P	21 45 31.0	-1.1
	0.2nm,0.7s,baz=339,slow=10,SNR=1.6						
	0.2nm,0.7s						
ASAR	Alice Springs	34.53	161	P	P	21 46 01.1	+0.3
	0.6nm,0.6s,baz=340,slow=7.0,SNR=13						
	0.6nm,0.6s						
MKAR	Makanchi Array	50.61	325	P	P	21 48 10.6	-0.5
	0.2nm,0.5s,baz=131,slow=9.0,SNR=4.3						
	0.2nm,0.5s						
PETK	Petropavlovsk-	52.35	26	LR	LR	22 10 55.6	
	comp=Z,45nm,22.0s,baz=157,slow=37						
FINES	FINESS Array B	85.00	331	P	P	21 51 46.0	-1.2
	0.5nm,0.7s,baz=70,slow=1.6,SNR=4.8						
	0.5nm,0.7s						

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*DNK **01** 21:54:13.3±2.5, 79°.05N×2°.25E, h36km±32km, ML0.7*

BER 01 21:54:18.5±1.6, 79°.05N×4°.16E, h10km, ML1.2, Confirmed Earthquake, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.50	91	*e*P	Pn	21 54 43.1	-2.3
KBS				*e*S	Sn	21 55 02.1	-2.9
KBS	Kingsbay	1.50	91	*e*P	Pn	21 54 42.8	-2.6
KBS				*e*S	Sn	21 55 02.1	-2.9
KBS				IAML		21 55 05.3	
	comp=Z,3.9nm,0.1s						
BRBB	Barentsburg B	2.22	111	*e*P	Pn	21 54 53.9	-1.3
BRBB				*e*S	Sn	21 55 17.8	-4.8
BRBA	Barentsburg A	2.24	111	*e*S	Sn	21 55 20.3	-2.8
BRBA				IAML		21 55 26.4	
	comp=Z,5.2nm,0.4s						
SPA0	Spitsbergen Ar	2.57	104	*e*P	Pn	21 54 58.6	-1.5
SPA0				*e*S	Sn	21 55 28.8	-2.6
SPA0				IAML		21 55 35.5	
	comp=Z,2.0nm,0.8s						
NOR	Nord	4.32	316	*i* P	Pn	21 55 12.0	-12
NOR				IAML		21 56 00.4	
	comp=Z,0.2nm,0.2s						
DAG	Danmarks Havn	5.28	256	*i* P	Pn	21 55 21.7	-16
DAG				*i* S	Sn	21 56 15.2	-23
DAG				IAML		21 56 20.3	
	comp=Z,0.8nm,0.1s						
DBG	Daneborg	7.30	242	*i* S	Sn	21 57 03.6	-24
DBG				IAML		21 57 10.5	
	comp=Z,0.2nm,0.2s						

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*IDC **01** 22:03:35.0±1.7, 2°.89S×128°.77E, h0km, mb3.4/2, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=37.0km s-min=25.2km az=98.0*

*DJA **01** 22:03:37.5±0.4, 3°S±3°×12°9E±°, h10km, M2.9/7, MLv2.9/7*

ISC 01 22:03:36.9±0.9, 2°.91S±0°.07×128°.73E±0°.07, h10km, n8, σ0ˢ.88/10, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.48	156	P	Pg	22 03 47.2	+1.0
MSAI				S	Sb	22 03 54.1	-0.4
AAI	Ambon	0.94	215	P	Pb	22 03 55.9	+0.6
SANI	Sanana	2.87	287	P	Pn	22 04 22.6	-0.1
SWI	Sorong	3.24	51	P	Pn	22 04 28.7	+0.8
SIJI	Sorong	3.24	51	Pn	Pn	22 04 27.3	-0.6
	4.3nm,0.3s,baz=253,slow=11,SNR=9.7						
SIJI				Sn	Sn	22 05 06.6	0.0
	1.7nm,0.3s,baz=200,slow=23,SNR=7.1						
	7.5nm,0.3s						
WRA	Warramunga Arr	17.79	162	P	Pn	22 07 43.3	-1.5
	0.1nm,0.3s,baz=343,slow=12,SNR=7.8						
	0.5nm,0.6s						
ASAR	Alice Springs	21.23	167	P	P	22 08 22.6	-0.7
	1.0nm,0.3s,baz=344,slow=9.9,SNR=26						
	1.0nm,0.3s						
MKAR	Makanchi Array	64.14	326	P	P	22 14 11.7	+0.1
	0.3nm,0.7s,baz=115,slow=6.8,SNR=2.5						
	0.3nm,0.7s						

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*IDC **01** 22:22:13.6±1.1, 59°.50N×143°.99W, h0km, mb3.3/5, mbtmp3.3/10, ML3.3/5, MS2.9/1, Error ellipse: s-maj=20.2km s-min=14.3km az=20.0*

*AEIC **01** 22:22:15±1.3, 59°.42N±0°.02×143°.97W±0°.05, h8km±4km, ML3.2, ML3.4/120(NEIC), Error ellipse: s-maj=3.8km s-min=3.0km az=130.0*

*NEIC **01** 22:22:15.9±1.6, 59°.48N±0°.05×143°.92W±0°.05, h19km±8km, Error ellipse: s-maj=6.8km s-min=3.9km az=185.0*

ISC 01 22:22:15.0±1.3, 59°.49N±0°.04×143°.98W±0°.03, h11km±9km, n193, σ0ˢ.78/207, mb3.4/5, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAIM	Kayak Island	0.49	334		Pb	22 22 26.6	+0.9
KAIM				Sg	Sb	22 22 34.1	+1.2
KAIM				IAML		22 22 37.6	
	comp=E,2µm,0.6s						
KAIM				IAML		22 22 37.6	
	comp=N,2µm,0.6s						
KAIM	Kayak Island	0.49	334	P	Pn	22 22 26.7	-1.3
	baz=155						
SUCK	Suckling Hills	0.60	10		Pb	22 22 27.8	+0.4
SUCK				Sg	Sn	22 22 39.5	+0.4
SUCK				IAML		22 22 47.8	
	comp=N,1µm,0.5s						
BGLC	Bering Glacier	0.73	29		Pb	22 22 29.8	+0.2
BGLC	Bering Glacier	0.73	29	P	Pb	22 22 29.8	+0.2
	baz=206						
NICHA	Nichawak Mount	0.75	1		Pb	22 22 30.6	+0.5
NICHA					Sn	22 22 42.5	-0.4
HMT	Hamilton	0.86	351		Pb	22 22 32.3	+0.3
HMT					Sn	22 22 47.5	+1.8
GRIN	Grindle Hills	0.86	23		Pn	22 22 32.4	-0.7
GRIN					Sn	22 22 46.0	+0.2
SNH	Sunshine Point	0.91	39	Pg	Pb	22 22 32.8	+0.1
SNH					Sn	22 22 46.3	-0.5
SNH				IAML		22 22 48.1	
	comp=N,2µm,0.8s						
BERG	Berg Lake	0.92	9		Pb	22 22 32.8	-0.2
BERG					Sb	22 22 45.5	+0.3
BERG				IAML		22 22 51.4	
	comp=N,1µm,0.3s						
BERG				IAML		22 22 52.9	
	comp=E,2µm,0.5s						
CYK	Cape Yakataga	0.97	51		Pb	22 22 33.2	-0.4
CYK					Sn	22 22 47.5	-0.6
RAGM	Ragged Mountai	0.97	339		Pb	22 22 33.5	-0.2
RAGM					Sn	22 22 49.4	+1.1
KHIT	Khitrov Hills	1.03	21		Pg	22 22 34.5	-0.3
KHIT					Sn	22 22 49.3	-0.6
WAX	Waxell Ridge	1.12	30		Pg	22 22 35.9	-0.6
WAX					Sn	22 22 51.6	-0.6
GOAT	Goat Mountain	1.16	342		Pg	22 22 36.9	-0.3
MID	Middleton Isla	1.20	268	Pn	Pg	22 22 37.6	-0.5
MID				IAML		22 23 09.1	
	comp=E,566nm,0.8s						
MID				IAML		22 23 09.1	
	comp=N,563nm,0.5s						
Q23K	Middleton Isla	1.21	268	Pn	Pg	22 22 38.0	-0.1
Q23K				IAML		22 23 09.1	
	comp=N,685nm,0.6s						
Q23K	Middleton Isla	1.21	268	P	Pn	22 22 36.3	-1.5
	baz=89						
BAGL	Bagley Icefiel	1.39	43		Pn	22 22 39.9	-0.3
BAGL					Sg	22 22 58.9	-0.6
EYAK	Cordova Ski Ar	1.39	321		Pn	22 22 39.7	-0.5
EYAK					Sg	22 22 59.9	+0.3
EYAK	Cordova Ski Ar	1.39	321	P	Pn	22 22 39.7	-0.5
	baz=141						
EYAK				S	Sg	22 22 59.8	+0.3
	baz=141						
ISLE	Juniper Island	1.39	36		Pn	22 22 40.0	-0.5
ISLE					Sn	22 22 58.7	-0.2
ISLE	Juniper Island	1.39	36	IAML		22 23 02.6	
	comp=N,876nm,1.3s						
BMRM	Bremner River	1.52	348		Pn	22 22 41.7	-0.4
BMRM	Bremner River	1.52	348	IAML		22 23 03.9	
	comp=E,460nm,0.5s						
BMRM				IAML		22 23 05.0	
	comp=N,391nm,0.6s						
BMRM	Bremner River	1.52	348	P	Pn	22 22 41.7	-0.4
	baz=168						
KIAG	Kiagna River	1.65	29		Pn	22 22 43.8	-0.4
KIAG					Sn	22 23 04.8	-0.7
TABL	Table Mountain	1.72	55		Pn	22 22 44.9	-0.2
SAMH	Samovar Hills	1.74	67		Pn	22 22 44.6	-0.7
BALM	Baldy	1.76	27		Pn	22 22 45.2	-0.2
BALM					Sn	22 23 07.3	-0.5
VRDI	Verde Repeater	1.77	8	Pn	Pn	22 22 45.7	0.0
VRDI				IAML		22 23 10.1	
	comp=E,257nm,0.6s						
VRDI				IAML		22 23 11.2	
	comp=N,248nm,0.7s						
FID	Port Fidalgo	1.78	316		Pn	22 22 45.4	-0.3
FID				IAML		22 23 18.2	
	comp=E,585nm,0.4s						
FID				IAML		22 23 18.3	
	comp=N,435nm,0.5s						
DIV	Divide	1.87	332		Pn	22 22 46.6	-0.4
BARN	Barnard Glacie	1.96	35		Pn	22 22 48.4	+0.1
BARN					Sn	22 23 12.6	-0.4
GLB	Gilahina Butte	1.96	2		Pn	22 22 48.2	0.0
PCA	Pinnacle	1.98	70		Pn	22 22 47.9	-0.6
PINM	Pinnacle	1.98	70	P	Pn	22 22 47.9	-0.6
	baz=252						
JPK	Jack Peak	2.04	322		Pn	22 22 48.6	-0.7
GLI	Glacier Island	2.09	313		Pn	22 22 48.7	-1.2
GLI				IAML		22 23 24.1	
	comp=E,360nm,0.4s						
GLI				IAML		22 23 29.0	
	comp=N,242nm,0.5s						
GLI	Glacier Island	2.09	313	P	Pn	22 22 49.0	-0.9
	baz=132						
N25K	Chitina, Valde	2.15	352		Pn	22 22 51.0	+0.2
N25K	Chitina, Valde	2.15	352	P	Pn	22 22 51.0	+0.2
	baz=172						
KLU	Klutina	2.23	335		Pn	22 22 51.7	-0.2
KLU				IAML		22 23 29.8	
	comp=N,184nm,0.5s						
KLU				IAML		22 23 36.2	
	comp=E,158nm,0.6s						
KLU	Klutina	2.23	335	P	Pn	22 22 51.8	-0.1
	baz=154						
BCPM	Bancas Point	2.25	76		Pn	22 22 52.0	-0.2
PNL	Peninsula	2.34	84		Pn	22 22 53.2	-0.2
PNL	Peninsula	2.34	84	P	Pn	22 22 53.2	-0.2
	baz=266						
PWL	Port Wells	2.57	304		Pn	22 22 56.3	-0.3
PWL				IAML		22 23 28.0	
	comp=N,171nm,0.4s						
PWL				IAML		22 23 46.3	
	comp=E,152nm,0.7s						
PWL	Port Wells	2.57	304	P	Pn	22 22 56.3	-0.3
	baz=122						
PS11	TAPS Pump St11	2.70	345		Pn	22 22 59.6	+1.3
YUK2	White River	2.78	32		Pn	22 23 00.7	+1.2
SEW	Seward	2.83	285	Pn	Pn	22 22 59.8	-0.3
SEW	Seward	2.83	285	P	Pn	22 23 00.0	0.0
	baz=102						
M24K	Tolsona, Glenn	2.84	339		Pn	22 23 01.1	+0.8
M24K				IAML		22 23 47.4	
	comp=N,126nm,1.2s						
M24K				IAML		22 24 28.7	
	comp=E,196nm,1.5s						
M24K	Tolsona, Glenn	2.84	339	P	Pn	22 23 01.1	+0.8
	baz=157						
SCM	Sheep Creek Mo	2.87	326		Pn	22 23 00.7	-0.1
SCM				IAML		22 23 54.6	
	comp=E,145nm,1.0s						
SCM				IAML		22 24 16.2	
	comp=N,102nm,1.0s						
SCM	Sheep Creek Mo	2.87	326	P	Pn	22 23 00.6	-0.1
	baz=144						
YUK3	Moose Creek	2.88	36		Pn	22 23 02.2	+1.3
YUK3	Moose Creek	2.88	36	P	Pn	22 23 02.2	+1.3
	baz=218						
KNK	Knik Glacier	2.94	313		Pn	22 23 02.1	+0.4
KNK				IAML		22 23 53.2	
	comp=E,115nm,0.4s						
KNK				IAML		22 23 55.4	
	comp=N,178nm,0.6s						
KNK	Knik Glacier	2.94	313	P	Pn	22 23 00.8	-0.9
	baz=130						
M23K	Glacier View	2.96	323	P	Pn	22 23 01.6	-0.3
	baz=140						
M26K	Nabesna, AK	2.96	9		Pn	22 23 02.1	+0.2
M26K	Nabesna, AK	2.96	9	P	Pn	22 23 02.3	+0.3
	baz=189						
HARP	HAARP	2.98	349		Pn	22 23 02.5	+0.4
HARP	HAARP	2.98	349	P	Pn	22 23 02.5	+0.4
	baz=168						
O22K	Cooper Landing	3.05	292		Pn	22 23 02.9	-0.2
M27K	Edge Creek, AK	3.06	19		Pn	22 23 04.2	+0.8
M27K	Edge Creek, AK	3.06	19	IAML		22 24 00.1	
	comp=N,99nm,1.0s						
M27K	Edge Creek, AK	3.06	19	P	Pn	22 23 04.2	+0.8
	baz=200						
YUK7	Dusty Glacier	3.12	68		Pn	22 23 04.5	+0.2
SML	Sawmill	3.16	319	Pn	Pn	22 23 04.1	-0.6
SML				IAML		22 23 57.5	
	comp=N,109nm,0.9s						
SML				IAML		22 23 58.4	
	comp=E,122nm,0.9s						
SML	Sawmill	3.16	319	P	Pn	22 23 04.2	-0.5
	baz=136						
YUK6	Outpost Mounta	3.16	60		Pn	22 23 05.2	+0.3
YUK6	Outpost Mounta	3.16	60	P	Pn	22 23 05.2	+0.3
	baz=244						
YUK4	Talbot Arm	3.24	53	P	Pn	22 23 08.2	+2.3
	baz=235						
RC01	Rabbit Creek A	3.29	302		Pn	22 23 06.0	-0.3
RC01	Rabbit Creek A	3.29	302	IAML		22 24 07.3	
	comp=E,97nm,0.7s						
RC01				IAML		22 24 15.3	
	comp=N,80nm,0.8s						
RC01	Rabbit Creek A	3.29	302	P	Pn	22 23 06.0	-0.3
	baz=118						
SLKM	Skilak Lake	3.30	291		Pn	22 23 06.5	-0.1
PMR	Palmer	3.31	312		Pn	22 23 06.7	+0.1
BVCY	Beaver Creek	3.31	26		Pn	22 23 07.9	+1.2
BVCY	Beaver Creek	3.31	26	P	Pn	22 23 07.9	+1.2
	baz=208						
GHO	Glory Hole Cre	3.34	315		Pn	22 23 07.2	0.0
GHO				IAML		22 24 11.0	
	comp=N,111nm,1.4s						
GHO				IAML		22 24 12.3	
	comp=E,110nm,0.8s						
BRSE	Bradley Lake S	3.44	277		Pn	22 23 09.2	+0.7
BRSE	Bradley Lake S	3.44	277	P	Pn	22 23 09.2	+0.7
	baz=92						
MENT	Mentasta	3.47	2		Pn	22 23 09.5	+0.6
MENT				IAML		22 24 39.6	
	comp=E,61nm,1.0s						
HYT	Haines Junctio	3.51	65	Pn	Pn	22 23 09.7	+0.2
HYT	Haines Junctio	3.51	65	P	Pn	22 23 09.7	+0.2
	baz=249						
BRLK	Bradley Lake	3.52	278	Pn	Pn	22 23 08.6	-0.9
BRLK				IAML		22 23 52.0	
	comp=E,66nm,0.4s						
L26K	Log Cabin Wild	3.56	5		Pn	22 23 10.3	+0.1
L26K				IAML		22 24 11.7	
	comp=E,55nm,0.5s						
PAX	Paxson	3.57	349	Pn	Pn	22 23 10.4	+0.1
PAX	Paxson	3.57	349	P	Pn	22 23 10.7	+0.4
	baz=168						
WAT6	Susitna Watana	3.60	331		Pn	22 23 10.7	-0.2
WAT6	Susitna Watana	3.60	331	P	Pn	22 23 10.7	-0.2
	baz=148						
CNPM	China Poot	3.70	274	Pn	Pn	22 23 11.1	-0.9
CNPM				IAML		22 24 34.2	
	comp=E,53nm,3.9s						
CNPM				IAML		22 24 48.8	
	comp=N,46nm,3.6s						
L27K	Beaver Creek,	3.74	15		Pn	22 23 12.8	+0.3
L27K	Beaver Creek,	3.74	15	P	Pn	22 23 12.8	+0.3
	baz=197						
BC03		3.75	16		Pn	22 23 13.1	+0.5
BCAR	Beaver Creek A	3.75	16		Pn	22 23 13.0	+0.3
M22K	Willow	3.78	310		Pn	22 23 13.1	0.0
DHY	Denali Highway	3.96	337		Pn	22 23 16.0	+0.3
DHY	Denali Highway	3.96	337	P	Pn	22 23 15.9	+0.3
	baz=154						
PS10	TAPS Pump St10	4.04	349		Pn	22 23 17.8	+1.0
DOT	Dot Lake	4.18	360		Pn	22 23 19.2	+0.5
CUT	Chulitna	4.24	316		Pn	22 23 20.4	+1.0
RIDG	Independent Ri	4.29	355		Pn	22 23 21.7	+1.5
RIDG				IAML		22 25 42.0	
	comp=E,27nm,2.8s						
RIDG	Independent Ri	4.29	355	P	Pn	22 23 21.6	+1.4
	baz=174						
STLK	Strandline Lak	4.38	301		Pn	22 23 21.1	-0.2
SKAG	Skagway	4.42	87		Pn	22 23 23.3	+1.5
SKAG				IAML		22 24 35.1	
	comp=N,40nm,0.9s						
SKAG				IAML		22 24 47.2	
	comp=E,43nm,1.0s						
SCRK	Sand Creek	4.51	360	Pn	Pn	22 23 23.6	+0.3
SCRK	Sand Creek	4.51	360	P	Pn	22 23 23.5	+0.3
	baz=180						
RSO	Redoubt South	4.51	286		Pn	22 23 23.6	+0.2
N31M	Braeburn, Yuko	4.53	60	Pn	Pn	22 23 23.0	-0.4
N31M				IAML		22 24 32.6	
	comp=E,45nm,1.6s						
N31M				IAML		22 25 20.6	
	comp=N,35nm,1.5s						
RND	Reindeer	4.57	331	Pn	Pn	22 23 22.9	-1.2
RND				IAML		22 24 41.9	
	comp=N,26nm,1.4s						
RND				IAML		22 24 49.0	
	comp=E,32nm,1.2s						
K27K	Chicken	4.65	10		Pn	22 23 25.1	+0.1
M30M	Minto, Yukon	4.67	45		Pn	22 23 25.5	+0.1
M30M	Minto, Yukon	4.67	45	P	Pn	22 23 25.5	+0.1
	baz=231						
WHY	Whitehorse	4.71	72		Pn	22 23 25.8	-0.2
WHY	Whitehorse	4.71	72	IAML		22 24 57.7	
	comp=E,24nm,1.0s						
WHY				IAML		22 24 58.7	
	comp=N,29nm,0.9s						
WHY	Whitehorse	4.71	72	P	Pn	22 23 25.8	-0.2

	baz=259						
BESE	Bessie Mountai	4.80	97	Pn	Pn	22 23 26.3	-1.0
KDAK	Kodiak Island	4.81	253	Pn	Pn	22 23 27.0	-0.2
	comp=N,1.4nm,0.3s,baz=61,slow=6.2,SNR=16						
KDAK				Sn	Sn	22 24 18.1	-4.7
	comp=N,2.5nm,0.3s,baz=336,slow=24,SNR=11						
	comp=N,3.6nm,0.3s						
KDAK	Kodiak Island	4.81	253	Pn	Pn	22 23 27.5	+0.3
TRF	Thorofare Moun	4.99	325		Pn	22 23 30.4	+0.4
TRF				IAML		22 24 47.3	
	comp=N,35nm,2.3s						
TRF				IAML		22 25 09.6	
	comp=E,31nm,2.3s						
Q19K	Cape Douglas,	5.00	268	Pn	Pn	22 23 28.9	-1.0
J26L	Joseph Creek	5.04	2	P	Pn	22 23 31.0	+0.5
	baz=182						
DAWY	Dawson	5.08	23		Pn	22 23 31.6	+0.5
DAWY				IAML		22 25 12.9	
	comp=E,16nm,2.5s						
DAWY				IAML		22 25 16.9	
	comp=N,16nm,1.7s						
DAWY	Dawson	5.08	23	P	Pn	22 23 31.8	+0.7
	baz=207						
JIS	Juneau Island	5.13	100	Pn	Pn	22 23 31.4	-0.1
JIS				IAML		22 24 28.7	
	comp=E,32nm,3.2s						
JIS				IAML		22 25 21.2	
	comp=N,31nm,3.8s						
SIT	Sitka	5.18	114	Pn	Pn	22 23 33.0	+0.7
J25K	Salcha River,	5.19	353		Pn	22 23 32.9	+0.4
J25K	Salcha River,	5.19	353	IAML		22 25 44.8	
	comp=N,14nm,5.0s						
J25K	Salcha River,	5.19	353	P	Pn	22 23 32.9	+0.4
	baz=172						
PPLA	Purkeypile	5.24	314	Pn	Pn	22 23 33.1	-0.2
KTH	Kantishna Hill	5.26	324		Pn	22 23 34.3	+0.8
KTH				IAML		22 25 08.4	
	comp=E,28nm,1.2s						
KTH				IAML		22 25 19.3	
	comp=N,32nm,3.0s						
WRH	Wood River Hil	5.36	341		Pn	22 23 34.3	-0.5
BWN	Browne	5.37	333		Pn	22 23 34.2	-0.8
OHAK	Old Harbor	5.40	249	Pn	Pn	22 23 35.5	+0.2
N19K	Bonanza Creek	5.41	289	Pn	Pn	22 23 35.2	-0.4
M31M	Drury Creek, Y	5.42	56		Pn	22 23 35.9	+0.2
IL31		5.48	347		Pn	22 23 35.8	-0.6
ILAR	Eielson Array	5.48	347	Pn	Pn	22 23 35.9	-0.5
	comp=N,1.8nm,0.3s,baz=171,slow=13,SNR=77						
	comp=N,4.0nm,0.5s						
ILAR	Eielson Array	5.48	347	Pn	Pn	22 23 36.0	-0.4
CCB	Clear Creek Bu	5.48	343		Pn	22 23 35.8	-0.7
CAST	Castle Rocks	5.54	319	Pn	Pn	22 23 37.3	+0.1
NEA2	Nenana	5.65	337		Pn	22 23 38.4	-0.5
NEA2	Nenana	5.65	337	P	Pn	22 23 38.4	-0.5
	baz=153						
M19K	Big River Lodg	5.66	300		Pn	22 23 38.3	-0.7
M19K	Big River Lodg	5.66	300	P	Pn	22 23 38.2	-0.7
	baz=111						
BPAW	Bear Paw Mtn.	5.70	327		Pn	22 23 39.1	-0.3
BPAW	Bear Paw Mtn.	5.70	327	P	Pn	22 23 39.1	-0.3
	baz=142						
COLA	College	5.70	343	Pn	Pn	22 23 39.4	0.0
MDM	Murphy Dome	5.84	342		Pn	22 23 40.8	-0.6
POKR	Poker Plat Res	5.88	346	Pn	Pn	22 23 41.6	-0.2
CHUM	Lake Minchumin	5.93	322		Pn	22 23 42.4	-0.2
CHUM	Lake Minchumin	5.93	322	P	Pn	22 23 42.3	-0.2
	baz=135						
L19K	White Mountain	5.96	302	Pn	Pn	22 23 42.5	-0.6
L19K	White Mountain	5.96	302	P	Pn	22 23 41.9	-1.2
	baz=113						
SVW2	Sparrevohn	5.99	291	Pn	Pn	22 23 43.6	+0.1
N18K	Kilae Creek	6.08	286	Pn	Pn	22 23 43.8	-0.9
K20K	Telida	6.20	313	Pn	Pn	22 23 45.5	-0.9
K20K	Telida	6.20	313	P	Pn	22 23 45.1	-1.3
	baz=125						
I23K	Minto, Yukon-K	6.21	339		Pn	22 23 45.9	-0.5
I23K	Minto, Yukon-K	6.21	339	P	Pn	22 23 45.9	-0.5
	baz=154						
I29M	Ogilvie Camp,	6.46	22		Pn	22 23 50.2	+0.4
H24K	Noodor Dome	6.62	346		Pn	22 23 52.0	-0.2
H24K	Noodor Dome	6.62	346	P	Pn	22 23 52.0	-0.2
	baz=163						
J20K	Nowinta River	6.72	319		Pn	22 23 53.6	+0.1
J20K	Nowinta River	6.72	319	P	Pn	22 23 52.9	-0.6
	baz=130						
TT01	Tatalina	6.75	306		Pn	22 23 52.9	-1.0
TTA	Tatalina	6.76	306	Pn	Pn	22 23 53.8	-0.2
I21K	Tanana	6.81	330		Pn	22 23 54.2	-0.5
I21K	Tanana	6.81	330	P	Pn	22 23 54.3	-0.5
	baz=144						
H23K	Yukon River	6.86	340	Pn	Pn	22 23 55.1	-0.3
DLBC	Dease Lake	7.29	92	Pn	Pn	22 24 01.9	+0.5
	comp=N,0.4nm,0.3s,baz=355,slow=6.2,SNR=8.2						
DLBC				Sn	Sn	22 25 20.5	-3.7
	comp=N,0.5nm,0.3s,baz=245,slow=20,SNR=2.1						
	comp=N,1.1nm,0.3s						
H21K	Melozitna Rive	7.41	330		Pn	22 24 02.3	-0.5
H21K	Melozitna Rive	7.41	330	P	Pn	22 24 02.4	-0.5
	baz=143						
IM03		7.90	330		Pn	22 24 09.1	-0.5
IMAR	Indian Mountai	7.90	330	Pn	Pn	22 24 09.3	-0.4
BM03	Burnt Mountain	7.97	358		Pn	22 24 11.1	+0.4
BMAR	Burnt Mountain	7.98	358	Pn	Pn	22 24 11.3	+0.6
COLD	Coldfoot	8.25	343		Pn	22 24 14.3	-0.2
COLD	Coldfoot	8.25	343	P	Pn	22 24 14.3	-0.2
	baz=157						
TOLK	Toolik Lake Re	9.51	348	Pn	Pn	22 24 31.9	+0.2
INK	Inuvik	9.96	23	Pn	Pn	22 24 38.0	+0.3
	comp=N,0.2nm,0.3s,baz=212,slow=12,SNR=7.9						
INK				LR	LR	22 28 25.5	
	comp=N,62nm,19.6s,baz=194,slow=37						
	comp=N,0.6nm,0.4s						
YKA	Yellowknife Ar	14.50	65	Pn	Pn	22 25 38.1	-1.7
	comp=N,0.1nm,0.3s,baz=268,slow=9.7,SNR=1.5						
YKA	Yellowknife Ar	14.50	65		Pn	22 25 42.4	+2.6
RES	Resolute Bay	23.38	30	P	P	22 27 23.2	+0.1
	comp=N,0.9nm,0.6s,baz=250,slow=14,SNR=6.1						
	comp=N,0.9nm,0.6s						
NVAR	Mina Array Bea	26.68	131	P	P	22 27 54.6	+0.6
	comp=N,0.1nm,0.5s,baz=327,slow=9.7,SNR=1.8						
	comp=N,0.1nm,0.5s						
SONM	Songino Array	58.66	312	P	P	22 32 11.9	-0.1
	comp=N,0.1nm,0.4s,baz=35,slow=5.3,SNR=1.7						
	comp=N,0.1nm,0.4s						
FINES	FINESS Array B	59.16	6	P	P	22 32 15.2	+0.2
	comp=N,0.3nm,0.5s,baz=37,slow=7.3,SNR=1.3						
	comp=N,0.3nm,0.5s						
MKAR	Makanchi Array	67.51	327	P	P	22 33 09.9	-0.8
	comp=N,0.1nm,0.4s,baz=45,slow=7.9,SNR=1.5						
	comp=N,0.1nm,0.4s						

IDC 01 22:34:45.8±1.9,**6°.60S**×**130°.18E,h0^{km},mb3.1**/1, **mbtmp3.3**/4,**ML3.4**/3,**Error ellipse: s-maj=77.2km s-min=28.9km az=80.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.79	11	Pn	Pn	22 36 15.1	+2.1
	1.7nm,0.3s,baz=184,slow=8.7,SNR=4.5						
SIJI				Sn	Sn	22 37 14.1	-6.1
	1.6nm,0.3s,baz=229,slow=22,SNR=2.3						
	4.0nm,0.3s						
WRA	Warramunga Arr	13.87	163	Pn	Pn	22 38 03.2	-0.5
	0.2nm,0.3s,baz=349,slow=14,SNR=13						
WRA				Sn	Sn	22 40 28.3	-10
	0.1nm,0.3s,baz=5.2,slow=24,SNR=6.2						
	0.2nm,0.3s						
ASAR	Alice Springs	17.34	168	P	P	22 38 50.8	-0.2
	0.1nm,0.3s,baz=357,slow=14,SNR=6.7						
	0.4nm,0.6s						
MKAR	Makanchi Array	67.99	327	P	P	22 45 46.0	-0.8
	0.1nm,0.4s,baz=140,slow=7.0,SNR=1.5						
	0.1nm,0.4s						

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*ECGS **01** 22:36:01.9,0°.86S±0°.08×29°.44E±0°.03,h4^{km}±5^{km},ML2.6, Error ellipse: s-maj=14.1km s-min=3.0km az=19.7, smi:local/4e8d7326-5c9a-4817-9bd1-1a9d7195d082 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 49.2179 Y 71.748 Z 7.65623 CovXX 13.1838 XY 26.1671 XZ 1.05494 YY 77.0553 YZ 6.34741 ZZ 25.8599 EllAz1 109.897 Dip1 3.02771 Len1 3.64912 Az2 46.903 Dip2 -83.3559 Len2 9.4438 Len3 1.753077e+01*

*EAF **01** 22:36:06.0±2.3,0°.67S×29°.11E,h0^{km}±16^{km},MD3.7*

ISC 01 22:36:03.2±1.0,**0°.98S**±0°.05×**29°.40E**±0°.06,**h10^{km},n18,** σ**0^s.71**/22,**Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGO	Tongo	0.26	208	*i* P	Pg	22 36 09.2	+0.6
RGB	Rumangabo	0.37	185	*i* S	Sg	22 36 15.7	+0.2
RGB	Rumangabo	0.37	185	*i* P	Pg	22 36 10.8	+0.2
KTSH	Kitshanga	0.43	233	*i* P	Pg	22 36 11.8	0.0
SAHA	Sahara	0.60	166	*i* S	Sg	22 36 21.9	-0.8
SAHA	Sahara	0.60	166	*i* P	Pg	22 36 14.5	-0.3
KBTI	Kibati	0.60	191	*i* P	Pg	22 36 15.1	+0.2
RSY	Rusayo	0.64	200	*i* P	Pg	22 36 16.3	+0.8
GOM	Goma	0.72	193	*i* P	Pg	22 36 17.1	0.0
GOM	Goma	0.72	193	*i* S	Sg	22 36 27.1	+0.5
IDJ	Idjwi	1.13	197	*i* S	Sg	22 36 39.5	-0.2
IDJ	Idjwi	1.13	197	*i* P	Pb	22 36 24.2	-0.8
KIL	Kilembe	1.32	28	*e*P	Pn	22 36 27.1	-0.7
KIL				*e*S	Sb	22 36 45.2	0.0
LWI	Lwiro	1.39	205	*i* P	Pn	22 36 28.2	-0.6
MBAR	Mbarara	1.39	75	*i* S	Sb	22 36 45.9	-1.5
MBAR	Mbarara	1.39	75	*e*P	Pn	22 36 28.8	-0.1
MBAR				*e*S	Sb	22 36 46.7	-0.6
BUJA	Bujumbura/Buru	2.41	180	*i* P	Pb	22 36 47.4	+0.7
BUJA				*i* S	Sb	22 37 17.5	+1.1
TEBE	Entebbe	3.24	72	*e*P	Pb	22 37 02.3	+1.3
TEBE				*e*S	Sb	22 37 40.7	+0.1

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*IDC **01** 22:36:24.1±1.3,5°.29N×73°.67W,h152^{km}±6^{km},mb3.0/1, mbtmp3.8/2,Error ellipse: s-maj=68.2km s-min=12.3km az=134.0*

*RSNC **01** 22:36:25.1±1.1,5°.28N×73°.73W,h152^{km}±4^{km},ML3.5, Mw3.6,Fault plane solution: NP1:ϕ_s138.00000°, δ68.00000°,λ18.00000°.*

ISC 01 22:36:24.4±0.9,**5°.32N**±0°.03×**73°.72W**±0°.03,**h158^{km}**±6^{km}, **n38,**σ**1^s.58**/71,**6C-2D,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.48	313	*e*P	Pn	22 36 46.9	+0.3
SPBC				*e*S	Sn	22 37 03.0	-0.7
SPBC				*i*		22 37 05.9	
	comp=Z,877nm,0.4s						
CHIC	Chingaza	0.69	181	⇑*i*P	Pn	22 36 47.9	-0.2
CHIC				*e*S	Sn	22 37 04.7	-1.6
CHIC				*i*		22 37 08.0	
	comp=Z,728nm,0.3s						
ROSC	El Rosal	0.77	232	P	Pn	22 36 49.5	+1.0
	comp=Z,211nm,0.4s,baz=117,slow=9.7,SNR=113						
ROSC				S	Sn	22 37 06.6	-0.4
	comp=Z,706nm,0.4s,baz=2.1,slow=22,SNR=18						
ROSC	El Rosal	0.77	232	⇑*i*P	Pn	22 36 49.5	+1.0
ROSC				*e*S	Sn	22 37 06.9	-0.2
ROSC				*i*		22 37 14.5	
	comp=Z,432nm,0.5s						
RUSC	La Rusia	0.85	48	⇓*i*P	Pn	22 36 50.2	+0.9
RUSC				*e*S	Sn	22 37 08.4	+0.2
RUSC				*i*		22 37 11.1	
	comp=Z,398nm,0.3s						
NORC	Norcasia	1.17	282	*e*P	Pn	22 36 51.4	+0.1
NORC				*e*S	Sn	22 37 11.0	-1.1
NORC				*i*		22 37 14.2	
	comp=Z,395nm,0.2s						
VILC	Villavicencio,	1.20	179	⇑*i*P	Pn	22 36 51.2	-0.5
VILC				*e*S	Sn	22 37 11.1	-1.7
BARC	Barichara	1.37	23	*e*P	Pn	22 36 53.9	+0.4
BARC				*e*S	Sn	22 37 15.3	-0.6
BARC				*i*		22 37 17.3	
	comp=Z,458nm,0.2s						
PTBC	PUERTO BERRIO,	1.42	329	*e*P	Pn	22 36 53.5	-0.2
PTBC				*e*S	Sn	22 37 15.2	-1.1
PTBC				*i*		22 37 18.4	
	comp=Z,319nm,0.2s						
GUY2C	Guyana, Caldas	1.64	267	*e*P	Pn	22 36 56.5	0.0
GUY2C				*e*S	Sn	22 37 22.0	+0.9
GUY2C				*i*		22 37 28.6	
	comp=Z,99nm,0.5s						
PTGC	Puerto Gaitan,	1.93	125	⇓*i*P	Pn	22 36 59.1	-0.1
PTGC				*e*S	Sn	22 37 24.2	-1.8
PTGC				*i*		22 37 27.2	
	comp=Z,406nm,0.2s						
HELC	Santa Helena	2.00	296	*e*P	Pn	22 37 01.0	+0.7
HELC				*e*S	Sn	22 37 27.4	-0.5
HELC				*i*		22 37 29.5	
	comp=Z,146nm,0.4s						
ORTC	Ortega, Tolima	2.07	227	⇑*i*P	Pn	22 37 00.4	-0.4
ORTC				*e*S	Sn	22 37 27.2	-1.7
ORTC				*i*		22 37 30.9	
	comp=Z,167nm,0.2s						
TAMC	Tame, Arauca	2.21	60	*e*P	Pn	22 37 03.8	+1.3
TAMC				*e*S	Sn	22 37 32.2	+0.3
TAMC				*i*		22 37 39.4	
	comp=Z,158nm,0.4s						
PAMC	Pamplona, Colo	2.25	27	*e*P	Pn	22 37 04.6	+1.2
PAMC				*e*S	Sn	22 37 34.2	+0.8
PAMC				*i*		22 37 36.8	
	comp=Z,181nm,0.3s						
CBOC	Ciudad Bolivar	2.35	283	*e*P	Pn	22 37 04.8	+0.6
CBOC				*e*S	Sn	22 37 34.7	-0.2
ZARC	Zaragoza, Cauc	2.44	332	*e*P	Pn	22 37 04.3	-0.8
ZARC				*e*S	Sn	22 37 35.9	-0.8
ZARC				*i*		22 37 43.1	
	comp=Z,273nm,0.3s						
PLMC	San Jos del P	2.59	261	*e*P	Pn	22 37 08.2	+1.2
PLMC				*e*S	Sn	22 37 42.6	+2.7
OCAC	Ocana	2.93	8	⇑*e*P	Pn	22 37 12.3	+1.0
OCAC				*e*S	Sn	22 37 48.2	+0.5
YOTC	Yotoco, Valle	2.94	243	*e*P	Pn	22 37 10.9	-0.4
YOTC				*e*S	Sn	22 37 48.3	+0.6
GUVC	San Jose del G	2.96	158	*e*P	Pn	22 37 10.8	-0.8
GUVC				*e*S	Sn	22 37 45.9	-2.3
GUVC				*i*		22 37 51.5	
	comp=Z,236nm,0.3s						
DBBC	Dabeiba	3.00	304	*e*P	Pn	22 37 12.9	+0.8
DBBC				*e*S	Sn	22 37 46.4	-2.6
UREC	San Jos de Ur	3.02	323	*e*P	Pn	22 37 11.1	-1.1
UREC				*e*S	Sn	22 37 47.5	-1.9
UREC				*i*		22 37 48.8	
	comp=Z,201nm,0.3s						
BETC	Betania	3.13	213	*e*P	Pn	22 37 12.7	-1.1
MACC	Macarena, Meta	3.15	182	⇑*i*P	Pn	22 37 12.6	-1.4
MACC				*e*S	Sn	22 37 49.0	-3.6
MACC				*i*		22 38 11.2	
	comp=Z,52nm,0.5s						
GARC	Garzon, Huila	3.58	210	*e*P	Pn	22 37 18.9	-0.8
LL1C	La Loma 1 Cana	4.20	2	*e*P	Pn	22 37 29.0	+1.6
LL1C				*e*S	Sn	22 38 19.1	+2.5
LCBC	Los crdobas,	4.39	323	*e*P	Pn	22 37 29.3	-0.6
LCBC				*e*S	Sn	22 38 22.0	+0.9
LCBC				*i*		22 38 24.8	
	comp=Z,51nm,0.3s						
LL6C	La Loma 6 Bece	4.41	6	*e*P	Pn	22 37 30.8	+0.6
LL6C				*e*S	Sn	22 38 21.2	-0.3
LL6C				*i*		22 38 28.5	
	comp=Z,28nm,0.4s						
SDV	Santo Domingo	4.68	41	P	Pn	22 37 34.6	+0.6
	comp=Z,30nm,0.4s,baz=136,slow=1.2,SNR=8.5						
SDV				S	Sn	22 38 27.1	-1.1
	comp=Z,32nm,0.3s,baz=58,slow=22,SNR=18						
SDV	Santo Domingo	4.68	41	*e*P	Pn	22 37 34.8	+0.9
SDV				*e*S	Sn	22 38 26.6	-1.7
SDV				*i*		22 38 34.7	
	comp=Z,36nm,0.6s						
SJCC	San Jacinto, C	4.77	342	*e*P	Pn	22 37 33.4	-1.6
SJCC				*e*S	Sn	22 38 26.5	-3.7
SJCC				*i*		22 38 28.6	
	comp=Z,43nm,0.4s						
CRJC	Cerrejon, Guaj	5.72	8	*e*P	Pn	22 37 46.9	-0.7
CRJC				*e*S	Sn	22 38 49.2	-3.5
CRJC				*i*		22 38 52.4	
	comp=Z,47nm,0.2s						
SMRC	Santa Marta, M	5.83	355	*e*P	Pn	22 37 48.2	-0.7
SMRC				*e*S	Sn	22 38 51.3	-3.9
SMRC				*i*		22 38 58.4	
	comp=Z,13nm,0.2s						
URIC	Uribia, Colomb	6.57	15	*e*P	Pn	22 37 57.5	-1.2
URIC				*e*S	Sn	22 39 07.4	-5.3
URIC				*i*		22 39 15.9	
	comp=Z,9.9nm,0.6s						
YKA	Yellowknife Ar	64.46	340	P	P	22 46 44.8	+1.0
	comp=Z,0.2nm,0.5s,baz=134,slow=6.2,SNR=3.5						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	147.75	233	PKPbc	PKPdf	22 55 50.6	+2.1
	comp=Z,0.2nm,0.5s,baz=113,slow=3.7,SNR=1.9						
WRA	Warramunga Arr	149.08	239	PKPbc	PKPbc	22 55 54.4	-0.5
	comp=Z,0.2nm,0.4s,baz=107,slow=3.1,SNR=5.5						

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*NEIC **01** 22:44:10.4±1.2,21°.57S±0°.09×175°.13W±0°.09,h67^{km}±8^{km}, mb4.5/15,Error ellipse: s-maj=14.3km s-min=10.7km az=221.0*

*IDC **01** 22:44:25.0±3.9,21°.27S×175°.86W,h167^{km}±33^{km}, mb3.7/12,mbtmp4.2/14,MS3.1/3,Error ellipse: s-maj=26.0km s-min=17.0km az=142.0*

ISC 01 22:44:23.2±0.6,**21°.3S**±0°.1×**175°.80W**±0°.10,**h150^{km},n49,** σ**1^s.13**/37,**mb4.1**/20,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.95	69	Pn	Pn	22 45 29.7	-20
MSVF	Nonsavu	6.81	301	P	Pn	22 46 01.7	+1.0
	92nm,0.9s,baz=134,slow=13,SNR=26						
MSVF	Nonsavu	6.81	301		Pn	22 45 56.7	-4.1
DZM	Mont Dzumac	16.52	264	P	P	22 48 07.5	+1.2
	15nm,0.9s,baz=96,slow=18,SNR=4.5						
DZM				LR	LR	22 53 05.3	
	comp=Z,61nm,18.8s,baz=228,slow=32						
DZM	Mont Dzumac	16.52	264	Pn	P	22 48 03.8	-2.6
DZM				IAmb	IAmb	22 48 13.3	
	comp=Z,18nm,0.9s						
URZ	Urewera	17.95	198	S	S	22 51 24.1	-16
	comp=Z,2.7nm,0.7s,baz=118,slow=22,SNR=1.3						
PPT	Papeete	25.00	86	LR	LR	22 58 57.1	
	comp=Z,22nm,18.9s,baz=313,slow=35						
EIDS	Eidsvold	30.62	256	P	P	22 50 23.7	+0.4
EIDS				IAmb	IAmb	22 50 25.9	
	comp=Z,6.6nm,0.7s						
CTAO	Charters Tower	35.46	265	P	P	22 51 06.1	+0.7
CTAO				IAmb	IAmb	22 51 08.3	
	comp=Z,4.5nm,0.7s						
PMG	Port Moresby	37.53	283	P	P	22 51 23.4	+0.5
	comp=Z,18nm,0.7s,baz=95,slow=5.3,SNR=5.2						
	comp=Z,18nm,0.7s						
STKA	Stephens Creek	39.30	245	P	P	22 51 37.4	-0.2
	comp=Z,2.6nm,0.5s,baz=98,slow=11,SNR=7.2						
	comp=Z,2.6nm,0.5s						
STKA	Stephens Creek	39.30	245	P	P	22 51 36.1	-1.5
COEN	Coen	39.69	274	P	P	22 51 39.9	-1.1
COEN				IAmb	IAmb	22 52 06.0	
	comp=Z,14nm,1.3s						
BBOO	Buckleboo	44.03	244	P	P	22 52 14.9	-1.2
AS31	Alice Springs	46.33	257	P	P	22 52 33.5	-0.9
AS31				IAmb	IAmb	22 52 37.2	
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	46.34	257	P	P	22 52 33.6	-0.8
	comp=Z,3.2nm,0.6s,baz=100,slow=7.9,SNR=34						
ASAR				PcP	PcP	22 54 08.6	+1.4
	comp=Z,0.6nm,0.7s,baz=116,slow=3.4,SNR=4.5						
	comp=Z,3.2nm,0.6s						
ASAR	Alice Springs	46.34	257	P	P	22 52 33.4	-1.0
WR0	Warramunga Arr	46.34	262	P	P	22 52 33.4	-1.0
WR0				IAmb	IAmb	22 52 37.9	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	46.51	263	P	P	22 52 34.7	-1.1
WB0				IAmb	IAmb	22 53 07.4	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	46.51	262	P	P	22 52 34.5	-1.3
WB2				IAmb	IAmb	22 52 37.4	
	comp=Z,4.9nm,0.9s						
WRA	Warramunga Arr	46.52	262	P	P	22 52 34.6	-1.3
	comp=Z,2.1nm,0.6s,baz=96,slow=7.9,SNR=28						
	comp=Z,2.1nm,0.6s						
WRA	Warramunga Arr	46.52	262	P	P	22 52 34.8	-1.1
FORT	Forrest	50.86	247	P	P	22 53 08.7	-0.1
MTN	Manton Dam	51.22	270	P	P	22 53 11.4	-0.3
KNRA	Kununurra	52.65	266	P	P	22 53 22.7	+0.4
KNRA				IAmb	IAmb	22 53 24.9	
	comp=Z,5.6nm,0.6s						
VNDA	Vanda	57.28	186	P	P	22 53 55.5	+0.9
	comp=Z,0.9nm,0.9s,baz=24,slow=6.8,SNR=4.1						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	57.28	186	P	P	22 53 49.3	-5.3
NVAR	Mina Array Bea	80.23	42	P	P	22 56 17.5	+0.1
	comp=Z,0.7nm,0.6s,baz=226,slow=9.0,SNR=8.7						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	80.23	42	P	P	22 56 12.4	-4.9
MAW	Mawson	81.48	199	P	P	22 56 23.0	-0.3
	comp=Z,1.8nm,0.8s,baz=90,slow=20,SNR=2.0						
	comp=Z,1.8nm,0.8s						
H03S2	Juan Fernandez	83.83	124	T	T	00 29 00.2	
	SNR=216						
H03S1	Juan Fernandez	83.84	124	T	T	00 29 01.6	
	SNR=258						
H03S3	Juan Fernandez	83.85	124	T	T	00 28 51.2	
	SNR=209						
H03N2	Juan Fernandez	83.97	123	T	T	00 28 41.2	
	baz=258,slow=71,SNR=103						
H03N3	Juan Fernandez	83.97	123	T	T	00 28 48.5	
	baz=258,slow=71,SNR=51						
H03N1	Juan Fernandez	83.99	123	T	T	00 28 47.1	
	baz=258,slow=71,SNR=79						
PLCA	Paso Flores	87.21	133	P	P	22 56 52.9	0.0
	comp=Z,0.8nm,0.5s,baz=278,slow=5.5,SNR=3.9						
	comp=Z,0.8nm,0.5s						
SEY	Seymchan	87.65	346	LR	LR	23 32 25.7	
	comp=Z,20nm,20.8s,baz=266,slow=33						
CMIG	Matias Romero	87.99	71	P	P	22 56 56.8	0.0
	comp=Z,0.6nm,0.4s,baz=285,slow=20,SNR=1.5						
	comp=Z,0.6nm,0.4s						
PDAR	Pinedale Array	88.17	42	P	P	22 56 56.6	-0.8
	comp=Z,0.3nm,0.7s,baz=212,slow=3.1,SNR=2.6						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	88.67	12	P	P	22 56 58.3	-0.6
	comp=Z,0.7nm,1.0s,baz=211,slow=5.7,SNR=2.8						
	comp=Z,0.7nm,1.0s						
YKA	Yellowknife Ar	96.41	24	P	P	22 57 34.0	-0.6
	comp=Z,0.4nm,0.8s,baz=233,slow=4.1,SNR=6.0						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	96.41	24	P	P	22 57 30.2	-4.4
ARCES	ARCESS Array B	130.09	350	PKP	PKPdf	23 03 13.7	-0.9
	comp=Z,0.8nm,0.7s,baz=48,slow=1.8,SNR=5.1						
ARCES	ARCESS Array B	130.09	350	PKPdf	PKPdf	23 03 13.8	-0.7
AKASG	Malin Array Be	144.71	332	PKP	PKPab	23 03 40.1	-0.9
	comp=Z,0.7nm,0.4s,baz=42,slow=3.9,SNR=4.7						
BRTR	Keskin Array B	148.91	313	PKPbc	PKPdf	23 03 53.0	+3.5
	comp=Z,0.5nm,0.6s,baz=128,slow=5.8,SNR=5.4						
CLL	Collm	149.29	349	*i* PKPbc	PKPbc	23 03 54.5	+0.5
CLL				*i* PKPab	PKPab	23 03 59.3	+0.3
GERES	GERESS Array B	151.51	347	PKPbc	PKPbc	23 03 59.3	-0.2
	comp=Z,0.3nm,0.3s,baz=57,slow=3.6,SNR=3.2						

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*IGQ **01** 22:55:31±1.4,0°S±5°×8°1W±°,h3^{km}*

*IDC **01** 22:55:31.5±1.1,0°.16S×80°.53W,h0^{km},mb3.6/6, mbtmp3.7/6,MS3.4/4,Error ellipse: s-maj=61.1km s-min=21.8km az=65.0*

ISC 01 22:55:32.4±0.8,**0°.16S**±0°.06×**80°.65W**±0°.07,**h9^{km},n53,** σ**0^s.95**/49,**mb3.7**/5,**MS3.3**/4,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	0.45	103	P	Pg	22 55 41.0	-0.3
FLF1	Flavio Alfaro-	0.83	104	P	Pb	22 55 49.0	0.0
MAG1	Magdalena	0.88	84	P	Pb	22 55 49.0	-0.9
AV18	Acelerografo,	1.26	68	P	Pg	22 55 57.0	+0.4
AV21	Acelerografo,	1.37	53	P	Pn	22 55 57.0	-0.7
PPLP	Puerto Lpez	1.38	185	P	Pn	22 55 56.0	-1.9
BV15	Puerto Quito-O	1.46	77	P	Pn	22 55 57.0	-2.0
PAC1	Pacto, Paraso	1.91	77	P	Pn	22 56 03.0	-2.2
HPAL	Hacienda Las P	2.00	92	P	Pn	22 56 05.0	-1.7
GGPT	Toaza - Volcan	2.03	92	P	Pn	22 56 05.0	-2.1
PINO	Pino	2.04	90	P	Pn	22 56 06.0	-1.5
JUA2	San Juan 2	2.04	91	P	Pn	22 56 07.0	-0.4
TERV	Terraza Guagua	2.04	90	P	Pn	22 56 06.0	-1.5
GGPC	Guagua Pichinc	2.05	90	P	Pn	22 56 06.0	-1.6
PAST	Pastocalle	2.08	105	P	Pn	22 56 07.0	-0.8
YANA	Yana	2.08	89	P	Pn	22 56 07.0	-0.9
CAMI	Rancho Maria	2.20	103	P	Pn	22 56 10.0	+0.4
CHSH	Refugio Sur-Vo	2.22	127	P	Pn	22 56 10.0	+0.1
BNAS	Cotopaxi Volca	2.23	103	P	Pn	22 56 09.0	-1.0

NAS2	**Nasa**	2.23	102	P	Pn	22 56 10.0	-0.1
PITA	**Cotopaxi Volc**	2.25	100	P	Pn	22 56 10.0	-0.3
BMOR	**Cotopaxi Volca**	2.26	104	P	Pn	22 56 10.0	-0.5
BREF	**Cotopaxi Volca**	2.27	103	P	Pn	22 56 11.0	+0.4
VC1	**Cotopaxi 1**	2.29	102	P	Pn	22 56 11.0	+0.1
CUSE	**Cuicocha Este**	2.30	78	P	Pn	22 56 10.0	-0.9
TAMH	**Tambohuasha Ch**	2.32	126	P	Pn	22 56 11.0	-0.2
CUIC	**Cuicocha-Domo**	2.33	79	P	Pn	22 56 10.0	-1.3
CUSW	**Cuicocha Oeste**	2.34	79	P	Pn	22 56 11.0	-0.4
VCES	**Cotopaxi**	2.34	106	P	Pn	22 56 12.0	+0.4
COTA	**Cotacachi**	2.36	78	P	Pn	22 56 12.0	+0.2
ANTG	**Antisana-Guama**	2.42	98	P	Pn	22 56 12.0	-0.6
ANTM	**Antisana-La Mi**	2.45	99	P	Pn	22 56 13.0	-0.1
URCU	**Urcuqui**	2.46	76	P	Pn	22 56 13.0	-0.2
ANTS	**Antisana-Sarah**	2.50	98	P	Pn	22 56 14.0	+0.2
ANTI	**Antisana**	2.50	97	P	Pn	22 56 14.0	+0.2
PIAT	**Ana Tenorio**	2.53	109	P	Pn	22 56 14.0	0.0
BMAS	**Trigal station**	2.54	122	P	Pn	22 56 14.0	-0.2
RETU	**Refugio**	2.55	120	P	Pn	22 56 15.0	+0.6
ARRY	**Arrayan**	2.57	121	P	Pn	22 56 15.0	+0.5
BPAT	**Tungurahua Vol**	2.58	121	P	Pn	22 56 15.0	+0.1
YAHU	**Yahuarcocha**	2.63	78	P	Pn	22 56 16.0	+0.6
ROSC	**El Rosal**	8.04	52	Pn	Pn	22 57 34.2	+4.4
	0.5nm,0.3s,baz=127,slow=22,SNR=1.2						
LPAZ	**La Paz**	20.23	143	P	P	23 00 08.6	-0.1
	0.6nm,0.5s,baz=306,slow=8.4,SNR=3.5						
LPAZ				LR	LR	23 09 19.9	
	comp=Z,99nm,21.0s,baz=315,slow=41						
	0.6nm,0.5s						
LVC	**Limon Verde**	25.07	154	P	P	23 00 58.4	+0.6
	1.1nm,0.6s,baz=13,slow=3.4,SNR=2.5						
	1.1nm,0.6s						
MDP	**Montagnes des**	28.45	79	LR	LR	23 13 21.0	
	comp=Z,59nm,18.3s,baz=349,slow=38						
CPUP	**Villa Florida**	34.38	141	LR	LR	23 19 23.6	
	comp=Z,69nm,20.1s,baz=28,slow=42						
PLCA	**Paso Flores**	41.41	168	P	P	23 03 19.1	-0.2
	1.6nm,0.9s,baz=354,slow=9.2,SNR=2.2						
	1.6nm,0.9s						
RCBR	**Riachuelo**	45.02	98	LR	LR	23 22 54.0	
	comp=Z,57nm,19.7s,baz=87,slow=37						
NVAR	**Mina Array Bea**	51.68	322	P	P	23 04 41.4	+1.3
	0.5nm,0.2s,baz=122,slow=8.6,SNR=6.5						
	0.5nm,0.2s						
YKA	**Yellowknife Ar**	67.50	344	P	P	23 06 29.4	+0.8
	0.2nm,0.6s,baz=138,slow=6.1,SNR=4.6						
	0.2nm,0.6s						
ESDC	**Sonseca Array**	79.86	50	P	P	23 07 41.8	0.0
	0.7nm,1.1s,baz=284,slow=5.2,SNR=2.6						
	0.7nm,1.1s						
ASAR	**Alice Springs**	138.94	232	PKP	PKPdf	23 15 00.8	+0.5
	0.3nm,0.9s,baz=113,slow=2.1,SNR=1.9						
WRA	**Warramunga Arr**	140.34	238	PKP	PKPdf	23 15 01.4	-1.5
	0.8nm,1.0s,baz=131,slow=2.2,SNR=2.8						

JMA 01 23:11:06.6±0.1**, 24°N**±2°×**122°.8E**±0°.8**, h26**^{km}±2^{km}**,**
MV1.9/8**, NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.27	41	P	Pb	23 11 13.2	-0.2
JYNG				S	Sb	23 11 17.8	-0.1
YOJ	**Yonaguni jima**	0.32	48	P	Pb	23 11 13.9	-0.1
YOJ				S	Sb	23 11 19.1	-0.1
IRIF	**Iriomote-Funau**	0.90	84	P	Pn	23 11 23.1	-0.4
HATJ	**Hateruma jima**	0.98	101	P	Pn	23 11 24.1	-0.6
HATJ				*e*S	Sn	23 11 37.9	+0.2
JKRS	**Kuro-shima**	1.15	90	P	Pb	23 11 27.6	-0.2
JKRS				*e*S	Sb	23 11 42.4	+0.1
JIJ	**Ishigaki jima**	1.28	84	P	Pn	23 11 28.9	+0.1
JIJ				S	Sn	23 11 45.3	+0.3
JISG	**Ishigakijimahi**	1.46	76	P	Pn	23 11 31.7	+0.4
JISG				S	Sn	23 11 50.0	+0.4

TAP 01 23:11:11.8, 24°.21N×121°.72E, h12^{km}**, ML1.3, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	0.10	241	*i* P	Pg	23 11 15.2	+0.6
	baz=240						
ETL				*i* S	Sg	23 11 17.5	+0.9
	baz=240						
NACB	**Ninganchiao**	0.12	254	*i* P	Pb	23 11 15.5	-0.6
	baz=253						
NACB				*i* S	Sg	23 11 18.0	+1.1
	baz=253						
TWD	**Chiawan**	0.17	221	S	Sg	23 11 19.0	+0.8
	baz=219						
ETLH	**Xiulin Townshi**	0.21	270	*i* P	Pb	23 11 17.2	-0.6
	baz=270						
ETLH				*i* S	Sg	23 11 21.3	+1.7
	baz=270						
LATG	**Datong**	0.37	332	P	Pb	23 11 20.1	-0.4
	baz=332						
LATG				S	Sb	23 11 26.2	-0.1
	baz=332						
NNSB	**Datong**	0.38	306	*i* P	Pb	23 11 20.4	-0.2
	baz=306						
NNSB				*i* S	Sb	23 11 26.1	-0.4
	baz=306						
NNS	**Nan Shan**	0.39	307	P	Pb	23 11 20.9	+0.1
	baz=306						
NNS				S	Sb	23 11 26.7	-0.2
	baz=306						
WHF	**Hehuan Shan**	0.42	262	P	Pg	23 11 20.7	+0.5
	baz=261						
WHF				S	Sb	23 11 27.3	-0.6
	baz=261						
NDS	**Dongshan**	0.43	360	P	Pb	23 11 20.9	-0.4
NDS				S	Sb	23 11 27.3	-0.5
ENTT	**Nioudou**	0.45	342	*i* P	Pb	23 11 21.7	-0.1
	baz=343						
ENTT				*i* S	Sb	23 11 28.5	-0.1
	baz=343						
CHGB	**Renai**	0.52	254	P	Pb	23 11 23.0	-0.1
	baz=253						
CHGB				S	Sb	23 11 30.6	+0.1
	baz=253						
OWD	**Renai**	0.55	243	*i* P	Pb	23 11 23.5	-0.1
	baz=243						
OWD				*i* S	Sb	23 11 31.2	-0.4
	baz=243						
YHNB	**Yeheng**	0.56	326	S	Sb	23 11 32.1	+0.5
	baz=326						
FUSB	**Fushanzhiwuyua**	0.56	348	P	Pb	23 11 23.8	0.0
	baz=347						
FUSB				S	Sg	23 11 30.5	+0.1
	baz=347						
NSK	**Sanguang**	0.57	325	S	Sb	23 11 32.6	+0.6
	baz=325						
WUSB	**Renai**	0.59	249	P	Pb	23 11 24.5	+0.4
	baz=248						
WUSB				S	Sb	23 11 33.5	+0.9
	baz=248						
NWLT	**Wulai**	0.60	341	*i* P	Pb	23 11 24.5	+0.2
	baz=341						
NWLT				*i* S	Sg	23 11 31.7	+0.1
	baz=341						
VWDT	**VWDT**	0.69	230	S	Sg	23 11 33.5	-0.9
	baz=229						

IDC 01 23:25:13.9±1.8**, 0°.81S×131°.72E, h0**^{km}**, mb3.1**/2**,**
mbtmp3.1/3**, ML3.1**/1**, MS2.9**/1**, Error ellipse:**
s-maj=30.9km s-min=11.6km az=1.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	0.46	262	Pg	Pg	23 25 23.6	+1.0
	267nm,0.3s,baz=49,slow=19,SNR=674						
SIJI				Lg	Lg	23 25 28.2	
	1µm,0.3s,baz=163,slow=19,SNR=69						
WRA	**Warramunga Arr**	19.19	172	P	P	23 29 38.5	-1.0
	0.1nm,0.3s,baz=354,slow=11,SNR=3.0						
	0.5nm,0.6s						
ASAR	**Alice Springs**	22.82	175	P	P	23 30 18.7	0.0
	0.2nm,0.5s,baz=348,slow=10.0,SNR=5.0						
	0.2nm,0.5s						
JNU	**Nakatsue**	33.76	359	LR	LR	23 45 13.3	
	comp=Z,23nm,21.1s,baz=46,slow=36						
MKAR	**Makanchi Array**	64.11	325	P	P	23 35 49.3	-0.8
	0.1nm,0.5s,baz=124,slow=7.3,SNR=2.0						
	0.1nm,0.5s						

NEIC ***01*** *23:35:09.5±2.4, 17°.14S±0°.10×174°.2W±0°.1, h92*^{km}*±7*^{km}*, mb4.4/14, Error ellipse: s-maj=18.1km s-min=12.4km az=117.0*

IDC ***01*** *23:35:10.2±7.2, 16°.89S×174°.37W, h97*^{km}*±50*^{km}*, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=162.7km s-min=19.7km az=148.0*

ISC 01 23:35:09.7±0.8**, 17°.13S**±0°.09×**174°.2W**±0°.1**, h100**^{km}**, n23,**
σ**1.s63**/25**, mb4.3**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	3.96	36	P	Pn	23 36 09.4	+1.0
	15nm,0.3s,baz=207,slow=2.3,SNR=2.0						
AFI				S	Sn	23 36 52.4	-1.6
	126nm,0.4s,baz=217,slow=20,SNR=12						
AFI	**Afiamalu**	3.96	36		Pn	23 36 08.7	+0.3
AFI					Sn	23 36 53.3	-0.6
NIUE	**Niue**	4.49	116	Pn	Pn	23 36 15.4	-0.1
QRZ	**Quartz Range**	26.25	203	P	P	23 40 38.4	+2.9
QRZ				IAmb	IAmb	23 40 42.0	
	comp=Z,21nm,1.1s						
NNZ	**Nelson**	26.28	202	P	P	23 40 37.6	+1.8
NNZ				IAmb	IAmb	23 40 51.5	
	comp=Z,24nm,1.1s						
THZ	**Tophouse**	26.93	202	P	P	23 40 43.1	+1.4
THZ				IAmb	IAmb	23 40 44.8	
	comp=Z,9.4nm,0.9s						
LTZ	**Lake Taylor**	28.05	202	P	P	23 40 49.3	-2.3
LTZ				IAmb	IAmb	23 40 53.8	
	comp=Z,15nm,1.0s						
BBOO	**Buckleboo**	47.30	241	P	P	23 43 31.4	-2.0
WR0	**Warramunga Arr**	48.54	258	P	P	23 43 42.6	-0.6
WR0				IAmb	IAmb	23 43 51.0	
	comp=Z,4.4nm,1.1s						
WB0	**Warramunga Arr**	48.70	259	P	P	23 43 43.9	-0.4
WB2	**Warramunga Arr**	48.72	258	P	P	23 43 44.0	-0.6
WB2				IAmb	IAmb	23 44 03.5	
	comp=Z,3.8nm,1.1s						
WRAB	**Tennant Creek**	48.72	258	P	P	23 43 41.4	-3.1
WRA	**Warramunga Arr**	48.73	258	P	P	23 43 44.2	-0.4
	comp=Z,0.8nm,0.6s,baz=97,slow=7.1,SNR=20						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	48.73	258	P	P	23 43 44.3	-0.4
AS31	**Alice Springs**	48.87	253	P	P	23 43 45.6	-0.1
ASAR	**Alice Springs**	48.87	253	P	P	23 43 45.5	-0.2
	comp=Z,3.7nm,0.5s,baz=89,slow=8.6,SNR=73						
	comp=Z,3.7nm,0.5s						
ASAR	**Alice Springs**	48.87	253	P	P	23 43 44.6	-1.1
MORW	**Morawa**	64.47	246	P	P	23 45 38.5	+2.4
MORW				IAmb	IAmb	23 45 45.0	
	comp=Z,2.1nm,0.7s						
NVAR	**Mina Array Bea**	76.12	42	P	P	23 46 47.7	+0.7
	comp=Z,0.2nm,0.4s,baz=227,slow=6.0,SNR=2.0						
	comp=Z,0.2nm,0.4s						
S11A	**Rachel**	77.34	44	P	P	23 46 56.6	+2.8
DLMT	**Dillon**	83.51	39	P	P	23 47 24.5	-2.1
DLMT				IAmb	IAmb	23 47 27.4	
	comp=Z,2.8nm,0.6s						
PDAR	**Pinedale Array**	84.05	42	P	P	23 47 30.1	+0.5
	comp=Z,0.3nm,0.6s,baz=216,slow=3.7,SNR=5.6						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	84.05	42	P	P	23 47 29.8	+0.2

OTT ***01*** *23:41:21.9±0.3, 73°.47N×73°.68W, h18*^{km}*, ML3.2/4, 164km northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.*

DNK ***01*** *23:41:24.1±0.5, 73°.62N×73°.66W, h36*^{km}*±6*^{km}*, ML2.4*

ISC 01 23:41:18.8±1.1**, 73°.56N**±0°.06×**73°.63W**±0°.08**, h10**^{km}**, n5,**
σ**2.s44**/9**, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TULEG	**Thule**	3.25	20	*i* P	Pn	23 42 11.4	+1.8
TULEG				*e*S	Sn	23 42 45.7	-2.5
TULEG				IAML		23 42 47.5	
	comp=Z,24nm,0.2s						
CLRN	**Clyde River**	3.47	151	PN	Pn	23 42 14.8	+2.1
CLRN				SN	Sn	23 42 51.2	-2.6
CLRN				Trac		23 42 54.6	
	comp=Z,19nm,0.1s						
RES	**Resolute Bay**	5.93	291	PN	Pn	23 42 48.2	+1.8
RES				SN	Sn	23 43 51.7	-2.6
RES				Trac		23 43 55.9	
	comp=Z,1.8nm,0.1s						
EUNU	**Eureka**	7.13	342	PN	Pn	23 43 04.6	+1.7
EUNU				SN	Sn	23 44 22.1	-1.7
EUNU				Trac		23 44 25.9	
	comp=Z,7.5nm,0.7s						
FRB	**Frobisher Bay**	10.02	167	PN	Pn	23 43 42.5	0.0
FRB				SN	Sn	23 45 26.9	-7.9
FRB				Trac		23 45 35.2	
	comp=Z,0.9nm,0.1s						

UCR ***01*** *23:50:16.8±2.2, 10°.47N×83°.19W, h13*^{km}*±11*^{km}*, MW3.7*

INET ***01*** *23:50:17.3±0.3, 10°.49N×83°.25W, h15*^{km}*±3*^{km}*, MW3.0*

ISC 01 23:50:14.0±1.5**, 10°.63N**±0°.06×**83°.18W**±0°.07**, h20**^{km}**, n19,**
σ**0.s88**/21**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIMA	**Rio Macho**	1.09	218	*e*P	Pb	23 50 34.0	-0.3
RIMA	**Rio Macho**	1.09	218	*e*P	Pb	23 50 34.0	-0.3
HDC3	**Heredia 3**	1.11	236	*e*P	Pn	23 50 35.2	+0.7
HDC	**Heredia**	1.11	236	*e*P	Pn	23 50 34.6	0.0
RGM0	**Gandoca**	1.18	151	*e*P	Pb	23 50 36.6	+1.0
LCR2	**La Lucha 2**	1.20	223	*e*P	Pb	23 50 36.0	-0.2
CDM	**Cerro de Muert**	1.22	208	*e*P	Pn	23 50 35.8	-0.5
CDM	**Cerro de Muert**	1.22	208	*e*P	Pn	23 50 35.8	-0.5
PEZE	**Perez Zeledon,**	1.33	202	*e*P	Pb	23 50 38.0	-0.4
SRBA	**San Rafael, Bu**	1.40	187	*e*P	Pn	23 50 38.2	-0.4
EDBA	**Buenos Aires**	1.46	184	*e*P	Pb	23 50 40.5	0.0
EDBA				*e*S	Sn	23 50 56.6	-1.3
ARE1	**Arenal 1**	1.52	264	*e*P	Pb	23 50 43.0	+1.4
PTEN	**Parque Tenorio**	1.78	273	*i* P	Pb	23 50 45.9	-0.1
PTEN				*i* S	Sb	23 51 09.8	+1.8
LAFE	**Finca La Fe, P**	1.89	245	*e*P	Pb	23 50 48.2	+0.4
LAFE	**Finca La Fe, P**	1.89	245	*e*P	Pb	23 50 48.2	+0.4
ESPN	**Las Esperanzas**	1.91	325	*e*P	Pb	23 50 48.4	+0.3
ORTG	**Ortega, Santa**	2.26	263	*e*P	Pb	23 50 52.9	-1.3
GUAI	**GUAI**	2.32	261	*i* P	Pb	23 50 55.3	+0.1
ACON	**Acoyapa**	2.37	304	*e*P	Pb	23 50 54.4	-1.6

IDC ***02*** *00:20:08.5±1.2, 2°.64N×127°.79E, h0*^{km}*, mb3.7/6, mbtmp3.8/7, ML4.3/1, MS3.3/3, Error ellipse: s-maj=65.5km s-min=18.6km az=68.0*

DJA ***02*** *00:20:12.7±0.5, 3°N±4°×12°8E±°, h101*^{km}*±6*^{km}*, M4.0/9, mb4.1/3, mB3.9/1, MLv4.0/9, Mw(mB)2.9/1*

NEIC ***02*** *00:20:15.5±1.2, 2°.68N±0°.07×128°.07E±0°.08, h51*^{km}*±7*^{km}*, mb4.4/15, Error ellipse: s-maj=12.8km s-min=9.3km az=61.0*

ISC 02 00:20:15.0±0.6**, 2°.62N**±0°.05×**128°.06E**±0°.07**, h51**^{km}**, n45,**
σ**1.s56**/38**, mb4.1**/14**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.97	201		Pn	00 20 46.1	+0.2
TNTI				Sn	Sn	00 21 13.8	+4.4
TNTI	**Ternate**	1.97	201	P	Pn	00 20 45.6	-0.3
TNTI				S	Sn	00 21 09.2	-0.2
LBMI	**Labuha**	3.29	190	P	Pn	00 21 05.4	+1.3
KMSI	**Cibinong**	4.56	244	P	Pn	00 21 18.7	-2.8
SWI	**Sorong**	4.71	137	P	Pn	00 21 21.2	-2.4
SIJI	**Sorong**	4.72	137	Pn	Pn	00 21 24.5	+0.8
	11nm,0.3s,baz=317,slow=16,SNR=23						
SIJI				Sn	Sn	00 22 16.7	-0.5
	3.7nm,0.3s,baz=202,slow=22,SNR=2.2						
	28nm,0.3s						
SANI	**Sanana**	5.08	204	P	Pn	00 21 25.7	-3.0
	0.1nm17nm,0.7s						
KCP	**Kidapawan**	5.27	326	⇑*e*P	Pn	00 21 38.0	+6.7
KCP				*e*S	Sn	00 22 35.2	+4.4
GTOI	**Gorontalo**	5.42	249	P	Pn	00 21 32.9	-0.5
	0.0nm132nm8.2nm,0.5s						
LUWI	**Luwuk**	6.42	236	Pn	Pn	00 21 48.9	+1.8
MRSI	**Marisa**	6.48	251	P	Pn	00 21 45.1	-2.8
TOLI2	**Tolitoli**	7.43	258	Pn	Pn	00 22 01.3	+0.3
MYLDM	**Lahad Datu**	9.87	285	Pn	Pn	00 22 34.1	-0.3
BATI	**Baumata**	13.48	199	LR	LR	00 29 11.9	
	comp=Z,180nm,18.3s,baz=264,slow=40						
FITZ	**Fitzroy Crossi**	20.73	187	P	P	00 24 50.7	-0.7
	0.6nm,0.7s,baz=17,slow=13,SNR=1.5						
	0.6nm,0.7s						
YOJ	**Yonaguni jima**	22.25	348	P	P	00 25 06.2	-1.5
YOJ				IAmb	IAmb	00 25 06.6	
	comp=Z,95nm,1.1s						
PMG	**Port Moresby**	22.47	122	LR	LR	00 34 25.9	
	comp=Z,63nm,18.7s,baz=172,slow=38						
WB0	**Warramunga Arr**	23.10	165	P	P	00 25 16.4	-0.3
WB0				IAmb	IAmb	00 25 20.4	
	comp=Z,5.3nm,0.8s						
WRAB	**Tennant Creek**	23.25	165	P	P	00 25 17.7	-0.4
WRAB				IAmb	IAmb	00 25 21.9	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	23.26	165	P	P	00 25 18.3	+0.1
	comp=Z,4.0nm,0.7s,baz=344,slow=10.0,SNR=37						
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	23.26	165	IAmb	IAmb	00 25 19.2	
	comp=Z,0.2nm,0.8s						
WB2	**Warramunga Arr**	23.26	165	P	P	00 25 18.6	+0.4
WB2				IAmb	IAmb	00 25 22.0	
	comp=Z,5.4nm,0.8s						
WR0	**Warramunga Arr**	23.33	164	P	P	00 25 19.3	+0.4
ASAR	**Alice Springs**	26.74	168	P	P	00 25 50.4	+0.4
	comp=Z,0.4nm,0.6s,baz=351,slow=9.4,SNR=6.3						
	comp=Z,0.4nm,0.6s						
KSAR	**Wonju Array Be**	34.65	360	P	P	00 26 58.8	-0.8
MAJO	**Matsushiro**	35.03	14	P	P	00 27 03.2	+0.3
MAJO				IAmb	IAmb	00 27 21.5	
	comp=Z,4.2nm,0.5s						
MJB9	**Matsu-Tunnel**	35.03	14	P	P	00 27 02.6	-0.3
MJB9				IAmb	IAmb	00 27 21.4	
	comp=Z,4.1nm,0.5s						
STKA	**Stephens Creek**	36.64	161	P	P	00 27 17.3	+0.6
	comp=Z,1.1nm,0.4s,baz=332,slow=8.6,SNR=4.3						
	comp=Z,1.1nm,0.4s						
H11S3	**WAKE ISLAND Hy**	40.98	65	T	T	01 11 16.5	
	baz=252,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	40.99	65	T	T	01 11 12.0	
	baz=252,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	40.99	65	T	T	01 11 16.2	
	baz=252,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	41.55	63	T	T	01 11 47.6	
	baz=250,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	41.56	63	T	T	01 11 52.4	
	baz=250,slow=75,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	41.56	63	T	T	01 11 49.6	
	baz=250,slow=75,SNR=13						
ASAJ	**Asahikawa**	43.28	15	LR	LR	00 45 42.0	
	comp=Z,23nm,20.0s,baz=146,slow=35						
TARA	**Tarawa**	44.85	91	P	P	00 28 24.0	-0.7
SONM	**Songino Array**	48.77	341	P	P	00 28 54.3	-0.6
	comp=Z,0.3nm,0.5s,baz=144,slow=5.4,SNR=2.4						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	59.22	325	P	P	00 30 10.9	-0.2
	comp=Z,0.9nm,0.5s,baz=114,slow=7.5,SNR=6.5						
	comp=Z,0.9nm,0.5s						
FOZ	**Fox Glacier**	59.28	146	P	P	00 30 12.4	+1.0
KK31	**Karatay Array**	64.94	317	*i* P	P	00 30 48.8	-0.8
KK31	**Karatay Array**	64.94	317	P	P	00 30 48.7	-0.8
KK31				IAmb	IAmb	00 30 50.3	
	comp=Z,1.2nm,0.7s						
KKAR	**Karatay Array**	64.94	317	P	P	00 30 48.7	-0.8
KKAR				IAmb	IAmb	00 30 50.3	
	comp=Z,1.2nm,0.7s						
KKAR	**Karatay Array**	64.94	317	P	P	00 30 48.9	-0.7
AKUT	**Akutan**	74.08	34	P	P	00 31 46.0	+0.4
AKUT				IAmb	IAmb	00 31 59.0	
	comp=Z,27nm,1.1s						
CNPM	**China Poot**	83.03	30	P	P	00 32 35.3	+0.5

SKHL ***02*** *00:21:47.6±0.3, 42°.30N×143°.10E, h79*^{km}*±4*^{km}*, mb4.8/4*

MOS ***02*** *00:21:48.2±1.2, 42°.39N×143°.13E, h78*^{km}*, mb3.9/1, Error ellipse: s-maj=10.8km s-min=8.1km az=84.0*

JMA ***02*** *00:21:49.1±0.2, 42°.4N±0°.5×143°.2E±0°.7, h50*^{km}*±1*^{km}*, MV3.6/38, HIDAKA MOUNTAINS REGION*

JMA Felt II J1 at HIDAKA MOUNTAINS REGION .

IDC ***02*** *00:21:49.6±2.0, 42°.46N×143°.16E, h71*^{km}*±14*^{km}*, mb3.4/16, mbtmp3.7/20, MS2.9/4, Error ellipse: s-maj=19.9km s-min=13.4km az=118.0*

NIED ***02*** *00:21:49.1, 42°.43N×143°.18E, h50*^{km}*, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{14}*Nm; M_{rr}6.89; $M_{\theta\theta}$-2.37; $M_{\phi\phi}$-4.51; $M_{r\theta}$1.00; $M_{\theta\phi}$-2.72; $M_{\phi r}$2.50; Fault plane solution: $M_0$7.15000×10*^{14}* NP1: ϕ_s218.00000°, δ34.00000°, λ97.00000°. NP2: ϕ_s30.00000°, δ56.00000°, λ85.00000°.*

ISC 02 00:21:48.3±0.7**, 42°.36N**±0°.05×**143°.19E**±0°.04**, h59**^{km}±6^{km}**,**
n61, σ**1.s52**/73**, mb3.7**/16**, 5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTHR	**Tokachihiroo**	0.10	131	P	Pn	00 21 57.1	-0.1
JTHR				*e*S	Sn	00 22 03.7	+0.1
JCH	**Churui**	0.28	26	P	Pn	00 21 57.7	-0.5
JCH				*e*S	Sn	00 22 04.8	-0.5
JNBK	**Urakawa-nobuka**	0.34	256	⇓*e*P	Pn	00 21 58.8	+0.2
JNBK				⇓*e*S	Sn	00 22 06.6	+0.6
JEM	**Erimo**	0.34	184	*e*P	Pn	00 21 59.5	+0.8
JSHD	**Hidakashinhida**	0.54	276	⇓*e*P	Pn	00 22 01.1	+0.6
JOB	**Onbets**	0.72	41	*e*P	Pn	00 22 03.3	+0.6
JIAM	**Iburiatsuma**	0.98	286	*e*P	Pn	00 22 07.7	+1.7
JAR	**Ashorobuto**	1.03	24	*e*P	Pn	00 22 06.3	-0.3
JAR				*e*S	Sn	00 22 19.5	-0.8
JAK	**Akkeshi**	1.28	60	*e*P	Pn	00 22 09.9	-0.1
JAK				*e*S	Sn	00 22 26.4	+0.3
JAB	**Ashibetsu**	1.35	328	⇓*e*P	Pn	00 22 11.2	+0.3
JEW	**Eniwo**	1.37	291	*e*P	Pn	00 22 11.8	+0.6
JEW				*e*S	Sn	00 22 29.7	+1.3
AKK	**Akkeshi**	1.38	61	*e*P	Pn	00 22 11.1	-0.2
AKK				AMB	AMB	00 22 13.4	
	190nm,0.3s						
AKK				*e*S	Sn	00 22 28.6	0.0
AKK				A	A	00 22 29.9	
	3µm,0.6s						
AKK				A	A	00 22 29.9	
	1µm,0.6s						
JKA	**Kamikawa-asahi**	1.81	346	*e*P	Pn	00 22 17.6	+0.5
JKA				*e*S	Sn	00 22 38.6	-0.3
ASAJ	**Asahikawa**	1.81	346	P	Pn	00 22 17.6	+0.4
	76nm,0.4s,baz=199,slow=17,SNR=95						
ASAJ				S	Sn	00 22 38.6	-0.3
	138nm,0.6s,baz=252,slow=20,SNR=8.9						
ASAJ				LR	LR	00 23 08.1	
	comp=Z,112nm,18.6s,baz=198,slow=46						
NMR	**Nemuro--Hokkai**	2.12	61	*e*PN	Pn	00 22 20.2	-1.1
NMR				*e*S	Sn	00 22 44.8	-1.7
NMR	**Nemuro--Hokkai**	2.12	61	*i* P	Pn	00 22 20.4	-0.9
NMR				*e*S	Sn	00 22 44.9	-1.6
RUSJ	**Misakicho**	2.30	40	*e*PN	Pn	00 22 25.6	+1.8
RUSJ				*e*S	Sn	00 22 54.2	+3.3
YUK	**Yuzh-Kuril'sk**	2.57	48	*d* *i*PN	Pn	00 22 29.6	+2.2
YUK				*i* S	Sn	00 22 59.7	+2.2
YUK				pmax	pmax		
	comp=N,97nm,0.3s						
YUK				pmax	pmax		
	comp=Z,174nm,0.3s						
YUK				pmax	pmax		
	comp=E,66nm,0.2s						
YUK				smax	smax		
	comp=E,263nm,0.3s						
YUK				smax	smax		
	comp=N,637nm,0.4s						
YUK	**Yuzh-Kuril'sk**	2.57	48	*e*P	Pn	00 22 28.1	+0.7
YUK				AMB	AMB	00 22 31.0	
	comp=N,100nm,0.4s						
YUK				AMB	AMB	00 22 31.0	
	comp=N,70nm,0.4s						
YUK				AMB	AMB	00 22 31.0	
	comp=N,120nm,0.4s						
YUK				*e*S	Sn	00 22 58.7	+1.2
YUK				A	A	00 23 01.8	
	comp=N,640nm,0.4s						
YUK				A	A	00 23 01.8	
	comp=N,260nm,0.4s						
KUR	**Kuril'sk**	4.44	48	*e*PN	Pn	00 22 57.4	+4.4
KUR				*i* S	Sn	00 23 47.5	+4.2
KUR				smax	smax		
	comp=E,47nm,0.5s						
KUR	**Kuril'sk**	4.44	48	*e*P	Pn	00 22 57.4	+4.4
KUR				AMB	AMB	00 22 59.5	
	comp=E,80nm,0.5s						
KUR				*e*S	Sn	00 23 47.5	+4.2
KUR				A	A	00 23 53.5	
	comp=E,70nm,0.4s						

KUR				A	A	00 23 53.5	
	comp=E,50nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.60**	**356**	*e*PN	**Pn**	**00 22 58.0**	**+2.7**
YSS				*e*S	**Sn**	**00 23 49.2**	**+1.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,20nm,1.1s						
YSS	**Yuzh-Sakhalins**	**4.60**	**356**	*e*P	**Pn**	**00 22 56.6**	**+1.3**
YSS				AMB	AMB	00 23 00.4	
	comp=N,20nm,0.4s						
YSS				*e*S	**Sn**	**00 23 47.8**	**+0.4**
YSS				A	A	00 23 55.2	
	comp=N,10.0nm,0.2s						
YSS				A	A	00 23 55.2	
	comp=N,10.0nm,0.2s						
TEY	**Ternei**	**5.47**	**301**	*e*P	**Pn**	**00 23 08.1**	**+0.9**
MJAR	**Matsushiro Arr**	**6.97**	**215**	P	**Pn**	**00 23 29.1**	**+1.4**
	comp=N,1.7nm,0.4s,baz=41,slow=12,SNR=8.1						
MJAR				LR	LR	00 26 43.9	
	comp=N,25nm,21.1s,baz=0.5,slow=42						
USRK	**Ussuriysk Ar.**	**8.38**	**286**	P	**Pn**	**00 23 48.2**	**+1.3**
	comp=N,2.5nm,0.5s,baz=92,slow=16,SNR=4.2						
TYV	**Tymovskoe**	**8.51**	**358**	*e*P	**Pn**	**00 23 49.9**	**+1.2**
TYV				AMB	AMB	00 23 51.8	
	comp=N,10.0nm,0.5s						
GRNR	**Gornyy**	**9.61**	**333**	*e*P	**Pn**	**00 24 04.9**	**+1.1**
KLR	**Kul'dur**	**10.53**	**315**	P	**Pn**	**00 24 17.1**	**+0.7**
	comp=N,0.3nm,0.3s,baz=121,slow=19,SNR=2.2						
KSRS	**Korea Array**	**12.70**	**252**	P	**Pn**	**00 24 48.0**	**+2.0**
	comp=N,0.7nm,0.3s,baz=63,slow=13,SNR=2.4						
KSRS				LR	LR	00 29 09.7	
	comp=N,20nm,20.6s,baz=210,slow=34						
SEY	**Seymchan**	**21.30**	**12**	P	**P**	**00 26 27.4**	**-2.3**
	comp=N,1.7nm,0.7s,baz=191,slow=7.3,SNR=5.6						
	comp=N,1.7nm,0.7s						
SONM	**Songino Array**	**26.37**	**295**	P	**P**	**00 27 18.6**	**-0.3**
	comp=N,1.7nm,0.7s,baz=85,slow=8.1,SNR=12						
	comp=N,1.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.16**	**131**	T	T	00 59 23.6	
	baz=324,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hy**	**30.18**	**131**	T	T	00 59 29.6	
	baz=324,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy**	**30.18**	**131**	T	T	00 59 22.3	
	baz=324,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**31.05**	**133**	T	T	01 00 38.8	
	baz=326,slow=75,SNR=33						
H11S3	**WAKE ISLAND Hy**	**31.05**	**133**	T	T	01 00 35.9	
	baz=326,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**31.06**	**133**	T	T	01 00 37.4	
	baz=326,slow=75,SNR=24						
NRIK	**Noril'sk**	**39.10**	**332**	LR	LR	00 46 17.9	
	comp=N,50nm,19.9s,baz=44,slow=38						
ZALV	**Zalesovo Beam**	**39.54**	**308**	P	**P**	**00 29 13.0**	**-0.1**
	comp=N,1.3nm,0.5s,baz=85,slow=7.9,SNR=6.7						
ZALV				PcP	**PcP**	**00 31 19.5**	**0.0**
	comp=N,1.0nm,0.6s,baz=68,slow=4.0,SNR=4.3						
	comp=N,1.3nm,0.5s						
MK31	**Makanchi Array**	**42.66**	**298**	*i* P	**P**	**00 29 38.3**	**-0.6**
MKAR	**Makanchi Array**	**42.66**	**298**	P	**P**	**00 29 38.4**	**-0.5**
	comp=N,0.8nm,0.5s,baz=82,slow=11,SNR=11						
MKAR				PcP	**PcP**	**00 31 29.6**	**-0.2**
	comp=N,0.4nm,0.7s,baz=61,slow=3.7,SNR=1.4						
	comp=N,0.8nm,0.5s						
KURK	**Kurchatov**	**43.90**	**304**	P	**P**	**00 29 47.0**	**-1.8**
KURK	**Kurchatov**	**43.90**	**304**	*e*P	**P**	**00 29 47.0**	**-1.8**
ILAR	**Eielson Array**	**44.31**	**35**	P	**P**	**00 29 52.0**	**+0.1**
	comp=N,0.5nm,0.8s,baz=243,slow=5.4,SNR=6.7						
	comp=N,0.5nm,0.8s						
ILAR	**Eielson Array**	**44.31**	**35**	P	**P**	**00 29 52.0**	**+0.1**
TKM2	**Tokmak 2**	**48.47**	**295**	P	**P**	**00 30 24.3**	**-0.7**
OTUK	**Ortayu**	**48.56**	**303**	P	**P**	**00 30 24.3**	**-1.2**
INK	**Inuvik**	**49.05**	**29**	P	**P**	**00 30 28.6**	**-0.2**
	comp=N,0.6nm,0.5s,baz=304,slow=5.5,SNR=5.9						
	comp=N,0.6nm,0.5s						
AB31	**Akbulak array**	**55.65**	**308**	*i* P	**P**	**00 31 17.6**	**-0.4**
AKTO	**Aktyubinsk**	**56.22**	**310**	P	**P**	**00 31 21.6**	**-0.5**
	comp=N,1.0nm,0.6s,baz=39,slow=14,SNR=3.8						
	comp=N,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**58.55**	**32**	P	**P**	**00 31 37.8**	**-0.4**
	comp=N,0.2nm,0.7s,baz=302,slow=6.3,SNR=2.5						
	comp=N,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**59.52**	**339**	P	**P**	**00 31 43.9**	**-1.0**
	comp=N,0.5nm,0.6s,baz=46,slow=6.9,SNR=5.1						
	comp=N,0.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**62.30**	**199**	LR	LR	00 58 29.0	
	comp=N,35nm,20.9s,baz=134,slow=35						
WRA	**Warramunga Arr**	**62.53**	**189**	P	**P**	**00 32 06.2**	**+0.4**
	comp=N,0.3nm,0.7s,baz=3.0,slow=6.8,SNR=2.1						
	comp=N,0.3nm,0.7s						
FINES	**FINESS Array B**	**64.76**	**332**	P	**P**	**00 32 18.8**	**-1.2**
	comp=N,1.1nm,0.5s,baz=53,slow=7.6,SNR=26						
	comp=N,1.1nm,0.5s						
KBZ	**Khabaz**	**68.51**	**310**	P	**P**	**00 32 44.0**	**-0.1**
	comp=N,0.9nm,0.7s,baz=26,slow=7.9,SNR=4.0						
	comp=N,0.9nm,0.7s						
NOA	**NORSAR Array B**	**69.81**	**337**	P	**P**	**00 32 51.1**	**-0.9**
	comp=N,0.4nm,0.6s,baz=53,slow=7.0,SNR=3.9						
	comp=N,0.4nm,0.6s						
PDAR	**Pinedale Array**	**73.00**	**47**	P	**P**	**00 33 11.9**	**+0.1**
	comp=N,0.1nm,0.4s,baz=63,slow=0.7,SNR=3.6						
	comp=N,0.1nm,0.4s						
BRTR	**Keskin Array B**	**76.35**	**312**	P	**P**	**00 33 30.8**	**-0.4**
	comp=N,0.4nm,0.8s,baz=35,slow=6.9,SNR=2.5						
	comp=N,0.4nm,0.8s						
IDI	**Anoyia**	**84.34**	**314**	P	**P**	**00 34 13.7**	**-0.4**
	comp=N,1.8nm,0.6s,baz=39,slow=6.5,SNR=1.9						
	comp=N,1.8nm,0.6s						

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*WEL **02** 00:26:00, 37°.17S×177°.49E, h140^{km}, ML4.5, Mw5.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^{16} Nm; M$_{rr}$2.27; M$_{\theta\theta}$-1.13; M$_{\phi\phi}$-1.14; M$_{r\theta}$0.90; M$_{\theta\phi}$-1.41; M$_{\phi r}$2.55; Fault plane solution: M$_0$3.63000×10^{16} NP1: φ$_s$243.00000°, δ25.00000°, λ125.00000°. NP2: φ$_s$26.00000°, δ70.00000°, λ75.00000°. Principal axes: T -3622.6200, Plg62.0000°, Azm274.0000°; N -18.5700, Plg14.0000°, Azm31.0000°; P 3641.2000, Plg23.0000°, Azm127.0000°;*

*NOU **02** 00:26:46.8, 37°.50S×177°.66E, h148^{km}, mb5.3/70, Off E. Coast of N. Island, N.Z.*

*NEIC **02** 00:26:47.9±2.4, 37°.34S±0°.05×177°.37E±0°.09, h151^{km}±4^{km}, mb5.1/83, Error ellipse: s-maj=10.5km s-min=6.1km az=110.0*

*IDC **02** 00:26:47.7±1.1, 37°.06S×177°.57E, h154^{km}±8^{km}, mb4.8/20, mbtmp5.2/21, MS3.6/16, Error ellipse: s-maj=15.6km s-min=10.4km az=65.0*

*GCMT **02** 00:26:48.9±0.3, 37°.30S±0°.02×177°.42E±0°.02, h152^{km}±2^{km}, MW5.0/105, Moment Tensor Solution. s39,c41; s105,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.99±.12; M$_{\theta\theta}$-1.74±.18; M$_{\phi\phi}$-0.25±.19; M$_{r\theta}$0.82±.10; M$_{\theta\phi}$-1.13±.16; M$_{\phi r}$3.07±.10; Best double couple: M$_0$3.82000×10^{16} NP1: φ$_s$264.00000°, δ26.00000°, λ143.00000°. NP2: φ$_s$27.00000°, δ75.00000°, λ69.00000°. Principal axes: T 4.1370, Plg55.0000°, Azm270.0000°; N -0.6380, Plg21.0000°, Azm33.0000°; P -3.5030, Plg27.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*WEL **02** 00:26:49.2±1.2, 37°S±12°×17°7E±°, h125^{km}±7^{km}, M4.5/19, ML4.8/19, MLv4.5/19 Error ellipse: s-maj=0.0km s-min=0.0km az=177.4*

*MOS **02** 00:26:49.8±1.4, 37°.18S×177°.32E, h175^{km}, mb5.0/13, Error ellipse: s-maj=14.6km s-min=10.1km az=128.3*

ISC 02 00:26:47.9±0.4**, 37°.30S**±0°.04×**177°.42E**±0°.04**, h155**^{km}±3^{km}**, n688, **σ1^{s}.**53**/717**, mb5.2**/102**, 38C-33D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.29**	**220**	P	**Pn**	**00 27 07.8**	**-1.1**
WIZ				S	**Sn**	**00 27 23.4**	**-1.7**
WSRZ	**White Island S**	**0.29**	**222**	P	**Pn**	**00 27 08.5**	**-0.5**
HAZ	**Te Kaha**	**0.54**	**148**	P	**Pn**	**00 27 09.1**	**-0.8**
HAZ				S	**Sn**	**00 27 24.5**	**-2.3**
WHRZ	**Whale Island**	**0.66**	**213**	P	**Pn**	**00 27 10.3**	**-0.4**
WHRZ				S	**Sn**	**00 27 27.8**	**-0.4**
RUGZ	**Raukumara Rang**	**0.69**	**163**	P	**Pn**	**00 27 09.9**	**-1.1**
RUGZ				S	**Sn**	**00 27 25.9**	**-2.8**
MXZ	**Matakaoa Point**	**0.75**	**111**	Pn	**Pn**	**00 27 10.5**	**-0.6**
MXZ				Sn	**Sn**	**00 27 27.7**	**-1.3**
MXZ	**Matakaoa Point**	**0.75**	**111**	P	**Pn**	**00 27 10.6**	**-0.6**
PKGZ	**Pakihiroa**	**0.78**	**139**	P	**Pn**	**00 27 11.4**	**-0.1**
PKGZ				S	**Sn**	**00 27 29.3**	**-0.4**
OPRZ	**Ohinepanea**	**0.88**	**232**	P	**Pn**	**00 27 11.6**	**-0.5**
OPRZ				S	**Sn**	**00 27 29.5**	**-1.3**
MARZ	**Manawahe**	**0.91**	**221**	P	**Pn**	**00 27 12.1**	**-0.2**
MARZ				S	**Sn**	**00 27 30.4**	**-0.8**
WMGZ	**Waiomatatini S**	**0.94**	**124**	P	**Pn**	**00 27 12.5**	**-0.1**
MYRZ	**Mayor Island**	**0.94**	**271**	P	**Pn**	**00 27 11.9**	**-0.8**
EDRZ	**Edgecumbe**	**0.97**	**214**	P	**Pn**	**00 27 12.9**	**-0.1**
TWGZ	**Tauwhareparae**	**0.98**	**153**	P	**Pn**	**00 27 13.4**	**+0.5**
URZ	**Urewera**	**0.99**	**194**	P	**Pn**	**00 27 12.9**	**-0.1**
	2μm,0.3s,baz=267,slow=3.6,SNR=3295						
URZ				S	**Sn**	**00 27 31.5**	**-0.8**
	baz=204,slow=20						
URZ				LR	LR	00 27 46.9	
	comp=Z,2μm,18.8s,baz=30,slow=47						
URZ	**Urewera**	**0.99**	**194**	Pn	**Pn**	**00 27 12.7**	**-0.2**
URZ				Sn	**Sn**	**00 27 30.9**	**-1.4**
URZ	**Urewera**	**0.99**	**194**	P	**Pn**	**00 27 12.8**	**-0.2**
URZ				S	**Sn**	**00 27 30.9**	**-1.4**
PUZ	**Puketiti**	**1.01**	**140**	P	**Pn**	**00 27 13.2**	**-0.1**
TGRZ	**Tauranga**	**1.02**	**245**	P	**Pn**	**00 27 13.1**	**-0.1**
MWZ	**Matawai**	**1.03**	**175**	P	**Pn**	**00 27 13.4**	**-0.1**
LIRZ	**Lichensteins R**	**1.08**	**229**	P	**Pn**	**00 27 14.0**	**+0.2**
MKRZ	**Makatiti**	**1.13**	**222**	P	**Pn**	**00 27 15.3**	**+1.0**
OMRZ	**Omania**	**1.16**	**226**	P	**Pn**	**00 27 14.6**	**+0.1**
KARZ	**Kaharoa**	**1.18**	**232**	P	**Pn**	**00 27 14.8**	**+0.1**
TARZ	**Mount Tarawera**	**1.18**	**218**	P	**Pn**	**00 27 15.3**	**+0.5**
TKGZ	**Te Karaka**	**1.19**	**164**	P	**Pn**	**00 27 14.9**	**+0.2**
RAGZ	**Rawiri**	**1.19**	**180**	P	**Pn**	**00 27 15.0**	**+0.2**
RRRZ	**Republican Roa**	**1.26**	**215**	P	**Pn**	**00 27 15.6**	**+0.2**
NGRZ	**Ngongotaha**	**1.27**	**230**	P	**Pn**	**00 27 16.0**	**+0.5**
HLRZ	**Highlands Stat**	**1.27**	**221**	P	**Pn**	**00 27 16.1**	**+0.5**
MUGZ	**Murupara**	**1.28**	**204**	P	**Pn**	**00 27 15.7**	**+0.1**
KMRZ	**Kaimai**	**1.30**	**245**	P	**Pn**	**00 27 15.9**	**+0.1**
UTU	**Utuhina**	**1.31**	**228**	P	**Pn**	**00 27 16.9**	**+1.1**
CNGZ	**Carnagh Statio**	**1.33**	**153**	P	**Pn**	**00 27 16.8**	**+0.7**
RTZ	**Ruatahuna**	**1.36**	**195**	P	**Pn**	**00 27 16.0**	**-0.4**
HSRZ	**Hossack Road**	**1.38**	**222**	P	**Pn**	**00 27 17.7**	**+1.1**
HRRZ	**Handcock Road**	**1.41**	**219**	P	**Pn**	**00 27 17.7**	**+0.8**
RIGZ	**Rimuhau**	**1.43**	**169**	P	**Pn**	**00 27 17.3**	**+0.2**
PRRZ	**Plateau Road**	**1.45**	**214**	P	**Pn**	**00 27 17.6**	**+0.3**
KUZ	**Kuaotunu**	**1.47**	**292**	P	**Pn**	**00 27 16.3**	**-1.2**
GRRZ	**Galatos Road**	**1.48**	**224**	P	**Pn**	**00 27 18.3**	**+0.8**
SNGZ	**Shannon Statio**	**1.48**	**183**	P	**Pn**	**00 27 17.7**	**+0.1**
ALRZ	**Allen Road**	**1.52**	**214**	P	**Pn**	**00 27 18.4**	**+0.4**
WPRZ	**Whakapapatarin**	**1.57**	**219**	P	**Pn**	**00 27 19.3**	**+0.8**
TOZ	**Tahuroa Road**	**1.59**	**254**	P	**Pn**	**00 27 19.0**	**+0.3**
MTHZ	**Maungataniwha**	**1.62**	**196**	P	**Pn**	**00 27 19.6**	**+0.6**
RAHZ	**Arahi**	**1.64**	**189**	P	**Pn**	**00 27 19.5**	**+0.3**
PRGZ	**Paritu Road**	**1.66**	**168**	P	**Pn**	**00 27 19.7**	**+0.2**
MRHZ	**Matea Rd**	**1.73**	**207**	P	**Pn**	**00 27 20.3**	**+0.1**
KNZ	**Kokohu**	**1.73**	**174**	P	**Pn**	**00 27 20.3**	**+0.1**
KUTZ	**Kaahu Road**	**1.73**	**226**	P	**Pn**	**00 27 21.4**	**+1.0**
WHTZ	**Whakaora**	**1.79**	**220**	P	**Pn**	**00 27 22.2**	**+1.3**
TLZ	**Tolley Road**	**1.81**	**235**	P	**Pn**	**00 27 22.1**	**+0.9**
MKAZ	**Moumakai**	**1.82**	**276**	P	**Pn**	**00 27 21.2**	**0.0**
NMHZ	**Naumai**	**1.86**	**195**	P	**Pn**	**00 27 22.5**	**+0.8**
MHGZ	**Mahia Peninsul**	**1.89**	**169**	P	**Pn**	**00 27 22.5**	**+0.5**
GRZ	**Great Barrier**	**1.90**	**303**	P	**Pn**	**00 27 21.0**	**-1.0**
WIAZ	**Waiheke Island**	**1.90**	**285**	P	**Pn**	**00 27 21.9**	**-0.2**
HATZ	**Hinemaiaia**	**1.90**	**213**	P	**Pn**	**00 27 22.7**	**+0.5**
WATZ	**Wairara**	**1.94**	**223**	P	**Pn**	**00 27 23.4**	**+0.8**
ARHZ	**Aropaoanui**	**1.99**	**190**	P	**Pn**	**00 27 23.5**	**+0.4**
BKZ	**Black Stump Fm**	**2.00**	**201**		**Pn**	**00 27 22.8**	**-0.6**
BKZ				Sn	**Sn**	**00 27 49.9**	**-0.8**
BKZ	**Black Stump Fm**	**2.00**	**201**	P	**Pn**	**00 27 23.0**	**-0.3**
BKZ	**Black Stump Fm**	**2.00**	**201**	P	**Pn**	**00 27 23.2**	**-0.1**
ETAZ	**East Tamaki Re**	**2.02**	**279**	P	**Pn**	**00 27 23.8**	**+0.3**
RATZ	**Rangitukua**	**2.04**	**219**	P	**Pn**	**00 27 24.8**	**+1.1**
RITZ	**Rihia Road**	**2.08**	**216**	P	**Pn**	**00 27 25.0**	**+0.8**
MBAZ	**Motutapu North**	**2.09**	**284**	P	**Pn**	**00 27 24.4**	**+0.1**
KATZ	**Kakaramea**	**2.16**	**219**	P	**Pn**	**00 27 26.3**	**+1.1**
EPAZ	**Eden Park BICE**	**2.19**	**280**	P	**Pn**	**00 27 25.8**	**+0.4**
ABAZ	**Army Bay**	**2.19**	**288**	P	**Pn**	**00 27 25.6**	**+0.1**
HBAZ	**Herne Bay Bore**	**2.20**	**281**	P	**Pn**	**00 27 26.0**	**+0.4**
MCHZ	**McNeill Hill**	**2.21**	**195**	P	**Pn**	**00 27 26.1**	**+0.4**
AWAZ	**Awhitu Peninsu**	**2.23**	**275**	P	**Pn**	**00 27 26.3**	**+0.3**
KWHZ	**Kaweka Forest**	**2.26**	**200**	P	**Pn**	**00 27 26.2**	**-0.2**
NTVZ	**North Tongarir**	**2.26**	**217**	P	**Pn**	**00 27 27.0**	**+0.6**
TMVZ	**Te Maari**	**2.26**	**216**	P	**Pn**	**00 27 26.8**	**+0.3**
ETVZ	**East Tongariro**	**2.27**	**216**	P	**Pn**	**00 27 26.9**	**+0.2**
WTAZ	**Waiatarua**	**2.31**	**278**	P	**Pn**	**00 27 27.3**	**+0.4**
WTVZ	**West Tongariro**	**2.32**	**218**	P	**Pn**	**00 27 27.4**	**+0.3**
NNVZ	**North Ngauruho**	**2.32**	**217**	P	**Pn**	**00 27 27.6**	**+0.5**
OTVZ	**Oturere**	**2.32**	**216**	P	**Pn**	**00 27 27.5**	**+0.3**
RVAZ	**Riverhead Bore**	**2.34**	**282**	P	**Pn**	**00 27 27.4**	**+0.2**
SNVZ	**South Ngauruho**	**2.35**	**216**	P	**Pn**	**00 27 27.9**	**+0.4**
NGZ	**Ngauruhoe**	**2.36**	**217**	P	**Pn**	**00 27 28.2**	**+0.5**
HIZ	**Hauiti**	**2.37**	**238**	Pn	**Pn**	**00 27 28.7**	**+1.2**
HIZ	**Hauiti**	**2.37**	**238**	P	**Pn**	**00 27 28.8**	**+1.3**
HIZ	**Hauiti**	**2.37**	**238**	P	**Pn**	**00 27 29.0**	**+1.5**
CKHZ	**Cape Kidnapper**	**2.37**	**186**	P	**Pn**	**00 27 27.5**	**-0.1**
TUVZ	**Tukino**	**2.41**	**215**	P	**Pn**	**00 27 28.7**	**+0.4**
BHHZ	**Black Hill Sta**	**2.43**	**206**	P	**Pn**	**00 27 27.9**	**-0.5**
FWVZ	**Far West T-bar**	**2.44**	**216**	P	**Pn**	**00 27 28.9**	**+0.2**
WHVZ	**Whangaehu Hut**	**2.45**	**216**	P	**Pn**	**00 27 28.8**	**0.0**
DRZ	**Dome Shelter**	**2.46**	**216**	P	**Pn**	**00 27 29.8**	**+0.9**
MOVZ	**Moawhango**	**2.48**	**211**	P	**Pn**	**00 27 28.4**	**-0.6**
KRHZ	**Kereru**	**2.48**	**199**	P	**Pn**	**00 27 28.2**	**-0.8**
WNVZ	**Wahianoa**	**2.48**	**215**	P	**Pn**	**00 27 29.0**	**-0.2**
TRVZ	**Turoa**	**2.48**	**216**	P	**Pn**	**00 27 30.4**	**+1.2**
KAHZ	**Kahuranaki**	**2.53**	**190**	P	**Pn**	**00 27 29.2**	**-0.3**
PKVZ	**Pokaka**	**2.57**	**219**	P	**Pn**	**00 27 30.9**	**+0.7**
MTVZ	**Mangateitei**	**2.59**	**216**	P	**Pn**	**00 27 30.7**	**+0.4**
PXZ	**Pawanui**	**2.76**	**189**	P	**Pn**	**00 27 31.8**	**-0.6**
PNHZ	**Pukenui**	**2.78**	**200**	P	**Pn**	**00 27 31.6**	**-1.1**
VRZ	**Vera Road**	**2.78**	**228**	P	**Pn**	**00 27 34.3**	**+1.7**
WCZ	**Waipu Caves**	**2.83**	**298**	P	**Pn**	**00 27 32.6**	**-0.6**
WPHZ	**Waipukurau**	**2.87**	**195**	P	**Pn**	**00 27 32.7**	**-1.0**
TSZ	**Takapari Road**	**2.98**	**202**	P	**Pn**	**00 27 33.9**	**-1.3**
PRHZ	**Porangahau**	**3.02**	**192**	P	**Pn**	**00 27 34.6**	**-1.1**
WAZ	**Wanganui**	**3.11**	**217**	P	**Pn**	**00 27 36.9**	**+0.1**
DVHZ	**Dannevirke**	**3.15**	**198**	P	**Pn**	**00 27 35.6**	**-1.7**
DREZ	**Durham Road**	**3.16**	**232**	P	**Pn**	**00 27 39.7**	**+2.3**
LREZ	**Lake Rotokare**	**3.21**	**227**	P	**Pn**	**00 27 40.6**	**+2.6**
ANWZ	**Angora Road**	**3.24**	**193**	P	**Pn**	**00 27 37.5**	**-0.9**
NEZ	**North Egmont**	**3.27**	**232**	P	**Pn**	**00 27 41.0**	**+2.0**
PREZ	**Palmer Road**	**3.28**	**231**	P	**Pn**	**00 27 41.7**	**+2.8**
PKE	**Pukeiti**	**3.30**	**234**	P	**Pn**	**00 27 41.1**	**+1.9**
OHWZ	**Ohakea**	**3.34**	**209**	P	**Pn**	**00 27 40.5**	**+0.9**
KHEZ	**Kahui Hut**	**3.34**	**232**	P	**Pn**	**00 27 41.3**	**+1.5**
POWZ	**Post Office Ro**	**3.35**	**202**	P	**Pn**	**00 27 38.2**	**-1.5**
NBEZ	**Newall Road No**	**3.42**	**234**	P	**Pn**	**00 27 42.5**	**+1.8**
PRWZ	**Pori Road**	**3.44**	**199**	P	**Pn**	**00 27 39.9**	**-1.1**
NMEZ	**Namu Road**	**3.50**	**232**	P	**Pn**	**00 27 43.7**	**+2.0**
BFZ	**Birch Farm**	**3.50**	**195**	Pn	**Pn**	**00 27 40.0**	**-1.7**
BFZ				Sn	**Sn**	**00 28 22.4**	**-1.2**
BFZ	**Birch Farm**	**3.50**	**195**	P	**Pn**	**00 27 40.0**	**-1.7**
BFZ	**Birch Farm**	**3.50**	**195**	P	**Pn**	**00 27 40.4**	**-1.3**
TIWZ	**Tintock**	**3.67**	**199**	P	**Pn**	**00 27 42.3**	**-1.6**
OUZ	**Omahuta**	**3.73**	**303**	Pn	**Pn**	**00 27 44.1**	**-0.6**
OUZ	**Omahuta**	**3.73**	**303**	P	**Pn**	**00 27 44.0**	**-0.6**
OUZ	**Omahuta**	**3.73**	**303**	P	**Pn**	**00 27 44.3**	**-0.4**
CPWZ	**Castlepoint**	**3.73**	**194**	P	**Pn**	**00 27 43.7**	**-1.0**
MSWZ	**Moikau Station**	**4.44**	**202**		**Pn**	**00 27 50.8**	**-3.1**
MSWZ				Sn	**Sn**	**00 28 41.6**	**-4.0**
SNZO	**South Karori**	**4.53**	**207**		**Pn**	**00 27 52.2**	**-2.8**
SNZO				Sn	**Sn**	**00 28 44.5**	**-2.9**
SNZO	**South Karori**	**4.53**	**207**	P	**Pn**	**00 27 52.9**	**-2.1**
BHW	**Baring Head**	**4.55**	**205**		**Pn**	**00 27 52.8**	**-2.6**
BHW				Sn	**Sn**	**00 28 44.6**	**-3.5**
PLWZ	**Palliser**	**4.58**	**201**	Pn	**Pn**	**00 27 52.6**	**-3.3**
PLWZ				Sn	**Sn**	**00 28 44.3**	**-4.6**
TUWZ	**Tuamarina**	**4.93**	**212**		**Pn**	**00 27 57.6**	**-2.7**
NNZ	**Nelson**	**5.01**	**217**		**Pn**	**00 27 59.2**	**-2.2**
NNZ				Sn	**Sn**	**00 28 55.3**	**-3.7**
CMWZ	**Cape Campbell**	**5.09**	**208**	Pn	**Pn**	**00 27 58.3**	**-4.1**
CMWZ				Sn	**Sn**	**00 28 58.5**	**-2.2**
QRZ	**Quartz Range**	**5.19**	**226**	Pn	**Pn**	**00 28 00.9**	**-2.8**
QRZ				Sn	**Sn**	**00 28 59.0**	**-4.0**
QRZ	**Quartz Range**	**5.19**	**226**	P	**Pn**	**00 28 00.5**	**-3.2**
BSWZ	**Blackbirch Sta**	**5.19**	**211**		**Pn**	**00 28 01.7**	**-2.1**
BSWZ				Sn	**Sn**	**00 29 00.0**	**-3.2**
THZ	**Tophouse**	**5.66**	**217**		**Pn**	**00 28 07.2**	**-2.9**
THZ				Sn	**Sn**	**00 29 10.9**	**-3.6**
KHZ	**Kahutara**	**5.92**	**209**	Pn	**Pn**	**00 28 09.6**	**-3.8**
KHZ				Sn	**Sn**	**00 29 15.9**	**-4.5**
KHZ	**Kahutara**	**5.92**	**209**	P	**Pn**	**00 28 09.9**	**-3.5**
LTZ	**Lake Taylor**	**6.75**	**214**		**Pn**	**00 28 20.8**	**-3.8**
CTZ	**Chatham Island**	**7.87**	**147**	P	**Pn**	**00 28 40.6**	**+1.3**
RPZ	**Rata Peaks**	**8.04**	**215**	P	**Pn**	**00 28 38.1**	**-3.5**
	29nm,0.3s,baz=123,slow=1.4,SNR=22						
RPZ				S	**Sn**	**00 30 02.8**	**-8.4**
	144nm,0.3s,baz=19,slow=18,SNR=14						
RPZ	**Rata Peaks**	**8.04**	**215**		**Pn**	**00 28 38.4**	**-3.3**
RPZ	**Rata Peaks**	**8.04**	**215**	P	**Pn**	**00 28 38.1**	**-3.5**
FOZ	**Fox Glacier**	**8.51**	**221**	Pn	**Pn**	**00 28 44.9**	**-2.9**
RAO	**Raoul Island**	**8.92**	**27**	S	**Sn**	**00 30 26.7**	**-5.9**
	250nm,0.4s,baz=121,slow=19,SNR=2.5						
LBZ	**Lake Benmore**	**8.95**	**216**	Pn	**Pn**	**00 28 52.4**	**-1.4**
ODZ	**Otahua Downs**	**9.27**	**211**		**Pn**	**00 28 54.3**	**-3.7**
ODZ	**Otahua Downs**	**9.27**	**211**	P	**Pn**	**00 28 53.6**	**-4.4**
WKZ	**Wanaka**	**9.84**	**218**	Pn	**Pn**	**00 29 01.6**	**-3.9**
MLZ	**Mavora Lakes**	**10.66**	**218**	Pn	**Pn**	**00 29 13.6**	**-2.9**
WHZ	**Wether Hill Ro**	**11.13**	**217**		**Pn**	**00 29 20.1**	**-2.4**
NFK	**Norfolk Island**	**11.44**	**313**	P	**Pn**	**00 29 22.8**	**-3.9**
	baz=11						
PYZ	**Puysegur Point**	**11.94**	**219**	Pn	**Pn**	**00 29 30.6**	**-2.5**
LHI	**Lord Howe Isla**	**16.20**	**285**	P	**Pn**	**00 30 26.1**	**-0.7**
	baz=16						
PINNC	**Pines Island,**	**16.98**	**327**		**P**	**00 30 36.2**	**+0.6**
PINNC				IAmb	IAmb	00 30 41.4	
	comp=Z,45nm,0.9s						
OUENC	**Ouen Island, N**	**17.42**	**325**	P	**P**	**00 30 40.7**	**+0.3**
OUENC				IAmb	IAmb	00 30 43.2	
	comp=Z,50nm,0.9s						
OUENC	**Ouen Island, N**	**17.42**	**325**	P	**Pn**	**00 30 45.7**	**+4.2**
ONTNC	**Ouen Toro**	**17.69**	**325**	P	**P**	**00 30 44.1**	**+0.7**
ONTNC				IAmb	IAmb	00 30 47.9	
	comp=Z,84nm,1.1s						
ONTNC	**Ouen Toro**	**17.69**	**325**	P	**Pn**	**00 30 46.8**	**+2.0**
MARNC	**Mare, Loyalty**	**17.75**	**330**	P	**P**	**00 30 42.9**	**-1.1**
DZM	**Mont Dzumac**	**17.90**	**325**	P	**Pn**	**00 30 47.3**	**-0.1**
	comp=Z,20nm,0.6s,baz=160,slow=10.0,SNR=19						
DZM	**Mont Dzumac**	**17.90**	**325**	*e*P	**Pn**	**00 30 47.1**	**-0.3**
	comp=Z,98nm,1.2s						
DZM				*e*LR	LR	00 34 48.2	
DZM	**Mont Dzumac**	**17.90**	**325**	Pn	**Pn**	**00 30 47.3**	**-0.1**
DZM	**Mont Dzumac**	**17.90**	**325**	P	**Pn**	**00 30 47.7**	**+0.3**
NOUC	**Port Laguerre**	**17.94**	**325**	P	**Pn**	**00 30 47.7**	**0.0**
LIFNC	**LIFOU**	**18.70**	**329**		**P**	**00 30 55.2**	**+0.9**
LIFNC				IAmb	IAmb	00 31 03.0	
	comp=Z,170nm,1.1s						
MSVF	**Nonsavu**	**19.50**	**2**	P	**P**	**00 31 02.3**	**-0.8**
	comp=Z,4.0nm,0.3s,baz=166,slow=6.2,SNR=8.9						
MSVF				PKiKP	**PKiKP**	**00 43 03.3**	**-3.5**
	comp=Z,5.5nm,0.3s,baz=308,slow=5.1,SNR=3.7						
MSVF	**Nonsavu**	**19.50**	**2**	⇓*e*P	**P**	**00 31 04.3**	**+1.1**
MSVF	**Nonsavu**	**19.50**	**2**	P	**Pn**	**00 31 05.2**	**-0.9**
MSVF				IAmb	IAmb	00 31 15.6	
	comp=Z,37nm,0.7s						
MSVF	**Nonsavu**	**19.50**	**2**	P	**P**	**00 31 04.9**	**+1.7**
KOUNC	**Koumac, New Ca**	**20.23**	**322**	P	**P**	**00 31 11.7**	**+0.8**
KOUNC				IAmb	IAmb	00 31 13.4	
	comp=Z,67nm,0.7s						
KOUNC	**Koumac, New Ca**	**20.23**	**322**	P	**P**	**00 31 12.8**	**+1.9**
MCQ	**Macquarie Isla**	**21.36**	**210**	P	**P**	**00 31 22.9**	**+0.3**
	baz=21						
NTLH	**Newcastle Hard**	**21.47**	**274**	P	**P**	**00 31 28.4**	**+4.3**
	comp=Z,122nm,0.7s						
MGCD	**Mangrove Creek**	**21.85**	**273**	P	**P**	**00 31 30.9**	**+2.8**
	baz=22,SNR=5.7						
MGCD	**Mangrove Creek**	**21.85**	**273**	P	**P**	**00 31 30.2**	**+2.1**
SYDH	**Sydney Hard Ro**	**21.97**	**271**	P	**P**	**00 31 33.0**	**+3.7**
	comp=Z,43nm,0.8s						
ARMA	**Armidale**	**22.45**	**280**	P	**P**	**00 31 35.6**	**+1.5**
	baz=22,SNR=12						
ARMA	**Armidale**	**22.45**	**280**	P	**P**	**00 31 36.2**	**+1.9**
ARMA				IAmb	IAmb	00 31 39.5	
	comp=Z,51nm,1.1s						
ARMA	**Armidale**	**22.45**	**280**	P	**P**	**00 31 36.1**	**+1.9**
CNB	**Canberra Magne**	**22.67**	**267**	P	**P**	**00 31 37.1**	**+1.0**
CAN	**Canberra**	**22.96**	**266**	P	**P**	**00 31 40.5**	**+1.7**
CAN				pmax	pmax		
	comp=Z,37nm,1.1s						
CAN	**Canberra**	**22.96**	**266**	P	**P**	**00 31 40.5**	**+1.7**
CAN	**Canberra**	**22.96**	**266**	P	**P**	**00 31 42.3**	**+3.5**
	comp=Z,67nm,1.4s						
SANVU	**Saraoutou**	**23.58**	**335**	P	**P**	**00 31 44.3**	**-0.2**
SANVU				IAmb	IAmb	00 31 45.6	
	comp=Z,51nm,0.8s						
SANVU	**Saraoutou**	**23.58**	**335**	P	**P**	**00 31 47.1**	**+2.6**
MOO	**Moorlands**	**23.70**	**248**	P	**P**	**00 31 47.3**	**+2.0**
	baz=24,SNR=4.0						
TOO	**Toolangi**	**25.30**	**260**	P	**P**	**00 32 01.6**	**+1.6**
	baz=25,SNR=8.8						
TOO	**Toolangi**	**25.30**	**260**	P	**P**	**00 31 59.7**	**-0.3**
TOO				pmax	pmax		
	comp=Z,19nm,0.8s						
TOO	**Toolangi**	**25.30**	**260**	P	**P**	**00 31 59.7**	**-0.3**
EIDS	**Eidsvold**	**25.36**	**290**	P	**P**	**00 32 02.4**	**+1.7**
	baz=25,SNR=25						
EIDS	**Eidsvold**	**25.36**	**290**	P	**P**	**00 32 01.6**	**+1.0**
EIDS				IAmb	IAmb	00 32 06.7	
	comp=Z,55nm,0.8s						
EIDS	**Eidsvold**	**25.36**	**290**	P	**P**	**00 32 02.3**	**+1.7**
RMQ	**Roma**	**26.52**	**286**	P	**P**	**00 32 13.5**	**+2.4**
	baz=26,SNR=27						
RMQ	**Roma**	**26.52**	**286**	P	**P**	**00 32 12.8**	**+1.7**
CMSA	**Cobar Meteorol**	**26.72**	**273**	P	**P**	**00 32 14.8**	**+2.0**
	baz=27,SNR=58						
CMSA	**Cobar Meteorol**	**26.72**	**273**	P	**P**	**00 32 14.5**	**+1.7**
RK1H	**Rockhampton Ha**	**26.95**	**293**	P	**P**	**00 32 16.9**	**+2.0**
	comp=Z,25nm,1.1s						
STKA	**Stephens Creek**	**29.87**	**270**	P	**P**	**00 32 42.4**	**+1.6**
	comp=Z,43nm,0.7s,baz=102,slow=10,SNR=64						
STKA				PcP	**PcP**	**00 35 39.1**	**-0.8**
	comp=Z,7.6nm,0.7s,baz=98,slow=5.9,SNR=6.2						
	comp=Z,43nm,0.7s						
STKA	**Stephens Creek**	**29.87**	**270**	*d* *i*P	**P**	**00 32 42.0**	**+1.3**
STKA	**Stephens Creek**	**29.87**	**270**	P	**P**	**00 32 41.4**	**+0.7**
QLP	**Quilpie**	**29.98**	**281**	P	**P**	**00 32 43.7**	**+1.9**
	baz=30,SNR=5.5						
QLP	**Quilpie**	**29.98**	**281**	P	**P**	**00 32 44.6**	**+2.8**
HTT	**Hallett**	**31.49**	**265**	P	**P**	**00 32 56.5**	**+1.4**
	baz=31,SNR=9.8						
CTA	**Charters Tower**	**32.08**	**294**	P	**P**	**00 33 01.6**	**+1.4**
	comp=Z,104nm,0.8s,baz=126,slow=9.5,SNR=148						
	comp=Z,104nm,0.8s						
CTAO	**Charters Tower**	**32.08**	**294**	P	**P**	**00 33 01.0**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,121nm,0.9s						
CTAO	**Charters Tower**	**32.08**	**294**	P	**P**	**00 33 01.0**	**+0.8**
CTAO	**Charters Tower**	**32.08**	**294**	P	**P**	**00 33 02.1**	**+1.9**
CTAO	**Charters Tower**	**32.08**	**294**	⇑P	**P**	**00 33 02.0**	**+1.7**
CTAO				pP	**pP**	**00 33 34.0**	**+0.9**
CTAO				sP	**sP**	**00 33 48.1**	**-2.7**
INKA	**Innaminka**	**32.19**	**276**	P	**P**	**00 33 02.9**	**+1.7**
WHYH	**Whyalla**	**32.69**	**265**	P	**P**	**00 33 06.6**	**+1.2**
	comp=Z,75nm,0.8s						
LCRK	**Leigh Creek**	**33.09**	**270**	P	**P**	**00 33 10.5**	**+1.6**
BBOO	**Buckleboo**	**33.96**	**265**	P	**P**	**00 33 17.0**	**+0.5**
	baz=34,SNR=25						
MTSU	**Mount Surprise**	**34.73**	**294**	P	**P**	**00 33 24.7**	**+1.5**
	baz=35,SNR=59						
MTSU	**Mount Surprise**	**34.73**	**294**	P	**P**	**00 33 25.0**	**+1.8**
PPT2	**Papeete2**	**35.00**	**65**	*e*S	**S**	**00 38 50.4**	**+4.2**
PPT2				*e*LR	LR	00 42 45.3	
	comp=Z,141nm,31.2s						
PPT	**Papeete**	**35.02**	**65**	LR	LR	00 44 26.7	
	comp=Z,42nm,20.4s,baz=91,slow=30						
OOD	**Oodnadatta**	**36.19**	**273**	P	**P**	**00 33 36.9**	**+1.3**
DRV	**Dumont d'Urvil**	**36.31**	**204**	⇑P	**P**	**00 33 38.6**	**+2.5**
DRV				sP	**sP**	**00 34 29.0**	**+1.6**
MULG	**Mulgathing**	**36.47**	**268**	P	**P**	**00 33 39.0**	**+1.1**
QIS	**Mount Isa**	**36.78**	**286**	P	**P**	**00 33 41.5**	**+0.8**
	baz=37,SNR=18						
QIS	**Mount Isa**	**36.78**	**286**	P	**P**	**00 33 42.1**	**+1.4**
COEN	**Coen**	**38.32**	**298**	P	**P**	**00 33 54.7**	**+1.0**
	baz=38,SNR=85						
COEN	**Coen**	**38.32**	**298**	P	**P**	**00 33 54.1**	**+0.4**
COEN	**Coen**	**38.32**	**298**	P	**P**	**00 33 55.3**	**+1.6**
PMG	**Port Moresby**	**38.96**	**308**	*c* *i*P	**P**	**00 34 00.0**	**+1.1**
PMG				pmax	pmax		
	comp=Z,59nm,0.6s						
PMG	**Port Moresby**	**38.96**	**308**	P	**P**	**00 33 59.7**	**+0.7**
PMG	**Port Moresby**	**38.96**	**308**	P	**P**	**00 34 00.8**	**+1.8**
PMG	**Port Moresby**	**38.96**	**308**	⇑P	**P**	**00 34 00.1**	**+1.1**
PMG				pP	**pP**	**00 34 27.4**	**-4.9**
AS31	**Alice Springs**	**39.55**	**277**	P	**P**	**00 34 04.0**	**+0.1**
AS31				IAmb	IAmb	00 34 05.4	
	comp=Z,32nm,0.6s						
ASAR	**Alice Springs**	**39.55**	**277**	P	**P**	**00 34 04.3**	**+0.4**

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              comp=Z,91nm,0.7s,baz=122,slow=8.4,SNR=784
ASAR                                  PcP     PcP     00 36 06.8  -1.4
              comp=Z,6.7nm,0.5s,baz=116,slow=4.0,SNR=7.5
ASAR                                  ScP     ScP     00 39 37.2  -5.1
              comp=Z,2.3nm,0.7s,baz=124,slow=4.2,SNR=6.8
ASAR                                  LR      LR      00 51 39.2
              comp=Z,85nm,18.3s,baz=112,slow=38
              comp=Z,91nm,0.7s
ASAR  Alice Springs      39.55 277    P       P       00 34 04.0 +0.1
RABL  Rabaul             40.26 319    P       P       00 34 09.8 +0.1
RABL  Rabaul             40.26 319    P       P       00 34 11.7 +1.9
VNDA  Vanda              40.88 185    P       P       00 34 17.7 +3.6
              comp=Z,6.0nm,0.7s,baz=15,slow=7.4,SNR=13
              comp=Z,6.0nm,0.7s
VNDA  Vanda              40.88 185    P       P       00 34 16.6 +2.5
VNDA  Vanda              40.88 185    P       P       00 34 17.8 +3.7
VNDA                                  pP      pP      00 34 44.3  -3.9
VNDA                                  sP      sP      00 34 56.9  -8.9
SBA   Scott Base         40.91 183    P       P       00 34 16.8 +2.5
SBA                                   pmax    pmax
              comp=Z,15nm,1.0s
SBA   Scott Base         40.91 183    P       P       00 34 16.8 +2.5
SBA   Scott Base         40.91 183    P       P       00 34 19.0 +4.7
SBA                                   pP      pP      00 34 54.4 +6.0
SBA                                   sP      sP      00 35 15.5 +9.4
WR0   Warramunga Arr     41.03 283    P       P       00 34 15.6  -0.4
WR0                                   IAmb    IAmb    00 34 17.2
              comp=Z,73nm,1.2s
FORT  Forrest            41.04 264    P       P       00 34 16.3 +0.3
              baz=41,SNR=63
FORT  Forrest            41.04 264    P       P       00 34 15.8  -0.2
FORT  Forrest            41.04 264    P       P       00 34 16.4 +0.3
              comp=Z,144nm,0.6s
WB2   Warramunga Arr     41.18 283    P       P       00 34 17.2  -0.1
WRAB  Tennant Creek      41.19 283c iP    P       00 34 17.4   0.0
WRAB                                  pmax    pmax
              comp=Z,142nm,1.7s
WRAB  Tennant Creek      41.19 283    P       P       00 34 16.9  -0.5
WRAB  Tennant Creek      41.19 283    P       P       00 34 17.7 +0.3
WRAB  Tennant Creek      41.19 283  ⇑P       P       00 34 17.4   0.0
WRAB                                  x       x       00 34 23.6
WRAB                                  pP      pP      00 34 49.0  -2.2
WRA   Warramunga Arr     41.19 283    P       P       00 34 17.4 +0.1
              comp=Z,50nm,0.6s,baz=121,slow=7.8,SNR=1052
WRA                                   PcP     PcP     00 36 13.1  -0.5
              comp=Z,7.4nm,0.8s,baz=113,slow=3.9,SNR=7.3
WRA                                   ScP     ScP     00 39 46.4  -2.4
              comp=Z,3.6nm,0.8s,baz=118,slow=3.8,SNR=9.7
              comp=Z,50nm,0.6s
WRA   Warramunga Arr     41.19 283    P       P       00 34 17.0  -0.4
WRKA  Warakurna          43.34 272    P       P       00 34 33.9  -0.9
              baz=43,SNR=77
WRKA  Warakurna          43.34 272    P       P       00 34 34.0  -0.7
              comp=Z,31nm,0.6s
MANU  Manus Island       44.67 315    P       P       00 34 45.3  -0.1
CCD   Concordia, Ant     45.27 197    P       P       00 34 52.0 +2.2
CCD                                   PP      PcP     00 36 27.4 +0.6
KDU   Kakadu             46.97 289    P       P       00 35 03.1  -0.2
              baz=47,SNR=7.9
KDU   Kakadu             46.97 289    P       P       00 35 03.8 +0.5
CASY  Casey              47.28 210    P       P       00 35 05.5 +0.5
CASY                                  IAmb    IAmb    00 35 06.8
              comp=Z,44nm,1.0s
TAOE  Nuku Hiva Isla     47.63  64   eS       S       00 41 51.8  -0.7
TAOE                                 eLR      LR      00 48 55.9
              comp=Z,92nm,33.4s
MTN   Manton Dam         47.88 288    P       P       00 35 10.4  -0.1
              baz=48,SNR=12
MTN   Manton Dam         47.88 288    P       P       00 35 10.3  -0.1
MTN                                   IAmb    IAmb    00 35 11.3
              comp=Z,40nm,0.6s
MTN   Manton Dam         47.88 288    P       P       00 35 10.9 +0.5
KNRA  Kununurra          47.98 283    P       P       00 35 11.5 +0.4
              baz=48,SNR=21
KNRA  Kununurra          47.98 283    P       P       00 35 11.3 +0.1
KNRA                                  IAmb    IAmb    00 35 12.5
              comp=Z,40nm,0.7s
KNRA  Kununurra          47.98 283    P       P       00 35 12.1 +1.0
GENI  Genyem             48.61 306    P       P       00 35 17.9 +1.9
KLBR  Kellerberrin       48.84 258    P       P       00 35 17.1  -0.4
              baz=49,SNR=22
KLBR  Kellerberrin       48.84 258    P       P       00 35 17.7 +0.1
MUN   Mundaring          49.88 257    P       P       00 35 24.3  -1.2
              baz=50,SNR=6.6
MUN   Mundaring          49.88 257    P       P       00 35 28.7 +3.2
              comp=Z,47nm,0.8s
BLDU  Ballidu            50.05 259    P       P       00 35 26.3  -0.5
              baz=50,SNR=20
MEEK  Meekatharra        50.30 264    P       P       00 35 28.0  -0.8
              baz=50,SNR=18
MEEK  Meekatharra        50.30 264    P       P       00 35 28.4  -0.4
MORW  Morawa             51.24 260    P       P       00 35 35.6  -0.2
              baz=51,SNR=17
MORW  Morawa             51.24 260    P       P       00 35 35.1  -0.6
MORW                                  IAmb    IAmb    00 35 36.2
              comp=Z,23nm,0.9s
PSA00 Pilbara Seismi     51.79 271    P       P       00 35 38.9  -1.0
PSA00                                 IAmb    IAmb    00 35 40.0
              comp=Z,19nm,0.6s
PSA00 Pilbara Seismi     51.79 271    IAmb    IAmb    00 35 40.0
              comp=Z,7.3nm,0.7s
PSA00 Pilbara Seismi     51.79 271    P       P       00 35 39.2  -0.7
MBWA  Marble Bar         52.10 271  ⇑P       P       00 35 41.2  -1.0
MBWA                                  sP      PcP     00 36 50.5  -1.5
BAKI  Biak               52.32 303    P       P       00 35 45.1 +1.3
              comp=Z,927nmcomp=Z,96nm,0.8s
QSPA  South Pole Qui     52.82 180    P       P       00 35 50.7 +3.7
              comp=Z,53nm,0.7s,baz=220,slow=1.0,SNR=158
QSPA                                  ScP     ScP     00 40 37.4 +0.5
              comp=Z,3.9nm,0.9s,baz=8.4,slow=3.7,SNR=4.4
QSPA                                  LR      LR      00 55 07.3
              comp=Z,50nm,19.9s,baz=50,slow=32
              comp=Z,53nm,0.7s
QSPA  South Pole Qui     52.82 180    P       P       00 35 50.2 +3.1
QSPA                                  IAmb    IAmb    00 35 54.8
              comp=Z,54nm,0.9s
QSPA  South Pole Qui     52.82 180    P       P       00 35 50.8 +3.7
QSPA                                  pP      pP      00 36 25.4 +2.7
BATI  Baumata            55.23 285    P       P       00 36 06.1 +1.0
              comp=Z,38nm,0.5s,baz=117,slow=4.5
BATI                                  LR      LR      01 02 27.3
              comp=Z,143nm,18.0s,baz=237,slow=39
              comp=Z,38nm,0.5s
BATI  Baumata            55.23 285    P       P       00 36 08.8 +3.8
              comp=Z,33nm,1.1s
GIRL  Giralia            55.72 266    P       P       00 36 09.3 +0.9
              baz=56,SNR=5.8
SIJI  Sorong             55.85 299    P       P       00 36 09.7 +0.3
              comp=Z,33nm,0.9s,baz=126,slow=6.7,SNR=4.8
              comp=Z,33nm,0.9s
SWI   Sorong             55.86 299    P       P       00 36 09.8 +0.4
              comp=Z,74nm,0.8s
MMRI  Maumere            57.30 285    P       P       00 36 20.5 +0.8
              comp=Z,108nm,0.8s
MMRI  Maumere            57.30 285    P       P       00 36 20.9 +1.2
SANI  Sanana             58.79 294    P       P       00 36 29.5  -0.5
              comp=Z,636nmcomp=Z,53nm,1.0s
SANI  Sanana             58.79 294    P       P       00 36 30.6 +0.6
PLAI  Plampang           60.64 282    P       P       00 36 43.7 +1.0
              comp=Z,43nm,0.8s
PLAI  Plampang           60.64 282    P       P       00 36 44.9 +2.2
BKSI  Bulukumba          61.02 287    P       P       00 36 46.2 +1.0
              comp=Z,22nm,0.7s
RPN   Rapa Nui           61.41 104    LR      LR      00 58 16.9
              comp=Z,29nm,21.3s,baz=206,slow=31
KAPI  Kappang            61.50 287    P       P       00 36 48.7 +0.3
              comp=Z,4.2nm,0.4s,baz=307,slow=0.4,SNR=7.3
KAPI                                  LR      LR      01 03 56.3
              comp=Z,63nm,20.3s,baz=122,slow=36
              comp=Z,4.2nm,0.4s
KAPI  Kappang            61.50 287c iP    P       00 36 49.1 +0.7
KAPI                                  pmax    pmax
              comp=Z,36nm,1.4s
KAPI  Kappang            61.50 287    P       P       00 36 48.7 +0.3
KAPI                                  IAmb    IAmb    00 36 50.5
              comp=Z,39nm,1.4s
KAPI  Kappang            61.50 287    P       P       00 36 49.9 +1.5
BNSI  Bone               61.62 287    P       P       00 36 51.0 +1.7
              comp=Z,608nmcomp=Z,12nm,1.1s
LUWI  Luwuk              61.83 292    P       P       00 36 50.8 +0.1
SPSI  Sidrap Palu        62.16 288    P       P       00 36 53.5 +0.7
              comp=Z,20nm,0.6s
TTSI  Tana Toraja        62.71 288    P       P       00 36 57.4 +0.9
GTOI  Gorontalo          62.78 294    P       P       00 36 58.5 +1.5
              comp=Z,9.6nm,0.7s
SRBI  Singaraja          63.10 281    P       P       00 37 01.3 +2.2
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              comp=Z,70nm,0.7s
BELA  Belgrano 2         63.45 173    P       P       00 37 01.9 +1.4
BELA                                  IAmb    IAmb    00 37 07.7
              comp=Z,30nm,0.7s
JAGI  Jajag, Banyuwa     63.70 280    P       P       00 37 03.0  -0.1
JAGI                                  IAmb    IAmb    00 37 22.0
              comp=Z,20nm,0.7s
ABJI  Asem Bagus         64.04 280    P       P       00 37 08.6 +3.3
              comp=Z,49nm,0.7s
GMJI  Gumukmas           64.38 279    P       P       00 37 09.8 +2.3
              comp=Z,56nm,1.4s
MAW   Mawson             64.51 203    P       P       00 37 09.3 +1.8
              comp=Z,60nm,0.9s,baz=134,slow=6.9,SNR=59
              comp=Z,60nm,0.9s
MAW   Mawson             64.51 203    P       P       00 37 08.6 +1.1
MAW                                   IAmb    IAmb    00 37 10.1
              comp=Z,21nm,1.1s
BLJI  Banyuglugur        64.58 280    P       P       00 37 10.4 +1.6
              comp=Z,38nm,0.6s
TOLI2 Tolitoli           64.74 293    P       P       00 37 08.9  -0.9
MPSI  Mapaga             64.87 291    P       P       00 37 11.3 +0.6
              comp=Z,455nmcomp=Z,16nm,1.0s
DAV   Davao City (W)     65.47 301    P       P       00 37 14.3  -0.2
              comp=Z,164nm,0.3s,baz=164,slow=4.1,SNR=3.9
PWJI  Pagerwojo          65.82 279    P       P       00 37 18.7 +1.9
              comp=Z,111nm,0.5s
PCJI  Pacitan            66.21 278    P       P       00 37 22.3 +3.0
              comp=Z,145nm,0.6s
BBKI  Banjar Baru        66.25 285    P       P       00 37 21.1 +1.5
MTKI  Muara Teweh, K     67.81 287    P       P       00 37 32.0 +2.6
MYLDM Lahad Datu         69.16 294    P       P       00 37 38.0 +0.3
DBJI  Dramaga            70.69 277    P       P       00 37 49.3 +2.1
TROLL Troll, Antarti     70.93 182    P       P       00 37 49.6 +1.8
SNAA  Sanae              71.33 180    P       P       00 37 51.9 +1.7
SNAA  Sanae              71.33 180deP     P       00 37 49.8  -0.4
SNAA                                  pmax    pmax
              comp=Z,41nm,1.2s
SNAA  Sanae              71.33 180    P       P       00 37 50.9 +0.8
SNAA                                  IAmb    IAmb    00 37 54.9
              comp=Z,40nm,1.2s
VNA3  Neumayer Olymp     71.64 178    P       P       00 37 53.8 +1.8
VNA2  Neumayer--Watz     72.02 178    P       P       00 37 56.3 +2.0
              baz=175,slow=5.0
JCJ   Chichijima         72.11 327    P       P       00 37 54.1  -1.1
              comp=Z,48nm,0.5s,baz=225,slow=6.1,SNR=7.4
              comp=Z,48nm,0.5s
VNA1  Neumayer--Stat     72.28 178    P       P       00 37 58.0 +2.3
TPI   Tanjungpandan      72.29 280    P       P       00 37 59.1 +2.4
              comp=Z,17nm,1.2s
GO09  Cerro Castillo     72.77 142    P       P       00 37 59.8 +0.8
GO09                                  IAmb    IAmb    00 38 03.4
              comp=Z,45nm,1.5s
KSM   Kuching            72.87 285    P       P       00 37 58.7  -1.4
KSM                                   IAmb    IAmb    00 38 02.1
              comp=Z,34nm,0.8s
KSM   Kuching            72.87 285    P       P       00 38 00.0  -0.1
KASI  Kota Agung         73.10 276    P       P       00 38 02.4 +0.9
              comp=Z,48nm,1.0s
TGY   Tagaytay City      73.67 303    P       P       00 38 05.5 +0.7
              comp=Z,151nm,0.4s,baz=164,slow=8.6,SNR=4.3
PPBI  Pangkal Pinang     73.84 280    P       P       00 38 07.1 +1.3
DSRI  Dabo               76.10 280    P       P       00 38 20.5 +1.7
              comp=Z,9.0nm,0.7s
KRJI  Kerinci            77.57 277    P       P       00 38 27.5 +0.3
              comp=Z,317nm,0.9s
LL02  Futaleuf           78.16 136    P       P       00 38 31.6 +1.7
H03S2 Juan Fernandez     79.76 125    T       T       02 05 29.0
              baz=231
H03S1 Juan Fernandez     79.77 125    T       T       02 05 30.9
              baz=231
H03S3 Juan Fernandez     79.78 125    T       T       02 05 33.9
              baz=231
TWG   Pinlang            79.92 309    P       P       00 38 38.8  -0.8
YOJ   Yonaguni jima      79.96 311    P       P       00 38 39.2  -0.5
YOJ                                   pmax    pmax
              comp=Z,86nm,0.8s
YOJ   Yonaguni jima      79.96 311    P       P       00 38 39.2  -0.5
H03N3 Juan Fernandez     79.99 124    T       T       02 05 42.8
              baz=233,slow=72,SNR=35
H03N2 Juan Fernandez     80.00 124    T       T       02 05 41.1
              baz=233,slow=72,SNR=35
H03N1 Juan Fernandez     80.01 124    T       T       02 05 41.5
              baz=233,slow=72,SNR=38
YULB  Yu-li              80.20 309    IAmb    IAmb    00 38 41.4
              comp=Z,56nm,0.8s
PLCA  Paso Flores        80.50 134    P       P       00 38 46.1 +3.4
              comp=Z,3.6nm,0.6s,baz=219,slow=7.2,SNR=7.5
PLCA                                  LR      LR      01 10 06.2
              comp=Z,36nm,18.4s,baz=180,slow=32
PLCA  Paso Flores        80.50 134    P       P       00 38 42.6  -0.1
PLCA                                  pmax    pmax
              comp=Z,7.0nm,1.1s
PLCA  Paso Flores        80.50 134    P       P       00 38 42.6  -0.1
TPUB  Ta-pu              80.55 309    P       P       00 38 42.1  -0.8
TPUB  Ta-pu              80.55 309    P       P       00 38 44.1 +1.1
NACB  Ninganchiao        80.60 310    P       P       00 38 42.9  -0.3
NACB                                  IAmb    IAmb    00 38 45.3
              comp=Z,72nm,1.3s
SSLB  Suanglung          80.71 309    P       P       00 38 43.5  -0.3
SSLB  Suanglung          80.71 309    P       P       00 38 43.8   0.0
DLV   T  Lat             81.00 292    P       P       00 38 45.1  -0.6
YHNB  Yeheng             81.10 310    P       P       00 38 46.0   0.0
YHNB                                  IAmb    IAmb    00 38 51.0
              comp=Z,31nm,0.9s
YHNB  Yeheng             81.10 310    P       P       00 38 47.1 +1.2
TATO  Taipei             81.26 310    P       P       00 38 46.6  -0.1
JSU   Suzuyama           81.32 321    P       P       00 38 46.4  -0.4
JSU                                   IAmb    IAmb    00 38 48.2
              comp=Z,14nm,0.7s
INU   Inuyama            81.44 328    P       P       00 38 47.0  -0.4
INU                                   IAmb    IAmb    00 38 48.1
              comp=Z,18nm,0.8s
INU   Inuyama            81.44 328    P       P       00 38 47.6 +0.2
IPM   Ipoh               81.94 282    P       P       00 38 49.5  -1.1
IPM                                   IAmb    IAmb    00 38 51.2
              comp=Z,17nm,0.7s
IPM   Ipoh               81.94 282    P       P       00 38 51.4 +0.8
MJAR  Matsushiro Arr     81.96 329    P       P       00 38 49.4  -0.7
              comp=Z,4.3nm,0.6s,baz=149,slow=7.9,SNR=12
              comp=Z,4.3nm,0.6s
MAJO  Matsushiro         81.96 329c iP    P       00 38 49.4  -0.7
MAJO                                  pmax    pmax
              comp=Z,13nm,1.0s
MAJO  Matsushiro         81.96 329    P       P       00 38 49.2  -0.9
MAJO  Matsushiro         81.96 329    P       P       00 38 51.3 +1.2
MJB9  Matsu-Tunnel       81.97 329    P       P       00 38 49.2  -0.9
JNU   Nakatsue           82.41 322    P       P       00 38 52.3  -0.2
              comp=Z,37nm,0.9s,baz=104,slow=4.3,SNR=24
JNU                                   LR      LR      01 13 42.9
              comp=Z,17nm,18.0s,baz=192,slow=34
              comp=Z,37nm,0.9s
JNU   Nakatsue           82.41 322    P       P       00 38 52.5   0.0
JNU                                   IAmb    IAmb    00 38 54.0
              comp=Z,42nm,0.9s
JNU   Nakatsue           82.41 322    P       P       00 38 53.7 +1.2
PSI   Prapat             82.56 279    P       P       00 38 52.7  -1.2
              comp=Z,16nm,0.7s,baz=124,slow=4.8,SNR=24
PSI                                   LR      LR      01 19 45.1
              comp=Z,91nm,18.4s,baz=184,slow=38
              comp=Z,16nm,0.7s
GSI   Gunungsitoli       82.71 277    P       P       00 38 54.3  -0.3
GSI   Gunungsitoli       82.71 277    P       P       00 38 55.8 +1.2
              comp=Z,146nm,0.8s
GSI   Gunungsitoli       82.71 277    P       P       00 38 56.5 +1.9
KULM  Kulim              82.74 282    P       P       00 38 54.4  -0.2
KULM                                  IAmb    IAmb    00 38 55.4
              comp=Z,16nm,1.0s
JHS   Saijyo             82.88 325    IAmb    IAmb    00 38 56.3
              comp=Z,63nm,1.3s
QZH   Quanzhou           83.02 309⇓iP     P       00 38 57.5 +1.7
QZH                                   pmax    pmax
              comp=Z,40nm,0.8s
JSD   Sado               83.23 330    P       P       00 38 56.3  -0.2
JSD                                   IAmb    IAmb    00 38 59.2
              comp=Z,41nm,1.4s
JTM   Tenmabayashi       84.55 333    P       P       00 39 03.0  -0.1
JTM                                   IAmb    IAmb    00 39 04.0
              comp=Z,29nm,0.8s
MT01  Popeta             84.64 129    P       P       00 39 06.1 +1.9
ERM   Erimo              84.91 335    P       P       00 39 06.0 +1.0
ERM                                   pmax    pmax
              comp=Z,14nm,1.0s
ERM   Erimo              84.91 335    P       P       00 39 06.0 +1.0
SRIT  Nakonsritamara     85.60 284    P       P       00 39 09.2 +0.1
SRIT                                  IAmb    IAmb    00 39 10.4
              comp=Z,21nm,0.9s
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TJN   Taejon             86.74 322d iP    P       00 39 15.7 +1.6
TJN   Taejon             86.74 322    P       P       00 39 14.6 +0.5
TJN   Taejon             86.74 322    P       P       00 39 15.7 +1.6
KSRS  Korea Array        87.32 323    P       P       00 39 18.1 +1.2
              comp=Z,24nm,0.9s,baz=142,slow=5.6,SNR=63
KSRS                                  LR      LR      01 14 07.4
              comp=Z,8.8nm,21.4s,baz=325,slow=33
              comp=Z,24nm,0.9s
KS19  Wonju Array Si     87.39 323    P       P       00 39 17.7 +0.5
INCN  Inchon             87.97 322    P       P       00 39 21.9 +1.9
              comp=Z,66nm,1.1s
NJ2   Nanjing            88.03 314⇓iP     P       00 39 21.7 +1.3
NJ2                                   pmax    pmax
              comp=Z,55nm,0.7s
YSS   Yuzh-Sakhalins     89.45 337   eP       P       00 39 27.4 +0.8
YSS                                   pmax    pmax
              comp=Z,50nm,0.9s
YSS   Yuzh-Sakhalins     89.45 337    P       P       00 39 26.8 +0.2
WHN   Wuhan              89.63 310  ⇓P       P       00 39 28.9 +1.0
MSHR  Mys Shultsa        89.98 328⇑eP     P       00 39 30.8 +1.6
MSHR                                  pmax    pmax
              comp=Z,16nm,0.8s
USRK  Ussuriysk Ar.      90.96 329    P       P       00 39 34.5 +0.7
              comp=Z,10nm,0.8s,baz=124,slow=2.7,SNR=11
              comp=Z,10nm,0.8s
PEA0B Petropavlovsk-     91.66 348⇓eP     P       00 39 36.4  -0.4
PETK  Petropavlovsk-     91.66 348    P       P       00 39 36.2  -0.6
              comp=Z,3.9nm,0.6s,baz=129,slow=6.0,SNR=16
PETK                                  LR      LR      01 15 16.4
              comp=Z,13nm,19.2s,baz=97,slow=32
              comp=Z,3.9nm,0.6s
GYA   Guiyang            91.83 302  ⇓P       P       00 39 38.8 +0.4
GYA                                   pmax    pmax
              comp=Z,15nm,1.0s
TIA   Tai'an             92.03 315   eP       P       00 39 39.7 +0.7
TIA                                   pmax    pmax
              comp=Z,15nm,1.3s
CM31  Chiang Mai Arr     92.22 291    P       P       00 39 40.6 +0.3
CM31                                  IAmb    IAmb    00 39 42.2
              comp=Z,13nm,0.6s
CMAR  Chiang Mai Arr     92.22 291    P       P       00 39 40.8 +0.5
              comp=Z,9.0nm,0.6s,baz=150,slow=3.4,SNR=38
CMAR                                  PP      PP      00 43 21.5  -1.6
              comp=Z,0.7nm,0.3s,baz=130,slow=5.4,SNR=7.9
              comp=Z,9.0nm,0.6s
CMAR  Chiang Mai Arr     92.22 291ceP     P       00 39 41.2 +0.9
CMAR                                  pmax    pmax
              comp=Z,10.0nm,0.6s
CHTO  Chiang Mai         92.44 292    P       P       00 39 41.4 +0.1
CHTO                                  pmax    pmax
              comp=Z,7.0nm,0.7s
CHTO  Chiang Mai         92.44 292    P       P       00 39 41.4 +0.1
CHTO                                  IAmb    IAmb    00 39 42.9
              comp=Z,7.0nm,0.7s
CHTO  Chiang Mai         92.44 292    P       P       00 39 42.9 +1.6
PB04  IPOC Station P     93.08 121    P       P       00 39 42.3  -2.2
PB04                                  IAmb    IAmb    00 39 44.0
              comp=Z,6.4nm,0.6s
MONP2 Monument Peak      93.15  50    P       P       00 39 46.6 +2.2
              baz=227
IKP   In-Ko-Pah, Jac     93.17  51    P       P       00 39 47.0 +2.5
              baz=227
YUH   Yuha Desert        93.29  51    P       P       00 39 44.2  -0.6
YUH                                   IAmb    IAmb    00 39 48.0
              comp=Z,5.2nm,0.8s
BFSC  Mount Baldy Ra     93.32  49    P       P       00 39 47.2 +2.1
              baz=226
CN2   Changchun          93.47 325   eP       P       00 39 45.4   0.0
CN2                                   pmax    pmax
              comp=Z,10.0nm,1.0s
LYN   LuoYang            93.56 311  ⇓P       P       00 39 47.3 +1.3
EDW2  Edwards Air Fo     93.56  48    P       P       00 39 48.0 +1.9
              baz=226
TPFO  Pinon Flats        93.61  50    P       P       00 39 48.5 +2.0
              baz=227
LVC   Limon Verde        93.73 122    LR      LR      01 13 40.1
              comp=Z,56nm,19.6s,baz=200,slow=30
ISA   Isabella, Lake     93.82  47    P       P       00 39 49.5 +2.2
              baz=226
BELC  Belle Mtn. Jos     94.16  50    P       P       00 39 51.5 +2.5
              baz=227
HNS   HongShan           94.23 315  ⇓P       P       00 39 50.0 +0.9
HNS                                   pmax    pmax
              comp=Z,8.0nm,1.0s
BC3   Big Chuckawall     94.26  50    P       P       00 39 52.0 +2.5
              baz=227
GSC   Goldstone, Bar     94.56  48    P       P       00 39 51.0 +0.2
GSC                                   pmax    pmax
              comp=Z,4.0nm,0.9s
GSC   Goldstone, Bar     94.56  48    P       P       00 39 51.0 +0.2
O02D  Mt. Diablo Mer     94.61  42    P       P       00 39 50.4  -0.4
O02D                                  IAmb    IAmb    00 39 53.9
              comp=Z,5.9nm,1.0s
IRM   Iron Mountain      94.79  50    P       P       00 39 54.3 +2.5
              baz=228
NNA   Nana               94.99 109    LR      LR      01 15 20.0
              comp=Z,36nm,18.8s,baz=284,slow=31
NNA   Nana               94.99 109deP     P       00 39 46.4  -6.9
NNA                                   pmax    pmax
              comp=Z,45nm,1.4s
KLR   Kul'dur            95.19 332    P       P       00 39 53.8 +0.7
              comp=Z,1.3nm,0.7s,baz=209,slow=8.6,SNR=4.8
KLR                                   LR      LR      01 18 55.8
              comp=Z,17nm,19.2s,baz=94,slow=33
              comp=Z,1.3nm,0.7s
KLR   Kul'dur            95.19 332⇓eP     P       00 39 53.3 +0.2
KLR                                   pmax    pmax
              comp=Z,8.0nm,2.5s
PZH   PanZhiHua          95.23 299    P       P       00 39 55.4 +1.3
PZH                                   pmax    pmax
              comp=Z,7.0nm,0.8s
PZH                                   pmax    pmax
              comp=Z,90nm,5.3s
NVAR  Mina Array Bea     95.83  45    P       P       00 39 56.0  -0.7
              comp=Z,0.9nm,0.9s,baz=214,slow=5.7,SNR=6.3
NVAR                                  PKKPbc  PKKPdf  00 56 46.0  -0.6
              comp=Z,0.3nm,0.5s,baz=56,slow=4.4,SNR=4.3
              comp=Z,0.9nm,0.9s
Y14A  Wickenburg         95.97  52    P       P       00 39 59.0 +1.8
Y14A                                  IAmb    IAmb    00 39 60.0
              comp=Z,3.0nm,0.8s
U15A  North Rim          98.04  50    P       Pdif    00 40 07.2 +0.4
CPUP  Villa Florida      98.44 132    LR      LR      01 17 48.3
              comp=Z,29nm,19.9s,baz=182,slow=31
PALK  Pallekele          99.70 272    LR      LR      01 28 24.5
              comp=Z,24nm,18.0s,baz=233,slow=37
LZH   Lanzhou            99.86 308   eP       Pdif    00 40 19.6 +4.9
LZH                                   sP      sP      00 41 10.5 +1.0
LZH                                   pmax    pmax
              comp=Z,18nm,1.4s
PDAR  Pinedale Array    103.69  46    PKKPbc  PKKPbc  00 56 22.2  -1.0
              comp=Z,0.8nm,0.8s,baz=89,slow=4.6,SNR=8.5
ILAR  Eielson Array     105.52  15    Pdiff   Pdif    00 40 40.1 +1.2
              comp=Z,0.4nm,0.9s,baz=192,slow=8.0,SNR=2.5
ILAR                                  PKiKP   PKiKP   00 44 50.6  -0.8
              comp=Z,0.4nm,0.6s,baz=292,slow=3.6,SNR=4.7
ILAR                                  PKKPbc  PKKPbc  00 56 14.8  -3.3
              comp=Z,0.6nm,0.6s,baz=355,slow=2.8,SNR=8.1
SONM  Songino Array     105.74 319    Pdiff   Pdif    00 40 40.8 +0.3
              comp=Z,0.8nm,0.8s,baz=124,slow=3.4,SNR=4.0
SONM                                  PKKPbc  PKKPbc  00 56 17.0  -0.1
              comp=Z,1.0nm,0.7s,baz=273,slow=2.8,SNR=5.9
BOSA  Boshof            109.42 206    PKiKP   PKiKP   00 45 00.2 +0.1
              comp=Z,1.2nm,0.5s,baz=169,slow=3.7,SNR=7.4
INK   Inuvik            111.46  18    PKiKP   PKiKP   00 45 01.5  -0.9
              comp=Z,0.6nm,0.5s,baz=164,slow=3.9,SNR=6.7
KNGR  Kungurtug, Tuv    112.09 317⇑iPKIKP PKiKP   00 45 03.0  -1.3
BDFB  Brasilia          112.17 132    PKiKP   PKiKP   00 45 05.7 +0.1
              comp=Z,2.3nm,0.6s,baz=318,slow=21,SNR=3.6
LBTB  Lobatse           112.58 208    PKiKP   PKiKP   00 45 05.7  -0.5
              comp=Z,1.9nm,0.6s,baz=180,slow=2.5,SNR=5.3
YKA   Yellowknife Ar    113.30  28    PKiKP   PKiKP   00 45 05.2  -0.9
              comp=Z,0.7nm,0.5s,baz=242,slow=1.6,SNR=22
YKA                                   PP      PP      00 45 57.8  -1.8
              comp=Z,1.0nm,1.1s,baz=239,slow=7.2,SNR=6.2
YKA                                   PKKPbc  PKKPbc  00 55 49.4  -3.5
              comp=Z,0.7nm,0.6s,baz=48,slow=3.6,SNR=14
WMQ   Urumqi            114.43 307   ePKP     PKiKP   00 45 09.8 +0.8
MATP  Matopo            115.54 212    PKP     PKiKP   00 45 11.4  -0.6
              comp=Z,3.5nm,0.6s,baz=214,slow=1.8,SNR=12
JFWS  Jewell Farm       115.67  55    P       PKPdf   00 45 10.8  -0.5
              baz=242
ULM   Lac du Bonnet     115.67  45⇓iPKIKP PKPdf   00 45 09.4  -1.6
EYMN  Ely               117.18  49    P       PKPdf   00 45 13.5  -0.5
              baz=244
V53A  Saluda            117.41  65            PKPdf   00 45 14.4  -0.5
O48B  Farmland          117.86  59    P       PKPdf   00 45 15.4  -0.2
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=243						
MK31	Makanchi Array	119.17	308	d iPKIKP	PKPdf	00 45 15.8	-2.1
MKAR	Makanchi Array	119.17	308	PKP	PKPdf	00 45 16.2	-1.7
	comp=Z,1.7nm,0.6s,baz=207,slow=1.3,SNR=16						
MKAR				PKKPbc	PKKPab	00 55 33.3	+1.2
	comp=Z,1.0nm,0.6s,baz=291,slow=3.6,SNR=7.4						
ACSO	Alum Creek Sta	119.34	60	P	PKiKP	00 45 18.4	-0.1
	baz=244						
MAKZ	Makanchi	119.38	308	PKIKP	PKPdf	00 45 16.3	-2.0
MAKZ	Makanchi	119.38	308	PKPdf	PKPdf	00 45 16.3	-2.0
LSZ	Lusaka	120.22	215	PKP	PKiKP	00 45 21.2	0.0
	comp=Z,4.3nm,0.7s,baz=75,slow=3.7,SNR=9.4						
FCC	Fort Churchill	120.27	37	PKIKP	PKPdf	00 45 18.3	-1.2
FCC	Fort Churchill	120.27	37	PKPdf	PKPdf	00 45 18.3	-1.2
KSH	Kashi	120.32	299	PKP	PKPdf	00 45 20.1	-0.4
KSH				PP	PP	00 46 53.3	+4.0
ZALV	Zalesovo Beam	120.54	317	PKP	PKPdf	00 45 17.9	-2.3
	comp=Z,1.2nm,0.6s,baz=158,slow=2.0,SNR=7.6						
O53A	New Philadelph	120.57	61	P	PKPdf	00 45 20.7	-0.1
	baz=245						
TSUM	Tsumeb	120.67	202	PKP	PKiKP	00 45 22.2	+0.1
	comp=Z,2.3nm,0.5s,baz=170,slow=5.1,SNR=8.1						
AAK	Ala-Archa	122.61	301	PKP	PKPdf	00 45 23.8	-1.1
	comp=Z,2.1nm,0.5s,baz=214,slow=3.3,SNR=6.1						
AAK	Ala-Archa	122.61	301	⇑iPKIKP	PKPdf	00 45 23.2	-1.7
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	122.91	312	c iPKIKP	PKPdf	00 45 22.5	-2.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	122.91	312	PKPdf	PKPdf	00 45 23.2	-1.7
KURBB	Kurchatov Arra	122.94	311	PKP	PKPdf	00 45 23.2	-1.8
	comp=Z,5.3nm,0.6s,baz=114,slow=1.8,SNR=21						
KURBB				PP	PP	00 47 04.9	-1.7
	comp=Z,1.2nm,0.2s,baz=100,slow=7.0,SNR=6.1						
KURBB				PKKPbc	PKKPbc	00 55 19.6	+1.9
	comp=Z,1.0nm,0.6s,baz=290,slow=4.4,SNR=11						
SSPA	Standing Stone	123.05	61	P	PKPdf	00 45 25.2	-0.4
	baz=247						
KBL	Kabul	123.24	291	PKIKP	PKPdf	00 45 25.5	-0.9
KBL	Kabul	123.24	291	PKPdf	PKPdf	00 45 25.5	-0.9
SOCY	Socotra	123.79	259	PKPdf	PKPdf	00 45 27.0	-0.8
NRIK	Noril'sk	124.30	335	PKP	PKPdf	00 45 25.9	-1.1
	comp=Z,3.7nm,0.6s,baz=64,slow=2.6,SNR=8.9						
NRIK	Noril'sk	124.30	335	⇑iPKIKP	PKPdf	00 45 25.0	-2.0
RES	Resolute Bay	124.97	19	PKIKP	PKPdf	00 45 27.4	-0.8
RES	Resolute Bay	124.97	19	PKPdf	PKPdf	00 45 27.4	-0.8
VLDQ	Val d'Or	125.97	53	PKPdf	PKPdf	00 45 29.9	-0.9
WSAR	Wadi Sarin	126.16	273	PKP	PKPdf	00 45 31.7	-0.4
	comp=Z,4.6nm,0.7s,baz=135,slow=2.9,SNR=2.3						
LONY	Lake Ozonia	126.75	58	P	PKPdf	00 45 32.5	0.0
	baz=251						
NCB	Newcomb	126.78	59	PKPdf	PKiKP	00 45 32.8	-0.3
KMBO	Kilima Mbogo	126.91	233	PKP	PKiKP	00 45 34.4	-0.2
	comp=Z,1.6nm,0.3s,baz=91,slow=0.7,SNR=8.5						
RCBR	Riachuelo	127.02	137	PKP	PKiKP	00 45 35.2	+0.6
	comp=Z,12nm,0.9s,baz=78,slow=1.4,SNR=5.7						
L61B	Northampton	127.35	61	P	PKiKP	00 45 34.1	-0.2
	baz=250						
QUA2	Belchertown	127.52	61		PKiKP	00 45 34.2	-0.4
EUNU	Eureka	127.53	13		PKPdf	00 45 32.5	-0.7
BRVK	Borovoye	128.53	312	⇓iPKIKP	PKPdf	00 45 34.5	-1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H62A	Milan	129.06	59		PKiKP	00 45 37.6	-0.1
GEYT	Alibeck	132.69	290	PKP	PKPdf	00 45 43.9	-0.1
	comp=Z,4.8nm,0.7s,baz=202,slow=3.1,SNR=7.8						
SCHQ	Schefferville	133.83	46	PKP	PKPdf	00 45 46.1	+0.5
	comp=Z,4.9nm,1.1s,baz=230,slow=5.8,SNR=5.0						
SCHQ				SKPbc	SKPbc	00 48 58.2	-1.8
	comp=Z,5.0nm,0.9s,baz=288,slow=3.6,SNR=6.5						
AKTO	Aktyubinsk	135.59	307	PKP	PKPdf	00 45 49.3	+0.3
	comp=Z,3.8nm,0.6s,baz=94,slow=3.9,SNR=13						
ARU	Arti	135.69	316	PKP	PKPdf	00 45 49.2	+0.2
	comp=Z,1.9nm,0.5s,baz=13,slow=1.4,SNR=9.0						
ARU				SKPbc	SKPbc	00 49 04.1	-1.8
	comp=Z,0.6nm,0.3s,baz=5.9,slow=6.2,SNR=3.2						
ARU	Arti	135.69	316	i PKIKP	PKPdf	00 45 49.0	0.0
ARU						00 48 26.8	
ARU	Arti	135.69	316	PKPdf	PKPdf	00 45 48.9	-0.2
KIRV	Kirov	140.46	320	ePKHKP	PKPpre	00 45 52.1	
PRGR	Permogore	141.63	325	ePKHKP	PKPpre	00 45 52.3	
BELG	Belogornoye	142.15	310	PKhKP	PKPpre	00 45 54.9	
	comp=Z,32nm,0.6s,baz=235,slow=0.5,SNR=14						
BELG	Belogornoye	142.15	310	d iPKHKP	PKPpre	00 45 54.5	
GROC	Groznyy	143.03	295	ePKHKP	PKPpre	00 45 57.4	
GROC				e		00 52 51.2	
GROC				pmax	pmax		
	comp=Z,39nm,1.1s						
GNI	Garni	143.31	289	PKhKP	PKPpre	00 45 59.7	
	comp=Z,3.6nm,0.6s,baz=334,slow=6.4,SNR=7.4						
GNI	Garni	143.31	289	PKIKP	PKPdf	00 46 05.1	+1.4
GNI	Garni	143.31	289		PKPpre	00 46 00.5	
GNI				PKPdf	PKPdf	00 46 05.1	+1.4
HAMF	Hammerfest	143.84	346	ePKPdf	PKPab	00 46 00.6	-0.3
NRS	Narsarsuaq	144.22	34	PKIKP	PKPab	00 46 02.2	-0.3
NRS	Narsarsuaq	144.22	34		PKPab	00 46 02.2	-0.3
ARA0	ARCESS Array S	144.32	344	ePKPbc	PKPab	00 46 02.7	0.0
ARCES	ARCESS Array B	144.32	344	PKP	PKPab	00 46 02.2	-0.6
	comp=Z,33nm,0.6s,baz=41,slow=3.0,SNR=462						
ZEI	Tsey	144.36	294	i PKIKP	PKPab	00 46 02.5	-1.5
ZEI				pmax	pmax		
	comp=Z,30nm,0.6s						
AKH	Akhalkalaki	144.47	291	⇑P	PKPbc	00 46 04.5	-0.1
NCK	Nalchik	144.66	295	c iPKIKP	PKPab	00 46 04.2	-0.7
KLMR	Klimovskoe	144.67	325	ePKHKP	PKPpre	00 46 01.7	
KLMR				pmax	pmax		
	comp=Z,116nm,1.1s						
KLMR	Klimovskoe	144.67	325	ePKPdf	PKPab	00 46 01.7	-2.6
KLMR				AMP		00 46 03.6	
	comp=Z,116nm,1.1s						
KBZ	Khabaz	145.19	295	PKPbc	PKPdf	00 46 05.7	-0.8
	comp=Z,14nm,0.8s,baz=139,slow=2.1,SNR=44						
KBZ	Khabaz	145.19	295	c iPKP2	PKPdf	00 46 05.2	-1.3
SCO	Scoresbysund	145.20	11	i P	PKPdf	00 46 05.0	-0.7
KTK1	Kautokeino	145.24	344	ePKPbc	PKPdf	00 46 04.5	-1.4
NEY	Neytrino	145.27	294	c iPKIKP	PKPab	00 46 08.1	+0.7
KVAR	Kislovodsk Arr	145.35	296	PKPbc	PKPdf	00 46 06.5	-0.5
	comp=Z,5.8nm,1.0s,baz=153,slow=6.9,SNR=7.2						
KIV	Kislovodsk	145.36	296	⇑P	PKPdf	00 46 06.1	-0.9
KIV	Kislovodsk	145.36	296	ePKIKP	PKPdf	00 46 05.6	-1.4
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	145.36	296	PKPdf	PKPdf	00 46 05.7	-1.3
JETT	Jettan, Norway	145.37	346	ePKPdf	PKPdf	00 46 05.7	-0.5
TRO	Tromso	145.59	347	ePKPdf	PKPdf	00 46 05.7	-0.7
CHVG	Ch'k'valeri	145.68	293	⇓P	PKPab	00 46 08.4	-0.3
BATM	Batumi	145.83	291	⇓P	PKPdf	00 46 07.6	-0.1
VRH	Novokhopyorsk	145.90	308	ePKIKP	PKPdf	00 46 06.8	-0.7
VRH				pmax	pmax		
	comp=Z,80nm,0.6s						
KTUT	Trabzon	147.19	290	⇑P	PKPbc	00 46 11.9	-0.6
MOS	Moscow	147.36	317	ePKIKP	PKPdf	00 46 10.2	+0.4
MOS				pmax	pmax		
	comp=Z,68nm,1.0s						
VORR	Voronezh	147.40	310	ePKIKP	PKPdf	00 46 09.8	-0.2
VORR				pmax	pmax		
	comp=Z,70nm,2.0s						
LPSR	Galich'ya Gora	147.40	311	ePKIKP	PKPdf	00 46 11.2	+1.2
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD	Divnogorie	147.45	308	ePKIKP	PKPdf	00 46 10.8	+0.7
VORD				pmax	pmax		
	comp=Z,50nm,0.8s						
SOC	Sochi	147.48	295	ePKIKP	PKPdf	00 46 10.7	+0.3
SOC				i		00 46 14.9	
SOC				e		00 49 42.1	
SOC				ePPP	PPP	00 52 58.3	
SOC				pmax	pmax		
	comp=Z,24nm,0.7s						
SOC				pmax	pmax		
	comp=Z,17nm,0.8s						
VSR	Storozhevoye	147.50	309	ePKIKP	PKPdf	00 46 11.4	+1.2
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
STEI	Steigen	147.73	347	ePKPbc	PKPbc	00 46 12.1	-1.0
LOF	Lofoten	147.83	349	ePKPdf	PKPdf	00 46 11.3	+1.1
EIL	Elat	147.95	267	PKPbc	PKPbc	00 46 14.6	-0.3
	comp=Z,32nm,0.7s,baz=154,slow=3.7,SNR=12						
OBN	Obninsk	148.12	317	⇑P	PKPbc	00 46 13.1	-1.4
OBN	Obninsk	148.12	317	c iPKIKP	PKPbc	00 46 13.1	-1.4
OBN				e		00 46 55.9	
OBN				e		00 49 43.4	
OBN				pmax	pmax		
	comp=Z,46nm,0.9s						
OBN	Obninsk	148.12	317		PKPdf	00 46 12.5	+1.4
VALR	Valaam	148.13	330	d iPKIKP	PKPdf	00 46 11.8	+0.9
FAUS	Fauske	148.21	347	ePKPdf	PKPbc	00 46 13.1	-1.3
LIC	Lamto	148.99	175	ePKIKP	PKPdf	00 46 14.1	+0.3
	comp=Z,75nm,0.8s						
KIC	Kosan Boka	149.14	176	ePKIKP	PKPdf	00 46 14.0	-0.1
	comp=Z,54nm,0.7s						
ANN	Anapa	149.16	297	ePKHKP	PKPpre	00 46 16.0	
ANN				pmax	pmax		
	comp=Z,43nm,0.9s						
PUL	Pulkovo	149.23	328	⇓iPKP2	PKPbc	00 46 16.6	-0.6
KONS	Konsvik	149.39	348	ePKPbc	PKPbc	00 46 16.7	-0.7
TIC	Toumodi	149.40	175	ePKIKP	PKPdf	00 46 14.4	-0.1
DBIC	Dimbokro	149.44	176	PKP	PKPdf	00 46 15.0	+0.5
	comp=Z,45nm,0.8s,baz=178,slow=2.9,SNR=9.9						
DBIC				PKPbc	PKPbc	00 46 19.4	+0.3
	comp=Z,46nm,0.9s,baz=173,slow=2.3,SNR=25						
MOR8	Moi Rana	149.45	346	ePKPdf	PKPdf	00 46 15.2	+2.2
STOK	Stokkvaagen	149.56	348	ePKPbc	PKPbc	00 46 17.4	-0.4
FINES	FINESS Array B	149.93	333	PKPbc	PKPbc	00 46 17.5	-1.3
	comp=Z,13nm,0.4s,baz=38,slow=4.4,SNR=141						
FINES				PKPab	PKPab	00 46 24.1	-1.0
	comp=Z,34nm,0.7s,baz=54,slow=4.0,SNR=23						
DIKM	Dikmen	150.63	290	⇓P	PKPbc	00 46 19.9	-1.3
CSS	Mathiatis	151.01	276		PKPbc	00 46 21.6	-0.7
MEF	Metsahovi	151.36	332	eP	PKPbc	00 46 21.1	-1.1
NSS	Namsos	151.38	347	ePKPbc	PKPbc	00 46 20.8	-1.4
SIM	Simferopol'	151.51	297	ePKIKP	PKPbc	00 46 21.5	-1.6
SIM				pmax	pmax		
	comp=Z,25nm,0.8s						
BR131	Keskin Array S	151.68	286	c iPKIKP	PKPbc	00 46 22.3	-1.6
BRTR	Keskin Array B	151.68	286	PKPbc	PKPbc	00 46 22.6	-1.2
	comp=Z,22nm,0.8s,baz=139,slow=4.3,SNR=123						
BRTR	Keskin Array B	151.68	286	c iPKIKP	PKPbc	00 46 22.5	-1.4
BRTR				pmax	pmax		
	comp=Z,23nm,0.8s						
RAF	Rauma	151.74	335	eP	PKPbc	00 46 21.5	-1.5
ANTO	Ankara	152.34	286	PKIKP	PKPbc	00 46 24.6	-0.7
ANTO	Ankara	152.34	286		PKPbc	00 46 24.6	-0.7
AAL	Aland	152.96	335	eP	PKPbc	00 46 24.1	-1.7
MNK	Minsk	153.01	319	ePKIKP	PKPab	00 46 37.0	-1.2
IDID	Didziasalis	153.20	322	eP	PKPbc	00 46 26.1	-0.4
AKASG	Malin Array Be	153.72	311	PKPbc	PKPbc	00 46 26.3	-1.5
	comp=Z,3.3nm,0.6s,baz=66,slow=3.1,SNR=19						
AKASG				PKPab	PKPab	00 46 40.5	-0.9
	comp=Z,15nm,0.8s,baz=52,slow=5.0,SNR=34						
AKASG	Malin Array Be	153.72	311	PKP2	PKPab	00 46 40.9	-0.4
AKASG	Malin Array Be	153.72	311	PKPab	PKPab	00 46 40.9	-0.4
AKBB	Malin Array Si	153.72	311	d iPKIKP	PKPbc	00 46 24.6	-3.2
ISP	Isparta	153.83	281	PKP2	PKPab	00 46 41.1	-1.3
ISP	Isparta	153.83	281	PKPab	PKPab	00 46 41.0	-1.3
SLIT	Slitere, Latvi	153.88	329	eP	PKPab	00 46 39.5	-2.2
UPP	Uppsala	153.98	337	eP	PKPab	00 46 40.9	-1.2
ELL	Elmali	154.12	279	PKIKP	PKPbc	00 46 28.7	-0.6
ELL	Elmali	154.12	279		PKPbc	00 46 28.7	-0.6
DOMB	Dombas	154.20	347	ePKPbc	PKiKP	00 46 29.2	+0.7
AKN	Aaknes	154.40	350	ePKPdf	PKPdf	00 46 21.1	+0.6
PABE	Paberze	154.44	324	PKPab	PKPab	00 46 42.9	-1.3
PABE	Paberze	154.44	324	eP	PKPab	00 46 43.4	-0.7
NB2	NORSAR Subarra	154.69	344	PKP	PKPbc	00 46 28.5	-1.1
	comp=Z,4.4nm,0.9s,baz=24,slow=3.5						
NOA	NORSAR Array B	154.69	344	PKPbc	PKPbc	00 46 28.7	-0.9
	comp=Z,2.6nm,1.0s,baz=31,slow=2.1,SNR=5.4						
NOA				PKPab	PKPab	00 46 43.9	-1.3
	comp=Z,3.3nm,0.9s,baz=27,slow=3.4,SNR=7.6						
NC602	NORSAR Array S	154.90	344	ePKPbc	PKPbc	00 46 29.7	-0.3
PBUR	Paburge	155.06	326	eP	PKPab	00 46 45.9	-0.9
FOO	Floro	155.21	351	ePKPdf	PKPdf	00 46 21.4	-0.1
VIKU	Vikbolandet	155.34	335	eP	PKPab	00 46 46.3	-1.6
SKAR	Skarslia	155.60	347	ePKPdf	PKPdf	00 46 21.6	-0.7
TIRR	Tirgusor	155.60	297	PKP2	PKPab	00 46 48.9	-0.7
TIRR	Tirgusor	155.60	297		PKPab	00 46 48.9	-0.7
TORD	Torodi Ar. Bea	155.65	190	PKP	PKPdf	00 46 23.6	0.0
	comp=Z,8.2nm,0.9s,baz=285,slow=0.8,SNR=13						
TORD				PKPbc	PKPbc	00 46 33.2	
	comp=Z,6.4nm,0.5s,baz=156,slow=3.1,SNR=9.1						
TORD				PKPab	PKPab	00 46 51.1	+0.8
	comp=Z,16nm,0.7s,baz=181,slow=2.5,SNR=16						
VLDR	Vladesti	155.65	300	⇑P	PKPab	00 46 50.3	+0.5
CFR	Carcaliu	155.71	299	⇑P	PKPab	00 46 50.1	+0.1
SCTR	Scanteiesti	155.73	300	⇑P	PKPab	00 46 50.7	+0.6
VARL	Varlezi	155.80	300	⇑P	PKPab	00 46 51.0	+0.7
ASK	Askoy	156.28	350	ePKPab	PKPab	00 46 53.1	+1.2
ODBI	Odobesti	156.37	300	⇑P	PKPab	00 46 54.5	+1.6
VRI	Vrincioaia	156.57	301	⇑P	PKPab	00 46 54.2	+0.4
PLOR	Plostina	156.63	301	⇓P	PKPab	00 46 54.6	+0.5
NEHR	Nehoiu	156.95	300	⇑P	PKPab	00 46 56.1	+0.7
LVV	L'vov	157.15	312	ePKP2	PKPab	00 46 54.3	-1.8
BURAR	Bucovina Array	157.16	306	⇓P	PKPab	00 46 56.6	+0.2
BURAR	Bucovina Array	157.16	306		PKPab	00 46 57.0	+0.6
MLR	Muntele Rosu	157.18	300	⇑P	PKPab	00 46 56.9	+0.3
BORU	Boraas	157.27	338	eP	PKPab	00 46 54.4	-1.9
IDI	Anoyia	157.80	273	PKPab	PKPab	00 46 59.7	+0.3
	comp=Z,7.5nm,0.5s,baz=103,slow=8.1,SNR=4.2						
VOIR		157.81	300	⇑P	PKPab	00 46 58.7	-0.5
DEL	Delary	157.88	335	eP	PKPab	00 46 57.4	-1.6
DEL	Delary	157.88	335	i P	PKPab	00 46 57.5	-1.4
BMR	Baia Mare	158.25	307	⇓P	PKPab	00 47 01.6	+0.6
CJR	Cluj-Napoca	158.48	304	⇑P	PKPab	00 47 03.0	+1.0
KOLS	Kolonicke sedl	158.56	311	ePKP2	PKPab	00 47 03.4	+1.2
BSD	Bornholm Skovb	158.57	332	eP	PKPab	00 47 00.9	-1.0
BSD	Bornholm Skovb	158.57	332	i P	PKPab	00 47 00.9	-1.0
UZH	Uzhgorod	158.67	310	⇓iPKP2	PKPab	00 47 02.2	-0.5
LOT	Lotru	158.69	301	⇓P	PKPab	00 47 03.4	+0.4
LUNU	Lund	158.69	334	i P	PKPab	00 47 01.0	-1.5
DRGR		159.04	305	⇑P	PKPab	00 47 04.6	+0.1
CRVS	Cervenica-Dubn	159.06	311	ePKP2	PKPab	00 47 05.3	+0.9
DJES	Djerdap	159.73	299	⇓P	PKPab	00 47 07.9	+0.5
KECS	Kecovo	159.82	311	ePKP2	PKPab	00 47 10.2	+2.5
BZS	Buzias	160.11	302	⇑P	PKPab	00 47 09.0	-0.1
LANS	Liptovska Anna	160.12	314	ePKP2	PKPab	00 47 10.2	+1.1
PSZ	Piszkesteto	160.42	310	⇑P	PKPab	00 47 10.9	+0.5
OKC	Ostrava-Krasne	160.52	317	ePKP2	PKPab	00 47 11.1	+0.4
OKC	Ostrava-Krasne	160.52	317	ePKPAB	PKPab	00 47 11.1	+0.4
VYHS	Vyhne	160.80	312	ePKP2	PKPab	00 47 12.7	+0.7
MORC	Moravsky Berou	160.88	317	⇓P	PKPab	00 47 12.8	+0.4
KRLC	Kraliky	161.12	319	ePKP2	PKPab	00 47 13.7	+0.3
KRLC	Kraliky	161.12	319	ePKPAB	PKPab	00 47 13.7	+0.3
OSTC	Ostas	161.13	321	ePKPAB	PKPab	00 47 13.8	+0.4
CHVC	Chvalec	161.19	321	ePKPAB	PKPab	00 47 14.1	+0.4
DPC	Dobruska-Polom	161.20	320	ePKP2	PKPab	00 47 14.2	+0.5
DPC	Dobruska-Polom	161.20	320	ePKPAB	PKPab	00 47 14.2	+0.5
UPC	Upice	161.26	321	ePKPAB	PKPab	00 47 14.3	+0.4
SRO	Srobarova	161.43	311	ePKP2	PKPab	00 47 15.8	+1.1
SMOL	Smolenice	161.61	314	ePKP2	PKPab	00 47 16.7	+1.2
VRAC	Vranov	161.66	317	⇓P	PKPab	00 47 15.8	+0.1
MODS	Modra-Piesok	161.77	314	ePKP2	PKPab	00 47 17.3	+1.0
ZST	Bratislava	161.96	313	ePKP2	PKPab	00 47 18.3	+1.2
PVCC	Panska Ves	161.97	323	ePKP2	PKPab	00 47 17.3	+0.3
PVCC	Panska Ves	161.97	323	ePKPAB	PKPab	00 47 17.3	+0.3
BRG	Berggiesshubel	162.03	324	i PKP2	PKPab	00 47 17.0	-0.3
BRG				pmax	pmax		
	comp=Z,19nm,0.8s						
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	162.16	327	⇓iPKP2	PKPab	00 47 17.0	-0.8
CLL				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	Collm	162.16	327	⇓iPKPab	PKPab	00 47 17.0	-0.8
	comp=Z,18nm,0.8s						
TREC	Trest	162.26	318	ePKP2	PKPab	00 47 18.7	+0.3
TREC	Trest	162.26	318	ePKPAB	PKPab	00 47 18.7	+0.3
PRU	Pruhonice	162.32	321	ePKP2	PKPab	00 47 18.7	+0.1
PRU	Pruhonice	162.32	321	ePKPAB	PKPab	00 47 18.7	+0.1
RONA	Rosalia, Austr	162.68	313	eP	PKPab	00 47 20.7	+0.4
	comp=Z,9.3nm,1.2s						
CONA	Conrad Observa	162.81	314	i P	PKPab	00 47 21.7	+0.8
	comp=Z,32nm,0.8s,SNR=19						
NKC	Novy Kostel	163.16	325	ePKP2	PKPab	00 47 22.3	0.0
NKC	Novy Kostel	163.16	325	ePKPAB	PKPab	00 47 22.3	0.0
CKRC	Cesky Krumlov	163.17	318	ePKPAB	PKPab	00 47 22.7	+0.3
ARSA	Arzberg	163.35	312	i P	PKPab	00 47 23.8	+0.5
	comp=Z,13nm,0.8s,SNR=6.0						
KHC	Kasperske Hory	163.35	320	ePKP2	PKPab	00 47 23.2	0.0
KHC	Kasperske Hory	163.35	320	ePKPAB	PKPab	00 47 23.2	0.0
KHC				x	x	00 47 51.5	
GERES	GERESS Array B	163.47	319	PKPab	PKPab	00 47 23.2	-0.6
	comp=Z,4.4nm,0.7s,baz=57,slow=4.9,SNR=23						
MOA	Molln	163.76	316	i P	PKPab	00 47 25.4	+0.4
	comp=Z,10nm,0.8s,SNR=6.1						
PERS	Pernice	163.90	311	i PKPab	PKPab	00 47 25.9	+0.2
SOKA	Soboth	163.93	311	eP	PKPab	00 47 25.6	-0.3
	comp=Z,9.9nm,0.8s,SNR=5.1						
GRFO	Grafenberg	164.11	326	PKP2	PKPab	00 47 26.9	+0.5
GRFO	Grafenberg	164.11	326		PKPab	00 47 26.9	+0.5
BIOA	Bad Ischl, Aus	164.19	316	eP	PKPab	00 47 27.0	+0.1
	comp=Z,6.0nm,1.0s						
OBKA	Obir	164.31	311	eP	PKPab	00 47 27.5	-0.1
	comp=Z,13nm,0.8s						
LJU	Ljubljana	164.54	310	i PKPab	PKPab	00 47 28.7	+0.2
KBA	Koelnbreinsper	164.71	315	i P	PKPab	00 47 29.1	-0.3
	comp=Z,12nm,0.9s						
MYKA	Terra Mystica	164.78	313	eP	PKPab	00 47 29.3	-0.4
	comp=Z,7.9nm,0.6s						
ABTA	Abfaltersbach	165.37	315	eP	PKPab	00 47 31.5	-0.7
	comp=Z,16nm,1.1s						
WATA	Walderalm	165.53	318	eP	PKPab	00 47 33.9	+0.9
	comp=Z,2.7nm,0.7s						
WTTA	Wattenberg	165.54	318	i P	PKPab	00 47 33.4	+0.4
	comp=Z,6.7nm,1.2s						
MOTA	Moosalm	165.77	319	eP	PKPab	00 47 33.2	-0.8
	comp=Z,4.8nm,0.9s						
SQTA	Sankt Quirin	165.79	319	eP	PKPab	00 47 34.1	0.0
	comp=Z,5.2nm,0.8s						
RETA	Reutte	165.85	320	eP	PKPab	00 47 34.0	-0.3
	comp=Z,6.7nm,1.2s						
FETA	Feichten	166.17	319	eP	PKPab	00 47 35.4	-0.4
	comp=Z,5.2nm,1.2s						
BFO	Black Forest	166.39	328	PKP2	PKPab	00 47 35.7	-0.9
BFO	Black Forest	166.39	328		PKPab	00 47 35.7	-0.9
DAVA	Damuels	166.43	321	i P	PKPab	00 47 36.9	0.0
	comp=Z,10.0nm,0.9s,SNR=5.2						
SENIN	Lac Senin/Sane	168.34	324	PKPdf	PKPdf	00 46 34.1	-1.7
KEST	Kesra	170.28	264	PKPab	PKPab	00 47 54.7	+0.3
	comp=Z,7.4nm,0.8s,baz=215,slow=4.2,SNR=4.5						
ESDC	Sonseca Array	177.39	24	PKP	PKPdf	00 46 39.6	+0.1
	comp=Z,0.7nm,1.0s,baz=107,slow=1.5,SNR=4.4						
ESDC				PKPab	PKPab	00 48 24.9	-0.7
	comp=Z,1.4nm,1.1s,baz=329,slow=4.0,SNR=6.4						

IDC 02 01:11:25.4±46.0, 16°.05S×174°.60W, h0^{km}, mb4.5/3, mbtmp4.5/3, Error ellipse: s-maj=877.4km s-min=166.6km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.71	240	P	P	01 19 24.8	+0.3
	2.5nm,0.6s,baz=94,slow=9.7,SNR=6.2						
	2.5nm,0.6s						
WRA	Warramunga Arr	48.57	257	P	P	01 20 10.6	-0.4
	1.5nm,0.5s,baz=95,slow=7.1,SNR=60						
	1.5nm,0.5s						
ASAR	Alice Springs	48.81	252	P	P	01 20 12.6	-0.3
	13nm,0.6s,baz=87,slow=8.4,SNR=5.3						
	13nm,0.6s						

GII ***02*** *01:29:20.0±0.0, 35°.55N×27°.56E, h20^{km}*
DDA ***02*** *01:29:24.9±0.0, 35°.58N×27°.43E, h8^{km}±2^{km}, MW3.4*
ISK ***02*** *01:29:29.6, 35°.51N×27°.53E, h25^{km}, ML3.3/19*
ATH ***02*** *01:29:30.2, 35°.62N×27°.36E, h42^{km}±2^{km}, ML3.2/4, Error ellipse: s-maj=4.0km s-min=1.3km az=142.0*
THE ***02*** *01:29:31.3, 35°.57N×27°.51E, h15^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=2.1km s-min=0.8km az=140.0*

ISC 02 01:29:30.2±1.1, 35°.53N±0°.04×27°.53E±0°.03, h29^{km}±8^{km}, n101, σ1^{s}.08/105, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.30	273	P	Pb	01 29 37.1	-0.5
KARP				S	Sb	01 29 43.2	+0.6
KARP				AML	AML	01 29 44.1	
	comp=N,14036µm,0.5s						
KARP				AML	AML	01 29 44.6	
	comp=E,13393µm,0.3s						
KARP	Karpathos	0.30	273	P	Pb	01 29 37.1	-0.5
KARP				S	Sb	01 29 43.0	+0.3
	comp=E,7µm,0.4s						
KARP	Karpathos	0.30	273	PG	Pb	01 29 36.9	-0.7
KARP				SG	Sb	01 29 42.7	0.0
ARG	Arkhangelos	0.84	35	P	Pb	01 29 46.8	+0.6
ARG				S	Sn	01 29 58.2	+0.9
ARG				AML	AML	01 30 01.6	
	comp=N,2716µm,0.3s						
ARG				AML	AML	01 30 01.6	
	comp=E,4819µm,0.4s						
ARG	Arkhangelos	0.84	35	P	Pb	01 29 46.6	+0.4
ARG				S	Sn	01 29 58.5	+1.2
	comp=E,2µm,0.3s						
ARG	Arkhangelos	0.84	35	PG	Pb	01 29 46.8	+0.6
ARG				SG	Sn	01 29 58.7	+1.4
NISR	Nisiros	1.12	343	P	Pn	01 29 49.7	-0.2
NISR				AML	AML	01 30 11.8	
	comp=E,1567µm,0.6s						
NISR				AML	AML	01 30 17.9	
	comp=N,1164µm,0.8s						
ZKR	Zakros	1.15	249	P	Pn	01 29 50.1	-0.2
ZKR				S	Sn	01 30 05.2	+0.1
ZKR				AML	AML	01 30 15.7	
	comp=N,935µm,0.7s						
ZKR				AML	AML	01 30 16.6	
	comp=E,2193µm,0.8s						
ZKR	Zakros	1.15	249	P	Pn	01 29 50.4	+0.1
ZKR				S	Sb	01 30 07.5	+1.4
	comp=E,782nm,0.7s						
ZKR	Zakros	1.15	249	PN	Pn	01 29 50.3	0.0
DAT	Datca	1.20	2	P	Pn	01 29 51.0	0.0
DAT				S	Sb	01 30 07.2	-0.1
DAT	Datca	1.20	2	PN	Pb	01 29 51.4	-0.9
DAT				SN	Sb	01 30 07.3	-0.1
KOSK	Kos Island	1.30	340	P	Pn	01 29 52.5	+0.2
KOSK	Kos Island	1.30	340	P	Pn	01 29 52.3	0.0
KOSK				S	Sb	01 30 16.0	+5.9
	comp=E,370nm,0.7s						
KOSK	Kos Island	1.30	340	PN	Pb	01 29 53.0	-0.9
TURN	Turunc	1.37	25	PN	Pb	01 29 54.3	-0.8
TURN	Turunc	1.37	25	P	Pn	01 29 53.2	-0.1
TURN				S	Sn	01 30 10.1	-0.3
BDRM	Kayabasi	1.53	357	P	Pn	01 29 52.8	-2.8
BDRM				S	Sn	01 30 13.2	-1.3
BDRM				i AML	AML	01 30 24.0	
	comp=E,131nm,0.4s						
BDRM				i AML	AML	01 30 34.0	
	comp=E,212nm,1.0s						
BODT	Bodrum	1.54	353	P	Pn	01 29 55.5	-0.2
BODT				S	Sn	01 30 14.8	+0.2
BODT	Bodrum	1.54	353	PN	Pn	01 29 56.2	+0.6
BODT	Bodrum	1.54	353	P	Pn	01 29 55.4	-0.2
BODT				S	Sn	01 30 12.7	-1.9
FRMA	Ierapetra Chan	1.56	251	P	Pn	01 29 55.4	-0.5
FRMA	Ierapetra Chan	1.56	251	P	Pn	01 29 55.4	-0.5
FRMA				S	Sb	01 30 17.1	-0.6
	comp=E,260nm,0.6s						
DALY	Dalyan (Mula)	1.57	35	PN	Pn	01 29 56.9	+0.8
FETY	Fethiye	1.67	48	PN	Pn	01 29 58.2	+0.7
YER	Yerkesik	1.71	21	P	Pn	01 29 59.0	+1.0
YER	Yerkesik	1.71	21	PN	Pn	01 29 59.1	+1.0
MLSB	Milas	1.77	6	PN	Pn	01 29 59.6	+0.7
MLSB	Milas	1.77	6	P	Pn	01 29 59.0	+0.1
AKAS	Kas	1.82	67	PN	Pn	01 29 59.7	0.0
AKAS	Kas	1.82	67	P	Pn	01 29 58.1	-1.6
MULA	Mugla, Merkez-	1.83	20	P	Pn	01 29 59.4	-0.4
MULA				S	Sb	01 30 26.5	+0.8
MULA				i AML	AML	01 30 34.0	
	comp=E,84nm,0.7s						
MULA				i AML	AML	01 30 36.0	
	comp=E,205nm,0.4s						
THR8	Santorini-Mono	1.88	298	P	Pn	01 30 00.5	+0.2
THR6	Thira Island,	1.92	296	P	Pn	01 30 01.7	+0.9
DDIM	Aydin, Didim	1.94	353	P	Pn	01 29 59.0	-2.1
THR3	Thira Island,	1.94	297	P	Pn	01 30 01.7	+0.6
SNT5	Nea Kammeni, S	1.94	297	P	Pn	01 30 01.4	+0.3
THR9	Santorini-Faro	1.95	296	P	Pn	01 30 01.9	+0.6
THR9	Santorini-Faro	1.95	296	P	Pn	01 30 02.0	+0.8
CMBO	Columbo, Santo	1.96	299	P	Pn	01 30 01.6	+0.2
CMBO	Columbo, Santo	1.96	299	P	Pn	01 30 01.6	+0.2
CMBO				S	Sn	01 30 25.9	+0.9
	comp=E,565nm,0.6s						
THR5	Thira Island,	1.98	297	P	Pn	01 30 02.5	+0.8
HRKL	Herakleio	2.00	264	P	Pn	01 30 03.1	+1.2
HRKL	Herakleio	2.00	264	PN	Pn	01 30 02.8	+0.9
CAME	Cameli-Denizli	2.01	45	PN	Pn	01 30 03.2	+1.0
KSTL	Kastelli Herak	2.02	264	P	Pn	01 30 01.0	-1.3
AYDN	Tasoluk	2.14	7	P	Pn	01 30 04.3	+0.3

AYDN				S	Sn	01 30 30.0	+0.4
AYDN				i AML	AML	01 30 45.0	
	comp=E,88nm,0.4s						
CAEL	Denizli, Camel	2.15	42	P	Pn	01 30 03.8	-0.3
IDI	Anoyia	2.17	264	P	Pn	01 30 05.3	+0.9
IDI	Anoyia	2.17	264	P	Pn	01 30 05.3	+0.9
IDI				S	Sb	01 30 34.0	-1.3
	comp=E,220nm,0.7s						
IDI	Anoyia	2.17	264	PN	Pn	01 30 05.2	+0.8
GCAM	G?zelcaml?	2.18	354	PN	Pn	01 30 04.9	+0.5
GCAM	G?zelcaml?	2.18	354	P	Pn	01 30 02.5	-1.9
APE	Apeiranthos	2.23	314	P	Pn	01 30 05.0	-0.1
APE	Apeiranthos	2.23	314	P	Pn	01 30 05.0	-0.1
APE	Apeiranthos	2.23	314	PN	Pn	01 30 05.2	+0.1
APE	Apeiranthos	2.23	314	Pn	Pn	01 30 04.7	-0.4
APE				Sn	Sn	01 30 30.8	-0.9
APE	Apeiranthos	2.23	314	P	Pn	01 30 04.3	-0.9
TAVA	DENIZLI_Tavas	2.23	30	P	Pn	01 30 04.3	-0.9
TAVA				S	Sb	01 30 34.9	-2.1
TAVA				i AML	AML	01 30 45.0	
	comp=E,160nm,0.8s						
SMG	Samos	2.24	346	P	Pn	01 30 06.3	+0.9
SMG	Samos	2.24	346	P	Pn	01 30 06.2	+0.9
ELL	Elmali	2.27	57	PN	Pn	01 30 06.8	+0.9
ELL	Elmali	2.27	57	P	Pn	01 30 06.1	+0.2
GOLH	Golhisar	2.36	43	P	Pn	01 30 06.1	-1.0
AKUM	Antalya-Kumluc	2.42	70	P	Pn	01 30 06.5	-1.1
AYDB	Zeytinkoy-Aydi	2.43	7	PN	Pn	01 30 09.2	+1.2
DGB	zmir	2.57	349	P	Pn	01 30 08.3	-1.5
KORT	Korkueli	2.71	56	P	Pn	01 30 12.3	+0.4
ZEYE	Izmir, Urla-Ze	2.82	343	P	Pn	01 30 12.3	-1.0
BLCB	Balcova	2.87	352	P	Pn	01 30 14.5	+0.5
IMMV	Iera Moni Meta	2.90	270	PN	Pn	01 30 15.5	+1.2
GVD	Gavdhos	2.90	257	PN	Pn	01 30 15.5	+1.1
URLA	Izmir	2.92	345	P	Pn	01 30 15.4	+0.7
BRDR	BURDUR-Merkez	2.97	43	P	Pn	01 30 14.9	-0.4
BUCA	Burdur, Bucak-	3.03	53	P	Pn	01 30 16.7	+0.5
KULA	Kula-Manisa	3.11	17	P	Pn	01 30 17.2	-0.2
BCK	Bucak	3.13	51	P	Pn	01 30 18.0	+0.5
PASA	Karahalli, USA	3.22	29	P	Pn	01 30 18.9	+0.1
ZEDA	zmir-Bergama	3.45	354	P	Pn	01 30 21.6	-0.3
GDZ	Gediz	3.88	23	P	Pn	01 30 26.5	-1.4
DURS	Dursunbey	4.13	10	P	Pn	01 30 30.5	-0.9
TVSB	Tavsanli	4.20	21	P	Pn	01 30 30.0	-2.3
BAYC	CANAKKALE_Bayr	4.27	350	P	Pn	01 30 33.6	+0.4
CSS	Mathiatis	4.78	95	Pn	Pn	01 30 31.4	-8.8
CSS				Sn	Sn	01 31 26.0	-8.6
MMA0B	Mount Meron ar	6.98	109	Pn	Pn	01 31 01.9	-8.6
MMA0B				Sn	Sn	01 32 20.2	-8.8
SLTI	Sal'it	7.05	116	Sn	Sn	01 32 21.3	-9.4
GEM	Giv'at Ha'Em	7.11	107	Pn	Pn	01 31 03.3	-8.9
GEM				Sn	Sn	01 32 23.4	-8.7
NATI	Neve Ativ	7.15	106	Pn	Pn	01 31 04.0	-8.7
NATI				Sn	Sn	01 32 24.9	-8.1
MMLI	Mount Malkishu	7.24	113	Sn	Sn	01 32 26.4	-9.0
AMAZ	Amatzia	7.34	121	Pn	Pn	01 31 06.8	-8.6
AMAZ				Sn	Sn	01 32 29.2	-8.6
KZIT	Kziot	7.37	127	Pn	Pn	01 31 07.7	-8.1
KZIT				Sn	Sn	01 32 29.7	-8.8
HMDT	Nahal Hemdat	7.41	114	Pn	Pn	01 31 07.9	-8.4
HMDT				Sn	Sn	01 32 30.6	-8.7
YTIR	Yattir	7.58	121	Pn	Pn	01 31 10.1	-8.6
YTIR				Sn	Sn	01 32 35.5	-8.2
DSI	Dead Sea	7.65	119	Pn	Pn	01 31 10.5	-9.1
DSI				Sn	Sn	01 32 36.7	-8.6
MDBI	Mazsada	7.78	121	Pn	Pn	01 31 12.1	-9.2
GHAJ	Ghor Haditha	7.93	120	Pn	Pn	01 31 15.0	-8.4
GHAJ				Sn	Sn	01 32 43.5	-8.7
KRMI	Paran Flat	8.11	130	Pn	Pn	01 31 17.9	-8.1
KRMI				Sn	Sn	01 32 47.3	-9.4
PRNI	Paran	8.13	127	Pn	Pn	01 31 17.5	-8.8
PRNI				Sn	Sn	01 32 48.2	-9.0
HRFI	Mount Harif	8.36	129	Sn	Sn	01 32 54.1	-8.8
MBRI	Mt Berech	8.45	131	Pn	Pn	01 31 21.8	-8.9
MBRI				Sn	Sn	01 32 56.4	-8.8
EIL	Elat	8.56	131	Sn	Sn	01 32 59.0	-8.8

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*GCG **02** 01:41:30.2±0.7, 13°.66N×91°.85W, h0^{km}±267^{km}, MD4.1*
*UCR **02** 01:41:38.1±1.0, 14°.09N×91°.36W, h9^{km}±6^{km}, ML3.7*
*SNET **02** 01:41:38.1±0.9, 14°.08N×91°.37W, h11^{km}±6^{km}, ML4.0*
ISC 02 01:41:36.5±2.2, **13°.98N**±0°.09×**91°.48W**±0°.08, **h11**^{km}±13^{km}, **n50, σ0^{s}.68**/64, **1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.58	338	⇓eP	Pg	01 41 48.8	+0.9
RTAL				eS	Sb	01 41 57.3	+0.4
STG3	Santiaguito 3,	0.73	353	eP	Pb	01 41 51.5	+0.1
FUG	Fuego 3	0.77	53	eP	Pn	01 41 54.3	+0.8
PCG	Pacaya	0.94	64	eP	Pn	01 41 57.0	+1.1
NBG	Las Nubes	1.25	61	eP	Pn	01 42 02.6	+2.4
HUEH	Huehuetenango	1.33	359	eP	Pn	01 42 00.5	-0.7
HUEH				eS	Sg	01 42 18.5	-0.9
HUEH	Huehuetenango	1.33	359	eP	Pn	01 42 00.5	-0.7
HUEH				eS	Sg	01 42 18.5	-0.9
SLOZ	Alcaldia de Sa	1.64	88	eP	Pn	01 42 05.4	+0.1
SLOZ				eS	Sn	01 42 25.9	-0.6
LOAL	Lomas de Alarc	1.65	89	eP	Pn	01 42 05.8	+0.4
LOAL				eS	Sb	01 42 27.1	-0.6
LOAL	Lomas de Alarc	1.65	89	eP	Pn	01 42 05.8	+0.4
LOAL				eS	Sb	01 42 27.1	-0.6
NUBE	Las Nubes	1.65	93	eP	Pn	01 42 05.4	-0.1
NUBE				eS	Sn	01 42 26.7	0.0
NUBE	Las Nubes	1.65	93	eP	Pn	01 42 05.4	-0.1
NUBE				eS	Sn	01 42 26.7	0.0
RTR	El Retiro	1.78	92	eP	Pn	01 42 07.9	+0.6
RTR	El Retiro	1.78	92	eP	Pn	01 42 07.9	+0.6
CEVE	Cerro Verde	1.80	95	eP	Pn	01 42 08.1	+0.4
CEVE				eS	Sb	01 42 32.0	-0.4
CEVE	Cerro Verde	1.80	95	eP	Pn	01 42 08.1	+0.4
CEVE				eS	Sb	01 42 32.0	-0.4
SBLS	San Blas	1.80	94	eP	Pn	01 42 08.1	+0.4
SBLS	San Blas	1.80	94	eP	Pn	01 42 08.1	+0.4
UNIC	Universidad Ca	1.87	90	eP	Pn	01 42 09.0	+0.5
UNIC	Universidad Ca	1.87	90	eP	Pn	01 42 09.0	+0.5
JAYA	Jayaque - finc	2.00	99	eP	Pn	01 42 10.0	-0.4
JAYA				eS	Sn	01 42 34.7	-0.6
JAYA				IAML		01 42 41.8	
	comp=Z,812nm,0.2s						
JAYA	Jayaque - finc	2.00	99	eP	Pn	01 42 10.0	-0.4
JAYA				eS	Sn	01 42 34.7	-0.6
JAYA				IAML		01 42 41.8	
	comp=Z,812nm,0.2s						
CEDA	San Andres	2.03	95	eP	Pn	01 42 11.1	+0.4
CEDA	San Andres	2.03	95	eP	Pn	01 42 11.1	+0.4
MRL	Marmol	2.05	58	eP	Pb	01 42 12.9	-1.0
MTO3	Montecristo	2.09	78	eP	Pn	01 42 12.0	+0.3
MTO3	Montecristo	2.09	78	eP	Pn	01 42 12.0	+0.3
ESQI	Esquipulas	2.15	74	eP	Pn	01 42 12.9	+0.6
LALI	Alcalda de L	2.15	103	eP	Pn	01 42 11.8	-0.5
LALI	Alcalda de L	2.15	103	eP	Pn	01 42 11.8	-0.5
UEES	Universidad Ev	2.19	97	eP	Pn	01 42 13.2	+0.3
UEES	Universidad Ev	2.19	97	eP	Pn	01 42 13.2	+0.3
SNET	Serv Nac Est T	2.20	97	eP	Pn	01 42 13.7	+0.6
SNET	Serv Nac Est T	2.20	97	eP	Pn	01 42 13.7	+0.6
LFRS	El Faro	2.37	98	eP	Pn	01 42 16.0	+0.6
LFRS				eS	Sn	01 42 45.8	+1.2
LFRS	El Faro	2.37	98	eP	Pn	01 42 16.0	+0.6
LFRS				eS	Sn	01 42 45.8	+1.2
SJTE	Alcalda de S	2.42	98	eP	Pn	01 42 16.0	-0.2
SJTE	Alcalda de S	2.42	98	eP	Pn	01 42 16.0	-0.2
PAVA	Las Pavas	2.48	96	eP	Pn	01 42 17.6	+0.6
PAVA	Las Pavas	2.48	96	eP	Pn	01 42 17.6	+0.6
COEG	Centro de Oper	2.55	98	eP	Pn	01 42 18.6	+0.8
COEG				IAML		01 42 20.5	
	comp=Z,425nm,0.4s						
COEG	Centro de Oper	2.55	98	eP	Pn	01 42 18.6	+0.8
COEG				IAML		01 42 20.5	
	comp=Z,425nm,0.4s						
SCLA	Alcaldia de Sa	2.68	96	eP	Pn	01 42 20.4	+0.7
SCLA	Alcaldia de Sa	2.68	96	eP	Pn	01 42 20.4	+0.7
COEB	Comit de Eme	2.90	99	eP	Pn	01 42 23.4	+0.6
COEB	Comit de Eme	2.90	99	eP	Pn	01 42 23.4	+0.6
PACA	Pacayal	3.10	99	eP	Pn	01 42 26.2	+0.6
PACA				IAML		01 43 14.4	
	comp=Z,1μm,0.4s						
PACA	Pacayal	3.10	99	eP	Pn	01 42 26.2	+0.6
PACA				IAML		01 43 14.4	
	comp=Z,1μm,0.4s						
LCND	La Caada	3.55	100	eP	Pn	01 42 32.1	+0.6
LCND				IAML		01 42 37.1	
	comp=Z,194nm,0.4s						
LCND	La Caada	3.55	100	eP	Pn	01 42 32.1	+0.6
LCND				IAML		01 42 37.1	
	comp=Z,194nm,0.4s						

IDC 02 01:46:03.7±1.5, **2°.50N**×**127°.10E, h0**^{km}**, mb3.3**/5, **mbtmp3.5**/6, **ML4.3**/1, **Error ellipse: s-maj=58.5km s-min=20.9km az=73.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	10.47	225	Pn	Pn	01 48 35.3	+0.1
	2.5nm,0.3s,baz=311,slow=18,SNR=3.5 5.2nm,0.3s						
FITZ	Fitzroy Crossi	20.52	184	P	Pn	01 50 45.0	-0.8
	1.1nm,0.7s,baz=22,slow=12,SNR=2.1 1.1nm,0.7s						
WRA	Warramunga Arr	23.40	163	P	P	01 51 15.3	+0.7
	0.3nm,0.4s,baz=340,slow=11,SNR=19 0.3nm,0.4s						
ASAR	Alice Springs	26.84	166	P	P	01 51 44.2	-1.9
	0.1nm,0.4s,baz=341,slow=5.4,SNR=1.4 0.1nm,0.4s						
MKAR	Makanchi Array	58.77	326	P	P	01 56 02.7	-1.1
	0.2nm,0.4s,baz=115,slow=6.3,SNR=2.2 0.2nm,0.4s						
KURBB	Kurchatov Arra	62.97	328	P	P	01 56 33.0	+0.7
	0.5nm,0.5s,baz=132,slow=6.3,SNR=6.3 0.5nm,0.5s						

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*JMA **02** 01:50:50.1±0.1, 40°.0N±0°.1×140°.6E±0°.1, h3^{km}±1^{km}, MV3.5/20, NORTHERN AKITA PREF*
JMA Felt II J1 at NORTHERN AKITA PREF .
*NIED **02** 01:50:50.1, 39°.98N×140°.57E, h3^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.52; $M_{\theta\theta}$2.69; $M_{\phi\phi}$-2.18; $M_{r\theta}$-1.18; $M_{\theta\phi}$1.81; $M_{\phi r}$0.46; Fault plane solution: $M_0$3.29000×10^{14} NP1: ϕ_s207.00000°, δ67.00000°, λ-176.00000°. NP2: ϕ_s115.00000°, δ87.00000°, λ-23.00000°.*
*IDC **02** 01:50:54.1±2.4, 40°.20N×140°.44E, h45^{km}±25^{km}, mb3.4/3, mbtmp3.6/7, ML3.0/4, MS2.7/2 Error ellipse: s-maj=32.3km s-min=20.7km az=106.0*
ISC 02 01:50:50.3±0.9, **40°.04N**±0°.03×**140°.62E**±0°.04, **h18**^{km}±5^{km}, **n15, σ1^{s}.68**/22, **mb3.8**/3, **4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAH	Hinai	0.15	4	i P	Pg	01 50 54.5	+0.1
JAH				S	Sg	01 50 57.8	+0.5
JKZ	Kuzumaki	0.55	96	⇓iP	Pg	01 51 01.3	+0.1
JKZ				⇓S	Sg	01 51 08.9	+0.3
JRG	Rokugo	0.65	179	i P	Pg	01 51 01.6	-1.5
JRG				S	Sg	01 51 09.8	-1.9
JIW	Iwasaki	0.72	320	i P	Pb	01 51 04.2	-0.2
JIW				S	Sb	01 51 14.4	+0.3
JANG	Nango	0.76	64	⇓iP	Pb	01 51 05.7	+0.8
JANG				⇓S	Sb	01 51 16.3	+1.3
JOM	Ohasama	0.77	138	i P	Pg	01 51 04.2	-1.2
JOM				S	Sg	01 51 14.2	-1.3
JTM	Tenmabayashi	0.82	24	i P	Pn	01 51 06.8	-0.1
MJAR	Matsushiro Arr	3.98	209	P	Pn	01 51 53.2	+2.8
	0.2nm,0.3s,baz=296,slow=26,SNR=5.0						
MJAR				S	Sb	01 52 48.2	+0.6
	5.8nm,0.6s,baz=345,slow=28,SNR=3.2 1.6nm,0.4s						
ASAJ	Asahikawa	4.33	19	P	Pn	01 51 54.4	-0.8
	0.7nm,0.3s,baz=270,slow=4.0,SNR=2.3						
ASAJ				S	Sb	01 52 53.6	-4.1
	15nm,0.8s,baz=130,slow=12,SNR=4.8 3.6nm,0.5s						
USRK	Ussuriysk Ar.	7.64	306	P	Pn	01 52 40.4	-0.3
	0.7nm,0.3s,baz=109,slow=13,SNR=11 1.8nm,0.3s						
KSRS	Korea Array	10.25	259	P	Pn	01 53 19.2	+2.7
	0.9nm,0.3s,baz=65,slow=14,SNR=12						
KSRS				LR	LR	01 56 58.3	
	comp=Z,33nm,18.1s,baz=80,slow=36 4.1nm,0.5s						
KLR	Kul'dur	11.14	328	LR	LR	01 57 48.6	
	comp=Z,46nm,19.9s,baz=260,slow=38						
KURBB	Kurchatov Arra	43.71	305	P	P	01 58 51.9	-2.2
	0.6nm,0.6s,baz=83,slow=8.8,SNR=3.3 0.6nm,0.6s						
INK	Inuvik	52.01	28	P	P	01 59 58.9	+0.8
	1.0nm,0.8s,baz=335,slow=5.5,SNR=5.4 1.0nm,0.8s						
WRA	Warramunga Arr	59.96	187	P	P	02 00 56.5	+0.9
	0.8nm,1.0s,baz=3.6,slow=7.4,SNR=8.2 0.8nm,1.0s						

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*IDC **02** 02:00:02.0±1.9, 0°.49N×125°.15E, h0^{km}, mb3.5/3, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=125.8km s-min=26.8km az=66.0*
*DJA **02** 02:00:12.8±0.5, 0°N±3°×12°5E±°, h94^{km}±9^{km}, M3.8/9, mb3.8/1, mB4.3/1, MLv3.8/9, Mw(mB)3.5/1, MwMwp4.6/1, Mwp5.0/1*
ISC 02 02:00:09.7±1.6, **0°.17S**±0°.07×**124°.96E**±0°.04, **h7**^{km}±12^{km}, **n12, σ1^{s}.62**/17, **mb3.4**/3, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.23	307	P	Pn	02 00 35.0	+1.7
KMSI				S	Sn	02 00 51.7	+1.6
GTOI	Gorontalo	2.10	292	P	Pg	02 00 50.2	+0.1
GTOI				S	Sg	02 01 16.7	-0.7
SANI	Sanana	2.13	151	P	Pg	02 00 50.1	-0.5
SANI				S	Sb	02 01 15.9	+0.5
LBMI	Labuha	2.59	100	P	Pn	02 00 54.6	+2.6
LBMI				S	Sn	02 01 25.0	+1.2
TNTI	Ternate	2.59	69	P	Pn	02 00 51.7	-0.3
TNTI				S	Sn	02 01 21.2	-2.6
MRSI	Marisa	3.08	282	P	Pn	02 00 59.5	+0.6
MRSI				S	Sn	02 01 33.7	-2.3
APSI	Ampana	3.39	257	P	Pn	02 01 03.1	+0.1
MPSI	Mapaga	5.08	276	P	Pn	02 01 27.6	+1.2
FITZ	Fitzroy Crossi	17.83	178	P	P	02 04 20.1	+1.0
	0.1nm,0.3s,baz=13,slow=14,SNR=2.4 1.6nm,1.0s						
WRA	Warramunga Arr	21.69	155	P	P	02 05 00.2	-1.2
	1.8nm,0.6s,baz=334,slow=10,SNR=16 1.8nm,0.6s						
ASAR	Alice Springs	24.92	160	P	P	02 05 31.9	-1.7
	0.4nm,0.5s,baz=341,slow=8.0,SNR=7.9 0.4nm,0.5s						
MKAR	Makanchi Array	59.80	327	P	P	02 10 06.0	-10
	0.1nm,0.3s,baz=126,slow=8.9,SNR=2.2 0.1nm,0.3s						

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*GUC **02** 02:03:28.6±0.7, 32°.68S×69°.15W, h39^{km}±18^{km}, ML3.9*
*IDC **02** 02:03:29.6±1.1, 32°.55S×69°.07W, h20^{km}±4^{km}, mb3.5/3, mbtmp3.6/5, ML3.5/2, MS3.2/3, Error ellipse: s-maj=47.7km s-min=32.6km az=133.0*
*NEIC **02** 02:03:31.2±1.9, 32°.76S±0°.04×69°.13W±0°.05, h33^{km}±6^{km}, mb4.4/16, Md3.6(SJA), ML3.7(GUC), Error ellipse: s-maj=7.8km s-min=3.0km az=126.0*
ISC 02 02:03:30.7±0.9, **32°.73S**±0°.03×**69°.14W**±0°.04, **h31**^{km}±7^{km}, **n75, σ1^{s}.22**/97, **mb4.4**/10, **2C-13D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	1.14	238	⇓iP	Pn	02 03 49.3	-1.5
FCH				i S	Sn	02 04 05.2	-0.3
VA03	San Esteban	1.19	268		Pn	02 03 50.0	-1.3
VA03				Sn	Sn	02 04 05.8	-0.7
VA03	San Esteban	1.19	268	⇓iP	Pn	02 03 50.0	-1.3
VA03				i S	Sn	02 04 06.2	-0.3
VA03				IAML		02 04 07.9	
	comp=E,4μm,0.2s						
ZON	Zonda	1.24	18	Pn	Pn	02 03 51.6	-0.4
ZON				Sn	Sn	02 04 08.5	+0.8
PEL	Peldehue	1.37	252	Pn	Pn	02 03 52.8	-0.8
PEL				Sn	Sn	02 04 10.9	+0.1
PEL	Peldehue	1.37	252	⇓iP	Pn	02 03 52.9	-0.8
PEL				i S	Sn	02 04 10.9	+0.1
PEL				IAML		02 04 12.4	
	comp=N,1μm,0.2s						
MT03	Universidad Ad	1.38	236	Pn	Pn	02 03 53.3	-0.7
MT03	Universidad Ad	1.38	236	⇓iP	Pn	02 03 53.6	-0.4
MT03				i S	Sn	02 04 12.3	+1.1
MT03				IAML		02 04 21.3	
	comp=N,2μm,0.6s						
MT05	Renca	1.50	243	Pn	Pn	02 03 55.7	+0.1
MT05	Renca	1.50	243	⇓iP	Pn	02 03 55.9	+0.4
MT05				i S	Sb	02 04 16.1	-0.6
ROCH	El Roble	1.60	261	⇓iP	Pn	02 03 57.1	+0.1
ROCH				i S	Sn	02 04 18.4	+1.7
ROCH				IAML		02 04 20.2	
	comp=E,3μm,0.6s						
ROC1	El Roble	1.60	261		Pn	02 03 55.0	-2.1
BO04	La Punta	1.76	224	Pn	Pn	02 04 00.3	+1.2
BO04	La Punta	1.76	224	⇓iP	Pn	02 04 00.4	+1.3
BO04				i S	Sb	02 04 24.1	-0.1
BO04				IAML		02 04 24.8	
	comp=E,1μm,0.4s						
MT02	Curacav	1.76	252	Pn	Pn	02 03 59.2	+0.1
MT02	Curacav	1.76	252	⇓iP	Pn	02 03 59.7	+0.6
MT02				i S	Sb	02 04 23.0	-1.2
VA06	Catapilco	1.83	275		Pn	02 04 00.7	+0.7
VA06	Catapilco	1.83	275	⇓iP	Pn	02 04 00.7	+0.7
VA06				i S	Sb	02 04 24.8	-1.2
VA06				IAML		02 04 31.3	
	comp=E,4μm,0.4s						
MT09	Talagante	1.87	236	Pn	Pn	02 04 00.8	+0.1
MT09	Talagante	1.87	236	⇓iP	Pn	02 04 01.8	+1.0
MT09				i S	Sb	02 04 26.8	-0.6
MT01	Popeta	2.10	237	Pn	Pn	02 04 05.0	+1.3
MT01	Popeta	2.10	237	⇓iP	Pn	02 04 05.3	+1.6
MT01				i S	Sb	02 04 33.5	-0.4
MT01				IAML		02 04 36.4	
	comp=N,667nm,0.7s						
VA01	Torpederas	2.13	261	Pn	Pn	02 04 05.5	+1.4
VA01	Torpederas	2.13	261	eP	Pn	02 04 05.5	+1.4
VA01				i S	Sb	02 04 33.5	-1.2
VA01				IAML		02 04 38.8	
	comp=N,922nm,0.4s						
CO02	Combarbal	2.20	313	Pn	Pn	02 04 07.7	+2.5
CO02	Combarbal	2.20	313	⇓iP	Pn	02 04 07.8	+2.7
CO02				i S	Sb	02 04 36.8	+0.1
CO02				IAML		02 04 37.4	
	comp=E,4μm,0.2s						
VA05	Santo Domingo	2.28	245		Pn	02 04 08.0	+1.9
VA05	Santo Domingo	2.28	245	⇓iP	Pn	02 04 08.1	+2.0
VA05				i S	Sb	02 04 38.1	-0.7
VA05				IAML		02 04 40.5	
	comp=E,3μm,0.5s						
BO01	Tunca	2.32	224	Pn	Pn	02 04 08.9	+2.1
BO01	Tunca	2.32	224	⇑iP	Pn	02 04 09.1	+2.3
BO01				i S	Sb	02 04 40.5	+0.3
BO01				IAML		02 04 46.2	
	comp=E,250nm,0.6s						
CO01	Juntas del Tor	2.86	343	eP	Pb	02 04 19.6	-1.7
CO01				i S	Sb	02 04 57.2	+1.3
GO04	Tololo Observa	2.92	330	⇑iP	Pn	02 04 17.8	+2.6
GO04				i S	Sb	02 04 56.6	-0.9
CO06	Fray Jorge	2.96	313	Pn	Pn	02 04 17.2	+1.7
GO05	Huala	3.25	225	Pn	Pn	02 04 21.1	+1.5
CO05	La Serena	3.33	327	Pn	Pn	02 04 21.8	+1.2
LCO	Las Campanas	3.94	340	Pn	Pn	02 04 31.0	+1.7
AC04	Llanos de Chal	4.81	339	Pn	Pn	02 04 43.7	+2.7
BI05	Punta Hualpn	5.22	219	Pn	Pn	02 04 45.9	-0.7
AC06	Mina Casimiro	5.46	349	Pn	Pn	02 04 50.4	+0.5
AC02	Maricunga	5.87	0	Pn	Pn	02 04 58.7	+2.7
LC01	Cunco	6.55	199	Pn	Pn	02 05 06.1	+1.3
AC01	Pan de Azucar	6.68	349	Pn	Pn	02 05 08.0	+1.3
TRQA	Tornquist	7.90	134	Pn	Pn	02 05 22.9	-0.5
PLCA	Paso Flores	8.07	188	Pn	Pn	02 05 28.5	+2.7
	comp=E,0.1nm,0.3s,baz=6.0,slow=11,SNR=8.2						
PLCA				LR	LR	02 09 01.8	
	comp=E,156nm,18.2s,baz=332,slow=40 comp=E,2.5nm,0.7s						
PLCA	Paso Flores	8.07	188	Pn	Pn	02 05 27.2	+1.4
PB14	IPOC Station P	8.15	352	Pn	Pn	02 05 27.7	+0.6
LL04	Puerto Octay	8.58	197	Pn	Pn	02 05 32.8	+0.2
LVC	Limon Verde	10.08	1	LR	LR	02 10 02.8	
	comp=E,96nm,20.4s,baz=167,slow=40						
ITQB	Itaqui	11.14	77	Pn	Pn	02 06 07.4	-0.4
CPUP	Villa Florida	12.09	61	Pn	Pn	02 06 19.4	-1.4
	comp=E,0.1nm,0.3s,baz=203,slow=13,SNR=2.5						
CPUP				LR	LR	02 11 43.8	
	comp=E,110nm,18.0s,baz=234,slow=41 comp=E,1.2nm,0.8s						
CPUP	Villa Florida	12.09	61	Pn	Pn	02 06 21.1	+0.3
PLTB	Pedras Altas	13.18	90	Pn	Pn	02 06 34.6	-1.1
PB16	IPOC Station P	14.34	359	Pn	Pn	02 06 52.0	0.0
LPAZ	La Paz	16.39	3	Pn	Pn	02 07 20.9	+1.8
	baz=199,slow=8.0,SNR=3.1						
LPAZ	La Paz	16.39	3	P	Pn	02 07 20.9	+1.8
GO09	Cerro Castillo	18.68	186	P	Pn	02 07 46.9	+0.3
BDFB	Brasilia	25.62	53	P	P	02 08 56.8	-0.8
	comp=E,2.0nm,0.8s,baz=174,slow=9.2,SNR=2.3 comp=E,2.0nm,0.8s						
BELA	Belgrano 2	47.72	171	P	P	02 12 04.3	+0.2
SNAA	Sanae	51.85	158	P	P	02 12 35.5	-0.1
SNAA				IAmb	IAmb	02 12 40.0	
	comp=Z,4.4nm,1.2s						
QSPA	South Pole Qui	57.51	180	P	P	02 13 17.2	+0.5
QSPA				IAmb	IAmb	02 13 17.9	
	comp=Z,3.5nm,0.7s						
SWET	Sewanee	69.40	345	P	P	02 14 35.1	-0.4
SWET				IAmb	IAmb	02 14 46.3	
	comp=Z,4.2nm,0.9s						
WVT	Waverly	70.70	344	P	P	02 14 43.1	-0.3
R55A	Marlinton	71.39	351	P	P	02 14 48.1	+0.5
LCAR	Lake Charles	71.48	341	P	P	02 14 48.0	-0.1
LCAR				IAmb	IAmb	02 14 55.1	
	comp=Z,3.2nm,0.8s						
PBMO	Poplar Bluff	71.96	342	P	P	02 14 50.5	-0.5
PBMO				IAmb	IAmb	02 14 57.9	
	comp=Z,3.0nm,0.8s						
CCM	Cathedral Cave	73.37	342	P	P	02 14 58.9	-0.5
CCM				IAmb	IAmb	02 15 06.4	
	comp=Z,4.8nm,1.0s						
R40A	Maddies Statio	73.87	341	P	P	02 15 01.8	-0.4
ECSD	EROS Data Cent	80.13	340	P	P	02 15 37.1	-0.3
ECSD				IAmb	IAmb	02 15 44.5	
	comp=Z,3.7nm,0.8s						
D41A	Chassel	81.33	347	P	P	02 15 43.9	+0.2
TORD	Torodi Ar. Bea	81.49	68	P	P	02 15 45.2	-0.1
	comp=Z,0.4nm,0.9s,baz=190,slow=7.3,SNR=2.0						
TORD				pP	PcP	02 15 51.5	+0.2
	comp=Z,0.7nm,0.7s,baz=285,slow=7.6,SNR=6.8 comp=Z,0.4nm,0.9s						
PDAR	Pinedale Array	83.77	331	P	P	02 15 56.9	0.0
	comp=Z,0.1nm,0.4s,baz=177,slow=3.6,SNR=1.9 comp=Z,0.1nm,0.4s						
KURBB	Kurchatov Arra	150.28	43	PKPbc	PKPbc	02 23 18.4	+0.2
	comp=Z,0.6nm,0.5s,baz=295,slow=3.2,SNR=8.0						
KURBB				pPKPbc	pPKPdf	02 23 25.1	+0.8
	comp=Z,1.1nm,0.7s,baz=304,slow=2.9,SNR=7.0						
ZALV	Zalesovo Beam	151.84	33	PKPbc	PKPbc	02 23 21.8	0.0
	comp=Z,1.9nm,0.5s,baz=308,slow=3.3,SNR=8.1						
ZALV				pPKPbc	pPKPdf	02 23 28.4	+1.8
	comp=Z,2.3nm,0.6s,baz=323,slow=3.0,SNR=6.4						
MKAR	Makanchi Array	154.10	49	PKPbc	PKPbc	02 23 26.9	-0.2
	comp=Z,0.1nm,0.4s,baz=358,slow=4.1,SNR=2.2						
PZH	PanZhiHua	169.93	126	PKP	PKPdf	02 23 34.1	-1.6

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*THE **02** 02:13:05.0, 34°.86N×25°.61E, h7^{km}±7^{km}, ML2.8/5, Error ellipse: s-maj=8.0km s-min=0.8km az=26.0*
*IDC **02** 02:13:05.6±1.4, 34°.86N×25°.55E, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=28.3km s-min=12.4km az=28.0*
*ATH **02** 02:13:06.7, 35°.01N×25°.62E, h14^{km}±2^{km}, ML3.0/8, Error ellipse: s-maj=2.8km s-min=0.9km az=181.0*
ISC 02 02:13:07.5±0.9, **35°.11N**±0°.05×**25°.57E**±0°.02, **h10**^{km}±7^{km}, **n30, σ1^{s}.74**/42, **mb3.4**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	0.16	126	P	Pg	02 13 10.7	-0.4
FRMA				S	Sg	02 13 14.5	+1.1
FRMA				AML	AML	02 13 15.2	
	comp=N,20745μm,0.6s						
FRMA				AML	AML	02 13 17.2	
	comp=E,10426μm,0.4s						
FRMA	Ierapetra Chan	0.16	126	P	Pg	02 13 10.7	-0.4
FRMA				S	Sg	02 13 14.7	+1.2
	comp=E,3μm,0.4s						
HRKL	Herakleio	0.44	298	P	Pg	02 13 16.5	+0.4

HRKL	comp=N,9144µm,0.8s			AML	AML	02 13 33.1	
HRKL	comp=E,16202µm,0.6s			AML	AML	02 13 38.4	
HRKL	**Herakleio**	**0.44**	**298**	P	**Pg**	**02 13 17.0**	**+0.9**
HRKL	comp=E,2µm,0.6s			S	**Sb**	**02 13 27.2**	**+3.2**
KSTL	**Kastelli Herak**	**0.46**	**295**	P	**Pg**	**02 13 13.1**	**-3.3**
KSTL				S	**Sg**	**02 13 17.9**	**-4.5**
KSTL	comp=E,2023µm,0.3s			AML	AML	02 13 20.9	
KSTL	comp=N,4926µm,0.3s			AML	AML	02 13 23.7	
KSTL	**Kastelli Herak**	**0.46**	**295**	P	**Pg**	**02 13 13.0**	**-3.5**
KSTL	comp=N,515nm,0.4s			S	**Sg**	**02 13 19.4**	**-3.1**
ZKR	**Zakros**	**0.53**	**89**	P	**Pg**	**02 13 16.2**	**-1.6**
ZKR				S	**Sg**	**02 13 23.9**	**-0.9**
ZKR	comp=N,3652µm,0.3s			AML	AML	02 13 27.2	
ZKR	comp=E,5537µm,0.3s			AML	AML	02 13 27.7	
ZKR	**Zakros**	**0.53**	**89**	P	**Pg**	**02 13 16.1**	**-1.7**
ZKR	comp=E,2µm,0.3s			S	**Sg**	**02 13 24.2**	**-0.6**
IDI	**Anoyia** baz=119,slow=19	**0.59**	**288**	Pg	**Pg**	**02 13 18.9**	**-0.1**
IDI	comp=E,49nm,0.3s,baz=22,slow=19,SNR=3.4			Lg	Lg	02 13 28.9	
IDI	comp=E,93nm,19.5s,baz=329,slow=69			LR	LR	02 13 52.8	
IDI	**Anoyia**	**0.59**	**288**	P	**Pg**	**02 13 18.4**	**-0.5**
IDI				S	**Sg**	**02 13 28.6**	**+1.9**
IDI	comp=E,833µm,0.3s			AML	AML	02 13 30.5	
IDI	comp=N,993µm,0.1s			AML	AML	02 13 30.8	
IDI	**Anoyia**	**0.59**	**288**	P	**Pg**	**02 13 18.5**	**-0.5**
IDI	comp=N,462nm,0.2s			S	**Sg**	**02 13 29.2**	**+2.5**
SIVA	**Sivas**	**0.63**	**262**	P	**Pg**	**02 13 19.0**	**-0.8**
SIVA				S	**Sb**	**02 13 29.0**	**-0.6**
SIVA	comp=N,3497µm,0.5s			AML	AML	02 13 33.4	
SIVA	comp=E,4670µm,0.7s			AML	AML	02 13 34.2	
TMBK	**Timbaki Herakl**	**0.66**	**267**	P	**Pg**	**02 13 19.9**	**-0.5**
TMBK				S	**Sb**	**02 13 30.8**	**+0.3**
TMBK	comp=E,3721µm,0.5s			AML	AML	02 13 35.5	
TMBK	comp=N,3640µm,0.5s			AML	AML	02 13 37.3	
PRNS	**Prines Rethymn**	**0.91**	**286**	P	**Pg**	**02 13 25.2**	**+0.1**
GVDS	**Gavdos**	**1.25**	**258**	P	**Pg**	**02 13 30.4**	**-1.1**
GVD	**Gavdhos**	**1.25**	**258**	P	**Pg**	**02 13 30.1**	**-1.4**
THR9	**Santorini-Faro**	**1.26**	**352**	P	**Pn**	**02 13 32.0**	**+0.8**
THR5	**Thira Island,**	**1.32**	**352**	P	**Pn**	**02 13 32.9**	**+0.9**
IMMV	**Iera Moni Meta**	**1.35**	**286**	P	**Pn**	**02 13 32.3**	**-0.2**
KARP	**Karpathos**	**1.37**	**71**	P	**Pn**	**02 13 32.1**	**-0.7**
KARP				S	**Sn**	**02 13 48.8**	**-2.2**
KARP	comp=E,902µm,0.5s			AML	AML	02 13 55.5	
KARP	comp=N,792µm,0.6s			AML	AML	02 14 03.3	
KARP	**Karpathos**	**1.37**	**71**	P	**Pb**	**02 13 32.8**	**-0.5**
KNDR	**Palaiochora Ch**	**1.55**	**275**	P	**Pb**	**02 13 35.8**	**-0.5**
APE	**Apeiranthos**	**1.96**	**359**	P	**Pn**	**02 13 42.3**	**+1.4**
KTHA	**Kythira Island**	**2.34**	**300**	P	**Pn**	**02 13 47.9**	**+1.8**
ARG	**Arkhangelos**	**2.35**	**61**	P	**Pn**	**02 13 48.0**	**+1.8**
TORD	**Torodi Ar. Bea** comp=N,0.2nm,0.6s,baz=34,slow=10,SNR=4.1 comp=N,0.2nm,0.6s	**30.72**	**231**	P	**P**	**02 19 21.2**	**-1.6**
ARCES	**ARCESS Array B** comp=N,1.0nm,1.0s,baz=180,slow=9.9,SNR=2.6 comp=N,1.0nm,1.0s	**34.48**	**360**	P	**P**	**02 19 56.7**	**+1.5**
KURBB	**Kurchatov Arra** comp=N,0.3nm,0.4s,baz=277,slow=8.6,SNR=4.6 comp=N,0.3nm,0.4s	**40.89**	**51**	P	**P**	**02 20 50.2**	**+0.5**
MKAR	**Makanchi Array** comp=N,0.2nm,0.4s,baz=280,slow=8.3,SNR=2.3 comp=N,0.2nm,0.4s	**43.52**	**57**	P	**P**	**02 21 13.5**	**+2.2**
SCHQ	**Schefferville** comp=N,1.4nm,1.0s,baz=45,slow=8.6,SNR=1.9 comp=N,1.4nm,1.0s	**63.44**	**320**	P	**P**	**02 23 37.0**	**-0.4**

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*JMA **02** 02:27:59.0±0.4,23°N±1°×12°1E±°,h0^{km},MV3.7/10, TAIWAN REGION*

*ASIES **02** 02:27:58.3,23°.17N×121°.01E,h22^{km},MW3.9*

*NIED **02** 02:27:59.0,23°.09N×121°.16E,h0^{km},MW4.0,Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-9.55; $M_{\theta\theta}$7.15; $M_{\phi\phi}$2.40; $M_{r\theta}$2.89; $M_{\theta\phi}$-2.16; $M_{\phi r}$-3.05; Fault plane solution: $M_0$9.69000×10^{14} NP1: ϕ_s104.00000°,δ34.00000°,λ-104.00000°. NP2: ϕ_s301.00000°,δ57.00000°,λ-81.00000°.*

*IASPEI **02** 02:27:59.5±0.8,23°.17N±0°.01×121°.04E±0°.01,h10^{km}±6^{km}, mb3.7/10,MS3.1/4 Error ellipse: s-maj=2.1km s-min=1.8km az=108.1,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TAP **02** 02:27:59.4,23°.19N×121°.02E,h3^{km},ML4.2,B*

*IDC **02** 02:28:07.0±6.5,22°.97N×121°.26E,h75^{km}±61^{km},mb3.4/10, mbtmp3.7/11,ML3.5/1,MS3.1/5,Error ellipse: s-maj=36.2km s-min=17.3km az=70.0*

ISC 02 02:27:59.6±0.8**,23°.16N**±0°.01×**121°.04E**±0°.01**,h12**^{km}±5^{km}**, n145,**σ1ˢ**46**/206**,mb3.7**/10**,MS3.1**/4**,47C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau** baz=81	**0.03**	**330**	⇑*i*P	**Pg**	**02 28 00.4**	**-1.5**
ECS	**Chishang** baz=116	**0.18**	**111**	⇑*i*P	**Pg**	**02 28 04.4**	**+0.7**
ECS	baz=116			S	**Sg**	**02 28 08.1**	**+1.6**
STYH	**Taoyuan** baz=268	**0.24**	**273**	⇑*i*P	**Pg**	**02 28 04.3**	**-0.4**
STYH	baz=268			*i* S	**Sg**	**02 28 07.4**	**-0.6**
FULB	**Fuli** baz=87	**0.24**	**81**	⇑*i*P	**Pg**	**02 28 05.7**	**+1.0**
FULB	baz=87			S	**Sg**	**02 28 10.2**	**+2.1**
STYT	**Tauyuan** baz=264	**0.26**	**271**	⇑*i*P	**Pb**	**02 28 04.6**	**-1.6**
STYT	baz=264			*i* S	**Sg**	**02 28 08.1**	**-0.5**
LONT	**Longtian** baz=159	**0.27**	**161**	⇓*i*P	**Pg**	**02 28 05.7**	**+0.5**
LONT	baz=159			*i* S	**Sg**	**02 28 09.6**	**+0.7**
TWF1	**Yuli** baz=58	**0.31**	**51**	⇑*i*P	**Pb**	**02 28 06.0**	**-1.1**
TWF1	baz=58			*i* S	**Sb**	**02 28 10.0**	**-2.2**
EDH	**Donghe** baz=129	**0.31**	**127**	⇓*i*P	**Pb**	**02 28 07.1**	**0.0**
EDH	baz=129			*e*S	**Sb**	**02 28 12.4**	**+0.2**
CHKT	**Chengkung** baz=105	**0.31**	**101**	⇑*i*P	**Pn**	**02 28 07.5**	**-2.6**
CHKT	baz=105			*e*S	**Sb**	**02 28 13.9**	**+1.7**
EYUL	**Yuli** baz=60	**0.32**	**54**	⇑*i*P	**Pb**	**02 28 06.2**	**-1.1**
EYUL	baz=60			*i* S	**Sb**	**02 28 10.4**	**-2.2**
YULB	**Yu-li** baz=51	**0.34**	**46**	⇑*i*P	**Pb**	**02 28 06.2**	**-1.4**
YULB	baz=51			*i* S	**Sg**	**02 28 10.3**	**-0.7**
TWG	**Pinlang** baz=171	**0.34**	**174**	⇓*i*P	**Pb**	**02 28 06.9**	**-0.7**
TWG	baz=171			*i* S	**Sb**	**02 28 11.8**	**-1.2**
YUS	**Yu-Shan** baz=350	**0.34**	**347**	⇑*i*P	**Pg**	**02 28 06.0**	**-0.7**
YUS	baz=350			*i* S	**Sg**	**02 28 10.6**	**-0.8**
TWGBT	**Beinan** baz=171	**0.34**	**173**	⇓*i*P	**Pb**	**02 28 06.9**	**-0.8**
TWGBT	baz=171			*i* S	**Sb**	**02 28 11.8**	**-1.3**
SLGT	**Liugui** baz=241	**0.39**	**245**	*e*P	**Pb**	**02 28 07.6**	**-1.0**
WTP	**Ta-pu** baz=279	**0.40**	**283**	⇑*i*P	**Pb**	**02 28 07.9**	**-0.8**
WTP	baz=279			*i* S	**Sb**	**02 28 13.9**	**-0.9**
TPUB	**Ta-pu** baz=288	**0.40**	**291**	⇑*i*P	**Pb**	**02 28 07.9**	**-0.8**
TPUB	baz=288			*i* S	**Sb**	**02 28 13.6**	**-1.2**
ALS	**Alishan** baz=330	**0.41**	**329**	⇓*i*P	**Pb**	**02 28 07.7**	**-1.4**
ALS	baz=330			*e*S	**Sg**	**02 28 13.4**	**0.0**
ECBN	**Changbin** baz=72	**0.41**	**68**	⇑*e*P	**Pn**	**02 28 09.3**	**-2.1**
ECBN	baz=72			*e*S	**Sb**	**02 28 16.8**	**+1.6**
TTN	**Taitung** baz=163	**0.42**	**166**	⇓P	**Pn**	**02 28 09.2**	**-2.3**
TTN	baz=163			*e*S	**Sb**	**02 28 16.4**	**+1.1**
SGST	**Jiashian** baz=255	**0.42**	**260**	⇑*e*P	**Pb**	**02 28 07.5**	**-1.6**
SGST	baz=255			*e*S	**Sb**	**02 28 13.9**	**-1.6**
EHY	**Hungye** baz=42	**0.43**	**37**	⇑*i*P	**Pb**	**02 28 08.0**	**-1.3**
EHY	baz=42			S	**Sg**	**02 28 13.2**	**-0.8**
CHN4	**Tsaushan** baz=293	**0.45**	**295**	⇑*i*P	**Pb**	**02 28 09.0**	**-0.5**
CHN4	baz=293			S	**Sb**	**02 28 15.7**	**-0.6**
CHN1	**Nanshi** baz=270	**0.47**	**273**	⇑*i*P	**Pb**	**02 28 09.6**	**-0.2**
CHN1	baz=270			*e*S	**Sb**	**02 28 16.8**	**0.0**
HGSD	**Ruisui** baz=51	**0.49**	**47**	⇑*i*P	**Pb**	**02 28 09.8**	**-0.4**
HGSD	baz=51			*e*S	**Sb**	**02 28 17.5**	**+0.1**
SNST	**Tainan City** baz=274	**0.50**	**277**	⇑*e*P	**Pb**	**02 28 10.3**	**-0.1**
SNST	baz=274			*e*S	**Sb**	**02 28 18.4**	**+0.7**
TWK	**Hsinying** baz=279	**0.52**	**282**	⇑*i*P	**Pb**	**02 28 10.4**	**-0.2**
TWK	baz=279			*e*S	**Sb**	**02 28 18.2**	**+0.1**
SSD	**Sandimen** baz=218	**0.55**	**222**	*i* P	**Pb**	**02 28 10.0**	**-1.3**
SSD	baz=218			*e*S	**Sn**	**02 28 20.5**	**-2.1**
ECL	**Taimali** baz=185	**0.56**	**188**	⇑*i*P	**Pb**	**02 28 10.6**	**-0.9**
ECL	baz=185			S	**Sb**	**02 28 17.7**	**-1.8**
SCST	**Cishan** baz=238	**0.57**	**241**	⇑P	**Pn**	**02 28 11.5**	**-2.1**
SCST	baz=238			*e*S	**Sn**	**02 28 22.7**	**-0.2**
TSMG	**Majia** baz=216	**0.58**	**219**	⇑*i*P	**Pb**	**02 28 10.4**	**-1.3**
TSMG	baz=216			*e*S	**Sb**	**02 28 17.7**	**-2.2**
VWDT	**VWDT** baz=11	**0.60**	**9**	⇑P	**Pg**	**02 28 10.4**	**-1.0**
VWDT	baz=11			*e*S	**Sb**	**02 28 20.1**	**-0.4**
EGFH	**Guangfu** baz=38	**0.62**	**35**	⇑*i*P	**Pb**	**02 28 11.2**	**-1.3**
EGFH	baz=38			*e*S	**Sg**	**02 28 19.4**	**-0.6**
CHN3	**Shinhua** baz=260	**0.62**	**263**	⇑*e*P	**Pn**	**02 28 14.0**	**-0.3**
LDUT	**Ludao** baz=141	**0.63**	**140**	⇓P	**Pn**	**02 28 12.4**	**-2.0**
LDUT	baz=141			*e*S	**Sn**	**02 28 23.5**	**-0.9**
SSLB	**Suanglung** baz=355	**0.63**	**353**	⇑P	**Pg**	**02 28 10.8**	**-1.1**
SSLB	baz=355			*e*S	**Sg**	**02 28 19.8**	**-0.5**
CHN2	**Minshiung** baz=305	**0.64**	**306**	*e*P	**Pn**	**02 28 13.0**	**-1.5**
SHHT	**Tainan City** baz=255	**0.65**	**258**	⇑*e*P	**Pn**	**02 28 14.6**	**-0.1**
SHHT	baz=255			*e*S	**Sn**	**02 28 26.0**	**+1.1**
CHY	**Chiayi** baz=300	**0.66**	**301**	⇑*e*P	**Pn**	**02 28 13.3**	**-1.5**
CHY	baz=300			*e*S	**Sb**	**02 28 23.1**	**+0.9**
TWM1	**Shoushan** baz=236	**0.66**	**240**	⇑*e*P	**Pn**	**02 28 13.8**	**-1.0**
MASBT	**Mashibuluo** baz=212	**0.66**	**214**	⇑*i*P	**Pb**	**02 28 11.9**	**-1.2**
MASBT	baz=212			*e*S	**Sg**	**02 28 19.9**	**-1.2**
SGLT	**Jiouru** baz=226	**0.66**	**229**	*e*P	**Pn**	**02 28 13.5**	**-1.3**
WGK	**Gukeng** baz=320	**0.68**	**320**	*e*P	**Pn**	**02 28 14.2**	**-1.0**
WGK	baz=320			*e*S	**Sn**	**02 28 24.4**	**-1.4**
WDLH	**Douliu** baz=319	**0.70**	**319**	*e*P	**Pn**	**02 28 14.4**	**-1.0**
WDLH	baz=319			*e*S	**Sb**	**02 28 23.6**	**+0.2**
WJS	**Zhushan** baz=337	**0.72**	**337**	*e*P	**Pn**	**02 28 14.6**	**-1.1**
ICHU	**Yijhu** baz=284	**0.72**	**286**	*e*P	**Pn**	**02 28 14.5**	**-1.2**
ICHU	baz=284			*e*S	**Sb**	**02 28 24.7**	**+0.6**
SMLT	**Sun Moon Lake** baz=352	**0.73**	**350**	*e*P	**Pb**	**02 28 13.4**	**-1.0**
SMLT	baz=352			*e*S	**Sb**	**02 28 24.0**	**-0.5**
ESL	**Shilin** baz=32	**0.75**	**29**	⇑*e*P	**Pb**	**02 28 13.4**	**-1.2**
ESL	baz=32			*e*S	**Sb**	**02 28 24.3**	**-0.5**
TYC	**Yuchr** baz=349	**0.76**	**348**	*e*P	**Pb**	**02 28 13.8**	**-1.0**
SCLT	**Jiali** baz=269	**0.77**	**271**	*e*P	**Pn**	**02 28 16.1**	**-0.3**
CHN8	**Yiju** baz=282	**0.78**	**284**	*e*P	**Pb**	**02 28 14.6**	**-0.6**
CHN8	baz=282			*e*S	**Sn**	**02 28 28.6**	**+0.4**
WNT	**Mingjian** baz=337	**0.79**	**336**	*e*P	**Pn**	**02 28 16.2**	**-0.4**
EAST	**Anshuo** baz=190	**0.79**	**193**	⇑P	**Pn**	**02 28 15.1**	**-1.7**
EAST	baz=190			*e*S	**Sb**	**02 28 25.4**	**-0.7**
WTK	**Tuku** baz=311	**0.79**	**312**	⇑*e*P	**Pn**	**02 28 15.9**	**-0.8**
WTK	baz=311			*e*S	**Sn**	**02 28 27.6**	**-0.9**
SSPT	**Xinbi** baz=211	**0.80**	**213**	⇑P	**Pn**	**02 28 15.2**	**-1.6**
SSPT	baz=211			*e*S	**Sn**	**02 28 27.1**	**-1.5**
OWD	**Renai** baz=11	**0.80**	**9**	⇑*e*P	**Pg**	**02 28 13.6**	**-1.6**
OWD	baz=11			*e*S	**Sb**	**02 28 25.5**	**-1.0**
TAW	**Tawu** baz=187	**0.81**	**189**	*e*P	**Pn**	**02 28 15.4**	**-1.5**
TAW	baz=187			*e*S	**Sb**	**02 28 25.7**	**-0.9**
WNT1	**Nantou City** baz=337	**0.81**	**336**	*e*P	**Pn**	**02 28 17.0**	**0.0**
WSL	**Shuilin Townsh** baz=295	**0.83**	**296**	⇑*e*P	**Pn**	**02 28 16.4**	**-0.7**
WSL	baz=295			*e*S	**Sn**	**02 28 28.6**	**-0.7**
TAWH	**Dawu Township** baz=188	**0.83**	**190**	⇑*e*P	**Pn**	**02 28 15.7**	**-1.5**
TAWH	baz=188			*e*S	**Sb**	**02 28 26.0**	**-1.0**
WUSB	**Renai** baz=7.0	**0.83**	**5**	⇑*e*P	**Pg**	**02 28 14.3**	**-1.4**
WUSB	baz=7.0			*e*S	**Sb**	**02 28 26.5**	**-0.9**
WPL	**Puli Township** baz=356	**0.85**	**355**	*e*P	**Pb**	**02 28 15.4**	**-1.0**
TEYL	**Yanliau Villag** baz=37	**0.88**	**36**	*e*P	**Pn**	**02 28 16.9**	**-0.9**
DPDB	**Guoxing** baz=354	**0.88**	**353**	*e*P	**Pb**	**02 28 16.2**	**-0.6**
WSSB	**Gushan** baz=232	**0.88**	**234**	*e*P	**Pn**	**02 28 19.1**	**+1.2**
WSF	**Szhu** baz=302	**0.89**	**303**	*e*P	**Pn**	**02 28 17.3**	**-0.7**
KAU	**Kaohsiung** baz=226	**0.89**	**229**	*e*P	**Pn**	**02 28 19.5**	**+1.5**
WCS	**Beigang Elemen** baz=354	**0.90**	**353**	*e*P	**Pb**	**02 28 16.3**	**-1.0**
CHGB	**Renai** baz=9.0	**0.91**	**8**	⇑*e*P	**Pg**	**02 28 15.7**	**-1.5**
WWF	**Wufeng** baz=341	**0.93**	**341**	*e*P	**Pn**	**02 28 18.9**	**+0.3**
WRL	**Guolierlin Hig** baz=321	**0.95**	**321**	*e*P	**Pn**	**02 28 18.3**	**-0.7**
SLIU	**Shizi** baz=192	**0.96**	**193**	⇑*e*P	**Pn**	**02 28 18.0**	**-1.0**
SLIU	baz=192			*e*S	**Sn**	**02 28 31.3**	**-1.4**
HWA	**Hwalien** baz=35	**0.97**	**33**	*e*P	**Pn**	**02 28 18.4**	**-0.7**
WHF	**Hehuan Shan** baz=14	**1.00**	**12**	*e*P	**Pg**	**02 28 17.2**	**-1.9**
WLCH	**Liuqiu** baz=215	**1.01**	**217**	*e*P	**Pn**	**02 28 22.1**	**+2.4**
WLCH	baz=215			*e*S	**Sn**	**02 28 41.1**	**+7.3**
WCHH	**Zhanghua** baz=335	**1.01**	**335**	*e*P	**Pn**	**02 28 20.1**	**+0.4**
TCU	**Taichung** baz=342	**1.04**	**342**	*e*P	**Pn**	**02 28 20.7**	**+0.6**
TWD	**Chiawan** baz=31	**1.05**	**29**	*e*P	**Pb**	**02 28 18.8**	**-1.0**
TDCB	**Techi** baz=7.0	**1.09**	**6**	*e*P	**Pg**	**02 28 19.1**	**-1.7**
TWT	**Tachien** baz=7.0	**1.10**	**7**	*e*P	**Pn**	**02 28 20.6**	**-0.5**
FUSS	**Fushou** baz=11	**1.10**	**10**	⇑*e*P	**Pg**	**02 28 18.1**	**-2.8**
FUSS	baz=11			*e*S	**Sn**	**02 28 35.7**	**-0.7**
WHP	**Taichung City** baz=357	**1.12**	**356**	*e*P	**Pb**	**02 28 20.1**	**-0.9**
WHP	baz=357			*e*S	**Sn**	**02 28 38.9**	**+2.2**
ETLH	**Xiulin Townshi** baz=23	**1.12**	**21**	*e*P	**Pg**	**02 28 19.7**	**-1.5**
ETLH	baz=23			*e*S	**Sn**	**02 28 35.9**	**-0.9**
NACB	**Ninganchiao** baz=28	**1.13**	**27**	*e*P	**Pg**	**02 28 20.0**	**-1.5**
HEN	**Hengchun** baz=192	**1.18**	**194**	*e*P	**Pn**	**02 28 22.1**	**+0.1**
TWQ1	**Liyutan** baz=349	**1.21**	**349**	*e*P	**Pn**	**02 28 23.0**	**+0.6**
LAY	**Lan-yu** baz=156	**1.21**	**157**	*e*P	**Pg**	**02 28 20.5**	**-2.4**
TWK1	**Hengchun** baz=189	**1.23**	**190**	*e*P	**Pn**	**02 28 23.8**	**+1.2**
WDJ	**Dajia District** baz=343	**1.24**	**343**	*e*P	**Pg**	**02 28 23.9**	**+0.5**
LYUB	**Lan-yu** baz=156	**1.26**	**156**	*e*P	**Pg**	**02 28 20.9**	**-2.9**
WDGT	**Dungji** baz=273	**1.27**	**275**	⇑*e*P	**Pg**	**02 28 23.2**	**-0.8**
WDGT	baz=273			*e*S	**Sn**	**02 28 40.0**	**-0.2**
NSY	**Sanyi** baz=350	**1.28**	**349**	*e*P	**Pg**	**02 28 25.0**	**+0.8**
NNSB	**Datong** baz=15	**1.30**	**14**	*e*P	**Pn**	**02 28 22.8**	**-1.1**
NNS	**Nan Shan** baz=15	**1.31**	**14**	*e*P	**Pg**	**02 28 23.7**	**-1.2**
NMLH	**Miaoli** baz=351	**1.39**	**351**	*e*P	**Pg**	**02 28 26.8**	**+0.5**
PHUB	**P'eng-hu** baz=284	**1.39**	**285**	⇑*e*P	**Pg**	**02 28 24.8**	**-1.6**
PHUB	baz=284			*e*S	**Sn**	**02 28 42.9**	**-0.4**
ENA	**Nanau** baz=29	**1.42**	**27**	*e*P	**Pg**	**02 28 25.7**	**-1.2**
PNG	**Penghu** baz=286	**1.42**	**287**	⇑*e*P	**Pg**	**02 28 25.4**	**-1.5**
PNG	baz=286			*e*S	**Sg**	**02 28 44.1**	**-1.3**
LATG	**Datong** baz=19	**1.44**	**18**	*e*P	**Pb**	**02 28 25.4**	**-1.1**
LATG	baz=19			*e*S	**Sb**	**02 28 44.0**	**-0.9**
EWUT	**Wuta** baz=29	**1.45**	**28**	*e*P	**Pg**	**02 28 26.1**	**-1.4**
NSTT	**Nanjuang** baz=360	**1.47**	**359**	*e*P	**Pg**	**02 28 26.9**	**-0.9**
NFF	**Wufeng Townshi** baz=4.0	**1.47**	**3**	*e*P	**Pb**	**02 28 26.3**	**-0.7**
NFF	baz=4.0			*e*S	**Sg**	**02 28 48.5**	**+1.6**
VCHM	**Qimei** baz=271	**1.48**	**272**	⇑*e*P	**Pb**	**02 28 26.1**	**-1.0**
VCHM	baz=271			*e*S	**Sb**	**02 28 45.1**	**-0.8**
LIOB	**Emei**	**1.48**	**359**	*e*P	**Pg**	**02 28 27.6**	**-0.5**
NDT	**Datong Townshi** baz=18	**1.50**	**17**	*e*P	**Pb**	**02 28 26.7**	**-0.8**
YHNB	**Yeheng** baz=13	**1.54**	**12**	*e*P	**Pb**	**02 28 27.0**	**-1.2**
NSK	**Sanguang** baz=12	**1.54**	**11**	*e*P	**Pb**	**02 28 27.2**	**-1.0**
ENTT	**Nioudou** baz=19	**1.55**	**18**	*e*P	**Pg**	**02 28 28.3**	**-1.1**
NDS	**Dongshan** baz=24	**1.59**	**23**	⇑*e*P	**Pg**	**02 28 28.9**	**-1.4**
NDS	baz=24			*e*S	**Sg**	**02 28 50.5**	**-0.5**
TWC	**Suao** baz=29	**1.62**	**27**	*e*P	**Pb**	**02 28 28.7**	**-0.9**
TWE	**Neicheng** baz=22	**1.66**	**20**	*e*P	**Pg**	**02 28 30.3**	**-1.2**
NWLT	**Wulai** baz=16	**1.67**	**15**	*e*P	**Pg**	**02 28 30.1**	**-1.5**
FUSB	**Fushanzhiwuyua** baz=18	**1.67**	**17**	*e*P	**Pg**	**02 28 30.1**	**-1.6**
NTC	**Toucheng** baz=24	**1.84**	**23**	*e*P	**Pg**	**02 28 33.2**	**-1.7**
TWA	**Mucha** baz=16	**1.88**	**15**	*e*P	**Pb**	**02 28 33.2**	**-0.8**
JYNG	**Yonagunijimaku**	**2.17**	**53**	P	**Pb**	**02 28 36.4**	**-2.5**
JYNG				S	**Sb**	**02 29 04.3**	**-1.5**
YOJ	**Yonaguni jima** baz=55	**2.23**	**54**	*e*P	**Pn**	**02 28 36.8**	**+0.4**
YOJ	**Yonaguni jima**	**2.23**	**54**	P	**Pb**	**02 28 37.6**	**-2.2**
YOJ				S	**Sn**	**02 29 04.8**	**+1.0**
HATJ	**Hateruma jima**	**2.69**	**70**	P	**Pn**	**02 28 43.9**	**+1.0**
HATJ				S	**Sn**	**02 29 15.1**	**-0.3**
IRIF	**Iriomote-Funau**	**2.73**	**64**	P	**Pb**	**02 28 45.2**	**-3.2**
IRIF				S	**Sn**	**02 29 17.9**	**+1.5**
QZH	**Quanzhou**	**2.85**	**309**	*e*Pn	**Pn**	**02 28 45.5**	**+0.5**
QZH				Sn	**Sn**	**02 29 13.9**	**-5.5**
QZH	comp=N,150nm,0.7s			smax	smax		
QZH	comp=E,120nm,0.7s			smax	smax		
JKRS	**Kuro-shima**	**2.93**	**68**	P	**Pn**	**02 28 46.8**	**+0.8**
JKRS				S	**Sn**	**02 29 21.7**	**+0.5**
JIJ	**Ishigaki jima**	**3.09**	**67**	P	**Pn**	**02 28 49.6**	**+1.3**
JIJ				S	**Sn**	**02 29 24.8**	**-0.4**
JISG	**Ishigakijimahi**	**3.32**	**64**	P	**Pn**	**02 28 52.9**	**+1.5**
JISG				S	**Sn**	**02 29 30.9**	**+0.1**
KSRS	**Korea Array** 0.2nm,0.3s,baz=32,slow=36,SNR=2.1 0.7nm,0.4s	**15.43**	**21**	P	**P**	**02 31 40.2**	**-1.5**
MJAR	**Matsushiro Arr** comp=Z,46nm,20.0s,baz=196,slow=37	**19.95**	**44**	LR	LR	02 40 29.4	
CMAR	**Chiang Mai Arr** 1.3nm,0.4s,baz=268,slow=6.3,SNR=1.4	**21.17**	**261**	P	**P**	**02 32 48.1**	**+3.1**
CMAR	comp=Z,30nm,18.5s,baz=295,slow=41 1.3nm,0.4s			LR	LR	02 42 46.5	
SONM	**Songino Array** 0.6nm,0.6s,baz=155,slow=11,SNR=5.1 0.6nm,0.6s	**27.26**	**338**	P	**P**	**02 33 46.9**	**+3.0**
ASAJ	**Asahikawa** comp=Z,48nm,20.2s,baz=110,slow=37	**27.40**	**35**	LR	LR	02 45 12.1	

MKAR	Makanchi Array	38.98	317	P	P	02 35 28.4	+2.5
	0.2nm,0.4s,baz=120,slow=41,SNR=2.6						
	0.2nm,0.4s						
PETK	Petropavlovsk-	40.79	33	LR	LR	02 53 59.6	
	comp=Z,26nm,18.4s,baz=194,slow=38						
ZALV	Zalesovo Beam	41.03	328	P	P	02 35 45.0	+2.3
	0.8nm,0.3s,baz=121,slow=6.9,SNR=4.2						
	0.8nm,0.3s						
KSH	Kashi	41.35	304	P	P	02 35 48.7	+3.0
H11N1	WAKE ISLAND Hy	42.69	86	T	T	03 21 09.6	
	baz=283,slow=74,SNR=9.9						
H11N2	WAKE ISLAND Hy	42.69	86	T	T	03 21 11.6	
	baz=283,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	42.71	86	T	T	03 21 12.7	
	baz=283,slow=74,SNR=13						
H11S3	WAKE ISLAND Hy	42.79	87	T	T	03 21 16.9	
	baz=284,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	42.80	87	T	T	03 21 17.1	
	baz=284,slow=74,SNR=6.6						
H11S2	WAKE ISLAND Hy	42.81	87	T	T	03 21 15.6	
	baz=284,slow=74,SNR=5.3						
WRA	Warramunga Arr	44.76	162	P	P	02 36 12.1	-1.2
	0.7nm,0.6s,baz=344,slow=8.5,SNR=12						
	0.7nm,0.6s						
ASAR	Alice Springs	48.20	164	P	P	02 36 36.6	-3.6
	0.2nm,0.5s,baz=346,slow=9.2,SNR=1.6						
	0.2nm,0.5s						
ARCES	ARCESS Array B	70.44	338	P	P	02 39 15.0	+1.5
	1.1nm,0.7s,baz=65,slow=8.6,SNR=4.7						
	1.1nm,0.7s						
FINES	FINESS Array B	72.26	330	P	P	02 39 25.1	+0.5
	0.7nm,0.7s,baz=343,slow=6.0,SNR=4.1						
	0.7nm,0.7s						
NOA	NORSAR Array B	79.06	332	P	P	02 40 02.8	-0.9
	0.6nm,0.7s,baz=75,slow=8.6,SNR=3.9						
NOA				LR	LR	03 17 47.5	
	comp=Z,12nm,18.8s,baz=340,slow=38						
	0.6nm,0.7s						
YKA	Yellowknife Ar	83.96	23	P	P	02 40 29.4	-0.1
	0.1nm,0.6s,baz=314,slow=4.4,SNR=5.6						
	0.1nm,0.6s						

*CNRM **02** 02:30:36.8, 35°.47N×3°.75W, h15^{km}, ml3.1*
*MDD **02** 02:30:37.2±0.4, 35°.46N×3°.83W, h0^{km}, mb_Lg2.8/14, Error ellipse: s-maj=3.5km s-min=3.1km az=161.0*
*SFS **02** 02:30:37.0, 35°.45N×3°.82W, ML2.8, ALBORAN SUR*
*INMG **02** 02:30:37.9±1.8, 35°.55N×3°.72W, h0^{km}±7^{km}, ML2.3, Error ellipse: s-maj=5.3km s-min=4.9km az=24.0*
*IGIL **02** 02:30:38.0, 35°.46N×3°.83W, h2^{km}, ML2.2*
ISC 02 02:30:36.8±1.0**, 35°.45N**±0°.03×**3°.78W**±0°.02**, h16**^{km}±8^{km}**, n60,** σ1^{s}.71/99**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.26	209	P	Pg	02 30 42.6	0.0
PALE				S	Sg	02 30 45.9	-0.6
PVLZ	Peæn de	0.50	237	P	Pg	02 30 46.6	-0.3
PVLZ				S	Sg	02 30 53.3	-0.4
GOG	Mont Gurugu	0.68	109	P	Pg	02 30 50.6	+0.4
GOG				S	Sg	02 30 58.2	-1.0
EMEL	Melilla	0.69	102	Pg	Pg	02 30 50.4	+0.1
EMEL				Sg	Sg	02 30 59.2	-0.3
WMELI	Melilla	0.69	101	P	Pg	02 30 50.2	-0.1
WMELI				S	Sg	02 30 58.5	-1.1
AKLM	AKL	0.94	184	P	Pb	02 30 55.4	+0.6
AKLM				S	Sg	02 31 06.4	-0.9
TAF	Taforalt	1.29	119	P	Pn	02 31 01.2	+1.0
CHEFC	Chefchaouen	1.32	256	P	Pn	02 31 00.9	+0.1
SMIR	Smir Dam	1.32	281	P	Pn	02 31 00.4	-0.3
ECEU	Ceuta	1.37	290	Pg	Pn	02 31 00.1	-1.3
ECEU				Sg	Sn	02 31 14.2	-5.1
ECEU				*i* Vmb_Lg		02 31 18.5	
EMIJ	Mijas	1.38	325	Pg	Pn	02 31 01.6	+0.2
EMIJ				Sg	Sn	02 31 20.0	+0.7
EMIJ				*i* Vmb_Lg		02 31 23.9	
EMAL	Malaga-Limoner	1.41	338	P	Pn	02 31 02.2	+0.2
EMAL				S	Sn	02 31 20.5	+0.2
ELGU	Los Guajares,	1.42	5	Pg	Pn	02 31 01.6	-0.6
ELGU				Sg	Sn	02 31 20.0	-0.6
JBK	JBK	1.49	138	P	Pn	02 31 03.5	+0.3
JBK				S	Sn	02 31 21.7	-0.8
EBER	Berja	1.62	26	Pn	Pn	02 31 05.0	0.0
EBER				Sn	Sn	02 31 24.9	-0.7
EBER				*i* Vmb_Lg		02 31 33.5	
EGOR	Sierra Gorda,	1.68	351	Pn	Pn	02 31 06.9	+1.2
EGOR				Sn	Sb	02 31 28.8	+0.2
EGOR				*i* Vmb_Lg		02 31 45.8	
LCRM	LCR	1.97	207	P	Pn	02 31 12.3	+2.6
LCRM				S	Sb	02 31 37.7	+1.0
ENIJ	Nijar	1.98	39	Pn	Pn	02 31 09.4	-0.5
ENIJ				Sn	Sn	02 31 32.1	-2.3
ENIJ				*i* Vmb_Lg		02 31 41.6	
IFR	Ifrane	2.22	210	P	Pn	02 31 13.7	+0.5
IFR				S	Sn	02 31 36.8	-3.7
EQES	Quesada	2.42	13	Pn	Pn	02 31 17.6	+1.7
EQES				Sn	Sn	02 31 47.7	+2.4
EQES				*i* Vmb_Lg		02 31 51.8	
CZD	Col de Zad	2.62	204	P	Pn	02 31 20.0	+1.2
MD31	MD31	2.70	198	P	Pn	02 31 21.2	+1.5
EADA	Adamuz	2.79	347	Pn	Pn	02 31 22.4	+1.5
EADA				Sn	Sb	02 31 58.3	-2.0
EADA				*i* Vmb_Lg		02 32 24.1	
ECAB	El Cabril	2.93	334	Pn	Pn	02 31 24.9	+2.0
ECAB				Sn	Sn	02 31 56.4	-1.4
CART	Cartagena	3.10	46	P	Pn	02 31 25.1	0.0
CART				S	Sn	02 31 59.3	-2.4
EMIN	Mina Concepcio	3.28	316	Pn	Pn	02 31 28.3	+0.6
EMIN				*i* Vmb_Lg		02 31 39.7	
EMIN				Sn	Sn	02 32 04.2	-2.2
EGRO	El Granado	3.64	306	Pn	Pn	02 31 32.1	-0.4
EGRO				Sn	Sn	02 32 13.8	-1.3
EGRO				*i* Vmb_Lg		02 32 22.5	
ETOB	Tobarra	3.66	29	Pn	Pn	02 31 34.6	+1.7
ETOB				*i* Vmb_Lg		02 31 38.7	
ETOB				Sn	Sn	02 32 15.8	0.0
PVAQ	Vaqueiros	3.73	303	*e*Pn	Pn	02 31 34.8	+1.1
PVAQ				*e*Sn	Sn	02 32 17.0	-0.3
PVAQ				A	A	02 32 22.6	
	6.6nm,0.3s						
PVAQ	Vaqueiros	3.73	303	P	Pn	02 31 36.0	+2.3
PBAR	Barrancos	3.77	317	*e*Pn	Pn	02 31 36.0	+1.6
PBAR				*e*Sn	Sn	02 32 19.2	+0.7
PBDV	Barranco-do-Ve	3.80	299	*e*Pn	Pn	02 31 37.0	+2.2
FIGM	Figuig	3.92	147	P	Pn	02 31 38.2	+1.7
PCVE	Castro Verde	4.06	304	*e*Pn	Pn	02 31 40.3	+1.9
PCVE				*e*Sn	Sn	02 32 25.3	-0.3
PCVE				A	A	02 32 32.0	
	3.4nm,0.6s						
PAB	San Pablo	4.12	354	Pn	Pn	02 31 39.9	+0.7
PAB				Sn	Sn	02 32 26.9	-0.1
PAB				*i* Vmb_Lg		02 32 56.7	
PBEJ	Beja	4.17	309	*e*Pn	Pn	02 31 42.3	+2.5
EBAD	Badajoz	4.19	323	Pn	Pn	02 31 40.4	+0.2
EBAD				Sn	Sn	02 32 26.5	-2.4
EBAD				*i* Vmb_Lg		02 32 29.3	
ESDC	Sonseca Array	4.22	358	Pn	Pn	02 31 41.8	+1.2
ESDC				Sn	Sn	02 32 26.9	-2.7
ESDC				*i* Vmb_Lg		02 33 34.9	
MESJ	Messejana	4.29	305	*e*P	Pn	02 31 42.1	+0.5
MESJ				*e*S	Sn	02 32 28.6	-2.7
MESJ				IAML		02 32 32.2	
	comp=N,5.0nm,0.5s						
PTEO	Sao Teotonio	4.50	299	*e*Pn	Pn	02 31 45.9	+1.6
PTEO				*e*Sn	Sn	02 32 35.6	-0.7
PTEO				A	A	02 32 58.2	
	comp=N,8.3nm,0.6s						
SRHM	Skhour des Reh	4.53	230	P	Pn	02 31 48.9	+4.1
PESTR	Estremoz	4.57	319	*e*Pn	Pn	02 31 47.4	+2.0
PESTR				*e*Sn	Sn	02 32 38.7	+0.5
PESTR				A	A	02 32 57.9	
	comp=N,2.8nm,0.6s						
PESTR	Estremoz	4.57	319	P	Pn	02 31 48.1	+2.7
EVO	Evora	4.58	314	P	Pn	02 31 46.9	+1.4
EVO				S	Sn	02 32 36.1	-2.1
EVO	Evora	4.58	314	*e*Pn	Pn	02 31 47.0	+1.6
EVO				*e*Sn	Sn	02 32 37.4	-0.9
EVO				A	A	02 32 44.6	
	comp=N,2.8nm,0.3s						
PNCL	Nicolau / Gran	4.65	306	*e*Pn	Pn	02 31 47.5	+1.1
PNCL				*e*Sn	Sn	02 32 39.4	-0.6
PNCL				A	A	02 32 53.8	
	comp=N,2.5nm,0.4s						
UCM	Universidad Co	4.87	5	P	Pn	02 31 52.3	+2.8
UCM				S	Sn	02 32 41.9	-3.7
TZRR	Tazzarine	4.88	198	P	Pn	02 31 50.9	+1.1
PMRV	Marv??o	4.90	325	*e*Pn	Pn	02 31 51.5	+1.6
PMTG	Montargil	5.06	317	*e*Pn	Pn	02 31 54.0	+1.9
PMTG				*e*Sn	Sn	02 32 49.5	-0.7
OUZM	OUZ	5.17	210	P	Pn	02 31 55.5	+1.8
PACT	Alcochete	5.22	311	*e*Pn	Pn	02 31 56.3	+2.0
PCBR	Castelo Branco	5.28	327	*e*Pn	Pn	02 31 57.8	+2.8
OUK	Oukaimeden	5.44	220	P	Pn	02 31 57.3	-0.3
PSBE	So Bento	5.69	317	*e*Pn	Pn	02 32 03.9	+3.2
PSBE				*e*Sn	Sn	02 33 05.2	-0.6
PCAS	Casmilo, Conde	5.92	322	*e*Pn	Pn	02 32 07.1	+3.1
EAH	EAH	6.15	234	P	Pn	02 32 07.4	+0.3
TTIG	Tnine Tigouga,	6.26	220	P	Pn	02 32 09.4	+0.8
PVRL	Vila Real	6.59	333	*e*Pn	Pn	02 32 15.3	+2.2
PVRL				*e*Sn	Sn	02 33 28.5	+0.6
PVRL				A	A	02 33 29.3	
	comp=N,2.6nm,0.6s						
PBRG	Braganca	6.76	341	*e*Pn	Pn	02 32 18.4	+3.0

*JMA **02** 02:33:40.0±0.5, 45°N±3°×14°8E±°, h120^{km}, MV3.5/16, SE OFF ETOROFU*
*SKHL **02** 02:33:40.2±0.4, 44°.80N×148°.10E, h141^{km}±4^{km}, mb4.4/3, msha4.9/3*
ISC 02 02:33:39.2±3.9**, 44°.7N**±0°.2×**148°.2E**±0°.2**, h143**^{km}±21^{km}**, n11,** σ1^{s}.00/20**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.61	337	*i* P	Pn	02 34 00.3	0.0
KUR				AMB	AMB	02 34 00.7	
	30nm,0.3s						
KUR				AMB	AMB	02 34 00.7	
	10.0nm,0.3s						
KUR				AMB	AMB	02 34 00.7	
	140nm,0.3s						
KUR				*i* S	Sn	02 34 15.7	-0.7
KUR				A	A	02 34 16.2	
	140nm,0.2s						
KUR				A	A	02 34 16.2	
	120nm,0.2s						
SHO	Shikotan	1.27	231	*i* P	Pn	02 34 07.0	+1.2
SHO				AMB	AMB	02 34 07.3	
	180nm,0.5s						
SHO				*i* S	Sn	02 34 26.6	+0.6
SHO				A	A	02 34 28.0	
	240nm,0.6s						
SHO				A	A	02 34 28.0	
	430nm,0.6s						
YUK	Yuzh-Kuril'sk	1.79	250	*i* P	Pn	02 34 12.3	+0.9
YUK				AMB	AMB	02 34 12.7	
	120nm,0.5s						
YUK				*i* S	Sn	02 34 36.3	+0.2
YUK				A	A	02 34 37.8	
	100nm,0.5s						
YUK				A	A	02 34 37.8	
	280nm,0.5s						
NEM2	Nemuro 2	2.20	234	*e*P	Pn	02 34 16.6	+0.4
NEM2				*e*S	Sn	02 34 43.3	-1.4
NMR	Nemuro--Hokkai	2.21	235	*e*P	Pn	02 34 16.5	+0.2
NMR				*e*S	Sn	02 34 43.5	-1.3
JRA	Rausu	2.33	253	*e*P	Pn	02 34 18.4	+0.6
JKHN	Kushirohamanak	2.71	235	*e*P	Pn	02 34 23.1	+0.5
JKHN				*e*S	Sn	02 34 55.6	-0.3
AKK	Akkeshi	2.94	237	*e*P	Pn	02 34 25.8	+0.4
AKK				*e*S	Sn	02 35 00.1	-1.0
JAK	Akkeshi	3.04	238	*e*P	Pn	02 34 27.0	+0.3
JAK				*e*S	Sn	02 35 02.1	-1.2
JAR	Ashorobuto	3.48	248	*e*P	Pn	02 34 33.6	+1.2
JAR				*e*S	Sn	02 35 14.1	+0.5
JCH	Churui	4.07	241	*e*S	Sn	02 35 25.5	-1.9

*ISK **02** 02:50:09.5, 40°.09N×42°.81E, h10^{km}, ML2.6/8*
*DDA **02** 02:50:09.9±0.0, 40°.11N×42°.79E, h7^{km}±1^{km}, ML2.7*
ISC 02 02:50:09.9±1.1**, 40°.09N**±0°.03×**42°.79E**±0°.04**, h15**^{km}±11^{km}**, n13,** σ0^{s}.51/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EATA	Eleskirt	0.32	225	P	Pg	02 50 16.9	+0.1
EATA				S	Sb	02 50 22.6	-0.1
EATA				*i* AML	AML	02 50 24.0	
	comp=E,742nm,0.5s						
EATA				*i* AML	AML	02 50 25.0	
	comp=N,962nm,0.4s						
KOTA	Agri, Merkez-K	0.43	132	P	Pg	02 50 18.8	+0.1
AGRB	Hanur-Agry	0.54	163	PG	Pb	02 50 20.9	-0.3
AGRB				SG	Sg	02 50 27.8	-0.1
SENK	Senkaya-Erzuru	0.58	325	PG	Pg	02 50 21.5	+0.1
SENK				SG	Sb	02 50 30.5	+0.6
KARS	Kars	0.58	23	PG	Pg	02 50 20.9	-0.5
KARS				SG	Sb	02 50 29.6	-0.4
KOPR	Koprukoy-ERZUR	0.72	262	PG	Pg	02 50 23.7	-0.4
EAK	Akyaka	0.86	46	P	Pb	02 50 26.6	-0.1
EAK				S	Sn	02 50 39.7	-0.4
EAK				*i* AML	AML	02 50 41.0	
	comp=N,236nm,0.4s						
CLDR	Caldiran	1.29	137	PN	Pn	02 50 34.1	+0.5
EPOS	Posof	1.41	358	P	Pb	02 50 36.0	0.0
AKH	Akhalkalaki	1.42	22	PN	Pn	02 50 35.4	0.0
KRIK	Erzurum-spir	1.45	280	P	Pn	02 50 35.2	-0.6
GNI	Garni	1.50	87	PN	Pb	02 50 37.6	0.0
BATM	Batumi	1.72	332	PN	Pn	02 50 40.7	+1.3

*IDC **02** 02:56:59.9±3.7, 24°.30S×179°.96E, h503^{km}±30^{km}, mb3.3/6, mbtmp4.1/8, Error ellipse: s-maj=73.7km s-min=19.5km az=150.0*
*NEIC **02** 02:56:60.0±2.4, 24°.3S±0°.1×180°.0W±0°.2, h501^{km}±10^{km}, mb4.1/16, Error ellipse: s-maj=20.3km s-min=16.6km az=92.0*
ISC 02 02:57:00.9±0.6**, 24°.3S**±0°.1×**180°.0E**±0°.1**, h517**^{km}**, n32,** σ1^{s}.15/33**, mb4.0**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.29	160	P	P	02 58 29.6	-1.7
MSVF	Nonsavu	6.76	344	P	P	02 58 45.2	-0.3
	6.1nm,0.4s,baz=240,slow=20,SNR=2.1						
MARNC	Mare, Loyalty	11.37	282	P	P	02 59 33.5	+0.8
PINNC	Pines Island,	11.63	276	P	P	02 59 37.3	+1.8
DZM	Mont Dzumac	12.65	277	P	P	02 59 46.4	0.0
	8.0nm,0.7s,baz=74,slow=16,SNR=6.3						
DZM	Mont Dzumac	12.65	277	P	P	02 59 47.3	+1.0
CTAO	Charters Tower	31.46	271	P	P	03 02 40.5	+0.6
STKA	Stephens Creek	34.57	249	P	P	03 03 06.2	+0.1
	2.3nm,0.6s,baz=135,slow=11,SNR=3.8						
	2.3nm,0.6s						
STKA	Stephens Creek	34.57	249	P	P	03 03 06.4	+0.3
BBOO	Buckleboo	39.28	247	P	P	03 03 43.8	-1.1
AS31	Alice Springs	41.96	261		P	03 04 05.9	-0.6
ASAR	Alice Springs	41.96	261	P	P	03 04 05.9	-0.5
	1.3nm,0.6s,baz=93,slow=7.3,SNR=25						
	1.3nm,0.6s						
ASAR	Alice Springs	41.96	261	P	P	03 04 05.4	-1.0
WR0	Warramunga Arr	42.18	267	P	P	03 04 07.0	-1.2
WR0				IAmb	IAmb	03 04 09.5	
	comp=Z,5.9nm,1.2s						
WB2	Warramunga Arr	42.36	267	P	P	03 04 08.5	-1.0
WB2				IAmb	IAmb	03 04 08.9	
	comp=Z,4.9nm,0.5s						
WRAB	Tennant Creek	42.36	267	P	P	03 04 08.6	-1.0
WRAB				IAmb	IAmb	03 04 22.9	
	comp=Z,7.5nm,0.9s						
WB0	Warramunga Arr	42.36	267	P	P	03 04 08.6	-1.0
WB0				IAmb	IAmb	03 04 09.3	
	comp=Z,4.5nm,0.7s						
WRA	Warramunga Arr	42.37	267	P	P	03 04 08.9	-0.8
	comp=Z,3.3nm,0.5s,baz=98,slow=7.9,SNR=118						
WRA				ScP	ScP	03 08 55.8	+3.1
	comp=Z,1.4nm,1.0s,baz=98,slow=4.4,SNR=7.0						
	comp=Z,3.3nm,0.5s						
WRA	Warramunga Arr	42.37	267	P	P	03 04 08.5	-1.2
KNRA	Kununurra	48.67	270	P	P	03 04 57.3	-0.6
FITZ	Fitzroy Crossi	50.78	266	P	P	03 05 13.3	-0.2
FITZ				IAmb	IAmb	03 05 14.2	
	comp=Z,3.4nm,0.8s						
SBA	Scott Base	54.00	183	P	P	03 05 37.7	+2.2
SBA				IAmb	IAmb	03 05 39.5	
	comp=Z,8.2nm,1.4s						
MORW	Morawa	56.73	250	P	P	03 05 53.7	-1.7
QSPA	South Pole Qui	65.80	180	P	P	03 06 55.0	+0.5
QSPA				IAmb	IAmb	03 06 56.4	
	comp=Z,7.6nm,1.5s						
BELA	Belgrano 2	76.06	173	P	P	03 07 54.1	-0.3
MNTX	Cornudas Mount	90.44	55		P	03 09 07.4	+0.2
MNTX				IAmb	IAmb	03 09 18.0	
	comp=Z,2.7nm,0.8s						
TXAR	Lajitas Array	90.64	58	P	P	03 09 09.7	+1.3
	comp=Z,1.5nm,0.8s,baz=216,slow=4.0,SNR=3.6						
	comp=Z,1.5nm,0.8s						
TXAR	Lajitas Array	90.64	58	P	P	03 09 09.5	+1.1
ILAR	Eielson Array	92.40	14	P	P	03 09 14.5	-0.9
	comp=Z,0.4nm,1.0s,baz=216,slow=5.6,SNR=2.2						
	comp=Z,0.4nm,1.0s						
PDAR	Pinedale Array	92.97	44	P	P	03 09 18.9	0.0
	comp=Z,0.1nm,0.3s,baz=191,slow=0.5,SNR=2.0						
	comp=Z,0.1nm,0.3s						
ARCES	ARCESS Array B	132.25	348	PKP	PKPdf	03 15 14.7	-0.4
	comp=Z,0.4nm,0.6s,baz=29,slow=2.8,SNR=5.7						
ARCES	ARCESS Array B	132.25	348		PKPdf	03 15 15.5	+0.4

NEIC 02 03:04:47.8±0.9**, 37°.24N**±0°.03×**97°.97W**±0°.02**, h5**^{km}±4^{km}**, Error ellipse: s-maj=4.6km s-min=2.0km az=192.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.19	224	Pg	Pg	03 05 09.8	-0.8
U32A				Sg	Sb	03 05 26.6	+0.2
T35A	Sooner Cattle	1.21	105	Pg	Pg	03 05 10.1	-0.9
R32A	Long Quarter,	1.32	334	Pn	Pn	03 05 12.0	-1.0
OKCFA	Oklahoma City	1.86	167	IAmb_Lg		03 05 50.8	
	comp=Z,21nm,0.7s						
OKCSW	OKLAHOMA CITY	1.88	167	Pn	Pn	03 05 20.8	+0.3
FNO	Franklin	2.03	167	Pn	Pn	03 05 22.9	+0.3
CBKS	Cedar Bluff	2.10	319	Pn	Pn	03 05 23.9	+0.2
TUL1	Leonard	2.20	126	Pn	Pn	03 05 25.6	+0.6
X34A	Smith Ranch, M	2.63	178	Pn	Pn	03 05 31.3	+0.4
HHAR	Hobbs	3.38	105	Pn	Pn	03 05 41.5	+0.3
HHAR				IAmb_Lg		03 06 42.5	
	comp=Z,10nm,0.7s						
X37A	Clayton	3.38	141	Pn	Pn	03 05 41.4	+0.2
S39A	Bolivar	3.73	82	Pn	Pn	03 05 46.4	+0.4
AMTX	Amarillo	3.81	233	Pn	Pn	03 05 48.2	+0.9
AMTX				IAmb_Lg		03 06 51.3	
	comp=Z,9.2nm,0.8s						
W39A	Magazine	3.95	120	Pn	Pn	03 05 50.0	+1.0
N35A	Tabor	4.05	26	Pn	Pn	03 05 50.5	+0.1
BGNE	Belgrade	4.17	358	Pn	Pn	03 05 53.1	+1.0
BGNE				IAmb_Lg		03 07 10.6	
	comp=Z,10nm,0.8s						
U40A	Yellville	4.20	101		Pn	03 05 53.0	+0.5
U40A				IAmb_Lg		03 07 03.2	
	comp=Z,17nm,0.7s						
MIAR	Mount Ida	4.46	126	Pn	Pn	03 05 56.6	+0.5
MIAR				IAmb_Lg		03 07 11.2	
	comp=Z,9.9nm,0.8s						
MGMO	Mountain Grove	4.55	89	Pn	Pn	03 05 57.8	+0.5
MGMO				IAmb_Lg		03 07 14.1	
	comp=Z,10nm,0.8s						
R40A	Maddies Statio	4.64	75	Pn	Pn	03 05 58.1	-0.4
OGNE	Ogallala	4.87	321	Pn	Pn	03 06 02.5	+0.7
FCAR	Ozark Folk Cen	4.89	104	Pn	Pn	03 06 01.1	-0.9
FCAR				IAmb_Lg		03 07 22.5	
	comp=Z,10nm,0.8s						
WHAR	Wooly Hollow	4.99	111	Pn	Pn	03 06 03.0	-0.3
WHAR				IAmb_Lg		03 07 36.7	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	4.99	122	Pn	Pn	03 06 03.5	+0.2
X40A				IAmb_Lg		03 07 36.2	
	comp=Z,12nm,1.2s						
W41B	Gary Mavity, V	5.07	112	Pn	Pn	03 06 05.5	+1.1
W41B				IAmb_Lg		03 07 31.4	
	comp=Z,7.1nm,0.7s						
N38A	Joes South For	5.12	45	Pn	Pn	03 06 05.9	+0.8
N38A				IAmb_Lg		03 07 30.2	
	comp=Z,9.9nm,1.0s						
T25A	Trinidad	5.14	271	Pn	Pn	03 06 05.2	-0.4
UALR	University of	5.18	117	IAmb_Lg		03 07 42.7	
	comp=Z,9.1nm,1.0s						
P40A	Paris	5.19	62	Pn	Pn	03 06 05.3	-0.7
WLAR	White Oak Lake	5.32	130	Pn	Pn	03 06 08.5	+0.7
CCM	Cathedral Cave	5.40	79	Pn	Pn	03 06 09.6	+0.7
CCM				IAmb_Lg		03 07 42.7	
	comp=Z,4.9nm,0.8s						
K31A	O'Neill	5.42	354	IAmb_Lg		03 07 48.0	
	comp=Z,11nm,0.7s						
LCAR	Lake Charles	5.60	100	Pn	Pn	03 06 12.6	+0.8
Q24A	Divide	5.92	289	IAmb_Lg		03 07 59.9	
	comp=Z,11nm,1.0s						
FVM	French Village	6.04	81	IAmb_Lg		03 07 58.5	
	comp=Z,5.5nm,0.7s						
ISCO	Idaho Springs	6.52	295	Pn	Pn	03 06 24.9	+0.4
ISCO				IAmb_Lg		03 08 19.0	
	comp=Z,3.9nm,0.9s						
ECSD	EROS Data Cent	6.57	9	Pn	Pn	03 06 23.8	-1.2
JCT	Junction City	6.91	193	Pn	Pn	03 06 31.1	+1.4
S44A	Carbondale	6.95	84	Pn	Pn	03 06 30.2	0.0
SIUC	Southern Illin	6.98	83	Pn	Pn	03 06 30.4	-0.3
SIUC				IAmb_Lg		03 08 31.0	
	comp=Z,8.7nm,0.9s						
N23A	Red Feather La	7.20	303	Pn	Pn	03 06 34.2	+0.3
N23A				IAmb_Lg		03 08 38.9	
	comp=Z,7.5nm,0.7s						
OXF	Oxford	7.46	109	Pn	Pn	03 06 36.3	-1.0
RSSD	Black Hills	8.28	328	Pn	Pn	03 06 48.9	+0.3

TAP 02 03:07:41.9, 24°.25N×121°.73E, h8^{km}, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.06	13	*e*P	Pg	03 07 44.9	+1.1
	baz=19						
EHP				*e*S	Sg	03 07 47.1	+2.0
	baz=19						
ETL	Fush Village	0.13	226	*e*S	Sg	03 07 48.2	+1.4
	baz=226						
NACB	Ninganchiao	0.14	238	P	Pg	03 07 45.8	+0.9
	baz=238						
NACB				S	Sg	03 07 48.4	+1.4
	baz=238						
ENA	Nanau	0.18	4	*e*P	Pg	03 07 46.6	+1.0
	baz=6.0						
ENA				*e*S	Sg	03 07 49.9	+1.7
	baz=6.0						
EWUT	Wuta	0.20	14	P	Pg	03 07 46.9	+0.9
	baz=13						
EWUT				*e*S	Sg	03 07 50.3	+1.5
	baz=13						
TWD	Chiawan	0.21	215	*e*P	Pg	03 07 46.6	+0.5
	baz=213						
TWD				*e*S	Sg	03 07 49.7	+0.8
	baz=213						
ETLH	Xiulin Townshi	0.23	259	*e*S	Sg	03 07 50.7	+1.1
	baz=259						
LATG	Datong	0.34	327	*e*P	Pb	03 07 49.9	-0.4
	baz=327						
NNSB	Datong	0.36	300	*e*P	Pb	03 07 50.4	-0.2
	baz=299						
NNS	Nan Shan	0.37	301	*e*P	Pb	03 07 50.5	-0.4
	baz=300						
TWC	Suao	0.38	17	*e*P	Pb	03 07 50.1	-0.8
	baz=18						
NDS	Dongshan	0.38	359	*e*P	Pb	03 07 50.6	-0.4
	baz=358						
ENTT	Nioudou	0.42	339	*e*P	Pb	03 07 51.5	-0.1
	baz=340						
ENTT				*e*S	Sb	03 07 56.9	-1.1
	baz=340						
TWE	Neicheng	0.47	353	*e*P	Pb	03 07 52.5	-0.1
	baz=355						
TWT	Tachien	0.50	271	*e*P	Pb	03 07 52.9	-0.2
	baz=270						
FUSB	Fushanzhiwuyua	0.52	346	*e*P	Pb	03 07 53.5	+0.1
	baz=346						
YHNB	Yeheng	0.53	323	*e*P	Pb	03 07 53.7	+0.2
	baz=322						
CHGB	Renai	0.54	250	*e*P	Pb	03 07 53.4	-0.4
	baz=249						
NSK	Sanguang	0.54	322	*e*P	Pb	03 07 53.9	+0.2
	baz=322						
NWLT	Wulai	0.56	339	*e*P	Pb	03 07 54.1	0.0

	baz=338						
NTC	Toucheng	0.61	9	*e*P	Pb	03 07 54.5	-0.4
	baz=8.0						
WUSB	Renai	0.61	245	*e*P	Pb	03 07 54.7	-0.3
	baz=245						
WUSB				*e*S	Sb	03 08 03.2	-0.6
	baz=245						
EGFH	Guangfu	0.64	205	*e*S	Sg	03 08 03.5	+0.9
	baz=205						
NFF	Wufeng Townshi	0.67	305	*e*S	Sb	03 08 05.8	+0.3
	baz=304						
WHP	Taichung City	0.71	272	*e*S	Sb	03 08 06.4	-0.2
	baz=272						
TIPB	Shuangxi	0.72	7	*e*P	Pb	03 07 57.1	+0.2
	baz=7.0						
TIPB				*e*S	Sb	03 08 06.4	-0.5
	baz=7.0						

*JMA **02** 03:26:47.4±1.2, 48°N±7°×15°5E±1°0, h30^{km}, MV4.3/11, FAR FIELD*
*SKHL **02** 03:26:49.4±0.0, 47°.70N×155°.30E, h60^{km}±4^{km}, mb4.9/11*
*MOS **02** 03:26:49.9±1.0, 47°.97N×154°.79E, h49^{km}, mb4.5/7, Error ellipse: s-maj=13.8km s-min=3.8km az=73.5*
*IDC **02** 03:26:52.5±3.3, 48°.17N×154°.27E, h53^{km}±29^{km}, mb3.6/12, mbtmp3.9/16, ML3.0/3, MS3.0/11, Error ellipse: s-maj=25.1km s-min=16.5km az=134.0*
*NEIC **02** 03:26:54.6±1.5, 48°.2N±0°.1×154°.4E±0°.2, h63^{km}±8^{km}, mb4.3/42, Error ellipse: s-maj=21.3km s-min=11.5km az=132.0*
ISC 02 03:26:50.6±0.6**, 47°.91N**±0°.08×**154°.73E**±0°.08**, h42^{km}, n181, σ1^{s}60**/171**, mb4.2**/44**, MS3.2**/6**, 3C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.92	18	*e*PN	Pn	03 27 34.2	-0.3
SKR				*e*S	Sn	03 28 08.0	-0.3
SKR				pmax	pmax		
	comp=Z,154nm,0.6s						
SKR				smax	smax		
	comp=N,419nm,0.8s						
SKR				smax	smax		
	comp=E,228nm,0.3s						
SKR	Severo-Kuril's	2.92	18	*e*P	Pn	03 27 34.2	-0.3
SKR				AMB	AMB	03 27 36.1	
	comp=E,150nm,0.5s						
SKR				*e*S	Sn	03 28 07.8	-0.5
SKR				A	A	03 28 10.9	
	comp=E,420nm,0.8s						
SKR				A	A	03 28 10.9	
	comp=E,230nm,0.3s						
PAU	Pauzhetka	3.81	20	PN	Pn	03 27 46.7	0.0
PAU				S	Sn	03 28 28.4	-1.8
PAU	Pauzhetka	3.81	20	*e*P	Pn	03 27 47.0	+0.3
PAU				AMB	AMB	03 27 49.1	
	comp=E,70nm,0.2s						
PAU				AMB	AMB	03 27 49.1	
	comp=E,70nm,0.2s						
PAU				*e*S	Sn	03 28 30.2	0.0
PAU				A	A	03 28 35.1	
	comp=E,430nm,0.4s						
PAU				A	A	03 28 35.1	
	comp=E,440nm,0.4s						
KDTR	Khodutka, Kamc	4.46	28	PN	Pn	03 27 54.6	-1.1
MIPR	Malaya Ipel'ka	4.56	16	PN	Pn	03 27 57.1	0.0
ASAK	Asacha	4.92	23	PN	Pn	03 28 02.1	0.0
MTVR	Mutnovka	5.09	25	PN	Pn	03 28 04.4	0.0
MTVR				S	Sn	03 29 00.2	-1.7
GRL	Gorelyy	5.12	23	PN	Pn	03 28 05.2	+0.4
RUS	Russkaya	5.14	27	PN	Pn	03 28 03.7	-1.3
RUS	Russkaya	5.14	27	*e*P	Pn	03 28 03.7	-1.3
APC	Apacha	5.26	16	PN	Pn	03 28 08.4	+1.8
KRMR	Karymshinskiy	5.39	23	PN	Pn	03 28 09.3	+1.0
KUR	Kuril'sk	5.44	243	*e*PN	Pn	03 28 13.0	+3.9
KUR				pmax	pmax		
	comp=Z,139nm,0.6s						
KUR				pmax	pmax		
	comp=N,50nm,0.4s						
KUR	Kuril'sk	5.44	243	*e*P	Pn	03 28 13.0	+3.9
KUR				AMB	AMB	03 28 16.4	
	comp=N,140nm,0.7s						
PEA0B	Petropavlovsk-	5.54	19	c*e*PN	Pn	03 28 11.3	+0.8
PEA0B	Petropavlovsk-	5.54	19		Pn	03 28 11.3	+0.8
PETK	Petropavlovsk-	5.54	19	P	Pn	03 28 10.8	+0.3
	comp=N,4.0nm,0.3s,baz=107,slow=20,SNR=92						
PETK				S	Sn	03 29 24.7	+12
	comp=N,2.8nm,0.5s,baz=230,slow=22,SNR=0.9						
	comp=N,18nm,0.6s						
PETK	Petropavlovsk-	5.54	19		Pn	03 28 10.6	+0.1
PET	Petropavlovsk	5.70	25	*e*PN	Pn	03 28 13.7	+1.1
PET	Petropavlovsk	5.70	25	Pn	Pn	03 28 12.1	-0.5
PET	Petropavlovsk	5.70	25	*e*P	Pn	03 28 12.8	+0.2
PET				AMB	AMB	03 28 14.5	
	comp=N,120nm,0.6s						
PET				*e*S	Sn	03 29 14.8	-1.9
PET				A	A	03 29 32.8	
	comp=N,200nm,0.7s						
PET				A	A	03 29 32.8	
	comp=N,120nm,0.7s						
DALK	Dalny	5.74	25	PN	Pn	03 28 13.1	0.0
UGLR	Uglovaya	5.91	25	PN	Pn	03 28 16.1	+0.4
KOK	Koryaka	5.94	23	PN	Pn	03 28 17.3	+1.3
KOK	Koryaka	5.94	23	*e*P	Pn	03 28 17.3	+1.3
AVH	Avacha	5.94	24	PN	Pn	03 28 16.9	+0.9
SMAR	Somma	5.95	24	PN	Pn	03 28 16.7	+0.4
KRER	Koryakskii	5.98	24	PN	Pn	03 28 17.5	+0.9
SDLR	Sedlovina	5.99	25	PN	Pn	03 28 16.6	-0.2
KRX	Arik	6.00	23	PN	Pn	03 28 17.8	+0.9
GNL	Ganaly	6.14	18	PN	Pn	03 28 20.3	+1.5
SPN	Mys Shipunski	6.20	31	PN	Pn	03 28 18.4	-1.0
KII	Karymskiy	6.82	24	PN	Pn	03 28 29.5	+1.4
YUK	Yuzh-Kuril'sk	7.29	241	*e*P	Pn	03 28 37.4	+2.9
YUK				AMB	AMB	03 28 42.4	
	comp=N,70nm,0.8s						
NEM2	Nemuro 2	7.76	238	*e*P	Pn	03 28 41.4	+0.4
NEM2				*e*S	Sn	03 30 05.1	-2.5
NMR	Nemuro--Hokkai	7.77	238	*e*P	Pn	03 28 43.1	+2.0
MKZ	Mys Kozlova	7.97	31	PN	Pn	03 28 41.5	-2.3
TUMR	Tumrok	8.12	22	PN	Pn	03 28 46.4	+0.5
YSS	Yuzh-Sakhalins	8.18	268	*e*PN	Pn	03 28 51.9	+5.2
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	Yuzh-Sakhalins	8.18	268	*e*P	Pn	03 28 51.9	+5.2
YSS				AMB	AMB	03 28 53.5	
	comp=Z,40nm,0.6s						
JNK	Nakash	8.23	242	*e*P	Pn	03 28 49.6	+2.3
TYV	Tymovskoe	8.42	295	*e*P	Pn	03 28 56.1	+6.2
TYV				AMB	AMB	03 28 58.5	
	comp=Z,40nm,0.7s						
AKK	Akkeshi	8.50	239	*e*P	Pn	03 28 52.2	+1.2
JAK	Akkeshi	8.59	239	*e*P	Pn	03 28 52.9	+0.5
JAK				*e*S	Sn	03 30 24.6	-3.3
JAR	Ashorobuto	8.96	243	*e*P	Pn	03 29 00.1	+2.7
JWK2	Keihoku	9.21	258	*e*P	Pn	03 29 06.3	+5.6
JKA	Kamikawa-asahi	9.25	250	Pn	Pn	03 29 03.4	+2.0
JKA	Kamikawa-asahi	9.25	250	*e*P	Pn	03 29 03.4	+2.0
ASAJ	Asahikawa	9.26	250	P	Pn	03 29 04.5	+3.1
	comp=Z,10nm,0.7s,baz=83,slow=17,SNR=9.3						
ASAJ				LR	LR	03 32 55.4	
	comp=Z,42nm,18.8s,baz=328,slow=40						
ASAJ	Asahikawa	9.26	250	PN	Pn	03 29 03.4	+2.0
JKK2	Kamakawa 2	9.28	249	*e*P	Pn	03 29 05.2	+3.4
OKH	Okha	9.37	311	*e*P	Pn	03 29 09.0	+6.1
OKH				AMB	AMB	03 29 11.6	
	comp=Z,30nm,0.4s						
JCH	Churui	9.60	241	*e*P	Pn	03 29 06.7	+0.5
JCH				*e*S	Sn	03 30 49.2	-3.5
KBTR	Krutoberegovo	9.68	28	PN	Pn	03 29 07.4	+0.2
ERM	Erimo	10.10	239	c*e*PN	Pn	03 29 14.1	+1.2
ERM	Erimo	10.10	239	Pn	Pn	03 29 13.8	+0.9
JNBK	Urakawa-nobuka	10.16	241	*e*P	Pn	03 29 13.4	-0.5
NKL	Nikolayevsk	10.37	306	*e*P	Pn	03 29 22.4	+5.9
MA2	Magadan	11.92	350	P	Pn	03 29 35.8	-2.0
	comp=Z,4.0nm,0.5s,baz=160,slow=9.9,SNR=4.3						
MA2				LR	LR	03 34 37.3	
	comp=Z,80nm,18.7s,baz=134,slow=40						
MA2	Magadan	11.92	350	PN	Pn	03 29 37.5	-0.3
MA2	Magadan	11.92	350	Pn	Pn	03 29 37.5	-0.3
MA2	Magadan	11.92	350	*e*P	Pn	03 29 37.5	-0.3
JANG	Nango	12.11	236	*e*P	Pn	03 29 37.8	-2.7
JANG				*e*S	Sn	03 31 47.5	-6.6
GRNR	Gornyy	12.28	290	*e*P	Pn	03 29 45.3	+2.5
GRNR				AMB	AMB	03 29 49.3	
TEY	Ternei	12.82	264	*e*P	Pn	03 29 53.3	+3.2
KHBR	Khabarovsk	13.14	280	*e*P	Pn	03 29 57.8	+3.3
KHBR				AMB	AMB	03 29 59.3	
	comp=Z,20nm,0.6s						
SEY	Seymchan	15.12	356	P	Pn	03 30 19.3	-1.7
	comp=Z,0.1nm,0.3s,baz=197,slow=19,SNR=2.4						
SEY				LR	LR	03 36 24.5	
	comp=Z,78nm,21.6s,baz=336,slow=39						
	comp=Z,0.4nm,0.4s						
SEY	Seymchan	15.12	356	⇑*i*P	Pn	03 30 22.1	+1.1
SEY				pmax	pmax		
	comp=Z,8.0nm,1.8s						
SEY	Seymchan	15.12	356	*e*P	Pn	03 30 22.1	+1.1
KLR	Kul'dur	15.26	284	P	Pn	03 30 24.0	+1.0
	comp=Z,0.3nm,0.3s,baz=68,slow=18,SNR=1.0						
KLR				LR	LR	03 36 28.0	
	comp=Z,54nm,19.3s,baz=80,slow=39						
KLR	Kul'dur	15.26	284	⇓*e*P	P	03 30 28.4	+1.1
KLR	Kul'dur	15.26	284	*e*P	Pn	03 30 24.2	+1.2
JSD	Sado	15.55	237	P	P	03 30 32.1	+1.6
USRK	Ussuriysk Ar.	16.20	265	P	P	03 30 38.2	+0.5
USRK	Ussuriysk Ar.	16.20	265	P	P	03 30 38.1	+0.5
GRTR	Gornotajezhnoj	16.28	263	*e*P	Pn	03 30 36.8	+0.8
MJAR	Matsushiro Arr	16.66	233	P	Pn	03 30 39.6	-1.3
	baz=29,slow=13,SNR=5.8						
MJAR				LR	LR	03 37 53.5	
	comp=Z,37nm,19.2s,baz=63,slow=40						
	comp=Z,2.1nm,0.7s						
ZEA	Zeya	18.25	299	*e*P	Pn	03 31 04.5	+4.1
ZEA				AMB	AMB	03 31 05.5	
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	19.98	324	LR	LR	03 38 42.3	
	comp=Z,33nm,21.0s,baz=87,slow=36						
BILL	Bilibino	21.02	12	⇓*e*P	P	03 31 29.4	-0.9
BILL				*e*S	Sn	03 35 39.2	+10
BILL				pmax	pmax		
	comp=Z,10.0nm,2.6s						
BILL				MLR	MLR		
	comp=Z,156nm,20.0s						
BILL	Bilibino	21.02	12	P	P	03 31 30.1	-0.2
BILL	Bilibino	21.02	12	*e*P	P	03 31 29.4	-0.9
KSRS	Korea Array	22.20	252	P	P	03 31 45.1	+2.0
	comp=Z,1.6nm,0.7s,baz=44,slow=9.6,SNR=4.6						
KSRS				LR	LR	03 40 14.4	
	comp=Z,17nm,19.2s,baz=80,slow=36						
KSRS	Korea Array	22.20	252	*e*P	P	03 31 47.1	+3.9
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TIXI	Tiksi	26.69	342	LR	LR	03 43 47.2	
	comp=Z,49nm,18.5s,baz=180,slow=38						
H11N2	WAKE ISLAND Hy	29.79	156	T	T	04 04 36.3	
	baz=349,slow=74,SNR=266						
H11N1	WAKE ISLAND Hy	29.81	156	T	T	04 04 35.8	
	baz=349,slow=74,SNR=492						
H11N3	WAKE ISLAND Hy	29.81	156	T	T	04 04 34.2	
	baz=349,SNR=246						
TTA	Tatalina	30.82	43	P	P	03 33 03.7	+1.5
TTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TTA	Tatalina	30.82	43	P	P	03 33 03.6	+1.5
TTA				IAmb	IAmb	03 33 05.3	
	comp=Z,6.7nm,1.3s						
H11S1	WAKE ISLAND Hy	30.91	157	T	T	04 05 59.2	
	baz=344,slow=76,SNR=2252						
H11S3	WAKE ISLAND Hy	30.92	158	T	T	04 05 59.9	
	baz=344,slow=76,SNR=2501						
H11S2	WAKE ISLAND Hy	30.93	157	T	T	04 06 01.1	
	baz=344,slow=76,SNR=1758						
K20K	Telida	31.74	42	P	P	03 33 12.4	+2.2
J20K	Nowinta River	31.78	40	P	P	03 33 12.1	+1.5
J20K				IAmb	IAmb	03 33 12.5	
	comp=Z,4.2nm,1.1s						
IMAR	Indian Mountai	32.18	37	P	P	03 33 14.5	+0.5
KDAK	Kodiak Island	32.52	52	LR	LR	03 46 21.0	
	comp=Z,40nm,20.1s,baz=221,slow=36						
H21K	Melozitna Rive	32.52	38	P	P	03 33 18.1	+1.1
H21K				IAmb	IAmb	03 33 19.3	
	comp=Z,2.6nm,0.8s						
CAST	Castle Rocks	32.64	42	P	P	03 33 19.7	+1.6
CAST				IAmb	IAmb	03 33 39.1	
	comp=Z,4.7nm,1.4s						
BPAW	Bear Paw Mtn.	33.16	41	P	P	03 33 23.5	+0.8
BPAW				IAmb	IAmb	03 33 33.4	
	comp=Z,4.7nm,1.2s						
KTH	Kantishna Hill	33.16	42	P	P	03 33 24.1	+1.3
TRF	Thorofare Moun	33.44	42	P	P	03 33 26.5	+1.2
TRF				IAmb	IAmb	03 33 42.4	
	comp=Z,7.8nm,1.4s						
I23K	Minto, Yukon-K	33.91	39	P	P	03 33 30.6	+1.5
RND	Reindeer	34.09	42	P	P	03 33 30.8	0.0
RND				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RND	Reindeer	34.09	42	P	P	03 33 30.8	0.0
TOLK	Toolik Lake Re	34.18	33	P	P	03 33 32.4	+0.9
SML	Sawmill	34.37	45	P	P	03 33 34.4	+1.2
MDM	Murphy Dome	34.38	39	P	P	03 33 34.6	+1.3
MDM				IAmb	IAmb	03 33 52.9	
	comp=Z,5.3nm,1.1s						
WRH	Wood River Hil	34.43	40	P	P	03 33 34.9	+1.3
WRH				IAmb	IAmb	03 33 38.4	
	comp=Z,4.9nm,1.4s						
CCB	Clear Creek Bu	34.56	40	P	P	03 33 36.0	+1.2
CCB				IAmb	IAmb	03 33 40.4	
	comp=Z,2.8nm,1.0s						
H24K	Noodor Dome	34.56	38	P	P	03 33 36.0	+1.1
H24K				IAmb	IAmb	03 33 37.7	
	comp=Z,7.7nm,1.4s						
ILAR	Eielson Array	34.95	40	P	P	03 33 38.2	0.0
	comp=Z,1.6nm,0.9s,baz=258,slow=9.4,SNR=13						
	comp=Z,1.6nm,0.9s						
ILAR	Eielson Array	34.95	40	*e*P	P	03 33 38.8	+0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FID	Port Fidalgo	35.34	47	P	P	03 33 40.9	-0.7
J25K	Salcha River,	35.61	40	P	P	03 33 44.3	+0.5
J25K				IAmb	IAmb	03 33 44.4	
	comp=Z,2.7nm,0.9s						
BMAR	Burnt Mountain	35.94	35	P	P	03 33 48.3	+1.6
N25K	Chitina, Valde	36.16	45	P	P	03 33 50.5	+1.8
DOT	Dot Lake	36.23	41	P	P	03 33 49.2	+0.1
K27K	Chicken	37.07	41	P	P	03 33 56.9	+0.7
K27K				IAmb	IAmb	03 33 58.6	
	comp=Z,4.6nm,0.9s						
L27K	Beaver Creek,	37.28	42	P	P	03 34 00.1	+1.9
BCAR	Beaver Creek A	37.30	42	P	P	03 34 00.5	+2.2
EGAK	Eagle	37.41	39	P	P	03 33 59.7	+0.6
EGAK				IAmb	IAmb	03 34 00.9	
	comp=Z,4.0nm,0.8s						
INK	Inuvik	40.08	33	P	P	03 34 22.5	+1.1
	comp=Z,2.0nm,0.6s,baz=296,slow=6.6,SNR=13						
	comp=Z,2.0nm,0.6s						
INK	Inuvik	40.08	33	P	P	03 34 22.8	+1.4
INK				IAmb	IAmb	03 34 23.1	
	comp=Z,2.1nm,0.7s						
M31M	Drury Creek, Y	40.82	43	P	P	03 34 29.8	+2.2
M31M				IAmb	IAmb	03 34 36.4	
	comp=Z,5.8nm,1.4s						
A36M	Sachs Harbour	42.32	27	P	P	03 34 41.1	+1.4
C36M	Paulatuk	43.26	31	P	P	03 34 48.1	+0.7
MKAR	Makanchi Array	47.39	297	P	P	03 35 17.2	-3.2
	comp=Z,0.3nm,0.5s,baz=72,slow=9.3,SNR=3.4						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	47.39	297	*e*P	P	03 35 21.3	+0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	47.39	297	*e*P	P	03 35 21.3	+0.8
KURK	Kurchatov	47.64	303	P	P	03 35 20.7	-1.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	47.64	303	P	P	03 35 20.7	-1.6
KURBB	Kurchatov Arra	47.74	303	LR	LR	03 56 18.1	
	comp=Z,31nm,21.2s,baz=42,slow=37						
EUNU	Eureka	47.77	12	P	P	03 35 22.2	-0.8
EUNU				IAmb	IAmb	03 35 23.2	
	comp=Z,6.5nm,1.4s						
YKA	Yellowknife Ar	49.34	38	P	P	03 35 35.0	-0.1
	comp=Z,1.8nm,0.8s,baz=298,slow=7.6,SNR=17						
	comp=Z,1.8nm,0.8s						
YKA	Yellowknife Ar	49.34	38	*e*P	P	03 35 34.8	-0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	49.34	38	P	P	03 35 34.4	-0.8
RES	Resolute Bay	49.38	19	P	P	03 35 35.5	+0.2
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RES	Resolute Bay	49.38	19	P	P	03 35 35.5	+0.2
RES				IAmb	IAmb	03 35 36.1	
	comp=Z,1.9nm,0.8s						
ARCES	ARCESS Array B	57.12	341	LR	LR	04 04 28.4	
	comp=Z,36nm,18.3s,baz=3.0,slow=40						
ABKAR	Akbulak array	58.53	310	P	P	03 36 40.4	-2.0
FCC	Fort Churchill	59.69	34	P	P	03 36 50.7	+0.5
FCC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
FCC	Fort Churchill	59.69	34	P	P	03 36 50.7	+0.5
FCC				IAmb	IAmb	03 36 52.6	
	comp=Z,5.8nm,1.4s						
NVAR	Mina Array Bea	60.93	64	P	P	03 37 01.4	+2.0
	comp=Z,0.6nm,0.7s,baz=291,slow=6.8,SNR=6.6						
	comp=Z,0.6nm,0.7s						
HWUT	Hardware Ranch	62.82	57	P	P	03 37 13.8	+1.8
PDAR	Pinedale Array	63.18	55	P	P	03 37 16.2	+1.8
	comp=Z,0.5nm,0.8s,baz=5.7,slow=3.0,SNR=4.2						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	63.46	335	P	P	03 37 13.2	-2.4
	comp=Z,0.8nm,0.4s,baz=38,slow=7.2,SNR=3.6						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	63.46	335	*e*P	P	03 37 16.2	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	63.46	335	P	P	03 37 13.9	-1.7
WB0	Warramunga Arr	69.79	200	P	P	03 37 58.5	+2.1
WB0				IAmb	IAmb	03 38 13.5	
	comp=Z,5.9nm,1.3s						
WB2	Warramunga Arr	69.97	200	P	P	03 37 59.8	+2.3
WB2				IAmb	IAmb	03 38 04.4	
	comp=Z,4.9nm,1.1s						
WRA	Warramunga Arr	69.97	200	P	P	03 37 59.6	+2.0
	comp=Z,0.8nm,0.7s,baz=15,slow=6.2,SNR=5.9						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	69.97	200	P	P	03 37 59.4	+1.8
SCHQ	Schefferville	71.81	24	P	P	03 38 07.2	-1.2
	comp=Z,0.8nm,0.5s,baz=56,slow=11,SNR=3.9						
	comp=Z,0.8nm,0.5s						
SCHQ	Schefferville	71.81	24	P	P	03 38 08.0	-0.5
SCHQ				IAmb	IAmb	03 38 30.0	
	comp=Z,4.6nm,1.1s						
ASAR	Alice Springs	73.66	200	P	P	03 38 21.1	+1.4
	comp=Z,0.4nm,0.7s,baz=0.1,slow=4.9,SNR=5.1						
	comp=Z,0.4nm,0.7s						
BUR08	Bucovina Ar. S	75.20	327	P	P	03 38 27.9	-0.7
BURAR	Bucovina Array	75.22	327	P	P	03 38 27.2	-1.5
ESK	Eskdalemuir	75.49	347	P	P	03 38 29.5	-0.5
ESK				pmax	pmax		
	comp=Z,29nm,1.4s						
ESK	Eskdalemuir	75.49	347	P	P	03 38 29.4	-0.5
CLL	Collm	75.86	336	*i* P	P	03 38 30.7	-1.4
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	75.86	336	*i* P	P	03 38 30.7	-1.4
	comp=Z,4.0nm,0.8s						
KHC	Kasperske Hory	77.66	335	*e*P	P	03 38 41.5	-0.9
KHC	Kasperske Hory	77.66	335	*e*P	P	03 38 41.5	-0.9
GERES	GERESS Array B	77.89	335	P	P	03 38 42.9	-0.8
	comp=Z,0.8nm,0.7s,baz=51,slow=7.0,SNR=5.8						
	comp=Z,0.8nm,0.7s						
GERES	GERESS Array B	77.89	335	*e*P	P	03 38 43.0	-0.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BR131	Keskin Array S	78.29	318	P	P	03 38 45.2	-1.0
BR131				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BR131	Keskin Array S	78.29	318	P	P	03 38 45.2	-1.0
BR131				IAmb	IAmb	03 38 46.9	
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	78.29	318	P	P	03 38 45.4	-0.8
	comp=Z,1.9nm,0.9s,baz=56,slow=3.8,SNR=9.4						
	comp=Z,1.9nm,0.9s						
BRTR	Keskin Array B	78.29	318	P	P	03 38 45.1	-1.0
KBA	Koelnbreinsper	79.59	334	*e*P	P	03 38 53.1	-0.1
	comp=Z,4.0nm,0.6s						
WATA	Walderalm	79.86	336	*e*P	P	03 38 54.9	+0.3
	comp=Z,6.0nm,1.1s						
WTTA	Wattenberg	79.91	335	*e*P	P	03 38 54.4	-0.5
	comp=Z,5.8nm,0.7s						
RETA	Reutte	79.94	336	*e*P	P	03 38 54.8	-0.2
	comp=Z,4.9nm,1.0s						
MOTA	Moosalm	79.98	336	*e*P	P	03 38 55.3	-0.1
	comp=Z,7.1nm,1.1s						
SQTA	Sankt Quirin	80.06	336	*e*P	P	03 38 55.8	+0.1
	comp=Z,4.8nm,1.0s						
FETA	Feichten	80.38	336	*e*P	P	03 38 57.6	+0.1
	comp=Z,4.1nm,1.0s						
H03N2	Juan Fernandez	137.66	90	T	T	06 19 31.2	
	baz=309,slow=77,SNR=82						
H03N1	Juan Fernandez	137.67	90	T	T	06 19 35.8	
	baz=309,slow=77,SNR=86						
H03N3	Juan Fernandez	137.67	90	T	T	06 19 29.2	
	baz=309,slow=77,SNR=98						

IDC 02 03:37:48.3±66.0**, 22°.57S**×**169°.26W, h0^{km}, mb4.3**/3**, mbtmp4.3**/3**, MS3.3**/1**, Error ellipse: s-maj=1315.0km s-min=204.5km az=89.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.36	247	P	P	03 45 58.9	-1.7
	2.0nm,0.7s,baz=116,slow=8.8,SNR=5.1						
	2.0nm,0.7s						
ASAR	Alice Springs	51.98	257	P	P	03 47 00.3	+0.7
	2.5nm,0.5s,baz=95,slow=7.3,SNR=54						
ASAR				LR	LR	04 09 00.5	
	comp=Z,26nm,18.1s,baz=266,slow=36						
	2.5nm,0.5s						
WRA	Warramunga Arr	52.37	262	P	P	03 47 02.7	+0.1
	3.4nm,0.5s,baz=90,slow=5.8,SNR=263						
	3.4nm,0.5s						

IDC 02 04:01:56.8±2.8**, 16°.20S**×**172°.27W, h0^{km}, mb4.0**/5**, mbtmp4.0**/5**, Error ellipse: s-maj=185.5km s-min=31.2km az=148.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.59	241	P	P	04 10 11.7	+0.7
	1.3nm,0.5s,baz=98,slow=10,SNR=4.6						
	1.3nm,0.5s						
WRA	Warramunga Arr	50.72	257	P	P	04 10 57.6	-1.3
	0.5nm,0.5s,baz=97,slow=7.2,SNR=19						
	0.5nm,0.5s						
ASAR	Alice Springs	50.90	252	P	P	04 10 59.7	-0.5
	5.9nm,0.6s,baz=88,slow=8.2,SNR=127						
	5.9nm,0.6s						
FITZ	Fitzroy Crossi	59.11	258	P	P	04 12 01.0	+1.4
	2.1nm,1.0s,baz=99,slow=5.7,SNR=2.6						
	2.1nm,1.0s						
NVAR	Mina Array Bea	74.20	41	P	P	04 13 35.8	0.0
	0.3nm,0.3s,baz=215,slow=8.5,SNR=2.3						
	0.3nm,0.3s						

*MOS **02** 04:21:23.9±1.2, 4°.77S×104°.62E, h126^{km}, mb5.9/74, Error ellipse: s-maj=7.5km s-min=4.0km az=117.1*
*NEIC **02** 04:21:24.7±2.7, 5°.03S±0°.07×104°.63E±0°.06, h117^{km}±1^{km}, mb6.0/230, Mwb5.7/46, Mww5.7, Error ellipse: s-maj=13.0km s-min=9.2km az=216.0*
*GCMT **02** 04:21:24.7±0.1, 5°.26S±0°.01×104°.49E±0°.01, h125^{km}, MW5.7/149, Moment Tensor Solution. s149,c298; s143,c319; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}2.56±.04; $M_{\theta\theta}$-2.26±.05; $M_{\phi\phi}$-0.30±.05; $M_{r\theta}$-3.05±.03; $M_{\theta\phi}$-2.64±.04; $M_{\phi r}$-0.07±.04; Best double couple: $M_0$4.67200×10^{17} NP1:ϕ_s24.00000°, δ35.00000°, λ38.00000°. NP2:ϕ_s261.00000°, δ70.00000°, λ118.00000°. Principal axes: T 4.3400, Plg56.0000°, Azm209.0000°; N 0.6610, Plg27.0000°, Azm71.0000°; P -5.0030, Plg20.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **02** 04:21:24.5, 4°.99S×104°.55E, h115^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.89; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-0.81; $M_{r\theta}$-3.15; $M_{\theta\phi}$-1.76; $M_{\phi r}$-0.40; Fault plane solution: $M_0$3.99000×10^{17} NP1:ϕ_s255.65000°, δ74.50000°, λ112.51000°. NP2:ϕ_s18.47000°, δ27.10000°, λ35.92000°. Principal axes: T 3.9733, Plg55.0000°, Azm194.0000°; N 0.0277, Plg22.0000°, Azm69.0000°; P -4.0010, Plg26.0000°, Azm328.0000°;*

*DJA **02** 04:21:24.3±0.1, 5°S±1°×10°5E±°, h119^{km}±1^{km}, M5.7/119, mB6.1/97, mb5.9/119, MLv6.3/28, Mw(mB)5.7/97, MwMwp5.4/43, Mwp5.6/43*

*NEIC **02** 04:21:26, 5°.19S×104°.57E, h120^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.47; M$_{\theta\theta}$-1.73; M$_{\phi\phi}$-0.74; M$_{r\theta}$-2.82; M$_{\theta\phi}$-2.01; M$_{\phi r}$-0.19; Fault plane solution: M$_0$4.10000×10^{17} NP1: φ$_s$26.00000°, δ31.00000°, λ44.00000°. NP2: φ$_s$256.00000°, δ69.00000°, λ113.00000°. Principal axes: T 4.0114, Plg59.0000°, Azm199.0000°; N 0.1788, Plg22.0000°, Azm67.0000°; P -4.1903, Plg21.0000°, Azm329.0000°;*

*IDC **02** 04:21:26.5±0.6, 4°.84S×104°.68E, h137^{km}±4^{km}, mb5.4/49, mbtmp5.8/53, MS4.4/54 Error ellipse: s-maj=7.4km s-min=5.3km az=52.0*

ISC 02 04:21:25.0±0.2, **5°.02S**±0°.03×**104°.54E**±0°.03, **h132**^{km}±1^{km}, **h132**^{km}**:pP-P, n1783,** σ1^s.75/2153, **mb5.8**/293, **148C-277D, Fault plane solution: NP1:**φ$_s$334.25418°, δ32.41145°, λ-4.63531°. **NP2:**φ$_s$68.16985°, δ87.51743°, λ-122.32658°. **Principal axes:** T Plg34.4944°, Azm185.4785°**;** N Plg32.2926°**,** Azm69.7400°**;** P Plg38.8720°**,** Azm309.1132°**; Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLI	Kotabumi	0.35	64	P	Pn	04 21 42.7	-0.8
LWLI	Liwa	0.48	270	P	Pn	04 21 42.6	-1.7
KASI	Kota Agung	0.50	185	P	Pn	04 21 41.2	-3.1
KASI				S	Sn	04 21 53.4	-5.5
MDSI	Maura Dua	0.64	325	P	Pn	04 21 44.8	-0.3
MDSI				S	Sn	04 21 59.9	-0.5
BLSI	Bandar Lampung	0.78	116	P	Pn	04 21 44.0	-2.1
BLSI				S	Sn	04 21 58.5	-3.7
MNAI	Manna	1.71	292		Pn	04 21 56.0	+0.4
MNAI				Sn	Sn	04 22 19.4	+0.3
MNAI	Manna	1.71	292	P	Pn	04 21 56.0	+0.4
MNAI				S	Sn	04 22 19.6	+0.6
MNAI	Manna	1.71	292	P	Pn	04 21 56.5	+0.9
PMBI	Palembang	2.09	6		Pn	04 22 02.4	+2.2
PMBI	Palembang	2.09	6	P	Pn	04 22 02.5	+2.3
PMBI	Palembang	2.09	6	P	Pn	04 22 03.2	+3.0
TNG	Tangerang	2.38	119	P	Pn	04 22 03.0	-0.8
TNG				P	Pn	04 22 04.8	+1.0
DBJI	Dramaga	2.67	125	P	Pn	04 22 06.4	-1.1
CBJI	Citeko	2.68	121	P	Pn	04 22 09.8	+2.2
SKJI	Sukabumi	2.81	135	P	Pn	04 22 06.6	-2.6
PPBI	Pangkal Pinang	3.25	29	P	Pn	04 22 17.5	+2.5
CNJI	Cibinong	3.43	132	P	Pn	04 22 14.2	-3.1
LEM	Lembang	3.54	121	P	Pn	04 22 18.8	-0.1
	31µm,0.8s,baz=226,slow=6.9,SNR=835						
LEM	Lembang	3.54	121	P	Pn	04 22 18.8	-0.1
TPI	Tanjungpandan	3.83	54	P	Pn	04 22 24.1	+1.6
JCJI	Jatiwangi	3.98	112	P	Pn	04 22 25.3	+0.7
KRJI	Kerinci	4.23	313	P	Pn	04 22 30.1	+2.1
DSRI	Dabo	4.51	0	P	Pn	04 22 34.7	+3.1
CMJI	Cimerak	4.75	125	P	Pn	04 22 32.3	-2.5
PPSI	Pulau Pagai	5.05	296	P	Pn	04 22 38.6	-0.2
	45nm28µm163µm13µm,1.1s						
RGRI	Rengat	5.14	334	P	Pn	04 22 43.4	+3.4
	24nm4µm60µm7µm,1.1s						
XMIS	Christmas Isla	5.54	169	Pn	Pn	04 22 36.3	-9.1
TPRI	Tanjung Pinang	5.90	360	P	Pn	04 22 53.7	+3.5
	35nm97µm10µm,1.1s						
PPI	Padang Panjang	6.14	317	P	Pn	04 22 53.5	+0.1
SMRI	Semarang	6.20	109	Pn	Pn	04 22 54.5	+0.3
SMRI	Semarang	6.20	109	P	Pn	04 22 54.9	+0.7
	20nm39µm69µm6µm,0.9s						
SMRI	Semarang	6.20	109	P	Pn	04 22 55.3	+1.1
YOGI	Yogyakarta	6.36	116	P	Pn	04 22 54.8	-1.5
	14nm18µm51µm3µm,0.8s						
BKNI	Bangkinang	6.36	327		Pn	04 22 57.8	+1.4
BKNI	Bangkinang	6.36	327	P	Pn	04 22 58.0	+1.6
	22nm28µm59µm7µm,1.2s						
BKNI	Bangkinang	6.36	327	P	Pn	04 22 58.9	+2.5
UWJI	Ujung Watu	6.52	103	P	Pn	04 22 59.1	+0.6
	13nm30µm3µm,0.8s						
SISI	Saibi	6.57	304	P	Pn	04 22 58.3	-0.8
	9.9nm17µm31µm2µm,0.9s						
UGM	Wanagama	6.60	116	Pn	Pn	04 22 58.3	-1.3
UGM	Wanagama	6.60	116	P	Pn	04 22 58.4	-1.2
	16nm36µm48µm5µm,0.8s						
UGM	Wanagama	6.60	116	P	Pn	04 22 59.0	-0.6
MYKOM	Kota Tinggi	6.80	354	Pn	Pn	04 23 05.8	+3.5
PCJI	Pacitan	7.30	116	P	Pn	04 23 07.6	-1.5
	13nm23µm19µm2µm,0.8s						
PBKI	Pangkalan Bun	7.47	72	P	Pn	04 23 13.0	+1.7
	12nm11µm1µm,1.0s						
TBJI	Tambak Boyo	7.48	104	P	Pn	04 23 12.8	+1.3
	2µm,0.9s						
PWJI	Pagerwojo	7.80	113	P	Pn	04 23 14.8	-1.0
	2µm,0.8s						
STKI	Sintang	8.57	54	P	Pn	04 23 28.1	+2.0
	8µm643nm,0.8s						
KSM	Kuching	8.65	42	Pn	Pn	04 23 29.3	+2.1
KSM	Kuching	8.65	42	P	Pn	04 23 30.8	+3.6
GSI	Gunungsitoli	9.38	312	Pn	Pn	04 23 34.5	-2.5
GSI	Gunungsitoli	9.38	312	P	Pn	04 23 34.4	-2.5
	17µm32µm3µm,0.7s						
GSI	Gunungsitoli	9.38	312	P	Pn	04 23 35.1	-1.9
BLJI	Banyuglugur	9.39	107	P	Pn	04 23 38.2	+1.0
KMMI	Kalianget	9.59	103	P	Pn	04 23 40.1	+0.3
	14µm18µm1µm,0.8s						
PSI	Prapat	9.59	324	P	Pn	04 23 37.6	-2.3
	494nm,0.9s,baz=160,slow=12,SNR=342						
PSI				LR	LR	04 27 56.9	
	comp=Z,7µm,21.3s,baz=141,slow=41						
PSI				ScP	ScP	04 33 04.4	+0.1
	54nm,1.0s,baz=224,slow=2.4,SNR=7.1						
PSI				ScS	ScS	04 36 35.9	-3.4
	65nm,1.1s,baz=18,slow=24,SNR=64						
ABJI	Asem Bagus	10.02	106	P	Pn	04 23 46.1	+0.6
IPM	Ipoh	10.07	340	Pn	Pn	04 23 48.8	+2.5
IPM	Ipoh	10.07	340	P	Pn	04 23 49.6	+3.3
JAGI	Jajag, Banyuwa	10.14	110	Pn	Pn	04 23 46.0	-1.2
JAGI	Jajag, Banyuwa	10.14	110	P	Pn	04 23 45.8	-1.4
	17µm45µm6µm,0.8s						
JAGI	Jajag, Banyuwa	10.14	110	P	Pn	04 23 46.5	-0.7
TSI	Tuntungan	10.36	325	P	Pn	04 23 48.5	-1.6
	14µm15µm605nm,1.5s						
BBKI	Banjar Baru	10.38	82	P	Pn	04 23 51.6	+1.1
	4µm4µm277nm,1.0s						
SBUM	Sibu	10.67	46	Pn	Pn	04 23 58.9	+4.6
KCSI	Kotacane, Aceh	10.85	321	P	Pn	04 23 53.1	-3.6
	5µm280nm,1.2s						
KULM	Kulim	10.95	339	Pn	Pn	04 23 59.0	+0.9
SRBI	Singaraja	11.03	107	P	Pn	04 23 58.8	-0.3
	19µm37µm2µm,0.8s						
MTKI	Muara Teweh, K	11.10	69	P	Pn	04 24 01.5	+1.4
	6µm183nm,1.2s						
IGBI	Denpasar	11.18	110	P	Pn	04 23 58.3	-2.8
	5µm9µm900nm,0.7s						
DNP	Denpasar	11.20	110	P	Pn	04 23 59.9	-1.4
	23µm46µm3µm,0.7s						
LHMI	Lhok Sumawe	12.70	323	Pn	Pn	04 24 17.1	-3.8
LHMI	Lhok Sumawe	12.70	323	P	Pn	04 24 17.3	-3.6
	10µm8µm857nm,0.9s						
SMKI	Samarinda	13.44	71	P	Pn	04 24 32.7	+2.2
	5µm12µm317nm,1.1s						
PLAI	Plampang	13.67	107	P	Pn	04 24 29.6	-3.9
	10µm14µm2µm,0.7s						
PLAI	Plampang	13.67	107	P	Pn	04 24 31.0	-2.5
SRIT	Nakonsritamara	14.39	340	Pn	Pn	04 24 42.2	-0.5
KAPI	Kappang	15.15	91	P	Pn	04 24 52.6	+0.5
	89nm,0.5s,baz=255,slow=10,SNR=42						
KAPI				LR	LR	04 31 27.1	
	comp=Z,2µm,18.0s,baz=264,slow=40						
KAPI	Kappang	15.15	91	c iP	Pn	04 24 53.1	+0.9
KAPI	Kappang	15.15	91		Pn	04 24 52.7	+0.5
KAPI	Kappang	15.15	91	P	P	04 24 54.6	+0.4
SPSI	Sidrap Palu	15.21	87	P	P	04 24 54.4	-0.5
	4µm334nm,1.3s						
TTSI	Tana Toraja	15.36	83	P	P	04 24 57.9	+1.3
	7µm529nm,0.9s						
BKSI	Bulukumba	15.52	92	P	P	04 24 57.8	-0.5
	6µm11µm1µm,0.9s						
BNSI	Bone	15.52	88	P	P	04 24 59.6	+1.3
	9µm11µm580nm,1.9s						
BSSI	Bau Bau, Buton	15.91	95	P	P	04 25 02.3	-0.4
	6µm8µm279nm,0.7s						
MPSI	Mapaga	16.23	71	P	P	04 25 09.5	+3.3
	3µm309nm,0.9s						
BASI	Baing, Sumba	16.71	109	P	Pn	04 25 08.0	-3.4
	21µm2µm,0.8s						
MYLDM	Lahad Datu	17.23	54	Pn	Pn	04 25 21.7	+4.0
MYLDM				IAmb	IAmb	04 25 57.3	
	comp=Z,2µm,1.6s						
DLV	T Lat	17.30	13	P	Pn	04 25 21.5	+2.8
DLV				IAmb	IAmb	04 25 23.8	
	comp=Z,1µm,1.6s						
DLV	T Lat	17.30	13	P	Pn	04 25 22.3	+3.5
TOLI2	Tolitoli	17.33	70	P	Pn	04 25 20.8	+1.9
TOLI2	Tolitoli	17.33	70	P	Pn	04 25 22.0	+3.1
APSI	Ampana	17.56	77	P	Pn	04 25 22.6	+0.9
	comp=Z,3µmcomp=Z,5µmcomp=Z,634nm,1.0s						
MMRI	Maumere	17.93	103	P	P	04 25 22.5	-2.4
MMRI				IAmb	IAmb	04 25 51.9	
	comp=Z,1µm,1.0s						
MMRI	Maumere	17.93	103	P	P	04 25 21.5	-3.4
	comp=Z,11µmcomp=Z,11µmcomp=Z,1µm,1.2s						
MMRI	Maumere	17.93	103	P	P	04 25 24.6	-0.3
BBSI	Bau Bau	17.96	92	P	P	04 25 25.1	-0.1
	comp=Z,597nmcomp=Z,45nm,0.8s						
MRSI	Marisa	18.21	73	P	Pn	04 25 29.1	-0.4
	comp=Z,4µmcomp=Z,327nm,0.9s						
LUWI	Luwuk	18.62	78	P	Pn	04 25 34.7	+0.4
LUWI				IAmb	IAmb	04 25 48.6	
	comp=Z,796nm,1.0s						
LUWI	Luwuk	18.62	78	P	Pn	04 25 34.9	+0.6
	comp=Z,8µmcomp=Z,895nm,1.1s						
LUWI	Luwuk	18.62	78	P	Pn	04 25 35.1	+0.8
	comp=Z,898nm,1.1s						
GTOI	Gorontalo	19.28	74	P	P	04 25 40.0	+0.3
	comp=Z,2µmcomp=Z,172nm,0.8s						
BATI	Baumata	19.63	106	P	P	04 25 43.1	-0.4
	comp=Z,582nm,0.6s,baz=254,slow=0.8,SNR=113						
BATI				S	S	04 29 12.6	-5.5
	comp=Z,956nm,0.8s,baz=166,slow=11,SNR=8.0						
BATI	Baumata	19.63	106	P	P	04 25 42.2	-1.3
	comp=Z,9µmcomp=Z,11µmcomp=Z,602nm,0.7s						
GIRL	Giralia	19.87	153	P	P	04 25 44.0	-1.9
	baz=20,SNR=20						
GIRL	Giralia	19.87	153	P	P	04 25 46.7	+0.8
GIRL	Giralia	19.87	153	P	P	04 25 47.2	+1.3
KMSI	Cibinong	20.19	75	P	Pn	04 25 51.3	-1.4
	comp=Z,294nm,0.8s						
PBA	Port Blair	20.30	325	P	P	04 25 48.5	-2.2
PBA	Port Blair	20.30	325	eP	P	04 25 48.3	-2.3
PBA				eS	S	04 29 24.8	-6.5
PBA	Port Blair	20.30	325	P	P	04 25 49.1	-1.5
	SNR=10.0						
PPR	Puerto Princes	20.39	44	⇑iP	Pn	04 25 54.8	-0.3
PPR	Puerto Princes	20.39	44	⇓iP	ScP	04 33 25.2	+1.6
DGPR	DIGLIPUR	21.45	328	eP	P	04 25 59.0	-3.9
DGPR				eS	S	04 29 45.9	-7.2
SANI	Sanana	21.60	83	P	P	04 26 05.2	+0.6
	comp=Z,6µmcomp=Z,7µmcomp=Z,452nm,1.1s						
SANI	Sanana	21.60	83	P	P	04 26 06.2	+1.6
PSA00	Pilbara Seismi	22.16	139	P	P	04 26 09.2	-1.1
PSA00				IAmb	IAmb	04 26 11.6	
	comp=Z,480nm,0.8s						
PSA00	Pilbara Seismi	22.16	139	P	P	04 26 09.9	-0.4
LBMI	Labuha	23.33	80	P	P	04 26 22.9	+1.2
	comp=Z,3µmcomp=Z,8µmcomp=Z,805nm,0.8s						
TNTI	Ternate	23.51	76	P	P	04 26 24.0	+0.7
TNTI				IAmb	IAmb	04 26 26.9	
	comp=Z,1µm,1.2s						
TNTI	Ternate	23.51	76	P	P	04 26 24.8	+1.5
	comp=Z,9µmcomp=Z,941nm,1.2s						
TNTI	Ternate	23.51	76	P	P	04 26 24.5	+1.2
AAI	Ambon	23.62	88	P	P	04 26 23.6	-0.7
	comp=Z,5µmcomp=Z,343nm,0.9s						
CM31	Chiang Mai Arr	23.97	347	P	P	04 26 27.3	-0.1
CM31				IAmb	IAmb	04 26 32.2	
	comp=Z,329nm,0.9s						
CMAR	Chiang Mai Arr	23.97	347	P	P	04 26 27.1	-0.3
	comp=Z,283nm,1.1s,baz=181,slow=8.5,SNR=269						
CMAR				S	S	04 30 36.6	+1.9
	comp=Z,19nm,1.1s,baz=190,slow=7.8,SNR=4.7						
CMAR				ScP	ScP	04 33 34.4	+1.7
	comp=Z,94nm,0.8s,baz=202,slow=3.4,SNR=39						
CMAR				P3KPbc		04 59 44.5	
	comp=Z,2.2nm,0.8s,baz=326,slow=5.5,SNR=14						
	comp=Z,283nm,1.1s						
CGP	Cagayan de Oro	24.14	56	⇓eP	P	04 26 35.3	+6.4
TBP	Tagbilaran	24.17	53	eP	P	04 26 31.9	+2.7
DAV	Davao City (W)	24.18	60	P	P	04 26 32.7	+3.3
	comp=Z,127nm,0.3s,baz=358,slow=3.6,SNR=5.9						
DAV	Davao City (W)	24.18	60	P	P	04 26 31.8	+2.4
DAV				IAmb	IAmb	04 27 24.8	
	comp=Z,645nm,1.2s						
CHTO	Chiang Mai	24.32	347	P	P	04 26 29.9	-0.6
CHTO				pmax	pmax		
	comp=Z,163nm,0.9s						
CHTO	Chiang Mai	24.32	347	P	P	04 26 29.9	-0.6
CHTO	Chiang Mai	24.32	347	P	P	04 26 31.0	+0.5
FITZ	Fitzroy Crossi	24.38	124	P	P	04 26 30.3	-0.8
	comp=Z,465nm,0.9s,baz=311,slow=6.4,SNR=235						
	comp=Z,465nm,0.9s						
FITZ	Fitzroy Crossi	24.38	124	IAmb	IAmb	04 26 33.0	
	comp=Z,529nm,0.9s						
MSAI	Masohi	24.38	87	P	P	04 26 30.6	-0.5
	comp=Z,20nm,1.1s						
QIZ	Qiongzhong	24.46	12	P	P	04 26 35.2	+3.4
QIZ				pP	pP	04 27 02.0	+2.7
QIZ				S	S	04 30 46.4	+3.9
QIZ				pmax	pmax		
	comp=Z,80nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,640nm,6.7s						
QIZ	Qiongzhong	24.46	12	P	P	04 26 36.3	+4.5
RCP	Roxas	24.48	48	⇓eP	P	04 26 35.3	+3.3
RCP	Roxas	24.48	48	⇓eP	ScP	04 33 34.8	+0.6
PGP	Puerto Galera	24.58	41	⇑eP	P	04 26 36.1	+3.2
LLP	Lapu-Lapu	24.62	52	i P	P	04 26 36.9	+3.6
LLP				eS	ScP	04 33 34.5	0.0
TGY	Tagaytay City	25.01	40	P	P	04 26 39.0	+2.1
	comp=Z,305nm,0.4s,baz=204,slow=6.4,SNR=1.7						
TGY				ScP	ScP	04 33 36.5	+0.8
	comp=Z,568nm,0.3s,baz=178,slow=8.1,SNR=21						
MEEK	Meekatharra	25.35	149	P	P	04 26 38.4	-1.5
	baz=25,SNR=51						
MEEK	Meekatharra	25.35	149	P	P	04 26 39.8	-0.1
KNRA	Kununurra	26.04	116	P	P	04 26 45.0	-1.2
	baz=26,SNR=184						
KNRA	Kununurra	26.04	116	P	P	04 26 45.0	-1.2
KNRA	Kununurra	26.04	116	P	P	04 26 45.5	-0.6
MORW	Morawa	26.28	157	P	P	04 26 47.1	-1.1
	baz=26,SNR=59						
MORW	Morawa	26.28	157	P	P	04 26 47.3	-0.9
MORW	Morawa	26.28	157	P	P	04 26 48.2	0.0
PALK	Pallekele	26.74	297	P	P	04 26 55.6	+3.1
	comp=Z,107nm,1.0s,baz=221,slow=8.5,SNR=60						
PALK				ScP	ScP	04 33 41.9	+1.1
	comp=Z,108nm,0.9s,baz=192,slow=1.4,SNR=30						
	comp=Z,107nm,1.0s						
PALK	Pallekele	26.74	297	P	P	04 26 54.8	+2.3
PALK				IAmb	IAmb	04 26 58.3	
	comp=Z,398nm,1.4s						
SAUI	Saumlaki	26.74	98	P	P	04 26 49.6	-2.9
SAUI				IAmb	IAmb	04 26 51.7	
	comp=Z,467nm,1.2s						
SAUI	Saumlaki	26.74	98	P	P	04 26 51.5	-1.0
	comp=Z,336nm,1.1s						
SWI	Sorong	26.99	82	P	P	04 26 54.2	-0.5
	comp=Z,3µmcomp=Z,329nm,1.0s						
SIJI	Sorong	27.00	82	P	P	04 26 54.7	-0.1
	comp=Z,141nm,0.8s,baz=274,slow=5.6,SNR=64						
	comp=Z,141nm,0.8s						
MTN	Manton Dam	27.37	108	P	P	04 26 56.6	-1.5
	baz=27,SNR=22						
MTN	Manton Dam	27.37	108	P	P	04 26 58.2	+0.1
FAKI	Fak Fak	27.71	87	IAmb	IAmb	04 27 03.7	
	comp=Z,273nm,1.0s						
FAKI	Fak Fak	27.71	87	P	P	04 27 00.5	-0.7
	comp=Z,3µmcomp=Z,280nm,0.9s						
FAKI	Fak Fak	27.71	87	P	P	04 27 01.3	+0.1
BLDU	Ballidu	27.92	157	P	P	04 27 02.3	-0.5
	baz=28,SNR=30						
BLDU	Ballidu	27.92	157	P	P	04 27 03.1	+0.3
KDU	Kakadu	28.61	107	P	P	04 27 07.0	-2.1
	baz=29,SNR=34						
KDU	Kakadu	28.61	107	P	P	04 27 07.8	-1.3
HKPS	Hong Kong Po S	28.71	19	P	P	04 27 12.0	+2.1
MUN	Mundaring	28.96	159	P	P	04 27 10.4	-1.6
	baz=29,SNR=12						
MUN	Mundaring	28.96	159	P	P	04 27 12.0	0.0
KLBR	Kellerberrin	29.20	156	P	P	04 27 13.0	-1.1
	baz=29,SNR=38						
KLBR	Kellerberrin	29.20	156	P	P	04 27 14.5	+0.4
KMI	Kunming	30.01	357	⇓P	P	04 27 23.6	+2.0
KMI				pP	pP	04 27 53.3	+3.2
KMI				sP	sP	04 28 08.0	+2.7
KMI				PP	PP	04 28 28.9	-3.1
KMI				S	S	04 32 14.8	+4.5
KMI				ScP	ScP	04 33 52.0	+1.0
KMI				ScS	ScS	04 37 46.7	-0.2
KMI				pmax	pmax		
	comp=Z,100nm,1.0s						
KMI				pmax	pmax		
	comp=Z,390nm,4.5s						
KMI				LR	LR		
	comp=Z,3µm,11.5s						
KMI				LR	LR		
	comp=Z,2µm,12.2s						
KMI				LR	LR		
	comp=Z,4µm,12.7s						
MDRS	Chennai	30.09	307	⇓iP	P	04 27 24.0	+1.8
MDRS				IAmb	IAmb	04 27 25.6	
	comp=Z,492nm,0.8s						
NWAO	Narrogin (SRO)	30.19	158	P	P	04 27 22.1	-0.8
NWAO				pmax	pmax		
	comp=Z,289nm,1.3s						
NWAO	Narrogin (SRO)	30.19	158	P	P	04 27 22.1	-0.8
NWAO				IAmb	IAmb	04 27 23.8	
	comp=Z,289nm,1.3s						
NWAO	Narrogin (SRO)	30.19	158	P	P	04 27 22.7	-0.2
NWAO	Narrogin (SRO)	30.19	158	P	P	04 27 22.6	-0.3
NWAO				pP	pP	04 27 50.9	-0.3
WRKA	Warakurna	30.26	134	P	P	04 27 23.6	-0.1
	baz=30,SNR=64						
WRKA				P	P	04 27 23.6	-0.1
	baz=30,SNR=64						
WRKA	Warakurna	30.26	134	P	P	04 27 23.7	0.0
TRD	Trivandrum	30.62	296	eP	P	04 27 29.4	+2.6
GULI	GuiLin	30.66	10	⇓P	P	04 27 28.8	+1.8
GULI				S	S	04 32 23.2	+3.3
GULI				pmax	pmax		
	comp=Z,30nm,1.1s						
GULI				LR	LR		
	comp=Z,1µm,14.5s						
GULI				LR	LR		
	comp=Z,1µm,9.6s						
GULI				LR	LR		
	comp=Z,2µm,24.9s						
KOD	Kodaikanal	30.93	299	⇓iP	P	04 27 32.7	+2.7
SALM	Salem	31.00	302	⇓iP	P	04 27 33.0	+2.7
GYA	Guiyang	31.36	4	⇓P	P	04 27 34.4	+1.0
GYA				pP	pP	04 28 03.5	+1.6
GYA				PcP	PcP	04 30 26.1	+1.9
GYA				S	S	04 32 32.3	+1.2
GYA				ScP	ScP	04 33 55.8	+0.6
GYA				pmax	pmax		
	comp=Z,84nm,1.2s						
GYA				pmax	pmax		
	comp=Z,440nm,4.4s						
GYA				LR	LR		
	comp=Z,940nm,12.1s						
GYA				LR	LR		
	comp=Z,2µm,11.3s						
GYA				LR	LR		
	comp=Z,1µm,15.3s						
PZH	PanZhiHua	31.45	355	⇓P	P	04 27 34.8	+0.6
PZH				pP	pP	04 28 02.4	-0.3
PZH				PP	PP	04 28 48.8	+0.9
PZH				S	S	04 32 34.4	+1.8
PZH				sS	sS	04 33 26.2	+3.2
PZH				PcS	PcS	04 34 09.3	+0.1
PZH				pmax	pmax		
	comp=Z,50nm,1.3s						
PZH				pmax	pmax		
	comp=Z,130nm,6.2s						
PZH				LR	LR		
	comp=Z,5µm,16.9s						
PZH				LR	LR		
	comp=Z,5µm,16.5s						
PZH				LR	LR		
	comp=Z,6µm,17.2s						
RKGY	Rocky Gully	31.62	160	P	P	04 27 36.4	+0.9
	baz=32,SNR=28						
RKGY	Rocky Gully	31.62	160	P	P	04 27 36.1	+0.7
BAKI	Biak	31.74	84	P	P	04 27 36.0	-0.8
	comp=Z,2µmcomp=Z,142nm,1.1s						
RAGD	RAYAGADA	31.82	320	⇓iP	P	04 27 37.1	-0.2
VJD	Vijayawada	31.88	313	eP	P	04 27 38.6	+0.7
KAAM	Kaadhehdhoo	31.98	279	P	P	04 27 43.8	+4.9
	SNR=5.1						
DGAR	Diego Garcia	31.99	264	c iP	P	04 27 42.0	+3.1
DGAR				pmax	pmax		
	comp=Z,305nm,1.7s						
TWG	Pinlang	32.04	30	P	P	04 27 41.7	+2.5
PCHI	Peechi	32.05	299	⇓eP	P	04 27 42.1	+2.6
PCHI				eS	S	04 32 46.4	+4.5
PCHI				⇓eP	ScP	04 33 57.9	+0.2
PCHI				eS	ScS	04 37 57.8	+0.9
TPUB	Ta-pu	32.23	29	P	P	04 27 42.7	+1.8
TPUB				IAmb	IAmb	04 28 12.7	
	comp=Z,186nm,1.0s						
TPUB	Ta-pu	32.23	29	P	P	04 27 43.5	+2.5
KNMB	Chin-men Tao	32.26	24	P	P	04 27 42.2	+1.1
WRA	Warramunga Arr	32.56	120	P	P	04 27 43.2	-0.8
	comp=Z,463nm,0.8s,baz=299,slow=9.1,SNR=1624						
WRA				PcP	PcP	04 30 28.2	+0.7
	comp=Z,39nm,0.7s,baz=294,slow=2.4,SNR=6.9						
WRA				S	S	04 32 46.6	-3.4
	comp=Z,59nm,1.0s,baz=292,slow=16,SNR=14						
WRA				ScP	ScP	04 34 00.2	+0.8
	comp=Z,71nm,0.9s,baz=305,slow=3.2,SNR=12						
WRA				ScS	ScS	04 37 58.1	-1.4
	comp=Z,34nm,1.1s,baz=287,slow=3.5,SNR=9.1						
WRA				LR	LR	04 41 15.1	
	comp=Z,558nm,19.5s,baz=287,slow=36						
WRA				P3KPbc		04 59 08.4	
	comp=Z,2.3nm,0.8s,baz=110,slow=4.1,SNR=18						
WRA				P3KP		05 00 30.1	
	comp=Z,0.7nm,0.9s,baz=183,slow=2.5,SNR=4.8						
	comp=Z,463nm,0.8s						
WRA	Warramunga Arr	32.56	120	P	P	04 27 42.7	-1.3
WRA				PcP	PcP	04 30 27.8	+0.2
WRA					ScP	04 33 59.7	+0.3
WRAB	Tennant Creek	32.57	120	c iP	P	04 27 43.3	-0.7
WRAB				pmax	pmax		
	comp=Z,715nm,0.8s						
WRAB	Tennant Creek	32.57	120	P	P	04 27 43.2	-0.8
WRAB	Tennant Creek	32.57	120	P	P	04 27 43.7	-0.3
WRAB	Tennant Creek	32.57	120	⇑P	P	04 27 43.5	-0.5
YULB	Yu-li	32.63	29	IAmb	IAmb	04 28 20.1	
	comp=Z,179nm,1.0s						
WR0	Warramunga Arr	32.75	120	P	P	04 27 44.9	-0.6
QZH	Quanzhou	32.77	24	⇓iP	P	04 27 46.8	+1.3
QZH				pP	pP	04 28 14.1	-0.1
QZH				sP	sP	04 28 29.6	+0.3
QZH				PP	PP	04 29 03.3	+1.0
QZH				S	S	04 32 54.6	+1.8
QZH				ScP	ScP	04 34 00.2	+0.3
QZH				pmax	pmax		
	comp=Z,200nm,5.9s						
QZH				LR	LR		
	comp=Z,520nm,13.0s						
QZH				LR	LR		
	comp=Z,660nm,13.5s						
QZH				LR	LR		
	comp=Z,730nm,10.5s						
SHL	Shillong	32.80	339	P	P	04 27 44.9	-1.2
SHL				pmax	pmax		
	comp=Z,344nm,0.8s						
SHL	Shillong	32.80	339	P	P	04 27 44.9	-1.2
SHL	Shillong	32.80	339	⇓iP	P	04 27 44.8	-1.2
SHL	Shillong	32.80	339	P	P	04 27 45.1	-0.9
	SNR=77						
SSLB	Suanglung	32.80	29	P	P	04 27 47.5	+1.6
SSLB				IAmb	IAmb	04 28 17.8	
	comp=Z,289nm,1.2s						
SSLB	Suanglung	32.80	29	P	P	04 27 48.7	+2.8
NACB	Ninganchiao	33.44	29	P	P	04 27 52.8	+1.4
JHSG	JHARSUGUGA	33.50	323	⇓iP	P	04 27 52.2	+0.2
YHNB	Yeheng	33.75	28	P	P	04 27 56.4	+2.2
ASAR	Alice Springs	33.82	126	P	P	04 27 54.5	-0.3
	comp=Z,212nm,0.8s,baz=296,slow=8.1,SNR=1568						
ASAR				PcP	PcP	04 30 32.1	+1.1
	comp=Z,86nm,0.8s,baz=308,slow=2.6,SNR=20						
ASAR				S	S	04 33 06.8	-2.5
	comp=Z,330nm,1.0s,baz=294,slow=16,SNR=52						
ASAR				ScP	ScP	04 34 05.3	+1.6
	comp=Z,83nm,0.9s,baz=307,slow=3.2,SNR=11						

ASAR				ScS	ScS	04 38 05.3	-0.6
	comp=Z,8.4nm,0.8s,baz=304,slow=6.4,SNR=6.0						
ASAR				LR	LR	04 40 39.2	
	comp=Z,782nm,21.5s,baz=332,slow=34						
ASAR				P3KPbc		04 59 00.8	
	comp=Z,0.6nm,0.6s,baz=120,slow=3.8,SNR=9.4						
ASAR				P3KP		05 00 34.5	
	comp=Z,0.9nm,1.0s,baz=85,slow=2.0,SNR=2.6						
ASAR				PKP2ab		05 03 11.7	
	comp=Z,1.2nm,1.0s,baz=40,slow=2.3,SNR=4.9						
	comp=Z,212nm,0.8s						
ASAR	**Alice Springs**	33.82	126	P	P	04 27 54.5	-0.3
ASAR				PcP	PcP	04 30 31.7	+0.6
ASAR				ScP	ScP	04 34 04.5	+0.7
FORT	**Forrest**	33.85	142	P	P	04 27 54.4	-0.6
	baz=34,SNR=58						
FORT	**Forrest**	33.85	142	P	P	04 27 55.0	0.0
FORT				IAmb	IAmb	04 29 10.7	
	comp=Z,309nm,0.9s						
FORT				PcP	PcP	04 30 31.8	+0.9
FORT	**Forrest**	33.85	142	P	P	04 27 55.2	+0.2
CNSH	**ChangSha**	33.98	13	⇓P	P	04 27 57.6	+1.5
CNSH				S	S	04 33 15.5	+4.0
CNSH				pmax	pmax		
	comp=Z,44nm,1.1s						
CNSH				LR	LR		
	comp=Z,940nm,18.5s						
CNSH				LR	LR		
	comp=Z,1µm,19.2s						
CNSH				LR	LR		
	comp=Z,2µm,38.2s						
HYB	**Hyderabad**	34.00	312	⇓*i*P	P	04 27 56.2	-0.2
HYB				IAmb	IAmb	04 27 58.3	
	comp=Z,89nm,0.8s						
HYBB	**Hyderabad (bro**	34.00	312	⇓*e*P	P	04 27 56.5	+0.1
HYBB				IVmB_BB		04 27 57.4	
	comp=Z,1µm,1.9s						
HYBB				*e*pP	pP	04 28 23.7	-1.6
HYBB				*e*PP	PP	04 29 17.7	+1.6
HYBB				*e*PcP	PcP	04 30 31.9	+0.3
HYBB				*e*S	S	04 33 12.3	+0.1
HYBB				*e*		04 33 13.2	
HYBB				*e*		04 34 06.0	
SMPI	**Sarmi**	34.23	86	P	P	04 27 58.3	-0.1
	comp=Z,137nm,1.0s						
MNGI	**Mangalore**	34.50	301	*e*P	P	04 28 01.8	+1.1
BLSP	**Bilaspur**	34.78	322	⇓*i*P	P	04 28 02.2	-0.8
GENI	**Genyem**	35.62	87	P	P	04 28 08.7	-1.7
	comp=Z,3µmcomp=Z,382nm,1.1s						
GENI	**Genyem**	35.62	87	P	P	04 28 11.8	+1.4
CD2	**Chengdu**	35.73	359	P	P	04 28 11.2	+0.1
CD2				pP	pP	04 28 39.4	-0.7
CD2				PP	PnPn	04 29 40.0	+4.3
CD2				S	S	04 33 38.3	-0.2
CD2				sS	sS	04 34 28.9	-0.5
CD2				pmax	pmax		
	comp=Z,220nm,0.9s						
CD2				pmax	pmax		
	comp=Z,390nm,11.8s						
CD2				LR	LR		
	comp=Z,220nm,12.3s						
CD2				LR	LR		
	comp=Z,3µm,13.3s						
ODAN	**Odare**	35.78	333	*e*P	P	04 28 11.2	-0.6
	comp=Z,858nm,0.8s						
TAPN	**Taplejung**	36.06	334	*e*P	P	04 28 14.1	-0.2
	comp=Z,1µm,0.8s						
LATR	**Latur**	36.10	311	⇓*i*P	P	04 28 13.8	-0.6
RAMN	**Ramite**	36.21	332	*e*P	P	04 28 15.1	-0.4
	comp=Z,210nm,0.5s						
WHN	**Wuhan**	36.59	14	⇓P	P	04 28 19.8	+1.5
WHN				pP	pP	04 28 49.0	+1.7
WHN				PP	PnPn	04 29 52.5	+6.6
WHN				S	S	04 33 55.1	+3.8
WHN				pmax	pmax		
	comp=Z,100nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,11.0s						
WHN				LR	LR		
	comp=Z,2µm,11.9s						
WHN				LR	LR		
	comp=Z,4µm,23.4s						
GOA	**Goa**	36.62	304	⇓*i*P	P	04 28 20.6	+1.8
GOA				*i* x	x	04 29 43.4	
LSA	**Lhasa**	36.84	340	P	P	04 28 21.0	0.0
LSA	**Lhasa**	36.84	340	P	P	04 28 20.7	-0.3
LSA	**Lhasa**	36.84	340	P	P	04 28 20.7	-0.3
LSA				pP	pP	04 28 48.0	-2.1
JBP	**Jabalpur**	36.88	320	*e*x	P	04 28 20.2	-0.8
JBP				⇓*e*P	P	04 28 20.2	-0.8
JBP				IAmb	IAmb	04 28 21.7	
	comp=Z,125nm,0.8s						
JBP				*e*S	S	04 33 54.5	-1.5
JIRN	**Jiri**	37.01	332	*e*P	P	04 28 22.0	-0.4
	comp=Z,291nm,0.9s						
AKL	**Akola**	37.20	314	*i* P	P	04 28 23.7	0.0
OOD	**Oodnadatta**	37.28	131	P	P	04 28 24.5	+0.2
PKI	**Pulchoki**	37.30	331	*e*P	P	04 28 24.1	-0.7
	comp=Z,448nm,0.9s						
KAD	**Karad**	37.30	307	⇓*i*P	P	04 28 25.5	+0.9
KAD				*i* x	PP	04 29 53.0	+0.5
KAD				*e*x	S	04 34 01.3	-1.3
PKIN	**Phulchoki**	37.31	331	*e*P	P	04 28 24.0	-0.8
	comp=Z,358nm,0.9s						
PKIN	**Phulchoki**	37.31	331	*e*P	ScP	04 34 17.2	+0.5
PKIN	**Phulchoki**	37.31	331	*e*P	ScS	04 38 23.4	-1.9
	comp=Z,446nm,1.5s						
GUN	**Gumba**	37.36	332	*e*P	P	04 28 25.0	-0.4
GUN	**Gumba**	37.36	332	*e*P	ScP	04 34 17.9	+0.9
GUN	**Gumba**	37.36	332	*e*P	ScS	04 38 23.2	-2.5
	comp=Z,715nm,1.5s						
ALBI	**Allahabad**	37.38	325	*e*P	P	04 28 24.2	-0.9
QIS	**Mount Isa**	37.39	118	P	P	04 28 25.0	-0.4
	baz=37,SNR=216						
QIS	**Mount Isa**	37.39	118	P	P	04 28 25.3	-0.1
DMN	**Daman**	37.48	331	*e*P	P	04 28 25.6	-0.6
MULG	**Mulgathing**	37.48	136	P	P	04 28 26.3	+0.3
KKN	**Kakani**	37.55	331	*e*P	P	04 28 26.0	-0.8
	comp=Z,958nm,1.0s						
VLK	**Valmikinagar**	37.85	329	⇓*i*P	P	04 28 29.9	+0.8
GKN	**Gorkha**	38.03	331	*e*P	P	04 28 30.2	-0.6
	comp=Z,1µm,1.1s						
POO	**Poona**	38.25	309	⇓*i*P	P	04 28 33.3	+0.7
POO				*i* pP	pP	04 29 00.1	-1.8
POO				*e*x	PP	04 30 05.0	+2.2
KOLN	**Koldanda**	38.36	329	*e*P	P	04 28 33.1	-0.5
	comp=Z,1µm,0.9s						
BHPL	**Bhopal**	38.60	318	*e*P	P	04 28 34.9	-0.6
BHPL				IAmb	IAmb	04 28 36.9	
	comp=Z,84nm,0.5s						
DANN	**Dangsing**	38.75	330	*e*P	P	04 28 36.3	-0.7
	comp=Z,2µm,0.9s						
PYUN	**Piuthan**	38.94	329	*e*P	P	04 28 37.8	-0.6
	comp=Z,1µm,1.0s						
XAN	**Xi'an**	39.07	6	P	P	04 28 39.4	+0.2
XAN				pP	pP	04 29 08.4	-0.1
XAN				S	S	04 34 28.7	-0.1
XAN				pmax	pmax		
	comp=Z,94nm,1.1s						
XAN				pmax	pmax		
	comp=Z,400nm,3.5s						
XAN				LR	LR		
	comp=Z,2µm,12.8s						
XAN				LR	LR		
	comp=Z,880nm,11.5s						
XAN				LR	LR		
	comp=Z,2µm,13.0s						
COEN	**Coen**	39.07	106	P	P	04 28 37.8	-1.7
	baz=39,SNR=61						
COEN	**Coen**	39.07	106	P	P	04 28 37.5	-2.0
COEN				IAmb	IAmb	04 28 41.3	
	comp=Z,140nm,0.8s						
COEN	**Coen**	39.07	106	P	P	04 28 38.3	-1.2
BOM	**Bombay**	39.27	308	*i* P	P	04 28 41.7	+0.7
SSE	**Sheshan**	39.27	23	P	P	04 28 43.6	+2.7
SSE				pP	pP	04 29 11.0	+0.8
SSE				S	S	04 34 35.5	+3.6
SSE				pmax	pmax		
	comp=Z,27nm,1.0s						
SSE				pmax	pmax		
	comp=Z,140nm,9.4s						
SSE				LR	LR		
	comp=Z,210nm,20.1s						
NJ2	**Nanjing**	39.30	19	⇓P	P	04 28 42.8	+1.7
NJ2				pP	pP	04 29 11.9	+1.5
NJ2				sP	sP	04 29 25.8	+0.4
NJ2				ScP	ScP	04 34 23.6	-0.2
NJ2				S	S	04 34 35.8	+3.5
NJ2				ScS	ScS	04 38 33.9	-2.1
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,2µm,4.3s						
JHNI	**Jhansi**	39.45	321	⇓*i*P	P	04 28 40.5	-2.0
LYN	**LuoYang**	40.06	10	⇓*i*P	P	04 28 48.6	+1.2
LYN				pP	pP	04 29 18.0	+1.2
LYN				sP	sP	04 29 32.3	+0.6
LYN				PP	PnPn	04 30 29.1	+2.0
LYN				ScP	ScP	04 34 26.3	-0.4
LYN				S	S	04 34 45.3	+1.7
LYN				pmax	pmax		
	comp=Z,100nm,0.9s						
LYN				pmax	pmax		
	comp=Z,720nm,11.2s						
LYN				LR	LR		
	comp=Z,1µm,18.9s						
LYN				LR	LR		
	comp=Z,1µm,19.0s						
LYN				LR	LR		
	comp=Z,2µm,18.2s						
BBOO	**Buckleboo**	40.35	137	P	P	04 28 49.5	-0.3
	baz=40,SNR=210						
BBOO	**Buckleboo**	40.35	137	P	P	04 28 49.4	-0.5
BBOO				PcP	PcP	04 30 50.9	+0.2
BBOO	**Buckleboo**	40.35	137	P	P	04 28 49.6	-0.3
LCRK	**Leigh Creek**	40.55	133	P	P	04 28 51.7	+0.1
LZH	**Lanzhou**	40.89	359	⇓P	P	04 28 55.2	+0.8
LZH				pP	pP	04 29 25.4	+1.5
LZH				sP	sP	04 29 42.4	+3.5
LZH				PcP	PcP	04 30 54.3	+1.7
LZH				ScP	ScP	04 34 30.7	+0.6
LZH				S	S	04 34 56.6	+0.3
LZH				sS	sS	04 35 50.9	+2.9
LZH				ScS	ScS	04 38 44.2	-1.5
LZH				pmax	pmax		
	comp=Z,150nm,1.3s						
LZH				pmax	pmax		
	comp=Z,590nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,12.5s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
MTSU	**Mount Surprise**	40.97	112	P	P	04 28 55.6	+0.4
	baz=41,SNR=173						
MTSU	**Mount Surprise**	40.97	112	P	P	04 28 55.1	-0.1
INKA	**Innaminka**	41.17	127	P	P	04 28 56.9	+0.3
BHV	**Bhavnagar**	41.41	311	*i* P	P	04 28 59.7	+1.1
LGTI	**Lohaghat**	41.46	327	⇓*i*P	P	04 28 58.2	-0.7
WHYH	**Whyalla**	41.52	136	P	P	04 28 59.5	+0.1
PTH	**Pithoragarh**	41.55	327	⇓*i*P	P	04 28 59.1	-0.9
PTPS	**Port Pirie**	41.89	136	P	P	04 29 03.1	+0.7
NAPP	**Napperby**	42.00	136	P	P	04 29 03.9	+0.6
GOMU	**GeErMu**	42.00	348	P	P	04 29 03.8	+0.1
GOMU				S	S	04 35 10.7	-2.3
GOMU				sS	sS	04 36 02.1	-2.8
GOMU				pmax	pmax		
	comp=Z,93nm,0.8s						
GOMU				LR	LR		
	comp=Z,810nm,14.9s						
GOMU				LR	LR		
	comp=Z,410nm,13.9s						
GOMU				LR	LR		
	comp=Z,790nm,14.2s						
SONA	**Sohna**	42.36	323	*e*P	P	04 29 05.4	-0.8
BISR	**Bishrakh**	42.38	324	*e*P	P	04 29 06.0	-0.4
PMG	**Port Moresby**	42.48	98	*c i*P	P	04 29 06.9	-0.6
PMG				pmax	pmax		
	comp=Z,938nm,1.3s						
PMG	**Port Moresby**	42.48	98	P	P	04 29 06.6	-0.9
PMG	**Port Moresby**	42.48	98	P	P	04 29 07.3	-0.2
PMG	**Port Moresby**	42.48	98	⇑P	P	04 29 06.8	-0.6
PMG				pP	pP	04 29 41.1	+3.9
AYAN	**Aya Nagar**	42.50	323	*e*P	P	04 29 06.9	-0.5
NDI	**New Delhi**	42.60	323	*i* P	P	04 29 06.9	-1.3
KUDL	**Kundal**	42.64	322	*e*P	P	04 29 07.7	-0.8
AJM	**Ajmer**	42.65	319	⇓*i*P	P	04 29 07.8	-0.9
HTT	**Hallett**	42.67	136	P	P	04 29 09.1	+0.2
	baz=43,SNR=66						
HTT	**Hallett**	42.67	136	P	P	04 29 09.2	+0.3
TIA	**Tai'an**	42.67	15	⇓P	P	04 29 09.2	+0.5
TIA				pP	pP	04 29 35.7	-2.7
TIA				S	S	04 35 24.3	+2.1
TIA				pmax	pmax		
	comp=Z,40nm,1.0s						
TIA				pmax	pmax		
	comp=Z,260nm,7.3s						
TIA				LR	LR		
	comp=Z,980nm,13.9s						
TIA				LR	LR		
	comp=Z,820nm,11.6s						
TIA				LR	LR		
	comp=Z,1µm,13.1s						
MANU	**Manus Island**	42.84	88	P	P	04 29 10.1	-0.2
MANU				IAmb	IAmb	04 29 13.3	
	comp=Z,121nm,0.6s						
KHET	**Khetri**	43.01	321	⇓*i*P	P	04 29 11.2	-0.4
TIY	**Taiyuan**	43.14	9	⇓P	P	04 29 13.5	+1.0
TIY				pP	pP	04 29 41.8	-0.5
TIY				sP	sP	04 29 57.2	0.0
TIY				PP	PcP	04 30 59.2	-0.7
TIY				S	S	04 35 31.2	+2.1
TIY				sS	sS	04 36 26.0	+4.8
TIY				pmax	pmax		
	comp=Z,380nm,4.8s						
TIY				LR	LR		
	comp=Z,1µm,16.5s						
TIY				LR	LR		
	comp=Z,930nm,17.2s						
TIY				LR	LR		
	comp=Z,1µm,26.1s						
CTA	**Charters Tower**	43.22	114	LR	LR	04 48 40.7	
	comp=Z,474nm,18.8s,baz=278,slow=38						
CTA	**Charters Tower**	43.22	114	P	P	04 29 13.6	+0.2
CTAO	**Charters Tower**	43.22	114	P	P	04 29 13.4	0.0
CTAO				pmax	pmax		
	comp=Z,523nm,1.0s						
CTAO	**Charters Tower**	43.22	114	P	P	04 29 13.4	0.0
CTAO	**Charters Tower**	43.22	114	P	P	04 29 13.6	+0.2
HNS	**HongShan**	43.25	12	⇓P	P	04 29 14.2	+0.9
HNS				pP	pP	04 29 42.3	-0.7
HNS				sP	sP	04 29 54.8	-3.1
HNS				PP	PcP	04 31 05.3	+5.2
HNS				ScP	ScP	04 34 39.3	0.0
HNS				S	S	04 35 32.0	+1.5
HNS				sS	sS	04 36 25.0	+2.4
HNS				SS	SS	04 38 43.1	-6.0
HNS				ScS	ScS	04 38 55.9	-3.8
HNS				pmax	pmax		
	comp=Z,36nm,0.7s						
HNS				LR	LR		
	comp=Z,830nm,19.6s						
HNS				LR	LR		
	comp=Z,1µm,23.5s						
DDI	**Dehra Dun**	43.34	326	*e*P	P	04 29 12.9	-1.3
TWOA	**Tennyson Woods**	43.35	138	P	P	04 29 15.2	+1.0
QLP	**Quilpie**	43.52	124	P	P	04 29 16.3	+0.6
	baz=44,SNR=146						
QLP	**Quilpie**	43.52	124	P	P	04 29 16.3	+0.6
STKA	**Stephens Creek**	43.77	132	P	P	04 29 17.9	+0.2
	comp=Z,764nm,0.7s,baz=308,slow=7.8,SNR=1252						
STKA				PP	PcP	04 31 01.2	-0.9
	comp=Z,84nm,0.7s,baz=290,slow=9.7,SNR=2.9						
STKA				ScP	ScP	04 34 42.5	+0.9
	comp=Z,24nm,0.8s,baz=310,slow=7.5,SNR=5.1						
STKA				S	S	04 35 38.1	-0.3
	comp=Z,40nm,1.1s,baz=186,slow=21,SNR=7.4						
STKA				LR	LR	04 47 26.9	
	comp=Z,507nm,21.5s,baz=306,slow=36						
	comp=Z,764nm,0.7s						
STKA	**Stephens Creek**	43.77	132	P	P	04 29 17.9	+0.2
	baz=44,SNR=831						
STKA	**Stephens Creek**	43.77	132	P	P	04 29 17.8	+0.2
STKA				IAmb	IAmb	04 29 19.0	
	comp=Z,172nm,0.8s						
STKA				ScP	ScP	04 34 41.6	-0.1
STKA	**Stephens Creek**	43.77	132	P	P	04 29 18.0	+0.4
JSU	**Suzuyama**	43.93	33	P	P	04 29 19.3	+0.4
JSU				IAmb	IAmb	04 29 50.1	
	comp=Z,308nm,1.5s						
GUMO	**Guam**	44.09	65	P	P	04 29 19.4	-1.0
GUMO				pmax	pmax		
	comp=Z,152nm,0.7s						
GUMO	**Guam**	44.09	65	P	P	04 29 19.4	-1.0
GUMO				IAmb	IAmb	04 29 20.0	
	comp=Z,152nm,0.7s						
GTA	**Gaotai**	44.42	355	⇓P	P	04 29 23.7	+0.9
GTA				pP	pP	04 29 54.5	+1.8
GTA				sP	sP	04 30 11.8	+4.2
GTA				ScP	ScP	04 34 44.2	-0.1
GTA				S	S	04 35 44.8	-3.0
GTA				sS	sS	04 36 40.9	+0.8
GTA				ScS	ScS	04 39 03.5	-3.9
GTA				pmax	pmax		
	comp=Z,120nm,0.9s						
GTA				pmax	pmax		
	comp=Z,390nm,7.2s						
GTA				LR	LR		
	comp=Z,1µm,19.5s						
GTA				LR	LR		
	comp=Z,1µm,20.3s						
GTA				LR	LR		
	comp=Z,2µm,19.1s						
SMLA	**Simla**	44.45	326	⇓*i*P	P	04 29 21.9	-1.1
SMLA				IAmb	IAmb	04 29 25.9	
	comp=Z,291nm,0.6s						
JNU	**Nakatsue**	45.41	32	ScP	ScP	04 34 47.5	-0.9
	comp=Z,22nm,0.7s,baz=117,slow=8.8,SNR=7.0						
JNU	**Nakatsue**	45.41	32	IAmb	IAmb	04 30 01.9	
	comp=Z,244nm,1.4s						
JNU	**Nakatsue**	45.41	32	P	P	04 29 32.9	+2.3
BTO	**Baotou**	45.68	6	*e*P	P	04 29 34.1	+1.4
BTO				S	S	04 36 07.6	+1.8
BTO				LR	LR		
	comp=Z,4µm,13.7s						
BTO				LR	LR		
	comp=Z,5µm,12.4s						
BJT	**Baijiatuau**	46.08	12	⇓P	P	04 29 36.9	+1.3
BJT				pP	pP	04 30 07.0	+1.2
BJI	**Beijing**	46.10	12	P	P	04 29 36.8	+1.0
BJI				pP	pP	04 30 06.5	+0.6
BJI				sP	sP	04 30 19.5	-1.2
BJI				PcP	PcP	04 31 10.9	+1.0
BJI				PP	PP	04 31 34.4	+7.9
BJI				ScP	ScP	04 34 50.7	-0.3
BJI				S	S	04 36 15.0	+3.5
BJI				sS	sS	04 37 05.4	+1.3
BJI				ScS	ScS	04 39 15.2	-2.6
BJI				pmax	pmax		
	comp=Z,44nm,0.7s						
BJI				pmax	pmax		
	comp=Z,310nm,4.4s						
BJI				LR	LR		
	comp=Z,400nm,15.8s						
BJI				LR	LR		
	comp=Z,1µm,18.4s						
BJI				LR	LR		
	comp=Z,1µm,21.3s						
THN	**Thein Dam**	46.24	326	*e*P	P	04 29 36.1	-1.0
DL2	**Dalian**	46.48	18	P	P	04 29 39.8	+1.0
DL2				pP	pP	04 30 07.6	-1.3
DL2				S	S	04 36 16.6	-0.4
DL2				pmax	pmax		
	comp=Z,140nm,4.9s						
ARPS	**Mount Arapiles**	46.52	138	P	P	04 29 40.0	+0.8
	baz=46,SNR=47						
ARPS	**Mount Arapiles**	46.52	138	P	P	04 29 40.3	+1.1
CMSA	**Cobar Meteorol**	46.70	129	P	P	04 29 41.2	+0.4
	baz=47,SNR=231						
CMSA	**Cobar Meteorol**	46.70	129	P	P	04 29 41.2	+0.4
JMU	**Jammu**	46.91	325	*e*P	P	04 29 42.4	+0.1
RMQ	**Roma**	47.27	122	P	P	04 29 46.5	+1.2
	baz=47,SNR=97						
RMQ	**Roma**	47.27	122	P	P	04 29 46.5	+1.2
RABL	**Rabaul**	47.47	91	P	P	04 29 45.4	-1.6
RABL				IAmb	IAmb	04 30 03.6	
	comp=Z,155nm,0.5s						
KSRS	**Korea Array**	47.54	25	P	P	04 29 48.1	+1.0
	comp=Z,20nm,0.7s,baz=221,slow=7.7,SNR=68						
KSRS				ScP	ScP	04 34 56.5	-0.6
	comp=Z,40nm,0.9s,baz=215,slow=4.2,SNR=29						
KSRS				PKP2ab		05 01 58.0	
	comp=Z,0.8nm,0.5s,baz=92,slow=3.8,SNR=4.3						
	comp=Z,20nm,0.7s						
KS19	**Wonju Array Si**	47.56	25	IAmb	IAmb	04 30 20.2	
	comp=Z,571nm,1.9s						
RK1H	**Rockhampton Ha**	47.88	117	P	P	04 29 49.8	-0.2
JHS	**Saijyo**	48.04	32	IAmb	IAmb	04 30 22.6	
	comp=Z,390nm,1.4s						
BRAT	**Ballarat**	48.34	138	P	P	04 29 54.9	+1.6
JCJ	**Chichijima**	48.40	47	LR	LR	04 53 33.7	
	comp=Z,136nm,18.1s,baz=196,slow=40						
NIL	**Nilore**	48.53	325	P	P	04 29 53.1	-1.8
NIL				pmax	pmax		
	comp=Z,538nm,0.7s						
NIL	**Nilore**	48.53	325	P	P	04 29 53.1	-1.8
MSEY	**Mahe Island**	48.88	268	P	P	04 30 00.2	+2.3
GEXS	**Deakin Univers**	48.93	138	P	P	04 29 59.9	+2.1
	comp=Z,553nm,1.0s						
EIDS	**Eidsvold**	48.93	119	P	P	04 29 58.6	+0.6
	baz=49,SNR=90						
EIDS	**Eidsvold**	48.93	119	P	P	04 29 58.2	+0.2
EIDS				PcP	PcP	04 31 21.1	+0.6
EIDS	**Eidsvold**	48.93	119	P	P	04 29 58.4	+0.4
TOO	**Toolangi**	49.41	137	P	P	04 30 03.3	+1.7
	baz=49,SNR=26						
TOO	**Toolangi**	49.41	137	P	P	04 30 02.7	+1.1
TOO				IAmb	IAmb	04 30 04.6	
	comp=Z,347nm,1.6s						
TOO				PcP	PcP	04 31 23.0	+1.1
TOO	**Toolangi**	49.41	137	P	P	04 30 03.4	+1.9
SNY	**Shenyang**	49.75	19	⇓P	P	04 30 04.1	+0.2
SNY				pP	pP	04 30 33.6	-0.8
SNY				S	S	04 37 03.8	+0.8
SNY				pmax	pmax		
	comp=Z,29nm,1.2s						
SNY				pmax	pmax		
	comp=Z,140nm,4.6s						
SNY				LR	LR		
	comp=Z,710nm,16.3s						
SNY				LR	LR		
	comp=Z,710nm,10.7s						
SNY				LR	LR		
	comp=Z,690nm,23.9s						
XLT	**XiLinHaoTe**	49.79	11	⇓*i*P	P	04 30 05.2	+0.9
XLT				pP	pP	04 30 35.4	+0.6
XLT				PP	PP	04 32 04.5	+4.1
XLT				S	S	04 37 05.2	+1.4
XLT				sS	sS	04 38 00.0	+3.0
XLT				pmax	pmax		
	comp=Z,74nm,0.7s						
XLT				LR	LR		
	comp=Z,960nm,15.6s						
XLT				LR	LR		
	comp=Z,1µm,16.8s						
INU	**Inuyama**	50.43	35	P	P	04 30 11.9	+2.7
JHJ	**Hachijo jima 2**	50.54	39	LR	LR	04 53 27.6	
	comp=Z,223nm,18.6s,baz=256,slow=38						
CAN	**Canberra**	50.84	132	P	P	04 30 13.3	+0.9
CAN	**Canberra**	50.84	132	⇑P	P	04 30 12.9	+0.5
CAN				pP	pP	04 30 48.1	+5.1
WMQ	**Urumqi**	50.94	344	⇓P	P	04 30 13.4	+0.5
WMQ				pP	pP	04 30 42.5	-1.1
WMQ				PcP	PcP	04 31 29.5	+2.1
WMQ				PP	PP	04 32 15.8	+5.1
WMQ				ScP	ScP	04 35 12.2	+0.6
WMQ				S	S	04 37 20.0	+0.4
WMQ				sS	sS	04 38 14.5	+1.5
WMQ				ScS	ScS	04 39 48.9	-1.5
WMQ				pmax	pmax		
	comp=Z,260nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,480nm,6.9s						
WMQ				LR	LR		
	comp=Z,290nm,21.7s						
WMQ				LR	LR		
	comp=Z,200nm,16.7s						
WMQ				LR	LR		
	comp=Z,790nm,21.1s						
ARMA	**Armidale**	50.97	125	P	P	04 30 15.0	+1.5
	baz=51,SNR=62						
ARMA	**Armidale**	50.97	125	P	P	04 30 14.8	+1.3
ARMA				IAmb	IAmb	04 30 16.4	

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          comp=Z,287nm,1.0s
ARMA                               PcP     PcP      04 31 29.5 +1.5
ARMA  Armidale          50.97 125  P       P        04 30 15.0 +1.5
CNB   Canberra Magne    51.10 132  P       P        04 30 14.9 +0.5
          baz=51,SNR=27
CNB   Canberra Magne    51.10 132  P       P        04 30 14.4  0.0
SYDH  Sydney Hard Ro    51.50 130  P       P        04 30 17.5 +0.3
KSH   Kashi             51.56 332  P       P        04 30 16.2 -1.5
KSH                                pP      pP       04 30 43.9 -4.5
KSH                                PcP     PcP      04 31 31.6 +1.7
KSH                                ScP     ScP      04 35 14.0 -0.5
KSH                                S       S        04 37 24.2 -4.2
KSH                                ScS     ScS      04 39 51.7 -3.3
KSH                                pmax    pmax
          comp=Z,230nm,0.8s
KSH                                pmax    pmax
          comp=Z,320nm,7.6s
KSH                                LR      LR
          comp=Z,450nm,25.1s
KSH                                LR      LR
          comp=Z,430nm,22.7s
KSH                                LR      LR
          comp=Z,1µm,28.6s
MGCD  Mangrove Creek    51.57 129  P       P        04 30 19.1 +1.3
          baz=52,SNR=32
MGCD  Mangrove Creek    51.57 129  P       P        04 30 18.8 +1.0
KBL   Kabul             51.65 322  P       P        04 30 17.5 -1.1
KBL                                pmax    pmax
          comp=Z,105nm,0.9s
KBL   Kabul             51.65 322  P       P        04 30 17.5 -1.1
KBL                                IAmb    IAmb     04 30 18.9
          comp=Z,105nm,0.8s
KBL   Kabul             51.65 322  P       P        04 30 17.8 -0.8
          SNR=54
JLN   Jalan Bani Buh    51.76 303  P       P        04 30 21.0 +1.6
          SNR=40
JLN                                P       P        04 30 21.0 +1.6
          SNR=40
RIV   Riverview         51.84 130  P       P        04 30 20.8 +1.0
          baz=52,SNR=8.2
NTLH  Newcastle Hard    51.91 128  P       P        04 30 21.7 +1.4
MAJO  Matsushiro        51.96  35d iP      P        04 30 20.1 -0.5
MAJO                               pmax    pmax
          comp=Z,32nm,1.4s
MAJO  Matsushiro        51.96  35  P       P        04 30 20.2 -0.5
MAJO  Matsushiro        51.96  35  P       P        04 30 20.7 +0.1
MJAR  Matsushiro Arr    51.96  35  P       P        04 30 20.3 -0.3
          comp=Z,19nm,1.1s,baz=184,slow=8.6,SNR=22
MJAR                               ScP     ScP      04 35 15.5 -0.7
          comp=Z,61nm,1.0s,baz=168,slow=5.5,SNR=29
MJAR                               S       S        04 37 30.5 -3.3
          comp=Z,1.2nm,0.3s,baz=204,slow=12,SNR=5.4
MJAR                               LR      LR       04 54 22.2
          comp=Z,202nm,18.6s,baz=222,slow=38
MJAR  Matsushiro Arr    51.96  35          ScP      04 35 15.4 -0.7
CN2   Changchun         52.13  19⇓iP       P        04 30 21.9 +0.2
CN2                               epP      pP       04 30 51.6 -0.8
CN2                                PcP     PcP      04 31 30.7 -1.1
CN2                                ScP     ScP      04 35 15.5 -1.1
CN2                               eS       S        04 37 35.0 -0.7
CN2                                pmax    pmax
          comp=Z,80nm,1.0s
WBK   Wadi Bani Khal    52.33 304  P       P        04 30 26.0 +2.4
          SNR=24
WBK                                P       P        04 30 26.0 +2.4
          SNR=24
DQM   DQM               52.43 300  P       P        04 30 27.0 +2.6
          SNR=14
MHTO  MHTO              52.48 301  P       P        04 30 26.0 +1.3
          SNR=30
MHTO                               P       P        04 30 26.0 +1.3
          SNR=30
SONM  Songino Array     52.65   2  P       P        04 30 26.7 +1.1
          comp=Z,159nm,0.8s,baz=180,slow=8.7,SNR=699
SONM                               PcP     PcP      04 31 34.8 +1.0
          comp=Z,31nm,0.7s,baz=180,slow=4.2,SNR=9.1
SONM                               ScP     ScP      04 35 18.5 -0.5
          comp=Z,94nm,0.9s,baz=176,slow=3.7,SNR=38
SONM                               S       S        04 37 47.3 +4.2
          comp=Z,8.0nm,1.1s,baz=192,slow=14,SNR=3.6
SONM                               LR      LR       04 56 12.3
          comp=Z,642nm,18.0s,baz=182,slow=40
SONM                               PKPPKP  P'P'df   05 00 24.7  -27
          comp=Z,0.6nm,0.5s,baz=259,slow=2.3,SNR=4.7
          comp=Z,159nm,0.8s
SONM  Songino Array     52.65   2  P       P        04 30 26.3 +0.6
SONM                               IAmb    IAmb     04 30 28.1
          comp=Z,157nm,0.8s
SONM                               PcP     PcP      04 31 34.2 +0.4
ULN   Ulaanbaatar       52.70   2d iP      P        04 30 26.7 +0.6
ULN                                pmax    pmax
          comp=Z,85nm,0.9s
ULN   Ulaanbaatar       52.70   2  P       P        04 30 26.9 +0.8
ULN                                PcP     PcP      04 31 34.3 +0.2
GLAD  Gladstone         52.83 139  P       P        04 30 28.7 +1.7
WSAR  Wadi Sarin        52.88 304  P       P        04 30 29.4 +1.7
          comp=Z,176nm,0.9s,baz=140,slow=7.7,SNR=80
WSAR                               ScP     ScP      04 35 19.9 -0.6
          comp=Z,16nm,0.8s,baz=202,slow=5.6,SNR=4.1
WSAR                               S       S        04 37 49.8 +3.1
          comp=Z,15nm,1.1s,baz=291,slow=17,SNR=6.5
          comp=Z,176nm,0.9s
WSAR  Wadi Sarin        52.88 304  P       P        04 30 29.9 +2.2
          SNR=32
JYT   Yasato            52.88  36  IAmb    IAmb     04 30 55.8
          comp=Z,141nm,1.1s
PRZ   Przheval'sk       52.91 336  IAmb    IAmb     04 30 30.9
          comp=Z,133nm,0.8s
JMDO  Jabal Madar       52.95 303  P       P        04 30 30.0 +1.9
          SNR=20
JSD   Sado              53.06  33  IAmb    IAmb     04 30 59.2
          comp=Z,294nm,1.1s
MOO   Moorlands         53.07 141  P       P        04 30 30.4 +1.7
          baz=53,SNR=3.7
MOO   Moorlands         53.07 141  P       P        04 30 30.2 +1.5
SOCY  Socotra           53.09 289          P        04 30 29.8 +0.4
SOCY  Socotra           53.09 289  P       P        04 30 31.9 +2.5
          SNR=6.7
KDJ   Kajisay           53.13 335  P       P        04 30 28.8 -0.5
KDJ                                pmax    pmax
          comp=Z,282nm,0.8s
KDJ   Kajisay           53.13 335  P       P        04 30 28.8 -0.5
PDGK  Podgornoye        53.19 337  P       P        04 30 29.1 -0.6
UZB   Uzynbulak         53.22 337d iP      P        04 30 29.6 -0.3
UZB                               eS       S        04 37 50.5 -0.4
UZB                                pmax    pmax
          comp=Z,114nm,0.9s
UZB   Uzynbulak         53.22 337⇓iP       P        04 30 29.6 -0.3
          comp=Z,114nm,0.9s,baz=337
UZB                               eS       S        04 37 50.5 -0.4
          baz=337
SMDO  Samad             53.29 304  P       P        04 30 33.0 +2.3
          SNR=33
SATY  Saty              53.39 336d iP      P        04 30 30.9 -0.2
SATY                              eS       S        04 37 52.9 -0.3
SATY                               pmax    pmax
          comp=Z,89nm,1.0s
SATY  Saty              53.39 336⇓iP       P        04 30 30.9 -0.2
          comp=Z,89nm,1.0s,baz=336
SATY                              eS       S        04 37 52.9 -0.3
          baz=336
SHAO  Shalim            53.40 297  P       P        04 30 33.3 +1.8
TAU   Tasmania Unive    53.40 142  P       P        04 30 31.2 +0.1
TAU                                pmax    pmax
          comp=Z,202nm,1.0s
TAU   Tasmania Unive    53.40 142  P       P        04 30 31.2 +0.1
TAU                                IAmb    IAmb     04 30 33.5
          comp=Z,202nm,0.9s
TAU   Tasmania Unive    53.40 142  P       P        04 30 32.5 +1.4
BIDO  Bidbid            53.42 304  P       P        04 30 34.0 +2.4
          SNR=55
ZHN   Zhinishke         53.47 336 eP       P        04 30 31.5 -0.2
ZHN                               eS       S        04 37 54.1 -0.2
ZHN   Zhinishke         53.47 336 eP       P        04 30 31.5 -0.2
          baz=336
ZHN                               eS       S        04 37 54.1 -0.2
          baz=336
KPKS  Kokpek            53.62 337d iP      P        04 30 32.1 -0.7
KPKS                              eS       S        04 37 55.5 -0.7
KPKS                               pmax    pmax
          comp=Z,86nm,1.0s
KPKS  Kokpek            53.62 337⇓iP       P        04 30 32.2 -0.6
          comp=Z,86nm,1.0s,baz=337
KPKS                              eS       S        04 37 55.6 -0.7
          baz=337
ULHL  Ulahol            53.62 334  P       P        04 30 32.4 -0.6

          SNR=44
BSY   Bisya             53.86 303  P       P        04 30 37.0 +2.1
          SNR=36
VLA   Vladivostok       53.93  25d iP      P        04 30 35.8 +0.9
VLA                                pmax    pmax
          comp=Z,101nm,1.8s
BOOM  Boomskoye usch    53.95 334  P       P        04 30 34.5 -0.9
BOOM                               IAmb    IAmb     04 30 36.0
          comp=Z,90nm,0.8s
BOOM                               PcP     PcP      04 31 39.2 +0.2
TNSS  Tian-Shan         53.97 335 i P      P        04 30 34.9 -0.8
TNSS                              i S      S        04 38 00.4 -1.2
TNSS  Tian-Shan         53.97 335 i P      P        04 30 34.9 -0.8
          baz=335
TNSS                              i S      S        04 38 00.5 -1.2
          baz=335
MDOK  Medeo             54.03 335 i P      P        04 30 35.4 -0.4
MDOK                              eS       S        04 38 01.4 -0.5
MDOK  Medeo             54.03 335 i P      P        04 30 35.5 -0.4
          baz=335
MDOK                              eS       S        04 38 01.5 -0.5
          baz=335
HOQ   Hoqain            54.12 304  P       P        04 30 39.0 +2.3
          SNR=25
AAA   Alma-Ata          54.12 335d iP      P        04 30 36.1 -0.3
AAA                               eS       S        04 38 02.7 -0.3
AAA                                pmax    pmax
          comp=Z,138nm,0.7s
AAA   Alma-Ata          54.12 335⇓iP       P        04 30 36.2 -0.3
          comp=Z,138nm,0.7s,baz=335
AAA                               eS       S        04 38 02.8 -0.3
          baz=335
MDJ   Mudanjiang        54.29  22  P       P        04 30 38.4 +0.9
MDJ                                pP      pP       04 31 08.5 +0.1
MDJ                                S       S        04 38 05.2 +0.2
MDJ                                pmax    pmax
          comp=Z,22nm,0.9s
MDJ                                pmax    pmax
          comp=Z,240nm,5.6s
MDJ                                LR      LR
          comp=Z,780nm,16.4s
MDJ                                LR      LR
          comp=Z,620nm,17.1s
MDJ                                LR      LR
          comp=Z,870nm,16.4s
MDJ   Mudanjiang        54.29  22  P       P        04 30 39.1 +1.6
          comp=Z,88nm,1.4s
JMM   Marumori          54.36  35  IAmb    IAmb     04 31 08.3
          comp=Z,152nm,1.2s
UCH   Uchtor            54.38 333  P       P        04 30 38.3 -0.5
          SNR=76
CHGR  Chuyangaron       54.42 326  P       P        04 30 36.2 -2.5
CHGR                               PcP     PcP      04 31 42.1 +1.4
TKM2  Tokmak 2          54.45 334  P       P        04 30 38.4 -0.6
          SNR=247
TKM2  Tokmak 2          54.45 334  P       P        04 30 38.2 -0.8
SBV   Sambava           54.46 257  P       P        04 30 41.5 +2.3
          SNR=16
SBV   Sambava           54.46 257  P       P        04 30 42.0 +2.7
BNX   BinXian           54.49  20 ⇓P       P        04 30 39.8 +0.9
BNX                                pP      pP       04 31 09.1 -0.8
BNX                                sP      sP       04 31 22.2 -2.3
BNX                                PP      PP       04 32 51.2 +8.6
BNX                                S       S        04 38 04.9 -2.7
BNX                                pmax    pmax
          comp=Z,300nm,1.0s
BNX                                pmax    pmax
          comp=Z,260nm,4.5s
BNX                                LR      LR
          comp=Z,1µm,18.4s
RBK   Rabkut            54.50 296  P       P        04 30 43.0 +3.4
          SNR=15
KBK   Karagaybulak      54.52 333  P       P        04 30 39.4  0.0
          SNR=93
BTK   Batken            54.53 328  IAmb    IAmb     04 30 40.2
          comp=Z,137nm,0.6s
ARXS  Arharly           54.59 337 eP       P        04 30 37.6 -2.1
ARQ   Araqi             54.67 303  P       P        04 30 43.0 +2.3
          SNR=27
ARQ                                P       P        04 30 43.0 +2.3
          SNR=27
AML   Almayashu         54.68 332  P       P        04 30 40.9  0.0
          SNR=24
AML   Almayashu         54.68 332 i P      P        04 30 40.4 -0.5
          SNR=159
AAK   Ala-Archa         54.71 333  P       P        04 30 40.5 -0.3
          SNR=39
AAK   Ala-Archa         54.71 333  P       P        04 30 40.4 -0.5
          comp=Z,36nm,0.9s,baz=165,slow=5.3,SNR=67
AAK                                PcP     PcP      04 31 44.0 +2.2
          comp=Z,59nm,0.6s,baz=143,slow=5.6,SNR=14
AAK                                ScP     ScP      04 35 28.2 +0.1
          comp=Z,38nm,0.8s,baz=167,slow=3.6,SNR=11
          comp=Z,36nm,0.9s
AAK   Ala-Archa         54.71 333d iP      P        04 30 40.3 -0.5
AAK                                pmax    pmax
          comp=Z,100nm,1.3s
AAK   Ala-Archa         54.71 333  P       P        04 30 40.2 -0.6
AAK                                PcP     PcP      04 31 43.6 +1.7
AAK                                IAmb    IAmb     04 31 44.6
          comp=Z,69nm,0.7s
AAK   Ala-Archa         54.71 333 i P      P        04 30 40.5 -0.3
          SNR=47
FRU1  Bishkek           54.79 333  IAmb    IAmb     04 30 42.1
          comp=Z,149nm,0.8s
USA0B Ussuriysk Arra    54.87  24  P       P        04 30 42.2 +0.6
USA0B                              pmax    pmax
          comp=Z,418nm,1.2s
USA0B Ussuriysk Arra    54.87  24  P       P        04 30 42.2 +0.6
USRK  Ussuriysk Ar.     54.87  24  P       P        04 30 42.7 +1.1
          comp=Z,61nm,0.9s,baz=217,slow=7.0,SNR=46
USRK                               ScP     ScP      04 35 27.1 -1.5
          comp=Z,19nm,1.0s,baz=234,slow=3.3,SNR=6.2
USRK                               S       S        04 38 14.3 +1.6
          comp=Z,1.8nm,0.9s,baz=207,slow=5.5,SNR=6.2
          comp=Z,61nm,0.9s
CHMS  Chumysh           54.88 334  P       P        04 30 41.2 -0.7
          SNR=22
KUU   Kurty             54.92 335d iP      P        04 30 40.9 -1.2
KUU                                pmax    pmax
          comp=Z,161nm,0.7s
KUU   Kurty             54.92 335⇓iP       P        04 30 40.9 -1.2
          comp=Z,162nm,0.7s,baz=335
DOK   Doka              54.94 297  P       P        04 30 45.0 +2.3
          SNR=13
SOHO  SOHO              55.00 304 i P      P        04 30 44.1 +1.1
          SNR=72
TDK   Taldyqorghan      55.02 338d iP      P        04 30 42.2 -0.6
TDK                                pmax    pmax
          comp=Z,158nm,0.7s
TDK   Taldyqorghan      55.02 338⇓iP       P        04 30 42.3 -0.6
          comp=Z,158nm,0.7s,baz=338
WHFO  Wadi Hawf         55.02 296  P       P        04 30 45.0 +1.7
          SNR=13
ZSN   Zaisan            55.05 344d iP      P        04 30 43.2 +0.2
ZSN                               eS       S        04 38 15.4 +0.3
ZSN                                pmax    pmax
          comp=Z,85nm,1.1s
ZSN   Zaisan            55.05 344⇓iP       P        04 30 43.2 +0.2
          comp=Z,85nm,1.1s,baz=344
ZSN                               eS       S        04 38 15.5 +0.3
          baz=344
EKS2  Erkin-Say         55.06 333  P       P        04 30 43.1 -0.2
          SNR=216
ZAK   Zakamensk         55.19 359 eP       P        04 30 44.3 +0.3
ZAK                               e                 04 40 16.9
ZAK                                pmax    pmax
          comp=Z,81nm,1.0s
ZAK                                pmax    pmax
          comp=Z,65nm,1.3s
USP   Ospenovka         55.21 334  P       P        04 30 42.9 -1.3
          SNR=55
MK31  Makanchi Array    55.23 342 eP       P        04 30 43.6 -0.6
MK31  Makanchi Array    55.23 342  P       P        04 30 43.3 -0.9
MK31                               IAmb    IAmb     04 30 45.4
          comp=Z,104nm,0.7s
MKAR  Makanchi Array    55.23 342  P       P        04 30 44.1 -0.1
          comp=Z,141nm,0.7s,baz=149,slow=7.9,SNR=705
MKAR                               ScP     ScP      04 35 30.4 +0.2
          comp=Z,66nm,0.9s,baz=142,slow=6.1,SNR=24
MKAR                               S       S        04 38 16.4 -1.1
          comp=Z,16nm,1.0s,baz=163,slow=10,SNR=4.9
MKAR                               LR      LR       04 57 60.0
          comp=Z,461nm,20.6s,baz=148,slow=40
MKAR                               PKPPKP  P'P'df   05 00 27.4  -21
          comp=Z,1.3nm,1.0s,baz=279,slow=3.2,SNR=4.1
          comp=Z,141nm,0.7s

ABTO  Aybut             55.26 295  P       P        04 30 47.0 +1.9
          SNR=44
SGDS  Sogindy           55.30 334d iP      P        04 30 43.7 -1.2
SGDS  Sogindy           55.30 334⇓iP       P        04 30 43.7 -1.2
          baz=334
MAKZ  Makanchi          55.34 341  P       P        04 30 43.9 -1.2
MAKZ                               pmax    pmax
          comp=Z,81nm,1.0s
MAKZ  Makanchi          55.34 341  P       P        04 30 43.9 -1.2
ALNE  Al Ain            55.62 304  P       P        04 30 49.3 +1.9
          SNR=57
ALNE  Al Ain            55.62 304 i P      P        04 30 48.9 +1.4
          SNR=55
UOSS  Minazif           55.62 305  P       P        04 30 47.5 +0.1
UOSS                               IAmb    IAmb     04 30 49.6
          comp=Z,180nm,0.8s
UOSS  Minazif           55.62 305 i P      P        04 30 47.9 +0.4
          SNR=16
UOSS  Minazif           55.62 305 ⇓P       P        04 30 47.8 +0.4
UOSS                               pP      pP       04 31 17.3 -1.4
ASHO  Ashiyiah          55.63 304  P       P        04 30 50.0 +2.4
          SNR=24
ASHO  Ashiyiah          55.63 304 i P      P        04 30 48.9 +1.4
          SNR=57
HATD  Hatta, Dubai      55.63 305  P       P        04 30 50.0 +2.5
          SNR=28
HATD                               P       P        04 30 50.0 +2.5
          SNR=28
HATD  Hatta, Dubai      55.63 305 i P      P        04 30 48.6 +1.1
          SNR=40
KNGR  Kungurtug, Tuv    55.73 355d iP      P        04 30 48.5 +0.6
MSFE  Esma-Masafi       55.84 305 i P      P        04 30 50.4 +1.4
          SNR=28
MASF  Masafi            55.84 305  P       P        04 30 51.5 +2.5
          SNR=11
HRA   Herat             55.91 318  P       P        04 30 47.8 -1.8
BANOM Banah             55.97 306 i P      P        04 30 51.4 +1.4
          SNR=9.6
FAQ   Al Faqa, Dubai    56.04 304  P       P        04 30 52.1 +1.7
          SNR=46
FAQ   Al Faqa, Dubai    56.04 304 i P      P        04 30 51.8 +1.4
          SNR=100
NAZ   Nazwa, Dubai      56.08 305  P       P        04 30 53.0 +2.2
          SNR=15
NAZ   Nazwa, Dubai      56.08 305 i P      P        04 30 52.1 +1.4
          SNR=34
NAZ                               i P      P        04 30 53.0 +2.2
          SNR=10
SHME  Shamm             56.15 306 i P      P        04 30 52.5 +1.3
          SNR=19
ASUD  Al Ashush, Dub    56.20 304  P       P        04 30 54.0 +2.4
          SNR=17
ASUD                               P       P        04 30 54.0 +2.4
          SNR=17
ASUD  Al Ashush, Dub    56.20 304 i P      P        04 30 53.4 +1.8
          SNR=70
TAS   Tashkent          56.25 328  P       P        04 30 50.9 -0.8
TAS                                pmax    pmax
          comp=Z,293nm,0.9s
TAS   Tashkent          56.25 328  P       P        04 30 50.9 -0.8
UMQ   Umm Al-Quwin      56.31 305  P       P        04 30 54.2 +1.9
DZA   Taraz             56.39 331 eP       P        04 30 51.1 -1.5
DZA                                pmax    pmax
          comp=Z,48nm,0.6s
DZA   Taraz             56.39 331 eP       P        04 30 51.1 -1.5
          comp=Z,48nm,0.6s,baz=331
AJN   Ajban             56.46 304  P       P        04 30 55.4 +2.0
          SNR=15
AJN   Ajban             56.46 304 i P      P        04 30 55.4 +2.0
          SNR=31
IUG   Iuzhnay           56.47 330d iP      P        04 30 52.5 -0.8
IUG   Iuzhnay           56.47 330⇓iP       P        04 30 52.5 -0.8
          baz=330
JTM   Tenmabayashi      56.54  33  IAmb    IAmb     04 31 24.6
          comp=Z,281nm,1.1s
MOY   Mondy             56.55 357 eP       P        04 30 54.2 +0.5
MOY                                pmax    pmax
          comp=Z,102nm,2.0s
BTLS  Baital            56.82 335d iP      P        04 30 53.9 -1.7
BTLS  Baital            56.82 335⇓iP       P        04 30 53.9 -1.7
          baz=334
KK31  Karatay Array     56.94 331 eP       P        04 30 54.8 -1.7
KKAR  Karatay Array     56.94 331  P       P        04 30 55.2 -1.3
KKAR                                                04 31 51.4
KKAR  Karatay Array     56.94 331  P       P        04 30 55.2 -1.3
KKAR                               PcP     PcP      04 31 51.4 +1.1
IRK   Irkutsk           57.04 360 eP       P        04 30 56.6 -0.4
IRK                               e                 04 31 30.4
IRK                               eS       S        04 38 41.7 +0.4
IRK                                pmax    pmax
          comp=Z,148nm,1.4s
MZR   Muzera            57.10 301  P       P        04 31 00.1 +2.1
          SNR=24
MZR   Muzera            57.10 301 i P      P        04 30 59.6 +1.6
          SNR=57
LHI   Lord Howe Isla    57.38 124  P       P        04 31 00.5 +0.7
          baz=57,SNR=7.9
LHI   Lord Howe Isla    57.38 124  IAmb    IAmb     04 31 01.6
          comp=Z,237nm,0.9s
LHI   Lord Howe Isla    57.38 124  P       P        04 31 00.4 +0.6
TEY   Ternei            57.50  27⇓eP       P        04 31 00.5 +0.2
TEY                               e                 04 31 29.9
TEY                                pmax    pmax
          comp=Z,100nm,2.0s
TEY                                pmax    pmax
          comp=N,10.0nm,1.4s
TEY                                pmax    pmax
          comp=E,10.0nm,1.4s
TEY                                pmax    pmax
          comp=Z,20nm,1.4s
TEY                                pmax    pmax
          comp=Z,200nm,1.6s
TEY                                pmax    pmax
          comp=N,40nm,1.1s
TEY                                pmax    pmax
          comp=E,20nm,1.1s
TEY                                pmax    pmax
          comp=Z,90nm,1.1s
OPO   Ambohidratompo    57.50 251  ScP     ScP      04 35 41.7 +0.7
          comp=Z,16nm,1.0s,baz=68,slow=5.5,SNR=9.5
ABPO  Ambohimpanom      57.51 251  P       P        04 31 02.5 +1.3
ABPO                               pmax    pmax
          comp=Z,220nm,1.3s
ABPO  Ambohimpanom      57.51 251  P       P        04 31 02.5 +1.3
ABPO                               IAmb    IAmb     04 31 04.4
          comp=Z,220nm,1.2s
ABPO  Ambohimpanom      57.51 251 ⇑P       P        04 31 02.8 +1.6
ABPO                               sP      PcP      04 31 54.9 +1.6
VOI   Vohitsoka         58.27 247  P       P        04 31 07.5 +1.1
VOI                                IAmb    IAmb     04 31 09.3
          comp=Z,202nm,1.1s
VOI                                PcP     PcP      04 31 56.9 +0.6
VOI   Vohitsoka         58.27 247  P       P        04 31 08.2 +1.9
          SNR=11
VOI   Vohitsoka         58.27 247  P       P        04 31 07.9 +1.6
JRN   Qarnain Island    58.39 303  P       P        04 31 08.9 +2.0
          SNR=5.8
ERM   Erimo             58.52  33deP       P        04 31 08.1 +0.6
ERM                                pmax    pmax
          comp=Z,24nm,1.0s
ERM   Erimo             58.52  33  P       P        04 31 07.7 +0.2
ERM                                IAmb    IAmb     04 31 38.8
          comp=Z,101nm,1.0s
ERM   Erimo             58.52  33  P       P        04 31 08.8 +1.3
KLR   Kul'dur           58.99  20  P       P        04 31 11.1 +0.4
          comp=Z,57nm,0.9s,baz=226,slow=5.9,SNR=143
KLR                                ScP     ScP      04 35 44.2 -2.5
          comp=Z,17nm,1.1s,baz=282,slow=3.6,SNR=5.0
KLR                                S       S        04 39 03.5 -3.2
          comp=Z,3.6nm,1.1s,baz=161,slow=18,SNR=2.9
KLR                                LR      LR       04 57 59.5
          comp=Z,261nm,18.0s,baz=219,slow=37
          comp=Z,57nm,0.9s
KLR   Kul'dur           58.99  20d iP      P        04 31 11.0 +0.4
KLR                                pmax    pmax
          comp=Z,145nm,1.7s
ASAJ  Asahikawa         59.69  31  P       P        04 31 16.4 +0.9
          comp=Z,38nm,0.7s,baz=244,slow=9.4,SNR=40
ASAJ                               LR      LR       04 57 14.7
          comp=Z,233nm,21.5s,baz=269,slow=36
          comp=Z,38nm,0.7s
JKA   Kamikawa-asahi    59.69  31  IAmb    IAmb     04 31 46.9
          comp=Z,192nm,1.2s
KURBB Kurchatov Arra    59.78 341  P       P        04 31 15.3 -0.7
          comp=Z,78nm,0.9s,baz=159,slow=6.3,SNR=366
KURBB                              PcP     sP       04 32 02.4 +0.4
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      comp=Z,23nm,0.7s,baz=157,slow=3.5,SNR=11
KURBB                              ScP      ScP      04 35 50.7 +0.5
      comp=Z,88nm,0.9s,baz=159,slow=3.3,SNR=28
KURBB                              S        S        04 39 15.7 -1.2
      comp=Z,11nm,1.0s,baz=130,slow=20,SNR=7.6
KURBB                              LR       LR       05 01 03.4
      comp=Z,415nm,18.2s,baz=124,slow=40
      comp=Z,78nm,0.9s
KURBB Kurchatov Arra   59.78 341   P        P        04 31 14.9 -1.1
KURK  Kurchatov        59.83 341d iP        P        04 31 15.4 -1.0
KURK                               pmax     pmax
      comp=Z,172nm,0.8s
KURK  Kurchatov        59.83 341   P        P        04 31 15.8 -0.6
KURK                               IAmb     IAmb     04 31 17.1
      comp=Z,184nm,1.0s
KOUNC Koumac, New Ca   59.95 111   P        P        04 31 18.7 +0.9
OTUK  Ortayu           60.08 336   P        P        04 31 17.2 -1.0
GEYT  Alibeck          60.67 319   P        P        04 31 22.3 -0.1
      comp=Z,26nm,0.5s,baz=145,slow=5.4,SNR=34
GEYT                               ScP      ScP      04 35 54.7 +0.2
      comp=Z,12nm,0.7s,baz=222,slow=6.9,SNR=5.8
GEYT                               S        S        04 39 29.1 +0.3
      comp=Z,2.9nm,0.5s,baz=104,slow=18,SNR=5.1
GEYT                               PKP2bc            05 00 49.4
      comp=Z,10nm,1.0s,baz=33,slow=8.6,SNR=8.1
      comp=Z,26nm,0.5s
GEYT  Alibeck          60.67 319   IAmb     IAmb     04 31 23.9
      comp=Z,427nm,1.9s
ZAA0  Zalesovo Array   61.04 347   P        P        04 31 23.2 -1.2
ZAA0                               IAmb     IAmb     04 31 25.1
      comp=Z,119nm,0.8s
ZALV  Zalesovo Beam    61.04 347   P        P        04 31 23.6 -0.9
      comp=Z,70nm,0.4s,baz=157,slow=4.8,SNR=199
ZALV                               ScP      ScP      04 35 54.4 -1.3
      comp=Z,24nm,0.6s,baz=132,slow=2.2,SNR=9.8
ZALV                               S        S        04 39 29.9 -2.8
      comp=Z,22nm,1.0s,baz=150,slow=10,SNR=12
ZALV                               ScS      SKKSac   04 40 58.0 -4.6
      comp=Z,7.1nm,0.7s,baz=142,slow=15,SNR=5.3
ZALV                               PKPPKP            05 00 37.0
      comp=Z,8.6nm,1.0s,baz=318,slow=2.0,SNR=11
ZALV                               LR       LR       05 01 35.4
      comp=Z,631nm,18.8s,baz=146,slow=40
      comp=Z,70nm,0.4s
ZALV  Zalesovo Beam    61.04 347   P        P        04 31 23.5 -1.0
CASY  Casey            61.30 177   P        P        04 31 26.1 +0.1
ZEA   Zeya             61.57  15 deP        P        04 31 29.3 +1.2
ZEA                               e*PP      pP       04 31 58.8 -1.0
ZEA                               eS        S        04 39 41.7 +2.2
ZEA                                pmax     pmax
      comp=E,50nm,0.7s
ZEA                                pmax     pmax
      comp=N,70nm,0.9s
ZEA                                pmax     pmax
      comp=Z,160nm,0.8s
ZEA                                pmax     pmax
      comp=N,100nm,1.6s
ZEA                                pmax     pmax
      comp=Z,100nm,1.4s
ZEA                                pmax     pmax
      comp=Z,200nm,10.5s
ZEA                                smax     smax
      comp=N,300nm,9.7s
ZEA                                smax     smax
      comp=E,400nm,8.4s
ZEA                                MLR      MLR
      comp=N,200nm,12.0s
ZEA                                MLR      MLR
      comp=E,200nm,12.0s
ZEA                                MLR      MLR
      comp=Z,300nm,14.0s
YSS   Yuzh-Sakhalins   61.78  29  eP        P        04 31 30.3 +0.7
YSS                               e*PP      pP       04 31 59.7 -1.6
YSS                               e*SP      sP       04 32 12.8 -2.9
YSS                               e                  04 33 48.6
YSS                               eS        S        04 39 42.1 -0.2
YSS                               eSS       SS       04 43 37.0  -10
YSS                                pmax     pmax
      comp=Z,400nm,1.7s
YSS                                pmax     pmax
      comp=Z,120nm,1.0s
YSS   Yuzh-Sakhalins   61.78  29   P        P        04 31 29.8 +0.2
YSS   Yuzh-Sakhalins   61.78  29   P        P        04 31 30.7 +1.1
NOUC  Port Laguerre    61.99 112   P        P        04 31 32.0 +0.5
DZM   Mont Dzumac      62.11 112   P        P        04 31 32.0 -0.5
DZM                                IAmb     IAmb     04 31 34.1
      comp=Z,189nm,0.7s
DZM   Mont Dzumac      62.11 112   P        P        04 31 33.2 +0.7
ONTNC Ouen Toro        62.15 112   P        P        04 31 33.2 +0.6
SANVU Saraoutou        62.34 105   P        P        04 31 33.8 -0.2
SANVU Saraoutou        62.34 105   P        P        04 31 34.6 +0.6
SANVU Saraoutou        62.34 105 ⇑P        P        04 31 33.9  0.0
SANVU                              sP       PcP      04 32 14.5 +2.0
OUENC Ouen Island, N   62.52 113   P        P        04 31 35.1  0.0
OUENC Ouen Island, N   62.52 113   P        P        04 31 35.8 +0.7
      comp=Z,460nm,0.9s
YATNC Mamie plateau,   62.52 112   P        P        04 31 36.2 +1.1
      comp=Z,524nm,0.9s
LIFNC LIFOU            62.73 111   P        P        04 31 37.3 +0.8
PINNC Pines Island,    63.09 113   IAmb     IAmb     04 31 40.7
      comp=Z,263nm,1.2s
PINNC Pines Island,    63.09 113   P        P        04 31 39.8 +0.9
BOD   Bodaibo          63.10   6  eP        P        04 31 38.1 -0.1
BOD                               e                  04 41 13.5
BOD                                pmax     pmax
      comp=Z,141nm,1.0s
MARNC Mare, Loyalty    63.52 111   P        P        04 31 41.2 -0.5
MARNC Mare, Loyalty    63.52 111   P        P        04 31 42.6 +0.9
      comp=Z,5.4nm,0.8s
ATD   Arta Tunnel      63.53 285   P        P        04 31 44.7 +2.7
      comp=Z,12nm,0.8s,baz=77,slow=5.1,SNR=6.0
ATD                                LR       LR       04 54 59.5
      comp=Z,330nm,20.5s,baz=88,slow=32
ATD   Arta Tunnel      63.53 285  eP        P        04 31 46.5 +4.5
ATD                               eS        S        04 40 04.8 -0.7
ATD   Arta Tunnel      63.53 285  eP        P        04 31 41.7 -0.3
ATD                               eS        S        04 40 08.2 +2.6
ATD   Arta Tunnel      63.53 285  eP        P        04 31 42.0 +0.1
ATD                              ⇓eS        S        04 40 07.8 +2.3
ATD   Arta Tunnel      63.53 285  eP        P        04 31 42.7 +0.7
ATD                               eS        S        04 40 06.5 +1.0
ATD   Arta Tunnel      63.53 285  eP        P        04 31 42.5 +0.5
ATD                               eS        S        04 40 06.0 +0.5
ATD   Arta Tunnel      63.53 285  eP        P        04 31 44.2 +2.2
ATD   Arta Tunnel      63.53 285  eP        P        04 31 45.1 +3.1
ATD   Arta Tunnel      63.53 285  eP        P        04 31 42.0 +0.1
ATD                               eS        S        04 40 09.4 +3.9
NFK   Norfolk Island   64.36 120   P        P        04 31 48.3 +1.2
      baz=64,SNR=7.3
NFK   Norfolk Island   64.36 120   P        P        04 31 48.2 +1.1
BVAR  Borovoye Array   64.61 338   P        P        04 31 47.5 -0.7
      comp=Z,42nm,0.7s
      comp=Z,42nm,0.7s
BRVK  Borovoye         64.68 338   P        P        04 31 47.5 -1.1
BRVK                               pmax     pmax
      comp=Z,83nm,0.8s
BRVK  Borovoye         64.68 338   P        P        04 31 47.5 -1.1
BRVK  Borovoye         64.68 338 ⇓P        P        04 31 47.8 -0.8
BRVK                               pP       pP       04 32 17.2 -3.4
NKL   Nikolayevsk      65.47  23  eP        P        04 31 54.4 +0.7
NKL                               e                  04 32 23.7
NKL                               eS        S        04 40 25.6 -2.2
NKL                                pmax     pmax
      comp=E,4.0nm,0.8s
NKL                                pmax     pmax
      comp=N,1.0nm,0.7s
NKL                                pmax     pmax
      comp=Z,97nm,1.2s
NKL                                pmax     pmax
      comp=Z,39nm,1.1s
NKL                                MLR      MLR
      comp=E,28nm,12.0s
NKL                                MLR      MLR
      comp=N,1.0nm,10.0s
NKL                                MLR      MLR
      comp=Z,119nm,10.0s
MCQ   Macquarie Isla   65.87 149   P        P        04 31 58.4 +2.1
      baz=66,SNR=8.3
MCQ   Macquarie Isla   65.87 149   P        P        04 31 56.5 +0.2
ANKE  Ethiopia-Afar    66.19 283  eP        P        04 32 01.2 +1.6
ANKE                             ⇓eS        S        04 40 41.2 +2.5
ANKE  Ethiopia-Afar    66.19 283  eP        P        04 31 59.8 +0.2
ANKE  Ethiopia-Afar    66.19 283  eP        P        04 32 01.2 +1.6
ANKE                             ⇓eS        S        04 40 41.2 +2.5
ANKE                               IAMs_20  IAMs_20  04 41 14.6
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      comp=E,196nm,2.5s
DRV   Dumont d'Urvil   66.24 165 ⇑P        P        04 31 58.9 +0.5
KIBK  Kibwezi          66.39 270   P        P        04 32 01.9 +1.3
KIBK  Kibwezi          66.39 270   P        P        04 32 02.7 +2.1
      SNR=24
AB31  Akbulak array    66.48 330  i P       P        04 31 59.3 -1.0
AAE   Adis Abeba       67.03 282  eP        P        04 32 08.4 +3.6
AAE   Adis Abeba       67.03 282  eP        P        04 32 03.3 -1.6
AAE                               eS        S        04 40 52.2 +3.4
AAE   Adis Abeba       67.03 282  eP        P        04 32 06.0 +1.1
AAE                              ⇓eS        S        04 40 52.9 +4.1
AAE   Adis Abeba       67.03 282  eP        P        04 32 08.0 +3.1
AAE                               eS        S        04 40 53.8 +4.9
AAE   Adis Abeba       67.03 282  eP        P        04 32 04.4 -0.5
AAE   Adis Abeba       67.03 282  eP        P        04 32 06.1 +1.1
AAE   Adis Abeba       67.03 282  eP        P        04 32 08.5 +3.6
AAE   Adis Abeba       67.03 282  eP        P        04 32 06.0 +1.1
AAE                              ⇓eS        S        04 40 52.9 +4.1
AAE                                IAMs_20  IAMs_20  04 41 01.6
      comp=E,872nm,17.5s
FURI  Furi             67.10 282   P        P        04 32 08.7 +3.4
FURI  Furi             67.10 282  eP        P        04 32 16.4  +11
FURI                              eS        S        04 41 00.6  +11
FURI  Furi             67.10 282  eP        P        04 32 08.7 +3.4
FURI                              eS        S        04 40 57.9 +8.3
FURI  Furi             67.10 282  eP        P        04 32 07.0 +1.7
FURI                              eS        S        04 40 54.6 +4.9
FURI  Furi             67.10 282  eP        P        04 32 08.8 +3.4
FURI                              eS        S        04 40 51.4 +1.7
FURI  Furi             67.10 282  eP        P        04 32 07.8 +2.5
FURI                              eS        S        04 40 48.7 -1.0
FURI  Furi             67.10 282  eP        P        04 32 06.7 +1.4
FURI  Furi             67.10 282  eP        P        04 32 09.3 +4.0
FURI  Furi             67.10 282  eP        P        04 32 07.0 +1.7
FURI                              eS        S        04 40 52.8 +3.2
FURI                               IAMs_20  IAMs_20  04 41 02.8
      comp=E,1µm,20.2s
KMBO  Kilima Mbogo     67.28 271   P        P        04 32 08.6 +2.2
      comp=E,49nm,1.0s,baz=72,slow=7.3,SNR=74
KMBO                               LR       LR       04 56 20.8
      comp=E,280nm,21.3s,baz=92,slow=31
      comp=E,49nm,1.0s
KMBO  Kilima Mbogo     67.28 271   P        P        04 32 08.0 +1.6
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 16.4  +10
KMBO                              eS        S        04 40 58.6 +6.9
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 06.4  0.0
KMBO                              eS        S        04 40 48.0 -3.8
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 06.0 -0.4
KMBO                              eS        S        04 40 47.9 -3.8
KMBO  Kilima Mbogo     67.28 271  i P       P        04 32 08.3 +1.8
KMBO                              eS        S        04 40 51.4 -0.4
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 04.4 -2.0
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 07.9 +1.5
KMBO  Kilima Mbogo     67.28 271  i P       P        04 32 08.2 +1.8
KMBO  Kilima Mbogo     67.28 271  eP        P        04 32 06.0 -0.4
KMBO                               IAMs_20  IAMs_20  04 40 10.9
      comp=E,8µm,97.2s
KMBO                              eS        S        04 40 47.9 -3.8
KMBO  Kilima Mbogo     67.28 271  i P       P        04 32 08.4 +2.0
      SNR=19
DCZ   Deep Cove        67.40 137   IAmb     IAmb     04 32 08.2
      comp=Z,363nm,1.4s
MLZ   Mavora Lakes     68.03 137   IAmb     IAmb     04 32 11.7
      comp=Z,164nm,1.1s
WHZ   Wether Hill Ro   68.06 138   IAmb     IAmb     04 32 11.9
      comp=Z,178nm,1.3s
AKTO  Aktyubinsk       68.19 330   P        P        04 32 10.1 -0.9
      comp=Z,60nm,0.6s,baz=122,slow=7.5,SNR=116
AKTO                               PcP      PcP      04 32 37.1 +1.1
      comp=Z,89nm,0.8s,baz=111,slow=6.8,SNR=9.5
AKTO                               S        S        04 40 58.8 -2.0
      comp=Z,7.0nm,0.9s,baz=275,slow=22,SNR=12
AKTO                               LR       LR       05 06 00.8
      comp=Z,122nm,18.2s,baz=135,slow=39
      comp=Z,60nm,0.6s
WKZ   Wanaka           68.50 136   IAmb     IAmb     04 32 15.7
      comp=Z,532nm,2.0s
MAW   Mawson           68.57 196   P        P        04 32 15.0 +2.0
      comp=Z,369nm,0.9s,baz=43,slow=7.0,SNR=130
MAW                                LR       LR       04 58 44.0
      comp=Z,262nm,18.1s,baz=40,slow=32
      comp=Z,369nm,0.9s
MAW   Mawson           68.57 196   P        P        04 32 14.8 +1.8
      baz=68,SNR=164
TARA  Tarawa           68.60  87   P        P        04 32 15.2 +0.8
TARA                               IAmb     IAmb     04 32 16.1
      comp=Z,237nm,0.9s
TARA  Tarawa           68.60  87   P        P        04 32 16.5 +2.2
      comp=Z,281nm,1.1s
LBZ   Lake Benmore     69.19 136   P        P        04 32 16.4 -1.1
YAK   Yakutsk          69.60  12   P        P        04 32 18.9 -0.6
      comp=Z,145nm,0.6s,baz=207,slow=0.7,SNR=44
YAK                                LR       LR       05 05 39.0
      comp=Z,195nm,19.2s,baz=262,slow=38
      comp=Z,145nm,0.6s
YAK   Yakutsk          69.60  12c iP        P        04 32 19.0 -0.5
YAK                               e                  04 32 46.8
YAK                               e*PP      sP       04 33 00.0 -6.1
YAK                               ePPP      PPP      04 36 36.2
YAK                               eS        S        04 41 13.7 -3.1
YAK                               e                  04 41 58.1
YAK                               eSSS      SSS      04 48 57.3
YAK                                pmax     pmax
      comp=Z,221nm,0.8s
YAK                                pmax     pmax
      comp=N,51nm,0.9s
YAK                                pmax     pmax
      comp=E,37nm,0.9s
YAK                                pmax     pmax
      comp=Z,129nm,1.0s
YAK                                pmax     pmax
      comp=N,20nm,1.0s
YAK                                pmax     pmax
      comp=E,24nm,1.0s
YAK                                smax     smax
      comp=N,51nm,1.6s
YAK                                smax     smax
      comp=E,36nm,1.5s
YAK   Yakutsk          69.60  12   P        P        04 32 19.0 -0.5
LODK  Lodwar           69.62 276   P        P        04 32 23.7 +3.0
      SNR=49
LODK  Lodwar           69.62 276  eP        P        04 32 21.8 +1.0
LODK                              eS        S        04 41 20.6 +1.6
LODK  Lodwar           69.62 276  eP        P        04 32 21.4 +0.6
LODK                             ⇓eS        S        04 41 19.6 +0.5
LODK  Lodwar           69.62 276  i P       P        04 32 22.9 +2.2
LODK                              eS        S        04 41 21.6 +2.6
LODK  Lodwar           69.62 276  eP        P        04 32 21.7 +1.0
LODK                              eS        S        04 40 57.9  -21
LODK  Lodwar           69.62 276  eP        P        04 32 22.9 +2.2
LODK  Lodwar           69.62 276  i P       P        04 32 23.0 +2.2
LODK  Lodwar           69.62 276  eP        P        04 32 21.4 +0.6
LODK                             ⇓eS        S        04 41 19.6 +0.5
LODK                               IAMs_20  IAMs_20  04 41 29.1
      comp=N,849nm,17.9s
RPZ   Rata Peaks       69.65 135   LR       LR       05 01 54.3
      comp=N,236nm,21.5s,baz=268,slow=35
RPZ   Rata Peaks       69.65 135   IAmb     IAmb     04 32 21.4
      comp=Z,447nm,1.3s
OUZ   Omahuta          70.03 126   P        P        04 32 22.4 -0.3
QRZ   Quartz Range     70.12 132   IAmb     IAmb     04 32 25.0
      comp=Z,371nm,1.1s
QRZ   Quartz Range     70.12 132   P        P        04 32 24.0 +0.8
MAK   Makhachkala      70.19 319  eP        P        04 32 21.0 -2.5
MAK                               e*PP      PcP      04 32 50.0 +5.5
MAK                               e*SP      sP       04 33 03.0 -7.2
MAK                               e                  04 34 56.0
MAK                               ePPP      PPP      04 36 37.7
MAK                               eS        S        04 41 21.1 -3.4
MAK                               e*SS      ScS      04 42 13.9  0.0
MAK                               eSS       SS       04 45 54.5 -2.9
MAK                                pmax     pmax
      comp=Z,333nm,0.7s
OXZ   Oxford           70.26 134   IAmb     IAmb     04 32 25.7
      comp=Z,160nm,1.0s
THZ   Tophouse         70.58 132   IAmb     IAmb     04 32 27.7
      comp=Z,246nm,0.9s
MQZ   McQueen's Vall   70.78 135   IAmb     IAmb     04 32 28.8
      comp=Z,152nm,1.0s
GNI   Garni            70.84 315   P        P        04 32 28.5 +0.7
      comp=Z,120nm,0.8s,baz=240,slow=0.7,SNR=103
GNI                                S        S        04 41 34.9 +2.4
      comp=Z,16nm,0.9s,baz=275,slow=22,SNR=19
      comp=Z,120nm,0.8s
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GNI   Garni            70.84 315d iP        P        04 32 28.1 +0.3
GNI                                pmax     pmax
      comp=Z,267nm,1.2s
GNI   Garni            70.84 315   P        P        04 32 28.0 +0.3
GNI                                IAmb     IAmb     04 32 29.9
      comp=Z,277nm,1.2s
GNI   Garni            70.84 315   P        P        04 32 28.5 +0.7
MQOL  MQOL             70.94 294  i P       P        04 32 30.3 +1.8
MQOL                              i                  04 32 38.5
      baz=254,slow=14
KHEZ  Kahui Hut        70.98 130   P        P        04 32 30.4 +1.8
KHZ   Kahutara         71.17 133   IAmb     IAmb     04 32 30.2
      comp=Z,212nm,0.9s
SVE   Sverdlovsk       71.22 336c iP        P        04 32 29.4  0.0
SVE                               eS        S        04 41 33.4 -2.4
SVE                                pmax     pmax
      comp=Z,221nm,1.1s
GEVA  Gevas            71.31 313   IAmb     IAmb     04 32 33.9
      comp=Z,214nm,0.9s
GROC  Groznyy          71.42 319  eP        P        04 32 31.6 +0.6
GROC                              e                  04 32 50.8
GROC                              e*PP      pP       04 33 05.5 +2.0
GROC                              eS        S        04 41 37.1 -1.6
GROC                               pmax     pmax
      comp=Z,858nm,1.1s
HIZ   Hauiti           71.51 129   P        P        04 32 33.1 +1.5
MKAZ  Moumakai         71.55 127   P        P        04 32 33.7 +1.9
WAZ   Wanganui         71.79 130   P        P        04 32 34.6 +1.3
ARU   Arti             71.80 335   P        P        04 32 32.5 -0.4
      comp=Z,34nm,0.7s,baz=126,slow=3.9,SNR=120
ARU                                S        S        04 41 45.3 +2.7
      comp=Z,1.3nm,0.6s,baz=352,slow=23,SNR=4.2
ARU                                LR       LR       05 08 44.1
      comp=Z,174nm,19.3s,baz=142,slow=40
      comp=Z,34nm,0.7s
ARU   Arti             71.80 335d iP        P        04 32 32.4 -0.5
ARU                                                  04 32 48.8
ARU                                *PP      pP       04 33 00.8 -4.7
ARU                                                  04 35 11.7
ARU                                PPP      PPP      04 36 59.4
ARU                                S        S        04 41 42.3 -0.3
ARU                                                  04 42 23.3
ARU                                SS       SS       04 46 15.0 -6.5
ARU                                pmax     pmax
      comp=Z,232nm,1.3s
SNZO  South Karori     71.83 132   P        P        04 32 32.6 -0.9
SNZO                               IAmb     IAmb     04 32 33.7
      comp=Z,214nm,0.9s
SNZO  South Karori     71.83 132   P        P        04 32 32.9 -0.6
TOZ   Tahuroa Road     71.90 128   P        P        04 32 35.5 +1.5
KUZ   Kuaotunu         71.94 127   P        P        04 32 35.5 +1.2
CNG   Changalane       71.98 244  i P       P        04 32 35.9 +1.2
CNG   Changalane       71.98 244  i P       P        04 32 35.9 +1.2
PKVZ  Pokaka           72.00 130   P        P        04 32 35.5 +0.8
TLZ   Tolley Road      72.01 129   P        P        04 32 33.6 -1.1
GURO  Guroymak-BITLI   72.14 313   IAmb     IAmb     04 32 37.8
      comp=Z,261nm,0.8s
FWVZ  Far West T-bar   72.15 130   P        P        04 32 36.5 +0.7
TRVZ  Turoa            72.16 130   P        P        04 32 36.5 +0.7
WTVZ  West Tongariro   72.16 129   P        P        04 32 36.5 +0.8
NGZ   Ngauruhoe        72.18 129   P        P        04 32 36.6 +0.7
NNVZ  North Ngauruho   72.18 129   P        P        04 32 36.8 +0.9
WHVZ  Whangaehu Hut    72.18 130   P        P        04 32 36.7 +0.7
WNVZ  Wahianoa         72.20 130   P        P        04 32 36.5 +0.5
SNVZ  South Ngauruho   72.21 129   P        P        04 32 36.2 +0.1
TMVZ  Te Maari         72.25 129   P        P        04 32 37.1 +0.9
ETVZ  East Tongariro   72.26 129   P        P        04 32 37.1 +0.8
MOVZ  Moawhango        72.33 130   P        P        04 32 36.5 -0.1
MRZ   Mangatainoka R   72.38 131   P        P        04 32 36.3 -0.5
ZEI   Tsey             72.50 318  eP        P        04 32 36.0 -1.7
ZEI                                pmax     pmax
      comp=Z,324nm,0.8s
BHHZ  Black Hill Sta   72.58 130   P        P        04 32 38.1  0.0
TSZ   Takapari Road    72.58 130   P        P        04 32 38.2 +0.1
ONI   Oni              72.72 317   IAmb     IAmb     04 32 41.2
      comp=Z,129nm,0.8s
PNHZ  Pukenui          72.74 130   P        P        04 32 39.3 +0.3
MRHZ  Matea Rd         72.76 129   P        P        04 32 38.9 -0.3
MSVF  Nonsavu          72.79 107   P        P        04 32 39.8 +0.1
MSVF                               pmax     pmax
      comp=Z,249nm,0.9s
MSVF  Nonsavu          72.79 107   P        P        04 32 39.8 +0.1
MSVF                               IAmb     IAmb     04 32 41.6
      comp=Z,249nm,0.9s
MSVF  Nonsavu          72.79 107   P        P        04 32 40.8 +1.1
KRHZ  Kereru           72.83 130   P        P        04 32 40.0 +0.5
KWHZ  Kaweka Forest    72.84 130   P        P        04 32 40.0 +0.3
BKZ   Black Stump Fm   72.86 129   P        P        04 32 39.9 +0.1
BKZ   Black Stump Fm   72.86 129   P        P        04 32 39.8 +0.1
BFZ   Birch Farm       72.89 131   P        P        04 32 39.8  0.0
BFZ   Birch Farm       72.89 131   P        P        04 32 40.3 +0.5
WPHZ  Waipukurau       72.94 130   P        P        04 32 40.2  0.0
NCK   Nalchik          73.00 318 deP        P        04 32 40.2 -0.2
MTHZ  Maungataniwha    73.09 129   P        P        04 32 33.1 -8.0
PEA0B Petropavlovsk-   73.09  30 deP        P        04 32 40.8 +0.1
PETK  Petropavlovsk-   73.09  30   P        P        04 32 40.5 -0.2
      comp=Z,15nm,0.8s,baz=257,slow=2.8,SNR=28
PETK                               LR       LR       05 08 41.5
      comp=Z,114nm,18.6s,baz=231,slow=39
      comp=Z,15nm,0.8s
NMHZ  Naumai           73.10 129   P        P        04 32 42.0 +0.8
PRHZ  Porangahau       73.12 130   P        P        04 32 42.0 +0.8
RTZ   Ruatahuna        73.17 129   P        P        04 32 39.0 -2.6
URZ   Urewera          73.23 128   LR       LR       05 06 14.7
      comp=Z,268nm,18.7s,baz=211,slow=37
URZ   Urewera          73.23 128   P        P        04 32 41.6 -0.3
KAHZ  Kahuranaki       73.24 130   P        P        04 32 42.8 +0.8
PXZ   Pawanui          73.26 130   P        P        04 32 39.8 -2.2
RAHZ  Arahi            73.29 129   P        P        04 32 42.7 +0.4
NEY   Neytrino         73.48 318d iP        P        04 32 44.7 +1.3
NEY                                pmax     pmax
      comp=Z,61nm,0.9s
PET   Petropavlovsk    73.53  31⇑iP        P        04 32 43.7 +0.5
PET                               e                  04 32 58.7
PET                               e*PP      pP       04 33 19.6 +3.7
PET                               eS        SKiKP    04 42 00.4 -0.1
PET                               eSP       SPn      04 42 30.2 -4.0
PET                               eSS       SS       04 46 48.9 +0.9
PET                                pmax     pmax
      comp=Z,134nm,0.6s
PET   Petropavlovsk    73.53  31   P        P        04 32 43.3 +0.1
KBZ   Khabaz           73.55 318   P        P        04 32 44.1 +0.6
      comp=Z,298nm,0.8s,baz=109,slow=4.5,SNR=613
KBZ                                S        SKiKP    04 41 57.8 -3.1
      comp=Z,6.6nm,1.1s,baz=81,slow=9.3,SNR=4.5
KBZ                                LR       LR       05 08 07.4
      comp=Z,176nm,20.9s,baz=99,slow=38
      comp=Z,298nm,0.8s
KBZ   Khabaz           73.55 318d iP        P        04 32 43.7 +0.1
KBZ                                pmax     pmax
      comp=Z,401nm,0.9s
MWZ   Matawai          73.56 128   P        P        04 32 43.3 -0.6
RUGZ  Raukumara Rang   73.64 128   P        P        04 32 43.3 -1.2
KVAR  Kislovodsk Arr   73.78 318   P        P        04 32 46.5 +1.5
      comp=Z,60nm,0.9s,baz=255,slow=20,SNR=35
KVAR                               S        S        04 42 05.1 -0.7
      comp=Z,127nm,1.2s,baz=180,slow=20,SNR=27
KVAR                               LR       LR       05 08 24.4
      comp=Z,120nm,21.8s,baz=260,slow=38
      comp=Z,60nm,0.9s
KIV   Kislovodsk       73.78 318  eP        P        04 32 45.2 +0.1
KIV                               e*PP      pP       04 33 14.0 -3.9
KIV                               e                  04 35 30.7
KIV                               eS        S        04 42 06.1 +0.3
KIV                                pmax     pmax
      comp=Z,226nm,1.0s
KIV                                pmax     pmax
      comp=Z,61nm,3.2s
KIV                                MLR      MLR
      comp=Z,86nm,18.0s
KIV   Kislovodsk       73.78 318   P        P        04 32 45.4 +0.3
KIV                                IAmb     IAmb     04 32 47.4
      comp=Z,200nm,0.9s
KIV   Kislovodsk       73.78 318  i P       P        04 32 45.4 +0.3
      SNR=59
KOPT  Kop Dagi         73.79 314   IAmb     IAmb     04 32 49.5
      comp=Z,208nm,0.8s
MBAR  Mbarara          73.82 271   P        P        04 32 48.2 +2.1
      baz=90,slow=8.9
MBAR                               LR       LR       05 02 30.8
      comp=Z,211nm,19.1s,baz=78,slow=33
MBAR  Mbarara          73.82 271ceP         P        04 32 48.1 +2.1
MBAR                               pmax     pmax
      comp=Z,218nm,1.3s
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MBAR	**Mbarara**	**73.82**	**271**	eP	**P**	**04 32 47.9**	**+1.9**
MBAR				⇓eS	**S**	**04 42 06.1**	**-1.3**
MBAR	**Mbarara**	**73.82**	**271**	eP	**P**	**04 32 45.4**	**-0.6**
MBAR				eS	**SKiKP**	**04 42 02.8**	**+0.4**
MBAR	**Mbarara**	**73.82**	**271**	i P	**P**	**04 32 48.0**	**+2.0**
MBAR				⇓eS	**S**	**04 42 08.9**	**+1.5**
MBAR	**Mbarara**	**73.82**	**271**	eP	**P**	**04 32 44.7**	**-1.3**
MBAR	**Mbarara**	**73.82**	**271**	eP	**P**	**04 32 47.5**	**+1.5**
MBAR	**Mbarara**	**73.82**	**271**	i P	**P**	**04 32 48.1**	**+2.1**
MBAR	**Mbarara**	**73.82**	**271**	eP	**P**	**04 32 45.4**	**-0.6**
MBAR				IAMs_20	IAMs_20	04 41 39.1	
MBAR				eS	**SKiKP**	**04 42 02.8**	**+0.4**
TWGZ	**Tauwhareparae**	**73.90**	**128**	P	**P**	**04 32 45.7**	**-0.2**
MA2	**Magadan**	**73.98**	**22**	P	**P**	**04 32 46.9**	**+1.2**
	comp=Z,39nm,0.8s,baz=216,slow=8.3						
	comp=Z,39nm,0.8s						
MA2	**Magadan**	**73.98**	**22**	d iP	**P**	**04 32 46.1**	**+0.4**
MA2				pmax	pmax		
	comp=Z,130nm,1.7s						
MA2	**Magadan**	**73.98**	**22**	P	**P**	**04 32 46.2**	**+0.5**
MA2				IAmb	IAmb	04 33 18.2	
	comp=Z,361nm,1.9s						
MA2	**Magadan**	**73.98**	**22**	P	**P**	**04 32 46.5**	**+0.8**
GOF	**Gofitskoye**	**74.00**	**320**	⇑eP	**P**	**04 32 46.4**	**+0.2**
GOF				eS	**S**	**04 42 06.4**	**-1.6**
GOF				pmax	pmax		
	comp=Z,516nm,1.3s						
GOF				smax	smax		
	comp=N,869nm,1.8s						
GOF				smax	smax		
	comp=E,444nm,1.3s						
ASF	**Jabal al Asfar**	**74.02**	**305**	P	**P**	**04 32 48.6**	**+1.9**
	comp=E,64nm,0.8s,baz=126,slow=3.0,SNR=91						
ASF				S	**S**	**04 42 09.8**	**+0.9**
	comp=E,2.9nm,0.7s,baz=174,slow=23,SNR=12						
ASF				LR	LR	05 04 43.6	
	comp=E,210nm,21.7s,baz=120,slow=35						
	comp=E,64nm,0.8s						
MXZ	**Matakaoa Point**	**74.09**	**128**	IAmb	IAmb	04 32 47.6	
	comp=Z,133nm,0.7s						
MXZ	**Matakaoa Point**	**74.09**	**128**	P	**P**	**04 32 47.2**	**+0.3**
PUZ	**Puketiti**	**74.11**	**128**	P	**P**	**04 32 46.5**	**-0.5**
CNGZ	**Carnagh Statio**	**74.11**	**128**	P	**P**	**04 32 47.4**	**+0.4**
JAWL	**J.Aulia**	**74.12**	**287**	i P	**P**	**04 32 51.2**	**+3.7**
JAWL				i		04 32 59.6	
	baz=348,slow=11						
FUNA	**Funafuti**	**74.12**	**97**	P	**P**	**04 32 48.4**	**+0.9**
FUNA				IAmb	IAmb	04 32 49.9	
	comp=Z,223nm,1.1s						
FUNA	**Funafuti**	**74.12**	**97**	P	**P**	**04 32 49.2**	**+1.7**
BELG	**Belogornoye**	**74.66**	**328**	P	**P**	**04 32 49.3**	**-0.5**
	comp=Z,128nm,0.9s,baz=355,slow=1.8,SNR=36						
BELG				S	**S**	**04 42 10.3**	**-4.6**
	comp=Z,11nm,0.8s,baz=159,slow=16,SNR=8.8						
BELG				LR	LR	05 09 34.8	
	comp=Z,210nm,21.8s,baz=135,slow=39						
	comp=Z,128nm,0.9s						
GHAJ	**Ghor Haditha**	**74.87**	**304**	IAmb	IAmb	04 32 54.3	
	comp=Z,140nm,0.6s						
EIL	**Elat**	**74.96**	**302**	P	**P**	**04 32 53.5**	**+1.4**
	comp=Z,87nm,0.8s,baz=137,slow=5.5,SNR=66						
EIL				S	**S**	**04 42 20.6**	**+1.3**
	comp=Z,3.7nm,0.7s,baz=38,slow=22,SNR=6.6						
EIL				LR	LR	05 06 08.0	
	comp=Z,172nm,19.8s,baz=101,slow=36						
	comp=Z,87nm,0.8s						
BLWY	**Bulawayo**	**75.09**	**251**	i P	**P**	**04 32 53.8**	**+0.6**
BLWY	**Bulawayo**	**75.09**	**251**	i P	**P**	**04 32 53.8**	**+0.6**
MRWI	**Hamdab**	**75.11**	**291**	i P	**P**	**04 32 55.8**	**+2.6**
MRWI				i		04 32 59.6	
	baz=10,slow=4.8						
NRIK	**Noril'sk**	**75.11**	**354**	P	**P**	**04 32 51.3**	**-0.8**
	comp=Z,19nm,0.4s,baz=160,slow=4.9,SNR=65						
NRIK				S	**S**	**04 42 18.5**	**-0.9**
	comp=Z,4.7nm,0.9s,baz=10,slow=21,SNR=9.6						
NRIK				LR	LR	05 08 38.0	
	comp=Z,775nm,21.1s,baz=156,slow=38						
	comp=Z,19nm,0.4s						
MATP	**Matopo**	**75.20**	**250**	i P	**P**	**04 32 54.5**	**+0.7**
MATP	**Matopo**	**75.20**	**250**	i P	**P**	**04 32 54.5**	**+0.7**
SHBL	**Chebaa**	**75.29**	**306**	eP	**P**	**04 32 55.8**	**+1.7**
MMAI	**Mount Meron Ar**	**75.47**	**306**	P	**P**	**04 32 55.5**	**+0.4**
	comp=Z,7.6nm,0.6s,baz=307,slow=36,SNR=6.2						
MMAI				LR	LR	05 08 30.0	
	comp=Z,141nm,18.3s,baz=260,slow=37						
BHL	**Bhannes**	**75.51**	**307**	eP	**P**	**04 32 56.8**	**+1.5**
LSZ	**Lusaka**	**75.55**	**256**	LR	LR	04 59 51.4	
	comp=Z,121nm,19.8s,baz=108,slow=30						
SOC	**Sochi**	**75.63**	**317**	d iP	**P**	**04 32 55.0**	**-0.6**
SOC				e*PP	**pP**	**04 33 23.6**	**-4.9**
SOC				e*SP	**sP**	**04 33 37.2**	**-5.4**
SOC				e		04 35 42.1	
SOC				ePPP	PPP	04 37 30.8	
SOC				eS	**S**	**04 42 22.3**	**-3.8**
SOC				e		04 42 52.5	
SOC				eSS	**SS**	**04 47 18.0**	**-2.3**
SOC				eSSS	SSS	04 50 42.4	
SOC				pmax	pmax		
	comp=Z,337nm,0.8s						
RAO	**Raoul Island**	**76.70**	**119**	LR	LR	05 06 30.5	
	comp=Z,385nm,21.6s,baz=138,slow=35						
SEY	**Seymchan**	**76.78**	**20**	P	**P**	**04 33 02.7**	**+1.0**
	comp=Z,24nm,0.7s,baz=232,slow=7.2,SNR=24						
SEY				S	**S**	**04 42 37.0**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=342,slow=20,SNR=6.2						
SEY				LR	LR	05 08 49.3	
	comp=Z,172nm,19.5s,baz=219,slow=37						
	comp=Z,24nm,0.7s						
SEY	**Seymchan**	**76.78**	**20**	d iP	**P**	**04 33 02.1**	**+0.4**
SEY				pmax	pmax		
	comp=Z,70nm,1.5s						
TOKA	**Tokat**	**76.79**	**313**	IAmb	IAmb	04 33 04.4	
	comp=Z,143nm,0.8s						
BNN	**Bunyan**	**76.80**	**312**	IAmb	IAmb	04 33 04.3	
	comp=Z,358nm,0.9s						
KIRV	**Kirov**	**77.04**	**334**	P	**P**	**04 33 03.4**	**+0.2**
	comp=Z,187nm,0.8s,baz=124,slow=2.1,SNR=93						
KIRV				S	**S**	**04 42 38.1**	**-2.7**
	comp=Z,5.7nm,0.5s,baz=143,slow=5.5,SNR=4.3						
	comp=Z,187nm,0.8s						
KIRV	**Kirov**	**77.04**	**334**	d iP	**P**	**04 33 03.1**	**-0.1**
VRH	**Novokhopyorsk**	**77.37**	**325**	eP	**P**	**04 33 04.8**	**-0.4**
VRH				eS	**S**	**04 42 39.7**	**-5.0**
VRH				pmax	pmax		
	comp=Z,360nm,0.8s						
VRH				pmax	pmax		
	comp=Z,1µm,2.3s						
VRH				smax	smax		
	comp=N,1µm,1.6s						
ANN	**Anapa**	**77.59**	**318**	eP	**P**	**04 33 05.7**	**-0.9**
ANN				e*PP	**pP**	**04 33 36.6**	**-3.0**
ANN				e		04 36 01.3	
ANN				eS	**S**	**04 42 43.3**	**-4.1**
ANN				e		04 43 08.0	
ANN				eSS	**SS**	**04 47 51.4**	**+1.5**
ANN				pmax	pmax		
	comp=N,40nm,0.7s						
ANN				pmax	pmax		
	comp=E,16nm,1.0s						
ANN				pmax	pmax		
	comp=Z,106nm,0.8s						
CSS	**Mathiatis**	**77.65**	**307**	IAmb	IAmb	04 33 09.6	
	comp=Z,450nm,1.4s						
LBTB	**Lobatse**	**77.89**	**246**	LR	LR	05 04 18.0	
	comp=Z,174nm,18.6s,baz=96,slow=33						
LBTB	**Lobatse**	**77.89**	**246**	P	**P**	**04 33 09.9**	**+1.0**
LBTB				pmax	pmax		
	comp=Z,217nm,1.0s						
LBTB	**Lobatse**	**77.89**	**246**	P	**P**	**04 33 09.9**	**+1.0**
LBTB				IAmb	IAmb	04 33 11.4	
	comp=Z,217nm,0.9s						
LBTB	**Lobatse**	**77.89**	**246**	i P	**P**	**04 33 09.8**	**+0.9**
LBTB	**Lobatse**	**77.89**	**246**	i P	**P**	**04 33 09.8**	**+0.9**
TIXI	**Tiksi**	**78.16**	**8**	P	**P**	**04 33 08.4**	**-0.8**
	comp=Z,29nm,0.7s,baz=93,slow=23,SNR=96						
TIXI				S	**S**	**04 42 46.0**	**-6.5**
	comp=Z,4.5nm,0.6s,baz=88,slow=24,SNR=3.5						
TIXI				LR	LR	05 10 46.9	
	comp=Z,423nm,18.1s,baz=181,slow=38						
	comp=Z,29nm,0.7s						
TIXI	**Tiksi**	**78.16**	**8**	d iP	**P**	**04 33 07.8**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,73nm,1.3s						
TIXI	**Tiksi**	**78.16**	**8**	P	**P**	**04 33 08.0**	**-1.2**
BOSA	**Boshof**	**78.22**	**242**	P	**P**	**04 33 11.8**	**+1.2**
	comp=Z,141nm,0.8s,baz=97,slow=4.9,SNR=145						
BOSA				PKKPbc	**PKKPbc**	**04 52 09.8**	**+0.9**
	comp=Z,4.8nm,1.0s,baz=238,slow=3.2,SNR=5.8						
BOSA				LR	LR	05 04 06.9	
	comp=Z,328nm,18.1s,baz=97,slow=33						
	comp=Z,141nm,0.8s						
BOSA	**Boshof**	**78.22**	**242**	P	**P**	**04 33 11.3**	**+0.7**
BOSA				IAmb	IAmb	04 33 12.9	
	comp=Z,214nm,0.9s						
BOSA	**Boshof**	**78.22**	**242**	i P	**P**	**04 33 11.8**	**+1.2**
BOSA	**Boshof**	**78.22**	**242**	i P	**P**	**04 33 11.8**	**+1.2**
VNDA	**Vanda**	**78.35**	**169**	P	**P**	**04 33 11.2**	**+0.9**
	comp=Z,185nm,1.0s,baz=306,slow=5.6,SNR=493						
VNDA				LR	LR	05 04 27.9	
	comp=Z,191nm,19.3s,baz=315,slow=33						
	comp=Z,185nm,1.0s						
VNDA	**Vanda**	**78.35**	**169**	P	**P**	**04 33 11.1**	**+0.9**
VNDA				IAmb	IAmb	04 33 12.6	
	comp=Z,311nm,1.1s						
VORD	**Divnogorie**	**78.67**	**324**	eP	**P**	**04 33 11.7**	**-0.7**
VORD				eS	**S**	**04 42 54.9**	**-3.8**
VORD				pmax	pmax		
	comp=Z,150nm,0.9s						
VORD				pmax	pmax		
	comp=Z,110nm,0.7s						
VORD				smax	smax		
	comp=N,180nm,0.9s						
BR131	**Keskin Array S**	**78.70**	**312**	d iP	**P**	**04 33 12.7**	**-0.3**
BR131	**Keskin Array S**	**78.70**	**312**	IAmb	IAmb	04 33 14.3	
	comp=Z,225nm,0.8s						
BR131	**Keskin Array S**	**78.70**	**312**	P	**P**	**04 33 13.1**	**+0.1**
	SNR=106						
BRTR	**Keskin Array B**	**78.70**	**312**	P	**P**	**04 33 12.9**	**-0.1**
	comp=Z,104nm,0.7s,baz=134,slow=7.1,SNR=554						
BRTR				S	**S**	**04 42 56.1**	**-3.7**
	comp=Z,1.6nm,0.9s,baz=109,slow=19,SNR=5.4						
BRTR				PKKPbc	**PKKPbc**	**04 52 08.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=202,slow=3.5,SNR=6.2						
	comp=Z,104nm,0.7s						
VSR	**Storozhevoye**	**78.84**	**324**	eP	**P**	**04 33 12.7**	**-0.6**
VSR				eS	**S**	**04 42 54.9**	**-5.6**
VSR				pmax	pmax		
	comp=Z,430nm,1.2s						
VSR				pmax	pmax		
	comp=Z,530nm,1.2s						
VSR				smax	smax		
	comp=N,2µm,3.2s						
VORR	**Voronezh**	**79.00**	**325**	eP	**P**	**04 33 14.6**	**+0.5**
VORR				S	**S**	**04 42 59.7**	**-2.4**
VORR				pmax	pmax		
	comp=Z,497nm,1.7s						
ILGA	**Ilgaz**	**79.01**	**313**	IAmb	IAmb	04 33 16.8	
	comp=Z,459nm,1.2s						
BZK	**Bozkurt**	**79.07**	**314**	⇓P	**P**	**04 33 16.2**	**+1.5**
ANTO	**Ankara**	**79.36**	**312**	P	**P**	**04 33 16.8**	**+0.3**
ANTO				pmax	pmax		
	comp=Z,156nm,1.1s						
ANTO	**Ankara**	**79.36**	**312**	P	**P**	**04 33 16.8**	**+0.3**
SBA	**Scott Base**	**79.44**	**169**	P	**P**	**04 33 17.5**	**+1.4**
SBA				pmax	pmax		
	comp=Z,216nm,0.9s						
SBA	**Scott Base**	**79.44**	**169**	P	**P**	**04 33 17.5**	**+1.4**
SBA				IAmb	IAmb	04 33 19.4	
	comp=Z,216nm,0.9s						
LPSR	**Galich'ya Gora**	**79.51**	**326**	eP	**P**	**04 33 17.2**	**+0.3**
LPSR				eS	**S**	**04 43 02.5**	**-5.0**
LPSR				pmax	pmax		
	comp=Z,260nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,280nm,2.0s						
LPSR				smax	smax		
	comp=N,410nm,1.8s						
SIM	**Simferopol'**	**79.88**	**317**	d iP	**P**	**04 33 19.0**	**-0.1**
SIM				i S	**S**	**04 43 11.1**	**-0.6**
SIM				pmax	pmax		
	comp=Z,619nm,0.8s						
PRGR	**Permogore**	**80.25**	**335**	⇓iP	**P**	**04 33 20.6**	**-0.1**
PRGR				i S	**S**	**04 43 13.0**	**-1.9**
ISP	**Isparta**	**80.56**	**309**	IAmb	IAmb	04 33 25.3	
	comp=Z,324nm,1.6s						
MOS	**Moscow**	**81.42**	**328**	eP	**P**	**04 33 24.8**	**-2.2**
MOS				e*PP	**pP**	**04 33 55.8**	**-4.6**
MOS				e		04 36 31.8	
MOS				eS	**S**	**04 43 23.1**	**-4.2**
MOS				e*SS	**pS**	**04 44 15.8**	**+7.3**
MOS				pmax	pmax		
	comp=Z,552nm,1.3s						
MOS				pmax	pmax		
	comp=N,110nm,1.3s						
MOS				pmax	pmax		
	comp=E,116nm,1.1s						
MOS				pmax	pmax		
	comp=Z,900nm,1.5s						
MOS				pmax	pmax		
	comp=N,200nm,1.4s						
MOS				pmax	pmax		
	comp=E,200nm,1.1s						
MOS				smax	smax		
	comp=E,1µm,2.8s						
OBN	**Obninsk**	**81.75**	**327**	P	**P**	**04 33 29.0**	**+0.2**
	comp=E,59nm,1.0s,baz=103,slow=0.9,SNR=101						
OBN				S	**S**	**04 43 28.6**	**-2.0**
	comp=E,1.4nm,0.3s,baz=58,slow=19,SNR=6.2						
OBN				PKKPbc	**PKKPbc**	**04 52 00.5**	**-1.8**
	comp=E,4.2nm,0.7s,baz=310,slow=22,SNR=4.6						
OBN				LR	LR	05 14 09.3	
	comp=E,67nm,20.7s,baz=114,slow=39						
	comp=E,59nm,1.0s						
OBN	**Obninsk**	**81.75**	**327**	d iP	**P**	**04 33 29.2**	**+0.4**
OBN				e*PP	**pP**	**04 33 57.8**	**-4.3**
OBN				e		04 36 33.6	
OBN				ePPP	PPP	04 38 28.0	
OBN				i S	S	04 43 19.6	-11
OBN				pmax	pmax		
	comp=Z,700nm,1.7s						
OBN	**Obninsk**	**81.75**	**327**	P	**P**	**04 33 28.6**	**-0.2**
SHEM	**Shemya Is, Ala**	**81.80**	**35**	LR	LR	05 08 43.7	
	comp=Z,60nm,21.8s,baz=250,slow=35						
SUR	**Sutherland**	**82.05**	**238**	LR	LR	05 04 53.4	
	comp=Z,183nm,19.5s,baz=90,slow=32						
YER	**Yerkesik**	**82.14**	**308**	P	**P**	**04 33 29.8**	**-1.5**
KLMR	**Klimovskoe**	**82.52**	**333**	eP	**P**	**04 33 29.8**	**-2.9**
KLMR				e		04 36 38.1	
KLMR				eS	**S**	**04 43 36.5**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,370nm,1.4s						
KLMR	**Klimovskoe**	**82.52**	**333**	eP	**P**	**04 33 29.8**	**-2.9**
KLMR				AMP		04 33 35.0	
	comp=Z,370nm,1.4s						
KLMR				ePP	**PP**	**04 36 38.1**	**-5.8**
KLMR				eS	**S**	**04 43 36.5**	**-1.9**
KLMR				eS	**S**	**04 43 36.5**	**-1.9**
AFI	**Afiamalu**	**82.69**	**103**	LR	LR	05 10 02.0	
	comp=Z,104nm,19.7s,baz=280,slow=35						
AFI	**Afiamalu**	**82.69**	**103**	P	**P**	**04 33 36.3**	**+1.6**
AFI				pmax	pmax		
	comp=Z,519nm,1.1s						
AFI	**Afiamalu**	**82.69**	**103**	P	**P**	**04 33 36.3**	**+1.6**
AFI	**Afiamalu**	**82.69**	**103**	P	**P**	**04 33 36.6**	**+1.9**
PURM	**Purcari**	**83.17**	**318**	⇑P	**P**	**04 33 37.2**	**+0.9**
ZKR	**Zakros**	**83.37**	**306**	P	**P**	**04 33 38.8**	**+1.1**
SMG	**Samos**	**83.38**	**309**	P	**P**	**04 33 35.7**	**-2.0**
MANR	**Mangalia**	**83.39**	**315**	⇓P	**P**	**04 33 38.8**	**+1.2**
JURR	**Jurilovca**	**83.41**	**316**	⇑P	**P**	**04 33 38.9**	**+1.2**
KALB	**Balgarevo**	**83.42**	**315**	⇑P	**P**	**04 33 39.3**	**+1.6**
EFOR	**EFORIE**	**83.42**	**315**	⇑P	**P**	**04 33 39.0**	**+1.3**
TSCT	**Constanta Port**	**83.42**	**315**	⇑P	**P**	**04 33 39.5**	**+1.7**
KNTN	**Kanton**	**83.53**	**92**	P	**P**	**04 33 39.0**	**+0.1**
KNTN	**Kanton**	**83.53**	**92**	P	**P**	**04 33 40.3**	**+1.4**
TLCR		**83.56**	**316**	⇑P	**P**	**04 33 39.5**	**+1.1**
MFTR	**Murfatlar**	**83.59**	**315**	⇓P	**P**	**04 33 39.7**	**+1.1**
PSN	**Preselentsi**	**83.65**	**315**	eP	**P**	**04 33 40.3**	**+1.4**
TIRR	**Tirgusor**	**83.67**	**316**	⇓P	**P**	**04 33 39.8**	**+0.9**
TIRR	**Tirgusor**	**83.67**	**316**	⇓P	**P**	**04 33 39.8**	**+0.9**
TIRR	**Tirgusor**	**83.67**	**316**	⇓P	**SKSac**	**04 43 47.5**	**-2.0**
TIRR	**Tirgusor**	**83.67**	**316**	P	**P**	**04 33 39.4**	**+0.5**
TIRR				pmax	pmax		
	comp=Z,492nm,0.9s						
TIRR	**Tirgusor**	**83.67**	**316**	P	**P**	**04 33 39.4**	**+0.5**
TPGR	**Topolog**	**83.75**	**316**	⇓P	**P**	**04 33 40.3**	**+0.9**
TPGR	**Topolog**	**83.75**	**316**	⇑P	**SKSac**	**04 43 50.1**	**-0.1**
TLBR	**Topalu**	**83.94**	**316**	⇓P	**P**	**04 33 42.0**	**+1.6**
MILM	**Milestii Mici**	**83.97**	**318**	⇑P	**P**	**04 33 41.7**	**+1.3**
MILM	**Milestii Mici**	**83.97**	**318**	d iP	**P**	**04 33 41.0**	**+0.5**
MILM				e		04 37 02.0	
MILM				i S	**S**	**04 43 48.0**	**-5.5**
MILM				e*SS	**pS**	**04 44 40.0**	**+4.4**
MILM				pmax	pmax		
	comp=Z,1µm,0.6s						
MILM				pmax	pmax		
	comp=E,300nm,0.8s						
MILM				smax	smax		
	comp=N,1µm,3.3s						
MILM				smax	smax		
	comp=E,2µm,3.9s						
KIS	**Kishinev**	**83.99**	**318**	⇓iP	**P**	**04 33 41.0**	**+0.5**
	comp=E,400nm,1.6s						
KIS				i pP	**pP**	**04 34 10.0**	**-4.1**
KIS				i S	**S**	**04 43 47.0**	**-6.7**
	comp=E,600nm,3.9s						
KIS				esS	**pS**	**04 44 43.0**	**+7.2**
KIS	**Kishinev**	**83.99**	**318**	⇑P	**P**	**04 33 41.2**	**+0.7**
KIS	**Kishinev**	**83.99**	**318**	i P	**P**	**04 33 41.0**	**+0.5**
KIS				i *PP	**pP**	**04 34 10.0**	**-4.1**
KIS				i S	**S**	**04 43 47.0**	**-6.7**
KIS				e*SS	**pS**	**04 44 43.0**	**+7.2**
KIS				pmax	pmax		
	comp=Z,400nm,1.6s						
KIS				pmax	pmax		
	comp=E,200nm,2.4s						
KIS				smax	smax		
	comp=E,600nm,3.9s						
KIS				smax	smax		
	comp=N,700nm,3.8s						
CFR	**Carcaliu**	**84.02**	**316**	⇓P	**P**	**04 33 41.6**	**+0.8**
GIUM	**Giurgiulesti**	**84.04**	**317**	⇑P	**P**	**04 33 42.3**	**+1.5**
HARR	**Harsova**	**84.05**	**316**	⇓P	**P**	**04 33 42.4**	**+1.5**
PRD	**Provadia**	**84.10**	**314**	eP	**P**	**04 33 42.9**	**+1.7**
CHOS	**Chios island**	**84.12**	**309**	P	**P**	**04 33 40.9**	**-0.6**
PRK	**Paraskevi**	**84.12**	**310**	P	**P**	**04 33 41.4**	**0.0**
VLDR	**Vladesti**	**84.21**	**317**	⇓P	**P**	**04 33 42.9**	**+1.2**
SCTR	**Scanteiesti**	**84.23**	**317**	⇓P	**P**	**04 33 42.8**	**+1.0**
LEOM	**Leova**	**84.24**	**318**	⇑P	**P**	**04 33 43.3**	**+1.5**
APE	**Apeiranthos**	**84.28**	**308**	⇑P	**P**	**04 33 43.3**	**+1.0**
KSTL	**Kastelli Herak**	**84.33**	**306**	P	**SKSac**	**04 43 53.5**	**-0.7**
IZVR	**Izvoarele**	**84.36**	**317**	⇑P	**P**	**04 33 44.1**	**+1.7**
SLCR	**Slobozia Conac**	**84.37**	**317**	⇑P	**P**	**04 33 43.7**	**+1.2**
VARL	**Varlezi**	**84.38**	**317**	⇓P	**P**	**04 33 44.3**	**+1.8**
BILL	**Bilibino**	**84.44**	**19**	c iP	**P**	**04 33 42.1**	**-0.2**
BILL				e*PP	**pP**	**04 34 12.2**	**-3.7**
BILL				e		04 36 56.8	
BILL				ePPP	PPP	04 38 51.0	
BILL				pmax	pmax		
	comp=Z,14nm,0.6s						
BILL	**Bilibino**	**84.44**	**19**	P	**P**	**04 33 42.1**	**-0.2**
AMRR	**Amara**	**84.45**	**316**	⇓P	**P**	**04 33 44.5**	**+1.6**
IDI	**Anoyia**	**84.47**	**306**	⇓P	**P**	**04 33 44.7**	**+1.3**
IDI	**Anoyia**	**84.47**	**306**	⇑P	**SKSac**	**04 43 59.5**	**+4.1**
IDI	**Anoyia**	**84.47**	**306**	P	**P**	**04 33 45.0**	**+1.7**
	comp=Z,52nm,0.5s,baz=86,slow=6.7,SNR=86						
IDI				S	**S**	**04 43 54.1**	**-5.1**
	comp=Z,17nm,0.8s,baz=231,slow=23,SNR=13						
	comp=Z,52nm,0.5s						
IDI	**Anoyia**	**84.47**	**306**	IAmb	IAmb	04 33 47.2	
	comp=Z,382nm,1.6s						
JMB	**Yambol**	**84.53**	**313**	eP	**P**	**04 33 45.3**	**+1.9**
SORM	**Soroca**	**84.56**	**319**	⇑P	**P**	**04 33 44.5**	**+1.0**
VASR	**Vaslui**	**84.59**	**318**	⇓P	**P**	**04 33 44.9**	**+1.3**
BIR	**Birlad**	**84.61**	**317**	⇑P	**P**	**04 33 45.6**	**+1.9**
AKASG	**Malin Array Be**	**84.64**	**322**	P	**P**	**04 33 43.6**	**-0.1**
	comp=Z,117nm,0.6s,baz=71,slow=5.8,SNR=400						
AKASG				PP	**PP**	**04 36 59.8**	**-1.6**
	comp=Z,11nm,0.8s,baz=76,slow=7.3,SNR=5.1						
AKASG				S	**S**	**04 43 52.0**	**-8.0**
	comp=Z,3.5nm,0.8s,baz=95,slow=6.5,SNR=8.9						
AKASG				PKKPbc	**PKKPbc**	**04 51 52.4**	**-3.1**
	comp=Z,0.2nm,0.4s,baz=281,slow=3.2,SNR=6.8						
AKASG				LR	LR	05 14 18.9	
	comp=Z,84nm,19.8s,baz=134,slow=38						
	comp=Z,117nm,0.6s						
AKASG	**Malin Array Be**	**84.64**	**322**	IAmb	IAmb	04 33 45.0	
	comp=Z,216nm,0.7s						
AKBB	**Malin Array Si**	**84.64**	**322**	d iP	**P**	**04 33 43.6**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,261nm,0.7s						
AKBB	**Malin Array Si**	**84.64**	**322**	P	**P**	**04 33 43.4**	**-0.3**
GHRR		**84.72**	**317**	⇓P	**P**	**04 33 46.3**	**+2.0**
PGOR	**Pogoanele**	**84.76**	**316**	⇓P	**P**	**04 33 46.9**	**+2.4**
LEHL	**Lehliu**	**84.78**	**315**	⇓P	**P**	**04 33 46.3**	**+1.7**
RAZG	**Razgrad**	**84.81**	**314**	⇑P	**P**	**04 33 46.0**	**+1.2**
PANC	**Panciu**	**84.85**	**317**	⇑P	**P**	**04 33 46.9**	**+2.0**
GRER		**84.87**	**316**	⇑P	**P**	**04 33 47.5**	**+2.5**
IAS	**Iasi**	**84.87**	**318**	⇓P	**P**	**04 33 45.9**	**+0.9**
ODBI	**Odobesti**	**84.89**	**317**	⇓P	**P**	**04 33 47.4**	**+2.3**
QSPA	**South Pole Qui**	**84.96**	**180**	PKKPbc	PKKPbc	04 51 52.8	-3.0
	comp=Z,1.5nm,0.7s,baz=221,slow=1.3,SNR=10.0						
QSPA				LR	LR	05 07 43.3	
	comp=Z,199nm,19.6s,baz=322,slow=33						
QSPA	**South Pole Qui**	**84.96**	**180**	P	**P**	**04 33 46.2**	**+0.9**
RDO	**Rodhopi**	**85.04**	**312**	P	**P**	**04 33 46.5**	**+0.5**
GVD	**Gavdhos**	**85.04**	**305**	P	**P**	**04 33 46.0**	**-0.1**
BISRR	**Bisoca**	**85.08**	**316**	⇓P	**P**	**04 33 48.2**	**+1.9**
BISRR	**Bisoca**	**85.08**	**316**	⇓P	**SKSac**	**04 44 04.9**	**+6.1**
ISR	**Istrita**	**85.11**	**316**	⇑P	**P**	**04 33 48.4**	**+2.1**
VRI	**Vrincioaia**	**85.14**	**317**	⇓P	**P**	**04 33 48.0**	**+1.6**
VRI				⇓P	**P**	**04 33 48.1**	**+1.7**
VRI	**Vrincioaia**	**85.14**	**317**	⇑P	**SKSac**	**04 43 58.0**	**-1.0**
SZH	**Strazhica**	**85.16**	**314**	eP	**P**	**04 33 47.6**	**+1.0**
PLOR	**Plostina**	**85.19**	**317**	⇓P	**P**	**04 33 48.2**	**+1.5**
PLOR	**Plostina**	**85.19**	**317**	⇓P	**SKSac**	**04 43 55.5**	**-3.9**
SULR		**85.22**	**315**	⇑P	**P**	**04 33 48.5**	**+1.8**
KDZ	**Kurdzhali**	**85.22**	**312**	eP	**P**	**04 33 48.1**	**+1.2**
IMMV	**Iera Moni Meta**	**85.23**	**306**	P	**P**	**04 33 47.0**	**-0.1**
TESR	**Tescani**	**85.33**	**317**	⇓P	**P**	**04 33 48.7**	**+1.4**
TESR	**Tescani**	**85.33**	**317**	⇑P	**SKSac**	**04 43 58.5**	**-1.6**
NEHR	**Nehoiu**	**85.34**	**316**	⇓P	**P**	**04 33 49.2**	**+1.7**
SECR		**85.42**	**316**	⇑P	**P**	**04 33 50.1**	**+2.3**
PLAR	**PLOIESTI**	**85.42**	**316**	⇓P	**P**	**04 33 50.2**	**+2.4**
RODP	**Rodopos**	**85.43**	**306**	P	**SKSac**	**04 43 59.3**	**-1.9**
KNDR	**Palaiochora Ch**	**85.43**	**306**	P	**SKSac**	**04 44 00.1**	**-1.1**
COVR	**Voineasa-Covas**	**85.49**	**317**	⇓P	**P**	**04 33 49.7**	**+1.5**
COVR	**Voineasa-Covas**	**85.49**	**317**	⇑P	**SKSac**	**04 43 58.1**	**-3.2**
TSUM	**Tsumeb**	**85.51**	**251**	LR	LR	05 09 21.3	
	comp=Z,215nm,19.3s,baz=83,slow=34						
TSUM	**Tsumeb**	**85.51**	**251**	P	**P**	**04 33 49.9**	**+1.0**
TSUM				IAmb	IAmb	04 33 52.0	
	comp=Z,181nm,1.1s						
MLR	**Muntele Rosu**	**85.60**	**316**	⇓P	**P**	**04 33 50.1**	**+1.3**
MLR	**Muntele Rosu**	**85.60**	**316**	⇓P	**SKSac**	**04 43 58.1**	**-4.1**
MLR	**Muntele Rosu**	**85.60**	**316**	P	**P**	**04 33 50.2**	**+1.3**
	comp=Z,307nm,1.0s,baz=65,slow=0.9,SNR=341						
MLR				PP	**PP**	**04 37 10.4**	**+0.9**
	comp=Z,25nm,0.9s,baz=143,slow=3.8,SNR=3.7						
MLR				S	S	04 43 59.7	-10
	comp=Z,58nm,0.8s,baz=244,slow=15,SNR=30						
MLR				LR	LR	05 19 09.6	
	comp=Z,148nm,18.5s,baz=95,slow=40						
RZN	**Rozhen**	**85.75**	**312**	eP	**P**	**04 33 50.9**	**+1.2**
KAVA	**Kavala**	**85.77**	**312**	P	**P**	**04 33 49.0**	**-0.6**
ATHU	**Athens Univers**	**85.80**	**309**	P	**P**	**04 33 47.0**	**-2.9**
PLD	**Plovdiv**	**85.83**	**313**	eP	**P**	**04 33 50.7**	**+0.8**
COPA	**Copaceanca**	**85.84**	**315**	⇓P	**P**	**04 33 50.9**	**+1.1**
ANKY	**Antikythira Is**	**85.84**	**306**	P	**P**	**04 33 50.6**	**+0.5**
ANKY	**Antikythira Is**	**85.84**	**306**	P	**SKSac**	**04 44 02.0**	**-1.8**
DOPR	**Dopca**	**86.08**	**317**	⇓P	**P**	**04 33 52.0**	**+1.0**
DOPR	**Dopca**	**86.08**	**317**	⇑P	**SKSac**	**04 44 06.0**	**+1.1**
HUMR	**Humele**	**86.08**	**315**	⇑P	**P**	**04 33 51.9**	**+0.8**
KTHA	**Kythira Island**	**86.09**	**307**	P	**SKSac**	**04 44 02.8**	**-2.6**
KOKK	**Kokkinochori,**	**86.12**	**311**	P	**P**	**04 33 50.6**	**-0.8**
KTHR	**Kythira**	**86.14**	**307**	P	**P**	**04 33 51.0**	**-0.6**
KTHR	**Kythira**	**86.14**	**307**	P	**SKSac**	**04 44 03.1**	**-2.6**
MTUR	**Matau**	**86.16**	**316**	⇑P	**P**	**04 33 52.5**	**+0.9**
STFAR	**Stefanesti-Arg**	**86.16**	**315**	⇑P	**P**	**04 33 53.6**	**+2.1**
KRND	**KRANIDI**	**86.20**	**308**	P	**P**	**04 33 51.0**	**-0.8**
VOIR		**86.21**	**316**	⇑P	**P**	**04 33 52.4**	**+0.6**
VOIR		**86.21**	**316**	⇑P	**SKSac**	**04 44 02.8**	**-3.1**
VLI	**Veliai**	**86.27**	**307**	P	**P**	**04 33 51.5**	**-0.7**
PGB	**Panagyurishte**	**86.30**	**313**	eP	**P**	**04 33 53.5**	**+1.2**
NVR	**Nevrokopi**	**86.32**	**312**	P	**P**	**04 33 49.4**	**-3.0**
MNK	**Minsk**	**86.36**	**325**	i P	**P**	**04 33 54.0**	**+1.8**
MNK				i *PP	**pP**	**04 34 24.7**	**-1.1**
MNK				i *SP	**sP**	**04 34 37.7**	**-2.0**
MNK				i		04 37 14.6	
MNK				i PPP	PPP	04 39 09.7	
MNK				i S	**S**	**04 44 08.2**	**-8.5**
MNK				i SS	**SS**	**04 50 01.1**	**+1.6**
MNK				pmax	pmax		
	comp=N,63nm,0.9s						
MNK				pmax	pmax		

	comp=E,37nm,0.9s						
MNK				pmax	pmax		
	comp=Z,497nm,0.9s						
MNK				MLR	MLR		
	comp=N,92nm,15.0s						
MNK				MLR	MLR		
	comp=Z,126nm,15.0s						
MNK				MLR	MLR		
	comp=E,14nm,15.0s						
MNK	Minsk	86.36	325	i P	P	04 33 54.0	+1.8
	comp=E,37nm,0.9s						
MNK				i P	P	04 33 54.0	+1.8
	comp=N,63nm,0.9s						
MNK				i P	P	04 33 54.0	+1.8
	comp=Z,497nm,0.9s,baz=284						
MNK				i pP	pP	04 34 24.8	-1.1
MNK				i sP	sP	04 34 37.8	-2.0
MNK				i PP	PP	04 37 14.7	-0.5
MNK				i PPP	PPP	04 39 09.7	
MNK				i S	S	04 44 08.2	-8.5
MNK				i sS	sS	04 45 07.0	-8.1
MNK				i SS	SS	04 50 01.2	+1.6
MNK				i SSS	SSS	04 53 48.6	
MNK				i LRM	MLR	05 13 59.5	
	comp=E,14nm,15.5s						
MNK				i LRM	MLR	05 13 59.5	
	comp=N,92nm,15.5s						
MNK				i LRM	MLR	05 13 59.5	
	comp=Z,126nm,15.5s						
VLAD	Vladila	86.39	315	⇓P	P	04 33 54.2	+1.6
PUL	Pulkovo	86.44	331c	iP	P	04 33 53.6	+1.2
PUL				pmax	pmax		
	comp=Z,314nm,1.0s						
MMB	Musomiste	86.46	312	eP	P	04 33 53.5	+0.5
ARR	Arges	86.48	316	⇓P	P	04 33 54.0	+0.9
ARR	Arges	86.48	316	⇓P	SKSac	04 44 04.1	-3.5
BURAR	Bucovina Array	86.51	318	⇓P	P	04 33 55.1	+1.8
BURAR	Bucovina Array	86.51	318	⇑P	SKSac	04 44 08.8	+1.1
SOH	Sokhos	86.61	311	P	P	04 33 53.1	-0.7
VALR	Valaam	86.62	332d	iP	P	04 33 53.6	+0.3
VALR				pmax	pmax		
	comp=Z,252nm,1.1s						
TGMR	Targu Mures	86.77	317	⇑P	P	04 33 56.2	+1.8
MDB	Medias	86.80	317	⇑P	P	04 33 56.9	+2.4
KKB	Krupnik	86.98	312	eP	P	04 33 56.6	+1.1
ARCR	ARCALIA	86.99	318	⇓P	P	04 33 57.4	+1.9
VTS	Vitosha	86.99	313	⇓P	P	04 33 56.6	+0.8
VTS	Vitosha	86.99	313	⇑P	SKSac	04 44 07.8	-3.1
VTS	Vitosha	86.99	313	IAmb	IAmb	04 33 58.1	
	comp=Z,93nm,0.9s						
VTS	Vitosha	86.99	313	eP	P	04 33 56.9	+1.1
NACGM	Naroch	87.08	326	⇓iP	P	04 33 56.3	+0.7
KLV	Kalavryta, Ach	87.09	308	P	P	04 33 56.9	+0.7
LOT	Lotru	87.09	316	⇓P	P	04 33 57.3	+1.1
AGG	Agios Georgios	87.10	309	P	P	04 33 56.0	-0.2
AGG	Agios Georgios	87.10	309	P	SKSac	04 44 07.0	-4.5
ITM	Ithomi	87.14	308	IAmb	IAmb	04 34 27.8	
	comp=Z,197nm,1.5s						
LIT	Litokhoron	87.14	310	IAmb	IAmb	04 33 57.9	
	comp=Z,264nm,1.3s						
BAIL	Bailesti	87.15	314	⇓P	P	04 33 58.0	+1.8
LVZ	Lovozero	87.18	339d	iP	P	04 33 55.0	-1.0
LVZ				pmax	pmax		
	comp=Z,105nm,0.8s						
LVZ	Lovozero	87.18	339	P	P	04 33 54.9	-1.1
LVZ				IAmb	IAmb	04 33 56.4	
	comp=Z,92nm,0.7s						
VAY	Valandovo	87.27	312	i P	P	04 33 57.8	+0.9
GRG	Griva	87.34	311	P	P	04 33 56.0	-1.3
THL	Klokotos Trika	87.42	310	P	P	04 33 53.5	-4.2
CJR	Cluj-Napoca	87.43	317	⇓P	P	04 33 59.7	+2.0
CBBR	Cluj-Babes-Bol	87.47	317	⇓P	P	04 34 00.1	+2.3
PUNG	Punghina	87.48	315	⇓P	P	04 33 59.5	+1.6
EVR	Evrytania	87.48	309	P	P	04 33 57.3	-0.8
APA	Apatity	87.52	339	⇓iP	P	04 33 56.2	-1.3
APA				pmax	pmax		
	comp=Z,23nm,1.0s						
BLKB	Belogradchik	87.56	314	⇑P	P	04 33 59.9	+1.5
ISAL	Salakas	87.59	326	eP	P	04 33 59.0	+0.9
STIP	Stip	87.61	312	i P	P	04 33 58.1	-0.5
RLS	Riolos of Patr	87.62	308	P	P	04 34 00.6	+1.9
BMR	Baia Mare	87.67	318	⇓P	P	04 34 00.4	+1.8
LVV	L'vov	87.70	320	eP	P	04 33 59.5	+0.7
LVV				e		04 37 25.6	
LVV				e		04 44 05.2	
LVV				eS	S	04 44 28.8	-1.1
LVV				eSS	SS	04 50 16.8	-2.6
LVV				eSSS	SSS	04 53 49.2	
LVV				pmax	pmax		
	comp=Z,200nm,1.7s						
RMGR	Halanga-Turnu	87.71	315	⇑P	P	04 34 01.3	+2.3
KZN	Kozani	87.72	311	P	P	04 33 56.4	-2.8
DEV	Deva	87.77	316	⇓P	P	04 34 01.2	+2.0
GZR	Gura Zlata	87.77	316	⇑P	P	04 34 00.9	+1.5
GZR	Gura Zlata	87.77	316	⇑P	SKSac	04 44 34.9	+20
DJES	Djerdap	87.84	315	⇑P	P	04 34 01.1	+1.5
HERR	Herculane	87.94	315	⇑P	P	04 34 01.7	+1.7
MESR	Meseseni	87.94	317	⇑P	P	04 34 02.3	+2.3
KPRO	Kipourio	87.97	310	P	P	04 33 57.3	-3.1
DRGR		88.05	317	⇓P	P	04 34 02.0	+1.4
SKO	Skopje	88.21	312	i P	P	04 34 02.1	+0.7
BOVS	Bovan	88.26	314	⇑P	P	04 34 02.6	+1.0
BOVS	Bovan	88.26	314	⇑P	SKSac	04 44 16.4	-1.9
NYDR	Nydri-Lefkada	88.31	309	P	P	04 34 01.9	0.0
NYDR	Nydri-Lefkada	88.31	309	P	SKSac	04 44 15.4	-3.3
PSDA	Pessada-Kefalo	88.32	308	P	P	04 34 02.3	+0.3
PSDA	Pessada-Kefalo	88.32	308	P	SKSac	04 44 25.5	+6.7
EVGI	Lefkada island	88.33	309	P	P	04 34 01.9	-0.1
EVGI	Lefkada island	88.33	309	P	SKSac	04 44 21.2	+2.3
LKD2	Lefkada island	88.36	309	P	SKSac	04 44 12.4	-6.7
TSLK	Tsoukalades, L	88.36	309	P	P	04 34 01.4	-0.8
TSLK	Tsoukalades, L	88.36	309	P	SKSac	04 44 17.8	-1.3
MDVR	Moldovita	88.42	315	⇑P	P	04 34 04.0	+1.6
KEF4	Livadi, Kephal	88.47	308	P	P	04 34 02.7	+0.1
DMLN	Damoulianata-K	88.50	308	P	P	04 34 02.7	-0.2
KBN	Korca	88.50	311	P	P	04 34 02.7	-0.2
KBN	Korca	88.50	311	P	SKSac	04 44 15.4	-4.6
KWP	Kalwaria Pacla	88.51	320	eP	P	04 34 03.9	+1.3
OHR	Ohrid	88.56	311	i P	P	04 34 04.2	+1.0
LSK	Leskovik	88.58	310	P	P	04 34 02.7	-0.6
LSK	Leskovik	88.58	310	P	SKSac	04 44 13.9	-6.6
BZS	Buzias	88.61	316	⇓P	P	04 34 04.4	+1.2
UZH	Uzhgorod	88.62	319	eP	P	04 34 01.7	-1.4
UZH				i		04 44 20.0	
UZH				i S	S	04 44 33.0	-5.6
UZH				e		04 45 40.0	
KOLS	Kolonicke sedl	88.68	319	eP	P	04 34 05.8	+2.3
KOLS				e		04 44 41.6	
KOLS				pmax	pmax		
	comp=Z,700nm,0.8s						
KOLS	Kolonicke sedl	88.68	319	eP	P	04 34 05.8	+2.3
KOLS				e		04 44 41.6	
SIRR	Siria	88.68	316	⇓P	P	04 34 05.0	+1.5
LTVH	Ltavrtes, Hu	88.69	318	⇓P	P	04 34 05.4	+2.0
LTVH	Ltavrtes, Hu	88.69	318	P	P	04 34 05.5	+2.0
BORR	Bors	88.72	317	⇑P	P	04 34 05.6	+1.9
PABE	Paberze	88.78	326	eP	P	04 34 04.2	+0.5
FIA1	FINESS Array S	88.88	332	IAmb	IAmb	04 34 05.8	
	comp=Z,210nm,1.1s						
FINES	FINESS Array B	88.88	332	P	P	04 34 04.5	+0.4
	comp=Z,70nm,0.7s,baz=108,slow=5.3,SNR=292						
FINES				S	SKSac	04 44 20.7	-0.4
	comp=Z,5.0nm,0.8s,baz=66,slow=9.4,SNR=8.2						
FINES				PKKP	PKKPdf	04 51 41.9	+1.8
	comp=Z,3.8nm,0.9s,baz=297,slow=0.4,SNR=7.3						
	comp=Z,70nm,0.7s						
TIM	Timisoara	88.91	316	⇑P	P	04 34 06.7	+2.2
PHP	Peshkopia	88.91	312	P	P	04 34 01.9	-2.8
PHP	Peshkopia	88.91	312	P	SKSac	04 44 18.1	-4.2
BANR	Banloc	88.92	316	⇓P	P	04 34 06.4	+1.8
TROLL	Troll, Antarti	88.96	198	P	P	04 34 07.2	+2.7
SUW	Suwalki	88.96	324	eP	P	04 34 05.1	+0.5
SUW	Suwalki	88.96	324	P	P	04 34 04.6	0.0
SUW				pmax	pmax		
	comp=Z,973nm,1.0s						
SUW	Suwalki	88.96	324	P	P	04 34 04.6	0.0
SRN	Sarande	89.00	310	P	P	04 34 03.9	-1.2
SRN	Sarande	89.00	310	P	SKSac	04 44 21.6	-1.2
KEK	Kerkira	89.14	310	P	P	04 34 05.6	-0.2
TIR	Tirane	89.29	311	⇓P	P	04 34 07.6	+1.1
TIR	Tirane	89.29	311	P	P	04 34 06.0	-0.5
TIR	Tirane	89.29	311	P	SKSac	04 44 22.0	-2.5
TIR	Tirane	89.29	311	IAmb	IAmb	04 34 08.9	
	comp=Z,209nm,1.4s						
PVY	Plav	89.38	313	⇓iP	P	04 34 07.7	+0.7
MEF	Metsahovi	89.44	331	eP	P	04 34 07.0	+0.3
IVA	Berane	89.46	313	⇓iP	P	04 34 08.3	+0.9
DIVS	Divibare	89.55	314	IAmb	IAmb	04 34 10.5	
	comp=Z,207nm,1.0s						
DIVS	Divibare	89.55	314	⇓iP	P	04 34 09.0	+1.3
KOME	Kolasin	89.74	313	⇓iP	P	04 34 09.8	+1.2
FRGS	Fruska Gora	89.81	315	⇑P	P	04 34 09.6	+0.8
FRGS	Fruska Gora	89.81	315	⇓iP	P	04 34 08.6	-0.3
PDG	Podgorica	89.88	312	⇓P	P	04 34 10.0	+0.8
PDG	Podgorica	89.88	312	⇑P	SKSac	04 44 24.0	-3.8
PDG	Podgorica	89.88	312	IAmb	IAmb	04 34 11.5	
	comp=Z,167nm,1.0s						
PDG	Podgorica	89.88	312	⇓iP	P	04 34 09.9	+0.8
TTG	Podgorica	89.88	312	⇓iP	P	04 34 10.0	+0.8
PLE	Pljevlja	89.89	313	⇓iP	P	04 34 10.5	+1.1
DRME	Dracevica, Mon	89.90	312	⇓iP	P	04 34 10.3	+1.0
DRME	Dracevica, Mon	89.90	312	⇓iP	P	04 34 10.5	+1.2
RUDO	Rudo	89.94	314	eP	P	04 34 09.7	+0.2
TEKS	Tekeris	89.94	315	⇓iP	P	04 34 09.8	+0.4
BBLS	Lazići	89.94	314	⇓iP	P	04 34 10.7	+1.2
PBUR	Paburge	90.00	326	eP	P	04 34 10.1	+0.7
NIE	Niedzica	90.03	319	eP	P	04 34 12.0	+2.2
BEL	Belsk	90.05	322	eP	P	04 34 11.3	+1.5
SLIT	Slitere, Latvi	90.06	328	eP	P	04 34 09.2	-0.4
PSZ	Piszkesteto	90.10	318	⇓P	P	04 34 11.1	+0.9
PSZ	Piszkesteto	90.10	318	IAmb	IAmb	04 34 12.5	
	comp=Z,110nm,0.9s						
PSZ	Piszkesteto	90.10	318	P	P	04 34 11.5	+1.3
NKY	Niksic	90.11	313	⇓iP	P	04 34 11.5	+1.1
BUM	Brajici-Budva	90.13	312	⇓iP	P	04 34 11.1	+0.7
CEME	Cevo	90.14	313	⇓iP	P	04 34 11.5	+1.0
NKME	Niksic	90.14	313	⇓iP	P	04 34 11.2	+0.7
BLJ	Bijeljina	90.15	315	eP	P	04 34 11.2	+0.8
UPM	Unac-Piva	90.22	313	eP	P	04 34 11.9	+0.9
UPM	Unac-Piva	90.22	313	⇓iP	P	04 34 11.5	+0.5
KEV	Kevo	90.38	340	P	P	04 34 10.4	-0.5
KEV				pmax	pmax		
	comp=Z,40nm,1.1s						
KEV	Kevo	90.38	340	P	P	04 34 10.4	-0.5
HCY	Herceg Novi	90.44	312	eP	P	04 34 11.6	-0.2
BRY	Bratogost	90.45	313	eP	P	04 34 13.0	+0.9
BRY	Bratogost	90.45	313	⇓iP	P	04 34 12.8	+0.7
OJC	Ojcow	90.46	320	eP	P	04 34 12.6	+0.9
OJC	Ojcow	90.46	320	IAmb	IAmb	04 34 14.0	
	comp=Z,210nm,1.5s						
LANS	Liptovska Anna	90.54	319	eP	P	04 34 14.0	+1.8
LANS				pmax	pmax		
	comp=Z,21nm,0.9s						
LANS	Liptovska Anna	90.54	319	eP	P	04 34 14.0	+1.8
TREB	Trebinje	90.57	313	eP	P	04 34 13.2	+0.8
BUD	Budapest	90.64	317	P	P	04 34 13.7	+1.1
SNAA	Sanae	90.67	198	P	P	04 34 14.6	+2.2
SNAA	Sanae	90.67	198	PP	PP	04 37 49.5	+0.4
SNAA	Sanae	90.67	198	S	SKSac	04 44 31.5	-0.1
	comp=Z,4.6nm,0.9s,baz=240,slow=19,SNR=5.9						
SNAA				PKKP		04 51 36.5	
	comp=Z,1.7nm,0.6s,baz=273,slow=4.5,SNR=6.9						
SNAA				LR	LR	05 10 02.8	
	comp=Z,235nm,20.2s,baz=124,slow=32						
SNAA	Sanae	90.67	198c	iP	P	04 34 14.6	+2.2
SNAA				pmax	pmax		
	comp=Z,331nm,1.1s						
SNAA	Sanae	90.67	198	P	P	04 34 14.6	+2.2
MORH	Mrgy, Hungar	90.75	316	⇓iP	P	04 34 14.0	+0.9
MORH	Mrgy, Hungar	90.75	316	P	P	04 34 13.8	+0.7
ARA0	ARCESS Array S	90.84	340	eP	P	04 34 13.1	0.0
ARCES	ARCESS Array B	90.84	340	P	P	04 34 13.2	+0.2
	comp=Z,33nm,1.0s,baz=92,slow=4.5,SNR=70						
ARCES				S	SKSac	04 44 28.7	-3.6
	comp=Z,8.4nm,0.9s,baz=104,slow=10,SNR=7.3						
ARCES				PKKP	PKKPdf	04 51 36.4	-0.5
	comp=Z,2.9nm,0.8s,baz=316,slow=3.3,SNR=5.8						
ARCES				LR	LR	05 21 07.2	
	comp=Z,422nm,18.6s,baz=100,slow=40						
	comp=Z,33nm,1.0s						
RAF	Rauma	90.86	331	eP	P	04 34 13.6	+0.3
VYHS	Vyhne	90.88	318	eP	P	04 34 14.8	+1.1
VYHS				e		04 34 43.5	
VYHS				e		04 37 49.7	
VYHS				pmax	pmax		
	comp=Z,26nm,1.0s						
VYHS	Vyhne	90.88	318	eP	P	04 34 14.8	+1.1
VYHS				e		04 34 43.5	
VYHS				ePP	PP	04 37 49.7	-1.8
STON	Ston	91.06	313	eP	P	04 34 14.5	-0.2
KOVH	Kovagotottos	91.11	316	P	P	04 34 15.6	+0.8
CSKK	Cskako	91.14	317	P	P	04 34 15.8	+0.9
KOLL	Kolacno	91.17	318	eP	P	04 34 16.7	+1.6
TIH	Tihany	91.34	317	P	P	04 34 17.1	+1.3
TIP	Timpagrande	91.42	309	IAmb	IAmb	04 34 49.4	
	comp=Z,104nm,1.4s						
OKC	Ostrava-Krasne	91.47	320	eP	P	04 34 17.9	+1.5
OKC				eS	S	04 45 05.0	+0.2
OKC				MLR	MLR		
	comp=Z,300nm,35.2s						
OKC	Ostrava-Krasne	91.47	320	⇑eP	P	04 34 17.9	+1.5
OKC				eS	S	04 45 05.0	+0.2
OKC				AMS	AMS	05 10 00.0	
	comp=Z,300nm,35.2s						
KTK1	Kautokeino	91.54	339	eP	P	04 34 16.1	-0.2
SRKY	Kupres RS	91.57	314	eP	P	04 34 18.6	+1.4
AAL	Aland	91.60	330	eP	P	04 34 16.9	+0.1
MPLH	Magyarpolny	91.61	317	P	P	04 34 18.0	+0.9
BLY	Banja Luka	91.62	315	⇑iP	P	04 34 17.7	+0.5
MGRS	Mrkonjic Grad	91.66	314	⇑iP	P	04 34 18.9	+1.4
HAMF	Hammerfest	91.67	341	eP	P	04 34 16.6	-0.2
JAVC	Velka Javorina	91.68	319	eP	P	04 34 19.3	+1.8
EGYH	Egyhazaskeszo	91.77	317	P	P	04 34 19.3	+1.4
SMOL	Smolenice	91.81	318	eP	P	04 34 19.3	+1.3
SMOL				e		04 34 49.1	
SMOL				pmax	pmax		
	comp=Z,14nm,0.9s						
SMOL	Smolenice	91.81	318	eP	P	04 34 19.3	+1.3
SMOL				e		04 34 49.1	
MORC	Moravsky Berou	91.86	320	⇑P	P	04 34 19.4	+1.2
MORC	Moravsky Berou	91.86	320	IAmb	IAmb	04 34 20.7	
	comp=Z,76nm,0.8s						
MORC	Moravsky Berou	91.86	320	eP	P	04 34 19.5	+1.2
MORC				ePP	PP	04 37 58.1	-1.1
MORC				eSKS	SKSac	04 44 37.7	-1.2
MORC				e		04 45 06.4	
MODS	Modra-Piesok	91.90	318	eP	P	04 34 19.9	+1.4
MODS				e		04 34 49.3	
MODS				pmax	pmax		
	comp=Z,166nm,1.3s						
MODS	Modra-Piesok	91.90	318	eP	P	04 34 19.9	+1.4
MODS				e		04 34 49.3	
NIKH	Nikolski High	91.92	37	IAmb	IAmb	04 34 56.6	
	comp=Z,68nm,0.9s						
NIKH	Nikolski High	91.92	37	P	P	04 34 18.8	+0.4
	baz=264						
ZST	Bratislava	92.00	318	eP	P	04 34 20.4	+1.5
ZST				e		04 34 49.6	
ZST				e		04 37 59.8	
ZST				pmax	pmax		
	comp=Z,121nm,0.8s						
ZST	Bratislava	92.00	318	eP	P	04 34 20.4	+1.5
ZST				e		04 34 49.6	
ZST				ePP	PP	04 37 59.8	-0.5
VNA2	Neumayer--Watz	92.31	198	P	P	04 34 22.5	+2.6
	baz=90,slow=3.0						
SOP	Sopron	92.32	317	P	P	04 34 20.8	+0.4
GKP	Gorka Klasztor	92.37	323	eP	P	04 34 21.2	+0.8
KRLC	Kraliky	92.37	320	⇑iP	P	04 34 22.4	+1.7
KRLC				e		04 44 42.0	
KRLC				eS	S	04 45 13.7	+0.7
KRLC				MLR	MLR		
	comp=Z,200nm,17.9s						
KRLC	Kraliky	92.37	320	⇑iP	P	04 34 22.4	+1.7
KRLC				eSKS	SKSac	04 44 42.0	+0.2
KRLC				eS	S	04 45 13.7	+0.7
KRLC				AMS	AMS	05 11 40.0	
	comp=Z,200nm,17.9s						
HOPEN	Hopen	92.41	347	eP	P	04 34 19.9	-0.3
KOGS	Kog	92.42	316	i P	P	04 34 22.0	+1.1
KOGS				i pP	pP	04 34 51.3	-3.5
KOGS				eSKSac	SKSac	04 44 40.3	-1.8
KOGS				eSKKSac	SKKSac	04 44 59.5	-0.7
KOGS				i SS	S	04 45 12.3	-1.2
VRAC	Vranov	92.43	319	⇓P	P	04 34 21.7	+0.9
VRAC	Vranov	92.43	319	P	P	04 34 21.8	+0.9
	comp=Z,6.5nm,0.6s,baz=115,slow=6.1,SNR=13						
VRAC				PP	PP	04 38 02.7	-1.0
	comp=Z,2.5nm,0.5s,baz=69,slow=6.7,SNR=5.0						
VRAC				LR	LR	05 22 01.1	
	comp=Z,89nm,19.5s,baz=76,slow=39						
	comp=Z,6.5nm,0.6s						
VRAC	Vranov	92.43	319	eP	P	04 34 21.8	+0.9
VRAC				ePP	PP	04 38 02.4	-1.3
VRAC				eSKS	SKSac	04 44 41.9	-0.2
RONA	Rosalia, Austr	92.49	317	i P	P	04 34 22.2	+0.9
	comp=Z,11nm,0.7s,SNR=8.0						
KRUC	Moravsky	92.54	319	eP	P	04 34 22.2	+0.8
KRUC				ePP	PP	04 38 03.2	-1.3
KRUC				eSKS	SKSac	04 44 42.0	-0.7
ZAG	Zagreb	92.56	316	eP	P	04 34 23.6	+2.1
JETT	Jettan, Norway	92.61	340	eP	P	04 34 21.6	+0.3
VNA1	Neumayer--Stat	92.68	198	P	P	04 34 24.4	+2.8
DPC	Dobruska-Polom	92.69	320	⇑iP	P	04 34 24.0	+1.9
DPC				e		04 44 43.7	
DPC				eS	S	04 45 16.5	+0.7
DPC				MLR	MLR		
	comp=Z,400nm,33.5s						
DPC	Dobruska-Polom	92.69	320	⇑iP	P	04 34 24.0	+1.9
DPC				eSKS	SKSac	04 44 43.7	+0.1
DPC				eS	S	04 45 16.5	+0.7
DPC				AMS	AMS	05 11 10.0	
	comp=Z,400nm,33.5s						
KSP	Ksiaz	92.75	321	eP	P	04 34 23.5	+1.2
UPP	Uppsala	92.75	330	eP	P	04 34 22.1	+0.1
OSTC	Ostas	92.77	320	⇑iP	P	04 34 24.3	+1.8
OSTC				eSKS	SKSac	04 44 43.6	-0.4
OSTC				eS	ScS	04 45 17.7	-0.5
OSTC				AMS	AMS	05 10 30.0	
	comp=Z,500nm,31.4s						
CONA	Conrad Observa	92.80	318	eP	P	04 34 23.7	+1.0
	comp=Z,13nm,0.8s						
CONA				eP	PP	04 38 09.3	+2.6
	comp=Z,4.4nm,0.7s						
VNA3	Neumayer Olymp	92.86	197	P	P	04 34 24.3	+1.8
CHVC	Chvalec	92.88	320	⇑iP	P	04 34 24.7	+1.8
CHVC				eSKS	SKSac	04 44 44.4	-0.2
CHVC				eS	S	04 45 18.0	+0.6
CHVC				AMS	AMS	05 10 30.0	
	comp=Z,400nm,30.4s						
UPC	Upice	92.90	320	⇑eP	P	04 34 24.7	+1.7
UPC				eSKS	SKSac	04 44 44.0	-0.6
UPC				eS	S	04 45 18.1	+0.6
UPC				AMS	AMS	05 10 30.0	
	comp=Z,600nm,41.5s						
CRES	Cresnjev	92.92	316	⇓iP	P	04 34 24.1	+0.8
ARSA	Arzberg	92.98	317	i P	P	04 34 25.1	+1.6
	comp=Z,22nm,0.8s,SNR=16						
VIKU	Vikbolandet	93.11	328	eP	P	04 34 23.9	+0.1
TRO	Tromso	93.14	340	eP	P	04 34 22.9	-0.8
TREC	Trest	93.15	319	⇑iP	P	04 34 25.8	+1.6
TREC				e		04 44 45.9	
TREC				eS	ScS	04 45 20.8	-0.6
TREC				MLR	MLR		
	comp=Z,300nm,26.9s						
TREC	Trest	93.15	319	⇑iP	P	04 34 25.8	+1.6
TREC				eSKS	SKSac	04 44 45.9	-0.2
TREC				eS	ScS	04 45 20.8	-0.6
TREC				AMS	AMS	05 12 30.0	
	comp=Z,300nm,26.9s						
PERS	Pernice	93.22	316	i P	P	04 34 25.9	+1.3
PERS				i PP	PP	04 38 08.0	-1.9
SOKA	Soboth	93.28	316	i P	P	04 34 26.4	+1.4
	comp=Z,29nm,0.9s,SNR=17						
BLEU	Blekinge	93.43	326	i P	P	04 34 25.2	0.0
RAR	Rarotonga	93.48	112	LR	LR	05 15 44.7	
	comp=Z,70nm,21.8s,baz=279,slow=35						
RIY	Rijeka	93.57	315	eP	P	04 34 26.9	+0.7
LJU	Ljubljana	93.59	316	⇓iP	P	04 34 27.5	+1.2
LJU	Ljubljana	93.59	316	i P	P	04 34 27.6	+1.2
LJU				i pP	pP	04 34 56.9	-3.4
LJU				e		04 35 09.7	
LJU				eSKSac	SKSac	04 44 46.6	-1.9
LJU				eSS	S	04 45 21.7	-2.0
OBKA	Obir	93.60	316	i P	P	04 34 28.0	+1.6
	comp=Z,20nm,0.9s,SNR=7.6						
BJO1	Bjornoya	93.61	344	eP	P	04 34 25.2	-0.5
PRU	Pruhonice	93.81	320	⇑iP	P	04 34 28.8	+1.6
PRU				e		04 44 48.4	
PRU				eS	S	04 45 26.0	+0.5
PRU				MLR	MLR		
	comp=Z,400nm,37.7s						
PRU	Pruhonice	93.81	320	⇑iP	P	04 34 28.8	+1.6
PRU				eSKS	SKSac	04 44 48.4	-1.2
PRU				eS	S	04 45 26.0	+0.5
PRU				AMS	AMS	05 11 10.0	
	comp=Z,400nm,37.7s						
PVCC	Panska Ves	93.82	320	eP	P	04 34 29.2	+2.0
PVCC				e		04 44 48.5	
PVCC				eS	S	04 45 25.5	-0.1
PVCC				MLR	MLR		
	comp=Z,500nm,36.3s						
PVCC	Panska Ves	93.82	320	⇑eP	P	04 34 29.2	+2.0
PVCC				eSKS	SKSac	04 44 48.5	-1.1
PVCC				eS	S	04 45 25.5	-0.1
PVCC				AMS	AMS	05 11 30.0	
	comp=Z,500nm,36.3s						
BSD	Bornholm Skovb	93.87	325	eP	P	04 34 28.0	+0.7
BSD	Bornholm Skovb	93.87	325	eP	P	04 34 26.5	-0.8
BSD				eP	PcP	04 34 27.6	-0.1
BSD				IAmb	IAmb	04 34 28.2	
	comp=Z,40nm,1.0s						
MOA	Molln	93.87	318	i P	P	04 34 28.5	+0.9
	comp=Z,12nm,0.8s,SNR=11						
MOA				eP	PP	04 38 14.7	-0.2
	comp=Z,5.8nm,0.8s						
CKRC	Cesky Krumlov	93.89	319	⇑iP	P	04 34 29.4	+1.7
CKRC				eSKS	SKSac	04 44 48.7	-1.5
CKRC				eS	S	04 45 26.6	+0.2
CKRC				AMS	AMS	05 15 40.0	
	comp=Z,300nm,27.1s						
SKDS	Skadanscina	93.92	315	eP	P	04 34 28.1	+0.3
MYKA	Terra Mystica	94.23	316	i P	P	04 34 29.8	+0.5
	comp=Z,8.8nm,0.8s,SNR=8.4						
BRG	Berggiesshubel	94.24	321	i P	P	04 34 30.2	+1.1
BRG				Amp		04 34 31.4	
	comp=Z,30nm,1.0s						
BRG				ex	x	04 34 43.2	
BRG				Amp		04 34 45.4	
	comp=Z,8.0nm,0.8s						
BRG				pP	pP	04 34 59.8	-3.3
BRG				Amp		04 35 02.6	
	comp=Z,18nm,1.5s						
BRG				PP	PP	04 38 17.2	-0.4
BRG				Amp		04 38 20.0	
	comp=Z,12nm,1.0s						
BRG	Berggiesshubel	94.24	321	i P	P	04 34 30.2	+1.1
BRG						04 34 59.7	
BRG						04 38 17.2	
BRG						04 44 51.0	
BRG				S	S	04 45 30.0	+0.8
BRG				SP	SP	04 46 45.0	+0.4
BRG				SS	SS	04 51 59.0	+5.7
BRG				pmax	pmax		
	comp=Z,30nm,1.0s						
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,18nm,1.5s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
BELA	Belgrano 2	94.27	188	IAmb	IAmb	04 34 31.1	
	comp=Z,84nm,0.9s						
BIOA	Bad Ischl, Aus	94.28	317	i P	P	04 34 30.1	+0.6
	comp=Z,16nm,0.7s,SNR=9.3						
GERES	GERESS Array B	94.30	319	P	P	04 34 30.6	+1.0
	comp=Z,15nm,0.7s,baz=94,slow=4.1,SNR=126						
	comp=Z,15nm,0.7s						
GERES	GERESS Array B	94.30	319	P	P	04 34 30.3	+0.7
FAUS	Fauske	94.31	337	eP	P	04 34 29.3	+0.2
STEI	Steigen	94.35	338	eP	P	04 34 28.9	-0.3
KHC	Kasperske Hory	94.39	319	⇑iP	P	04 34 31.1	+1.1
KHC				e		04 38 22.5	
KHC				e		04 44 52.5	
KHC				eS	S	04 45 30.9	+0.2
KHC	Kasperske Hory	94.39	319	⇑iP	P	04 34 31.1	+1.1
KHC				x	x	04 34 43.5	

KHC				x	x	04 38 22.5	
KHC				*e*SKS	SKSac	04 44 52.5	-0.4
KHC				*e*S	S	04 45 30.9	+0.2
KBA	Koelnbreinsper	94.46	317	*i* P	P	04 34 30.8	+0.3
	comp=Z,9.5nm,0.8s,SNR=9.2						
KBA				*e*P	PP	04 38 19.5	-0.3
	comp=Z,3.4nm,0.8s						
KBA				*e*S	SKSac	04 44 52.2	-1.4
	comp=Z,11nm,0.8s						
SPA0	Spitsbergen Ar	94.50	348	*e*P	P	04 34 29.5	-0.4
SPITS	Spitsbergen Ar	94.50	348	P	P	04 34 29.4	-0.4
	comp=Z,15nm,0.7s,baz=16,slow=9.9,SNR=24						
SPITS				S	SKSac	04 44 51.5	-0.8
	comp=Z,6.9nm,0.9s,baz=30,slow=24,SNR=3.0						
SPITS				LR	LR	05 23 00.9	
	comp=Z,428nm,19.8s,baz=214,slow=39						
	comp=Z,15nm,0.7s						
DEL	Delary	94.52	326	*e*P	P	04 34 30.1	-0.2
DEL	Delary	94.52	326	*i* P	P	04 34 31.0	+0.7
ANM	Nome	94.53	26	P	P	04 34 30.7	+0.5
	baz=268						
MOR8	Moi Rana	94.60	336	*e*P	P	04 34 29.9	-0.5
HSPB	Hornsund (broa	94.63	347	*e*P	P	04 34 31.4	+1.0
LUNU	Lund	94.73	325	*i* P	P	04 34 31.8	+0.6
HFS	Hagfors	94.74	330	LR	LR	05 21 24.0	
	comp=Z,232nm,21.5s,baz=75,slow=38						
CLL	Collm	94.85	321	*i* P	P	04 34 32.7	+0.8
CLL				*e**PP	pP	04 35 03.0	-2.9
CLL				*i*		04 44 53.0	
CLL				*i* S	S	04 45 32.0	-2.5
CLL				pmax	pmax		
	comp=Z,55nm,1.6s						
CLL	Collm	94.85	321	*i* P	P	04 34 32.7	+0.8
	comp=Z,55nm,1.6s						
CLL				*e*pP	pP	04 35 03.0	-2.9
CLL				*i* PP	PP	04 38 20.4	-2.0
CLL				*e*sPP		04 39 04.0	
CLL				*e*PPP	PPP	04 40 24.0	
CLL				*i* SKSac	SKSac	04 44 53.0	-2.1
CLL				*i* S	S	04 45 32.0	-2.5
CLL				*e*sS	pS	04 46 25.0	+6.5
CLL				*e*SP	SP	04 46 50.0	-1.2
CLL				*e*PPS	PPS	04 47 43.0	
CLL				*e*SS	SS	04 52 02.0	0.0
CLL				*e*sSS		04 52 49.0	
CLL				*e*x	x	04 56 48.0	
CLL				*e*x	x	05 00 06.0	
CLL				Lm	MLR	06 30 00.0	
	comp=Z,300nm,19.9s						
STAL	STALIGIAL	94.86	316	P	P	04 34 32.3	+0.1
STAL				IAmb	IAmb	04 34 34.0	
	comp=Z,81nm,1.1s						
BJUU	Bjuv	94.98	326	*e*P	P	04 34 33.0	+0.6
LOF	Lofoten	95.00	338	*e*P	P	04 34 31.9	-0.3
ABTA	Abfaltersbach	95.01	316	*i* P	P	04 34 33.4	+0.5
	comp=Z,8.2nm,0.8s,SNR=7.9						
ABTA				*e*P	PP	04 38 22.1	-1.8
	comp=Z,4.6nm,0.8s						
ABTA				*e*S	SKSac	04 44 54.4	-2.0
	comp=Z,5.9nm,0.6s						
KONS	Konsvik	95.14	336	*e*P	P	04 34 33.4	+0.5
BORU	Boraas	95.16	327	*e*P	P	04 34 32.4	-0.8
NKC	Novy Kostel	95.17	320	*e*P	P	04 34 35.1	+1.7
NKC				*e*		04 44 55.5	
NKC				*e*S	S	04 45 36.5	-0.9
NKC				MLR	MLR		
	comp=Z,600nm,36.4s						
NKC	Novy Kostel	95.17	320⇑	*e*P	P	04 34 35.1	+1.7
NKC				*e*SKS	SKSac	04 44 55.5	-1.4
NKC				*e*S	S	04 45 36.5	-0.9
NKC				AMS	AMS	05 11 40.0	
	comp=Z,600nm,36.4s						
COP	Copenhagen	95.30	325	*e*P	P	04 34 34.5	+0.7
KBS	Kingsbay	95.39	349⇑	*i*P	P	04 34 33.0	-0.9
KBS				pmax	pmax		
	comp=Z,32nm,1.3s						
KBS	Kingsbay	95.39	349	*e*P	P	04 34 31.5	-2.4
KBS	Kingsbay	95.39	349	*e*P	P	04 34 32.6	-1.2
CTI	Castel Tesino	95.59	316	IAmb	IAmb	04 34 38.6	
	comp=Z,102nm,1.5s						
NSS	Namsos	95.61	334	*e*P	P	04 34 35.5	+0.5
ONAU	Onsala	95.61	327	*i* P	P	04 34 35.4	+0.2
WTTA	Wattenberg	95.63	317	*i* P	P	04 34 36.4	+0.5
	comp=Z,18nm,0.7s,SNR=7.8						
WTTA				*e*P	PP	04 38 28.4	-0.4
	comp=Z,13nm,0.9s						
WTTA				*e*S	SKSac	04 44 57.6	-2.3
	comp=Z,19nm,0.7s						
WATA	Walderalm	95.67	317	*i* P	P	04 34 36.4	+0.4
	comp=Z,11nm,0.6s,SNR=6.7						
WATA				*e*S	SKSac	04 44 56.6	-3.4
	comp=Z,5.3nm,0.7s						
NC405	NORSAR Array S	95.73	331	IAmb	IAmb	04 34 38.3	
	comp=Z,71nm,1.2s						
TJOU	Tjoern	95.77	328	*i* P	P	04 34 36.6	+0.7
NC602	NORSAR Array S	95.82	330	IAmb	IAmb	04 34 36.7	
	comp=Z,86nm,1.1s						
NC602	NORSAR Array S	95.82	330	*e*P	P	04 34 36.5	+0.4
NC303	NORSAR Array S	95.90	331	IAmb	IAmb	04 34 37.8	
	comp=Z,82nm,1.6s						
SQTA	Sankt Quirin	95.92	317	*i* P	P	04 34 37.7	+0.6
	comp=Z,16nm,0.6s,SNR=10						
SQTA				*e*S	SKSac	04 44 58.8	-2.4
	comp=Z,22nm,0.9s						
GRA1	Grafenberg Arr	95.94	319	IAmb	IAmb	04 34 39.3	
	comp=Z,37nm,0.9s						
GRFO	Grafenberg	95.95	319	P	P	04 34 38.1	+1.1
GRFO				pmax	pmax		
	comp=Z,38nm,1.0s						
GRFO	Grafenberg	95.95	319	P	P	04 34 38.1	+1.1
GRFO				IAmb	IAmb	04 34 39.2	
	comp=Z,38nm,1.0s						
NB2	NORSAR Subarra	95.97	331	P	P	04 34 36.6	-0.3
	comp=Z,38nm,1.0s,baz=92,slow=5.3						
NB2	NORSAR Subarra	95.97	331	P	P	04 34 36.6	-0.3
	baz=92,slow=5.3						
NOA	NORSAR Array B	95.97	331	P	P	04 34 36.7	-0.3
	comp=Z,16nm,0.9s,baz=92,slow=4.6,SNR=49						
NOA				PP	PP	04 38 30.1	-0.7
	comp=Z,11nm,0.8s,baz=93,slow=7.5,SNR=17						
NOA				PKKP	PKKPbc	04 51 25.3	-2.1
	comp=Z,3.1nm,0.8s,baz=271,slow=2.2,SNR=7.4						
NOA				LR	LR	05 24 37.8	
	comp=Z,95nm,18.2s,baz=105,slow=40						
	comp=Z,16nm,0.9s						
MOTA	Moosalm	95.99	317	*i* P	P	04 34 37.9	+0.5
	comp=Z,22nm,0.8s,SNR=13						
MOTA				*e*P	PP	04 38 30.6	-1.0
	comp=Z,5.4nm,0.7s						
MOTA				*e*S	SKSac	04 45 00.1	-1.7
	comp=Z,11nm,0.9s						
NBO00	NORSAR Array S	96.19	331	IAmb	IAmb	04 34 39.2	
	comp=Z,65nm,1.0s						
NC204	NORSAR Array S	96.19	331	IAmb	IAmb	04 34 39.2	
	comp=Z,80nm,1.1s						
RETA	Reutte	96.22	317	*i* P	P	04 34 39.3	+0.9
	comp=Z,19nm,0.6s,SNR=12						
OSL	Oslo	96.23	330	*e*P	P	04 34 39.0	+1.0
FETA	Feichten	96.24	317	*i* P	P	04 34 39.5	+0.9
	comp=Z,9.6nm,0.8s,SNR=7.6						
FETA				*e*P	PP	04 38 32.1	-1.4
	comp=Z,1.2nm,0.5s						
SALO	Salr	96.37	315	IAmb	IAmb	04 34 42.6	
	comp=Z,45nm,0.9s						
TBLU	Trondheim	96.38	333	*e*P	P	04 34 38.8	+0.1
OVD	Ostervraa, Den	96.54	327	*e*P	P	04 34 39.5	+0.1
KONO	Kongsberg	96.80	329⇓	*e*P	P	04 34 40.5	-0.1
KONO				pmax	pmax		
	comp=Z,41nm,1.0s						
KONO	Kongsberg	96.80	329	P	P	04 34 39.8	-0.8
KONO				IAmb	IAmb	04 34 42.4	
	comp=Z,36nm,0.9s						
KONO	Kongsberg	96.80	329	*e*P	P	04 34 41.5	+0.9
DAVA	Damuels	96.82	317	*i* P	P	04 34 42.1	+0.9
	comp=Z,17nm,0.7s,SNR=16						
DAVOX	Davos/Dischmat	96.82	316	S	SKSac	04 45 06.2	+0.1
	baz=162,slow=20						
DOMB	Dombas	96.98	332	*e*P	P	04 34 41.5	+0.1
GOET	G??ttrup	97.08	327	*e*P	Pdif	04 34 42.5	+0.5
KEST	Kesra	97.12	305	P	Pdif	04 34 45.2	+2.4
	comp=Z,13nm,0.9s,baz=116,slow=5.6,SNR=5.3						
	comp=Z,13nm,0.9s						
SKAR	Skarslia	97.41	330	*e*P	Pdif	04 34 44.4	+0.9
HOMB	Homborsund	97.42	328	*e*P	Pdif	04 34 44.3	+0.9
A21K	Barrow	97.56	19	P	Pdif	04 34 43.8	0.0
A21K				IAmb	IAmb	04 34 44.9	
	comp=Z,26nm,0.8s						
A21K	Barrow	97.56	19	P	P	04 34 43.6	-0.2
	baz=277						
MOL	Molde	97.66	332	*e*P	Pdif	04 34 45.4	+1.0
BFO	Black Forest	97.86	318	P	Pdif	04 34 45.8	+0.1
BFO				pmax	pmax		
	comp=Z,13nm,0.9s						
BFO	Black Forest	97.86	318	P	Pdif	04 34 45.8	+0.1
BLS5	Blasjo	98.42	329	*e*P	Pdif	04 34 49.1	+1.1
TTA	Tatalina	98.75	27	P	P	04 34 49.3	-0.1
	baz=276						
BER	Bergen	98.89	330	*e*Pdif	Pdif	04 34 51.0	+1.0
ASK	Askoy	98.95	330	*e*Pdif	Pdif	04 34 51.1	+0.9
N18K	Kilae Creek	99.04	29	P	Pdif	04 34 51.2	+0.5
	baz=276						
BTNL	Ternell	99.20	320	*d*P	Pdif	04 34 52.0	+0.3
	comp=Z,9.5nm,0.9s						
BTNL				*d*PP	PP	04 38 53.1	-2.8
WLF	Walferdange	99.24	319	*d*P	Pdif	04 34 52.9	+1.2
	comp=Z,11nm,1.0s						
MEM	Membach	99.28	320	*d*P	Pdif	04 34 52.6	+0.7
	comp=Z,11nm,0.8s						
IMAR	Indian Mountai	99.32	24	PKKPdf	PKKPdf	04 51 16.3	-5.3
L19K	White Mountain	99.36	28	P	Pdif	04 34 52.6	+0.5
	baz=277						
J20K	Nowinta River	99.42	26	P	Pdif	04 34 53.0	+0.8
	baz=278						
O18K	Koktuh Hills	99.47	30	P	Pdif	04 34 53.5	+0.9
	baz=276						
K20K	Telida	99.57	27	P	Pdif	04 34 53.2	+0.2
	baz=278						
N19K	Bonanza Creek	99.71	29	P	Pdif	04 34 54.7	+0.9
	baz=277						
BCLA	Clavier	99.74	320	*d*Pdif	Pdif	04 34 54.8	+0.8
H21K	Melozitna Rive	99.76	24	PKKPdf	PKKPdf	04 51 15.5	-5.3
H21K	Melozitna Rive	99.76	24	P	Pdif	04 34 54.5	+0.7
	baz=279						
RCHB	Rochefort	99.80	320	*d*P	Pdif	04 34 54.4	+0.2
BGES	Gesves	99.88	320	*d*Pdif	Pdif	04 34 55.3	+0.7
BGES				*d*PP	PP	04 38 56.7	-4.3
BMRD	Maredsous	100.09	320	*d*Pdif	Pdif	04 34 56.4	+0.9
BMRD				*d*PP	PP	04 38 58.0	-4.5
DOU	Dourbes	100.21	320	*d*Pdif	Pdif	04 34 56.7	+0.6
TOLK	Toolik Lake Re	100.41	21	P	Pdif	04 34 57.1	+0.4
	baz=283						
CAST	Castle Rocks	100.44	26	P	Pdif	04 34 57.3	+0.4
	baz=280						
PPLA	Purkeypile	100.48	27	P	Pdif	04 34 57.5	+0.3
	baz=280						
BPAW	Bear Paw Mtn.	100.80	26	P	Pdif	04 34 58.7	+0.3
	baz=281						
KDAK	Kodiak Island	101.08	32	P	Pdif	04 35 01.1	+1.3
	comp=Z,6.7nm,0.8s,baz=140,slow=7.9,SNR=2.2						
I23K	Minto, Yukon-K	101.27	24	P	Pdif	04 35 01.3	+0.8
	baz=282						
DAG	Danmarks Havn	102.13	349	*i* P	Pdif	04 35 02.0	-2.1
ILAR	Eielson Array	102.39	25	P	Pdif	04 35 04.0	-1.4
	comp=Z,0.4nm,0.6s,baz=288,slow=3.8,SNR=7.2						
ILAR				PKiKP	PKiKP	04 39 23.8	-2.6
	comp=Z,1.1nm,0.8s,baz=287,slow=4.0,SNR=5.7						
ILAR				PKKPbc	PKKPbc	04 51 06.8	-2.6
	comp=Z,6.2nm,0.8s,baz=126,slow=2.1,SNR=25						
ILAR				SKKPbc	SKKPbc	04 54 35.2	-4.2
	comp=Z,1.9nm,0.7s,baz=124,slow=1.7,SNR=8.3						
RIDG	Independent Ri	103.52	25	PKKPbc	PKKPbc	04 51 03.7	-2.3
BCAR	Beaver Creek A	105.04	26	PKKPbc	PKKPbc	04 50 58.8	-2.6
BCAR				PKKPab	PKKPab	04 51 18.4	+1.1
EPYK	Eagle Plains	105.82	22	P	PKiKP	04 39 33.0	+0.3
	baz=295,SNR=6.5						
INK	Inuvik	106.06	19	PKiKP	PKiKP	04 39 32.8	-0.1
	comp=Z,8.1nm,1.0s,baz=285,slow=1.4,SNR=14						
INK				PKKPbc	PKKPbc	04 50 55.9	-2.4
	comp=Z,13nm,1.0s,baz=99,slow=4.9,SNR=16						
INK				PKKPab	PKKPab	04 51 13.1	+0.6
	comp=Z,11nm,0.9s,baz=84,slow=6.5,SNR=12						
INK	Inuvik	106.06	19	PKKPbc	PKKPbc	04 50 55.5	-2.8
INK	Inuvik	106.06	19	P	PKiKP	04 39 33.0	0.0
	baz=298						
A36M	Sachs Harbour	106.42	14	PKKPbc	PKKPbc	04 50 54.1	-3.2
YUK4	Talbot Arm	107.02	27	P	PKiKP	04 39 34.7	-0.5
	baz=292						
M30M	Minto, Yukon	107.35	25	PKKPbc	PKKPbc	04 50 52.5	-1.7
M30M	Minto, Yukon	107.35	25	P	PKiKP	04 39 36.1	+0.5
	baz=294						
ESDC	Sonseca Array	107.42	310	Pdiff	Pdif	04 35 30.7	+2.2
	comp=Z,0.3nm,0.6s,baz=69,slow=7.0,SNR=2.2						
ESDC				PKiKP	PKiKP	04 39 36.7	+0.2
	comp=Z,2.4nm,0.9s,baz=50,slow=2.8,SNR=6.3						
ESDC				PP	PP	04 39 59.9	+2.4
	comp=Z,4.7nm,1.1s,baz=76,slow=7.4,SNR=6.2						
ESDC				SKP		04 42 59.9	
	comp=Z,2.2nm,0.9s,baz=47,slow=1.5,SNR=4.6						
ESDC				PKKPbc	PKKPbc	04 50 53.8	+0.6
	comp=Z,5.4nm,1.1s,baz=288,slow=3.8,SNR=12						
ESDC				PKKPab	PKKPab	04 51 07.5	+0.5
	comp=Z,6.4nm,1.0s,baz=274,slow=4.5,SNR=14						
ESDC				SKKPbc	SKKPbc	04 54 23.6	-0.9
	comp=Z,1.6nm,0.8s,baz=292,slow=3.8,SNR=6.1						
HYT	Haines Junctio	107.73	27	P	PKiKP	04 39 37.2	+0.7
	baz=292						
N31M	Braeburn, Yuko	108.23	26	P	PKiKP	04 39 37.8	+0.5
	baz=294						
M31M	Drury Creek, Y	108.53	25	P	PKiKP	04 39 38.2	+0.4
	baz=296						
FARO	Faro, Yukon	108.95	25	P	PKiKP	04 39 39.2	+0.6
	baz=297						
KOWA	Kowa	109.19	284	PKKPbc	PKKPbc	04 50 48.4	+1.5
KOWA				PKKPdf	PKKPab	04 50 59.9	+0.5
RES	Resolute Bay	109.48	5	Pdiff	Pdif	04 35 36.9	+0.1
	comp=Z,1.9nm,0.9s,baz=355,slow=5.7,SNR=6.1						
RES				PKiKP	PKiKP	04 39 40.0	+0.8
	comp=Z,6.9nm,0.9s,baz=307,slow=2.5,SNR=14						
RES				SKP		04 43 02.6	
	comp=Z,2.8nm,0.7s,baz=5.5,slow=3.9,SNR=7.3						
RES				PKKPbc	PKKPbc	04 50 44.8	-2.9
	comp=Z,4.0nm,1.0s,baz=191,slow=4.2,SNR=7.6						
MVO	Moncorvo	109.48	312	*e*PP	PP	04 40 12.4	0.0
MVO				*i* LQ	LQ	04 49 25.0	
MMPY	Sheldon Lake,	109.63	24	P	PKiKP	04 39 40.6	+0.7
	baz=299						
KIC	Kosan Boka	109.67	275	*e*PKIKP	SKiKP	04 43 04.1	-0.5
	comp=Z,15nm,0.9s						
DBIC	Dimbokro	109.80	275	PKiKP	PKiKP	04 39 41.8	+0.3
	comp=Z,7.8nm,0.8s,baz=225,slow=2.2,SNR=6.1						
DBIC				SKP		04 43 04.8	
	comp=Z,8.8nm,0.8s,baz=112,slow=2.3,SNR=5.9						
DBIC				SKKPbc	SKKPbc	04 54 16.3	+0.1
	comp=Z,5.9nm,1.1s,baz=208,slow=6.1,SNR=3.1						
LIC	Lamto	109.95	275	*e*PKIKP	SKiKP	04 43 04.3	-0.9
	comp=Z,19nm,0.9s						
TIC	Toumodi	109.96	275	*e*PKIKP	SKiKP	04 43 04.7	-0.5
MTE	Manteigas	110.01	311	*e*SKSac	SKSac	04 46 08.7	+1.3
MTE				*i* LQ	LQ	04 49 29.1	
PCBR	Castelo Branco	110.06	311	*e*PKP	PKiKP	04 39 42.9	+1.6
PCBR	Castelo Branco	110.06	311	*e*PP	PP	04 40 14.3	-2.3
PMRV	Marv??o	110.07	310	*e*PKP	PKiKP	04 39 42.8	+1.4
PMRV	Marv??o	110.07	310	*e*PP	PP	04 40 14.4	-2.3
PMRV				*i* LQ	LQ	04 49 34.1	
PGAV	Gavieira, Arco	110.24	313	*i* LQ	LQ	04 49 33.8	
PESTR	Estremoz	110.32	310	*e*PKP	PKiKP	04 39 43.5	+1.6
PESTR	Estremoz	110.32	310	*e*PP	PP	04 40 14.7	-3.8
PVAQ	Vaqueiros	110.68	308	*i* LQ	LQ	04 49 32.1	
COI	Coimbra	110.70	311	*e*PP	PP	04 40 17.5	-3.6
TGTN	Hyland Airport	111.40	24	P	PKiKP	04 39 44.1	+0.8
	baz=302						
DLBC	Dease Lake	112.19	28	PKiKP	PKiKP	04 39 46.0	+1.1
	comp=Z,2.7nm,0.6s,baz=315,slow=1.7,SNR=7.7						
DLBC				SKP		04 43 09.0	
	comp=Z,4.5nm,0.7s,baz=184,slow=2.3,SNR=6.7						
YKA	Yellowknife Ar	115.83	19	PKP	PKiKP	04 39 51.5	-0.1
	comp=Z,7.8nm,0.8s,baz=317,slow=1.7,SNR=38						
YKA				SKP		04 43 14.3	
	comp=Z,3.9nm,0.6s,baz=2.5,slow=2.2,SNR=17						
YKA				PKKPbc	PKKPbc	04 50 24.4	-1.8
	comp=Z,9.7nm,1.1s,baz=130,slow=3.6,SNR=23						
YKA				SKKPbc	SKKPbc	04 53 47.6	-13
	comp=Z,1.7nm,1.0s,baz=160,slow=3.3,SNR=4.1						
YKA	Yellowknife Ar	115.83	19		PKiKP	04 39 51.3	-0.3
YKA				SKPdf	SKPdf	04 43 14.0	-1.1
YKA				PKKPbc	PKKPbc	04 50 22.2	-4.0
YKA				PKKPab	PKKPab	04 50 30.0	+0.7
BBB	Bella Bella	116.14	33	PKP	PKiKP	04 39 53.5	+1.0
	comp=Z,14nm,0.9s,baz=331,slow=4.3,SNR=8.3						
BBB				SKP		04 43 15.9	
	comp=Z,19nm,1.1s,baz=9.9,slow=6.4,SNR=4.8						
USHA	Ushuaia	120.08	185	PKP	PKiKP	04 40 01.1	+1.0
	comp=Z,55nm,0.9s,baz=113,slow=1.6,SNR=11						
A04D	Lummi Island	120.86	35	P	PKiKP	04 40 03.2	+1.4
	baz=302,SNR=5.6						
D03D	Eldon	121.25	36	P	PKiKP	04 40 04.0	+1.4
	baz=301,SNR=16						
B05A	Bryant	121.44	35	P	PKiKP	04 40 04.0	+1.0
	baz=302,SNR=43						
E04D	Cinebar	122.06	37	P	PKiKP	04 40 05.5	+1.3
	baz=300,SNR=9.9						
G03D	McMinnville, O	122.30	38	P	PKiKP	04 40 06.0	+1.2
	baz=299,SNR=8.3						
LTY	Liberty	122.80	35	PKPdf	PKPdf	04 40 05.5	-0.1
LTY				SKPdf	SKPdf	04 43 29.1	+0.1
EDM	Edmonton	122.83	26	PKIKP	PKiKP	04 40 06.4	+0.7
EDM	Edmonton	122.83	26		PKiKP	04 40 06.4	+0.7
EDM				PKKPab	PKKPab	04 49 58.5	-0.4
J01E	Myrtle Point	122.85	41	P	PKiKP	04 40 06.9	+1.0
	baz=297						
H04D	Lebanon	122.97	39	P	PKiKP	04 40 07.3	+1.1
	baz=299,SNR=30						
I03D	Drain, OR	122.98	40	P	PKiKP	04 40 07.2	+1.1
	baz=298,SNR=26						
K02D	Willamette Mer	123.24	41	P	PKiKP	04 40 07.6	+0.8
	baz=297,SNR=16						
G05D	Wamic, OR	123.48	37	P	PKiKP	04 40 08.0	+0.8
	baz=301						
I04A	Tendick Farm,	123.53	39	P	PKiKP	04 40 07.7	+0.3
	baz=299,SNR=20						
I05D	Terrebonne, OR	123.93	38	P	PKiKP	04 40 08.7	+0.5
	baz=300						
J04D	Umpqua Nationa	123.99	40	P	PKiKP	04 40 09.1	+0.6
	baz=299,SNR=34						
NEW	Newport	124.19	32	PKP	PKiKP	04 40 09.3	+0.8
	comp=Z,16nm,0.9s,baz=270,slow=4.9,SNR=25						
NEW				SKPab	SKPab	04 43 16.9	
	comp=Z,2.9nm,0.7s,baz=245,slow=2.5,SNR=5.7						
NEW	Newport	124.19	32	P	PKiKP	04 40 08.7	+0.2
	baz=307						
YBH	Yreka Blue Hor	124.31	42	PKP	PKiKP	04 40 09.9	+0.9
	comp=Z,16nm,1.1s,baz=129,slow=3.4,SNR=28						
L04D	Klamath Falls	124.35	41	P	PKiKP	04 40 09.7	+0.5
	baz=298,SNR=34						
FCC	Fort Churchill	124.48	12	PKIKP	PKPdf	04 40 07.9	-0.4
FCC	Fort Churchill	124.48	12	PKPdf	PKPdf	04 40 07.9	-0.4
FCC				SKPdf	SKPdf	04 43 31.9	+0.2
K04D	Chiloquin, OR	124.52	40	P	PKiKP	04 40 09.6	+0.2
	baz=299						
J05D	Fort Rock, OR	124.52	39	P	PKiKP	04 40 10.6	+1.1
	baz=300						
O02D	Mt. Diablo Mer	124.97	43	P	PKiKP	04 40 11.6	+1.2
	baz=297,SNR=18						
O03E	Paynes Creek	125.59	43		PKiKP	04 40 12.1	+0.5
O03E				SKPdf	SKPdf	04 43 34.4	-0.2
O03E	Paynes Creek	125.59	43	P	PKiKP	04 40 11.8	+0.2
	baz=298,SNR=28						
PLID	Pearl Lake	126.70	35		PKPdf	04 40 13.4	0.0
PLID				SKPdf	SKPdf	04 43 37.2	+0.5
MSO	Missoula	126.77	32	P	PKiKP	04 40 13.9	+0.1
	baz=309,SNR=58						
EGMT	Eagleton	128.09	29	P	PKiKP	04 40 16.7	+0.3
	baz=314,SNR=32						
HLID	Hailey	128.52	36	P	PKiKP	04 40 18.4	+0.9
	baz=307,SNR=28						
BOZ	Bozeman (W)	128.79	32	P	PKiKP	04 40 18.5	+0.6
	baz=311						
NVAR	Mina Array Bea	128.86	43	PKhKP	PKPpre	04 40 13.2	
	comp=Z,0.9nm,0.9s,baz=274,slow=3.1,SNR=4.4						
NVAR				PKP	PKiKP	04 40 18.9	+0.5
	comp=Z,12nm,0.6s,baz=285,slow=2.1,SNR=76						
NVAR				SKPab	SKPab	04 43 27.0	
	comp=Z,65nm,0.7s,baz=280,slow=3.7,SNR=88						
NVAR				SKKPbc	SKKPbc	04 53 08.3	-8.8
	comp=Z,3.2nm,1.1s,baz=152,slow=4.1,SNR=4.6						
VOG	Valley Oaks Go	129.10	46	P	PKiKP	04 40 18.7	+0.1
	baz=297						
SMMC	Simmler	129.10	48	P	PKiKP	04 40 20.2	+1.5
	baz=296,SNR=9.3						
PKM	Mcpherson Peak	129.42	48	P	PKiKP	04 40 20.4	+0.9
	baz=296,SNR=15						
VES	Vestal, Richgr	129.53	47	P	PKiKP	04 40 20.4	+0.9
	baz=297,SNR=8.9						
TIN	Tinemaha, Big	129.58	45	P	PKiKP	04 40 20.8	+1.1
	baz=299						
SCHQ	Schefferville	129.85	354	PKP	PKiKP	04 40 19.3	-0.3
	comp=Z,22nm,1.0s,baz=25,slow=2.8,SNR=29						
SCHQ				PP	PP	04 42 28.2	-2.5
	comp=Z,4.3nm,0.8s,baz=15,slow=9.1,SNR=3.4						
SCHQ				SKPab	SKPab	04 43 28.4	-0.4
	comp=Z,57nm,0.8s,baz=15,slow=3.0,SNR=63						
SCHQ				SKKPbc	SKKPbc	04 53 08.6	-5.6
	comp=Z,3.7nm,0.9s,baz=218,slow=0.8,SNR=4.1						
SCHQ	Schefferville	129.85	354	PKPdf	PKPdf	04 40 18.4	-0.4
CWC	Cottonwood Cre	129.98	45	P	PKiKP	04 40 21.5	+0.9
	baz=298						
ARVC	Arvin	130.04	47	P	PKiKP	04 40 21.1	+0.5
	baz=297,SNR=9.7						
ISA	Isabella, Lake	130.06	47	P	PKiKP	04 40 21.0	+0.3
	baz=297,SNR=15						
H17A	Grant Village	130.15	33	P	PKiKP	04 40 22.3	+1.4
	baz=311,SNR=9.6						
GRAC	Grapevine Rang	130.21	44	P	PKiKP	04 40 21.7	+0.8
	baz=299,SNR=17						
DGMT	Dagmar	130.25	25	P	PKiKP	04 40 21.3	+0.7
	baz=321						
DGMT	Dagmar	130.25	25	P	PKiKP	04 40 20.3	-0.3
	baz=321						
RLMT	Red Lodge	130.34	31	P	PKiKP	04 40 21.5	+0.4
	baz=313						
MPMC	Manual Prospec	130.58	46	P	PKiKP	04 40 22.7	+0.8
	baz=299,SNR=54						
LRMC	Laurel Mtn Rad	130.72	46	P	PKiKP	04 40 22.6	+0.5
	baz=298,SNR=27						
LAO	LASA Array	130.72	28	P	PKiKP	04 40 22.6	+1.0
	baz=318,SNR=21						
LAO	LASA Array	130.72	28	P	PKiKP	04 40 22.4	+0.7
	baz=318						
R11A	Troy Canyon, C	130.74	42	P	PKiKP	04 40 22.8	+0.7
	baz=302						
EDW2	Edwards Air Fo	130.76	47	P	PKiKP	04 40 23.1	+1.0
	baz=297,SNR=18						
FURC	Furnace Creek,	130.82	45	P	PKiKP	04 40 22.6	+0.6
	baz=300,SNR=20						
TPNV	Topopah Spring	131.01	44	P	PKiKP	04 40 22.8	+0.1
	baz=300,SNR=13						
CIS	Catalina Islan	131.11	49	P	PKiKP	04 40 23.1	+0.4
	baz=296						
BFSC	Mount Baldy Ra	131.30	48	P	PKiKP	04 40 23.3	0.0
	baz=297,SNR=5.9						
GSC	Goldstone, Bar	131.43	46	P	PKiKP	04 40 24.1	+0.6
	baz=299,SNR=28						
DUG	Dugway, Tooele	131.48	38	P	PKiKP	04 40 23.8	+0.3
	baz=306						
RRX	Edison Barstow	131.49	47	P	PKiKP	04 40 23.8	+0.2
	baz=298						
PRN	Pahroc Range	131.59	43	SKPbc	SKPab	04 43 37.1	+0.1
ULM	Lac du Bonnet	131.76	17	PKP	PKPdf	04 40 22.4	-0.1
	comp=Z,21nm,0.9s,baz=338,slow=4.0,SNR=17						
ULM				SKPab	SKPbc	04 43 35.5	-0.8
	comp=Z,202nm,0.6s,baz=337,slow=4.3,SNR=108						
ULM				SKKPbc	SKKPbc	04 53 02.6	-4.5
	comp=Z,8.1nm,0.9s,baz=323,slow=0.3,SNR=4.4						
BW06	Boulder Array	131.78	34	P	PKPdf	04 40 23.3	+0.2
	baz=312						
PDAR	Pinedale Array	131.78	34	PKP	PKPdf	04 40 23.4	+0.2
	comp=Z,5.2nm,0.6s,baz=163,slow=1.5,SNR=55						
PDAR				SKPab	SKPbc	04 43 36.4	-0.5
	comp=Z,95nm,0.8s,baz=161,slow=0.4,SNR=74						
PDAR				PKKP	PKKPdf	04 50 18.4	-1.7
	comp=Z,1.6nm,0.9s,baz=110,slow=3.8,SNR=4.7						
PDAR				SKKPbc	SKKPbc	04 53 04.2	-2.8
	comp=Z,2.9nm,0.9s,baz=119,slow=5.4,SNR=3.6						
BBRC	Big Bear Solar	131.84	47	P	PKiKP	04 40 24.3	-0.2
	baz=298						
MURC	Murrieta	131.94	48	P	PKiKP	04 40 24.8	+0.4
	baz=297,SNR=7.8						
HEC	Hector,Ludlow	131.99	46	P	PKiKP	04 40 25.1	+0.5
	baz=299,SNR=8.9						
TUQ	Turquoise Moun	131.99	45	P	PKiKP	04 40 25.2	+0.5
	baz=300,SNR=16						
109C	Camp Elliot, M	132.32	49	P	PKiKP	04 40 25.6	+0.4
	baz=296						
PFO	Pinyon Flats O	132.48	48	PKP	PKiKP	04 40 26.6	+1.0
	comp=Z,16nm,0.9s,baz=276,slow=1.5,SNR=24						
PFO				SKPab	SKPab	04 43 40.4	-0.5
	comp=Z,228nm,1.0s,baz=290,slow=2.8,SNR=118						
PFO	Pinyon Flats O	132.48	48		PKiKP	04 40 26.2	+0.5
PFO	Pinyon Flats O	132.48	48	P	PKiKP	04 40 26.3	+0.6

	baz=298,SNR=12						
TPFO	Pinon Flats	132.48	48	P	PKiKP	04 40 26.1	+0.4
	baz=298,SNR=12						
GMRC	Granite Mounta	132.50	46	P	PKiKP	04 40 26.6	+0.9
	baz=299,SNR=44						
MDND	Maddock	132.57	22	P	PKiKP	04 40 25.0	-0.3
	baz=326						
MDND	Maddock	132.57	22	P	PKiKP	04 40 25.0	-0.3
	baz=326						
BELC	Belle Mtn. Jos	132.63	47	P	PKiKP	04 40 26.8	+0.8
	baz=298,SNR=23						
MONP2	Monument Peak	132.83	49	P	PKiKP	04 40 27.2	+0.6
	baz=297,SNR=9.0						
IKP	In-Ko-Pah, Jac	133.18	49	P	PKiKP	04 40 27.8	+0.7
	baz=297,SNR=10						
IRM	Iron Mountain	133.18	47	P	PKiKP	04 40 27.5	+0.5
	baz=299,SNR=18						
BC3	Big Chuckawall	133.20	47	P	PKiKP	04 40 27.7	+0.6
	baz=299,SNR=14						
E28A	Huff	133.20	24	P	PKPdf	04 40 25.8	+0.4
	baz=324						
SWSC	Sam W. Stewart	133.27	48	P	PKiKP	04 40 27.4	+0.3
	baz=298,SNR=14						
AGMN	Agassiz Nation	133.49	19	P	PKPdf	04 40 25.2	-0.6
	baz=331						
K22A	Casper	133.49	32	P	PKPdf	04 40 26.8	+0.5
	baz=315						
K22A	Casper	133.49	32	P	PKPdf	04 40 26.5	+0.2
	baz=315,SNR=12						
RSSD	Black Hills	133.66	28	P	PKPdf	04 40 27.1	+0.5
	baz=319,SNR=22						
RSSD	Black Hills	133.66	28	P	PKPdf	04 40 26.9	+0.3
	baz=319						
RWWY	Rawlins	133.79	33		PKPdf	04 40 26.4	-0.6
RWWY				SKPbc	SKPbc	04 43 42.1	-1.8
PDMCI	Parker Dam,Lak	133.83	46	P	PKiKP	04 40 27.9	-0.3
	baz=300,SNR=13						
GLA	Glamis	133.94	48	P	PKiKP	04 40 28.3	-0.2
	baz=299						
B35A	Bob, Littlefor	134.08	17	P	PKPdf	04 40 27.3	+0.4
	baz=334						
PLCA	Paso Flores	134.25	185	PKhKP	PKPpre	04 40 14.2	
	comp=Z,3.2nm,1.0s,baz=244,slow=3.6,SNR=6.2						
PLCA				PKP	PKiKP	04 40 29.1	0.0
	comp=Z,15nm,0.9s,baz=184,slow=1.1,SNR=21						
PLCA				SKPbc	SKPbc	04 43 46.5	+1.3
	comp=Z,48nm,0.9s,baz=202,slow=3.2,SNR=15						
PLCA				SKKPbc	SKKPbc	04 52 55.0	-2.2
	comp=Z,6.4nm,0.9s,baz=352,slow=5.7,SNR=15						
PLCA	Paso Flores	134.25	185	PKPdf	PKiKP	04 40 28.4	-0.6
PLCA				SKPbc	SKPbc	04 43 46.1	+0.9
PLCA	Paso Flores	134.25	185	eP	PKPdf	04 40 28.1	+0.5
O20A	White River Ci	134.26	35	P	PKiKP	04 40 28.7	-0.5
	baz=311						
N23A	Red Feather La	135.03	33	P	PKiKP	04 40 30.1	-0.8
	baz=314,SNR=9.1						
EYMN	Ely	135.07	15	P	PKiKP	04 40 29.6	-0.8
	baz=337						
EYMN	Ely	135.07	15	P	PKiKP	04 40 29.5	-0.8
	baz=337						
WUAZ	Wupatki	135.11	43	P	PKiKP	04 40 31.2	+0.2
	baz=304,SNR=22						
TRQA	Tornquist	135.35	195	PKIKP	PKPdf	04 40 30.3	+0.6
TRQA	Tornquist	135.35	195	PKPdf	PKPdf	04 40 30.3	+0.6
F33A	5 Mile Ranch,	135.48	21	P	PKPdf	04 40 30.3	+0.7
	baz=330						
SMCO	Snowmass	135.62	36	PKPdf	PKPdf	04 40 30.7	0.0
SUSD	Miller	135.65	24	P	PKPdf	04 40 30.1	+0.1
	baz=325						
SUSD	Miller	135.65	24	P	PKPdf	04 40 30.4	+0.4
	baz=325,SNR=7.2						
214A	Organ Pipe Nat	135.96	48	P	PKiKP	04 40 32.5	-0.2
	baz=300,SNR=8.2						
ISCO	Idaho Springs	135.97	34	P	PKiKP	04 40 32.2	-0.7
	baz=314						
ISCO	Idaho Springs	135.97	34	P	PKPdf	04 40 31.8	+0.6
	baz=314,SNR=13						
MVCO	Mesa Verde	135.98	39	P	PKiKP	04 40 32.1	-0.8
	baz=309						
LC01	Cunco	136.18	184	PKPdf	PKPdf	04 40 31.5	+0.3
LC01				SKPbc	SKPbc	04 43 50.2	-1.1
E38A	The Farm, Brul	136.29	16	P	PKPdf	04 40 31.7	+0.5
	baz=336						
W18A	Petrified Fore	136.43	42	P	PKiKP	04 40 33.6	-0.1
	baz=306,SNR=13						
D41A	Chassel	136.62	13	P	PKiKP	04 40 32.6	-0.9
	baz=341						
S22A	4UR Ranch, Cre	136.66	37	P	PKiKP	04 40 33.7	-0.6
	baz=311,SNR=18						
Q24A	Divide	136.81	34	P	PKPdf	04 40 33.5	+0.7
	baz=314						
OGNE	Ogallala	137.02	30	P	PKPdf	04 40 33.0	+0.2
	baz=319						
ABR01	Abrolhos, BA	137.14	237	eP	PKPdf	04 40 33.9	+0.4
ECSD	EROS Data Cent	137.16	23	PKPpre	PKPpre	04 40 23.7	
ECSD				SKPbc	SKPbc	04 43 53.4	-0.7
ECSD	EROS Data Cent	137.16	23	P	PKPdf	04 40 33.1	+0.3
	baz=328						
ECSD	EROS Data Cent	137.16	23	P	PKPdf	04 40 33.2	+0.3
	baz=328						
SPMN	Marine on St.	137.18	18	P	PKPdf	04 40 33.6	+0.8
	baz=334						
SPMN	Marine on St.	137.18	18	P	PKPdf	04 40 32.9	+0.1
	baz=334						
K31A	O'Neill	137.22	25	P	PKPdf	04 40 33.6	+0.6
	baz=324,SNR=24						
TUC	Tucson	137.26	46	P	PKPdf	04 40 34.2	+0.7
	baz=302						
COWI	Conover	137.39	14	P	PKPdf	04 40 33.3	+0.1
	baz=340						
ALF01	Guarapari-ES	137.44	232	eP	PKPdf	04 40 33.9	-0.1
SDCO	Great Sand Dun	137.44	36	PKPdf	PKPdf	04 40 33.2	-0.7
SDCO				SKPbc	SKPbc	04 43 55.4	0.0
SDCO	Great Sand Dun	137.44	36	P	PKPdf	04 40 33.6	-0.3
	baz=312						
SDCO	Great Sand Dun	137.44	36	P	PKPdf	04 40 34.8	+0.9
	baz=312,SNR=26						
CAM01	Campos-RJ	137.49	230	eP	PKPdf	04 40 33.7	-0.4
NBRF	Rio Formoso -	137.55	251	eP	PKPdf	04 40 33.5	-0.8
E43A	Lone Tree Farm	137.60	12	P	PKPdf	04 40 34.1	+0.5
	baz=343						
LATQ	La Tuque	137.73	357	PKPpre	PKPpre	04 40 24.4	
RIB01	Linhares ES	137.86	234	eP	PKPdf	04 40 34.9	+0.1
DUB01	Friburgo-RJ	137.88	229	eP	PKPdf	04 40 34.8	0.0
G40A	Rib Lake	137.89	16	P	PKPdf	04 40 33.3	-0.9
	baz=338						
PLTB	Pedras Altas	137.91	208	eP	PKPdf	04 40 34.6	0.0
F42A	Maple Grove Fa	137.94	13	P	PKPdf	04 40 33.8	-0.4
	baz=341						
I37B	Waseca	138.07	19	P	PKPdf	04 40 33.1	-1.4
	baz=333						
E46A	Sault Ste Mari	138.10	9		PKPdf	04 40 33.3	-1.2
E46A				SKPbc	SKPbc	04 43 56.4	-0.2
E46A	Sault Ste Mari	138.10	9	P	PKPdf	04 40 34.0	-0.4
	baz=347						
TER01	Tubaro-SC	138.10	216	eP	PKPdf	04 40 34.4	-0.7
KSCO	Kaye Shedlock'	138.16	32	P	PKPdf	04 40 35.5	+0.5
	baz=317						
NBAN	Anadia - AL	138.32	250	eP	PKPdf	04 40 35.8	0.0
NBPV	Pedro Velho	138.33	255	eP	PKPdf	04 40 36.0	+0.2
BGNE	Belgrade	138.47	26	P	PKPdf	04 40 36.1	+0.7
	baz=325,SNR=7.7						
BGNE	Belgrade	138.47	26	P	PKPdf	04 40 35.3	-0.1
	baz=325,SNR=7.7						
CNLB	Canela	138.48	213	eP	PKPdf	04 40 35.8	-0.1
T25A	Trinidad	138.49	36	P	PKiKP	04 40 37.0	-0.9
	baz=313						
NBCA	Caruaru-PE	138.52	252	eP	PKPdf	04 40 36.1	-0.1
VAS01	Vassouras-RJ	138.56	228	eP	PKPdf	04 40 36.0	-0.1
MAN01	Angra dos Reis	138.59	227	eP	PKPdf	04 40 36.2	0.0
ANMO	Albuquerque	138.68	40	PKhKP	PKPpre	04 40 31.0	
	comp=Z,1.3nm,0.6s,baz=243,slow=3.6,SNR=8.5						
ANMO				PKP	PKiKP	04 40 38.2	-0.1
	comp=Z,18nm,1.0s,baz=220,slow=2.7,SNR=33						
ANMO				SKPbc	SKPbc	04 44 00.3	+1.4
	comp=Z,191nm,0.9s,baz=284,slow=1.4,SNR=96						
ANMO	Albuquerque	138.68	40		SKPbc	04 43 59.8	+0.9
ANMO	Albuquerque	138.68	40	P	PKiKP	04 40 38.1	-0.3
	baz=309,SNR=19						
ANMO	Albuquerque	138.68	40	P	PKiKP	04 40 37.4	-1.0
	baz=309						
GUA01	Guaratinga, BA	138.73	238	eP	PKPdf	04 40 36.5	0.0
L34A	Svendsen Farm,	138.75	24	P	PKPdf	04 40 36.2	+0.4
	baz=327						
SJMB	Sao Joao De Ma	138.82	234	eP	PKPdf	04 40 36.1	-0.5
F64A	Sherman	138.85	352	P	PKPdf	04 40 36.5	+0.6
	baz=11						
F64A				P	PKPdf	04 40 36.5	+0.6
	baz=11						
Y22D	IRIS PASSCAL I	138.92	41	P	PKiKP	04 40 38.0	-0.8
	baz=308						
Y22A	Socorro	138.97	41	P	PKPdf	04 40 35.0	-1.7
	baz=308,SNR=13						
CMC01	Camacan, BA	139.05	240	eP	PKPdf	04 40 35.9	-1.2
RCBR	Riachuelo	139.06	255	SKPbc	SKPbc	04 44 00.9	+0.5
	comp=Z,78nm,1.1s,baz=246,slow=4.5,SNR=15						
RCBR	Riachuelo	139.06	255	eP	PKPdf	04 40 36.8	-0.4
F63A	Nahmakanta, Br	139.10	353	PKPdf	PKPdf	04 40 36.0	-0.3
F63A				SKPbc	SKPbc	04 43 59.0	-0.5
F63A	Nahmakanta, Br	139.10	353	P	PKPdf	04 40 36.7	+0.4
	baz=9.5,SNR=8.9						
F63A				P	PKPdf	04 40 36.7	+0.4
	baz=9.5,SNR=8.9						
G45A	Suttons Bay	139.15	11	P	PKiKP	04 40 37.6	-1.1
	baz=344						
G45A				P	PKiKP	04 40 37.6	-1.1
	baz=344						
H43A	Windswept, Lux	139.25	14	P	PKPdf	04 40 36.9	+0.2
	baz=341						
121A	Cookes Peak, D	139.25	44	P	PKPdf	04 40 35.5	-1.7
	baz=305,SNR=9.1						
121A	Cookes Peak, D	139.25	44	P	PKPdf	04 40 38.3	+1.1
	baz=305						
NBLA	Lagarto - SE	139.27	247	eP	PKPdf	04 40 37.0	-0.5
PARB	Paraibuna	139.47	225	eP	PKPdf	04 40 36.6	-1.1
K38A	Parkersburg	139.50	20	SKPbc	SKPbc	04 44 00.2	-0.4
K38A	Parkersburg	139.50	20	P	PKPdf	04 40 37.2	+0.1
	baz=333						
I42A	Draeger Farm,	139.51	15		PKPpre	04 40 29.2	
I42A	Draeger Farm,	139.51	15	P	PKPdf	04 40 37.0	-0.2
	baz=339						
GLMI	Grayling	139.55	10	P	PKPdf	04 40 37.6	+0.4
	baz=346						
PKME	Peaks-Kenny Pk	139.55	353	P	PKPdf	04 40 37.6	+0.5
	baz=9.3						
CBKS	Cedar Bluff	139.79	30	P	PKPdf	04 40 38.2	+0.3
	baz=321						
GDU01	Guandu, BA	139.81	242	eP	PKPdf	04 40 38.7	+0.2
PET01	Itanhaem-SP	139.97	222	eP	PKPdf	04 40 38.4	-0.2
SCIA	State Center	140.00	21	P	PKPdf	04 40 38.3	+0.2
	baz=332						
JFWS	Jewell Farm	140.05	17	P	PKPdf	04 40 38.1	-0.1
	baz=337						
JFWS	Jewell Farm	140.05	17	P	PKPdf	04 40 38.1	-0.1
	baz=337						
SADO	Sadowa	140.28	4	PKhKP	PKPpre	04 40 33.0	
	comp=Z,5.1nm,0.7s,baz=354,slow=3.7,SNR=1.5						
SADO				PKP	PKPdf	04 40 38.5	0.0
	comp=Z,19nm,0.9s,baz=351,slow=2.9,SNR=4.3						
SADO				SKPbc	SKPbc	04 44 02.5	-0.1
	comp=Z,223nm,0.9s,baz=336,slow=3.2,SNR=76						
BMNY	Brushton-Moira	140.33	359	P	PKPdf	04 40 36.6	-2.0
	baz=1.4,SNR=7.1						
TIJ01	Guaruva-PR	140.38	219	eP	PKPdf	04 40 39.1	-0.4
L40A	Anamosa	140.53	19	PKPpre	PKPpre	04 40 32.0	
L40A				SKPdf	SKPbc	04 44 03.1	-0.3
L40A	Anamosa	140.53	19	P	PKPdf	04 40 39.1	+0.1
	baz=335						
LONY	Lake Ozonia	140.55	359	P	PKPdf	04 40 39.2	+0.2
	baz=1.2						
R32A	Long Quarter,	140.60	29	P	PKPdf	04 40 34.9	-4.4
	baz=322						
ITAB	Concordia	140.80	214	eP	PKPdf	04 40 38.1	-1.8
LBNH	Lisbon	140.81	356	P	PKPdf	04 40 40.1	+0.6
	baz=5.4						
I63A	Otisfield	140.89	354		PKPpre	04 40 33.6	
I63A				SKPbc	SKPbc	04 44 03.5	-0.8
N38A	Joes South For	140.97	22		PKPdf	04 40 38.3	-1.6
N38A				SKPbc	SKPbc	04 44 03.7	-0.9
N38A	Joes South For	140.97	22	P	PKPdf	04 40 39.8	-0.1
	baz=331,SNR=7.5						
KSU1	Kansas State U	141.03	27	P	PKPdf	04 40 40.0	-0.1
	baz=325						
ITQB	Itaqui	141.06	207	eP	PKPdf	04 40 40.9	+0.5
MNTX	Cornudas Mount	141.39	43	P	PKPdf	04 40 38.6	-2.3
	baz=307,SNR=32						
MSTX	Muleshoe	141.62	38	P	PKPdf	04 40 42.8	+1.4
	baz=313,SNR=14						
MSTX	Muleshoe	141.62	38	P	PKPdf	04 40 42.1	+0.7
	baz=313,SNR=14						
AMTX	Amarillo	141.64	36	P	PKPdf	04 40 42.0	+0.6
	baz=315						
J55A	Hilton	141.85	3	PKPdf	PKPdf	04 40 39.7	-1.7
P38A	Dawn	141.87	23	P	PKPdf	04 40 37.8	-3.7
	baz=330						
SLBS	Sierra La Lagu	141.95	57	PKPdf	PKPdf	04 40 39.4	-2.9
SLBS				SKPbc	SKPbc	04 44 08.3	+0.6
U32A	Winter Ranch,	142.03	32	P	PKPdf	04 40 39.4	-2.5
	baz=320						
MC01	Montes Claros	142.10	235	eP	PKPdf	04 40 40.1	-2.5
FRTB	Fartura	142.14	221	eP	PKPdf	04 40 41.9	-0.6
AAM	Ann Arbor	142.16	10	P	PKPdf	04 40 42.0	+0.1
	baz=346						
FRBT	Francisco Belt	142.30	214	eP	PKPdf	04 40 40.1	-2.7
L48A	N Adams	142.37	11	P	PKPdf	04 40 39.4	-2.9
	baz=345						
L48A				P	PKPdf	04 40 39.4	-2.9
	baz=345						
K62A	Royalston	142.40	356	P	PKPdf	04 40 39.4	-3.0
	baz=5.1						
K62A				P	PKPdf	04 40 39.4	-3.0
	baz=5.1						
K57A	Scipio Center	142.43	1	P	PKPdf	04 40 38.0	-4.5
	baz=358						
HDIL	Hopedale	142.49	17	P	PKPdf	04 40 38.8	-3.8
	baz=337						
HDIL	Hopedale	142.49	17	P	PKPdf	04 40 42.9	+0.3
	baz=337						
HRV	Adam Dziewonsk	142.51	355	P	PKPdf	04 40 43.3	+0.8
	baz=6.2						
P40A	Paris	142.51	21	P	PKPdf	04 40 38.8	-3.9
	baz=332						
WVNY	West Valley, N	142.66	4	P	PKPdf	04 40 39.2	-3.7
	baz=355,SNR=6.9						
NBPB	Pedra_Branca-C	142.67	254	eP	PKPdf	04 40 40.9	-2.8
PTGB	Pitanga	142.69	217	eP	PKPdf	04 40 42.4	-1.2
ERPA	Erie	142.84	6	P	PKPdf	04 40 42.0	-1.2
	baz=352						
T35B	Sooner Cattle	142.85	28	P	PKPdf	04 40 40.1	-3.3
	baz=324						
BINY	Binghamton	142.97	1	P	PKPdf	04 40 40.2	-3.3
	baz=359,SNR=5.9						
BINY	Binghamton	142.97	1	P	PKPdf	04 40 42.0	-1.4
	baz=359,SNR=5.9						
BB19B	Bebedouro	142.99	225	eP	PKPdf	04 40 41.9	-2.2
L56A	Greenwood	142.99	3	P	PKPdf	04 40 39.7	-3.8
	baz=356,SNR=16						
L56A				P	PKPdf	04 40 39.7	-3.8
	baz=356,SNR=16						
O44A	Mansfield	143.11	17	P	PKPdf	04 40 42.5	-1.2
	baz=338,SNR=5.7						
N47A	Urbana	143.13	13	P	PKPbc	04 40 41.2	+0.2
	baz=343,SNR=5.6						
N47A				P	PKPbc	04 40 41.2	+0.2
	baz=343,SNR=5.6						
M50A	Fremont	143.14	10	P	PKPbc	04 40 40.8	-0.2
	baz=347						
M50A				P	PKPbc	04 40 40.8	-0.2
	baz=347						
JANB	Januaria	143.25	237	eP	PKPbc	04 40 42.3	+0.3
M52A	Chesterland	143.25	7	P	PKPbc	04 40 41.7	+0.4
	baz=350,SNR=6.1						
M52A				P	PKPbc	04 40 41.7	+0.4
	baz=350,SNR=6.1						
P43A	Skaggs, Pawnee	143.26	18	P	PKPbc	04 40 42.0	+0.7
	baz=336						
SFIN	Lafayette	143.27	15		PKPbc	04 40 42.0	+0.7
SFIN				SKPbc	SKPbc	04 44 10.2	-0.1
SFIN	Lafayette	143.27	15	P	PKPbc	04 40 40.7	-0.6
	baz=340,SNR=6.7						
SFIN	Lafayette	143.27	15	P	PKPbc	04 40 42.4	+1.1
	baz=340						
WMOK	Wichita Mounta	143.39	33	P	PKPbc	04 40 42.1	+0.2
	baz=319,SNR=12						
WMOK	Wichita Mounta	143.39	33	P	PKPbc	04 40 41.5	-0.4
	baz=319,SNR=12						
N49A	Columbus Grove	143.41	11	P	PKPbc	04 40 41.4	-0.3
	baz=345,SNR=6.7						
N49A				P	PKPbc	04 40 41.4	-0.3
	baz=345,SNR=6.7						
M53A	WI Miller and	143.44	7	P	PKPbc	04 40 41.3	-0.5
	baz=351,SNR=11						
R40A	Maddies Statio	143.52	23	P	PKPbc	04 40 41.7	-0.4
	baz=331						
M55A	Ridgway	143.59	4	P	PKPbc	04 40 41.9	-0.3
	baz=354,SNR=16						
M55A				P	PKPbc	04 40 41.9	-0.3
	baz=354,SNR=16						
KSPA	Keystone Colle	143.62	0	P	PKPbc	04 40 42.3	0.0
	baz=359,SNR=8.2						
S39A	Bolivar	143.62	24	P	PKPbc	04 40 42.7	+0.3
	baz=329						
NBMO	Morrinhos-CE	143.67	258	eP	PKPbc	04 40 43.8	+0.5
N51A	Ashland	143.72	9	P	PKPbc	04 40 42.3	-0.3
	baz=348,SNR=9.8						
N51A				P	PKPbc	04 40 42.3	-0.3
	baz=348,SNR=9.8						
M57A	Sunshine Farm,	143.81	2	P	PKPbc	04 40 43.0	+0.1
	baz=357,SNR=22						
M57A				P	PKPbc	04 40 43.0	+0.1
	baz=357,SNR=22						
O48B	Farmland	143.85	13	P	PKPab	04 40 42.3	+0.1
	baz=343						
O48B	Farmland	143.85	13	P	PKPbc	04 40 42.8	-0.2
	baz=343,SNR=14						
TX31	Lajitas Ar. Si	143.99	45		PKPbc	04 40 44.7	+0.8
TX31				SKPbc	SKPbc	04 44 13.0	+0.5
TX31	Lajitas Ar. Si	143.99	45	P	PKPdf	04 40 44.9	-0.8
	baz=307						
TXAR	Lajitas Array	143.99	45	PKP	PKPdf	04 40 45.2	-0.5
	comp=Z,37nm,0.9s,baz=292,slow=1.3,SNR=46						
TXAR				SKPbc	SKiKP	04 44 13.9	+0.5
	comp=Z,96nm,0.8s,baz=264,slow=0.9,SNR=40						
TUL1	Leonard	144.00	29	P	PKPbc	04 40 44.3	+0.7
	baz=324,SNR=13						
TUL1	Leonard	144.00	29	P	PKPbc	04 40 43.8	+0.2
	baz=324,SNR=13						
MCR1	Marechal Candi	144.03	215	eP	PKPbc	04 40 44.8	+0.7
N53A	Lisbon	144.04	7	P	PKPbc	04 40 43.7	+0.1
	baz=351,SNR=22						
N53A				P	PKPbc	04 40 43.7	+0.1
	baz=351,SNR=22						
O49A	Covington	144.08	12	P	PKPbc	04 40 43.8	+0.1
	baz=345						
O49A				P	PKPbc	04 40 43.8	+0.1
	baz=345						
ODNJ	Ogdensburg	144.09	359	P	PKPbc	04 40 43.7	+0.1
	baz=1.3,SNR=13						
Q44A	Meyer Farm, Va	144.09	18	P	PKPab	04 40 43.4	+0.1
	baz=336						
CCM	Cathedral Cave	144.11	21		PKPab	04 40 43.1	-0.2
CCM				SKPbc	SKPbc	04 44 11.7	-0.7
CCM	Cathedral Cave	144.11	21	P	PKPab	04 40 43.2	-0.1
	baz=332						
CCM	Cathedral Cave	144.11	21	P	PKPbc	04 40 43.8	-0.1
	baz=332						
PAL	Palisades	144.14	358	P	PKPab	04 40 43.6	+0.2
	baz=2.5,SNR=10						
PAL	Palisades	144.14	358	P	PKPbc	04 40 43.9	+0.1
	baz=2.5						
CPUP	Villa Florida	144.23	209	PKP	PKPdf	04 40 45.5	-0.5
	comp=Z,298nm,1.0s,baz=149,slow=2.7,SNR=366						
CPUP				SKPbc	SKPbc	04 44 12.8	-0.2
	comp=Z,31nm,0.8s,baz=145,slow=1.4,SNR=11						
CPUP				SKKPab	SKKPbc	04 52 15.4	-2.4
	comp=Z,9.3nm,1.1s,baz=352,slow=4.2,SNR=9.2						
CPUP	Villa Florida	144.23	209	eP	PKPdf	04 40 45.6	-0.5
FOR	Fordham	144.28	358	P	PKPbc	04 40 44.4	+0.2
	baz=2.5						
ACSO	Alum Creek Sta	144.29	10	P	PKPbc	04 40 44.5	+0.1
	baz=347,SNR=26						
ACSO	Alum Creek Sta	144.29	10	P	PKPbc	04 40 44.3	0.0
	baz=347,SNR=26						
N58A	Sunbury	144.32	2	P	PKPbc	04 40 44.6	+0.2
	baz=358,SNR=47						
N58A				P	PKPbc	04 40 44.6	+0.2
	baz=358,SNR=47						
ABTX	Abilene, Hawle	144.44	36	P	PKPdf	04 40 46.0	-0.3
	baz=315						
ABTX	Abilene, Hawle	144.44	36	P	PKPbc	04 40 45.6	+0.5
	baz=315						
FVM	French Village	144.46	21	P	PKPab	04 40 44.6	-0.1
	baz=334						
PCMB	Pacaembu	144.47	221	eP	PKPbc	04 40 45.3	-0.1
SSPA	Standing Stone	144.47	3		PKPab	04 40 44.5	-0.1
SSPA				SKPbc	SKPbc	04 44 13.0	-0.2
SSPA	Standing Stone	144.47	3	P	PKPbc	04 40 45.2	+0.3
	baz=356,SNR=28						
SSPA	Standing Stone	144.47	3	P	PKPbc	04 40 44.9	0.0
	baz=356						
TRCB	Terra Rica	144.48	218	eP	PKPbc	04 40 45.8	+0.3
BRNJ	Basking Ridge	144.48	359	P	PKPbc	04 40 45.3	+0.5
	baz=1.4,SNR=7.7						
OLIL	Olney	144.53	17	P	PKPbc	04 40 45.0	-0.1
	baz=338						
O53A	New Philadelph	144.54	8	P	PKPbc	04 40 45.3	+0.2
	baz=350,SNR=43						
P48A	Milroy	144.55	13	P	PKPab	04 40 44.6	-0.3
	baz=343,SNR=32						
P48A				P	PKPab	04 40 44.6	-0.3
	baz=343,SNR=32						
HHAR	Hobbs	144.55	26	P	PKPab	04 40 45.1	0.0
	baz=327						
O52A	Adamsville	144.59	8	P	PKPbc	04 40 45.3	0.0
	baz=349,SNR=32						
O52A				P	PKPbc	04 40 45.3	0.0
	baz=349,SNR=32						
P49A	Miami Univ. Ec	144.63	12	P	PKPab	04 40 45.1	-0.2
	baz=344,SNR=37						
P49A	Miami Univ. Ec	144.63	12	P	PKPbc	04 40 45.3	-0.1
	baz=344,SNR=37						
O54A	Avella	144.71	7	P	PKPbc	04 40 45.8	+0.1
	baz=351,SNR=46						
O54A				P	PKPbc	04 40 45.8	+0.1
	baz=351,SNR=46						
IPMB	Ipameri, GO	144.72	229	eP	PKPab	04 40 44.3	-1.9
NBPS	Pedro II - PI	144.76	255	eP	PKPab	04 40 45.0	-1.6
PANJ	Princeton	144.79	359	P	PKPbc	04 40 46.1	+0.2
	baz=1.1,SNR=16						
U40A	Yellville	144.95	25		PKPbc	04 40 46.4	-0.2
U40A				SKPbc	SKPbc	04 44 14.2	-0.3
U40A	Yellville	144.95	25	P	PKPbc	04 40 46.4	-0.2
	baz=329,SNR=125						
U40A				P	PKPbc	04 40 46.4	-0.2
	baz=329,SNR=125						
U40A	Yellville	144.95	25	P	PKPab	04 40 46.8	+0.2
	baz=329,SNR=125						
TUPA	Temple Univers	145.01	360	P	PKPdf	04 40 47.1	+0.1
	baz=0.3,SNR=40						
P51A	Williamsport	145.01	10	P	PKPbc	04 40 46.5	-0.1
	baz=347,SNR=32						
P51A				P	PKPbc	04 40 46.5	-0.1
	baz=347,SNR=32						
P52A	Corning	145.02	9	P	PKPbc	04 40 46.6	0.0
	baz=348,SNR=58						
SDBA	SAO DESIDERIO	145.04	240	eP	PKPbc	04 40 47.5	0.0
S44A	Carbondale	145.12	19	P	PKPdf	04 40 47.4	+0.1
	baz=335,SNR=36						
ITRB	Iturama	145.17	224	eP	PKPdf	04 40 49.5	+1.5
P53A	Whipple	145.27	8	P	PKPdf	04 40 47.5	0.0
	baz=350,SNR=59						
P53A				P	PKPdf	04 40 47.5	0.0
	baz=350,SNR=59						
X37A	Clayton	145.27	30	P	PKPab	04 40 47.9	0.0
	baz=323,SNR=37						
Z35A	Perchaven, San	145.28	33	P	PKPab	04 40 48.1	+0.2
	baz=320						
MCWV	Mont Chateau	145.29	6	P	PKPab	04 40 48.2	+0.5
	baz=352						
MCWV	Mont Chateau	145.29	6	P	PKPab	04 40 48.2	+0.5
	baz=352						
GEDE	Greenville	145.36	0	P	PKPbc	04 40 47.8	+0.1
	baz=360,SNR=56						
Q51A	Peebles	145.40	11	P	PKPbc	04 40 47.9	0.0
	baz=346,SNR=52						
Q51A				P	PKPbc	04 40 47.9	0.0
	baz=346,SNR=52						
P61A	Hammonton	145.50	359	P	PKPab	04 40 48.5	0.0
	baz=1.0,SNR=10						
P61A				P	PKPab	04 40 48.5	0.0
	baz=1.0,SNR=10						
W39A	Magazine	145.53	27	P	PKPab	04 40 48.6	-0.1
	baz=326,SNR=13						
W39A	Magazine	145.53	27	P	PKPbc	04 40 48.4	+0.1
	baz=326,SNR=13						
PBMO	Poplar Bluff	145.54	22	P	PKPdf	04 40 48.0	0.0
	baz=333,SNR=46						
Q52A	Bidwell	145.65	9	P	PKPab	04 40 49.1	0.0
	baz=348,SNR=56						
Q52A				P	PKPab	04 40 49.1	0.0
	baz=348,SNR=56						

R49A	Shelbyville	145.72	14	P	PKPbc	04 40 48.9	0.0
	baz=343,SNR=70						
R49A				P	PKPbc	04 40 48.9	0.0
	baz=343,SNR=70						
SDMD	Soldier's Deli	145.74	2	P	PKPab	04 40 49.3	-0.1
	baz=357,SNR=23						
JCT	Junction City	145.83	39	P	PKPab	04 40 50.1	0.0
	baz=313,SNR=66						
JCT	Junction City	145.83	39	P	PKPbc	04 40 49.7	+0.1
	baz=313,SNR=66						
Q54A	Coxs Mills	145.84	7	P	PKPbc	04 40 49.3	+0.1
	baz=350,SNR=41						
Q54A				P	PKPbc	04 40 49.3	+0.1
	baz=350,SNR=41						
LCAR	Lake Charles	145.89	23	P	PKPbc	04 40 49.1	-0.4
	baz=331,SNR=102						
R50A	Paris	145.92	13	P	PKPbc	04 40 49.1	-0.3
	baz=344,SNR=34						
R50A				P	PKPbc	04 40 49.1	-0.3
	baz=344,SNR=34						
T45B	Paducah	145.94	19	P	PKPbc	04 40 49.8	+0.3
	baz=336,SNR=6.5						
BDFB	Brasilia	145.95	232	PKPbc	PKPbc	04 40 50.5	+0.1
	comp=Z,257nm,0.9s,baz=142,slow=3.2,SNR=158						
BDFB				SKPbc	SKPbc	04 44 17.5	+0.1
	comp=Z,31nm,1.1s,baz=240,slow=3.6,SNR=3.0						
Q56A	Snyder Ridge,	145.96	5	P	PKPbc	04 40 49.3	-0.3
	baz=353,SNR=21						
Q56A				P	PKPbc	04 40 49.3	-0.3
	baz=353,SNR=21						
MIAR	Mount Ida	146.16	27	P	PKPbc	04 40 49.8	-0.5
	baz=326,SNR=46						
MIAR	Mount Ida	146.16	27	P	PKPbc	04 40 50.0	-0.3
	baz=326,SNR=46						
WHTX	Lake Whitney,	146.17	35	P	PKPab	04 40 50.9	-0.3
	baz=318,SNR=7.0						
WHTX	Lake Whitney,	146.17	35	P	PKPbc	04 40 50.2	-0.3
	baz=318,SNR=7.0						
W41B	Gary Mavity, V	146.22	25	P	PKPdf	04 40 49.3	+0.1
	baz=329,SNR=25						
W41B	Gary Mavity, V	146.22	25	P	PKPdf	04 40 49.6	+0.4
	baz=329,SNR=25						
R53A	Hurricane	146.32	9	P	PKPbc	04 40 50.2	-0.5
	baz=348,SNR=100						
R53A				P	PKPbc	04 40 50.2	-0.5
	baz=348,SNR=100						
T47A	Sharon Grove	146.44	17	P	PKPdf	04 40 50.2	+0.6
	baz=339,SNR=30						
X40A	Basin Creek Fa	146.54	27	P	PKPbc	04 40 51.5	+0.1
	baz=327,SNR=9.5						
X40A				P	PKPbc	04 40 51.5	+0.1
	baz=327,SNR=9.5						
X40A	Basin Creek Fa	146.54	27	P	PKPdf	04 40 50.4	+0.6
	baz=327,SNR=9.5						
R55A	Marlinton	146.62	7	P	PKPbc	04 40 50.8	-0.9
	baz=351,SNR=28						
R55A				P	PKPbc	04 40 50.8	-0.9
	baz=351,SNR=28						
S51A	Beattyville	146.69	12	P	PKPdf	04 40 50.8	+0.8
	baz=345,SNR=48						
S51A				P	PKPdf	04 40 50.8	+0.8
	baz=345,SNR=48						
CBN	Corbin Frederi	146.92	3	P	PKPbc	04 40 51.4	-1.0
	baz=356						
CBN	Corbin Frederi	146.92	3	P	PKPdf	04 40 51.1	+0.8
	baz=356						
S54A	Dingess, Beckl	146.94	9	P	PKPdf	04 40 51.3	+0.8
	baz=349,SNR=26						
S54A				P	PKPdf	04 40 51.3	+0.8
	baz=349,SNR=26						
435B	Jarrell	146.98	37	P	PKPbc	04 40 52.3	-0.5
	baz=316,SNR=9.8						
435B	Jarrell	146.98	37	P	PKPdf	04 40 51.7	+1.0
	baz=316						
WVT	Waverly	147.01	19		PKPdf	04 40 50.6	+0.1
WVT				SKPbc	SKPbc	04 44 18.4	-0.7
WVT	Waverly	147.01	19	P	PKPdf	04 40 50.9	+0.4
	baz=337,SNR=83						
WVT	Waverly	147.01	19	P	PKPdf	04 40 51.1	+0.6
	baz=337						
237A	Washetta, Mont	147.08	33	P	PKPbc	04 40 52.5	-0.5
	baz=320						
R58B	Mineral	147.13	4	P	PKPdf	04 40 51.6	+1.0
	baz=355,SNR=26						
R58B				P	PKPdf	04 40 51.6	+1.0
	baz=355,SNR=26						
U49A	Red Boiling Sp	147.25	15	P	PKPdf	04 40 51.3	+0.4
	baz=341,SNR=52						
S57A	Dark Hollow, R	147.25	5	P	PKPdf	04 40 51.6	+0.7
	baz=353,SNR=29						
S57A				P	PKPdf	04 40 51.6	+0.7
	baz=353,SNR=29						
W45A	Hickory Valley	147.44	21	P	PKPdf	04 40 52.2	+0.9
	baz=334,SNR=18						
C2SB	Chapadao do Su	147.51	223	*e*P	PKPdf	04 40 51.3	-0.5
833A	Chaparral WMA,	147.54	42	P	PKPbc	04 40 53.8	-0.6
	baz=311						
833A	Chaparral WMA,	147.54	42	P	PKPbc	04 40 53.2	-1.2
	baz=311						
Z41A	Richland Creek	147.59	28	P	PKPdf	04 40 51.4	-0.2
	baz=326						
Z41A				P	PKPdf	04 40 51.4	-0.2
	baz=326						
Z41A	Richland Creek	147.59	28	P	PKPdf	04 40 52.5	+1.0
	baz=326,SNR=6.7						
V48A	Smith Brothers	147.68	17	P	PKPdf	04 40 52.1	+0.5
	baz=338,SNR=50						
ROSB	Rosrio	147.73	257	*e*P	PKPdf	04 40 52.8	+0.4
TZTN	Tazewell	147.76	12	P	PKPdf	04 40 52.7	+0.9
	baz=345						
TZTN	Tazewell	147.76	12	P	PKPdf	04 40 52.5	+0.7
	baz=345						
NATX	Nacogdoches	147.88	32	P	PKPbc	04 40 53.9	-1.3
	baz=322,SNR=17						
NATX	Nacogdoches	147.88	32	P	PKPdf	04 40 53.4	+1.3
	baz=322						
OXF	Oxford	147.93	22	P	PKPdf	04 40 52.6	+0.5
	baz=333						
OXF	Oxford	147.93	22	P	PKPdf	04 40 52.2	+0.1
	baz=333						
T57A	Hurt	147.98	6	P	PKPdf	04 40 53.2	+1.1
	baz=353,SNR=16						
T57A				P	PKPdf	04 40 53.2	+1.1
	baz=353,SNR=16						
T60A	Surry	148.01	2	P	PKPdf	04 40 53.5	+1.4
	baz=357,SNR=25						
T60A				P	PKPdf	04 40 53.5	+1.4
	baz=357,SNR=25						
AQDB	Aquidauana	148.09	217		PKPdf	04 40 52.7	-0.1
AQDB	Aquidauana	148.09	217	*e*P	PKPdf	04 40 52.0	-0.7
PEXB	Peixe	148.09	238	*e*P	PKPdf	04 40 52.9	0.0
U54A	Nelsons Funny	148.11	10	P	PKPdf	04 40 52.9	+0.4
	baz=348						
U54A				P	PKPdf	04 40 52.9	+0.4
	baz=348						
T59A	Double "B" Far	148.14	3	P	PKPdf	04 40 52.5	+0.1
	baz=356,SNR=45						
T59A				P	PKPdf	04 40 52.5	+0.1
	baz=356,SNR=45						
V51A	Loudon	148.29	14	P	PKPdf	04 40 53.3	+0.7
	baz=343						
V52A	Sevierville	148.42	13	P	PKPdf	04 40 53.6	+0.7
	baz=344						
Y45A	Yeager Farm, C	148.45	23	P	PKPdf	04 40 54.1	+1.1
	baz=332						
DVLD	Doverlandia	148.48	226	*e*P	PKPdf	04 40 51.2	-2.4
TKL	Tuckaleechee C	148.56	13	PKPbc	PKPdf	04 40 54.3	+1.2
	comp=Z,67nm,0.7s,baz=143,slow=5.3,SNR=67						
TKL				SKPbc	SKiKP	04 44 23.1	+0.6
	comp=Z,39nm,0.7s,baz=131,slow=6.0,SNR=12						
TKL	Tuckaleechee C	148.56	13	P	PKPdf	04 40 54.1	+1.0
	baz=344						
HKT	Hockley	148.61	35	PKIKP	PKPdf	04 40 54.7	+1.4
HKT						04 44 23.3	
HKT	Hockley	148.61	35		PKPdf	04 40 54.7	+1.4
HKT				SKPbc	SKiKP	04 44 23.3	+0.6
HKT	Hockley	148.61	35	P	PKPdf	04 40 54.1	+0.8
	baz=318						
W50A	Signal Mountai	148.62	16	P	PKPdf	04 40 54.0	+0.7
	baz=341						
AC01	Pan de Azucar	148.66	188		PKPdf	04 40 54.8	+1.2
AC01				SKPbc	SKiKP	04 44 24.5	+1.4
143A	Socs Landing,	148.69	26	P	PKPdf	04 40 54.9	+1.5
	baz=328,SNR=8.3						
U59A	Littleton	148.74	4	P	PKPdf	04 40 54.4	+1.0
	baz=355,SNR=14						
U59A				P	PKPdf	04 40 54.4	+1.0
	baz=355,SNR=14						
V53A	Saluda	148.75	12	P	PKPdf	04 40 54.6	+1.1
	baz=346,SNR=71						
V53A				P	PKPdf	04 40 54.6	+1.1
	baz=346,SNR=71						
X48A	Hartselle	148.80	19	P	PKPdf	04 40 53.7	+0.1
	baz=337						
V55A	Taylorsville	148.86	9	P	PKPdf	04 40 54.6	+1.0
	baz=349,SNR=27						
V55A				P	PKPdf	04 40 54.6	+1.0
	baz=349,SNR=27						
SMTB	Santa Maria do	148.98	244	*e*P	PKPdf	04 40 52.6	-1.8
KVTX	Kingsville	149.04	41		PKPdf	04 40 55.4	+1.2
KVTX					PP	04 44 26.6	-3.1
W52A	Murphy	149.06	14	P	PKPdf	04 40 55.1	+1.1
	baz=343,SNR=81						
V58A	Windy Hill, Pi	149.19	6	P	PKPdf	04 40 55.2	+1.1
	baz=353,SNR=17						
V58A				P	PKPdf	04 40 55.2	+1.1
	baz=353,SNR=17						
X51A	Calhoun	149.34	15	P	PKPdf	04 40 55.4	+1.0
	baz=341,SNR=18						
X51A				P	PKPdf	04 40 55.4	+1.0
	baz=341,SNR=18						
V61A	Roper	149.36	2	P	PKPdf	04 40 56.4	+2.0
	baz=358,SNR=8.5						
V61A				P	PKPdf	04 40 56.4	+2.0
	baz=358,SNR=8.5						
342B	Flagon Creek P	149.37	29	P	PKPdf	04 40 56.6	+2.1
	baz=325,SNR=8.3						
CASEE	Lake Jocassee	149.38	12	P	PKPdf	04 40 55.8	+1.4
	baz=345,SNR=57						
441A	DeRidder	149.44	31	P	PKPdf	04 40 56.2	+1.6
	baz=323,SNR=8.6						
VBMS	Vicksburg	149.49	26	P	PKPdf	04 40 56.2	+1.6
	baz=329,SNR=23						
VBMS	Vicksburg	149.49	26	P	PKPdf	04 40 55.4	+0.7
	baz=329						
KMSC	Kings Mountain	149.54	10	P	PKPdf	04 40 55.8	+1.1
	baz=348,SNR=25						
KMSC	Kings Mountain	149.54	10	P	PKPdf	04 40 55.1	+0.4
	baz=348						
Y49A	Blount Mountai	149.55	18	P	PKPdf	04 40 55.6	+0.8
	baz=338,SNR=77						
Z47A	Carrollton	149.60	21	P	PKPdf	04 40 55.8	+1.0
	baz=334,SNR=48						
PP1B	Ponte de Pedra	149.70	222	*e*P	PKPdf	04 40 55.2	-0.3
W57A	Gilead	149.72	7	P	PKPdf	04 40 56.0	+1.0
	baz=351,SNR=22						
W57A				P	PKPdf	04 40 56.0	+1.0
	baz=351,SNR=22						
146A	Union	149.73	23	P	PKPdf	04 40 56.3	+1.2
	baz=332,SNR=78						
PAULI	Pauline	149.77	10	P	PKPdf	04 40 55.8	+0.7
	baz=347						
CNNC	Cliffs of the	149.84	4	P	PKPdf	04 40 56.6	+1.4
	baz=355,SNR=9.3						
CNNC	Cliffs of the	149.84	4	P	PKPdf	04 40 55.9	+0.8
	baz=355						
344A	Westbrook Farm	150.05	27	P	PKPdf	04 40 57.6	+2.1
	baz=328,SNR=23						
LRAL	Lakeview Retre	150.12	20	P	PKPdf	04 40 56.2	+0.5
	baz=336,SNR=34						
LRAL	Lakeview Retre	150.12	20	P	PKPdf	04 40 56.2	+0.5
	baz=336						
Y52A	Lilburn	150.21	15	P	PKPdf	04 40 57.0	+1.2
	baz=342,SNR=68						
Y52A				P	PKPdf	04 40 57.0	+1.2
	baz=342,SNR=68						
HODGE	Hodges	150.25	11	P	PKPdf	04 40 56.9	+1.0
	baz=346,SNR=41						
JSC	Jenkinsville	150.39	10	P	PKPdf	04 40 56.4	+0.4
	baz=348,SNR=26						
X58A	Rowland	150.39	6	P	PKPdf	04 40 57.2	+1.2
	baz=352,SNR=6.7						
X58A				P	PKPdf	04 40 57.2	+1.2
	baz=352,SNR=6.7						
Z51A	Franklin	150.42	17	P	PKPdf	04 40 57.5	+1.3
	baz=340,SNR=21						
SNDB	Serra Nova Dou	150.63	235	*e*P	PKPdf	04 40 57.0	0.0
346A	Big Creek Wild	150.65	25	P	PKPdf	04 40 57.9	+1.3
	baz=330,SNR=12						
GOGA	Godfrey	150.78	14	P	PKPdf	04 40 58.2	+1.5
	baz=343,SNR=31						
GOGA	Godfrey	150.78	14	P	PKPdf	04 40 57.7	+1.0
	baz=343						
Y57A	Sumter	150.78	8	P	PKPdf	04 40 57.8	+1.1
	baz=350,SNR=14						
Y57A				P	PKPdf	04 40 57.8	+1.1
	baz=350,SNR=14						
BBSR	BB Station	150.99	341	P	PKPdf	04 40 58.4	+1.4
	baz=22						
Y58A	Scranton	150.99	7	P	PKPdf	04 40 58.3	+1.3
	baz=351,SNR=16						
Y58A				P	PKPdf	04 40 58.3	+1.3
	baz=351,SNR=16						
Y59A	Loris	151.00	6	P	PKPdf	04 40 58.3	+1.3
	baz=353,SNR=10						
Y59A				P	PKPdf	04 40 58.3	+1.3
	baz=353,SNR=10						
152A	Waverly Hall	151.16	16	P	PKPdf	04 40 58.5	+1.1
	baz=340,SNR=19						
HAW	Hawthorne Fire	151.22	11	P	PKPdf	04 40 58.3	+0.9
	baz=347						
250A	Grady	151.33	19	P	PKPdf	04 40 59.1	+1.5
	baz=337,SNR=17						
SALV	Santo Antonio	151.46	223	*e*P	PKPdf	04 40 58.2	0.0
154A	Montrose	151.63	14	P	PKPdf	04 40 59.1	+1.1
	baz=344						
TMAB	Tom-Au,PA,Br	151.70	256	*e*P	PKPdf	04 40 58.2	-0.4
NHSC	New Hope	151.71	8	P	PKPdf	04 40 59.9	+1.8
	baz=350,SNR=8.9						
NHSC	New Hope	151.71	8	P	PKPdf	04 40 58.7	+0.6
	baz=350						
BRAL	Brewton	151.80	21	P	PKPdf	04 41 00.0	+1.7
	baz=335,SNR=16						
BRAL	Brewton	151.80	21	P	PKPdf	04 40 59.4	+1.1
	baz=335						
LVC	Limon Verde	151.80	193	PKP	PKPdf	04 41 01.0	+2.0
	comp=Z,21nm,1.0s,baz=190,slow=1.6,SNR=23						
LVC				PKPbc	PKiKP	04 41 07.3	+1.5
	comp=Z,223nm,0.9s,baz=248,slow=1.8,SNR=89						
LVC				PKPab	PKPab	04 41 17.2	+2.5
	comp=Z,193nm,0.8s,baz=207,slow=3.2,SNR=19						
LVC				PP	PP	04 44 47.9	+2.9
	comp=Z,74nm,1.1s,baz=116,slow=8.6,SNR=7.9						
LVC	Limon Verde	151.80	193	*e*P	PKPdf	04 40 58.3	-0.8
PRPB	Parauapebas	152.09	247	*e*P	PKPdf	04 40 59.1	-0.2
352A	Blakely	152.22	18	P	PKPdf	04 41 00.4	+1.4
	baz=339						
255A	Hazlehurst	152.44	13	P	PKPdf	04 40 60.0	+0.8
	baz=345						
NBRS	Nobres	152.61	225	*e*P	PKPdf	04 40 59.6	-0.4
TIGA	Tifton	152.63	15	P	PKPdf	04 40 59.7	+0.2
	baz=342						
TIGA	Tifton	152.63	15	P	PKPdf	04 41 00.5	+0.9
	baz=342						
PTLB	Pontes e Lacer	154.02	218	*e*P	PKPdf	04 41 01.7	-0.2
SIV	San Ignacio	154.73	214	PKP	PKPdf	04 41 03.5	+0.6
	comp=Z,14nm,0.6s,baz=97,slow=2.5,SNR=12						
SIV				PKPbc	PKiKP	04 41 12.2	+0.6
	comp=Z,27nm,0.8s,baz=154,slow=2.0,SNR=13						
SIV				PKPab	PKPab	04 41 27.9	+1.1
	comp=Z,50nm,0.8s,baz=136,slow=4.0,SNR=12						
CLDB	Colider	154.85	231	*e*P	PKPdf	04 41 02.9	-0.3
PDRB	Porto dos Gac	155.10	228	*e*P	PKPdf	04 41 02.1	-1.4
MCPB	Macapa, AP	156.03	258	*e*P	PKPdf	04 41 04.6	-0.2
DWPF	Disney Wildern	156.34	13	P	PKPdf	04 41 04.9	+0.1
	baz=345						
VILB	Vilhena	156.58	220	*e*P	PKPdf	04 41 05.4	0.0
MDP	Montagnes des	157.28	271	PKP	PKPdf	04 41 07.8	+1.4
	comp=Z,40nm,1.1s,baz=211,slow=3.4,SNR=6.2						
MDP				PKPab	PKPab	04 41 39.9	+1.8
	comp=Z,33nm,1.1s,baz=202,slow=2.9,SNR=5.0						
CMIG	Matias Romero	157.50	56	PKP	PKPdf	04 41 07.1	+0.6
	comp=Z,14nm,0.8s,baz=308,slow=2.6,SNR=23						
CMIG				PKPab	PKPab	04 41 38.3	-0.5
	comp=Z,12nm,0.9s,baz=344,slow=3.0,SNR=7.2						
LPAZ	La Paz	157.62	199	PKP	PKPdf	04 41 08.4	+0.9
	comp=Z,22nm,1.0s,baz=81,slow=0.7,SNR=72						
LPAZ				PKPab	pPKPdf	04 41 42.0	-1.3
	comp=Z,41nm,0.8s,baz=144,slow=5.2,SNR=19						
LPAZ				PP	PP	04 45 20.2	+2.2
	comp=Z,21nm,1.1s,baz=128,slow=4.6,SNR=8.8						
LPAZ	La Paz	157.62	199	*e*P	PKPdf	04 41 06.7	-0.8
MALB	Monte Alegre	157.76	253	*e*P	PKPdf	04 41 06.9	0.0
ITTB	Itaituba	158.21	245	*e*P	PKPdf	04 41 07.5	0.0
ETMB	Extrema	162.62	212	*e*P	PKPdf	04 41 12.1	-0.2
NNA	Nana	163.05	175	PKP	PKPdf	04 41 13.6	+0.8
	comp=Z,44nm,1.0s,baz=268,slow=5.4,SNR=12						
NNA				PKPab	PKPab	04 42 04.0	+1.1
	comp=Z,44nm,1.0s,baz=216,slow=3.7,SNR=11						
NNA				PP	PP	04 45 47.9	+1.7
	comp=Z,19nm,1.0s,baz=209,slow=5.7,SNR=9.0						
MACA	Manacapuru-AM	163.15	241	*e*P	PKPdf	04 41 12.6	-0.3
SJG	San Juan	164.12	326	PKP	PKPdf	04 41 13.6	0.0
	comp=Z,42nm,1.2s,baz=91,slow=6.3,SNR=4.7						
SJG				PKPab	PKPab	04 42 07.8	+0.3
	comp=Z,30nm,0.8s,baz=37,slow=4.9,SNR=8.5						
SJG	San Juan	164.12	326	PKIKP	PKPdf	04 41 13.3	-0.3
SJG						04 42 07.8	
SJG	San Juan	164.12	326		PKPdf	04 41 13.2	-0.3
SJG				PKPab	PKPab	04 42 07.8	+0.3
BOAV	Boa Vista	164.87	261	*e*P	PKPdf	04 41 14.1	-0.3
CZSB	Cruzeiro do Su	167.04	192	*e*P	PKPdf	04 41 16.0	-0.2
TBTG	Tabatinga, AM	169.31	211	*e*P	PKPdf	04 41 17.6	-0.2
SDV	Santo Domingo	173.86	309	PKP	PKPdf	04 41 19.4	-0.8
	comp=Z,32nm,0.6s,baz=256,slow=1.7,SNR=7.7						
SDV				PKPab	PKPab	04 42 52.8	+1.7
	comp=Z,28nm,0.4s,baz=25,slow=3.4,SNR=4.2						
SDV				PP	PP	04 46 42.6	-0.2
	comp=Z,33nm,0.4s,baz=48,slow=2.9,SNR=9.2						
OCAC	Ocana	176.16	327	*e*P	PKPdf	04 41 19.8	-1.0
PAMC	Pamplona, Colo	176.42	310	*e*P	PKPdf	04 41 17.9	-3.4
MACC	Macarena, Meta	176.72	209	*e*P	PKPdf	04 41 19.8	-1.0
UREC	San Jos de Ur	177.28	2	*e*P	PKPdf	04 41 19.8	-1.0
RUSC	La Rusia	177.48	290	*e*P	PKPdf	04 41 20.7	-0.7
PTBC	PUERTO BERRIO,	178.19	327	*e*P	PKPdf	04 41 18.8	-2.1
CHIC	Chingaza	178.24	257	*e*P	PKPdf	04 41 19.8	-1.7
SPBC	San Pablo de B	178.49	295	*e*P	PKPdf	04 41 20.7	-0.3
YOTC	Yotoco, Valle	178.64	139	*e*P	PKPdf	04 41 20.7	-0.4
HELC	Santa Helena	178.83	4	*e*P	PKPdf	04 41 19.8	-1.6
ROSC	El Rosal	178.85	261	PKP	PKPdf	04 41 21.4	0.0
	comp=Z,60nm,1.1s,baz=145,slow=0.9,SNR=21						
ROSC				PKPab	PKPab	04 43 14.9	
	comp=Z,61nm,0.9s,baz=99,slow=3.4,SNR=16						
ROSC				PP	PP	04 47 10.8	+3.0
	comp=Z,16nm,0.8s,baz=62,slow=3.9,SNR=10						
ROSC	El Rosal	178.85	261		PKPdf	04 41 20.6	-0.9
ORTC	Ortega, Tolima	178.88	191	*e*P	PKPdf	04 41 19.8	-1.3
CBOC	Ciudad Bolivar	178.99	33	*e*P	PKPdf	04 41 19.8	-1.4
PLMC	San Jos del P	179.17	98	*e*P	PKPdf	04 41 19.8	-1.3
NORC	Norcasia	179.20	313	*e*P	PKPdf	04 41 20.7	-0.3

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*NEIC **02** 04:37:20.9±2.4, 56˚.98N±0˚.03×157˚.78W±0˚.05, h14^{km}±4^{km}*
Error ellipse: s-maj=5.9km s-min=2.0km az=140.0
*AEIC **02** 04:37:21±2.6, 56˚.99N±0˚.04×157˚.81W±0˚.06, h13^{km}±4^{km},*
ML4.0, mb4.6/24(NEIC), ML4.2/34(NEIC), Error ellipse:
s-maj=6.2km s-min=3.7km az=139.0
*IDC **02** 04:37:24.6±5.3, 57˚.25N×157˚.69W, h33^{km}±41^{km}, mb3.8/14,*
mbtmp4.0/17, ML3.6/3, Error ellipse: s-maj=45.2km
s-min=18.0km az=172.0
ISC 02 04:37:21.0±1.2, **57˚.03N**±0˚.04×**157˚.79W**±0˚.03, **h11**^{km}±8^{km},
n174, σ1^{s}.**12**/185, **mb4.3**/25, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANNE	Aniakchak Nort	0.19	232		Pg	04 37 24.8	-0.3
ANNW	Aniakchak Nort	0.24	255		Pb	04 37 26.8	-0.6
ANPB	Aniakchak Plen	0.35	230		Pg	04 37 28.1	+0.1
PLBL	Peulik Blue Cr	0.85	38		Pb	04 37 37.7	0.0
PLK1	Peulik 1	1.00	39		Pn	04 37 40.6	-0.3
PLK3	Peulik 3	1.06	51		Pb	04 37 41.0	-0.2
PLK3					Sn	04 37 56.3	-0.1
PLK5	Peulik 5	1.09	26		Pg	04 37 42.0	+0.1
VNHG	Veniaminof 1	1.11	224		Pb	04 37 41.0	-1.2
VNHG					Sb	04 37 56.4	-0.3
VNFG	Fog Glacier, M	1.23	233		Pn	04 37 43.7	-0.4
VNFG	Fog Glacier, M	1.23	233	P	Pn	04 37 43.7	-0.4
	baz=53						
KJL	Kejulik	1.57	48		Pb	04 37 49.5	-0.6
CAHL	Cahill	1.69	52		Pb	04 37 51.3	-0.7
ANCK	Angle Creek	1.70	45		Pn	04 37 51.3	+0.7
CHIR	Chirikof Islan	1.71	134	Pn	Pn	04 37 49.9	-0.7
CHIR					Sn	04 38 10.5	-1.8
CHIR				IAML		04 38 16.5	
	comp=E,3µm,0.8s						
CHIR				IAML		04 38 19.9	
	comp=N,4µm,0.9s						
CHIR	Chirikof Islan	1.71	134	P	Pn	04 37 50.5	-0.1
	baz=315						
CHIR				S	Sb	04 38 12.8	-0.9
	baz=315						
KELA	Mount Kelaz	1.79	37		Pn	04 37 52.3	+0.5
SII	Sitkinak Islan	2.04	102	Pn	Pn	04 37 54.0	-1.2
SII				IAML		04 38 37.4	
	comp=N,2µm,0.7s						
SII	Sitkinak Islan	2.04	102	P	Pn	04 37 54.9	-0.3
	baz=284						
SII				S	Sb	04 38 23.0	-0.2
	baz=284						
SDPT	Sand Point	2.26	223	Pn	Pn	04 37 57.9	-0.3
SDPT	Sand Point	2.26	223	P	Pn	04 37 58.3	+0.1
	baz=41						
SDPT				S	Sn	04 38 26.7	+0.8
	baz=41						
OHAK	Old Harbor	2.46	84	Pn	Pn	04 38 00.4	-0.5
OHAK				Sn	Sn	04 38 29.8	-1.1
OHAK	Old Harbor	2.46	84	P	Pn	04 38 00.7	-0.3
	baz=267						
OHAK				S	Sn	04 38 31.0	+0.1
	baz=267						
P18K	Big Mountain,	2.73	29		Pn	04 38 03.1	-1.6
P18K				IAML		04 38 48.4	
	comp=E,631nm,0.9s						
P18K				IAML		04 38 49.0	
	comp=N,529nm,0.9s						
P18K	Big Mountain,	2.73	29	P	Pn	04 38 03.3	-1.4
	baz=211						
PS4A	Pavlof South-4	2.83	235		Pn	04 38 06.8	+0.7
KDAK	Kodiak Island	2.92	73	Pn	Pn	04 38 07.1	-0.1
	comp=N,22nm,0.3s,baz=264,slow=7.6,SNR=281						
KDAK				Sn	Sn	04 38 43.3	+1.1
	comp=N,19nm,0.3s,baz=64,slow=17,SNR=4.9						
	comp=N,60nm,0.4s						
KDAK	Kodiak Island	2.92	73	Pn	Pn	04 38 06.5	-0.7
Q19K	Cape Douglas,	2.92	47	Pn	Pn	04 38 06.7	-0.6
Q19K				IAML		04 39 23.7	
	comp=N,1µm,0.9s						
Q19K	Cape Douglas,	2.92	47	P	Pn	04 38 07.5	+0.2
	baz=231						
O18K	Koktuh Hills	3.14	24		Pn	04 38 08.5	-1.8
O18K				IAML		04 39 03.0	
	comp=N,686nm,0.9s						
O18K				IAML		04 39 04.4	
	comp=E,622nm,0.8s						
O18K	Koktuh Hills	3.14	24	P	Pn	04 38 08.7	-1.6
	baz=207						
P19K	Oil Pt	3.56	40	Pn	Pn	04 38 16.2	+0.1
O19K	Port Alsworth	3.66	28	Pn	Pn	04 38 16.3	-1.1
N18K	Kilae Creek	3.79	14	Pn	Pn	04 38 18.5	-0.8
N18K				IAML		04 39 19.9	
	comp=N,198nm,0.9s						
N18K				IAML		04 39 23.6	
	comp=E,325nm,1.0s						
N18K	Kilae Creek	3.79	14	P	Pn	04 38 18.0	-1.3
	baz=196						
FALS	False Pass	3.84	238	Pn	Pn	04 38 18.6	-1.3
ISLZ	Isanotski Laza	4.06	238		Pn	04 38 24.0	+1.1
N19K	Bonanza Creek	4.16	23	Pn	Pn	04 38 23.5	-0.9
N19K				IAML		04 39 38.7	
	comp=E,395nm,0.8s						
N19K				IAML		04 39 42.7	
	comp=N,283nm,1.0s						
N19K	Bonanza Creek	4.16	23	P	Pn	04 38 23.8	-0.6
	baz=206						
HOM	Homer	4.17	48	Pn	Pn	04 38 24.5	0.0
HOM				IAML		04 39 48.6	
	comp=E,406nm,1.3s						
SVW2	Sparrevohn	4.24	15	Pn	Pn	04 38 24.8	-0.5
SVW2				IAML		04 39 43.4	
	comp=E,266nm,0.9s						
SVW2				IAML		04 39 57.1	
	comp=N,199nm,0.8s						
CNPM	China Poot	4.27	51	Pn	Pn	04 38 25.8	0.0
RED	Redoubt Volcan	4.29	35		Pn	04 38 25.7	-0.4
RDWB	Redoubt West	4.32	35		Pn	04 38 26.2	-0.5
RSO	Redoubt South	4.33	35	Pn	Pn	04 38 25.9	-0.9
NCT	North Crescent	4.35	33		Pn	04 38 27.0	0.0
DFR	Drift River	4.45	34		Pn	04 38 28.0	-0.4
BRLK	Bradley Lake	4.55	50	Pn	Pn	04 38 29.6	-0.1

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M19K  Big River Lodg      5.19  18  Pn     Pn      04 38 37.8 -0.7
M19K                                IAML           04 40 13.7
      comp=N,139nm,0.8s
M19K  Big River Lodg      5.19  18  P      Pn      04 38 37.5 -0.9
      baz=201
SEW   Seward              5.34  51  Pn     Pn      04 38 38.8 -1.7
L19K  White Mountain      5.38  15  Pn     Pn      04 38 39.8 -1.3
L19K  White Mountain      5.38  15  P      Pn      04 38 39.8 -1.3
      baz=197
STLK  Strandline Lak      5.42  32         Pn      04 38 42.0 +0.3
RC01  Rabbit Creek A      5.81  42  Pn     Pn      04 38 47.1 +0.1
UNV   Unalaska Valle      5.90 241  Pn     Pn      04 38 49.5 +1.3
UNV   Unalaska Valle      5.90 241  P      Pn      04 38 49.3 +1.1
      baz=54
TT01  Tatalina            5.96   8         Pn      04 38 47.8 -1.3
TTA   Tatalina            5.99   8  Pn     Pn      04 38 47.6 -1.8
TTA   Tatalina            5.99   8  P      Pn      04 38 47.9 -1.6
      baz=189
M22K  Willow              6.14  36  Pn     Pn      04 38 52.0 +0.5
PWL   Port Wells          6.22  48  Pn     Pn      04 38 52.9 +0.3
PMR   Palmer              6.37  40  Pn     Pn      04 38 55.1 +0.6
KNK   Knik Glacier        6.50  44  Pn     Pn      04 38 59.5 +3.1
PPLA  Purkeypile          6.52  23         Pn      04 38 56.9 +0.1
PPLA  Purkeypile          6.52  23  P      Pn      04 38 56.9 +0.1
      baz=208
GHO   Glory Hole Cre      6.56  40  Pn     Pn      04 38 58.5 +1.2
CUT   Chulitna            6.59  32  Pn     Pn      04 38 59.4 +1.7
K20K  Telida              6.61  15  Pn     Pn      04 38 56.1 -1.9
K20K  Telida              6.61  15  P      Pn      04 38 56.7 -1.2
      baz=198
GLI   Glacier Island      6.74  51  Pn     Pn      04 38 59.3 -0.4
SPIA  Saint Paul Isl      6.79 276  Pn     Pn      04 39 01.1 +0.7
SPIA  Saint Paul Isl      6.79 276  P      Pn      04 39 00.9 +0.6
      baz=86
SML   Sawmill             6.80  41  Pn     Pn      04 39 00.6 +0.1
FID   Port Fidalgo        6.94  53  Pn     Pn      04 39 02.2 -0.3
CAST  Castle Rocks        7.01  21  Pn     Pn      04 39 02.4 -1.0
EYAK  Cordova Ski Ar      7.18  56  Pn     Pn      04 39 04.6 -1.1
SCM   Sheep Creek Mo      7.18  44  Pn     Pn      04 39 06.2 +0.3
KTH   Kantishna Hill      7.38  25  Pn     Pn      04 39 08.1 -0.4
J20K  Nowinta River       7.39  12  Pn     Pn      04 39 07.4 -1.2
DIV   Divide              7.43  51  Pn     Pn      04 39 10.7 +1.5
TRF   Thorofare Moun      7.44  27  Pn     Pn      04 39 11.2 +1.8
KLU   Klutina             7.54  49  Pn     Pn      04 39 10.8  0.0
KLU   Klutina             7.54  49  P      Pn      04 39 10.7 -0.1
      baz=239
RAGM  Ragged Mountai      7.61  58  Pn     Pn      04 39 10.3 -1.4
M24K  Tolsona, Glenn      7.78  44  Pn     Pn      04 39 14.9 +0.9
RND   Reindeer            7.79  31  Pn     Pn      04 39 12.9 -1.2
HMT   Hamilton            7.79  59  Pn     Pn      04 39 11.5 -2.6
BPAW  Bear Paw Mtn.       7.84  22  Pn     Pn      04 39 13.6 -1.2
BMRM  Bremner River       7.86  54  Pn     Pn      04 39 15.0 -0.2
DHY   Denali Highway      7.99  36  Pn     Pn      04 39 16.9 -0.1
N25K  Chitina, Valde      8.15  50  Pn     Pn      04 39 18.6 -0.5
ANM   Nome                8.41 337  Pn     Pn      04 39 22.7 +0.1
ANM   Nome                8.41 337  P      Pn      04 39 22.4 -0.2
      baz=151
GLB   Gilahina Butte      8.41  52  Pn     Pn      04 39 22.9 +0.3
VRDI  Verde Repeater      8.48  54  Pn     Pn      04 39 24.4 +0.7
WAX   Waxell Ridge        8.49  60  Pn     Pn      04 39 22.7 -1.0
PAX   Paxson              8.57  41  Pn     Pn      04 39 25.1 +0.2
I21K  Tanana              8.64  17  Pn     Pn      04 39 24.6 -1.2
NEA2  Nenana              8.69  26  Pn     Pn      04 39 26.8 +0.3
ISLE  Juniper Island      8.77  59  Pn     Pn      04 39 27.3 -0.5
WRH   Wood River Hil      8.84  28  Pn     Pn      04 39 26.0 -2.4
H21K  Melozitna Rive      8.98  13  Pn     Pn      04 39 28.5 -1.9
CCB   Clear Creek Bu      9.05  28  Pn     Pn      04 39 30.7 -0.6
I23K  Minto, Yukon-K      9.10  23  Pn     Pn      04 39 32.4 +0.4
M26K  Nabesna, AK         9.20  48  Pn     Pn      04 39 33.1 -0.3
MDM   Murphy Dome         9.20  26  Pn     Pn      04 39 32.2 -1.2
BARN  Barnard Glacie      9.23  57  Pn     Pn      04 39 32.3 -1.8
RIDG  Independent Ri      9.28  38  Pn     Pn      04 39 33.6 -0.8
TABL  Table Mountain      9.30  62  Pn     Pn      04 39 34.2 -0.8
IL31                      9.39  30  Pn     Pn      04 39 36.2 +0.2
ILAR  Eielson Array       9.39  30  Pn     Pn      04 39 34.4 -1.7
      comp=N,0.4nm,0.3s,baz=218,slow=14,SNR=21
GAMB  Gambell             9.63 320  Pn     Pn      04 39 39.5 +0.2
H23K  Yukon River         9.66  21  Pn     Pn      04 39 39.2 -0.4
TNA   Tin City            9.84 335  Pn     Pn      04 39 42.6 +0.5
L27K  Beaver Creek,       9.99  46  Pn     Pn      04 39 45.4 +1.1
H24K  Noodor Dome        10.02  24  Pn     Pn      04 39 44.1 -0.5
COLD  Coldfoot           10.82  16  Pn     Pn      04 39 55.2 -0.3
DAWY  Dawson             11.44  44  Pn     Pn      04 40 06.2 +2.0
GSTR  Great Sitkin T     11.69 253  Pn     Pn      04 40 08.8 +1.4
ADK   Adak               12.13 253  Pn     Pn      04 40 13.9 +0.5
TOLK  Toolik Lake Re     12.23  14  Pn     Pn      04 40 17.8 +3.0
A21K  Barrow             14.36   2  Pn     Pn      04 40 45.5 +1.7
DLBC  Dease Lake         14.85  73  Pn     Pn      04 40 50.5 -0.2
      comp=N,0.1nm,0.3s,baz=268,slow=13,SNR=3.7
      comp=N,3.4nm,0.8s
MOBC  Moresby Island     15.24  94  P      Pn      04 40 58.0 +2.1
MOBC                                IAmb   IAmb    04 41 00.8
      comp=Z,61nm,1.2s
INK   Inuvik             15.72  34  Pn     Pn      04 41 00.5 -1.5
      comp=Z,0.1nm,0.3s,baz=176,slow=4.3,SNR=2.2
      comp=Z,2.6nm,0.8s
INK   Inuvik             15.72  34  Pn     Pn      04 41 00.2 -1.7
C36M  Paulatuk           19.24  37  P      P       04 41 43.0 -1.7
BILL  Bilibino           19.56 319  P      P       04 41 47.8 -0.6
YKA   Yellowknife Ar     22.08  58  P      P       04 42 14.8 -0.7
      comp=Z,2.3nm,0.8s,baz=272,slow=9.6,SNR=9.3
YKA                                 PcP    PcP     04 46 12.3 -0.3
      comp=Z,0.4nm,0.5s,baz=278,slow=1.8,SNR=4.8
      comp=Z,2.3nm,0.8s
YKA   Yellowknife Ar     22.08  58  P      P       04 42 14.3 -1.3
NLWA  Neilton Lookou     22.69 101  P      P       04 42 24.6 +2.3
NLWA                                IAmb   IAmb    04 42 28.2
      comp=Z,14nm,1.2s
B08A  Colville Reser     24.57  94  P      P       04 42 40.7 +0.1
SEY   Seymchan           25.06 304  P      P       04 42 44.9 +0.1
      comp=Z,2.7nm,0.6s,baz=93,slow=12,SNR=9.0
      comp=Z,2.7nm,0.6s
EDM   Edmonton           25.34  80  P      P       04 42 47.6  0.0
EDM                                 IAmb   IAmb    04 42 48.4
      comp=Z,20nm,1.0s
PEA0B Petropavlovsk-     25.44 280  P      P       04 42 49.2 +0.8
PETK  Petropavlovsk-     25.44 280  P      P       04 42 48.1 -0.2
      comp=Z,2.0nm,0.6s,baz=87,slow=10,SNR=9.0
      comp=Z,2.0nm,0.6s
PETK  Petropavlovsk-     25.44 280  P      P       04 42 50.1 +1.8
MA2   Magadan            26.60 297  P      P       04 43 00.5 +1.7
      comp=Z,6.1nm,0.8s,baz=100,slow=17,SNR=4.8
      comp=Z,6.1nm,0.8s
G08A  Pilot Rock         26.65  99  P      P       04 43 00.0 +0.4
YBH   Yreka Blue Hor     27.11 109  P      P       04 43 04.5 +0.8
YBH                                 IAmb   IAmb    04 43 33.7
      comp=Z,10nm,1.2s
WALA  Waterton Lakes     27.14  88  P      P       04 43 04.8 +0.8
WALA                                IAmb   IAmb    04 43 19.9
      comp=Z,16nm,1.2s
I07A  Izee               27.16 102  P      P       04 43 04.1  0.0
I07A                                IAmb   IAmb    04 43 23.4
      comp=Z,8.5nm,1.2s
F10A  Beach Ranch, E     27.16  97  P      P       04 43 04.3 +0.2
F10A                                IAmb   IAmb    04 43 23.4
      comp=Z,15nm,0.7s
K05A  Summer Lake        27.35 106  P      P       04 43 07.9 +1.9
BMO   Blue Mountains     27.83  98  P      P       04 43 10.7 +0.6
BMO                                 IAmb   IAmb    04 43 16.5
      comp=Z,6.1nm,0.7s
CBX   Cerro Bola         37.42 114  P      P       04 44 34.4 +0.4
CBX                                 IAmb   IAmb    04 44 34.7
      comp=Z,4.8nm,0.8s
G40A  Rib Lake           42.26  76  P      P       04 45 15.1 +1.1
G40A                                IAmb   IAmb    04 45 43.0
      comp=Z,20nm,0.9s
DAG   Danmarks Havn      43.98  13 iP      P       04 45 27.0 -0.5
M53A  WI Miller and      49.93  73  P      P       04 46 15.5 +1.2
OXF   Oxford             50.31  86  P      P       04 46 17.9 +0.5
P57A  Homestead Farm     52.74  73  P      P       04 46 36.6 +1.1
ARCES ARCESS Array B     53.72 359  P      P       04 46 39.4 -2.9
      comp=Z,2.5nm,1.0s,baz=22,slow=7.8,SNR=4.9
      comp=Z,2.5nm,1.0s
ARCES ARCESS Array B     53.72 359  P      P       04 46 40.0 -2.2
ARCES                               IAmb   IAmb    04 46 57.6
      comp=Z,12nm,1.5s
HODGE Hodges             54.41  81  P      P       04 46 45.5 -2.2
SONM  Songino Array      54.45 305  P      P       04 46 48.1 +0.1
      comp=Z,1.6nm,0.7s,baz=45,slow=7.0,SNR=7.1
SONM                                PcP    PcP     04 47 51.1 -0.4
      comp=Z,1.0nm,0.8s,baz=82,slow=2.2,SNR=4.4
      comp=Z,1.6nm,0.7s
FINES FINESS Array B     61.83 358  P      P       04 47 37.1 -2.2
      comp=Z,1.2nm,0.5s,baz=27,slow=8.8,SNR=5.5
      comp=Z,1.2nm,0.5s
FINES FINESS Array B     61.83 358  P      P       04 47 37.5 -1.7
KURBB Kurchatov Arra     63.11 324  P      P       04 47 49.0 +1.0
      comp=Z,0.3nm,0.3s,baz=30,slow=6.3,SNR=2.5
      comp=Z,0.3nm,0.3s
MKAR  Makanchi Array     65.11 319  P      P       04 47 59.9 -1.3
      comp=Z,0.5nm,0.6s,baz=39,slow=6.8,SNR=4.6
      comp=Z,0.5nm,0.6s
MKAR  Makanchi Array     65.11 319  P      P       04 48 00.2 -1.1
WMQ   Urumqi             65.58 314 eP      P       04 48 07.5 +3.1
AKTO  Aktyubinsk         68.89 336  P      P       04 48 26.1 +0.8
      comp=Z,1.3nm,0.6s,baz=348,slow=9.3,SNR=4.6
      comp=Z,1.3nm,0.6s
ABKAR Akbulak array      69.56 335  P      P       04 48 29.4  0.0
KKAR  Karatay Array      72.32 325  P      P       04 48 46.1 -0.2
AKASG Malin Array Be     72.48 355  P      P       04 48 45.4 -1.6
      comp=Z,0.9nm,0.5s,baz=8.1,slow=6.3,SNR=6.5
      comp=Z,0.9nm,0.5s
AKBB  Malin Array Si     72.48 355  P      P       04 48 47.3 +0.3
AKBB                                IAmb   IAmb    04 48 60.0
      comp=Z,12nm,1.5s
PZH   PanZhiHua          73.59 293  P      P       04 48 56.3 +2.2
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
      comp=Z,100nm,5.5s
GEC2  GERESS Array S     74.26   6  P      P       04 48 58.0 +0.3
GERES GERESS Array B     74.26   6  P      P       04 48 57.9 +0.3
      comp=Z,0.7nm,0.7s,baz=18,slow=7.2,SNR=3.7
      comp=Z,0.7nm,0.7s
GERES GERESS Array B     74.26   6  P      P       04 48 57.5 -0.2
ESDC  Sonseca Array      81.16  20  P      P       04 49 35.5 -0.8
      comp=Z,0.4nm,0.5s,baz=340,slow=5.1,SNR=5.9
      comp=Z,0.4nm,0.5s
CMAR  Chiang Mai Arr     81.70 291  P      P       04 49 38.5 -0.9
      comp=Z,1.0nm,0.3s,baz=18,slow=4.9,SNR=7.3
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr     81.70 291  P      P       04 49 38.1 -1.3
```

DJA ***02*** *04:44:53.4±1.4, 0°S±8°×13°0E±°, h27^{km}±17^{km}, M4.3/7, mb4.9/1, MLv4.0/7*

IDC ***02*** *04:44:59.2±1.0, 0°.30S×131°.00E, h106^{km}±9^{km}, mb3.5/3, mbtmp3.9/4, Error ellipse: s-maj=28.7km s-min=21.1km az=84.0*

ISC 02 04:44:54.2±1.1**, 0°.5S**±0°.1×**130°.01E**±0°.06**, h35**^{km}**, n11, σ0^{s}75**/12**, mb3.7**/3**, Irian Jaya region**

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Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC      h  m  s    ISC
SWI   Sorong              1.30 106  S      Sn      04 45 33.8 +1.8
SIJI  Sorong              1.31 107  P      Pn      04 45 15.8 -0.1
      536nm,0.3s,baz=334,slow=21,SNR=261
SIJI                                S      Sn      04 45 31.8 -0.5
      259nm,0.3s,baz=48,slow=20,SNR=7.1
LBMI  Labuha              2.52 267  P      Pn      04 45 32.5 -0.1
MSAI  Masohi              3.03 201  P      Pn      04 45 40.1 +0.4
FAKI  Fak Fak             3.29 137  P      Pn      04 45 42.8 -0.4
AAI   Ambon               3.66 210  P      Pn      04 45 48.4 +0.1
SANI  Sanana              4.31 249  P      Pn      04 45 57.1 -0.2
WRA   Warramunga Arr     19.79 168  P      P       04 49 21.0 -0.7
      2.2nm,0.4s,baz=351,slow=11,SNR=36
ASAR  Alice Springs      23.34 171  P      P       04 49 59.0 -0.6
      3.8nm,0.6s,baz=351,slow=9.2,SNR=61
      3.8nm,0.6s
MKAR  Makanchi Array     62.87 325  P      P       04 55 17.4 +0.7
      0.6nm,0.9s,baz=107,slow=9.5,SNR=2.1
      0.6nm,0.9s
KURBB Kurchatov Arra     67.04 327  P      P       04 55 43.4 -0.3
      0.4nm,0.6s,baz=123,slow=5.6,SNR=6.0
      0.4nm,0.6s
```

JMA ***02*** *04:46:07.6±0.1, 36°.7N±0°.2×141°.0E±0°.6, h56^{km}, MV3.9/40, E OFF IBARAKI PREF*

JMA Felt II J1 at E OFF IBARAKI PREF .

IDC ***02*** *04:46:08.3±2.8, 36°.67N×140°.94E, h63^{km}±27^{km}, mb3.4/11, mbtmp3.7/13, ML3.2/2, Error ellipse: s-maj=24.4km s-min=14.6km az=70.0*

ISC 02 04:46:07.1±1.0**, 36°.72N**±0°.04×**141°.09E**±0°.07**, h50**^{km}±8^{km}**, n31, σ0^{s}65**/36**, mb3.7**/11**, Near east coast of eastern Honshu**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC      h  m  s    ISC
JHO   Hitachi             0.43 255  P      Pn      04 46 17.9 +0.3
JHO                                 S      Sn      04 46 25.2  0.0
ONAJ  Iwakimizuishiy      0.45 328  P      Pn      04 46 18.0 +0.2
ONAJ                                S      Sn      04 46 25.4 -0.1
JHYU  Hitachinakayam      0.56 227  P      Pn      04 46 19.5 +0.4
JHYU                                S      Sn      04 46 28.0 +0.4
JFFD  Fukushimafurud      0.56 311  P      Pn      04 46 19.3 +0.1
JFFD                                S      Sn      04 46 27.4 -0.4
JFK   Kawauchi            0.67 345  P      Pn      04 46 20.5  0.0
JFK                                 S      Sn      04 46 29.8 -0.3
JYT   Yasato              0.88 236  P      Pn      04 46 23.2  0.0
JYT                                 S      Sn      04 46 34.2 -0.7
JFT   Otama               1.00 323  P      Pn      04 46 25.3 +0.4
JFT                                 S      Sn      04 46 38.0 +0.1
JMM   Marumori            1.17 348  P      Pn      04 46 27.2 +0.1
JMM                                 S      Sn      04 46 41.8 -0.1
JFY   Yanaizu             1.30 302  P      Pn      04 46 29.0  0.0
JAG   Ashikaga            1.35 258  P      Pn      04 46 29.5 -0.1
JKT   Katashina           1.48 272  P      Pn      04 46 31.7 +0.3
JKT                                 S      Sn      04 46 49.2 -0.5
MJAR  Matsushiro Arr      2.33 266  P      Pn      04 46 43.1 +0.2
      2.8nm,0.3s,baz=89,slow=16,SNR=41
MJAR                                S      Sn      04 47 12.5 +2.1
      26nm,0.4s,baz=107,slow=39,SNR=4.4
      17nm,0.4s
JHJ   Hachijo jima 2      3.75 197  P      Pn      04 47 02.5  0.0
      12nm,0.3s,baz=312,slow=23,SNR=19
JHJ                                 S      Sn      04 47 44.5 -0.9
      67nm,0.3s,baz=54,slow=22,SNR=9.6
      32nm,0.3s
SONM  Songino Array      27.75 305  P      P       04 51 50.4 -0.6
      0.9nm,0.5s,baz=103,slow=8.8,SNR=5.4
      0.9nm,0.5s
H11N2 WAKE ISLAND Hy     28.21 120  T      T       05 21 33.1
      baz=313,slow=75,SNR=32
H11N1 WAKE ISLAND Hy     28.22 120  T      T       05 21 33.7
      baz=313,slow=75,SNR=35
H11N3 WAKE ISLAND Hy     28.23 120  T      T       05 21 37.9
      baz=313,slow=75,SNR=30
H11S1 WAKE ISLAND Hy     28.91 122  T      T       05 22 27.6
      baz=314,slow=75,SNR=53
H11S3 WAKE ISLAND Hy     28.91 122  T      T       05 22 29.8
      baz=314,slow=75,SNR=49
H11S2 WAKE ISLAND Hy     28.93 122  T      T       05 22 28.1
      baz=314,slow=75,SNR=41
ZALV  Zalesovo Beam      41.93 313  P      P       04 53 52.1 -0.5
      0.9nm,0.4s,baz=89,slow=5.3,SNR=2.9
      0.9nm,0.4s
MKAR  Makanchi Array     44.06 302  P      P       04 54 09.8 -0.2
      0.5nm,0.5s,baz=84,slow=12,SNR=5.1
      0.5nm,0.5s
KURBB Kurchatov Arra     45.99 308  P      P       04 54 24.0 -1.2
      0.9nm,0.4s,baz=83,slow=7.8,SNR=9.7
      0.9nm,0.4s
INK   Inuvik             54.78  27  P      P       04 55 32.1 +0.9
      0.9nm,0.7s,baz=244,slow=4.1,SNR=5.3
      0.9nm,0.7s
WRA   Warramunga Arr     56.72 188  P      P       04 55 45.4 -0.3
      0.7nm,0.6s,baz=1.4,slow=7.4,SNR=6.1
      0.7nm,0.6s
ASAR  Alice Springs      60.45 188  P      P       04 56 11.8 +0.2
      0.9nm,1.1s,baz=353,slow=3.7,SNR=2.6
      0.9nm,1.1s
YKA   Yellowknife Ar     64.21  30  P      P       04 56 36.1 -0.2
      0.2nm,0.7s,baz=299,slow=5.1,SNR=1.9
      0.2nm,0.7s
AKASG Malin Array Be     74.38 322  P      P       04 57 38.5 -0.9
      0.3nm,0.3s,baz=42,slow=9.0,SNR=2.7
      0.3nm,0.3s
NVAR  Mina Array Bea     75.38  53  P      P       04 57 47.2 +1.4
      0.3nm,0.6s,baz=305,slow=3.2,SNR=2.6
      0.3nm,0.6s
PDAR  Pinedale Array     78.07  45  P      P       04 58 01.1 +0.2
      0.3nm,0.6s,baz=336,slow=2.0,SNR=3.1
      0.3nm,0.6s
LPAZ  La Paz            147.07  60  PKPbc  PKPdf   05 05 44.3 +0.7
      0.7nm,0.6s,baz=293,slow=2.7,SNR=5.2
```

NNC ***02*** *04:56:29.7±6.3, 38°.44N×72°.75E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=49.8km s-min=38.3km az=12.0*

ISC 02 04:56:28.8±4.6**, 38°.1N**±0°.3×**72°.9E**±0°.1**, h100**^{km}**, n12, σ1^{s}66**/16**, 6C, Tajikistan**

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Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC      h  m  s    ISC
AML   Almayashu           4.13   9  P      Pn      04 57 30.1  0.0
      SNR=78
UCH   Uchtor              4.37  16  P      Pn      04 57 33.3  0.0
      SNR=140
EKS2  Erkin-Say           4.66   8  P      Pn      04 57 37.7 +0.6
      SNR=43
AAK   Ala-Archa           4.75  15  P      Pn      04 57 38.7 +0.4
      SNR=17
KBK   Karagaybulak        4.87  18  P      Pn      04 57 41.1 +1.1
      SNR=12
ULHL  Ulahol              4.93  31  P      Pn      04 57 39.6 -1.1
      SNR=9.8
CHMS  Chumysh             5.15  16  P      Pn      04 57 43.8 +0.2
      SNR=5.2
CHMS  Chumysh             5.15  16 ⇑P      Pn      04 57 42.5 -1.2
      4.7nm,0.4s
CHMS                               ⇑S      Sn      04 58 41.5 -0.4
      7.8nm,0.8s
TKM2  Tokmak 2            5.30  22  P      Pn      04 57 45.3 -0.4
      SNR=10
TKM2  Tokmak 2            5.30  22 ⇑P      Pn      04 57 44.9 -0.9
      3.9nm,0.6s
TKM2                               ⇑S      Sn      04 58 47.2 +1.6
      2.3nm,0.6s
KK31  Karatay Array       5.36 341 ⇑P      Pn      04 57 48.7 +2.3
      0.6nm,0.3s,baz=136,slow=12,SNR=39
KK31                               ⇑S      Sn      04 58 42.9 -3.9
      12nm,0.5s,baz=150,slow=22,SNR=16
MDOK  Medeo               6.02  31  P      Pn      04 57 54.2 -1.3
      1.7nm,0.4s
MDOK                                S      Sn      04 59 05.5 +2.3
      3.9nm,0.8s
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BJI ***02*** *05:24:38.4±0.0, 11°.66N×143°.80E, h26^{km}, mb4.8/63, mB5.0/39, Ms4.6/43, Ms7 4.4/46*

IDC ***02*** *05:24:39.8±0.4, 11°.84N×143°.27E, h0^{km}, mb4.8/31, mbtmp4.8/35, ML4.7/4, MS4.2/67, Error ellipse: s-maj=15.8km s-min=9.5km az=84.0*

MOS ***02*** *05:24:41.5±0.9, 11°.83N×143°.19E, h23^{km}, mb5.4/62, MS4.4/6, Error ellipse: s-maj=8.5km s-min=4.8km az=104.4*

NEIC ***02*** *05:24:42.2±1.6, 11°.85N±0°.07×143°.34E±0°.09, h10^{km}±1^{km}, mb5.3/354, Error ellipse: s-maj=15.0km s-min=11.8km az=277.0*

GCMT ***02*** *05:24:46.2±0.2, 11°.58N±0°.01×143°.07E±0°.03, h19^{km}, MW5.1/102, Moment Tensor Solution. s35,c42; s102,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.77±.22; M$_{\theta\theta}$-4.09±.15; M$_{\phi\phi}$0.32±.14; M$_{r\theta}$2.05±.30; M$_{\theta\phi}$-1.10±.11; M$_{\phi r}$-2.48±.42; Best double couple: M$_0$5.13500×10^{16} NP1:φ$_s$233.00000°,δ41.00000°, λ45.00000°. NP2:φ$_s$106.00000°,δ62.00000°,λ122.00000°. Principal axes: T 5.6230, Plg59.0000°, Azm63.0000°; N -0.9750, Plg28.0000°, Azm270.0000°; P -4.6470, Plg12.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***02*** *05:24:46.0±0.6, 12°N±3°×14°4E±°, h48^{km}±6^{km}, M5.0/35, mB5.4/14, mb4.9/35, MLv5.2/1, Mw(mB)4.9/14*

ISC 02 05:24:44.0±0.9**, 11°.83N**±0°.04×**143°.36E**±0°.05**, h27**^{km}±6^{km}**, n829, σ1^{s}05**/751**, mb5.3**/269**, MS4.3**/81**, 80C-32D, Fault plane solution: NP1:**φ$_s$102.80981°, δ71.60468°, λ88.57143°. **NP2:**φ$_s$287.32828°**,** δ18.44879°**,** λ94.28714°. **Principal axes:** T Plg63.3686°**,** Azm10.5559°**;** N Plg1.3556°**,** Azm103.2607°**;** P Plg26.5913°**,** Azm193.9394°**; South of Mariana Islands**

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Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                    Op     ISC      h  m  s    ISC
GUMO  Guam                2.28  40  Pn     Pn      05 25 20.7 +0.7
      324nm,0.3s,baz=195,slow=7.8,SNR=108
GUMO                                Sn     Sn      05 25 49.0 +1.8
      288nm,0.3s,baz=40,slow=22,SNR=12
GUMO                                LR     LR      05 26 23.5
      comp=Z,8μm,18.3s,baz=170,slow=44
      2μm,0.6s
GUMO  Guam                2.28  40  P      Pn      05 25 20.9 +1.0
MANU  Manus Island       14.35 164         Pn      05 28 05.3 -0.2
SMPI  Sarmi              14.49 199  P      Pn      05 28 08.4 +1.0
      2μm65nm,1.7s
GENI  Genyem             14.68 193  P      Pn      05 28 10.9 +0.9
      3μm113nm,1.2s
GENI  Genyem             14.68 193  P      Pn      05 28 10.7 +0.7
BAKI  Biak               14.81 210  P      Pn      05 28 11.8  0.0
      2μm77nm,1.4s
JCJ   Chichijima         15.23 356  Pn     Pn      05 28 15.9 -1.3
      1.9nm,0.3s,baz=294,slow=18,SNR=2.8
JCJ                                 LR     LR      05 33 41.3
      comp=Z,892nm,18.6s,baz=158,slow=36
      68nm,0.9s
JCJ   Chichijima         15.23 356         Pn      05 28 16.8 -0.4
JCJ                                 IAmb   IAmb    05 28 28.1
      comp=Z,219nm,1.0s
JCJ   Chichijima         15.23 356  P      Pn      05 28 18.2 +1.0
PATS  Pohnpei            15.56 107  Pn     Pn      05 28 20.9 -0.8
PATS                                IAmb   IAmb    05 29 00.1
      comp=Z,356nm,1.5s
SIJI  Sorong             17.42 224  P      Pn      05 28 45.4 +0.1
      comp=Z,1.3nm,0.3s,baz=27,slow=14,SNR=13
SIJI                                LR     LR      05 35 07.4
      comp=Z,951nm,18.7s,baz=18,slow=36
      comp=Z,9.6nm,0.5s
KRVT  Keravat (AS076     18.20 151  P      P       05 28 56.1 +1.2
      comp=Z,6.6nm,0.3s,baz=320,slow=7.2,SNR=6.8
KRVT                                LR     LR      05 35 11.2
      comp=Z,861nm,18.6s,baz=108,slow=35
      comp=Z,38nm,0.6s
FAKI  Fak Fak            18.35 218  P      P       05 28 55.5 -1.2
FAKI  Fak Fak            18.35 218  P      Pn      05 28 58.9 +2.2
TNTI  Ternate            19.30 236  P      P       05 29 06.7 -0.4
LBMI  Labuha             20.04 233  P      Pn      05 29 17.2 +0.2
      comp=Z,2μmcomp=Z,104nm,1.5s
JOW   Kunigami           20.59 319         P       05 29 20.9 -0.1
JOW                                 IAmb   IAmb    05 29 25.9
      comp=Z,302nm,1.5s
JOW   Kunigami           20.59 319  P      Pn      05 29 23.4  0.0
MSAI  Masohi             20.82 224  P      Pn      05 29 26.1  0.0
      comp=Z,2μmcomp=Z,7.7nm,0.7s
PMG   Port Moresby       21.43 170  P      P       05 29 28.7 -1.4
      comp=Z,24nm,0.8s,baz=7.4,slow=14,SNR=8.6
PMG                                 LR     LR      05 37 57.6
      comp=Z,950nm,18.0s,baz=334,slow=37
      comp=Z,24nm,0.8s
PMG   Port Moresby       21.43 170ceP      P       05 29 27.8 -2.4
PMG                                 pmax   pmax
      comp=Z,151nm,1.7s
PMG   Port Moresby       21.43 170  P      P       05 29 28.5 -1.6
PMG                                 IAmb   IAmb    05 29 48.1
      comp=Z,110nm,1.2s
PMG   Port Moresby       21.43 170  P      P       05 29 31.6 +1.4
PMG   Port Moresby       21.43 170  P      P       05 29 31.3 +1.1
JHJ   Hachijo jima 2     21.44 352  LR     LR      05 36 35.3
      comp=Z,858nm,18.3s,baz=108,slow=33
AAI   Ambon              21.57 225  P      P       05 29 33.9 +2.3
      comp=Z,2μmcomp=Z,130nm,0.9s
SANI  Sanana             22.10 232  P      P       05 29 38.9 +1.6
      comp=Z,17nm,1.5s
SANI  Sanana             22.10 232  P      P       05 29 39.1 +1.8
JSU   Suzuyama           22.92 331  P      P       05 29 45.1 -0.9
GTOI  Gorontalo          23.06 243  P      P       05 29 49.9 +2.4
      comp=Z,422nmcomp=Z,40nm,1.0s
H11S3 WAKE ISLAND Hy     23.45  71  T      T       05 54 17.5
      baz=253,slow=76,SNR=14
H11S1 WAKE ISLAND Hy     23.47  71  T      T       05 54 19.2
      baz=253,slow=76,SNR=5.2
H11S2 WAKE ISLAND Hy     23.47  71  T      T       05 54 17.7
      baz=253,slow=76,SNR=16
YULB  Yu-li              23.93 302  P      P       05 29 54.6 -1.4
H11N1 WAKE ISLAND Hy     23.94  68  T      T       05 54 51.9
      baz=255,SNR=12
H11N2 WAKE ISLAND Hy     23.95  68  T      T       05 54 55.8
      baz=255
H11N3 WAKE ISLAND Hy     23.96  68  T      T       05 54 56.9
      baz=255
NACB  Ninganchiao        24.02 304  P      P       05 29 56.0 -0.8
MRSI  Marisa             24.07 244  P      P       05 30 00.1 +2.8
      comp=Z,2μmcomp=Z,82nm,0.8s
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JNU   Nakatsue          24.08 334   P     P        05 29 55.7  -1.6
            comp=Z,43nm,0.9s,baz=176,slow=3.9,SNR=16
JNU                                 LR    LR       05 38 00.8
            comp=Z,451nm,19.7s,baz=154,slow=33
            comp=Z,43nm,0.9s
JNU   Nakatsue          24.08 334   P     P        05 29 56.7  -0.6
JNU                                 IAmb  IAmb     05 30 02.2
            comp=Z,100nm,1.2s
JNU   Nakatsue          24.08 334   P     P        05 29 58.2  +0.9
INU   Inuyama           24.11 347   P     P        05 29 56.4  -1.1
INU   Inuyama           24.11 347   P     P        05 29 57.4  -0.1
LUWI  Luwuk             24.12 239   P     P        05 29 56.5  -1.3
LUWI  Luwuk             24.12 239   P     P        05 29 57.2  -0.6
            comp=Z,2µmcomp=Z,193nm,1.0s
LUWI  Luwuk             24.12 239   P     P        05 29 58.1  +0.3
JGF   Kuroka            24.28 348   P     P        05 29 57.6  -1.6
SSLB  Suanglung         24.38 302   P     P        05 30 00.1  -0.1
SSLB                                IAmb  IAmb     05 30 05.0
            comp=Z,65nm,1.1s
SSLB  Suanglung         24.38 302   P     P        05 30 00.6  +0.4
YHNB  Yeheng            24.43 305   P     P        05 30 00.4  -0.3
YHNB  Yeheng            24.43 305   P     P        05 30 01.4  +0.8
TPUB  Ta-pu             24.45 301   P     P        05 30 00.6  -0.2
JYT   Yasato            24.46 354   P     P        05 29 59.9  -0.8
TOLI2 Tolitoli          24.80 246   P     P        05 30 03.9  -0.2
TOLI2 Tolitoli          24.80 246   P     P        05 30 07.6  +3.5
JHS   Saijyo            24.87 340   P     P        05 30 04.0  -0.5
JHS                                 IAmb  IAmb     05 30 05.3
            comp=Z,82nm,1.8s
APSI  Ampana            25.01 241   P     P        05 30 07.3  +1.4
            comp=Z,629nmcomp=Z,38nm,1.0s
MJAR  Matsushiro Arr    25.04 350   P     P        05 30 04.0  -1.9
            comp=Z,15nm,0.7s,baz=164,slow=12,SNR=44
MJAR                                LR    LR       05 39 07.5
            comp=Z,903nm,19.6s,baz=143,slow=35
            comp=Z,15nm,0.7s
MJAR  Matsushiro Arr    25.04 350   P     P        05 30 03.6  -2.3
MAJO  Matsushiro        25.04 350c iP     P        05 30 04.3  -1.6
MAJO                                pmax  pmax
            comp=Z,46nm,0.8s
MAJO  Matsushiro        25.04 350   P     P        05 30 04.4  -1.6
MAJO                                IAmb  IAmb     05 30 05.4
            comp=Z,45nm,0.8s
MAJO  Matsushiro        25.04 350   P     P        05 30 04.8  -1.2
MJB9  Matsu-Tunnel      25.04 350   P     P        05 30 04.5  -1.5
MJB9                                IAmb  IAmb     05 30 05.4
            comp=Z,43nm,0.8s
MYLDM Lahad Datu        25.45 257   P     P        05 30 08.8  -1.0
MYLDM                               IAmb  IAmb     05 30 19.1
            comp=Z,63nm,1.1s
COEN  Coen              25.62 180   P     P        05 30 10.8  -0.6
COEN  Coen              25.62 180   P     P        05 30 11.0  -0.4
MPSI  Mapaga            25.94 246   P     P        05 30 16.0  +1.7
            comp=Z,35nm,1.2s
JMM   Marumori          26.03 355   P     P        05 30 13.4  -1.5
JMM                                 IAmb  IAmb     05 30 18.2
            comp=Z,112nm,1.1s
JSD   Sado              26.49 351   P     P        05 30 17.2  -1.8
JSD                                 IAmb  IAmb     05 30 21.5
            comp=Z,65nm,1.2s
KDU   Kakadu            26.65 204   P     P        05 30 20.6  -0.1
MTN   Manton Dam        27.35 207   P     P        05 30 28.1  +1.1
MTN   Manton Dam        27.35 207   P     P        05 30 29.7  +2.7
BNSI  Bone              28.19 236   P     P        05 30 36.9  +2.3
            comp=Z,20nm,1.9s
TJN   Taejon            28.38 332deP  P        05 30 35.7  -0.3
TJN   Taejon            28.38 332   P     P        05 30 35.8  -0.3
KAPI  Kappang           28.84 236   P     P        05 30 39.7  -0.6
            comp=Z,4.1nm,0.6s,baz=78,slow=7.0,SNR=6.3
KAPI                                LR    LR       05 41 33.1
            comp=Z,181nm,21.0s,baz=58,slow=35
            comp=Z,4.1nm,0.6s
KAPI  Kappang           28.84 236   P     P        05 30 39.9  -0.4
KAPI                                pmax  pmax
            comp=Z,14nm,1.1s
KAPI  Kappang           28.84 236   P     P        05 30 39.9  -0.4
KAPI  Kappang           28.84 236   P     P        05 30 42.1  +1.8
KSRS  Korea Array       29.03 334   P     P        05 30 40.4  -1.4
            comp=Z,4.0nm,0.7s,baz=150,slow=9.9,SNR=15
KSRS                                LR    LR       05 41 51.4
            comp=Z,353nm,18.1s,baz=135,slow=36
            comp=Z,4.0nm,0.7s
KSAR  Wonju Array Be    29.04 334   P     P        05 30 41.4  -0.5
KSAR  Wonju Array Be    29.04 334   P     P        05 30 41.4  -0.5
BATI  Baumata           29.37 223   LR    LR       05 43 45.5
            comp=Z,300nm,18.9s,baz=74,slow=39
MTSU  Mount Surprise    29.79 178   P     P        05 30 49.1  +0.4
ERM   Erimo             30.07 360   P     P        05 30 50.4  -0.5
ERM                                 pmax  pmax
            comp=Z,11nm,0.9s
ERM   Erimo             30.07 360   P     P        05 30 50.4  -0.5
NJ2   Nanjing           30.23 316  eP     P        05 30 53.7  +1.2
NJ2                                 pmax  pmax
            comp=Z,9.0nm,0.5s
KNRA  Kununurra         30.92 208   P     P        05 30 58.4  -0.3
KNRA                                IAmb  IAmb     05 31 10.8
            comp=Z,58nm,1.4s
KNRA  Kununurra         30.92 208   P     P        05 30 58.8  +0.1
CTA   Charters Tower    31.85 175   P     P        05 31 05.5  -1.4
            comp=Z,8.8nm,0.9s,baz=349,slow=8.3,SNR=9.9
CTA                                 LR    LR       05 45 06.7
            comp=Z,196nm,18.7s,baz=340,slow=38
            comp=Z,8.8nm,0.9s
CTA   Charters Tower    31.85 175   P     P        05 31 06.7  -0.1
CTAO  Charters Tower    31.85 175   P     P        05 31 06.5  -0.3
CTAO                                pmax  pmax
            comp=Z,18nm,1.1s
CTAO  Charters Tower    31.85 175   P     P        05 31 06.5  -0.3
CTAO  Charters Tower    31.85 175   P     P        05 31 07.1  +0.3
ASAJ  Asahikawa         32.18 359   LR    LR       05 46 29.1
            comp=Z,184nm,19.5s,baz=172,slow=41
SBUM  Sibu              32.24 256   P     P        05 31 09.5  -1.0
QIS   Mount Isa         32.40 187   P     P        05 31 11.5  -0.2
WB0   Warramunga Arr    32.62 196   P     P        05 31 12.5  -1.1
WB0                                 IAmb  IAmb     05 31 16.7
            comp=Z,32nm,1.1s
WR0   Warramunga Arr    32.76 195   P     P        05 31 13.9  -0.9
WR0                                 IAmb  IAmb     05 31 18.0
            comp=Z,28nm,1.1s
WRAB  Tennant Creek     32.79 196d iP     P        05 31 13.8  -1.3
WRAB                                pmax  pmax
            comp=Z,57nm,1.3s
WRAB  Tennant Creek     32.79 196   P     P        05 31 14.1  -1.0
WRAB                                IAmb  IAmb     05 31 18.2
            comp=Z,32nm,0.8s
WRAB  Tennant Creek     32.79 196   P     P        05 31 14.8  -0.3
WB2   Warramunga Arr    32.80 196   P     P        05 31 14.3  -0.9
WB2                                 IAmb  IAmb     05 31 18.4
            comp=Z,33nm,0.9s
WRA   Warramunga Arr    32.80 196   P     P        05 31 14.3  -0.9
            comp=Z,17nm,0.8s,baz=19,slow=9.8,SNR=60
WRA                                 LR    LR       05 45 12.4
            comp=Z,1µm,18.0s,baz=14,slow=38
            comp=Z,17nm,0.8s
WRA   Warramunga Arr    32.80 196   P     P        05 31 13.7  -1.6
QIZ   Qiongzhong        33.05 287   P     P        05 31 18.3  +0.8
QIZ                                 S     S        05 36 37.8  +2.9
QIZ                                 LR    LR
            comp=Z,260nm,15.1s
QIZ                                 LR    LR
            comp=Z,260nm,14.3s
QIZ                                 LR    LR
            comp=Z,210nm,9.6s
KUR   Kuril'sk          33.51   6   P     P        05 31 20.5  -0.6
KUR                                e               05 32 32.1
KUR                                 MLR   MLR
            comp=Z,310nm,13.0s
USA0B Ussuriysk Arra    33.71 345   P     P        05 31 23.0  +0.1
USA0B                               pmax  pmax
            comp=Z,42nm,1.2s
USA0B Ussuriysk Arra    33.71 345   P     P        05 31 23.0  +0.1
USA0B                               IAmb  IAmb     05 31 24.3
            comp=Z,42nm,1.1s
USRK  Ussuriysk Ar.     33.71 345   P     P        05 31 23.4  +0.6
            comp=Z,20nm,0.8s,baz=164,slow=9.3,SNR=23
USRK                                LR    LR       05 43 48.4
            comp=Z,355nm,20.9s,baz=143,slow=34
            comp=Z,20nm,0.8s
USRK  Ussuriysk Ar.     33.71 345   P     P        05 31 23.1  +0.2
KSM   Kuching           34.36 255   P     P        05 31 27.5  -1.4
FITZ  Fitzroy Crossi    34.50 211   LR    LR       05 47 13.8
            comp=Z,145nm,18.6s,baz=26,slow=39
FITZ  Fitzroy Crossi    34.50 211   P     P        05 31 27.7  -2.3
FITZ                                IAmb  IAmb     05 31 34.4
            comp=Z,45nm,1.6s
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YSS   Yuzh-Sakhalins    35.01 359⇓eP  P        05 31 33.3  -0.8
YSS                                 pmax  pmax
            comp=Z,19nm,1.3s
CN2   Changchun         35.41 337  eP     P        05 31 36.7  -0.9
CN2                                eS     S        05 37 09.9  -0.9
CN2                                 pmax  pmax
            comp=Z,10.0nm,0.6s
CN2                                 LR    LR
            comp=Z,500nm,17.0s
CN2                                 LR    LR
            comp=Z,200nm,17.0s
CN2                                 LR    LR
            comp=Z,600nm,18.0s
RK1H  Rockhampton Ha    35.69 169   P     P        05 31 39.5  -0.7
SANVU Saraoutou         35.94 138   P     P        05 31 41.5  -0.9
SANVU                               IAmb  IAmb     05 31 57.8
            comp=Z,33nm,1.0s
LYN   LuoYang           36.05 314⇑iP  P        05 31 43.0  -0.3
LYN                                 PP    PnPn     05 33 02.2  -2.5
LYN                                 S     S        05 37 25.8  +4.9
LYN                                 pmax  pmax
            comp=Z,20nm,0.7s
LYN                                 pmax  pmax
            comp=Z,150nm,6.7s
LYN                                 LR    LR
            comp=Z,630nm,19.4s
LYN                                 LR    LR
            comp=Z,540nm,19.7s
LYN                                 LR    LR
            comp=Z,830nm,18.6s
HNS   HongShan          36.16 320 ⇑P     P        05 31 44.0  -0.1
HNS                                 PP    PP       05 33 08.7  +2.1
HNS                                 S     S        05 37 20.0  -2.3
HNS                                 pmax  pmax
            comp=Z,20nm,1.3s
HNS                                 LR    LR
            comp=Z,410nm,16.3s
HNS                                 LR    LR
            comp=Z,380nm,18.0s
ENH   Enshi             36.35 306   P     P        05 31 46.2  +0.2
BNX   BinXian           36.42 341 ⇓P     P        05 31 46.3   0.0
BNX                                 pmax  pmax
            comp=Z,78nm,1.0s
BNX                                 pmax  pmax
            comp=Z,300nm,5.2s
AS31  Alice Springs     36.47 195   P     P        05 31 46.5  -0.4
ASAR  Alice Springs     36.47 195   P     P        05 31 46.2  -0.7
            comp=Z,9.9nm,1.1s,baz=17,slow=7.5,SNR=20
ASAR                                PP    PP       05 33 10.2  -0.1
            comp=Z,6.5nm,1.0s,baz=23,slow=10,SNR=4.8
ASAR                                LR    LR       05 47 17.5
            comp=Z,1µm,18.8s,baz=14,slow=37
            comp=Z,9.9nm,1.1s
ASAR  Alice Springs     36.47 195   P     P        05 31 46.4  -0.6
ASAR  Alice Springs     36.47 195   P     P        05 31 46.4  -0.6
BJT   Baijiatuau        36.94 324   P     P        05 31 50.7  -0.1
BJT                                 pmax  pmax
            comp=Z,15nm,0.6s
BJT   Baijiatuau        36.94 324   P     P        05 31 50.7  -0.1
BJI   Beijing           36.95 324   P     P        05 31 50.6  -0.3
BJI                                 S     S        05 37 37.6  +3.2
BJI                                 pmax  pmax
            comp=Z,20nm,0.6s
BJI                                 LR    LR
            comp=Z,590nm,18.2s
BJI                                 LR    LR
            comp=Z,320nm,17.8s
BJI                                 LR    LR
            comp=Z,800nm,18.2s
GYA   Guiyang           37.44 298 ⇑P     P        05 31 57.4  +2.0
GYA                                 pmax  pmax
            comp=Z,12nm,0.8s
EIDS  Eidsvold          37.73 169   P     P        05 31 56.9  -0.7
EIDS  Eidsvold          37.73 169   P     P        05 31 57.5  -0.1
QLP   Quilpie           38.19 179   P     P        05 32 00.7  -0.8
KLR   Kul'dur           38.51 348   LR    LR       05 48 03.6
            comp=Z,485nm,19.1s,baz=154,slow=36
KLR   Kul'dur           38.51 348c iP     P        05 32 03.9   0.0
KLR                                 pmax  pmax
            comp=Z,44nm,1.5s
TYV   Tymovskoe         38.92 359  eP     P        05 32 07.2  -0.1
TYV                                eS     S        05 38 08.4  +4.4
TYV                                 pmax  pmax
            comp=Z,100nm,8.0s
TYV                                 pmax  pmax
            comp=Z,16nm,1.5s
TYV                                 smax  smax
            comp=N,800nm,10.9s
TYV                                 smax  smax
            comp=E,500nm,10.9s
INKA  Innaminka         39.42 184   P     P        05 32 11.7   0.0
WRKA  Warakurna         39.48 202   P     P        05 32 12.6  +0.2
XLT   XiLinHaoTe        39.67 329⇑iP  P        05 32 13.5  -0.3
XLT                                 S     S        05 38 16.0  +0.4
XLT                                 pmax  pmax
            comp=E,33nm,0.7s
XLT                                 pmax  pmax
            comp=E,230nm,4.0s
XLT                                 LR    LR
            comp=E,680nm,17.7s
XLT                                 LR    LR
            comp=E,720nm,18.1s
OOD   Oodnadatta        40.09 191   P     P        05 32 17.2  -0.1
MBWA  Marble Bar        40.17 215   P     P        05 32 16.5  -1.6
PSA00 Pilbara Seismi    40.44 215   P     P        05 32 19.9  -0.4
PSA00 Pilbara Seismi    40.44 215   P     P        05 32 19.8  -0.5
PSA00                               IAmb  IAmb     05 32 32.3
            comp=Z,14nm,1.1s
PSA00 Pilbara Seismi    40.44 215   P     P        05 32 21.3  +1.0
KMI   Kunming           40.57 295 ⇑P     P        05 32 22.7  +1.0
KMI                                 sP    pwP      05 32 34.6  +0.5
KMI                                 pmax  pmax
            comp=Z,8.0nm,1.0s
KMI                                 pmax  pmax
            comp=Z,160nm,5.6s
KMI                                 LR    LR
            comp=Z,160nm,13.0s
KMI                                 LR    LR
            comp=Z,240nm,20.9s
KMI                                 LR    LR
            comp=Z,250nm,19.0s
DZM   Mont Dzumac       40.59 146   P     P        05 32 22.5  +0.8
            comp=Z,29nm,0.8s,baz=1.1,slow=9.3,SNR=6.7
DZM                                 LR    LR       05 47 27.7
            comp=Z,213nm,20.0s,baz=272,slow=34
            comp=Z,29nm,0.8s
DZM   Mont Dzumac       40.59 146  eP     P        05 32 21.0  -0.7
DZM   Mont Dzumac       40.59 146   P     P        05 32 21.8  +0.1
DZM                                 IAmb  IAmb     05 32 34.9
            comp=Z,35nm,0.8s
DZM   Mont Dzumac       40.59 146   P     P        05 32 22.8  +1.1
BTO   Baotou            40.99 320  eP     P        05 32 26.1  +1.2
CD2   Chengdu           41.20 304   P     P        05 32 26.4  -0.2
CD2                                 pmax  pmax
            comp=Z,30nm,0.9s
PZH   PanZhiHua         41.73 297   P     P        05 32 32.6  +1.5
PZH                                 S     S        05 38 44.3  -2.6
PZH                                 pmax  pmax
            comp=Z,10.0nm,0.6s
PZH                                 pmax  pmax
            comp=Z,120nm,6.2s
PZH                                 LR    LR
            comp=Z,610nm,17.6s
PZH                                 LR    LR
            comp=Z,600nm,16.5s
PZH                                 LR    LR
            comp=Z,640nm,17.2s
MDSI  Maura Dua         42.20 250   P     P        05 32 36.8  +1.8
            comp=Z,7.2nm,1.3s
LCRK  Leigh Creek       42.32 187   P     P        05 32 35.7  +0.1
IPM   Ipoh              42.49 264   P     P        05 32 37.6  +0.2
IPM   Ipoh              42.49 264   P     P        05 32 39.1  +1.7
KULM  Kulim             42.69 265   P     P        05 32 39.4  +0.4
PEA0B Petropavlovsk-    42.74  13⇑eP  P        05 32 38.5  -0.3
PETK  Petropavlovsk-    42.74  13   P     P        05 32 39.4  +0.6
            comp=Z,6.1nm,0.9s,baz=190,slow=7.1,SNR=7.5
PETK                                LR    LR       05 48 12.9
            comp=Z,409nm,20.0s,baz=197,slow=33
            comp=Z,6.1nm,0.9s
ARMA  Armidale          42.75 169   P     P        05 32 39.0  -0.2
ARMA  Armidale          42.75 169   P     P        05 32 39.1  -0.2
MULG  Mulgathing        42.82 192   P     P        05 32 39.5  -0.2
PET   Petropavlovsk     42.88  14  eP     P        05 32 42.8  +2.9
PET                                eS     S        05 39 06.9  +4.1
PET                                 pmax  pmax
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            comp=Z,100nm,15.9s
PET                                 MLR   MLR
            comp=Z,900nm,15.0s
LZH   Lanzhou           43.01 311  eP     P        05 32 41.4  -0.1
LZH                                 sP    pwP      05 32 54.8  +0.7
LZH                                eS     S        05 39 05.7  +0.1
LZH                                 sS    sS       05 39 19.2  +1.6
LZH                                 pmax  pmax
            comp=Z,28nm,1.3s
LZH                                 pmax  pmax
            comp=Z,140nm,5.2s
LZH                                 LR    LR
            comp=Z,350nm,13.0s
LZH                                 LR    LR
            comp=Z,500nm,13.0s
LZH                                 LR    LR
            comp=Z,650nm,16.3s
SRIT  Nakonsritamara    43.15 270   P     P        05 32 44.2  +1.5
SRIT                                IAmb  IAmb     05 32 46.9
            comp=Z,50nm,1.0s
CMSA  Cobar Meteorol    43.18 177   P     P        05 32 42.7  +0.1
CM31  Chiang Mai Arr    43.29 284   P     P        05 32 45.1  +1.3
            SNR=7.4
CMAR  Chiang Mai Arr    43.29 284   P     P        05 32 44.7  +0.9
            comp=Z,8.4nm,1.0s,baz=84,slow=5.9,SNR=35
            comp=Z,8.4nm,1.0s
CMAR  Chiang Mai Arr    43.29 284   P     P        05 32 44.5  +0.7
CMAR  Chiang Mai Arr    43.29 284   P     P        05 32 44.5  +0.7
CHTO  Chiang Mai        43.31 285   P     P        05 32 43.3  -0.6
CHTO                                pmax  pmax
            comp=Z,5.0nm,1.0s
CHTO  Chiang Mai        43.31 285   P     P        05 32 43.3  -0.6
CHTO  Chiang Mai        43.31 285   P     P        05 32 45.8  +1.9
STKA  Stephens Creek    43.49 182   P     P        05 32 44.0  -1.1
            comp=Z,9.9nm,1.1s,baz=23,slow=7.5,SNR=5.1
STKA                                LR    LR       05 51 21.0
            comp=Z,177nm,18.8s,baz=2.7,slow=37
            comp=Z,9.9nm,1.1s
STKA  Stephens Creek    43.49 182⇓iP  P        05 32 44.5  -0.7
STKA  Stephens Creek    43.49 182   P     P        05 32 44.4  -0.7
STKA  Stephens Creek    43.49 182   P     P        05 32 44.4  -0.7
ZEA   Zeya              43.73 346  eP     P        05 32 46.6  -0.2
ZEA                                 pmax  pmax
            comp=N,20nm,1.3s
ZEA                                 pmax  pmax
            comp=Z,20nm,1.4s
ZEA                                 MLR   MLR
            comp=N,300nm,15.0s
ZEA                                 MLR   MLR
            comp=Z,200nm,14.0s
FORT  Forrest           44.85 199   P     P        05 32 56.1  +0.2
FORT                                IAmb  IAmb     05 33 14.2
            comp=Z,56nm,0.8s
BBOO  Buckleboo         44.93 189   P     P        05 32 57.0  +0.3
MSVF  Nonsavu           45.12 130   LR    LR       05 49 00.9
            comp=Z,390nm,20.9s,baz=258,slow=32
KCSI  Kotacane, Aceh    45.87 263   P     P        05 33 03.0  -1.5
            comp=Z,17nm,1.5s
GSI   Gunungsitoli      46.59 261   P     P        05 33 10.3  +0.1
GSI                                 IAmb  IAmb     05 33 32.3
            comp=Z,29nm,1.1s
ULN   Ulaanbaatar       47.01 327c iP     P        05 33 13.2  +0.1
ULN                                 pmax  pmax
            comp=Z,32nm,2.5s
ULN   Ulaanbaatar       47.01 327   P     P        05 33 13.4  +0.3
ULN                                 IAmb  IAmb     05 33 14.6
            comp=Z,26nm,1.4s
GTA   Gaotai            47.27 313  eP     P        05 33 15.6  +0.4
GTA                                 pP    pP       05 33 22.6  +0.4
GTA                                 sP    pwP      05 33 26.6  -1.3
GTA                                 PcP   PcP      05 34 47.1  +0.9
GTA                                 pmax  pmax
            comp=Z,16nm,1.0s
GTA                                 pmax  pmax
            comp=Z,94nm,6.0s
GTA                                 LR    LR
            comp=Z,220nm,16.7s
GTA                                 LR    LR
            comp=Z,270nm,19.5s
GTA                                 LR    LR
            comp=Z,280nm,17.9s
SONM  Songino Array     47.35 327   P     P        05 33 15.9  +0.2
            comp=Z,4.9nm,0.6s,baz=146,slow=7.6,SNR=26
SONM                                PcP   PcP      05 34 45.7  -0.6
            comp=Z,3.4nm,0.8s,baz=148,slow=5.3,SNR=4.1
SONM                                LR    LR       05 54 12.5
            comp=Z,618nm,18.1s,baz=143,slow=38
            comp=Z,4.9nm,0.6s
SONM  Songino Array     47.35 327   P     P        05 33 15.8  +0.2
SHEM  Shemya Is, Ala    47.66  25   LR    LR       05 50 45.2
            comp=Z,221nm,21.3s,baz=222,slow=33
MA2   Magadan           47.97   5   LR    LR       05 54 34.0
            comp=Z,121nm,18.2s,baz=140,slow=37
MA2   Magadan           47.97   5d iP     P        05 33 22.1  +1.9
MA2                                 pmax  pmax
            comp=Z,31nm,2.5s
MA2   Magadan           47.97   5   P     P        05 33 19.1  -1.1
MA2   Magadan           47.97   5   P     P        05 33 19.3  -0.9
MORW  Morawa            48.47 212   P     P        05 33 24.5   0.0
MORW                                IAmb  IAmb     05 33 42.2
            comp=Z,40nm,0.9s
MORW  Morawa            48.47 212   P     P        05 33 25.0  +0.6
BLDU  Ballidu           49.37 211   P     P        05 33 32.2  +0.9
GOMU  GeErMu            49.91 308   P     P        05 33 36.4  +0.5
GOMU                                PcP   PcP      05 34 57.2  +1.1
GOMU                                pmax  pmax
            comp=Z,5.0nm,0.7s
GOMU                                pmax  pmax
            comp=Z,89nm,5.2s
GOMU                                LR    LR
            comp=Z,130nm,16.8s
GOMU                                LR    LR
            comp=Z,270nm,16.1s
GOMU                                LR    LR
            comp=Z,310nm,16.1s
SHL   Shillong          50.34 293   P     P        05 33 39.0  -0.1
SHL                                 pmax  pmax
            comp=Z,18nm,0.3s
SHL   Shillong          50.34 293   P     P        05 33 39.0  -0.1
SHL                                 IAmb  IAmb     05 34 01.8
            comp=Z,18nm,0.3s
ZAK   Zakamensk         50.50 328  eP     P        05 33 39.5  -0.3
ZAK                                 pmax  pmax
            comp=Z,36nm,1.2s
BOD   Bodaibo           51.04 340  eP     P        05 33 43.5  -0.1
BOD                                 pmax  pmax
            comp=Z,26nm,1.5s
YAK   Yakutsk           51.09 352   LR    LR       05 54 43.9
            comp=Z,382nm,19.6s,baz=92,slow=35
YAK   Yakutsk           51.09 352  eP     P        05 33 43.3  -0.6
YAK                                e*PP   pwP      05 33 57.0  +1.6
YAK                                e               05 34 55.9
YAK                                e               05 35 40.4
YAK                                ePPP   PPP      05 36 36.8
YAK                                eS     S        05 40 57.3  -2.3
YAK                                e               05 43 27.0
YAK                                eSS    SS       05 44 30.5  -4.4
YAK                                eSSS   SSS      05 46 08.2
YAK                                 pmax  pmax
            comp=Z,67nm,0.9s
YAK                                 pmax  pmax
            comp=N,24nm,1.0s
YAK                                 pmax  pmax
            comp=E,4.0nm,0.9s
YAK                                 pmax  pmax
            comp=Z,111nm,2.7s
YAK                                 pmax  pmax
            comp=N,20nm,2.2s
YAK                                 pmax  pmax
            comp=E,28nm,2.5s
YAK                                 smax  smax
            comp=N,19nm,1.7s
YAK                                 smax  smax
            comp=E,38nm,2.0s
YAK   Yakutsk           51.09 352   P     P        05 33 43.5  -0.3
IRK   Irkutsk           51.10 330  eP     P        05 33 42.4  -1.8
IRK                                 pmax  pmax
            comp=Z,31nm,1.9s
AFI   Afiamalu          51.30 119   LR    LR       05 51 53.3
            comp=Z,190nm,19.8s,baz=326,slow=32
SEY   Seymchan          51.43   5   LR    LR       05 56 34.2
            comp=Z,229nm,18.7s,baz=214,slow=37
SEY   Seymchan          51.43   5⇑eP  P        05 33 46.1  -0.3
SEY                                 pmax  pmax
            comp=Z,18nm,1.7s
LSA   Lhasa             51.51 299   P     P        05 33 48.3  +0.1
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MOY	Mondy	52.42	328	*e*P	P	05 33 54.4	+0.2
MOY				pmax	pmax		
	comp=Z,21nm,1.5s						
TAPN	Taplejung	54.24	295	*e*P	P	05 34 07.7	-0.5
ODAN	Odare	54.48	295	*e*P	P	05 34 09.4	-0.5
OUZ	Omahuta	54.86	150	P	P	05 34 13.1	+1.0
OUZ				IAmb	IAmb	05 34 18.6	
	comp=Z,35nm,1.2s						
RAMN	Ramite	55.19	295	*e*P	P	05 34 15.1	+0.1
JIRN	Jiri	55.61	295	*e*P	P	05 34 17.9	-0.3
GUN	Gumba	55.90	296	*e*P	P	05 34 20.1	-0.2
	comp=Z,130nm,1.2s						
NIKH	Nikolski High	55.94	33	P	P	05 34 18.4	-1.2
	baz=241						
PKI	Pulchoki	56.29	295	*e*P	P	05 34 22.4	-0.6
	comp=Z,59nm,1.2s						
PKIN	Phulchoki	56.30	295	*e*P	P	05 34 22.4	-0.6
	comp=Z,38nm,0.9s						
KKN	Kakani	56.42	295	*e*P	P	05 34 23.4	-0.4
DMN	Daman	56.56	295	*e*P	P	05 34 24.6	-0.3
GKN	Gorkha	57.00	296	*e*P	P	05 34 27.5	-0.4
WMQ	Urumqi	57.30	315	⇓P	P	05 34 30.7	+1.1
WMQ				pP	pP	05 34 37.3	+0.6
WMQ				PcP	PcP	05 35 23.8	+0.2
WMQ				PP	PP	05 36 36.0	-0.9
WMQ				S	S	05 42 25.8	+1.5
WMQ				pmax	pmax		
	comp=Z,33nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.7s						
WMQ				LR	LR		
	comp=Z,340nm,18.5s						
WMQ				LR	LR		
	comp=Z,680nm,17.1s						
WMQ				LR	LR		
	comp=Z,310nm,21.7s						
SPIA	Saint Paul Isl	57.41	28	P	P	05 34 31.3	+1.3
SPIA	Saint Paul Isl	57.41	28	P	P	05 34 29.2	-0.8
	baz=237						
UNV	Unalaska Valle	57.59	33	P	P	05 34 31.9	+0.5
UNV	Unalaska Valle	57.59	33	P	P	05 34 30.5	-0.8
	baz=243						
DANN	Dangsing	57.80	296	*e*P	P	05 34 33.5	-0.2
KOLN	Koldanda	57.91	295	*e*P	P	05 34 34.0	-0.3
	comp=Z,58nm,1.1s						
BILL	Bilibino	58.13	10	*ce*P	P	05 34 34.9	0.0
BILL				*e*		05 36 39.5	
BILL				*e*SS	SS	05 46 28.4	+2.6
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
BILL				MLR	MLR		
	comp=Z,183nm,14.0s						
BILL	Bilibino	58.13	10	P	P	05 34 35.2	+0.3
PYUN	Piuthan	58.46	296	*e*P	P	05 34 37.9	-0.3
	comp=Z,95nm,1.1s						
URZ	Urewera	58.99	149	LR	LR	05 58 35.0	
	comp=Z,114nm,18.1s,baz=32,slow=34						
TIXI	Tiksi	60.43	355	LR	LR	06 01 08.1	
	comp=Z,75nm,18.4s,baz=180,slow=36						
TIXI	Tiksi	60.43	355	*c i*P	P	05 34 49.6	-1.1
TIXI				pmax	pmax		
	comp=Z,22nm,1.3s						
TIXI	Tiksi	60.43	355	P	P	05 34 50.6	-0.1
GAMB	Gambell	60.63	21	P	P	05 34 52.0	-0.2
	baz=232						
RPZ	Rata Peaks	60.77	157	P	P	05 34 54.3	+0.8
	comp=Z,19nm,0.9s,baz=295,slow=13,SNR=4.2						
RPZ				LR	LR	05 59 22.8	
	comp=Z,162nm,19.4s,baz=295,slow=34						
	comp=Z,19nm,0.9s						
RPZ	Rata Peaks	60.77	157	P	P	05 34 53.1	-0.4
OXZ	Oxford	60.82	156	P	P	05 34 54.0	+0.2
OXZ				IAmb	IAmb	05 35 05.2	
	comp=Z,32nm,0.8s						
MLZ	Mavora Lakes	61.17	160	P	P	05 34 56.3	+0.2
SDPT	Sand Point	61.41	33	P	P	05 34 56.9	-0.7
SDPT	Sand Point	61.41	33	P	P	05 34 56.3	-1.3
	baz=248						
MK31	Makanchi Array	61.74	317	*c i*P	P	05 35 00.3	+0.1
MK31	Makanchi Array	61.74	317	P	P	05 35 00.8	+0.6
MKAR	Makanchi Array	61.74	317	P	P	05 35 00.5	+0.3
	comp=Z,18nm,1.1s,baz=96,slow=8.7,SNR=59						
MKAR				LR	LR	06 03 25.6	
	comp=Z,149nm,18.0s,baz=98,slow=38						
	comp=Z,18nm,1.1s						
MKAR	Makanchi Array	61.74	317	P	P	05 35 00.2	0.0
PALK	Pallekele	61.85	272	P	P	05 35 01.3	-0.2
PALK				pmax	pmax		
	comp=Z,37nm,1.7s						
PALK	Pallekele	61.85	272	P	P	05 35 01.3	-0.2
PALK				IAmb	IAmb	05 35 03.5	
	comp=Z,37nm,1.6s						
PALK	Pallekele	61.85	272	P	P	05 35 03.0	+1.5
MAKZ	Makanchi	61.96	317	P	P	05 35 02.1	+0.5
MAKZ				pmax	pmax		
	comp=Z,22nm,1.1s						
MAKZ	Makanchi	61.96	317	P	P	05 35 02.1	+0.5
MAKZ				IAmb	IAmb	05 35 03.1	
	comp=Z,22nm,1.1s						
ZAA0	Zalesovo Array	62.20	325	P	P	05 35 02.5	-0.5
ZAA0				IAmb	IAmb	05 35 03.6	
	comp=Z,35nm,1.6s						
ZALV	Zalesovo Beam	62.20	325	P	P	05 35 02.3	-0.7
	comp=Z,6.7nm,0.7s,baz=110,slow=7.3,SNR=22						
ZALV				PcP	PcP	05 35 42.2	-0.7
	comp=Z,3.5nm,0.5s,baz=119,slow=3.8,SNR=5.8						
ZALV				LR	LR	06 02 37.5	
	comp=Z,269nm,18.9s,baz=96,slow=37						
	comp=Z,6.7nm,0.7s						
ZALV	Zalesovo Beam	62.20	325	*i* P	P	05 35 02.5	-0.5
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HYBB	Hyderabad (bro	62.71	284	*e*P	P	05 35 07.2	0.0
ANM	Nome	63.37	22	P	P	05 35 10.7	+0.1
	baz=239						
TARG	Taragay, Kyrgy	64.00	311	P	P	05 35 15.6	-0.2
KDJ	Kajisay	64.52	311	P	P	05 35 19.3	+0.5
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KDJ	Kajisay	64.52	311	P	P	05 35 19.3	+0.5
RAR	Rarotonga	64.78	120	LR	LR	05 56 42.9	
	comp=Z,82nm,21.3s,baz=282,slow=30						
KURK	Kurchatov	64.99	321	*c i*P	P	05 35 20.8	-0.7
KURK				pmax	pmax		
	comp=Z,60nm,1.3s						
KURK	Kurchatov	64.99	321	P	P	05 35 21.3	-0.1
KURK	Kurchatov	64.99	321	P	P	05 35 21.4	-0.1
KURK				P	P	05 35 21.4	-0.1
KURK				S	S	05 43 59.6	-2.1
KURK				S	S	05 43 59.6	-2.1
KURBB	Kurchatov Arra	65.02	321	LR	LR	06 05 14.6	
	comp=Z,310nm,18.8s,baz=81,slow=38						
KURBB	Kurchatov Arra	65.02	321	P	P	05 35 21.0	-0.7
SII	Sitkinak Islan	65.15	33	P	P	05 35 22.3	-0.1
	baz=253						
KSH	Kashi	65.15	308	P	P	05 35 22.8	-0.1
KSH				sP	sP	05 35 34.0	+1.0
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,140nm,6.5s						
KSH				LR	LR		
	comp=Z,560nm,18.8s						
KSH				LR	LR		
	comp=Z,340nm,19.8s						
KSH				LR	LR		
	comp=Z,150nm,20.0s						
BOOM	Boomskoye usch	65.47	311	P	P	05 35 25.3	+0.2
BOOM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BOOM	Boomskoye usch	65.47	311	P	P	05 35 25.3	+0.2
P18K	Big Mountain,	65.50	30	P	P	05 35 23.9	-0.8
	baz=251						
N18K	Kilae Creek	65.62	28	P	P	05 35 26.1	+0.7
N18K	Kilae Creek	65.62	28	P	P	05 35 26.0	+0.5
	baz=250						
O18K	Koktuh Hills	65.66	29	P	P	05 35 26.8	+1.1
O18K				IAmb	IAmb	05 35 27.4	
	comp=Z,41nm,1.2s						
O18K	Koktuh Hills	65.66	29	P	P	05 35 25.9	+0.2
	baz=251						
TKM2	Tokmak 2	65.77	312	P	P	05 35 25.8	-1.2
OHAK	Old Harbor	65.81	32	P	P	05 35 26.6	-0.1
	baz=254						
SVW2	Sparrevohn	65.91	28	P	P	05 35 28.1	+0.9
SVW2				IAmb	IAmb	05 35 29.3	
	comp=Z,41nm,1.4s						
RDOG	Red Dog Mine	66.02	19	P	P	05 35 27.7	-0.2
RDOG	Red Dog Mine	66.02	19	P	P	05 35 27.0	-0.8
	baz=240						
Q19K	Cape Douglas,	66.12	30	P	P	05 35 27.9	-0.9
O19K	Port Alsworth	66.19	29	P	P	05 35 29.0	-0.1
O19K				IAmb	IAmb	05 35 31.1	
	comp=Z,33nm,1.3s						
O19K	Port Alsworth	66.19	29	P	P	05 35 29.2	+0.2
	baz=251						
N19K	Bonanza Creek	66.31	28	P	P	05 35 30.7	+0.7
N19K	Bonanza Creek	66.31	28	P	P	05 35 30.8	+0.8
	baz=251,SNR=7.4						
KDAK	Kodiak Island	66.33	32	P	P	05 35 31.3	+1.3
	baz=254						
TTA	Tatalina	66.37	26	P	P	05 35 30.8	+0.5
TTA				pmax	pmax		
	comp=Z,46nm,1.6s						
TTA	Tatalina	66.37	26	P	P	05 35 30.8	+0.5
TTA				IAmb	IAmb	05 35 31.8	
	comp=Z,46nm,1.6s						
TTA	Tatalina	66.37	26	P	P	05 35 30.2	-0.1
	baz=249,SNR=11						
P19K	Oil Pt	66.55	30	P	P	05 35 30.9	-0.5
	baz=253						
AAK	Ala-Archa	66.55	311	LR	LR	06 07 20.1	
	comp=Z,460nm,18.8s,baz=88,slow=38						
AAK	Ala-Archa	66.55	311	*ce*P	P	05 35 32.0	0.0
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	66.55	311	P	P	05 35 31.9	0.0
L19K	White Mountain	66.61	27	P	P	05 35 32.2	+0.4
L19K				IAmb	IAmb	05 35 33.6	
	comp=Z,27nm,0.8s						
L19K	White Mountain	66.61	27	P	P	05 35 32.4	+0.7
	baz=250,SNR=14						
GCSA	Galena City Sc	66.70	24	P	P	05 35 32.1	-0.1
	baz=247,SNR=6.4						
M19K	Big River Lodg	66.72	27	IAmb	IAmb	05 35 34.5	
	comp=Z,17nm,0.8s						
M19K	Big River Lodg	66.72	27	P	P	05 35 30.6	-1.9
	baz=251						
O20K	Slope Mountain	66.97	29	P	P	05 35 33.6	-0.5
	baz=253						
NIL	Nilore	67.03	302	P	P	05 35 35.2	+0.2
NIL				pmax	pmax		
	comp=Z,27nm,0.8s						
NIL	Nilore	67.03	302	P	P	05 35 35.2	+0.2
NIL				IAmb	IAmb	05 36 08.1	
	comp=Z,27nm,0.8s						
NIL	Nilore	67.03	302	P	P	05 35 35.3	+0.3
NIL				P	P	05 35 35.3	+0.3
L20K	Farewell, AK	67.14	27	P	P	05 35 34.1	-1.0
	baz=251,SNR=8.6						
NRIK	Noril'sk	67.31	341	P	P	05 35 36.0	0.0
	comp=Z,22nm,1.0s,baz=112,slow=6.7,SNR=28						
NRIK				LR	LR	06 04 31.2	
	comp=Z,268nm,20.8s,baz=144,slow=36						
	comp=Z,22nm,1.0s						
NRIK	Noril'sk	67.31	341	*c i*P	P	05 35 35.7	-0.4
NRIK				pmax	pmax		
	comp=Z,48nm,1.2s						
HOM	Homer	67.32	30	P	P	05 35 36.2	-0.1
	baz=254						
K20K	Telida	67.35	26	IAmb	IAmb	05 35 38.6	
	comp=Z,23nm,0.8s						
K20K	Telida	67.35	26	P	P	05 35 37.4	+0.9
	baz=250,SNR=18						
J20K	Nowinta River	67.59	25	P	P	05 35 38.7	+0.8
	baz=250,SNR=38						
BRSE	Bradley Lake S	67.78	30	P	P	05 35 38.8	-0.5
	baz=255						
PPLA	Purkeypile	68.01	26	P	P	05 35 41.4	+0.7
PPLA				IAmb	IAmb	05 35 42.3	
	comp=Z,26nm,0.7s						
PPLA	Purkeypile	68.01	26	P	P	05 35 41.1	+0.4
	baz=252,SNR=9.8						
CAST	Castle Rocks	68.21	26	P	P	05 35 42.3	+0.4
CAST	Castle Rocks	68.21	26	P	P	05 35 42.3	+0.4
	baz=252,SNR=38						
CHUM	Lake Minchumin	68.26	25	P	P	05 35 43.0	+0.9
	baz=252,SNR=8.9						
IMAR	Indian Mountai	68.38	23	P	P	05 35 43.2	+0.3
O22K	Cooper Landing	68.46	29	P	P	05 35 43.9	+0.5
O22K	Cooper Landing	68.46	29	P	P	05 35 43.4	-0.1
	baz=256						
SEW	Seward	68.50	30	P	P	05 35 43.3	-0.4
	baz=256						
M22K	Willow	68.61	28	P	P	05 35 43.7	-0.6
	baz=255,SNR=10.0						
RC01	Rabbit Creek A	68.61	29	P	P	05 35 44.3	-0.1
RC01	Rabbit Creek A	68.61	29	P	P	05 35 44.1	-0.3
	baz=255,SNR=9.3						
H21K	Melozitna Rive	68.63	24	P	P	05 35 45.3	+0.8
	baz=251,SNR=32						
CUT	Chulitna	68.72	27	P	P	05 35 44.1	-0.9
	baz=254						
I21K	Tanana	68.80	24	P	P	05 35 46.2	+0.7
	baz=252,SNR=29						
BPAW	Bear Paw Mtn.	68.88	25	P	P	05 35 46.3	+0.2
BPAW	Bear Paw Mtn.	68.88	25	P	P	05 35 46.4	+0.4
	baz=253,SNR=32						
TRF	Thorofare Moun	68.99	26	IAmb	IAmb	05 35 47.6	
	comp=Z,28nm,0.8s						
PMR	Palmer	69.02	28	P	P	05 35 46.9	0.0
PMR				pmax	pmax		
	comp=Z,34nm,0.8s						
PMR	Palmer	69.02	28	P	P	05 35 46.9	0.0
PMR	Palmer	69.02	28	P	P	05 35 46.5	-0.4
	baz=256,SNR=12						
BTK	Batken	69.14	308	P	P	05 35 48.3	0.0
BTK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTK	Batken	69.14	308	P	P	05 35 48.3	0.0
PWL	Port Wells	69.22	29	P	P	05 35 47.9	-0.3
	baz=257						
KNK	Knik Glacier	69.29	29	P	P	05 35 48.9	+0.2
	baz=256,SNR=6.4						
SML	Sawmill	69.44	28	P	P	05 35 49.4	-0.2
	baz=256,SNR=14						
A21K	Barrow	69.48	17	P	P	05 35 49.7	+0.1
A21K	Barrow	69.48	17	P	P	05 35 50.2	+0.6
	baz=245,SNR=9.2						
GAR	Garm	69.50	307	P	P	05 35 50.0	-0.6
GAR				IAmb	IAmb	05 36 44.2	
	comp=Z,28nm,1.1s						
KK31	Karatay Array	69.50	312	*i* P	P	05 35 49.9	-0.4
KK31	Karatay Array	69.50	312	P	P	05 35 50.4	+0.1
KKAR	Karatay Array	69.50	312	P	P	05 35 50.0	-0.3
KKAR	Karatay Array	69.50	312	P	P	05 35 50.0	-0.3
RND	Reindeer	69.60	26	IAmb	IAmb	05 35 51.3	
	comp=Z,22nm,0.7s						
M23K	Glacier View	69.72	28	P	P	05 35 51.4	+0.1
	baz=257,SNR=7.5						
GLI	Glacier Island	69.81	29	P	P	05 35 51.2	-0.7
	baz=258						
NEA2	Nenana	69.82	25	P	P	05 35 51.5	-0.4
	baz=255,SNR=9.3						
I23K	Minto, Yukon-K	69.85	25	P	P	05 35 52.5	+0.5
	baz=254,SNR=37						
Q23K	Middleton Isla	69.89	31	P	P	05 35 52.0	-0.3
	baz=259						
WAT6	Susitna Watana	69.89	27	P	P	05 35 52.5	0.0
	baz=257,SNR=14						
SCM	Sheep Creek Mo	69.91	28	P	P	05 35 53.2	+0.6
SCM				pmax	pmax		
	comp=Z,92nm,1.0s						
SCM	Sheep Creek Mo	69.91	28	P	P	05 35 53.2	+0.6
SCM	Sheep Creek Mo	69.91	28	P	P	05 35 53.0	+0.4
	baz=257,SNR=12						
H23K	Yukon River	69.97	24	P	P	05 35 53.5	+0.7
H23K	Yukon River	69.97	24	P	P	05 35 53.5	+0.7
	baz=254,SNR=38						
COLD	Coldfoot	70.12	22	P	P	05 35 54.7	+1.0
	baz=253,SNR=92						
DHY	Denali Highway	70.17	27	P	P	05 35 54.1	-0.1
DHY				IAmb	IAmb	05 35 55.6	
	comp=Z,57nm,1.4s						
DHY	Denali Highway	70.17	27	P	P	05 35 54.0	-0.3
	baz=257,SNR=14						
CCB	Clear Creek Bu	70.36	25	IAmb	IAmb	05 35 55.7	
	comp=Z,50nm,1.3s						
TCOL	CIGO, UAF Yank	70.39	25	P	P	05 35 55.2	-0.1
TCOL				IAmb	IAmb	05 35 58.0	
	comp=Z,29nm,0.7s						
TCOL	CIGO, UAF Yank	70.39	25	P	P	05 35 54.7	-0.6
	baz=256,SNR=10						
EYAK	Cordova Ski Ar	70.40	30	IAmb	IAmb	05 36 00.2	
	comp=Z,40nm,1.0s						
EYAK	Cordova Ski Ar	70.40	30	P	P	05 35 54.9	-0.5
	baz=259						
COLA	College	70.40	25	*c i*P	P	05 35 54.6	-0.7
COLA				pmax	pmax		
	comp=Z,40nm,1.2s						
COLA	College	70.40	25	P	P	05 35 55.0	-0.3
COLA				IAmb	IAmb	05 35 58.0	
	comp=Z,29nm,0.7s						
COLA	College	70.40	25	P	P	05 35 54.7	-0.6
	baz=256						
CHGR	Chuyangaron	70.40	307	P	P	05 35 56.1	+0.1
CHGR				IAmb	IAmb	05 36 39.9	
	comp=Z,36nm,1.1s						
BRVK	Borovoye	70.46	322	*ce*P	P	05 35 55.7	-0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BRVK	Borovoye	70.46	322	P	P	05 35 55.9	-0.1
BRVK				IAmb	IAmb	05 35 57.2	
	comp=Z,59nm,1.4s						
BRVK	Borovoye	70.46	322	P	P	05 35 56.1	+0.1
BRVK				P	P	05 35 56.1	+0.1
KLU	Klutina	70.50	29	IAmb	IAmb	05 35 57.9	
	comp=Z,37nm,0.9s						
KLU	Klutina	70.50	29	P	P	05 35 56.7	+0.6
	baz=259,SNR=9.8						
M24K	Tolsona, Glenn	70.50	28	P	P	05 35 57.0	+0.8
M24K	Tolsona, Glenn	70.50	28	P	P	05 35 56.9	+0.8
	baz=258,SNR=7.5						
KBL	Kabul	70.52	303	P	P	05 35 57.2	+0.2
	SNR=5.5						
KBL				P	P	05 35 57.2	+0.2
	SNR=5.5						
H24K	Noodor Dome	70.63	24	P	P	05 35 57.4	+0.5
H24K	Noodor Dome	70.63	24	P	P	05 35 57.7	+0.8
	baz=255,SNR=46						
POKR	Poker Plat Res	70.63	25	P	P	05 35 56.8	-0.1
POKR				IAmb	IAmb	05 35 58.8	
	comp=Z,18nm,0.9s						
POKR	Poker Plat Res	70.63	25	P	P	05 35 55.8	-1.0
	baz=256						
TOLK	Toolik Lake Re	70.77	21	P	P	05 35 58.8	+1.1
TOLK	Toolik Lake Re	70.77	21	P	P	05 35 58.5	+0.8
	baz=253						
IL31		70.78	25	P	P	05 35 56.4	-1.3
ILAR	Eielson Array	70.78	25	P	P	05 35 56.6	-1.1
	comp=Z,26nm,0.6s,baz=249,slow=6.1,SNR=447						
ILAR				LR	LR	06 07 05.0	
	comp=Z,169nm,19.3s,baz=238,slow=36						
	comp=Z,26nm,0.6s						
KAIM	Kayak Island	70.94	30	P	P	05 35 59.1	+0.4
	baz=260						
PAX	Paxson	71.00	27	P	P	05 35 59.5	+0.3
PAX				pmax	pmax		
	comp=Z,24nm,0.8s						
PAX	Paxson	71.00	27	P	P	05 35 59.5	+0.3
PAX				IAmb	IAmb	05 36 00.6	
	comp=Z,24nm,0.8s						
PAX	Paxson	71.00	27	P	P	05 35 59.5	+0.3
	baz=258,SNR=23						
BMRM	Bremner River	71.03	29	P	P	05 35 60.0	+0.6
	baz=260,SNR=8.5						
HARP	HAARP	71.03	28	P	P	05 35 59.8	+0.5
	baz=259,SNR=12						
K24K	Donnelly Dome	71.03	26	P	P	05 35 59.5	+0.2
	baz=258,SNR=23						
N25K	Chitina, Valde	71.14	29	P	P	05 36 00.7	+0.6
	baz=260,SNR=6.4						
BERG	Berg Lake	71.37	30	P	P	05 36 02.4	+1.0
J25K	Salcha River,	71.38	26	P	P	05 36 00.7	-0.7
J25K				IAmb	IAmb	05 36 05.8	
	comp=Z,37nm,1.2s						
J25K	Salcha River,	71.38	26	P	P	05 36 00.7	-0.7
	baz=258,SNR=25						
RIDG	Independent Ri	71.43	26	P	P	05 36 01.9	+0.1
RIDG	Independent Ri	71.43	26	P	P	05 36 01.8	+0.1
	baz=259,SNR=19						
VRDI	Verde Repeater	71.62	29	IAmb	IAmb	05 36 04.7	
	comp=Z,22nm,0.8s						
DOT	Dot Lake	71.75	27	P	P	05 36 03.7	+0.1
MENT	Mentasta	71.78	27	P	P	05 36 04.5	+0.7
MENT				IAmb	IAmb	05 36 11.8	
	comp=Z,26nm,0.9s						
SCRK	Sand Creek	71.84	26	IAmb	IAmb	05 36 05.6	
	comp=Z,24nm,0.8s						
SCRK	Sand Creek	71.84	26	P	P	05 36 04.3	0.0
	baz=260,SNR=25						
L26K	Log Cabin Wild	71.96	27	IAmb	IAmb	05 36 06.7	
	comp=Z,28nm,0.8s						
L26K	Log Cabin Wild	71.96	27	P	P	05 36 05.3	+0.4
	baz=260,SNR=6.3						
M26K	Nabesna, AK	72.02	28	P	P	05 36 05.7	+0.4
M26K	Nabesna, AK	72.02	28	P	P	05 36 05.2	-0.1
	baz=261						
ISLE	Juniper Island	72.07	30	IAmb	IAmb	05 36 15.2	
	comp=Z,42nm,1.1s						
J26L	Joseph Creek	72.12	26	P	P	05 36 06.1	+0.2
	baz=260,SNR=46						
BMAR	Burnt Mountain	72.28	23	P	P	05 36 07.3	+0.6
PPT	Papeete	72.37	113	LR	LR	06 02 03.8	
	comp=Z,123nm,19.9s,baz=304,slow=31						
BARN	Barnard Glacie	72.46	30	IAmb	IAmb	05 36 12.0	
	comp=Z,31nm,1.2s						
M27K	Edge Creek, AK	72.53	28	IAmb	IAmb	05 36 10.4	
	comp=Z,27nm,1.0s						
L27K	Beaver Creek,	72.65	27	IAmb	IAmb	05 36 10.9	
	comp=Z,77nm,1.8s						
L27K	Beaver Creek,	72.65	27	P	P	05 36 09.6	+0.6
	baz=262,SNR=18						
BCAR	Beaver Creek A	72.67	27	P	P	05 36 09.8	+0.6
K27K	Chicken	72.68	26	P	P	05 36 10.4	+1.2
K27K				IAmb	IAmb	05 36 11.6	
	comp=Z,38nm,1.1s						
K27K	Chicken	72.68	26	P	P	05 36 09.8	+0.6
	baz=261						
BVCY	Beaver Creek	73.01	28	P	P	05 36 12.1	+1.0
	baz=263,SNR=11						
PCA	Pinnacle	73.03	31	IAmb	IAmb	05 36 13.5	
	comp=Z,30nm,0.8s						
YUK3	Moose Creek	73.12	29	P	P	05 36 12.9	+0.9
	baz=264,SNR=16						
EGAK	Eagle	73.19	26	P	P	05 36 12.6	+0.4
EGAK				IAmb	IAmb	05 36 14.7	
	comp=Z,27nm,1.0s						
EGAK	Eagle	73.19	26	P	P	05 36 12.2	+0.1
	baz=262						
PNL	Peninsula	73.43	31	P	P	05 36 13.9	+0.3
	baz=265						
DAWY	Dawson	73.86	27	IAmb	IAmb	05 36 18.4	
	comp=Z,43nm,1.0s						
DAWY	Dawson	73.86	27	P	P	05 36 17.1	+1.0
	baz=264,SNR=28						
YUK4	Talbot Arm	73.94	29	P	P	05 36 18.7	+1.8
	baz=265,SNR=20						
YUK6	Outpost Mounta	74.04	30	P	P	05 36 18.4	+0.9
	baz=266						
J29M	Klondike Camp	74.41	26	P	P	05 36 20.5	+1.1
	baz=265						
HYT	Haines Junctio	74.45	30	IAmb	IAmb	05 36 22.5	
	comp=Z,43nm,1.1s						
HYT	Haines Junctio	74.45	30	P	P	05 36 21.4	+1.5
	baz=266,SNR=15						
I29M	Ogilvie Camp,	74.46	25	IAmb	IAmb	05 36 21.6	
	comp=Z,44nm,1.1s						
I29M	Ogilvie Camp,	74.46	25	P	P	05 36 20.3	+0.7
	baz=264,SNR=39						
M30M	Minto, Yukon	74.90	28	IAmb	IAmb	05 36 24.8	
	comp=Z,31nm,1.1s						
M30M	Minto, Yukon	74.90	28	P	P	05 36 23.5	+1.3
	baz=266,SNR=15						
EPYK	Eagle Plains	75.20	24	P	P	05 36 24.7	+0.8
EPYK				IAmb	IAmb	05 36 25.9	
	comp=Z,50nm,1.1s						
EPYK	Eagle Plains	75.20	24	P	P	05 36 24.7	+0.8
	baz=266,SNR=36						
N31M	Braeburn, Yuko	75.32	29	P	P	05 36 24.8	+0.1
N31M	Braeburn, Yuko	75.32	29	P	P	05 36 25.9	+1.2
	baz=268						
SIT	Sitka	75.44	34	P	P	05 36 26.6	+1.2
	baz=269						
SKAG	Skagway	75.48	31	P	P	05 36 26.4	+0.9
SKAG				IAmb	IAmb	05 36 58.3	
	comp=Z,41nm,1.3s						
SKAG	Skagway	75.48	31	P	P	05 36 26.9	+1.3

	baz=269,SNR=7.1						
WHY	Whitehorse	75.73	30	P	P	05 36 28.4	+1.3
WHY				IAmb	IAmb	05 36 29.9	
	comp=Z,55nm,1.4s						
WHY	Whitehorse	75.73	30	P	P	05 36 28.5	+1.3
	baz=269,SNR=6.8						
M31M	Drury Creek, Y	76.00	29	IAmb	IAmb	05 36 30.8	
	comp=Z,16nm,0.8s						
M31M	Drury Creek, Y	76.00	29	P	P	05 36 29.5	+0.9
	baz=269,SNR=15						
HRA	Herat	76.14	303	IAmb	IAmb	05 36 31.7	
	comp=Z,39nm,1.4s						
SVE	Sverdlovsk	76.21	326	*de*P	P	05 36 30.1	+0.3
SVE				pmax	pmax		
	comp=Z,45nm,1.3s						
FARO	Faro, Yukon	76.49	29	P	P	05 36 32.2	+0.8
	baz=270,SNR=14						
INK	Inuvik	76.54	22	IAmb	IAmb	05 36 32.8	
	comp=Z,39nm,1.1s						
INK	Inuvik	76.54	22	P	P	05 36 31.6	+0.2
	baz=268						
AB31	Akbulak array	76.85	318	*i* P	P	05 36 32.9	-0.7
ABKAR	Akbulak array	76.85	318	P	P	05 36 33.2	-0.4
WRAK	Wrangell Islan	77.09	35	P	P	05 36 35.3	+0.6
	baz=272						
ARU	Arti	77.37	325	LR	LR	06 13 56.8	
	comp=Z,198nm,18.7s,baz=90,slow=38						
ARU	Arti	77.37	325	*d i*P	P	05 36 36.0	-0.3
ARU						05 36 48.1	
ARU				S	S	05 46 27.1	+2.2
ARU				SS	SS	05 51 20.9	-2.4
ARU				pmax	pmax		
	comp=Z,54nm,1.5s						
ARU				MLR	MLR		
	comp=Z,210nm,18.0s						
ARU	Arti	77.37	325	P	P	05 36 36.1	-0.3
MMPY	Sheldon Lake,	77.46	28	P	P	05 36 38.0	+1.2
	baz=271,SNR=17						
AKTO	Aktyubinsk	78.03	319	LR	LR	06 13 40.5	
	comp=Z,131nm,18.9s,baz=83,slow=38						
AKTO	Aktyubinsk	78.03	319	P	P	05 36 38.7	-1.5
DLBC	Dease Lake	78.25	32	P	P	05 36 42.2	+0.9
DLBC				IAmb	IAmb	05 36 44.3	
	comp=Z,22nm,0.9s						
TGTN	Hyland Airport	78.92	29	P	P	05 36 46.3	+1.4
	baz=274,SNR=14						
GEYT	Alibeck	79.11	307	P	P	05 36 47.4	+0.9
	comp=Z,8.2nm,0.8s,baz=215,slow=3.1,SNR=10						
GEYT				LR	LR	06 16 32.7	
	comp=Z,243nm,18.6s,baz=98,slow=39						
	comp=Z,8.2nm,0.8s						
GEYT	Alibeck	79.11	307	P	P	05 36 47.6	+1.1
GYA0B	ALIBECK ARRAY	79.11	307	P	P	05 36 46.9	+0.5
GYA0B				IAmb	IAmb	05 36 48.2	
	comp=Z,26nm,1.1s						
A36M	Sachs Harbour	79.27	18	P	P	05 36 46.9	+0.4
A36M				IAmb	IAmb	05 36 50.8	
	comp=Z,29nm,0.8s						
A36M	Sachs Harbour	79.27	18	P	P	05 36 46.9	+0.4
	baz=275						
BBB	Bella Bella	79.86	39	LR	LR	06 06 26.1	
	comp=Z,152nm,19.7s,baz=278,slow=31						
C36M	Paulatuk	79.93	21	P	P	05 36 50.2	0.0
C36M				IAmb	IAmb	05 36 51.5	
	comp=Z,58nm,1.4s						
C36M	Paulatuk	79.93	21	P	P	05 36 50.2	0.0
	baz=277						
JLN	Jalan Bani Buh	80.09	291	P	P	05 36 52.2	+0.2
WBK	Wadi Bani Khal	80.43	291	P	P	05 36 54.3	+0.5
WBK				P	P	05 36 54.3	+0.5
WSAR	Wadi Sarin	80.64	292	LR	LR	06 18 21.0	
	comp=Z,28nm,18.1s,baz=87,slow=40						
WSAR	Wadi Sarin	80.64	292	P	P	05 36 55.6	+0.6
BIDO	Bidbid	81.05	292	P	P	05 36 57.7	+0.6
SMDO	Samad	81.20	292	P	P	05 36 58.4	+0.4
JMDO	Jabal Madar	81.26	291	P	P	05 36 58.2	0.0
MHTO	MHTO	81.60	290	P	P	05 37 00.3	+0.2
	SNR=8.3						
HOQ	Hoqain	81.78	292	P	P	05 37 01.2	+0.2
CBB	Campbell River	81.86	41	IAmb	IAmb	05 37 04.1	
	comp=Z,17nm,0.9s						
BSY	Bisya	82.02	292	P	P	05 37 02.9	+0.6
KIRV	Kirov	82.05	328	LR	LR	06 16 12.9	
	comp=Z,265nm,18.9s,baz=77,slow=38						
KIRV	Kirov	82.05	328	*c i*P	P	05 37 01.9	+0.2
DQM	DQM	82.17	289	P	P	05 37 03.7	+0.5
BANOM	Banah	82.31	295	P	P	05 37 04.4	+0.6
SOHO	SOHO	82.39	293	P	P	05 37 04.5	+0.3
SHME	Shamm	82.43	295	P	P	05 37 05.2	+0.8
MASF	Masafi	82.53	294	P	P	05 37 05.7	+0.8
ARQ	Araqi	82.54	292	P	P	05 37 05.6	+0.6
	SNR=7.5						
UOSS	Minazif	82.56	294	P	P	05 37 05.0	-0.1
UOSS	Minazif	82.56	294	P	P	05 37 05.1	-0.1
HATD	Hatta, Dubai	82.64	294	P	P	05 37 06.0	+0.5
HATD				P	P	05 37 06.0	+0.5
ASHO	Ashiyiah	82.73	294	P	P	05 37 06.4	+0.4
CLRS	Cowichan Lake	82.84	42	IAmb	IAmb	05 37 08.8	
	comp=Z,31nm,1.3s						
ALNE	Al Ain	83.11	293	P	P	05 37 08.0	0.0
	SNR=7.5						
NLWA	Neilton Lookou	83.26	43	P	P	05 37 09.3	+1.0
NLWA				IAmb	IAmb	05 37 14.4	
	comp=Z,29nm,0.9s						
PGC	Sidney	83.32	42	P	P	05 37 09.2	+0.7
PRGR	Permogore	83.33	332	*e*P	P	05 37 06.3	-2.0
WISH	Wishkah	83.38	43	P	P	05 37 09.8	+1.0
B04A	Port Angeles	83.39	42	IAmb	IAmb	05 37 11.9	
	comp=Z,43nm,1.2s						
D03D	Eldon	83.76	43	P	P	05 37 12.5	+1.7
	baz=281,SNR=21						
A04D	Lummi Island	83.79	42	P	P	05 37 12.3	+1.4
	baz=281						
I02E	Swisshome, OR	83.86	46	P	P	05 37 12.6	+1.2
	baz=280						
LLLB	Lillooet	83.96	40	IAmb	IAmb	05 37 15.7	
	comp=Z,46nm,1.7s						
J01E	Myrtle Point	83.97	47	P	P	05 37 13.3	+1.3
	baz=280						
D04E	Lakebay	84.04	43	P	P	05 37 13.4	+1.2
	baz=281						
G03D	McMinnville, O	84.07	45	P	P	05 37 13.5	+1.0
	baz=281						
COR	Corvallis	84.16	46	P	P	05 37 13.4	+0.5
COR				pmax	pmax		
	comp=Z,111nm,1.7s						
COR	Corvallis	84.16	46	P	P	05 37 13.4	+0.5
BELG	Belogornoye	84.20	322	LR	LR	06 18 03.1	
	comp=Z,170nm,18.3s,baz=97,slow=38						
BELG	Belogornoye	84.20	322	*c i*P	P	05 37 12.6	-0.3
BELG				pmax	pmax		
	comp=Z,30nm,1.5s						
K02D	Willamette Mer	84.25	48	P	P	05 37 14.6	+1.1
	baz=281						
B05A	Bryant	84.28	42	P	P	05 37 14.7	+1.3
	baz=281,SNR=8.5						
I03D	Drain, OR	84.29	47	P	P	05 37 15.2	+1.6
	baz=281,SNR=7.4						
E04D	Cinebar	84.29	44	P	P	05 37 15.1	+1.6
	baz=281,SNR=8.0						
KMPM	Mount Pierce	84.33	50	P	P	05 37 15.0	+0.9
KMPM				IAmb	IAmb	05 37 19.8	
	comp=Z,26nm,0.9s						
BUCK	Buck Mountain	84.45	46	P	P	05 37 15.7	+1.2
F04A	Amboy	84.51	44	IAmb	IAmb	05 37 20.7	
	comp=Z,27nm,1.0s						
KHMM	Horse Mountain	84.54	50	P	P	05 37 16.3	+1.1
KHMM				IAmb	IAmb	05 37 23.1	
	comp=Z,25nm,0.8s						
D05A	Enumclaw	84.56	43	IAmb	IAmb	05 37 24.7	
	comp=Z,25nm,1.0s						
H04D	Lebanon	84.57	46	P	P	05 37 16.6	+1.6
	baz=281,SNR=9.9						
B06A	Marblemount	84.62	42	IAmb	IAmb	05 37 17.4	
	comp=Z,39nm,1.5s						
KMRM	Mail Ridge	84.68	50	IAmb	IAmb	05 37 19.0	
	comp=Z,30nm,1.1s						
HUMO	Hull Mountain	84.78	48	P	P	05 37 16.9	+0.8
HUMO				IAmb	IAmb	05 37 19.0	
	comp=Z,52nm,1.7s						
EUNU	Eureka	84.80	8	P	P	05 37 16.5	+0.9
EUNU				IAmb	IAmb	05 37 17.6	
	comp=Z,25nm,1.1s						
KCPM	Cahto Peak	84.88	51	IAmb	IAmb	05 37 19.7	
	comp=Z,30nm,0.9s						
HOPEN	Hopen	84.90	348	*e*P	P	05 37 17.0	+1.0
H04A	Detroit Lake	84.92	46	IAmb	IAmb	05 37 21.0	
	comp=Z,33nm,1.3s						
I04A	Tendick Farm,	84.94	46	P	P	05 37 18.1	+1.2
	baz=282,SNR=9.4						
YKA	Yellowknife Ar	85.09	27	P	P	05 37 17.4	+0.3
	comp=Z,6.1nm,0.6s,baz=287,slow=5.0,SNR=119						
YKA				LR	LR	06 13 10.3	
	comp=Z,216nm,21.2s,baz=284,slow=34						
	comp=Z,6.1nm,0.6s						
YKA	Yellowknife Ar	85.09	27	*i* P	P	05 37 17.2	0.0
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YBH	Yreka Blue Hor	85.13	49	LR	LR	06 07 45.5	
	comp=Z,134nm,21.5s,baz=314,slow=30						
YBH	Yreka Blue Hor	85.13	49	P	P	05 37 19.1	+1.1
YBH				pmax	pmax		
	comp=Z,13nm,0.8s						
YBH	Yreka Blue Hor	85.13	49	P	P	05 37 19.1	+1.1
YBH				IAmb	IAmb	05 37 20.8	
	comp=Z,13nm,0.8s						
F05D	White Salmon	85.18	44	IAmb	IAmb	05 37 20.9	
	comp=Z,28nm,1.4s						
F05D	White Salmon	85.18	44	P	P	05 37 18.9	+0.9
	baz=282						
J04D	Umpqua Nationa	85.27	47	P	P	05 37 20.2	+1.4
	baz=282,SNR=8.8						
L04D	Klamath Falls	85.33	48	P	P	05 37 20.4	+1.4
	baz=282,SNR=13						
O02D	Mt. Diablo Mer	85.38	50	P	P	05 37 20.9	+1.6
O02D				IAmb	IAmb	05 37 24.1	
	comp=Z,17nm,0.9s						
O02D	Mt. Diablo Mer	85.38	50	P	P	05 37 21.2	+1.9
	baz=282,SNR=12						
G05D	Wamic, OR	85.41	45	P	P	05 37 20.7	+1.4
	baz=282						
LTY	Liberty	85.42	43	P	P	05 37 20.2	+0.8
LTY				IAmb	IAmb	05 37 32.9	
	comp=Z,23nm,1.1s						
SPA0	Spitsbergen Ar	85.53	350	*e*P	P	05 37 19.5	+0.2
SPITS	Spitsbergen Ar	85.53	350	LR	LR	06 16 45.1	
	comp=Z,188nm,19.6s,baz=264,slow=36						
SPITS	Spitsbergen Ar	85.53	350	P	P	05 37 19.6	+0.4
SPITS				pmax	pmax		
	comp=Z,121nm,1.3s						
JRN	Qarnain Island	85.56	294	P	P	05 37 20.2	-0.1
DOK	Doka	85.58	288	P	P	05 37 20.3	-0.3
I05D	Terrebonne, OR	85.58	46	P	P	05 37 21.2	+1.0
	baz=282						
K04D	Chiloquin, OR	85.65	48	P	P	05 37 21.2	+0.6
	baz=282						
KBS	Kingsbay	85.72	352	*c i*P	P	05 37 20.5	+0.4
KBS				pmax	pmax		
	comp=Z,63nm,1.3s						
KBS	Kingsbay	85.72	352	P	P	05 37 20.3	+0.2
KBS	Kingsbay	85.72	352	*e*P	P	05 37 19.5	-0.6
KBS	Kingsbay	85.72	352	*e*P	P	05 37 20.7	+0.6
J05D	Fort Rock, OR	85.88	47	P	P	05 37 23.1	+1.3
	baz=282,SNR=31						
WHFO	Wadi Hawf	86.05	287	P	P	05 37 22.1	-0.8
B08A	Colville Reser	86.06	42	P	P	05 37 23.5	+1.1
O03E	Paynes Creek	86.10	50	IAmb	IAmb	05 37 32.2	
	comp=Z,35nm,1.1s						
O03E	Paynes Creek	86.10	50	P	P	05 37 23.8	+0.9
	baz=282,SNR=9.8						
E07A	Sunnyside	86.12	43	IAmb	IAmb	05 37 25.3	
	comp=Z,17nm,0.8s						
NOR	Nord	86.20	357	*e*P	P	05 37 21.5	-1.0
NOR				IAmb	IAmb	05 37 23.8	
	comp=Z,32nm,1.5s						
F07A	Phinny Hill Vi	86.22	44	IAmb	IAmb	05 37 27.9	
	comp=Z,22nm,1.3s						
K05A	Summer Lake	86.25	47	P	P	05 37 25.1	+1.4
K05A				IAmb	IAmb	05 37 30.2	
	comp=Z,22nm,1.1s						
HAWA	Hanford	86.38	43	IAmb	IAmb	05 37 26.5	
	comp=Z,20nm,1.1s						
KLMR	Klimovskoe	86.39	332	*e*P	P	05 37 21.6	-2.1
KLMR				*e*		05 40 45.2	
KLMR				pmax	pmax		
	comp=Z,38nm,1.3s						
KLMR	Klimovskoe	86.39	332	*e*P	P	05 37 21.7	-2.0
KLMR				AMP		05 37 25.3	
	comp=Z,38nm,1.3s						
KLMR				*e*PP	PP	05 40 45.2	+0.5
KLMR				LQ	LQ	06 10 07.2	
KLMR				LQ	LQ	06 10 07.2	
KLMR				LR	LR	06 14 49.2	
HSPB	Hornsund (broa	86.42	350	*e*P	P	05 37 23.9	+0.3
ORV	Oroville	86.48	50	IAmb	IAmb	05 37 28.4	
	comp=Z,18nm,1.3s						
RES	Resolute Bay	86.59	13	P	P	05 37 25.3	+0.9
RES				pmax	pmax		
	comp=Z,29nm,0.9s						
RES	Resolute Bay	86.59	13	P	P	05 37 25.2	+0.9
RES				IAmb	IAmb	05 37 26.4	
	comp=Z,30nm,0.9s						
ABTO	Aybut	86.60	287	P	P	05 37 25.5	-0.1
	SNR=6.3						
KHOR	Al-Khor Airpor	86.61	295	P	P	05 37 24.9	-0.6
D08A	Wollman Farm,	86.63	43	IAmb	IAmb	05 37 30.7	
	comp=Z,21nm,1.0s						
E08A	Dider Farm, El	86.67	43	IAmb	IAmb	05 37 30.5	
	comp=Z,30nm,1.1s						
MOD	Modoc Plateau	86.85	48	IAmb	IAmb	05 37 29.1	
	comp=Z,28nm,1.4s						
I07A	Izee	86.93	46	P	P	05 37 27.6	+0.7
I07A				IAmb	IAmb	05 37 33.1	
	comp=Z,16nm,1.2s						
SOCY	Socotra	86.95	282	P	P	05 37 26.3	-1.2
SOCY				IAmb	IAmb	05 37 31.8	
	comp=Z,33nm,1.4s						
SOCY	Socotra	86.95	282	P	P	05 37 27.5	0.0
G08A	Pilot Rock	87.02	44	IAmb	IAmb	05 37 32.8	
	comp=Z,15nm,1.2s						
TRNA	Turayna	87.05	295	P	P	05 37 28.3	+0.6
BEKR	Beckworth	87.27	50	IAmb	IAmb	05 37 31.0	
	comp=Z,18nm,0.9s						
BJO1	Bjornoya	87.27	347	*e*P	P	05 37 27.6	-0.2
NEW	Newport	87.51	41	LR	LR	06 11 21.6	
	comp=Z,127nm,19.9s,baz=304,slow=32						
NEW	Newport	87.51	41	P	P	05 37 30.6	+1.1
NEW				pmax	pmax		
	comp=Z,48nm,1.4s						
NEW	Newport	87.51	41	P	P	05 37 30.6	+1.1
NEW	Newport	87.51	41	P	P	05 37 30.5	+1.0
	baz=285,SNR=32						
CMB	Columbia Colle	87.66	52	P	P	05 37 31.2	+0.7
CMB				pmax	pmax		
	comp=Z,12nm,1.2s						
CMB	Columbia Colle	87.66	52	P	P	05 37 31.2	+0.7
J08A	Circle Bar Ran	87.83	46	P	P	05 37 32.2	+1.0
J08A				IAmb	IAmb	05 37 37.0	
	comp=Z,29nm,1.2s						
WVOR	Wild Horse Val	87.93	47	IAmb	IAmb	05 37 34.3	
	comp=Z,18nm,1.1s						
PNTR	Pine Nut	88.02	51	IAmb	IAmb	05 37 35.2	
	comp=Z,17nm,0.9s						
F10A	Beach Ranch, E	88.03	44	P	P	05 37 32.9	+0.7
F10A				IAmb	IAmb	05 37 38.6	
	comp=Z,18nm,1.1s						
PAHR	Pah Rah Range	88.04	50	P	P	05 37 32.5	+0.1
PAHR				IAmb	IAmb	05 37 34.9	
	comp=Z,18nm,1.1s						
VRH	Novokhopyorsk	88.05	322	*e*P	P	05 37 30.0	-1.9
VRH				pmax	pmax		
	comp=Z,40nm,0.7s						
HAMF	Hammerfest	88.26	343	*e*P	P	05 37 32.3	-0.2
BMO	Blue Mountains	88.27	45	P	P	05 37 34.0	+0.7
BMO				pmax	pmax		
	comp=Z,34nm,1.2s						
BMO	Blue Mountains	88.27	45	P	P	05 37 34.0	+0.7
ARA0	ARCESS Array S	88.29	342	*e*P	P	05 37 32.9	+0.1
ARCES	ARCESS Array B	88.29	342	P	P	05 37 32.4	-0.4
	comp=Z,4.9nm,0.6s,baz=62,slow=5.6,SNR=50						
ARCES				LR	LR	06 20 52.6	
	comp=Z,137nm,18.5s,baz=60,slow=38						
	comp=Z,4.9nm,0.6s						
ARCES	ARCESS Array B	88.29	342	P	P	05 37 32.6	-0.2
ARCES				pmax	pmax		
	comp=Z,21nm,1.2s						
ARCES	ARCESS Array B	88.29	342	P	P	05 37 32.6	-0.2
ARCES				IAmb	IAmb	05 37 37.8	
	comp=Z,21nm,1.1s						
PAGB	Antelope Grade	88.29	54	IAmb	IAmb	05 37 38.3	
	comp=Z,26nm,1.1s						
YERR	Yerington	88.32	51	IAmb	IAmb	05 37 36.5	
	comp=Z,21nm,1.2s						
OMMB	Old Mammoth Mi	88.83	52	P	P	05 37 35.9	-0.5
OMMB				IAmb	IAmb	05 37 39.0	
	comp=Z,17nm,1.3s						
PKM	Mcpherson Peak	88.83	55	P	P	05 37 38.1	+1.8
	baz=284,SNR=5.6						
VOG	Valley Oaks Go	88.84	53	P	P	05 37 36.8	+0.8
	baz=284						
ZEI	Tsey	88.89	313	*e*P	P	05 37 34.0	-2.4
ZEI				pmax	pmax		
	comp=Z,13nm,1.3s						
GOF	Gofitskoye	88.89	316	*i* P	P	05 37 34.7	-1.3
GNI	Garni	88.95	311	LR	LR	06 22 00.9	
	comp=Z,107nm,19.3s,baz=85,slow=39						
GNI	Garni	88.95	311	⇓*e*P	P	05 37 38.3	+1.6
GNI				pmax	pmax		
	comp=Z,42nm,1.6s						
RYN	Ryan	88.95	51	P	P	05 37 35.9	-0.8
RYN				IAmb	IAmb	05 37 39.5	
	comp=Z,16nm,1.0s						
MLAC	Mammoth, Mammo	88.95	52	P	P	05 37 37.7	+0.9
	baz=284						
MOS	Moscow	88.98	327	*e*P	P	05 37 34.2	-2.0
MOS				*e*		05 41 05.0	
MOS				pmax	pmax		
	comp=Z,50nm,1.3s						
LHV	Little Huntoon	89.05	51	P	P	05 37 37.9	+0.9
LHV				IAmb	IAmb	05 37 40.3	
	comp=Z,21nm,1.3s						
PLID	Pearl Lake	89.10	44	P	P	05 37 36.7	-0.7
PLID				IAmb	IAmb	05 37 41.0	
	comp=Z,22nm,1.4s						
BCW	Bitter Crk WRg	89.14	55	IAmb	IAmb	05 37 41.0	
	comp=Z,33nm,1.2s						
KVN	Kaiserville	89.16	50	IAmb	IAmb	05 37 40.4	
	comp=Z,25nm,1.2s						
NVAR	Mina Array Bea	89.16	51	P	P	05 37 39.4	+1.6
	comp=Z,12nm,0.7s,baz=268,slow=5.4,SNR=132						
	comp=Z,12nm,0.7s						
NVAR	Mina Array Bea	89.16	51	P	P	05 37 39.3	+1.5
VES	Vestal, Richgr	89.19	54	P	P	05 37 38.5	+0.9
	baz=284,SNR=10						
KTK1	Kautokeino	89.25	342	*e*P	P	05 37 37.3	0.0
ONI	Oni	89.26	313	P	P	05 37 38.3	+0.4
ONI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ONI	Oni	89.26	313	P	P	05 37 38.3	+0.4
NV11	Mina Array Sit	89.27	51	IAmb	IAmb	05 37 41.0	
	comp=Z,17nm,1.0s						
LPSR	Galich'ya Gora	89.28	324	*e*P	P	05 37 36.1	-1.6
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
WALA	Waterton Lakes	89.34	40	P	P	05 37 38.6	+0.4
WALA				IAmb	IAmb	05 37 41.3	
	comp=Z,23nm,1.5s						
KBZ	Khabaz	89.34	315	P	P	05 37 37.1	-1.1
	comp=Z,6.8nm,1.0s,baz=159,slow=3.4,SNR=15						
KBZ				LR	LR	06 21 02.8	
	comp=Z,98nm,19.5s,baz=55,slow=38						
	comp=Z,6.8nm,1.0s						
KBZ	Khabaz	89.34	315	*ce*P	P	05 37 36.7	-1.5
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORR	Voronezh	89.41	323	⇓*i*P	P	05 37 37.4	-0.9
VORR				pmax	pmax		
	comp=Z,34nm,1.3s						
KIV	Kislovodsk	89.43	315	*e*P	P	05 37 38.2	-0.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BMN	Battle Mountai	89.47	49	P	P	05 37 40.3	+1.2
BMN				pmax	pmax		
	comp=Z,26nm,1.4s						
BMN	Battle Mountai	89.47	49	P	P	05 37 40.3	+1.2
BMN				IAmb	IAmb	05 37 41.8	
	comp=Z,26nm,1.4s						
ARVC	Arvin	89.56	54	P	P	05 37 40.2	+0.8
	baz=284						
VSR	Storozhevoye	89.58	322	*e*P	P	05 37 37.2	-1.9
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD	Divnogorie	89.58	322	*e*P	P	05 37 37.5	-1.6
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
MFID	Camas Ranch	89.67	46	IAmb	IAmb	05 37 44.7	
	comp=Z,37nm,1.2s						
ISA	Isabella, Lake	89.71	54	IAmb	IAmb	05 37 42.4	
	comp=Z,20nm,1.6s						
ISA	Isabella, Lake	89.71	54	P	P	05 37 41.1	+0.9
	baz=284,SNR=6.2						
OBN	Obninsk	89.76	327	LR	LR	06 20 48.2	
	comp=Z,38nm,18.8s,baz=354,slow=38						
OBN	Obninsk	89.76	327	*c i*P	P	05 37 38.5	-1.3
OBN				*e*		05 41 13.2	
OBN				pmax	pmax		
	comp=Z,47nm,1.3s						
TULEG	Thule	89.78	7	P	P	05 37 39.9	+0.3
TULEG				IAmb	IAmb	05 38 39.4	
	comp=Z,29nm,1.2s						
TULEG	Thule	89.78	7	*i* P	P	05 37 37.2	-2.4
TULEG				IAmb	IAmb	05 37 40.8	
	comp=Z,17nm,1.0s						
JETT	Jettan, Norway	89.79	343	*e*P	P	05 37 39.8	0.0
VNDA	Vanda	89.82	176	P	P	05 37 40.0	+0.4
	comp=Z,1.5nm,0.9s,baz=304,slow=5.5,SNR=8.8						
VNDA				LR	LR	06 19 57.1	
	comp=Z,104nm,18.2s,baz=336,slow=37						
	comp=Z,1.5nm,0.9s						
VNDA	Vanda	89.82	176	P	P	05 37 40.0	+0.4
VNDA	Vanda	89.82	176	P	P	05 37 40.7	+1.1
CWC	Cottonwood Cre	89.83	53	P	P	05 37 41.8	+0.9
	baz=285						
LCH	Last Change Ra	89.97	52	IAmb	IAmb	05 37 44.3	
	comp=Z,22nm,1.5s						
MSO	Missoula	89.98	42	P	P	05 37 42.0	+0.7
MSO	Missoula	89.98	42	P	P	05 37 41.7	+0.4
	baz=287						
VALR	Valaam	90.11	334	*c i*P	P	05 37 40.4	-0.9
VALR				pmax	pmax		
	comp=Z,24nm,0.9s						
TRO	Tromso	90.17	343	*e*P	P	05 37 40.9	-0.6
DECC	Green Verdugo	90.17	55	P	P	05 37 43.4	+1.0
	baz=284						
CCAC	Calif City Air	90.20	54	IAmb	IAmb	05 37 45.6	
	comp=Z,36nm,1.4s						
GRAC	Grapevine Rang	90.24	52	P	P	05 37 44.0	+1.4
	baz=285,SNR=5.3						
EDW2	Edwards Air Fo	90.29	54	P	P	05 37 44.3	+1.4
	baz=285,SNR=10						
LRMC	Laurel Mtn Rad	90.38	54	P	P	05 37 45.0	+1.5
	baz=285,SNR=7.7						
MPMC	Manual Prospec	90.39	53	P	P	05 37 45.2	+1.7
	baz=285,SNR=20						
HLID	Hailey	90.62	45	P	P	05 37 45.8	+1.4
	baz=287,SNR=19						
BFSC	Mount Baldy Ra	90.72	55	P	P	05 37 44.9	-0.1
	baz=285						
FURC	Furnace Creek,	90.77	53	P	P	05 37 46.6	+1.6
	baz=285,SNR=15						
ELK	Elko	90.84	48	LR	LR	06 11 43.3	
	comp=Z,143nm,21.7s,baz=297,slow=31						
ELK	Elko	90.84	48	P	P	05 37 46.5	+0.9
ELK				pmax	pmax		
	comp=Z,14nm,1.2s						
ELK	Elko	90.84	48	P	P	05 37 46.5	+0.9
ELK				IAmb	IAmb	05 37 50.5	
	comp=Z,14nm,1.1s						
QSM	Queen of Sheba	90.90	53	IAmb	IAmb	05 37 48.5	
	comp=Z,40nm,1.5s						
DAG	Danmarks Havn	90.93	356	*i* P	P	05 37 44.0	-0.9
DAG				IAmb	IAmb	05 37 47.8	
	comp=Z,12nm,0.9s						
GWY	Greenwater Val	91.00	53	P	P	05 37 46.4	+0.1
GWY				IAmb	IAmb	05 37 49.0	
	comp=Z,28nm,1.4s						
RRX	Edison Barstow	91.08	54	P	P	05 37 47.7	+1.1
	baz=285						
TPNV	Topopah Spring	91.12	52	IAmb	IAmb	05 37 49.6	
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	91.12	52	P	P	05 37 48.4	+1.5
	baz=286,SNR=20						
GSC	Goldstone, Bar	91.12	54	P	P	05 37 47.0	+0.2
GSC				pmax	pmax		
	comp=Z,30nm,1.3s						
GSC	Goldstone, Bar	91.12	54	P	P	05 37 47.0	+0.2
GSC				IAmb	IAmb	05 37 49.7	
	comp=Z,30nm,1.3s						

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GSC   Goldstone, Bar    91.12  54  P      P      05 37 48.3 +1.4
      baz=285,SNR=15
R11A  Troy Canyon, C    91.25  51  P      P      05 37 48.9 +1.5
      baz=286,SNR=13
MURC  Murrieta          91.25  55  P      P      05 37 47.9 +0.5
      baz=285
LRM   Limekiln Ridge    91.27  43  P      P      05 37 47.9 +0.4
BBRC  Big Bear Solar    91.30  55  P      P      05 37 48.2 +0.4
      baz=285
S11A  Rachel            91.31  51  IAmb   IAmb   05 37 50.8
      comp=Z,16nm,1.1s
DLMT  Dillon            91.32  43  P      P      05 37 48.5 +0.9
SHOC  Shoshone, Teco    91.38  53  P      P      05 37 49.3 +1.4
      baz=286,SNR=9.5
109C  Camp Elliot, M    91.51  56  IAmb   IAmb   05 37 56.1
      comp=Z,36nm,1.5s
109C  Camp Elliot, M    91.51  56  P      P      05 37 49.6 +1.1
      baz=285
HEC   Hector,Ludlow     91.62  54  P      P      05 37 50.6 +1.4
      baz=286,SNR=11
TUQ   Turquoise Moun    91.78  53  P      P      05 37 51.4 +1.4
      baz=286,SNR=16
PFO   Pinyon Flats O    91.84  55  LR     LR     06 20 35.4
      comp=Z,59nm,18.1s,baz=342,slow=36
PFO   Pinyon Flats O    91.84  55  P      P      05 37 50.8 +0.5
PFO                                pmax   pmax
      comp=Z,13nm,1.2s
PFO   Pinyon Flats O    91.84  55  P      P      05 37 50.8 +0.5
PFO                                IAmb   IAmb   05 37 57.3
      comp=Z,13nm,1.1s
PFO   Pinyon Flats O    91.84  55  P      P      05 37 51.1 +0.9
      baz=286
TPFO  Pinon Flats       91.85  55  P      P      05 37 51.1 +0.8
      baz=286
BOZ   Bozeman (W)       91.89  43  P      P      05 37 51.4 +1.2
      baz=289,SNR=12
MONP2 Monument Peak     92.06  56  P      P      05 37 52.3 +0.9
      baz=286
SHPR  Sheep Range       92.08  52  P      P      05 37 52.2 +0.9
SHPR                               IAmb   IAmb   05 37 54.6
      comp=Z,29nm,1.6s
BELC  Belle Mtn. Jos    92.11  55  P      P      05 37 52.4 +0.9
      baz=286,SNR=6.6
KOPT  Kop Dagi          92.11 311  IAmb   IAmb   05 37 57.1
      comp=Z,33nm,1.4s
FIA1  FINESS Array S    92.12 335  P      P      05 37 49.3 -1.4
FIA1                               IAmb   IAmb   05 37 50.4
      comp=Z,15nm,0.9s
FINES FINESS Array B    92.12 335  P      P      05 37 49.2 -1.5
      comp=Z,8.3nm,0.8s,baz=72,slow=6.2,SNR=29
FINES                              LR     LR     06 21 49.8
      comp=Z,147nm,18.2s,baz=57,slow=37
      comp=Z,8.3nm,0.8s
GMRC  Granite Mounta    92.17  54  P      P      05 37 53.0 +1.2
      baz=286,SNR=12
STEI  Steigen           92.28 343 eP      P      05 37 51.1 -0.2
EGMT  Eagleton          92.29  40  P      P      05 37 52.0 +0.1
EGMT                               IAmb   IAmb   05 37 56.9
      comp=Z,10nm,1.1s
EGMT  Eagleton          92.29  40  P      P      05 37 52.5 +0.5
      baz=290
HVU   Hansel Valley     92.31  47  P      P      05 37 53.4 +1.1
HVU                                pmax   pmax
      comp=Z,7.0nm,1.0s
HVU   Hansel Valley     92.31  47  P      P      05 37 53.4 +1.1
IKP   In-Ko-Pah, Jac    92.38  56  P      P      05 37 53.5 +0.8
      baz=286
RMX   La Rumorosa       92.42  56  IAmb   IAmb   05 37 59.2
      comp=Z,11nm,1.1s
PSUT  Pine Spring       92.50  50  P      P      05 37 53.9 +0.6
SWSC  Sam W. Stewart    92.55  56  P      P      05 37 54.3 +0.9
      baz=286
FAUS  Fauske            92.62 342 eP      P      05 37 53.0 +0.1
LOF   Lofoten           92.64 343 eP      P      05 37 53.3 +0.3
BC3   Big Chuckawall    92.64  55  P      P      05 37 55.3 +1.4
      baz=286,SNR=8.5
YHH   Holmes Hill       92.67  43  P      P      05 37 55.6 +1.5
YHH                                IAmb   IAmb   05 37 59.2
      comp=Z,13nm,1.1s
IRM   Iron Mountain     92.75  54  P      P      05 37 55.8 +1.5
      baz=286,SNR=10.0
ANN   Anapa             92.76 317 eP      P      05 37 52.1 -1.9
ANN                                pmax   pmax
      comp=Z,36nm,1.1s
DUG   Dugway, Tooele    92.77  48  P      P      05 37 55.6 +1.2
      baz=288,SNR=5.2
H17A  Grant Village     92.99  44  IAmb   IAmb   05 38 03.9
      comp=Z,13nm,0.9s
H17A  Grant Village     92.99  44  P      P      05 37 58.2 +2.7
      baz=290,SNR=15
NEE2  Needles Airpor    92.99  54  P      P      05 37 57.0 +1.6
      baz=287
FLWY  Flagg Ranch       93.01  44  P      P      05 37 57.2 +1.6
FLWY                               IAmb   IAmb   05 38 02.8
      comp=Z,23nm,1.1s
TPAW  Teton Pass        93.04  45  P      P      05 37 55.8  0.0
LKWY  Lake              93.05  43  IAmb   IAmb   05 38 02.7
      comp=Z,18nm,1.0s
MOOW  Moose Ponds       93.09  44  P      P      05 37 55.5 -0.4
GCMT  Greycliff         93.12  42  P      P      05 37 56.2 +0.3
AHID  Auburn Hatcher    93.17  45  P      P      05 37 57.1 +0.8
AHID                               IAmb   IAmb   05 38 00.8
      comp=Z,22nm,1.4s
SNOW  Snow King Moun    93.18  45  P      P      05 37 55.9 -0.5
HWUT  Hardware Ranch    93.22  46  P      P      05 37 56.4 -0.1
HWUT                               IAmb   IAmb   05 38 00.8
      comp=Z,17nm,1.4s
LOHW  Long Hollow       93.23  44  P      P      05 37 56.2 -0.4
LOHW                               IAmb   IAmb   05 38 01.7
      comp=Z,14nm,1.7s
GLA   Glamis            93.31  55  IAmb   IAmb   05 37 59.8
      comp=Z,12nm,1.1s
GLA   Glamis            93.31  55  P      P      05 37 58.4 +1.4
      baz=286
BLYC  Blythe            93.36  55  IAmb   IAmb   05 37 59.9
      comp=Z,13nm,1.2s
LCMT  Little Creek M    93.41  51  P      P      05 37 58.1 +0.7
DBG   Daneborg          93.42 356 i P     P      05 37 56.1 -0.3
DBG                                IAmb   IAmb   05 38 03.6
      comp=Z,19nm,1.5s
MEF   Metsahovi         93.45 334 eP      P      05 37 56.0 -0.9
PDMCI Parker Dam,Lak    93.50  54  P      P      05 37 59.3 +1.6
      baz=287
TCRU  Three Creeks R    93.52  50  IAmb   IAmb   05 38 25.3
      comp=Z,9.0nm,0.4s
RLMT  Red Lodge         93.62  43  P      P      05 37 58.9 +0.6
RLMT                               IAmb   IAmb   05 38 01.4
      comp=Z,20nm,1.3s
RLMT  Red Lodge         93.62  43  P      P      05 37 59.5 +1.2
      baz=291
MOR8  Moi Rana          93.65 342 eP      P      05 37 56.0 -1.8
MSU   Marysvale         93.75  50  P      P      05 37 59.1  0.0
MSU   Marysvale         93.75  50  P      P      05 37 59.1  0.0
RAF   Rauma             94.12 335 eP      P      05 37 58.5 -1.4
BW06  Boulder Array     94.24  45  P      P      05 38 01.1 -0.2
BW06  Boulder Array     94.24  45  P      P      05 38 02.0 +0.7
      baz=290
PD31  Pinedale Array    94.24  45  P      P      05 38 01.5 +0.3
PDAR  Pinedale Array    94.24  45  P      P      05 38 01.9 +0.6
      comp=Z,1.0nm,0.6s,baz=115,slow=0.5,SNR=14
PDAR                               PP     PP     05 41 44.1 -3.8
      comp=Z,0.3nm,0.6s,baz=318,slow=1.2,SNR=2.9
PDAR                               LR     LR     06 15 20.7
      comp=Z,75nm,20.9s,baz=302,slow=32
      comp=Z,1.0nm,0.6s
PDAR  Pinedale Array    94.24  45  P      P      05 38 01.2 -0.1
113A  Mohawk Valley,    94.25  55  P      P      05 38 02.2 +1.1
Q16A  Castle Valley     94.37  49  IAmb   IAmb   05 38 24.1
      comp=Z,24nm,1.9s
MTSE  Matsula           94.48 333 eP      P      05 38 01.2 -0.4
Y14A  Wickenburg        94.51  54  P      P      05 38 03.2 +0.7
MNK   Minsk             94.60 328 i P     P      05 38 00.0 -2.3
MNK                               i              05 41 49.1
MNK                               i PPP   PPP    05 43 52.9
MNK                               i S     SKSac  05 48 35.5 -0.3
MNK                               i PS    PS     05 50 31.0 -1.2
MNK                               i SS    SS     05 55 38.0 +2.2
MNK                               i SSS   SSS    05 59 19.6
MNK                                pmax   pmax
      comp=E,1.0nm,0.8s
MNK                                pmax   pmax
      comp=Z,11nm,0.8s
MNK                                pmax   pmax
      comp=N,7.0nm,0.8s
MNK                                MLR    MLR
      comp=N,138nm,18.0s
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MNK                                MLR    MLR
      comp=Z,296nm,18.0s
MNK                                MLR    MLR
      comp=E,30nm,18.0s
MNK   Minsk             94.60 328 i P     P      05 38 00.0 -2.3
      comp=E,1.0nm,0.8s,baz=62
MNK                               i P     PcP    05 38 00.4 -2.2
      comp=N,7.0nm,0.8s
MNK                               i P     PcP    05 38 00.4 -2.2
      comp=Z,11nm,0.8s
MNK                               i PP    PP     05 41 49.2 -0.8
MNK                               i PPP   PPP    05 43 53.0
MNK                               i S     SKSac  05 48 35.5 -0.3
MNK                               i PS    PS     05 50 31.0 -1.2
MNK                               i SS    SS     05 55 38.0 +2.2
MNK                               i SSS   SSS    05 59 19.6
MNK                               i LQ    LQ     06 13 42.6
MNK                               i LR    LR     06 17 13.7
MNK                               i LRM   MLR    06 23 23.6
      comp=N,138nm,18.1s
MNK                               i LRM   MLR    06 23 26.3
      comp=Z,296nm,18.1s
MNK                               i LRM   MLR    06 23 27.6
      comp=E,30nm,18.1s
NACGM Naroch            94.97 329⇓eP      P      05 38 04.4 +0.4
      baz=62
RDMU  Red Mountain      94.99  47  IAmb   IAmb   05 38 07.7
      comp=Z,16nm,1.4s
LAO   LASA Array        95.01  40  P      P      05 38 05.7 +1.2
LAO   LASA Array        95.01  40  P      P      05 38 05.5 +1.0
      baz=293
JMIC  Jan Mayen         95.19 351  LR     LR     06 21 08.3
      comp=Z,46nm,19.3s,baz=86,slow=36
214A  Organ Pipe Nat    95.26  56  P      P      05 38 07.2 +1.3
      baz=287
WUAZ  Wupatki           95.31  52  P      P      05 38 05.5 -0.7
WUAZ  Wupatki           95.31  52  P      P      05 38 06.1 -0.1
      baz=289
DGMT  Dagmar            95.55  38  P      P      05 38 04.6 -2.3
DGMT                               IAmb   IAmb   05 38 07.6
      comp=Z,7.1nm,0.8s
DGMT  Dagmar            95.55  38  P      P      05 38 07.0 +0.2
      baz=295
AKASG Malin Array Be    95.59 324  P      P      05 38 07.7 +0.8
      comp=Z,0.8nm,0.6s,baz=61,slow=5.7,SNR=7.1
AKASG                              LR     LR     06 24 04.2
      comp=Z,325nm,18.8s,baz=4.5,slow=37
      comp=Z,0.8nm,0.6s
AKASG Malin Array Be    95.59 324  P      P      05 38 05.4 -1.5
AKBB  Malin Array Si    95.59 324⇑eP      P      05 38 05.7 -1.2
AKBB                               pmax   pmax
      comp=Z,6.0nm,1.1s
AKBB  Malin Array Si    95.59 324  P      P      05 38 06.0 -0.9
AKBB                               IAmb   IAmb   05 38 08.9
      comp=Z,13nm,1.6s
SLIT  Slitere, Latvi    95.75 332 eP      P      05 38 05.9 -1.5
FCC   Fort Churchill    95.78  26  P      P      05 38 07.3 -0.3
FCC                                pmax   pmax
      comp=Z,8.0nm,0.9s
FCC   Fort Churchill    95.78  26  P      P      05 38 07.3 -0.3
FCC                                IAmb   IAmb   05 38 08.4
      comp=Z,7.6nm,0.8s
O20A  White River Ci    96.09  47  P      P      05 38 09.9 +0.2
      baz=291
PV23  Carpenter Ridg    96.12  49  P      P      05 38 09.4 -0.6
PV23                               IAmb   IAmb   05 38 12.0
      comp=Z,15nm,1.3s
PV11  David Mesa, Pa    96.28  49  IAmb   IAmb   05 38 12.5
      comp=Z,22nm,1.5s
PV13  Radium Mtn., P    96.36  49  P      P      05 38 11.1  0.0
K22A  Casper            96.37  44  P      P      05 38 11.4 +0.5
      baz=292
UPP   Uppsala           96.47 336 eP      P      05 38 09.5 -1.1
W18A  Petrified Fore    96.70  52  P      P      05 38 13.2 +0.6
      baz=290
TUC   Tucson            96.78  55  P      P      05 38 13.2 +0.4
      baz=289
MVCO  Mesa Verde        96.93  50  P      P      05 38 12.6 -1.1
MVCO                               IAmb   IAmb   05 38 16.6
      comp=Z,7.9nm,1.3s
MVCO  Mesa Verde        96.93  50  P      P      05 38 14.1 +0.4
      baz=290
BR131 Keskin Array S    97.19 313⇑eP      P      05 38 13.8 -0.9
BRTR  Keskin Array B    97.19 313  P      P      05 38 13.1 -1.5
      comp=Z,2.2nm,0.8s,baz=74,slow=4.7,SNR=7.4
BRTR                               LR     LR     06 27 45.8
      comp=Z,79nm,18.7s,baz=95,slow=39
      comp=Z,2.2nm,0.8s
BRTR  Keskin Array B    97.19 313  P      P      05 38 13.7 -0.9
BRTR  Keskin Array B    97.19 313  P      P      05 38 13.7 -1.0
MAW   Mawson            97.25 202  LR     LR     06 20 38.6
      comp=Z,200nm,18.7s,baz=72,slow=34
SMCO  Snowmass          97.35  48  P      P      05 38 15.2 -0.5
SMCO                               IAmb   IAmb   05 38 23.6
      comp=Z,8.5nm,1.4s
N23A  Red Feather La    97.44  46  P      Pdif   05 38 16.5 +0.5
      baz=293
RSSD  Black Hills       97.45  42  P      Pdif   05 38 17.0 +1.1
      baz=294
ANTO  Ankara            97.74 313  P      Pdif   05 38 17.2 +0.1
ANTO                               P      Pdif   05 38 17.2 +0.1
HFS   Hagfors           97.84 337  LR     LR     06 24 11.8
      comp=Z,152nm,22.0s,baz=40,slow=36
S22A  4UR Ranch, Cre    97.98  49  P      P      05 38 17.0 -1.5
S22A  4UR Ranch, Cre    97.98  49  P      P      05 38 18.2 -0.3
      baz=292
ISCO  Idaho Springs     98.09  47  P      P      05 38 17.5 -1.4
      baz=293
NB2   NORSAR Subarra    98.15 339  P      P      05 38 16.7 -1.6
      comp=Z,2.8nm,0.8s,baz=47,slow=5.1
NB2   NORSAR Subarra    98.15 339  P      P      05 38 16.7 -1.6
      baz=47,slow=5.1
NOA   NORSAR Array B    98.15 339  P      P      05 38 16.9 -1.4
      comp=Z,2.1nm,0.8s,baz=48,slow=4.6,SNR=5.5
NOA                                LR     LR     06 25 09.4
      comp=Z,52nm,18.8s,baz=50,slow=37
      comp=Z,2.1nm,0.8s
MOL   Molde             98.31 341 eP      Pdif   05 38 19.1 +0.1
MDND  Maddock           98.58  37  P      P      05 38 20.1 -0.5
      baz=298
SDCO  Great Sand Dun    98.96  48  P      P      05 38 21.5 -1.3
      baz=292
ANMO  Albuquerque       99.28  51⇑eP      Pdif   05 38 25.2 +1.0
ANMO                               pmax   pmax
      comp=Z,2.0nm,1.4s
ANMO  Albuquerque       99.28  51  P      Pdif   05 38 24.0 -0.2
      baz=292
BUR08 Bucovina Ar. S    99.34 323  P      Pdif   05 38 21.8 -2.3
BURAR Bucovina Array    99.35 323         Pdif   05 38 22.7 -1.4
ULM   Lac du Bonnet     99.52  34  P      Pdif   05 38 24.9 +0.3
      comp=Z,4.1nm,0.8s,baz=323,slow=5.1,SNR=3.7
ULM                                LR     LR     06 19 51.0
      comp=Z,83nm,19.2s,baz=300,slow=33
      comp=Z,4.1nm,0.8s
ULM   Lac du Bonnet     99.52  34⇓iP      Pdif   05 38 24.7 +0.1
MLR   Muntele Rosu      99.92 321  LR     LR     06 25 55.7
      comp=Z,160nm,20.8s,baz=63,slow=37
AGMN  Agassiz Nation   100.54  36  P      Pdif   05 38 29.1 -0.1
      baz=301
MNTX  Cornudas Mount   101.31  54  P      Pdif   05 38 33.8 +0.8
      baz=292
LRAL  Lakeview Retre   114.47  45  P      PKiKP  05 43 21.9 -0.2
      baz=304
PLCA  Paso Flores      138.58 140  PKP    PKiKP  05 44 10.7 +0.8
      comp=Z,1.3nm,0.9s,baz=268,slow=5.3,SNR=3.5
PLCA  Paso Flores      138.58 140  PKIKP  PKPdf  05 44 08.6 +0.9
PLCA  Paso Flores      138.58 140         PKPdf  05 44 08.6 +0.9
DBIC  Dimbokro         143.43 299  PKhKP  PKPpre 05 44 12.8
      comp=Z,5.9nm,0.9s,baz=146,slow=3.6,SNR=3.9
DBIC  Dimbokro         143.43 299  PKIKP  PKPbc  05 44 15.0 +0.7
DBIC  Dimbokro         143.43 299         PKPbc  05 44 15.0 +0.7
LCO   Las Campanas     143.97 123  PKIKP  PKPbc  05 44 16.3 +0.4
LCO   Las Campanas     143.97 123  PKPdf  PKPbc  05 44 16.3 +0.4
ZON   Zonda            144.55 129  PKIKP  PKPbc  05 44 18.0 +0.7
ZON   Zonda            144.55 129  PKPdf  PKPbc  05 44 17.9 +0.6
AC06  Mina Casimiro    144.83 121         PKPdf  05 44 19.0 -0.3
TBTG  Tabatinga, AM    146.22  80 eP      PKPab  05 44 23.5 -0.3
PB11  IPOC Station P   147.31 108         PKPab  05 44 27.2 -0.8
LVC   Limon Verde      147.44 114  PKPbc  PKPab  05 44 28.3 -0.4
      comp=Z,7.3nm,1.0s,baz=250,slow=11,SNR=5.4
LVC   Limon Verde      147.44 114  PKP2   PKPab  05 44 27.9 -0.8
LVC   Limon Verde      147.44 114         PKPab  05 44 27.9 -0.8
LVC   Limon Verde      147.44 114 eP      PKPbc  05 44 26.4 -0.4
PB16  IPOC Station P   147.65 106         PKPbc  05 44 27.3 -0.4
PB08  IPOC Station P   147.72 109         PKPbc  05 44 27.0 -0.6
AF01  San Pedro de A   148.01 114  PKPbc  PKPbc  05 44 29.1 +0.9
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LPAZ  La Paz           149.15 102  PKPbc  PKiKP  05 44 32.4 -0.6
      comp=Z,2.8nm,0.6s,baz=309,slow=3.2,SNR=20
LPAZ  La Paz           149.15 102  PKHKP  PKPpre 05 44 29.5
LPAZ  La Paz           149.15 102         PKPdf  05 44 29.5 +2.0
CNLB  Canela           158.14 145 eP      PKPdf  05 44 42.1 +2.9
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*NEIC **02** 06:02:51.6±1.6, 17.°98S±0.°04×70.°52W±0.°09, h52^{km}±12^{km}*
Error ellipse: s-maj=12.7km s-min=3.2km az=69.0
*ARE **02** 06:02:51±1.8, 18.°02S±0.°06×70.°52W±0.°08, h42^{km}±8^{km}, ML4.2, mb3.9/9(NEIC), Error ellipse: s-maj=11.5km s-min=8.2km az=79.0*
*GUC **02** 06:02:51.2±0.6, 17.°82S×70.°37W, h47^{km}±3^{km}, ML4.2*
*IDC **02** 06:02:54.2±2.2, 17.°98S×70.°52W, h58^{km}±24^{km}, mb3.1/2, mbtmp3.6/5, ML3.1/3, MS2.5/1, Error ellipse: s-maj=33.8km s-min=16.5km az=82.0*
ISC 02 06:02:52.4±1.0, **17.°96S**±0.°06×**70.°45W**±0.°07, **h48**^{km}±10^{km}, **n71**, σ1.s**67**/73, **mb3.8**/4, **5C-6D, Near coast of Peru**

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Code  Station Name      Δ°   AZ°   Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
AP01  Chacalluta         0.42 166  Pn     Pn     06 03 02.2 -0.4
AP01  Chacalluta         0.42 166⇓iP      Pn     06 03 02.3 -0.4
AP01                              i S     Sn     06 03 11.0 +1.1
AP01                               IAML          06 03 11.4
      comp=E,78µm,0.4s
AP01  Chacalluta         0.42 166⇑iP      Pn     06 03 02.4 -0.4
AP01                              i S     Sn     06 03 11.1 +1.1
AP01                               IAML          06 03 11.4
      comp=E,78µm,0.4s
PB12  IPOC Station P     0.66 170  Pn     Pn     06 03 05.0 -0.7
PB12  IPOC Station P     0.66 170⇑iP      Pn     06 03 05.7  0.0
PB12                              i S     Sn     06 03 16.6 +1.3
PB12                               IAML          06 03 17.9
      comp=N,16µm,0.3s
PB12  IPOC Station P     0.66 170⇑iP      Pn     06 03 05.7  0.0
PB12                              i S     Sn     06 03 16.7 +1.4
PB12                               IAML          06 03 17.9
      comp=N,16µm,0.3s
PB16  IPOC Station P     0.97 113  Pn     Pn     06 03 08.5 -1.7
PB16  IPOC Station P     0.97 113⇑eP      Pn     06 03 09.3 -1.0
PB16                              i S     Sn     06 03 23.0 -0.3
PB16                               IAML          06 03 25.1
      comp=E,5µm,0.5s
PB16  IPOC Station P     0.97 113⇓iP      Pn     06 03 09.4 -0.8
PB16                              eS      Sn     06 03 22.5 -0.7
PB11  IPOC Station P     1.94 157  Pn     Pn     06 03 23.1 -0.1
PB11  IPOC Station P     1.94 157 eP      Pn     06 03 23.2 +0.1
PB11                              eS      Sn     06 03 48.3 +1.9
PB11                               IAML          06 03 54.4
      comp=E,2µm,0.2s
PB11  IPOC Station P     1.94 157 eP      Pn     06 03 23.3 +0.2
PB11                              i S     Sn     06 03 49.1 +2.7
PB11                               IAML          06 03 54.4
      comp=E,2µm,0.2s
TA02  Huaiquique         2.32 173  Pn     Pn     06 03 28.6 +0.5
TA02  Huaiquique         2.32 173 eP      Pn     06 03 29.2 +1.1
TA02                              eS      Sn     06 03 58.1 +2.7
TA02                               IAML          06 04 08.8
      comp=N,2µm,0.6s
TA02  Huaiquique         2.32 173 eP      Pn     06 03 29.9 +1.8
TA02                               IAML          06 04 08.8
      comp=N,2µm,0.6s
PB08  IPOC Station P     2.49 151  Pn     Pn     06 03 29.7 -1.1
PB08  IPOC Station P     2.49 151 eP      Pn     06 03 31.9 +1.1
PB08                              eS      Sn     06 04 03.2 +3.0
PB08                               IAML          06 04 10.4
      comp=E,873nm,0.1s
PB08  IPOC Station P     2.49 151⇑eP      Pn     06 03 32.1 +1.3
PB08                              i S     Sn     06 04 03.7 +3.4
PB08                               IAML          06 04 10.4
      comp=E,873nm,0.1s
TA01  Diego Aracena      2.60 174  Pn     Pn     06 03 32.2 +0.1
TA01  Diego Aracena      2.60 174 eP      Pn     06 03 32.6 +0.6
TA01                              eS      Sn     06 04 04.7 +2.2
TA01                               IAML          06 04 16.2
      comp=E,520nm,0.7s
TA01  Diego Aracena      2.60 174 eP      Pn     06 03 33.4 +1.3
TA01                               IAML          06 04 16.2
      comp=E,520nm,0.7s
LPAZ  La Paz             2.77  53  P      Pn     06 03 37.1 +2.1
      comp=E,0.8nm,0.3s,baz=243,slow=9.2,SNR=54
LPAZ                               LR     LR     06 05 12.5
      comp=E,79nm,19.6s,baz=144,slow=49
      comp=E,6.4nm,0.3s
LPAZ  La Paz             2.77  53  Pn     Pn     06 03 37.0 +2.0
LPAZ  La Paz             2.77  53⇓eP      Pn     06 03 36.8 +1.9
PB01  IPOC Station P     3.20 164  Pn     Pn     06 03 38.9 -1.4
PB01  IPOC Station P     3.20 164 eP      Pn     06 03 40.4  0.0
PB01                               IAML          06 04 38.0
      comp=E,521nm,0.4s
PB02  IPOC Station P     3.38 171  Pn     Pn     06 03 42.3 -0.6
PB02  IPOC Station P     3.38 171⇓eP      Pn     06 03 44.5 +1.6
PB02                              eS      Sn     06 04 24.3 +2.5
PB07  IPOC Station P     3.78 172  Pn     Pn     06 03 46.0 -2.5
PB07  IPOC Station P     3.78 172⇓eP      Pn     06 03 49.8 +1.4
PB09  IPOC Station P     3.98 164  Pn     Pn     06 03 49.2 -1.9
PB09  IPOC Station P     3.98 164 eP      Pn     06 03 53.4 +2.3
PB04  IPOC Station P     4.36 176  Pn     Pn     06 03 55.2 -1.1
PB04  IPOC Station P     4.36 176⇓eP      Pn     06 03 56.6 +0.3
PB06  IPOC Station P     4.79 170  Pn     Pn     06 04 01.2 -1.1
LVC   Limon Verde        4.85 163  P      Pn     06 04 04.6 +1.4
      comp=E,1.9nm,0.3s,baz=352,slow=7.3,SNR=45
LVC                                S      Sn     06 05 00.3 +2.0
      comp=E,27nm,0.5s,baz=8.6,slow=7.2,SNR=7.2
      comp=E,6.8nm,0.2s
LVC   Limon Verde        4.85 163  Pn     Pn     06 04 02.7 -0.5
PB15  IPOC Station P     5.30 170  Pn     Pn     06 04 08.0 -1.3
PB10  IPOC Station P     5.53 181  Pn     Pn     06 04 11.6 -0.6
PB14  IPOC Station P     6.63 180  Pn     Pn     06 04 25.9 -1.7
GO02  Mina Guanaco       7.21 174  Pn     Pn     06 04 34.4 -1.2
AC01  Pan de Azucar      8.15 181  Pn     Pn     06 04 45.9 -2.3
NNA   Nana               8.57 313  P      Pn     06 04 57.0 +3.0
      comp=E,0.7nm,0.3s,baz=117,slow=18,SNR=2.3
      comp=E,3.8nm,0.6s
NNA   Nana               8.57 313  Pn     Pn     06 04 52.3 -1.7
AC06  Mina Casimiro      9.35 179  Pn     Pn     06 05 03.1 -1.6
AC04  Llanos de Chal    10.21 183  Pn     Pn     06 05 13.4 -3.0
LCO   Las Campanas      11.00 181  Pn     Pn     06 05 24.8 -2.7
VA03  San Esteban       14.74 180  Pn     Pn     06 06 15.8 -2.2
MT01  Popeta            15.86 182         P      06 06 33.3 -2.1
BO04  La Punta          15.96 180  Pn     Pn     06 06 32.2 -1.6
GO05  Huala             17.03 184  Pn     Pn     06 06 44.6 -2.7
GO05                               IAmb   IAmb   06 06 47.7
      comp=Z,12nm,1.4s
H03N1 Juan Fernandez    17.19 205  T      T      06 24 15.9
      baz=28,slow=73,SNR=217
H03N2 Juan Fernandez    17.19 205  T      T      06 24 14.8
      baz=28,slow=73,SNR=221
H03N3 Juan Fernandez    17.20 205  T      T      06 24 12.5
      baz=28,slow=73,SNR=208
TRCB  Terra Rica        17.38 109  P      P      06 06 51.9 -0.5
H03S3 Juan Fernandez    17.52 204  T      T      06 24 44.0
      baz=124,SNR=3.2
H03S1 Juan Fernandez    17.54 204  T      T      06 24 42.8
      baz=124,SNR=5.8
H03S2 Juan Fernandez    17.54 204  T      T      06 24 48.2
      baz=124,SNR=3.9
ITAB  Concordia         19.25 122  P      P      06 07 12.2 -0.7
PLTB  Pedras Altas      20.52 135  P      P      06 07 25.5 -1.2
PLTB                               IAmb   IAmb   06 07 26.3
      comp=Z,3.8nm,0.8s
TRQA  Tornquist         21.35 161  P      P      06 07 34.1 -1.5
TRQA                               IAmb   IAmb   06 07 50.8
      comp=Z,6.8nm,1.1s
PLCA  Paso Flores       22.70 180  P      P      06 07 51.4 +1.3
      comp=Z,1.1nm,0.9s,baz=340,slow=12,SNR=3.2
      comp=Z,1.1nm,0.9s
PLCA  Paso Flores       22.70 180  P      P      06 07 48.8 -1.2
PLCA                               IAmb   IAmb   06 08 04.7
      comp=Z,7.8nm,1.4s
TORD  Torodi Ar. Bea    77.58  72  P      P      06 14 46.5 +2.5
      comp=Z,6.0nm,0.2s,baz=268,slow=5.1,SNR=2.0
YKA   Yellowknife Ar    87.39 341  P      P      06 15 32.9 -1.1
      comp=Z,0.2nm,0.6s,baz=135,slow=4.8,SNR=4.7
      comp=Z,0.2nm,0.6s
H11N3 WAKE ISLAND Hy125.91 282     T      T      08 39 45.5
      baz=100,slow=74,SNR=5.7
H11S2 WAKE ISLAND Hy125.91 280     T      T      08 39 54.3
      baz=100,slow=75,SNR=42
H11N2 WAKE ISLAND Hy125.92 282     T      T      08 39 51.7
      baz=100,slow=74,SNR=6.4
H11S1 WAKE ISLAND Hy125.92 280     T      T      08 39 46.0
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	baz=100,slow=75,SNR=82						
H11N1	**WAKE ISLAND Hy**	**125.92**	**282**	T	T	08 39 52.7	
	baz=100,slow=74,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**125.93**	**280**	T	T	08 39 51.1	
	baz=100,slow=75,SNR=100						

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*NOU **02** 06:02:47.4, 36°.90S×178°.06E, h264^{km}, mb4.1/7, Off E. Coast of N. Island, N.Z.*

*IDC **02** 06:02:56.5±3.1, 37°.44S×177°.57E, h207^{km}±54^{km}, mb3.2/2, mbtmp3.8/2, Error ellipse: s-maj=228.2km s-min=36.2km az=179.0*

*WEL **02** 06:02:58.2±0.9, 37°S±7°×17°7E±°, h171^{km}±7^{km}, M3.3/32, ML3.2/8, MLv3.3/32, Error ellipse: s-maj=0.0km s-min=0.0km az=36.5*

ISC 02 06:02:54.5±1.0**, 37°.09S**±0°.07×**177°.40E**±0°.07**, h210**^{km}±6^{km}**, n121, σ1^{s}.29**/130**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.74	155	P	Pn	06 03 23.5	-0.2
WHRZ	Whale Island	0.84	203	P	Pn	06 03 24.7	+0.4
MXZ	Matakaoa Point	0.87	123	P	Pn	06 03 24.5	0.0
RUGZ	Raukumara Rang	0.91	166	P	Pn	06 03 24.5	-0.4
PKGZ	Pakihiroa	0.97	146	P	Pn	06 03 25.7	+0.6
PKGZ				S	S	06 03 46.8	-2.3
OPRZ	Ohinepanea	1.01	221	P	Pn	06 03 25.4	+0.1
MARZ	Manawahe	1.06	212	P	Pn	06 03 26.2	+0.5
WMGZ	Waiomatatini S	1.09	132	P	Pn	06 03 26.7	+0.8
WMGZ				S	S	06 03 49.4	-0.9
TGRZ	Tauranga	1.11	234	P	Pn	06 03 26.4	+0.3
EDRZ	Edgecumbe	1.14	207	P	Pn	06 03 27.1	+0.8
TWGZ	Tauwhareparae	1.18	157	P	Pn	06 03 28.0	+1.4
TWGZ				S	S	06 03 51.0	-0.6
URZ	Urewera	1.19	191	P	Pn	06 03 26.9	+0.4
	73nm,0.3s,baz=274,slow=3.1,SNR=634						
URZ				S	S	06 03 49.7	-1.9
	108nm,0.3s,baz=38,slow=19,SNR=7.2						
URZ	Urewera	1.19	191	P	Pn	06 03 27.0	+0.4
URZ				S	S	06 03 49.2	-2.4
URZ	Urewera	1.19	191	P	Pn	06 03 27.2	+0.6
PUZ	Puketiti	1.20	145	P	Pn	06 03 27.6	+0.9
PUZ				S	S	06 03 50.9	-0.8
MWZ	Matawai	1.25	175	P	Pn	06 03 27.9	+0.8
MWZ				S	S	06 03 50.9	-1.6
OMRZ	Omania	1.30	218	P	Pn	06 03 28.4	+0.9
TARZ	Mount Tarawera	1.35	211	P	Pn	06 03 29.3	+1.4
KUZ	Kuaotunu	1.39	284	P	Pn	06 03 27.4	-0.7
KUZ				S	S	06 03 51.3	-2.7
TKGZ	Te Karaka	1.40	165	P	Pn	06 03 29.4	+1.2
TKGZ				S	S	06 03 53.8	-0.6
RAGZ	Rawiri	1.41	179	P	Pn	06 03 29.6	+1.2
RRRZ	Republican Roa	1.43	209	P	Pn	06 03 29.6	+1.1
MUGZ	Murupara	1.47	199	P	Pn	06 03 29.6	+0.7
CNGZ	Carnagh Statio	1.54	156	P	Pn	06 03 31.2	+1.8
RTZ	Ruatahuna	1.56	192	P	Pn	06 03 30.2	+0.5
HRRZ	Handcock Road	1.57	214	P	Pn	06 03 30.7	+0.9
PRRZ	Plateau Road	1.62	209	P	Pn	06 03 31.3	+1.2
TOZ	Tahuroa Road	1.64	246	P	Pn	06 03 31.3	+1.0
RIGZ	Rimuhau	1.64	170	P	Pn	06 03 31.8	+1.4
ALRZ	Allen Road	1.69	209	P	Pn	06 03 32.0	+1.2
SNGZ	Shannon Statio	1.69	181	P	Pn	06 03 32.2	+1.4
WPRZ	Whakapapatarin	1.73	214	P	Pn	06 03 32.7	+1.5
GRZ	Great Barrier	1.77	298	P	Pn	06 03 30.8	-0.7
MKAZ	Moumakai	1.79	269	P	Pn	06 03 32.2	+0.5
MTHZ	Maungataniwha	1.82	194	P	Pn	06 03 33.1	+1.1
WIAZ	Waiheke Island	1.84	278	P	Pn	06 03 32.4	+0.2
RAHZ	Arahi	1.84	188	P	Pn	06 03 33.8	+1.6
PRGZ	Paritu Road	1.87	168	P	Pn	06 03 33.9	+1.4
MRHZ	Matea Rd	1.91	204	P	Pn	06 03 33.8	+0.9
TLZ	Tolley Road	1.93	229	P	Pn	06 03 34.9	+1.8
KNZ	Kokohu	1.94	174	P	Pn	06 03 34.5	+1.4
ETAZ	East Tamaki Re	1.98	273	P	Pn	06 03 34.4	+0.8
MBAZ	Motutapu North	2.03	278	P	Pn	06 03 34.6	+0.6
NMHZ	Naumai	2.06	193	P	Pn	06 03 36.2	+1.8
WATZ	Wairara	2.09	219	P	Pn	06 03 37.1	+2.4
MHGZ	Mahia Peninsul	2.10	169	P	Pn	06 03 36.5	+1.7
ABAZ	Army Bay	2.11	283	P	Pn	06 03 35.4	+0.5
HBAZ	Herne Bay Bore	2.15	276	P	Pn	06 03 36.2	+1.0
BKZ	Black Stump Fm	2.19	199	P	Pn	06 03 36.4	+0.6
BKZ	Black Stump Fm	2.19	199	P	Pn	06 03 36.6	+0.8
ARHZ	Aropaoanui	2.20	188	P	Pn	06 03 37.3	+1.6
AWAZ	Awhitu Peninsu	2.20	270	P	Pn	06 03 36.7	+0.9
RVAZ	Riverhead Bore	2.28	277	P	Pn	06 03 37.3	+0.7
MCHZ	McNeill Hill	2.42	193	P	Pn	06 03 39.6	+1.5
NTVZ	North Tongarir	2.42	214	P	Pn	06 03 39.0	+0.7
TMVZ	Te Maari	2.43	213	P	Pn	06 03 39.6	+1.3
ETVZ	East Tongariro	2.44	213	P	Pn	06 03 39.6	+1.2
KWHZ	Kaweka Forest	2.46	198	P	Pn	06 03 39.6	+1.0
HIZ	Hauiti	2.46	234	P	Pn	06 03 40.9	+2.3
HIZ	Hauiti	2.46	234	P	Pn	06 03 41.1	+2.5
WTVZ	West Tongariro	2.48	215	P	Pn	06 03 40.1	+1.2
NNVZ	North Ngauruho	2.48	214	P	Pn	06 03 40.5	+1.5
OTVZ	Oturere	2.48	213	P	Pn	06 03 40.4	+1.5
SNVZ	South Ngauruho	2.51	213	P	Pn	06 03 40.6	+1.3
NGZ	Ngauruhoe	2.52	214	P	Pn	06 03 41.2	+1.9
TUVZ	Tukino	2.57	212	P	Pn	06 03 41.2	+1.2
CKHZ	Cape Kidnapper	2.58	185	P	Pn	06 03 41.2	+1.3
FWVZ	Far West T-bar	2.61	213	P	Pn	06 03 41.5	+1.1
WHVZ	Whangaehu Hut	2.61	212	P	Pn	06 03 41.7	+1.2
BHHZ	Black Hill Sta	2.62	203	P	Pn	06 03 40.9	+0.6
WNVZ	Wahianoa	2.65	212	P	Pn	06 03 41.6	+0.9
MOVZ	Moawhango	2.65	209	P	Pn	06 03 41.3	+0.5
KRHZ	Kereru	2.68	197	P	Pn	06 03 41.7	+0.7
PKVZ	Pokaka	2.73	216	P	Pn	06 03 42.7	+1.1
KAHZ	Kahuranaki	2.73	188	P	Pn	06 03 43.1	+1.4
PXZ	Pawanui	2.97	188	P	Pn	06 03 45.1	+0.9
PNHZ	Pukenui	2.98	198	P	Pn	06 03 45.0	+0.6
WPHZ	Waipukurau	3.07	194	P	Pn	06 03 46.1	+0.7
TSZ	Takapari Road	3.17	200	P	Pn	06 03 47.1	+0.4
PRHZ	Porangahau	3.23	190	P	Pn	06 03 48.2	+0.9
WAZ	Wanganui	3.27	215	P	Pn	06 03 48.9	+1.2
DVHZ	Dannevirke	3.35	196	P	Pn	06 03 49.0	+0.3
NEZ	North Egmont	3.39	229	P	Pn	06 03 52.3	+3.0
PKE	Pukeiti	3.41	231	P	Pn	06 03 52.5	+3.0
POWZ	Post Office Ro	3.54	201	P	Pn	06 03 51.4	+0.5
OUZ	Omahuta	3.59	300	P	Pn	06 03 51.7	0.0
OUZ	Omahuta	3.59	300	P	Pn	06 03 51.7	0.0
PRWZ	Pori Road	3.64	197	P	Pn	06 03 52.8	+0.7
BFZ	Birch Farm	3.70	194	P	Pn	06 03 53.2	+0.3
MRZ	Mangatainoka R	3.84	201	P	Pn	06 03 54.6	0.0
TIWZ	Tintock	3.87	197	P	Pn	06 03 55.5	+0.5
HOWZ	Holdsworth Sta	4.08	200	P	Pn	06 03 57.2	-0.4
OGWZ	Otaki Gorge	4.11	204	P	Pn	06 03 57.7	-0.2
TMWZ	Te Maipa	4.18	196	P	Pn	06 03 58.9	+0.1
KIW	Kapiti Island	4.24	206	P	Pn	06 03 58.9	-0.6
MTW	Mount Morrison	4.32	199	P	Pn	06 04 00.0	-0.5
CAW	Cannon Point	4.41	204	P	Pn	06 04 01.0	-0.6
TRWZ	Traveller	4.50	197	P	Pn	06 04 02.7	-0.1
MSWZ	Moikau Station	4.63	200	P	Pn	06 04 03.7	-0.8
SNZO	South Karori	4.71	206	P	Pn	06 04 05.5	+0.2
PLWZ	Palliser	4.77	200	P	Pn	06 04 05.4	-0.9
TCW	Tory Channel	4.78	210	P	Pn	06 04 05.2	-1.1
TUWZ	Tuamarina	5.10	211	P	Pn	06 04 09.2	-1.1
CMWZ	Cape Campbell	5.27	207	P	Pn	06 04 12.5	0.0
QRZ	Quartz Range	5.32	224	P	Pn	06 04 12.8	-0.3
QRZ	Quartz Range	5.32	224	P	Pn	06 04 13.1	-0.1
BSWZ	Blackbirch Sta	5.37	209	P	Pn	06 04 13.3	-0.4
MRNZ	Matariki Terra	5.61	218	P	Pn	06 04 16.1	-0.8
THZ	Tophouse	5.82	215	P	Pn	06 04 18.8	-0.7
KHZ	Kahutara	6.09	208	P	Pn	06 04 22.2	-0.8
KHZ	Kahutara	6.09	208	P	Pn	06 04 22.0	-1.0
GVZ	Greta Valley S	6.76	208	P	Pn	06 04 30.2	-1.4
LTZ	Lake Taylor	6.92	213	P	Pn	06 04 32.6	-1.0
OKCZ	Okains Bay	7.41	205	P	Pn	06 04 38.8	-1.2
MQZ	McQueen's Vall	7.54	207	P	Pn	06 04 39.6	-2.0
TMZ	Timaru	8.75	212	P	Pn	06 04 56.2	-1.2
ODZ	Otahua Downs	9.44	211	P	Pn	06 05 05.4	-0.9
ASAR	Alice Springs	39.50	277	P	P	06 10 09.0	+4.1
	0.8nm,0.5s,baz=120,slow=8.1,SNR=21						
	0.8nm,0.5s						
WRA	Warramunga Arr	41.12	282	P	P	06 10 21.8	+3.5
	0.4nm,0.3s,baz=123,slow=7.5,SNR=7.4						
	0.4nm,0.3s						
ARCES	ARCESS Array B	144.11	344	PKP	PKiKP	06 22 05.7	-1.8
	0.9nm,0.7s,baz=20,slow=3.9,SNR=4.6						
FINES	FINESS Array B	149.73	333	PKPbc	PKPab	06 22 21.5	-3.0
	0.3nm,0.4s,baz=57,slow=7.0,SNR=4.9						

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*REN **02** 06:05:21.8±1.1, 38°.26N±0°.02×118°.73W±0°.03, h11^{km}±5^{km}, ML2.8/34, ML2.7/58(NEIC), Error ellipse: s-maj=3.6km s-min=2.3km az=112.0*

NEIC 02 06:05:21.9±1.5**, 38°.24N**±0°.02×**118°.74W**±0°.03**, h12**^{km}±1^{km}**, Error ellipse: s-maj=3.4km s-min=2.3km az=127.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHV	Little Huntoon	0.18	88		Pg	06 05 26.3	+0.3
LHV				Sg	Sg	06 05 29.5	+0.8
NVAR	Mina Array Bea	0.39	61		Pg	06 05 29.6	-0.1
RYN	Ryan	0.42	23		Pg	06 05 30.1	-0.1
RYN				Sg	Sg	06 05 35.9	0.0
RYN				IAML		06 05 37.9	
	comp=N,612nm,0.3s						
RYN				IAML		06 05 40.1	
	comp=E,692nm,0.6s						
NV11	Mina Array Sit	0.49	67		Pg	06 05 31.6	-0.1
NV11				Sg	Sg	06 05 38.0	-0.3
OMMB	Old Mammoth Mi	0.66	199	Pg	Pg	06 05 35.1	+0.2
OMMB				Sg	Sb	06 05 44.3	-0.6
MDPB	Devils Postpil	0.67	204		Pg	06 05 35.1	+0.2
MDPB				Sg	Sg	06 05 44.3	+0.5
MDPB				IAML		06 05 45.2	
	comp=N,237nm,0.2s						
YERR	Yerington	0.84	332		Pg	06 05 37.6	-0.5
YERR				Sg	Sg	06 05 49.0	-0.2
KVN	Kaiserville	0.95	31	Pg	Pg	06 05 39.6	-0.6
KVN				Sg	Sg	06 05 52.2	-0.4
KCC	Kaiser Creek	1.03	207		Pb	06 05 41.6	-0.1
PNTR	Pine Nut	1.08	322		Pb	06 05 42.1	-0.6
PNTR				Sg	Sg	06 05 56.6	-0.3
PNTR				IAML		06 05 57.3	
	comp=N,165nm,0.6s						
PNTR				IAML		06 06 01.5	
	comp=E,228nm,0.7s						
TPH	Tonopah	1.20	98		Pn	06 05 44.8	0.0
TPH	Tonopah	1.20	98		Sn	06 06 01.0	-0.2
VCNR	Virginia City	1.27	326		Pn	06 05 45.5	-0.3
EMB	Emerald Bay	1.30	305		Pn	06 05 45.7	-0.4
EMB				IAML		06 06 05.9	
	comp=E,122nm,0.5s						
EMB				IAML		06 06 07.7	
	comp=N,174nm,0.7s						
CMB	Columbia Colle	1.32	261	Pn	Pb	06 05 46.5	-0.1
CMB				IAML		06 06 04.7	
	comp=E,168nm,0.5s						
CMB				IAML		06 06 07.0	
	comp=N,150nm,0.6s						
LCH	Last Change Ra	1.33	139		Pg	06 05 47.3	-0.1
Q09A	Carvers	1.35	64		Pb	06 05 47.6	+0.3
RUBR	Rubicon Trail	1.37	306		Pn	06 05 47.3	+0.2
RUBR				IAML		06 06 10.2	
	comp=E,152nm,0.6s						
RUBR				IAML		06 06 10.2	
	comp=N,107nm,0.7s						
MPK	Martis Peak	1.46	316		Pb	06 05 49.1	-0.1
MPK				IAML		06 06 17.6	
	comp=N,118nm,0.7s						
MPK				IAML		06 06 18.8	
	comp=E,97nm,0.7s						
PAHR	Pah Rah Range	1.55	341		Pn	06 05 49.5	0.0
PAHR				IAML		06 06 13.3	
	comp=E,57nm,0.7s						
GRAC	Grapevine Rang	1.65	138		Pn	06 05 51.2	+0.3
GRAC				IAML		06 06 19.1	
	comp=E,86nm,0.7s						
GRAC				IAML		06 06 19.9	
	comp=N,71nm,0.5s						
BEKR	Beckworth	2.06	323	Pn	Pb	06 05 58.3	-1.0
TPNV	Topopah Spring	2.36	122		Pn	06 06 01.4	+0.7
TPNV				IAML		06 06 44.7	
	comp=N,40nm,0.8s						
TPNV				IAML		06 06 44.7	
	comp=N,45nm,0.7s						
S11A	Rachel	2.44	103		Pn	06 06 01.7	0.0
BBGB	Big Mountain B	2.48	229	Pn	Pb	06 06 04.5	-1.9
BMN	Battle Mountai	2.48	28	Pn	Pn	06 06 02.1	-0.2
R11A	Troy Canyon, C	2.48	87		Pn	06 06 04.1	+1.7
R11A				IAML		06 06 42.3	
	comp=E,42nm,0.4s						
ORV	Oroville	2.52	302	Pn	Pn	06 06 01.1	-1.7
ORV				IAML		06 06 43.1	
	comp=E,24nm,0.7s						
PMPB	Monarch Peak	2.61	220	Pn	Pn	06 06 04.8	+0.8
SAO	San Andreas Ge	2.61	236	Pn	Pn	06 06 03.9	-0.1
GWY	Greenwater Val	2.63	141		Pn	06 06 04.6	+0.1
QSM	Queen of Sheba	2.72	146		Pn	06 06 04.2	-1.3
PRN	Pahroc Range	3.03	105		Pn	06 06 11.1	+1.1
CCAC	Calif City Air	3.14	169	Pn	Pn	06 06 11.3	0.0
CCAC				IAML		06 07 05.0	
	comp=N,19nm,0.7s						
CCAC				IAML		06 07 09.1	
	comp=E,14nm,0.7s						
O03E	Paynes Creek	3.14	312	Pn	Pn	06 06 10.0	-1.4
O03E				IAML		06 07 05.9	
	comp=N,14nm,1.7s						
O03E				IAML		06 07 11.5	
	comp=E,25nm,0.7s						
GSC	Goldstone, Bar	3.32	152	Pn	Pn	06 06 14.9	+1.1
SHPR	Sheep Range	3.33	120	Pn	Pn	06 06 13.2	-0.9
ELK	Elko	3.68	46	Pn	Pn	06 06 18.8	-0.1
ELK				IAML		06 07 23.0	
	comp=E,8.8nm,0.3s						
PSUT	Pine Spring	3.85	84	Pn	Pn	06 06 18.9	-2.2
CCUT	Cedar City	4.30	98	Pn	Pn	06 06 28.6	+1.1
SZCU	Shurtz Canyon	4.51	97	Pn	Pn	06 06 30.2	-0.1
LCMT	Little Creek M	4.53	104	Pn	Pn	06 06 29.8	-0.7
J08A	Circle Bar Ran	5.11	2	Pn	Pn	06 06 36.1	-2.4
MFID	Camas Ranch	5.62	22	Pn	Pn	06 06 44.5	-0.9
HVU	Hansel Valley	5.78	50	Pn	Pn	06 06 46.5	-1.2
TMUT	Trail Mountain	5.97	78	Pn	Pn	06 06 49.6	-0.9

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*IDC **02** 06:15:29.2±1.4, 29°.69N×130°.94E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS3.1/3, Error ellipse: s-maj=52.8km s-min=33.5km az=80.0*

*JMA **02** 06:15:34.1±0.1, 29°.7N±0°.6×130°.9E±0°.7, h47^{km}±2^{km}, MV3.0/31, NEAR AMAMI-OSHIMA ISLAND*

ISC 02 06:15:35.2±1.5**, 29°.70N**±0°.06×**130°.91E**±0°.08**, h41**^{km}±16^{km}**, n21, σ0^{s}.45**/25**, mb3.2**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAK	Yakushimahirau	0.63	327	*e*P	Pn	06 15 47.1	-0.6
JYAK				S	Sn	06 15 57.3	+0.6
JMTN	Minamitane	0.69	360	*e*P	Pn	06 15 48.0	-0.5
JMTN				*e*S	Sn	06 15 58.0	-0.1
JNN	Nakanoshima	0.91	279	*e*P	Pn	06 15 51.5	+0.1
JNN				*e*S	Sn	06 16 04.0	+0.7
JTN	Tanegashima 3	0.95	4	*e*P	Pn	06 15 51.3	-0.7
JTN				*e*S	Sn	06 16 04.7	+0.2
JKC	Kuchinoerabu	0.97	321	*e*P	Pn	06 15 52.5	+0.1
JTSR	Tashiro 2	1.46	1	*e*P	Pn	06 15 59.1	+0.1
JTSR				*e*S	Sn	06 16 17.4	+0.4
JTAJ	Takarajima	1.58	250	P	Pn	06 16 00.9	+0.2
JZK	Kikaishima	1.61	211	P	Pn	06 16 01.1	+0.1
JAM	Amami Oshima	1.72	222	*e*P	Pn	06 16 02.3	-0.3
JSU	Suzuyama	1.84	348	*e*P	Pn	06 16 04.2	-0.1
JSU				*e*S	Sn	06 16 26.1	-0.3
JNAR	Kushima--Naru	1.84	10	*e*P	Pn	06 16 04.8	+0.5
JNKG	Nichinankitago	2.00	12	*e*P	Pn	06 16 06.7	+0.3
JNKG				*e*S	Sn	06 16 30.5	+0.4
JAMN	Amaminishikomi	2.10	227	*i* P	Pn	06 16 07.3	-0.5
JTZ	Takazaki	2.20	4	P	Pn	06 16 09.9	+0.7
JSJ	Shimokoshiki	2.22	333	P	Pn	06 16 08.8	-0.7
KSRS	Korea Array	8.12	343	LR	LR	06 21 01.3	
	comp=Z,75nm,18.6s,baz=155,slow=41						
CMAR	Chiang Mai Arr	31.16	256	LR	LR	06 36 10.7	
	comp=Z,25nm,18.7s,baz=290,slow=40						
MKAR	Makanchi Array	41.11	308	P	P	06 23 15.0	-0.1
	0.4nm,0.7s,baz=108,slow=7.9,SNR=4.5						
	0.4nm,0.7s						
ASAR	Alice Springs	53.14	177	P	P	06 24 48.8	-0.2
	0.3nm,0.8s,baz=11,slow=13,SNR=4.8						
	0.3nm,0.8s						
ARU	Arti	56.19	320	LR	LR	06 52 08.4	
	comp=Z,44nm,19.5s,baz=124,slow=39						
YKA	Yellowknife Ar	74.39	26	P	P	06 27 08.6	+0.2
	0.2nm,0.7s,baz=306,slow=5.3,SNR=3.6						
	0.2nm,0.7s						

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*IDC **02** 06:35:04.2±1.4, 32°.55N×130°.56E, h0^{km}, mb3.8/6, mbtmp3.8/9, ML2.9/2, MS3.2/10, Error ellipse: s-maj=23.9km s-min=10.4km az=129.0*

*NIED **02** 06:35:05.6, 32°.56N×130°.68E, h8^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.16; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.10; $M_{r\theta}$0.54; $M_{\theta\phi}$1.63; $M_{\phi r}$0.09; Fault plane solution: $M_0$1.74000×10^{15} NP1: ϕ_s356.00000°, δ71.00000°, λ176.00000°. NP2: ϕ_s88.00000°, δ86.00000°, λ19.00000°.*

*JMA **02** 06:35:05.6±0.1, 32°.6N±0°.2×130°.7E±0°.2, h8^{km}±1^{km}, MD4.1/19, MV4.2/19, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

*NEIC **02** 06:35:06.4±2.2, 32°.56N±0°.04×130°.53E±0°.07, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=10.6km s-min=5.8km az=108.0*

ISC 02 06:35:05.9±0.5**, 32°.56N**±0°.03×**130°.60E**±0°.04**, h11**^{km}**, n76, σ1^{s}.23**/53**, mb4.3**/15**, MS3.3**/6**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.18	92	*i* P	Pg	06 35 08.3	-1.6
JIU3				S	Sg	06 35 10.4	-2.2
JIU3	Izumi3	0.18	92	A	A	06 35 08.3	
	comp=E,250nm,0.3s,comp=E,198nm,1.0s						
JHD	Hondo	0.40	257	A	A	06 35 14.8	
	comp=E,18nm,1.3s,comp=E,34nm,1.4s						
JTA	Tamana	0.41	352	*i* P	Pg	06 35 14.0	0.0
JTA				S	Sg	06 35 19.8	+0.4
JTA	Tamana	0.41	352	A	A	06 35 14.0	
	comp=E,17nm,5.0s,comp=E,12nm,5.9s						
JZO	Okuchi	0.42	180	⇓*i*P	Pg	06 35 14.0	-0.1
JZO				⇓S	Sg	06 35 19.8	+0.2
JZO	Okuchi	0.42	180	A	A	06 35 14.0	
	comp=E,36nm,4.2s,comp=E,22nm,0.6s						
JNU	Nakatsue	0.61	23	Pg	Pg	06 35 16.8	-1.0
	326nm,0.3s,baz=232,slow=5.6,SNR=1477						
JNU				Lg	Lg	06 35 24.5	
	947nm,0.3s,baz=176,slow=19,SNR=20						
JNU	Nakatsue	0.61	23		Pg	06 35 17.1	-0.7
JNU	Nakatsue	0.61	23	A	A	06 35 17.0	
	comp=E,13nm,4.5s,comp=E,8.0nm,4.3s						
NGSJ	Nagasakinomoza	0.68	277	A	A	06 35 19.9	
	comp=E,7.0nm,5.5s,comp=E,11nm,2.1s						
JKIT	Kitakata	0.72	84	A	A	06 35 18.3	
	comp=E,14nm,0.3s,comp=E,21nm,0.3s						
JTZ	Takazaki	0.77	148	*i* P	Pg	06 35 20.6	-0.3
JTZ				S	Sg	06 35 30.6	-0.3
JTZ	Takazaki	0.77	148	A	A	06 35 20.6	
	comp=E,16nm,1.7s,comp=E,11nm,1.9s						
JTSN	Tsuno	0.83	112	A	A	06 35 20.3	
	comp=E,7.0nm,1.3s,comp=E,16nm,0.7s						
JHHC	Hyugahichiya	0.88	97	A	A	06 35 21.3	
	comp=E,11nm,3.2s,comp=E,19nm,5.1s						
JFI	Itaya	0.89	348	A	A	06 35 22.7	
	comp=E,8.0nm,5.4s,comp=E,7.0nm,5.8s						
JBEP	Beppuamama	1.03	41	A	A	06 35 24.3	
	comp=E,10.0nm,2.7s,comp=E,10.0nm,1.7s						
JSU	Suzuyama	1.05	187	Pn	Pg	06 35 25.8	-0.4
JSU	Suzuyama	1.05	187	A	A	06 35 25.7	
	comp=E,10.0nm,6.3s,comp=E,5.0nm,7.3s						
JUS	Usuki	1.09	62	A	A	06 35 25.1	
	comp=E,5.0nm,4.4s,comp=E,9.0nm,6.3s						
JNKG	Nichinankitago	1.11	143	A	A	06 35 25.9	
	comp=E,13nm,1.9s,comp=E,7.0nm,1.5s						
JSKE	Saikikamae	1.12	77	A	A	06 35 25.6	
	comp=E,6.0nm,5.6s,comp=E,8.0nm,5.6s						
JSJ	Shimokoshiki	1.15	221	A	A	06 35 28.0	
	comp=E,5.0nm,6.0s,comp=E,6.0nm,6.2s						
JNAR	Kushima--Naru	1.18	151	A	A	06 35 27.1	
	comp=E,9.0nm,3.8s,comp=E,9.0nm,3.0s						
JKI	Kunimi	1.35	37	A	A	06 35 29.7	
	comp=E,7.0nm,1.3s,comp=E,19nm,1.1s						
JFU	Fukue jima 2	1.56	274	A	A	06 35 34.8	
	comp=E,3.0nm,2.0s,comp=E,5.0nm,1.8s						
JTU	Tsushima	2.20	333	Pn	Pn	06 35 41.8	-0.7
JMN	Monobe	2.99	66	Pn	Pn	06 35 53.0	-0.3
JHS	Saijyo	3.21	40	Pn	Pn	06 35 56.9	+0.6
TJN	Taejon	4.65	326	Pn	Pn	06 36 14.9	-1.2
KSRS	Korea Array	5.36	337	Pn	Pn	06 36 27.2	+1.5
	0.4nm,0.3s,baz=156,slow=14,SNR=2.8						
KSRS				Lg	Lg	06 37 55.0	
	3.1nm,0.3s,baz=158,slow=31,SNR=13						
KSRS				LR	LR	06 38 38.9	
	comp=Z,259nm,18.6s,baz=165,slow=40						
	1.1nm,0.4s						
KS19	Wonju Array Si	5.42	336	Pn	Pn	06 36 24.5	-2.1
INCN	Inchon	5.89	328	Pn	Pn	06 36 31.3	-1.9
INU	Inuyama	6.02	61		Pn	06 36 36.3	+1.5
JOW	Kunigami	6.05	200	Pn	Pn	06 36 36.3	+1.0
JGF	Kuroka	6.38	60		Pn	06 36 42.2	+2.4
MAJO	Matsushiro	7.43	56	Pn	Pn	06 36 55.5	+1.3
MJB9	Matsu-Tunnel	7.43	56	Pn	Pn	06 36 55.1	+0.8
MJAR	Matsushiro Arr	7.43	56	Pn	Pn	06 36 56.2	+1.9
	0.2nm,0.3s,baz=233,slow=13,SNR=1.8						
MJAR				LR	LR	06 40 12.6	
	comp=Z,122nm,20.5s,baz=232,slow=41						
	2.7nm,0.3s						
JHJ	Hachijo jima 2	7.75	83	Pn	Pn	06 36 59.9	+1.3
	34nm,0.3s,baz=94,slow=8.8,SNR=7.9						
JHJ				LR	LR	06 39 53.3	
	comp=Z,89nm,20.1s,baz=348,slow=37						
JHJ2	Mitsune	7.78	83	Pn	Pn	06 37 00.5	+1.5
JSD	Sado	8.31	47	Pn	Pn	06 37 07.2	+0.9
ASAJ	Asahikawa	14.87	36	LR	LR	06 44 06.9	
	comp=Z,80nm,18.5s,baz=40,slow=36						
KLR	Kul'dur	16.68	3	Pn	P	06 39 04.9	+3.0
	0.1nm,0.3s,baz=192,slow=6.2,SNR=6.9						
GUMO	Guam	22.95	142	LR	LR	06 48 22.2	
	comp=Z,44nm,18.3s,baz=68,slow=35						
ULN	Ulaanbaatar	23.47	318	P	P	06 40 16.7	+1.1
SONM	Songino Array	23.83	317	P	P	06 40 20.1	+1.0
	1.4nm,0.6s,baz=125,slow=9.3,SNR=8.3						
	1.4nm,0.6s						
SONM	Songino Array	23.83	317	P	P	06 40 19.5	+0.4
ZALV	Zalesovo Beam	38.73	317	LR	LR	06 58 47.6	
	comp=Z,46nm,19.2s,baz=72,slow=37						
KULM	Kulim	38.95	232	P	P	06 42 30.2	-1.9
KULM				IAmb	IAmb	06 42 49.3	
	comp=Z,7.6nm,1.0s						
MKAR	Makanchi Array	39.19	306	P	P	06 42 33.9	+0.1
	comp=Z,0.2nm,0.3s,baz=94,slow=8.7,SNR=2.0						
	comp=Z,0.2nm,0.3s						
KURK	Kurchatov	41.92	311	P	P	06 42 54.8	-1.5
NRIK	Noril'sk	43.97	340	LR	LR	07 05 17.6	
	comp=Z,15nm,19.0s,baz=150,slow=41						
AAK	Ala-Archa	44.85	300	LR	LR	07 03 03.0	
	comp=Z,50nm,19.0s,baz=60,slow=38						
BRVK	Borovoye	47.20	314	P	P	06 43 38.9	+0.4
BRVK				IAmb	IAmb	06 43 45.0	
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	47.69	301	P	P	06 43 43.7	+1.2
KK31				IAmb	IAmb	06 43 44.9	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	47.69	301	P	P	06 43 43.3	+0.8
ABKAR	Akbulak array	53.99	310	P	P	06 44 29.7	-0.1
ABKAR				IAmb	IAmb	06 44 31.4	
	comp=Z,3.2nm,1.2s						
K20K	Telida	54.94	32	P	P	06 44 37.0	+0.6
K20K				IAmb	IAmb	06 44 42.6	
	comp=Z,4.3nm,1.4s						
CAST	Castle Rocks	55.82	32	P	P	06 44 44.6	+1.8
PPLA	Purkeypile	55.83	33	P	P	06 44 44.2	+1.2
MDM	Murphy Dome	57.33	30	P	P	06 44 55.2	+1.6
MDM				IAmb	IAmb	06 45 21.6	
	comp=Z,5.5nm,1.3s						
IL31		57.92	30	P	P	06 44 58.1	+0.4
IL31				IAmb	IAmb	06 45 03.7	
	comp=Z,4.7nm,1.4s						
ILAR	Eielson Array	57.92	30	P	P	06 44 57.6	-0.1
	comp=Z,0.3nm,0.7s,baz=281,slow=7.2,SNR=2.7						
	comp=Z,0.3nm,0.7s						
GEYT	Alibeck	58.07	297	P	P	06 44 58.1	-1.1
KLU	Klutina	58.94	34	P	P	06 45 04.9	-0.1
SCRK	Sand Creek	59.31	31	P	P	06 45 08.3	+0.7
SCRK				IAmb	IAmb	06 45 24.3	
	comp=Z,2.6nm,1.0s						
DOT	Dot Lake	59.34	31	P	P	06 45 08.1	+0.4
DOT				IAmb	IAmb	06 45 35.9	
	comp=Z,3.6nm,1.4s						
M26K	Nabesna, AK	60.09	32	P	P	06 45 14.1	+1.2
BCAR	Beaver Creek A	60.47	32	P	P	06 45 16.9	+1.4
OBN	Obninsk	66.16	321	LR	LR	07 18 04.7	
	comp=Z,14nm,18.6s,baz=260,slow=39						

KBZ	**Khabaz**	**66.83**	**308**	P	**P**	**06 45 56.3**	**-1.4**
	comp=Z,1.9nm,0.9s,baz=333,slow=2.3,SNR=3.6						
	comp=Z,1.9nm,0.9s						
FINES	**FINESS Array B**	**68.41**	**330**	P	**P**	**06 46 07.0**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=72,slow=6.2,SNR=6.1						
FINES				LR	LR	07 18 20.8	
	comp=Z,75nm,18.9s,baz=252,slow=38						
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**72.10**	**319**	P	**P**	**06 46 30.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=54,slow=6.7,SNR=5.4						
	comp=Z,0.7nm,0.5s						
AKASG	**Malin Array Be**	**72.10**	**319**	IAmb	IAmb	06 46 30.9	
	comp=Z,2.2nm,1.3s						

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*OTT **02** 06:42:41.3±1.0, 73°.38N×74°.12W, h18^{km}, ML3.4/3, 147km northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.*

ISC 02 06:42:35.5±0.9**, 73°.45N**±0°.06×**73°.55W**±0°.08**, h10^{km}, n6, σ3^{s}.65**/11**, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TULEG	**Thule**	**3.33**	**19**	*i* P	**Pn**	**06 43 29.8**	**+2.3**
TULEG				*e*S	**Sn**	**06 44 03.7**	**-3.4**
TULEG				IAML		06 44 05.9	
	comp=Z,2.1nm,0.1s						
CLRN	**Clyde River**	**3.37**	**150**	PN	**Pb**	**06 43 33.5**	**-1.7**
CLRN				SN	**Sn**	**06 44 09.9**	**+2.0**
CLRN				Trac		06 44 12.1	
	comp=Z,8.8nm,0.1s						
RES	**Resolute Bay**	**5.99**	**292**	PN	**Pn**	**06 44 07.1**	**+3.1**
RES				SN	**Sn**	**06 45 09.0**	**-3.5**
RES				Trac		06 45 25.5	
	comp=Z,3.9nm,0.5s						
EUNU	**Eureka**	**7.23**	**342**	PN	**Pn**	**06 44 22.7**	**+1.6**
EUNU				SN	**Sn**	**06 45 40.4**	**-2.7**
FRB	**Frobisher Bay**	**9.92**	**167**	PN	**Pn**	**06 45 01.5**	**+3.7**
FRB				SN	**Sn**	**06 46 44.6**	**-4.3**
FRB				Trac		06 47 03.1	
	comp=Z,35nm,1.4s						
KNGQ	**Kangiqsujuaq**	**11.94**	**176**	SN	**Sn**	**06 47 34.2**	**-4.2**

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*AEIC **02** 06:45:02±4.0, 51°.41N±0°.05×174°.47W±0°.08, h4^{km}±5^{km}, Error ellipse: s-maj=7.6km s-min=6.5km az=130.0*

*NEIC **02** 06:45:02.1±1.7, 51°.3N±0°.1×174°.28W±0°.09, h22^{km}±16^{km}, mb3.7/22, ML2.6/15(AEIC), Error ellipse: s-maj=16.9km s-min=2.2km az=151.0*

ISC 02 06:45:03.4±1.9**, 51°.3N**±0°.1×**174°.25W**±0°.06**, h38^{km}**±5^{km}**, n36, σ0^{s}.72**/40**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.92**	**2**		**Pn**	**06 45 18.8**	**-1.0**
ATKA					**Sn**	**06 45 31.6**	**-0.2**
KOFP	**Korovin Flat P**	**1.00**	**6**		**Pn**	**06 45 20.5**	**-0.4**
KOFP					**Sn**	**06 45 34.6**	**+0.8**
KOKL	**Mount Kliuchef**	**1.04**	**2**		**Pn**	**06 45 21.0**	**-0.5**
GSMY	**Great Sitkin M**	**1.35**	**305**		**Pn**	**06 45 25.0**	**-0.8**
GSMY					**Sn**	**06 45 42.1**	**-0.4**
GSTR	**Great Sitkin T**	**1.39**	**306**		**Pn**	**06 45 25.7**	**-0.6**
GSTD	**Great Sitkin T**	**1.41**	**304**		**Pn**	**06 45 25.7**	**-0.9**
GSTD					**Sn**	**06 45 44.0**	**0.0**
ADK	**Adak**	**1.63**	**293**		**Pn**	**06 45 29.1**	**-0.5**
ADK					**Sn**	**06 45 49.8**	**+0.5**
KIWB	**Kanaga Island**	**1.90**	**289**		**Pn**	**06 45 33.2**	**0.0**
KIMD	**Kanaga Island**	**1.92**	**286**		**Pn**	**06 45 33.4**	**-0.2**
TAFP	**Tanaga Falls P**	**2.41**	**286**		**Pn**	**06 45 40.8**	**+0.6**
TASE	**Tanaga Southea**	**2.42**	**285**		**Pn**	**06 45 41.3**	**+0.7**
NIKH	**Nikolski High**	**3.73**	**61**	Pn	**Pn**	**06 45 57.4**	**-1.0**
UNV	**Unalaska Valle**	**5.38**	**59**	Pn	**Pn**	**06 46 21.8**	**+0.8**
SPIA	**Saint Paul Isl**	**6.35**	**20**	Pn	**Pn**	**06 46 35.9**	**+1.5**
J20K	**Nowinta River**	**16.69**	**32**	Pn	**Pn**	**06 48 54.4**	**+0.4**
CAST	**Castle Rocks**	**16.93**	**36**	Pn	**Pn**	**06 48 56.5**	**-0.7**
GHO	**Glory Hole Cre**	**17.35**	**43**	Pn	**Pn**	**06 49 01.3**	**-1.1**
SML	**Sawmill**	**17.62**	**43**		**Pn**	**06 49 05.8**	**+0.1**
SCM	**Sheep Creek Mo**	**18.06**	**44**		**Pn**	**06 49 10.1**	**-1.1**
DHY	**Denali Highway**	**18.57**	**40**	P	**Pn**	**06 49 17.5**	**+0.1**
DHY				IAmb	IAmb	06 49 34.2	
	comp=Z,9.6nm,1.4s						
I23K	**Minto, Yukon-K**	**18.91**	**33**	P	**Pn**	**06 49 21.4**	**+0.2**
CCB	**Clear Creek Bu**	**19.18**	**36**	P	**P**	**06 49 23.7**	**+0.2**
N25K	**Chitina, Valde**	**19.19**	**46**	P	**P**	**06 49 24.2**	**+0.5**
POKR	**Poker Plat Res**	**19.57**	**35**	P	**P**	**06 49 28.3**	**+0.6**
POKR				IAmb	IAmb	06 49 51.8	
	comp=Z,3.3nm,0.7s						
IL31		**19.59**	**36**	P	**P**	**06 49 28.1**	**+0.3**
IL31				IAmb	IAmb	06 49 33.2	
	comp=Z,4.0nm,1.3s						
ILAR	**Eielson Array**	**19.59**	**36**	P	**P**	**06 49 28.6**	**+0.7**
H24K	**Noodor Dome**	**19.81**	**33**	P	**Pn**	**06 49 31.3**	**-0.8**
H24K				IAmb	IAmb	06 49 38.2	
	comp=Z,5.3nm,1.4s						
RIDG	**Independent Ri**	**19.89**	**40**	P	**P**	**06 49 31.1**	**-0.1**
RIDG				IAmb	IAmb	06 49 54.1	
	comp=Z,6.7nm,1.3s						
J25K	**Salcha River,**	**20.08**	**37**	P	**P**	**06 49 32.6**	**-0.7**
J25K				IAmb	IAmb	06 49 34.0	
	comp=Z,4.2nm,1.2s						
M26K	**Nabesna, AK**	**20.17**	**44**	P	**P**	**06 49 32.9**	**-1.4**
M26K				IAmb	IAmb	06 49 35.9	
	comp=Z,9.3nm,1.4s						
DOT	**Dot Lake**	**20.17**	**41**	P	**P**	**06 49 33.7**	**-0.6**
DOT				IAmb	IAmb	06 49 35.8	
	comp=Z,5.7nm,1.4s						
SCRK	**Sand Creek**	**20.34**	**40**	P	**P**	**06 49 35.5**	**-0.7**
SCRK				IAmb	IAmb	06 49 42.0	
	comp=Z,5.2nm,1.5s						
BCAR	**Beaver Creek A**	**20.91**	**43**	P	Pn	06 49 44.1	-1.0
TOLK	**Toolik Lake Re**	**21.07**	**25**	P	**P**	**06 49 44.7**	**+0.8**
EGAK	**Eagle**	**21.78**	**39**	P	**P**	**06 49 51.8**	**+0.2**
EGAK				IAmb	IAmb	06 49 53.2	
	comp=Z,3.3nm,1.0s						
I29M	**Ogilvie Camp,**	**23.12**	**39**	P	**P**	**06 50 06.1**	**+0.3**
I29M				IAmb	IAmb	06 50 26.4	
	comp=Z,3.7nm,1.4s						

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*BJI **02** 06:51:37.2±0.0, 3°.24S×146°.13E, h13^{km}, mb4.6/26, mB4.9/14, Ms4.5/7, Ms7 4.2/8*

*NEIC **02** 06:51:37.4±1.3, 3°.20S±0°.07×146°.04E±0°.08, h10^{km}±1^{km}, mb4.8/28, Error ellipse: s-maj=14.5km s-min=11.0km az=113.0*

*DJA **02** 06:51:37.2±0.6, 3°S±7°×14°6E±°, h10^{km}, M4.8/6, mB5.2/2, mb4.8/6, MLv4.8/2, Mw(mB)4.6/2*

*IDC **02** 06:51:37.2±0.7, 3°.38S×146°.04E, h0^{km}, mb4.4/17, mbtmp4.4/20, ML3.5/3, MS3.9/23, Error ellipse: s-maj=18.6km s-min=12.9km az=87.0*

*GCMT **02** 06:51:41.4±0.2, 3°.30S±0°.01×146°.15E±0°.02, h15^{km}±1^{km}, MW4.9/110, Moment Tensor Solution. s31,c34; s110,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.12; $M_{\theta\theta}$-0.18±.10; $M_{\phi\phi}$0.52±.11; $M_{r\theta}$-0.79±.24; $M_{\theta\phi}$3.00±.10; $M_{\phi r}$0.19±.19; Best double couple: $M_0$3.13800×10^{16} NP1:ϕ_s177.00000°, δ75.00000°, λ-174.00000°. NP2:ϕ_s86.00000°, δ84.00000°, λ-15.00000°. Principal axes: T 3.2360, Plg6.0000°, Azm132.0000°; N -0.1960, Plg74.0000°, Azm244.0000°; P -3.0400, Plg15.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 06:51:38.0±0.5**, 3°.33S**±0°.05×**146°.06E**±0°.07**, h10^{km}, n94, σ1^{s}.54**/76**, mb4.6**/35**, MS4.0**/26**, 3C, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.82**	**46**		**Pn**	**06 52 06.8**	**-2.7**
KRVT	**Keravat (AS076**	**6.03**	**99**	Pn	**Pn**	**06 53 07.0**	**-0.4**
	4.9nm,0.3s,baz=224,slow=6.3,SNR=10						
	36nm,0.6s						
PMG	**Port Moresby**	**6.14**	**170**	Pn	**Pn**	**06 53 09.0**	**+0.3**
	8.4nm,0.3s,baz=16,slow=6.2,SNR=11						
PMG				Sn	**Sn**	**06 54 18.6**	**-0.5**
	1.9nm,0.3s,baz=94,slow=15,SNR=1.0						
PMG				LR	LR	06 55 18.0	
	comp=Z,628nm,20.8s,baz=350,slow=36						
	57nm,0.7s						
PMG	**Port Moresby**	**6.14**	**170**	P	**Pn**	**06 53 09.5**	**+0.7**
COEN	**Coen**	**10.94**	**195**	Pn	**Pn**	**06 54 15.3**	**+0.6**
COEN	**Coen**	**10.94**	**195**	P	**Pn**	**06 54 16.9**	**+2.2**
FAKI	**Fak Fak**	**13.80**	**271**	Pn	**Pn**	**06 54 51.3**	**-2.5**
MTSU	**Mount Surprise**	**14.81**	**186**	P	**Pn**	**06 55 11.1**	**+3.3**
SIJI	**Sorong**	**14.98**	**279**	Pn	**Pn**	**06 55 10.1**	**+0.1**
	1.1nm,0.3s,baz=114,slow=20,SNR=4.4						
SIJI				LR	LR	07 01 24.4	
	comp=Z,290nm,19.2s,baz=302,slow=39						
	3.6nm,0.3s						
KDU	**Kakadu**	**16.34**	**235**	P	**Pn**	**06 55 27.9**	**+0.2**
CTA	**Charters Tower**	**16.66**	**179**	Pn	**P**	**06 55 34.3**	**+0.2**
	0.3nm,0.3s,baz=352,slow=13,SNR=11						
CTA				LR	LR	07 02 11.5	
	comp=Z,615nm,18.2s,baz=3.0,slow=38						
CTAO	**Charters Tower**	**16.66**	**179**	Pn	**Pn**	**06 55 31.7**	**-0.1**
GUMO	**Guam**	**16.85**	**356**	LR	LR	07 00 04.2	
	comp=Z,319nm,22.0s,baz=164,slow=30						
MTN	**Manton Dam**	**17.53**	**237**	P	**Pn**	**06 55 42.7**	**0.0**
MTN	**Manton Dam**	**17.53**	**237**	P	**P**	**06 55 43.9**	**+0.1**
QIS	**Mount Isa**	**18.25**	**200**	P	**Pn**	**06 55 51.7**	**+0.2**
WB0	**Warramunga Arr**	**19.92**	**214**	P	**P**	**06 56 09.9**	**-0.1**
WR0	**Warramunga Arr**	**19.99**	**213**	P	**P**	**06 56 10.4**	**-0.4**
WR0				IAmb	IAmb	06 56 12.8	
	comp=Z,104nm,0.9s						
WRAB	**Tennant Creek**	**20.07**	**214**	P	**P**	**06 56 11.7**	**-0.1**
WB2	**Warramunga Arr**	**20.08**	**214**	P	**P**	**06 56 11.7**	**-0.2**
WRA	**Warramunga Arr**	**20.09**	**214**	P	**P**	**06 56 11.6**	**-0.4**
	comp=Z,104nm,0.9s,baz=39,slow=12,SNR=68						
WRA	**Warramunga Arr**	**20.09**	**214**	P	**P**	**06 56 10.6**	**-1.3**
KNRA	**Kununurra**	**20.99**	**233**	P	**P**	**06 56 21.0**	**-0.7**
KNRA	**Kununurra**	**20.99**	**233**	P	**P**	**06 56 21.4**	**-0.3**
EIDS	**Eidsvold**	**22.44**	**168**	P	**P**	**06 56 37.1**	**-0.2**
EIDS				IAmb	IAmb	06 56 52.0	
	comp=Z,50nm,1.5s						
DAV	**Davao City (W)**	**22.90**	**297**	LR	LR	07 04 39.8	
	comp=Z,41nm,21.0s,baz=138,slow=34						
BATI	**Baumata**	**23.25**	**252**	P	**P**	**06 56 46.3**	**+0.4**
	comp=Z,53nm,0.6s,baz=246,slow=5.4,SNR=7.8						
BATI				LR	LR	07 08 03.7	
	comp=Z,353nm,19.2s,baz=86,slow=42						
	comp=Z,53nm,0.6s						
AS31	**Alice Springs**	**23.39**	**209**	P	**P**	**06 56 46.8**	**-0.4**
ASAR	**Alice Springs**	**23.39**	**209**	P	**P**	**06 56 46.8**	**-0.4**
	comp=Z,26nm,0.9s,baz=41,slow=8.9,SNR=157						
	comp=Z,26nm,0.9s						
ASAR	**Alice Springs**	**23.39**	**209**	P	**P**	**06 56 46.6**	**-0.5**
SANVU	**Saraoutou**	**24.05**	**121**	P	**P**	**06 56 53.2**	**-0.4**
SANVU				IAmb	IAmb	06 56 54.9	
	comp=Z,57nm,1.2s						
FITZ	**Fitzroy Crossi**	**24.81**	**232**	P	**P**	**06 57 00.2**	**-0.3**
	comp=Z,54nm,1.0s,baz=55,slow=8.6,SNR=76						
FITZ				LR	LR	07 07 25.4	
	comp=Z,625nm,18.8s,baz=56,slow=38						
	comp=Z,54nm,1.0s						
FITZ	**Fitzroy Crossi**	**24.81**	**232**	P	**P**	**06 57 00.1**	**-0.5**
TOLI2	**Tolitoli**	**25.65**	**279**	P	**P**	**06 57 05.8**	**-2.4**
TOLI2				IAmb	IAmb	06 57 21.9	
	comp=Z,28nm,1.3s						
KAPI	**Kappang**	**26.29**	**265**	P	**P**	**06 57 13.0**	**-1.0**
	comp=Z,3.9nm,0.6s,baz=82,slow=8.8,SNR=5.1						
KAPI				LR	LR	07 10 05.5	
	comp=Z,115nm,18.3s,baz=96,slow=42						
	comp=Z,3.9nm,0.6s						
KAPI	**Kappang**	**26.29**	**265**	IAmb	IAmb	06 57 31.7	
	comp=Z,15nm,1.1s						
DZM	**Mont Dzumac**	**27.18**	**135**	P	**P**	**06 57 23.8**	**+1.8**
	comp=Z,11nm,0.9s,baz=311,slow=19,SNR=5.1						
DZM				LR	LR	07 06 50.1	
	comp=Z,515nm,18.5s,baz=299,slow=34						
	comp=Z,11nm,0.9s						
DZM	**Mont Dzumac**	**27.18**	**135**	*e*S	S	07 01 49.6	-11
DZM				*e*LR	LR	07 04 11.9	
	comp=Z,1μm,27.8s						
ARMA	**Armidale**	**27.46**	**170**	P	**P**	**06 57 24.6**	**+0.2**
ARMA				IAmb	IAmb	06 57 31.1	
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	**28.71**	**188**	P	**P**	**06 57 37.4**	**+1.9**
	comp=Z,13nm,0.8s,baz=347,slow=8.8,SNR=13						
STKA				LR	LR	07 10 20.1	
	comp=Z,336nm,18.7s,baz=9.2,slow=39						
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**28.71**	**188**	P	**P**	**06 57 33.8**	**-1.7**
BBOO	**Buckleboo**	**30.79**	**197**	P	**P**	**06 57 53.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**32.13**	**259**	P	**P**	**06 58 04.2**	**-1.8**
FORT	**Forrest**	**32.16**	**210**	P	**P**	**06 58 06.0**	**-0.1**
TOO	**Toolangi**	**34.08**	**181**	P	**P**	**06 58 21.0**	**-1.8**
TOO				IAmb	IAmb	06 58 42.6	
	comp=Z,30nm,1.4s						
LEM	**Lembang**	**38.44**	**263**	LR	LR	07 17 42.7	
	comp=Z,85nm,18.4s,baz=154,slow=41						
JNU	**Nakatsue**	**38.99**	**340**	LR	LR	07 13 26.9	
	comp=Z,122nm,18.3s,baz=192,slow=34						
JNU	**Nakatsue**	**38.99**	**340**	P	**P**	**06 59 04.0**	**-0.7**
JNU				IAmb	IAmb	06 59 15.3	
	comp=Z,42nm,1.3s						
JGF	**Kuroka**	**39.57**	**349**	P	**P**	**06 59 07.2**	**-2.4**
JGF				IAmb	IAmb	06 59 27.7	
	comp=Z,17nm,1.4s						
MJAR	**Matsushiro Arr**	**40.34**	**350**	P	**P**	**06 59 15.3**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=169,slow=9.5,SNR=1.8						
	comp=Z,0.9nm,0.3s						
MJAR	**Matsushiro Arr**	**40.34**	**350**	IAmb	IAmb	06 59 17.6	
	comp=Z,2.6nm,1.0s						
OUZ	**Omahuta**	**40.72**	**145**	P	**P**	**06 59 19.7**	**+0.7**
OUZ				IAmb	IAmb	06 59 20.9	
	comp=Z,14nm,0.9s						
QIZ	**Qiongzhong**	**41.99**	**303**	P	**P**	**06 59 29.2**	**-0.5**
QIZ				S	**S**	**07 05 49.8**	**+1.0**
QIZ				LR	LR		
	comp=Z,280nm,25.5s						
QIZ				LR	LR		
	comp=Z,270nm,27.1s						
QIZ				LR	LR		
	comp=Z,190nm,38.2s						
AFI	**Afiamalu**	**42.92**	**107**	LR	LR	07 16 17.9	
	comp=Z,123nm,18.3s,baz=290,slow=34						
NJ2	**Nanjing**	**43.65**	**326**	*e*P	**P**	**06 59 41.8**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSRS	**Korea Array**	**43.94**	**339**	P	**P**	**06 59 46.0**	**+0.9**
	comp=Z,5.2nm,0.9s,baz=156,slow=9.8,SNR=12						
	comp=Z,5.2nm,0.9s						
KSAR	**Wonju Array Be**	**43.94**	**339**	P	**P**	**06 59 44.3**	**-0.9**
GYA	**Guiyang**	**48.24**	**310**	⇑P	**P**	**07 00 22.3**	**+2.8**
GYA				pmax	pmax		
	comp=Z,16nm,0.8s						
USRK	**Ussuriysk Ar.**	**48.97**	**347**	P	**P**	**07 00 25.4**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=168,slow=4.7,SNR=4.5						
	comp=Z,3.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**48.97**	**347**	P	**P**	**07 00 24.2**	**-0.4**
LYN	**LuoYang**	**49.17**	**323**	*e*P	P	07 00 30.2	+3.9
LYN				S	S	07 07 39.1	+7.2
LYN				pmax	pmax		
	comp=Z,100nm,6.2s						
LYN				LR	LR		
	comp=Z,350nm,19.2s						
LYN				LR	LR		
	comp=Z,250nm,22.4s						
LYN				LR	LR		
	comp=Z,480nm,21.2s						
HNS	**HongShan**	**49.90**	**327**	⇑P	**P**	**07 00 33.5**	**+1.6**
HNS				S	**S**	**07 07 48.1**	**+6.0**
HNS				pmax	pmax		
	comp=Z,12nm,1.0s						
HNS				LR	LR		
	comp=Z,170nm,16.1s						
HNS				LR	LR		
	comp=Z,190nm,15.5s						
HNS				LR	LR		
	comp=Z,210nm,19.2s						
CN2	**Changchun**	**50.45**	**341**	*e*P	**P**	**07 00 36.9**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
XAN	**Xi'an**	**51.04**	**320**	P	**P**	**07 00 44.1**	**+3.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**51.19**	**297**	P	**P**	**07 00 44.3**	**+2.3**
	comp=Z,2.6nm,1.0s,baz=112,slow=5.5,SNR=8.6						
CMAR				LR	LR	07 20 56.1	
	comp=Z,41nm,21.9s,baz=105,slow=34						
	comp=Z,2.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**51.19**	**297**	P	**P**	**07 00 40.2**	**-1.8**
BNX	**BinXian**	**51.59**	**343**	⇑P	**P**	**07 00 45.7**	**+1.2**
BNX				pmax	pmax		
	comp=Z,13nm,0.6s						
BNX				pmax	pmax		
	comp=Z,210nm,3.8s						
PZH	**PanZhiHua**	**52.09**	**307**	P	**P**	**07 00 49.7**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
PETK	**Petropavlovsk-**	**57.08**	**8**	P	P	07 01 30.5	+6.2
	comp=Z,2.2nm,0.8s,baz=166,slow=7.3,SNR=2.6						
GTA	**Gaotai**	**60.10**	**320**	*e*P	**P**	**07 01 47.2**	**+1.3**
GTA				pP	pwP	07 01 52.8	+1.5
GTA				sP	sP	07 01 56.8	+7.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SHEM	**Shemya Is, Ala**	**60.65**	**19**	LR	LR	07 23 20.3	
	comp=Z,106nm,21.0s,baz=251,slow=31						
SONM	**Songino Array**	**61.63**	**331**	P	**P**	**07 01 57.8**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=154,slow=7.2,SNR=6.3						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**61.63**	**331**	P	**P**	**07 01 53.3**	**-2.7**
SONM				IAmb	IAmb	07 02 04.8	
	comp=Z,3.2nm,0.9s						
PPT	**Papeete**	**64.58**	**108**	LR	LR	07 26 46.3	
	comp=Z,47nm,19.1s,baz=308,slow=33						
PPT2	**Papeete2**	**64.58**	**108**	*e*LR	LR	07 21 13.3	
	comp=Z,98nm,24.2s						
TBI	**Tubuai**	**65.29**	**114**	*e*LR	LR	07 22 01.1	
	comp=Z,248nm,39.5s						
WMQ	**Urumqi**	**70.17**	**319**	*e*P	**P**	**07 02 51.4**	**+0.3**
TAOE	**Nuku Hiva Isla**	**73.49**	**98**	*e*LR	LR	07 25 33.5	
	comp=Z,124nm,31.7s						
VNDA	**Vanda**	**74.62**	**176**	P	**P**	**07 03 16.0**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=291,slow=8.8,SNR=3.7						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**74.62**	**176**	P	**P**	**07 03 16.8**	**-0.2**
MK31	**Makanchi Array**	**74.85**	**320**	P	**P**	**07 03 16.9**	**-2.1**
MK31				IAmb	IAmb	07 03 26.2	
	comp=Z,6.7nm,1.4s						
MKAR	**Makanchi Array**	**74.85**	**320**	P	**P**	**07 03 19.6**	**+0.7**
	comp=Z,1.5nm,1.0s,baz=164,slow=5.7,SNR=4.5						
	comp=Z,1.5nm,1.0s						
MKAR	**Makanchi Array**	**74.85**	**320**	P	**P**	**07 03 17.3**	**-1.7**
MAKZ	**Makanchi**	**75.06**	**320**	P	**P**	**07 03 18.6**	**-1.5**
MAKZ				IAmb	IAmb	07 03 33.4	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**76.27**	**328**	P	**P**	**07 03 29.2**	**+2.4**
	comp=Z,2.0nm,0.7s,baz=104,slow=6.3,SNR=5.5						
ZALV				LR	LR	07 35 33.8	
	comp=Z,139nm,21.8s,baz=94,slow=35						
	comp=Z,2.0nm,0.7s						
NRIK	**Noril'sk**	**82.46**	**342**	P	**P**	**07 04 01.4**	**+1.1**
	comp=Z,8.9nm,0.9s,baz=121,slow=3.7,SNR=6.3						
	comp=Z,8.9nm,0.9s						
NRIK	**Noril'sk**	**82.46**	**342**	P	**P**	**07 03 59.0**	**-1.3**
NRIK				IAmb	IAmb	07 04 07.1	
	comp=Z,10nm,0.9s						
ILAR	**Eielson Array**	**83.41**	**23**	P	**P**	**07 04 05.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=252,slow=5.7,SNR=7.6						
ILAR				LR	LR	07 35 56.5	
	comp=Z,62nm,20.9s,baz=355,slow=32						
	comp=Z,0.9nm,0.8s						
INK	**Inuvik**	**89.53**	**22**	LR	LR	07 43 22.7	
	comp=Z,87nm,18.9s,baz=226,slow=35						
AKTO	**Aktyubinsk**	**91.29**	**320**	LR	LR	07 45 04.9	
	comp=Z,81nm,21.8s,baz=66,slow=35						
KIRV	**Kirov**	**96.29**	**328**	LR	LR	07 48 47.4	
	comp=Z,253nm,21.1s,baz=76,slow=36						
YKA	**Yellowknife Ar**	**97.25**	**28**	P	Pdif	07 05 12.7	+1.7
	comp=Z,0.3nm,0.8s,baz=273,slow=4.3,SNR=3.4						
YKA				LR	LR	07 48 34.7	
	comp=Z,54nm,19.9s,baz=322,slow=35						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**97.25**	**28**	P	Pdif	07 05 10.6	-0.4
ELK	**Elko**	**98.76**	**49**	LR	LR	07 41 51.9	
	comp=Z,60nm,20.0s,baz=300,slow=30						

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*SOME **02** 06:56:23.2, 43°.83N×81°.87E, h10^{km}*

*NNC **02** 06:56:24.1±0.7, 43°.89N×81°.85E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=6.3km s-min=2.5km az=133.0*

ISC 02 06:56:23.9±1.2**, 43°.85N**±0°.05×**81°.88E**±0°.05**, h10^{km}, n55, σ2^{s}.19**/86**, 18C-12D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.18**	**250**	*e*P	**Pg**	**06 56 48.4**	**+1.8**
	47nm,0.0s						
KTMS				*e*S	**Sn**	**06 57 05.0**	**+2.2**
	137nm,0.3s						
DJR	**Jarkent**	**1.58**	**288**	*e*P	**Pg**	**06 56 53.8**	**-0.4**
	286nm,0.3s						
DJR				*e*S	**Sg**	**06 57 15.8**	**+1.2**
	907nm,0.4s						
DJR	**Jarkent**	**1.58**	**288**	P	**Pg**	**06 56 53.8**	**-0.4**
	286nm,0.3s						
DJR				S	**Sg**	**06 57 15.8**	**+1.2**
	907nm,0.4s						
PDGK	**Podgornoye**	**1.81**	**254**	P	**Pb**	**06 56 56.6**	**-0.6**
	52nm,0.2s						
PDGK				S	**Sg**	**06 57 20.9**	**-1.3**
	99nm,0.5s						
PDGK	**Podgornoye**	**1.81**	**254**	⇑Pn	**Pb**	**06 56 56.2**	**-1.1**
	41nm,0.3s						
PDGK				⇓Lg	Lg	06 57 21.3	
	111nm,0.5s						
UZB	**Uzynbulak**	**2.20**	**252**	*e*P	**Pb**	**06 57 03.1**	**-0.6**
	47nm,0.0s						
UZB				*e*S	**Sg**	**06 57 32.1**	**-2.3**
	79nm,0.1s						
UZB	**Uzynbulak**	**2.20**	**252**	Pg	**Pb**	**06 57 03.1**	**-0.6**
	47nm,0.4s						
UZB				Lg	Lg	06 57 32.1	
	60nm,0.5s						
KAPS	**Kapalarasan**	**2.30**	**309**	*e*P	**Pb**	**06 57 05.4**	**-0.1**
	10nm,0.1s						
KAPS				*e*S	**Sb**	**06 57 35.7**	**+1.7**
	399nm,0.0s						
KAPS	**Kapalarasan**	**2.30**	**309**	Pg	**Pb**	**06 57 05.4**	**-0.1**
	10nm,0.1s						
KAPS				Lg	Lg	06 57 35.7	
	427nm,0.4s						
KPKS	**Kokpek**	**2.35**	**262**	*e*P	**Pb**	**06 57 06.1**	**-0.3**
	56nm,0.1s						
KPKS				*e*S	**Sg**	**06 57 37.0**	**-2.4**
	217nm,0.1s						
ZHN	**Zhinishke**	**2.60**	**256**	*e*P	**Pb**	**06 57 10.9**	**+0.3**
	51nm,0.1s						
ZHN				*e*S	**Sg**	**06 57 45.1**	**-2.2**
	185nm,0.1s						
ZHN	**Zhinishke**	**2.60**	**256**	Pg	**Pb**	**06 57 10.9**	**+0.3**
	56nm,0.2s						
ZHN				Lg	Lg	06 57 45.1	
	168nm,0.2s						
SATY	**Saty**	**2.65**	**254**	*e*P	**Pb**	**06 57 11.9**	**+0.5**
	21nm,0.1s						
SATY				*e*S	**Sg**	**06 57 47.1**	**-1.9**
	147nm,0.1s						
SATY	**Saty**	**2.65**	**254**	Pg	**Pb**	**06 57 12.0**	**+0.5**
	21nm,0.1s						
SATY				Lg	Lg	06 57 47.1	
	147nm,0.1s						
KURS	**Kuram**	**2.72**	**264**	*e*P	**Pb**	**06 57 12.6**	**0.0**
	13nm,0.1s						
KURS				*e*S	**Sg**	**06 57 48.3**	**-2.8**
	37nm,0.2s						
KURS	**Kuram**	**2.72**	**264**	Pg	**Pb**	**06 57 12.6**	**0.0**
	13nm,0.5s						
KURS				Lg	Lg	06 57 48.3	
	37nm,0.4s						
TDK	**Taldyqorghan**	**2.74**	**296**	*e*P	**Pg**	**06 57 14.1**	**-2.3**
	61nm,0.1s						
TDK				*e*S	**Sg**	**06 57 50.7**	**-1.2**
	565nm,0.3s						
TDK	**Taldyqorghan**	**2.74**	**296**	Pg	**Pg**	**06 57 14.1**	**-2.3**
	68nm,0.7s						
TDK				Lg	Lg	06 57 50.7	
	288nm,0.4s						
ARXS	**Arharly**	**2.94**	**278**	*e*P	**Pb**	**06 57 17.0**	**+0.5**
	21nm,0.2s						
ARXS				*e*S	**Sg**	**06 57 55.3**	**-3.2**
	162nm,0.4s						
ARXS	**Arharly**	**2.94**	**278**	Pg	**Pb**	**06 57 16.7**	**+0.2**
	56nm,0.5s						
ARXS				Lg	Lg	06 57 55.3	
	162nm,0.4s						
MK31	**Makanchi Array**	**2.95**	**5**	Pn	**Pn**	**06 57 11.8**	**+1.0**
	0.5nm,0.3s,baz=180,slow=13,SNR=157						
MK31				⇑Pg	**Pg**	**06 57 17.8**	**-2.6**

	2.0nm,0.2s,baz=186,slow=15,SNR=33						
MK31				⇓Lg	Lg	06 57 56.9	
	10nm,0.3s,baz=188,slow=30,SNR=9.0						
MAKZ	**Makanchi**	**2.96**	**1**	⇑Pn	**Pn**	**06 57 12.1**	**+1.2**
	2.5nm,0.2s						
MAKZ				⇓Pg	**Pb**	**06 57 17.5**	**+0.9**
	6.3nm,0.5s						
MAKZ				⇓Sn	**Sn**	**06 57 48.8**	**+2.4**
	7.4nm,0.3s						
MAKZ				⇑Lg	Lg	06 57 56.6	
	15nm,0.7s						
KOTS	**Kotyrbulak**	**3.52**	**262**	*e*P	**Pb**	**06 57 27.5**	**+1.1**
	44nm,0.3s						
KOTS				*e*S	**Sg**	**06 58 12.7**	**-4.2**
	150nm,0.4s						
KOTS	**Kotyrbulak**	**3.52**	**262**	Pg	**Pg**	**06 57 28.5**	**-2.8**
	45nm,0.6s						
KOTS				Lg	Lg	06 58 15.2	
	150nm,0.4s						
CHKK	**Chushkaly**	**3.54**	**272**	*e*P	**Pb**	**06 57 27.1**	**+0.5**
	5.1nm,0.0s						
CHKK				*e*S	**Sb**	**06 58 12.7**	**+3.2**
	101nm,0.0s						
CHKK	**Chushkaly**	**3.54**	**272**	Pg	**Pb**	**06 57 26.8**	**+0.3**
	20nm,0.4s						
CHKK				Lg	Lg	06 58 12.3	
	101nm,0.2s						
MDOK	**Medeo**	**3.58**	**261**	*e*P	**Pb**	**06 57 28.7**	**+1.3**
	38nm,0.6s						
MDOK				*e*S	**Sg**	**06 58 15.7**	**-3.2**
	26nm,0.1s						
MDOK	**Medeo**	**3.58**	**261**	⇑Pn	**Pn**	**06 57 20.5**	**+0.9**
	2.9nm,0.6s						
MDOK				⇓Pg	**Pg**	**06 57 29.9**	**-2.6**
	27nm,0.5s						
MDOK				⇑Lg	Lg	06 58 18.1	
	19nm,0.4s						
MDOK	**Medeo**	**3.58**	**261**	Pg	**Pb**	**06 57 28.7**	**+1.3**
	38nm,0.6s						
MDOK				Lg	Lg	06 58 15.7	
	28nm,0.4s						
KNDC	**Almaty**	**3.63**	**262**	⇑Pg	**Pg**	**06 57 31.1**	**-2.3**
	51nm,0.5s						
KNDC				⇓Lg	Lg	06 58 19.1	
	122nm,0.8s						
TNSS	**Tian-Shan**	**3.68**	**259**	*e*P	**Pb**	**06 57 30.7**	**+1.5**
	9.2nm,0.4s						
TNSS				*e*S	**Sg**	**06 58 19.0**	**-3.2**
	11nm,0.0s						
TNSS	**Tian-Shan**	**3.68**	**259**	Pg	**Pg**	**06 57 31.5**	**-3.0**
	9.2nm,0.4s						
TNSS				Lg	Lg	06 58 20.7	
	9.4nm,0.3s						
KTBS	**Karatobe**	**3.77**	**270**	*e*P	**Pg**	**06 57 33.2**	**-2.8**
	10nm,0.4s						
KTBS				*e*S	**Sg**	**06 58 23.7**	**-1.1**
	180nm,0.2s						
KTBS	**Karatobe**	**3.77**	**270**	Pg	**Pg**	**06 57 33.2**	**-2.8**
	10nm,0.4s						
KTBS				Lg	Lg	06 58 23.7	
	179nm,0.3s						
IZV	**Izvestkoviy**	**3.92**	**260**	*e*P	**Pb**	**06 57 34.4**	**+1.2**
	21nm,0.2s						
IZV				*e*S	**Sg**	**06 58 29.2**	**-0.5**
	48nm,0.4s						
IZV	**Izvestkoviy**	**3.92**	**260**	Pg	**Pg**	**06 57 36.7**	**-2.3**
	21nm,0.5s						
KUU	**Kurty**	**4.01**	**272**	*e*P	**Pg**	**06 57 37.2**	**-3.4**
	11nm,0.3s						
KUU				*e*S	**Sg**	**06 58 30.7**	**-1.7**
	75nm,0.0s						
KUU	**Kurty**	**4.01**	**272**	Pg	**Pg**	**06 57 37.2**	**-3.4**
	11nm,0.4s						
KUU				Lg	Lg	06 58 30.7	
	80nm,0.6s						
MTBS	**Maitube**	**4.03**	**262**	*e*P	**Pb**	**06 57 37.0**	**+2.0**
	9.5nm,0.1s						
MTBS				*e*S	**Sg**	**06 58 30.0**	**-3.3**
	38nm,0.3s						
MTBS	**Maitube**	**4.03**	**262**	Pg	**Pb**	**06 57 37.0**	**+2.0**
	9.6nm,0.5s						
MTBS				Lg	Lg	06 58 30.0	
	38nm,0.3s						
ZSN	**Zaisan**	**4.16**	**29**	*e*P	**Pb**	**06 57 38.6**	**+1.4**
	5.8nm,0.1s						
ZSN				*e*S	**Sg**	**06 58 32.7**	**-4.7**
	60nm,0.7s						
ZSN	**Zaisan**	**4.16**	**29**	Pg	**Pb**	**06 57 38.6**	**+1.4**
	5.8nm,0.0s						
KST	**Kastek**	**4.38**	**261**	*e*P	**Pb**	**06 57 42.9**	**+1.9**
	18nm,1.1s						
KST				*e*S	**Sg**	**06 58 40.6**	**-4.0**
	28nm,0.6s						
KST	**Kastek**	**4.38**	**261**	Pg	**Pb**	**06 57 42.9**	**+1.9**
	18nm,1.1s						
KST				Lg	Lg	06 58 40.6	
	28nm,0.6s						
KRBS	**Karabastau**	**4.50**	**270**	*e*P	**Pg**	**06 57 46.2**	**-3.8**
	3.6nm,0.4s						
KRBS				*e*S	**Sg**	**06 58 45.8**	**-2.4**
	21nm,0.0s						
KRBS	**Karabastau**	**4.50**	**270**	Pg	**Pg**	**06 57 46.2**	**-3.8**
	3.6nm,0.4s						
KRBS				Lg	Lg	06 58 45.8	
	21nm,0.5s						
TKM2	**Tokmak 2**	**4.67**	**261**	⇑Pn	**Pn**	**06 57 36.9**	**+2.2**
	4.1nm,0.8s						
TKM2				⇓Pg	**Pg**	**06 57 49.6**	**-3.8**
	8.1nm,0.4s						
TKM2				⇓Lg	Lg	06 58 51.6	
	11nm,0.3s						
CHMS	**Chumysh**	**5.26**	**263**	⇓Pg	**Pb**	**06 57 58.9**	**+2.9**
	5.3nm,0.6s						
CHMS				⇑Lg	Lg	06 59 10.0	
	29nm,0.8s						
SGDS	**Sogindy**	**5.28**	**268**	*e*P	**Pb**	**06 57 59.5**	**+3.3**
	2.4nm,0.2s						
SGDS				*e*S	**Sg**	**06 59 08.6**	**-4.6**
	11nm,0.5s						
SGDS	**Sogindy**	**5.28**	**268**	Pg	**Pb**	**06 57 59.5**	**+3.3**
	2.4nm,0.1s						
SGDS				Lg	Lg	06 59 08.3	
	11nm,0.5s						
KURBB	**Kurchatov Arra**	**7.14**	**343**	⇓Pn	**Pn**	**06 58 08.9**	**+0.5**
	1.9nm,0.6s						
KURBB				⇑Sn	**Sn**	**06 59 30.9**	**+1.4**
	4.5nm,0.5s						
KURBB				⇑Lg	Lg	07 00 08.3	
	27nm,0.7s						
KURK	**Kurchatov**	**7.21**	**343**	⇑Pn	**Pn**	**06 58 10.0**	**+0.8**
	0.9nm,0.5s						
KURK				⇓Sn	**Sn**	**06 59 32.5**	**+1.3**
	3.3nm,0.8s						
KURK				⇑Lg	Lg	07 00 11.2	
	9.9nm,0.8s						
OTUK	**Ortayu**	**7.96**	**307**	⇑Pn	**Pn**	**06 58 19.1**	**-0.4**
	1.4nm,1.1s						
OTUK				⇓Sn	**Sn**	**06 59 49.8**	**+0.3**
	2.0nm,0.8s						
OTUK				⇑Lg	Lg	07 00 34.3	
	15nm,1.1s						
KK31	**Karatay Array**	**8.30**	**269**	Pn	**Pn**	**06 58 25.9**	**+1.6**
	0.1nm,0.3s,baz=76,slow=15,SNR=4.0						
KK31				⇑Pg	Pg	06 58 55.3	-7.4
	0.5nm,0.4s,baz=80,slow=16,SNR=9.2						
KK31				⇑Lg	Lg	07 00 46.5	
	3.1nm,0.6s,baz=75,slow=30,SNR=3.5						
BRVK	**Borovoye**	**11.99**	**324**	⇑Lg	Lg	07 02 38.4	
	14nm,1.2s						

*IDC **02** 06:58:03.4±0.8, 59°.79N×30°.04W, h0^{km}, mb4.1/16, mbtmp4.2/20, ML4.1/4, MS4.0/38, Error ellipse: s-maj=24.6km s-min=12.2km az=9.0*

*GCMT **02** 06:58:03.9±0.4, 59°.81N±0°.03×29°.76W±0°.04, h18^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s8,c9; s72,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.75±.16; $M_{\theta\theta}$-0.44±.12; $M_{\phi\phi}$1.20±.12; $M_{r\theta}$-0.70±.27; $M_{\theta\phi}$1.44±.08; $M_{\phi r}$0.34±.22; Best double couple: $M_0$1.93800×10^{16} NP1:ϕ_s171.00000°,δ65.00000°,λ-154.00000°. NP2: ϕ_s69.00000°,δ67.00000°,λ-28.00000°. Principal axes: T 2.0370, Plg1.0000°, Azm120.0000°; N -0.1960, Plg54.0000°, Azm212.0000°; P -1.8390, Plg36.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*REY **02** 06:58:04.6, 59°.32N×27°.94W, h10^{km}*

*NEIC **02** 06:58:05.9±1.3, 59°.83N±0°.10×30°.0W±0°.1, h10^{km}±1^{km}, mb4.6/130, Error ellipse: s-maj=16.5km s-min=11.8km az=180.0*

ISC 02 06:58:05.2±0.4**, 59°.85N**±0°.07×**29°.96W**±0°.04**, h10**^{km}**, n345, σ0^{s}91**/327**, mb4.6**/88**, MS3.9**/33**, 11D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRNE	**Reykjanes**	**5.26**	**38**	P	**Pn**	**06 59 23.2**	**-0.5**
	baz=27						
INYL	**Nylenda**	**5.36**	**36**	P	**Pn**	**06 59 25.4**	**+0.2**
	baz=26						
IGRV	**Grindav??k**	**5.37**	**38**	P	**Pn**	**06 59 25.0**	**-0.3**
	baz=28						
IGRV				S	**Sn**	**07 00 27.5**	**+0.5**
	baz=28						
IVOG	**Vogar**	**5.47**	**38**	P	**Pn**	**06 59 26.2**	**-0.4**
	baz=27						
IKRI	**Krysuvik**	**5.50**	**39**	P	**Pn**	**06 59 26.5**	**-0.6**
	baz=29						
IKRI				S	**Sn**	**07 00 29.6**	**-0.7**
	baz=29						
IKAS	**Kald??rsel**	**5.67**	**39**	P	**Pn**	**06 59 28.2**	**-1.2**
	baz=29						
IKAS				S	**Sn**	**07 00 34.3**	**-0.2**
	baz=29						
ISAN	**Sandskeio**	**5.79**	**40**	P	**Pn**	**06 59 29.9**	**-1.1**
	baz=30						
ISAN				S	**Sn**	**07 00 37.3**	**0.0**
	baz=30						
IBJA	**Bjarnastaoir**	**5.80**	**41**	P	**Pn**	**06 59 30.2**	**-0.9**
	baz=31						
IBJA				S	**Sn**	**07 00 35.7**	**-1.9**
	baz=31						
ISOL	**Solvholt**	**5.91**	**42**	P	**Pn**	**06 59 31.0**	**-1.7**
	baz=33						
ISOL				S	**Sn**	**07 00 37.7**	**-2.6**
	baz=33						
IKRO	**Krokur**	**5.96**	**41**	P	**Pn**	**06 59 31.9**	**-1.5**
	baz=31						
IKRO				S	**Sn**	**07 00 40.6**	**-1.0**
	baz=31						
IASM	**Asmuli**	**5.96**	**44**	P	**Pn**	**06 59 31.9**	**-1.5**
	baz=34						
IASM				S	**Sn**	**07 00 39.0**	**-2.6**
	baz=34						
ISAU	**Saurbar**	**6.13**	**43**	P	**Pn**	**06 59 33.0**	**-2.7**
	baz=34						
ISAU				S	**Sn**	**07 00 43.5**	**-2.2**
	baz=34						
BORG	**Borgarnes**	**6.35**	**36**	Pn	**Pn**	**06 59 37.8**	**-1.0**
	18nm,0.3s,baz=215,slow=4.6,SNR=60						
BORG				Sn	**Sn**	**07 00 50.5**	**-0.7**
	1.4nm,0.3s,baz=346,slow=24,SNR=6.1						
BORG				LR	LR	07 01 28.1	
	comp=Z,974nm,18.3s,baz=245,slow=32						
	59nm,0.5s						
BORG	**Borgarnes**	**6.35**	**36**	Pn	**Pn**	**06 59 40.0**	**+1.2**
ANGG	**Ammassalik, Gr**	**6.78**	**332**		**Pn**	**06 59 44.0**	**-0.6**
NRS	**Narsarsuaq**	**7.74**	**286**	Pn	**Pn**	**06 59 58.4**	**+0.6**
SFJD	**Kangerlussuaq**	**11.65**	**317**	Pn	**Pn**	**07 00 51.4**	**+0.1**
	1.0nm,0.3s,baz=138,slow=11,SNR=9.6						
SFJD				LR	LR	07 04 35.6	
	comp=Z,1µm,21.2s,baz=124,slow=34						
	20nm,0.9s						
SFJD	**Kangerlussuaq**	**11.65**	**317**	Pn	**Pn**	**07 00 52.9**	**+1.6**
ILULI	**Ilulissat**	**12.99**	**325**	Pn	**Pn**	**07 01 08.4**	**-1.1**
JMIC	**Jan Mayen**	**14.18**	**29**	LR	LR	07 05 27.0	
	comp=Z,289nm,20.2s,baz=256,slow=31						
EKA	**Eskdalemuir Ar**	**15.01**	**96**	Pn	**P**	**07 01 38.6**	**-3.9**
	baz=305,slow=8.6						
EKA				LR	LR	07 06 31.5	
	comp=Z,502nm,18.1s,baz=356,slow=34						
	14nm,0.9s						
FRB	**Frobisher Bay**	**18.44**	**299**	P	**P**	**07 02 18.6**	**-1.9**
	0.3nm,0.3s,baz=84,slow=8.8,SNR=11						
FRB				LR	LR	07 08 35.7	
	comp=Z,917nm,18.5s,baz=81,slow=34						
	5.4nm,0.8s						
NB2	**NORSAR Subarra**	**20.11**	**69**	P	Pn	07 02 39.3	-1.4
	comp=Z,6.2nm,1.2s,baz=282,slow=11						
NOA	**NORSAR Array B**	**20.11**	**69**	P	Pn	07 02 38.3	-2.4
	comp=Z,1.8nm,1.0s,baz=282,slow=11,SNR=3.3						
SCHQ	**Schefferville**	**20.33**	**272**	P	**P**	**07 02 40.5**	**-0.7**
	comp=Z,8.9nm,0.8s,baz=56,slow=8.0,SNR=15						
SCHQ				LR	LR	07 09 09.8	
	comp=Z,158nm,20.1s,baz=60,slow=33						
	comp=Z,8.9nm,0.8s						
SCHQ	**Schefferville**	**20.33**	**272**	P	**P**	**07 02 41.1**	**-0.1**
TULEG	**Thule**	**21.36**	**336**	P	**P**	**07 02 51.5**	**-0.7**
TULEG				IAmb	IAmb	07 02 55.3	
	comp=Z,27nm,1.1s						
SNF	**Seneffe**	**21.44**	**101**	*d*P	**P**	**07 02 52.9**	**-0.3**
SNF				*d*pP	**sP**	**07 02 58.1**	**+1.3**
BMRD	**Maredsous**	**21.81**	**100**	*d*P	**P**	**07 02 57.0**	**-0.2**
DOU	**Dourbes**	**21.86**	**101**	*d*P	**P**	**07 02 56.7**	**-1.0**
BCLA	**Clavier**	**22.00**	**100**	*d*P	**P**	**07 02 59.5**	**+0.2**
CLF	**Chambon-Foret**	**22.10**	**108**	P	**P**	**07 02 58.9**	**-1.4**
RCHB	**Rochefort**	**22.13**	**100**	*d*P	**P**	**07 02 59.2**	**-1.5**
	comp=Z,18nm,1.0s						
MEM	**Membach**	**22.23**	**99**	*d*P	**P**	**07 03 01.4**	**-0.3**
BTNL	**Ternell**	**22.31**	**98**	*d*P	**P**	**07 03 02.0**	**-0.6**
BTNL				*d*pP	**sP**	**07 03 06.4**	**+0.2**
BTNL				*d*PP	**PnPn**	**07 03 24.7**	**-0.3**
PGAV	**Gavieira, Arco**	**22.35**	**134**	*e*LR	LR	07 08 20.0	
	comp=Z,365nm,20.0s						
BHOU	**Houvegnez**	**22.39**	**99**	*d*P	**P**	**07 03 02.9**	**-0.6**
WLF	**Walferdange**	**22.91**	**100**	P	**P**	**07 03 09.2**	**+0.4**
WLF				IAmb	IAmb	07 03 17.0	
	comp=Z,23nm,1.1s						
POLO	**Lamas de Olo**	**23.04**	**133**	*e*P	**P**	**07 03 10.6**	**+0.2**
	comp=Z,17nm,1.3s						
PVRL	**Vila Real**	**23.15**	**133**	*e*P	**P**	**07 03 12.0**	**+0.5**
	comp=Z,51nm,1.6s						
MVO	**Moncorvo**	**23.50**	**132**	*e*P	**P**	**07 03 16.4**	**+1.3**
	comp=Z,57nm,1.3s						
MVO				*e*LR	LR	07 09 04.5	
	comp=Z,311nm,20.0s						
PVIS	**Viseu**	**23.58**	**134**	*e*P	**P**	**07 03 15.1**	**-0.7**
	comp=Z,31nm,1.3s						
GBN	**Guysborough**	**23.69**	**247**	P	**P**	**07 03 15.0**	**-1.8**
GBN				IAmb	IAmb	07 03 24.7	
	comp=Z,26nm,1.6s						
PCAS	**Casmilo, Conde**	**23.95**	**136**	*e*P	**P**	**07 03 18.5**	**-0.8**
	comp=Z,54nm,2.1s						
MTE	**Manteigas**	**23.98**	**134**	*e*P	**P**	**07 03 18.4**	**-1.3**
	comp=Z,43nm,1.4s						
MTE				*e*LR	LR	07 09 18.8	
	comp=Z,275nm,20.0s						
MTE	**Manteigas**	**23.98**	**134**	P	**P**	**07 03 18.0**	**-1.7**
ECH	**Echery**	**24.36**	**102**	P	**P**	**07 03 23.4**	**+0.2**
ECH				IAmb	IAmb	07 03 37.0	
	comp=Z,16nm,1.1s						
PCBR	**Castelo Branco**	**24.50**	**135**	*e*P	**P**	**07 03 24.1**	**-0.3**
BATG	**Bathurst New B**	**24.50**	**255**	P	**P**	**07 03 23.9**	**-0.5**
ARCES	**ARCESS Array B**	**24.67**	**44**	P	**P**	**07 03 26.6**	**+0.8**
	comp=Z,12nm,1.2s,baz=260,slow=6.0,SNR=12						
ARCES				LR	LR	07 11 30.9	
	comp=Z,215nm,18.2s,baz=257,slow=33						
	comp=Z,12nm,1.2s						
ARCES	**ARCESS Array B**	**24.67**	**44**	P	**P**	**07 03 26.3**	**+0.6**
ARCES				IAmb	IAmb	07 03 28.8	
	comp=Z,14nm,1.2s						
BFO	**Black Forest**	**24.86**	**100**	P	**P**	**07 03 27.8**	**+0.1**
BFO				IAmb	IAmb	07 03 55.9	
	comp=Z,12nm,1.2s						
PMRV	**Marv??o**	**24.89**	**135**	*e*P	**P**	**07 03 27.5**	**-0.5**
	comp=Z,44nm,1.6s						
PMRV				*e*LR	LR	07 09 45.4	
	comp=Z,281nm,20.0s						
PMTG	**Montargil**	**24.92**	**137**	*e*P	**P**	**07 03 27.3**	**-0.9**
	comp=Z,46nm,1.2s						
SSB	**Saint Sauveur**	**25.17**	**110**	P	**P**	**07 03 31.0**	**+0.5**
SSB				IAmb	IAmb	07 03 51.2	
	comp=Z,14nm,1.2s						
KEV	**Kevo**	**25.17**	**43**	P	**P**	**07 03 32.1**	**+1.9**
KEV				IAmb	IAmb	07 03 35.1	
	comp=Z,19nm,1.2s						
HAL	**Halifax**	**25.24**	**248**	P	**P**	**07 03 29.5**	**-1.5**
HAL				IAmb	IAmb	07 04 01.2	
	comp=Z,25nm,1.6s						
PESTR	**Estremoz**	**25.32**	**136**	*e*P	**P**	**07 03 31.2**	**-0.7**
	comp=Z,34nm,1.4s						
CLL	**Collm**	**25.33**	**90**	P	**P**	**07 03 32.0**	**+0.2**
CLL	**Collm**	**25.33**	**90**	*e*P	**P**	**07 03 33.0**	**+1.2**
CLL				*e*PPP	PPP	07 04 12.0	
CLL				*e*S	**S**	**07 08 00.0**	**+2.4**
CLL				LmH		07 12 00.0	
	comp=Z,200nm,20.7s						
PNCL	**Nicolau / Gran**	**25.68**	**138**	*e*P	**P**	**07 03 34.6**	**-0.5**
SENIN	**Lac Senin/Sane**	**25.71**	**105**	P	**P**	**07 03 36.1**	**+0.5**
SENIN				IAmb	IAmb	07 03 50.5	
	comp=Z,25nm,1.5s						
PAB	**San Pablo**	**25.92**	**130**	P	**P**	**07 03 37.4**	**0.0**
ESBB	**Sonseca Array**	**25.96**	**129**	P	**P**	**07 03 39.3**	**+1.6**
ESBB				IAmb	IAmb	07 03 42.9	
	comp=Z,19nm,1.2s						
ESDC	**Sonseca Array**	**25.96**	**129**	P	**P**	**07 03 37.5**	**-0.3**
	comp=Z,11nm,1.0s,baz=331,slow=8.9,SNR=26						
ESDC				LR	LR	07 11 52.7	
	comp=Z,198nm,21.5s,baz=328,slow=32						
	comp=Z,11nm,1.0s						
ESDC	**Sonseca Array**	**25.96**	**129**	P	**P**	**07 03 39.1**	**+1.4**
ESDC				IAmb	IAmb	07 03 43.0	
	comp=Z,15nm,1.2s						
EUNU	**Eureka**	**26.03**	**341**	P	**P**	**07 03 37.6**	**-0.4**
EUNU				IAmb	IAmb	07 03 40.8	
	comp=Z,21nm,1.4s						
D62A	**Allapoint, All**	**26.11**	**258**	P	**P**	**07 03 37.8**	**-1.1**
D62A				IAmb	IAmb	07 03 49.2	
	comp=Z,14nm,1.1s						
PTEO	**Sao Teotonio**	**26.12**	**139**	*e*P	**P**	**07 03 41.5**	**+2.4**
	comp=Z,122nm,2.0s						
PCVE	**Castro Verde**	**26.28**	**138**	*e*P	**P**	**07 03 42.1**	**+1.6**
BNI	**Bardonecchia**	**26.36**	**108**	P	**P**	**07 03 40.2**	**-1.1**
PVAQ	**Vaqueiros**	**26.59**	**138**	*e*LR	LR	07 10 30.4	
	comp=Z,460nm,20.0s						
TUE	**Stuetta**	**26.64**	**102**	P	**P**	**07 03 43.0**	**-1.0**
DAVOX	**Davos/Dischmat**	**26.69**	**101**	LR	LR	07 13 41.8	
	comp=Z,115nm,21.0s,baz=274,slow=35						
FINES	**FINESS Array B**	**26.80**	**62**	P	**P**	**07 03 44.4**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=286,slow=10.0,SNR=2.2						
	comp=Z,1.5nm,0.9s						
RES	**Resolute Bay**	**27.25**	**328**	P	**P**	**07 03 49.6**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=92,slow=10.0,SNR=14						
RES				LR	LR	07 14 23.2	
	comp=Z,284nm,18.0s,baz=86,slow=36						
	comp=Z,5.2nm,0.9s						
RES	**Resolute Bay**	**27.25**	**328**	P	**P**	**07 03 49.6**	**+0.6**
VRAC	**Vranov**	**28.37**	**91**	LR	LR	07 14 30.0	
	comp=Z,180nm,20.3s,baz=300,slow=35						
FCC	**Fort Churchill**	**31.62**	**297**	P	**P**	**07 04 28.4**	**+0.5**
FCC				IAmb	IAmb	07 04 33.0	
	comp=Z,7.2nm,0.8s						
MDT	**Midelt**	**31.82**	**137**	LR	LR	07 16 13.6	
	comp=Z,175nm,20.5s,baz=360,slow=34						
SADO	**Sadowa**	**32.76**	**265**	LR	LR	07 16 29.1	
	comp=Z,238nm,19.7s,baz=54,slow=34						
KLMR	**Klimovskoe**	**32.93**	**58**	*e*P	**P**	**07 04 39.8**	**+0.5**
KLMR				AMP		07 04 43.4	
	comp=Z,14nm,1.4s						
BUR08	**Bucovina Ar. S**	**33.80**	**86**	P	**P**	**07 04 48.5**	**+1.3**
BURAR	**Bucovina Array**	**33.83**	**86**	P	**P**	**07 04 47.9**	**+0.4**
AKASG	**Malin Array Be**	**33.83**	**79**	P	**P**	**07 04 46.1**	**-1.2**
	comp=Z,2.6nm,0.9s,baz=308,slow=8.7,SNR=7.9						
	comp=Z,2.6nm,0.9s						
AKASG	**Malin Array Be**	**33.83**	**79**	P	**P**	**07 04 46.9**	**-0.4**
AKBB	**Malin Array Si**	**33.83**	**79**	P	**P**	**07 04 46.6**	**-0.7**
AKBB				IAmb	IAmb	07 04 48.1	
	comp=Z,9.4nm,1.2s						
KEST	**Kesra**	**34.95**	**116**	LR	LR	07 17 46.6	
	comp=Z,377nm,20.4s,baz=276,slow=34						
SSPA	**Standing Stone**	**35.17**	**259**	P	**P**	**07 04 59.5**	**+0.5**
SSPA				IAmb	IAmb	07 05 01.9	
	comp=Z,18nm,1.4s						
SSPA	**Standing Stone**	**35.17**	**259**	P	**P**	**07 04 58.6**	**-0.4**
	baz=40						
VAE	**Valguarnera**	**35.89**	**108**	LR	LR	07 19 19.8	
	comp=Z,224nm,18.0s,baz=313,slow=36						
FNA	**Florina**	**36.76**	**98**	P	**P**	**07 05 12.1**	**-0.5**
FNA				IAmb	IAmb	07 05 18.9	
	comp=Z,9.1nm,1.0s						
C36M	**Paulatuk**	**37.42**	**324**	P	**P**	**07 05 17.6**	**-0.2**
	baz=56						
ULM	**Lac du Bonnet**	**37.43**	**285**	LR	LR	07 19 31.3	
	comp=Z,376nm,19.0s,baz=42,slow=34						
YKA	**Yellowknife Ar**	**38.15**	**312**	LR	LR	07 20 24.0	
	comp=Z,482nm,18.0s,baz=56,slow=35						
KIRV	**Kirov**	**38.36**	**56**	LR	LR	07 20 18.2	
	comp=Z,145nm,18.4s,baz=309,slow=35						
AGMN	**Agassiz Nation**	**38.72**	**283**	P	**P**	**07 05 29.5**	**+0.4**
AGMN	**Agassiz Nation**	**38.72**	**283**	P	**P**	**07 05 28.7**	**-0.4**
	baz=47						
O48B	**Farmland**	**39.09**	**265**	P	**P**	**07 05 31.5**	**-0.7**
	baz=41						
F36A	**Milaca**	**39.24**	**278**	P	**P**	**07 05 33.9**	**+0.5**
P48A	**Milroy**	**39.83**	**265**	P	**P**	**07 05 37.9**	**-0.5**
SFIN	**Lafayette**	**39.98**	**267**	P	**P**	**07 05 38.7**	**-0.9**
	baz=41						
R50A	**Paris**	**40.18**	**262**	P	**P**	**07 05 41.8**	**+0.4**
R50A				IAmb	IAmb	07 05 59.8	
	comp=Z,21nm,1.7s						
S51A	**Beattyville**	**40.31**	**261**	P	**P**	**07 05 42.2**	**-0.3**
F33A	**5 Mile Ranch,**	**40.63**	**281**	P	**P**	**07 05 45.2**	**+0.2**
INK	**Inuvik**	**40.77**	**326**	P	**P**	**07 05 45.2**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=29,slow=12,SNR=10						
INK				LR	LR	07 21 56.1	
	comp=Z,154nm,19.1s,baz=58,slow=35						
	comp=Z,2.5nm,0.8s						
INK	**Inuvik**	**40.77**	**326**	P	**P**	**07 05 45.9**	**0.0**
INK				IAmb	IAmb	07 05 50.6	
	comp=Z,17nm,1.8s						
INK	**Inuvik**	**40.77**	**326**	P	**P**	**07 05 45.5**	**-0.3**
	baz=49						
HDIL	**Hopedale**	**40.95**	**269**	P	**P**	**07 05 47.2**	**-0.5**
	baz=41						
TZTN	**Tazewell**	**41.14**	**260**	P	**P**	**07 05 48.2**	**-1.1**
	baz=38						
V51A	**Loudon**	**42.12**	**260**	P	**P**	**07 05 57.9**	**+0.6**
V51A				IAmb	IAmb	07 06 47.7	
	comp=Z,23nm,1.8s						
ECSD	**EROS Data Cent**	**42.30**	**279**	P	**P**	**07 05 58.2**	**-0.5**
	baz=44						
DGMT	**Dagmar**	**42.64**	**289**	P	**P**	**07 06 02.1**	**+0.6**
DGMT				IAmb	IAmb	07 06 07.5	
	comp=Z,12nm,0.8s						
DGMT	**Dagmar**	**42.64**	**289**	P	**P**	**07 06 00.4**	**-1.1**
	baz=46						
IDI	**Anoyia**	**42.76**	**100**	LR	LR	07 25 16.9	
	comp=Z,84nm,19.9s,baz=290,slow=38						
EPYK	**Eagle Plains**	**43.00**	**326**	P	**P**	**07 06 04.7**	**+0.4**
EPYK				IAmb	IAmb	07 06 12.6	
	comp=Z,14nm,1.4s						
EPYK	**Eagle Plains**	**43.00**	**326**	P	**P**	**07 06 03.7**	**-0.5**
	baz=45						
W50A	**Signal Mountai**	**43.08**	**261**	P	**P**	**07 06 05.9**	**+0.8**
W50A				IAmb	IAmb	07 06 50.7	
	comp=Z,19nm,1.6s						
P40A	**Paris**	**43.12**	**271**	P	**P**	**07 06 05.3**	**0.0**
ARU	**Arti**	**43.53**	**54**	LR	LR	07 23 06.1	
	comp=Z,162nm,19.7s,baz=356,slow=34						
ARU	**Arti**	**43.53**	**54**	P	**P**	**07 06 09.8**	**+1.3**
ARU				IAmb	IAmb	07 06 13.9	
	comp=Z,13nm,1.5s						
EDM	**Edmonton**	**43.56**	**300**	P	**P**	**07 06 09.2**	**+0.3**
GOGA	**Godfrey**	**43.59**	**257**	P	**P**	**07 06 08.8**	**-0.4**
	baz=36						
WVT	**Waverly**	**43.61**	**264**	P	**P**	**07 06 09.4**	**0.0**
WVT	**Waverly**	**43.61**	**264**	P	**P**	**07 06 08.5**	**-0.9**
	baz=38						
BR131	**Keskin Array S**	**43.73**	**88**	P	**P**	**07 06 12.0**	**+1.5**
BR131				IAmb	IAmb	07 06 23.2	
	comp=Z,15nm,1.6s						
BRTR	**Keskin Array B**	**43.73**	**88**	P	**P**	**07 06 10.8**	**+0.4**
	comp=Z,3.2nm,1.1s,baz=324,slow=6.1,SNR=5.6						
	comp=Z,3.2nm,1.1s						
BRTR	**Keskin Array B**	**43.73**	**88**	P	**P**	**07 06 11.4**	**+0.9**
CCM	**Cathedral Cave**	**43.83**	**269**	P	**P**	**07 06 11.0**	**-0.2**
CCM				IAmb	IAmb	07 06 11.8	
	comp=Z,6.7nm,0.9s						
CCM	**Cathedral Cave**	**43.83**	**269**	P	**P**	**07 06 10.7**	**-0.5**
	baz=40						
A21K	**Barrow**	**43.94**	**338**	P	**P**	**07 06 12.5**	**+0.9**
A21K	**Barrow**	**43.94**	**338**	P	**P**	**07 06 11.5**	**0.0**
	baz=36						
MMPY	**Sheldon Lake,**	**43.97**	**319**	P	**P**	**07 06 12.6**	**+0.6**
	baz=46,SNR=6.8						
I29M	**Ogilvie Camp,**	**44.19**	**325**	P	**P**	**07 06 13.9**	**+0.2**
I29M	**Ogilvie Camp,**	**44.19**	**325**	P	**P**	**07 06 13.7**	**0.0**
	baz=43,SNR=14						
BMAR	**Burnt Mountain**	**44.35**	**330**	P	**P**	**07 06 15.7**	**+0.7**
PBMO	**Poplar Bluff**	**44.41**	**267**	P	**P**	**07 06 15.4**	**-0.3**

PBMO				IAmb	IAmb	07 06 16.5	
	comp=Z,8.3nm,0.8s						
X48A	Hartselle	44.54	262	P	P	07 06 16.3	-0.5
X48A				IAmb	IAmb	07 06 17.7	
	comp=Z,5.0nm,0.8s						
TOLK	Toolik Lake Re	44.62	333	P	P	07 06 17.9	+0.8
TOLK	Toolik Lake Re	44.62	333	P	P	07 06 17.4	+0.3
	baz=39						
J29M	Klondike Camp	44.82	324	P	P	07 06 18.8	0.0
	baz=43						
LAO	LASA Array	44.88	289	P	P	07 06 20.8	+1.3
LAO				IAmb	IAmb	07 06 25.3	
	comp=Z,6.0nm,0.7s						
LAO	LASA Array	44.88	289	P	P	07 06 19.4	-0.1
	baz=44						
FARO	Faro, Yukon	44.93	320	P	P	07 06 20.0	+0.2
	baz=44						
MGMO	Mountain Grove	45.05	269	P	P	07 06 21.1	+0.2
S39A	Bolivar	45.16	270	P	P	07 06 21.2	-0.6
M31M	Drury Creek, Y	45.29	320	P	P	07 06 24.3	+1.8
M31M				IAmb	IAmb	07 06 29.2	
	comp=Z,5.2nm,0.8s						
M31M	Drury Creek, Y	45.29	320	P	P	07 06 22.9	+0.3
	baz=44						
LCAR	Lake Charles	45.33	267	P	P	07 06 22.6	-0.5
LCAR				IAmb	IAmb	07 08 00.5	
	comp=Z,3.9nm,0.6s						
KBZ	Khabaz	45.37	77	P	P	07 06 24.7	+1.3
	comp=Z,1.8nm,0.7s,baz=342,slow=8.4,SNR=5.3						
KBZ				LR	LR	07 27 25.9	
	comp=Z,92nm,18.1s,baz=316,slow=39						
	comp=Z,1.8nm,0.7s						
EGAK	Eagle	45.43	326	P	P	07 06 24.0	+0.4
EGAK				IAmb	IAmb	07 06 25.1	
	comp=Z,7.3nm,1.1s						
EGAK	Eagle	45.43	326	P	P	07 06 23.4	-0.2
	baz=41,SNR=5.5						
DAWY	Dawson	45.46	324	P	P	07 06 25.3	+1.4
DAWY	Dawson	45.46	324	P	P	07 06 24.2	+0.3
	baz=42,SNR=9.0						
EGMT	Eagleton	45.59	292	P	P	07 06 26.3	+1.1
EGMT				IAmb	IAmb	07 06 28.1	
	comp=Z,8.1nm,1.1s						
EGMT	Eagleton	45.59	292	P	P	07 06 24.9	-0.3
	baz=44						
LRAL	Lakeview Retre	45.65	260	P	P	07 06 25.6	0.0
LRAL	Lakeview Retre	45.65	260	P	P	07 06 25.5	-0.2
	baz=36						
M30M	Minto, Yukon	45.78	322	P	P	07 06 26.1	-0.4
	baz=42						
COLD	Coldfoot	45.88	332	P	P	07 06 28.0	+0.8
COLD				IAmb	IAmb	07 06 28.8	
	comp=Z,13nm,1.6s						
COLD	Coldfoot	45.88	332	P	P	07 06 26.6	-0.5
	baz=37						
FCAR	Ozark Folk Cen	45.95	267	P	P	07 06 27.7	-0.4
FCAR				IAmb	IAmb	07 07 31.8	
	comp=Z,5.5nm,0.8s						
K27K	Chicken	46.26	326	P	P	07 06 31.6	+1.5
K27K	Chicken	46.26	326	P	P	07 06 30.5	+0.4
	baz=40						
N31M	Braeburn, Yuko	46.27	320	P	P	07 06 31.5	+1.2
N31M	Braeburn, Yuko	46.27	320	P	P	07 06 30.0	-0.3
	baz=42						
J26L	Joseph Creek	46.32	327	P	P	07 06 30.1	-0.7
	baz=40,SNR=6.8						
H24K	Noodor Dome	46.42	330	P	P	07 06 32.5	+1.0
H24K				IAmb	IAmb	07 06 36.9	
	comp=Z,5.2nm,0.8s						
H24K	Noodor Dome	46.42	330	P	P	07 06 30.5	-0.9
	baz=38,SNR=6.4						
DLBC	Dease Lake	46.55	314	LR	LR	07 25 46.8	
	comp=Z,421nm,18.2s,baz=32,slow=36						
W41B	Gary Mavity, V	46.58	267	P	P	07 06 32.6	-0.3
	baz=38,SNR=5.6						
J25K	Salcha River,	46.72	328	P	P	07 06 34.9	+1.0
J25K				IAmb	IAmb	07 06 36.0	
	comp=Z,11nm,1.4s						
J25K	Salcha River,	46.72	328	P	P	07 06 33.2	-0.6
	baz=39						
WALA	Waterton Lakes	46.75	296	P	P	07 06 34.4	0.0
WALA				IAmb	IAmb	07 06 38.6	
	comp=Z,6.0nm,0.8s						
SCRK	Sand Creek	46.84	326	P	P	07 06 36.3	+1.5
SCRK				IAmb	IAmb	07 06 41.1	
	comp=Z,4.7nm,0.9s						
SCRK	Sand Creek	46.84	326	P	P	07 06 34.8	0.0
	baz=39,SNR=6.0						
H23K	Yukon River	46.84	331	P	P	07 06 35.3	+0.5
H23K	Yukon River	46.84	331	P	P	07 06 35.1	+0.3
	baz=37						
POKR	Poker Plat Res	46.87	329	P	P	07 06 34.8	-0.2
POKR	Poker Plat Res	46.87	329	P	P	07 06 35.4	+0.5
	baz=38						
BCAR	Beaver Creek A	46.92	325	P	P	07 06 36.9	+1.5
L27K	Beaver Creek,	46.93	325	P	P	07 06 35.7	+0.2
L27K				IAmb	IAmb	07 06 38.2	
	comp=Z,4.6nm,1.1s						
L27K	Beaver Creek,	46.93	325	P	P	07 06 35.4	0.0
	baz=40						
IL31		47.00	329	P	P	07 06 36.1	+0.2
IL31				IAmb	IAmb	07 06 37.9	
	comp=Z,6.0nm,1.0s						
ILAR	Eielson Array	47.00	329	P	P	07 06 36.7	+0.7
	comp=Z,3.2nm,0.7s,baz=30,slow=6.7,SNR=31						
	comp=Z,3.2nm,0.7s						
ILAR	Eielson Array	47.00	329	P	P	07 06 36.5	+0.5
DOT	Dot Lake	47.12	326	P	P	07 06 38.2	+1.3
DOT				IAmb	IAmb	07 06 39.2	
	comp=Z,7.0nm,0.9s						
BVCY	Beaver Creek	47.15	324	P	P	07 06 37.0	-0.2
	baz=40						
GCMT	Greycliff	47.17	290	P	P	07 06 38.9	+1.2
COLA	College	47.18	329	P	P	07 06 38.1	+0.9
COLA	College	47.18	329	P	P	07 06 37.0	-0.2
	baz=38						
TCOL	CIGO, UAF Yank	47.18	329	P	P	07 06 38.0	+0.7
TCOL	CIGO, UAF Yank	47.18	329	P	P	07 06 37.6	+0.3
	baz=38						
MDM	Murphy Dome	47.21	329	P	P	07 06 38.3	+0.7
RIDG	Independent Ri	47.27	327	P	P	07 06 39.8	+1.7
RIDG	Independent Ri	47.27	327	P	P	07 06 38.1	+0.1
	baz=39						
YUK4	Talbot Arm	47.28	322	P	P	07 06 37.0	-1.5
	baz=41						
HYT	Haines Junctio	47.32	321	P	P	07 06 40.0	+1.4
HYT	Haines Junctio	47.32	321	P	P	07 06 38.3	-0.3
	baz=41						
CCAR	Cane Creek	47.33	265	P	P	07 06 39.1	+0.2
W39A	Magazine	47.34	268	P	P	07 06 38.9	-0.1
W39A	Magazine	47.34	268	P	P	07 06 38.8	-0.1
	baz=38						
I23K	Minto, Yukon-K	47.34	330	P	P	07 06 39.4	+0.9
I23K				IAmb	IAmb	07 06 44.1	
	comp=Z,4.3nm,0.8s						
I23K	Minto, Yukon-K	47.34	330	P	P	07 06 39.4	+0.9
	baz=37						
CCB	Clear Creek Bu	47.34	329	P	P	07 06 40.0	+1.4
CCB				IAmb	IAmb	07 06 41.1	
	comp=Z,5.1nm,1.2s						
L26K	Log Cabin Wild	47.40	325	P	P	07 06 39.4	+0.3
	baz=39						
K24K	Donnelly Dome	47.47	327	P	P	07 06 40.1	+0.4
	baz=38,SNR=11						
RLMT	Red Lodge	47.47	289	P	P	07 06 40.6	+0.5
	baz=42						
M27K	Edge Creek, AK	47.49	324	P	P	07 06 42.1	+2.1
HRY	Holter Researc	47.51	293	P	P	07 06 41.3	+1.0
YUK3	Moose Creek	47.52	323	P	P	07 06 40.6	+0.3
	baz=40						
SKAG	Skagway	47.63	318	P	P	07 06 41.0	+0.1
	baz=41						
NEA2	Nenana	47.72	329	P	P	07 06 42.0	+0.5
	baz=37						
IMAR	Indian Mountai	47.73	333	P	P	07 06 42.4	+0.9
MIAR	Mount Ida	47.74	268	P	P	07 06 42.5	+0.5
H21K	Melozitna Rive	47.77	332	P	P	07 06 42.4	+0.4
	baz=35						
M26K	Nabesna, AK	47.79	325	P	P	07 06 43.4	+1.2
M26K				IAmb	IAmb	07 06 44.8	
	comp=Z,7.1nm,0.9s						
M26K	Nabesna, AK	47.79	325	P	P	07 06 42.7	+0.5
	baz=39,SNR=5.4						
JTMT	Jette	47.88	295	P	P	07 06 42.6	-0.5
RDOG	Red Dog Mine	47.88	338	P	P	07 06 42.9	+0.2
	baz=30						
TIXI	Tiksi	47.96	9	P	P	07 06 44.7	+1.4
TIXI				IAmb	IAmb	07 06 48.9	
	comp=Z,3.4nm,0.8s						
I21K	Tanana	47.97	331	P	P	07 06 43.7	+0.3
	baz=35						
PAX	Paxson	48.05	326	P	P	07 06 45.4	+1.2
PAX	Paxson	48.05	326	P	P	07 06 44.4	+0.2
	baz=38,SNR=7.0						
BOZ	Bozeman (W)	48.24	291	P	P	07 06 46.8	+0.8
BOZ	Bozeman (W)	48.24	291	P	P	07 06 46.3	+0.3
	baz=42,SNR=7.0						
MSO	Missoula	48.40	294	P	P	07 06 47.7	+0.6
MSO				IAmb	IAmb	07 06 49.4	
	comp=Z,3.8nm,0.8s						
MSO	Missoula	48.40	294	P	P	07 06 47.8	+0.6
	baz=42						
HARP	HAARP	48.41	326	P	P	07 06 46.7	-0.3
	baz=38						
LRM	Limekiln Ridge	48.46	292	P	P	07 06 48.4	+0.7
YHL	Hebgen Lake	48.58	290	P	P	07 06 49.3	+0.4
YHL				IAmb	IAmb	07 06 53.8	
	comp=Z,4.7nm,1.1s						
BPAW	Bear Paw Mtn.	48.61	330	P	P	07 06 51.4	+3.0
BPAW				IAmb	IAmb	07 06 53.9	
	comp=Z,4.6nm,0.8s						
BPAW	Bear Paw Mtn.	48.61	330	P	P	07 06 48.1	-0.3
	baz=35						
RND	Reindeer	48.62	328	P	P	07 06 49.6	+1.0
H17A	Grant Village	48.64	290	P	P	07 06 51.5	+2.3
H17A				IAmb	IAmb	07 06 53.5	
	comp=Z,4.9nm,0.9s						
H17A	Grant Village	48.64	290	P	P	07 06 49.6	+0.4
	baz=42,SNR=6.4						
NEW	Newport	48.78	297	LR	LR	07 26 46.2	
	comp=Z,600nm,19.5s,baz=22,slow=35						
NEW	Newport	48.78	297	P	P	07 06 50.0	0.0
	baz=42						
YPP	Pitchstone Pla	48.84	290	P	P	07 06 50.4	-0.4
YPP				IAmb	IAmb	07 06 59.9	
	comp=Z,5.0nm,1.1s						
N25K	Chitina, Valde	48.88	325	P	P	07 06 52.3	+1.6
N25K	Chitina, Valde	48.88	325	P	P	07 06 51.0	+0.3
	baz=38						
M24K	Tolsona, Glenn	48.93	326	P	P	07 06 50.8	-0.2
	baz=37						
GNI	Garni	48.97	79	LR	LR	07 29 37.3	
	comp=Z,42nm,18.3s,baz=332,slow=39						
WAT6	Susitna Watana	48.99	327	P	P	07 06 51.4	-0.1
	baz=36						
N23A	Red Feather La	49.03	283	P	P	07 06 52.7	+0.4
	baz=40						
CHUM	Lake Minchumin	49.12	330	P	P	07 06 52.6	+0.4
	baz=34						
SJG	San Juan	49.14	228	LR	LR	07 25 22.1	
	comp=Z,20nm,20.4s,baz=66,slow=33						
ABKAR	Akbulak array	49.26	60	P	P	07 06 54.4	+0.8
ABKAR				IAmb	IAmb	07 06 55.9	
	comp=Z,5.1nm,0.8s						
J20K	Nowinta River	49.32	331	P	P	07 06 55.4	+1.6
J20K	Nowinta River	49.32	331	P	P	07 06 54.3	+0.5
	baz=33						
KLU	Klutina	49.36	325	P	P	07 06 54.1	-0.1
	baz=37						
BW06	Boulder Array	49.37	287	P	P	07 06 54.9	+0.1
BW06	Boulder Array	49.37	287	P	P	07 06 55.0	+0.1
	baz=41						
PD31	Pinedale Array	49.37	287	P	P	07 06 54.1	-0.7
PDAR	Pinedale Array	49.37	287	P	P	07 06 53.8	-1.1
	comp=Z,1.0nm,0.7s,baz=57,slow=6.6,SNR=9.5						
PDAR				LR	LR	07 27 05.3	
	comp=Z,266nm,18.1s,baz=5.0,slow=35						
	comp=Z,1.0nm,0.7s						
MCMT	McKenzie Canyo	49.39	292	P	P	07 06 55.3	+0.4
CAST	Castle Rocks	49.45	330	P	P	07 06 54.9	+0.1
	baz=34						
M23K	Glacier View	49.62	327	P	P	07 06 56.7	+0.4
	baz=36						
B08A	Colville Reser	49.70	299	P	P	07 06 57.4	+0.5
ISCO	Idaho Springs	49.70	282	P	P	07 06 56.9	-0.6
	baz=40						
SML	Sawmill	49.78	327	P	P	07 06 57.5	0.0
	baz=36						
MMAI	Mount Meron Ar	49.84	92	LR	LR	07 32 15.1	
	comp=Z,65nm,18.1s,baz=65,slow=41						
PPLA	Purkeypile	49.91	330	P	P	07 06 58.1	-0.4
	baz=34						
K20K	Telida	49.99	331	P	P	07 06 59.5	+0.5
K20K				IAmb	IAmb	07 07 04.4	
	comp=Z,6.6nm,0.9s						
K20K	Telida	49.99	331	P	P	07 06 58.4	-0.6
	baz=33						
EYAK	Cordova Ski Ar	50.07	325	P	P	07 06 59.0	-0.6
	baz=36						
KNK	Knik Glacier	50.14	327	P	P	07 06 59.4	-0.7
	baz=35						
M22K	Willow	50.31	328	P	P	07 07 00.6	-0.8
	baz=34						
BBB	Bella Bella	50.50	308	LR	LR	07 27 59.9	
	comp=Z,194nm,19.5s,baz=342,slow=36						
F10A	Beach Ranch, E	50.55	296	P	P	07 07 03.5	-0.1
F10A				IAmb	IAmb	07 07 07.0	
	comp=Z,5.7nm,0.9s						
PWL	Port Wells	50.56	326	P	P	07 07 02.6	-0.7
	baz=35						
PLID	Pearl Lake	50.66	294	P	P	07 07 04.5	-0.1
L20K	Farewell, AK	50.69	330	P	P	07 07 03.4	-0.9
	baz=33						
RC01	Rabbit Creek A	50.76	327	P	P	07 07 04.6	-0.2
	baz=34						
HLID	Hailey	51.08	292	P	P	07 07 07.5	-0.2
	baz=40						
T25A	Trinidad	51.16	279	P	P	07 07 08.4	0.0
T25A				IAmb	IAmb	07 08 36.5	
	comp=Z,3.8nm,0.6s						
M19K	Big River Lodg	51.30	330	P	P	07 07 08.0	-0.9
	baz=32						
BMO	Blue Mountains	51.44	295	P	P	07 07 09.9	-0.4
S22A	4UR Ranch, Cre	51.89	281	P	P	07 07 13.8	-0.2
	baz=39						
BRSE	Bradley Lake S	52.16	327	P	P	07 07 15.0	-0.3
	baz=33						
N19K	Bonanza Creek	52.25	329	P	P	07 07 15.7	-0.4
	baz=32						
HOM	Homer	52.48	327	P	P	07 07 16.9	-0.7
	baz=33						
I07A	Izee	53.03	296	P	P	07 07 23.8	+1.7
I07A				IAmb	IAmb	07 07 27.6	
	comp=Z,16nm,2.0s						
J08A	Circle Bar Ran	53.12	294	P	P	07 07 23.1	+0.3
O18K	Koktuh Hills	53.26	329	P	P	07 07 23.1	-0.4
	baz=31						
Q19K	Cape Douglas,	53.64	328	P	P	07 07 25.6	-0.7
	baz=31						
ELK	Elko	53.64	290	LR	LR	07 28 35.7	
	comp=Z,191nm,19.9s,baz=3.0,slow=34						
ELK	Elko	53.64	290	P	P	07 07 28.0	+1.2
I05D	Terrebonne, OR	53.66	297	P	P	07 07 26.4	-0.3
	baz=39						
P18K	Big Mountain,	53.67	329	P	P	07 07 26.0	-0.5
	baz=31						
H04A	Detroit Lake	53.77	298	P	P	07 07 27.2	-0.3
H04A				IAmb	IAmb	07 07 33.6	
	comp=Z,13nm,1.6s						
ANMO	Albuquerque	53.91	279	P	P	07 07 28.6	-0.2
	baz=37						
WVOR	Wild Horse Val	53.92	294	P	P	07 07 28.8	+0.1
JCT	Junction City	54.14	270	P	P	07 07 30.0	-0.3
JCT				IAmb	IAmb	07 07 31.0	
	comp=Z,7.4nm,0.9s						
JCT	Junction City	54.14	270	P	P	07 07 30.3	0.0
	baz=36						
KDAK	Kodiak Island	54.33	326	P	P	07 07 29.1	-2.2
	baz=32						
J05D	Fort Rock, OR	54.44	296	P	P	07 07 32.1	-0.4
	baz=38,SNR=6.4						
PSUT	Pine Spring	54.71	287	P	P	07 07 35.0	+0.4
MOD	Modoc Plateau	55.10	294	P	P	07 07 37.4	+0.1
MOD				IAmb	IAmb	07 07 38.4	
	comp=Z,4.6nm,0.9s						
KURK	Kurchatov	55.66	47	P	P	07 07 41.9	+0.9
WUAZ	Wupatki	55.89	283	P	P	07 07 43.0	-0.1
	baz=37						
MNTX	Cornudas Mount	55.97	275	P	P	07 07 43.7	+0.2
	baz=36						
K02D	Willamette Mer	56.00	297	P	P	07 07 42.6	-1.1
	baz=37						
KVN	Kaiserville	56.33	291	P	P	07 07 46.4	+0.2
YBH	Yreka Blue Hor	56.34	296	LR	LR	07 31 37.5	
	comp=Z,406nm,18.1s,baz=3.0,slow=36						
DBIC	Dimbokro	56.38	150	LR	LR	07 29 39.3	
	comp=Z,170nm,18.4s,baz=359,slow=34						
PAHR	Pah Rah Range	56.41	292	P	P	07 07 47.2	+0.5
PAHR				IAmb	IAmb	07 07 48.5	
	comp=Z,4.8nm,0.9s						
NVAR	Mina Array Bea	56.92	290	P	P	07 07 49.9	-0.6
	comp=Z,0.3nm,0.6s,baz=50,slow=4.0,SNR=5.5						
NVAR				LR	LR	07 31 43.6	
	comp=Z,166nm,18.9s,baz=350,slow=36						
	comp=Z,0.3nm,0.6s						
TX31	Lajitas Ar. Si	57.02	272	P	P	07 07 51.1	+0.1
TXAR	Lajitas Array	57.02	272	P	P	07 07 50.3	-0.8
	comp=Z,0.8nm,0.8s,baz=32,slow=5.3,SNR=2.3						
	comp=Z,0.8nm,0.8s						
O03E	Paynes Creek	57.07	294	P	P	07 07 50.4	-0.9
	baz=37						
TPNV	Topopah Spring	57.12	288	P	P	07 07 51.6	-0.3
	baz=37						
MDP	Montagnes des	57.30	207	LR	LR	07 26 51.4	
	comp=Z,43nm,21.2s,baz=22,slow=30						
O02D	Mt. Diablo Mer	57.61	295	P	P	07 07 54.9	-0.2
	baz=37						
GRAC	Grapevine Rang	57.62	289	P	P	07 07 55.4	+0.2
	baz=37						
GWY	Greenwater Val	57.94	288	P	P	07 07 58.2	+0.7
GWY				IAmb	IAmb	07 07 59.0	
	comp=Z,12nm,1.6s						
MPMC	Manual Prospec	58.43	288	P	P	07 08 00.8	-0.3
	baz=36						
KKAR	Karatay Array	58.63	58	P	P	07 08 03.3	+1.2
GSC	Goldstone, Bar	58.71	287	P	P	07 08 02.8	-0.1
	baz=36						
HEC	Hector,Ludlow	58.87	286	P	P	07 08 03.3	-0.7
	baz=36						
LRMC	Laurel Mtn Rad	58.99	288	P	P	07 08 03.5	-1.4
	baz=36						
ISA	Isabella, Lake	59.22	289	P	P	07 08 05.8	-0.6
	baz=36						
BELC	Belle Mtn. Jos	59.37	286	P	P	07 08 07.3	-0.3
	baz=36						
BC3	Big Chuckawall	59.39	285	P	P	07 08 08.1	+0.5
	baz=36						
214A	Organ Pipe Nat	59.47	282	P	P	07 08 08.4	+0.3
	baz=36						
BBRC	Big Bear Solar	59.61	287	P	P	07 08 09.7	+0.4
	baz=36						
EDW2	Edwards Air Fo	59.62	288	P	P	07 08 09.3	+0.1
	baz=36						
PFO	Pinyon Flats O	59.91	286	LR	LR	07 33 38.8	
	comp=Z,226nm,18.8s,baz=352,slow=36						
MK31	Makanchi Array	60.27	47	P	P	07 08 13.8	+0.4
MKAR	Makanchi Array	60.27	47	P	P	07 08 13.7	+0.2
	comp=Z,0.9nm,0.6s,baz=340,slow=6.6,SNR=7.1						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	60.27	47	P	P	07 08 14.1	+0.7
IKP	In-Ko-Pah, Jac	60.52	285	P	P	07 08 15.6	+0.2
	baz=35						
ZAIG	Zacatecas	61.87	267	P	P	07 08 25.9	+1.0
ZAIG				IAmb	IAmb	07 08 26.9	
	comp=Z,4.2nm,0.9s						
GAR	Garm	61.91	60	P	P	07 08 25.2	+0.4
KSH	Kashi	63.90	56	P	P	07 08 41.9	+3.9
KSH				sP	sP	07 08 52.5	+11
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WMQ	Urumqi	64.79	45	*e*P	P	07 08 46.2	+2.5
SONM	Songino Array	66.94	30	P	P	07 08 57.2	-0.4
	comp=Z,0.4nm,0.6s,baz=298,slow=3.1,SNR=1.8						
	comp=Z,0.4nm,0.6s						
WSAR	Wadi Sarin	69.51	79	LR	LR	07 42 02.4	
	comp=Z,59nm,18.2s,baz=114,slow=38						
MBAR	Mbarara	76.23	116	LR	LR	07 44 40.4	
	comp=Z,84nm,19.5s,baz=315,slow=37						
LZH	Lanzhou	77.11	37	*e*P	P	07 09 56.3	-2.4
LZH				pP	sP	07 10 02.3	-0.3
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
KMBO	Kilima Mbogo	79.71	110	LR	LR	07 48 59.7	
	comp=Z,40nm,18.5s,baz=86,slow=38						
NJ2	Nanjing	84.89	26	*e*P	P	07 10 39.4	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PB11	IPOC Station P	85.66	217	P	P	07 10 43.1	-0.8
CMAR	Chiang Mai Arr	91.68	48	P	P	07 11 13.5	+0.8
	comp=Z,1.4nm,0.3s,baz=320,slow=5.5,SNR=4.6						
	comp=Z,1.4nm,0.3s						
ASAR	Alice Springs	142.11	25	PKhKP	PKPpre	07 17 33.7	
	comp=Z,0.4nm,0.8s,baz=356,slow=3.0,SNR=4.2						

TUL ***02*** *07:05:20.7±1.5, 35°.73N±0°.01×97°.16W±0°.01, h$5^{km}\pm6^{km}$, ML2.7, mb_Lg2.2/23(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=144.0*

NEIC 02 07:05:21.0±0.8**, 35°.73N**±0°.01×**97°.16W**±0°.01**, h**$8^{km}\pm4^{km}$**, Error ellipse: s-maj=1.8km s-min=1.5km az=140.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.19	246	Pg	Pg	07 05 24.7	-0.3
ADOK				Sg	Sg	07 05 27.7	+0.1
OKCFA	Oklahoma City	0.39	217	Pg	Pg	07 05 28.6	-0.1
OKCFA				Sg	Sg	07 05 34.4	+0.4
OKCSW	OKLAHOMA CITY	0.40	215	Pg	Pg	07 05 28.7	-0.1
OKCSW				Sg	Sg	07 05 34.5	+0.5
FNO	Franklin	0.51	203	Pg	Pg	07 05 30.7	-0.2
FNO				Sg	Sg	07 05 37.8	+0.2
TUL1	Leonard	1.13	80	Pg	Pg	07 05 41.3	-1.3
X34A	Smith Ranch, M	1.25	206		Pn	07 05 44.2	-0.6
T35A	Sooner Cattle	1.29	24	Pn	Pn	07 05 45.0	-0.4
U32A	Winter Ranch,	1.63	294	Pn	Pn	07 05 50.2	+0.2
X37A	Clayton	1.85	127		Pn	07 05 53.0	-0.1
X37A				IAmb_Lg		07 06 20.2	
	comp=Z,7.9nm,0.8s						
HHAR	Hobbs	2.67	77		Pn	07 06 03.6	-0.6
W39A	Magazine	2.81	100	Pn	Pn	07 06 05.8	-0.3
MIAR	Mount Ida	3.17	111	Pn	Pn	07 06 11.6	+0.5
MIAR				IAmb_Lg		07 07 05.2	
	comp=Z,7.6nm,1.1s						
U40A	Yellville	3.54	79	Pn	Pn	07 06 15.7	-0.7
U40A				IAmb_Lg		07 07 14.8	
	comp=Z,8.1nm,0.8s						
CBKS	Cedar Bluff	3.70	327	IAmb_Lg		07 07 23.6	
	comp=Z,9.0nm,1.0s						
ABTX	Abilene, Hawle	3.72	214	IAmb_Lg		07 07 23.1	
	comp=Z,5.7nm,0.8s						
X40A	Basin Creek Fa	3.76	108	IAmb_Lg		07 07 24.4	
	comp=Z,6.5nm,0.8s						
AMTX	Amarillo	3.79	258	IAmb_Lg		07 07 26.2	
	comp=Z,8.0nm,0.8s						
WHAR	Wooly Hollow	4.00	95	IAmb_Lg		07 07 34.5	
	comp=Z,4.3nm,0.7s						
W41B	Gary Mavity, V	4.05	96	Pn	Pn	07 06 24.0	+0.7
W41B				IAmb_Lg		07 07 33.5	
	comp=Z,5.1nm,0.8s						
NATX	Nacogdoches	4.47	152	Pn	Pn	07 06 28.1	-1.0
P38A	Dawn	4.84	35	IAmb_Lg		07 08 01.0	
	comp=Z,3.5nm,0.7s						
CCM	Cathedral Cave	5.28	62	IAmb_Lg		07 08 19.7	
	comp=Z,4.5nm,0.8s						

NEIC ***02*** *07:13:48.8±2.5, 10°.86S±0°.08×112°.06E±0°.08, h$10^{km}\pm2^{km}$, mb4.1/10, Error ellipse: s-maj=13.8km s-min=12.8km az=198.0*

IDC ***02*** *07:13:50.4±1.5, 10°.17S×112°.97E, h0^{km}, mb3.9/5, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=55.6km s-min=19.4km az=48.0*

ISC 02 07:13:50.7±0.8**, 10°.66S**±0°.08×**112°.4E**±0°.1**, h**24^{km}**, n30,** σ**1ˢ.67**/21**, mb4.1**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	2.76	38		Pb	07 14 38.3	-1.1
UGM	Wanagama	3.32	325		Pn	07 14 41.3	+0.1
SMRI	Semarang	4.09	331	Pn	Pn	07 14 50.2	-1.6
XMIS	Christmas Isla	6.67	271	Pn	Pn	07 15 22.0	-5.3
KAPI	Kappang	9.16	53	Pn	Pn	07 15 52.5	-9.0
	1.9nm,0.3s,baz=193,slow=7.7,SNR=4.7						
	4.4nm,0.4s						
KAPI	Kappang	9.16	53	Pn	Pn	07 16 06.7	+5.1
GIRL	Giralia	12.04	172	Pn	Pn	07 16 36.6	-4.3
MBWA	Marble Bar	12.58	147	Pn	Pn	07 16 45.4	-2.8

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PSA00 Pilbara Seismi   12.97 148    Pn     Pn     07 16 50.4 -3.3
SBUM  Sibu             13.03 359    Pn     Pn     07 16 53.3 -1.1
MTN   Manton Dam       18.44  99    P      Pn     07 18 05.7 +0.9
MTN                                 IAmb   IAmb   07 18 27.8
      comp=Z,17nm,1.3s
MORW  Morawa           18.62 170    P      P      07 18 05.5 -1.1
MORW                                IAmb   IAmb   07 18 29.1
      comp=Z,20nm,1.4s
WB0   Warramunga Arr   23.02 116    P      P      07 18 55.9 +1.7
WB0                                 IAmb   IAmb   07 19 07.0
      comp=Z,5.6nm,0.8s
WRA   Warramunga Arr   23.03 116    P      P      07 18 55.9 +1.5
      comp=Z,2.5nm,0.9s,baz=311,slow=11,SNR=10
      comp=Z,2.5nm,0.9s
WRA   Warramunga Arr   23.03 116    P      P      07 18 56.0 +1.7
WB2   Warramunga Arr   23.04 116    P      P      07 18 55.7 +1.2
WB2                                 IAmb   IAmb   07 19 07.0
      comp=Z,4.7nm,0.8s
WR0   Warramunga Arr   23.22 116    P      P      07 18 58.1 +1.9
WR0                                 IAmb   IAmb   07 19 08.9
      comp=Z,5.3nm,0.8s
AS31  Alice Springs    24.21 125    P      P      07 19 07.8 +2.1
ASAR  Alice Springs    24.21 125    P      P      07 19 07.4 +1.7
      comp=Z,1.2nm,0.7s,baz=297,slow=8.7,SNR=18
      comp=Z,1.2nm,0.7s
ASAR  Alice Springs    24.21 125    P      P      07 19 07.1 +1.4
FORT  Forrest          24.73 146    P      P      07 19 09.3 -1.0
CMAR  Chiang Mai Arr   31.85 335    P      P      07 20 16.0 +2.0
      comp=Z,1.0nm,0.3s,baz=176,slow=8.6,SNR=7.6
      comp=Z,1.0nm,0.3s
STKA  Stephens Creek   34.22 133    P      P      07 20 36.9 +2.1
      comp=Z,2.5nm,0.7s,baz=297,slow=6.8,SNR=3.0
      comp=Z,2.5nm,0.7s
STKA  Stephens Creek   34.22 133    IAmb   IAmb   07 20 54.7
      comp=Z,3.7nm,1.4s
H08S2 Diego Garcia H   39.52 271    T      T      08 03 25.5
      baz=97,slow=74,SNR=4.1
H08S3 Diego Garcia H   39.54 271    T      T      08 03 29.5
      baz=97,slow=74,SNR=4.5
H08S1 Diego Carcia H   39.54 271    T      T      08 03 23.8
      baz=97
MK31  Makanchi Array   63.22 337    P      P      07 24 17.6 +0.6
MKAR  Makanchi Array   63.22 337    P      P      07 24 18.8 +1.7
      comp=Z,0.6nm,0.5s,baz=148,slow=7.9,SNR=6.4
      comp=Z,0.6nm,0.5s
KKAR  Karatay Array    65.76 328    P      P      07 24 32.9 -0.8
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*BJI **02** 07:26:47.8±0.0, 40˚.00N×144˚.82E, h7km, mb4.8/69, mB4.9/44, Ms4.3/54, Ms7 4.0/55*

*IDC **02** 07:26:47.4±0.4, 39˚.84N×145˚.01E, h0km, mb4.7/36, mbtmp4.7/43, ML4.0/6, MS3.6/20, Error ellipse: s-maj=12.0km s-min=10.0km az=146.0*

*MOS **02** 07:26:50.3±0.9, 40˚.04N×144˚.90E, h25km, mb5.1/71, Error ellipse: s-maj=5.9km s-min=3.9km az=109.9*

*NIED **02** 07:26:51.1, 39˚.98N×144˚.81E, h43km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-7.41; Mθθ-0.09; Mφφ7.50; Mrθ0.95; Mθφ0.87; Mφr2.59; Fault plane solution: M₀8.00000×10¹⁵ NP1:φs2.00000°, δ35.00000°, λ-98.00000°. NP2:φs191.00000°, δ55.00000°, λ-84.00000°.*

*JMA **02** 07:26:51.1±0.3, 40˚.0N±0˚.8×14˚5E±˚, h43km, MD4.7/36, MW4.6/36, FAR E OFF NORTH HONSHU*

JMA Felt I J1 at FAR E OFF NORTH HONSHU .

*NEIC **02** 07:26:52.3±1.5, 39˚.89N±0˚.06×144˚.9E±0˚.1, h29km±4km, mb4.9/310, Error ellipse: s-maj=12.1km s-min=8.7km az=114.0*

*GCMT **02** 07:26:53.3±0.4, 39˚.78N±0˚.04×144˚.96E±0˚.03, h20km±1km, MW4.8/85, Moment Tensor Solution. s21,c21; s85,c107; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.45±.17; Mθθ0.37±.10; Mφφ2.08±.12; Mrθ-0.80±.24; Mθφ0.23±.07; Mφr-0.05±.19; Best double couple: M₀2.38900×10¹⁶ NP1:φs174.00000°, δ45.00000°, λ-111.00000°. NP2: φs22.00000°, δ49.00000°, λ-70.00000°. Principal axes: T 2.1170, Plg2.0000°, Azm99.0000°; N 0.5430, Plg15.0000°, Azm189.0000°; P -2.6610, Plg75.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 07:26:49.6±0.5**, 39˚.91N**±0˚.04×**145˚.00E**±0˚.04**, h15**km±2km**, h15**km**:pP-P, n938, **σ1ˢ**26**/908**, mb5.0**/273**, MS4.0**/37**, 103C-125D, Fault plane solution: NP1:**φs43.86298°**,** δ67.25196°**,** λ-47.69307°. **NP2:**φs156.88129°**,** δ46.99805°, λ-148.08003°. **Principal axes:** T Plg12.0544°, Azm104.7400°**;** N Plg38.3705°**,** Azm204.4741°**;** P Plg49.0854°**,** Azm0.4754°**; Off east coast of Honshu**

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Code  Station Name       Δ°   AZ°     Phase ID        Time       Res
                                    Op     ISC      h  m  s     ISC
JTH   Tanohata          2.41 272  i P      Pn     07 27 27.0 -1.5
JTH                                 S      Sn     07 27 54.1 -3.7
MIYJ  Miyakonagasawa    2.47 263  i P      Pn     07 27 28.4 -1.0
MIYJ                                S      Sn     07 27 55.7 -3.6
ERM   Erimo             2.52 327 ceP      Pn     07 27 29.5 -0.6
ERM                                 pmax   pmax
      comp=Z,136nm,0.7s
ERM   Erimo             2.52 327    Pn     Pn     07 27 29.2 -0.9
JEM   Erimo             2.53 327  i P      Pn     07 27 29.1 -1.0
JEM                                 S      Sn     07 27 58.1 -2.5
JKEN  Kujiedanarisaw    2.54 278    P      Pn     07 27 29.0 -1.3
JKEN                                S      Sn     07 27 56.6 -4.4
JKEN  Kujiedanarisaw    2.54 278    A      A      07 27 29.0
      comp=Z,6.0nm,4.8s,comp=Z,5.0nm,0.7s
OFUJ  Ofunato           2.70 253    A      A      07 27 31.9
      comp=Z,3.0nm,1.7s,comp=Z,4.0nm,0.5s
JANG  Nango             2.71 281  i P      Pn     07 27 31.4 -1.2
JANG                                S      Sn     07 28 00.9 -4.3
JANG  Nango             2.71 281    A      A      07 27 31.4
      comp=Z,3.0nm,0.4s,comp=Z,2.0nm,0.4s
JKZ   Kuzumaki          2.82 273    A      A      07 27 33.0
      comp=Z,5.0nm,0.9s,comp=Z,11nm,0.9s
JOM   Ohasama           2.89 263  i P      Pn     07 27 34.8 -0.3
JOM                                 S      Sn     07 28 07.1 -2.6
JOM   Ohasama           2.89 263    A      A      07 27 34.8
      comp=Z,8.0nm,2.2s,comp=Z,8.0nm,0.8s
JNBK  Urakawa-nobuka    2.92 325  i P      Pn     07 27 35.2 -0.3
JNBK                                S      Sn     07 28 08.7 -1.5
JNBK  Urakawa-nobuka    2.92 325    A      A      07 27 35.2
      comp=Z,8.0nm,0.8s,comp=Z,6.0nm,2.8s
JCH   Churui            2.97 336  i P      Pn     07 27 35.3 -1.0
JCH                                 S      Sn     07 28 08.8 -2.9
JARK  Aomorirokkasho    2.98 293    A      A      07 27 35.1
      comp=Z,9.0nm,2.2s,comp=Z,10.0nm,1.1s
JMK   Ichinoseki        3.08 253  i P      Pn     07 27 36.9 -0.8
JMK                                 S      Sn     07 28 10.6 -3.7
JAK   Akkeshi           3.10 356    P      Pn     07 27 36.6 -1.3
JAK   Akkeshi           3.10 356    A      A      07 27 36.6
      comp=Z,5.0nm,2.6s,comp=Z,4.0nm,0.4s
JAHD  Aomorihigashid    3.10 297    A      A      07 27 36.7
      comp=Z,17nm,0.8s,comp=Z,20nm,0.6s
JOB   Onbets            3.12 344    A      A      07 27 37.8
      comp=Z,6.0nm,4.4s,comp=Z,4.0nm,5.1s
JSZI  Iwateshizukuis    3.12 268    A      A      07 27 37.3
      comp=Z,13nm,1.2s,comp=Z,14nm,1.6s
JTM   Tenmabayashi      3.13 288    Pn     Pn     07 27 38.1 -0.3
JTM   Tenmabayashi      3.13 288    A      A      07 27 37.2
      comp=Z,6.0nm,7.5s,comp=Z,7.0nm,0.9s
JSHD  Hidakashinhida    3.15 323    A      A      07 27 37.7
      comp=Z,6.0nm,1.1s,comp=Z,6.0nm,3.1s
JOT   Ohata             3.35 297    P      Pn     07 27 41.2 -0.2
JOT                                 S      Sn     07 28 17.6 -3.2
JOT   Ohata             3.35 297    A      A      07 27 41.2
      comp=Z,5.0nm,1.0s,comp=Z,8.0nm,1.4s
JAH   Hinai             3.36 276    A      A      07 27 40.6
      comp=Z,9.0nm,0.5s,comp=Z,5.0nm,1.7s
JRG   Rokugo            3.41 263    A      A      07 27 41.6
      comp=Z,7.0nm,0.5s,comp=Z,6.0nm,2.4s
JOFO  Osakifurukawao    3.43 249    A      A      07 27 42.2
      comp=Z,38nm,0.5s,comp=Z,18nm,3.8s
NEM2  Nemuro 2          3.50   9  i P      Pn     07 27 41.6 -1.9
NEM2                                S      Sn     07 28 20.1 -4.5
NMR   Nemuro--Hokkai    3.50   9⇓iP      Pn     07 27 41.6 -1.9
NMR                                eS      Sn     07 28 19.8 -4.9
JAR   Ashorobuto        3.51 345  i P      Pn     07 27 42.4 -1.3
JAR                                 S      Sn     07 28 21.2 -3.7
JAR   Ashorobuto        3.51 345    A      A      07 27 42.4
      comp=Z,5.0nm,0.5s,comp=Z,4.0nm,0.5s
JIAM  Iburiatsuma       3.57 320    A      A      07 27 43.6
      comp=Z,10.0nm,0.8s,comp=Z,9.0nm,0.6s
JHHS  Hirosakihyakuz    3.62 283    A      A      07 27 44.3
      comp=Z,9.0nm,4.2s,comp=Z,7.0nm,4.1s
JSI2  Shiura 2          3.68 290    A      A      07 27 45.0
      comp=Z,9.0nm,0.8s,comp=Z,16nm,0.8s
JOU   Okura             3.71 247    A      A      07 27 46.2
      comp=Z,6.0nm,1.4s,comp=Z,5.0nm,0.5s
JYW   Yuwa              3.71 266    A      A      07 27 45.8
      comp=Z,10.0nm,1.5s,comp=Z,12nm,3.0s
JYK   Kaneyama          3.73 256  i P      Pn     07 27 46.4 -0.2
JYK                                 S      Sn     07 28 27.8 -2.5
JMM   Marumori          3.86 239    Pn     Pn     07 27 46.8 -1.7
JMST  Minamisoumatoc    3.88 237    A      A      07 27 49.0
      comp=Z,3.0nm,0.7s,comp=Z,3.0nm,0.6s
JEW   Eniwo             3.96 319    Pn     Pn     07 27 49.9  0.0
JEW   Eniwo             3.96 319    P      Pn     07 27 50.4 +0.5
JEW                                 S      Sn     07 28 35.7 -0.4
JEW   Eniwo             3.96 319    A      A      07 27 50.4
      comp=Z,5.0nm,3.4s,comp=Z,6.0nm,0.9s
JYYZ  Yamagatayuza      4.02 259    A      A      07 27 50.3
      comp=Z,8.0nm,3.3s,comp=Z,7.0nm,9.0s
JRA   Rausu             4.03   1    P      Pn     07 27 49.0 -1.7
JRA                                 S      Sn     07 28 34.3 -3.4
JTKR  Abashiri--Toko    4.14 349  i P      Pn     07 27 51.8 -0.5
JTKR                                S      Sn     07 28 38.0 -2.5
YUK   Yuzh-Kuril'sk     4.17   9d iP      Pn     07 27 50.7 -2.1
YUK                                eS      Sn     07 28 35.5 -5.8
YUK                                 pmax   pmax
      comp=Z,829nm,0.2s
YUK                                 pmax   pmax
      comp=N,218nm,0.1s
YUK                                 pmax   pmax
      comp=E,92nm,0.1s
YUK                                 smax   smax
      comp=N,3µm,0.4s
YUK                                 smax   smax
      comp=E,7µm,0.7s
JYS   Shirataka         4.19 248    A      A      07 27 53.0
      comp=E,5.0nm,9.5s,comp=E,6.0nm,2.8s
RUSJ  Misakicho         4.20   2⇓iP      Pn     07 27 51.4 -1.7
RUSJ                               eS      Sn     07 28 37.2 -4.7
JMP   Maruseppu         4.28 344    A      A      07 27 54.1
      comp=E,2.0nm,1.1s,comp=E,4.0nm,0.9s
JYAR  Yonezawaarcadi    4.28 244    A      A      07 27 54.3
      comp=E,5.0nm,4.6s,comp=E,6.0nm,0.9s
JISS  Ishikarishitsu    4.30 323    A      A      07 27 54.0
      comp=E,5.0nm,2.6s,comp=E,5.0nm,1.0s
JYA   Atsumi            4.31 254    A      A      07 27 54.5
      comp=E,5.0nm,0.8s,comp=E,4.0nm,1.3s
JHR   Hokuryu           4.55 329    P      Pn     07 27 59.4 +1.5
JHR                                 S      Sn     07 28 50.9 +0.4
JHR   Hokuryu           4.55 329    A      A      07 27 59.4
      comp=E,4.0nm,1.2s,comp=E,5.0nm,2.9s
JKA   Kamikawa-asahi    4.57 338    Pn     Pn     07 27 57.9 -0.3
ASAJ  Asahikawa         4.57 338    Pn     Pn     07 27 58.0 -0.3
      comp=E,16nm,0.3s,baz=190,slow=10,SNR=57
ASAJ                                Sn     Sn     07 28 49.9 -1.2
      comp=E,18nm,0.3s,baz=120,slow=20,SNR=2.8
      comp=E,87nm,0.5s
JOSM  Okushiri--Mats    4.71 299    P      Pn     07 27 59.7 -0.4
JOSM                                S      Sn     07 28 50.3 -4.2
JYT   Yasato            5.28 227    Pn     Pn     07 28 06.0 -2.0
JSD   Sado              5.57 253    Pn     Pn     07 28 11.6 -0.4
KUR   Kuril'sk          5.73  21⇑iP      Pn     07 28 12.7 -1.4
KUR                                eS      Sn     07 29 14.2 -5.4
KUR                                 pmax   pmax
      comp=Z,668nm,1.8s
KUR                                 pmax   pmax
      comp=Z,267nm,0.6s
KUR                                 pmax   pmax
      comp=E,131nm,0.8s
KUR                                 smax   smax
      comp=E,876nm,0.5s
KUR                                 smax   smax
      comp=N,560nm,0.6s
KUR                                 MLR    MLR
      comp=Z,1µm,12.0s
JWK2  Keihoku           5.87 338    P      Pn     07 28 17.4 +1.4
BSO1  Boso 1            6.14 213    P      Pn     07 28 16.6 -2.8
BSO1                                S      Sn     07 29 22.6 -6.6
JRY   Ryogami san       6.19 233    P      Pn     07 28 19.1 -1.4
JRY                                 S      Sn     07 29 25.6 -5.4
MJAR  Matsushiro Arr    6.31 240    Pn     Pn     07 28 22.0 -0.2
      comp=Z,1.8nm,0.3s,baz=65,slow=12,SNR=122
MJAR                                Sn     Sn     07 29 35.7 +1.7
      comp=Z,1.5nm,0.3s,baz=359,slow=21,SNR=2.0
MJAR                                LR     LR     07 30 58.7
      comp=Z,853nm,19.1s,baz=56,slow=40
      comp=Z,86nm,0.8s
MJAR  Matsushiro Arr    6.31 240    P      Pn     07 28 21.8 -0.4
MJAR  Matsushiro Arr    6.31 240           Pn     07 28 21.8 -0.4
MAJO  Matsushiro        6.31 240c iP      Pn     07 28 22.3 +0.1
MAJO  Matsushiro        6.31 240    Pn     Pn     07 28 21.6 -0.6
MJB9  Matsu-Tunnel      6.31 240           Pn     07 28 21.9 -0.3
JOD2  Odawara 2         6.59 227    P      Pn     07 28 25.0 -1.1
JOD2                                S      Sn     07 29 33.6 -7.4
YSS   Yuzh-Sakhalins    7.23 348   eP      Pn     07 28 34.7  0.0
YSS                                eS      Sn     07 29 54.0 -2.5
YSS                                 pmax   pmax
      comp=Z,40nm,0.6s
YSS                                 MLR    MLR
      comp=N,400nm,14.0s
YSS                                 MLR    MLR
      comp=Z,600nm,14.0s
YSS   Yuzh-Sakhalins    7.23 348    Pn     Pn     07 28 34.7  0.0
JGF   Kuroka            7.42 237    Pn     Pn     07 28 36.4 -1.1
INU   Inuyama           7.80 237    Pn     Pn     07 28 41.9 -0.6
JHJ2  Mitsune           7.96 213    Pn     Pn     07 28 45.6 +0.8
JHJ   Hachijo jima 2    7.97 213    Pn     Pn     07 28 41.6 -3.3
      comp=Z,11nm,0.3s,baz=269,slow=24,SNR=13
JHJ                                 Sn     Sn     07 30 03.3  -11
      comp=Z,32nm,0.3s,baz=292,slow=18,SNR=3.5
      comp=Z,33nm,0.2s
TEY   Ternei            8.04 312⇓eP      Pn     07 28 46.6 +0.7
TEY                                 pmax   pmax
      comp=N,30nm,0.6s
TEY                                 pmax   pmax
      comp=E,50nm,0.6s
TEY                                 pmax   pmax
      comp=Z,60nm,0.6s
USA0B Ussuriysk Arra   10.58 298    P      Pn     07 29 21.4 +0.7
USA0B Ussuriysk Arra   10.58 298           Pn     07 29 21.4 +0.7
USRK  Ussuriysk Ar.    10.58 298    Pn     Pn     07 29 22.0 +1.4
      comp=Z,3.0nm,0.3s,baz=102,slow=14,SNR=66
USRK                                LR     LR     07 33 14.4
      comp=Z,328nm,19.0s,baz=94,slow=36
      comp=Z,69nm,0.8s
USRK  Ussuriysk Ar.    10.58 298    P      Pn     07 29 21.6 +0.9
USRK  Ussuriysk Ar.    10.58 298    Pn     Pn     07 29 21.6 +0.9
JHS   Saijyo           10.64 246    Pn     Pn     07 29 22.0 +0.5
MSHR  Mys Shultsa      10.76 289ceP      Pn     07 29 24.2 +1.1
MSHR                                pmax   pmax
      comp=Z,21nm,0.8s
MDJ   Mudanjiang       12.34 297    Pn     Pn     07 29 43.5 -1.3
MDJ   Mudanjiang       12.34 297    P      Pn     07 29 45.4 +0.6
MDJ                                 pmax   pmax
      comp=Z,25nm,0.9s
MDJ                                 pmax   pmax
      comp=Z,230nm,3.5s
MDJ                                 LR     LR
      comp=Z,510nm,12.7s
MDJ                                 LR     LR
      comp=Z,520nm,14.3s
MDJ                                 LR     LR
      comp=Z,750nm,14.2s
JCJ   Chichijima       12.99 191    Pn     Pn     07 29 47.3 -6.4
      comp=Z,5.6nm,0.3s,baz=273,slow=22,SNR=11
JCJ                                 Sn     Sn     07 32 02.3  -16
      comp=Z,4.4nm,0.3s,baz=217,slow=20,SNR=1.6
JCJ   Chichijima       12.99 191           Pn     07 29 51.0 -2.7
JNU   Nakatsue         13.21 244    Pn     Pn     07 29 52.8 -4.0
      comp=Z,1.3nm,0.3s,baz=188,slow=20,SNR=12
JNU   Nakatsue         13.21 244    Pn     Pn     07 29 53.5 -3.3
KLR   Kul'dur          13.25 319    Pn     Pn     07 29 56.7 -0.4
      comp=Z,0.3nm,0.3s,baz=124,slow=13,SNR=47
KLR                                 LR     LR     07 35 19.9
      comp=Z,198nm,20.8s,baz=134,slow=38
      comp=Z,10nm,0.8s
KLR   Kul'dur          13.25 319ceP      Pn     07 29 56.6 -0.5
KLR                                 pmax   pmax
      comp=Z,56nm,2.5s
SKR   Severo-Kuril's   13.30  32  i P      Pn     07 29 58.7 +0.9
JTU   Tsushima         13.54 252    Pn     Pn     07 30 00.7 -0.4
KSRS  Korea Array      13.56 265    Pn     Pn     07 30 02.2 +0.7
      comp=Z,0.8nm,0.3s,baz=84,slow=13,SNR=9.9
KSRS                                LR     LR     07 34 31.4
      comp=Z,470nm,21.7s,baz=70,slow=34
      comp=Z,3.3nm,0.4s
KS19  Wonju Array Si   13.60 265    Pn     Pn     07 30 00.6 -1.3
KSAR  Wonju Array Be   13.60 265    P      Pn     07 29 58.8 -3.1
KSAR  Wonju Array Be   13.60 265    Pn     Pn     07 29 58.8 -3.1
BNX   BinXian          14.16 300  ⇓P      Pn     07 30 08.9 -0.6
BNX                                 pmax   pmax
      comp=Z,25nm,1.0s
BNX                                 pmax   pmax
      comp=Z,280nm,3.5s
TJN   Taejon           14.32 261ceP      Pn     07 30 12.4 +0.6
TJN   Taejon           14.32 261    Pn     Pn     07 30 11.3 -0.5
CN2   Changchun        15.07 291  eP      Pn     07 30 21.2 -0.8
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.8s
CN2                                 LR     LR
      comp=Z,300nm,13.0s
CN2                                 LR     LR
      comp=Z,400nm,13.0s
CN2                                 LR     LR
      comp=Z,500nm,14.0s
PEA0B Petropavlovsk-   15.80  29    P      Pn     07 30 29.3 -2.2
PEA0B                               pmax   pmax
      comp=Z,36nm,1.2s
PEA0B Petropavlovsk-   15.80  29    Pn     Pn     07 30 29.3 -2.2
PETK  Petropavlovsk-   15.80  29    Pn     Pn     07 30 31.1 -0.4
      comp=Z,1.8nm,0.7s,baz=196,slow=15,SNR=3.5
PETK                                LR     LR     07 36 57.5
      comp=Z,92nm,19.6s,baz=216,slow=38
PETK  Petropavlovsk-   15.80  29    P      Pn     07 30 30.5 -1.0
PETK  Petropavlovsk-   15.80  29           Pn     07 30 30.5 -1.0
SNY   Shenyang         16.32 284  ⇑P      Pn     07 30 37.3 -0.8
SNY                                 S      Sn     07 33 38.5 -0.3
SNY                                 pmax   pmax
      comp=Z,18nm,0.7s
SNY                                 pmax   pmax
      comp=Z,160nm,3.7s
SNY                                 LR     LR
      comp=Z,180nm,10.5s
SNY                                 LR     LR
      comp=Z,360nm,13.3s
SNY                                 LR     LR
      comp=Z,630nm,16.7s
ZEA   Zeya             18.34 325  eP      Pn     07 31 01.5 -1.7
ZEA                                 pmax   pmax
      comp=E,10.0nm,1.0s
ZEA                                 pmax   pmax
      comp=N,10.0nm,0.7s
ZEA                                 pmax   pmax
      comp=Z,30nm,0.8s
ZEA                                 MLR    MLR
      comp=E,200nm,15.0s
ZEA                                 MLR    MLR
      comp=N,100nm,17.0s
ZEA                                 MLR    MLR
      comp=Z,200nm,13.0s
JOW   Kunigami         19.07 232    P      P      07 31 08.9 -2.6
JOW                                 IAmb   IAmb   07 31 15.2
      comp=Z,113nm,1.5s
MA2   Magadan          20.02   9    P      P      07 31 21.2 -0.5
      comp=Z,19nm,0.8s,baz=204,slow=8.7,SNR=16
      comp=Z,19nm,0.8s
MA2   Magadan          20.02   9  i P      P      07 31 22.5 +0.8
MA2                                 pmax   pmax
      comp=Z,26nm,0.9s
MA2   Magadan          20.02   9    P      P      07 31 21.4 -0.3
HIA   Hailar           20.19 306  i P      P      07 31 24.0 +0.3
HIA                                 pmax   pmax
      comp=Z,30nm,0.8s
HIA   Hailar           20.19 306    P      P      07 31 23.9 +0.2
HIA                                 IAmb   IAmb   07 31 24.9
      comp=Z,39nm,0.7s
XLT   XiLinHaoTe       21.84 290⇑iP      P      07 31 42.0 +0.5
XLT                                 pP     pwP    07 31 50.9 -0.9
XLT                                 S      S      07 35 34.2 -8.3
XLT                                 sS     pS     07 35 48.1 +0.8
XLT                                 pmax   pmax
      comp=Z,27nm,0.8s
XLT                                 pmax   pmax
      comp=Z,160nm,4.3s
XLT                                 LR     LR
      comp=Z,280nm,13.5s
XLT                                 LR     LR
      comp=Z,320nm,13.4s
BJI   Beijing          22.05 280    P      P      07 31 43.6 -0.1
BJI                                 sP     pwP    07 31 56.5 +2.5
BJI                                 S      S      07 35 48.4 +1.9
BJI                                 pmax   pmax
      comp=Z,12nm,0.9s
BJI                                 LR     LR
      comp=Z,110nm,12.7s
BJI                                 LR     LR
      comp=Z,310nm,14.2s
BJT   Baijiatuau       22.06 280    P      P      07 31 43.7 -0.2
BJT                                 pmax   pmax
      comp=Z,13nm,0.8s
BJT   Baijiatuau       22.06 280    P      P      07 31 43.7 -0.2
TIA   Tai'an           22.22 269  ⇑P      P      07 31 45.1 -0.5
TIA                                 S      S      07 35 45.5 -4.2
TIA                                 pmax   pmax
      comp=Z,37nm,1.2s
TIA                                 pmax   pmax
      comp=Z,200nm,3.9s
TIA                                 LR     LR
      comp=Z,230nm,11.8s
TIA                                 LR     LR
      comp=Z,480nm,13.2s
TIA                                 LR     LR
      comp=Z,680nm,14.3s
NJ2   Nanjing          22.51 258  eP      P      07 31 47.9 -0.8
NJ2                                 pmax   pmax
      comp=Z,15nm,1.1s
SEY   Seymchan         23.48   8    P      P      07 31 58.5 +0.1
      comp=Z,54nm,0.8s,baz=186,slow=7.8,SNR=77
      comp=Z,54nm,0.8s
SEY   Seymchan         23.48   8ceP      P      07 31 58.8 +0.3
SEY                                 pmax   pmax
      comp=Z,65nm,0.8s
SHEM  Shemya Is, Ala   23.65  47    LR     LR     07 39 53.2
      comp=Z,31nm,20.1s,baz=284,slow=33
HNS   HongShan         23.73 274  ⇑P      P      07 32 01.8 +0.6
HNS                                 S      S      07 36 18.2 +2.4
HNS                                 pmax   pmax
      comp=Z,26nm,0.9s
HNS                                 LR     LR
      comp=Z,150nm,13.7s
HNS                                 LR     LR
      comp=Z,430nm,15.2s
HNS                                 LR     LR
      comp=Z,490nm,15.9s
YAK   Yakutsk          24.04 342    P      P      07 32 03.0 -0.8
      comp=Z,70nm,0.7s,baz=24,slow=0.8,SNR=27
YAK                                 LR     LR     07 42 09.0
      comp=Z,99nm,19.0s,baz=108,slow=38
      comp=Z,70nm,0.7s
YAK   Yakutsk          24.04 342  eP      P      07 32 02.4 -1.4
YAK                               e                 07 32 34.7
YAK                               e                 07 35 46.4
YAK                               eS      S      07 36 16.3 -3.9
YAK                               eSS     SnSn   07 37 03.1 +2.3
YAK                               e                 07 43 02.3
YAK                                 pmax   pmax
      comp=Z,120nm,0.9s
YAK                                 pmax   pmax
      comp=E,11nm,0.9s
YAK                                 pmax   pmax
      comp=N,27nm,1.1s
YAK                                 pmax   pmax
      comp=Z,24nm,1.0s
YAK                                 pmax   pmax
      comp=E,5.0nm,0.9s
YAK                                 pmax   pmax
      comp=N,11nm,1.1s
YAK                                 smax   smax
      comp=N,19nm,1.3s
YAK                                 smax   smax
      comp=E,31nm,1.3s
YAK   Yakutsk          24.04 342    P      P      07 32 02.8 -1.0
GUMO  Guam             26.22 180    LR     LR     07 41 13.7
      comp=E,35nm,20.9s,baz=66,slow=33
LYN   LuoYang          26.36 269⇓iP      P      07 32 26.2 +1.0
LYN                                 S      S      07 36 58.7 +0.9
LYN                                 pmax   pmax
      comp=E,40nm,1.0s
LYN                                 pmax   pmax
      comp=E,310nm,4.4s
LYN                                 LR     LR
      comp=E,560nm,15.0s
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LYN                               LR      LR
      comp=E,540nm,14.2s
LYN                               LR      LR
      comp=E,720nm,15.0s
BTO   Baotou            26.60 283 eP      P       07 32 28.3 +0.9
WHN   Wuhan             26.61 259 ⇑P      P       07 32 28.3 +0.8
WHN                               pmax    pmax
      comp=E,110nm,1.3s
WHN                               LR      LR
      comp=E,830nm,13.9s
WHN                               LR      LR
      comp=E,760nm,16.2s
WHN                               LR      LR
      comp=E,630nm,24.2s
BOD   Bodaibo           26.79 322 eP      P       07 32 29.0 +0.2
BOD                               pmax    pmax
      comp=Z,17nm,1.0s
H11N2 WAKE ISLAND Hy    27.53 131 T       T       08 01 17.2
      baz=322
H11N1 WAKE ISLAND Hy    27.54 131 T       T       08 01 23.4
      baz=322
H11N3 WAKE ISLAND Hy    27.55 131 T       T       08 01 21.7
      baz=322
ULN   Ulaanbaatar       28.25 299ceP      P       07 32 41.7 -0.5
ULN                               pmax    pmax
      comp=Z,22nm,1.3s
ULN   Ulaanbaatar       28.25 299 P       P       07 32 41.9 -0.4
ULN                               IAmb    IAmb    07 32 47.1
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar       28.25 299 ⇓P      P       07 32 42.9 +0.7
ULN                               pP      pwP     07 32 49.7 -2.8
H11S1 WAKE ISLAND Hy    28.38 132 T       T       08 02 25.2
      baz=324
H11S3 WAKE ISLAND Hy    28.39 132 T       T       08 02 25.8
      baz=324,slow=74,SNR=5.3
H11S2 WAKE ISLAND Hy    28.40 132 T       T       08 02 28.4
      baz=324,slow=74,SNR=4.7
SONM  Songino Array     28.69 299 P       P       07 32 47.2 +1.0
      comp=Z,7.9nm,0.7s,baz=80,slow=8.8,SNR=34
SONM                              LR      LR      07 44 50.5
      comp=Z,210nm,18.1s,baz=122,slow=38
      comp=Z,7.9nm,0.7s
SONM  Songino Array     28.69 299 P       P       07 32 46.2 +0.1
SONM                              pmax    pmax
      comp=Z,13nm,1.0s
SONM  Songino Array     28.69 299 P       P       07 32 46.2 +0.1
XAN   Xi'an             29.27 270 P       P       07 32 51.5 +0.2
XAN                               pmax    pmax
      comp=Z,7.0nm,0.6s
IRK   Irkutsk           30.42 308 eP      P       07 32 59.7 -1.5
IRK                               pmax    pmax
      comp=Z,29nm,1.7s
ENH   Enshi             30.44 263 P       P       07 33 01.1 -0.5
ENH                               IAmb    IAmb    07 33 18.5
      comp=Z,31nm,1.0s
BILL  Bilibino          30.49  16deP      P       07 33 02.2 +0.5
BILL                              e               07 33 59.7
BILL                              eS      S       07 37 59.0 -3.2
BILL                              pmax    pmax
      comp=Z,13nm,1.3s
BILL                              MLR     MLR
      comp=Z,149nm,16.0s
BILL  Bilibino          30.49  16 P       P       07 33 01.2 -0.4
ZAK   Zakamensk         30.86 304 eP      P       07 33 05.4 +0.2
ZAK                               pmax    pmax
      comp=Z,9.0nm,1.4s
MOY   Mondy             32.38 306 eP      P       07 33 19.3 +0.7
MOY                               pmax    pmax
      comp=Z,18nm,1.5s
LZH   Lanzhou           32.45 277 eP      P       07 33 20.8 +1.3
LZH                               pP      pwP     07 33 27.1 -2.8
LZH                               sP      sP      07 33 32.0 +8.6
LZH                               pmax    pmax
      comp=Z,23nm,1.3s
LZH                               pmax    pmax
      comp=Z,120nm,5.4s
LZH                               LR      LR
      comp=Z,220nm,11.4s
LZH                               LR      LR
      comp=Z,280nm,12.5s
LZH                               LR      LR
      comp=Z,300nm,15.7s
TIXI  Tiksi             32.84 351 P       P       07 33 22.2 -0.1
      comp=Z,3.9nm,0.6s,baz=270,slow=23,SNR=22
      comp=Z,3.9nm,0.6s
TIXI  Tiksi             32.84 351ceP      P       07 33 22.0 -0.3
TIXI                              pmax    pmax
      comp=Z,5.0nm,0.8s
TIXI  Tiksi             32.84 351 P       P       07 33 20.6 -1.7
TIXI  Tiksi             32.84 351 P       P       07 33 22.0 -0.3
TIXI                              pP      sP      07 33 28.1 +2.0
GTA   Gaotai            34.51 284 ⇑P      P       07 33 38.8 +1.5
GTA                               pP      pwP     07 33 47.4 -0.2
GTA                               PcP     PcP     07 36 13.4 +1.3
GTA                               S       S       07 39 05.9 +0.4
GTA                               pmax    pmax
      comp=Z,20nm,1.0s
GTA                               pmax    pmax
      comp=Z,96nm,6.0s
GTA                               LR      LR
      comp=Z,130nm,15.9s
GTA                               LR      LR
      comp=Z,290nm,15.5s
GTA                               LR      LR
      comp=Z,410nm,14.7s
GYA   Guiyang           34.51 259 ⇑P      P       07 33 37.8 +0.4
GYA                               PP      PP      07 34 56.7 +1.1
GYA                               S       S       07 39 03.6 -2.1
GYA                               pmax    pmax
      comp=Z,51nm,0.7s
GYA                               pmax    pmax
      comp=Z,180nm,5.5s
GYA                               LR      LR
      comp=Z,130nm,7.5s
GYA                               LR      LR
      comp=Z,230nm,15.2s
GYA                               LR      LR
      comp=Z,180nm,16.3s
CD2   Chengdu           34.54 268 P       P       07 33 37.9 +0.3
CD2                               S       S       07 39 06.6 +0.6
CD2                               pmax    pmax
      comp=Z,20nm,0.9s
CD2                               LR      LR
      comp=Z,250nm,13.7s
QIZ   Qiongzhong        36.67 246 P       P       07 33 54.3 -1.6
QIZ                               S       S       07 39 43.4 +4.6
QIZ                               LR      LR
      comp=Z,260nm,16.7s
QIZ                               LR      LR
      comp=Z,230nm,16.7s
QIZ                               LR      LR
      comp=Z,190nm,17.5s
FALS  False Pass        37.09  49 P       P       07 34 00.5 +1.4
      baz=268
ANM   Nome              37.67  33 P       P       07 34 05.1 +1.1
      baz=254
KMI   Kunming           38.20 260 ⇓P      P       07 34 09.7 +0.6
KMI                               pmax    pmax
      comp=Z,16nm,0.6s
KMI                               pmax    pmax
      comp=Z,160nm,5.6s
KMI                               LR      LR
      comp=Z,120nm,14.7s
KMI                               LR      LR
      comp=Z,230nm,14.3s
KMI                               LR      LR
      comp=Z,220nm,15.9s
PZH   PanZhiHua         38.22 263 ⇓P      P       07 34 09.6 +0.4
PZH                               pP      pwP     07 34 19.8 +0.4
PZH                               PP      PnPn    07 35 44.4 +6.3
PZH                               S       S       07 40 07.5 +5.0
PZH                               sS      ScP     07 40 14.3 +3.6
PZH                               pmax    pmax
      comp=Z,40nm,0.7s
PZH                               pmax    pmax
      comp=Z,130nm,6.4s
PZH                               LR      LR
      comp=Z,360nm,20.0s
PZH                               LR      LR
      comp=Z,430nm,19.4s
PZH                               LR      LR
      comp=Z,370nm,18.9s
SDPT  Sand Point        38.79  48 P       P       07 34 13.9 +0.6
      baz=270
GOMU  GeErMu            39.27 281 P       P       07 34 18.9 +0.7
GOMU                              pP      pP      07 34 20.3 -0.7
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GOMU                              PcP     PcP     07 36 28.6 +1.7
GOMU                              pmax    pmax
      comp=Z,7.0nm,0.7s
RDOG  Red Dog Mine      39.67  28 P       P       07 34 21.1 +0.4
RDOG                              IAmb    IAmb    07 34 34.5
      comp=Z,12nm,0.7s
RDOG  Red Dog Mine      39.67  28 P       P       07 34 21.0 +0.4
      baz=252
GCSA  Galena City Sc    41.28  34 P       P       07 34 34.1 +0.1
      baz=262
N18K  Kilae Creek       41.36  40 P       P       07 34 35.7 +0.9
N18K  Kilae Creek       41.36  40 P       P       07 34 35.5 +0.8
      baz=268
TTA   Tatalina          41.45  36 P       P       07 34 36.2 +0.7
TTA                               pmax    pmax
      comp=Z,6.0nm,1.2s
TTA   Tatalina          41.45  36 P       P       07 34 36.2 +0.7
TTA   Tatalina          41.45  36 P       P       07 34 36.3 +0.7
      baz=265
SVW2  Sparrevohn        41.53  39 P       P       07 34 36.9 +0.8
P18K  Big Mountain,     41.66  42 P       P       07 34 38.5 +1.3
P18K  Big Mountain,     41.66  42 P       P       07 34 37.4 +0.2
      baz=270
O18K  Koktuh Hills      41.67  41 P       P       07 34 38.5 +1.2
O18K  Koktuh Hills      41.67  41 P       P       07 34 38.3 +1.0
      baz=269
NRIK  Noril'sk          41.90 333 P       P       07 34 39.5 +0.5
      comp=Z,3.9nm,0.5s,baz=130,slow=3.0,SNR=8.8
NRIK                              LR      LR      07 53 01.0
      comp=Z,111nm,21.0s,baz=331,slow=38
      comp=Z,3.9nm,0.5s
NRIK  Noril'sk          41.90 333 P       P       07 34 39.7 +0.7
L19K  White Mountain    41.93  38 P       P       07 34 39.9 +0.4
L19K  White Mountain    41.93  38 P       P       07 34 40.5 +1.1
      baz=267
MYLDM Lahad Datu        42.02 222 P       P       07 34 39.6 -1.0
MYLDM                             IAmb    IAmb    07 35 02.5
      comp=Z,32nm,1.1s
N19K  Bonanza Creek     42.05  40 P       P       07 34 41.6 +1.1
      baz=269
O19K  Port Alsworth     42.12  40 P       P       07 34 41.8 +0.9
O19K                              IAmb    IAmb    07 34 43.5
      comp=Z,36nm,1.5s
O19K  Port Alsworth     42.12  40 P       P       07 34 42.5 +1.6
      baz=269
WMQ   Urumqi            42.13 295 ⇑P      P       07 34 42.6 +1.3
WMQ                               sP      pwP     07 34 54.2 +2.6
WMQ                               pmax    pmax
      comp=Z,27nm,1.3s
WMQ                               pmax    pmax
      comp=Z,120nm,3.9s
WMQ                               LR      LR
      comp=Z,220nm,14.9s
WMQ                               LR      LR
      comp=Z,150nm,20.7s
M19K  Big River Lodg    42.13  38 P       P       07 34 41.5 +0.5
M19K  Big River Lodg    42.13  38 P       P       07 34 41.9 +0.9
      baz=268
ZAA0  Zalesovo Array    42.14 310 P       P       07 34 41.2  0.0
ZAA0                              PcP     PcP     07 36 35.6 +0.2
ZALV  Zalesovo Beam     42.14 310 P       P       07 34 42.0 +0.9
      comp=Z,4.0nm,0.6s,baz=88,slow=7.7,SNR=17
ZALV                              PcP     PcP     07 36 36.1 +0.7
      comp=Z,19nm,0.5s,baz=91,slow=3.3,SNR=18
ZALV                              LR      LR      07 53 00.3
      comp=Z,115nm,19.1s,baz=76,slow=37
      comp=Z,4.0nm,0.6s
ZALV  Zalesovo Beam     42.14 310 P       P       07 34 41.4 +0.3
ZALV                                              07 36 35.4
ZALV  Zalesovo Beam     42.14 310 P       P       07 34 41.4 +0.3
ZALV                              PcP     PcP     07 36 35.4 +0.1
K20K  Telida            42.37  36 P       P       07 34 44.3 +1.4
K20K                              PcP     PcP     07 36 37.3 +1.3
K20K  Telida            42.37  36 P       P       07 34 44.0 +1.1
      baz=266
J20K  Nowinta River     42.39  35 P       P       07 34 44.4 +1.3
J20K                              PcP     PcP     07 36 37.6 +1.5
J20K  Nowinta River     42.39  35 P       P       07 34 44.0 +0.9
      baz=265,SNR=7.3
L20K  Farewell, AK      42.40  37 P       P       07 34 43.9 +0.6
      baz=267
P19K  Oil Pt            42.67  41 P       P       07 34 45.4 -0.1
      baz=271
A21K  Barrow            42.71  24 P       P       07 34 46.5 +1.0
A21K                              IAmb    IAmb    07 34 56.1
      comp=Z,20nm,0.9s
A21K  Barrow            42.71  24 P       P       07 34 46.0 +0.5
      baz=255,SNR=14
IMAR  Indian Mountai    42.74  32 P       P       07 34 46.2 +0.3
IMAR                              PcP     PcP     07 36 38.4 +1.2
RSO   Redoubt South     42.90  40 P       P       07 34 48.1 +0.6
O20K  Slope Mountain    42.97  41 P       P       07 34 48.9 +1.0
      baz=271
KDAK  Kodiak Island     43.08  44 P       P       07 34 48.8  0.0
      comp=Z,12nm,0.8s,baz=301,slow=6.9,SNR=8.4
KDAK                              LR      LR      07 52 06.8
      comp=Z,55nm,21.5s,baz=245,slow=35
      comp=Z,12nm,0.8s
KDAK  Kodiak Island     43.08  44 IAmb    IAmb    07 34 49.1
      comp=Z,16nm,0.8s
KDAK  Kodiak Island     43.08  44 P       P       07 34 50.2 +1.4
      baz=274
H21K  Melozitna Rive    43.09  32 P       P       07 34 49.7 +0.9
H21K                              PcP     PcP     07 36 40.2 +1.9
H21K  Melozitna Rive    43.09  32 P       P       07 34 49.7 +0.9
      baz=265,SNR=7.5
CHUM  Lake Minchumin    43.18  35 P       P       07 34 50.8 +1.4
      baz=267,SNR=5.8
PPLA  Purkeypile        43.20  37 P       P       07 34 51.8 +1.9
PPLA  Purkeypile        43.20  37 P       P       07 34 50.5 +0.7
      baz=268
CAST  Castle Rocks      43.26  36 P       P       07 34 51.9 +1.7
CAST  Castle Rocks      43.26  36 P       P       07 34 51.2 +1.0
      baz=268,SNR=8.4
I21K  Tanana            43.40  33 P       P       07 34 51.9 +0.8
I21K  Tanana            43.40  33 P       P       07 34 52.0 +0.8
      baz=266
HOM   Homer             43.48  41 P       P       07 34 52.5 +0.6
      baz=272
BPAW  Bear Paw Mtn.     43.77  35 P       P       07 34 55.3 +1.0
BPAW  Bear Paw Mtn.     43.77  35 P       P       07 34 54.8 +0.5
      baz=268
KTH   Kantishna Hill    43.79  36 P       P       07 34 54.2 -0.3
BRSE  Bradley Lake S    43.93  41 P       P       07 34 55.9 +0.2
      baz=273
CUT   Chulitna          44.08  37 P       P       07 34 56.9 +0.2
      baz=271
M22K  Willow            44.16  38 P       P       07 34 57.4 +0.1
      baz=271
COLD  Coldfoot          44.27  30 P       P       07 34 59.7 +1.5
COLD                              PcP     PcP     07 36 43.7 +1.4
COLD  Coldfoot          44.27  30 P       P       07 34 58.6 +0.4
      baz=266
RC01  Rabbit Creek A    44.37  39 P       P       07 34 59.1  0.0
      baz=272
O22K  Cooper Landing    44.40  40 P       P       07 34 59.1 -0.2
      baz=273
BWN   Browne            44.44  35 P       P       07 35 01.8 +2.2
BWN                               IAmb    IAmb    07 35 02.5
      comp=Z,30nm,1.0s
H23K  Yukon River       44.45  32 P       P       07 35 00.3 +0.6
H23K                              IAmb    IAmb    07 35 02.4
      comp=Z,13nm,1.1s
H23K  Yukon River       44.45  32 P       P       07 35 01.1 +1.4
      baz=268,SNR=9.6
I23K  Minto, Yukon-K    44.50  33 P       P       07 35 00.9 +0.8
I23K                              IAmb    IAmb    07 35 03.2
      comp=Z,18nm,1.4s
I23K  Minto, Yukon-K    44.50  33 P       P       07 35 00.3 +0.2
      baz=269,SNR=8.1
MRSI  Marisa            44.52 214 P       P       07 35 01.3 +0.6
      comp=Z,51nm,1.1s
SEW   Seward            44.56  41 P       P       07 35 00.5 -0.1
      baz=274
NEA2  Nenana            44.62  34 P       P       07 35 02.3 +1.2
NEA2                              PcP     PcP     07 36 44.0 +0.5
NEA2  Nenana            44.62  34 P       P       07 35 01.6 +0.6
      baz=269,SNR=7.9
TOLK  Toolik Lake Re    44.62  28 P       P       07 35 02.2 +1.1
TOLK                              PcP     PP      07 36 45.6 +0.6
TOLK  Toolik Lake Re    44.62  28 P       P       07 35 01.8 +0.7
      baz=265,SNR=5.9
PMR   Palmer            44.64  38 P       P       07 35 01.6 +0.4
      baz=272
RND   Reindeer          44.72  36 P       P       07 35 02.3 +0.4
RND                               pmax    pmax
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      comp=Z,19nm,1.3s
RND   Reindeer          44.72  36 P       P       07 35 02.3 +0.4
RND                               IAmb    IAmb    07 35 03.0
      comp=Z,19nm,1.3s
CHTO  Chiang Mai        44.73 256 P       P       07 35 02.7 +0.3
CHTO                              pmax    pmax
      comp=Z,13nm,0.9s
CHTO  Chiang Mai        44.73 256 P       P       07 35 02.7 +0.3
CHTO                              IAmb    IAmb    07 35 04.2
      comp=Z,13nm,0.9s
CMAR  Chiang Mai Arr    44.95 255 P       P       07 35 05.2 +0.9
      comp=Z,2.8nm,0.3s,baz=42,slow=6.8,SNR=14
CMAR                              PcP     PcP     07 36 46.5 +1.0
      comp=Z,1.1nm,0.3s,baz=29,slow=0.4,SNR=4.6
      comp=Z,2.8nm,0.3s
CMAR  Chiang Mai Arr    44.95 255ceP      P       07 35 05.4 +1.2
CMAR                              pmax    pmax
      comp=Z,3.0nm,0.4s
CMAR  Chiang Mai Arr    44.95 255 PcP     PcP     07 36 46.2 +0.7
KNK   Knik Glacier      44.97  39 P       P       07 35 04.2 +0.3
      baz=273
MDM   Murphy Dome       44.98  34 P       P       07 35 05.3 +1.4
MDM                               IAmb    IAmb    07 35 08.0
      comp=Z,18nm,1.2s
SML   Sawmill           45.01  38 P       P       07 35 04.4 +0.1
SML                               IAmb    IAmb    07 35 15.8
      comp=Z,14nm,0.9s
SML   Sawmill           45.01  38 P       P       07 35 03.6 -0.6
      baz=273
MK31  Makanchi Array    45.04 300 i P     P       07 35 05.1 +0.4
MK31  Makanchi Array    45.04 300 P       P       07 35 04.0 -0.6
MK31                              PcP     PcP     07 36 45.9 +0.5
MKAR  Makanchi Array    45.04 300 P       P       07 35 04.8 +0.2
      comp=Z,8.3nm,0.9s,baz=81,slow=10.0,SNR=40
MKAR                              PcP     PcP     07 36 45.8 +0.4
      comp=Z,2.4nm,0.7s,baz=64,slow=6.6,SNR=2.3
      comp=Z,8.3nm,0.9s
PWL   Port Wells        45.06  39 P       P       07 35 04.6  0.0
      baz=274
H24K  Noodor Dome       45.13  32 P       P       07 35 05.4 +0.2
H24K                              PcP     PcP     07 36 46.6 +1.3
H24K  Noodor Dome       45.13  32 P       P       07 35 06.2 +1.0
      baz=269,SNR=7.3
TCOL  CIGO, UAF Yank    45.14  34 IAmb    IAmb    07 35 23.5
      comp=Z,10nm,0.9s
TCOL  CIGO, UAF Yank    45.14  34 P       P       07 35 05.3 +0.2
      baz=270
COLA  College           45.14  34 i P     P       07 35 06.7 +1.6
COLA                              pmax    pmax
      comp=Z,6.0nm,1.1s
COLA  College           45.14  34 P       P       07 35 05.8 +0.7
COLA                              IAmb    IAmb    07 35 23.5
      comp=Z,10nm,0.9s
COLA  College           45.14  34 P       P       07 35 05.2  0.0
      baz=270
MAKZ  Makanchi          45.24 300 P       P       07 35 06.6 +0.3
MAKZ                              pmax    pmax
      comp=Z,9.0nm,0.9s
MAKZ  Makanchi          45.24 300 P       P       07 35 06.6 +0.3
MAKZ  Makanchi          45.24 300 ⇓P      P       07 35 06.5 +0.2
MAKZ                              pP      pwP     07 35 17.9 +1.3
SANI  Sanana            45.24 207 P       P       07 35 05.8 -0.7
      comp=Z,34nm,1.0s
WAT6  Susitna Watana    45.25  37 P       P       07 35 05.8 -0.4
      baz=273
M23K  Glacier View      45.30  38 P       P       07 35 06.2 -0.3
      baz=273
POKR  Poker Plat Res    45.32  33 P       P       07 35 07.1 +0.5
POKR                              IAmb    IAmb    07 35 08.9
      comp=Z,19nm,1.0s
POKR  Poker Plat Res    45.32  33 P       P       07 35 06.2 -0.5
      baz=270
DHY   Denali Highway    45.39  36 P       P       07 35 06.6 -0.8
      baz=272
SCM   Sheep Creek Mo    45.48  38 P       P       07 35 07.0 -1.0
      baz=274
SEM   Semipalatinsk     45.49 306 eP      P       07 35 07.4 -1.0
SEM   Semipalatinsk     45.49 306 eP      P       07 35 07.5 -1.0
      baz=306
MPSI  Mapaga            45.55 216 P       P       07 35 09.1 +0.2
      comp=Z,13nm,0.9s
IL31                    45.55  34 P       P       07 35 08.9 +0.5
ILAR  Eielson Array     45.55  34 P       P       07 35 08.8 +0.4
      comp=Z,3.8nm,0.7s,baz=260,slow=6.9,SNR=54
      comp=Z,3.8nm,0.7s
ILAR  Eielson Array     45.55  34 P       P       07 35 08.4 -0.1
ILAR  Eielson Array     45.55  34 P       P       07 35 08.4 -0.1
GLI   Glacier Island    45.66  39 P       P       07 35 08.8 -0.6
      baz=275
M24K  Tolsona, Glenn    46.01  38 P       P       07 35 12.0 -0.1
      baz=274
K24K  Donnelly Dome     46.08  35 P       P       07 35 12.2 -0.4
      baz=273
KLU   Klutina           46.18  38 IAmb    IAmb    07 35 25.0
      comp=Z,13nm,0.9s
KLU   Klutina           46.18  38 P       P       07 35 13.4 -0.1
      baz=275
J25K  Salcha River,     46.21  34 P       P       07 35 13.8 +0.1
J25K  Salcha River,     46.21  34 P       P       07 35 13.2 -0.6
      baz=273
PAX   Paxson            46.27  36 P       P       07 35 13.4 -0.8
PAX                                               07 36 50.0
PAX                               pmax    pmax
      comp=Z,3.0nm,0.8s
PAX   Paxson            46.27  36 P       P       07 35 13.4 -0.8
PAX                               PcP     PcP     07 36 50.0 +0.6
PAX   Paxson            46.27  36 P       P       07 35 14.2  0.0
      baz=274
DIV   Divide            46.28  39 P       P       07 35 14.7 +0.4
DIV                               IAmb    IAmb    07 35 16.2
      comp=Z,23nm,1.1s
EYAK  Cordova Ski Ar    46.35  40 P       P       07 35 14.7 -0.1
      baz=276
KURK  Kurchatov         46.43 306ceP      P       07 35 15.8 +0.2
KURK                              pmax    pmax
      comp=Z,33nm,1.3s
KURK  Kurchatov         46.43 306 P       P       07 35 15.7 +0.1
KURK  Kurchatov         46.43 306         PcP     07 36 50.9 +0.8
KURK  Kurchatov         46.43 306 P       P       07 35 16.1 +0.5
KURK                              pP      pwP     07 35 25.4 -0.6
BMAR  Burnt Mountain    46.45  30 P       P       07 35 16.9 +1.4
HARP  HAARP             46.46  37 P       P       07 35 15.7  0.0
      baz=275
RIDG  Independent Ri    46.49  35 P       P       07 35 16.1 +0.1
      baz=274
KURBB Kurchatov Arra    46.51 306 P       P       07 35 16.5 +0.3
      comp=Z,19nm,0.9s,baz=79,slow=8.6,SNR=134
KURBB                             PcP     PcP     07 36 50.9 +0.5
      comp=Z,4.8nm,0.8s,baz=80,slow=4.2,SNR=5.2
KURBB                             LR      LR      07 54 51.4
      comp=Z,65nm,20.9s,baz=70,slow=36
      comp=Z,19nm,0.9s
KURBB Kurchatov Arra    46.51 306 P       P       07 35 16.0 -0.2
N25K  Chitina, Valde    46.80  38 P       P       07 35 18.0 -0.4
      baz=276
DOT   Dot Lake          46.85  35 P       P       07 35 18.7  0.0
DOT                               IAmb    IAmb    07 35 21.6
      comp=Z,16nm,1.5s
SCRK  Sand Creek        46.85  35 P       P       07 35 19.3 +0.5
SCRK                              IAmb    IAmb    07 35 21.5
      comp=Z,11nm,1.2s
SCRK  Sand Creek        46.85  35 P       P       07 35 19.0 +0.1
      baz=274,SNR=9.3
BMRM  Bremner River     46.87  39 P       P       07 35 19.0 +0.1
      baz=277
J26L  Joseph Creek      47.00  34 P       P       07 35 19.1 -0.8
      baz=274
MENT  Mentasta          47.07  36 IAmb    IAmb    07 35 22.3
      comp=Z,6.9nm,0.8s
L26K  Log Cabin Wild    47.23  36 IAmb    IAmb    07 35 24.0
      comp=Z,13nm,0.8s
L26K  Log Cabin Wild    47.23  36 P       P       07 35 22.5 +0.8
      baz=276,SNR=11
M26K  Nabesna, AK       47.46  37 IAmb    IAmb    07 35 26.5
      comp=Z,17nm,1.2s
M26K  Nabesna, AK       47.46  37 P       P       07 35 23.6 +0.1
      baz=277,SNR=8.5
BGLC  Bering Glacier    47.63  40 P       P       07 35 24.6 -0.1
      baz=279
K27K  Chicken           47.69  35 P       P       07 35 25.9 +0.7
      baz=276
L27K  Beaver Creek,     47.91  36 P       P       07 35 28.4 +1.4
L27K                              IAmb    IAmb    07 35 29.4
      comp=Z,18nm,1.1s
L27K  Beaver Creek,     47.91  36 P       P       07 35 27.9 +0.9
      baz=277,SNR=12
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M27K  Edge Creek, AK    47.98  37  P      P      07 35 28.8 +1.1
M27K                               IAmb   IAmb   07 35 29.9
      comp=Z,13nm,1.1s
EGAK  Eagle             48.00  34  P      P      07 35 28.1 +0.5
EGAK                               IAmb   IAmb   07 35 45.6
      comp=Z,17nm,1.4s
EGAK  Eagle             48.00  34  P      P      07 35 27.6 -0.1
      baz=276
TDK   Taldyqorghan      48.15 299 eP      P      07 35 28.7 -0.4
TDK                                pmax   pmax
      comp=Z,6.0nm,0.5s
TDK   Taldyqorghan      48.15 299 eP      P      07 35 28.7 -0.4
      comp=Z,5.8nm,0.5s,baz=299
UZB   Uzynbulak         48.35 297 eP      P      07 35 30.4 -0.4
UZB   Uzynbulak         48.35 297 eP      P      07 35 30.4 -0.4
      baz=296
BVCY  Beaver Creek      48.44  37  P      P      07 35 30.8 -0.3
      baz=279
KPKS  Kokpek            48.47 297 eP      P      07 35 31.1 -0.5
KPKS                               pmax   pmax
      comp=Z,8.0nm,1.2s
KPKS  Kokpek            48.47 297 eP      P      07 35 31.2 -0.5
      comp=Z,8.5nm,1.2s,baz=297
TAPN  Taplejung         48.56 273 eP      P      07 35 33.5 +0.7
YUK3  Moose Creek       48.73  38  P      P      07 35 32.7 -0.8
      baz=280
ZHN   Zhinishke         48.74 297 eP      P      07 35 33.3 -0.5
ZHN   Zhinishke         48.74 297 eP      P      07 35 33.4 -0.4
      baz=297
SATY  Saty              48.80 297 eP      P      07 35 34.0 -0.3
SATY  Saty              48.80 297 eP      P      07 35 34.0 -0.3
      baz=297
DAWY  Dawson            48.85  34  P      P      07 35 33.5 -0.7
      baz=278
I29M  Ogilvie Camp,     49.13  33  IAmb   IAmb   07 35 38.3
      comp=Z,27nm,1.3s
I29M  Ogilvie Camp,     49.13  33  P      P      07 35 36.5 +0.2
      baz=278,SNR=19
KSM   Kuching           49.56 228  P      P      07 35 39.9 -0.3
KSM                                IAmb   IAmb   07 35 42.4
      comp=Z,17nm,1.1s
JIRN  Jiri              49.58 275 eP      P      07 35 41.8 +1.1
RAMN  Ramite            49.62 274 eP      P      07 35 41.5 +0.6
      comp=Z,44nm,0.6s
EPYK  Eagle Plains      49.63  31  P      P      07 35 39.7 -0.4
EPYK                               IAmb   IAmb   07 35 42.0
      comp=Z,11nm,0.8s
EPYK  Eagle Plains      49.63  31  P      P      07 35 40.4 +0.3
      baz=279,SNR=7.0
YUK4  Talbot Arm        49.66  38  P      P      07 35 40.2 -0.4
      baz=281
BNSI  Bone              49.68 213  P      P      07 35 42.1 +1.1
      comp=Z,14nm,1.2s
GUN   Gumba             49.69 275 eP      P      07 35 42.0 +0.5
TARG  Taragay, Kyrgy    49.69 295  P      P      07 35 40.8 -0.6
TARG                               IAmb   IAmb   07 35 43.2
      comp=Z,8.4nm,0.8s
MDOK  Medeo             49.69 297 eP      P      07 35 41.2 +0.1
MDOK  Medeo             49.69 297 eP      P      07 35 41.3 +0.1
      baz=297
TNSS  Tian-Shan         49.81 297 eP      P      07 35 42.5 +0.3
TNSS  Tian-Shan         49.81 297 eP      P      07 35 42.6 +0.3
      baz=297
YUK6  Outpost Mounta    49.88  38  P      P      07 35 41.5 -0.8
      baz=282
KUU   Kurty             49.92 298 eP      P      07 35 41.5 -1.1
KUU                                pmax   pmax
      comp=Z,7.0nm,0.7s
KUU   Kurty             49.92 298 eP      P      07 35 41.6 -1.1
      comp=Z,7.4nm,0.7s,baz=298
KKN   Kakani            50.21 275 eP      P      07 35 46.0 +0.7
PKI   Pulchoki          50.22 275 eP      P      07 35 45.7 +0.2
PKIN  Phulchoki         50.23 275 eP      P      07 35 45.7 +0.2
M30M  Minto, Yukon      50.27  36  P      P      07 35 45.5 +0.5
      baz=282,SNR=5.1
HYT   Haines Junctio    50.31  38  P      P      07 35 45.9 +0.4
      baz=283,SNR=24
DMN   Daman             50.43 275 eP      P      07 35 47.4 +0.4
INK   Inuvik            50.54  28  P      P      07 35 48.0 +1.1
      comp=Z,3.6nm,0.5s,baz=301,slow=6.1,SNR=35
      comp=Z,3.6nm,0.5s
INK   Inuvik            50.54  28  P      P      07 35 48.0 +1.1
INK   Inuvik            50.54  28  IAmb   IAmb   07 35 48.8
      comp=Z,10.0nm,1.1s
INK   Inuvik            50.54  28  P      P      07 35 47.7 +0.8
      baz=280,SNR=9.9
GKN   Gorkha            50.59 276 eP      P      07 35 48.1  0.0
      comp=Z,109nm,1.1s
BOOM  Boomskoye usch    50.70 297  P      P      07 35 48.5 -0.3
BOOM                               pmax   pmax
      comp=Z,14nm,0.8s
BOOM  Boomskoye usch    50.70 297  P      P      07 35 48.5 -0.3
BOOM                               IAmb   IAmb   07 35 50.4
      comp=Z,14nm,0.8s
TKM2  Tokmak 2          50.77 297  P      P      07 35 49.6 +0.2
BRVK  Borovoye          50.81 311ceP      P      07 35 50.3 +1.1
BRVK                               pmax   pmax
      comp=Z,21nm,1.3s
BRVK  Borovoye          50.81 311  P      P      07 35 50.0 +0.8
BRVK                               IAmb   IAmb   07 35 51.1
      comp=Z,15nm,0.9s
BRVK  Borovoye          50.81 311 ⇓P      P      07 35 50.0 +0.8
BRVK                               pP     pwP    07 36 00.6 +1.0
N31M  Braeburn, Yuko    50.98  37  IAmb   IAmb   07 35 53.1
      comp=Z,17nm,0.8s
N31M  Braeburn, Yuko    50.98  37  P      P      07 35 51.2 +0.8
      baz=284,SNR=7.0
BTLS  Baital            51.05 300 eP      P      07 35 50.4 -0.7
BTLS  Baital            51.05 300 eP      P      07 35 50.5 -0.7
      baz=300
DANN  Dangsing          51.09 277 eP      P      07 35 52.9 +0.9
      comp=Z,142nm,0.9s
SGDS  Sogindy           51.23 298 eP      P      07 35 51.9 -0.7
SGDS  Sogindy           51.23 298 eP      P      07 35 52.0 -0.7
      baz=298
M31M  Drury Creek, Y    51.45  36  IAmb   IAmb   07 35 56.1
      comp=Z,8.4nm,0.8s
M31M  Drury Creek, Y    51.45  36  P      P      07 35 54.8 +0.9
      baz=284,SNR=6.9
KOLN  Koldanda          51.50 276 eP      P      07 35 55.4 +0.4
      comp=Z,73nm,1.1s
WHY   Whitehorse        51.60  38  P      P      07 35 55.4 +0.2
AAK   Ala-Archa         51.63 297  LR     LR     07 58 56.3
      comp=Z,142nm,21.2s,baz=78,slow=37
AAK   Ala-Archa         51.63 297ceP      P      07 35 56.2 +0.4
AAK                                pmax   pmax
      comp=Z,10.0nm,2.5s
AAK   Ala-Archa         51.63 297  P      P      07 35 54.9 -0.9
SKAG  Skagway           51.70  40  P      P      07 35 55.9 +0.2
      baz=285
KSH   Kashi             51.83 293  P      P      07 36 01.0 +3.7
KSH                                pP     pwP    07 36 08.9 +1.3
KSH                                pmax   pmax
      comp=Z,7.0nm,0.7s
KSH                                LR     LR
      comp=Z,530nm,16.5s
KSH                                LR     LR
      comp=Z,340nm,16.8s
KSH                                LR     LR
      comp=Z,290nm,17.2s
FARO  Faro, Yukon       51.91  36  P      P      07 35 57.5 +0.1
      baz=285
A36M  Sachs Harbour     52.53  23  P      P      07 36 02.2 +0.4
      baz=284
MMPY  Sheldon Lake,     52.74  35  P      P      07 36 04.0 +0.4
      baz=286,SNR=6.4
C36M  Paulatuk          53.63  26  IAmb   IAmb   07 36 11.1
      comp=Z,8.7nm,0.9s
C36M  Paulatuk          53.63  26  P      P      07 36 09.3 -0.6
      baz=287
DZA   Taraz             53.68 299 eP      P      07 36 10.6 -0.1
DZA                                pmax   pmax
      comp=Z,8.0nm,0.5s
DZA   Taraz             53.68 299 eP      P      07 36 10.7 -0.1
      comp=Z,7.7nm,0.5s,baz=299
KK31  Karatay Array     54.14 299 i P     P      07 36 13.7 -0.4
KKAR  Karatay Array     54.14 299  P      P      07 36 13.5 -0.6
KKAR                               pmax   pmax
      comp=Z,6.0nm,0.8s
KKAR  Karatay Array     54.14 299  P      P      07 36 13.5 -0.6
KKAR  Karatay Array     54.14 299  P      P      07 36 14.1  0.0
KKAR                               IAmb   IAmb   07 36 29.6
      comp=Z,5.7nm,0.8s
TGTN  Hyland Airport    54.42  36  P      P      07 36 16.4 +0.6
      baz=289
DSRI  Dabo              54.53 233  P      P      07 36 19.2 +2.0
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      comp=Z,8.5nm,0.8s
DLBC  Dease Lake        54.63  40  P      P      07 36 19.3 +1.8
      comp=Z,5.1nm,0.8s,baz=274,slow=9.0,SNR=9.3
      comp=Z,5.1nm,0.8s
DLBC  Dease Lake        54.63  40  P      P      07 36 18.8 +1.3
IUG   Iuzhnay           54.86 299 eP      P      07 36 19.2 -0.2
IUG   Iuzhnay           54.86 299 eP      P      07 36 19.2 -0.2
      baz=298
SVE   Sverdlovsk        54.88 318ceP      P      07 36 20.4 +1.2
SVE                                pmax   pmax
      comp=Z,46nm,1.2s
PSI   Prapat            55.67 241  LR     LR     08 01 40.0
      comp=Z,62nm,20.0s,baz=98,slow=38
GAR   Garm              56.02 295  P      P      07 36 27.9  0.0
GAR                                IAmb   IAmb   07 36 53.1
      comp=Z,9.5nm,0.7s
ARU   Arti              56.09 318c iP     P      07 36 28.6 +0.7
ARU                                              07 37 23.7
ARU                                              07 38 31.2
ARU                                S      S      07 44 19.0 +3.0
ARU                                SS     SS     07 48 03.9 +2.3
ARU                                pmax   pmax
      comp=Z,32nm,0.8s
ARU   Arti              56.09 318  P      P      07 36 28.3 +0.4
ARU   Arti              56.09 318  P      P      07 36 28.8 +0.9
NIL   Nilore            56.40 288  P      P      07 36 30.9 +0.4
NIL                                pmax   pmax
      comp=Z,26nm,0.9s
NIL   Nilore            56.40 288  P      P      07 36 30.9 +0.4
EUNU  Eureka            56.92   9  P      P      07 36 33.9 +0.3
EUNU                               IAmb   IAmb   07 36 34.3
      comp=Z,8.4nm,0.8s
CHGR  Chuyangaron       56.98 295  P      P      07 36 35.0 +0.3
ALE   Alert             57.06   4  P      P      07 36 35.3 +0.8
ALE                                pP     pwP    07 36 42.7 -2.1
KNRA  Kununurra         57.33 199  P      P      07 36 36.3 -0.8
HOPEN Hopen             57.93 346 eP      P      07 36 41.3 +0.6
SPA0  Spitsbergen Ar    58.25 349 eP      P      07 36 43.9 +1.0
AB31  Akbulak array     58.25 310 i P     P      07 36 43.5 +0.2
ABKAR Akbulak array     58.25 310  P      P      07 36 43.6 +0.3
KBS   Kingsbay          58.30 350ceP      P      07 36 43.6 +0.4
KBS                                pmax   pmax
      comp=Z,15nm,1.0s
KBS   Kingsbay          58.30 350  P      P      07 36 44.3 +1.1
KBS   Kingsbay          58.30 350 eP      P      07 36 44.2 +0.9
NOR   Nord              58.35 357 eP      P      07 36 43.5 -0.1
NOR                                IAmb   IAmb   07 36 45.0
      comp=Z,13nm,1.4s
AKTO  Aktyubinsk        58.86 312  LR     LR     08 04 18.7
      comp=Z,75nm,18.4s,baz=73,slow=38
AKTO  Aktyubinsk        58.86 312  P      P      07 36 47.4 -0.1
KBL   Kabul             59.02 291  P      P      07 36 48.8 -0.4
KBL                                pmax   pmax
      comp=Z,17nm,0.8s
KBL   Kabul             59.02 291  P      P      07 36 48.8 -0.4
HSPB  Hornsund (broa    59.22 348 eP      P      07 36 50.5 +0.9
HSPB  Hornsund (broa    59.22 348 eP      P      07 36 49.8 +0.2
KIRV  Kirov             59.66 323ceP      P      07 36 53.7 +0.8
PRGR  Permogore         59.89 327 eP      P      07 36 53.9 -0.6
PRGR                              e              07 37 37.1
PRGR                              e              07 39 05.5
YKA   Yellowknife Ar    59.90  32  P      P      07 36 55.0 +0.4
      comp=Z,7.0nm,0.7s,baz=301,slow=6.3,SNR=117
YKA                                PcP    PcP    07 37 40.8  0.0
      comp=Z,0.9nm,0.6s,baz=299,slow=3.6,SNR=5.1
      comp=Z,7.0nm,0.7s
YKA   Yellowknife Ar    59.90  32ceP      P      07 36 54.7 +0.2
YKA                                pmax   pmax
      comp=Z,7.0nm,0.6s
YKA   Yellowknife Ar    59.90  32  P      P      07 36 54.5  0.0
WB0   Warramunga Arr    60.18 192  P      P      07 36 55.4 -1.5
WR0   Warramunga Arr    60.35 191  P      P      07 36 56.5 -1.5
WRAB  Tennant Creek     60.35 192ceP      P      07 36 57.0 -1.0
WRAB                               pmax   pmax
      comp=Z,7.0nm,0.6s
WRAB  Tennant Creek     60.35 192  P      P      07 36 57.0 -1.0
WB2   Warramunga Arr    60.36 192  P      P      07 36 56.8 -1.3
WRA   Warramunga Arr    60.36 192  P      P      07 36 57.0 -1.1
      comp=Z,13nm,0.6s,baz=12,slow=7.1,SNR=169
      comp=Z,13nm,0.6s
WRA   Warramunga Arr    60.36 192ceP      P      07 36 56.7 -1.4
WRA                                pmax   pmax
      comp=Z,13nm,0.6s
WRA   Warramunga Arr    60.36 192  P      P      07 36 56.6 -1.6
BJO1  Bjornoya          60.40 346 eP      P      07 36 58.6 +0.8
LVZ   Lovozero          60.64 336ceP      P      07 37 00.0 +0.4
LVZ                                pmax   pmax
      comp=Z,29nm,2.5s
APA   Apatity           61.22 336⇑iP      P      07 37 03.2 -0.2
APA                                pmax   pmax
      comp=Z,6.0nm,0.6s
APA                                MLR    MLR
      comp=Z,100nm,14.0s
TULEG Thule             61.87   9  P      P      07 37 07.6 -0.1
TULEG                              IAmb   IAmb   07 37 10.2
      comp=Z,18nm,1.1s
HAMF  Hammerfest        62.02 341 eP      P      07 37 08.9 +0.1
ARA0  ARCESS Array S    62.29 340 eP      P      07 37 09.6 -1.0
ARCES ARCESS Array B    62.29 340  P      P      07 37 10.9 +0.2
      comp=Z,2.9nm,0.8s,baz=45,slow=7.4,SNR=9.2
      comp=Z,2.9nm,0.8s
ARCES ARCESS Array B    62.29 340  P      P      07 37 10.4 -0.3
ARCES                              pmax   pmax
      comp=Z,10.0nm,1.4s
ARCES ARCESS Array B    62.29 340  P      P      07 37 10.4 -0.3
ARCES                              IAmb   IAmb   07 37 28.9
      comp=Z,10nm,1.4s
A04D  Lummi Island      62.72  48  P      P      07 37 13.4 -0.4
      baz=300
A04D  Lummi Island      62.72  48  S      P      07 37 13.1 -0.7
      baz=210
KLMR  Klimovskoe        62.83 328 eP      P      07 37 13.4 -0.9
KLMR                              e              07 39 32.6
KLMR                               pmax   pmax
      comp=Z,13nm,0.8s
KLMR  Klimovskoe        62.83 328 eP      P      07 37 13.4 -0.9
KLMR                               AMP           07 37 15.2
      comp=Z,13nm,0.8s
KLMR                              ePP     PP     07 39 32.7 +0.7
D03D  Eldon             63.09  49  P      P      07 37 15.6 -0.8
      baz=300
DAG   Danmarks Havn     63.14 356 i P     P      07 37 16.0 -0.2
DAG                                IAmb   IAmb   07 37 26.9
      comp=Z,15nm,0.9s
KTK1  Kautokeino        63.24 340 eP      P      07 37 17.1 +0.1
JETT  Jettan, Norway    63.59 341 eP      P      07 37 20.0 +0.7
BELG  Belogornoye       63.61 317 i P     P      07 37 19.5 -0.1
BELG                               pmax   pmax
      comp=Z,15nm,0.8s
TRO   Tromso            63.90 342 eP      P      07 37 21.6 +0.3
E04D  Cinebar           63.90  50  P      P      07 37 21.6 -0.1
      baz=301
HRA   Herat             63.93 294  P      P      07 37 22.8 +0.4
HRA                                IAmb   IAmb   07 37 23.9
      comp=Z,12nm,0.8s
AS31  Alice Springs     64.08 191  P      P      07 37 22.5 -0.5
ASAR  Alice Springs     64.09 191  P      P      07 37 22.2 -0.8
      comp=Z,6.5nm,0.7s,baz=8.4,slow=5.6,SNR=84
ASAR                               PKP2bc        08 06 20.1
      comp=Z,1.2nm,0.9s,baz=180,slow=2.8,SNR=6.5
      comp=Z,6.5nm,0.7s
J01E  Myrtle Point      64.85  54  P      P      07 37 27.6 -0.4
      baz=302
GEYT  Alibeck           64.90 299  P      P      07 37 29.0 +0.6
      comp=Z,7.3nm,0.7s,baz=249,slow=12,SNR=8.5
GEYT                               LR     LR     08 06 59.0
      comp=Z,29nm,20.7s,baz=130,slow=37
      comp=Z,7.3nm,0.7s
GEYT  Alibeck           64.90 299  P      P      07 37 29.1 +0.6
GEYT                               IAmb   IAmb   07 37 29.8
      comp=Z,11nm,0.9s
GYA0B ALIBECK ARRAY     64.90 299  P      P      07 37 29.3 +0.8
GYA0B                              IAmb   IAmb   07 37 29.7
      comp=Z,12nm,0.8s
I03D  Drain, OR         64.92  53  P      P      07 37 28.3 -0.2
      baz=302
EIDS  Eidsvold          65.19 174  IAmb   IAmb   07 37 31.4
      comp=Z,10nm,0.9s
G05D  Wamic, OR         65.34  51  P      P      07 37 31.6 +0.4
      baz=302
I04A  Tendick Farm,     65.45  53  P      P      07 37 31.8 -0.2
      baz=302
DBG   Daneborg          65.64 356 eP      P      07 37 33.4 +0.8
I05D  Terrebonne, OR    65.81  52  P      P      07 37 34.5 +0.3
      baz=303
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J04D  Umpqua Nationa    65.93  53  P      P      07 37 35.1 -0.1
      baz=303
STEI  Steigen           66.06 341 eP      P      07 37 35.6 +0.2
NEW   Newport           66.11  46  P      P      07 37 36.4 +0.3
      comp=Z,7.0nm,0.7s,baz=298,slow=6.2,SNR=5.5
      comp=Z,7.0nm,0.7s
NEW   Newport           66.11  46  P      P      07 37 35.9 -0.2
      baz=304
LOF   Lofoten           66.32 342 eP      P      07 37 37.0 +0.1
L04D  Klamath Falls     66.36  54  P      P      07 37 37.5 -0.5
      baz=303
YBH   Yreka Blue Hor    66.38  55  P      P      07 37 38.9 +0.9
      comp=Z,3.6nm,0.9s,baz=333,slow=9.0,SNR=2.5
      comp=Z,3.6nm,0.9s
J05D  Fort Rock, OR     66.44  53  P      P      07 37 38.5  0.0
      baz=303
FAUS  Fauske            66.47 341 eP      P      07 37 38.5 +0.4
K04D  Chiloquin, OR     66.49  53  P      P      07 37 38.4 -0.4
      baz=303
MOS   Moscow            66.60 324 eP      P      07 37 38.4 -0.6
PUL   Pulkovo           67.13 330 i P     P      07 37 42.3  0.0
PUL                                pmax   pmax
      comp=Z,80nm,0.5s
O02D  Mt. Diablo Mer    67.18  56  IAmb   IAmb   07 37 45.6
      comp=Z,6.2nm,0.8s
O02D  Mt. Diablo Mer    67.18  56  P      P      07 37 42.6 -0.5
      baz=304
VRH   Novokhopyorsk     67.32 318 eP      P      07 37 43.5 -0.2
VRH                                pmax   pmax
      comp=Z,30nm,0.9s
OBN   Obninsk           67.46 324ceP      P      07 37 45.3 +0.8
OBN                               e              07 38 12.6
OBN                               e              07 40 11.2
OBN                                pmax   pmax
      comp=Z,16nm,0.7s
OBN                                MLR    MLR
      comp=Z,80nm,15.0s
FIA1  FINESS Array S    67.56 333  P      P      07 37 45.1 +0.1
FINES FINESS Array B    67.56 333  P      P      07 37 45.4 +0.3
      comp=Z,23nm,0.6s,baz=46,slow=8.2,SNR=113
      comp=Z,23nm,0.6s
FINES FINESS Array B    67.56 333  P      P      07 37 45.2 +0.2
FINES FINESS Array B    67.56 333  P      P      07 37 45.2 +0.2
MOR8  Moi Rana          67.62 340 eP      P      07 37 44.5 -0.9
O03E  Paynes Creek      67.74  56  IAmb   IAmb   07 37 49.7
      comp=Z,13nm,0.9s
O03E  Paynes Creek      67.74  56  P      P      07 37 45.7 -1.0
      baz=304
MOD   Modoc Plateau     67.78  53  IAmb   IAmb   07 37 49.0
      comp=Z,8.2nm,0.8s
LPSR  Galich'ya Gora    67.88 321 eP      P      07 37 46.8 -0.4
LPSR                               pmax   pmax
      comp=Z,20nm,0.9s
J08A  Circle Bar Ran    68.08  51  P      P      07 37 49.4 +0.6
J08A                               IAmb   IAmb   07 37 51.1
      comp=Z,15nm,1.0s
VORR  Voronezh          68.31 320 eP      P      07 37 50.8 +0.9
VORR                               pmax   pmax
      comp=Z,40nm,0.4s
ORV   Oroville          68.35  56  P      P      07 37 50.3 -0.1
ORV                                pmax   pmax
      comp=Z,6.0nm,1.1s
ORV   Oroville          68.35  56  P      P      07 37 50.3 -0.1
WVOR  Wild Horse Val    68.50  52  P      P      07 37 51.7 +0.2
WVOR                               pmax   pmax
      comp=Z,11nm,1.2s
WVOR  Wild Horse Val    68.50  52  P      P      07 37 51.7 +0.2
WVOR                               IAmb   IAmb   07 37 53.6
      comp=Z,11nm,1.2s
PLID  Pearl Lake        68.55  49  P      P      07 37 52.2 +0.4
PLID                               IAmb   IAmb   07 37 53.3
      comp=Z,19nm,1.4s
VSR   Storozhevoye      68.60 319 eP      P      07 37 51.9 +0.1
VSR                                pmax   pmax
      comp=Z,20nm,1.1s
MSO   Missoula          68.70  46  P      P      07 37 53.5 +0.8
MSO                                IAmb   IAmb   07 37 54.1
      comp=Z,9.4nm,0.9s
MSO   Missoula          68.70  46  P      P      07 37 52.5 -0.1
      baz=306,SNR=5.8
BEKR  Beckworth         68.90  55  P      P      07 37 54.6 +0.6
BEKR                               IAmb   IAmb   07 37 57.3
      comp=Z,6.6nm,0.9s
MEF   Metsahovi         69.01 333 eP      P      07 37 54.3 +0.2
RAF   Rauma             69.34 334 eP      P      07 37 56.6 +0.5
MPK   Martis Peak       69.43  56  P      P      07 37 58.5 +1.0
MPK                                IAmb   IAmb   07 38 09.6
      comp=Z,24nm,1.4s
NSS   Namsos            69.56 340 eP      P      07 37 57.5  0.0
PAHR  Pah Rah Range     69.60  55  P      P      07 37 59.6 +1.2
PAHR                               IAmb   IAmb   07 38 00.3
      comp=Z,11nm,1.1s
VCNR  Virginia City     69.67  55  P      P      07 38 00.3 +1.4
PNTR  Pine Nut          69.82  56  IAmb   IAmb   07 38 02.0
      comp=Z,7.0nm,0.9s
CMB   Columbia Colle    69.93  57  P      P      07 38 01.0 +0.7
CMB                                pmax   pmax
      comp=Z,7.0nm,1.1s
CMB   Columbia Colle    69.93  57  P      P      07 38 01.0 +0.7
HRY   Holter Researc    69.94  46  P      P      07 38 01.0 +0.7
YERR  Yerington         70.11  56  P      P      07 38 02.7 +1.1
YERR                               IAmb   IAmb   07 38 03.6
      comp=Z,10nm,1.0s
LRM   Limekiln Ridge    70.13  47  P      P      07 38 02.5 +0.8
FCC   Fort Churchill    70.16  28  P      P      07 38 01.3 +0.1
FCC                                pmax   pmax
      comp=Z,27nm,1.3s
FCC   Fort Churchill    70.16  28  P      P      07 38 01.2 +0.1
GOF   Gofitskoye        70.25 313⇑eP      P      07 38 03.3 +1.2
GOF                                pmax   pmax
      comp=Z,68nm,0.8s
EGMT  Eagleton          70.26  43  P      P      07 38 02.8 +0.6
EGMT  Eagleton          70.26  43  P      P      07 38 01.9 -0.3
      baz=308
MTSE  Matsula           70.29 332 eP      P      07 38 02.6 +0.6
DLMT  Dillon            70.33  47  P      P      07 38 03.1 +0.4
DLMT                               IAmb   IAmb   07 38 04.6
      comp=Z,10.0nm,0.8s
HLID  Hailey            70.36  49  P      P      07 38 03.7 +0.7
HLID                               IAmb   IAmb   07 38 07.2
      comp=Z,6.3nm,0.9s
HLID  Hailey            70.36  49  P      P      07 38 03.7 +0.7
      baz=307,SNR=7.6
BMN   Battle Mountai    70.53  53  P      P      07 38 05.4 +1.3
BMN                                pmax   pmax
      comp=Z,10.0nm,0.9s
BMN   Battle Mountai    70.53  53  P      P      07 38 05.4 +1.3
BMN                                IAmb   IAmb   07 38 06.3
      comp=Z,10nm,0.9s
AAL   Aland             70.55 334 eP      P      07 38 03.5 -0.1
BOZ   Bozeman (W)       70.72  46  P      P      07 38 06.2 +1.0
BOZ   Bozeman (W)       70.72  46  P      P      07 38 06.2 +1.0
BOZ   Bozeman (W)       70.72  46  P      P      07 38 05.9 +0.8
      baz=308,SNR=19
RYN   Ryan              70.78  56  P      P      07 38 06.8 +1.1
KVN   Kaiserville       70.79  55  P      P      07 38 07.2 +1.4
KVN                                pmax   pmax
      comp=Z,12nm,1.0s
KVN   Kaiserville       70.79  55  P      P      07 38 07.2 +1.4
KVN                                IAmb   IAmb   07 38 07.8
      comp=Z,12nm,1.0s
LHV   Little Huntoon    71.01  56  P      P      07 38 08.8 +2.1
LHV                                IAmb   IAmb   07 38 09.5
      comp=Z,16nm,1.1s
NVAR  Mina Array Bea    71.03  56  P      P      07 38 08.3 +1.0
      comp=Z,4.1nm,0.7s,baz=287,slow=6.6,SNR=26
      comp=Z,4.1nm,0.7s
TBLU  Trondheim         71.04 340 eP      P      07 38 06.1 -0.4
KVAR  Kislovodsk Arr    71.12 312  LR     LR     08 12 42.2
      comp=Z,79nm,20.0s,baz=334,slow=39
KIV   Kislovodsk        71.12 312 ⇓P      P      07 38 08.7 +1.2
KIV   Kislovodsk        71.12 312 eP      P      07 38 08.4 +0.9
KIV                                pmax   pmax
      comp=Z,71nm,1.1s
KIV   Kislovodsk        71.12 312  P      P      07 38 08.8 +1.2
KIV   Kislovodsk        71.12 312  P      P      07 38 09.3 +1.8
NV11  Mina Array Sit    71.12  55  P      P      07 38 08.6 +0.9
ZEI   Tsey              71.12 310 eP      P      07 38 07.0 -0.7
ZEI                                pmax   pmax
      comp=Z,20nm,0.9s
KBZ   Khabaz            71.14 311  P      P      07 38 08.9 +1.4
      comp=Z,30nm,0.8s,baz=74,slow=4.0,SNR=93
KBZ                                LR     LR     08 13 57.6
      comp=Z,69nm,18.3s,baz=35,slow=40
      comp=Z,30nm,0.8s
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KBZ	Khabaz	71.14	311	ceP	P	07 38 08.0	+0.5
KBZ				pmax	pmax		
	comp=Z,40nm,0.9s						
MLAC	Mammoth, Mammo	71.16	57	P	P	07 38 07.7	-0.4
	baz=306						
ICESG	Greenland Ices	71.27	2	eP	P	07 38 08.2	0.0
ICESG				IAmb	IAmb	07 38 09.2	
	comp=Z,19nm,0.7s						
QLMT	Earthquake Lak	71.31	47	P	P	07 38 10.0	+1.2
YHL	Hebgen Lake	71.43	47	P	P	07 38 10.8	+1.1
YHL				IAmb	IAmb	07 38 11.7	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	71.49	183	P	P	07 38 09.1	-0.5
	comp=Z,3.8nm,0.7s,baz=344,slow=7.2,SNR=6.4						
	comp=Z,3.8nm,0.7s						
Q09A	Carvers	71.50	55	P	P	07 38 11.7	+1.7
Q09A				IAmb	IAmb	07 38 14.1	
	comp=Z,18nm,0.9s						
ONI	Oni	71.51	310	P	P	07 38 11.8	+2.0
ONI				pmax	pmax		
	comp=Z,26nm,0.9s						
ONI	Oni	71.51	310	P	P	07 38 11.8	+2.0
ELK	Elko	71.56	52	P	P	07 38 11.5	+1.1
	comp=Z,2.3nm,0.7s,baz=277,slow=9.4,SNR=5.4						
	comp=Z,2.3nm,0.7s						
ELK	Elko	71.56	52	P	P	07 38 10.9	+0.5
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ELK	Elko	71.56	52	P	P	07 38 10.9	+0.5
UPP	Uppsala	71.58	335	eP	P	07 38 10.2	+0.4
SLIT	Slitere, Latvi	71.64	332	eP	P	07 38 10.5	+0.3
ISAL	Salakas	71.64	328	eP	P	07 38 11.6	+1.3
YHH	Holmes Hill	71.66	47	P	P	07 38 11.8	+0.8
YHH				IAmb	IAmb	07 38 12.9	
	comp=Z,10nm,1.1s						
YMR	Madison River	71.67	47	P	P	07 38 12.4	+1.5
YMR				IAmb	IAmb	07 38 13.1	
	comp=Z,11nm,0.8s						
GCMT	Greycliff	71.69	45	P	P	07 38 12.4	+1.4
YNR	Norris Junctio	71.80	47	P	P	07 38 13.8	+2.0
YNR				IAmb	IAmb	07 38 14.5	
	comp=Z,11nm,1.1s						
NACGM	Naroch	71.84	328	⇑eP	P	07 38 10.9	-0.6
	baz=46						
TPH	Tonopah	71.93	55	P	P	07 38 14.0	+1.4
TPH				pmax	pmax		
	comp=Z,43nm,0.9s						
TPH	Tonopah	71.93	55	P	P	07 38 14.0	+1.4
LKWY	Lake	72.05	47	P	P	07 38 15.9	+2.6
LKWY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LKWY	Lake	72.05	47	P	P	07 38 15.9	+2.6
LKWY				IAmb	IAmb	07 38 28.7	
	comp=Z,10nm,0.9s						
H17A	Grant Village	72.05	47	P	P	07 38 15.9	+2.5
	baz=309,SNR=18						
VES	Vestal, Richgr	72.06	58	P	P	07 38 13.3	+0.2
	baz=307						
PKM	Mcpherson Peak	72.14	59	P	P	07 38 14.1	+0.1
	baz=306						
FLWY	Flagg Ranch	72.18	47	IAmb	IAmb	07 38 28.2	
	comp=Z,7.9nm,0.8s						
AKH	Akhalkalaki	72.20	309	⇑P	P	07 38 16.4	+2.2
GNI	Garni	72.22	308	LR	LR	08 12 04.2	
	comp=Z,40nm,21.8s,baz=96,slow=38						
GNI	Garni	72.22	308	ceP	P	07 38 15.7	+1.4
GNI				pmax	pmax		
	comp=Z,18nm,1.3s						
CHVG	Ch'k'valeri	72.23	311	⇑P	P	07 38 15.9	+1.8
RLMT	Red Lodge	72.33	46	IAmb	IAmb	07 38 17.0	
	comp=Z,8.2nm,0.9s						
RLMT	Red Lodge	72.33	46	P	P	07 38 15.9	+1.0
	baz=309,SNR=6.4						
CWC	Cottonwood Cre	72.35	57	P	P	07 38 15.0	-0.2
	baz=307						
DOMB	Dombas	72.36	340	eP	P	07 38 14.6	+0.1
MOOW	Moose Ponds	72.36	47	P	P	07 38 16.6	+1.4
MOOW				IAmb	IAmb	07 38 17.7	
	comp=Z,9.9nm,0.8s						
NC405	NORSAR Array S	72.39	338	P	P	07 38 15.1	+0.4
NC303	NORSAR Array S	72.40	338	P	P	07 38 15.1	+0.3
NC303				IAmb	IAmb	07 38 16.1	
	comp=Z,15nm,0.9s						
HVU	Hansel Valley	72.40	50	P	P	07 38 16.2	+0.8
HVU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HVU	Hansel Valley	72.40	50	P	P	07 38 16.2	+0.8
HVU				IAmb	IAmb	07 38 17.6	
	comp=Z,9.8nm,1.0s						
TPAW	Teton Pass	72.40	48	IAmb	IAmb	07 38 18.1	
	comp=Z,18nm,1.2s						
GRAC	Grapevine Rang	72.48	56	IAmb	IAmb	07 38 27.9	
	comp=Z,11nm,0.7s						
GRAC	Grapevine Rang	72.48	56	P	P	07 38 16.3	+0.5
	baz=307,SNR=6.3						
SNOW	Snow King Moun	72.53	48	IAmb	IAmb	07 38 18.7	
	comp=Z,9.8nm,0.8s						
REDW	Red Top Meadow	72.54	48	IAmb	IAmb	07 38 18.6	
	comp=Z,9.6nm,0.9s						
PABE	Paberze	72.55	329	P	P	07 38 16.3	+0.6
PABE	Paberze	72.55	329	eP	P	07 38 16.6	+0.9
NB201	NORSAR Array S	72.56	338	P	P	07 38 16.2	+0.4
ISA	Isabella, Lake	72.56	58	P	P	07 38 15.9	-0.4
	baz=307						
NB2	NORSAR Subarra	72.59	338	P	P	07 38 16.1	+0.1
	comp=Z,9.7nm,0.6s,baz=35,slow=6.2						
NB2	NORSAR Subarra	72.59	338	P	P	07 38 16.1	+0.1
	baz=35,slow=6.2						
NOA	NORSAR Array B	72.59	338	P	P	07 38 16.2	+0.1
	comp=Z,14nm,0.8s,baz=36,slow=6.0,SNR=41						
	comp=Z,14nm,0.8s						
ARVC	Arvin	72.65	59	P	P	07 38 16.9	+0.1
	baz=307						
NC602	NORSAR Array S	72.75	338	eP	P	07 38 17.0	+0.2
AHID	Auburn Hatcher	72.77	48	IAmb	IAmb	07 38 19.4	
	comp=Z,8.0nm,0.8s						
R11A	Troy Canyon, C	72.79	54	P	P	07 38 17.8	+0.1
	baz=308,SNR=14						
DGMT	Dagmar	72.84	41	IAmb	IAmb	07 38 18.8	
	comp=Z,16nm,0.8s						
DGMT	Dagmar	72.84	41	P	P	07 38 18.1	+0.4
	baz=311,SNR=5.5						
VIKU	Vikbolandet	72.93	334	eP	P	07 38 18.1	+0.2
LAO	LASA Array	72.96	43	P	P	07 38 18.8	+0.4
	baz=310,SNR=5.2						
MPMC	Manual Prospec	72.96	57	P	P	07 38 19.2	+0.3
	baz=307,SNR=7.0						
SOC	Sochi	73.04	313	eP	P	07 38 17.6	-1.3
SOC				e		07 40 58.0	
SOC				ePPP	PPP	07 42 44.5	
SOC				eS	S	07 47 43.5	-2.0
SOC				e		07 48 20.8	
SOC				eSS	SS	07 52 23.6	-1.9
SOC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,97nm,19.0s						
S11A	Rachel	73.12	55	IAmb	IAmb	07 38 31.8	
	comp=Z,12nm,0.8s						
FURC	Furnace Creek,	73.12	57	P	P	07 38 20.3	+0.9
	baz=307,SNR=12						
BATM	Batumi	73.14	310	⇑P	P	07 38 20.9	+1.3
LRMC	Laurel Mtn Rad	73.19	58	P	P	07 38 20.1	0.0
	baz=307						
TPNV	Topopah Spring	73.22	56	IAmb	IAmb	07 38 30.8	
	comp=Z,10nm,1.1s						
TPNV	Topopah Spring	73.22	56	P	P	07 38 20.5	+0.2
	baz=308,SNR=8.7						
HWUT	Hardware Ranch	73.22	50	P	P	07 38 21.6	+1.3
HWUT				IAmb	IAmb	07 38 22.6	
	comp=Z,10nm,1.1s						
EDW2	Edwards Air Fo	73.34	58	P	P	07 38 21.6	+0.6
	baz=307						
DUG	Dugway, Tooele	73.36	51	P	P	07 38 21.7	+0.7
DUG				pmax	pmax		
	comp=Z,18nm,1.4s						
DUG	Dugway, Tooele	73.36	51	P	P	07 38 21.7	+0.7
DUG				IAmb	IAmb	07 38 23.4	
	comp=Z,18nm,1.4s						
DUG	Dugway, Tooele	73.36	51	P	P	07 38 21.4	+0.3
	baz=308,SNR=8.5						
GWY	Greenwater Val	73.42	57	IAmb	IAmb	07 38 25.3	
	comp=Z,15nm,1.3s						
QSM	Queen of Sheba	73.42	57	IAmb	IAmb	07 38 23.2	
	comp=Z,19nm,1.2s						
ANN	Anapa	73.53	315	eP	P	07 38 22.0	+0.3
ANN				pmax	pmax		
	comp=Z,26nm,0.8s						
DY2G	Dye2	73.59	5	eP	P	07 38 21.2	-0.9
OSL	Oslo	73.64	338	eP	P	07 38 22.9	+0.8
BW06	Boulder Array	73.65	48	IAmb	IAmb	07 38 34.1	
	comp=Z,7.0nm,0.7s						
BW06	Boulder Array	73.65	48	P	P	07 38 22.7	-0.2
	baz=310,SNR=9.8						
PD31	Pinedale Array	73.65	48	P	P	07 38 23.1	+0.3
PD31				IAmb	IAmb	07 38 34.1	
	comp=Z,6.1nm,0.7s						
PDAR	Pinedale Array	73.65	48	P	P	07 38 23.4	+0.6
	comp=Z,4.9nm,0.6s,baz=272,slow=1.7,SNR=44						
	comp=Z,4.9nm,0.6s						
PDAR	Pinedale Array	73.65	48	P	P	07 38 23.1	+0.3
SKAR	Skarslia	73.69	339	eP	P	07 38 23.4	+0.9
AKASG	Malin Array Be	73.71	323	P	P	07 38 22.9	+0.2
	comp=Z,6.4nm,0.5s,baz=44,slow=6.4,SNR=37						
	comp=Z,6.4nm,0.5s						
AKASG	Malin Array Be	73.71	323	ceP	P	07 38 22.8	+0.1
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKASG	Malin Array Be	73.71	323	P	P	07 38 23.1	+0.4
AKASG				IAmb	IAmb	07 38 24.3	
	comp=Z,14nm,1.4s						
AKBB	Malin Array Si	73.71	323	ceP	P	07 38 21.8	-0.9
AKBB	Malin Array Si	73.71	323	P	P	07 38 22.9	+0.2
FOO	Floro	73.76	341	eP	P	07 38 23.3	+0.6
SHOC	Shoshone, Teco	73.84	57	P	P	07 38 24.0	+0.2
	baz=308						
GSC	Goldstone, Bar	73.86	57	P	P	07 38 24.3	+0.2
	baz=308						
SUW	Suwalki	73.95	329	eP	P	07 38 24.8	+0.7
NLU	North Lily Min	73.95	51	IAmb	IAmb	07 38 38.2	
	comp=Z,9.2nm,1.1s						
BFSC	Mount Baldy Ra	73.95	59	P	P	07 38 24.8	+0.2
	baz=308						
SHPR	Sheep Range	74.18	56	P	P	07 38 27.2	+1.2
SHPR				IAmb	IAmb	07 38 28.3	
	comp=Z,10nm,1.1s						
TUQ	Turquoise Moun	74.35	57	P	P	07 38 27.3	+0.4
	baz=308,SNR=6.6						
BBRC	Big Bear Solar	74.42	58	P	P	07 38 27.4	0.0
	baz=308						
HEC	Hector,Ludlow	74.46	58	P	P	07 38 27.7	+0.3
	baz=308,SNR=5.2						
MURC	Murrieta	74.65	59	P	P	07 38 28.5	0.0
	baz=308						
BER	Bergen	74.73	341	eP	P	07 38 29.4	+1.0
MSU	Marysvale	74.79	52	P	P	07 38 30.2	+0.6
MSU	Marysvale	74.79	52	P	P	07 38 30.2	+0.6
SZCU	Shurtz Canyon	74.81	54	P	P	07 38 30.0	+0.4
TMUT	Trail Mountain	74.89	51	IAmb	IAmb	07 38 32.9	
	comp=Z,14nm,1.5s						
GMRC	Granite Mounta	74.92	57	P	P	07 38 30.1	-0.2
	baz=308						
P17A	Butcher Ranch,	75.05	51	IAmb	IAmb	07 38 33.3	
	comp=Z,22nm,1.2s						
LCMT	Little Creek M	75.08	54	P	P	07 38 31.7	+0.6
LCMT				IAmb	IAmb	07 38 33.5	
	comp=Z,7.6nm,0.9s						
PFO	Pinyon Flats O	75.12	59	P	P	07 38 31.9	+0.5
	comp=Z,2.2nm,0.8s,baz=288,slow=5.2,SNR=4.3						
	comp=Z,2.2nm,0.8s						
PFO	Pinyon Flats O	75.12	59	P	P	07 38 31.4	0.0
	baz=308						
TPFO	Pinon Flats	75.13	59	P	P	07 38 31.7	+0.2
	baz=308						
109C	Camp Elliot, M	75.14	60	P	P	07 38 31.3	-0.1
	baz=308						
Q16A	Castle Valley	75.15	52	P	P	07 38 32.0	+0.4
Q16A				IAmb	IAmb	07 38 34.6	
	comp=Z,16nm,1.4s						
BELC	Belle Mtn. Jos	75.19	58	P	P	07 38 31.5	-0.3
	baz=308						
P18A	Preston Nutter	75.25	51	IAmb	IAmb	07 38 44.5	
	comp=Z,9.6nm,1.2s						
SRU	San Rafael Swe	75.41	51	IAmb	IAmb	07 38 35.6	
	comp=Z,11nm,0.8s						
K22A	Casper	75.43	46	IAmb	IAmb	07 38 34.6	
	comp=Z,17nm,1.1s						
K22A	Casper	75.43	46	P	P	07 38 32.6	-0.6
	baz=311,SNR=5.7						
DEL	Delary	75.47	334	eP	P	07 38 32.4	-0.5
MDND	Maddock	75.52	39	P	P	07 38 33.1	-0.2
	baz=314,SNR=6.8						
ULM	Lac du Bonnet	75.55	35	P	P	07 38 33.1	-0.2
	comp=Z,7.3nm,0.6s,baz=312,slow=6.6,SNR=9.9						
	comp=Z,7.3nm,0.6s						
ULM	Lac du Bonnet	75.55	35	i P	P	07 38 33.5	+0.1
ULM	Lac du Bonnet	75.55	35	P	P	07 38 32.9	-0.5
ULM				IAmb	IAmb	07 38 34.1	
	comp=Z,11nm,0.9s						
MONP2	Monument Peak	75.59	59	P	P	07 38 34.1	-0.1
	baz=308						
IRM	Iron Mountain	75.64	57	P	P	07 38 34.5	+0.2
	baz=309						
RWWY	Rawlins	75.68	47	P	P	07 38 33.1	-1.5
RWWY				IAmb	IAmb	07 38 35.1	
	comp=Z,11nm,0.8s						
BC3	Big Chuckawall	75.76	58	P	P	07 38 34.8	-0.2
	baz=309						
RSSD	Black Hills	75.81	44	P	P	07 38 33.9	-1.4
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RSSD	Black Hills	75.81	44	P	P	07 38 33.9	-1.4
RSSD				IAmb	IAmb	07 38 46.8	
	comp=Z,9.8nm,0.8s						
RSSD	Black Hills	75.81	44	P	P	07 38 34.8	-0.5
	baz=312						
SORM	Soroca	75.91	322	⇓P	P	07 38 35.7	+0.2
IKP	In-Ko-Pah, Jac	75.95	59	P	P	07 38 35.8	-0.3
	baz=309						
SWSC	Sam W. Stewart	75.97	59	P	P	07 38 36.3	+0.2
	baz=309						
U15A	North Rim	76.04	54	P	P	07 38 36.4	-0.4
U15A				IAmb	IAmb	07 38 39.3	
	comp=Z,8.5nm,1.0s						
O20A	White River Ci	76.10	49	P	P	07 38 37.0	0.0
	baz=311						
PDMCI	Parker Dam,Lak	76.20	57	P	P	07 38 37.9	+0.5
	baz=309						
BSD	Bornholm Skovb	76.20	333	eP	P	07 38 37.4	+0.4
GLA	Glamis	76.54	58	P	P	07 38 39.8	+0.4
	baz=309						
LVV	L'vov	76.67	325	eP	P	07 38 41.0	+1.2
PV10	Paradox Valley	76.77	51	IAmb	IAmb	07 38 54.4	
	comp=Z,16nm,0.9s						
N23A	Red Feather La	76.92	47	IAmb	IAmb	07 38 43.9	
	comp=Z,10nm,0.9s						
N23A	Red Feather La	76.92	47	P	P	07 38 42.1	+0.3
	baz=312						
PV11	David Mesa, Pa	76.92	51	P	P	07 38 41.1	-0.6
PV11				IAmb	IAmb	07 38 44.4	
	comp=Z,11nm,0.7s						
AGMN	Agassiz Nation	76.97	37	IAmb	IAmb	07 38 42.0	
	comp=Z,7.5nm,0.8s						
AGMN	Agassiz Nation	76.97	37	P	P	07 38 41.0	-0.5
	baz=316,SNR=8.4						
PV07	Paradox Valley	76.97	51	IAmb	IAmb	07 38 44.6	
	comp=Z,9.9nm,1.2s						
PV13	Radium Mtn., P	77.05	51	IAmb	IAmb	07 38 45.2	
	comp=Z,13nm,1.0s						
WUAZ	Wupatki	77.19	54	P	P	07 38 44.4	+1.2
WUAZ				IAmb	IAmb	07 38 46.1	
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	77.19	54	P	P	07 38 43.5	+0.3
	baz=310						
KWP	Kalwaria Pacla	77.39	326	eP	P	07 38 45.4	+1.6
SMCO	Snowmass	77.47	49	P	P	07 38 44.6	-0.4
VLDR	Vladesti	77.67	320	⇓P	P	07 38 46.3	+0.8
BUR08	Bucovina Ar. S	77.74	323	P	P	07 38 46.0	0.0
BUR08				IAmb	IAmb	07 38 47.8	
	comp=Z,13nm,0.7s						
BURAR	Bucovina Array	77.76	323	⇓P	P	07 38 46.9	+0.8
BURAR	Bucovina Array	77.76	323	P	P	07 38 46.5	+0.4
TLCR		77.77	320	⇓P	P	07 38 47.2	+1.2
ISCO	Idaho Springs	77.84	48	P	P	07 38 46.2	-0.7
	baz=312						
MVCO	Mesa Verde	77.86	52	P	P	07 38 46.8	-0.2
	baz=311						
TESR	Tescani	77.88	322	⇓P	P	07 38 47.4	+0.7
B35A	Bob, Littlefor	77.89	36	IAmb	IAmb	07 38 47.4	
	comp=Z,9.9nm,0.8s						
KOLS	Kolonicke sedl	78.10	325	eP	P	07 38 48.9	+1.1
KOLS				pmax	pmax		
	comp=Z,13nm,1.0s						
KOLS	Kolonicke sedl	78.10	325	eP	P	07 38 48.9	+1.1
PANC	Panciu	78.11	321	⇑P	P	07 38 49.7	+1.9
CFR	Carcaliu	78.12	320	⇑P	P	07 38 48.9	+1.0
OJC	Ojcow	78.18	328	eP	P	07 38 49.4	+1.2
TPGR	Topolog	78.20	319	⇑P	P	07 38 49.8	+1.3
SUSD	Miller	78.23	41	P	P	07 38 48.8	+0.1
	baz=315						
VRI	Vrincioaia	78.31	321	⇓P	P	07 38 50.8	+1.7
UZH	Uzhgorod	78.32	325	eP	P	07 38 45.4	-3.6
UZH				e		07 38 49.2	
PLOR	Plostina	78.36	321	⇑P	P	07 38 50.9	+1.5
CRVS	Cervenica-Dubn	78.48	326	eP	P	07 38 51.2	+1.3
CRVS				pmax	pmax		
	comp=Z,21nm,1.5s						
CRVS	Cervenica-Dubn	78.48	326	eP	P	07 38 51.2	+1.3
TIRR	Tirgusor	78.49	319	⇑P	P	07 38 50.8	+0.7
S22A	4UR Ranch, Cre	78.50	50	P	P	07 38 50.5	-0.1
	baz=312						
ARCR	ARCALIA	78.54	323	⇓P	P	07 38 52.4	+2.1
F33A	5 Mile Ranch,	78.54	39	IAmb	IAmb	07 38 51.5	
	comp=Z,12nm,1.0s						
214A	Organ Pipe Nat	78.55	58	P	P	07 38 50.6	0.0
	baz=310						
BISRR	Bisoca	78.55	321	⇓P	P	07 38 52.7	+2.2
NIE	Niedzica	78.58	327	eP	P	07 38 52.5	+2.0
TLBR	Topalu	78.61	319	⇑P	P	07 38 52.2	+1.5
DOPR	Dopca	78.88	322	⇑P	P	07 38 54.8	+2.5
ISR	Istrita	78.94	321	⇑P	P	07 38 54.4	+1.8
MLR	Muntele Rosu	78.96	321	⇓P	P	07 38 53.8	+1.0
MLR	Muntele Rosu	78.96	321	IAmb	IAmb	07 38 55.5	
	comp=Z,20nm,1.5s						
BR131	Keskin Array S	79.00	313	IAmb	IAmb	07 38 55.7	
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	79.01	313	P	P	07 38 53.9	+0.7
	comp=Z,4.6nm,0.6s,baz=90,slow=3.7,SNR=21						
	comp=Z,4.6nm,0.6s						
BRTR	Keskin Array B	79.01	313	P	P	07 38 52.6	-0.6
BRTR	Keskin Array B	79.01	313	P	P	07 38 52.6	-0.6
ICOR	Ion Corvin	79.04	319	⇑P	P	07 38 54.8	+1.7
OGNE	Ogallala	79.06	45	P	P	07 38 52.7	-0.7
	baz=314						
KSP	Ksiaz	79.09	330	eP	P	07 38 54.1	+0.9
LANS	Liptovska Anna	79.14	327	eP	P	07 38 55.5	+1.9
LANS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LANS	Liptovska Anna	79.14	327	eP	P	07 38 55.5	+1.9
CJR	Cluj-Napoca	79.17	323	⇓P	P	07 38 55.9	+2.1
EYMN	Ely	79.19	35	P	P	07 38 53.6	-0.3
EYMN				IAmb	IAmb	07 38 54.7	
	comp=Z,20nm,1.3s						
EYMN	Ely	79.19	35	P	P	07 38 53.3	-0.6
	baz=319,SNR=5.9						
SDCO	Great Sand Dun	79.28	50	P	P	07 38 54.5	-0.4
	baz=313						
ANTO	Ankara	79.38	314	P	P	07 38 54.8	-0.3
ANTO				pmax	pmax		
	comp=Z,31nm,0.8s						
ANTO	Ankara	79.38	314	P	P	07 38 54.8	-0.3
CHVC	Chvalec	79.39	330	eP	P	07 38 56.3	+1.4
VOIR		79.43	322	⇓P	P	07 38 56.5	+1.2
MORC	Moravsky Berou	79.44	328	⇑P	P	07 38 56.6	+1.4
MORC	Moravsky Berou	79.44	328	P	P	07 38 55.7	+0.5
MORC				pmax	pmax		
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	79.44	328	P	P	07 38 55.7	+0.5
MORC				IAmb	IAmb	07 38 57.4	
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	79.44	328	eP	P	07 38 56.2	+1.0
UPC	Upice	79.47	330	eP	P	07 38 56.6	+1.3
DPC	Dobruska-Polom	79.47	329	eP	P	07 38 56.8	+1.4
DPC	Dobruska-Polom	79.47	329	eP	P	07 38 56.8	+1.4
KRLC	Kraliky	79.51	329	eP	P	07 38 56.9	+1.3
KRLC	Kraliky	79.51	329	eP	P	07 38 56.9	+1.3
K31A	O'Neill	79.63	42	P	P	07 38 56.4	0.0
TUC	Tucson	79.63	57	P	P	07 38 56.5	-0.1
	baz=311						
ARR	Arges	79.68	322	⇓P	P	07 38 58.7	+2.1
PSZ	Piszkesteto	79.90	326	⇑P	P	07 38 59.7	+1.9
PSZ	Piszkesteto	79.90	326	IAmb	IAmb	07 39 00.1	
	comp=Z,17nm,1.0s						
PSZ	Piszkesteto	79.90	326	P	P	07 38 58.6	+0.8
VYHS	Vyhne	79.91	327	eP	P	07 38 59.0	+1.2
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	79.91	327	eP	P	07 38 59.0	+1.2
ECSD	EROS Data Cent	79.92	40	IAmb	IAmb	07 38 58.8	
	comp=Z,10nm,0.9s						
ECSD	EROS Data Cent	79.92	40	P	P	07 38 57.9	0.0
	baz=317,SNR=12						
CLL	Collm	79.96	332	⇓iP	P	07 38 58.3	+0.4
CLL				i		07 39 08.2	
CLL				pmax	pmax		
	comp=Z,17nm,0.7s						
CLL	Collm	79.96	332	⇓iP	P	07 38 58.3	+0.4
	comp=Z,17nm,0.7s						
CLL				i pP	pwP	07 39 08.2	-0.3
CLL				LmV		08 03 00.0	
	comp=Z,100nm,19.4s						
BRG	Berggiesshubel	79.96	331	eP	P	07 38 58.5	+0.6
BRG				Amp		07 39 00.3	
	comp=Z,5.9nm,0.8s						
BRG	Berggiesshubel	79.96	331	eP	P	07 38 58.5	+0.6
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PVCC	Panska Ves	80.00	330	eP	P	07 38 56.6	-1.6
JAVC	Velka Javorina	80.11	328	eP	P	07 39 01.1	+2.2
DEV	Deva	80.11	323	⇓P	P	07 38 59.7	+0.9
E38A	The Farm, Brul	80.18	36	IAmb	IAmb	07 39 09.8	
	comp=Z,13nm,1.0s						
VRAC	Vranov	80.19	329	⇓P	P	07 39 00.4	+1.2
VRAC	Vranov	80.19	329	eP	P	07 39 00.8	+1.5
COPA	Copaceanca	80.31	321	⇓P	P	07 39 00.5	+0.5
T25A	Trinidad	80.33	49	P	P	07 39 00.7	+0.2
	baz=313						
SIRR	Siria	80.39	324	⇑P	P	07 39 01.6	+1.2
PRU	Pruhonice	80.45	330	eP	P	07 39 01.9	+1.3
PRU	Pruhonice	80.45	330	eP	P	07 39 01.9	+1.3
KRUC	Moravsky	80.47	329	eP	P	07 39 02.0	+1.3
SMOL	Smolenice	80.48	328	eP	P	07 39 02.6	+1.8
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SMOL	Smolenice	80.48	328	eP	P	07 39 02.6	+1.8
GZR	Gura Zlata	80.53	323	⇓P	P	07 39 02.1	+0.9
ANMO	Albuquerque	80.60	52	P	P	07 39 03.3	+1.3
	comp=Z,4.1nm,1.0s,baz=311,slow=11,SNR=7.2						
	comp=Z,4.1nm,1.0s						
ANMO	Albuquerque	80.60	52	i P	P	07 39 02.9	+1.0
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	80.60	52	P	P	07 39 02.3	+0.3
	baz=312						
MODS	Modra-Piesok	80.65	328	eP	P	07 39 03.3	+1.5
MODS				pmax	pmax		
	comp=Z,22nm,0.9s						
MODS	Modra-Piesok	80.65	328	eP	P	07 39 03.3	+1.5
SPMN	Marine on St.	80.65	37	P	P	07 39 02.0	+0.2
SPMN	Marine on St.	80.65	37	P	P	07 39 01.5	-0.3
	baz=319						
BGNE	Belgrade	80.81	43	P	P	07 39 03.0	+0.2
BGNE	Belgrade	80.81	43	P	P	07 39 02.3	-0.5
	baz=316						
BZS	Buzias	80.90	324	⇓P	P	07 39 03.7	+0.6
D41A	Chassel	81.14	34	IAmb	IAmb	07 39 06.4	
	comp=Z,14nm,1.1s						
319A	Douglas	81.21	56	IAmb	IAmb	07 39 07.1	
	comp=Z,8.2nm,0.9s						
121A	Cookes Peak, D	81.39	55	P	P	07 39 05.9	-0.3
	baz=312						
CKRC	Cesky Krumlov	81.48	330	eP	P	07 39 07.5	+1.3
MPLH	Magyarpolny	81.49	327	P	P	07 39 06.8	+0.5
KHC	Kasperske Hory	81.51	330	i P	P	07 39 04.9	-1.5
KHC				pmax	pmax		
	comp=Z,41nm,0.9s						
KHC	Kasperske Hory	81.51	330	IAmb	IAmb	07 39 08.3	
	comp=Z,16nm,0.8s						
KHC	Kasperske Hory	81.51	330	eP	P	07 39 07.6	+1.2
KHC				pP	pwP	07 39 17.5	+0.5
CONA	Conrad Observa	81.58	328	eP	P	07 39 08.0	+1.2
	comp=Z,9.1nm,1.2s						
RONA	Rosalia, Austr	81.59	328	i P	P	07 39 08.4	+1.6
	comp=Z,13nm,0.7s,SNR=5.8						
GERES	GERESS Array B	81.70	330	P	P	07 39 07.8	+0.4
	comp=Z,4.1nm,0.6s,baz=46,slow=5.8,SNR=18						

	comp=Z,4.1nm,0.6s						
GERES	GERESS Array B	81.70	330	P	P	07 39 07.7	+0.3
GERES	GERESS Array B	81.70	330	P	P	07 39 07.7	+0.3
MORH	Mrgy, Hungar	81.77	326	P	P	07 39 07.5	-0.2
SCHQ	Schefferville	81.77	18	P	P	07 39 07.9	+0.3
	comp=Z,6.0nm,0.8s,baz=7.3,slow=5.8,SNR=15						
	comp=Z,6.0nm,0.8s						
CBKS	Cedar Bluff	81.81	46	P	P	07 39 07.7	-0.5
	baz=316						
FRGS	Fruska Gora	82.07	324	⇑P	P	07 39 09.5	+0.1
KOVH	Kovagotottos	82.10	326	P	P	07 39 09.7	+0.2
BOVS	Bovan	82.37	322	⇓P	P	07 39 10.6	-0.3
VTS	Vitosha	82.40	321	⇓P	P	07 39 12.4	+1.1
VTS	Vitosha	82.40	321	P	P	07 39 11.7	+0.4
VTS				pmax	pmax		
	comp=Z,19nm,0.9s						
VTS	Vitosha	82.40	321	P	P	07 39 11.7	+0.4
CSS	Mathiatis	82.46	310	P	P	07 39 11.8	+0.2
CSS				IAmb	IAmb	07 39 13.1	
	comp=Z,14nm,0.9s						
N35A	Tabor	82.51	42	P	P	07 39 11.7	0.0
BIOA	Bad Ischl, Aus	82.66	329	eP	P	07 39 13.5	+1.1
	comp=Z,11nm,0.9s						
DIVS	Divibare	82.81	324	P	P	07 39 13.5	+0.2
DIVS				IAmb	IAmb	07 39 16.2	
	comp=Z,5.7nm,0.8s						
SOKA	Soboth	82.92	328	eP	P	07 39 14.7	+0.8
	comp=Z,14nm,0.8s						
BTNL	Ternell	82.93	335	dP	P	07 39 14.1	+0.4
	comp=Z,9.0nm,0.9s						
SCIA	State Center	82.95	40	IAmb	IAmb	07 39 15.4	
	comp=Z,13nm,0.8s						
SCIA	State Center	82.95	40	P	P	07 39 12.9	-1.0
	baz=319,SNR=5.3						
MEM	Membach	82.95	335	dP	P	07 39 14.5	+0.7
OBKA	Obir	83.25	328	eP	P	07 39 15.6	0.0
	comp=Z,14nm,1.4s						
KBA	Koelnbreinsper	83.28	329	eP	P	07 39 17.4	+1.6
	comp=Z,9.9nm,0.8s						
KSU1	Kansas State U	83.29	44	IAmb	IAmb	07 39 16.2	
	comp=Z,7.9nm,0.7s						
KSU1	Kansas State U	83.29	44	P	P	07 39 15.0	-0.8
	baz=317						
BCLA	Clavier	83.34	335	dP	P	07 39 16.3	+0.5
BGES	Gesves	83.44	335	dP	P	07 39 16.8	+0.4
BGES				dpP	pwP	07 39 27.2	+0.2
MNTX	Cornudas Mount	83.46	54	P	P	07 39 16.4	-0.4
MNTX	Cornudas Mount	83.46	54	P	P	07 39 16.9	+0.1
	baz=313,SNR=8.7						
E46A	Sault Ste Mari	83.47	32	P	P	07 39 16.7	+0.1
E46A				IAmb	IAmb	07 39 27.3	
	comp=Z,11nm,1.1s						
MSTX	Muleshoe	83.48	51	P	P	07 39 17.0	0.0
MSTX				IAmb	IAmb	07 39 18.5	
	comp=Z,9.8nm,1.1s						
MSTX	Muleshoe	83.48	51	P	P	07 39 16.4	-0.6
	baz=314						
AMTX	Amarillo	83.49	49	P	P	07 39 16.8	-0.2
AMTX				IAmb	IAmb	07 39 18.9	
	comp=Z,11nm,1.1s						
AMTX	Amarillo	83.49	49	P	P	07 39 17.3	+0.3
	baz=315						
PPT2	Papeete2	83.50	119	eLR	LR	08 05 17.6	
	comp=Z,161nm,26.0s						
MYKA	Terra Mystica	83.52	329	eP	P	07 39 17.2	+0.3
	comp=Z,12nm,1.2s						
SNF	Seneffe	83.59	336	dP	P	07 39 16.6	-0.5
	comp=Z,16nm,0.7s						
RCHB	Rochefort	83.60	335	dP	P	07 39 17.2	+0.1
	comp=Z,8.5nm,1.1s						
RCHB				dpP	pwP	07 39 27.4	-0.4
JFWS	Jewell Farm	83.60	37	P	P	07 39 16.5	-0.8
	baz=321						
STIP	Stip	83.61	321	i P	P	07 39 17.5	+0.1
BMRD	Maredsous	83.62	336	dP	P	07 39 17.8	+0.6
	comp=Z,12nm,0.9s						
BMRD				dpP	pwP	07 39 28.1	+0.3
VAY	Valandovo	83.70	320	i P	P	07 39 18.6	+0.8
WATA	Walderalm	83.75	330	eP	P	07 39 18.9	+0.7
	comp=Z,14nm,1.1s						
N38A	Joes South For	83.78	40	P	P	07 39 18.3	0.0
WTTA	Wattenberg	83.79	330	eP	P	07 39 18.9	+0.5
	comp=Z,9.9nm,0.7s						
ABTA	Abfaltersbach	83.88	329	eP	P	07 39 19.0	+0.2
	comp=Z,10nm,1.0s						
MOTA	Moosalm	83.92	330	i P	P	07 39 19.7	+0.6
	comp=Z,20nm,1.0s,SNR=5.9						
RETA	Reutte	83.94	331	i P	P	07 39 20.1	+1.0
	comp=Z,20nm,1.1s,SNR=7.2						
SQTA	Sankt Quirin	83.99	330	eP	P	07 39 20.4	+1.0
	comp=Z,14nm,0.9s						
BFO	Black Forest	84.11	333	P	P	07 39 20.2	+0.3
BFO				pmax	pmax		
	comp=Z,25nm,1.4s						
BFO	Black Forest	84.11	333	P	P	07 39 20.2	+0.3
TAOE	Nuku Hiva Isla	84.21	107	eLR	LR	08 05 28.8	
	comp=Z,132nm,24.1s						
FETA	Feichten	84.34	331	i P	P	07 39 22.3	+1.1
	comp=Z,14nm,0.9s,SNR=5.1						
DAVA	Damuels	84.43	331	eP	P	07 39 21.7	0.0
	comp=Z,21nm,1.1s,SNR=5.0						
P38A	Dawn	84.50	41	P	P	07 39 21.7	-0.2
GLMI	Grayling	84.59	33	P	P	07 39 22.1	-0.2
	baz=324						
VLDQ	Val d'Or	84.61	27	IAmb	IAmb	07 39 22.6	
	comp=Z,9.5nm,1.1s						
ECH	Echery	84.62	333	IAmb	IAmb	07 39 23.8	
	comp=Z,12nm,1.0s						
LIT	Litokhoron	84.67	319	P	P	07 39 22.4	-0.4
LIT				pmax	pmax		
	comp=Z,12nm,0.8s						
LIT	Litokhoron	84.67	319	P	P	07 39 22.4	-0.4
FNA	Florina	84.70	321	IAmb	IAmb	07 39 24.0	
	comp=Z,9.3nm,0.8s						
CTI	Castel Tesino	84.79	329	P	P	07 39 22.8	-0.7
CTI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CTI	Castel Tesino	84.79	329	P	P	07 39 22.8	-0.7
CTI				IAmb	IAmb	07 39 23.7	
	comp=Z,8.8nm,0.6s						
N41A	Harden Midland	85.01	39	IAmb	IAmb	07 39 35.5	
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	85.26	48	P	P	07 39 25.8	-0.1
	baz=316,SNR=5.2						
P40A	Paris	85.33	41	P	P	07 39 26.2	+0.1
HDIL	Hopedale	85.88	38	P	P	07 39 28.2	-0.6
	baz=321						
S39A	Bolivar	86.07	43	IAmb	IAmb	07 39 30.2	
	comp=Z,7.1nm,0.8s						
TUL1	Leonard	86.08	45	P	P	07 39 29.7	-0.2
	baz=318						
TX31	Lajitas Ar. Si	86.15	55	P	P	07 39 30.9	+0.3
TX32	Lajitas Array	86.15	55	P	P	07 39 31.4	+0.8
TX32				IAmb	IAmb	07 39 32.0	
	comp=Z,6.0nm,0.9s						
TXAR	Lajitas Array	86.15	55	P	P	07 39 31.1	+0.5
	comp=Z,4.0nm,0.8s,baz=286,slow=3.4,SNR=21						
	comp=Z,4.0nm,0.8s						
TXAR	Lajitas Array	86.15	55	P	P	07 39 30.6	+0.1
R40A	Maddies Statio	86.16	42	P	P	07 39 30.2	-0.1
SENIN	Lac Senin/Sane	86.16	332	P	P	07 39 31.2	+0.8
SENIN				IAmb	IAmb	07 39 31.8	
	comp=Z,8.4nm,0.7s						
ABTX	Abilene, Hawle	86.28	50	P	P	07 39 31.4	+0.4
ABTX				IAmb	IAmb	07 39 32.7	
	comp=Z,9.6nm,0.9s						
ABTX	Abilene, Hawle	86.28	50	P	P	07 39 30.7	-0.3
	baz=316						
HHAR	Hobbs	86.80	44	P	P	07 39 33.4	-0.1
HHAR				IAmb	IAmb	07 39 34.2	
	comp=Z,5.0nm,1.0s						
CCM	Cathedral Cave	86.86	41	P	P	07 39 33.2	-0.5
CCM				pmax	pmax		
	comp=Z,13nm,0.9s						
CCM	Cathedral Cave	86.86	41	P	P	07 39 33.2	-0.5
CCM	Cathedral Cave	86.86	41	P	P	07 39 33.2	-0.5
	baz=320						
MGMO	Mountain Grove	87.02	42	P	P	07 39 34.6	0.0
MGMO				IAmb	IAmb	07 39 36.8	
	comp=Z,12nm,1.2s						
SFIN	Lafayette	87.06	37	P	P	07 39 34.0	-0.6
	baz=323						
U40A	Yellville	87.32	43	IAmb	IAmb	07 39 36.8	
	comp=Z,8.8nm,0.9s						
U40A	Yellville	87.32	43	P	P	07 39 34.7	-1.3
	baz=319,SNR=8.2						
TBI	Tubuai	87.66	123	eLR	LR	08 07 08.4	
	comp=Z,106nm,30.2s						
W39A	Magazine	87.70	45	P	P	07 39 37.0	-0.8
	baz=319						
JCT	Junction City	87.72	51	P	P	07 39 37.5	-0.6
	baz=316						
WHTX	Lake Whitney,	88.02	49	P	P	07 39 39.0	-0.4
	baz=317						
O48B	Farmland	88.04	36	P	P	07 39 38.9	-0.4
	baz=324						
FCAR	Ozark Folk Cen	88.06	43	P	P	07 39 39.0	-0.5
FCAR				IAmb	IAmb	07 39 40.3	
	comp=Z,13nm,1.4s						
S44A	Carbondale	88.13	40	P	P	07 39 39.9	+0.1
PBMO	Poplar Bluff	88.25	41	P	P	07 39 40.8	+0.3
MIAR	Mount Ida	88.30	45	P	P	07 39 39.7	-1.0
MIAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MIAR	Mount Ida	88.30	45	P	P	07 39 39.7	-1.0
MIAR				IAmb	IAmb	07 39 52.1	
	comp=Z,7.5nm,1.0s						
MIAR	Mount Ida	88.30	45	P	P	07 39 40.0	-0.7
	baz=319						
WHAR	Wooly Hollow	88.43	44	P	P	07 39 40.4	-0.9
WHAR				IAmb	IAmb	07 40 00.2	
	comp=Z,12nm,1.2s						
W41B	Gary Mavity, V	88.54	44	P	P	07 39 41.0	-0.8
	baz=320						
LONY	Lake Ozonia	88.63	27	P	P	07 39 41.1	-1.0
	baz=331						
ERPA	Erie	88.73	32	P	P	07 39 42.2	-0.4
	baz=327						
X40A	Basin Creek Fa	88.75	44	P	P	07 39 42.2	-0.6
	baz=320						
P49A	Miami Univ. Ec	88.83	36	P	P	07 39 42.0	-1.1
	baz=324						
M53A	WI Miller and	89.01	33	P	P	07 39 43.1	-0.8
	baz=327						
ACSO	Alum Creek Sta	89.03	35	P	P	07 39 43.2	-0.8
ACSO	Alum Creek Sta	89.03	35	P	P	07 39 43.5	-0.6
	baz=325						
O53A	New Philadelph	89.78	34	P	P	07 39 47.3	-0.3
	baz=326						
P52A	Corning	89.89	34	P	P	07 39 47.5	-0.6
	baz=326						
WVT	Waverly	90.06	40	P	P	07 39 48.6	-0.3
	baz=322						
BINY	Binghamton	90.22	29	P	P	07 39 48.4	-1.2
	baz=330						
OXF	Oxford	90.53	42	P	P	07 39 50.5	-0.6
	baz=321						
L59A	Walton	90.58	29	P	P	07 39 51.4	+0.1
U49A	Red Boiling Sp	90.76	39	IAmb	IAmb	07 39 53.6	
	comp=Z,14nm,1.4s						
Y45A	Yeager Farm, C	90.97	43	P	P	07 39 52.2	-1.0
TZTN	Tazewell	91.79	37	P	P	07 39 56.5	-0.5
	baz=325						
VNDA	Vanda	117.62	176	PKP	PKPdf	07 45 33.0	-0.6
	comp=Z,0.7nm,0.7s,baz=316,slow=6.5,SNR=5.5						
MATP	Matopo	122.93	270	PKP	PKPdf	07 45 45.5	-0.2
	comp=Z,2.4nm,0.7s,baz=3.3,slow=2.9,SNR=5.1						
DBIC	Dimbokro	125.94	322	PKhKP	PKPpre	07 45 48.9	
	comp=Z,2.6nm,0.6s,baz=73,slow=3.9,SNR=4.9						
LPAZ	La Paz	142.82	60	PKhKP	PKPpre	07 46 19.8	
	comp=Z,1.7nm,0.7s,baz=273,slow=6.7,SNR=8.3						
PB11	IPOC Station P	144.16	66	PKPdf	PKPbc	07 46 23.6	+0.1
SNAA	Sanae	144.31	197	PKhKP	PKPpre	07 46 20.7	
	comp=Z,1.5nm,0.5s,baz=82,slow=12,SNR=2.3						
SIV	San Ignacio	147.09	51	PKPbc	PKPbc	07 46 31.8	-0.6
	comp=Z,12nm,0.5s,baz=11,slow=2.3,SNR=5.1						
PLCA	Paso Flores	152.99	103	PKPbc	PKiKP	07 46 46.7	+0.2
	comp=Z,8.3nm,0.8s,baz=236,slow=3.2,SNR=9.7						
PLCA	Paso Flores	152.99	103		PKiKP	07 46 47.1	+0.7
BDFB	Brasilia	153.29	29	PKPbc	PKPbc	07 46 47.7	+0.1
	comp=Z,5.3nm,0.6s,baz=329,slow=5.9,SNR=5.2						

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*IDC **02** 07:34:32.3±1.6, 43°.53N×126°.89W, h0^{km}, mb3.3/3, mbtmp3.5/9, ML3.5/6, MS3.4/4 Error ellipse: s-maj=26.3km s-min=12.5km az=49.0*

*ANF **02** 07:34:33.2±1.0, 43°.43N×126°.90W, h0^{km}, ML3.8/18, Error ellipse: s-maj=10.8km s-min=5.2km az=70.0*

*NEIC **02** 07:34:35.9±2.6, 43°.55N±0°.07×126°.8W±0°.1, h10^{km}±2^{km}, mb3.8/11, ML3.2/60, Error ellipse: s-maj=15.0km s-min=10.7km az=253.0*

ISC 02 07:34:34.2±1.1, **43°.40N**±0°.06×**127°.02W**±0°.09, **h14**^{km}, **n160,** σ**1^{s}.36**/161, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
J01E	Myrtle Point	2.27	95		Pn	07 35 09.4	-1.8
J01E				IAML		07 35 44.0	
	comp=N,126nm,0.3s						
J01E	Myrtle Point	2.27	95	P	Pn	07 35 09.4	-1.8
	baz=278,SNR=76						
J01E				S	Sn	07 35 38.5	-0.3
	baz=278						
I02E	Swisshome, OR	2.40	72		Pn	07 35 11.6	-1.5
I02E				IAML		07 35 28.5	
	comp=E,125nm,0.4s						
I02E	Swisshome, OR	2.40	72	P	Pn	07 35 11.7	-1.3
	baz=254						
I02E				S	Sn	07 35 42.5	+0.3
	baz=254						
K02D	Willamette Mer	2.56	105	P	Pn	07 35 13.6	-1.6
	baz=288,SNR=360						
K02D				S	Sn	07 35 45.3	-0.9
	baz=288						
I03D	Drain, OR	2.68	82	P	Pn	07 35 15.8	-1.1
	baz=265,SNR=146						
I03D				S	Sn	07 35 50.2	+1.1
	baz=265						
COR	Corvallis	2.93	65		Pn	07 35 19.9	-0.4
COR				IAML		07 36 04.8	
	comp=E,58nm,1.1s						
HEBO	Mount Hebo	2.96	51		Pn	07 35 19.7	-1.1
HEBO				IAML		07 36 00.7	
	comp=N,98nm,1.1s						
BUCK	Buck Mountain	3.02	73		Pn	07 35 21.2	-0.5
BUCK				IAML		07 35 42.9	
	comp=N,55nm,0.5s						
HUMO	Hull Mountain	3.08	104	Pn	Pn	07 35 21.5	-0.9
G03D	McMinnville, O	3.25	55		Pn	07 35 23.8	-0.9
G03D				IAML		07 36 08.1	
	comp=E,78nm,0.3s						
G03D	McMinnville, O	3.25	55	P	Pn	07 35 23.7	-0.9
	baz=237,SNR=407						
G03D				S	Sn	07 36 03.0	0.0
	baz=237						
H04D	Lebanon	3.29	69		Pn	07 35 25.3	+0.1
H04D	Lebanon	3.29	69	P	Pn	07 35 25.1	-0.1
	baz=251,SNR=182						
I04A	Tendick Farm,	3.37	82	P	Pn	07 35 26.2	-0.1
	baz=265,SNR=83						
KHMM	Horse Mountain	3.51	135	Pn	Pn	07 35 29.7	+1.3
J04D	Umpqua Nationa	3.58	91	Pn	Pn	07 35 30.1	+0.7
J04D	Umpqua Nationa	3.58	91	P	Pn	07 35 30.0	+0.5
	baz=275,SNR=18						
YBH	Yreka Blue Hor	3.59	116	Pn	Pn	07 35 29.7	+0.2
	comp=E,1.9nm,0.3s,baz=294,slow=10,SNR=97						
YBH				Sn	Sn	07 36 11.5	-0.2
	comp=E,0.6nm,0.3s,baz=139,slow=19,SNR=1.2						
	comp=E,8.4nm,0.4s						
YBH	Yreka Blue Hor	3.59	116	Pn	Pn	07 35 30.1	+0.6
L04D	Klamath Falls	3.66	107	Pn	Pn	07 35 30.8	+0.3
L04D				IAML		07 36 21.9	
	comp=E,36nm,0.5s						
L04D	Klamath Falls	3.66	107	P	Pn	07 35 30.3	-0.2
	baz=291,SNR=15						
H04A	Detroit Lake	3.71	68	Pn	Pn	07 35 31.0	-0.1
H04A				IAML		07 35 57.6	
	comp=E,78nm,0.7s						
F04D	Rainier, OR	3.92	45	P	Pn	07 35 33.1	-0.7
	baz=228,SNR=20						
K04D	Chiloquin, OR	3.94	100	P	Pn	07 35 34.2	0.0
	baz=284,SNR=19						
E03A	Lebam	3.99	37		Pn	07 35 34.0	-0.8
KMRM	Mail Ridge	4.03	141	Pn	Pn	07 35 37.4	+1.9
KMRM				IAML		07 36 08.2	
	comp=E,28nm,3.5s						
KMRM				IAML		07 36 59.5	
	comp=N,24nm,3.9s						
F04A	Amboy	4.14	51		Pn	07 35 37.3	+0.4
I05D	Terrebonne, OR	4.21	75	P	Pn	07 35 37.9	-0.1
	baz=259,SNR=62						
J05D	Fort Rock, OR	4.22	90	P	Pn	07 35 37.7	-0.4
	baz=274,SNR=27						
WISH	Wishkah	4.37	31		Pn	07 35 39.2	-0.8
WISH				IAML		07 36 33.4	
	comp=E,36nm,2.6s						
PINE	Pine Mountain	4.43	83	Pn	Pn	07 35 40.9	-0.2
PINE				IAML		07 36 17.7	
	comp=E,17nm,0.8s						
E04D	Cinebar	4.46	43	Pn	Pn	07 35 41.1	-0.2
E04D				IAML		07 36 36.8	
	comp=N,31nm,1.2s						
E04D				IAML		07 36 50.8	
	comp=E,26nm,1.8s						
E04D	Cinebar	4.46	43	P	Pn	07 35 40.9	-0.5
	baz=226,SNR=94						
E04D				S	Sn	07 36 33.8	+0.7
	baz=226						
G05D	Wamic, OR	4.49	64	P	Pn	07 35 41.8	+0.1
	baz=248,SNR=32						
K05A	Summer Lake	4.54	96	Pn	Pn	07 35 42.9	+0.3
K05A				IAML		07 36 35.3	
	comp=E,15nm,5.0s						
K05A				IAML		07 36 56.8	
	comp=N,15nm,4.3s						
NLWA	Neilton Lookou	4.56	28	Pn	Pn	07 35 42.0	-0.8
NLWA				IAML		07 36 36.9	
	comp=N,44nm,0.6s						
NLWA				IAML		07 36 37.5	
	comp=N,27nm,0.6s						
F05D	White Salmon	4.68	56		Pn	07 35 45.1	+0.8
F05D	White Salmon	4.68	56	P	Pn	07 35 44.8	+0.5
	baz=240,SNR=47						
D04E	Lakebay	4.82	37	P	Pn	07 35 46.2	-0.1
	baz=219,SNR=22						
D04E				S	Sn	07 36 43.4	+1.5
	baz=219						
D03D	Eldon	4.97	32	P	Pn	07 35 47.3	-1.1
	baz=214,SNR=44						
D03D				S	Sn	07 36 45.0	-0.6
	baz=214						
O03E	Paynes Creek	4.98	127		Pn	07 35 51.0	+2.5
O03E				IAML		07 37 58.4	
	comp=N,10nm,3.4s						
MOD	Modoc Plateau	5.17	105		Pn	07 35 51.4	+0.1
D05A	Enumclaw	5.19	41		Pn	07 35 51.9	+0.6
B04A	Port Angeles	5.26	27	Pn	Pn	07 35 51.6	-0.8
B04A				IAML		07 36 56.3	
	comp=E,24nm,0.7s						
I07A	Izee	5.49	80	Pn	Pn	07 35 54.6	-0.9
I07A				IAML		07 36 45.6	
	comp=E,8.1nm,3.5s						
I07A				IAML		07 36 47.9	
	comp=N,11nm,2.4s						
F07A	Phinny Hill Vi	5.64	61	Pn	Pn	07 35 57.2	-0.3
ORV	Oroville	5.65	131	Pn	Pn	07 35 59.4	+1.7
CLRS	Cowichan Lake	5.78	19		Pn	07 35 58.2	-1.2
PGC	Sidney	5.81	24	Pn	Pn	07 35 58.9	-0.9
LTY	Liberty	5.91	47		Pn	07 36 01.4	+0.1
B05A	Bryant	5.96	34	P	Pn	07 36 01.4	-0.5
	baz=216,SNR=32						
B05A				S	Sn	07 37 09.7	-0.1
	baz=216						
E07A	Sunnyside	5.98	56		Pn	07 36 02.0	-0.2
G08A	Pilot Rock	6.08	69		Pn	07 36 03.8	+0.1
HAWA	Hanford	6.10	58	Pn	Pn	07 36 04.5	+0.7
A04D	Lummi Island	6.11	28	P	Pn	07 36 04.0	+0.1
	baz=210						
BEKR	Beckworth	6.11	123	Pn	Pn	07 36 07.3	+3.1
J08A	Circle Bar Ran	6.23	87		Pn	07 36 06.0	+0.3
WVOR	Wild Horse Val	6.23	96		Pn	07 36 05.2	-0.5
C06D	Leavenworth	6.23	41	S	Sn	07 37 18.8	+2.2
	baz=225						
B06A	Marblemount	6.41	35		Pn	07 36 07.8	-0.2
E08A	Dider Farm, El	6.44	59		Pn	07 36 09.1	+0.6
MPK	Martis Peak	6.67	126	Pn	Pn	07 36 10.4	-1.5
CBB	Campbell River	6.73	9	Pn	Pn	07 36 13.1	+0.6
D08A	Wollman Farm,	6.78	55	Pn	Pn	07 36 10.8	-2.5
EMB	Emerald Bay	6.84	128	Pn	Pn	07 36 16.3	+2.1
VCNR	Virginia City	6.89	124		Pn	07 36 16.2	+1.2
E09A	Wood Farm, Sta	7.02	61	Pn	Pn	07 36 15.5	-0.9
PNTR	Pine Nut	7.05	125		Pn	07 36 18.5	+1.3
BMO	Blue Mountains	7.14	75		Pn	07 36 18.2	+0.1
B08A	Colville Reser	7.30	45	Pn	Pn	07 36 19.3	-1.1
YERR	Yerington	7.34	124		Pn	07 36 23.3	+2.3
CMB	Columbia Colle	7.35	135	Pn	Pn	07 36 25.0	+3.9
F10A	Beach Ranch, E	7.43	66		Pn	07 36 22.3	0.0
C09A	Chrisman Ranch	7.54	51		Pn	07 36 23.8	+0.1
LLLB	Lillooet	8.02	24	Pn	Pn	07 36 30.6	+0.4
PLID	Pearl Lake	8.09	74	Pn	Pn	07 36 31.0	-0.3
MFID	Camas Ranch	8.15	86	Pn	Pn	07 36 32.7	+0.7
LHV	Little Huntoon	8.25	126	Pn	Pn	07 36 36.4	+3.1
NVAR	Mina Array Bea	8.26	124	Pn	Pn	07 36 35.9	+2.2
	comp=N,0.1nm,0.3s,baz=300,slow=13,SNR=8.2						
	comp=N,0.5nm,0.6s						
MDPB	Devils Postpil	8.35	131	Pn	Pn	07 36 38.3	+3.3
OMMB	Old Mammoth Mi	8.41	131	Pn	Pn	07 36 39.4	+3.6
NEW	Newport	8.45	51	Pn	Pn	07 36 35.8	-0.2
	comp=N,1.9nm,0.3s,baz=249,slow=12,SNR=23						
NEW				LR	LR	07 40 05.0	
	comp=N,207nm,18.4s,baz=264,slow=40						
	comp=N,4.0nm,0.4s						
NEW	Newport	8.45	51	P	Pn	07 36 35.7	-0.4
	baz=238						
BBB	Bella Bella	8.82	356	Pn	Pn	07 36 41.6	+0.5
	comp=N,0.5nm,0.3s,baz=206,slow=12,SNR=5.5						
BBB	Bella Bella	8.82	356	Pn	Pn	07 36 42.1	+1.0
ELK	Elko	9.15	103	Pn	Pn	07 36 47.9	+1.9
	comp=N,0.1nm,0.3s,baz=312,slow=11,SNR=6.0						
	comp=N,1.1nm,0.6s						
ELK	Elko	9.15	103	Pn	Pn	07 36 47.3	+1.3
HLID	Hailey	9.17	85	Pn	Pn	07 36 48.3	+2.2
LCH	Last Change Ra	9.44	128	Pn	Pn	07 36 51.0	+1.2
GRAC	Grapevine Rang	9.76	128	Pn	Pn	07 36 56.0	+1.9
MSO	Missoula	9.86	65	Pn	Pn	07 36 55.0	-0.5
MSO	Missoula	9.86	65	P	Pn	07 36 55.2	-0.3
	baz=254						
JTMT	Jette	9.93	60	Pn	Pn	07 36 55.9	-0.5
ISA	Isabella, Lake	10.16	137	Pn	Pn	07 37 03.0	+3.4
MCMT	McKenzie Canyo	10.29	77	Pn	Pn	07 37 01.9	+0.3
DLMT	Dillon	10.51	74	Pn	Pn	07 37 05.8	+1.4
LRM	Limekiln Ridge	10.66	72	Pn	Pn	07 37 07.6	+0.9
WALA	Waterton Lakes	10.69	54	Pn	Pn	07 37 04.9	-2.0
GWY	Greenwater Val	10.73	129	Pn	Pn	07 37 09.1	+1.5
QSM	Queen of Sheba	10.78	130	Pn	Pn	07 37 07.6	-0.5
CCAC	Calif City Air	10.79	137	Pn	Pn	07 37 09.7	+1.5
PSUT	Pine Spring	11.07	112	Pn	Pn	07 37 11.9	-0.3
DUG	Dugway, Tooele	11.08	102	Pn	Pn	07 37 11.5	-0.7
BOZ	Bozeman (W)	11.21	73	Pn	Pn	07 37 14.7	+0.7
BOZ	Bozeman (W)	11.21	73	P	Pn	07 37 14.3	+0.3
	baz=264						
HRY	Holter Researc	11.24	68	Pn	Pn	07 37 13.9	-0.5
QLMT	Earthquake Lak	11.30	77	Pn	Pn	07 37 15.6	+0.3
GSC	Goldstone, Bar	11.30	132	Pn	Pn	07 37 21.0	+5.8
SHPR	Sheep Range	11.40	123	Pn	Pn	07 37 16.4	-0.4
ECR	Eagle Creek	11.42	86	Pn	Pn	07 37 18.4	+1.3
YHL	Hebgen Lake	11.48	77	Pn	Pn	07 37 20.0	+2.2
HWUT	Hardware Ranch	11.55	94	Pn	Pn	07 37 16.3	-2.4
YMR	Madison River	11.63	78	Pn	Pn	07 37 17.4	-2.4
AHID	Auburn Hatcher	11.66	88	Pn	Pn	07 37 18.4	-1.8
TPAW	Teton Pass	11.68	84	Pn	Pn	07 37 17.8	-2.8
NLU	North Lily Min	11.69	102	Pn	Pn	07 37 21.0	+0.3
YHH	Holmes Hill	11.71	78	Pn	Pn	07 37 23.1	+2.0
YPP	Pitchstone Pla	11.74	80	Pn	Pn	07 37 24.3	+2.8
REDW	Red Top Meadow	11.77	85	Pn	Pn	07 37 19.8	-1.9
MOOW	Moose Ponds	11.81	83	Pn	Pn	07 37 23.4	+1.0
FLWY	Flagg Ranch	11.83	81	Pn	Pn	07 37 20.6	-1.9
SNOW	Snow King Moun	11.83	84	Pn	Pn	07 37 19.4	-3.2
H17A	Grant Village	11.91	80	Pn	Pn	07 37 21.6	-2.1
CCUT	Cedar City	11.92	115	Pn	Pn	07 37 23.0	-0.9
LOHW	Long Hollow	11.92	83	Pn	Pn	07 37 23.3	-0.6
GCMT	Greycliff	12.60	73	Pn	Pn	07 37 34.3	+1.3
BW06	Boulder Array	12.78	87	Pn	Pn	07 37 36.9	+1.3
PD31	Pinedale Array	12.78	87	Pn	Pn	07 37 37.2	+1.5
PDAR	Pinedale Array	12.78	87	Pn	Pn	07 37 37.6	+2.0
	comp=N,0.1nm,0.3s,baz=277,slow=13,SNR=13						
	comp=N,1.7nm,0.9s						
PFO	Pinyon Flats O	12.79	136	LR	LR	07 42 36.0	
	comp=N,186nm,20.9s,baz=300,slow=38						
PFO	Pinyon Flats O	12.79	136	Pn	Pn	07 37 37.2	+1.6
RLMT	Red Lodge	12.84	76	Pn	Pn	07 37 35.2	-1.2
EGMT	Eagleton	12.91	63	Pn	Pn	07 37 35.3	-1.9
O20A	White River Ci	14.39	97	Pn	Pn	07 37 58.8	+1.3
DLBC	Dease Lake	15.17	354	Pn	Pn	07 38 07.5	-0.5
	comp=N,0.1nm,0.3s,baz=154,slow=15,SNR=2.2						
	comp=N,1.9nm,0.9s						

N23A	Red Feather La	15.83	92	Pn	Pn	07 38 16.3	-0.4
X18A	Snowflake	15.94	118	Pn	Pn	07 38 18.6	+0.5
X18A				IAmb	IAmb	07 38 32.8	
	comp=Z,7.1nm,1.1s						
214A	Organ Pipe Nat	16.00	131	Pn	Pn	07 38 20.2	+1.3
214A				IAmb	IAmb	07 38 32.1	
	comp=Z,9.8nm,1.4s						
S22A	4UR Ranch, Cre	16.33	103	P	P	07 38 25.0	-1.2
ISCO	Idaho Springs	16.40	95	Pn	Pn	07 38 22.8	-1.3
ISCO				IAmb	IAmb	07 38 49.2	
	comp=Z,9.4nm,1.4s						
RSSD	Black Hills	16.61	80	Pn	Pn	07 38 24.2	-2.5
SDCO	Great Sand Dun	17.28	102		P	07 38 37.1	+0.4
ANMO	Albuquerque	18.01	111	P	P	07 38 46.2	+1.6
	comp=Z,2.4nm,1.1s,baz=300,slow=14,SNR=7.9						
ANMO	Albuquerque	18.01	111		P	07 38 46.2	+1.6
ANMO				IAmb	IAmb	07 39 04.2	
	comp=Z,6.1nm,1.1s						
LENM	Lemitar	18.11	114	P	P	07 38 45.8	0.0
T25A	Trinidad	18.32	102	P	Pn	07 38 47.3	-0.7
T25A				IAmb	IAmb	07 39 02.4	
	comp=Z,7.9nm,0.9s						
BNM	Barren Site	18.35	113	P	P	07 38 49.4	+0.9
319A	Douglas	18.47	125	P	Pn	07 38 51.5	+1.7
121A	Cookes Peak, D	18.60	119	P	P	07 38 50.4	-0.8
121A				IAmb	IAmb	07 39 08.0	
	comp=Z,5.4nm,0.8s						
YKA	Yellowknife Ar	20.46	17	P	P	07 39 11.1	0.0
	comp=Z,0.4nm,0.6s,baz=204,slow=11,SNR=4.6						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	24.16	339	P	P	07 39 48.5	-1.1
	comp=Z,0.9nm,0.8s,baz=152,slow=8.6,SNR=8.9						
ILAR				LR	LR	07 47 24.3	
	comp=Z,81nm,21.4s,baz=175,slow=32						
	comp=Z,0.9nm,0.8s						
SCHQ	Schefferville	39.81	52	LR	LR	07 59 03.0	
	comp=Z,84nm,19.0s,baz=206,slow=37						
H11N3	WAKE ISLAND Hy	59.46	269	T	T	08 48 38.3	
	baz=50,slow=75,SNR=47						
H11N2	WAKE ISLAND Hy	59.46	269	T	T	08 48 35.8	
	baz=50,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	59.48	269	T	T	08 48 42.7	
	baz=50,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	60.38	268	T	T	08 49 43.7	
	baz=50,slow=75,SNR=254						
H11S2	WAKE ISLAND Hy	60.39	268	T	T	08 49 44.8	
	baz=50,slow=75,SNR=160						
H11S3	WAKE ISLAND Hy	60.40	268	T	T	08 49 42.4	
	baz=50,slow=75,SNR=116						
SONM	Songino Array	77.69	326	P	P	07 46 29.6	-0.7
	comp=Z,0.2nm,0.3s,baz=74,slow=6.2,SNR=1.8						
	comp=Z,0.2nm,0.3s						

IDC ***02*** *07:37:45.4±0.4, 59°.91S×25°.88W, h0^{km}, mb4.7/19, mbtmp4.7/20, ML4.9/1, MS4.3/29, Error ellipse: s-maj=15.2km s-min=13.0km az=31.0*

NEIC ***02*** *07:37:47.3±1.8, 59°.86S±0°.07×25°.9W±0°.1, h10^{km}±1^{km}, mb5.1/89, Error ellipse: s-maj=12.9km s-min=11.1km az=112.0*

MOS ***02*** *07:37:49.8±1.2, 59°.88S×26°.24W, h36^{km}, mb5.0/20, Error ellipse: s-maj=24.1km s-min=11.3km az=112.3*

GCMT ***02*** *07:37:53.3±0.2, 60°.28S±0°.02×25°.28W±0°.03, h19^{km}±1^{km}, MW5.1/85, Moment Tensor Solution. s30,c35; s85,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.65±.23; $M_{\theta\theta}$-0.08±.15; $M_{\phi\phi}$2.74±.15; $M_{r\theta}$-0.40±.34; $M_{\theta\phi}$1.94±.09; $M_{\phi r}$4.02±.39; Best double couple: $M_0$5.22800×10^{16} NP1:ϕ_s55.00000°, δ27.00000°, λ-39.00000°. NP2: ϕ_s181.00000°, δ73.00000°, λ-112.00000°. Principal axes: T 5.3260, Plg25.0000°, Azm288.0000°; N -0.1910, Plg21.0000°, Azm188.0000°; P -5.1290, Plg57.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 07:37:47.7±0.2**, 59°.90S**±0°.06×**25°.97W**±0°.06**, h16**^{km}**, n319,** σ1°.06/306**, mb5.0**/61**, MS4.4**/32**, 13C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.02	310	P	Pn	07 39 42.7	-0.7
HOPE	Hope Point	8.02	310	Pn	Pn	07 39 42.7	-0.7
VNA1	Neumayer--Stat	13.01	153	P	Pn	07 40 48.8	-2.8
VNA3	Neumayer Olymp	13.16	156	P	Pn	07 40 50.7	-3.0
VNA2	Neumayer--Watz	13.41	153	P	Pn	07 40 54.2	-2.9
	baz=314,slow=15						
SNAA	Sanae	14.99	151	P	Pn	07 41 15.4	-3.3
SNAA	Sanae	14.99	151	Pn	Pn	07 41 15.9	-2.8
	5.6nm,0.3s,baz=314,slow=14,SNR=73						
SNAA				Sn	Sn	07 43 46.0	-18
	0.3nm,0.3s,baz=284,slow=17,SNR=2.0						
SNAA				LR	LR	07 46 05.3	
	comp=Z,752nm,18.3s,baz=286,slow=33						
	44nm,0.6s						
SNAA	Sanae	14.99	151	ceP	Pn	07 41 17.3	-1.4
SNAA				pmax	pmax		
	comp=Z,112nm,1.3s						
SNAA	Sanae	14.99	151	Pn	Pn	07 41 15.7	-3.0
ESPZ	Base Esperanza	15.06	243	Pn	Pn	07 41 19.5	0.0
ESPZ				IAmb	IAmb	07 41 27.2	
	comp=Z,79nm,1.1s						
TROLL	Troll, Antarti	16.55	149	P	Pn	07 41 35.5	-3.4
PMSA	Palmer Station	18.12	238	LR	LR	07 48 17.2	
	comp=Z,1µm,18.4s,baz=82,slow=35						
BELA	Belgrano 2	18.29	186	P	P	07 42 01.2	+0.8
SMAI	San Martin Ant	19.44	228	P	P	07 42 11.9	-1.1
SMAI				IAmb	IAmb	07 42 39.7	
	comp=Z,138nm,1.3s						
EFI	East Falkland	19.66	280	P	P	07 42 15.9	+0.4
EFI				pmax	pmax		
	comp=Z,386nm,1.5s						
EFI	East Falkland	19.66	280		P	07 42 15.9	+0.4
USHA	Ushuaia	23.13	264	P	P	07 42 54.3	+1.5
	comp=Z,40nm,0.8s,baz=110,slow=7.2,SNR=10						
USHA				LR	LR	07 50 16.3	
	comp=Z,2µm,19.3s,baz=124,slow=32						
	comp=Z,40nm,0.8s						
DSPA	Despedida	23.50	266	P	P	07 42 58.8	+2.3
MG02	Cerro Sombrero	24.62	267	P	P	07 43 07.7	+0.8
MG03	Isla Dawson	24.66	264	P	P	07 43 08.5	+1.2
MG03				IAmb	IAmb	07 43 48.4	
	comp=Z,78nm,1.2s						
MG04	Isla Riesco	25.76	265	P	P	07 43 17.7	+0.5
MG05	Puerto Natales	26.91	267	P	P	07 43 28.3	+0.7
GO09	Cerro Castillo	27.07	268	P	P	07 43 29.0	-0.1
GO08	Villa O'Higgin	28.93	272	P	P	07 43 47.0	+1.2
QSPA	South Pole Qui	30.34	180	P	P	07 43 58.2	-0.1
	comp=Z,25nm,1.1s,baz=201,slow=4.8,SNR=30						
QSPA				LR	LR	07 56 09.8	
	comp=Z,550nm,18.4s,baz=184,slow=36						
	comp=Z,25nm,1.1s						
QSPA	South Pole Qui	30.34	180	P	P	07 43 58.8	+0.4
QSPA				IAmb	IAmb	07 44 11.1	
	comp=Z,45nm,1.1s						
COYC	Coyhaique	30.66	277	P	P	07 44 01.5	+0.4
TRQA	Tornquist	31.56	298	P	P	07 44 10.8	+1.7
TRQA				pmax	pmax		
	comp=Z,25nm,1.2s						
TRQA	Tornquist	31.56	298	P	P	07 44 10.8	+1.7
TRQA				IAmb	IAmb	07 44 20.5	
	comp=Z,25nm,1.1s						
AY01	Puyuhuapi	31.76	278	P	P	07 44 10.0	-0.8
AY01				IAmb	IAmb	07 44 22.3	
	comp=Z,20nm,0.9s						
LL02	Futaleuf	32.26	280	P	P	07 44 16.0	+0.8
LL01	San Ignacio de	33.13	281	P	P	07 44 23.0	+0.2
GO07	Milladeo Hill,	33.21	279	P	P	07 44 24.1	+0.6
PLCA	Paso Flores	33.46	285	P	P	07 44 26.1	+0.2
	comp=Z,4.9nm,0.9s,baz=154,slow=7.5,SNR=43						
PLCA				LR	LR	07 56 56.9	
	comp=Z,452nm,20.7s,baz=140,slow=34						
	comp=Z,4.9nm,0.9s						
PLCA	Paso Flores	33.46	285	P	P	07 44 25.6	-0.2
PLCA				pmax	pmax		
	comp=Z,25nm,1.2s						
PLCA	Paso Flores	33.46	285	P	P	07 44 25.6	-0.2
PLCA				IAmb	IAmb	07 44 43.7	
	comp=Z,25nm,1.2s						
PLCA	Paso Flores	33.46	285	eP	P	07 44 26.6	+0.8
PLTB	Pedras Altas	33.61	314	P	P	07 44 26.6	-0.5
PLTB				IAmb	IAmb	07 44 38.5	
	comp=Z,61nm,1.8s						
PLTB	Pedras Altas	33.61	314	eP	P	07 44 27.2	+0.1
LL04	Puerto Octay	34.24	283	P	P	07 44 31.9	-0.5
CPSB	Cacapava Do Su	34.78	316	eP	P	07 44 37.6	+0.3
LR03	Panguipulli	35.19	284	P	P	07 44 41.5	+0.8
LR03				IAmb	IAmb	07 44 51.8	
	comp=Z,26nm,0.9s						
LC01	Cunco	35.53	285	P	P	07 44 44.1	+0.5
LC01				IAmb	IAmb	07 45 02.1	
	comp=Z,22nm,0.9s						
ITQB	Itaqui	36.60	312	P	P	07 44 52.2	-0.6
ITQB				IAmb	IAmb	07 45 10.2	
	comp=Z,39nm,0.9s						
ITQB	Itaqui	36.60	312	eP	P	07 44 52.4	-0.5
MAW	Mawson	36.72	140	P	P	07 44 53.1	-0.3
	comp=Z,19nm,0.9s,baz=239,slow=8.1,SNR=18						
MAW				PcP	PcP	07 47 17.0	+1.5
	comp=Z,5.6nm,0.9s,baz=296,slow=5.5,SNR=3.9						
MAW				LR	LR	07 58 31.9	
	comp=Z,729nm,18.8s,baz=256,slow=34						
	comp=Z,19nm,0.9s						
MAW	Mawson	36.72	140	P	P	07 44 53.9	+0.5
ML02	Panimavida	37.80	289	P	P	07 45 03.7	+0.7
ML02				IAmb	IAmb	07 45 32.6	
	comp=Z,62nm,1.5s						
BI05	Punta Hualpn	37.86	286	P	P	07 45 04.1	+0.6
GO05	Huala	38.65	289	P	P	07 45 10.7	+0.4
GO05				IAmb	IAmb	07 45 26.3	
	comp=Z,24nm,0.7s						
BO01	Tunca	38.76	291	P	P	07 45 12.1	+1.0
BO04	La Punta	38.87	292	P	P	07 45 12.9	+0.8
MT09	Talagante	39.22	291	P	P	07 45 15.5	+0.4
MT03	Universidad Ad	39.23	292	P	P	07 45 15.4	+0.3
MT01	Popeta	39.27	291	P	P	07 45 15.0	-0.4
MT01				IAmb	IAmb	07 45 27.0	
	comp=Z,29nm,0.7s						
MT05	Renca	39.42	292	P	P	07 45 17.2	+0.5
PTGB	Pitanga	39.57	321	eP	P	07 45 18.3	+0.2
PEL	Peldehue	39.60	292	P	P	07 45 18.9	+0.7
PEL				pmax	pmax		
	comp=Z,56nm,0.7s						
PEL	Peldehue	39.60	292	P	P	07 45 18.9	+0.7
VA05	Santo Domingo	39.61	291	P	P	07 45 18.4	+0.2
MT02	Curacav	39.72	292	P	P	07 45 19.2	+0.1
MT02				IAmb	IAmb	07 45 29.9	
	comp=Z,27nm,0.8s						
VA03	San Esteban	39.85	293	P	P	07 45 21.2	+0.8
VA03				IAmb	IAmb	07 45 38.4	
	comp=Z,56nm,0.9s						
CPUP	Villa Florida	39.89	313	P	P	07 45 21.0	+0.5
	comp=Z,2.5nm,0.7s,baz=133,slow=5.7,SNR=7.8						
CPUP				LR	LR	08 01 21.9	
	comp=Z,234nm,20.0s,baz=161,slow=36						
	comp=Z,2.5nm,0.7s						
CPUP	Villa Florida	39.89	313	P	P	07 45 19.8	-0.7
CPUP				pmax	pmax		
	comp=Z,14nm,1.3s						
CPUP	Villa Florida	39.89	313	P	P	07 45 19.8	-0.7
CPUP	Villa Florida	39.89	313	eP	P	07 45 21.2	+0.7
ROC1	El Roble	39.89	292	P	P	07 45 19.6	-1.2
ROC1				IAmb	IAmb	07 45 42.9	
	comp=Z,20nm,0.6s						
ZON	Zonda	40.01	296	P	P	07 45 21.7	+0.1
ZON				pmax	pmax		
	comp=Z,17nm,0.9s						
ZON	Zonda	40.01	296	P	P	07 45 21.7	+0.1
VA06	Catapilco	40.37	292	P	P	07 45 26.3	+1.8
VA06				IAmb	IAmb	07 45 35.7	
	comp=Z,42nm,1.1s						
SUR	Sutherland	41.21	69	P	P	07 45 32.2	+0.6
	comp=Z,9.1nm,0.8s,baz=236,slow=7.0,SNR=10						
	comp=Z,9.1nm,0.8s						
SUR	Sutherland	41.21	69	IAmb	IAmb	07 45 35.4	
	comp=Z,100nm,1.9s						
CO02	Combarbal	41.36	293	P	P	07 45 34.2	+1.3
CO02				IAmb	IAmb	07 45 45.6	
	comp=Z,19nm,0.7s						
RIB01	Linhares ES	41.84	339	eP	P	07 45 36.3	-0.4
BB19B	Bebedouro	41.98	328	eP	P	07 45 36.8	-1.0
CO01	Juntas del Tor	41.98	295	P	P	07 45 39.0	+0.9
CO06	Fray Jorge	42.10	293	P	P	07 45 39.4	+0.7
CO06				IAmb	IAmb	07 45 47.0	
	comp=Z,53nm,1.5s						
GO04	Tololo Observa	42.14	295	P	P	07 45 38.4	-1.0
GO04				IAmb	IAmb	07 46 38.6	
	comp=Z,22nm,0.8s						
SBA	Scott Base	42.28	184	P	P	07 45 42.3	+2.6
SBA				pmax	pmax		
	comp=Z,11nm,1.1s						
SBA	Scott Base	42.28	184	P	P	07 45 42.3	+2.6
CO05	La Serena	42.56	294	P	P	07 45 41.8	-0.7
CO05				IAmb	IAmb	07 45 53.5	
	comp=Z,43nm,0.8s						
SJMB	Sao Joao De Ma	42.58	338	eP	P	07 45 41.9	-0.8
VNDA	Vanda	42.75	183	P	P	07 45 43.7	+0.2
	comp=Z,7.1nm,1.0s,baz=186,slow=7.0,SNR=16						
VNDA				LR	LR	08 04 55.7	
	comp=Z,102nm,18.1s,baz=178,slow=38						
	comp=Z,7.1nm,1.0s						
VNDA	Vanda	42.75	183	P	P	07 45 43.3	-0.2
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	Vanda	42.75	183	P	P	07 45 43.2	-0.2
LCO	Las Campanas	43.08	296	P	P	07 45 46.3	-0.8
LCO				pmax	pmax		
	comp=Z,22nm,0.9s						
LCO	Las Campanas	43.08	296	P	P	07 45 46.3	-0.8
LCO				IAmb	IAmb	07 46 37.9	
	comp=Z,22nm,0.9s						
NAN01	Guarapari, ES	43.23	340	eP	P	07 45 47.7	-0.3
DIAM	Diamantina, MG	43.47	335	eP	P	07 45 48.9	-1.2
AC04	Llanos de Chal	43.94	296	P	P	07 45 54.0	+0.4
AC04				IAmb	IAmb	07 46 06.7	
	comp=Z,20nm,0.6s						
GO03	Copiap	44.08	297	P	P	07 45 54.2	-0.7
GO03				IAmb	IAmb	07 46 36.6	
	comp=Z,24nm,1.2s						
AC02	Maricunga	44.24	299	P	P	07 45 57.9	+1.3
AC02				IAmb	IAmb	07 46 20.9	
	comp=Z,16nm,0.8s						
AC06	Mina Casimiro	44.34	297	P	P	07 45 56.4	-0.5
GUA01	Guaratinga, BA	44.41	341	eP	P	07 45 58.2	+0.7
AQDB	Aquidauana	44.70	319	P	P	07 45 59.0	-0.8
AQDB	Aquidauana	44.70	319	eP	P	07 45 58.8	-1.0
GO02	Mina Guanaco	45.90	299	P	P	07 46 09.9	+0.3
GO02				IAmb	IAmb	07 46 31.6	
	comp=Z,21nm,0.8s						
BOSA	Boshof	46.45	71	P	P	07 46 13.1	-0.7
	comp=Z,5.8nm,0.7s,baz=210,slow=6.9,SNR=3.5						
BOSA				LR	LR	08 01 32.0	
	comp=Z,219nm,18.2s,baz=212,slow=31						
	comp=Z,5.8nm,0.7s						
BOSA	Boshof	46.45	71	P	P	07 46 13.0	-0.7
BOSA				pmax	pmax		
	comp=Z,18nm,1.2s						
BOSA	Boshof	46.45	71	P	P	07 46 13.0	-0.7
BOSA				IAmb	IAmb	07 46 14.3	
	comp=Z,18nm,1.1s						
PB14	IPOC Station P	46.73	299	P	P	07 46 16.1	-0.1
PB14				IAmb	IAmb	07 46 32.4	
	comp=Z,14nm,1.0s						
JANB	Januaria	46.74	335	eP	P	07 46 16.7	+0.7
BDFB	Brasilia	47.03	330	P	P	07 46 18.4	+0.1
	comp=Z,2.1nm,0.3s,baz=150,slow=6.3,SNR=7.5						
BDFB				LR	LR	08 04 10.0	
	comp=Z,389nm,19.9s,baz=145,slow=34						
	comp=Z,2.1nm,0.3s						
BDFB	Brasilia	47.03	330	IAmb	IAmb	07 46 21.1	
	comp=Z,44nm,2.0s						
PP1B	Ponte de Pedra	47.12	321	eP	P	07 46 19.3	+0.4
GDU01	Guandu, BA	47.18	342	eP	P	07 46 18.9	-0.5
AF01	San Pedro de A	47.23	302	P	P	07 46 17.9	-2.1
PB15	IPOC Station P	47.56	301	P	P	07 46 21.2	-1.3
PB15				IAmb	IAmb	07 46 34.8	
	comp=Z,14nm,0.6s						
PB10	IPOC Station P	47.76	300	P	P	07 46 22.9	-0.9
PB10				IAmb	IAmb	07 46 36.6	
	comp=Z,16nm,1.0s						
LVC	Limon Verde	47.84	302	P	P	07 46 25.7	+0.8
	comp=Z,7.8nm,0.4s,baz=124,slow=9.7,SNR=2.7						
LVC				LR	LR	08 05 46.9	
	comp=Z,307nm,21.7s,baz=178,slow=35						
	comp=Z,7.8nm,0.4s						
LVC	Limon Verde	47.84	302	P	P	07 46 25.0	+0.1
LVC				pmax	pmax		
	comp=Z,17nm,0.9s						
LVC	Limon Verde	47.84	302	P	P	07 46 25.0	+0.1
LVC				IAmb	IAmb	07 46 34.9	
	comp=Z,17nm,0.9s						
PB06	IPOC Station P	48.04	301	P	P	07 46 26.5	+0.2
PB04	IPOC Station P	48.62	301	P	P	07 46 27.9	-2.8
PB09	IPOC Station P	48.70	302	P	P	07 46 29.8	-1.6
SALV	Santo Antonio	48.97	321	eP	P	07 46 32.5	-0.7
PB02	IPOC Station P	49.41	302	P	P	07 46 37.2	+0.6
SDBA	SAO DESIDERIO	49.44	335	eP	P	07 46 37.5	+0.6
PB01	IPOC Station P	49.47	302	P	P	07 46 37.3	+0.2
PB01				IAmb	IAmb	07 47 09.2	
	comp=Z,20nm,1.0s						
NBLA	Lagarto - SE	49.60	345	eP	P	07 46 38.1	+0.1
LBTB	Lobatse	49.65	69	P	P	07 46 38.2	-0.3
	comp=Z,5.6nm,0.7s,baz=221,slow=9.1,SNR=8.0						
LBTB				LR	LR	08 04 04.5	
	comp=Z,332nm,18.1s,baz=203,slow=32						
	comp=Z,5.6nm,0.7s						
LBTB	Lobatse	49.65	69	P	P	07 46 36.6	-1.9
LBTB				pmax	pmax		
	comp=Z,89nm,2.0s						
LBTB	Lobatse	49.65	69	P	P	07 46 36.5	-1.9
CASY	Casey	50.07	159	P	P	07 46 41.5	+0.5
CASY				IAmb	IAmb	07 46 43.0	
	comp=Z,22nm,1.0s						
NBPN	Ponto Novo - B	50.10	342	eP	P	07 46 41.0	-0.9
PB08	IPOC Station P	50.13	303	P	P	07 46 43.0	+0.5
PB08				IAmb	IAmb	07 46 46.3	
	comp=Z,9.9nm,0.7s						
PTLB	Pontes e Lacer	50.54	317	eP	P	07 46 44.5	-0.6
GO01	Chusmiza	50.57	303	P	P	07 46 46.6	+0.7
GO01				IAmb	IAmb	07 46 58.4	
	comp=Z,10nm,0.7s						
TSUM	Tsumeb	51.13	57	P	P	07 46 49.5	-0.2
	comp=Z,11nm,1.1s,baz=175,slow=4.9,SNR=5.6						
TSUM				LR	LR	08 03 38.9	
	comp=Z,318nm,20.8s,baz=149,slow=30						
	comp=Z,11nm,1.1s						
TSUM	Tsumeb	51.13	57	P	P	07 46 49.8	+0.1
TSUM				IAmb	IAmb	07 46 51.2	
	comp=Z,19nm,1.1s						
H10S2	ASCENSION HYDR	51.54	14	T	T	08 42 52.2	
	baz=34,slow=74,SNR=5.3						
H10S3	ASCENSION HYDR	51.55	14	T	T	08 42 51.1	
	baz=186,slow=74,SNR=6.9						
PB16	IPOC Station P	51.89	304	P	P	07 46 55.9	-0.1
PB12	IPOC Station P	51.99	303	P	P	07 46 55.5	-0.7
PB12				IAmb	IAmb	07 47 31.3	
	comp=Z,23nm,1.3s						
H10N1	ASCENSION HYDR	52.66	14	T	T	08 44 11.5	
	baz=181,slow=73,SNR=5.7						
H10N3	ASCENSION HYDR	52.66	14	T	T	08 44 14.2	
	baz=181,slow=73,SNR=13						
H10N2	ASCENSION HYDR	52.68	14	T	T	08 44 15.6	
	baz=181,slow=73,SNR=10.0						
LPAZ	La Paz	53.16	306	P	P	07 47 05.7	+0.3
	comp=Z,3.3nm,0.5s,baz=112,slow=2.7,SNR=17						
LPAZ				LR	LR	08 10 32.2	
	comp=Z,228nm,20.5s,baz=154,slow=37						
	comp=Z,3.3nm,0.5s						
LPAZ	La Paz	53.16	306	P	P	07 47 05.9	+0.5
LPAZ	La Paz	53.16	306	eP	P	07 47 05.9	+0.5
VILB	Vilhena	53.23	317	eP	P	07 47 05.3	+0.1
NBMA	Muriti-CE	53.30	344	eP	P	07 47 06.1	+0.3
PDRB	Porto dos Gac	53.33	321	eP	P	07 47 04.8	-1.2
SMTB	Santa Maria do	53.47	333	eP	P	07 47 06.7	-0.3
CLDB	Colider	53.74	323	eP	P	07 47 08.4	-0.6
NBPV	Pedro Velho	53.83	349	eP	P	07 47 08.8	-0.8
MATP	Matopo	54.95	69	P	P	07 47 17.1	-0.7
	comp=Z,5.9nm,0.8s,baz=208,slow=6.4,SNR=10						
	comp=Z,5.9nm,0.8s						
NBCL	Cascavel-CE	56.33	345	eP	P	07 47 28.0	+0.3
PRPB	Parauapebas	56.59	331	eP	P	07 47 29.9	+0.4
NBPS	Pedro II - PI	56.62	341	eP	P	07 47 28.4	-1.5
NBMO	Morrinhos-CE	57.47	343	eP	P	07 47 34.3	-1.4
ETMB	Extrema	58.30	312	eP	P	07 47 41.2	-0.3
LSZ	Lusaka	59.27	66	LR	LR	08 09 27.0	
	comp=Z,548nm,20.4s,baz=193,slow=32						
ITTB	Itaituba	59.89	325	eP	P	07 47 52.2	-0.4
NNA	Nana	60.69	299	LR	LR	08 13 22.5	
	comp=Z,135nm,21.4s,baz=152,slow=35						
NNA	Nana	60.69	299	i P	P	07 47 59.6	+1.4
NNA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MALB	Monte Alegre	61.88	328	eP	P	07 48 06.6	+0.5
MACA	Manacapuru-AM	62.54	320	eP	P	07 48 09.4	-1.1
MCPB	Macapa, AP	62.73	330	eP	P	07 48 12.7	+0.9
CZSB	Cruzeiro do Su	62.75	306	eP	P	07 48 11.9	-0.1
RPN	Rapa Nui	63.66	261	LR	LR	08 10 25.4	
	comp=Z,120nm,18.4s,baz=200,slow=31						
OPO	Ambohidratompo	65.68	85	LR	LR	08 11 38.0	
	comp=Z,266nm,18.1s,baz=352,slow=31						
LIC	Lamto	67.97	23	eP	P	07 48 47.2	+1.5
	comp=Z,28nm,1.2s						
MDP	Montagnes des	68.14	331	LR	LR	08 17 10.4	
	comp=Z,240nm,19.3s,baz=171,slow=35						
KIC	Kosan Boka	68.16	23	eP	P	07 48 47.8	+0.9
	comp=Z,20nm,1.1s						
TIC	Toumodi	68.39	22	eP	P	07 48 49.1	+0.8
DBIC	Dimbokro	68.44	23	P	P	07 48 48.4	-0.2
	comp=Z,8.9nm,1.0s,baz=185,slow=6.5,SNR=7.0						
DBIC				LR	LR	08 13 28.0	
	comp=Z,205nm,18.1s,baz=184,slow=31						
	comp=Z,8.9nm,1.0s						
DBIC	Dimbokro	68.44	23	P	P	07 48 48.6	0.0
DBIC				IAmb	IAmb	07 49 26.2	
	comp=Z,17nm,1.1s						
OTAV	Otavalo	72.33	304	P	P	07 49 12.1	-1.0
OTAV				pmax	pmax		
	comp=Z,11nm,0.6s						
OTAV	Otavalo	72.33	304	P	P	07 49 12.1	-1.0
OTAV				IAmb	IAmb	07 50 10.1	
	comp=Z,11nm,0.6s						
GARC	Garzon, Huila	72.89	307	eP	P	07 49 15.9	-0.2
SOTA	Rioblanco	73.29	306	eP	P	07 49 26.5	+7.8
MBAR	Mbarara	73.40	61	LR	LR	08 19 17.1	
	comp=Z,308nm,18.4s,baz=218,slow=34						
MBAR	Mbarara	73.40	61	i P	P	07 49 19.4	+0.3
MBAR				pmax	pmax		
	comp=Z,14nm,1.3s						
ORTC	Ortega, Tolima	74.36	308	eP	P	07 49 24.2	-0.3
CHIC	Chingaza	74.42	310	eP	P	07 49 24.8	-0.5
ROSC	El Rosal	74.84	310	LR	LR	08 23 09.2	
	comp=Z,213nm,21.4s,baz=224,slow=36						
YOTC	Yotoco, Valle	74.86	307	eP	P	07 49 25.1	-2.5
RUSC	La Rusia	75.33	311	eP	P	07 49 29.2	-1.4
SPBC	San Pablo de B	75.49	310	eP	P	07 49 29.4	-1.7
GUY2C	Guyana, Caldas	75.60	309	eP	P	07 49 31.1	-1.1
PLMC	San Jos del P	75.67	308	eP	P	07 49 31.2	-0.9
NORC	Norcasia	75.72	309	eP	P	07 49 30.9	-1.4
KMBO	Kilima Mbogo	75.88	67	P	P	07 49 36.1	+2.6
	comp=Z,1.8nm,0.4s,baz=203,slow=5.0,SNR=7.2						
TORD	Torodi Ar. Bea	76.13	28	P	P	07 49 36.1	+1.6
	comp=Z,15nm,0.5s,baz=201,slow=5.9,SNR=8.1						
	comp=Z,15nm,0.5s						
KOWA	Kowa	76.23	22	P	P	07 49 36.6	+1.5
KOWA				IAmb	IAmb	07 49 37.5	
	comp=Z,25nm,1.1s						
CBOC	Ciudad Bolivar	76.44	308	eP	P	07 49 35.2	-1.4
PTBC	PUERTO BERRIO,	76.45	310	eP	P	07 49 33.1	-3.4
SDV	Santo Domingo	77.19	315	LR	LR	08 25 46.3	
	comp=Z,267nm,19.1s,baz=146,slow=37						
ZARC	Zaragoza, Cauc	77.48	310	eP	P	07 49 40.7	-1.5
OCAC	Ocana	77.58	312	eP	P	07 49 35.9	-7.0
UREC	San Jos de Ur	77.98	310	eP	P	07 49 43.8	-1.2
LODK	Lodwar	79.04	63	P	P	07 49 51.9	+0.9
LODK				IAmb	IAmb	07 49 55.9	
	comp=Z,18nm,1.3s						
OUZ	Omahuta	83.86	196	P	P	07 50 17.5	+1.2
JTS	Las Juntas de	84.12	302	i P	P	07 50 19.0	+1.3
JTS				pmax	pmax		
	comp=Z,12nm,1.8s						
SJG	San Juan	84.29	322	LR	LR	08 28 39.9	
	comp=Z,105nm,19.4s,baz=156,slow=36						
TBI	Tubuai	85.14	230	eLR	LR	08 16 50.6	
	comp=Z,150nm,22.2s						
STKA	Stephens Creek	87.99	169	P	P	07 50 37.1	+0.4
	comp=Z,6.5nm,0.9s,baz=282,slow=5.4,SNR=4.8						
	comp=Z,6.5nm,0.9s						
STKA	Stephens Creek	87.99	169	i P	P	07 50 37.2	+0.5
STKA	Stephens Creek	87.99	169	IAmb	IAmb	07 50 38.3	
	comp=Z,2.9nm,1.1s						
PPT2	Papeete2	90.38	233	eLR	LR	08 19 13.0	
	comp=Z,182nm,20.5s						
PPT	Papeete	90.40	233	LR	LR	08 24 33.7	
	comp=Z,279nm,18.9s,baz=135,slow=31						

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MDT   Midelt           94.04  18   LR      LR      08 29 27.1
        comp=Z,244nm,18.2s,baz=166,slow=33
TAOE  Nuku Hiva Isla   94.12 245  eLR      LR      08 21 02.3
        comp=Z,204nm,21.4s
ASAR  Alice Springs    95.12 162   P       P       07 51 09.5  -0.5
        comp=Z,4.2nm,0.9s,baz=190,slow=4.2,SNR=22
ASAR                               PKKPbc  PKKPbc  08 08 02.9  +1.7
        comp=Z,0.6nm,0.7s,baz=18,slow=2.8,SNR=7.4
ASAR                               LR      LR      08 32 30.8
        comp=Z,318nm,18.0s,baz=192,slow=34
        comp=Z,4.2nm,0.9s
ASAR  Alice Springs    95.12 162   P       P       07 51 09.7  -0.3
WRA   Warramunga Arr   98.84 161   P       P       07 51 26.1  -0.7
        comp=Z,1.5nm,1.0s,baz=205,slow=4.4,SNR=6.2
WRA                                PKKP    PKKPdf  08 07 52.8  -0.2
        comp=Z,0.3nm,0.6s,baz=357,slow=2.9,SNR=6.9
        comp=Z,1.5nm,1.0s
WRAB  Tennant Creek    98.85 161  i P      P       07 51 25.8  -1.1
WRAB                               pmax    pmax
        comp=Z,5.0nm,1.8s
FITZ  Fitzroy Crossi   98.92 153   LR      LR      08 31 38.0
        comp=Z,92nm,21.5s,baz=130,slow=33
KEST  Kesra            99.64  28   LR      LR      08 34 47.8
        comp=Z,191nm,18.5s,baz=257,slow=34
KBZ   Khabaz          117.59  50  i PKIKP  PKPdf   07 56 31.7   0.0
KBZ                                pmax    pmax
        comp=Z,1.0nm,0.9s
KIV   Kislovodsk      117.70  49  i PKIKP  PKiKP   07 56 33.0  +0.9
KIV                                pmax    pmax
        comp=Z,5.0nm,1.0s
KIV                                MLR     MLR
        comp=Z,78nm,22.0s
AKASG Malin Array Be  118.92  37   PKP     PKPdf   07 56 33.9  -0.2
        comp=Z,0.2nm,0.3s,baz=266,slow=2.7,SNR=7.2
AKASG Malin Array Be  118.92  37c iPKIKP   PKiKP   07 56 34.2  +0.1
AKASG Malin Array Be  118.92  37           PKPdf   07 56 34.0   0.0
AKBB  Malin Array Si  118.92  37c iPKIKP   PKiKP   07 56 34.7  +0.6
SCHQ  Schefferville   118.94 334   PKP     PKPdf   07 56 33.7  -0.3
        comp=Z,3.0nm,0.7s,baz=215,slow=1.6,SNR=7.4
SCHQ  Schefferville   118.94 334           PKiKP   07 56 34.4  +0.3
PDAR  Pinedale Array  122.88 299   PKP     PKPdf   07 56 42.0  -0.3
        comp=Z,0.3nm,0.5s,baz=130,slow=4.9,SNR=5.5
CMAR  Chiang Mai Arr  123.07 112   PKP     PKiKP   07 56 44.0  +0.6
        comp=Z,3.1nm,0.7s,baz=234,slow=3.8,SNR=19
CMAR  Chiang Mai Arr  123.07 112c iPKIKP   PKiKP   07 56 43.7  +0.4
CMAR                               pmax    pmax
        comp=Z,3.0nm,0.7s
CMAR  Chiang Mai Arr  123.07 112           PKPdf   07 56 42.7  -0.4
NVAR  Mina Array Bea  123.41 290   PKP     PKiKP   07 56 45.1  +1.5
        comp=Z,0.5nm,0.8s,baz=112,slow=1.6,SNR=4.8
NB2   NORSAR Subarra123.99  21     PKPdf   PKPdf   07 56 43.6   0.0
        comp=Z,3.4nm,1.1s,baz=202,slow=1.9
NOA   NORSAR Array B 123.99  21    PKP     PKPdf   07 56 43.4  -0.1
        comp=Z,2.8nm,0.9s,baz=196,slow=1.6,SNR=6.3
MOOW  Moose Ponds     124.18 299   PKPdf   PKiKP   07 56 45.9  +0.8
OBN   Obninsk         124.98  38⇑ePKIKP    PKiKP   07 56 46.2  +0.3
OBN                               ePPP     PPP     08 01 14.6
OBN                                pmax    pmax
        comp=Z,5.0nm,0.7s
OBN                                MLR     MLR
        comp=Z,115nm,18.0s
O03E  Paynes Creek    126.55 289   PKPdf   PKiKP   07 56 50.2  +0.5
FINES FINESS Array B  127.48  29   PKP     PKiKP   07 56 50.4  -0.2
        comp=Z,4.7nm,0.7s,baz=162,slow=1.8,SNR=23
FINES FINESS Array B  127.48  29c iPKIKP   PKiKP   07 56 50.9  +0.2
FINES                              pmax    pmax
        comp=Z,5.0nm,0.7s
FINES FINESS Array B  127.48  29   PKPdf   PKiKP   07 56 50.7   0.0
FIA1  FINESS Array S  127.48  29   PKPdf   PKPdf   07 56 50.3  +0.1
MSO   Missoula        128.00 299   PKPdf   PKPdf   07 56 52.1  +0.3
KSH   Kashi           128.91  77   PKP     PKiKP   07 56 54.3  -0.2
ABKAR Akbulak array   128.97  57   PKPdf   PKiKP   07 56 53.8  -0.3
KKAR  Karatay Array   129.03  70   PKIKP   PKPdf   07 56 53.5  -0.3
KKAR  Karatay Array   129.03  70   PKPdf   PKPdf   07 56 53.5  -0.3
AAK   Ala-Archa       130.58  73c iPKIKP   PKiKP   07 56 57.8   0.0
AAK                                pmax    pmax
        comp=Z,7.0nm,1.0s
AAK   Ala-Archa       130.58  73   PKPdf   PKPdf   07 56 56.8  -0.1
KLMR  Klimovskoe      130.60  36  ePKIKP   PKPdf   07 56 54.8  -1.3
KLMR                              e                07 59 12.0
KLMR                               pmax    pmax
        comp=Z,31nm,1.3s
KLMR  Klimovskoe      130.60  36  ePKPdf   PKPdf   07 56 54.9  -1.2
KLMR                               AMP             07 56 57.9
        comp=Z,31nm,1.3s
KLMR                              ePP      PP      07 59 12.1  -0.1
KLMR                              eSKPab   SKPbc   08 00 13.3  -5.5
PZH   PanZhiHua       131.28 109   PKP     PKPdf   07 56 59.0  +0.3
KDJ   Kajisay         131.49  75   PKIKP   PKPdf   07 56 58.3  -0.4
KDJ   Kajisay         131.49  75   PKPdf   PKPdf   07 56 58.3  -0.4
GYA   Guiyang         133.54 115   PKP     PKiKP   07 57 04.7  +0.5
ARU   Arti            133.75  50  i PKIKP  PKiKP   07 57 03.1  -0.4
ARCES ARCESS Array B  134.27  23   PKhKP   PKPpre  07 56 56.6
        comp=Z,1.7nm,1.0s,baz=186,slow=1.8,SNR=1.6
ARCES                              PKP     PKPdf   07 57 02.8  -0.1
        comp=Z,5.0nm,0.9s,baz=188,slow=0.9,SNR=14
CD2   Chengdu         135.92 108   PKP     PKPdf   07 57 06.8  -0.4
BRVK  Borovoye        136.20  60c iPKIKP   PKiKP   07 57 09.0  +0.4
BRVK                               pmax    pmax
        comp=Z,3.0nm,0.8s
MKAR  Makanchi Array  137.40  75   PKhKP   PKPpre  07 57 00.5
        comp=Z,0.3nm,0.4s,baz=224,slow=3.8,SNR=5.4
MKAR                               PKP     PKPdf   07 57 08.0  -1.4
        comp=Z,2.6nm,0.9s,baz=163,slow=1.9,SNR=8.3
WMQ   Urumqi          137.94  82   PKP     PKiKP   07 57 12.0  -0.5
WMQ                                PP      PP      08 00 03.2  +4.0
WMQ                                AMB     AMB
        comp=Z,150nm,3.9s
YKA   Yellowknife Ar  139.41 314   PKhKP   PKPpre  07 57 04.8
        comp=Z,0.5nm,0.8s,baz=113,slow=2.9,SNR=8.4
YKA                                PKP     PKPdf   07 57 12.6  +0.1
        comp=Z,5.1nm,0.8s,baz=130,slow=2.4,SNR=50
YKA                                PP      PP      08 00 04.8  -3.1
        comp=Z,0.9nm,1.0s,baz=125,slow=5.8,SNR=4.4
YKA                                SKP             08 00 46.0
        comp=Z,5.2nm,1.0s,baz=124,slow=1.8,SNR=20
YKA   Yellowknife Ar  139.41 314   PKPdf   PKPdf   07 57 12.8  +0.3
GTA   Gaotai          140.76  97  ePKP     PKiKP   07 57 19.0  +0.5
XAN   Xi'an           140.96 111   PKP     PKPdf   07 57 16.7  +0.4
RES   Resolute Bay    141.67 336   PKhKP   PKPpre  07 57 10.3
        comp=Z,1.6nm,0.8s,baz=146,slow=4.6,SNR=5.9
RES                                PKP     PKPdf   07 57 14.8  -1.5
        comp=Z,2.4nm,0.7s,baz=184,slow=3.1,SNR=6.9
RES                                SKP             08 00 53.0
        comp=Z,5.8nm,0.9s,baz=162,slow=3.4,SNR=12
ZALV  Zalesovo Beam   143.36  68   PKhKP   PKPpre  07 57 16.4
        comp=Z,1.3nm,0.4s,baz=239,slow=3.5,SNR=6.5
NJ2   Nanjing         143.71 124  ePKP     PKPdf   07 57 21.6  +0.4
HNS   HongShan        146.40 114 ⇑PKPbc    PKPdf   07 57 26.2  +0.5
TIA   Tai'an          146.51 118   PKPbc   PKPbc   07 57 27.6  +0.2
BTO   Baotou          146.72 105  ePKPbc   PKPbc   07 57 28.1  +0.1
M31M  Drury Creek, Y  146.88 306   P       PKPab   07 57 28.7  -0.4
        baz=119
HYT   Haines Junctio  147.51 302   PKPbc   PKiKP   07 57 31.8  +0.1
N30M  Aishikik Lake   147.64 303   P       PKiKP   07 57 31.6  -0.3
        baz=118
A36M  Sachs Harbour   147.79 325           PKPbc   07 57 30.4  +0.6
A36M  Sachs Harbour   147.79 325   P       PKiKP   07 57 30.9  -0.9
        baz=111
M30M  Minto, Yukon    148.04 305           PKiKP   07 57 32.2  -0.4
M30M  Minto, Yukon    148.04 305   P       PKPbc   07 57 31.1  +0.2
        baz=117
INK   Inuvik          149.12 316   PKP     PKPdf   07 57 27.2  -1.9
        comp=Z,7.5nm,0.7s,baz=93,slow=4.2,SNR=3.2
INK                                PKPbc   PKPbc   07 57 33.2  -0.2
        comp=Z,7.5nm,0.7s,baz=18,slow=1.6,SNR=18
INK   Inuvik          149.12 316           PKPbc   07 57 33.8  +0.5
INK   Inuvik          149.12 316   P       PKPbc   07 57 33.5  +0.1
        baz=110
BJI   Beijing         149.20 113   PKPbc   PKPbc   07 57 34.6  +0.1
EPYK  Eagle Plains    149.58 312   P       PKPbc   07 57 34.7   0.0
        baz=111
BVCY  Beaver Creek    149.67 303   P       PKiKP   07 57 36.6  +0.7
        baz=115
DAWY  Dawson          149.74 307           PKPbc   07 57 35.0  -0.1
DAWY  Dawson          149.74 307   P       PKPbc   07 57 35.1  -0.1
        baz=113
MOY   Mondy           149.83  82  ePKP2    PKiKP   07 57 36.6  -0.2
MOY                                pmax    pmax
        comp=Z,70nm,1.7s
M27K  Edge Creek, AK  150.07 303   P       PKiKP   07 57 37.5  +0.5
        baz=115
SONM  Songino Array   150.12  92   PKP     PKPdf   07 57 31.6   0.0
        comp=Z,0.7nm,0.5s,baz=172,slow=3.0,SNR=4.6
SONM                               PKPbc   PKPbc   07 57 36.9  +0.2
        comp=Z,23nm,1.0s,baz=217,slow=2.5,SNR=75
ZAK   Zakamensk       150.19  86  ePKIKP   PKPdf   07 57 31.0  -0.6
ZAK                                pmax    pmax
        comp=Z,51nm,1.3s
VRDI  Verde Repeater  150.27 300           PKiKP   07 57 38.0  +0.5
BCAR  Beaver Creek A  150.32 304   PKPbc   PKiKP   07 57 37.7  +0.3
L27K  Beaver Creek,   150.34 304           PKiKP   07 57 38.1  +0.7
L27K  Beaver Creek,   150.34 304   P       PKiKP   07 57 38.0  +0.7
        baz=114
ULN   Ulaanbaatar     150.47  93c iPKIKP   PKPbc   07 57 37.7  +0.1
ULN                                pmax    pmax
        comp=Z,24nm,1.7s
ULN   Ulaanbaatar     150.47  93           PKPbc   07 57 37.5   0.0
EGAK  Eagle           150.72 308   P       PKiKP   07 57 38.4  +0.4
        baz=111
K27K  Chicken         150.82 306   P       PKiKP   07 57 39.1  +0.8
        baz=112
TJN   Taejon          150.87 132c iPKIKP   PKiKP   07 57 40.2  +1.0
L26K  Log Cabin Wild  150.96 303   P       PKiKP   07 57 39.0  +0.3
        baz=113
NRIK  Noril'sk        151.50  43   PKPbc   PKiKP   07 57 39.4  -0.1
        comp=Z,6.9nm,1.0s,baz=118,slow=0.2,SNR=10
NRIK  Noril'sk        151.50  43⇑ePKIKP    PKPbc   07 57 38.9  -0.2
NRIK  Noril'sk        151.50  43           PKiKP   07 57 39.5   0.0
NRIK                               PKPab   PKPab   07 57 47.5  -0.2
SCRK  Sand Creek      151.58 305           PKiKP   07 57 40.3  +0.2
SCRK  Sand Creek      151.58 305   P       PKiKP   07 57 40.4  +0.4
        baz=111
J26L  Joseph Creek    151.59 306   P       PKiKP   07 57 40.4  +0.4
        baz=110
IRK   Irkutsk         151.81  83  ePKIKP   PKPbc   07 57 38.1  -2.2
IRK                                pmax    pmax
        comp=Z,52nm,1.3s
PAX   Paxson          151.84 303   PKIKP   PKPab   07 57 49.3  -0.2
PAX   Paxson          151.84 303           PKiKP   07 57 42.2  +1.6
PAX                                PKPab   PKPab   07 57 49.3  -0.2
RIDG  Independent Ri  151.86 304   P       PKiKP   07 57 41.1  +0.6
        baz=111
KSAR  Wonju Array Be  152.01 132   PKIKP   PKPbc   07 57 41.0  -0.2
KSAR                                               07 57 51.5
KSAR  Wonju Array Be  152.01 132           PKPbc   07 57 41.0  -0.2
KSAR                               PKPab   PKPab   07 57 51.5  +0.8
KSRS  Korea Array     152.03 132   PKPbc   PKPbc   07 57 41.5  +0.2
        comp=Z,7.1nm,1.0s,baz=194,slow=2.9,SNR=18
XLT   XiLinHaoTe      152.14 108⇑iP        PKiKP   07 57 42.1  +0.3
XLT                                pP      PKPab   07 57 51.4  +0.2
XLT                                pmax    pmax
        comp=Z,26nm,0.9s
XLT                                pmax    pmax
        comp=Z,150nm,3.8s
WAT6  Susitna Watana  152.67 301   P       PKiKP   07 57 43.0  +0.6
        baz=111
ILAR  Eielson Array   153.04 306   PKPbc   PKiKP   07 57 43.0  +0.2
        comp=Z,1.7nm,0.4s,baz=142,slow=3.5,SNR=29
ILAR  Eielson Array   153.04 306           PKiKP   07 57 43.0  +0.2
RND   Reindeer        153.43 302   PKIKP   PKiKP   07 57 44.4  +0.6
RND   Reindeer        153.43 302           PKiKP   07 57 44.4  +0.6
H24K  Noodor Dome     153.73 308   P       PKiKP   07 57 45.6  +1.3
        baz=105
NEA2  Nenana          153.88 305   P       PKiKP   07 57 45.8  +1.2
        baz=106
MJAR  Matsushiro Arr  154.50 149   PKPbc   PKiKP   07 57 47.2  +0.4
        comp=Z,2.7nm,0.9s,baz=133,slow=5.6,SNR=5.9
MJAR  Matsushiro Arr  154.50 149   PKPab   PKPab   07 58 01.4  +0.2
BPAW  Bear Paw Mtn.   154.54 303           PKiKP   07 57 47.0  +1.1
BPAW                               PKPab   PKPab   07 58 00.8  +0.1
BPAW  Bear Paw Mtn.   154.54 303   P       PKiKP   07 57 46.7  +0.7
        baz=106
TOLK  Toolik Lake Re  154.93 314   PKPdf   PKPdf   07 57 37.3  -0.6
TOLK                                       PKiKP   07 57 47.8  +1.1
TOLK                               PKPab   PKPab   07 58 04.1  +1.8
TOLK  Toolik Lake Re  154.93 314   P       PKiKP   07 57 47.8  +1.1
        baz=98
BNX   BinXian         158.76 120 ⇓P        PKPab   07 58 18.8  -0.6
BNX                                pmax    pmax
        comp=Z,23nm,1.2s
BNX                                pmax    pmax
        comp=Z,100nm,4.0s
BOD   Bodaibo         159.42  78  ePKP2    PKPab   07 58 21.8  -0.1
BOD                                pmax    pmax
        comp=Z,17nm,1.5s
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*JMA **02** 07:45:43.4±0.2, 47°0N±1°0×14°2E±°, h19^{km}, MV3.0/11, SOUTH SAKHALIN*

*SKHL **02** 07:45:44.0±0.5, 46°80N×142°30E, h15^{km}±2^{km}, mb4.9/6*

ISC 02 07:45:44.2±1.0, **46°83N**±0°04×**142°22E**±0°07, **h12**^{km}**, n5, σ0^{s}23**/9, **Sakhalin Island**

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Code  Station Name      Δ°  AZ°    Phase ID          Time      Res
                                   Op      ISC     h  m  s     ISC
KHLM  Kholmsk          0.26 334  i Pg      Pb      07 45 50.8   0.0
KHLM                               AMB     AMB     07 45 51.0
        1µm,0.2s
KHLM                              eSg      Sb      07 45 55.0  -0.1
KHLM                               A       A       07 45 56.1
        6µm,0.3s
KHLM                               A       A       07 45 56.1
        8µm,0.3s
YSS   Yuzh-Sakhalins   0.39  71  i Pg      Pg      07 45 51.9  -0.1
YSS                                AMB     AMB     07 45 52.2
        300nm,0.4s
YSS                               eSg      Sg      07 45 57.4  +0.1
YSS                                A       A       07 45 57.8
        1µm,0.2s
YSS                                A       A       07 45 57.8
        880nm,0.2s
JWK2  Keihoku          1.53 188  eP        Pb      07 46 12.1  -0.3
JWK2                             eS        Sg      07 46 33.3   0.0
JRBN  Rebuntou         1.61 210  eP        Pn      07 46 12.6  +0.1
JRBN                             eS        Sb      07 46 34.5  +0.2
JSE   Soyaes           1.89 172  eS        Sb      07 46 42.3  +0.3
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*JMA **02** 08:08:43.3±0.4, 44°N±2°×14°8E±°, h0^{km}, MV4.3/27, SE OFF ETOROFU*

*SKHL **02** 08:08:43.9±0.7, 44°20N×148°80E, h48^{km}±4^{km}, mb5.2/5*

*MOS **02** 08:08:43.8±0.8, 44°21N×148°68E, h44^{km}, mb4.2/1, Error ellipse: s-maj=11.9km s-min=9.5km az=72.4*

*IDC **02** 08:08:50.5±4.0, 44°55N×148°42E, h81^{km}±29^{km}, mb3.2/6, mbtmp3.5/10, Error ellipse: s-maj=58.9km s-min=22.1km az=163.0*

ISC 02 08:08:45.5±1.4, **44°21N**±0°06×**148°62E**±0°08, **h44**^{km}±14^{km}**, n63, σ1^{s}38**/68, **mb3.4**/6, **1C-3D, Kuril Islands**

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Code  Station Name      Δ°  AZ°    Phase ID          Time      Res
                                   Op      ISC     h  m  s     ISC
KUR   Kuril'sk         1.16 333c iPN       Pn      08 09 03.7  -1.5
KUR                              i S       Sn      08 09 18.5  -1.3
KUR                                pmax    pmax
        comp=Z,782nm,0.3s
KUR                                pmax    pmax
        comp=N,323nm,0.2s
KUR                                pmax    pmax
        comp=E,425nm,0.2s
KUR                                smax    smax
        comp=E,4µm,1.3s
KUR                                smax    smax
        comp=N,3µm,1.1s
KUR                                smax    smax
        comp=N,1µm,0.2s
KUR                                smax    smax
        comp=E,2µm,0.2s
KUR   Kuril'sk         1.16 333  i P       Pn      08 09 03.7  -1.5
KUR                                AMB     AMB     08 09 05.7
        comp=E,320nm,0.3s
KUR                                AMB     AMB     08 09 05.7
        comp=E,780nm,0.3s
KUR                              i S       Sn      08 09 18.5  -1.3
KUR                                A       A       08 09 19.2
        comp=E,3µm,1.2s
KUR                                A       A       08 09 19.2
        comp=E,4µm,1.2s
KUR                                A       A       08 09 21.5
        comp=E,1µm,0.2s
KUR                                A       A       08 09 21.5
        comp=E,2µm,0.2s
YUK   Yuzh-Kuril'sk    1.99 266  ePN       Pn      08 09 15.5  -1.0
YUK                              eS        Sn      08 09 40.0  -0.3
YUK                                pmax    pmax
        comp=Z,543nm,0.2s
YUK                                pmax    pmax
        comp=N,114nm,0.1s
YUK                                pmax    pmax
        comp=E,120nm,0.1s
YUK                                smax    smax
        comp=N,1µm,0.5s
YUK                                smax    smax
        comp=E,2µm,0.4s
YUK   Yuzh-Kuril'sk    1.99 266  eP        Pn      08 09 15.6  -1.0
YUK                                AMB     AMB     08 09 21.4
        comp=E,110nm,0.3s
YUK                                AMB     AMB     08 09 21.4
        comp=E,120nm,0.3s
YUK                                AMB     AMB     08 09 21.4
        comp=E,540nm,0.3s
YUK                              eS        Sn      08 09 39.8  -0.5
YUK                                A       A       08 09 43.3
        comp=E,1µm,0.5s
YUK                                A       A       08 09 43.3
        comp=E,2µm,0.5s
NEM2  Nemuro 2         2.24 249  eP        Pn      08 09 18.6  -1.4
NEM2                             eS        Sn      08 09 45.1  -1.4
NMR   Nemuro--Hokkai   2.25 249  ePN       Pn      08 09 19.0  -1.2
NMR                              eS        Sn      08 09 45.9  -0.8
NMR   Nemuro--Hokkai   2.25 249  i P       Pn      08 09 19.3  -0.9
NMR                              eS        Sn      08 09 46.5  -0.2
RUSJ  Misakicho        2.43 269⇓iPN        Pn      08 09 22.9  +0.3
RUSJ                             eS        Sn      08 09 52.3  +1.3
JRA   Rausu            2.53 265  eP        Pn      08 09 24.2  +0.2
JRA                              eS        Sn      08 09 54.8  +1.2
JNSB  Nemuroshibetsu   2.64 262  eP        Pn      08 09 25.9  +0.3
JKHN  Kushirohamanak   2.75 247  eP        Pn      08 09 26.2  -0.8
JKHN                             eS        Sn      08 09 57.8  -1.1
JNK   Nakash           2.88 259  eP        Pn      08 09 28.7  -0.2
JNK                              eS        Sn      08 10 02.8  +0.5
AKK   Akkeshi          2.99 248  i P       Pn      08 09 30.8  +0.5
AKK                              i S       Sn      08 10 05.2  +0.4
JAK   Akkeshi          3.09 248  eP        Pn      08 09 30.9  -0.9
JTKR  Abashiri--Toko   3.40 268  eP        Pn      08 09 37.1  +1.2
JAR   Ashorobuto       3.63 257  eP        Pn      08 09 39.9  +0.8
JCH   Churui           4.14 249  eP        Pn      08 09 47.0  +0.9
JCH                              eS        Sn      08 10 33.5  +0.1
JKA   Kamikawa-asahi   4.33 271  eP        Pn      08 09 52.1  +3.4
ASAJ  Asahikawa        4.33 271    P       Pn      08 09 52.1  +3.4
        comp=E,8.5nm,0.5s,baz=73,slow=16,SNR=3.2
ASAJ                               S       Sn      08 10 50.8   +13
        comp=E,17nm,0.8s,baz=22,slow=19,SNR=2.2
ERM   Erimo            4.56 243d iPN       Pn      08 09 53.1  +1.3
JNBK  Urakawa-nobuka   4.70 248  eP        Pn      08 09 54.4  +0.6
YSS   Yuzh-Sakhalins   4.95 306  ePN       Pn      08 09 57.6  +0.4
YSS   Yuzh-Sakhalins   4.95 306  eP        Pn      08 09 57.6  +0.4
YSS                                AMB     AMB     08 09 58.5
        comp=E,30nm,0.2s
YSS                              eS        Sn      08 10 52.9  -0.2
YSS                                A       A       08 10 55.5
        comp=E,40nm,0.4s
YSS                                A       A       08 10 55.5
        comp=E,20nm,0.4s
JOT   Ohata            6.24 246  eP        Pn      08 10 16.6  +1.6
JANG  Nango            6.51 236  eP        Pn      08 10 17.8  -0.9
JOSM  Okushiri--Mats   7.01 256  eP        Pn      08 10 26.1  +0.6
TYV   Tymovskoe        7.78 331  eP        Pn      08 10 36.0  -0.1
TYV                                AMB     AMB     08 10 36.3
        comp=E,30nm,0.3s
SKR   Severo-Kuril’s   8.23  35  i PN      Pn      08 10 43.5  +1.3
SKR   Severo-Kuril’s   8.23  35  eP        Pn      08 10 41.4  -0.8
SKR                                AMB     AMB     08 10 50.6
        comp=E,20nm,0.6s
OKH   Okha            10.07 340  eP        Pn      08 11 08.7  +1.4
OKH                                AMB     AMB     08 11 19.2
        comp=E,10.0nm,0.7s
NKL   Nikolayevsk     10.37 332  eP        Pn      08 11 11.7  +0.3
NKL                                AMB     AMB     08 11 12.4
        comp=E,10.0nm,0.7s
PEA0B Petropavlovsk-  10.74  31  i PN      Pn      08 11 17.6  +1.1
PETK  Petropavlovsk-  10.74  31    P       Pn      08 11 17.0  +0.5
        comp=E,1.2nm,0.5s,baz=205,slow=14,SNR=8.0
KLR   Kul'dur         12.61 299    P       Pn      08 11 44.7  +2.6
        comp=E,0.9nm,0.6s,baz=105,slow=16,SNR=4.8
KLR   Kul'dur         12.61 299  i PN      Pn      08 11 44.6  +2.5
KLR                                pmax    pmax
        comp=Z,9.0nm,2.6s
KLR   Kul'dur         12.61 299  i P       Pn      08 11 44.6  +2.5
KLR                                AMB     AMB     08 11 47.0
        comp=Z,10.0nm,0.5s
ZEA   Zeya            16.90 312  eP        Pn      08 12 36.1  -2.5
ZEA                                AMB     AMB     08 12 38.0
        comp=Z,20nm,0.3s
KROS  Kirovskiy       17.36 314  eP        Pn      08 12 42.0  -2.3
KROS                               AMB     AMB     08 12 49.5
        comp=Z,10.0nm,0.6s
SEY   Seymchan        18.89   5    P       P       08 12 59.9  -2.0
        comp=Z,1.0nm,0.6s,baz=180,slow=6.9,SNR=4.7
SEY   Seymchan        18.89   5  i P       Pn      08 13 03.8  +0.9
SEY                                pmax    pmax
        comp=Z,11nm,3.1s
SEY   Seymchan        18.89   5  i P       Pn      08 13 03.8  +0.9
HIA   Hailar          20.36 295  i P       P       08 13 18.1   0.0
BILL  Bilibino        25.64  15⇓eP         P       08 14 11.1  +0.6
BILL                             e                 08 14 50.1
BILL                             eS        S       08 18 26.7  -8.8
BILL                               MLR     MLR
        comp=Z,50nm,17.0s
BILL  Bilibino        25.64  15  eP        P       08 14 11.1  +0.6
H11N2 WAKE ISLAND Hy  28.78 142    T       T       08 45 31.7
        baz=333,slow=76,SNR=198
H11N1 WAKE ISLAND Hy  28.79 142    T       T       08 45 32.8
        baz=333,slow=76,SNR=167
H11N3 WAKE ISLAND Hy  28.80 142    T       T       08 45 33.0
        baz=333,slow=76,SNR=199
TIXI  Tiksi           29.14 347  i P       P       08 14 41.5  -0.3
TIXI  Tiksi           29.14 347  i P       P       08 14 41.5  -0.3
H11S1 WAKE ISLAND Hy  29.78 144    T       T       08 46 45.2
        baz=334,slow=76,SNR=58
H11S3 WAKE ISLAND Hy  29.78 144    T       T       08 46 49.3
        baz=334,slow=76,SNR=65
H11S2 WAKE ISLAND Hy  29.80 144    T       T       08 46 48.5
        baz=334,slow=76,SNR=40
ILAR  Eielson Array   40.49  37    P       P       08 16 18.8  -0.8
        comp=Z,0.2nm,0.6s,baz=282,slow=11,SNR=5.0
        comp=Z,0.2nm,0.6s
MKAR  Makanchi Array  45.31 298    P       P       08 16 57.0  -1.9
        comp=Z,0.4nm,0.7s,baz=72,slow=4.7,SNR=3.2
        comp=Z,0.4nm,0.7s
INK   Inuvik          45.47  31    P       P       08 16 59.9  +0.1
        comp=Z,0.6nm,0.4s,baz=255,slow=5.3,SNR=10
        comp=Z,0.6nm,0.4s
YKA   Yellowknife Ar  54.83  34    P       P       08 18 11.1  +0.3
        comp=Z,0.2nm,0.7s,baz=304,slow=7.1,SNR=5.0
        comp=Z,0.2nm,0.7s
YKA   Yellowknife Ar  54.83  34  eP        P       08 18 14.6  +3.9
FINES FINESS Array B  64.94 333    P       P       08 19 18.2  -1.8
        comp=Z,0.8nm,0.5s,baz=60,slow=11,SNR=3.7
        comp=Z,0.8nm,0.5s
FINES FINESS Array B  64.94 333  eP        P       08 19 20.6  +0.5
FINES                              pmax    pmax
        comp=Z,1.0nm,0.5s
NVAR  Mina Array Bea  66.44  59    P       P       08 19 30.6  +0.2
        comp=Z,0.1nm,0.3s,baz=304,slow=5.2,SNR=3.6
        comp=Z,0.1nm,0.3s
H03N2 Juan Fernandez 141.91  90    T       T       11 06 36.3
        baz=304,slow=77,SNR=34
H03N3 Juan Fernandez 141.92  90    T       T       11 06 41.4
        baz=304,slow=77,SNR=37
H03N1 Juan Fernandez 141.92  90    T       T       11 06 40.4
        baz=304,slow=77,SNR=31
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*BJI **02** 08:10:16.8±0.0, 4°36S×152°90E, h107^{km}, mb5.0/60, mB4.8/27*

*MOS **02** 08:10:18.1±1.1, 4°51S×152°46E, h104^{km}, mb5.1/41, Error ellipse: s-maj=8.6km s-min=5.5km az=95.5*

*IDC **02** 08:10:18.7±0.5, 4°57S×152°41E, h100^{km}±3^{km}, mb4.7/34, mbtmp5.0/37, MS3.6/17, Error ellipse: s-maj=10.8km s-min=7.4km az=101.0*

*NEIC **02** 08:10:19.3±1.6, 4°55S±0°07×152°49E±0°07, h99^{km}±4^{km}, mb5.1/209, Error ellipse: s-maj=11.6km s-min=9.1km az=218.0*

*GCMT **02** 08:10:19.3±0.3, 4°72S±0°02×152°47E±0°02, h102^{km}±4^{km}, MW4.9/93, Moment Tensor Solution. s32,c34; s93,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.79±.13; $M_{\theta\theta}$-0.01±.12; $M_{\phi\phi}$-1.78±.14; $M_{r\theta}$0.29±.08; $M_{\theta\phi}$0.83±.15; $M_{\phi r}$1.96±.09; Best double couple: $M_0$2.79300×10^{16} NP1:ϕ_s137.00000°,δ28.00000°,λ51.00000°. NP2: ϕ_s359.00000°,δ69.00000°,λ108.00000°. Principal axes: T 2.7890, Plg62.0000°, Azm297.0000°; N 0.0070,* *Plg17.0000°, Azm173.0000°; P -2.7970, Plg22.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 08:10:19.4±0.4, 5°S±3°×15°2E±°, h106^{km}±3^{km}, M5.1/65, mb5.2/65, mB5.5/29, MLv5.6/3, Mw(mB)5.0/29, MwMwp5.0/1, Mwp5.3/1*

ISC 02 08:10:18.8±0.4, **4°.60S**±0°.04×**152°.48E**±0°.05, **h104**^{km}±3^{km}, **h105**^{km}**:pP-P, n818, σ0^{s}.94**/854, **mb5.1**/230, **145C-56D,**
Fault plane solution: NP1:φs12.23914°, δ55.17751°, λ84.83484°. **NP2:**φs201.23433°, δ35.15557°, λ97.37443°.
Principal axes: T Plg79.0846°, Azm262.5948°; N Plg4.2383°, Azm15.1940°; P Plg10.0403°, Azm105.9458°;

New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.52**	**322**	Pn	**Pn**	**08 10 35.1**	**-0.2**
KRVT	**Keravat (AS076**	**0.54**	**303**	P	**Pn**	**08 10 35.3**	**-0.1**
	18µm,0.3s,baz=196,slow=0.2,SNR=5543						
KRVT				S	**Sn**	**08 10 47.6**	**-0.2**
	17µm,0.4s,baz=299,slow=14,SNR=10						
MANU	**Manus Island**	**5.71**	**296**		**Pn**	**08 11 42.5**	**+1.3**
PMG	**Port Moresby**	**7.12**	**228**	P	**Pn**	**08 12 01.0**	**+0.6**
	230nm,0.4s,baz=54,slow=6.5,SNR=86						
PMG				S	**Sn**	**08 13 19.4**	**-0.4**
	1µm,0.7s,baz=84,slow=22,SNR=20						
PMG	**Port Moresby**	**7.12**	**228**	*ce*P	**Pn**	**08 12 01.6**	**+1.2**
PMG				pmax	pmax		
	comp=Z,182nm,0.6s						
PMG	**Port Moresby**	**7.12**	**228**	Pn	**Pn**	**08 12 01.4**	**+1.0**
PMG	**Port Moresby**	**7.12**	**228**	P	**Pn**	**08 12 02.0**	**+1.6**
	comp=Z,359nm,0.5s						
HNR	**Honiara**	**8.82**	**123**	P	**Pn**	**08 12 23.6**	**0.0**
	comp=Z,115nm,0.5s,baz=158,slow=0.7,SNR=5.7						
HNR	**Honiara**	**8.82**	**123**	P	**Pn**	**08 12 23.9**	**+0.3**
HNR	**Honiara**	**8.82**	**123**		**Pn**	**08 12 23.9**	**+0.3**
PATS	**Pohnpei**	**12.77**	**27**	Pn	**Pn**	**08 13 16.5**	**0.0**
PATS	**Pohnpei**	**12.77**	**27**	P	**Pn**	**08 13 16.6**	**0.0**
	comp=Z,215nm,1.3s						
COEN	**Coen**	**13.06**	**224**	P	**Pn**	**08 13 21.0**	**+0.5**
	baz=13,SNR=29						
COEN	**Coen**	**13.06**	**224**	Pn	**Pn**	**08 13 21.1**	**+0.6**
COEN	**Coen**	**13.06**	**224**	P	**Pn**	**08 13 22.6**	**+2.1**
	comp=Z,118nm,1.4s						
SMPI	**Sarmi**	**13.99**	**280**	P	**Pn**	**08 13 34.8**	**+2.2**
	comp=Z,2µmcomp=Z,34nm,0.7s						
MTSU	**Mount Surprise**	**15.64**	**210**	P	**P**	**08 13 56.6**	**+1.1**
	baz=16,SNR=30						
CTA	**Charters Tower**	**16.55**	**201**	P	**P**	**08 14 06.7**	**+1.3**
	comp=Z,7.1nm,0.7s,baz=32,slow=11,SNR=11						
CTA				LR	LR	08 19 48.8	
	comp=Z,163nm,18.6s,baz=58,slow=34						
CTAO	**Charters Tower**	**16.55**	**201**	P	**P**	**08 14 06.5**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,14nm,1.0s						
CTAO	**Charters Tower**	**16.55**	**201**		**P**	**08 14 06.5**	**+1.0**
SANVU	**Saraoutou**	**18.05**	**128**		**Pn**	**08 14 23.2**	**+0.3**
SANVU				IAmb	IAmb	08 14 26.4	
	comp=Z,71nm,0.8s						
SANVU	**Saraoutou**	**18.05**	**128**	P	**Pn**	**08 14 24.4**	**+1.5**
	comp=Z,113nm,1.0s						
RK1H	**Rockhampton Ha**	**18.78**	**186**	P	**Pn**	**08 14 31.8**	**+0.2**
	comp=Z,26nm,0.8s						
KOUNC	**Koumac, New Ca**	**19.57**	**145**	P	**P**	**08 14 38.9**	**+0.3**
GUMO	**Guam**	**19.59**	**337**	P	**Pn**	**08 14 40.7**	**-0.4**
	comp=Z,232nm,1.0s,baz=191,slow=11,SNR=7.6						
GUMO				LR	LR	08 21 16.4	
	comp=Z,31nm,18.2s,baz=107,slow=34						
GUMO	**Guam**	**19.59**	**337**	P	**P**	**08 14 39.4**	**+0.5**
GUMO				pmax	pmax		
	comp=Z,225nm,0.9s						
GUMO	**Guam**	**19.59**	**337**	P	**P**	**08 14 39.4**	**+0.5**
QIS	**Mount Isa**	**20.21**	**217**	P	**P**	**08 14 46.2**	**+0.6**
	baz=20,SNR=47						
QIS	**Mount Isa**	**20.21**	**217**	P	**P**	**08 14 46.5**	**+0.9**
	comp=Z,55nm,0.9s						
FAKI	**Fak Fak**	**20.26**	**274**	P	**P**	**08 14 46.4**	**+0.2**
FAKI				IAmb	IAmb	08 15 21.7	
	comp=Z,208nm,1.3s						
FAKI	**Fak Fak**	**20.26**	**274**	P	**P**	**08 14 47.2**	**+1.0**
	comp=Z,2µmcomp=Z,3µmcomp=Z,115nm,1.4s						
FAKI	**Fak Fak**	**20.26**	**274**	P	**P**	**08 14 47.4**	**+1.2**
	comp=Z,115nm,1.5s						
EIDS	**Eidsvold**	**20.69**	**184**	P	**P**	**08 14 51.2**	**+0.5**
TARA	**Tarawa**	**21.26**	**74**	P	**P**	**08 14 55.1**	**-1.8**
TARA				IAmb	IAmb	08 14 59.8	
	comp=Z,139nm,0.8s						
KDU	**Kakadu**	**21.34**	**247**	P	**P**	**08 14 57.2**	**-0.5**
	baz=21,SNR=438						
KDU	**Kakadu**	**21.34**	**247**	P	**P**	**08 14 57.3**	**-0.4**
	comp=Z,208nm,0.9s						
SIJI	**Sorong**	**21.51**	**279**	P	**P**	**08 15 01.0**	**+1.4**
	comp=Z,72nm,0.6s,baz=78,slow=8.2,SNR=24						
	comp=Z,72nm,0.6s						
SWI	**Sorong**	**21.52**	**279**	P	**P**	**08 15 00.5**	**+0.8**
	comp=Z,3µmcomp=Z,150nm,0.7s						
LIFNC	**LIFOU**	**21.55**	**140**	P	**P**	**08 15 00.3**	**+0.5**
NOUC	**Port Laguerre**	**21.95**	**144**	P	**P**	**08 15 05.2**	**+1.1**
	comp=Z,72nm,1.0s						
DZM	**Mont Dzumac**	**22.01**	**143**	P	**P**	**08 15 05.6**	**+0.7**
	comp=Z,81nm,0.7s,baz=271,slow=8.4,SNR=55						
DZM				LR	LR	08 22 55.9	
	comp=Z,218nm,18.6s,baz=240,slow=34						
	comp=Z,81nm,0.7s						
DZM	**Mont Dzumac**	**22.01**	**143**	P	**P**	**08 15 05.8**	**+0.9**
DZM				IAmb	IAmb	08 15 07.8	
	comp=Z,81nm,0.6s						
DZM	**Mont Dzumac**	**22.01**	**143**	P	**P**	**08 15 06.0**	**+1.1**
	comp=Z,121nm,0.9s						
RMQ	**Roma**	**22.05**	**189**	P	**P**	**08 15 05.9**	**+0.7**
	baz=22,SNR=6.7						
RMQ	**Roma**	**22.05**	**189**	P	**P**	**08 15 06.1**	**+0.9**
	comp=Z,32nm,1.1s						
ONTNC	**Ouen Toro**	**22.20**	**144**	P	**P**	**08 15 07.5**	**+0.8**
ONTNC				IAmb	IAmb	08 15 08.1	
	comp=Z,88nm,1.2s						
OUENC	**Ouen Island, N**	**22.51**	**143**	P	**P**	**08 15 10.9**	**+0.9**
OUENC	**Ouen Island, N**	**22.51**	**143**	P	**P**	**08 15 11.0**	**+1.0**
	comp=Z,63nm,0.8s						
MARNC	**Mare, Loyalty**	**22.56**	**139**	P	**P**	**08 15 10.8**	**+0.3**
MTN	**Manton Dam**	**22.62**	**247**	P	**P**	**08 15 10.6**	**-0.6**
	baz=23,SNR=20						
MTN	**Manton Dam**	**22.62**	**247**	P	**P**	**08 15 10.4**	**-0.8**
MTN				IAmb	IAmb	08 15 12.7	
	comp=Z,135nm,1.1s						
MTN	**Manton Dam**	**22.62**	**247**	P	**P**	**08 15 10.6**	**-0.6**
	comp=Z,113nm,0.8s						
WB0	**Warramunga Arr**	**23.19**	**228**	P	**P**	**08 15 16.4**	**-0.3**
WB0				IAmb	IAmb	08 15 18.0	
	comp=Z,120nm,0.8s						
WR0	**Warramunga Arr**	**23.20**	**227**	P	**P**	**08 15 16.6**	**-0.2**
WR0				IAmb	IAmb	08 15 18.1	
	comp=Z,116nm,0.8s						
QLP	**Quilpie**	**23.24**	**199**	P	**P**	**08 15 17.6**	**+0.6**
	baz=23,SNR=15						
QLP	**Quilpie**	**23.24**	**199**	P	**P**	**08 15 17.5**	**+0.5**
	comp=Z,90nm,0.7s						
WRAB	**Tennant Creek**	**23.33**	**228**	*ce*P	**P**	**08 15 18.0**	**0.0**
WRAB				pmax	pmax		
	comp=Z,181nm,0.7s						
WRAB	**Tennant Creek**	**23.33**	**228**	P	**P**	**08 15 17.9**	**0.0**
WRAB	**Tennant Creek**	**23.33**	**228**	P	**P**	**08 15 18.2**	**+0.2**
	comp=Z,283nm,0.7s						
WB2	**Warramunga Arr**	**23.33**	**228**	P	**P**	**08 15 18.1**	**+0.1**
	baz=23						
WB2	**Warramunga Arr**	**23.33**	**228**	P	**P**	**08 15 18.1**	**+0.1**
WRA	**Warramunga Arr**	**23.34**	**228**	P	**P**	**08 15 17.9**	**-0.3**
	comp=Z,125nm,0.6s,baz=52,slow=10.0,SNR=433						
WRA				PcP	**PcP**	**08 19 02.9**	**+0.7**
	comp=Z,10nm,0.8s,baz=39,slow=2.3,SNR=6.2						
WRA				S	**S**	**08 19 21.6**	**-1.4**
	comp=Z,13nm,0.8s,baz=57,slow=14,SNR=8.9						
WRA				PKiKP	**PKiKP**	**08 26 45.1**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=339,slow=0.9,SNR=6.2						
	comp=Z,125nm,0.6s						
WRA	**Warramunga Arr**	**23.34**	**228**	P	**P**	**08 15 18.2**	**+0.1**
AAI	**Ambon**	**24.24**	**271**	P	**P**	**08 15 25.9**	**-0.4**
	comp=Z,79nm,0.8s						
LBMI	**Labuha**	**25.26**	**278**	P	**P**	**08 15 37.4**	**+1.8**
	comp=Z,1µmcomp=Z,116nm,0.9s						
ARMA	**Armidale**	**25.69**	**182**	P	**P**	**08 15 40.2**	**+0.8**
	baz=26,SNR=5.4						
ARMA	**Armidale**	**25.69**	**182**	P	**P**	**08 15 39.9**	**+0.5**
ARMA	**Armidale**	**25.69**	**182**	P	**P**	**08 15 40.9**	**+1.5**
	comp=Z,19nm,2.0s						
KNRA	**Kununurra**	**25.78**	**243**	P	**P**	**08 15 40.5**	**+0.3**
	baz=26,SNR=60						
KNRA	**Kununurra**	**25.78**	**243**	P	**P**	**08 15 40.1**	**-0.1**
AS31	**Alice Springs**	**26.08**	**222**	P	**P**	**08 15 42.7**	**-0.2**
ASAR	**Alice Springs**	**26.09**	**222**	P	**P**	**08 15 42.8**	**-0.2**
	comp=Z,14nm,0.7s,baz=54,slow=8.9,SNR=291						
ASAR				PcP	**PcP**	**08 19 08.4**	**+0.2**
	comp=Z,3.7nm,0.6s,baz=77,slow=2.3,SNR=4.3						
ASAR				S	**S**	**08 20 04.3**	**-2.5**
	comp=Z,1.8nm,0.6s,baz=57,slow=14,SNR=3.1						
ASAR				PKiKP	**PKiKP**	**08 26 46.2**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=9.8,slow=0.5,SNR=4.8						
	comp=Z,14nm,0.7s						
ASPA	**Alice Springs**	**26.09**	**222**	P	**P**	**08 15 42.6**	**-0.4**
	baz=26						
SANI	**Sanana**	**26.57**	**275**	P	**P**	**08 15 47.9**	**+0.5**
	comp=Z,48nm,1.5s						
FUNA	**Funafuti**	**26.82**	**100**	P	**P**	**08 15 49.5**	**-0.1**
CMSA	**Cobar Meteorol**	**27.55**	**193**	P	**P**	**08 15 55.7**	**-0.2**
	baz=28,SNR=15						
CMSA	**Cobar Meteorol**	**27.55**	**193**	P	**P**	**08 15 55.4**	**-0.5**
	comp=Z,15nm,1.2s						
OOD	**Oodnadatta**	**28.07**	**213**	P	**P**	**08 16 00.8**	**+0.2**
KMSI	**Cibinong**	**28.94**	**280**	P	**P**	**08 16 09.4**	**+0.9**
	comp=Z,5µmcomp=Z,277nm,0.6s						
STKA	**Stephens Creek**	**28.99**	**199**	P	**P**	**08 16 08.5**	**-0.2**
	comp=Z,11nm,0.7s,baz=4.0,slow=9.6,SNR=15						
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**28.99**	**199**	P	**P**	**08 16 08.6**	**-0.2**
	baz=29,SNR=5.1						
STKA	**Stephens Creek**	**28.99**	**199**	*i* P	**P**	**08 16 09.2**	**+0.4**
STKA	**Stephens Creek**	**28.99**	**199**	P	**P**	**08 16 08.8**	**0.0**
STKA	**Stephens Creek**	**28.99**	**199**	P	**P**	**08 16 09.1**	**+0.3**
	comp=Z,4.9nm,0.6s						
LCRK	**Leigh Creek**	**29.02**	**206**	P	**P**	**08 16 09.9**	**+0.9**
	comp=Z,56nm,1.0s						
BATI	**Baumata**	**29.11**	**257**	P	**P**	**08 16 09.8**	**-0.2**
	comp=Z,25nm,0.5s,baz=222,slow=5.4,SNR=4.7						
BATI				LR	LR	08 30 37.6	
	comp=Z,180nm,19.3s,baz=82,slow=42						
	comp=Z,25nm,0.5s						
DAV	**Davao City (W)**	**29.25**	**293**	LR	LR	08 25 48.4	
	comp=Z,53nm,21.9s,baz=134,slow=32						
FITZ	**Fitzroy Crossi**	**29.48**	**241**	P	**P**	**08 16 12.5**	**-0.7**
	comp=Z,46nm,0.8s,baz=58,slow=6.7,SNR=126						
	comp=Z,46nm,0.8s						
LUWI	**Luwuk**	**29.88**	**276**	P	**P**	**08 16 17.6**	**+0.7**
LUWI	**Luwuk**	**29.88**	**276**	P	**P**	**08 16 18.4**	**+1.5**
	comp=Z,4µmcomp=Z,135nm,0.8s						
GTOI	**Gorontalo**	**29.90**	**279**	P	**P**	**08 16 18.9**	**+1.9**
	comp=Z,376nmcomp=Z,47nm,0.7s						
MMRI	**Maumere**	**30.30**	**261**	P	**P**	**08 16 19.9**	**-0.6**
MMRI				IAmb	IAmb	08 16 51.0	
	comp=Z,28nm,0.8s						
CAN	**Canberra**	**30.74**	**186**	P	**P**	**08 16 24.7**	**+0.5**
CAN				pmax	pmax		
	comp=Z,70nm,1.8s						
CAN	**Canberra**	**30.74**	**186**	P	**P**	**08 16 24.7**	**+0.5**
CAN				IAmb	IAmb	08 16 35.8	
	comp=Z,70nm,1.8s						
WRKA	**Warakurna**	**30.86**	**226**	P	**P**	**08 16 24.6**	**-0.9**
	baz=31,SNR=36						
WRKA	**Warakurna**	**30.86**	**226**	P	**P**	**08 16 24.9**	**-0.6**
	comp=Z,90nm,0.7s						
MULG	**Mulgathing**	**30.90**	**212**	P	**P**	**08 16 25.1**	**-0.5**
	comp=Z,139nm,0.7s						
MRSI	**Marisa**	**30.93**	**279**	P	**P**	**08 16 26.2**	**+0.1**
	comp=Z,47nm,0.7s						
APSI	**Ampana**	**31.01**	**276**	P	**P**	**08 16 28.2**	**+1.4**
	comp=Z,701nmcomp=Z,82nm,1.1s						
HTT	**Hallett**	**31.35**	**202**	P	**P**	**08 16 29.7**	**+0.2**
	baz=32,SNR=5.9						
HTT	**Hallett**	**31.35**	**202**	P	**P**	**08 16 29.4**	**-0.2**
	comp=Z,14nm,1.5s						
BSSI	**Bau Bau, Buton**	**31.89**	**266**	P	**P**	**08 16 34.2**	**-0.3**
	comp=Z,534nmcomp=Z,20nm,0.9s						
BBOO	**Buckleboo**	**31.99**	**207**	P	**P**	**08 16 34.8**	**-0.4**
	baz=32,SNR=10						
BBOO	**Buckleboo**	**31.99**	**207**	P	**P**	**08 16 34.8**	**-0.4**
BBOO	**Buckleboo**	**31.99**	**207**	P	**P**	**08 16 35.0**	**-0.2**
	comp=Z,30nm,1.5s						
TOLI2	**Tolitoli**	**32.18**	**279**	P	**P**	**08 16 36.9**	**-0.2**
TOLI2				IAmb	IAmb	08 16 39.9	
	comp=Z,30nm,0.7s						
TOLI2	**Tolitoli**	**32.18**	**279**	P	**P**	**08 16 37.5**	**+0.4**
	comp=Z,40nm,0.7s						
BKSI	**Bulukumba**	**32.25**	**267**	P	**P**	**08 16 37.3**	**-0.4**
	comp=Z,409nmcomp=Z,15nm,1.0s						
BNSI	**Bone**	**32.28**	**269**	P	**P**	**08 16 38.6**	**+0.7**
	comp=Z,691nmcomp=Z,51nm,0.9s						
KAPI	**Kappang**	**32.62**	**268**	P	**P**	**08 16 40.6**	**-0.3**
KAPI				pmax	pmax		
	comp=Z,46nm,1.2s						
KAPI	**Kappang**	**32.62**	**268**	P	**P**	**08 16 40.6**	**-0.3**
KAPI				IAmb	IAmb	08 16 41.8	
	comp=Z,46nm,1.2s						
TTSI	**Tana Toraja**	**32.63**	**272**	P	**P**	**08 16 41.9**	**+0.9**
	comp=Z,2µmcomp=Z,14nm,0.8s						
SPSI	**Sidrap Palu**	**32.63**	**270**	P	**P**	**08 16 40.7**	**-0.3**
	comp=Z,44nm,0.8s						
MPSI	**Mapaga**	**32.92**	**278**	P	**P**	**08 16 43.8**	**+0.2**
	comp=Z,840nmcomp=Z,96nm,0.7s						
WBSI	**Waikabubak, Su**	**33.20**	**259**	P	**P**	**08 16 44.6**	**-1.5**
ARPS	**Mount Arapiles**	**33.47**	**196**	P	**P**	**08 16 48.5**	**+0.4**
	baz=34,SNR=5.5						
PLAI	**Plampang**	**34.71**	**261**	P	**P**	**08 16 56.8**	**-2.3**
	comp=Z,35nm,0.5s						
PLAI	**Plampang**	**34.71**	**261**	P	**P**	**08 16 57.2**	**-1.9**
	comp=Z,34nm,0.6s						
FORT	**Forrest**	**34.74**	**219**	P	**P**	**08 16 58.7**	**-0.4**
	baz=35,SNR=8.6						
FORT	**Forrest**	**34.74**	**219**	P	**P**	**08 16 58.9**	**-0.3**
FORT	**Forrest**	**34.74**	**219**	P	**P**	**08 16 58.8**	**-0.3**
	comp=Z,190nm,0.9s						
MYLDM	**Lahad Datu**	**35.31**	**286**	P	**P**	**08 17 04.4**	**+0.2**
MBWA	**Marble Bar**	**35.80**	**240**	P	**P**	**08 17 07.6**	**-0.7**
MBWA	**Marble Bar**	**35.80**	**240**	⇑P	**P**	**08 17 07.3**	**-1.0**
MBWA				pP	**pP**	**08 17 25.5**	**-6.5**
PSA00	**Pilbara Seismi**	**35.86**	**239**	P	**P**	**08 17 08.2**	**-0.7**
PSA00				IAmb	IAmb	08 17 09.1	
	comp=Z,19nm,1.0s						
PSA00	**Pilbara Seismi**	**35.86**	**239**	P	**P**	**08 17 08.1**	**-0.7**
	comp=Z,60nm,1.0s						
OUZ	**Omahuta**	**36.18**	**150**	P	**P**	**08 17 13.9**	**+2.5**
	comp=Z,16nm,1.0s						
AFI	**Afiamalu**	**36.42**	**107**	LR	LR	08 29 39.4	
	comp=Z,77nm,18.5s,baz=54,slow=32						
BBKI	**Banjar Baru**	**37.56**	**270**	P	**P**	**08 17 24.2**	**+0.8**
	comp=Z,6µmcomp=Z,41nm,0.9s						
MTKI	**Muara Teweh, K**	**37.71**	**274**	P	**P**	**08 17 25.3**	**+0.6**
MEEK	**Meekatharra**	**39.07**	**232**	P	**P**	**08 17 35.6**	**-0.4**
	baz=39,SNR=113						
MEEK	**Meekatharra**	**39.07**	**232**	P	**P**	**08 17 35.5**	**-0.4**
	comp=Z,108nm,0.6s						
QRZ	**Quartz Range**	**40.31**	**156**	P	**P**	**08 17 48.5**	**+2.6**
	comp=Z,37nm,2.2s						
URZ	**Urewera**	**40.31**	**150**	P	**P**	**08 17 47.5**	**+1.6**
	comp=Z,7.0nm,0.5s,baz=120,slow=23,SNR=13						
URZ				LR	LR	08 33 11.5	
	comp=Z,78nm,22.0s,baz=31,slow=34						
	comp=Z,7.0nm,0.5s						
URZ	**Urewera**	**40.31**	**150**	P	**P**	**08 17 47.4**	**+1.4**
URZ	**Urewera**	**40.31**	**150**	P	**P**	**08 17 49.0**	**+3.0**
	comp=Z,72nm,1.1s						
BKZ	**Black Stump Fm**	**40.71**	**151**	P	**P**	**08 17 49.5**	**+0.1**
BKZ				IAmb	IAmb	08 18 16.9	
	comp=Z,46nm,1.7s						
BKZ	**Black Stump Fm**	**40.71**	**151**	P	**P**	**08 17 50.4**	**+1.1**
	comp=Z,57nm,1.7s						
PBKI	**Pangkalan Bun**	**40.77**	**271**	P	**P**	**08 17 51.5**	**+1.4**
	comp=Z,362nm,0.9s						
SBUM	**Sibu**	**40.84**	**279**	P	**P**	**08 17 51.1**	**+0.4**
SBUM				IAmb	IAmb	08 17 53.5	
	comp=Z,34nm,0.9s						
GIRL	**Giralia**	**41.09**	**240**	P	**P**	**08 17 52.8**	**+0.2**
	baz=41,SNR=12						
GIRL	**Giralia**	**41.09**	**240**	P	**P**	**08 17 52.5**	**-0.1**
	comp=Z,107nm,0.9s						
PCJI	**Pacitan**	**41.19**	**263**	P	**P**	**08 17 52.7**	**-0.8**
	comp=Z,161nm,0.9s						
STKI	**Sintang**	**41.22**	**275**	P	**P**	**08 17 55.3**	**+1.4**
	comp=Z,29nm,0.5s						
YULB	**Yu-li**	**41.23**	**314**	P	**P**	**08 17 52.3**	**-1.5**
YULB				IAmb	IAmb	08 18 21.7	
	comp=Z,24nm,1.1s						
THZ	**Tophouse**	**41.26**	**157**	P	**P**	**08 17 55.0**	**+1.2**
THZ				IAmb	IAmb	08 17 58.2	
	comp=Z,24nm,0.8s						
TUWZ	**Tuamarina**	**41.40**	**155**	P	**P**	**08 17 56.4**	**+1.6**
NACB	**Ninganchiao**	**41.51**	**315**	P	**P**	**08 17 55.9**	**-0.1**
NACB				IAmb	IAmb	08 18 01.2	
	comp=Z,31nm,1.1s						
BSWZ	**Blackbirch Sta**	**41.61**	**156**	P	**P**	**08 17 58.5**	**+1.9**
SSLB	**Suanglung**	**41.72**	**314**	P	**P**	**08 17 57.7**	**-0.1**
SSLB				IAmb	IAmb	08 18 43.5	
	comp=Z,50nm,1.7s						
UGM	**Wanagama**	**41.83**	**263**	P	**P**	**08 17 59.2**	**+0.4**
	comp=Z,95nm,1.3s						
MSWZ	**Moikau Station**	**41.94**	**154**	P	**P**	**08 18 02.2**	**+2.9**
YHNB	**Yeheng**	**41.98**	**315**	P	**P**	**08 17 59.9**	**0.0**
YHNB				IAmb	IAmb	08 18 02.0	
	comp=Z,31nm,1.0s						
KHZ	**Kahutara**	**42.06**	**157**	P	**P**	**08 18 01.5**	**+1.3**
	comp=Z,32nm,2.1s						
MORW	**Morawa**	**42.23**	**231**	P	**P**	**08 18 01.1**	**-0.7**
	baz=42,SNR=15						
MORW	**Morawa**	**42.23**	**231**	P	**P**	**08 18 01.1**	**-0.7**
MORW				IAmb	IAmb	08 18 02.9	
	comp=Z,27nm,0.7s						
MORW	**Morawa**	**42.23**	**231**	P	**P**	**08 18 00.8**	**-1.0**
	comp=Z,37nm,0.7s						
RPZ	**Rata Peaks**	**42.27**	**160**	P	**P**	**08 18 03.3**	**+1.4**
	comp=Z,21nm,0.9s,baz=4.6,slow=4.8,SNR=7.1						
RPZ				LR	LR	08 35 29.0	
	comp=Z,159nm,18.3s,baz=304,slow=36						
	comp=Z,21nm,0.9s						
RPZ	**Rata Peaks**	**42.27**	**160**	P	**P**	**08 18 03.9**	**+2.0**
	comp=Z,113nm,0.9s						
BLDU	**Ballidu**	**42.47**	**228**	P	**P**	**08 18 03.0**	**-0.8**
	baz=42,SNR=21						
BLDU	**Ballidu**	**42.47**	**228**	P	**P**	**08 18 02.4**	**-1.4**
	comp=Z,40nm,0.7s						
KSM	**Kuching**	**42.57**	**277**	P	**P**	**08 18 05.1**	**+0.3**
KSM	**Kuching**	**42.57**	**277**	P	**P**	**08 18 05.7**	**+0.9**
	comp=Z,106nm,0.9s						
JNU	**Nakatsue**	**42.74**	**333**	P	**P**	**08 18 05.8**	**-0.1**
	comp=Z,49nm,0.8s,baz=67,slow=0.5,SNR=28						
	comp=Z,49nm,0.8s						
MQZ	**McQueen's Vall**	**42.82**	**158**	P	**P**	**08 18 08.4**	**+2.1**
MQZ				IAmb	IAmb	08 19 43.6	
	comp=Z,64nm,1.4s						
MJAR	**Matsushiro Arr**	**43.05**	**343**	P	**P**	**08 18 07.1**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=165,slow=8.0,SNR=7.9						
MJAR				PcP	**PcP**	**08 19 56.9**	**+0.3**
	comp=Z,13nm,0.6s,baz=161,slow=3.8,SNR=19						
MJAR				LR	LR	08 33 03.2	
	comp=Z,38nm,21.5s,baz=162,slow=32						
	comp=Z,3.3nm,0.9s						
MJAR	**Matsushiro Arr**	**43.05**	**343**	P	**P**	**08 18 07.0**	**-1.4**
MJAR				PcP	**PcP**	**08 19 56.9**	**+0.3**
MAJO	**Matsushiro**	**43.05**	**343**	P	**P**	**08 18 07.4**	**-0.9**
MAJO				IAmb	IAmb	08 19 00.1	
	comp=Z,41nm,2.0s						
MAJO				PcP	**PcP**	**08 19 57.5**	**+0.8**
MJB9	**Matsu-Tunnel**	**43.06**	**343**	P	**P**	**08 18 07.3**	**-1.1**
MJB9				IAmb	IAmb	08 19 00.1	
	comp=Z,41nm,2.0s						
MJB9				PcP	**PcP**	**08 19 57.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**43.30**	**225**	P	**P**	**08 18 09.8**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,93nm,1.6s						
NWAO	**Narrogin (SRO)**	**43.30**	**225**	P	**P**	**08 18 09.8**	**-0.7**
JHS	**Saijyo**	**43.40**	**337**	P	**P**	**08 18 10.4**	**-0.8**
JHS				IAmb	IAmb	08 19 50.5	
	comp=Z,16nm,0.8s						
MUN	**Mundaring**	**43.54**	**227**	P	**P**	**08 18 11.9**	**-0.4**
	baz=44,SNR=4.5						
CMJI	**Cimerak**	**43.88**	**264**	P	**P**	**08 18 14.0**	**-1.3**
	comp=Z,118nm,0.9s						
JSD	**Sado**	**44.43**	**344**	P	**P**	**08 18 19.5**	**+0.2**
JSD				PcP	**PcP**	**08 20 01.9**	**+0.6**
JSD				IAmb	IAmb	08 20 03.2	
	comp=Z,30nm,0.8s						
LEM	**Lembang**	**44.69**	**265**	P	**P**	**08 18 21.9**	**-0.1**
	comp=Z,41nm,0.8s						
TPI	**Tanjungpandan**	**44.77**	**271**	P	**P**	**08 18 23.5**	**+1.0**
	comp=Z,636nmcomp=Z,85nm,0.9s						
CNJI	**Cibinong**	**45.18**	**264**	P	**P**	**08 18 24.7**	**-1.0**
	comp=Z,3µmcomp=Z,322nm,1.1s						
DBJI	**Dramaga**	**45.55**	**265**	P	**P**	**08 18 27.7**	**-0.9**
PPBI	**Pangkal Pinang**	**46.32**	**271**	P	**P**	**08 18 35.4**	**+0.7**
	comp=Z,68nm,0.9s						
DLV	**T Lat**	**46.73**	**291**	P	**P**	**08 18 39.6**	**+1.5**
DLV				PcP	**PcP**	**08 20 11.6**	**+1.5**
TJN	**Taejon**	**47.05**	**332**	*ce*P	**P**	**08 18 37.4**	**-2.6**
TJN	**Taejon**	**47.05**	**332**	P	**P**	**08 18 39.6**	**-0.4**
ERM	**Erimo**	**47.17**	**351**	P	**P**	**08 18 40.4**	**-0.3**
ERM						08 20 12.5	
ERM				pmax	pmax		
	comp=Z,54nm,1.8s						
ERM	**Erimo**	**47.17**	**351**	P	**P**	**08 18 40.4**	**-0.3**
ERM				IAmb	IAmb	08 18 43.0	
	comp=Z,54nm,1.8s						
ERM				PcP	**PcP**	**08 20 12.4**	**+1.7**
KSRS	**Korea Array**	**47.68**	**333**	P	**P**	**08 18 45.0**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=150,slow=8.6,SNR=18						
KSRS				PcP	**PcP**	**08 20 13.8**	**+1.2**
	comp=Z,3.9nm,0.6s,baz=154,slow=2.8,SNR=11						
KSRS				LR	LR	08 35 52.2	
	comp=Z,18nm,21.9s,baz=230,slow=32						
	comp=Z,5.8nm,0.8s						
KSAR	**Wonju Array Be**	**47.69**	**333**	P	**P**	**08 18 43.8**	**-1.1**
KSAR	**Wonju Array Be**	**47.69**	**333**	P	**P**	**08 18 43.8**	**-1.1**
KSAR				PcP	**PcP**	**08 20 13.7**	**+0.9**
KS19	**Wonju Array Si**	**47.75**	**333**	P	**P**	**08 18 44.6**	**-0.8**
KS19				IAmb	IAmb	08 19 49.1	
	comp=Z,62nm,1.9s						
KS19				PcP	**PcP**	**08 20 13.8**	**+0.9**
KASI	**Kota Agung**	**47.80**	**267**	P	**P**	**08 18 44.1**	**-2.1**
	comp=Z,107nm,1.0s						
DSRI	**Dabo**	**48.02**	**273**	P	**P**	**08 18 48.1**	**+0.2**
	comp=Z,40nm,1.0s						
MDSI	**Maura Dua**	**48.15**	**268**	P	**P**	**08 18 47.5**	**-1.4**
	comp=Z,38nm,1.1s						
LWLI	**Liwa**	**48.25**	**267**	P	**P**	**08 18 48.3**	**-1.5**
	comp=Z,203nm,0.7s						
INCN	**Inchon**	**48.29**	**332**	P	**P**	**08 18 50.6**	**+1.0**
INCN				pmax	pmax		
	comp=Z,41nm,0.8s						
INCN	**Inchon**	**48.29**	**332**	P	**P**	**08 18 50.6**	**+1.0**
NJ2	**Nanjing**	**48.49**	**321**	*e*P	**P**	**08 18 54.4**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
MYKOM	**Kota Tinggi**	**49.01**	**276**	P	**P**	**08 18 55.8**	**+0.3**
JKA	**Kamikawa-asahi**	**49.30**	**351**	P	**P**	**08 18 57.6**	**+0.5**
JKA				IAmb	IAmb	08 18 58.6	
	comp=Z,22nm,0.8s						
ASAJ	**Asahikawa**	**49.31**	**351**	P	**P**	**08 18 57.6**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,22nm,0.8s						
MNAI	**Manna**	**49.37**	**268**	P	**P**	**08 18 56.9**	**-1.4**
BKNI	**Bangkinang**	**51.62**	**274**	P	**P**	**08 19 15.0**	**-0.2**
BKNI	**Bangkinang**	**51.62**	**274**	P	**P**	**08 19 15.3**	**+0.1**
	comp=Z,97nm,0.9s						
USA0B	**Ussuriysk Arra**	**51.96**	**341**	P	**P**	**08 19 17.1**	**0.0**
USA0B				pmax	pmax		
	comp=Z,9.0nm,0.8s						
USA0B	**Ussuriysk Arra**	**51.96**	**341**	P	**P**	**08 19 17.1**	**0.0**
USRK	**Ussuriysk Ar.**	**51.96**	**341**	P	**P**	**08 19 17.0**	**-0.1**
	comp=Z,8.6nm,0.8s,baz=171,slow=8.1,SNR=14						
USRK				PcP	**PcP**	**08 20 28.9**	**+0.6**
	comp=Z,5.6nm,0.6s,baz=83,slow=6.4,SNR=5.2						
	comp=Z,8.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.96**	**341**	P	**P**	**08 19 17.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**51.96**	**341**	P	**P**	**08 19 17.2**	**+0.1**
USRK				PcP	**PcP**	**08 20 29.9**	**+1.6**
YSS	**Yuzh-Sakhalins**	**52.05**	**352**	*e*P	**P**	**08 19 17.7**	**0.0**
YSS				*e*		08 20 29.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**52.05**	**352**	P	**P**	**08 19 17.8**	**+0.1**
YSS				PcP	**PcP**	**08 20 29.9**	**+1.4**
YSS				IAmb	IAmb	08 20 30.2	
	comp=Z,19nm,0.8s						
PPI	**Padang Panjang**	**52.19**	**273**	P	**P**	**08 19 18.3**	**-1.1**
IPM	**Ipoh**	**52.19**	**279**	P	**P**	**08 19 19.1**	**-0.3**
IPM				PcP	**PcP**	**08 20 30.4**	**+0.5**
IPM				IAmb	IAmb	08 20 31.4	
	comp=Z,20nm,0.8s						
KULM	**Kulim**	**52.69**	**280**	P	**P**	**08 19 22.4**	**-0.7**
KULM				IAmb	IAmb	08 19 23.9	
	comp=Z,23nm,0.7s						

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KULM                          PcP     PcP      08 20 32.7 +1.0
MDJ    Mudanjiang     53.13 340  P       P        08 19 25.9 +0.2
MDJ                              IAmb    IAmb     08 20 33.8
       comp=Z,14nm,0.7s
MDJ    Mudanjiang     53.13 340  P       P        08 19 26.1 +0.4
MDJ                              pmax    pmax
       comp=Z,18nm,0.8s
MDJ                              pmax    pmax
       comp=Z,130nm,3.7s
ENH    Enshi          53.79 313  P       P        08 19 31.9 +1.0
ENH                              IAmb    IAmb     08 19 32.5
       comp=Z,38nm,1.2s
CN2    Changchun      53.99 336 eP       P        08 19 32.9 +0.8
CN2                              PcP     PcP      08 20 35.7 -0.3
CN2                              pmax    pmax
       comp=Z,10.0nm,0.8s
GYA    Guiyang        54.02 307 ⇓P       P        08 19 34.5 +1.7
GYA                              pmax    pmax
       comp=Z,21nm,0.8s
LYN    LuoYang        54.19 319 eP       P        08 19 33.9 +0.2
SRIT   Nakonsritamara 54.34 284  P       P        08 19 35.2 +0.1
SRIT                             IAmb    IAmb     08 19 36.0
       comp=Z,25nm,0.8s
HNS    HongShan       54.60 323 ⇑P       P        08 19 37.2 +0.6
HNS                              pmax    pmax
       comp=Z,18nm,1.0s
BNX    BinXian        54.87 339 ⇓P       P        08 19 38.2 -0.2
BNX                              pmax    pmax
       comp=Z,46nm,0.9s
BNX                              pmax    pmax
       comp=Z,190nm,3.8s
GSI    Gunungsitoli   55.17 275  P       P        08 19 39.8 -1.4
GSI    Gunungsitoli   55.17 275  P       P        08 19 39.9 -1.3
       comp=Z,63nm,0.9s
KCSI   Kotacane, Aceh 55.26 277  P       P        08 19 39.9 -1.9
       comp=Z,736nmcomp=Z,28nm,0.8s
XAN    Xi'an          56.26 317  P       P        08 19 48.8 +0.1
XAN                              pmax    pmax
       comp=Z,15nm,0.9s
KLR    Kul'dur        56.57 344  P       P        08 19 50.8 +0.4
       comp=Z,8.7nm,0.7s,baz=154,slow=5.7,SNR=44
KLR                              PcP     PcP      08 20 46.3 +0.5
       comp=Z,9.4nm,0.5s,baz=155,slow=1.1,SNR=16
       comp=Z,8.7nm,0.7s
KLR    Kul'dur        56.57 344ceP       P        08 19 50.7 +0.2
KLR                              pmax    pmax
       comp=Z,20nm,1.3s
KMI    Kunming        56.62 304 ⇓P       P        08 19 53.5 +1.9
KMI                              pmax    pmax
       comp=Z,19nm,0.8s
CM31   Chiang Mai Arr 57.51 295  P       P        08 19 58.8 +1.1
CMAR   Chiang Mai Arr 57.51 295  P       P        08 19 59.3 +1.6
       comp=Z,51nm,0.8s,baz=115,slow=5.2,SNR=205
       comp=Z,51nm,0.8s
CMAR   Chiang Mai Arr 57.51 295ceP       P        08 19 59.2 +1.6
CMAR                             pmax    pmax
       comp=Z,57nm,0.8s
CMAR   Chiang Mai Arr 57.51 295  P       P        08 19 57.5 -0.2
CHTO   Chiang Mai     57.62 296  P       P        08 19 59.3 +0.9
CHTO                             pmax    pmax
       comp=Z,52nm,1.2s
CHTO   Chiang Mai     57.62 296  P       P        08 19 59.3 +0.8
CHTO   Chiang Mai     57.62 296 ⇑P       P        08 19 59.4 +0.9
CHTO                             pP      pP       08 20 25.6 +1.6
PEA0B  Petropavlovsk- 57.66   4  P       P        08 19 58.3 +0.2
PEA0B                            pmax    pmax
       comp=Z,60nm,1.6s
PEA0B  Petropavlovsk- 57.66   4  P       P        08 19 58.3 +0.2
PETK   Petropavlovsk- 57.66   4  P       P        08 19 57.8 -0.3
       comp=Z,7.4nm,0.5s,baz=168,slow=7.8,SNR=30
PETK                             PcP     PcP      08 20 50.4 +0.3
       comp=Z,11nm,0.8s,baz=184,slow=8.9,SNR=7.5
       comp=Z,7.4nm,0.5s
PETK   Petropavlovsk- 57.66   4  P       P        08 19 58.0 -0.1
PETK   Petropavlovsk- 57.66   4  P       P        08 19 58.0 -0.1
PETK                             PcP     PcP      08 20 50.0  0.0
PZH    PanZhiHua      58.00 305  P       P        08 20 01.7 +0.5
PZH                              pmax    pmax
       comp=Z,10.0nm,0.6s
PZH                              pmax    pmax
       comp=Z,110nm,5.3s
XLT    XiLinHaoTe     58.34 330⇑iP       P        08 20 03.5 +0.4
XLT                              pmax    pmax
       comp=Z,22nm,1.0s
XLT                              pmax    pmax
       comp=Z,37nm,4.6s
CD2    Chengdu        58.37 311  P       P        08 20 04.4 +0.8
HIA    Hailar         60.73 336 i P      P        08 20 19.7 +0.4
HIA                              pmax    pmax
       comp=Z,7.0nm,1.0s
LZH    Lanzhou        60.87 316 eP       P        08 20 22.2 +1.4
LZH                              pP      pP       08 20 47.2 +0.7
LZH                              sP      sP       08 20 59.0 +1.1
LZH                              pmax    pmax
       comp=Z,35nm,1.3s
LZH                              LR      LR
       comp=Z,130nm,16.0s
LZH                              LR      LR
       comp=Z,210nm,16.5s
LZH                              LR      LR
       comp=Z,170nm,18.2s
ZEA    Zeya           61.87 343 eP       P        08 20 27.4 +0.5
ZEA                              pmax    pmax
       comp=Z,10.0nm,0.7s
DRV    Dumont d'Urvil 62.56 186  P       P        08 20 31.9 +0.6
DRV                              x       x        08 20 45.1
DRV                              sP      PcP      08 21 09.4  0.0
MA2    Magadan        63.99 359  P       P        08 20 40.8 -0.1
       comp=Z,22nm,0.7s,baz=162,slow=6.3,SNR=27
       comp=Z,22nm,0.7s
MA2    Magadan        63.99 359ceP       P        08 20 40.9  0.0
MA2                              pmax    pmax
       comp=Z,21nm,0.7s
MA2    Magadan        63.99 359  P       P        08 20 40.8 -0.1
MA2                              IAmb    IAmb     08 20 41.3
       comp=Z,23nm,0.8s
MA2    Magadan        63.99 359  P       P        08 20 40.8 -0.1
MA2                              pP      pP       08 21 08.9 +2.2
GTA    Gaotai         65.30 317 ⇑P       P        08 20 51.0 +1.0
GTA                              pP      pP       08 21 17.9 +1.9
GTA                              sP      sP       08 21 27.9 +0.5
GTA                              pmax    pmax
       comp=Z,18nm,1.0s
ULN    Ulaanbaatar    65.66 328ceP       P        08 20 53.2 +1.0
ULN                              pmax    pmax
       comp=Z,7.0nm,1.0s
ULN    Ulaanbaatar    65.66 328  P       P        08 20 53.0 +0.9
SHL    Shillong       65.94 300  P       P        08 20 54.7 +0.3
SHL                              pmax    pmax
       comp=Z,52nm,0.6s
SHL    Shillong       65.94 300  P       P        08 20 54.7 +0.3
SONM   Songino Array  65.99 328  P       P        08 20 54.9 +0.7
       comp=Z,2.7nm,0.4s,baz=139,slow=6.5,SNR=14
SONM                             PcP     PcP      08 21 24.1 -0.1
       comp=Z,3.9nm,0.7s,baz=144,slow=3.9,SNR=7.3
       comp=Z,2.7nm,0.4s
SONM   Songino Array  65.99 328  P       P        08 20 54.7 +0.5
SEY    Seymchan       67.35 360  P       P        08 21 02.3 -0.1
       comp=Z,1.1nm,0.5s,baz=142,slow=5.6,SNR=5.4
SEY                              PcP     pP       08 21 28.2 -0.2
       comp=Z,3.9nm,0.8s,baz=197,slow=4.8,SNR=7.6
       comp=Z,1.1nm,0.5s
SEY    Seymchan       67.35 360ceP       P        08 21 02.9 +0.6
SEY                              pmax    pmax
       comp=Z,9.0nm,2.5s
GOMU   GeErMu         67.40 312  P       P        08 21 04.5 +0.8
GOMU                             PcP     PcP      08 21 31.1 +0.5
GOMU                             pmax    pmax
       comp=Z,8.0nm,0.7s
UNV    Unalaska Valle 67.57  25  P       P        08 21 03.4 -0.5
       baz=225
LSA    Lhasa          67.87 304  P       P        08 21 08.1 +1.2
LSA                              pmax    pmax
       comp=Z,19nm,0.7s
LSA    Lhasa          67.87 304  P       P        08 21 08.1 +1.2
LSA                              IAmb    IAmb     08 21 08.9
       comp=Z,19nm,0.7s
CASY   Casey          68.11 197  P       P        08 21 07.2  0.0
CASY                             IAmb    IAmb     08 21 08.3
       comp=Z,22nm,1.2s
SPIA   Saint Paul Isl 68.58  21  P       P        08 21 09.7 -0.4
       baz=220
ZAK    Zakamensk      69.16 329 eP       P        08 21 14.0 -0.1
ZAK                             e                 08 21 37.5
ZAK                              pmax    pmax
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       comp=Z,15nm,1.4s
ZAK                              pmax    pmax
       comp=Z,9.0nm,1.3s
TAPN   Taplejung      70.03 301 eP       P        08 21 20.7 +0.5
ODAN   Odare          70.17 301 eP       P        08 21 21.5 +0.5
       comp=Z,139nm,0.7s
RAMN   Ramite         70.88 300 eP       P        08 21 25.4 +0.1
       comp=Z,21nm,0.5s
SDPT   Sand Point     71.18  26  P       P        08 21 25.3 -0.8
       baz=230
JIRN   Jiri           71.42 301 eP       P        08 21 29.1 +0.4
       comp=Z,6.1nm,0.8s
GUN    Gumba          71.75 301 eP       P        08 21 31.1 +0.5
       comp=Z,132nm,0.7s
PKI    Pulchoki       72.06 301 eP       P        08 21 32.5  0.0
       comp=Z,46nm,0.7s
PKIN   Phulchoki      72.07 301 eP       P        08 21 32.4 -0.1
       comp=Z,41nm,0.7s
KKN    Kakani         72.23 301 eP       P        08 21 33.6 +0.3
       comp=Z,83nm,0.7s
DMN    Daman          72.33 301 eP       P        08 21 34.5 +0.5
       comp=Z,137nm,0.9s
KNGR   Kungurtug, Tuv 72.35 327 i P      P        08 21 33.8 +0.4
GKN    Gorkha         72.83 301 eP       P        08 21 37.1 +0.2
       comp=Z,143nm,1.0s
VNDA   Vanda          73.04 178  P       P        08 21 37.8 +0.9
       comp=Z,5.1nm,0.8s,baz=333,slow=6.9,SNR=29
       comp=Z,5.1nm,0.8s
VNDA   Vanda          73.04 178  P       P        08 21 37.8 +0.9
BILL   Bilibino       73.12   5d iP      P        08 21 37.7 +0.2
BILL                            e*PP     pP       08 22 03.3 -0.3
BILL                            e                 08 24 25.5
BILL                            ePPP     PPP      08 26 12.0
BILL                             pmax    pmax
       comp=Z,14nm,1.0s
BILL   Bilibino       73.12   5  P       P        08 21 37.0 -0.4
SBA    Scott Base     73.59 177  P       P        08 21 42.3 +2.2
SBA                              pmax    pmax
       comp=Z,12nm,1.2s
SBA    Scott Base     73.59 177  P       P        08 21 42.3 +2.2
CHIR   Chirikof Islan 73.66  28  P       P        08 21 40.1 -0.7
       baz=235
KOLN   Koldanda       73.66 301 eP       P        08 21 41.8  0.0
       comp=Z,112nm,0.8s
DANN   Dangsing       73.67 301 eP       P        08 21 41.6 -0.3
       comp=Z,75nm,0.7s
PYUN   Piuthan        74.27 301 eP       P        08 21 44.9 -0.4
       comp=Z,120nm,0.8s
SII    Sitkinak Islan 74.74  27          P        08 21 47.6 +0.4
SII    Sitkinak Islan 74.74  27  P       P        08 21 47.3 +0.1
       baz=236
WMQ    Urumqi         75.38 317 eP       P        08 21 52.8 +1.6
WMQ                              pP      pP       08 22 17.4 -0.5
WMQ                              pmax    pmax
       comp=Z,19nm,1.1s
WMQ                              LR      LR
       comp=Z,31nm,21.1s
OHAK   Old Harbor     75.52  27  P       P        08 21 51.1 -0.5
       baz=237
ANM    Nome           75.68  17  P       P        08 21 53.8 +1.4
ANM                              pmax    pmax
       comp=Z,31nm,1.1s
ANM    Nome           75.68  17  P       P        08 21 53.8 +1.4
ANM                              IAmb    IAmb     08 21 54.4
       comp=Z,31nm,1.1s
ANM    Nome           75.68  17  P       P        08 21 53.0 +0.6
       baz=224
P18K   Big Mountain,  75.90  25  P       P        08 21 53.5 -0.3
       baz=234
KDAK   Kodiak Island  76.14  27  P       P        08 21 54.3 -0.8
       comp=Z,9.6nm,0.8s,baz=225,slow=3.3,SNR=8.5
       comp=Z,9.6nm,0.8s
O18K   Koktuh Hills   76.18  24  P       P        08 21 55.0 -0.4
       baz=234
Q19K   Cape Douglas,  76.31  26  P       P        08 21 56.3 +0.2
Q19K   Cape Douglas,  76.31  26  P       P        08 21 55.6 -0.5
       baz=236
N18K   Kilae Creek    76.40  23  P       P        08 21 57.9 +1.3
N18K                             IAmb    IAmb     08 21 58.8
       comp=Z,18nm,0.9s
N18K   Kilae Creek    76.40  23  P       P        08 21 57.0 +0.4
       baz=234
O19K   Port Alsworth  76.74  24  P       P        08 21 58.0 -0.4
       baz=235
SVW2   Sparrevohn     76.77  23  P       P        08 21 59.8 +1.2
P19K   Oil Pt         76.89  25  P       P        08 21 59.4 +0.1
P19K   Oil Pt         76.89  25  P       P        08 21 58.4 -1.0
       baz=236
N19K   Bonanza Creek  77.03  24  P       P        08 22 01.0 +0.8
N19K   Bonanza Creek  77.03  24  P       P        08 22 00.2  0.0
       baz=235
O20K   Slope Mountain 77.38  25  P       P        08 22 01.7 -0.5
       baz=237
HOM    Homer          77.57  25  P       P        08 22 03.0 -0.1
       baz=238
TIXI   Tiksi          77.66 353  P       P        08 22 02.4 -1.0
       comp=Z,1.7nm,0.4s,baz=97,slow=20,SNR=8.8
       comp=Z,1.7nm,0.4s
TIXI   Tiksi          77.66 353ceP       P        08 22 04.1 +0.7
TIXI                             pmax    pmax
       comp=Z,5.0nm,1.3s
TIXI   Tiksi          77.66 353  P       P        08 22 03.2 -0.1
CNPM   China Poot     77.67  26  P       P        08 22 04.5 +0.8
L19K   White Mountain 77.69  22  P       P        08 22 05.1 +1.3
L19K                             IAmb    IAmb     08 22 05.8
       comp=Z,28nm,0.9s
L19K   White Mountain 77.69  22  P       P        08 22 04.9 +1.2
       baz=234,SNR=18
TTA    Tatalina       77.70  21  P       P        08 22 04.8 +0.9
TTA                              pmax    pmax
       comp=Z,14nm,0.9s
TTA    Tatalina       77.70  21  P       P        08 22 04.8 +0.9
TTA    Tatalina       77.70  21  P       P        08 22 04.7 +0.8
       baz=233,SNR=9.5
M19K   Big River Lodg 77.70  23  P       P        08 22 04.8 +1.0
       baz=235
BRSE   Bradley Lake S 78.00  26  P       P        08 22 05.3 -0.2
       baz=238
L20K   Farewell, AK   78.23  22  P       P        08 22 07.8 +1.1
       baz=235,SNR=10
CAPN   Captain Cook N 78.37  25  P       P        08 22 06.1 -1.4
       baz=238
GCSA   Galena City Sc 78.51  20  P       P        08 22 08.7 +0.5
       baz=232
K20K   Telida         78.67  22  P       P        08 22 10.4 +1.3
K20K                             IAmb    IAmb     08 22 11.3
       comp=Z,24nm,0.8s
K20K   Telida         78.67  22  P       P        08 22 10.3 +1.2
       baz=235,SNR=21
SEW    Seward         78.75  26  P       P        08 22 09.9 +0.4
       baz=240
O22K   Cooper Landing 78.82  25  P       P        08 22 10.4 +0.5
O22K   Cooper Landing 78.82  25  P       P        08 22 10.0 +0.1
       baz=239
RDOG   Red Dog Mine   78.88  16  P       P        08 22 10.3 +0.1
RDOG   Red Dog Mine   78.88  16  P       P        08 22 09.8 -0.4
       baz=226
PPLA   Purkeypile     79.11  23  P       P        08 22 11.6 -0.2
PPLA                             IAmb    IAmb     08 22 18.5
       comp=Z,25nm,1.2s
PPLA   Purkeypile     79.11  23  P       P        08 22 11.4 -0.4
       baz=237
J20K   Nowinta River  79.11  21  P       P        08 22 12.8 +1.3
J20K   Nowinta River  79.11  21  P       P        08 22 12.7 +1.2
       baz=234,SNR=41
RC01   Rabbit Creek A 79.13  25  P       P        08 22 12.2 +0.5
RC01                             IAmb    IAmb     08 22 12.7
       comp=Z,58nm,1.2s
RC01   Rabbit Creek A 79.13  25  P       P        08 22 11.8 +0.1
       baz=239,SNR=7.3
M22K   Willow         79.31  24  P       P        08 22 12.7 +0.1
M22K                             IAmb    IAmb     08 22 14.3
       comp=Z,34nm,0.9s
M22K   Willow         79.31  24  P       P        08 22 11.9 -0.7
       baz=239
CAST   Castle Rocks   79.44  22  P       P        08 22 13.6 +0.3
CAST                             IAmb    IAmb     08 22 14.7
       comp=Z,30nm,0.7s
CAST   Castle Rocks   79.44  22  P       P        08 22 13.3  0.0
       baz=237,SNR=34
CUT    Chulitna       79.59  23  P       P        08 22 14.0 -0.2
CUT                              IAmb    IAmb     08 22 30.2
       comp=Z,64nm,1.5s
CUT    Chulitna       79.59  23  P       P        08 22 13.3 -0.8
       baz=238
PWL    Port Wells     79.60  25  P       P        08 22 14.8 +0.6
PWL    Port Wells     79.60  25  P       P        08 22 14.6 +0.3
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       baz=240
CHUM   Lake Minchumin 79.61  22  P       P        08 22 14.8 +0.6
       baz=236,SNR=48
PMR    Palmer         79.64  24  P       P        08 22 14.4  0.0
PMR                              pmax    pmax
       comp=Z,20nm,0.7s
PMR    Palmer         79.64  24  P       P        08 22 14.3  0.0
PMR                              IAmb    IAmb     08 22 15.2
       comp=Z,20nm,0.7s
PMR    Palmer         79.64  24  P       P        08 22 14.3 -0.1
       baz=240,SNR=6.6
Q23K   Middleton Isla 79.79  27  P       P        08 22 15.7 +0.5
       baz=242
GHO    Glory Hole Cre 79.81  24  P       P        08 22 15.9 +0.4
GHO                              IAmb    IAmb     08 22 16.5
       comp=Z,27nm,0.6s
KNK    Knik Glacier   79.83  25  P       P        08 22 15.8 +0.3
       baz=240,SNR=5.2
KTH    Kantishna Hill 79.95  22  P       P        08 22 15.7 -0.5
KTH                              IAmb    IAmb     08 22 16.5
       comp=Z,26nm,0.7s
MK31   Makanchi Array 79.97 319 i P      P        08 22 16.7 +0.1
MK31   Makanchi Array 79.97 319  P       P        08 22 17.0 +0.4
MKAR   Makanchi Array 79.97 319  P       P        08 22 16.9 +0.4
       comp=Z,12nm,0.8s,baz=104,slow=6.3,SNR=69
MKAR                             PKKPbc  PKKPbc   08 41 01.1 -2.2
       comp=Z,0.4nm,0.7s,baz=337,slow=2.8,SNR=4.6
MKAR                             LR      LR       08 58 52.1
       comp=Z,67nm,20.6s,baz=250,slow=36
       comp=Z,12nm,0.8s
MKAR   Makanchi Array 79.97 319  P       P        08 22 17.0 +0.4
SML    Sawmill        80.07  24  P       P        08 22 17.3 +0.5
SML    Sawmill        80.07  24  P       P        08 22 17.2 +0.3
       baz=240,SNR=21
GLI    Glacier Island 80.14  26  P       P        08 22 17.6 +0.4
GLI    Glacier Island 80.14  26  P       P        08 22 17.4 +0.2
       baz=242,SNR=5.9
MAKZ   Makanchi       80.18 319  P       P        08 22 18.0 +0.2
MAKZ                             pmax    pmax
       comp=Z,21nm,0.9s
MAKZ   Makanchi       80.18 319  P       P        08 22 17.9 +0.2
MAKZ                             IAmb    IAmb     08 22 19.0
       comp=Z,21nm,0.9s
BPAW   Bear Paw Mtn.  80.22  22  P       P        08 22 17.3 -0.3
BPAW   Bear Paw Mtn.  80.22  22  P       P        08 22 17.2 -0.4
       baz=238,SNR=14
IMAR   Indian Mountai 80.30  20  P       P        08 22 18.6 +0.7
M23K   Glacier View   80.32  25  P       P        08 22 18.3 +0.2
       baz=241,SNR=7.0
H21K   Melozitna Rive 80.43  20  P       P        08 22 19.5 +0.8
H21K   Melozitna Rive 80.43  20  P       P        08 22 19.4 +0.8
       baz=236,SNR=17
I21K   Tanana         80.45  21  P       P        08 22 19.6 +0.9
I21K                             IAmb    IAmb     08 22 21.3
       comp=Z,41nm,0.9s
I21K   Tanana         80.45  21  P       P        08 22 19.7 +1.0
       baz=236,SNR=45
SCM    Sheep Creek Mo 80.50  25  P       P        08 22 19.6 +0.4
SCM                              pmax    pmax
       comp=Z,33nm,1.0s
SCM    Sheep Creek Mo 80.50  25  P       P        08 22 19.6 +0.4
SCM                              IAmb    IAmb     08 22 21.6
       comp=Z,33nm,1.0s
SCM    Sheep Creek Mo 80.50  25  P       P        08 22 19.6 +0.4
       baz=241,SNR=5.1
EYAK   Cordova Ski Ar 80.57  26  P       P        08 22 19.8 +0.3
       baz=243
RND    Reindeer       80.67  23  P       P        08 22 19.8 -0.2
RND                              pmax    pmax
       comp=Z,45nm,0.6s
RND    Reindeer       80.67  23  P       P        08 22 19.8 -0.2
WAT6   Susitna Watana 80.70  24  P       P        08 22 20.3  0.0
       baz=241,SNR=14
ZAA0   Zalesovo Array 80.81 326  P       P        08 22 20.3 -0.6
ZAA0                             IAmb    IAmb     08 22 21.1
       comp=Z,16nm,0.8s
ZALV   Zalesovo Beam  80.81 326  P       P        08 22 20.5 -0.4
       comp=Z,16nm,0.6s,baz=111,slow=5.6,SNR=50
       comp=Z,16nm,0.6s
ZALV   Zalesovo Beam  80.81 326  P       P        08 22 20.1 -0.8
BWN    Browne         80.83  22  P       P        08 22 21.1 +0.3
BWN                              IAmb    IAmb     08 22 21.8
       comp=Z,58nm,1.2s
DIV    Divide         80.83  26  P       P        08 22 21.5 +0.5
DIV                              IAmb    IAmb     08 22 22.1
       comp=Z,23nm,0.6s
KAIM   Kayak Island   80.89  27  P       P        08 22 22.0 +0.8
       baz=244
KLU    Klutina        80.93  25  P       P        08 22 22.4 +0.8
KLU                              IAmb    IAmb     08 22 23.8
       comp=Z,30nm,0.8s
KLU    Klutina        80.93  25  P       P        08 22 22.3 +0.8
       baz=243,SNR=11
DHY    Denali Highway 81.08  24  P       P        08 22 22.7 +0.3
DHY                              IAmb    IAmb     08 22 24.0
       comp=Z,21nm,0.8s
DHY    Denali Highway 81.08  24  P       P        08 22 22.6 +0.3
       baz=241,SNR=15
M24K   Tolsona, Glenn 81.11  25  P       P        08 22 23.5 +1.1
M24K   Tolsona, Glenn 81.11  25  P       P        08 22 23.4 +1.0
       baz=242,SNR=12
NEA2   Nenana         81.19  22  P       P        08 22 22.3 -0.4
NEA2                             IAmb    IAmb     08 22 23.1
       comp=Z,36nm,0.7s
NEA2   Nenana         81.19  22  P       P        08 22 22.2 -0.4
       baz=239,SNR=34
BMRM   Bremner River  81.27  26  P       P        08 22 23.7 +0.4
BMRM                             IAmb    IAmb     08 22 27.8
       comp=Z,45nm,1.3s
BMRM   Bremner River  81.27  26  P       P        08 22 23.6 +0.4
       baz=244
I23K   Minto, Yukon-K 81.37  21  P       P        08 22 23.8 +0.1
I23K                             IAmb    IAmb     08 22 25.5
       comp=Z,16nm,0.6s
I23K   Minto, Yukon-K 81.37  21  P       P        08 22 23.7 +0.1
       baz=239,SNR=34
BERG   Berg Lake      81.42  27  P       P        08 22 25.0 +1.0
WRH    Wood River Hil 81.50  22  P       P        08 22 23.6 -0.7
WRH                              IAmb    IAmb     08 22 24.7
       comp=Z,43nm,1.2s
N25K   Chitina, Valde 81.55  25  P       P        08 22 25.6 +0.8
N25K                             IAmb    IAmb     08 22 26.5
       comp=Z,15nm,0.6s
N25K   Chitina, Valde 81.55  25  P       P        08 22 25.5 +0.7
       baz=244,SNR=6.0
H23K   Yukon River    81.66  21  P       P        08 22 25.9 +0.7
H23K                             IAmb    IAmb     08 22 26.8
       comp=Z,17nm,0.8s
H23K   Yukon River    81.66  21  P       P        08 22 25.8 +0.7
       baz=239,SNR=23
HARP   HAARP          81.67  25  P       P        08 22 25.8 +0.5
       baz=243,SNR=6.9
MDM    Murphy Dome    81.69  22  P       P        08 22 25.0 -0.3
CCB    Clear Creek Bu 81.69  22  P       P        08 22 24.5 -0.8
CCB                              IAmb    IAmb     08 22 25.4
       comp=Z,26nm,0.7s
TCOL   CIGO, UAF Yank 81.78  22  P       P        08 22 25.4 -0.3
TCOL   CIGO, UAF Yank 81.78  22  P       P        08 22 25.1 -0.7
       baz=240,SNR=17
COLA   College        81.78  22 i P      P        08 22 25.2 -0.6
COLA                             pmax    pmax
       comp=Z,40nm,0.9s
COLA   College        81.78  22  P       P        08 22 25.3 -0.4
COLA   College        81.78  22  P       P        08 22 25.1 -0.6
       baz=240
PAX    Paxson         81.80  24  P       P        08 22 26.4 +0.3
PAX                              pmax    pmax
       comp=Z,16nm,1.1s
PAX    Paxson         81.80  24  P       P        08 22 26.4 +0.3
PAX    Paxson         81.80  24  P       P        08 22 26.0 -0.1
       baz=243,SNR=12
GLB    Gilahina Butte 81.82  26  P       P        08 22 26.6 +0.5
GLB                              IAmb    IAmb     08 22 27.7
       comp=Z,36nm,1.0s
WAX    Waxell Ridge   81.82  27  P       P        08 22 27.1 +0.9
WAX                              IAmb    IAmb     08 22 28.0
       comp=Z,40nm,0.8s
VRDI   Verde Repeater 81.88  26  P       P        08 22 27.3 +0.6
VRDI                             IAmb    IAmb     08 22 28.1
       comp=Z,25nm,0.9s
POKR   Poker Plat Res 82.06  22  P       P        08 22 27.0 -0.3
POKR                             IAmb    IAmb     08 22 27.4
       comp=Z,14nm,0.6s
POKR   Poker Plat Res 82.06  22  P       P        08 22 26.2 -1.1
       baz=241
K24K   Donnelly Dome  82.06  23  P       P        08 22 27.6 +0.3
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       baz=242,SNR=13
IL31                      82.09  22    P        P        08 22 26.6 -0.7
IL31                                   IAmb     IAmb     08 22 27.4
       comp=Z,28nm,0.8s
ILAR   Eielson Array      82.09  22    P        P        08 22 26.5 -0.9
       comp=Z,23nm,0.7s,baz=246,slow=5.4,SNR=274
ILAR                                   PKKPbc   PKKPbc   08 40 55.7 -3.6
       comp=Z,0.3nm,0.5s,baz=335,slow=2.0,SNR=4.1
       comp=Z,23nm,0.7s
ILAR   Eielson Array      82.09  22    P        P        08 22 26.4 -1.1
ISLE   Juniper Island     82.12  27    P        P        08 22 28.3 +0.4
ISLE                                   IAmb     IAmb     08 22 29.3
       comp=Z,22nm,0.8s
COLD   Coldfoot           82.17  19    P        P        08 22 28.7 +0.9
COLD                                   IAmb     IAmb     08 22 29.9
       comp=Z,29nm,1.3s
COLD   Coldfoot           82.17  19    P        P        08 22 28.6 +0.8
       baz=238
KDJ    Kajisay            82.25 313    P        P        08 22 29.8 +0.8
KDJ                                    pmax     pmax
       comp=Z,20nm,0.8s
KDJ    Kajisay            82.25 313    P        P        08 22 29.8 +0.8
KDJ                                    IAmb     IAmb     08 22 30.8
       comp=Z,20nm,0.8s
H24K   Noodor Dome        82.25  21    P        P        08 22 28.4 +0.1
H24K                                   IAmb     IAmb     08 22 29.8
       comp=Z,17nm,0.6s
H24K   Noodor Dome        82.25  21    P        P        08 22 28.4 +0.1
       baz=240,SNR=26
RIDG   Independent Ri     82.40  23    P        P        08 22 29.4 +0.2
       baz=243,SNR=12
MENT   Mentasta           82.50  24    P        P        08 22 30.4 +0.8
MENT                                   IAmb     IAmb     08 22 31.2
       comp=Z,17nm,0.7s
KSH    Kashi              82.57 311    P        P        08 22 33.2 +2.6
KSH                                    sP       sP       08 23 10.4 +1.5
KSH                                    pmax     pmax
       comp=Z,11nm,0.7s
M26K   Nabesna, AK        82.58  25    P        P        08 22 30.5 +0.5
M26K   Nabesna, AK        82.58  25    P        P        08 22 30.6 +0.5
       baz=245,SNR=5.4
TABL   Table Mountain     82.59  27    P        P        08 22 31.4 +1.0
J25K   Salcha River,      82.60  23    P        P        08 22 30.3 +0.1
J25K   Salcha River,      82.60  23    P        P        08 22 30.3 +0.1
       baz=243,SNR=69
BARN   Barnard Glacie     82.61  27    P        P        08 22 31.5 +1.0
DOT    Dot Lake           82.67  24    P        P        08 22 31.0 +0.5
L26K   Log Cabin Wild     82.69  24    P        P        08 22 31.4 +0.8
L26K                                   IAmb     IAmb     08 22 32.2
       comp=Z,25nm,0.8s
L26K   Log Cabin Wild     82.69  24    P        P        08 22 31.3 +0.7
       baz=245,SNR=31
A21K   Barrow             82.70  15    P        P        08 22 30.8 +0.4
A21K                                   IAmb     IAmb     08 22 31.8
       comp=Z,20nm,0.8s
A21K   Barrow             82.70  15    P        P        08 22 30.6 +0.1
       baz=231
SCRK   Sand Creek         82.85  23    P        P        08 22 32.0 +0.5
SCRK                                   IAmb     IAmb     08 22 32.8
       comp=Z,18nm,0.8s
SCRK   Sand Creek         82.85  23    P        P        08 22 31.8 +0.3
       baz=244,SNR=22
PNL    Peninsula          83.11  28    P        P        08 22 33.0 +0.1
       baz=249
TOLK   Toolik Lake Re     83.13  18    P        P        08 22 33.6 +0.8
TOLK                                   IAmb     IAmb     08 22 34.6
       comp=Z,31nm,0.8s
TOLK   Toolik Lake Re     83.13  18    P        P        08 22 33.5 +0.8
       baz=238
BOOM   Boomskoye usch     83.23 314    P        P        08 22 34.6 +0.5
BOOM                                   pmax     pmax
       comp=Z,21nm,0.5s
BOOM   Boomskoye usch     83.23 314    P        P        08 22 34.6 +0.5
BOOM                                   IAmb     IAmb     08 25 26.1
       comp=Z,21nm,0.5s
J26L   Joseph Creek       83.24  23    P        P        08 22 34.0 +0.5
       baz=244,SNR=20
L27K   Beaver Creek,      83.34  25    P        P        08 22 35.0 +1.0
L27K                                   IAmb     IAmb     08 22 35.8
       comp=Z,17nm,0.8s
L27K   Beaver Creek,      83.34  25    P        P        08 22 34.9 +1.0
       baz=246,SNR=17
BCAR   Beaver Creek A     83.36  25    P        P        08 22 34.4 +0.3
YUK3   Moose Creek        83.42  26    P        P        08 22 35.6 +0.9
       baz=248,SNR=9.8
KURK   Kurchatov          83.42 322ceP          P        08 22 34.6  0.0
KURK                                   pmax     pmax
       comp=Z,20nm,1.0s
KURK   Kurchatov          83.42 322    P        P        08 22 34.4 -0.1
KURK                                   IAmb     IAmb     08 22 35.5
       comp=Z,19nm,1.0s
KURBB  Kurchatov Arra     83.45 322    LR       LR       08 59 23.8
       comp=Z,64nm,20.7s,baz=199,slow=35
BVCY   Beaver Creek       83.49  25    P        P        08 22 35.9 +1.1
       baz=247,SNR=19
TKM2   Tokmak 2           83.57 314    P        P        08 22 36.4 +0.6
       SNR=16
K27K   Chicken            83.63  24    P        P        08 22 36.6 +1.1
       baz=246
KBK    Karagaybulak       83.98 314    P        P        08 22 39.0 +1.1
       SNR=9.6
YUK6   Outpost Mounta     84.05  27    P        P        08 22 38.7 +0.7
       baz=250
YUK4   Talbot Arm         84.06  27    P        P        08 22 39.6 +1.7
       baz=249,SNR=13
BMAR   Burnt Mountain     84.17  20    P        P        08 22 38.6 +0.5
CHMS   Chumysh            84.19 314    P        P        08 22 39.3 +0.5
       SNR=13
UCH    Uchtor             84.21 313    P        P        08 22 40.7 +1.3
       SNR=21
SIT    Sitka              84.27  32    P        P        08 22 39.4 +0.7
       baz=252
EGAK   Eagle              84.30  23    P        P        08 22 39.5 +0.8
EGAK                                   IAmb     IAmb     08 22 41.0
       comp=Z,25nm,0.7s
EGAK   Eagle              84.30  23    P        P        08 22 39.6 +0.8
       baz=247,SNR=33
AAK    Ala-Archa          84.30 314    P        P        08 22 40.1 +0.6
       SNR=14
AAK    Ala-Archa          84.30 314ceP          P        08 22 40.2 +0.7
AAK                                    pmax     pmax
       comp=Z,14nm,0.7s
AAK    Ala-Archa          84.30 314    P        P        08 22 39.8 +0.3
AAK                                    IAmb     IAmb     08 25 37.3
       comp=Z,28nm,0.7s
HYT    Haines Junctio     84.41  28    P        P        08 22 41.0 +1.5
HYT    Haines Junctio     84.41  28    P        P        08 22 40.8 +1.3
       baz=250,SNR=26
USP    Ospenovka          84.42 314    P        P        08 22 40.7 +0.7
       SNR=26
DAWY   Dawson             84.74  24    P        P        08 22 42.0 +1.0
DAWY                                   IAmb     IAmb     08 22 43.8
       comp=Z,24nm,1.1s
DAWY   Dawson             84.74  24    P        P        08 22 42.1 +1.0
       baz=248,SNR=17
H02S1  DAWSON INLET T     84.77  36    T        T        09 56 08.6
       SNR=8.5
AML    Almayashu          84.78 313    P        P        08 22 43.5 +1.2
       SNR=52
EKS2   Erkin-Say          84.83 313    P        P        08 22 43.0 +0.9
       SNR=15
CRAG   Craig              85.00  33    P        P        08 22 43.4 +0.9
       baz=254
SKAG   Skagway            85.00  29    P        P        08 22 43.1 +0.8
       baz=252
M30M   Minto, Yukon       85.31  26    P        P        08 22 45.1 +1.1
M30M                                   IAmb     IAmb     08 22 45.9
       comp=Z,16nm,0.8s
M30M   Minto, Yukon       85.31  26    P        P        08 22 45.1 +1.1
       baz=251,SNR=16
J29M   Klondike Camp      85.36  24    P        P        08 22 45.5 +1.4
       baz=249,SNR=6.8
QSPA   South Pole Qui     85.36 180    P        P        08 22 44.7 +0.5
QSPA                                   IAmb     IAmb     08 22 45.1
       comp=Z,13nm,0.8s
N31M   Braeburn, Yuko     85.41  27    P        P        08 22 45.8 +1.4
N31M                                   IAmb     IAmb     08 22 48.1
       comp=Z,20nm,0.7s
N31M   Braeburn, Yuko     85.41  27    P        P        08 22 45.7 +1.2
       baz=252,SNR=8.9
WHY    Whitehorse         85.57  28    P        P        08 22 46.7 +1.3
WHY    Whitehorse         85.57  28    P        P        08 22 46.2 +0.8
       baz=253
MAW    Mawson             85.63 203    P        P        08 22 45.6 +0.2
       comp=Z,12nm,0.8s,baz=102,slow=6.0,SNR=26
       comp=Z,12nm,0.8s
MAW    Mawson             85.63 203    P        P        08 22 45.8 +0.4
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       baz=86,SNR=15
MAW    Mawson             85.63 203    P        P        08 22 45.8 +0.4
MAW                                    pmax     pmax
       comp=Z,9.0nm,1.5s
MAW    Mawson             85.63 203    P        P        08 22 45.8 +0.4
I29M   Ogilvie Camp,      85.64  23    P        P        08 22 46.2 +0.7
I29M                                   IAmb     IAmb     08 22 47.1
       comp=Z,42nm,1.1s
I29M   Ogilvie Camp,      85.64  23    P        P        08 22 46.0 +0.5
       baz=249
NRIK   Noril'sk           85.67 341    P        P        08 22 45.4 -0.2
       comp=Z,7.9nm,0.7s,baz=110,slow=4.9,SNR=14
       comp=Z,7.9nm,0.7s
NRIK   Noril'sk           85.67 341ceP          P        08 22 44.7 -0.8
NRIK                                   pmax     pmax
       comp=Z,8.0nm,0.9s
NRIK   Noril'sk           85.67 341    P        P        08 22 45.5 -0.1
M31M   Drury Creek, Y     86.26  27    P        P        08 22 49.4 +0.7
M31M                                   IAmb     IAmb     08 22 50.2
       comp=Z,11nm,0.7s
M31M   Drury Creek, Y     86.26  27    P        P        08 22 49.2 +0.5
       baz=253,SNR=13
BTK    Batken             86.57 310    P        P        08 22 50.8  0.0
BTK                                    pmax     pmax
       comp=Z,10.0nm,0.8s
BTK    Batken             86.57 310    P        P        08 22 50.8  0.0
BTK                                    IAmb     IAmb     08 22 52.4
       comp=Z,10nm,0.8s
EPYK   Eagle Plains       86.60  22    P        P        08 22 51.0 +0.8
EPYK   Eagle Plains       86.60  22    P        P        08 22 51.0 +0.8
       baz=251
FARO   Faro, Yukon        86.73  27    P        P        08 22 51.6 +0.6
       baz=254,SNR=8.0
KK31   Karatay Array      87.27 313    P        P        08 22 53.8 -0.2
KK31                                   pmax     pmax
       comp=Z,11nm,1.2s
KK31   Karatay Array      87.27 313    P        P        08 22 53.8 -0.2
KKAR   Karatay Array      87.27 313    P        P        08 22 53.6 -0.3
KKAR   Karatay Array      87.27 313    P        P        08 22 53.6 -0.3
DLBC   Dease Lake         87.37  31    P        P        08 22 55.5 +1.3
       comp=Z,16nm,0.9s,baz=276,slow=4.7,SNR=21
       comp=Z,16nm,0.9s
DLBC   Dease Lake         87.37  31    P        P        08 22 55.5 +1.3
DLBC                                   IAmb     IAmb     08 22 56.6
       comp=Z,19nm,0.9s
MMPY   Sheldon Lake,      87.77  27    P        P        08 22 57.1 +1.1
       baz=256,SNR=18
WTLY   Watson Lake, Y     88.36  29    P        P        08 22 59.7 +0.9
       baz=258
INK    Inuvik             88.38  21    P        P        08 22 58.7 +0.1
       comp=Z,15nm,0.6s,baz=271,slow=4.0,SNR=98
INK                                    LR       LR       09 00 35.8
       comp=Z,69nm,19.3s,baz=171,slow=34
       comp=Z,15nm,0.6s
INK    Inuvik             88.38  21    P        P        08 22 58.8 +0.2
INK                                    pmax     pmax
       comp=Z,42nm,1.2s
INK    Inuvik             88.38  21    P        P        08 22 58.8 +0.2
INK    Inuvik             88.38  21    P        P        08 22 58.5 -0.1
       baz=253
K02D   Willamette Mer     88.57  47    P        P        08 23 01.2 +1.0
       baz=262
TGTN   Hyland Airport     88.90  28    P        P        08 23 02.6 +1.3
       baz=258,SNR=9.4
O02D   Mt. Diablo Mer     88.91  50    P        P        08 23 03.7 +1.8
       baz=263
I03D   Drain, OR          88.93  46    P        P        08 23 02.5 +0.7
       baz=263
BRVK   Borovoye           88.96 323ceP          P        08 23 00.8 -1.0
BRVK                                   pmax     pmax
       comp=Z,28nm,1.7s
BRVK   Borovoye           88.96 323    P        P        08 23 00.7 -1.0
BRVK                                   IAmb     IAmb     08 23 01.7
       comp=Z,18nm,1.1s
HUMO   Hull Mountain      89.08  47    P        P        08 23 03.9 +1.3
YBH    Yreka Blue Hor     89.16  48    P        P        08 23 03.9 +0.9
       comp=Z,3.5nm,0.9s,baz=181,slow=4.2,SNR=9.4
YBH                                    LR       LR       08 56 15.0
       comp=Z,36nm,20.4s,baz=224,slow=31
       comp=Z,3.5nm,0.9s
YBH    Yreka Blue Hor     89.16  48    P        P        08 23 04.7 +1.7
YBH                                    pmax     pmax
       comp=Z,6.0nm,1.1s
YBH    Yreka Blue Hor     89.16  48    P        P        08 23 04.7 +1.7
H04D   Lebanon            89.47  45    P        P        08 23 05.3 +1.0
       baz=263
L04D   Klamath Falls      89.52  48    P        P        08 23 05.2 +0.4
       baz=263
I04A   Tendick Farm,      89.62  46    P        P        08 23 05.6 +0.6
       baz=263
O03E   Paynes Creek       89.68  50    P        P        08 23 06.1 +0.7
       baz=264
K04D   Chiloquin, OR      89.97  47    P        P        08 23 07.4 +0.5
       baz=264
A04D   Lummi Island       90.00  41    P        P        08 23 07.5 +0.9
       baz=263
B05A   Bryant             90.35  42    P        P        08 23 09.2 +0.9
       baz=264
J05D   Fort Rock, OR      90.41  47    P        P        08 23 10.0 +1.0
       baz=264,SNR=11
I05D   Terrebonne, OR     90.45  46    P        P        08 23 09.6 +0.7
       baz=264
K05A   Summer Lake        90.61  47    P        P        08 23 10.5 +0.6
K05A                                   IAmb     IAmb     08 23 12.5
       comp=Z,17nm,1.2s
PINE   Pine Mountain      90.68  46    P        P        08 23 11.3 +1.1
PINE                                   IAmb     IAmb     08 23 12.3
       comp=Z,8.9nm,0.8s
MOD    Modoc Plateau      90.97  48    P        P        08 23 11.8 +0.3
VCNR   Virginia City      91.23  51    P        P        08 23 13.5 +0.6
PNTR   Pine Nut           91.25  51    P        P        08 23 14.1 +1.1
PNTR                                   IAmb     IAmb     08 23 20.5
       comp=Z,12nm,1.4s
I07A   Izee               91.74  46    P        P        08 23 15.9 +0.9
A36M   Sachs Harbour      91.95  18    P        P        08 23 15.6 +0.4
A36M   Sachs Harbour      91.95  18    P        P        08 23 15.2  0.0
       baz=261
C36M   Paulatuk           91.96  21    P        P        08 23 15.3  0.0
C36M   Paulatuk           91.96  21    P        P        08 23 15.0 -0.3
       baz=262
RYN    Ryan               92.05  52    P        P        08 23 16.2 -0.5
PNT    Penticton          92.08  41    P        P        08 23 14.1 -2.3
PNT                                    pmax     pmax
       comp=Z,12nm,1.4s
EDW2   Edwards Air Fo     92.21  55    P        P        08 23 18.5 +1.2
       baz=266
NVAR   Mina Array Bea     92.21  52    P        P        08 23 19.1 +1.6
       comp=Z,2.7nm,0.8s,baz=252,slow=6.6,SNR=27
NVAR                                   LR       LR       08 56 00.7
       comp=Z,46nm,21.5s,baz=340,slow=30
       comp=Z,2.7nm,0.8s
NVAR   Mina Array Bea     92.21  52    P        P        08 23 18.0 +0.5
G08A   Pilot Rock         92.22  45    P        P        08 23 16.4 -0.9
WVOR   Wild Horse Val     92.24  48    P        P        08 23 17.3 -0.1
WVOR                                   pmax     pmax
       comp=Z,7.0nm,1.1s
WVOR   Wild Horse Val     92.24  48    P        P        08 23 17.3 -0.1
CWC    Cottonwood Cre     92.25  54    P        P        08 23 17.3 -0.3
       baz=266
NV11   Mina Array Sit     92.33  52    P        P        08 23 17.8 -0.1
J08A   Circle Bar Ran     92.43  47    P        P        08 23 18.3 +0.1
LRMC   Laurel Mtn Rad     92.50  55    P        P        08 23 19.4 +0.6
       baz=266
MPMC   Manual Prospec     92.70  54    P        P        08 23 20.3 +0.6
       baz=266
GRAC   Grapevine Rang     92.86  53    P        P        08 23 21.4 +1.1
       baz=266
TPH    Tonopah            93.04  52    P        P        08 23 21.6 +0.3
TPH                                    pmax     pmax
       comp=Z,10.0nm,0.9s
TPH    Tonopah            93.04  52    P        P        08 23 21.6 +0.3
TPH                                    IAmb     IAmb     08 23 23.1
       comp=Z,10.0nm,0.9s
QSM    Queen of Sheba     93.19  54    P        P        08 23 21.5 -0.3
FURC   Furnace Creek,     93.23  54    P        P        08 23 22.8 +1.0
       baz=267
BMO    Blue Mountains     93.36  45    P        P        08 23 22.4 -0.1
BMO                                    pmax     pmax
       comp=Z,4.0nm,0.9s
BMO    Blue Mountains     93.36  45    P        P        08 23 22.4 -0.1
PFO    Pinyon Flats O     93.40  57    LR       LR       08 59 01.1
       comp=Z,21nm,19.5s,baz=281,slow=31
F10A   Beach Ranch, E     93.47  44    P        P        08 23 23.1 +0.2
NEW    Newport            93.66  42    P        P        08 23 24.0 +0.3
       comp=Z,1.5nm,0.6s,baz=233,slow=6.6,SNR=4.6
       comp=Z,1.5nm,0.6s
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NEW    Newport            93.66  42    P        P        08 23 23.7  0.0
       baz=267
SHOC   Shoshone, Teco     93.67  54    P        P        08 23 25.1 +1.1
       baz=267
TPNV   Topopah Spring     93.75  53    P        P        08 23 23.9 -0.6
TPNV                                   pmax     pmax
       comp=Z,4.0nm,0.9s
TPNV   Topopah Spring     93.75  53    P        P        08 23 23.9 -0.6
TPNV   Topopah Spring     93.75  53    P        P        08 23 25.2 +0.7
       baz=267
TUQ    Turquoise Moun     93.93  55    P        P        08 23 26.6 +1.3
       baz=267
GMRC   Granite Mounta     94.12  56    P        P        08 23 27.7 +1.5
       baz=267
BC3    Big Chuckawall     94.24  57    P        P        08 23 27.8 +1.0
       baz=267
PLID   Pearl Lake         94.30  45    P        P        08 23 26.5 -0.4
R11A   Troy Canyon, C     94.34  52    P        P        08 23 28.1 +0.9
       baz=268
IRM    Iron Mountain      94.52  56    P        P        08 23 29.1 +1.1
       baz=268
SHPR   Sheep Range        94.60  54    P        P        08 23 29.6 +1.1
ELK    Elko               94.70  50    LR       LR       09 03 55.7
       comp=Z,31nm,18.0s,baz=160,slow=34
PRN    Pahroc Range       94.72  53    P        P        08 23 28.1 -0.9
ABKAR  Akbulak array      95.11 319    P        P        08 23 28.4 -1.8
ABKAR                                  IAmb     IAmb     08 23 30.2
       comp=Z,8.8nm,1.7s
HLID   Hailey             95.39  47    P        P        08 23 32.4 +0.5
       baz=269
YKA    Yellowknife Ar     95.40  28    P        P        08 23 32.2 +1.0
       comp=Z,7.9nm,0.7s,baz=271,slow=4.8,SNR=196
YKA                                    PKKPbc   PKKPdf   08 40 22.4 -3.3
       comp=Z,0.6nm,0.8s,baz=92,slow=3.1,SNR=9.7
       comp=Z,7.9nm,0.7s
YKA    Yellowknife Ar     95.40  28ceP          P        08 23 31.6 +0.4
YKA                                    pmax     pmax
       comp=Z,8.0nm,0.7s
YKA    Yellowknife Ar     95.40  28    P        P        08 23 31.3 +0.1
MSO    Missoula           95.77  44    P        P        08 23 34.6 +1.1
       baz=270
WALA   Waterton Lakes     95.81  41    P        P        08 23 33.9 +0.3
WALA                                   IAmb     IAmb     08 23 35.6
       comp=Z,8.2nm,1.1s
ARU    Arti               95.98 326d iP         P        08 23 32.6 -1.4
ARU                                    *PP      pP       08 23 59.4 -2.1
ARU                                                      08 27 25.4
ARU                                    S        SKSac    08 33 59.2 -1.5
ARU                                    SP       SP       08 36 02.8 +0.1
ARU                                    pmax     pmax
       comp=Z,9.0nm,0.8s
ARU    Arti               95.98 326    P        P        08 23 32.4 -1.6
ARU                                    IAmb     IAmb     08 23 33.1
       comp=Z,8.1nm,0.8s
CCUT   Cedar City         96.07  53    P        P        08 23 36.0 +0.8
EDM    Edmonton           96.16  37    P        P        08 23 34.8 -0.2
EDM                                    pmax     pmax
       comp=Z,11nm,0.9s
EDM    Edmonton           96.16  37    P        P        08 23 34.8 -0.2
214A   Organ Pipe Nat     96.40  58    P        P        08 23 37.1 +0.5
       baz=269
DUG    Dugway, Tooele     96.54  50    P        P        08 23 37.7 +0.6
       baz=270
PKCU   Pink Cliffs        96.90  53    P        P        08 23 36.8 -2.4
PKCU                                   IAmb     IAmb     08 23 44.0
       comp=Z,9.8nm,1.4s
BOZ    Bozeman (W)        97.38  45    P        P        08 23 40.7 -0.2
       baz=271
TMUT   Trail Mountain     97.77  51    P        P        08 23 42.7 -0.3
H17A   Grant Village      98.16  46    P        Pdif     08 23 46.5 +2.0
       baz=272
EGMT   Eagleton           98.59  42    P        P        08 23 45.7 -0.4
       baz=273
BW06   Boulder Array      98.95  48    P        P        08 23 46.9 -1.2
BW06   Boulder Array      98.95  48    P        P        08 23 47.9 -0.2
       baz=272
PD31   Pinedale Array     98.95  48    P        P        08 23 48.0 -0.1
PDAR   Pinedale Array     98.95  48    P        Pdif     08 23 48.2 +0.1
       comp=Z,1.6nm,0.8s,baz=241,slow=1.6,SNR=15
       comp=Z,1.6nm,0.8s
RDMU   Red Mountain       99.01  50    P        Pdif     08 23 45.9 -2.4
RDMU                                   IAmb     IAmb     08 23 49.8
       comp=Z,3.3nm,0.8s
RES    Resolute Bay      100.29  14    P        Pdif     08 23 53.1 +0.1
RES    Resolute Bay      100.29  14    Pdif     Pdif     08 23 53.0 +0.1
K22A   Casper            101.19  48    P        Pdif     08 23 58.1 +0.2
       baz=274
SDCO   Great Sand Dun    102.30  53    P        Pdif     08 24 02.9 -0.2
       baz=274
RSSD   Black Hills       102.86  46    P        Pdif     08 24 05.4  0.0
       baz=276
ARCES  ARCESS Array B    106.59 343    Pdiff    Pdif     08 24 20.2 -1.0
       comp=Z,1.9nm,1.0s,baz=55,slow=12,SNR=2.3
ARCES                                  PKiKP    PKiKP    08 28 30.9 -0.4
       comp=Z,1.2nm,0.6s,baz=83,slow=0.9,SNR=13
ARCES  ARCESS Array B    106.59 343             PKiKP    08 28 31.5 +0.3
ECSD   EROS Data Cent    108.22  45    P        PKiKP    08 28 34.7 -0.3
       baz=281
FINES  FINESS Array B    110.74 336    Pdiff    Pdif     08 24 38.4 -1.3
       comp=Z,1.9nm,0.6s,baz=71,slow=5.2,SNR=13
FINES                                  PKiKP    PKiKP    08 28 38.4 -0.7
       comp=Z,2.4nm,0.7s,baz=101,slow=6.0,SNR=12
FINES  FINESS Array B    110.74 336c iPKIKP     PKiKP    08 28 39.2 +0.1
FINES                                  pmax     pmax
       comp=Z,2.0nm,0.7s
SCIA   State Center      111.05  47    P        PKiKP    08 28 40.1 -0.3
       baz=283
W39A   Magazine          111.98  54    P        PKiKP    08 28 42.1 -0.2
       baz=280
U40A   Yellville         112.51  53    P        PKiKP    08 28 43.1 -0.3
       baz=281
AAL    Aland             113.93 336 eP          PKiKP    08 28 44.8 -0.4
AKASG  Malin Array Be    114.15 324    PKP      PKPdf    08 28 45.8 -0.2
       comp=Z,1.3nm,0.4s,baz=60,slow=2.8,SNR=18
AKBB   Malin Array Si    114.15 324c iPKIKP     PKiKP    08 28 46.0  0.0
BRTR   Keskin Array B    114.94 312    PKP      PKiKP    08 28 47.9 -0.1
       comp=Z,1.0nm,0.6s,baz=145,slow=6.8,SNR=5.4
BRTR   Keskin Array B    114.94 312c iPKIKP     PKPdf    08 28 48.2 +0.1
BRTR                                   pmax     pmax
       comp=Z,1.0nm,0.6s
WVT    Waverly           116.52  52    P        PKPdf    08 28 50.5 -0.5
       baz=285
NB2    NORSAR Subarra116.62 340        PKPdf    PKPdf    08 28 50.4 -0.1
       comp=Z,0.8nm,0.5s,baz=44,slow=1.9
NOA    NORSAR Array B116.62 340        PKP      PKiKP    08 28 50.8 +0.2
       comp=Z,1.3nm,0.5s,baz=46,slow=1.7,SNR=8.3
O48B   Farmland          117.36  47    P        PKPdf    08 28 52.0 -0.5
       baz=289
VRI    Vrincioaia        117.65 320 ⇓P          PKPdf    08 28 52.9  0.0
VRI    Vrincioaia        117.65 320 ⇓PKIKP      PKPdf    08 28 52.9  0.0
BUR08  Bucovina Ar. S    117.84 323             PKiKP    08 28 53.7 +0.3
BURAR  Bucovina Array    117.84 322 ⇑P          PKiKP    08 28 54.7 +1.3
BURAR  Bucovina Array    117.84 322 ⇑PKIKP      PKiKP    08 28 54.7 +1.3
P49A   Miami Univ. Ec    117.91  47    P        PKPdf    08 28 53.1 -0.5
       baz=289
LRAL   Lakeview Retre    117.93  55    P        PKPdf    08 28 53.7 -0.1
       baz=284
MLR    Muntele Rosu      118.30 320 ⇑P          PKPdf    08 28 52.4 -1.9
MLR    Muntele Rosu      118.30 320 ⇑PKIKP      PKPdf    08 28 52.4 -1.9
BRAL   Brewton           118.31  57    P        PKPdf    08 28 54.4 -0.2
       baz=283
KWP    Kalwaria Pacla    118.38 325    PKIKP    PKiKP    08 28 54.2  0.0
KWP    Kalwaria Pacla    118.38 325             PKiKP    08 28 54.1  0.0
DEL    Delary            118.77 335 eP          PKiKP    08 28 55.0 +0.3
VOIR                     118.89 320 ⇓P          PKPdf    08 28 53.0 -2.4
VOIR                     118.89 320 ⇓PKIKP      PKPdf    08 28 53.0 -2.4
ACSO   Alum Creek Sta    118.94  46    P        PKiKP    08 28 55.5  0.0
       baz=290
KOLS   Kolonicke sedl    118.97 325 ePKIKP      PKiKP    08 28 56.6 +1.2
KOLS   Kolonicke sedl    118.97 325 ePKP        PKiKP    08 28 56.5 +1.2
ARR    Arges             119.19 320 ⇓P          PKiKP    08 28 57.2 +1.2
S51A   Beattyville       119.34  49             PKiKP    08 28 56.5  0.0
BOSA   Boshof            119.49 234    PKP      PKiKP    08 28 57.6 +0.5
       comp=Z,4.9nm,0.8s,baz=112,slow=1.9,SNR=7.8
OJC    Ojcow             119.68 327    PKIKP    PKiKP    08 28 56.9 +0.2
OJC    Ojcow             119.68 327             PKiKP    08 28 56.9 +0.2
TZTN   Tazewell          119.72  50    P        PKPdf    08 28 56.9 -0.2
       baz=288
DRGR                     119.74 323 ⇑P          PKiKP    08 28 57.1  0.0
DRGR                     119.74 323 ⇑PKIKP      PKiKP    08 28 57.1  0.0
P52A   Corning           119.76  46    P        PKPdf    08 28 57.0 -0.1
       baz=291
PLCA   Paso Flores       120.12 143    PKP      PKiKP    08 28 58.6 +0.5
       comp=Z,1.7nm,0.5s,baz=266,slow=2.6,SNR=20
PLCA                                   PKKPbc   PKKPbc   08 39 06.2 -1.3
       comp=Z,1.7nm,0.8s,baz=50,slow=4.2,SNR=7.7
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PLCA	Paso Flores	120.12	143	PKPdf	PKiKP	08 28 58.8	+0.8
M53A	WI Miller and	120.13	44	P	PKPdf	08 28 57.8	0.0
	baz=293						
O53A	New Philadelph	120.20	46	P	PKiKP	08 28 58.3	+0.2
	baz=292						
KECS	Kecovo	120.22	325	*e*PKIKP	PKiKP	08 28 57.9	+0.1
KECS	Kecovo	120.22	325	*e*PKP	PKiKP	08 28 57.9	+0.1
N53A	Lisbon	120.25	45		PKPdf	08 28 58.1	0.0
P53A	Whipple	120.35	46		PKPdf	08 28 57.0	-1.3
GZR	Gura Zlata	120.35	321	⇑P	PKPdf	08 28 58.1	-0.1
GZR	Gura Zlata	120.35	321	⇑PKIKP	PKPdf	08 28 58.1	-0.1
LANS	Liptovska Anna	120.44	326	*e*PKIKP	PKiKP	08 28 59.8	+1.5
LANS	Liptovska Anna	120.44	326	*e*PKP	PKiKP	08 28 59.8	+1.5
SIRR	Siria	120.63	322	⇓P	PKiKP	08 28 58.7	0.0
GOGA	Godfrey	120.70	54	P	PKPdf	08 28 58.8	-0.3
	baz=286						
O54A	Avella	120.82	45		PKPdf	08 28 58.2	-1.0
PSZ	Piszkesteto	120.85	325	⇓P	PKiKP	08 28 59.4	+0.2
PSZ	Piszkesteto	120.85	325	⇓PKIKP	PKiKP	08 28 59.4	+0.2
PSZ	Piszkesteto	120.85	325		PKPdf	08 28 58.0	-1.1
Q54A	Coxs Mills	120.93	47		PKiKP	08 28 59.5	0.0
BZS	Buzias	120.97	322	⇓P	PKPdf	08 28 59.1	-0.2
BZS	Buzias	120.97	322	⇓PKIKP	PKPdf	08 28 59.1	-0.2
MORC	Moravsky Berou	121.14	328	⇓P	PKiKP	08 29 00.5	+0.8
MORC	Moravsky Berou	121.14	328	PKIKP	PKPdf	08 28 58.9	-0.6
MORC	Moravsky Berou	121.14	328		PKPdf	08 28 58.9	-0.6
MORC	Moravsky Berou	121.14	328	*e*PKP	PKiKP	08 29 00.3	+0.6
VYHS	Vyhne	121.14	326	*e*PKIKP	PKiKP	08 29 00.8	+1.1
VYHS	Vyhne	121.14	326	*e*PKP	PKiKP	08 29 00.8	+1.1
BLKB	Belogradchik	121.22	319	⇓P	PKiKP	08 28 60.0	0.0
VTS	Vitosha	121.28	318	⇓P	PKiKP	08 29 00.5	+0.2
VTS	Vitosha	121.28	318	⇓PKIKP	PKiKP	08 29 00.5	+0.2
VTS	Vitosha	121.28	318	PKPdf	PKPdf	08 28 59.9	-0.3
KOLL	Kolacno	121.34	326	*e*PKP	PKiKP	08 29 00.6	+0.6
KRLC	Kraliky	121.37	328	*e*PKIKP	PKiKP	08 29 00.8	+0.7
KRLC	Kraliky	121.37	328	*e*PKPDF	PKiKP	08 29 00.8	+0.7
OSTC	Ostas	121.39	329	*e*PKPDF	PKiKP	08 29 01.2	+1.1
LSZ	Lusaka	121.41	249	PKP	PKiKP	08 29 01.4	+0.1
	comp=Z,1.7nm,0.4s,baz=243,slow=4.5,SNR=2.5						
DPC	Dobruska-Polom	121.45	329	*e*PKIKP	PKiKP	08 29 01.3	+1.0
DPC	Dobruska-Polom	121.45	329	*e*PKPDF	PKiKP	08 29 01.3	+1.0
JAVC	Velka Javorina	121.59	327	*e*PKP	PKiKP	08 29 01.7	+1.1
R55A	Marlinton	121.71	47		PKiKP	08 29 01.1	0.0
BOVS	Bovan	121.84	320	⇑P	PKPdf	08 29 00.8	-0.2
KMSC	Kings Mountain	121.87	51	P	PKiKP	08 29 01.6	+0.1
	baz=289						
VRAC	Vranov	121.92	328	⇑P	PKiKP	08 29 01.7	+0.5
VRAC	Vranov	121.92	328	⇑PKIKP	PKiKP	08 29 01.7	+0.5
VRAC	Vranov	121.92	328	*e*PKP	PKiKP	08 29 02.0	+0.8
MODS	Modra-Piesok	122.08	326	*e*PKIKP	PKiKP	08 29 02.6	+1.1
MODS	Modra-Piesok	122.08	326	*e*PKP	PKiKP	08 29 02.6	+1.1
KRUC	Moravsky	122.17	327	*e*PKP	PKiKP	08 29 01.7	+0.1
FRGS	Fruska Gora	122.30	322	⇓P	PKPdf	08 29 01.2	-0.7
BRG	Berggiesshubel	122.34	330	*e*PKP	PKiKP	08 29 02.5	+0.6
BRG				Amp		08 29 03.7	
	comp=Z,15nm,1.0s						
BRG				*e*x	x	08 29 07.5	
BRG				Amp		08 29 08.1	
	comp=Z,5.5nm,0.9s						
BRG	Berggiesshubel	122.34	330	*e*PKIKP	PKiKP	08 29 02.5	+0.6
BRG				pmax	pmax		
	comp=Z,15nm,1.0s						
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SSPA	Standing Stone	122.38	44	P	PKiKP	08 29 02.4	+0.1
	baz=295						
CLL	Collm	122.53	331	⇓*i*PKIKP	PKiKP	08 29 02.7	+0.4
CLL				*e*		08 29 33.0	
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
CLL	Collm	122.53	331	PKPdf	PKPdf	08 29 02.0	-0.1
CLL	Collm	122.53	331	⇓*i*PKPdf	PKiKP	08 29 02.7	+0.4
	comp=Z,18nm,1.0s						
CLL				*e*(pPKPdf)		08 29 33.0	
CLL				LmV		08 41 00.0	
	comp=Z,100nm,19.3s						
PRU	Pruhonice	122.59	329	*e*PKIKP	PKiKP	08 29 03.0	+0.6
PRU	Pruhonice	122.59	329	*e*PKPDF	PKiKP	08 29 03.0	+0.6
DIVS	Divibare	122.71	321		PKiKP	08 29 03.3	+0.3
J58A	Remsen	122.90	40		PKiKP	08 29 03.2	-0.1
BINY	Binghamton	122.98	42	P	PKPdf	08 29 03.0	-0.3
	baz=297						
RONA	Rosalia, Austr	123.00	326	*e*P	PKiKP	08 29 03.8	+0.4
	comp=Z,12nm,1.0s						
CONA	Conrad Observa	123.11	327	*i* P	PKiKP	08 29 03.8	+0.1
	comp=Z,6.3nm,0.7s						
FNA	Florina	123.33	317	PKIKP	PKPdf	08 29 03.4	-0.6
FNA	Florina	123.33	317		PKPdf	08 29 03.4	-0.6
CKRC	Cesky Krumlov	123.42	328	*e*PKPDF	PKiKP	08 29 04.8	+0.6
NKC	Novy Kostel	123.49	330	*e*PKIKP	PKiKP	08 29 04.6	+0.3
NKC	Novy Kostel	123.49	330	*e*PKPDF	PKiKP	08 29 04.6	+0.3
KHC	Kasperske Hory	123.61	329	*e*PKIKP	PKiKP	08 29 05.1	+0.5
KHC				*e*		08 29 32.5	
KHC	Kasperske Hory	123.61	329	PKPdf	PKPdf	08 29 04.3	0.0
KHC	Kasperske Hory	123.61	329	*e*PKPDF	PKiKP	08 29 05.1	+0.5
KHC				pPKP	pPKPdf	08 29 32.5	+0.3
ARSA	Arzberg	123.69	326	*e*P	PKiKP	08 29 05.1	+0.3
	comp=Z,4.9nm,0.9s						
GEC2	GERESS Array S	123.72	328	PKPdf	PKiKP	08 29 04.8	0.0
GERES	GERESS Array B	123.72	328	PKP	PKiKP	08 29 05.1	+0.2
	comp=Z,8.4nm,0.7s,baz=52,slow=2.2,SNR=45						
CBN	Corbin Frederi	123.74	46	P	PKiKP	08 29 05.1	+0.1
	baz=294						
MOA	Molln	124.03	327	*e*P	PKiKP	08 29 05.3	-0.1
	comp=Z,6.1nm,0.9s						
PERS	Pernice	124.27	326	*i* PKPdf	PKPdf	08 29 05.5	-0.2
SOKA	Soboth	124.29	326	*i* P	PKPdf	08 29 05.6	-0.1
	comp=Z,7.6nm,0.9s						
BIOA	Bad Ischl, Aus	124.46	327	*i* P	PKPdf	08 29 05.6	-0.3
	comp=Z,3.4nm,0.7s						
LBNH	Lisbon	124.56	38	P	PKiKP	08 29 06.8	+0.2
	baz=302						
BOJS	Bojanci	124.84	324	*i* PKPdf	PKiKP	08 29 07.0	0.0
PAL	Palisades	124.92	42	P	PKiKP	08 29 07.1	-0.2
	baz=298						
KBA	Koelnbreinsper	124.99	327	*e*P	PKPdf	08 29 06.6	-0.6
	comp=Z,9.1nm,1.0s						
L61B	Northampton	125.01	40	P	PKPdf	08 29 07.2	+0.1
	baz=300						
MYKA	Terra Mystica	125.10	326	*i* P	PKPdf	08 29 07.1	-0.1
	comp=Z,6.9nm,0.8s						
CO02	Combarbal	125.36	134		PKPdf	08 29 08.4	0.0
PKME	Peaks-Kenny Pk	125.55	35	P	PKPdf	08 29 07.8	-0.2
	baz=305						
ABTA	Abfaltersbach	125.64	327	*i* P	PKPdf	08 29 08.2	-0.2
	comp=Z,17nm,0.9s						
HRV	Adam Dziewonsk	125.70	39	P	PKiKP	08 29 08.7	-0.1
	baz=302						
WATA	Walderalm	125.78	328	*i* P	PKPdf	08 29 08.1	-0.5
	comp=Z,19nm,1.0s						
WTTA	Wattenberg	125.79	328	*e*P	PKPdf	08 29 08.7	0.0
	comp=Z,20nm,0.7s,SNR=7.4						
STAL	STALIGIAL	125.83	326		PKPdf	08 29 08.5	-0.1
MOTA	Moosalm	126.02	328	*e*P	PKPdf	08 29 09.2	+0.1
	comp=Z,26nm,1.0s,SNR=7.6						
SQTA	Sankt Quirin	126.04	328	*i* P	PKiKP	08 29 09.6	0.0
	comp=Z,20nm,0.8s						
RETA	Reutte	126.11	329	*i* P	PKiKP	08 29 09.9	+0.3
	comp=Z,4.0nm,0.5s						
BTNL	Ternell	126.18	334	*d*PKiKP	PKiKP	08 29 10.0	+0.4
MEM	Membach	126.22	334	*d*PKiKP	PKiKP	08 29 09.9	+0.3
BHOU	Houvegnez	126.41	334	*d*PKiKP	PKiKP	08 29 10.9	+0.8
FETA	Feichten	126.42	328	*e*P	PKiKP	08 29 10.6	+0.2
	comp=Z,20nm,0.9s,SNR=7.8						
BCLA	Clavier	126.67	334	*d*PKiKP	PKiKP	08 29 10.8	+0.3
DAVA	Damuels	126.69	329	*e*P	PKPdf	08 29 10.3	-0.2
	comp=Z,18nm,0.8s,SNR=5.2						
WLF	Walferdange	126.84	333	*d*PKiKP	PKiKP	08 29 11.9	+1.0
RCHB	Rochefort	126.89	334	*d*PKiKP	PKiKP	08 29 11.3	+0.4
BMRD	Maredsous	126.98	335	*d*PKiKP	PKiKP	08 29 11.4	+0.3
SNF	Seneffe	127.03	335	*d*PKiKP	PKiKP	08 29 12.1	+0.9
DOU	Dourbes	127.21	335	*d*PKiKP	PKiKP	08 29 12.0	+0.4
ECH	Echery	127.41	331	PKIKP	PKPdf	08 29 11.5	-0.1
ECH	Echery	127.41	331		PKPdf	08 29 11.5	-0.1
TUE	Stuetta	127.50	328		PKPdf	08 29 12.0	-0.1
NRCA	Norcia	127.62	323		PKPdf	08 29 11.9	-0.3
ZCCA	Zocca	127.97	325		PKiKP	08 29 13.6	+0.2
SENIN	Lac Senin/Sane	128.63	330		PKPdf	08 29 14.0	-0.2
BNI	Bardonecchia	129.84	329	PKIKP	PKPdf	08 29 16.7	+0.2
BNI	Bardonecchia	129.84	329		PKPdf	08 29 16.7	+0.2
GCUF	Volcan Galeras	130.13	92	*e*P	PKiKP	08 29 18.9	-0.3
CBOC	Ciudad Bolivar	131.70	86	*e*P	PKiKP	08 29 23.9	+2.0
GUY2C	Guyana, Caldas	132.33	87	*e*P	PKPdf	08 29 22.3	-0.2
GUY2C				*e*P	SKPdf	08 32 47.0	-1.4
ORTC	Ortega, Tolima	132.40	89	*e*P	PKPdf	08 29 22.5	+0.4
SPBC	San Pablo de B	133.63	87	*e*P	PKPdf	08 29 20.1	-4.3
MACC	Macarena, Meta	133.69	91	*e*P	PKPdf	08 29 24.7	+0.2
CHIC	Chingaza	133.94	88	*e*P	PKPdf	08 29 21.5	-3.9
KEST	Kesra	134.04	317	PKP	PKiKP	08 29 26.9	+1.0
	comp=Z,11nm,0.9s,baz=338,slow=2.2,SNR=4.2						
RUSC	La Rusia	134.61	86	*e*P	PKPdf	08 29 25.0	-1.8
LPAZ	La Paz	134.79	118	PKhKP	PKPpre	08 29 22.1	
	comp=Z,2.1nm,0.7s,baz=257,slow=6.1,SNR=6.3						
LPAZ	La Paz	134.79	118	PKIKP	PKPdf	08 29 24.6	-2.6
LPAZ	La Paz	134.79	118		PKPdf	08 29 24.6	-2.6
LPAZ	La Paz	134.79	118	*e*P	PKPdf	08 29 22.3	-4.9
CPUP	Villa Florida	137.82	138	PKP	PKiKP	08 29 33.2	-0.6
	comp=Z,3.1nm,0.8s,baz=197,slow=2.4,SNR=8.5						
ESDC	Sonseca Array	139.10	332	PKhKP	PKPpre	08 29 28.0	
	comp=Z,0.8nm,0.8s,baz=18,slow=4.2,SNR=3.1						
ESDC				PKP	PKPdf	08 29 34.9	+1.1
	comp=Z,1.3nm,0.7s,baz=4.0,slow=2.9,SNR=8.2						
MVO	Moncorvo	139.22	336	*e*PKP	PKiKP	08 29 35.6	-0.7
POLO	Lamas de Olo	139.35	337	*e*PKP	PKiKP	08 29 37.6	+1.0
MTE	Manteigas	140.08	336	*e*PKP	PKiKP	08 29 37.6	-0.5
PCBR	Castelo Branco	140.52	335	*e*PKP	PKiKP	08 29 37.7	-1.2
PMTG	Montargil	141.48	336	*e*PKP	PKiKP	08 29 41.8	+0.9
PNCL	Nicolau / Gran	142.42	335	*e*PKP	PKPdf	08 29 36.2	-3.6
PCVE	Castro Verde	142.61	334	*e*PKP	PKiKP	08 29 44.8	+1.5
PTEO	Sao Teotonio	142.98	335	*e*PKP	PKiKP	08 29 45.4	+1.4
ZHG	ZHG	145.33	328	P	PKiKP	08 29 48.0	-1.1
GOLM	Goulmima	145.72	325	P	PKPab	08 29 48.0	+1.1
TRN	Trinidad (W)	145.90	78	*e*P	PKPbc	08 29 47.0	-0.3
ROSA	Rosais	146.03	1	PKPdf	PKPdf	08 29 45.3	-0.8
TOSP	Speyside	146.65	76	*e*P	PKPab	08 29 50.4	-0.4
TZRR	Tazzarine	146.75	324	P	PKPab	08 29 50.2	-0.6
ZGR	Zagora	147.26	323	P	PKPab	08 29 52.0	-0.9
OUZM	OUZ	147.34	326	P	PKPbc	08 29 52.1	+1.0
OUK	Oukaimeden	147.72	327	P	PKiKP	08 29 54.0	-0.5
EAH	EAH	148.26	330	P	PKiKP	08 29 55.0	-0.1
TTIG	Tnine Tigouga,	148.54	327	P	PKPbc	08 29 55.0	+0.6
CGR	Cap Guir	149.23	329	P	PKiKP	08 29 57.0	-0.1
TORD	Torodi Ar. Bea	149.95	288	PKPbc	PKPbc	08 29 58.2	+0.2
	comp=Z,39nm,0.7s,baz=74,slow=2.5,SNR=14						
BDFB	Brasilia	151.43	135	PKPbc	PKiKP	08 30 02.6	+0.4
	comp=Z,12nm,0.5s,baz=252,slow=1.3,SNR=19						
BDFB	Brasilia	151.43	135	PKIKP	PKPbc	08 30 01.5	-0.2
BDFB	Brasilia	151.43	135		PKPbc	08 30 01.5	-0.2
KOWA	Kowa	154.86	295	PKPbc	PKPbc	08 30 09.0	-0.1
KOWA				PKPab	PKPab	08 30 23.4	-1.2
KIC	Kosan Boka	157.26	275	*e*P	PKPab	08 30 35.1	0.0
	comp=Z,45nm,0.6s						
DBIC	Dimbokro	157.36	276	PKPab	PKPab	08 30 35.5	0.0
	comp=Z,15nm,0.6s,baz=102,slow=4.1,SNR=24						
DBIC	Dimbokro	157.36	276	⇑PKP2	PKPab	08 30 33.8	-1.7
DBIC	Dimbokro	157.36	276	PKPdf	PKPdf	08 30 01.6	-2.1
DBIC				PKPab	PKPab	08 30 35.2	-0.3
TIC	Toumodi	157.52	276	*e*P	PKPab	08 30 36.1	-0.1
LIC	Lamto	157.56	275	*e*P	PKPab	08 30 36.7	+0.3
	comp=Z,32nm,0.9s						

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*SOME **02** 08:24:41.2, 40°.13N×76°.13E, h10km*

*KRNET **02** 08:24:44.1±0.1, 40°.28N×75°.97E, mb3.3*

*NNC **02** 08:24:45.4±0.8, 40°.25N×76°.10E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=6.3km s-min=5.2km az=149.0

ISC 02 08:24:44.3±1.2, **40°.24N**±0°.05×**76°.02E**±0°.03, **h10km, n72,**
σ1ˢ.**62**/107, **30C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	2.01	42	⇑*i*P	Pb	08 25 20.4	-0.9
	baz=43						
TARG				⇑*i*S	Sb	08 25 46.7	+0.2
	baz=43						
ULHL	Ulahol	2.01	5	P	Pb	08 25 21.4	+0.3
	SNR=18						
ULHL	Ulahol	2.01	5	⇑*i*P	Pn	08 25 19.2	+0.6
	baz=6.0						
ULHL				⇑*i*S	Sn	08 25 44.6	+0.7
	baz=6.0						
KDJ	Kajisay	2.08	25	⇑*i*P	Pb	08 25 21.1	-1.2
	baz=26						
KDJ				⇑*i*S	Sb	08 25 47.7	-0.7
	baz=26						
BOOM	Boomskoye usch	2.25	359	⇓*i*P	Pn	08 25 22.8	+1.0
	baz=60						
BOOM				⇓*i*S	Sn	08 25 51.2	+1.5
	baz=60						
UCH	Uchtor	2.29	331	P	Pb	08 25 23.8	-2.2
	SNR=33						
UCH	Uchtor	2.29	331	⇑*i*P	Pn	08 25 23.6	+1.0
	baz=31						
UCH				⇑*i*S	Sn	08 25 52.3	+1.3
	baz=31						
OHH	Osh	2.48	278	⇑*i*P	Pn	08 25 25.3	+0.4
	baz=77						
OHH				⇑*i*S	Sn	08 25 56.0	+0.6
	baz=77						
KBK	Karagaybulak	2.55	342	P	Pb	08 25 28.9	-1.4
	SNR=27						
KBK	Karagaybulak	2.55	342	⇓*e*P	Pn	08 25 26.8	+0.9
	baz=42						
KBK				⇓*i*S	Sn	08 25 57.9	+0.9
	baz=42						
AML	Almayashu	2.58	318	P	Pn	08 25 27.4	+0.8
	SNR=25						
AAK	Ala-Archa	2.66	335	P	Pb	08 25 29.3	-2.8
	SNR=9.1						
AAK	Ala-Archa	2.66	335	⇓*i*P	Pn	08 25 28.5	+1.1
	baz=35						
AAK				⇓*i*S	Sn	08 26 00.6	+0.9
	baz=35						
TKM2	Tokmak 2	2.70	353	P	Pb	08 25 30.2	-2.6
	SNR=12						
TKM2	Tokmak 2	2.70	353	⇓Pn	Pb	08 25 30.3	-2.6
	8.5nm,0.6s						
TKM2				⇑Lg	Lg	08 26 11.3	
	66nm,0.7s						
TKM2	Tokmak 2	2.70	353	⇑*i*P	Pn	08 25 29.1	+1.1
	baz=54						
TKM2				⇑*i*S	Sn	08 26 01.9	+1.1
	baz=54						
FRU1	Bishkek	2.77	338	⇓*i*P	Pn	08 25 30.1	+1.2
	baz=39						
FRU1				⇓*i*S	Sn	08 26 04.0	+1.5
	baz=39						
KST	Kastek	2.80	359	*e*P	Pb	08 25 34.6	0.0
	6.3nm,0.1s						
KST				*e*S	Sg	08 26 12.4	-2.0
	48nm,0.1s						
KST	Kastek	2.80	359	Pg	Pg	08 25 35.9	-2.1
	5.4nm,0.5s						
KST				Lg	Lg	08 26 14.9	
	49nm,0.7s						
ANVS	Anan'yevo	2.83	25	⇑*i*P	Pn	08 25 31.5	+1.7
	baz=26						
ANVS				⇑*i*S	Sn	08 26 05.7	+1.7
	baz=26						
IZV	Izvestkoviy	2.83	9	*e*P	Pg	08 25 37.7	-0.9
	12nm,0.2s						
IZV				*e*S	Sg	08 26 17.9	+2.6
	29nm,0.2s						
IZV	Izvestkoviy	2.83	9	Pg	Pg	08 25 38.0	-0.5
	12nm,0.7s						
IZV				Lg	Lg	08 26 18.5	
	24nm,0.4s						
TNSS	Tian-Shan	2.88	14	*e*P	Pb	08 25 36.8	+0.7
	6.1nm,0.6s						
TNSS				*e*S	Sg	08 26 16.0	-1.0
	6.6nm,0.5s						
TNSS	Tian-Shan	2.88	14	Pg	Pb	08 25 36.8	+0.7
	6.1nm,0.6s						
TNSS				Lg	Lg	08 26 16.0	
	6.6nm,0.5s						
MTBS	Maitube	2.91	6	*e*P	Pg	08 25 38.1	-1.9
	14nm,0.1s						
MTBS				*e*S	Sg	08 26 18.4	+0.7
	53nm,0.1s						
MTBS	Maitube	2.91	6	Pg	Pg	08 25 38.1	-1.9
	14nm,0.2s						
MTBS				Lg	Lg	08 26 18.4	
	51nm,0.4s						
CHMS	Chumysh	2.92	341	P	Pn	08 25 33.1	+2.3
	SNR=5.7						
CHMS	Chumysh	2.92	341	⇓Pn	Pn	08 25 32.7	+1.9
	9.1nm,0.6s						
CHMS				⇑Lg	Lg	08 26 18.1	
	18nm,0.3s						
EKS2	Erkin-Say	2.95	326	P	Pn	08 25 33.5	+2.1
	SNR=5.8						
EKS2	Erkin-Say	2.95	326	⇑*i*P	Pn	08 25 32.4	+1.0
	baz=26						
EKS2				⇑*i*S	Sn	08 26 07.8	+0.9
	baz=26						
DGS	Degeres	3.01	357	*e*P	Pb	08 25 39.1	+1.1
	4.4nm,0.0s						
DGS				*e*S	Sg	08 26 20.4	-0.5
	14nm,0.1s						
DGS	Degeres	3.01	357	Pg	Pb	08 25 39.1	+1.1
	4.4nm,0.3s						
DGS				Lg	Lg	08 26 20.4	
	14nm,0.5s						
MDOK	Medeo	3.02	14	*e*P	Pb	08 25 39.4	+1.1
	2.3nm,0.3s						
MDOK				*e*S	Sg	08 26 20.7	-0.7
	20nm,0.1s						
MDOK	Medeo	3.02	14	⇑Pn	Pn	08 25 34.5	+2.1
	2.1nm,0.4s						
MDOK				Pg	Pg	08 25 41.6	-0.6
	7.2nm,0.6s						
MDOK				⇑Lg	Lg	08 26 20.7	
	25nm,0.7s						
MDOK	Medeo	3.02	14	Pg	Pb	08 25 39.4	+1.1
	2.3nm,0.3s						
MDOK				Lg	Lg	08 26 20.7	
	20nm,0.6s						
KNDC	Almaty	3.06	13	⇓Pn	Pn	08 25 34.9	+2.1
	19nm,0.5s						
KNDC				⇓Lg	Lg	08 26 21.1	
	51nm,0.5s						
KOTS	Kotyrbulak	3.10	15	*e*P	Pb	08 25 40.2	+0.5
	4.9nm,0.0s						
KOTS				*e*S	Sg	08 26 22.3	-1.7
	60nm,0.3s						
KOTS	Kotyrbulak	3.10	15	Pg	Pg	08 25 41.3	-2.5
	4.9nm,0.4s						
KOTS				Lg	Lg	08 26 24.2	
	56nm,0.7s						
USP	Ospenovka	3.23	340	P	Pn	08 25 37.0	+1.8
	SNR=5.8						
MRKS	Merke	3.27	321	*e*P	Pg	08 25 45.2	-1.7
	13nm,0.1s						
MRKS				*e*S	Sg	08 26 30.7	+1.5
	61nm,0.2s						
MRKS	Merke	3.27	321	Pg	Pg	08 25 45.2	-1.7
	13nm,0.6s						
MRKS				Lg	Lg	08 26 30.7	
	58nm,0.6s						
DRK	Karamyk	3.33	258	⇑*i*P	Pn	08 25 38.1	+1.3
	baz=57						
DRK				⇑*i*S	Sn	08 26 17.7	+1.1
	baz=57						
SATY	Saty	3.34	32	*e*P	Pb	08 25 45.0	+1.3
	2.0nm,0.1s						
SATY				*e*S	Sg	08 26 30.5	-1.0
	11nm,0.5s						
SATY	Saty	3.34	32	Pg	Pb	08 25 45.0	+1.3
	2.1nm,0.6s						
SATY				Lg	Lg	08 26 30.5	
	11nm,0.7s						
SGDS	Sogindy	3.38	343	*e*P	Pb	08 25 46.0	+1.7
	8.4nm,0.1s						
SGDS				*e*S	Sg	08 26 32.1	-0.6
	45nm,0.1s						
SGDS	Sogindy	3.38	343	Pg	Pb	08 25 46.0	+1.7
	8.5nm,0.8s						
SGDS				Lg	Lg	08 26 32.1	
	45nm,0.5s						
ARK	Arkit	3.44	298	⇑*i*P	Pn	08 25 39.2	+1.1
	baz=98						
ARK				⇑*i*S	Sn	08 26 19.6	+0.6
	baz=98						
ZHN	Zhinishke	3.44	31	*e*P	Pb	08 25 46.9	+1.4
	5.1nm,0.1s						
ZHN				*e*S	Sg	08 26 33.6	-1.2
	17nm,0.3s						
ZHN	Zhinishke	3.44	31	Pg	Pb	08 25 46.9	+1.4
	5.1nm,0.1s						
ZHN				Lg	Lg	08 26 33.6	
	17nm,0.3s						
KRBS	Karabastau	3.46	356	*e*P	Pb	08 25 47.5	+1.6
	5.6nm,0.1s						
KRBS				*e*S	Sg	08 26 34.8	-0.8
	37nm,0.0s						
KRBS	Karabastau	3.46	356	Pg	Pb	08 25 47.5	+1.6
	5.6nm,0.5s						
KRBS				Lg	Lg	08 26 34.8	
	37nm,0.7s						
KTBS	Karatobe	3.51	8	*e*P	Pb	08 25 48.1	+1.6
	5.5nm,0.0s						
KTBS				*e*S	Sg	08 26 35.4	-1.6
	50nm,0.2s						
KTBS	Karatobe	3.51	8	Pg	Pg	08 25 48.9	-2.6
	5.4nm,0.4s						
KTBS				Lg	Lg	08 26 37.0	
	51nm,0.4s						
KURS	Kuram	3.62	26	*e*P	Pb	08 25 50.0	+1.5
	2.5nm,0.7s						
KURS				*e*S	Sg	08 26 38.9	-1.8
	13nm,0.2s						
KURS	Kuram	3.62	26	Pg	Pb	08 25 50.0	+1.5
	2.5nm,0.7s						
KURS				Lg	Lg	08 26 38.9	
	13nm,0.7s						
KUU	Kurty	3.66	4	*e*P	Pb	08 25 51.0	+1.9
	6.1nm,0.2s						
KUU				*e*S	Sg	08 26 40.8	-1.1
	47nm,0.1s						
KUU	Kurty	3.66	4	Pg	Pb	08 25 51.0	+1.9
	6.1nm,0.7s						
KUU				Lg	Lg	08 26 40.8	
	23nm,0.7s						
UZB	Uzynbulak	3.68	37	*e*P	Pb	08 25 50.7	+1.2
	1.5nm,0.1s						
UZB				*e*S	Sg	08 26 40.1	-2.2
	6.0nm,0.2s						
UZB	Uzynbulak	3.68	37	Pg	Pb	08 25 50.7	+1.2
	1.5nm,0.2s						
UZB				Lg	Lg	08 26 40.1	
	6.1nm,0.9s						
CHKK	Chushkaly	3.69	11	*e*P	Pg	08 25 52.0	-2.9
	5.7nm,0.2s						
CHKK				*e*S	Sg	08 26 42.3	-0.3
	36nm,0.6s						
CHKK	Chushkaly	3.69	11	Pg	Pg	08 25 52.2	-2.7
	4.4nm,0.4s						
CHKK				Lg	Lg	08 26 42.6	
	37nm,0.3s						
KPKS	Kokpek	3.79	31	*e*P	Pb	08 25 52.4	+1.0
	3.1nm,0.0s						
KPKS				*e*S	Sg	08 26 43.0	-3.0
	29nm,0.2s						
TRKS	Terek-Say	3.92	291	⇑*i*P	Pn	08 25 45.7	+1.0
	baz=90						
TRKS				⇑*i*S	Sn	08 26 30.3	-0.5
	baz=90						
BTK	Batken	3.99	269	⇑*i*P	Pn	08 25 47.2	+1.6
	baz=68						
BTK				⇑*i*S	Sn	08 26 32.9	+0.4
	baz=68						
PDGK	Podgornoye	4.04	39	Pg	Pb	08 25 55.9	+0.3
	0.5nm,0.7s						
PDGK				Lg	Lg	08 26 49.0	
	4.4nm,1.0s						
PDGK	Podgornoye	4.04	39	⇑Pg	Pg	08 25 59.4	-2.2
	4.1nm,0.8s						
PDGK				⇓Lg	Lg	08 26 51.8	
	18nm,1.0s						
ARXS	Arharly	4.19	18	*e*P	Pb	08 26 00.6	+2.4
	4.0nm,0.1s						
ARXS				*e*S	Sg	08 26 56.9	-2.1
	9.6nm,0.4s						
ARXS	Arharly	4.19	18	Pg	Pb	08 25 59.9	+1.6
	7.9nm,0.8s						
ARXS				Lg	Lg	08 26 55.9	
	9.6nm,0.4s						
BTLS	Baital	5.02	344	*e*P	Pb	08 26 15.6	+3.4
	1.0nm,0.0s						
BTLS				*e*S	Sg	08 27 22.5	-2.8
	13nm,0.4s						
BTLS	Baital	5.02	344	Pg	Pb	08 26 15.4	+3.2
	0.7nm,0.5s						
BTLS				Lg	Lg	08 27 22.3	
	13nm,0.5s						
KK31	Karatay Array	5.02	307	⇓Pn	Pn	08 26 05.3	+5.6
	1.0nm,0.5s,baz=134,slow=16,SNR=6.5						

KK31				⇓Lg	Lg	08 27 27.0	
	1.6nm,0.3s,baz=118,slow=29,SNR=3.1						
OTUK	Ortayu	8.43	343	⇑Lg	Lg	08 29 12.5	
	3.8nm,0.7s						

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*IDC **02** 08:30:39.9±0.7, 2°.50S×23°.82E, h0^{km}, mb4.2/11, mbtmp4.4/15, ML3.7/3, MS3.6/19, Error ellipse: s-maj=27.3km s-min=14.4km az=92.0*

*NEIC **02** 08:30:42.0±2.1, 2°.5S±0°.1×23°.9E±0°.1, h10^{km}±1^{km}, mb4.5/21, Error ellipse: s-maj=22.1km s-min=15.3km az=117.0*

ISC 02 08:30:41.2±0.6**, 2°.58S**±0°.06×**23°.99E**±0°.07**, h10^{km}, n72, σ2^{s}.45**/61**, mb4.4**/19**, MS3.6**/15**, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIL	Kilembe	6.62	65	eP	Pn	08 32 23.5	+4.7
KIL				eS	Sn	08 33 34.2	-0.3
MBAR	Mbarara	7.03	74	Pn	Pn	08 32 26.3	+1.9
	12nm,0.3s,baz=237,slow=18,SNR=15						
MBAR				Sn	Sn	08 33 43.9	-0.7
	48nm,0.3s,baz=315,slow=23,SNR=9.5						
MBAR				Lg	Lg	08 34 22.0	
	64nm,0.3s,baz=172,slow=18,SNR=6.6						
MBAR				LR	LR	08 35 32.9	
	comp=Z,284nm,20.0s,baz=241,slow=41						
	26nm,0.3s						
MBAR	Mbarara	7.03	74		Pn	08 32 26.0	+1.6
MBAR	Mbarara	7.03	74	eP	Pn	08 32 31.1	+6.7
MBAR				eS	Sn	08 33 43.5	-1.1
MBAR	Mbarara	7.03	74	eP	Pn	08 32 27.4	+3.0
MBAR	Mbarara	7.03	74	eP	Pn	08 32 25.9	+1.6
MBAR				eS	Sn	08 33 40.8	-3.7
LODK	Lodwar	12.84	62		Pn	08 33 42.9	-1.1
LSZ	Lusaka	13.28	162	Pn	Pn	08 33 51.8	+1.7
	6.3nm,0.3s,baz=336,slow=12,SNR=16						
LSZ				Sn	Sn	08 36 11.3	-6.7
	4.9nm,0.3s,baz=64,slow=18,SNR=5.3						
LSZ				Lg	Lg	08 37 35.2	
	2.9nm,0.3s,baz=324,slow=1.3,SNR=3.6						
LSZ				LR	LR	08 39 15.7	
	comp=Z,270nm,18.4s,baz=344,slow=38						
KMBO	Kilima Mbogo	13.33	84	LR	LR	08 38 48.7	
	comp=Z,206nm,20.3s,baz=272,slow=36						
KMBO	Kilima Mbogo	13.33	84	Pn	Pn	08 33 48.6	-2.3
KIBK	Kibwezi	14.05	89		Pn	08 34 01.1	+0.6
TSUM	Tsumeb	17.67	200	P	Pn	08 34 46.5	-1.2
	2.7nm,0.3s,baz=25,slow=14,SNR=22						
TSUM				S	Sn	08 37 51.1	-14
	7.7nm,0.5s,baz=167,slow=19,SNR=2.5						
TSUM				Lg	Lg	08 40 01.0	
	1.0nm,0.3s,baz=112,slow=21,SNR=3.3						
TSUM				LR	LR	08 41 47.2	
	comp=Z,418nm,18.6s,baz=328,slow=38						
	16nm,0.6s						
TSUM	Tsumeb	17.67	200	Pn	Pn	08 34 47.2	-0.6
TSUM				IAmb	IAmb	08 34 50.7	
	comp=Z,19nm,0.7s						
BLWY	Bulawayo	18.03	166	i P	P	08 34 57.3	+4.7
BLWY	Bulawayo	18.03	166	i P	P	08 34 57.3	+4.7
MATP	Matopo	18.27	166	P	P	08 34 58.0	+2.7
	comp=Z,1.8nm,0.3s,baz=351,slow=11,SNR=22						
MATP				S	Sn	08 38 12.5	-7.0
	comp=Z,13nm,0.9s,baz=38,slow=12,SNR=4.2						
	comp=Z,24nm,0.8s						
MATP	Matopo	18.27	166	i P	P	08 34 58.8	+3.4
MATP	Matopo	18.27	166	i P	P	08 34 58.8	+3.4
LBTB	Lobatse	22.36	176	P	P	08 35 41.5	+1.8
	comp=Z,67nm,0.8s,baz=347,slow=10,SNR=37						
LBTB				LR	LR	08 44 42.9	
	comp=Z,225nm,18.2s,baz=355,slow=38						
	comp=Z,67nm,0.8s						
LBTB	Lobatse	22.36	176	P	P	08 35 40.3	+0.6
LBTB	Lobatse	22.36	176	i P	P	08 35 43.5	+3.8
LBTB	Lobatse	22.36	176	i P	P	08 35 43.5	+3.8
CNG	Changalane	24.86	162	i P	P	08 36 10.4	+6.3
CNG	Changalane	24.86	162	i P	P	08 36 10.4	+6.3
BOSA	Boshof	25.92	177	P	P	08 36 14.5	+0.7
	comp=Z,16nm,0.8s,baz=356,slow=7.8,SNR=25						
BOSA				LR	LR	08 47 12.4	
	comp=Z,134nm,19.6s,baz=3.0,slow=38						
	comp=Z,16nm,0.8s						
BOSA	Boshof	25.92	177	P	P	08 36 14.2	+0.4
BOSA	Boshof	25.92	177	i P	P	08 36 17.1	+3.3
BOSA	Boshof	25.92	177	i P	P	08 36 17.1	+3.3
SUR	Sutherland	29.79	185	LR	LR	08 48 34.6	
	comp=Z,111nm,18.8s,baz=6.5,slow=36						
SUR	Sutherland	29.79	185	P	P	08 36 50.2	+1.6
SUR				IAmb	IAmb	08 36 53.2	
	comp=Z,9.0nm,0.8s						
DBIC	Dimbokro	30.23	288	P	P	08 36 51.0	-1.4
	comp=Z,1.6nm,0.5s,baz=166,slow=4.2,SNR=4.6						
DBIC				LR	LR	08 49 09.2	
	comp=Z,66nm,20.4s,baz=101,slow=37						
	comp=Z,1.6nm,0.5s						
DBIC	Dimbokro	30.23	288	IAmb	IAmb	08 37 06.5	
	comp=Z,14nm,1.1s						
KOWA	Kowa	32.52	302	P	P	08 37 12.3	-0.3
KOWA				IAmb	IAmb	08 37 29.8	
	comp=Z,14nm,1.5s						
EIL	Elat	33.74	17	LR	LR	08 51 22.8	
	comp=Z,126nm,19.1s,baz=268,slow=37						
IDI	Anoyia	37.68	1	P	P	08 37 57.9	+1.0
	comp=Z,9.7nm,1.1s,baz=163,slow=14,SNR=2.1						
	comp=Z,9.7nm,1.1s						
AGG	Agios Georgios	41.43	358	P	P	08 38 28.3	+0.2
AGG				IAmb	IAmb	08 38 54.1	
	comp=Z,22nm,1.4s						
LIT	Litokhoron	42.50	358	P	P	08 38 37.2	+0.4
LIT				IAmb	IAmb	08 38 47.5	
	comp=Z,6.4nm,0.8s						
BRTR	Keskin Array B	43.02	11	P	P	08 38 39.4	-1.9
	comp=Z,0.4nm,0.4s,baz=161,slow=5.8,SNR=2.4						
	comp=Z,0.4nm,0.4s						
BRTR	Keskin Array B	43.02	11	P	P	08 38 42.2	+1.0
BR131	Keskin Array S	43.02	11	P	P	08 38 41.4	+0.1
FNA	Florina	43.22	357	P	P	08 38 42.9	+0.2
FNA				IAmb	IAmb	08 38 43.7	
	comp=Z,6.6nm,0.8s						
TIR	Tirane	43.88	356	P	P	08 38 46.4	-1.5
MDT	Midelt	44.40	325	LR	LR	08 56 39.8	
	comp=Z,64nm,20.6s,baz=148,slow=35						
KBZ	Khabaz	49.13	18	P	P	08 39 30.1	+1.0
	comp=Z,0.7nm,0.5s,baz=281,slow=5.2,SNR=1.5						
	comp=Z,0.7nm,0.5s						
BURAR	Bucovina Array	50.00	1	P	P	08 39 36.1	+0.3
DAVOX	Davos/Dischmat	50.70	347	LR	LR	09 00 36.2	
	comp=Z,40nm,21.6s,baz=258,slow=36						
GEYT	Alibeck	51.20	35	LR	LR	09 01 12.4	
	comp=Z,50nm,19.2s,baz=182,slow=36						
PALK	Pallekele	57.43	80	LR	LR	09 01 25.1	
	comp=Z,61nm,21.1s,baz=291,slow=32						
RCBR	Riachuelo	59.79	265	LR	LR	09 02 08.7	
	comp=Z,76nm,20.2s,baz=231,slow=32						
ABKAR	Akbulak array	60.26	26	P	P	08 40 48.7	-1.1
KK31	Karatay Array	61.77	37	P	P	08 41 00.3	+0.1
KK31				IAmb	IAmb	08 41 06.3	
	comp=Z,1.9nm,0.7s						
KKAR	Karatay Array	61.77	37	P	P	08 41 00.1	-0.2
FINES	FINESS Array B	63.87	1	P	P	08 41 12.6	-1.1
	comp=Z,1.2nm,0.7s,baz=160,slow=12,SNR=3.7						
	comp=Z,1.2nm,0.7s						
FINES	FINESS Array B	63.87	1	P	P	08 41 13.4	-0.4
NAO01	NORSAR Array S	64.06	353	P	P	08 41 13.0	-2.0
NB2	NORSAR Subarra	64.21	353	P	P	08 41 16.1	0.0
	comp=Z,4.1nm,0.9s,baz=170,slow=6.5						
NOA	NORSAR Array B	64.21	353	P	P	08 41 16.4	+0.3
	comp=Z,0.9nm,0.7s,baz=169,slow=6.6,SNR=4.8						
	comp=Z,0.9nm,0.7s						
NC405	NORSAR Array S	64.22	353	P	P	08 41 15.6	-0.5
BOOM	Boomskoye usch	64.83	40	P	P	08 41 20.6	-0.1
BOOM				IAmb	IAmb	08 41 22.5	
	comp=Z,5.8nm,0.9s						
MAW	Mawson	70.16	165	LR	LR	09 08 36.3	
	comp=Z,38nm,21.2s,baz=18,slow=32						
KURK	Kurchatov	70.54	33	P	P	08 41 54.9	-1.4
MAKZ	Makanchi	70.66	38	P	P	08 41 57.4	+0.2
MK31	Makanchi Array	70.84	38	P	P	08 41 59.0	+0.6
MK31				IAmb	IAmb	08 42 03.6	
	comp=Z,4.1nm,1.4s						
MKAR	Makanchi Array	70.84	38	P	P	08 41 59.0	+0.6
	comp=Z,1.1nm,0.6s,baz=251,slow=5.4,SNR=12						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	70.84	38	P	P	08 41 58.1	-0.2
ARCES	ARCESS Array B	71.98	1	P	P	08 42 04.8	+0.1
	comp=Z,0.7nm,0.6s,baz=205,slow=5.4,SNR=5.7						
	comp=Z,0.7nm,0.6s						
ARCES	ARCESS Array B	71.98	1	IAmb	IAmb	08 42 12.4	
	comp=Z,8.3nm,1.4s						
BORG	Borgarnes	74.88	342	LR	LR	09 16 29.8	
	comp=Z,30nm,18.4s,baz=137,slow=37						
ZALV	Zalesovo Beam	75.42	32	P	P	08 42 24.7	-0.5
	comp=Z,1.0nm,0.5s,baz=243,slow=6.5,SNR=3.7						
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	76.58	70	LR	LR	09 17 49.5	
	comp=Z,20nm,18.2s,baz=210,slow=37						
LPAZ	La Paz	91.32	254	LR	LR	09 20 48.5	
	comp=Z,28nm,21.8s,baz=327,slow=33						
SCHQ	Schefferville	92.57	325	LR	LR	09 23 05.1	
	comp=Z,18nm,18.4s,baz=130,slow=34						

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*TUL **02** 08:35:52±0.5, 36°.343N±0°.010×97°.67W±0°.01, h6^{km}±6^{km}, ML2.6, mb_Lg2.3/22(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=90.0*

NEIC 02 08:35:52.0±0.6**, 36°.340N**±0°.004×**97°.67W**±0°.02**, h6^{km}**±6^{km}**, Error ellipse: s-maj=1.9km s-min=0.3km az=76.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.07	272	Pg	Pg	08 36 12.2	-0.4
T35A	Sooner Cattle	1.10	58	Pg	Pg	08 36 12.6	-0.5
FNO	Franklin	1.10	168	Pg	Pg	08 36 12.8	-0.4
TUL1	Leonard	1.58	105	Pn	Pn	08 36 20.4	-0.3
X34A	Smith Ranch, M	1.74	184	IAmb_Lg		08 36 50.3	
	comp=Z,18nm,0.8s						
WMOK	Wichita Mounta	1.84	210	Pn	Pn	08 36 24.7	+0.5
X37A	Clayton	2.56	132	Pn	Pn	08 36 34.8	+0.6
CBKS	Cedar Bluff	2.96	327	IAmb_Lg		08 37 27.3	
	comp=Z,6.3nm,0.9s						
HHAR	Hobbs	3.02	90	Pn	Pn	08 36 40.3	-0.1
W39A	Magazine	3.36	109	Pn	Pn	08 36 44.6	-0.5
W39A					LR	08 37 38.1	
W39A				IAmb_Lg		08 37 44.3	
	comp=Z,7.2nm,0.9s						
AMTX	Amarillo	3.57	247	IAmb_Lg		08 37 54.0	
	comp=Z,9.5nm,0.8s						
S39A	Bolivar	3.73	68	IAmb_Lg		08 37 49.4	
	comp=Z,5.9nm,0.7s						
MIAR	Mount Ida	3.79	117	Pn	Pn	08 36 52.1	+1.0
U40A	Yellville	3.89	88	Pn	Pn	08 36 52.6	+0.2
U40A				IAmb_Lg		08 37 58.9	
	comp=Z,5.3nm,0.9s						
X40A	Basin Creek Fa	4.36	114	IAmb_Lg		08 38 15.1	
	comp=Z,5.3nm,1.1s						
P38A	Dawn	4.63	44	IAmb_Lg		08 38 17.9	
	comp=Z,3.9nm,0.7s						
R40A	Maddies Statio	4.73	64	IAmb_Lg		08 38 25.6	
	comp=Z,5.3nm,1.1s						
P40A	Paris	5.47	53	IAmb_Lg		08 38 47.6	
	comp=Z,6.7nm,0.7s						
PBMO	Poplar Bluff	5.85	84	IAmb_Lg		08 38 57.2	
	comp=Z,6.3nm,0.9s						
FVM	French Village	6.02	72	IAmb_Lg		08 39 02.3	
	comp=Z,6.1nm,0.8s						

IDC 02 08:43:04.6±1.7**, 16°.04N**×**93°.64E, h0^{km}, mb3.5**/4**, mbtmp3.5**/5**, ML4.1**/1**, MS3.6**/1**, Error ellipse: s-maj=56.5km s-min=23.8km az=60.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.61	64	Pn	Pn	08 44 29.4	+0.1
	1.3nm,0.3s,baz=249,slow=15,SNR=22						
	4.1nm,0.4s						
H08S3	Diego Garcia H	31.49	223	T	T	09 22 28.7	
	baz=41,slow=76,SNR=19						
H08S2	Diego Garcia H	31.50	223	T	T	09 22 29.4	
	baz=41,slow=76,SNR=22						
H08S1	Diego Carcia H	31.51	223	T	T	09 22 30.7	
	baz=41,slow=76,SNR=8.8						
MKAR	Makanchi Array	32.08	345	P	P	08 49 33.5	+0.2
	0.2nm,0.7s,baz=156,slow=11,SNR=2.7						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	36.58	344	P	P	08 50 11.9	-0.3
	0.4nm,0.8s,baz=159,slow=8.9,SNR=3.8						
	0.4nm,0.8s						
WRA	Warramunga Arr	53.65	130	P	P	08 52 28.1	-0.2
	0.4nm,0.5s,baz=308,slow=7.5,SNR=1.6						
	0.4nm,0.5s						
ASAR	Alice Springs	55.73	134	P	P	08 52 43.4	0.0
	0.4nm,0.3s,baz=314,slow=6.9,SNR=9.9						
	0.4nm,0.3s						
PMG	Port Moresby	58.70	112	LR	LR	09 23 02.2	
	comp=Z,46nm,18.4s,baz=129,slow=41						

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*MEX **02** 08:48:39.7±1.4, 14°.65N×95°.15W, h16^{km}±26^{km}, MD4.0*

*NEIC **02** 08:48:39.4±2.1, 14°.77N±0°.07×95°.19W±0°.04, h21^{km}±7^{km}, mb4.0/15, Md4.0/26(MEX), Error ellipse: s-maj=10.3km s-min=5.6km az=188.0*

ISC 02 08:48:40.3±0.8**, 14°.74N**±0°.06×**95°.18W**±0°.02**, h45^{km}**±9^{km}**, n42, σ1^{s}.65**/46**, mb3.9**/5**, Off coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.36	319		Pn	08 49 02.1	-0.8
HUIG					Sn	08 49 18.3	-1.5
HUIG	Huatulco	1.36	319	eP	Pn	08 49 02.1	-0.8
HUIG				eS	Sn	08 49 18.3	-1.5
PCIG		2.12	63		Pn	08 49 11.0	-2.2
PCIG					Sn	08 49 36.3	-2.0
PCIG		2.12	63	eP	Pn	08 49 11.0	-2.2
PCIG				eS	Sn	08 49 36.3	-2.0
PEIG	Puerto Escondi	2.28	304	eP	Pn	08 49 15.3	-0.2
PEIG				eS	Sn	08 49 40.7	-1.7
CMIG	Matias Romero	2.36	7		Pn	08 49 16.4	-0.2
CMIG					Sn	08 49 44.6	+0.3
CMIG	Matias Romero	2.36	7	eP	Pn	08 49 16.4	-0.2
CMIG				eS	Sn	08 49 44.6	+0.3
UXUV	UXUV	2.75	21	eP	Pn	08 49 22.2	+0.3
UXUV				eS	Sn	08 49 54.5	+0.6
VHO	Vista Hermosa	2.76	327	eP	Pn	08 49 24.7	+2.4
VHO				eS	Sn	08 49 56.7	+2.1
TGIG		2.83	44		Pn	08 49 22.8	-0.3
TGIG					Sn	08 49 56.8	+0.7
TGIG		2.83	44	eP	Pn	08 49 22.8	-0.3
TGIG				eS	Sn	08 49 56.8	+0.7
PATR	El Naranjo	2.87	82	i P	Pn	08 49 21.9	-1.9
PATR				i S	Sn	08 49 53.1	-4.1
PAVE	Pavencul	2.93	81	eP	Pn	08 49 22.7	-2.0
PAVE				i S	Sn	08 49 55.2	-3.6
CHUJ	Union Juarez	2.98	83	eP	Pn	08 49 23.4	-1.9
CHUJ				i S	Sn	08 49 56.4	-3.7
YOIG	Yosondua	3.11	313	eP	Pn	08 49 29.9	+2.8
YOIG				eS	Sn	08 50 04.6	+1.5
PNIG	Pinotepa	3.29	300		Pn	08 49 30.1	+0.8
PNIG					Sn	08 50 04.8	-2.4
PNIG	Pinotepa	3.29	300	eP	Pn	08 49 30.1	+0.8
PNIG				eS	Sn	08 50 04.8	-2.4
CCIG	Comitan	3.31	62		Pn	08 49 30.2	+0.4
CCIG					Sn	08 50 08.7	+0.8
CCIG	Comitan	3.31	62	eP	Pn	08 49 30.2	+0.4
CCIG				eS	Sn	08 50 08.7	+0.8
RTAL	Retalhuleu	3.38	93	Pn	Pn	08 49 29.5	-1.0
HUEH	Huehuetenango	3.59	80		Pn	08 49 34.2	+0.5
TLIG	Tlapa	4.30	311		Pn	08 49 43.3	-0.1
PETF	Flores	5.55	66		Pn	08 50 00.3	-0.1
MTO3	Montecristo	5.64	93	Pn	Pn	08 50 01.6	-0.3
ESQI	Esquipulas	5.65	91	Pn	Pn	08 50 03.4	+1.5
ORTG	Ortega, Santa	10.43	114	Pn	Pn	08 51 07.5	0.0
DUNO	Dulce Nombre,	10.53	115	Pn	Pn	08 51 10.1	+1.5
ZAIG	Zacatecas	10.62	320	Pn	Pn	08 51 11.2	+1.1
ESPN	Las Esperanzas	10.88	102	Pn	Pn	08 51 15.1	+1.7
CVTR	Volcan Turrial	12.10	112	Pn	Pn	08 51 30.3	-0.2
LRAL	Lakeview Retre	19.68	21	P	P	08 53 06.6	+1.0
LRAL				IAmb	IAmb	08 53 28.7	
	comp=Z,10nm,1.4s						
SRIG	Santa Rosalia	20.23	311	P	P	08 53 11.1	-0.6
SRIG				IAmb	IAmb	08 53 29.5	
	comp=Z,17nm,1.4s						
HSIG		20.37	317	P	P	08 53 12.8	-0.4
W41B	Gary Mavity, V	20.52	7	P	P	08 53 15.4	+0.7
W41B				IAmb	IAmb	08 53 29.7	
	comp=Z,5.7nm,1.4s						
FCAR	Ozark Folk Cen	21.24	7	P	P	08 53 24.6	+2.1
FCAR				IAmb	IAmb	08 53 30.0	
	comp=Z,4.2nm,0.8s						
HHAR	Hobbs	21.48	3	P	P	08 53 25.8	+0.6
U40A	Yellville	21.63	5	P	P	08 53 26.2	-0.5
S39A	Bolivar	22.92	4	P	P	08 53 41.6	+1.2
S39A				IAmb	IAmb	08 53 45.1	
	comp=Z,3.8nm,0.8s						
T47A	Sharon Grove	23.30	17	P	P	08 53 46.3	+2.1
T47A				IAmb	IAmb	08 53 47.4	
	comp=Z,4.1nm,0.8s						
R40A	Maddies Statio	23.60	6	P	P	08 53 48.7	+1.6
R40A				IAmb	IAmb	08 53 58.8	
	comp=Z,5.2nm,1.1s						
P40A	Paris	24.85	6	P	P	08 54 01.2	+2.6
P40A				IAmb	IAmb	08 54 09.4	
	comp=Z,3.5nm,0.8s						
N38A	Joes South For	26.02	3	P	P	08 54 11.4	+2.3

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*ASRS **02** 08:48:53.2±0.2, 51°N±1°×90°.1E±1°.0, h5^{km}, MLh3.2/15, Error ellipse: s-maj=2.8km s-min=1.8km az=150.1, confirmed*

*NNC **02** 08:49:07.1±4.7, 50°.85N×89°.24E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=43.0km s-min=23.3km az=39.0*

ISC 02 08:48:57.5±0.8**, 51°.25N**±0°.03×**89°.96E**±0°.03**, h10^{km}, n24, σ1^{s}.90**/41**, 11C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	1.54	222	Pg	Pn	08 49 25.9	+0.7
CUR				Sg	Sg	08 49 46.9	-0.2
DJO	Djoy, Khakassi	1.72	26	Pg	Pn	08 49 27.4	0.0
DJO				Sg	Sn	08 49 49.1	-0.4
AKAR	Aktash	1.75	239	Pg	Pb	08 49 30.2	+0.4
AKAR				Sg	Sg	08 49 53.2	-0.7
ARTR	Artybash	1.76	289	Pg	Pg	08 49 30.1	-1.1
ARTR				Sg	Sg	08 49 52.9	-1.0
DJOS	Djoyskaya Sosn	1.78	29	Pg	Pn	08 49 29.3	+1.0
DJOS				Sg	Sn	08 49 51.4	+0.4
CHBI	Chibit, Altay	1.82	240	Pg	Pg	08 49 32.3	0.0
CHBI				Sg	Sg	08 49 57.0	+1.0
CERR	Cheremushki	1.84	29	Pg	Pb	08 49 30.7	-0.4
CERR				Sg	Sb	08 49 54.2	+0.1
TASR	Tashtagol	1.98	320	Pg	Pg	08 49 34.7	-0.8
TASR				Sg	Sg	08 50 00.7	-0.4
DGZ	Jazzator, Alta	2.24	227	Pg	Pb	08 49 38.5	+0.3
DGZ				Sg	Sg	08 50 09.5	0.0
LUZB	Luzhba, Kemero	2.50	345	Pg	Pb	08 49 42.0	-0.3
LUZB				Sg	Sb	08 50 14.4	+1.3
ARDR	Aradan	2.53	57	Pg	Pb	08 49 41.8	-1.1
ARDR				Sg	Sb	08 50 13.6	-0.5
GALT	Gorno-Altaysk,	2.60	287	Sg	Sg	08 50 18.7	-2.2
ABNR	Abakan	2.63	19	Sg	Sb	08 50 19.4	+2.3
KZLR	Kyzyl	2.85	79	Sg	Sb	08 50 23.5	+0.2
ELT	Eltsovka	3.04	313	Pg	Pb	08 49 50.7	-1.0
ELT				Sg	Sg	08 50 31.3	-3.8
UKR	Ust'-Kan	3.29	266	Pg	Pg	08 49 58.0	-2.4
UKR				Sg	Sg	08 50 41.4	-1.5
ERNS	Erzin	3.45	105	Pg	Pn	08 49 55.1	+3.8
ERNS				Sg	Sb	08 50 41.7	+1.2
MINR	Mina	4.46	33	Pg	Pb	08 50 16.2	+0.4
MINR				Sg	Sb	08 51 14.9	+5.3
BRCR	Berchikul'	4.50	348	Pg	Pb	08 50 15.9	-0.6
BRCR				Sg	Sb	08 51 14.4	+3.6
KNGR	Kungurtug, Tuv	4.83	95	Sg	Sg	08 51 30.1	-2.2
MK31	Makanchi Array	6.73	231	⇑Pn	Pn	08 50 39.0	+2.7
	0.9nm,0.5s,baz=61,slow=12,SNR=18						
MK31				⇑Pg	Pg	08 51 01.9	-4.4
	2.7nm,0.8s,baz=48,slow=16,SNR=5.4						
MK31				⇑Lg	Lg	08 52 23.4	
	1.1nm,0.5s,baz=50,slow=29,SNR=3.9						
MAKZ	Makanchi	6.88	233	⇑Pn	Pn	08 50 37.5	-0.8
	1.4nm,1.1s						
MAKZ				⇑Pg	Pb	08 51 02.8	+5.8
	1.0nm,0.7s						
MAKZ				⇓Lg	Lg	08 52 26.5	
	2.8nm,0.8s						
KURK	Kurchatov	7.18	270	⇑Pn	Pn	08 50 49.4	+7.0
	1.8nm,1.1s						
KURK				⇑Sn	Sn	08 52 05.1	+1.2
	0.7nm,0.5s						
KURK				⇑Lg	Lg	08 52 41.8	
	6.8nm,0.9s						
KURBB	Kurchatov Arra	7.25	269	⇑Pn	Pn	08 50 48.0	+4.6
	1.3nm,0.5s						
KURBB				⇑Sn	Sn	08 52 06.7	+1.0
	4.2nm,0.9s						
KURBB				⇑Lg	Lg	08 52 42.8	
	4.7nm,0.6s						

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*IDC **02** 09:21:15.6±1.4, 20°.04S×44°.32W, h0^{km}, mb4.2/3, mbtmp4.2/5, ML4.2/2, Error ellipse: s-maj=35.0km s-min=25.1km az=13.0*

*VAO **02** 09:21:16.2±0.2, 19°.91S×44°.25W, h1^{km}, mbR3.4*

ISC 02 09:21:16.0±1.6**, 19°.91S**±0°.04×**44°.27W**±0°.05**, h1^{km}**±12^{km}**, n36, σ0^{s}.99**/47**, mb4.5**/3**, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSCB	Bom Sucesso	1.18	204	eP	Pg	09 21 38.7	0.0
BSCB				eS	Sg	09 21 53.3	-0.8
DIAM	Diamantina, MG	1.70	19	eP	Pb	09 21 48.4	+0.3
DIAM				eS	Sn	09 22 09.5	+0.1
VAS01	Vassouras-RJ	2.48	162	eP	Pn	09 21 59.0	+1.5
VAS01				eS	Sn	09 22 28.1	-0.4
DUB01	Friburgo-RJ	2.79	141	eP	Pn	09 22 02.0	+0.2
DUB01				eS	Sn	09 22 35.9	-0.4
MAN01	Angra dos Reis	2.95	175	eP	Pn	09 22 04.4	+0.3
MAN01				eS	Sn	09 22 40.3	+0.1
CAM01	Campos-RJ	3.10	128	eP	Pn	09 22 06.2	+0.2
CAM01				eS	Sn	09 22 44.0	+0.4
ESAR	Angra dos Reis	3.10	183	eP	Pn	09 22 06.4	+0.4
ESAR				eS	Sn	09 22 43.3	-0.5
SJMB	Sao Joao De Ma	3.15	68	eP	Pn	09 22 07.3	+0.6
SJMB				eS	Sn	09 22 45.1	+0.1
ALF01	Guarapari-ES	3.40	103	eP	Pn	09 22 11.4	+1.3
ALF01				eS	Sn	09 22 51.8	+0.7
PARB	Paraibuna	3.64	200	eP	Pn	09 22 14.0	+0.5
RIB01	Linhares ES	3.70	81	eP	Pn	09 22 15.1	+0.8
RCLB	Rio Claro- Sao	3.94	230	eP	Pn	09 22 18.2	+0.6
VAO	Valinhos	3.97	219	eP	Pn	09 22 19.6	+1.5
BB19B	Bebedouro	4.16	253	eP	Pn	09 22 22.4	+1.7
IPMB	Ipameri, GO	4.20	297	eP	Pn	09 22 21.4	+0.2
NAN01	Guarapari, ES	4.43	63	eP	Pn	09 22 24.0	-0.3
JANB	Januaria	4.83	359	eP	Pn	09 22 30.6	+0.7
GUA01	Guaratinga, BA	5.38	53	eP	Pn	09 22 37.6	+0.2
BDFB	Brasilia	5.55	319	Pn	Pn	09 22 41.0	+1.1
	3.2nm,0.3s,baz=150,slow=8.7,SNR=25						
BDFB				Pg	Pb	09 22 56.1	+2.4
	3.3nm,0.3s,baz=135,slow=12,SNR=4.7						
BDFB				Sn	Sn	09 23 43.1	-1.3
	4.4nm,0.3s,baz=131,slow=22,SNR=4.9						
BDFB				Lg	Lg	09 24 05.7	
	9.2nm,0.3s,baz=238,slow=24,SNR=7.3						
	7.3nm,0.3s						
PCMB	Pacaembu	6.76	254	eP	Pn	09 22 57.2	+0.8
SDBA	SAO DESIDERIO	7.48	355	eP	Pn	09 23 05.1	-1.3
GDU01	Guandu, BA	7.62	37	eP	Pn	09 23 08.6	+0.4
PTGB	Pitanga	8.66	235	eP	Pn	09 23 22.5	0.0
PEXB	Peixe	8.67	333	eP	Pn	09 23 22.1	-0.7
NBPN	Ponto Novo - B	9.83	24	eP	Pn	09 23 38.1	-0.4
ITAB	Concordia	10.25	223	eP	Pn	09 23 45.0	+0.7
SNDB	Serra Nova Dou	10.39	318	eP	Pn	09 23 44.8	-1.4
AQDB	Aquidauana	10.75	265	eP	Pn	09 23 50.4	-0.8
NBLA	Lagarto - SE	10.84	36	eP	Pn	09 23 51.2	-1.2
SMTB	Santa Maria do	11.44	343	eP	Pn	09 24 00.1	-0.6
SALV	Santo Antonio	11.58	288	eP	Pn	09 24 03.2	+0.7
NBAN	Anadia - AL	12.78	38	eP	Pn	09 24 16.8	-2.1
CPUP	Villa Florida	13.61	240	Pn	Pn	09 24 27.8	-2.4
	0.4nm,0.3s,baz=71,slow=12,SNR=5.7						
CPUP				Sn	Sn	09 26 48.3	-14
	0.3nm,0.3s,baz=127,slow=5.3,SNR=4.9						
CPUP				Lg	Lg	09 28 22.9	
	0.5nm,0.3s,baz=175,slow=11,SNR=4.4						
	1.0nm,0.3s						
TORD	Torodi Ar. Bea	55.90	58	P	P	09 30 55.6	-0.2
	3.4nm,0.3s,baz=230,slow=8.1,SNR=1.2						
	3.4nm,0.3s						
BOSA	Boshof	63.21	113	P	P	09 31 46.4	0.0
	3.4nm,1.0s,baz=270,slow=7.1,SNR=3.2						
	3.4nm,1.0s						
PDAR	Pinedale Array	86.53	318	P	P	09 34 02.1	+1.1
	0.2nm,0.5s,baz=136,slow=5.7,SNR=4.3						

0.2nm,0.5s

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*NOU **02** 09:27:20.6, 36°.90S×179°.95W, h124^{km}, MLv4.9/9, East of North Island, N.Z.*
*IDC **02** 09:27:21.2±2.8, 36°.62S×179°.49E, h0^{km}, mb4.2/3, mbtmp4.3/4, ML4.4/1, MS3.2/2, Error ellipse: s-maj=70.8km s-min=40.5km az=140.0*
*NEIC **02** 09:27:26.6±0.4, 37°.06S±0°.05×179°.4E±0°.2, h32^{km}±11^{km}, mb4.3/8, ML4.1(WEL), Error ellipse: s-maj=24.7km s-min=6.7km az=91.0*
*WEL **02** 09:27:27.5±1.0, 37°S±4°×17°9E±°, h9^{km}±6^{km}, M4.1/21, ML4.3/21, MLv4.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=94.6*
ISC 02 09:27:26.0±2.2, **36°.93S**±0°.07×**179°.38E**±0°.09, **h32**^{km}±13^{km}, **n146**, σ**1^{s}.52**/158, **mb4.2**/7, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.06	233		Pn	09 27 44.3	-0.3
MXZ	Matakaoa Point	1.06	233	P	Pn	09 27 44.4	-0.3
MXZ				S	Sn	09 27 57.3	-1.1
WMGZ	Waiomatatini S	1.17	221	P	Pb	09 27 48.5	+0.8
WMGZ				S	Sb	09 28 04.4	+1.9
PKGZ	Pakihiroa	1.41	227	P	Pn	09 27 50.8	+1.2
PKGZ				S	Sb	09 28 08.9	-0.4
PUZ	Puketiti	1.44	218	P	Pb	09 27 51.8	-0.6
PUZ				S	Sb	09 28 11.5	+1.2
HAZ	Te Kaha	1.51	237	P	Pn	09 27 50.9	0.0
HAZ				S	Sb	09 28 11.5	-0.7
TWGZ	Tauwhareparae	1.66	221	P	Pb	09 27 55.2	-0.9
TWGZ				S	Sb	09 28 17.6	+0.9
RUGZ	Raukumara Rang	1.70	232	P	Pn	09 27 55.0	+1.4
RUGZ				S	Sb	09 28 17.7	0.0
CNGZ	Carnagh Statio	1.80	211	P	Pb	09 27 57.4	-1.0
CNGZ				S	Sb	09 28 21.5	+0.9
WIZ	White Island	1.84	251	P	Pn	09 27 55.4	0.0
WIZ				S	Sn	09 28 14.3	-3.3
WSRZ	White Island S	1.85	251	P	Pn	09 27 56.5	+0.9
WSRZ				S	Sn	09 28 13.9	-4.0
TKGZ	Te Karaka	1.93	218	P	Pn	09 27 58.2	+1.6
TKGZ				S	Sn	09 28 22.8	+3.0
MWZ	Matawai	2.03	226	P	Pn	09 27 59.8	+1.7
MWZ				S	Sb	09 28 25.9	-1.2
WHRZ	Whale Island	2.12	244	P	Pb	09 28 01.4	-2.4
RIGZ	Rimuhau	2.18	215	P	Pn	09 28 01.6	+1.4
RAGZ	Rawiri	2.20	224	P	Pn	09 28 02.3	+1.9
URZ	Urewera	2.23	233	Pn	Pn	09 28 02.5	+1.6
	74nm,0.3s,baz=269,slow=4.1,SNR=435						
URZ				Sn	Sn	09 28 28.4	+1.1
	60nm,0.3s,baz=204,slow=20,SNR=10						
URZ				LR	LR	09 28 52.5	
	comp=Z,200nm,18.7s,baz=31,slow=36						
	274nm,0.4s						
URZ	Urewera	2.23	233	P	Pn	09 28 02.4	+1.6
URZ				S	Sn	09 28 29.0	+1.7
URZ	Urewera	2.23	233	P	Pn	09 28 02.6	+1.8
PRGZ	Paritu Road	2.31	210	P	Pn	09 28 03.3	+1.4
MARZ	Manawahe	2.39	243	P	Pn	09 28 04.0	+1.0
EDRZ	Edgecumbe	2.40	240	P	Pn	09 28 04.7	+1.5
OPRZ	Ohinepanea	2.42	247	P	Pn	09 28 04.7	+1.3
SNGZ	Shannon Statio	2.45	220	P	Pn	09 28 05.1	+1.3
KNZ	Kokohu	2.48	212	P	Pn	09 28 05.4	+1.2
MHGZ	Mahia Peninsul	2.50	207	P	Pn	09 28 05.9	+1.4
MYRZ	Mayor Island	2.53	261	P	Pn	09 28 04.7	-0.2
RTZ	Ruatahuna	2.53	228	P	Pn	09 28 06.4	+1.4
MUGZ	Murupara	2.58	232	P	Pn	09 28 06.7	+1.2
MKRZ	Makatiti	2.60	242	P	Pn	09 28 08.0	+2.0
TGRZ	Tauranga	2.61	251	P	Pn	09 28 06.8	+0.8
LIRZ	Lichensteins R	2.61	245	P	Pn	09 28 08.7	+2.7
TARZ	Mount Tarawera	2.62	239	P	Pn	09 28 08.2	+1.9
OMRZ	Omania	2.66	243	P	Pn	09 28 08.8	+2.0
RRRZ	Republican Roa	2.67	237	P	Pn	09 28 08.3	+1.5
RAHZ	Arahi	2.68	222	P	Pn	09 28 08.4	+1.3
KARZ	Kaharoa	2.72	246	P	Pn	09 28 09.1	+1.6
HLRZ	Highlands Stat	2.74	240	P	Pn	09 28 09.6	+1.8
MTHZ	Maungataniwha	2.77	226	P	Pn	09 28 09.8	+1.5
NGRZ	Ngongotaha	2.79	244	P	Pn	09 28 10.8	+2.2
UTU	Utuhina	2.82	243	P	Pn	09 28 11.7	+2.9
PRRZ	Plateau Road	2.83	236	P	Pn	09 28 10.5	+1.4
HSRZ	Hossack Road	2.84	240	P	Pn	09 28 11.3	+2.1
HRRZ	Handcock Road	2.85	238	P	Pn	09 28 10.9	+1.5
KMRZ	Kaimai	2.88	251	P	Pn	09 28 10.4	+0.6
ALRZ	Allen Road	2.90	235	P	Pn	09 28 11.3	+1.2
KUZ	Kuaotunu	2.94	273	P	Pn	09 28 10.0	-0.5
GRRZ	Galatos Road	2.95	240	P	Pn	09 28 12.8	+2.0
NMHZ	Naumai	2.96	222	P	Pn	09 28 12.7	+1.7
ARHZ	Aropaoanui	2.99	218	P	Pn	09 28 12.6	+1.4
WPRZ	Whakapapatarin	3.00	237	P	Pn	09 28 13.9	+2.5
MRHZ	Matea Rd	3.01	230	P	Pn	09 28 12.7	+1.1
BKZ	Black Stump Fm	3.19	225	Pn	Pn	09 28 14.4	+0.4
BKZ	Black Stump Fm	3.19	225	P	Pn	09 28 14.9	+0.9
BKZ	Black Stump Fm	3.19	225	P	Pn	09 28 15.1	+1.1
TOZ	Tahuroa Road	3.19	254	P	Pn	09 28 13.9	0.0
WHTZ	Whakaora	3.21	236	P	Pn	09 28 16.9	+2.6
KUTZ	Kaahu Road	3.22	240	P	Pn	09 28 16.2	+1.8
GRZ	Great Barrier	3.23	281	P	Pn	09 28 14.9	+0.5
CKHZ	Cape Kidnapper	3.27	213	P	Pn	09 28 14.1	-0.9
MCHZ	McNeill Hill	3.28	219	P	Pn	09 28 16.2	+1.0
TLZ	Tolley Road	3.35	244	P	Pn	09 28 17.7	+1.4
MKAZ	Moumakai	3.38	266	P	Pn	09 28 16.7	+0.1
WATZ	Wairara	3.38	237	P	Pn	09 28 18.2	+1.5
WIAZ	Waiheke Island	3.40	271	P	Pn	09 28 17.1	+0.2
KWHZ	Kaweka Forest	3.41	222	P	Pn	09 28 18.5	+1.5
RATZ	Rangitukua	3.44	235	P	Pn	09 28 19.2	+1.7
RITZ	Rihia Road	3.45	233	P	Pn	09 28 19.0	+1.4
KAHZ	Kahuranaki	3.47	214	P	Pn	09 28 17.9	+0.1
ETAZ	East Tamaki Re	3.56	268	P	Pn	09 28 19.9	+0.8
KRHZ	Kereru	3.59	220	P	Pn	09 28 20.2	+0.7
MBAZ	Motutapu North	3.59	271	P	Pn	09 28 20.1	+0.6
TMVZ	Te Maari	3.63	232	P	Pn	09 28 20.7	+0.6
ETVZ	East Tongariro	3.63	232	P	Pn	09 28 20.8	+0.6
NTVZ	North Tongarir	3.63	232	P	Pn	09 28 21.6	+1.4
BHHZ	Black Hill Sta	3.65	225	P	Pn	09 28 20.8	+0.5
ABAZ	Army Bay	3.66	274	P	Pn	09 28 21.3	+0.8
PXZ	Pawanui	3.67	212	P	Pn	09 28 20.2	-0.4
OTVZ	Oturere	3.68	232	P	Pn	09 28 21.8	+0.9
NNVZ	North Ngauruho	3.69	232	P	Pn	09 28 22.2	+1.2
WTVZ	West Tongariro	3.70	233	P	Pn	09 28 22.7	+1.6
SNVZ	South Ngauruho	3.71	232	P	Pn	09 28 22.3	+1.0
EPAZ	Eden Park BICE	3.71	270	P	Pn	09 28 23.3	+2.2
HBAZ	Herne Bay Bore	3.72	270	P	Pn	09 28 23.2	+1.9
NGZ	Ngauruhoe	3.73	232	P	Pn	09 28 22.5	+1.0
TUVZ	Tukino	3.75	230	P	Pn	09 28 22.6	+0.8
MOVZ	Moawhango	3.77	228	P	Pn	09 28 22.5	+0.4
AWAZ	Awhitu Peninsu	3.79	267	P	Pn	09 28 23.1	+0.9
WHVZ	Whangaehu Hut	3.80	231	P	Pn	09 28 23.2	+0.7
FWVZ	Far West T-bar	3.80	231	P	Pn	09 28 23.9	+1.3
WNVZ	Wahianoa	3.82	230	P	Pn	09 28 23.3	+0.5
TRVZ	Turoa	3.83	231	P	Pn	09 28 24.7	+1.6
WTAZ	Waiatarua	3.85	269	P	Pn	09 28 24.2	+1.1
RVAZ	Riverhead Bore	3.85	271	P	Pn	09 28 24.1	+1.0
PNHZ	Pukenui	3.88	219	P	Pn	09 28 23.5	0.0
WPHZ	Waipukurau	3.88	215	P	Pn	09 28 23.4	-0.1
HIZ	Hauiti	3.91	245	P	Pn	09 28 25.7	+1.7
HIZ	Hauiti	3.91	245	P	Pn	09 28 26.2	+2.2
PKVZ	Pokaka	3.95	232	P	Pn	09 28 26.1	+1.5
PRHZ	Porangahau	3.96	212	P	Pn	09 28 23.8	-0.8
TSZ	Takapari Road	4.11	220	P	Pn	09 28 26.0	-0.7
WCZ	Waipu Caves	4.17	282	P	Pn	09 28 28.7	+1.2
VRZ	Vera Road	4.25	238	P	Pn	09 28 30.6	+2.0
WAZ	Wanganui	4.45	229	P	Pn	09 28 32.3	+0.9
POWZ	Post Office Ro	4.46	218	P	Pn	09 28 32.1	+0.7
BFZ	Birch Farm	4.47	212	Pn	Pn	09 28 29.8	-1.8
PRWZ	Pori Road	4.49	215	P	Pn	09 28 32.1	+0.3
MHEZ	Mangahewa	4.53	240	P	Pn	09 28 37.1	+4.7
LREZ	Lake Rotokare	4.66	236	P	Pn	09 28 36.1	+2.0
DREZ	Durham Road	4.66	240	P	Pn	09 28 37.7	+3.4
MRZ	Mangatainoka R	4.76	217	P	Pn	09 28 35.3	-0.2
NEZ	North Egmont	4.77	239	P	Pn	09 28 38.7	+2.9
PKE	Pukeiti	4.81	240	P	Pn	09 28 39.7	+3.3
KHEZ	Kahui Hut	4.84	239	P	Pn	09 28 40.1	+3.3
NBEZ	Newall Road No	4.93	240	P	Pn	09 28 41.8	+3.9
OUZ	Omahuta	4.98	288		Pn	09 28 39.9	+1.2
OUZ	Omahuta	4.98	288	P	Pn	09 28 39.9	+1.2
OUZ	Omahuta	4.98	288	P	Pn	09 28 40.1	+1.5
OGWZ	Otaki Gorge	5.08	219	P	Pn	09 28 39.1	-0.8
KIW	Kapiti Island	5.24	220	P	Pn	09 28 41.2	-1.0
MSWZ	Moikau Station	5.50	214	Pn	Pn	09 28 44.7	-1.1
PLWZ	Palliser	5.63	213	Pn	Pn	09 28 46.6	-0.9
SNZO	South Karori	5.68	218	P	Pn	09 28 47.4	-0.8
TUWZ	Tuamarina	6.16	222	P	Pn	09 28 54.0	-0.8
BSWZ	Blackbirch Sta	6.40	220	Pn	Pn	09 28 57.6	-0.5
TKNZ	Takaka Hill	6.46	229	P	Pn	09 28 58.1	-0.8
QRZ	Quartz Range	6.60	232	P	Pn	09 29 00.5	-0.4
KHZ	Kahutara	7.09	218	P	Pn	09 29 07.3	-0.2
CTZ	Chatham Island	7.45	157	P	Pn	09 29 14.8	+2.3
INZ	Inchbonnie	8.40	224	P	Pn	09 29 31.4	+5.8
RPZ	Rata Peaks	9.28	221	P	Pn	09 29 37.1	-0.5
ODZ	Otahua Downs	10.44	216	P	Pn	09 29 50.7	-2.8
STKA	Stephens Creek	31.44	268	LR	LR	09 45 35.4	
	comp=Z,78nm,18.5s,baz=192,slow=35						
BBOO	Buckleboo	35.55	264	P	P	09 34 20.5	+0.2
COEN	Coen	39.54	296	P	P	09 34 54.4	+0.2
AS31	Alice Springs	41.06	276	P	P	09 35 06.8	0.0
ASAR	Alice Springs	41.06	276	P	P	09 35 06.8	-0.1
	3.0nm,0.5s,baz=121,slow=8.2,SNR=72						
	3.0nm,0.5s						
WR0	Warramunga Arr	42.48	281	P	P	09 35 18.5	+0.1
WR0				IAmb	IAmb	09 35 25.5	
	comp=Z,3.3nm,0.8s						
WB2	Warramunga Arr	42.64	281	P	P	09 35 19.8	+0.1
WB2				IAmb	IAmb	09 35 45.0	
	comp=Z,8.1nm,1.3s						
WRAB	Tennant Creek	42.64	281	P	P	09 35 19.8	0.0
WRAB				IAmb	IAmb	09 35 32.2	
	comp=Z,3.3nm,0.6s						
WRA	Warramunga Arr	42.65	281	P	P	09 35 19.6	-0.1
	comp=Z,1.5nm,0.3s,baz=121,slow=7.7,SNR=26						
	comp=Z,1.5nm,0.3s						
WB0	Warramunga Arr	42.70	281	P	P	09 35 20.0	-0.2
WB0				IAmb	IAmb	09 35 35.9	
	comp=Z,13nm,1.4s						
FITZ	Fitzroy Crossi	50.54	277	P	P	09 36 22.8	+1.2
	comp=Z,0.8nm,0.4s,baz=69,slow=3.0,SNR=1.5						
	comp=Z,0.8nm,0.4s						
FITZ	Fitzroy Crossi	50.54	277	P	P	09 36 22.4	+0.8
ARCES	ARCESS Array B	144.40	345	PKP	PKPab	09 46 56.0	-0.1
	comp=Z,0.3nm,0.5s,baz=15,slow=3.7,SNR=1.2						
FINES	FINESS Array B	150.30	334	PKPbc	PKPbc	09 47 12.8	-0.3
	comp=Z,1.3nm,0.6s,baz=13,slow=3.0,SNR=4.9						

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*IPEC **02** 09:58:24.9±0.1, 49°.82N×18°.49E, h1^{km}, ML1.3/3, Error ellipse: s-maj=2.0km s-min=0.7km az=162.0*
PRU 02 09:58:26.5±0.0, **49°.80N**×**18°.41E**, **h0**^{km}, **Mining Induced Event Lazy, E=2.7e+04, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.17	283	*e*PG	Pg	09 58 29.6	-0.2
OKC				*e*SG	Sg	09 58 32.7	+0.6
	comp=Z,50nm,0.4s						
MORC	Moravsky Berou	0.56	268	*e*Pg	Pg	09 58 37.1	-0.2
	baz=86						
MORC				*e*Sg	Sg	09 58 44.5	-0.1
	7.8nm,0.2s,baz=86						
MORC	Moravsky Berou	0.56	268	*e*PG	Pg	09 58 37.2	-0.1
MORC				*e*SG	Sg	09 58 44.5	-0.1
LANS	Liptovska Anna	0.95	133	*e*PG	Pb	09 58 45.5	-0.3
LANS				*e*SG	Sn	09 59 00.5	-0.9
LANS				*e*LG	Lg	09 59 01.1	
JAVC	Velka Javorina	1.06	207	*e*PG	Pg	09 58 46.9	+0.1
KRLC	Kraliky	1.09	285	*e*PG	Pg	09 58 45.3	-2.0
KRLC				*e*SG	Sg	09 59 00.3	-1.1
	comp=Z,5.9nm,0.4s						
VRAC	Vranov	1.28	248	*e*Pg	Pg	09 58 50.1	-0.9
	baz=67						
VRAC				*e*Sg	Sg	09 59 07.0	-0.6
	4.4nm,0.2s,baz=67						
VRAC	Vranov	1.28	248	*e*PG	Pg	09 58 50.1	-0.9
VRAC				*e*SG	Sg	09 59 07.0	-0.6
VYHS	Vyhne	1.34	168	*e*SG	Sb	09 59 09.8	-0.3
DPC	Dobruska-Polom	1.45	293	*e*PG	Pn	09 58 52.2	-1.9
DPC				*e*SG	Sg	09 59 12.1	-1.1
	comp=Z,3.5nm,0.2s						
KRUC	Moravsky	1.51	241	*e*Pg	Pn	09 58 53.3	-1.5
	baz=60						
KRUC				*e*Sg	Sg	09 59 13.8	-1.1
	3.6nm,0.2s,baz=60						
KRUC	Moravsky	1.51	241	*e*PG	Pn	09 58 53.3	-1.5
KRUC				*e*SG	Sg	09 59 13.8	-1.1
OSTC	Ostas	1.60	299	*e*PG	Pn	09 58 55.1	-1.0
OSTC				*e*SG	Sb	09 59 17.7	0.0
	comp=Z,4.7nm,0.6s						
KHC	Kasperske Hory	3.22	260	*e*SG	Sg	10 00 08.0	-2.0
	comp=Z,2.9nm,0.3s						

KRSZO 02 09:59:02.8±3.3, **47°.89N**×**20°.02E**, **h0**^{km}, **Error ellipse: s-maj=23.4km s-min=18.6km az=158.0, Explosion., Hungary**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.09	291	Pg	Pg	09 59 05.2	+0.7
	comp=Z,3.1nm,SNR=147						
PSZ				Lg	Lg	09 59 07.8	
PSZ	Piszkesteto	0.09	291	P	Pg	09 59 05.2	+0.7
PSZ				S	Sg	09 59 07.8	+2.2
KECS	Kecovo	0.67	28	*e*PG	Pn	09 59 20.8	+1.2
KECS				*e*SG	Sn	09 59 30.9	0.0
VYHS	Vyhne	1.00	308	*e*SG	Sg	09 59 34.6	-0.2

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*SFS **02** 10:03:32.0, 35°.68N×3°.67W, ML3.0, ALBORAN SUR*
*CNRM **02** 10:03:32.3, 35°.81N×3°.58W, h33^{km}, ml3.0*
*MDD **02** 10:03:32.3±0.3, 35°.69N×3°.68W, h0^{km}, mb_Lg3.0/23, Error ellipse: s-maj=2.9km s-min=2.0km az=4.0*
*INMG **02** 10:03:32.6±1.5, 35°.72N×3°.69W, h3^{km}±6^{km}, ML2.7, Error ellipse: s-maj=3.6km s-min=3.3km az=23.0*
*IGIL **02** 10:03:32.3, 35°.69N×3°.68W, h0^{km}, ML2.8*
ISC 02 10:03:31.7±1.0, **35°.74N**±0°.02×**3°.66W**±0°.02, **h12**^{km}±9^{km}, **n78**, σ**1^{s}.33**/133, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.55	69	Pg	Pb	10 03 42.8	-0.4
EALB				Sg	Sb	10 03 50.8	-0.3
EALB				*i* Vmb_Lg		10 03 52.1	
PALE	Palemas	0.57	203	P	Pn	10 03 45.0	-0.7
PALE	Palemas	0.57	203	P	Pb	10 03 44.6	+0.9
PALE				S	Sb	10 03 53.6	+1.9
WMELI	Melilla	0.72	126	P	Pg	10 03 45.8	+0.1
WMELI				S	Sg	10 03 54.6	-0.5
EMEL	Melilla	0.73	127	Pg	Pg	10 03 45.9	+0.1
EMEL				Sg	Sg	10 03 55.4	0.0
GOG	Mont Gurugu	0.75	133	P	Pg	10 03 46.4	+0.1
GOG	Mont Gurugu	0.75	133	P	Pg	10 03 46.1	-0.2
GOG				S	Sg	10 03 56.7	+0.5
PVLZ	Peæn de	0.77	223	P	Pn	10 03 48.0	-0.4
PVLZ				S	Sg	10 03 55.2	-1.5
ELGU	Los Guajares,	1.12	2	Pg	Pb	10 03 52.0	-1.1
ELGU				Sg	Sg	10 04 08.1	+0.1
ELGU				*i* Vmb_Lg		10 04 09.5	
EMAL	Malaga-Limoner	1.19	329	P	Pb	10 03 53.3	-1.0
EMAL				S	Sb	10 04 07.6	-2.0
EMIJ	Mijas	1.22	313	Pg	Pn	10 03 53.4	-1.2
EMIJ				Sg	Sb	10 04 09.4	-1.0
EMIJ				*i* Vmb_Lg		10 04 10.8	
AKLM	AKL	1.24	188	P	Pg	10 03 56.0	+0.4
AKLM	AKL	1.24	188	P	Pb	10 03 55.4	+0.3
AKLM				S	Sn	10 04 12.8	+1.1
EBER	Berja	1.31	28	Pn	Pn	10 03 54.6	-1.5
EBER				Sn	Sg	10 04 14.4	+0.2
EBER				*i* Vmb_Lg		10 04 16.2	
TAF	Taforalt	1.38	132	P	Pg	10 03 58.0	-0.2
TAF	Taforalt	1.38	132	P	Pn	10 03 56.1	-0.8
TAF				S	Sb	10 04 11.2	-3.9
SMIR	Smir Dam	1.40	268	P	Pn	10 03 54.9	-2.1
SMIR				S	Sn	10 04 15.2	-0.2
ECEU	Ceuta	1.40	277	Pn	Pn	10 03 57.1	+0.1
ECEU				Sn	Sn	10 04 14.8	-0.7
ECEU				*i* Vmb_Lg		10 04 15.8	
EGOR	Sierra Gorda,	1.41	345	Pn	Pn	10 03 57.1	-0.4
EGOR				Sn	Sg	10 04 18.2	+0.9
EGOR				*i* Vmb_Lg		10 04 22.7	
EQUE	Quentar	1.47	7	Pn	Pn	10 03 58.1	-0.1
EQUE				Sn	Sg	10 04 19.1	-0.1
EQUE				*i* Vmb_Lg		10 04 21.9	
CHEFC	Chefchaouen	1.51	246	P	Pn	10 03 58.8	+0.1
CHEFC				S	Sb	10 04 18.8	0.0
EJIF	Jimena Fronter	1.62	296	Pn	Pn	10 04 00.5	+0.3
EJIF				Sn	Sg	10 04 24.4	+0.4
JBK	JBK	1.67	147	P	Pb	10 04 03.0	+0.5
JBK	JBK	1.67	147	P	Pn	10 04 00.3	-0.6
JBK				S	Sn	10 04 20.0	-2.4
ENIJ	Nijar	1.70	43	Pn	Pn	10 04 01.0	-0.2
ENIJ				Sn	Sb	10 04 24.0	-0.3
ENIJ				*i* Vmb_Lg		10 04 30.2	
ESPR	Espera	2.10	303	Pn	Pb	10 04 08.7	-1.1
ESPR				Sn	Sb	10 04 36.6	+0.9
ESPR				*i* Vmb_Lg		10 04 42.0	
EQES	Quesada	2.11	13	Pn	Pb	10 04 08.9	-1.1
EQES				Sn	Sb	10 04 36.7	+0.4
EQES				*i* Vmb_Lg		10 04 41.0	
IFR	Ifrane	2.52	209	P	Pn	10 04 14.1	+1.3
IFR				S	Sn	10 04 43.6	+0.1
EADA	Adamuz	2.53	343	Pn	Pn	10 04 14.1	+1.4
EADA				Sn	Sn	10 04 45.5	+2.1
EADA				*i* Vmb_Lg		10 04 49.9	
EZAR	Zarzadilla de	2.65	36	Pn	Pn	10 04 15.8	+1.4
ECAB	El Cabril	2.72	329	Pn	Pn	10 04 16.3	+1.0
ECAB				Sn	Sn	10 04 50.0	+1.9
ECAB				*i* Vmb_Lg		10 04 57.0	
EMUR	La Murta	2.86	42	Pn	Pn	10 04 19.1	+1.9
EMUR				Sn	Sn	10 04 50.7	-0.9
CZD	Col de Zad	2.93	203	P	Pn	10 04 20.0	+1.5
CZD				S	Sn	10 04 54.9	+1.2
MD31	MD31	3.01	198	P	Pn	10 04 20.9	+1.6
MD31				S	Sn	10 04 53.1	-2.1
EMIN	Mina Concepcio	3.15	311	Pn	Pn	10 04 21.4	+0.3
EMIN				Sn	Sn	10 04 58.0	-0.7
EMIN				*i* Vmb_Lg		10 04 59.8	
ETOB	Tobarra	3.35	30	Pn	Pn	10 04 25.6	+1.6
ETOB				*i* Vmb_Lg		10 04 38.0	
ETOB				Sn	Sn	10 05 06.2	+2.3
ZHG	ZHG	3.36	228	P	Pn	10 04 25.2	+1.1
ZHG				S	Sn	10 05 07.8	+3.9
EGRO	El Granado	3.55	301	Pn	Pn	10 04 27.2	+0.6
EGRO				Sn	Sn	10 05 08.5	-0.1
EGRO				*i* Vmb_Lg		10 05 11.2	
PBAR	Barrancos	3.63	313	*e*Sn	Sn	10 05 09.7	-0.9
PVAQ	Vaqueiros	3.66	298	*e*Pn	Pn	10 04 28.6	+0.4
PVAQ				*e*Sn	Sn	10 05 10.3	-0.9
PVAQ				A	A	10 05 13.6	
	12nm,0.4s						
PVAQ	Vaqueiros	3.66	298	P	Pn	10 04 28.5	+0.3
PVAQ	Vaqueiros	3.66	298	P	Pn	10 04 28.5	+0.3
PVAQ				S	Sn	10 05 09.6	-1.6
PBDV	Barranco-do-Ve	3.75	295	*e*Pn	Pn	10 04 30.0	+0.6
PBDV				*e*Sn	Sn	10 05 13.0	-0.5
PBDV				A	A	10 05 16.7	
	14nm,0.5s						
PAB	San Pablo	3.84	352	Pn	Pn	10 04 32.0	+1.3
PAB				Sn	Sn	10 05 17.6	+1.8
AFON	Font Roja	3.84	40	Pn	Pn	10 04 32.6	+1.9
AFON				*i* Vmb_Lg		10 05 04.6	
ESDC	Sonseca Array	3.93	357	Pn	Pn	10 04 33.4	+1.4
ESDC				*i* Vmb_Lg		10 05 35.8	
PCVE	Castro Verde	3.99	300	*e*Pn	Pn	10 04 33.2	+0.5
PCVE				*e*Sn	Sn	10 05 18.4	-1.0
PCVE				A	A	10 05 22.1	
	15nm,0.5s						
EBAD	Badajoz	4.02	319	Pn	Pn	10 04 34.0	+0.8
EBAD				Sn	Sn	10 05 20.5	+0.3
PBEJ	Beja	4.07	305	*e*Sn	Sn	10 05 20.8	-0.5
MESJ	Messejana	4.21	301	*e*P	Pn	10 04 36.1	+0.3
MESJ				*e*S	Sn	10 05 22.8	-2.0
MESJ				IAML		10 05 27.6	
	comp=N,21nm,0.3s						
MORF	Marmelete	4.31	293	*e*P	Pn	10 04 37.1	0.0
MORF	Marmelete	4.31	293	*e*Pn	Pn	10 04 37.4	+0.3
MORF				*e*Sn	Sn	10 05 26.2	-1.1
MORF				A	A	10 05 30.4	
	comp=N,10.0nm,0.3s						
PFVI	Vila Bisbo	4.39	290	*e*Pn	Pn	10 04 39.6	+1.4
PFVI				*e*Sn	Sn	10 05 28.4	-0.8
PFVI				A	A	10 05 46.9	
	comp=N,12nm,0.5s						
ECHE	Chera	4.40	28	Pn	Pn	10 04 40.0	+1.6
ECHE				*i* Vmb_Lg		10 06 08.5	
PESTR	Estremoz	4.42	316	*e*Pn	Pn	10 04 40.1	+1.5
PESTR				*e*Sn	Sn	10 05 29.9	-0.1
PESTR				A	A	10 05 31.2	
	comp=N,5.1nm,0.3s						
PESTR	Estremoz	4.42	316	P	Pn	10 04 40.0	+1.5
PESTR				S	Sn	10 05 26.1	-3.9
PTEO	Sao Teotonio	4.45	295	*e*Pn	Pn	10 04 40.1	+1.1
PTEO				*e*Sn	Sn	10 05 30.2	-0.5
PTEO				A	A	10 05 36.9	
	comp=N,9.0nm,0.6s						
EVO	Evora	4.45	310	P	Pn	10 04 39.7	+0.6
EVO				S	Sn	10 05 27.9	-2.9
EVO	Evora	4.45	310	*e*Pn	Pn	10 04 40.2	+1.1
EVO				*e*Sn	Sn	10 05 30.3	-0.5
EVO				A	A	10 05 32.1	
	comp=N,12nm,0.5s						
PNCL	Nicolau / Gran	4.56	303	*e*Pn	Pn	10 04 41.2	+0.7
PNCL				*e*Sn	Sn	10 05 32.6	-0.8
PNCL				A	A	10 05 36.8	
	comp=N,8.0nm,0.6s						
EPLA	Plasencia	4.72	337	Pn	Pn	10 04 44.1	+1.4
EPLA				Sn	Sn	10 05 38.7	+1.3
PMRV	Marv??o	4.72	322	*e*Pn	Pn	10 04 44.1	+1.3
PMRV				*e*Sn	Sn	10 05 37.0	-0.5
PMRV				A	A	10 05 56.1	
	comp=N,4.7nm,0.6s						
GUD	Guadarrama	4.91	356	Pn	Pn	10 04 46.5	+1.0
PMTG	Montargil	4.92	314	*e*Pn	Pn	10 04 46.5	+1.0
PMTG				*e*Sn	Sn	10 05 42.3	0.0
PMTG				A	A	10 05 43.5	
	comp=N,4.9nm,0.8s						
PCBR	Castelo Branco	5.08	325	*e*Pn	Pn	10 04 49.3	+1.6
PCBR				*e*Sn	Sn	10 05 44.7	-1.7
PCBR				A	A	10 05 48.1	
	comp=N,5.9nm,0.6s						
PACT	Alcochete	5.11	308	*e*Pn	Pn	10 04 49.6	+1.5
PACT				*e*Sn	Sn	10 05 46.7	-0.3
EIBI	Ibiza	5.16	49	Pn	Pn	10 04 49.5	+0.7
EIBI				*i* Vmb_Lg		10 06 30.2	
ETOR	Torete	5.23	14	Pn	Pn	10 04 50.7	+0.9
PSBE	So Bento	5.55	314	*e*Pn	Pn	10 04 55.8	+1.7
PCAS	Casmilo, Conde	5.76	320	*e*Pn	Pn	10 04 58.5	+1.5
PCAS				*e*Sn	Sn	10 06 02.1	-0.8
PCAS				A	A	10 06 24.5	
	comp=N,4.9nm,0.6s						
MVO	Moncorvo	6.02	335	*e*Pn	Pn	10 05 02.9	+2.2
PVRL	Vila Real	6.37	331	*e*Pn	Pn	10 05 07.3	+1.8
PVRL				*e*Sn	Sn	10 06 17.4	-0.8
PVRL				A	A	10 06 21.5	
	comp=N,5.8nm,0.5s						
POLO	Lamas de Olo	6.49	331	*e*Pn	Pn	10 05 08.7	+1.6
POLO				*e*Sn	Sn	10 06 18.1	-3.0
POLO				A	A	10 06 27.4	
	comp=N,1.6nm,0.7s						
PBRG	Braganca	6.51	339	*e*Pn	Pn	10 05 08.9	+1.5
PCAB	Cabril	6.87	332	*e*Pn	Pn	10 05 14.2	+2.0
ELOB	Lobios	7.01	332	Pn	Pn	10 05 16.4	+2.1
ELOB				*i* Vmb_Lg		10 09 02.6	
PGAV	Gavieira, Arco	7.18	331	*e*Pn	Pn	10 05 17.9	+1.3
EARI	Arriondas	7.64	351	Pn	Pn	10 05 24.8	+1.9
EARI				*i* Vmb_Lg		10 10 11.1	

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*IDC **02** 10:07:21.5±1.1, 15°.60N×95°.30W, h0^{km}, mb4.0/9, mbtmp4.0/10, ML4.1/1, MS3.6/32, Error ellipse: s-maj=31.9km s-min=20.3km az=76.0*
*NEIC **02** 10:07:21.9±1.9, 15°.47N±0°.05×95°.59W±0°.04, h10^{km}±1^{km}, mb4.4/125, Md4.3/52(MEX), Error ellipse: s-maj=10.8km s-min=3.0km az=216.0*
*MEX **02** 10:07:22.5±0.8, 15°.34N×95°.60W, h23^{km}±24^{km}, MD4.3*
ISC 02 10:07:20.5±1.3, **15°.35N**±0°.05×**95°.62W**±0°.03, **h8**^{km}±8^{km}, **n146**, σ**2^{s}.46**/113, **mb4.4**/52, **MS3.7**/30, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.63	311		Pg	10 07 32.5	-0.3
HUIG					Sg	10 07 41.3	+0.3
HUIG	Huatulco	0.63	311	*i* P	Pg	10 07 32.5	-0.3
HUIG				*e*S	Sg	10 07 41.3	+0.3

PANG	**Puerto Angel**	0.89	291		Pg	10 07 36.8	-0.8
PANG					Sg	10 07 48.1	-1.0
PANG	**Puerto Angel**	0.89	291	*e*P	Pg	10 07 36.8	-0.8
PANG				*i* S	Sg	10 07 48.1	-1.0
PEIG	**Puerto Escondi**	1.61	294	*e*P	Pn	10 07 47.3	-2.0
PEIG				*i* S	Sn	10 08 05.7	-4.5
CMIG	**Matias Romero**	1.86	22	Pn	Pn	10 07 50.8	-2.0
	35nm,0.3s,baz=222,slow=11,SNR=220						
CMIG				Sn	Sn	10 08 11.8	-4.8
	60nm,0.3s,baz=218,slow=16,SNR=6.7						
CMIG				LR	LR	10 08 20.4	
	comp=Z,1µm,19.9s,baz=306,slow=38						
CMIG	**Matias Romero**	1.86	22		Pn	10 07 50.8	-2.0
CMIG					Sn	10 08 14.5	-2.1
CMIG	**Matias Romero**	1.86	22	*e*P	Pn	10 07 50.8	-2.0
CMIG				*e*S	Sn	10 08 12.9	-3.7
OXLC	**Oaxaca**	2.00	329	*e*P	Pn	10 07 51.3	-3.5
OXLC				*e*S	Sn	10 08 16.6	-3.6
OXBJ	**Oaxaca**	2.01	328		Pb	10 07 58.3	+0.8
OXBJ					Sn	10 08 19.1	-1.3
OXBJ	**Oaxaca**	2.01	328	*e*P	Pn	10 07 54.3	-0.7
OXBJ				*e*S	Sn	10 08 17.8	-2.6
VHO	**Vista Hermosa**	2.02	328	*e*P	Pn	10 07 54.5	-0.6
VHO				*e*S	Sn	10 08 17.0	-3.6
PCIG		2.34	81		Pn	10 07 57.0	-2.3
PCIG		2.34	81	*i* P	Pn	10 07 57.0	-2.3
PCIG				*i* S	Sn	10 08 21.3	-6.9
NEUV	**Arroyo Zacate**	2.35	356	*e*P	Pn	10 07 58.1	-1.4
NEUV				*e*S	Sn	10 08 26.1	-2.5
YOIG	**Yosondua**	2.38	309	*e*P	Pn	10 08 00.5	+0.4
YOIG				*e*S	Sn	10 08 26.1	-3.7
UXUV	**UXUV**	2.41	36	*e*P	Pn	10 07 59.3	-0.9
UXUV				*e*S	Sn	10 08 26.4	-3.6
PNIG	**Pinotepa**	2.63	293		Pn	10 08 02.3	-1.0
PNIG	**Pinotepa**	2.63	293	*e*P	Pn	10 08 02.3	-1.0
PNIG				*i* S	Sn	10 08 30.1	-5.4
TGIG		2.78	59		Pn	10 08 04.6	-0.9
TGIG					Sn	10 08 37.3	-2.1
TGIG		2.78	59	*e*P	Pn	10 08 04.6	-0.9
TGIG				*i* S	Sn	10 08 37.3	-2.1
TXIG	**Tlaxiaco**	2.80	313	*e*P	Pn	10 08 06.6	+0.7
TXIG				*e*S	Sn	10 08 37.5	-2.6
TOIG	**Toxpalan**	3.06	333	*e*P	Pn	10 08 07.5	-1.9
TOIG				*e*S	Sn	10 08 44.0	-2.3
HLIG	**Huajuapan de L**	3.24	320	*e*P	Pn	10 08 13.3	+1.4
HLIG				*e*S	Sn	10 08 46.7	-4.0
PATR	**El Naranjo**	3.27	94	*e*P	Pn	10 08 06.1	-6.2
PATR				*e*S	Sn	10 08 45.4	-6.3
PAVE	**Pavencul**	3.32	92	*e*P	Pn	10 08 11.3	-1.8
PAVE				*i* S	Sn	10 08 46.4	-6.5
CHUJ	**Union Juarez**	3.40	94	*e*P	Pn	10 08 07.0	-7.1
CHUJ				*i* S	Sn	10 08 47.4	-7.2
MGIG	**Malinaltepec**	3.45	303	*e*P	Pn	10 08 15.5	+0.8
MGIG				*i* S	Sn	10 08 53.2	-2.8
CCIG	**Comitan**	3.47	74		Pn	10 08 15.4	+0.3
CCIG					Sn	10 08 56.0	-0.5
CCIG	**Comitan**	3.47	74	*e*P	Pn	10 08 15.4	+0.3
CCIG				*e*S	Sn	10 08 56.0	-0.5
FTIG	**Fresnillo de T**	3.50	317	*e*P	Pn	10 08 16.8	+1.3
FTIG				*e*S	Sn	10 08 55.3	-1.9
TLIG	**Tlapa**	3.58	308		Pn	10 08 17.6	+1.1
CRIG	**Cruz Grande**	3.65	293		Pn	10 08 16.7	-0.6
CRIG	**Cruz Grande**	3.65	293	*e*P	Pn	10 08 16.7	-0.6
CRIG				*e*S	Sn	10 08 54.1	-6.5
HUEH	**Huehuetenango**	3.97	90		Pn	10 08 22.5	+0.5
JAUV	**Jalcomulco**	4.15	344	*e*P	Pn	10 08 23.9	-0.3
JAUV				*i* S	Sn	10 09 08.0	-5.0
DAIG	**Los Arroyos**	4.22	294		Pn	10 08 25.0	-0.1
DAIG	**Los Arroyos**	4.22	294	*e*P	Pn	10 08 25.0	-0.1
DAIG				*i* S	Sn	10 09 07.8	-6.9
PETF	**Flores**	5.74	74		Pn	10 08 45.0	-1.0
MTO3	**Montecristo**	6.12	98	Pn	Pn	10 08 50.2	-1.4
HPIG		14.85	323	P	P	10 10 56.5	-0.5
TXAR	**Lajitas Array**	15.77	333	Pn	Pn	10 11 05.0	+1.9
	0.2nm,0.3s,baz=153,slow=14,SNR=7.5						
TXAR				LR	LR	10 16 24.1	
	comp=Z,72nm,21.6s,baz=150,slow=35						
	2.4nm,0.9s						
TXAR	**Lajitas Array**	15.77	333	Pn	Pn	10 11 03.1	0.0
TX31	**Lajitas Ar. Si**	15.77	333	Pn	Pn	10 11 04.0	+0.8
TX31				IAmb	IAmb	10 11 11.4	
	comp=Z,24nm,1.2s						
TX32	**Lajitas Array**	15.77	333	Pn	Pn	10 11 03.0	-0.2
LPIG	**La Paz**	16.33	304	LR	LR	10 16 29.2	
	comp=Z,313nm,18.6s,baz=54,slow=33						
ABTX	**Abilene, Hawle**	17.58	349	Pn	Pn	10 11 23.1	-3.0
Z38A	**Mt. Pleasant**	17.84	2	P	Pn	10 11 29.1	-0.1
Z38A				IAmb	IAmb	10 11 31.0	
	comp=Z,33nm,0.8s						
Z41A	**Richland Creek**	18.01	8	P	Pn	10 11 30.0	-1.2
Z41A				IAmb	IAmb	10 11 32.5	
	comp=Z,31nm,0.8s						
MNTX	**Cornudas Mount**	18.55	333	P	P	10 11 37.4	-0.4
X37A	**Clayton**	19.16	1		P	10 11 44.0	-0.4
MIAR	**Mount Ida**	19.20	5	P	P	10 11 42.8	-2.0
HSIG		19.63	316	P	Pn	10 11 51.1	0.0
MSTX	**Muleshoe**	19.63	342	P	P	10 11 50.2	+0.4
W39A	**Magazine**	19.83	4	P	P	10 11 50.5	-1.2
W41B	**Gary Mavity, V**	19.97	8	P	P	10 11 51.6	-1.6
WHAR	**Wooly Hollow**	20.08	8	P	P	10 11 53.3	-1.1
AMTX	**Amarillo**	20.20	345	P	P	10 11 55.3	-0.6
121A	**Cookes Peak, D**	20.37	329	P	P	10 11 58.1	+0.2
121A				IAmb	IAmb	10 12 03.9	
	comp=Z,33nm,1.3s						
FCAR	**Ozark Folk Cen**	20.69	8	P	P	10 11 59.7	-1.3
FCAR				IAmb	IAmb	10 12 00.8	
	comp=Z,15nm,1.0s						
HHAR	**Hobbs**	20.90	4	P	P	10 12 02.4	-1.0
HHAR				IAmb	IAmb	10 12 06.8	
	comp=Z,10nm,0.6s						
LCAR	**Lake Charles**	21.01	10	P	P	10 12 02.6	-2.0
U40A	**Yellville**	21.06	6	P	P	10 12 04.1	-1.1
U40A				IAmb	IAmb	10 12 12.5	
	comp=Z,12nm,1.0s						
U32A	**Winter Ranch,**	21.16	352		P	10 12 06.1	-0.1
U32A				IAmb	IAmb	10 12 11.0	
	comp=Z,24nm,1.1s						
BNM	**Barren Site**	21.19	334	P	P	10 12 08.1	+1.3
ANMO	**Albuquerque**	21.81	335	P	P	10 12 15.2	+1.8
	comp=Z,3.3nm,1.0s,baz=151,slow=12,SNR=7.9						
ANMO				LR	LR	10 20 19.5	
	comp=Z,88nm,19.9s,baz=158,slow=36						
	comp=Z,3.3nm,1.0s						
ANMO	**Albuquerque**	21.81	335	P	P	10 12 12.0	-1.4
PBMO	**Poplar Bluff**	21.83	11	IAmb	IAmb	10 12 23.7	
	comp=Z,13nm,1.1s						
MGMO	**Mountain Grove**	21.92	7	P	P	10 12 12.9	-1.5
MGMO				IAmb	IAmb	10 12 16.1	
	comp=Z,8.2nm,0.8s						
TKL	**Tuckaleechee C**	22.83	26	LR	LR	10 23 41.5	
	comp=Z,102nm,18.8s,baz=194,slow=44						
T47A	**Sharon Grove**	22.84	18	IAmb	IAmb	10 12 24.8	
	comp=Z,26nm,1.4s						
R40A	**Maddies Statio**	23.04	7	IAmb	IAmb	10 12 26.4	
	comp=Z,9.4nm,0.8s						
X18A	**Snowflake**	23.05	329	IAmb	IAmb	10 12 37.8	
	comp=Z,24nm,1.4s						
T25A	**Trinidad**	23.06	342	IAmb	IAmb	10 12 35.6	
	comp=Z,18nm,1.3s						
ROSC	**El Rosal**	23.40	114	P	P	10 12 34.9	+4.4
	comp=Z,9.1nm,0.5s,baz=61,slow=14,SNR=7.1						
SDCO	**Great Sand Dun**	23.96	340	IAmb	IAmb	10 12 46.1	
	comp=Z,9.3nm,1.2s						
P38A	**Dawn**	24.25	4	IAmb	IAmb	10 12 37.6	
	comp=Z,12nm,0.9s						
Y14A	**Wickenburg**	24.27	323	IAmb	IAmb	10 12 49.2	
	comp=Z,11nm,1.5s						
P40A	**Paris**	24.29	7	IAmb	IAmb	10 12 37.7	
	comp=Z,18nm,1.1s						
KSCO	**Kaye Shedlock'**	24.36	347	IAmb	IAmb	10 12 40.9	
	comp=Z,18nm,1.1s						
WUAZ	**Wupatki**	24.55	328	IAmb	IAmb	10 12 52.3	
	comp=Z,15nm,1.2s						
MVCO	**Mesa Verde**	24.59	335	IAmb	IAmb	10 12 44.9	
	comp=Z,18nm,1.2s						
GLA	**Glamis**	24.78	319	P	P	10 12 43.6	+0.6
SDV	**Santo Domingo**	25.24	102	LR	LR	10 24 58.2	
	comp=Z,191nm,18.3s,baz=302,slow=42						
N35A	**Tabor**	25.42	360	IAmb	IAmb	10 12 51.6	
	comp=Z,12nm,1.0s						
PV13	**Radium Mtn., P**	25.54	335	IAmb	IAmb	10 13 00.8	
	comp=Z,10nm,1.1s						
PV15	**Paradox Valley**	25.56	336	IAmb	IAmb	10 13 00.8	
	comp=Z,17nm,1.4s						
PV11	**David Mesa, Pa**	25.68	335	IAmb	IAmb	10 13 01.7	
	comp=Z,14nm,1.2s						
SMCO	**Snowmass**	25.75	339	IAmb	IAmb	10 13 02.2	
	comp=Z,11nm,1.3s						
PV23	**Carpenter Ridg**	25.86	335	IAmb	IAmb	10 13 04.4	
	comp=Z,16nm,1.1s						
ISCO	**Idaho Springs**	25.88	342	IAmb	IAmb	10 13 04.3	
	comp=Z,12nm,1.4s						
PFO	**Pinyon Flats O**	26.18	318	LR	LR	10 24 33.4	
	comp=Z,205nm,20.4s,baz=132,slow=39						
L40A	**Anamosa**	26.89	7	IAmb	IAmb	10 13 01.2	
	comp=Z,13nm,1.1s						
PDAR	**Pinedale Array**	29.83	339	P	P	10 13 29.4	+0.9
	comp=Z,2.8nm,1.3s,baz=150,slow=2.0,SNR=2.5						
PDAR				LR	LR	10 26 29.7	
	comp=Z,108nm,18.9s,baz=163,slow=39						
	comp=Z,2.8nm,1.3s						
G40A	**Rib Lake**	30.17	8	IAmb	IAmb	10 13 31.7	
	comp=Z,7.1nm,1.3s						
HVU	**Hansel Valley**	30.22	334	IAmb	IAmb	10 13 40.9	
	comp=Z,5.1nm,1.1s						
NV11	**Mina Array Sit**	30.38	323	IAmb	IAmb	10 13 43.6	
	comp=Z,7.7nm,1.1s						
MDPB	**Devils Postpil**	30.39	321	IAmb	IAmb	10 13 43.6	
	comp=Z,7.0nm,1.3s						
NVAR	**Mina Array Bea**	30.46	323	P	P	10 13 37.4	+3.3
	comp=Z,2.2nm,0.8s,baz=142,slow=9.1,SNR=21						
NVAR				PcP	PcP	10 16 35.1	+1.6
	comp=Z,0.3nm,0.7s,baz=114,slow=2.9,SNR=3.8						
NVAR				LR	LR	10 25 05.7	
	comp=Z,194nm,20.7s,baz=153,slow=35						
	comp=Z,2.2nm,0.8s						
ELK	**Elko**	30.51	330	LR	LR	10 25 58.9	
	comp=Z,160nm,19.4s,baz=154,slow=37						
LOHW	**Long Hollow**	30.93	339	IAmb	IAmb	10 13 46.9	
	comp=Z,6.5nm,1.2s						
TPAW	**Teton Pass**	30.95	338	IAmb	IAmb	10 13 58.4	
	comp=Z,7.6nm,1.4s						
COWI	**Conover**	31.13	9	IAmb	IAmb	10 13 39.6	
	comp=Z,6.4nm,0.9s						
EMB	**Emerald Bay**	31.88	322	IAmb	IAmb	10 13 50.0	
	comp=Z,8.1nm,1.2s						
YHL	**Hebgen Lake**	32.22	339	IAmb	IAmb	10 13 59.8	
	comp=Z,6.5nm,1.4s						
HLID	**Hailey**	32.37	334	IAmb	IAmb	10 13 59.7	
	comp=Z,7.0nm,1.5s						
SADO	**Sadowa**	32.47	22	LR	LR	10 28 25.4	
	comp=Z,61nm,19.8s,baz=182,slow=39						
AGMN	**Agassiz Nation**	32.85	360	IAmb	IAmb	10 13 54.8	
	comp=Z,7.1nm,1.1s						
DLMT	**Dillon**	33.16	338	IAmb	IAmb	10 14 07.5	
	comp=Z,9.5nm,1.2s						
WVOR	**Wild Horse Val**	33.47	328	IAmb	IAmb	10 14 09.6	
	comp=Z,7.7nm,1.1s						
MOD	**Modoc Plateau**	33.96	326	IAmb	IAmb	10 14 13.6	
	comp=Z,5.0nm,1.1s						
J08A	**Circle Bar Ran**	34.06	330	IAmb	IAmb	10 14 08.3	
	comp=Z,9.9nm,1.4s						
PLID	**Pearl Lake**	34.27	334	IAmb	IAmb	10 14 15.9	
	comp=Z,6.4nm,1.1s						
EGMT	**Eagleton**	34.61	343	IAmb	IAmb	10 14 19.0	
	comp=Z,11nm,1.4s						
ULM	**Lac du Bonnet**	34.81	360	LR	LR	10 30 34.6	
	comp=Z,39nm,19.2s,baz=162,slow=40						
MSO	**Missoula**	34.90	338	IAmb	IAmb	10 14 20.9	
	comp=Z,3.8nm,1.0s						
F10A	**Beach Ranch, E**	35.50	334	IAmb	IAmb	10 14 19.9	
	comp=Z,7.8nm,1.2s						
NEW	**Newport**	37.30	336	LR	LR	10 31 53.0	
	comp=Z,90nm,20.3s,baz=168,slow=40						
LPAZ	**La Paz**	41.53	138	LR	LR	10 31 47.5	
	comp=Z,51nm,18.2s,baz=294,slow=35						
MDP	**Montagnes des**	43.42	99	LR	LR	10 35 31.0	
	comp=Z,83nm,18.7s,baz=296,slow=39						
RPN	**Rapa Nui**	44.28	198	LR	LR	10 28 52.9	
	comp=Z,44nm,20.0s,baz=188,slow=29						
SCHQ	**Schefferville**	45.27	23	P	P	10 15 38.4	-0.1
	comp=Z,1.8nm,0.9s,baz=221,slow=11,SNR=2.7						
SCHQ				LR	LR	10 36 43.4	
	comp=Z,91nm,18.5s,baz=211,slow=39						
	comp=Z,1.8nm,0.9s						
SCHQ	**Schefferville**	45.27	23	IAmb	IAmb	10 15 41.5	
	comp=Z,6.9nm,1.4s						
YKA	**Yellowknife Ar**	48.96	348	P	P	10 16 07.0	-0.2
	comp=Z,1.6nm,0.8s,baz=154,slow=7.3,SNR=20						
YKA				LR	LR	10 38 48.2	
	comp=Z,80nm,18.3s,baz=8.5,slow=39						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	48.96	348	P	P	10 16 07.5	+0.4
DLBC	**Dease Lake**	50.03	337	LR	LR	10 41 18.7	
	comp=Z,152nm,18.2s,baz=126,slow=41						
FRB	**Frobisher Bay**	51.85	15	LR	LR	10 40 57.3	
	comp=Z,75nm,18.9s,baz=224,slow=39						
CPUP	**Villa Florida**	55.70	138	LR	LR	10 40 25.5	
	comp=Z,42nm,19.5s,baz=334,slow=36						
INK	**Inuvik**	58.18	344	LR	LR	10 44 26.0	
	comp=Z,110nm,18.6s,baz=189,slow=38						
INK	**Inuvik**	58.18	344	P	P	10 17 14.8	+0.2
SFJD	**Kangerlussuaq**	59.33	19	LR	LR	10 46 02.9	
	comp=Z,42nm,18.2s,baz=192,slow=39						
IL31		60.24	337	P	P	10 17 29.6	+0.7
ILAR	**Eielson Array**	60.24	337	P	P	10 17 30.1	+1.1
	comp=Z,1.6nm,0.9s,baz=137,slow=4.5,SNR=14						
ILAR				LR	LR	10 45 03.8	
	comp=Z,83nm,18.0s,baz=194,slow=38						
	comp=Z,1.6nm,0.9s						
ILAR	**Eielson Array**	60.24	337	P	P	10 17 29.3	+0.2
PLCA	**Paso Flores**	60.46	158	P	P	10 17 34.3	+3.4
	comp=Z,2.9nm,1.0s,baz=315,slow=12,SNR=4.4						
PLCA				LR	LR	10 38 24.2	
	comp=Z,76nm,18.2s,baz=323,slow=31						
	comp=Z,2.9nm,1.0s						
PLCA	**Paso Flores**	60.46	158	IAmb	IAmb	10 17 35.3	
	comp=Z,6.2nm,1.1s						
I23K	**Minto, Yukon-K**	61.34	337	P	P	10 17 36.7	+0.2
PPT	**Papeete**	62.45	240	LR	LR	10 36 47.2	
	comp=Z,65nm,21.3s,baz=116,slow=28						
RCBR	**Riachuelo**	62.77	105	LR	LR	10 48 36.9	
	comp=Z,86nm,18.3s,baz=92,slow=40						
BORG	**Borgarnes**	69.53	26	LR	LR	10 48 01.7	
	comp=Z,32nm,20.5s,baz=283,slow=35						
SPITS	**Spitsbergen Ar**	79.46	11	LR	LR	10 59 06.3	
	comp=Z,39nm,19.5s,baz=31,slow=39						
ESDC	**Sonseca Array**	81.61	51	P	P	10 19 39.4	-0.1
	comp=Z,1.7nm,0.9s,baz=290,slow=5.2,SNR=8.8						
ESDC				LR	LR	10 50 28.3	
	comp=Z,57nm,19.4s,baz=326,slow=32						
	comp=Z,1.7nm,0.9s						
ESDC	**Sonseca Array**	81.61	51	IAmb	IAmb	10 19 56.1	
	comp=Z,4.0nm,1.4s						
NOA	**NORSAR Array B**	84.61	28	P	P	10 19 55.4	+0.9
	comp=Z,1.4nm,0.9s,baz=300,slow=5.4,SNR=3.2						
NOA				LR	LR	10 57 31.2	
	comp=Z,20nm,18.4s,baz=295,slow=36						
	comp=Z,1.4nm,0.9s						
HFS	**Hagfors**	86.09	28	LR	LR	10 59 07.7	
	comp=Z,28nm,18.2s,baz=321,slow=36						
FINES	**FINESS Array B**	90.73	24	LR	LR	11 01 34.4	
	comp=Z,25nm,19.7s,baz=262,slow=36						

IDC ***02*** *10:09:02.0±5.4, 36°.90N×23°.38E, h0^{km}, mb3.6/4, mbtmp3.6/4, MS2.8/3, Error ellipse: s-maj=121.1km s-min=44.1km az=13.0*

ATH ***02*** *10:09:08.0, 37°.56N×23°.59E, h13^{km}±2^{km}, ML3.3/6, Error ellipse: s-maj=2.4km s-min=0.8km az=208.0*

THE ***02*** *10:09:08.2, 37°.56N×23°.62E, h7^{km}±3^{km}, ML3.2/5, Error ellipse: s-maj=4.8km s-min=0.9km az=80.0*

ISC 02 10:09:08.1±1.0**, 37°.57N**±0°.03×**23°.59E**±0°.03**, h12**^{km}±7^{km}**, n28,** σ**0^{s}.71**/38**, mb3.5**/4**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YDRA	**Hydra**	0.24	204	P	Pg	10 09 12.7	-0.4
YDRA				S	Sg	10 09 17.0	+0.5
VLY	**Voula,Athens**	0.33	30	P	Pg	10 09 14.4	-0.4
VLY				S	Sg	10 09 20.2	+1.0
VLY				AML	AML	10 09 21.5	
	comp=N,11254µm,0.2s						
VLY				AML	AML	10 09 23.4	
	comp=E,13591µm,0.3s						
EPID	**Epidavros**	0.38	277	P	Pg	10 09 15.1	-0.5
KRND	**KRANIDI**	0.39	242	P	Pg	10 09 15.1	-0.8
KRND				S	Sg	10 09 21.4	+0.2
KRND				AML	AML	10 09 24.5	
	comp=E,10998µm,0.5s						
KRND				AML	AML	10 09 25.8	
	comp=N,10534µm,0.3s						
ATH	**Athens Observa**	0.42	14	P	Pg	10 09 16.3	-0.1
ATH				S	Sg	10 09 22.7	+0.8
ATH				AML	AML	10 09 26.5	
	comp=N,9621µm,0.4s						
ATH				AML	AML	10 09 27.3	
	comp=E,11748µm,0.6s						
ATHU	**Athens Univers**	0.43	21	P	Pg	10 09 16.1	-0.5
ATHU				S	Sg	10 09 23.1	+0.8
ATHU	**Athens Univers**	0.43	21	P	Pg	10 09 16.1	-0.5
ATHU				S	Sg	10 09 22.8	+0.5
	comp=E,2µm,0.6s						
PTL	**Penteli**	0.53	24	P	Pg	10 09 18.0	-0.5
PTL				S	Sg	10 09 25.8	+0.3
PTL				AML	AML	10 09 26.9	
	comp=N,5550µm,0.2s						
PTL				AML	AML	10 09 30.0	
	comp=E,10753µm,0.4s						
DION	**Dionisos Attik**	0.58	28	P	Pg	10 09 18.9	-0.5
DION				AML	AML	10 09 30.4	
	comp=E,7820µm,0.2s						
DION				AML	AML	10 09 30.4	
	comp=N,7734µm,0.2s						
VIL2	**Platees**	0.69	339	P	Pg	10 09 20.0	-1.6
VIL2				S	Sg	10 09 29.7	-0.9
VIL2				AML	AML	10 09 30.8	
	comp=N,14544µm,0.5s						
VIL2				AML	AML	10 09 32.2	
	comp=E,19027µm,0.4s						
KARY	**Karystos**	0.82	55	P	Pg	10 09 23.6	-0.3
THAL	**Thalero**	0.87	303	P	Pg	10 09 24.6	-0.3
KYMI	**Kymi, Euboea I**	1.14	21	P	Pg	10 09 29.2	-0.8
ATAL	**Atalanti**	1.21	338	P	Pg	10 09 30.3	-1.1
TNSA	**Tinos**	1.25	91	P	Pn	10 09 31.4	-0.1
ALIK	**Aliki, Aigiali**	1.36	301	P	Pg	10 09 34.4	+0.2
KTHA	**Kythira Island**	1.38	198	P	Pn	10 09 33.2	0.0
KTHA				S	Sb	10 09 50.9	-0.5
KTHR	**Kythira**	1.39	200	P	Pn	10 09 33.5	+0.2
KTHR				S	Sb	10 09 51.7	0.0
	comp=E,1µm,0.4s						
ANKY	**Antikythira Is**	1.71	188	P	Pn	10 09 37.7	-0.1
ANKY				S	Sb	10 10 01.4	+0.3
	comp=E,428nm,0.7s						
AGG	**Agios Georgios**	1.76	326	P	Pn	10 09 38.8	+0.3
AGG				S	Sn	10 10 02.1	+1.3
	comp=E,370nm,0.5s						
CHOS	**Chios island**	2.11	66	P	Pn	10 09 42.9	-0.5
CHOS				S	Sn	10 10 09.5	-0.2
	comp=E,1µm,0.8s						
BRTR	**Keskin Array B**	8.15	72	LR	LR	10 14 35.9	
	comp=E,41nm,18.1s,baz=295,slow=39						
DAVOX	**Davos/Dischmat**	13.70	317	LR	LR	10 19 27.4	
	comp=E,29nm,20.1s,baz=69,slow=44						
FINES	**FINESS Array B**	23.95	3	P	P	10 14 23.9	+1.9
	comp=E,2.4nm,0.9s,baz=185,slow=8.6,SNR=5.5						
	comp=E,2.4nm,0.9s						
ARU	**Arti**	29.94	40	LR	LR	10 30 03.9	
	comp=E,39nm,19.2s,baz=119,slow=41						
KURBB	**Kurchatov Arra**	40.65	53	P	P	10 16 48.0	+0.1
	comp=E,1.1nm,0.9s,baz=278,slow=8.3,SNR=6.2						
	comp=E,1.1nm,0.9s						
MKAR	**Makanchi Array**	43.55	58	P	P	10 17 11.2	-0.5
	comp=E,0.4nm,0.5s,baz=274,slow=7.2,SNR=4.6						
	comp=E,0.4nm,0.5s						
YKA	**Yellowknife Ar**	74.77	341	P	P	10 20 46.8	-0.9
	comp=E,0.2nm,0.6s,baz=31,slow=5.4,SNR=6.0						
	comp=E,0.2nm,0.6s						

IDC 02 10:14:58.0±3.6**, 4°.50S**×**135°.64E, h0**^{km}**, mb3.5**/1**, mbtmp3.5**/3**, ML3.4**/2**, MS2.9**/1**, Error ellipse: s-maj=157.5km s-min=33.5km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	15.40	185	Pn	Pn	10 18 35.0	-1.9
	0.1nm,0.3s,baz=3.8,slow=13,SNR=3.2						
WRA				Sn	Sn	10 21 16.1	-12
	baz=3.5,slow=26,SNR=1.8						
	0.3nm,0.4s						
KAPI	**Kappang**	15.84	268	LR	LR	10 25 39.5	
	comp=Z,42nm,19.7s,baz=36,slow=40						
ASAR	**Alice Springs**	19.13	185	P	Pn	10 19 23.6	-0.1
	0.4nm,0.3s,baz=8.2,slow=11,SNR=19						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	69.37	324	P	P	10 26 07.7	0.0
	0.4nm,0.8s,baz=114,slow=6.5,SNR=2.6						
	0.4nm,0.8s						

GUC 02 10:27:08.0±0.6**, 33°.36S**×**70°.14W, h134**^{km}±2^{km}**, ML3.9, 11C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	**Farellones**	0.13	284	⇑*i*P	Pn	10 27 25.2	-1.4
FCH				*i* S	Sn	10 27 38.7	-1.9
MT03	**Universidad Ad**	0.34	246	⇑*i*P	Pn	10 27 25.8	-1.0
MT03				*i* S	Sn	10 27 39.7	-1.4
MT03				IAML		10 27 40.7	
	comp=N,11µm,0.3s						
MT05	**Renca**	0.50	266	⇑*i*P	Pn	10 27 26.8	-0.7
MT05				*i* S	Sn	10 27 41.4	-1.0
MT05				IAML		10 27 41.9	
	comp=N,8µm,0.2s						
PEL	**Peldehue**	0.50	295	⇑*i*P	Pn	10 27 26.7	-0.9
PEL				*i* S	Sn	10 27 40.9	-1.4
PEL				IAML		10 27 42.7	
	comp=E,3µm,0.2s						
VA03	**San Esteban**	0.69	330	⇑*i*P	Pn	10 27 27.9	-0.9
VA03				*i* S	Sn	10 27 43.4	-1.1
VA03				IAML		10 27 45.1	
	comp=E,3µm,0.2s						
BO04	**La Punta**	0.74	212	*e*P	Pn	10 27 28.5	-0.6
BO04				*i* S	Sn	10 27 44.2	-1.0
BO04				IAML		10 27 45.1	
	comp=N,4µm,0.2s						
MT09	**Talagante**	0.82	239	⇑*i*P	Pn	10 27 29.0	-0.9
MT09				*i* S	Sn	10 27 45.2	-1.2
MT09				IAML		10 27 46.8	
	comp=N,8µm,0.1s						
ROCH	**El Roble**	0.82	298	⇑*i*P	Pn	10 27 29.4	-0.6
ROCH				*i* S	Sn	10 27 45.6	-1.1
ROCH				IAML		10 27 46.6	
	comp=N,5µm,0.3s						
MT02	**Curacav**	0.84	277	⇑*i*P	Pn	10 27 29.2	-0.6
MT02				*i* S	Sn	10 27 45.2	-1.2
MT02				IAML		10 27 46.1	
	comp=N,2µm,0.1s						
MT01	**Popeta**	1.05	241	⇓*i*P	Pn	10 27 31.0	-0.7
MT01				*i* S	Sn	10 27 48.5	-1.3
MT01				IAML		10 27 49.8	
	comp=N,2µm,0.2s						
MT01				IAML		10 27 50.0	
	comp=E,2µm,0.2s						
MT01				IAML		10 27 51.0	
	comp=E,2µm,0.3s						
VA06	**Catapilco**	1.25	309	⇑*i*P	Pn	10 27 33.2	-0.5
VA06				*i* S	Sn	10 27 52.1	-1.1
VA06				IAML		10 27 53.6	
	comp=E,4µm,0.3s						
VA05	**Santo Domingo**	1.27	256	⇓*i*P	Pn	10 27 33.4	-0.4
VA05				*i* S	Sn	10 27 52.4	-1.1
VA05				IAML		10 27 56.0	
	comp=E,5µm,0.3s						
BO01	**Tunca**	1.29	217	⇓*i*P	Pn	10 27 33.5	-0.6
BO01				*i* S	Sn	10 27 53.2	-0.8
BO01				IAML		10 27 54.8	
	comp=E,1µm,0.2s						
VA01	**Torpederas**	1.31	284	*e*P	Pn	10 27 34.5	+0.2
VA01				IAML		10 27 56.3	
	comp=N,2µm,0.1s						
BO03	**Pichilemu**	1.89	233	⇓*i*P	Pn	10 27 40.2	-0.6
BO03				*e*S	Sn	10 28 05.0	-0.9
BO03				IAML		10 28 05.8	
	comp=N,495nm,0.3s						
GO05	**Huala**	2.21	221	⇓*i*P	Pn	10 27 43.8	-1.0
GO05				*i* S	Sn	10 28 11.8	-1.2
GO05				IAML		10 28 13.7	
	comp=E,425nm,0.4s						
CO02	**Combarbal**	2.27	341	⇑*i*P	Pn	10 27 45.1	-0.5
CO02				*i* S	Sn	10 28 13.6	-0.8
ML02	**Panimavida**	2.62	203	*e*P	Pn	10 27 49.6	-0.2
ML02				*i* S	Sn	10 28 21.6	-0.5

ML02				IAML		10 28 27.2	
	comp=E,298nm,0.2s						
CO06	Fray Jorge	2.96	334	⇓iP	Pn	10 27 54.2	-0.1
CO06				iS	Sn	10 28 28.2	-1.8
CO06				IAML		10 28 31.3	
	comp=N,236nm,0.2s						
GO04	Tololo Observa	3.23	350	⇑iP	Pn	10 27 57.2	-0.7
GO04				iS	Sn	10 28 34.1	-2.3

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*ISK **02** 10:29:56.9, 37°.59N×23°.60E, h15^{km}±1^{km}, ML3.2/13*
*ATH **02** 10:29:56.9, 37°.55N×23°.60E, h15^{km}±2^{km}, ML2.7/3, Error ellipse: s-maj=2.3km s-min=0.9km az=185.0*
*THE **02** 10:29:57.0, 37°.55N×23°.81E, h18^{km}±6^{km}, ML2.8/4, Error ellipse: s-maj=13.0km s-min=0.8km az=82.0*
ISC 02 10:29:56.7±0.9**, 37°.57N**±0°.02×**23°.58E**±0°.03**, h13**^{km}±8^{km}**, n33, σ0^{s}.97**/45**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YDRA	Hydra	0.24	203	P	Pg	10 30 01.8	0.0
YDRA				S	Sg	10 30 06.1	+0.8
VLY	Voula,Athens	0.33	31	P	Pg	10 30 03.3	-0.1
VLY				S	Sb	10 30 09.0	-0.7
VLY				AML	AML	10 30 11.3	
	comp=E,4221µm,0.3s						
VLY				AML	AML	10 30 11.8	
	comp=N,2773µm,0.2s						
EPID	Epidavros	0.37	277	P	Pg	10 30 04.5	+0.2
EPID				S	Sg	10 30 10.3	+1.0
KRND	KRANIDI	0.39	242	P	Pg	10 30 04.2	-0.4
ATH	Athens Observa	0.42	15	P	Pg	10 30 05.1	+0.1
ATHU	Athens Univers	0.43	22	P	Pg	10 30 05.1	-0.2
ATHU				S	Sb	10 30 11.8	-0.8
ATHU				AML	AML	10 30 16.6	
	comp=N,1129µm,0.3s						
ATHU				AML	AML	10 30 16.7	
	comp=E,964µm,0.5s						
ATHU	Athens Univers	0.43	22	P	Pg	10 30 05.1	-0.2
ATHU				S	Sb	10 30 11.8	-0.8
	comp=E,525nm,0.4s						
PTL	Penteli	0.53	25	P	Pg	10 30 06.9	-0.3
DION	Dionisos Attik	0.58	28	P	Pb	10 30 08.1	-0.7
VIL2	Platees	0.69	339	P	Pg	10 30 09.1	-1.1
VIL2				S	Sg	10 30 18.6	-0.7
VIL2				AML	AML	10 30 19.8	
	comp=N,3911µm,1.0s						
VIL2				AML	AML	10 30 21.2	
	comp=E,4051µm,0.4s						
KARY	Karystos	0.82	55	P	Pb	10 30 12.5	-0.4
KYMI	Kymi, Euboea I	1.14	21	P	Pg	10 30 18.1	-0.5
ATAL	Atalanti	1.21	339	P	Pg	10 30 19.3	-0.7
KTHA	Kythira Island	1.38	198	P	Pn	10 30 21.6	-0.1
KTHA				S	Sg	10 30 39.5	-1.5
ITM	Ithomi	1.38	254	PN	Pn	10 30 22.1	+0.4
ITM				SN	Sg	10 30 40.9	-0.2
KTHR	Kythira	1.39	200	P	Pn	10 30 22.8	+1.0
KTHR				S	Sg	10 30 40.4	-1.0
	comp=E,675nm,0.4s						
LAKA	Lakka	1.44	298	P	Pn	10 30 22.9	+0.4
APE	Apeiranthos	1.63	107	PN	Pn	10 30 25.5	+0.3
ANKY	Antikythira Is	1.71	188	P	Pn	10 30 25.1	-1.2
ANKY				S	Sn	10 30 47.4	-0.6
	comp=E,372nm,0.5s						
AGG	Agios Georgios	1.75	326	P	Pn	10 30 27.7	+0.8
AGG				S	Sn	10 30 51.2	+2.1
	comp=E,120nm,0.7s						
AGG	Agios Georgios	1.75	326	PN	Pn	10 30 27.7	+0.8
AGG				SN	Sn	10 30 49.9	+0.8
RODP	Rodopos	2.01	176	PN	Pn	10 30 31.7	+1.3
CHOS	Chios island	2.12	67	PN	Pn	10 30 32.8	+0.9
IMMV	Iera Moni Meta	2.13	171	PN	Pn	10 30 33.9	+1.9
KNDR	Palaiochora Ch	2.33	178	PN	Pn	10 30 36.2	+1.4
URLA	Izmir	2.51	71	PN	Pn	10 30 37.4	+0.1
IDI	Anoyia	2.51	155	PN	Pn	10 30 38.4	+1.1
HRKL	Herakleio	2.56	151	PN	Pn	10 30 38.3	+0.3
BODT	Bodrum	3.01	99	PN	Pn	10 30 44.6	+0.4
EZN	Ezine	3.11	43	PN	Pn	10 30 46.7	+1.2
ZKR	Zakros	3.24	138	PN	Pn	10 30 49.3	+2.0
DAT	Datca	3.30	104	PN	Pn	10 30 49.6	+1.4
AYDB	Zeytinkoy-Aydi	3.43	82	PN	Pn	10 30 51.5	+1.4

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*IDC **02** 10:36:55.0±2.1, 47°.06N×0°.37E, h0^{km}, mb3.2/2, mbtmp3.4/6, ML3.8/4, Error ellipse: s-maj=30.3km s-min=23.4km az=173.0*
*UCC **02** 10:36:56.7±3.1, 47°.15N×0°.54E, h0^{km}, ML4.0*
*LDG **02** 10:36:57.9±0.0, 47°.07N×0°.50E, h2^{km}, Md4.2/2, Ml4.2/43, Error ellipse: s-maj=0.9km s-min=0.8km az=48.0*
*NEIC **02** 10:36:57.1±2.3, 46°.98N±0°.04×0°.45E±0°.08, h10^{km}±2^{km}, Error ellipse: s-maj=10.0km s-min=5.0km az=297.0*
*STR **02** 10:36:58.1±0.6, 47°N±2°×°±°, h10^{km}±5^{km}, MLv3.8/7, preliminary*
*BGS **02** 10:36:58.5±1.0, 47°.13N×0°.49E, h15^{km}±31^{km}, ML3.6, ML3.6*
*BGR **02** 10:36:59.1±0.6, 46°.98N×0°.68E, h10^{km}, ML4.2/7, Error ellipse: s-maj=13.3km s-min=5.6km az=174.0*
*BNS **02** 10:37:01.3±0.4, 47°.14N×0°.98E, h5^{km}, ML3.8*
ISC 02 10:36:56.6±1.1**, 47°.02N**±0°.01×**0°.48E**±0°.02**, h12**^{km}±9^{km}**, n201, σ2^{s}.05**/320**, 4C-44D, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MFF	Saint Martin d	0.60	226	ePg	Pb	10 37 09.8	+0.8
MFF	Saint Martin d	0.60	226	eP	Pn	10 37 11.1	+0.2
MFF	Saint Martin d	0.60	226	ePn	Pn	10 37 12.3	+1.4
MFF				eSg	Sb	10 37 18.1	+0.7
	515nm,0.2s						
MFF				eSn	Sn	10 37 22.5	+2.0
MFF	Saint Martin d	0.60	226	Pg	Pb	10 37 09.8	+0.8
MFF				Sg	Sb	10 37 18.0	+0.7
CHIF	Chize	1.08	215	⇑iP	Pn	10 37 19.0	+1.5
CHIF				eS	Sn	10 37 33.9	+1.6
CHIF				IAML		10 37 35.9	
	comp=E,2µm,0.3s						
CHIF				IAML		10 37 36.7	
	comp=N,1µm,0.4s						
CHIF	Chize	1.08	215	Pg	Pn	10 37 19.0	+1.5
CHIF				Pn	Pb	10 37 19.6	+2.4
CHIF				Sg	Sn	10 37 34.3	+1.9
TCF	Toulx Ste Croi	1.40	121	ePn	Pn	10 37 22.9	+0.9
TCF	Toulx Ste Croi	1.40	121	ePg	Pg	10 37 24.2	+0.7
TCF				eSg	Sb	10 37 41.0	+0.4
	comp=N,1µm,0.4s						
HYF	Humbligny	1.50	80	ePg	Pb	10 37 25.3	+0.9
HYF				eSn	Sn	10 37 42.5	-0.3
HYF				eSg	Sb	10 37 44.3	+1.0
CLF	Chambon-Foret	1.57	50		Pn	10 37 26.1	+1.8
CLF				Sn	Sn	10 37 46.0	+1.4
CLF	Chambon-Foret	1.57	50	Pn	Pn	10 37 25.0	+0.7
CLF				Pg	Pn	10 37 26.2	+1.8
CLF				Sn	Sn	10 37 45.4	+0.8
LDF	La Druitiere	1.62	346	ePn	Pn	10 37 24.9	-0.1
LDF	La Druitiere	1.62	346	ePg	Pb	10 37 27.0	+0.5
LDF				eSg	Sn	10 37 47.7	+1.8
	comp=N,801nm,0.3s						
GRR	Gorron	1.64	327	ePn	Pn	10 37 25.5	+0.3
GRR	Gorron	1.64	327	ePg	Pb	10 37 27.6	+0.9
GRR				eSg	Sb	10 37 48.5	+1.2
	comp=N,690nm,0.2s						
BGF	Bois d'Agland	1.69	105	ePn	Pn	10 37 26.8	+0.8
BGF	Bois d'Agland	1.69	105	ePg	Pg	10 37 29.1	0.0
BGF				eSn	Sn	10 37 47.5	-0.1
BGF				eSg	Sb	10 37 50.7	+1.7
	comp=N,3µm,0.4s						
BGF	Bois d'Agland	1.69	105	Pn	Pn	10 37 26.3	+0.3
BGF				Sn	Sn	10 37 46.3	-1.3
RENF	Rennes	1.80	308	eP	Pn	10 37 27.7	+0.2
RENF	Rennes	1.80	308	Pn	Pn	10 37 28.3	+0.8
RENF				Pg	Pb	10 37 30.6	+1.1
RENF				Sn	Sn	10 37 49.5	-0.7
RENF				Sg	Sg	10 37 54.8	+0.2
FLN	La Foliniere	1.86	340	ePn	Pn	10 37 28.3	+0.1
FLN	La Foliniere	1.86	340	ePg	Pb	10 37 31.6	+1.1
FLN				eSg	Sb	10 37 55.1	+1.5
	comp=N,408nm,0.2s						
RJF	Les Rejaudoux	1.86	157	ePn	Pn	10 37 29.3	+1.0
RJF	Les Rejaudoux	1.86	157	ePg	Pg	10 37 32.4	+0.1
RJF				eSn	Sn	10 37 52.4	+0.6
RJF				eSg	Sg	10 37 56.7	+0.2
	comp=N,1µm,0.3s						
RJF	Les Rejaudoux	1.86	157	Pn	Pn	10 37 29.3	+1.0
AVF	Avril sur Loir	1.99	96	ePn	Pn	10 37 30.4	+0.4
AVF	Avril sur Loir	1.99	96	ePg	Pg	10 37 34.5	-0.2
AVF				eSn	Sn	10 37 54.6	-0.2
AVF				eSg	Sb	10 37 58.9	+1.6
	comp=N,450nm,0.4s						
AVF	Avril sur Loir	1.99	96	Pn	Pn	10 37 29.8	-0.2
SSF	Saint Saulge	2.07	88	ePn	Pn	10 37 31.7	+0.5
SSF	Saint Saulge	2.07	88	ePg	Pb	10 37 35.8	+1.6
SSF				eSg	Sb	10 38 01.0	+1.1
	comp=N,663nm,0.3s						
AGO	Saint Agoulin	2.07	117	Sn	Sb	10 37 59.8	-0.1
AGO	Saint Agoulin	2.07	117	Pn	Pn	10 37 31.1	-0.2
AGO	Saint Agoulin	2.07	117	Pg	Pb	10 37 35.0	+0.8
LFF	La Frestale	2.09	175	ePn	Pn	10 37 32.5	+1.1
LFF	La Frestale	2.09	175	ePg	Pg	10 37 37.7	+1.0
LFF				eSg	Sg	10 38 04.6	+0.8
	comp=N,1µm,0.4s						
LRVF	chteau la Riv	2.15	195	Pn	Pb	10 37 33.8	-1.5
LRVF				Pg	Pg	10 37 39.4	+1.7
LRVF				Sn	Sb	10 38 00.1	-1.8
PYM	Petit Puy Mans	2.17	125	Sn	Sn	10 38 00.4	+1.0
PYM	Petit Puy Mans	2.17	125	Pg	Pb	10 37 37.1	+1.4
PYM	Petit Puy Mans	2.17	125	Pn	Pn	10 37 32.7	+0.1
LOR	Lormes	2.32	83	ePn	Pn	10 37 34.9	+0.2
	baz=264						
LOR	Lormes	2.32	83	ePg	Pb	10 37 40.6	+2.2
LOR				eSg	Sb	10 38 08.6	+1.5
	comp=N,698nm,0.3s,baz=264						
LOR	Lormes	2.32	83	Sn	Sn	10 38 03.4	+0.2
LOR	Lormes	2.32	83	Pn	Pn	10 37 35.1	+0.4
LOR	Lormes	2.32	83	Pg	Pg	10 37 41.7	+0.6
SMF	Signal de Mont	2.34	98	ePn	Pn	10 37 35.3	+0.4
SMF	Signal de Mont	2.34	98	ePg	Pb	10 37 39.7	+1.0
SMF				eSn	Sn	10 38 03.2	-0.4
SMF				eSg	Sb	10 38 10.1	+2.5
	comp=N,252nm,0.3s						
CAF	Calviac	2.37	152	ePn	Pn	10 37 36.2	+0.9
CAF	Calviac	2.37	152	ePg	Pg	10 37 42.3	+0.2
CAF				eSn	Sn	10 38 04.5	+0.1
CAF				eSg	Sg	10 38 13.2	+0.4
	comp=N,645nm,0.3s						
CAF	Calviac	2.37	152	Pn	Pn	10 37 36.3	+0.9
SGMF	Saint Gilles	2.39	302	ePn	Pn	10 37 36.1	+0.5
SGMF	Saint Gilles	2.39	302	ePg	Pb	10 37 40.4	+0.8
SGMF				eSn	Sn	10 38 04.0	-0.8
SGMF				eSg	Sg	10 38 12.5	-1.0
	comp=N,259nm,0.5s						
QUIF	Quistinic	2.63	291	ePn	Pn	10 37 39.3	+0.5
QUIF	Quistinic	2.63	291	ePg	Pg	10 37 46.4	-0.5
QUIF				eSn	Sn	10 38 09.7	-0.9
QUIF				eSg	Sg	10 38 19.2	-1.8
	comp=N,214nm,0.2s						
MONQ	Montcuq	2.70	169	Pn	Pn	10 37 40.6	+0.8
MONQ				Sn	Sn	10 38 11.9	-0.5
JDC	Jersey Dam (Cr	2.75	323	IAML		10 38 25.0	
	comp=N,813nm,0.2s						
JDC				IAML		10 38 26.9	
	comp=E,388nm,0.2s						
JDG	Jersey Dam (Ga	2.75	323	IAML		10 38 24.6	
	comp=N,135nm,0.7s						
JDG				IAML		10 38 25.2	
	comp=E,139nm,0.3s						
JRS	Jersey	2.77	323	IAML		10 38 28.4	
	comp=E,131nm,0.3s						
JRS				IAML		10 38 29.5	
	comp=N,101nm,0.5s						
JSA	Saint Aubin	2.80	322	eP	Pn	10 37 40.7	-0.4
JSA				IAML		10 38 28.0	
	comp=E,122nm,0.2s						
JSA				IAML		10 38 28.4	
	comp=N,141nm,0.5s						
JSA	Saint Aubin	2.80	322	Sn	Sn	10 38 14.1	-0.7
JSA	Saint Aubin	2.80	322	Pn	Pn	10 37 40.1	-1.0
JSA	Saint Aubin	2.80	322	Pg	Pg	10 37 49.4	-0.8
JLP	Les Platons	2.81	323	eP	Pn	10 37 41.5	+0.2
JVM	Valle D.L. Mar	2.84	322	eP	Pn	10 37 41.5	-0.1
ROSF	Rostrenen	2.85	299	ePn	Pn	10 37 42.4	+0.5
ROSF	Rostrenen	2.85	299	ePg	Pg	10 37 50.4	-0.9
ROSF				eSn	Sn	10 38 15.0	-1.2
ROSF				eSg	Sg	10 38 26.7	-1.5
	comp=N,189nm,0.3s						
ROSF	Rostrenen	2.85	299	eP	Pn	10 37 42.5	+0.6
ROSF				IAML		10 38 27.8	
	comp=N,91nm,0.2s						
ROSF				IAML		10 38 32.9	
	comp=E,104nm,0.2s						
ROSF	Rostrenen	2.85	299	Sn	Sn	10 38 16.9	+0.7
ROSF	Rostrenen	2.85	299	Pn	Pn	10 37 42.9	+1.0
SFTF	Sexfontaines	3.31	67	ePn	Pn	10 37 48.3	+0.1
SFTF	Sexfontaines	3.31	67	ePg	Pb	10 37 58.3	+3.1
SFTF				eSn	Sn	10 38 25.3	-2.1
SFTF				eSg	Sg	10 38 40.6	-2.1
	comp=E,160nm,0.3s						
SSB	Saint Sauveur	3.32	120		Pn	10 37 49.5	+1.1
SSB	Saint Sauveur	3.32	120	Pn	Pn	10 37 49.0	+0.6
MEZF	Maizieres J'vi	3.42	63	ePn	Pn	10 37 49.7	-0.1
MEZF	Maizieres J'vi	3.42	63	ePg	Pb	10 38 00.6	+3.4
MEZF				eSg	Sb	10 38 44.1	+5.4
	comp=E,472nm,0.6s						
SAVF	Savonnieres en	3.52	61	ePn	Pn	10 37 51.2	+0.2
SAVF	Savonnieres en	3.52	61	ePg	Pb	10 38 01.2	+2.5
SAVF				eSn	Sn	10 38 30.0	-2.5
SAVF				eSg	Sg	10 38 47.0	-2.4
	comp=E,268nm,0.7s						
VIVF	Saint-Julien-l	3.64	125	ePn	Pn	10 37 53.8	+1.0
VIVF	Saint-Julien-l	3.64	125	ePg	Pg	10 38 05.8	-0.6
VIVF				eSn	Sn	10 38 34.8	-0.9
VIVF				eSg	Sg	10 38 52.3	-1.2
	comp=E,174nm,0.4s						
OG35	Corcelles	3.65	104	Pn	Pn	10 37 54.1	+1.2
OG35				Pg	Pg	10 38 07.1	+0.5
LASF	Ste Croix	3.78	140	ePn	Pn	10 37 55.9	+1.1
LASF	Ste Croix	3.78	140	ePg	Pg	10 38 08.4	-0.7
LASF				eSg	Sg	10 38 57.2	-0.9
	comp=E,178nm,0.4s						
PAGF	Fort de Pagny	3.86	65	ePn	Pn	10 37 55.6	-0.1
PAGF	Fort de Pagny	3.86	65	ePg	Pb	10 38 08.5	+3.9
PAGF				eSg	Sg	10 38 57.7	-2.7
	comp=E,288nm,0.6s						
MTLF	Montolieu	3.88	161	ePn	Pn	10 37 56.8	+0.7
MTLF	Montolieu	3.88	161	ePg	Pg	10 38 10.2	-0.7
MTLF				eSn	Sn	10 38 40.4	-1.2
MTLF				eSg	Sg	10 39 00.4	-0.8
	comp=E,174nm,0.3s						
OGSM	Saint Maurice	3.88	109	Pn	Pn	10 37 57.8	+1.7
OGSM				Pg	Pg	10 38 10.7	-0.3
BAIF	Baives	3.92	38	ePn	Pn	10 37 56.6	0.0
BAIF	Baives	3.92	38	ePg	Pb	10 38 09.8	+4.1
BAIF				eSn	Sn	10 38 39.6	-2.9
BAIF				eSg	Sb	10 38 59.5	+6.5
	comp=E,112nm,0.6s						
EPF	Esparros	3.99	181	ePn	Pn	10 37 57.9	+0.3
EPF	Esparros	3.99	181	ePg	Pg	10 38 12.8	-0.3
EPF				eSn	Sn	10 38 42.0	-2.4
EPF				eSg	Sg	10 39 05.9	+1.1
	comp=E,108nm,0.3s						
BBOU	Bougnies	4.08	33	bPn	Pn	10 37 59.1	+0.3
BBOU				dPg	Pg	10 38 14.8	+0.2
BBOU				dSn	Sn	10 38 40.6	-5.7
SJPF	Ste Jean	4.09	198	ePn	Pn	10 37 59.9	+1.0
SJPF	Ste Jean	4.09	198	ePg	Pg	10 38 14.3	-0.6
SJPF				eSn	Sn	10 38 45.6	-1.1
SJPF				eSg	Sg	10 39 07.1	-0.8
	comp=E,85nm,0.4s						
HAU	Haudompre	4.10	74	ePn	Pn	10 37 58.4	-0.7
HAU	Haudompre	4.10	74	ePg	Pg	10 38 13.3	-1.8
HAU				eSn	Sn	10 38 44.4	-2.6
HAU				eSg	Sg	10 39 05.6	-2.6
	comp=E,333nm,0.5s						
DOU	Dourbes	4.12	40	eP	Pn	10 37 59.4	+0.2
DOU	Dourbes	4.12	40	bPn	Pn	10 37 59.4	+0.2
DOU				dPg	Pg	10 38 14.2	-1.2
DOU				dSn	Sn	10 38 40.0	-7.3
DOU				dSg	Sg	10 39 06.6	-2.2
	comp=N,86nm,0.5s						
DOU	Dourbes	4.12	40	Pn	Pn	10 37 59.5	+0.2
VIEF	Viey	4.15	185	Pn	Pn	10 38 01.2	+1.3
ELSH	Elham, Standar	4.15	6	IAML		10 39 17.9	
	comp=N,88nm,0.5s						
ELSH				IAML		10 39 20.4	
	comp=E,92nm,0.6s						
ETSF	Etsaut	4.19	190	ePn	Pn	10 38 01.1	+0.8
ETSF	Etsaut	4.19	190	ePg	Pg	10 38 16.0	-0.8
ETSF				eSn	Sn	10 38 48.2	-1.0
ETSF				eSg	Sg	10 39 10.3	-0.7
	comp=E,119nm,0.5s						
GIVF	Givet	4.22	42	ePn	Pn	10 38 00.9	+0.2
GIVF	Givet	4.22	42	ePg	Pg	10 38 16.4	-1.1
GIVF				eSn	Sn	10 38 46.6	-3.4
GIVF				eSg	Sg	10 39 08.8	-3.3
	comp=E,174nm,0.5s						
SNF	Seneffe	4.30	34	dPn	Pn	10 38 02.0	+0.1
ORIF	Oris-en-Rattie	4.32	117	ePn	Pn	10 38 03.1	+1.0
ORIF	Oris-en-Rattie	4.32	117	ePg	Pg	10 38 18.6	-0.6
ORIF				eSg	Sg	10 39 13.1	-2.0
	comp=E,120nm,0.7s						
ORIF	Oris-en-Rattie	4.32	117	Pn	Pn	10 38 04.1	+2.0
BSKQ	Steenkerk	4.34	32	dPn	Pn	10 38 02.4	0.0
BSKQ				dPg	Pg	10 38 18.2	-1.5
BSKQ				dSn	Sn	10 38 49.2	-3.6
BSKQ				dSg	Sb	10 39 08.8	+3.8
	comp=E,53nm,0.5s						
BMRD	Maredsous	4.34	39	bPn	Pn	10 38 02.4	0.0
BMRD				dPg	Pb	10 38 16.9	+4.1
BMRD				dSn	Sn	10 38 49.0	-3.9
BMRD				dSg	Sb	10 39 10.0	+4.8
	comp=N,61nm,0.7s						
BRQR	Ronquire	4.36	33	dPn	Pn	10 38 02.9	+0.3
BRQR				dPg	Pb	10 38 17.8	+4.7
HINF	Hinteralfeld	4.40	77	ePn	Pn	10 38 02.2	-1.1
HINF	Hinteralfeld	4.40	77	ePg	Pb	10 38 17.5	+3.6
HINF				eSn	Sn	10 38 49.7	-4.8
HINF				eSg	Sg	10 39 14.3	-3.6
	comp=N,135nm,0.3s						
RCHB	Rochefort	4.45	43	dPn	Pn	10 38 04.1	+0.3
RCHB				dPg	Pb	10 38 17.4	+2.8
RCHB				dSn	Sn	10 38 49.4	-6.1
RCHB				dSg	Sb	10 39 13.8	+5.7
	comp=E,63nm,0.8s						
RSL	Roselend	4.46	105	P	Pn	10 38 06.0	+1.8
RSL	Roselend	4.46	105	Pn	Pn	10 38 06.0	+1.8
DYA	Yadsworthy	4.49	321	eP	Pn	10 38 04.1	-0.3
DYA				IAML		10 39 25.3	
	comp=E,41nm,0.6s						
DYA				IAML		10 39 26.3	
	comp=N,45nm,0.5s						
BGES	Gesves	4.54	41	dPn	Pn	10 38 05.4	+0.3
BGES				dPg	Pg	10 38 22.8	-0.8
BGES				dSn	Sn	10 38 54.0	-3.9
BGES				dSg	Sg	10 39 19.4	-3.0
	comp=N,54nm,0.7s						
SALAN	Lac Salanfe	4.57	99	P	Pn	10 38 06.6	+0.9
LPL	La Plagne	4.59	107	ePn	Pn	10 38 07.7	+1.7
LPL	La Plagne	4.59	107	ePg	Pg	10 38 23.5	-1.1
LPL				eSg	Sg	10 39 21.7	-2.3
	comp=N,81nm,0.7s						
LPG	La Plagne	4.61	107	ePn	Pn	10 38 08.3	+1.9
LPG	La Plagne	4.61	107	ePg	Pg	10 38 23.3	-1.6
LPG				eSg	Sg	10 39 22.1	-2.6
	comp=N,67nm,0.5s						
WLF	Walferdange	4.62	53	Pn	Pn	10 38 06.2	+0.1
WLF	Walferdange	4.62	53	ePn	Pn	10 38 06.3	+0.1
WLF				ePg	Pg	10 38 24.9	-0.2
WLF				eSg	Sg	10 39 24.0	-0.8
WLF	Walferdange	4.62	53	dPn	Pn	10 38 05.8	-0.3
WLF				dPg	Pb	10 38 22.2	+4.7
BOURR	Bourrignon	4.62	83	Pn	Pn	10 38 05.1	-1.2
BCLA	Clavier	4.67	41	dPn	Pn	10 38 07.0	+0.1
BCLA				dPg	Pg	10 38 25.0	-1.0
BCLA				dSn	Sn	10 38 57.2	-3.6
BCLA				dSg	Sg	10 39 22.3	-4.0
	comp=E,40nm,0.8s						
ECH	Echery	4.67	73	Pn	Pn	10 38 07.0	0.0
ECH	Echery	4.67	73	ePn	Pn	10 38 06.7	-0.2
ECH				ePg	Pg	10 38 24.8	-1.3
ECH				eSg	Sg	10 39 23.2	-3.4
FILF	Fillols	4.70	161	Pn	Pn	10 38 08.7	+1.3
SMRF	Simiane la Rot	4.70	129	ePn	Pn	10 38 08.8	+1.4
SMRF	Simiane la Rot	4.70	129	ePg	Pg	10 38 25.0	-1.7
SMRF				eSg	Sg	10 39 25.6	-2.0
	comp=E,84nm,0.8s						
MRGE	Morge	4.73	103	P	Pn	10 38 09.9	+2.1
SENIN	Lac Senin/Sane	4.74	95	Pn	Pn	10 38 09.6	+1.5
BNI	Bardonecchia	4.75	112	Pn	Pn	10 38 10.2	+2.1
CDF	Champ du Feu	4.80	71	ePn	Pn	10 38 08.5	-0.2
CDF	Champ du Feu	4.80	71	ePg	Pg	10 38 26.2	-2.2
CDF				eSg	Sg	10 39 27.4	-3.1
	comp=E,122nm,0.5s						
LKLB	Kalborn	4.84	48	dPn	Pn	10 38 08.9	-0.4
LKLB				dPg	Pb	10 38 26.4	+5.0
LKLB				dSg	Sb	10 39 25.2	+5.6
	comp=E,67nm,1.0s						
DIX	Grande Dixence	4.88	99	P	Pn	10 38 11.7	+1.7
CCA1	Carnmenellis	4.93	312	eP	Pn	10 38 10.4	-0.1
CCA1				IAML		10 39 37.0	
	comp=E,23nm,0.6s						
CCA1				IAML		10 39 37.8	
	comp=N,38nm,0.6s						
CCA1	Carnmenellis	4.93	312	Pn	Pn	10 38 10.4	-0.1
BHOU	Houvegnez	4.95	46	dPn	Pn	10 38 10.8	0.0
BHOU				dSn	Sn	10 39 02.7	-5.2
BHOU				dSg	Sg	10 39 34.3	-1.2
	comp=E,65nm,0.6s						
MBDF	Montbardon	4.96	115	ePn	Pn	10 38 12.2	+1.2
MBDF	Montbardon	4.96	115	ePg	Pg	10 38 29.3	-2.3
MBDF				eSg	Sg	10 39 34.2	-1.6
	comp=E,48nm,0.7s						
OGAG	Argentiere	4.96	119	Pn	Pn	10 38 11.4	+0.3
VANNI	Vissoie, Val d	4.97	97	P	Pn	10 38 13.1	+1.9
RIVT	Riveris	4.98	55	ePn	Pn	10 38 10.3	-0.8
BEBN	Eben Emael	5.10	40	dPn	Pn	10 38 12.8	0.0
BEBN				dPg	Pg	10 38 34.5	+0.2
MEM	Membach	5.12	43	dPn	Pn	10 38 13.0	-0.1
MEM				dPg	Pb	10 38 30.6	+4.5
MEM				dSn	Sn	10 39 07.0	-5.1
MEM				dSg	Sb	10 39 32.3	+4.8
	comp=E,72nm,0.7s						
EMBD	Embd, Matterta	5.13	96	Pn	Pn	10 38 15.4	+2.0
HTL	Hartland	5.14	322	eP	Pn	10 38 13.4	0.0
HTL				IAML		10 39 47.6	
	comp=E,50nm,0.4s						
HTL				IAML		10 39 49.5	
	comp=N,56nm,0.5s						
HTL	Hartland	5.14	322	Pn	Pn	10 38 13.6	+0.2
HILG	Hillesheim	5.25	49	eSn	Sn	10 39 10.1	-5.3
	comp=N,54nm,1.0s						
DREG	Dreilaegerbach	5.26	44	ePn	Pn	10 38 14.9	-0.2
KLL	Kalltalsperre	5.29	45	ePn	Pn	10 38 15.3	-0.1
KLL				eSn	Sn	10 39 11.2	-5.1
	comp=N,41nm,0.8s						
BERGE	Lenzkirch (DE)	5.29	78	ePn	Pn	10 38 14.7	-0.8
METMA	Mettma DE	5.33	80	ePn	Pn	10 38 15.4	-0.6
METMA				eSg	Sg	10 39 43.1	-4.5
BFO	Black Forest	5.46	73	Pn	Pn	10 38 18.0	+0.1
BFO	Black Forest	5.46	73	ePn	Pn	10 38 16.5	-1.3
BFO				ePg	Pg	10 38 39.5	-1.7
BFO				eSn	Sn	10 39 15.0	-5.6
BFO				eSg	Sg	10 39 46.8	-5.2
MCH1	Michaelchurch	5.47	337	eP	Pn	10 38 17.9	0.0
MCH1				IAML		10 39 55.9	
	comp=N,44nm,0.6s						
MCH1				IAML		10 40 00.3	
	comp=E,31nm,0.5s						
ABH	Alteburg	5.51	56	ePn	Pn	10 38 17.3	-1.1
STB	Steinbach	5.52	47	ePn	Pn	10 38 18.3	-0.2
BGG	Burgeitz	5.55	52	ePn	Pn	10 38 18.2	-0.8
AHRW	Bad Neuenahr-A	5.61	49	ePn	Pn	10 38 19.2	-0.5
LMR	La Mourre	5.64	129	ePn	Pn	10 38 20.8	+0.6
LMR	La Mourre	5.64	129	ePg	Pg	10 38 43.0	-1.5
LMR				eSn	Sn	10 39 24.2	-0.6
LMR				eSg	Sg	10 39 54.9	-2.6
	comp=E,14nm,0.5s						
EMING	Emmingen-Lipti	5.74	78	ePn	Pn	10 38 21.5	-0.1
EMING				eSg	Sg	10 39 56.8	-4.0
SBF	Sospel	5.83	120	ePn	Pn	10 38 23.2	+0.3
SBF				eSn	Sn	10 39 27.5	-2.1
SBF				eSg	Sg	10 40 00.3	-3.3
	comp=E,26nm,0.5s						
CWF	Charnwood Fore	5.84	349	eP	Pn	10 38 22.2	-0.7
CWF				IAML		10 40 06.9	
	comp=N,13nm,0.6s						
CWF				IAML		10 40 10.9	
	comp=E,23nm,0.7s						
KOE	Koeppel	5.89	52	ePn	Pn	10 38 23.4	-0.2

HLM1	Long Mynd	5.92	340	eP	Pn	10 38 23.5	-0.5
HLM1				IAML		10 40 13.6	
	comp=E,24nm,0.6s						
HLM1				IAML		10 40 15.9	
	comp=N,18nm,0.6s						
WALHA	Wallhausen, DE	5.92	80	eSg	Sg	10 40 03.0	-3.5
HOBG	Hohbusch	6.01	46	ePn	Pn	10 38 25.1	-0.1
LAUG	Laupendahl	6.06	42	ePn	Pn	10 38 25.6	-0.4
STU	Stuttgart	6.12	70	Pn	Pn	10 38 29.1	+2.3
TUE	Stuetta	6.12	92	Pn	Pn	10 38 29.4	+2.4
TNS	Taunus Mts	6.18	56	ePn	Pn	10 38 26.8	-0.9
TNS				ePg	Pg	10 38 52.1	-2.8
DAVA	Damuels	6.42	84	i Sn	Sn	10 39 45.9	+1.6
	comp=N,23nm,0.7s						
DAVOX	Davos/Dischmat	6.45	89	Pn	Pn	10 38 33.7	+2.2
	comp=N,0.4nm,0.3s,baz=298,slow=18,SNR=3.0						
DAVOX				Sn	Sn	10 39 40.5	-4.6
	comp=N,1.5nm,0.3s,baz=293,slow=15,SNR=2.4						
DAVOX				Lg	Lg	10 40 20.9	
	comp=N,1.3nm,0.3s,baz=344,slow=20,SNR=1.8						
	comp=N,1.8nm,0.4s						
UBR	Ueberruh	6.58	81	eSg	Sg	10 40 24.5	-3.2
FETA	Feichten	7.01	86	ePn	Pn	10 38 41.7	+2.6
	comp=N,3.7nm,0.7s						
FETA				eSn	Sn	10 39 57.4	-1.4
	comp=N,8.7nm,0.7s						
RETA	Reutte	7.02	82	eSg	Sg	10 40 43.6	+1.8
	comp=N,3.5nm,0.3s						
MOTA	Moosalm	7.25	84	ePn	Pn	10 38 43.8	+1.3
	comp=N,0.8nm,0.2s						
MOTA				eSn	Sn	10 40 02.6	-2.1
	comp=N,2.8nm,0.4s						
SQTA	Sankt Quirin	7.33	85	i Pn	Pn	10 38 43.4	-0.1
	comp=N,0.9nm,0.2s						
SQTA				eSg	Sg	10 40 49.4	-2.2
	comp=N,22nm,0.5s						
PGF	Pioggiola	7.53	123	ePn	Pn	10 38 46.5	+0.2
PGF				eSn	Sn	10 40 08.2	-3.5
	comp=N,1.5nm,0.3s						
WATA	Walderalm	7.57	84	i Pn	Pn	10 38 50.5	+3.6
	comp=N,1.4nm,0.2s						
ESDC	Sonseca Array	8.02	205	Pn	Pn	10 38 52.2	-0.8
	comp=N,0.4nm,0.3s,baz=28,slow=13,SNR=8.7						
ESDC				Sn	Sn	10 40 18.1	-5.6
	comp=N,0.7nm,0.3s,baz=29,slow=24,SNR=6.7						
	comp=N,0.7nm,0.4s						
PAB	San Pablo	8.26	207	Pn	Pn	10 38 56.8	+0.6
CASP	Castiglione de	8.50	116	Pn	Pn	10 38 59.4	0.0
NKC	Novy Kostel	8.56	64	eSN	Sg	10 41 27.9	-3.1
ESK	Eskdalemuir	8.62	346	Pn	Pn	10 38 59.6	-1.5
EKA	Eskdalemuir Ar	8.63	346	Pn	Pn	10 38 59.1	-2.0
	baz=164,slow=14						
EKA				Sn	Sn	10 40 29.8	-8.5
	baz=173,slow=23						
	comp=N,0.9nm,0.2s						
KBA	Koelnbreinsper	8.79	85	i Pn	Pn	10 39 06.2	+2.6
	comp=N,1.4nm,0.4s						
KBA				eSn	Sn	10 40 39.3	-3.3
	comp=N,1.4nm,0.3s						
KHC	Kasperske Hory	9.03	72	eP	Pn	10 39 09.5	+2.8
KHC				x	x	10 39 44.0	
GERES	GERESS Array B	9.07	74	Pn	Pn	10 39 06.7	-0.7
	comp=N,0.2nm,0.3s,baz=271,slow=13,SNR=2.8						
GERES				Lg	Lg	10 41 41.4	
	comp=N,0.7nm,0.3s,baz=261,slow=29,SNR=3.7						
	comp=N,0.5nm,0.3s						
VRAC	Vranov	11.01	72	Lg	Lg	10 42 42.5	
	comp=N,0.4nm,0.3s,baz=10,slow=21,SNR=3.4						
MORI	Morici	11.16	101	ePn	Pn	10 39 37.9	+2.1
ZIRJ	Zirje	11.20	102	ePn	Pn	10 39 37.1	+0.7
FINES	FINESS Array B	20.60	36	P	P	10 41 36.1	+0.9
	comp=N,0.8nm,0.8s,baz=287,slow=9.5,SNR=3.9						
	comp=N,0.8nm,0.8s						
ARCES	ARCESS Array B	25.74	20	P	P	10 42 26.6	0.0
	comp=N,0.3nm,0.6s,baz=216,slow=12,SNR=1.2						
	comp=N,0.3nm,0.6s						

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*RHSSO **02** 10:38:39.0±0.7, 42°.44N×20°.25E, h4^{km}, ML2.1/6*
*TIR **02** 10:38:40.3, 42°.44N×20°.15E, h6^{km}±2^{km}, Md2.2, Ml2.5*
*PDG **02** 10:38:40.7±0.6, 42°.46N×20°.08E, h7^{km}±2^{km}, MD2.4/1, ML2.2/13, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*BEO **02** 10:38:41.6±0.4, 42°.51N×20°.12E, h4^{km}±4^{km}, ML2.1/7*
ISC 02 10:38:39.6±0.8**, 42°.45N**±0°.02×**20°.12E**±0°.02**, h14**^{km}±5^{km}**, n47, σ1ˢ.29**/86**, 14C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.09	204	P	Pg	10 38 42.7	0.0
	baz=221						
BCI				S	Sg	10 38 44.5	-0.3
	baz=221						
BCI				AMP			
	comp=N,29nm,0.1s,baz=221						
PVY	Plav	0.19	320	⇑iPg	Pg	10 38 43.9	-0.2
PVY				i Sg	Sg	10 38 47.0	-0.1
KKS	Kukesi	0.43	150	P	Pb	10 38 48.8	-0.3
	baz=151						
KKS				S	Sb	10 38 55.1	-0.4
	baz=151						
IVA	Berane	0.45	338	⇑iPg	Pg	10 38 48.6	-0.1
IVA				i Sg	Sb	10 38 55.5	-0.6
KOME	Kolasin	0.60	312	⇑iPg	Pg	10 38 51.3	-0.1
KOME				i Sg	Sb	10 39 00.1	-0.2
PDG	Podgorica	0.64	268	ePg	Pg	10 38 51.7	-0.4
PDG				eSg	Sn	10 39 02.6	-1.6
PDG	Podgorica	0.64	268	⇑iPg	Pg	10 38 51.5	-0.6
PDG				eSg	Sb	10 39 01.6	+0.2
TTG	Podgorica	0.64	268	⇑iPg	Pn	10 39 00.8	+6.5
TTG				i Sg	Sb	10 39 01.5	+0.2
DRME	Dracevica, Mon	0.74	249	⇑iPg	Pg	10 38 53.4	-0.7
DRME				eSg	Sn	10 39 05.7	-1.1
DRME	Dracevica, Mon	0.74	249	⇑iPg	Pg	10 38 53.6	-0.5
DRME				i Sg	Sb	10 39 05.1	+0.8
PHP	Peshkopia	0.80	163	P	Pn	10 38 55.8	-0.8
	baz=163						
PHP				S	Sn	10 39 07.7	-0.7
	baz=163						
PHP				AMP			
	comp=N,0.2nm,0.2s,baz=163						
ULC	Ulcinj	0.81	233	⇑iPg	Pb	10 38 55.4	-0.1
ULC				i Sg	Sn	10 39 07.9	-0.7
SJES	Sjenica	0.82	352	ePg	Pb	10 38 55.7	0.0
SJES				eSg	Sg	10 39 05.7	-0.6
CEME	Cevo	0.89	277	⇑iPg	Pb	10 38 56.0	-1.0
CEME				i Sg	Sn	10 39 10.0	-0.6
NKY	Niksic	0.91	294	⇑iPg	Pb	10 38 56.4	-0.8
NKY				i Sg	Sn	10 39 10.6	-0.4
NKME	Niksic	0.92	290	⇑iPg	Pb	10 38 56.9	-0.5
NKME				i Sg	Sn	10 39 11.0	-0.2
BUM	Brajici-Budva	0.92	261	⇓iPg	Pg	10 38 57.3	-0.2
BUM				i Sg	Sn	10 39 11.2	-0.1
PLE	Pljevlja	1.03	329	⇓iPg	Pb	10 38 59.1	-0.2
PLE				i Sg	Sn	10 39 15.0	+0.9
SELS	Selova	1.06	43	ePg	Pg	10 39 00.5	+0.4
SELS				eSg	Sg	10 39 13.8	-0.2
UPM	Unac-Piva	1.17	310	ePg	Pg	10 39 02.0	-0.2
UPM				eSg	Sg	10 39 19.1	+1.7
UPM	Unac-Piva	1.17	310	⇓iPg	Pg	10 39 01.9	-0.2
UPM				i Sg	Sg	10 39 19.9	+2.5
HCY	Herceg Novi	1.20	270	ePg	Pg	10 39 02.7	-0.1
HCY				eSg	Sg	10 39 20.0	+1.5
HCY	Herceg Novi	1.20	270	⇑iPg	Pb	10 39 02.3	+0.1
HCY				i Sg	Sg	10 39 20.8	+2.3
BRY	Bratogost	1.25	292	ePg	Pb	10 39 03.1	0.0
BRY				eSg	Sg	10 39 21.3	+1.3
BRY	Bratogost	1.25	292	⇑iPg	Pb	10 39 03.1	0.0
BRY				i Sg	Sg	10 39 22.4	+2.4
RUDO	Rudo	1.29	335	ePg	Pn	10 39 02.7	-0.6
RUDO				eSg	Sg	10 39 21.4	+0.2
BARS	Barje	1.30	73	ePg	Pg	10 39 05.6	+0.9
BARS				eSg	Sg	10 39 22.4	+0.7
TREB	Trebinje	1.33	282	ePg	Pg	10 39 05.4	+0.1
TREB				eSg	Sg	10 39 23.3	+0.7
TREB	Trebinje	1.33	282	⇑iPg	Pg	10 39 04.8	-0.5
TREB				eSg	Sg	10 39 24.6	+2.0
DBRK	Dubrovnik	1.47	279	ePn	Pg	10 39 07.9	-0.1
DBRK				Sn	Sg	10 39 30.9	+3.8
GRUS	Gruza	1.50	17	ePn	Pb	10 39 07.6	+0.3
BBLS	Lazići	1.51	340	ePn	Pb	10 39 07.0	-0.4
BBLS				eSn	Sg	10 39 27.7	-0.5
DIVS	Divibare	1.65	357	ePn	Pb	10 39 10.2	+0.3
DIVS	Divibare	1.65	357	ePn	Pb	10 39 09.1	-0.8
DIVS				eSn	Sb	10 39 31.0	+0.5
BOSS	Bosilegrad	1.75	88	ePn	Pb	10 39 11.9	+0.4
TRUS	Trudelj	1.78	7	ePn	Pg	10 39 13.4	-0.5
STON	Ston	1.83	284	ePn	Pb	10 39 13.6	+0.7
STON				eSg	Sg	10 39 39.8	+1.2
STON	Ston	1.83	284	ePn	Pb	10 39 12.4	-0.5
STON	Ston	1.83	284	ePn	Pb	10 39 13.6	+0.7
STON				Sn	Sg	10 39 39.7	+1.1
LSTV	Lastovo	2.40	279	ePn	Pb	10 39 22.2	-0.4
LSTV				Sn	Sb	10 39 52.6	+0.5
MAKA	Makarska	2.43	291	ePn	Pb	10 39 23.4	+0.4
MAKA				Sn	Sb	10 39 54.5	+1.7
RICI	Ricice	2.43	296	ePn	Pb	10 39 23.6	+0.5
RICI				Sn	Sg	10 39 56.5	-1.1
HVAR	Hvar	2.80	286	ePn	Pb	10 39 27.6	-1.8
HVAR				Sn	Sb	10 40 02.2	-1.2
KIJV	Kijevo	3.13	301	ePn	Pb	10 39 32.9	-2.1
KIJV				Sn	Sb	10 40 12.5	-0.5
ZIRJ	Zirje	3.49	292	Sn	Sb	10 40 20.1	-3.4
MORI	Morici	3.52	295	Sn	Sb	10 40 21.3	-3.0
DUGI	Dugi Otok	4.01	294	ePn	Pn	10 39 44.2	+3.6
DUGI				Sn	Sb	10 40 33.3	-5.0

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*TIR **02** 10:40:31.2, 39°.94N×21°.52E, h25^{km}±4^{km}, Md2.9, Ml2.4*
*THE **02** 10:40:32.0, 40°.12N×21°.48E, h6^{km}±2^{km}, ML2.0/3, Error ellipse: s-maj=4.7km s-min=0.8km az=205.0*
*ATH **02** 10:40:32.6, 40°.04N×21°.40E, h8^{km}±3^{km}, ML2.5/2, Error ellipse: s-maj=4.1km s-min=1.2km az=239.0*
ISC 02 10:40:32.0±1.1**, 40°.05N**±0°.03×**21°.47E**±0°.04**, h5**^{km}±9^{km}**, n16, σ0ˢ.46**/25**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPRO	Kipourio	0.13	223	P	Pg	10 40 34.8	+0.2
KPRO				S	Sg	10 40 36.4	+0.1
KPRO				AML	AML	10 40 36.9	
	comp=N,28040µm,0.2s						
KPRO				AML	AML	10 40 36.9	
	comp=E,23527µm,0.1s						
PENT	Pentalofos	0.30	300	P	Pg	10 40 37.6	-0.2
PENT				S	Sg	10 40 41.6	-0.2
KZN	Kozani	0.34	41	P	Pb	10 40 40.6	-0.2
KZN				AML	AML	10 40 47.9	
	comp=N,615µm,0.3s						
KZN				AML	AML	10 40 49.0	
	comp=E,720µm,0.6s						
NEST	Nestorio	0.49	319	P	Pg	10 40 41.3	-0.2
THL	Klokotos Trika	0.64	139	P	Pb	10 40 45.1	-0.6
THL	Klokotos Trika	0.64	139	P	Pb	10 40 45.5	-0.2
THL				S	Sb	10 40 54.6	-0.3
LSK	Leskovik	0.68	279	P	Pg	10 40 44.1	-1.0
LSK				S	Sg	10 40 54.9	+1.0
	comp=E,190nm,0.6s						
LSK	Leskovik	0.68	279	P	Pg	10 40 44.9	-0.2
	baz=287						
LSK				S	Sb	10 40 56.6	+0.4
	baz=287						
LSK				AMP			
	comp=N,0.8nm,0.5s,baz=287						
FNA	Florina	0.74	354	P	Pg	10 40 46.2	-0.1
KBN	Korca	0.78	318	P	Pb	10 40 48.2	0.0
	baz=321						
KBN				S	Sn	10 41 01.6	-0.4
	baz=321						
KBN				AMP			
	comp=E,0.3nm,0.2s,baz=321						
LIT	Litokhoron	0.78	86	P	Pb	10 40 48.2	0.0
SRN	Sarande	1.15	262	P	Pg	10 40 53.2	-0.8
SRN				S	Sn	10 41 11.0	+0.2
	comp=E,130nm,0.4s						
SRN	Sarande	1.15	262	P	Pg	10 40 54.1	+0.1
	baz=268						
SRN				S	Sn	10 41 10.4	-0.4
	baz=268						
SRN				AMP			
	comp=N,0.3nm,0.3s,baz=268						
AGG	Agios Georgios	1.22	147	P	Pn	10 40 56.0	+0.2
AGG	Agios Georgios	1.22	147	P	Pn	10 40 56.0	+0.2
AGG				S	Sn	10 41 13.4	+0.7
	comp=N,52nm,0.4s						
PHP	Peshkopia	1.81	335	P	Pb	10 41 05.9	+0.1
	baz=336						

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*IDC **02** 10:42:17.9±1.3, 15°.94S×167°.12E, h0^{km}, mb4.1/6, mbtmp4.1/7, ML3.7/1, MS3.2/8, Error ellipse: s-maj=46.8km s-min=24.1km az=137.0*
*NOU **02** 10:42:20.1, 15°.92S×166°.96E, h14^{km}, MLv4.8/18, Vanuatu Islands*
ISC 02 10:42:21.6±0.8**, 16°.00S**±0°.08×**167°.0E**±0°.1**, h27**^{km}**, n25, σ1ˢ.53**/18**, mb4.0**/4**, MS3.1**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.57	17	P	Pb	10 42 31.0	-2.1
DVP	Devils Point	2.05	147	P	Pn	10 42 55.4	+1.1
RTV	Rentapao	2.23	143	P	Pn	10 42 58.0	+1.2
KOUNC	Koumac, New Ca	5.22	209	P	Pn	10 43 38.4	+0.4
MARNC	Mare, Loyalty	5.54	170	P	Pn	10 43 43.3	+1.0
YATNC	Mamie plateau,	6.03	181	P	Pn	10 43 49.3	+0.2
DZM	Mont Dzumac	6.07	185	Pn	Pn	10 43 50.2	+0.6
	1.8nm,0.3s,baz=132,slow=22,SNR=44						
DZM				Sn	Sn	10 44 54.6	-3.7
	5.5nm,0.3s,baz=108,slow=20,SNR=3.3						
DZM				LR	LR	10 45 59.2	
	comp=Z,116nm,21.8s,baz=102,slow=36						
	9.5nm,0.5s						
DZM	Mont Dzumac	6.07	185	P	Pn	10 43 50.1	+0.4
NOUC	Port Laguerre	6.11	186	P	Pn	10 43 50.9	+0.7
ONTNC	Ouen Toro	6.30	185	P	Pn	10 43 53.9	+1.1
OUENC	Ouen Island, N	6.39	182	P	Pn	10 43 55.2	+1.2
PINNC	Pines Island,	6.59	177	P	Pn	10 43 58.3	+1.5
MSVF	Nonsavu	10.70	101	LR	LR	10 48 12.6	
	comp=Z,262nm,18.4s,baz=183,slow=33						
RAO	Raoul Island	19.14	136	LR	LR	10 52 15.9	
	comp=Z,94nm,21.0s,baz=146,slow=31						
CTA	Charters Tower	20.16	255	P	Pn	10 46 56.8	+0.8
	2.8nm,0.7s,baz=40,slow=12,SNR=4.0						
CTA				LR	LR	10 53 07.5	
	comp=Z,80nm,20.7s,baz=85,slow=32						
	2.8nm,0.7s						
PMG	Port Moresby	20.45	286	LR	LR	10 53 59.9	
	comp=Z,43nm,21.1s,baz=159,slow=34						
WRA	Warramunga Arr	31.31	258	P	P	10 48 39.9	0.0
	0.9nm,0.8s,baz=89,slow=8.2,SNR=6.6						
	0.9nm,0.8s						
ASAR	Alice Springs	32.02	251	P	P	10 48 46.5	+0.5
	3.6nm,0.7s,baz=75,slow=8.6,SNR=51						
	3.6nm,0.7s						
GUMO	Guam	36.66	322	LR	LR	11 01 30.5	
	comp=Z,33nm,21.7s,baz=84,slow=31						
FITZ	Fitzroy Crossi	39.56	261	LR	LR	11 05 53.3	
	comp=Z,72nm,18.4s,baz=77,slow=36						
PETK	Petropavlovsk-	69.29	354	LR	LR	11 22 19.7	
	comp=Z,10nm,18.3s,baz=100,slow=35						
SONM	Songino Array	83.37	324	P	P	10 54 48.4	+2.0
	0.3nm,0.5s,baz=158,slow=4.7,SNR=1.9						
	0.3nm,0.5s						
ILAR	Eielson Array	87.80	18	P	P	10 55 07.1	-0.8
	1.3nm,0.5s,baz=240,slow=5.0,SNR=43						
	1.3nm,0.5s						
YKA	Yellowknife Ar	98.77	27	P	Pdif	10 55 58.2	-0.3
	0.6nm,0.7s,baz=257,slow=4.5,SNR=12						
	0.6nm,0.7s						
ARCES	ARCESS Array B	121.41	345	PKP	PKiKP	11 01 13.4	+1.5
	0.5nm,0.4s,baz=72,slow=2.1,SNR=16						

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*IDC **02** 11:04:36.8±1.2, 6°.61S×149°.88E, h47^{km}±18^{km}, mb3.4/4, mbtmp3.8/7, ML1.6/1, Error ellipse: s-maj=49.0km s-min=8.5km az=133.0*
ISC 02 11:04:36.0±1.8**, 6°.6S**±0°.2×**150°.0E**±0°.3**, h43**^{km}**, n7, σ0ˢ.83**/7**, mb3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.08	42	P	Pn	11 05 23.7	+1.6
	16nm,0.3s,baz=120,slow=6.2,SNR=5.7						
KRVT				S	Sn	11 06 00.7	+2.9
	33nm,0.7s,baz=112,slow=21,SNR=6.1						
PMG	Port Moresby	3.93	225	P	Pn	11 05 34.6	+0.8
	3.1nm,0.3s,baz=17,slow=11,SNR=9.3						
PMG				S	Sn	11 06 18.0	-0.7
	48nm,0.5s,baz=240,slow=18,SNR=9.2						
	15nm,0.6s						
SIJI	Sorong	19.50	286	P	P	11 08 59.5	-0.2
	3.7nm,0.3s,baz=252,slow=22,SNR=10						
WRA	Warramunga Arr	20.14	227	P	P	11 09 06.3	-0.5
	2.5nm,0.6s,baz=53,slow=11,SNR=23						
	2.5nm,0.6s						
ASAR	Alice Springs	22.93	221	P	P	11 09 36.0	-0.7
	0.8nm,1.0s,baz=54,slow=9.0,SNR=10						
	0.8nm,1.0s						
FITZ	Fitzroy Crossi	26.32	242	P	P	11 10 08.9	+0.9
	1.4nm,0.4s,baz=50,slow=9.8,SNR=13						
	1.4nm,0.4s						
ILAR	Eielson Array	84.89	23	P	P	11 17 05.8	-0.2
	0.3nm,0.7s,baz=254,slow=4.9,SNR=5.2						
	0.3nm,0.7s						

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*SOME **02** 11:09:07.6, 43°.57N×81°.85E, h10^{km}*
*NNC **02** 11:09:08.7±1.1, 43°.59N×81°.81E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=10.0km s-min=4.8km az=140.0*
ISC 02 11:09:09.5±1.6**, 43°.58N**±0°.05×**81°.72E**±0°.07**, h10**^{km}**, n51, σ1ˢ.65**/78**, 13C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.00	263	eP	Pg	11 09 28.6	-0.2
	20nm,0.0s						
KTMS				eS	Sn	11 09 43.9	-0.1
	74nm,0.3s						
KTMS	Ketmen	1.00	263	P	Pn	11 09 30.1	+0.3
	17nm,0.1s						
KTMS				S	Sn	11 09 46.7	+2.6
	74nm,0.3s						
DJR	Jarkent	1.58	299	eP	Pg	11 09 39.3	-0.5
	15nm,0.0s						
DJR				eS	Sg	11 10 02.5	+2.1
	145nm,0.1s						
DJR	Jarkent	1.58	299	P	Pg	11 09 39.3	-0.5
	15nm,0.1s						
DJR				S	Sg	11 10 02.5	+2.1
	117nm,0.4s						
PDGK	Podgornoye	1.64	262	P	Pb	11 09 39.9	0.0
	32nm,0.3s						
PDGK				S	Sg	11 10 03.9	+1.6
	94nm,0.5s						
PDGK	Podgornoye	1.64	262	⇑P	Pb	11 09 39.7	-0.2
	27nm,0.3s						
PDGK				⇑S	Sg	11 10 03.7	+1.4
	95nm,0.4s						
UZB	Uzynbulak	2.01	258	eP	Pb	11 09 45.7	-0.6
	34nm,0.1s						
UZB				eS	Sg	11 10 14.0	-0.2
	170nm,0.2s						
UZB	Uzynbulak	2.01	258	Pg	Pb	11 09 45.7	-0.6
	34nm,0.3s						
UZB				Lg	Lg	11 10 14.0	
	170nm,0.3s						
KPKS	Kokpek	2.21	268	eP	Pb	11 09 49.4	-0.2
	24nm,0.0s						
KPKS				eS	Sg	11 10 20.0	-0.5
	196nm,0.1s						
KAPS	Kapalarasan	2.40	316	eP	Pb	11 09 53.0	+0.2
	4.4nm,0.1s						
KAPS				eS	Sg	11 10 26.1	-0.5
	46nm,0.1s						
KAPS	Kapalarasan	2.40	316	Pg	Pb	11 09 53.0	+0.2
	2.8nm,0.2s						
KAPS				Lg	Lg	11 10 26.1	
	46nm,0.1s						
ZHN	Zhinishke	2.43	261	eP	Pb	11 09 53.5	+0.2
	43nm,0.1s						
ZHN				eS	Sg	11 10 27.2	-0.3
	249nm,0.1s						
ZHN	Zhinishke	2.43	261	Pg	Pb	11 09 53.5	+0.2
	47nm,0.3s						
ZHN				Lg	Lg	11 10 27.2	
	242nm,0.3s						
SATY	Saty	2.47	259	eP	Pb	11 09 54.5	+0.4
	26nm,0.1s						
SATY				eS	Sg	11 10 28.8	-0.1
	137nm,0.2s						
SATY	Saty	2.47	259	Pg	Pb	11 09 54.5	+0.4
	26nm,0.2s						
SATY				Lg	Lg	11 10 28.8	
	109nm,0.2s						
TDK	Taldyqorghan	2.77	302	eP	Pb	11 09 59.6	+0.5
	82nm,0.0s						
TDK				eS	Sg	11 10 37.4	-1.0
	149nm,0.1s						
TDK	Taldyqorghan	2.77	302	Pg	Pb	11 09 59.6	+0.5
	71nm,0.3s						
TDK				Lg	Lg	11 10 37.4	
	149nm,0.4s						
ARXS	Arharly	2.88	284	eP	Pb	11 10 01.5	+0.4
	3.8nm,0.0s						
ARXS				eS	Sg	11 10 40.5	-1.6
	110nm,0.4s						
ARXS	Arharly	2.88	284	Pg	Pb	11 10 01.5	+0.4
	8.3nm,0.2s						
ARXS				Lg	Lg	11 10 40.5	
	110nm,0.4s						
MAKZ	Makanchi	3.23	3	⇓Pn	Pn	11 10 00.2	-0.1
	0.5nm,0.2s						
MAKZ				⇓Pg	Pg	11 10 10.0	-1.4
	2.1nm,0.5s						
MAKZ				⇑Lg	Lg	11 10 49.9	
	4.6nm,0.3s						
MK31	Makanchi Array	3.24	7	⇑Pn	Pn	11 10 00.2	-0.2
	0.1nm,0.1s,baz=173,slow=17,SNR=23						
MK31				⇑Pg	Pg	11 10 10.5	-1.0
	2.9nm,0.5s,baz=187,slow=16,SNR=20						
MK31				⇑Lg	Lg	11 10 49.2	
	18nm,0.3s,baz=187,slow=29,SNR=10						
KOTS	Kotyrbulak	3.38	266	eP	Pb	11 10 10.8	+1.3
	3.8nm,0.0s						
KOTS				eS	Sg	11 10 56.6	-1.3
	117nm,0.5s						
KOTS	Kotyrbulak	3.38	266	Pg	Pb	11 10 10.8	+1.3
	3.9nm,0.3s						
KOTS				Lg	Lg	11 10 56.6	
	117nm,0.5s						
MDOK	Medeo	3.43	265	eP	Pb	11 10 11.6	+1.1
	10nm,0.1s						
MDOK				eS	Sg	11 10 58.3	-1.4
	35nm,0.5s						
MDOK	Medeo	3.43	265	Pn	Pn	11 10 03.3	+0.1
	2.0nm,0.5s						
MDOK				⇑Pg	Pg	11 10 13.5	-1.7
	6.8nm,0.5s						
MDOK				⇑Lg	Lg	11 10 59.6	
	22nm,0.5s						
MDOK	Medeo	3.43	265	Pg	Pb	11 10 11.6	+1.1
	11nm,0.5s						
MDOK				Lg	Lg	11 10 58.3	
	35nm,0.5s						
CHKK	Chushkaly	3.44	276	eP	Pb	11 10 10.8	+0.3
	1.6nm,0.0s						
CHKK				eS	Sg	11 10 56.6	-3.4
	23nm,0.1s						
CHKK	Chushkaly	3.44	276	Pg	Pb	11 10 10.8	+0.3
	2.1nm,0.3s						
CHKK				Lg	Lg	11 10 56.6	
	23nm,0.2s						
TNSS	Tian-Shan	3.52	263	eP	Pb	11 10 13.4	+1.3
	4.8nm,0.5s						
TNSS				eS	Sg	11 11 01.4	-1.3
	9.0nm,0.3s						
TNSS	Tian-Shan	3.52	263	Pg	Pb	11 10 13.4	+1.3
	4.9nm,0.4s						
TNSS				Lg	Lg	11 11 01.4	
	9.0nm,0.3s						
KTBS	Karatobe	3.66	274	eP	Pb	11 10 15.8	+1.5
	2.5nm,0.1s						
KTBS				eS	Sg	11 11 04.8	-2.1
	28nm,0.2s						
KTBS	Karatobe	3.66	274	Pg	Pb	11 10 14.2	0.0
	2.5nm,0.4s						
KTBS				Lg	Lg	11 11 02.2	
	28nm,0.6s						
IZV	Izvestkoviy	3.77	263	eP	Pg	11 10 18.9	-2.7
	3.2nm,0.1s						
IZV				eS	Sg	11 11 10.6	+0.2
	44nm,0.1s						
IZV	Izvestkoviy	3.77	263	Pg	Pg	11 10 19.4	-2.2
	2.9nm,0.2s						
IZV				Lg	Lg	11 11 11.3	
	45nm,0.7s						
MTBS	Maitube	3.88	265	eP	Pb	11 10 19.5	+1.4

	3.4nm,0.1s						
MTBS				eS	Sg	11 11 11.5	-2.7
	16nm,0.2s						
MTBS	Maitube	3.88	265	Pg	Pb	11 10 19.5	+1.4
	3.4nm,0.2s						
MTBS				Lg	Lg	11 11 11.5	
	20nm,0.3s						
KUU	Kurty	3.91	276	eP	Pb	11 10 20.2	+1.7
	2.0nm,0.1s						
KUU				eS	Sg	11 11 12.4	-2.6
	18nm,0.1s						
KUU	Kurty	3.91	276	Pg	Pb	11 10 18.9	+0.4
	2.0nm,0.3s						
KUU				Lg	Lg	11 11 10.3	
	18nm,0.3s						
KST	Kastek	4.24	265	eP	Pb	11 10 26.7	+2.6
	3.4nm,0.1s						
KST				eS	Sg	11 11 24.2	-1.2
	19nm,0.1s						
KST	Kastek	4.24	265	Pg	Pb	11 10 27.0	+2.9
	3.5nm,0.9s						
KST				Lg	Lg	11 11 24.2	
	19nm,0.5s						
DGS	Degeres	4.35	268	eP	Pb	11 10 28.0	+2.1
	12nm,0.3s						
DGS				eS	Sg	11 11 25.6	-3.4
	26nm,0.6s						
DGS	Degeres	4.35	268	Pg	Pb	11 10 27.0	+1.0
	12nm,1.0s						
DGS				Lg	Lg	11 11 24.7	
	26nm,0.6s						
KRBS	Karabastau	4.39	274	eP	Pb	11 10 29.4	+2.7
	1.3nm,0.0s						
KRBS				eS	Sg	11 11 28.4	-1.9
	11nm,0.2s						
KRBS	Karabastau	4.39	274	Pg	Pb	11 10 29.4	+2.7
	1.9nm,0.5s						
KRBS				Lg	Lg	11 11 28.4	
	11nm,0.7s						
TKM2	Tokmak 2	4.52	264	⇓Pn	Pn	11 10 21.1	+2.9
	2.0nm,0.6s						
TKM2				⇓Pg	Pg	11 10 32.7	-3.3
	3.9nm,0.6s						
TKM2				⇑Lg	Lg	11 11 33.6	
	16nm,0.5s						
SGDS	Sogindy	5.16	271	eP	Pb	11 10 43.7	+3.9
	0.9nm,0.0s						
SGDS				eS	Sg	11 11 52.9	-2.1
	4.7nm,0.1s						
SGDS	Sogindy	5.16	271	Pg	Pb	11 10 43.7	+3.9
	0.8nm,0.3s						
SGDS				Lg	Lg	11 11 52.9	
	6.2nm,0.4s						
KURBB	Kurchatov Arra	7.37	344	⇑Sn	Sn	11 12 21.2	+0.5
	2.6nm,0.6s						
KURBB				⇑Lg	Lg	11 13 00.6	
	13nm,0.7s						
KURK	Kurchatov	7.44	345	⇑Sn	Sn	11 12 22.9	+0.4
	2.4nm,1.0s						
KURK				⇓Lg	Lg	11 13 02.6	
	3.0nm,0.6s						
OTUK	Ortayu	8.03	309	⇓Lg	Lg	11 13 23.7	
	5.3nm,1.1s						
KK31	Karatay Array	8.18	271	⇑Lg	Lg	11 13 27.6	
	1.8nm,0.6s,baz=81,slow=26,SNR=4.4						

*SOME **02** 11:21:33.4, 40°.72N×70°.22E, h0^{km}*
*ISU **02** 11:21:38, 41°.36N×70°.35E, h2^{km}*
*ISU **02** 11:21:40, 41°.35N×70°.40E, h5^{km}*
*KRNET **02** 11:21:40.3±0.1, 41°.13N×70°.12E, h17^{km}, mb2.8*
ISC 02 11:21:40.4±1.3**, 41°.07N**±0°.03×**70°.11E**±0°.04**, h4**^{km}±10^{km}**,**
n18, σ**2**^{s}**22**/33**, 12C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMG	Chimgan	0.48	351	P	Pg	11 21 51.3	+1.6
CHDK	Chadak	0.49	101	P	Pg	11 21 49.1	-0.8
CHDK				S	Sb	11 21 56.3	-3.0
CHDK	Chadak	0.49	101	P	Pg	11 21 49.1	-0.8
CHDK				S	Sb	11 21 56.4	-2.9
CHRV	Charvak	0.58	348	S	Sg	11 21 53.6	-5.5
TRKS	Terek-Say	0.90	59	⇑iP	Pg	11 21 56.6	-1.0
	baz=67						
TRKS				⇑iS	Sg	11 22 08.3	-1.0
	baz=67						
IUG	Iuzhnay	1.08	357	eP	Pb	11 22 01.0	-0.6
	52nm,0.1s						
IUG				eS	Sn	11 22 23.6	+5.8
	68nm,0.4s						
BTK	Batken	1.15	152	⇑iP	Pn	11 22 02.8	-0.5
	baz=53						
BTK				⇑iS	Sn	11 22 18.5	-1.0
	baz=53						
FRG	Fergana	1.45	118	P	Pg	11 22 09.7	+1.6
FRG				S	Sg	11 22 30.2	+3.3
ARK	Arkit	1.57	62	⇑iP	Pn	11 22 08.6	-0.6
	baz=64						
ARK				⇑iS	Sn	11 22 29.3	-0.7
	baz=64						
SHAK	Shakhimardan	1.67	131	P	Pg	11 22 12.9	+0.6
SHAK				S	Sg	11 22 37.3	+3.3
SHAK	Shakhimardan	1.67	131	P	Pg	11 22 12.8	+0.5
SHAK				S	Sg	11 22 37.2	+3.2
KK31	Karatay Array	2.05	8	Pn	Pb	11 22 19.1	+0.8
	1.6nm,0.3s,baz=194,slow=20,SNR=23						
KK31				⇓Lg	Lg	11 22 47.4	
	2.1nm,0.3s,baz=193,slow=27,SNR=6.5						
KKAR	Karatay Array	2.05	8	⇑iP	Pn	11 22 16.1	+0.4
	baz=8.0						
KKAR				⇑iS	Sn	11 22 42.0	+0.2
	baz=8.0						
GAR	Garm	2.08	176	⇓iP	Pb	11 22 18.0	-0.7
	baz=76						
GAR				⇓iS	Sg	11 22 45.5	-1.5
	baz=76						
MRKS	Merke	2.86	53	eP	Pb	11 22 30.2	-1.9
	1.9nm,0.1s						
MRKS				eS	Sg	11 23 13.4	+1.1
	5.0nm,0.1s						
ARLS	Aral	3.26	75	⇑eP	Pn	11 22 33.4	+0.9
	baz=76						
ARLS				⇑eS	Sn	11 23 12.0	+0.2
	baz=76						
UCH	Uchtor	3.49	69	⇑eP	Pn	11 22 36.8	+0.9
	baz=70						
UCH				⇑eS	Sn	11 23 17.8	-0.2
	baz=70						
BTLS	Baital	4.90	35	eP	Pb	11 23 09.5	+2.7
	0.8nm,0.3s						
BTLS				eS	Sg	11 24 18.3	+0.5
	1.0nm,0.1s						

*NEIC **02** 11:34:24.6±1.2, 41°.78N±0°.06×126°.2W±0°.1, h11^{km}±9^{km}, ML2.7/52, Md3.0/14(NCEDC), Error ellipse: s-maj=15.8km s-min=8.2km az=82.0*
*NCEDC **02** 11:34:26.7±1.4, 41°.82N±0°.06×126°.3W±0°.1, h24^{km}±2^{km}, Error ellipse: s-maj=15.7km s-min=9.7km az=254.0*
*ANF **02** 11:34:27.5±0.8, 42°.01N×125°.78W, h0^{km}, ML2.8/3, Error ellipse: s-maj=10.4km s-min=4.1km az=104.0*
ISC 02 11:34:23.9±2.4**, 41°.81N**±0°.05×**126°.2W**±0°.1**, h11**^{km}**, n35,**
σ**1**^{s}**25**/37**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRPM	Rodgers	1.74	111	Pn	Pn	11 34 55.0	+0.9
JCC	Jacoby Creek,	1.89	121		Pn	11 34 56.6	+0.5
JCC	Jacoby Creek,	1.89	121		Sn	11 35 19.5	-0.4
JCC	Jacoby Creek,	1.89	121		Pn	11 34 56.8	+0.6
JCC				IAML		11 35 18.0	
	comp=E,32nm,3.9s						
L02F	Cave Junction	1.96	80	P	Pn	11 34 57.5	+0.4
	baz=267						
K02D	Willamette Mer	2.06	64	P	Pn	11 34 58.6	+0.2
	baz=249						
KHMM	Horse Mountain	2.06	116		Pn	11 34 59.1	+0.5
KMPM	Mount Pierce	2.08	131	Pn	Pn	11 34 59.0	+0.2
KMPM				IAML		11 35 25.6	
	comp=N,41nm,0.5s						
KMPM				IAML		11 35 30.6	
	comp=E,50nm,0.8s						
KOMM	Orleans Mounta	2.11	104		Pn	11 35 00.2	+1.0
J01E	Myrtle Point	2.13	50	Pn	Pn	11 35 00.1	+0.7
J01E				IAML		11 35 24.6	
	comp=N,76nm,0.3s						
J01E	Myrtle Point	2.13	50	P	Pn	11 34 59.5	0.0
	baz=234						
J01E				S	Sn	11 35 24.1	-1.8
	baz=234						
KSMM	Slide Mountain	2.22	137		Pn	11 35 01.1	+0.4
KCRM	Chalk Rock	2.25	127		Pn	11 35 02.4	+1.2
KMRM	Mail Ridge	2.45	130	Pn	Pn	11 35 04.9	+1.0
KMRM				IAML		11 35 38.0	
	comp=E,38nm,0.7s						
KMRM				IAML		11 35 43.9	
	comp=N,27nm,4.4s						
HUMO	Hull Mountain	2.51	71		Pn	11 35 05.4	+0.7
HUMO	Hull Mountain	2.51	71		Pn	11 35 05.7	+1.0
HUMO				IAML		11 35 34.8	
	comp=N,7.7nm,3.9s						
HUMO				IAML		11 35 37.0	
	comp=E,5.7nm,1.4s						
YBH	Yreka Blue Hor	2.59	91		Pn	11 35 07.8	+2.0
YBH	Yreka Blue Hor	2.59	91	Pn	Pn	11 35 07.6	+1.8
I03D	Drain, OR	2.80	47	P	Pn	11 35 09.0	+0.4
	baz=230						
I03D				S	Sn	11 35 40.5	-1.9
	baz=230						
I02E	Swisshome, OR	2.86	36	Pn	Pn	11 35 10.6	+1.2
I02E				IAML		11 35 44.1	
	comp=N,29nm,1.3s						
I02E				IAML		11 36 11.6	
	comp=E,24nm,3.5s						
I02E	Swisshome, OR	2.86	36	S	Sn	11 35 42.0	-1.7
	baz=218						
KCPM	Cahto Peak	2.89	136	Pn	Pn	11 35 10.7	+0.7
KCPM				IAML		11 36 56.4	
	comp=N,28nm,1.7s						
L04D	Klamath Falls	2.91	81		Pn	11 35 12.2	+2.1
L04D	Klamath Falls	2.91	81	P	Pn	11 35 12.3	+2.1
	baz=267						
BUCK	Buck Mountain	3.33	43	Pn	Pn	11 35 17.1	+1.1
BUCK				IAML		11 36 28.6	
	comp=E,22nm,4.8s						
BUCK				IAML		11 36 41.8	
	comp=N,16nm,4.5s						
COR	Corvallis	3.47	36	Pn	Pn	11 35 19.4	+1.6
COR				IAML		11 36 05.5	
	comp=N,24nm,2.4s						
COR				IAML		11 36 48.2	
	comp=N,20nm,4.3s						
HOPS	Hopland Field	3.68	139	Pn	Pn	11 35 21.5	+0.8
H04D	Lebanon	3.69	42	Pn	Pn	11 35 22.9	+2.0
H04D				IAML		11 36 08.2	
	comp=E,17nm,0.5s						
H04D				IAML		11 36 56.8	
	comp=N,16nm,4.9s						
G03D	McMinnville, O	4.00	31	Pn	Pn	11 35 25.2	+0.1
K05A	Summer Lake	4.02	75	Pn	Pn	11 35 26.8	+1.2
K05A				IAML		11 36 13.3	
	comp=E,7.3nm,4.7s						
K05A				IAML		11 38 03.7	
	comp=N,9.3nm,4.3s						
H04A	Detroit Lake	4.08	44		Pn	11 35 27.4	+1.1
H04A				IAML		11 36 18.6	
	comp=N,15nm,0.3s						
ORV	Oroville	4.21	121		Pn	11 35 27.3	-0.7
ORV				IAML		11 36 20.5	
	comp=N,5.1nm,1.0s						
ORV				IAML		11 36 20.9	
	comp=E,6.1nm,0.5s						
PINE	Pine Mountain	4.32	61	Pn	Pn	11 35 31.5	+1.7
PINE				IAML		11 36 35.4	
	comp=E,7.6nm,4.9s						
PINE				IAML		11 36 51.1	
	comp=N,8.6nm,4.8s						
MOD	Modoc Plateau	4.38	87		Pn	11 35 31.6	+1.1
MOD				IAML		11 36 08.9	
	comp=E,4.7nm,5.0s						
F04A	Amboy	4.93	32	Pn	Pn	11 35 39.5	+1.6

*DDA **02** 11:37:09.8±0.0, 40°.71N×32°.36E, h7^{km}±2^{km}, ML1.6*
ISK 02 11:37:10.8, 40°.64N×32°.36E, h7^{km}**, ML2.1**/6**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMDR	Camlidere-ANKA	0.17	149	P	Pg	11 37 14.8	+0.5
CMDR				S	Sg	11 37 19.2	+2.5
CMDR				i AML	AML	11 37 22.0	
	comp=E,283nm,0.7s						
CMDR				i AML	AML	11 37 23.0	
	comp=N,209nm,0.6s						
BCAM	Yenicaga	0.29	308	P	Pg	11 37 15.1	-1.4
BCAM				S	Sg	11 37 19.4	-0.9
BCAM				i AML	AML	11 37 20.0	
	comp=N,91nm,0.5s						
BCAM				i AML	AML	11 37 20.0	
	comp=E,120nm,0.5s						
KIBS	BOLU	0.45	241	P	Pg	11 37 19.2	-0.3
KIBS				S	Sb	11 37 26.9	-1.1
KIBS				i AML	AML	11 37 27.0	
	comp=E,51nm,0.5s						
KIBS				i AML	AML	11 37 28.0	
	comp=N,41nm,0.4s						
YUVA	Yuva-Kibriscik	0.57	245	PG	Pg	11 37 21.6	-0.2
YUVA				SG	Sb	11 37 30.8	-0.7
ANTO	Ankara	0.84	157	PG	Pb	11 37 27.3	-0.4
ANTO				SG	Sb	11 37 39.6	+0.5
MDUB	Mudurnu	0.90	260	PG	Pb	11 37 28.7	-0.1
MDUB				SG	Sb	11 37 41.8	+0.7
AUMIH	MIHALICIK	1.02	221	PG	Pb	11 37 31.0	+0.1
AUMIH				SG	Sb	11 37 45.3	+0.7
AUMIH	MIHALICIK	1.02	221	P	Pn	11 37 32.1	+0.4
SAHE	Sakarya_HENDEK	1.17	281	P	Pg	11 37 31.1	-2.0
AFSR	Afar-Bala (An	1.31	155	PN	Pg	11 37 36.1	+0.2
BRTR	Keskin Array B	1.34	133	PN	Pg	11 37 36.5	0.0
GULT	Gulveren	1.42	262	PN	Pb	11 37 37.7	0.0
BORA	Eskisehir	1.65	243	PN	Pn	11 37 40.8	+0.6

*IDC **02** 11:38:30.8±1.0, 39°.11N×21°.91E, h0^{km}, mb3.8/9, mbtmp3.8/12, ML3.6/3, MS2.7/3, Error ellipse: s-maj=20.9km s-min=19.3km az=114.0*
*ATH **02** 11:38:33.8, 39°.09N×21°.94E, h20^{km}±2^{km}, ML3.4/23, Error ellipse: s-maj=2.4km s-min=0.8km az=116.0*
*THE **02** 11:38:34.1, 39°.09N×21°.95E, h13^{km}, ML3.6/15, Error ellipse: s-maj=0.9km s-min=0.5km az=107.0*
*ISK **02** 11:38:35.2, 39°.18N×22°.16E, h23^{km}, ML3.2/13*
*NEIC **02** 11:38:36.3±1.9, 39°.14N±0°.05×22°.12E±0°.07, h30^{km}±3^{km}, Error ellipse: s-maj=7.8km s-min=6.6km az=62.0*
ISC 02 11:38:33.7±0.8**, 39°.10N**±0°.02×**21°.96E**±0°.02**, h17**^{km}±5^{km}**,**
n184, σ**1**^{s}**40**/221**, mb3.9**/12**, 8C-14D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKR	Makrakomi, Fth	0.16	123	P	Pb	11 38 38.4	0.0
MAKR				S	Sb	11 38 42.0	+0.6
MAKR				AML	AML	11 38 42.2	
MAKR				AML	AML	11 38 42.8	
MAKR	Makrakomi, Fth	0.16	123	P	Pb	11 38 38.3	0.0
MAKR				S	Sb	11 38 41.9	+0.6
	91μm,0.3s						
EVR	Evrytania	0.22	212	P	Pg	11 38 38.2	-0.7
EVR				S	Sg	11 38 42.1	-0.3
EVR				AML	AML	11 38 42.4	
EVR				AML	AML	11 38 42.5	
EVR	Evrytania	0.22	212	P	Pg	11 38 38.1	-0.8
EVR				S	Sg	11 38 42.0	-0.4
	61μm,0.4s						
AGG	Agios Georgios	0.30	105	P	Pg	11 38 40.5	+0.3
AGG				S	Sb	11 38 46.2	+0.8
AGG				AML	AML	11 38 46.5	
	comp=E,24359μm,0.3s						
AGG				AML	AML	11 38 46.7	
	comp=N,62024μm,0.3s						
AGG	Agios Georgios	0.30	105	P	Pg	11 38 40.5	+0.3
AGG				S	Sb	11 38 46.1	+0.8
	comp=N,27μm,0.2s						
AGG	Agios Georgios	0.30	105	PG	Pg	11 38 40.5	+0.3
AGG				SG	Sb	11 38 45.8	+0.5
AGG	Agios Georgios	0.30	105		Pg	11 38 40.5	+0.3
AGG				Sg	Sb	11 38 46.1	+0.7
THL	Klokotos Trika	0.46	5	P	Pg	11 38 42.8	-0.2
THL				S	Sb	11 38 50.2	+0.2
THL				AML	AML	11 38 50.8	
	comp=N,6057μm,0.5s						
THL				AML	AML	11 38 51.7	
	comp=E,6040μm,0.4s						
THL	Klokotos Trika	0.46	5	P	Pg	11 38 42.7	-0.4
THL				S	Sb	11 38 50.3	+0.2
	comp=E,3μm,0.4s						
ANX	Ano Chora	0.51	183	P	Pg	11 38 43.2	-0.7
ANX				S	Sg	11 38 51.0	+0.2
ANX				AML	AML	11 38 53.3	
	comp=E,33346μm,0.3s						
ANX				AML	AML	11 38 53.4	
	comp=N,49558μm,0.4s						
PVO	Paravola	0.59	215	P	Pg	11 38 44.4	-1.0
PVO				S	Sg	11 38 53.3	0.0
TYRN	Tyrnavos	0.64	19	P	Pg	11 38 45.8	-0.6
TYRN				S	Sb	11 38 55.8	+0.6
TYRN				AML	AML	11 39 00.1	
	comp=N,14642μm,0.7s						
TYRN				AML	AML	11 39 00.8	
	comp=E,9936μm,0.5s						
TYRN	Tyrnavos	0.64	19	P	Pg	11 38 46.0	-0.4
TYRN				S	Sb	11 38 55.9	+0.6
	comp=E,5μm,0.6s						
DLFA	Delphi	0.75	146	P	Pb	11 38 47.4	-1.0
DLFA				S	Sb	11 38 58.3	0.0
DLFA				AML	AML	11 39 02.1	
	comp=N,5874μm,0.4s						
DLFA				AML	AML	11 39 02.4	
	comp=E,7398μm,0.5s						
ALIK	Aliki, Aigiali	0.85	172	P	Pb	11 38 49.7	-0.3
ALIK				S	Sn	11 39 02.6	-0.3
LAKA	Lakka	0.86	179	P	Pb	11 38 49.2	-1.0
LAKA				AML	AML	11 39 04.3	
	comp=E,2167μm,0.5s						
LAKA				AML	AML	11 39 08.3	
	comp=N,1815μm,0.5s						
LAKA	Lakka	0.86	179	P	Pb	11 38 49.3	-1.0
LAKA				S	Sn	11 39 02.8	-0.5
	comp=N,4μm,0.5s						
ATAL	Atalanti	0.92	116	P	Pb	11 38 51.0	-0.3
ATAL				S	Sb	11 39 02.5	-0.8
ATAL				AML	AML	11 39 07.2	
	comp=E,1434μm,0.4s						
ATAL				AML	AML	11 39 07.9	
	comp=N,1731μm,0.4s						
ATAL	Atalanti	0.92	116	P	Pb	11 38 51.2	-0.1
ATAL				S	Sn	11 39 04.8	0.0
	comp=N,795nm,0.4s						
KPRO	Kipourio	0.97	332	P	Pb	11 38 51.1	-1.0
KPRO				AML	AML	11 39 08.1	
	comp=N,5075μm,0.5s						
KPRO				AML	AML	11 39 08.7	
	comp=E,4711μm,0.4s						
KPRO	Kipourio	0.97	332	P	Pb	11 38 51.2	-0.9
KPRO				S	Sn	11 39 06.8	+0.8
	comp=E,2μm,0.4s						
XOR	Xorichti	0.99	74	P	Pb	11 38 52.0	-0.5
XOR				AML	AML	11 39 10.6	
	comp=N,6038μm,0.4s						
XOR				AML	AML	11 39 11.2	
	comp=E,2607μm,0.4s						
XOR	Xorichti	0.99	74	P	Pb	11 38 52.7	+0.2
XOR				S	Sn	11 39 07.2	+0.6
	comp=E,2μm,0.4s						
NEO	Neokhori	1.00	78	P	Pn	11 38 52.9	-0.1
NEO				AML	AML	11 39 11.1	
	comp=N,5017μm,0.3s						
NEO				AML	AML	11 39 11.5	
	comp=E,2621μm,0.3s						
TSLK	Tsoukalades, L	1.05	255	P	Pb	11 38 53.5	-0.1
TSLK	Tsoukalades, L	1.05	255	P	Pb	11 38 53.4	-0.1
TSLK				S	Sg	11 39 09.3	+1.4
	comp=E,2μm,0.5s						
NYDR	Nydri-Lefkada	1.06	249	P	Pb	11 38 53.0	-0.5
NYDR	Nydri-Lefkada	1.06	249	P	Pb	11 38 52.9	-0.6
NYDR				S	Sg	11 39 09.8	+1.8
KLV	Kalavryta, Ach	1.07	172	P	Pb	11 38 53.1	-0.6
KLV				AML	AML	11 39 11.8	
	comp=N,1428μm,0.4s						
KLV				AML	AML	11 39 15.6	
	comp=E,2512μm,0.6s						
KLV	Kalavryta, Ach	1.07	172	P	Pb	11 38 53.2	-0.6
KLV				S	Sg	11 39 09.0	+0.6
LIT	Litokhoron	1.08	22	P	Pb	11 38 53.6	-0.4
LIT				AML	AML	11 39 14.1	
	comp=E,6693μm,0.7s						
LIT				AML	AML	11 39 14.7	
	comp=N,6793μm,0.5s						
LIT	Litokhoron	1.08	22	P	Pb	11 38 53.6	-0.4
LIT				S	Sg	11 39 10.1	+1.4
	comp=N,3μm,0.6s						
LIT	Litokhoron	1.08	22		Pb	11 38 53.8	-0.1
RLS	Riolos of Patr	1.11	200	P	Pb	11 38 54.6	+0.1
RLS				AML	AML	11 39 13.0	
	comp=E,4697μm,0.4s						
RLS				AML	AML	11 39 13.1	
	comp=N,5635μm,0.5s						
RLS	Riolos of Patr	1.11	200	P	Pn	11 38 54.4	-0.1
RLS				S	Sg	11 39 10.2	+0.4
	comp=N,3μm,0.5s						
EVGI	Lefkada island	1.12	245	P	Pn	11 38 54.0	-0.7
EVGI	Lefkada island	1.12	245	P	Pn	11 38 54.4	-0.3
DRAG	Dragano-Lefkad	1.16	249	P	Pn	11 38 54.6	-0.6
DRAG	Dragano-Lefkad	1.16	249	P	Pn	11 38 54.5	-0.7
DRO	Drossia	1.17	190	P	Pn	11 38 54.6	-0.6
THAL	Thalero	1.20	152	P	Pb	11 38 56.1	+0.2
THAL	Thalero	1.20	152	P	Pn	11 38 55.9	+0.2
THAL				S	Sn	11 39 12.0	+0.5
	comp=N,3μm,0.5s						
GUR	Goura	1.20	165	P	Pn	11 38 55.4	-0.4
GUR				AML	AML	11 39 16.0	
	comp=N,6034μm,0.4s						
GUR				AML	AML	11 39 16.2	
	comp=E,5474μm,0.7s						
KZN	Kozani	1.21	353	P	Pn	11 38 55.8	-0.2
KZN				AML	AML	11 39 15.3	
	comp=E,6898μm,0.6s						
KZN				AML	AML	11 39 15.3	
	comp=N,3949μm,0.8s						
KZN	Kozani	1.21	353	P	Pn	11 38 55.8	-0.2
KZN				S	Sg	11 39 13.2	+0.2
	comp=N,3μm,0.7s						
PENT	Pentalofos	1.26	330	P	Pn	11 38 56.3	-0.4
PENT				AML	AML	11 39 25.5	
	comp=N,769μm,0.6s						
PENT				AML	AML	11 39 31.1	
	comp=E,2034μm,0.9s						
FSK	Fiskardo	1.27	240	P	Pn	11 38 56.8	+0.2
FSK				AML	AML	11 39 20.7	
	comp=E,5390μm,0.5s						
FSK				AML	AML	11 39 22.2	
	comp=N,2926μm,0.4s						
VIL2	Platees	1.36	131	P	Pb	11 38 59.4	+0.7
VILL	Villia	1.41	131	P	Pb	11 38 59.6	-0.1
VLS	Valsamata	1.42	230	P	Pn	11 38 58.3	-0.4
VLS				AML	AML	11 39 27.7	
	comp=E,2593μm,0.4s						
VLS				AML	AML	11 39 29.6	
	comp=N,1995μm,0.4s						
VLS	Valsamata	1.42	230	P	Pn	11 38 58.4	-0.3
PSDA	Pessada-Kefalo	1.46	228	P	Pn	11 38 59.2	-0.1
PSDA	Pessada-Kefalo	1.46	228	P	Pn	11 38 59.2	-0.1
PSDA				S	Sn	11 39 17.9	-0.1
KEF4	Livadi, Kephal	1.47	235	P	Pn	11 38 59.7	+0.2
KEF4	Livadi, Kephal	1.47	235	P	Pn	11 38 59.6	+0.2
NEST	Nestorio	1.49	332	P	Pb	11 39 00.5	-0.5
NEST				AML	AML	11 39 28.4	
	comp=E,2101μm,0.5s						
NEST				AML	AML	11 39 29.4	
	comp=N,2112μm,0.4s						
NEST	Nestorio	1.49	332	P	Pb	11 39 00.6	-0.4
DMLN	Damoulianata-K	1.51	236	P	Pn	11 39 00.2	+0.2
DMLN	Damoulianata-K	1.51	236	P	Pn	11 39 00.2	+0.2
KEF3	Kipouria, Keph	1.55	235	P	Pn	11 39 00.2	-0.3
KEF3	Kipouria, Keph	1.55	235	P	Pn	11 39 00.2	-0.3
HORT	Hortiatis	1.73	30	PN	Pn	11 39 02.8	-0.3
FNA	Florina	1.74	345	P	Pn	11 39 04.0	+0.8
FNA	Florina	1.74	345	P	Pn	11 39 04.0	+0.8
FNA				S	Sb	11 39 26.1	-0.7
	comp=N,1μm,0.5s						
FNA	Florina	1.74	345	PN	Pn	11 39 04.1	+0.8
FNA				SN	Sb	11 39 26.3	-0.5
FNA	Florina	1.74	345		Pn	11 39 04.0	+0.8
EPID	Epidavros	1.74	148	P	Pn	11 39 03.9	+0.7
KBN	Korca	1.77	330		Pb	11 39 06.4	+0.7
KEK	Kerkira	1.78	291	P	Pb	11 39 06.1	+0.2
KEK	Kerkira	1.78	291	Pn	Pb	11 39 06.8	+0.9

ATHU	Athens Univers	1.83	128	P	Pn	11 39 05.1	+0.8
ATHU				AML	AML	11 39 27.4	
	comp=E,388μm,0.3s						
ATHU				AML	AML	11 39 30.6	
	comp=N,483μm,0.4s						
PTL	Penteli	1.83	125	P	Pn	11 39 05.2	+0.8
GRG	Griva	1.88	10	PN	Pn	11 39 05.7	+0.5
VLY	Voula,Athens	1.91	130	P	Pn	11 39 06.5	+1.0
VLY				AML	AML	11 39 30.0	
	comp=N,1098μm,0.5s						
VLY				AML	AML	11 39 42.2	
	comp=E,814μm,0.5s						
ITM	Ithomi	1.92	181	PN	Pb	11 39 08.4	+0.1
ITM	Ithomi	1.92	181		Pb	11 39 08.4	+0.1
OUR	Ouranopolis	1.99	51	PN	Pn	11 39 06.5	0.0
OHR	Ohrid	2.19	336	*i* Pn	Pb	11 39 13.8	+0.8
VAY	Valandovo	2.27	12	*i* Pn	Pb	11 39 12.2	-1.9
VLO	Vlora	2.34	306		Pb	11 39 14.0	-1.4
STIP	Stip	2.59	4	*i* Pn	Pn	11 39 16.6	+1.6
TIR	Tirane	2.76	325	⇑P	Pb	11 39 21.4	-1.1
TIR	Tirane	2.76	325		Pn	11 39 18.0	+0.9
SCTE	Santa Cesarea	2.87	291	Pn	Pn	11 39 21.0	+2.4
SCTE	Santa Cesarea	2.87	291	P	Pb	11 39 21.5	-2.9
SCTE				S	Sn	11 39 54.4	+1.7
CHOS	Chios island	3.28	101	PN	Pn	11 39 24.8	+0.4
RDO	Rodhopi	3.42	52	PN	Pn	11 39 25.6	-0.6
RDO	Rodhopi	3.42	52	Pn	Pn	11 39 25.7	-0.5
EZN	Ezine	3.46	77	PN	Pn	11 39 26.9	+0.2
APE	Apeiranthos	3.47	125	PN	Pn	11 39 28.4	+1.4
MESG	Mesagne	3.50	296	P	Pn	11 39 29.9	+2.7
MESG				S	Sn	11 40 07.1	-1.1
ALN	Alexandroupoli	3.61	59	PN	Pn	11 39 28.7	-0.2
ALN	Alexandroupoli	3.61	59	Pn	Pn	11 39 28.5	-0.4
VTS	Vitosha	3.64	15	⇓P	Pn	11 39 30.7	+1.2
VTS	Vitosha	3.64	15	Pn	Pn	11 39 30.4	+0.9
PLD	Plovdiv	3.66	34	PN	Pn	11 39 30.0	+0.5
URLA	Izmir	3.70	100	PN	Pn	11 39 30.8	+0.7
GELI	Tayfur-Gelibol	3.71	68	PN	Pn	11 39 29.6	-0.7
DRME	Dracevica, Mon	3.73	326	*e*Pn	Pn	11 39 33.0	+2.4
PDG	Podgorica	3.91	329	⇓P	Pn	11 39 36.1	+3.2
PDG	Podgorica	3.91	329	Pn	Pn	11 39 35.2	+2.3
PDG	Podgorica	3.91	329	*e*Pn	Pn	11 39 35.5	+2.6
TIP	Timpagrande	4.04	273	⇓P	Pn	11 39 36.8	+1.9
TIP	Timpagrande	4.04	273		Pn	11 39 36.5	+1.6
NOCI	Noci	4.12	296	P	Pn	11 39 37.5	+1.5
NOCI				S	Sn	11 40 23.6	-0.2
NOCI				AML	AML		
	comp=N,143μm,0.4s						
NOCI				AML	AML		
	comp=E,141μm,1.5s						
HCY	Herceg Novi	4.25	323	*e*Pn	Pn	11 39 38.7	+1.0
MATE	Matera	4.33	293	⇑P	Pn	11 39 40.8	+2.0
CRAC	Craco	4.44	288	⇓P	Pn	11 39 42.5	+2.2
CRAC				S	Sn	11 40 33.0	+1.4
CRAC				AML	AML		
	comp=E,160μm,1.6s						
CRAC				AML	AML		
	comp=N,182μm,0.9s						
IDI	Anoyia	4.47	148	⇓P	Pn	11 39 44.3	+3.6
IDI	Anoyia	4.47	148	Pn	Pn	11 39 41.2	+0.4
	comp=N,0.5nm,0.3s,baz=24,slow=18,SNR=1.9						
IDI				Sn	Sn	11 40 29.3	-3.1
	comp=N,1.6nm,0.3s,baz=325,slow=18,SNR=1.8						
	comp=N,2.1nm,0.3s						
IDI	Anoyia	4.47	148		Pn	11 39 40.5	-0.3
MIGL	Miglionico	4.50	291	⇓P	Pn	11 39 43.5	+2.4
MIGL				AML	AML		
	comp=N,455μm,0.5s						
MIGL				AML	AML		
	comp=E,359μm,1.6s						
TREB	Trebinje	4.53	324	*e*Pn	Pn	11 39 42.4	+0.9
BLKB	Belogradchik	4.55	7	⇓P	Pn	11 39 42.9	+1.1
BRY	Bratogost	4.59	327	*e*Pn	Pn	11 39 43.5	+1.0
CET2	Cetraro	4.68	277	P	Pn	11 39 47.0	+3.4
CET2				S	Sn	11 40 40.9	+3.4
UPM	Unac-Piva	4.70	332	*e*Pn	Pn	11 39 46.5	+2.5
JOPP	Joppolo	4.77	266	S	Sn	11 40 27.0	-13
CEL	Celeste	4.82	262	Pn	Pn	11 39 48.4	+2.9
SIRI	Monte Sirino -	4.83	285	⇑P	Pn	11 39 49.0	+3.4
SIRI				S	Sn	11 40 43.9	+2.7
SIRI				AML	AML		
	comp=E,129μm,0.5s						
SIRI				AML	AML		
	comp=N,120μm,0.7s						
CUC	Castrocucco	4.83	283		Pn	11 39 49.8	+4.1
CUC	Castrocucco	4.83	283	⇑P	Pn	11 39 49.5	+3.8
CUC				S	Sn	11 40 43.7	+2.4
CUC				AML	AML		
	comp=N,66μm,0.4s						
CUC				AML	AML		
	comp=E,110μm,0.7s						
RUDO	Rudo	4.91	337	*e*Pn	Pn	11 39 47.5	+0.7
ACER	Acerenza	4.92	292	⇓P	Pn	11 39 49.5	+2.5
ACER				S	Sn	11 40 42.5	-1.0
ACER				AML	AML		
	comp=N,108μm,0.8s						
ACER				AML	AML		
	comp=E,170μm,0.9s						
MTSN	Montesano sull	4.93	286	P	Pn	11 39 49.7	+2.6
MTSN				S	Sn	11 40 46.0	+2.2
MTSN				AML	AML		
	comp=E,98μm,0.4s						
MTSN				AML	AML		
	comp=N,129μm,0.4s						
STON	Ston	4.96	321	*e*Pn	Pn	11 39 47.9	+0.6
PALZ	Palazzo San Ge	4.96	294	⇑P	Pn	11 39 49.6	+2.1
SLCN	Sala Consilina	5.04	287	⇓P	Pn	11 39 52.0	+3.3
SLCN				S	Sn	11 40 50.2	+3.6
SLCN				AML	AML		
	comp=N,229μm,1.2s						
SLCN				AML	AML		
	comp=E,222μm,0.3s						
BBLS	Lazići	5.13	339	*e*Pn	Pn	11 39 51.5	+1.7
DIVS	Divibare	5.21	344	Pn	Pn	11 39 51.3	+0.4
DIVS	Divibare	5.21	344	*e*Pn	Pn	11 39 51.3	+0.4
SGRT	San Giovanni R	5.43	301	Pn	Pn	11 39 55.3	+1.3
KARP	Karpathos	5.46	129	Pn	Pn	11 39 54.2	-0.1
MCRV	Calabrutti - M	5.48	290	P	Pn	11 39 59.0	+4.3
MCRV				S	Sn	11 40 55.3	-2.1
MCRV				AML	AML		
	comp=E,76μm,0.5s						
MCRV				AML	AML		
	comp=N,93μm,0.4s						
PAOL	Paolisi	5.99	291		Pn	11 40 03.3	+1.7
FRGS	Fruska Gora	6.26	346	⇑P	Pn	11 40 05.4	+0.2
FRGS	Fruska Gora	6.26	346	*e*Pn	Pn	11 40 04.7	-0.6
GZR	Gura Zlata	6.32	5	⇑P	Pn	11 40 08.3	+2.3
BZS	Buzias	6.51	358	⇑P	Pn	11 40 10.7	+2.0
BLY	Banja Luka	6.67	329	*e*Pn	Pn	11 40 11.6	+0.7
VOIR		6.73	19	⇓P	Pn	11 40 13.5	+1.6
MLR	Muntele Rosu	7.03	24	⇓P	Pn	11 40 18.3	+2.3
MLR	Muntele Rosu	7.03	24	Pn	Pn	11 40 17.4	+1.4
	comp=N,1.3nm,0.3s,baz=206,slow=15,SNR=6.2						
	comp=N,5.2nm,0.6s						
MLR	Muntele Rosu	7.03	24	Pn	Pn	11 40 16.9	+0.9
CRJA	Costa Raja	7.15	262	P	Pb	11 40 30.6	-6.8
AQU	L'Aquila	7.26	299	*e*Pn	Pn	11 40 25.9	+6.8
MORH	Mrgy, Hungar	7.52	342	*e*Pn	Pn	11 40 23.4	+0.9
PLOR	Plostina	7.58	26	⇓P	Pn	11 40 26.0	+2.5
VRI	Vrincioaia	7.62	26	⇓P	Pn	11 40 26.5	+2.5
NRCA	Norcia	7.66	302		Pn	11 40 26.9	+2.3
MURB	Monte Urbino	8.24	303	Pn	Pn	11 40 36.1	+3.6
CRES	Cresnjev	8.26	327	*e*Pn	Pn	11 40 30.5	-2.2
PSZ	Piszkesteto	8.94	351	⇓P	Pn	11 40 43.9	+1.8
PSZ	Piszkesteto	8.94	351	Pn	Pn	11 40 42.6	+0.5
BR131	Keskin Array S	9.06	82	Pn	Pn	11 40 43.1	-0.7
BRTR	Keskin Array B	9.06	82	Pn	Pn	11 40 45.3	+1.4
	comp=N,0.4nm,0.3s,baz=263,slow=11,SNR=7.2						
	comp=N,1.0nm,0.4s						
BRTR	Keskin Array B	9.06	82		Pn	11 40 43.1	-0.7
CTI	Castel Tesino	10.29	316	Pn	Pn	11 41 02.7	+2.1
GNI	Garni	17.58	79	LR	LR	11 49 33.8	
	comp=N,21nm,19.7s,baz=335,slow=38						
FINES	FINESS Array B	22.51	5	P	P	11 43 30.9	-1.4
	comp=N,2.3nm,0.9s,baz=174,slow=6.9,SNR=6.6						
	comp=N,2.3nm,0.9s						
FINES	FINESS Array B	22.51	5	P	P	11 43 30.4	-1.8
FIA1	FINESS Array S	22.51	5	P	P	11 43 30.3	-2.0
FIA1				IAmb	IAmb	11 43 50.7	
	comp=Z,11nm,1.4s						
NOA	NORSAR Array B	22.96	347	P	P	11 43 37.0	-0.1
	comp=Z,0.4nm,0.5s,baz=155,slow=8.3,SNR=3.3						
	comp=Z,0.4nm,0.5s						
EKA	Eskdalemuir Ar	23.36	322	P	P	11 43 41.0	-0.1
	comp=Z,1.4nm,0.7s,baz=116,slow=9.5,SNR=3.5						
	comp=Z,1.4nm,0.7s						
AKTO	Aktyubinsk	27.73	54	LR	LR	11 56 30.8	
	comp=Z,20nm,18.1s,baz=338,slow=39						
GEYT	Alibeck	28.20	81	LR	LR	11 56 28.2	
	comp=Z,17nm,20.9s,baz=89,slow=38						
ARCES	ARCESS Array B	30.55	2	P	P	11 44 44.3	-1.6
	comp=Z,1.5nm,0.6s,baz=192,slow=9.5,SNR=13						
	comp=Z,1.5nm,0.6s						
ARCES	ARCESS Array B	30.55	2	P	P	11 44 45.8	-0.2
ARCES				IAmb	IAmb	11 44 49.0	
	comp=Z,6.0nm,1.3s						
TORD	Torodi Ar. Bea	31.46	220	P	P	11 44 55.5	+1.1
	comp=Z,5.8nm,0.3s,baz=30,slow=8.8,SNR=1.2						
KK31	Karatay Array	36.40	68	P	P	11 45 37.9	+0.7
KKAR	Karatay Array	36.40	68	P	P	11 45 36.9	-0.3
MKAR	Makanchi Array	43.86	59	P	P	11 46 39.3	+0.3
	comp=Z,0.5nm,0.5s,baz=271,slow=8.3,SNR=9.2						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	43.86	59	P	P	11 46 39.1	+0.2
ZAA0	Zalesovo Array	44.24	49	P	P	11 46 41.4	-0.5
ZAA0				IAmb	IAmb	11 46 42.6	
	comp=Z,6.3nm,1.2s						
ZALV	Zalesovo Beam	44.24	49	P	P	11 46 42.1	+0.3
	comp=Z,3.0nm,0.4s,baz=278,slow=8.3,SNR=10						
	comp=Z,3.0nm,0.4s						
ZALV	Zalesovo Beam	44.24	49	P	P	11 46 41.6	-0.3
SCHQ	Schefferville	58.55	317	P	P	11 48 29.0	-0.1
	comp=Z,1.1nm,0.5s,baz=49,slow=11,SNR=4.5						
	comp=Z,1.1nm,0.5s						
SCHQ	Schefferville	58.55	317	P	P	11 48 28.8	-0.3
YKA	Yellowknife Ar	72.90	340	P	P	11 50 01.6	+0.1
	comp=Z,0.5nm,0.6s,baz=33,slow=5.3,SNR=14						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	72.90	340	P	P	11 50 02.0	+0.6
PDAR	Pinedale Array	87.41	326	P	P	11 51 18.1	-2.2
	comp=Z,0.1nm,0.4s,baz=23,slow=4.9,SNR=1.8						
	comp=Z,0.1nm,0.4s						
ASAR	Alice Springs	121.15	96	PKP	PKPdf	11 57 23.6	-2.3
	comp=Z,0.6nm,1.1s,baz=318,slow=1.7,SNR=2.0						
ASAR	Alice Springs	121.15	96		PKPdf	11 57 24.1	-1.8

IDC ***02*** *11:40:51.1±0.9, 59°.44S×25°.85W, h0^{km}, mb4.2/5, mbtmp4.3/6, ML4.0/1, MS3.2/5, Error ellipse: s-maj=41.1km s-min=21.5km az=59.0*

NEIC ***02*** *11:40:54.9±1.4, 59°.6S±0°.1×26°.0W±0°.2, h20^{km}±4^{km}, mb4.5/21, Error ellipse: s-maj=17.6km s-min=12.6km az=47.0*

ISC 02 11:40:56.8±0.6**, 59°.59S**±0°.09×**26°.0W**±0°.1**, h40^{km}, n45,** σ0^{s}.**81**/44**, mb4.4**/10**, MS3.2**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.83	308	Pn	Pn	11 42 47.6	-0.4
ORCD	Orcadas	9.41	255	Pn	Pn	11 43 09.5	-0.2
VNA1	Neumayer--Stat	13.29	154	P	Pn	11 44 01.4	-1.1
VNA3	Neumayer Olymp	13.45	157	P	Pn	11 44 03.1	-1.6
VNA3				S	Sn	11 46 17.1	-15
VNA2	Neumayer--Watz	13.69	154	P	Pn	11 44 06.7	-1.3
	baz=307,slow=13						
VNA2				S	Sn	11 46 23.7	-15
ESPZ	Base Esperanza	15.20	242	Pn	Pn	11 44 27.0	-1.2
ESPZ				IAmb	IAmb	11 44 29.2	
	comp=Z,46nm,1.3s						
SNAA	Sanae	15.27	152	P	Pn	11 44 27.7	-1.5
SNAA				S	Sn	11 47 01.8	-15
SNAA	Sanae	15.27	152	Pn	Pn	11 44 27.6	-1.5
	comp=Z,0.6nm,0.3s,baz=37,slow=10,SNR=3.0						
SNAA				Sn	Sn	11 47 02.0	-15
	comp=Z,0.1nm,0.3s,baz=313,slow=19,SNR=1.3						
SNAA				LR	LR	11 49 01.9	
	comp=Z,57nm,19.1s,baz=24,slow=32						
	comp=Z,7.7nm,0.4s						
SNAA	Sanae	15.27	152		Pn	11 44 28.0	-1.2
SNAA				IAmb	IAmb	11 44 30.8	
	comp=Z,8.0nm,0.5s						
TROLL	Troll, Antarti	16.82	149	P	Pn	11 44 47.8	-1.2
TROLL				S	Sn	11 47 41.1	-13
PMSA	Palmer Station	18.28	237	LR	LR	11 51 05.6	
	comp=Z,88nm,18.0s,baz=33,slow=33						
BELA	Belgrano 2	18.59	186	P	P	11 45 09.8	-0.3
EFI	East Falkland	19.60	280	P	P	11 45 21.2	-0.1
DSPA	Despedida	23.52	265	P	P	11 46 02.3	-0.5
MG02	Cerro Sombrero	24.63	267	P	P	11 46 12.5	-0.6
GO09	Cerro Castillo	27.07	267	P	P	11 46 35.1	-0.2
GO09				IAmb	IAmb	11 46 36.5	
	comp=Z,16nm,1.2s						
QSPA	South Pole Qui	30.65	180	P	P	11 47 08.3	+1.3
	comp=Z,2.5nm,0.6s,baz=211,slow=2.9,SNR=48						
QSPA				LR	LR	11 59 09.4	
	comp=Z,32nm,20.0s,baz=212,slow=36						
	comp=Z,2.5nm,0.6s						
QSPA	South Pole Qui	30.65	180	P	P	11 47 08.3	+1.3
QSPA				IAmb	IAmb	11 47 10.3	
	comp=Z,9.3nm,1.4s						
TRQA	Tornquist	31.42	297	P	P	11 47 14.2	+0.2
TRQA				IAmb	IAmb	11 47 33.5	
	comp=Z,7.1nm,1.1s						
PLCA	Paso Flores	33.38	284	P	P	11 47 30.7	-0.4
	comp=Z,1.5nm,0.6s,baz=162,slow=5.8,SNR=6.8						
	comp=Z,1.5nm,0.6s						
PLCA	Paso Flores	33.38	284	P	P	11 47 30.8	-0.4
PLCA				IAmb	IAmb	11 47 55.3	
	comp=Z,5.8nm,1.4s						
LC01	Cunco	35.45	285	P	P	11 47 49.1	+0.1
LC01				IAmb	IAmb	11 47 53.5	
	comp=Z,3.9nm,0.8s						
MT09	Talagante	39.10	291	P	P	11 48 20.2	+0.1
MT09				IAmb	IAmb	11 48 21.2	
	comp=Z,19nm,1.2s						
PEL	Peldehue	39.48	292	P	P	11 48 22.8	-0.3
PEL				IAmb	IAmb	11 48 26.9	
	comp=Z,13nm,0.5s						
CO01	Juntas del Tor	41.85	295	P	P	11 48 43.4	+0.4
SBA	Scott Base	42.58	184	P	P	11 48 49.4	+1.4
VNDA	Vanda	43.05	182	P	P	11 48 53.8	+1.9
	comp=Z,1.7nm,0.7s,baz=178,slow=6.3,SNR=9.2						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	43.05	182	P	P	11 48 52.6	+0.7
TSUM	Tsumeb	50.96	57	LR	LR	12 06 56.6	
	comp=Z,25nm,19.7s,baz=126,slow=31						
LPAZ	La Paz	52.98	306	P	P	11 50 10.4	+0.5
	comp=Z,1.2nm,0.3s,baz=77,slow=6.1,SNR=7.7						
	comp=Z,1.2nm,0.3s						
LPAZ	La Paz	52.98	306	P	P	11 50 10.6	+0.6
LSZ	Lusaka	59.15	66	LR	LR	12 13 10.7	
	comp=Z,43nm,18.9s,baz=145,slow=33						
TORD	Torodi Ar. Bea	75.86	28	P	P	11 52 38.3	-0.4
FORT	Forrest	87.43	158	P	P	11 53 40.3	+0.6
ASAR	Alice Springs	95.41	162	P	P	11 54 17.0	0.0
	comp=Z,0.7nm,0.6s,baz=183,slow=4.1,SNR=17						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	95.41	162	P	P	11 54 16.7	-0.2
AS31	Alice Springs	95.41	162	P	P	11 54 17.0	0.0
CMAR	Chiang Mai Arr	123.19	112	PKP	PKPdf	11 59 48.5	-0.4
	comp=Z,0.6nm,0.2s,baz=212,slow=4.6,SNR=4.1						
CMAR	Chiang Mai Arr	123.19	112		PKiKP	11 59 49.2	+0.2
ARCES	ARCESS Array B	133.99	22	PKP	PKPdf	12 00 08.1	+0.3
	comp=Z,0.3nm,0.4s,baz=192,slow=1.7,SNR=11						
ARCES	ARCESS Array B	133.99	22		PKiKP	12 00 09.6	+0.4
INK	Inuvik	148.90	317	PKPbc	PKPbc	12 00 37.9	-0.5
	comp=Z,1.0nm,0.8s,baz=77,slow=4.0,SNR=6.3						
SONM	Songino Array	150.14	92	PKPbc	PKiKP	12 00 43.3	+0.1
	comp=Z,2.5nm,0.6s,baz=215,slow=3.0,SNR=14						
SONM	Songino Array	150.14	92	PKPdf	PKPdf	12 00 37.1	0.0
SONM					PKiKP	12 00 43.2	+0.1
SONM				PKPab	pPKPdf	12 00 49.2	0.0
ILAR	Eielson Array	152.85	306	PKPbc	PKPbc	12 00 47.5	-0.3
	comp=Z,0.4nm,0.4s,baz=148,slow=2.5,SNR=8.6						

GCG ***02*** *11:50:24.0±0.3, 12°.60N×88°.68W, h15^{km}, MD4.7*

NEIC ***02*** *11:50:28.3±1.1, 12°.81N±0°.04×88°.93W±0°.06, h55^{km}±4^{km}, mb4.9/178, Md5.1(SNET), Error ellipse: s-maj=9.4km s-min=5.9km az=65.0*

IDC ***02*** *11:50:29.1±0.4, 13°.18N×88°.40W, h50^{km}±3^{km}, mb4.4/27, mbtmp4.6/28, MS3.9/29, Error ellipse: s-maj=16.9km s-min=7.4km az=57.0*

UCR ***02*** *11:50:29.7±1.3, 12°.93N×88°.91W, h32^{km}±3^{km}, ML5.1, MW4.7, mb4.9(NEIC)*

INET ***02*** *11:50:31.5±1.4, 12°.94N×88°.73W, h35^{km}±69^{km}, MW4.4*

GCMT ***02*** *11:50:31.3±0.3, 12°.82N±0°.02×89°.06W±0°.02, h55^{km}±1^{km}, MW5.0/75, Moment Tensor Solution. s72,c96; s75,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.52±.13; M$_{\theta\theta}$-3.04±.09; M$_{\phi\phi}$-0.48±.11; M$_{r\theta}$0.78±.09; M$_{\theta\phi}$1.79±.09; M$_{\phi r}$-0.60±.08; Best double couple: M$_0$3.86900×10^{16} NP1:φ$_s$294.00000°, δ38.00000°, λ85.00000°. NP2: φ$_s$120.00000°, δ52.00000°, λ94.00000°. Principal axes: T 3.6530, Plg82.0000°, Azm51.0000°; N 0.4270, Plg3.0000°, Azm298.0000°; P -4.0850, Plg7.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

SNET ***02*** *11:50:31.6±2.4, 13°.07N×88°.87W, h42^{km}, ML5.1, ML5.1*

ISC 02 11:50:28.5±0.3**, 12°.95N**±0°.03×**88°.87W**±0°.03**, h54^{km}**±3^{km}**, h54^{km}:pP-P, n702,** σ1^{s}.**40**/738**, mb4.9**/101**, MS4.1**/30**, 3C-11D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	0.64	31	⇓*e*P	Pn	11 50 43.1	+1.2
COEB				*e*S	Sn	11 50 53.6	+2.1
COEB				IAML		11 50 56.7	
COEB	Comit de Eme	0.64	31	⇓*e*P	Pn	11 50 43.1	+1.2
COEB				*e*S	Sn	11 50 53.6	+2.1
COEB				IAML		11 50 56.7	
COEB	Comit de Eme	0.64	31	*e*P	Pn	11 50 43.1	+1.2
COEG	Centro de Oper	0.67	359	⇓*e*P	Pn	11 50 43.0	+0.9
COEG				*e*S	Sn	11 50 53.8	+1.8
COEG				IAML		11 51 03.5	
COEG	Centro de Oper	0.67	359	⇓*e*P	Pn	11 50 43.0	+0.9
COEG				*e*S	Sn	11 50 53.8	+1.8
COEG				IAML		11 51 03.5	
COEG	Centro de Oper	0.67	359	*e*P	Pn	11 50 43.1	+0.9
SJTE	Alcalda de S	0.68	349	*e*P	Pn	11 50 43.1	+0.9
SJTE				*e*S	Sn	11 50 53.2	+1.0
SJTE	Alcalda de S	0.68	349	*e*P	Pn	11 50 43.1	+0.9
SJTE				*e*S	Sn	11 50 53.2	+1.0
UESV	Universidad de	0.69	7	*e*P	Pn	11 50 43.6	+1.2
UESV				*e*S	Sn	11 50 54.4	+1.9
UESV				IAML		11 51 00.6	
UESV	Universidad de	0.69	7	*e*P	Pn	11 50 43.6	+1.2
UESV				*e*S	Sn	11 50 54.4	+1.9
UESV				IAML		11 51 00.6	
LALI	Alcalda de L	0.69	321	⇓*e*P	Pn	11 50 43.0	+0.6
LALI				*e*S	Sn	11 50 52.9	+0.4
LALI	Alcalda de L	0.69	321	⇓*e*P	Pn	11 50 43.0	+0.6
LALI				*e*S	Sn	11 50 52.9	+0.4
LALI	Alcalda de L	0.69	321	*e*P	Pn	11 50 43.0	+0.6
LFRS	El Faro	0.70	345	*e*P	Pn	11 50 43.1	+0.5
LFRS	El Faro	0.70	345	*e*P	Pn	11 50 43.1	+0.5
LCY	Lacayo	0.73	50	*e*P	Pn	11 50 44.1	+1.1
LCY	Lacayo	0.73	50	*e*P	Pn	11 50 44.1	+1.1
PQSS	Presa 15 de Se	0.74	24	⇑*e*P	Pn	11 50 44.6	+1.6
PQSS				*e*S	Sn	11 50 56.5	+3.0
PQSS				IAML		11 50 57.5	
PQSS	Presa 15 de Se	0.74	24	⇑*e*P	Pn	11 50 44.6	+1.6
PQSS				*e*S	Sn	11 50 56.5	+3.0
PQSS				IAML		11 50 57.5	
VSM	San Miguel	0.75	50	*e*P	Pn	11 50 44.7	+1.3
VSM	San Miguel	0.75	50	*e*P	Pn	11 50 44.7	+1.3
SCLA	Alcaldia de Sa	0.76	10	⇓*e*P	Pn	11 50 45.0	+1.7
SCLA				*e*S	Sn	11 50 56.9	+2.8
SCLA	Alcaldia de Sa	0.76	10	⇓*e*P	Pn	11 50 45.0	+1.7
SCLA				*e*S	Sn	11 50 56.9	+2.8
PAVA	Las Pavas	0.77	355	*e*P	Pn	11 50 44.7	+1.3
PAVA				*e*S	Sn	11 50 56.9	+2.6
PAVA				IAML		11 50 59.0	
PAVA	Las Pavas	0.77	355	*e*P	Pn	11 50 44.7	+1.3
PAVA				*e*S	Sn	11 50 56.9	+2.6
PAVA				IAML		11 50 59.0	
PAVA	Las Pavas	0.77	355	*e*P	Pn	11 50 44.7	+1.3
AEIL	Aeropuerto Ilo	0.78	342	*e*P	Pn	11 50 45.1	+1.5
AEIL				*e*S	Sn	11 50 57.2	+2.6
AEIL	Aeropuerto Ilo	0.78	342	*e*P	Pn	11 50 45.1	+1.5
AEIL				*e*S	Sn	11 50 57.2	+2.6
UDBS	Universidad Do	0.81	340	*e*P	Pn	11 50 45.1	+1.1
UDBS	Universidad Do	0.81	340	*e*P	Pn	11 50 45.1	+1.1
SNET	Serv Nac Est T	0.82	335		Pn	11 50 44.8	+0.8
SNET	Serv Nac Est T	0.82	335	*e*P	Pn	11 50 44.8	+0.8
SNET	Serv Nac Est T	0.82	335	*e*P	Pn	11 50 44.8	+0.8
UTEC	Universidad Te	0.82	337	*e*P	Pn	11 50 45.0	+0.9
UTEC				*e*S	Sn	11 50 57.3	+1.9
UTEC	Universidad Te	0.82	337	*e*P	Pn	11 50 45.0	+0.9
UTEC				*e*S	Sn	11 50 57.3	+1.9
IGN	Direccin Gen	0.82	339	*e*P	Pn	11 50 45.1	+1.0
IGN	Direccin Gen	0.82	339	*e*P	Pn	11 50 45.1	+1.0
ITCA	Escuela Especi	0.82	331	*e*P	Pn	11 50 44.9	+0.8
ITCA	Escuela Especi	0.82	331	*e*P	Pn	11 50 44.9	+0.8
SEMO	Seminario San	0.83	335	*e*P	Pn	11 50 45.1	+0.9
LFU	La Fuente	0.83	344	*e*P	Pn	11 50 45.3	+1.0
LFU	La Fuente	0.83	344	*e*P	Pn	11 50 45.3	+1.0
UESS	Universidad de	0.83	337	*e*P	Pn	11 50 45.4	+1.1
UESS	Universidad de	0.83	337	*e*P	Pn	11 50 45.4	+1.1
UEES	Universidad Ev	0.84	335	*e*P	Pn	11 50 45.3	+0.9
UEES	Universidad Ev	0.84	335	*e*P	Pn	11 50 45.3	+0.9
CNRM	Centro Naciona	0.86	52	*e*P	Pn	11 50 45.8	+1.3
CNRM	Centro Naciona	0.86	52	*e*P	Pn	11 50 45.8	+1.3
BOQS	Boqueron	0.88	333	*e*P	Pn	11 50 46.0	+1.0
BOQS	Boqueron	0.88	333	*e*P	Pn	11 50 46.0	+1.0
JAYA	Jayaque - finc	0.90	321	*e*P	Pn	11 50 45.8	+0.6
JAYA	Jayaque - finc	0.90	321	*e*P	Pn	11 50 45.8	+0.6
CEDA	San Andres	0.99	329	*e*P	Pn	11 50 47.2	+0.9
CEDA				IAML		11 51 12.0	
	comp=Z,40μm,0.3s						
CEDA	San Andres	0.99	329	*e*P	Pn	11 50 47.2	+0.9
CEDA				IAML		11 51 12.0	
	comp=Z,40μm,0.3s						
CEDA	San Andres	0.99	329	*e*P	Pn	11 50 47.3	+0.9
LCND	La Caada	1.02	69	*e*P	Pn	11 50 47.8	+1.1
LCND				IAML		11 51 05.4	
	comp=Z,65μm,0.3s						
LCND	La Caada	1.02	69	*e*P	Pn	11 50 47.8	+1.1
LCND				*e*P		11 50 48.0	
LCND				IAML		11 51 05.1	
	comp=Z,67μm,0.3s						
LCND				IAML		11 51 05.4	
	comp=Z,65μm,0.3s						
CNCH	Conchagua	1.06	72	*e*P	Pn	11 50 48.2	+0.9
CNCH	Conchagua	1.06	72	*e*P	Pn	11 50 48.2	+0.9
CEVE	Cerro Verde	1.14	320	*e*P	Pn	11 50 49.5	+0.9
CEVE				IAML		11 51 12.4	
	comp=Z,40μm,0.6s						
CEVE	Cerro Verde	1.14	320	*e*P	Pn	11 50 49.5	+0.9
CEVE				IAML		11 51 12.4	
	comp=Z,40μm,0.6s						
SBLS	San Blas	1.15	321	*e*P	Pn	11 50 50.0	+1.4
SBLS	San Blas	1.15	321	*e*P	Pn	11 50 50.0	+1.4
LLGN	La Laguna	1.21	357	*e*P	Pn	11 50 51.0	+1.7
LLGN	La Laguna	1.21	357	*e*P	Pn	11 50 51.0	+1.7
UNIC	Universidad Ca	1.22	327	*e*P	Pn	11 50 50.8	+1.4
UNIC	Universidad Ca	1.22	327	*e*P	Pn	11 50 50.8	+1.4
CSGN	Cosiguina Volc	1.28	89	*e*P	Pn	11 50 50.7	+0.5
NUBE	Las Nubes	1.30	317	*e*P	Pn	11 50 51.5	+1.0
NUBE	Las Nubes	1.30	317	*e*P	Pn	11 50 51.5	+1.0
LOAL	Lomas de Alarc	1.37	320	*e*P	Pn	11 50 53.0	+1.6
LOAL	Lomas de Alarc	1.37	320	*e*P	Pn	11 50 53.0	+1.6
SLOZ	Alcaldia de Sa	1.39	321	*e*P	Pn	11 50 53.4	+1.7
MTO3	Montecristo	1.52	342		Pn	11 50 55.3	+1.6
MTO3				Sn	Sn	11 51 15.1	+2.6
MTO3	Montecristo	1.52	342	*e*P	Pn	11 50 55.2	+1.6
MTO3	Montecristo	1.52	342	*e*P	Pn	11 50 55.2	+1.6
MTO3	Montecristo	1.52	342	*e*P	Pn	11 50 55.2	+1.6
ESQI	Esquipulas	1.67	344		Pn	11 50 57.6	+2.1
CRIN	San Cristobal	1.79	98	Pn	Pn	11 50 58.3	+1.1
CRIN	San Cristobal	1.79	98	*e*P	Pn	11 50 58.3	+1.1
TGUH	Tegucigalpa,Un	1.91	54		Pn	11 51 00.6	+1.8
TGUH	Tegucigalpa,Un	1.91	54	⇓*e*P	Pn	11 51 00.5	+1.8
TGUH	Tegucigalpa,Un	1.91	54	*e*P	Pn	11 51 00.6	+1.8
TGUH	Tegucigalpa,Un	1.91	54	*e*P	Pn	11 51 00.6	+1.8
TELN	Telica	2.02	99	*e*P	Pn	11 51 01.4	+1.2
TELN				*e*P	Pn	11 51 01.4	+1.2
CNGN	Cerro Negro	2.17	102		Pn	11 51 01.8	-0.4
CNGN	Cerro Negro	2.17	102	*e*P	Pn	11 51 01.5	-0.7
NBG	Las Nubes	2.17	319	*e*P	Pn	11 51 05.7	+3.1
PCG	Pacaya	2.22	311	*e*P	Pn	11 51 04.4	+1.2
MRL	Marmol	2.26	340	*e*P	Pn	11 51 06.8	+3.0
COPN	Copaltepe	2.35	109	*e*P	Pn	11 51 04.6	-0.1
FUG	Fuego 3	2.43	308	*e*P	Pn	11 51 08.5	+2.5

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APYN  Apoyeque          2.56 106 eP   Pn    11 51 08.0 +0.3
MGAN  Managua           2.68 107 eP   Pn    11 51 09.5 +0.3
MGAN                             eP         11 51 09.6
RCON  San Juan de Ri    2.70  78 eP   Pn    11 51 15.0 +5.3
HUEN                    2.70 103 eP   Pn    11 51 09.9 +0.4
MASN  Masaya            2.82 109 eP   Pn    11 51 13.0 +1.8
MATN  Matagalpa         2.87  90  Pn  Pn    11 51 12.6 +0.7
MATN  Matagalpa         2.87  90 eP   Pn    11 51 12.7 +0.7
STG3  Santiaguito 3,    3.15 304 eP   Pn    11 51 18.7 +2.7
RTAL  Retalhuleu        3.16 300  Pn  Pn    11 51 16.2 +0.3
BOAB  BOACO BROADBAN3.17  99          Pn    11 51 16.0 +0.1
BOAB  BOACO BROADBAN3.17  99 eP       Pn    11 51 16.1 +0.1
HUEH  Huehuetenango     3.48 313      Pn    11 51 20.7 +0.4
ACON  Acoyapa           3.74 105      Pn    11 51 23.7 -0.1
HZTE  Horizontes, Gu    3.90 124      Pn    11 51 24.6 -1.3
HZTE  Horizontes, Gu    3.90 124 eP   Pn    11 51 28.4 +2.4
GBS3  Finca Las Img     3.98 122 eP   Pn    11 51 29.9 +2.8
GB1A  Borinquen Arri    4.00 122 eP   Pn    11 51 30.0 +2.5
BUEV  Buena Vista       4.01 122 eP   Pn    11 51 29.6 +2.1
BUAI  Buenos Aires      4.03 120 eP   Pn    11 51 30.4 +2.6
PETF  Flores            4.06 346      Pn    11 51 29.7 +1.5
PETF  Flores            4.06 346 eP   Pn    11 51 31.9 +3.6
GPS2  Hotel Rincn d     4.08 122 eP   Pn    11 51 31.1 +2.6
LIM1  Limonal           4.19 122 eP   Pn    11 51 31.6 +1.6
GUAB  Guayabo de Bag    4.20 122 eP   Pn    11 51 31.2 +1.1
ORTG  Ortega, Santa     4.21 127  Pn  Pn    11 51 30.4  0.0
ORTG  Ortega, Santa     4.21 127 eP   Pn    11 51 32.4 +2.0
GUAI  GUAI              4.23 129 eP   Pn    11 51 32.5 +2.0
HORNC Hornillas         4.24 121 eP   Pn    11 51 32.0 +1.2
COLC  Colonia           4.25 122 eP   Pn    11 51 32.7 +1.9
CUI   Cuipilapa         4.28 122 eP   Pn    11 51 33.5 +2.2
DUNO  Dulce Nombre,     4.37 130      Pn    11 51 32.0 -0.3
DUNO  Dulce Nombre,     4.37 130 eP   Pn    11 51 34.3 +1.9
PTEN  Parque Tenorio    4.40 120 eP   Pn    11 51 34.1 +1.2
ACAL  Aguas Claras      4.40 121 eP   Pn    11 51 34.4 +1.4
ESPN  Las Esperanzas    4.52  99      Pn    11 51 34.5  0.0
ESPN  Las Esperanzas    4.52  99 eP   Pn    11 51 35.1 +0.5
CCIG  Comitan           4.58 317      Pn    11 51 36.5 +1.0
JTS   Las Juntas de     4.66 124  Pn  Pn    11 51 35.9 -0.5
JTS   Las Juntas de     4.66 124 eP   Pn    11 51 38.8 +2.4
CEDE  Laguna Cedeo      4.76 120 eP   Pn    11 51 41.3 +3.5
ARE1  Arenal 1          4.76 121 eP   Pn    11 51 40.8 +3.0
CASO  Castillo          4.76 121 eP   Pn    11 51 40.1 +2.3
FORC  Fortuna           4.80 120 eP   Pn    11 51 41.1 +2.8
CAO2  Cobano, Puntar    4.91 131      Pn    11 51 38.8 -1.0
LAFE  Finca La Fe, P    4.98 128 eP   Pn    11 51 42.7 +1.8
LAFE  Finca La Fe, P    4.98 128 eP   Pn    11 51 42.6 +1.8
SRA1  San Ramn          5.16 123 eP   Pn    11 51 46.2 +2.9
HDC   Heredia           5.50 122      Pn    11 51 48.0 -0.1
HDC   Heredia           5.50 122 eP   Pn    11 51 51.0 +2.9
LCR2  La Lucha 2        5.74 123 eP   Pn    11 51 54.5 +3.1
RIMA  Rio Macho         5.84 122      Pn    11 51 52.6 -0.2
RIMA  Rio Macho         5.84 122 eP   Pn    11 51 55.4 +2.7
CDM   Cerro de Muert    6.04 123⇓eP   Pn    11 51 59.1 +3.4
CDM   Cerro de Muert    6.04 123 eP   Pn    11 51 59.1 +3.4
BATAN Batan             6.08 117      Pn    11 51 55.7 -0.2
PEZE  Perez Zeledon,    6.21 124      Pn    11 51 57.1 -0.6
SRBA  San Rafael, Bu    6.55 124 eP   Pn    11 52 04.8 +2.3
DRK0  Durika            6.62 123      Pn    11 52 02.9 -0.7
EDPN  Palmar Norte      6.63 126 eP   Pn    11 52 07.5 +4.1
EDBA  Buenos Aires      6.66 124 eP   Pn    11 52 05.9 +2.1
CMIG  Matias Romero     7.12 306  P   Pn    11 52 13.6 +3.4
      comp=Z,28nm,0.7s,baz=125,slow=10,SNR=28
CMIG                              S   Sn    11 53 38.3 +8.6
      comp=Z,60nm,0.7s,baz=282,slow=20,SNR=1.8
CDITO Canoas            7.32 126      Pn    11 52 11.8 -1.1
PRVC  Isla de Provid    7.33  86 eP   Pn    11 52 14.2 +1.2
BRU2  Volcan            7.34 124  Pn  Pn    11 52 12.2 -1.1
BRU2  Volcan            7.34 124 eP   Pn    11 52 16.2 +2.9
GMAL  Guarumal, Vera    9.11 124 eP   Pn    11 52 42.1 +4.7
BCIP  Isla Barro Col    9.63 112      Pn    11 52 44.5 -0.1
BCIP  Isla Barro Col    9.63 112 eP   Pn    11 52 44.8 +0.3
CACAO El Cacao, Vera    9.65 124 eP   Pn    11 52 47.7 +2.9
FSCY  Frank Sound, G    9.73  48      Pn    11 52 48.0 +2.2
AZU   Azuero            9.88 120 eP   Pn    11 52 51.8 +3.7
TLIG  Tlapa            10.42 297      Pn    11 52 54.5 -1.0
LCCY  Blossom Villag   10.76  50      Pn    11 53 01.9 +1.9
SOR   Soroa            11.27  29      Pn    11 53 08.8 +1.9
MTDJ  Mount Denham     12.12  63 eP   Pn    11 53 22.0 +3.4
PAYG  Puerto Ayora     13.60 186      Pn    11 53 35.8 -3.1
PAYG  Puerto Ayora     13.60 186 eP   P     11 53 46.5 +0.2
SJCC  San Jacinto, C   13.76 101 eP   Pn    11 53 40.8 -0.3
UREC  San Jos de Ur    14.10 110 eP   P     11 53 51.8 +0.1
CBOC  Ciudad Bolivar   14.50 118 eP   P     11 53 55.7 -0.7
PLMC  San Jos del P    14.77 122 eP   Pn    11 53 55.8 +1.3
ZARC  Zaragoza, Cauc   14.81 110 eP   Pn    11 53 56.5 +1.6
YOTC  Yotoco, Valle    15.25 125 eP   Pn    11 54 02.3 +1.6
PTBC  PUERTO BERRIO,   15.56 113 eP   Pn    11 54 04.7 +0.1
NORC  Norcasia         15.64 117 eP   P     11 54 07.9 -1.0
CRJC  Cerrejon, Guaj   15.76  95 eP   Pn    11 54 05.7 -1.5
OCAC  Ocana            15.98 105 eP   Pn    11 54 11.2 +1.1
ORTC  Ortega, Tolima   16.18 123 eP   P     11 54 14.5 -0.5
CMBC  Cumbal           16.19 137 eP   P     11 54 20.5 +5.1
SOTA  Rioblanco        16.21 131 eP   P     11 54 17.7 +2.0
PCON  Cinco Dias       16.24 129 eP   P     11 54 17.2 +1.1
MARP  Paez Belalcaza   16.25 127 eP   P     11 54 18.6 +2.7
ZAIG  Zacatecas        16.28 309  P   Pn    11 54 14.1 +0.1
SPBC  San Pablo de B   16.30 115 eP   Pn    11 54 14.9 +0.9
GCUF  Volcan Galeras   16.31 135 eP   P     11 54 17.4 +0.6
CRUC  La Cruz          16.34 133 eP   P     11 54 20.1 +3.0
ROSC  El Rosal         16.47 118  P   P     11 54 20.3 +1.9
      comp=Z,17nm,0.7s,baz=338,slow=14,SNR=6.0
ROSC                              LR  LR    12 02 36.6
      comp=Z,288nm,19.1s,baz=20,slow=45
ROSC  El Rosal         16.47 118  P   Pn    11 54 16.1 -0.4
URIC  Uribia, Colomb   16.54  92 eP   Pn    11 54 14.5 -2.5
DWPF  Disney Wildern   16.61  24  P   P     11 54 19.8 +0.4
DWPF                              IAmb IAmb 11 54 39.0
      comp=Z,92nm,0.9s
DWPF  Disney Wildern   16.61  24  P   P     11 54 19.7 +0.2
      baz=206
BARC  Barichara        16.69 111 eP   Pn    11 54 20.1 +0.9
BETC  Betania          16.75 126 eP   P     11 54 23.6 +2.3
PAMC  Pamplona, Colo   16.86 108 eP   Pn    11 54 21.1 -0.4
GARC  Garzon, Huila    17.02 128 eP   P     11 54 26.6 +2.2
RUSC  La Rusia         17.07 113 eP   Pn    11 54 24.2 +0.1
CHIC  Chingaza         17.08 118 eP   P     11 54 26.0 +0.7
656A  Willston         17.37  19  P   P     11 54 27.9 +0.1
656A                              IAmb IAmb 11 54 34.5
      comp=Z,97nm,0.9s
VILC  Villavicencio,   17.38 119 eP   P     11 54 28.8 +0.6
553A  Crawfordville    17.64  13  P   P     11 54 30.7 -0.2
553A                              IAmb IAmb 11 54 38.3
      comp=Z,89nm,0.8s
SDDR  Presa de Saban   17.93  68  P   Pn    11 54 34.0 -0.3
SDDR  Presa de Saban   17.93  68 eP   P     11 54 36.2 +2.0
DABV  Dabajuro         17.95  94 eP   Pn    11 54 34.9 +0.4
HKT   Hockley          18.11 340  P   P     11 54 35.5 -0.5
441A  DeRidder         18.16 348  P   P     11 54 35.7 -0.9
441A                              IAmb IAmb 11 54 47.9
      comp=Z,75nm,0.9s
833A  Chaparral WMA,   18.18 329  P   Pn    11 54 39.3 +2.2
      baz=146,SNR=14
BRAL  Brewton          18.21   5  P   Pn    11 54 38.9 +1.4
      baz=186
MACC  Macarena, Meta   18.34 125 eP   Pn    11 54 41.0 +1.7
SDV   Santo Domingo    18.35 101  P   P     11 54 39.0 -0.1
      comp=Z,52nm,0.8s,baz=282,slow=4.1,SNR=19
SDV                               LR  LR    12 02 31.2
      comp=Z,175nm,21.4s,baz=286,slow=40
SDV   Santo Domingo    18.35 101      P     11 54 37.9 -1.2
SDV                               IAmb IAmb 11 54 40.1
      comp=Z,52nm,0.8s
SDV   Santo Domingo    18.35 101 eP   P     11 54 39.0 -0.1
SDV   Santo Domingo    18.35 101 eP   Pn    11 54 39.6 +0.1
SC01  Santiago de lo   18.57  67  P   Pn    11 54 41.8 -0.2
SC01                              IAmb IAmb 11 54 50.2
      comp=Z,75nm,0.7s
456A  Hilliard         18.79  19  P   Pn    11 54 44.6 +0.1
352A  Blakely          18.80  11  P   Pn    11 54 44.0 -0.6
TIGA  Tifton           19.04  14  P   Pn    11 54 47.6 +0.2
TIGA  Tifton           19.04  14  P   Pn    11 54 49.2 +1.7
      baz=196,SNR=12
VBMS  Vicksburg        19.24 356  P   P     11 54 48.9 +0.5
VBMS  Vicksburg        19.24 356  P   Pn    11 54 52.2 +2.3
      baz=175,SNR=5.8
NATX  Nacogdoches      19.47 345  P   P     11 54 50.7 -0.2
NATX  Nacogdoches      19.47 345  P   Pn    11 54 53.4 +0.9
      baz=163
435B  Jarrell          19.49 337  P   P     11 54 51.2  0.0
435B                              IAmb IAmb 11 55 17.4
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      comp=Z,106nm,1.1s
435B  Jarrell          19.49 337  P   Pn    11 54 53.0 +0.1
      baz=154
146A  Union            19.60 360  P   Pn    11 54 53.5 -0.6
146A                              IAmb IAmb 11 55 00.3
      comp=Z,51nm,0.8s
143A  Socs Landing,    19.80 354  P   P     11 54 54.8 +0.2
143A                              IAmb IAmb 11 55 22.2
      comp=Z,79nm,1.1s
152A  Waverly Hall     20.00  10  P   P     11 54 56.6  0.0
152A                              IAmb IAmb 11 55 17.4
      comp=Z,104nm,1.3s
LRAL  Lakeview Retre   20.07   5  P   P     11 54 57.0 -0.5
LRAL  Lakeview Retre   20.07   5  P   Pn    11 55 00.1 +0.4
      baz=185,SNR=18
JCT   Junction City    20.16 332  P   P     11 54 58.7 +0.1
JCT   Junction City    20.16 332  P   Pn    11 55 00.2 -0.7
      baz=148,SNR=14
Z47A  Carrollton       20.17   2  P   P     11 54 58.9 +0.3
Z47A                              IAmb IAmb 11 55 23.5
      comp=Z,66nm,0.9s
WHTX  Lake Whitney,    20.53 339  P   P     11 55 01.9 -0.6
WHTX  Lake Whitney,    20.53 339  P   Pn    11 55 04.1 -1.0
      baz=156
Z41A  Richland Creek   20.54 351  P   P     11 55 01.8 -0.7
Z41A  Richland Creek   20.54 351  P   Pn    11 55 05.0 -0.1
      baz=169
BAUV  El Baul          20.83  99  P   P     11 55 03.8 -2.1
GOGA  Godfrey          20.96  13  P   P     11 55 07.5 +0.4
GOGA  Godfrey          20.96  13  P   Pn    11 55 08.9 -1.3
      baz=195,SNR=34
HPIG                   21.01 314  P   P     11 55 07.6 -0.3
Y52A  Lilburn          21.28  11  P   P     11 55 10.9 +0.4
Y52A                              IAmb IAmb 11 55 29.9
      comp=Z,67nm,0.9s
TX31  Lajitas Ar. Si   21.32 322  P   P     11 55 11.1 -0.1
TX31                              IAmb IAmb 11 55 28.1
      comp=Z,49nm,0.9s
TX32  Lajitas Array    21.32 322  P   P     11 55 11.0 -0.2
TXAR  Lajitas Array    21.32 322  P   P     11 55 13.8 +2.7
      comp=Z,8.7nm,0.6s,baz=145,slow=11,SNR=85
TXAR                              PcP PcP   11 59 15.5 +1.5
      comp=Z,2.8nm,0.8s,baz=120,slow=2.0,SNR=7.1
TXAR                              pPcP      11 59 30.9
      comp=Z,4.2nm,1.0s,baz=191,slow=1.3,SNR=6.2
TXAR                              LR  LR    12 05 15.7
      comp=Z,137nm,18.3s,baz=126,slow=41
      comp=Z,8.7nm,0.6s
TXAR  Lajitas Array    21.32 322  P   P     11 55 10.6 -0.5
X48A  Hartselle        21.47   4  P   P     11 55 12.9 +0.3
X48A                              IAmb IAmb 11 55 39.1
      comp=Z,55nm,1.4s
OXF   Oxford           21.48 359  P   P     11 55 12.4 -0.1
OXF   Oxford           21.48 359  P   P     11 55 14.4 +1.8
      baz=179,SNR=8.4
NHSC  New Hope         21.58  20  P   P     11 55 14.4 +0.7
NHSC  New Hope         21.58  20  P   P     11 55 15.3 +1.5
      baz=204
FPAL  Fort Paine       21.70   7  P   P     11 55 15.6 +0.5
FPAL                              IAmb IAmb 11 55 19.8
      comp=Z,28nm,0.8s
X40A  Basin Creek Fa   21.75 351  P   P     11 55 16.3 +0.8
X40A  Basin Creek Fa   21.75 351  P   P     11 55 17.6 +2.2
      baz=170,SNR=7.6
X51A  Calhoun          21.83   9  P   P     11 55 17.0 +0.6
MIAR  Mount Ida        21.92 350  P   P     11 55 18.4 +0.9
MIAR                              IAmb IAmb 11 55 23.1
      comp=Z,64nm,0.9s
MIAR  Mount Ida        21.92 350  P   P     11 55 18.8 +1.3
      baz=168,SNR=48
ABTX  Abilene, Hawle   21.93 335  P   P     11 55 16.6 -1.0
ABTX                              IAmb IAmb 11 55 34.0
      comp=Z,40nm,0.8s
ABTX  Abilene, Hawle   21.93 335  P   P     11 55 18.3 +0.7
      baz=151,SNR=14
PLAL  Pickwick Lake    21.95   2  P   P     11 55 17.6 -0.1
UALR  University of    21.96 352  P   P     11 55 17.7 -0.1
UALR                              IAmb IAmb 11 55 36.8
      comp=Z,64nm,1.1s
HODGE Hodges           22.03  15  P   P     11 55 18.1 -0.5
HODGE                             IAmb IAmb 11 55 22.1
      comp=Z,30nm,0.9s
W45A  Hickory Valley   22.11 359  P   P     11 55 19.9 +0.4
BIRV  Birongo          22.27  94  P   P     11 55 20.2 -1.1
BIRV                              IAmb IAmb 11 55 46.3
      comp=Z,30nm,0.8s
JSC   Jenkinsville     22.34  17  P   P     11 55 22.4 +0.6
JSC                               IAmb IAmb 11 55 41.6
      comp=Z,68nm,1.1s
W41B  Gary Mavity, V   22.34 353  P   P     11 55 21.6 -0.3
W41B                              IAmb IAmb 11 55 41.0
      comp=Z,57nm,1.4s
W41B  Gary Mavity, V   22.34 353  P   P     11 55 22.6 +0.7
      baz=172,SNR=12
Y57A  Sumter           22.35  19  P   P     11 55 22.9 +0.9
WHAR  Wooly Hollow     22.46 353  P   P     11 55 23.7 +0.5
WHAR                              IAmb IAmb 11 55 49.3
      comp=Z,34nm,1.0s
SJG   San Juan         22.48  74  LR  LR    12 05 01.4
      comp=Z,646nm,18.8s,baz=264,slow=40
W39A  Magazine         22.59 349  P   P     11 55 24.6  0.0
W39A                              IAmb IAmb 11 55 29.8
      comp=Z,25nm,0.8s
W39A  Magazine         22.59 349  P   P     11 55 26.8 +2.2
      baz=168,SNR=19
PAULI Pauline          22.70  15  P   P     11 55 26.8 +1.1
PAULI                             IAmb IAmb 11 55 44.0
      comp=Z,109nm,1.5s
CPCT  Cooper Cave      22.75   9  P   P     11 55 27.1 +0.9
V48A  Smith Brothers   22.77   4  P   P     11 55 27.3 +0.9
FCAR  Ozark Folk Cen   23.03 353  P   P     11 55 29.6 +0.5
FCAR                              IAmb IAmb 11 55 33.0
      comp=Z,35nm,0.8s
TKL   Tuckaleechee C   23.08  11  P   P     11 55 30.2 +0.6
      comp=Z,30nm,0.8s,baz=184,slow=11,SNR=39
TKL                               LR  LR    12 04 41.7
      comp=Z,423nm,21.7s,baz=200,slow=37
TKL   Tuckaleechee C   23.08  11  P   P     11 55 30.6 +1.0
TKL                               IAmb IAmb 11 55 32.4
      comp=Z,30nm,0.8s
WVT   Waverly          23.10   2  P   P     11 55 29.7 -0.1
      baz=183
LPIG  La Paz           23.12 302  LR  LR    12 05 08.8
      comp=Z,161nm,18.8s,baz=120,slow=38
KMSC  Kings Mountain   23.13  16  P   P     11 55 31.6 +1.5
KMSC                              IAmb IAmb 11 55 48.5
      comp=Z,74nm,1.2s
KMSC  Kings Mountain   23.13  16  P   P     11 55 29.7 -0.4
      baz=199,SNR=17
X58A  Rowland          23.19  20  P   P     11 55 31.0 +0.4
X58A                              IAmb IAmb 11 55 32.9
      comp=Z,48nm,0.8s
V52A  Sevierville      23.29  11  P   P     11 55 31.9 +0.2
V52A                              IAmb IAmb 11 55 54.8
      comp=Z,49nm,1.2s
WMOK  Wichita Mounta   23.48 339  P   P     11 55 34.2 +0.7
WMOK  Wichita Mounta   23.48 339  P   P     11 55 33.5  0.0
      baz=156,SNR=22
FNO   Franklin         23.52 342      P     11 55 34.7 +0.9
U40A  Yellville        23.58 352  P   P     11 55 35.4 +0.9
      baz=170,SNR=37
HHAR  Hobbs            23.68 350  P   P     11 55 36.1 +0.8
TUL1  Leonard          23.70 346      P     11 55 35.5  0.0
TUL1                              IAmb IAmb 11 55 51.0
      comp=Z,40nm,0.9s
TUL1  Leonard          23.70 346  P   P     11 55 35.9 +0.4
      baz=163
TZTN  Tazewell         23.98  11  P   P     11 55 38.4 +0.3
      baz=193
MNTX  Cornudas Mount   24.06 324  P   P     11 55 38.8 -0.1
MNTX  Cornudas Mount   24.06 324  P   P     11 55 39.5 +0.6
      baz=138,SNR=21
MSTX  Muleshoe         24.45 331  P   P     11 55 43.0 +0.5
      baz=146,SNR=38
SIUC  Southern Illin   24.67 359  P   P     11 55 44.6 +0.3
SIUC                              IAmb IAmb 11 56 07.9
      comp=Z,81nm,1.4s
AMTX  Amarillo         24.73 334  P   P     11 55 45.7 +0.6
      baz=149
CCM   Cathedral Cave   25.10 356  P   P     11 55 48.6 +0.4
      baz=175
TBTG  Tabatinga, AM    25.39 131 eP   P     11 55 52.8 +1.8
T59A  Double "B" Far   25.99  21  P   P     11 55 56.8 +0.5
CZSB  Cruzeiro do Su   26.07 141 eP   P     11 55 59.6 +2.3
121A  Cookes Peak, D   26.08 321  P   P     11 55 59.2 +1.8
      baz=134,SNR=9.4
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319A  Douglas          26.25 318  P   P     11 55 58.1 -0.8
JSRW  J. Sargeant Re   26.53  20  P   P     11 56 01.4 +0.3
Q52A  Bidwell          26.57  12  P   P     11 56 01.8 +0.3
Q52A                              IAmb IAmb 11 56 27.7
      comp=Z,62nm,1.4s
Y22D  IRIS PASSCAL I   26.68 325  P   P     11 56 04.6 +1.8
      baz=138
R58B  Mineral          26.77  20  P   P     11 56 04.1 +0.7
R58B                              IAmb IAmb 11 56 20.9
      comp=Z,31nm,1.1s
KSU1  Kansas State U   26.94 347  P   P     11 56 05.4 +0.5
      baz=163
ANMO  Albuquerque      27.08 327  P   P     11 56 09.1 +2.7
      comp=Z,1.8nm,0.6s,baz=134,slow=9.6,SNR=12
ANMO                              PcP PcP   11 59 28.0 +1.6
      comp=Z,4.3nm,0.8s,baz=172,slow=3.3,SNR=7.0
ANMO                              pPcP      11 59 42.9
      comp=Z,7.3nm,1.0s,baz=140,slow=6.8,SNR=6.1
      comp=Z,1.8nm,0.6s
ANMO  Albuquerque      27.08 327  P   P     11 56 05.7 -0.7
ANMO  Albuquerque      27.08 327  P   P     11 56 07.8 +1.4
      baz=140
CBN   Corbin Frederi   27.16  20  P   P     11 56 07.5 +0.7
CBN   Corbin Frederi   27.16  20  P   P     11 56 07.1 +0.3
      baz=205
P52A  Corning          27.24  11  P   P     11 56 07.1 -0.5
      baz=194
P53A  Whipple          27.25  13  P   P     11 56 08.2 +0.5
Q56A  Snyder Ridge,    27.37  17  P   P     11 56 09.4 +0.6
Q56A                              IAmb IAmb 11 56 35.2
      comp=Z,58nm,1.4s
SFIN  Lafayette        27.37   3  P   P     11 56 08.1 -0.6
      baz=184
O48B  Farmland         27.40   6  P   P     11 56 08.4 -0.6
      baz=188
NNA   Nana             27.50 154  LR  LR    12 07 22.1
      comp=Z,35nm,19.6s,baz=330,slow=37
HDIL  Hopedale         27.51 359  P   P     11 56 09.9  0.0
      baz=179
CBKS  Cedar Bluff      27.51 341  P   P     11 56 10.1 +0.1
CBKS                              IAmb IAmb 11 56 12.0
      comp=Z,29nm,0.8s
CBKS  Cedar Bluff      27.51 341  P   P     11 56 10.2 +0.1
      baz=157,SNR=7.0
ACSO  Alum Creek Sta   27.67  10  P   P     11 56 12.1 +0.7
ACSO                              IAmb IAmb 11 56 12.9
      comp=Z,19nm,0.7s
ACSO  Alum Creek Sta   27.67  10  P   P     11 56 11.3 -0.1
      baz=192
N41A  Harden Midland   27.71 357  P   P     11 56 12.1 +0.4
N41A                              IAmb IAmb 11 56 28.4
      comp=Z,19nm,0.8s
O52A  Adamsville       27.76  12  P   P     11 56 12.9 +0.6
O52A                              IAmb IAmb 11 56 13.5
      comp=Z,23nm,0.7s
MCWV  Mont Chateau     27.77  15  P   P     11 56 11.2 -1.2
      baz=199
T25A  Trinidad         27.82 333  P   P     11 56 13.3 +0.3
T25A                              IAmb IAmb 11 56 16.9
      comp=Z,28nm,0.8s
T25A  Trinidad         27.82 333  P   P     11 56 15.1 +2.0
      baz=146,SNR=28
TUC   Tucson           27.83 317  P   P     11 56 12.3 -0.8
TUC   Tucson           27.83 317  P   P     11 56 14.6 +1.6
      baz=129
O53A  New Philadelph   28.02  13  P   P     11 56 14.7 +0.2
O53A                              IAmb IAmb 11 56 34.9
      comp=Z,33nm,1.0s
O53A  New Philadelph   28.02  13  P   P     11 56 14.9 +0.3
      baz=196,SNR=5.6
P57A  Homestead Farm   28.12  18  P   P     11 56 15.9 +0.5
P57A                              IAmb IAmb 11 56 33.4
      comp=Z,34nm,0.8s
O54A  Avella           28.14  14  P   P     11 56 16.1 +0.4
O54A                              IAmb IAmb 11 56 17.2
      comp=Z,20nm,0.7s
SDMD  Soldier's Deli   28.43  20  P   P     11 56 18.4 +0.2
SDMD                              IAmb IAmb 11 56 20.5
      comp=Z,17nm,0.7s
KSCO  Kaye Shedlock'   28.68 337  P   P     11 56 21.7 +1.1
      baz=151,SNR=12
SDCO  Great Sand Dun   28.81 332  P   P     11 56 22.4 +0.4
SDCO  Great Sand Dun   28.81 332  P   P     11 56 23.3 +1.3
      baz=145,SNR=16
214A  Organ Pipe Nat   28.99 315  P   P     11 56 22.9 -0.4
214A  Organ Pipe Nat   28.99 315  P   P     11 56 25.2 +1.8
      baz=126,SNR=7.5
W18A  Petrified Fore   29.04 323  P   P     11 56 25.0 +1.1
      baz=135
L40A  Anamosa          29.08 356  P   P     11 56 23.8 -0.1
L40A                              IAmb IAmb 11 56 26.4
      comp=Z,25nm,0.8s
SCIA  State Center     29.10 353  P   P     11 56 25.2 +1.1
      baz=171
L44A  Lake County Fo   29.14   1  P   P     11 56 24.4  0.0
      baz=182
SSPA  Standing Stone   29.22  17  P   P     11 56 25.3 +0.1
      baz=202
M53A  WI Miller and    29.28  13  P   P     11 56 25.4 -0.2
      baz=196
BBSR  BB Station       29.40  45  P   P     11 56 27.1 +0.3
S22A  4UR Ranch, Cre   29.44 330  P   P     11 56 26.6 -0.9
S22A                              IAmb IAmb 11 56 31.8
      comp=Z,17nm,0.8s
S22A  4UR Ranch, Cre   29.44 330  P   P     11 56 28.4 +0.8
      baz=143,SNR=44
Q24A  Divide           29.66 334  P   P     11 56 30.6 +1.1
      baz=147
K38A  Parkersburg      29.79 354  P   P     11 56 30.2  0.0
K38A                              IAmb IAmb 11 56 32.6
      comp=Z,21nm,0.6s
MVCO  Mesa Verde       29.87 327  P   P     11 56 30.7 -0.6
MVCO  Mesa Verde       29.87 327  P   P     11 56 32.8 +1.5
      baz=139,SNR=6.7
JFWS  Jewell Farm      29.88 358  P   P     11 56 30.8 -0.3
JFWS                              IAmb IAmb 11 56 53.4
      comp=Z,12nm,0.7s
JFWS  Jewell Farm      29.88 358  P   P     11 56 32.0 +0.9
      baz=177
LUPA  Lehigh Univers   29.99  21  P   P     11 56 32.4 +0.5
LUPA                              IAmb IAmb 11 56 49.7
      comp=Z,31nm,1.0s
ERPA  Erie             30.07  13  P   P     11 56 32.4 -0.3
      baz=198
M57A  Sunshine Farm,   30.09  18  P   P     11 56 33.2 +0.3
M57A                              IAmb IAmb 11 56 53.0
      comp=Z,26nm,1.0s
OGNE  Ogallala         30.18 340  P   P     11 56 34.8 +1.0
      baz=154
WUAZ  Wupatki          30.29 322  P   P     11 56 36.5 +1.5
      baz=133,SNR=7.6
ISCO  Idaho Springs    30.55 334  P   P     11 56 37.2 -0.2
ISCO  Idaho Springs    30.55 334  P   P     11 56 38.8 +1.5
      baz=147,SNR=23
WVNY  West Valley, N   30.68  15  P   P     11 56 38.3 +0.2
WVNY                              IAmb IAmb 11 56 55.4
      comp=Z,26nm,0.9s
PAL   Palisades        30.87  22  P   P     11 56 40.0 +0.2
      baz=209
BINY  Binghamton       31.22  19  P   P     11 56 43.1 +0.2
      baz=205
PDMCI Parker Dam,Lak   31.27 317  P   P     11 56 44.9 +1.5
      baz=127
ECSD  EROS Data Cent   31.39 349  P   P     11 56 44.3  0.0
      baz=166,SNR=5.4
N23A  Red Feather La   31.61 335  P   P     11 56 47.5 +0.9
      baz=147,SNR=12
SWSC  Sam W. Stewart   31.64 313  P   P     11 56 48.3 +1.6
      baz=123
IKP   In-Ko-Pah, Jac   31.70 313  P   P     11 56 48.5 +1.1
      baz=122
PHWY  Pilot Hill       31.75 336  P   P     11 56 47.7 -0.2
PHWY                              IAmb IAmb 11 56 50.4
      comp=Z,11nm,0.8s
BC3   Big Chuckawall   31.79 315  P   P     11 56 49.3 +1.2
      baz=124,SNR=8.8
IRM   Iron Mountain    31.86 316  P   P     11 56 50.6 +2.0
      baz=126
ETMB  Extrema          31.90 134 eP   P     11 56 50.1 +1.0
CBX   Cerro Bola       31.93 312  P   P     11 56 48.5 -0.8
CBX                               IAmb IAmb 11 57 07.2
      comp=Z,11nm,0.7s
J56A  Wolcott          31.95  17  P   P     11 56 49.5 +0.2
O20A  White River Ci   32.00 331  P   P     11 56 51.7 +1.7
      baz=143,SNR=31
MONP2 Monument Peak    32.05 313  P   P     11 56 52.7 +2.1
      baz=122,SNR=6.6
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G45A  Suttons Bay       32.10   4  P      P      11 56 49.5 -1.0
UCCT  U. Connecticut    32.19  24  P      P      11 56 50.8 -0.6
MACA  Manacapuru-AM     32.24 118 eP      P      11 56 51.4 -0.8
J57A  Williamstown      32.32  18  P      P      11 56 52.8 +0.3
SPMN  Marine on St.     32.34 355  P      P      11 56 52.6 -0.1
SPMN  Marine on St.     32.34 355  P      P      11 56 52.0 -0.7
      baz=173,SNR=16
BELC  Belle Mtn. Jos    32.36 315  P      P      11 56 55.6 +2.5
      baz=124
TPFO  Pinon Flats       32.46 314  P      P      11 56 53.0 -1.1
      baz=123
PFO   Pinyon Flats O    32.47 314  P      P      11 56 57.1 +3.1
      comp=Z,3.3nm,0.9s,baz=164,slow=5.9,SNR=4.1
PFO                                pP     pP     11 57 10.6 +2.8
      comp=Z,8.2nm,0.9s,baz=127,slow=7.6,SNR=10
PFO                                PcP    PcP    11 59 41.8 +1.5
      comp=Z,4.6nm,0.9s,baz=177,slow=3.9,SNR=5.8
PFO                                pPcP          11 59 57.4
      comp=Z,8.6nm,1.1s,baz=128,slow=3.4,SNR=6.5
PFO                                LR     LR     12 11 17.7
      comp=Z,225nm,19.6s,baz=123,slow=38
      comp=Z,3.3nm,0.9s
PFO   Pinyon Flats O    32.47 314  P      P      11 56 52.2 -1.9
      baz=123
PFO   Pinyon Flats O    32.47 314  P      P      11 56 56.9 +2.8
PFO                                pP     pP     11 57 10.3 +2.6
MTPU  Mount Pierson     32.49 324  P      P      11 56 54.0 -0.5
SUSD  Miller            32.56 347  P      P      11 56 54.3 -0.3
      baz=162
GMRC  Granite Mounta    32.57 316  P      P      11 56 57.2 +2.2
      baz=126,SNR=6.9
SADO  Sadowa            32.79  13  P      P      11 56 56.2 -0.3
      comp=Z,27nm,0.6s,baz=218,slow=8.4,SNR=36
SADO                               LR     LR     12 11 36.1
      comp=Z,204nm,18.5s,baz=217,slow=39
      comp=Z,27nm,0.6s
SADO  Sadowa            32.79  13  P      P      11 56 56.0 -0.6
MURC  Murrieta          32.98 313  P      P      11 56 59.8 +1.3
      baz=122
HEC   Hector,Ludlow     33.05 316  P      P      11 57 00.7 +1.6
      baz=125
HRV   Adam Dziewonsk    33.06  24  P      P      11 56 59.0 +0.1
      baz=212
TUQ   Turquoise Moun    33.12 317  P      P      11 57 01.5 +1.7
      baz=126
BBRC  Big Bear Solar    33.14 315  P      P      11 57 02.5 +2.4
      baz=123,SNR=6.7
K22A  Casper            33.32 336  P      P      11 57 01.5  0.0
      baz=148,SNR=13
SAML  Samuel            33.53 129 ⇑P      P      11 57 03.1 -0.3
SAML                               pP     pP     11 57 16.9 -0.2
GSC   Goldstone, Bar    33.64 316  P      P      11 57 06.8 +2.6
      baz=125
BFSC  Mount Baldy Ra    33.64 314  P      P      11 57 06.2 +1.8
      baz=122
RSSD  Black Hills       33.68 340  P      P      11 57 05.2 +0.5
RSSD                               IAmb   IAmb   11 57 08.2
      comp=Z,16nm,0.7s
RSSD  Black Hills       33.68 340  P      P      11 57 06.2 +1.6
      baz=153
RSSD  Black Hills       33.68 340  P      P      11 57 06.6 +1.9
RSSD                               pP     pP     11 57 19.9 +1.6
LONY  Lake Ozonia       33.85  18  P      P      11 57 05.9 +0.1
LONY  Lake Ozonia       33.85  18  P      P      11 57 04.7 -1.2
      baz=206,SNR=5.9
EDW2  Edwards Air Fo    34.22 315  P      P      11 57 11.0 +1.7
      baz=123
TPNV  Topopah Spring    34.23 319  P      P      11 57 10.8 +1.3
      baz=128,SNR=7.1
LRMC  Laurel Mtn Rad    34.33 316  P      P      11 57 13.1 +2.8
      baz=124
FURC  Furnace Creek,    34.34 318  P      P      11 57 12.6 +2.4
      baz=126
DUG   Dugway, Tooele    34.35 327  P      P      11 57 12.2 +1.8
      baz=136
MPMC  Manual Prospec    34.52 317  P      P      11 57 13.8 +1.8
      baz=125,SNR=5.5
R11A  Troy Canyon, C    34.69 322  P      P      11 57 14.5 +1.1
      baz=130
BW06  Boulder Array     34.69 333  P      P      11 57 13.7 +0.3
BW06  Boulder Array     34.69 333  P      P      11 57 13.7 +0.3
      baz=143,SNR=9.4
PD31  Pinedale Array    34.69 333  P      P      11 57 13.1 -0.3
PDAR  Pinedale Array    34.69 333  P      P      11 57 14.4 +1.0
      comp=Z,5.3nm,0.8s,baz=128,slow=10.0,SNR=43
PDAR                               PcP    PcP    11 59 46.8 +0.2
      comp=Z,3.3nm,0.6s,baz=143,slow=5.1,SNR=15
PDAR                               pPcP          12 00 02.0
      comp=Z,3.0nm,0.6s,baz=130,slow=5.0,SNR=7.8
PDAR                               LR     LR     12 14 32.3
      comp=Z,172nm,20.6s,baz=148,slow=42
      comp=Z,5.3nm,0.8s
PDAR  Pinedale Array    34.69 333  P      P      11 57 13.7 +0.3
ARVC  Arvin             34.93 314  P      P      11 57 16.9 +1.6
      baz=122,SNR=7.2
EYMN  Ely               34.96 357  P      P      11 57 14.1 -1.3
      baz=176,SNR=8.3
ISA   Isabella, Lake    34.97 315  P      P      11 57 17.9 +2.2
      baz=123
E28A  Huff              34.97 346  P      P      11 57 15.5  0.0
GRAC  Grapevine Rang    34.98 318  P      P      11 57 18.2 +2.4
      baz=126
CWC   Cottonwood Cre    35.13 317  P      P      11 57 19.3 +2.1
      baz=125
AHID  Auburn Hatcher    35.40 331  P      P      11 57 19.1 -0.3
AHID                               IAmb   IAmb   11 57 36.0
      comp=Z,16nm,0.8s
VES   Vestal, Richgr    35.48 315  P      P      11 57 22.2 +2.1
      baz=123
PKM   Mcpherson Peak    35.50 313  P      P      11 57 20.8 +0.4
      baz=121,SNR=6.7
B35A  Bob, Littlefor    35.54 354  P      P      11 57 20.1 -0.3
B35A                               IAmb   IAmb   11 57 36.0
      comp=Z,11nm,1.1s
LPAZ  La Paz            35.56 144  P      P      11 57 22.6 +1.2
      comp=Z,6.7nm,0.7s,baz=325,slow=6.1,SNR=31
LPAZ                               PcP    PcP    11 59 50.6 +0.7
      comp=Z,1.3nm,0.6s,baz=63,slow=2.3,SNR=1.9
LPAZ                               pPcP          12 00 06.2
      comp=Z,5.0nm,1.0s,baz=205,slow=1.5,SNR=4.3
      comp=Z,6.7nm,0.7s
LPAZ  La Paz            35.56 144  P      P      11 57 18.8 -2.7
LPAZ                               IAmb   IAmb   11 57 23.6
      comp=Z,8.0nm,0.8s
LPAZ  La Paz            35.56 144 eP      P      11 57 22.5 +0.9
LPAZ  La Paz            35.56 144 eP      P      11 57 22.8 +1.2
TIN   Tinemaha, Big     35.58 318  P      P      11 57 20.5 -0.5
      baz=125
AGMN  Agassiz Nation    35.72 352  P      P      11 57 21.8 -0.1
AGMN  Agassiz Nation    35.72 352  P      P      11 57 21.3 -0.6
      baz=168,SNR=14
SMMC  Simmler           35.84 314  P      P      11 57 24.8 +1.5
      baz=121
MDND  Maddock           35.93 348  P      P      11 57 24.0 +0.2
MDND  Maddock           35.93 348  P      P      11 57 23.5 -0.2
      baz=162,SNR=15
ELK   Elko              36.06 325  P      P      11 57 27.6 +2.3
      comp=Z,4.9nm,0.8s,baz=135,slow=7.1,SNR=23
ELK                                PcP    PcP    11 59 52.0 +1.4
      comp=Z,5.2nm,0.9s,baz=164,slow=1.8,SNR=8.3
ELK                                pPcP          12 00 07.3
      comp=Z,6.3nm,0.9s,baz=203,slow=0.4,SNR=9.8
ELK                                LR     LR     12 13 37.5
      comp=Z,156nm,21.1s,baz=146,slow=38
      comp=Z,4.9nm,0.8s
ELK   Elko              36.06 325  P      P      11 57 24.5 -0.8
PKME  Peaks-Kenny Pk    36.27  24  P      P      11 57 26.4 -0.1
      baz=213
VLDQ  Val d'Or          36.33  13  P      P      11 57 26.2 -0.9
VLDQ                               IAmb   IAmb   11 57 43.8
      comp=Z,18nm,1.2s
NVAR  Mina Array Bea    36.42 319  P      P      11 57 31.1 +2.7
      comp=Z,4.1nm,0.7s,baz=130,slow=7.0,SNR=53
NVAR                               pP     pP     11 57 43.9 +1.7
      comp=Z,2.7nm,0.6s,baz=142,slow=8.7,SNR=10
NVAR                               PcP    PcP    11 59 53.6 +1.9
      comp=Z,9.0nm,0.7s,baz=137,slow=4.2,SNR=29
NVAR                               pPcP          12 00 08.8
      comp=Z,11nm,0.7s,baz=134,slow=4.1,SNR=20
NVAR                               ScP    ScP    12 03 36.7 +2.8
      comp=Z,1.0nm,0.8s,baz=138,slow=4.8,SNR=5.7
NVAR                               LR     LR     12 14 45.8
      comp=Z,327nm,19.1s,baz=150,slow=40
      comp=Z,4.1nm,0.7s
H17A  Grant Village     36.43 333  P      P      11 57 30.0 +1.6
      baz=143
RLMT  Red Lodge         36.47 335  P      P      11 57 29.1 +0.5
RLMT                               IAmb   IAmb   11 57 30.8
      comp=Z,18nm,0.8s
MDP   Montagnes des     36.58  99  LR     LR     12 14 06.6
      comp=Z,136nm,21.1s,baz=327,slow=39
KVN   Kaiserville       36.66 320  P      P      11 57 29.5 -0.8
LAO   LASA Array        36.67 340  P      P      11 57 30.2  0.0
LAO   LASA Array        36.67 340  P      P      11 57 30.8 +0.7
      baz=151,SNR=16
YMR   Madison River     36.82 333  P      P      11 57 33.4 +1.8
YMR                                IAmb   IAmb   11 57 49.6
      comp=Z,26nm,1.0s
YHH   Holmes Hill       36.87 334  P      P      11 57 33.5 +1.4
YHH                                IAmb   IAmb   11 57 49.9
      comp=Z,11nm,1.0s
G65A  Princeton         36.91  25  P      P      11 57 32.4 +0.3
BMN   Battle Mountai    36.99 323  P      P      11 57 32.4 -0.7
GCMT  Greycliff         37.18 336  P      P      11 57 34.7 +0.1
HLID  Hailey            37.60 329  P      P      11 57 39.1 +0.9
      baz=137,SNR=14
DGMT  Dagmar            37.64 343  P      P      11 57 38.3  0.0
DGMT  Dagmar            37.64 343  P      P      11 57 38.9 +0.7
      baz=155,SNR=12
ULM   Lac du Bonnet     37.64 353  P      P      11 57 36.7 -1.5
      comp=Z,18nm,0.9s,baz=166,slow=8.4,SNR=12
ULM                                LR     LR     12 14 40.1
      comp=Z,387nm,22.0s,baz=148,slow=39
      comp=Z,18nm,0.9s
ULM   Lac du Bonnet     37.64 353  P      P      11 57 37.5 -0.7
ULM                                IAmb   IAmb   11 57 54.8
      comp=Z,25nm,1.1s
BOZ   Bozeman (W)       37.84 334  P      P      11 57 40.6 +0.4
BOZ                                IAmb   IAmb   11 57 46.9
      comp=Z,11nm,0.7s
BOZ   Bozeman (W)       37.84 334  P      P      11 57 41.8 +1.6
      baz=142,SNR=29
DLMT  Dillon            38.09 333  P      P      11 57 43.1 +0.8
VILB  Vilhena           38.34 131 eP      P      11 57 44.9 +0.3
LRM   Limekiln Ridge    38.38 333  P      P      11 57 45.5 +0.7
LMN   Caledonia Moun    38.61  27  P      P      11 57 46.5  0.0
LMN                                IAmb   IAmb   11 58 07.2
      comp=Z,27nm,1.0s
EGMT  Eagleton          39.06 338  P      P      11 57 50.1 -0.3
EGMT  Eagleton          39.06 338  P      P      11 57 51.3 +0.9
      baz=147,SNR=42
BATG  Bathurst New B    39.20  25  P      P      11 57 51.0 -0.4
PLID  Pearl Lake        39.49 329  P      P      11 57 53.7 -0.4
SIV   San Ignacio       39.78 135  P      P      11 57 57.1 +0.5
      comp=Z,21nm,0.7s,baz=335,slow=7.2,SNR=9.8
SIV                                pP     pP     11 58 10.0 -0.5
      comp=Z,39nm,0.8s,baz=313,slow=6.7,SNR=6.4
      comp=Z,21nm,0.7s
MSO   Missoula          39.81 333  P      P      11 57 57.0 +0.4
      baz=140,SNR=8.1
BMO   Blue Mountains    39.98 328  P      P      11 57 58.0 -0.1
PDRB  Porto dos Gac     40.16 126 eP      P      11 57 59.1 -0.6
LVC   Limon Verde       40.39 151  P      P      11 58 02.8 +0.9
      comp=Z,2.8nm,0.7s,baz=339,slow=2.6,SNR=4.3
LVC                                LR     LR     12 13 46.3
      comp=Z,177nm,21.5s,baz=295,slow=35
      comp=Z,2.8nm,0.7s
LVC   Limon Verde       40.39 151 eP      P      11 58 02.1 +0.2
CLDB  Colider           40.47 124 eP      P      11 58 01.6 -0.7
F10A  Beach Ranch, E    40.72 329  P      P      11 58 03.7 -0.5
PTLB  Pontes e Lacer    40.76 133 eP      P      11 58 04.9 +0.3
YBH   Yreka Blue Hor    41.09 321  P      P      11 58 07.3 +0.1
      comp=Z,1.5nm,0.6s,baz=109,slow=5.1,SNR=12
YBH                                PcP    PcP    12 00 06.9 +0.8
      comp=Z,2.7nm,0.8s,baz=78,slow=2.9,SNR=8.4
YBH                                pPcP          12 00 22.1
      comp=Z,3.5nm,0.8s,baz=83,slow=3.3,SNR=7.6
YBH                                LR     LR     12 16 52.8
      comp=Z,266nm,21.3s,baz=139,slow=38
      comp=Z,1.5nm,0.6s
J05D  Fort Rock, OR     41.11 324  P      P      11 58 08.4 +1.0
      baz=128
L04D  Klamath Falls     41.12 322  P      P      11 58 08.0 +0.5
      baz=126
J04D  Umpqua Nationa    41.60 323  P      P      11 58 12.7 +1.2
      baz=127
I05D  Terrebonne, OR    41.82 325  P      P      11 58 14.4 +1.2
      baz=129
I04A  Tendick Farm,     42.10 323  P      P      11 58 14.7 -0.7
      baz=127
NEW   Newport           42.32 332  P      P      11 58 17.2 +0.1
      comp=Z,2.1nm,0.6s,baz=142,slow=8.3,SNR=6.6
NEW                                PcP    PcP    12 00 09.4 -0.5
      comp=Z,3.2nm,0.5s,baz=102,slow=3.9,SNR=5.8
NEW                                pPcP          12 00 25.4
      comp=Z,4.9nm,0.7s,baz=134,slow=5.7,SNR=4.5
NEW                                LR     LR     12 20 32.4
      comp=Z,225nm,19.6s,baz=128,slow=43
      comp=Z,2.1nm,0.6s
NEW   Newport           42.32 332  P      P      11 58 17.1  0.0
NEW   Newport           42.32 332  P      P      11 58 17.1  0.0
      baz=137
G05D  Wamic, OR         42.37 326  P      P      11 58 17.5  0.0
      baz=129
I03D  Drain, OR         42.59 323  P      P      11 58 20.7 +1.3
      baz=126
TMAB  Tom-Au,PA,Br      43.24 108 eP      P      11 58 25.8 +0.8
G03D  McMinnville, O    43.44 324  P      P      11 58 25.0 -1.2
      baz=127
SALV  Santo Antonio     43.57 130 eP      P      11 58 27.0 -0.5
F04D  Rainier, OR       43.82 326  P      P      11 58 29.1 -0.2
      baz=128
DRLN  Deer Lake         44.47  29  P      P      11 58 33.8 -0.5
DRLN                               IAmb   IAmb   11 58 49.6
      comp=Z,28nm,1.1s
B06A  Marblemount       44.58 329  P      P      11 58 34.3 -0.9
EDM   Edmonton          44.65 339  P      P      11 58 35.7 -0.1
B05A  Bryant            44.72 329  P      P      11 58 35.8 -0.5
      baz=131
SNDB  Serra Nova Dou    44.75 122 eP      P      11 58 35.6 -1.5
D03D  Eldon             44.77 327  P      P      11 58 36.4 -0.4
      baz=129
SCHQ  Schefferville     45.22  18  P      P      11 58 39.0 -1.3
      comp=Z,21nm,0.7s,baz=217,slow=5.9,SNR=54
SCHQ                               PcP    PcP    12 00 19.3 -0.3
      comp=Z,4.6nm,0.5s,baz=237,slow=4.2,SNR=7.4
SCHQ                               LR     LR     12 18 43.3
      comp=Z,256nm,18.6s,baz=195,slow=38
      comp=Z,21nm,0.7s
SCHQ  Schefferville     45.22  18  P      P      11 58 39.5 -0.8
PP1B  Ponte de Pedra    45.25 131 eP      P      11 58 41.4 +0.4
LCO   Las Campanas      45.26 157  P      P      11 58 42.6 +1.4
LCO                                pP     pP     11 58 56.3 +1.0
A04D  Lummi Island      45.33 329  P      P      11 58 41.4 +0.2
      baz=130,SNR=8.9
PGC   Sidney            45.66 328  P      P      11 58 44.1 +0.3
FCC   Fort Churchill    45.90 356  P      P      11 58 45.3 -0.1
FCC                                IAmb   IAmb   11 58 46.1
      comp=Z,14nm,0.7s
SMTB  Santa Maria do    46.38 116 eP      P      11 58 50.4 +0.4
AQDB  Aquidauana        46.55 135 eP      P      11 58 51.2  0.0
H03N2 Juan Fernandez    47.09 169  T      T      12 49 08.0
      baz=347,slow=76,SNR=187
H03N1 Juan Fernandez    47.09 169  T      T      12 49 09.0
      baz=347,slow=76,SNR=270
H03N3 Juan Fernandez    47.11 169  T      T      12 49 04.6
      baz=347,slow=76,SNR=312
PEXB  Peixe             47.32 120 eP      P      11 58 55.3 -2.0
BDFB  Brasilia          49.40 124  P      P      11 59 12.2 -1.2
      comp=Z,18nm,0.6s,baz=295,slow=9.5,SNR=22
      comp=Z,18nm,0.6s
BDFB  Brasilia          49.40 124  P      P      11 59 11.8 -1.6
CPUP  Villa Florida     49.65 142  P      P      11 59 14.8 -0.3
      comp=Z,4.9nm,0.7s,baz=334,slow=8.6,SNR=12
CPUP                               pP     pP     11 59 29.1 -0.3
      comp=Z,7.5nm,0.7s,baz=341,slow=11,SNR=9.5
      comp=Z,4.9nm,0.7s
CPUP  Villa Florida     49.65 142  P      P      11 59 13.5 -1.5
CPUP  Villa Florida     49.65 142 eP      P      11 59 15.0 -0.1
ITRB  Iturama           49.90 130 eP      P      11 59 16.7 -0.4
PCMB  Pacaembu          50.42 133 eP      P      11 59 20.6 -0.3
IPMB  Ipameri, GO       50.54 127 eP      P      11 59 21.8 -0.2
PTGB  Pitanga           51.88 136 eP      P      11 59 31.4 -0.5
BB19B Bebedouro         52.09 130 eP      P      11 59 33.1 -0.4
JANB  Januaria          52.15 121 eP      P      11 59 33.4 -0.7
ITQB  Itaqui            52.56 144 eP      P      11 59 37.8 +1.0
FRB   Frobisher Bay     52.70  11  P      P      11 59 35.9 -1.5
      comp=Z,21nm,0.6s,baz=216,slow=8.5,SNR=43
FRB                                pP     pP     11 59 49.2 -2.6
      comp=Z,10nm,0.8s,baz=193,slow=3.3,SNR=5.3
FRB                                LR     LR     12 22 02.0
      comp=Z,287nm,21.7s,baz=200,slow=36
      comp=Z,21nm,0.6s
YKA   Yellowknife Ar    52.78 345  P      P      11 59 38.0 +0.1
      comp=Z,29nm,0.7s,baz=142,slow=7.3,SNR=32
YKA                                pP     pP     11 59 52.4 -0.1
      comp=Z,19nm,0.8s,baz=140,slow=7.8,SNR=14
YKA                                PcP    PcP    12 00 46.7 -0.1
      comp=Z,2.6nm,0.6s,baz=146,slow=3.9,SNR=6.2
YKA                                pPcP          12 01 02.6
      comp=Z,1.8nm,0.6s,baz=149,slow=4.0,SNR=4.0
      comp=Z,29nm,0.7s
YKA   Yellowknife Ar    52.78 345  P      P      11 59 37.8 -0.1
ITAB  Concordia         53.54 139 eP      P      11 59 44.1  0.0
NBPN  Ponto Novo - B    53.78 114 eP      P      11 59 45.6 -0.5
DIAM  Diamantina, MG    54.32 124 eP      P      11 59 49.7 -0.4
VAO   Valinhos          54.40 131 eP      P      11 59 50.7 +0.2
CRAG  Craig             54.51 331  P      P      11 59 49.9 -0.8
      baz=124
DLBC  Dease Lake        54.87 335  P      P      11 59 53.2 -0.3
DLBC                               IAmb   IAmb   11 59 55.8
      comp=Z,15nm,0.8s
PET01 Itanhaem-SP       54.95 132 eP      P      11 59 55.1 +0.7
CPSB  Cacapava Do Su    54.96 142 eP      P      11 59 54.7 +0.4
TAOE  Nuku Hiva Isla    55.34 250 eLR     LR     12 15 51.6
      comp=Z,430nm,26.0s
GDU01 Guandu, BA        55.57 117 eP      P      11 59 59.7 +0.7
PARB  Paraibuna         55.60 130 eP      P      12 00 00.8 +1.7
RCBR  Riachuelo         55.83 106  LR     LR     12 27 25.8
      comp=Z,120nm,18.4s,baz=82,slow=40
RCBR  Riachuelo         55.83 106 eP      P      12 00 01.1 +0.2
PLTB  Pedras Altas      55.85 144 eP      P      12 00 01.3 +0.6
NBLA  Lagarto - SE      56.00 113 eP      P      12 00 00.6 -1.6
PLCA  Paso Flores       56.04 163  P      P      12 00 03.4 +1.4
      comp=Z,2.8nm,0.7s,baz=338,slow=8.4,SNR=7.2
PLCA                               pP     pP     12 00 16.2 -0.4
      comp=Z,6.7nm,1.1s,baz=345,slow=7.8,SNR=5.3
PLCA                               PcP    PcP    12 01 00.2 +0.5
      comp=Z,2.7nm,0.8s,baz=352,slow=6.8,SNR=4.4
      comp=Z,2.8nm,0.7s
PLCA  Paso Flores       56.04 163  P      P      12 00 00.3 -1.7
PLCA                               IAmb   IAmb   12 00 17.8
      comp=Z,9.8nm,1.2s
PLCA  Paso Flores       56.04 163 eP      P      12 00 03.1 +1.1
TGTN  Hyland Airport    56.19 339  P      P      12 00 03.1 +0.2
      baz=132
CMC01 Camacan, BA       56.35 118 eP      P      12 00 03.3 -1.3
TER01 Tubaro-SC         56.37 137 eP      P      12 00 05.2 +0.7
SIT   Sitka             56.40 332  P      P      12 00 04.1 -0.1
      baz=122
IVI   Ivigtut           56.45  22 i P     P      12 00 02.6 -2.0
IVI                                IAmb   IAmb   12 00 05.5
      comp=Z,16nm,0.7s
SJMB  Sao Joao De Ma    56.56 123 eP      P      12 00 05.7 -0.3
VAS01 Vassouras-RJ      56.65 128 eP      P      12 00 07.2 +0.6
TRQA  Tornquist         56.65 155  P      P      12 00 04.6 -1.8
TRQA                               IAmb   IAmb   12 00 08.1
      comp=Z,25nm,1.4s
GUA01 Guaratinga, BA    56.68 120 eP      P      12 00 07.1 +0.2
NBAN  Anadia - AL       56.86 111 eP      P      12 00 08.9 +0.7
NUUK  Nuuk              57.28  18 i P     P      12 00 08.0 -2.4
NUUK                               IAmb   IAmb   12 00 11.0
      comp=Z,24nm,0.8s
NRS   Narsarsuaq        57.46  23 eP      P      12 00 04.7 -7.0
NRS                                IAmb   IAmb   12 00 13.7
      comp=Z,9.2nm,0.6s
RIB01 Linhares ES       57.51 123 eP      P      12 00 12.6 -0.1
RKT   Rikitea           57.63 232 eT      T      13 02 14.0
      comp=Z,7.7nm,0.3s
SKAG  Skagway           57.70 334  P      P      12 00 14.2 +0.8
      baz=124
CAM01 Campos-RJ         57.79 126 eP      P      12 00 15.0 +0.3
ALF01 Guarapari-ES      57.90 125 eP      P      12 00 15.3 -0.1
MMPY  Sheldon Lake,     57.98 338  P      P      12 00 15.5  0.0
      baz=129,SNR=8.4
FARO  Faro, Yukon       58.50 337  P      P      12 00 19.3 +0.2
      baz=127
M31M  Drury Creek, Y    58.88 337  P      P      12 00 21.4 -0.3
      baz=126
N31M  Braeburn, Yuko    59.01 336  P      P      12 00 22.3 -0.3
      baz=124
HYT   Haines Junctio    59.35 335  P      P      12 00 26.2 +1.1
      baz=122
PNL   Peninsula         59.58 333  P      P      12 00 27.4 +0.9
      baz=119
SFJD  Kangerlussuaq     59.63  16  P      P      12 00 25.3 -1.4
      comp=Z,9.5nm,0.8s,baz=186,slow=5.8,SNR=6.0
SFJD                               LR     LR     12 25 42.7
      comp=Z,113nm,21.4s,baz=220,slow=36
      comp=Z,9.5nm,0.8s
SFJD  Kangerlussuaq     59.63  16  P      P      12 00 26.4 -0.3
SFJD                               IAmb   IAmb   12 00 53.5
      comp=Z,8.3nm,1.0s
SFJD  Kangerlussuaq     59.63  16 i P     P      12 00 24.4 -2.3
SFJD                               IAmb   IAmb   12 00 26.1
      comp=Z,9.3nm,0.9s
YUK6  Outpost Mounta    59.77 335  P      P      12 00 28.4 +0.3
      baz=121
M30M  Minto, Yukon      60.01 337  P      P      12 00 29.8 +0.3
      baz=124
YUK4  Talbot Arm        60.10 335  P      P      12 00 30.3  0.0
      baz=121
DY2G  Dye2              60.53  18 i P     P      12 00 30.3 -2.9
DY2G                               IAmb   IAmb   12 00 37.5
      comp=Z,3.8nm,0.6s
C36M  Paulatuk          60.61 346  P      P      12 00 32.3 -1.1
      baz=140
YUK3  Moose Creek       61.07 335  P      P      12 00 36.7 -0.2
      baz=119
BVCY  Beaver Creek      61.54 335  P      P      12 00 37.3 -2.7
      baz=119
DAWY  Dawson            61.80 337  P      P      12 00 41.3 -0.4
DAWY  Dawson            61.80 337  P      P      12 00 40.3 -1.4
      baz=122
RES   Resolute Bay      61.82 358  P      P      12 00 40.3 -1.2
      comp=Z,11nm,0.8s,baz=179,slow=7.8,SNR=51
RES                                pP     pP     12 00 55.4 -0.9
      comp=Z,7.0nm,0.5s,baz=175,slow=9.5,SNR=10.0
RES                                LR     LR     12 28 13.5
      comp=Z,140nm,20.3s,baz=196,slow=37
      comp=Z,11nm,0.8s
RES   Resolute Bay      61.82 358  P      P      12 00 40.8 -0.7
RES                                IAmb   IAmb   12 00 41.5
      comp=Z,11nm,0.7s
M27K  Edge Creek, AK    61.93 335  P      P      12 00 41.8 -0.9
M27K                               IAmb   IAmb   12 00 59.8
      comp=Z,6.6nm,0.9s
BCAR  Beaver Creek A    62.23 336  P      P      12 00 44.3 -0.2
L27K  Beaver Creek,     62.25 336  P      P      12 00 44.2 -0.4
L27K                               IAmb   IAmb   12 01 00.2
      comp=Z,7.1nm,1.1s
L27K  Beaver Creek,     62.25 336  P      P      12 00 42.1 -2.5
      baz=119
INK   Inuvik            62.32 343  P      P      12 00 45.5 +0.5
      comp=Z,18nm,0.7s,baz=122,slow=6.9,SNR=85
INK                                pP     pP     12 00 59.4 -0.4
      comp=Z,10nm,0.6s,baz=148,slow=4.4,SNR=8.9
INK                                LR     LR     12 31 08.4
      comp=Z,179nm,20.3s,baz=118,slow=39
      comp=Z,18nm,0.7s
INK   Inuvik            62.32 343  P      P      12 00 45.0 +0.1
INK   Inuvik            62.32 343  P      P      12 00 44.7 -0.3
      baz=129,SNR=27
NUUG  Nuugaatsiaq       62.40  12 i P     P      12 00 42.8 -2.6
NUUG                               IAmb   IAmb   12 00 44.5
      comp=Z,9.0nm,0.8s
M26K  Nabesna, AK       62.41 335  P      P      12 00 45.9 +0.1
      baz=117
BMRM  Bremner River     62.48 333  P      P      12 00 45.3 -0.9
      baz=115
N25K  Chitina, Valde    62.74 334  P      P      12 00 46.3 -1.8
      baz=115
K27K  Chicken           62.81 337  P      P      12 00 46.3 -2.0
      baz=119
EGAK  Eagle             62.83 338  P      P      12 00 47.5 -0.9
EGAK  Eagle             62.83 338  P      P      12 00 47.7 -0.7
      baz=120,SNR=5.2
A36M  Sachs Harbour     62.89 348  P      P      12 00 47.0 -1.6
      baz=140
J26L  Joseph Creek      63.60 337  P      P      12 00 53.3 -0.4
      baz=118,SNR=5.5
PAX   Paxson            63.69 335  P      P      12 00 53.6 -0.7
      baz=115
ICESG Greenland Ices    64.13  18 i P     P      12 00 54.4 -2.9
ICESG                              IAmb   IAmb   12 00 56.9
      comp=Z,64nm,1.7s
K24K  Donnelly Dome     64.17 336  P      P      12 00 55.9 -1.4
      baz=115
M23K  Glacier View      64.19 333  P      P      12 00 54.9 -2.6
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	baz=112						
J25K	Salcha River,	64.35	336	P	P	12 00 58.5	0.0
J25K	Salcha River,	64.35	336	P	P	12 00 58.0	-0.6
	baz=116,SNR=7.8						
WAT6	Susitna Watana	64.49	334	P	P	12 00 58.0	-1.6
	baz=112						
DHY	Denali Highway	64.53	335	P	P	12 00 59.1	-0.8
	baz=113						
O22K	Cooper Landing	64.62	331	P	P	12 00 58.2	-2.1
	baz=110						
PMOR	Pomariorio Ree	64.68	246	*e*T	T	13 11 13.0	
	comp=Z,6.0nm,0.2s						
PMR	Palmer	64.74	333	P	P	12 00 58.1	-2.9
	baz=111						
RC01	Rabbit Creek A	64.84	332	P	P	12 01 01.0	-0.7
	baz=110						
IL31		65.01	336	P	P	12 01 02.2	-0.5
IL31				IAmb	IAmb	12 01 03.4	
	comp=Z,17nm,1.3s						
ILAR	Eielson Array	65.01	336	P	P	12 01 02.8	0.0
	comp=Z,5.7nm,1.0s,baz=124,slow=5.0,SNR=32						
ILAR				pP	pP	12 01 16.9	-0.7
	comp=Z,8.0nm,1.0s,baz=116,slow=4.9,SNR=11						
ILAR				LR	LR	12 32 20.6	
	comp=Z,140nm,20.6s,baz=176,slow=39						
	comp=Z,5.7nm,1.0s						
ILAR	Eielson Array	65.01	336	P	P	12 01 02.2	-0.6
M22K	Willow	65.23	333	P	P	12 01 02.8	-1.4
	baz=110						
RND	Reindeer	65.27	335	P	P	12 01 04.5	-0.1
RND				IAmb	IAmb	12 01 05.8	
	comp=Z,14nm,0.8s						
BMAR	Burnt Mountain	65.33	339	P	P	12 01 05.6	+0.7
COLA	College	65.43	336	P	P	12 01 04.8	-0.6
	baz=113						
TCOL	CIGO, UAF Yank	65.43	336	P	P	12 01 04.4	-1.1
	baz=113						
CUT	Chulitna	65.52	333	P	P	12 01 06.1	0.0
	baz=110						
MDM	Murphy Dome	65.61	336	P	P	12 01 05.7	-1.0
NEA2	Nenana	65.80	336	P	P	12 01 07.9	0.0
	baz=112						
BWN	Browne	65.81	335	P	P	12 01 07.5	-0.4
H24K	Noodor Dome	65.83	337	P	P	12 01 08.4	+0.3
	baz=114						
TRF	Thorofare Moun	65.89	334	P	P	12 01 08.1	-0.6
TRF				IAmb	IAmb	12 01 12.3	
	comp=Z,8.0nm,0.7s						
P19K	Oil Pt	66.05	330	P	P	12 01 09.2	-0.4
	baz=106						
Q19K	Cape Douglas,	66.06	329	P	P	12 01 05.6	-4.1
	baz=105						
I23K	Minto, Yukon-K	66.13	336	P	P	12 01 09.4	-0.5
I23K				IAmb	IAmb	12 01 25.9	
	comp=Z,16nm,1.1s						
I23K	Minto, Yukon-K	66.13	336	P	P	12 01 07.0	-2.9
	baz=112,SNR=9.5						
CHIR	Chirikof Islan	66.36	326	P	P	12 01 09.4	-2.2
	baz=102						
BPAW	Bear Paw Mtn.	66.41	335	P	P	12 01 10.5	-1.3
	baz=110,SNR=6.6						
H23K	Yukon River	66.45	337	P	P	12 01 10.9	-1.2
	baz=112						
PPLA	Purkeypile	66.52	334	P	P	12 01 10.3	-2.4
	baz=108						
CAST	Castle Rocks	66.64	334	P	P	12 01 12.0	-1.3
	baz=109,SNR=5.8						
CHUM	Lake Minchumin	66.89	335	P	P	12 01 13.7	-1.1
	baz=109						
N19K	Bonanza Creek	66.96	331	P	P	12 01 15.7	+0.2
N19K	Bonanza Creek	66.96	331	P	P	12 01 14.6	-0.9
	baz=105						
O18K	Koktuh Hills	67.07	330	P	P	12 01 16.0	-0.1
	baz=104						
EUNU	Eureka	67.14	0	P	P	12 01 16.5	+0.3
EUNU				IAmb	IAmb	12 01 16.7	
	comp=Z,8.0nm,0.7s						
L20K	Farewell, AK	67.14	333	P	P	12 01 15.5	-1.0
	baz=107,SNR=8.0						
PPT2	Papeete2	67.16	245	*e*LR	LR	12 21 18.3	
I21K	Tanana	67.17	336	P	P	12 01 16.6	0.0
	baz=110						
M19K	Big River Lodg	67.21	332	P	P	12 01 17.3	+0.3
	baz=106						
COLD	Coldfoot	67.22	338	P	P	12 01 16.8	-0.1
COLD				IAmb	IAmb	12 01 18.8	
	comp=Z,9.0nm,0.9s						
COLD	Coldfoot	67.22	338	P	P	12 01 17.2	+0.3
	baz=112,SNR=12						
K20K	Telida	67.48	334	P	P	12 01 17.5	-1.1
	baz=107,SNR=5.1						
L19K	White Mountain	67.50	332	P	P	12 01 17.6	-1.2
	baz=106						
TOLK	Toolik Lake Re	67.55	340	P	P	12 01 19.1	+0.1
TOLK				IAmb	IAmb	12 01 20.3	
	comp=Z,12nm,0.7s						
TOLK	Toolik Lake Re	67.55	340	P	P	12 01 18.8	-0.2
	baz=113,SNR=16						
N18K	Kilae Creek	67.60	331	P	P	12 01 19.3	-0.1
	baz=104						
H21K	Melozitna Rive	67.66	336	P	P	12 01 18.5	-1.2
	baz=109						
J20K	Nowinta River	67.75	335	P	P	12 01 19.1	-1.1
	baz=107						
TTA	Tatalina	68.21	333	P	P	12 01 22.0	-1.3
	baz=105						
TBI	Tubuai	69.37	239	*e*LR	LR	12 22 18.6	
	comp=Z,333nm,27.2s						
TBI	Tubuai	69.37	239	*e*T	T	13 16 49.0	
	comp=Z,9.1nm,0.2s						
FALS	False Pass	70.62	324	P	P	12 01 37.7	-0.5
	baz=95						
A21K	Barrow	70.75	342	P	P	12 01 38.2	-0.4
	baz=107						
RDOG	Red Dog Mine	72.12	338	P	P	12 01 45.4	-1.7
	baz=100						
UNV	Unalaska Valle	72.36	323	P	P	12 01 48.5	-0.2
	baz=92						
DAG	Danmarks Havn	72.98	13	*i* P	P	12 01 50.0	-2.0
DAG				IAmb	IAmb	12 01 52.1	
	comp=Z,6.0nm,0.8s						
NOR	Nord	74.69	8	*i* P	P	12 02 00.1	-1.9
NOR				IAmb	IAmb	12 02 03.0	
	comp=Z,2.8nm,0.6s						
JMIC	Jan Mayen	74.70	20	LR	LR	12 34 27.8	
	comp=Z,42nm,20.1s,baz=268,slow=36						
EKA	Eskdalemuir Ar	77.04	36	LR	LR	12 29 42.2	
	comp=Z,105nm,21.6s,baz=194,slow=31						
ESDC	Sonseca Array	77.97	52	P	P	12 02 19.1	-2.3
	comp=Z,0.7nm,0.5s,baz=278,slow=5.6,SNR=5.1						
ESDC				pP	pP	12 02 34.8	-1.9
	comp=Z,2.2nm,0.8s,baz=285,slow=6.0,SNR=6.7						
	comp=Z,0.7nm,0.5s						
ESDC	Sonseca Array	77.97	52	P	P	12 02 20.1	-1.4
MDT	Midelt	78.34	59	LR	LR	12 30 36.2	
	comp=Z,188nm,21.6s,baz=302,slow=31						
SPITS	Spitsbergen Ar	80.50	12	LR	LR	12 39 21.3	
	comp=Z,98nm,19.0s,baz=359,slow=37						
BILL	Bilibino	83.56	339	P	P	12 02 50.4	-0.2
BILL				IAmb	IAmb	12 03 08.0	
	comp=Z,12nm,1.2s						
NB2	NORSAR Subarra	83.61	29	P	P	12 02 49.7	-1.3
	comp=Z,0.8nm,0.6s,baz=285,slow=5.1						
NOA	NORSAR Array B	83.61	29	P	P	12 02 50.2	-0.8
	comp=Z,1.1nm,0.8s,baz=287,slow=4.7,SNR=3.9						
NOA				LR	LR	12 36 04.5	
	comp=Z,83nm,21.7s,baz=285,slow=33						
	comp=Z,1.1nm,0.8s						
ARCES	ARCESS Array B	86.17	19	P	P	12 03 02.5	-1.2
	comp=Z,1.0nm,0.5s,baz=287,slow=4.9,SNR=12						
	comp=Z,1.0nm,0.5s						
TORD	Torodi Ar. Bea	87.65	77	P	P	12 03 09.4	-2.6
	comp=Z,5.7nm,0.3s,baz=293,slow=5.4,SNR=1.6						
	comp=Z,5.7nm,0.3s						
TORD	Torodi Ar. Bea	87.65	77	P	P	12 03 09.9	-2.1
TORD				IAmb	IAmb	12 03 20.9	
	comp=Z,9.5nm,0.8s						
TIXI	Tiksi	91.89	349	P	P	12 03 29.6	-1.1
TIXI				IAmb	IAmb	12 03 45.6	
	comp=Z,4.2nm,0.8s						
ZALV	Zalesovo Beam	113.16	4	PKiKP	PKiKP	12 08 59.0	-0.9
	comp=Z,1.6nm,0.6s,baz=246,slow=2.2,SNR=6.6						
ZALV				PP	PP	12 09 47.7	-1.3
	comp=Z,0.5nm,0.5s,baz=15,slow=6.3,SNR=4.2						
BOSA	Boshof	117.16	116	PKP	PKiKP	12 09 08.7	+0.2
	comp=Z,1.3nm,0.5s,baz=261,slow=2.4,SNR=4.1						
BOSA				pPKP	pPKPdf	12 09 24.3	-0.3
	comp=Z,5.8nm,0.8s,baz=128,slow=1.9,SNR=7.0						
SONM	Songino Array	117.98	348	PKP	PKPdf	12 09 09.6	0.0
	comp=Z,2.0nm,0.6s,baz=345,slow=1.5,SNR=11						
SONM				pPKP	pPKPdf	12 09 25.1	-0.6
	comp=Z,1.8nm,0.7s,baz=344,slow=1.8,SNR=6.8						
SONM				PKKPbc	PKKPbc	12 19 29.6	-1.5
	comp=Z,0.9nm,0.6s,baz=187,slow=3.8,SNR=4.7						
SONM	Songino Array	117.98	348		PKPdf	12 09 09.4	-0.2
LSZ	Lusaka	119.10	100	PKP	PKPdf	12 09 12.4	-0.1
	comp=Z,2.9nm,0.6s,baz=169,slow=1.1,SNR=5.9						
KSRS	Korea Array	119.11	327	PKP	PKiKP	12 09 12.7	+0.8
	comp=Z,3.4nm,0.8s,baz=9.5,slow=2.0,SNR=10						
KSRS				pPKP	pPKPdf	12 09 27.6	-0.3
	comp=Z,4.2nm,0.7s,baz=12,slow=1.7,SNR=9.1						
MATP	Matopo	119.84	106	PKP	PKiKP	12 09 14.6	+0.6
	comp=Z,3.6nm,0.6s,baz=246,slow=1.2,SNR=10						
MATP				pPKP	pPKPdf	12 09 28.0	-2.0
	comp=Z,5.2nm,0.7s,baz=260,slow=4.8,SNR=7.2						
MKAR	Makanchi Array	120.01	7	PKP	PKPdf	12 09 12.2	-1.2
	comp=Z,1.0nm,0.7s,baz=5.4,slow=2.6,SNR=6.1						
MKAR				pPKP	pPKPdf	12 09 28.3	-1.2
	comp=Z,1.0nm,0.8s,baz=349,slow=2.5,SNR=2.8						
MAW	Mawson	122.32	168	PKP	PKiKP	12 09 18.4	+1.1
	comp=Z,2.3nm,0.8s,baz=184,slow=0.9,SNR=7.1						
MAW				pPKP	pPKPdf	12 09 33.2	+0.1
	comp=Z,5.6nm,0.7s,baz=124,slow=3.1,SNR=5.6						
MAW	Mawson	122.32	168		PKiKP	12 09 18.1	+0.9
WMQ	Urumqi	123.42	3	PKP	PKiKP	12 09 20.6	+0.2
WMQ				sPKP		12 09 47.2	
WMQ				PP	PP	12 11 04.3	+4.1
WMQ				AMB	AMB		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=N,240nm,15.1s						
WMQ				LR	LR		
	comp=Z,140nm,19.9s						
GTA	Gaotai	127.29	352	PKPbc	PKiKP	12 09 28.3	0.0
GTA				sPKP		12 10 07.5	
NJ2	Nanjing	127.97	330	*e*P	PKiKP	12 09 30.4	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LZH	Lanzhou	129.78	347	*e*PKP	PKiKP	12 09 34.4	+1.0
LZH				pPKP	sPKPdf	12 09 54.8	+0.3
STKA	Stephens Creek	130.16	239	PKP	PKiKP	12 09 38.6	+4.6
	comp=Z,1.4nm,0.5s,baz=143,slow=10,SNR=3.7						
STKA	Stephens Creek	130.16	239		PKiKP	12 09 33.7	-0.3
XAN	Xi'an	130.30	341	P	PKiKP	12 09 35.0	+0.7
XAN				pP	pPKPdf	12 09 50.2	+0.6
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
OPO	Ambohidratompo	137.42	103	PKP	PKiKP	12 09 49.4	+0.1
	comp=Z,3.3nm,0.6s,baz=225,slow=1.4,SNR=7.9						
GYA	Guiyang	138.02	339	⇓P	PKPdf	12 09 46.7	-1.6
GYA				pmax	pmax		
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	138.07	255	PKhKP	PKPpre	12 09 39.6	
	comp=Z,0.4nm,0.6s,baz=91,slow=3.2,SNR=5.1						
WRA				PKP	PKiKP	12 09 49.6	-0.7
	comp=Z,6.0nm,0.8s,baz=92,slow=2.1,SNR=36						
WRA				pPKP	pPKPdf	12 10 05.3	+0.9
	comp=Z,5.9nm,0.9s,baz=84,slow=1.3,SNR=8.0						
WRA	Warramunga Arr	138.07	255		PKPdf	12 09 48.2	-0.2
ASAR	Alice Springs	138.16	249	PKhKP	PKPpre	12 09 39.5	
	comp=Z,1.0nm,0.8s,baz=106,slow=3.1,SNR=11						
ASAR				PKP	PKiKP	12 09 50.1	-0.3
	comp=Z,1.7nm,0.8s,baz=103,slow=3.2,SNR=16						
ASAR				pPKP	pPKPdf	12 10 04.8	+0.2
	comp=Z,3.9nm,1.0s,baz=97,slow=3.7,SNR=5.3						
ASAR	Alice Springs	138.16	249		PKPdf	12 09 47.9	-0.5
PZH	PanZhiHua	139.45	345	PKP	PKPdf	12 09 51.6	+0.7
CMAR	Chiang Mai Arr	147.86	346	PKPbc	PKPdf	12 10 07.1	+1.5
	comp=Z,6.5nm,0.6s,baz=341,slow=3.3,SNR=26						
CMAR				pPKPbc	pPKPdf	12 10 21.9	+0.2
	comp=Z,4.0nm,0.4s,baz=342,slow=1.9,SNR=4.2						
CMAR	Chiang Mai Arr	147.86	346		PKPbc	12 10 07.9	-0.6

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*NOU **02** 11:58:45.5, 37°.44S×179°.99E, h114^{km}, mb3.9/6, Off E. Coast of N. Island, N.Z.*

*WEL **02** 11:59:09.2±0.6, 38°S±3°×17°8E±°, h28^{km}±5^{km}, M3.4/13, ML3.8/13, MLv3.4/13, Error ellipse: s-maj=0.0km s-min=0.0km az=129.8*

ISC 02 11:59:10.2±1.0**, 38°.03S**±0°.02×**177°.92E**±0°.03**, h33**^{km}±2^{km}**,**
n107, σ**1**^{s}**.18**/109**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	Tauwhareparae	0.16	161	P	Pn	11 59 16.5	+1.6
TWGZ				S	Sb	11 59 22.6	+1.7
PKGZ	Pakihiroa	0.19	42	P	Pn	11 59 16.4	+0.6
PKGZ				S	Sb	11 59 22.2	+0.8
RUGZ	Raukumara Rang	0.20	288	P	Pn	11 59 16.3	+0.2
RUGZ				S	Sb	11 59 21.6	0.0
PUZ	Puketiti	0.27	99	P	Pn	11 59 17.6	-0.1
PUZ				S	Sb	11 59 24.2	+1.4
HAZ	Te Kaha	0.29	339	P	Pn	11 59 17.3	-0.7
HAZ				S	Sn	11 59 23.1	+0.6
TKGZ	Te Karaka	0.41	187	P	Pb	11 59 19.4	-0.1
TKGZ				S	Sn	11 59 27.8	+1.4
MWZ	Matawai	0.43	225	P	Pb	11 59 19.3	-0.6
MWZ				S	Sb	11 59 26.6	0.0
WMGZ	Waiomatatini S	0.45	62	P	Pb	11 59 20.1	0.0
WMGZ				S	Sn	11 59 29.0	+1.8
CNGZ	Carnagh Statio	0.51	153	P	Pb	11 59 21.0	0.0
MXZ	Matakaoa Point	0.56	34	P	Pn	11 59 21.5	-0.2
RAGZ	Rawiri	0.61	220	P	Pn	11 59 22.4	-0.2
RAGZ				S	Sb	11 59 32.4	+1.2
URZ	Urewera	0.68	250	P	Pn	11 59 22.9	-0.5
URZ	Urewera	0.68	250	P	Pn	11 59 23.3	-0.1
RIGZ	Rimuhau	0.69	190	P	Pn	11 59 23.4	-0.3
WIZ	White Island	0.76	311	P	Pn	11 59 23.4	-1.3
WHRZ	Whale Island	0.76	283	P	Pn	11 59 23.9	-0.7
SNGZ	Shannon Statio	0.88	211	P	Pn	11 59 26.0	-0.3
PRGZ	Paritu Road	0.89	182	P	Pn	11 59 25.5	-1.0
EDRZ	Edgecumbe	0.93	265	P	Pn	11 59 24.2	-2.8
RTZ	Ruatahuna	0.94	231	P	Pn	11 59 26.9	-0.3
MARZ	Manawahe	0.98	272	P	Pn	11 59 26.9	-0.8
MUGZ	Murupara	1.01	243	P	Pn	11 59 27.5	-0.5
KNZ	Kokohu	1.01	191	P	Pn	11 59 26.8	-1.3
OPRZ	Ohinepanea	1.09	279	P	Pn	11 59 27.7	-1.5
RAHZ	Arahi	1.10	216	P	Pn	11 59 29.2	-0.2
MHGZ	Mahia Peninsul	1.12	180	P	Pn	11 59 28.6	-1.0
TARZ	Mount Tarawera	1.13	259	P	Pn	11 59 29.5	-0.3
RRRZ	Republican Roa	1.15	254	P	Pn	11 59 29.6	-0.4
MTHZ	Maungataniwha	1.18	225	P	Pn	11 59 30.3	-0.1
OMRZ	Omania	1.22	266	P	Pn	11 59 31.1	+0.1
HLRZ	Highlands Stat	1.25	259	P	Pn	11 59 31.3	-0.1
PRRZ	Plateau Road	1.29	248	P	Pn	11 59 31.3	-0.6
KARZ	Kaharoa	1.32	270	P	Pn	11 59 31.5	-0.8
HRRZ	Handcock Road	1.34	254	P	Pn	11 59 32.2	-0.4
TGRZ	Tauranga	1.34	282	P	Pn	11 59 31.4	-1.2
ALRZ	Allen Road	1.35	246	P	Pn	11 59 32.2	-0.5
HSRZ	Hossack Road	1.35	257	P	Pn	11 59 32.7	0.0
NGRZ	Ngongotaha	1.37	266	P	Pn	11 59 33.0	0.0
NMHZ	Naumai	1.38	219	P	Pn	11 59 33.1	-0.1
MRHZ	Matea Rd	1.43	235	P	Pn	11 59 33.4	-0.4
ARHZ	Aropaoanui	1.43	210	P	Pn	11 59 33.4	-0.5
GRRZ	Galatos Road	1.46	257	P	Pb	11 59 39.4	+2.6
WPRZ	Whakapapatarin	1.47	250	P	Pn	11 59 34.1	-0.2
MYRZ	Mayor Island	1.52	299	P	Pn	11 59 33.7	-1.4
KMRZ	Kaimai	1.57	276	P	Pn	11 59 34.4	-1.4
BKZ	Black Stump Fm	1.59	224	P	Pn	11 59 35.4	-0.8
BKZ	Black Stump Fm	1.59	224	P	Pn	11 59 35.6	-0.5
HATZ	Hinemaiaia	1.67	238	P	Pn	11 59 36.4	-0.8
MCHZ	McNeill Hill	1.71	214	P	Pn	11 59 36.9	-0.7
CKHZ	Cape Kidnapper	1.75	202	P	Pn	11 59 36.6	-1.7
KWHZ	Kaweka Forest	1.82	219	P	Pn	11 59 38.8	-0.5
RITZ	Rihia Road	1.87	239	P	Pn	11 59 39.8	-0.2
RATZ	Rangitukua	1.88	243	P	Pn	11 59 39.8	-0.3
TLZ	Tolley Road	1.90	260	P	Pn	11 59 39.5	-0.8
TOZ	Tahuroa Road	1.93	278	P	Pn	11 59 39.6	-1.1
KAHZ	Kahuranaki	1.94	204	P	Pn	11 59 39.1	-1.8
KRHZ	Kereru	2.02	216	P	Pn	11 59 40.2	-1.7
TMVZ	Te Maari	2.05	237	P	Pn	11 59 41.6	-0.8
ETVZ	East Tongariro	2.05	237	P	Pn	11 59 41.7	-0.9
NTVZ	North Tongarir	2.06	238	P	Pn	11 59 41.9	-0.7
BHHZ	Black Hill Sta	2.06	224	P	Pn	11 59 41.5	-1.0
OTVZ	Oturere	2.10	237	P	Pn	11 59 42.4	-0.8
NNVZ	North Ngauruho	2.11	238	P	Pn	11 59 42.9	-0.5
WTVZ	West Tongariro	2.12	238	P	Pn	11 59 43.0	-0.5
SNVZ	South Ngauruho	2.13	236	P	Pn	11 59 43.0	-0.6
NGZ	Ngauruhoe	2.15	237	P	Pn	11 59 43.1	-0.7
TUVZ	Tukino	2.16	234	P	Pn	11 59 43.4	-0.7
PXZ	Pawanui	2.16	202	P	Pn	11 59 41.0	-2.9
KUZ	Kuaotunu	2.17	306	P	Pn	11 59 42.0	-1.9
MOVZ	Moawhango	2.18	230	P	Pn	11 59 43.1	-1.2
WHVZ	Whangaehu Hut	2.21	235	P	Pn	11 59 43.9	-0.9
FWVZ	Far West T-bar	2.22	236	P	Pn	11 59 44.0	-0.9
WNVZ	Wahianoa	2.23	234	P	Pn	11 59 44.1	-0.9
PNHZ	Pukenui	2.31	215	P	Pn	11 59 43.7	-2.3
WPHZ	Waipukurau	2.34	209	P	Pn	11 59 44.0	-2.3
PKVZ	Pokaka	2.37	237	P	Pn	11 59 46.7	-0.2
MKAZ	Moumakai	2.38	292	P	Pn	11 59 45.5	-1.4
PRHZ	Porangahau	2.45	204	P	Pn	11 59 44.9	-3.0
HIZ	Hauiti	2.46	258	P	Pn	11 59 48.1	+0.1
HIZ	Hauiti	2.46	258	P	Pn	11 59 48.1	+0.1
WIAZ	Waiheke Island	2.54	298	P	Pn	11 59 47.8	-1.3
TSZ	Takapari Road	2.54	216	P	Pn	11 59 46.5	-2.6
ETAZ	East Tamaki Re	2.61	293	P	Pn	11 59 49.2	-0.8
GRZ	Great Barrier	2.65	311	P	Pn	11 59 49.1	-1.4
VRZ	Vera Road	2.71	245	P	Pn	11 59 51.6	+0.3
MBAZ	Motutapu North	2.71	297	P	Pn	11 59 50.6	-0.9
HBAZ	Herne Bay Bore	2.79	294	P	Pn	11 59 52.2	-0.4
WAZ	Wanganui	2.86	232	P	Pn	11 59 53.4	-0.2
WTAZ	Waiatarua	2.88	291	P	Pn	11 59 53.5	-0.3
RVAZ	Riverhead Bore	2.94	294	P	Pn	11 59 53.9	-0.7
PRWZ	Pori Road	2.94	210	P	Pn	11 59 51.8	-2.9
BFZ	Birch Farm	2.95	206	P	Pn	11 59 51.6	-3.1
LREZ	Lake Rotokare	3.10	241	P	Pn	11 59 57.1	+0.3
MRZ	Mangatainoka R	3.19	214	P	Pn	11 59 54.7	-3.4
NEZ	North Egmont	3.24	246	P	Pn	11 59 59.7	+0.9
PKE	Pukeiti	3.29	248	P	Pn	12 00 00.4	+0.9
KHEZ	Kahui Hut	3.31	246	P	Pn	12 00 00.8	+1.1
TMWZ	Te Maipa	3.45	206	P	Pn	11 59 57.9	-3.8
OGWZ	Otaki Gorge	3.50	216	P	Pn	11 59 58.8	-3.6
WCZ	Waipu Caves	3.54	305	P	Pn	12 00 02.0	-0.8
KIW	Kapiti Island	3.66	218	P	Pn	12 00 01.0	-3.6
DUWZ	D’Urville Isla	4.15	227	P	Pn	12 00 07.7	-3.6
OUZ	Omahuta	4.46	308	P	Pn	12 00 15.2	-0.3
QRZ	Quartz Range	5.02	235	P	Pn	12 00 20.6	-2.6
KHZ	Kahutara	5.52	216	P	Pn	12 00 25.5	-4.5
CTZ	Chatham Island	7.05	146	P	Pn	12 00 49.8	-1.1
ODZ	Otahua Downs	8.88	216	P	Pn	12 01 10.6	-5.5

DDA 02 12:16:15.5±0.0**, 39°.83N**×**39°.27E, h7**^{km}±1^{km}**, ML1.3,**
Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELT	Kelkit	0.32	357	P	Pg	12 16 21.9	0.0
KELT				S	Sg	12 16 25.8	-0.3
KELT				*i* AML	AML	12 16 26.0	
	comp=E,66nm,0.5s						
KELT				*i* AML	AML	12 16 26.0	
	comp=N,92nm,0.4s						
REFA	Refahiye_ERZN	0.40	281	P	Pg	12 16 23.8	+0.5
REFA				S	Sb	12 16 30.1	-1.3
REFA				*i* AML	AML	12 16 32.0	
	comp=N,20nm,0.3s						
REFA				*i* AML	AML	12 16 33.0	
	comp=E,22nm,0.4s						
TNCL	Tunceli-Merkez	0.74	164	P	Pb	12 16 30.3	-0.5
TNCL				S	Sb	12 16 41.1	-0.1
TNCL				*i* AML	AML	12 16 42.0	
	comp=N,16nm,0.4s						
TNCL				*i* AML	AML	12 16 42.0	
	comp=E,9.8nm,0.2s						
KEMA	Kemaliye	0.82	227	P	Pg	12 16 31.6	+0.3
KEMA				S	Sb	12 16 43.4	-0.1
KEMA				*i* AML	AML	12 16 44.0	
	comp=N,15nm,0.3s						
KEMA				*i* AML	AML	12 16 45.0	
	comp=E,15nm,0.4s						
SUSE	Susehri	0.91	295	P	Pg	12 16 33.2	+0.3
SUSE				S	Sb	12 16 45.9	-0.1

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*JMA **02** 12:16:51.9±0.2, 24°.0N±0°.9×12°2E±°, h22^{km}±1^{km}, MV3.0/10, TAIWAN REGION*

*TAP **02** 12:16:53.8, 24°.19N×121°.76E, h12^{km}, ML3.7, C*

*ASIES **02** 12:16:54.1, 24°.22N×121°.74E, h17^{km}, MW3.5*

ISC 02 12:16:54.0±0.8**, 24°.19N**±0°.01×**121°.79E**±0°.01**, h18**^{km}±1^{km}**,**
n106, σ**0**^{s}**.78**/190**, 2C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.13	341	⇓*i*P	Pb	12 16 57.2	-0.3
	baz=356						
EHP				*i* S	Sb	12 16 59.8	0.0
	baz=356						
ETL	Fush Village	0.15	260	⇓*i*P	Pb	12 16 57.4	-0.6
	baz=256						
ETL				*e*S	Sb	12 17 00.1	-0.5
	baz=256						
NACB	Ninganchiao	0.18	266	*e*P	Pb	12 16 57.6	-0.9
	baz=258						
NACB				*e*S	Sb	12 17 00.0	-1.4
	baz=258						
TWD	Chiawan	0.20	239	⇓*i*P	Pb	12 16 58.1	-0.9
	baz=240						
TWD				S	Sb	12 17 01.3	-1.1
	baz=240						
ENA	Nanau	0.24	350	⇓*i*P	Pb	12 16 59.0	-0.8
	baz=358						
ENA				S	Sb	12 17 02.7	-1.1
	baz=358						
EWUT	Wuta	0.26	358	⇓*i*P	Pb	12 16 59.4	-0.7
	baz=4.0						
EWUT				*i* S	Sb	12 17 03.3	-0.9
	baz=4.0						
HWA	Hwalien	0.27	219	*e*P	Pg	12 17 00.7	+0.8
	baz=223						
ETLH	Xiulin Townshi	0.28	274	P	Pb	12 16 59.4	-1.1
	baz=275						
ETLH				S	Sb	12 17 03.4	-1.5
	baz=275						
ETM	Tongmen	0.35	231	P	Pg	12 17 00.8	-0.5
	baz=229						
TEYL	Yanliau Villag	0.36	209	*e*P	Pb	12 17 02.1	+0.2
	baz=216						
TEYL				*e*S	Sn	12 17 09.4	-1.6
	baz=216						
LATG	Datong	0.42	326	⇓*i*P	Pg	12 17 02.3	-0.4
	baz=328						
LATG				*i* S	Sg	12 17 08.1	-0.5
	baz=328						
TWC	Suao	0.42	8	⇓*i*P	Pg	12 17 02.5	-0.3
	baz=5.0						
TWC				*i* S	Sg	12 17 08.5	-0.1
	baz=5.0						
NNSB	Datong	0.44	303	⇓*i*P	Pg	12 17 02.6	-0.5
	baz=305						
NNSB				*i* S	Sg	12 17 08.5	-0.6
	baz=305						
NDS	Dongshan	0.45	352	P	Pb	12 17 02.9	-0.5
	baz=355						
NDS				S	Sg	12 17 09.1	-0.3
	baz=355						
NNS	Nan Shan	0.45	304	⇓*i*P	Pb	12 17 02.8	-0.8
	baz=306						
NNS				*i* S	Sg	12 17 08.9	-0.7
	baz=306						
WHF	Hehuan Shan	0.48	265	⇓*i*P	Pg	12 17 03.2	-0.6
	baz=265						
WHF				*i* S	Sg	12 17 09.4	-1.0
	baz=265						
ESL	Shilin	0.49	221	P	Pb	12 17 03.5	-0.6
	baz=225						
ESL				*e*S	Sg	12 17 11.1	+0.5
	baz=225						
ENTT	Nioudou	0.49	336	⇓*i*P	Pb	12 17 03.8	-0.4
	baz=339						
ENTT				*i* S	Sb	12 17 10.7	-0.5
	baz=339						
TEGC	Jichi Village	0.53	205	*e*P	Pg	12 17 05.0	+0.5
	baz=196						
TEGC				*e*S	Sn	12 17 14.9	-0.1
	baz=196						
TWE	Neicheng	0.54	348	⇓*i*P	Pb	12 17 04.8	-0.2
	baz=352						
TWE				*i* S	Sb	12 17 12.0	-0.5
	baz=352						
CHGB	Renai	0.57	258	⇓*i*P	Pb	12 17 05.1	-0.5
	baz=251						
CHGB				*i* S	Sb	12 17 12.5	-1.0
	baz=251						
ILA	Ilan	0.58	356	*e*P	Pb	12 17 05.2	-0.4

	baz=354						
ILA	baz=354			*e*S	Sb	12 17 13.2	-0.3
TDCB	Techi baz=277	0.58	277	⇓*i*P	Pb	12 17 05.3	-0.3
TDCB	baz=277			*i* S	Sb	12 17 12.6	-1.0
FUSB	Fushanzhiwuyua baz=344	0.60	342	⇓*i*P	Pb	12 17 05.8	-0.1
FUSB	baz=344			*i* S	Sb	12 17 13.5	-0.6
OWD	Renai baz=247	0.60	248	*e*P	Pb	12 17 05.3	-0.8
OWD	baz=247			*e*S	Sb	12 17 13.4	-0.9
YHNB	Yeheng baz=324	0.61	322	P	Pb	12 17 06.0	-0.2
YHNB	baz=324			*e*S	Sb	12 17 14.1	-0.4
EGFH	Guangfu baz=219	0.61	213	*e*P	Pg	12 17 06.2	+0.1
EGFH	baz=219			*e*S	Sg	12 17 15.4	+1.1
NSK	Sanguang baz=323	0.62	321	P	Pb	12 17 06.2	-0.2
NSK	baz=323			*e*S	Sb	12 17 14.4	-0.5
WUSB	Renai baz=245	0.64	253	⇓*i*P	Pb	12 17 06.3	-0.4
WUSB	baz=245			*i* S	Sb	12 17 14.4	-1.1
NWLT	Wulai baz=338	0.64	336	*e*P	Pb	12 17 06.6	-0.2
NWLT	baz=338			*e*S	Sb	12 17 14.8	-0.6
NTC	Toucheng baz=5.0	0.67	3	P	Pb	12 17 07.1	0.0
NTC	baz=5.0			S	Sb	12 17 15.7	-0.3
EGS	baz=21	0.67	11	*e*P	Pg	12 17 07.2	0.0
EGS	baz=21			*e*S	Sg	12 17 16.3	+0.2
VWDT	VWDT baz=234	0.73	234	P	Pb	12 17 08.0	-0.2
VWDT	baz=234			S	Sg	12 17 18.6	+0.5
NFF	Wufeng Townshi baz=307	0.76	306	*e*P	Pg	12 17 08.9	+0.1
NFF	baz=307			*e*S	Sb	12 17 18.5	-0.2
HGSD	Ruisui baz=194	0.77	206	*e*P	Pg	12 17 09.2	+0.2
HGSD	baz=194			*e*S	Sn	12 17 21.8	+0.7
WHP	Taichung City baz=277	0.77	277	*e*P	Pg	12 17 09.2	0.0
WHP	baz=277			*e*S	Sb	12 17 19.1	-0.1
TIPB	Shuangxi baz=4.0	0.78	3	*e*P	Pb	12 17 09.2	+0.1
TIPB	baz=4.0			*e*S	Sb	12 17 19.4	-0.1
EHY	Hungye baz=223	0.80	212	P	Pb	12 17 09.4	0.0
NHDH	Xindian Distri baz=344	0.81	343	*e*P	Pg	12 17 09.8	0.0
NHDH	baz=344			*e*S	Sb	12 17 18.8	-1.3
WCS	Beigang Elemen baz=262	0.81	261	*e*P	Pb	12 17 07.5	-2.1
TWA	Mucha baz=348	0.81	347	*e*P	Pb	12 17 09.8	+0.1
TWA	baz=348			*e*S	Sb	12 17 19.7	-0.6
LIOB	Emei baz=304	0.84	303	*e*P	Pg	12 17 10.5	+0.2
LIOB	baz=304			*e*S	Sb	12 17 21.2	+0.2
TWB1	Santiao Chiao baz=14	0.84	13	*e*P	Pg	12 17 10.3	0.0
TWB1	baz=14			*e*S	Sb	12 17 21.2	+0.2
NSTT	Nanjuang baz=303	0.84	302	P	Pg	12 17 10.6	+0.1
NSTT	baz=303			S	Sb	12 17 21.2	+0.1
SSLB	Suanglung baz=252	0.86	243	⇑*i*P	Pb	12 17 10.1	-0.3
SSLB	baz=252			S	Sb	12 17 21.2	-0.4
SMLT	Sun Moon Lake baz=250	0.86	250	P	Pg	12 17 10.8	-0.1
SMLT	baz=250			S	Sb	12 17 22.2	+0.3
NWF	Wu-fen Shan baz=354	0.88	360	⇓*i*P	Pg	12 17 11.3	+0.1
NWF	baz=354			S	Sb	12 17 22.3	0.0
TAP	Taipei baz=345	0.89	343	*e*P	Pb	12 17 10.0	-0.9
TAP	baz=345			*e*S	Sg	12 17 23.4	+0.4
TYC	Yuchr baz=253	0.90	252	*e*P	Pn	12 17 11.4	-0.2
SXI1	Grass Mountain baz=6.0	0.91	5	⇓*i*P	Pn	12 17 11.8	-0.2
SXI1	baz=6.0			S	Sb	12 17 23.1	0.0
YULB	Yu-li baz=220	0.91	210	*e*P	Pb	12 17 10.4	-0.9
YULB	baz=220			*e*S	Sb	12 17 23.2	+0.2
EYUL	Yuli baz=222	0.94	207	*e*P	Pg	12 17 12.6	+0.3
TWQ1	Liyutan baz=281	0.94	280	P	Pg	12 17 12.7	+0.4
TWQ1	baz=281			*e*S	Sn	12 17 25.3	0.0
SBCB	Hsinchu baz=310	0.95	310	*e*P	Pg	12 17 13.3	+0.9
SBCB	baz=310			*e*S	Sn	12 17 25.6	+0.1
NCUH	Zhongli baz=325	0.95	325	*e*P	Pg	12 17 13.0	+0.5
NCUH	baz=325			*e*S	Sn	12 17 26.1	+0.4
NCU	National Centr baz=326	0.95	325	*e*P	Pn	12 17 12.3	-0.2
NCU	baz=326			*e*S	Sn	12 17 26.6	+1.0
NSY	Sanyi baz=285	0.96	284	*e*P	Pg	12 17 13.7	+1.0
NSY	baz=285			*e*S	Sg	12 17 26.2	+0.7
HSN	Hsinchu baz=303	0.96	310	*e*P	Pg	12 17 13.1	+0.3
HSN	baz=303			*e*S	Sg	12 17 26.1	+0.7
TWS1	Kuangyinshan baz=349	0.97	340	*e*P	Pg	12 17 13.5	+0.6
TWS1	baz=349			*e*S	Sn	12 17 25.9	-0.2
NMLH	Miaoli baz=292	0.97	291	*e*P	Pg	12 17 13.7	+0.8
NMLH	baz=292			*e*S	Sg	12 17 26.2	+0.4
YM01	YM01 baz=349	0.98	348	*e*P	Pg	12 17 13.1	+0.1
YM01	baz=349			*e*S	Sn	12 17 25.9	-0.4
TCU	Taichung baz=269	1.01	268	*e*P	Pg	12 17 14.8	+1.1
TCU	baz=269			*e*S	Sg	12 17 28.9	+1.9
NTST	Danshui baz=351	1.02	343	*e*P	Pg	12 17 14.3	+0.4
NTST	baz=351			*e*S	Sg	12 17 29.0	+1.8
ANP	Anpu baz=348	1.02	346	*e*P	Pg	12 17 14.1	+0.1
YUS	Yu-Shan baz=229	1.03	228	*e*P	Pb	12 17 13.5	-0.1
YUS	baz=229			*e*S	Sb	12 17 26.9	-0.1
WJS	Zhushan baz=246	1.03	250	*e*P	Pg	12 17 14.2	+0.1
WJS	baz=246			*e*S	Sg	12 17 28.8	+1.2
WNT	Mingjian baz=249	1.05	253	*e*P	Pg	12 17 15.1	+0.6
WNT	baz=249			*e*S	Sg	12 17 30.6	+2.4
WDJ	Dajia District baz=280	1.06	279	*e*P	Pg	12 17 15.5	+1.0
WDJ	baz=280			*e*S	Sg	12 17 29.1	+0.7
FULB	Fuli baz=221	1.08	205	*e*P	Pg	12 17 14.8	-0.1
JYNG	Yonagunijimaku	1.09	76	P	Pg	12 17 15.1	0.0
JYNG				S	Sg	12 17 30.9	+1.5
TWY	Chenhua baz=337	1.10	351	*e*P	Pg	12 17 16.3	+1.0
ALS	Alishan baz=234	1.12	233	⇑P	Pb	12 17 15.2	+0.1
ALS	baz=234			*e*S	Sg	12 17 31.2	+0.7
WCHH	Zhanghua baz=266	1.13	265	*e*P	Pg	12 17 16.1	+0.3
WCHH	baz=266			*e*S	Sg	12 17 32.3	+1.7
CHKT	Chengkung baz=187	1.15	200	*e*P	Pb	12 17 15.1	-0.3
YOJ	Yonaguni jima baz=63	1.15	76	*e*P	Pg	12 17 15.9	-0.4
YOJ	Yonaguni jima	1.15	76	P	Pg	12 17 16.1	-0.2
YOJ				*e*S	Sg	12 17 31.4	0.0
CHN5	Tsauling baz=242	1.17	240	*e*P	Pg	12 17 16.7	0.0
CHN5	baz=242			*e*S	Sg	12 17 33.9	+1.8
ELDTW	Lidau baz=202	1.22	216	*e*P	Pn	12 17 15.4	-0.8
WDLH	Douliu baz=248	1.25	247	*e*P	Pg	12 17 17.9	-0.1
WDLH	baz=248			*e*S	Sg	12 17 36.7	+2.3
EDH	Donghe baz=202	1.29	200	*e*P	Pn	12 17 15.8	-1.3
EDH	baz=202			*e*S	Sb	12 17 34.6	+0.8
WRL	Guolierlin Hig baz=259	1.32	258	*e*P	Pg	12 17 19.0	-0.5
WRL	baz=259			*e*S	Sg	12 17 37.0	+0.3
STYH	Taoyuan baz=225	1.37	223	*e*P	Pb	12 17 19.2	+0.1
STYH	baz=225			*e*S	Sb	12 17 36.8	+0.5
TPUB	Ta-pu baz=221	1.38	231	*e*P	Pb	12 17 19.9	+0.6
TPUB	baz=221			*e*S	Sg	12 17 38.0	-0.6
LONT	Longtian baz=207	1.41	205	*e*P	Pn	12 17 17.8	-1.0
CHY	Chiayi baz=243	1.42	242	*e*P	Pb	12 17 20.8	+0.7
CHY	baz=243			*e*S	Sg	12 17 41.5	+1.5
WTP	Ta-pu baz=231	1.43	229	*e*P	Pg	12 17 20.9	-0.6
WTP	baz=231			*e*S	Sg	12 17 40.0	-0.1
TWK	Hsinying baz=234	1.50	233	*e*P	Pb	12 17 22.0	+0.6
TWK	baz=234			*e*S	Sg	12 17 41.8	-0.7
TWG	Pinlang baz=191	1.51	206	*e*P	Pn	12 17 18.8	-1.4
TWGBT	Beinan baz=191	1.51	206	*e*P	Pn	12 17 18.9	-1.2
SNST	Tainan City baz=233	1.52	231	*e*P	Pg	12 17 24.0	+0.7
SNST	baz=233			*e*S	Sg	12 17 43.8	+0.5
CHN1	Nanshi baz=231	1.52	229	*e*P	Pb	12 17 22.5	+0.7
CHN1	baz=231			*e*S	Sg	12 17 44.9	+1.7
SGST	Jiashian baz=227	1.56	225	*e*P	Pb	12 17 22.3	0.0
WSL	Shuilin Townsh baz=248	1.57	245	*e*P	Pb	12 17 22.7	+0.1
WSL	baz=248			*e*S	Sg	12 17 44.2	-0.5
ICHU	Yijhu baz=242	1.61	240	*e*P	Pb	12 17 23.6	+0.4
ICHU	baz=242			*e*S	Sg	12 17 46.3	+0.5
CHN8	Yiju baz=227	1.67	240	*e*S	Sg	12 17 48.2	+0.3
SCST	Cishan baz=225	1.76	223	*e*P	Pb	12 17 25.7	0.0
IRIF	Iriomote-Funau	1.78	85	P	Pb	12 17 24.9	-1.2
IRIF				S	Sb	12 17 47.6	-0.5
SSD	Sandimen baz=231	1.78	217	*e*P	Pb	12 17 25.7	-0.5
SSD	baz=231			*e*S	Sb	12 17 48.7	+0.5
TSMG	Majia baz=208	1.81	216	*e*P	Pb	12 17 26.6	0.0
MASBT	Mashibuluo baz=215	1.89	214	*e*P	Pn	12 17 26.4	+1.0
MASBT	baz=215			*e*S	Sb	12 17 51.5	+0.2
JKRS	Kuro-shima	2.03	88	P	Pb	12 17 28.8	-1.5
JKRS				S	Sb	12 17 55.1	-0.1
WDGT	Dungji baz=249	2.16	245	*e*P	Pn	12 17 30.4	+1.4
JIJ	Ishigaki jima	2.16	85	P	Pn	12 17 29.9	+0.8
JIJ				S	Sn	12 17 56.7	+1.3
JISG	Ishigakijimahi	2.34	80	P	Pn	12 17 32.1	+0.6
JISG				*e*S	Sn	12 18 01.2	+1.4
JTJ	Tarama	2.70	80	*e*S	Sn	12 18 11.1	+2.5
XPSS	Dashiqiu baz=331	3.09	333	*e*P	Pn	12 17 41.3	-0.5

ISK 02 12:17:05.1, 39°.08N×37°.34E, h0^{km}, ML2.3/3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DARE	Darende-Malaty	0.52	168	PG	Pg	12 17 15.9	+0.9
DARE				SG	Sb	12 17 24.7	-0.5
ARPR	Arapgir-MALATY	0.77	88	PG	Pb	12 17 21.3	-0.2
ARPR				SG	Sb	12 17 32.9	+0.2
SARI	SarD1z-Kayseri	0.98	228	PG	Pb	12 17 24.9	-0.2
SARI				SG	Sn	12 17 40.1	-1.0

IDC ***02*** *12:17:11.6±0.8, 6°.16S×107°.41W, h0^{km}, mb4.4/16, mbtmp4.4/16, MS5.1/51, Error ellipse: s-maj=26.0km s-min=14.4km az=56.0*

MOS ***02*** *12:17:13.7±1.1, 6°.03S×107°.10W, h10^{km}, mb5.1/38, Error ellipse: s-maj=11.8km s-min=6.7km az=95.1*

NEIC ***02*** *12:17:16.5±1.7, 6°.1S±0°.1×107°.2W±0°.1, h15^{km}±3^{km}, mb5.0/170, Mwc5.6(GCMT), Error ellipse: s-maj=19.8km s-min=14.9km az=71.0*

GCMT ***02*** *12:17:16.5±0.1, 6°.16S±0°.01×107°.28W±0°.01, h15^{km}, MW5.6/142, Moment Tensor Solution. s123,c225; s142,c294; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.03; $M_{\theta\theta}$0.62±.03; $M_{\phi\phi}$-0.46±.03; $M_{r\theta}$-0.04±.08; $M_{\theta\phi}$2.78±.03; $M_{\phi r}$-0.02±.08; Best double couple: $M_0$2.83300×10^{17} NP1:ϕ_s186.00000°, δ89.00000°, λ180.00000°. NP2:ϕ_s276.00000°, δ90.00000°, λ1.00000°. Principal axes: T 2.9090, Plg1.0000°, Azm141.0000°; N -0.1530, Plg89.0000°, Azm299.0000°; P -2.7570, Plg0.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *12:17:17, 6°.17S×107°.26W, h14^{km}, Moment Tensor Solution. Duration: 3^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-0.55; $M_{r\theta}$0.23; $M_{\theta\phi}$2.84; $M_{\phi r}$0.30; Fault plane solution: $M_0$2.93000×10^{17} NP1:ϕ_s96.00000°, δ84.00000°, λ4.00000°. NP2:ϕ_s6.00000°, δ86.00000°, λ174.00000°. Principal axes: T 2.9879, Plg7.0000°, Azm321.0000°; N -0.1286, Plg83.0000°, Azm155.0000°; P -2.8593, Plg2.0000°, Azm51.0000°;*

ISC 02 12:17:14.2±0.3**, 6°.13S**±0°.06×**107°.28W**±0°.07**, h10^{km}, n692, σ1^{s}44**/693**, mb4.9**/108**, MS5.2**/61**, 3C-1D, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	17.80	73		Pn	12 21 22.1	-0.2
PAYG	comp=Z,151nm,1.6s			IAmb	IAmb	12 22 13.9	
RPN	Rapa Nui comp=Z,5µm,19.0s,baz=11,slow=31	20.98	185	LR	LR	12 27 54.3	
H06S1	SOCORRO T SNR=37	24.97	352	T	T	12 48 39.3	
H06E1	SOCORRO T-PHAS SNR=21	25.01	352	T	T	12 48 41.9	
TLIG	Tlapa	25.06	20	P	P	12 22 39.5	+0.4
CMIG	Matias Romero comp=Z,4.8nm,1.1s,baz=216,slow=8.5,SNR=5.8	26.12	28	P	P	12 22 47.6	-1.0
CMIG	comp=Z,6µm,20.7s,baz=201,slow=31 comp=Z,4.8nm,1.1s			LR	LR	12 30 49.1	
CCIG	Comitan	26.84	34	P	P	12 22 55.7	+0.4
CCIG	comp=Z,34nm,1.2s			IAmb	IAmb	12 23 00.8	
MTO3	Montecristo	27.05	41	P	P	12 22 57.4	+0.2
MTO3	comp=Z,37nm,1.4s			IAmb	IAmb	12 23 24.2	
HZTE	Horizontes, Gu	27.31	52	P	P	12 22 59.2	-0.2
JTS	Las Juntas de	27.57	54	c *i*P	P	12 23 04.2	+2.4
JTS	comp=Z,68nm,2.0s			pmax	pmax		
JTS	Las Juntas de	27.57	54	P	P	12 23 03.0	+1.2
JTS	comp=Z,18nm,0.5s			IAmb	IAmb	12 23 47.5	
CDITO	Canoas	28.38	59	P	P	12 23 09.1	+0.2
ACON	Acoyapa	28.39	51	P	P	12 23 09.9	+0.8
ACON	comp=Z,38nm,1.2s			IAmb	IAmb	12 23 19.6	
MATN	Matagalpa	28.43	48	P	P	12 23 10.3	+0.8
ZAIG	Zacatecas	29.09	9	P	P	12 23 16.0	+0.6
OTAV	Otavalo	29.46	79	P	P	12 23 19.3	+0.2
OTAV	comp=Z,34nm,1.5s			pmax	pmax		
OTAV	Otavalo	29.46	79	P	P	12 23 19.3	+0.2
OTAV	comp=Z,34nm,1.5s			IAmb	IAmb	12 23 30.9	
LPIG	La Paz comp=Z,4µm,20.7s,baz=177,slow=30	30.19	354	LR	LR	12 32 26.2	
NNA	Nana comp=Z,4µm,19.1s,baz=270,slow=29	30.59	103	LR	LR	12 32 15.4	
NNA	Nana	30.59	103	*i* P	P	12 23 30.4	+1.7
NNA	comp=Z,48nm,1.3s			pmax	pmax		
NNA	Nana	30.59	103	P	P	12 23 28.8	+0.1
NNA	comp=Z,52nm,1.4s			IAmb	IAmb	12 23 47.8	
BCIP	Isla Barro Col	31.28	61	P	P	12 23 34.0	-0.7
BCIP	comp=Z,97nm,1.7s			pmax	pmax		
BCIP	Isla Barro Col	31.28	61	P	P	12 23 34.0	-0.7
ROSC	El Rosal comp=Z,6.8nm,0.4s,baz=267,slow=20,SNR=4.9	34.66	72	P	P	12 24 05.6	+0.9
ROSC	comp=Z,3µm,18.7s,baz=257,slow=32 comp=Z,6.8nm,0.4s			LR	LR	12 35 29.3	
ROSC	El Rosal	34.66	72	P	P	12 24 05.0	+0.3
ROSC	comp=Z,135nm,2.0s			pmax	pmax		
ROSC	El Rosal	34.66	72	P	P	12 24 05.0	+0.3
ZARC	Zaragoza, Cauc	35.05	68	P	P	12 24 07.5	-0.2
833A	Chaparral WMA,	35.08	12	P	P	12 24 09.6	+2.0
833A	Chaparral WMA, baz=194	35.08	12	P	P	12 24 06.5	-1.2
HSIG		35.12	354	P	P	12 24 09.0	+1.0
HSIG	comp=Z,20nm,1.0s			IAmb	IAmb	12 24 15.7	
TX31	Lajitas Ar. Si	35.43	5	P	P	12 24 12.0	+1.2
TX31	comp=Z,37nm,1.2s			IAmb	IAmb	12 24 19.2	
TX31	Lajitas Ar. Si baz=186	35.43	5	P	P	12 24 12.6	+1.8
TX32	Lajitas Array	35.43	5	P	P	12 24 11.7	+1.0
TXAR	Lajitas Array comp=Z,1.6nm,0.8s,baz=187,slow=8.8,SNR=13	35.43	5	P	P	12 24 11.5	+0.8
TXAR	comp=Z,2µm,20.8s,baz=190,slow=32 comp=Z,1.6nm,0.8s			LR	LR	12 36 02.0	
TXAR	Lajitas Array	35.43	5	P	P	12 24 11.7	+1.0
TXAR	Lajitas Array	35.43	5	P	P	12 24 11.7	+1.0
JCT	Junction City	37.09	11	P	P	12 24 25.9	+1.0
JCT	comp=Z,22nm,1.2s			pmax	pmax		
JCT	Junction City	37.09	11	P	P	12 24 25.9	+1.0
JCT	Junction City baz=192	37.09	11	S	S	12 30 15.1	+3.9
JCT	Junction City baz=192	37.09	11	P	P	12 24 23.6	-1.4
TBTG	Tabatinga, AM	37.26	89	*e*P	P	12 24 25.1	-1.5
319A	Douglas	37.34	357	P	P	12 24 28.1	+1.0
319A	comp=Z,32nm,1.1s			IAmb	IAmb	12 24 50.2	
HKT	Hockley	37.51	16	*i* P	P	12 24 29.2	+0.8
HKT	comp=Z,25nm,1.3s			pmax	pmax		
MNTX	Cornudas Mount	37.66	3	P	P	12 24 31.1	+1.4
MNTX	comp=Z,28nm,1.3s			IAmb	IAmb	12 24 52.1	
MNTX	Cornudas Mount baz=183,SNR=26	37.66	3	P	P	12 24 30.0	+0.4
MNTX	Cornudas Mount baz=183,SNR=26	37.66	3	P	P	12 24 30.0	+0.4
H03N2	Juan Fernandez baz=313,slow=77,SNR=200	37.82	140	T	T	13 04 22.9	
H03N1	Juan Fernandez baz=313,slow=77,SNR=205	37.84	140	T	T	13 04 29.2	
H03N3	Juan Fernandez baz=313,slow=77,SNR=199	37.84	140	T	T	13 04 23.6	
435B	Jarrell baz=196	37.85	14	P	P	12 24 30.8	-0.6
214A	Organ Pipe Nat	38.23	352	P	P	12 24 36.1	+1.6
214A	Organ Pipe Nat baz=171	38.23	352	P	P	12 24 35.0	+0.4
TUC	Tucson	38.37	355	P	P	12 24 37.3	+1.6
TUC	comp=Z,13nm,1.6s			pmax	pmax		
TUC	Tucson	38.37	355	P	P	12 24 37.3	+1.6
TUC	Tucson baz=174	38.37	355	P	P	12 24 36.1	+0.3
121A	Cookes Peak, D	38.45	359	P	P	12 24 38.1	+1.6
121A	comp=Z,27nm,1.2s			IAmb	IAmb	12 25 01.4	
121A	Cookes Peak, D baz=179	38.45	359	P	P	12 24 38.3	+1.8
121A	baz=179			S	S	12 30 36.8	+4.9
121A	Cookes Peak, D baz=179	38.45	359	P	P	12 24 35.3	-1.2
PB16	IPOC Station P	38.76	112	P	P	12 24 39.2	-0.6
PB11	IPOC Station P	38.97	114	P	P	12 24 40.8	-0.3
WHTX	Lake Whitney, baz=195	39.04	13	P	P	12 24 40.4	-0.9
ABTX	Abilene, Hawle	39.21	10	P	P	12 24 43.5	+0.8
ABTX	comp=Z,38nm,1.4s			IAmb	IAmb	12 24 50.4	
ABTX	Abilene, Hawle baz=192	39.21	10	P	P	12 24 43.9	+1.1
ABTX	Abilene, Hawle baz=192	39.21	10	P	P	12 24 42.4	-0.4
PB04	IPOC Station P	39.28	118	P	P	12 24 43.2	-0.5
PB10	IPOC Station P	39.31	120	P	P	12 24 44.9	+1.1
PB10	comp=Z,56nm,1.8s			IAmb	IAmb	12 24 46.5	
GO01	Chusmiza	39.37	114	P	P	12 24 45.6	+0.7
YUH	Yuha Desert	39.43	348	P	P	12 24 46.2	+1.7
YUH	comp=Z,66nm,1.7s			IAmb	IAmb	12 24 58.7	
SDV	Santo Domingo comp=Z,7.0nm,0.4s,baz=238,slow=6.5,SNR=9.7	39.45	68	P	P	12 24 44.7	-0.6
SDV	comp=Z,2µm,19.9s,baz=242,slow=34 comp=Z,7.0nm,0.4s			LR	LR	12 39 33.6	
SDV	Santo Domingo	39.45	68	*e*P	P	12 24 44.3	-0.9
IKP	In-Ko-Pah, Jac baz=166	39.47	348	P	P	12 24 45.3	+0.3
BAR	Barrett	39.61	348	P	P	12 24 48.2	+2.0
BAR	comp=Z,39nm,1.4s			IAmb	IAmb	12 25 04.9	
GLA	Glamis baz=168	39.62	350	P	P	12 24 45.8	-0.4

LPAZ	La Paz	39.63	108	P	P	12 24 47.0	-0.2
	comp=Z,4.3nm,0.9s,baz=297,slow=5.9,SNR=15						
LPAZ				LR	LR	12 37 38.3	
	comp=Z,3µm,20.7s,baz=266,slow=31						
	comp=Z,4.3nm,0.9s						
LPAZ	La Paz	39.63	108	P	P	12 24 47.3	+0.1
LPAZ				pmax	pmax		
	comp=Z,24nm,1.5s						
LPAZ	La Paz	39.63	108	P	P	12 24 47.3	+0.1
LPAZ	La Paz	39.63	108	*e*P	P	12 24 45.0	-2.2
SWSC	Sam W. Stewart	39.69	349	P	P	12 24 46.2	-0.5
	baz=166						
MONP2	Monument Peak	39.77	348	P	P	12 24 47.4	-0.2
	baz=166						
Y22A	Socorro	39.85	0	P	P	12 24 49.2	+1.0
	baz=180,SNR=16						
109C	Camp Elliot, M	39.91	347	P	P	12 24 48.1	-0.5
	baz=164						
BNM	Barren Site	40.06	1	P	P	12 24 51.4	+1.3
LENM	Lemitar	40.07	0	P	P	12 24 50.2	+0.1
MSTX	Muleshoe	40.10	6	P	P	12 24 51.0	+0.8
MSTX				IAmb	IAmb	12 24 55.6	
	comp=Z,54nm,1.6s						
MSTX	Muleshoe	40.10	6	P	P	12 24 51.5	+1.2
	baz=187						
MSTX	Muleshoe	40.10	6	P	P	12 24 48.9	-1.4
	baz=187						
Y14A	Wickenburg	40.21	353	P	P	12 24 51.6	+0.4
BLYC	Blythe	40.25	351	P	P	12 24 52.7	+1.3
BLYC				IAmb	IAmb	12 25 05.6	
	comp=Z,47nm,1.8s						
BC3	Big Chuckawall	40.32	349	P	P	12 24 53.0	+0.9
	baz=167,SNR=12						
SCI2	San Clemente I	40.34	345	P	P	12 24 52.6	+0.5
	baz=162						
LVC	Limon Verde	40.45	118	P	P	12 24 54.0	+0.3
	comp=Z,5.2nm,0.7s,baz=279,slow=6.9,SNR=9.6						
LVC				LR	LR	12 37 08.5	
	comp=Z,6µm,20.4s,baz=284,slow=30						
	comp=Z,5.2nm,0.7s						
LVC	Limon Verde	40.45	118	P	P	12 24 54.3	+0.6
LVC				pmax	pmax		
	comp=Z,14nm,1.1s						
LVC	Limon Verde	40.45	118	P	P	12 24 54.3	+0.6
LVC	Limon Verde	40.45	118	*e*P	P	12 24 53.3	-0.3
TPFO	Pinon Flats	40.46	348	P	P	12 24 53.5	+0.2
	baz=166						
PFO	Pinyon Flats O	40.47	348	LR	LR	12 37 33.9	
	comp=Z,4µm,20.9s,baz=166,slow=30						
PFO	Pinyon Flats O	40.47	348	*i* P	P	12 24 54.8	+1.5
PFO				pmax	pmax		
	comp=Z,23nm,1.5s						
PFO	Pinyon Flats O	40.47	348	P	P	12 24 53.7	+0.4
PFO				IAmb	IAmb	12 25 07.5	
	comp=Z,47nm,1.6s						
PFO	Pinyon Flats O	40.47	348	P	P	12 24 53.9	+0.6
	baz=166						
X18A	Snowflake	40.51	357	P	P	12 24 54.3	+0.5
MURC	Murrieta	40.61	347	P	P	12 24 54.7	+0.2
	baz=165						
CIS	Catalina Islan	40.71	346	P	P	12 24 56.4	+1.2
	baz=163						
ELS	Elsinore Mount	40.71	347	P	P	12 24 56.2	+0.9
GO02	Mina Guanaco	40.72	122	P	P	12 24 56.4	+0.6
GO02				IAmb	IAmb	12 25 18.9	
	comp=Z,62nm,1.9s						
PDMCI	Parker Dam,Lak	40.73	351	P	P	12 24 55.8	+0.5
	baz=169						
IRM	Iron Mountain	40.75	350	P	P	12 24 56.4	+0.9
	baz=168,SNR=15						
BELC	Belle Mtn. Jos	40.75	349	P	P	12 24 56.5	+0.8
	baz=166,SNR=8.5						
ETMB	Extrema	40.81	98	*e*P	P	12 24 55.8	-0.6
SNCC	San Nicolas Is	40.85	344	P	P	12 24 57.2	+0.8
	baz=161						
ANMO	Albuquerque	40.86	1	LR	LR	12 39 23.3	
	comp=Z,2µm,18.5s,baz=187,slow=33						
ANMO	Albuquerque	40.86	1	*i* P	P	12 24 58.6	+2.0
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANMO	Albuquerque	40.86	1	P	P	12 24 57.1	+0.5
ANMO	Albuquerque	40.86	1	P	P	12 24 57.9	+1.3
	baz=181						
ANMO	Albuquerque	40.86	1	P	P	12 24 56.1	-0.5
	baz=181						
FMP	Fort Macarthur	40.97	346	P	P	12 24 57.5	+0.2
	baz=163						
W18A	Petrified Fore	41.09	357	P	P	12 24 58.5	0.0
	baz=176						
AMTX	Amarillo	41.13	7	S	S	12 31 14.9	+3.0
	baz=188						
AMTX	Amarillo	41.13	7	P	P	12 24 58.6	-0.1
	baz=188						
BBRC	Big Bear Solar	41.19	348	P	P	12 24 59.9	+0.5
	baz=165						
BFSC	Mount Baldy Ra	41.33	347	P	P	12 25 01.4	+1.0
	baz=164,SNR=7.6						
LCO	Las Campanas	41.36	128	P	P	12 25 01.3	+0.3
LCO				pmax	pmax		
	comp=Z,13nm,1.1s						
LCO	Las Campanas	41.36	128	P	P	12 25 01.2	+0.3
WMOK	Wichita Mounta	41.43	11	P	P	12 25 01.6	+0.5
	baz=193						
WMOK				S	S	12 31 15.1	-1.2
	baz=193						
WMOK	Wichita Mounta	41.43	11	P	P	12 24 59.9	-1.2
	baz=193						
GMRC	Granite Mounta	41.45	350	P	P	12 25 01.5	+0.1
	baz=167						
W13A	Hualapai Mount	41.48	352	P	P	12 25 02.7	+1.0
DECC	Green Verdugo	41.50	346	P	P	12 25 01.8	+0.1
	baz=163						
Z41A	Richland Creek	41.51	18	S	S	12 31 22.2	+4.8
	baz=202						
Z41A				S	S	12 31 22.2	+4.8
	baz=202						
Z41A	Richland Creek	41.51	18	P	P	12 25 01.2	-0.6
	baz=202						
WUAZ	Wupatki	41.60	355	P	P	12 25 03.0	+0.4
WUAZ	Wupatki	41.60	355	P	P	12 25 03.3	+0.6
	baz=174,SNR=14						
HEC	Hector,Ludlow	41.62	349	P	P	12 25 03.1	+0.3
	baz=166						
AC02	Maricunga	41.73	124	P	P	12 25 05.6	+1.3
AC02				IAmb	IAmb	12 25 38.2	
	comp=Z,40nm,1.8s						
BRAL	Brewton	41.82	26	P	P	12 25 02.9	-1.5
	baz=211						
BAUV	El Baul	41.88	69	P	P	12 25 03.5	-1.6
EDW2	Edwards Air Fo	42.02	347	P	P	12 25 06.2	+0.2
	baz=164,SNR=17						
X37A	Clayton	42.03	15	P	P	12 25 05.7	-0.3
X37A	Clayton	42.03	15	P	P	12 25 06.5	+0.5
	baz=198						
X37A				S	S	12 31 26.1	+1.0
	baz=198						
TUQ	Turquoise Moun	42.13	349	P	P	12 25 07.2	+0.2
	baz=167						
GSC	Goldstone, Bar	42.17	348	P	P	12 25 07.9	+0.6
GSC				pmax	pmax		
	comp=Z,28nm,1.3s						
GSC	Goldstone, Bar	42.17	348	P	P	12 25 07.8	+0.6
GSC	Goldstone, Bar	42.17	348	P	P	12 25 07.7	+0.4
	baz=166,SNR=11						
CCAC	Calif City Air	42.29	347	P	P	12 25 09.9	+1.8
ARVC	Arvin	42.45	346	P	P	12 25 09.8	+0.3
	baz=163						
MIAR	Mount Ida	42.47	17	P	P	12 25 09.1	-0.5
MIAR				pmax	pmax		
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	42.47	17	P	P	12 25 09.1	-0.5
MIAR	Mount Ida	42.47	17	P	P	12 25 09.6	0.0
	baz=200,SNR=8.3						
MIAR				S	S	12 31 33.5	+1.9
	baz=200						
MIAR	Mount Ida	42.47	17	P	P	12 25 09.3	-0.3
	baz=200,SNR=8.3						
PKM	Mcpherson Peak	42.48	345	P	P	12 25 10.0	+0.2
	baz=161						
LRMC	Laurel Mtn Rad	42.53	347	P	P	12 25 10.6	+0.3
	baz=164						
U15A	North Rim	42.59	354	P	P	12 25 11.4	+0.5
X40A	Basin Creek Fa	42.64	18	S	S	12 31 37.3	+3.3
	baz=201						
X40A				S	S	12 31 37.3	+3.3
	baz=201						
X40A	Basin Creek Fa	42.64	18	P	P	12 25 09.4	-1.5
	baz=201						
SHOC	Shoshone, Teco	42.65	349	P	P	12 25 11.1	+0.1
	baz=167						
PPT	Papeete	42.83	251	LR	LR	12 38 22.8	
	comp=Z,2µm,18.9s,baz=78,slow=30						
ISA	Isabella, Lake	42.88	347	P	P	12 25 14.7	+1.7
ISA				pmax	pmax		
	comp=Z,17nm,1.4s						
ISA	Isabella, Lake	42.88	347	P	P	12 25 14.7	+1.7
ISA	Isabella, Lake	42.88	347	P	P	12 25 13.3	+0.3
	baz=163						
SMMC	Simmler	42.92	345	P	P	12 25 12.7	-0.6
	baz=161						
GWY	Greenwater Val	43.00	349	P	P	12 25 14.2	+0.1
W39A	Magazine	43.02	16	P	P	12 25 14.1	+0.1
	baz=200						
W39A				S	S	12 31 40.5	+0.8
	baz=200						
W39A	Magazine	43.02	16	P	P	12 25 12.8	-1.2
	baz=200						
MPMC	Manual Prospec	43.04	348	P	P	12 25 14.7	+0.3
	baz=165,SNR=7.1						
T25A	Trinidad	43.12	3	P	P	12 25 14.4	-0.8
	baz=184,SNR=7.1						
MVCO	Mesa Verde	43.13	359	P	P	12 25 15.0	-0.1
	baz=178,SNR=15						
Y45A	Yeager Farm, C	43.17	22	P	P	12 25 15.7	+0.4
	baz=206						
TUL1	Leonard	43.18	14	P	P	12 25 14.2	-1.1
	baz=197						
VES	Vestal, Richgr	43.20	346	P	P	12 25 15.6	+0.2
	baz=163						
LCMT	Little Creek M	43.27	353	P	P	12 25 16.3	+0.1
FURC	Furnace Creek,	43.31	349	P	P	12 25 16.9	+0.6
	baz=166,SNR=6.1						
LRAL	Lakeview Retre	43.45	25	P	P	12 25 17.0	-0.5
LRAL	Lakeview Retre	43.45	25	P	P	12 25 17.6	0.0
	baz=210						
LRAL				S	S	12 31 48.6	+2.5
	baz=210						
LRAL	Lakeview Retre	43.45	25	P	P	12 25 16.0	-1.6
	baz=210						
W41B	Gary Mavity, V	43.45	18	P	P	12 25 16.9	-0.7
W41B				IAmb	IAmb	12 25 24.2	
	comp=Z,28nm,1.2s						
W41B	Gary Mavity, V	43.45	18	P	P	12 25 17.8	+0.2
	baz=202,SNR=12						
W41B				S	S	12 31 49.8	+3.8
	baz=202						
W41B	Gary Mavity, V	43.45	18	P	P	12 25 16.7	-0.9
	baz=202,SNR=12						
CWC	Cottonwood Cre	43.54	347	P	P	12 25 18.6	+0.1
	baz=164						
WHAR	Wooly Hollow	43.55	18	P	P	12 25 18.7	+0.4
S22A	4UR Ranch, Cre	43.65	1	P	P	12 25 19.0	-0.4
	baz=180,SNR=22						
TPNV	Topopah Spring	43.66	350	P	P	12 25 20.1	+0.7
	baz=167,SNR=10						
TIGA	Tifton	43.67	30	P	P	12 25 17.6	-1.8
	baz=215						
SDCO	Great Sand Dun	43.68	2	P	P	12 25 19.9	+0.2
SDCO	Great Sand Dun	43.68	2	P	P	12 25 20.3	+0.6
	baz=182,SNR=18						
SDCO	Great Sand Dun	43.68	2	P	P	12 25 19.0	-0.7
	baz=182,SNR=18						
OXF	Oxford	43.80	21	P	P	12 25 21.4	+1.0
	baz=206						
OXF	Oxford	43.80	21	P	P	12 25 18.7	-1.7
	baz=206						
GRAC	Grapevine Rang	43.92	348	P	P	12 25 21.5	+0.1
	baz=165						
T35A	Sooner Cattle	43.99	12	P	P	12 25 22.1	+0.2
T35A				IAmb	IAmb	12 25 48.8	
	comp=Z,23nm,1.1s						
T35B	Sooner Cattle	43.99	12	P	P	12 25 22.2	+0.3
	baz=195						
BIRV	Birongo	44.04	68	P	P	12 25 21.1	-1.5
PV13	Radium Mtn., P	44.08	358	P	P	12 25 23.6	+0.8
PV13				IAmb	IAmb	12 25 41.2	
	comp=Z,25nm,1.2s						
152A	Waverly Hall	44.14	28	P	P	12 25 23.0	-0.2
	baz=213						
152A				S	S	12 31 58.7	+2.5
	baz=213						
TIN	Tinemaha, Big	44.16	347	P	P	12 25 23.1	-0.3
	baz=164						
U40A	Yellville	44.37	17	P	P	12 25 25.3	+0.4
	baz=200						
U40A				P	P	12 25 25.3	+0.4
	baz=200						
U40A				S	S	12 32 01.9	+2.4
	baz=200						
U40A				S	S	12 32 01.9	+2.4
	baz=200						
U40A	Yellville	44.37	17	P	P	12 25 23.0	-1.9
	baz=200						
Y49A	Blount Mountai	44.41	25	P	P	12 25 25.6	+0.3
	baz=210						
Y49A				S	S	12 32 01.9	+1.8
	baz=210						
W45A	Hickory Valley	44.46	21	P	P	12 25 25.4	-0.3
	baz=206						
LCAR	Lake Charles	44.62	19	P	P	12 25 26.7	-0.2
LCAR	Lake Charles	44.62	19	P	P	12 25 26.2	-0.6
	baz=203,SNR=10						
X48A	Hartselle	44.66	24	S	S	12 32 05.3	+1.6
	baz=209						
PLAL	Pickwick Lake	44.72	23	P	P	12 25 28.1	+0.4
MLAC	Mammoth, Mammo	44.85	347	P	P	12 25 28.5	-0.5
	baz=164						
PSUT	Pine Spring	44.85	353	P	P	12 25 29.8	+0.8
Q24A	Divide	44.91	2	P	P	12 25 27.8	-1.7
	baz=183						
R11A	Troy Canyon, C	44.92	351	P	P	12 25 29.6	+0.1
	baz=168,SNR=11						
R32A	Long Quarter,	45.03	10	S	S	12 32 11.9	+2.8
	baz=192						
SMCO	Snowmass	45.08	0	P	P	12 25 32.0	+1.0
SRU	San Rafael Swe	45.11	356	P	P	12 25 32.1	+1.1
SRU				pmax	pmax		
	comp=Z,18nm,1.1s						
SRU	San Rafael Swe	45.11	356	P	P	12 25 32.1	+1.1
SRU				IAmb	IAmb	12 25 49.5	
	comp=Z,18nm,1.1s						
KSCO	Kaye Shedlock’	45.12	5	P	P	12 25 29.9	-1.0
	baz=186						
CBKS	Cedar Bluff	45.26	8	P	P	12 25 32.7	+0.7
	baz=190						
CBKS				S	S	12 32 15.2	+2.9
	baz=190						
CBKS	Cedar Bluff	45.26	8	P	P	12 25 30.7	-1.3
	baz=190						
FPAL	Fort Paine	45.33	25	P	P	12 25 31.4	-1.2
FPAL				IAmb	IAmb	12 25 36.9	
	comp=Z,25nm,1.1s						
GOGA	Godfrey	45.34	28	P	P	12 25 32.2	-0.5
GOGA				pmax	pmax		
	comp=Z,19nm,1.2s						
GOGA	Godfrey	45.34	28	P	P	12 25 32.1	-0.5
GOGA				IAmb	IAmb	12 25 32.7	
	comp=Z,19nm,1.2s						
GOGA	Godfrey	45.34	28	P	P	12 25 32.3	-0.5
	baz=214						
GOGA				S	S	12 32 15.5	+1.8
	baz=214						
GOGA	Godfrey	45.34	28	P	P	12 25 30.8	-1.9
	baz=214						
Y52A	Lilburn	45.44	27	P	P	12 25 32.9	-0.7
	baz=213						
Y52A				P	P	12 25 32.9	-0.7
	baz=213						
Y52A				S	S	12 32 15.4	+0.3
	baz=213						
Y52A				S	S	12 32 15.4	+0.3
	baz=213						
NV11	Mina Array Sit	45.47	348	P	P	12 25 34.4	+0.5
P17A	Butcher Ranch,	45.48	356	P	P	12 25 35.0	+1.1
P17A				IAmb	IAmb	12 25 52.6	
	comp=Z,39nm,1.3s						
S39A	Bolivar	45.49	16	P	P	12 25 33.6	-0.3
	baz=199,SNR=11						
S39A				S	S	12 32 17.0	+1.4
	baz=199						
NVAR	Mina Array Bea	45.50	348	P	P	12 25 34.4	+0.2
	comp=Z,3.1nm,0.8s,baz=177,slow=10.0,SNR=26						
NVAR				LR	LR	12 40 49.5	
	comp=Z,3µm,18.6s,baz=168,slow=31						
	comp=Z,3.1nm,0.8s						
NVAR	Mina Array Bea	45.50	348	P	P	12 25 35.5	+1.3
PBMO	Poplar Bluff	45.50	19	P	P	12 25 34.0	+0.1
	baz=204						
CMB	Columbia Colle	45.60	345	P	P	12 25 36.3	+1.6
CMB				pmax	pmax		
	comp=Z,18nm,1.4s						
CMB	Columbia Colle	45.60	345	P	P	12 25 36.3	+1.6
CMB				IAmb	IAmb	12 25 47.6	
	comp=Z,18nm,1.4s						
P18A	Preston Nutter	45.61	357	P	P	12 25 36.0	+0.9
P18A				IAmb	IAmb	12 25 57.9	
	comp=Z,42nm,1.6s						
ISCO	Idaho Springs	45.72	2	P	P	12 25 37.1	+1.1
ISCO				pmax	pmax		
	comp=Z,19nm,1.3s						
ISCO	Idaho Springs	45.72	2	P	P	12 25 37.1	+1.1
ISCO				IAmb	IAmb	12 25 54.4	
	comp=Z,19nm,1.2s						
ISCO	Idaho Springs	45.72	2	P	P	12 25 36.6	+0.7
	baz=182,SNR=12						
ISCO	Idaho Springs	45.72	2	P	P	12 25 35.6	-0.4
	baz=182,SNR=12						
SWET	Sewanee	45.77	25	P	P	12 25 35.8	-0.4
SWET				IAmb	IAmb	12 25 40.3	
	comp=Z,21nm,1.1s						
WVT	Waverly	45.83	22	P	P	12 25 36.0	-0.5
WVT				pmax	pmax		
	comp=Z,22nm,1.3s						
WVT	Waverly	45.83	22	P	P	12 25 36.0	-0.5
WVT				IAmb	IAmb	12 25 40.3	
	comp=Z,22nm,1.3s						
WVT	Waverly	45.83	22	P	P	12 25 35.7	-0.8
	baz=207						
WVT	Waverly	45.83	22	P	P	12 25 34.9	-1.6
	baz=207						
V48A	Smith Brothers	45.87	23	P	P	12 25 36.3	-0.6
V48A				IAmb	IAmb	12 25 42.0	
	comp=Z,26nm,1.3s						
V48A	Smith Brothers	45.87	23	P	P	12 25 36.0	-0.8
	baz=209						
W50A	Signal Mountai	46.02	25	P	P	12 25 38.0	-0.1
W50A				IAmb	IAmb	12 25 46.1	
	comp=Z,22nm,1.4s						
W50A	Signal Mountai	46.02	25	P	P	12 25 37.6	-0.5
	baz=211						
W50A				S	S	12 32 25.1	+1.6
	baz=211						
O20A	White River Ci	46.04	359	P	P	12 25 38.9	+0.5
O20A	White River Ci	46.04	359	P	P	12 25 38.3	-0.1
	baz=178,SNR=17						
KVN	Kaiserville	46.05	348	P	P	12 25 40.0	+1.5
KVN				pmax	pmax		
	comp=Z,19nm,1.3s						
KVN	Kaiserville	46.05	348	P	P	12 25 40.0	+1.5
KVN				IAmb	IAmb	12 26 02.3	
	comp=Z,19nm,1.3s						
NLU	North Lily Min	46.06	355	P	P	12 25 39.5	+1.0
NLU				IAmb	IAmb	12 25 48.6	
	comp=Z,17nm,1.2s						
KSU1	Kansas State U	46.07	12	P	P	12 25 38.6	+0.2
KSU1				IAmb	IAmb	12 25 53.8	
	comp=Z,32nm,1.2s						
KSU1	Kansas State U	46.07	12	P	P	12 25 37.9	-0.5
	baz=195						
KSU1	Kansas State U	46.07	12	P	P	12 25 37.9	-0.5
	baz=195						
HAW	Hawthorne Fire	46.20	30	P	P	12 25 38.3	-1.2
	baz=216						
HAW				S	S	12 32 27.7	+1.7
	baz=216						
YERR	Yerington	46.23	347	P	P	12 25 41.1	+1.2
CLTN	Cedars of Leba	46.37	24	P	P	12 25 40.5	-0.3
CLTN				IAmb	IAmb	12 25 43.7	
	comp=Z,52nm,1.9s						
DUG	Dugway, Tooele	46.37	354	P	P	12 25 41.7	+0.8
DUG				pmax	pmax		
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	46.37	354	P	P	12 25 41.7	+0.8
DUG				IAmb	IAmb	12 25 51.5	
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	46.37	354	P	P	12 25 40.9	0.0
	baz=172,SNR=11						
PNTR	Pine Nut	46.41	347	P	P	12 25 42.4	+1.0
PNTR				IAmb	IAmb	12 25 52.9	
	comp=Z,21nm,0.9s						
CCM	Cathedral Cave	46.42	18	P	P	12 25 40.8	-0.3
CCM				pmax	pmax		
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	46.42	18	P	P	12 25 40.8	-0.3
CCM				IAmb	IAmb	12 25 46.9	
	comp=Z,16nm,0.9s						
CCM	Cathedral Cave	46.42	18	P	P	12 25 40.9	-0.2
	baz=202,SNR=12						
CCM	Cathedral Cave	46.42	18	P	P	12 25 40.3	-0.9
	baz=202						
EMB	Emerald Bay	46.42	346	P	P	12 25 42.6	+1.1
EMB				IAmb	IAmb	12 25 52.8	
	comp=Z,21nm,1.1s						
MACA	Manacapuru-AM	46.52	89	*e*P	P	12 25 39.9	-2.5
W52A	Murphy	46.53	27	P	P	12 25 42.1	-0.1
	baz=213,SNR=7.4						
CPCT	Cooper Cave	46.57	26	P	P	12 25 41.9	-0.5
CPCT				IAmb	IAmb	12 25 42.5	
	comp=Z,20nm,1.1s						
HODGE	Hodges	46.59	29	P	P	12 25 42.1	-0.5
	baz=215						
FVM	French Village	46.60	18	P	P	12 25 42.6	0.0
	baz=203						
FVM				S	S	12 32 32.7	+1.1
	baz=203						
S44A	Carbondale	46.72	20	P	P	12 25 43.0	-0.5
	baz=205						
S44A				S	S	12 32 34.6	+1.3
	baz=205						
NHSC	New Hope	46.74	32	P	P	12 25 42.7	-1.0
	baz=218						
N23A	Red Feather La	46.81	1	P	P	12 25 44.0	-0.5
	baz=182						
T47A	Sharon Grove	46.85	22	P	P	12 25 44.0	-0.6
	baz=208						
T47A				S	S	12 32 36.6	+1.3
	baz=208						
VILB	Vilhena	46.86	102	*e*P	P	12 25 45.0	-0.1
BG3	Lake Jocassee	46.90	28	P	P	12 25 44.6	-0.3
CASEE	Lake Jocassee	46.90	28	P	P	12 25 44.8	-0.1
	baz=214,SNR=7.4						
V51A	Loudon	46.94	26	P	P	12 25 44.7	-0.6
	baz=212,SNR=6.4						
V51A				S	S	12 32 37.3	+0.8
	baz=212						
U49A	Red Boiling Sp	46.96	24	P	P	12 25 44.6	-0.8
	baz=210						
TKL	Tuckaleechee C	47.07	26	LR	LR	12 45 23.7	
	comp=Z,775nm,18.3s,baz=192,slow=36						
TKL	Tuckaleechee C	47.07	26	P	P	12 25 46.0	-0.3
TKL				pmax	pmax		
	comp=Z,24nm,1.2s						
TKL	Tuckaleechee C	47.07	26	P	P	12 25 46.0	-0.3
TKL				IAmb	IAmb	12 25 50.2	
	comp=Z,24nm,1.1s						
OGNE	Ogallala	47.09	5	P	P	12 25 47.6	+1.2
	baz=187						
OGNE	Ogallala	47.09	5	P	P	12 25 45.8	-0.6
	baz=187						
JSC	Jenkinsville	47.12	30	P	P	12 25 46.0	-0.6
	baz=216						
SJG	San Juan	47.19	59	LR	LR	12 42 37.1	
	comp=Z,2µm,20.8s,baz=243,slow=32						
ELK	Elko	47.21	352	LR	LR	12 42 20.2	
	comp=Z,3µm,18.9s,baz=180,slow=32						
ELK	Elko	47.21	352	P	P	12 25 48.1	+0.5
ELK				pmax	pmax		
	comp=Z,11nm,1.1s						
ELK	Elko	47.21	352	P	P	12 25 48.1	+0.5
ELK				IAmb	IAmb	12 25 58.5	
	comp=Z,11nm,1.1s						
PHWY	Pilot Hill	47.23	2	P	P	12 25 48.3	+0.5
PHWY				IAmb	IAmb	12 25 53.2	
	comp=Z,35nm,1.6s						
P38A	Dawn	47.26	14	S	S	12 32 38.7	-2.3
	baz=199						
PAULI	Pauline	47.28	29	P	P	12 25 47.4	-0.5
	baz=215						
V53A	Saluda	47.51	27	P	P	12 25 49.2	-0.5
V53A	Saluda	47.51	27	P	P	12 25 49.3	-0.5
	baz=214,SNR=14						

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V53A                               P     P     12 25 49.3  -0.5
      baz=214,SNR=14
P40A  Paris             47.56  16  P     P     12 25 49.5  -0.5
      baz=200,SNR=8.4
PLCA  Paso Flores       47.58 142  P     P     12 25 51.4  +1.1
      comp=Z,1.8nm,0.9s,baz=325,slow=6.4,SNR=2.9
PLCA                               LR    LR    12 41 03.2
      comp=Z,6µm,18.7s,baz=304,slow=30
      comp=Z,1.8nm,0.9s
PLCA  Paso Flores       47.58 142  P     P     12 25 51.1  +0.8
PLCA                               pmax  pmax
      comp=Z,37nm,1.8s
PLCA  Paso Flores       47.58 142  P     P     12 25 51.1  +0.8
PLCA                               IAmb  IAmb  12 26 01.2
      comp=Z,37nm,1.8s
HWUT  Hardware Ranch    47.66 356  P     P     12 25 51.5  +0.5
HWUT                               IAmb  IAmb  12 26 13.5
      comp=Z,22nm,1.2s
KMSC  Kings Mountain    47.77  29  P     P     12 25 51.2  -0.6
      baz=216
KMSC  Kings Mountain    47.77  29  P     P     12 25 49.9  -1.9
      baz=216
T50A  Nancy             47.77  24  P     P     12 25 51.8  +0.1
T50A                               IAmb  IAmb  12 26 20.7
      comp=Z,34nm,1.5s
T50A  Nancy             47.77  24  P     P     12 25 50.9  -0.9
      baz=211
T50A                               P     P     12 25 50.9  -0.9
      baz=211
Q44A  Meyer Farm, Va    47.89  19  P     P     12 25 53.0  +0.4
      baz=205
TZTN  Tazewell          47.91  26  S     S     12 32 50.4   0.0
      baz=212
TZTN  Tazewell          47.91  26  P     P     12 25 51.5  -1.3
      baz=212
BGNE  Belgrade          48.04   9  P     P     12 25 53.0  -0.8
      baz=192
OLIL  Olney             48.05  20  P     P     12 25 53.4  -0.5
      baz=206
PTLB  Pontes e Lacer    48.09 105 eP     P     12 25 52.6  -1.9
O03E  Paynes Creek      48.09 345  P     P     12 25 54.6  +0.4
      baz=160
O02D  Mt. Diablo Mer    48.24 344  P     P     12 25 56.7  +1.3
      baz=159
V55A  Taylorsville      48.40  29  P     P     12 25 54.9  -1.8
      baz=216,SNR=7.3
V55A                               P     P     12 25 54.9  -1.8
      baz=216,SNR=7.3
N38A  Joes South For    48.44  14  P     P     12 25 56.5  -0.3
      baz=199
K22A  Casper            48.55   1  P     P     12 25 57.6  -0.3
      baz=181
U54A  Nelsons Funny     48.67  27  P     P     12 25 58.2  -0.6
      baz=214
U54A                               P     P     12 25 58.2  -0.6
      baz=214
BW06  Boulder Array     48.70 358  P     P     12 25 58.3  -0.8
BW06  Boulder Array     48.70 358  P     P     12 25 58.2  -1.0
      baz=177
PD31  Pinedale Array    48.70 358  P     P     12 25 58.7  -0.4
PDAR  Pinedale Array    48.70 358  P     P     12 25 58.9  -0.2
      comp=Z,3.3nm,0.8s,baz=168,slow=6.0,SNR=14
PDAR                               LR    LR    12 43 16.5
      comp=Z,896nm,19.7s,baz=186,slow=32
      comp=Z,3.3nm,0.8s
PDAR  Pinedale Array    48.70 358  P     P     12 25 58.5  -0.6
R49A  Shelbyville       48.74  23  P     P     12 25 58.0  -1.1
      baz=210
R49A                               P     P     12 25 58.0  -1.1
      baz=210
R50A  Paris             49.06  24  P     P     12 26 00.2  -1.5
      baz=211
R50A                               P     P     12 26 00.2  -1.5
      baz=211
HDIL  Hopedale          49.31  18  P     P     12 26 01.8  -1.7
      baz=204
WVOR  Wild Horse Val    49.42 349  P     P     12 26 05.6  +1.1
WVOR                               pmax  pmax
      comp=Z,16nm,1.2s
WVOR  Wild Horse Val    49.42 349  P     P     12 26 05.6  +1.1
WVOR                               IAmb  IAmb  12 26 15.4
      comp=Z,16nm,1.1s
SCIA  State Center      49.50  14  P     P     12 26 04.1  -0.9
      baz=198
P48A  Milroy            49.66  22  P     P     12 26 04.7  -1.5
      baz=209
P48A                               P     P     12 26 04.7  -1.5
      baz=209
YBH   Yreka Blue Hor    49.67 345  LR    LR    12 42 26.2
      comp=Z,4µm,20.4s,baz=168,slow=30
SFIN  Lafayette         49.87  20  P     P     12 26 06.2  -1.6
      baz=206
HLID  Hailey            49.88 353  P     P     12 26 07.1  -0.9
      baz=171,SNR=15
MFID  Camas Ranch       49.91 352  P     P     12 26 08.7  +0.5
MFID                               IAmb  IAmb  12 26 18.6
      comp=Z,31nm,1.1s
S54A  Dingess, Beckl    49.95  27  P     P     12 26 07.4  -1.1
      baz=214
S54A                               P     P     12 26 07.4  -1.1
      baz=214
P49A  Miami Univ. Ec    49.99  23  P     P     12 26 06.8  -1.9
      baz=210
L04D  Klamath Falls     50.03 345  P     P     12 26 08.7  -0.5
      baz=160
FLWY  Flagg Ranch       50.07 357  P     P     12 26 09.8  +0.3
RSSD  Black Hills       50.10   3  P     P     12 26 10.0  +0.2
RSSD                               pmax  pmax
      comp=Z,21nm,1.4s
RSSD  Black Hills       50.10   3  P     P     12 26 10.0  +0.2
RSSD                               IAmb  IAmb  12 26 27.9
      comp=Z,21nm,1.4s
RSSD  Black Hills       50.10   3  P     P     12 26 10.9  +1.1
      baz=184
RSSD  Black Hills       50.10   3  P     P     12 26 08.8  -1.0
      baz=184
R53A  Hurricane         50.10  26  P     P     12 26 09.2  -0.4
      baz=214
R53A                               P     P     12 26 09.2  -0.4
      baz=214
K05A  Summer Lake       50.17 347  P     P     12 26 11.2  +0.9
PDRB  Porto dos Gac     50.18 100 eP     P     12 26 08.2  -2.4
T57A  Hurt              50.27  29  P     P     12 26 10.5  -0.3
T57A                               IAmb  IAmb  12 26 14.7
      comp=Z,37nm,1.4s
YPP   Pitchstone Pla    50.27 357  P     P     12 26 10.6  -0.5
YPP                                IAmb  IAmb  12 26 25.3
      comp=Z,16nm,1.2s
K04D  Chiloquin, OR     50.28 346  P     P     12 26 10.5  -0.5
      baz=161
J08A  Circle Bar Ran    50.29 349  P     P     12 26 11.1   0.0
J08A                               IAmb  IAmb  12 26 33.0
      comp=Z,17nm,1.1s
H17A  Grant Village     50.38 357  P     P     12 26 11.0  -0.9
      baz=176
O48B  Farmland          50.45  22  P     P     12 26 10.7  -1.5
      baz=209
O48B  Farmland          50.45  22  P     P     12 26 10.0  -2.2
      baz=209
Q52A  Bidwell           50.49  25  P     P     12 26 11.6  -1.0
      baz=213
Q52A                               P     P     12 26 11.6  -1.0
      baz=213
LKWY  Lake              50.54 357  P     P     12 26 14.4  +1.3
LKWY                               pmax  pmax
      comp=Z,20nm,1.4s
LKWY  Lake              50.54 357  P     P     12 26 14.3  +1.3
LKWY                               IAmb  IAmb  12 26 39.9
      comp=Z,20nm,1.4s
ECSD  EROS Data Cent    50.56  10  P     P     12 26 12.9  -0.1
ECSD  EROS Data Cent    50.56  10  P     P     12 26 12.3  -0.7
      baz=194,SNR=6.2
ECSD  EROS Data Cent    50.56  10  P     P     12 26 11.8  -1.1
      baz=194,SNR=6.2
YMR   Madison River     50.67 357  P     P     12 26 15.1  +1.0
YMR                                IAmb  IAmb  12 26 32.4
      comp=Z,36nm,1.4s
J05D  Fort Rock, OR     50.78 347  P     P     12 26 14.7  -0.1
      baz=162,SNR=9.7
YHH   Holmes Hill       50.78 357  P     P     12 26 15.4  +0.4
YHH                                IAmb  IAmb  12 26 33.2
      comp=Z,32nm,1.5s
K02D  Willamette Mer    50.83 344  P     P     12 26 14.0  -1.1
      baz=159
QLMT  Earthquake Lak    50.86 356  P     P     12 26 16.0  +0.5
YHL   Hebgen Lake       50.87 356  P     P     12 26 15.8  +0.2
YHL                                IAmb  IAmb  12 26 34.1
      comp=Z,36nm,1.2s
SUSD  Miller            50.89   8  P     P     12 26 13.5  -2.0
      baz=190
J04D  Umpqua Nationa    50.94 346  P     P     12 26 14.7  -1.4
      baz=161
MCMT  McKenzie Canyo    50.97 355  P     P     12 26 17.1  +0.8
RLMT  Red Lodge         51.05 358  P     P     12 26 17.0  +0.2
CLDB  Colider           51.08  99 eP     P     12 26 15.1  -2.4
P52A  Corning           51.11  25  P     P     12 26 16.7  -0.5
P52A                               IAmb  IAmb  12 26 46.2
      comp=Z,36nm,1.2s
P52A  Corning           51.11  25  P     P     12 26 14.8  -2.4
      baz=213
Q54A  Coxs Mills        51.13  26  P     P     12 26 16.2  -1.2
      baz=214
Q54A                               P     P     12 26 16.2  -1.2
      baz=214
I07A  Izee              51.18 349  P     P     12 26 18.7  +0.9
I07A                               IAmb  IAmb  12 26 35.8
      comp=Z,33nm,1.4s
JFWS  Jewell Farm       51.20  16  P     P     12 26 16.8  -1.1
      baz=202
JFWS  Jewell Farm       51.20  16  P     P     12 26 15.6  -2.2
      baz=202
L44A  Lake County Fo    51.22  18  P     P     12 26 15.3  -2.6
      baz=205
ACSO  Alum Creek Sta    51.27  24  P     P     12 26 15.5  -2.8
      baz=211
P53A  Whipple           51.31  26  P     P     12 26 17.5  -1.2
      baz=214,SNR=9.2
P53A                               P     P     12 26 17.5  -1.2
      baz=214,SNR=9.2
J01E  Myrtle Point      51.33 344  P     P     12 26 17.0  -1.8
      baz=158
ITTB  Itaituba          51.34  91 eP     P     12 26 16.9  -2.5
SALV  Santo Antonio     51.43 105 eP     P     12 26 17.8  -2.3
I04A  Tendick Farm,     51.54 346  P     P     12 26 18.3  -2.1
      baz=161
PLID  Pearl Lake        51.58 352  P     P     12 26 21.3  +0.4
CPUP  Villa Florida     51.61 119  P     P     12 26 20.4  -0.8
      comp=Z,3.3nm,0.9s,baz=287,slow=8.1,SNR=8.2
CPUP                               LR    LR    12 44 28.5
      comp=Z,3µm,20.9s,baz=280,slow=32
      comp=Z,3.3nm,0.9s
CPUP  Villa Florida     51.61 119  P     P     12 26 21.5  +0.3
CPUP                               pmax  pmax
      comp=Z,12nm,1.2s
CPUP  Villa Florida     51.61 119  P     P     12 26 21.5  +0.3
CPUP  Villa Florida     51.61 119 eP     P     12 26 21.1  -0.1
BOZ   Bozeman (W)       51.64 356  P     P     12 26 21.5  +0.3
BOZ                                pmax  pmax
      comp=Z,23nm,1.8s
BOZ   Bozeman (W)       51.64 356  P     P     12 26 21.5  +0.3
BOZ   Bozeman (W)       51.64 356  P     P     12 26 19.0  -2.2
      baz=174
O52A  Adamsville        51.64  25  P     P     12 26 20.7  -0.5
O52A                               IAmb  IAmb  12 26 33.5
      comp=Z,41nm,1.3s
O52A  Adamsville        51.64  25  P     P     12 26 19.7  -1.5
      baz=213
O52A                               P     P     12 26 19.7  -1.5
      baz=213
GCMT  Greycliff         51.73 358  P     P     12 26 21.9   0.0
I05D  Terrebonne, OR    51.81 347  P     P     12 26 21.2  -1.2
      baz=162
AQDB  Aquidauana        51.95 111  P     P     12 26 23.9   0.0
AQDB  Aquidauana        51.95 111 eP     P     12 26 23.2  -0.7
I40A  Norwalk           52.01  15  P     P     12 26 23.7  -0.2
I40A                               IAmb  IAmb  12 26 29.0
      comp=Z,21nm,1.2s
O53A  New Philadelph    52.02  25  P     P     12 26 23.7  -0.3
O53A  New Philadelph    52.02  25  P     P     12 26 21.2  -2.7
      baz=214
BUCK  Buck Mountain     52.06 346  P     P     12 26 24.5  +0.2
MCWV  Mont Chateau      52.13  27  P     P     12 26 22.6  -2.2
      baz=215
I02E  Swisshome, OR     52.19 345  P     P     12 26 22.9  -2.3
      baz=159
G08A  Pilot Rock        52.24 350  P     P     12 26 26.4  +0.7
G08A                               IAmb  IAmb  12 26 41.2
      comp=Z,18nm,1.2s
H04D  Lebanon           52.30 346  P     P     12 26 24.0  -2.0
      baz=160
PP1B  Ponte de Pedra    52.37 107 eP     P     12 26 27.6  +0.6
LAO   LASA Array        52.59   1  P     P     12 26 28.6  +0.4
      baz=181
LAO   LASA Array        52.59   1  P     P     12 26 25.5  -2.6
      baz=181
N53A  Lisbon            52.64  25  P     P     12 26 27.2  -1.3
      baz=214
N53A                               P     P     12 26 27.2  -1.3
      baz=214
G05D  Wamic, OR         52.66 348  P     P     12 26 27.0  -1.7
      baz=162
SPMN  Marine on St.     52.74  13  P     P     12 26 26.3  -2.9
      baz=198
HRY   Holter Researc    52.76 356  P     P     12 26 29.9  +0.4
AAM   Ann Arbor         52.78  22  P     P     12 26 26.0  -3.6
      baz=210
RAR   Rarotonga         52.92 248  LR    LR    12 43 00.1
      comp=Z,1µm,19.9s,baz=71,slow=29
MALB  Monte Alegre      53.03  88 eP     P     12 26 32.2  +0.2
MSO   Missoula          53.05 354  P     P     12 26 29.5  -2.1
      baz=172
F36A  Milaca            53.19  12  P     P     12 26 30.8  -1.8
      baz=197,SNR=9.0
M53A  WI Miller and     53.23  25  P     P     12 26 29.5  -3.4
      baz=214
F05D  White Salmon      53.31 348  P     P     12 26 31.5  -1.9
      baz=162
H43A  Windswept, Lux    53.34  17  P     P     12 26 32.6  -1.1
      baz=204
G40A  Rib Lake          53.40  15  P     P     12 26 33.1  -1.0
      baz=201,SNR=11
F04A  Amboy             53.56 347  P     P     12 26 36.3  +1.0
F04A                               IAmb  IAmb  12 27 00.2
      comp=Z,29nm,1.2s
SSPA  Standing Stone    53.80  28  P     P     12 26 37.2  +0.1
SSPA                               IAmb  IAmb  12 26 54.0
      comp=Z,29nm,1.3s
SSPA  Standing Stone    53.80  28  P     P     12 26 36.4  -0.8
      baz=217
SSPA  Standing Stone    53.80  28  P     P     12 26 34.2  -3.0
      baz=217
EGMT  Eagleton          53.96 358  P     P     12 26 35.9  -2.4
      baz=177
ERPA  Erie              54.08  25  P     P     12 26 36.3  -2.9
      baz=214
MCR1  Marechal Candi    54.13 116 eP     P     12 26 41.2  +1.3
E04D  Cinebar           54.19 347  P     P     12 26 37.7  -2.1
      baz=161
C2SB  Chapadao do Su    54.42 109 eP     P     12 26 42.5  +0.5
DGMT  Dagmar            54.43   3  P     P     12 26 38.8  -2.9
      baz=184
COWI  Conover           54.45  15  P     P     12 26 41.5  -0.4
      baz=202
N58A  Sunbury           54.51  28  P     P     12 26 41.1  -1.1
      baz=218
N58A                               P     P     12 26 41.1  -1.1
      baz=218
M57A  Sunshine Farm,    54.71  28  P     P     12 26 42.8  -0.9
      baz=218
M57A                               P     P     12 26 42.8  -0.9
      baz=218
D04E  Lakebay           54.82 347  P     P     12 26 42.3  -2.0
      baz=161
NEW   Newport           54.85 352  LR    LR    12 46 30.8
      comp=Z,2µm,20.2s,baz=174,slow=32
NEW   Newport           54.85 352  P     P     12 26 43.3  -1.4
      baz=168
DVLD  Doverlandia       54.87 106 eP     P     12 26 46.2  +0.8
WVNY  West Valley, N    54.91  26  P     P     12 26 43.8  -1.4
      baz=216
AGMN  Agassiz Nation    55.11   9  P     P     12 26 45.0  -1.5
      baz=194
TRCB  Terra Rica        55.12 113 eP     P     12 26 48.0  +0.9
L56A  Greenwood         55.15  27  P     P     12 26 45.6  -1.4
      baz=217
L56A                               P     P     12 26 45.6  -1.4
      baz=217
D03D  Eldon             55.23 347  P     P     12 26 47.0  -0.4
      baz=161
FRBT  Francisco Belt    55.28 117 eP     P     12 26 48.2  -0.1
MCPB  Macapa, AP        55.40  86 eP     P     12 26 50.1  +0.8
D41A  Chassel           55.49  15  P     P     12 26 48.7  -0.6
      baz=203
SNDB  Serra Nova Dou    55.51 100 eP     P     12 26 48.0  -2.0
B35A  Bob, Littlefor    55.55  11  P     P     12 26 49.5  -0.2
      baz=196
EYMN  Ely               55.61  13  P     P     12 26 49.4  -0.8
      baz=199,SNR=10
EYMN  Ely               55.61  13  P     P     12 26 48.7  -1.4
      baz=199,SNR=10
B05A  Bryant            55.71 348  P     P     12 26 50.2  -0.5
      baz=162
BINY  Binghamton        55.91  28  P     P     12 26 50.5  -2.0
      baz=218
CPSB  Cacapava Do Su    55.92 123 eP     P     12 26 53.8  +1.0
PTGB  Pitanga           55.94 116 eP     P     12 26 53.4  +0.3
PLTB  Pedras Altas      56.13 124 eP     P     12 26 55.0  +0.8
PCMB  Pacaembu          56.22 112 eP     P     12 26 55.4  +0.4
A04D  Lummi Island      56.27 348  P     P     12 26 54.4  -0.3
      baz=161,SNR=5.7
SADO  Sadowa            56.62  24  LR    LR    12 51 14.6
      comp=Z,1µm,18.4s,baz=216,slow=36
SADO  Sadowa            56.62  24  P     P     12 26 56.4  -1.0
ITRB  Iturama           56.84 109 eP     P     12 26 58.7  -0.8
ULM   Lac du Bonnet     57.01   9  P     P     12 26 59.2  -0.8
      comp=Z,7.8nm,1.0s,baz=199,slow=8.3,SNR=5.9
ULM                                LR    LR    12 49 33.2
      comp=Z,1µm,18.6s,baz=196,slow=34
      comp=Z,7.8nm,1.0s
ULM   Lac du Bonnet     57.01   9 iP     P     12 26 59.9  -0.2
PRPB  Parauapebas       57.10  93 eP     P     12 27 01.7  +0.2
J58A  Remsen            57.14  27  P     P     12 26 59.5  -1.7
      baz=219
J58A                               P     P     12 26 59.5  -1.7
      baz=219
WCNY  West Carthage     57.46  27  P     P     12 27 02.1  -1.3
      baz=218
USHA  Ushuaia           57.69 155  LR    LR    12 46 03.1
      comp=Z,3µm,19.3s,baz=304,slow=30
CNLB  Canela            57.86 121 eP     P     12 27 08.3  +1.6
FRTB  Fartura           58.00 114 eP     P     12 27 09.4  +1.7
HRV   Adam Dziewonsk    58.29  30  P     P     12 27 07.3  -1.9
      baz=223
LONY  Lake Ozonia       58.44  27  P     P     12 27 08.8  -1.5
      baz=219
PEXB  Peixe             58.44 100 eP     P     12 27 10.5  -0.4
IPMB  Ipameri, GO       58.73 107 eP     P     12 27 12.7  -0.2
BDFB  Brasilia          58.80 105  P     P     12 27 12.1  -1.4
      comp=Z,5.7nm,0.8s,baz=241,slow=8.8,SNR=6.8
BDFB                               LR    LR    12 49 57.2
      comp=Z,3µm,20.1s,baz=277,slow=33
      comp=Z,5.7nm,0.8s
BDFB  Brasilia          58.80 105  P     P     12 27 12.8  -0.6
BDFB                               pmax  pmax
      comp=Z,65nm,1.7s
BDFB  Brasilia          58.80 105  P     P     12 27 12.8  -0.6
FRNY  Flat Rock         59.06  27  P     P     12 27 13.5  -1.0
      baz=220
SMTB  Santa Maria do    59.19  97 eP     P     12 27 16.4  +0.3
EDM   Edmonton          59.35 356  P     P     12 27 16.3  -0.2
EDM                                pmax  pmax
      comp=Z,74nm,1.4s
EDM   Edmonton          59.35 356  P     P     12 27 16.3  -0.2
LBNH  Lisbon            59.39  29  P     P     12 27 14.7  -2.1
      baz=222
RCLB  Rio Claro- Sao    59.75 112 eP     P     12 27 19.3  -0.6
BBB   Bella Bella       60.75 345  LR    LR    12 49 16.3
      comp=Z,742nm,19.0s,baz=160,slow=32
PKME  Peaks-Kenny Pk    61.42  30  P     P     12 27 28.8  -1.9
      baz=224
PARB  Paraibuna         61.59 113 eP     P     12 27 34.0  +1.6
SDBA  SAO DESIDERIO     61.76 101 eP     P     12 27 33.7  -0.1
ROSB  Rosrio            63.01  90 eP     P     12 27 41.8  -0.2
AFI   Afiamalu          63.83 258  LR    LR    12 47 33.2
      comp=Z,583nm,21.9s,baz=80,slow=29
BATG  Bathurst New B    64.42  30  P     P     12 27 49.8  -0.9
BATG                               IAmb  IAmb  12 27 59.5
      comp=Z,17nm,1.0s
CAM01 Campos-RJ         65.13 111 eP     P     12 27 57.6  +1.8
FCC   Fort Churchill    65.54   8  P     P     12 27 57.3  -0.4
FCC                                pmax  pmax
      comp=Z,20nm,1.1s
FCC   Fort Churchill    65.54   8  P     P     12 27 57.3  -0.4
FCC                                IAmb  IAmb  12 28 04.7
      comp=Z,20nm,1.1s
WRAK  Wrangell Islan    65.65 345  P     P     12 27 56.9  -1.5
      baz=152
BSFB  Barra de Sao F    65.76 108 eP     P     12 27 59.8  -0.1
PMSA  Palmer Station    66.03 161  LR    LR    12 49 56.8
      comp=Z,3µm,18.1s,baz=318,slow=30
DLBC  Dease Lake        66.91 347  LR    LR    12 54 42.0
      comp=Z,3µm,18.1s,baz=148,slow=34
DLBC  Dease Lake        66.91 347  P     P     12 28 07.7  +1.1
GDU01 Guandu, BA        66.94 102 eP     P     12 28 08.6  +1.0
SIT   Sitka             67.00 344  P     P     12 28 05.0  -2.0
      baz=149
SMAI  San Martin Ant    67.48 165  P     P     12 28 12.4  +2.4
YKA   Yellowknife Ar    68.65 356  P     P     12 28 15.6  -1.8
      comp=Z,10.0nm,0.9s,baz=166,slow=6.0,SNR=63
YKA                                LR    LR    12 56 18.1
      comp=Z,3µm,18.0s,baz=176,slow=34
      comp=Z,10.0nm,0.9s
YKA   Yellowknife Ar    68.65 356  P     P     12 28 15.9  -1.5
YKA   Yellowknife Ar    68.65 356  P     P     12 28 15.9  -1.5
NBCL  Cascavel-CE       68.69  92 eP     P     12 28 20.4  +1.7
TGTN  Hyland Airport    69.40 349  P     P     12 28 21.8  -0.3
      baz=158,SNR=9.4
SCHQ  Schefferville     69.43  24  P     P     12 28 21.6  -0.8
      comp=Z,7.0nm,1.0s,baz=236,slow=6.3,SNR=7.3
SCHQ                               LR    LR    12 58 39.1
      comp=Z,996nm,20.8s,baz=229,slow=36
      comp=Z,7.0nm,1.0s
SCHQ  Schefferville     69.43  24  P     P     12 28 21.5  -1.0
SCHQ                               IAmb  IAmb  12 28 43.1
      comp=Z,18nm,1.4s
RAO   Raoul Island      70.15 241  LR    LR    12 51 12.2
      comp=Z,890nm,21.6s,baz=128,slow=29
NBAN  Anadia - AL       70.31  98 eP     P     12 28 29.2  +0.5
HYT   Haines Junctio    70.82 345  P     P     12 28 29.3  -1.7
      baz=148
RCBR  Riachuelo         70.93  94  LR    LR    12 57 13.1
      comp=Z,754nm,18.5s,baz=60,slow=34
N31M  Braeburn, Yuko    70.96 346  P     P     12 28 30.9  -0.8
      baz=150,SNR=6.9
MMPY  Sheldon Lake,     70.97 349  P     P     12 28 31.1  -0.7
      baz=155,SNR=5.7
YUK6  Outpost Mounta    71.14 345  P     P     12 28 30.2  -2.9
      baz=147
M31M  Drury Creek, Y    71.26 347  P     P     12 28 31.3  -2.2
      baz=151
YUK4  Talbot Arm        71.56 345  P     P     12 28 33.5  -2.0
      baz=147
KAIM  Kayak Island      72.08 341  P     P     12 28 37.3  -1.2
      baz=141
M30M  Minto, Yukon      72.14 346  P     P     12 28 37.0  -1.8
      baz=149
BERG  Berg Lake         72.23 342  P     P     12 28 41.1  +1.7
Q23K  Middleton Isla    72.33 340  P     P     12 28 37.9  -2.1
      baz=139
YUK3  Moose Creek       72.40 344  P     P     12 28 38.6  -2.0
      baz=145
BMRM  Bremner River     72.95 342  P     P     12 28 42.4  -1.3
      baz=141
EYAK  Cordova Ski Ar    72.99 341  P     P     12 28 42.0  -1.8
      baz=140
BVCY  Beaver Creek      73.03 344  P     P     12 28 43.0  -1.1
      baz=145
M27K  Edge Creek, AK    73.27 344  P     P     12 28 45.7   0.0
M27K                               IAmb  IAmb  12 28 56.3
      comp=Z,20nm,1.3s
SII   Sitkinak Islan    73.27 335  P     P     12 28 44.5  -1.2
      baz=131
OHAK  Old Harbor        73.34 336  P     P     12 28 44.6  -1.3
      baz=132
CHIR  Chirikof Islan    73.42 334  P     P     12 28 44.3  -2.1
      baz=129
KDAK  Kodiak Island     73.44 337  LR    LR    12 53 41.8
      comp=Z,4µm,19.3s,baz=164,slow=30
KDAK  Kodiak Island     73.44 337  P     P     12 28 45.0  -1.5
      baz=132
N25K  Chitina, Valde    73.45 342  P     P     12 28 44.3  -2.3
      baz=141
MSVF  Nonsavu           73.59 253  LR    LR    12 53 32.9
      comp=Z,564nm,20.5s,baz=141,slow=30
M26K  Nabesna, AK       73.61 344  P     P     12 28 46.7  -0.8
      baz=143
GLI   Glacier Island    73.67 341  P     P     12 28 47.2  -0.7
      baz=138
KLU   Klutina           73.77 342  P     P     12 28 47.0  -1.5
      baz=140
BCAR  Beaver Creek A    73.81 344  P     P     12 28 49.5  +0.8
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L27K	Beaver Creek,	73.82	344	P	P	12 28 48.1	-0.7
	baz=144,SNR=8.4						
SEW	Seward	73.90	340	P	P	12 28 48.1	-1.1
	baz=136						
DAWY	Dawson	74.03	346	P	P	12 28 50.3	+0.3
DAWY				IAmb	IAmb	12 29 11.0	
	comp=Z,25nm,1.2s						
DAWY	Dawson	74.03	346	P	P	12 28 49.3	-0.7
	baz=147,SNR=13						
PWL	Port Wells	74.07	340	P	P	12 28 50.1	-0.1
	baz=137						
BRSE	Bradley Lake S	74.09	339	P	P	12 28 49.3	-1.1
	baz=135						
L26K	Log Cabin Wild	74.21	344	P	P	12 28 49.9	-1.1
	baz=142						
HARP	HAARP	74.23	343	P	P	12 28 49.9	-1.3
	baz=140						
O22K	Cooper Landing	74.26	340	P	P	12 28 49.6	-1.7
	baz=136						
M24K	Tolsona, Glenn	74.31	342	P	P	12 28 50.3	-1.4
	baz=140						
HOM	Homer	74.36	338	P	P	12 28 50.8	-1.1
	baz=134						
SCM	Sheep Creek Mo	74.46	342	P	P	12 28 51.0	-1.6
	baz=138						
KNK	Knik Glacier	74.51	341	P	P	12 28 51.6	-1.2
	baz=137						
M23K	Glacier View	74.56	341	P	P	12 28 51.7	-1.4
	baz=138						
Q19K	Cape Douglas,	74.62	337	P	P	12 28 51.5	-2.0
	baz=132						
K27K	Chicken	74.67	345	P	P	12 28 52.2	-1.4
	baz=144						
RC01	Rabbit Creek A	74.70	340	P	P	12 28 52.2	-1.7
	baz=136						
SML	Sawmill	74.76	341	P	P	12 28 52.1	-2.2
	baz=137						
PAX	Paxson	74.77	343	P	P	12 28 53.1	-1.3
	baz=140						
PMR	Palmer	74.87	341	P	P	12 28 53.4	-1.4
	baz=136						
I29M	Ogilvie Camp,	74.87	347	P	P	12 28 53.0	-1.9
	baz=148,SNR=8.2						
URZ	Urewera	74.94	232	LR	LR	12 56 23.2	
	comp=Z,1µm,18.2s,baz=32,slow=31						
P19K	Oil Pt	74.95	338	P	P	12 28 54.0	-1.3
	baz=132						
O20K	Slope Mountain	75.01	338	P	P	12 28 53.6	-2.2
	baz=133						
EGAK	Eagle	75.05	346	P	P	12 28 54.2	-1.6
	baz=145,SNR=24						
SCRK	Sand Creek	75.14	344	P	P	12 28 54.6	-1.9
	baz=142						
WAT6	Susitna Watana	75.15	342	P	P	12 28 54.3	-2.4
	baz=138,SNR=11						
RIDG	Independent Ri	75.19	344	P	P	12 28 57.0	+0.3
RIDG	Independent Ri	75.19	344	P	P	12 28 55.7	-1.1
	baz=141,SNR=11						
M22K	Willow	75.31	340	P	P	12 28 56.6	-0.7
	baz=136						
DHY	Denali Highway	75.41	342	P	P	12 28 55.7	-2.4
	baz=138						
J26L	Joseph Creek	75.44	345	P	P	12 28 56.1	-2.2
	baz=142,SNR=9.9						
K24K	Donnelly Dome	75.50	343	P	P	12 28 56.2	-2.3
	baz=140						
FRB	Frobisher Bay	75.52	17	LR	LR	13 01 08.6	
	comp=Z,1µm,18.7s,baz=210,slow=35						
P18K	Big Mountain,	75.54	337	P	P	12 28 57.3	-1.5
	baz=130						
O19K	Port Alsworth	75.72	338	P	P	12 28 57.9	-1.9
	baz=131						
CUT	Chulitna	75.83	341	P	P	12 28 58.7	-1.6
	baz=136						
O18K	Koktuh Hills	75.83	337	P	P	12 28 59.5	-0.9
	baz=130						
J25K	Salcha River,	76.01	344	P	P	12 28 59.8	-1.7
	baz=141						
RND	Reindeer	76.11	342	P	P	12 29 01.3	-0.7
RND				pmax	pmax		
	comp=Z,45nm,1.2s						
RND	Reindeer	76.11	342	P	P	12 29 01.3	-0.7
N19K	Bonanza Creek	76.19	338	P	P	12 28 59.9	-2.6
	baz=131						
C36M	Paulatuk	76.19	354	P	P	12 29 00.9	-1.3
	baz=163						
MCK	McKinley	76.37	342	P	P	12 29 03.5	0.0
MCK				pmax	pmax		
	comp=Z,66nm,1.7s						
MCK	McKinley	76.37	342	P	P	12 29 03.5	0.0
FALS	False Pass	76.48	330	P	P	12 29 01.2	-2.9
	baz=122						
INK	Inuvik	76.52	350	LR	LR	13 00 04.6	
	comp=Z,2µm,18.7s,baz=149,slow=34						
INK	Inuvik	76.52	350	P	P	12 29 04.3	+0.2
INK				pmax	pmax		
	comp=Z,13nm,1.1s						
INK	Inuvik	76.52	350	P	P	12 29 04.3	+0.2
INK				IAmb	IAmb	12 29 11.7	
	comp=Z,13nm,1.1s						
INK	Inuvik	76.52	350	P	P	12 29 02.9	-1.2
	baz=153,SNR=13						
IL31		76.55	344	P	P	12 29 03.5	-0.8
IL31				IAmb	IAmb	12 29 18.3	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	76.55	344	P	P	12 29 03.2	-1.2
	comp=Z,5.9nm,1.0s,baz=157,slow=5.4,SNR=17						
ILAR				LR	LR	12 56 40.9	
	comp=Z,1µm,19.0s,baz=176,slow=31						
	comp=Z,5.9nm,1.0s						
ILAR	Eielson Array	76.55	344	P	P	12 29 04.2	-0.2
ILAR	Eielson Array	76.55	344	P	P	12 29 04.2	-0.2
TRF	Thorofare Moun	76.58	342	P	P	12 29 05.0	+0.1
TRF				IAmb	IAmb	12 29 18.8	
	comp=Z,14nm,1.0s						
N18K	Kilae Creek	76.63	338	P	P	12 29 05.2	+0.2
N18K	Kilae Creek	76.63	338	P	P	12 29 02.2	-2.8
	baz=130						
WRH	Wood River Hil	76.67	343	P	P	12 29 05.0	-0.1
PPLA	Purkeypile	76.80	341	P	P	12 29 06.0	0.0
PPLA	Purkeypile	76.80	341	P	P	12 29 03.2	-2.9
	baz=134						
BWN	Browne	76.85	342	P	P	12 29 06.0	-0.1
M19K	Big River Lodg	76.88	339	P	P	12 29 06.5	+0.1
M19K				IAmb	IAmb	12 29 21.4	
	comp=Z,23nm,1.4s						
COLA	College	76.90	343	*i* P	P	12 29 09.9	+3.5
COLA				pmax	pmax		
	comp=Z,14nm,1.4s						
COLA	College	76.90	343	P	P	12 29 03.2	-3.2
	baz=138						
TCOL	CIGO, UAF Yank	76.91	343	P	P	12 29 03.2	-3.2
	baz=138						
POKR	Poker Plat Res	76.97	344	P	P	12 29 04.0	-2.8
	baz=139						
NEA2	Nenana	77.05	343	P	P	12 29 05.5	-1.7
	baz=137,SNR=13						
L20K	Farewell, AK	77.09	340	P	P	12 29 06.1	-1.4
	baz=132,SNR=8.7						
CAST	Castle Rocks	77.13	341	P	P	12 29 05.8	-2.0
	baz=134,SNR=8.3						
L19K	White Mountain	77.23	339	P	P	12 29 07.9	-0.4
L19K				IAmb	IAmb	12 29 23.9	
	comp=Z,25nm,1.3s						
L19K	White Mountain	77.23	339	P	P	12 29 06.9	-1.5
	baz=131,SNR=6.4						
BPAW	Bear Paw Mtn.	77.27	342	P	P	12 29 08.0	-0.5
BPAW				IAmb	IAmb	12 29 17.1	
	comp=Z,21nm,1.5s						
BPAW	Bear Paw Mtn.	77.27	342	P	P	12 29 05.8	-2.7
	baz=135						
UNV	Unalaska Valle	77.52	329	P	P	12 29 08.1	-1.9
	baz=119						
CHUM	Lake Minchumin	77.53	341	P	P	12 29 07.6	-2.3
	baz=134						
I23K	Minto, Yukon-K	77.54	343	P	P	12 29 08.5	-1.5
	baz=137,SNR=11						
H24K	Noodor Dome	77.64	344	P	P	12 29 08.6	-2.0
	baz=138						
K20K	Telida	77.74	340	P	P	12 29 09.1	-2.1
	baz=132,SNR=10						
BMAR	Burnt Mountain	78.02	346	P	P	12 29 13.0	+0.3
H23K	Yukon River	78.09	344	P	P	12 29 10.6	-2.4
	baz=137						
TTA	Tatalina	78.13	339	P	P	12 29 10.5	-2.9
	baz=130						
J20K	Nowinta River	78.32	341	P	P	12 29 12.2	-2.1
	baz=132						
I21K	Tanana	78.33	342	P	P	12 29 11.8	-2.6
	baz=134						
NIKH	Nikolski High	78.36	327	P	P	12 29 13.7	-1.1
	baz=117						
A36M	Sachs Harbour	78.84	354	P	P	12 29 14.7	-2.3
	baz=162						
H21K	Melozitna Rive	78.92	342	P	P	12 29 16.5	-1.1
	baz=134,SNR=9.8						
COLD	Coldfoot	79.29	344	P	P	12 29 19.8	+0.1
COLD	Coldfoot	79.29	344	P	P	12 29 18.1	-1.6
	baz=136,SNR=8.9						
IMAR	Indian Mountai	79.42	342	P	P	12 29 19.7	-0.6
GCSA	Galena City Sc	79.59	341	P	P	12 29 20.3	-0.9
	baz=130,SNR=10.0						
RPZ	Rata Peaks	79.78	227	LR	LR	12 59 10.9	
	comp=Z,1µm,18.1s,baz=66,slow=32						
TOLK	Toolik Lake Re	80.17	346	P	P	12 29 24.1	-0.3
TOLK				IAmb	IAmb	12 29 40.0	
	comp=Z,36nm,1.7s						
TOLK	Toolik Lake Re	80.17	346	P	P	12 29 22.1	-2.3
	baz=137						
BELA	Belgrano 2	80.43	168	P	P	12 29 24.9	-0.8
BELA				IAmb	IAmb	12 29 45.1	
	comp=Z,16nm,1.3s						
RES	Resolute Bay	81.03	3	LR	LR	13 04 38.6	
	comp=Z,1µm,18.2s,baz=196,slow=35						
ANM	Nome	82.45	338	P	P	12 29 34.5	-2.0
	baz=122						
SBA	Scott Base	83.20	192	P	P	12 29 40.9	+0.6
SBA				pmax	pmax		
	comp=Z,25nm,1.5s						
SBA	Scott Base	83.20	192	P	P	12 29 40.9	+0.6
SBA				IAmb	IAmb	12 29 57.9	
	comp=Z,25nm,1.4s						
SFJD	Kangerlussuaq	83.26	19	LR	LR	13 06 39.2	
	comp=Z,1µm,18.8s,baz=236,slow=36						
QSPA	South Pole Qui	83.94	180	LR	LR	12 59 44.3	
	comp=Z,1µm,21.6s,baz=116,slow=30						
QSPA	South Pole Qui	83.94	180	P	P	12 29 43.6	-0.8
VNDA	Vanda	84.25	193	P	P	12 29 45.6	-0.1
	comp=Z,1.4nm,1.1s,baz=117,slow=8.3,SNR=3.1						
VNDA				LR	LR	13 00 16.2	
	comp=Z,119nm,19.1s,baz=95,slow=31						
	comp=Z,1.4nm,1.1s						
VNDA	Vanda	84.25	193	P	P	12 29 48.5	+2.8
VNDA				pmax	pmax		
	comp=Z,29nm,1.7s						
VNDA	Vanda	84.25	193	P	P	12 29 48.5	+2.8
DZM	Mont Dzumac	84.29	248	LR	LR	13 01 55.7	
	comp=Z,364nm,18.1s,baz=44,slow=32						
SHEM	Shemya Is, Ala	87.99	323	LR	LR	13 00 38.4	
	comp=Z,1µm,21.7s,baz=108,slow=30						
H11N3	WAKE ISLAND Hy	88.12	290	T	T	14 07 32.4	
	baz=99,slow=74,SNR=253						
H11N2	WAKE ISLAND Hy	88.13	290	T	T	14 07 33.4	
	baz=99,slow=74,SNR=278						
H11N1	WAKE ISLAND Hy	88.14	290	T	T	14 07 35.0	
	baz=99,slow=74,SNR=200						
H11S2	WAKE ISLAND Hy	88.16	289	T	T	14 07 32.2	
	baz=97,slow=75,SNR=252						
H11S1	WAKE ISLAND Hy	88.17	289	T	T	14 07 36.0	
	baz=97,slow=75,SNR=260						
H11S3	WAKE ISLAND Hy	88.18	289	T	T	14 07 42.1	
	baz=97,slow=75,SNR=241						
SNAA	Sanae	88.73	162	LR	LR	13 03 18.0	
	comp=Z,2µm,19.3s,baz=276,slow=31						
SNAA	Sanae	88.73	162	P	P	12 30 09.0	+1.2
SNAA				pmax	pmax		
	comp=Z,31nm,1.8s						
SNAA	Sanae	88.73	162	P	P	12 30 09.0	+1.2
BORG	Borgarnes	93.76	25	LR	LR	13 11 06.1	
	comp=Z,308nm,19.1s,baz=273,slow=34						
BILL	Bilibino	94.31	338	⇑*e*P	P	12 30 32.6	-1.0
BILL				*e*		12 34 20.4	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
PET	Petropavlovsk	97.30	323	*e*P	Pdif	12 30 50.0	+2.4
PET				*e*		12 34 44.7	
PET				*e*PPP	PPP	12 37 00.7	
PET				*e*S	S	12 42 09.3	-2.2
PET				*e*PS	PS	12 43 42.7	+8.0
PET				*e*PPS	PPS	12 44 22.8	
PET				MLR	MLR		
	comp=Z,400nm,19.0s						
PETK	Petropavlovsk-	97.88	323	LR	LR	13 06 14.1	
	comp=Z,818nm,21.6s,baz=80,slow=30						
JMIC	Jan Mayen	98.62	19	LR	LR	13 15 05.0	
	comp=Z,798nm,18.4s,baz=266,slow=35						
SEY	Seymchan	100.13	333	*i* P	Pdif	12 31 02.7	+2.7
SEY				pmax	pmax		
	comp=Z,3.0nm,1.3s						
CLL	Collm	113.41	36	*e*PS	PS	12 46 18.0	-1.6
CLL				*e*PPS	PPS	12 47 24.0	
CLL				*e*SS	SS	12 52 30.0	+0.7
CLL				*e*x	x	12 53 30.0	
CLL				*e*SSS	SSS	12 56 42.0	
CLL				LmV		13 20 00.0	
	comp=Z,300nm,20.5s						
KLR	Kul'dur	114.55	322	*e*PKIKP	PKiKP	12 35 54.7	-0.1
KLR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NRIK	Noril'sk	116.12	354	*i* PKIKP	PKPdf	12 36 00.3	+3.1
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	Obninsk	123.23	24	⇑*e*PKIKP	PKiKP	12 36 14.7	+3.2
OBN				*e*		12 37 50.2	
OBN				*e*SSS	SSS	12 59 16.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,478nm,21.0s						
ARU	Arti	128.59	10	*i* PKIKP	PKiKP	12 36 25.0	+2.9
ARU						12 38 30.1	
ARU						12 43 35.9	
ARU				SS	SS	12 55 41.2	-1.2
ARU				MLR	MLR		
	comp=Z,609nm,20.0s						
ULN	Ulaanbaatar	129.15	331	*i* PKIKP	PKiKP	12 36 24.5	+0.7
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	129.49	331	PKP	PKPdf	12 36 21.4	-2.3
	comp=Z,0.9nm,0.9s,baz=349,slow=2.9,SNR=4.5						
SONM	Songino Array	129.49	331	PKIKP	PKPdf	12 36 23.0	-0.7
SONM	Songino Array	129.49	331		PKPdf	12 36 22.9	-0.7
NJ2	Nanjing	129.88	307	*e*PKP	PKiKP	12 36 26.4	+0.9
LYN	LuoYang	133.70	313	*e*PKP	PKPdf	12 36 25.5	-6.4
LYN				AMB	AMB		
	comp=Z,90nm,5.8s						
LYN				LR	LR		
	comp=Z,440nm,16.4s						
LYN				LR	LR		
	comp=Z,470nm,19.3s						
LYN				LR	LR		
	comp=Z,550nm,18.9s						
KURK	Kurchatov	135.29	355	PKIKP	PKPdf	12 36 34.3	0.0
KURK	Kurchatov	135.29	355		PKPdf	12 36 34.3	0.0
KURBB	Kurchatov Arra	135.39	355	PKP	PKPdf	12 36 32.8	-1.7
	comp=Z,0.5nm,0.8s,baz=358,slow=2.3,SNR=2.4						
MAK	Makhachkala	137.09	27	*i* P	Pdif	12 33 40.7	-4.1
MAK				*i*		12 36 36.6	
MAK				*e*		12 39 17.3	
MAK				*e*		12 43 45.7	
MAK				*e*SSS	SSS	13 02 30.7	
MAK				pmax	pmax		
	comp=Z,15nm,0.3s						
MK31	Makanchi Array	138.65	350	PKIKP	PKPdf	12 36 39.1	-1.6
MK31	Makanchi Array	138.65	350		PKPdf	12 36 39.1	-1.6
MKAR	Makanchi Array	138.65	350	PKP	PKPdf	12 36 39.0	-1.7
	comp=Z,1.3nm,0.8s,baz=28,slow=2.9,SNR=9.4						
MKAR				PP	PP	12 39 29.8	-0.6
	comp=Z,1.1nm,0.9s,baz=2.5,slow=5.5,SNR=4.1						
MKAR	Makanchi Array	138.65	350	PKIKP	PKPdf	12 36 39.8	-0.9
MKAR	Makanchi Array	138.65	350	PKPdf	PKPdf	12 36 39.8	-0.9
WMQ	Urumqi	140.22	343	PKP	PKPdf	12 36 42.2	-1.5
WMQ				PP	PP	12 39 45.9	+5.7
WMQ				AMB	AMB		
	comp=Z,150nm,4.7s						
WMQ				LR	LR		
	comp=Z,700nm,21.1s						
WMQ				LR	LR		
	comp=Z,530nm,21.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
QIZ	Qiongzhong	141.67	293	PKP	PKPdf	12 36 46.7	-0.2
QIZ				PP	PP	12 39 53.6	+2.7
QIZ				LR	LR		
	comp=Z,360nm,21.5s						
QIZ				LR	LR		
	comp=Z,330nm,20.7s						
QIZ				LR	LR		
	comp=Z,380nm,25.5s						
CD2	Chengdu	141.86	314	PKP	PKPdf	12 36 46.5	-0.6
GYA	Guiyang	141.86	306	PKP	PKPdf	12 36 48.3	+1.0
KMBO	Kilima Mbogo	143.86	100	PKP	PKPab	12 36 48.5	+0.2
	comp=Z,1.5nm,0.3s,baz=255,slow=3.6,SNR=13						
KMBO	Kilima Mbogo	143.86	100	PKIKP	PKPbc	12 36 49.9	+0.9
KMBO	Kilima Mbogo	143.86	100		PKPbc	12 36 49.9	+0.9
GOMU	GeErMu	143.86	329	PKP	PKPdf	12 36 50.6	-0.3
GOMU				AMB	AMB		
	comp=Z,75nm,3.9s						
GOMU				LR	LR		
	comp=Z,770nm,17.5s						
GOMU				LR	LR		
	comp=Z,420nm,17.3s						
GOMU				LR	LR		
	comp=Z,380nm,17.7s						
KIBK	Kibwezi	144.37	103		PKPbc	12 36 50.8	+0.4
ABPO	Ambohimpanom	144.57	135	PKIKP	PKPab	12 36 50.2	-0.5
ABPO	Ambohimpanom	144.57	135		PKPab	12 36 50.2	-0.5
KMI	Kunming	145.62	307	⇓PKPbc	PKPdf	12 36 54.4	+0.4
KMI				LR	LR		
	comp=Z,350nm,16.8s						
KMI				LR	LR		
	comp=Z,300nm,19.9s						
KMI				LR	LR		
	comp=Z,560nm,18.9s						
GEYT	Alibeck	145.67	21	PKPbc	PKPdf	12 36 52.6	-0.9
	comp=Z,4.6nm,0.8s,baz=93,slow=2.9,SNR=3.9						
GEYT	Alibeck	145.67	21		PKPdf	12 36 51.6	-1.9
PZH	PanZhiHua	145.72	309	PKPbc	PKPdf	12 36 53.2	-0.8
PZH				SKKS		12 47 08.5	
PZH				SS	SS	12 59 11.1	+2.3
PZH				AMB	AMB		
	comp=Z,120nm,4.8s						
PZH				LR	LR		
	comp=Z,220nm,16.9s						
PZH				LR	LR		
	comp=Z,330nm,15.6s						
PZH				LR	LR		
	comp=Z,280nm,16.1s						
KSH	Kashi	146.63	355	PKPbc	PKiKP	12 37 02.8	+3.2
KSH				SKS	SKSdf	12 44 08.4	+3.9
KSH				LR	LR		
	comp=N,680nm,20.0s						
KSH				LR	LR		
	comp=E,550nm,20.6s						
KSH				LR	LR		
	comp=Z,980nm,21.6s						
GAR	Garm	147.20	3		PKPbc	12 36 58.3	-0.1
CHGR	Chuyangaron	147.46	5		PKPbc	12 36 58.9	-0.1
CHTO	Chiang Mai	151.52	299	PKIKP	PKPbc	12 37 08.2	-1.4
CHTO	Chiang Mai	151.52	299		PKPbc	12 37 08.2	-1.4
CMAR	Chiang Mai Arr	151.66	298	PKPbc	PKPdf	12 37 07.6	+3.9
	comp=Z,4.0nm,0.7s,baz=32,slow=0.6,SNR=22						
CMAR	Chiang Mai Arr	151.66	298	PKIKP	PKPbc	12 37 08.6	-1.4
CMAR	Chiang Mai Arr	151.66	298		PKPbc	12 37 08.6	-1.4
IPM	Ipoh	151.78	268	PKPdf	PKPdf	12 37 01.8	-2.3
IPM					sPKPdf	12 37 08.6	+1.4
IPM				PKPab	PKPab	12 37 20.2	+0.9
PCHI	Peechi	174.34	321	*e*P	PKPdf	12 37 22.6	-2.8

*CNRM **02** 12:17:40.7, 36.°25N×7.°64W, h0^{km}, ml2.3*

*MDD **02** 12:17:45.7±0.7, 36.°41N×7.°90W, h21^{km}±7^{km}, mb_Lg2.7/16,*
Error ellipse: s-maj=6.5km s-min=2.9km az=32.0

*INMG **02** 12:17:47.4±1.5, 36.°42N×7.°87W, h30^{km}±11^{km}, ML1.9,*
Error ellipse: s-maj=5.2km s-min=4.2km az=25.0

*IGIL **02** 12:17:47.6, 36.°49N×7.°93W, h14^{km}, ML2.0*

ISC 02 12:17:44.2±1.2**, 36.°37N**±0.°03×**7.°86W**±0.°04**, h31**^{km}±12^{km}**,**
n37, σ1.^{s}38/68**, 1C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	Barranco-do-Ve	0.88	356	*e*P	Pn	12 18 01.9	+1.4
PBDV				*e*S	Sb	12 18 12.2	-0.1
PBDV				A	A	12 18 16.9	
	14nm,0.4s						
PVAQ	Vaqueiros	1.04	6	*e*P	Pb	12 18 04.3	+0.7
PVAQ				*e*S	Sb	12 18 16.5	-0.4
PVAQ				A	A	12 18 17.2	
	28nm,0.2s						
PVAQ	Vaqueiros	1.04	6	P	Pb	12 18 03.8	+0.2
PVAQ				S	Sb	12 18 16.8	-0.1
PFVI	Vila Bisbo	1.09	315	*e*P	Pb	12 18 04.5	0.0
PFVI				*e*S	Sb	12 18 17.4	-1.0
PFVI				A	A	12 18 21.6	
	12nm,0.2s						
MORF	Marmelete	1.13	326	*e*P	Pn	12 18 05.0	+1.0
MORF	Marmelete	1.13	326	*e*P	Pn	12 18 05.0	+1.0
MORF				*e*S	Sb	12 18 18.6	-1.0
MORF				A	A	12 18 23.0	
	20nm,0.1s						
EGRO	El Granado	1.20	14	P	Pn	12 18 06.5	+1.6
EGRO				S	Sb	12 18 20.0	-1.6
EGRO				*i* Vmb_Lg		12 18 21.6	
PCVE	Castro Verde	1.27	354	*e*P	Pn	12 18 07.5	+1.6
PCVE				*e*S	Sn	12 18 22.2	+0.3
PCVE				A	A	12 18 23.4	
	21nm,0.1s						
PTEO	Sao Teotonio	1.36	330	*e*P	Pn	12 18 08.5	+1.4
PTEO				*e*S	Sn	12 18 24.1	-0.1
PTEO				A	A	12 18 36.1	
	10.0nm,0.6s						
MESJ	Messejana	1.50	349	*e*P	Pn	12 18 10.5	+1.5
MESJ				*e*S	Sn	12 18 27.3	-0.1
MESJ				IAML		12 18 28.4	
	comp=N,17nm,0.1s						
ESPR	Espera	1.69	72	P	Pn	12 18 13.2	+1.6
ESPR				S	Sn	12 18 32.2	+0.1
ESPR				*i* Vmb_Lg		12 18 34.7	
EMIN	Mina Concepcio	1.69	34	P	Pn	12 18 12.7	+1.1
EMIN				S	Sn	12 18 30.8	-1.4
EMIN				*i* Vmb_Lg		12 18 40.5	
PNCL	Nicolau / Gran	1.82	343	*e*Pn	Pn	12 18 14.6	+1.2
PNCL				*e*Sn	Sn	12 18 34.3	-1.1
PNCL				A	A	12 18 47.1	
	comp=N,3.3nm,0.1s						
PBAR	Barrancos	1.92	20	*e*Pn	Pn	12 18 16.3	+1.5
PBAR				*e*Sn	Sn	12 18 37.7	-0.2
EBAD	Badajoz	2.48	15	P	Pn	12 18 23.4	+0.9
EBAD				S	Sn	12 18 50.2	-1.4
EBAD				*i* Vmb_Lg		12 18 53.0	
EMIJ	Mijas	2.50	85	P	Pn	12 18 24.2	+1.5
EMIJ				S	Sn	12 18 52.7	+0.6
EMIJ				*i* Vmb_Lg		12 18 54.8	
PESTR	Estremoz	2.50	5	*e*Sn	Sn	12 18 51.9	-0.4
PESTR				A	A	12 19 06.8	
	comp=N,2.5nm,0.4s						
PESTR	Estremoz	2.50	5	P	Pn	12 18 23.2	+0.3
PESTR				S	Sb	12 18 58.2	-0.7
ECAB	El Cabril	2.59	48	P	Pn	12 18 25.4	+1.4
ECAB				S	Sn	12 18 53.1	-1.3
ECAB				*i* Vmb_Lg		12 18 55.9	
PMTG	Montargil	2.71	354	⇑*e*Pn	Pn	12 18 27.1	+1.4
PMTG				*e*Sn	Sn	12 18 57.4	0.0
PMTG				A	A	12 18 58.0	
	comp=N,5.0nm,0.1s						
PMAFR	Mafra	2.82	337	*e*Sn	Sn	12 18 58.5	-1.6
PMRV	Marv??o	3.08	7	*e*Pn	Pn	12 18 32.4	+1.7
PMRV				*e*Sn	Sn	12 19 06.3	-0.2
PMRV				A	A	12 19 07.4	
	comp=N,2.3nm,0.2s						
ZHG	ZHG	3.08	161	P	Pn	12 18 33.0	+2.1
ZHG				S	Sn	12 19 05.7	-1.1
EGOR	Sierra Gorda,	3.10	75	P	Pn	12 18 31.6	+0.4
EGOR				S	Sn	12 19 08.2	+0.9
EGOR				*i* Vmb_Lg		12 19 19.9	
EADA	Adamuz	3.17	55	P	Pn	12 18 33.2	+1.2
EADA				S	Sn	12 19 07.4	-1.6
EADA				*i* Vmb_Lg		12 19 10.7	
PSBE	So Bento	3.23	347	*e*Sn	Sn	12 19 10.6	+0.4
ELGU	Los Guajares,	3.44	80	P	Pn	12 18 36.6	+0.8
ELGU				S	Sn	12 19 17.5	+1.9
ELGU				*i* Vmb_Lg		12 19 26.2	
PCBR	Castelo Branco	3.48	5	*e*Sn	Sn	12 19 16.1	-0.3
PCBR				A	A	12 19 16.7	
	comp=N,2.6nm,0.6s						

EPLA	Plasencia	3.95	20	P	Pn	12 18 43.5	+0.9
EPLA				S	Sn	12 19 26.3	-1.7
EPLA				i Vmb_Lg		12 19 30.5	
EQES	Quesada	4.09	68	P	Pn	12 18 45.6	+1.0
EQES				S	Sn	12 19 31.1	-0.4
EQES				i Vmb_Lg		12 19 37.1	
PAB	San Pablo	4.21	40	P	Pn	12 18 48.2	+1.8
PAB				S	Sn	12 19 31.0	-3.6
PAB				i Vmb_Lg		12 19 33.1	
MD31	MD31	4.33	143	P	Pn	12 18 47.9	-0.1
MD31				S	Sn	12 19 34.1	-3.4
OUK	Oukaimeden	5.15	180	P	Pn	12 19 01.1	+1.6
OUK				S	Sn	12 19 55.3	-2.8
GUD	Guadarrama	5.16	33	P	Pn	12 19 00.6	+1.1
GUD				S	Sn	12 19 56.7	-1.4
GUD				i Vmb_Lg		12 20 03.0	
ELOB	Lobios	5.49	358	i Vmb_Lg		12 20 03.6	
ELOB				S	Sn	12 20 03.8	-2.3
ETOB	Tobarra	5.51	64	P	Pn	12 19 04.9	+0.7
ETOB				i Vmb_Lg		12 19 54.2	
ETOB				S	Sn	12 20 04.6	-1.9
ETOR	Torete	6.36	44	P	Pn	12 19 17.0	+1.2
ETOR				S	Sn	12 20 25.9	-1.5
ETOR				i Vmb_Lg		12 20 29.8	

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*UPA **02** 12:22:56.9±1.8, 8°.79N×82°.50W, h6^{km}±4^{km}, MW4.0, Fault plane solution: NP1:ϕ$_s$159.00000°, δ47.00000°, λ51.00000°., Probable volcanic*

*UCR **02** 12:22:57.8±2.0, 8°.70N×82°.43W, h15^{km}, MW3.6*

ISC 02 12:22:57.0±1.0, **8°.74N**±0°.03×**82°.47W**±0°.02, **h5**^{km}±9^{km}, **n36, σ0ˢ87**/60, **7C-10D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BC3P	Paso Ancho	0.15	297	⇓iP	Pg	12 23 00.3	+0.2
BC3P				i S	Sg	12 23 02.0	-0.3
BRU2	Volcan	0.22	283	⇓iP	Pg	12 23 01.8	+0.4
BRU2				i S	Sg	12 23 05.0	+0.7
BAGA3	Bagala, Chiriq	0.28	191	⇑iP	Pb	12 23 04.6	+0.1
BAGA3				i S	Sb	12 23 09.1	-0.4
DVD	David	0.31	176	⇓eP	Pb	12 23 05.0	+0.1
LOMA3	Las Lomas, Chi	0.32	166	⇓eP	Pb	12 23 05.0	-0.1
LOMA3				eS	Sb	12 23 10.5	-0.2
MLIR3	Monte Lirio, C	0.35	278	eP	Pg	12 23 03.5	-0.3
PEDE3	Pedregal, Chir	0.36	172	⇓eP	Pb	12 23 05.5	-0.4
PEDE3				i S	Sb	12 23 11.6	-0.2
CHIR3	Chiriqui UPA,	0.37	158	⇓iP	Pb	12 23 05.8	-0.2
CHIR3				eS	Sb	12 23 13.0	+0.8
CHGR2	Aguacate	0.38	59	⇓eP	Pg	12 23 03.6	-0.6
CHGR2				eS	Sg	12 23 08.7	-0.5
LESP3	La Esperanza,	0.46	223	eP	Pb	12 23 07.5	-0.1
EDSV	San Vito	0.50	279	eP	Pb	12 23 09.1	+0.8
EDSV				eS	Sb	12 23 17.3	+1.3
PTPM	Petroterminale	0.67	217	eP	Pn	12 23 12.6	-0.5
PTPM				i S	Sb	12 23 21.1	+0.4
CNI2	El Empalme, Bo	0.68	360	⇑iP	Pg	12 23 09.7	-0.2
CNI2				eS	Sg	12 23 19.7	+0.9
REME3	Remedios, Chir	0.81	129	⇓eP	Pg	12 23 13.2	+0.5
REME3				i S	Sb	12 23 24.2	-0.7
RGM0	Gandoca	0.85	351	⇑eP	Pg	12 23 13.9	+0.6
DRK0	Durika	0.92	304	i P	Pg	12 23 13.7	-1.0
DRK0				eS	Sg	12 23 25.8	-0.9
EDPN	Palmar Norte	1.00	283	eP	Pg	12 23 16.6	+0.4
PEZE	Perez Zeledon,	1.35	298	eP	Pn	12 23 21.2	-1.3
CDM	Cerro de Muert	1.51	302	eP	Pn	12 23 24.2	-0.8
CDM				eS	Sn	12 23 44.6	-0.7
GMAL	Guarumal, Vera	1.57	128	eP	Pn	12 23 24.2	-1.2
GMAL				eS	Sn	12 23 45.8	-0.3
BATAN	Batan	1.61	326	eP	Pn	12 23 20.7	-5.4
CALO3	Calobre, Verag	1.67	105	⇑eP	Pn	12 23 26.9	+0.1
RIMA	Rio Macho	1.71	307	eP	Pn	12 23 27.4	-0.1
RIMA				eS	Sn	12 23 49.7	-0.2
LCR2	La Lucha 2	1.81	303	⇑eP	Pn	12 23 29.3	+0.3
LCR2				eS	Sb	12 23 53.0	-0.7
MARI3	Mariato, Verag	1.83	126	eP	Pb	12 23 29.8	-1.0
CRIS3	El Cristo, Coc	1.90	105	eP	Pn	12 23 30.8	+0.9
CRIS3				i S	Sb	12 23 55.9	-0.2
PESE3	Pese, Herrera	2.02	114	eP	Pn	12 23 32.1	+0.4
PESE3				i S	Sn	12 23 56.6	-0.7
HDC	Heredia	2.05	308	eP	Pn	12 23 29.8	-2.3
HDC				eS	Sb	12 23 59.9	-0.6
CACAO	El Cacao, Vera	2.12	131	⇑eP	Pn	12 23 34.2	+1.2
CACAO				i S	Sb	12 24 00.9	-1.4
PNME	Penonome	2.14	97	⇓eP	Pn	12 23 34.4	+1.1
PNME				i S	Sb	12 24 02.5	-0.4
CHIT3	Chitre	2.18	111	⇓eP	Pn	12 23 34.9	+1.0
CHIT3				eS	Sb	12 24 03.4	-0.7
VTON	El Valle, Cocl	2.33	93	eP	Pn	12 23 37.5	+1.4
VTON				i S	Sn	12 24 05.7	+0.5
AZU	Azuero	2.37	113	eP	Pn	12 23 37.5	+1.0
AZU				i S	Sn	12 24 07.3	+1.3
ZANG	Zanguenga, Cho	2.58	85	eP	Pn	12 23 41.1	+1.7
BCIP	Isla Barro Col	2.63	81	⇑eP	Pn	12 23 40.3	+0.2
JTS	Las Juntas de	2.89	302	eP	Pn	12 23 46.0	+2.3
JTS				eS	Sb	12 24 25.2	+0.5

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*IDC **02** 12:28:27.9±4.1, 25°.94N×95°.88E, h128^{km}±45^{km}, mb3.4/5, mbtmp3.7/6, Error ellipse: s-maj=127.5km s-min=15.6km az=58.0*

ISC 02 12:28:25.4±1.0, **26°.1N**±0°.1×**95°.84E**±0°.09, **h100**^{km}, **n19, σ1ˢ44**/30, **mb3.6**/5, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	7.38	282	ePn	Pn	12 30 12.7	+2.0
TAPN				eSn	Sn	12 31 33.0	0.0
ODAN	Odare	7.61	278	ePn	Pn	12 30 15.7	+1.9
ODAN				eSn	Sn	12 31 40.1	+1.5
	62nm,0.4s						
CMAR	Chiang Mai Arr	8.11	159	P	Pn	12 30 20.9	+0.5
	1.4nm,0.4s,baz=334,slow=14,SNR=16						
RAMN	Ramite	8.32	278	ePn	Pn	12 30 25.4	+1.9
RAMN				eSn	Sn	12 31 56.1	+0.2
JIRN	Jiri	8.76	283	ePn	Pn	12 30 31.6	+2.0
GUN	Gumba	9.07	284	ePn	Pn	12 30 35.1	+1.3
GUN				eSn	Sn	12 32 13.5	-0.8
	31nm,0.3s						
PKI	Pulchoki	9.43	281	ePn	Pn	12 30 39.4	+0.7
PKI				eSn	Sn	12 32 22.4	-0.7
	28nm,0.4s						
PKIN	Phulchoki	9.45	281	ePn	Pn	12 30 39.3	+0.5
PKIN				eSn	Sn	12 32 22.8	-0.5
	23nm,0.4s						
KKN	Kakani	9.57	283	ePn	Pn	12 30 41.9	+1.4
KKN				eSn	Sn	12 32 25.4	-1.0
	17nm,0.3s						
DMN	Daman	9.71	281	ePn	Pn	12 30 43.1	+0.8
GKN	Gorkha	10.17	283	ePn	Pn	12 30 48.9	+0.3
GKN				eSn	Sn	12 32 38.9	-1.9
	31nm,0.3s						
DANN	Dangsing	10.99	285	ePn	Pn	12 30 59.3	-0.5
DANN				eSn	Sn	12 32 58.0	-2.8
	41nm,0.5s						
KOLN	Koldanda	11.05	282	ePn	Pn	12 31 01.2	+0.6
KOLN				eSn	Sn	12 33 00.0	-2.3
PYUN	Piuthan	11.62	283	ePn	Pn	12 31 08.0	-0.3
PYUN				eSn	Sn	12 33 13.7	-2.5
	28nm,0.5s						
MKAR	Makanchi Array	23.31	336	P	P	12 33 26.0	+1.5
	1.4nm,0.4s,baz=143,slow=9.0,SNR=18						
	1.4nm,0.4s						
KURBB	Kurchatov Arra	27.88	336	P	P	12 34 06.3	+0.7
	0.5nm,0.3s,baz=142,slow=8.9,SNR=1.4						
	0.5nm,0.3s						
FINES	FINESS Array B	57.80	328	P	P	12 38 05.9	-0.1
	0.8nm,0.8s,baz=90,slow=5.6,SNR=1.5						
	0.8nm,0.8s						
WRA	Warramunga Arr	59.07	137	P	P	12 38 13.8	-1.6
	0.6nm,0.6s,baz=324,slow=7.6,SNR=14						
	0.6nm,0.6s						
ASAR	Alice Springs	61.66	140	P	P	12 38 31.8	-1.2
	0.2nm,0.4s,baz=325,slow=6.4,SNR=11						
	0.2nm,0.4s						

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*MDD **02** 12:32:15.1±1.5, 32°.09N×7°.76W, h10^{km}, Mb4.2/4, M_mb3.5/4, Error ellipse: s-maj=14.8km s-min=12.2km az=94.0*

*INMG **02** 12:32:18.9±0.8, 32°.34N×7°.71W, h4^{km}±9^{km}, ML2.4, Error ellipse: s-maj=6.7km s-min=2.8km az=124.0*

*CNRM **02** 12:32:18.7, 32°.21N×7°.85W, h0^{km}*

ISC 02 12:32:17.6±1.1, **32°.25N**±0°.03×**7°.77W**±0°.04, **h20**^{km}±4^{km}, **n28, σ1ˢ86**/49, **4C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRHM	Skhour des Reh	0.25	333	P	Pg	12 32 22.4	-1.2
SRHM				S	Sg	12 32 27.0	-0.6
OUK	Oukaimeden	1.04	185	P	Pb	12 32 36.1	-1.1
OUK				S	Sn	12 32 54.5	+2.9
AVE	Averroes	1.09	16	P	Pb	12 32 37.3	-0.5
AVE				S	Sg	12 32 56.2	+3.1
AVE	Averroes	1.09	16	P	Pg	12 32 39.2	+0.4
AVE				S	Sg	12 32 56.3	+3.2
ZHG	ZHG	1.52	38	P	Pg	12 32 47.0	-0.1
ZHG				S	Sg	12 33 10.7	+3.8
OUZM	OUZ	1.59	147	P	Pb	12 32 46.3	-0.1
OUZM				S	Sg	12 33 06.9	-2.1
TZRR	Tazzarine	2.38	127	P	Pb	12 32 59.1	-0.8
TZRR				S	Sb	12 33 29.5	+0.7
CGR	Cap Guir	2.42	229	P	Pb	12 32 59.7	-0.9
CZD	Col de Zad	2.43	71	P	Pn	12 32 58.8	+2.3
CZD				S	Sg	12 33 34.5	-1.4
GOLM	Goulmima	2.45	102	P	Pb	12 33 01.8	+0.6
GOLM				S	Sg	12 33 35.5	-1.1
IFR	Ifrane	2.56	60	P	Pb	12 33 03.8	+0.9
IFR				S	Sb	12 33 32.8	-1.3
MD31	MD31	2.61	76	P	Pn	12 33 00.4	+1.6
MD31				S	Sg	12 33 39.8	-1.9
ZGR	Zagora	2.81	139	P	Pb	12 33 07.5	+0.3
ZGR				S	Sb	12 33 43.6	+2.3
PFVI	Vila Bisbo	4.95	350	ePn	Pn	12 33 32.2	+1.3
PFVI				eSn	Sn	12 34 26.7	-0.9
EMIJ	Mijas	4.96	29	S	Sn	12 34 24.8	-3.2
PBDV	Barranco-do-Ve	4.98	358	ePn	Pn	12 33 32.9	+1.5
MORF	Marmelete	5.10	352	ePn	Pn	12 33 34.1	+1.1
PVAQ	Vaqueiros	5.14	0	ePn	Pn	12 33 34.7	+1.2
PVAQ				eSn	Sn	12 34 31.3	-1.0
PVAQ				A	A	12 34 39.6	
	3.5nm,0.9s						
EGRO	El Granado	5.28	2	P	Pn	12 33 35.7	+0.3
EGRO				⇑iVmb_V		12 33 42.8	
	320nm,SNR=1.8						
EGRO				S	Sn	12 34 34.7	-1.0
PTEO	Sao Teotonio	5.34	352	ePn	Pn	12 33 37.5	+1.2
PCVE	Castro Verde	5.38	358	ePn	Pn	12 33 38.0	+1.3
PCVE				eSn	Sn	12 34 37.6	-0.5
EMIN	Mina Concepcio	5.58	9	P	Pn	12 33 39.0	-0.6
EMIN				⇑iVmb_V		12 33 41.6	
	124nm,SNR=1.2						
EMIN				S	Sn	12 34 40.1	-3.0
PNCL	Nicolau / Gran	5.88	354	ePn	Pn	12 33 45.2	+1.5
PNCL				eSn	Sn	12 34 49.7	-0.9
PNCL				A	A	12 34 52.6	
	2.5nm,0.5s						
PBAR	Barrancos	5.94	6	ePn	Pn	12 33 46.0	+1.5
PBAR				eSn	Sn	12 34 51.0	-1.0
ECAB	El Cabril	6.12	18	P	Pn	12 33 45.8	-1.3
ECAB				⇑iVmb_V		12 33 53.5	
	91nm,SNR=1.2						
ECAB				S	Sn	12 34 51.1	-5.4
EADA	Adamuz	6.46	23	P	Pn	12 33 51.7	+0.1
EADA				⇑iVmb_V		12 33 59.8	
	94nm,SNR=1.9						
EADA				S	Sn	12 35 01.9	-2.9
PMTG	Montargil	6.82	357	ePn	Pn	12 33 58.2	+1.7
PMRV	Marv??o	7.17	2	ePn	Pn	12 34 02.6	+1.2

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*IDC **02** 12:56:40.4±5.7, 36°.32N×70°.96E, h180^{km}±45^{km}, mb3.1/6, mbtmp3.8/10, Error ellipse: s-maj=50.4km s-min=21.9km az=43.0*

*NNC **02** 12:56:46.9±4.4, 37°.15N×71°.08E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=34.6km s-min=32.4km az=158.0*

ISC 02 12:56:42.4±1.3, **36°.6N**±0°.1×**71°.0E**±0°.1, **h188**^{km}, **n21, σ1ˢ86**/25, **mb3.2**/5, **4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.90	20	P	Pn	12 58 10.2	+1.7
	SNR=76						
UCH	Uchtor	6.24	25	P	Pn	12 58 14.8	+1.8
	SNR=42						
EKS2	Erkin-Say	6.41	19	P	Pn	12 58 16.7	+1.8
	SNR=9.7						
KK31	Karatay Array	6.50	357	⇑P	Pn	12 58 16.8	+0.8
	1.6nm,0.5s,baz=175,slow=12,SNR=40						
KK31				⇑S	Sn	12 59 25.9	-4.1
	10nm,0.5s,baz=186,slow=24,SNR=9.1						
AAK	Ala-Archa	6.60	23	P	Pn	12 58 19.4	+2.0
	SNR=10						
AAK	Ala-Archa	6.60	23	P	Pn	12 58 18.8	+1.4
	5.6nm,0.3s,baz=184,slow=6.2,SNR=16						
KBK	Karagaybulak	6.76	26	P	Pn	12 58 21.8	+2.2
	SNR=7.8						
CHMS	Chumysh	7.00	23	⇑P	Pn	12 58 23.9	+1.3
	4.3nm,0.5s						
CHMS				⇓S	Sn	12 59 40.9	-1.1
	5.5nm,0.6s						
USP	Ospenovka	7.17	21	P	Pn	12 58 25.8	+1.0
	SNR=6.7						
TKM2	Tokmak 2	7.23	28	P	Pn	12 58 27.4	+1.6
	SNR=42						
TKM2	Tokmak 2	7.23	28	⇓P	Pn	12 58 27.0	+1.3
	23nm,0.7s						
TKM2				⇑S	Sn	12 59 47.1	-0.5
	7.7nm,0.9s						
MDOK	Medeo	8.03	33	⇓P	Pn	12 58 37.7	+1.6
	9.7nm,0.5s						
MDOK				S	Sn	13 00 02.8	-3.6
	2.3nm,0.8s						
MKAR	Makanchi Array	13.20	36	P	Pn	12 59 44.2	+1.5
	2.6nm,0.8s,baz=218,slow=12,SNR=10						
KURBB	Kurchatov Arra	15.02	19	P	P	13 00 07.2	+1.1
	0.8nm,0.4s,baz=208,slow=12,SNR=4.1						
AKTO	Aktyubinsk	16.69	330	P	Pn	13 00 25.6	+0.2
	1.5nm,0.4s,baz=145,slow=9.2,SNR=7.7						
ZALV	Zalesovo Beam	19.82	25	P	P	13 00 59.8	+1.4
	3.5nm,0.5s,baz=222,slow=12,SNR=18						
	3.5nm,0.5s						
FINES	FINESS Array B	37.40	326	P	P	13 03 37.4	+0.5
	0.9nm,0.8s,baz=120,slow=12,SNR=5.2						
	0.9nm,0.8s						
ARCES	ARCESS Array B	41.05	338	P	P	13 04 07.3	+0.3
	0.3nm,0.4s,baz=102,slow=5.1,SNR=8.0						
	0.3nm,0.4s						
YKA	Yellowknife Ar	81.14	3	P	P	13 08 36.8	+0.3
	0.3nm,0.4s,baz=352,slow=5.4,SNR=16						
	0.3nm,0.4s						
WRA	Warramunga Arr	82.04	122	P	P	13 08 39.3	-2.5
	0.2nm,0.6s,baz=323,slow=5.2,SNR=1.7						
	0.2nm,0.6s						
ASAR	Alice Springs	84.31	125	P	P	13 08 52.0	-1.4
	0.1nm,0.5s,baz=311,slow=4.4,SNR=6.0						
	0.1nm,0.5s						

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*IDC **02** 13:09:58.9±1.0, 14°.13S×166°.93E, h0^{km}, mb4.2/13, mbtmp4.3/15, ML4.4/2, MS3.9/7, Error ellipse: s-maj=29.6km s-min=18.5km az=100.0*

*NEIC **02** 13:10:01.6±1.8, 14°.07S±0°.08×166°.9E±0°.1, h15^{km}±4^{km}, mb4.5/23, Error ellipse: s-maj=19.7km s-min=9.3km az=62.0*

ISC 02 13:10:04.1±0.6, **14°.11S**±0°.07×**166°.8E**±0°.1, **h35**^{km}, **n56, σ1ˢ00**/53, **mb4.5**/24, **MS3.9**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.37	165		Pn	13 10 25.9	-0.9
LIFNC	LIFOU	6.64	177	Pn	Pn	13 11 39.4	+0.1
KOUNC	Koumac, New Ca	6.85	200		Pn	13 11 43.7	+1.6
MARNC	Mare, Loyalty	7.42	171	Pn	Pn	13 11 50.3	+0.4
DZM	Mont Dzumac	7.93	183	Pn	Pn	13 11 56.8	-0.2
	2.3nm,0.3s,baz=320,slow=17,SNR=46						
DZM				Sn	Sn	13 13 23.3	-2.2
	baz=316,slow=23						
DZM				LR	LR	13 14 38.8	
	comp=Z,761nm,19.8s,baz=35,slow=35						
	5.8nm,0.3s						
DZM	Mont Dzumac	7.93	183		Pn	13 11 57.7	+0.7
ONTNC	Ouen Toro	8.16	183	Pn	Pn	13 12 01.0	+0.9
HNR	Honiara	8.20	304	Pn	Pn	13 11 59.7	-0.9
	13nm,0.3s,baz=254,slow=4.8,SNR=7.8						
HNR				Sn	Sn	13 13 30.0	-2.0
	5.0nm,0.3s,baz=122,slow=21,SNR=1.3						
HNR				LR	LR	13 14 57.3	
	comp=Z,353nm,21.6s,baz=258,slow=36						
	24nm,0.3s						
HNR	Honiara	8.20	304		Pn	13 12 00.2	-0.4
OUENC	Ouen Island, N	8.26	180	Pn	Pn	13 12 02.7	+1.2
PINNC	Pines Island,	8.48	176	Pn	Pn	13 12 05.9	+1.5
MSVF	Nonsavu	11.37	110	LR	LR	13 16 14.1	
	comp=Z,437nm,19.2s,baz=152,slow=33						
EIDS	Eidsvold	18.57	231	P	P	13 14 17.6	-0.5
PMG	Port Moresby	19.82	281	LR	LR	13 21 09.8	
	comp=Z,276nm,18.0s,baz=7.5,slow=34						
CTA	Charters Tower	20.55	250	P	P	13 14 39.1	-0.7
	2.1nm,0.8s,baz=174,slow=7.7,SNR=2.0						
	2.1nm,0.8s						
URZ	Urewera	25.72	161	LR	LR	13 23 32.8	
	comp=Z,175nm,18.4s,baz=31,slow=32						
BKZ	Black Stump Fm	26.37	163	P	P	13 15 36.9	-0.2
BKZ				IAmb	IAmb	13 15 48.6	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	29.09	228	P	P	13 16 02.9	+1.4
	comp=Z,2.5nm,0.8s,baz=26,slow=9.9,SNR=3.5						
	comp=Z,2.5nm,0.8s						
RPZ	Rata Peaks	29.72	174	P	P	13 16 06.7	-0.3
	comp=Z,8.3nm,0.9s,baz=239,slow=20,SNR=1.7						
RPZ				LR	LR	13 26 24.0	
	comp=Z,230nm,18.1s,baz=36,slow=33						
	comp=Z,8.3nm,0.9s						
WB0	Warramunga Arr	31.51	255	P	P	13 16 22.7	-0.4
WB0				IAmb	IAmb	13 16 26.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	31.57	255	P	P	13 16 23.1	-0.5
WB2				IAmb	IAmb	13 16 39.6	
	comp=Z,9.5nm,1.5s						
WRAB	Tennant Creek	31.57	255	P	P	13 16 23.4	-0.2
WRAB				IAmb	IAmb	13 16 39.9	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	31.58	255	P	P	13 16 23.3	-0.4
	comp=Z,1.1nm,0.9s,baz=86,slow=8.8,SNR=7.3						
	comp=Z,1.1nm,0.9s						
WRA	Warramunga Arr	31.58	255	IAmb	IAmb	13 16 25.3	
	comp=Z,0.2nm,1.2s						
AS31	Alice Springs	32.51	248	P	P	13 16 31.3	-0.6
ASAR	Alice Springs	32.51	248	P	P	13 16 31.4	-0.5
	comp=Z,0.9nm,0.7s,baz=75,slow=9.5,SNR=24						
ASAR				PcP	PcP	13 19 17.9	-0.4
	comp=Z,0.3nm,0.7s,baz=62,slow=2.2,SNR=2.2						
	comp=Z,0.9nm,0.7s						
KNRA	Kununurra	36.80	263	P	P	13 17 09.1	+0.1
TOLI2	Tolitoli	48.05	285	P	P	13 18 40.2	-0.3
TOLI2				IAmb	IAmb	13 18 40.5	
	comp=Z,3.6nm,0.8s						
JGF	Kuroka	56.78	331	P	P	13 19 45.6	+0.7
JGF				IAmb	IAmb	13 20 01.4	
	comp=Z,8.2nm,1.2s						
MJAR	Matsushiro Arr	57.17	333	P	P	13 19 47.4	-0.2
	comp=Z,3.8nm,0.8s,baz=155,slow=9.5,SNR=15						
	comp=Z,3.8nm,0.8s						
MJAR	Matsushiro Arr	57.17	333	P	P	13 19 46.3	-1.3
MAJO	Matsushiro	57.17	333	P	P	13 19 46.7	-0.8
MAJO				IAmb	IAmb	13 19 49.0	
	comp=Z,4.7nm,0.7s						
MJB9	Matsu-Tunnel	57.17	333	P	P	13 19 46.7	-0.9
MJB9				IAmb	IAmb	13 19 48.9	
	comp=Z,4.5nm,0.7s						
JNU	Nakatsue	58.18	325	P	P	13 19 55.3	+0.5
KSRS	Korea Array	63.00	326	P	P	13 20 28.8	+1.3
	comp=Z,2.3nm,0.9s,baz=144,slow=6.6,SNR=6.1						
	comp=Z,2.3nm,0.9s						
SBA	Scott Base	63.75	180	P	P	13 20 33.6	+1.7
SBA				IAmb	IAmb	13 20 47.4	
	comp=Z,5.4nm,1.2s						
CASY	Casey	63.94	202	P	P	13 20 33.6	+0.3
USRK	Ussuriysk Ar.	66.15	333	P	P	13 20 49.6	+1.6
	comp=Z,4.7nm,0.9s,baz=73,slow=6.6,SNR=5.7						
	comp=Z,4.7nm,0.9s						
CMAR	Chiang Mai Arr	74.32	294	P	P	13 21 40.5	+2.0
	comp=Z,2.2nm,0.8s,baz=122,slow=4.6,SNR=16						
	comp=Z,2.2nm,0.8s						
CMAR	Chiang Mai Arr	74.32	294	P	P	13 21 39.9	+1.3
CHTO	Chiang Mai	74.45	294	P	P	13 21 40.5	+1.2
CHTO				IAmb	IAmb	13 21 42.0	
	comp=Z,4.5nm,1.1s						
QSPA	South Pole Qui	75.91	180	P	P	13 21 46.9	-0.1
ULN	Ulaanbaatar	81.39	324	P	P	13 22 18.2	+0.7
SONM	Songino Array	81.75	324	P	P	13 22 20.4	+1.0
	comp=Z,2.0nm,0.8s,baz=147,slow=6.0,SNR=10						
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	81.75	324	P	P	13 22 19.9	+0.6
SONM				IAmb	IAmb	13 22 21.5	
	comp=Z,4.3nm,1.1s						
YBH	Yreka Blue Hor	85.28	45	LR	LR	13 51 56.3	
	comp=Z,167nm,20.5s,baz=324,slow=30						
ILAR	Eielson Array	86.07	18	P	P	13 22 40.6	-0.2
	comp=Z,0.6nm,0.8s,baz=235,slow=5.8,SNR=6.0						
	comp=Z,0.6nm,0.8s						
BELA	Belgrano 2	87.37	176	P	P	13 22 45.7	-1.4
BELA				IAmb	IAmb	13 23 04.7	
	comp=Z,3.1nm,1.2s						
MK31	Makanchi Array	96.47	316	P	P	13 23 29.6	-0.3
MK31				IAmb	IAmb	13 23 31.4	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	96.47	316	P	P	13 23 30.6	+0.7
	comp=Z,1.6nm,0.8s,baz=94,slow=6.3,SNR=18						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	96.47	316	P	P	13 23 29.4	-0.4
ZALV	Zalesovo Beam	96.65	324	P	P	13 23 30.1	-0.3
	comp=Z,1.2nm,0.6s,baz=126,slow=4.0,SNR=4.9						
	comp=Z,1.2nm,0.6s						
ZALV	Zalesovo Beam	96.65	324	P	P	13 23 29.5	-0.9
ARCES	ARCESS Array B	119.55	345	PKhKP	PKPpre	13 28 46.7	
	comp=Z,0.3nm,0.6s,baz=164,slow=35,SNR=2.4						
ARCES	ARCESS Array B	119.55	345		PKPdf	13 28 49.5	-0.1
ESDC	Sonseca Array	153.28	344	PKPbc	PKPbc	13 29 57.1	-1.7
	comp=Z,0.3nm,0.4s,baz=9.9,slow=4.2,SNR=2.3						

TAP 02 13:10:29.5, 24°.20N×120°.82E, h11^{km}**, ML1.5, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHP	Taichung City	0.14	57	i P	Pb	13 10 33.5	-0.7
	baz=57						
WHP				i S	Sg	13 10 36.0	+0.8
	baz=57						
TCU	Taichung	0.14	247	i P	Pb	13 10 33.7	-0.5
	baz=245						
TCU				i S	Sg	13 10 36.9	+1.8
	baz=245						
TWQ1	Liyutan	0.15	344	P	Pg	13 10 33.5	+0.5
	baz=347						
TWQ1				S	Sg	13 10 37.3	+1.9
	baz=347						
WCS	Beigang Elemen	0.17	149	P	Pb	13 10 34.1	-0.5
	baz=142						
WCS				S	Sg	13 10 37.5	+1.6
	baz=142						
WWF	Wufeng	0.19	214	eP	Pg	13 10 33.7	+0.1
	baz=227						
WWF				S	Sg	13 10 39.2	+2.7
	baz=227						
DPDB	Guoxing	0.20	150	P	Pb	13 10 34.7	-0.4
	baz=138						
DPDB				S	Sg	13 10 38.6	+1.9
	baz=138						
WDJ	Dajia District	0.22	312	P	Pb	13 10 35.0	-0.4
	baz=317						
WDJ				S	Sg	13 10 39.3	+2.1
	baz=317						
NSY	Sanyi	0.22	346	i P	Pb	13 10 35.1	-0.4
	baz=348						
NSY				S	Sg	13 10 39.3	+2.1
	baz=348						
WPL	Puli Township	0.23	146	P	Pb	13 10 35.2	-0.4
	baz=136						
WPL				S	Sg	13 10 39.1	+1.7
	baz=136						
TYC	Yuchr	0.30	173	i P	Pb	13 10 36.6	-0.3
	baz=163						
TYC				S	Sb	13 10 42.0	+0.2
	baz=163						
TDCB	Techi	0.32	81	P	Pb	13 10 36.7	-0.5
	baz=80						
TDCB				S	Sg	13 10 41.0	+0.9
	baz=80						
SMLT	Sun Moon Lake	0.33	167	i P	Pb	13 10 37.2	-0.2

	baz=157						
TWT	Tachien baz=80	0.33	81	P	Pg	13 10 36.8	+0.6
TWT	baz=80			S	Sb	13 10 41.8	-1.0
NMLH	Miaoli baz=355	0.33	356	P	Pb	13 10 37.2	-0.2
NMLH	baz=355			S	Sb	13 10 43.4	+0.6
WUSB	Renai baz=127	0.34	127	P	Pb	13 10 37.3	-0.4
WUSB	baz=127			S	Sb	13 10 42.7	-0.5
CHGB	Renai baz=105	0.35	114	P	Pb	13 10 37.6	-0.3
CHGB	baz=105			S	Sb	13 10 43.5	-0.1
WJS	Zhushan baz=192	0.39	192	P	Pg	13 10 37.0	-0.2
OWD	Renai baz=126	0.41	127	*i* P	Pb	13 10 38.8	0.0
OWD	baz=126			S	Sb	13 10 44.2	-0.9
WHF	Hehuan Shan baz=97	0.41	98	P	Pb	13 10 38.9	-0.1
WHF	baz=97			S	Sb	13 10 45.6	+0.1
SSLB	Suanglung baz=158	0.43	163	P	Pg	13 10 38.5	+0.5
SSLB	baz=158			S	Sb	13 10 46.0	+0.3
NSTT	Nanjuang baz=31	0.46	21	*i* P	Pb	13 10 39.5	0.0
NSTT	baz=31			*i* S	Sb	13 10 46.1	-0.3
LIOB	Emei baz=30	0.48	22	*i* P	Pb	13 10 39.9	0.0
LIOB	baz=30			*i* S	Sb	13 10 46.5	-0.4
WRL	Guolierlin Hig baz=236	0.50	233	S	Sb	13 10 47.8	+0.2
NFF	Wufeng Townshi baz=31	0.51	33	P	Pb	13 10 40.2	-0.2
NFF	baz=31			S	Sg	13 10 46.9	+0.8
VWDT	VWDT baz=141	0.54	146	P	Pb	13 10 41.0	+0.1
VWDT	baz=141			S	Sb	13 10 48.6	0.0
NNS	Nan Shan baz=64	0.56	65	*e*P	Pb	13 10 41.4	0.0
NNS	baz=64			*e*S	Sb	13 10 49.0	-0.4
NNSB	Datong baz=74	0.56	66	P	Pb	13 10 41.0	-0.4
ETLH	Xiulin Townshi baz=89	0.61	90	P	Pb	13 10 42.1	0.0
CHN5	Tsauling baz=194	0.62	192	*i* P	Pb	13 10 42.3	0.0
CHN5	baz=194			*i* S	Sb	13 10 51.6	+0.6
YHNB	Yeheng baz=48	0.69	47	P	Pb	13 10 43.3	-0.2
ALS	Alishan baz=182	0.69	181	*i* P	Pb	13 10 43.9	+0.2
ALS	baz=182			*i* S	Sb	13 10 54.4	+1.1
NACB	Ninganchiao baz=84	0.71	92	P	Pb	13 10 44.2	+0.4
NACB	baz=84			S	Sn	13 10 55.1	-1.3
LATG	Datong baz=61	0.73	63	P	Pb	13 10 44.1	-0.1
LATG	baz=61			S	Sb	13 10 54.3	+0.1
ENTT	Nioudou baz=67	0.81	57	*i* P	Pb	13 10 45.9	+0.4
EHY	Hungye baz=147	0.83	146	*e*P	Pb	13 10 46.5	+0.5
EHY	baz=147			*e*S	Sb	13 10 57.9	+0.7
NWLT	Wulai baz=46	0.85	47	P	Pb	13 10 46.5	+0.3
NWLT	baz=46			S	Sb	13 10 57.8	+0.2
WSL	Shuilin Townsh baz=233	0.87	219	S	Sb	13 10 58.8	+0.7
FUSB	Fushanzhiwuyua baz=57	0.89	52	P	Pb	13 10 47.1	0.0
FUSB	baz=57			S	Sg	13 10 58.6	+0.2
HGSD	Ruisui baz=142	0.90	142	S	Sn	13 11 01.9	+0.9
TPUB	Ta-pu baz=193	0.92	191	P	Pg	13 10 46.9	-0.2
TPUB	baz=193			S	Sb	13 11 00.1	+0.5
YULB	Yu-li baz=152	0.92	151	P	Pn	13 10 47.9	-0.4
YULB	baz=152			S	Sn	13 11 01.0	-0.6
NDS	Dongshan baz=62	0.92	62	P	Pn	13 10 48.2	-0.2
TWE	Neicheng baz=55	0.93	56	*i* P	Pn	13 10 48.1	-0.3
WTP	Ta-pu baz=193	0.97	191	P	Pg	13 10 48.0	-0.2
WTP	baz=193			S	Sb	13 11 01.8	+0.6
TWK	Hsinying baz=200	0.98	198	P	Pg	13 10 48.4	0.0
TWK	baz=200			S	Sb	13 11 01.6	+0.1
CHN1	Nanshi baz=198	1.05	195	P	Pb	13 10 49.6	0.0
CHN1	baz=198			S	Sn	13 11 04.7	-0.1
FULB	Fuli baz=169	1.09	156	P	Pn	13 10 51.6	+0.9

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*SNET **02** 13:31:57.0±1.2, 12°.26N×89°.70W, h21^{km}±46^{km}, ML3.5*
*GCG **02** 13:31:59.6±0.6, 12°.25N×89°.97W, h83^{km}±108^{km}, MD3.8*
ISC 02 13:31:57.6±3.2**, 12°.2N**±0°.2×**89°.70W**±0°.07**, h35^{km}, n17, σ0^{s}.88**/23**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	1.52	9	*e*P	Pn	13 32 21.9	-0.5
JAYA	comp=Z,658nm,0.2s			IAML		13 32 44.8	
LFRS	El Faro	1.59	23	*e*P	Pn	13 32 22.4	-1.0
SJTE	Alcalda de S	1.60	25	*e*P	Pn	13 32 22.6	-1.0
SJTE	comp=Z,118nm,0.1s			IAML		13 32 46.6	
COEG	Centro de Oper	1.66	28	*e*P	Pn	13 32 23.5	-0.9
CEVE	Cerro Verde	1.67	2	*e*P	Pn	13 32 24.3	-0.4
CEVE	comp=Z,2µm,0.4s			IAML		13 32 46.7	
SBLS	San Blas	1.68	2	*e*P	Pn	13 32 24.4	-0.4
PAVA	Las Pavas	1.72	25	*e*P	Pn	13 32 24.7	-0.6
NUBE	Las Nubes	1.74	357	*e*P	Pn	13 32 25.1	-0.5
NUBE				*e*S	Sn	13 32 45.9	-0.8
COEB	Comit de Eme	1.76	40	*e*P	Pn	13 32 25.1	-0.7
JUCU	Jucuar¡n	1.79	52	*e*P	Pn	13 32 25.5	-0.6
JUCU				*e*S	Sn	13 32 48.7	+1.0
JUCU	comp=Z,642nm,0.2s			IAML		13 32 52.0	
LCND	La Caada	2.10	57	*e*P	Pn	13 32 29.7	-0.7
LCND				*e*S	Sn	13 32 56.9	+1.5
LCND	comp=Z,750nm,0.3s			IAML		13 33 01.0	
MTO3	Montecristo	2.26	8	*e*P	Pn	13 32 32.9	+0.2
PCG	Pacaya	2.40	338	*e*S	Sn	13 33 03.8	+0.8
NBG	Las Nubes	2.50	345	*e*P	Pn	13 32 37.9	+1.7
NBG				*e*S	Sn	13 33 06.8	+1.1
FUG	Fuego 3	2.54	334	*e*P	Pn	13 32 36.6	0.0
FUG				*e*S	Sn	13 33 06.1	-0.3
TGUH	Tegucigalpa,Un	3.03	51	*e*P	Pn	13 32 43.3	+0.1
STG3	Santiaguito 3,	3.13	325	*e*P	Pn	13 32 44.6	-0.1
STG3				*e*S	Sn	13 33 19.9	-1.1

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*BJI **02** 13:38:42.8±0.0, 59°.54N×145°.06W, h4^{km}, mb5.2/70, mB5.3/40, Ms5.5/58, Ms7 5.1/55*
*IDC **02** 13:38:44.9±0.4, 59°.57N×144°.72W, h0^{km}, mb5.0/33, mbtmp5.0/40, ML4.2/7, MS4.5/63, Error ellipse: s-maj=11.2km s-min=7.6km az=27.0*
*MOS **02** 13:38:45.1±0.9, 59°.42N×144°.86W, h19^{km}, mb5.5/64, MS4.7/28, Error ellipse: s-maj=15.4km s-min=4.9km az=98.4*
*NEIC **02** 13:38:45, 59°.42N×144°.79W, h12^{km}, Moment Tensor Solution. Duration: 1^{s}.6 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.04; $M_{\theta\theta}$1.92; $M_{\phi\phi}$1.12; $M_{r\theta}$-0.58; $M_{\theta\phi}$1.79; $M_{\phi r}$0.58; Fault plane solution: $M_0$3.31000×10^{16} NP1: ϕ_s216.00000°, δ46.00000°, λ-111.00000°. NP2: ϕ_s66.00000°, δ48.00000°, λ-68.00000°. Principal axes: T 3.3515, Plg1.0000°, Azm141.0000°; N -0.0888, Plg15.0000°, Azm232.0000°; P -3.2627, Plg75.0000°, Azm48.0000°;*
*NEIC **02** 13:38:45.4±1.8, 59°.45N±0°.03×144°.73W±0°.04, h5^{km}±3^{km} Error ellipse: s-maj=5.0km s-min=2.9km az=159.0*
*NEIC **02** 13:38:45.3, 59°.40N×144°.76W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-3.22; $M_{\theta\theta}$2.40; $M_{\phi\phi}$0.82; $M_{r\theta}$-1.13; $M_{\theta\phi}$1.37; $M_{\phi r}$0.46; Fault plane solution: $M_0$3.43000×10^{16} NP1:ϕ_s225.91000°, δ40.24000°, λ-112.89000°. NP2:ϕ_s74.85000°, δ53.48000°, λ-71.78000°. Principal axes: T 3.2828, Plg7.0000°, Azm152.0000°; N 0.2794, Plg15.0000°, Azm244.0000°; P -3.5622, Plg74.0000°, Azm38.0000°;*
*AEIC **02** 13:38:46±2.0, 59°.43N±0°.03×144°.74W±0°.05, h8^{km}±2^{km}, ML4.9, mb5.2/478(NEIC), ML5.0/128(NEIC), Mwr5.0/162(NEIC), Mww4.9(NEIC) Error ellipse: s-maj=4.5km s-min=3.0km az=149.0*
*GCMT **02** 13:38:48.0±0.2, 59°.76N±0°.02×144°.63W±0°.03, h14^{km}, MW5.0/109, Moment Tensor Solution. s62,c79; s109,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.91±.15; $M_{\theta\theta}$2.75±.11; $M_{\phi\phi}$1.15±.10; $M_{r\theta}$2.81±.27; $M_{\theta\phi}$1.45±.07; $M_{\phi r}$-1.66±.26; Best double couple: $M_0$4.80500×10^{16} NP1:ϕ_s43.00000°, δ36.00000°, λ-130.00000°. NP2:ϕ_s269.00000°, δ64.00000°, λ-65.00000°. Principal axes: T 4.0370, Plg15.0000°, Azm341.0000°; N 1.5260, Plg22.0000°, Azm78.0000°; P -5.5730, Plg63.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 13:38:45.4±0.5**, 59°.46N**±0°.03×**144°.72W**±0°.02**, h9^{km}**±2^{km}**, h9^{km}:pP-P, n1347, σ1^{s}.23**/1389**, mb5.2**/377**, MS4.7**/99**, 123C-290D, Fault plane solution: NP1:**ϕ_s82.85413°, δ63.71137°, λ-40.87145°. **NP2:**ϕ_s193.82396°, δ54.07782°, λ-146.84491°. **Principal axes:** T Plg5.8357°, Azm140.3415°; N Plg42.6853°, Azm235.7505°; P Plg46.7209°, Azm44.1105°; **Fault plane solution: NP1:**ϕ_s65.26766°, δ59.51073°, λ-98.15023°. **NP2:** ϕ_s261.03027°, δ31.45827°, λ-76.46205°. **Principal axes:** T Plg14.1468°, Azm161.2016°; N Plg7.0171°, Azm69.4237°; P Plg74.1429°, Azm313.7443°; **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAIM	Kayak Island	0.49	18		Pn	13 38 56.5	-2.1
KAIM				Sg	Sb	13 39 01.9	-1.7
KAIM	comp=E,147µm,1.0s			IAML		13 39 06.8	
KAIM	Kayak Island baz=198	0.49	18	P	Pn	13 38 56.6	-2.1
KAIM	baz=198			S	Sb	13 39 02.1	-1.5
SUCK	Suckling Hills	0.78	37		Pb	13 39 00.9	-0.2
SUCK	Suckling Hills	0.78	37		Sn	13 39 13.4	-1.0
SUCK	Suckling Hills comp=N,41µm,1.0s	0.78	37	IAML		13 39 21.7	
SUCK	comp=E,45µm,0.7s			IAML		13 39 29.4	
MID	Middleton Isla	0.83	269		Pg	13 39 01.3	-0.1
Q23K	Middleton Isla	0.83	269		Pg	13 39 01.3	-0.2
Q23K				Sg	Sg	13 39 10.0	-2.3
Q23K	Middleton Isla baz=89,SNR=19	0.83	269	P	Pg	13 39 01.2	-0.2
NICHA	Nichawak Mount	0.87	26		Pn	13 39 02.5	-1.3
NICHA					Sn	13 39 16.0	-0.6
HMT	Hamilton	0.91	14		Pn	13 39 03.1	-1.4
HMT	Hamilton	0.91	14		Sn	13 39 17.3	-0.4
BGLC	Bering Glacier	0.98	47		Pb	13 39 04.2	-0.4
BGLC	Bering Glacier baz=227,SNR=57	0.98	47	P	Pb	13 39 04.2	-0.4
BGLC	baz=227			S	Sn	13 39 19.4	+0.1
BERG	Berg Lake	1.07	28	Pn	Pb	13 39 05.1	-0.9
BERG	comp=N,57µm,0.8s			IAML		13 39 30.1	
BERG	Berg Lake	1.07	28		Sn	13 39 21.2	-0.3
GRIN	Grindle Hills	1.09	40		Pn	13 39 06.0	-0.8
GRIN					Sn	13 39 22.5	+0.5
GOAT	Goat Mountain	1.13	360		Pn	13 39 06.7	-0.7
GOAT					Sn	13 39 23.4	+0.3
SNH	Sunshine Point	1.20	52	Pn	Pg	13 39 07.4	-1.0
SNH	Sunshine Point	1.20	52		Sn	13 39 24.8	+0.1
SNH	Sunshine Point comp=N,68µm,1.0s	1.20	52	IAML		13 39 26.0	
SNH	comp=E,96µm,1.0s			IAML		13 39 26.1	
EYAK	Cordova Ski Ar	1.21	335		Pn	13 39 07.5	-0.9
EYAK	Cordova Ski Ar	1.21	335		Sn	13 39 25.3	+0.3
EYAK	Cordova Ski Ar baz=155,SNR=1000	1.21	335	P	Pn	13 39 07.7	-0.8
EYAK	baz=155			S	Sn	13 39 24.5	-0.5
KHIT	Khitrov Hills	1.23	36		Pg	13 39 07.8	-1.3
KHIT					Sn	13 39 25.5	-0.2
CYK	Cape Yakataga	1.29	60		Pn	13 39 08.8	-0.8
WAX	Waxell Ridge	1.37	43		Pn	13 39 09.7	-1.0
WAX	Waxell Ridge	1.37	43		Sn	13 39 28.5	-0.5
BMRM	Bremner River	1.52	2		Pn	13 39 12.1	-0.7
BMRM	comp=E,25µm,0.6s			IAML		13 39 37.8	
BMRM	Bremner River	1.52	2		Sg	13 39 32.5	-1.7
BMRM	Bremner River baz=183,SNR=1000	1.52	2	P	Pb	13 39 12.3	-1.4
BMRM	baz=183			S	Sg	13 39 32.7	-1.5
FID	Port Fidalgo	1.57	327		Pn	13 39 12.8	-0.6
FID	comp=N,17µm,0.8s			IAML		13 39 40.0	
FID	comp=E,15µm,0.7s			IAML		13 39 52.3	
ISLE	Juniper Island	1.66	45	Pn	Pn	13 39 14.1	-0.6
ISLE	Juniper Island	1.66	45		Sb	13 39 36.0	-1.2
BAGL	Bagley Icefiel	1.68	51		Pn	13 39 14.4	-0.5
DIV	Divide	1.76	343		Pn	13 39 15.2	-0.9
VMT	TAPS TI Valdez	1.83	334		Pn	13 39 16.1	-0.8
GLI	Glacier Island	1.86	321		Pn	13 39 16.2	-1.2
GLI	comp=E,12µm,0.5s			IAML		13 39 47.1	
GLI	Glacier Island baz=140,SNR=260	1.86	321	P	Pn	13 39 16.5	-0.9
JPK	Jack Peak	1.86	330		Pn	13 39 16.6	-0.9
KIAG	Kiagna River	1.89	38		Pn	13 39 17.4	-0.6
KIAG					Sn	13 39 41.2	-0.7
VRDI	Verde Repeater	1.89	19		Pn	13 39 17.2	-0.7
VRDI	Verde Repeater	1.89	19		Sb	13 39 41.3	-2.4
VRDI	Verde Repeater comp=N,15µm,1.0s	1.89	19	IAML		13 39 46.1	
VRDI	comp=E,9µm,1.0s			IAML		13 39 56.6	
BALM	Baldy	1.98	36		Pn	13 39 18.7	-0.5
GLB	Gilahina Butte	2.04	12		Pn	13 39 19.4	-0.6
GLB	comp=N,10µm,0.9s			IAML		13 39 55.1	
GLB	comp=E,10µm,0.9s			IAML		13 39 55.8	
TABL	Table Mountain	2.05	60		Pn	13 39 19.7	-0.6
TABL	comp=E,18µm,0.9s			IAML		13 40 07.2	
TABL	comp=N,14µm,1.1s			IAML		13 40 07.7	
KLU	Klutina	2.13	344		Pn	13 39 20.6	-0.6
KLU	comp=N,8µm,1.1s			IAML		13 40 01.0	
KLU	comp=E,8µm,0.9s			IAML		13 40 01.2	
KLU	Klutina baz=164,SNR=930	2.13	344	P	Pn	13 39 20.6	-0.6
N25K	Chitina, Valde	2.16	2		Pn	13 39 21.5	0.0
N25K	Chitina, Valde baz=182,SNR=1000	2.16	2	P	Pn	13 39 21.7	+0.1
N25K	baz=182			S	Sb	13 39 48.7	-2.8
BARN	Barnard Glacie	2.21	42		Pn	13 39 22.3	-0.2
BARN	comp=E,11µm,0.6s			IAML		13 39 52.3	
BARN	comp=N,8µm,1.1s			IAML		13 39 59.5	
PWL	Port Wells	2.29	309		Pn	13 39 22.8	-0.5
PWL	comp=N,11µm,0.7s			IAML		13 39 58.6	
PWL	comp=E,9µm,1.0s			IAML		13 40 07.2	
PWL	Port Wells baz=127	2.29	309	P	Pn	13 39 22.7	-0.7
SEW	Seward	2.48	287	Pn	Pn	13 39 24.2	-1.7
SEW	Seward baz=104,SNR=65	2.48	287	P	Pn	13 39 24.1	-1.8
YKU2	Yakutat	2.58	87	Pn	Pn	13 39 26.5	-0.7
BCPM	Bancas Point	2.62	77		Pn	13 39 26.5	-1.4
BCPM	comp=E,6µm,0.8s			IAML		13 40 07.6	
BCPM	comp=N,7µm,1.0s			IAML		13 40 10.9	
PS11	TAPS Pump St11	2.66	352		Pn	13 39 29.0	+0.7
KNK	Knik Glacier	2.70	318	Pn	Pn	13 39 29.3	+0.4
KNK	comp=N,6µm,1.0s			IAML		13 40 07.3	
KNK	comp=E,5µm,1.2s			IAML		13 40 24.2	
KNK	Knik Glacier baz=136,SNR=524	2.70	318	P	Pn	13 39 29.0	0.0
SCM	Sheep Creek Mo	2.71	333		Pn	13 39 28.7	-0.4
SCM	comp=E,5µm,0.9s			IAML		13 40 07.1	
SCM	comp=N,6µm,1.4s			IAML		13 40 18.7	
SCM	Sheep Creek Mo baz=151,SNR=223	2.71	333	P	Pn	13 39 28.8	-0.4
PNL	Peninsula	2.72	83		Pn	13 39 27.8	-1.4
PNL	Peninsula baz=267,SNR=308	2.72	83	P	Pn	13 39 28.0	-1.2
O22K	Cooper Landing	2.72	294	Pn	Pn	13 39 28.6	-0.6
O22K	Cooper Landing baz=111,SNR=44	2.72	294	P	Pn	13 39 27.9	-1.3
M24K	Tolsona, Glenn	2.75	346		Pn	13 39 29.9	+0.2
M24K	Tolsona, Glenn baz=165,SNR=359	2.75	346	P	Pn	13 39 30.0	+0.3
M23K	Glacier View baz=147,SNR=260	2.77	329	P	Pn	13 39 29.6	-0.3
SML	Sawmill	2.95	324	Pn	Pn	13 39 32.2	-0.3
SML	comp=N,6µm,1.0s			IAML		13 40 34.9	
SML	comp=E,6µm,0.9s			IAML		13 40 35.7	
SML	Sawmill baz=142,SNR=332	2.95	324	P	Pn	13 39 32.2	-0.3
HARP	HAARP	2.96	356		Pn	13 39 32.9	+0.4
HARP	HAARP baz=176,SNR=253	2.96	356	P	Pn	13 39 33.0	+0.4
SLKM	Skilak Lake	2.96	293		Pn	13 39 31.4	-1.1
RC01	Rabbit Creek A	2.99	305	Pn	Pn	13 39 32.5	-0.4
RC01	comp=E,4µm,0.6s			IAML		13 40 12.8	
RC01	comp=N,4µm,0.5s			IAML		13 40 13.9	
RC01	Rabbit Creek A baz=122,SNR=239	2.99	305	P	Pn	13 39 32.4	-0.5
YUK2	White River	3.02	38		Pn	13 39 34.2	+0.8
PMR	Palmer	3.06	316		Pn	13 39 33.7	-0.1
PMR	Palmer baz=133,SNR=219	3.06	316	P	Pn	13 39 34.0	+0.2
M26K	Nabesna, AK	3.07	15		Pn	13 39 34.0	-0.1
M26K	Nabesna, AK baz=197,SNR=520	3.07	15	P	Pn	13 39 34.2	+0.1
BRSE	Bradley Lake S	3.08	278		Pn	13 39 33.6	-0.5
BRSE	Bradley Lake S baz=93,SNR=11	3.08	278	P	Pn	13 39 33.8	-0.3
GHO	Glory Hole Cre	3.11	320		Pn	13 39 34.7	0.0
YUK3	Moose Creek	3.13	40		Pn	13 39 36.0	+0.9
YUK3	Moose Creek baz=224,SNR=1000	3.13	40	P	Pn	13 39 35.9	+0.8
BRLK	Bradley Lake	3.15	278		Pn	13 39 35.4	+0.3
M27K	Edge Creek, AK	3.22	24		Pn	13 39 36.6	+0.4
M27K	Edge Creek, AK comp=N,4µm,1.3s	3.22	24	IAML		13 40 37.8	
M27K	comp=E,3µm,1.3s			IAML		13 40 51.6	
WAT6	Susitna Watana	3.46	336		Pn	13 39 39.1	-0.5
WAT6	Susitna Watana baz=154,SNR=249	3.46	336	P	Pn	13 39 38.9	-0.6
YUK7	Dusty Glacier	3.48	69		Pn	13 39 39.5	-0.3
CAPN	Captain Cook N baz=110	3.48	295	P	Pn	13 39 39.6	0.0
YUK6	Outpost Mounta	3.50	62		Pn	13 39 40.1	-0.1
YUK6	Outpost Mounta baz=247,SNR=149	3.50	62	P	Pn	13 39 40.3	+0.1
BVCY	Beaver Creek	3.51	31		Pn	13 39 41.0	+0.8
BVCY	Beaver Creek baz=214,SNR=849	3.51	31	P	Pn	13 39 41.0	+0.8
M22K	Willow	3.52	313	Pn	Pn	13 39 40.0	-0.1
M22K	Willow baz=129,SNR=64	3.52	313	P	Pn	13 39 39.9	-0.3
MENT	Mentasta	3.53	7		Pn	13 39 40.1	-0.2
MENT	comp=N,3µm,1.1s			IAML		13 40 44.5	
MENT	comp=E,3µm,1.0s			IAML		13 41 05.2	
HOM	Homer	3.53	276	Pn	Pn	13 39 40.5	+0.1
HOM	Homer baz=91,SNR=10	3.53	276	P	Pn	13 39 40.1	-0.3
PAX	Paxson	3.54	354	Pn	Pn	13 39 40.5	-0.2
PAX	Paxson baz=174,SNR=240	3.54	354	P	Pn	13 39 40.6	0.0
YUK4	Talbot Arm baz=240,SNR=643	3.56	55	P	Pn	13 39 42.9	+2.0
L26K	Log Cabin Wild baz=191,SNR=263	3.64	10	P	Pn	13 39 42.3	+0.4
YUK5	Granite Creek	3.80	61		Pn	13 39 44.4	+0.1
DHY	Denali Highway	3.85	342		Pn	13 39 44.3	-0.6
DHY	comp=N,2µm,1.5s			IAML		13 40 57.1	
DHY	comp=E,2µm,1.2s			IAML		13 40 58.8	
DHY	Denali Highway baz=160,SNR=207	3.85	342	P	Pn	13 39 44.5	-0.4
HYT	Haines Junctio	3.86	66	Pn	Pn	13 39 44.5	-0.5
HYT	comp=N,2µm,1.1s			IAML		13 41 09.8	
HYT	Haines Junctio baz=252,SNR=88	3.86	66	P	Pn	13 39 44.6	-0.5
L27K	Beaver Creek,	3.88	20	Pn	Pn	13 39 44.8	-0.4
L27K	Beaver Creek, baz=202,SNR=238	3.88	20	P	Pn	13 39 45.0	-0.1
BC03		3.89	20		Pn	13 39 45.2	0.0
CUT	Chulitna baz=136,SNR=136	4.01	320	P	Pn	13 39 47.3	+0.4
PS10	TAPS Pump St10	4.01	353		Pn	13 39 47.2	+0.2
O20K	Slope Mountain	4.05	282		Pn	13 39 47.5	0.0
O20K	Slope Mountain baz=96,SNR=11	4.05	282	P	Pn	13 39 46.6	-0.9
SPCG	Spurr Capps Gl	4.07	300		Pn	13 39 47.1	-0.7
STLK	Strandline Lak	4.07	303		Pn	13 39 47.4	-0.4
DFR	Drift River	4.16	289		Pn	13 39 47.7	-1.3
RSO	Redoubt South	4.16	287		Pn	13 39 48.0	-1.2
RDWB	Redoubt West	4.21	288		Pn	13 39 48.6	-1.2
RDJH	Redoubt Jeurge	4.21	289		Pn	13 39 48.7	-1.2
DOT	Dot Lake	4.22	4	Pn	Pn	13 39 50.0	+0.1
NCT	North Crescent	4.27	289		Pn	13 39 49.2	-1.3
SPWE	Spurr West	4.30	298		Pn	13 39 50.8	-0.1
RIDG	Independent Ri	4.30	359	Pn	Pn	13 39 51.7	+0.7
RIDG	comp=N,2µm,1.1s			IAML		13 41 03.4	
RIDG	comp=E,2µm,0.9s			IAML		13 41 13.6	
RIDG	Independent Ri baz=179,SNR=707	4.30	359	P	Pn	13 39 51.7	+0.7
OPT	Oil Point	4.34	276		Pn	13 39 52.4	+1.0
P19K	Oil Pt	4.34	276	Pn	Pn	13 39 52.6	+1.1
P19K	comp=N,2µm,1.0s			IAML		13 41 23.0	
P19K	comp=E,1µm,1.1s			IAML		13 41 23.0	

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P19K  Oil Pt             4.34 276    P      Pn     13 39 51.4  -0.1
      baz=89,SNR=17
K24K  Donnelly Dome      4.39 354    P      Pn     13 39 53.1  +0.9
      baz=173,SNR=822
RND   Reindeer           4.43 335    Pn     Pn     13 39 52.7   0.0
RND                                  IAML          13 41 16.0
      comp=E,2µm,0.9s
RND                                  IAML          13 41 16.5
      comp=N,2µm,1.4s
KDAK  Kodiak Island      4.44 251    Pn     Pn     13 39 51.1  -1.7
      comp=N,7.3nm,0.3s,baz=55,slow=5.5,SNR=112
KDAK                                 Sn     Sn     13 40 39.6  -5.0
      comp=N,20nm,0.3s,baz=122,slow=23,SNR=11
KDAK                                 LR     LR     13 42 03.4
      comp=N,6µm,21.5s,baz=218,slow=44
      comp=N,46nm,0.5s
KDAK  Kodiak Island      4.44 251  i P      Pn     13 39 51.7  -1.1
KDAK  Kodiak Island      4.44 251           Pn     13 39 52.1  -0.7
KDAK  Kodiak Island      4.44 251    P      Pn     13 39 51.4  -1.5
      baz=65
SCRK  Sand Creek         4.55   4    Pn     Pn     13 39 54.3  -0.2
SCRK                                 IAML          13 41 22.3
      comp=E,1µm,1.2s
SCRK  Sand Creek         4.55   4    P      Pn     13 39 54.6  +0.1
      baz=185,SNR=198
Q19K  Cape Douglas,      4.62 267    Pn     Pn     13 39 55.2  -0.1
Q19K                                 IAML          13 42 17.2
      comp=N,2µm,2.8s
Q19K  Cape Douglas,      4.62 267    P      Pn     13 39 54.0  -1.4
      baz=80,SNR=18
MCK   McKinley           4.74 337    Pn     Pn     13 39 56.8  -0.2
MCK                                  IAML          13 41 33.3
      comp=E,1µm,2.1s
MCK                                  IAML          13 41 35.9
      comp=N,2µm,1.5s
K27K  Chicken            4.76  14           Pn     13 39 57.1  -0.1
SKAG  Skagway            4.79  86           Pn     13 39 56.0  -1.6
SKAG  Skagway            4.79  86    P      Pn     13 39 56.7  -0.9
      baz=274,SNR=47
TRF   Thorofare Moun     4.81 329           Pn     13 39 58.2  +0.1
N31M  Braeburn, Yuko     4.87  61    Pn     Pn     13 39 57.5  -1.2
N31M                                 IAML          13 42 02.4
      comp=E,2µm,1.4s
N31M  Braeburn, Yuko     4.87  61    P      Pn     13 39 58.4  -0.3
      baz=249,SNR=218
O19K  Port Alsworth      4.90 283    Pn     Pn     13 39 58.7  -0.5
O19K                                 IAML          13 41 05.1
      comp=N,906nm,0.4s
O19K                                 IAML          13 41 10.4
      comp=E,1µm,0.5s
O19K  Port Alsworth      4.90 283    P      Pn     13 39 59.1  -0.1
      baz=95,SNR=31
M30M  Minto, Yukon       4.96  48    Pn     Pn     13 39 59.9  -0.1
M30M                                 IAML          13 41 39.8
      comp=N,1µm,0.9s
M30M                                 IAML          13 42 28.4
      comp=E,970nm,4.3s
M30M  Minto, Yukon       4.96  48    P      Pn     13 40 00.1   0.0
      baz=234,SNR=273
PPLA  Purkeypile         5.00 317           Pn     13 39 59.8  -0.8
PPLA  Purkeypile         5.00 317    P      Pn     13 39 59.8  -0.8
      baz=131,SNR=53
OHAK  Old Harbor         5.04 247    Pn     Pn     13 39 58.5  -2.5
OHAK  Old Harbor         5.04 247    P      Pn     13 39 59.1  -2.0
      baz=60,SNR=15
N19K  Bonanza Creek      5.07 290    Pn     Pn     13 39 59.7  -1.9
N19K                                 IAML          13 42 08.1
      comp=N,1µm,2.7s
N19K  Bonanza Creek      5.07 290    P      Pn     13 39 59.9  -1.7
      baz=102,SNR=28
KTH   Kantishna Hill     5.07 327    Pn     Pn     13 40 01.6   0.0
WHY   Whitehorse         5.08  72    Pn     Pn     13 40 01.1  -0.6
WHY                                  IAML          13 41 43.8
      comp=N,1µm,2.7s
WHY   Whitehorse         5.08  72    P      Pn     13 40 01.3  -0.4
      baz=260,SNR=138
J26L  Joseph Creek       5.09   6    P      Pn     13 40 02.1  +0.2
      baz=187,SNR=356
BESE  Bessie Mountai     5.17  96    Pn     Pn     13 40 01.8  -1.2
J25K  Salcha River,      5.18 357    Pn     Pn     13 40 02.8  -0.3
J25K                                 IAML          13 41 34.5
      comp=N,770nm,1.1s
J25K                                 IAML          13 41 36.2
      comp=E,801nm,1.1s
J25K  Salcha River,      5.18 357    P      Pn     13 40 02.9  -0.3
      baz=176,SNR=417
PS08  TAPS Pump Stn8     5.20 350           Pn     13 40 02.4  -0.8
BWN   Browne             5.24 337    Pn     Pn     13 40 02.8  -1.0
DAWY  Dawson             5.27  26    Pn     Pn     13 40 04.3  +0.1
DAWY                                 IAML          13 41 43.8
      comp=E,704nm,1.1s
DAWY                                 IAML          13 42 16.9
      comp=N,678nm,3.4s
DAWY  Dawson             5.27  26    P      Pn     13 40 04.6  +0.3
      baz=211,SNR=371
WRH   Wood River Hil     5.28 344    Pn     Pn     13 40 03.6  -0.7
WRH                                  IAML          13 42 32.3
      comp=E,993nm,3.0s
CAST  Castle Rocks       5.32 322    Pn     Pn     13 40 04.7  -0.2
CAST                                 IAML          13 41 45.7
      comp=E,1µm,2.9s
CAST                                 IAML          13 42 24.7
      comp=N,1µm,2.8s
CAST  Castle Rocks       5.32 322    P      Pn     13 40 04.2  -0.7
      baz=135,SNR=95
O18K  Koktuh Hills       5.33 279    Pn     Pn     13 40 04.2  -0.9
O18K                                 IAML          13 42 18.4
      comp=N,809nm,3.3s
O18K  Koktuh Hills       5.33 279    P      Pn     13 40 04.2  -0.9
      baz=90,SNR=14
M19K  Big River Lodg     5.35 301           Pn     13 40 04.2  -1.1
M19K                                 IAML          13 42 33.9
      comp=E,727nm,2.4s
M19K                                 IAML          13 42 36.3
      comp=N,657nm,2.9s
M19K  Big River Lodg     5.35 301    P      Pn     13 40 04.2  -1.1
      baz=113
P18K  Big Mountain,      5.37 274    P      Pn     13 40 04.4  -1.2
      baz=85
L20K  Farewell, AK       5.39 308           Pn     13 40 05.0  -0.9
L20K  Farewell, AK       5.39 308    P      Pn     13 40 05.0  -0.9
      baz=120,SNR=121
CCB   Clear Creek Bu     5.41 346           Pn     13 40 04.8  -1.3
IL31                     5.43 350           Pn     13 40 05.1  -1.3
ILAR  Eielson Array      5.43 350    Pn     Pn     13 40 05.1  -1.3
      comp=N,3.9nm,0.3s,baz=174,slow=13,SNR=337
ILAR                                 LR     LR     13 42 22.4
      comp=N,8µm,19.9s,baz=174,slow=41
      comp=N,53nm,0.8s
JIS   Juneau Island      5.49  98           Pn     13 40 05.6  -1.7
SIT   Sitka              5.51 112           Pn     13 40 06.0  -1.6
SIT   Sitka              5.51 112    P      Pn     13 40 06.3  -1.2
      baz=300
BPAW  Bear Paw Mtn.      5.53 330    Pn     Pn     13 40 06.4  -1.4
BPAW  Bear Paw Mtn.      5.53 330    P      Pn     13 40 07.3  -0.5
      baz=145,SNR=153
NEA2  Nenana             5.54 340           Pn     13 40 06.7  -1.3
NEA2  Nenana             5.54 340    P      Pn     13 40 07.0  -1.0
      baz=157,SNR=25
COLA  College            5.63 346c i P      Pn     13 40 08.1  -1.0
COLA  College            5.63 346           Pn     13 40 07.8  -1.4
COLA  College            5.63 346    P      Pn     13 40 08.4  -0.7
      baz=164
TCOL  CIGO, UAF Yank     5.63 346           Pn     13 40 07.8  -1.3
TCOL  CIGO, UAF Yank     5.63 346    P      Pn     13 40 08.2  -0.9
      baz=164,SNR=36
I53US FAIRBANKS INFR     5.63 346    Pn     Pn     13 40 07.2  -1.9
      baz=168,slow=22
I53US                              i               14 01 50.0
      baz=175,slow=328,SNR=0.3
SVW2  Sparrevohn         5.65 292           Pn     13 40 08.2  -1.3
L19K  White Mountain     5.66 303    Pn     Pn     13 40 08.2  -1.4
L19K  White Mountain     5.66 303    P      Pn     13 40 08.4  -1.2
      baz=115,SNR=335
CHUM  Lake Minchumin     5.72 324           Pn     13 40 10.3  -0.1
CHUM  Lake Minchumin     5.72 324    P      Pn     13 40 10.1  -0.3
      baz=138,SNR=142
N18K  Kilae Creek        5.73 287    Pn     Pn     13 40 08.8  -1.7
N18K  Kilae Creek        5.73 287    P      Pn     13 40 09.3  -1.2
      baz=98,SNR=36
M31M  Drury Creek, Y     5.75  57    P      Pn     13 40 11.0  +0.1
      baz=246,SNR=173
MDM   Murphy Dome        5.76 345           Pn     13 40 09.7  -1.2
SII   Sitkinak Islan     5.81 244    P      Pn     13 40 10.3  -1.4
      baz=56
POKR  Poker Plat Res     5.82 349           Pn     13 40 10.6  -1.2
POKR  Poker Plat Res     5.82 349    P      Pn     13 40 10.6  -1.2
      baz=166,SNR=18
J29M  Klondike Camp      5.87  29    P      Pn     13 40 13.3  +0.7
      baz=214
K20K  Telida             5.95 315    Pn     Pn     13 40 12.2  -1.4
K20K  Telida             5.95 315    P      Pn     13 40 12.5  -1.1
      baz=127,SNR=212
I23K  Minto, Yukon-K     6.11 341           Pn     13 40 14.4  -1.2
I23K  Minto, Yukon-K     6.11 341    P      Pn     13 40 14.7  -0.9
      baz=157,SNR=45
FARO  Faro, Yukon        6.21  59    P      Pn     13 40 17.2   0.0
      baz=248,SNR=89
TT01  Tatalina           6.46 307           Pn     13 40 19.3  -1.3
TTA   Tatalina           6.47 307    Pn     Pn     13 40 18.9  -1.9
TTA   Tatalina           6.47 307    P      Pn     13 40 19.3  -1.4
      baz=118,SNR=128
J20K  Nowinta River      6.50 321    Pn     Pn     13 40 20.2  -0.9
J20K  Nowinta River      6.50 321    P      Pn     13 40 20.3  -0.9
      baz=133,SNR=129
H24K  Noodor Dome        6.57 349    Pn     Pn     13 40 21.0  -1.1
H24K  Noodor Dome        6.57 349    P      Pn     13 40 21.3  -0.8
      baz=166,SNR=54
I29M  Ogilvie Camp,      6.63  24           Pn     13 40 22.6  -0.2
I29M  Ogilvie Camp,      6.63  24    P      Pn     13 40 23.0  +0.1
      baz=210,SNR=196
I21K  Tanana             6.66 333           Pn     13 40 22.4  -0.9
I21K  Tanana             6.66 333    P      Pn     13 40 22.7  -0.6
      baz=146,SNR=126
H23K  Yukon River        6.76 343    P      Pn     13 40 24.2  -0.6
      baz=159,SNR=22
CHIR  Chirikof Islan     6.89 243    Pn     Pn     13 40 27.0  +0.5
CHIR  Chirikof Islan     6.89 243    P      Pn     13 40 25.0  -1.5
      baz=54
H21K  Melozitna Rive     7.25 332           Pn     13 40 30.7  -0.7
H21K  Melozitna Rive     7.25 332    P      Pn     13 40 30.5  -0.9
      baz=146,SNR=104
WRAK  Wrangell Islan     7.25 109    Pn     Pn     13 40 30.8  -0.6
WRAK  Wrangell Islan     7.25 109    P      Pn     13 40 30.1  -1.3
      baz=300
MMPY  Sheldon Lake,      7.26  58    P      Pn     13 40 31.5  -0.1
      baz=250,SNR=73
CRAG  Craig              7.42 118           Pn     13 40 31.1  -2.5
CRAG  Craig              7.42 118    P      Pn     13 40 32.2  -1.4
      baz=307
DLBC  Dease Lake         7.67  91    Pn     Pn     13 40 36.9  -0.3
      comp=N,11nm,0.3s,baz=281,slow=12,SNR=88
DLBC                                 Lg     Lg     13 42 44.1
      comp=N,3.7nm,0.3s,baz=207,slow=27,SNR=2.4
      comp=N,65nm,0.6s
DLBC  Dease Lake         7.67  91    Pn     Pn     13 40 36.6  -0.6
IM03                     7.74 332           Pn     13 40 37.4  -0.8
IMAR  Indian Mountai     7.74 332    Pn     Pn     13 40 37.1  -1.0
GCSA  Galena City Sc     7.78 318           Pn     13 40 38.3  -0.3
GCSA  Galena City Sc     7.78 318    P      Pn     13 40 38.2  -0.3
      baz=128,SNR=105
BM03  Burnt Mountain     7.99   0           Pn     13 40 41.5  -0.1
BMAR  Burnt Mountain     8.00   0    Pn     Pn     13 40 41.3  -0.5
COLD  Coldfoot           8.18 345    Pn     Pn     13 40 43.0  -1.0
COLD  Coldfoot           8.18 345    P      Pn     13 40 43.3  -0.7
      baz=160,SNR=64
TGTN  Hyland Airport     8.38  69    P      Pn     13 40 46.6  -0.3
      baz=263,SNR=30
DIB   Dawson Inlet,      9.24 127           Pn     13 40 56.5  -2.1
H02S1 DAWSON INLET T     9.24 127    T      T      13 50 33.5
      SNR=15
RUBB  Prince Rupert      9.43 117    Pn     Pn     13 41 00.2  -1.0
SDPT  Sand Point         9.44 251    Pn     Pn     13 41 01.7  +0.3
SDPT  Sand Point         9.44 251    P      Pn     13 41 00.2  -1.2
      baz=58,SNR=5.6
TOLK  Toolik Lake Re     9.46 349    Pn     Pn     13 41 01.4  -0.2
TOLK  Toolik Lake Re     9.46 349    P      Pn     13 41 00.9  -0.8
      baz=165,SNR=27
GRNB  Grenville Isla     9.87 118    Pn     Pn     13 41 04.9  -2.4
INK   Inuvik            10.14  24    Pn     Pn     13 41 09.8  -1.0
      comp=N,1.0nm,0.3s,baz=203,slow=15,SNR=158
INK                                  Sn     Sn     13 42 56.0  -8.4
      comp=N,1.0nm,0.3s,baz=148,slow=14,SNR=3.2
INK                                  Lg     Lg     13 43 55.9
      baz=100,slow=28
INK                                  LR     LR     13 45 42.6
      comp=N,2µm,20.7s,baz=202,slow=42
      comp=N,69nm,0.9s
INK   Inuvik            10.14  24           Pn     13 41 10.0  -0.9
INK   Inuvik            10.14  24    P      Pn     13 41 10.0  -0.9
      baz=214,SNR=104
ANM   Nome              10.94 307           Pn     13 41 21.1  -0.8
ANM   Nome              10.94 307    P      Pn     13 41 20.3  -1.6
      baz=108
FALS  False Pass        11.14 254           Pn     13 41 23.2  -1.4
FALS  False Pass        11.14 254    P      Pn     13 41 22.9  -1.7
      baz=58
RDOG  Red Dog Mine      11.74 325    P      Pn     13 41 32.9  +0.1
      baz=129
BBB   Bella Bella       11.82 121    Pn     Pn     13 41 33.5  -0.4
      comp=N,0.7nm,0.3s,baz=326,slow=14,SNR=6.6
BBB                                  Sn     Sn     13 43 41.3  -4.4
      comp=N,0.2nm,0.3s,baz=1.0,slow=18,SNR=1.1
BBB                                  LR     LR     13 45 35.9
      comp=N,1µm,18.2s,baz=327,slow=35
      comp=N,17nm,0.8s
TNA   Tin City          12.29 310    P      Pn     13 41 38.5  -1.7
      baz=109
A21K  Barrow            12.86 343    P      Pn     13 41 46.3  -1.7
      baz=152
UNV   Unalaska Valle    13.20 254           Pn     13 41 51.2  -1.6
UNV   Unalaska Valle    13.20 254    P      Pn     13 41 49.9  -2.9
      baz=56
C36M  Paulatuk          13.25  33           Pn     13 41 51.0  -2.4
C36M  Paulatuk          13.25  33    P      Pn     13 41 50.6  -2.8
      baz=232,SNR=43
GAMB  Gambell           13.48 300    P      Pn     13 41 54.0  -2.6
      baz=96
SPIA  Saint Paul Isl    13.58 271    P      Pn     13 41 56.4  -1.6
      baz=70
A36M  Sachs Harbour     14.79  24           Pn     13 42 12.1  -2.3
A36M  Sachs Harbour     14.79  24    P      Pn     13 42 11.0  -3.3
      baz=222,SNR=26
YKA   Yellowknife Ar    14.85  65    Pn     Pn     13 42 13.8  -1.5
      comp=N,0.4nm,0.3s,baz=270,slow=13,SNR=72
YKA                                  Lg     Lg     13 46 25.5
      baz=214,slow=34
YKA                                  PcP    PcP    13 47 25.9  +0.9
      comp=N,4.2nm,0.7s,baz=277,slow=1.6,SNR=6.7
YKA                                  LR     LR     13 47 58.6
      comp=N,1000nm,20.8s,baz=262,slow=37
      comp=N,14nm,0.8s
YKA   Yellowknife Ar    14.85  65           Pn     13 42 13.1  -2.2
NIKH  Nikolski High     14.86 255    P      Pn     13 42 12.5  -2.9
      baz=54
LLLB  Lillooet          15.73 114    Pn     Pn     13 42 27.7  +0.7
PGC   Sidney            16.44 122    P      Pn     13 42 37.7  +1.7
A04D  Lummi Island      16.71 120    P      Pn     13 42 38.3  -1.2
      baz=318,SNR=8.3
NLWA  Neilton Lookou    17.23 125    P      P      13 42 47.9  +0.2
B05A  Bryant            17.32 120    P      Pn     13 42 45.9  -1.3
      baz=319,SNR=16
B06A  Marblemount       17.40 119    P      Pn     13 42 49.2  +1.1
D03D  Eldon             17.45 124    P      Pn     13 42 48.3  -0.5
      baz=321,SNR=6.1
D04E  Lakebay           17.86 124    P      Pn     13 42 53.2  -0.6
      baz=322
C06D  Leavenworth       18.11 119    P      Pn     13 42 55.9  -1.1
      baz=318
EDM   Edmonton          18.35  96    P      Pn     13 42 59.0  -0.8
EDM                                  IAmb   IAmb   13 43 04.2
      comp=Z,111nm,1.0s
E04D  Cinebar           18.44 125    P      P      13 42 59.9  -1.0
      baz=322,SNR=14
F04D  Rainier, OR       18.64 126    P      P      13 43 02.6  -0.4
      baz=324
G03D  McMinnville, O    19.24 128    P      P      13 43 08.8  -0.9
      baz=326
F05D  White Salmon      19.44 124    P      P      13 43 12.1  +0.2
      baz=323
NEW   Newport           19.60 113    P      Pn     13 43 15.5  +0.6
      comp=Z,0.6nm,0.3s,baz=323,slow=12,SNR=35
NEW                                  LR     LR     13 50 07.9
      comp=Z,1µm,19.3s,baz=308,slow=35
      comp=Z,42nm,0.9s
NEW   Newport           19.60 113    P      P      13 43 14.0  +0.3
NEW   Newport           19.60 113    P      P      13 43 14.1  +0.5
      baz=315,SNR=41
I02E  Swisshome, OR     19.93 131    P      P      13 43 16.6  -0.7
      baz=328
G05D  Wamic, OR         20.02 125    P      P      13 43 18.3  +0.1
      baz=324,SNR=16
H04D  Lebanon           20.02 129    P      P      13 43 17.6  -0.6
      baz=326,SNR=7.9
I03D  Drain, OR         20.47 131    P      P      13 43 22.9  -0.2
      baz=328
J01E  Myrtle Point      20.71 133    P      P      13 43 24.3  -1.4
      baz=329,SNR=7.1
I05D  Terrebonne, OR    20.74 126    P      P      13 43 25.6  -0.5
      baz=325,SNR=31
I04A  Tendick Farm,     20.76 129    P      P      13 43 25.4  -0.9
      baz=327,SNR=21
K02D  Willamette Mer    21.21 133    P      P      13 43 31.0  -0.2
      baz=330,SNR=38
F10A  Beach Ranch, E    21.23 117    P      P      13 43 31.7  +0.3
JTMT  Jette             21.31 110    P      P      13 43 33.5  +1.2
JTMT                                 IAmb   IAmb   13 43 35.3
      comp=Z,69nm,0.9s
J04D  Umpqua Nationa    21.34 129    P      P      13 43 34.7  +1.9
J04D  Umpqua Nationa    21.34 129    P      P      13 43 32.5  -0.3
      baz=327,SNR=17
PINE  Pine Mountain     21.35 127    P      P      13 43 34.7  +1.8
PINE                                 IAmb   IAmb   13 43 37.3
      comp=Z,90nm,1.2s
J05D  Fort Rock, OR     21.66 128    P      P      13 43 35.8  -0.3
      baz=326,SNR=19
I07A  Izee              21.72 124    P      P      13 43 37.9  +1.3
I07A                                 IAmb   IAmb   13 43 42.7
      comp=Z,69nm,1.0s
K04D  Chiloquin, OR     22.00 130    P      P      13 43 38.6  -1.2
      baz=328,SNR=10
BMO   Blue Mountains    22.06 119    P      P      13 43 41.8  +1.4
BMO                                  IAmb   IAmb   13 43 45.6
      comp=Z,85nm,1.1s
MSO   Missoula          22.13 111    P      P      13 43 42.0  +0.9
MSO   Missoula          22.13 111    P      P      13 43 39.8  -1.3
      baz=316,SNR=40
L04D  Klamath Falls     22.14 131    P      P      13 43 42.9  +1.7
L04D                                 IAmb   IAmb   13 43 47.0
      comp=Z,100nm,1.1s
L04D  Klamath Falls     22.14 131    P      P      13 43 38.9  -2.3
      baz=329,SNR=21
YBH   Yreka Blue Hor    22.40 133    P      P      13 43 46.9  +2.9
      comp=Z,40nm,0.8s,baz=348,slow=5.9,SNR=76
YBH                                  PcP    PcP    13 47 39.2  +0.7
      comp=Z,1.9nm,0.8s,baz=221,slow=4.0,SNR=3.2
      comp=Z,40nm,0.8s
PLID  Pearl Lake        22.47 117    P      P      13 43 45.8  +0.9
PLID                                 IAmb   IAmb   13 43 47.7
      comp=Z,70nm,0.9s
BILL  Bilibino          22.69 313c i P      P      13 43 46.3  -0.5
BILL                                e                13 44 12.0
BILL                                 pmax   pmax
      comp=Z,76nm,1.3s
BILL                                 MLR    MLR
      comp=Z,2µm,10.0s
BILL  Bilibino          22.69 313    P      P      13 43 44.5  -2.3
BILL                                 IAmb   IAmb   13 43 50.4
      comp=Z,55nm,1.1s
HRY   Holter Researc    23.23 109    P      P      13 43 53.1  +0.4
EGMT  Eagleton          23.34 104    P      P      13 43 53.4  -0.3
EGMT                                 IAmb   IAmb   13 44 03.0
      comp=Z,51nm,0.8s
EGMT  Eagleton          23.34 104    P      P      13 43 52.6  -1.1
      baz=312,SNR=30
RES   Resolute Bay      23.59  30    P      P      13 43 56.0   0.0
      comp=Z,29nm,0.7s,baz=256,slow=11,SNR=85
RES                                  S      S      13 48 09.7  -0.2
      comp=Z,4.2nm,0.9s,baz=346,slow=14,SNR=1.6
RES                                  LR     LR     13 54 08.4
      comp=Z,1µm,20.5s,baz=246,slow=39
      comp=Z,29nm,0.7s
RES   Resolute Bay      23.59  30    P      P      13 43 55.5  -0.4
SHEM  Shemya Is, Ala    23.62 272    LR     LR     13 54 14.2
      comp=Z,2µm,18.6s,baz=70,slow=39
O02D  Mt. Diablo Mer    23.73 135    P      P      13 43 56.5  -1.1
      baz=332,SNR=9.9
MFID  Camas Ranch       23.85 119    P      P      13 43 59.2  +0.5
O03E  Paynes Creek      23.99 133    P      P      13 43 59.2  -0.9
      baz=331,SNR=21
BOZ   Bozeman (W)       24.13 110    P      P      13 44 01.7  +0.2
BOZ   Bozeman (W)       24.13 110    P      P      13 44 00.5  -0.9
      baz=317,SNR=53
HLID  Hailey            24.37 117    P      P      13 44 04.3  +0.6
HLID                                 IAmb   IAmb   13 44 07.5
      comp=Z,40nm,0.9s
HLID  Hailey            24.37 117    P      P      13 44 02.1  -1.7
      baz=321,SNR=70
ORV   Oroville          24.75 133    P      P      13 44 08.3  +1.4
QLMT  Earthquake Lak    24.79 111    P      P      13 44 09.2  +1.7
YHL   Hebgen Lake       24.89 111    P      P      13 44 10.0  +1.4
YHL                                  IAmb   IAmb   13 44 13.5
      comp=Z,33nm,1.0s
BEKR  Beckworth         24.91 131    P      P      13 44 07.9  -0.7
BEKR                                 IAmb   IAmb   13 44 18.5
      comp=Z,73nm,1.3s
BEKR                                 PcP    PcP    13 47 44.6  +0.6
GCMT  Greycliff         24.93 108    P      P      13 44 10.7  +1.9
YMR   Madison River     25.13 111    P      P      13 44 12.6  +1.9
YMR                                  IAmb   IAmb   13 44 13.9
      comp=Z,56nm,0.9s
YNR   Norris Junctio    25.23 111    P      P      13 44 13.7  +2.1
PAHR  Pah Rah Range     25.42 130    P      P      13 44 15.1  +1.8
PAHR                                 IAmb   IAmb   13 44 23.5
      comp=Z,89nm,1.2s
LKWY  Lake              25.48 110    P      P      13 44 16.6  +2.7
LKWY                                 IAmb   IAmb   13 44 40.4
      comp=Z,52nm,1.3s
FCC   Fort Churchill    25.50  69    P      P      13 44 13.5  -0.1
FCC                                  IAmb   IAmb   13 44 17.1
      comp=Z,46nm,0.9s
YPP   Pitchstone Pla    25.50 111    P      P      13 44 14.7  +0.6
H17A  Grant Village     25.52 111    P      P      13 44 15.5  +1.3
H17A                                 IAmb   IAmb   13 44 22.7
      comp=Z,46nm,1.1s
H17A  Grant Village     25.52 111    P      P      13 44 13.5  -0.7
      baz=318,SNR=32
MPK   Martis Peak       25.53 131    P      P      13 44 16.5  +2.2
VCNR  Virginia City     25.67 131    P      P      13 44 16.6  +1.0
VCNR                                 IAmb   IAmb   13 44 21.5
      comp=Z,56nm,1.0s
BMN   Battle Mountai    25.68 126    P      P      13 44 15.9  +0.3
RUBR  Rubicon Trail     25.69 132    P      P      13 44 16.9  +1.1
RUBR                                 IAmb   IAmb   13 44 34.3
      comp=Z,42nm,0.9s
FLWY  Flagg Ranch       25.70 112    P      P      13 44 17.2  +1.5
FLWY                                 IAmb   IAmb   13 44 25.5
      comp=Z,56nm,1.1s
EMB   Emerald Bay       25.78 132    P      P      13 44 17.4  +0.9
EMB                                  IAmb   IAmb   13 44 22.1
      comp=Z,30nm,1.0s
DGMT  Dagmar            25.83  97    P      P      13 44 17.9  +1.1
DGMT                                 IAmb   IAmb   13 44 21.5
      comp=Z,33nm,0.8s
DGMT  Dagmar            25.83  97    P      P      13 44 14.5  -2.2
      baz=310
PNTR  Pine Nut          25.87 131    P      P      13 44 18.8  +1.3
PNTR                                 IAmb   IAmb   13 44 25.9
      comp=Z,106nm,1.3s
MOOW  Moose Ponds       25.93 112    P      P      13 44 19.8  +1.9
MOOW                                 IAmb   IAmb   13 44 24.0
      comp=Z,34nm,1.0s
LAO   LASA Array        26.00 102    P      P      13 44 18.1  -0.3
LAO                                  IAmb   IAmb   13 44 21.2
      comp=Z,39nm,1.1s
LAO   LASA Array        26.00 102    P      P      13 44 16.6  -1.8
      baz=314,SNR=8.7
TPAW  Teton Pass        26.02 113    P      P      13 44 20.0  +1.2
TPAW                                 IAmb   IAmb   13 44 22.5
      comp=Z,40nm,0.9s
LOHW  Long Hollow       26.10 112    P      P      13 44 20.1  +0.7
LOHW                                 IAmb   IAmb   13 44 26.6
      comp=Z,34nm,1.1s
YERR  Yerington         26.10 130    P      P      13 44 20.1  +0.7
YERR                                 IAmb   IAmb   13 44 25.5
      comp=Z,32nm,1.0s
SNOW  Snow King Moun    26.14 113    P      P      13 44 21.6  +1.7
SNOW                                 IAmb   IAmb   13 44 23.6
      comp=Z,38nm,0.9s
ECR   Eagle Creek       26.16 114    P      P      13 44 21.7  +1.6
REDW  Red Top Meadow    26.17 113    P      P      13 44 22.0  +1.9
REDW                                 IAmb   IAmb   13 44 33.9
      comp=Z,58nm,1.1s
ELK   Elko              26.26 122    P      P      13 44 23.8  +2.8
      comp=Z,21nm,0.9s,baz=328,slow=7.9,SNR=49
ELK                                  PcP    PcP    13 47 47.9  +0.8
      comp=Z,3.0nm,0.9s,baz=199,slow=2.4,SNR=4.0
      comp=Z,21nm,0.9s
ELK   Elko              26.26 122    P      P      13 44 23.1  +2.1
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CMB	Columbia Colle	26.50	133		P	P	13 44 24.1	+1.2
KVN	Kaiserville	26.50	129		P	P	13 44 24.8	+1.7
KVN					IAmb	IAmb	13 44 34.3	
	comp=Z,44nm,1.3s							
KVN					PcP	PcP	13 47 48.6	+1.0
AHID	Auburn Hatcher	26.51	114		P	P	13 44 23.0	-0.1
HVU	Hansel Valley	26.52	118		P	P	13 44 24.7	+1.6
HVU					IAmb	IAmb	13 44 27.1	
	comp=Z,48nm,1.0s							
RYN	Ryan	26.69	130		P	P	13 44 25.6	+0.9
EUNU	Eureka	26.71	19		P	P	13 44 26.2	+1.8
EUNU					IAmb	IAmb	13 44 30.3	
	comp=Z,52nm,1.0s							
NVAR	Mina Array Bea	26.95	130		P	P	13 44 29.7	+2.6
	comp=Z,14nm,0.9s,baz=313,slow=9.4,SNR=74							
NVAR					PcP	PcP	13 47 50.2	+1.5
	comp=Z,6.0nm,0.7s,baz=288,slow=1.9,SNR=16							
NVAR					ScP	ScP	13 51 30.6	+2.0
	comp=Z,1.2nm,1.0s,baz=305,slow=1.3,SNR=5.6							
	comp=Z,14nm,0.9s							
NVAR	Mina Array Bea	26.95	130		P	P	13 44 28.8	+1.7
NV11	Mina Array Sit	27.00	129		P	P	13 44 28.9	+1.4
NV11					IAmb	IAmb	13 44 39.2	
	comp=Z,55nm,1.2s							
LHV	Little Huntoon	27.02	130		P	P	13 44 29.6	+2.1
LHV					IAmb	IAmb	13 44 34.9	
	comp=Z,30nm,0.9s							
BGU	Big Grassy Mou	27.09	119		P	P	13 44 28.9	+0.6
HWUT	Hardware Ranch	27.20	116		P	P	13 44 30.2	+0.9
BW06	Boulder Array	27.23	112		P	P	13 44 30.7	+1.0
BW06	Boulder Array	27.23	112		P	P	13 44 28.6	-1.1
	baz=320,SNR=22							
PD31	Pinedale Array	27.23	112		P	P	13 44 30.7	+1.0
PDAR	Pinedale Array	27.23	112		P	P	13 44 31.4	+1.6
	comp=Z,11nm,1.0s,baz=324,slow=7.3,SNR=53							
PDAR					PcP	PcP	13 47 49.4	0.0
	comp=Z,2.4nm,0.8s,baz=59,slow=0.6,SNR=5.0							
	comp=Z,11nm,1.0s							
PDAR	Pinedale Array	27.23	112		P	P	13 44 30.8	+1.0
OMMB	Old Mammoth Mi	27.39	131		P	P	13 44 33.3	+2.1
MLAC	Mammoth, Mammo	27.44	131		P	P	13 44 28.9	-2.6
	baz=331							
TPH	Tonopah	27.68	128		P	P	13 44 33.9	+0.2
DUG	Dugway, Tooele	27.77	120		P	P	13 44 36.1	+1.7
DUG	Dugway, Tooele	27.77	120		P	P	13 44 32.5	-2.0
	baz=325							
CTU	Camp Tracy	27.85	118		P	P	13 44 37.0	+1.8
JLU	Jordanelle	28.06	117		P	P	13 44 38.4	+1.3
R11A	Troy Canyon, C	28.12	126		P	P	13 44 38.2	+0.6
R11A	Troy Canyon, C	28.12	126		P	P	13 44 36.5	-1.0
	baz=328,SNR=31							
TIN	Tinemaha, Big	28.17	131		P	P	13 44 38.1	+0.1
	baz=331							
LCH	Last Change Ra	28.25	130		P	P	13 44 40.2	+1.6
NLU	North Lily Min	28.30	119		P	P	13 44 40.6	+1.4
NLU					PcP	PcP	13 47 52.7	+0.8
GRAC	Grapevine Rang	28.56	130		P	P	13 44 40.6	-0.8
	baz=331							
MDND	Maddock	28.57	94		P	P	13 44 41.9	+0.6
MDND					IAmb	IAmb	13 44 43.8	
	comp=Z,44nm,1.0s							
MDND	Maddock	28.57	94		P	P	13 44 38.8	-2.6
	baz=311							
PAGB	Antelope Grade	28.59	135		P	P	13 44 43.0	+1.4
S11A	Rachel	28.65	127		P	P	13 44 44.3	+2.0
S11A					IAmb	IAmb	13 44 48.2	
	comp=Z,33nm,1.1s							
PSUT	Pine Spring	28.69	123		P	P	13 44 44.4	+1.7
CWC	Cottonwood Cre	28.77	131		P	P	13 44 43.5	+0.1
	baz=332							
K22A	Casper	28.78	109		P	P	13 44 44.5	+1.1
K22A	Casper	28.78	109		P	P	13 44 42.2	-1.2
	baz=319,SNR=7.9							
E28A	Huff	28.87	97		P	P	13 44 45.5	+1.5
E28A					IAmb	IAmb	13 44 47.0	
	comp=Z,79nm,1.3s							
RSSD	Black Hills	28.91	104		P	P	13 44 45.9	+1.3
RSSD					IAmb	IAmb	13 44 47.1	
	comp=Z,25nm,0.8s							
RSSD	Black Hills	28.91	104		P	P	13 44 43.8	-0.8
	baz=316							
VES	Vestal, Richgr	28.92	133		P	P	13 44 44.3	-0.2
	baz=333							
RDMU	Red Mountain	28.94	115		P	P	13 44 46.6	+1.7
RDMU					IAmb	IAmb	13 44 48.9	
	comp=Z,29nm,0.9s							
ULM	Lac du Bonnet	28.96	87		P	P	13 44 45.5	+0.7
	comp=Z,14nm,0.8s,baz=302,slow=9.2,SNR=14							
ULM					PcP	PcP	13 47 52.9	-0.2
	comp=Z,6.3nm,0.7s,baz=294,slow=3.4,SNR=4.6							
ULM					LR	LR	13 55 53.1	
	comp=Z,657nm,20.6s,baz=320,slow=36							
	comp=Z,14nm,0.8s							
ULM	Lac du Bonnet	28.96	87	i	P	P	13 44 44.7	0.0
ULM	Lac du Bonnet	28.96	87		P	P	13 44 45.1	+0.3
TPNV	Topopah Spring	29.05	128		P	P	13 44 46.8	+1.0
TPNV					IAmb	IAmb	13 44 55.6	
	comp=Z,43nm,1.4s							
TPNV	Topopah Spring	29.05	128		P	P	13 44 44.1	-1.7
	baz=330,SNR=17							
SMMC	Simmler	29.05	135		P	P	13 44 44.5	-1.2
	baz=334							
PRN	Pahroc Range	29.14	126		P	P	13 44 48.1	+1.5
RWWY	Rawlins	29.18	111		P	P	13 44 47.3	+0.2
FURC	Furnace Creek,	29.22	130		P	P	13 44 46.2	-0.9
	baz=331,SNR=9.8							
TCRU	Three Creeks R	29.24	121		P	P	13 44 47.9	+0.3
TCRU					IAmb	IAmb	13 44 56.8	
	comp=Z,35nm,1.3s							
P17A	Butcher Ranch,	29.29	118		P	P	13 44 48.4	+0.4
ISA	Isabella, Lake	29.30	133		P	P	13 44 49.0	+1.0
ISA	Isabella, Lake	29.30	133		P	P	13 44 46.5	-1.6
	baz=333,SNR=7.0							
MPMC	Manual Prospec	29.33	131		P	P	13 44 48.4	0.0
	baz=332,SNR=17							
P18A	Preston Nutter	29.39	117		P	P	13 44 50.6	+1.6
P18A					IAmb	IAmb	13 44 53.4	
	comp=Z,38nm,1.1s							
SEY	Seymchan	29.43	304		P	P	13 44 49.2	+0.4
	comp=Z,8.0nm,1.1s,baz=78,slow=10,SNR=16							
SEY					LR	LR	13 57 39.5	
	comp=Z,2µm,20.5s,baz=90,slow=39							
	comp=Z,8.0nm,1.1s							
SEY	Seymchan	29.43	304	ce	P	P	13 44 49.0	+0.2
SEY					pmax	pmax		
	comp=Z,20nm,1.3s							
SEY					MLR	MLR		
	comp=Z,2µm,10.0s							
MSU	Marysvale	29.44	121		P	P	13 44 51.1	+1.8
PKM	Mcpherson Peak	29.50	135		P	P	13 44 48.6	-1.3
	baz=334,SNR=10							
GWY	Greenwater Val	29.54	130		P	P	13 44 50.9	+0.7
Q16A	Castle Valley	29.55	119		P	P	13 44 51.2	+0.9
Q16A					IAmb	IAmb	13 45 00.0	
	comp=Z,52nm,1.1s							
ARVC	Arvin	29.65	134		P	P	13 44 50.7	-0.3
	baz=333							
QSM	Queen of Sheba	29.65	130		P	P	13 44 51.8	+0.8
QSM					IAmb	IAmb	13 44 59.3	
	comp=Z,24nm,1.0s							
SRU	San Rafael Swe	29.68	118		P	P	13 44 52.3	+0.9
SRU					IAmb	IAmb	13 44 55.2	
	comp=Z,37nm,1.0s							
CCUT	Cedar City	29.73	123		P	P	13 44 53.8	+1.9
LRMC	Laurel Mtn Rad	29.77	132		P	P	13 44 53.8	+1.6
	baz=332,SNR=5.7							
SZCU	Shurtz Canyon	29.81	123		P	P	13 44 54.5	+1.9
SZCU					IAmb	IAmb	13 44 56.4	
	comp=Z,32nm,1.3s							
MTPU	Mount Pierson	29.82	121		P	P	13 44 54.7	+1.7
SHPR	Sheep Range	29.87	127		P	P	13 44 53.4	+0.3
O20A	White River Ci	29.91	114		P	P	13 44 54.4	+0.9
O20A					IAmb	IAmb	13 44 56.7	
	comp=Z,27nm,0.9s							
O20A	White River Ci	29.91	114		P	P	13 44 52.3	-1.1
	baz=322,SNR=21							
TULEG	Thule	30.12	27		P	P	13 44 53.8	-1.0
OSI	Osito Audit: C	30.14	134		P	P	13 44 55.5	+0.1
	baz=334							
EDW2	Edwards Air Fo	30.18	133		P	P	13 44 55.6	-0.2
	baz=333							
AGMN	Agassiz Nation	30.19	90		P	P	13 44 54.2	-1.4
	baz=310,SNR=12							
LCMT	Little Creek M	30.23	124		P	P	13 44 57.8	+1.5
GSC	Goldstone, Bar	30.26	131		P	P	13 44 58.3	+1.8
GSC	Goldstone, Bar	30.26	131		P	P	13 44 57.3	+0.8
	baz=332,SNR=9.9							
PHWY	Pilot Hill	30.32	109		P	P	13 44 57.9	+0.7
N23A	Red Feather La	30.40	110		P	P	13 44 59.1	+1.2
N23A	Red Feather La	30.40	110		P	P	13 44 58.2	+0.3
	baz=321,SNR=8.8							
TUQ	Turquoise Moun	30.49	129		P	P	13 44 57.9	-0.7
	baz=331							
RRX	Edison Barstow	30.56	131		P	P	13 44 58.2	-0.9
	baz=332							
DECC	Green Verdugo	30.61	134		P	P	13 44 59.0	-0.5
	baz=334							
HEC	Hector,Ludlow	30.86	130		P	P	13 45 01.9	+0.2
	baz=332,SNR=6.5							
BFSC	Mount Baldy Ra	30.87	133		P	P	13 45 02.1	+0.1
	baz=333,SNR=9.9							
PV10	Paradox Valley	30.95	117		P	P	13 45 04.8	+2.0
PV10					IAmb	IAmb	13 45 09.4	
	comp=Z,28nm,1.1s							
PV14	Lion Creek, Pa	30.96	117		P	P	13 45 03.6	+0.8
PV14					IAmb	IAmb	13 45 06.1	
	comp=Z,53nm,1.3s							
PV04	Paradox Valley	31.00	117		P	P	13 45 04.3	+1.2
PV04					IAmb	IAmb	13 45 06.4	
	comp=Z,30nm,1.0s							
PV20	West Nyswonger	31.01	117		P	P	13 45 04.2	+1.0
PV20					IAmb	IAmb	13 45 05.8	
	comp=Z,25nm,1.1s							
PV16	Nyswonger Mesa	31.06	117		P	P	13 45 05.3	+1.6
PV16					IAmb	IAmb	13 45 06.3	
	comp=Z,24nm,1.0s							
PV17	East Wray Mesa	31.07	117		P	P	13 45 05.2	+1.5
PV17					IAmb	IAmb	13 45 06.9	
	comp=Z,28nm,0.9s							
PV07	Paradox Valley	31.08	116		P	P	13 45 05.3	+1.4
PV07					IAmb	IAmb	13 45 06.9	
	comp=Z,31nm,1.1s							
SNCC	San Nicolas Is	31.08	136		P	P	13 45 03.4	-0.3
	baz=335							
PV12	Saucer Basin,	31.11	117		P	P	13 45 05.4	+1.3
PV12					IAmb	IAmb	13 45 07.4	
	comp=Z,41nm,1.3s							
PV18	Skein Mesa, Pa	31.12	117		P	P	13 45 05.4	+1.2
PV18					IAmb	IAmb	13 45 07.3	
	comp=Z,26nm,0.9s							
U15A	North Rim	31.13	123		P	P	13 45 05.8	+1.4
U15A					IAmb	IAmb	13 45 08.5	
	comp=Z,32nm,1.5s							
PV03	Paradox Valley	31.14	117		P	P	13 45 05.4	+1.0
PV03					IAmb	IAmb	13 45 07.5	
	comp=Z,22nm,1.0s							
GMRC	Granite Mounta	31.16	129		P	P	13 45 05.4	+0.9
	baz=331,SNR=12							
SUSD	Miller	31.23	98		P	P	13 45 03.9	-1.0
	baz=315							
PV13	Radium Mtn., P	31.23	117		P	P	13 45 06.3	+1.2
PV13					IAmb	IAmb	13 45 08.4	
	comp=Z,43nm,1.0s							
PV15	Paradox Valley	31.23	116		P	P	13 45 06.4	+1.1
PV15					IAmb	IAmb	13 45 08.2	
	comp=Z,30nm,1.0s							
PET	Petropavlovsk	31.25	284	e	P	P	13 45 03.7	-1.3
PET				e	S	S	13 50 11.6	+0.4
PET				e	SS	SnSn	13 51 49.5	-3.8
PET					MLR	MLR		
	comp=Z,1µm,21.0s							
SMCO	Snowmass	31.26	114		P	P	13 45 06.8	+1.1
CIS	Catalina Islan	31.34	135		P	P	13 45 06.5	+0.5
	baz=334							
PV01	Paradox Valley	31.36	117		P	P	13 45 07.4	+1.0
PV01					IAmb	IAmb	13 45 09.6	
	comp=Z,32nm,0.9s							
ISCO	Idaho Springs	31.41	111		P	P	13 45 08.3	+1.4
ISCO	Idaho Springs	31.41	111		P	P	13 45 06.4	-0.5
	baz=322,SNR=11							
ELS	Elsinore Mount	31.49	133		P	P	13 45 09.1	+1.8
MA2	Magadan	31.58	299		P	P	13 45 08.5	+0.6
	comp=Z,13nm,0.9s,baz=70,slow=9.4,SNR=25							
MA2					PcP	PcP	13 48 00.3	+0.5
	comp=Z,4.8nm,0.8s,baz=115,slow=1.4,SNR=4.1							
MA2					LR	LR	13 59 40.5	
	comp=Z,588nm,18.7s,baz=66,slow=40							
	comp=Z,13nm,0.9s							
MA2	Magadan	31.58	299	de	P	P	13 45 08.6	+0.8
MA2					pmax	pmax		
	comp=Z,33nm,1.3s							
MA2					MLR	MLR		
	comp=Z,759nm,10.0s							
MA2	Magadan	31.58	299		P	P	13 45 08.4	+0.6
MA2					IAmb	IAmb	13 45 09.9	
	comp=Z,27nm,1.1s							
SCI2	San Clemente I	31.67	135		P	P	13 45 08.1	-0.7
	baz=335							
PEA0B	Petropavlovsk-	31.68	284	ce	P	P	13 45 09.0	+0.3
PEA0B	Petropavlovsk-	31.68	284		P	P	13 45 08.5	-0.3
PEA0B					IAmb	IAmb	13 45 22.8	
	comp=Z,35nm,1.0s							
PETK	Petropavlovsk-	31.68	284		P	P	13 45 08.9	+0.1
	comp=Z,11nm,0.7s,baz=74,slow=12,SNR=28							
PETK					LR	LR	13 58 38.7	
	comp=Z,900nm,20.1s,baz=63,slow=38							
	comp=Z,11nm,0.7s							
PETK	Petropavlovsk-	31.68	284		P	P	13 45 08.1	-0.6
BELC	Belle Mtn. Jos	31.72	131		P	P	13 45 08.9	-0.5
	baz=332,SNR=11							
PFO	Pinyon Flats O	31.89	132		LR	LR	13 55 54.5	
	comp=Z,473nm,18.0s,baz=334,slow=32							
PFO	Pinyon Flats O	31.89	132	i	P	P	13 45 09.2	-1.7
PFO					pmax	pmax		
	comp=Z,15nm,1.0s							
PFO	Pinyon Flats O	31.89	132		P	P	13 45 12.5	+1.6
PFO	Pinyon Flats O	31.89	132		P	P	13 45 10.5	-0.4
	baz=333,SNR=8.2							
TPFO	Pinon Flats	31.89	132		P	P	13 45 10.2	-0.7
	baz=333,SNR=10							
IRM	Iron Mountain	31.91	129		P	P	13 45 10.9	-0.1
	baz=332,SNR=10							
MVCO	Mesa Verde	32.15	118		P	P	13 45 14.6	+1.3
MVCO	Mesa Verde	32.15	118		P	P	13 45 13.6	+0.3
	baz=326,SNR=5.3							
PDMCI	Parker Dam,Lak	32.19	128		P	P	13 45 12.5	-0.9
	baz=331							
BC3	Big Chuckawall	32.23	130		P	P	13 45 14.5	+0.6
	baz=332,SNR=9.8							
OGNE	Ogallala	32.26	106		P	P	13 45 11.4	-2.6
	baz=320							
109C	Camp Elliot, M	32.28	133		P	P	13 45 13.8	-0.5
	baz=334							
Q24A	Divide	32.29	112		P	P	13 45 15.9	+1.3
Q24A	Divide	32.29	112		P	P	13 45 14.4	-0.2
	baz=322,SNR=7.3							
WUAZ	Wupatki	32.30	123		P	P	13 45 16.5	+2.0
	baz=328,SNR=30							
S22A	4UR Ranch, Cre	32.48	115		P	P	13 45 18.2	+1.9
S22A	4UR Ranch, Cre	32.48	115		P	P	13 45 17.1	+0.8
	baz=324,SNR=12							
BLYC	Blythe	32.52	129		P	P	13 45 16.6	+0.3
MONP2	Monument Peak	32.54	132		P	P	13 45 16.7	0.0
	baz=333,SNR=14							
K31A	O'Neill	32.64	100		P	P	13 45 17.6	+0.3
K31A					IAmb	IAmb	13 45 19.6	
	comp=Z,47nm,1.1s							
EYMN	Ely	32.65	87		P	P	13 45 17.7	+0.4
EYMN	Ely	32.65	87		P	P	13 45 17.2	-0.1
	baz=311,SNR=48							
SWSC	Sam W. Stewart	32.73	131		P	P	13 45 19.0	+0.9
	baz=333							
IKP	In-Ko-Pah, Jac	32.87	132		P	P	13 45 19.7	+0.2
	baz=333,SNR=8.7							
ECSD	EROS Data Cent	32.91	97		P	P	13 45 19.4	-0.3
ECSD					IAmb	IAmb	13 45 21.5	
	comp=Z,25nm,1.0s							
ECSD	EROS Data Cent	32.91	97		P	P	13 45 19.3	-0.3
	baz=316,SNR=16							
RMX	La Rumorosa	32.93	132		P	P	13 45 21.8	+1.7
YUH	Yuha Desert	32.95	132		P	P	13 45 21.2	+1.2
CBX	Cerro Bola	32.97	133		P	P	13 45 21.9	+1.6
Y14A	Wickenburg	32.97	127		P	P	13 45 21.9	+1.6
F36A	Milaca	33.00	91		P	P	13 45 21.0	+0.6
GLA	Glamis	33.01	130		P	P	13 45 21.7	+1.1
GLA					IAmb	IAmb	13 45 24.5	
	comp=Z,18nm,0.9s							
GLA	Glamis	33.01	130		P	P	13 45 22.4	+1.7
	baz=332,SNR=5.3							
SDCO	Great Sand Dun	33.10	113		P	P	13 45 22.8	+1.2
SDCO	Great Sand Dun	33.10	113		P	P	13 45 22.6	+1.0
	baz=324,SNR=17							
W18A	Petrified Fore	33.34	121		P	P	13 45 25.6	+1.9
W18A					IAmb	IAmb	13 45 27.8	
	comp=Z,57nm,1.4s							
W18A	Petrified Fore	33.34	121		P	P	13 45 25.9	+2.2
	baz=328,SNR=12							
KSCO	Kaye Shedlock’	33.46	109		P	P	13 45 26.4	+1.8
KSCO	Kaye Shedlock’	33.46	109		P	P	13 45 26.3	+1.6
	baz=322,SNR=8.7							
E38A	The Farm, Brul	33.50	88		P	P	13 45 25.2	+0.4
113A	Mohawk Valley,	33.68	129		P	P	13 45 27.1	+0.6
X18A	Snowflake	33.75	122		P	P	13 45 28.9	+1.6
SPMN	Marine on St.	33.81	91		P	P	13 45 27.1	-0.3
	baz=314							
BGNE	Belgrade	33.84	101		P	P	13 45 29.0	+1.2
BGNE	Belgrade	33.84	101		P	P	13 45 28.7	+0.9
	baz=318,SNR=17							
T25A	Trinidad	34.10	113		P	P	13 45 31.8	+1.5
T25A	Trinidad	34.10	113		P	P	13 45 31.3	+1.0
	baz=324,SNR=6.8							
L34A	Svendsen Farm,	34.32	99		P	P	13 45 32.2	+0.3
L34A					IAmb	IAmb	13 45 33.6	
	comp=Z,38nm,0.8s							
TIXI	Tiksi	34.35	326		P	P	13 45 32.1	+0.3
	comp=Z,11nm,0.8s,baz=91,slow=23,SNR=73							
TIXI					LR	LR	14 02 18.7	
	comp=Z,1µm,18.7s,baz=1.0,slow=41							
	comp=Z,11nm,0.8s							
TIXI	Tiksi	34.35	326	ce	P	P	13 45 30.5	-1.3
TIXI					pmax	pmax		
	comp=Z,25nm,1.3s							
TIXI					MLR	MLR		
	comp=Z,2µm,19.0s							
TIXI	Tiksi	34.35	326		P	P	13 45 31.4	-0.4
TIXI					PcP	PcP	13 48 07.4	+0.1
FRB	Frobisher Bay	34.48	50		LR	LR	14 00 53.7	
	comp=Z,1µm,19.0s,baz=292,slow=39							
N33A	J Bar K, Exete	34.69	101		P	P	13 45 36.3	+1.1
D41A	Chassel	34.72	85		P	P	13 45 36.2	+0.9
D41A					IAmb	IAmb	13 45 38.0	
	comp=Z,46nm,1.0s							
214A	Organ Pipe Nat	34.78	128		P	P	13 45 37.1	+1.2
214A	Organ Pipe Nat	34.78	128		P	P	13 45 37.3	+1.3
	baz=332,SNR=13							
ANMO	Albuquerque	34.95	117	ce	P	P	13 45 38.4	+0.7
ANMO					pmax	pmax		
	comp=Z,18nm,1.7s							
ANMO	Albuquerque	34.95	117		P	P	13 45 38.3	+0.7
ANMO	Albuquerque	34.95	117		P	P	13 45 37.3	-0.3
	baz=327							
CBKS	Cedar Bluff	35.02	106		P	P	13 45 38.0	-0.1
	baz=321,SNR=11							
CBKS	Cedar Bluff	35.02	106			Pn	13 45 37.8	+0.5
CBKS	Cedar Bluff	35.02	106		IAmb_Lg		13 46 18.6	
	comp=Z,62nm,0.7s							
COWI	Conover	35.08	87		P	P	13 45 38.3	-0.2
COWI					IAmb	IAmb	13 45 40.4	
	comp=Z,24nm,0.9s							
TUC	Tucson	35.30	125		P	P	13 45 42.2	+1.7
TUC	Tucson	35.30	125		P	P	13 45 40.9	+0.4
	baz=330							
LENM	Lemitar	35.37	119		P	P	13 45 41.6	+0.4
Y22D	IRIS PASSCAL I	35.47	119		P	P	13 45 42.7	+0.6
	baz=327							
N35A	Tabor	35.51	99		P	P	13 45 43.1	+1.0
K38A	Parkersburg	35.65	95		P	P	13 45 44.1	+0.8
K38A					IAmb	IAmb	13 45 47.0	
	comp=Z,28nm,1.0s							
F42A	Maple Grove Fa	35.82	87		P	P	13 45 45.8	+1.0
R32A	Long Quarter,	35.83	105		P	P	13 45 46.1	+1.1
I40A	Norwalk	35.86	91		P	P	13 45 46.0	+0.9
I40A					IAmb	IAmb	13 45 47.5	
	comp=Z,44nm,0.8s							
SCIA	State Center	35.96	96		P	P	13 45 47.0	+1.0
SCIA	State Center	35.96	96		P	P	13 45 46.7	+0.7
	baz=317							
E43A	Lone Tree Farm	35.98	85		P	P	13 45 47.1	+1.0
KSU1	Kansas State U	36.35	102		P	P	13 45 50.7	+1.3
KSU1	Kansas State U	36.35	102		P	P	13 45 49.9	+0.4
	baz=320							
121A	Cookes Peak, D	36.39	121		P	P	13 45 51.2	+1.2
121A	Cookes Peak, D	36.39	121		P	P	13 45 51.9	+1.9
	baz=329,SNR=11							
NOR	Nord	36.47	11	e	P	P	13 45 50.5	+0.5
NOR					IAmb	IAmb	13 45 54.0	
	comp=Z,13nm,1.1s							
I42A	Draeger Farm,	36.73	90		P	P	13 45 53.2	+0.6
I42A					IAmb	IAmb	13 45 55.0	
	comp=Z,33nm,0.9s							
JFWS	Jewell Farm	36.74	92		P	P	13 45 53.1	+0.4
JFWS					IAmb	IAmb	13 45 54.5	
	comp=Z,54nm,0.8s							
JFWS	Jewell Farm	36.74	92		P	P	13 45 53.2	+0.5
	baz=316,SNR=15							
N38A	Joes South For	36.77	97		P	P	13 45 53.4	+0.4
N38A					IAmb	IAmb	13 45 54.6	
	comp=Z,28nm,0.8s							
L40A	Anamosa	36.86	94		P	P	13 45 54.1	+0.4
H43A	Windswept, Lux	36.90	88		P	P	13 45 55.0	+1.0
H43A					IAmb	IAmb	13 45 56.3	
	comp=Z,52nm,0.9s							
AMTX	Amarillo	37.22	112		P	P	13 45 58.7	+1.8
AMTX					IAmb	IAmb	13 46 00.4	
	comp=Z,35nm,0.9s							
AMTX	Amarillo	37.22	112		P	P	13 45 57.1	+0.1
	baz=325							
E46A	Sault Ste Mari	37.36	83		P	P	13 45 58.8	+0.9
E46A					IAmb	IAmb	13 46 00.1	
	comp=Z,39nm,0.8s							
MSTX	Muleshoe	37.45	114		P	P	13 46 00.4	+1.5
MSTX					IAmb	IAmb	13 46 02.2	
	comp=Z,30nm,0.9s							
MSTX	Muleshoe	37.45	114		P	P	13 45 59.7	+0.7
	baz=326,SNR=10							
P38A	Dawn	37.50	99		P	P	13 45 59.6	+0.5
G45A	Suttons Bay	37.58	86		P	P	13 46 00.6	+0.8
G45A					IAmb	IAmb	13 46 02.2	
	comp=Z,59nm,0.9s							
L42A	Oliver, Polo	37.70	92		P	P	13 46 01.4	+0.6
K43A	Burlington	37.87	91		P	P	13 46 03.1	+0.9
K43A					IAmb	IAmb	13 46 04.1	
	comp=Z,50nm,0.8s							
N41A	Harden Midland	38.05	95		P	P	13 46 04.0	+0.2
N41A					IAmb	IAmb	13 46 05.3	
	comp=Z,49nm,0.8s							
MNTX	Cornudas Mount	38.16	119		P	P	13 46 06.1	+1.2
MNTX	Cornudas Mount	38.16	119		P	P	13 46 06.7	+1.8
	baz=328,SNR=16							
GLMI	Grayling	38.26	85		P	P	13 46 07.1	+1.5
GLMI	Grayling	38.26	85		P	P	13 46 04.9	-0.7
	baz=314							
P40A	Paris	38.32	97		P	P	13 46 06.5	+0.4
MIDW	Midway	38.39	230		P	P	13 46 07.5	+0.8
L44A	Lake County Fo	38.47	91		P	P	13 46 07.1	-0.2
	baz=317							
HDIL	Hopedale	38.95	94		P	P	13 46 11.3	0.0
HDIL					IAmb	IAmb	13 46 13.0	
	comp=Z,62nm,0.8s							
HDIL	Hopedale	38.95	94		P	P	13 46 10.9	-0.4
	baz=318,SNR=9.3							
M44A	Midewin, Midew	38.98	92		P	P	13 46 12.2	+0.6
M44A					IAmb	IAmb	13 46 13.5	
	comp=Z,38nm,0.9s							
YAK	Yakutsk	39.04	312		P	P	13 46 12.4	+0.5
	comp=Z,54nm,0.8s,baz=58,slow=2.2,SNR=44							
YAK					LR	LR	14 03 30.0	
	comp=Z,1µm,18.7s,baz=78,slow=38							
	comp=Z,54nm,0.8s							
YAK	Yakutsk	39.04	312	d i	P	P	13 46 12.3	+0.5
YAK				e	*PP	sP	13 46 15.8	+0.5
YAK				e			13 47 39.9	
YAK				e	PPP	PPP	13 48 03.2	
YAK				e			13 48 19.9	
YAK				e	S	S	13 52 08.6	-2.0
YAK				e	SS	SnSn	13 55 00.0	-1.5
YAK				e	SSS	SSS	13 55 21.7	
YAK				e			13 56 16.9	
YAK					pmax	pmax		
	comp=Z,88nm,0.9s							
YAK					pmax	pmax		
	comp=N,18nm,0.9s							
YAK					pmax	pmax		
	comp=E,45nm,1.1s							
YAK					pmax	pmax		
	comp=Z,176nm,3.3s							

YAK				pmax	pmax		
	comp=N,106nm,3.1s						
YAK				pmax	pmax		
	comp=E,113nm,3.0s						
YAK				smax	smax		
	comp=N,66nm,2.5s						
YAK				smax	smax		
	comp=E,100nm,2.4s						
YAK				MLR	MLR		
	comp=Z,1µm,15.0s						
YAK				MLR	MLR		
	comp=N,1µm,16.0s						
YAK				MLR	MLR		
	comp=E,454nm,15.0s						
YAK	**Yakutsk**	**39.04**	**312**	P	**P**	**13 46 12.1**	**+0.2**
SFJD	**Kangerlussuaq**	**39.08**	**38**	P	**P**	**13 46 13.3**	**+1.2**
	comp=E,20nm,0.8s,baz=315,slow=8.5,SNR=13						
SFJD				LR	LR	14 03 03.3	
	comp=E,1µm,18.5s,baz=310,slow=37						
	comp=E,20nm,0.8s						
SFJD	**Kangerlussuaq**	**39.08**	**38**	P	**P**	**13 46 12.9**	**+0.8**
SFJD				IAmb	IAmb	13 46 14.4	
	comp=Z,40nm,1.1s						
SFJD	**Kangerlussuaq**	**39.08**	**38**	*e*P	**P**	**13 46 11.4**	**-0.7**
SFJD				IAmb	IAmb	13 46 14.1	
	comp=Z,24nm,1.1s						
J47A	**Sunmer**	**39.28**	**87**	P	**P**	**13 46 15.0**	**+0.9**
J47A				IAmb	IAmb	13 46 16.5	
	comp=Z,30nm,0.8s						
P43A	**Skaggs, Pawnee**	**39.52**	**95**	P	**P**	**13 46 16.3**	**+0.1**
P43A				IAmb	IAmb	13 46 17.7	
	comp=Z,53nm,0.8s						
P43A				PcP	**PcP**	**13 48 23.9**	**+0.4**
VLDQ	**Val d'Or**	**39.61**	**76**	P	**P**	**13 46 15.5**	**-1.3**
VLDQ				IAmb	IAmb	13 46 16.9	
	comp=Z,49nm,1.1s						
I49A	**Point Hope**	**39.80**	**85**	P	**P**	**13 46 19.3**	**+0.9**
I49A				IAmb	IAmb	13 46 20.9	
	comp=Z,57nm,0.9s						
NKL	**Nikolayevsk**	**39.83**	**295**	*e*P	**P**	**13 46 22.5**	**+4.0**
NKL				*e*S	**S**	**13 52 16.6**	**-5.9**
NKL				pmax	pmax		
	comp=N,1.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,25nm,1.0s						
NKL				smax	smax		
	comp=E,3.0nm,6.4s						
NKL				smax	smax		
	comp=N,10.0nm,3.1s						
NKL				MLR	MLR		
	comp=E,30nm,15.0s						
NKL				MLR	MLR		
	comp=N,4.0nm,17.0s						
NKL				MLR	MLR		
	comp=Z,483nm,13.0s						
CCM	**Cathedral Cave**	**39.85**	**98**	P	**P**	**13 46 18.6**	**-0.3**
CCM				IAmb	IAmb	13 46 28.1	
	comp=Z,19nm,0.6s						
CCM	**Cathedral Cave**	**39.85**	**98**	P	**P**	**13 46 18.6**	**-0.3**
	baz=320						
DAG	**Danmarks Havn**	**39.88**	**17**	*i* P	**P**	**13 46 18.0**	**-0.7**
DAG				IAmb	IAmb	13 46 20.1	
	comp=Z,53nm,1.2s						
MGMO	**Mountain Grove**	**40.03**	**100**	P	**P**	**13 46 19.9**	**-0.5**
MGMO				IAmb	IAmb	13 46 21.5	
	comp=Z,47nm,1.0s						
ABTX	**Abilene, Hawle**	**40.04**	**112**	P	**P**	**13 46 19.8**	**-0.7**
	baz=326						
SFIN	**Lafayette**	**40.21**	**92**	P	**P**	**13 46 22.1**	**+0.3**
SFIN	**Lafayette**	**40.21**	**92**	P	**P**	**13 46 22.2**	**+0.4**
	baz=318,SNR=6.6						
SCHQ	**Schefferville**	**40.25**	**61**	P	**P**	**13 46 22.5**	**+0.5**
	comp=Z,25nm,0.9s,baz=319,slow=8.3,SNR=38						
SCHQ				LR	LR	14 05 06.5	
	comp=Z,266nm,18.6s,baz=310,slow=39						
	comp=Z,25nm,0.9s						
SCHQ	**Schefferville**	**40.25**	**61**	P	**P**	**13 46 22.5**	**+0.5**
FVM	**French Village**	**40.32**	**97**	P	**P**	**13 46 22.9**	**0.0**
FVM				IAmb	IAmb	13 46 24.3	
	comp=Z,51nm,1.1s						
Q44A	**Meyer Farm, Va**	**40.33**	**95**	P	**P**	**13 46 23.1**	**+0.2**
Q44A				IAmb	IAmb	13 46 24.5	
	comp=Z,42nm,0.8s						
U40A	**Yellville**	**40.36**	**101**	P	**P**	**13 46 22.8**	**-0.3**
	baz=322						
TYV	**Tymovskoe**	**40.38**	**291**	*e*P	**P**	**13 46 24.0**	**+0.8**
TYV				*e*S	**S**	**13 52 35.8**	**+4.8**
TYV				pmax	pmax		
	comp=Z,23nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,1.7s						
TYV				smax	smax		
	comp=N,200nm,2.5s						
TYV				smax	smax		
	comp=E,100nm,2.5s						
TYV				smax	smax		
	comp=N,5.0nm,1.7s						
TYV				smax	smax		
	comp=E,11nm,1.7s						
L48A	**N Adams**	**40.41**	**88**	P	**P**	**13 46 24.5**	**+0.9**
L48A				IAmb	IAmb	13 46 25.8	
	comp=Z,62nm,0.9s						
NUUK	**Nuuk**	**40.42**	**42**	*e*P	**P**	**13 46 23.4**	**+0.1**
NUUK				IAmb	IAmb	13 46 25.6	
	comp=Z,67nm,1.1s						
AAM	**Ann Arbor**	**40.55**	**87**	P	**P**	**13 46 24.0**	**-0.6**
	baz=317						
N47A	**Urbana**	**40.55**	**90**	P	**P**	**13 46 24.6**	**0.0**
N47A				IAmb	IAmb	13 46 26.1	
	comp=Z,56nm,0.9s						
Z35A	**Perchaven, San**	**40.60**	**109**	P	**P**	**13 46 26.5**	**+1.4**
P46A	**Rosedale**	**40.72**	**93**	P	**P**	**13 46 26.8**	**+0.7**
P46A				IAmb	IAmb	13 46 27.9	
	comp=Z,49nm,0.9s						
W39A	**Magazine**	**40.81**	**103**	P	**P**	**13 46 26.6**	**-0.2**
	baz=323						
OLIL	**Olney**	**40.93**	**95**	P	**P**	**13 46 28.3**	**+0.5**
OLIL				IAmb	IAmb	13 46 29.6	
	comp=Z,56nm,0.8s						
TX31	**Lajitas Ar. Si**	**40.94**	**119**	P	**P**	**13 46 29.3**	**+1.1**
TX31				IAmb	IAmb	13 46 31.4	
	comp=Z,54nm,1.0s						
TX32	**Lajitas Array**	**40.95**	**119**	P	**P**	**13 46 30.0**	**+1.9**
TXAR	**Lajitas Array**	**40.95**	**119**	P	**P**	**13 46 30.7**	**+2.6**
	comp=Z,10nm,0.8s,baz=333,slow=7.3,SNR=61						
TXAR				LR	LR	14 02 51.1	
	comp=Z,246nm,20.6s,baz=328,slow=35						
	comp=Z,10nm,0.8s						
TXAR	**Lajitas Array**	**40.95**	**119**	P	**P**	**13 46 30.2**	**+2.0**
ICESG	**Greenland Ices**	**40.99**	**32**	*e*P	**P**	**13 46 26.4**	**-2.0**
ICESG				IAmb	IAmb	13 46 30.0	
	comp=Z,32nm,1.1s						
SADO	**Sadowa**	**41.08**	**81**	P	**P**	**13 46 29.4**	**+0.5**
S44A	**Carbondale**	**41.13**	**97**	P	**P**	**13 46 29.8**	**+0.3**
S44A				IAmb	IAmb	13 46 31.1	
	comp=Z,41nm,1.1s						
SIUC	**Southern Illin**	**41.14**	**97**	P	**P**	**13 46 30.0**	**+0.5**
SIUC				IAmb	IAmb	13 46 31.1	
	comp=Z,40nm,0.9s						
KBS	**Kingsbay**	**41.16**	**7**	P	**P**	**13 46 30.6**	**+1.4**
PBMO	**Poplar Bluff**	**41.25**	**99**	P	**P**	**13 46 30.7**	**+0.3**
O48B	**Farmland**	**41.29**	**90**	P	**P**	**13 46 30.1**	**-0.6**
	baz=318,SNR=7.7						
N49A	**Columbus Grove**	**41.29**	**89**	P	**P**	**13 46 31.3**	**+0.5**
N49A				IAmb	IAmb	13 46 32.6	
	comp=Z,45nm,0.9s						
BLO	**Bloomington**	**41.40**	**93**	P	**P**	**13 46 31.9**	**+0.2**
BLO				IAmb	IAmb	13 46 33.3	
	comp=Z,28nm,0.9s						
MIAR	**Mount Ida**	**41.43**	**104**	P	**P**	**13 46 32.9**	**+0.9**
MIAR	**Mount Ida**	**41.43**	**104**	P	**P**	**13 46 32.0**	**0.0**
	baz=323,SNR=10						
LCAR	**Lake Charles**	**41.43**	**100**	P	**P**	**13 46 31.5**	**-0.5**
W41B	**Gary Mavity, V**	**41.59**	**102**	P	**P**	**13 46 32.8**	**-0.5**
	baz=322						
WHTX	**Lake Whitney,**	**41.60**	**110**	P	**P**	**13 46 33.4**	**+0.1**
	baz=326						
KUR	**Kuril'sk**	**41.67**	**281**	P	**P**	**13 46 34.1**	**+0.3**
KUR				S	**S**	**13 52 54.6**	**+4.4**
KUR				MLR	MLR		
	comp=E,1µm,16.0s						
KUR				MLR	MLR		
	comp=Z,619nm,16.0s						
USIN	**University of**	**41.73**	**95**	P	**P**	**13 46 35.2**	**+0.8**
JCT	**Junction City**	**41.74**	**114**	P	**P**	**13 46 35.9**	**+1.2**
JCT				IAmb	IAmb	13 46 40.4	
	comp=Z,32nm,1.0s						
JCT	**Junction City**	**41.74**	**114**	P	**P**	**13 46 35.2**	**+0.5**
	baz=327,SNR=9.2						
P48A	**Milroy**	**41.74**	**91**	P	**P**	**13 46 34.2**	**-0.3**
O49A	**Covington**	**41.76**	**90**	P	**P**	**13 46 34.6**	**0.0**
X40A	**Basin Creek Fa**	**41.84**	**103**	P	**P**	**13 46 35.6**	**+0.2**
X40A	**Basin Creek Fa**	**41.84**	**103**	P	**P**	**13 46 33.7**	**-1.6**
	baz=323						
UALR	**University of**	**41.86**	**102**	P	**P**	**13 46 35.7**	**+0.2**
UALR				IAmb	IAmb	13 46 36.7	
	comp=Z,26nm,0.8s						
T45A	**Paducah**	**41.96**	**97**	P	**P**	**13 46 36.8**	**+0.5**
DELO	**Deloro Mine**	**42.02**	**80**	P	**P**	**13 46 36.9**	**+0.2**
PEBM	**Pemiscott Bayo**	**42.05**	**99**	P	**P**	**13 46 37.7**	**+0.6**
P49A	**Miami Univ. Ec**	**42.05**	**91**	P	**P**	**13 46 36.6**	**-0.4**
P49A	**Miami Univ. Ec**	**42.05**	**91**	P	**P**	**13 46 36.2**	**-0.8**
	baz=319						
GNAR	**Gosnell**	**42.09**	**99**	P	**P**	**13 46 37.9**	**+0.5**
GNAR				IAmb	IAmb	13 46 38.9	
	comp=Z,64nm,1.1s						
SPITS	**Spitsbergen Ar**	**42.13**	**6**	LR	LR	14 03 49.7	
	comp=Z,634nm,19.9s,baz=316,slow=36						
SPB2	**Spitsbergen Ar**	**42.13**	**6**	P	**P**	**13 46 37.3**	**+0.1**
N51A	**Ashland**	**42.22**	**87**	P	**P**	**13 46 39.0**	**+0.6**
N51A				IAmb	IAmb	13 46 40.2	
	comp=Z,44nm,1.1s						
M52A	**Chesterland**	**42.28**	**86**	P	**P**	**13 46 39.8**	**+1.0**
M52A				IAmb	IAmb	13 46 42.2	
	comp=Z,39nm,0.9s						
WLAR	**White Oak Lake**	**42.34**	**104**	P	**P**	**13 46 40.5**	**+1.0**
WLAR				IAmb	IAmb	13 46 41.6	
	comp=Z,54nm,1.0s						
TRQ	**Mont Tremblant**	**42.35**	**76**	P	**P**	**13 46 39.9**	**+0.4**
TRQ				IAmb	IAmb	13 46 41.1	
	comp=Z,89nm,1.5s						
J54A	**Appleton**	**42.40**	**82**	P	**P**	**13 46 41.0**	**+1.2**
ACSO	**Alum Creek Sta**	**42.42**	**89**	P	**P**	**13 46 40.8**	**+0.8**
ACSO				IAmb	IAmb	13 46 41.8	
	comp=Z,39nm,0.9s						
ACSO	**Alum Creek Sta**	**42.42**	**89**	P	**P**	**13 46 38.7**	**-1.3**
	baz=318						
435B	**Jarrell**	**42.54**	**111**	P	**P**	**13 46 39.3**	**-1.8**
	baz=326						
ERPA	**Erie**	**42.55**	**84**	P	**P**	**13 46 41.8**	**+0.7**
ERPA				IAmb	IAmb	13 46 43.2	
	comp=Z,44nm,0.8s						
ERPA	**Erie**	**42.55**	**84**	P	**P**	**13 46 39.5**	**-1.6**
	baz=317						
MEDO	**Medina**	**42.57**	**82**	P	**P**	**13 46 42.0**	**+0.8**
MEDO				IAmb	IAmb	13 46 43.4	
	comp=Z,49nm,0.9s						
M53A	**WI Miller and**	**42.70**	**85**	P	**P**	**13 46 43.1**	**+0.9**
M53A				IAmb	IAmb	13 46 44.4	
	comp=Z,55nm,0.8s						
M53A	**WI Miller and**	**42.70**	**85**	P	**P**	**13 46 41.3**	**-1.0**
	baz=317,SNR=7.6						
PECO	**Prince Edward**	**42.75**	**80**	P	**P**	**13 46 43.5**	**+0.8**
T47A	**Sharon Grove**	**42.77**	**95**	P	**P**	**13 46 43.3**	**+0.4**
J55A	**Hilton**	**42.82**	**81**	P	**P**	**13 46 43.7**	**+0.5**
J55A				IAmb	IAmb	13 46 45.2	
	comp=Z,40nm,1.0s						
CCAR	**Cane Creek**	**42.83**	**103**	P	**P**	**13 46 44.6**	**+1.3**
CCAR				IAmb	IAmb	13 46 45.7	
	comp=Z,49nm,0.8s						
Z41A	**Richland Creek**	**42.84**	**104**	P	**P**	**13 46 42.9**	**-0.6**
	baz=324						
P51A	**Williamsport**	**42.94**	**89**	P	**P**	**13 46 44.4**	**+0.2**
P51A				IAmb	IAmb	13 46 45.6	
	comp=Z,49nm,1.1s						
YSS	**Yuzh-Sakhalins**	**43.00**	**287**	κ *i*P	**P**	**13 46 45.4**	**+0.8**
YSS				*e*S	**S**	**13 53 12.7**	**+3.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				pmax	pmax		
	comp=Z,400nm,5.0s						
YSS				smax	smax		
	comp=N,300nm,5.5s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
YSS	**Yuzh-Sakhalins**	**43.00**	**287**	P	**P**	**13 46 44.9**	**+0.3**
YSS				IAmb	IAmb	13 46 46.9	
	comp=Z,67nm,1.4s						
WVNY	**West Valley, N**	**43.04**	**83**	P	**P**	**13 46 45.7**	**+0.6**
WVNY				IAmb	IAmb	13 46 47.2	
	comp=Z,54nm,1.0s						
WVT	**Waverly**	**43.07**	**97**	P	**P**	**13 46 45.8**	**+0.5**
WVT	**Waverly**	**43.07**	**97**	P	**P**	**13 46 45.4**	**+0.1**
	baz=321						
N53A	**Lisbon**	**43.08**	**86**	P	**P**	**13 46 46.0**	**+0.6**
N53A				IAmb	IAmb	13 46 47.2	
	comp=Z,42nm,0.9s						
O52A	**Adamsville**	**43.09**	**88**	P	**P**	**13 46 46.0**	**+0.6**
O52A				IAmb	IAmb	13 46 47.0	
	comp=Z,46nm,1.1s						
Q51A	**Peebles**	**43.13**	**90**	P	**P**	**13 46 46.0**	**+0.1**
Q51A				IAmb	IAmb	13 46 47.5	
	comp=Z,45nm,0.9s						
W45A	**Hickory Valley**	**43.14**	**99**	P	**P**	**13 46 46.7**	**+0.8**
R50A	**Paris**	**43.20**	**92**	P	**P**	**13 46 46.3**	**0.0**
R50A				IAmb	IAmb	13 46 47.7	
	comp=Z,37nm,0.8s						
J56A	**Wolcott**	**43.29**	**81**	P	**P**	**13 46 47.0**	**-0.1**
P52A	**Corning**	**43.30**	**88**	P	**P**	**13 46 46.8**	**-0.3**
P52A	**Corning**	**43.30**	**88**	P	**P**	**13 46 46.7**	**-0.5**
	baz=319						
O53A	**New Philadelph**	**43.31**	**87**	P	**P**	**13 46 47.1**	**-0.1**
O53A	**New Philadelph**	**43.31**	**87**	P	**P**	**13 46 46.1**	**-1.1**
	baz=318						
MNTQ	**Montreal, Queb**	**43.32**	**76**	P	**P**	**13 46 47.2**	**0.0**
LONY	**Lake Ozonia**	**43.47**	**78**	P	**P**	**13 46 48.4**	**0.0**
LONY	**Lake Ozonia**	**43.47**	**78**	P	**P**	**13 46 48.5**	**0.0**
	baz=316,SNR=5.7						
LMQ	**La Malbaie**	**43.49**	**71**	P	**P**	**13 46 48.8**	**+0.2**
LMQ				IAmb	IAmb	13 46 50.3	
	comp=Z,39nm,1.1s						
OXF	**Oxford**	**43.54**	**100**	P	**P**	**13 46 49.9**	**+0.8**
OXF	**Oxford**	**43.54**	**100**	P	**P**	**13 46 49.5**	**+0.4**
	baz=322,SNR=10						
J57A	**Williamstown**	**43.63**	**80**	P	**P**	**13 46 50.3**	**+0.5**
M55A	**Ridgway**	**43.65**	**84**	P	**P**	**13 46 51.0**	**+1.0**
M55A				IAmb	IAmb	13 46 52.1	
	comp=Z,50nm,0.9s						
Q52A	**Bidwell**	**43.73**	**89**	P	**P**	**13 46 50.7**	**+0.1**
Q52A				IAmb	IAmb	13 46 51.9	
	comp=Z,40nm,0.8s						
833A	**Chaparral WMA,**	**43.75**	**115**	P	**P**	**13 46 52.1**	**+1.2**
833A	**Chaparral WMA,**	**43.75**	**115**	P	**P**	**13 46 51.2**	**+0.3**
	baz=328,SNR=5.7						
L56A	**Greenwood**	**43.77**	**82**	P	**P**	**13 46 51.8**	**+0.8**
O54A	**Avella**	**43.78**	**86**	P	**P**	**13 46 51.3**	**+0.2**
O54A				IAmb	IAmb	13 46 52.7	
	comp=Z,32nm,0.9s						
P53A	**Whipple**	**43.79**	**88**	P	**P**	**13 46 51.3**	**+0.3**
P53A				IAmb	IAmb	13 46 52.5	
	comp=Z,27nm,0.9s						
FRNY	**Flat Rock**	**43.81**	**77**	P	**P**	**13 46 51.1**	**-0.1**
U49A	**Red Boiling Sp**	**43.81**	**95**	P	**P**	**13 46 51.8**	**+0.5**
PLAL	**Pickwick Lake**	**43.84**	**98**	P	**P**	**13 46 52.0**	**+0.5**
CLTN	**Cedars of Leba**	**43.86**	**95**	P	**P**	**13 46 52.4**	**+0.7**
CLTN				IAmb	IAmb	13 46 54.0	
	comp=Z,32nm,1.1s						
K57A	**Scipio Center**	**43.86**	**81**	P	**P**	**13 46 52.0**	**+0.3**
K57A				IAmb	IAmb	13 46 53.6	
	comp=Z,49nm,1.2s						
V48A	**Smith Brothers**	**43.88**	**96**	P	**P**	**13 46 51.6**	**-0.3**
T50A	**Nancy**	**43.90**	**93**	P	**P**	**13 46 52.3**	**+0.3**
T50A				IAmb	IAmb	13 46 54.0	
	comp=Z,29nm,0.8s						
143A	**Socs Landing,**	**43.98**	**103**	P	**P**	**13 46 54.0**	**+1.3**
Y45A	**Yeager Farm, C**	**43.98**	**100**	P	**P**	**13 46 53.6**	**+0.9**
Y45A				IAmb	IAmb	13 46 54.8	
	comp=Z,39nm,1.0s						
J58A	**Remsen**	**44.02**	**79**	P	**P**	**13 46 53.6**	**+0.6**
S51A	**Beattyville**	**44.06**	**92**	P	**P**	**13 46 53.7**	**+0.4**
NCB	**Newcomb**	**44.11**	**78**	P	**P**	**13 46 54.0**	**+0.4**
R53A	**Hurricane**	**44.37**	**90**	P	**P**	**13 46 56.1**	**+0.3**
R53A				IAmb	IAmb	13 46 57.4	
	comp=Z,22nm,0.8s						
D62A	**Allapoint, All**	**44.44**	**71**	P	**P**	**13 46 56.8**	**+0.6**
MCWV	**Mont Chateau**	**44.45**	**86**	P	**P**	**13 46 56.8**	**+0.4**
MCWV				IAmb	IAmb	13 46 58.0	
	comp=Z,24nm,1.0s						
MCWV	**Mont Chateau**	**44.45**	**86**	P	**P**	**13 46 55.0**	**-1.4**
	baz=319						
Q54A	**Coxs Mills**	**44.45**	**88**	P	**P**	**13 46 56.4**	**0.0**
Q54A				IAmb	IAmb	13 46 57.9	
	comp=Z,34nm,1.1s						
BINY	**Binghamton**	**44.52**	**81**	P	**P**	**13 46 57.5**	**+0.6**
BINY	**Binghamton**	**44.52**	**81**	P	**P**	**13 46 55.8**	**-1.2**
	baz=317,SNR=12						
M57A	**Sunshine Farm,**	**44.58**	**83**	P	**P**	**13 46 58.1**	**+0.7**
M57A				IAmb	IAmb	13 46 59.3	
	comp=Z,38nm,1.1s						
SSPA	**Standing Stone**	**44.71**	**84**	P	**P**	**13 46 59.1**	**+0.6**
SSPA	**Standing Stone**	**44.71**	**84**	P	**P**	**13 46 57.4**	**-1.1**
	baz=318						
SWET	**Sewanee**	**44.74**	**96**	P	**P**	**13 46 59.1**	**+0.2**
X48A	**Hartselle**	**44.78**	**98**	P	**P**	**13 46 59.4**	**+0.4**
X48A				IAmb	IAmb	13 47 00.8	
	comp=Z,21nm,0.8s						
VBMS	**Vicksburg**	**44.81**	**103**	P	**P**	**13 46 58.9**	**-0.4**
	baz=324						
TZTN	**Tazewell**	**44.92**	**93**	P	**P**	**13 47 00.7**	**+0.5**
TZTN				IAmb	IAmb	13 47 02.5	
	comp=Z,42nm,0.9s						
TZTN	**Tazewell**	**44.92**	**93**	P	**P**	**13 46 59.2**	**-1.0**
	baz=321,SNR=18						
L59A	**Walton**	**45.00**	**80**	P	**P**	**13 47 01.7**	**+0.9**
L59A				IAmb	IAmb	13 47 03.6	
	comp=Z,25nm,0.9s						
G62A	**West of Eustis**	**45.04**	**74**	P	**P**	**13 47 01.5**	**+0.4**
G62A				IAmb	IAmb	13 47 02.9	
	comp=Z,31nm,0.9s						
LBNH	**Lisbon**	**45.06**	**76**	P	**P**	**13 47 02.1**	**+0.9**
LBNH				IAmb	IAmb	13 47 03.4	
	comp=Z,15nm,0.8s						
LBNH	**Lisbon**	**45.06**	**76**	P	**P**	**13 47 00.4**	**-0.8**
	baz=316						
W50A	**Signal Mountai**	**45.07**	**95**	P	**P**	**13 47 01.8**	**+0.3**
V51A	**Loudon**	**45.09**	**94**	P	**P**	**13 47 02.0**	**+0.5**
ASAJ	**Asahikawa**	**45.10**	**284**	LR	LR	14 08 03.6	
	comp=Z,528nm,18.4s,baz=47,slow=39						
KSPA	**Keystone Colle**	**45.10**	**81**	P	**P**	**13 47 02.0**	**+0.5**
KSPA				IAmb	IAmb	13 47 03.7	
	comp=Z,49nm,1.3s						
S54A	**Dingess, Beckl**	**45.10**	**89**	P	**P**	**13 47 01.8**	**+0.1**
S54A				IAmb	IAmb	13 47 03.3	
	comp=Z,18nm,0.8s						
N58A	**Sunbury**	**45.15**	**83**	P	**P**	**13 47 02.6**	**+0.6**
N58A				IAmb	IAmb	13 47 03.9	
	comp=Z,31nm,1.0s						
H62A	**Milan**	**45.20**	**75**	P	**P**	**13 47 03.0**	**+0.7**
H62A				IAmb	IAmb	13 47 04.1	
	comp=Z,21nm,0.9s						
146A	**Union**	**45.21**	**101**	P	**P**	**13 47 03.4**	**+0.9**
Q56A	**Snyder Ridge,**	**45.24**	**87**	P	**P**	**13 47 02.8**	**+0.1**
Z47A	**Carrollton**	**45.26**	**100**	P	**P**	**13 47 03.3**	**+0.5**
CPCT	**Cooper Cave**	**45.28**	**94**	P	**P**	**13 47 03.6**	**+0.5**
R55A	**Marlinton**	**45.34**	**88**	P	**P**	**13 47 04.2**	**+0.6**
R55A				IAmb	IAmb	13 47 21.4	
	comp=Z,21nm,1.2s						
F63A	**Nahmakanta, Br**	**45.39**	**72**	P	**P**	**13 47 04.4**	**+0.6**
F63A				IAmb	IAmb	13 47 05.4	
	comp=Z,29nm,0.9s						
ZEA	**Zeya**	**45.41**	**304**	*e*P	**P**	**13 47 04.1**	**+0.2**
ZEA				*e*S	**S**	**13 53 47.6**	**+2.9**
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				pmax	pmax		
	comp=E,100nm,9.5s						
ZEA				pmax	pmax		
	comp=Z,200nm,7.0s						
ZEA				smax	smax		
	comp=N,200nm,7.5s						
ZEA				MLR	MLR		
	comp=E,600nm,15.0s						
ZEA				MLR	MLR		
	comp=N,800nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
FPAL	**Fort Paine**	**45.44**	**96**	P	**P**	**13 47 04.9**	**+0.6**
V52A	**Sevierville**	**45.44**	**93**	P	**P**	**13 47 05.2**	**+0.8**
V52A				IAmb	IAmb	13 47 05.9	
	comp=Z,20nm,1.0s						
TKL	**Tuckaleechee C**	**45.50**	**94**	LR	LR	14 06 04.5	
	comp=Z,896nm,18.2s,baz=332,slow=36						
TKL	**Tuckaleechee C**	**45.50**	**94**	P	**P**	**13 47 05.0**	**+0.2**
P57A	**Homestead Farm**	**45.51**	**85**	P	**P**	**13 47 05.5**	**+0.6**
P57A				IAmb	IAmb	13 47 06.7	
	comp=Z,39nm,0.9s						
Y49A	**Blount Mountai**	**45.57**	**97**	P	**P**	**13 47 05.6**	**+0.2**
Y49A				IAmb	IAmb	13 47 07.2	
	comp=Z,22nm,0.8s						
PAGS	**Pennsylvania G**	**45.61**	**83**	P	**P**	**13 47 06.4**	**+0.8**
PKME	**Peaks-Kenny Pk**	**45.62**	**73**	P	**P**	**13 47 06.2**	**+0.6**
PKME				IAmb	IAmb	13 47 07.3	
	comp=Z,36nm,0.8s						
PKME	**Peaks-Kenny Pk**	**45.62**	**73**	P	**P**	**13 47 05.4**	**-0.2**
	baz=316,SNR=10						
F64A	**Sherman**	**45.64**	**72**	P	**P**	**13 47 05.9**	**+0.1**
BATG	**Bathurst New B**	**45.73**	**69**	P	**P**	**13 47 06.7**	**+0.2**
BATG				IAmb	IAmb	13 47 08.4	
	comp=Z,38nm,1.0s						
X51A	**Calhoun**	**45.80**	**95**	P	**P**	**13 47 08.0**	**+0.9**
X51A				IAmb	IAmb	13 47 08.7	
	comp=Z,19nm,0.9s						
U54A	**Nelsons Funny**	**45.83**	**91**	P	**P**	**13 47 08.3**	**+0.9**
U54A				IAmb	IAmb	13 47 09.8	
	comp=Z,25nm,0.9s						
I63A	**Otisfield**	**45.87**	**75**	P	**P**	**13 47 08.7**	**+1.1**
I63A				IAmb	IAmb	13 47 09.6	
	comp=Z,16nm,0.8s						
LRAL	**Lakeview Retre**	**45.93**	**99**	P	**P**	**13 47 08.1**	**-0.1**
LRAL	**Lakeview Retre**	**45.93**	**99**	P	**P**	**13 47 08.1**	**-0.1**
	baz=323,SNR=5.9						
MVL	**Millersville**	**45.97**	**83**	P	**P**	**13 47 09.1**	**+0.7**
MVL				IAmb	IAmb	13 47 09.8	
	comp=Z,20nm,1.0s						
V53A	**Saluda**	**45.98**	**93**	P	**P**	**13 47 09.3**	**+0.7**
L61B	**Northampton**	**45.99**	**78**	P	**P**	**13 47 07.5**	**-1.1**
	baz=318						
LUPA	**Lehigh Univers**	**46.01**	**82**	P	**P**	**13 47 09.4**	**+0.6**
ODNJ	**Ogdensburg**	**46.04**	**81**	P	**P**	**13 47 09.5**	**+0.5**
ODNJ				IAmb	IAmb	13 47 10.2	
	comp=Z,13nm,0.7s						
K62A	**Royalston**	**46.06**	**78**	P	**P**	**13 47 10.0**	**+0.9**
K62A				IAmb	IAmb	13 47 10.7	
	comp=Z,29nm,1.0s						
KSCT	**Kent School, K**	**46.13**	**79**	P	**P**	**13 47 10.8**	**+1.1**
KSCT				IAmb	IAmb	13 47 11.8	
	comp=Z,26nm,1.1s						
NRIK	**Noril'sk**	**46.14**	**337**	P	**P**	**13 47 10.2**	**+0.8**
	comp=Z,41nm,0.8s,baz=48,slow=6.4,SNR=48						
NRIK				LR	LR	14 09 23.5	
	comp=Z,857nm,21.0s,baz=52,slow=40						
	comp=Z,41nm,0.8s						
NRIK	**Noril'sk**	**46.14**	**337**	*de*P	**P**	**13 47 10.0**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,48nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,691nm,16.0s						
NRIK	**Noril'sk**	**46.14**	**337**	P	**P**	**13 47 09.7**	**+0.2**
JMIC	**Jan Mayen**	**46.26**	**18**	LR	LR	14 08 01.8	
	comp=Z,466nm,18.4s,baz=62,slow=38						
ERM	**Erimo**	**46.36**	**281**	*ce*P	**P**	**13 47 09.7**	**-1.8**
ERM				pmax	pmax		
	comp=Z,28nm,0.8s						
ERM	**Erimo**	**46.36**	**281**	P	**P**	**13 47 12.5**	**+1.1**
WUPA	**West Chester U**	**46.39**	**83**	P	**P**	**13 47 12.6**	**+0.9**
BG3	**Lake Jocassee**	**46.45**	**93**	P	**P**	**13 47 13.3**	**+1.1**
PAL	**Palisades**	**46.45**	**80**	P	**P**	**13 47 13.2**	**+1.0**
PAL				IAmb	IAmb	13 47 14.1	
	comp=Z,20nm,0.9s						
PAL	**Palisades**	**46.45**	**80**	P	**P**	**13 47 10.2**	**-2.0**
	baz=318						
G65A	**Princeton**	**46.51**	**72**	P	**P**	**13 47 13.0**	**+0.4**
G65A				IAmb	IAmb	13 47 14.2	
	comp=Z,27nm,1.1s						
HRV	**Adam Dziewonsk**	**46.51**	**77**	P	**P**	**13 47 10.7**	**-2.0**
	baz=318						
KLR	**Kul'dur**	**46.61**	**296**	LR	LR	14 07 59.2	
	comp=Z,832nm,18.3s,baz=50,slow=38						
KLR	**Kul'dur**	**46.61**	**296**	*de*P	**P**	**13 47 13.3**	**-0.1**
KLR				pmax	pmax		
	comp=Z,21nm,0.8s						
KLR				MLR	MLR		
	comp=Z,679nm,15.0s						
V55A	**Taylorsville**	**46.65**	**91**	P	**P**	**13 47 14.3**	**+0.4**

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V55A                             IAmb    IAmb    13 47 16.0
      comp=Z,19nm,0.8s
U56A  King              46.69  90  P       P       13 47 14.8 +0.6
U56A                             IAmb    IAmb    13 47 16.1
      comp=Z,27nm,0.8s
R58B  Mineral           46.73  86  P       P       13 47 15.2 +0.8
R58B                             IAmb    IAmb    13 47 16.6
      comp=Z,15nm,0.9s
Y52A  Lilburn           46.76  95  P       P       13 47 15.7 +0.9
Y52A                             IAmb    IAmb    13 47 17.2
      comp=Z,30nm,0.9s
T57A  Hurt              46.77  88  P       P       13 47 15.1 +0.4
T57A                             IAmb    IAmb    13 47 15.7
      comp=Z,19nm,1.2s
GGN   Saint George      46.91  71  P       P       13 47 16.3 +0.5
GGN                              IAmb    IAmb    13 47 17.4
      comp=Z,29nm,0.9s
JSRW  J. Sargeant Re    46.94  87  P       P       13 47 16.6 +0.6
M63A  Gales Ferry       47.09  79  P       P       13 47 18.2 +1.0
ZAIG  Zacatecas         47.13 122  P       P       13 47 18.6 +0.5
ZAIG                             IAmb    IAmb    13 47 21.3
      comp=Z,12nm,0.9s
250A  Grady             47.14  99  P       P       13 47 18.7 +1.0
KMSC  Kings Mountain    47.14  92  P       P       13 47 16.3 -1.4
      baz=322,SNR=7.1
PAULI Pauline           47.15  92  P       P       13 47 18.5 +0.7
LMN   Caledonia Moun    47.36  69  P       P       13 47 19.7 +0.5
152A  Waverly Hall      47.37  97  P       P       13 47 20.0 +0.5
HODGE Hodges            47.38  93  P       P       13 47 20.1 +0.5
GOGA  Godfrey           47.42  95  P       P       13 47 20.6 +0.7
GOGA                             IAmb    IAmb    13 47 21.9
      comp=Z,25nm,1.1s
GOGA  Godfrey           47.42  95  P       P       13 47 19.0 -0.8
      baz=323,SNR=5.5
T59A  Double "B" Far    47.66  87  P       P       13 47 21.9 +0.2
T59A                             IAmb    IAmb    13 47 23.5
      comp=Z,19nm,1.1s
BOD   Bodaibo           47.72 315 eP       P       13 47 21.6 -0.3
BOD                              pmax    pmax
      comp=Z,46nm,1.6s
W57A  Gilead            47.82  91  P       P       13 47 23.5 +0.5
W57A                             IAmb    IAmb    13 47 24.6
      comp=Z,19nm,0.9s
JSC   Jenkinsville      47.85  92  P       P       13 47 23.9 +0.7
U59A  Littleton         48.01  88  P       P       13 47 25.4 +1.0
U59A                             IAmb    IAmb    13 47 26.3
      comp=Z,18nm,1.0s
352A  Blakely           48.22  98  P       P       13 47 26.8 +0.7
DRLN  Deer Lake         48.26  61  P       P       13 47 26.9 +0.7
451A  Vernon            48.50  99  P       P       13 47 29.4 +1.1
CNNC  Cliffs of the     48.83  89  P       P       13 47 30.1 -0.7
      baz=322
HAL   Halifax           48.83  70  P       P       13 47 31.2 +0.5
HAL                              IAmb    IAmb    13 47 32.2
      comp=Z,24nm,0.9s
TIGA  Tifton            48.93  97  P       P       13 47 30.3 -1.3
      baz=324
BORG  Borgarnes         49.00  28  LR      LR      14 09 54.4
      comp=Z,807nm,18.4s,baz=323,slow=38
255A  Hazlehurst        49.10  95  P       P       13 47 33.1 +0.2
GBN   Guysborough       49.25  67  P       P       13 47 34.8 +1.0
NHSC  New Hope          49.33  92  P       P       13 47 33.1 -1.5
      baz=323
USRK  Ussuriysk Ar.     50.19 292  P       P       13 47 40.8 -0.3
      comp=Z,3.9nm,0.8s,baz=43,slow=9.5,SNR=4.7
USRK                             LR      LR      14 09 19.5
      comp=Z,1µm,20.9s,baz=34,slow=37
      comp=Z,3.9nm,0.8s
USRK  Ussuriysk Ar.     50.19 292  P       P       13 47 40.4 -0.7
JMM   Marumori          50.68 280  P       P       13 47 45.2 +0.4
JMM                              IAmb    IAmb    13 47 46.4
      comp=Z,19nm,0.8s
KEV   Kevo              50.95   4  P       P       13 47 45.9 -0.4
KEV                              IAmb    IAmb    13 47 47.1
      comp=Z,31nm,1.0s
ARCES ARCESS Array B    51.11   4  P       P       13 47 47.0 -0.7
      comp=Z,11nm,0.8s,baz=357,slow=7.5,SNR=37
ARCES                            PcP     PcP     13 49 03.3 +0.2
      comp=Z,11nm,0.8s,baz=355,slow=4.1,SNR=12
ARCES                            LR      LR      14 09 47.4
      comp=Z,241nm,19.7s,baz=2.5,slow=36
      comp=Z,11nm,0.8s
ARCES ARCESS Array B    51.11   4  P       P       13 47 47.0 -0.7
BNX   BinXian           51.17 296 ⇑P       P       13 47 49.0 +0.6
BNX                              pP      sP      13 47 52.3 +0.3
BNX                              sP      pP      13 47 54.9 +3.9
BNX                              PP      PP      13 49 48.6 +3.8
BNX                              S       S       13 55 06.3  0.0
BNX                              sS      sS      13 55 12.2 +1.8
BNX                              pmax    pmax
      comp=Z,40nm,1.1s
BNX                              pmax    pmax
      comp=Z,350nm,5.6s
BNX                              LR      LR
      comp=Z,4µm,18.2s
BNX                              LR      LR
      comp=Z,4µm,15.5s
BNX                              LR      LR
      comp=Z,2µm,14.7s
JSD   Sado              51.82 282  P       P       13 47 53.7 +0.3
JSD                              IAmb    IAmb    13 47 59.2
      comp=Z,18nm,0.9s
HIA   Hailar            51.88 304  P       P       13 47 53.9 +0.2
HIA                              IAmb    IAmb    13 47 55.4
      comp=Z,40nm,0.9s
JYT   Yasato            52.26 279  P       P       13 47 56.2 -0.4
JYT                              IAmb    IAmb    13 47 57.7
      comp=Z,28nm,1.1s
DWPF  Disney Wildern    52.72  97  P       P       13 47 58.5 -1.6
      baz=325
LVZ   Lovozero          52.95   0ceP       P       13 48 01.0 -0.4
LVZ                              pmax    pmax
      comp=Z,59nm,1.7s
LVZ   Lovozero          52.95   0  P       P       13 48 01.5 +0.1
LVZ                              IAmb    IAmb    13 48 03.0
      comp=Z,31nm,0.9s
MJB9  Matsu-Tunnel      53.01 281  P       P       13 48 02.1 -0.1
MAJO  Matsushiro        53.01 281  P       P       13 48 02.0 -0.2
MJAR  Matsushiro Arr    53.01 281  P       P       13 48 02.1 -0.2
      comp=Z,5.3nm,0.8s,baz=52,slow=6.2,SNR=20
MJAR                             LR      LR      14 11 34.5
      comp=Z,677nm,20.9s,baz=31,slow=37
      comp=Z,5.3nm,0.8s
MJAR  Matsushiro Arr    53.01 281  P       P       13 48 02.2  0.0
CN2   Changchun         53.55 296 eP       P       13 48 05.6 -0.5
CN2                             eS       S       13 55 35.7 -3.2
CN2                              pmax    pmax
      comp=Z,30nm,0.8s
CN2                              pmax    pmax
      comp=Z,300nm,6.0s
CN2                              LR      LR
      comp=Z,700nm,12.0s
CN2                              LR      LR
      comp=Z,900nm,12.0s
CN2                              LR      LR
      comp=Z,900nm,12.0s
JHJ   Hachijo jima 2    54.91 277  LR      LR      14 13 16.7
      comp=Z,103nm,19.1s,baz=50,slow=38
CMIG  Matias Romero     55.52 118  LR      LR      14 13 20.5
      comp=Z,107nm,18.8s,baz=334,slow=37
IRK   Irkutsk           55.57 316 eP       P       13 48 19.8 -0.8
IRK                              pmax    pmax
      comp=Z,57nm,2.5s
SNY   Shenyang          55.95 296 ⇓P       P       13 48 23.9 +0.4
SNY                              S       S       13 56 17.3 +6.1
SNY                              pmax    pmax
      comp=Z,28nm,0.9s
SNY                              pmax    pmax
      comp=Z,290nm,4.1s
SNY                              LR      LR
      comp=Z,1µm,10.3s
SNY                              LR      LR
      comp=Z,1µm,11.8s
SNY                              LR      LR
      comp=Z,1µm,12.0s
JHS   Saijyo            56.77 284  P       P       13 48 29.8 +0.3
MOY   Mondy             57.19 318 eP       P       13 48 33.7 +1.3
MOY                              pmax    pmax
      comp=Z,44nm,2.3s
KSRS  Korea Array       57.36 289  P       P       13 48 34.6 +1.1
      comp=Z,7.4nm,0.8s,baz=38,slow=6.5,SNR=17
KSRS                             LR      LR      14 13 44.4
      comp=Z,258nm,20.5s,baz=45,slow=37
      comp=Z,7.4nm,0.8s
KSAR  Wonju Array Be    57.39 289  P       P       13 48 33.6 -0.1
ZAK   Zakamensk         57.45 315 eP       P       13 48 34.0 -0.2
ZAK                              pmax    pmax
      comp=Z,10.0nm,1.3s
CCIG  Comitan           57.48 115  P       P       13 48 35.8 +1.0
CCIG                             IAmb    IAmb    13 48 40.7
      comp=Z,13nm,0.8s
XLT   XiLinHaoTe        57.65 302⇓iP       P       13 48 36.4 +0.7
XLT                              S       S       13 56 32.5 -1.3
XLT                              sS      sS      13 56 43.0 +5.0
XLT                              pmax    pmax
      comp=Z,25nm,0.8s
XLT                              pmax    pmax
      comp=Z,300nm,4.5s
XLT                              LR      LR
      comp=Z,3µm,16.0s
XLT                              LR      LR
      comp=Z,650nm,17.7s
NC204 NORSAR Array S    58.11  14  P       P       13 48 38.7 +0.1
ULN   Ulaanbaatar       58.13 311ceP       P       13 48 39.9 +0.9
ULN                              pmax    pmax
      comp=Z,34nm,0.8s
ULN   Ulaanbaatar       58.13 311  P       P       13 48 39.2 +0.2
ULN                              IAmb    IAmb    13 48 41.2
      comp=Z,30nm,0.8s
NC303 NORSAR Array S    58.23  13  P       P       13 48 39.7 +0.3
NB2   NORSAR Subarra    58.39  13  P       P       13 48 40.5 -0.1
      comp=Z,2.4nm,0.7s,baz=347,slow=6.9
NOA   NORSAR Array B    58.39  13  P       P       13 48 40.5 -0.1
      comp=Z,10.0nm,1.1s,baz=349,slow=6.7,SNR=12
NOA                              LR      LR      14 15 38.6
      comp=Z,270nm,19.7s,baz=355,slow=38
NOA                              PKPPKP  P'P'df  14 18 24.2 -3.5
      comp=Z,1.4nm,0.9s,baz=157,slow=2.4,SNR=3.8
      comp=Z,10.0nm,1.1s
SONM  Songino Array     58.40 312  P       P       13 48 42.3 +1.4
      comp=Z,33nm,0.9s,baz=40,slow=7.4,SNR=159
SONM                             LR      LR      14 15 17.2
      comp=Z,2µm,19.5s,baz=30,slow=38
SONM                             PKP2bc          14 18 33.2
      comp=Z,1.1nm,1.0s,baz=223,slow=2.7,SNR=4.1
      comp=Z,33nm,0.9s
SONM  Songino Array     58.40 312  P       P       13 48 41.8 +0.8
TJN   Taejon            58.49 289ceP       P       13 48 40.1 -1.4
PRGR  Permogore         58.97 354 eP       P       13 48 44.0 -0.5
FIA1  FINESS Array S    59.22   5  P       P       13 48 45.6 -0.5
FINES FINESS Array B    59.22   5  P       P       13 48 46.2  0.0
      comp=Z,27nm,0.7s,baz=5.4,slow=8.0,SNR=104
FINES                            PKPPKP  P'P'df  14 18 23.6 -2.7
      comp=Z,3.4nm,0.9s,baz=101,slow=3.9,SNR=8.8
      comp=Z,27nm,0.7s
FINES FINESS Array B    59.22   5  P       P       13 48 45.6 -0.6
RAF   Rauma             59.39   8 eP       P       13 48 47.2 -0.2
VALR  Valaam            59.47   2 i P      P       13 48 48.2 +0.3
VALR                             pmax    pmax
      comp=Z,45nm,0.9s
KONO  Kongsberg         59.54  15ceP       P       13 48 49.4 +0.9
KONO                             pmax    pmax
      comp=Z,90nm,2.5s
KLMR  Klimovskoe        59.98 358 eP       P       13 48 49.9 -1.5
KLMR                             pmax    pmax
      comp=Z,30nm,0.8s
KLMR  Klimovskoe        59.98 358 eP       P       13 48 50.0 -1.5
KLMR                             AMP             13 48 52.3
      comp=Z,30nm,0.8s
AAL   Aland             60.10   9 eP       P       13 48 52.4 +0.1
ZAA0  Zalesovo Array    60.16 329  P       P       13 48 52.3 -0.5
ZALV  Zalesovo Beam     60.16 329  P       P       13 48 52.8  0.0
      comp=Z,34nm,0.8s,baz=30,slow=7.0,SNR=125
ZALV                             LR      LR      14 17 22.7
      comp=Z,817nm,18.4s,baz=358,slow=39
      comp=Z,34nm,0.8s
ZALV  Zalesovo Beam     60.16 329  P       P       13 48 52.4 -0.4
UPP   Uppsala           60.22  10 eP       P       13 48 53.2 +0.1
ESQI  Esquipulas        60.28 113  P       P       13 48 55.6 +1.4
MEF   Metsahovi         60.36   6 eP       P       13 48 54.5 +0.4
MTO3  Montecristo       60.41 114  P       P       13 48 56.1 +0.8
MTO3                             IAmb    IAmb    13 48 57.7
      comp=Z,9.9nm,0.8s
BJI   Beijing           60.73 300  P       P       13 48 57.5 +0.6
BJI                              pmax    pmax
      comp=Z,13nm,1.4s
BJI                              LR      LR
      comp=Z,950nm,14.3s
BJI                              LR      LR
      comp=Z,720nm,14.6s
BJI                              LR      LR
      comp=Z,830nm,12.8s
BJT   Baijiatuau        60.76 300  P       P       13 48 57.0 -0.1
BJT                              IAmb    IAmb    13 48 58.1
      comp=Z,14nm,1.1s
PUL   Pulkovo           61.04   3 i P      P       13 48 59.3 +0.6
PUL                              pmax    pmax
      comp=Z,41nm,0.4s
VIKU  Vikbolandet       61.47  11 eP       P       13 49 02.0 +0.4
EKA   Eskdalemuir Ar    61.51  24  LR      LR      14 16 23.9
      comp=Z,616nm,18.5s,baz=344,slow=37
KIRV  Kirov             61.77 352  LR      LR      14 18 43.5
      comp=Z,264nm,18.9s,baz=19,slow=39
KIRV  Kirov             61.77 352ceP       P       13 49 04.1 +0.5
MTSE  Matsula           61.82   7 eP       P       13 49 04.3 +0.3
SVE   Sverdlovsk        62.32 345ceP       P       13 49 07.9 +0.5
SVE                             eS       S       13 57 38.1 +4.8
SVE                              pmax    pmax
      comp=Z,44nm,1.0s
SLIT  Slitere, Latvi    62.80   8 eP       P       13 49 10.9 +0.4
MTDJ  Mount Denham      62.90 100  P       P       13 49 12.7 +0.8
ARU   Arti              62.98 346  LR      LR      14 17 26.3
      comp=Z,626nm,21.6s,baz=28,slow=37
ARU   Arti              62.98 346d iP      P       13 49 11.7 -0.1
ARU                                              13 49 44.7
ARU                              S       S       13 57 43.9 +2.3
ARU                                              13 59 01.8
ARU                              pmax    pmax
      comp=Z,34nm,0.7s
ARU                              MLR     MLR
      comp=Z,650nm,21.0s
ARU   Arti              62.98 346  P       P       13 49 11.8  0.0
DEL   Delary            63.17  13 eP       P       13 49 13.5 +0.5
MATN  Matagalpa         63.31 111  P       P       13 49 15.3 +0.7
HNS   HongShan          63.56 299 ⇓P       P       13 49 16.9 +1.0
HNS                              PP      PP      13 51 30.7 -4.5
HNS                              S       S       13 57 51.4 +2.2
HNS                              pmax    pmax
      comp=Z,52nm,1.0s
HNS                              LR      LR
      comp=Z,600nm,15.1s
HNS                              LR      LR
      comp=Z,1µm,17.5s
HNS                              LR      LR
      comp=Z,990nm,14.5s
BOAB  BOACO BROADBA063.85 111  P       P       13 49 18.2 +0.1
BRVK  Borovoye          64.34 337deP       P       13 49 20.9  0.0
BRVK                             pmax    pmax
      comp=Z,53nm,1.3s
BRVK  Borovoye          64.34 337  P       P       13 49 20.9  0.0
SEM   Semipalatinsk     64.56 330 eP       P       13 49 21.7 -0.9
SEM                              pmax    pmax
      comp=Z,16nm,0.8s
SEM   Semipalatinsk     64.56 330 eP       P       13 49 21.7 -0.9
      comp=Z,16nm,0.8s,baz=330
BSD   Bornholm Skovb    64.62  13 eP       P       13 49 23.4 +0.8
BSD   Bornholm Skovb    64.62  13 eP       P       13 49 21.8 -0.8
BSD                              IAmb    IAmb    13 49 23.8
      comp=Z,35nm,1.0s
KURK  Kurchatov         64.69 331ceP       P       13 49 23.4 +0.3
KURK                             pmax    pmax
      comp=Z,41nm,0.7s
KURK  Kurchatov         64.69 331  P       P       13 49 22.9 -0.2
KURBB Kurchatov Arra    64.80 331  PKP2bc          14 18 15.3
      comp=Z,0.7nm,0.7s,baz=212,slow=2.6,SNR=5.4
KURBB                            LR      LR      14 23 13.4
      comp=Z,452nm,18.1s,baz=5.6,slow=41
KURBB Kurchatov Arra    64.80 331  P       P       13 49 23.3 -0.5
RGN   Rugen             64.99  14  P       P       13 49 25.4 +0.4
PABE  Paberze           65.03   7  P       P       13 49 25.6 +0.4
PABE  Paberze           65.03   7 eP       P       13 49 26.3 +1.0
ISAL  Salakas           65.09   6 eP       P       13 49 26.6 +0.9
MOS   Moscow            65.14 359 eP       P       13 49 24.9 -1.0
MOS                              pmax    pmax
      comp=Z,76nm,1.0s
SDDR  Presa de Saban    65.43  94  P       P       13 49 29.3 +0.8
SDDR  Presa de Saban    65.43  94 eP       P       13 49 27.9 -0.5
OBN   Obninsk           65.77 359  LR      LR      14 20 03.1
      comp=Z,67nm,19.7s,baz=1.0,slow=38
OBN   Obninsk           65.77 359d iP      P       13 49 30.2 +0.2
OBN                             e                13 49 58.3
OBN                             e                13 51 51.2
OBN                             i S      S       13 58 05.3  -11
OBN                             eSS      SS      14 02 33.0 +3.8
OBN                              pmax    pmax
      comp=Z,54nm,0.8s
OBN                              MLR     MLR
      comp=Z,329nm,15.0s
OBN   Obninsk           65.77 359  P       P       13 49 30.3 +0.2
NACGM Naroch            65.78   5 eP       P       13 49 30.9 +0.8
ZSN   Zaisan            66.00 326d iP      P       13 49 32.2 +0.5
ZSN                              pmax    pmax
      comp=Z,22nm,1.0s
ZSN   Zaisan            66.00 326⇓iP       P       13 49 32.3 +0.5
      comp=Z,22nm,1.0s,baz=326
NJ2   Nanjing           66.08 293⇓iP       P       13 49 32.6 +0.2
NJ2                              pmax    pmax
      comp=Z,65nm,0.6s
NJ2                              LR      LR
      comp=Z,570nm,16.1s
NJ2                              LR      LR
      comp=Z,1µm,15.2s
NJ2                              LR      LR
      comp=Z,2µm,17.8s
MNK   Minsk             66.24   5 i P      P       13 49 34.4 +1.4
MNK                             i                13 50 03.4
MNK                             i                13 51 56.3
MNK                             i S      S       13 58 26.2 +4.5
MNK                             i SS     SS      14 02 36.3 -0.1
MNK                              pmax    pmax
      comp=Z,122nm,0.8s
MNK                              pmax    pmax
      comp=N,95nm,1.0s
MNK                              pmax    pmax
      comp=E,6.0nm,0.8s
MNK                              MLR     MLR
      comp=E,43nm,23.0s
MNK                              MLR     MLR
      comp=Z,233nm,21.0s
MNK                              MLR     MLR
      comp=N,157nm,18.0s
MNK   Minsk             66.24   5 i P      P       13 49 34.5 +1.4
      comp=E,6.0nm,0.8s
MNK                             i P      P       13 49 34.5 +1.4
      comp=N,95nm,1.0s
MNK                             i P      P       13 49 34.5 +1.4
      comp=Z,122nm,0.8s,baz=356
MNK                             i PcP    PcP     13 50 03.5 +0.4
MNK                             i PP     PP      13 51 56.4 -1.8
MNK                             i PPP    PPP     13 53 30.4
MNK                             i S      S       13 58 26.2 +4.5
MNK                             i SS     SS      14 02 36.4 -0.1
MNK                             i SSS    SSS     14 05 44.1
MNK                             i LQ     LQ      14 13 05.3
MNK                             i LR     LR      14 18 44.2
MNK                             i LRM    MLR     14 21 21.6
      comp=E,43nm,23.2s
MNK                             i LRM    MLR     14 21 33.2
      comp=Z,233nm,20.6s
MNK                             i LRM    MLR     14 21 41.0
      comp=N,157nm,18.0s
BANI  BANI              66.40  94  P       P       13 49 35.9 +1.1
SUW   Suwalki           66.46   8 eP       P       13 49 34.5 -0.1
SUW   Suwalki           66.46   8  P       P       13 49 34.4 -0.1
SUW   Suwalki           66.46   8 eP       P       13 49 34.8 +0.3
DR12  Loma Pena Alta    66.56  93  P       P       13 49 36.2 +0.5
GKP   Gorka Klasztor    66.69  12 eP       P       13 49 37.1 +1.1
GKP   Gorka Klasztor    66.69  12 eP       P       13 49 36.9 +1.0
LYN   LuoYang           66.93 299⇓iP       P       13 49 38.6 +0.8
LYN                              pP      sP      13 49 43.1 +1.6
LYN                              S       S       13 58 31.7 +1.0
LYN                              pmax    pmax
      comp=N,50nm,1.1s
LYN                              pmax    pmax
      comp=N,310nm,4.4s
LYN                              LR      LR
      comp=N,1µm,14.4s
LYN                              LR      LR
      comp=N,700nm,17.6s
LYN                              LR      LR
      comp=N,880nm,17.6s
RUE   Ruedersdorf       67.07  14 eP       P       13 49 39.7 +1.3
MK31  Makanchi Array    67.33 327d iP      P       13 49 39.6 -0.6
MK31  Makanchi Array    67.33 327  P       P       13 49 39.4 -0.8
MK31                             IAmb    IAmb    13 49 40.8
      comp=Z,14nm,0.9s
MKAR  Makanchi Array    67.33 327  P       P       13 49 39.6 -0.6
      comp=Z,18nm,1.0s,baz=45,slow=6.7,SNR=112
MKAR                             PKP2bc          14 18 09.4
      comp=Z,1.2nm,0.9s,baz=193,slow=2.1,SNR=8.3
MKAR                             LR      LR      14 21 25.0
      comp=Z,864nm,21.6s,baz=18,slow=38
      comp=Z,18nm,1.0s
MKAR  Makanchi Array    67.33 327 i P      P       13 49 39.5 -0.7
MKAR                             pmax    pmax
      comp=Z,19nm,1.0s
MKAR  Makanchi Array    67.33 327  P       P       13 49 39.3 -0.9
MAKZ  Makanchi          67.40 327  P       P       13 49 39.8 -0.9
SNF   Seneffe           67.53  21 dx       x       13 49 41.3
BSTI  Sart Tilman       67.69  20 dx       x       13 49 43.5
MEM   Membach           67.74  20 dx       x       13 49 43.7
DRK0  Durika            67.78 110  P       P       13 49 43.6  0.0
BTNL  Ternell           67.78  20 dx       x       13 49 44.0
BGES  Gesves            67.80  20 dx       x       13 49 43.8
BCLA  Clavier           67.80  20 dx       x       13 49 44.0
BHOU  Houvegnez         67.99  20 dx       x       13 49 45.6
RCHB  Rochefort         68.04  20 dx       x       13 49 45.0
BELG  Belogornoye       68.06 352d iP      P       13 49 44.7 +0.1
BELG                             pmax    pmax
      comp=Z,30nm,0.9s
GTA   Gaotai            68.07 311 ⇓P       P       13 49 45.5 +0.4
GTA                              pP      sP      13 49 56.2 +7.4
GTA                              S       S       13 58 46.3 +1.7
GTA                              SS      SS      14 03 06.0 +0.1
GTA                              pmax    pmax
      comp=Z,31nm,1.4s
GTA                              pmax    pmax
      comp=Z,210nm,7.6s
GTA                              LR      LR
      comp=Z,990nm,15.9s
GTA                              LR      LR
      comp=Z,1µm,16.7s
GTA                              LR      LR
      comp=Z,1µm,16.3s
CLL   Collm             68.12  15⇓iP       P       13 49 45.5 +0.4
CLL                              pmax    pmax
      comp=Z,43nm,0.9s
CLL   Collm             68.12  15  P       P       13 49 45.2 +0.1
CLL   Collm             68.12  15⇓iP       P       13 49 45.5 +0.4
      comp=Z,43nm,0.9s
LPSR  Galich'ya Gora    68.26 358 eP       P       13 49 45.7 -0.2
LPSR                             pmax    pmax
      comp=Z,40nm,0.9s
AOPR  Arecibo Observ    68.28  91  P       P       13 49 46.2 -0.3
WMQ   Urumqi            68.42 322 eP       P       13 49 48.7 +1.5
WMQ                              pP      sP      13 49 52.8 +2.2
WMQ                              sP      pP      13 49 57.7 +7.8
WMQ                              PP      PP      13 52 16.9 -0.7
WMQ                              S       S       13 58 43.9 -4.7
WMQ                              ScS     SKiKP   13 59 39.2 -1.4
WMQ                              pmax    pmax
      comp=Z,22nm,0.9s
WMQ                              LR      LR
      comp=Z,1µm,16.3s
WMQ                              LR      LR
      comp=Z,1µm,20.3s
WMQ                              LR      LR
      comp=Z,580nm,17.5s
GUMO  Guam              68.46 260  LR      LR      14 19 16.8
      comp=Z,170nm,19.7s,baz=66,slow=36
GCPR  Guaynabo City     68.65  90  P       P       13 49 48.7 -0.1
BRG   Berggiesshubel    68.67  14 i P      P       13 49 49.4 +0.9
BRG                              Amp             13 49 50.5
      comp=Z,49nm,1.0s
BRG                             ex       x       13 49 54.7
BRG                              Amp             13 49 56.7
      comp=Z,21nm,1.0s
BRG                              Amp             14 24 26.0
      comp=N,0.2nm,16.7s
BRG                              Amp             14 24 34.0
      comp=E,0.3nm,17.7s
BRG                              Amp             14 24 39.0
      comp=Z,0.4nm,14.3s
BRG   Berggiesshubel    68.67  14 i P      P       13 49 49.4 +0.9
BRG                             e                13 49 54.7
BRG                              pmax    pmax
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      comp=Z,49nm,1.0s
BRG                               pmax   pmax
      comp=Z,21nm,1.0s
BRG                               MLR    MLR
      comp=N,230nm,16.7s
BRG                               MLR    MLR
      comp=E,310nm,17.7s
BRG                               MLR    MLR
      comp=Z,380nm,14.3s
WLF   Walferdange      68.68  20 dx     x      13 49 50.2
SJG   San Juan         68.78  90 LR     LR     14 21 47.7
      comp=Z,211nm,19.0s,baz=46,slow=38
AKTO  Aktyubinsk       68.92 345 LR     LR     14 22 12.9
      comp=Z,229nm,19.7s,baz=20,slow=38
AKTO  Aktyubinsk       68.92 345 P      P      13 49 49.6 -0.5
PDPR  Patillas Dam,    68.92  90 P      P      13 49 50.1 -0.4
PDPR                              IAmb   IAmb   13 49 52.1
      comp=Z,19nm,1.1s
XAN   Xi'an            68.92 301 P      P      13 49 50.2 -0.3
XAN                               pP     sP     13 49 54.4 +0.3
XAN                               pmax   pmax
      comp=Z,20nm,1.1s
XAN                               pmax   pmax
      comp=Z,190nm,6.0s
XAN                               LR     LR
      comp=Z,1µm,18.2s
XAN                               LR     LR
      comp=Z,3µm,17.5s
XAN                               LR     LR
      comp=Z,1µm,15.1s
KSP   Ksiaz            68.98  13 eP     P      13 49 51.5 +1.0
PVCC  Panska Ves       69.08  14 eP     P      13 49 52.5 +1.4
PVCC                              MLR    MLR
      comp=Z,400nm,15.8s
PVCC  Panska Ves       69.08  14 eP     P      13 49 52.5 +1.4
PVCC                              AMS    AMS    14 24 40.0
      comp=Z,400nm,15.8s
NKC   Novy Kostel      69.10  15 eP     P      13 49 52.5 +1.2
NKC                               MLR    MLR
      comp=Z,500nm,15.9s
NKC   Novy Kostel      69.10  15 eP     P      13 49 52.5 +1.2
NKC                               AMS    AMS    14 27 00.0
      comp=Z,500nm,15.9s
VORR  Voronezh         69.18 357 eP     P      13 49 55.2 +3.5
VORR                              pmax   pmax
      comp=Z,60nm,0.4s
CHVC  Chvalec          69.20  13 eP     P      13 49 53.0 +1.1
CHVC                              AMS    AMS    14 27 20.0
      comp=Z,400nm,15.0s
OSTC  Ostas            69.25  13 eP     P      13 49 53.4 +1.2
OSTC                              AMS    AMS    14 27 20.0
      comp=Z,300nm,14.2s
UPC   Upice            69.28  13 eP     P      13 49 53.5 +1.2
UPC                               eS     S      13 59 06.0 +7.7
UPC                               AMS    AMS    14 25 20.0
      comp=Z,300nm,15.8s
LZH   Lanzhou          69.33 306 ⇓P     P      13 49 53.9 +0.8
LZH                               pP     sP     13 50 01.8 +5.1
LZH                               sP     pP     13 50 05.9  +10
LZH                               pmax   pmax
      comp=Z,56nm,1.3s
LZH                               pmax   pmax
      comp=Z,240nm,7.2s
LZH                               LR     LR
      comp=Z,2µm,16.1s
LZH                               LR     LR
      comp=Z,1µm,16.2s
LZH                               LR     LR
      comp=Z,2µm,18.3s
GRA1  Grafenberg Arr   69.46  16 P      P      13 49 54.2 +0.7
GRFO  Grafenberg       69.46  16 P      P      13 49 54.2 +0.7
GRFO                              IAmb   IAmb   13 49 59.8
      comp=Z,21nm,0.8s
DPC   Dobruska-Polom   69.47  13 eP     P      13 49 55.0 +1.4
DPC                               eS     S      13 59 02.0 +1.3
DPC                               MLR    MLR
      comp=Z,300nm,14.1s
DPC   Dobruska-Polom   69.47  13 eP     P      13 49 55.0 +1.4
DPC                               eS     S      13 59 02.0 +1.3
DPC                               AMS    AMS    14 25 30.0
      comp=Z,300nm,14.1s
BCIP  Isla Barro Col   69.50 107 P      P      13 49 53.9 -0.2
BCIP  Isla Barro Col   69.50 107 eP     P      13 49 52.6 -1.6
CLF   Chambon-Foret    69.53  23 P      P      13 49 54.8 +0.9
VRH   Novokhopyorsk    69.57 356 eP     P      13 49 53.2 -0.9
VRH                               pmax   pmax
      comp=Z,30nm,1.0s
PRU   Pruhonice        69.61  14 eP     P      13 49 55.5 +1.1
PRU                               eS     S      13 59 10.4 +8.1
PRU                               MLR    MLR
      comp=Z,400nm,15.9s
PRU   Pruhonice        69.61  14 eP     P      13 49 55.5 +1.1
PRU                               eS     S      13 59 10.4 +8.1
PRU                               AMS    AMS    14 26 00.0
      comp=Z,400nm,15.9s
VSR   Storozhevoye     69.64 357 eP     P      13 49 53.8 -0.7
VSR                               pmax   pmax
      comp=Z,30nm,0.8s
KRLC  Kraliky          69.79  13 eP     P      13 49 56.5 +0.9
KRLC                              MLR    MLR
      comp=Z,300nm,12.0s
KRLC  Kraliky          69.79  13 eP     P      13 49 56.5 +0.9
KRLC                              eS     S      13 59 20.3  +16
KRLC                              AMS    AMS    14 26 40.0
      comp=Z,300nm,12.0s
AB31  Akbulak array    69.79 343 i P    P      13 49 55.4 -0.1
ABKAR Akbulak array    69.79 343 P      P      13 49 55.7 +0.2
ABKAR Akbulak array    69.79 343 P      P      13 49 55.7 +0.2
ABKAR                             IAmb   IAmb   13 49 57.1
      comp=Z,40nm,0.9s
UPA   Univ. de Panam   69.81 107 eP     P      13 49 55.0 -1.0
VORD  Divnogorie       69.89 357 eP     P      13 49 55.7 -0.3
VORD                              pmax   pmax
      comp=Z,30nm,0.9s
OJC   Ojcow            69.96  11 eP     P      13 49 57.4 +0.9
OJC   Ojcow            69.96  11 P      P      13 49 56.7 +0.2
OJC                               IAmb   IAmb   13 49 57.5
      comp=Z,9.7nm,0.8s
TDK   Taldyqorghan     70.03 329 eP     P      13 49 57.2 +0.1
TDK                               eS     S      13 59 07.9 +0.5
TDK                               pmax   pmax
      comp=Z,25nm,0.9s
TDK   Taldyqorghan     70.03 329 eP     P      13 49 57.3 +0.1
      comp=Z,25nm,0.9s,baz=329
TDK                               eS     S      13 59 08.0 +0.5
      baz=329
AKASG Malin Array Be   70.09   4 P      P      13 49 57.1 -0.2
      comp=Z,18nm,0.8s,baz=359,slow=6.2,SNR=56
AKASG                             LR     LR     14 22 43.5
      comp=Z,175nm,18.0s,baz=348,slow=38
      comp=Z,18nm,0.8s
AKASG Malin Array Be   70.09   4 P      P      13 49 56.8 -0.5
AKBB  Malin Array Si   70.09   4deP     P      13 49 57.0 -0.3
AKBB  Malin Array Si   70.09   4 P      P      13 49 56.8 -0.5
MORC  Moravsky Berou   70.17  12 ⇓P     P      13 49 58.5 +0.6
MORC  Moravsky Berou   70.17  12 P      P      13 49 58.0 +0.1
MORC                              IAmb   IAmb   13 49 59.6
      comp=Z,18nm,0.9s
MORC  Moravsky Berou   70.17  12 eP     P      13 49 58.4 +0.5
OKC   Ostrava-Krasne   70.17  12 eP     P      13 49 58.2 +0.4
OKC                               MLR    MLR
      comp=Z,400nm,15.9s
OKC   Ostrava-Krasne   70.17  12 eP     P      13 49 58.2 +0.4
OKC                               AMS    AMS    14 25 10.0
      comp=Z,400nm,15.9s
ECH   Echery           70.25  20 P      P      13 49 58.8 +0.4
ECH                               IAmb   IAmb   13 50 00.4
      comp=Z,27nm,1.0s
KHC   Kasperske Hory   70.33  15 i P    P      13 50 00.0 +1.1
KHC                               pmax   pmax
      comp=Z,67nm,1.0s
KHC   Kasperske Hory   70.33  15 P      P      13 49 59.5 +0.6
KHC                               IAmb   IAmb   13 50 01.3
      comp=Z,26nm,0.9s
KHC   Kasperske Hory   70.33  15 eP     P      13 50 00.3 +1.4
KHC                               eS     S      13 59 21.9  +11
KHC                               AMS    AMS    14 23 40.0
      comp=Z,400nm,16.0s
BFO   Black Forest     70.33  19 P      P      13 49 59.2 +0.3
BFO                               IAmb   IAmb   13 50 00.8
      comp=Z,24nm,1.0s
TREC  Trest            70.41  14 eP     P      13 49 59.2 -0.1
TREC                              MLR    MLR
      comp=Z,500nm,16.5s
TREC  Trest            70.41  14 eP     P      13 49 59.2 -0.1
TREC                              AMS    AMS    14 26 40.0
      comp=Z,500nm,16.5s
VRAC  Vranov           70.53  13 ⇓P     P      13 50 01.0 +1.0
VRAC  Vranov           70.53  13 LR     LR     14 22 30.5
      comp=Z,158nm,21.7s,baz=12,slow=37
VRAC  Vranov           70.53  13 eP     P      13 50 00.8 +0.8
SMRC  Santa Marta, M   70.56 101 eP     P      13 50 00.4 -0.3
GEC2  GERESS Array S   70.63  15 P      P      13 50 01.2 +0.5
GEC2                              IAmb   IAmb   13 50 02.1
      comp=Z,11nm,0.8s
GERES GERESS Array B   70.63  15 P      P      13 50 01.6 +0.9
      comp=Z,6.6nm,0.7s,baz=18,slow=4.6,SNR=47
GERES                             LR     LR     14 24 21.9
      comp=Z,236nm,18.0s,baz=26,slow=39
      comp=Z,6.6nm,0.7s
GERES GERESS Array B   70.63  15 P      P      13 50 01.0 +0.2
LVV   L'vov            70.70   8 eP     P      13 50 01.1 +0.1
CKRC  Cesky Krumlov    70.73  15 eP     P      13 50 02.2 +0.9
CKRC                              AMS    AMS    14 24 10.0
      comp=Z,400nm,16.7s
KRUC  Moravsky         70.75  13 eP     P      13 50 01.8 +0.4
LANS  Liptovska Anna   70.98  11 eP     P      13 50 04.6 +1.7
LANS                              pmax   pmax
      comp=Z,14nm,0.8s
LANS  Liptovska Anna   70.98  11 eP     P      13 50 04.6 +1.7
JAVC  Velka Javorina   71.09  12 eP     P      13 50 05.1 +1.6
BTLS  Baital           71.09 332d iP    P      13 50 03.7 +0.2
BTLS                              eS     S      13 59 21.2 +1.5
BTLS                              pmax   pmax
      comp=Z,12nm,0.8s
BTLS  Baital           71.09 332⇓iP     P      13 50 03.8 +0.2
      comp=Z,12nm,0.8s,baz=332
BTLS                              eS     S      13 59 21.3 +1.5
      baz=332
SJCC  San Jacinto, C   71.17 103 eP     P      13 50 05.6 +1.1
URIC  Uribia, Colomb   71.23  99 P      P      13 50 05.0 +0.3
URIC                              IAmb   IAmb   13 50 06.5
      comp=Z,24nm,0.9s
URIC  Uribia, Colomb   71.23  99 eP     P      13 50 05.3 +0.6
PDGK  Podgornoye       71.29 328 P      P      13 50 04.8 -0.2
KPKS  Kokpek           71.39 328d iP    P      13 50 05.8 +0.3
KPKS                              eS     S      13 59 24.5 +1.1
KPKS                              pmax   pmax
      comp=Z,10.0nm,0.8s
KPKS  Kokpek           71.39 328⇓iP     P      13 50 05.8 +0.3
      comp=Z,10nm,0.8s,baz=328
KPKS                              eS     S      13 59 24.5 +1.1
      baz=328
SMOL  Smolenice        71.40  12 eP     P      13 50 06.9 +1.5
SMOL                              pmax   pmax
      comp=Z,16nm,1.5s
SMOL  Smolenice        71.40  12 eP     P      13 50 06.8 +1.4
CRVS  Cervenica-Dubn   71.41  10 eP     P      13 50 06.5 +1.1
CRVS                              pmax   pmax
      comp=Z,54nm,1.5s
CRVS  Cervenica-Dubn   71.41  10 eP     P      13 50 06.5 +1.1
KOLS  Kolonicke sedl   71.45   9 eP     P      13 50 06.8 +1.2
KOLS                              pmax   pmax
      comp=Z,14nm,1.0s
KOLS  Kolonicke sedl   71.45   9 eP     P      13 50 06.8 +1.2
CHKK  Chushkaly        71.47 329 eP     P      13 50 05.7 -0.2
CHKK  Chushkaly        71.47 329 eP     P      13 50 05.8 -0.2
      baz=330
MODS  Modra-Piesok     71.52  13 eP     P      13 50 07.5 +1.4
MODS                              pmax   pmax
      comp=Z,77nm,1.2s
MODS  Modra-Piesok     71.52  13 eP     P      13 50 07.5 +1.4
RETA  Reutte           71.54  17 i P    P      13 50 07.0 +0.7
      comp=Z,8.8nm,0.8s
VYHS  Vyhne            71.57  11 eP     P      13 50 07.4 +1.0
VYHS                              pmax   pmax
      comp=Z,11nm,0.9s
VYHS  Vyhne            71.57  11 eP     P      13 50 07.4 +1.0
UZB   Uzynbulak        71.59 328 eP     P      13 50 07.0 +0.2
UZB                               eS     S      13 59 26.7 +0.8
UZB   Uzynbulak        71.59 328 eP     P      13 50 07.1 +0.2
      baz=328
UZB                               eS     S      13 59 26.7 +0.8
      baz=328
DAVA  Damuels          71.60  18 i P    P      13 50 07.8 +1.0
      comp=Z,26nm,1.5s,SNR=5.8
KUU   Kurty            71.60 330 eP     P      13 50 05.9 -0.8
KUU                               eS     S      13 59 26.2 +0.5
KUU                               pmax   pmax
      comp=Z,22nm,0.8s
KUU   Kurty            71.60 330 eP     P      13 50 06.0 -0.8
      comp=Z,22nm,0.8s,baz=330
KUU                               eS     S      13 59 26.2 +0.5
      baz=330
ZST   Bratislava       71.68  13 eP     P      13 50 08.4 +1.4
ZST                               pmax   pmax
      comp=Z,90nm,1.4s
ZST   Bratislava       71.68  13 eP     P      13 50 08.4 +1.4
MOTA  Moosalm          71.73  17 i P    P      13 50 08.3 +0.7
      comp=Z,27nm,1.1s,SNR=8.3
ZHN   Zhinishke        71.73 328 eP     P      13 50 07.7 +0.1
ZHN   Zhinishke        71.73 328 eP     P      13 50 07.7 +0.1
      baz=328
KECS  Kecovo           71.74  10 eP     P      13 50 08.7 +1.3
KECS  Kecovo           71.74  10 eP     P      13 50 08.7 +1.3
UZH   Uzhgorod         71.75   9⇑iP     P      13 50 07.5 +0.1
UZH                               i             13 50 10.0
UZH                               e             13 50 16.8
BIOA  Bad Ischl, Aus   71.75  15 i P    P      13 50 08.2 +0.7
      comp=Z,22nm,0.8s,SNR=7.5
CONA  Conrad Observa   71.80  14 i P    P      13 50 08.8 +1.0
      comp=Z,24nm,1.0s,SNR=15
WATA  Walderalm        71.81  17 i P    P      13 50 09.0 +0.9
      comp=Z,70nm,1.1s,SNR=14
SATY  Saty             71.84 328 eP     P      13 50 08.5 +0.3
SATY  Saty             71.84 328 eP     P      13 50 08.6 +0.3
      baz=328
SQTA  Sankt Quirin     71.87  17 i P    P      13 50 09.5 +1.2
      comp=Z,54nm,0.9s,SNR=17
ENH   Enshi            71.88 299 P      P      13 50 08.2 -0.4
WTTA  Wattenberg       71.89  17 i P    P      13 50 09.6 +1.1
      comp=Z,58nm,0.9s,SNR=18
FETA  Feichten         71.99  17 i P    P      13 50 10.3 +1.2
      comp=Z,37nm,0.9s,SNR=12
SENIN Lac Senin/Sane   72.07  20 P      P      13 50 10.4 +0.7
RONA  Rosalia, Austr   72.08  13 i P    P      13 50 10.6 +1.1
      comp=Z,10nm,0.8s,SNR=5.1
DAVOX Davos/Dischmat   72.09  18 LR     LR     14 26 52.2
      comp=Z,200nm,18.5s,baz=266,slow=40
AAA   Alma-Ata         72.09 329 eP     P      13 50 09.9 +0.2
AAA                               pmax   pmax
      comp=Z,31nm,0.9s
AAA   Alma-Ata         72.09 329 eP     P      13 50 09.9 +0.2
      comp=Z,31nm,0.9s,baz=329
MDOK  Medeo            72.10 329 i P    P      13 50 09.9  0.0
MDOK                              eS     S      13 59 32.7 +1.0
MDOK  Medeo            72.10 329 i P    P      13 50 09.9  0.0
      baz=329
MDOK                              eS     S      13 59 32.8 +1.0
      baz=329
PSZ   Piszkesteto      72.25  11 ⇓P     P      13 50 11.7 +1.2
PSZ   Piszkesteto      72.25  11 P      P      13 50 11.4 +0.9
PSZ   Piszkesteto      72.25  11 P      P      13 50 10.5  0.0
TNSS  Tian-Shan        72.25 329 eP     P      13 50 11.3 +0.3
TNSS  Tian-Shan        72.25 329 eP     P      13 50 11.3 +0.3
      baz=329
TUE   Stuetta          72.31  18 P      P      13 50 11.9 +0.8
KBA   Koelnbreinsper   72.31  16 i P    P      13 50 12.2 +1.1
      comp=Z,52nm,0.8s,SNR=23
ARSA  Arzberg          72.43  14 i P    P      13 50 12.6 +1.1
      comp=Z,16nm,0.8s,SNR=6.8
SGDS  Sogindy          72.45 331 eP     P      13 50 12.3 +0.5
SGDS                              eS     S      13 59 37.1 +1.6
SGDS  Sogindy          72.45 331 eP     P      13 50 12.3 +0.5
      baz=331
SGDS                              eS     S      13 59 37.1 +1.6
      baz=331
ABTA  Abfaltersbach    72.52  16 i P    P      13 50 12.8 +0.6
      comp=Z,15nm,1.1s
SORM  Soroca           72.62   5 ⇓P     P      13 50 12.3 -0.3
CSKK  Cskako           72.63  12 P      P      13 50 13.3 +0.5
USP   Ospenovka        72.65 331 P      P      13 50 13.4 +0.3
      SNR=24
TKM2  Tokmak 2         72.70 330 P      P      13 50 14.1 +0.6
      SNR=39
TKM2  Tokmak 2         72.70 330 P      P      13 50 13.4 -0.1
PGAV  Gavieira, Arco   72.74  33 eP     P      13 50 13.5 -0.1
PGAV  Gavieira, Arco   72.74  33 eLR    LR     14 16 19.4
      comp=Z,545nm,18.0s
MPLH  Magyarpolny      72.74  13 P      P      13 50 12.4 -1.0
GOMU  GeErMu           72.78 313 P      P      13 50 14.6 +0.3
GOMU                              pP     pP     13 50 16.6 -0.3
GOMU                              PcP    PcP    13 50 30.1 -1.4
GOMU                              S      S      13 59 36.2 -3.9
GOMU                              ScS    ScS    14 00 21.2 -0.8
GOMU                              pmax   pmax
      comp=Z,10.0nm,0.8s
GOMU                              pmax   pmax
      comp=Z,330nm,6.0s
GOMU                              LR     LR
      comp=Z,410nm,18.0s
GOMU                              LR     LR
      comp=Z,690nm,17.8s
GOMU                              LR     LR
      comp=Z,180nm,17.8s
MYKA  Terra Mystica    72.79  15 i P    P      13 50 14.1 +0.3
      comp=Z,17nm,1.0s
BMR   Baia Mare        72.79   8 ⇓P     P      13 50 15.0 +1.3
UREC  San Jos de Ur    72.84 104 eP     P      13 50 14.0 -0.4
CHMS  Chumysh          72.84 331 P      P      13 50 15.0 +0.9
      SNR=29
SOKA  Soboth           72.93  14 i P    P      13 50 15.4 +0.7
      comp=Z,32nm,1.1s,SNR=13
BUR08 Bucovina Ar. S   72.94   7 P      P      13 50 15.1 +0.4
BUR08                             IAmb   IAmb   13 50 16.4
      comp=Z,19nm,1.4s
BURAR Bucovina Array   72.97   7 ⇑P     P      13 50 15.0 +0.1
BURAR Bucovina Array   72.97   7 P      P      13 50 15.1 +0.1
PERS  Pernice          72.98  14 i P    P      13 50 15.7 +0.8
BOOM  Boomskoye usch   73.02 330 P      P      13 50 15.9 +0.5
BOOM                              IAmb   IAmb   13 50 17.0
      comp=Z,20nm,0.8s
OBKA  Obir             73.03  15 i P    P      13 50 16.0 +0.7
      comp=Z,54nm,0.8s,SNR=12
KDJ   Kajisay          73.03 329 P      P      13 50 15.5 +0.1
KDJ                               IAmb   IAmb   13 50 17.0
      comp=Z,23nm,0.8s
TIH   Tihany           73.05  12 P      P      13 50 15.9 +0.7
FRU1  Bishkek          73.05 331 P      P      13 50 16.4 +0.9
CTI   Castel Tesino    73.08  17 P      P      13 50 15.7 +0.1
CTI                               IAmb   IAmb   13 50 24.2
      comp=Z,18nm,1.1s
KBK   Karagaybulak     73.12 331 P      P      13 50 16.8 +0.9
      SNR=30
BNI   Bardonecchia     73.22  21 P      P      13 50 17.7 +1.3
BNI                               IAmb   IAmb   13 50 19.5
      comp=Z,20nm,1.0s
AAK   Ala-Archa        73.25 331 P      P      13 50 17.5 +0.8
      SNR=17
AAK   Ala-Archa        73.25 331 LR     LR     14 26 40.3
      comp=Z,434nm,19.0s,baz=20,slow=39
AAK   Ala-Archa        73.25 331deP     P      13 50 17.2 +0.5
AAK                               pmax   pmax
      comp=Z,26nm,0.7s
AAK   Ala-Archa        73.25 331 P      P      13 50 17.0 +0.3
AAK                               IAmb   IAmb   13 50 18.4
      comp=Z,28nm,0.8s
PBRG  Braganca         73.30  32 eP     P      13 50 17.4 +0.5
      comp=Z,24nm,1.6s
KOGS  Kog              73.30  14 i P    P      13 50 17.2 +0.5
SALO  Salr             73.33  18 P      P      13 50 17.1 +0.1
ZARC  Zaragoza, Cauc   73.40 104 P      P      13 50 17.3 -0.4
ZARC                              IAmb   IAmb   13 50 18.9
      comp=Z,25nm,0.9s
ZARC  Zaragoza, Cauc   73.40 104 eP     P      13 50 17.7  0.0
EKS2  Erkin-Say        73.40 331 P      P      13 50 18.6 +1.0
      SNR=61
CRNS  Crni Vrh         73.41  15 i P    P      13 50 17.2 -0.2
POLO  Lamas de Olo     73.42  32 eP     P      13 50 18.8 +1.2
      comp=Z,20nm,1.1s
ARCR  ARCALIA          73.44   8 ⇑P     P      13 50 18.9 +1.3
OCAC  Ocana            73.52 102 P      P      13 50 18.9 +0.3
OCAC                              IAmb   IAmb   13 50 23.3
      comp=Z,15nm,1.0s
PVRL  Vila Real        73.53  32 eP     P      13 50 19.5 +1.3
      comp=Z,38nm,1.8s
DRGR                   73.61   9 ⇓P     P      13 50 19.2 +0.6
UCH   Uchtor           73.63 331 P      P      13 50 20.1 +0.8
      SNR=8.0
KK31  Karatay Array    73.75 334 i P    P      13 50 19.3 -0.1
KK31  Karatay Array    73.75 334 P      P      13 50 19.3 -0.1
KK31                              IAmb   IAmb   13 50 20.7
      comp=Z,17nm,0.8s
KKAR  Karatay Array    73.75 334 P      P      13 50 19.2 -0.3
KKAR  Karatay Array    73.75 334 P      P      13 50 19.2 -0.3
KKAR                              IAmb   IAmb   13 50 20.7
      comp=Z,17nm,0.8s
TEOL  Teolo            73.75  17 P      P      13 50 19.5 +0.1
CJR   Cluj-Napoca      73.76   8 ⇑P     P      13 50 20.3 +0.9
DZA   Taraz            73.76 333 eP     P      13 50 19.8 +0.3
DZA   Taraz            73.76 333 eP     P      13 50 19.9 +0.3
      baz=333
MORH  Mrgy, Hungar     73.81  12 ⇑P     P      13 50 20.1 +0.4
MORH  Mrgy, Hungar     73.81  12 P      P      13 50 20.0 +0.4
MVO   Moncorvo         73.82  32 eP     P      13 50 21.1 +1.1
      comp=Z,40nm,1.3s
MVO   Moncorvo         73.82  32 eLR    LR     14 18 29.3
      comp=Z,440nm,16.0s
CD2   Chengdu          73.83 304 P      P      13 50 14.4 -5.8
CD2                               pmax   pmax
      comp=Z,40nm,0.7s
MILM  Milestii Mici    73.85   5⇓iP     P      13 50 19.0 -0.9
      comp=Z,44nm,0.9s
MILM                              LRM    MLR    14 23 58.0
      comp=Z,300nm,15.0s
MILM  Milestii Mici    73.85   5 ⇓P     P      13 50 19.6 -0.3
MILM  Milestii Mici    73.85   5d iP    P      13 50 19.0 -0.9
MILM                              pmax   pmax
      comp=Z,40nm,0.9s
MILM                              MLR    MLR
      comp=Z,300nm,15.0s
MILM                              MLR    MLR
      comp=E,300nm,18.0s
KOVH  Kovagotottos     73.87  12 P      P      13 50 20.9 +0.9
AML   Almayashu        73.92 331 P      P      13 50 22.1 +1.1
      SNR=43
PVIS  Viseu            74.00  33 eP     P      13 50 21.6 +0.6
      comp=E,38nm,1.0s
SIRR  Siria            74.04  10 ⇓P     P      13 50 21.6 +0.5
TESR  Tescani          74.15   6 ⇓P     P      13 50 21.6 -0.1
HELC  Santa Helena     74.19 105 eP     P      13 50 23.1 +0.3
CBOC  Ciudad Bolivar   74.23 106 eP     P      13 50 22.5 -0.3
SDV   Santo Domingo    74.32  99 LR     LR     14 23 56.9
      comp=E,283nm,20.6s,baz=330,slow=36
SDV   Santo Domingo    74.32  99 P      P      13 50 24.0 +0.7
SDV   Santo Domingo    74.32  99 eP     P      13 50 24.3 +1.0
SDV   Santo Domingo    74.32  99 eP     P      13 50 24.1 +0.8
COI   Coimbra          74.33  33 eP     P      13 50 23.8 +0.9
      comp=E,74nm,1.3s
MTE   Manteigas        74.40  33 eP     P      13 50 24.6 +1.3
      comp=E,40nm,1.0s
MTE   Manteigas        74.40  33 eLR    LR     14 17 05.2
      comp=E,411nm,18.0s
MTE   Manteigas        74.40  33 P      P      13 50 24.0 +0.7
MTE                               IAmb   IAmb   13 50 25.2
      comp=Z,33nm,0.9s
PTBC  PUERTO BERRIO,   74.42 104 eP     P      13 50 23.6 -0.1
PCAS  Casmilo, Conde   74.45  33 eP     P      13 50 24.7 +1.1
      comp=Z,73nm,1.5s
PAMC  Pamplona, Colo   74.60 102 eP     P      13 50 25.6 +0.3
GHRR                   74.64   6 ⇓P     P      13 50 25.2 +0.6
BZS   Buzias           74.69  10 ⇓P     P      13 50 25.1 +0.3
IUG   Iuzhnay          74.77 334d iP    P      13 50 26.3 +0.8
IUG   Iuzhnay          74.77 334⇓iP     P      13 50 26.4 +0.8
      baz=334
COVR  Voineasa-Covas   74.79   7 ⇑P     P      13 50 26.9 +1.4
VRI   Vrincioaia       74.80   6 ⇑P     P      13 50 26.3 +0.8
PLOR  Plostina         74.81   6 ⇓P     P      13 50 26.3 +0.7
ODBI  Odobesti         74.92   6 ⇓P     P      13 50 28.4 +2.2
PCBR  Castelo Branco   74.94  33 eP     P      13 50 27.2 +0.8
FRGS  Fruska Gora      74.97  11 ⇓P     P      13 50 26.3 -0.2
BARC  Barichara        75.00 103 eP     P      13 50 27.7 +0.3
GZR   Gura Zlata       75.00   9 ⇓P     P      13 50 27.1 +0.3
LOT   Lotru            75.03   8 ⇓P     P      13 50 26.8 -0.2
NORC  Norcasia         75.05 105 eP     P      13 50 27.8 +0.4
VOIR                   75.13   7 ⇑P     P      13 50 28.0 +0.5
MLR   Muntele Rosu     75.13   7 ⇓P     P      13 50 28.0 +0.5
MLR   Muntele Rosu     75.13   7 LR     LR     14 29 14.5
      comp=Z,232nm,18.4s,baz=36,slow=40
MLR   Muntele Rosu     75.13   7 P      P      13 50 28.5 +0.9
ARR   Arges            75.17   8 ⇓P     P      13 50 28.5 +0.8
NEHR  Nehoiu           75.22   7 ⇑P     P      13 50 28.9 +1.0
PMAFR Mafra            75.25  34 eP     P      13 50 29.1 +0.9
      comp=Z,138nm,1.6s
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PMRV	Marv??o	75.34	33	*e*P	P	13 50 29.3	+0.5
	comp=Z,25nm,1.5s						
PMRV	Marv??o	75.34	33	*e*LR	LR	14 17 59.4	
	comp=Z,396nm,18.0s						
SPBC	San Pablo de B	75.37	104	*e*P	P	13 50 29.3	0.0
PMTG	Montargil	75.44	34	*e*P	P	13 50 29.7	+0.4
	comp=Z,36nm,1.3s						
OSSC	Osservatorio P	75.48	18	P	P	13 50 29.1	-0.4
OSSC				IAmb	IAmb	13 50 38.2	
	comp=Z,19nm,1.0s						
CFR	Carcaliu	75.56	5	⇑P	P	13 50 30.3	+0.5
BAUV	El Baul	75.58	97	P	P	13 50 30.6	+0.3
TLCR		75.58	5	⇑P	P	13 50 30.1	+0.1
GOF	Gofitskoye	75.65	354	⇑*i*P	P	13 50 30.5	+0.1
GOF				pmax	pmax		
	comp=Z,137nm,0.8s						
RUSC	La Rusia	75.66	103	*e*P	P	13 50 31.7	+0.3
YOTC	Yotoco, Valle	75.69	107	*e*P	P	13 50 30.8	-0.4
KSH	Kashi	75.80	329	P	P	13 50 35.3	+3.8
KSH				pmax	pmax		
	comp=Z,24nm,1.0s						
KSH				pmax	pmax		
	comp=Z,280nm,7.2s						
KSH				LR	LR		
	comp=Z,850nm,16.2s						
KSH				LR	LR		
	comp=Z,1µm,16.1s						
KSH				LR	LR		
	comp=Z,2µm,17.1s						
PESTR	Estremoz	75.81	33	*e*P	P	13 50 32.2	+0.8
	comp=Z,40nm,1.3s						
PESTR	Estremoz	75.81	33	P	P	13 50 31.9	+0.5
PESTR				IAmb	IAmb	13 50 33.0	
	comp=Z,16nm,1.1s						
TPGR	Topolog	75.89	5	⇓P	P	13 50 32.4	+0.6
MURB	Monte Urbino	75.93	17	P	P	13 50 32.8	+0.6
ROSC	El Rosal	75.95	105	P	P	13 50 32.3	-0.6
	comp=Z,12nm,0.6s,baz=197,slow=4.9,SNR=6.1						
	comp=Z,12nm,0.6s						
EVO	Evora	76.00	34	*e*P	P	13 50 33.4	+0.9
	comp=Z,45nm,1.3s						
ESBB	Sonseca Array	76.03	30	P	P	13 50 33.7	+1.0
ESDC	Sonseca Array	76.03	30	P	P	13 50 34.0	+1.2
	comp=Z,24nm,0.8s,baz=339,slow=5.7,SNR=130						
ESDC				LR	LR	14 23 19.5	
	comp=Z,299nm,19.7s,baz=344,slow=35						
	comp=Z,24nm,0.8s						
ESDC	Sonseca Array	76.03	30	P	P	13 50 33.4	+0.7
ESDC				IAmb	IAmb	13 50 35.1	
	comp=Z,29nm,0.9s						
DIVS	Divibare	76.04	11	P	P	13 50 33.0	+0.3
DIVS				IAmb	IAmb	13 50 34.1	
	comp=Z,27nm,1.5s						
PAB	San Pablo	76.05	31	P	P	13 50 33.3	+0.4
PAB				IAmb	IAmb	13 50 35.1	
	comp=Z,22nm,1.1s						
ANN	Anapa	76.09	358	*e*P	P	13 50 33.0	+0.1
ANN				*e*S	S	14 00 15.7	-0.4
ANN				pmax	pmax		
	comp=Z,19nm,0.7s						
ANN				MLR	MLR		
	comp=Z,346nm,17.0s						
CASP	Castiglione de	76.14	18	P	P	13 50 33.5	+0.3
CASP				IAmb	IAmb	13 50 34.6	
	comp=Z,25nm,0.9s						
PNCL	Nicolau / Gran	76.25	34	*e*P	P	13 50 34.9	+1.0
	comp=Z,55nm,0.9s						
ORTC	Ortega, Tolima	76.30	106	*e*P	P	13 50 34.4	-0.1
GYA	Guiyang	76.42	299	⇑P	P	13 50 35.9	+0.7
GYA				S	S	14 00 17.9	-2.7
GYA				SS	SS	14 05 12.8	-1.3
GYA				pmax	pmax		
	comp=Z,37nm,1.0s						
GYA				pmax	pmax		
	comp=Z,270nm,8.8s						
GYA				LR	LR		
	comp=Z,520nm,21.3s						
GYA				LR	LR		
	comp=Z,470nm,18.2s						
GYA				LR	LR		
	comp=Z,240nm,21.6s						
CHIC	Chingaza	76.42	104	*e*P	P	13 50 32.4	-3.3
NRCA	Norcia	76.44	17	P	P	13 50 35.7	+0.7
NRCA				IAmb	IAmb	13 50 36.9	
	comp=Z,21nm,0.9s						
BTK	Batken	76.58	333	P	P	13 50 36.3	+0.4
BTK				IAmb	IAmb	13 50 37.5	
	comp=Z,23nm,1.0s						
MESJ	Messejana	76.59	34	*e*P	P	13 50 36.6	+0.7
MESJ				IAmb	IAmb	13 50 37.2	
	comp=Z,135nm,1.9s						
MESJ	Messejana	76.59	34	*e*P	P	13 50 36.5	+0.7
PTEO	Sao Teotonio	76.72	35	*e*P	P	13 50 37.8	+1.2
KVAR	Kislovodsk Arr	76.77	355	LR	LR	14 26 42.8	
	comp=Z,123nm,21.9s,baz=262,slow=38						
KIV	Kislovodsk	76.77	355	⇑P	P	13 50 37.4	+0.5
KIV	Kislovodsk	76.77	355	*e*P	P	13 50 37.2	+0.3
KIV				pmax	pmax		
	comp=Z,57nm,1.1s						
KIV				MLR	MLR		
	comp=Z,164nm,18.0s						
KIV	Kislovodsk	76.77	355	P	P	13 50 37.4	+0.5
PCVE	Castro Verde	76.83	34	*e*P	P	13 50 38.0	+0.8
MORF	Marmelete	76.96	35	*e*P	P	13 50 38.8	+0.8
MORF				IAmb	IAmb	13 50 42.5	
	comp=Z,206nm,1.8s						
MORF	Marmelete	76.96	35	*e*P	P	13 50 38.9	+0.8
MORF	Marmelete	76.96	35	*e*P	P	13 50 38.8	+0.8
KBZ	Khabaz	76.98	354	P	P	13 50 38.8	+0.8
	comp=Z,30nm,0.8s,baz=346,slow=3.6,SNR=85						
KBZ				LR	LR	14 26 55.5	
	comp=Z,151nm,21.9s,baz=18,slow=38						
	comp=Z,30nm,0.8s						
KBZ	Khabaz	76.98	354	*ce*P	P	13 50 38.8	+0.8
KBZ				pmax	pmax		
	comp=Z,31nm,0.9s						
SHA1	Shidzhatmaz	76.98	355	*i* P	P	13 50 38.0	-0.3
PCON	Cinco Dias	77.10	108	*e*P	P	13 50 40.8	+1.1
PVAQ	Vaqueiros	77.14	34	*e*P	P	13 50 39.8	+0.8
	comp=Z,80nm,1.4s						
PVAQ	Vaqueiros	77.14	34	*e*LR	LR	14 18 42.0	
	comp=Z,478nm,18.0s						
PVAQ	Vaqueiros	77.14	34	P	P	13 50 39.8	+0.8
PBDV	Barranco-do-Ve	77.23	34	*e*P	P	13 50 40.9	+1.4
	comp=Z,99nm,2.1s						
SOC	Sochi	77.25	357	*e*P	P	13 50 39.3	-0.2
SOC				*e*		13 53 31.7	
SOC				*e*PPP	PPP	13 55 21.0	
SOC				*e*S	S	14 00 30.6	+1.7
SOC				*e*		14 00 51.0	
SOC				*e*SS	SS	14 05 28.3	+2.9
SOC				*e*SSS	SSS	14 08 50.9	
SOC				pmax	pmax		
	comp=Z,16nm,0.7s						
SOC				MLR	MLR		
	comp=Z,216nm,17.0s						
GROC	Groznyy	77.33	352	*e*P	P	13 50 38.5	-1.4
GROC				*e*		13 50 48.5	
GROC				*e*		13 53 32.8	
GROC				pmax	pmax		
	comp=Z,20nm,0.6s						
MAK	Makhachkala	77.44	351	*e*P	P	13 50 35.4	-5.1
MAK				*e*S	S	14 00 24.4	-6.6
MAK				pmax	pmax		
	comp=Z,85nm,1.1s						
MAK				MLR	MLR		
	comp=Z,358nm,19.0s						
CRUC	La Cruz	77.50	109	*e*P	P	13 50 42.0	+0.4
PTGC	Puerto Gaitan,	77.58	103	*e*P	P	13 50 41.3	-0.4
PDG	Podgorica	77.61	12	⇑P	P	13 50 41.8	+0.3
PDG	Podgorica	77.61	12	P	P	13 50 41.4	-0.2
PDG				IAmb	IAmb	13 50 42.5	
	comp=Z,23nm,0.8s						
GARC	Garzon, Huila	77.67	107	*e*P	P	13 50 42.7	+0.2
GAR	Garm	77.70	333	P	P	13 50 42.5	+0.3
VTS	Vitosha	77.80	9	⇓P	P	13 50 42.6	-0.2
VTS	Vitosha	77.80	9	P	P	13 50 42.3	-0.5
ZEI	Tsey	77.87	354	*e*P	P	13 50 42.0	-1.2
ZEI				pmax	pmax		
	comp=Z,15nm,1.1s						
ONI	Oni	78.09	354	P	P	13 50 45.1	+0.9
ONI				IAmb	IAmb	13 50 46.4	
	comp=Z,14nm,1.1s						
SKO	Skopje	78.28	10	*i* P	P	13 50 46.1	+0.8
CHGR	Chuyangaron	78.30	334	P	P	13 50 45.9	+0.4
PMOZ	Porto Moniz, M	78.35	43	*e*LR	LR	14 19 45.7	
	comp=Z,539nm,18.0s						
PZH	PanZhiHua	78.53	303	⇓P	P	13 50 47.1	+0.1
PZH				pP	sP	13 50 52.2	+1.5
PZH				S	S	14 00 34.6	-8.9
PZH				pmax	pmax		
	comp=Z,40nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,5.6s						
PZH				LR	LR		
	comp=Z,680nm,17.3s						
PZH				LR	LR		
	comp=Z,1µm,16.7s						
PZH				LR	LR		
	comp=Z,770nm,17.1s						
STIP	Stip	78.63	10	*i* P	P	13 50 46.9	-0.3
CART	Cartagena	78.75	29	P	P	13 50 48.8	+0.9
CART				IAmb	IAmb	13 50 50.0	
	comp=Z,33nm,1.0s						
VAY	Valandovo	79.03	10	*i* P	P	13 50 50.0	+0.6
OHR	Ohrid	79.08	11	*i* P	P	13 50 50.4	+0.7
VSL	Villasalto	79.10	20	P	P	13 50 50.0	+0.2
VSL				IAmb	IAmb	13 50 52.0	
	comp=Z,28nm,0.9s						
DIKM	Dikmen	79.25	0	⇑P	P	13 50 51.6	+1.0
KMI	Kunming	79.31	302	⇑P	P	13 50 52.0	+0.6
KMI				pP	PcP	13 50 57.5	-2.1
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
FNA	Florina	79.46	11	P	P	13 50 51.9	+0.1
FNA				IAmb	IAmb	13 50 52.8	
	comp=Z,25nm,0.8s						
CUC	Castrocucco	79.60	15	P	P	13 50 52.1	-0.5
CUC				IAmb	IAmb	13 51 00.3	
	comp=Z,17nm,0.9s						
ALN	Alexandroupoli	79.71	7	P	P	13 50 53.4	+0.3
ALN				IAmb	IAmb	13 50 54.6	
	comp=Z,21nm,0.9s						
LSA	Lhasa	79.95	313	P	P	13 50 56.5	+1.3
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
LIT	Litokhoron	80.23	10	P	P	13 50 55.9	-0.1
LIT				IAmb	IAmb	13 50 57.1	
	comp=Z,32nm,0.8s						
MDUB	Mudurnu	80.37	3	P	P	13 50 57.3	+0.5
GNI	Garni	80.44	353	*de*P	P	13 50 58.8	+1.5
GNI				pmax	pmax		
	comp=Z,43nm,1.3s						
GNI	Garni	80.44	353	P	P	13 50 58.5	+1.2
GNI				IAmb	IAmb	13 51 00.0	
	comp=Z,30nm,0.9s						
KOPT	Kop Dagi	80.79	356	P	P	13 50 59.5	+0.2
KOPT				IAmb	IAmb	13 51 09.1	
	comp=Z,14nm,0.8s						
BORA	Eskisehir	80.94	4	P	P	13 51 00.6	+0.7
ANTO	Ankara	81.01	2	P	P	13 51 01.1	+0.9
ANTO				IAmb	IAmb	13 51 02.4	
	comp=Z,27nm,0.8s						
GEYT	Alibeck	81.14	342	P	P	13 51 01.5	+0.6
	comp=Z,13nm,0.8s,baz=241,slow=6.1,SNR=14						
GEYT				LR	LR	14 32 15.6	
	comp=Z,394nm,19.7s,baz=44,slow=40						
	comp=Z,13nm,0.8s						
GEYT	Alibeck	81.14	342	P	P	13 51 01.9	+1.0
GYA0B	ALIBECK ARRAY	81.14	342	P	P	13 51 01.8	+0.9
GYA0B				IAmb	IAmb	13 51 03.0	
	comp=Z,17nm,0.8s						
BR131	Keskin Array S	81.17	1	P	P	13 51 01.6	+0.5
BR131				IAmb	IAmb	13 51 02.8	
	comp=Z,22nm,0.8s						
BRTR	Keskin Array B	81.17	1	P	P	13 51 01.6	+0.5
	comp=Z,11nm,0.8s,baz=5.9,slow=3.2,SNR=47						
BRTR				PKPPKP	P'P'df	14 17 44.0	-4.0
	comp=Z,0.8nm,0.7s,baz=159,slow=3.7,SNR=4.1						
	comp=Z,11nm,0.8s						
BRTR	Keskin Array B	81.17	1	P	P	13 51 01.5	+0.4
QIZ	Qiongzhong	81.37	293	P	P	13 50 53.1	-9.2
QIZ	Qiongzhong	81.37	293	S	S	14 01 05.4	-7.9
QIZ				LR	LR		
	comp=N,590nm,16.7s						
QIZ				LR	LR		
	comp=E,700nm,17.9s						
QIZ				LR	LR		
	comp=Z,470nm,16.7s						
VAE	Valguarnera	81.88	17	LR	LR	14 29 47.5	
	comp=Z,131nm,18.1s,baz=324,slow=38						
BNN	Bunyan	82.05	360	P	P	13 51 06.7	+0.9
NIL	Nilore	82.05	329	P	P	13 51 05.9	+0.1
MANT	Manisa	82.25	5	P	P	13 51 07.0	+0.1
MANT				IAmb	IAmb	13 51 08.1	
	comp=Z,19nm,1.0s						
KBL	Kabul	82.25	332	P	P	13 51 06.5	-0.6
KBL				IAmb	IAmb	13 51 07.4	
	comp=Z,13nm,0.9s						
MDT	Midelt	82.31	33	LR	LR	14 26 27.4	
	comp=Z,280nm,19.5s,baz=360,slow=35						
GEVA	Gevas	82.37	354	P	P	13 51 08.7	+1.1
KEST	Kesra	82.75	21	P	P	13 51 10.3	+0.8
	comp=Z,21nm,0.8s,baz=148,slow=2.7,SNR=12						
	comp=Z,21nm,0.8s						
KEST	Kesra	82.75	21	P	P	13 51 10.2	+0.8
ISP	Isparta	82.99	4	P	P	13 51 10.8	+0.1
ITM	Ithomi	83.08	11	P	P	13 51 10.9	-0.2
TAPN	Taplejung	83.34	315	*e*P	P	13 51 13.5	+0.6
	comp=Z,73nm,1.2s						
SHL	Shillong	83.39	311	P	P	13 51 13.1	+0.1
MARD	Mardin	83.47	356	P	P	13 51 14.7	+1.4
GUN	Gumba	83.49	317	*e*P	P	13 51 14.1	+0.4
	comp=Z,48nm,0.9s						
JIRN	Jiri	83.61	316	*e*P	P	13 51 15.2	+0.8
	comp=Z,6.2nm,1.0s						
KKN	Kakani	83.81	317	*e*P	P	13 51 15.8	+0.6
DANN	Dangsing	83.81	318	*e*P	P	13 51 15.9	+0.6
	comp=Z,144nm,1.0s						
GKN	Gorkha	83.83	318	*e*P	P	13 51 15.5	+0.2
	comp=Z,84nm,1.2s						
HRA	Herat	83.86	338	P	P	13 51 16.0	+0.6
HRA				IAmb	IAmb	13 51 17.8	
	comp=Z,22nm,1.2s						
ODAN	Odare	83.91	315	*e*P	P	13 51 16.2	+0.5
PKIN	Phulchoki	83.96	317	*e*P	P	13 51 15.9	-0.2
PKI	Pulchoki	83.96	317	*e*P	P	13 51 16.1	0.0
	comp=Z,65nm,1.3s						
DMN	Daman	84.03	317	*e*P	P	13 51 16.8	+0.4
RAMN	Ramite	84.11	316	*e*P	P	13 51 17.1	+0.3
	comp=Z,20nm,0.7s						
PYUN	Piuthan	84.31	319	*e*P	P	13 51 17.8	+0.1
	comp=Z,116nm,1.1s						
KOLN	Koldanda	84.40	318	*e*P	P	13 51 18.5	+0.3
	comp=Z,86nm,1.2s						
SMPI	Sarmi	84.90	257	P	P	13 51 21.9	+1.4
	comp=Z,4µmcomp=Z,12nm,1.3s						
BOAV	Boa Vista	84.99	94	*e*P	P	13 51 21.4	+0.3
IDI	Anoyia	85.21	9	LR	LR	14 34 52.2	
	comp=Z,69nm,18.0s,baz=72,slow=40						
TBTG	Tabatinga, AM	85.92	105	*e*P	P	13 51 25.6	-0.1
CHTO	Chiang Mai	86.50	302	P	P	13 51 28.3	-0.3
CHTO				IAmb	IAmb	13 51 29.6	
	comp=Z,15nm,1.1s						
MDP	Montagnes des	86.70	86	LR	LR	14 34 52.7	
	comp=Z,145nm,18.1s,baz=30,slow=39						
CM31	Chiang Mai Arr	86.82	302	P	P	13 51 30.5	+0.4
CMAR	Chiang Mai Arr	86.82	302	P	P	13 51 30.6	+0.5
	comp=Z,18nm,0.9s,baz=6.9,slow=5.3,SNR=111						
CMAR				LR	LR	14 32 19.7	
	comp=Z,335nm,19.1s,baz=25,slow=37						
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	86.82	302	*i* P	P	13 51 30.6	+0.5
CMAR				pmax	pmax		
	comp=Z,20nm,0.9s						
CMAR	Chiang Mai Arr	86.82	302	P	P	13 51 30.4	+0.3
PMG	Port Moresby	87.24	246	LR	LR	14 26 39.9	
	comp=Z,169nm,20.7s,baz=25,slow=33						
CZSB	Cruzeiro do Su	87.63	109	*e*P	P	13 51 34.0	+0.1
SIJI	Sorong	87.69	264	LR	LR	14 30 48.5	
	comp=Z,94nm,18.2s,baz=39,slow=36						
NNA	Nana	89.38	115	*ce*P	P	13 51 42.2	0.0
NNA				pmax	pmax		
	comp=Z,29nm,0.7s						
NNA	Nana	89.38	115	P	P	13 51 41.9	-0.3
LBMI	Labuha	89.41	268	P	P	13 51 43.5	+1.1
MACA	Manacapuru-AM	89.66	97	*e*P	P	13 51 43.2	-0.3
MCPB	Macapa, AP	91.67	88	*e*P	P	13 51 52.4	-0.6
MALB	Monte Alegre	91.81	91	*e*P	P	13 51 53.5	-0.1
ETMB	Extrema	92.60	105	*e*P	P	13 51 55.1	-2.0
ITTB	Itaituba	93.21	93	*e*P	P	13 51 59.5	-0.6
SBUM	Sibu	94.52	283	P	P	13 52 06.6	+0.5
SBUM				IAmb	IAmb	13 52 07.7	
	comp=Z,6.2nm,0.9s						
WSAR	Wadi Sarin	95.39	339	LR	LR	14 42 11.1	
	comp=Z,134nm,18.6s,baz=40,slow=40						
KSM	Kuching	96.31	284	P	P	13 52 14.9	+0.6
KSM				IAmb	IAmb	13 52 16.0	
	comp=Z,8.2nm,0.9s						
LPAZ	La Paz	97.23	110	P	P	13 52 17.4	-1.7
	comp=Z,3.6nm,0.7s,baz=347,slow=6.0,SNR=17						
LPAZ	La Paz	97.23	110	P	P	13 52 17.3	-1.8
LPAZ				IAmb	IAmb	13 52 20.2	
	comp=Z,3.6nm,0.7s						
LPAZ	La Paz	97.23	110	*e*P	P	13 52 17.1	-2.0
LPAZ	La Paz	97.23	110	*e*P	P	13 52 17.3	-1.7
PB16	IPOC Station P	98.34	112	P	P	13 52 23.2	-0.7
PB16				IAmb	IAmb	13 52 24.4	
	comp=Z,4.1nm,0.9s						
CLDB	Colider	98.72	96	*e*P	P	13 52 24.7	-0.4
PB11	IPOC Station P	99.50	113	P	Pdif	13 52 27.5	-1.1
WRA	Warramunga Arr	102.47	252	P	Pdif	13 52 41.2	-0.4
	comp=Z,0.8nm,1.1s,baz=34,slow=5.0,SNR=4.7						
ASAR	Alice Springs	105.84	250	Pdiff	Pdif	13 52 58.6	+2.0
	comp=Z,0.3nm,0.8s,baz=85,slow=2.0,SNR=2.0						
ASAR				PKiKP	PKiKP	13 57 08.9	-0.2
	comp=Z,0.7nm,0.9s,baz=44,slow=2.1,SNR=6.3						
ASAR				PKKPbc	PKKPbc	14 08 31.5	+1.5
	comp=Z,0.4nm,0.7s,baz=205,slow=2.8,SNR=5.1						
PLCA	Paso Flores	116.93	125	PKP	PKiKP	13 57 30.0	+0.4
	comp=Z,2.3nm,0.8s,baz=340,slow=4.7,SNR=5.8						
KMBO	Kilima Mbogo	121.81	358	PKP	PKiKP	13 57 40.9	+0.6
	comp=Z,3.3nm,0.7s,baz=72,slow=5.2,SNR=3.8						
KMBO	Kilima Mbogo	121.81	358	*i* PKIKP	PKiKP	13 57 41.2	+0.9
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIBK	Kibwezi	123.00	357		PKPdf	13 57 41.8	-0.3
VNDA	Vanda	140.62	196	PKhKP	PKPpre	13 58 08.0	
	comp=Z,1.6nm,0.9s,baz=12,slow=4.9,SNR=6.1						
LBTB	Lobatse	144.91	15	PKPdf	PKPbc	13 58 22.1	+0.3
CASY	Casey	147.02	226	PKPdf	PKPbc	13 58 26.4	-0.3
BOSA	Boshof	148.41	17	PKPbc	PKPbc	13 58 31.8	-0.1
	comp=Z,23nm,0.8s,baz=344,slow=2.4,SNR=33						
SUR	Sutherland	151.24	26		PKiKP	13 58 39.4	+0.1
VNA3	Neumayer Olymp	158.50	141	PKPab	PKPab	13 59 16.9	+0.5
VNA2	Neumayer--Watz	159.29	141	PKPab	PKPab	13 59 20.4	+0.5
SNAA	Sanae	160.51	144	PKPab	PKPab	13 59 24.5	-0.7
TROLL	Troll, Antarti	161.93	147	PKPab	PKPab	13 59 31.9	+0.3

TUL ***02*** *13:44:52.9±1.2, 36.°92N±0.°03×97.°35W±0.°03, h5^{km}±7^{km}, ML3.0, mb_Lg3.1/66(NEIC) Error ellipse: s-maj=4.2km s-min=2.3km az=222.0*

NEIC ***02*** *13:44:53.3±0.8, 36.°87N±0.°02×97.°39W±0.°02, h5^{km}±7^{km}, Error ellipse: s-maj=3.7km s-min=1.5km az=217.0*

ISC 02 13:44:53.1±1.0, **36.°87N**±0.°04×**97.°37W**±0.°03, **h10**^{km}, **n52**, σ**1**^{s}**66**/26, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.69	86	Pg	Pg	13 45 06.0	-0.4
U32A	Winter Ranch,	1.40	250		Pn	13 45 19.3	+0.6
OKCFA	Oklahoma City	1.45	183		Pn	13 45 20.6	+1.1
OKCSW	OKLAHOMA CITY	1.46	182	Pn	Pn	13 45 20.8	+1.3
TUL1	Leonard	1.59	127		Pn	13 45 22.4	+1.1
TUL1	Leonard	1.59	127	P	Pn	13 45 22.6	+1.2
	baz=309						
TUL1				S	Sb	13 45 44.1	+1.3
	baz=309						
FNO	Franklin	1.61	181		Pn	13 45 23.0	+1.4
R32A	Long Quarter,	1.88	326		Pn	13 45 26.4	+1.1
X34A	Smith Ranch, M	2.30	190	Pn	Pn	13 45 32.5	+1.5
X34A				IAmb_Lg		13 46 10.9	
	comp=Z,94nm,0.9s						
KSU1	Kansas State U	2.31	15		Pn	13 45 32.2	+1.1
KSU1				IAmb_Lg		13 46 05.5	
	comp=Z,78nm,0.8s						
KSU1	Kansas State U	2.31	15	P	Pn	13 45 32.6	+1.4
	baz=195						
KSU1				S	Sb	13 46 03.2	-0.1
	baz=195						
WMOK	Wichita Mounta	2.42	209		Pn	13 45 34.3	+1.6
WMOK	Wichita Mounta	2.42	209	S	Sb	13 46 05.8	-0.8
	baz=28						
CBKS	Cedar Bluff	2.70	317	S	Sb	13 46 16.5	+1.8
	baz=134						
X37A	Clayton	2.80	144		Pn	13 45 39.1	+1.3
X37A				IAmb_Lg		13 46 28.7	
	comp=Z,49nm,1.0s						
S39A	Bolivar	3.33	75		Pn	13 45 46.2	+1.0
W39A	Magazine	3.35	119	S	Sb	13 46 36.4	+3.0
	baz=302						
U40A	Yellville	3.67	97		Pn	13 45 50.8	+0.9
U40A				IAmb_Lg		13 46 56.0	
	comp=Z,43nm,0.9s						
MIAR	Mount Ida	3.86	126	IAmb_Lg		13 46 56.9	
	comp=Z,39nm,0.8s						
AMTX	Amarillo	4.02	242	IAmb_Lg		13 47 11.9	
	comp=Z,53nm,1.0s						
AMTX	Amarillo	4.02	242	S	Sg	13 46 59.9	-2.5
	baz=59						
P38A	Dawn	4.08	47	IAmb_Lg		13 47 03.0	
	comp=Z,58nm,0.8s						
MGMO	Mountain Grove	4.09	85		Pn	13 45 56.6	+0.9
Z38A	Mt. Pleasant	4.10	151	IAmb_Lg		13 47 07.4	
	comp=Z,47nm,0.7s						
N35A	Tabor	4.21	18	Pn	Pn	13 45 58.0	+0.7
R40A	Maddies Statio	4.29	69		Pn	13 45 58.9	+0.5
FCAR	Ozark Folk Cen	4.34	101	Pn	Pn	13 46 00.3	+1.2
FCAR				IAmb_Lg		13 47 08.5	
	comp=Z,51nm,1.1s						
X40A	Basin Creek Fa	4.39	121	IAmb_Lg		13 47 22.7	
	comp=Z,27nm,0.8s						
W41B	Gary Mavity, V	4.48	111	IAmb_Lg		13 47 14.8	
	comp=Z,57nm,0.8s						
W41B	Gary Mavity, V	4.48	111	S	Sg	13 47 12.6	-4.4
	baz=294						
UALR	University of	4.59	116	IAmb_Lg		13 47 26.9	
	comp=Z,42nm,1.1s						
WLAR	White Oak Lake	4.71	131	IAmb_Lg		13 47 27.8	
	comp=Z,28nm,0.7s						
P40A	Paris	4.96	56	IAmb_Lg		13 47 32.1	
	comp=Z,30nm,0.7s						
CCM	Cathedral Cave	5.01	75	IAmb_Lg		13 47 36.6	
	comp=Z,34nm,1.0s						
Z41A	Richland Creek	5.20	133	IAmb_Lg		13 47 45.5	
	comp=Z,44nm,0.9s						
OGNE	Ogallala	5.46	320	IAmb_Lg		13 47 52.8	
	comp=Z,42nm,0.8s						
PBMO	Poplar Bluff	5.57	89	IAmb_Lg		13 48 01.0	
	comp=Z,31nm,0.8s						
NATX	Nacogdoches	5.57	156	IAmb_Lg		13 48 00.6	
	comp=Z,33nm,1.1s						
K31A	O'Neill	5.84	350	IAmb_Lg		13 48 11.1	
	comp=Z,37nm,0.7s						
435B	Jarrell	6.08	182	IAmb_Lg		13 48 14.0	
	comp=Z,21nm,0.8s						
Q24A	Divide	6.50	291	IAmb_Lg		13 48 25.7	
	comp=Z,19nm,0.8s						
S44A	Carbondale	6.52	80	IAmb_Lg		13 48 23.0	
	comp=Z,28nm,0.9s						
SIUC	Southern Illin	6.55	80	IAmb_Lg		13 48 20.2	
	comp=Z,21nm,0.8s						
JCT	Junction City	6.69	198	IAmb_Lg		13 48 36.4	
	comp=Z,35nm,1.0s						
P43A	Skaggs, Pawnee	6.76	63	IAmb_Lg		13 48 35.0	
	comp=Z,33nm,0.7s						
Y45A	Yeager Farm, C	7.06	113	IAmb_Lg		13 48 45.9	
	comp=Z,28nm,0.8s						
ISCO	Idaho Springs	7.11	297	IAmb_Lg		13 48 38.9	
	comp=Z,18nm,0.9s						
O44A	Mansfield	7.71	62	IAmb_Lg		13 49 10.7	
	comp=Z,28nm,0.9s						
N23A	Red Feather La	7.80	304	IAmb_Lg		13 49 20.4	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	8.14	40	IAmb_Lg		13 49 11.7	
	comp=Z,24nm,0.9s						
Z47A	Carrollton	8.46	113	IAmb_Lg		13 49 38.0	
	comp=Z,17nm,1.1s						
K22A	Casper	9.11	312	IAmb_Lg		13 49 55.6	
	comp=Z,20nm,1.1s						

TUL ***02*** *13:52:02.9±1.3, 36.°92N±0.°02×97.°35W±0.°01, h4^{km}±7^{km}, ML2.6, mb_Lg2.3/16(NEIC), Error ellipse: s-maj=2.8km*

s-min=0.8km az=211.0

NEIC 02 13:52:03.3±0.8**, 36°.89N**±0°.02×**97°.38W**±0°.02**, h5**^{km}±7^{km}**,**
Error ellipse: s-maj=3.3km s-min=0.8km az=211.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.70	88		Pg	13 52 15.8	-0.8
U32A	Winter Ranch,	1.40	249	Pn	Pn	13 52 29.5	0.0
OKCFA	Oklahoma City	1.47	182	Pn	Pn	13 52 30.6	0.0
TUL1	Leonard	1.61	127	Pn	Pn	13 52 32.5	+0.1
FNO	Franklin	1.63	181		Pn	13 52 33.0	+0.3
R32A	Long Quarter, comp=Z,12nm,0.7s	1.86	326	IAmb_Lg		13 53 05.4	
KSU1	Kansas State U	2.29	15	Pn	Pn	13 52 42.0	+0.2
KSU1	Kansas State U comp=Z,11nm,0.8s	2.29	15	IAmb_Lg		13 53 15.5	
HHAR	Hobbs	2.83	101	Pn	Pn	13 52 49.7	+0.4
W39A	Magazine comp=Z,14nm,1.0s	3.37	119	IAmb_Lg		13 53 58.9	
AMTX	Amarillo comp=Z,7.9nm,0.8s	4.02	241	IAmb_Lg		13 54 14.5	
P38A	Dawn comp=Z,8.7nm,0.8s	4.08	47	IAmb_Lg		13 54 12.9	
X40A	Basin Creek Fa comp=Z,4.6nm,0.7s	4.41	122	IAmb_Lg		13 54 25.3	
N38A	Joes South For comp=Z,8.0nm,0.7s	5.07	38	IAmb_Lg		13 54 44.3	
ISCO	Idaho Springs comp=Z,2.6nm,0.7s	7.09	297	IAmb_Lg		13 56 00.9	

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*JMA **02** 14:10:33.1±0.2, 24°.0N±0°.9×12°2E±°, h20*^{km}*±1*^{km}*,*
MV2.9/10, TAIWAN REGION
*TAP **02** 14:10:35.7, 24°.21N×121°.73E, h11*^{km}*, ML3.6, C*
ISC 02 14:10:35.6±0.8**, 24°.20N**±0°.01×**121°.74E**±0°.02**, h13**^{km}±4^{km}**,**
n120, σ**0**^{s}**.87**/217**, 5C-25D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village baz=10.0	0.10	359	P	Pg	14 10 38.8	+0.1
EHP	baz=10.0			S	Sg	14 10 41.0	+0.1
ETL	Fush Village baz=242	0.12	248	⇓*i*P	Pg	14 10 38.9	0.0
ETL	baz=242			*i* S	Sg	14 10 41.1	-0.1
NACB	Ninganchiao baz=245	0.14	257	⇓*i*P	Pg	14 10 39.1	-0.1
NACB	baz=245			*i* S	Sg	14 10 41.4	-0.2
TWD	Chiawan baz=222	0.18	227	⇓*i*P	Pg	14 10 39.8	-0.1
TWD	baz=222			*i* S	Sg	14 10 42.6	-0.1
ENA	Nanau baz=4.0	0.22	359	⇓*i*P	Pg	14 10 40.6	0.0
ENA	baz=4.0			*i* S	Sg	14 10 43.7	-0.1
ETLH	Xiulin Townshi baz=269	0.24	271	⇓P	Pg	14 10 40.8	-0.1
ETLH	baz=269			*e*S	Sg	14 10 44.0	-0.3
EWUT	Wuta baz=10.0	0.24	8	P	Pg	14 10 40.9	+0.1
EWUT	baz=10.0			S	Sg	14 10 44.2	-0.2
HWA	Hwalien baz=215	0.26	209	*e*P	Pb	14 10 41.7	-0.5
HWA	baz=215			*e*S	Sb	14 10 46.1	-0.4
ETM	Tongmen baz=222	0.33	224	⇓*i*P	Pb	14 10 42.3	-1.1
TEYL	Yanliau Villag baz=210	0.36	202	P	Pb	14 10 43.4	-0.4
LATG	Datong baz=330	0.38	329	⇓*i*P	Pb	14 10 43.6	-0.8
LATG	baz=330			S	Sb	14 10 48.9	-1.3
NNSB	Datong baz=304	0.40	304	⇓*i*P	Pb	14 10 43.9	-0.7
NNSB	baz=304			S	Sg	14 10 49.0	-0.1
NNS	Nan Shan baz=305	0.41	305	⇓*i*P	Pb	14 10 44.1	-0.8
NNS	baz=305			*i* S	Sb	14 10 49.6	-1.5
TWC	Suao baz=9.0	0.41	13	⇑*i*P	Pb	14 10 44.2	-0.6
TWC	baz=9.0			*i* S	Sg	14 10 49.8	+0.3
NDS	Dongshan baz=358	0.43	357	P	Pb	14 10 44.5	-0.6
NDS	baz=358			S	Sg	14 10 50.1	+0.2
WHF	Hehuan Shan baz=261	0.44	262	⇓*i*P	Pb	14 10 44.6	-0.9
WHF	baz=261			*i* S	Sg	14 10 50.4	-0.2
ENTT	Nioudou baz=341	0.46	340	⇓*i*P	Pb	14 10 45.3	-0.4
ENTT	baz=341			S	Sb	14 10 51.3	-1.2
ESL	Shilin baz=224	0.48	216	⇓*i*P	Pb	14 10 44.9	-1.0
TWE	Neicheng baz=355	0.52	352	⇑*i*P	Pb	14 10 46.2	-0.4
TWE	baz=355			*i* S	Sb	14 10 53.3	-0.7
TEGC	Jichi Village baz=190	0.53	201	*e*P	Pb	14 10 47.4	+0.7
TEGC	baz=190			*e*S	Sn	14 10 57.7	+0.1
TDCB	Techi baz=275	0.54	275	⇓*i*P	Pb	14 10 46.7	-0.3
TDCB	baz=275			S	Sb	14 10 53.3	-1.4
CHGB	Renai baz=246	0.54	255	⇓*i*P	Pb	14 10 46.6	-0.5
CHGB	baz=246			*i* S	Sb	14 10 53.8	-1.0
ILA	Ilan baz=2.0	0.56	0	*e*P	Pb	14 10 47.2	-0.1
ILA	baz=2.0			*e*S	Sb	14 10 54.4	-0.8
FUSB	Fushanzhiwuyua baz=346	0.57	346	⇑*i*P	Pb	14 10 47.2	-0.4
FUSB	baz=346			S	Sb	14 10 54.6	-1.0
YHNB	Yeheng baz=324	0.57	324	⇓*i*P	Pb	14 10 47.3	-0.3
YHNB	baz=324			S	Sb	14 10 54.5	-1.1
OWD	Renai baz=244	0.57	244	P	Pb	14 10 46.9	-0.7
OWD	baz=244			*e*S	Sb	14 10 56.0	+0.3
NSK	Sanguang baz=324	0.59	323	⇑*i*P	Pb	14 10 47.5	-0.3
NSK	baz=324			S	Sb	14 10 55.1	-0.9
EGFH	Guangfu baz=215	0.61	209	*e*P	Pb	14 10 47.7	-0.4
EGFH	baz=215			*e*S	Sb	14 10 56.9	+0.4
WUSB	Renai baz=242	0.61	250	⇓*i*P	Pb	14 10 47.9	-0.4
WUSB	baz=242			S	Sb	14 10 55.4	-1.4
NWLT	Wulai baz=339	0.61	339	P	Pb	14 10 47.9	-0.4
NWLT	baz=339			S	Sg	14 10 55.6	-0.1
NTC	Toucheng baz=8.0	0.65	7	⇑P	Pb	14 10 48.6	-0.3
NTC	baz=8.0			*e*S	Sg	14 10 56.7	-0.3
VWDT	VWDT baz=230	0.71	231	⇓*i*P	Pb	14 10 49.5	-0.4
VWDT	baz=230			S	Sb	14 11 00.3	+0.8
NFF	Wufeng Townshi baz=307	0.71	307	P	Pb	14 10 49.9	0.0
NFF	baz=307			S	Sb	14 10 59.3	-0.4
WHP	Taichung City baz=275	0.73	276	⇓P	Pb	14 10 50.4	+0.1
WHP	baz=275			S	Sb	14 10 59.6	-0.6
WPL	Puli Township baz=247	0.74	255	P	Pb	14 10 50.3	-0.1
WPL	baz=247			*e*S	Sb	14 10 59.9	-0.6
HGSD	Ruisui baz=191	0.77	202	*e*P	Pn	14 10 51.9	-0.2
HGSD	baz=191			*e*S	Sn	14 11 03.8	+0.2
TIPB	Shuangxi baz=6.0	0.77	6	P	Pb	14 10 50.6	-0.2
TIPB	baz=6.0			*e*S	Sg	14 11 00.4	-0.3
WCS	Beigang Elemen baz=259	0.77	259	*e*P	Pb	14 10 50.7	-0.2
WCS	baz=259			*e*S	Sg	14 10 59.7	-1.1
NHDH	Xindian Distri baz=346	0.78	345	*e*P	Pb	14 10 51.4	+0.4
NHDH	baz=346			*e*S	Sb	14 11 01.2	-0.3
TWA	Mucha baz=350	0.79	349	⇓P	Pb	14 10 51.3	+0.1
TWA	baz=350			*e*S	Sg	14 11 00.1	-1.2
EHY	Hungye baz=209	0.80	209	*e*P	Pg	14 10 50.2	-0.8
LIOB	Emei baz=303	0.80	304	*e*P	Pb	14 10 51.5	+0.2
LIOB	baz=303			*e*S	Sb	14 11 02.1	+0.1
NSTT	Nanjuang baz=302	0.80	302	P	Pb	14 10 51.4	0.0
NSTT	baz=302			S	Sb	14 11 01.8	-0.3
TATO	Taipei baz=344	0.80	343	*e*P	Pb	14 10 51.8	+0.3
TWB1	Santiao Chiao baz=9.0	0.83	16	P	Pb	14 10 52.1	+0.2
TWB1	baz=9.0			S	Sg	14 11 02.2	-0.5
SSLB	Suanglung baz=240	0.83	240	⇓*i*P	Pb	14 10 51.6	-0.4
SSLB	baz=240			S	Sg	14 11 01.1	-1.6
SMLT	Sun Moon Lake baz=238	0.83	248	⇓*i*P	Pb	14 10 51.9	-0.2
SMLT	baz=238			*i* S	Sb	14 11 03.4	+0.2
TAP	Taipei baz=346	0.86	345	*e*P	Pn	14 10 52.8	-0.6
TAP	baz=346			S	Sb	14 11 04.5	+0.7
NWF	Wu-fen Shan baz=354	0.86	2	⇓P	Pb	14 10 52.9	+0.3
NWF	baz=354			*e*S	Sg	14 11 02.8	-0.9
TYC	Yuchr baz=241	0.86	250	P	Pb	14 10 52.4	-0.1
TYC	baz=241			S	Sb	14 11 04.0	0.0
SXI1	Grass Mountain baz=15	0.89	8	P	Pn	14 10 53.5	-0.5
SXI1	baz=15			*e*S	Sb	14 11 05.7	+0.8
TWQ1	Liyutan baz=279	0.90	279	P	Pn	14 10 54.1	+0.1
TWQ1	baz=279			S	Sn	14 11 06.3	-0.5
SBCB	Hsinchu baz=310	0.91	310	*e*P	Pn	14 10 55.0	+0.9
SBCB	baz=310			*e*S	Sn	14 11 08.4	+1.4
YULB	Yu-li baz=217	0.91	207	*e*P	Pg	14 10 52.4	-0.8
YULB	baz=217			S	Sn	14 11 06.8	-0.2
NCUH	Zhongli baz=326	0.91	326	*e*P	Pn	14 10 54.5	+0.3
NCUH	baz=326			*e*S	Sn	14 11 08.1	+0.9
NCU	National Centr baz=326	0.92	327	P	Pn	14 10 54.9	+0.7
NCU	baz=326			*e*S	Sn	14 11 07.1	-0.1
NSY	Sanyi baz=283	0.92	283	P	Pn	14 10 54.5	+0.3
NSY	baz=283			S	Sn	14 11 07.2	-0.2
HSN	Hsinchu baz=313	0.92	310	*e*P	Pg	14 10 52.8	-0.7
HSN	baz=313			*e*S	Sn	14 11 07.7	+0.3
NMLH	Miaoli baz=290	0.93	291	*e*P	Pn	14 10 55.0	+0.6
NMLH	baz=290			*e*S	Sn	14 11 07.1	-0.5
EYUL	Yuli baz=218	0.94	205	*e*P	Pg	14 10 52.2	-1.6
TWS1	Kuangyinshan baz=350	0.94	342	*e*P	Pn	14 10 55.0	+0.4
TWS1	baz=350			*e*S	Sn	14 11 07.7	-0.1
YM01	YM01 baz=351	0.95	350	P	Pn	14 10 54.7	0.0
YM01	baz=351			S	Sn	14 11 07.5	-0.7
TCU	Taichung baz=266	0.98	267	*e*P	Pn	14 10 56.3	+1.3
TCU	baz=266			*e*S	Sn	14 11 09.9	+1.2
NTST	Danshui baz=354	0.99	344	*e*P	Pn	14 10 55.4	+0.1
NTST	baz=354			*e*S	Sn	14 11 10.1	+1.0
ANP	Anpu baz=349	1.00	348	*e*P	Pn	14 10 55.0	-0.4
WJS	Zhushan baz=243	1.00	248	*e*P	Pn	14 10 56.0	+0.5
WJS	baz=243			*e*S	Sn	14 11 10.6	+1.2
WDJ	Dajia District baz=278	1.02	278	P	Pn	14 10 57.0	+1.4
WDJ	baz=278			S	Sn	14 11 10.6	+0.8
WNT	Mingjian baz=247	1.02	252	*e*P	Pn	14 10 56.6	+1.0
WNT	baz=247			*e*S	Sn	14 11 11.2	+1.3
TWY	Chenhua baz=353	1.07	353	*e*P	Pn	14 10 58.7	+2.3
TWY	baz=353			*e*S	Sn	14 11 11.3	+0.1
FULB	Fuli baz=219	1.08	202	*e*P	Pn	14 10 56.6	+0.1
FULB	baz=219			*e*S	Sn	14 11 14.6	+3.2
WCHH	Zhanghua baz=263	1.09	264	*e*P	Pn	14 10 57.9	+1.3
WCHH	baz=263			*e*S	Sn	14 11 14.5	+3.0
ALS	Alishan baz=232	1.10	231	P	Pn	14 10 56.8	-0.3
ALS	baz=232			S	Sn	14 11 12.8	+0.6
JYNG	Yonagunijimaku	1.12	77	P	Pn	14 10 57.6	+0.6
JYNG				*e*S	Sn	14 11 14.7	+2.3
CHN5	Tsauling baz=239	1.15	238	⇓*i*P	Pn	14 10 58.2	+0.8
CHN5	baz=239			S	Sn	14 11 13.5	+0.4
CHKT	Chengkung baz=213	1.15	198	*e*P	Pg	14 10 56.7	-1.2
CHKT	baz=213			*e*S	Sn	14 11 13.6	+0.5
YOJ	Yonaguni jima baz=66	1.18	77	*e*P	Pn	14 10 58.1	+0.3
YOJ	baz=66			*e*S	Sn	14 11 14.7	+0.9
YOJ	Yonaguni jima	1.18	77	P	Pn	14 10 58.4	+0.5
YOJ				*e*S	Sn	14 11 15.5	+1.6
ELDTW	Lidau baz=215	1.21	214	P	Pn	14 10 58.2	-0.2
WDLH	Douliu baz=246	1.22	245	*e*P	Pg	14 10 59.5	+0.5
WDLH	baz=246			*e*S	Sn	14 11 17.9	+3.3
WRL	Guolierlin Hig baz=257	1.28	257	*e*P	Pg	14 11 00.5	+0.1
WRL	baz=257			*e*S	Sn	14 11 18.4	+2.1
EDH	Donghe baz=182	1.29	198	*e*P	Pb	14 10 59.4	-0.4
EDH	baz=182			*e*S	Sn	14 11 17.4	+0.9
WTK	Tuku baz=236	1.34	248	*e*P	Pg	14 11 01.3	-0.1
WTK	baz=236			*e*S	Sg	14 11 20.1	+1.1
CHN4	Tsaushan baz=233	1.35	231	P	Pg	14 11 01.6	0.0
CHN4	baz=233			S	Sg	14 11 21.4	+2.1
STYH	Taoyuan baz=223	1.36	221	*e*P	Pg	14 11 01.1	-0.6
STYH	baz=223			*e*S	Sg	14 11 18.4	-1.1
TPUB	Ta-pu baz=218	1.36	229	P	Pg	14 11 01.8	-0.1
TPUB	baz=218			S	Sg	14 11 19.4	-0.1
CHY	Chiayi baz=241	1.40	240	P	Pg	14 11 02.8	+0.3
CHY	baz=241			S	Sg	14 11 22.3	+1.6
WTP	Ta-pu baz=229	1.41	228	⇓*i*P	Pg	14 11 02.5	-0.2
WTP	baz=229			S	Sg	14 11 22.8	+1.8
LONT	Longtian baz=206	1.41	204	*e*P	Pn	14 11 01.0	0.0
TWK	Hsinying baz=233	1.48	231	⇓*i*P	Pg	14 11 03.8	-0.3
TWK	baz=233			S	Sg	14 11 23.9	+0.5
WSF	Szhu baz=238	1.50	248	*e*P	Pg	14 11 04.0	-0.5
WSF	baz=238			*e*S	Sg	14 11 25.1	+1.0
SNST	Tainan City baz=232	1.50	230	*e*P	Pg	14 11 04.9	+0.3
SNST	baz=232			*e*S	Sg	14 11 25.9	+1.7
CHN1	Nanshi baz=230	1.51	228	P	Pg	14 11 04.2	-0.5
CHN1	baz=230			S	Sg	14 11 25.2	+1.0
TWG	Pinlang baz=189	1.51	204	*e*P	Pg	14 11 03.9	-0.8
TWGBT	Beinan baz=189	1.51	204	*e*P	Pg	14 11 03.4	-1.2
SGST	Jiashian baz=225	1.54	224	*e*P	Pg	14 11 04.2	-1.1
LDUT	Ludao baz=179	1.54	189	*e*P	Pn	14 11 01.0	-1.8
LDUT	baz=179			*e*S	Sn	14 11 22.6	-0.1
WSL	Shuilin Townsh baz=245	1.54	244	P	Pg	14 11 04.8	-0.6
WSL	baz=245			*e*S	Sg	14 11 25.9	+0.5
ICHU	Yijhu baz=225	1.58	238	*e*P	Pg	14 11 04.9	-1.1
ICHU	baz=225			*e*S	Sg	14 11 27.7	+1.1
CHN8	Yiju baz=226	1.64	239	*e*P	Pn	14 11 04.3	+0.1
CHN8	baz=226			*e*S	Sg	14 11 29.5	+0.9
SCST	Cishan baz=226	1.74	221	*e*P	Pg	14 11 07.7	-1.4
SCST	baz=226			*e*S	Sg	14 11 31.6	-0.1
ECL	Taimali baz=192	1.76	205	*e*P	Pb	14 11 07.8	+0.1
ECL	baz=192			*e*S	Sg	14 11 30.9	-1.3
SSD	Sandimen baz=218	1.77	215	*e*P	Pg	14 11 08.2	-1.5
SSD	baz=218			*e*S	Sg	14 11 32.0	-0.7
TSMG	Majia baz=208	1.80	214	*e*P	Pb	14 11 08.3	-0.2
IRIF	Iriomote-Funau	1.82	86	P	Pn	14 11 06.9	+0.3
IRIF				*e*S	Sb	14 11 31.6	+0.2
TWM1	Shoushan baz=225	1.83	222	*e*P	Pg	14 11 09.9	-0.9
MASBT	Mashibuluo baz=218	1.89	213	*e*P	Pb	14 11 09.8	-0.1
MASBT	baz=218			*e*S	Sb	14 11 33.8	+0.4
HATJ	Hateruma jima	1.89	94	*e*S	Sb	14 11 33.0	-0.5
SSPT	Xinbi baz=217	2.02	212	*e*P	Pb	14 11 12.5	+0.2
JKRS	Kuro-shima	2.07	89	*e*P	Pn	14 11 11.4	+1.4
PNG	Penghu baz=255	2.10	253	*e*P	Pn	14 11 11.6	+1.1
PNG	baz=255			*e*S	Sn	14 11 37.6	+1.1
PHUB	P'eng-hu baz=253	2.10	251	*e*P	Pn	14 11 11.3	+0.7
PHUB	baz=253			*e*S	Sn	14 11 36.9	+0.3
WDGT	Dungji baz=232	2.13	244	P	Pb	14 11 12.2	-1.8
WDGT	baz=232			*e*S	Sn	14 11 38.5	+1.3
JIJ	Ishigaki jima	2.19	85	P	Pn	14 11 12.2	+0.4
JIJ				S	Sn	14 11 39.0	+0.2
VWUC	VWUC baz=278	2.23	291	*e*P	Pn	14 11 12.2	-0.1
WLCH	Liuqiu baz=236	2.23	214	*e*P	Pb	14 11 15.7	-0.1
JISG	Ishigakijimahi	2.37	80	P	Pn	14 11 15.2	+1.0
JISG				S	Sn	14 11 43.8	+0.6
TWKBT	Hengchun baz=191	2.41	201	*e*P	Pb	14 11 18.1	-0.8
XPSS	Dashiqiu baz=333	3.06	333	*e*P	Pn	14 11 23.8	+0.2
KNMB	Chin-men Tao baz=275	3.07	276	*e*P	Pn	14 11 23.9	0.0
AXDP	Jialang baz=281	3.50	282	*e*P	Pn	14 11 29.8	0.0

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*JMA **02** 14:12:58.9±0.3, 24°N±1°×12°2E±°, h20*^{km}*±1*^{km}*, TAIWAN*
REGION
*TAP **02** 14:13:00.9, 24°.22N×121°.73E, h11*^{km}*, ML2.8, B*
ISC 02 14:13:00.7±0.9**, 24°.18N**±0°.02×**121°.76E**±0°.02**, h12**^{km}±5^{km}**,**
n107, σ**0**^{s}**.52**/141**, 1C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village baz=240	0.13	261	P	Pg	14 13 04.0	+0.1
ETL	baz=240			S	Sg	14 13 06.1	-0.1
EHP	Heping Village baz=11	0.13	352	*i* P	Pg	14 13 03.8	-0.2
EHP	baz=11			*i* S	Sg	14 13 06.0	-0.3
NACB	Ninganchiao baz=244	0.15	268	⇓*i*P	Pg	14 13 04.2	-0.1
NACB	baz=244			*i* S	Sg	14 13 06.5	-0.3
TWD	Chiawan baz=221	0.18	237	P	Pg	14 13 05.0	+0.3
TWD	baz=221			S	Sg	14 13 07.8	+0.3
HWA	Hwalien baz=214	0.25	215	*e*P	Pg	14 13 07.0	+1.1
ENA	Nanau baz=4.0	0.25	356	⇓*i*P	Pg	14 13 05.6	-0.3
ENA	baz=4.0			*i* S	Sg	14 13 09.1	-0.4
ETLH	Xiulin Townshi baz=268	0.26	276	⇓*i*P	Pg	14 13 05.8	-0.3
ETLH	baz=268			S	Sg	14 13 09.2	-0.5
EWUT	Wuta baz=11	0.27	3	⇓P	Pg	14 13 06.0	-0.2
EWUT	baz=11			S	Sg	14 13 09.5	-0.4
ETM	Tongmen baz=222	0.33	229	*e*P	Pg	14 13 07.4	0.0

TEYL	**Yanliau Villag** baz=210	**0.34**	**206**	eP	**Pb**	**14 13 08.8**	**-0.1**
LATG	**Datong** baz=329	**0.41**	**329**	⇓iP	**Pg**	**14 13 08.6**	**-0.3**
LATG	baz=329			S	**Sg**	**14 13 13.4**	**-1.2**
NNSB	**Datong** baz=303	**0.42**	**306**	⇓iP	**Pg**	**14 13 08.9**	**-0.3**
NNSB	baz=303			S	**Sg**	**14 13 13.8**	**-1.0**
TWC	**Suao** baz=9.0	**0.43**	**11**	P	**Pg**	**14 13 09.1**	**-0.2**
TWC	baz=9.0			S	**Sg**	**14 13 14.8**	**-0.3**
NNS	**Nan Shan** baz=304	**0.44**	**306**	⇓iP	**Pg**	**14 13 09.1**	**-0.4**
NNS	baz=304			S	**Sg**	**14 13 14.8**	**-0.5**
NDS	**Dongshan** baz=358	**0.45**	**355**	⇓iP	**Pg**	**14 13 09.6**	**-0.1**
NDS	baz=358			S	**Sg**	**14 13 15.4**	**-0.3**
WHF	**Hehuan Shan** baz=261	**0.45**	**266**	⇓iP	**Pg**	**14 13 09.7**	**-0.1**
WHF	baz=261			i S	**Sg**	**14 13 15.2**	**-0.7**
ESL	**Shilin** baz=223	**0.47**	**220**	eP	**Pg**	**14 13 10.0**	**0.0**
NDT	**Datong Townshi** baz=332	**0.48**	**332**	⇓P	**Pg**	**14 13 09.9**	**-0.2**
NDT	baz=332			S	**Sg**	**14 13 16.4**	**-0.1**
ENTT	**Nioudou** baz=340	**0.49**	**339**	⇓iP	**Pg**	**14 13 10.2**	**-0.2**
ENTT	baz=340			i S	**Sg**	**14 13 16.5**	**-0.4**
TWT	**Tachien** baz=274	**0.54**	**278**	⇓iP	**Pg**	**14 13 11.6**	**+0.3**
TWT	baz=274			S	**Sg**	**14 13 18.5**	**0.0**
TWE	**Neicheng** baz=354	**0.55**	**351**	⇓iP	**Pg**	**14 13 11.3**	**-0.1**
TWE	baz=354			S	**Sg**	**14 13 18.2**	**-0.5**
CHGB	**Renai** baz=246	**0.55**	**258**	⇓iP	**Pg**	**14 13 11.6**	**+0.1**
CHGB	baz=246			i S	**Sg**	**14 13 18.6**	**-0.3**
TDCB	**Techi** baz=274	**0.56**	**278**	⇓iP	**Pg**	**14 13 11.7**	**0.0**
TDCB	baz=274			S	**Sg**	**14 13 18.3**	**-0.7**
OWD	**Renai** baz=243	**0.58**	**247**	⇓P	**Pg**	**14 13 12.1**	**0.0**
OWD	baz=243			eS	**Sg**	**14 13 19.0**	**-0.8**
ILA	**Ilan** baz=352	**0.58**	**359**	eP	**Pg**	**14 13 12.1**	**0.0**
EGFH	**Guangfu** baz=213	**0.59**	**211**	eP	**Pb**	**14 13 13.4**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=346	**0.60**	**345**	⇓iP	**Pg**	**14 13 12.3**	**-0.2**
FUSB	baz=346			S	**Sg**	**14 13 19.5**	**-0.9**
YHNB	**Yeheng** baz=324	**0.60**	**324**	⇓iP	**Pg**	**14 13 12.3**	**-0.1**
YHNB	baz=324			S	**Sg**	**14 13 19.3**	**-1.1**
NSK	**Sanguang** baz=323	**0.61**	**323**	⇓iP	**Pg**	**14 13 12.5**	**-0.3**
NSK	baz=323			i S	**Sg**	**14 13 20.0**	**-0.9**
WUSB	**Renai** baz=241	**0.62**	**252**	⇓P	**Pg**	**14 13 12.9**	**+0.1**
WUSB	baz=241			S	**Sg**	**14 13 20.8**	**-0.2**
NWLT	**Wulai** baz=339	**0.64**	**338**	⇓P	**Pg**	**14 13 13.1**	**-0.1**
NWLT	baz=339			S	**Sg**	**14 13 21.0**	**-0.6**
NTC	**Toucheng** baz=8.0	**0.68**	**5**	eP	**Pg**	**14 13 13.9**	**+0.1**
EGS	baz=24	**0.68**	**13**	eP	**Pg**	**14 13 14.5**	**+0.5**
VWDT	**VWDT** baz=230	**0.71**	**233**	P	**Pb**	**14 13 14.7**	**-0.4**
VWDT	baz=230			eS	**Sb**	**14 13 24.6**	**-0.2**
NFF	**Wufeng Townshi** baz=306	**0.74**	**308**	P	**Pg**	**14 13 14.9**	**-0.1**
NFF	baz=306			eS	**Sg**	**14 13 24.3**	**-0.5**
WHP	**Taichung City** baz=275	**0.75**	**278**	P	**Pg**	**14 13 15.3**	**0.0**
WHP	baz=275			S	**Sg**	**14 13 25.3**	**+0.1**
HGSD	**Ruisui** baz=219	**0.75**	**204**	eP	**Pn**	**14 13 16.8**	**-0.4**
WPL	**Puli Township** baz=246	**0.75**	**257**	P	**Pg**	**14 13 15.4**	**+0.1**
WPL	baz=246			eS	**Sg**	**14 13 24.9**	**-0.3**
DPDB	**Guoxing** baz=257	**0.78**	**259**	eP	**Pg**	**14 13 15.7**	**-0.1**
EHY	**Hungye** baz=209	**0.78**	**211**	eP	**Pb**	**14 13 15.7**	**-0.7**
WCS	**Beigang Elemen** baz=259	**0.79**	**261**	eP	**Pg**	**14 13 15.8**	**-0.1**
TIPB	**Shuangxi** baz=351	**0.79**	**4**	eP	**Pg**	**14 13 15.9**	**-0.2**
NHDH	**Xindian Distri** baz=346	**0.81**	**345**	eP	**Pb**	**14 13 17.1**	**+0.3**
TWA	**Mucha** baz=350	**0.81**	**349**	eP	**Pg**	**14 13 16.7**	**+0.3**
LIOB	**Emei** baz=304	**0.82**	**304**	eP	**Pg**	**14 13 16.7**	**0.0**
NSTT	**Nanjuang** baz=302	**0.82**	**303**	eP	**Pg**	**14 13 16.4**	**-0.3**
TATO	**Taipei** baz=344	**0.83**	**343**	⇑P	**Pg**	**14 13 17.0**	**+0.2**
SSLB	**Suanglung** baz=240	**0.83**	**242**	⇓P	**Pg**	**14 13 16.6**	**-0.3**
SSLB	baz=240			S	**Sg**	**14 13 27.1**	**-0.7**
SMLT	**Sun Moon Lake** baz=238	**0.84**	**250**	eP	**Pb**	**14 13 17.2**	**-0.2**
SMLT	baz=238			eS	**Sb**	**14 13 28.3**	**-0.4**
TWB1	**Santiao Chiao** baz=9.0	**0.85**	**14**	eP	**Pg**	**14 13 17.2**	**0.0**
TYC	**Yuchr** baz=249	**0.87**	**252**	eP	**Pg**	**14 13 17.2**	**-0.4**
NWF	**Wu-fen Shan** baz=354	**0.89**	**1**	eP	**Pg**	**14 13 17.9**	**0.0**
NWF	baz=354			eS	**Sg**	**14 13 29.2**	**-0.3**
TAP	**Taipei** baz=346	**0.89**	**345**	eP	**Pg**	**14 13 16.5**	**-1.3**
WFSB	**Wu-fen Shan** baz=355	**0.89**	**1**	eP	**Pg**	**14 13 18.1**	**+0.2**
WFSB	baz=355			S	**Sg**	**14 13 28.7**	**-0.8**
YULB	**Yu-li** baz=219	**0.89**	**209**	eP	**Pg**	**14 13 17.4**	**-0.5**
ECBN	**Changbin** baz=184	**0.91**	**198**	eP	**Pn**	**14 13 19.7**	**+0.4**
SXI1	**Grass Mountain** baz=355	**0.92**	**7**	eP	**Pg**	**14 13 18.4**	**-0.1**
TWQ1	**Liyutan** baz=279	**0.92**	**281**	eP	**Pn**	**14 13 19.7**	**+0.2**
TWF1	**Yuli** baz=219	**0.93**	**207**	eP	**Pb**	**14 13 18.9**	**+0.1**
SBCB	**Hsinchu** baz=310	**0.93**	**311**	P	**Pn**	**14 13 20.4**	**+0.6**
NSY	**Sanyi** baz=283	**0.94**	**285**	eP	**Pg**	**14 13 18.1**	**-0.9**
NCU	**National Centr** baz=322	**0.94**	**327**	eP	**Pg**	**14 13 18.4**	**-0.6**
NCUH	**Zhongli** baz=321	**0.94**	**326**	eP	**Pb**	**14 13 19.6**	**+0.5**
NMLH	**Miaoli** baz=297	**0.95**	**292**	eP	**Pn**	**14 13 20.5**	**+0.5**
TWS1	**Kuangyinshan** baz=342	**0.97**	**341**	eP	**Pg**	**14 13 19.6**	**+0.2**
YM01	**YM01** baz=3.0	**0.98**	**350**	eP	**Pg**	**14 13 19.8**	**+0.2**
WWF	**Wufeng** baz=255	**0.98**	**262**	eP	**Pn**	**14 13 20.9**	**+0.5**
TCU	**Taichung** baz=266	**0.99**	**268**	eP	**Pn**	**14 13 22.0**	**+1.4**
WJS	**Zhushan** baz=240	**1.01**	**250**	eP	**Pn**	**14 13 21.4**	**+0.6**
YUS	**Yu-Shan** baz=236	**1.01**	**227**	eP	**Pg**	**14 13 20.0**	**-0.3**
YM08	**YM08** baz=352	**1.02**	**351**	eP	**Pg**	**14 13 20.1**	**-0.2**
WNT1	**Nantou City** baz=243	**1.02**	**255**	eP	**Pn**	**14 13 21.5**	**+0.5**
ANP	**Anpu** baz=349	**1.03**	**348**	eP	**Pg**	**14 13 20.0**	**-0.5**
WNT	**Mingjian** baz=242	**1.03**	**253**	eP	**Pn**	**14 13 21.4**	**+0.3**
WDJ	**Dajia District** baz=278	**1.04**	**280**	eP	**Pn**	**14 13 23.0**	**+1.9**
NHW	**Xinwu Township** baz=322	**1.05**	**322**	eP	**Pg**	**14 13 20.4**	**-0.5**
FULB	**Fuli** baz=217	**1.07**	**204**	eP	**Pn**	**14 13 22.4**	**+0.8**
ALS	**Alishan** baz=217	**1.10**	**233**	P	**Pb**	**14 13 22.0**	**+0.1**
WCHH	**Zhanghua** baz=263	**1.10**	**265**	eP	**Pn**	**14 13 23.3**	**+1.2**
CHKT	**Chengkung** baz=183	**1.14**	**199**	eP	**Pn**	**14 13 22.3**	**-0.2**
CHN5	**Tsauling** baz=239	**1.15**	**240**	eP	**Pn**	**14 13 23.5**	**+0.7**
CHN5	baz=239			eS	**Sn**	**14 13 39.9**	**+1.4**
YOJ	**Yonaguni jima** baz=66	**1.18**	**76**	eP	**Pg**	**14 13 23.1**	**-0.2**
ELDTW	**Lidau** baz=214	**1.20**	**215**	eP	**Pg**	**14 13 22.9**	**-0.9**
WGK	**Gukeng** baz=245	**1.20**	**246**	eP	**Pn**	**14 13 24.4**	**+1.0**
EDH	**Donghe** baz=185	**1.27**	**199**	eP	**Pg**	**14 13 25.4**	**+0.2**
WRL	**Guolierlin Hig** baz=257	**1.29**	**258**	eP	**Pn**	**14 13 24.7**	**0.0**
WTK	**Tuku** baz=234	**1.35**	**249**	eP	**Pb**	**14 13 25.9**	**-0.1**
CHN4	**Tsaushan** baz=232	**1.35**	**233**	eP	**Pg**	**14 13 26.8**	**+0.1**
STYH	**Taoyuan** baz=222	**1.35**	**222**	eP	**Pn**	**14 13 25.4**	**-0.1**
TPUB	**Ta-pu** baz=230	**1.36**	**230**	P	**Pg**	**14 13 26.3**	**-0.5**
STYT	**Tauyuan** baz=222	**1.37**	**222**	eP	**Pb**	**14 13 26.0**	**-0.4**
WTP	**Ta-pu** baz=229	**1.40**	**229**	eP	**Pg**	**14 13 27.2**	**-0.5**
TWK	**Hsinying** baz=232	**1.48**	**232**	eP	**Pb**	**14 13 27.9**	**-0.3**
TWG	**Pinlang** baz=189	**1.49**	**205**	eP	**Pg**	**14 13 29.0**	**-0.4**
TWGBT	**Beinan** baz=189	**1.49**	**205**	eP	**Pb**	**14 13 27.9**	**-0.6**
CHN1	**Nanshi** baz=230	**1.50**	**229**	eP	**Pg**	**14 13 29.1**	**-0.5**
SGST	**Jiashian** baz=225	**1.54**	**225**	eP	**Pb**	**14 13 28.6**	**-0.6**
WSL	**Shuilin Townsh** baz=245	**1.55**	**245**	eP	**Pb**	**14 13 29.6**	**+0.2**
SLGT	**Liugui** baz=222	**1.56**	**221**	eP	**Pg**	**14 13 30.3**	**-0.5**
ICHU	**Yijhu** baz=239	**1.58**	**239**	eP	**Pg**	**14 13 30.8**	**-0.4**
SSD	**Sandimen** baz=218	**1.76**	**216**	eP	**Pb**	**14 13 32.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.80**	**85**	eS	**Sn**	**14 13 54.9**	**+0.3**
MASBT	**Mashibuluo** baz=217	**1.87**	**214**	eP	**Pb**	**14 13 34.8**	**-0.2**
PHUB	**P'eng-hu** baz=253	**2.11**	**252**	eP	**Pn**	**14 13 36.2**	**+0.3**
WDGT	**Dungji** baz=246	**2.13**	**245**	eP	**Pn**	**14 13 36.8**	**+0.5**
VWUC	**VWUC** baz=277	**2.25**	**291**	eP	**Pn**	**14 13 37.8**	**-0.2**
JISG	**Ishigakijimahi**	**2.36**	**80**	eS	**Sn**	**14 14 09.0**	**+0.7**

KRSC ***02*** *14:17:45.7±2.9, 50.°35N×157.°17E, h81^{km}±27^{km}, ML4.1*
MOS ***02*** *14:17:47.5±1.2, 50.°58N×156.°40E, h92^{km}, mb4.0/4, Error ellipse: s-maj=19.7km s-min=4.7km az=76.4*
ISC 02 14:17:45.2±1.8**, 50.°3N**±0.°1×**156.°99E**±0.°07**, h81**^{km}±8^{km}**, n58,** σ**1.^{s}91**/84**, mb4.0**/4**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril’s**	**0.70**	**308**	PN	**Pn**	**14 18 01.9**	**+0.9**
SKR				S	**Sn**	**14 18 12.3**	**-0.4**
SKR	**Severo-Kuril’s**	**0.70**	**308**	eP	**Pn**	**14 18 01.9**	**+0.9**
SKR				eS	**Sn**	**14 18 12.3**	**-0.4**
PAU	**Pauzhetka**	**1.22**	**355**	PN	**Pn**	**14 18 07.2**	**+0.2**
PAU				S	**Sn**	**14 18 22.5**	**-0.8**
PAU	**Pauzhetka**	**1.22**	**355**	eP	**Pn**	**14 18 07.2**	**+0.2**
PAU				eS	**Sn**	**14 18 22.5**	**-0.8**
KDTR	**Khodutka, Kamc**	**1.70**	**23**	PN	**Pn**	**14 18 14.6**	**+1.5**
KDTR				S	**Sn**	**14 18 34.6**	**+0.3**
KDTR	**Khodutka, Kamc**	**1.70**	**23**	eP	**Pn**	**14 18 14.6**	**+1.5**
KDTR				eS	**Sn**	**14 18 34.6**	**+0.3**
MIPR	**Malaya Ipel'ka**	**2.03**	**356**	PN	**Pn**	**14 18 16.9**	**-0.6**
MIPR	**Malaya Ipel'ka**	**2.03**	**356**	i P	**Pn**	**14 18 16.9**	**-0.6**
ASAK	**Asacha**	**2.21**	**15**	PN	**Pn**	**14 18 21.5**	**+1.6**
ASAK				S	**Sn**	**14 18 47.4**	**+1.0**
ASAK	**Asacha**	**2.21**	**15**	eP	**Pn**	**14 18 21.5**	**+1.6**
ASAK				eS	**Sn**	**14 18 47.4**	**+1.0**
MTVR	**Mutnovka**	**2.35**	**18**	PN	**Pn**	**14 18 23.7**	**+1.8**
MTVR				S	**Sn**	**14 18 50.6**	**+0.6**
MTVR	**Mutnovka**	**2.35**	**18**	eP	**Pn**	**14 18 23.7**	**+1.8**
MTVR				eS	**Sn**	**14 18 50.6**	**+0.6**
RUS	**Russkaya**	**2.38**	**23**	PN	**Pn**	**14 18 23.3**	**+1.1**
RUS				S	**Sn**	**14 18 50.2**	**-0.3**
RUS	**Russkaya**	**2.38**	**23**	eP	**Pn**	**14 18 23.3**	**+1.1**
RUS				eS	**Sn**	**14 18 50.2**	**-0.3**
GRL	**Gorelyy**	**2.40**	**16**	PN	**Pn**	**14 18 24.3**	**+1.8**
GRL	**Gorelyy**	**2.40**	**16**	eP	**Pn**	**14 18 24.3**	**+1.8**
KRMR	**Karymshinskiy**	**2.67**	**15**	PN	**Pn**	**14 18 27.4**	**+1.3**
KRMR				S	**Sn**	**14 18 58.2**	**+0.7**
KRMR	**Karymshinskiy**	**2.67**	**15**	eP	**Pn**	**14 18 27.4**	**+1.3**
KRMR				eS	**Sn**	**14 18 58.2**	**+0.7**
APC	**Apacha**	**2.68**	**2**	PN	**Pn**	**14 18 25.4**	**-0.7**
APC	**Apacha**	**2.68**	**2**	eP	**Pn**	**14 18 25.4**	**-0.7**
PEA0B	**Petropavlovsk-**	**2.89**	**8**	d iPN	**Pn**	**14 18 29.8**	**+0.7**
PET	**Petropavlovsk**	**2.96**	**20**	ePN	**Pn**	**14 18 32.1**	**+2.2**
PET				eS	**Sn**	**14 19 05.3**	**+0.9**
PET	comp=Z,31nm,0.5s			pmax	pmax		
PET	comp=N,57nm,0.4s			smax	smax		
PET	comp=E,23nm,0.5s			smax	smax		
PET	**Petropavlovsk**	**2.96**	**20**	eP	**Pn**	**14 18 31.5**	**+1.6**
PET				eS	**Sn**	**14 19 04.0**	**-0.4**
DALK	**Dalny**	**2.99**	**21**	PN	**Pn**	**14 18 31.9**	**+1.6**
DALK				S	**Sn**	**14 19 06.6**	**+1.5**
DALK	**Dalny**	**2.99**	**21**	eP	**Pn**	**14 18 31.9**	**+1.6**
DALK				eS	**Sn**	**14 19 06.6**	**+1.5**
UGLR	**Uglovaya**	**3.17**	**20**	PN	**Pn**	**14 18 35.2**	**+2.3**
UGLR	**Uglovaya**	**3.17**	**20**	eP	**Pn**	**14 18 35.2**	**+2.3**
AVH	**Avacha**	**3.20**	**19**	PN	**Pn**	**14 18 35.6**	**+2.3**
AVH	**Avacha**	**3.20**	**19**	eP	**Pn**	**14 18 35.6**	**+2.3**
KOK	**Koryaka**	**3.21**	**18**	PN	**Pn**	**14 18 35.9**	**+2.5**
KOK	**Koryaka**	**3.21**	**18**	eP	**Pn**	**14 18 35.9**	**+2.5**
SMAR	**Somma**	**3.21**	**20**	PN	**Pn**	**14 18 35.6**	**+2.0**
SMAR	**Somma**	**3.21**	**20**	eP	**Pn**	**14 18 35.6**	**+2.0**
KRER	**Koryakskii**	**3.24**	**19**	PN	**Pn**	**14 18 36.2**	**+2.2**
KRER	**Koryakskii**	**3.24**	**19**	eP	**Pn**	**14 18 36.2**	**+2.2**
SDLR	**Sedlovina**	**3.25**	**20**	PN	**Pn**	**14 18 35.7**	**+1.7**
SDLR	**Sedlovina**	**3.25**	**20**	eP	**Pn**	**14 18 35.7**	**+1.7**
NLC	**Nalytchevo**	**3.27**	**26**	PN	**Pn**	**14 18 34.6**	**+0.5**
NLC				S	**Sn**	**14 19 09.9**	**-1.9**
NLC	**Nalytchevo**	**3.27**	**26**	eP	**Pn**	**14 18 34.6**	**+0.5**
NLC				eS	**Sn**	**14 19 09.9**	**-1.9**
KRX	**Arik**	**3.27**	**18**	PN	**Pn**	**14 18 36.4**	**+2.0**
KRX	**Arik**	**3.27**	**18**	eP	**Pn**	**14 18 36.4**	**+2.0**
SPN	**Mys Shipunski**	**3.42**	**32**	PN	**Pn**	**14 18 38.3**	**+2.2**
SPN				S	**Sn**	**14 19 14.5**	**-1.0**
SPN	**Mys Shipunski**	**3.42**	**32**	eP	**Pn**	**14 18 38.3**	**+2.2**
SPN				eS	**Sn**	**14 19 14.5**	**-1.0**
GNL	**Ganaly**	**3.50**	**9**	PN	**Pn**	**14 18 38.3**	**+1.0**
GNL	**Ganaly**	**3.50**	**9**	eP	**Pn**	**14 18 38.3**	**+1.0**
MKZ	**Mys Kozlova**	**5.19**	**32**	PN	**Pn**	**14 19 00.6**	**+0.3**
MKZ				S	**Sn**	**14 19 55.9**	**-2.8**
MKZ	**Mys Kozlova**	**5.19**	**32**	eP	**Pn**	**14 19 00.6**	**+0.3**
MKZ				eS	**Sn**	**14 19 55.9**	**-2.8**
TUMD	**Tumrok D**	**5.37**	**21**	eP	**Pn**	**14 19 05.5**	**+2.8**
TUMR	**Tumrok**	**5.39**	**20**	PN	**Pn**	**14 19 05.5**	**+2.4**
TUMR	**Tumrok**	**5.39**	**20**	eP	**Pn**	**14 19 06.5**	**+3.4**
BKI	**Bering**	**7.37**	**44**	eS	**Sn**	**14 20 44.7**	**-7.1**
MA2	**Magadan**	**10.00**	**341**	i PN	**Pn**	**14 20 03.2**	**-2.6**
MA2	comp=Z,1.0nm,0.2s			pmax	pmax		
SEY	**Seymchan**	**12.96**	**351**	i PN	**Pn**	**14 20 43.4**	**-2.4**
SEY	comp=Z,1.0nm,1.0s			pmax	pmax		
YAK	**Yakutsk**	**19.07**	**319**	i P	**P**	**14 21 57.2**	**-3.6**
YAK	comp=Z,8.0nm,0.7s			pmax	pmax		
TIXI	**Tiksi**	**24.96**	**339**	i P	**P**	**14 22 59.2**	**-1.3**
TIXI	comp=Z,6.0nm,3.0s			pmax	pmax		
KURK	**Kurchatov**	**47.61**	**303**	i P	**P**	**14 26 13.5**	**+0.9**
KURK	comp=Z,3.0nm,0.9s			pmax	pmax		
ARU	**Arti**	**54.18**	**317**	i P	**P**	**14 26 59.2**	**-2.5**
ARU	comp=Z,1.0nm,0.9s			pmax	pmax		
OBN	**Obninsk**	**63.84**	**326**	⇑eP	**P**	**14 28 11.2**	**+2.7**
OBN				e		14 30 27.0	
OBN				eS	**S**	**14 36 38.2**	**+1.2**
OBN				eSS	**SS**	**14 40 49.6**	**+4.1**
OBN	comp=Z,4.0nm,0.8s			pmax	pmax		
OBN	comp=Z,107nm,16.0s			MLR	MLR		

INET ***02*** *14:24:52.1±0.7, 12.°50N×88.°03W, h15^{km}±18^{km}, MW3.7*
UCR ***02*** *14:24:53.8±0.8, 12.°54N×88.°06W, h30^{km}±4^{km}, ML3.8*
SNET ***02*** *14:24:54.1±0.8, 12.°57N×88.°05W, h32^{km}±4^{km}, ML3.8*
ISC 02 14:24:52.8±1.7**, 12.°47N**±0.°08×**88.°00W**±0.°05**, h50**^{km}**, n45,** σ**0.^{s}40**/53**, 8C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.67**	**40**	eP	**Pn**	**14 25 06.0**	**-0.2**
JUCU	**Jucuar¡n**	**0.82**	**343**	eP	**Pn**	**14 25 07.6**	**-0.6**
JUCU				eS	**Sn**	**14 25 18.7**	**-0.7**
JUCU	comp=Z,3µm,0.2s			IAML		14 25 21.5	
JUCU	**Jucuar¡n**	**0.82**	**343**	eP	**Pn**	**14 25 07.6**	**-0.6**
JUCU				eS	**Sn**	**14 25 18.7**	**-0.7**
JUCU	comp=Z,3µm,0.2s			IAML		14 25 21.5	
CNCH	**Conchagua**	**0.82**	**11**	eP	**Pn**	**14 25 08.4**	**+0.1**
CNCH				eS	**Sn**	**14 25 19.6**	**+0.1**
CNCH	**Conchagua**	**0.82**	**11**	eP	**Pn**	**14 25 08.4**	**+0.1**
CNCH				eS	**Sn**	**14 25 19.6**	**+0.1**
LCND	**La Caada**	**0.84**	**7**	⇓iP	**Pn**	**14 25 08.5**	**0.0**
LCND				eS	**Sn**	**14 25 20.0**	**+0.1**
LCND	comp=Z,4µm,0.2s			IAML		14 25 24.4	
LCND	**La Caada**	**0.84**	**7**	⇓iP	**Pn**	**14 25 08.5**	**0.0**
LCND				eS	**Sn**	**14 25 20.0**	**+0.1**
LCND	comp=Z,4µm,0.2s			IAML		14 25 24.4	
CRIN	**San Cristobal**	**0.96**	**76**	eP	**Pn**	**14 25 10.8**	**+0.7**
LCY	**Lacayo**	**0.99**	**343**	eP	**Pn**	**14 25 10.7**	**+0.1**
LCY				eS	**Sn**	**14 25 23.3**	**-0.3**
LCY	**Lacayo**	**0.99**	**343**	eP	**Pn**	**14 25 10.7**	**+0.1**
LCY				eS	**Sn**	**14 25 23.3**	**-0.3**
PACA	**Pacayal**	**1.04**	**342**	eP	**Pn**	**14 25 11.3**	**0.0**
PACA	**Pacayal**	**1.04**	**342**	eP	**Pn**	**14 25 11.3**	**0.0**
TELN	**Telica**	**1.15**	**83**	eP	**Pn**	**14 25 12.5**	**-0.2**
CNGN	**Cerro Negro**	**1.27**	**88**	eP	**Pn**	**14 25 13.3**	**-0.9**
PQSS	**Presa 15 de Se**	**1.27**	**335**	eP	**Pn**	**14 25 14.8**	**+0.6**
PQSS	**Presa 15 de Se**	**1.27**	**335**	eP	**Pn**	**14 25 14.8**	**+0.6**
CAHU	**Cacacuatique**	**1.31**	**351**	eP	**Pn**	**14 25 15.2**	**+0.2**
CAHU	**Cacacuatique**	**1.31**	**351**	eP	**Pn**	**14 25 15.2**	**+0.2**
COPN	**Copaltepe**	**1.41**	**102**	eP	**Pn**	**14 25 16.1**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.42**	**330**	eP	**Pn**	**14 25 16.6**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.42**	**330**	eP	**Pn**	**14 25 16.6**	**+0.4**
MOMN	**Momotombo**	**1.43**	**92**	eP	**Pn**	**14 25 16.5**	**+0.1**
COEG	**Centro de Oper**	**1.43**	**323**	eP	**Pn**	**14 25 16.6**	**+0.2**
COEG	comp=Z,2µm,0.3s			IAML		14 25 37.8	
COEG	**Centro de Oper**	**1.43**	**323**	eP	**Pn**	**14 25 16.6**	**+0.2**
COEG	comp=Z,2µm,0.3s			IAML		14 25 37.8	
SJTE	**Alcalda de S**	**1.50**	**319**	⇑eP	**Pn**	**14 25 17.3**	**-0.2**
SJTE	**Alcalda de S**	**1.50**	**319**	⇑eP	**Pn**	**14 25 17.3**	**-0.2**
PAVA	**Las Pavas**	**1.54**	**324**	eP	**Pn**	**14 25 18.5**	**+0.5**
PAVA	**Las Pavas**	**1.54**	**324**	eP	**Pn**	**14 25 18.5**	**+0.5**
LFRS	**El Faro**	**1.55**	**318**	⇑iP	**Pn**	**14 25 17.9**	**-0.2**
LFRS	**El Faro**	**1.55**	**318**	⇑iP	**Pn**	**14 25 17.9**	**-0.2**
APYN	**Apoyeque**	**1.63**	**98**	eP	**Pn**	**14 25 19.2**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.73**	**24**	⇑iP	**Pn**	**14 25 21.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.73**	**24**	⇑iP	**Pn**	**14 25 21.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.73**	**24**	eP	**Pn**	**14 25 21.0**	**+0.3**
MGAN	**Managua**	**1.74**	**100**	eP	**Pn**	**14 25 21.0**	**+0.4**
BOQS	**Boqueron**	**1.77**	**315**	eP	**Pn**	**14 25 22.1**	**+0.8**
BOQS	**Boqueron**	**1.77**	**315**	eP	**Pn**	**14 25 22.1**	**+0.8**
HUEN		**1.79**	**94**	eP	**Pn**	**14 25 21.6**	**+0.3**
JAYA	**Jayaque - finc**	**1.84**	**310**	eP	**Pn**	**14 25 21.9**	**-0.2**
JAYA	**Jayaque - finc**	**1.84**	**310**	eP	**Pn**	**14 25 21.9**	**-0.2**
MATN	**Matagalpa**	**2.08**	**77**	eP	**Pn**	**14 25 25.3**	**0.0**
NUBE	**Las Nubes**	**2.25**	**310**	eP	**Pn**	**14 25 28.2**	**+0.5**
NUBE	**Las Nubes**	**2.25**	**310**	eP	**Pn**	**14 25 28.2**	**+0.5**
MTO3	**Montecristo**	**2.33**	**326**	⇑eP	**Pn**	**14 25 29.2**	**+0.2**
MTO3	**Montecristo**	**2.33**	**326**	⇑eP	**Pn**	**14 25 29.2**	**+0.2**

IDC ***02*** *14:24:51.6±1.4, 6.°31S×107.°16W, h0^{km}, mb4.1/13, mbtmp4.1/13, MS4.3/40, Error ellipse: s-maj=48.9km s-min=19.1km az=54.0*
NEIC ***02*** *14:24:55.6±1.7, 6.°2S±0.°1×106.°77W±0.°07, h10^{km}±1^{km}, mb4.5/91, Error ellipse: s-maj=22.4km s-min=11.0km az=193.0*
GCMT ***02*** *14:24:56.6±0.2, 6.°22S±0.°01×107.°16W±0.°01, h17^{km}±1^{km}, MW5.1/123, Moment Tensor Solution. s51,c60; s123,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.42±.11; $M_{\theta\theta}$-0.45±.10; $M_{\phi\phi}$0.87±.11; $M_{r\theta}$0.84±.26; $M_{\theta\phi}$4.73±.10; $M_{\phi r}$-1.58±.30; Best double couple: $M_0$5.11300×10^{16} NP1:ϕ_s264.00000°, δ71.00000°, λ-9.00000°. NP2:ϕ_s357.00000°, δ81.00000°, λ-161.00000°. Principal axes: T 5.0660, Plg7.0000°, Azm130.0000°; N 0.0930, Plg69.0000°, Azm21.0000°; P -5.1590, Plg20.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 14:24:54.4±0.9**, 6.°2S**±0.°1×**106.°8W**±0.°2**, h10**^{km}**, n144,** σ**1.^{s}08**/105**, mb4.5**/56**, MS4.4**/40**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui** comp=Z,150nm,19.6s,baz=5.5,slow=32	**20.96**	**186**	LR	LR	14 35 51.1	
CMIG	**Matias Romero** comp=Z,1µm,21.0s,baz=198,slow=31	**25.96**	**27**	LR	LR	14 38 27.0	
NNA	**Nana** comp=Z,960nm,19.5s,baz=268,slow=30	**30.15**	**103**	LR	LR	14 39 51.9	
LPIG	**La Paz** comp=Z,266nm,19.8s,baz=176,slow=28	**30.29**	**354**	LR	LR	14 38 58.3	
ROSC	**El Rosal** comp=Z,227nm,22.0s,baz=280,slow=31	**34.25**	**72**	LR	LR	14 42 56.0	
TXAR	**Lajitas Array** 0.5nm,0.6s,baz=190,slow=10,SNR=5.3	**35.44**	**5**	P	**P**	**14 31 52.5**	**+1.3**
TXAR	comp=Z,179nm,18.7s,baz=188,slow=32 0.5nm,0.6s			LR	LR	14 43 42.5	
TXAR	**Lajitas Array**	**35.44**	**5**	P	**P**	**14 31 51.7**	**+0.6**
CBCY	**The Bluff, Cay**	**37.06**	**45**	P	**P**	**14 32 05.0**	**+0.1**
319A	**Douglas**	**37.42**	**357**	P	**P**	**14 32 08.7**	**+0.7**
319A	comp=Z,7.3nm,0.9s			IAmb	IAmb	14 32 16.5	
H03N2	**Juan Fernandez** baz=313,slow=77,SNR=826	**37.49**	**140**	T	T	15 12 03.7	
H03N1	**Juan Fernandez** baz=313,slow=77,SNR=698	**37.51**	**140**	T	T	15 12 05.0	
H03N3	**Juan Fernandez** baz=313,slow=77,SNR=1167	**37.51**	**140**	T	T	15 12 04.4	
MNTX	**Cornudas Mount**	**37.69**	**2**	P	**P**	**14 32 11.0**	**+0.8**
PB16	**IPOC Station P**	**38.33**	**112**	P	**P**	**14 32 18.3**	**+1.8**

PB16				IAmb	IAmb	14 32 22.6	
	comp=Z,8.5nm,1.0s						
214A	Organ Pipe Nat	38.35	352	P	P	14 32 15.0	-0.8
PB07	IPOC Station P	38.90	117	P	P	14 32 20.1	-0.7
PB07				IAmb	IAmb	14 32 29.2	
	comp=Z,7.9nm,1.0s						
WHTX	Lake Whitney,	39.00	13	P	P	14 32 22.2	+1.1
WHTX				IAmb	IAmb	14 32 25.1	
	comp=Z,14nm,0.8s						
SDV	Santo Domingo	39.06	68	LR	LR	14 45 41.2	
	comp=Z,225nm,21.5s,baz=244,slow=32						
PB08	IPOC Station P	39.10	114	P	P	14 32 21.7	-1.0
LPAZ	La Paz	39.19	108	P	P	14 32 25.3	+1.5
	comp=Z,1.4nm,0.9s,baz=307,slow=4.7,SNR=5.7						
LPAZ				LR	LR	14 45 25.3	
	comp=Z,530nm,21.3s,baz=276,slow=31						
	comp=Z,1.4nm,0.9s						
LVC	Limon Verde	40.03	118	P	P	14 32 31.3	+0.9
	comp=Z,1.7nm,0.5s,baz=282,slow=5.8,SNR=2.3						
LVC				LR	LR	14 44 54.8	
	comp=Z,1µm,19.5s,baz=286,slow=30						
	comp=Z,1.7nm,0.5s						
LVC	Limon Verde	40.03	118	IAmb	IAmb	14 32 37.1	
	comp=Z,7.2nm,1.1s						
LENM	Lemitar	40.13	360	P	P	14 32 30.7	-0.1
PFO	Pinyon Flats O	40.62	348	LR	LR	14 45 16.1	
	comp=Z,481nm,20.0s,baz=164,slow=30						
BAUV	El Baul	41.48	69	P	P	14 32 41.5	-0.5
W13A	Hualapai Mount	41.60	351	P	P	14 32 44.0	+1.1
WUAZ	Wupatki	41.70	354	P	P	14 32 45.5	+1.8
MIAR	Mount Ida	42.40	16	P	P	14 32 48.9	-0.4
QSM	Queen of Sheba	42.97	348	P	P	14 32 54.1	+0.2
GWY	Greenwater Val	43.15	348	P	P	14 32 57.0	+1.5
SHPR	Sheep Range	43.18	350	P	P	14 32 56.8	+1.0
MVCO	Mesa Verde	43.20	358	P	P	14 32 57.0	+1.0
MVCO				IAmb	IAmb	14 33 07.2	
	comp=Z,13nm,1.4s						
PPT	Papeete	43.23	251	LR	LR	14 46 10.3	
	comp=Z,262nm,18.1s,baz=86,slow=30						
S22A	4UR Ranch, Cre	43.70	360	P	P	14 33 00.9	+0.8
S22A				IAmb	IAmb	14 33 11.8	
	comp=Z,10nm,1.4s						
SDCO	Great Sand Dun	43.72	2	P	P	14 33 00.5	+0.2
TPNV	Topopah Spring	43.80	349	P	P	14 33 03.6	+2.8
CCUT	Cedar City	43.93	353	P	P	14 33 03.7	+1.8
PV13	Radium Mtn., P	44.15	358	P	P	14 33 04.1	+0.5
PV13				IAmb	IAmb	14 33 11.1	
	comp=Z,5.3nm,1.0s						
Y49A	Blount Mountai	44.27	25	P	P	14 33 05.3	+0.9
MTPU	Mount Pierson	44.28	354	P	P	14 33 05.4	+0.5
LCAR	Lake Charles	44.53	18	P	P	14 33 06.3	-0.1
LCAR				IAmb	IAmb	14 33 17.5	
	comp=Z,8.1nm,1.2s						
PLAL	Pickwick Lake	44.60	22	P	P	14 33 06.9	-0.1
PLAL				IAmb	IAmb	14 33 10.9	
	comp=Z,12nm,1.4s						
PSUT	Pine Spring	44.97	352	P	P	14 33 11.7	+1.6
TPH	Tonopah	45.08	348	P	P	14 33 12.2	+1.2
SRU	San Rafael Swe	45.20	356	P	P	14 33 12.7	+0.8
CBKS	Cedar Bluff	45.25	8	P	P	14 33 12.6	+0.5
CBKS				IAmb	IAmb	14 33 26.6	
	comp=Z,8.7nm,0.9s						
S39A	Bolivar	45.43	15	P	P	14 33 14.0	+0.4
S39A				IAmb	IAmb	14 33 15.3	
	comp=Z,11nm,1.4s						
LHV	Little Huntoon	45.52	347	P	P	14 33 16.3	+2.0
LHV				IAmb	IAmb	14 33 26.3	
	comp=Z,6.4nm,1.1s						
P17A	Butcher Ranch,	45.57	356	P	P	14 33 16.2	+1.3
P17A				IAmb	IAmb	14 33 27.1	
	comp=Z,8.4nm,1.2s						
SWET	Sewanee	45.64	24	P	P	14 33 15.6	+0.2
SWET				IAmb	IAmb	14 33 16.5	
	comp=Z,7.9nm,1.2s						
NVAR	Mina Array Bea	45.65	347	P	P	14 33 16.2	+0.7
	comp=Z,1.8nm,0.9s,baz=174,slow=9.5,SNR=6.0						
	comp=Z,1.8nm,0.9s						
P18A	Preston Nutter	45.69	356	P	P	14 33 16.9	+0.9
P18A				IAmb	IAmb	14 33 31.5	
	comp=Z,6.2nm,1.2s						
WVT	Waverly	45.71	22	P	P	14 33 16.0	+0.2
WVT				IAmb	IAmb	14 33 31.7	
	comp=Z,14nm,1.5s						
ISCO	Idaho Springs	45.77	1	P	P	14 33 17.5	+0.9
RYN	Ryan	45.89	347	P	P	14 33 18.5	+1.2
RYN				IAmb	IAmb	14 33 25.1	
	comp=Z,4.3nm,0.9s						
KVN	Kaiserville	46.20	348	P	P	14 33 22.3	+2.4
KVN				IAmb	IAmb	14 33 27.5	
	comp=Z,4.5nm,1.1s						
CCM	Cathedral Cave	46.34	17	P	P	14 33 20.2	-0.6
CCM				IAmb	IAmb	14 33 32.0	
	comp=Z,5.5nm,0.9s						
CPCT	Cooper Cave	46.43	25	P	P	14 33 20.9	-0.6
CPCT				IAmb	IAmb	14 33 22.8	
	comp=Z,6.4nm,0.9s						
PNTR	Pine Nut	46.57	346	P	P	14 33 23.9	+1.1
EMB	Emerald Bay	46.59	346	P	P	14 33 24.9	+2.0
EMB				IAmb	IAmb	14 33 27.2	
	comp=Z,8.0nm,1.1s						
SJG	San Juan	46.84	58	LR	LR	14 50 12.2	
	comp=Z,202nm,19.9s,baz=254,slow=32						
TKL	Tuckaleechee C	46.93	26	P	P	14 33 26.3	+0.9
	comp=Z,4.9nm,0.9s,baz=207,slow=12,SNR=4.1						
TKL				LR	LR	14 51 31.0	
	comp=Z,204nm,21.7s,baz=159,slow=34						
	comp=Z,4.9nm,0.9s						
JSC	Jenkinsville	46.95	29	P	P	14 33 26.6	+1.0
PAHR	Pah Rah Range	47.11	347	P	P	14 33 28.2	+1.3
PAHR				IAmb	IAmb	14 33 34.8	
	comp=Z,5.3nm,1.0s						
PLCA	Paso Flores	47.26	142	LR	LR	14 48 31.6	
	comp=Z,872nm,19.0s,baz=310,slow=30						
ELK	Elko	47.33	351	P	P	14 33 30.0	+1.2
ELK				IAmb	IAmb	14 33 40.1	
	comp=Z,4.5nm,1.1s						
V53A	Saluda	47.36	27	P	P	14 33 29.7	+0.8
T50A	Nancy	47.65	24	P	P	14 33 30.9	0.0
T50A				IAmb	IAmb	14 33 33.2	
	comp=Z,5.9nm,0.8s						
TZTN	Tazewell	47.77	25	P	P	14 33 32.7	+0.7
PDAR	Pinedale Array	48.78	357	P	P	14 33 38.9	-1.1
	comp=Z,0.5nm,0.7s,baz=149,slow=6.1,SNR=5.5						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	48.78	357	P	P	14 33 40.0	+0.1
MOD	Modoc Plateau	49.41	347	P	P	14 33 46.2	+1.5
MOD				IAmb	IAmb	14 33 56.0	
	comp=Z,12nm,1.4s						
REDW	Red Top Meadow	49.45	356	P	P	14 33 46.5	+1.5
REDW				IAmb	IAmb	14 33 51.7	
	comp=Z,6.6nm,1.3s						
MOOW	Moose Ponds	49.83	356	P	P	14 33 49.0	+1.2
MOOW				IAmb	IAmb	14 33 58.2	
	comp=Z,6.7nm,1.4s						
YBH	Yreka Blue Hor	49.85	344	LR	LR	14 50 28.3	
	comp=Z,354nm,18.9s,baz=169,slow=31						
MFID	Camas Ranch	50.04	351	P	P	14 33 48.8	-0.6
MFID				IAmb	IAmb	14 33 53.5	
	comp=Z,5.5nm,0.8s						
RSSD	Black Hills	50.13	3	P	P	14 33 50.5	+0.3
RSSD				IAmb	IAmb	14 33 53.9	
	comp=Z,4.9nm,1.0s						
FLWY	Flagg Ranch	50.16	356	P	P	14 33 50.3	-0.1
K05A	Summer Lake	50.33	347	P	P	14 33 52.1	+0.4
ECSD	EROS Data Cent	50.54	10	P	P	14 33 52.5	-0.5
YHH	Holmes Hill	50.87	356	P	P	14 33 57.5	+1.7
YHL	Hebgen Lake	50.95	356	P	P	14 33 57.8	+1.3
YHL				IAmb	IAmb	14 34 07.8	
	comp=Z,8.7nm,1.2s						
Q54A	Coxs Mills	50.99	26	P	P	14 33 57.0	+0.4
Q54A				IAmb	IAmb	14 34 12.2	
	comp=Z,9.9nm,1.1s						
MCMT	McKenzie Canyo	51.07	354	P	P	14 33 58.4	+1.1
P53A	Whipple	51.17	25	P	P	14 33 57.8	0.0
CPUP	Villa Florida	51.19	119	P	P	14 33 57.9	-0.4
	comp=Z,1.1nm,0.4s,baz=303,slow=7.5,SNR=3.7						
CPUP				LR	LR	14 52 15.2	
	comp=Z,515nm,20.1s,baz=298,slow=32						
	comp=Z,1.1nm,0.4s						
PINE	Pine Mountain	51.35	347	P	P	14 34 01.3	+1.9
PINE				IAmb	IAmb	14 34 06.1	
	comp=Z,5.5nm,1.1s						
H43A	Windswept, Lux	53.26	17	P	P	14 34 14.1	+0.7
RAR	Rarotonga	53.31	248	LR	LR	14 50 46.8	
	comp=Z,206nm,19.5s,baz=157,slow=29						
NEW	Newport	54.97	352	P	P	14 34 24.8	-1.0
	comp=Z,0.8nm,0.4s,baz=213,slow=12,SNR=1.5						
NEW				LR	LR	14 54 32.8	
	comp=Z,202nm,18.6s,baz=186,slow=32						
	comp=Z,0.8nm,0.4s						
EYMN	Ely	55.57	12	P	P	14 34 29.8	-0.2
EYMN				IAmb	IAmb	14 34 40.1	
	comp=Z,8.2nm,1.1s						
SADO	Sadowa	56.49	23	P	P	14 34 36.3	-0.4
SADO				IAmb	IAmb	14 34 39.4	
	comp=Z,7.9nm,0.9s						
ULM	Lac du Bonnet	57.00	8	P	P	14 34 38.9	-1.4
	comp=Z,4.9nm,0.9s,baz=197,slow=6.6,SNR=3.9						
ULM				LR	LR	14 57 21.9	
	comp=Z,187nm,19.4s,baz=310,slow=34						
	comp=Z,4.9nm,0.9s						
ULM	Lac du Bonnet	57.00	8	P	P	14 34 38.4	-1.8
ULM				IAmb	IAmb	14 34 43.0	
	comp=Z,7.0nm,1.0s						
USHA	Ushuaia	57.44	155	LR	LR	14 54 02.6	
	comp=Z,336nm,20.6s,baz=352,slow=30						
BDFB	Brasilia	58.35	104	LR	LR	14 57 33.1	
	comp=Z,634nm,19.7s,baz=295,slow=33						
EDM	Edmonton	59.44	355	P	P	14 34 57.7	+0.4
BBB	Bella Bella	60.92	345	LR	LR	14 57 60.0	
	comp=Z,110nm,18.4s,baz=206,slow=33						
RUBB	Prince Rupert	63.41	345	P	P	14 35 25.3	+1.3
BATG	Bathurst New B	64.25	30	P	P	14 35 30.2	+0.4
GBN	Guysborough	65.38	33	P	P	14 35 36.7	-0.5
FCC	Fort Churchill	65.54	7		P	14 35 37.5	-0.4
PMSA	Palmer Station	65.83	161	LR	LR	14 56 48.4	
	comp=Z,532nm,20.0s,baz=312,slow=29						
DLBC	Dease Lake	67.07	347	P	P	14 35 48.5	+0.7
	comp=Z,3.6nm,0.8s,baz=176,slow=6.1,SNR=3.1						
DLBC				LR	LR	15 02 33.4	
	comp=Z,255nm,18.1s,baz=209,slow=34						
	comp=Z,3.6nm,0.8s						
YKA	Yellowknife Ar	68.74	356	P	P	14 35 56.7	-1.5
	comp=Z,3.2nm,0.9s,baz=165,slow=6.2,SNR=12						
YKA				LR	LR	15 04 09.1	
	comp=Z,336nm,18.3s,baz=250,slow=34						
	comp=Z,3.2nm,0.9s						
SCHQ	Schefferville	69.30	23	LR	LR	15 04 44.5	
	comp=Z,159nm,21.9s,baz=248,slow=34						
RCBR	Riachuelo	70.48	94	LR	LR	15 05 06.7	
	comp=Z,301nm,18.4s,baz=66,slow=34						
KDAK	Kodiak Island	73.66	336	LR	LR	15 01 24.7	
	comp=Z,496nm,19.1s,baz=140,slow=30						
BCAR	Beaver Creek A	73.99	344	P	P	14 36 29.5	-0.5
DAWY	Dawson	74.19	346	P	P	14 36 32.2	+1.0
DAWY				IAmb	IAmb	14 36 37.8	
	comp=Z,6.6nm,1.2s						
K27K	Chicken	74.84	345	P	P	14 36 36.7	+1.8
K27K				IAmb	IAmb	14 36 51.3	
	comp=Z,10nm,1.4s						
EGAK	Eagle	75.22	346	P	P	14 36 38.2	+1.2
URZ	Urewera	75.25	232	LR	LR	15 04 36.8	
	comp=Z,174nm,18.1s,baz=31,slow=32						
FRB	Frobisher Bay	75.45	17	LR	LR	15 09 53.9	
	comp=Z,146nm,19.4s,baz=198,slow=36						
INK	Inuvik	76.65	350	LR	LR	15 07 47.1	
	comp=Z,237nm,18.6s,baz=156,slow=34						
ILAR	Eielson Array	76.73	344	P	P	14 36 43.6	-2.1
	comp=Z,1.6nm,1.0s,baz=92,slow=9.9,SNR=5.1						
ILAR				LR	LR	15 04 14.5	
	comp=Z,132nm,18.6s,baz=130,slow=31						
	comp=Z,1.6nm,1.0s						
ILAR	Eielson Array	76.73	344	P	P	14 36 45.4	-0.3
WRH	Wood River Hil	76.86	343	P	P	14 36 46.7	+0.4
WRH				IAmb	IAmb	14 36 52.9	
	comp=Z,5.6nm,1.0s						
KTH	Kantishna Hill	77.05	341	P	P	14 36 49.0	+1.4
MDM	Murphy Dome	77.26	343	P	P	14 36 49.3	+0.7
MDM				IAmb	IAmb	14 36 54.1	
	comp=Z,5.0nm,1.2s						
L19K	White Mountain	77.44	339	P	P	14 36 50.0	+0.3
L19K				IAmb	IAmb	14 36 59.8	
	comp=Z,6.5nm,1.1s						
BPAW	Bear Paw Mtn.	77.46	342	P	P	14 36 50.2	+0.4
BPAW				IAmb	IAmb	14 37 03.1	
	comp=Z,3.9nm,1.2s						
I23K	Minto, Yukon-K	77.72	343	P	P	14 36 51.7	+0.5
I23K				IAmb	IAmb	14 37 01.8	
	comp=Z,6.4nm,1.3s						
K20K	Telida	77.95	340	P	P	14 36 52.6	+0.1
K20K				IAmb	IAmb	14 36 53.5	
	comp=Z,6.1nm,1.2s						
J20K	Nowinta River	78.52	341	P	P	14 36 56.8	+1.2
J20K				IAmb	IAmb	14 37 09.7	
	comp=Z,10.0nm,1.5s						
A36M	Sachs Harbour	78.94	354	P	P	14 36 57.0	-0.8
RPZ	Rata Peaks	80.06	227	LR	LR	15 07 41.8	
	comp=Z,273nm,19.0s,baz=118,slow=32						
RES	Resolute Bay	81.06	3	P	P	14 37 07.8	-1.4
	comp=Z,1.6nm,0.8s,baz=168,slow=7.4,SNR=5.6						
RES				LR	LR	15 10 23.7	
	comp=Z,107nm,20.9s,baz=226,slow=34						
	comp=Z,1.6nm,0.8s						
RES	Resolute Bay	81.06	3	P	P	14 37 08.6	-0.6
SFJD	Kangerlussuaq	83.17	19	LR	LR	15 14 47.6	
	comp=Z,144nm,18.8s,baz=231,slow=36						
QSPA	South Pole Qui	83.88	180	P	P	14 37 25.5	+1.1
SHEM	Shemya Is, Ala	88.30	323	LR	LR	15 09 14.4	
	comp=Z,234nm,20.0s,baz=104,slow=30						
SNAA	Sanae	88.54	162	LR	LR	15 10 46.8	
	comp=Z,203nm,18.7s,baz=286,slow=31						
H11N3	WAKE ISLAND Hy	88.56	290	T	T	16 15 33.0	
	baz=99,slow=74,SNR=33						
H11N2	WAKE ISLAND Hy	88.57	290	T	T	16 15 26.0	
	baz=99,slow=74,SNR=33						
H11N1	WAKE ISLAND Hy	88.58	290	T	T	16 15 31.1	
	baz=99,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	88.60	289	T	T	16 15 27.4	
	baz=97,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	88.61	289	T	T	16 15 28.0	
	baz=97,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	88.62	289	T	T	16 15 28.7	
	baz=97,slow=75,SNR=44						
BORG	Borgarnes	93.62	25	LR	LR	15 19 00.7	
	comp=Z,64nm,19.3s,baz=292,slow=35						
PETK	Petropavlovsk-	98.19	323	LR	LR	15 13 24.9	
	comp=Z,150nm,21.8s,baz=77,slow=30						
JMIC	Jan Mayen	98.53	19	LR	LR	15 22 14.0	
	comp=Z,79nm,19.3s,baz=94,slow=35						
SONM	Songino Array	129.75	331	PKP	PKPdf	14 44 02.9	-1.5
	comp=Z,0.1nm,0.3s,baz=135,slow=3.1,SNR=1.4						
CMAR	Chiang Mai Arr	152.07	298	PKPbc	PKPbc	14 44 49.9	-1.3
	comp=Z,0.6nm,0.3s,baz=20,slow=0.3,SNR=4.9						

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*IDC **02** 14:27:29.5±1.4, 15°.79S×167°.06E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=49.0km s-min=25.7km az=137.0*

*NOU **02** 14:27:31.7, 15°.90S×166°.90E, h4^{km}, MLv4.5/17, Vanuatu Islands*

ISC 02 14:27:33.6±0.8, **15°.91S**±0°.08×**167°.0E**±0°.1, **h27**^{km}, **n18**, σ1^{s}**39**/19, **mb4.0**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.51	27	P	Pb	14 27 42.7	-1.4
DVP	Devils Point	2.16	147	P	Pn	14 28 09.8	+2.0
RTV	Rentapao	2.34	144	P	Pn	14 28 12.3	+1.9
KOUNC	Koumac, New Ca	5.28	208	P	Pn	14 28 51.8	+1.1
MARNC	Mare, Loyalty	5.64	170	P	Pn	14 28 56.7	+1.0
YATNC	Mamie plateau,	6.12	181	P	Pn	14 29 02.3	-0.1
DZM	Mont Dzumac	6.15	185	Pn	Pn	14 29 02.5	-0.3
	0.8nm,0.3s,baz=138,slow=23,SNR=42						
DZM				Sn	Sn	14 30 09.1	-3.3
	2.1nm,0.3s,baz=309,slow=23,SNR=1.7						
	2.7nm,0.3s						
DZM	Mont Dzumac	6.15	185	P	Pn	14 29 02.7	-0.2
NOUC	Port Laguerre	6.20	186	P	Pn	14 29 03.5	+0.1
ONTNC	Ouen Toro	6.39	184	P	Pn	14 29 06.3	+0.3
OUENC	Ouen Island, N	6.48	181	P	Pn	14 29 08.4	+1.1
PINNC	Pines Island,	6.69	176	P	Pn	14 29 11.2	+1.1
CTA	Charters Tower	20.13	255	P	P	14 32 07.8	+2.1
	1.8nm,0.8s,baz=76,slow=16,SNR=2.5						
	1.8nm,0.8s						
WRA	Warramunga Arr	31.27	258	P	P	14 33 52.1	+0.5
	0.2nm,0.7s,baz=88,slow=8.5,SNR=2.0						
	0.2nm,0.7s						
ASAR	Alice Springs	32.00	251	P	P	14 33 58.6	+0.7
	1.6nm,0.8s,baz=73,slow=9.2,SNR=18						
	1.6nm,0.8s						
ILAR	Eielson Array	87.73	18	P	P	14 40 19.0	-0.6
	0.8nm,0.6s,baz=231,slow=5.0,SNR=9.5						
	0.8nm,0.6s						
YKA	Yellowknife Ar	98.72	27	P	P	14 41 10.1	-0.1
	0.4nm,0.8s,baz=260,slow=5.3,SNR=6.3						
	0.4nm,0.8s						
ARCES	ARCESS Array B	121.31	345	PKP	PKPdf	14 46 23.6	-0.1
	0.6nm,0.7s,baz=34,slow=3.4,SNR=1.4						

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*NIED **02** 14:28:58.0, 23°.99N×121°.55E, h20^{km}, MW4.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.60; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-0.11; $M_{r\theta}$1.25; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.87; Fault plane solution: $M_0$1.63000×10^{16} NP1: ϕ_s258.00000°, δ11.00000°, λ111.00000°. NP2: ϕ_s56.00000°, δ80.00000°, λ86.00000°.*

*JMA **02** 14:28:58.0±0.2, 24°.0N±0°.7×121°.6E±0°.9, h20^{km}, MD4.5/15, MV4.4/15, TAIWAN REGION*

*NEIC **02** 14:29:00.4±1.4, 24°.17N±0°.07×121°.74E±0°.06, h12^{km}±4^{km}, mb4.6/78, Error ellipse: s-maj=9.9km s-min=7.7km az=179.0*

*TAP **02** 14:29:00.6, 24°.21N×121°.72E, h12^{km}, ML4.9, B*

*ASIES **02** 14:29:00.6, 24°.22N×121°.70E, h17^{km}, MW4.4*

*BJI **02** 14:29:00.0±0.0, 24°.29N×121°.71E, h10^{km}, mb4.3/46, mB4.7/25, ML4.4/8, Ms4.6/46, Ms7 4.4/44*

*IDC **02** 14:29:04.5±2.3, 24°.22N×121°.80E, h49^{km}±21^{km}, mb3.9/25, mbtmp4.2/29, ML3.3/4, MS3.7/15, Error ellipse: s-maj=15.3km s-min=11.3km az=68.0*

ISC 02 14:29:00.8±0.6, **24°.22N**±0°.01×**121°.74E**±0°.02, **h15**^{km}±3^{km}, **n349**, σ1^{s}**31**/468, **mb4.5**/72, **MS3.8**/15, **33C-48D, Fault plane solution: NP1:**ϕ_s138.27860°, δ8.82357°, λ11.11605°. **NP2:**ϕ_s37.29088°, δ88.30531°, λ98.66056°. **Principal axes:** T Plg46.0256°, Azm316.1120°; N Plg8.6567°, Azm217.0328°; P Plg42.6741°, Azm118.9639°; **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.09	0	*i* P	Pg	14 29 03.6	-0.3
	baz=15						
EHP				*i* S	Sg	14 29 06.0	+0.1
	baz=15						
ETL	Fush Village	0.13	239	*i* P	Pg	14 29 03.7	-0.7
	baz=240						
ETL				*i* S	Sg	14 29 05.9	-0.8
	baz=240						
NACB	Ninganchiao	0.14	250		Pg	14 29 03.8	-0.8
NACB	Ninganchiao	0.14	250	⇓*i*P	Pg	14 29 03.9	-0.7
	baz=253						
NACB				*i* S	Sg	14 29 06.4	-0.7
	baz=253						
TWD	Chiawan	0.20	223	⇓*i*P	Pg	14 29 04.5	-0.8
	baz=220						
TWD				*i* S	Sg	14 29 07.6	-0.8
	baz=220						
ENA	Nanau	0.20	0	⇓*i*P	Pg	14 29 05.4	-0.1
	baz=7.0						
ENA				*i* S	Sg	14 29 08.9	+0.3
	baz=7.0						
EWUT	Wuta	0.22	9	⇓*i*P	Pg	14 29 05.7	-0.1
	baz=12						
EWUT				*i* S	Sg	14 29 09.4	+0.2
	baz=12						
ETLH	Xiulin Townshi	0.24	266	⇓*i*P	Pg	14 29 05.5	-0.5
	baz=269						
ETLH				*e*S	Sg	14 29 09.1	-0.6
	baz=269						
HWA	Hwalien	0.28	207	⇓P	Pg	14 29 06.5	-0.2
	baz=203						
HWA				*e*S	Sg	14 29 10.3	-0.3
	baz=203						
ETM	Tongmen	0.34	221	⇓*i*P	Pg	14 29 07.0	-0.8
	baz=221						
ETM				*e*S	Sg	14 29 12.2	-0.5
	baz=221						
LATG	Datong	0.37	328	⇓*i*P	Pg	14 29 08.4	+0.1
	baz=331						
LATG				*i* S	Sg	14 29 14.0	+0.5
	baz=331						
TEYL	Yanliau Villag	0.38	200	P	Pg	14 29 08.0	-0.5
	baz=200						
TEYL				*e*S	Sb	14 29 15.2	+0.3
	baz=200						
NNSB	Datong	0.39	302	⇓*i*P	Pg	14 29 08.6	0.0
	baz=305						
NNSB				*i* S	Sg	14 29 14.1	0.0
	baz=305						
TWC	Suao	0.40	14	⇓*i*P	Pg	14 29 08.9	+0.1
	baz=18						
TWC				*e*S	Sb	14 29 15.0	-0.5
	baz=18						
NNS	Nan Shan	0.40	303	⇓*i*P	Pg	14 29 08.8	-0.1
	baz=306						
NNS				*i* S	Sg	14 29 14.5	+0.1
	baz=306						
NDS	Dongshan	0.41	357	⇓*i*P	Pb	14 29 09.3	-0.5
	baz=359						
NDS				*i* S	Sb	14 29 15.1	-0.7
	baz=359						
NDT	Datong Townshi	0.43	331	⇓*i*P	Pb	14 29 09.8	-0.3
	baz=334						
NDT				*e*S	Sb	14 29 15.9	-0.6
	baz=334						
WHF	Hehuan Shan	0.44	260	⇓*i*P	Pg	14 29 09.4	-0.4
	baz=261						
WHF				*e*S	Sg	14 29 15.3	-0.6
	baz=261						
ENTT	Nioudou	0.44	339	⇓*i*P	Pb	14 29 10.0	-0.4
	baz=342						
ENTT				*i* S	Sb	14 29 16.6	-0.2
	baz=342						
FUSS	Fushou	0.46	273	⇓*i*P	Pg	14 29 08.7	-1.2
	baz=275						
FUSS				*e*S	Sg	14 29 14.9	-1.3
	baz=275						
ESL	Shilin	0.50	215	⇓*i*P	Pg	14 29 09.7	-0.9
	baz=213						
ESL				*e*S	Sg	14 29 17.3	0.0
	baz=213						
TWE	Neicheng	0.50	352	⇓*i*P	Pb	14 29 11.0	-0.3
	baz=356						
TWE				S	Sb	14 29 18.4	0.0
	baz=356						
TWT	Tachien	0.52	273	⇓*i*P	Pg	14 29 11.4	+0.3
	baz=274						
TWT				*e*S	Sg	14 29 18.1	+0.1
	baz=274						
TDCB	Techi	0.53	273	⇓*i*P	Pg	14 29 11.4	0.0
	baz=275						
TDCB				S	Sg	14 29 18.2	-0.4
	baz=275						
ILA	Ilan	0.54	1	*e*P	Pb	14 29 12.1	+0.1
	baz=3.0						
ILA				*e*S	Sb	14 29 19.9	+0.4
	baz=3.0						
CHGB	Renai	0.54	253	⇓*i*P	Pg	14 29 11.3	-0.3
	baz=253						
CHGB				*e*S	Sg	14 29 18.8	-0.1
	baz=253						
TEGC	Jichi Village	0.54	200	*e*P	Pg	14 29 11.9	+0.4
	baz=198						
TEGC				*e*S	Sb	14 29 21.6	+1.9
	baz=198						
FUSB	Fushanzhiwuyua	0.55	345	⇓*i*P	Pb	14 29 12.1	-0.2
	baz=347						
FUSB				S	Sb	14 29 19.7	-0.3
	baz=347						
YHNB	Yeheng	0.56	323		Pg	14 29 11.9	+0.2
YHNB	Yeheng	0.56	323	P	Pb	14 29 12.5	+0.2
YHNB	Yeheng	0.56	323	⇓*i*P	Pb	14 29 12.1	-0.2
	baz=325						
YHNB				*e*S	Sg	14 29 19.6	+0.4
	baz=325						
NSK	Sanguang	0.57	322	⇓*i*P	Pg	14 29 12.2	+0.2
	baz=325						
NSK				*e*S	Sg	14 29 20.0	+0.3
	baz=325						
OWD	Renai	0.58	243	⇓*i*P	Pg	14 29 11.7	-0.6
	baz=243						
OWD				*e*S	Sg	14 29 19.3	-0.8
	baz=243						
NWLT	Wulai	0.59	339	⇓*i*P	Pb	14 29 12.8	-0.1
	baz=341						
NWLT				*e*S	Sb	14 29 20.7	-0.4
	baz=341						
WUSB	Renai	0.61	248	⇓*i*P	Pg	14 29 12.6	-0.3

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      baz=249
WUSB                                eS   Sg   14 29 20.6 -0.5
      baz=249
EGFH  Guangfu           0.62 208  ⇓P    Pg   14 29 12.2 -0.8
      baz=207
EGFH                                eS   Sg   14 29 22.0 +0.7
      baz=207
NTC   Toucheng          0.63   7  ⇓P    Pb   14 29 13.4 -0.1
      baz=9.0
NTC                                 eS   Sb   14 29 22.0 -0.3
      baz=9.0
EGS                     0.64  16   eP   Pb   14 29 14.0 +0.3
      baz=18
EGS                                 eS   Sb   14 29 22.1 -0.4
      baz=18
NFF   Wufeng Townshi    0.70 306   eP   Pg   14 29 14.4  0.0
      baz=307
NFF                                 eS   Sg   14 29 23.4 -0.3
      baz=307
VWDT  VWDT              0.72 230  ⇓P    Pg   14 29 14.2 -0.6
      baz=229
VWDT                                eS   Sg   14 29 24.6 +0.2
      baz=229
WHP   Taichung City     0.73 274  ⇓P    Pg   14 29 15.1 +0.1
      baz=275
WHP                                 eS   Sg   14 29 24.5 -0.1
      baz=275
WPL   Puli Township     0.75 254  ⇓P    Pg   14 29 15.1 -0.2
      baz=255
WPL                                 eS   Sg   14 29 24.6 -0.6
      baz=255
TIPB  Shuangxi          0.75   6  ⇓P    Pb   14 29 15.7 +0.1
      baz=7.0
TIPB                                eS   Sb   14 29 25.3 -0.3
      baz=7.0
NHDH  Xindian Distri    0.76 345   eP   Pb   14 29 16.2 +0.4
      baz=347
NHDH                                eS   Sb   14 29 26.3 +0.3
      baz=347
TWA   Mucha             0.77 349   eP   Pb   14 29 16.2 +0.3
      baz=351
TWA                                 eS   Sb   14 29 27.2 +1.1
      baz=351
DPDB  Guoxing           0.77 256⇓iP     Pg   14 29 15.6 -0.1
      baz=256
DPDB                                eS   Sg   14 29 25.4 -0.5
      baz=256
WCS   Beigang Elemen    0.78 258⇓eP     Pg   14 29 15.6 -0.3
      baz=258
WCS                                 eS   Sg   14 29 25.7 -0.4
      baz=258
LIOB  Emei              0.78 303   eP   Pb   14 29 16.4 +0.3
      baz=304
LIOB                                eS   Sb   14 29 26.8 +0.2
      baz=304
NJD   Zhudong           0.78 311   eP   Pn   14 29 17.2 -0.1
      baz=312
TATO  Taipei            0.78 343        Pb   14 29 16.3 +0.2
TATO  Taipei            0.78 343   eP   Pb   14 29 16.4 +0.2
      baz=345
TATO                                eS   Sb   14 29 27.2 +0.7
      baz=345
HGSD  Ruisui            0.78 202   eP   Pg   14 29 15.4 -0.6
      baz=201
HGSD                                eS   Sn   14 29 28.3 -0.5
      baz=201
NSTT  Nanjuang          0.79 301⇑eP     Pb   14 29 16.5 +0.3
      baz=303
NSTT                                eS   Sg   14 29 26.6 +0.1
      baz=303
EHY   Hungye            0.81 208    P   Pg   14 29 15.1 -1.4
      baz=207
EHY                                 eS   Sb   14 29 27.9 +0.6
      baz=207
TWB1  Santiao Chiao     0.81  16   eP   Pb   14 29 16.8 +0.2
      baz=18
TWB1                                eS   Sb   14 29 27.5 +0.1
      baz=18
BACT  New Taipei Cit    0.82 341   eP   Pn   14 29 17.8 +0.1
      baz=342
BACT                                eS   Sb   14 29 28.7 +1.2
      baz=342
NHY   Taipei            0.83 349   eP   Pn   14 29 17.8 -0.1
      baz=350
TAP1  Taipei            0.84 346   eP   Pn   14 29 18.2 +0.2
      baz=347
SMLT  Sun Moon Lake     0.84 246  ⇓P    Pg   14 29 16.6 -0.5
      baz=246
SMLT                                eS   Sg   14 29 27.8 -0.4
      baz=246
TAP   Taipei            0.84 345   eP   Pn   14 29 18.3 +0.3
      baz=347
TAP                                 eS   Sb   14 29 29.0 +0.9
      baz=347
SSLB  Suanglung         0.84 239        Pg   14 29 16.4 -0.8
SSLB  Suanglung         0.84 239    P   Pg   14 29 16.9 -0.2
SSLB  Suanglung         0.84 239  ⇓P    Pg   14 29 16.3 -0.8
      baz=239
SSLB                                eS   Sg   14 29 26.8 -1.4
      baz=239
NWF   Wu-fen Shan       0.84   2   eP   Pb   14 29 17.7 +0.5
      baz=4.0
NWF                                 eS   Sb   14 29 28.9 +0.5
      baz=4.0
WFSB  Wu-fen Shan       0.84   2   eP   Pn   14 29 17.7 -0.4
      baz=4.0
WFSB                                eS   Sb   14 29 28.4 +0.1
      baz=4.0
HSN1  Hsinchu           0.86 310   eP   Pn   14 29 18.7 +0.4
      baz=311
HSN1                                eS   Sn   14 29 30.4 -0.2
      baz=311
TYC   Yuchr             0.87 249   eP   Pg   14 29 16.9 -0.7
      baz=249
TYC                                 eS   Sg   14 29 28.8 -0.2
      baz=249
NTY   Taoyuan           0.87 333   eP   Pn   14 29 19.2 +0.7
      baz=334
SXI1  Grass Mountain    0.88   8⇑eP     Pn   14 29 18.3 -0.3
      baz=9.0
SXI1                                eS   Sb   14 29 29.7 +0.4
      baz=9.0
SBCB  Hsinchu           0.89 310⇑eP     Pn   14 29 19.2 +0.4
      baz=311
SBCB                                eS   Sn   14 29 31.1 -0.4
      baz=311
TWQ1  Liyutan           0.89 278   eP   Pb   14 29 18.7 +0.7
      baz=279
TWQ1                                eS   Sn   14 29 33.1 +1.6
      baz=279
NCUH  Zhongli           0.90 326⇑eP     Pn   14 29 19.2 +0.3
      baz=327
NCUH                                eS   Sn   14 29 31.7 +0.1
      baz=327
NCU   National Centr    0.90 326   eP   Pn   14 29 19.0 +0.1
      baz=328
NCU                                 eS   Sn   14 29 32.1 +0.5
      baz=328
HSN   Hsinchu           0.91 309   eP   Pn   14 29 19.5 +0.5
      baz=314
HSN                                 eS   Sn   14 29 32.9 +1.0
      baz=314
NSY   Sanyi             0.91 282   eP   Pn   14 29 19.2  0.0
      baz=283
NSY                                 eS   Sb   14 29 31.4 +1.1
      baz=283
NJN   Zhunan            0.92 300   eP   Pn   14 29 19.9 +0.8
      baz=301
NMLH  Miaoli            0.92 290   eP   Pn   14 29 19.7 +0.5
      baz=291
NMLH                                eS   Sb   14 29 31.6 +1.1
      baz=291
TWS1  Kuangyinshan      0.92 341⇑eP     Pn   14 29 19.4 +0.2
      baz=343
TWS1                                eS   Sn   14 29 33.2 +1.0
      baz=343
YULB  Yu-li             0.92 206        Pg   14 29 16.9 -1.8
YULB  Yu-li             0.92 206⇑eP     Pg   14 29 16.5 -2.1
      baz=206
YULB                                eS   Sb   14 29 31.6 +1.0
      baz=206
TNOU  National Taiwa    0.92   2   eP   Pn   14 29 19.2  0.0
      baz=3.0
YM01  YM01              0.93 350⇑eP     Pn   14 29 19.3 -0.1
      baz=352
YM01                                eS   Sn   14 29 33.0 +0.4
      baz=352
ECBN  Changbin          0.94 196   eP   Pg   14 29 18.3 -0.7
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      baz=196
ECBN                                eS   Sb   14 29 32.1 +1.1
      baz=196
EYUL  Yuli              0.95 204   eP   Pg   14 29 17.5 -1.7
      baz=203
EYUL                                eS   Sn   14 29 34.3 +1.3
      baz=203
TWF1  Yuli              0.96 205   eP   Pg   14 29 17.1 -2.2
      baz=204
TWF1                                eS   Sn   14 29 33.4 +0.3
      baz=204
WWF   Wufeng            0.97 260   eP   Pn   14 29 20.1 +0.3
      baz=260
YM08  YM08              0.97 352   eP   Pb   14 29 19.6 +0.3
      baz=353
YM08                                eS   Sn   14 29 33.7 +0.3
      baz=353
NTST  Danshui           0.97 344   eP   Pn   14 29 20.2 +0.3
      baz=345
TCU   Taichung          0.98 266   eP   Pn   14 29 20.9 +0.9
      baz=266
TCU                                 eS   Sn   14 29 34.4 +0.9
      baz=266
ANP   Anpu              0.98 348   eP   Pn   14 29 20.0 -0.1
      baz=350
NHW   Xinwu Township    1.00 321   eP   Pn   14 29 20.8 +0.5
      baz=322
NHW                                 eS   Sn   14 29 35.0 +0.7
      baz=322
WJS   Zhushan           1.01 247   eP   Pg   14 29 20.4 +0.1
      baz=247
WJS                                 eS   Sn   14 29 35.0 +0.7
      baz=247
WDJ   Dajia District    1.01 277⇑eP     Pn   14 29 21.3 +0.9
      baz=278
WDJ                                 eS   Sn   14 29 34.7 +0.3
      baz=278
WNT1  Nantou City       1.02 252   eP   Pn   14 29 21.7 +1.1
      baz=252
WNT1                                eS   Sn   14 29 36.3 +1.7
      baz=252
WNT   Mingjian          1.03 251   eP   Pn   14 29 21.0 +0.4
      baz=251
WNT                                 eS   Sn   14 29 35.8 +1.1
      baz=251
YUS   Yu-Shan           1.03 225   eP   Pg   14 29 19.9 -0.8
      baz=224
YUS                                 eS   Sg   14 29 33.9 -0.4
      baz=224
TWY   Chenhua           1.05 353⇑eP     Pn   14 29 22.4 +1.3
      baz=354
WCHH  Zhanghua          1.09 263⇑eP     Pg   14 29 22.2 +0.4
      baz=263
WCHH                                eS   Sn   14 29 37.2 +0.9
      baz=263
WYL   Yuanlin Townsh    1.09 256   eP   Pg   14 29 22.5 +0.6
      baz=257
WYL                                 eS   Sn   14 29 38.5 +2.1
      baz=257
FULB  Fuli              1.10 202   eP   Pb   14 29 20.3 -1.2
      baz=201
FULB                                eS   Sn   14 29 39.5 +2.8
      baz=201
ALS   Alishan           1.11 231⇓eP     Pb   14 29 21.7 -0.2
      baz=230
ALS                                 eS   Sn   14 29 37.9 +0.5
      baz=230
JYNG  Yonagunijimaku    1.12  78   i P  Pg   14 29 22.2 -0.2
JYNG                                eS   Sn   14 29 39.0 +1.8
JYNG  Yonagunijimaku    1.12  78    A   A    14 29 22.2
      comp=E,21nm,1.1s,comp=E,20nm,2.5s
CHN5  Tsauling          1.16 238⇑eP     Pb   14 29 22.9 +0.3
      baz=237
CHN5                                eS   Sn   14 29 39.9 +1.8
      baz=237
CHKT  Chengkung         1.17 197   eP   Pn   14 29 20.8 -1.8
      baz=196
CHKT                                eS   Sb   14 29 38.3 +0.6
      baz=196
YOJ   Yonaguni jima     1.18  78        Pn   14 29 22.9 +0.2
YOJ   Yonaguni jima     1.18  78    P   Pg   14 29 23.5 -0.1
YOJ   Yonaguni jima     1.18  78⇓iP     Pg   14 29 23.1 -0.5
      baz=78
YOJ                                 S    Sn   14 29 39.8 +1.1
      baz=78
YOJ   Yonaguni jima     1.18  78    P   Pg   14 29 23.1 -0.5
YOJ                                 S    Sn   14 29 39.7 +1.1
YOJ   Yonaguni jima     1.18  78    A   A    14 29 23.1
      comp=E,13nm,1.2s,comp=E,16nm,2.0s
WGK   Gukeng            1.20 244   eP   Pb   14 29 23.9 +0.6
      baz=244
WGK                                 eS   Sg   14 29 40.8 +1.1
      baz=244
ECS   Chishang          1.22 203   eP   Pn   14 29 22.9 -0.4
      baz=203
ECS                                 eS   Sg   14 29 43.2 +2.9
      baz=203
WDLH  Douliu            1.22 244⇑eP     Pb   14 29 24.2 +0.6
      baz=244
WDLH                                eS   Sn   14 29 40.4 +0.8
      baz=244
ELDTW Lidau             1.23 213   eP   Pn   14 29 21.5 -2.0
      baz=212
ELDTW                               eS   Sn   14 29 40.4 +0.6
      baz=212
WRL   Guolierlin Hig    1.29 256⇑eP     Pb   14 29 25.1 +0.4
      baz=256
EDH   Donghe            1.31 198   eP   Pn   14 29 22.9 -1.6
      baz=197
WTK   Tuku              1.35 247⇑eP     Pb   14 29 25.9 +0.2
      baz=247
WTK                                 eS   Sg   14 29 44.4 +0.1
      baz=247
CHN4  Tsaushan          1.36 231⇑eP     Pb   14 29 26.1 +0.1
      baz=230
CHN4                                eS   Sg   14 29 46.4 +1.5
      baz=230
STYH  Taoyuan           1.37 220⇑eP     Pn   14 29 25.2 -0.2
      baz=220
STYH                                eS   Sb   14 29 44.4 +0.9
      baz=220
TPUB  Ta-pu             1.37 228        Pn   14 29 26.0 +0.6
TPUB  Ta-pu             1.37 228    P   Pb   14 29 26.9 +0.7
TPUB  Ta-pu             1.37 228⇑eP     Pn   14 29 26.1 +0.6
      baz=228
TPUB                                eS   Sg   14 29 45.1  0.0
      baz=228
WTCT  Ta-ch'eng         1.38 255   eP   Pb   14 29 26.5 +0.2
      baz=255
STYT  Tauyuan           1.39 221   eP   Pn   14 29 25.6 -0.1
      baz=220
STYT                                eS   Sb   14 29 45.2 +1.1
      baz=220
CHY   Chiayi            1.41 239   eP   Pb   14 29 27.3 +0.6
      baz=239
CHY                                 eS   Sg   14 29 46.2 +0.1
      baz=239
WTP   Ta-pu             1.42 227⇑eP     Pn   14 29 26.7 +0.6
      baz=226
WTP                                 eS   Sg   14 29 48.2 +1.6
      baz=226
LONT  Longtian          1.43 203   eP   Pn   14 29 24.4 -1.8
      baz=203
LONT                                eS   Sn   14 29 44.8 +0.1
      baz=203
TWK   Hsinying          1.49 231   eP   Pn   14 29 28.0 +0.9
      baz=230
TWK                                 eS   Sg   14 29 49.0 +0.1
      baz=230
WSF   Szhu              1.51 248   eP   Pb   14 29 28.4  0.0
      baz=247
WSF                                 eS   Sg   14 29 49.6 +0.2
      baz=247
SNST  Tainan City       1.52 229   eP   Pn   14 29 28.2 +0.8
      baz=229
CHN1  Nanshi            1.52 227   eP   Pn   14 29 28.4 +0.9
      baz=227
CHN1                                eS   Sb   14 29 48.6 +0.9
      baz=227
TWG   Pinlang           1.53 204        Pn   14 29 25.4 -2.1
TWG   Pinlang           1.53 204   eP   Pn   14 29 25.4 -2.1
      baz=203
TWGBT Beinan            1.53 204   eP   Pn   14 29 25.4 -2.1
      baz=203
WSL   Shuilin Townsh    1.55 244⇑eP     Pn   14 29 28.8 +1.0
      baz=243
SGST  Jiashian          1.56 223   eP   Pn   14 29 28.0  0.0
      baz=223
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TTN   Taitung           1.56 201   eP   Pn   14 29 27.0 -1.0
      baz=200
LDUT  Ludao             1.56 189   eP   Pn   14 29 25.5 -2.6
      baz=189
LDUT                                eS   Sn   14 29 47.7 -0.3
      baz=189
SLGT  Liugui            1.58 220   eP   Pb   14 29 29.7 -0.1
      baz=219
ICHU  Yijhu             1.59 238⇑eP     Pn   14 29 29.5 +1.1
      baz=237
ICHU                                eS   Sb   14 29 51.0 +1.2
      baz=237
CHN8  Yiju              1.65 238⇑eP     Pb   14 29 30.8 -0.2
      baz=238
CHN8                                eS   Sg   14 29 54.1 +0.1
      baz=238
CHN3  Shinhua           1.70 228   eP   Pb   14 29 32.7 +0.9
      baz=228
SHHT  Tainan City       1.75 227   eP   Pn   14 29 32.0 +1.4
      baz=227
SHHT                                eS   Sg   14 29 58.7 +1.5
      baz=227
SCST  Cishan            1.76 221⇑eP     Pb   14 29 32.4 -0.3
      baz=221
SCST                                eS   Sn   14 29 54.3 +1.5
      baz=221
SCLT  Jiali             1.76 234   eP   Pn   14 29 32.1 +1.4
      baz=233
ECL   Taimali           1.77 204   eP   Pn   14 29 29.3 -1.6
      baz=203
SSD   Sandimen          1.79 215   eP   Pn   14 29 31.4 +0.3
      baz=214
SSD                                 eS   Sb   14 29 56.4 +0.9
      baz=214
TSMG  Majia             1.82 214   eP   Pn   14 29 32.5 +1.0
      baz=213
IRIF  Iriomote-Funau    1.82  86    P   Pn   14 29 31.8 +0.3
IRIF                                eS   Sb   14 29 57.0 +0.6
IRIF  Iriomote-Funau    1.82  86    A   A    14 29 31.8
      comp=E,7.0nm,4.0s,comp=E,9.0nm,3.6s
TAI1  Yung-k'ang        1.82 230   eP   Pn   14 29 31.8 +0.2
      baz=229
TWM1  Shoushan          1.85 221   eP   Pb   14 29 34.1 -0.2
      baz=221
SGLT  Jiouru            1.88 218   eP   Pb   14 29 35.3 +0.5
      baz=217
HATJ  Hateruma jima     1.89  95    P   Pn   14 29 33.2 +0.6
HATJ                                eS   Sb   14 29 58.1 -0.4
HATJ  Hateruma jima     1.89  95    A   A    14 29 33.2
      comp=E,12nm,3.4s,comp=E,11nm,2.2s
MASBT Mashibuluo        1.90 213   eP   Pn   14 29 32.5 -0.2
      baz=212
MASBT                               eS   Sb   14 29 59.0 +0.3
      baz=212
EAST  Anshuo            2.01 204   eP   Pn   14 29 32.6 -1.6
      baz=204
TAW   Tawu              2.01 203   eP   Pn   14 29 34.7 +0.5
      baz=202
TAWH  Dawu Township     2.03 203   eP   Pn   14 29 34.6 +0.1
      baz=202
SSPT  Xinbi             2.04 212   eP   Pn   14 29 35.5 +0.9
      baz=212
JKRS  Kuro-shima        2.07  89    P   Pn   14 29 35.9 +0.9
JKRS                                eS   Sb   14 30 03.4 -0.2
JKRS  Kuro-shima        2.07  89    A   A    14 29 35.9
      comp=E,10.0nm,3.5s,comp=E,20nm,3.4s
PNG   Penghu            2.10 252   eP   Pn   14 29 35.5  0.0
      baz=252
PHUB  P'eng-hu          2.11 251   eP   Pn   14 29 35.5  0.0
      baz=250
WDGT  Dungji            2.13 244⇑eP     Pn   14 29 36.7 +0.8
      baz=243
WDGT                                eS   Sn   14 30 03.7 +1.6
      baz=243
SLIU  Shizi             2.18 204   eP   Pn   14 29 36.3 -0.2
      baz=203
SLIU                                eS   Sg   14 30 09.5 -1.4
      baz=203
LAY   Lan-yu            2.18 185   eP   Pn   14 29 34.6 -2.0
      baz=184
JIJ   Ishigaki jima     2.20  86    P   Pn   14 29 36.7  0.0
JIJ                                 eS   Sn   14 30 04.3 +0.6
JIJ   Ishigaki jima     2.20  86    A   A    14 29 36.7
      comp=E,2.0nm,1.7s,comp=E,3.0nm,5.2s
VWUC  VWUC              2.22 291⇑eP     Pn   14 29 36.9 -0.2
      baz=291
VWUC                                eS   Sn   14 30 04.2  0.0
      baz=291
WLCH  Liuqiu            2.25 214   eP   Pb   14 29 39.7 -1.4
      baz=214
TWP   Hsiaoliuchiu      2.26 214   eP   Pb   14 29 40.1 -1.2
      baz=214
VCHM  Qimei             2.35 245   eP   Pn   14 29 39.7 +0.9
      baz=245
JISG  Ishigakijimahi    2.37  81    P   Pn   14 29 39.4 +0.2
JISG                                eS   Sn   14 30 08.9 +1.0
JISG  Ishigakijimahi    2.37  81    A   A    14 29 39.4
      comp=E,4.0nm,6.6s,comp=E,6.0nm,3.9s
HEN   Hengchun          2.39 203   eP   Pb   14 29 42.7 -0.9
      baz=202
TWK1  Hengchun          2.43 201   eP   Pn   14 29 41.6 +1.7
      baz=200
TWKBT Hengchun          2.43 201   eP   Pn   14 29 39.5 -0.4
      baz=200
MATB  Ma-tsu            2.52 320   eP   Pn   14 29 40.7 -0.5
      baz=320
JTJ   Tarama            2.73  81    P   Pn   14 29 45.2 +1.1
JTJ   Tarama            2.73  81    A   A    14 29 45.2
      comp=E,5.0nm,1.4s,comp=E,5.0nm,5.3s
QZH   Quanzhou          2.96 285⇓iPn    Pn   14 29 47.4 +0.2
QZH                                 Sn   Sn   14 30 21.7 -0.7
KNMB  Chin-men Tao      3.07 275        Pn   14 29 48.2 -0.5
JIRB  Irabujima         3.18  78    P   Pn   14 29 52.1 +1.8
JIKM  Ikemajima         3.27  77    P   Pn   14 29 53.0 +1.5
JMJ   Miyako jima 2     3.29  79    P   Pn   14 29 54.3 +2.5
JMJ2  Miyako jima3      3.31  80    P   Pn   14 29 54.0 +1.9
JOGS  Gusukube          3.38  80    P   Pn   14 29 55.2 +2.1
BBP   Basco             3.77 177⇓eP     Pn   14 29 56.8 -1.6
BBP                                 eS   Sn   14 30 35.5 -7.0
APYP  Conner            6.35 184⇓eP     Pb   14 30 44.4 -6.6
APYP                                eS   Sn   14 31 54.3 +8.2
JOW   Kunigami          6.45  65    Pn   Pn   14 30 35.7 +0.4
SSE   Sheshan           6.86 356    Pn   Pn   14 30 49.4 +8.5
SSE                                 Sn   Sb   14 32 12.2 -9.3
SSE                                 smax smax
      comp=N,73nm,1.1s
SSE                                 smax smax
      comp=E,88nm,1.2s
SSE                                 LR   LR
      comp=N,640nm,10.3s
SSE                                 LR   LR
      comp=E,140nm,10.3s
HKPS  Hong Kong Po S    7.25 256    Pn   Pn   14 30 46.7 +0.5
NJ2   Nanjing           8.20 343   eP   Pn   14 30 58.9 -0.4
NJ2                                 S    Sn   14 32 29.6 -2.1
NJ2                                 pmax pmax
      comp=E,25nm,0.7s
NJ2                                 smax smax
      comp=E,240nm,0.9s
NJ2                                 smax smax
      comp=E,240nm,1.1s
CNSH  ChangSha          8.84 298  ⇑P    Pn   14 31 04.3 -3.7
CNSH                                S    Sn   14 32 43.4 -4.0
CNSH                                smax smax
      comp=N,320nm,0.8s
CNSH                                smax smax
      comp=E,390nm,1.0s
WHN   Wuhan             9.10 315  ⇑P    Pn   14 31 10.8 -0.7
WHN                                 S    Sn   14 32 48.5 -5.2
WHN                                 LR   LR
      comp=E,5µm,9.0s
WHN                                 LR   LR
      comp=E,5µm,9.9s
WHN                                 LR   LR
      comp=E,7µm,9.5s
GULI  GuiLin           10.39 278    P   Pn   14 31 25.5 -3.9
GULI                                S    Sn   14 33 18.8 -6.8
GULI                                LR   LR
      comp=N,930nm,9.5s
GULI                                LR   LR
      comp=E,2µm,8.7s
GULI                                LR   LR
      comp=Z,3µm,10.3s
JNU   Nakatsue         11.95  40    P   Pn   14 31 53.1 +2.4
      comp=Z,0.1nm,0.3s,baz=154,slow=20,SNR=2.1
      comp=Z,5.2nm,0.9s
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JNU	Nakatsue	11.95	40	Pn	Pn	14 31 51.8	+1.1
QIZ	Qiongzhong	12.21	247	P	Pn	14 31 55.9	+1.6
QIZ				S	Sn	14 34 13.8	+3.6
QIZ				LR	LR		
	comp=Z,530nm,12.7s						
QIZ				LR	LR		
	comp=Z,400nm,12.0s						
QIZ				LR	LR		
	comp=Z,370nm,12.7s						
LYN	LuoYang	13.08	324	*e*P	P	14 32 11.9	-4.4
LYN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LYN				pmax	pmax		
	comp=Z,90nm,11.5s						
LYN				LR	LR		
	comp=Z,3µm,9.3s						
LYN				LR	LR		
	comp=Z,1µm,8.6s						
LYN				LR	LR		
	comp=Z,3µm,9.7s						
GYA	Guiyang	13.81	282	⇓P	Pn	14 32 18.2	+1.9
GYA				sP	P	14 32 22.7	-2.0
GYA				S	Sn	14 34 52.2	+2.6
GYA				PcP	PcP	14 37 38.5	-1.0
GYA				pmax	pmax		
	comp=Z,17nm,0.9s						
GYA				LR	LR		
	comp=Z,610nm,7.3s						
GYA				LR	LR		
	comp=Z,2µm,9.0s						
GYA				LR	LR		
	comp=Z,2µm,9.6s						
KSAR	Wonju Array Be	14.19	20	Pn	Pn	14 32 22.0	+0.8
KSRS	Korea Array	14.21	20	P	Pn	14 32 23.2	+1.7
	comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=6.2						
KSRS				LR	LR	14 37 18.3	
	comp=Z,70nm,20.6s,baz=210,slow=35						
	comp=Z,2.7nm,0.8s						
KS19	Wonju Array Si	14.24	20	P	P	14 32 28.2	-0.9
HNS	HongShan	14.45	337	⇑P	P	14 32 33.2	+1.7
HNS				S	S	14 35 21.4	-3.0
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HNS				LR	LR		
	comp=N,920nm,14.3s						
HNS				LR	LR		
	comp=E,760nm,12.7s						
HNS				LR	LR		
	comp=Z,1µm,13.3s						
JHS	Saijyo	14.59	40	P	P	14 32 33.0	-0.2
BJT	Baijiatuau	16.43	345	P	P	14 32 53.9	+0.3
JHJ	Hachijo jima 2	18.12	57	P	P	14 33 12.8	+0.5
	comp=Z,2.0nm,0.3s,baz=316,slow=14,SNR=1.5						
JHJ				LR	LR	14 39 24.3	
	comp=Z,137nm,20.4s,baz=270,slow=34						
	comp=Z,26nm,0.6s						
JHJ2	Mitsune	18.15	57	P	P	14 33 12.9	+0.3
PZH	PanZhiHua	18.22	281	P	P	14 33 16.4	+2.9
PZH				S	Sn	14 36 34.3	-2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
PZH				LR	LR		
	comp=Z,900nm,14.9s						
PZH				LR	LR		
	comp=Z,2µm,13.3s						
PZH				LR	LR		
	comp=Z,1µm,14.2s						
MJAR	Matsushiro Arr	18.74	45	P	Pn	14 33 19.8	+0.2
	baz=237,slow=9.0,SNR=6.1						
MJAR				LR	LR	14 40 53.6	
	comp=Z,208nm,19.7s,baz=223,slow=38						
	comp=Z,1.5nm,0.8s						
MJAR	Matsushiro Arr	18.74	45	P	Pn	14 33 19.6	0.0
LZH	Lanzhou	19.44	312	*e*P	Pn	14 33 31.7	+3.6
LZH				pP	sP	14 33 36.1	+2.4
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				LR	LR		
	comp=Z,930nm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,12.0s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
CN2	Changchun	19.77	8	*e*P	Pn	14 33 35.1	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,500nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
MDJ	Mudanjiang	21.33	16	P	P	14 33 48.3	+1.2
MDJ				pmax	pmax		
	comp=Z,13nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,89nm,6.3s						
MDJ				LR	LR		
	comp=Z,290nm,17.1s						
MDJ				LR	LR		
	comp=Z,510nm,17.8s						
MDJ				LR	LR		
	comp=Z,550nm,14.7s						
USRK	Ussuriysk Ar.	21.62	20	P	P	14 33 51.9	+1.7
	comp=Z,3.5nm,0.7s,baz=214,slow=12,SNR=5.7						
	comp=Z,3.5nm,0.7s						
BNX	BinXian	21.95	11	⇑P	P	14 33 56.7	+2.9
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,160nm,3.8s						
CMAR	Chiang Mai Arr	21.98	259	P	P	14 33 56.1	+1.7
	comp=Z,1.2nm,0.8s,baz=58,slow=7.6,SNR=12						
CMAR				PcP	PcP	14 37 53.2	+0.3
	comp=Z,0.5nm,0.7s,baz=90,slow=1.8,SNR=4.8						
	comp=Z,1.2nm,0.8s						
GTOI	Gorontalo	23.48	177	P	P	14 34 12.0	+2.0
	comp=Z,4.5nm,0.7s						
SBUM	Sibu	23.52	204	P	P	14 34 09.2	-1.3
SBUM				IAmb	IAmb	14 34 13.0	
	comp=Z,23nm,1.4s						
MRSI	Marisa	23.61	180	P	P	14 34 13.5	+2.2
	comp=Z,389nmcomp=Z,12nm,0.7s						
MPSI	Mapaga	23.81	185	P	P	14 34 16.6	+3.3
	comp=Z,9.3nm,1.5s						
GTA	Gaotai	23.92	314	⇓P	P	14 34 15.2	+0.9
GTA				pP	pP	14 34 19.2	+0.3
GTA				sP	sP	14 34 22.2	+1.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.6s						
GTA				LR	LR		
	comp=Z,250nm,10.8s						
GTA				LR	LR		
	comp=Z,840nm,12.0s						
GTA				LR	LR		
	comp=Z,900nm,12.0s						
GUMO	Guam	24.26	112	LR	LR	14 41 53.2	
	comp=Z,100nm,21.7s,baz=308,slow=32						
APSI	Ampana	24.98	180	P	P	14 34 26.5	+2.5
	comp=Z,13nm,1.2s						
ERM	Erimo	25.12	40	P	P	14 34 25.4	+0.4
KSM	Kuching	25.18	208	P	P	14 34 24.5	-1.3
KSM				IAmb	IAmb	14 34 29.6	
	comp=Z,14nm,1.1s						
LBMI	Labuha	25.34	166	P	P	14 34 30.5	+3.3
	comp=Z,12nm,1.0s						
GOMU	GeErMu	26.06	304	P	P	14 34 40.5	+6.4
GOMU				sP	sP	14 34 42.8	+2.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,91nm,4.2s						
ASAJ	Asahikawa	26.16	36	P	P	14 34 32.8	-1.8
	comp=Z,1.7nm,0.4s,baz=256,slow=12,SNR=6.0						
	comp=Z,1.7nm,0.4s						
JKA	Kamikawa-asahi	26.17	36	P	P	14 34 32.8	-1.8
KLR	Kul'dur	26.17	15	P	P	14 34 34.1	-0.4
	comp=Z,4.4nm,0.7s,baz=200,slow=7.8,SNR=13						
	comp=Z,4.4nm,0.7s						
ULN	Ulaanbaatar	26.32	337	P	P	14 34 36.7	+0.5
SANI	Sanana	26.44	170	P	P	14 34 39.1	+1.9
	comp=Z,498nmcomp=Z,5.5nm,1.1s						
SONM	Songino Array	26.53	336	P	P	14 34 38.0	+0.1
	comp=Z,3.1nm,0.9s,baz=152,slow=11,SNR=12						
SONM				LR	LR	14 45 49.7	
	comp=Z,166nm,20.7s,baz=148,slow=38						
	comp=Z,3.1nm,0.9s						
SONM	Songino Array	26.53	336	P	P	14 34 38.5	+0.6
KAPI	Kappang	29.12	184	LR	LR	14 49 48.7	
	comp=Z,74nm,18.3s,baz=348,slow=43						
WMQ	Urumqi	33.99	314	*e*P	P	14 35 42.9	-1.1
WMQ				pP	pP	14 35 48.4	-0.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=Z,490nm,12.9s						
WMQ				LR	LR		
	comp=Z,460nm,11.7s						
WMQ				LR	LR		
	comp=Z,250nm,12.9s						
MTN	Manton Dam	37.97	165	P	P	14 36 16.8	-1.4
MTN				IAmb	IAmb	14 36 17.9	
	comp=Z,7.3nm,0.7s						
MK31	Makanchi Array	38.66	316	P	P	14 36 23.5	-0.3
MKAR	Makanchi Array	38.66	316	P	P	14 36 24.1	+0.3
	comp=Z,3.7nm,0.8s,baz=112,slow=9.5,SNR=43						
MKAR				PcP	PcP	14 38 34.7	-1.1
	comp=Z,0.6nm,0.7s,baz=70,slow=4.1,SNR=3.2						
MKAR				ScP	S	14 42 19.4	-0.6
	comp=Z,0.4nm,0.8s,baz=74,slow=5.2,SNR=2.9						
MKAR				LR	LR	14 52 03.6	
	comp=Z,27nm,19.0s,baz=49,slow=36						
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	38.66	316		P	14 36 23.6	-0.2
MAKZ	Makanchi	38.87	316		P	14 36 25.4	-0.1
KNRA	Kununurra	40.25	169	P	P	14 36 36.0	-1.2
KNRA				IAmb	IAmb	14 36 58.4	
	comp=Z,14nm,1.4s						
ZAA0	Zalesovo Array	40.49	327	P	P	14 36 38.8	-0.1
ZALV	Zalesovo Beam	40.49	327	P	P	14 36 37.8	-1.0
	comp=Z,1.8nm,0.7s,baz=120,slow=8.7,SNR=6.9						
ZALV				LR	LR	14 54 25.7	
	comp=Z,123nm,18.5s,baz=120,slow=38						
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	40.49	327	P	P	14 36 38.4	-0.5
KRVT	Keravat (AS076	40.91	130	P	P	14 36 43.4	+0.7
	comp=Z,24nm,0.6s,baz=53,slow=11,SNR=11						
FITZ	Fitzroy Crossi	42.24	174	P	P	14 36 53.4	-0.1
KURK	Kurchatov	42.39	320	P	P	14 36 56.2	+1.7
AAK	Ala-Archa	42.89	307	LR	LR	14 57 32.3	
	comp=Z,112nm,18.1s,baz=71,slow=40						
COEN	Coen	43.34	149	P	P	14 37 02.6	+0.1
COEN				IAmb	IAmb	14 37 03.5	
	comp=Z,14nm,1.1s						
SEY	Seymchan	43.77	20	P	P	14 37 03.7	-1.8
	comp=Z,1.1nm,0.7s,baz=225,slow=8.6,SNR=3.7						
SEY				PcP	PcP	14 38 51.7	-0.3
	comp=Z,1.4nm,0.6s,baz=180,slow=5.1,SNR=8.4						
	comp=Z,1.1nm,0.7s						
WB0	Warramunga Arr	45.43	163	P	P	14 37 17.6	-1.6
WB0				IAmb	IAmb	14 37 32.5	
	comp=Z,18nm,1.5s						
PSA00	Pilbara Seismi	45.56	182	P	P	14 37 19.3	-0.8
PSA00				IAmb	IAmb	14 37 21.0	
	comp=Z,4.7nm,0.8s						
WRAB	Tennant Creek	45.58	163	P	P	14 37 18.9	-1.5
WRAB				IAmb	IAmb	14 37 34.5	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	45.58	163	P	P	14 37 18.8	-1.7
	comp=Z,2.4nm,0.5s,baz=345,slow=8.8,SNR=35						
WRA				PP	PcP	14 39 02.6	+3.7
	comp=Z,0.5nm,0.5s,baz=341,slow=12,SNR=2.6						
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	45.58	163	P	P	14 37 18.8	-1.7
WB2	Warramunga Arr	45.59	163	P	P	14 37 18.3	-2.2
WB2				IAmb	IAmb	14 37 21.2	
	comp=Z,4.9nm,0.7s						
GAR	Garm	45.63	302	P	P	14 37 20.4	-0.5
WR0	Warramunga Arr	45.65	163	P	P	14 37 18.8	-2.2
WR0				IAmb	IAmb	14 37 20.4	
	comp=Z,12nm,1.4s						
KK31	Karatay Array	45.85	307	P	P	14 37 22.9	+0.5
KKAR	Karatay Array	45.85	307	P	P	14 37 22.8	+0.4
TIXI	Tiksi	47.63	3	P	P	14 37 34.3	-1.6
	comp=Z,2.8nm,0.8s,baz=268,slow=23,SNR=24						
TIXI				LR	LR	14 58 55.3	
	comp=Z,81nm,19.0s,baz=182,slow=38						
	comp=Z,2.8nm,0.8s						
TIXI	Tiksi	47.63	3	P	P	14 37 34.4	-1.4
TIXI				IAmb	IAmb	14 37 40.8	
	comp=Z,10nm,1.2s						
BRVK	Borovoye	48.04	321	P	P	14 37 38.8	-0.5
BRVK				IAmb	IAmb	14 37 43.5	
	comp=Z,4.6nm,0.9s						
AS31	Alice Springs	49.05	165	P	P	14 37 46.4	-1.0
ASAR	Alice Springs	49.05	165	P	P	14 37 46.4	-1.0
	comp=Z,1.3nm,0.7s,baz=338,slow=6.9,SNR=30						
ASAR				PP	PP	14 39 40.2	-1.0
	comp=Z,2.5nm,0.7s,baz=344,slow=11,SNR=12						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	49.05	165	P	P	14 37 46.2	-1.2
CTA	Charters Tower	50.10	149	P	P	14 37 52.7	-2.8
	comp=Z,2.5nm,1.0s,baz=336,slow=8.1,SNR=2.5						
	comp=Z,2.5nm,1.0s						
ABKAR	Akbulak array	53.78	314	P	P	14 38 22.6	0.0
AKTO	Aktyubinsk	55.10	316	LR	LR	15 03 37.9	
	comp=Z,85nm,21.6s,baz=120,slow=38						
GEYT	Alibeck	55.22	300	P	P	14 38 32.1	-1.2
	comp=Z,2.0nm,0.6s,baz=132,slow=8.0,SNR=2.5						
	comp=Z,2.0nm,0.6s						
GEYT	Alibeck	55.22	300	P	P	14 38 33.8	+0.5
STKA	Stephens Creek	58.93	160	P	P	14 38 58.2	-1.2
	comp=Z,2.4nm,0.8s,baz=0.0,slow=8.1,SNR=2.0						
	comp=Z,2.4nm,0.8s						
KIRV	Kirov	60.48	325	LR	LR	15 06 29.4	
	comp=Z,102nm,18.2s,baz=115,slow=37						
GNI	Garni	65.20	305	P	P	14 39 41.5	-0.3
TTA	Tatalina	65.22	30	P	P	14 39 41.0	-0.5
KLMR	Klimovskoe	65.40	328	*e*P	P	14 39 39.3	-3.2
KLMR				AMP		14 39 42.5	
	comp=Z,8.0nm,0.8s						
SVW2	Sparrevohn	65.60	32	P	P	14 39 44.0	+0.2
ONI	Oni	65.67	307	P	P	14 39 44.8	0.0
ONI				IAmb	IAmb	14 39 47.0	
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	65.85	309	P	P	14 39 46.0	+0.3
	comp=Z,4.0nm,0.8s,baz=120,slow=4.1,SNR=14						
	comp=Z,4.0nm,0.8s						
O18K	Koktuh Hills	65.92	33	P	P	14 39 47.1	+1.1
O18K				IAmb	IAmb	14 39 51.7	
	comp=Z,5.7nm,0.8s						
J20K	Nowinta River	65.93	28	P	P	14 39 46.6	+0.7
J20K				IAmb	IAmb	14 39 52.0	
	comp=Z,2.8nm,0.8s						
K20K	Telida	66.06	29	P	P	14 39 47.5	+0.8
K20K				IAmb	IAmb	14 39 53.0	
	comp=Z,4.8nm,1.0s						
M19K	Big River Lodg	66.07	31	P	P	14 39 47.6	+0.7
H21K	Melozitna Rive	66.34	27	P	P	14 39 49.1	+0.6
H21K				IAmb	IAmb	14 39 52.3	
	comp=Z,5.8nm,1.1s						
I21K	Tanana	66.74	27	P	P	14 39 52.0	+0.9
I21K				IAmb	IAmb	14 40 04.8	
	comp=Z,7.6nm,1.3s						
Q19K	Cape Douglas,	66.84	34	P	P	14 39 52.3	+0.4
CAST	Castle Rocks	66.93	29	P	P	14 39 52.7	+0.3
PPLA	Purkeypile	66.96	30	P	P	14 39 53.0	+0.3
COLD	Coldfoot	67.18	25	P	P	14 39 54.2	+0.3
BPAW	Bear Paw Mtn.	67.32	28	P	P	14 39 54.9	+0.1
BPAW				IAmb	IAmb	14 39 55.9	
	comp=Z,6.5nm,1.3s						
KTH	Kantishna Hill	67.43	29	P	P	14 39 55.3	-0.3
KTH				IAmb	IAmb	14 40 02.5	
	comp=Z,6.0nm,1.0s						
KDAK	Kodiak Island	67.58	35	P	P	14 39 55.9	-0.6
H23K	Yukon River	67.65	26	P	P	14 39 57.5	+0.5
H23K				IAmb	IAmb	14 40 01.5	
	comp=Z,8.6nm,1.1s						
I23K	Minto, Yukon-K	67.84	27	P	P	14 39 58.2	+0.2
NEA2	Nenana	68.06	28	P	P	14 39 59.5	+0.1
NEA2				IAmb	IAmb	14 40 02.5	
	comp=Z,5.7nm,0.9s						
H24K	Noodor Dome	68.33	26	P	P	14 40 01.4	+0.2
H24K				IAmb	IAmb	14 40 10.2	
	comp=Z,3.9nm,1.2s						
MDM	Murphy Dome	68.34	27	P	P	14 40 01.5	+0.2
RND	Reindeer	68.37	29	P	P	14 40 00.9	-0.7
WRH	Wood River Hil	68.50	28	P	P	14 40 02.1	-0.1
WRH				IAmb	IAmb	14 40 23.9	
	comp=Z,9.4nm,1.4s						
SML	Sawmill	68.92	31	P	P	14 40 04.5	-0.5
ILAR	Eielson Array	68.94	27	P	P	14 40 03.3	-1.7
	comp=Z,0.2nm,0.5s,baz=275,slow=6.0,SNR=2.6						
	comp=Z,0.2nm,0.5s						
DHY	Denali Highway	69.09	29	P	P	14 40 05.7	-0.5
DHY				IAmb	IAmb	14 40 13.4	
	comp=Z,4.2nm,1.2s						
BMAR	Burnt Mountain	69.28	24	P	P	14 40 07.6	+0.5
SCM	Sheep Creek Mo	69.38	30	P	P	14 40 07.7	-0.1
ARCES	ARCESS Array B	69.69	338	P	P	14 40 08.4	-1.1
	comp=Z,1.0nm,0.8s,baz=72,slow=2.9,SNR=2.4						
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	69.69	338	P	P	14 40 09.7	+0.2
ARCES				IAmb	IAmb	14 40 37.4	
	comp=Z,7.5nm,1.4s						
M24K	Tolsona, Glenn	69.85	30	P	P	14 40 11.2	+0.5
RIDG	Independent Ri	70.05	28	P	P	14 40 11.1	-0.8
RIDG				IAmb	IAmb	14 40 14.1	
	comp=Z,11nm,1.4s						
KLU	Klutina	70.11	31	P	P	14 40 12.4	0.0
SCRK	Sand Creek	70.36	28	P	P	14 40 13.2	-0.7
SCRK				IAmb	IAmb	14 40 18.6	
	comp=Z,3.2nm,0.9s						
DOT	Dot Lake	70.41	28	P	P	14 40 13.7	-0.4
N25K	Chitina, Valde	70.70	30	P	P	14 40 16.5	+0.6
N25K				IAmb	IAmb	14 40 23.7	
	comp=Z,3.6nm,0.9s						
GLB	Gilahina Butte	71.11	30	P	P	14 40 18.1	-0.3
M26K	Nabesna, AK	71.21	29	P	P	14 40 18.8	-0.3
M26K				IAmb	IAmb	14 40 21.9	
	comp=Z,9.2nm,1.2s						
L27K	Beaver Creek,	71.54	28	P	P	14 40 21.3	+0.4
L27K				IAmb	IAmb	14 40 23.9	
	comp=Z,8.0nm,1.2s						
BCAR	Beaver Creek A	71.56	28	P	P	14 40 21.4	+0.3
FINES	FINESS Array B	71.67	330	P	P	14 40 20.4	-1.3
	comp=Z,3.3nm,0.8s,baz=64,slow=4.4,SNR=10						
	comp=Z,3.3nm,0.8s						
FINES	FINESS Array B	71.67	330	P	P	14 40 21.4	-0.3
BARN	Barnard Glacie	72.21	30	P	P	14 40 24.5	-0.8
DAWY	Dawson	72.27	27	P	P	14 40 24.8	-0.6
DAWY				IAmb	IAmb	14 40 28.5	
	comp=Z,5.1nm,0.8s						
I29M	Ogilvie Camp,	72.28	26	P	P	14 40 25.3	0.0
INK	Inuvik	73.00	22	P	P	14 40 28.4	-1.1
	comp=Z,2.7nm,1.0s,baz=241,slow=2.7,SNR=4.9						
	comp=Z,2.7nm,1.0s						
INK	Inuvik	73.00	22	P	P	14 40 29.4	0.0
INK				IAmb	IAmb	14 40 40.8	
	comp=Z,7.3nm,1.4s						
AKASG	Malin Array Be	73.18	318	P	P	14 40 29.4	-1.4
	comp=Z,1.8nm,0.7s,baz=58,slow=6.9,SNR=10						
	comp=Z,1.8nm,0.7s						
AKASG	Malin Array Be	73.18	318	IAmb	IAmb	14 40 31.0	
	comp=Z,3.2nm,1.1s						
AKBB	Malin Array Si	73.18	318	P	P	14 40 29.8	-1.1
AKBB				IAmb	IAmb	14 40 30.7	
	comp=Z,3.6nm,0.8s						
NACGM	Naroch	73.29	323	*e*P	P	14 40 31.8	+0.3
BR131	Keskin Array S	73.56	307	P	P	14 40 33.4	-0.1
BR131				IAmb	IAmb	14 40 34.5	
	comp=Z,5.2nm,1.0s						
BRTR	Keskin Array B	73.56	307	P	P	14 40 33.6	0.0
	comp=Z,2.3nm,0.8s,baz=99,slow=7.6,SNR=11						
	comp=Z,2.3nm,0.8s						
BRTR	Keskin Array B	73.56	307	P	P	14 40 33.3	-0.3
BURAR	Bucovina Array	76.69	316	P	P	14 40 51.1	-0.3
MLR	Muntele Rosu	76.99	314	P	P	14 40 53.6	+0.4
MLR				IAmb	IAmb	14 41 07.8	
	comp=Z,14nm,1.5s						
NB2	NORSAR Subarra	78.43	332	P	P	14 40 59.3	-1.5
	comp=Z,6.5nm,1.2s,baz=59,slow=5.6						
NOA	NORSAR Array B	78.43	332	P	P	14 40 58.8	-2.0
	comp=Z,1.4nm,0.8s,baz=56,slow=5.8,SNR=3.6						
NOA				LR	LR	15 18 29.4	
	comp=Z,75nm,19.3s,baz=285,slow=38						
	comp=Z,1.4nm,0.8s						
OJC	Ojcow	78.97	320	P	P	14 41 04.0	+0.1
OJC				IAmb	IAmb	14 41 05.0	
	comp=Z,7.1nm,1.0s						
VYHS	Vyhne	80.27	319	*e*P	P	14 41 11.4	+0.3
CLL	Collm	82.33	323	*e*P	P	14 41 22.0	+0.1
YKA	Yellowknife Ar	82.73	23	P	P	14 41 23.0	-0.8
	comp=Z,1.8nm,0.7s,baz=313,slow=4.8,SNR=34						
	comp=Z,1.8nm,0.7s						
GERES	GERESS Array B	83.13	321	P	P	14 41 26.1	-0.1
	comp=Z,1.9nm,0.2s,baz=28,slow=3.2,SNR=5.5						
	comp=Z,1.9nm,0.2s						
DAVOX	Davos/Dischmat	86.40	320	LR	LR	15 23 01.8	
	comp=Z,103nm,20.7s,baz=264,slow=38						
VAE	Valguarnera	88.23	311	LR	LR	15 26 34.1	
	comp=Z,108nm,21.1s,baz=314,slow=39						
B08A	Colville Reser	89.46	36	P	P	14 41 57.6	+0.3
B08A				IAmb	IAmb	14 41 59.6	
	comp=Z,4.4nm,0.8s						
JTMT	Jette	92.48	34	P	P	14 42 11.9	+0.4
BEKR	Beckworth	93.92	43	P	P	14 42 18.7	+0.4
BEKR				IAmb	IAmb	14 42 20.8	
	comp=Z,2.9nm,0.9s						
NVAR	Mina Array Bea	96.06	43	P	P	14 42 28.8	+0.6
	comp=Z,0.8nm,0.7s,baz=292,slow=4.0,SNR=6.6						
	comp=Z,0.8nm,0.7s						

TAP 02 14:30:45.9, 24°.22N×121°.70E, h12$^{\text{km}}$, ML3.6, 1C-14D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.09	229	⇓*i*P	Pg	14 30 48.8	+0.2
	baz=229						
ETL				*i* S	Sg	14 30 51.1	+0.5
	baz=229						
EHP	Heping Village	0.10	22	⇓*i*P	Pg	14 30 48.8	+0.1
	baz=27						
EHP				*i* S	Sg	14 30 51.1	+0.4
	baz=27						
NACB	Ninganchiao	0.11	244	⇓*i*P	Pg	14 30 49.0	+0.2
	baz=244						
NACB				*i* S	Sg	14 30 51.4	+0.5
	baz=244						
TWD	Chiawan	0.17	214	⇓*i*P	Pg	14 30 49.7	-0.1
	baz=212						
TWD				*i* S	Sg	14 30 52.5	+0.2
	baz=212						
ETLH	Xiulin Townshi	0.20	266	⇓*i*P	Pg	14 30 50.7	+0.4
	baz=266						
ETLH				*e*S	Sg	14 30 54.0	+0.7
	baz=266						
ENA	Nanau	0.21	10	⇓*i*P	Pg	14 30 50.6	+0.1
	baz=12						
ENA				*i* S	Sg	14 30 53.9	+0.4
	baz=12						
EWUT	Wuta	0.23	18	*i* P	Pg	14 30 50.9	0.0
	baz=18						
EWUT				*i* S	Sg	14 30 54.4	+0.2
	baz=18						
HWA	Hwalien	0.26	200	*i* P	Pg	14 30 51.8	+0.5
	baz=198						
ETM	Tongmen	0.32	217	P	Pg	14 30 52.2	-0.2
	baz=217						
ETM				*e*S	Sg	14 30 57.1	+0.4
	baz=217						
LATG	Datong	0.35	333	⇓*i*P	Pg	14 30 53.6	+0.6
	baz=333						
LATG				*e*S	Sb	14 30 58.9	-1.0
	baz=333						
NNSB	Datong	0.36	305	⇓*i*P	Pb	14 30 53.8	-0.5
	baz=305						
NNSB				S	Sb	14 30 59.2	-0.8
	baz=305						
TEYL	Yanliau Villag	0.36	195	*e*P	Pg	14 30 53.7	+0.5
	baz=196						
TEYL				*e*S	Sb	14 31 01.2	+1.2
	baz=196						
NNS	Nan Shan	0.37	306	⇓P	Pg	14 30 54.0	+0.6
	baz=306						
NNS				*e*S	Sb	14 30 59.6	-0.8
	baz=306						
WHF	Hehuan Shan	0.41	259	⇓*i*P	Pg	14 30 54.5	+0.4
	baz=259						
WHF				*e*S	Sg	14 31 00.5	+0.9
	baz=259						
TWC	Suao	0.41	19	*i* P	Pg	14 30 54.2	+0.2
	baz=21						
TWC				*e*S	Sg	14 30 59.9	+0.4

	baz=21						
NDS	Dongshan	0.41	2	*i* P	Pg	14 30 54.4	+0.3
	baz=2.0						
NDS				*i* S	Sg	14 31 00.1	+0.6
	baz=2.0						
NDT	Datong Townshi	0.42	336	⇓*i*P	Pb	14 30 54.9	-0.4
	baz=336						
NDT				*i* S	Sb	14 31 01.4	-0.2
	baz=336						
FUSS	Fushou	0.42	274	⇓P	Pg	14 30 53.9	-0.4
	baz=274						
FUSS				*e*S	Sg	14 30 59.7	-0.2
	baz=274						
ENTT	Nioudou	0.43	344	⇓*i*P	Pb	14 30 55.1	-0.5
	baz=344						
ENTT				S	Sb	14 31 01.9	-0.2
	baz=344						
ESL	Shilin	0.47	211	*e*P	Pg	14 30 54.9	-0.4
	baz=210						
ESL				*e*S	Sb	14 31 02.6	-0.6
	baz=210						
TWT	Tachien	0.48	274	*e*P	Pb	14 30 56.5	+0.1
	baz=273						
TDCB	Techi	0.50	274	P	Pb	14 30 56.6	-0.2
	baz=274						
TDCB				*e*S	Sb	14 31 03.3	-0.7
	baz=274						
TWE	Neicheng	0.50	356	*i* P	Pg	14 30 56.2	+0.5
	baz=358						
TWE				*e*S	Sb	14 31 03.5	-0.4
	baz=358						
CHGB	Renai	0.51	252	⇓*e*P	Pb	14 30 56.5	-0.4
	baz=252						
CHGB				*e*S	Sb	14 31 03.9	-0.5
	baz=252						
TEGC	Jichi Village	0.53	196	*e*P	Pg	14 30 56.1	-0.2
	baz=195						
YHNB	Yeheng	0.54	326	⇑P	Pb	14 30 57.3	0.0
	baz=326						
YHNB				*e*S	Sb	14 31 04.9	-0.2
	baz=326						
ILA	Ilan	0.54	4	*e*P	Pb	14 30 57.2	-0.3
	baz=5.0						
ILA				*e*S	Sb	14 31 05.0	-0.3
	baz=5.0						
FUSB	Fushanzhiwuyua	0.55	349	P	Pb	14 30 57.4	-0.1
	baz=349						
FUSB				*e*S	Sg	14 31 04.4	+0.5
	baz=349						
OWD	Renai	0.55	241	*e*P	Pg	14 30 57.0	+0.3
	baz=241						
OWD				*e*S	Sb	14 31 05.3	-0.2
	baz=241						
NSK	Sanguang	0.55	325	P	Pb	14 30 57.4	-0.2
	baz=326						
NSK				*e*S	Sg	14 31 04.7	+0.7
	baz=326						
WUSB	Renai	0.58	247	*e*P	Pb	14 30 57.8	-0.4
	baz=247						
WUSB				*e*S	Sg	14 31 05.5	+0.6
	baz=247						
NWLT	Wulai	0.58	342	*i* P	Pb	14 30 58.1	-0.1
	baz=342						
NWLT				*e*S	Sb	14 31 05.8	-0.6
	baz=342						
EGFH	Guangfu	0.60	205	*e*P	Pg	14 30 57.5	-0.1
	baz=204						
NTC	Toucheng	0.64	11	*e*P	Pg	14 30 57.9	-0.5
	baz=11						
EGS		0.66	19	*e*P	Pb	14 30 59.8	+0.4
	baz=20						
NFF	Wufeng Townshi	0.67	308	*e*P	Pb	14 31 00.1	+0.4
	baz=308						
VWDT	VWDT	0.69	228	*e*P	Pb	14 30 59.6	-0.3
	baz=228						
VWDT				*e*S	Sb	14 31 09.9	+0.4
	baz=228						
TIPB	Shuangxi	0.76	9	*e*P	Pb	14 31 00.9	-0.2
	baz=9.0						
TIPB				*e*S	Sg	14 31 09.7	-0.9
	baz=9.0						
TWB1	Santiao Chiao	0.83	18	*e*P	Pn	14 31 03.3	-0.2
	baz=19						
WFSB	Wu-fen Shan	0.85	5	*e*P	Pn	14 31 03.2	-0.5
	baz=5.0						
YOJ	Yonaguni jima	1.22	78	*e*P	Pn	14 31 08.3	-0.5
	baz=78						
YOJ				*e*S	Sb	14 31 24.8	+0.1
	baz=78						

IDC ***02*** *14:30:51.9±1.5, 58.°66N×155.°92W, h136^{km}±15^{km}, mb3.5/12, mbtmp4.0/13, Error ellipse: s-maj=25.3km s-min=13.5km az=177.0*

NEIC ***02*** *14:30:52.7±1.9, 58.°43N±0.°04×155.°62W±0.°09, h157^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=6.2km az=117.0*

ANF ***02*** *14:30:52.5±0.3, 58.°47N×155.°78W, h150^{km}±3^{km}, ML4.2/35, Error ellipse: s-maj=3.8km s-min=2.8km az=131.0*

AEIC ***02*** *14:30:53±1.6, 58.°43N±0.°04×155.°67W±0.°09, h155^{km}±3^{km}, ML4.0, mb4.2/14(NEIC), ML3.9/74(NEIC), Error ellipse: s-maj=7.1km s-min=5.4km az=97.0*

ISC 02 14:30:52.8±0.6**, 58.°46N**±0.°03**×155.°68W**±0.°04**, h155**^{km}±5^{km}**, n312, σ1^{s}18**/327**, mb3.9**/14**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELA	Mount Kelaz	0.04	233		Pn	14 31 13.1	-0.5
KELA					Sn	14 31 30.2	+0.9
ANCK	Angle Creek	0.28	159		Pn	14 31 13.8	-0.2
ANCK					Sn	14 31 31.4	+1.4
KCG	Knife Ck. Glac	0.34	117		Pn	14 31 13.9	-0.2
KCG					Sn	14 31 31.5	+1.2
KJL	Kejulik	0.41	172		Pn	14 31 14.1	-0.2
KJL					Sn	14 31 32.4	+1.6
CAHL	Cahill	0.46	154		Pn	14 31 14.2	-0.4
PLK5	Peulik 5	0.79	234		Pn	14 31 16.2	-0.1
PLK1	Peulik 1	0.82	217		Pn	14 31 16.2	-0.4
PLK3	Peulik 3	0.84	202		Pn	14 31 16.6	-0.2
PLK3					Sn	14 31 36.1	+1.1
P18K	Big Mountain,	0.96	14		Pn	14 31 17.4	-0.3
P18K					Sn	14 31 35.4	-1.5
P18K	Big Mountain,	0.96	14	P	Pn	14 31 17.3	-0.3
	baz=194,SNR=15						
P18K				S	Sn	14 31 35.7	-1.2
	baz=194						
Q19K	Cape Douglas,	1.16	65		Pn	14 31 19.6	+0.2
Q19K					Sn	14 31 39.5	-0.3
Q19K	Cape Douglas,	1.16	65	IAML		14 31 42.3	
	comp=E,3µm,0.8s						
Q19K				IAML		14 31 42.5	
	comp=N,1µm,0.7s						
Q19K	Cape Douglas,	1.16	65	P	Pn	14 31 19.6	+0.2
	baz=245,SNR=167						
Q19K				S	Sn	14 31 39.5	-0.3
	baz=245						
O18K	Koktuh Hills	1.42	10		Pn	14 31 21.8	-0.1
O18K					Sn	14 31 43.5	-0.7
O18K	Koktuh Hills	1.42	10	P	Pn	14 31 21.9	+0.1
	baz=190,SNR=183						
O18K				S	Sn	14 31 43.3	-0.9
	baz=190						
AUH	Augustine H	1.47	51		Pn	14 31 23.1	+0.6
AUQ	Augustine Qik'	1.48	52		Pn	14 31 23.0	+0.6
AUQ					Sn	14 31 45.0	-0.4
AUL	Augustine Lava	1.49	51		Pn	14 31 23.1	+0.6
AU2	Augustine Isla	1.50	52		Pn	14 31 23.2	+0.6
AU22	Augustine Moun	1.51	52		Pn	14 31 23.3	+0.6
AU22					Sn	14 31 45.8	0.0
OPT	Oil Point	1.74	46		Pn	14 31 26.2	+1.0
P19K	Oil Pt	1.74	46		Pn	14 31 25.9	+0.7
P19K					Sn	14 31 50.2	0.0
P19K	Oil Pt	1.74	46	IAML		14 31 51.4	
	comp=E,1µm,0.8s						
P19K				IAML		14 31 51.4	
	comp=N,1µm,0.6s						
P19K	Oil Pt	1.74	46	P	Pn	14 31 25.9	+0.7
	baz=227,SNR=7.5						
P19K				S	Sn	14 31 50.3	0.0
	baz=227						
KDAK	Kodiak Island	1.78	111	P	Pn	14 31 25.0	-0.7
	comp=N,110nm,0.3s,baz=329,slow=3.0,SNR=871						
KDAK				S	Sn	14 31 48.7	-2.2
KDAK	Kodiak Island	1.78	111		Pn	14 31 25.1	-0.6
KDAK				IAML		14 31 50.9	
	comp=N,496nm,0.6s						
KDAK				IAML		14 31 56.2	
	comp=N,411nm,0.7s						
KDAK	Kodiak Island	1.78	111	P	Pn	14 31 25.1	-0.6
	baz=293						
KDAK				S	Sn	14 31 49.2	-1.7
	baz=293						
OHAK	Old Harbor	1.79	133		Pn	14 31 25.1	-0.6
OHAK					Sn	14 31 48.9	-2.1
OHAK	Old Harbor	1.79	133	IAML		14 31 49.7	
	comp=E,2µm,0.4s						
OHAK				IAML		14 31 50.0	
	comp=N,2µm,0.3s						
OHAK	Old Harbor	1.79	133	P	Pn	14 31 25.1	-0.6
	baz=314,SNR=35						
OHAK				S	Sn	14 31 48.7	-2.3
	baz=314						
O19K	Port Alsworth	1.87	21		Pn	14 31 26.9	+0.4
O19K					Sn	14 31 52.2	-0.6
O19K	Port Alsworth	1.87	21	IAML		14 31 53.7	
	comp=E,1µm,0.5s						
O19K	Port Alsworth	1.87	21	P	Pn	14 31 27.0	+0.4
	baz=202,SNR=138						
O19K				S	Sn	14 31 52.1	-0.6
	baz=202						
ANNE	Aniakchak Nort	2.01	220		Pn	14 31 27.8	-0.5
ANNW	Aniakchak Nort	2.02	223		Pn	14 31 28.9	+0.4
SII	Sitkinak Islan	2.07	156		Pn	14 31 28.4	-0.6
SII					Sn	14 31 55.0	-2.0
SII	Sitkinak Islan	2.07	156	P	Pn	14 31 28.4	-0.6
	baz=337,SNR=16						
SII				S	Sn	14 31 55.0	-2.0
	baz=337						
ANPB	Aniakchak Plen	2.17	221		Pn	14 31 29.6	-0.6
N18K	Kilae Creek	2.23	357		Pn	14 31 31.1	+0.3
N18K	Kilae Creek	2.23	357	IAML		14 32 01.5	
	comp=N,192nm,1.1s						
N18K	Kilae Creek	2.23	357	P	Pn	14 31 31.0	+0.3
	baz=177,SNR=64						
N18K				S	Sn	14 31 59.3	-0.8
	baz=177						
O20K	Slope Mountain	2.26	43		Pn	14 31 32.0	+0.9
O20K	Slope Mountain	2.26	43	P	Pn	14 31 32.1	+0.9
	baz=225,SNR=7.3						
O20K				S	Sn	14 32 00.9	0.0
	baz=225						
HOM	Homer	2.41	58	Pn	Pn	14 31 33.3	+0.4
HOM	Homer	2.41	58	P	Pn	14 31 33.7	+0.8
	baz=241						
HOM				S	Sn	14 32 03.3	-0.6
	baz=241						
N19K	Bonanza Creek	2.44	14		Pn	14 31 34.0	+0.7
N19K	Bonanza Creek	2.44	14	IAML		14 32 06.2	
	comp=E,136nm,1.4s						
N19K	Bonanza Creek	2.44	14	P	Pn	14 31 34.1	+0.7
	baz=195,SNR=99						
N19K				S	Sn	14 32 04.1	-0.7
	baz=195						
RDWB	Redoubt West	2.50	34		Pn	14 31 34.4	+0.2
RSO	Redoubt South	2.50	35		Pn	14 31 34.3	0.0
NCT	North Crescent	2.53	33		Pn	14 31 34.9	+0.4
CNPM	China Poot	2.54	63		Pn	14 31 34.6	+0.1
CNPM	China Poot	2.54	63	IAML		14 32 05.8	
	comp=E,668nm,0.5s						
CNPM				IAML		14 32 06.4	
	comp=N,1µm,0.5s						
RDJH	Redoubt Jeurge	2.59	33		Pn	14 31 35.7	+0.4
DFR	Drift River	2.63	34		Pn	14 31 36.1	+0.4
SVW2	Sparrevohn	2.64	1		Pn	14 31 36.1	+0.3
CHIR	Chirikof Islan	2.65	179		Pn	14 31 34.6	-1.3
CHIR	Chirikof Islan	2.65	179	IAML		14 32 07.2	
	comp=N,784nm,0.4s						
CHIR				IAML		14 32 07.7	
	comp=E,434nm,0.8s						
CHIR	Chirikof Islan	2.65	179	P	Pn	14 31 34.5	-1.3
	baz=359,SNR=5.5						
CHIR				S	Sn	14 32 05.2	-3.9
	baz=359						
BRLK	Bradley Lake	2.80	60		Pn	14 31 37.5	-0.3
BRLK	Bradley Lake	2.80	60	IAML		14 32 15.4	
	comp=E,546nm,0.1s						
BRLK				IAML		14 32 15.5	
	comp=N,785nm,0.1s						
BRSE	Bradley Lake S	2.85	61		Pn	14 31 38.2	-0.2
BRSE	Bradley Lake S	2.85	61	P	Pn	14 31 38.8	+0.4
	baz=245						
BRSE				S	Sn	14 32 11.3	-2.5
	baz=245						
VNHG	Veniaminof 1	2.93	221		Pn	14 31 39.2	-0.3
VNFG	Fog Glacier, M	3.03	225		Pn	14 31 40.6	-0.1
SPWE	Spurr West	3.23	28		Pn	14 31 44.2	+1.0
CAPN	Captain Cook N	3.26	43	S	Sn	14 32 24.6	+1.7
	baz=226						
CKN	Chakachatna No	3.29	31		Pn	14 31 44.5	+0.6
SPCG	Spurr Capps Gl	3.39	31		Pn	14 31 45.8	+0.6
SLKM	Skilak Lake	3.46	51		Pn	14 31 46.1	0.0
M19K	Big River Lodg	3.51	10		Pn	14 31 47.5	+0.7
M19K	Big River Lodg	3.51	10	P	Pn	14 31 47.5	+0.7
	baz=191,SNR=48						
M19K				S	Sn	14 32 28.8	+0.1
	baz=191						
SEW	Seward	3.60	60		Pn	14 31 47.8	0.0
SEW	Seward	3.60	60	P	Pn	14 31 48.5	+0.8
	baz=245						
STLK	Strandline Lak	3.61	31		Pn	14 31 48.6	+0.6
O22K	Cooper Landing	3.65	54		Pn	14 31 48.8	+0.3
O22K	Cooper Landing	3.65	54	P	Pn	14 31 48.8	+0.3
	baz=238						
L19K	White Mountain	3.75	6		Pn	14 31 50.5	+0.7
L19K	White Mountain	3.75	6	IAML		14 33 06.1	
	comp=E,50nm,1.0s						
L19K	White Mountain	3.75	6	P	Pn	14 31 50.5	+0.7
	baz=186,SNR=72						
FIS	Fire Island	3.85	43	Pn	Pn	14 31 51.6	+0.5
FIS				IAML		14 32 43.5	
	comp=N,312nm,0.4s						
FIS				IAML		14 32 44.3	
	comp=E,332nm,0.7s						
RC01	Rabbit Creek A	4.00	46		Pn	14 31 52.9	-0.1
RC01	Rabbit Creek A	4.00	46	IAML		14 32 38.2	
	comp=N,386nm,0.4s						
RC01				IAML		14 32 38.6	
	comp=E,420nm,0.3s						
RC01	Rabbit Creek A	4.00	46	P	Pn	14 31 53.0	+0.1
	baz=231,SNR=7.0						
SDPT	Sand Point	4.08	222		Pn	14 31 52.7	-1.4
SDPT	Sand Point	4.08	222	IAML		14 32 45.4	
	comp=E,77nm,1.6s						
SDPT				IAML		14 33 12.6	
	comp=N,68nm,1.8s						
L20K	Farewell, AK	4.13	12		Pn	14 31 55.8	+1.1
L20K	Farewell, AK	4.13	12	P	Pn	14 31 55.8	+1.1
	baz=193,SNR=162						
M22K	Willow	4.32	38		Pn	14 31 57.0	-0.1
M22K	Willow	4.32	38	P	Pn	14 31 56.9	-0.1
	baz=222,SNR=18						
PWL	Port Wells	4.43	54		Pn	14 31 58.0	-0.7
PWL	Port Wells	4.43	54	IAML		14 32 47.4	
	comp=E,320nm,0.7s						
PWL	Port Wells	4.43	54	P	Pn	14 31 58.2	-0.5
	baz=240						
TT01	Tatalina	4.46	358		Pn	14 31 59.5	+0.5
TTA	Tatalina	4.49	358		Pn	14 31 59.5	+0.1
TTA	Tatalina	4.49	358	P	Pn	14 31 59.8	+0.4
	baz=178,SNR=24						
PMR	Palmer	4.54	44		Pn	14 31 59.2	-0.9
PMR				IAML		14 32 51.4	
	comp=N,104nm,0.3s						
PMR				IAML		14 32 51.6	
	comp=E,101nm,0.2s						
PMR	Palmer	4.54	44	P	Pn	14 31 59.2	-0.9
	baz=229						
KNK	Knik Glacier	4.69	48		Pn	14 32 01.0	-1.0
KNK	Knik Glacier	4.69	48	IAML		14 32 54.0	
	comp=E,289nm,0.6s						
KNK	Knik Glacier	4.69	48	P	Pn	14 32 01.0	-1.0
	baz=234,SNR=14						
GHO	Glory Hole Cre	4.74	43		Pn	14 32 01.5	-1.2
GHO	Glory Hole Cre	4.74	43	IAML		14 32 56.2	
	comp=N,123nm,0.4s						
GHO				IAML		14 32 56.2	
	comp=E,238nm,0.3s						
PPLA	Purkeypile	4.77	20		Pn	14 32 04.5	+1.3
PPLA	Purkeypile	4.77	20	P	Pn	14 32 04.2	+1.1
	baz=202,SNR=59						
CUT	Chulitna	4.78	32		Pn	14 32 02.8	-0.4
CUT	Chulitna	4.78	32	IAML		14 32 58.5	
	comp=N,223nm,0.4s						
CUT				IAML		14 32 58.7	
	comp=E,247nm,0.5s						
CUT	Chulitna	4.78	32	P	Pn	14 32 02.9	-0.2
	baz=216,SNR=70						
Q23K	Middleton Isla	4.93	75		Pn	14 32 05.5	+0.3
Q23K	Middleton Isla	4.93	75	P	Pn	14 32 05.4	+0.3
	baz=262						
MID	Middleton Isla	4.94	75		Pn	14 32 05.4	+0.2
K20K	Telida	4.97	8		Pn	14 32 06.4	+0.6
K20K	Telida	4.97	8	P	Pn	14 32 06.3	+0.6
	baz=190,SNR=109						
SML	Sawmill	4.97	44		Pn	14 32 04.6	-1.2
SML	Sawmill	4.97	44	IAML		14 33 07.9	
	comp=N,106nm,1.0s						
SML				IAML		14 33 09.2	
	comp=E,79nm,1.3s						
SML	Sawmill	4.97	44	P	Pn	14 32 04.4	-1.4
	baz=230,SNR=13						
GLI	Glacier Island	4.98	57		Pn	14 32 05.0	-0.9
GLI	Glacier Island	4.98	57	IAML		14 33 01.6	
	comp=N,226nm,0.3s						
GLI	Glacier Island	4.98	57	P	Pn	14 32 05.4	-0.5
	baz=244						
M23K	Glacier View	5.19	47	P	Pn	14 32 07.7	-1.0
	baz=233,SNR=30						
FID	Port Fidalgo	5.21	60		Pn	14 32 07.7	-1.2
CAST	Castle Rocks	5.27	18	Pn	Pn	14 32 10.1	+0.4
CAST				IAML		14 33 44.6	
	comp=E,17nm,1.4s						
CAST	Castle Rocks	5.27	18	P	Pn	14 32 10.5	+0.7
	baz=201,SNR=224						
JPK	Jack Peak	5.28	57		Pn	14 32 09.3	-0.5
SCM	Sheep Creek Mo	5.37	47		Pn	14 32 10.1	-1.0
SCM	Sheep Creek Mo	5.37	47	IAML		14 33 14.4	
	comp=N,138nm,0.6s						
SCM	Sheep Creek Mo	5.37	47	P	Pn	14 32 10.1	-1.0
	baz=234,SNR=19						
EYAK	Cordova Ski Ar	5.47	63		Pn	14 32 12.1	-0.2
EYAK	Cordova Ski Ar	5.47	63	P	Pn	14 32 12.1	-0.2
	baz=252						
FALS	False Pass	5.59	233		Pn	14 32 14.1	+0.1
FALS	False Pass	5.59	233	P	Pn	14 32 13.6	-0.4
	baz=47						
KTH	Kantishna Hill	5.61	22		Pn	14 32 13.8	-0.4
WAT1	Susitna Watana	5.61	36		Pn	14 32 13.2	-1.0
TRF	Thorofare Moun	5.65	25		Pn	14 32 14.1	-0.8
DIV	Divide	5.67	58		Pn	14 32 15.1	0.0
CHUM	Lake Minchumin	5.68	15		Pn	14 32 15.9	+0.9
CHUM	Lake Minchumin	5.68	15	P	Pn	14 32 15.7	+0.6
	baz=198,SNR=58						
WAT6	Susitna Watana	5.70	40		Pn	14 32 13.9	-1.5
WAT6	Susitna Watana	5.70	40	P	Pn	14 32 14.1	-1.4
	baz=227,SNR=47						
KLU	Klutina	5.76	54		Pn	14 32 15.8	-0.5
KLU	Klutina	5.76	54	P	Pn	14 32 16.3	0.0
	baz=242,SNR=53						
J20K	Nowinta River	5.78	7		Pn	14 32 16.9	+0.4
J20K	Nowinta River	5.78	7	P	Pn	14 32 16.9	+0.4
	baz=188,SNR=62						
ISLZ	Isanotski Laza	5.80	233		Pn	14 32 16.5	-0.3
RAGM	Ragged Mountai	5.94	66		Pn	14 32 18.7	+0.1
GOAT	Goat Mountain	5.97	65		Pn	14 32 19.2	+0.2
RND	Reindeer	5.97	31		Pn	14 32 17.6	-1.4
KAIM	Kayak Island	5.97	71		Pn	14 32 19.7	+0.7
M24K	Tolsona, Glenn	5.97	48		Pn	14 32 18.9	-0.1
M24K	Tolsona, Glenn	5.97	48	P	Pn	14 32 18.8	-0.3
	baz=236,SNR=20						
BPAW	Bear Paw Mtn.	6.09	20		Pn	14 32 19.5	-1.1
BPAW	Bear Paw Mtn.	6.09	20	P	Pn	14 32 19.5	-1.1
	baz=204,SNR=98						
HMT	Hamilton	6.13	67		Pn	14 32 21.4	+0.3
BMRM	Bremner River	6.14	61		Pn	14 32 21.3	0.0
BMRM	Bremner River	6.14	61	P	Pn	14 32 21.3	0.0
	baz=250,SNR=7.2						
DHY	Denali Highway	6.16	38		Pn	14 32 20.2	-1.4
DHY	Denali Highway	6.16	38	P	Pn	14 32 20.4	-1.2
	baz=225,SNR=82						
MCK	McKinley	6.21	29		Pn	14 32 21.0	-1.2
NICHA	Nichawak Mount	6.25	69		Pn	14 32 23.2	+0.5
SUCK	Suckling Hills	6.32	70	Pn	Pn	14 32 24.1	+0.5
GCSA	Galena City Sc	6.33	355		Pn	14 32 24.1	+0.4
GCSA	Galena City Sc	6.33	355	P	Pn	14 32 24.0	+0.4
	baz=174,SNR=26						
WESE	West Dahl East	6.35	235		Pn	14 32 24.2	+0.1
N25K	Chitina, Valde	6.38	56		Pn	14 32 24.9	+0.4
N25K	Chitina, Valde	6.38	56	P	Pn	14 32 24.8	+0.3
	baz=245,SNR=21						
BERG	Berg Lake	6.41	67		Pn	14 32 25.0	+0.2
BWN	Browne	6.46	25		Pn	14 32 24.8	-0.7
HARP	HAARP	6.53	48		Pn	14 32 26.1	-0.4
HARP	HAARP	6.53	48	P	Pn	14 32 26.8	+0.3
	baz=237,SNR=19						
GRIN	Grindle Hills	6.58	69		Pn	14 32 27.8	+0.7
KHIT	Khitrov Hills	6.64	67		Pn	14 32 28.2	+0.2
GLB	Gilahina Butte	6.67	58		Pn	14 32 28.1	-0.2
PAX	Paxson	6.74	44		Pn	14 32 28.6	-0.8
PAX	Paxson	6.74	44	P	Pn	14 32 28.4	-0.9
	baz=232,SNR=70						
VRDI	Verde Repeater	6.76	61		Pn	14 32 29.9	+0.3
SNH	Sunshine Point	6.80	70		Pn	14 32 31.1	+1.1
WAX	Waxell Ridge	6.84	68		Pn	14 32 31.1	+0.5
NEA2	Nenana	6.91	24		Pn	14 32 29.1	-2.3
NEA2	Nenana	6.91	24	P	Pn	14 32 29.2	-2.3
	baz=210,SNR=131						
PS10	TAPS Pump St10	6.93	40		Pn	14 32 31.3	-0.4
I21K	Tanana	6.96	13		Pn	14 32 32.0	-0.1
I21K	Tanana	6.96	13	P	Pn	14 32 32.0	-0.1
	baz=196,SNR=78						
WRH	Wood River Hil	7.04	28		Pn	14 32 30.9	-2.2
AKSA	Akutan Strait	7.06	236		Pn	14 32 33.5	+0.1
AKUT	Akutan	7.09	237	Pn	Pn	14 32 33.6	-0.2
ISLE	Juniper Island	7.12	67		Pn	14 32 34.8	+0.5
KIAG	Kiagna River	7.18	64		Pn	14 32 35.9	+0.7
K24K	Donnelly Dome	7.18	38	P	Pn	14 32 35.2	+0.1
	baz=226,SNR=115						
AKBBA	Akutan Broad B	7.18	237		Pn	14 32 34.9	-0.3
BAGL	Bagley Icefiel	7.22	68		Pn	14 32 36.6	+1.1
CCB	Clear Creek Bu	7.25	28		Pn	14 32 33.6	-2.3
I23K	Minto, Yukon-K	7.34	21		Pn	14 32 35.1	-2.0
I23K	Minto, Yukon-K	7.34	21	P	Pn	14 32 35.4	-1.7
	baz=207,SNR=130						
H21K	Melozitna Rive	7.35	9		Pn	14 32 37.8	+0.6
H21K	Melozitna Rive	7.35	9	P	Pn	14 32 37.9	+0.6
	baz=192,SNR=99						
MENT	Mentasta	7.38	48	Pn	Pn	14 32 38.0	+0.2
M26K	Nabesna, AK	7.41	52		Pn	14 32 38.6	+0.5
M26K	Nabesna, AK	7.41	52	P	Pn	14 32 38.6	+0.5
	baz=243,SNR=50						
MDM	Murphy Dome	7.41	25		Pn	14 32 35.9	-2.2
PS08	TAPS Pump Stn8	7.42	31		Pn	14 32 36.1	-2.1
TCOL	CIGO, UAF Yank	7.43	27		Pn	14 32 36.5	-1.8
TCOL	CIGO, UAF Yank	7.43	27	P	Pn	14 32 36.5	-1.8
	baz=213,SNR=49						
COLA	College	7.43	27		Pn	14 32 36.4	-1.9
COLA	College	7.43	27	P	Pn	14 32 36.5	-1.7
	baz=213						
RIDG	Independent Ri	7.45	40		Pn	14 32 37.8	-0.8
RIDG	Independent Ri	7.45	40	P	Pn	14 32 37.9	-0.8
	baz=229,SNR=80						
BARN	Barnard Glacie	7.54	64		Pn	14 32 40.7	+0.6
L26K	Log Cabin Wild	7.58	48	Pn	Pn	14 32 40.1	-0.1
L26K	Log Cabin Wild	7.58	48	P	Pn	14 32 40.2	-0.1
	baz=238,SNR=18						
IL31		7.58	30		Pn	14 32 38.0	-2.4
ILAR	Eielson Array	7.58	30	P	Pn	14 32 38.0	-2.4
	comp=N,40nm,0.5s,baz=215,slow=13,SNR=332						
ILAR				S	Sn	14 33 57.8	-7.2
	comp=N,3.0nm,0.4s,baz=214,slow=22,SNR=6.7						
ILAR	Eielson Array	7.58	30	Pn	Pn	14 32 38.2	-2.2
IM03		7.60	6		Pn	14 32 41.0	+0.5
IMAR	Indian Mountai	7.60	6	Pn	Pn	14 32 41.0	+0.3
UNV	Unalaska Valle	7.61	237		Pn	14 32 39.3	-1.4
UNV	Unalaska Valle	7.61	237	P	Pn	14 32 39.3	-1.4
	baz=48						
DOT	Dot Lake	7.66	42		Pn	14 32 40.8	-0.7
ANM	Nome	7.67	327	Pn	Pn	14 32 41.9	+0.4
TABL	Table Mountain	7.67	69		Pn	14 32 42.4	+0.6
POKR	Poker Plat Res	7.73	27		Pn	14 32 40.3	-2.1
POKR	Poker Plat Res	7.73	27	P	Pn	14 32 40.3	-2.1
	baz=214,SNR=19						
SAMH	Samovar Hills	7.81	71		Pn	14 32 44.8	+1.2

M27K	Edge Creek, AK	7.87	54		Pn	14 32 44.9	+0.6
SPIA	Saint Paul Isl	7.88	267	Pn	Pn	14 32 44.4	0.0
J25K	Salcha River,	7.89	34		Pn	14 32 42.8	-1.7
J25K	Salcha River,	7.89	34	P	Pn	14 32 42.9	-1.7
	baz=223,SNR=132						
SCRK	Sand Creek	7.89	41		Pn	14 32 42.9	-1.7
SCRK	Sand Creek	7.89	41	P	Pn	14 32 43.0	-1.6
	baz=231,SNR=46						
H23K	Yukon River	7.92	19		Pn	14 32 42.8	-2.1
H23K	Yukon River	7.92	19	P	Pn	14 32 43.0	-2.0
	baz=204,SNR=46						
PCA	Pinnacle	8.07	72		Pn	14 32 47.5	+0.6
YUK2	White River	8.12	60		Pn	14 32 48.4	+0.7
L27K	Beaver Creek,	8.19	50		Pn	14 32 48.8	+0.3
L27K	Beaver Creek,	8.19	50	P	Pn	14 32 48.9	+0.3
	baz=242,SNR=35						
BC03		8.21	50		Pn	14 32 47.3	-1.4
BCAR	Beaver Creek A	8.21	50	Pn	Pn	14 32 48.7	-0.1
H24K	Noodor Dome	8.25	23		Pn	14 32 46.4	-2.9
H24K	Noodor Dome	8.25	23	P	Pn	14 32 46.7	-2.5
	baz=210,SNR=32						
YUK3	Moose Creek	8.29	60		Pn	14 32 51.0	+0.9
YUK3	Moose Creek	8.29	60	P	Pn	14 32 50.9	+0.9
	baz=253,SNR=16						
BVCY	Beaver Creek	8.32	55		Pn	14 32 51.2	+0.9
BVCY	Beaver Creek	8.32	55	P	Pn	14 32 51.0	+0.7
	baz=248,SNR=12						
BCPM	Bancas Point	8.37	73	Pn	Pn	14 32 50.6	-0.3
J26L	Joseph Creek	8.37	39	P	Pn	14 32 49.6	-1.3
	baz=229,SNR=126						
PNL	Peninsula	8.48	75		Pn	14 32 53.2	+0.9
PNL	Peninsula	8.48	75	P	Pn	14 32 53.1	+0.8
	baz=269,SNR=11						
K27K	Chicken	8.60	44		Pn	14 32 53.1	-0.8
YUK4	Talbot Arm	9.03	64	P	Pn	14 33 01.2	+1.4
	baz=258						
YUK6	Outpost Mounta	9.10	67	P	Pn	14 33 01.7	+1.0
	baz=262						
COLD	Coldfoot	9.14	14		Pn	14 32 59.5	-1.6
COLD	Coldfoot	9.14	14	P	Pn	14 32 59.3	-1.8
	baz=198,SNR=15						
YUK7	Dusty Glacier	9.16	69		Pn	14 33 02.9	+1.4
EGAK	Eagle	9.36	41		Pn	14 33 02.4	-1.6
YUK5	Granite Creek	9.37	66		Pn	14 33 06.4	+2.2
HYT	Haines Junctio	9.50	68	Pn	Pn	14 33 05.5	-0.5
DAWY	Dawson	9.63	48		Pn	14 33 08.1	+0.4
DAWY	Dawson	9.63	48	P	Pn	14 33 08.0	+0.4
	baz=242,SNR=22						
M30M	Minto, Yukon	10.17	58	Pn	Pn	14 33 15.3	+0.6
M30M	Minto, Yukon	10.17	58	P	Pn	14 33 14.8	+0.1
	baz=254						
J29M	Klondike Camp	10.27	47	P	Pn	14 33 16.0	0.0
	baz=242						
BMAR	Burnt Mountain	10.30	25	Pn	Pn	14 33 12.7	-3.7
SKAG	Skagway	10.55	76	Pn	Pn	14 33 20.0	+0.3
TOLK	Toolik Lake Re	10.57	12	Pn	Pn	14 33 18.0	-1.9
TOLK	Toolik Lake Re	10.57	12	P	Pn	14 33 17.9	-2.0
	baz=198						
I29M	Ogilvie Camp,	10.69	42		Pn	14 33 20.6	-0.9
I29M	Ogilvie Camp,	10.69	42	P	Pn	14 33 20.6	-0.9
	baz=238						
SIT	Sitka	10.96	89	Pn	Pn	14 33 25.5	+0.5
M31M	Drury Creek, Y	11.18	61	Pn	Pn	14 33 28.9	+1.0
M31M	Drury Creek, Y	11.18	61	P	Pn	14 33 28.3	+0.3
	baz=260						
JIS	Juneau Island	11.18	82	Pn	Pn	14 33 28.4	+0.4
CRAG	Craig	12.65	94	Pn	Pn	14 33 47.4	+0.3
MMPY	Sheldon Lake,	12.68	61	P	Pn	14 33 47.8	+0.4
	baz=262						
DLBC	Dease Lake	13.41	79	P	P	14 34 00.9	+0.1
	comp=N,13nm,0.4s,baz=256,slow=10,SNR=20						
DLBC				S	Sn	14 36 26.0	+0.8
	comp=N,1.1nm,0.3s,baz=162,slow=23,SNR=1.1						
DLBC	Dease Lake	13.41	79		P	14 34 01.2	+0.5
ADK	Adak	13.65	250	Pn	Pn	14 34 00.1	+0.3
INK	Inuvik	13.90	36	P	Pn	14 34 00.8	-1.9
	comp=N,4.7nm,0.3s,baz=214,slow=12,SNR=51						
INK				S	Sn	14 36 35.3	-1.3
	comp=N,1.0nm,0.9s,baz=317,slow=26,SNR=1.5						
INK	Inuvik	13.90	36	Pn	Pn	14 34 00.7	-2.1
INK	Inuvik	13.90	36	P	Pn	14 34 00.7	-2.1
	baz=236,SNR=8.4						
KIWB	Kanaga Island	13.90	251	Pn	Pn	14 34 02.5	-0.5
DIB	Dawson Inlet,	14.03	102	P	P	14 34 07.8	+0.3
C36M	Paulatuk	17.41	38	P	P	14 34 43.3	-1.4
C36M				IAmb	IAmb	14 34 44.4	
	comp=Z,8.4nm,0.6s						
C36M	Paulatuk	17.41	38	P	P	14 34 42.4	-2.3
	baz=247,SNR=7.9						
A36M	Sachs Harbour	18.29	30	P	P	14 34 52.1	-2.1
A36M				IAmb	IAmb	14 34 54.6	
	comp=Z,14nm,0.8s						
A36M	Sachs Harbour	18.29	30	P	P	14 34 51.6	-2.7
	baz=238,SNR=6.1						
BILL	Bilibino	19.27	315	P	P	14 35 05.2	+0.2
YKA	Yellowknife Ar	20.38	61	P	P	14 35 18.5	+1.6
	comp=Z,9.2nm,0.5s,baz=277,slow=9.9,SNR=178						
YKA				ScP	ScP	14 42 45.5	+1.4
	comp=Z,0.7nm,0.9s,baz=291,slow=2.8,SNR=3.9 comp=Z,9.2nm,0.5s						
YKA	Yellowknife Ar	20.38	61	P	P	14 35 17.9	+1.0
CLRS	Cowichan Lake	20.86	104	P	P	14 35 22.8	+0.6
CLRS				IAmb	IAmb	14 35 38.4	
	comp=Z,17nm,1.4s						
EDM	Edmonton	24.02	84	P	P	14 35 50.6	-2.4
EDM				IAmb	IAmb	14 35 52.1	
	comp=Z,5.1nm,0.5s						
SEY	Seymchan	25.21	302	P	P	14 36 03.0	-0.7
	comp=Z,0.9nm,0.6s,baz=69,slow=23,SNR=7.9 comp=Z,0.9nm,0.6s						
PET	Petropavlovsk	25.86	278	P	P	14 36 09.9	+0.4
PEA0B	Petropavlovsk-	26.31	279	P	P	14 36 13.0	-0.6
PETK	Petropavlovsk-	26.31	279	P	P	14 36 12.7	-1.0
	comp=Z,1.8nm,0.6s,baz=75,slow=13,SNR=21 comp=Z,1.8nm,0.6s						
PETK	Petropavlovsk-	26.31	279	P	P	14 36 12.5	-1.1
MSO	Missoula	27.41	97	P	P	14 36 22.1	-1.5
EUNU	Eureka	29.53	19	P	P	14 36 44.7	+2.7
FCC	Fort Churchill	31.09	63	P	P	14 36 57.3	+1.4
FCC				IAmb	IAmb	14 36 58.7	
	comp=Z,4.5nm,1.1s						
PDAR	Pinedale Array	32.45	98	P	P	14 37 11.8	+3.5
	comp=Z,0.2nm,0.6s,baz=324,slow=3.8,SNR=3.5 comp=Z,0.2nm,0.6s						
PDAR	Pinedale Array	32.45	98	P	P	14 37 10.1	+1.8
EYMN	Ely	38.41	77	P	P	14 38 00.8	+2.1
EYMN				IAmb	IAmb	14 38 01.4	
	comp=Z,3.5nm,1.0s						
KLR	Kul'dur	41.78	290	P	P	14 38 26.4	-0.1
	comp=Z,2.2nm,0.5s,baz=49,slow=9.3,SNR=4.2 comp=Z,2.2nm,0.5s						
SCHQ	Schefferville	45.57	54	P	P	14 38 57.4	+0.7
	comp=Z,2.2nm,0.5s,baz=306,slow=6.9,SNR=8.1 comp=Z,2.2nm,0.5s						
SCHQ	Schefferville	45.57	54	P	P	14 38 57.4	+0.7
SCHQ				IAmb	IAmb	14 38 59.9	
	comp=Z,3.8nm,1.1s						
KSRS	Korea Array	52.15	282	P	P	14 39 47.0	+0.1
	comp=Z,1.0nm,0.8s,baz=53,slow=8.3,SNR=3.5 comp=Z,1.0nm,0.8s						
SONM	Songino Array	54.56	305	P	P	14 40 05.4	+0.8
	comp=Z,2.0nm,0.6s,baz=40,slow=7.4,SNR=11 comp=Z,2.0nm,0.6s						
SONM	Songino Array	54.56	305	P	P	14 40 05.0	+0.5
SONM				IAmb	IAmb	14 40 05.9	
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	57.78	323	P	P	14 40 26.7	-0.4
	comp=Z,0.7nm,0.4s,baz=33,slow=8.6,SNR=2.6 comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	64.75	320	P	P	14 41 12.8	-1.3
	comp=Z,0.2nm,0.5s,baz=64,slow=6.6,SNR=3.0 comp=Z,0.2nm,0.5s						
MKAR	Makanchi Array	64.75	320	P	P	14 41 13.0	-1.1
AKASG	Malin Array Be	71.12	357	P	P	14 41 52.5	-1.3
	comp=Z,0.5nm,0.3s,baz=8.5,slow=5.9,SNR=4.6 comp=Z,0.5nm,0.3s						
HKPS	Hong Kong Po S	71.39	282	P	P	14 41 55.5	-0.3
CMAR	Chiang Mai Arr	82.22	293	P	P	14 42 56.0	-0.5
	comp=Z,0.5nm,0.5s,baz=18,slow=6.3,SNR=1.8 comp=Z,0.5nm,0.5s						

DJA 02 14:34:53.2±0.5,**3°S**±4°×**12°7E**±°,**h10km**,**M3.3**/9,**mb3.9**/4,
MLv3.0/9,**Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	1.32	102	P	Pn	14 35 16.6	-1.1
AAI				S	Sb	14 35 34.9	-0.2
AAI	Ambon	1.32	102	P	Pn	14 35 17.6	-0.1
SANI	Sanana	1.64	326	P	Pn	14 35 20.3	-1.8
SANI				S	Sb	14 35 44.2	-0.1
MSAI	Masohi	2.03	88	P	Pn	14 35 27.1	-0.3
MSAI				S	Sn	14 35 53.5	+0.7
LBMI	Labuha	2.83	12	P	Pn	14 35 38.6	+0.1
APSI	Ampana	5.81	295	P	Pn	14 36 19.8	+0.3
	0.0nm12nm,1.0s						
MRSI	Marisa	6.29	308	P	Pn	14 36 26.5	+0.4

IDC ***02*** *14:42:15.8±1.2, 15°.90S×167°.24E, h0km, mb4.2/9, mbtmp4.2/10, ML3.8/1, MS3.8/12, Error ellipse: s-maj=43.4km s-min=20.0km az=132.0*

NOU ***02*** *14:42:19.2, 15°.90S×167°.06E, h11km, MLv5.0/11, Vanuatu Islands*

NEIC ***02*** *14:42:19.4±1.7, 15°.90S±0°.02×167°.1E±0°.1, h22km±8km, mb4.1/4, Error ellipse: s-maj=19.3km s-min=3.2km az=93.0*

ISC 02 14:42:19.7±0.7,**15°.97S**±0°.05×**167°.1E**±0°.1,**h27km**,**n39**,
σ**1**^{s}**61**/26,**mb4.2**/7,**MS3.7**/12,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.53	10		Pb	14 42 28.9	-1.6
SANVU	Saraoutou	0.53	10	P	Pb	14 42 29.2	-1.3
DVP	Devils Point	2.03	150	P	Pb	14 42 54.6	-1.3
LIFNC	LIFOU	4.79	179	Pn	Pn	14 43 30.9	+0.9
LIFNC	LIFOU	4.79	179	P	Pn	14 43 33.1	+3.0
KOUNC	Koumac, New Ca	5.29	210		Pn	14 43 37.8	+0.7
KOUNC	Koumac, New Ca	5.29	210	P	Pn	14 43 37.9	+0.9
MARNC	Mare, Loyalty	5.55	171		Pn	14 43 42.5	+1.9
DZM	Mont Dzumac	6.10	186	Pn	Pn	14 43 48.9	+0.6
	2.4nm,0.3s,baz=4.0,slow=6.9,SNR=41						
DZM				Sn	Sn	14 44 53.2	-4.1
	baz=57,slow=23 6.5nm,0.3s						
DZM	Mont Dzumac	6.10	186		Pn	14 43 49.0	+0.8
ONTNC	Ouen Toro	6.34	186	Pn	Pn	14 43 52.0	+0.6
OUENC	Ouen Island, N	6.42	182	Pn	Pn	14 43 54.0	+1.4
PINNC	Pines Island,	6.62	177		Pn	14 43 57.1	+1.9
PINNC	Pines Island,	6.62	177	P	Pn	14 43 57.9	+2.6
MSVF	Nonsavu	10.62	101	LR	LR	14 48 08.7	
	comp=Z,514nm,18.3s,baz=8.9,slow=34						
CTA	Charters Tower	20.25	255	P	Pn	14 46 56.0	+0.7
	11nm,0.8s,baz=77,slow=12,SNR=19 11nm,0.8s						
CTAO	Charters Tower	20.25	255	Pn	Pn	14 46 55.2	0.0
PMG	Port Moresby	20.52	286	LR	LR	14 54 18.4	
	comp=Z,222nm,18.1s,baz=168,slow=35						
STKA	Stephens Creek	28.09	231	P	P	14 48 11.2	+1.9
	3.8nm,0.8s,baz=330,slow=6.8,SNR=3.0						
STKA				LR	LR	14 58 45.6	
	comp=Z,96nm,19.6s,baz=37,slow=35 3.8nm,0.8s						
STKA	Stephens Creek	28.09	231	IAmb	IAmb	14 48 12.7	
	comp=Z,4.2nm,1.4s						
WRA	Warramunga Arr	31.40	258	P	P	14 48 38.9	+0.1
	comp=Z,1.8nm,0.7s,baz=88,slow=8.0,SNR=30						
WRA				LR	LR	15 00 32.7	
	comp=Z,111nm,21.6s,baz=225,slow=35 comp=Z,1.8nm,0.7s						
WRA	Warramunga Arr	31.40	258	IAmb	IAmb	14 48 42.6	
	comp=Z,0.5nm,1.4s						
AS31	Alice Springs	32.11	251	P	P	14 48 43.9	-1.1
AS31				IAmb	IAmb	14 48 55.3	
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	32.11	251	P	P	14 48 45.5	+0.5
	comp=Z,7.7nm,0.8s,baz=76,slow=8.8,SNR=85						
ASAR				LR	LR	15 01 08.7	
	comp=Z,139nm,18.0s,baz=47,slow=35 comp=Z,7.7nm,0.8s						
ASAR	Alice Springs	32.11	251	P	P	14 48 44.3	-0.7
SIJI	Sorong	38.40	289	LR	LR	15 07 10.9	
	comp=Z,83nm,18.5s,baz=142,slow=39						
FITZ	Fitzroy Crossi	39.65	261	LR	LR	15 06 13.7	
	comp=Z,125nm,18.3s,baz=58,slow=36						
KAPI	Kappang	47.71	278	LR	LR	15 09 24.3	
	comp=Z,66nm,19.7s,baz=305,slow=34						
PETK	Petropavlovsk-	69.27	354	P	P	14 53 25.0	+0.8
	comp=Z,2.0nm,0.8s,baz=168,slow=8.1,SNR=6.1 comp=Z,2.0nm,0.8s						
KLR	Kul'dur	72.08	337	LR	LR	15 22 35.4	
	comp=Z,151nm,21.9s,baz=70,slow=34						
SONM	Songino Array	83.40	324	P	P	14 54 45.1	+0.4
	comp=Z,0.6nm,0.8s,baz=140,slow=6.6,SNR=3.7 comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	87.75	18	P	P	14 55 04.9	-0.9
	comp=Z,1.3nm,0.6s,baz=238,slow=5.1,SNR=29 comp=Z,1.3nm,0.6s						
LPIG	La Paz	89.86	65	LR	LR	15 28 09.9	
	comp=Z,32nm,18.1s,baz=200,slow=31						
WMQ	Urumqi	93.48	315	*e*P	P	14 55 32.9	-0.2
WMQ				LR	LR		
	comp=E,230nm,18.9s						
WMQ				LR	LR		
	comp=Z,160nm,21.1s						
MKAR	Makanchi Array	97.99	316	P	Pdif	14 55 54.8	+1.3
	comp=Z,0.1nm,0.6s,baz=108,slow=7.7,SNR=2.8						
MKAR				LR	LR	15 43 11.4	
	comp=Z,33nm,18.9s,baz=20,slow=37 comp=Z,0.1nm,0.6s						
ZALV	Zalesovo Beam	98.30	324	LR	LR	15 37 37.1	
	comp=Z,79nm,22.0s,baz=56,slow=34						
YKA	Yellowknife Ar	98.71	27	P	Pdif	14 55 56.0	-0.3
	comp=Z,0.7nm,0.8s,baz=253,slow=4.6,SNR=8.4 comp=Z,0.7nm,0.8s						
ARCES	ARCESS Array B	121.40	345	PKP	PKiKP	15 01 10.5	+0.4
	comp=Z,1.0nm,0.5s,baz=48,slow=1.8,SNR=6.8						
FINES	FINESS Array B	126.81	338	PKP	PKPdf	15 01 20.1	-0.4
	comp=Z,0.4nm,0.6s,baz=24,slow=19,SNR=1.1						

TUL ***02*** *14:55:26.9±0.9, 36°.48N±0°.02×98°.75W±0°.03, h8km±4km, ML2.8, mb_Lg2.5/30(NEIC), Error ellipse: s-maj=4.0km s-min=3.4km az=82.0*

NEIC 02 14:55:26.9±0.9,**36°.48N**±0°.02×**98°.72W**±0°.02,**h10km**±4km,
Error ellipse: s-maj=3.6km s-min=2.9km az=166.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.24	246		Pg	14 55 31.8	-0.2
U32A				Sg	Sg	14 55 35.1	-0.2
FNO	Franklin	1.62	138	Pn	Pb	14 55 56.4	-0.6
WMOK	Wichita Mounta	1.74	182	Pn	Pn	14 55 57.4	+0.2
T35A	Sooner Cattle	1.83	76	Pn	Pn	14 55 59.4	+0.9
R32A	Long Quarter,	1.94	0		Pn	14 56 00.6	+0.5
R32A				IAmb_Lg		14 56 30.3	
	comp=Z,21nm,0.8s						
TUL1	Leonard	2.44	103	Pn	Pn	14 56 07.5	+0.7
X37A	Clayton	3.32	124	Pn	Pn	14 56 19.6	+0.7
KSCO	Kaye Shedlock'	4.00	310	IAmb_Lg		14 57 41.7	
	comp=Z,6.8nm,0.7s						
MSTX	Muleshoe	4.15	234	IAmb_Lg		14 57 43.2	
	comp=Z,10nm,1.0s						
W39A	Magazine	4.21	106	IAmb_Lg		14 57 49.2	
	comp=Z,8.7nm,0.8s						
S39A	Bolivar	4.49	73	IAmb_Lg		14 57 50.2	
	comp=Z,13nm,1.0s						
U40A	Yellville	4.74	90	IAmb_Lg		14 58 04.1	
	comp=Z,14nm,1.0s						
P38A	Dawn	5.16	51	IAmb_Lg		14 58 11.0	
	comp=Z,5.2nm,0.7s						
MGMO	Mountain Grove	5.22	81	IAmb_Lg		14 58 12.5	
	comp=Z,7.6nm,0.7s						
FCAR	Ozark Folk Cen	5.37	94	IAmb_Lg		14 58 16.7	
	comp=Z,7.2nm,0.7s						
W41B	Gary Mavity, V	5.42	102	IAmb_Lg		14 58 31.7	
	comp=Z,5.0nm,0.8s						
R40A	Maddies Statio	5.45	69	IAmb_Lg		14 58 20.8	
	comp=Z,7.6nm,0.7s						
L34A	Svendsen Farm,	5.78	18	IAmb_Lg		14 58 43.2	
	comp=Z,11nm,0.9s						
N38A	Joes South For	6.08	43	IAmb_Lg		14 58 51.5	
	comp=Z,9.8nm,0.8s						
LCAR	Lake Charles	6.13	92	IAmb_Lg		14 58 40.9	
	comp=Z,4.8nm,0.9s						
CCM	Cathedral Cave	6.17	73	IAmb_Lg		14 58 49.4	
	comp=Z,8.5nm,0.9s						
N23A	Red Feather La	7.16	310	IAmb_Lg		14 59 24.8	
	comp=Z,7.5nm,1.0s						

IDC ***02*** *14:58:35.6±3.2, 43°.09N×17°.21E, h0km, mb3.3/2, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=53.4km s-min=21.1km az=41.0*

RHSSO ***02*** *14:58:35.8±0.3, 42°.95N×17°.13E, h4km±1km, ML3.4/18*

PDG ***02*** *14:58:36.1±0.5, 43°.03N×17°.24E, h7km, MD3.3/1, ML3.2/13, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*

BEO ***02*** *14:58:39.4±0.4, 43°.15N×17°.62E, h4km±3km, ML3.1/15*

ISC 02 14:58:35.7±1.1,**43°.04N**±0°.02×**17°.22E**±0°.02,**h2km**±9km,
n128,σ**1**^{s}**22**/225,**35C-13D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKA	Makarska	0.29	330	*e*Pg	Pg	14 58 41.6	+0.4
MAKA				Sg	Sg	14 58 45.9	+1.0
LSTV	Lastovo	0.36	221	*e*Pg	Pg	14 58 41.2	-1.4
LSTV				Sg	Sg	14 58 45.6	-1.7
STON	Ston	0.39	115	*e*Pg	Pg	14 58 43.3	+0.1
STON				*e*Sg	Sg	14 58 49.5	+1.2
STON	Ston	0.39	115	⇓*i*Pg	Pg	14 58 43.1	-0.1
STON				*e*Sg	Sg	14 58 49.5	+1.2
STON	Ston	0.39	115	*e*Pg	Pg	14 58 43.7	+0.5
STON				Sg	Sg	14 58 49.8	+1.4
RICI	Ricice	0.46	352	*e*Pg	Pg	14 58 44.7	+0.2
RICI				Sg	Sb	14 58 51.8	-2.1
HVAR	Hvar	0.58	284	*e*Pg	Pg	14 58 47.1	+0.3
HVAR				Sg	Sg	14 58 55.1	+0.8
DBRK	Dubrovnik	0.78	118	*e*Pg	Pg	14 58 51.0	+0.4
DBRK				Sg	Sg	14 59 02.1	+1.4
TREB	Trebinje	0.89	111	*e*Pg	Pg	14 58 52.1	-0.8
TREB				*e*Sg	Sg	14 59 02.1	-2.3
TREB	Trebinje	0.89	111	⇑*i*Pg	Pg	14 58 52.0	-0.8
TREB				*e*Sg	Sg	14 59 05.4	+1.0
BRY	Bratogost	0.98	98	⇑*i*Pg	Pg	14 58 53.4	-1.0
BRY				*e*Sg	Sb	14 59 08.9	0.0
BRY	Bratogost	0.98	98	⇑*i*Pg	Pg	14 58 53.5	-1.0
BRY				*i* Sg	Sb	14 59 09.0	0.0
SRKY	Kupres RS	1.03	358	⇑*i*Pg	Pb	14 58 55.6	-0.7
SRKY				*e*Sg	Sn	14 59 11.8	-0.5
HCY	Herceg Novi	1.11	122	*e*Pg	Pg	14 58 56.0	-1.0
HCY				*e*Sg	Sg	14 59 11.7	+0.3
HCY	Herceg Novi	1.11	122	⇑*i*Pg	Pg	14 58 56.3	-0.7
HCY				*i* Sg	Sb	14 59 13.0	+0.4
KIJV	Kijevo	1.13	329	*e*Pg	Pg	14 58 57.4	0.0
KIJV				Sg	Sb	14 59 13.1	-0.1
UPM	Unac-Piva	1.25	82	*e*Pg	Pg	14 58 59.4	-0.2
UPM				*e*Sg	Sn	14 59 18.6	+0.8
UPM	Unac-Piva	1.25	82	⇓*i*Pg	Pg	14 58 58.9	-0.7
UPM				*i* Sg	Sn	14 59 18.3	+0.5
ZIRJ	Zirje	1.30	299	*e*Pg	Pn	14 59 00.2	-0.7
ZIRJ				Sg	Sb	14 59 18.1	0.0
NKME	Niksic	1.30	102	⇑*i*Pg	Pg	14 58 59.6	-1.1
NKME				*i* Sg	Sn	14 59 20.0	+1.0
NKY	Niksic	1.32	99	⇑*i*Pg	Pn	14 59 00.1	-1.2
NKY				*i* Sg	Sn	14 59 20.2	+0.6
CEME	Cevo	1.34	111	⇑*i*Pg	Pn	14 59 00.1	-1.5
CEME				*i* Sg	Sn	14 59 20.9	+0.8
MORI	Morici	1.38	307	*e*Pn	Pn	14 59 01.9	0.0
MORI				Sg	Sn	14 59 20.9	+0.2
MGRS	Mrkonjic Grad	1.38	356	*e*Pg	Pg	14 59 02.5	+0.4
MGRS				*e*Sg	Sn	14 59 22.5	+1.6
BUM	Brajici-Budva	1.44	120	⇑*i*Pg	Pn	14 59 02.0	-0.9
BUM				*i* Sg	Sg	14 59 23.6	+1.6
A050A	Klekovaca	1.52	341	*e*Pn	Pg	14 59 04.5	-0.4
A050A				*e*Sn	Sg	14 59 26.2	+1.5
PLE	Pljevlja	1.61	79	⇑*i*Pn	Pb	14 59 05.8	-0.5
PLE				*i* Sn	Sg	14 59 29.2	+1.6
PDG	Podgorica	1.62	111	⇓P	Pn	14 59 05.7	+0.5
PDG				⇑S	Sg	14 59 28.3	+0.5
PDG	Podgorica	1.62	111	*e*Pg	Pn	14 59 05.8	+0.5
PDG				*e*Sg	Sn	14 59 24.3	-2.4
PDG	Podgorica	1.62	111	⇑*i*Pn	Pn	14 59 05.9	+0.6
PDG				*e*Sn	Sn	14 59 26.6	-0.1
TTG	Podgorica	1.62	111	⇑*i*Pn	Pn	14 59 05.7	+0.5
TTG				*i* Sn	Sg	14 59 29.0	+1.2
RUDO	Rudo	1.67	69	*e*Pn	Pb	14 59 06.7	-0.5
RUDO				*e*Sn	Sg	14 59 30.5	+1.1
DRME	Dracevica, Mon	1.68	120	⇑*i*Pn	Pn	14 59 06.3	+0.1
DRME				*e*Sn	Sb	14 59 28.9	-0.2
DRME	Dracevica, Mon	1.68	120	⇑*i*Pn	Pn	14 59 06.4	+0.2
DRME				*i* Sn	Sg	14 59 30.8	+1.0
KOME	Kolasin	1.70	96	⇑*i*Pn	Pb	14 59 07.1	-0.6
KOME				*i* Sn	Sg	14 59 30.9	+0.7
BLY	Banja Luka	1.71	359	*e*Pn	Pg	14 59 08.5	+0.1
BLY				*e*Sg	Sg	14 59 32.7	+2.1
BLY	Banja Luka	1.71	359	⇑*i*Pn	Pg	14 59 07.7	-0.7
BLY				*e*Sn	Sg	14 59 30.9	+0.3
BBLS	Lazići	1.79	62	*e*Pn	Pn	14 59 06.3	-1.5
BBLS	Lazići	1.79	62	⇑*i*Pn	Pg	14 59 09.4	-0.7
BBLS				*e*Sn	Sg	14 59 33.0	-0.3
DOB	Doboj	1.81	20	*e*Pn	Pb	14 59 08.5	-1.0
DOB				*e*Sn	Sg	14 59 33.3	-0.5
UDBI	Udbina	1.82	325	*e*Pn	Pb	14 59 09.6	-0.3
UDBI				Sn	Sg	14 59 34.0	-0.2
DUGI	Dugi Otok	1.84	302	*e*Pn	Pn	14 59 08.7	+0.4
DUGI				Sn	Sb	14 59 33.1	-0.4
ULC	Ulcinj	1.84	125	⇓*i*Pn	Pn	14 59 08.8	+0.4
ULC				*i* Sn	Sg	14 59 35.0	0.0
PRIJ	Prijedor	1.97	350	*e*Pn	Pn	14 59 10.5	+0.4
PRIJ				*e*Sn	Sb	14 59 36.9	-0.4
IVA	Berane	1.97	94	⇑*i*Pn	Pn	14 59 10.8	+0.6
IVA				*i* Sn	Sb	14 59 37.9	+0.5
A051A	Mrakovica	1.98	354	⇑*i*Pn	Pb	14 59 11.6	-1.0
A051A				*e*Sn	Sb	14 59 37.3	-0.5
VIRC	Vir	2.01	309	*e*Pn	Pn	14 59 11.2	+0.6
VIRC				Sn	Sb	14 59 37.8	-0.6
SJES	Sjenica	2.03	83	*e*Pg	Pn	14 59 11.1	+0.1
PVY	Plav	2.06	102	⇑*i*Pn	Pn	14 59 11.8	+0.2
PVY				*i* Sn	Sb	14 59 40.1	-0.1
A052A	Srbac	2.07	6	⇑*i*Pn	Pb	14 59 12.8	-1.2
A052A				*e*Sn	Sb	14 59 39.5	-0.7
PLIT	Plitvice	2.17	328	*e*Pn	Pb	14 59 14.2	-1.5
PLIT				Sn	Sb	14 59 42.7	-0.4
TEKS	Tekeris	2.25	47	*e*Pg	Pn	14 59 13.9	-0.1
TEKS				*e*Sg	Sn	14 59 42.5	+0.1
TEKS	Tekeris	2.25	47	*e*Sn	Sb	14 59 44.1	-1.4
DIVS	Divibare	2.28	61	*e*Pg	Pb	14 59 15.8	-1.8
DIVS	Divibare	2.28	61	⇑*i*Pn	Pn	14 59 15.5	+1.1
DIVS				*e*Sn	Sb	14 59 45.6	-0.6
NVLJ	Novalja	2.28	313	*e*Pn	Pn	14 59 15.0	+0.6
NVLJ				Sn	Sn	14 59 43.7	+0.7
BLJ	Bijeljina	2.29	40	*e*Pn	Pn	14 59 14.8	+0.4
BLJ				*e*Sn	Sn	14 59 43.5	+0.3
MATE	Matera	2.42	189	⇓P	Pb	14 59 20.7	+0.7
A252A	Venje	2.44	10	*e*Pn	Pn	14 59 17.7	+1.1
A252A				Sn	Sb	14 59 48.5	-2.2
RABC	Rab	2.45	315	*e*Pn	Pn	14 59 17.2	+0.5
RABC				Sn	Sb	14 59 49.1	-2.1
MOSL	Moslavina	2.59	353	*e*Pn	Pn	14 59 19.7	+1.0
MOSL				Sn	Sb	14 59 52.2	-3.1
TIR	Tirane	2.59	130	⇓P	Pn	14 59 19.9	+1.2
TRUS	Trudelj	2.60	62	*e*Pg	Pn	14 59 19.9	+1.1
TRUS				*e*Sg	Sn	14 59 51.2	+0.3
GRUS	Gruza	2.68	70	*e*Pg	Pn	14 59 21.2	+1.3
GRUS				*e*Sg	Sb	14 59 55.2	-2.6
FRGS	Fruska Gora	2.82	41	⇑P	Pn	14 59 21.4	-0.4
FRGS				⇑S	Sn	14 59 57.0	+0.6
BOJS	Bojanci	2.84	331	*e*Pn	Pn	14 59 23.8	+1.7
BOJS				*e*Sn	Sb	15 00 01.2	-1.0
BOJS				IAML		15 00 14.9	
	comp=Z,48nm,0.4s						
SELS	Selova	2.86	85	*e*Pg	Pn	14 59 24.0	+1.6
SELS				*e*Sg	Sn	14 59 59.3	+1.9
OZLJ	Ozalj	2.86	335	*e*Pn	Pn	14 59 22.9	+0.6
OZLJ				Sn	Sn	14 59 58.9	+1.5
SMRN	Sveta Marina	2.98	313	*e*Pn	Pn	14 59 24.8	+0.8
SMRN				Sn	Sn	15 00 02.0	+1.8
PTJ	Puntijarka	3.00	343	*e*Pn	Pn	14 59 25.3	+0.9
PTJ				Sn	Sn	15 00 01.0	0.0
RIY	Rijeka	3.01	320	*e*Pn	Pn	14 59 24.9	+0.4
RIY				*e*Sn	Sn	15 00 00.9	-0.2
CRES	Cresnjev	3.06	336	⇑*i*Pn	Pn	14 59 25.9	+0.8
CRES				*e*Sn	Sn	15 00 03.0	+0.8
KOVH	Kovagotottos	3.11	11	P	Pn	14 59 27.0	+1.2
KOVH				S	Sn	15 00 03.6	+0.1
BRJN	Brijuni	3.12	308	*e*Pn	Pn	14 59 26.3	+0.4

BRJN				Sn	Sn	15 00 04.2	+0.5
KALN	Kalnik	3.14	350	*e*Pn	Pn	14 59 27.0	+0.8
KALN				Sn	Sn	15 00 04.8	+0.6
LOBO	Lobor	3.22	346	*e*Pn	Pn	14 59 28.4	+1.1
LOBO				Sn	Sn	15 00 07.5	+1.3
MORH	Mrgy, Hungar	3.33	17	⇓P	Pn	14 59 29.8	+1.0
MORH	Mrgy, Hungar	3.33	17	*e*Pn	Pn	14 59 29.5	+0.7
MORH				*e*Sn	Sn	15 00 10.4	+1.4
MORH	Mrgy, Hungar	3.33	17	P	Pn	14 59 29.6	+0.7
MORH				S	Sn	15 00 09.0	0.0
BARS	Barje	3.38	92	*e*Pn	Pn	14 59 28.8	-0.8
BARS	Barje	3.38	92	*e*Pn	Pn	14 59 32.6	+3.0
BARS				*e*Sg	Sb	15 00 18.5	+0.5
SKDS	Skadanscina	3.40	319	*e*Pn	Pn	14 59 29.9	+0.1
SKDS				*e*Sn	Sn	15 00 09.7	-1.0
LJU	Ljubljana	3.56	328	*e*Pn	Pn	14 59 32.8	+0.7
LJU				*e*Sn	Sn	15 00 14.6	-0.2
ZAGS	Zajecar	3.73	76	*e*Pn	Pn	14 59 34.5	+0.1
TIH	Tihany	3.89	7	P	Pn	14 59 37.2	+0.7
TIH				S	Sn	15 00 20.5	-2.2
BOSS	Bosilegrad	3.91	96	*e*Pn	Pn	14 59 36.1	-0.7
BOSS				*e*Sg	Sb	15 00 33.4	+0.2
STIP	Stip	3.92	108	*i* Pn	Pn	14 59 39.3	+2.4
OBKA	Obir	3.95	332	*i* Pn	Pn	14 59 39.7	+2.2
	comp=Z,0.8nm,0.2s						
OBKA				*e*Sn	Sn	15 00 26.9	+2.4
	comp=Z,19nm,0.6s						
OBKA	Obir	3.95	332	⇑*i*Pn	Pn	14 59 37.8	+0.3
OBKA				*e*Sn	Sn	15 00 23.4	-1.1
SOKA	Soboth	3.95	338	*e*Pn	Pn	14 59 39.3	+1.8
	comp=Z,5.7nm,0.2s,SNR=5.6						
SOKA				*i* Sn	Sn	15 00 26.0	+1.5
	comp=Z,6.0nm,0.3s						
BLKB	Belogradchik	4.02	80	⇑P	Pn	14 59 38.5	+0.1
BZS	Buzias	4.07	49	⇑P	Pn	14 59 39.4	+0.4
BZS				⇓S	Sn	15 00 28.0	+0.7
MPLH	Magyarpolny	4.13	3	P	Pn	14 59 42.2	+2.3
HERR	Herculane	4.18	62	⇑P	Pn	14 59 41.6	+1.1
HERR				⇓S	Sn	15 00 29.8	0.0
ARSA	Arzberg	4.38	345	*i* Pn	Pn	14 59 45.0	+1.8
	comp=Z,27nm,0.4s,SNR=42						
ARSA				*e*Sn	Sn	15 00 35.4	+0.6
	comp=Z,3.3nm,0.3s						
ARSA	Arzberg	4.38	345	⇑*i*Pn	Pn	14 59 43.1	-0.1
ARSA				*e*Sn	Sn	15 00 34.2	-0.6
EGYH	Egyhazaskeszo	4.38	1	S	Sn	15 00 34.0	-0.7
CSKK	Cskako	4.38	9	P	Pn	14 59 45.8	+2.5
CSKK				S	Sn	15 00 33.0	-1.9
VTS	Vitosha	4.45	93	⇓P	Pn	14 59 44.9	+0.6
SIRR	Siria	4.52	43	⇑P	Pn	14 59 46.0	+0.8
GZR	Gura Zlata	4.63	58	⇑P	Pn	14 59 47.9	+1.1
RONA	Rosalia, Austr	4.70	352	*e*Pn	Pn	14 59 50.9	+3.1
	comp=Z,3.3nm,0.2s,SNR=4.7						
RONA				*i* Sn	Sn	15 00 44.6	+1.7
	comp=Z,13nm,0.4s						
KBA	Koelnbreinsper	4.88	327	*i* Pn	Pn	14 59 50.9	+0.6
	comp=Z,0.4nm,0.2s						
KBA				*i* Sn	Sn	15 00 47.7	+0.2
	comp=Z,1.2nm,0.2s						
CONA	Conrad Observa	4.98	349	*e*Pn	Pn	14 59 54.3	+2.7
	comp=Z,5.3nm,0.4s,SNR=16						
CONA				*e*Sn	Sn	15 00 51.0	+1.3
	comp=Z,9.7nm,0.4s						
ZST	Bratislava	5.16	359	*e*PN	Pn	14 59 55.0	+1.1
ZST				*e*SN	Sn	15 00 52.5	-1.4
PSZ	Piszkesteto	5.23	20	⇓P	Pn	14 59 56.6	+1.6
MOA	Molln	5.24	338	*i* Pn	Pn	14 59 57.6	+2.6
	comp=Z,2.8nm,0.2s						
MOA				*i* Sn	Sn	15 00 59.4	+3.4
	comp=Z,12nm,0.4s						
BIOA	Bad Ischl, Aus	5.29	333	*i* Pn	Pn	14 59 57.3	+1.5
MODS	Modra-Piesok	5.33	0	*e*PN	Pn	14 59 58.7	+2.3
MODS				*e*SN	Sn	15 00 57.7	-0.7
DRGR		5.41	44	⇓P	Pn	14 59 58.4	+0.9
VYHS	Vyhne	5.57	11	*e*PN	Pn	15 00 02.4	+2.8
VYHS				*e*SN	Sn	15 01 03.6	-0.6
KOLL	Kolacno	5.60	8	*e*PN	Pn	15 00 02.2	+2.2
KOLL				*e*SN	Sn	15 01 04.1	-0.8
WTTA	Wattenberg	5.78	319	*i* Pn	Pn	15 00 04.4	+1.7
	comp=Z,2.1nm,0.3s						
WTTA				*e*Sn	Sn	15 01 09.7	+0.1
	comp=Z,6.4nm,0.5s						
ARR	Arges	5.81	64	⇓P	Pn	15 00 03.7	+0.7
JAVC	Velka Javorina	5.83	3	*e*SN	Sn	15 01 12.3	+1.7
WATA	Walderalm	5.86	319	*e*Pn	Pn	15 00 04.6	+0.9
	comp=Z,2.2nm,0.2s						
KRUC	Moravsky	6.05	355	*e*PN	Pn	15 00 09.0	+2.8
KRUC				*e*SN	Sn	15 01 13.9	-2.1
VOIR		6.11	64	⇑P	Pn	15 00 07.5	+0.4
VRAC	Vranov	6.28	356	Sn	Sn	15 01 19.9	-1.9
	comp=Z,1.2nm,0.3s,baz=68,slow=8.6,SNR=6.8						
VRAC	Vranov	6.28	356	*e*SN	Sn	15 01 19.5	-2.2
GERES	GERESS Array B	6.30	338	Pn	Pn	15 00 11.0	+1.3
	comp=Z,0.4nm,0.3s,baz=160,slow=12,SNR=7.5						
GERES				Sn	Sn	15 01 22.0	-0.3
	comp=Z,1.2nm,0.3s,baz=153,slow=24,SNR=11						
GERES				Lg	Lg	15 01 49.5	
	comp=Z,0.8nm,0.3s,baz=141,slow=26,SNR=8.4						
	comp=Z,0.8nm,0.3s						
DAVOX	Davos/Dischmat	6.41	308	Pn	Pn	15 00 09.6	-1.8
	comp=Z,0.4nm,0.3s,baz=158,slow=18,SNR=1.7						
DAVOX				Sn	Sn	15 01 25.6	+0.4
	comp=Z,0.3nm,0.3s,baz=102,slow=19,SNR=1.4						
	comp=Z,1.2nm,0.3s						
MLR	Muntele Rosu	6.73	66	Sn	Sn	15 01 32.8	-0.1
	comp=Z,0.2nm,0.3s,baz=298,slow=8.1,SNR=1.3						
MORC	Moravsky Berou	6.74	2	⇑P	Pn	15 00 18.0	+2.3
MORC	Moravsky Berou	6.74	2	*e*SN	Sn	15 01 32.7	-0.4
FINES	FINESS Array B	19.18	13	P	P	15 02 59.6	-0.7
	comp=Z,0.2nm,0.3s,baz=194,slow=10,SNR=8.8						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	26.90	6	P	P	15 04 15.8	-2.0
	comp=Z,0.4nm,0.6s,baz=189,slow=7.1,SNR=5.8						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	45.05	62	P	P	15 06 54.1	+1.3
	comp=Z,0.1nm,0.6s,baz=293,slow=7.4,SNR=2.1						
	comp=Z,0.1nm,0.6s						

IDC 02 15:00:15.1±40.0**, 23°.41S×176°.88W, h391^{km}**±129^{km}**, mb3.3**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=526.8km s-min=112.0km az=77.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.34	268	P	P	15 06 27.6	+0.5
	3.1nm,0.4s,baz=94,slow=11,SNR=19						
	3.1nm,0.4s						
STKA	Stephens Creek	37.56	248	P	P	15 06 53.0	-0.9
	1.3nm,0.6s,baz=104,slow=8.3,SNR=1.2						
	1.3nm,0.6s						
ASAR	Alice Springs	44.94	259	P	P	15 07 53.1	-0.3
	0.4nm,0.5s,baz=91,slow=6.9,SNR=26						
	0.4nm,0.5s						
WRA	Warramunga Arr	45.30	265	P	P	15 07 56.0	-0.2
	1.5nm,0.5s,baz=99,slow=8.0,SNR=26						
WRA				ScP	ScP	15 12 42.7	-0.4
	0.2nm,0.6s,baz=104,slow=3.7,SNR=4.8						
	1.5nm,0.5s						

TRN 02 15:19:08.5, 10°.64N×62°.35W, h69^{km}, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.93	90	*e*P	Pn	15 19 26.8	+0.7
TRN				*e*S	Sn	15 19 39.0	-0.2
GRFF	Grenada Fort F	1.52	23	*e*P	Pn	15 19 33.6	-0.1
GRFF				*e*S	Sn	15 19 52.4	-0.4
GRGR	Grenville	1.63	25	*e*P	Pn	15 19 35.3	0.0
GRGR				*e*S	Sn	15 19 55.0	-0.4
GRHS	Sauteurs	1.72	24	*e*P	Pn	15 19 37.1	+0.7
GRHS				*e*S	Sn	15 19 58.2	+0.7
GRSS	Sisters	1.80	24	*e*P	Pn	15 19 38.7	+1.2
GRSS				*e*S	Sn	15 20 00.3	+1.0
GCMP	Grenada, Carri	2.04	26	*e*P	Pn	15 19 40.5	-0.3
GCMP				*e*S	Sn	15 20 04.2	-1.1
SLBI	Saint Lucia, B	3.62	22	*e*P	Pn	15 20 03.4	+1.2
SLBI				*e*S	Sn	15 20 43.6	-0.1
MPOM	Morne Pois Mar	4.05	21	*e*P	Pn	15 20 08.7	+0.6
MPOM				*e*S	Sn	15 20 52.9	-1.3
ANBD	Bethesda, Anti	6.39	5	*e*P	Pn	15 20 40.6	+0.5

*IDC **02** 15:27:08.6±0.8, 15°.85S×167°.02E, h0^{km}, mb4.2/14, mbtmp4.2/15, ML4.0/1, MS3.6/20, Error ellipse: s-maj=25.8km s-min=18.1km az=117.0*

*NOU **02** 15:27:10.0, 15°.99S×166°.95E, h2^{km}, MLv5.0/15, Vanuatu Islands*

*NEIC **02** 15:27:10.9±1.9, 15°.92S±0°.06×167°.0E±0°.1, h13^{km}±4^{km}, mb4.6/33, Error ellipse: s-maj=15.6km s-min=5.1km az=115.0*

ISC 02 15:27:12.5±0.5**, 15°.96S**±0°.05×**166°.97E**±0°.07**, h27^{km}, n84, σ1^{s}.48**/68**, mb4.5**/28**, MS3.7**/18**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.56	23	Pg	Pb	15 27 21.2	-2.5
SANVU				Sg	Sb	15 27 28.3	-3.1
SANVU	Saraoutou	0.56	23	P	Pb	15 27 21.6	-2.1
DVP	Devils Point	2.10	147	P	Pn	15 27 46.0	+0.1
LIFNC	LIFOU	4.80	177	Pn	Pn	15 28 17.6	-5.4
KOUNC	Koumac, New Ca	5.23	209		Pn	15 28 28.2	-0.7
KOUNC	Koumac, New Ca	5.23	209	P	Pn	15 28 28.7	-0.2
MARNC	Mare, Loyalty	5.58	170	Pn	Pn	15 28 33.3	-0.5
MARNC	Mare, Loyalty	5.58	170	P	Pn	15 28 33.5	-0.2
YATNC	Mamie plateau,	6.07	181	P	Pn	15 28 39.7	-0.7
DZM	Mont Dzumac	6.10	185	Pn	Pn	15 28 40.2	-0.7
	3.5nm,0.3s,baz=62,slow=7.1,SNR=104						
DZM				Sn	Sn	15 29 41.5	-8.4
	3.6nm,0.3s,baz=85,slow=21,SNR=1.6						
DZM				LR	LR	15 30 49.6	
	comp=Z,321nm,21.5s,baz=32,slow=36						
	8.2nm,0.3s						
DZM	Mont Dzumac	6.10	185	P	Pn	15 28 40.5	-0.4
NOUC	Port Laguerre	6.14	186	P	Pn	15 28 41.6	+0.2
ONTNC	Ouen Toro	6.33	184		Pn	15 28 43.8	-0.3
ONTNC	Ouen Toro	6.33	184	P	Pn	15 28 44.3	+0.2
OUENC	Ouen Island, N	6.42	181		Pn	15 28 45.0	-0.3
OUENC	Ouen Island, N	6.42	181	P	Pn	15 28 45.3	0.0
PINNC	Pines Island,	6.63	176	Pn	Pn	15 28 47.6	-0.5
PINNC	Pines Island,	6.63	176	P	Pn	15 28 48.3	+0.1
MSVF	Nonsavu	10.75	101	Pn	Pn	15 29 47.2	+2.4
	0.6nm,0.3s,baz=242,slow=20,SNR=1.4						
MSVF				LR	LR	15 32 54.8	
	comp=Z,355nm,20.1s,baz=210,slow=32						
MSVF	Nonsavu	10.75	101	Pn	Pn	15 29 46.2	+1.4
CTA	Charters Tower	20.12	255	P	Pn	15 31 46.9	+0.4
	8.3nm,0.8s,baz=75,slow=11,SNR=12						
CTA				LR	LR	15 38 11.6	
	comp=Z,116nm,21.7s,baz=75,slow=33						
	8.3nm,0.8s						
CTAO	Charters Tower	20.12	255	P	P	15 31 44.9	+0.4
PMG	Port Moresby	20.39	286	LR	LR	15 38 49.7	
	comp=Z,100nm,18.6s,baz=146,slow=34						
URZ	Urewera	23.94	160	P	P	15 32 26.6	+2.2
	9.1nm,0.9s,baz=305,slow=20,SNR=2.9						
	9.1nm,0.9s						
URZ	Urewera	23.94	160	IAmb	IAmb	15 32 39.7	
	comp=Z,15nm,1.0s						
BKZ	Black Stump Fm	24.58	162	P	P	15 32 31.6	+1.4
BKZ				IAmb	IAmb	15 32 40.1	
	comp=Z,11nm,0.9s						
MSWZ	Moikau Station	26.35	166	P	P	15 32 46.6	+0.3
STKA	Stephens Creek	27.99	231	P	P	15 33 03.2	+2.0
	comp=Z,2.3nm,0.8s,baz=37,slow=10.0,SNR=5.4						
STKA				LR	LR	15 43 42.5	
	comp=Z,164nm,20.9s,baz=43,slow=35						
	comp=Z,2.3nm,0.8s						
WR0	Warramunga Arr	31.08	258	P	P	15 33 28.6	-0.1
WB0	Warramunga Arr	31.21	258	P	P	15 33 29.7	-0.2
WRA	Warramunga Arr	31.27	258	P	P	15 33 29.8	-0.6
	comp=Z,1.1nm,0.8s,baz=88,slow=8.9,SNR=7.8						
WRA				LR	LR	15 45 32.2	
	comp=Z,118nm,18.8s,baz=18,slow=35						
	comp=Z,1.1nm,0.8s						
AS31	Alice Springs	31.98	251	P	P	15 33 36.7	0.0
ASAR	Alice Springs	31.98	251	P	P	15 33 36.9	+0.2
	comp=Z,8.5nm,0.7s,baz=75,slow=8.7,SNR=80						
ASAR				LR	LR	15 45 12.7	
	comp=Z,142nm,20.7s,baz=100,slow=34						
	comp=Z,8.5nm,0.7s						
GUMO	Guam	36.60	322	LR	LR	15 51 02.1	
	comp=Z,59nm,18.1s,baz=108,slow=39						
SIJI	Sorong	38.27	290	LR	LR	15 49 47.3	
	comp=Z,78nm,20.1s,baz=140,slow=36						
FITZ	Fitzroy Crossi	39.52	261	P	P	15 34 40.5	-0.8
	comp=Z,1.7nm,0.8s,baz=85,slow=7.9,SNR=2.7						
FITZ				LR	LR	15 50 12.9	
	comp=Z,103nm,19.8s,baz=134,slow=35						
	comp=Z,1.7nm,0.8s						
PPT	Papeete	41.57	99	LR	LR	15 47 38.7	
	comp=Z,116nm,20.8s,baz=1.5,slow=30						
BATI	Baumata	42.51	272	LR	LR	15 51 06.5	
	comp=Z,154nm,19.5s,baz=258,slow=34						
PSA00	Pilbara Seismi	44.84	255	P	P	15 35 24.2	-0.4
PSA00				IAmb	IAmb	15 35 37.2	
	comp=Z,8.2nm,1.4s						
MJAR	Matsushiro Arr	58.87	333	P	P	15 37 08.2	-0.8
	comp=Z,1.0nm,0.8s,baz=152,slow=9.3,SNR=5.0						
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	61.63	181	LR	LR	15 59 47.2	
	comp=Z,44nm,20.8s,baz=320,slow=32						
PETK	Petropavlovsk-	69.25	354	P	P	15 38 17.1	+0.3
	comp=Z,3.3nm,0.9s,baz=161,slow=14,SNR=5.9						
	comp=Z,3.3nm,0.9s						
PETK	Petropavlovsk-	69.25	354	P	P	15 38 16.9	+0.1
GSTR	Great Sitkin T	69.36	11	P	P	15 38 16.5	-1.0
QSPA	South Pole Qui	74.07	180	P	P	15 38 46.9	+1.0
CMAR	Chiang Mai Arr	75.19	294	P	P	15 38 54.3	+1.2
	comp=Z,0.3nm,0.3s,baz=120,slow=5.3,SNR=1.5						
	comp=Z,0.3nm,0.3s						
MA2	Magadan	76.42	352	P	P	15 39 00.4	+1.2
MA2				IAmb	IAmb	15 39 01.1	
	comp=Z,3.0nm,0.7s						
P18K	Big Mountain,	81.13	19	P	P	15 39 26.7	+1.5
N19K	Bonanza Creek	82.50	18	P	P	15 39 33.1	+0.7
N19K				IAmb	IAmb	15 39 56.6	
	comp=Z,7.8nm,1.3s						
CNPM	China Poot	82.51	20	P	P	15 39 33.3	+0.9
SONM	Songino Array	83.32	324	P	P	15 39 37.3	+0.3
	comp=Z,0.7nm,0.8s,baz=141,slow=5.2,SNR=5.1						
	comp=Z,0.7nm,0.8s						
L19K	White Mountain	83.49	17	P	P	15 39 38.2	+0.8
L19K				IAmb	IAmb	15 39 43.0	
	comp=Z,3.4nm,0.9s						
BILL	Bilibino	83.77	360	P	P	15 39 40.3	+1.6
TTA	Tatalina	83.78	16	P	P	15 39 39.9	+1.0
TTA				IAmb	IAmb	15 39 51.5	
	comp=Z,7.0nm,1.4s						
CAST	Castle Rocks	85.25	17	P	P	15 39 45.2	-1.1
J20K	Nowinta River	85.28	16	P	P	15 39 47.2	+0.8
J20K				IAmb	IAmb	15 39 48.1	
	comp=Z,4.5nm,0.8s						
BELA	Belgrano 2	85.52	176	P	P	15 39 48.0	+0.3
BELA				IAmb	IAmb	15 39 48.9	
	comp=Z,3.5nm,0.9s						
KTH	Kantishna Hill	85.69	18	P	P	15 39 47.4	-1.2
KTH				IAmb	IAmb	15 39 48.7	
	comp=Z,3.3nm,0.8s						
BPAW	Bear Paw Mtn.	86.09	17	P	P	15 39 50.3	-0.2
BPAW				IAmb	IAmb	15 40 14.5	
	comp=Z,8.9nm,1.5s						
N25K	Chitina, Valde	86.27	21	P	P	15 39 51.5	0.0
H21K	Melozitna Rive	86.81	16	P	P	15 39 54.5	+0.5
H21K				IAmb	IAmb	15 40 03.6	
	comp=Z,4.2nm,1.0s						
IMAR	Indian Mountai	86.82	15	P	P	15 39 54.5	+0.5
WRH	Wood River Hil	87.20	18	P	P	15 39 54.9	-1.0
WRH				IAmb	IAmb	15 40 03.9	
	comp=Z,3.3nm,1.0s						
MDM	Murphy Dome	87.52	17	P	P	15 39 56.4	-1.1
MDM				IAmb	IAmb	15 40 05.3	
	comp=Z,2.8nm,1.0s						
M27K	Edge Creek, AK	87.73	21	P	P	15 39 57.9	-0.7
IL31		87.78	18	P	P	15 39 57.4	-1.2
IL31				IAmb	IAmb	15 39 58.3	
	comp=Z,2.5nm,0.6s						
ILAR	Eielson Array	87.78	18	P	P	15 39 57.4	-1.3
	comp=Z,1.8nm,0.5s,baz=237,slow=5.1,SNR=45						
	comp=Z,1.8nm,0.5s						
DOT	Dot Lake	87.86	20	P	P	15 39 58.3	-0.8
PFO	Pinyon Flats O	87.94	54	LR	LR	16 11 17.4	
	comp=Z,50nm,19.5s,baz=252,slow=30						
J25K	Salcha River,	88.12	19	P	P	15 39 59.6	-0.8
J25K				IAmb	IAmb	15 40 10.4	
	comp=Z,2.9nm,0.9s						
EGAK	Eagle	89.57	20	P	P	15 40 06.7	-0.4
EGAK				IAmb	IAmb	15 40 15.2	
	comp=Z,4.6nm,1.2s						
ELK	Elko	91.32	48	LR	LR	16 20 24.5	
	comp=Z,35nm,18.5s,baz=247,slow=35						
TROLL	Troll, Antarti	91.62	185	P	P	15 40 18.1	+1.2
SNAA	Sanae	92.31	183	P	P	15 40 20.5	+0.5
	comp=Z,2.4nm,0.9s,baz=256,slow=2.8,SNR=3.6						
	comp=Z,2.4nm,0.9s						
SNAA	Sanae	92.31	183	IAmb	IAmb	15 40 22.7	
	comp=Z,10nm,1.3s						
INK	Inuvik	94.14	19	LR	LR	16 17 18.7	
	comp=Z,27nm,19.2s,baz=152,slow=32						
PDAR	Pinedale Array	95.99	47	LR	LR	16 16 24.0	
	comp=Z,24nm,19.6s,baz=304,slow=31						
ANMO	Albuquerque	96.23	56	LR	LR	16 16 47.8	
	comp=Z,34nm,19.1s,baz=263,slow=31						
TXAR	Lajitas Array	97.11	62	LR	LR	16 19 37.9	
	comp=Z,36nm,18.0s,baz=229,slow=32						
MKAR	Makanchi Array	97.89	316	P	Pdif	15 40 47.7	+1.8
	comp=Z,0.4nm,0.8s,baz=87,slow=6.0,SNR=4.1						
	comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	98.21	324	LR	LR	16 25 19.6	
	comp=Z,26nm,20.0s,baz=188,slow=36						
YKA	Yellowknife Ar	98.77	27	P	P	15 40 48.4	-0.9
	comp=Z,1.0nm,0.7s,baz=254,slow=4.5,SNR=16						
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	121.36	345	PKP	PKiKP	15 46 03.3	+0.6
	comp=Z,0.9nm,0.6s,baz=79,slow=1.9,SNR=16						
ESDC	Sonseca Array	155.08	343	PKPab	PKPab	15 47 28.2	+0.4
	comp=Z,0.7nm,0.6s,baz=20,slow=3.4,SNR=4.6						

JMA 02 15:31:25.5±0.2**, 24°N**±4°×**122°.4E**±0°.7**, h17^{km}**±2^{km}**, NW OFF ISHIGAKIJIMA IS, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.47	93	P	Pg	15 31 34.7	-0.2
YOJ	Yonaguni jima	0.53	92	P	Pg	15 31 35.7	-0.3
YOJ				*e*S	Sg	15 31 42.8	-0.3
IRIF	Iriomote-Funau	1.19	97	P	Pn	15 31 47.3	+0.1
IRIF				*e*S	Sn	15 32 03.0	0.0
JKRS	Kuro-shima	1.46	99	*e*P	Pn	15 31 51.4	+0.4
JKRS				*e*S	Sn	15 32 08.9	-0.7

TAP 02 15:31:27.5, 24°.19N×121°.71E, h17^{km}, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.09	253	*i* P	Pg	15 31 30.9	0.0
	baz=253						
ETL				S	Sg	15 31 33.0	-0.2
	baz=253						
NACB	Ninganchiao	0.11	264	*i* P	Pg	15 31 31.0	-0.1
	baz=265						
NACB				*i* S	Sg	15 31 33.4	-0.1
	baz=265						
TWD	Chiawan	0.15	226	*e*P	Pb	15 31 31.8	-0.1
	baz=225						
TWD				*e*S	Sb	15 31 34.7	-0.1
	baz=225						
ETLH	Xiulin Townshi	0.21	276	*e*P	Pg	15 31 32.6	0.0
	baz=277						
ETLH				*e*S	Sg	15 31 36.2	+0.2
	baz=277						
NNSB	Datong	0.39	309	*e*P	Pg	15 31 35.7	+0.2
	baz=309						
NNSB				*e*S	Sg	15 31 41.1	+0.1
	baz=309						
WHF	Hehuan Shan	0.41	265	*e*P	Pg	15 31 36.2	+0.2
	baz=266						
WHF				*e*S	Sb	15 31 42.5	-0.2
	baz=266						
ENTT	Nioudou	0.47	343	*e*P	Pg	15 31 37.1	0.0
	baz=343						
CHGB	Renai	0.51	256	*e*P	Pb	15 31 38.2	+0.1
	baz=249						
TIPB	Shuangxi	0.79	7	*e*P	Pn	15 31 44.0	0.0
	baz=6.0						

*IDC **02** 15:34:45.0±2.4, 0°.23N×125°.55E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=293.3km s-min=24.7km az=64.0*

*DJA **02** 15:34:51.4±0.9, 0°S±2°×12°5E±°, h11^{km}±7^{km}, M3.8/14, mb3.8/3, mB5.0/1, MLv3.7/14, Mw(mB)4.3/1*

ISC 02 15:34:53.7±1.0**, 0°.17S**±0°.07×**124°.81E**±0°.05**, h53^{km}, n16, σ1^{s}.88**/19**, mb3.3**/3**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.11	312	P	Pn	15 35 11.7	-1.3
KMSI				S	Sn	15 35 25.7	-1.7
GTOI	Gorontalo	1.97	294	P	Pn	15 35 26.2	+1.5
GTOI				S	Sn	15 35 54.1	+5.8
SANI	Sanana	2.20	148	P	Pn	15 35 26.9	-1.0
LUWI	Luwuk	2.22	247	P	Pn	15 35 28.1	+0.1
LBMI	Labuha	2.73	100	P	Pn	15 35 36.1	+1.1
LBMI				S	Sn	15 36 09.5	+2.7
MRSI	Marisa	2.94	283	P	Pn	15 35 37.0	-1.0
APSI	Ampana	3.25	257	P	Pn	15 35 42.3	+0.1
SGSI	Sangihe	3.90	11	P	Pn	15 35 51.0	-0.1
AAI	Ambon	4.86	136	P	Pn	15 36 04.4	+0.1
MPSI	Mapaga	4.94	276	P	Pn	15 36 05.0	-0.4
BBSI	Bau Bau	5.74	203	P	Pn	15 36 16.7	+0.4
	0.0nm1.8nm,0.8s						
TTSI	Tana Toraja	5.75	240	P	Pn	15 36 16.6	+0.1
	0.1nm1µm9.6nm,0.4s						
SPSI	Sidrap Palu	6.29	233	P	Pn	15 36 24.4	+0.5
WRA	Warramunga Arr	21.75	155	P	P	15 39 39.0	-2.0
	0.4nm,0.5s,baz=336,slow=9.8,SNR=9.0						
	0.4nm,0.5s						
ASAR	Alice Springs	24.97	160	P	P	15 40 11.8	-0.7
	0.7nm,0.7s,baz=346,slow=11,SNR=19						
	0.7nm,0.7s						
MKAR	Makanchi Array	59.72	327	P	P	15 44 52.0	-1.0
	0.3nm,0.3s,baz=128,slow=7.6,SNR=7.8						
	0.3nm,0.3s						

*NEIC **02** 15:38:20.9±2.6, 6°.3S±0°.1×130°.38E±0°.10, h160^{km}±10^{km}, mb4.2/9, Error ellipse: s-maj=18.9km s-min=8.4km az=221.0*

*IDC **02** 15:38:20.1±2.1, 6°.16S×130°.41E, h154^{km}±22^{km}, mb3.5/3, mbtmp4.1/8, MS3.3/1, Error ellipse: s-maj=33.2km s-min=16.3km az=83.0*

ISC 02 15:38:19.6±0.6**, 6°.28S**±0°.05×**130°.40E**±0°.07**, h150^{km}, n41, σ2^{s}.64**/44**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.81	344	P	Pn	15 38 55.3	+2.7
SAUI	Saumlaki	1.91	152	Pn	Pn	15 38 56.4	+2.7
SIJI	Sorong	5.44	9	P	Pn	15 39 38.1	-0.9
	26nm,0.3s,baz=56,slow=5.6,SNR=68						
SIJI				S	Sn	15 40 35.2	-5.8
	31nm,0.3s,baz=286,slow=23,SNR=17						
SANI	Sanana	6.08	313	P	Pn	15 39 48.9	+1.4
MTN	Manton Dam	6.56	174		Pn	15 39 56.9	+3.0
MTN	Manton Dam	6.56	174	P	Pn	15 39 57.2	+3.4
KDU	Kakadu	6.69	162	P	Pn	15 39 58.3	+2.8
BATI	Baumata	7.72	239	P	Pn	15 40 11.6	+2.2
	7.6nm,0.3s,baz=262,slow=1.1,SNR=11						
BATI				S	Sn	15 41 34.8	-0.9
	14nm,0.5s,baz=303,slow=19,SNR=3.0						
KNRA	Kununurra	9.48	190		Pn	15 40 34.1	+1.4
KNRA	Kununurra	9.48	190	P	Pn	15 40 34.4	+1.7
TOLI2	Tolitoli	12.09	307	Pn	Pn	15 41 09.6	+2.5
FITZ	Fitzroy Crossi	12.63	201	P	Pn	15 41 14.2	+0.1
	0.9nm,0.3s,baz=33,slow=11,SNR=21						
FITZ				S	Sn	15 43 25.7	-8.2
	2.0nm,0.5s,baz=86,slow=17,SNR=3.1						
WB0	Warramunga Arr	13.96	164	Pn	Pn	15 41 30.9	-0.1
WRAB	Tennant Creek	14.10	165	Pn	Pn	15 41 32.7	-0.2
WRAB	Tennant Creek	14.10	165	P	Pn	15 41 34.5	+1.6
WRA	Warramunga Arr	14.11	165	P	Pn	15 41 32.8	-0.2
	1.3nm,0.5s,baz=348,slow=12,SNR=19						
WRA				S	Sn	15 44 02.5	-7.0
	3.3nm,0.6s,baz=330,slow=25,SNR=10						
WRA	Warramunga Arr	14.11	165	Pn	Pn	15 41 32.3	-0.6
WB2	Warramunga Arr	14.11	165	Pn	Pn	15 41 32.7	-0.3
WR0	Warramunga Arr	14.18	164	Pn	Pn	15 41 34.3	+0.4
COEN	Coen	14.70	122		Pn	15 41 41.9	+1.5
COEN	Coen	14.70	122	P	P	15 41 44.2	+1.6

QIS	**Mount Isa**	**16.77**	**149**	P	**Pn**	**15 42 08.7**	**+2.9**
AS31	**Alice Springs**	**17.61**	**169**		**Pn**	**15 42 17.9**	**+2.0**
AS31				IAmb	IAmb	15 42 19.5	
	comp=Z,6.8nm,0.3s						
ASAR	**Alice Springs**	**17.61**	**169**	P	**Pn**	**15 42 17.9**	**+2.0**
	comp=Z,7.2nm,0.4s,baz=351,slow=11,SNR=176						
ASAR				S	**S**	**15 45 25.5**	**-4.7**
	comp=Z,0.4nm,0.6s,baz=352,slow=25,SNR=2.1						
ASAR	**Alice Springs**	**17.61**	**169**	Pn	**Pn**	**15 42 17.3**	**+1.4**
WRKA	**Warakurna**	**18.76**	**186**	P	**Pn**	**15 42 30.2**	**+0.8**
SBUM	**Sibu**	**20.12**	**295**	P	**P**	**15 42 44.0**	**+2.0**
CTA	**Charters Tower**	**20.62**	**133**	LR	LR	15 52 02.3	
	comp=Z,80nm,18.7s,baz=220,slow=40						
OOD	**Oodnadatta**	**21.98**	**167**	P	**P**	**15 43 03.3**	**+1.7**
INKA	**Innaminka**	**23.50**	**156**	P	**P**	**15 43 19.0**	**+3.1**
	comp=Z,22nm,2.5s						
STKA	**Stephens Creek**	**27.53**	**159**	P	**P**	**15 43 53.7**	**+1.4**
	comp=Z,4.3nm,1.1s,baz=348,slow=5.5,SNR=3.7						
	comp=Z,4.3nm,1.1s						
ARMA	**Armidale**	**31.22**	**143**	P	**P**	**15 44 25.5**	**+0.4**
ARMA				IAmb	IAmb	15 44 47.5	
	comp=Z,16nm,1.4s						
DZM	**Mont Dzumac**	**38.17**	**118**	P	**P**	**15 45 25.0**	**+0.1**
MXZ	**Matakaoa Point**	**53.45**	**133**	P	**P**	**15 47 23.5**	**-0.8**
MK31	**Makanchi Array**	**67.85**	**326**	P	**P**	**15 49 00.8**	**-0.9**
MK31				IAmb	IAmb	15 49 01.6	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**67.85**	**326**	P	**P**	**15 49 01.2**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=122,slow=8.0,SNR=20						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**67.85**	**326**	P	**P**	**15 49 00.9**	**-0.8**
MAKZ	**Makanchi**	**68.03**	**326**	P	**P**	**15 49 01.9**	**-0.9**
MAKZ				IAmb	IAmb	15 49 02.9	
	comp=Z,1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**72.11**	**328**	P	**P**	**15 49 26.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=132,slow=4.5,SNR=3.8						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**72.12**	**328**	P	**P**	**15 49 26.4**	**-1.2**
KURK	**Kurchatov**	**72.12**	**328**	IAmb	IAmb	15 49 37.5	
	comp=Z,2.7nm,0.5s						

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*NEIC **02** 15:49:02.3±0.7, 22°.28N±0°.09×94°.69E±0°.09, h120^{km}±7^{km}, mb4.2/25, Error ellipse: s-maj=14.8km s-min=9.7km az=219.0*

*IDC **02** 15:49:02.5±1.7, 22°.32N×94°.76E, h127^{km}±16^{km}, mb3.5/13, mbtmp3.8/15, Error ellipse: s-maj=22.7km s-min=11.0km az=56.0*

*NDI **02** 15:49:04.0±3.6, 22°.23N×94°.52E, h100^{km}±50^{km}, ML4.2, mb4.2(NEIC)*

ISC 02 15:48:59.8±0.5**, 22°.20N**±0°.05×**94°.53E**±0°.06**, h100**^{km}**, n72,** σ**2^{s}.34**/93**, mb4.1**/23**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**2.71**	**281**	P	Pn	15 49 47.0	+5.3
	0.9nm,0.3s,baz=360,slow=24,SNR=1.7						
BRDH				S	**Sn**	**15 50 19.1**	**+5.2**
	1.7nm,0.3s,baz=360,slow=24,SNR=22						
KOHI	**KOHIMA**	**3.53**	**354**	*e*P	**Pn**	**15 49 57.5**	**+4.7**
KOHI				*e*S	**Sn**	**15 50 35.2**	**+1.5**
KOHI				IAML		15 50 39.4	
	comp=N,725nm,0.5s						
MOKO	**MOKOCHONG**	**4.11**	**360**	*e*P	**Pn**	**15 50 05.0**	**+4.5**
MOKO				*e*S	**Sn**	**15 50 54.3**	**+6.6**
SHL	**Shillong**	**4.13**	**325**		**Pn**	**15 50 04.0**	**+3.0**
SHL	**Shillong**	**4.13**	**325**	*e*P	**Pn**	**15 50 04.6**	**+3.6**
JORH	**JORHAT**	**4.53**	**357**	*e*P	**Pn**	**15 50 09.9**	**+3.7**
GUWA	**GUWAHATI**	**4.75**	**328**	*e*P	**Pn**	**15 50 11.4**	**+2.4**
GUWA				*e*S	**Sn**	**15 51 00.7**	**-2.2**
ITAN	**ITANAGAR**	**4.98**	**352**	*e*P	**Pn**	**15 50 15.5**	**+3.2**
ITAN				*e*S	**Sn**	**15 51 08.3**	**-0.3**
ITAN				IAML		15 51 10.5	
	comp=E,874nm,0.4s						
CHTO	**Chiang Mai**	**5.34**	**128**	Pn	**Pn**	**15 50 18.5**	**+1.3**
CM31	**Chiang Mai Arr**	**5.57**	**131**	Pn	**Pn**	**15 50 21.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**5.57**	**131**	P	**Pn**	**15 50 21.9**	**+1.6**
	comp=E,2.4nm,0.5s,baz=310,slow=13,SNR=17						
GTK	**Tadong**	**7.41**	**315**	*e*x	Pn	15 50 52.6	+7.2
GTK				*e*x	**Sn**	**15 52 08.2**	**+0.1**
GTK				IAML		15 52 16.9	
	comp=E,211nm,0.5s						
ODAN	**Odare**	**7.98**	**307**	*e*Pn	**Pn**	**15 50 56.2**	**+2.9**
ODAN				*e*Sn	**Sn**	**15 52 21.2**	**-0.9**
	comp=E,137nm,0.3s						
TAPN	**Taplejung**	**8.04**	**311**	*e*Pn	**Pn**	**15 50 57.0**	**+2.9**
TAPN				*e*Sn	**Sn**	**15 52 23.0**	**-0.6**
	comp=E,177nm,0.5s						
LSA	**Lhasa**	**8.06**	**339**		**Pn**	**15 50 57.3**	**+2.7**
BWNR	**Bhubaneshwar**	**8.35**	**258**	*e*P	**Pn**	**15 51 01.2**	**+3.1**
BWNR				*e*S	**Sn**	**15 52 28.5**	**-2.2**
RAMN	**Ramite**	**8.62**	**305**	*e*Pn	**Pn**	**15 51 05.6**	**+3.5**
RAMN				*e*Sn	**Sn**	**15 52 36.5**	**-1.2**
	comp=E,113nm,0.5s						
JIRN	**Jiri**	**9.31**	**307**	*e*Pn	**Pn**	**15 51 14.9**	**+3.4**
JIRN				*e*Sn	**Sn**	**15 52 53.4**	**-1.3**
GUN	**Gumba**	**9.68**	**308**	*e*Pn	**Pn**	**15 51 19.5**	**+3.0**
GUN				*e*Sn	**Sn**	**15 53 02.3**	**-1.3**
PKI	**Pulchoki**	**9.85**	**305**	*e*Pn	**Pn**	**15 51 21.4**	**+2.6**
PKI				*e*Sn	**Sn**	**15 53 05.9**	**-1.8**
	comp=E,40nm,0.4s						
PKIN	**Phulchoki**	**9.87**	**305**	*e*Pn	**Pn**	**15 51 21.6**	**+2.7**
PKIN				*e*Sn	**Sn**	**15 53 06.7**	**-1.2**
	comp=E,67nm,0.4s						
KKN	**Kakani**	**10.06**	**305**	*e*Pn	**Pn**	**15 51 25.8**	**+4.2**
KKN				*e*Sn	**Sn**	**15 53 11.5**	**-1.2**
	comp=E,40nm,0.3s						
DMN	**Daman**	**10.10**	**304**	*e*Pn	**Pn**	**15 51 25.5**	**+3.3**
DMN				*e*Sn	**Sn**	**15 53 11.9**	**-1.8**
	comp=E,26nm,0.3s						
PBA	**Port Blair**	**10.62**	**190**		**Pn**	**15 51 30.9**	**+1.8**
GKN	**Gorkha**	**10.66**	**305**	*e*Pn	**Pn**	**15 51 32.2**	**+2.5**
GKN				*e*Sn	**Sn**	**15 53 24.6**	**-2.5**
RAGD	**RAYAGADA**	**10.77**	**256**	*e*S	**Sn**	**15 53 26.6**	**-3.0**
KOLN	**Koldanda**	**11.35**	**301**	*e*Pn	**Pn**	**15 51 41.6**	**+2.5**
KOLN				*e*Sn	**Sn**	**15 53 41.0**	**-3.1**
	comp=E,48nm,0.4s						
BLSP	**Bilaspur**	**11.49**	**272**	*e*P	**Pn**	**15 51 43.1**	**+2.4**
BLSP				*i* x	x	15 51 45.1	
BLSP				*e*S	**Sn**	**15 53 41.1**	**-6.0**
DANN	**Dangsing**	**11.50**	**304**	*e*Pn	**Pn**	**15 51 44.4**	**+3.2**
DANN				*e*Sn	**Sn**	**15 53 45.4**	**-2.4**
PYUN	**Piuthan**	**11.98**	**302**	*e*Pn	**Pn**	**15 51 50.3**	**+2.8**
PYUN				*e*Sn	**Sn**	**15 53 56.6**	**-2.8**
	comp=E,36nm,0.4s						
ENH	**Enshi**	**15.64**	**56**	P	**Pn**	**15 52 35.5**	**+0.9**
ENH				IAmb	IAmb	15 52 36.9	
	comp=Z,6.7nm,0.5s						
PSI	**Prapat**	**19.75**	**167**	P	**Pn**	**15 53 26.5**	**+2.1**
	comp=Z,2.1nm,0.3s,baz=338,slow=18,SNR=2.1						
MK31	**Makanchi Array**	**26.46**	**341**	P	**P**	**15 54 28.6**	**+1.1**
MKAR	**Makanchi Array**	**26.46**	**341**	P	**P**	**15 54 29.1**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=144,slow=10.0,SNR=12						
MKAR				PcP	**PcP**	**15 57 49.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=218,slow=3.2,SNR=5.1						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**31.01**	**340**	P	**P**	**15 55 08.9**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=147,slow=9.1,SNR=4.7						
KURBB				PcP	**PcP**	**15 58 00.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=156,slow=2.3,SNR=6.9						
KURBB				ScP	**ScP**	**16 01 31.4**	**-3.8**
	comp=Z,0.5nm,0.6s,baz=154,slow=3.0,SNR=4.2						
	comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**31.07**	**340**	P	**P**	**15 55 08.9**	**+0.6**
ZALV	**Zalesovo Beam**	**32.55**	**349**	P	**P**	**15 55 19.0**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=166,slow=8.3,SNR=2.7						
	comp=Z,0.6nm,0.4s						
USA0B	**Ussuriysk Arra**	**37.81**	**46**	P	**P**	**15 56 05.0**	**-1.5**
USA0B				IAmb	IAmb	15 56 13.6	
	comp=Z,5.9nm,1.0s						
ABKAR	**Akbulak array**	**38.40**	**323**	P	**P**	**15 56 12.8**	**+1.5**
AKTO	**Aktyubinsk**	**40.08**	**324**	P	**P**	**15 56 25.6**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=123,slow=8.7,SNR=4.4						
	comp=Z,1.2nm,0.5s						
MJB9	**Matsu-Tunnel**	**40.32**	**59**	P	**P**	**15 56 25.9**	**-1.6**
MJB9				IAmb	IAmb	15 56 27.7	
	comp=Z,3.9nm,1.3s						
MAJO	**Matsushiro**	**40.32**	**59**	P	**P**	**15 56 25.9**	**-1.6**
MAJO				IAmb	IAmb	15 56 27.8	
	comp=Z,4.1nm,1.4s						
MJAR	**Matsushiro Arr**	**40.32**	**59**	P	**P**	**15 56 25.2**	**-2.3**
	comp=Z,1.2nm,1.0s,baz=272,slow=11,SNR=3.4						
	comp=Z,1.2nm,1.0s						
ERM	**Erimo**	**45.02**	**52**	P	**P**	**15 57 04.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**50.31**	**140**	P	**P**	**15 57 46.2**	**-0.3**
FITZ				IAmb	IAmb	15 58 03.9	
	comp=Z,8.0nm,1.5s						
KNRA	**Kununurra**	**50.42**	**135**	P	**P**	**15 57 46.6**	**-0.8**
TIXI	**Tiksi**	**53.23**	**13**	P	**P**	**15 58 05.4**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=104,slow=17,SNR=7.3						
	comp=Z,0.6nm,0.3s						
TIXI	**Tiksi**	**53.23**	**13**	IAmb	IAmb	15 58 10.4	
	comp=Z,1.5nm,1.1s						
WB0	**Warramunga Arr**	**57.07**	**134**	P	**P**	**15 58 35.0**	**-0.9**
WB0				IAmb	IAmb	15 58 47.6	
	comp=Z,6.4nm,1.2s						
WRA	**Warramunga Arr**	**57.16**	**134**	P	**P**	**15 58 35.7**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=321,slow=7.2,SNR=13						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**57.16**	**134**	IAmb	IAmb	15 58 43.7	
	comp=Z,0.2nm,1.4s						
WRAB	**Tennant Creek**	**57.16**	**134**	P	**P**	**15 58 35.5**	**-1.0**
WB2	**Warramunga Arr**	**57.16**	**134**	P	**P**	**15 58 35.6**	**-0.9**
WR0	**Warramunga Arr**	**57.30**	**134**	P	**P**	**15 58 36.6**	**-0.9**
WR0				IAmb	IAmb	15 58 37.1	
	comp=Z,2.6nm,0.7s						
AKASG	**Malin Array Be**	**57.58**	**317**	P	**P**	**15 58 38.1**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=74,slow=7.7,SNR=4.5						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**57.58**	**317**	IAmb	IAmb	15 58 51.3	
	comp=Z,2.8nm,1.4s						
AS31	**Alice Springs**	**59.54**	**138**	P	**P**	**15 58 52.5**	**-0.6**
ASAR	**Alice Springs**	**59.54**	**138**	P	**P**	**15 58 52.6**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=317,slow=6.7,SNR=60						
ASAR				PcP	**PcP**	**15 59 37.7**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=323,slow=5.1,SNR=5.8						
	comp=Z,1.3nm,0.6s						
BURAR	**Bucovina Array**	**60.12**	**313**	P	**P**	**15 58 57.2**	**+0.4**
FINES	**FINESS Array B**	**60.46**	**329**	P	**P**	**15 58 58.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=66,slow=4.8,SNR=4.6						
FINES				PcP	**PcP**	**15 59 42.1**	**-0.4**
	comp=Z,1.4nm,1.1s,baz=104,slow=5.9,SNR=2.0						
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**62.07**	**338**	P	**P**	**15 59 09.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=79,slow=6.3,SNR=14						
ARCES				PcP	**sP**	**15 59 48.1**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=92,slow=4.5,SNR=4.4						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**62.07**	**338**	P	**P**	**15 59 09.5**	**-0.1**
ARCES				IAmb	IAmb	15 59 22.1	
	comp=Z,2.8nm,1.2s						
SPB2	**Spitsbergen Ar**	**65.99**	**347**	P	**P**	**15 59 35.0**	**0.0**
NOA	**NORSAR Array B**	**67.62**	**328**	P	**P**	**15 59 44.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=85,slow=6.1,SNR=3.4						
	comp=Z,0.4nm,0.5s						
H21K	**Melozitna Rive**	**78.83**	**23**	P	**P**	**16 00 50.3**	**-1.2**
H21K				IAmb	IAmb	16 00 54.8	
	comp=Z,4.1nm,1.4s						
BPAW	**Bear Paw Mtn.**	**80.28**	**24**	P	**P**	**16 00 58.6**	**-0.8**
BPAW				IAmb	IAmb	16 01 15.3	
	comp=Z,5.2nm,1.4s						
BMAR	**Burnt Mountain**	**80.63**	**20**	P	**P**	**16 01 00.8**	**-0.4**
LBTB	**Lobatse**	**81.70**	**239**	P	**P**	**16 01 08.2**	**+0.6**
LBTB				IAmb	IAmb	16 01 08.6	
	comp=Z,11nm,1.4s						
BOSA	**Boshof**	**83.72**	**236**	P	**P**	**16 01 18.5**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=94,slow=2.2,SNR=5.7						
	comp=Z,0.9nm,0.4s						
BOSA	**Boshof**	**83.72**	**236**	IAmb	IAmb	16 01 25.2	
	comp=Z,9.4nm,1.2s						
BCAR	**Beaver Creek A**	**84.24**	**22**	P	**P**	**16 01 19.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**87.69**	**283**	P	**P**	**16 01 38.4**	**+0.5**
	comp=Z,4.0nm,0.3s,baz=60,slow=4.2,SNR=1.2						

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*SJA **02** 15:53:24.9±1.0, 25°.91S×71°.65W, h10^{km}, ML4.2, MW3.7*

*NEIC **02** 15:53:33.3±2.6, 25°.91S±0°.04×70°.76W±0°.08, h55^{km}±6^{km}, mb4.7/5, ML4.2(GUC), Error ellipse: s-maj=11.0km s-min=6.0km az=88.0*

*GUC **02** 15:53:35.7±0.7, 26°.03S×70°.31W, h44^{km}±2^{km}, ML4.1*

*IDC **02** 15:53:36.8±3.8, 25°.83S×70°.48W, h65^{km}±29^{km}, mb4.5/2, mbtmp4.2/5, ML3.9/3, MS3.0/3, Error ellipse: s-maj=65.7km s-min=35.3km az=106.0*

ISC 02 15:53:33.6±0.7**, 25°.99S**±0°.03×**70°.67W**±0°.05**, h51**^{km}±6^{km}**, n99,** σ**2^{s}.43**/124**, mb4.4**/3**, 10C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC01	**Pan de Azucar**	**0.17**	**156**	Pn	**Pn**	**15 53 43.3**	**+1.3**
AC01				Sn	**Sn**	**15 53 49.1**	**+1.2**
AC01	**Pan de Azucar**	**0.17**	**156**	⇓ *i*P	**Pn**	**15 53 43.3**	**+1.3**
AC01				*i* S	**Sn**	**15 53 49.4**	**+1.5**
AC01				IAML		15 53 49.9	
	comp=N,39µm,0.3s						
AC01	**Pan de Azucar**	**0.17**	**156**	*e*P	**Pn**	**15 53 43.0**	**+1.0**
AC01				IAML		15 53 59.1	
	comp=Z,2µm,0.2s						
GO02	**Mina Guanaco**	**1.28**	**50**	Pn	**Pn**	**15 53 55.4**	**-0.1**
GO02				Sn	**Sn**	**15 54 10.2**	**-1.5**
GO02	**Mina Guanaco**	**1.28**	**50**	⇑ *i*P	**Pn**	**15 53 55.3**	**-0.2**
GO02				*e*S	**Sn**	**15 54 10.4**	**-1.3**
PB14	**IPOC Station P**	**1.38**	**10**		**Pn**	**15 53 57.1**	**+0.3**
PB14	**IPOC Station P**	**1.38**	**10**	⇑ *i*P	**Pn**	**15 53 57.3**	**+0.5**
PB14				*e*S	**Sn**	**15 54 15.1**	**+1.0**
PB14				IAML		15 54 17.6	
	comp=E,3µm,0.6s						
PB14	**IPOC Station P**	**1.38**	**10**	*e*P	Pn	15 53 51.9	-4.9
PB14				*e*P	**Pn**	**15 53 57.0**	**+0.2**
PB14				*e*S	**Sn**	**15 54 16.1**	**+2.0**
PB14				IAML		15 54 18.1	
	comp=Z,4µm,0.5s						
AC06	**Mina Casimiro**	**1.39**	**168**		**Pn**	**15 53 58.7**	**+2.0**
AC06	**Mina Casimiro**	**1.39**	**168**	⇑ *e*P	**Pn**	**15 53 58.6**	**+1.9**
AC06				*e*S	**Sn**	**15 54 16.5**	**+2.6**
AC02	**Maricunga**	**1.62**	**122**	Pn	**Pn**	**15 54 00.9**	**+0.7**
AC02	**Maricunga**	**1.62**	**122**	⇑ *i*P	**Pn**	**15 54 01.0**	**+0.8**
AC02				*i* S	**Sn**	**15 54 20.4**	**+0.1**
AC02				IAML		15 54 21.4	
	comp=N,7µm,0.2s						
AC02	**Maricunga**	**1.62**	**122**	*e*P	Pn	15 53 55.4	-4.8
AC02				*e*S	**Sn**	**15 54 21.8**	**+1.6**
AC02				IAML		15 54 23.4	
	comp=Z,2µm,0.1s						
GO03	**Copiap**	**1.64**	**166**		**Pn**	**15 54 01.9**	**+1.8**
GO03	**Copiap**	**1.64**	**166**	⇑ *i*P	**Pn**	**15 54 01.9**	**+1.8**
GO03				*e*S	**Sn**	**15 54 22.3**	**+2.1**
GO03				IAML		15 54 24.9	
	comp=E,3µm,0.2s						
GO03	**Copiap**	**1.64**	**166**	*e*P	**Pn**	**15 54 02.1**	**+2.0**
GO03				*e*S	**Sn**	**15 54 24.4**	**+4.2**
GO03				*e*S		15 54 24.6	
AC04	**Llanos de Chal**	**2.23**	**189**	Pn	**Pn**	**15 54 08.8**	**+0.7**
AC04	**Llanos de Chal**	**2.23**	**189**	⇑ *i*P	**Pn**	**15 54 09.1**	**+0.9**
AC04				*e*S	**Sn**	**15 54 35.8**	**+1.2**
AC04				IAML		15 54 50.0	
	comp=E,1µm,0.2s						
AC04	**Llanos de Chal**	**2.23**	**189**	*e*P	Pn	15 53 54.9	-13
AC04				*e*S	Sn	15 54 46.0	+11
AC04				IAML		15 54 53.7	
	comp=Z,486nm,0.5s						
PB10	**IPOC Station P**	**2.47**	**3**	Pn	**Pn**	**15 54 10.9**	**-0.5**
PB10	**IPOC Station P**	**2.47**	**3**	⇑ *i*P	**Pn**	**15 54 11.0**	**-0.5**
PB10				*e*S	**Sn**	**15 54 45.9**	**+5.5**
PB10	**IPOC Station P**	**2.47**	**3**	*e*P	**Pn**	**15 54 10.9**	**-0.5**
PB10				*e*S	**Sn**	**15 54 42.4**	**+2.0**
PB10				IAML		15 54 55.4	
	comp=Z,554nm,0.4s						
PB15	**IPOC Station P**	**2.98**	**22**		**Pn**	**15 54 19.3**	**+0.7**
PB15	**IPOC Station P**	**2.98**	**22**	⇑ *e*P	**Pn**	**15 54 19.2**	**+0.7**
PB15				*e*S	**Sn**	**15 54 55.6**	**+2.4**
PB15	**IPOC Station P**	**2.98**	**22**	*e*P	**Pn**	**15 54 19.6**	**+1.0**
PB15				*e*S	**Sn**	**15 55 01.3**	**+8.1**
LCO	**Las Campanas**	**3.01**	**180**	Pn	**Pn**	**15 54 20.1**	**+1.0**
LCO	**Las Campanas**	**3.01**	**180**	*e*P	**Pn**	**15 54 20.1**	**+1.0**
LCO				*e*S	**Sn**	**15 54 57.3**	**+3.3**
LCO	**Las Campanas**	**3.01**	**180**	*e*P	**Pn**	**15 54 20.0**	**+1.0**
PB06	**IPOC Station P**	**3.42**	**17**		**Pn**	**15 54 24.0**	**-0.6**
PB06	**IPOC Station P**	**3.42**	**17**	⇑ *i*P	**Pn**	**15 54 24.3**	**-0.4**
PB06				*e*S	**Sn**	**15 55 08.1**	**+4.1**
PB06				IAML		15 55 18.3	
	comp=E,857nm,0.2s						
PB06	**IPOC Station P**	**3.42**	**17**	*e*P	**Pn**	**15 54 24.4**	**-0.2**
PB06				*e*S	**Sn**	**15 55 08.9**	**+4.8**
PB06				IAML		15 55 33.3	
	comp=Z,465nm,0.4s						
PB04	**IPOC Station P**	**3.67**	**8**		**Pn**	**15 54 26.7**	**-1.4**
PB04	**IPOC Station P**	**3.67**	**8**	⇑ *e*P	**Pn**	**15 54 27.0**	**-1.1**
PB04				*e*S	**Sn**	**15 55 15.3**	**+5.0**
PB04	**IPOC Station P**	**3.67**	**8**	*e*P	**Pn**	**15 54 27.0**	**-1.1**
PB04				*e*S	**Sn**	**15 55 13.4**	**+3.1**
PB04				IAML		15 55 25.1	
	comp=Z,356nm,0.5s						
LVC	**Limon Verde**	**3.73**	**26**	P	**Pn**	**15 54 29.5**	**+0.5**
	comp=Z,9.2nm,0.3s,baz=175,slow=8.8,SNR=118						
LVC				S	**Sn**	**15 55 19.5**	**+7.5**
	comp=Z,178nm,0.4s,baz=2.8,slow=22,SNR=4.0						
LVC				LR	LR	15 56 09.4	
	comp=Z,76nm,18.0s,baz=194,slow=44						
	comp=Z,20nm,0.3s						
LVC	**Limon Verde**	**3.73**	**26**	Pn	**Pn**	**15 54 29.2**	**+0.2**
LVC	**Limon Verde**	**3.73**	**26**	*e*P	**Pn**	**15 54 24.4**	**-4.7**
LVC				*e*P	**Pn**	**15 54 29.5**	**+0.5**
LVC				*e*S	**Sn**	**15 55 19.9**	**+7.9**
LVC				IAML		15 55 29.1	
	comp=Z,410nm,0.5s						
AF01	**San Pedro de A**	**3.79**	**37**		**Pn**	**15 54 31.0**	**+1.3**
CO05	**La Serena**	**3.94**	**187**	Pn	**Pn**	**15 54 33.1**	**+1.5**
CO01	**Juntas del Tor**	**4.00**	**173**		**Pn**	**15 54 34.2**	**+1.5**
CO01	**Juntas del Tor**	**4.00**	**173**	*e*P	**Pn**	**15 54 34.9**	**+2.2**
CO01				*e*S	**Sn**	**15 55 27.4**	**+9.0**
CO01				IAML		15 55 41.3	
	comp=Z,244nm,0.8s						
GO04	**Tololo Observa**	**4.17**	**181**		**Pn**	**15 54 36.0**	**+1.1**
GO04	**Tololo Observa**	**4.17**	**181**	*e*P	**Pn**	**15 54 36.0**	**+1.1**
GO04				*e*S	**Sn**	**15 55 27.4**	**+4.9**
FSA	**Cafayete**	**4.22**	**93**	*e*P	**Pn**	**15 54 32.9**	**-2.8**
FSA				*e*S	**Sn**	**15 55 27.1**	**+3.3**
AROD	**Rodeo**	**4.29**	**166**	*e*P	**Pn**	**15 54 40.0**	**+3.3**
AROD				*e*S	Sn	15 55 37.9	+12
PB07	**IPOC Station P**	**4.31**	**10**		**Pn**	**15 54 35.5**	**-1.3**
PB07	**IPOC Station P**	**4.31**	**10**	*e*P	**Pn**	**15 54 35.6**	**-1.1**
PB07				*e*S	**Sn**	**15 55 30.9**	**+5.0**
PB07				*e*S	Sn	15 55 34.9	+9.0
PB09	**IPOC Station P**	**4.38**	**18**		**Pn**	**15 54 37.4**	**-0.3**
PB02	**IPOC Station P**	**4.71**	**9**		**Pn**	**15 54 40.9**	**-1.3**
PB02	**IPOC Station P**	**4.71**	**9**	*e*P	**Pn**	**15 54 40.7**	**-1.5**
PB02				*e*S	**Sn**	**15 55 40.0**	**+4.4**
PB02	**IPOC Station P**	**4.71**	**9**	*e*P	**Pn**	**15 54 41.0**	**-1.2**
PB02				*e*S	**Sn**	**15 55 36.5**	**+0.9**
CO06	**Fray Jorge**	**4.74**	**190**	Pn	**Pn**	**15 54 41.9**	**-0.6**
ACLC	**CERRO LA CRUZ**	**4.75**	**137**	*e*P	**Pn**	**15 54 45.6**	**+2.8**
ACLC				*e*S	Sn	15 55 49.5	+13
ACLC				IAML		15 55 51.9	
	comp=Z,108nm,0.6s						
ACCO	**Cerro Coronel**	**4.79**	**163**	*e*P	**Pn**	**15 54 47.4**	**+3.8**
ACCO				*e*S	Sn	15 55 51.9	+14
ACCO				IAML		15 55 58.5	
	comp=Z,201nm,0.5s						
PB01	**IPOC Station P**	**5.04**	**13**		**Pn**	**15 54 45.2**	**-1.7**
PB01	**IPOC Station P**	**5.04**	**13**	*e*P	Pn	15 54 37.9	-8.9
PB01				*e*P	**Pn**	**15 54 45.6**	**-1.2**
PB01				*e*P	**Pn**	**15 54 45.9**	**-0.9**
PB01				*e*S	Sn	15 55 59.8	+16
PB01				*e*S	Sn	15 56 01.3	+17
PB01				IAML		15 56 02.0	
	comp=Z,169nm,0.2s						
CO02	**Combarbal**	**5.20**	**183**	Pn	**Pn**	**15 54 49.1**	**+0.2**
CO02	**Combarbal**	**5.20**	**183**	*e*P	**Pn**	**15 54 49.0**	**0.0**
CO02				*e*P	**Pn**	**15 54 49.5**	**+0.5**
CO02				*e*S	Sn	15 55 58.4	+11
TA01	**Diego Aracena**	**5.42**	**5**	Pn	**Pn**	**15 54 49.4**	**-2.5**
TA01	**Diego Aracena**	**5.42**	**5**	*e*P	**Pn**	**15 54 49.9**	**-2.0**
ZON	**Zonda**	**5.80**	**163**	Pn	**Pn**	**15 54 57.0**	**-0.2**
PB08	**IPOC Station P**	**5.99**	**14**		**Pn**	**15 54 58.2**	**-1.8**
PB11	**IPOC Station P**	**6.27**	**9**	Pn	**Pn**	**15 55 00.9**	**-2.8**
GO01	**Chusmiza**	**6.44**	**13**		**Pn**	**15 55 03.9**	**-2.4**
VA06	**Catapilco**	**6.57**	**185**	Pn	**Pn**	**15 55 07.1**	**-0.5**
VA03	**San Esteban**	**6.75**	**179**		**Pn**	**15 55 09.8**	**-0.3**
ROC1	**El Roble**	**6.97**	**182**	Pn	**Pn**	**15 55 11.8**	**-1.5**
MT02	**Curacav**	**7.25**	**183**		**Pn**	**15 55 16.2**	**-0.8**
PB12	**IPOC Station P**	**7.35**	**3**	Pn	**Pn**	**15 55 16.1**	**-2.3**
MT03	**Universidad Ad**	**7.48**	**179**	Pn	**Pn**	**15 55 20.0**	**-0.1**
VA05	**Santo Domingo**	**7.68**	**186**	Pn	**Pn**	**15 55 23.8**	**+1.0**
PB16	**IPOC Station P**	**7.70**	**8**		**Pn**	**15 55 22.3**	**-1.4**
MT09	**Talagante**	**7.76**	**182**	Pn	**Pn**	**15 55 23.5**	**-0.6**
MT01	**Popeta**	**7.86**	**184**		**Pn**	**15 55 23.9**	**-1.4**
BO04	**La Punta**	**7.97**	**180**	Pn	**Pn**	**15 55 26.4**	**-0.4**
BO01	**Tunca**	**8.38**	**182**	Pn	**Pn**	**15 55 32.0**	**-0.4**
GO05	**Huala**	**9.05**	**187**	Pn	**Pn**	**15 55 39.1**	**-2.5**
LPAZ	**La Paz**	**9.94**	**14**	P	**Pn**	**15 55 53.8**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=214,slow=2.8,SNR=12						
	comp=Z,1.4nm,0.3s						
LPAZ	**La Paz**	**9.94**	**14**	Pn	**Pn**	**15 55 54.0**	**-0.4**
H03N1	**Juan Fernandez**	**10.31**	**222**	T	T	16 06 34.7	
	baz=48,slow=72,SNR=131						
H03N2	**Juan Fernandez**	**10.32**	**222**	T	T	16 06 25.8	
	baz=48,slow=72,SNR=190						
H03N3	**Juan Fernandez**	**10.33**	**222**	T	T	16 06 23.6	
	baz=48,slow=72,SNR=141						
CPUP	**Villa Florida**	**11.99**	**95**	P	Pn	15 56 27.2	+5.3
	comp=Z,0.5nm,0.3s,baz=236,slow=11,SNR=1.5						
CPUP				LR	LR	16 01 21.0	
	comp=Z,122nm,19.0s,baz=242,slow=39						
ITQB	**Itaqui**	**12.96**	**110**	Pn	**Pn**	**15 56 35.1**	**0.0**
TRQA	**Tornquist**	**14.10**	**151**	Pn	**Pn**	**15 56 50.0**	**-0.5**
PLCA	**Paso Flores**	**14.70**	**180**	P	**P**	**15 57 04.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=358,slow=12,SNR=3.3						
	comp=Z,0.7nm,0.6s						
PLCA	**Paso Flores**	**14.70**	**180**	P	**P**	**15 57 02.8**	**-0.7**
PLTB	**Pedras Altas**	**16.01**	**115**	Pn	**Pn**	**15 57 14.1**	**-1.3**
DSPA	**Despedida**	**27.99**	**177**	P	**P**	**15 59 21.3**	**+2.0**
SNAA	**Sanae**	**58.61**	**160**	P	**P**	**16 03 25.0**	**+0.1**
SNAA				IAmb	IAmb	16 03 51.0	
	comp=Z,3.7nm,1.2s						
DBIC	**Dimbokro**	**71.58**	**73**	P	**P**	**16 04 49.9**	**0.0**
	comp=Z,2.5nm,0.6s,baz=229,slow=6.6,SNR=4.4						
DBIC				LR	LR	16 34 25.5	
	comp=Z,22nm,21.6s,baz=138,slow=34						
	comp=Z,2.5nm,0.6s						
DBIC	**Dimbokro**	**71.58**	**73**	P	**P**	**16 04 50.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**80.39**	**70**	P	**P**	**16 05 40.0**	**-0.1**
	comp=Z,6.5nm,0.4s,baz=256,slow=5.1,SNR=1.4						
	comp=Z,6.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**80.39**	**70**	IAmb	IAmb	16 05 42.5	
	comp=Z,8.6nm,0.5s						
WRA	**Warramunga Arr**	**128.28**	**210**	PKP	**PKPdf**	**16 12 34.7**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=179,slow=1.2,SNR=1.7						
WRA	**Warramunga Arr**	**128.28**	**210**		**PKPdf**	**16 12 33.6**	**-1.5**
ZALV	**Zalesovo Beam**	**146.68**	**27**	PKPbc	**PKPab**	**16 13 10.4**	**0.0**
	comp=Z,1.2nm,0.7s,baz=298,slow=3.2,SNR=4.9						
MKAR	**Makanchi Array**	**150.17**	**39**	PKPbc	**PKiKP**	**16 13 19.9**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=324,slow=2.4,SNR=14						
PZH	**PanZhiHua**	**173.17**	**84**	PKP	**PKPdf**	**16 13 35.9**	**-1.8**

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*GII **02** 15:58:02.8±0.0, 28°.97N×34°.69E, h1^{km}, MD1.9/2, Mm2.3/3*

*HLW **02** 15:58:04.1, 28°.91N×34°.74E, h19^{km}, Md2.6, Ml3.2*

ISC 02 15:58:03.7±1.2**, 28°.95N**±0°.06×**34°.7E**±0°.1**, h25**^{km}±7^{km}**, n12,** σ**1^{s}.00**/20**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUB	**Nuweibaa**	**0.08**	**345**	P	**Pb**	**15 58 07.8**	**-0.3**
	baz=313						
NUB				S	**Sb**	**15 58 10.7**	**-0.5**
	baz=313						
HDHB	**Dhahab**	**0.23**	**192**	P	**Pb**	**15 58 09.5**	**-0.2**
	baz=209						
HBST	**Basata**	**0.27**	**11**	P	**Pb**	**15 58 10.6**	**+0.3**
	baz=0.0						
HBST				S	**Sn**	**15 58 15.9**	**-1.7**
	baz=0.0						
HKAT	**Jabal Katrina**	**0.73**	**235**	P	**Pn**	**15 58 18.5**	**-0.2**
	baz=240						
HKAT				S	**Sn**	**15 58 29.1**	**0.0**
	baz=240						
EIL	**Elat**	**0.76**	**19**	Pg	**Pb**	**15 58 17.8**	**-0.5**
EIL				Sg	**Sn**	**15 58 29.0**	**-0.6**
MBRI	**Mt Berech**	**0.87**	**14**	Pg	**Pn**	**15 58 20.3**	**-0.2**
MBRI				Sg	**Sn**	**15 58 33.1**	**+0.7**
TR2	**Tor 2**	**1.00**	**236**	P	**Pb**	**15 58 22.6**	**+0.2**
	baz=240						
HRFI	**Mount Harif**	**1.13**	**16**	Pg	**Pb**	**15 58 24.1**	**-0.5**
HRFI				Sg	**Sb**	**15 58 40.2**	**+1.3**
TR1	**Tor 1**	**1.13**	**214**	P	**Pb**	**15 58 24.3**	**-0.3**
	baz=218						
KRMI	**Paran Flat**	**1.17**	**2**	Pg	**Pb**	**15 58 24.6**	**-0.6**
KRMI				Sg	**Sb**	**15 58 41.6**	**+1.7**
PRNI	**Paran**	**1.43**	**12**	Pn	**Pb**	**15 58 29.6**	**-0.1**
PRNI				Sn	**Sb**	**15 58 49.7**	**+2.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZIT	Kziot	1.97	353	Pn	Pb	15 58 37.6	-1.2

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*IDC **02** 16:38:56.2±0.8, 36°.21N×143°.12E, h0^{km}, mb3.6/10, mbtmp3.7/14, ML3.5/4, MS2.7/3, Error ellipse: s-maj=24.3km s-min=16.9km az=102.0*

*JMA **02** 16:39:01.6±0.2, 36°.3N±0°.6×14°3E±°, h91^{km}, MV3.0/21, FAR E OFF KANTO*

ISC 02 16:38:58.8±0.9**, 36°.24N**±0°.05×**142°.78E**±0°.07**, h10**^{km}**, n27,** σ1^{s}.**46**/23**, mb3.5**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.65	252	P	Pg	16 39 31.2	+0.7
CHOJ				*e*S	Sg	16 39 53.3	+1.4
JHYU	Hitachinakayam	1.78	274	*e*P	Pg	16 39 32.7	-0.2
JHYU				S	Sg	16 39 55.6	-0.4
ONAJ	Iwakimizuishiy	1.81	299	P	Pb	16 39 32.5	+0.4
JHO	Hitachi	1.82	282	P	Pg	16 39 32.7	-1.1
BSO1	Boso 1	2.17	223	P	Pb	16 39 37.4	-0.4
JAG	Ashikaga	2.69	275	P	Pb	16 39 45.4	-1.7
JMK	Ichinoseki	2.98	336	*e*P	Pn	16 39 46.5	+0.4
JRY	Ryogami san	3.15	267	*e*P	Pb	16 39 51.7	-3.2
JYK	Kaneyama	3.29	325	*e*P	Pn	16 39 52.0	+1.6
MJAR	Matsushiro Arr	3.70	276	Pn	Pn	16 39 58.5	+2.4
	0.3nm,0.3s,baz=92,slow=14,SNR=18						
MJAR				LR	LR	16 41 22.0	
	comp=Z,35nm,19.3s,baz=356,slow=37 5.9nm,0.6s						
JHJ2	Mitsune	3.97	219	P	Pn	16 40 01.8	+2.1
JHJ	Hachijo jima 2	3.98	219	Pn	Pn	16 39 59.9	0.0
	14nm,0.3s,baz=78,slow=23,SNR=13						
JHJ				Sn	Sn	16 40 45.6	-0.9
	26nm,0.3s,baz=91,slow=23,SNR=9.3 30nm,0.3s						
ASAJ	Asahikawa	7.87	359	Pn	Pn	16 40 50.4	-2.8
	0.9nm,0.3s,baz=215,slow=12,SNR=12 1.7nm,0.3s						
JCJ	Chichijima	9.13	183	Pn	Pn	16 41 07.4	-3.3
	2.1nm,0.3s,baz=108,slow=22,SNR=1.5						
JCJ				Sn	Sn	16 42 40.4	-13
	3.9nm,0.3s,baz=79,slow=17,SNR=1.1 32nm,0.8s						
KSRS	Korea Array	11.97	280	LR	LR	16 45 46.9	
	comp=Z,17nm,18.7s,baz=275,slow=34						
SEY	Seymchan	27.37	10	P	P	16 44 43.7	-0.1
	0.4nm,0.5s,baz=182,slow=23,SNR=1.6 0.4nm,0.5s						
SONM	Songino Array	29.14	305	P	P	16 44 59.4	-0.6
	0.3nm,0.6s,baz=87,slow=12,SNR=2.4 0.3nm,0.6s						
ZALV	Zalesovo Beam	43.26	313	P	P	16 47 01.8	+1.6
	0.8nm,0.5s,baz=90,slow=8.6,SNR=4.0 0.8nm,0.5s						
MKAR	Makanchi Array	45.47	303	P	P	16 47 20.3	+2.3
	0.3nm,0.6s,baz=83,slow=12,SNR=2.9 0.3nm,0.6s						
KURBB	Kurchatov Arra	47.35	309	LR	LR	17 06 43.2	
	comp=Z,42nm,21.9s,baz=303,slow=35						
ILAR	Eielson Array	49.58	32	P	P	16 47 46.6	-3.0
	0.4nm,0.8s,baz=255,slow=7.0,SNR=3.0 0.4nm,0.8s						
WRA	Warramunga Arr	56.45	190	P	P	16 48 39.4	-1.3
	1.3nm,0.9s,baz=8.7,slow=6.9,SNR=4.9 1.3nm,0.9s						
ASAR	Alice Springs	60.17	189	P	P	16 49 06.4	-0.4
	0.4nm,0.5s,baz=0.8,slow=6.6,SNR=7.5 0.4nm,0.5s						
YKA	Yellowknife Ar	63.94	30	P	P	16 49 30.3	-1.3
	0.2nm,0.7s,baz=299,slow=6.2,SNR=3.8 0.2nm,0.7s						
NOA	NORSAR Array B	75.34	338	P	P	16 50 40.9	-1.2
	0.4nm,0.7s,baz=15,slow=5.0,SNR=1.2 0.4nm,0.7s						
TXAR	Lajitas Array	89.72	53	P	P	16 51 55.0	-2.6
	0.3nm,0.6s,baz=304,slow=2.1,SNR=2.6 0.3nm,0.6s						
LPAZ	La Paz	146.11	62	PKPbc	PKPdf	16 58 39.9	+0.4
	0.8nm,0.6s,baz=42,slow=6.5,SNR=3.9						

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*SNET **02** 16:46:34.2±0.8, 13°.40N×90°.67W, h22^{km}±6^{km}, ML3.3*

*GCG **02** 16:46:37.8±1.0, 13°.68N×90°.90W, h45^{km}±85^{km}, MD3.4*

ISC 02 16:46:33.2±2.7**, 13°.4N**±0°.1×**90°.75W**±0°.08**, h27**^{km}±15^{km}**, n14,** σ1^{s}.**07**/21**, 1C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.98	8⇓	*e*P	Pb	16 46 52.4	+0.7
PCG				*e*S	Sb	16 47 05.3	+0.9
FUG	Fuego 3	1.03	355	*e*P	Pn	16 46 52.8	+0.8
FUG				*e*S	Sb	16 47 04.1	-1.6
NUBE	Las Nubes	1.06	63	*e*P	Pb	16 46 52.3	-0.7
NUBE				*e*S	Sb	16 47 05.9	-0.8
SLOZ	Alcaldia de Sa	1.12	57	*e*P	Pn	16 46 53.9	+0.7
CEVE	Cerro Verde	1.17	70	*e*P	Pn	16 46 54.3	+0.2
CEVE				*e*S	Sn	16 47 10.5	+1.2
CEVE				IAML		16 47 14.1	
	comp=Z,645nm,0.2s						
SBLS	San Blas	1.18	69	*e*P	Pn	16 46 54.3	+0.2
RTR	El Retiro	1.18	66	*e*P	Pn	16 46 54.7	+0.6
SNJE	San Jose	1.20	68	*e*P	Pn	16 46 54.6	+0.2
NBG	Las Nubes	1.23	19	*e*P	Pb	16 46 56.9	+0.9
NBG				*e*S	Sn	16 47 09.2	-1.4
JAYA	Jayaque - finc	1.29	79	*e*P	Pn	16 46 55.6	0.0
JAYA				*e*S	Sb	16 47 12.4	-0.8
JAYA				IAML		16 47 17.1	
	comp=Z,655nm,0.2s						
BOQS	Boqueron	1.47	77	*e*P	Pn	16 46 59.0	+0.9
STG3	Santiaguito 3,	1.51	328	*e*P	Pn	16 46 59.6	+0.9
STG3				*e*S	Sn	16 47 15.3	-2.2
LFRS	El Faro	1.66	83	*e*P	Pn	16 47 01.5	+0.9
MTO3	Montecristo	1.67	54⇑	*e*P	Pn	16 47 01.6	+0.8

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*TIF **02** 17:00:57.8, 41°.40N×42°.60E, h10^{km}±1^{km}*

*DDA **02** 17:00:58.0±0.0, 41°.42N×42°.57E, h7^{km}±2^{km}, ML1.9*

*NORS **02** 17:00:58.7±0.0, 41°.47N×42°.50E, h10^{km}, MPVA3.2*

ISC 02 17:00:58.3±1.0**, 41°.40N**±0°.03×**42°.59E**±0°.03**, h11**^{km}±8^{km}**, n22,** σ1^{s}.**20**/40**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPOS	Posof	0.15	44	P	Pg	17 01 01.4	-0.5
EPOS				S	Sg	17 01 03.7	-0.6
ABS	Abastumani	0.40	25	P	Pg	17 01 06.2	-0.1
ABS				S	Sb	17 01 13.0	-0.7
DAGI	Agillar	0.60	238	P	Pb	17 01 10.2	-0.7
DAGI				S	Sb	17 01 18.8	-0.7
DAGI				*i* AML	AML	17 01 20.0	
	comp=E,41nm,0.4s						
DBOC	Borcka	0.70	266	P	Pb	17 01 11.6	-0.9
DBOC				*i* AML	AML	17 01 24.0	
	comp=E,36nm,0.3s						
BATM	Batumi	0.70	287	P	Pb	17 01 12.0	-0.7
BATM				S	Sb	17 01 22.6	+0.3
DBAD	Bademkaya	0.77	241	P	Pb	17 01 13.3	-0.5
DBAD				S	Sb	17 01 24.2	-0.2
DBAD				*i* AML	AML	17 01 25.0	
	comp=E,52nm,0.3s						
DBAD				*i* AML	AML	17 01 27.0	
	comp=N,69nm,0.4s						
BKRG	Bakuriani	0.79	62	P	Pg	17 01 13.6	0.0
BKRG				S	Sb	17 01 24.7	-0.2
DDEM	Demirkent	0.81	232	P	Pg	17 01 13.4	-0.5
DDEM				S	Sb	17 01 25.7	+0.3
DDEM				*i* AML	AML	17 01 29.0	
	comp=E,98nm,0.3s						
DDEM				*i* AML	AML	17 01 32.0	
	comp=N,96nm,0.4s						
BRNG	Burnasheti	0.96	76	P	Pg	17 01 16.2	-0.6
BRNG				S	Sb	17 01 30.1	+0.2
TKB	Tkibuli	1.00	17	P	Pb	17 01 17.1	-0.6
TKB				S	Sn	17 01 31.7	-0.9
DMNI	Dmanisi	1.21	93	P	Pn	17 01 20.9	-0.4
DMNI				S	Sb	17 01 37.0	+0.1
ONI	Oni	1.36	28	P	Pg	17 01 23.6	-0.7
ONI				S	Sg	17 01 43.2	+1.3
ONI	Oni	1.36	28	*e*Pg	Pg	17 01 25.2	+0.8
ONI				*e*Sg	Sg	17 01 44.3	+2.4
CHVG	Ch'k'valeri	1.37	344	P	Pg	17 01 24.0	-0.7
CHVG				S	Sg	17 01 46.6	+4.0
HOMI	Horasan	1.45	201	P	Pg	17 01 27.2	+1.1
HOMI				*i* AML	AML	17 02 00.0	
	comp=N,26nm,0.9s						
EATA	Eleskirt	1.53	183	P	Pg	17 01 27.9	+0.1
EATA				*i* AML	AML	17 01 53.0	
	comp=N,15nm,0.5s						
EATA				*i* AML	AML	17 01 58.0	
	comp=E,12nm,1.5s						
KOTA	Agri, Merkez-K	1.66	163	P	Pg	17 01 29.8	-0.3
DIGR	Digorskoe uzhe	1.67	26	*e*Pg	Pg	17 01 30.5	0.0
DIGR				*e*Sg	Sg	17 01 53.8	+1.6
ZEI	Tsey	1.70	35	*e*Pg	Pg	17 01 31.0	+0.1
ZEI				*e*Sg	Sg	17 01 55.9	+2.9
NEY	Neytrino	1.85	3	*e*Pg	Pg	17 01 32.7	-1.2
NEY				*e*Sg	Sg	17 01 58.5	+0.6
LACR	Lac	1.91	41	*e*Pg	Pg	17 01 34.4	-0.6
LACR				*e*Sg	Sg	17 02 01.6	+1.7
KORR	Kora	2.02	33	*e*Pg	Pg	17 01 36.8	-0.2
KORR				*e*Sg	Sg	17 02 05.0	+1.9

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*IDC **02** 17:02:07.4±1.4, 7°.02N×94°.05E, h0^{km}, mb3.5/7, mbtmp3.4/8, ML3.5/1, MS3.1/1, Error ellipse: s-maj=51.6km s-min=21.4km az=57.0*

ISC 02 17:02:10.8±1.2**, 7°.1N**±0°.2×**94°.1E**±0°.2**, h21**^{km}**, n8,** σ1^{s}.**21**/8**, mb3.6**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.23	22	Pn	Pn	17 05 03.4	-0.5
	0.1nm,0.3s,baz=211,slow=13,SNR=2.6 0.2nm,0.5s						
MKAR	Makanchi Array	40.85	348	P	P	17 09 51.6	+0.5
	0.8nm,0.7s,baz=179,slow=9.0,SNR=2.6 0.8nm,0.7s						
SONM	Songino Array	41.92	12	P	P	17 10 00.3	+0.3
	0.1nm,0.4s,baz=189,slow=8.2,SNR=1.7						
SONM				LR	LR	17 28 08.3	
	comp=Z,26nm,19.9s,baz=20,slow=37 0.1nm,0.4s						
ZALV	Zalesovo Beam	47.33	353	P	P	17 10 44.7	+1.8
	0.6nm,0.6s,baz=177,slow=10.0,SNR=3.9 0.6nm,0.6s						
WRA	Warramunga Arr	47.81	125	P	P	17 10 47.3	0.0
	0.2nm,0.6s,baz=304,slow=8.9,SNR=4.5 0.2nm,0.6s						
ASAR	Alice Springs	49.42	129	P	P	17 10 59.6	+0.1
	0.2nm,0.5s,baz=302,slow=8.0,SNR=8.9 0.2nm,0.5s						
BRTR	Keskin Array B	62.94	311	P	P	17 12 36.5	+0.4
	0.6nm,0.8s,baz=96,slow=7.3,SNR=2.2 0.6nm,0.8s						
FINES	FINESS Array B	73.40	332	P	P	17 13 39.3	-1.8
	0.4nm,0.6s,baz=119,slow=11,SNR=1.4 0.4nm,0.6s						

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*IDC **02** 17:06:08.4±1.8, 20°.64S×177°.76W, h528^{km}±17^{km}, mb3.1/6, mbtmp4.1/10, Error ellipse: s-maj=33.2km s-min=16.9km az=141.0*

*NEIC **02** 17:06:08.7±1.7, 20°.4S±0°.1×177°.8W±0°.2, h525^{km}±9^{km}, mb4.1/14, Error ellipse: s-maj=24.6km s-min=16.8km az=126.0*

ISC 02 17:06:09.2±0.7**, 20°.4S**±0°.1×**177°.8W**±0°.1**, h534**^{km}**, n31,** σ1^{s}.**33**/32**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.72	304	P	P	17 07 37.1	+1.2
	18nm,0.4s,baz=120,slow=4.0,SNR=14						
MSVF	Nonsavu	4.72	304	P	P	17 07 37.3	+1.5
AFI	Afiamalu	8.66	43	P	P	17 08 13.4	0.0
	56nm,1.0s,baz=240,slow=16,SNR=2.7						
AFI				S	S	17 09 52.2	-2.9
	30nm,0.9s,baz=14,slow=19,SNR=2.2						
DZM	Mont Dzumac	14.76	261	P	P	17 09 14.9	-1.7
	6.8nm,0.9s,baz=44,slow=14,SNR=2.5						
URZ	Urewera	18.33	193	P	P	17 09 48.1	-2.5
	2.5nm,0.4s,baz=118,slow=22,SNR=7.3						
CMWZ	Cape Campbell	22.33	196	P	P	17 10 25.5	-1.3
STKA	Stephens Creek	37.98	244	P	P	17 12 41.1	-0.5
	2.3nm,0.7s,baz=72,slow=9.1,SNR=5.1 2.3nm,0.7s						
STKA	Stephens Creek	37.98	244	IAmb	IAmb	17 13 08.4	
	comp=Z,3.9nm,1.4s						
AS31	Alice Springs	44.70	257	P	P	17 13 34.2	-0.7
ASAR	Alice Springs	44.70	257	P	P	17 13 34.5	-0.5
	comp=Z,3.8nm,0.7s,baz=89,slow=8.0,SNR=77						
ASAR				PcP	PcP	17 15 06.5	+0.5
	comp=Z,1.0nm,0.5s,baz=105,slow=3.8,SNR=13 comp=Z,3.8nm,0.7s						
ASAR	Alice Springs	44.70	257	P	P	17 13 34.1	-0.9
WB0	Warramunga Arr	44.75	262	P	P	17 13 34.2	-1.2
WB0				IAmb	IAmb	17 13 38.2	
	comp=Z,7.5nm,1.4s						
WB2	Warramunga Arr	44.77	262	P	P	17 13 34.6	-0.9
WB2				IAmb	IAmb	17 13 55.9	
	comp=Z,7.7nm,1.3s						
WRAB	Tennant Creek	44.77	262	P	P	17 13 34.4	-1.1
WRAB				IAmb	IAmb	17 13 34.7	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	44.78	262	P	P	17 13 34.5	-1.1
	comp=Z,0.9nm,0.5s,baz=97,slow=7.8,SNR=19						
WRA				PcP	PcP	17 15 07.2	+0.9
	comp=Z,0.6nm,0.6s,baz=97,slow=3.2,SNR=3.1 comp=Z,0.9nm,0.5s						
MTN	Manton Dam	49.33	270	P	P	17 14 08.3	-1.6
MTN				IAmb	IAmb	17 14 10.4	
	comp=Z,7.9nm,0.8s						
FORT	Forrest	49.48	247	P	P	17 14 10.7	-0.1
KNRA	Kununurra	50.83	266	P	P	17 14 20.1	-0.7
KNRA				IAmb	IAmb	17 14 34.0	
	comp=Z,15nm,1.2s						
FITZ	Fitzroy Crossi	53.20	262	P	P	17 14 37.8	-0.1
MBWA	Marble Bar	58.03	257	P	P	17 15 10.8	-0.7
MBWA				IAmb	IAmb	17 15 34.6	
	comp=Z,13nm,1.2s						
QSPA	South Pole Qui	69.67	180	P	P	17 16 27.5	+2.6
QSPA				IAmb	IAmb	17 16 28.2	
	comp=Z,3.8nm,0.7s						
G08A	Pilot Rock	84.44	37	P	P	17 17 44.1	-1.4
ILAR	Eielson Array	88.18	13	P	P	17 18 03.7	+0.9
	comp=Z,0.3nm,0.4s,baz=220,slow=5.2,SNR=3.6 comp=Z,0.3nm,0.4s						
PDAR	Pinedale Array	88.78	43	P	P	17 18 07.3	+1.0
	comp=Z,0.3nm,0.5s,baz=215,slow=7.2,SNR=4.4 comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	90.24	290	P	P	17 18 14.5	+1.1
	comp=Z,0.4nm,0.6s,baz=130,slow=2.4,SNR=5.5 comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	128.85	350	PKP	PKPdf	17 24 15.8	+0.4
	comp=Z,0.9nm,0.8s,baz=2.9,slow=2.4,SNR=4.8						
AKASG	Malin Array Be	143.01	331	PKP	PKPab	17 24 39.7	+0.3
	comp=Z,2.1nm,0.5s,baz=47,slow=4.5,SNR=13						
BRTR	Keskin Array B	146.89	313	PKPbc	PKPbc	17 24 52.6	+0.6
	comp=Z,1.1nm,0.6s,baz=124,slow=3.2,SNR=5.9						
BUR08	Bucovina Ar. S	147.04	331		PKPbc	17 24 53.5	+1.3
CLL	Collm	148.00	347	*i* PKPbc	PKPbc	17 24 55.3	+1.0
	comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	150.15	345	PKPbc	PKPbc	17 24 58.4	-1.4
	comp=Z,0.7nm,0.7s,baz=76,slow=5.6,SNR=6.0						

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*IDC **02** 17:19:19.6±1.4, 36°.36N×139°.89E, h122^{km}±13^{km}, mb2.9/4, mbtmp3.4/7, Error ellipse: s-maj=26.2km s-min=10.4km az=71.0*

*JMA **02** 17:19:21.4±0.1, 36°.3N±0°.4×139°.8E±0°.5, h119^{km}, MV3.1/35, SOUTHERN TOCHIGI PREF*

ISC 02 17:19:19.8±0.8**, 36°.30N**±0°.05×**139°.78E**±0°.06**, h131**^{km}±7^{km}**, n18,** σ1^{s}.**04**/28**, mb3.3**/4**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.29	295	*i* P	Pn	17 19 38.1	+0.1
JYT	Yasato	0.34	102	*i* P	Pn	17 19 38.8	+0.6
JYT				S	Sn	17 19 51.7	-0.2
JKT	Katashina	0.63	317	*i* P	Pn	17 19 40.2	+0.4
JKT				S	Sn	17 19 55.3	+0.2
JRY	Ryogami san	0.77	249	*i* P	Pn	17 19 41.3	+0.6
JRY				S	Sn	17 19 57.4	+0.7
JFY	Yanaizu	1.10	357	P	Pn	17 19 44.4	+0.6
JFY				*e*S	Sn	17 20 01.9	-0.2
JOD2	Odawara 2	1.18	209	*i* P	Pn	17 19 44.8	+0.3
JOD2				S	Sn	17 20 02.5	-0.8
JYN	Shimob	1.29	232	*i* P	Pn	17 19 46.4	+0.7
JYN				S	Sn	17 20 05.7	+0.4
JFT	Otama	1.29	20	*i* P	Pn	17 19 46.6	+0.9
JFT				S	Sn	17 20 06.0	+0.6
MJAR	Matsushiro Arr	1.29	281	P	Pn	17 19 44.8	-0.9
	19nm,0.4s,baz=96,slow=12,SNR=68						
MJAR				S	Sn	17 20 04.8	-0.6
	21nm,0.4s,baz=52,slow=9.3,SNR=4.4						
MAT	Matsushiro	1.29	281	P	Pn	17 19 46.1	+0.4
MAT				S	Sn	17 20 04.9	-0.5
JHJ	Hachijo jima 2	3.17	180	P	Pn	17 20 09.7	+0.9
	27nm,0.3s,baz=72,slow=19,SNR=27						
JHJ				S	Sn	17 20 47.8	+1.3
	45nm,0.3s,baz=53,slow=20,SNR=7.2						
ASAJ	Asahikawa	8.10	15	P	Pn	17 21 13.4	-1.0
	2.5nm,0.8s,baz=240,slow=20,SNR=1.5						
JCJ	Chichijima	9.40	167	P	Pn	17 21 28.8	-3.3
	44nm,0.8s,baz=354,slow=20,SNR=6.5						
JCJ				S	Sn	17 23 06.4	-10
	89nm,0.9s,baz=248,slow=15,SNR=2.5						
USRK	Ussuriysk Ar.	9.88	325	P	Pn	17 21 39.1	+0.7
	1.7nm,0.7s,baz=138,slow=15,SNR=3.8						
SONM	Songino Array	27.12	306	P	P	17 24 51.6	+1.0
	0.2nm,0.4s,baz=108,slow=4.7,SNR=1.4 0.2nm,0.4s						
ILAR	Eielson Array	50.81	32	P	P	17 28 06.0	-0.4
	0.4nm,1.0s,baz=274,slow=7.2,SNR=2.3 0.4nm,1.0s						
WRA	Warramunga Arr	56.17	186	P	P	17 28 46.8	+0.8
	0.1nm,0.2s,baz=0.4,slow=7.5,SNR=5.1 0.1nm,0.2s						
ASAR	Alice Springs	59.90	186	P	P	17 29 13.6	+1.7
	0.3nm,0.8s,baz=357,slow=5.7,SNR=2.1 0.3nm,0.8s						

JMA 02 17:32:49.4±0.3**, 26°N**±2°×**12°4E**±°**, h178**^{km}**, MV3.5**/21**, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	1.35	166	*i* P	Pn	17 33 19.9	+0.2
JISG				S	Sn	17 33 43.4	+0.1
JTJ	Tarama	1.43	151	P	Pn	17 33 21.0	+0.5
JTJ				S	Sn	17 33 44.8	+0.2
JIKM	Ikemajima	1.52	129	*e*P	Pn	17 33 21.9	+0.5
JIKM				S	Sn	17 33 46.8	+0.7
JIRB	Irabujima	1.54	134	P	Pn	17 33 21.9	+0.4
JIRB				*e*S	Sn	17 33 45.9	-0.5
JIJ	Ishigaki jima	1.54	173	P	Pn	17 33 21.3	-0.3
JIJ				S	Sn	17 33 44.9	-1.6
IRIF	Iriomote-Funau	1.57	187	P	Pn	17 33 21.7	-0.1
IRIF				S	Sn	17 33 47.2	+0.1
JKRS	Kuro-shima	1.66	178	P	Pn	17 33 22.6	-0.2
JKRS				S	Sn	17 33 47.8	-0.8
YOJ	Yonaguni jima	1.67	211	P	Pn	17 33 23.2	+0.4
YOJ				*e*S	Sn	17 33 49.4	+0.7
JMJ2	Miyako jima3	1.70	132	P	Pn	17 33 23.9	+0.8
JMJ2				S	Sn	17 33 49.6	+0.4
JYNG	Yonagunijimaku	1.71	213	*e*P	Pn	17 33 23.7	+0.5
JYNG				S	Sn	17 33 49.9	+0.5
JOGS	Gusukube	1.74	130	P	Pn	17 33 24.5	+0.9
JOGS				S	Sn	17 33 50.3	+0.4
HATJ	Hateruma jima	1.84	184	P	Pn	17 33 24.6	0.0
HATJ				*e*S	Sn	17 33 51.2	-0.7
JKE	Kume jima 2	2.58	80	P	Pn	17 33 33.3	+0.4
JKE				*e*S	Sn	17 34 06.6	-0.1
JAGN	Aguni-jima	3.04	76	P	Pn	17 33 38.0	-0.3
JAGN				S	Sn	17 34 14.8	-1.7
JJT3	Tamagusuku3	3.46	85	P	Pn	17 33 43.3	-0.3
JJT3				*e*S	Sn	17 34 24.0	-1.9
JNTH	Nagotoyohara	3.71	80	P	Pn	17 33 45.7	-1.0
JNTH				*e*S	Sn	17 34 27.5	-4.0
JIH	Iheya	3.77	72	*e*P	Pn	17 33 46.7	-0.9
JIH				*e*S	Sn	17 34 29.7	-3.2
JYRO	Yoronjima	4.19	73	P	Pn	17 33 51.2	-1.6
JYRO				*e*S	Sn	17 34 37.4	-5.0

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*IDC **02** 17:38:46.3±1.5, 21°.88S×68°.91E, h0^{km}, mb3.7/6, mbtmp3.7/6, MS3.7/27, Error ellipse: s-maj=49.4km s-min=27.2km az=31.0*

ISC 02 17:38:49.5±1.5**, 21°.9S**±0°.3×**68°.9E**±0°.2**, h19**^{km}**, n34,** σ0^{s}.**69**/7**, mb3.9**/7**, MS3.8**/27**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	14.54	14	T	T	17 56 56.8	
	baz=194,slow=76,SNR=42						
H08S2	Diego Garcia H	14.54	14	T	T	17 56 56.2	
	baz=194,slow=76,SNR=87						
H08S3	Diego Garcia H	14.56	14	T	T	17 56 57.5	
	baz=194,slow=76,SNR=99						
OPO	Ambohidratompo	20.66	275	LR	LR	17 49 46.1	
	comp=Z,106nm,18.8s,baz=350,slow=32						
PALK	Pallekele	31.17	23	LR	LR	17 54 25.1	
	comp=Z,129nm,20.4s,baz=310,slow=30						
KMBO	Kilima Mbogo	37.10	299	LR	LR	17 58 16.2	
	comp=Z,96nm,18.0s,baz=96,slow=32						
PSI	Prapat	38.22	54	LR	LR	17 57 46.5	
	comp=Z,118nm,21.6s,baz=212,slow=30						
LSZ	Lusaka	39.09	272	LR	LR	18 00 41.5	
	comp=Z,152nm,18.6s,baz=132,slow=34						
LBTB	Lobatse	39.76	257	LR	LR	17 59 50.9	
	comp=Z,102nm,20.2s,baz=98,slow=32						
BOSA	Boshof	39.91	251	LR	LR	17 59 55.5	
	comp=Z,140nm,18.1s,baz=154,slow=32						
LEM	Lembang	40.20	74	LR	LR	17 58 37.1	
	comp=Z,176nm,21.2s,baz=173,slow=30						
ATD	Arta Tunnel	41.91	320	LR	LR	18 00 32.5	
	comp=Z,34nm,21.7s,baz=162,slow=31						
MBAR	Mbarara	42.79	294	LR	LR	18 02 10.1	
	comp=Z,55nm,18.0s,baz=110,slow=33						
SUR	Sutherland	43.78	246	LR	LR	18 01 34.3	
	comp=Z,115nm,21.3s,baz=106,slow=31						
TSUM	Tsumeb	47.98	263	LR	LR	18 05 26.3	
	comp=Z,163nm,18.5s,baz=112,slow=33						
CMAR	Chiang Mai Arr	49.68	39	P	P	17 47 41.0	+0.5
	0.6nm,0.8s,baz=234,slow=8.4,SNR=5.8						
CMAR				LR	LR	18 05 58.3	
	comp=Z,64nm,19.0s,baz=215,slow=33 0.6nm,0.8s						
BATI	Baumata	53.62	87	LR	LR	18 09 21.7	
	comp=Z,91nm,19.1s,baz=241,slow=34						
ASAR	Alice Springs	59.46	105	P	P	17 48 51.5	-0.2
	0.8nm,0.7s,baz=259,slow=6.2,SNR=5.6						
ASAR				LR	LR	18 11 29.3	
	comp=Z,122nm,19.3s,baz=265,slow=33 0.8nm,0.7s						
WRA	Warramunga Arr	60.71	101	P	P	17 48 59.9	-0.3
	1.3nm,0.9s,baz=256,slow=7.0,SNR=5.1						
WRA				LR	LR	18 14 29.3	
	comp=Z,56nm,18.1s,baz=312,slow=35 1.3nm,0.9s						
AAK	Ala-Archa	64.38	5	LR	LR	18 15 00.6	
	comp=Z,65nm,19.9s,baz=186,slow=34						
STKA	Stephens Creek	64.53	116	LR	LR	18 12 40.3	
	comp=Z,105nm,21.6s,baz=209,slow=32						
GNI	Garni	65.69	340	LR	LR	18 15 55.1	
	comp=Z,19nm,19.0s,baz=132,slow=34						
MKAR	Makanchi Array	69.39	10	P	P	17 49 55.9	-0.1
	0.7nm,0.8s,baz=190,slow=6.0,SNR=7.1 0.7nm,0.8s						
BRTR	Keskin Array B	69.57	332	P	P	17 49 56.4	-1.0
	0.7nm,0.8s,baz=126,slow=6.5,SNR=4.7 0.7nm,0.8s						
CTA	Charters Tower	71.45	105	LR	LR	18 18 51.8	
	comp=Z,66nm,20.4s,baz=256,slow=34						
TORD	Torodi Ar. Bea	74.55	291	P	P	17 50 28.3	+0.7
	8.5nm,0.5s,baz=95,slow=6.0,SNR=1.5						
PMG	Port Moresby	75.69	95	LR	LR	18 23 08.7	
	comp=Z,40nm,19.9s,baz=241,slow=35						
ZALV	Zalesovo Beam	76.73	10	LR	LR	18 22 15.9	
	comp=Z,19nm,18.6s,baz=196,slow=34						
SONM	Songino Array	77.10	25	P	P	17 50 42.0	+0.3
	0.2nm,0.4s,baz=212,slow=5.1,SNR=2.2 0.2nm,0.4s						
DBIC	Dimbokro	77.59	282	LR	LR	18 22 21.6	
	comp=Z,19nm,19.1s,baz=146,slow=34						
MJAR	Matsushiro Arr	87.41	49	LR	LR	18 28 28.9	
	comp=Z,46nm,21.3s,baz=224,slow=34						
DZM	Mont Dzumac	88.53	113	LR	LR	18 27 59.6	
	comp=Z,63nm,21.2s,baz=160,slow=33						
MDT	Midelt	88.74	306	LR	LR	18 31 53.9	
	comp=Z,67nm,18.2s,baz=143,slow=36						
KLR	Kul'dur	90.08	36	LR	LR	18 34 05.4	
	comp=Z,38nm,18.1s,baz=205,slow=37						

IDC ***02*** *17:39:03.4±0.9, 15°.79S×166°.91E, h0^{km}, mb4.1/11, mbtmp4.1/13, ML3.9/2, MS3.7/3, Error ellipse: s-maj=28.3km s-min=20.5km az=147.0*

NOU ***02*** *17:39:05.6, 15°.94S×166°.89E, h9^{km}, MLv4.8/16, Vanuatu Islands*

NEIC ***02*** *17:39:07.0±2.5, 15°.85S±0°.06×166°.98E±0°.09, h28^{km}±6^{km}, mb4.6/11, Error ellipse: s-maj=12.9km s-min=7.2km az=118.0*

ISC 02 17:39:06.9±0.6**, 16°.00S**±0°.06×**166°.99E**±0°.08**, h27**^{km}**, n47, σ1^s.39**/43**, mb4.4**/15**, MS3.7**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.58	21		Pb	17 39 16.8	-1.8
SANVU				Sg	Sb	17 39 23.9	-2.7
SANVU	Saraoutou	0.58	21	P	Pb	17 39 17.4	-1.2
RTV	Rentapao	2.26	143	P	Pn	17 39 44.7	+2.2
LIFNC	LIFOU	4.76	177	Pn	Pn	17 40 17.5	+0.6
KOUNC	Koumac, New Ca	5.21	209		Pn	17 40 24.1	+1.1
KOUNC	Koumac, New Ca	5.21	209	P	Pn	17 40 23.9	+0.8
MARNC	Mare, Loyalty	5.54	170	Pn	Pn	17 40 26.9	-0.8
MARNC					Sn	17 41 27.4	-3.1
MARNC	Mare, Loyalty	5.54	170	P	Pn	17 40 29.3	+1.6
YATNC	Mamie plateau,	6.03	181	P	Pn	17 40 35.1	+0.7
DZM	Mont Dzumac	6.07	185	Pn	Pn	17 40 35.3	+0.3
	2.3nm,0.3s,baz=130,slow=22,SNR=103						
DZM				Sn	Sn	17 41 40.8	-2.8
	3.7nm,0.3s,baz=328,slow=22,SNR=6.8						
	6.5nm,0.4s						
DZM	Mont Dzumac	6.07	185		Pn	17 40 35.6	+0.6
DZM	Mont Dzumac	6.07	185	P	Pn	17 40 35.9	+0.9
NOUC	Port Laguerre	6.11	186	P	Pn	17 40 36.5	+1.1
ONTNC	Ouen Toro	6.30	185	Pn	Pn	17 40 39.5	+1.4
ONTNC				Sn	Sn	17 41 46.8	-2.3
ONTNC	Ouen Toro	6.30	185	P	Pn	17 40 39.4	+1.4
OUENC	Ouen Island, N	6.39	181	Pn	Pn	17 40 39.9	+0.6
OUENC	Ouen Island, N	6.39	181	P	Pn	17 40 41.1	+1.8
PINNC	Pines Island,	6.60	176	Pn	Pn	17 40 43.5	+1.3
PINNC	Pines Island,	6.60	176	P	Pn	17 40 43.8	+1.6
HNR	Honiara	9.47	313	Pn	Pn	17 41 18.6	-3.0
	1.4nm,0.3s,baz=132,slow=12,SNR=1.6						
	13nm,0.5s						
CTA	Charters Tower	20.13	255	P	P	17 43 39.4	+0.4
	4.0nm,1.1s,baz=74,slow=11,SNR=3.2						
	4.0nm,1.1s						
CTAO	Charters Tower	20.13	255		P	17 43 40.9	+1.9
CTAO				IAmb	IAmb	17 43 48.4	
	comp=Z,12nm,1.1s						
AFI	Afiamalu	20.62	87	P	P	17 43 45.3	+0.9
	comp=Z,39nm,0.9s,baz=225,slow=10.0,SNR=2.5						
	comp=Z,39nm,0.9s						
AFI	Afiamalu	20.62	87	P	P	17 43 44.8	+0.3
WRA	Warramunga Arr	31.27	258	P	P	17 45 25.1	+0.3
	comp=Z,1.0nm,0.8s,baz=86,slow=8.3,SNR=7.4						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	31.27	258	IAmb	IAmb	17 45 33.7	
	comp=Z,0.4nm,1.5s						
AS31	Alice Springs	31.98	251	P	P	17 45 31.9	+0.8
AS31				IAmb	IAmb	17 45 38.7	
	comp=Z,4.0nm,0.8s						
ASAR	Alice Springs	31.98	251	P	P	17 45 32.3	+1.2
	comp=Z,6.9nm,0.7s,baz=75,slow=9.1,SNR=74						
	comp=Z,6.9nm,0.7s						
MTN	Manton Dam	34.84	270	P	P	17 45 55.2	-0.8
MTN				IAmb	IAmb	17 46 00.8	
	comp=Z,9.6nm,1.1s						
JCJ	Chichijima	49.14	330	LR	LR	18 05 29.6	
	comp=Z,89nm,21.2s,baz=106,slow=32						
MJAR	Matsushiro Arr	58.90	333	P	P	17 49 01.3	-2.4
	comp=Z,0.6nm,0.7s,baz=140,slow=4.3,SNR=4.4						
	comp=Z,0.6nm,0.7s						
PETK	Petropavlovsk-	69.28	354	P	P	17 50 11.9	+0.5
	comp=Z,2.1nm,0.8s,baz=140,slow=2.1,SNR=4.9						
	comp=Z,2.1nm,0.8s						
CMAR	Chiang Mai Arr	75.22	294	P	P	17 50 47.0	-0.7
	comp=Z,0.2nm,0.4s,baz=49,slow=9.7,SNR=1.8						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	83.35	324	P	P	17 51 31.2	-0.4
	comp=Z,0.2nm,0.5s,baz=113,slow=3.3,SNR=2.6						
	comp=Z,0.2nm,0.5s						
BILL	Bilibino	83.80	360	P	P	17 51 33.4	+0.1
BILL				IAmb	IAmb	17 51 39.2	
	comp=Z,8.1nm,1.3s						
CAST	Castle Rocks	85.28	17	P	P	17 51 41.1	+0.2
CAST				IAmb	IAmb	17 51 42.2	
	comp=Z,3.7nm,0.8s						
BELA	Belgrano 2	85.49	176	P	P	17 51 42.5	+0.6
BELA				IAmb	IAmb	17 51 44.0	
	comp=Z,4.0nm,1.0s						
I21K	Tanana	86.68	16	P	P	17 51 49.2	+1.5
IL31		87.81	18	P	P	17 51 52.5	-0.7
IL31				IAmb	IAmb	17 51 53.4	
	comp=Z,2.2nm,0.6s						
ILAR	Eielson Array	87.81	18	P	P	17 51 52.8	-0.4
	comp=Z,1.5nm,0.5s,baz=238,slow=5.0,SNR=34						
	comp=Z,1.5nm,0.5s						
ILAR	Eielson Array	87.81	18	P	P	17 51 52.4	-0.9
PFO	Pinyon Flats O	87.95	54	LR	LR	18 22 49.3	
	comp=Z,69nm,21.6s,baz=212,slow=30						
PDAR	Pinedale Array	96.00	47	LR	LR	18 28 19.0	
	comp=Z,25nm,20.4s,baz=298,slow=31						
MKAR	Makanchi Array	97.93	316	P	P	17 52 38.7	-1.8
	comp=Z,0.3nm,0.8s,baz=116,slow=3.4,SNR=2.6						
	comp=Z,0.3nm,0.8s						
YKA	Yellowknife Ar	98.79	27	P	P	17 52 43.9	0.0
	comp=Z,0.6nm,0.7s,baz=256,slow=4.6,SNR=11						
	comp=Z,0.6nm,0.7s						
ARCES	ARCESS Array B	121.40	345	PKP	PKPdf	17 57 57.9	+0.7
	comp=Z,0.6nm,0.4s,baz=63,slow=1.6,SNR=13						
FINES	FINESS Array B	126.79	338	PKP	PKPdf	17 58 10.0	+2.4
	comp=Z,0.6nm,0.9s,baz=180,slow=1.3,SNR=0.9						

JMA ***02*** *17:39:42.6±0.1, 24°.8N±0°.6×122°.3E±0°.3, h0^{km}, MV2.5/7, TAIWAN REGION*

TAP ***02*** *17:39:42.2, 24°.86N×122°.28E, h11^{km}, ML2.6, C*

ISC 02 17:39:42.5±1.0**, 24°.80N**±0°.03×**122°.30E**±0°.02**, h11**^{km}±10^{km}**, n47, σ0^s.48**/69**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.34	278	*e*P	Pg	17 39 49.2	0.0
	baz=267						
TWB1	Santiao Chiao	0.35	306	*i* P	Pg	17 39 48.9	-0.6
	baz=300						
TWB1				*e*S	Sg	17 39 53.0	-1.1
	baz=300						
NTC	Toucheng	0.43	277	*e*P	Pg	17 39 51.0	0.0
	baz=270						
TWC	Suao	0.45	245	P	Pg	17 39 51.2	-0.2
	baz=238						
TWC				*e*S	Sb	17 39 59.3	+0.1
	baz=238						
TIPB	Shuangxi	0.46	292	P	Pg	17 39 51.4	-0.2
	baz=285						
TIPB				*e*S	Sg	17 39 58.2	+0.4
	baz=285						
SXI1	Grass Mountain	0.48	307	*i* P	Pg	17 39 51.7	-0.3
	baz=296						
SXI1				*e*S	Sg	17 39 58.4	0.0
	baz=296						
NWF	Wu-fen Shan	0.54	300	*e*P	Pg	17 39 53.1	0.0
	baz=294						
NWF				*e*S	Sg	17 40 00.7	+0.4
	baz=294						
NDS	Dongshan	0.56	253	P	Pg	17 39 53.1	-0.3
	baz=239						
TWE	Neicheng	0.58	262	P	Pg	17 39 53.4	-0.4
	baz=249						
TWE				*e*S	Sb	17 40 02.2	-0.8
	baz=249						
EWUT	Wuta	0.59	233	P	Pb	17 39 54.2	-0.7
	baz=229						
ENA	Nanau	0.63	234	P	Pg	17 39 54.6	-0.1
	baz=229						
ENA				*e*S	Sb	17 40 04.9	+0.6
	baz=229						
FUSB	Fushanzhiwuyua	0.65	267	P	Pg	17 39 55.2	+0.1
	baz=253						
TWA	Mucha	0.67	286	*e*P	Pb	17 39 56.1	-0.2
	baz=281						
TWA				*e*S	Sg	17 40 05.2	+0.8
	baz=281						
JYNG	Yonagunijimaku	0.68	120	P	Pb	17 39 56.2	-0.3
JYNG				*e*S	Sb	17 40 06.1	+0.2
ENTT	Nioudou	0.69	257	*e*P	Pb	17 39 56.1	-0.4
	baz=252						
NHDH	Xindian Distri	0.72	283	P	Pb	17 39 57.1	0.0
	baz=278						
NHDH				*e*S	Sb	17 40 07.0	-0.1
	baz=278						
NWLT	Wulai	0.72	268	*e*P	Pb	17 39 57.1	0.0
	baz=264						
YOJ	Yonaguni jima	0.73	117	*e*P	Pb	17 39 57.2	0.0
	baz=120						
YOJ				*e*S	Sb	17 40 07.3	0.0
	baz=120						
YOJ	Yonaguni jima	0.73	117	P	Pb	17 39 57.0	-0.3
YOJ				*e*S	Sb	17 40 07.0	-0.3
YM01	YM01	0.75	298	P	Pg	17 39 57.0	+0.1
	baz=293						
YM01				*e*S	Sg	17 40 07.2	+0.4
	baz=293						
LATG	Datong	0.75	250	P	Pg	17 39 57.0	-0.1
	baz=246						
LATG				*e*S	Sb	17 40 08.3	+0.2
	baz=246						
TWY	Chenhua	0.79	307	*e*P	Pg	17 39 57.8	0.0
	baz=303						
TWY				*e*S	Sg	17 40 08.5	+0.4
	baz=303						
YHNB	Yeheng	0.85	261	P	Pg	17 39 58.8	-0.1
	baz=258						
YHNB				*e*S	Sb	17 40 12.0	+1.2
	baz=258						
NSK	Sanguang	0.86	262	P	Pb	17 39 59.4	-0.2
	baz=258						
NSK				*e*S	Sb	17 40 11.3	+0.1
	baz=258						
NACB	Ninganchiao	0.90	226	P	Pb	17 39 59.8	-0.3
	baz=224						
NACB				*e*S	Sb	17 40 11.8	-0.2
	baz=224						
NNSB	Datong	0.91	246	*e*P	Pb	17 40 00.1	-0.4
	baz=234						
NNSB				*e*S	Sn	17 40 13.6	-1.1
	baz=234						
NNS	Nan Shan	0.92	247	*e*P	Pg	17 40 00.0	-0.2
	baz=251						
ETLH	Xiulin Townshi	0.95	232	*e*P	Pb	17 40 00.6	-0.5
	baz=230						
ETLH				*e*S	Sb	17 40 14.0	+0.3
	baz=230						
TWD	Chiawan	0.96	222	*e*P	Pb	17 40 01.0	-0.2
	baz=221						
NFF	Wufeng Townshi	1.09	261	*e*P	Pg	17 40 03.2	-0.2
	baz=272						
WHF	Hehuan Shan	1.15	235	*e*P	Pn	17 40 04.6	-0.3
	baz=235						
LIOB	Emei	1.18	263	*e*P	Pn	17 40 06.2	+1.2
	baz=280						
NSTT	Nanjuang	1.19	262	*e*P	Pg	17 40 06.3	+0.8
	baz=280						
ESL	Shilin	1.26	219	*e*P	Pg	17 40 06.5	-0.2
	baz=221						
CHGB	Renai	1.26	235	*e*P	Pg	17 40 06.8	0.0
	baz=234						
OWD	Renai	1.33	231	P	Pg	17 40 07.7	-0.3
	baz=231						
WHP	Taichung City	1.34	247	*e*P	Pg	17 40 08.7	+0.5
	baz=246						
WUSB	Renai	1.34	233	P	Pg	17 40 08.5	+0.1
	baz=233						
WUSB				*e*S	Sg	17 40 26.6	+0.8
	baz=233						
IRIF	Iriomote-Funau	1.38	109	*e*P	Pg	17 40 09.2	+0.1
WCS	Beigang Elemen	1.47	240	*e*P	Pg	17 40 10.9	+0.2
	baz=228						
VWDT	VWDT	1.48	226	*e*P	Pg	17 40 10.7	-0.3
	baz=226						
VWDT				*e*S	Sg	17 40 31.4	+1.1
	baz=226						
SMLT	Sun Moon Lake	1.57	235	*e*P	Pg	17 40 12.1	-0.6
	baz=224						
SSLB	Suanglung	1.59	231	*e*P	Pg	17 40 12.4	-0.6
	baz=233						
JKRS	Kuro-shima	1.66	109	*e*P	Pg	17 40 14.4	+0.2
ALS	Alishan	1.87	227	*e*P	Pb	17 40 16.5	-0.5
	baz=230						
CHN5	Tsauling	1.90	231	*e*P	Pg	17 40 18.5	-0.6
	baz=234						
CHN4	Tsaushan	2.12	228	*e*P	Pb	17 40 20.9	-0.1
	baz=231						

IDC ***02*** *17:40:49.4±1.1, 15°.85S×166°.72E, h0^{km}, mb4.2/9, mbtmp4.2/12, ML4.0/3, MS3.7/12, Error ellipse: s-maj=34.6km s-min=20.5km az=125.0*

NEIC ***02*** *17:40:51.8±1.9, 15°.81S±0°.07×166°.77E±0°.08, h13^{km}±3^{km}, mb4.6/11, Error ellipse: s-maj=12.8km s-min=6.5km az=128.0*

ISC 02 17:40:52.9±0.6**, 15°.90S**±0°.07×**166°.8E**±0°.1**, h27**^{km}**, n43, σ1^s.52**/31**, mb4.6**/13**, MS3.7**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.56	38	Pg	Pb	17 41 02.6	-1.7
KOUNC	Koumac, New Ca	5.23	207	Pn	Pn	17 42 10.7	+1.3
MARNC	Mare, Loyalty	5.67	169	Pn	Pn	17 42 13.9	-1.5
DZM	Mont Dzumac	6.16	183	Pn	Pn	17 42 21.6	-0.6
	3.1nm,0.3s,baz=312,slow=10,SNR=7.9						
DZM				Sn	Sn	17 43 28.1	-3.6
	1.2nm,0.3s,baz=336,slow=23,SNR=2.2						
	19nm,0.5s						
ONTNC	Ouen Toro	6.39	183	Pn	Pn	17 42 25.0	-0.3
OUENC	Ouen Island, N	6.49	180	Pn	Pn	17 42 25.9	-0.8
PINNC	Pines Island,	6.71	175	Pn	Pn	17 42 30.3	+0.7
HNR	Honiara	9.30	313	Pn	Pn	17 43 01.7	-3.6
	6.3nm,0.3s,baz=193,slow=17,SNR=1.9						
	20nm,0.4s						
CTA	Charters Tower	20.02	255	P	P	17 45 24.2	+0.4
	0.1nm,0.3s,baz=84,slow=12,SNR=2.2						
CTA				LR	LR	17 51 49.5	
	comp=Z,170nm,19.7s,baz=78,slow=33						
	2.6nm,0.8s						
PMG	Port Moresby	20.25	286	LR	LR	17 51 28.4	
	comp=Z,168nm,18.2s,baz=80,slow=32						
AFI	Afiamalu	20.76	87	LR	LR	17 51 53.8	
	comp=Z,179nm,18.3s,baz=360,slow=32						
STKA	Stephens Creek	27.93	231	P	P	17 46 39.7	-1.4
	6.2nm,1.2s,baz=122,slow=9.5,SNR=2.2						
STKA				LR	LR	17 56 12.1	
	comp=Z,169nm,20.9s,baz=46,slow=33						
	6.2nm,1.2s						
RPZ	Rata Peaks	27.96	173	LR	LR	17 57 23.6	
	comp=Z,186nm,18.7s,baz=320,slow=36						
WRAB	Tennant Creek	31.15	258	P	P	17 47 08.9	-0.8
WRA	Warramunga Arr	31.16	258	P	P	17 47 08.6	-1.2
	0.7nm,0.7s,baz=94,slow=15,SNR=3.1						
	0.7nm,0.7s						
AS31	Alice Springs	31.89	251	P	P	17 47 18.2	+2.0
ASAR	Alice Springs	31.89	251	P	P	17 47 16.4	+0.1
	5.1nm,0.7s,baz=74,slow=9.1,SNR=14						
	5.1nm,0.7s						
ASAR	Alice Springs	31.89	251	P	P	17 47 18.1	+1.9
GUMO	Guam	36.47	322	LR	LR	18 03 39.6	
	comp=Z,150nm,18.4s,baz=120,slow=38						
FITZ	Fitzroy Crossi	39.41	261	LR	LR	18 04 05.6	
	comp=Z,170nm,18.7s,baz=84,slow=36						
MJAR	Matsushiro Arr	58.75	333	P	P	17 50 47.9	-0.6
	0.5nm,0.4s,baz=172,slow=7.7,SNR=4.7						
	0.5nm,0.4s						
ASAJ	Asahikawa	63.70	341	LR	LR	18 17 58.9	
	comp=Z,28nm,18.4s,baz=164,slow=35						
PEA0B	Petropavlovsk-	69.17	354	P	P	17 51 56.9	+0.2
PETK	Petropavlovsk-	69.17	354	P	P	17 51 57.1	+0.3
	3.1nm,0.8s,baz=184,slow=13,SNR=6.0						
	3.1nm,0.8s						
QSPA	South Pole Qui	74.14	180	P	P	17 52 28.9	+2.1
QSPA				IAmb	IAmb	17 52 36.7	
	comp=Z,6.2nm,1.1s						
SEY	Seymchan	79.38	353	LR	LR	18 22 48.8	
	comp=Z,38nm,19.6s,baz=326,slow=32						
KDAK	Kodiak Island	80.69	21	LR	LR	18 25 54.0	
	comp=Z,60nm,18.1s,baz=130,slow=34						
SONM	Songino Array	83.19	324	P	P	17 53 17.6	+0.9
	comp=Z,0.3nm,0.5s,baz=144,slow=5.3,SNR=3.8						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	83.19	324	IAmb	IAmb	17 53 30.3	
	comp=Z,4.5nm,1.4s						
BILL	Bilibino	83.70	360	P	P	17 53 20.2	+1.4
BILL				IAmb	IAmb	17 53 21.6	
	comp=Z,5.8nm,1.2s						
CAST	Castle Rocks	85.22	17	P	P	17 53 27.7	+1.1
CAST				IAmb	IAmb	17 53 28.1	
	comp=Z,4.2nm,0.8s						
J20K	Nowinta River	85.25	16	P	P	17 53 28.0	+1.3
J20K				IAmb	IAmb	17 53 29.6	
	comp=Z,3.0nm,0.8s						
BELA	Belgrano 2	85.60	176	P	P	17 53 29.3	+0.9
BELA				IAmb	IAmb	17 53 30.3	
	comp=Z,6.3nm,1.1s						
I21K	Tanana	86.62	16	P	P	17 53 35.0	+1.5
IL31		87.76	18	P	P	17 53 39.2	+0.3
IL31				IAmb	IAmb	17 53 39.6	
	comp=Z,2.1nm,0.5s						
ILAR	Eielson Array	87.76	18	P	P	17 53 38.9	-0.1
	comp=Z,1.8nm,0.5s,baz=240,slow=5.0,SNR=24						
	comp=Z,1.8nm,0.5s						
ILAR	Eielson Array	87.76	18	P	P	17 53 39.0	0.0
PFO	Pinyon Flats O	88.01	54	LR	LR	18 33 03.2	
	comp=Z,56nm,18.2s,baz=210,slow=36						
PDAR	Pinedale Array	96.04	47	LR	LR	18 36 40.6	
	comp=Z,24nm,18.1s,baz=297,slow=35						
MKAR	Makanchi Array	97.76	316	P	Pdif	17 54 26.7	+1.0
	comp=Z,0.1nm,0.5s,baz=100,slow=6.4,SNR=2.4						
	comp=Z,0.1nm,0.5s						
YKA	Yellowknife Ar	98.77	27	P	Pdif	17 54 30.1	+0.3
	comp=Z,0.8nm,0.7s,baz=254,slow=4.5,SNR=10						
	comp=Z,0.8nm,0.7s						
ARCES	ARCESS Array B	121.27	345	PKP	PKiKP	17 59 44.8	+1.8
	comp=Z,0.6nm,0.4s,baz=85,slow=2.9,SNR=9.4						
FINES	FINESS Array B	126.64	338	PKP	PKiKP	17 59 55.0	+1.2
	comp=Z,0.4nm,0.6s,baz=15,slow=7.2,SNR=1.5						

TUL ***02*** *17:53:05.2±1.2, 35°.72N±0°.01×97°.161W±0°.007, h6^{km}±4^{km}, ML3.1, mb_Lg2.4/26(NEIC), Error ellipse: s-maj=1.9km s-min=0.7km az=168.0*

NEIC 02 17:53:05.5±1.1**, 35°.73N**±0°.01×**97°.16W**±0°.01**, h8**^{km}±3^{km}**, Error ellipse: s-maj=2.2km s-min=1.0km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.20	211	Pg	Pg	17 53 09.4	-0.2
OK001				Sg	Sg	17 53 12.3	0.0
OK009	Oakdale Elemen	0.26	234		Pg	17 53 10.2	-0.5
OK009				Sg	Sg	17 53 14.4	+0.2
OKCFA	Oklahoma City	0.40	216	Pg	Pg	17 53 13.1	-0.2
OKCFA					Sg	17 53 18.6	+0.1
OKCSW	OKLAHOMA CITY	0.40	214	Sg	Sg	17 53 18.7	+0.2
FNO	Franklin	0.51	202	Pg	Pg	17 53 15.1	-0.4
FNO				Sg	Sg	17 53 22.4	+0.2
TUL1	Leonard	1.13	81		Pg	17 53 26.4	-0.8
TUL1				Sg	Sg	17 53 41.0	-0.9
X34A	Smith Ranch, M	1.26	206		Pn	17 53 28.7	-0.7
T35A	Sooner Cattle	1.29	24		Pn	17 53 29.2	-0.7
U32A	Winter Ranch,	1.62	294	Pn	Pn	17 53 32.6	-1.9
WMOK	Wichita Mounta	1.66	234	Pn	Pn	17 53 34.8	-0.1
X37A	Clayton	1.86	127	Pn	Pn	17 53 38.1	+0.4
W39A	Magazine	2.81	100	Pn	Pn	17 53 47.8	-3.0
R32A	Long Quarter,	2.96	336		Pg	17 54 00.4	-1.8
CBKS	Cedar Bluff	3.70	327	IAmb_Lg		17 55 08.6	
	comp=Z,9.3nm,0.8s						
X40A	Basin Creek Fa	3.76	108	IAmb_Lg		17 55 12.4	
	comp=Z,9.0nm,0.9s						
AMTX	Amarillo	3.79	258	IAmb_Lg		17 55 13.5	
	comp=Z,8.8nm,0.7s						
W41B	Gary Mavity, V	4.05	97	Pn	Pn	17 54 06.8	-1.0
W41B				IAmb_Lg		17 55 18.3	
	comp=Z,8.4nm,0.8s						
FCAR	Ozark Folk Cen	4.10	86	IAmb_Lg		17 55 13.5	
	comp=Z,7.0nm,0.8s						
MGMO	Mountain Grove	4.19	69	IAmb_Lg		17 55 19.0	
	comp=Z,9.2nm,0.8s						
LCAR	Lake Charles	4.89	84	IAmb_Lg		17 55 51.9	
	comp=Z,7.6nm,1.2s						
CCM	Cathedral Cave	5.28	62	IAmb_Lg		17 56 02.7	
	comp=Z,5.3nm,0.8s						
KSCO	Kaye Shedlock'	5.44	309	IAmb_Lg		17 56 08.5	
	comp=Z,6.8nm,0.7s						
P40A	Paris	5.55	45	IAmb_Lg		17 56 02.6	
	comp=Z,10.0nm,0.8s						
JCT	Junction City	5.69	204	IAmb_Lg		17 56 11.1	
	comp=Z,8.9nm,1.0s						
FVM	French Village	5.85	65	IAmb_Lg		17 56 17.4	
	comp=Z,7.4nm,0.8s						
T25A	Trinidad	6.01	286	Pn	Pn	17 54 33.1	-1.8
SIUC	Southern Illin	6.68	70	IAmb_Lg		17 56 36.6	
	comp=Z,9.1nm,0.8s						
SDCO	Great Sand Dun	6.99	289	Pn	Pn	17 54 47.1	-1.3

NEIC ***02*** *17:59:51.4±1.2, 20°.10N±0°.05×146°.4E±0°.1, h39^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=20.0km s-min=4.6km az=105.0*

IDC ***02*** *17:59:52.4±2.4, 20°.29N×146°.43E, h49^{km}±23^{km}, mb3.5/13, mbtmp3.8/16, ML3.7/3, Error ellipse: s-maj=26.6km s-min=12.6km az=83.0*

ISC 02 17:59:51.3±0.6**, 20°.34N**±0°.06×**146°.5E**±0°.1**, h34**^{km}**, n34, σ1^s.60**/27**, mb4.0**/18**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.88	193	P	Pn	18 01 31.6	+1.8
	2.7nm,0.3s,baz=34,slow=13,SNR=1.6						
GUMO				S	Sn	18 02 48.8	+1.9
	52nm,0.9s,baz=5.4,slow=22,SNR=2.0						
	58nm,1.0s						
JCJ	Chichijima	7.78	331	P	Pn	18 01 43.8	+1.6
	4.8nm,0.3s,baz=100,slow=20,SNR=7.2						
JCJ				S	Sn	18 03 09.2	+0.2
	71nm,0.7s,baz=136,slow=22,SNR=2.8						
	33nm,0.6s						
MJAR	Matsushiro Arr	17.68	338	P	Pn	18 03 53.9	-1.0
	baz=167,slow=9.7,SNR=3.2						
	0.4nm,0.5s						
H11S3	WAKE ISLAND Hy	19.18	92	T	T	18 23 46.8	
	baz=280						
H11S1	WAKE ISLAND Hy	19.19	92	T	T	18 23 43.3	
	baz=280						
H11S2	WAKE ISLAND Hy	19.20	92	T	T	18 23 45.1	
	baz=280						
H11N1	WAKE ISLAND Hy	19.22	88	T	T	18 23 40.2	
	baz=273						
H11N2	WAKE ISLAND Hy	19.22	88	T	T	18 23 39.4	
	baz=273						
H11N3	WAKE ISLAND Hy	19.24	88	T	T	18 23 41.5	
	baz=273						
KSRS	Korea Array	23.46	321	P	P	18 04 57.8	+0.1
	1.3nm,0.7s,baz=148,slow=6.8,SNR=5.8						
	1.3nm,0.7s						
WR0	Warramunga Arr	41.71	197	P	P	18 07 33.2	-3.9
WR0				IAmb	IAmb	18 07 37.1	
	comp=Z,9.8nm,1.4s						
WRAB	Tennant Creek	41.74	197	P	P	18 07 34.4	-2.9
WRAB				IAmb	IAmb	18 07 49.6	
	comp=Z,8.0nm,1.4s						
WB2	Warramunga Arr	41.75	197	P	P	18 07 34.2	-3.2
WRA	Warramunga Arr	41.75	197	P	P	18 07 34.7	-2.8
	comp=Z,0.2nm,0.6s,baz=20,slow=8.8,SNR=5.7						
WRA				PcP	PcP	18 09 33.1	-0.4
	comp=Z,0.4nm,0.6s,baz=15,slow=3.5,SNR=2.5						
	comp=Z,0.2nm,0.6s						
WRA	Warramunga Arr	41.75	197	IAmb	IAmb	18 07 38.9	
	comp=Z,0.2nm,1.5s						
SONM	Songino Array	42.33	320	P	P	18 07 40.8	-1.3
	comp=Z,0.2nm,0.4s,baz=124,slow=7.2,SNR=2.5						
	comp=Z,0.2nm,0.4s						
FITZ	Fitzroy Crossi	43.31	210	P	P	18 07 45.9	-4.1
FITZ				IAmb	IAmb	18 08 00.0	
	comp=Z,7.6nm,1.4s						
ASAR	Alice Springs	45.41	196	P	P	18 08 04.2	-2.7
	comp=Z,0.3nm,0.7s,baz=15,slow=6.9,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ZALV	Zalesovo Beam	57.16	322	P	P	18 09 34.7	+0.1
	comp=Z,1.3nm,0.5s,baz=112,slow=7.4,SNR=6.1						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	57.85	313	P	P	18 09 40.7	+1.0
	comp=Z,0.4nm,0.6s,baz=96,slow=6.4,SNR=5.7						
	comp=Z,0.4nm,0.6s						
H21K	Melozitna Rive	59.70	25	P	P	18 09 54.0	+1.8
H21K				IAmb	IAmb	18 10 01.9	
	comp=Z,3.5nm,1.2s						
BPAW	Bear Paw Mtn.	59.98	27	P	P	18 09 55.4	+1.3
TRF	Thorofare Moun	60.11	28	P	P	18 09 55.8	+0.6
NRIK	Noril'sk	60.33	340	P	P	18 09 55.8	-0.5
	comp=Z,1.9nm,0.6s,baz=100,slow=5.6,SNR=2.2						

	comp=Z,1.9nm,0.6s						
ILAR	**Eielson Array**	**61.87**	**27**	P	**P**	**18 10 06.2**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=250,slow=5.0,SNR=8.4						
	comp=Z,1.2nm,0.9s						
BERG	**Berg Lake**	**62.59**	**32**	P	**P**	**18 10 14.4**	**+2.6**
L27K	**Beaver Creek,**	**63.80**	**29**	P	**P**	**18 10 20.9**	**+1.0**
L27K				IAmb	IAmb	18 10 27.4	
	comp=Z,3.6nm,1.5s						
YKA	**Yellowknife Ar**	**76.22**	**28**	P	**P**	**18 11 35.9**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=287,slow=5.3,SNR=16						
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**81.16**	**342**	P	**P**	**18 12 03.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=33,slow=7.4,SNR=4.2						
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**81.16**	**342**	IAmb	IAmb	18 12 26.2	
	comp=Z,3.6nm,1.3s						
NVAR	**Mina Array Bea**	**81.58**	**52**	P	**P**	**18 12 06.1**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=268,slow=5.8,SNR=9.6						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**85.70**	**335**	P	**P**	**18 12 26.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=63,slow=8.8,SNR=5.6						
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**86.18**	**46**	P	**P**	**18 12 28.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=75,slow=1.7,SNR=2.5						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**146.96**	**89**	PKPbc	**PKPdf**	**18 19 30.4**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=256,slow=5.5,SNR=5.9						

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*IDC **02** 18:25:58.8±1.0, 60°.01N×29°.98W, h0^{km}, mb3.4/9, mbtmp3.5/10, ML3.6/1, MS3.3/13, Error ellipse: s-maj=36.9km s-min=17.6km az=10.0*

ISC 02 18:26:00.5±0.9, **60°.0N**±0°.2×**30°.01W**±0°.10, **h10^{km}, n23, σ0^s.91**/11, **mb3.5**/8, **MS3.3**/10, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**11.49**	**316**	LR	LR	18 32 40.3	
	comp=Z,160nm,18.5s,baz=134,slow=35						
EKA	**Eskdalemuir Ar**	**15.05**	**96**	Pn	**Pn**	**18 29 34.5**	**+1.5**
	baz=304,slow=9.2						
EKA				LR	LR	18 34 32.5	
	comp=Z,77nm,18.3s,baz=359,slow=34						
	3.4nm,0.8s						
FRB	**Frobisher Bay**	**18.32**	**298**	LR	LR	18 36 21.0	
	comp=Z,91nm,18.5s,baz=345,slow=34						
NOA	**NORSAR Array B**	**20.07**	**69**	LR	LR	18 36 51.3	
	comp=Z,30nm,21.4s,baz=295,slow=32						
SCHQ	**Schefferville**	**20.30**	**271**	P	**P**	**18 30 36.6**	**+0.5**
	1.2nm,0.7s,baz=256,slow=3.6,SNR=3.7						
	1.2nm,0.7s						
ESDC	**Sonseca Array**	**26.11**	**130**	P	**P**	**18 31 33.9**	**-0.3**
	1.1nm,0.9s,baz=327,slow=9.1,SNR=6.9						
	1.1nm,0.9s						
DAVOX	**Davos/Dischmat**	**26.75**	**102**	LR	LR	18 40 33.8	
	comp=Z,34nm,20.1s,baz=265,slow=33						
GERES	**GERESS Array B**	**27.25**	**95**	LR	LR	18 41 34.8	
	comp=Z,50nm,19.6s,baz=291,slow=34						
VRAC	**Vranov**	**28.40**	**91**	LR	LR	18 42 23.8	
	comp=Z,40nm,18.5s,baz=326,slow=35						
SADO	**Sadowa**	**32.76**	**265**	LR	LR	18 44 23.9	
	comp=Z,56nm,18.7s,baz=281,slow=34						
AKASG	**Malin Array Be**	**33.82**	**79**	P	**P**	**18 32 41.3**	**-1.1**
	0.1nm,0.3s,baz=319,slow=6.0,SNR=4.4						
	0.1nm,0.3s						
ULM	**Lac du Bonnet**	**37.35**	**285**	LR	LR	18 46 17.2	
	comp=Z,51nm,19.7s,baz=48,slow=33						
YKA	**Yellowknife Ar**	**38.00**	**311**	P	**P**	**18 33 18.6**	**+0.6**
	0.4nm,0.9s,baz=57,slow=9.1,SNR=4.0						
	0.4nm,0.9s						
BRTR	**Keskin Array B**	**43.75**	**88**	LR	LR	18 55 12.4	
	comp=Z,31nm,18.7s,baz=328,slow=40						
ILAR	**Eielson Array**	**46.82**	**328**	P	**P**	**18 34 30.0**	**+0.3**
	0.3nm,0.7s,baz=39,slow=8.7,SNR=2.8						
	0.3nm,0.7s						
AKTO	**Aktyubinsk**	**47.47**	**60**	P	**P**	**18 34 35.6**	**+0.6**
	2.9nm,0.7s,baz=338,slow=8.0,SNR=8.4						
	2.9nm,0.7s						
NEW	**Newport**	**48.67**	**297**	LR	LR	18 54 52.1	
	comp=Z,60nm,19.6s,baz=333,slow=36						
PDAR	**Pinedale Array**	**49.29**	**287**	P	**P**	**18 34 48.9**	**-0.5**
	0.2nm,0.4s,baz=52,slow=9.3,SNR=2.5						
	0.2nm,0.4s						
ANMO	**Albuquerque**	**53.85**	**279**	LR	LR	18 55 42.0	
	comp=Z,56nm,18.6s,baz=2.5,slow=33						
YBH	**Yreka Blue Hor**	**56.23**	**296**	LR	LR	18 59 25.2	
	comp=Z,46nm,18.2s,baz=5.0,slow=36						
TXAR	**Lajitas Array**	**56.98**	**272**	P	**P**	**18 35 45.7**	**-0.4**
	0.2nm,0.7s,baz=55,slow=4.9,SNR=2.4						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**60.16**	**47**	P	**P**	**18 36 06.8**	**-1.1**
	0.3nm,0.8s,baz=339,slow=7.7,SNR=2.9						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**141.94**	**24**	PKP	**PKPdf**	**18 45 32.8**	**+0.6**
	0.4nm,0.9s,baz=308,slow=2.1,SNR=2.3						

IDC 02 18:32:03.0±1.6, **29°.66S**×**178°.98W, h0^{km}, mb3.8**/3, **mbtmp4.0**/4, **ML5.8**/1, **Error ellipse: s-maj=60.3km s-min=17.0km az=161.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.01**	**66**	Pn	Pn	18 32 24.5	+0.1
	56nm,0.3s,baz=233,slow=20,SNR=1.8						
RAO				Sn	Sn	18 32 40.1	+0.8
	146nm,0.3s,baz=170,slow=21,SNR=5.5						
MSVF	**Nonsavu**	**12.18**	**346**	Pn	Pn	18 34 57.5	-0.4
	2.3nm,0.3s,baz=204,slow=20,SNR=4.9						
	6.5nm,0.5s						
STKA	**Stephens Creek**	**33.83**	**256**	P	P	18 38 46.5	-0.6
	3.1nm,0.8s,baz=98,slow=7.1,SNR=3.8						
	3.1nm,0.8s						
ASAR	**Alice Springs**	**42.30**	**267**	P	P	18 39 58.4	-0.3
	0.3nm,0.6s,baz=104,slow=7.3,SNR=8.4						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.23**	**272**	P	P	18 40 06.6	+0.4
	0.8nm,0.4s,baz=111,slow=7.5,SNR=7.3						
	0.8nm,0.4s						

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*JMA **02** 18:48:07.6±0.6, 43°N±2°×14°7E±°, h35^{km}, MV2.9/25, E OFF HOKKAIDO*

*SKHL **02** 18:48:09.0±0.4, 43°.00N×147°.00E, h72^{km}±3^{km}, mb4.3/3*

ISC 02 18:48:07.1±2.6, **43°.06N**±0°.09×**147°.05E**±0°.09, **h6^{km}**±14^{km}, **n14, σ0^s.67**/20, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.00**	**288**	*e*P	**Pb**	**18 48 27.0**	**+0.2**
NEM2				*e*S	**Sb**	**18 48 41.2**	**+1.0**
NMR	**Nemuro--Hokkai**	**1.01**	**288**	*e*P	**Pb**	**18 48 27.1**	**+0.1**
NMR				AMB	AMB	18 48 28.6	
	330nm,0.4s						
NMR				*e*S	**Sb**	**18 48 41.0**	**+0.5**
NMR				A	A	18 48 43.4	
	260nm,0.4s						
NMR				A	A	18 48 43.4	
	550nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.30**	**319**	*e*P	**Pn**	**18 48 31.6**	**-0.1**
YUK				AMB	AMB	18 48 32.2	
	120nm,0.3s						
YUK				*e*S	**Sg**	**18 48 48.4**	**-0.5**
YUK				A	A	18 48 50.2	
	280nm,0.5s						
YUK				A	A	18 48 50.2	
	530nm,0.5s						
JKHN	**Kushirohamanak**	**1.38**	**272**	*e*P	**Pg**	**18 48 33.4**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.65**	**296**	*e*P	**Pn**	**18 48 36.9**	**+0.4**
JRA	**Rausu**	**1.65**	**303**	*e*P	**Pn**	**18 48 36.7**	**+0.1**
JAK	**Akkeshi**	**1.73**	**269**	*e*P	**Pn**	**18 48 37.0**	**-0.6**
JNK	**Nakash**	**1.78**	**288**	P	**Pn**	**18 48 38.1**	**-0.2**
KUR	**Kuril'sk**	**2.25**	**15**	*e*P	**Pn**	**18 48 45.0**	**+0.2**
KUR				AMB	AMB	18 48 46.7	
	30nm,0.6s						
KUR				*e*S	**Sn**	**18 49 12.2**	**-0.6**
KUR				A	A	18 49 16.4	
	20nm,0.5s						
KUR				A	A	18 49 16.4	
	40nm,0.5s						
JAR	**Ashorobuto**	**2.41**	**277**	P	**Pn**	**18 48 47.1**	**+0.1**
JAR				*e*S	**Sn**	**18 49 15.7**	**-1.0**
JTKR	**Abashiri--Toko**	**2.46**	**293**	*e*P	**Pn**	**18 48 49.2**	**+1.6**
JCH	**Churui**	**2.75**	**262**	*e*P	**Pn**	**18 48 51.9**	**+0.3**
JEM	**Erimo**	**3.06**	**251**	*e*P	**Pn**	**18 48 56.7**	**+0.8**
JNBK	**Urakawa-nobuka**	**3.26**	**258**	*e*P	**Pn**	**18 48 58.5**	**-0.2**
JNBK				*e*S	**Sn**	**18 49 37.1**	**-0.6**

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*IDC **02** 18:58:36.7±0.9, 34°.51S×55°.24E, h0^{km}, mb4.1/8, mbtmp4.1/9, ML3.7/1, MS3.5/21, Error ellipse: s-maj=36.2km s-min=22.4km az=55.0*

*NEIC **02** 18:58:38.7±0.7, 34°.5S±0°.1×55°.14E±0°.09, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=24.9km s-min=11.2km az=191.0*

ISC 02 18:58:38.6±0.8, **34°.5S**±0°.2×**55°.3E**±0°.2, **h10^{km}, n39, σ0^s.68**/16, **mb4.3**/11, **MS3.6**/20, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.43**	**334**	P	**Pn**	**19 02 42.4**	**+0.3**
	baz=180,slow=12,SNR=2.2						
OPO				LR	LR	19 08 19.9	
	comp=Z,116nm,19.1s,baz=30,slow=34						
	0.7nm,0.3s						
BOSA	**Boshof**	**26.18**	**275**	LR	LR	19 12 08.3	
	comp=Z,47nm,21.8s,baz=148,slow=31						
LBTB	**Lobatse**	**27.36**	**282**	LR	LR	19 13 14.1	
	comp=Z,39nm,19.1s,baz=128,slow=32						
SUR	**Sutherland**	**28.75**	**264**	LR	LR	19 13 49.5	
	comp=Z,46nm,19.4s,baz=124,slow=32						
LSZ	**Lusaka**	**30.98**	**301**	LR	LR	19 15 37.1	
	comp=Z,68nm,19.2s,baz=150,slow=33						
H08S1	**Diego Carcia H**	**31.09**	**35**	T	T	19 37 37.4	
	baz=208,slow=75,SNR=6.4						
H08S2	**Diego Garcia H**	**31.09**	**35**	T	T	19 37 34.5	
	baz=208,slow=75,SNR=6.5						
H08S3	**Diego Garcia H**	**31.11**	**35**	T	T	19 37 38.6	
	baz=208,slow=75,SNR=12						
MAW	**Mawson**	**33.42**	**175**	LR	LR	19 15 29.6	
	comp=Z,116nm,19.4s,baz=14,slow=30						
TSUM	**Tsumeb**	**36.68**	**285**	LR	LR	19 18 58.0	
	comp=Z,79nm,18.5s,baz=140,slow=33						
KMBO	**Kilima Mbogo**	**37.23**	**329**	LR	LR	19 20 10.0	
	comp=Z,78nm,18.7s,baz=92,slow=35						
MBAR	**Mbarara**	**40.79**	**321**	LR	LR	19 22 41.0	
	comp=Z,111nm,18.4s,baz=104,slow=35						
QSPA	**South Pole Qui**	**55.66**	**180**	P	**P**	**19 08 14.7**	**0.0**
	2.6nm,1.0s,baz=275,slow=3.4,SNR=5.3						
QSPA				LR	LR	19 29 08.3	
	comp=Z,106nm,20.5s,baz=338,slow=33						
	2.6nm,1.0s						
QSPA	**South Pole Qui**	**55.66**	**180**	IAmb	IAmb	19 08 21.7	
	comp=Z,4.5nm,1.3s						
WSAR	**Wadi Sarin**	**57.52**	**4**	LR	LR	19 27 03.7	
	comp=Z,52nm,19.4s,baz=239,slow=30						
IPM	**Ipoh**	**57.95**	**57**	P	**P**	**19 08 31.3**	**-0.2**
IPM				IAmb	IAmb	19 08 34.4	
	comp=Z,5.1nm,0.8s						
VNDA	**Vanda**	**60.05**	**166**	LR	LR	19 33 35.0	
	comp=Z,87nm,18.1s,baz=311,slow=35						
CMAR	**Chiang Mai Arr**	**67.08**	**45**	P	**P**	**19 09 32.5**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=233,slow=7.1,SNR=11						
CMAR				LR	LR	19 34 58.2	
	comp=Z,36nm,19.4s,baz=170,slow=32						
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**68.02**	**104**	P	**P**	**19 09 38.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=226,slow=6.3,SNR=8.3						
	comp=Z,1.3nm,0.8s						
DBIC	**Dimbokro**	**69.91**	**293**	LR	LR	19 38 26.7	
	comp=Z,24nm,18.5s,baz=142,slow=34						
STKA	**Stephens Creek**	**70.04**	**115**	P	**P**	**19 09 50.4**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=299,slow=10,SNR=2.2						
	comp=Z,3.4nm,0.9s						
STKA	**Stephens Creek**	**70.04**	**115**	IAmb	IAmb	19 10 13.5	
	comp=Z,4.7nm,1.5s						
WRA	**Warramunga Arr**	**70.22**	**101**	P	**P**	**19 09 52.1**	**0.0**
	comp=Z,3.0nm,0.9s,baz=237,slow=5.0,SNR=16						
	comp=Z,3.0nm,0.9s						
WRAB	**Tennant Creek**	**70.23**	**101**	P	**P**	**19 09 53.2**	**+1.1**
WRAB				IAmb	IAmb	19 09 54.4	
	comp=Z,5.3nm,0.9s						
GNI	**Garni**	**74.93**	**352**	LR	LR	19 40 42.6	
	comp=Z,36nm,20.6s,baz=148,slow=34						
IDI	**Anoyia**	**75.02**	**335**	LR	LR	19 43 09.2	
	comp=Z,20nm,21.8s,baz=272,slow=36						
BRTR	**Keskin Array B**	**76.53**	**343**	P	**P**	**19 10 27.7**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=155,slow=9.3,SNR=6.4						
	comp=Z,1.3nm,0.9s						
KBZ	**Khabaz**	**78.68**	**351**	LR	LR	19 43 22.8	
	comp=Z,21nm,19.9s,baz=142,slow=34						
MAKZ	**Makanchi**	**84.45**	**18**	P	**P**	**19 11 11.4**	**+0.4**
MAKZ				IAmb	IAmb	19 11 12.3	
	comp=Z,2.3nm,1.0s						
MKAR	**Makanchi Array**	**84.52**	**18**	P	**P**	**19 11 11.5**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=199,slow=2.6,SNR=5.7						
	comp=Z,1.1nm,0.9s						
MDT	**Midelt**	**87.43**	**313**	LR	LR	19 51 47.0	
	comp=Z,23nm,18.6s,baz=156,slow=36						
VRAC	**Vranov**	**90.25**	**336**	LR	LR	19 53 38.1	
	comp=Z,23nm,20.1s,baz=98,slow=37						
ESDC	**Sonseca Array**	**91.87**	**318**	P	**P**	**19 11 47.3**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=137,slow=5.1,SNR=4.6						
ESDC				LR	LR	19 55 00.4	
	comp=Z,42nm,18.3s,baz=124,slow=37						
	comp=Z,0.9nm,1.0s						
ESDC	**Sonseca Array**	**91.87**	**318**	IAmb	IAmb	19 11 56.6	
	comp=Z,1.3nm,1.2s						
SONM	**Songino Array**	**93.88**	**32**	LR	LR	19 52 04.5	
	comp=Z,36nm,19.0s,baz=182,slow=34						
RES	**Resolute Bay**	**137.23**	**349**	PKP	**PKPdf**	**19 18 01.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=305,slow=1.8,SNR=4.3						
ILAR	**Eielson Array**	**146.87**	**17**	PKPbc	**PKPdf**	**19 18 19.4**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=310,slow=3.2,SNR=10						
YKA	**Yellowknife Ar**	**151.28**	**350**	PKPbc	**PKPbc**	**19 18 30.3**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=18,slow=2.1,SNR=13						
YKA	**Yellowknife Ar**	**151.28**	**350**		**PKPbc**	**19 18 31.0**	**-0.4**

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*IDC **02** 19:08:44.5±0.9, 10°.50S×152°.38E, h0^{km}, mb3.9/9, mbtmp3.9/13, ML3.7/3, MS3.4/18, Error ellipse: s-maj=23.1km s-min=18.5km az=117.0*

*NEIC **02** 19:08:47.0±1.5, 10°.56S±0°.04×152°.37E±0°.09, h10^{km}±1^{km}, mb4.1/13, Error ellipse: s-maj=16.0km s-min=4.0km az=114.0*

ISC 02 19:08:49.5±0.6, **10°.58S**±0°.07×**152°.26E**±0°.08, **h35^{km}, n43, σ2^s.16**/33, **mb4.0**/10, **MS3.5**/13, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.16**	**283**	Pn	**Pn**	**19 10 05.4**	**+1.1**
	6.5nm,0.5s,baz=101,slow=11,SNR=8.6						
PMG				Lg	Lg	19 11 31.7	
	2.5nm,0.3s,baz=205,slow=19,SNR=1.6						
PMG				LR	LR	19 12 09.1	
	comp=Z,154nm,20.6s,baz=94,slow=39						
KRVT	**Keravat (AS076**	**6.24**	**358**	Pn	Pn	19 10 14.8	-4.4
	0.7nm,0.3s,baz=169,slow=16,SNR=2.3						
KRVT				Sn	**Sn**	**19 11 23.9**	**-5.4**
	0.4nm,0.3s,baz=341,slow=23,SNR=1.0						
	8.7nm,0.6s						
RABL	**Rabaul**	**6.35**	**359**	Pn	**Pn**	**19 10 18.0**	**-2.7**
HNR	**Honiara**	**7.66**	**82**	LR	LR	19 13 16.5	
	comp=Z,76nm,20.6s,baz=4.5,slow=36						
HNR	**Honiara**	**7.66**	**82**	Pn	**Pn**	**19 10 37.4**	**-1.3**
COEN	**Coen**	**9.49**	**248**	Pn	**Pn**	**19 11 02.5**	**-1.3**
COEN				Sn	**Sn**	**19 12 46.0**	**-3.3**
CTA	**Charters Tower**	**11.08**	**211**	Pn	**Pn**	**19 11 25.3**	**-0.3**
	0.4nm,0.3s,baz=38,slow=13,SNR=7.0						
CTA				Sn	**Sn**	**19 13 21.8**	**-6.6**
	0.2nm,0.3s,baz=302,slow=22,SNR=1.4						
CTA				LR	LR	19 15 23.0	
	comp=Z,114nm,21.9s,baz=34,slow=36						
	1.2nm,0.4s						
CTAO	**Charters Tower**	**11.08**	**211**	Pn	**Pn**	**19 11 25.2**	**-0.4**
CTAO					**Sn**	**19 13 24.6**	**-3.7**
DZM	**Mont Dzumac**	**17.75**	**132**	LR	LR	19 18 46.1	
	comp=Z,173nm,20.5s,baz=17,slow=34						
WR0	**Warramunga Arr**	**19.45**	**239**	P	**P**	**19 13 14.1**	**+0.8**
WR0				IAmb	IAmb	19 13 19.9	
	comp=Z,10nm,1.0s						
WB0	**Warramunga Arr**	**19.49**	**240**	P	**Pn**	**19 13 16.0**	**+0.8**
WB0				IAmb	IAmb	19 13 17.6	
	comp=Z,8.3nm,0.9s						
WRAB	**Tennant Creek**	**19.60**	**240**	P	**P**	**19 13 15.9**	**+0.9**
WRAB				IAmb	IAmb	19 13 32.4	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**19.61**	**240**	P	**Pn**	**19 13 16.5**	**0.0**
WB2				IAmb	IAmb	19 13 32.6	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**19.61**	**240**	P	**P**	**19 13 16.1**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=63,slow=11,SNR=24						
WRA				PcP	**PcP**	**19 17 35.5**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=59,slow=2.4,SNR=1.4						
WRA				LR	LR	19 20 03.1	
	comp=Z,148nm,18.4s,baz=356,slow=34						
	comp=Z,5.3nm,0.9s						
WRA	**Warramunga Arr**	**19.61**	**240**	P	**P**	**19 13 16.4**	**+1.2**
MTN	**Manton Dam**	**20.81**	**262**	P	**P**	**19 13 29.0**	**+0.9**
MTN				IAmb	IAmb	19 13 34.9	
	comp=Z,14nm,1.0s						
AS31	**Alice Springs**	**21.80**	**231**	P	**P**	**19 13 40.2**	**+1.5**
ASAR	**Alice Springs**	**21.80**	**231**	P	**P**	**19 13 40.9**	**+2.1**
	comp=Z,2.0nm,0.8s,baz=63,slow=8.9,SNR=13						
ASAR				LR	LR	19 21 47.3	
	comp=Z,173nm,18.9s,baz=218,slow=36						
	comp=Z,2.0nm,0.8s						
SIJI	**Sorong**	**22.99**	**293**	LR	LR	19 25 09.3	
	comp=Z,48nm,18.7s,baz=48,slow=43						
STKA	**Stephens Creek**	**23.37**	**203**	P	**P**	**19 13 55.2**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=11,slow=11,SNR=6.2						
STKA				LR	LR	19 22 47.0	
	comp=Z,150nm,19.5s,baz=26,slow=36						
	comp=Z,3.0nm,0.7s						
KNRA	**Kununurra**	**23.43**	**255**	P	**P**	**19 13 58.0**	**+2.3**
KNRA				IAmb	IAmb	19 14 10.0	
	comp=Z,11nm,1.0s						
FITZ	**Fitzroy Crossi**	**26.82**	**251**	LR	LR	19 24 26.8	
	comp=Z,78nm,18.6s,baz=163,slow=35						
RPZ	**Rata Peaks**	**36.82**	**157**	LR	LR	19 29 01.1	
	comp=Z,133nm,20.6s,baz=277,slow=33						
MYLDM	**Lahad Datu**	**37.08**	**293**	P	**P**	**19 15 57.9**	**+1.1**
MJAR	**Matsushiro Arr**	**48.70**	**345**	LR	LR	19 36 33.5	
	comp=Z,11nm,19.4s,baz=196,slow=34						
ASAJ	**Asahikawa**	**55.14**	**352**	LR	LR	19 40 10.8	
	comp=Z,14nm,19.6s,baz=324,slow=34						
CMAR	**Chiang Mai Arr**	**59.99**	**298**	P	**P**	**19 18 53.4**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=110,slow=4.9,SNR=2.5						
	comp=Z,0.4nm,0.7s						
PETK	**Petropavlovsk-**	**63.61**	**4**	LR	LR	19 40 43.9	
	comp=Z,33nm,21.9s,baz=144,slow=30						
MA2	**Magadan**	**69.93**	**359**	LR	LR	19 45 49.4	
	comp=Z,13nm,21.6s,baz=55,slow=32						
SONM	**Songino Array**	**70.94**	**329**	P	**P**	**19 20 05.4**	**+1.9**
	comp=Z,0.8nm,1.0s,baz=134,slow=4.4,SNR=5.2						
	comp=Z,0.8nm,1.0s						
SONM	**Songino Array**	**70.94**	**329**	IAmb	IAmb	19 20 08.6	
	comp=Z,1.8nm,1.2s						
BILL	**Bilibino**	**79.06**	**5**	P	**P**	**19 20 51.0**	**+1.2**
QSPA	**South Pole Qui**	**79.41**	**180**	P	**P**	**19 20 53.1**	**+1.1**
	comp=Z,2.8nm,1.1s,baz=38,slow=2.9,SNR=3.9						
	comp=Z,2.8nm,1.1s						
QSPA	**South Pole Qui**	**79.41**	**180**	IAmb	IAmb	19 21 01.7	
	comp=Z,8.0nm,1.2s						
MAW	**Mawson**	**80.06**	**203**	LR	LR	19 53 17.9	
	comp=Z,53nm,20.3s,baz=59,slow=33						
MKAR	**Makanchi Array**	**84.33**	**320**	P	**P**	**19 21 18.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=96,slow=6.2,SNR=11						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**84.33**	**320**	P	**P**	**19 21 18.6**	**+0.6**
ZALV	**Zalesovo Beam**	**85.65**	**327**	P	**P**	**19 21 23.1**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=104,slow=6.1,SNR=2.4						
	comp=Z,0.7nm,0.5s						
ILAR	**Eielson Array**	**87.69**	**22**	P	**P**	**19 21 34.0**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=252,slow=4.7,SNR=8.8						
ILAR				LR	LR	19 55 00.6	
	comp=Z,34nm,20.1s,baz=174,slow=32						
	comp=Z,1.1nm,0.8s						
BBB	**Bella Bella**	**92.00**	**37**	LR	LR	19 57 34.6	
	comp=Z,34nm,18.8s,baz=258,slow=32						
NVAR	**Mina Array Bea**	**96.05**	**52**	P	**P**	**19 22 14.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=298,slow=1.9,SNR=2.2						
	comp=Z,0.1nm,0.3s						
SNAA	**Sanae**	**96.26**	**188**	LR	LR	20 04 36.7	
	comp=Z,52nm,18.5s,baz=142,slow=35						
TORD	**Torodi Ar. Bea**	**151.09**	**278**	PKPbc	**PKPbc**	**19 28 40.5**	**+0.5**
	comp=Z,8.4nm,0.4s,baz=43,slow=2.3,SNR=2.1						

IDC 02 19:09:05.4±1.2, **23°.34N**×**100°.57E, h0^{km}, mb3.5**/4, **mbtmp3.5**/5, **ML3.6**/1, **Error ellipse: s-maj=33.8km s-min=16.8km az=91.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.09**	**198**	Pn	Pn	19 10 22.0	-1.0
	0.6nm,0.3s,baz=13,slow=13,SNR=9.8						
CMAR				Pg	Pg	19 10 39.1	-3.8
	3.7nm,0.3s,baz=8.2,slow=17,SNR=153						
CMAR				Lg	Lg	19 11 45.1	
	2.0nm,0.3s,baz=19,slow=28,SNR=3.7						
	1.4nm,0.4s						
SONM	**Songino Array**	**24.89**	**9**	P	P	19 14 29.9	-0.1
	0.7nm,0.7s,baz=188,slow=8.0,SNR=7.3						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**27.64**	**332**	P	P	19 14 53.6	-1.1
	0.6nm,0.6s,baz=140,slow=8.8,SNR=9.0						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**32.79**	**343**	P	P	19 15 40.9	+0.7
	0.3nm,0.4s,baz=170,slow=8.8,SNR=1.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**54.18**	**140**	P	P	19 18 34.0	+1.2
	0.5nm,1.0s,baz=330,slow=7.5,SNR=2.2						
	0.5nm,1.0s						

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*SOME **02** 19:41:52.7, 42°.08N×75°.52E, h10^{km}*

*KRNET **02** 19:41:53.0±0.1, 42°.07N×75°.49E, h17^{km}, mb3.4*

*NNC **02** 19:41:55.0±0.7, 42°.16N×75°.51E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=4.8km s-min=3.2km az=173.0*

ISC 02 19:41:53.9±0.8, **42°.08N**±0°.03×**75°.52E**±0°.02, **h10^{km}, n81, σ1^s.64**/144, **33C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	**Boomskoye usch**	**0.51**	**38**	⇑*i*P	**Pg**	**19 42 03.3**	**-0.6**
	baz=39						
BOOM				⇑*i*S	**Sb**	**19 42 10.8**	**-1.9**
	baz=39						
ARLS	**Aral**	**0.92**	**256**	⇑*i*P	**Pg**	**19 42 09.9**	**-1.7**
	baz=56						
ARLS				⇑*i*S	**Sg**	**19 42 22.1**	**-1.4**
	baz=56						
FRU1	**Bishkek**	**0.98**	**318**	⇓*i*P	**Pg**	**19 42 11.2**	**-1.5**
	baz=20						
FRU1				⇓*i*S	**Sg**	**19 42 24.9**	**-0.6**
	baz=20						
KST	**Kastek**	**1.01**	**19**	*e*P	**Pg**	**19 42 12.3**	**-1.1**
	36nm,0.1s						
KST				*e*S	**Sb**	**19 42 26.2**	**-0.9**
	294nm,0.2s						
KST	**Kastek**	**1.01**	**19**	P	**Pg**	**19 42 12.5**	**-1.0**
	36nm,0.1s						
KST				S	**Sb**	**19 42 26.2**	**-0.9**
	294nm,0.2s						
DGS	**Degeres**	**1.17**	**9**	*e*P	**Pb**	**19 42 14.4**	**-2.0**
	29nm,0.1s						
DGS				*e*S	**Sg**	**19 42 29.0**	**-2.7**
	94nm,0.1s						
DGS	**Degeres**	**1.17**	**9**	P	**Pb**	**19 42 15.3**	**-1.1**
	29nm,0.1s						
DGS				S	**Sg**	**19 42 30.6**	**-1.1**
	92nm,0.2s						
KDJ	**Kajisay**	**1.24**	**87**	⇓*i*P	**Pb**	**19 42 16.6**	**-0.9**
	baz=87						
KDJ				⇓*i*S	**Sn**	**19 42 33.6**	**-0.7**
	baz=87						
MTBS	**Maitube**	**1.24**	**32**	*e*P	**Pb**	**19 42 16.7**	**-0.8**
	39nm,0.1s						
MTBS				*e*S	**Sn**	**19 42 33.4**	**-0.9**
	188nm,0.2s						
MTBS	**Maitube**	**1.24**	**32**	P	**Pb**	**19 42 16.8**	**-0.7**
	39nm,0.2s						
MTBS				S	**Sn**	**19 42 33.4**	**-0.9**
	191nm,0.4s						
TNSS	**Tian-Shan**	**1.42**	**47**	*e*P	**Pb**	**19 42 20.3**	**-0.5**
	20nm,0.1s						
TNSS				*e*S	**Sg**	**19 42 39.5**	**-0.2**
	64nm,0.3s						
TNSS	**Tian-Shan**	**1.42**	**47**	*i* Pn	**Pb**	**19 42 20.2**	**-0.5**
	baz=53						
TNSS				*i* Sn	**Sg**	**19 42 39.6**	**-0.1**
	baz=53						
TNSS	**Tian-Shan**	**1.42**	**47**	P	**Pb**	**19 42 20.3**	**-0.5**
	20nm,0.2s						
TNSS				S	**Sg**	**19 42 39.5**	**-0.2**
	64nm,0.3s						
SGDS	**Sogindy**	**1.52**	**335**	*e*P	**Pn**	**19 42 21.4**	**+0.2**
	38nm,0.2s						
SGDS				*e*S	**Sb**	**19 42 41.3**	**-0.2**
	103nm,0.1s						
SGDS	**Sogindy**	**1.52**	**335**	*i* Pn	**Pn**	**19 42 21.4**	**+0.2**

	baz=345						
SGDS				*e*Pg	Pg	19 42 23.1	+0.2
	baz=345						
SGDS				*e*Sn	Sb	19 42 41.2	-0.2
	baz=345						
SGDS	Sogindy	1.52	335	P	Pn	19 42 21.4	+0.2
	38nm,0.2s						
SGDS				S	Sb	19 42 41.3	-0.2
	103nm,0.2s						
AAA	Alma-Ata	1.53	42	*e*P	Pg	19 42 22.5	-0.7
	71nm,0.1s						
AAA				*e*S	Sg	19 42 43.0	+0.1
	225nm,0.2s						
AAA	Alma-Ata	1.53	42	*i* Pn	Pg	19 42 22.8	-0.4
	baz=48						
AAA				*i* Pg	Pb	19 42 26.8	+4.5
	baz=48						
AAA	Alma-Ata	1.53	42	P	Pg	19 42 22.5	-0.7
	71nm,0.1s						
AAA				S	Sg	19 42 43.1	+0.1
	225nm,0.2s						
KNDC	Almaty	1.56	43	⇑P	Pg	19 42 23.1	-0.7
	34nm,0.3s						
KNDC				⇑S	Sg	19 42 44.3	+0.3
	135nm,0.5s						
MDOK	Medeo	1.56	46	*e*P	Pb	19 42 22.7	-0.3
	21nm,0.3s						
MDOK				*e*S	Sg	19 42 43.5	-0.7
	54nm,0.5s						
MDOK	Medeo	1.56	46	*i* Pn	Pb	19 42 22.6	-0.3
	baz=51						
MDOK				*e*Sn	Sg	19 42 46.0	+1.8
	baz=51						
MDOK	Medeo	1.56	46	⇑P	Pb	19 42 22.6	-0.3
	20nm,0.4s						
MDOK				⇑S	Sg	19 42 43.2	-1.0
	43nm,0.6s						
MDOK	Medeo	1.56	46	Pg	Pb	19 42 22.7	-0.3
	21nm,0.3s						
MDOK				Lg	Lg	19 42 43.5	
	54nm,0.5s						
KRBS	Karabastau	1.62	4	*e*P	Pn	19 42 22.2	-0.4
	16nm,0.1s						
KRBS				*e*S	Sn	19 42 42.8	-0.7
	92nm,0.2s						
KRBS	Karabastau	1.62	4	P	Pb	19 42 23.1	-0.8
	49nm,0.2s						
KRBS				S	Sb	19 42 44.0	-0.4
	199nm,0.3s						
KOTS	Kotyrbulak	1.65	45	*e*P	Pg	19 42 24.4	-1.0
	34nm,0.0s						
KOTS				*e*S	Sg	19 42 46.5	-0.3
	176nm,0.3s						
KOTS	Kotyrbulak	1.65	45	P	Pg	19 42 24.4	-1.0
	41nm,0.3s						
KOTS				S	Sg	19 42 46.5	-0.3
	176nm,0.3s						
ANVS	Anan'yevo	1.74	66	⇑*i*P	Pb	19 42 25.3	-0.7
	baz=65						
ANVS				⇑*i*S	Sg	19 42 48.9	-0.9
	baz=65						
MRKS	Merke	1.82	292	*e*P	Pg	19 42 28.8	0.0
	39nm,0.4s						
MRKS				*e*S	Sg	19 42 55.0	+2.6
	93nm,0.3s						
KTBS	Karatobe	1.84	27	*e*P	Pb	19 42 27.6	-0.1
	47nm,0.1s						
KTBS				*e*S	Sg	19 42 52.2	-0.9
	374nm,0.4s						
KTBS	Karatobe	1.84	27	P	Pb	19 42 27.6	-0.1
	47nm,0.2s						
KTBS				S	Sg	19 42 52.2	-0.9
	374nm,0.4s						
KUU	Kurty	1.91	18	*e*P	Pb	19 42 28.4	-0.4
	34nm,0.4s						
KUU				*e*S	Sg	19 42 53.2	-2.0
	197nm,0.4s						
KUU	Kurty	1.91	18	⇑*i*Pn	Pb	19 42 28.4	-0.4
	baz=25						
KUU				*i* Sn	Sg	19 42 53.6	-1.6
	baz=25						
KUU	Kurty	1.91	18	P	Pb	19 42 28.4	-0.4
	34nm,0.4s						
KUU				S	Sg	19 42 53.2	-2.0
	197nm,0.4s						
CHKK	Chushkaly	2.07	31	*e*P	Pb	19 42 31.6	0.0
	73nm,0.1s						
CHKK				*e*S	Sg	19 42 59.1	-1.4
	292nm,0.3s						
CHKK	Chushkaly	2.07	31	⇑*i*Pn	Pb	19 42 31.7	0.0
	baz=36						
CHKK				*i* Sn	Sg	19 42 59.5	-1.1
	baz=36						
CHKK	Chushkaly	2.07	31	Pg	Pb	19 42 31.9	+0.3
	73nm,0.2s						
CHKK				Lg	Lg	19 42 59.1	
	292nm,0.3s						
PRZ	Przheval'sk	2.18	78	⇓*i*P	Pn	19 42 31.4	+1.1
	baz=78						
PRZ				⇓*i*S	Sb	19 42 59.6	-1.0
	baz=78						
SATY	Saty	2.35	64	*e*P	Pb	19 42 36.8	+0.5
	16nm,0.1s						
SATY				*e*S	Sg	19 43 07.5	-1.8
	110nm,0.3s						
SATY	Saty	2.35	64	*i* Pn	Pb	19 42 36.4	+0.1
	baz=66						
SATY				*i* Sn	Sg	19 43 08.5	-0.8
	baz=66						
SATY	Saty	2.35	64	Pg	Pb	19 42 36.8	+0.5
	16nm,0.1s						
SATY				Lg	Lg	19 43 07.5	
	110nm,0.3s						
KURS	Kuram	2.41	53	*e*P	Pb	19 42 37.4	+0.1
	21nm,0.5s						
KURS				*e*S	Sg	19 43 09.1	-2.1
	42nm,0.8s						
KURS	Kuram	2.41	53	Pg	Pb	19 42 37.4	+0.1
	21nm,0.5s						
KURS				Lg	Lg	19 43 09.1	
	42nm,0.8s						
ZHN	Zhinishke	2.41	62	*e*P	Pb	19 42 38.0	+0.5
	46nm,0.2s						
ZHN				*e*S	Sg	19 43 09.5	-1.8
	190nm,0.2s						
ZHN	Zhinishke	2.41	62	*i* Pn	Pb	19 42 37.0	-0.4
	baz=64						
ZHN				*i* Sn	Sg	19 43 09.7	-1.7
	baz=64						
ZHN	Zhinishke	2.41	62	Pg	Pb	19 42 38.0	+0.5
	46nm,0.2s						
ZHN				Lg	Lg	19 43 09.5	
	190nm,0.2s						
ARK	Arkit	2.67	265	⇑*i*P	Pn	19 42 37.6	+0.6
	baz=65						
ARK				⇑*i*S	Sn	19 43 10.3	+0.9
	baz=65						
KPKS	Kokpek	2.71	58	*e*P	Pb	19 42 43.0	+0.4
	37nm,0.1s						
KPKS				*e*S	Sg	19 43 18.8	-2.1
	119nm,0.5s						
KPKS	Kokpek	2.71	58	*i* Pn	Pb	19 42 41.7	-0.8
	baz=60						
ARXS	Arharly	2.72	38	*e*P	Pb	19 42 43.3	+0.7
	35nm,0.2s						
ARXS				*e*S	Sg	19 43 19.0	-2.2
	156nm,0.1s						
ARXS	Arharly	2.72	38	Pg	Pb	19 42 43.3	+0.7
	38nm,0.4s						
ARXS				Lg	Lg	19 43 19.0	
	162nm,0.4s						
UZB	Uzynbulak	2.80	66	*e*P	Pb	19 42 43.8	-0.2
	20nm,0.1s						
UZB				*e*S	Sb	19 43 19.5	+1.1
	41nm,0.4s						
UZB	Uzynbulak	2.80	66	⇓*i*Pn	Pb	19 42 43.0	-1.0
	baz=68						
UZB	Uzynbulak	2.80	66	Pg	Pb	19 42 43.0	-1.0
	20nm,0.3s						
UZB				Lg	Lg	19 43 19.5	
	41nm,0.4s						
BTLS	Baital	3.14	341	*e*P	Pb	19 42 49.7	-0.1
	8.3nm,0.3s						
BTLS				*e*S	Sb	19 43 29.7	+1.5
	24nm,0.4s						
BTLS	Baital	3.14	341	*e*Pn	Pn	19 42 45.2	+1.7
	baz=346						
BTLS				*i* Sb	Sg	19 43 31.2	-3.6
	baz=346						
BTLS	Baital	3.14	341	Pg	Pb	19 42 49.7	-0.1
	8.3nm,0.3s						
BTLS				Lg	Lg	19 43 29.7	
	24nm,0.4s						
PDGK	Podgornoye	3.18	66	Pg	Pb	19 42 51.6	+1.0
	5.1nm,0.3s						
PDGK				Lg	Lg	19 43 32.8	
	18nm,0.5s						
PDGK	Podgornoye	3.18	66	⇑Pg	Pg	19 42 52.2	-2.7
	6.7nm,0.6s						
PDGK				⇑Lg	Lg	19 43 33.7	
	28nm,0.6s						
DZA	Taraz	3.20	286	*e*P	Pb	19 42 51.8	+1.0
	25nm,0.1s						
DZA				*e*S	Sb	19 43 33.2	+3.3
	94nm,0.4s						
TRKS	Terek-Say	3.32	262	⇑*i*P	Pn	19 42 46.5	+0.5
	baz=61						
TRKS				⇑*e*S	Sn	19 43 25.5	-0.1
	baz=61						
TDK	Taldyqorghan	3.59	35	*e*P	Pb	19 42 57.8	+0.2
	50nm,0.5s						
TDK				*e*S	Sb	19 43 43.6	+2.3
	73nm,0.6s						
TDK	Taldyqorghan	3.59	35	*e*Pn	Pn	19 42 53.1	+3.4
	baz=38						
TDK				*i* Sn	Sb	19 43 38.1	-3.1
	baz=38						
TDK	Taldyqorghan	3.59	35	Pg	Pb	19 42 57.8	+0.2
	50nm,0.5s						
TDK				Lg	Lg	19 43 43.6	
	73nm,0.6s						
KK31	Karatay Array	3.83	287	⇓Pn	Pb	19 42 58.2	-3.4
	0.3nm,0.4s,baz=103,slow=14,SNR=80						
KK31				⇑Pg	Pg	19 43 04.9	-2.4
	3.6nm,0.5s,baz=104,slow=16,SNR=60						
KK31				⇑Lg	Lg	19 44 00.4	
	3.3nm,0.3s,baz=109,slow=28,SNR=7.5						
KKAR	Karatay Array	3.83	287	⇑*i*P	Pn	19 42 53.9	+0.9
	baz=87						
KKAR				⇑*i*S	Sn	19 43 38.3	+0.2
	baz=87						
DJR	Jarkent	3.85	53	*e*P	Pb	19 43 04.0	+2.0
	6.9nm,0.4s						
DJR				*e*S	Sg	19 43 54.3	-3.1
	18nm,0.4s						
DJR	Jarkent	3.85	53	Pg	Pg	19 43 05.6	-2.0
	11nm,0.4s						
DJR				Lg	Lg	19 43 57.4	
	38nm,0.5s						
IUG	Iuzhnay	4.08	273	*e*P	Pb	19 43 08.2	+2.3
	158nm,0.4s						
IUG				*e*S	Sg	19 44 02.1	-2.8
	30nm,0.6s						
IUG	Iuzhnay	4.08	273	Pg	Pb	19 43 08.2	+2.3
	158nm,0.4s						
KAPS	Kapalarasan	4.24	40	*e*P	Pb	19 43 10.1	+1.4
	7.5nm,0.4s						
KAPS				*e*S	Sg	19 44 04.6	-5.5
	30nm,0.4s						
KAPS	Kapalarasan	4.24	40	Pg	Pb	19 43 10.1	+1.4
	7.5nm,0.4s						
KAPS				Lg	Lg	19 44 04.7	
	30nm,0.4s						
BRLS	Borolday	4.30	285	*e*P	Pg	19 43 13.2	-3.1
	3.0nm,0.3s						
BRLS				*e*S	Sg	19 44 10.0	-1.9
	8.1nm,0.6s						
BRLS	Borolday	4.30	285	Pg	Pg	19 43 13.2	-3.1
	3.0nm,0.3s						
BRLS				Lg	Lg	19 44 10.0	
	8.1nm,0.6s						
GAR	Garm	5.02	234	⇑*e*P	Pn	19 43 10.3	+1.0
	baz=34						
GAR				⇑*i*S	Sn	19 44 06.6	-0.8
	baz=34						
OTUK	Ortayu	6.56	341	⇑Pn	Pn	19 43 34.2	+3.9
	1.0nm,0.9s						
OTUK				⇓Lg	Lg	19 45 23.7	
	13nm,1.0s						
MAKZ	Makanchi	6.61	42	⇓Pn	Pn	19 43 34.4	+3.3
	2.0nm,0.8s						
MAKZ				⇑Sn	Sn	19 44 49.6	+3.2
	1.5nm,0.4s						
MAKZ				⇑Lg	Lg	19 45 22.8	
	4.0nm,0.8s						
MK31	Makanchi Array	6.76	44	⇑Pn	Pn	19 43 36.0	+2.9
	0.8nm,0.3s,baz=222,slow=16,SNR=46						
MK31				Sn	Sn	19 44 54.3	+4.2
	0.4nm,0.3s,baz=232,slow=27,SNR=4.7						
MK31				⇓Lg	Lg	19 45 27.8	
	1.7nm,0.6s,baz=230,slow=28,SNR=4.7						
KURBB	Kurchatov Arra	8.79	13	⇑Pn	Pn	19 44 02.6	+1.6
	0.6nm,0.3s						
KURBB				⇑Sn	Sn	19 45 43.5	+3.5
	4.0nm,0.7s						
KURBB				⇑Lg	Lg	19 46 33.6	
	14nm,0.7s						
KURK	Kurchatov	8.90	13	⇓Pn	Pn	19 44 05.5	+3.1
	2.1nm,0.6s						
KURK				⇑Sn	Sn	19 45 46.3	+3.7
	2.7nm,0.9s						
KURK				⇑Lg	Lg	19 46 36.2	
	16nm,1.1s						

IDC ***02*** *19:46:07.1±0.9, 27°.97N×56°.23E, h0km, mb3.7/13, mbtmp3.7/14, ML3.4/1, Error ellipse: s-maj=21.8km s-min=20.1km az=104.0*

TEH ***02*** *19:46:11.1, 28°.02N×56°.33E, h15km, ML3.5*

ISC 02 19:46:11.2±0.6**, 27°.87N**±0°.04×**56°.31E**±0°.05**, h28km, n54, σ1ˢ.68**/57**, mb3.6**/13**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	Bandar-abas	0.47	154	*e*Pg	Pn	19 46 23.1	+1.1
IBND				*e*Sg	Sn	19 46 32.5	+3.1
IBND				*e*		19 46 59.8	
	comp=Z,46µm,0.4s						
GENO	Geno	0.49	195	*e*Pg	Pn	19 46 23.8	+1.3
GENO				*e*		19 46 36.1	
	comp=Z,43µm,0.4s						
KHNJ	Kahnooj	1.24	86	*e*Pg	Pn	19 46 33.8	+1.1
LAR1	LAR	1.73	264	*e*Pn	Pn	19 46 41.7	+2.3
NGRK	Negar Kerman	1.80	12	*e*Pg	Pn	19 46 42.2	+1.4
NGRK				*e*Sg	Sn	19 47 04.9	+1.9
NGRK				*e*		19 47 06.3	
	comp=Z,6µm,1.0s						
KRBR	Kerman	2.14	11	*e*Pn	Pn	19 46 48.2	+2.9
TVBK	TV Kerman	2.14	11	*e*Pn	Pn	19 46 47.5	+2.1
TVBK				*e*		19 47 18.9	
	comp=Z,6µm,0.2s						
CHMN	Cheshme madani	2.26	28	*e*Pn	Pn	19 46 48.2	+1.2
CHMN				*e*		19 47 25.6	
	comp=Z,3µm,0.3s						
KHGB	Koh Gabri	2.50	3	*e*Pn	Pn	19 46 51.2	+1.0
KHGB				*e*		19 47 32.5	
	comp=Z,2µm,0.5s						
MSFE	Esma-Masafi	2.51	183	*e*Pn	Pn	19 46 51.5	+1.4
NAZ	Nazwa, Dubai	2.93	192	*e*Pn	Pn	19 46 55.9	0.0
HATD	Hatta, Dubai	3.04	183	*e*Pn	Pn	19 46 57.3	-0.1
FAQ	Al Faqa, Dubai	3.18	192	*e*Pn	Pn	19 47 00.0	+0.6
ASHO	Ashiyiah	3.18	184	*e*Pn	Pn	19 47 01.1	+1.6
ASUD	Al Ashush, Dub	3.35	195	*e*Pn	Pn	19 47 04.4	+2.7
IBAF	Bafgh	3.76	350	*e*Pn	Pn	19 47 08.7	+1.2
IMEH	Mehriz	3.81	338	*e*Pn	Pn	19 47 10.0	+1.8
IMEH				*e*		19 48 17.1	
	comp=Z,478nm,0.4s						
ALNE	Al Ain	3.83	188	*e*Pn	Pn	19 47 10.7	+2.3
ZHDN	Zahedan	4.24	68	*e*Pn	Pn	19 47 16.8	+2.7
CHBR	Chabahar	4.37	120	*e*Pn	Pn	19 47 17.3	+1.6
ISAD	Sadrabad	4.63	331	*e*Pn	Pn	19 47 21.8	+2.3
ISAD				*e*		19 47 53.3	
	comp=Z,347nm,0.7s						
YZKH	Yazd	4.74	342	*e*Pn	Pn	19 47 22.7	+1.8
BSRN	Basiran	4.75	30	*e*Pn	Pn	19 47 21.7	+0.5
NHDN	Nehbandan	4.79	42	*e*Pn	Pn	19 47 23.9	+2.3
WSAR	Wadi Sarin	5.07	155	Pn	Pn	19 47 27.3	+1.9
	comp=Z,1.4nm,0.3s,baz=339,slow=9.3,SNR=8.6						
WSAR				Sn	Sn	19 48 22.3	-0.6
	comp=Z,2.4nm,0.3s,baz=251,slow=18,SNR=6.3						
	comp=Z,4.3nm,0.4s						
KLNJ	Kolanjah	5.17	308	*e*Pn	Pn	19 47 28.7	+1.7
IRAM	Ramesheh	5.20	320	*e*Pn	Pn	19 47 29.4	+2.1
UMZA	Um Al Zommool	5.24	192	*e*Pn	Pn	19 47 29.3	+1.6
SRVN	Saravan	5.42	94	*e*Pn	Pn	19 47 34.0	+3.7
MZR	Muzera	5.48	208	*e*Pn	Pn	19 47 31.3	+0.3
ANAR	Anarak	5.75	338	*e*Pn	Pn	19 47 35.9	+1.1
NASN	Na'in	5.77	329	*e*Pn	Pn	19 47 36.7	+1.5
TABS	Tabas	5.80	7	*e*Pn	Pn	19 47 36.8	+1.3
IBRJ	Brojen	5.95	314	*e*Pn	Pn	19 47 39.8	+2.1
IZEF	Zefreh	6.07	326	*e*Pn	Pn	19 47 40.2	+0.8
SHRT	Shahrakht	6.70	30	*e*Pn	Pn	19 47 47.9	+0.1
IPIR	Pirpir	6.70	317	*e*Pn	Pn	19 47 49.6	+1.5
IKLH	Kolahrood	6.79	324	*e*Pn	Pn	19 47 50.7	+1.5
ISFB	Sefidab	7.34	333	*e*Pn	Pn	19 47 57.8	+1.2
SHRO	Shahrood	8.10	358	*e*Pn	Pn	19 48 08.7	+1.7
ASAO	Ashtian	8.56	323	*e*Pn	Pn	19 48 16.5	+3.1
BRTR	Keskin Array B	22.18	308	P	P	19 51 04.6	-0.6
	comp=Z,1.3nm,0.8s,baz=128,slow=12,SNR=6.2						
	comp=Z,1.3nm,0.8s						
AKTO	Aktyubinsk	22.57	3	P	P	19 51 07.5	-1.7
	comp=Z,2.1nm,0.8s,baz=214,slow=8.5,SNR=3.3						
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	27.79	40	P	P	19 51 57.6	-0.1
	comp=Z,0.5nm,0.3s,baz=220,slow=9.1,SNR=22						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	30.67	325	P	P	19 52 21.8	-1.4
	comp=Z,0.5nm,0.5s,baz=135,slow=9.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	33.39	31	P	P	19 52 46.2	-0.8
	comp=Z,0.6nm,0.2s,baz=238,slow=9.1,SNR=4.6						
	comp=Z,0.6nm,0.2s						
FINES	FINESS Array B	39.16	337	P	P	19 53 36.0	-0.2
	comp=Z,1.1nm,0.9s,baz=134,slow=10.0,SNR=1.8						
	comp=Z,1.1nm,0.9s						
SONM	Songino Array	43.42	49	P	P	19 54 12.4	+0.8
	comp=Z,0.2nm,0.5s,baz=245,slow=8.5,SNR=2.4						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	45.35	345	P	P	19 54 24.7	-1.8
	comp=Z,0.4nm,0.6s,baz=147,slow=10,SNR=1.9						
	comp=Z,0.4nm,0.6s						
ESDC	Sonseca Array	50.62	300	P	P	19 55 07.3	-0.5
	comp=Z,0.2nm,0.5s,baz=89,slow=7.1,SNR=1.7						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	52.81	266	P	P	19 55 23.7	-0.7
	comp=Z,5.4nm,0.5s,baz=59,slow=6.7,SNR=1.3						
	comp=Z,5.4nm,0.5s						
BOSA	Boshof	63.56	210	P	P	19 56 39.9	+0.4
	comp=Z,2.7nm,0.9s,baz=34,slow=8.8,SNR=4.0						
	comp=Z,2.7nm,0.9s						
YKA	Yellowknife Ar	89.66	356	P	P	19 59 06.0	-0.2
	comp=Z,0.4nm,0.9s,baz=1.4,slow=4.9,SNR=4.8						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	90.64	116	P	P	19 59 11.5	0.0
	comp=Z,0.2nm,0.7s,baz=295,slow=4.7,SNR=1.5						
	comp=Z,0.2nm,0.7s						

IDC ***02*** *20:00:22.3±1.1, 35°.20S×105°.45W, h0km, mb3.9/5, mbtmp3.9/5, MS3.6/14, Error ellipse: s-maj=36.4km s-min=29.3km az=81.0*

ISC 02 20:00:24.1±1.1**, 35°.2S**±0°.2×**105°.4W**±0°.2**, h10km, n25, σ0ˢ.88**/7**, mb3.9**/5**, MS3.7**/13**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	8.72	336	LR	LR	20 05 04.4	
	comp=Z,376nm,19.7s,baz=139,slow=32						
H03S2	Juan Fernandez	21.86	94	T	T	20 27 50.8	
	baz=256						
H03S1	Juan Fernandez	21.87	94	T	T	20 27 48.9	
	baz=256						
H03S3	Juan Fernandez	21.87	94	T	T	20 27 47.6	
	baz=256						
H03N2	Juan Fernandez	21.93	93	T	T	20 27 52.6	
	baz=265,slow=74						
H03N3	Juan Fernandez	21.93	93	T	T	20 27 52.9	
	baz=265,slow=74						
H03N1	Juan Fernandez	21.95	93	T	T	20 27 51.9	
	baz=265,slow=74						
PLCA	Paso Flores	27.92	112	P	P	20 06 14.7	+0.2
	2.7nm,1.1s,baz=278,slow=8.7,SNR=3.3						
PLCA				LR	LR	20 13 09.4	
	comp=Z,71nm,21.7s,baz=308,slow=28						
	2.7nm,1.1s						
USHA	Ushuaia	32.16	139	LR	LR	20 16 13.3	
	comp=Z,164nm,20.0s,baz=141,slow=30						
LVC	Limon Verde	34.15	78	LR	LR	20 17 12.6	
	comp=Z,99nm,20.6s,baz=225,slow=30						
NNA	Nana	34.71	55	LR	LR	20 17 45.3	
	comp=Z,183nm,19.1s,baz=212,slow=30						
LPAZ	La Paz	38.22	70	P	P	20 07 44.6	-0.4
	2.7nm,1.1s,baz=276,slow=9.2,SNR=5.2						
LPAZ				LR	LR	20 20 16.0	
	comp=Z,49nm,19.2s,baz=243,slow=31						
	2.7nm,1.1s						
PMSA	Palmer Station	38.56	153	LR	LR	20 19 21.8	
	comp=Z,154nm,18.4s,baz=288,slow=30						
CPUP	Villa Florida	41.92	91	LR	LR	20 23 33.7	
	comp=Z,36nm,18.4s,baz=244,slow=33						
ROSC	El Rosal	49.41	43	LR	LR	20 26 22.9	
	comp=Z,120nm,19.2s,baz=234,slow=32						
QSPA	South Pole Qui	55.00	180	P	P	20 09 55.6	+0.2
	1.9nm,0.8s,baz=91,slow=2.8,SNR=7.6						
	1.9nm,0.8s						
URZ	Urewera	60.41	242	LR	LR	20 33 16.4	
	comp=Z,66nm,18.6s,baz=211,slow=33						
RPZ	Rata Peaks	62.47	234	LR	LR	20 30 37.5	
	comp=Z,78nm,21.9s,baz=122,slow=29						
MDP	Montagnes des	63.73	62	LR	LR	20 35 43.4	
	comp=Z,102nm,19.4s,baz=210,slow=33						
SJG	San Juan	64.81	42	LR	LR	20 35 52.7	
	comp=Z,20nm,21.0s,baz=183,slow=33						
NVAR	Mina Array Bea	74.23	350	P	P	20 12 01.8	+0.5
	0.8nm,0.9s,baz=178,slow=6.3,SNR=4.0						
	0.8nm,0.9s						
PDAR	Pinedale Array	77.69	357	P	P	20 12 20.9	0.0
	0.1nm,0.3s,baz=170,slow=6.2,SNR=2.7						
	0.1nm,0.3s						
SUR	Sutherland	95.95	137	LR	LR	20 53 13.0	
	comp=Z,26nm,18.7s,baz=154,slow=33						
BRTR	Keskin Array B	147.40	70	PKPbc	PKPdf	20 20 06.7	+1.0
	0.5nm,0.9s,baz=268,slow=4.0,SNR=2.6						
CMAR	Chiang Mai Arr	152.71	239	PKPbc	PKPbc	20 20 20.3	-1.3
	0.1nm,0.4s,baz=176,slow=3.6,SNR=1.7						

NEIC ***02*** *20:03:47.8±1.2, 43°.77N±0°.03×105°.26W±0°.08, h0km±2km, ML3.5/54, Error ellipse: s-maj=10.7km s-min=3.0km az=67.0*

IDC ***02*** *20:03:48.3±0.9, 43°.93N×105°.67W, h0km, mb3.7/2, mbtmp3.4/8, ML3.0/5, MS2.9/4, Error ellipse: s-maj=24.8km s-min=7.3km az=146.0*

ISC 02 20:03:46.8±0.8**, 43°.75N**±0°.05×**105°.25W**±0°.06**, h0km, n51, σ1ˢ.13**/49**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.95	67	Pg	Pg	20 04 06.1	+1.2
K22A	Casper	1.44	221		Pn	20 04 13.3	-1.1
K22A				IAML		20 04 38.4	
	comp=N,868nm,0.3s						
K22A				IAML		20 04 40.7	
	comp=E,595nm,0.3s						
PHWY	Pilot Hill	2.45	184		Pn	20 04 29.1	+0.8
RWWY	Rawlins	2.52	216		Pn	20 04 29.7	+0.5
RWWY				IAML		20 05 06.7	
	comp=E,350nm,0.9s						
N23A	Red Feather La	2.90	191	Pn	Pn	20 04 35.4	+0.9
N23A				IAML		20 05 22.1	
	comp=N,131nm,0.4s						
N23A				IAML		20 05 32.1	
	comp=E,122nm,1.0s						
LAO	LASA Array	3.02	347		Pn	20 04 36.1	+0.2
LAO				IAML		20 05 34.2	
	comp=E,220nm,0.8s						
RLMT	Red Lodge	3.19	297		Pn	20 04 38.7	+0.3
RLMT				IAML		20 05 34.9	
	comp=E,112nm,0.7s						
RLMT				IAML		20 05 41.4	
	comp=E,94nm,1.0s						
PD31	Pinedale Array	3.30	254		Pn	20 04 40.6	+0.7
PDAR	Pinedale Array	3.30	254	Pn	Pn	20 04 40.5	+0.7
	comp=E,6.9nm,0.3s,baz=70,slow=16,SNR=67						
PDAR				Pg	Pb	20 04 46.2	-0.1
	comp=E,26nm,0.3s,baz=70,slow=18,SNR=69						
PDAR				Lg	Lg	20 05 24.0	
	comp=E,9.1nm,0.3s,baz=72,slow=33,SNR=3.7						
PDAR	Pinedale Array	3.30	254	Pn	Pn	20 04 40.1	+0.2
BW06	Boulder Array	3.30	254		Pn	20 04 40.7	+0.8
BW06				IAML		20 05 33.8	
	comp=E,89nm,0.7s						

OGNE	Ogallala	3.68	139	Pn	Pn	20 04 46.9	+2.0
GCMT	Greycliff	3.75	304		Pn	20 04 46.6	+0.6
LKWY	Lake	3.80	284		Pn	20 04 47.3	+0.5
LKWY				IAML		20 06 05.5	
	comp=E,64nm,1.1s						
LKWY				IAML		20 06 17.6	
	comp=E,63nm,1.2s						
LOHW	Long Hollow	3.89	270		Pn	20 04 49.3	+1.3
LOHW				IAML		20 05 58.7	
	comp=E,42nm,1.1s						
LOHW				IAML		20 06 15.6	
	comp=E,43nm,1.0s						
H17A	Grant Village	3.90	281		Pn	20 04 49.5	+1.4
H17A				IAML		20 05 53.9	
	comp=N,53nm,1.1s						
FLWY	Flagg Ranch	3.95	277		Pn	20 04 49.4	+0.5
FLWY				IAML		20 05 57.9	
	comp=N,80nm,1.1s						
ISCO	Idaho Springs	3.96	184	Pn	Pn	20 04 50.1	+1.1
MOOW	Moose Ponds	3.98	272		Pn	20 04 50.3	+1.0
YPP	Pitchstone Pla	4.04	279		Pn	20 04 50.8	+0.6
TPAW	Teton Pass	4.15	268		Pn	20 04 52.5	+0.9
TPAW				IAML		20 06 14.2	
	comp=N,59nm,1.0s						
TPAW				IAML		20 06 20.3	
	comp=N,90nm,1.0s						
YHH	Holmes Hill	4.16	286		Pn	20 04 53.1	+1.4
YHH				IAML		20 06 04.9	
	comp=N,41nm,1.1s						
O20A	White River Ci	4.25	213		Pn	20 04 54.4	+1.5
O20A				IAML		20 06 07.7	
	comp=E,86nm,1.0s						
O20A				IAML		20 06 16.5	
	comp=N,82nm,1.9s						
AHID	Auburn Hatcher	4.39	259		Pn	20 04 55.7	+0.9
AHID				IAML		20 06 08.7	
	comp=N,70nm,1.4s						
AHID				IAML		20 06 12.0	
	comp=N,64nm,0.9s						
YHL	Hebgen Lake	4.40	287		Pn	20 04 55.4	+0.3
YHL				IAML		20 06 11.2	
	comp=N,67nm,1.2s						
YHL				IAML		20 06 15.4	
	comp=E,81nm,1.3s						
DGMT	Dagmar	4.78	8	Pn	Pn	20 05 01.8	+1.8
Q24A	Divide	4.78	179		Pn	20 05 01.2	+0.9
Q24A				IAML		20 06 19.2	
	comp=N,20nm,0.9s						
Q24A				IAML		20 06 29.7	
	comp=E,41nm,0.9s						
BOZ	Bozeman (W)	4.91	294		Pn	20 05 02.2	+0.2
BOZ				IAML		20 06 21.2	
	comp=E,37nm,1.2s						
BOZ				IAML		20 06 21.7	
	comp=E,30nm,1.1s						
HWUT	Hardware Ranch	5.13	247	Pn	Pn	20 05 05.6	+0.6
KSCO	Kaye Shedlock'	5.13	157		Pn	20 05 05.9	+1.0
EGMT	Eagleton	5.31	325	Pn	Pn	20 05 07.3	0.0
LRM	Limekiln Ridge	5.53	294		Pn	20 05 11.9	+1.4
MCMT	McKenzie Canyo	5.56	284		Pn	20 05 11.0	0.0
P18A	Preston Nutter	5.56	224		Pn	20 05 11.9	+0.8
JLU	Jordanelle	5.58	238	Pn	Pn	20 05 10.9	-0.4
PV11	David Mesa, Pa	6.10	208		Pn	20 05 19.0	+0.7
PV13	Radium Mtn., P	6.21	207		Pn	20 05 21.4	+1.6
TMUT	Trail Mountain	6.31	227		Pn	20 05 22.5	+1.2
MSU	Marysvale	7.40	227	Pn	Pn	20 05 37.5	+1.3
JTMT	Jette	7.48	305	Pn	Pn	20 05 38.1	+0.9
ELK	Elko	8.00	251	Pn	Pn	20 05 46.8	+2.3
	comp=E,0.8nm,0.3s,baz=67,slow=11,SNR=12						
ELK				Lg	Lg	20 07 51.9	
	baz=174,slow=19,SNR=1.3						
	comp=E,1.3nm,0.3s						
ANMO	Albuquerque	8.84	186	LR	LR	20 09 06.0	
	comp=E,27nm,21.1s,baz=7.5,slow=35						
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 06 00.5	+0.9
	comp=E,1.0nm,0.3s,baz=241,slow=14,SNR=3.1						
ULM				Sn	Sn	20 07 41.0	-1.9
	comp=E,0.5nm,0.3s,baz=323,slow=13,SNR=2.3						
ULM				Lg	Lg	20 08 30.7	
	comp=E,0.5nm,0.3s,baz=132,slow=21,SNR=1.7						
	comp=E,2.1nm,0.3s						
NEW	Newport	9.41	303	Lg	Lg	20 08 33.4	
	comp=E,0.4nm,0.3s,baz=76,slow=19,SNR=1.6						
NEW				LR	LR	20 10 04.9	
	comp=E,102nm,21.6s,baz=76,slow=42						
I56US	NEWPORT INFRAS	9.42	303	i		20 59 50.0	
	baz=116,slow=316,SNR=3.5						
NVAR	Mina Array Bea	11.19	246	Pn	Pn	20 06 30.6	+2.5
	comp=E,0.1nm,0.3s,baz=48,slow=11,SNR=5.5						
	comp=E,0.5nm,0.6s						
TXAR	Lajitas Array	14.44	174	Pn	P	20 07 17.7	-2.0
	baz=9.9,slow=11,SNR=1.6						
TXAR				LR	LR	20 12 58.8	
	comp=E,36nm,20.9s,baz=318,slow=38						
	comp=E,0.2nm,0.7s						
YKA	Yellowknife Ar	19.56	347	P	P	20 08 14.4	-1.4
	comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=4.0						
	comp=E,0.2nm,0.5s						
FRB	Frobisher Bay	28.88	33	LR	LR	20 21 22.0	
	comp=E,66nm,19.2s,baz=210,slow=36						
ARCES	ARCESS Array B	61.40	18	P	P	20 14 04.2	0.0
	comp=E,0.6nm,0.6s,baz=335,slow=8.3,SNR=3.8						
	comp=E,0.6nm,0.6s						
MKAR	Makanchi Array	89.59	355	P	P	20 16 46.1	0.0
	comp=E,0.3nm,0.7s,baz=13,slow=5.2,SNR=3.7						
	comp=E,0.3nm,0.7s						

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*IDC **02** 20:03:52.7±1.6, 27°.95N×56°.30E, h0^{km}, mb3.1/2, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=35.5km s-min=32.5km az=20.0*

*TEH **02** 20:03:56.2, 28°.02N×56°.36E, h12^{km}, ML3.2*

ISC 02 20:03:56.0±0.7**, 27°.95N**±0°.03×**56°.34E**±0°.05**, h10^{km}, n27,** σ**1^{s}.93**/31**, mb3.2**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.53	160	eSg	Sb	20 04 16.6	+1.5
IBND				ePg	Pb	20 04 08.4	+1.0
IBND				e		20 04 26.8	
	comp=Z,22μm,0.3s						
GENO	Geno	0.57	195	eSg	Sb	20 04 18.7	+2.3
GENO				ePg	Pg	20 04 08.6	+1.5
GENO				e		20 04 22.2	
	comp=Z,19μm,0.3s						
KHNJ	Kahnooj	1.21	90	ePg	Pb	20 04 18.8	-0.2
KHNJ				eSg	Sn	20 04 36.4	+0.9
NGRK	Negar Kerman	1.72	11	ePn	Pb	20 04 27.5	-0.5
NGRK				e		20 04 52.8	
	comp=Z,3μm,0.5s						
LAR1	LAR	1.76	261	ePn	Pb	20 04 29.3	+0.8
LAR1				e		20 05 06.1	
	comp=Z,6μm,0.5s						
KRBR	Kerman	2.06	10	ePg	Pb	20 04 33.3	-0.4
TVBK	TV Kerman	2.06	10	e	Sb	20 05 06.0	+6.4
	comp=Z,4μm,0.2s						
CHMN	Cheshme madani	2.17	29	ePn	Pb	20 04 34.6	-1.1
CHMN				e		20 05 10.0	
	comp=Z,2μm,0.3s						
KHGB	Koh Gabri	2.42	3	ePn	Pb	20 04 37.2	-2.6
KHGB				e		20 05 17.8	
	comp=Z,834nm,0.4s						
IMEH	Mehriz	3.74	337	ePn	Pn	20 04 55.2	+1.1
IMEH				e		20 04 56.7	
	comp=Z,159nm,0.2s						
CHBR	Chabahar	4.38	121	ePn	Pn	20 05 03.1	+0.4
ISAD	Sadrabad	4.57	330	ePn	Pn	20 05 07.0	+1.5
BSRN	Basiran	4.67	30	ePn	Pn	20 05 08.2	+1.4
YZKH	Yazd	4.68	342	ePn	Pn	20 05 08.1	+1.3
IKOO	Kooshah	5.02	27	ePn	Pn	20 05 12.9	+1.3
WSAR	Wadi Sarin	5.13	156	Pn	Pn	20 05 12.3	-0.6
	comp=Z,0.4nm,0.3s,baz=333,slow=6.8,SNR=9.0						
WSAR				Sn	Sn	20 06 08.9	-3.3
	comp=Z,0.7nm,0.3s,baz=187,slow=11,SNR=5.7						
	comp=Z,2.2nm,0.6s						
KLNJ	Kolanjah	5.14	307	ePn	Pn	20 05 14.0	+0.6
IRAM	Ramesheh	5.16	319	ePn	Pn	20 05 14.7	+1.2
ANAR	Anarak	5.69	337	ePn	Pn	20 05 21.7	+1.0
NASN	Na'in	5.71	329	ePn	Pn	20 05 22.1	+0.8
TABS	Tabas	5.72	7	ePn	Pn	20 05 22.6	+1.5
IZEF	Zefreh	6.02	326	ePn	Pn	20 05 25.8	+0.4
IPIR	Pirpir	6.67	316	ePn	Pn	20 05 35.0	+0.7
KHMZ	Khomeyn	7.96	318	ePn	Pn	20 05 52.9	+0.9
BRTR	Keskin Array B	22.15	308	P	P	20 08 51.8	-0.3
	comp=Z,0.4nm,0.6s,baz=105,slow=11,SNR=2.7						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	27.71	40	P	P	20 09 42.5	-1.9
	comp=Z,0.2nm,0.4s,baz=222,slow=9.6,SNR=5.5						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	52.84	265	P	P	20 13 08.7	-3.5
	comp=Z,7.1nm,0.4s,baz=55,slow=7.9,SNR=1.7						

IDC 02 20:08:13.7±1.7**, 27°.98N**×**56°.22E, h0^{km}, mb3.2**/2**, mbtmp3.3**/3**, ML2.6**/1**, Error ellipse: s-maj=37.1km s-min=33.0km az=25.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	5.20	155	Pn	Pn	20 09 33.8	+1.0
	0.2nm,0.3s,baz=326,slow=15,SNR=5.1						
WSAR				Sn	Sn	20 10 28.5	-5.0
	0.6nm,0.3s,baz=111,slow=2.4,SNR=2.5						
	1.9nm,0.6s						
BRTR	Keskin Array B	22.05	308	P	P	20 13 11.4	+1.2
	0.7nm,0.8s,baz=125,slow=12,SNR=3.4						
	0.7nm,0.8s						
MKAR	Makanchi Array	27.76	40	P	P	20 14 03.8	-0.3
	0.3nm,0.6s,baz=224,slow=8.0,SNR=3.6						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	52.74	265	P	P	20 17 29.7	-1.0
	4.7nm,0.3s,baz=71,slow=7.6,SNR=1.8						

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*IDC **02** 20:12:27.6±7.8, 49°.14N×155°.83E, h566^{km}±31^{km}, mb2.5/2, mbtmp3.2/3, Error ellipse: s-maj=154.8km s-min=69.1km az=141.0*

*KRSC **02** 20:12:41.7±1.1, 51°.10N×154°.96E, h529^{km}±12^{km}, ML4.0*

ISC 02 20:12:38.9±2.4**, 50°.8N**±0°.3×**155°.0E**±0°.2**, h550^{km}, n14,** σ**2^{s}.83**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	2.17	60	eS	S	20 14 44.8	-2.0
RUS	Russkaya	2.73	51	eP	P	20 13 54.2	+2.1
PETK	Petropavlovsk-	2.86	34	P	P	20 13 51.4	-1.5
	1.1nm,0.6s,baz=204,slow=2.5,SNR=18						
PETK				S	S	20 15 00.6	+7.0
	1.3nm,1.0s,baz=219,slow=14,SNR=1.1						
DALK	Dalny	3.23	44	eP	P	20 13 56.4	+1.3
DALK				eS	S	20 14 54.7	-2.9
KOK	Koryaka	3.36	40	eP	P	20 13 57.9	+1.7
SMAR	Somma	3.41	42	eP	P	20 13 58.8	+2.2
SDLR	Sedlovina	3.46	42	eP	P	20 13 58.7	+1.9
SPN	Mys Shipunski	3.87	51	eS	S	20 15 03.8	-1.9
TUMR	Tumrok	5.47	32	eP	P	20 14 14.5	+1.8
TUMD	Tumrok D	5.49	34	eP	P	20 14 13.4	+0.6
MKZ	Mys Kozlova	5.56	44	eP	P	20 14 15.4	+2.1
MKZ				eS	S	20 15 28.0	-2.8
KBTR	Krutoberegovo	7.15	37	eP	P	20 14 29.4	+1.3
MKAR	Makanchi Array	46.31	295	P	P	20 20 11.6	-3.8
	0.1nm,0.4s,baz=70,slow=7.2,SNR=4.1						
	0.1nm,0.4s						
FINES	FINESS Array B	60.94	335	P	P	20 21 56.8	-1.6
	0.4nm,0.6s,baz=28,slow=6.3,SNR=5.0						
	0.4nm,0.6s						

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*ISK **02** 20:16:25.3, 42°.47N×26°.07E, h5^{km}, ML2.7/13*

*DDA **02** 20:16:27.9±0.0, 42°.35N×26°.18E, h7^{km}±5^{km}, ML2.5*

ISC 02 20:16:25.7±1.2**, 42°.42N**±0°.02×**26°.08E**±0°.03**, h10^{km}**±10^{km}**, n42,** σ**1^{s}.23**/57**, 13C-17D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.38	82	PG	Pg	20 16 33.3	+0.1
JMB				SG	Sg	20 16 38.7	+0.5
EDRB	Edirne	0.76	139	PG	Pn	20 16 41.6	-0.9
EDRB				SG	Sn	20 16 52.3	-1.6
KIRK	Kırklareli	0.99	130	P	Pn	20 16 45.6	-0.1
KIRK				S	Sb	20 16 58.4	+0.3
PLD	Plovdiv	1.07	253	PG	Pg	20 16 46.3	+0.1
ARMN	Kirklareli, Me	1.15	118	P	Pg	20 16 47.5	-0.2
ARMN				S	Sn	20 17 04.0	+0.3
RAZG	Razgrad	1.19	15	⇓S	Sb	20 17 03.6	-0.3
RDO	Rodhopi	1.33	198	PN	Pg	20 16 51.3	0.0
PHSR	Pinarhisar	1.33	126	PN	Pg	20 16 51.8	+0.5
ZIMR		1.34	337	⇑S	Sb	20 17 04.1	-4.2
UKOP	Uzunkopru-Edir	1.35	162	PN	Pg	20 16 52.2	+0.5
ALN	Alexandroupoli	1.52	181	PN	Pb	20 16 54.4	+0.4
VIZE	Kirklareli, Vi	1.56	122	P	Pb	20 16 54.8	+0.1
VIZE				S	Sg	20 17 15.4	-0.5
VIZE				i AML	AML	20 17 19.0	
	comp=E,55nm,0.4s						
KESN	Edirne-Kesan	1.65	164	P	Pn	20 16 55.6	+0.5
KESN				S	Sg	20 17 19.2	+0.3
KESN				i AML	AML	20 17 23.0	
	comp=N,74nm,0.3s						
KESN				i AML	AML	20 17 23.0	
	comp=E,109nm,0.4s						
ENEZ	Enez	1.68	178	PN	Pb	20 16 56.7	0.0
CAVK	Edirne/Enez-Ca	1.73	178	P	Pg	20 17 00.1	+1.3
CAVK				i AML	AML	20 17 28.0	
	comp=E,52nm,0.9s						
CAVK				i AML	AML	20 17 33.0	
	comp=N,87nm,1.1s						
ERIK	Erikli-Kesan	1.78	169	PN	Pb	20 16 58.1	-0.2
SGRR	Singureni	1.81	358	⇑P	Pb	20 16 58.8	-0.1
SGRR				⇓S	Sn	20 17 20.6	+0.8
COPA	Copaceanca	1.83	340	⇑P	Pn	20 16 57.5	+0.3
COPA				⇑S	Sn	20 17 19.5	-0.9
MAR3	Marsite Statio	1.91	151	PN	Pb	20 17 00.2	-0.4
RKY	Sarkoy-Tekirda	1.92	154	PN	Pb	20 17 00.2	-0.6
BUC1	Bucharest	1.93	359	⇓S	Sn	20 17 24.6	+1.7
MAR6	Marsite Statio	1.93	152	PN	Pb	20 17 00.5	-0.5
RASA	Rasa	1.96	23	⇓P	Pb	20 17 01.9	+0.5
RASA				⇓S	Sb	20 17 26.6	+0.6
SLVT	Silivri	1.99	126	PN	Pb	20 17 01.1	-0.9
VLAD	Vladila	2.00	323	⇓S	Sn	20 17 24.0	-0.6
GELI	Tayfur-Gelibol	2.04	171	PN	Pb	20 17 02.4	-0.4
VTS	Vitosha	2.11	276	⇑P	Pn	20 17 03.1	+1.9
VTS				⇓S	Sn	20 17 29.5	+1.9
ICOR	Ion Corvin	2.12	36	⇓P	Pb	20 17 04.5	+0.3
ICOR				⇓S	Sb	20 17 31.7	+1.2
LEHL	Lehliu	2.13	14	⇓S	Sb	20 17 31.0	+0.2
MRMT	Marmara Adasi	2.14	147	PN	Pb	20 17 03.2	-1.4
CTKS	Kestanelik-??a	2.17	122	PN	Pb	20 17 03.5	-1.5
SULR		2.26	3	⇓S	Sn	20 17 32.5	+1.3
TLBR	Topalu	2.56	33	⇓S	Sb	20 17 43.2	-0.2
HARR	Harsova	2.64	30	⇓P	Pb	20 17 12.7	-0.4
TIRR	Tirgusor	2.66	39	⇑P	Pb	20 17 13.4	0.0
TIRR				⇑S	Sb	20 17 45.8	-0.2
BLKB	Belogradchik	2.77	297	⇑S	Sn	20 17 44.0	+0.2
TPGR	Topolog	2.97	34	⇓P	Pb	20 17 17.1	-1.7
TPGR				⇓S	Sb	20 17 53.3	-1.9
MLR	Muntele Rosu	3.07	358	⇓P	Pn	20 17 16.1	+1.6
VOIR		3.11	347	⇑S	Sn	20 17 52.0	-0.1
CFR	Carcaliu	3.14	28	⇓P	Pb	20 17 18.8	-2.8
CFR				⇑S	Sn	20 17 56.3	+3.6
HERR	Herculane	3.62	314	⇑P	Pn	20 17 20.8	-1.1
BZS	Buzias	4.54	316	⇑P	Pn	20 17 34.1	-0.3
BZS				⇑S	Sn	20 18 25.7	-1.5

IDC 02 20:24:41.8±1.7**, 26°.29N**×**67°.37E, h0^{km}, mb3.4**/4**, mbtmp3.5**/4**, MS3.2**/3**, Error ellipse: s-maj=42.4km s-min=29.2km az=1.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.64	26	P	P	20 29 53.5	-1.1
	0.3nm,0.6s,baz=214,slow=11,SNR=4.5						
MKAR				LR	LR	20 41 30.0	
	comp=Z,19nm,21.6s,baz=178,slow=43						
	0.3nm,0.6s						
CMAR	Chiang Mai Arr	30.16	98	P	P	20 30 53.5	-0.3
	0.4nm,0.6s,baz=287,slow=9.3,SNR=6.6						
	0.4nm,0.6s						
SONM	Songino Array	37.31	44	P	P	20 31 56.7	+0.9
	0.5nm,0.7s,baz=254,slow=7.3,SNR=4.6						
	0.5nm,0.7s						
ARCES	ARCESS Array B	49.65	342	P	P	20 33 34.8	+0.1
	1.1nm,0.9s,baz=140,slow=7.1,SNR=4.9						
	1.1nm,0.9s						
ESDC	Sonseca Array	59.88	302	LR	LR	21 01 51.0	
	comp=Z,42nm,21.9s,baz=219,slow=37						
JHJ	Hachijo jima 2	62.15	65	LR	LR	21 04 54.4	
	comp=Z,49nm,21.8s,baz=98,slow=39						
TORD	Torodi Ar. Bea	62.63	272	P	P	20 35 08.3	-0.1
	3.6nm,0.3s,baz=62,slow=6.1,SNR=1.5						

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*IDC **02** 20:27:27.7±2.0, 14°.51N×94°.23W, h0^{km}, mb3.6/5, mbtmp3.6/7, ML3.8/2, MS3.1/3, Error ellipse: s-maj=48.2km s-min=37.4km az=55.0*

*MEX **02** 20:27:30.4±1.1, 14°.32N×94°.58W, h16^{km}±30^{km}, MD4.1*

*NEIC **02** 20:27:31.7±1.8, 14°.75N±0°.04×94°.38W±0°.05, h10^{km}±1^{km}, mb4.3/22, Md4.1/36(MEX), Error ellipse: s-maj=10.6km s-min=3.3km az=134.0*

ISC 02 20:27:27.9±2.5**, 14°.62N**±0°.07×**94°.52W**±0°.03**, h0^{km}**±15^{km}**, n61,** σ**2^{s}.20**/78**, mb4.2**/16**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.65	49		Pn	20 27 58.6	+0.4
PCIG					Sg	20 28 21.0	-0.1
PCIG		1.65	49	i P	Pn	20 27 58.6	+0.4
PCIG				i S	Sg	20 28 21.0	-0.1
HUIG	Huatulco	1.92	307		Pn	20 28 00.4	-1.4
HUIG					Sn	20 28 20.9	-5.7
HUIG	Huatulco	1.92	307	eP	Pn	20 28 00.4	-1.4
HUIG				eS	Sn	20 28 20.9	-5.7
PATR	El Naranjo	2.26	77	eP	Pn	20 28 06.1	-0.6
PATR				eS	Sn	20 28 32.7	-2.8
PAVE	Pavencul	2.33	76	eP	Pn	20 28 07.6	-0.2
PAVE				eS	Sn	20 28 35.3	-1.9
CHUJ	Union Juarez	2.38	78	eP	Pn	20 28 07.9	-0.4
CHUJ				i S	Sn	20 28 36.7	-1.6
CMIG	Matias Romero	2.48	352	Pn	Pn	20 28 10.6	+1.0
	30nm,0.3s,baz=171,slow=13,SNR=251						
CMIG				Sn	Sn	20 28 39.4	-1.2
	46nm,0.3s,baz=173,slow=15,SNR=5.7						
CMIG				LR	LR	20 29 15.9	
	comp=Z,144nm,21.1s,baz=162,slow=41						
	60nm,0.3s						
TGIG		2.53	32		Pb	20 28 12.4	-1.9
TGIG					Sb	20 28 43.7	-2.3
TGIG		2.53	32	eP	Pb	20 28 12.4	-1.9
TGIG				eS	Sb	20 28 43.7	-2.3
UXUV	UXUV	2.71	8	eP	Pn	20 28 15.0	+2.3
UXUV				i S	Sb	20 28 48.2	-2.7
RTAL	Retalhuleu	2.73	92	Pn	Pn	20 28 12.8	-0.2
CCIG	Comitan	2.83	54	Pn	Pn	20 28 15.9	+1.4
CCIG	Comitan	2.83	54		Sb	20 28 51.5	-3.1
CCIG	Comitan	2.83	54	eP	Pb	20 28 17.5	-1.9
CCIG				eS	Sb	20 28 51.5	-3.1
PEIG	Puerto Escondi	2.88	299	eP	Pn	20 28 13.6	-1.6
PEIG				i S	Sn	20 28 43.8	-6.8
HUEH	Huehuetenango	2.99	76	Pn	Pn	20 28 18.3	+1.5
VHO	Vista Hermosa	3.24	319	eP	Pn	20 28 21.8	+1.6
VHO				eS	Sn	20 28 57.7	-2.0
NEUV	Arroyo Zacate	3.31	338	eP	Pn	20 28 22.6	+1.5
NEUV				eS	Sn	20 29 00.0	-1.1
YOIG	Yosondua	3.67	308	eP	Pn	20 28 27.7	+1.5
YOIG				eS	Sn	20 29 06.7	-3.6
PNIG	Pinotepa	3.90	297		Pn	20 28 28.8	-0.4
PNIG					Sn	20 29 07.6	-8.1
PNIG	Pinotepa	3.90	297	eP	Pn	20 28 28.8	-0.4
PNIG				eS	Sn	20 29 07.6	-8.1
TXIG	Tlaxiaco	4.08	310	eP	Pn	20 28 34.0	+2.2
TXIG				eS	Sn	20 29 14.5	-5.9
TOIG	Toxpalan	4.23	325	eP	Pn	20 28 38.0	+4.2
TOIG				i S	Sn	20 29 23.7	-0.3
HLIG	Huajuapan de L	4.49	316	eP	Pb	20 28 46.3	-1.5
HLIG				eS	Sn	20 29 26.1	-4.4
FTIG	Fresnillo de T	4.77	314	eP	Pn	20 28 43.9	+2.7
FTIG				eS	Sn	20 29 34.0	-3.2
MTO3	Montecristo	5.00	92	Pn	Pn	20 28 46.4	+2.0
ESQI	Esquipulas	5.01	90	Pn	Pn	20 28 42.3	-2.2
PETF	Flores	5.02	62	Pn	Pn	20 28 45.6	+1.1
JAUV	Jalcomulco	5.20	335	eP	Pn	20 28 46.9	-0.1
JAUV				eS	Sn	20 29 42.8	-5.0
TXAR	Lajitas Array	16.91	331	P	P	20 31 29.2	+1.0
	0.1nm,0.3s,baz=150,slow=15,SNR=9.6						
	1.1nm,0.9s						
TX31	Lajitas Ar. Si	16.91	331	P	Pn	20 31 28.9	+2.7
TX32	Lajitas Array	16.91	331		Pn	20 31 28.6	+2.4
MIAR	Mount Ida	19.86	2	P	P	20 32 00.1	-0.5
255A	Hazlehurst	20.44	31	P	P	20 32 06.1	-0.8
AMTX	Amarillo	21.18	344	P	P	20 32 17.1	+2.0
AMTX				IAmb	IAmb	20 32 21.2	
	comp=Z,10nm,0.7s						
FCAR	Ozark Folk Cen	21.29	5	P	P	20 32 16.9	+0.8
121A	Cookes Peak, D	21.55	328	P	P	20 32 21.3	+2.3
S39A	Bolivar	23.00	2	P	P	20 32 35.5	+1.2
S39A				IAmb	IAmb	20 32 36.7	
	comp=Z,8.1nm,0.8s						
TKL	Tuckaleechee C	23.06	23	P	P	20 32 34.5	-0.5
	comp=Z,3.2nm,0.7s,baz=205,slow=12,SNR=4.6						
	comp=Z,3.2nm,0.7s						
TKL	Tuckaleechee C	23.06	23	IAmb	IAmb	20 32 35.6	
	comp=Z,6.8nm,1.1s						
U49A	Red Boiling Sp	23.16	18		P	20 32 36.1	+0.1
U49A				IAmb	IAmb	20 32 37.1	
	comp=Z,6.8nm,0.8s						
R40A	Maddies Statio	23.66	4	P	P	20 32 41.6	+0.5
R40A				IAmb	IAmb	20 32 42.5	
	comp=Z,6.7nm,0.9s						
S51A	Beattyville	24.89	21	P	P	20 32 51.4	-1.1
S51A				IAmb	IAmb	20 32 59.1	
	comp=Z,14nm,0.9s						
P40A	Paris	24.91	5	P	P	20 32 52.4	-0.2
P40A				IAmb	IAmb	20 32 53.6	
	comp=Z,8.6nm,0.6s						
P48A	Milroy	26.00	16	P	P	20 33 01.4	-1.1
P48A				IAmb	IAmb	20 33 02.4	
	comp=Z,8.0nm,0.7s						
N38A	Joes South For	26.10	2		P	20 33 04.0	+0.6
O49A	Covington	26.98	17	P	P	20 33 10.9	-0.5
O49A				IAmb	IAmb	20 33 11.8	
	comp=Z,9.9nm,0.7s						
SCIA	State Center	27.21	2	P	P	20 33 14.2	+0.8
L40A	Anamosa	27.49	5	P	P	20 33 15.7	-0.2
L40A				IAmb	IAmb	20 33 17.0	
	comp=Z,6.6nm,0.6s						
JFWS	Jewell Farm	28.43	7	P	P	20 33 24.8	+0.4
L48A	N Adams	28.59	16	P	P	20 33 25.5	-0.2
NVAR	Mina Array Bea	31.68	323	P	P	20 33 56.4	+3.0
	comp=Z,0.2nm,0.4s,baz=121,slow=8.5,SNR=3.5						
NVAR				LR	LR	20 47 49.0	
	comp=Z,74nm,18.0s,baz=198,slow=38						
	comp=Z,0.2nm,0.4s						
SADO	Sadowa	32.76	20	LR	LR	20 48 20.4	
	comp=Z,32nm,18.1s,baz=227,slow=38						
PLID	Pearl Lake	35.40	333	P	P	20 34 27.7	+2.0
PLID				IAmb	IAmb	20 34 30.6	
	comp=Z,1.7nm,0.8s						
F10A	Beach Ranch, E	36.63	333	P	P	20 34 39.0	+2.9
F10A				IAmb	IAmb	20 34 40.7	
	comp=Z,2.1nm,0.7s						
YKA	Yellowknife Ar	49.89	348	P	P	20 36 24.0	+1.1
	comp=Z,0.4nm,0.7s,baz=153,slow=7.3,SNR=7.2						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	61.32	337	P	P	20 37 46.2	+1.2
	comp=Z,0.3nm,0.6s,baz=134,slow=7.5,SNR=3.2						
	comp=Z,0.3nm,0.6s						
ESDC	Sonseca Array	81.24	51	P	P	20 39 45.9	-0.2
	comp=Z,0.6nm,0.8s,baz=275,slow=6.3,SNR=3.1						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	133.18	256	PKP	PKPdf	20 46 45.9	-0.7
	comp=Z,0.3nm,1.0s,baz=84,slow=2.5,SNR=4.9						
CMAR	Chiang Mai Arr	144.56	338	PKP	PKPab	20 47 05.8	+0.1
	comp=Z,0.3nm,0.3s,baz=18,slow=4.0,SNR=2.7						

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*IDC **02** 20:33:03.7±8.5, 16°.33S×168°.08E, h148^{km}±75^{km}, mb3.4/2, mbtmp3.8/3, Error ellipse: s-maj=76.4km s-min=40.6km az=178.0*

*NOU **02** 20:33:10.2, 17°.03S×168°.54E, h209^{km}, MLv3.6/10, Vanuatu Islands*

*NEIC **02** 20:33:10.4±2.3, 16°.93S±0°.05×168°.3E±0°.2, h209^{km}±11^{km}, mb4.3/6, Error ellipse: s-maj=23.7km s-min=6.2km az=99.0*

ISC 02 20:33:09.8±1.5**, 16°.97S**±0°.07×**168°.3E**±0°.2**, h200^{km}, n20,** σ**1^{s}.88**/22**, mb4.2**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.77	190	P	Pn	20 33 40.4	+2.3
RTV	Rentapao	0.83	173	P	Pn	20 33 40.4	+1.9
SANVU	Saraoutou	1.85	324	Pn	Pn	20 33 48.8	+1.9

SANVU	Saraoutou	1.85	324	P	Pn	20 33 49.2	+2.3
LIFNC	LIFOU	3.93	195	Pn	Pn	20 34 10.4	-0.3
LIFNC	LIFOU	3.93	195	P	Pn	20 34 11.6	+0.9
MARNC	Mare, Loyalty	4.50	183	Pn	Pn	20 34 17.4	-0.4
MARNC	Mare, Loyalty	4.50	183	P	Pn	20 34 17.2	-0.6
YATNC	Mamie plateau,	5.24	195	P	Pn	20 34 28.0	+0.7
	20nm,1.7s						
DZM	Mont Dzumac	5.38	199	P	Pn	20 34 30.3	+1.2
	2.7nm,0.4s,baz=21,slow=15,SNR=26						
DZM				S	Sn	20 35 35.7	+3.8
	6.3nm,1.0s,baz=148,slow=22,SNR=1.5						
DZM	Mont Dzumac	5.38	199	P	Pn	20 34 30.3	+1.2
PINNC	Pines Island,	5.68	188	Pn	Pn	20 34 35.9	+3.0
WR0	Warramunga Arr	32.15	259	P	P	20 39 17.3	-1.6
WR0				IAmb	IAmb	20 40 13.9	
	comp=Z,25nm,1.8s						
WB0	Warramunga Arr	32.29	260	P	P	20 39 18.4	-1.7
WB0				IAmb	IAmb	20 40 09.9	
	comp=Z,32nm,1.9s						
WRA	Warramunga Arr	32.34	259	P	P	20 39 18.2	-2.3
	comp=Z,0.2nm,0.3s,baz=85,slow=8.3,SNR=11						
WRA				PcP	PcP	20 42 02.2	-1.4
	comp=Z,0.1nm,0.6s,baz=83,slow=3.9,SNR=1.3						
	comp=Z,0.2nm,0.3s						
AS31	Alice Springs	32.90	253	P	P	20 39 23.8	-1.6
AS31				IAmb	IAmb	20 39 24.7	
	comp=Z,2.2nm,1.1s						
ASAR	Alice Springs	32.90	253	P	P	20 39 23.9	-1.4
	comp=Z,2.3nm,0.4s,baz=79,slow=9.1,SNR=93						
	comp=Z,2.3nm,0.4s						
KNRA	Kununurra	37.95	266	P	P	20 40 07.0	-1.4
FITZ	Fitzroy Crossi	40.65	262	P	P	20 40 30.0	-0.8
FITZ				IAmb	IAmb	20 41 20.3	
	comp=Z,11nm,1.5s						
ARCES	ARCESS Array B	122.66	345	PKP	PKPdf	20 51 40.0	-1.0
	comp=Z,0.3nm,0.3s,baz=63,slow=1.9,SNR=10						

*JMA **02** 20:47:29.9±0.2, 24°.1N±1°.0×12°2E±°, h19^{km}±1^{km}, MV2.9/10, TAIWAN REGION*
*TAP **02** 20:47:30.8, 24°.23N×121°.70E, h12^{km}, ML3.6, B*
ISC 02 20:47:31.0±0.8, **24°.23N**±0°.01×**121°.70E**±0°.02, **h12**^{km}±4^{km}, **n95, σ0^{s}.74**/155, **1C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.09	23	*i* P	Pg	20 47 33.6	-0.2
	baz=32						
EHP				S	Sg	20 47 35.9	+0.1
	baz=32						
ETL	Fush Village	0.10	227	*i* P	Pg	20 47 33.8	-0.1
	baz=223						
ETL				*i* S	Sg	20 47 36.1	+0.2
	baz=223						
NACB	Ninganchiao	0.11	242	⇓*i*P	Pg	20 47 33.9	-0.1
	baz=239						
NACB				*i* S	Sg	20 47 36.2	+0.1
	baz=239						
TWD	Chiawan	0.18	214	*i* P	Pg	20 47 34.8	-0.2
	baz=209						
TWD				*i* S	Sg	20 47 37.7	0.0
	baz=209						
ENA	Nanau	0.20	10	*i* P	Pg	20 47 35.2	-0.2
	baz=14						
ENA				*i* S	Sg	20 47 38.8	+0.3
	baz=14						
ETLH	Xiulin Townshi	0.20	264	⇓*i*P	Pg	20 47 35.4	0.0
	baz=263						
ETLH				*i* S	Sg	20 47 38.9	+0.3
	baz=263						
EWUT	Wuta	0.23	18	*i* P	Pg	20 47 35.6	-0.3
	baz=19						
EWUT				*e*S	Sg	20 47 39.0	-0.2
	baz=19						
HWA	Hwalien	0.27	200	*i* P	Pg	20 47 36.9	+0.4
	baz=196						
HWA				*e*S	Sg	20 47 41.5	+1.3
	baz=196						
ETM	Tongmen	0.32	216	*i* P	Pg	20 47 37.3	-0.3
	baz=215						
ETM				S	Sg	20 47 42.3	+0.3
	baz=215						
LATG	Datong	0.35	332	⇓*i*P	Pg	20 47 38.2	+0.1
	baz=333						
LATG				*i* S	Sb	20 47 43.5	-1.2
	baz=333						
NNSB	Datong	0.35	305	⇓*i*P	Pb	20 47 38.5	-0.9
	baz=305						
NNSB				*i* S	Sb	20 47 43.9	-1.1
	baz=305						
NNS	Nan Shan	0.37	305	⇓*i*P	Pb	20 47 38.6	-1.0
	baz=306						
NNS				*e*S	Sb	20 47 44.3	-1.1
	baz=306						
TEYL	Yanliau Villag	0.37	195	*e*P	Pg	20 47 38.2	-0.2
	baz=195						
TEYL				*e*S	Sb	20 47 46.1	+0.8
	baz=195						
TWC	Suao	0.40	19	⇓*i*P	Pg	20 47 38.9	-0.2
	baz=22						
TWC				*e*S	Sg	20 47 44.0	-0.4
	baz=22						
NDS	Dongshan	0.41	2	⇓*i*P	Pg	20 47 39.1	0.0
	baz=3.0						
NDS				S	Sg	20 47 44.6	+0.1
	baz=3.0						
WHF	Hehuan Shan	0.41	258	⇓*i*P	Pg	20 47 39.3	0.0
	baz=257						
WHF				*e*S	Sb	20 47 45.1	-1.7
	baz=257						
NDT	Datong Townshi	0.41	335	⇓*i*P	Pg	20 47 39.6	+0.3
	baz=336						
NDT				S	Sb	20 47 45.5	-1.1
	baz=336						
FUSS	Fushou	0.42	273	⇓*e*P	Pg	20 47 38.6	-0.8
	baz=272						
FUSS				*e*S	Sb	20 47 44.7	-2.3
	baz=272						
ENTT	Nioudou	0.43	343	⇓*i*P	Pg	20 47 39.7	+0.1
	baz=345						
ENTT				S	Sg	20 47 45.9	+0.6
	baz=345						
ESL	Shilin	0.48	211	P	Pg	20 47 39.9	-0.6
	baz=209						
ESL				*e*S	Sg	20 47 47.8	+0.9
	baz=209						
TWT	Tachien	0.48	273	*e*P	Pb	20 47 41.2	-0.4
	baz=272						
TWT				*e*S	Sb	20 47 48.1	-0.6
	baz=272						
TWE	Neicheng	0.49	356	⇓P	Pg	20 47 40.8	0.0
	baz=359						
TWE				*e*S	Sg	20 47 47.7	+0.4
	baz=359						
TDCB	Techi	0.50	273	⇓P	Pb	20 47 41.2	-0.7
	baz=273						
TDCB				*e*S	Sb	20 47 47.9	-1.3
	baz=273						
CHGB	Renai	0.51	251	⇓*i*P	Pb	20 47 41.3	-0.8
	baz=250						
CHGB				*e*S	Sb	20 47 48.4	-1.2
	baz=250						
YHNB	Yeheng	0.53	326	P	Pb	20 47 41.9	-0.5
YHNB	Yeheng	0.53	326	⇓*i*P	Pb	20 47 41.8	-0.5
	baz=326						
YHNB				*e*S	Sb	20 47 49.3	-0.8
	baz=326						
ILA	Ilan	0.54	4	*e*P	Pg	20 47 41.9	+0.3
	baz=6.0						
ILA				*e*S	Sg	20 47 49.8	+1.1
	baz=6.0						
TEGC	Jichi Village	0.54	196	*e*P	Pg	20 47 42.3	+0.7
	baz=195						
FUSB	Fushanzhiwuyua	0.54	349	⇓*e*P	Pg	20 47 41.7	+0.1
	baz=349						
FUSB				*e*S	Sg	20 47 49.2	+0.4
	baz=349						
NSK	Sanguang	0.55	325	⇓*i*P	Pg	20 47 42.0	+0.2
	baz=326						
NSK				*e*S	Sb	20 47 49.9	-0.6
	baz=326						
OWD	Renai	0.55	241	⇓*i*P	Pg	20 47 41.7	-0.2
	baz=240						
OWD				*e*S	Sb	20 47 49.9	-0.8
	baz=240						
NWLT	Wulai	0.58	342	⇓P	Pg	20 47 42.5	+0.2
	baz=342						
NWLT				*e*S	Sg	20 47 50.0	0.0
	baz=342						
WUSB	Renai	0.58	246	*e*P	Pg	20 47 42.6	+0.2
	baz=246						
WUSB				*e*S	Sb	20 47 50.7	-0.9
	baz=246						
EGFH	Guangfu	0.61	204	*e*P	Pg	20 47 42.5	-0.4
	baz=204						
EGFH				*e*S	Sg	20 47 52.3	+1.3
	baz=204						
NTC	Toucheng	0.64	10	*e*P	Pg	20 47 43.4	-0.1
	baz=11						
NTC				*e*S	Sg	20 47 51.7	-0.1
	baz=11						
EGS		0.65	19	*e*P	Pg	20 47 44.0	+0.3
	baz=20						
EGS				*e*S	Sg	20 47 52.5	+0.3
	baz=20						
NFF	Wufeng Townshi	0.67	307	*e*P	Pb	20 47 44.2	-0.5
	baz=307						
NFF				*e*S	Sb	20 47 53.6	-0.4
	baz=307						
WHP	Taichung City	0.69	274	⇓*e*P	Pb	20 47 44.8	-0.3
	baz=274						
WHP				*e*S	Sb	20 47 54.2	-0.5
	baz=274						
VWDT	VWDT	0.70	228	*e*P	Pg	20 47 44.4	-0.2
	baz=227						
VWDT				*e*S	Sb	20 47 55.1	+0.4
	baz=227						
WPL	Puli Township	0.71	253	*e*P	Pb	20 47 45.0	-0.4
	baz=252						
WPL				*e*S	Sb	20 47 54.7	-0.5
	baz=252						
DPDB	Guoxing	0.73	255	*e*P	Pb	20 47 45.5	-0.3
	baz=254						
DPDB				*e*S	Sb	20 47 55.4	-0.5
	baz=254						
WCS	Beigang Elemen	0.74	257	*e*P	Pb	20 47 45.5	-0.4
	baz=256						
WCS				*e*S	Sb	20 47 55.3	-0.7
	baz=256						
NHDH	Xindian Distri	0.75	348	*e*P	Pg	20 47 46.2	+0.6
	baz=348						
NHDH				*e*S	Sb	20 47 56.0	-0.3
	baz=348						
TIPB	Shuangxi	0.75	9	*e*P	Pg	20 47 45.5	-0.1
	baz=9.0						
TIPB				*e*S	Sg	20 47 55.0	-0.4
	baz=9.0						
LIOB	Emei	0.75	304	*e*P	Pb	20 47 46.5	+0.4
	baz=304						
NSTT	Nanjuang	0.76	302	*e*P	Pb	20 47 46.2	0.0
	baz=302						
NSTT				*e*S	Sb	20 47 55.7	-0.7
	baz=302						
TWA	Mucha	0.76	352	*e*P	Pg	20 47 46.3	+0.6
	baz=353						
HGSD	Ruisui	0.78	199	*e*P	Pg	20 47 45.8	-0.3
	baz=199						
EHY	Hungye	0.80	206	*e*P	Pg	20 47 45.2	-1.3
	baz=205						
SMLT	Sun Moon Lake	0.81	245	*e*P	Pg	20 47 46.6	-0.1
	baz=244						
SMLT				*e*S	Sb	20 47 57.4	-0.8
	baz=244						
SSLB	Suanglung	0.81	238	P	Pg	20 47 46.6	-0.2
SSLB	Suanglung	0.81	238	⇓P	Pg	20 47 46.4	-0.4
	baz=237						
SSLB				*e*S	Sg	20 47 56.3	-1.1
	baz=237						
TWB1	Santiao Chiao	0.82	18	*e*P	Pg	20 47 46.8	-0.1
	baz=20						
TWB1				*e*S	Sg	20 47 57.0	-0.7
	baz=20						
TYC	Yuchr	0.84	248	*e*P	Pb	20 47 47.3	-0.2
	baz=247						
NWF	Wu-fen Shan	0.84	5	*e*P	Pg	20 47 47.5	+0.2
	baz=5.0						
NWF				*e*S	Sg	20 47 58.1	-0.3
	baz=5.0						
WFSB	Wu-fen Shan	0.84	5	*e*P	Pg	20 47 47.4	0.0
	baz=5.0						
WFSB				*e*S	Sg	20 47 58.1	-0.3
	baz=5.0						
TWQ1	Liyutan	0.86	278	*e*P	Pn	20 47 48.4	-0.6
	baz=278						
SBCB	Hsinchu	0.86	311	*e*P	Pn	20 47 49.0	0.0
	baz=311						
NCUH	Zhongli	0.88	328	*e*P	Pb	20 47 48.8	+0.6
	baz=328						
SXI1	Grass Mountain	0.88	10	⇑*e*P	Pg	20 47 48.2	+0.2
	baz=11						
SXI1				*e*S	Sg	20 47 59.2	-0.3
	baz=11						
NMLH	Miaoli	0.89	291	*e*P	Pn	20 47 50.0	+0.7
	baz=290						
TWS1	Kuangyinshan	0.91	343	*e*P	Pb	20 47 49.8	+1.0
	baz=344						
YULB	Yu-li	0.91	204	*e*P	Pg	20 47 46.8	-1.9
	baz=204						
YULB				*e*S	Sg	20 48 01.3	+0.8
	baz=204						
YM01	YM01	0.92	353	*e*P	Pb	20 47 49.9	+0.8
	baz=353						
WWF	Wufeng	0.94	259	*e*P	Pn	20 47 50.8	+0.7
	baz=258						
EYUL	Yuli	0.94	202	*e*P	Pg	20 47 49.1	-0.2
	baz=201						
TWF1	Yuli	0.95	203	*e*P	Pg	20 47 47.3	-2.0
	baz=202						
WJS	Zhushan	0.98	246	*e*P	Pn	20 47 50.9	+0.2
	baz=245						
WJS				*e*S	Sn	20 48 04.8	+0.3
	baz=245						
WNT	Mingjian	0.99	250	*e*P	Pn	20 47 51.3	+0.4
	baz=249						
YUS	Yu-Shan	1.01	223	*e*P	Pg	20 47 50.2	-0.3
	baz=222						
ALS	Alishan	1.09	229	*e*P	Pg	20 47 51.8	-0.2
	baz=228						
FULB	Fuli	1.09	200	*e*P	Pg	20 47 51.0	-1.1
	baz=200						
CHN5	Tsauling	1.13	236	⇓*e*P	Pn	20 47 53.1	+0.3
	baz=236						
CHN5				*e*S	Sn	20 48 09.8	+1.5
	baz=236						
JYNG	Yonagunijimaku	1.16	79	P	Pn	20 47 52.6	-0.4
JYNG				*e*S	Sb	20 48 08.1	+0.2
WDLH	Douliu	1.19	244	*e*P	Pg	20 47 53.7	-0.2
	baz=243						
WDLH				*e*S	Sn	20 48 11.8	+2.1
	baz=243						
ELDTW	Lidau	1.21	211	*e*P	Pb	20 47 51.5	-2.5
	baz=211						
YOJ	Yonaguni jima	1.22	79	P	Pn	20 47 53.3	-0.6
YOJ	Yonaguni jima	1.22	79	*i* P	Pn	20 47 53.2	-0.6
	baz=79						
YOJ				*e*S	Sb	20 48 10.2	+0.6
	baz=79						
YOJ	Yonaguni jima	1.22	79	*e*P	Pn	20 47 53.2	-0.6
YOJ				*e*S	Sb	20 48 09.5	-0.2
CHN4	Tsaushan	1.34	230	*e*P	Pn	20 47 56.3	+0.7
	baz=229						
TPUB	Ta-pu	1.35	227	P	Pb	20 47 56.7	+0.4
TPUB	Ta-pu	1.35	227	*e*P	Pn	20 47 56.0	+0.3
	baz=227						
TPUB				*e*S	Sn	20 48 15.4	+1.7
	baz=227						
STYH	Taoyuan	1.35	219	*e*P	Pn	20 47 55.4	-0.4
	baz=219						
STYH				*e*S	Sb	20 48 14.0	+0.4
	baz=219						
WTP	Ta-pu	1.40	226	*e*P	Pn	20 47 56.7	+0.3
	baz=225						
TWK	Hsinying	1.47	230	*e*P	Pb	20 47 58.5	+0.2
	baz=229						
CHN1	Nanshi	1.50	226	*e*P	Pn	20 47 58.8	+1.0
	baz=226						
SGST	Jiashian	1.53	222	*e*P	Pn	20 47 58.3	0.0
	baz=222						
LDUT	Ludao	1.56	188	*e*P	Pn	20 47 58.6	0.0
	baz=188						
SCST	Cishan	1.74	220	*e*P	Pn	20 48 02.4	+1.4
	baz=219						
SSD	Sandimen	1.77	214	*e*P	Pn	20 48 03.0	+1.4
	baz=213						
IRIF	Iriomote-Funau	1.85	86	*e*P	Pn	20 48 03.1	+0.5
IRIF				*e*S	Sn	20 48 27.0	+1.0
HATJ	Hateruma jima	1.93	95	*e*S	Sn	20 48 28.6	+0.7
JKRS	Kuro-shima	2.11	89	*e*P	Pn	20 48 06.7	+0.5
JIJ	Ishigaki jima	2.23	86	*e*S	Sn	20 48 34.2	-1.2
JISG	Ishigakijimahi	2.40	81	*e*P	Pn	20 48 10.1	-0.1
JISG				S	Sn	20 48 39.0	-0.6

*NEIC **02** 20:51:20.9±1.3, 38°.28N±0°.07×142°.1E±0°.1, h25^{km}±6^{km}, mb4.2/13, Error ellipse: s-maj=13.8km s-min=7.7km az=122.0*
*JMA **02** 20:51:21.4±0.1, 38°.3N±0°.4×142°.1E±0°.8, h38^{km}±1^{km}, MD4.0/39, MV4.1/39, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*NIED **02** 20:51:21.4, 38°.32N×142°.14E, h38^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.17; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-2.64; $M_{r\theta}$1.28; $M_{\theta\phi}$0.14; $M_{\phi r}$8.30; Fault plane solution: $M_0$8.63000×10^{14} NP1: ϕ_s149.00000°, δ8.00000°, λ50.00000°. NP2: ϕ_s9.00000°, δ84.00000°, λ95.00000°.*
*MOS **02** 20:51:22.1±1.1, 38°.42N×142°.03E, h40^{km}, mb4.1/7 Error ellipse: s-maj=10.6km s-min=7.7km az=93.4*
*IDC **02** 20:51:22.9±1.9, 38°.18N×142°.13E, h48^{km}±19^{km}, mb3.6/14, mbtmp3.9/19, ML3.4/5, MS3.1/5, Error ellipse: s-maj=22.2km s-min=17.1km az=102.0*
ISC 02 20:51:20.9±0.8, **38°.25N**±0°.04×**142°.20E**±0°.05, **h29**^{km}±5^{km}, **n97, σ1^{s}.20**/96, **mb4.0**/23, **8C-20D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.58	277	⇓*i*P	Pb	20 51 32.4	-0.2
JIKH				⇓S	Sb	20 51 39.8	-0.8
JIO	Ouri	0.70	288	⇓*i*P	Pb	20 51 34.0	-0.6
JIO				⇓S	Sb	20 51 42.6	-1.3
JKMT	Kesennumamotoy	0.80	315	⇓*i*P	Pn	20 51 35.2	-1.0
JKMT				⇓S	Sb	20 51 44.8	-1.9
OFUJ	Ofunato	0.93	334	⇓*i*P	Pn	20 51 36.8	-1.2
OFUJ				⇓S	Sn	20 51 47.6	-2.7
OFUJ	Ofunato	0.93	334	A	A	20 51 36.8	
	comp=E,2.0nm,0.6s,comp=E,2.0nm,0.7s						
JMK	Ichinoseki	1.04	313	⇓*i*P	Pn	20 51 38.7	-0.8
JOFO	Osakifurukawao	1.07	290	A	A	20 51 39.3	
	comp=E,16nm,0.6s,comp=E,14nm,1.6s						
JMST	Minamisoumatoc	1.16	244	A	A	20 51 41.6	
	comp=E,4.0nm,0.7s,comp=E,4.0nm,0.7s						
JMM	Marumori	1.17	252		Pn	20 51 40.7	-0.6
JMM	Marumori	1.17	252	⇓*i*P	Pn	20 51 40.9	-0.4
JMM				⇓S	Sn	20 51 55.6	-0.7
JOU	Okura	1.21	276	⇓*i*P	Pn	20 51 41.9	0.0
JOU				⇓S	Sn	20 51 56.9	-0.5
JOU	Okura	1.21	276	A	A	20 51 41.9	
	comp=E,11nm,0.5s,comp=E,11nm,0.5s						
JFK	Kawauchi	1.37	230	⇓*i*P	Pn	20 51 43.6	-0.4
JFK				⇓S	Sn	20 51 59.6	-1.6
JOM	Ohasama	1.41	330	⇓*i*P	Pn	20 51 44.2	-0.4
JOM				⇓S	Sn	20 52 01.1	-1.3
JOM	Ohasama	1.41	330	A	A	20 51 44.2	
	comp=E,4.0nm,0.2s,comp=E,4.0nm,0.2s						
JYK	Kaneyama	1.59	296	⇓*i*P	Pn	20 51 47.0	-0.1
JFT	Otama	1.64	244	⇓P	Pn	20 51 48.3	+0.5
JFT				⇓S	Sn	20 52 08.6	+0.6
JYAR	Yonezawaarcadi	1.65	259	A	A	20 51 48.5	
	comp=E,4.0nm,3.2s,comp=E,5.0nm,1.0s						
JRG	Rokugo	1.68	314	P	Pn	20 51 48.4	+0.1
JYS	Shirataka	1.68	270	P	Pn	20 51 48.7	+0.4
JYA	Atsumi	1.98	281	A	A	20 51 52.8	
	comp=E,3.0nm,0.6s,comp=E,2.0nm,1.0s						
JYT	Yasato	2.57	219		Pn	20 52 00.5	-0.1
JTM	Tenmabayashi	2.68	341		Pn	20 52 02.8	+0.7
JSD	Sado	3.11	267		Pn	20 52 08.0	0.0
MJA0	Matsu Arr-Jizo	3.58	243	*e*P	Pn	20 52 18.6	+4.2
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	3.60	243	P	Pn	20 52 16.5	+1.7
	comp=Z,0.7nm,0.3s,baz=76,slow=11,SNR=39						
MJAR				LR	LR	20 53 54.6	
	comp=Z,255nm,19.4s,baz=93,slow=43						
	comp=Z,8.6nm,0.5s						
MJAR	Matsushiro Arr	3.60	243	P	Pn	20 52 15.3	+0.5
MJAR	Matsushiro Arr	3.60	243	Pn	Pn	20 52 15.3	+0.5
MAJO	Matsushiro	3.60	243	P	Pn	20 52 16.0	+1.2
MAJO	Matsushiro	3.60	243		Pn	20 52 16.0	+1.2
MJB9	Matsu-Tunnel	3.60	243		Pn	20 52 15.8	+1.0
ERM	Erimo	3.83	11	*i* P	Pn	20 52 18.1	+0.1
ERM	Erimo	3.83	11	Pn	Pn	20 52 18.0	+0.1
JGF	Kuroka	4.69	237		Pn	20 52 32.8	+3.0
INU	Inuyama	5.06	237		Pn	20 52 34.3	-0.6
JHJ2	Mitsune	5.48	201	Pn	Pn	20 52 40.9	+0.3
JHJ	Hachijo jima 2	5.48	202	P	Pn	20 52 40.9	+0.3
	comp=Z,10nm,0.3s,baz=335,slow=22,SNR=11						
JHJ				S	Sn	20 53 38.6	-4.0
	comp=Z,26nm,0.3s,baz=89,slow=22,SNR=1.9						
JHJ				LR	LR	20 55 02.3	
	comp=Z,50nm,18.6s,baz=72,slow=41						
	comp=Z,22nm,0.3s						
ASAJ	Asahikawa	5.87	3	P	Pn	20 52 46.6	+0.7
	comp=Z,1.3nm,0.3s,baz=216,slow=9.7,SNR=14						
ASAJ				S	Sn	20 53 50.4	-1.8
	comp=Z,4.5nm,0.6s,baz=308,slow=25,SNR=1.5						
ASAJ				LR	LR	20 55 27.2	
	comp=Z,55nm,21.5s,baz=168,slow=41						
	comp=Z,1.9nm,0.4s						
JKA	Kamikawa-asahi	5.87	3	Pn	Pn	20 52 45.2	-0.7
USRK	Ussuriysk Ar.	9.72	311	P	Pn	20 53 40.0	+1.3
	comp=Z,0.5nm,0.3s,baz=122,slow=15,SNR=5.1						
	comp=Z,3.1nm,0.6s						
USRK	Ussuriysk Ar.	9.72	311	P	Pn	20 53 40.0	+1.3
JCJ	Chichijima	11.12	180	P	Pn	20 53 56.5	-1.5
	comp=Z,1.8nm,0.3s,baz=300,slow=20,SNR=2.1						
JCJ				S	Sn	20 55 50.4	-11
	comp=Z,34nm,0.7s,baz=120,slow=23,SNR=1.6						
	comp=Z,63nm,0.9s						
SKR	Severo-Kuril’s	15.88	34	*ce*P	Pn	20 55 02.9	+0.7
ZEA	Zeya	18.59	331	*e*P	P	20 55 35.0	-0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PET	Petropavlovsk	18.66	32	*ce*P	Pn	20 55 37.0	+0.2
PET				pmax	pmax		
	comp=Z,41nm,2.5s						
BJT	Baijiatuau	20.25	283	P	P	20 55 52.5	-1.3
BJT				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BJT	Baijiatuau	20.25	283	P	P	20 55 52.5	-1.3
YAK	Yakutsk	25.03	346	*ce*P	P	20 56 43.9	+1.8
YAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SEY	Seymchan	25.48	11	P	P	20 56 48.8	+2.6
	comp=Z,1.2nm,0.9s,baz=207,slow=11,SNR=5.2						
	comp=Z,1.2nm,0.9s						
ULN	Ulaanbaatar	27.21	302	*ce*P	P	20 57 03.8	+1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ULN	Ulaanbaatar	27.21	302	P	P	20 57 02.5	+0.3
SONM	Songino Array	27.65	302	P	P	20 57 06.6	+0.5
	comp=Z,0.5nm,0.4s,baz=102,slow=8.3,SNR=5.0						
	comp=Z,0.5nm,0.4s						
ENH	Enshi	28.07	263	P	P	20 57 09.6	-0.3
H11N2	WAKE ISLAND Hy	28.27	124	T	T	21 27 27.9	
	baz=316,slow=76,SNR=228						
H11N1	WAKE ISLAND Hy	28.28	124	T	T	21 27 31.5	
	baz=316,slow=76,SNR=239						
H11N3	WAKE ISLAND Hy	28.29	124	T	T	21 27 39.6	
	baz=316,slow=76,SNR=238						
H11S1	WAKE ISLAND Hy	29.03	126	T	T	21 28 27.2	
	baz=318,slow=75,SNR=56						
H11S3	WAKE ISLAND Hy	29.03	126	T	T	21 28 33.8	
	baz=318,slow=75,SNR=66						
H11S2	WAKE ISLAND Hy	29.05	126	T	T	21 28 35.3	
	baz=318,slow=75,SNR=44						
TIXI	Tiksi	34.17	353	*ce*P	P	20 58 03.4	+0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ZAA0	Zalesovo Array	41.57	311	P	P	20 59 05.2	-0.5
ZAA0				IAmb	IAmb	20 59 06.1	
	comp=Z,2.6nm,0.9s						
ZALV	Zalesovo Beam	41.57	311	P	P	20 59 05.4	-0.3
	comp=Z,1.7nm,0.3s,baz=88,slow=7.4,SNR=5.6						
	comp=Z,1.7nm,0.3s						
CMAR	Chiang Mai Arr	42.41	255	P	P	20 59 13.2	+0.2
	comp=Z,0.4nm,0.6s,baz=48,slow=4.5,SNR=4.2						
	comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	42.41	255	*ce*P	P	20 59 15.6	+2.6

MK31	Makanchi Array	44.01	301	P	P	20 59 24.9	-0.8
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	44.01	301	P	P	20 59 24.9	-0.8
MK31				IAmb	IAmb	20 59 40.7	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	44.01	301	P	P	20 59 24.4	-1.3
	comp=Z,1.8nm,0.7s,baz=90,slow=9.5,SNR=17						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	44.01	301	*e*P	P	20 59 25.3	-0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	44.01	301	P	P	20 59 23.9	-1.8
MAKZ	Makanchi	44.22	301	P	P	20 59 26.4	-0.9
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAKZ	Makanchi	44.22	301	P	P	20 59 26.4	-0.9
MAKZ				IAmb	IAmb	20 59 42.6	
	comp=Z,2.3nm,0.9s						
KURK	Kurchatov	45.68	307	P	P	20 59 39.0	+0.1
KURK	Kurchatov	45.68	307	P	P	20 59 38.1	-0.8
KURK				IAmb	IAmb	20 59 39.3	
	comp=Z,6.6nm,0.9s						
KURBB	Kurchatov Arra	45.76	307	P	P	20 59 39.0	-0.5
	comp=Z,3.4nm,0.6s,baz=81,slow=8.1,SNR=23						
	comp=Z,3.4nm,0.6s						
ILAR	Eielson Array	48.14	33	P	P	20 59 58.2	+0.4
	comp=Z,0.3nm,0.7s,baz=257,slow=5.9,SNR=4.2						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	48.14	33	*e*P	P	20 59 58.6	+0.7
LEM	Lembang	55.18	223	LR	LR	21 23 14.6	
	comp=Z,62nm,21.1s,baz=174,slow=35						
ARU	Arti	55.87	318	*c i*P	P	21 00 55.5	0.0
ARU				*PP	pP	21 01 05.6	+1.3
ARU				S	S	21 08 41.0	+0.2
ARU				pmax	pmax		
	comp=Z,12nm,2.9s						
ABKAR	Akbulak array	57.64	310	P	P	21 01 07.2	-0.9
AKTO	Aktyubinsk	58.33	312	P	P	21 01 12.9	-0.1
	comp=Z,1.3nm,0.7s,baz=70,slow=11,SNR=4.6						
	comp=Z,1.3nm,0.7s						
AKTO	Aktyubinsk	58.33	312	P	P	21 01 13.0	-0.1
WRA	Warramunga Arr	58.35	189	P	P	21 01 12.0	-1.4
	comp=Z,0.3nm,0.5s,baz=4.2,slow=7.0,SNR=1.7						
	comp=Z,0.3nm,0.5s						
KIRV	Kirov	59.66	323	*ce*P	P	21 01 23.3	+1.3
ARCES	ARCESS Array B	63.08	339	P	P	21 01 45.0	-0.1
	comp=Z,0.5nm,0.7s,baz=58,slow=7.5,SNR=4.5						
ARCES				pP	sP	21 01 58.0	+0.5
	comp=Z,0.8nm,0.8s,baz=48,slow=8.3,SNR=1.8						
	comp=Z,0.5nm,0.7s						
ARCES	ARCESS Array B	63.08	339	*e*P	P	21 01 45.3	+0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	68.03	332	P	P	21 02 16.6	-0.5
	comp=Z,2.3nm,0.7s,baz=30,slow=8.8,SNR=11						
	comp=Z,2.3nm,0.7s						
FINES	FINESS Array B	68.03	332	*e*P	P	21 02 16.9	-0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	Kislovodsk	70.58	311	*e*P	P	21 02 35.1	+1.7
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	70.58	311	P	P	21 02 32.4	-1.0
KIV				IAmb	IAmb	21 02 35.3	
	comp=Z,3.6nm,0.9s						
KBZ	Khabaz	70.58	311	P	P	21 02 33.3	+0.1
	comp=Z,1.5nm,0.8s,baz=10,slow=6.8,SNR=5.0						
KBZ				LR	LR	21 38 10.5	
	comp=Z,26nm,19.0s,baz=330,slow=40						
	comp=Z,1.5nm,0.8s						
KBZ	Khabaz	70.58	311	*e*P	P	21 02 34.7	+1.5
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	73.72	322	P	P	21 02 51.2	-0.6
	comp=Z,0.4nm,0.3s,baz=47,slow=6.4,SNR=7.4						
	comp=Z,0.4nm,0.3s						
AKASG	Malin Array Be	73.72	322	*e*P	P	21 02 51.4	-0.4
AKASG	Malin Array Be	73.72	322	IAmb	IAmb	21 03 04.4	
	comp=Z,3.6nm,1.4s						
CLL	Collm	80.35	330	*i* P	P	21 03 29.2	+0.1
CLL	Collm	80.35	330	*i* P	P	21 03 29.2	+0.1
TXAR	Lajitas Array	88.89	53	P	P	21 04 13.4	+0.7
	comp=Z,0.2nm,0.5s,baz=274,slow=2.6,SNR=3.7						
	comp=Z,0.2nm,0.5s						

IDC ***02*** *20:52:24.9±10.0, 7.°02S×129.°00E, h75^{km}±116^{km}, mb3.1/2, mbtmp3.4/5, ML3.6/4, Error ellipse: s-maj=110.8km s-min=35.3km az=42.0*

ISC 02 20:52:27.3±1.2**, 7.°33S**±0.°10×**128.°9E**±0.°1**, h100^{km}, n6, σ3.^{s}03**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.87	240	P	Pn	20 53 54.2	+2.3
	13nm,0.3s,baz=86,slow=3.9,SNR=21						
BATI				S	Sn	20 54 56.0	-1.9
	68nm,0.3s,baz=355,slow=22,SNR=13						
FITZ	Fitzroy Crossi	11.15	196	P	Pn	20 55 04.2	+0.5
	0.2nm,0.3s,baz=24,slow=12,SNR=12						
FITZ				S	Sn	20 56 58.8	-7.6
	2.0nm,0.3s,baz=278,slow=23,SNR=5.8						
	0.9nm,0.5s						
WRA	Warramunga Arr	13.62	158	P	Pn	20 55 37.6	+1.1
	0.2nm,0.3s,baz=341,slow=13,SNR=18						
WRA				S	Sn	20 57 59.1	-7.3
	2.6nm,0.7s,baz=335,slow=22,SNR=4.5						
	0.2nm,0.4s						
ASAR	Alice Springs	16.95	164	P	P	20 56 21.9	+3.0
	0.1nm,0.3s,baz=343,slow=11,SNR=10						
ASAR				S	Sn	20 59 22.1	-4.8
	0.2nm,0.4s,baz=335,slow=23,SNR=1.8						
	0.4nm,0.4s						
SONM	Songino Array	58.40	342	P	P	21 02 11.0	-1.4
	0.2nm,0.5s,baz=142,slow=7.3,SNR=2.4						
	0.2nm,0.5s						
MKAR	Makanchi Array	67.88	327	P	P	21 03 14.1	-1.0
	0.2nm,0.4s,baz=114,slow=8.0,SNR=4.5						
	0.2nm,0.4s						

JMA ***02*** *20:53:34.6±0.2, 24.°0N±0.°7×121.°5E±0.°9, h23^{km}, MV3.6/12, TAIWAN REGION*

NIED ***02*** *20:53:34.6, 24.°04N×121.°54E, h23^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.27; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$1.45; $M_{r\theta}$0.33; $M_{\theta\phi}$0.81; $M_{\phi r}$-0.76; Fault plane solution: $M_0$1.78000×10^{15} NP1: ϕ_s228.00000°, δ41.00000°, λ-48.00000°. NP2: ϕ_s358.00000°, δ61.00000°, λ-120.00000°.*

IDC ***02*** *20:53:34.6±1.1, 24.°29N×121.°99E, h0^{km}, mb3.5/8, mbtmp3.5/8, MS3.4/10 Error ellipse: s-maj=34.1km s-min=21.6km az=75.0*

ASIES ***02*** *20:53:36.7, 24.°22N×121.°71E, h19^{km}, MW4.1*

BJI ***02*** *20:53:36.0±0.0, 24.°23N×121.°70E, h6^{km}, mb3.9/3, ML4.3/1, Ms4.2/7, Ms7 4.1/7*

NEIC ***02*** *20:53:36.1±1.5, 24.°19N±0.°02×121.°76E±0.°04, h10^{km}±5^{km}, mb4.1/3, ML4.2(TAP), Error ellipse: s-maj=6.1km s-min=1.5km az=107.0*

TAP ***02*** *20:53:36.9, 24.°23N×121.°71E, h12^{km}, ML4.3, C*

ISC 02 20:53:36.8±0.7**, 24.°21N**±0.°01×**121.°73E**±0.°02**, h13^{km}**±4^{km}**, n171, σ1.^{s}00**/247**, mb3.6**/11**, MS3.6**/9**, 3C-34D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	6	*i* P	Pg	20 53 39.9	0.0
	baz=22						
EHP				*i* S	Sg	20 53 42.1	+0.2
	baz=22						
ETL	Fush Village	0.11	241	⇓*i*P	Pb	20 53 40.0	-0.8
	baz=231						
ETL				*i* S	Sg	20 53 42.3	+0.1
	baz=231						
NACB	Ninganchiao	0.13	253	Pg	Pg	20 53 39.2	-1.0
NACB				Sg	Sg	20 53 42.5	0.0
NACB	Ninganchiao	0.13	253	⇓*i*P	Pb	20 53 40.1	-1.0
	baz=245						
NACB				*i* S	Sg	20 53 42.5	0.0
	baz=245						
TWD	Chiawan	0.18	223	⇑*i*P	Pb	20 53 41.0	-1.0
	baz=215						
TWD				*i* S	Sg	20 53 44.0	+0.2
	baz=215						
ENA	Nanau	0.21	3	⇓*i*P	Pb	20 53 41.6	-1.1
	baz=9.0						
ENA				*i* S	Sg	20 53 44.6	-0.1
	baz=9.0						
ETLH	Xiulin Townshi	0.23	269	⇓*i*P	Pb	20 53 41.7	-1.1
	baz=265						
ETLH				*i* S	Sg	20 53 45.1	0.0
	baz=265						
EWUT	Wuta	0.24	11	⇓*i*P	Pb	20 53 41.9	-1.0
	baz=15						
EWUT				*i* S	Sg	20 53 45.1	-0.2
	baz=15						
HWA	Hwalien	0.26	206	P	Pb	20 53 43.0	-0.4
	baz=201						
HWA				*i* S	Sb	20 53 47.6	-0.1
	baz=201						
LATG	Datong	0.37	330	⇓*i*P	Pb	20 53 44.5	-0.9
	baz=330						
LATG				*i* S	Sb	20 53 49.3	-1.8
	baz=330						
NNSB	Datong	0.38	304	⇓*i*P	Pb	20 53 44.7	-0.8
	baz=304						
NNSB				*i* S	Sb	20 53 49.5	-1.9
	baz=304						
NNS	Nan Shan	0.40	305	⇓*i*P	Pb	20 53 44.9	-0.9
	baz=305						
NNS				*i* S	Sb	20 53 50.5	-1.3
	baz=305						
TWC	Suao	0.41	15	⇓*i*P	Pb	20 53 45.1	-0.8
	baz=12						
TWC				S	Sb	20 53 50.6	-1.4
	baz=12						
NDS	Dongshan	0.42	358	⇓*i*P	Pb	20 53 45.5	-0.6
	baz=359						
NDS				S	Sb	20 53 50.8	-1.6
	baz=359						
WHF	Hehuan Shan	0.43	261	⇓*i*P	Pb	20 53 45.5	-0.9
	baz=259						
WHF				*i* S	Sg	20 53 51.0	-0.3
	baz=259						
ENTT	Nioudou	0.45	341	⇓*i*P	Pb	20 53 46.0	-0.6
	baz=342						
ENTT				S	Sb	20 53 52.2	-1.1
	baz=342						
ESL	Shilin	0.48	214	⇑*i*P	Pb	20 53 46.3	-0.9
	baz=221						
ESL				*e*S	Sg	20 53 51.9	-0.8
	baz=221						
TWT	Tachien	0.51	275	⇓*i*P	Pb	20 53 47.5	-0.2
	baz=273						
TWT				S	Sb	20 53 54.1	-0.9
	baz=273						
TWE	Neicheng	0.51	354	⇓*i*P	Pb	20 53 47.0	-0.6
	baz=1.0						
TWE				*i* S	Sg	20 53 53.0	-0.7
	baz=1.0						
TDCB	Techi	0.52	275	⇓*i*P	Pb	20 53 47.5	-0.4
	baz=273						
TDCB				*i* S	Sb	20 53 54.2	-1.3
	baz=273						
CHGB	Renai	0.53	254	⇓*i*P	Pb	20 53 47.6	-0.5
	baz=244						
CHGB				*i* S	Sb	20 53 54.1	-1.6
	baz=244						
ILA	Ilan	0.55	2	⇓*i*P	Pb	20 53 48.0	-0.3
	baz=3.0						
ILA				S	Sb	20 53 55.9	-0.2
	baz=3.0						
YHNB	Yeheng	0.56	325		Pb	20 53 47.5	-1.0
YHNB	Yeheng	0.56	325	⇓*i*P	Pb	20 53 48.1	-0.4
	baz=324						
YHNB				*i* S	Sb	20 53 55.1	-1.3
	baz=324						
FUSB	Fushanzhiwuyua	0.56	347	⇓*i*P	Pb	20 53 48.0	-0.6
	baz=347						
FUSB				*i* S	Sg	20 53 54.7	-0.6
	baz=347						
OWD	Renai	0.57	243	⇓*i*P	Pb	20 53 48.0	-0.7
	baz=235						
OWD				*i* S	Sg	20 53 55.1	-0.4
	baz=235						
NSK	Sanguang	0.57	324	⇓*i*P	Pb	20 53 48.2	-0.5
	baz=324						
NSK				*i* S	Sb	20 53 55.8	-1.0
	baz=324						
NWLT	Wulai	0.60	340	⇓*i*P	Pb	20 53 48.9	-0.3
	baz=340						
NWLT				*i* S	Sb	20 53 56.3	-1.2
	baz=340						
WUSB	Renai	0.60	249	⇓*i*P	Pb	20 53 48.8	-0.4
	baz=240						
WUSB				*i* S	Sg	20 53 56.0	-0.6
	baz=240						
EGFH	Guangfu	0.61	207	⇑P	Pb	20 53 48.9	-0.4
	baz=213						
EGFH				*e*S	Sb	20 53 57.2	-0.5
	baz=213						
NTC	Toucheng	0.65	8	⇓P	Pb	20 53 49.5	-0.5
	baz=10.0						
EGS		0.66	16	*e*P	Pb	20 53 50.0	-0.2
	baz=26						
NFF	Wufeng Townshi	0.70	307	⇓P	Pb	20 53 50.6	-0.2
	baz=306						
NFF				*e*S	Sb	20 53 59.0	-1.5
	baz=306						
VWDT	VWDT	0.70	230	⇓*i*P	Pb	20 53 50.5	-0.4
	baz=229						
VWDT				*i* S	Sb	20 53 59.7	-0.9
	baz=229						
WHP	Taichung City	0.72	275	⇓*i*P	Pb	20 53 51.2	-0.1
	baz=274						
WHP				*i* S	Sb	20 54 00.8	-0.2
	baz=274						
TIPB	Shuangxi	0.76	7	⇓*i*P	Pb	20 53 51.7	-0.3
	baz=359						
TIPB				S	Sg	20 54 01.0	-0.7
	baz=359						
WCS	Beigang Elemen	0.76	258	⇓*i*P	Pb	20 53 51.7	-0.2
	baz=258						
WCS				*e*S	Sb	20 54 02.4	+0.2
	baz=258						
HGSD	Ruisui	0.77	201	⇓P	Pb	20 53 52.0	-0.1
	baz=214						
HGSD				*e*S	Sn	20 54 05.0	+0.2
	baz=214						
NHDH	Xindian Distri	0.77	346	*e*P	Pn	20 53 52.3	-1.1
	baz=346						
NHDH				*e*S	Sb	20 54 01.9	-0.5
	baz=346						
TWA	Mucha	0.78	350	*e*P	Pb	20 53 52.0	-0.2
	baz=352						
LIOB	Emei	0.78	304	*e*P	Pn	20 53 52.6	-1.0
	baz=304						
NSTT	Nanjuang	0.78	302	⇓*i*P	Pb	20 53 52.2	-0.1
	baz=302						
NSTT				*e*S	Sb	20 54 02.2	-0.6
	baz=302						
TATO	Taipei	0.79	344		Pb	20 53 52.4	0.0
EHY	Hungye	0.80	208	P	Pg	20 53 51.1	-1.2
	baz=206						
SSLB	Suanglung	0.82	239		Pb	20 53 52.5	-0.5
SSLB	Suanglung	0.82	239	⇓*i*P	Pb	20 53 52.5	-0.5
	baz=239						
SSLB				*i* S	Sg	20 54 02.3	-1.4
	baz=239						
SMLT	Sun Moon Lake	0.83	247	⇓*i*P	Pb	20 53 52.7	-0.3
	baz=237						
SMLT				S	Sb	20 54 03.4	-0.8
	baz=237						
TWB1	Santiao Chiao	0.83	17	*e*P	Pb	20 53 52.6	-0.5
	baz=17						
TWB1				*e*S	Sg	20 54 02.5	-1.2
	baz=17						
TYC	Yuchr	0.85	249	*e*P	Pb	20 53 52.9	-0.6
	baz=239						
TYC				*e*S	Sb	20 54 04.0	-0.9
	baz=239						
NWF	Wu-fen Shan	0.86	3	*e*P	Pn	20 53 54.0	-0.6
	baz=354						
NWF				*e*S	Sb	20 54 04.3	-0.7
	baz=354						
TWQ1	Liyutan	0.88	279	*e*P	Pn	20 53 54.5	-0.4
	baz=278						
TWQ1				*e*S	Sn	20 54 07.3	-0.4
	baz=278						
SXI1	Grass Mountain	0.89	9	P	Pn	20 53 54.2	-0.9
	baz=355						
SXI1				*e*S	Sb	20 54 05.7	-0.2
	baz=355						
SBCB	Hsinchu	0.89	311	*e*P	Pn	20 53 55.1	+0.1
	baz=310						
SBCB				*e*S	Sn	20 54 06.4	-1.4
	baz=310						
NCUH	Zhongli	0.90	327	*e*P	Pn	20 53 55.5	+0.3
	baz=326						
NCUH				*e*S	Sn	20 54 09.6	+1.6
	baz=326						
NCU	National Centr	0.90	327	*e*P	Pn	20 53 55.0	-0.2
	baz=326						
NCU				*e*S	Sn	20 54 07.8	-0.3
	baz=326						
YULB	Yu-li	0.91	206		Pg	20 53 52.7	-1.6
YULB	Yu-li	0.91	206	*e*P	Pg	20 53 52.8	-1.6
	baz=214						
YULB				*e*S	Sg	20 54 05.1	-1.1
	baz=214						
HSN	Hsinchu	0.91	311	*e*P	Pn	20 53 55.1	-0.1
	baz=313						
HSN				*e*S	Sn	20 54 07.7	-0.5
	baz=313						
NMLH	Miaoli	0.92	291	*e*P	Pn	20 53 55.7	+0.4
	baz=290						
NMLH				*e*S	Sn	20 54 06.9	-1.5
	baz=290						
TWS1	Kuangyinshan	0.93	342	*e*P	Pn	20 53 55.7	+0.2
	baz=350						
TWS1				*e*S	Sn	20 54 08.2	-0.5
	baz=350						
EYUL	Yuli	0.94	204	*e*P	Pn	20 53 55.9	+0.2
	baz=215						
YM01	YM01	0.94	351	*e*P	Pn	20 53 55.7	-0.1
	baz=351						
YM01				*e*S	Sb	20 54 07.0	-0.5
	baz=351						
TCU	Taichung	0.96	266	P	Pn	20 53 57.2	+1.2
	baz=266						
TCU				*e*S	Sn	20 54 10.1	+0.5
	baz=266						
NTST	Danshui	0.98	345	*e*P	Pn	20 53 56.9	+0.6
	baz=352						
NTST				*e*S	Sn	20 54 09.6	-0.5
	baz=352						
ANP	Anpu	0.99	349	*e*P	Pn	20 53 56.3	-0.2
	baz=350						
WJS	Zhushan	0.99	247	*e*P	Pn	20 53 56.3	-0.1
	baz=242						
WJS				*e*S	Sn	20 54 09.8	-0.5
	baz=242						
WDJ	Dajia District	1.00	278	*e*P	Pn	20 53 57.5	+0.9
	baz=277						
WDJ				*e*S	Sn	20 54 11.0	+0.5
	baz=277						
WNT	Mingjian	1.01	251	*e*P	Pn	20 53 57.6	+0.9
	baz=247						
WNT				*e*S	Sn	20 54 11.4	+0.6
	baz=247						
YUS	Yu-Shan	1.01	225	P	Pn	20 53 56.5	-0.6
	baz=225						
YUS				*e*S	Sb	20 54 09.6	-0.3
	baz=225						
TWY	Chenhua	1.07	354	*e*P	Pn	20 53 58.5	+1.1
	baz=341						
WCHH	Zhanghua	1.08	263	*e*P	Pn	20 53 58.7	+1.1
	baz=263						
WCHH				*e*S	Sn	20 54 14.6	+2.2
	baz=263						
FULB	Fuli	1.08	202	*e*P	Pn	20 53 57.4	-0.3
	baz=213						
ALS	Alishan	1.10	231	*e*P	Pn	20 53 58.1	0.0
	baz=216						
ALS				*e*S	Sn	20 54 13.1	-0.2
	baz=216						
JYNG	Yonagunijimaku	1.14	78	P	Pn	20 53 58.6	+0.3
JYNG				*e*S	Sn	20 54 15.4	+1.6
CHN5	Tsauling	1.14	238	*e*P	Pn	20 53 59.3	+0.8
	baz=238						
CHN5				*e*S	Sn	20 54 15.0	+0.9
	baz=238						
CHKT	Chengkung	1.16	197	*e*P	Pn	20 53 58.3	-0.3
	baz=217						
CHKT				*e*S	Sg	20 54 13.6	-0.5
	baz=217						
YOJ	Yonaguni jima	1.20	78		Pb	20 53 59.2	-0.2
YOJ	Yonaguni jima	1.20	78	*e*P	Pn	20 53 58.6	-0.6
	baz=67						
YOJ	Yonaguni jima	1.20	78	P	Pg	20 53 59.3	-0.6
YOJ				*e*S	Sn	20 54 16.7	+1.4
WDLH	Douliu	1.21	245	*e*P	Pg	20 54 00.8	+0.7
	baz=245						
WDLH				*e*S	Sn	20 54 17.8	+2.2
	baz=245						
ELDTW	Lidau	1.21	213	*e*P	Pb	20 53 58.4	-1.2
	baz=214						
ELDTW				*e*S	Sg	20 54 15.2	-0.7
	baz=214						
WRL	Guolierlin Hig	1.27	256	*e*P	Pg	20 54 01.1	-0.3
	baz=256						
WRL				*e*S	Sn	20 54 18.9	+1.6
	baz=256						
EDH	Donghe	1.29	198	*e*P	Pn	20 53 59.3	-1.3
	baz=182						
WTK	Tuku	1.33	247	*e*P	Pg	20 54 02.2	-0.2
	baz=260						
WTK				*e*S	Sg	20 54 21.2	+1.4
	baz=260						
CHN4	Tsaushan	1.35	231	*e*P	Pg	20 54 03.1	+0.3
	baz=232						
CHN4				*e*S	Sg	20 54 21.6	+1.3
	baz=232						
STYH	Taoyuan	1.36	220	*e*P	Pg	20 54 01.9	-1.0
	baz=221						
STYH				*e*S	Sg	20 54 20.0	-0.5
	baz=221						
TPUB	Ta-pu	1.36	228		Pg	20 54 02.2	-0.7
TPUB	Ta-pu	1.36	228	*e*P	Pg	20 54 02.6	-0.3
	baz=218						
TPUB				*e*S	Sg	20 54 21.5	+1.0
	baz=218						
WTCT	Ta-ch'eng	1.37	256	*e*P	Pg	20 54 02.1	-1.0
	baz=255						
CHY	Chiayi	1.39	240	*e*P	Pg	20 54 03.3	-0.2
	baz=240						
CHY				*e*S	Sg	20 54 22.3	+0.7
	baz=240						
WTP	Ta-pu	1.40	227	*e*P	Pg	20 54 03.9	+0.1
	baz=217						
WTP				*e*S	Sg	20 54 21.6	-0.4
	baz=217						
LONT	Longtian	1.41	203	*e*P	Pn	20 54 01.0	-1.2
	baz=203						
TWK	Hsinying	1.48	231	*e*P	Pg	20 54 04.1	-1.1
	baz=232						
TWK				*e*S	Sg	20 54 24.6	+0.2
	baz=232						
WSF	Szhu	1.49	248	*e*P	Pg	20 54 04.2	-1.3
	baz=258						
WSF				*e*S	Sg	20 54 25.8	+0.9
	baz=258						
SNST	Tainan City	1.50	229	*e*P	Pg	20 54 04.7	-0.9
	baz=229						
CHN1	Nanshi	1.50	227	*e*P	Pg	20 54 04.8	-0.9
	baz=229						
CHN1				*e*S	Sg	20 54 24.7	-0.5
	baz=229						
TWGBT	Beinan	1.51	203	*e*P	Pn	20 54 01.9	-1.7
	baz=187						
TWG	Pinlang	1.51	204		Pn	20 54 01.4	-2.2
TWG	Pinlang	1.51	204	*e*P	Pn	20 54 02.4	-1.1
	baz=187						
WSL	Shuilin Townsh	1.54	244	*e*P	Pg	20 54 05.5	-0.8
	baz=244						
WSL				*e*S	Sg	20 54 28.3	+2.0
	baz=244						
SGST	Jiashian	1.54	223	*e*P	Pb	20 54 04.5	-0.7
	baz=224						
SGST				*e*S	Sg	20 54 26.5	+0.1
	baz=224						
LDUT	Ludao	1.55	189	*e*P	Pn	20 54 04.4	+0.3
	baz=189						
ICHU	Yijhu	1.57	238	*e*P	Pb	20 54 05.6	-0.2
	baz=223						
ICHU				*e*S	Sg	20 54 27.7	+0.2
	baz=223						
CHN8	Yiju	1.64	239	*e*P	Pb	20 54 06.6	-0.2
	baz=223						
CHN3	Shinhua	1.69	228	*e*P	Pg	20 54 08.4	-0.7
	baz=230						
SHHT	Tainan City	1.73	227	*e*P	Pg	20 54 09.6	-0.5

	baz=229						
SCST	Cishan	1.74	221	eP	Pb	20 54 08.4	-0.2
	baz=222						
ECL	Taimali	1.76	204	eP	Pn	20 54 05.8	-1.1
	baz=191						
SSD	Sandimen	1.77	215	eP	Pb	20 54 08.0	-1.1
	baz=215						
TSMG	Majia	1.80	214	eP	Pb	20 54 08.8	-0.8
	baz=226						
IRIF	Iriomote-Funau	1.83	86	P	Pn	20 54 07.9	0.0
TWM1	Shoushan	1.83	221	eP	Pg	20 54 10.8	-1.1
	baz=222						
SGLT	Jiouru	1.87	218	eP	Pg	20 54 12.4	-0.2
	baz=207						
EAST	Anshuo	1.99	204	eP	Pn	20 54 10.2	-0.1
	baz=191						
TAW	Tawu	2.00	203	eP	Pb	20 54 11.8	-1.2
	baz=191						
TAWH	Dawu Township	2.02	203	eP	Pn	20 54 11.3	+0.8
	baz=192						
SSPT	Xinbi	2.02	212	eP	Pb	20 54 12.5	-0.9
	baz=215						
JKRS	Kuro-shima	2.08	89	P	Pn	20 54 12.1	+0.6
PNG	Penghu	2.09	253	eP	Pn	20 54 12.3	+0.8
	baz=252						
PHUB	P'eng-hu	2.09	251	eP	Pn	20 54 11.6	+0.1
	baz=251						
WDGT	Dungji	2.12	244	eP	Pb	20 54 13.0	-2.1
	baz=244						
SLIU	Shizi	2.16	203	eP	Pn	20 54 13.3	+0.8
	baz=192						
LYUB	Lan-yu	2.20	184	eP	Pn	20 54 11.5	-1.6
	baz=185						
JIJ	Ishigaki jima	2.21	86	P	Pn	20 54 13.2	0.0
JIJ				S	Sn	20 54 40.4	0.0
WLCH	Liuqiu	2.23	214	eP	Pb	20 54 15.7	-1.3
	baz=217						
SMST	Manzhou Townsh	2.33	201	eP	Pb	20 54 18.0	-0.7
	baz=191						
VCHM	Qimei	2.33	245	eP	Pn	20 54 15.9	+1.1
	baz=231						
HEN	Hengchun	2.38	203	eP	Pb	20 54 18.9	-0.6
	baz=193						
JISG	Ishigakijimahi	2.38	80	P	Pn	20 54 16.0	+0.4
TWKBT	Hengchun	2.41	201	eP	Pn	20 54 15.9	0.0
	baz=189						
JTJ	Tarama	2.74	80	eP	Pn	20 54 21.9	+1.3
LYJJ	Jianjiangzhen	2.93	323	eP	Pn	20 54 23.1	0.0
	baz=323						
QZH	Quanzhou	2.95	285	Pn	Pn	20 54 23.6	+0.3
QZH				Sn	Sn	20 54 57.4	-1.2
KNM	Kinmen	3.01	275	eP	Pn	20 54 26.0	+1.8
	baz=273						
XPSS	Dashiqiu	3.04	333	eP	Pn	20 54 24.0	-0.6
	baz=332						
KNMB	Chin-men Tao	3.06	275		Pn	20 54 25.0	+0.1
KNMB	Chin-men Tao	3.06	275	eP	Pn	20 54 24.1	-0.7
	baz=274						
MHZQ	Yeshan	3.08	308	eP	Pn	20 54 25.0	-0.2
	baz=307						
JIRB	Irabujima	3.20	78	P	Pn	20 54 28.1	+1.4
JIRB				eS	Sn	20 55 07.0	+2.3
JMJ2	Miyako jima3	3.32	80	P	Pn	20 54 30.2	+1.8
AXDP	Jialang	3.49	282	eP	Pn	20 54 30.8	0.0
	baz=281						
ZPLA	Ao Xicun	3.65	266	eP	Pn	20 54 33.4	+0.5
	baz=265						
SXFK	Yanhouchang	4.29	301	eP	Pn	20 54 41.6	-0.2
	baz=300						
HKPS	Hong Kong Po S	7.24	256	Pn	Pn	20 55 21.9	-0.4
JNU	Nakatsue	11.97	40	Pn	Pn	20 56 28.2	+1.1
QIZ	Qiongzhong	12.20	247	P	Pn	20 56 31.2	+0.9
QIZ				S	Sn	20 58 45.7	-0.5
QIZ				LR	LR		
	comp=N,240nm,13.7s						
QIZ				LR	LR		
	comp=E,230nm,17.9s						
QIZ				LR	LR		
	comp=Z,140nm,15.5s						
GYA	Guiyang	13.81	282	⇓P	Pn	20 56 55.3	+2.9
GYA				S	Sn	20 59 29.1	+3.4
GYA				PcP	PcP	21 02 13.8	-2.0
GYA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GYA				LR	LR		
	comp=N,180nm,5.8s						
GYA				LR	LR		
	comp=E,630nm,10.2s						
GYA				LR	LR		
	comp=Z,700nm,10.1s						
KSRS	Korea Array	14.22	20	Pn	Pn	20 56 59.8	+1.9
	0.1nm,0.3s,baz=203,slow=13,SNR=4.2						
DAV	Davao City (W)	17.44	167	LR	LR	21 04 41.4	
	comp=Z,37nm,20.3s,baz=4.0,slow=38						
MJAR	Matsushiro Arr	18.76	45	LR	LR	21 06 02.0	
	comp=Z,85nm,19.4s,baz=219,slow=40						
CMAR	Chiang Mai Arr	21.97	259	P	P	20 58 34.7	+4.1
	0.5nm,0.8s,baz=68,slow=9.8,SNR=5.3						
	0.5nm,0.8s						
ASAJ	Asahikawa	26.18	36	LR	LR	21 10 34.4	
	comp=Z,45nm,18.0s,baz=180,slow=39						
KLR	Kul'dur	26.18	15	P	P	20 59 11.4	+0.5
	0.7nm,0.5s,baz=174,slow=10,SNR=2.0						
	0.7nm,0.5s						
SONM	Songino Array	26.54	336	P	P	20 59 15.9	+1.5
	0.6nm,0.8s,baz=148,slow=8.5,SNR=2.7						
SONM				LR	LR	21 10 53.9	
	comp=Z,153nm,18.7s,baz=139,slow=39						
	0.6nm,0.8s						
WMQ	Urumqi	34.00	314	eP	P	21 00 23.1	+2.8
WMQ				LR	LR		
	comp=N,190nm,10.1s						
WMQ				LR	LR		
	comp=Z,77nm,13.3s						
YAK	Yakutsk	38.19	6	LR	LR	21 17 24.8	
	comp=Z,32nm,19.0s,baz=258,slow=38						
MKAR	Makanchi Array	38.66	316	P	P	21 00 58.9	-1.3
	0.3nm,0.6s,baz=111,slow=9.9,SNR=2.4						
	0.3nm,0.6s						
MAKZ	Makanchi	38.87	316	P	P	21 01 01.1	-0.7
MAKZ				IAmb	IAmb	21 01 10.0	
	comp=Z,2.4nm,1.2s						
ZALV	Zalesovo Beam	40.49	327	P	P	21 01 13.7	-1.5
	comp=Z,1.0nm,0.8s,baz=127,slow=9.6,SNR=1.9						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	45.58	163	P	P	21 01 55.9	-0.8
	comp=Z,0.5nm,0.5s,baz=344,slow=8.7,SNR=3.9						
	comp=Z,0.5nm,0.5s						
WR0	Warramunga Arr	45.64	163	P	P	21 01 56.2	-1.0
WR0				IAmb	IAmb	21 02 05.5	
	comp=Z,10.0nm,1.4s						
TIXI	Tiksi	47.64	3	P	P	21 02 11.0	-1.3
TIXI				IAmb	IAmb	21 02 16.0	
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	49.04	165	P	P	21 02 23.6	0.0
	comp=Z,0.4nm,0.6s,baz=355,slow=8.4,SNR=2.0						
	comp=Z,0.4nm,0.6s						
ABKAR	Akbulak array	53.78	314	P	P	21 02 57.0	-1.9
KIRV	Kirov	60.48	325	LR	LR	21 33 01.0	
	comp=Z,60nm,18.1s,baz=26,slow=39						
SPITS	Spitsbergen Ar	69.56	348	LR	LR	21 40 20.8	
	comp=Z,27nm,19.3s,baz=322,slow=40						
FINES	FINESS Array B	71.67	330	LR	LR	21 39 40.5	
	comp=Z,67nm,18.1s,baz=17,slow=39						
FINES	FINESS Array B	71.67	330	P	P	21 04 57.5	-0.5
HFS	Hagfors	77.78	331	LR	LR	21 40 54.6	
	comp=Z,30nm,21.6s,baz=44,slow=36						
NOA	NORSAR Array B	78.43	332	LR	LR	21 43 04.9	
	comp=Z,26nm,19.0s,baz=280,slow=38						
YKA	Yellowknife Ar	82.75	23	P	P	21 05 58.9	-1.3
	comp=Z,0.2nm,0.4s,baz=308,slow=4.2,SNR=3.6						
	comp=Z,0.2nm,0.4s						

IDC ***02*** *20:54:34.9±8.7, 37°.55N×71°.54E, h107*^{km}*±106*^{km}*, mb3.2/1, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=117.9km s-min=72.8km az=101.0*

ISC 02 20:54:36.7±1.9, **37°.6N**±0°.1×**71°.9E**±0°.2, **h130**^{km}**, n7,** σ**2**^{s}**.06**/8**, 1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.43	20	P	Pn	20 55 55.5	-0.1
	1.4nm,0.3s,baz=162,slow=4.5,SNR=7.5						
AAK				S	Sn	20 56 53.9	-3.1
	4.8nm,0.5s,baz=355,slow=21,SNR=16						
	2.9nm,0.3s						
KK31	Karatay Array	5.63	349	⇓P	Pn	20 55 60.0	+1.9
	1.2nm,0.5s,baz=147,slow=11,SNR=46						
KK31	Karatay Array	5.63	349	S	Sn	20 57 01.4	-0.2
	13nm,0.4s,baz=151,slow=24,SNR=29						
MKAR	Makanchi Array	11.99	37	P	Pn	20 57 25.6	+2.3
	baz=219,slow=11,SNR=2.0						
	0.1nm,0.6s						
KURBB	Kurchatov Arra	13.87	18	P	Pn	20 57 47.0	-0.6
	0.1nm,0.3s,baz=206,slow=10,SNR=5.7						
	0.5nm,0.7s						
FINES	FINESS Array B	37.02	325	P	P	21 01 32.6	-0.7
	0.3nm,0.4s,baz=109,slow=12,SNR=4.1						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	66.48	269	P	P	21 05 11.3	-1.3
	5.5nm,0.4s,baz=54,slow=6.8,SNR=1.1						

IDC ***02*** *20:56:10.7±1.9, 52°.06N×153°.02E, h405*^{km}*±22*^{km}*, mb2.6/4, mbtmp3.3/5, Error ellipse: s-maj=39.7km s-min=23.3km az=131.0*

KRSC ***02*** *20:56:11.6±2.0, 51°.40N×155°.07E, h474*^{km}*±22*^{km}*, ML3.8*

ISC 02 20:56:15.4±1.3, **51°.6N**±0°.2×**154°.9E**±0°.2, **h450**^{km}**, n25,** σ**1**^{s}**.20**/28**, mb3.0**/4**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.18	138	eS	S	20 57 57.1	-1.1
MIPR	Malaya Ipel'ka	1.37	58	eP	P	20 57 10.4	-2.4
KDTR	Khodutka, Kamc	2.01	82	eP	P	20 57 15.3	-0.5
KDTR				eS	S	20 58 04.9	-0.1
ASAK	Asacha	2.04	65	eP	P	20 57 16.1	0.0
GRL	Gorelyy	2.21	62	eP	P	20 57 17.4	+0.3
MTVR	Mutnovka	2.24	64	eP	P	20 57 17.6	+0.3
PETK	Petropavlovsk-	2.32	47	P	P	20 57 14.6	-3.1
	2.2nm,0.6s,baz=243,slow=3.9,SNR=27						
KRMR	Karymshinskiy	2.37	56	eP	P	20 57 16.8	-1.1
RUS	Russkaya	2.41	67	eP	P	20 57 18.1	-0.1
RUS				eS	S	20 58 10.5	+1.2
DALK	Dalny	2.80	57	eP	P	20 57 20.8	0.0
GNL	Ganaly	2.84	40	eP	P	20 57 21.9	+0.7
KOK	Koryaka	2.88	52	eP	P	20 57 21.4	-0.1
AVH	Avacha	2.92	53	eP	P	20 57 22.2	+0.5
UGLR	Uglovaya	2.93	54	eP	P	20 57 22.7	+0.9
KRER	Koryakskii	2.94	52	eP	P	20 57 22.2	+0.1
SMAR	Somma	2.95	53	eP	P	20 57 22.4	+0.3
SDLR	Sedlovina	3.00	53	eP	P	20 57 22.2	-0.2
SPN	Mys Shipunski	3.51	62	eP	P	20 57 26.1	-0.1
SPN				eS	S	20 58 22.3	-1.7
TUMR	Tumrok	4.88	38	eP	P	20 57 39.0	+0.5
MKZ	Mys Kozlova	5.11	51	eP	P	20 57 40.3	-0.2
MKZ				eS	S	20 58 47.2	-2.9
KBTR	Krutoberegovo	6.61	42	eP	P	20 57 54.7	-1.0
INK	Inuvik	37.01	36	P	P	21 02 45.4	+0.8
	0.4nm,0.3s,baz=280,slow=6.7,SNR=5.5						
	0.4nm,0.3s						
MKAR	Makanchi Array	45.89	294	P	P	21 03 44.7	-11
	0.1nm,0.5s,baz=68,slow=8.6,SNR=2.0						
	0.1nm,0.5s						
YKA	Yellowknife Ar	46.42	40	P	P	21 04 00.7	+1.2
	0.3nm,0.6s,baz=301,slow=6.9,SNR=4.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	73.44	200	P	P	21 07 00.6	0.0
	0.2nm,0.4s,baz=13,slow=6.1,SNR=4.7						
	0.2nm,0.4s						

IDC ***02*** *21:02:31.8±1.4, 54°.85N×110°.95E, h0*^{km}*, mb3.7/3, mbtmp3.3/8, ML2.8/3, MS2.7/1, Error ellipse: s-maj=34.6km s-min=17.1km az=126.0*

MOS ***02*** *21:02:31.6±0.9, 54°.78N×111°.18E, h10*^{km}*, mb3.9/1, Error ellipse: s-maj=12.1km s-min=6.2km az=82.4*

MOS Felt (III) at Ulyunkhan.

BYKL ***02*** *21:02:33.4±0.1, 54°.81N×111°.17E, h19*^{km}*±2*^{km}*, FELT I=III MSK at Ulyunkhan.*

ISC 02 21:02:33.0±0.7, **54°.83N**±0°.02×**111°.35E**±0°.02, **h17**^{km}±4^{km}**, n64,** σ**2**^{s}**.53**/106**, mb3.7**/4**, 6C-3D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YLYR	Ulyunkhan	0.12	291	ePG	Pg	21 02 36.9	+0.2
YLYR				eS	Sg	21 02 39.3	+0.1
YLYR	Ulyunkhan	0.12	291	⇓iPg	Pg	21 02 36.9	+0.2
YLYR				eSg	Sg	21 02 39.3	+0.1
KMO	Kumora	1.06	355	⇑iPG	Pb	21 02 52.7	-0.2
KMO				e		21 03 05.9	
KMO				pmax	pmax		
	comp=Z,1μm,0.3s						
KMO				smax	smax		
	comp=E,2μm,0.7s						
KMO	Kumora	1.06	355	⇑iPg	Pb	21 02 52.8	-0.2
KMO				e		21 02 58.7	
KMO				eSg	Sb	21 03 07.3	+0.8
KMO				max			
	comp=E,1μm,0.3s						
KMO				Smax			
	comp=E,2μm,0.6s						
YOA	Uoyan	1.32	9	ePG	Pn	21 02 57.5	+0.8
YOA				e		21 03 16.9	
YOA				pmax	pmax		
	comp=Z,316nm,0.2s						
YOA				smax	smax		
	comp=N,6μm,0.6s						
YOA	Uoyan	1.32	9	ePg	Pb	21 02 58.5	+1.1
YOA				eSg	Sg	21 03 16.1	+0.5
YOA				e		21 03 20.4	
YOA				Pmax			
	comp=N,492nm,0.4s						
YOA				max			
	comp=N,5μm,0.4s						
NIZ	Nizh Angarsk	1.40	313	⇑iPG	Pn	21 02 57.5	-0.3
NIZ				e		21 03 15.2	
NIZ				pmax	pmax		
	comp=Z,238nm,0.6s						
NIZ				smax	smax		
	comp=N,1μm,0.5s						
NIZ	Nizh Angarsk	1.40	313	⇑iPg	Pn	21 02 57.5	-0.3
NIZ				eSg	Sn	21 03 15.4	-0.5
NIZ				eSb	Sb	21 03 17.3	+1.0
NIZ				Pmax			
	comp=N,265nm,0.5s						
NIZ				max			
	comp=N,1μm,0.3s						
SYVR	Suvo	1.42	214	ePG	Pn	21 02 57.8	-0.3
SYVR				e		21 03 16.4	
SYVR				pmax	pmax		
	comp=Z,117nm,0.5s						
SYVR				smax	smax		
	comp=N,808nm,0.6s						
SYVR	Suvo	1.42	214	ePg	Pn	21 02 57.9	-0.2
SYVR				ePb	Pb	21 02 58.4	-0.7
SYVR				eSg	Sn	21 03 16.2	-0.2
SYVR				max			
	comp=N,114nm,0.4s						
SYVR				Smax			
	comp=N,792nm,0.3s						
UKT	Uakit	1.46	62	⇑iPN	Pg	21 03 01.3	+0.1
UKT				e		21 03 21.8	
UKT				pmax	pmax		
	comp=Z,21nm,0.1s						
UKT				smax	smax		
	comp=N,2μm,0.4s						
UKT	Uakit	1.46	62	ePg	Pg	21 03 01.3	+0.1
UKT				eSg	Sg	21 03 22.3	+2.1
UKT				eSb	Sb	21 03 23.9	+5.7
UKT				Pmax			
	comp=N,106nm,0.3s						
UKT				max			
	comp=N,2μm,0.4s						
SVKR	Severomuysk	1.80	43	ePN	Pb	21 03 06.9	+1.3
SVKR				e		21 03 33.3	
SVKR				pmax	pmax		
	comp=Z,254nm,0.4s						
SVKR				smax	smax		
	comp=N,2μm,0.5s						
SVKR	Severomuysk	1.80	43	ePg	Pg	21 03 07.3	-0.3
SVKR				e		21 03 08.6	
SVKR				eSg	Sg	21 03 31.9	+1.0
SVKR				max			
	comp=N,323nm,0.3s						
SVKR				Smax			
	comp=N,2μm,0.5s						
MXMB	Maximikha	2.20	225	ePn	Pn	21 03 08.9	+0.1
MXMB				ePg	Pb	21 03 11.5	-0.8
MXMB				eSg	Sb	21 03 40.0	+0.7
OGRR	Ongureny	2.50	243	⇓iPN	Pn	21 03 14.8	+1.8
OGRR				e		21 03 18.4	
OGRR				e		21 03 50.3	
OGRR				pmax	pmax		
	comp=Z,74nm,0.7s						
OGRR				smax	smax		
	comp=E,173nm,1.0s						
OGRR	Ongureny	2.50	243	⇓i	Pn	21 03 14.8	+1.8
OGRR				e		21 03 21.6	
OGRR				e		21 03 24.8	
OGRR				e		21 03 45.1	
OGRR				eSg	Sb	21 03 48.6	+0.5
OGRR				e		21 03 50.2	
OGRR				max			
	comp=E,169nm,0.6s						
KELR	Kotokel	2.84	224	ePn	Pn	21 03 17.5	-0.1
KELR				eSg	Sb	21 03 58.9	+1.1
KELR				e		21 04 01.8	
NLYR	Nelyaty	2.97	54	ePn	Pn	21 03 21.7	+2.2
NLYR				e		21 03 22.9	
NLYR				ePg	Pb	21 03 28.2	+2.6
NLYR				e		21 03 35.8	
NLYR				eSn	Sn	21 03 56.8	+2.1
NLYR				eSg	Sg	21 04 08.2	-0.3
NLYR				max			
	comp=E,52nm,0.4s						
NLYR				max			
	comp=E,270nm,1.4s						
CIT	Chita	3.11	154	ePN	Pn	21 03 22.1	+0.7
CIT				e		21 03 29.9	
CIT				eS	Sn	21 03 58.1	-0.1
CIT				e		21 04 09.8	
CIT				pmax	pmax		
	comp=Z,97nm,1.1s						
CIT				smax	smax		
	comp=E,255nm,1.4s						
CIT	Chita	3.11	154	ePg	Pb	21 03 29.5	+1.6
CIT				eSg	Sg	21 04 10.3	-2.6
CIT				Pmax			
	comp=E,95nm,0.2s						
CIT				Smax			
	comp=E,271nm,0.4s						
BOD	Bodaibo	3.34	25	ePN	Pn	21 03 25.8	+1.4
BOD				e		21 03 33.0	
BOD				e		21 04 17.0	
BOD				pmax	pmax		
	comp=Z,34nm,0.3s						
BOD				smax	smax		
	comp=E,360nm,1.1s						
BOD	Bodaibo	3.34	25	ePn	Pn	21 03 26.5	+2.1
BOD				e		21 03 30.6	
BOD				ePg	Pb	21 03 34.4	+2.7
BOD				e		21 03 40.0	
BOD				e		21 03 43.2	
BOD				e		21 04 06.7	
BOD				e		21 04 15.9	
BOD				eSg	Sg	21 04 18.5	-1.6
BOD				max			
	comp=E,34nm,0.3s						
BOD				Smax			
	comp=E,358nm,1.1s						
ZRHB	Zarechye	3.38	229	eSn	Sn	21 04 01.5	-3.3
ZRHB				eSg	Sb	21 04 14.9	+1.6
UUDB	Ulan-Yde	3.70	218	ePg	Pb	21 03 38.5	+0.5
UUDB				e		21 03 46.1	
UUDB				eSg	Sb	21 04 25.0	+2.4
UUDB				e		21 04 27.4	
UUDB				max			
	comp=E,48nm,0.8s						
UUDB				max			
	comp=E,195nm,0.5s						
CRS	Chara	4.41	59	ePN	Pn	21 03 41.6	+2.3
CRS				eS	Sg	21 04 52.5	-2.1
CRS				smax	smax		
	comp=E,147nm,0.8s						
CRS	Chara	4.41	59	ePn	Pn	21 03 41.6	+2.3
CRS				ePg	Pg	21 03 54.7	-2.8
CRS				eSg	Sg	21 04 53.2	-1.4
CRS				Pmax			
	comp=E,45nm,1.0s						
CRS				Smax			
	comp=E,147nm,0.8s						
BGT	Bolshoye Golou	4.52	234	ePn	Pn	21 03 39.9	-0.8
BGT				ePg	Pb	21 03 53.1	+1.2
BGT				eSg	Sb	21 04 50.5	+4.5
BGT				e		21 05 01.7	
BGT				Pmax			
	comp=E,25nm,1.3s						
BGT				max			
	comp=E,74nm,1.0s						
VTMR	Vitim	4.66	8	ePg	Pb	21 03 58.6	+4.3
VTMR				eSg	Sg	21 04 59.8	-2.8
LSTR	Listvyanka	4.91	235	ePg	Pb	21 03 59.4	+1.0
LSTR				eSg	Sb	21 05 02.5	+5.4
LSTR				Pmax			
	comp=E,8.0nm,0.5s						
LSTR				Smax			
	comp=E,49nm,1.1s						
TUP	Tupik	5.02	91	⇑iPN	Pn	21 03 49.4	+1.9
TUP				e		21 04 04.3	
TUP				eS	Sn	21 04 48.2	+3.1
TUP				e		21 05 11.0	
TUP				pmax	pmax		
	comp=Z,17nm,0.5s						
TUP				smax	smax		
	comp=N,220nm,0.7s						
TUP	Tupik	5.02	91	ePn	Pn	21 03 49.5	+1.9
TUP				ePg	Pg	21 04 05.1	-3.9
TUP				eSn	Sn	21 04 45.1	0.0
TUP				e		21 05 00.7	
TUP				eSg	Sg	21 05 12.1	-1.9
TUP				Pmax			
	comp=N,17nm,0.7s						
TUP				Smax			
	comp=N,258nm,1.0s						
IVK	Ivanovka	5.15	237	ePg	Pb	21 04 03.7	+1.1
IVK				e		21 05 08.2	
IVK				eSg	Sb	21 05 09.6	+5.5
IVK				Pmax			
	comp=N,6.0nm,0.4s						
IVK				Smax			
	comp=N,56nm,0.9s						
KPC	Khapcheranga	5.18	173	ePN	Pn	21 03 49.8	0.0
KPC				e		21 04 05.4	
KPC				e		21 05 12.5	
KPC				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KPC				smax	smax		
	comp=E,180nm,1.2s						
KPC	Khapcheranga	5.18	173	ePn	Pn	21 03 51.8	+2.0
KPC				ePg	Pb	21 04 06.9	+3.8
KPC				eSg	Sg	21 05 14.2	-4.9
KPC				Pmax			
	comp=E,16nm,0.9s						
KPC				Smax			
	comp=E,181nm,1.1s						
KHNR	Khani	5.29	63	eSn	Sn	21 04 52.8	+1.0
KHNR				e		21 04 58.2	
KHNR				eSg	Sg	21 05 19.8	-2.9
TLY	Talaya	5.60	239	ePg	Pb	21 04 12.3	+2.0
TLY				e		21 04 17.5	
TLY				e		21 05 22.2	
TLY				eSg	Sb	21 05 24.0	+6.9
TLY				max			
	comp=E,8.0nm,0.3s						
TLY				Smax			
	comp=E,36nm,0.8s						
ARS	Arshan	6.09	245	ePg	Pb	21 04 21.2	+2.6
ARS				eSg	Sb	21 05 39.1	+8.0
ARS				Pmax			
	comp=E,29nm,0.6s						
ARS				Smax			
	comp=E,230nm,1.0s						
YKLR	Yuktali	6.09	69	ePn	Pn	21 04 04.4	+2.2
YKLR				eSg	Sg	21 05 44.4	-3.7
ZAK	Zakamensk	6.63	231	eSg	Sb	21 05 56.1	+9.2
ZAK				Smax			
	comp=E,34nm,1.2s						
MOY	Mondy	6.98	247	ePN	Pn	21 04 14.8	+0.3
MOY				e		21 04 34.8	
MOY				eS	Sn	21 05 31.0	-2.4
MOY				e		21 06 06.9	
MOY				pmax	pmax		

	comp=Z,6.0nm,0.6s						
MOY				smax	smax		
	comp=E,64nm,1.3s						
MOY	**Mondy**	**6.98**	**247**	*e*Pn	**Pn**	**21 04 15.1**	**+0.6**
MOY				*e*		21 04 21.8	
MOY				*e*		21 05 44.1	
MOY				*e*Sg	**Sb**	**21 06 05.4**	**+8.7**
MOY				Smax			
	comp=E,63nm,1.0s						
ORL	**Orlik**	**7.23**	**256**	*e*PN	**Pn**	**21 04 17.6**	**-0.4**
ORL				*e*		21 04 40.4	
ORL				*e*S	**Sn**	**21 05 37.3**	**-2.4**
ORL				*e*		21 06 13.7	
ORL				pmax	pmax		
	comp=Z,18nm,0.9s						
ORL				smax	smax		
	comp=N,70nm,1.4s						
ORL	**Orlik**	**7.23**	**256**	*e*Pn	**Pn**	**21 04 18.1**	**+0.1**
ORL				*e*Pg	**Pb**	**21 04 42.2**	**+4.2**
ORL				*e*Sn	**Sn**	**21 05 34.6**	**-5.1**
ORL				*e*		21 05 56.2	
ORL				*e*Sg	Sb	21 06 13.8	+10
ORL				Pmax			
	comp=N,17nm,1.0s						
ORL				Smax			
	comp=N,64nm,1.0s						
HIA	**Hailar**	**7.60**	**134**	*i* PN	**Pn**	**21 04 25.6**	**+2.6**
SONM	**Songino Array**	**7.66**	**206**	Pn	**Pn**	**21 04 24.4**	**+0.5**
	comp=N,0.3nm,0.3s,baz=18,slow=14,SNR=6.1						
SONM				Sn	**Sn**	**21 05 52.1**	**+1.7**
	comp=N,0.7nm,0.3s,baz=20,slow=22,SNR=4.7						
SONM				Lg	Lg	21 06 31.7	
	comp=N,1.9nm,0.3s,baz=16,slow=28,SNR=12						
	comp=N,0.4nm,0.3s						
SONM	**Songino Array**	**7.66**	**206**	*e*PN	**Pn**	**21 04 24.7**	**+0.7**
IENR	**Iengra**	**7.79**	**74**	*e*Sg		21 06 37.5	
IENR				*e*		21 06 45.7	
CLNS	**Chul'man**	**7.89**	**70**	*e*Sg		21 06 40.1	
KNGR	**Kungurtug, Tuv**	**9.40**	**249**	*e*Sg	Sn	21 07 21.0	+48
KLR	**Kul'dur**	**13.73**	**106**	Lg	Lg	21 09 47.5	
	comp=N,0.1nm,0.3s,baz=220,slow=19,SNR=6.1						
ZALV	**Zalesovo Beam**	**15.45**	**278**	Pn	**Pn**	**21 06 08.2**	**-1.7**
	comp=N,0.1nm,0.3s,baz=75,slow=12,SNR=2.5						
	comp=N,0.6nm,0.5s						
NRIK	**Noril'sk**	**18.11**	**333**	Sn	**Sn**	**21 10 05.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=15,slow=23,SNR=1.5						
NRIK				Lg	Lg	21 11 57.0	
	comp=N,0.3nm,0.3s,baz=199,slow=6.9,SNR=1.5						
NRIK	**Noril'sk**	**18.11**	**333**	*i* P	**P**	**21 06 44.5**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,9.0nm,2.3s						
NRIK				MLR	MLR		
	comp=Z,28nm,16.0s						
TIXI	**Tiksi**	**18.48**	**18**	Pn	**P**	**21 06 44.0**	**-3.8**
	comp=Z,0.3nm,0.4s,baz=270,slow=20,SNR=6.0						
TIXI				Sn	Sn	21 10 00.8	-13
	comp=Z,15nm,0.3s,baz=270,slow=23,SNR=2.1						
TIXI				Lg	Lg	21 12 12.8	
	comp=Z,3.3nm,0.3s,baz=88,slow=24,SNR=1.3						
TIXI	**Tiksi**	**18.48**	**18**	*i* P	**Pn**	**21 06 49.2**	**+1.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,3.2s						
TIXI				MLR	MLR		
	comp=Z,18nm,5.0s						
MKAR	**Makanchi Array**	**19.93**	**258**	P	**P**	**21 07 02.7**	**-1.2**
	baz=51,slow=11,SNR=2.2						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**20.11**	**272**	P	**P**	**21 07 05.3**	**-0.5**
KURBB	**Kurchatov Arra**	**20.20**	**272**	P	**P**	**21 07 05.3**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=62,slow=12,SNR=1.2						
KSRS	**Korea Array**	**20.74**	**140**	LR	LR	21 15 57.1	
	comp=Z,19nm,19.2s,baz=250,slow=38						
BRVK	**Borovoye**	**23.99**	**283**	*i* P	**P**	**21 07 47.2**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
FINES	**FINESS Array B**	**42.42**	**315**	P	**P**	**21 10 25.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=44,slow=10,SNR=1.6						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**46.65**	**35**	P	**P**	**21 11 01.6**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=307,slow=8.9,SNR=4.8						
	comp=Z,0.4nm,0.7s						
YBH	**Yreka Blue Hor**	**73.34**	**39**	P	**P**	**21 14 05.8**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=333,slow=6.8,SNR=4.3						
	comp=Z,1.3nm,0.6s						

*IDC **02** 21:02:26.8±2.9, 15°.87S×173°.47W, h0^{km}, mb3.7/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=181.0km s-min=22.1km az=147.0*

ISC 02 21:02:37.1±2.9**, 15°.8S**±1°.0×**173°.6W**±0°.6**, h79^{km}, n8, σ0^s.10**/7**, mb3.6**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.60**	**44**	Pn	Pn	21 03 08.1	-9.1
	7.8nm,0.3s,baz=207,slow=18,SNR=7.1						
AFI				Sn	Sn	21 03 35.4	-13
	81nm,0.3s,baz=276,slow=22,SNR=12						
	18nm,0.2s						
WRA	**Warramunga Arr**	**49.54**	**257**	P	**P**	**21 11 20.2**	**-0.1**
	0.3nm,0.8s,baz=93,slow=8.6,SNR=5.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**49.78**	**252**	P	**P**	**21 11 22.2**	**+0.1**
	1.3nm,0.7s,baz=88,slow=8.3,SNR=13						
	1.3nm,0.7s						
NVAR	**Mina Array Bea**	**74.78**	**42**	P	**P**	**21 14 09.1**	**0.0**
	0.7nm,0.7s,baz=236,slow=8.1,SNR=5.2						
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**82.72**	**42**	P	**P**	**21 14 52.5**	**-0.1**
	0.5nm,0.8s,baz=191,slow=3.0,SNR=5.5						
	0.5nm,0.8s						
ARCES	**ARCESS Array B**	**124.99**	**352**	PKP	**PKiKP**	**21 21 27.9**	**0.0**
	0.6nm,0.9s,baz=29,slow=2.1,SNR=3.7						
BRTR	**Keskin Array B**	**146.34**	**320**	PKPbc	**PKPab**	**21 22 10.3**	**+0.1**
	1.4nm,0.7s,baz=93,slow=2.5,SNR=6.1						
GERES	**GERESS Array B**	**146.52**	**351**	PKPbc	**PKPab**	**21 22 10.5**	**0.0**
	0.9nm,0.9s,baz=29,slow=3.0,SNR=6.5						

*IDC **02** 21:02:60.0±1.9, 36°.21N×142°.07E, h0^{km}, mb3.4/3, mbtmp3.6/7, ML3.3/4, Error ellipse: s-maj=38.0km s-min=23.2km az=76.0*

*JMA **02** 21:03:04.9±0.3, 36°.3N±0°.6×14°2E±°, h62^{km}, MV2.9/34, FAR E OFF IBARAKI PREF*

ISC 02 21:03:03.2±1.2**, 36°.18N**±0°.06×**141°.98E**±0°.08**, h23^{km}, n26, σ1^s.14**/24**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.03**	**243**	P	**Pn**	**21 03 22.7**	**+0.5**
CHOJ				*e*S	**Sn**	**21 03 36.5**	**+0.6**
JHYU	**Hitachinakayam**	**1.14**	**278**	*i* P	**Pn**	**21 03 22.9**	**-0.8**
JHYU				*e*S	**Sb**	**21 03 36.5**	**-2.1**
JIHU	**Itakohorinouch**	**1.20**	**260**	P	**Pb**	**21 03 24.8**	**-0.4**
JHO	**Hitachi**	**1.22**	**291**	P	**Pn**	**21 03 23.4**	**-1.5**
JFK	**Kawauchi**	**1.48**	**323**	P	**Pn**	**21 03 27.7**	**-0.8**
BSO1	**Boso 1**	**1.73**	**209**	P	**Pn**	**21 03 33.0**	**+1.6**
BSO3	**Boso 3**	**1.83**	**221**	P	**Pn**	**21 03 34.4**	**+1.5**
JFT	**Otama**	**1.88**	**316**	P	**Pn**	**21 03 34.1**	**+0.2**
JMM	**Marumori**	**1.93**	**331**	P	**Pn**	**21 03 34.6**	**0.0**
JAG	**Ashikaga**	**2.06**	**277**	P	**Pn**	**21 03 36.2**	**-0.2**
JKT	**Katashina**	**2.28**	**286**	P	**Pn**	**21 03 39.7**	**+0.2**
JRY	**Ryogami san**	**2.50**	**267**	P	**Pn**	**21 03 42.4**	**-0.1**
JOD2	**Odawara 2**	**2.53**	**250**	P	**Pn**	**21 03 43.9**	**+1.0**
MJAR	**Matsushiro Arr**	**3.07**	**278**	Pn	**Pn**	**21 03 50.1**	**-0.2**
	0.6nm,0.3s,baz=104,slow=10,SNR=12						
MJAR				Sn	**Sn**	**21 04 28.9**	**+2.6**
	0.2nm,0.3s,baz=84,slow=26,SNR=2.2						
	4.9nm,0.5s						
JHJ	**Hachijo jima 2**	**3.55**	**211**	Pn	**Pn**	**21 03 57.7**	**+0.8**
	13nm,0.3s,baz=331,slow=23,SNR=14						
JHJ				Sn	**Sn**	**21 04 37.2**	**-1.0**
	20nm,0.3s,baz=259,slow=23,SNR=8.8						
	22nm,0.3s						
ASAJ	**Asahikawa**	**7.94**	**3**	Pn	**Pn**	**21 04 56.5**	**-0.6**
	0.2nm,0.3s,baz=177,slow=17,SNR=1.1						
	0.9nm,0.3s						
JCJ	**Chichijima**	**9.06**	**179**	Pn	**Pn**	**21 05 10.9**	**-1.7**
	2.3nm,0.3s,baz=273,slow=23,SNR=1.1						
	30nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**27.32**	**120**	T	T	21 37 26.8	
	baz=313,slow=75,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**27.33**	**120**	T	T	21 37 33.7	
	baz=313,slow=75,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**27.34**	**120**	T	T	21 37 32.1	
	baz=313,slow=75,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**28.02**	**122**	T	T	21 38 16.8	
	baz=314,slow=75,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**28.02**	**122**	T	T	21 38 17.0	
	baz=314,slow=75,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**28.03**	**122**	T	T	21 38 17.6	
	baz=314,slow=75,SNR=3.3						
MKAR	**Makanchi Array**	**44.96**	**303**	P	**P**	**21 11 16.9**	**+0.5**
	0.3nm,0.6s,baz=94,slow=8.7,SNR=3.1						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**46.89**	**309**	P	**P**	**21 11 31.8**	**+0.3**
	0.3nm,0.5s,baz=81,slow=7.5,SNR=4.6						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**56.29**	**189**	P	**P**	**21 12 42.9**	**+0.8**
	0.6nm,1.2s,baz=4.3,slow=7.3,SNR=1.4						
	0.6nm,1.2s						

*IDC **02** 21:05:14.9±1.5, 32°.77N×130°.61E, h0^{km}, mb4.3/2, mbtmp4.1/3, ML2.8/2, Error ellipse: s-maj=28.6km s-min=10.2km az=126.0*

*JMA **02** 21:05:15.6±0.0, 32°.74N±0°.09×130°.8E±0°.1, h13^{km}, MD3.8/20, MV4.0/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

*NIED **02** 21:05:15.6, 32°.74N×130°.75E, h13^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.56; $M_{\theta\theta}$3.05; $M_{\phi\phi}$-2.49; $M_{r\theta}$2.18; $M_{\theta\phi}$0.54; $M_{\phi r}$0.74; Fault plane solution: $M_0$3.46000×10^{14} NP1: ϕ_s134.00000°, δ56.00000°, λ3.00000°. NP2: ϕ_s42.00000°, δ87.00000°, λ146.00000°.*

ISC 02 21:05:16.3±0.8**, 32°.70N**±0°.05×**130°.70E**±0°.09**, h11^{km}, n18, σ1^s.41**/13**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.18**	**148**	*e*P	**Pg**	**21 05 20.1**	**-0.1**
JIU3				*e*S	**Sg**	**21 05 23.5**	**+0.5**
JIU3	**Izumi3**	**0.18**	**148**	A	A	21 05 20.1	
	comp=E,19nm,0.2s,comp=E,15nm,0.6s						
JTA	**Tamana**	**0.30**	**332**	*e*P	**Pg**	**21 05 21.7**	**-0.7**
JTA				*e*S	**Sg**	**21 05 25.8**	**-0.6**
JNU	**Nakatsue**	**0.44**	**20**	Pg	**Pg**	**21 05 23.2**	**-1.8**
	453nm,0.3s,baz=194,slow=8.3,SNR=5008						
JNU				Lg	Lg	21 05 28.4	
	5μm,0.3s,baz=288,slow=20,SNR=168						
JNU	**Nakatsue**	**0.44**	**20**	A	A	21 05 23.6	
	comp=E,9.0nm,1.3s,comp=E,11nm,0.9s						
JHD	**Hondo**	**0.53**	**244**	A	A	21 05 26.8	
	comp=E,9.0nm,0.3s,comp=E,8.0nm,0.3s						
JZO	**Okuchi**	**0.57**	**189**	A	A	21 05 27.3	
	comp=E,10.0nm,0.3s,comp=E,9.0nm,0.3s						
JKIT	**Kitakata**	**0.64**	**97**	A	A	21 05 27.3	
	comp=E,11nm,0.3s,comp=E,17nm,0.3s						
JFI	**Itaya**	**0.77**	**340**	A	A	21 05 29.9	
	comp=E,10.0nm,0.3s,comp=E,10.0nm,0.3s						
JTZ	**Takazaki**	**0.86**	**158**	*i* P	**Pb**	**21 05 32.7**	**-0.6**
JTZ				S	**Sb**	**21 05 44.7**	**-0.2**
JTZ	**Takazaki**	**0.86**	**158**	A	A	21 05 32.7	
	comp=N,3.0nm,0.4s						
JUS	**Usuki**	**0.96**	**67**	A	A	21 05 32.6	
	comp=E,3.0nm,0.6s,comp=E,3.0nm,0.8s						
JII	**Iki**	**1.36**	**324**	A	A	21 05 40.2	
	comp=E,6.0nm,1.6s,comp=E,3.0nm,2.0s						
KSRS	**Korea Array**	**5.26**	**335**	Pn	**Pn**	**21 06 33.9**	**-0.9**
	0.3nm,0.3s,baz=154,slow=14,SNR=2.5						
KSRS				Pg	**Pb**	**21 06 51.0**	**+2.8**
	1.2nm,0.3s,baz=151,slow=18,SNR=4.7						
KSRS				Lg	Lg	21 07 56.1	
	2.4nm,0.3s,baz=157,slow=30,SNR=6.7						
MJAR	**Matsushiro Arr**	**7.28**	**56**	Pn	**Pn**	**21 07 03.9**	**+1.3**
	0.1nm,0.3s,baz=243,slow=13,SNR=4.6						
MJAR				Lg	Lg	21 09 05.9	
	baz=246,slow=30						
	2.7nm,0.5s						
WRA	**Warramunga Arr**	**52.46**	**176**	P	**P**	**21 14 30.1**	**+4.6**
WRA	**Warramunga Arr**	**52.46**	**176**	P	**P**	**21 14 30.1**	**+0.9**
	2.3nm,0.3s,baz=355,slow=7.8,SNR=3.0						
	2.3nm,0.3s						
FINES	**FINESS Array B**	**68.33**	**330**	P	**P**	**21 16 15.9**	**-1.3**
	2.5nm,1.1s,baz=66,slow=4.7,SNR=1.7						
	2.5nm,1.1s						

*TUL **02** 21:24:07.5±0.8, 36°.66N±0°.01×97°.91W±0°.01, h7^{km}±3^{km}, ML2.9, mb_Lg2.8/51(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=173.0*

NEIC 02 21:24:08.1±0.6**, 36°.66N**±0°.01×**97°.905W**±0°.008**, h3^{km}**±6^{km}**, Error ellipse: s-maj=1.9km s-min=0.4km az=152.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.93**	**253**	Pg	Pg	21 24 24.9	-1.0
U32A				Sg	Sg	21 24 37.7	-0.1
T35A	**Sooner Cattle**	**1.15**	**77**	Pg	Pg	21 24 29.0	-1.1
T35A				Sg	Sg	21 24 43.9	-1.0
OKCFA	**Oklahoma City**	**1.30**	**163**		Pg	21 24 31.8	-1.1
OKCSW	**OKLAHOMA CITY**	**1.31**	**163**		Pg	21 24 31.9	-1.3
FNO	**Franklin**	**1.46**	**164**		Pn	21 24 34.4	-1.0
TUL1	**Leonard**	**1.86**	**113**	Pn	Pn	21 24 40.9	0.0
TUL1				IAmb_Lg		21 25 08.0	
	comp=Z,48nm,0.9s						
R32A	**Long Quarter,**	**1.87**	**340**	Pn	Pn	21 24 41.2	+0.2
R32A				IAmb_Lg		21 25 11.3	
	comp=Z,40nm,0.9s						
WMOK	**Wichita Mounta**	**2.05**	**201**	Pn	Pn	21 24 42.9	-0.6
WMOK				IAmb_Lg		21 25 16.1	
	comp=Z,35nm,0.8s						
X34A	**Smith Ranch, M**	**2.06**	**178**	Pn	Pn	21 24 43.9	+0.3
KSU1	**Kansas State U**	**2.64**	**22**	IAmb_Lg		21 25 34.5	
	comp=Z,30nm,0.8s						
X37A	**Clayton**	**2.92**	**134**	Pn	Pn	21 24 55.1	-0.4
HHAR	**Hobbs**	**3.22**	**96**	Pn	Pn	21 24 59.8	+0.3
AMTX	**Amarillo**	**3.55**	**241**	Pn	Pn	21 25 03.6	-0.5
W39A	**Magazine**	**3.65**	**112**	IAmb_Lg		21 26 13.4	
	comp=Z,23nm,0.8s						
S39A	**Bolivar**	**3.80**	**73**	Pn	Pn	21 25 07.3	-0.2
S39A				IAmb_Lg		21 26 08.9	
	comp=Z,22nm,0.8s						
U40A	**Yellville**	**4.08**	**93**	Pn	Pn	21 25 12.2	+0.7
N33A	**J Bar K, Exete**	**4.09**	**5**	Pn	Pn	21 25 09.9	-1.6
MIAR	**Mount Ida**	**4.11**	**120**	Pn	Pn	21 25 11.9	+0.1
Z38A	**Mt. Pleasant**	**4.16**	**144**	IAmb_Lg		21 26 26.9	
	comp=Z,20nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.41**	**304**	Pn	Pn	21 25 14.8	-1.2
P38A	**Dawn**	**4.54**	**48**	Pn	Pn	21 25 17.9	+0.2
P38A				IAmb_Lg		21 26 29.2	
	comp=Z,19nm,0.9s						
MGMO	**Mountain Grove**	**4.54**	**82**	Pn	Pn	21 25 17.8	+0.1
MGMO				IAmb_Lg		21 26 34.1	
	comp=Z,23nm,0.8s						
N35A	**Tabor**	**4.55**	**22**	Pn	Pn	21 25 16.8	-1.1
X40A	**Basin Creek Fa**	**4.67**	**116**	Pn	Pn	21 25 18.8	-0.7
WHTX	**Lake Whitney,**	**4.67**	**175**	Pn	Pn	21 25 18.6	-0.9
BGNE	**Belgrade**	**4.74**	**358**	IAmb_Lg		21 26 42.3	
	comp=Z,27nm,0.7s						
WHAR	**Wooly Hollow**	**4.76**	**105**	IAmb_Lg		21 26 40.9	
	comp=Z,20nm,1.1s						
R40A	**Maddies Statio**	**4.77**	**68**	IAmb_Lg		21 26 38.2	
	comp=Z,17nm,0.8s						
MSTX	**Muleshoe**	**4.80**	**237**	Pn	Pn	21 25 20.6	-0.8
T25A	**Trinidad**	**5.24**	**277**	Pn	Pn	21 25 27.0	-0.5
OGNE	**Ogallala**	**5.36**	**324**	Pn	Pn	21 25 29.1	+0.1
OGNE				IAmb_Lg		21 27 03.2	
	comp=Z,21nm,0.8s						
P40A	**Paris**	**5.43**	**56**	IAmb_Lg		21 27 04.5	
	comp=Z,21nm,0.8s						
LCAR	**Lake Charles**	**5.48**	**94**	IAmb_Lg		21 27 06.4	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**5.49**	**73**	IAmb_Lg		21 27 05.7	
	comp=Z,23nm,0.8s						
PBMO	**Poplar Bluff**	**6.01**	**87**	IAmb_Lg		21 27 19.6	
	comp=Z,14nm,0.8s						
FVM	**French Village**	**6.11**	**75**	IAmb_Lg		21 27 21.7	
	comp=Z,19nm,0.8s						
SDCO	**Great Sand Dun**	**6.16**	**282**	Pn	Pn	21 25 40.0	-0.2
JCT	**Junction City**	**6.37**	**195**	IAmb_Lg		21 27 35.2	
	comp=Z,9.8nm,0.7s						
ISCO	**Idaho Springs**	**6.83**	**300**	Pn	Pn	21 25 47.9	-1.5
S44A	**Carbondale**	**6.98**	**79**	IAmb_Lg		21 27 59.0	
	comp=Z,18nm,0.8s						
SIUC	**Southern Illin**	**7.01**	**79**	IAmb_Lg		21 27 47.9	
	comp=Z,14nm,0.8s						
ECSD	**EROS Data Cent**	**7.13**	**8**	IAmb_Lg		21 28 05.4	
	comp=Z,8.6nm,1.1s						
K38A	**Parkersburg**	**7.17**	**32**	IAmb_Lg		21 27 58.6	
	comp=Z,16nm,0.9s						
N23A	**Red Feather La**	**7.57**	**306**	IAmb_Lg		21 28 24.6	
	comp=Z,8.8nm,0.8s						
O44A	**Mansfield**	**8.19**	**62**	IAmb_Lg		21 28 31.4	
	comp=Z,12nm,0.8s						
JFWS	**Jewell Farm**	**8.58**	**41**	IAmb_Lg		21 28 49.2	
	comp=Z,8.3nm,0.7s						
TX31	**Lajitas Ar. Si**	**8.76**	**215**	Pn	Pn	21 26 15.6	-0.2
TXAR	**Lajitas Array**	**8.76**	**215**	Pn	Pn	21 26 15.3	-0.5
F33A	**5 Mile Ranch,**	**9.25**	**7**	IAmb_Lg		21 29 01.8	
	comp=Z,7.5nm,1.0s						

*KRNET **02** 21:30:43.8±0.1, 42°.08N×75°.47E, h17^{km}, mb2.6*

*SOME **02** 21:30:44.9, 42°.12N×75°.48E, h10^{km}*

*NNC **02** 21:30:46.8±0.9, 42°.20N×75°.53E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=6.6km s-min=4.7km az=179.0*

ISC 02 21:30:44.8±1.2**, 42°.11N**±0°.04×**75°.53E**±0°.02**, h4^{km}**±10^{km}**, n52, σ0^s.96**/92**, 14C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	**Boomskoye usch**	**0.49**	**39**	⇓*e*P	**Pg**	**21 30 54.4**	**+0.2**
	baz=40						
BOOM				⇓*i*S	**Sg**	**21 31 01.7**	**+1.1**
	baz=40						
ARLS	**Aral**	**0.93**	**255**	⇑*e*P	**Pg**	**21 31 00.7**	**-1.9**
	baz=56						
ARLS				⇑*e*S	**Sg**	**21 31 12.3**	**-2.4**
	baz=56						
FRU1	**Bishkek**	**0.96**	**317**	⇑*i*P	**Pg**	**21 31 02.2**	**-1.1**
	baz=20						
FRU1				⇑*i*S	**Sg**	**21 31 15.2**	**-0.6**
	baz=20						
KST	**Kastek**	**0.99**	**19**	*e*P	**Pg**	**21 31 03.3**	**-0.4**
	8.0nm,0.1s						
KST				*e*S	**Sg**	**21 31 17.0**	**+0.5**
	40nm,0.3s						
KST	**Kastek**	**0.99**	**19**	P	**Pg**	**21 31 03.3**	**-0.4**
	8.1nm,0.2s						
KST				S	**Sg**	**21 31 17.0**	**+0.5**
	40nm,0.3s						
DGS	**Degeres**	**1.15**	**9**	*e*P	**Pb**	**21 31 06.3**	**-1.0**
	4.6nm,0.2s						
DGS				*e*S	**Sg**	**21 31 21.5**	**-0.2**
	10.0nm,0.2s						
DGS	**Degeres**	**1.15**	**9**	P	**Pb**	**21 31 06.3**	**-1.0**
	6.6nm,0.3s						
DGS				S	**Sg**	**21 31 21.5**	**-0.2**
	10.0nm,0.2s						
MTBS	**Maitube**	**1.22**	**33**	*e*P	**Pn**	**21 31 07.7**	**-1.0**
	4.6nm,0.3s						
MTBS				*e*S	**Sb**	**21 31 23.9**	**-0.7**
	13nm,0.3s						
MTBS	**Maitube**	**1.22**	**33**	P	**Pn**	**21 31 07.7**	**-1.0**
	4.6nm,0.3s						
MTBS				S	**Sb**	**21 31 23.9**	**-0.7**
	13nm,0.3s						
KDJ	**Kajisay**	**1.23**	**88**	⇑*i*P	**Pn**	**21 31 07.5**	**-1.4**
	baz=87						
KDJ				⇑*i*S	**Sb**	**21 31 25.1**	**+0.1**
	baz=87						
TNSS	**Tian-Shan**	**1.40**	**48**	*e*P	**Pn**	**21 31 11.3**	**-0.2**
	2.5nm,0.3s						
TNSS				*e*S	**Sn**	**21 31 30.1**	**-0.5**
	9.7nm,0.1s						
TNSS	**Tian-Shan**	**1.40**	**48**	P	**Pn**	**21 31 11.3**	**-0.2**
	2.5nm,0.3s						
TNSS				S	**Sn**	**21 31 30.1**	**-0.5**
	9.8nm,0.5s						
SGDS	**Sogindy**	**1.50**	**334**	*e*P	**Pg**	**21 31 12.9**	**-0.6**
	4.7nm,0.1s						
SGDS				*e*S	**Sg**	**21 31 33.2**	**+0.4**
	8.4nm,0.3s						
SGDS	**Sogindy**	**1.50**	**334**	P	**Pg**	**21 31 12.9**	**-0.6**
	4.7nm,0.1s						
SGDS				S	**Sg**	**21 31 33.2**	**+0.4**
	8.4nm,0.3s						
AAA	**Alma-Ata**	**1.50**	**43**	*e*P	**Pn**	**21 31 12.4**	**-0.2**
	11nm,0.3s						
AAA				*e*S	**Sn**	**21 31 31.9**	**-0.7**
	28nm,0.4s						
AAA	**Alma-Ata**	**1.50**	**43**	P	**Pn**	**21 31 12.4**	**-0.2**
	11nm,0.3s						
AAA				S	**Sn**	**21 31 31.9**	**-0.7**
	28nm,0.4s						
KNDC	**Almaty**	**1.54**	**43**	⇑P	**Pg**	**21 31 14.5**	**+0.3**
	2.9nm,0.3s						
KNDC				⇑S	**Sg**	**21 31 35.3**	**+1.2**
	13nm,0.5s						
MDOK	**Medeo**	**1.54**	**46**	*e*P	**Pb**	**21 31 13.8**	**-0.1**
	5.2nm,0.8s						
MDOK				*e*S	**Sb**	**21 31 34.4**	**+0.5**
	8.7nm,0.8s						
MDOK	**Medeo**	**1.54**	**46**	⇓P	**Pb**	**21 31 13.9**	**-0.1**
	9.1nm,0.9s						
MDOK				S	**Sg**	**21 31 34.6**	**+0.3**
	5.0nm,0.5s						
MDOK	**Medeo**	**1.54**	**46**	Pg	**Pb**	**21 31 13.8**	**-0.1**
	5.2nm,0.8s						
MDOK				Lg	Lg	21 31 34.4	
	8.7nm,0.8s						
KRBS	**Karabastau**	**1.59**	**4**	*e*P	**Pb**	**21 31 14.1**	**-0.7**
	3.5nm,0.2s						
KRBS				*e*S	**Sb**	**21 31 34.9**	**-0.3**
	26nm,0.3s						
KRBS	**Karabastau**	**1.59**	**4**	P	**Pb**	**21 31 14.1**	**-0.7**
	3.5nm,0.2s						
KRBS				S	**Sb**	**21 31 34.9**	**-0.3**
	26nm,0.3s						
KOTS	**Kotyrbulak**	**1.62**	**46**	*e*P	**Pb**	**21 31 15.6**	**+0.3**
	3.1nm,0.3s						
KOTS				*e*S	**Sg**	**21 31 37.6**	**+0.7**
	70nm,0.6s						
KOTS	**Kotyrbulak**	**1.62**	**46**	P	**Pb**	**21 31 15.6**	**+0.3**
	3.1nm,0.3s						
KOTS				S	**Sg**	**21 31 37.6**	**+0.7**
	70nm,0.6s						
ANVS	**Anan'yevo**	**1.72**	**66**	⇑*i*P	**Pb**	**21 31 16.7**	**-0.4**
	baz=66						
ANVS				⇑*i*S	**Sb**	**21 31 39.8**	**+0.7**
	baz=66						
KTBS	**Karatobe**	**1.81**	**28**	*e*P	**Pb**	**21 31 18.5**	**-0.1**
	2.7nm,0.2s						
KTBS				*e*S	**Sg**	**21 31 43.0**	**-0.1**
	56nm,0.4s						
KTBS	**Karatobe**	**1.81**	**28**	P	**Pb**	**21 31 18.5**	**-0.1**
	2.7nm,0.2s						
KTBS				S	**Sg**	**21 31 43.0**	**-0.1**
	56nm,0.4s						
MRKS	**Merke**	**1.82**	**291**	*e*P	**Pg**	**21 31 20.2**	**+0.6**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**21 31 45.4**	**+2.2**
	9.4nm,0.3s						
MRKS	**Merke**	**1.82**	**291**	Pg	**Pg**	**21 31 20.8**	**+1.2**
	1.8nm,0.2s						
KUU	**Kurty**	**1.88**	**18**	*e*P	**Pb**	**21 31 19.4**	**-0.2**
	2.6nm,0.2s						
KUU				*e*S	**Sb**	**21 31 44.2**	**+0.6**
	24nm,0.4s						
KUU	**Kurty**	**1.88**	**18**	P	**Pb**	**21 31 19.5**	**-0.2**
	2.6nm,0.2s						
KUU				S	**Sb**	**21 31 44.2**	**+0.6**
	24nm,0.4s						
CHKK	**Chushkaly**	**2.05**	**31**	*e*P	**Pb**	**21 31 23.1**	**+0.6**
	5.8nm,0.3s						
CHKK				*e*S	**Sg**	**21 31 50.5**	**-0.1**
	38nm,0.2s						
CHKK	**Chushkaly**	**2.05**	**31**	Pg	**Pb**	**21 31 23.1**	**+0.6**
	5.8nm,0.3s						
PRZ	**Przheval'sk**	**2.17**	**79**	⇑*i*P	**Pn**	**21 31 22.4**	**+0.6**
	baz=78						
PRZ				⇑*i*S	**Sb**	**21 31 50.9**	**-1.0**
	baz=78						
SATY	**Saty**	**2.33**	**65**	*e*P	**Pb**	**21 31 28.5**	**+1.1**
	2.6nm,0.4s						
SATY				*e*S	**Sg**	**21 31 59.6**	**0.0**
	14nm,0.4s						
SATY	**Saty**	**2.33**	**65**	Pg	**Pb**	**21 31 28.5**	**+1.1**
	2.6nm,0.4s						
KURS	**Kuram**	**2.38**	**54**	*e*P	**Pb**	**21 31 29.6**	**+1.3**
	1.5nm,0.4s						
KURS				*e*S	**Sg**	**21 32 01.6**	**+0.2**
	8.8nm,0.5s						
KURS	**Kuram**	**2.38**	**54**	Pg	**Pb**	**21 31 29.6**	**+1.3**
	1.5nm,0.4s						
ZHN	**Zhinishke**	**2.39**	**63**	*e*P	**Pb**	**21 31 29.0**	**+0.6**

	5.0nm,0.2s						
ZHN				*e*S	**Sb**	**21 32 00.5**	**+2.1**
	30nm,0.2s						
ZHN	**Zhinishke**	**2.39**	**63**	Pg	**Pb**	**21 31 29.0**	**+0.6**
	5.0nm,0.2s						
KPKS	**Kokpek**	**2.69**	**59**	*e*P	**Pb**	**21 31 34.6**	**+1.0**
	3.2nm,0.2s						
KPKS				*e*S	**Sg**	**21 32 10.1**	**-1.1**
	12nm,0.4s						
ARXS	**Arharly**	**2.69**	**38**	*e*P	**Pb**	**21 31 34.0**	**+0.4**
	7.5nm,0.4s						
ARXS				*e*S	**Sg**	**21 32 09.5**	**-1.8**
	30nm,0.3s						
ARXS	**Arharly**	**2.69**	**38**	Pg	**Pb**	**21 31 34.0**	**+0.4**
	7.5nm,0.4s						
UZB	**Uzynbulak**	**2.78**	**67**	*e*P	**Pb**	**21 31 35.8**	**+0.7**
	2.7nm,0.3s						
UZB				*e*S	**Sb**	**21 32 12.1**	**+2.5**
	5.5nm,0.6s						
UZB	**Uzynbulak**	**2.78**	**67**	Pg	**Pb**	**21 31 35.8**	**+0.7**
	2.7nm,0.3s						
BLB	**Baldybastay**	**2.94**	**46**	*e*P	**Pb**	**21 31 38.7**	**+1.0**
	5.6nm,0.4s						
BLB				*e*S	**Sg**	**21 32 17.5**	**-1.6**
	23nm,0.4s						
BLB	**Baldybastay**	**2.94**	**46**	Pg	**Pb**	**21 31 38.7**	**+1.0**
	5.6nm,0.4s						
BTLS	**Baital**	**3.12**	**340**	*e*P	**Pb**	**21 31 40.9**	**+0.1**
	1.2nm,0.3s						
BTLS				*e*S	**Sb**	**21 32 21.1**	**+1.9**
	8.9nm,0.5s						
BTLS	**Baital**	**3.12**	**340**	Pg	**Pb**	**21 31 40.9**	**+0.1**
	1.2nm,0.3s						
PDGK	**Podgornoye**	**3.17**	**66**	Pg	**Pb**	**21 31 42.6**	**+0.9**
	0.9nm,0.4s						
PDGK	**Podgornoye**	**3.17**	**66**	⇑Pn	**Pb**	**21 31 40.4**	**-1.2**
	3.3nm,0.9s						
PDGK				⇓Lg	Lg	21 32 23.5	
	6.7nm,0.9s						
KK31	**Karatay Array**	**3.83**	**287**	⇑P	**Pb**	**21 31 54.8**	**+1.9**
	0.3nm,0.4s,baz=108,slow=16,SNR=12						
KK31				⇓S	**Sb**	**21 32 42.0**	**+2.4**
	0.7nm,0.5s,baz=110,slow=28,SNR=6.2						

JMA 02 21:38:34.2±0.1, 24°.3N±0°.3×123°.8E±0°.3, h15^{km}±1^{km}, MV0.4/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.12**	**320**	P	Pg	21 38 37.7	0.0
JKRS	**Kuro-shima**	**0.18**	**92**	*i* P	Pg	21 38 38.7	+0.1
JKRS				*e*S	Sg	21 38 41.5	0.0
HATJ	**Hateruma jima**	**0.19**	**182**	P	Pg	21 38 38.6	-0.1
HATJ				*e*S	Sg	21 38 41.4	-0.3
JIJ	**Ishigaki jima**	**0.32**	**69**	*e*P	Pg	21 38 40.8	-0.2
JIJ				*e*S	Sg	21 38 45.5	-0.1
JISG	**Ishigakijimahi**	**0.57**	**53**	*e*P	Pg	21 38 45.3	-0.1

TAP 02 21:39:23.5, 24°.22N×121°.70E, h15^{km}, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**230**	*e*P	Pg	21 39 27.2	+0.4
	baz=229						
ETL				*e*S	Sg	21 39 30.3	+1.3
	baz=229						
NACB	**Ninganchiao**	**0.11**	**245**	*i* P	Pb	21 39 27.4	+0.1
	baz=245						
NACB				S	Sb	21 39 29.8	0.0
	baz=245						
TWD	**Chiawan**	**0.17**	**215**	*e*P	Pb	21 39 28.2	-0.2
	baz=212						
TWD				*e*S	Sg	21 39 30.7	+0.3
	baz=212						
ETLH	**Xiulin Townshi**	**0.20**	**267**	*i* P	Pb	21 39 28.9	-0.1
	baz=266						
ETLH				S	Sb	21 39 32.7	+0.1
	baz=266						
ENA	**Nanau**	**0.21**	**10**	*e*P	Pb	21 39 29.0	-0.1
	baz=11						
ENA				*e*S	Sb	21 39 32.7	-0.2
	baz=11						
EWUT	**Wuta**	**0.24**	**17**	*e*P	Pb	21 39 30.1	+0.6
	baz=17						
EWUT				*e*S	Sg	21 39 32.9	+0.5
	baz=17						
LATG	**Datong**	**0.35**	**333**	P	Pb	21 39 31.9	+0.3
	baz=333						
LATG				S	Sb	21 39 37.7	+0.7
	baz=333						
NNSB	**Datong**	**0.36**	**306**	*e*P	Pb	21 39 32.0	+0.3
	baz=305						
NNSB				*e*S	Sb	21 39 37.6	+0.4
	baz=305						
WHF	**Hehuan Shan**	**0.41**	**260**	*e*P	Pb	21 39 32.5	-0.2
	baz=259						
WHF				*e*S	Sb	21 39 38.6	-0.2
	baz=259						
TWC	**Suao**	**0.41**	**19**	*e*P	Pb	21 39 32.5	-0.1
	baz=20						
TWC				*e*S	Sb	21 39 38.5	-0.1
	baz=20						
NDS	**Dongshan**	**0.41**	**2**	*e*P	Pb	21 39 32.7	+0.1
	baz=1.0						
NDS				*e*S	Sb	21 39 39.0	+0.3
	baz=1.0						
ENTT	**Nioudou**	**0.44**	**344**	*e*P	Pb	21 39 33.4	+0.4
	baz=344						
ENTT				*e*S	Sb	21 39 39.7	+0.4
	baz=344						
CHGB	**Renai**	**0.51**	**252**	*e*P	Pb	21 39 34.5	+0.3
	baz=251						
CHGB				*e*S	Sb	21 39 41.9	+0.4
	baz=251						
YHNB	**Yeheng**	**0.54**	**327**	*e*P	Pb	21 39 35.5	+0.8
	baz=326						
YHNB				*e*S	Sb	21 39 42.3	0.0
	baz=326						
OWD	**Renai**	**0.55**	**241**	*e*P	Pb	21 39 35.6	+0.7
	baz=241						
OWD				*e*S	Sb	21 39 42.4	-0.2
	baz=241						
FUSB	**Fushanzhiwuyua**	**0.55**	**349**	*e*P	Pg	21 39 34.2	-0.2
	baz=349						
FUSB				*e*S	Sb	21 39 43.1	+0.5
	baz=349						
WUSB	**Renai**	**0.58**	**247**	*e*P	Pb	21 39 36.1	+0.7
	baz=247						
WUSB				*e*S	Sb	21 39 43.4	-0.1
	baz=247						
NWLT	**Wulai**	**0.58**	**342**	*e*P	Pb	21 39 36.1	+0.6
	baz=341						
NWLT				*e*S	Sb	21 39 43.8	+0.2
	baz=341						

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*IDC **02** 21:49:32.1±0.6, 13°.79N×90°.84W, h0^{km}, mb4.5/20, mbtmp4.5/21, ML4.9/1, MS4.2/51, Error ellipse: s-maj=28.0km s-min=12.2km az=57.0*

*INET **02** 21:49:34.3±0.5, 13°.61N×91°.58W, h15^{km}±4^{km}, MW4.6*

*GCMT **02** 21:49:35.0±0.5, 13°.68N±0°.03×91°.78W±0°.04, h34^{km}±1^{km}, MW4.9/53, Moment Tensor Solution. s36,c42; s53,c68; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.41±.20; $M_{\theta\theta}$2.24±.12; $M_{\phi\phi}$0.16±.14; $M_{r\theta}$1.02±.14; $M_{\theta\phi}$-0.99±.09; $M_{\phi r}$-0.29±.17; Best double couple: $M_0$2.73700×10^{16} NP1:ϕ_s115.00000°, δ34.00000°, λ-86.00000°. NP2: ϕ_s289.00000°, δ56.00000°, λ-93.00000°. Principal axes: T 2.8480, Plg11.0000°, Azm21.0000°; N -0.2250, Plg2.0000°, Azm291.0000°; P -2.6270, Plg78.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GCG **02** 21:49:36.7±1.8, 13°.55N×91°.49W, h41^{km}, MD5.0*

*NEIC **02** 21:49:38±3.0, 13°.57N±0°.06×91°.36W±0°.07, h35^{km}±1^{km}, mb4.7/350, Md4.9(SNET), Error ellipse: s-maj=12.6km s-min=7.8km az=229.0*

*SNET **02** 21:49:40.6±3.3, 13°.86N×91°.14W, h66^{km}, ML4.8*

ISC 02 21:49:37.7±1.0, 13°.61N±0°.05×91°.37W±0°.05, h40^{km}±8^{km}, n628, σ1^{s}.22/477, mb4.7/164, MS4.2/51, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.96**	**341**	Pn	**Pn**	**21 49 53.5**	**-1.2**
RTAL				Sn	**Sn**	**21 50 06.3**	**-0.8**
RTAL	**Retalhuleu**	**0.96**	**341**	*e*P	**Pn**	**21 49 53.9**	**-0.8**
RTAL				*e*S	**Sn**	**21 50 07.0**	**-0.2**
FUG	**Fuego 3**	**0.97**	**32**	*e*P	**Pn**	**21 49 55.4**	**+0.3**
PCG	**Pacaya**	**1.07**	**44**	*e*P	**Pn**	**21 49 57.1**	**+0.7**
STG3	**Santiaguito 3,**	**1.11**	**350**	*e*P	**Pn**	**21 49 56.1**	**-0.8**
NBG	**Las Nubes**	**1.39**	**46**	*e*P	**Pn**	**21 50 02.5**	**+1.7**
NUBE	**Las Nubes**	**1.57**	**79**	*e*P	**Pn**	**21 50 02.5**	**-0.8**
NUBE				*e*S	**Sn**	**21 50 22.9**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.59**	**75**	*e*P	**Pn**	**21 50 03.5**	**+0.1**
SLOZ				*e*S	**Sn**	**21 50 24.2**	**+1.3**
HUEH	**Huehuetenango**	**1.70**	**356**		**Pn**	**21 50 06.4**	**+1.4**
HUEH	**Huehuetenango**	**1.70**	**356**	*e*P	**Pn**	**21 50 06.6**	**+1.5**
CEVE	**Cerro Verde**	**1.71**	**83**	*e*P	**Pn**	**21 50 04.9**	**-0.3**
CEVE				IAML		21 50 34.8	
	comp=Z,15μm,0.5s						
SBLS	**San Blas**	**1.71**	**82**	*e*P	**Pn**	**21 50 04.9**	**-0.3**
JAYA	**Jayaque - finc**	**1.87**	**89**	*e*P	**Pn**	**21 50 06.8**	**-0.5**
JAYA				IAML		21 50 39.3	
	comp=Z,9μm,0.3s						
CEDA	**San Andres**	**1.93**	**84**	*e*P	**Pn**	**21 50 09.1**	**+1.1**
CEDA				IAML		21 50 44.6	
	comp=Z,8μm,0.4s						
LALI	**Alcalda de L**	**2.00**	**93**	*e*P	**Pn**	**21 50 09.8**	**+0.9**
BOQS	**Boqueron**	**2.03**	**86**	*e*P	**Pn**	**21 50 09.8**	**+0.2**
SNET	**Serv Nac Est T**	**2.08**	**88**	Pn	**Pn**	**21 50 10.2**	**+0.1**
SNET	**Serv Nac Est T**	**2.08**	**88**	*e*P	**Pn**	**21 50 11.1**	**+0.9**
SNET				*e*S	**Sn**	**21 50 37.0**	**+2.2**
MTO3	**Montecristo**	**2.10**	**68**		**Pn**	**21 50 11.1**	**+0.5**
MTO3	**Montecristo**	**2.10**	**68**	*e*P	**Pn**	**21 50 11.1**	**+0.5**
ESQI	**Esquipulas**	**2.18**	**64**		**Pn**	**21 50 12.6**	**+1.0**
ESQI	**Esquipulas**	**2.18**	**64**	*e*P	**Pn**	**21 50 12.6**	**+1.0**
MRL	**Marmol**	**2.19**	**48**	*e*P	**Pn**	**21 50 14.5**	**+2.7**
LFRS	**El Faro**	**2.24**	**89**	*e*P	**Pn**	**21 50 12.8**	**+0.4**
SJTE	**Alcalda de S**	**2.30**	**90**	*e*P	**Pn**	**21 50 13.7**	**+0.6**
PAVA	**Las Pavas**	**2.37**	**87**	*e*P	**Pn**	**21 50 14.6**	**+0.5**
COEG	**Centro de Oper**	**2.42**	**90**	*e*P	**Pn**	**21 50 15.1**	**+0.3**
SCLA	**Alcaldia de Sa**	**2.57**	**88**	*e*P	**Pn**	**21 50 17.6**	**+0.8**
CCIG	**Comitan**	**2.76**	**344**		**Pn**	**21 50 21.2**	**+1.6**
COEB	**Comit de Eme**	**2.76**	**92**	*e*P	**Pn**	**21 50 20.4**	**+0.8**
CAHU	**Cacacuatique**	**3.07**	**87**	*e*P	**Pn**	**21 50 24.4**	**+0.5**
LCND	**La Caada**	**3.40**	**95**	*e*P	**Pn**	**21 50 28.9**	**+0.7**
PETF	**Flores**	**3.59**	**24**	Pn	**Pn**	**21 50 32.5**	**+1.7**
CSGN	**Cosiguina Volc**	**3.76**	**99**	*e*P	**Pn**	**21 50 33.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**4.00**	**83**	Pn	**Pn**	**21 50 36.7**	**+0.1**
TGUH	**Tegucigalpa,Un**	**4.00**	**83**	*e*P	**Pn**	**21 50 34.2**	**-2.4**
CRIN	**San Cristobal**	**4.30**	**102**	Pn	**Pn**	**21 50 41.2**	**+0.5**
CRIN	**San Cristobal**	**4.30**	**102**	*e*P	**Pn**	**21 50 41.2**	**+0.5**
CNGN	**Cerro Negro**	**4.68**	**103**	Pn	**Pn**	**21 50 44.3**	**-1.6**
CNGN	**Cerro Negro**	**4.68**	**103**	*e*P	**Pn**	**21 50 44.9**	**-1.0**
CMIG	**Matias Romero**	**4.84**	**316**	Pn	**Pn**	**21 50 47.2**	**-0.9**
	comp=Z,7.8nm,0.3s,baz=138,slow=11,SNR=51						
CMIG				Sn	**Sn**	**21 51 43.1**	**+0.1**
	comp=Z,34nm,0.3s,baz=135,slow=16,SNR=7.5						
CMIG				LR	LR	21 53 05.4	
	comp=Z,3μm,19.5s,baz=150,slow=42						
MOMN	**Momotombo**	**4.86**	**104**	*e*P	**Pn**	**21 50 49.0**	**+0.7**
COPN	**Copaltepe**	**4.87**	**106**	*e*P	**Pn**	**21 50 48.9**	**+0.4**
APYN	**Apoyeque**	**5.08**	**105**	*e*P	**Pn**	**21 50 51.0**	**-0.3**
MGAN	**Managua**	**5.20**	**106**	*e*P	**Pn**	**21 50 51.7**	**-1.3**
HUEN		**5.22**	**103**	*e*P	**Pn**	**21 50 52.9**	**-0.3**
MATN	**Matagalpa**	**5.34**	**97**	Pn	**Pn**	**21 50 54.6**	**-0.4**
MATN	**Matagalpa**	**5.34**	**97**	*e*P	**Pn**	**21 50 54.6**	**-0.4**
BOAB	**BOACO BROADBAN**	**5.68**	**101**	Pn	**Pn**	**21 50 58.1**	**-1.4**
ACON	**Acoyapa**	**6.26**	**104**	Pn	**Pn**	**21 51 06.5**	**-1.1**
HZTE	**Horizontes, Gu**	**6.34**	**116**	Pn	**Pn**	**21 51 09.4**	**+0.8**
ORTG	**Ortega, Santa**	**6.62**	**119**	Pn	**Pn**	**21 51 12.8**	**+0.2**
DUNO	**Dulce Nombre,**	**6.74**	**121**	Pn	**Pn**	**21 51 14.3**	**+0.1**
ESPN	**Las Esperanzas**	**7.03**	**101**	Pn	**Pn**	**21 51 18.1**	**-0.1**
JTS	**Las Juntas de**	**7.09**	**117**	Pn	**Pn**	**21 51 19.9**	**+0.9**
JTS	**Las Juntas de**	**7.09**	**117**	*e*P	**Pn**	**21 51 22.0**	**+3.0**
CAO2	**Cobano, Puntar**	**7.27**	**122**	Pn	**Pn**	**21 51 22.1**	**+0.7**
JACO	**JACO, Garabito**	**7.66**	**120**	Pn	**Pn**	**21 51 27.0**	**+0.3**
HDC	**Heredia**	**7.96**	**116**	Pn	**Pn**	**21 51 31.9**	**+1.0**
TLIG	**Tlapa**	**7.97**	**300**	Pn	**Pn**	**21 51 33.4**	**+2.3**
RIMA	**Rio Macho**	**8.28**	**117**	Pn	**Pn**	**21 51 35.9**	**+0.3**
PEZE	**Perez Zeledon,**	**8.63**	**118**	Pn	**Pn**	**21 51 41.5**	**+1.4**
SRBA	**San Rafael, Bu**	**8.98**	**118**	Pn	**Pn**	**21 51 46.0**	**+1.1**
DRK0	**Durika**	**9.06**	**118**	Pn	**Pn**	**21 51 47.4**	**+1.3**
RIOS	**Rincon, Osa**	**9.12**	**122**	Pn	**Pn**	**21 51 47.7**	**+0.9**
PRVC	**Isla de Provid**	**9.73**	**90**	Pn	**Pn**	**21 51 56.3**	**+1.1**
BRU2	**Volcan**	**9.77**	**118**	*e*P	**Pn**	**21 51 58.3**	**+2.5**
SOR	**Soroa**	**12.10**	**40**	Pn	**Pn**	**21 52 30.1**	**+2.5**
BCIP	**Isla Barro Col**	**12.14**	**110**	Pn	**Pn**	**21 52 27.2**	**-0.9**
ZAIG	**Zacatecas**	**14.00**	**312**		**Pn**	**21 52 56.1**	**+2.3**
MTDJ	**Mount Denham**	**14.07**	**69**		**P**	**21 53 01.6**	**0.0**
SJCC	**San Jacinto, C**	**16.27**	**101**	*e*P	**Pn**	**21 53 22.3**	**-1.2**
DBBC	**Dabeiba**	**16.28**	**112**	*e*P	**Pn**	**21 53 24.2**	**+0.5**
833A	**Chaparral WMA,**	**16.43**	**334**	P	**P**	**21 53 27.8**	**+0.1**
833A	**Chaparral WMA,**	**16.43**	**334**	P	**P**	**21 53 28.4**	**+0.7**
	baz=152,SNR=10						
CBOC	**Ciudad Bolivar**	**16.97**	**116**	*e*P	**P**	**21 53 34.7**	**+0.8**
DWPF	**Disney Wildern**	**17.14**	**31**	P	**P**	**21 53 36.3**	**+0.8**
	baz=214						
PLMC	**San Jos del P**	**17.21**	**119**	*e*P	**Pn**	**21 53 35.7**	**+0.4**
ZARC	**Zaragoza, Cauc**	**17.33**	**109**	P	**Pn**	**21 53 36.3**	**-0.4**
ZARC	**Zaragoza, Cauc**	**17.33**	**109**	*e*P	**Pn**	**21 53 37.6**	**+0.9**
YOTC	**Yotoco, Valle**	**17.65**	**121**	*e*P	**Pn**	**21 53 41.4**	**+0.7**
553A	**Crawfordville**	**17.70**	**20**	P	**P**	**21 53 43.6**	**+2.0**
346A	**Big Creek Wild**	**17.78**	**5**	P	**P**	**21 53 42.6**	**+0.1**
346A				IAmb	IAmb	21 53 52.8	
	comp=Z,94nm,0.9s						
BRAL	**Brewton**	**17.92**	**12**	P	**P**	**21 53 45.1**	**+1.0**
	baz=194						
435B	**Jarrell**	**18.02**	**342**	P	**P**	**21 53 46.7**	**+1.4**
	baz=160						
PTBC	**PUERTO BERRIO,**	**18.07**	**111**	*e*P	**P**	**21 53 45.2**	**-0.6**
NORC	**Norcasia**	**18.12**	**115**	*e*P	**Pn**	**21 53 49.0**	**+2.6**
NATX	**Nacogdoches**	**18.31**	**351**	P	**Pn**	**21 53 49.0**	**+0.4**
	baz=170						
OTAV	**Otavalo**	**18.45**	**135**	P	**P**	**21 53 51.0**	**+0.5**
JCT	**Junction City**	**18.50**	**336**	P	**Pn**	**21 53 52.5**	**+1.5**
JCT	**Junction City**	**18.50**	**336**	P	**Pn**	**21 53 52.5**	**+1.5**
	baz=153						
VBMS	**Vicksburg**	**18.54**	**2**	P	**Pn**	**21 53 52.0**	**+0.7**
	baz=183						
ORTC	**Ortega, Tolima**	**18.61**	**120**	*e*P	**Pn**	**21 53 53.8**	**+1.4**
ROSC	**El Rosal**	**18.94**	**116**	P	**Pn**	**21 53 58.4**	**+1.6**
	comp=Z,40nm,0.9s,baz=237,slow=14,SNR=11						
143A	**Socs Landing,**	**19.00**	**360**	P	**Pn**	**21 53 57.2**	**+0.3**
143A				IAmb	IAmb	21 54 00.1	
	comp=Z,49nm,0.9s						
WHTX	**Lake Whitney,**	**19.13**	**344**	P	**Pn**	**21 53 58.2**	**-0.2**
	baz=162						
TIGA	**Tifton**	**19.13**	**21**	P	**Pn**	**21 53 58.5**	**0.0**
TIGA				IAmb	IAmb	21 54 22.6	
	comp=Z,58nm,0.9s						
TIGA	**Tifton**	**19.13**	**21**	P	**Pn**	**21 53 58.4**	**-0.1**
	baz=204						
BARC	**Barichara**	**19.20**	**110**	*e*P	**Pn**	**21 54 05.3**	**+5.5**
TXAR	**Lajitas Array**	**19.36**	**326**	P	**Pn**	**21 54 02.3**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=154,slow=11,SNR=153						
	comp=Z,28nm,0.8s						
TXAR	**Lajitas Array**	**19.36**	**326**	P	**Pn**	**21 54 02.5**	**+1.1**
H06E1	**SOCORRO T-PHAS**	**19.47**	**288**	T	T	22 13 58.1	
	SNR=8.9						
CHIC	**Chingaza**	**19.55**	**116**	*e*P	**P**	**21 54 03.4**	**+0.8**
RUSC	**La Rusia**	**19.57**	**111**	*e*P	**Pn**	**21 54 05.3**	**+0.8**
Z41A	**Richland Creek**	**19.60**	**356**	P	**Pn**	**21 54 03.4**	**-0.7**
Z41A				IAmb	IAmb	21 54 24.7	
	comp=Z,32nm,0.9s						
Z41A	**Richland Creek**	**19.60**	**356**	P	**Pn**	**21 54 03.2**	**-0.9**
	baz=176						
Z47A	**Carrollton**	**19.73**	**8**	IAmb	IAmb	21 54 09.3	
	comp=Z,50nm,0.8s						
LRAL	**Lakeview Retre**	**19.74**	**11**	P	**Pn**	**21 54 05.8**	**0.0**
LRAL				IAmb	IAmb	21 54 13.2	
	comp=Z,42nm,0.9s						
LRAL	**Lakeview Retre**	**19.74**	**11**	P	**P**	**21 54 04.6**	**+0.5**
	baz=193,SNR=27						
Z38A	**Mt. Pleasant**	**19.83**	**351**	IAmb	IAmb	21 54 10.2	
	comp=Z,28nm,0.9s						
152A	**Waverly Hall**	**19.92**	**17**	P	**P**	**21 54 06.5**	**+0.5**
152A				IAmb	IAmb	21 54 15.4	
	comp=Z,37nm,0.8s						
WLAR	**White Oak Lake**	**20.05**	**356**	P	**Pn**	**21 54 08.7**	**-0.7**
WLAR				IAmb	IAmb	21 54 33.5	
	comp=Z,54nm,0.9s						
CCAR	**Cane Creek**	**20.22**	**359**	P	Pn	21 54 10.2	-1.2
CCAR				IAmb	IAmb	21 54 34.2	
	comp=Z,38nm,0.9s						
SLBS	**Sierra La Lagu**	**20.23**	**302**		**P**	**21 54 09.6**	**+0.1**
SLBS				IAmb	IAmb	21 54 18.6	
	comp=Z,45nm,1.3s						
Z35A	**Perchaven, San**	**20.35**	**346**	P	Pn	21 54 11.7	-1.2
Z35A				IAmb	IAmb	21 54 21.2	
	comp=Z,40nm,0.9s						
154A	**Montrose**	**20.36**	**20**	P	**P**	**21 54 10.9**	**0.0**
ABTX	**Abilene, Hawle**	**20.38**	**340**	IAmb	IAmb	21 54 14.2	
	comp=Z,50nm,0.8s						
ABTX	**Abilene, Hawle**	**20.38**	**340**	P	Pn	21 54 12.0	-1.3
	baz=156,SNR=19						
Z51A	**Franklin**	**20.41**	**15**	IAmb	IAmb	21 54 18.4	
	comp=Z,46nm,0.9s						
Y49A	**Blount Mountai**	**20.65**	**12**	P	**P**	**21 54 14.8**	**+0.8**
Y49A				IAmb	IAmb	21 54 19.6	
	comp=Z,35nm,0.8s						
LPIG	**La Paz**	**20.71**	**303**	P	Pn	21 54 17.6	+0.3
	comp=Z,28nm,0.3s,baz=157,slow=2.8,SNR=3.6						
	comp=Z,28nm,0.3s						
X40A	**Basin Creek Fa**	**20.82**	**357**	P	**P**	**21 54 15.6**	**-0.2**
X40A	**Basin Creek Fa**	**20.82**	**357**	P	**P**	**21 54 16.0**	**+0.2**
	baz=176						
SDV	**Santo Domingo**	**20.87**	**101**	LR	LR	22 04 11.0	
	comp=Z,498nm,18.7s,baz=276,slow=43						
OXF	**Oxford**	**20.88**	**5**	P	**P**	**21 54 16.6**	**+0.2**
OXF				IAmb	IAmb	21 54 25.3	
	comp=Z,39nm,0.9s						
OXF	**Oxford**	**20.88**	**5**	P	**P**	**21 54 16.6**	**+0.2**
	baz=185,SNR=6.5						
MIAR	**Mount Ida**	**20.94**	**355**	P	**P**	**21 54 17.0**	**-0.1**
	baz=174						
GOGA	**Godfrey**	**20.98**	**19**	P	**P**	**21 54 17.8**	**+0.3**
GOGA	**Godfrey**	**20.98**	**19**	P	**P**	**21 54 18.3**	**+0.7**
	baz=202,SNR=10.0						
UALR	**University of**	**21.09**	**358**	P	**P**	**21 54 19.8**	**+1.1**
X48A	**Hartselle**	**21.11**	**10**	IAmb	IAmb	21 54 35.0	
	comp=Z,24nm,0.8s						
X37A	**Clayton**	**21.20**	**351**	IAmb	IAmb	21 54 29.0	
	comp=Z,22nm,0.8s						
Y52A	**Lilburn**	**21.23**	**17**	IAmb	IAmb	21 54 31.5	
	comp=Z,28nm,0.8s						
FPAL	**Fort Paine**	**21.48**	**13**	IAmb	IAmb	21 54 28.5	
	comp=Z,33nm,0.9s						
W41B	**Gary Mavity, V**	**21.48**	**358**	P	**P**	**21 54 23.9**	**+1.0**
	baz=178,SNR=5.1						
PLAL	**Pickwick Lake**	**21.48**	**7**	P	**P**	**21 54 22.5**	**-0.3**
W45A	**Hickory Valley**	**21.54**	**5**	P	**P**	**21 54 25.4**	**+1.9**
W39A	**Magazine**	**21.60**	**355**	P	**P**	**21 54 24.4**	**+0.3**
	baz=174						
X51A	**Calhoun**	**21.68**	**15**	P	**P**	**21 54 26.9**	**+2.0**
X51A				IAmb	IAmb	21 54 35.5	
	comp=Z,29nm,0.7s						
NHSC	**New Hope**	**21.93**	**26**	P	**P**	**21 54 27.4**	**-0.2**
	baz=210						
WMOK	**Wichita Mounta**	**22.08**	**344**	P	**P**	**21 54 29.8**	**+0.5**
	baz=161,SNR=6.8						
MNTX	**Cornudas Mount**	**22.12**	**327**	P	**P**	**21 54 30.5**	**+0.6**
	baz=142,SNR=136						
HODGE	**Hodges**	**22.13**	**20**	IAmb	IAmb	21 54 48.0	
	comp=Z,36nm,1.5s						
W50A	**Signal Mountai**	**22.18**	**13**	P	**P**	**21 54 30.0**	**-0.4**
W50A				IAmb	IAmb	21 54 42.5	
	comp=Z,28nm,0.8s						
FCAR	**Ozark Folk Cen**	**22.19**	**358**	IAmb	IAmb	21 54 32.8	
	comp=Z,28nm,0.9s						
FNO	**Franklin**	**22.23**	**347**	IAmb	IAmb	21 54 32.9	
	comp=Z,35nm,0.8s						
LCAR	**Lake Charles**	**22.36**	**0**	IAmb	IAmb	21 54 34.1	
	comp=Z,19nm,0.7s						
OKCFA	**Oklahoma City**	**22.39**	**347**	P	**P**	**21 54 33.4**	**+0.7**
OKCFA				IAmb	IAmb	21 54 34.8	
	comp=Z,35nm,0.7s						
V48A	**Smith Brothers**	**22.41**	**10**	IAmb	IAmb	21 54 55.6	
	comp=Z,33nm,1.2s						
W52A	**Murphy**	**22.42**	**16**	IAmb	IAmb	21 55 02.9	
	comp=Z,26nm,0.8s						
TUL1	**Leonard**	**22.56**	**351**	P	**P**	**21 54 34.4**	**0.0**
	baz=169						
BG3	**Lake Jocassee**	**22.61**	**18**	IAmb	IAmb	21 54 41.0	
	comp=Z,21nm,1.0s						
WVT	**Waverly**	**22.65**	**7**	P	**P**	**21 54 33.8**	**-1.5**
WVT	**Waverly**	**22.65**	**7**	P	**P**	**21 54 35.0**	**-0.3**
	baz=189						
U40A	**Yellville**	**22.69**	**357**	IAmb	IAmb	21 54 37.8	
	comp=Z,13nm,0.7s						
U40A	**Yellville**	**22.69**	**357**	P	**P**	**21 54 35.1**	**-0.7**
	baz=176,SNR=13						
MSTX	**Muleshoe**	**22.76**	**335**	P	**P**	**21 54 36.4**	**-0.3**
MSTX				IAmb	IAmb	21 54 40.8	
	comp=Z,27nm,0.8s						
MSTX	**Muleshoe**	**22.76**	**335**	P	**P**	**21 54 36.4**	**-0.3**
	baz=150,SNR=10.0						
CLTN	**Cedars of Leba**	**22.84**	**11**	IAmb	IAmb	21 55 00.2	
	comp=Z,49nm,1.4s						
V51A	**Loudon**	**22.98**	**15**	IAmb	IAmb	21 54 50.4	
	comp=Z,23nm,0.8s						
TKL	**Tuckaleechee C**	**22.99**	**16**	P	**P**	**21 54 38.8**	**-0.1**
	comp=Z,12nm,0.5s,baz=188,slow=10,SNR=24						
TKL				LR	LR	22 04 38.3	
	comp=Z,714nm,20.4s,baz=195,slow=40						
TKL	**Tuckaleechee C**	**22.99**	**16**	IAmb	IAmb	21 54 41.9	
	comp=Z,28nm,1.0s						
PBMO	**Poplar Bluff**	**23.08**	**2**	IAmb	IAmb	21 54 41.6	
	comp=Z,36nm,0.9s						
AMTX	**Amarillo**	**23.14**	**338**	P	**P**	**21 54 40.3**	**-0.2**
	baz=154						
V52A	**Sevierville**	**23.21**	**16**	IAmb	IAmb	21 54 52.4	
	comp=Z,19nm,0.8s						
KMSC	**Kings Mountain**	**23.27**	**21**	IAmb	IAmb	21 55 05.2	
	comp=Z,21nm,0.8s						
KMSC	**Kings Mountain**	**23.27**	**21**	P	**P**	**21 54 40.6**	**-1.1**
	baz=205						
V53A	**Saluda**	**23.27**	**18**	P	**P**	**21 54 41.3**	**-0.5**
V53A				IAmb	IAmb	21 55 05.6	
	comp=Z,15nm,0.8s						
BAUV	**El Baul**	**23.34**	**99**	P	**P**	**21 54 40.4**	**-2.2**
BAUV				IAmb	IAmb	21 54 44.8	
	comp=Z,33nm,0.8s						
U49A	**Red Boiling Sp**	**23.35**	**11**	IAmb	IAmb	21 55 04.2	
	comp=Z,18nm,0.9s						
MGMO	**Mountain Grove**	**23.46**	**358**	IAmb	IAmb	21 54 44.6	
	comp=Z,37nm,1.0s						
TZTN	**Tazewell**	**23.89**	**16**	IAmb	IAmb	21 54 52.8	
	comp=Z,34nm,0.8s						
TZTN	**Tazewell**	**23.89**	**16**	P	**P**	**21 54 46.9**	**-0.8**
	baz=199,SNR=7.0						
T50A	**Nancy**	**24.03**	**13**	P	**P**	**21 54 47.8**	**-1.1**
T50A				IAmb	IAmb	21 55 16.5	
	comp=Z,22nm,1.1s						
S39A	**Bolivar**	**24.04**	**356**	IAmb	IAmb	21 54 50.6	
	comp=Z,23nm,0.7s						
S44A	**Carbondale**	**24.06**	**4**	IAmb	IAmb	21 54 51.5	
	comp=Z,29nm,0.8s						
121A	**Cookes Peak, D**	**24.08**	**324**	IAmb	IAmb	21 55 10.1	
	comp=Z,27nm,0.8s						
121A	**Cookes Peak, D**	**24.08**	**324**	P	**P**	**21 54 50.1**	**+0.4**
	baz=138,SNR=14						
SIUC	**Southern Illin**	**24.08**	**4**	IAmb	IAmb	21 54 51.7	
	comp=Z,28nm,0.8s						
319A	**Douglas**	**24.15**	**320**	P	**P**	**21 54 52.5**	**+2.3**
CCM	**Cathedral Cave**	**24.34**	**0**	P	**P**	**21 54 50.5**	**-1.3**
CCM				IAmb	IAmb	21 54 53.3	
	comp=Z,34nm,0.8s						
CCM	**Cathedral Cave**	**24.34**	**0**	P	**P**	**21 54 50.7**	**-1.1**
	baz=180						
R40A	**Maddies Statio**	**24.59**	**358**	IAmb	IAmb	21 54 55.1	
	comp=Z,32nm,0.8s						
V58A	**Windy Hill, Pi**	**24.69**	**24**	IAmb	IAmb	21 54 59.3	
	comp=Z,14nm,0.8s						
LENM	**Lemitar**	**24.88**	**328**	P	**P**	**21 54 60.0**	**+3.0**
S51A	**Beattyville**	**24.91**	**15**	IAmb	IAmb	21 55 03.4	
	comp=Z,17nm,0.7s						
OLIL	**Olney**	**25.19**	**6**	IAmb	IAmb	21 55 05.2	
	comp=Z,21nm,0.8s						
R49A	**Shelbyville**	**25.19**	**12**	IAmb	IAmb	21 55 28.3	
	comp=Z,33nm,1.2s						
ANMO	**Albuquerque**	**25.24**	**330**	P	**P**	**21 55 01.8**	**+1.6**
	comp=Z,8.9nm,0.7s,baz=148,slow=11,SNR=22						
	comp=Z,8.9nm,0.7s						
ANMO	**Albuquerque**	**25.24**	**330**	P	**P**	**21 55 02.0**	**+1.8**
ANMO	**Albuquerque**	**25.24**	**330**	P	**P**	**21 55 01.4**	**+1.2**
	baz=144						
TUC	**Tucson**	**25.73**	**320**	P	**P**	**21 55 06.3**	**+1.8**
TUC				IAmb	IAmb	21 55 10.5	
	comp=Z,20nm,1.1s						

TUC	Tucson	25.73	320	P	P	21 55 05.4	+0.9
	baz=132						
KSU1	Kansas State U	25.81	351	P	P	21 55 05.7	+0.6
	baz=168						
P40A	Paris	25.82	359	IAmb	IAmb	21 55 07.1	
	comp=Z,23nm,0.8s						
P38A	Dawn	25.98	356	IAmb	IAmb	21 55 09.1	
	comp=Z,12nm,0.7s						
P46A	Rosedale	26.16	7	IAmb	IAmb	21 55 37.5	
	comp=Z,13nm,0.8s						
T25A	Trinidad	26.17	336	P	P	21 55 09.0	+0.4
T25A	Trinidad	26.17	336	P	P	21 55 08.8	+0.2
	baz=150,SNR=6.6						
T59A	Double "B" Far	26.34	26	IAmb	IAmb	21 55 14.4	
	comp=Z,11nm,0.8s						
P49A	Miami Univ. Ec	26.48	12	P	P	21 55 11.2	+0.1
	baz=194						
Q52A	Bidwell	26.50	16	IAmb	IAmb	21 55 16.3	
	comp=Z,14nm,0.7s						
X18A	Snowflake	26.77	324	P	P	21 55 16.0	+2.0
P51A	Williamsport	26.79	14	IAmb	IAmb	21 55 36.8	
	comp=Z,19nm,1.0s						
214A	Organ Pipe Nat	26.82	316	P	P	21 55 16.1	+1.8
	baz=128,SNR=8.9						
HDIL	Hopedale	26.90	3	P	P	21 55 15.5	+0.6
	baz=184						
SFIN	Lafayette	26.93	7	P	P	21 55 16.1	+1.0
	baz=189						
W18A	Petrified Fore	27.08	325	P	P	21 55 18.8	+2.0
W18A				IAmb	IAmb	21 55 22.2	
	comp=Z,41nm,1.4s						
W18A	Petrified Fore	27.08	325	P	P	21 55 18.0	+1.2
	baz=138,SNR=15						
O48B	Farmland	27.10	10	P	P	21 55 17.5	+0.8
	baz=193						
N38A	Joes South For	27.13	357	P	P	21 55 15.8	-1.2
SDCO	Great Sand Dun	27.13	335	P	P	21 55 17.3	-0.1
	baz=149,SNR=8.6						
P52A	Corning	27.17	16	P	P	21 55 16.9	-0.4
	baz=200						
KSCO	Kaye Shedlock’	27.19	341	P	P	21 55 17.4	-0.2
KSCO				IAmb	IAmb	21 55 20.4	
	comp=Z,16nm,1.1s						
KSCO	Kaye Shedlock’	27.19	341	P	P	21 55 18.0	+0.3
	baz=156						
CBN	Corbin Frederi	27.47	24	P	P	21 55 20.1	+0.1
	baz=210						
ACSO	Alum Creek Sta	27.52	14	IAmb	IAmb	21 55 21.4	
	comp=Z,33nm,1.3s						
ACSO	Alum Creek Sta	27.52	14	P	P	21 55 20.8	+0.3
	baz=198						
O52A	Adamsville	27.70	16	IAmb	IAmb	21 55 51.2	
	comp=Z,24nm,1.1s						
S22A	4UR Ranch, Cre	27.70	333	P	P	21 55 24.2	+1.7
S22A	4UR Ranch, Cre	27.70	333	P	P	21 55 22.5	+0.1
	baz=146,SNR=7.7						
113A	Mohawk Valley,	27.95	317	P	P	21 55 26.1	+1.6
O53A	New Philadelph	27.99	17	P	P	21 55 24.3	-0.4
	baz=201						
MVCO	Mesa Verde	28.04	330	IAmb	IAmb	21 55 29.1	
	comp=Z,19nm,1.0s						
MVCO	Mesa Verde	28.04	330	P	P	21 55 24.4	-1.1
	baz=143,SNR=13						
Q24A	Divide	28.04	337	P	P	21 55 23.6	-1.9
Q24A	Divide	28.04	337	P	P	21 55 24.6	-0.9
	baz=151						
WUAZ	Wupatki	28.29	324	IAmb	IAmb	21 55 34.2	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	28.29	324	P	P	21 55 28.3	+0.7
	baz=136,SNR=9.7						
L40A	Anamosa	28.35	0	IAmb	IAmb	21 55 29.1	
	comp=Z,14nm,1.0s						
L44A	Lake County Fo	28.62	5	P	P	21 55 30.3	0.0
	baz=187						
SDMD	Soldier’s Deli	28.71	24	P	P	21 55 30.4	-0.7
OGNE	Ogallala	28.78	343	P	P	21 55 32.0	+0.2
	baz=158						
GLA	Glamis	28.83	316	P	P	21 55 34.0	+1.7
GLA				IAmb	IAmb	21 55 37.8	
	comp=Z,19nm,1.2s						
GLA	Glamis	28.83	316	P	P	21 55 32.6	+0.2
	baz=127						
ISCO	Idaho Springs	28.94	337	P	P	21 55 34.2	+0.6
	baz=150						
PV11	David Mesa, Pa	29.08	331	P	P	21 55 36.0	+1.3
PV11				IAmb	IAmb	21 55 40.3	
	comp=Z,17nm,1.0s						
PV07	Paradox Valley	29.09	331	IAmb	IAmb	21 55 38.6	
	comp=Z,14nm,1.0s						
PDMCI	Parker Dam,Lak	29.15	319	P	P	21 55 36.2	+1.1
	baz=130,SNR=7.3						
JFWS	Jewell Farm	29.21	2	P	P	21 55 35.8	+0.3
	baz=182						
NNA	Nana	29.23	150	LR	LR	22 05 11.8	
	comp=Z,290nm,20.1s,baz=334,slow=32						
M53A	WI Miller and	29.25	17	IAmb	IAmb	21 56 05.3	
	comp=Z,14nm,0.9s						
M53A	WI Miller and	29.25	17	P	P	21 55 36.1	+0.3
	baz=202						
PV23	Carpenter Ridg	29.27	331	IAmb	IAmb	21 55 39.9	
	comp=Z,15nm,1.0s						
SSPA	Standing Stone	29.40	21		P	21 55 37.1	-0.1
SSPA	Standing Stone	29.40	21	P	P	21 55 37.1	-0.1
	baz=207						
SWSC	Sam W. Stewart	29.43	315	P	P	21 55 38.7	+1.0
	baz=125						
IKP	In-Ko-Pah, Jac	29.48	314	P	P	21 55 40.8	+2.6
	baz=124						
W13A	Hualapai Mount	29.50	320	P	P	21 55 40.5	+2.0
BC3	Big Chuckawall	29.61	316	P	P	21 55 40.6	+1.3
	baz=127,SNR=14						
WUPA	West Chester U	29.66	25	IAmb	IAmb	21 55 46.1	
	comp=Z,7.5nm,0.4s						
IRM	Iron Mountain	29.71	318	P	P	21 55 41.4	+1.3
	baz=128,SNR=6.2						
MONP2	Monument Peak	29.84	314	P	P	21 55 42.3	+0.9
	baz=124						
N23A	Red Feather La	30.02	338	P	P	21 55 43.6	+0.6
	baz=151						
ERPA	Erie	30.07	17	P	P	21 55 43.9	+0.8
	baz=202						
BELC	Belle Mtn. Jos	30.18	316	P	P	21 55 45.9	+1.5
	baz=126						
TPFO	Pinon Flats	30.26	315	P	P	21 55 46.4	+1.3
	baz=125						
PFO	Pinyon Flats O	30.27	315	LR	LR	22 08 03.6	
	comp=Z,462nm,20.6s,baz=132,slow=36						
PFO	Pinyon Flats O	30.27	315	P	P	21 55 48.1	+2.9
PFO	Pinyon Flats O	30.27	315	P	P	21 55 46.6	+1.4
	baz=125						
M57A	Sunshine Farm,	30.28	22	IAmb	IAmb	21 55 56.8	
	comp=Z,11nm,0.9s						
O20A	White River Ci	30.29	334	P	P	21 55 46.2	+0.9
	baz=146						
LUPA	Lehigh Univers	30.32	25	P	P	21 55 44.5	-0.8
LUPA				IAmb	IAmb	21 55 50.1	
	comp=Z,16nm,0.8s						
ECSD	EROS Data Cent	30.35	352	P	P	21 55 46.5	+0.9
	baz=170						
GMRC	Granite Mounta	30.43	318	P	P	21 55 47.5	+0.9
	baz=128,SNR=5.3						
Q16A	Castle Valley	30.69	329	P	P	21 55 51.1	+2.2
Q16A				IAmb	IAmb	21 55 54.2	
	comp=Z,9.3nm,0.9s						
P18A	Preston Nutter	30.79	331	P	P	21 55 51.3	+1.5
CCUT	Cedar City	30.86	325	IAmb	IAmb	21 55 57.2	
	comp=Z,14nm,0.9s						
HEC	Hector,Ludlow	30.90	317	P	P	21 55 52.4	+1.8
	baz=127						
P17A	Butcher Ranch,	30.90	330	IAmb	IAmb	21 55 55.5	
	comp=Z,15nm,1.0s						
TMUT	Trail Mountain	31.00	329	IAmb	IAmb	21 55 59.4	
	comp=Z,7.4nm,0.8s						
TUQ	Turquoise Moun	31.00	319	P	P	21 55 52.9	+1.3
	baz=128						
SHPR	Sheep Range	31.20	321	P	P	21 55 55.8	+2.4
PAL	Palisades	31.26	26	P	P	21 55 55.1	+1.4
	baz=214						
BFSC	Mount Baldy Ra	31.45	315	P	P	21 55 57.2	+1.6
	baz=124						
BINY	Binghamton	31.45	22	P	P	21 55 56.0	+0.7
	baz=210						
SPMN	Marine on St.	31.53	358	P	P	21 55 54.8	-1.2
SPMN				IAmb	IAmb	21 55 56.1	
	comp=Z,11nm,0.5s						
PRN	Pahroc Range	31.73	323	P	P	21 55 59.3	+1.2
MPU	Maple Canyon	31.76	330	IAmb	IAmb	21 56 01.9	
	comp=Z,13nm,1.1s						
PSUT	Pine Spring	31.83	325	IAmb	IAmb	21 56 04.2	
	comp=Z,17nm,0.9s						
EDW2	Edwards Air Fo	32.04	316	P	P	21 56 02.6	+2.0
	baz=125						
TPNV	Topopah Spring	32.16	321	P	P	21 56 03.8	+1.9
	baz=130,SNR=5.8						
LRMC	Laurel Mtn Rad	32.17	317	P	P	21 56 04.0	+2.1
	baz=126						
FURC	Furnace Creek,	32.24	319	P	P	21 56 04.2	+1.9
	baz=128						
RSSD	Black Hills	32.28	343	P	P	21 56 03.5	+0.7
	baz=157						
CTU	Camp Tracy	32.34	330	IAmb	IAmb	21 56 07.0	
	comp=Z,15nm,0.9s						
MPMC	Manual Prospec	32.39	318	P	P	21 56 06.5	+2.6
	baz=127,SNR=15						
COWI	Conover	32.44	3	IAmb	IAmb	21 56 04.4	
	comp=Z,7.4nm,0.6s						
BOAV	Boa Vista	32.46	107	*e*P	P	21 56 03.5	-1.0
DUG	Dugway, Tooele	32.48	329	P	P	21 56 06.8	+2.2
	baz=139,SNR=6.3						
R11A	Troy Canyon, C	32.68	323	P	P	21 56 08.2	+1.8
R11A				IAmb	IAmb	21 56 14.3	
	comp=Z,11nm,1.4s						
R11A	Troy Canyon, C	32.68	323	P	P	21 56 08.3	+1.9
	baz=133,SNR=13						
J58A	Remsen	32.72	22	IAmb	IAmb	21 56 08.9	
	comp=Z,7.1nm,0.9s						
SADO	Sadowa	32.76	16	LR	LR	22 10 31.3	
	comp=Z,697nm,19.2s,baz=241,slow=39						
SADO	Sadowa	32.76	16	IAmb	IAmb	21 56 35.3	
	comp=Z,9.6nm,0.8s						
ISA	Isabella, Lake	32.80	317	P	P	21 56 09.4	+2.1
	baz=125						
E43A	Lone Tree Farm	32.87	6	IAmb	IAmb	21 56 08.0	
	comp=Z,8.6nm,0.8s						
GRAC	Grapevine Rang	32.88	320	P	P	21 56 09.8	+1.8
	baz=128						
E38A	The Farm, Brul	32.89	360	IAmb	IAmb	21 56 07.9	
	comp=Z,14nm,0.9s						
DELO	Deloro Mine	32.96	18	IAmb	IAmb	21 56 12.6	
	comp=Z,10nm,0.8s						
HWUT	Hardware Ranch	32.96	332	IAmb	IAmb	21 56 13.3	
	comp=Z,17nm,1.0s						
CWC	Cottonwood Cre	33.00	318	P	P	21 56 11.3	+2.1
	baz=127						
BW06	Boulder Array	33.03	335	P	P	21 56 10.9	+1.4
	baz=146						
PDAR	Pinedale Array	33.03	335	P	P	21 56 09.4	0.0
	comp=Z,0.9nm,0.5s,baz=130,slow=10,SNR=15						
PDAR				PcP	PcP	21 58 53.0	+0.5
	comp=Z,0.6nm,0.7s,baz=120,slow=5.4,SNR=3.9						
PDAR				ScP	ScP	22 02 39.9	+6.1
	comp=Z,0.4nm,0.7s,baz=125,slow=5.6,SNR=3.8						
PDAR				LR	LR	22 13 00.3	
	comp=Z,162nm,18.0s,baz=146,slow=43						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	33.03	335	P	P	21 56 08.6	-0.8
BGU	Big Grassy Mou	33.14	329	IAmb	IAmb	21 56 14.1	
	comp=Z,12nm,1.0s						
PKM	Mcpherson Peak	33.29	314	P	P	21 56 12.7	+0.9
	baz=123						
TPH	Tonopah	33.47	321	P	P	21 56 15.9	+2.5
AHID	Auburn Hatcher	33.68	333	IAmb	IAmb	21 56 17.8	
	comp=Z,7.7nm,0.8s						
LONY	Lake Ozonia	34.06	22	P	P	21 56 17.2	-0.9
	baz=210						
ETMB	Extrema	34.13	132	*e*P	P	21 56 18.5	-0.5
ELK	Elko	34.15	327	LR	LR	22 11 32.7	
	comp=Z,297nm,20.4s,baz=152,slow=38						
ELK	Elko	34.15	327	IAmb	IAmb	21 56 23.6	
	comp=Z,11nm,0.8s						
TPAW	Teton Pass	34.20	334	IAmb	IAmb	21 56 24.7	
	comp=Z,10nm,0.8s						
EYMN	Ely	34.23	360	IAmb	IAmb	21 56 19.2	
	comp=Z,6.7nm,0.8s						
EYMN	Ely	34.23	360	P	P	21 56 18.1	-1.4
	baz=180						
NV11	Mina Array Sit	34.27	321	IAmb	IAmb	21 56 25.1	
	comp=Z,17nm,0.9s						
MDPB	Devils Postpil	34.35	319	IAmb	IAmb	21 56 25.1	
	comp=Z,7.6nm,0.9s						
NVAR	Mina Array Bea	34.36	321	P	P	21 56 23.8	+2.8
	comp=Z,17nm,0.8s,baz=132,slow=7.5,SNR=77						
NVAR				ScP	ScP	22 02 46.3	+7.8
	comp=Z,0.9nm,0.7s,baz=142,slow=4.6,SNR=5.1						
NVAR				LR	LR	22 12 32.8	
	comp=Z,714nm,18.7s,baz=122,slow=40						
	comp=Z,17nm,0.8s						
NVAR	Mina Array Bea	34.36	321	P	P	21 56 22.8	+1.8
KVN	Kaiserville	34.62	322	IAmb	IAmb	21 56 30.9	
	comp=Z,14nm,1.0s						
MACA	Manacapuru-AM	34.71	117	*e*P	P	21 56 23.8	-0.3
AGMN	Agassiz Nation	34.78	355	P	P	21 56 23.6	-0.7
	baz=172						
LAO	LASA Array	35.26	342	P	P	21 56 29.0	+0.5
	baz=154						
YERR	Yerington	35.27	321	P	P	21 56 31.1	+2.2
YERR				IAmb	IAmb	21 56 33.6	
	comp=Z,12nm,0.9s						
GCMT	Greycliff	35.61	338	P	P	21 56 31.5	-0.2
HLID	Hailey	35.81	331	IAmb	IAmb	21 56 36.9	
	comp=Z,14nm,1.1s						
HLID	Hailey	35.81	331	P	P	21 56 34.4	+1.0
	baz=140,SNR=16						
PAHR	Pah Rah Range	35.81	322	IAmb	IAmb	21 56 37.4	
	comp=Z,7.5nm,1.0s						
BOZ	Bozeman (W)	36.20	336	P	P	21 56 37.2	+0.5
	baz=145,SNR=5.6						
MFID	Camas Ranch	36.38	329	P	P	21 56 40.3	+2.0
DLMT	Dillon	36.41	335	IAmb	IAmb	21 56 42.1	
	comp=Z,11nm,0.9s						
ULM	Lac du Bonnet	36.72	355	P	P	21 56 39.4	-1.5
	comp=Z,5.9nm,0.8s,baz=179,slow=5.9,SNR=7.3						
ULM				LR	LR	22 15 22.7	
	comp=Z,299nm,18.8s,baz=168,slow=42						
	comp=Z,5.9nm,0.8s						
LPAZ	La Paz	37.55	142	P	P	21 56 48.3	-0.7
	comp=Z,3.8nm,0.9s,baz=338,slow=10,SNR=12						
LPAZ				LR	LR	22 12 01.0	
	comp=Z,272nm,19.5s,baz=319,slow=36						
	comp=Z,3.8nm,0.9s						
LPAZ	La Paz	37.55	142	P	P	21 56 48.0	-1.0
LPAZ	La Paz	37.55	142	*e*P	P	21 56 49.0	0.0
EGMT	Eagleton	37.56	340	IAmb	IAmb	21 56 50.8	
	comp=Z,8.6nm,0.9s						
EGMT	Eagleton	37.56	340	P	P	21 56 48.4	+0.2
	baz=150						
MOD	Modoc Plateau	37.74	324	IAmb	IAmb	21 56 55.1	
	comp=Z,9.3nm,0.8s						
MSO	Missoula	38.14	335	IAmb	IAmb	21 56 55.8	
	comp=Z,8.3nm,0.9s						
MSO	Missoula	38.14	335	P	P	21 56 53.7	+0.6
	baz=143,SNR=6.5						
BMO	Blue Mountains	38.16	330	P	P	21 56 54.3	+1.0
BMO				IAmb	IAmb	21 56 55.7	
	comp=Z,12nm,1.1s						
I07A	Izee	38.74	327	IAmb	IAmb	21 57 02.8	
	comp=Z,16nm,0.9s						
JTMT	Jette	39.02	335	P	P	21 57 00.2	-0.3
JTMT				IAmb	IAmb	21 57 03.7	
	comp=Z,18nm,1.4s						
K04D	Chiloquin, OR	39.03	324	P	P	21 57 01.8	+1.2
	baz=129						
YBH	Yreka Blue Hor	39.05	322	LR	LR	22 15 21.7	
	comp=Z,405nm,19.3s,baz=148,slow=40						
MDP	Montagnes des	39.09	99	LR	LR	22 14 01.6	
	comp=Z,194nm,18.7s,baz=314,slow=38						
L04D	Klamath Falls	39.10	323	IAmb	IAmb	21 57 04.4	
	comp=Z,17nm,0.9s						
L04D	Klamath Falls	39.10	323	P	P	21 57 02.6	+1.3
	baz=128						
J05D	Fort Rock, OR	39.15	325	P	P	21 57 03.4	+1.7
	baz=130,SNR=6.6						
PINE	Pine Mountain	39.32	326	IAmb	IAmb	21 57 07.0	
	comp=Z,22nm,0.9s						
PB11	IPOC Station P	39.45	147	P	P	21 57 04.1	-0.3
PB11				IAmb	IAmb	21 57 06.9	
	comp=Z,14nm,0.9s						
J04D	Umpqua Nationa	39.62	324	P	P	21 57 06.5	+0.9
	baz=129,SNR=11						
ITTB	Itaituba	39.62	114	*e*P	P	21 57 04.6	-1.2
E09A	Wood Farm, Sta	39.77	331	IAmb	IAmb	21 57 09.4	
	comp=Z,9.5nm,0.9s						
I05D	Terrebonne, OR	39.89	326	P	P	21 57 09.3	+1.6
	baz=131						
I04A	Tendick Farm,	40.14	325	P	P	21 57 11.1	+1.3
	baz=129,SNR=6.5						
G05D	Wamic, OR	40.47	327	P	P	21 57 14.1	+1.6
	baz=132,SNR=6.4						
D08A	Wollman Farm,	40.53	331	P	P	21 57 13.5	+0.6
D08A				IAmb	IAmb	21 57 15.7	
	comp=Z,15nm,1.1s						
H04A	Detroit Lake	40.58	326	P	P	21 57 14.2	+0.9
I03D	Drain, OR	40.61	324	P	P	21 57 15.0	+1.4
	baz=128						
NEW	Newport	40.61	334	LR	LR	22 16 23.0	
	comp=Z,278nm,19.8s,baz=150,slow=40						
NEW	Newport	40.61	334	P	P	21 57 14.2	+0.5
NEW	Newport	40.61	334	P	P	21 57 14.3	+0.7
	baz=140						
PB02	IPOC Station P	40.62	148	IAmb	IAmb	21 57 16.2	
	comp=Z,18nm,0.9s						
J01E	Myrtle Point	40.62	323	P	P	21 57 14.9	+1.2
	baz=127,SNR=5.0						
E07A	Sunnyside	40.63	330	P	P	21 57 15.4	+1.7
E07A				IAmb	IAmb	21 57 16.6	
	comp=Z,18nm,0.9s						
VILB	Vilhena	40.63	129	*e*P	P	21 57 13.9	-0.2
C09A	Chrisman Ranch	40.78	332	IAmb	IAmb	21 57 17.7	
	comp=Z,18nm,0.7s						
H04D	Lebanon	40.78	325	P	P	21 57 16.5	+1.5
	baz=129,SNR=7.0						
F05D	White Salmon	40.98	328	IAmb	IAmb	21 57 21.0	
	comp=Z,22nm,0.8s						
F05D	White Salmon	40.98	328	P	P	21 57 18.5	+1.9
	baz=132						
I02E	Swisshome, OR	41.14	324	P	P	21 57 19.5	+1.5
	baz=128						
MCPB	Macapa, AP	41.34	106	*e*P	P	21 57 19.0	-1.1
PB09	IPOC Station P	41.35	148	P	P	21 57 18.9	-1.2
PB09				IAmb	IAmb	21 57 22.3	
	comp=Z,16nm,1.0s						
G03D	McMinnville, O	41.50	326	P	P	21 57 22.3	+1.4
	baz=129						
F04D	Rainier, OR	41.92	327	P	P	21 57 25.3	+0.9
	baz=130						
E04D	Cinebar	42.00	328	P	P	21 57 26.4	+1.4
	baz=131						
C06D	Leavenworth	42.09	330	P	P	21 57 27.6	+1.9
	baz=134						
LVC	Limon Verde	42.19	148	LR	LR	22 14 57.1	
	comp=Z,227nm,18.5s,baz=316,slow=36						
LVC	Limon Verde	42.19	148	P	P	21 57 26.9	-0.3
LVC				IAmb	IAmb	21 57 29.9	
	comp=Z,12nm,1.1s						
E03A	Lebam	42.51	327	P	P	21 57 31.4	+2.3
D04E	Lakebay	42.52	328	P	P	21 57 29.6	+0.5
	baz=132						
PDRB	Porto dos Gac	42.52	125	*e*P	P	21 57 28.3	-1.3
B06A	Marblemount	42.79	331	IAmb	IAmb	21 57 33.8	
	comp=Z,20nm,0.9s						
CLDB	Colider	42.86	123	*e*P	P	21 57 30.2	-2.2
B05A	Bryant	42.91	330	P	P	21 57 32.9	+0.5
	baz=133						
D03D	Eldon	42.91	328	P	P	21 57 33.1	+0.8
	baz=132						
PTLB	Pontes e Lacer	43.01	131	*e*P	P	21 57 31.4	-2.1
PB14	IPOC Station P	43.17	152	IAmb	IAmb	21 57 36.3	
	comp=Z,12nm,0.9s						
EDM	Edmonton	43.20	341	IAmb	IAmb	21 57 35.9	
	comp=Z,15nm,0.6s						
NLWA	Neilton Lookou	43.22	328	IAmb	IAmb	21 57 38.8	
	comp=Z,26nm,1.1s						
A04D	Lummi Island	43.52	330	P	P	21 57 38.0	+0.8
	baz=133						
GO02	Mina Guanaco	44.00	151	IAmb	IAmb	21 57 43.9	
	comp=Z,14nm,0.8s						
RPN	Rapa Nui	44.09	203	LR	LR	22 11 21.2	
	comp=Z,414nm,18.6s,baz=15,slow=29						
SCHQ	Schefferville	45.37	20	P	P	21 57 49.9	-2.1
	comp=Z,9.9nm,0.8s,baz=210,slow=5.5,SNR=18						
SCHQ				LR	LR	22 18 00.0	
	comp=Z,786nm,19.0s,baz=215,slow=38						
	comp=Z,9.9nm,0.8s						
SCHQ	Schefferville	45.37	20	P	P	21 57 49.5	-2.5
SCHQ				IAmb	IAmb	21 57 52.0	
	comp=Z,12nm,0.8s						
AC06	Mina Casimiro	45.55	153	IAmb	IAmb	21 57 55.0	
	comp=Z,9.0nm,0.8s						
AC02	Maricunga	45.65	152	IAmb	IAmb	21 57 57.6	
	comp=Z,10nm,0.8s						
PRPB	Parauapebas	45.70	113	*e*P	P	21 57 54.1	-1.0
TMAB	Tom-Au,PA,Br	45.76	107	*e*P	P	21 57 55.4	-0.2
SALV	Santo Antonio	45.87	129	*e*P	P	21 57 55.6	-0.8
LCO	Las Campanas	46.85	155	P	P	21 58 03.3	-0.9
SNDB	Serra Nova Dou	47.17	121	*e*P	P	21 58 05.8	-0.9
PP1B	Ponte de Pedra	47.53	130	*e*P	P	21 58 09.1	-0.2
H03N2	Juan Fernandez	48.27	166	T	T	22 50 09.5	
	baz=347,slow=76,SNR=18						
H03N1	Juan Fernandez	48.28	166	T	T	22 50 10.6	
	baz=347,slow=76,SNR=25						
H03N3	Juan Fernandez	48.29	166	T	T	22 50 08.7	
	baz=347,slow=76,SNR=28						
BBB	Bella Bella	48.40	330	LR	LR	22 22 04.5	
	comp=Z,339nm,18.5s,baz=174,slow=40						
AQDB	Aquidauana	48.76	133	*e*P	P	21 58 18.3	-0.6
SMTB	Santa Maria do	48.86	115	*e*P	P	21 58 18.6	-1.1
ROSB	Rosrio	49.65	106	*e*P	P	21 58 25.2	-0.5
PEXB	Peixe	49.76	119	*e*P	P	21 58 27.6	+0.9
ZON	Zonda	49.90	154	IAmb	IAmb	21 58 29.0	
	comp=Z,7.8nm,0.9s						
LMEL	Las Melosas	51.32	157	IAmb	IAmb	21 58 40.2	
	comp=Z,12nm,0.9s						
YKA	Yellowknife Ar	51.54	346	P	P	21 58 38.5	-0.8
	comp=Z,6.2nm,0.7s,baz=147,slow=7.6,SNR=104						
YKA				PcP	PcP	21 59 53.7	+0.8
	comp=Z,1.8nm,0.8s,baz=150,slow=4.8,SNR=5.7						
YKA				LR	LR	22 26 01.6	
	comp=Z,118nm,18.0s,baz=58,slow=43						
	comp=Z,6.2nm,0.7s						
CPUP	Villa Florida	51.69	140	P	P	21 58 39.3	-1.6
	comp=Z,5.0nm,0.9s,baz=328,slow=8.5,SNR=12						
CPUP				LR	LR	22 22 14.1	
	comp=Z,270nm,18.1s,baz=332,slow=38						
	comp=Z,5.0nm,0.9s						
CPUP	Villa Florida	51.69	140	IAmb	IAmb	21 58 40.9	
	comp=Z,7.4nm,1.0s						
CPUP	Villa Florida	51.69	140	*e*P	P	21 58 39.4	-1.6
BDFB	Brasilia	51.80	123	P	P	21 58 41.0	-1.0
	comp=Z,7.6nm,0.9s,baz=296,slow=5.4,SNR=7.9						
	comp=Z,7.6nm,0.9s						
BDFB	Brasilia	51.80	123	IAmb	IAmb	21 58 43.3	
	comp=Z,8.9nm,1.0s						
FRB	Frobisher Bay	52.55	13	LR	LR	22 22 31.8	
	comp=Z,342nm,18.8s,baz=201,slow=38						
PCMB	Pacaembu	52.67	131	*e*P	P	21 58 48.9	+0.6
CRAG	Craig	52.75	332	P	P	21 58 49.1	+0.7
	baz=126						
SDBA	SAO DESIDERIO	52.82	117	*e*P	P	21 58 48.9	-0.7
IPMB	Ipameri, GO	52.90	125	*e*P	P	21 58 49.7	-0.4
WRAK	Wrangell Islan	52.96	333	P	P	21 58 50.0	+0.1
	baz=127						
NBMO	Morrinhos-CE	53.62	105	*e*P	P	21 58 54.9	-0.6
PTGB	Pitanga	54.06	135	*e*P	P	21 58 58.6	+0.1
BB19B	Bebedouro	54.39	129	*e*P	P	21 58 59.2	-1.8
ITQB	Itaqui	54.54	142	*e*P	P	21 59 01.0	-0.9
JANB	Januaria	54.58	120	*e*P	P	21 59 00.8	-1.7
SIT	Sitka	54.67	332	P	P	21 59 02.6	+0.2
	baz=124						
TGTN	Hyland Airport	54.70	339	P	P	21 59 02.0	-0.7
	baz=134						
NBPB	Pedra_Branca-C	54.81	107	*e*P	P	21 59 04.1	-0.1
FRTB	Fartura	54.97	132	*e*P	P	21 59 04.8	-0.3
LC01	Cunco	55.32	162	P	P	21 59 06.4	-1.0
NBCL	Cascavel-CE	55.57	105	*e*P	P	21 59 10.1	+0.5
ITAB	Concordia	55.66	137	*e*P	P	21 59 07.8	-2.3
SKAG	Skagway	56.05	335	P	P	21 59 12.0	-0.3
	baz=126						
NBMA	Muriti-CE	56.23	109	*e*P	P	21 59 13.8	-0.6
NBPN	Ponto Novo - B	56.28	113	*e*P	P	21 59 13.4	-1.3
MMPY	Sheldon Lake,	56.48	339	P	P	21 59 15.6	+0.2
	baz=132,SNR=11						
WHY	Whitehorse	56.58	336	P	P	21 59 16.7	+0.5
	baz=127						
TIJ01	Guaruva-PR	56.59	133	*e*P	P	21 59 15.4	-1.4
VAO	Valinhos	56.69	130	*e*P	P	21 59 17.9	+0.4
DIAM	Diamantina, MG	56.72	123	*e*P	P	21 59 17.2	-0.7
CPSB	Cacapava Do Su	56.99	141	*e*P	P	21 59 17.8	-1.6
M31M	Drury Creek, Y	57.33	338	IAmb	IAmb	21 59 24.6	
	comp=Z,7.3nm,1.0s						
M31M	Drury Creek, Y	57.33	338	P	P	21 59 22.2	+0.7
	baz=128						

PLCA	Paso Flores	57.41	161	P	P	21 59 21.9	-0.5
	comp=Z,5.5nm,0.9s,baz=335,slow=10,SNR=11						
PLCA				LR	LR	22 18 53.9	
	comp=Z,234nm,18.1s,baz=354,slow=31						
	comp=Z,5.5nm,0.9s						
PLCA	Paso Flores	57.41	161	P	P	21 59 20.2	-2.1
PLCA				IAmb	IAmb	21 59 23.4	
	comp=Z,7.7nm,1.0s						
PLCA	Paso Flores	57.41	161	*e*P	P	21 59 20.5	-1.8
N31M	Braeburn, Yuko	57.42	337	P	P	21 59 22.5	+0.4
	baz=126						
HYT	Haines Junctio	57.73	335	P	P	21 59 24.2	-0.1
	baz=124						
PLTB	Pedras Altas	57.85	142	*e*P	P	21 59 24.4	-1.1
PNL	Peninsula	57.89	334	P	P	21 59 25.6	+0.2
	baz=122						
GDU01	Guandu, BA	58.04	116	*e*P	P	21 59 27.6	+0.4
YUK6	Outpost Mounta	58.14	335	P	P	21 59 27.6	+0.2
	baz=123						
RCBR	Riachuelo	58.35	106	LR	LR	22 26 23.3	
	comp=Z,212nm,19.3s,baz=98,slow=38						
RCBR	Riachuelo	58.35	106	*e*P	P	21 59 29.7	+0.4
M30M	Minto, Yukon	58.45	337	IAmb	IAmb	21 59 33.0	
	comp=Z,6.2nm,1.1s						
M30M	Minto, Yukon	58.45	337	P	P	21 59 29.3	0.0
	baz=126						
YUK4	Talbot Arm	58.48	335	P	P	21 59 28.8	-0.9
	baz=123						
NBLA	Lagarto - SE	58.50	112	*e*P	P	21 59 30.1	-0.2
CMC01	Camacan, BA	58.81	118	*e*P	P	21 59 32.9	+0.5
SJMB	Sao Joao De Ma	58.97	122	*e*P	P	21 59 33.8	+0.3
LL02	Futaleuf	59.29	163	P	P	21 59 34.0	-1.2
LL02				IAmb	IAmb	21 59 36.8	
	comp=Z,9.0nm,0.8s						
YUK3	Moose Creek	59.44	335	P	P	21 59 36.2	-0.2
	baz=122						
SFJD	Kangerlussuaq	59.70	17	LR	LR	22 26 20.5	
	comp=Z,613nm,18.7s,baz=220,slow=37						
BGLC	Bering Glacier	59.82	333	P	P	21 59 38.5	-0.2
	baz=118						
RIB01	Linhares ES	59.91	122	*e*P	P	21 59 39.0	-1.0
NBRF	Rio Formoso -	60.06	108	*e*P	P	21 59 40.7	-0.4
DAWY	Dawson	60.27	338	P	P	21 59 41.2	-0.6
	baz=124						
M27K	Edge Creek, AK	60.31	336	IAmb	IAmb	21 59 44.7	
	comp=Z,7.4nm,0.9s						
VRDI	Verde Repeater	60.41	334	IAmb	IAmb	21 59 45.8	
	comp=Z,8.4nm,0.9s						
I29M	Ogilvie Camp,	60.62	339	P	P	21 59 43.9	-0.3
	baz=125						
BCAR	Beaver Creek A	60.64	336	P	P	21 59 44.3	-0.1
L27K	Beaver Creek,	60.65	336	P	P	21 59 44.4	-0.1
L27K				IAmb	IAmb	21 59 46.6	
	comp=Z,9.0nm,0.8s						
L27K	Beaver Creek,	60.65	336	P	P	21 59 44.4	-0.1
	baz=121,SNR=14						
M26K	Nabesna, AK	60.79	335	IAmb	IAmb	21 59 47.7	
	comp=Z,9.4nm,1.1s						
M26K	Nabesna, AK	60.79	335	P	P	21 59 45.4	0.0
	baz=119,SNR=5.8						
BMRM	Bremner River	60.79	333	P	P	21 59 46.0	+0.6
	baz=117						
INK	Inuvik	60.98	343	LR	LR	22 30 24.0	
	comp=Z,206nm,18.4s,baz=164,slow=40						
INK	Inuvik	60.98	343	P	P	21 59 45.6	-0.9
INK				IAmb	IAmb	21 59 48.0	
	comp=Z,5.1nm,0.7s						
INK	Inuvik	60.98	343	P	P	21 59 46.0	-0.5
	baz=132,SNR=8.3						
N25K	Chitina, Valde	61.08	334	P	P	21 59 48.0	+0.6
	baz=117,SNR=12						
RES	Resolute Bay	61.09	359	LR	LR	22 29 21.7	
	comp=Z,332nm,18.6s,baz=228,slow=39						
RES	Resolute Bay	61.09	359	IAmb	IAmb	21 59 46.6	
	comp=Z,4.7nm,0.8s						
EYAK	Cordova Ski Ar	61.11	333	P	P	21 59 48.1	+0.6
	baz=116						
L26K	Log Cabin Wild	61.23	336	IAmb	IAmb	21 59 51.1	
	comp=Z,5.8nm,0.8s						
L26K	Log Cabin Wild	61.23	336	P	P	21 59 48.8	+0.4
	baz=119						
K27K	Chicken	61.24	337	IAmb	IAmb	21 59 50.6	
	comp=Z,4.7nm,0.9s						
EGAK	Eagle	61.30	338	IAmb	IAmb	21 59 50.2	
	comp=Z,4.6nm,0.9s						
EGAK	Eagle	61.30	338	P	P	21 59 48.7	-0.1
	baz=122						
COYC	Coyhaique	61.44	165	P	P	21 59 49.9	0.0
KLU	Klutina	61.59	334	P	P	21 59 51.0	+0.1
	baz=116,SNR=11						
HARP	HAARP	61.67	335	P	P	21 59 52.0	+0.6
	baz=117						
A36M	Sachs Harbour	61.74	349	P	P	21 59 50.6	-1.0
	baz=142						
SCRK	Sand Creek	61.95	337	IAmb	IAmb	21 59 56.2	
	comp=Z,5.7nm,1.1s						
SCRK	Sand Creek	61.95	337	P	P	21 59 53.7	+0.4
	baz=119						
M24K	Tolsona, Glenn	61.97	334	P	P	21 59 53.6	+0.2
	baz=116						
J26L	Joseph Creek	62.04	337	P	P	21 59 54.8	+0.9
	baz=120,SNR=8.0						
PAX	Paxson	62.06	335	IAmb	IAmb	21 59 55.9	
	comp=Z,8.5nm,0.9s						
PAX	Paxson	62.06	335	P	P	21 59 53.7	-0.4
	baz=117,SNR=8.1						
RIDG	Independent Ri	62.17	336	P	P	21 59 54.4	-0.4
	baz=118,SNR=8.9						
SCM	Sheep Creek Mo	62.35	334	P	P	21 59 56.3	+0.3
SCM	Sheep Creek Mo	62.35	334	P	P	21 59 56.1	+0.1
	baz=115,SNR=5.8						
PWL	Port Wells	62.40	332	P	P	21 59 56.1	-0.1
	baz=113						
M23K	Glacier View	62.50	334	P	P	21 59 57.1	+0.1
	baz=114,SNR=7.6						
K24K	Donnelly Dome	62.57	336	P	P	21 59 57.3	-0.1
	baz=117,SNR=5.7						
KNK	Knik Glacier	62.67	333	P	P	21 59 58.0	0.0
	baz=113,SNR=9.5						
SML	Sawmill	62.77	333	P	P	21 59 58.4	-0.3
	baz=114,SNR=5.2						
J25K	Salcha River,	62.78	337	IAmb	IAmb	22 00 00.8	
	comp=Z,7.5nm,0.8s						
J25K	Salcha River,	62.78	337	P	P	21 59 59.1	+0.3
	baz=118,SNR=11						
WAT6	Susitna Watana	62.83	334	P	P	21 59 59.5	+0.2
	baz=114,SNR=22						
DHY	Denali Highway	62.89	335	P	P	21 59 59.9	+0.2
	baz=115						
PMR	Palmer	63.04	333	P	P	22 00 01.0	+0.5
BRSE	Bradley Lake S	63.09	331	P	P	22 00 00.8	-0.1
	baz=110						
RC01	Rabbit Creek A	63.12	332	P	P	22 00 01.3	+0.3
	baz=112,SNR=13						
KDAK	Kodiak Island	63.37	328	LR	LR	22 28 30.6	
	comp=Z,143nm,18.5s,baz=119,slow=37						
KDAK	Kodiak Island	63.37	328	P	P	22 00 03.1	+0.4
	baz=108						
IL31		63.44	337	IAmb	IAmb	22 00 05.2	
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	63.44	337	P	P	22 00 03.1	+0.1
	comp=Z,5.3nm,0.9s,baz=110,slow=6.0,SNR=40						
ILAR				LR	LR	22 29 39.3	
	comp=Z,211nm,20.4s,baz=136,slow=38						
	comp=Z,5.3nm,0.9s						
ILAR	Eielson Array	63.44	337	P	P	22 00 02.9	-0.2
OHAK	Old Harbor	63.56	328	P	P	22 00 04.5	+0.5
	baz=107						
WRH	Wood River Hil	63.77	336	IAmb	IAmb	22 00 06.8	
	comp=Z,4.8nm,0.8s						
POKR	Poker Plat Res	63.80	337	P	P	22 00 06.4	+1.0
	baz=116						
MCK	McKinley	63.80	335	P	P	22 00 05.6	+0.1
	baz=114,SNR=8.2						
COLA	College	63.85	337	P	P	22 00 06.1	+0.3
	baz=116						
SII	Sitkinak Islan	63.85	327	P	P	22 00 06.1	+0.1
	baz=106						
TCOL	CIGO, UAF Yank	63.85	337	P	P	22 00 06.1	+0.3
	baz=116						
GO08	Villa O'Higgin	64.02	166	P	P	22 00 06.9	-0.1
GO08				IAmb	IAmb	22 00 09.2	
	comp=Z,8.6nm,0.8s						
MDM	Murphy Dome	64.03	337	IAmb	IAmb	22 00 18.2	
	comp=Z,4.9nm,1.0s						
TULEG	Thule	64.04	6	P	P	22 00 05.2	-1.6
TULEG				IAmb	IAmb	22 00 08.2	
	comp=Z,7.5nm,0.8s						
O20K	Slope Mountain	64.10	331	P	P	22 00 07.9	+0.3
	baz=109,SNR=7.4						
NEA2	Nenana	64.21	336	IAmb	IAmb	22 00 10.2	
	comp=Z,9.4nm,1.1s						
NEA2	Nenana	64.21	336	P	P	22 00 08.1	0.0
	baz=114,SNR=6.8						
Q19K	Cape Douglas,	64.24	329	P	P	22 00 09.2	+0.7
	baz=107						
P19K	Oil Pt	64.26	330	P	P	22 00 08.9	+0.3
	baz=108						
SPCR	Spurr Chakacha	64.28	332	P	P	22 00 08.9	+0.2
	baz=110,SNR=5.9						
H24K	Noodor Dome	64.28	338	IAmb	IAmb	22 00 10.4	
	comp=Z,6.1nm,0.8s						
H24K	Noodor Dome	64.28	338	P	P	22 00 08.5	-0.2
	baz=116,SNR=8.6						
CHIR	Chirikof Islan	64.44	326	P	P	22 00 09.5	-0.3
	baz=104						
I23K	Minto, Yukon-K	64.55	337	P	P	22 00 10.3	0.0
	baz=114,SNR=11						
BPAW	Bear Paw Mtn.	64.78	335	P	P	22 00 12.3	+0.3
	baz=112,SNR=17						
PPLA	Purkeypile	64.85	334	P	P	22 00 12.1	-0.4
	baz=110,SNR=7.0						
H23K	Yukon River	64.90	337	IAmb	IAmb	22 00 14.3	
	comp=Z,12nm,1.5s						
H23K	Yukon River	64.90	337	P	P	22 00 12.4	-0.2
	baz=114						
CAST	Castle Rocks	64.99	334	P	P	22 00 12.7	-0.5
	baz=111,SNR=16						
P18K	Big Mountain,	65.16	330	IAmb	IAmb	22 00 16.6	
	comp=Z,6.6nm,0.8s						
P18K	Big Mountain,	65.16	330	P	P	22 00 14.5	0.0
	baz=106						
N19K	Bonanza Creek	65.21	331	P	P	22 00 14.8	-0.1
	baz=107,SNR=19						
CHUM	Lake Minchumin	65.25	335	P	P	22 00 14.6	-0.3
	baz=111						
PPT	Papeete	65.26	243	LR	LR	22 21 35.2	
	comp=Z,239nm,18.3s,baz=70,slow=29						
O18K	Koktuh Hills	65.28	330	P	P	22 00 15.4	+0.2
	baz=106,SNR=8.5						
L20K	Farewell, AK	65.44	333	P	P	22 00 15.9	-0.4
	baz=108,SNR=44						
I21K	Tanana	65.58	336	IAmb	IAmb	22 00 18.6	
	comp=Z,8.9nm,0.9s						
I21K	Tanana	65.58	336	P	P	22 00 16.9	-0.2
	baz=112						
COLD	Coldfoot	65.71	339	P	P	22 00 18.6	+0.7
COLD	Coldfoot	65.71	339	P	P	22 00 18.0	+0.2
	baz=114						
L19K	White Mountain	65.78	333	P	P	22 00 18.2	-0.3
	baz=108,SNR=11						
K20K	Telida	65.81	334	P	P	22 00 18.1	-0.5
	baz=109,SNR=22						
N18K	Kilae Creek	65.83	331	P	P	22 00 18.7	-0.1
	baz=106,SNR=9.7						
H21K	Melozitna Rive	66.08	337	IAmb	IAmb	22 00 21.3	
	comp=Z,5.7nm,0.9s						
H21K	Melozitna Rive	66.08	337	P	P	22 00 20.0	-0.3
	baz=111,SNR=7.6						
TOLK	Toolik Lake Re	66.09	340	IAmb	IAmb	22 00 22.6	
	comp=Z,6.3nm,0.9s						
TOLK	Toolik Lake Re	66.09	340	P	P	22 00 20.6	+0.2
	baz=115,SNR=6.0						
J20K	Nowinta River	66.11	335	IAmb	IAmb	22 00 21.8	
	comp=Z,9.7nm,0.9s						
J20K	Nowinta River	66.11	335	P	P	22 00 20.6	+0.1
	baz=109,SNR=7.7						
EUNU	Eureka	66.50	1	P	P	22 00 21.1	-1.7
EUNU				IAmb	IAmb	22 00 23.0	
	comp=Z,8.4nm,0.7s						
TTA	Tatalina	66.52	333	P	P	22 00 22.9	-0.3
TTA	Tatalina	66.52	333	P	P	22 00 22.8	-0.4
	baz=107,SNR=19						
SDPT	Sand Point	67.05	325	P	P	22 00 26.3	-0.3
	baz=100						
FALS	False Pass	68.65	324	P	P	22 00 37.7	+1.0
FALS	False Pass	68.65	324	P	P	22 00 37.9	+1.2
	baz=97						
BORG	Borgarnes	69.29	26	LR	LR	22 32 08.4	
	comp=Z,112nm,19.0s,baz=271,slow=37						
UNV	Unalaska Valle	70.36	323	P	P	22 00 47.7	+0.5
	baz=94						
ANM	Nome	70.94	334	P	P	22 00 50.5	-0.1
	baz=99						
NIKH	Nikolski High	71.72	322	P	P	22 00 56.4	+0.9
	baz=92						
SPIA	Saint Paul Isl	72.65	326	P	P	22 01 01.5	+0.6
	baz=92						
GAMB	Gambell	73.62	333	P	P	22 01 06.6	+0.1
	baz=92						
RAR	Rarotonga	75.54	244	LR	LR	22 28 20.1	
	comp=Z,184nm,18.3s,baz=328,slow=31						
EKA	Eskdalemuir Ar	77.92	36	LR	LR	22 34 54.1	
	comp=Z,126nm,18.9s,baz=347,slow=35						
ESDC	Sonseca Array	79.47	52	P	P	22 01 37.8	-2.5
	comp=Z,1.0nm,0.9s,baz=290,slow=4.8,SNR=3.6						
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	79.47	52	P	P	22 01 40.2	-0.1
MDT	Midelt	80.07	59	LR	LR	22 33 41.7	
	comp=Z,80nm,18.4s,baz=306,slow=33						
SPITS	Spitsbergen Ar	80.34	11	LR	LR	22 39 16.6	
	comp=Z,330nm,19.3s,baz=24,slow=37						
PMSA	Palmer Station	80.86	169	LR	LR	22 29 18.2	
	comp=Z,136nm,19.5s,baz=318,slow=30						
BILL	Bilibino	82.04	338	P	P	22 01 53.3	-0.1
BILL				IAmb	IAmb	22 01 56.4	
	comp=Z,8.3nm,0.8s						
NOA	NORSAR Array B	84.19	29	P	P	22 02 03.2	-1.5
	comp=Z,0.9nm,0.8s,baz=287,slow=3.7,SNR=4.2						
NOA				LR	LR	22 37 43.2	
	comp=Z,72nm,21.2s,baz=290,slow=34						
	comp=Z,0.9nm,0.8s						
DBIC	Dimbokro	85.08	84	P	P	22 02 07.3	-2.7
	comp=Z,2.8nm,0.9s,baz=307,slow=5.1,SNR=1.4						
DBIC				LR	LR	22 38 08.0	
	comp=Z,95nm,19.4s,baz=293,slow=34						
	comp=Z,2.8nm,0.9s						
HFS	Hagfors	85.64	29	LR	LR	22 38 16.0	
	comp=Z,99nm,21.4s,baz=286,slow=34						
ARCES	ARCESS Array B	86.31	18	P	P	22 02 13.4	-1.6
	comp=Z,0.9nm,0.6s,baz=284,slow=4.9,SNR=4.7						
ARCES				LR	LR	22 41 17.2	
	comp=Z,161nm,18.4s,baz=312,slow=36						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	86.31	18	P	P	22 02 14.1	-1.0
ARCES				IAmb	IAmb	22 02 31.2	
	comp=Z,8.1nm,1.4s						
DAVOX	Davos/Dischmat	87.73	42	LR	LR	22 41 24.3	
	comp=Z,91nm,18.2s,baz=276,slow=36						
CLL	Collm	88.25	37	*e*SKSac	SKSac	22 12 54.0	+3.6
CLL				*e*Sx	Sx	22 13 11.0	
CLL				*e*pPS		22 14 24.0	
SEY	Seymchan	89.36	336	P	P	22 02 30.4	+0.7
	comp=Z,4.8nm,0.9s,baz=70,slow=6.9,SNR=21						
	comp=Z,4.8nm,0.9s						
GERES	GERESS Array B	89.51	40	P	P	22 02 28.5	-2.4
	comp=Z,0.3nm,0.5s,baz=308,slow=3.2,SNR=2.5						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	90.59	25	LR	LR	22 44 20.7	
	comp=Z,131nm,18.2s,baz=301,slow=36						
TIXI	Tiksi	90.76	348	LR	LR	22 46 31.8	
	comp=Z,94nm,21.8s,baz=0.0,slow=38						
TIXI	Tiksi	90.76	348	P	P	22 02 35.2	-0.9
TIXI				IAmb	IAmb	22 02 37.1	
	comp=Z,3.6nm,0.8s						
VRAC	Vranov	91.11	39	LR	LR	22 45 01.0	
	comp=Z,92nm,18.0s,baz=286,slow=37						
PETK	Petropavlovsk-	91.31	326	P	P	22 02 41.0	+1.9
	comp=Z,1.9nm,0.8s,baz=120,slow=7.0,SNR=3.7						
PETK				LR	LR	22 45 30.4	
	comp=Z,22nm,18.4s,baz=72,slow=37						
	comp=Z,1.9nm,0.8s						
MA2	Magadan	91.72	333	P	P	22 02 41.8	+1.0
	comp=Z,6.8nm,0.8s,baz=67,slow=6.5,SNR=10						
MA2				LR	LR	22 49 24.3	
	comp=Z,71nm,19.9s,baz=104,slow=39						
	comp=Z,6.8nm,0.8s						
MA2	Magadan	91.72	333	P	P	22 02 41.1	+0.3
MSVF	Nonsavu	94.60	253	LR	LR	22 37 29.6	
	comp=Z,127nm,18.6s,baz=147,slow=30						
NRIK	Noril'sk	97.26	0	LR	LR	22 51 06.1	
	comp=Z,228nm,20.0s,baz=352,slow=38						
AKASG	Malin Array Be	97.71	34	LR	LR	22 47 32.0	
	comp=Z,66nm,20.0s,baz=346,slow=36						
YAK	Yakutsk	98.02	342	LR	LR	22 53 49.5	
	comp=Z,64nm,20.2s,baz=90,slow=39						
OBN	Obninsk	98.74	27	LR	LR	22 49 31.4	
	comp=Z,18nm,18.3s,baz=358,slow=37						
URZ	Urewera	99.47	233	LR	LR	22 37 57.8	
	comp=Z,68nm,20.3s,baz=211,slow=29						
SONM	Songino Array	116.81	347	PKP	PKiKP	22 08 18.6	+0.5
	comp=Z,0.7nm,0.7s,baz=315,slow=1.5,SNR=5.9						
SONM	Songino Array	116.81	347		PKiKP	22 08 19.0	+0.9
MKAR	Makanchi Array	119.60	5	PKP	PKPdf	22 08 22.6	-0.8
	comp=Z,1.3nm,0.9s,baz=334,slow=1.9,SNR=11						
MKAR	Makanchi Array	119.60	5		PKPdf	22 08 22.5	-0.9
BOSA	Boshof	119.64	115	PKP	PKiKP	22 08 25.9	+1.7
	comp=Z,2.6nm,0.8s,baz=348,slow=4.7,SNR=3.9						
WMQ	Urumqi	122.84	1	*e*P	PKiKP	22 08 30.7	+0.7
WMQ				LR	LR		
	comp=N,200nm,20.1s						
WMQ				LR	LR		
	comp=E,150nm,19.7s						
WMQ				LR	LR		
	comp=Z,180nm,21.7s						
KSH	Kashi	125.84	12	PKP	PKiKP	22 08 38.3	+2.1
NJ2	Nanjing	126.15	328	*e*P	PKiKP	22 08 37.4	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
STKA	Stephens Creek	128.40	240	PKP	PKPdf	22 08 40.9	+0.3
	comp=Z,5.5nm,0.9s,baz=54,slow=3.7,SNR=4.7						
WRA	Warramunga Arr	135.89	255	PKP	PKPdf	22 08 55.4	+0.3
	comp=Z,4.4nm,0.8s,baz=84,slow=3.0,SNR=34						
ASAR	Alice Springs	136.11	250	PKP	PKPdf	22 08 55.5	0.0
	comp=Z,3.3nm,0.8s,baz=106,slow=2.0,SNR=25						
ASAR	Alice Springs	136.11	250	PKPdf	PKPdf	22 08 55.9	+0.5
GYA	Guiyang	136.48	336	⇑P	PKPdf	22 08 56.7	+0.5
GYA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
PZH	PanZhiHua	138.14	342	PKP	PKPdf	22 08 57.4	-1.9
CMAR	Chiang Mai Arr	146.55	342	PKPbc	PKPab	22 09 16.1	-0.5
	comp=Z,12nm,0.7s,baz=335,slow=3.3,SNR=60						
CMAR	Chiang Mai Arr	146.55	342		PKPab	22 09 16.0	-0.6

IDC 02 21:53:00.1±1.6**, 3°.88S×129°.57E, h0^{km}, mb3.3**/3**,**
mbtmp3.3/5**, ML2.9**/2**, Error ellipse: s-maj=48.1km**
s-min=27.2km az=74.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.44	30	Pn	Pn	21 53 54.4	-0.5
	1.1nm,0.3s,baz=198,slow=20,SNR=2.7						
SIJI				Sn	Sn	21 54 30.9	-5.5
	2.1nm,0.3s,baz=57,slow=22,SNR=6.5						
	5.3nm,0.3s						
WRA	Warramunga Arr	16.63	164	Pn	Pn	21 56 54.7	-0.1
	baz=342,slow=13,SNR=1.8						
	0.5nm,1.0s						
ASAR	Alice Springs	20.11	168	P	P	21 57 35.8	0.0
	0.4nm,0.4s,baz=351,slow=9.1,SNR=3.1						
	0.4nm,0.4s						
CMAR	Chiang Mai Arr	37.46	307	P	P	22 00 16.5	+0.9
	0.4nm,0.3s,baz=127,slow=5.9,SNR=4.2						
	0.4nm,0.3s						
MKAR	Makanchi Array	65.40	326	P	P	22 03 43.9	-0.8
	0.1nm,0.5s,baz=133,slow=8.0,SNR=2.2						
	0.1nm,0.5s						

UCR ***02*** *21:56:46.1±1.4, 8°.98N×85°.10W, h10^{km}, MW4.0*
UPA ***02*** *21:56:47.1±0.6, 9°.04N×85°.18W, h30^{km}±17^{km}, MW4.2*
ISC 02 21:56:48.8±2.3**, 9°.08N**±0°.09×**85°.1W**±0°.1**, h35^{km}, n24,**
σ0^{s}65/29**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACO	JACO, Garabito	0.72	37	*e*P	Pn	21 57 01.3	-1.2
LAFE	Finca La Fe, P	0.75	14	*e*P	Pn	21 57 01.4	-1.4
JTS	Las Juntas de	1.21	7	*e*P	Pn	21 57 08.5	-0.8
JTS	Las Juntas de	1.21	7	*e*P	Pn	21 57 08.5	-0.8
JTS				*e*S	Sn	21 57 23.9	-0.6
EDDO	Dominical	1.23	82	*e*S	Sn	21 57 24.6	-0.2
LCR2	La Lucha 2	1.26	58	*e*P	Pn	21 57 09.6	-0.5
HDC	Heredia	1.33	46	*e*S	Sn	21 57 28.7	+1.0
RIMA	Rio Macho	1.40	61	*e*P	Pn	21 57 11.7	-0.2
CDM	Cerro de Muert	1.40	70	*e*P	Pn	21 57 12.0	-0.2
ARE1	Arenal 1	1.42	15	*e*P	Pn	21 57 12.7	+0.5
ACAL	Aguas Claras	1.55	2	*i* P	Pn	21 57 14.3	+0.4
CUI	Cuipilapa	1.57	358	*i* P	Pn	21 57 14.4	+0.2
COLC	Colonia	1.58	356	*i* P	Pn	21 57 14.5	+0.1
LIM1	Limonal	1.62	355	*i* P	Pn	21 57 15.0	+0.1
EDPN	Palmar Norte	1.62	94	*e*P	Pn	21 57 14.4	-0.4
EDPN				*e*S	Sn	21 57 34.8	+0.2
HORNC	Hornillas	1.63	357	*i* P	Pn	21 57 15.1	+0.1
SRBA	San Rafael, Bu	1.72	85	*e*P	Pn	21 57 15.9	-0.4
EDBA	Buenos Aires	1.80	87	*e*P	Pn	21 57 17.2	-0.2
BUAI	Buenos Aires	1.80	353	*i* P	Pn	21 57 18.0	+0.6
DRK0	Durika	1.84	84	*e*P	Pn	21 57 18.0	0.0
DRK0				*e*S	Sn	21 57 41.3	+1.1
PIRO	Carate, Puerto	1.86	111	*e*P	Pn	21 57 17.4	-0.8
PIRO	Carate, Puerto	1.86	111	*e*P	Pn	21 57 17.5	-0.7
CDITO	Canoas	2.25	103	*e*P	Pn	21 57 23.4	-0.2
CDITO				*e*S	Sn	21 57 50.0	-0.1
BRU2	Volcan	2.39	97	*e*P	Pn	21 57 25.9	+0.3
BRU2				*e*S	Sn	21 57 54.8	+0.9

UPA ***02*** *22:03:58.8±1.7, 7°.68N×82°.29W, h3^{km}±8^{km}, MW4.7*
UCR ***02*** *22:03:58.8±1.5, 7°.63N×82°.30W, h10^{km}, MW4.4*
ISC 02 22:03:56.4±1.4**, 7°.64N**±0°.05×**82°.24W**±0°.03**, h6^{km}**±10^{km}**,**
n47, σ**1^{s}43**/81**, 4C-3D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REME3	Remedios, Chir	0.71	34	*e*P	Pn	22 04 12.8	-0.2
REME3				*e*S	Sn	22 04 24.2	0.0
CHIR3	Chiriqui UPA,	0.76	353	*e*P	Pn	22 04 13.0	-0.6
CHIR3				*e*S	Sg	22 04 21.7	+0.8
PEDE3	Pedregal, Chir	0.77	346	⇓*e*P	Pn	22 04 13.3	-0.4
PEDE3				*e*S	Sb	22 04 24.0	+1.2
LOMA3	Las Lomas, Chi	0.81	349	⇓*e*P	Pn	22 04 14.0	-0.3
LOMA3				*e*S	Sb	22 04 23.4	-0.5
DVD	David	0.82	345	⇑*e*P	Pn	22 04 14.2	-0.3
DVD				*e*S	Sb	22 04 25.4	+0.9
PTPM	Petroterminale	0.85	312	*e*P	Pn	22 04 14.4	-0.5
PTPM				*e*S	Sn	22 04 27.2	-0.5
BAGA3	Bagala, Chiriq	0.88	341	*e*P	Pn	22 04 15.4	+0.1
BAGA3				*e*S	Sn	22 04 27.7	-0.6
GUAL3	Gualaca, Chiri	0.89	356	⇓*e*P	Pn	22 04 15.4	0.0
GUAL3				*e*S	Sg	22 04 25.1	0.0
LESP3	La Esperanza,	0.94	324	*e*P	Pn	22 04 15.6	-0.6
LESP3				*e*S	Sb	22 04 28.5	+0.6
GMAL	Guarumal, Vera	1.00	83	*e*P	Pn	22 04 17.7	+0.8
GMAL	Guarumal, Vera	1.00	83	*e*P	Pn	22 04 17.8	+0.8
GMAL				*e*S	Sn	22 04 32.5	+1.0
CCOL	Caracol de Cor	1.06	316	*e*P	Pn	22 04 17.8	0.0
BCO2	Palmira	1.11	345	*e*S	Sn	22 04 34.1	-0.4
CDITO	Canoas	1.12	326	*e*P	Pn	22 04 18.6	-0.1
CDITO				*e*S	Sn	22 04 33.8	-0.7
BC3P	Paso Ancho	1.23	342	*e*P	Pn	22 04 20.6	+0.3
BC3P				*e*S	Sn	22 04 37.9	+0.5
MARI3	Mariato, Verag	1.23	89	⇑*i*P	Pn	22 04 22.3	+2.1
MARI3				*e*S	Sg	22 04 31.5	-4.7
BRU2	Volcan	1.24	339	*e*P	Pn	22 04 20.9	+0.5
BRU2				*e*S	Sn	22 04 37.5	0.0
BRU2	Volcan	1.24	339	*e*P	Pn	22 04 20.9	+0.5
BRU2				*e*S	Sb	22 04 36.8	+0.3
MLIR3	Monte Lirio, C	1.29	333	*e*P	Pn	22 04 22.2	+1.2
MLIR3				*e*S	Sn	22 04 41.2	+2.5
CHGR2	Aguacate	1.30	4	*e*P	Pn	22 04 16.6	-4.5
CHGR2				*e*S	Sg	22 04 36.9	-1.2
PIRO	Carate, Puerto	1.33	305	*e*P	Pn	22 04 20.7	-0.8
PIRO	Carate, Puerto	1.33	305	*e*P	Pn	22 04 20.8	-0.7
PIRO				*e*S	Sn	22 04 42.8	+3.2
EDSV	San Vito	1.39	328	*e*P	Pg	22 04 23.6	+0.6
EDSV				*e*S	Sn	22 04 42.6	+1.5
CACAO	El Cacao, Vera	1.39	102	*e*P	Pg	22 04 23.8	+0.7
CACAO				*e*S	Sb	22 04 38.8	-2.0
PESE3	Pese, Herrera	1.63	80	*e*P	Pg	22 04 28.1	+0.4
CRIS3	El Cristo, Coc	1.72	69	*e*P	Pg	22 04 29.4	0.0
CRIS3				*e*S	Sg	22 04 52.5	+0.9
EDPN	Palmar Norte	1.79	318	*e*P	Pb	22 04 28.5	-1.1
CNI2	El Empalme, Bo	1.79	353	*e*P	Pg	22 04 31.7	+0.9
CNI2				*e*S	Sg	22 04 55.2	+1.1
CHIT3	Chitre	1.83	80	⇑*e*P	Pb	22 04 31.0	+0.7
CHIT3				*e*S	Sg	22 04 55.3	+0.1
EDBA	Buenos Aires	1.83	326	*e*P	Pn	22 04 27.9	-0.6

SRBA	**San Rafael, Bu**	**1.94**	**325**	*e*P	**Pb**	**22 04 31.2**	**-1.0**
AZU	**Azuero**	**1.95**	**85**	*e*P	**Pb**	**22 04 32.5**	**+0.2**
AZU	**Azuero**	**1.95**	**85**	*e*P	**Pb**	**22 04 32.6**	**+0.3**
AZU				*e*S	**Sg**	**22 04 59.9**	**+0.8**
RGM0	**Gandoca**	**1.98**	**349**	*e*P	**Pg**	**22 04 35.5**	**+1.2**
RGM0				*e*S	**Sg**	**22 05 02.2**	**+2.3**
PNME	**Penonome**	**2.07**	**66**	*e*P	**Pb**	**22 04 35.4**	**+1.0**
PNME				*e*S	**Sg**	**22 05 03.9**	**+0.9**
PEDA3	**Pedasi**	**2.19**	**93**	*e*P	**Pb**	**22 04 35.8**	**-0.7**
PEDA3				*e*S	**Sb**	**22 05 03.8**	**-0.2**
PEZE	**Perez Zeledon,**	**2.25**	**321**	*e*P	**Pn**	**22 04 35.5**	**+1.3**
VTON	**El Valle, Cocl**	**2.31**	**65**	*e*P	**Pg**	**22 04 40.0**	**-0.8**
VTON				*e*S	**Sg**	**22 05 10.2**	**-0.6**
CDM	**Cerro de Muert**	**2.43**	**322**	*e*P	**Pn**	**22 04 38.1**	**+1.1**
CDM				*e*S	**Sb**	**22 05 09.3**	**-1.9**
RIMA	**Rio Macho**	**2.66**	**323**	*e*P	**Pn**	**22 04 41.4**	**+1.4**
BATAN	**Batan**	**2.69**	**335**	*e*P	**Pb**	**22 04 44.5**	**-0.5**
BATAN				*e*S	**Sg**	**22 05 22.0**	**-1.0**
LCR2	**La Lucha 2**	**2.73**	**320**	*e*P	**Pn**	**22 04 42.1**	**+1.1**
BCIP	**Isla Barro Col**	**2.82**	**57**	*e*P	**Pb**	**22 04 45.8**	**-1.4**
BCIP				*e*S	**Sg**	**22 05 26.1**	**-0.9**
OCM	**Ochomogo**	**2.82**	**323**	*e*P	**Pn**	**22 04 43.9**	**+1.7**
UPA	**Univ. de Panam**	**2.99**	**63**	*e*P	**Pb**	**22 04 48.9**	**-1.2**
UPA				*e*S	**Sb**	**22 05 27.3**	**+0.4**
HDC	**Heredia**	**3.00**	**322**	⇑*e*P	**Pb**	**22 04 50.5**	**+0.2**
HDC				*e*S	**Sg**	**22 05 29.7**	**-3.0**
JTS	**Las Juntas de**	**3.76**	**315**	*e*P	**Pn**	**22 04 57.2**	**+2.2**
JTS				*e*S	**Sn**	**22 05 34.8**	**-4.9**

JMA ***02*** *22:13:30.8±0.3, 31°.0N±0°.7×12°.9E±°, h17^{km}, MV3.9/28, SW OFF KYUSHU*

NIED ***02*** *22:13:30.8, 30°.97N×128°.61E, h17^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.12; $M_{\theta\theta}$0.75; $M_{\phi\phi}$-0.63; $M_{r\theta}$-0.04; $M_{\theta\phi}$0.78; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.04000×10^{15} NP1: ϕ_s291.00000°, δ89.00000°, λ1.00000°. NP2:ϕ_s201.00000°, δ89.00000°, λ179.00000°.*

IDC ***02*** *22:13:31.6±1.0, 30°.84N×128°.42E, h0^{km}, mb3.6/6, mbtmp3.6/9, ML3.4/3, MS3.0/5 Error ellipse: s-maj=26.4km s-min=16.4km az=89.0*

ISC 02 22:13:32.5±0.8**, 30°.96N**±0°.05×**128°.82E**±0°.06**, h6**^{km}**, n22,** σ**1.**^{s}**67**/23**, mb3.6**/6**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**1.04**	**47**	*e*P	**Pg**	**22 13 51.8**	**-0.7**
JSJ				*e*S	**Sn**	**22 14 07.2**	**-1.3**
JKC	**Kuchinoerabu**	**1.28**	**113**	*e*P	**Pn**	**22 13 57.3**	**+0.4**
JKC				*e*S	**Sn**	**22 14 15.7**	**+1.2**
JNN	**Nakanoshima**	**1.44**	**141**	*e*P	**Pn**	**22 13 59.0**	**-0.1**
JSU	**Suzuyama**	**1.50**	**68**	*e*P	**Pb**	**22 13 60.0**	**-0.7**
JYAK	**Yakushimahirau**	**1.62**	**116**	*e*P	**Pn**	**22 14 00.2**	**-1.4**
JFU	**Fukue jima 2**	**1.69**	**358**	*e*P	**Pn**	**22 14 00.6**	**-1.9**
JMTN	**Minamitane**	**1.88**	**107**	*e*P	**Pn**	**22 14 04.8**	**-0.3**
JTN	**Tanegashima 3**	**1.88**	**99**	*e*P	**Pn**	**22 14 04.8**	**-0.3**
JTZ	**Takazaki**	**2.15**	**64**	*e*P	**Pn**	**22 14 09.0**	**+0.2**
JIU3	**Izumi3**	**2.32**	**46**	*e*P	**Pn**	**22 14 11.2**	**0.0**
JNU	**Nakatsue**	**2.77**	**39**	Pn	**Pb**	**22 14 22.6**	**+0.2**
	12nm,0.3s,baz=261,slow=6.0,SNR=29						
JNU				Sn	**Sg**	**22 15 00.1**	**-1.4**
	10nm,0.3s,baz=154,slow=7.7,SNR=3.7						
JNU				LR	LR	22 15 35.9	
	comp=Z,190nm,21.9s,baz=174,slow=40						
	73nm,0.5s						
KSRS	**Korea Array**	**6.52**	**354**	Pn	**Pn**	**22 15 08.4**	**-0.4**
	0.6nm,0.3s,baz=174,slow=14,SNR=4.2						
KSRS				Sn	**Sn**	**22 16 26.1**	**+2.7**
	0.8nm,0.3s,baz=226,slow=39,SNR=2.2						
KSRS				Lg	Lg	22 17 01.7	
	1.9nm,0.3s,baz=183,slow=31,SNR=7.2						
	1.4nm,0.3s						
JHJ	**Hachijo jima 2**	**9.55**	**74**	LR	LR	22 19 32.0	
	comp=Z,28nm,18.3s,baz=311,slow=36						
MJAR	**Matsushiro Arr**	**9.59**	**52**	Pn	Pn	22 15 56.2	+5.2
	0.2nm,0.3s,baz=246,slow=13,SNR=3.6						
MJAR				LR	LR	22 20 02.6	
	comp=Z,66nm,20.0s,baz=308,slow=39						
	1.7nm,0.4s						
KLR	**Kul'dur**	**18.38**	**6**	P	**P**	**22 17 53.0**	**+5.1**
	2.2nm,0.6s,baz=207,slow=5.1,SNR=11						
KLR				LR	LR	22 24 10.2	
	comp=Z,40nm,19.1s,baz=57,slow=34						
SONM	**Songino Array**	**24.04**	**321**	P	**P**	**22 18 47.3**	**-1.0**
	1.2nm,0.7s,baz=132,slow=8.0,SNR=2.7						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**38.92**	**307**	P	**P**	**22 20 56.9**	**-2.0**
	1.0nm,0.8s,baz=105,slow=9.2,SNR=13						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**50.89**	**173**	P	**P**	**22 22 32.6**	**-1.8**
	0.7nm,0.7s,baz=355,slow=8.1,SNR=5.4						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**54.54**	**174**	P	**P**	**22 23 01.6**	**+0.3**
	0.2nm,0.3s,baz=0.4,slow=13,SNR=6.9						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**69.03**	**330**	P	**P**	**22 24 39.6**	**+1.0**
	0.6nm,0.8s,baz=74,slow=10,SNR=1.6						
	0.6nm,0.8s						
YKA	**Yellowknife Ar**	**74.04**	**26**	P	**P**	**22 25 09.6**	**+0.8**
	0.2nm,0.7s,baz=312,slow=6.4,SNR=3.2						
	0.2nm,0.7s						
ATD	**Arta Tunnel**	**80.75**	**278**	LR	LR	23 05 43.9	
	comp=Z,54nm,18.6s,baz=328,slow=39						

IDC ***02*** *22:16:54.6±1.3, 12°.62N×123°.05E, h0^{km}, mb3.5/6, mbtmp3.6/7, ML4.6/1, MS3.4/9, Error ellipse: s-maj=59.2km s-min=19.2km az=59.0*

MAN ***02*** *22:16:55.7, 12°.76N×123°.02E, h8^{km}, mb4.8, ML3.7, MS3.7, Hypocentre not reviewed by the ISC*

ISC 02 22:16:56.0±1.6**, 12°.71N**±0°.05×**123°.09E**±0°.07**, h10**^{km}±12^{km}**, n25,** σ**1.**^{s}**35**/25**, mb3.5**/6**, MS3.3**/8**, 6C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.62**	**123**	⇑*e*P	**Pg**	**22 17 09.4**	**+1.3**
MMPH				*i* S	**Sn**	**22 17 19.7**	**-1.3**
RCP	**Roxas**	**1.19**	**197**	⇑*e*P	**Pb**	**22 17 18.2**	**-0.4**
GQP	**Guinayangan**	**1.35**	**332**	⇑*e*P	**Pn**	**22 17 19.8**	**-1.1**
GQP				*i* S	**Sn**	**22 17 38.7**	**-0.1**
LQP	**Lukban**	**2.06**	**313**	⇓*e*P	**Pn**	**22 17 29.8**	**-1.1**
LQP				*e*S	**Sb**	**22 18 01.6**	**+2.2**
PGP	**Puerto Galera**	**2.23**	**291**	⇑*e*P	**Pn**	**22 17 32.0**	**-1.1**
PGP				*i* S	**Sb**	**22 18 05.1**	**+1.1**
JAP	**San Jose, Anti**	**2.25**	**210**	⇑*e*P	**Pb**	**22 17 35.8**	**-0.9**
TGY	**Tagaytay City**	**2.51**	**304**	Pn	**Pn**	**22 17 35.5**	**-1.5**
	113nm,0.3s,baz=286,slow=2.3,SNR=8.5						
	324nm,0.4s						
TGY	**Tagaytay City**	**2.51**	**304**	⇓*e*P	**Pn**	**22 17 34.5**	**-2.5**
LLP	**Lapu-Lapu**	**2.52**	**160**	⇓*i*P	**Pb**	**22 17 39.0**	**-2.5**
LLP				*i* S	**Sg**	**22 18 15.7**	**-1.5**
TBP	**Tagbilaran**	**3.09**	**166**	⇑*e*P	**Pn**	**22 17 46.7**	**+1.8**
TBP				*i* S	Sn	22 18 01.9	-20
SNPH	**Sibulan**	**3.34**	**178**	*e*P	**Pb**	**22 17 54.6**	**-0.9**
SNPH				*i* S	**Sn**	**22 18 28.4**	**+0.1**
PCPH	**Palayan**	**3.44**	**326**	⇓*e*P	**Pn**	**22 17 49.7**	**0.0**
PCPH	**Palayan**	**3.44**	**326**	⇓*e*P	**Pn**	**22 17 49.7**	**0.0**
KAPI	**Kappang**	**17.91**	**191**	LR	LR	22 28 55.4	
	comp=Z,100nm,18.5s,baz=0.5,slow=40						
GUMO	**Guam**	**21.23**	**85**	LR	LR	22 28 06.4	
	comp=Z,52nm,21.1s,baz=99,slow=32						
JCJ	**Chichijima**	**22.92**	**49**	LR	LR	22 29 13.4	
	comp=Z,82nm,21.9s,baz=116,slow=32						
CMAR	**Chiang Mai Arr**	**23.94**	**287**	P	**P**	**22 22 11.2**	**+0.6**
	0.6nm,0.3s,baz=95,slow=8.4,SNR=4.8						
	0.6nm,0.3s						
KSRS	**Korea Array**	**25.02**	**9**	LR	LR	22 33 19.6	
	comp=Z,23nm,19.5s,baz=220,slow=39						
PSI	**Prapat**	**25.86**	**250**	LR	LR	22 32 08.9	
	comp=Z,80nm,20.8s,baz=116,slow=35						
WRA	**Warramunga Arr**	**34.28**	**161**	P	**P**	**22 23 41.8**	**-0.8**
	0.7nm,1.0s,baz=343,slow=8.7,SNR=4.6						
WRA				LR	LR	22 38 41.2	
	comp=Z,86nm,18.4s,baz=7.5,slow=38						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**37.66**	**164**	P	**P**	**22 24 11.1**	**-0.6**
	0.4nm,0.4s,baz=346,slow=6.8,SNR=5.3						
ASAR				LR	LR	22 41 54.9	
	comp=Z,91nm,19.1s,baz=250,slow=40						
	0.4nm,0.4s						
SONM	**Songino Array**	**37.70**	**342**	P	**P**	**22 24 12.4**	**+0.6**
	0.3nm,0.5s,baz=149,slow=7.1,SNR=2.1						
SONM				LR	LR	22 41 41.5	
	comp=Z,59nm,18.7s,baz=198,slow=39						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**48.22**	**323**	P	**P**	**22 25 38.1**	**+1.2**
	0.2nm,0.5s,baz=130,slow=9.0,SNR=3.7						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**51.02**	**332**	P	**P**	**22 25 58.2**	**+0.2**
	0.3nm,0.3s,baz=122,slow=7.2,SNR=1.6						
	0.3nm,0.3s						
NOA	**NORSAR Array B**	**89.20**	**333**	LR	LR	23 13 04.7	
	comp=Z,26nm,18.0s,baz=65,slow=38						

TAP 02 22:23:53.4, 24°.21N×121°.74E, h13^{km}, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**244**	*i* P	Pg	22 23 56.8	+0.1
	baz=245						
ETL				S	Sg	22 23 59.1	+0.1
	baz=245						
NACB	**Ninganchiao**	**0.14**	**255**	*i* P	Pg	22 23 57.0	+0.1
	baz=255						
NACB				*i* S	Sg	22 23 59.4	0.0
	baz=255						
TWD	**Chiawan**	**0.18**	**225**	*i* P	Pg	22 23 57.8	+0.2
	baz=225						
TWD				S	Sg	22 24 00.8	+0.3
	baz=225						
ENA	**Nanau**	**0.22**	**0**	P	Pg	22 23 58.3	+0.1
	baz=2.0						
ENA				*e*S	Sg	22 24 01.5	+0.1
	baz=2.0						
ETLH	**Xiulin Townshi**	**0.23**	**269**	P	Pg	22 23 58.6	+0.1
	baz=270						
ETLH				*e*S	Sg	22 24 02.1	+0.1
	baz=270						
EWUT	**Wuta**	**0.24**	**9**	P	Pg	22 23 58.6	+0.1
	baz=8.0						
EWUT				*e*S	Sg	22 24 02.1	+0.1
	baz=8.0						
LATG	**Datong**	**0.38**	**329**	*i* P	Pg	22 24 01.4	+0.4
	baz=328						
LATG				S	Sg	22 24 06.4	+0.2
	baz=328						
NNSB	**Datong**	**0.39**	**304**	*i* P	Pg	22 24 01.7	+0.4
	baz=303						
NNSB				*e*S	Sg	22 24 06.8	+0.2
	baz=303						
NNS	**Nan Shan**	**0.41**	**305**	P	Pg	22 24 01.9	+0.3
	baz=304						
NNS				*e*S	Sg	22 24 06.8	-0.3
	baz=304						
TWC	**Suao**	**0.41**	**14**	*e*P	Pb	22 24 02.8	+0.3
	baz=8.0						
TWC				*e*S	Sb	22 24 08.0	-0.7
	baz=8.0						
NDS	**Dongshan**	**0.42**	**357**	P	Pg	22 24 02.2	+0.3
	baz=356						
NDS				*e*S	Sg	22 24 07.8	+0.2
	baz=356						
ENTT	**Nioudou**	**0.46**	**340**	*i* P	Pb	22 24 03.2	-0.1
	baz=340						
ENTT				S	Sg	22 24 09.3	+0.6
	baz=340						
ESL	**Shilin**	**0.48**	**215**	*e*P	Pg	22 24 03.3	+0.3
	baz=222						
ESL				*e*S	Sb	22 24 11.4	+0.7
	baz=222						
TWE	**Neicheng**	**0.51**	**353**	*e*P	Pb	22 24 04.1	-0.2
	baz=353						
TWE				*e*S	Sg	22 24 11.0	+0.6
	baz=353						
FUSB	**Fushanzhiwuyua**	**0.56**	**346**	*e*P	Pb	22 24 05.4	+0.2
	baz=345						
FUSB				*e*S	Sg	22 24 11.9	-0.1
	baz=345						
YHNB	**Yeheng**	**0.56**	**324**	*i* P	Pb	22 24 05.2	0.0
	baz=324						
YHNB				*e*S	Sb	22 24 13.4	+0.2
	baz=324						
OWD	**Renai**	**0.57**	**244**	P	Pb	22 24 05.8	+0.5
	baz=244						
OWD				*e*S	Sg	22 24 12.9	+0.5
	baz=244						
NSK	**Sanguang**	**0.58**	**323**	*e*P	Pb	22 24 05.3	-0.1
	baz=323						
NSK				*e*S	Sg	22 24 12.9	+0.4
	baz=323						
NWLT	**Wulai**	**0.60**	**339**	*e*P	Pg	22 24 05.5	+0.3
	baz=339						
NWLT				*e*S	Sg	22 24 13.7	+0.4
	baz=339						
WUSB	**Renai**	**0.61**	**249**	*e*S	Sb	22 24 14.6	+0.1
	baz=245						

TAP 02 22:35:06.9, 24°.22N×121°.73E, h19^{km}±1^{km}, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**239**	*i* P	Pg	22 35 11.0	+0.1
	baz=241						
ETL				*e*S	Sg	22 35 13.7	+0.1
	baz=241						
NACB	**Ninganchiao**	**0.13**	**250**	*i* P	Pg	22 35 11.1	+0.1
	baz=252						
NACB				*e*S	Sg	22 35 14.0	+0.1
	baz=252						
TWD	**Chiawan**	**0.19**	**222**	*i* P	Pg	22 35 11.8	+0.1
	baz=223						
TWD				*e*S	Sg	22 35 15.2	+0.2
	baz=223						
ENA	**Nanau**	**0.21**	**2**	*i* P	Pg	22 35 12.1	0.0
	baz=2.0						
ENA				*e*S	Sg	22 35 15.6	0.0
	baz=2.0						
ETLH	**Xiulin Townshi**	**0.23**	**267**	*e*P	Pg	22 35 13.5	+1.1
	baz=267						
EWUT	**Wuta**	**0.23**	**11**	*i* P	Pg	22 35 12.4	+0.1
	baz=8.0						
LATG	**Datong**	**0.37**	**329**	*e*P	Pb	22 35 15.1	+0.1
	baz=329						
NNSB	**Datong**	**0.38**	**303**	*e*P	Pg	22 35 14.3	-0.7
	baz=303						

TAP 02 22:59:08.0, 24°.27N×121°.70E, h20^{km}±1^{km}, ML1.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.13**	**212**	P	Pb	22 59 12.3	-1.4
	baz=212						
ETL				S	Sb	22 59 15.3	-2.3
	baz=212						
NACB	**Ninganchiao**	**0.13**	**225**	*e*P	Pb	22 59 12.6	-1.0
	baz=225						
EWUT	**Wuta**	**0.19**	**23**	*e*P	Pb	22 59 12.3	-1.3
	baz=22						
EWUT				*e*S	Sb	22 59 15.4	-2.1
	baz=22						
ETLH	**Xiulin Townshi**	**0.20**	**253**	*e*P	Pb	22 59 11.9	-1.9
	baz=253						
ETLH				*e*S	Sb	22 59 15.2	-2.6
	baz=253						
TWD	**Chiawan**	**0.21**	**206**	*e*P	Pb	22 59 11.3	-2.4
	baz=204						
TWD				*e*S	Sb	22 59 14.1	-3.5
	baz=204						
LATG	**Datong**	**0.31**	**330**	⇓P	Pb	22 59 14.7	-0.3
	baz=329						
LATG				S	Sb	22 59 19.5	-0.3
	baz=329						
NNSB	**Datong**	**0.33**	**300**	P	Pb	22 59 14.9	-0.3
	baz=299						
NNSB				*e*S	Sb	22 59 20.1	0.0
	baz=299						
NNS	**Nan Shan**	**0.34**	**301**	*e*P	Pb	22 59 15.3	-0.2
	baz=300						
NDS	**Dongshan**	**0.37**	**3**	*e*P	Pb	22 59 15.4	-0.3
	baz=2.0						
NDT	**Datong Townshi**	**0.37**	**334**	*e*P	Pb	22 59 15.9	0.0
	baz=333						
NDT				*e*S	Sb	22 59 21.9	+0.6
	baz=333						
ENTT	**Nioudou**	**0.39**	**342**	P	Pb	22 59 16.3	+0.1
	baz=343						
WHF	**Hehuan Shan**	**0.41**	**253**	*e*P	Pb	22 59 15.8	-1.0
	baz=252						
YHNB	**Yeheng**	**0.50**	**324**	P	Pb	22 59 18.2	+0.1
	baz=324						
YHNB				*e*S	Sb	22 59 25.1	+0.1
	baz=324						
ILA	**Ilan**	**0.50**	**5**	*e*P	Pb	22 59 17.8	-0.3
	baz=6.0						
ILA				*e*S	Sb	22 59 24.3	-0.7
	baz=6.0						
FUSB	**Fushanzhiwuyua**	**0.50**	**349**	*e*P	Pb	22 59 19.1	+0.9
	baz=348						
FUSB				*e*S	Sb	22 59 25.6	+0.5
	baz=348						
NSK	**Sanguang**	**0.51**	**323**	*e*P	Pb	22 59 18.0	-0.4
	baz=323						
NSK				*e*S	Sb	22 59 25.8	+0.4
	baz=323						
NWLT	**Wulai**	**0.54**	**341**	*e*P	Pb	22 59 18.9	0.0
	baz=340						
NWLT				*e*S	Sb	22 59 26.6	+0.3
	baz=340						
OWD	**Renai**	**0.57**	**237**	*e*P	Pb	22 59 18.4	-1.0
	baz=236						
WUSB	**Renai**	**0.59**	**243**	P	Pb	22 59 19.2	-0.7
	baz=242						
WUSB				*e*S	Sb	22 59 27.4	-0.6
	baz=242						

TUL ***02*** *23:03:56.7±1.9, 35°.73N±0°.01×97°.16W±0°.01, h5^{km}±5^{km}, ML2.7, mb_Lg2.3/18(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=142.0*

NEIC 02 23:03:56.8±1.0**, 35°.73N**±0°.02×**97°.16W**±0°.02**, h13**^{km}±3^{km}**, Error ellipse: s-maj=2.6km s-min=1.7km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.39**	**218**	Pg	Pg	23 04 04.5	-0.3
OKCFA				Sg	Sg	23 04 10.2	+0.2
OKCSW	**OKLAHOMA CITY**	**0.39**	**216**		Pg	23 04 04.5	-0.2
OKCSW				Sg	Sg	23 04 10.5	+0.4
FNO	**Franklin**	**0.51**	**203**	Pg	Pg	23 04 06.7	-0.2
FNO				Sg	Sg	23 04 13.6	0.0
TUL1	**Leonard**	**1.12**	**80**		Pb	23 04 18.0	-0.1
X34A	**Smith Ranch, M**	**1.25**	**206**		Pb	23 04 20.2	-0.1
T35A	**Sooner Cattle**	**1.30**	**23**		Pn	23 04 19.9	-0.8
U32A	**Winter Ranch,**	**1.63**	**294**	Pn	Pn	23 04 24.6	-0.7
X37A	**Clayton**	**1.85**	**127**	Pn	Pn	23 04 29.3	+1.1
W39A	**Magazine**	**2.80**	**100**		Pn	23 04 42.4	+1.1
R32A	**Long Quarter,**	**2.96**	**336**	Pg	Pg	23 04 52.3	-1.4
MIAR	**Mount Ida**	**3.16**	**111**	Pn	Pn	23 04 47.8	+1.5
U40A	**Yellville**	**3.54**	**79**	Pn	Pn	23 04 53.0	+1.5
U40A				IAmb_Lg		23 05 48.4	
	comp=Z,6.4nm,0.8s						
X40A	**Basin Creek Fa**	**3.75**	**108**	Pn	Pn	23 04 55.6	+1.2
X40A				IAmb_Lg		23 06 00.4	
	comp=Z,6.0nm,0.8s						
AMTX	**Amarillo**	**3.79**	**259**	IAmb_Lg		23 06 07.8	
	comp=Z,8.0nm,1.0s						
237A	**Washetta, Mont**	**3.88**	**163**	Pn	Pn	23 04 56.9	+0.7
WHAR	**Wooly Hollow**	**3.99**	**95**	Pn	Pn	23 04 58.7	+1.0
WHAR				IAmb_Lg		23 06 04.1	
	comp=Z,7.4nm,1.1s						
W41B	**Gary Mavity, V**	**4.04**	**96**	Pn	Pn	23 04 59.1	+0.7
W41B				IAmb_Lg		23 06 06.5	
	comp=Z,6.1nm,1.0s						
FCAR	**Ozark Folk Cen**	**4.09**	**86**	IAmb_Lg		23 06 11.9	
	comp=Z,6.2nm,1.0s						
MGMO	**Mountain Grove**	**4.19**	**69**	IAmb_Lg		23 06 18.8	
	comp=Z,5.5nm,0.8s						
R40A	**Maddies Statio**	**4.67**	**55**	IAmb_Lg		23 06 23.3	
	comp=Z,6.5nm,1.1s						
CCM	**Cathedral Cave**	**5.28**	**62**	IAmb_Lg		23 06 41.6	
	comp=Z,4.4nm,0.7s						
PBMO	**Poplar Bluff**	**5.54**	**77**		Pb	23 05 32.5	-0.8
L34A	**Svendsen Farm,**	**6.26**	**5**	IAmb_Lg		23 07 20.2	
	comp=Z,4.6nm,0.8s						

NEIC ***02*** *23:12:14.9±1.6, 59°.91N±0°.04×150°.23W±0°.08, h52^{km}±9^{km}, Error ellipse: s-maj=7.5km s-min=3.8km az=136.0*

ANF ***02*** *23:12:14.7±0.1, 59°.89N×150°.26W, h52^{km}±4^{km}, ML3.7/60, Error ellipse: s-maj=2.0km s-min=1.4km az=158.0*

AEIC ***02*** *23:12:15±1.6, 59°.92N±0°.04×150°.22W±0°.07, h47^{km}±7^{km}, ML3.3, ML3.5/152(NEIC), Error ellipse: s-maj=6.4km s-min=3.8km az=142.0*

ISC 02 23:12:14.5±1.0**, 59°.89N**±0°.03×**150°.24W**±0°.03**, h59**^{km}±8^{km}**, n169,** σ**0.**^{s}**74**/178**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRSE	**Bradley Lake S**	**0.30**	**240**	P	**Pn**	**23 12 24.5**	**+0.1**
	baz=56,SNR=113						
BRSE				S	**Sn**	**23 12 31.6**	**-0.1**
	baz=56						
BRLK	**Bradley Lake**	**0.35**	**249**		**Pn**	**23 12 24.9**	**0.0**
BRLK				Sn	**Sn**	**23 12 32.3**	**-0.2**
BRLK				IAML		23 12 32.4	
	comp=N,5μm,0.2s						
SEW	**Seward**	**0.45**	**61**		**Pn**	**23 12 25.7**	**-0.1**
SEW	**Seward**	**0.45**	**61**	P	**Pn**	**23 12 25.8**	**-0.1**
	baz=244,SNR=76						
SEW				S	**Sn**	**23 12 33.4**	**-0.5**
	baz=244						
CNPM	**China Poot**	**0.62**	**235**		**Pn**	**23 12 28.1**	**+0.3**
CNPM				Sn	**Sn**	**23 12 37.7**	**+0.2**
O22K	**Cooper Landing**	**0.65**	**23**	Pn	**Pn**	**23 12 27.8**	**-0.1**
O22K				Sn	**Sn**	**23 12 37.1**	**-0.7**
O22K	**Cooper Landing**	**0.65**	**23**	P	**Pn**	**23 12 27.9**	**-0.1**
	baz=204,SNR=115						
O22K				S	**Sn**	**23 12 37.3**	**-0.5**
	baz=204						
HOM	**Homer**	**0.75**	**252**		**Pn**	**23 12 29.7**	**+0.5**
HOM				Sn	**Sn**	**23 12 40.5**	**+0.5**
HOM	**Homer**	**0.75**	**252**	P	**Pn**	**23 12 29.7**	**+0.5**
	baz=70,SNR=16						
HOM				S	**Sn**	**23 12 40.6**	**+0.6**
	baz=70						
CAPN	**Captain Cook N**	**0.99**	**333**		**Pn**	**23 12 33.2**	**+0.9**
CAPN	**Captain Cook N**	**0.99**	**333**	P	**Pn**	**23 12 33.3**	**+0.9**
	baz=151,SNR=33						
CAPN				S	**Sn**	**23 12 45.6**	**+0.1**
	baz=151						
O20K	**Slope Mountain**	**1.22**	**280**	P	**Pn**	**23 12 35.3**	**-0.1**
	baz=97,SNR=65						
O20K				S	**Sn**	**23 12 50.8**	**-0.2**
	baz=97						
RC01	**Rabbit Creek A**	**1.23**	**11**		**Pn**	**23 12 35.3**	**-0.2**
RC01				IAML		23 12 52.4	
	comp=N,874nm,0.3s						
RC01	**Rabbit Creek A**	**1.23**	**11**	P	**Pn**	**23 12 35.4**	**-0.2**
	baz=192,SNR=124						
RC01				S	**Sn**	**23 12 50.6**	**-0.6**
	baz=192						
FIS	**Fire Island**	**1.26**	**0**	Pn	**Pn**	**23 12 36.4**	**+0.5**
PWL	**Port Wells**	**1.35**	**43**		**Pn**	**23 12 37.3**	**+0.1**
PWL	**Port Wells**	**1.35**	**43**	P	**Pn**	**23 12 37.4**	**+0.1**
	baz=226						
PWL				S	**Sn**	**23 12 53.7**	**-0.5**
	baz=226						
RSO	**Redoubt South**	**1.38**	**296**		**Pn**	**23 12 36.9**	**-0.9**
P19K	**Oil Pt**	**1.53**	**262**		**Pn**	**23 12 39.8**	**+0.2**
P19K	**Oil Pt**	**1.53**	**262**	P	**Pn**	**23 12 39.8**	**+0.2**
	baz=79,SNR=30						
P19K				S	**Sn**	**23 12 58.6**	**+0.1**
	baz=79						
SPCR	**Spurr Chakacha**	**1.64**	**324**	P	**Pn**	**23 12 40.3**	**-0.7**
	baz=142,SNR=41						
SPCR				S	**Sn**	**23 13 00.0**	**-1.1**
	baz=142						
KNK	**Knik Glacier**	**1.76**	**29**		**Pn**	**23 12 42.5**	**-0.1**
KNK	**Knik Glacier**	**1.76**	**29**	P	**Pn**	**23 12 42.6**	**-0.1**
	baz=211,SNR=43						
KNK				S	**Sn**	**23 13 03.8**	**-0.2**
	baz=211						
PMR	**Palmer**	**1.79**	**17**		**Pn**	**23 12 42.8**	**-0.3**
PMR	**Palmer**	**1.79**	**17**	P	**Pn**	**23 12 42.8**	**-0.3**
	baz=198,SNR=29						
PMR				S	**Sn**	**23 13 03.7**	**-1.0**
	baz=198						
GLI	**Glacier Island**	**1.85**	**56**		**Pn**	**23 12 43.2**	**-0.6**
GLI				IAML		23 13 05.6	
	comp=N,482nm,0.5s						
GLI				IAML		23 13 06.2	

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      comp=E,655nm,0.6s
GLI   Glacier Island   1.85  56 P     Pn    23 12 43.1 -0.8
      baz=239,SNR=11
GLI                             S     Sn    23 13 04.4 -1.7
      baz=239
M22K  Willow           1.87   2       Pn    23 12 44.5 +0.4
M22K                            IAML        23 13 09.6
      comp=N,595nm,0.3s
M22K                            IAML        23 13 13.1
      comp=E,591nm,0.4s
M22K  Willow           1.87   2 P     Pn    23 12 44.1  0.0
      baz=182,SNR=7.9
M22K                            S     Sn    23 13 06.4 -0.2
      baz=182
Q19K  Cape Douglas,    1.99 242       Pn    23 12 46.4 +0.6
Q19K  Cape Douglas,    1.99 242 P     Pn    23 12 46.5 +0.6
      baz=59,SNR=30
Q19K                            S     Sn    23 13 09.8 +0.1
      baz=59
GHO   Glory Hole Cre   1.99  18       Pn    23 12 45.8 -0.1
GHO                             IAML        23 13 10.2
      comp=N,439nm,0.6s
GHO                             IAML        23 13 15.8
      comp=E,412nm,0.8s
Q23K  Middleton Isla   2.03 102 Pn    Pn    23 12 46.5 +0.2
Q23K  Middleton Isla   2.03 102 S     Sn    23 13 11.3 +0.9
      baz=286
MID   Middleton Isla   2.03 102 Pn    Pn    23 12 46.6 +0.3
FID   Port Fidalgo     2.06  64       Pn    23 12 45.8 -0.9
FID                             IAML        23 13 10.4
      comp=N,445nm,0.3s
FID                             IAML        23 13 12.0
      comp=E,345nm,0.4s
O19K  Port Alsworth    2.07 280       Pn    23 12 47.0 +0.2
O19K  Port Alsworth    2.07 280 P     Pn    23 12 47.1 +0.2
      baz=96,SNR=7.5
O19K                            S     Sn    23 13 10.9 -0.6
      baz=96
SML   Sawmill          2.14  25 Pn    Pn    23 12 47.6 -0.3
SML                             IAML        23 13 32.8
      comp=N,194nm,0.8s
SML   Sawmill          2.14  25 P     Pn    23 12 47.9  0.0
      baz=207,SNR=34
M23K  Glacier View     2.27  32 P     Pn    23 12 49.8 +0.2
      baz=214,SNR=90
M23K                            S     Sn    23 13 16.4 -0.1
      baz=214
N19K  Bonanza Creek    2.31 296 Pn    Pn    23 12 49.4 -0.8
N19K  Bonanza Creek    2.31 296 P     Pn    23 12 49.4 -0.8
      baz=111,SNR=37
N19K                            S     Sn    23 13 16.5 -0.9
      baz=111
EYAK  Cordova Ski Ar   2.33  72 Pn    Pn    23 12 50.1 -0.4
EYAK  Cordova Ski Ar   2.33  72 P     Pn    23 12 49.9 -0.5
      baz=256
EYAK                            S     Sn    23 13 16.2 -1.7
      baz=256
SCM   Sheep Creek Mo   2.41  35       Pn    23 12 52.1 +0.4
SCM                             IAML        23 13 21.6
      comp=E,343nm,0.5s
SCM                             IAML        23 13 22.3
      comp=N,222nm,0.3s
SCM   Sheep Creek Mo   2.41  35 P     Pn    23 12 52.0 +0.4
      baz=218,SNR=116
SCM                             S     Sn    23 13 20.0  0.0
      baz=218
KDAK  Kodiak Island    2.44 211       Pn    23 12 52.0 +0.1
KDAK  Kodiak Island    2.44 211 P     Pn    23 12 52.0 +0.1
      baz=29
KDAK                            S     Sn    23 13 18.7 -1.9
      baz=29
O18K  Koktuh Hills     2.51 271       Pn    23 12 52.2 -0.6
O18K                            IAML        23 13 33.7
      comp=N,162nm,0.6s
O18K                            IAML        23 13 39.2
      comp=E,144nm,0.7s
O18K  Koktuh Hills     2.51 271 P     Pn    23 12 52.2 -0.6
      baz=86
O18K                            S     Sn    23 13 21.4 -0.8
      baz=86
CUT   Chulitna         2.52 360 Pn    Pn    23 12 50.9 -2.1
CUT                             IAML        23 13 27.7
      comp=N,290nm,0.5s
DIV   Divide           2.53  59       Pn    23 12 53.3  0.0
P18K  Big Mountain,    2.58 261 Pn    Pn    23 12 54.0  0.0
P18K                            IAML        23 13 40.2
      comp=N,196nm,1.0s
P18K                            IAML        23 13 41.2
      comp=E,163nm,0.8s
P18K  Big Mountain,    2.58 261 P     Pn    23 12 53.4 -0.5
      baz=76
KLU   Klutina          2.66  51       Pn    23 12 55.4 +0.3
KLU                             IAML        23 13 27.0
      comp=E,308nm,0.3s
KLU   Klutina          2.66  51 P     Pn    23 12 55.3 +0.3
      baz=235,SNR=67
M19K  Big River Lodg   2.86 317 P     Pn    23 12 57.3 -0.4
      baz=133
SVW2  Sparrevohn       2.91 297       Pn    23 12 57.1 -1.2
N18K  Kilae Creek      2.92 288       Pn    23 12 57.7 -0.8
N18K  Kilae Creek      2.92 288 P     Pn    23 12 57.4 -1.1
      baz=103,SNR=13
KAIM  Kayak Island     2.93  87 Pn    Pn    23 13 00.6 +2.0
KAIM                            IAML        23 13 52.5
      comp=E,166nm,1.8s
KAIM                            IAML        23 13 52.8
      comp=N,137nm,2.7s
WAT6  Susitna Watana   2.96  23 P     Pn    23 12 59.7 +0.6
      baz=205,SNR=124
M24K  Tolsona, Glenn   2.98  40       Pn    23 13 00.3 +1.1
M24K                            IAML        23 13 37.2
      comp=E,215nm,1.2s
M24K                            IAML        23 13 40.2
      comp=N,182nm,0.5s
M24K  Tolsona, Glenn   2.98  40 P     Pn    23 13 00.2 +1.0
      baz=224,SNR=127
BMRM  Bremner River    2.99  66       Pn    23 12 59.2 -0.3
BMRM                            IAML        23 13 33.7
      comp=N,99nm,0.4s
BMRM                            IAML        23 13 37.4
      comp=E,111nm,0.6s
BMRM  Bremner River    2.99  66 P     Pn    23 12 59.0 -0.5
      baz=252
HMT   Hamilton         3.02  79 Pn    Pn    23 12 58.7 -1.2
OHAK  Old Harbor       3.12 212       Pn    23 13 00.8 -0.4
OHAK  Old Harbor       3.12 212 P     Pn    23 13 00.7 -0.4
      baz=29,SNR=6.7
L20K  Farewell, AK     3.14 327 P     Pn    23 13 01.3 -0.2
      baz=144,SNR=9.0
PPLA  Purkeypile       3.16 344       Pn    23 13 02.6 +0.8
PPLA  Purkeypile       3.16 344 P     Pn    23 13 01.7 -0.2
      baz=162
L19K  White Mountain   3.21 318 P     Pn    23 13 02.2 -0.3
      baz=133,SNR=13
SUCK  Suckling Hills   3.25  84 Pn    Pn    23 13 03.2 +0.2
SUCK                            IAML        23 13 34.6
      comp=E,105nm,2.1s
SUCK                            IAML        23 14 46.6
      comp=N,104nm,1.8s
N25K  Chitina, Valde   3.26  56 IAML        23 13 44.4
      comp=E,101nm,0.6s
N25K                            IAML        23 13 46.0
      comp=N,81nm,0.5s
N25K  Chitina, Valde   3.26  56 P     Pn    23 13 03.3 +0.1
      baz=241,SNR=15
BERG  Berg Lake        3.31  78 Pn    Pn    23 13 04.2 +0.5
DHY   Denali Highway   3.48  22       Pn    23 13 06.9 +0.7
DHY                             IAML        23 13 49.1
      comp=N,139nm,0.4s
DHY                             IAML        23 13 49.2
      comp=E,102nm,0.5s
DHY   Denali Highway   3.48  22 P     Pn    23 13 06.9 +0.7
      baz=204,SNR=86
HARP  HAARP            3.52  42 P     Pn    23 13 07.6 +0.9
      baz=227,SNR=21
GLB   Gilahina Butte   3.52  61 IAML        23 13 48.2
      comp=E,76nm,0.3s
GLB                             IAML        23 13 49.2
      comp=N,97nm,0.5s
TRF   Thorofare Moun   3.57 360 P     Pn    23 13 08.7 +1.2
      baz=180
RND   Reindeer         3.59  10 IAML        23 13 52.5
      comp=E,67nm,0.3s
VRDI  Verde Repeater   3.61  65 IAML        23 13 49.9
      comp=N,64nm,0.3s
VRDI                            IAML        23 13 50.1
      comp=E,51nm,0.5s
CAST  Castle Rocks     3.65 347       Pn    23 13 09.8 +1.4
CAST  Castle Rocks     3.65 347 P     Pn    23 13 09.7 +1.2
      baz=165,SNR=16
KTH   Kantishna Hill   3.69 355 Pn    Pn    23 13 10.0 +1.0
KTH                             IAML        23 13 51.0
      comp=E,68nm,0.9s
KTH                             IAML        23 13 54.8
      comp=N,95nm,0.6s
SNH   Sunshine Point   3.72  82 Pn    Pn    23 13 11.1 +1.6
SNH                             IAML        23 14 15.0
      comp=N,104nm,2.0s
SNH                             IAML        23 15 22.1
      comp=E,96nm,2.1s
WAX   Waxell Ridge     3.73  78 Pn    Pn    23 13 09.1 -0.5
PAX   Paxson           3.84  34       Pn    23 13 11.9 +0.7
PAX   Paxson           3.84  34 P     Pn    23 13 11.7 +0.5
      baz=219,SNR=82
MCK   McKinley         3.91   9       Pn    23 13 13.5 +1.5
MCK                             IAML        23 13 59.6
      comp=N,56nm,0.2s
MCK                             IAML        23 13 59.9
      comp=E,58nm,0.3s
MCK   McKinley         3.91   9 P     Pn    23 13 13.2 +1.3
      baz=190,SNR=59
K20K  Telida           3.93 334 P     Pn    23 13 12.1 -0.2
      baz=150
SII   Sitkinak Islan   3.94 214 Pn    Pn    23 13 11.8 -0.7
SII                             IAML        23 14 27.6
      comp=N,92nm,2.4s
SII                             IAML        23 15 19.5
      comp=E,97nm,3.4s
SII   Sitkinak Islan   3.94 214 P     Pn    23 13 11.8 -0.7
      baz=30
ISLE  Juniper Island   4.00  76 Pn    Pn    23 13 12.8 -0.6
ISLE                            IAML        23 13 58.5
      comp=E,69nm,0.3s
TTA   Tatalina         4.12 320       Pn    23 13 14.5 -0.5
TTA   Tatalina         4.12 320 P     Pn    23 13 14.3 -0.6
      baz=135
CHUM  Lake Minchumin   4.12 347 P     Pn    23 13 16.0 +1.1
      baz=165,SNR=22
BPAW  Bear Paw Mtn.    4.24 356 IAML        23 14 04.4
      comp=N,40nm,0.2s
BPAW  Bear Paw Mtn.    4.24 356 P     Pn    23 13 16.9 +0.4
      baz=175,SNR=39
BWN   Browne           4.31   5 IAML        23 14 30.1
      comp=E,59nm,0.5s
BWN                             IAML        23 14 32.2
      comp=N,61nm,1.0s
M26K  Nabesna, AK      4.32  51 IAML        23 14 08.7
      comp=N,47nm,0.4s
M26K                            IAML        23 14 10.2
      comp=E,35nm,0.3s
M26K  Nabesna, AK      4.32  51 P     Pn    23 13 18.0 +0.4
      baz=238,SNR=29
MENT  Mentasta         4.38  43 IAML        23 14 30.1
      comp=N,46nm,0.3s
MENT                            IAML        23 14 30.7
      comp=E,68nm,0.5s
BARN  Barnard Glacie   4.40  71       Pn    23 13 19.5 +0.6
BARN                            IAML        23 14 11.3
      comp=N,37nm,0.5s
BARN                            IAML        23 14 12.0
      comp=E,35nm,0.5s
K24K  Donnelly Dome    4.46  26 P     Pn    23 13 21.3 +1.8
      baz=210,SNR=80
L26K  Log Cabin Wild   4.56  43 IAML        23 14 28.2
      comp=N,37nm,0.4s
L26K                            IAML        23 14 31.5
      comp=E,47nm,0.4s
L26K  Log Cabin Wild   4.56  43 P     Pn    23 13 21.8 +0.9
      baz=230
TABL  Table Mountain   4.58  79 Pn    Pn    23 13 21.4 +0.1
RIDG  Independent Ri   4.63  31 IAML        23 14 29.9
      comp=E,50nm,0.6s
RIDG                            IAML        23 14 44.9
      comp=N,32nm,0.7s
RIDG  Independent Ri   4.63  31 P     Pn    23 13 22.9 +0.9
      baz=216,SNR=70
J20K  Nowinta River    4.68 339 Pn    Pn    23 13 23.5 +1.0
J20K                            IAML        23 14 15.4
      comp=N,28nm,0.6s
J20K  Nowinta River    4.68 339 P     Pn    23 13 23.0 +0.5
      baz=155,SNR=14
WRH   Wood River Hil   4.71  11 IAML        23 14 17.4
      comp=E,27nm,0.6s
WRH                             IAML        23 14 18.4
      comp=N,24nm,0.5s
M27K  Edge Creek, AK   4.75  55 P     Pn    23 13 23.8 +0.2
      baz=242
NEA2  Nenana           4.75   6 IAML        23 14 15.9
      comp=E,24nm,0.4s
NEA2                            IAML        23 14 17.1
      comp=N,30nm,0.3s
NEA2  Nenana           4.75   6 P     Pn    23 13 23.6 +0.1
      baz=187,SNR=33
CCB   Clear Creek Bu   4.91  12 IAML        23 14 19.7
      comp=E,25nm,0.4s
CHIR  Chirikof Islan   4.99 218 Pn    Pn    23 13 27.4 +0.6
SCRK  Sand Creek       5.05  33 IAML        23 14 39.9
      comp=E,18nm,0.7s
SCRK  Sand Creek       5.05  33 P     Pn    23 13 27.7  0.0
      baz=219,SNR=8.4
TCOL  CIGO, UAF Yank   5.12  11       Pn    23 13 29.5 +0.9
TCOL  CIGO, UAF Yank   5.12  11 P     Pn    23 13 29.4 +0.9
      baz=194,SNR=9.7
COLA  College          5.12  11       Pn    23 13 29.5 +0.9
COLA  College          5.12  11 P     Pn    23 13 29.4 +0.9
      baz=194
L27K  Beaver Creek,    5.13  48 P     Pn    23 13 29.6 +0.9
      baz=236,SNR=23
ILAR  Eielson Array    5.14  16 Pn    Pn    23 13 29.8 +0.9
YUK3  Moose Creek      5.14  64 P     Pn    23 13 29.5 +0.4
      baz=253
BCAR  Beaver Creek A   5.15  48 Pn    Pn    23 13 30.0 +1.0
MDM   Murphy Dome      5.17  10       Pn    23 13 30.0 +0.7
MDM                             IAML        23 14 26.9
      comp=E,27nm,0.6s
MDM                             IAML        23 14 27.4
      comp=N,30nm,0.5s
BVCY  Beaver Creek     5.20  57 P     Pn    23 13 30.3 +0.7
      baz=245
J25K  Salcha River,    5.26  24 IAML        23 14 28.8
      comp=E,21nm,0.6s
J25K                            IAML        23 14 30.6
      comp=N,16nm,0.6s
J25K  Salcha River,    5.26  24 P     Pn    23 13 30.8 +0.4
      baz=208,SNR=32
I23K  Minto, Yukon-K   5.29   4 IAML        23 15 20.9
      comp=N,17nm,0.9s
I23K  Minto, Yukon-K   5.29   4 P     Pn    23 13 31.4 +0.6
      baz=185
BCPM  Bancas Point     5.33  85 Pn    Pn    23 13 33.4 +1.9
I21K  Tanana           5.37 352       Pn    23 13 32.5 +0.6
I21K                            IAML        23 14 50.9
      comp=E,15nm,0.8s
I21K  Tanana           5.37 352 P     Pn    23 13 32.7 +0.7
      baz=170,SNR=9.4
POKR  Poker Plat Res   5.40  13 IAML        23 14 32.8
      comp=E,16nm,0.6s
POKR                            IAML        23 14 33.8
      comp=N,24nm,0.4s
POKR  Poker Plat Res   5.40  13 P     Pn    23 13 33.0 +0.6
      baz=195,SNR=15
PNL   Peninsula        5.48  88 P     Pn    23 13 33.6 +0.1
      baz=277
J26L  Joseph Creek     5.58  31 P     Pn    23 13 35.2 +0.2
      baz=217,SNR=46
K27K  Chicken          5.66  39 P     Pn    23 13 35.9 -0.1
      baz=227
YUK4  Talbot Arm       5.89  71 P     Pn    23 13 40.5 +1.2
      baz=260
H21K  Melozitna Rive   5.91 350       Pn    23 13 40.1 +0.8
H21K  Melozitna Rive   5.91 350 P     Pn    23 13 39.8 +0.5
      baz=167,SNR=32
H23K  Yukon River      5.97   3 Pn    Pn    23 13 40.6 +0.5
H23K  Yukon River      5.97   3 P     Pn    23 13 40.3 +0.2
      baz=183,SNR=14
H24K  Noodor Dome      6.07   9 P     Pn    23 13 41.9 +0.4
      baz=191,SNR=21
IMAR  Indian Mountai   6.32 347 Pn    Pn    23 13 45.6 +0.6
DAWY  Dawson           6.60  46 P     Pn    23 13 48.9  0.0
      baz=236,SNR=5.2
M30M  Minto, Yukon     7.02  62 Pn    Pn    23 13 54.5 -0.1
M30M  Minto, Yukon     7.02  62 P     Pn    23 13 54.5 -0.1
      baz=254
COLD  Coldfoot         7.37   0 Pn    Pn    23 13 58.9 -0.3
COLD  Coldfoot         7.37   0 P     Pn    23 13 58.7 -0.5
      baz=180,SNR=9.3
BESE  Bessie Mountai   8.00  93 Pn    Pn    23 14 08.2 +0.3
SIT   Sitka            8.31 103 Pn    Pn    23 14 11.7 -0.5
SIT   Sitka            8.31 103 P     Pn    23 14 12.2  0.0
      baz=296
JIS   Juneau Island    8.32  94 Pn    Pn    23 14 13.8 +1.5
TOLK  Toolik Lake Re   8.79   2       Pn    23 14 20.4 +1.7
TOLK  Toolik Lake Re   8.79   2 P     Pn    23 14 19.8 +1.0
      baz=182
CRAG  Craig           10.17 108 Pn    Pn    23 14 38.2 +0.6
AKUT  Akutan          10.23 243 Pn    Pn    23 14 37.6 -0.8
DLBC  Dease Lake      10.47  89 Pn    Pn    23 14 42.8 +1.0
INK   Inuvik          11.12  34 Pn    Pn    23 14 50.3 -0.2
DIB   Dawson Inlet,   11.85 117 Pn    Pn    23 15 00.3 -0.1
```

KRNET ***02*** *23:21:19.9±0.1, 42.°07N×75.°49E, h12^{km}, mb2.4*
SOME ***02*** *23:21:20.8, 42.°13N×75.°50E, h10^{km}*
NNC ***02*** *23:21:22.3±1.1, 42.°19N×75.°49E, h0^{km}, mb3.3, mpv3.1,*
Error ellipse: s-maj=7.8km s-min=5.3km az=179.0
ISC 02 23:21:20.1±1.1**, 42.°10N**±0.°03×**75.°48E**±0.°02**, h9**^{km}±10^{km}**,**
n52, σ**1§13**/92**, 9C-8D, Lake Issyk-Kul region**

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Code  Station Name       Δ°  AZ°  Phase ID       Time      Res
                                  Op    ISC    h  m  s    ISC
BOOM  Boomskoye usch   0.52  41 ⇓iP   Pg    23 21 30.4 +0.2
      baz=38
BOOM                            ⇓iS   Sg    23 21 37.6 +0.6
      baz=38
ARLS  Aral             0.89 255 ⇓iP   Pg    23 21 36.9 -0.4
      baz=57
ARLS                            ⇓iS   Sg    23 21 49.0  0.0
      baz=57
FRU1  Bishkek          0.95 319 ⇑iP   Pb    23 21 38.8 +0.1
      baz=20
FRU1                            ⇑iS   Sn    23 21 52.2 -1.1
      baz=20
KST   Kastek           1.01  21  eP   Pg    23 21 39.3 -0.2
      9.1nm,0.2s
KST                              eS   Sb    23 21 52.9 -0.3
      13nm,0.3s
KST   Kastek           1.01  21   P   Pg    23 21 39.3 -0.2
      9.1nm,0.2s
KST                               S   Sb    23 21 52.9 -0.3
      13nm,0.3s
DGS   Degeres          1.16  11  eP   Pg    23 21 42.1 -0.2
      180nm,0.1s
DGS                              eS   Sb    23 21 57.4 -0.2
      4.0nm,0.1s
DGS   Degeres          1.16  11   P   Pg    23 21 42.1 -0.2
      250nm,0.6s
DGS                               S   Sb    23 21 57.4 -0.2
      9.3nm,0.4s
MTBS  Maitube          1.24  34  eP   Pn    23 21 43.7 -0.1
      7.3nm,0.2s
MTBS                             eS   Sn    23 22 00.4 -0.4
      15nm,0.1s
MTBS  Maitube          1.24  34   P   Pg    23 21 43.8 -0.2
      7.3nm,0.2s
MTBS                              S   Sn    23 22 00.4 -0.4
      17nm,0.4s
KDJ   Kajisay          1.27  88 ⇑iP   Pn    23 21 44.1 -0.1
      baz=87
KDJ                             ⇑iS   Sb    23 22 01.3 +0.6
      baz=87
TNSS  Tian-Shan        1.43  49  eP   Pb    23 21 47.2  0.0
      3.3nm,0.0s
TNSS                             eS   Sg    23 22 06.6 +0.4
      7.9nm,0.2s
TNSS  Tian-Shan        1.43  49   P   Pb    23 21 47.2  0.0
      3.3nm,0.3s
TNSS                              S   Sg    23 22 06.6 +0.4
      7.9nm,0.2s
SGDS  Sogindy          1.49 335  eP   Pg    23 21 48.6  0.0
      2.6nm,0.2s
SGDS                             eS   Sg    23 22 08.1 +0.2
      12nm,0.2s
SGDS  Sogindy          1.49 335   P   Pg    23 21 48.6  0.0
      2.6nm,0.2s
SGDS                              S   Sg    23 22 08.1 +0.2
      12nm,0.2s
KNDC  Almaty           1.56  44  ⇓P   Pb    23 21 49.2 -0.1
      6.4nm,0.4s
KNDC                             ⇑S   Sg    23 22 10.0 -0.4
      20nm,0.9s
MDOK  Medeo            1.57  47  eP   Pb    23 21 49.5  0.0
      3.1nm,0.6s
MDOK                             eS   Sg    23 22 10.7 +0.1
      8.4nm,0.7s
MDOK  Medeo            1.57  47   P   Pb    23 21 49.2 -0.3
      2.4nm,0.5s
MDOK                              S   Sg    23 22 11.0 +0.4
      6.7nm,0.7s
MDOK  Medeo            1.57  47   Pg  Pb    23 21 49.5  0.0
      3.1nm,0.6s
MDOK                              Lg  Lg    23 22 10.7
      8.4nm,0.7s
KRBS  Karabastau       1.60   5  eP   Pg    23 21 50.0 -0.8
      3.4nm,0.3s
KRBS                             eS   Sg    23 22 10.8 -0.7
      17nm,0.5s
KRBS  Karabastau       1.60   5   P   Pg    23 21 50.0 -0.8
      3.4nm,0.3s
KRBS                              S   Sg    23 22 10.8 -0.7
      17nm,0.5s
KOTS  Kotyrbulak       1.65  46  eP   Pg    23 21 51.4 -0.4
      4.1nm,0.1s
KOTS                             eS   Sg    23 22 13.7 +0.5
      17nm,0.2s
KOTS  Kotyrbulak       1.65  46   P   Pg    23 21 51.4 -0.4
      4.1nm,0.3s
KOTS                              S   Sg    23 22 13.7 +0.5
      51nm,0.5s
ANVS  Anan'yevo        1.76  66 ⇑iP   Pb    23 21 52.5 -0.1
      baz=65
ANVS                            ⇑iS   Sg    23 22 16.4 -0.2
      baz=65
MRKS  Merke            1.79 292  eP   Pg    23 21 55.7 +1.4
      1.7nm,0.0s
MRKS                             eS   Sg    23 22 20.6 +3.1
      10nm,0.3s
MRKS  Merke            1.79 292   Pg  Pg    23 21 56.8 +2.5
      6.3nm,0.2s
KTBS  Karatobe         1.84  28  eP   Pb    23 21 54.3 +0.4
      4.5nm,0.2s
KTBS                             eS   Sg    23 22 19.0 -0.1
      41nm,0.3s
KTBS  Karatobe         1.84  28   P   Pb    23 21 54.3 +0.4
      4.5nm,0.2s
KTBS                              S   Sg    23 22 19.0 -0.1
      41nm,0.3s
KUU   Kurty            1.90  19  eP   Pb    23 21 55.2 +0.3
      2.9nm,0.2s
KUU                              eS   Sg    23 22 20.4 -0.7
      22nm,0.5s
KUU   Kurty            1.90  19   P   Pb    23 21 55.2 +0.3
      2.9nm,0.2s
KUU                               S   Sg    23 22 20.4 -0.7
      22nm,0.5s
CHKK  Chushkaly        2.07  32  eP   Pg    23 21 59.0 -0.8
      6.6nm,0.3s
CHKK                             eS   Sg    23 22 26.3 -0.4
      30nm,0.3s
CHKK  Chushkaly        2.07  32   Pg  Pg    23 21 59.0 -0.8
      6.6nm,0.3s
CHKK                              Lg  Lg    23 22 26.3
      30nm,0.3s
PRZ   Przheval'sk      2.20  79 ⇓iP   Pb    23 21 59.1 -1.1
      baz=78
PRZ                             ⇓iS   Sb    23 22 28.0 +0.4
      baz=78
SATY  Saty             2.36  65  eP   Pb    23 22 04.0 +1.1
      2.3nm,0.4s
SATY                             eS   Sg    23 22 34.8 -1.3
      14nm,0.3s
SATY  Saty             2.36  65   Pg  Pg    23 22 04.5 -0.9
      2.5nm,0.2s
SATY                              Lg  Lg    23 22 35.6
      14nm,0.3s
KURS  Kuram            2.42  54  eP   Pb    23 22 05.2 +1.4
      4.0nm,0.2s
KURS                             eS   Sg    23 22 37.2 -0.5
      5.9nm,0.5s
KURS  Kuram            2.42  54   Pg  Pg    23 22 05.5 -1.0
      4.1nm,0.6s
KURS                              Lg  Lg    23 22 37.2
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	5.9nm,0.5s						
ZHN	Zhinishke	2.43	63	eP	Pb	23 22 04.8	+0.8
	3.3nm,0.1s						
ZHN				eS	Sg	23 22 36.6	-1.5
	21nm,0.3s						
ZHN	Zhinishke	2.43	63	Pg	Pb	23 22 05.3	+1.3
	5.7nm,0.2s						
ZHN				Lg	Lg	23 22 37.1	
	21nm,0.3s						
ARXS	Arharly	2.72	38	eP	Pb	23 22 09.6	+0.6
	4.7nm,1.4s						
ARXS				eS	Sb	23 22 44.5	+2.0
	17nm,0.4s						
ARXS	Arharly	2.72	38	Pg	Pb	23 22 09.4	+0.4
	4.7nm,0.7s						
ARXS				Lg	Lg	23 22 44.5	
	17nm,0.4s						
KPKS	Kokpek	2.73	59	eP	Pb	23 22 10.4	+1.3
	2.9nm,0.2s						
KPKS				eS	Sg	23 22 45.8	-1.9
	13nm,0.5s						
UZB	Uzynbulak	2.82	67	eP	Pb	23 22 12.0	+1.3
	2.8nm,0.1s						
UZB				eS	Sg	23 22 48.5	-2.1
	9.2nm,0.4s						
UZB	Uzynbulak	2.82	67	Pg	Pb	23 22 12.0	+1.3
	3.2nm,0.4s						
UZB				Lg	Lg	23 22 48.5	
	9.2nm,0.4s						
BLB	Baldybastay	2.97	47	eP	Pb	23 22 14.7	+1.5
	5.5nm,0.3s						
BLB				eS	Sg	23 22 53.4	-2.0
	15nm,0.3s						
BLB	Baldybastay	2.97	47	Pg	Pb	23 22 14.7	+1.5
	5.5nm,0.3s						
BLB				Lg	Lg	23 22 53.4	
	15nm,0.3s						
BTLS	Baital	3.12	341	eP	Pb	23 22 17.0	+1.3
	1.0nm,0.2s						
BTLS				eS	Sg	23 22 57.1	-3.1
	12nm,0.4s						
BTLS	Baital	3.12	341	Pg	Pb	23 22 17.0	+1.3
	1.0nm,0.2s						
BTLS				Lg	Lg	23 22 57.1	
	12nm,0.4s						
PDGK	Podgornoye	3.20	66	Pg	Pb	23 22 18.9	+1.8
	0.8nm,0.6s						
PDGK				Lg	Lg	23 23 00.5	
	2.5nm,0.6s						
PDGK	Podgornoye	3.20	66	⇑Pn	Pn	23 22 11.8	+1.1
	2.2nm,0.9s						
PDGK				⇓Sn	Sb	23 22 59.7	+3.3
	7.7nm,1.1s						
KK31	Karatay Array	3.80	287	P	Pg	23 22 30.9	-2.0
	0.7nm,0.5s,baz=101,slow=18,SNR=14						
KK31				⇑S	Sg	23 23 19.3	-2.8
	0.5nm,0.3s,baz=107,slow=29,SNR=5.4						
IUG	Iuzhnay	4.05	272	eP	Pg	23 22 36.0	-1.7
	30nm,0.5s						
IUG				eS	Sg	23 23 29.6	-0.6
	4.9nm,0.6s						
IUG	Iuzhnay	4.05	272	Pg	Pg	23 22 36.0	-1.7
	30nm,0.5s						
IUG				Lg	Lg	23 23 29.6	
	4.9nm,0.6s						

*HEL **02** 23:28:01.7±0.1, 67°.85N×20°.25E, h0km, ML2.0, ML2.4(UPP), Explosion*
*UPP **02** 23:28:01.2±0.0, 67°.85N×20°.21E, h0km, ML2.4, Explosion*
*IDC **02** 23:28:02.9±1.4, 67°.82N×20°.55E, h0km, mbtmp2.8/3, ML2.1/3, Error ellipse: s-maj=21.5km s-min=9.9km az=107.0*
*KOLA **02** 23:28:04.8, 67°.96N×20°.40E, h0km, ML2.3*
ISC 02 23:28:01.5±0.8, **67°.85N**±0°.02×**20°.25E**±0°.03, **h0**km, **n44**, σ**1ṣ11**/61, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	17	P	Pg	23 28 03.7	-0.1
KUA				S	Sg	23 28 05.3	+0.1
KUA	Kurravaara	0.12	17	iP	Pg	23 28 03.7	-0.1
KUA				iS	Sg	23 28 05.3	+0.1
RATU	Laukkuluspa	0.25	265	P	Pg	23 28 05.9	-0.4
RATU	Laukkuluspa	0.25	265	iP	Pg	23 28 05.9	-0.4
KOVU	Salmi	0.38	355	P	Pg	23 28 08.5	-0.3
KOVU	Salmi	0.38	355	iP	Pg	23 28 08.5	-0.3
NIKU	Nikkaluokta	0.46	273	P	Pg	23 28 09.8	-0.5
NIKU	Nikkaluokta	0.46	273	iP	Pg	23 28 09.8	-0.5
LANU	Lannavaara	0.69	72	P	Pg	23 28 14.6	-0.2
LANU	Lannavaara	0.69	72	eP	Pg	23 28 12.2	-2.5
LANU				eS	Sg	23 28 24.5	+0.8
DUNU	Dundret	0.74	170	P	Pg	23 28 15.1	-0.6
DUNU	Dundret	0.74	170	iP	Pg	23 28 15.1	-0.6
MASU	Masugnsbyn	0.78	119	P	Pg	23 28 16.3	-0.1
MASU	Masugnsbyn	0.78	119	iP	Pg	23 28 16.3	-0.1
SALU	Saltoluokta	0.81	236	P	Pg	23 28 16.3	-0.8
SALU	Saltoluokta	0.81	236	iP	Pg	23 28 16.3	-0.8
KIF	Kilpisjarvi	1.18	10	eP	Pb	23 28 24.7	-0.1
KIF	Kilpisjarvi	1.18	10	ePB	Pg	23 28 23.9	-0.3
	baz=187						
KIF				MSG		23 28 38.9	
	comp=Z,31nm,0.2s						
KIF				eSB	Sg	23 28 39.8	+0.3
HEF	Hetta	1.40	65	eP	Pn	23 28 25.8	-2.5
HEF	Hetta	1.40	65	ePG	Pn	23 28 27.2	-1.1
	baz=247						
HEF				MSG		23 28 41.2	
	comp=Z,6.0nm,0.2s						
HEF				eSB	Sg	23 28 45.9	-0.6
ERTU	Ertsjaerv	1.50	149	P	Pn	23 28 28.8	-0.9
ERTU	Ertsjaerv	1.50	149	eP	Pn	23 28 28.8	-0.9
HARU	Harads	1.71	170	P	Pn	23 28 32.4	-0.1
HARU	Harads	1.71	170	eP	Pn	23 28 32.4	-0.1
KALU	Kalix	2.34	147	ePB	Pn	23 28 42.2	+1.0
KALU				eSB	Sb	23 29 13.0	-0.9
TOF	Tornio	2.39	136	ePB	Pn	23 28 43.2	+1.3
	baz=320						
TOF				MSG		23 29 10.2	
	comp=Z,12nm,0.2s						
TOF				eSG	Sb	23 29 15.8	+0.5
SGF	Sodankyl	2.44	97	ePB	Pn	23 28 43.9	+1.4
ARA0	ARCESS Array S	2.56	46	eP	Pn	23 28 44.7	+0.4
	baz=230						
ARA0				eS	Sn	23 29 14.7	-1.4
ARCES	ARCESS Array B	2.56	46	Pn	Pn	23 28 44.8	+0.5
	comp=Z,0.5nm,0.3s,baz=225,slow=15,SNR=32						
ARCES				Sn	Sn	23 29 17.9	+1.8
	comp=Z,1.3nm,0.3s,baz=227,slow=25,SNR=12						
	comp=Z,1.5nm,0.3s						
ARCES	ARCESS Array B	2.56	46	P	Pn	23 28 45.4	+1.1
ARCES				S	Sn	23 29 14.3	-1.8
RNF	Rovaniemi	2.56	116	ePB	Pn	23 28 46.1	+1.8
RNF				eSG	Sb	23 29 20.0	-0.4
KEV	Kevo	3.12	49	eP	Pn	23 28 52.9	+1.1
KEV				eS	Sn	23 29 30.9	+1.2
KEV				MSG		23 29 31.5	
	comp=Z,5.1nm,0.2s						
VRF	Varrio	3.56	87	ePB	Pn	23 29 00.9	+3.0
OUL	Oulu	3.58	138	ePG	Pb	23 29 06.0	+0.4
OUL				eSG	Sb	23 29 50.4	+0.8
OLKF	Oulanka, Finla	3.89	109	eP	Pn	23 29 03.7	+1.1
MSF	Maaselka	3.98	115	eP	Pn	23 29 04.8	+1.2
	baz=299						
UMAU	Umeaa	3.98	177	eP	Pn	23 29 05.7	+1.9
	baz=3.0						
KU6	Riekki	4.21	111	ePG	Pb	23 29 17.0	+0.6
	baz=301						
PRVG	Vayda Guba	4.74	61	S	Sn	23 30 08.3	-1.2
APA0	Apatity Array	4.86	87	P	Pn	23 29 15.4	-0.4
APA0				S	Sn	23 30 11.8	-0.8
LVZ	Lovozero	5.45	83	P	Pn	23 29 23.9	0.0
LVZ				S	Sn	23 30 26.9	-0.3
TERR	Teriberka	5.62	69	P	Pn	23 29 26.8	+0.5
TERR				S	Sn	23 30 28.6	-2.8
FINES	FINESS Array B	6.89	156	Pn	Pn	23 29 44.9	+1.2
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=5.4						
FINES				Sn	Sn	23 31 01.6	-1.1
	comp=Z,0.2nm,0.3s,baz=345,slow=22,SNR=2.4						
FINES				Lg	Lg	23 31 35.1	
	comp=Z,0.3nm,0.3s,baz=335,slow=28,SNR=6.2						
	comp=Z,1.5nm,0.9s						
NOA	NORSAR Array B	7.86	214	Pn	Pn	23 29 57.1	+0.2
	baz=23,slow=12,SNR=1.3						
	comp=Z,0.5nm,0.8s						

*IDC **02** 23:30:13.6±2.7, 8°.93N×122°.75E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=284.6km s-min=29.4km az=63.0*
*MAN **02** 23:30:16.4, 8°.68N×121°.98E, h36km, mb4.7, ML3.6, MS3.5, Hypocentre not reviewed by the ISC*
ISC 02 23:30:19.0±1.4, **8°.7N**±0°.1×**122°.1E**±0°.1, **h35**km, **n8**, σ**0ṣ98**/11, **mb3.3**/3, **2C-2D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.31	61	⇓iP	Pn	23 30 40.0	-1.0
SNPH				iS	Sn	23 30 57.5	+0.2
TBP	Tagbilaran	2.02	61	eP	Pn	23 30 49.5	-1.1
TBP				iS	Sn	23 31 15.9	+1.1
LLP	Lapu-Lapu	2.46	49	⇑iP	Pn	23 30 56.1	-0.6
LLP				iS	Sn	23 31 25.8	+0.2
CGP	Cagayan de Oro	2.61	95	⇓eP	Pn	23 30 58.6	-0.1
CGP				eS	Sn	23 31 30.3	+1.1
KCP	Kidapawan	3.43	119	⇑eP	Pn	23 31 14.2	+4.1
WRA	Warramunga Arr	30.92	157	P	P	23 36 31.7	-1.0
	0.2nm,0.5s,baz=338,slow=9.4,SNR=1.8						
	0.2nm,0.5s						
ASAR	Alice Springs	34.19	160	P	P	23 37 01.0	-0.3
	0.2nm,0.3s,baz=337,slow=7.0,SNR=2.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	50.86	325	P	P	23 39 17.6	+1.1
	0.2nm,0.6s,baz=111,slow=7.9,SNR=4.2						
	0.2nm,0.6s						

*KRSC **02** 23:36:40.3±1.2, 56°.25N×163°.99E, h53km±17km, ML4.9*
*MOS **02** 23:36:42.9±1.0, 56°.27N×163°.84E, h45km, mb4.6/14, MS3.5/6, Error ellipse: s-maj=6.5km s-min=3.8km az=68.0*
*NEIC **02** 23:36:44.2±1.9, 56°.52N±0°.09×162°.9E±0°.1, h17km±3km, mb4.4/97, Error ellipse: s-maj=14.1km s-min=8.1km az=145.0*
*IDC **02** 23:36:45.1±2.1, 56°.30N×163°.71E, h42km±21km, mb3.8/25, mbtmp4.1/30, ML4.7/3, MS3.4/11, Error ellipse: s-maj=15.4km s-min=10.5km az=157.0*
ISC 02 23:36:44.9±0.6, **56°.29N**±0°.04×**163°.63E**±0°.05, **h38**km±1km, **n283**, σ**1ṣ97**/273, **mb4.3**/85, **MS3.5**/8, **12C-3D**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.46	260	PN	Pn	23 36 53.1	-1.8
KBTR	Krutoberegovo	0.46	260	iP	Pn	23 36 53.1	-1.8
KBG	Krutoberegovo	0.52	266	PN	Pn	23 36 53.9	-1.9
KBG				S	Sn	23 37 04.2	+0.8
KBG	Krutoberegovo	0.52	266	iP	Pn	23 36 53.9	-1.9
KBG				eS	Sn	23 37 04.2	+0.8
SMKR	Semkarok	1.23	284	PN	Pn	23 37 05.9	+0.2
SMKR	Semkarok	1.23	284	eP	Pn	23 37 05.9	+0.2
BDR	Baidarnaya	1.37	283	PN	Pn	23 37 08.5	+0.9
BDR				S	Sn	23 37 28.3	+3.8
BDR	Baidarnaya	1.37	283	eP	Pn	23 37 08.5	+0.9
BDR				eS	Sn	23 37 28.3	+3.8
SRKR	Sorokina	1.41	286	PN	Pn	23 37 08.8	+0.7
SRKR	Sorokina	1.41	286	eP	Pn	23 37 08.8	+0.7
ZLN	Zelenaya	1.60	261	PN	Pn	23 37 12.0	+1.2
ZLN	Zelenaya	1.60	261	eP	Pn	23 37 12.0	+1.2
CIRR	Tsirk	1.62	265	PN	Pn	23 37 12.4	+1.4
CIRR	Tsirk	1.62	265	eP	Pn	23 37 12.4	+1.4
LGNR	Loginova	1.66	264	PN	Pn	23 37 13.0	+1.3
LGNR	Loginova	1.66	264	eP	Pn	23 37 13.0	+1.3
KLY	Klyuchi	1.66	272	PN	Pn	23 37 10.7	-0.7
KLY				S	Sn	23 37 32.4	+1.0
KLY	Klyuchi	1.66	272	iP	Pn	23 37 10.7	-0.7
KLY				eS	Sn	23 37 32.4	+1.0
BZGR	Bezymyannyi-Gr	1.68	259	PN	Pn	23 37 13.1	+1.3
BZGR	Bezymyannyi-Gr	1.68	259	eP	Pn	23 37 13.1	+1.3
KRSR	Krestovskiy	1.71	269	PN	Pn	23 37 13.1	+0.9
KRSR				S	Sn	23 37 35.1	+2.2
KRSR	Krestovskiy	1.71	269	iP	Pn	23 37 13.1	+0.9
KRSR				eS	Sn	23 37 35.1	+2.2
BKI	Bering	1.72	128	PN	Pn	23 37 08.0	-4.2
BKI				S	Sn	23 37 27.0	-5.8
BKI	Bering	1.72	128	iP	Pn	23 37 08.0	-4.2
BKI				eS	Sn	23 37 27.0	-5.8
BZWR	Bezymyannyi-We	1.78	261	PN	Pn	23 37 14.7	+1.4
BZWR	Bezymyannyi-We	1.78	261	eP	Pn	23 37 14.7	+1.4
KIRR	Kirishev	1.87	261	PN	Pn	23 37 15.8	+1.3
KIRR	Kirishev	1.87	261	eP	Pn	23 37 15.8	+1.3
KPT	Kopyto	1.94	262	PN	Pn	23 37 17.3	+2.0
KPT	Kopyto	1.94	262	eP	Pn	23 37 17.3	+2.0
KMNR	Kamenistaya	1.98	256	PN	Pn	23 37 17.3	+1.4
KMNR	Kamenistaya	1.98	256	eP	Pn	23 37 17.3	+1.4
MKZ	Mys Kozlova	2.05	213	PN	Pn	23 37 15.3	-1.5
MKZ				S	Sn	23 37 40.3	-0.7
MKZ	Mys Kozlova	2.05	213	eP	Pn	23 37 15.3	-1.5
MKZ				eS	Sn	23 37 40.3	-0.7
KOZ	Kozyrevsk	2.11	265	PN	Pn	23 37 19.8	+2.1
KOZ	Kozyrevsk	2.11	265	eP	Pn	23 37 19.8	+2.1
TUMD	Tumrok D	2.13	240	eP	Pn	23 37 18.6	+0.7
TUMD				eS	Sn	23 37 46.1	+3.1
TUMR	Tumrok	2.21	244	PN	Pn	23 37 18.6	-0.5
TUMR				S	Sn	23 37 46.1	+0.9
TUMR	Tumrok	2.21	244	eP	Pn	23 37 20.3	+1.2
ESO	Esso	2.79	264	PN	Pn	23 37 29.4	+2.5
ESO	Esso	2.79	264	eP	Pn	23 37 29.4	+2.5
OSSR	Ossora	2.98	354	PN	Pn	23 37 27.7	-1.9
OSSR	Ossora	2.98	354	eP	Pn	23 37 27.7	-1.9
OSSR				eS	Sn	23 38 00.5	-3.5
KII	Karymskiy	3.29	228	PN	Pn	23 37 34.6	+0.6
KII	Karymskiy	3.29	228	eP	Pn	23 37 34.6	+0.6
PALN	Palana	3.42	326	PN	Pn	23 37 37.6	+2.0
PALN	Palana	3.42	326	eP	Pn	23 37 37.6	+2.0
SPN	Mys Shipunski	3.82	215	PN	Pn	23 37 39.7	-1.5
SPN	Mys Shipunski	3.82	215	eP	Pn	23 37 39.7	-1.5
SPN				eS	Sn	23 38 21.9	-2.9
NLC	Nalytchevo	3.99	220	PN	Pn	23 37 43.4	-0.1
NLC	Nalytchevo	3.99	220	eP	Pn	23 37 43.4	-0.1
SDLR	Sedlovina	4.08	224	PN	Pn	23 37 45.5	+0.7
SDLR	Sedlovina	4.08	224	eP	Pn	23 37 45.5	+0.7
KRX	Arik	4.11	226	PN	Pn	23 37 46.4	+1.1
KRX	Arik	4.11	226	eP	Pn	23 37 46.4	+1.1
KRER	Koryakskii	4.12	225	PN	Pn	23 37 46.5	+1.1
KRER	Koryakskii	4.12	225	eP	Pn	23 37 46.5	+1.1
SMAR	Somma	4.13	225	PN	Pn	23 37 46.1	+0.6
SMAR	Somma	4.13	225	eP	Pn	23 37 46.1	+0.6
AVH	Avacha	4.15	225	PN	Pn	23 37 46.8	+1.1
AVH	Avacha	4.15	225	eP	Pn	23 37 46.8	+1.1
UGLR	Uglovaya	4.16	224	PN	Pn	23 37 46.6	+0.7
UGLR	Uglovaya	4.16	224	iP	Pn	23 37 46.6	+0.7
KOK	Koryaka	4.17	226	PN	Pn	23 37 47.1	+1.1
KOK	Koryaka	4.17	226	eP	Pn	23 37 47.1	+1.1
GNL	Ganaly	4.18	234	PN	Pn	23 37 47.5	+1.3
GNL	Ganaly	4.18	234	eP	Pn	23 37 47.5	+1.3
DALK	Dalny	4.32	223	PN	Pn	23 37 48.4	+0.4
DALK				S	Sn	23 38 39.1	+2.0
DALK	Dalny	4.32	223	eP	Pn	23 37 48.4	+0.4
DALK				eS	Sn	23 38 39.1	+2.0
PET	Petropavlovsk	4.37	223	ePN	Pn	23 37 49.4	+0.9
PET				pmax	pmax		
	comp=Z,151nm,0.4s						
PET				MLR	MLR		
	comp=Z,600nm,13.0s						
PET				MLR	MLR		
	comp=E,900nm,11.0s						
PET	Petropavlovsk	4.37	223	Pn	Pn	23 37 48.3	-0.3
PET	Petropavlovsk	4.37	223	eP	Pn	23 37 49.5	+0.9
TILK	Tilichiki	4.37	17	PN	Pn	23 37 47.8	-0.8
TILK	Tilichiki	4.37	17	eP	Pn	23 37 47.8	-0.8
TILK				eS	Sn	23 38 35.8	-2.4
PEA0B	Petropavlovsk-	4.69	230	cePN	Pn	23 37 54.5	+1.4
PEA0B	Petropavlovsk-	4.69	230		Pn	23 37 52.8	-0.3
PETK	Petropavlovsk-	4.69	230	P	Pn	23 37 54.4	+1.3
	comp=E,12nm,0.3s,baz=61,slow=17,SNR=39						
PETK				S	Sn	23 38 55.1	+8.9
	comp=E,11nm,0.3s,baz=291,slow=25,SNR=5.7						
PETK				LR	LR	23 40 06.1	
	comp=E,1μm,19.6s,baz=46,slow=42						
PETK	Petropavlovsk-	4.69	230	Pn	Pn	23 37 52.8	-0.3
KRMR	Karymshinskiy	4.72	225	PN	Pn	23 37 55.1	+1.7
KRMR				S	Sn	23 38 47.8	+1.0
KRMR	Karymshinskiy	4.72	225	eP	Pn	23 37 55.1	+1.7
KRMR				eS	Sn	23 38 47.8	+1.0
RUS	Russkaya	4.89	220	PN	Pn	23 37 56.0	+0.2
RUS	Russkaya	4.89	220	eP	Pn	23 37 56.0	+0.2
GRL	Gorelyy	4.96	223	PN	Pn	23 37 57.1	+0.3
GRL	Gorelyy	4.96	223	eP	Pn	23 37 57.1	+0.3
MTVR	Mutnovka	4.97	222	PN	Pn	23 37 58.0	+1.0
MTVR	Mutnovka	4.97	222	eP	Pn	23 37 58.0	+1.0
APC	Apacha	5.05	231	PN	Pn	23 38 00.2	+2.2
APC	Apacha	5.05	231	eP	Pn	23 38 00.2	+2.2
ASAK	Asacha	5.15	223	PN	Pn	23 38 01.1	+1.6
ASAK	Asacha	5.15	223	eP	Pn	23 38 01.1	+1.6
KDTR	Khodutka, Kamc	5.55	218	PN	Pn	23 38 04.7	-0.2
KDTR	Khodutka, Kamc	5.55	218	eP	Pn	23 38 04.7	-0.2
MIPR	Malaya Ipel'ka	5.69	228	PN	Pn	23 38 09.3	+2.5
MIPR	Malaya Ipel'ka	5.69	228	eP	Pn	23 38 09.3	+2.5
PAU	Pauzhetka	6.29	223	PN	Pn	23 38 16.1	+1.1
PAU	Pauzhetka	6.29	223	eP	Pn	23 38 16.1	+1.1
KMSK	Kamenskaya	6.33	11	PN	Pn	23 38 15.2	-0.3
KMSK	Kamenskaya	6.33	11	eP	Pn	23 38 15.2	-0.3
SHEM	Shemya Is, Ala	7.06	116	P	Pn	23 38 25.2	-0.4
	comp=E,5.6nm,0.3s,baz=345,slow=1.6,SNR=6.6						
SHEM				S	Sn	23 39 38.9	-5.5
	comp=E,51nm,1.0s,baz=306,slow=19,SNR=1.9						
SHEM				LR	LR	23 40 48.1	
	comp=E,202nm,20.8s,baz=301,slow=35						
	comp=E,15nm,0.3s						
SMY	Shemya	7.06	116	PN	Pn	23 38 34.2	+8.6
SMY	Shemya	7.06	116	Pn	Pn	23 38 34.2	+8.6
SKR	Severo-Kuril's	7.18	222	PN	Pn	23 38 27.9	+0.6
SKR	Severo-Kuril's	7.18	222	eP	Pn	23 38 27.9	+0.6
MA2	Magadan	7.59	301	LR	LR	23 41 29.8	
	comp=E,78nm,20.1s,baz=116,slow=37						
MA2	Magadan	7.59	301	iPN	Pn	23 38 28.8	-4.1
MA2				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MA2				MLR	MLR		
	comp=Z,331nm,11.0s						
SEY	Seymchan	8.75	324	P	Pn	23 38 49.8	+1.1
	comp=Z,0.8nm,0.2s,baz=138,slow=16,SNR=4.1						
BILL	Bilibino	11.85	5	cePN	Pn	23 39 31.8	+0.7
BILL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,224nm,14.0s						
BILL	Bilibino	11.85	5	Pn	Pn	23 39 30.7	-0.4
ANM	Nome	17.23	49	P	P	23 40 45.8	+2.3
ANM				pmax	pmax		
	comp=Z,15nm,1.0s						
ANM	Nome	17.23	49		P	23 40 45.8	+2.3
JKA	Kamikawa-asahi	18.07	236		Pn	23 40 51.6	-1.1
JKA				IAmb	IAmb	23 40 54.5	
	comp=Z,37nm,0.8s						
ASAJ	Asahikawa	18.07	236	P	P	23 40 52.5	-0.3
	comp=Z,3.1nm,0.3s,baz=44,slow=9.4,SNR=20						
ASAJ				LR	LR	23 47 32.8	
	comp=Z,254nm,21.6s,baz=354,slow=36						
	comp=Z,40nm,0.9s						
ASAJ	Asahikawa	18.07	236	P	Pn	23 40 51.6	-1.1
ASAJ				pmax	pmax		
	comp=Z,37nm,0.8s						
YAK	Yakutsk	18.17	302	P	Pn	23 40 53.2	-0.6
	comp=Z,0.2nm,0.3s,baz=173,slow=0.7,SNR=2.0						
YAK				LR	LR	23 48 11.5	
	comp=Z,67nm,18.5s,baz=100,slow=38						
	comp=Z,7.4nm,0.4s						
YAK	Yakutsk	18.17	302	ceP	Pn	23 40 52.9	-0.9
YAK				pmax	pmax		
	comp=Z,13nm,0.7s						
YAK				MLR	MLR		
	comp=Z,150nm,12.0s						
RDOG	Red Dog Mine	19.25	39	P	Pn	23 41 09.3	+2.4
ERM	Erimo	19.47	231	P	P	23 41 07.4	-0.8
ERM				pmax	pmax		
	comp=Z,27nm,1.0s						
ERM	Erimo	19.47	231	P	P	23 41 07.4	-0.8
ERM				IAmb	IAmb	23 41 11.8	
	comp=Z,27nm,1.0s						
SDPT	Sand Point	20.05	78		Pn	23 41 21.7	+5.3
KLR	Kul'dur	20.40	263	P	P	23 41 17.9	-0.5
	comp=Z,4.4nm,0.9s,baz=51,slow=12,SNR=9.1						
KLR				LR	LR	23 49 39.9	
	comp=Z,107nm,18.8s,baz=51,slow=38						
	comp=Z,4.4nm,0.9s						
KLR	Kul'dur	20.40	263	ceP	P	23 41 18.8	+0.5
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLR				MLR	MLR		
	comp=Z,283nm,16.0s						
TTA	Tatalina	21.16	55	P	P	23 41 26.8	+0.3
TTA				pmax	pmax		
	comp=Z,21nm,1.4s						
TTA	Tatalina	21.16	55	P	P	23 41 26.8	+0.3
TTA				IAmb	IAmb	23 41 38.6	
	comp=Z,21nm,1.4s						
TIXI	Tiksi	21.17	330	P	P	23 41 27.6	+1.2
	comp=Z,17nm,0.9s,baz=91,slow=23,SNR=43						
	comp=Z,17nm,0.9s						
TIXI	Tiksi	21.17	330	deP	P	23 41 27.0	+0.6
TIXI				pmax	pmax		
	comp=Z,21nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,247nm,16.0s						
TIXI	Tiksi	21.17	330		P	23 41 25.4	-1.0
TIXI				IAmb	IAmb	23 41 30.5	
	comp=Z,19nm,0.9s						
N18K	Kilae Creek	21.35	61	P	P	23 41 33.1	+4.6
JTM	Tenmabayashi	21.39	233	P	P	23 41 28.2	-0.8
JTM				IAmb	IAmb	23 41 34.0	
	comp=Z,22nm,1.1s						
SVW2	Sparrevohn	21.46	60	P	P	23 41 35.0	+5.4
SVW2				IAmb	IAmb	23 41 44.0	
	comp=Z,13nm,1.0s						
L19K	White Mountain	21.73	57	P	P	23 41 34.0	+1.5
L19K				IAmb	IAmb	23 41 49.9	
	comp=Z,19nm,1.4s						
O18K	Koktuh Hills	21.80	63	P	P	23 41 35.5	+2.3
O18K				IAmb	IAmb	23 41 43.8	
	comp=Z,16nm,1.1s						
P18K	Big Mountain,	21.86	65	P	P	23 41 38.2	+4.2
P18K				IAmb	IAmb	23 41 45.3	
	comp=Z,15nm,1.1s						
J20K	Nowinta River	22.01	52	P	P	23 41 37.1	+1.7
N19K	Bonanza Creek	22.02	61	IAmb	IAmb	23 41 47.3	
	comp=Z,9.7nm,0.8s						
K20K	Telida	22.04	54	P	P	23 41 39.4	+3.5
O19K	Port Alsworth	22.19	62	P	P	23 41 41.6	+4.2
O19K				IAmb	IAmb	23 41 48.5	
	comp=Z,8.2nm,0.8s						
IMAR	Indian Mountai	22.28	47	P	P	23 41 39.3	+0.9
H21K	Melozitna Rive	22.64	48	P	P	23 41 43.5	+1.2
Q19K	Cape Douglas,	22.75	65	P	P	23 41 48.2	+4.8
PPLA	Purkeypile	22.91	55	P	P	23 41 50.0	+4.7
RSO	Redoubt South	22.92	61	P	P	23 41 49.5	+4.2
CAST	Castle Rocks	22.93	54	P	P	23 41 49.7	+4.3
I21K	Tanana	22.96	49	P	P	23 41 48.9	+3.3
USRK	Ussuriysk Ar.	23.34	252	LR	LR	23 52 29.5	
	comp=Z,196nm,18.0s,baz=65,slow=40						
KDAK	Kodiak Island	23.57	68	P	P	23 41 50.4	-1.1
	comp=Z,4.3nm,0.8s,baz=251,slow=5.3,SNR=6.1						
KDAK				LR	LR	23 50 46.3	
	comp=Z,102nm,18.6s,baz=266,slow=36						
	comp=Z,4.3nm,0.8s						
HOM	Homer	23.61	63	P	P	23 41 55.2	+3.2
COLD	Coldfoot	23.80	44	IAmb	IAmb	23 42 07.5	
	comp=Z,14nm,1.4s						
JMM	Marumori	23.92	229	P	P	23 41 53.4	-1.6
M22K	Willow	23.99	58	P	P	23 41 59.0	+3.5
H23K	Yukon River	24.00	48	IAmb	IAmb	23 42 09.5	
	comp=Z,7.0nm,0.9s						
TOLK	Toolik Lake Re	24.18	41	IAmb	IAmb	23 42 08.3	
	comp=Z,14nm,1.0s						
NEA2	Nenana	24.21	51	P	P	23 42 00.5	+3.0
MCK	McKinley	24.32	53	IAmb	IAmb	23 42 10.6	
	comp=Z,18nm,1.3s						
RND	Reindeer	24.39	54	IAmb	IAmb	23 42 20.9	
	comp=Z,9.6nm,1.1s						
WRH	Wood River Hil	24.64	51	P	P	23 42 01.8	+0.4
WRH				IAmb	IAmb	23 42 13.2	
	comp=Z,12nm,1.0s						
TCOL	CIGO, UAF Yank	24.72	50	P	P	23 42 06.5	+4.4
COLA	College	24.72	50	P	P	23 42 05.3	+3.2
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
COLA	College	24.72	50	P	P	23 42 05.3	+3.2
COLA				IAmb	IAmb	23 42 08.0	
	comp=Z,8.9nm,0.9s						
CCB	Clear Creek Bu	24.75	50	P	P	23 42 01.8	-0.6
CCB				IAmb	IAmb	23 42 14.8	

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      comp=Z,8.8nm,0.9s
SML   Sawmill            24.82  57   P      P      23 42 06.4 +3.2
SML                                  IAmb   IAmb   23 42 15.5
      comp=Z,10nm,0.8s
KNK   Knik Glacier       24.83  58   P      P      23 42 07.1 +3.9
KNK                                  IAmb   IAmb   23 42 16.8
      comp=Z,11nm,1.0s
JSD   Sado               24.88 234   P      P      23 42 03.4 -0.4
JSD                                  IAmb   IAmb   23 42 04.4
      comp=Z,12nm,0.9s
POKR  Poker Plat Res     24.89  49   P      P      23 42 07.6 +3.9
PWL   Port Wells         24.99  59   P      P      23 42 08.4 +3.7
DHY   Denali Highway     25.09  54   IAmb   IAmb   23 42 17.3
      comp=Z,13nm,1.4s
ILAR  Eielson Array      25.14  50   P      P      23 42 04.8 -1.2
      comp=Z,1.1nm,0.8s,baz=264,slow=8.8,SNR=15
ILAR                                 LR     LR     23 52 27.5
      comp=Z,84nm,18.9s,baz=172,slow=38
      comp=Z,1.1nm,0.8s
ILAR  Eielson Array      25.14  50   P      P      23 42 10.1 +4.1
JYT   Yasato             25.57 228   P      P      23 42 08.7 -1.3
M24K  Tolsona, Glenn     25.78  56   P      P      23 42 15.9 +4.0
J25K  Salcha River,      25.80  50   P      P      23 42 14.0 +1.9
BMAR  Burnt Mountain     25.98  44   P      P      23 42 16.6 +2.9
KLU   Klutina            26.01  58   P      P      23 42 18.9 +4.9
KLU                                  IAmb   IAmb   23 42 27.1
      comp=Z,12nm,1.0s
MJA0  Matsu Arr-Jizo     26.13 232  eP      P      23 42 14.9 -0.3
MJA0                                 pmax   pmax
      comp=Z,16nm,0.8s
MJB9  Matsu-Tunnel       26.14 232   P      P      23 42 15.1 -0.2
MAJO  Matsushiro         26.15 232 i P      P      23 42 15.2 -0.1
MAJO                                 pmax   pmax
      comp=Z,23nm,0.9s
MAJO  Matsushiro         26.15 232   P      P      23 42 15.1 -0.3
MJAR  Matsushiro Arr     26.15 232   P      P      23 42 15.2 -0.2
      comp=Z,17nm,0.8s,baz=40,slow=8.4,SNR=38
MJAR                                 LR     LR     23 53 01.8
      comp=Z,160nm,21.0s,baz=34,slow=37
      comp=Z,17nm,0.8s
MJAR  Matsushiro Arr     26.15 232   P      P      23 42 14.4 -0.9
MJAR                                 pmax   pmax
      comp=Z,7.0nm,1.0s
MJAR  Matsushiro Arr     26.15 232   P      P      23 42 14.4 -0.9
MJAR                                 IAmb   IAmb   23 42 16.8
      comp=Z,7.1nm,1.0s
DOT   Dot Lake           26.49  52   IAmb   IAmb   23 42 31.0
      comp=Z,10nm,1.4s
K27K  Chicken            27.30  51   IAmb   IAmb   23 42 36.9
      comp=Z,4.8nm,0.8s
JGF   Kuroka             27.31 232   P      P      23 42 25.9  0.0
BCAR  Beaver Creek A     27.60  53   P      P      23 42 28.3 +0.1
M27K  Edge Creek, AK     27.70  55   P      P      23 42 33.0 +3.8
M27K                                 IAmb   IAmb   23 42 43.3
      comp=Z,6.6nm,0.9s
INK   Inuvik             30.09  41   P      P      23 42 49.6 -0.5
      comp=Z,1.0nm,0.3s,baz=278,slow=7.8,SNR=9.9
INK                                  LR     LR     23 57 33.4
      comp=Z,64nm,19.4s,baz=271,slow=42
      comp=Z,1.0nm,0.3s
KSRS  Korea Array        30.35 247   P      P      23 42 53.1 +0.4
      comp=Z,0.7nm,0.3s,baz=44,slow=8.2,SNR=2.2
      comp=Z,0.7nm,0.3s
NRIK  Noril'sk           34.54 323ceP       P      23 43 27.1 -2.0
NRIK                                 pmax   pmax
      comp=Z,2.0nm,1.1s
NRIK                                 MLR    MLR
      comp=Z,101nm,9.0s
ULN   Ulaanbaatar        34.86 281ceP       P      23 43 32.4 +0.1
ULN                                  pmax   pmax
      comp=Z,3.0nm,1.3s
ULN   Ulaanbaatar        34.86 281   P      P      23 43 30.1 -2.2
SONM  Songino Array      35.24 281   P      P      23 43 35.7 +0.2
      comp=Z,0.5nm,0.4s,baz=68,slow=7.9,SNR=5.8
      comp=Z,0.5nm,0.4s
SONM  Songino Array      35.24 281  eP      P      23 43 35.6 +0.1
SONM                                 pmax   pmax
      comp=Z,1.0nm,0.3s
SONM  Songino Array      35.24 281   P      P      23 43 34.2 -1.3
H11N2 WAKE ISLAND Hy     36.59 175   T      T      00 22 31.2
      baz=357,slow=76
H11N3 WAKE ISLAND Hy     36.60 175   T      T      00 22 36.5
      baz=357,slow=76
H11N1 WAKE ISLAND Hy     36.60 175   T      T      00 22 30.4
      baz=357,slow=76,SNR=9749
GRNB  Grenville Isla     36.78  65   P      P      23 43 54.2 +5.7
YKA   Yellowknife Ar     39.44  46   P      P      23 44 09.8 -0.9
      comp=Z,0.7nm,0.5s,baz=301,slow=8.2,SNR=14
      comp=Z,0.7nm,0.5s
SPITS Spitsbergen Ar     44.31 351   P      P      23 44 50.0 -0.3
SPITS                                pmax   pmax
      comp=Z,23nm,1.2s
SPB2  Spitsbergen Ar     44.31 351   P      P      23 44 49.8 -0.6
PINE  Pine Mountain      47.62  72   P      P      23 45 22.1 +5.0
WALA  Waterton Lakes     47.67  62   P      P      23 45 21.4 +4.1
WALA                                 IAmb   IAmb   23 45 28.3
      comp=Z,4.0nm,0.8s
KURK  Kurchatov          47.80 301ceP       P      23 45 19.2 +1.1
KURK                                 pmax   pmax
      comp=Z,7.0nm,2.5s
F10A  Beach Ranch, E     48.07  67   P      P      23 45 26.2 +5.8
F10A                                 IAmb   IAmb   23 45 31.1
      comp=Z,3.5nm,1.1s
MK31  Makanchi Array     48.63 295   P      P      23 45 22.4 -2.2
MK31                                 pmax   pmax
      comp=Z,1.0nm,0.8s
MK31  Makanchi Array     48.63 295   P      P      23 45 22.4 -2.2
MKAR  Makanchi Array     48.63 295   P      P      23 45 23.5 -1.2
      comp=Z,0.4nm,0.4s,baz=58,slow=6.4,SNR=11
      comp=Z,0.4nm,0.4s
MKAR  Makanchi Array     48.63 295   P      P      23 45 23.0 -1.6
MAKZ  Makanchi           48.78 295   P      P      23 45 24.6 -1.2
MAKZ                                 pmax   pmax
      comp=Z,5.0nm,1.4s
MAKZ  Makanchi           48.78 295   P      P      23 45 24.6 -1.2
MAKZ                                 IAmb   IAmb   23 45 26.4
      comp=Z,5.3nm,1.4s
BRVK  Borovoye           50.04 308ceP       P      23 45 36.3 +1.1
BRVK                                 pmax   pmax
      comp=Z,5.0nm,2.5s
ARCES ARCESS Array B     50.87 342   P      P      23 45 40.6 -0.7
      comp=Z,1.2nm,0.6s,baz=30,slow=12,SNR=8.5
      comp=Z,1.2nm,0.6s
PNTR  Pine Nut           51.64  75   P      P      23 45 53.2 +5.5
PNTR                                 IAmb   IAmb   23 46 02.4
      comp=Z,6.1nm,1.2s
YHL   Hebgen Lake        51.92  64   P      P      23 45 54.7 +4.8
YHL                                  IAmb   IAmb   23 46 01.7
      comp=Z,5.4nm,1.1s
YHH   Holmes Hill        52.13  64   IAmb   IAmb   23 46 03.8
      comp=Z,7.1nm,1.4s
ARU   Arti               52.43 317d iP      P      23 45 52.9 -0.2
ARU                                  S      S      23 53 15.3 -0.8
ARU                                  SS     SS     23 56 50.0 -3.5
ARU                                  pmax   pmax
      comp=Z,6.0nm,0.9s
ARU                                  MLR    MLR
      comp=Z,260nm,17.0s
ARU   Arti               52.43 317   P      P      23 45 52.0 -1.0
ARU                                  IAmb   IAmb   23 45 54.5
      comp=Z,6.8nm,1.0s
H17A  Grant Village      52.55  64   P      P      23 45 58.5 +4.0
H17A                                 IAmb   IAmb   23 46 07.8
      comp=Z,4.3nm,1.1s
FLWY  Flagg Ranch        52.71  65   P      P      23 46 00.9 +5.3
NVAR  Mina Array Bea     52.81  75   P      P      23 45 56.3 -0.2
      comp=Z,0.8nm,0.8s,baz=292,slow=7.8,SNR=4.6
      comp=Z,0.8nm,0.8s
NVAR  Mina Array Bea     52.81  75   P      P      23 45 59.7 +3.2
PRGR  Permogore          52.82 328  eP      P      23 45 52.1 -3.7
FXWY  Fox Creek          52.86  65   P      P      23 46 00.9 +4.1
NV11  Mina Array Sit     52.89  75   P      P      23 46 01.4 +4.4
MOOW  Moose Ponds        52.93  65   P      P      23 46 01.9 +4.6
KIRV  Kirov              54.03 324ceP       P      23 46 05.7 +1.0
BW06  Boulder Array      54.23  65   P      P      23 46 11.6 +4.7
BW06                                 IAmb   IAmb   23 46 20.1
      comp=Z,3.7nm,1.1s
PD31  Pinedale Array     54.23  65   P      P      23 46 11.8 +5.0
PD31                                 IAmb   IAmb   23 46 20.1
      comp=Z,3.5nm,1.2s
PDAR  Pinedale Array     54.23  65   P      P      23 46 06.5 -0.4
      comp=Z,1.1nm,0.9s,baz=318,slow=4.0,SNR=5.9
      comp=Z,1.1nm,0.9s
PDAR  Pinedale Array     54.23  65   P      P      23 46 10.2 +3.3
ULM   Lac du Bonnet      55.16  50   P      P      23 46 16.0 +2.9
ULM                                  pmax   pmax
      comp=Z,5.0nm,1.0s
ULM   Lac du Bonnet      55.16  50   P      P      23 46 16.0 +2.9
ULM                                  IAmb   IAmb   23 46 24.4
      comp=Z,4.6nm,1.0s
KLMR  Klimovskoe         55.19 330  eP      P      23 46 11.9 -1.2
KLMR                                 pmax   pmax
      comp=Z,4.0nm,0.7s
KLMR  Klimovskoe         55.19 330  eP      P      23 46 12.0 -1.2
KLMR                                 AMP           23 46 13.6
      comp=Z,4.0nm,0.7s
PRN   Pahroc Range       55.31  73   P      P      23 46 18.7 +4.2
PRN                                  IAmb   IAmb   23 46 36.1
      comp=Z,5.3nm,1.2s
SZCU  Shurtz Canyon      56.21  72   P      P      23 46 26.1 +4.9
SRU   San Rafael Swe     56.43  69   P      P      23 46 25.6 +2.9
SRU                                  pmax   pmax
      comp=Z,4.0nm,0.8s
SRU   San Rafael Swe     56.43  69   P      P      23 46 25.6 +2.9
SRU                                  IAmb   IAmb   23 46 34.6
      comp=Z,4.2nm,0.8s
O20A  White River Ci     56.84  66   P      P      23 46 29.6 +4.1
O20A                                 IAmb   IAmb   23 46 38.8
      comp=Z,3.8nm,0.8s
KK31  Karatay Array      57.11 299   P      P      23 46 26.5 -0.7
KK31                                 pmax   pmax
      comp=Z,2.0nm,0.7s
KK31  Karatay Array      57.11 299   P      P      23 46 26.5 -0.7
KK31                                 IAmb   IAmb   23 46 27.8
      comp=Z,2.4nm,0.7s
KKAR  Karatay Array      57.11 299   P      P      23 46 25.8 -1.4
KKAR  Karatay Array      57.11 299   P      P      23 46 26.2 -1.0
KKAR                                 IAmb   IAmb   23 46 27.8
      comp=Z,2.4nm,0.7s
KKAR  Karatay Array      57.11 299   P      P      23 46 25.8 -1.4
ABKAR Akbulak array      57.27 311   IAmb   IAmb   23 46 28.8
      comp=Z,3.4nm,0.6s
PV11  David Mesa, Pa     57.89  68   P      P      23 46 37.7 +4.7
FINES FINESS Array B     57.97 338   P      P      23 46 32.4 -0.5
      comp=Z,2.3nm,0.7s,baz=28,slow=7.8,SNR=18
      comp=Z,2.3nm,0.7s
PV13  Radium Mtn., P     58.02  68   P      P      23 46 38.0 +4.1
PV13                                 IAmb   IAmb   23 46 47.5
      comp=Z,5.4nm,1.2s
DRK   Karamyk            59.21 296   P      P      23 46 40.2 -2.0
DRK                                  IAmb   IAmb   23 46 43.1
      comp=Z,2.7nm,0.8s
TAPN  Taplejung          60.00 275  eP      P      23 46 47.2 -0.6
      comp=Z,7.4nm,0.3s
GUN   Gumba              60.58 277  eP      P      23 46 50.8 -1.1
      comp=Z,9.7nm,0.4s
CMAR  Chiang Mai Arr     60.82 259   P      P      23 46 53.4 +0.2
      comp=Z,1.4nm,0.3s,baz=20,slow=6.8,SNR=7.2
      comp=Z,1.4nm,0.3s
OBN   Obninsk            60.89 328⇓eP       P      23 46 54.0 +0.9
OBN                                 e              23 47 38.5
OBN                                 e              23 49 03.6
OBN                                  pmax   pmax
      comp=Z,4.0nm,0.8s
OBN                                  MLR    MLR
      comp=Z,125nm,7.0s
RAMN  Ramite             60.93 276  eP      P      23 46 53.1 -1.0
      comp=Z,20nm,0.4s
NB2   NORSAR Subarra     61.01 345   P      P      23 46 53.4 -0.5
      comp=Z,1.2nm,0.5s,baz=18,slow=6.9
NOA   NORSAR Array B     61.01 345   P      P      23 46 53.4 -0.5
      comp=Z,1.2nm,0.4s,baz=18,slow=6.9,SNR=9.5
      comp=Z,1.2nm,0.4s
PKI   Pulchoki           61.10 277  eP      P      23 46 54.1 -1.3
      comp=Z,12nm,0.8s
PKIN  Phulchoki          61.10 277  eP      P      23 46 54.2 -1.1
GKN   Gorkha             61.19 278  eP      P      23 46 55.2 -0.6
DANN  Dangsing           61.41 279  eP      P      23 46 57.0 -0.4
SCHQ  Schefferville      61.85  30   P      P      23 46 58.3 -1.4
      comp=Z,1.3nm,0.6s,baz=340,slow=6.7,SNR=5.8
      comp=Z,1.3nm,0.6s
KOLN  Koldanda           61.95 279  eP      P      23 47 00.5 -0.4
PYUN  Piuthan            62.02 279  eP      P      23 47 01.0 -0.5
LPSR  Galich'ya Gora     62.34 326  eP      P      23 47 01.8 -1.1
LPSR                                 pmax   pmax
      comp=Z,10.0nm,0.7s
VRH   Novokhopyorsk      62.62 323  eP      P      23 47 03.7 -1.1
VRH                                  pmax   pmax
      comp=Z,7.0nm,0.6s
VORR  Voronezh           63.05 325  eP      P      23 47 09.5 +1.9
VORR                                 pmax   pmax
      comp=Z,10.0nm,0.4s
VSR   Storozhevoye       63.45 325  eP      P      23 47 09.9 -0.4
VSR                                  pmax   pmax
      comp=Z,10.0nm,1.2s
VORD  Divnogorie         63.62 324  eP      P      23 47 11.9 +0.4
VORD                                 pmax   pmax
      comp=Z,6.0nm,0.8s
AKASG Malin Array Be     66.88 330   P      P      23 47 31.9 -0.7
      comp=Z,1.0nm,0.5s,baz=30,slow=7.1,SNR=5.6
      comp=Z,1.0nm,0.5s
AKASG Malin Array Be     66.88 330ceP       P      23 47 31.8 -0.8
AKASG                                pmax   pmax
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si     66.88 330ceP       P      23 47 32.8 +0.2
TXAR  Lajitas Array      67.56  71   P      P      23 47 37.1 -0.3
      comp=Z,0.5nm,0.6s,baz=303,slow=5.6,SNR=6.9
      comp=Z,0.5nm,0.6s
KIV   Kislovodsk         68.46 318  eP      P      23 47 43.8 +1.0
KIV                                  pmax   pmax
      comp=Z,2.0nm,1.0s
KBZ   Khabaz             68.58 318   P      P      23 47 44.3 +1.0
      comp=Z,1.8nm,0.8s,baz=32,slow=4.3,SNR=6.1
      comp=Z,1.8nm,0.8s
CLL   Collm              70.05 341  eP      P      23 47 52.0 -0.3
CLL   Collm              70.05 341  eP      P      23 47 52.0 -0.3
LANS  Liptovska Anna     70.77 336  eP      P      23 47 58.4 +1.5
LANS                                 pmax   pmax
      comp=Z,3.0nm,0.7s
LANS  Liptovska Anna     70.77 336  eP      P      23 47 58.4 +1.5
GNI   Garni              70.93 315ceP       P      23 48 00.1 +1.9
GNI                                  pmax   pmax
      comp=Z,6.0nm,1.3s
GERES GERESS Array B     72.27 340   P      P      23 48 06.0  0.0
      comp=Z,0.7nm,0.6s,baz=32,slow=5.2,SNR=6.8
      comp=Z,0.7nm,0.6s
BRTR  Keskin Array B     75.40 322   P      P      23 48 24.9 +0.4
      comp=Z,0.7nm,0.9s,baz=18,slow=3.2,SNR=2.4
      comp=Z,0.7nm,0.9s
WRA   Warramunga Arr     79.86 208   P      P      23 48 48.3 -1.0
      comp=Z,1.5nm,1.0s,baz=18,slow=5.9,SNR=5.7
      comp=Z,1.5nm,1.0s
ASAR  Alice Springs      83.54 207   P      P      23 49 09.1 +0.5
      comp=Z,1.9nm,0.9s,baz=15,slow=4.4,SNR=8.7
      comp=Z,1.9nm,0.9s
ESDC  Sonseca Array      83.82 350   P      P      23 49 09.8 -0.3
      comp=Z,0.4nm,0.6s,baz=353,slow=5.1,SNR=5.5
      comp=Z,0.4nm,0.6s
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JMA **02** *23:55:48.6±0.2, 24.°0N±1.°0×12°2E±°, h19^{km}±1^{km}, MV3.6/11, TAIWAN REGION*
NIED **02** *23:55:48.6, 24.°02N×121.°57E, h19^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.94; $M_{\theta\theta}$0.49; $M_{\phi\phi}$0.45; $M_{r\theta}$0.72; $M_{\theta\phi}$0.62; $M_{\phi r}$-0.13; Fault plane solution: $M_0$1.25000×10^{15} NP1:ϕ_s22.00000°, δ39.00000°, λ-132.00000°. NP2:ϕ_s252.00000°, δ62.00000°, λ-62.00000°.*
ASIES **02** *23:55:50.3, 24.°21N×121.°71E, h17^{km}, MW3.7*
TAP **02** *23:55:50.9, 24.°21N×121.°71E, h11^{km}, ML4.1, B*
IDC **02** *23:56:01.9±6.5, 24.°12N×121.°62E, h114^{km}±62^{km}, mb3.2/10, mbtmp3.6/11, Error ellipse: s-maj=33.0km s-min=16.4km az=72.0*
ISC 02 23:55:50.7±0.7**, 24.°19N**±0.°01×**121.°73E**±0.°02**, h13**^{km}±4^{km}**, n135,** σ**0.°74**/204**, mb3.6**/10**, 27D, Taiwan**

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Code  Station Name        Δ°   AZ°     Phase ID          Time     Res
                                       Op      ISC       h  m  s  ISC
ETL   Fush Village       0.10 252⇓iP           Pg     23 55 53.9 +0.1
      baz=236
ETL                                iS          Sg     23 55 55.9 -0.1
      baz=236
EHP   Heping Village     0.12   6⇓iP           Pg     23 55 54.1 +0.1
      baz=20
EHP                                iS          Sg     23 55 56.2 -0.1
      baz=20
NACB  Ninganchiao        0.12 263⇓iP           Pg     23 55 54.0  0.0
      baz=251
NACB                               iS          Sg     23 55 56.1 -0.3
      baz=251
TWD   Chiawan            0.16 228⇓iP           Pg     23 55 54.7 +0.1
      baz=217
TWD                                iS          Sg     23 55 57.5 +0.2
      baz=217
ETLH  Xiulin Townshi     0.23 274⇓iP           Pg     23 55 55.7  0.0
      baz=270
ETLH                                S          Sg     23 55 59.2 +0.1
      baz=270
ENA   Nanau              0.24   3⇓iP           Pg     23 55 55.8  0.0
      baz=9.0
ENA                                iS          Sg     23 55 59.2 -0.1
      baz=9.0
HWA   Hwalien            0.24 208  eP          Pb     23 55 56.7 -0.2
      baz=201
HWA                                eS          Sg     23 56 01.3 +1.9
      baz=201
EWUT  Wuta               0.26  10⇓iP           Pg     23 55 56.3 +0.1
      baz=14
EWUT                               iS          Sg     23 55 59.7 -0.2
      baz=14
LATG  Datong             0.39 332⇓iP           Pg     23 55 58.6  0.0
      baz=332
LATG                               iS          Sg     23 56 03.9  0.0
      baz=332
NNSB  Datong             0.40 307⇓iP           Pg     23 55 58.7  0.0
      baz=306
NNSB                               iS          Sg     23 56 04.0 -0.1
      baz=306
NNS   Nan Shan           0.41 308⇓iP           Pg     23 55 58.9  0.0
      baz=307
NNS                                iS          Sg     23 56 04.4 -0.1
      baz=307
WHF   Hehuan Shan        0.42 264⇓iP           Pg     23 55 59.4  0.0
      baz=261
WHF                                iS          Sg     23 56 05.0 -0.2
      baz=261
TWC   Suao               0.43  15⇓iP           Pg     23 55 59.4  0.0
      baz=12
TWC                                iS          Sg     23 56 05.1  0.0
      baz=12
NDS   Dongshan           0.44 359⇓iP           Pg     23 55 59.7 +0.2
      baz=360
NDS                                iS          Sg     23 56 05.1 -0.4
      baz=360
ESL   Shilin             0.46 216  eP          Pg     23 55 59.7 -0.2
      baz=212
ENTT  Nioudou            0.47 342⇓iP           Pg     23 56 00.3 +0.2
      baz=343
ENTT                               iS          Sg     23 56 06.5 +0.1
      baz=343
CHGB  Renai              0.52 256⇓iP           Pg     23 56 01.3 +0.2
      baz=246
CHGB                               iS          Sg     23 56 08.2 +0.1
      baz=246
TDCB  Techi              0.52 277⇓iP           Pb     23 56 01.4 -0.5
      baz=275
TDCB                               iS          Sg     23 56 08.0 -0.2
      baz=275
TWE   Neicheng           0.53 354⇓iP           Pg     23 56 01.4 +0.2
      baz=356
TWE                                iS          Sg     23 56 07.8 -0.5
      baz=356
OWD   Renai              0.56 245⇓iP           Pg     23 56 01.7  0.0
      baz=243
OWD                                 S          Sg     23 56 08.7 -0.4
      baz=243
ILA   Ilan               0.57   2 iP           Pg     23 56 02.2 +0.2
      baz=3.0
ILA                                eS          Sg     23 56 08.9 -0.8
      baz=3.0
YHNB  Yeheng             0.58 326⇓iP           Pg     23 56 02.1 +0.1
      baz=325
YHNB                               iS          Sg     23 56 09.5 -0.2
      baz=325
FUSB  Fushanzhiwuyua     0.58 347⇓iP           Pg     23 56 02.2  0.0
      baz=347
FUSB                                S          Sg     23 56 09.5 -0.5
      baz=347
EGFH  Guangfu            0.59 208  eP          Pb     23 56 02.4 -0.4
      baz=214
EGFH                               eS          Sb     23 56 10.7 -0.4
      baz=214
NSK   Sanguang           0.59 325⇓iP           Pg     23 56 02.3  0.0
      baz=325
NSK                                 S          Sg     23 56 09.4 -0.8
      baz=325
WUSB  Renai              0.59 251⇓iP           Pb     23 56 02.5 -0.5
      baz=241
WUSB                               iS          Sg     23 56 09.7 -0.6
      baz=241
NWLT  Wulai              0.62 341 ⇓P           Pg     23 56 03.0 +0.1
      baz=341
NWLT                                S          Sg     23 56 10.9 -0.2
      baz=341
NTC   Toucheng           0.67   8  eP          Pg     23 56 03.5 -0.3
      baz=9.0
NTC                                eS          Sg     23 56 12.2 -0.4
      baz=9.0
EGS                      0.68  16  eP          Pg     23 56 04.3 +0.3
      baz=28
VWDT  VWDT               0.69 231⇓iP           Pb     23 56 04.2 -0.4
      baz=229
VWDT                                S          Sb     23 56 14.5 +0.4
      baz=229
NFF   Wufeng Townshi     0.71 308  eP          Pg     23 56 04.6 +0.1
      baz=308
NFF                                eS          Sg     23 56 13.5 -0.5
      baz=308
WHP   Taichung City      0.72 277   P          Pb     23 56 05.0 -0.2
      baz=276
WHP                                eS          Sg     23 56 14.3  0.0
      baz=276
HGSD  Ruisui             0.75 202  eP          Pb     23 56 05.5 -0.1
      baz=217
WCS   Beigang Elemen     0.76 260 ⇓P           Pb     23 56 05.5 -0.3
      baz=259
WCS                                eS          Sg     23 56 13.5 -1.9
      baz=259
EHY   Hungye             0.78 209  eP          Pg     23 56 04.6 -1.2
      baz=213
EHY                                eS          Sb     23 56 16.1 -0.5
      baz=213
TIPB  Shuangxi           0.78   6 iP           Pg     23 56 06.0  0.0
      baz=359
TIPB                               eS          Sg     23 56 15.4 -0.9
      baz=359
NHDH  Xindian Distri     0.79 347  eP          Pg     23 56 06.1  0.0
      baz=347
NHDH                               eS          Sg     23 56 16.5 -0.1
      baz=347
LIOB  Emei               0.79 305  eP          Pg     23 56 06.2 +0.1
      baz=304
LIOB                               eS          Sg     23 56 15.5 -1.1
      baz=304
NSTT  Nanjuang           0.80 304  eP          Pb     23 56 06.4  0.0
      baz=303
NSTT                               eS          Sg     23 56 16.8 +0.2
      baz=303
TWA   Mucha              0.80 351  eP          Pg     23 56 06.5 +0.3
      baz=351
TWA                                eS          Sg     23 56 15.1 -1.6
      baz=351
SSLB  Suanglung          0.81 241⇓iP           Pg     23 56 06.3 -0.2
      baz=239
SSLB                                S          Sg     23 56 16.2 -0.9
      baz=239
SMLT  Sun Moon Lake      0.82 248⇓iP           Pg     23 56 06.5 -0.1
      baz=237
SMLT                               eS          Sg     23 56 16.8 -0.5
      baz=237
TYC   Yuchr              0.85 251  eP          Pg     23 56 07.0 -0.2
      baz=240
TYC                                eS          Sb     23 56 18.1 -0.5
      baz=240
TWB1  Santiao Chiao      0.85  16  eP          Pg     23 56 07.0 -0.2
      baz=10.0
TWB1                               eS          Sg     23 56 17.1 -1.2
      baz=10.0
TAP   Taipei             0.87 347  eP          Pb     23 56 08.2 +0.4
      baz=347
TAP                                eS          Sg     23 56 19.1 +0.1
      baz=347
NWF   Wu-fen Shan        0.88   3  eP          Pg     23 56 08.1 +0.3
      baz=354
NWF                                eS          Sg     23 56 18.9 -0.4
      baz=354
TWQ1  Liyutan            0.89 280  eP          Pn     23 56 08.6 -0.4
      baz=279
YULB  Yu-li              0.89 207  eP          Pg     23 56 06.4 -1.5
      baz=215
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SBCB  Hsinchu          0.91 312 eP    Pn    23 56 08.9 -0.2
      baz=312
NSY   Sanyi            0.91 285 eP    Pn    23 56 09.4 +0.1
      baz=283
SXI1  Grass Mountain   0.91   8 eP    Pg    23 56 08.4  0.0
      baz=357
EYUL  Yuli             0.92 204 eP    Pn    23 56 08.8 -0.6
      baz=216
NCUH  Zhongli          0.92 328 eP    Pn    23 56 09.3 -0.1
      baz=327
NCUH                            eS    Sn    23 56 22.2 -0.3
      baz=327
NCU   National Centr   0.92 328 eP    Pn    23 56 09.4  0.0
      baz=327
NCU                             eS    Sn    23 56 22.0 -0.5
      baz=327
HSN   Hsinchu          0.92 312 eP    Pn    23 56 09.2 -0.2
      baz=314
HSN                             eS    Sn    23 56 22.9 +0.3
      baz=314
NMLH  Miaoli           0.92 292 eP    Pn    23 56 09.6 +0.1
      baz=291
NMLH                            eS    Sb    23 56 21.0 +0.2
      baz=291
TWS1  Kuangyinshan     0.95 343  P    Pn    23 56 10.0 +0.2
      baz=351
TWS1                             S    Sb    23 56 22.7 +1.1
      baz=351
TCU   Taichung         0.96 268  P    Pn    23 56 10.6 +0.7
      baz=266
TCU                             eS    Sn    23 56 23.7 +0.2
      baz=266
YM01  YM01             0.96 351 eP    Pg    23 56 09.8 +0.4
      baz=5.0
WJS   Zhushan          0.98 248  P    Pn    23 56 10.3  0.0
      baz=242
WJS                              S    Sn    23 56 24.8 +0.7
      baz=242
YUS   Yu-Shan          1.00 226 eP    Pb    23 56 09.9 -0.3
      baz=214
YUS                             eS    Sb    23 56 23.7 +0.3
      baz=214
NTST  Danshui          1.00 345 eP    Pn    23 56 10.9 +0.4
      baz=346
WNT   Mingjian         1.00 252 eP    Pn    23 56 11.3 +0.8
      baz=248
WNT                             eS    Sn    23 56 25.7 +1.2
      baz=248
WDJ   Dajia District   1.00 279 eP    Pn    23 56 10.8 +0.2
      baz=278
WDJ                             eS    Sn    23 56 24.4 -0.2
      baz=278
ANP   Anpu             1.01 349 eP    Pb    23 56 10.3 +0.1
      baz=350
FULB  Fuli             1.06 202 eP    Pb    23 56 10.3 -0.7
      baz=214
WCHH  Zhanghua         1.07 264 eP    Pn    23 56 12.1 +0.6
      baz=263
WCHH                            eS    Sn    23 56 28.3 +2.1
      baz=263
ALS   Alishan          1.08 232 eP    Pn    23 56 11.7 -0.2
      baz=231
ALS                             eS    Sg    23 56 25.6 -0.3
      baz=231
TWY   Chenhua          1.09 354 eP    Pg    23 56 12.0 +0.3
      baz=6.0
CHKT  Chengkung        1.14 197 eP    Pb    23 56 11.1 -1.2
      baz=182
JYNG  Yonagunijimaku   1.14  77 eP    Pb    23 56 12.5 +0.2
JYNG                            eS    Sn    23 56 29.3 +1.4
ELDTW Lidau            1.19 213 eP    Pb    23 56 12.7 -0.6
      baz=222
ELDTW                           eS    Sn    23 56 29.5 +0.2
      baz=222
WDLH  Douliu           1.20 246 eP    Pg    23 56 13.6 -0.3
      baz=245
WDLH                            eS    Sn    23 56 31.1 +1.8
      baz=245
YOJ   Yonaguni jima    1.20  77 eP    Pn    23 56 13.3 +0.1
      baz=66
YOJ   Yonaguni jima    1.20  77  P    Pn    23 56 13.4 +0.1
YOJ                              S    Sg    23 56 30.5 +1.0
WRL   Guolierlin Hig   1.27 257 eP    Pg    23 56 14.9 -0.3
      baz=257
WRL                             eS    Sg    23 56 33.4 +1.8
      baz=257
EDH   Donghe           1.27 198 eP    Pn    23 56 12.4 -1.9
      baz=184
WTK   Tuku             1.32 248 eP    Pb    23 56 15.3 -0.1
      baz=260
WTK                             eS    Sg    23 56 34.4 +1.0
      baz=260
CHN4  Tsaushan         1.33 231 eP    Pg    23 56 16.4  0.0
      baz=225
CHN4                            eS    Sg    23 56 36.6 +2.8
      baz=225
STYH  Taoyuan          1.34 221 eP    Pb    23 56 15.5 -0.2
      baz=220
TPUB  Ta-pu            1.34 229 eP    Pg    23 56 16.5  0.0
      baz=222
TPUB                            eS    Sg    23 56 34.7 +0.7
      baz=222
WTCT  Ta-ch'eng        1.36 257 eP    Pg    23 56 18.1 +1.2
      baz=256
WTCT                            eS    Sg    23 56 36.0 +1.3
      baz=256
CHY   Chiayi           1.38 240 eP    Pg    23 56 16.9 -0.3
      baz=240
CHY                             eS    Sg    23 56 37.1 +1.9
      baz=240
WTP   Ta-pu            1.39 228 eP    Pg    23 56 16.9 -0.5
      baz=227
LONT  Longtian         1.39 203 eP    Pb    23 56 16.5 -0.1
      baz=203
TWK   Hsinying         1.46 231 eP    Pg    23 56 18.1 -0.7
      baz=233
TWK                             eS    Sg    23 56 40.3 +2.4
      baz=233
WSF   Szhu             1.48 249 eP    Pg    23 56 18.7 -0.5
      baz=248
CHN1  Nanshi           1.49 228 eP    Pg    23 56 18.7 -0.6
      baz=230
CHN1                            eS    Sg    23 56 40.8 +2.1
      baz=230
TWG   Pinlang          1.49 204 eP    Pn    23 56 16.6 -0.6
      baz=188
TWGBT Beinan           1.49 204 eP    Pn    23 56 16.5 -0.7
      baz=188
SGST  Jiashian         1.52 224 eP    Pb    23 56 18.4 -0.4
      baz=224
LDUT  Ludao            1.53 189 eP    Pg    23 56 19.9 -0.2
      baz=190
SCST  Cishan           1.72 221 eP    Pb    23 56 22.3  0.0
      baz=223
ECL   Taimali          1.74 204 eP    Pb    23 56 22.0 -0.5
      baz=191
SSD   Sandimen         1.75 215 eP    Pb    23 56 21.8 -1.0
      baz=215
TSMG  Majia            1.78 214 eP    Pb    23 56 22.2 -1.1
      baz=227
TWM1  Shoushan         1.81 222 eP    Pb    23 56 23.7 -0.1
      baz=223
IRIF  Iriomote-Funau   1.83  85  P    Pn    23 56 22.1 +0.1
MASBT Mashibuluo       1.86 213 eP    Pb    23 56 23.8 -0.9
      baz=215
HATJ  Hateruma jima    1.90  94  P    Pn    23 56 23.3 +0.4
EAST  Anshuo           1.97 204 eP    Pb    23 56 26.4 -0.2
      baz=192
TAWH  Dawu Township    2.00 203 eP    Pn    23 56 23.4 -0.8
      baz=192
SSPT  Xinbi            2.00 212 eP    Pb    23 56 26.4 -0.7
      baz=215
JKRS  Kuro-shima       2.08  88 eP    Pn    23 56 26.1 +0.8
PNG   Penghu           2.08 253 eP    Pn    23 56 25.7 +0.3
      baz=253
PHUB  P'eng-hu         2.09 252 eP    Pn    23 56 25.6 +0.2
      baz=252
WDGT  Dungji           2.11 244 eP    Pn    23 56 26.6 +0.8
      baz=245
SLIU  Shizi            2.14 204 eP    Pn    23 56 27.3 +1.0
      baz=193
JIJ   Ishigaki jima    2.21  85  P    Pn    23 56 27.4 +0.2
JIJ                             eS    Sn    23 56 54.5 +0.2
VWUC  VWUC             2.22 292 eP    Pn    23 56 26.9 -0.4
      baz=277
VCHM  Qimei            2.32 246 eP    Pn    23 56 28.9 +0.3
      baz=231
JISG  Ishigakijimahi   2.39  80  P    Pn    23 56 29.9 +0.3
TWK1  Hengchun         2.39 201 eP    Pb    23 56 31.5 -2.2
      baz=191
TWKBT Hengchun         2.39 201 eP    Pb    23 56 32.1 -1.6
      baz=191
MATB  Ma-tsu           2.54 321 eP    Pn    23 56 31.0 -0.6
      baz=320
JTJ   Tarama           2.75  80  P    Pn    23 56 35.1 +0.6
LYJJ  Jianjiangzhen    2.95 323 eP    Pn    23 56 36.6 -0.7
      baz=323
QZH   Quanzhou         2.95 285  Pn   Pn    23 56 37.4 +0.1
QZH                              Sn   Sn    23 57 11.5 -1.2
QZH                              smax smax
      comp=N,120nm,0.4s
QZH                              smax smax
      comp=E,86nm,0.7s
QZH                              LR   LR
      comp=E,560nm,9.4s
QZH                              LR   LR
      comp=Z,470nm,9.0s
KNM   Kinmen           3.02 275 eP    Pn    23 56 39.5 +1.3
      baz=273
KNMB  Chin-men Tao     3.06 276 eP    Pn    23 56 37.9 -0.9
      baz=274
XPSS  Dashiqiu         3.06 333 eP    Pn    23 56 38.3 -0.6
      baz=333
MHZQ  Yeshan           3.10 308 eP    Pn    23 56 38.4 -1.0
      baz=307
AXDP  Jialang          3.50 282 eP    Pn    23 56 44.9 +0.1
      baz=281
ZPLA  Ao Xicun         3.65 267 eP    Pn    23 56 47.0 +0.1
      baz=265
KSRS  Korea Array     14.25  20  P    P     23 59 19.8 +0.3
      comp=Z,2.4nm,0.7s,baz=202,slow=12,SNR=5.7
KLR   Kul'dur         26.20  15  P    P     00 01 26.0 +0.9
      comp=Z,1.0nm,0.6s,baz=306,slow=14,SNR=3.7
      comp=Z,1.0nm,0.6s
SONM  Songino Array   26.56 337  P    P     00 01 30.3 +1.8
      comp=Z,0.1nm,0.3s,baz=158,slow=10,SNR=2.5
      comp=Z,0.1nm,0.3s
MKAR  Makanchi Array  38.68 316  P    P     00 03 14.3 +0.1
      comp=Z,0.7nm,0.8s,baz=111,slow=9.8,SNR=7.1
      comp=Z,0.7nm,0.8s
ZALV  Zalesovo Beam   40.51 327  P    P     00 03 28.5 -0.8
      comp=Z,0.5nm,0.5s,baz=106,slow=9.2,SNR=2.3
      comp=Z,0.5nm,0.5s
KURBB Kurchatov Arra  42.42 320  P    P     00 03 45.5 +0.4
      comp=Z,0.2nm,0.3s,baz=98,slow=6.6,SNR=1.9
      comp=Z,0.2nm,0.3s
WRA   Warramunga Arr  45.55 163  P    P     00 04 10.1 -0.4
      comp=Z,0.7nm,0.7s,baz=346,slow=8.8,SNR=9.3
      comp=Z,0.7nm,0.7s
ASAR  Alice Springs   49.02 165  P    P     00 04 37.0 -0.5
      comp=Z,0.3nm,0.6s,baz=335,slow=6.7,SNR=4.4
      comp=Z,0.3nm,0.6s
FINES FINESS Array B  71.69 330  P    P     00 07 11.0 -1.2
      comp=Z,0.5nm,0.7s,baz=72,slow=8.9,SNR=2.2
      comp=Z,0.5nm,0.7s
INK   Inuvik          73.03  22  P    P     00 07 20.9 +0.9
      comp=Z,0.9nm,0.8s,baz=330,slow=5.5,SNR=4.3
      comp=Z,0.9nm,0.8s
YKA   Yellowknife Ar  82.77  23  P    P     00 08 12.9 -1.3
      comp=Z,0.3nm,0.5s,baz=312,slow=4.9,SNR=7.8
      comp=Z,0.3nm,0.5s
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*JMA **03** 00:00:50.5±0.2, 43°.5N±0°.8×14°8E±°, h44^{km}, MD5.9/40, MW5.7/40, E OFF HOKKAIDO*

JMA Felt III J1 at E OFF HOKKAIDO .

*MOS **03** 00:00:50.1±1.1, 43°.73N×147°.48E, h66^{km}, mb5.9/89, MS5.0/35, Error ellipse: s-maj=5.2km s-min=3.8km az=117.3*

MOS Felt (III-IV) at Malokuril'skoye, Kuril'sk, Reydovo, (III) at Yuzhno-Kuril'sk, Lagunnoye, Goryachiy Plyazh, Goryachiye Klyuchi, Gornyy.

*SKHL **03** 00:00:50.8±0.3, 43°.60N×147°.70E, h80^{km}±5^{km}, mb6.3/11, mbv6.1/15, ms5.2/20, msha6.6/7*

*IDC **03** 00:00:50.1±1.6, 43°.72N×147°.53E, h52^{km}±14^{km}, mb5.2/33, mbtmp5.5/42, ML5.0/8, MS4.7/85, Error ellipse: s-maj=9.5km s-min=8.2km az=128.0*

*NIED **03** 00:00:50.5, 43°.49N×147°.60E, h44^{km}, MW5.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.48; $M_{\theta\theta}$3.17; $M_{\phi\phi}$-1.69; $M_{r\theta}$2.80; $M_{\theta\phi}$-1.99; $M_{\phi r}$1.55; Fault plane solution: $M_0$4.66000×10^{17} NP1: ϕ_s148.00000°, δ43.00000°, λ-18.00000°. NP2: ϕ_s252.00000°, δ78.00000°, λ-132.00000°.*

*BJI **03** 00:00:50.1±0.0, 43°.78N×147°.40E, h61^{km}, mb5.4/79, mB5.3/59, Ms5.1/86, Ms7 4.8/81*

*NEIC **03** 00:00:51.7±1.4, 43°.70N±0°.06×147°.51E±0°.09, h61^{km}±1^{km}, mb5.5/778, Mwb5.7/94, Mww5.7, Error ellipse: s-maj=11.0km s-min=9.8km az=304.0*

*NEIC **03** 00:00:51.8, 43°.69N×147°.51E, h60^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.85; $M_{\theta\theta}$1.08; $M_{\phi\phi}$-0.23; $M_{r\theta}$2.85; $M_{\theta\phi}$-2.00; $M_{\phi r}$1.54; Fault plane solution: $M_0$3.93000×10^{17} NP1: ϕ_s159.02000°, δ36.15000°, λ-13.36000°. NP2: ϕ_s259.88000°, δ82.16000°, λ-125.40000°. Principal axes: T 3.3261, Plg28.0000°, Azm18.0000°; N 1.0159, Plg35.0000°, Azm265.0000°; P -4.3419, Plg42.0000°, Azm137.0000°;*

*NEIC **03** 00:00:53, 43°.59N×147°.51E, h60^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.08; $M_{\theta\theta}$2.18; $M_{\phi\phi}$-0.10; $M_{r\theta}$2.19; $M_{\theta\phi}$-1.20; $M_{\phi r}$1.94; Fault plane solution: $M_0$3.81000×10^{17} NP1: ϕ_s138.00000°, δ37.00000°, λ-33.00000°. NP2: ϕ_s255.00000°, δ71.00000°, λ-121.00000°. Principal axes: T 3.1521, Plg20.0000°, Azm9.0000°; N 1.0788, Plg30.0000°, Azm267.0000°; P -4.2309, Plg53.0000°, Azm127.0000°;*

*GCMT **03** 00:00:53.7±0.1, 43°.66N±0°.01×147°.65E±0°.01, h74^{km}, MW5.7/152, Moment Tensor Solution. s137,c270; s152,c322; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.90±.04; $M_{\theta\theta}$2.99±.05; $M_{\phi\phi}$-2.09±.05; $M_{r\theta}$2.66±.04; $M_{\theta\phi}$-2.63±.04; $M_{\phi r}$1.87±.03; Best double couple: $M_0$4.94200×10^{17} NP1: ϕ_s153.00000°, δ50.00000°, λ-12.00000°. NP2: ϕ_s251.00000°, δ81.00000°, λ-139.00000°. Principal axes: T 4.7370, Plg20.0000°, Azm16.0000°; N 0.4090, Plg48.0000°, Azm262.0000°; P -5.1470, Plg35.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 00:00:51.6±0.2**, 43°.72N**±0°.03×**147°.52E**±0°.02**, h68**^{km}±1^{km}**, h68**^{km}**:pP-P, n1939,** σ1^{s}**54**/2042**, mb5.6**/582**, 308C-258D, Fault plane solution: NP1:**ϕ_s71.61723°**,** δ73.88616°**,** λ110.49779°. **NP2:**ϕ_s198.20815°**,** δ25.85700°**,** λ39.52317°. **Principal axes:** T Plg56.3637°**,** Azm8.1693°**;** N Plg19.6585°**,** Azm245.6935°**;** P Plg26.1077°**,** Azm145.6109°**; Kuril Islands**

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Code  Station Name       Δ°   AZ°    Phase ID       Time       Res
                                  Op     ISC      h  m  s     ISC
YUK   Yuzh-Kuril'sk      1.24 285d iPN   Pn     00 01 13.4 +0.4
YUK                            eS    Sn     00 01 29.9 +0.8
YUK                            pmax  pmax
      comp=N,14μm,0.2s
YUK                            pmax  pmax
      comp=Z,57μm,0.2s
YUK                            pmax  pmax
      comp=E,25μm,0.1s
YUK                            smax  smax
      comp=N,216μm,0.6s
YUK                            smax  smax
      comp=E,118μm,0.6s
YUK   Yuzh-Kuril'sk      1.24 285  eP    Pn     00 01 13.5 +0.4
YUK                            AMB   AMB    00 01 15.7
      comp=E,14μm,0.2s
YUK                            AMB   AMB    00 01 15.7
      comp=E,25μm,0.2s
YUK                            AMB   AMB    00 01 15.7
      comp=E,57μm,0.2s
YUK                            eS    Sn     00 01 30.7 +1.6
YUK                            A     A      00 01 35.0
      comp=E,216μm,0.7s
YUK                            A     A      00 01 35.0
      comp=E,118μm,0.7s
NEM2  Nemuro 2           1.34 255 ⇓P     Pn     00 01 13.7 -0.6
NEM2                          ⇓eS    Sn     00 01 30.7 -0.7
NEM2  Nemuro 2           1.34 255  A     A      00 01 13.7
      comp=E,184nm,1.7s,comp=E,425nm,3.3s
NMR   Nemuro--Hokkai     1.35 256⇓iPN    Pn     00 01 13.8 -0.7
NMR                            eS    Sn     00 01 30.7 -0.9
NMR   Nemuro--Hokkai     1.35 256 iP     Pn     00 01 13.9 -0.6
NMR                            eS    Sn     00 01 31.0 -0.6
KUR   Kuril'sk           1.54   9c iPN   Pn     00 01 18.0 +1.0
KUR                            iS    Sn     00 01 37.7 +1.6
KUR                            pmax  pmax
      comp=Z,14μm,0.6s
KUR                            pmax  pmax
      comp=N,4μm,0.4s
KUR                            pmax  pmax
      comp=E,5μm,0.4s
KUR                            pmax  pmax
      comp=Z,45μm,2.3s
KUR                            smax  smax
      comp=N,209μm,2.3s
KUR                            smax  smax
      comp=E,202μm,2.3s
KUR                            smax  smax
      comp=E,69μm,0.5s
KUR                            smax  smax
      comp=N,49μm,0.6s
KUR   Kuril'sk           1.54   9  iP    Pn     00 01 18.0 +1.0
KUR                            AMB   AMB    00 01 20.5
      comp=N,45μm,2.3s
KUR                            AMB   AMB    00 01 20.5
      comp=N,4μm,0.4s
KUR                            AMB   AMB    00 01 20.5
      comp=N,5μm,0.4s
KUR                            AMB   AMB    00 01 20.5
      comp=N,14μm,0.4s
KUR                            iS    Sn     00 01 37.7 +1.6
KUR                            A     A      00 01 39.6
      comp=N,209μm,2.3s
KUR                            A     A      00 01 39.6
      comp=N,202μm,2.3s
KUR                            A     A      00 01 40.4
      comp=N,49μm,0.6s
KUR                            A     A      00 01 40.4
      comp=N,69μm,0.6s
RUSJ  Misakicho          1.69 284⇓iPN    Pn     00 01 20.2 +1.2
JRA   Rausu              1.75 278 ⇓P     Pn     00 01 20.7 +0.9
JRA                           ⇓eS    Sn     00 01 42.9 +1.8
JRA   Rausu              1.75 278  A     A      00 01 20.7
      comp=N,167nm,1.0s,comp=N,224nm,1.3s
JNSB  Nemuroshibetsu     1.82 273⇓iP     Pn     00 01 21.5 +0.7
JNSB                          ⇓eS    Sn     00 01 44.7 +1.8
JNSB  Nemuroshibetsu     1.82 273  A     A      00 01 21.5
      comp=N,228nm,1.6s,comp=N,397nm,5.7s
JKHN  Kushirohamanak     1.83 251⇓iP     Pn     00 01 20.6 -0.3
JKHN                          ⇓eS    Sn     00 01 42.7 -0.5
JKHN  Kushirohamanak     1.83 251  A     A      00 01 20.6
      comp=N,428nm,1.6s,comp=N,464nm,4.0s
JNK   Nakash             2.04 267⇓iP     Pn     00 01 23.8 +0.1
JNK   Nakash             2.04 267  A     A      00 01 23.8
      comp=N,101nm,3.4s,comp=N,145nm,1.5s
AKK   Akkeshi            2.07 251 iP     Pn     00 01 23.5 -0.7
AKK                            eS    Sn     00 01 47.2 -1.8
JAK   Akkeshi            2.18 252⇓iP     Pn     00 01 25.0 -0.6
JAK                           ⇓S     Sn     00 01 50.7 -0.9
JAK   Akkeshi            2.18 252  A     A      00 01 25.0
      comp=N,144nm,0.9s,comp=N,217nm,3.7s
JTKR  Abashiri--Toko     2.62 277⇓iP     Pn     00 01 33.0 +1.3
JTKR  Abashiri--Toko     2.62 277  A     A      00 01 33.0
      comp=N,39nm,3.7s,comp=N,39nm,3.4s
JAR   Ashorobuto         2.76 263⇓iP     Pn     00 01 34.0 +0.5
JAR                           ⇓S     Sn     00 02 07.1 +1.4
JAR   Ashorobuto         2.76 263  A     A      00 01 34.0
      comp=N,91nm,0.6s,comp=N,120nm,0.6s
JOB   Onbets             2.81 254⇓iP     Pn     00 01 34.1 -0.1
JOB                           ⇓S     Sn     00 02 06.0 -0.9
JOB   Onbets             2.81 254  A     A      00 01 34.1
      comp=N,102nm,2.4s,comp=N,98nm,2.3s
JMP   Maruseppu          3.02 277⇓iP     Pn     00 01 38.6 +1.5
JMP   Maruseppu          3.02 277  A     A      00 01 38.6
      comp=N,33nm,3.4s,comp=N,47nm,3.3s
JCH   Churui             3.23 252  P     Pn     00 01 39.1 -0.8
JCH                            eS    Sn     00 02 15.0 -2.3
JCH   Churui             3.23 252  A     A      00 01 39.1
      comp=N,59nm,3.3s,comp=N,88nm,2.9s
JTHR  Tokachihiroo       3.41 247  A     A      00 01 42.4
      comp=N,112nm,0.8s,comp=N,108nm,1.0s
JKK2  Kamakawa 2         3.46 274⇓iP     Pn     00 01 44.8 +1.7
JKK2                          ⇓eS    Sn     00 02 26.2 +3.4
JKK2  Kamakawa 2         3.46 274  A     A      00 01 44.8
      comp=N,27nm,3.5s,comp=N,48nm,7.0s
JKA   Kamikawa-asahi     3.58 278  Pn    Pn     00 01 45.3 +0.7
JKA                            Sn    Sn     00 02 27.7 +2.0
ASAJ  Asahikawa          3.58 278  P     Pn     00 01 46.7 +2.1
      comp=N,2μm,0.7s,baz=99,slow=14,SNR=440
ASAJ                           LR    LR     00 02 25.8
      comp=N,2μm,21.1s,baz=125,slow=27
ASAJ                           S     Sn     00 02 26.3 +0.6
      comp=N,2μm,0.6s,baz=177,slow=16,SNR=2.6
ASAJ  Asahikawa          3.58 278  A     A      00 01 46.6
      comp=N,22nm,2.3s,comp=N,39nm,4.2s
JEM   Erimo              3.63 244  eP    Pn     00 01 45.7 +0.4
JEM                            eS    Sn     00 02 26.6 -0.3
JEM   Erimo              3.63 244  A     A      00 01 45.7
      comp=N,70nm,4.0s,comp=N,96nm,4.0s
ERM   Erimo              3.63 244  PN    Pn     00 01 45.6 +0.3
ERM                                         00 02 25.3
ERM   Erimo              3.63 244  Pn    Pn     00 01 45.6 +0.3
ERM                            Sn    Sn     00 02 25.3 -1.6
ERM   Erimo              3.63 244  P     Pn     00 01 46.9 +1.6
JFR   Furan              3.63 263  A     A      00 01 46.5
      comp=N,62nm,1.0s,comp=N,60nm,1.6s
JSE   Soyaes             3.75 291⇓iP     Pn     00 01 49.0 +2.0
JSE   Soyaes             3.75 291  A     A      00 01 49.0
      comp=N,18nm,5.9s,comp=N,13nm,6.0s
JNBK  Urakawa-nobuka     3.78 249 iP     Pn     00 01 46.8 -0.6
JNBK                           eS    Sn     00 02 28.7 -1.9
JNBK  Urakawa-nobuka     3.78 249  A     A      00 01 46.8
      comp=N,93nm,0.6s,comp=N,91nm,1.4s
JAB   Ashibetsu          3.85 269  A     A      00 01 49.9
      comp=N,68nm,3.6s,comp=N,127nm,4.6s
JBT2  Biratori 2         3.88 258  A     A      00 01 49.7
      comp=N,28nm,1.5s,comp=N,46nm,3.1s
JSHD  Hidakashinhida     3.93 252  A     A      00 01 50.0
      comp=N,98nm,3.8s,comp=N,89nm,3.0s
JSS   Shosan             4.14 281 ⇓P     Pn     00 01 55.3 +3.0
JSS   Shosan             4.14 281  A     A      00 01 55.3
      comp=N,46nm,3.0s,comp=N,46nm,4.5s
JHR   Hokuryu            4.20 272  P     Pn     00 01 55.8 +2.6
JHR   Hokuryu            4.20 272  A     A      00 01 55.8
      comp=N,74nm,4.8s,comp=N,61nm,3.6s
JIAM  Iburiatsuma        4.24 257  A     A      00 01 54.7
      comp=N,115nm,1.4s,comp=N,142nm,0.9s
JWK2  Keihoku            4.33 294⇓iP     Pn     00 01 58.3 +3.5
JWK2                          ⇓S     Sn     00 02 49.5 +5.6
JWK2  Keihoku            4.33 294  A     A      00 01 58.3
      comp=N,37nm,3.0s,comp=N,27nm,4.3s
JYG   Yagishiri          4.45 281  A     A      00 01 59.0
      comp=N,28nm,5.6s,comp=N,29nm,4.5s
JISS  Ishikarishitsu     4.46 266  A     A      00 01 58.3
      comp=N,72nm,3.4s,comp=N,82nm,4.6s
JEW   Eniwo              4.52 261  Pn    Pn     00 01 57.5  0.0
JEW   Eniwo              4.52 261 iP     Pn     00 01 59.0 +1.5
JEW                            eS    Sn     00 02 50.0 +1.3
JEW   Eniwo              4.52 261  A     A      00 01 59.0
      comp=N,52nm,4.1s,comp=N,66nm,3.0s
YSS   Yuzh-Sakhalins     4.67 316κ iPN   Pn     00 02 02.0 +2.5
YSS                            eS    Sn     00 02 54.6 +2.4
YSS                            pmax  pmax
      comp=Z,4μm,3.0s
YSS                            pmax  pmax
      comp=N,2μm,2.9s
YSS                            pmax  pmax
      comp=E,2μm,2.8s
YSS                            pmax  pmax
      comp=Z,2μm,0.6s
YSS                            smax  smax
      comp=N,2μm,0.8s
YSS                            smax  smax
      comp=E,1μm,0.9s
YSS                            MLR   MLR
      comp=Z,17μm,16.0s
YSS                            MLR   MLR
      comp=N,12μm,14.0s
YSS                            MLR   MLR
      comp=E,10μm,14.0s
YSS   Yuzh-Sakhalins     4.67 316  Pn    Pn     00 02 00.4 +1.0
YSS   Yuzh-Sakhalins     4.67 316  P     Pn     00 02 02.2 +2.7
YSS   Yuzh-Sakhalins     4.67 316 iP     Pn     00 02 02.0 +2.5
YSS                            AMB   AMB    00 02 03.6
      comp=E,2μm,3.0s
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YSS                             AMB    AMB    00 02 03.6
      comp=E,2µm,3.0s
YSS                             AMB    AMB    00 02 03.6
      comp=E,4µm,3.0s
YSS                             AMB    AMB    00 02 03.9
      comp=E,2µm,0.6s
YSS                           i S      Sn     00 02 55.1 +2.9
YSS                             A      A      00 02 56.8
      comp=E,2µm,0.8s
YSS                             A      A      00 02 56.8
      comp=E,1µm,0.8s
YSS                             AMS    AMS    00 03 50.0
      comp=E,12µm,15.0s
YSS                             AMS    AMS    00 03 50.0
      comp=E,10µm,15.0s
YSS                             AMS    AMS    00 03 50.0
      comp=E,17µm,15.0s
JRR   Rishiri         4.67 290  A      A      00 02 02.5
      comp=E,68nm,4.9s,comp=E,72nm,5.2s
JNB   Noboribetsu     4.91 258  A      A      00 02 04.1
      comp=E,16nm,1.3s,comp=E,25nm,1.4s
JRBN  Rebuntou        4.92 293  A      A      00 02 06.0
      comp=E,11nm,5.1s,comp=E,8.0nm,4.8s
JKB   Kayabe          5.11 251  A      A      00 02 06.6
      comp=E,64nm,0.7s,comp=E,61nm,1.1s
JSK   Shakotan        5.13 268  A      A      00 02 07.9
      comp=E,16nm,6.0s,comp=E,19nm,6.2s
JAHD  Aomorihigashid  5.19 244  A      A      00 02 07.2
      comp=E,115nm,0.4s,comp=E,145nm,1.0s
JARK  Aomorirokkasho  5.30 241  A      A      00 02 08.7
      comp=E,59nm,1.1s,comp=E,92nm,1.6s
JOT   Ohata           5.32 246  A      A      00 02 09.2
      comp=E,21nm,4.5s,comp=E,21nm,2.8s
JYM2  Yakumo 2        5.49 256  A      A      00 02 12.1
      comp=E,12nm,3.2s,comp=E,23nm,6.6s
JSH   Shimam          5.57 261  A      A      00 02 13.6
      comp=E,9.0nm,4.0s,comp=E,10.0nm,5.2s
JKEN  Kujiedanarisaw  5.57 233  A      A      00 02 12.0
      comp=E,28nm,0.4s,comp=E,30nm,1.8s
JANG  Nango           5.58 235  A      A      00 02 12.2
      comp=E,30nm,1.5s,comp=E,43nm,2.5s
JTM   Tenmabayashi    5.61 241  Pn     Pn     00 02 10.5 -1.9
JTM   Tenmabayashi    5.61 241  A      A      00 02 13.0
      comp=E,32nm,2.2s,comp=E,69nm,3.1s
JTH   Tanohata        5.67 230  A      A      00 02 13.1
      comp=E,21nm,2.5s,comp=E,26nm,2.8s
JSR   Shiriuchi       5.68 250  A      A      00 02 14.4
      comp=E,14nm,3.5s,comp=E,18nm,5.7s
JHST  Hiyamasetana    5.75 260  A      A      00 02 15.9
      comp=E,23nm,1.0s,comp=E,23nm,3.2s
JSI2  Shiura 2        5.90 246  A      A      00 02 17.2
      comp=E,38nm,2.8s,comp=E,26nm,0.9s
JKZ   Kuzumaki        5.94 233  A      A      00 02 17.1
      comp=E,24nm,1.2s,comp=E,41nm,2.6s
MIYJ  Miyakonagasawa  5.94 228  A      A      00 02 16.9
      comp=E,32nm,4.0s,comp=E,13nm,5.7s
JOMM  Oshimamatsumae  5.96 251  A      A      00 02 18.4
      comp=E,8.0nm,6.1s,comp=E,11nm,6.8s
JHHS  Hirosakihyakuz  6.14 243  A      A      00 02 20.4
      comp=E,72nm,2.9s,comp=E,66nm,4.0s
JAH   Hinai           6.22 238  A      A      00 02 21.4
      comp=E,41nm,1.1s,comp=E,46nm,2.3s
JOM   Ohasama         6.30 230  A      A      00 02 22.1
      comp=E,41nm,3.1s,comp=E,42nm,3.1s
JSZI  Iwateshizukuis  6.32 233  A      A      00 02 22.4
      comp=E,44nm,3.4s,comp=E,52nm,2.2s
OFUJ  Ofunato         6.39 225  A      A      00 02 23.0
      comp=E,32nm,4.4s,comp=E,26nm,2.9s
JIW   Iwasaki         6.40 243  A      A      00 02 24.1
      comp=E,14nm,3.5s,comp=E,17nm,1.2s
JNTW  Noshirotokiwa   6.47 240  A      A      00 02 25.0
      comp=E,80nm,4.5s,comp=E,82nm,2.7s
UGL   Uglegorsk       6.55 327 ePN     Pn     00 02 29.1 +3.8
UGL                            eS      Sn     00 03 42.6 +4.1
UGL                             pmax   pmax
      comp=Z,5µm,3.2s
UGL                             pmax   pmax
      comp=Z,453nm,1.1s
UGL                             pmax   pmax
      comp=N,4µm,3.6s
UGL                             pmax   pmax
      comp=E,3µm,3.0s
UGL                             smax   smax
      comp=N,556nm,0.8s
UGL                             smax   smax
      comp=E,594nm,0.7s
UGL                             smax   smax
      comp=N,20µm,5.1s
UGL                             smax   smax
      comp=E,10µm,4.3s
UGL                             MLR    MLR
      comp=Z,9µm,8.4s
UGL                             MLR    MLR
      comp=N,10µm,7.0s
UGL                             MLR    MLR
      comp=E,10µm,9.5s
UGL   Uglegorsk       6.55 327 eP      Pn     00 02 28.9 +3.6
UGL                             AMB    AMB    00 02 31.3
      comp=E,4µm,3.3s
UGL                             AMB    AMB    00 02 31.3
      comp=E,3µm,3.3s
UGL                             AMB    AMB    00 02 31.3
      comp=E,5µm,3.3s
UGL                             AMB    AMB    00 02 36.2
      comp=E,300nm,0.6s
UGL                            eS      Sn     00 03 41.9 +3.4
UGL                             A      A      00 03 44.5
      comp=E,560nm,0.7s
UGL                             A      A      00 03 44.5
      comp=E,590nm,0.7s
UGL                             A      A      00 03 50.2
      comp=E,20µm,5.1s
UGL                             A      A      00 03 50.2
      comp=E,11µm,5.1s
UGL                             A      A      00 03 50.2
      comp=E,16µm,5.1s
UGL                             AMS    AMS    00 07 01.0
      comp=E,11µm,10.0s
UGL                             AMS    AMS    00 07 01.0
      comp=E,10µm,10.0s
UGL                             AMS    AMS    00 07 01.0
      comp=E,10µm,10.0s
JKMT  Kesennumamotoy  6.69 225  A      A      00 02 27.2
      comp=E,17nm,2.9s,comp=E,18nm,3.5s
JMK   Ichinoseki      6.72 227  A      A      00 02 27.7
      comp=E,25nm,3.1s,comp=E,22nm,4.0s
JRG   Rokugo          6.73 232  A      A      00 02 28.1
      comp=E,35nm,3.3s,comp=E,22nm,3.4s
JYW   Yuwa            6.88 235  A      A      00 02 30.4
      comp=E,42nm,2.6s,comp=E,53nm,3.1s
JOG3  Oga3            7.36 242  A      A      00 02 30.8
      comp=E,16nm,2.6s,comp=E,18nm,3.0s
JMM   Marumori        7.76 223         Pn     00 02 37.6 -4.1
TYV   Tymovskoe       7.88 337 ePN     Pn     00 02 46.6 +3.3
TYV                            eS      Sn     00 04 13.6 +2.8
TYV                             pmax   pmax
      comp=Z,120nm,1.3s
TYV                             pmax   pmax
      comp=Z,5µm,3.7s
TYV                             smax   smax
      comp=N,200nm,1.4s
TYV                             smax   smax
      comp=E,237nm,1.4s
TYV                             smax   smax
      comp=N,2µm,7.7s
TYV                             smax   smax
      comp=E,4µm,7.7s
TYV   Tymovskoe       7.88 337 eP      Pn     00 02 46.6 +3.3
TYV                             AMB    AMB    00 02 48.3
      comp=E,5µm,3.7s
TYV                             AMB    AMB    00 02 57.0
      comp=E,40nm,0.6s
TYV                            eS      Sn     00 04 12.9 +2.1
TYV                             A      A      00 04 18.7
      comp=E,2µm,7.7s
TYV                             A      A      00 04 18.7
      comp=E,4µm,7.7s
TYV                             A      A      00 04 19.1
      comp=E,80nm,0.7s
TYV                             A      A      00 04 19.1
      comp=E,150nm,0.7s
TYV                             AMS    AMS    00 05 30.0
      comp=E,6µm,13.0s
TYV                             AMS    AMS    00 05 30.0
      comp=E,4µm,13.0s
TYV                             AMS    AMS    00 05 30.0
      comp=E,5µm,13.0s
TEY   Ternei          7.93 283⇑ePN     Pn     00 02 46.5 +2.4
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TEY                             pmax   pmax
      comp=E,40nm,1.6s
TEY                             pmax   pmax
      comp=Z,40nm,1.6s
TEY                             pmax   pmax
      comp=N,100nm,2.3s
TEY                             pmax   pmax
      comp=E,400nm,2.4s
TEY                             pmax   pmax
      comp=Z,300nm,2.4s
TEY                             MLR    MLR
      comp=Z,400nm,8.5s
TEY   Ternei          7.93 283 i P     Pn     00 02 46.5 +2.4
TEY                             AMB    AMB    00 02 47.9
      comp=Z,100nm,2.4s
TEY                             AMB    AMB    00 02 47.9
      comp=Z,400nm,2.4s
TEY                             AMB    AMB    00 02 47.9
      comp=Z,300nm,2.4s
TEY                             AMB    AMB    00 02 48.0
      comp=Z,460nm,0.9s
TEY                             AMS    AMS    00 04 19.5
      comp=Z,2µm,10.0s
TEY                             AMS    AMS    00 04 19.5
      comp=Z,2µm,10.0s
JSD   Sado            9.02 234  Pn     Pn     00 02 56.9 -2.1
SKR   Severo-Kuril's  9.10  37 ePN     Pn     00 02 59.1 -0.9
SKR                             pmax   pmax
      comp=Z,223nm,0.5s
SKR                             pmax   pmax
      comp=Z,500nm,4.3s
SKR                             MLR    MLR
      comp=E,2µm,18.0s
SKR                             MLR    MLR
      comp=N,5µm,17.0s
SKR                             MLR    MLR
      comp=Z,4µm,17.0s
SKR   Severo-Kuril's  9.10  37 eP      Pn     00 02 59.4 -0.6
SKR                             AMB    AMB    00 03 01.8
      comp=Z,940nm,0.5s
SKR                             AMB    AMB    00 03 04.1
      comp=Z,500nm,4.3s
SKR                            eS      Sn     00 04 38.4 -2.3
SKR                             A      A      00 04 53.4
      comp=Z,400nm,0.6s
SKR                             A      A      00 04 53.4
      comp=Z,490nm,0.6s
SKR                             AMS    AMS    00 06 17.0
      comp=Z,6µm,13.0s
SKR                             AMS    AMS    00 06 17.0
      comp=Z,11µm,13.0s
SKR                             AMS    AMS    00 06 17.0
      comp=Z,20µm,13.0s
JYT   Yasato          9.35 219  Pn     Pn     00 02 59.3 -4.3
KHBR  Khabarovsk      9.88 303 eP      Pn     00 03 13.8 +3.2
KHBR                            AMB    AMB    00 03 17.7
      comp=Z,70nm,1.0s
PAU   Pauzhetka       9.97  36 eP      Pn     00 03 10.6 -1.3
PAU                             AMB    AMB    00 03 13.0
      comp=Z,670nm,0.5s
PAU                           i S      Sn     00 04 57.8 -4.2
PAU                             A      A      00 05 03.0
      comp=Z,280nm,0.4s
PAU                             A      A      00 05 03.0
      comp=Z,760nm,0.4s
PAU                             A      A      00 05 38.0
      comp=Z,5µm,6.3s
PAU                             A      A      00 05 38.0
      comp=Z,2µm,6.3s
PAU                             AMS    AMS    00 06 14.0
      comp=Z,2µm,13.0s
PAU                             AMS    AMS    00 06 14.0
      comp=Z,5µm,13.0s
PAU                             AMS    AMS    00 06 14.0
      comp=Z,4µm,13.0s
MAJO  Matsushiro     10.10 228c iPN    Pn     00 03 12.2 -1.7
MAJO  Matsushiro     10.10 228  Pn     Pn     00 03 11.7 -2.2
MAJO  Matsushiro     10.10 228  P      Pn     00 03 12.2 -1.7
MJAR  Matsushiro Arr 10.10 228  P      Pn     00 03 11.9 -2.0
      comp=Z,8.7nm,0.3s,baz=38,slow=13,SNR=428
MJAR                            S      Sn     00 05 01.3 -4.3
      comp=Z,63nm,0.8s,baz=16,slow=27,SNR=2.7
      comp=Z,408nm,0.8s
MJAR  Matsushiro Arr 10.10 228  Pn     Pn     00 03 11.2 -2.7
MJB9  Matsu-Tunnel   10.10 228         Pn     00 03 11.7 -2.2
OKH   Okha           10.29 345c iPN    Pn     00 03 19.6 +3.3
OKH                           i S      Sn     00 05 17.3 +7.4
OKH                             pmax   pmax
      comp=Z,3µm,12.0s
OKH                             smax   smax
      comp=E,4µm,9.6s
OKH                             MLR    MLR
      comp=E,12µm,15.0s
OKH                             MLR    MLR
      comp=N,8µm,13.0s
OKH                             MLR    MLR
      comp=Z,7µm,14.0s
OKH   Okha           10.29 345 i P     Pn     00 03 18.7 +2.4
OKH                             AMB    AMB    00 03 25.8
      comp=Z,3µm,12.0s
OKH                             AMB    AMB    00 03 26.2
      comp=Z,230nm,0.8s
OKH                            eS      Sn     00 05 10.7 +0.8
OKH                             A      A      00 05 18.5
      comp=Z,380nm,0.8s
OKH                             A      A      00 05 18.5
      comp=Z,230nm,0.8s
OKH                             A      A      00 05 29.7
      comp=Z,4µm,9.6s
OKH                             AMS    AMS    00 08 21.0
      comp=Z,8µm,15.0s
OKH                             AMS    AMS    00 08 21.0
      comp=Z,12µm,15.0s
OKH                             AMS    AMS    00 08 21.0
      comp=Z,6µm,15.0s
GRNR  Gornyy         10.32 317⇓iPN     Pn     00 03 21.5 +4.7
GRNR                           e              00 05 16.8
GRNR                            pmax   pmax
      comp=E,50nm,1.3s
GRNR                            pmax   pmax
      comp=N,30nm,1.2s
GRNR                            pmax   pmax
      comp=Z,60nm,1.2s
GRNR                            MLR    MLR
      comp=E,2µm,16.0s
GRNR  Gornyy         10.32 317 eP      Pn     00 03 20.4 +3.6
GRNR                            AMB    AMB    00 03 22.5
      comp=E,50nm,0.8s
GRNR                            AMS    AMS    00 07 38.4
      comp=E,1µm,19.0s
GRNR                            AMS    AMS    00 07 38.4
      comp=E,1µm,19.0s
GRNR                            AMS    AMS    00 07 38.4
      comp=E,4µm,19.0s
NKL   Nikolayevsk    10.47 337 ePN     Pn     00 03 18.2 -0.5
NKL                             pmax   pmax
      comp=E,4.0nm,0.9s
NKL                             pmax   pmax
      comp=N,1.0nm,1.2s
NKL                             pmax   pmax
      comp=Z,188nm,1.5s
NKL   Nikolayevsk    10.47 337 eP      Pn     00 03 19.9 +1.2
NKL                             AMB    AMB    00 03 30.7
      comp=Z,50nm,0.8s
NKL                            eS      Sn     00 05 13.3 -0.9
NKL                             A      A      00 05 21.5
      comp=Z,500nm,2.5s
NKL                             A      A      00 05 21.5
      comp=Z,100nm,2.5s
NKL                             AMS    AMS    00 07 41.0
      comp=Z,34µm,19.0s
NKL                             AMS    AMS    00 07 41.0
      comp=Z,4µm,19.0s
GRTR  Gornotajezhnoj 11.12 275 eP      Pn     00 03 29.2 +1.5
GRTR                            AMB    AMB    00 03 32.7
      comp=Z,30nm,1.0s
USA0B Ussuriysk Arra 11.21 278  PN     Pn     00 03 29.9 +1.0
USA0B Ussuriysk Arra 11.21 278         Pn     00 03 29.9 +1.0
USRK  Ussuriysk Ar.  11.21 278  P      Pn     00 03 29.2 +0.4
      comp=Z,66nm,0.7s,baz=88,slow=12,SNR=84
USRK  Ussuriysk Ar.  11.21 278  Pn     Pn     00 03 28.5 -0.4
JGF   Kuroka         11.26 227  Pn     Pn     00 03 26.9 -2.8
VLA   Vladivostok    11.39 272d iPN    Pn     00 03 31.8 +0.5
VLA                             pmax   pmax
      comp=Z,142nm,1.2s
VLA                             MLR    MLR
      comp=Z,1µm,11.0s
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VLA   Vladivostok    11.39 272 i P     Pn     00 03 31.8 +0.5
VLA                             AMB    AMB    00 03 32.7
      comp=Z,140nm,1.0s
VLA                             AMS    AMS    00 08 32.1
      comp=Z,1µm,11.0s
PEA0B Petropavlovsk- 11.57  32ceePN    Pn     00 03 32.2 -1.5
PEA0B Petropavlovsk- 11.57  32         Pn     00 03 31.9 -1.8
PETK  Petropavlovsk- 11.57  32  P      Pn     00 03 32.3 -1.4
      comp=Z,11nm,0.3s,baz=198,slow=6.3,SNR=135
PETK                            LR     LR     00 08 49.7
      comp=Z,4µm,19.1s,baz=237,slow=42
      comp=Z,59nm,0.5s
INU   Inuyama        11.63 228  Pn     Pn     00 03 32.0 -2.7
INU   Inuyama        11.63 228  P      Pn     00 03 33.4 -1.3
PET   Petropavlovsk  11.88  35c iPN    Pn     00 03 34.6 -3.4
PET                             pmax   pmax
      comp=Z,4µm,6.5s
PET                             pmax   pmax
      comp=Z,3µm,8.1s
PET                             pmax   pmax
      comp=Z,93nm,0.8s
PET                             MLR    MLR
      comp=Z,5µm,14.0s
PET                             MLR    MLR
      comp=Z,6µm,17.0s
PET   Petropavlovsk  11.88  35  Pn     Pn     00 03 34.3 -3.7
PET   Petropavlovsk  11.88  35  P      Pn     00 03 34.9 -3.1
PET   Petropavlovsk  11.88  35 eP      Pn     00 03 34.7 -3.3
PET                             AMB    AMB    00 03 38.2
      comp=Z,50nm,0.6s
PET                             AMB    AMB    00 03 46.2
      comp=Z,4µm,6.5s
PET                             AMS    AMS    00 07 41.0
      comp=Z,34µm,19.0s
PET                             AMS    AMS    00 07 41.0
      comp=Z,10µm,19.0s
MSHR  Mys Shultsa    12.01 270 i PN    Pn     00 03 40.0 +0.2
MSHR                            pmax   pmax
      comp=Z,64nm,1.1s
KLR   Kul'dur        12.18 302  P      Pn     00 03 44.0 +1.8
      comp=Z,25nm,0.8s,baz=112,slow=14,SNR=52
KLR                             LR     LR     00 08 57.5
      comp=Z,6µm,18.7s,baz=117,slow=40
KLR   Kul'dur        12.18 302dePN     Pn     00 03 43.9 +1.8
KLR                             pmax   pmax
      comp=Z,61nm,1.0s
KLR                             MLR    MLR
      comp=Z,7µm,15.0s
KLR   Kul'dur        12.18 302 i P     Pn     00 03 43.9 +1.8
KLR                             AMB    AMB    00 03 49.4
      comp=Z,60nm,1.0s
KLR                             AMS    AMS    00 09 12.4
      comp=Z,7µm,15.0s
JHJ2  Mitsune        12.18 212  Pn     Pn     00 03 39.8 -2.4
JHJ2  Mitsune        12.18 212  P      Pn     00 03 39.8 -2.4
JHJ   Hachijo jima 2 12.19 212  P      Pn     00 03 40.1 -2.2
      comp=Z,132nm,0.3s,baz=288,slow=15,SNR=36
JHJ                             S      Sn     00 05 43.9  -12
      comp=Z,579nm,0.3s,baz=68,slow=21,SNR=12
      comp=Z,340nm,0.3s
MDJ   Mudanjiang     12.91 280  Pn     Pn     00 03 51.8 -0.2
MDJ   Mudanjiang     12.91 280  P      Pn     00 03 51.7 -0.3
MDJ                             PP     PnPn   00 03 59.6 -0.4
MDJ                             S      Sn     00 06 13.7  0.0
MDJ                             pmax   pmax
      comp=Z,86nm,0.9s
MDJ                             pmax   pmax
      comp=Z,640nm,4.0s
MDJ                             LR     LR
      comp=Z,6µm,10.4s
MDJ                             LR     LR
      comp=Z,4µm,12.2s
MDJ                             LR     LR
      comp=Z,4µm,13.5s
BNX   BinXian        14.44 285 ⇓P      Pn     00 04 11.5 -0.9
BNX                             PP     PnPn   00 04 23.3 +2.3
BNX                             sP     P      00 04 33.1  +16
BNX                             S      Sn     00 06 48.4 -2.6
BNX                             sS     S      00 07 06.1 -0.9
BNX                             pmax   pmax
      comp=Z,190nm,0.7s
BNX                             pmax   pmax
      comp=Z,700nm,4.5s
BNX                             LR     LR
      comp=Z,5µm,10.7s
BNX                             LR     LR
      comp=Z,5µm,8.9s
BNX                             LR     LR
      comp=Z,12µm,26.1s
KBG   Krutoberegovo  15.85  32 eP      Pn     00 04 25.8 -4.5
KBG                             AMB    AMB    00 04 33.2
      comp=Z,90nm,0.3s
OKHT  Okhotsk        15.88 352 eP      Pn     00 04 31.0 +0.3
OKHT                            AMB    AMB    00 04 33.0
      comp=Z,550nm,1.0s
CN2   Changchun      15.95 278 eP      Pn     00 04 29.1 -2.5
CN2                            eS      Sn     00 07 23.0 -4.5
CN2                             pmax   pmax
      comp=Z,400nm,7.0s
CN2                             LR     LR
      comp=Z,5µm,19.0s
CN2                             LR     LR
      comp=Z,3µm,19.0s
CN2                             LR     LR
      comp=Z,3µm,17.0s
MA2   Magadan        16.01   6  P      Pn     00 04 31.1 -1.2
      comp=Z,2.1nm,0.3s,baz=192,slow=11,SNR=101
MA2                             LR     LR     00 10 09.2
      comp=Z,5µm,21.5s,baz=189,slow=35
      comp=Z,231nm,1.2s
MA2   Magadan        16.01   6ceP      Pn     00 04 30.5 -1.8
MA2                             pmax   pmax
      comp=Z,708nm,1.7s
MA2                             MLR    MLR
      comp=Z,3µm,16.0s
MA2   Magadan        16.01   6  Pn     Pn     00 04 30.0 -2.3
MA2                             IAmb   IAmb   00 04 33.7
      comp=Z,689nm,1.4s
MA2   Magadan        16.01   6  P      P      00 04 34.2 -0.4
MA2   Magadan        16.01   6 eP      Pn     00 04 30.5 -1.8
KSRS  Korea Array    16.13 254  P      Pn     00 04 33.1 -0.9
      comp=Z,0.8nm,0.3s,baz=61,slow=12,SNR=39
KSRS                            S      Sn     00 07 33.6 +1.5
      comp=Z,37nm,1.0s,baz=63,slow=24,SNR=9.1
KSRS                            LR     LR     00 10 02.9
      comp=Z,3µm,20.5s,baz=55,slow=34
      comp=Z,47nm,1.0s
KSAR  Wonju Array Be 16.16 254  P      Pn     00 04 33.5 -0.9
KSAR  Wonju Array Be 16.16 254  Pn     Pn     00 04 33.5 -0.9
BMKR  Bomnak         16.37 319 eP      P      00 04 38.0 -0.6
BMKR                            AMB    AMB    00 04 39.6
      comp=Z,120nm,0.6s
BMKR                            AMB    AMB    00 04 39.6
      comp=Z,130nm,0.6s
ZEA   Zeya           16.66 314 eP      Pn     00 04 40.7 +0.3
ZEA                            eS      Sn     00 07 35.3 -9.2
ZEA                             pmax   pmax
      comp=E,1µm,5.1s
ZEA                             pmax   pmax
      comp=N,600nm,2.5s
ZEA                             pmax   pmax
      comp=Z,1µm,4.6s
ZEA                             pmax   pmax
      comp=E,90nm,1.0s
ZEA                             pmax   pmax
      comp=N,130nm,0.9s
ZEA                             pmax   pmax
      comp=Z,160nm,1.3s
ZEA                             smax   smax
      comp=E,2µm,6.2s
ZEA                             smax   smax
      comp=N,2µm,7.0s
ZEA                             MLR    MLR
      comp=E,3µm,16.0s
ZEA                             MLR    MLR
      comp=N,2µm,10.0s
ZEA                             MLR    MLR
      comp=Z,3µm,12.0s
ZEA   Zeya           16.66 314 eP      Pn     00 04 40.7 +0.3
ZEA                             AMB    AMB    00 05 00.0
      comp=Z,1µm,4.9s
ZEA                             AMB    AMB    00 05 00.0
      comp=Z,1µm,4.9s
ZEA                             AMS    AMS    00 11 48.0
      comp=Z,2µm,11.0s
ZEA                             AMS    AMS    00 11 48.0
      comp=Z,3µm,11.0s
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JNU	**Nakatsue**	**16.76**	**236**	P	**Pn**	**00 04 41.3**	**-0.6**
	comp=Z,4.5nm,0.3s,baz=44,slow=6.3,SNR=14						
JNU				LR	LR	00 11 49.1	
	comp=Z,3µm,19.0s,baz=39,slow=39						
	comp=Z,128nm,0.9s						
INCN	**Inchon**	**17.02**	**256**	P	**Pn**	**00 04 44.3**	**-0.8**
INCN				pmax	pmax		
	comp=Z,127nm,1.3s						
INCN	**Inchon**	**17.02**	**256**	P	**Pn**	**00 04 44.3**	**-0.8**
TJN	**Taejon**	**17.06**	**251**	*i* P	**P**	**00 04 46.0**	**-0.4**
JCJ	**Chichijima**	**17.14**	**196**	P	**Pn**	**00 04 43.1**	**-3.5**
	comp=Z,107nm,0.3s,baz=44,slow=16,SNR=22						
JCJ				S	Sn	00 07 40.1	-16
	comp=Z,114nm,0.3s,baz=287,slow=19,SNR=3.4						
JCJ	**Chichijima**	**17.14**	**196**		**Pn**	**00 04 45.3**	**-1.2**
JCJ				IAmb	IAmb	00 04 48.6	
	comp=Z,433nm,0.9s						
JCJ	**Chichijima**	**17.14**	**196**	P	**Pn**	**00 04 42.6**	**-4.0**
KROS	**Kirovskiy**	**17.14**	**316**	*e*P	**Pn**	**00 04 45.0**	**-1.5**
KROS				AMB	AMB	00 04 50.0	
	comp=Z,60nm,0.8s						
SNY	**Shenyang**	**17.67**	**272**	⇓P	**P**	**00 04 54.4**	**+1.4**
SNY				pmax	pmax		
	comp=Z,310nm,0.8s						
SNY				pmax	pmax		
	comp=Z,800nm,9.2s						
SNY				LR	LR		
	comp=Z,1µm,14.7s						
SNY				LR	LR		
	comp=Z,2µm,25.0s						
SNY				LR	LR		
	comp=Z,3µm,18.2s						
JSU	**Suzuyama**	**18.16**	**234**	P	**P**	**00 04 57.2**	**-1.4**
SEY	**Seymchan**	**19.46**	**7**	P	**P**	**00 05 12.1**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=184,slow=8.8,SNR=78						
SEY				S	**S**	**00 08 45.8**	**-2.8**
	comp=Z,9.5nm,0.9s,baz=353,slow=18,SNR=1.9						
SEY				LR	LR	00 12 59.2	
	comp=Z,3µm,18.3s,baz=194,slow=38						
	comp=Z,59nm,0.9s						
SEY	**Seymchan**	**19.46**	**7**	⇑*e*P	**P**	**00 05 10.2**	**-2.3**
SEY				pmax	pmax		
	comp=Z,233nm,1.7s						
SEY				MLR	MLR		
	comp=Z,3µm,16.0s						
SHEM	**Shemya Is, Ala**	**19.77**	**54**	P	**Pn**	**00 05 17.5**	**-0.5**
	comp=Z,7.1nm,0.3s,baz=272,slow=3.7,SNR=14						
SHEM				S	**S**	**00 08 48.1**	**-6.9**
	comp=Z,42nm,0.4s,baz=270,slow=22,SNR=9.1						
	comp=Z,557nm,1.1s						
SMY	**Shemya**	**19.77**	**54**	P	**P**	**00 05 16.7**	**+0.7**
SMY				pmax	pmax		
	comp=Z,457nm,1.0s						
SMY	**Shemya**	**19.77**	**54**	P	**P**	**00 05 16.7**	**+0.7**
SMY				IAmb	IAmb	00 05 20.0	
	comp=Z,457nm,1.0s						
HIA	**Hailar**	**19.85**	**296**	*c i*P	**P**	**00 05 15.5**	**-1.4**
HIA				pmax	pmax		
	comp=Z,92nm,0.5s						
HIA	**Hailar**	**19.85**	**296**	IAmb	IAmb	00 05 18.2	
	comp=Z,107nm,0.6s						
DL2	**Dalian**	**20.00**	**265**	P	Pn	00 05 20.2	-0.6
DL2				S	**S**	**00 08 58.1**	**-1.5**
DL2				pmax	pmax		
	comp=Z,210nm,1.2s						
DL2				pmax	pmax		
	comp=Z,790nm,5.2s						
YAK	**Yakutsk**	**21.14**	**336**	P	**P**	**00 05 28.7**	**-1.9**
	comp=Z,101nm,0.5s,baz=303,slow=1.8,SNR=36						
YAK				S	**S**	**00 09 15.4**	**-6.2**
	comp=Z,23nm,0.6s,baz=110,slow=18,SNR=7.4						
YAK				LR	LR	00 14 03.5	
	comp=Z,3µm,19.8s,baz=143,slow=38						
	comp=Z,101nm,0.5s						
YAK	**Yakutsk**	**21.14**	**336**	*e*P	**P**	**00 05 26.9**	**-3.7**
YAK				*e*		00 05 47.7	
YAK				*e*S	**S**	**00 09 15.4**	**-6.2**
YAK				*e*SS	Sn	00 09 37.5	+5.5
YAK				*e*		00 09 38.0	
YAK				*e*		00 16 44.4	
YAK				pmax	pmax		
	comp=Z,226nm,1.1s						
YAK				pmax	pmax		
	comp=E,80nm,1.3s						
YAK				pmax	pmax		
	comp=N,87nm,1.4s						
YAK				smax	smax		
	comp=N,689nm,1.8s						
YAK				smax	smax		
	comp=E,115nm,1.1s						
YAK				MLR	MLR		
	comp=Z,6µm,18.0s						
YAK				MLR	MLR		
	comp=E,2µm,17.0s						
YAK				MLR	MLR		
	comp=N,2µm,15.0s						
YAK	**Yakutsk**	**21.14**	**336**	P	**P**	**00 05 27.4**	**-3.2**
XLT	**XiLinHaoTe**	**22.62**	**281**	⇑*i*P	**P**	**00 05 45.9**	**-0.9**
XLT				pP	pP	00 06 00.4	-0.8
XLT				sP	sP	00 06 06.2	-3.5
XLT				S	**S**	**00 09 43.6**	**-6.1**
XLT				sS	Sn	00 10 05.6	-2.5
XLT				SS	**SnSn**	**00 10 31.4**	**+6.6**
XLT				pmax	pmax		
	comp=N,180nm,0.9s						
XLT				pmax	pmax		
	comp=N,550nm,4.0s						
XLT				LR	LR		
	comp=N,710nm,16.4s						
XLT				LR	LR		
	comp=N,2µm,17.3s						
XLT				LR	LR		
	comp=N,3µm,21.5s						
JOW	**Kunigami**	**22.95**	**229**	P	**P**	**00 05 50.0**	**-0.2**
BJI	**Beijing**	**23.55**	**272**	P	**P**	**00 05 55.5**	**-0.3**
BJI				pP	**pP**	**00 06 09.3**	**-1.8**
BJI				sP	**sP**	**00 06 17.1**	**-2.2**
BJI				S	**S**	**00 10 03.0**	**-1.6**
BJI				sS	Sn	00 10 30.0	-0.1
BJI				pmax	pmax		
	comp=N,100nm,1.4s						
BJI				pmax	pmax		
	comp=N,470nm,3.8s						
BJI				LR	LR		
	comp=N,4µm,19.3s						
BJI				LR	LR		
	comp=N,930nm,20.5s						
BJI				LR	LR		
	comp=N,2µm,20.7s						
BJT	**Baijiatuau**	**23.56**	**272**	P	**P**	**00 05 56.4**	**+0.5**
BJT				pmax	pmax		
	comp=Z,456nm,1.9s						
BJT	**Baijiatuau**	**23.56**	**272**	P	**P**	**00 05 56.4**	**+0.5**
BJT				IAmb	IAmb	00 05 58.0	
	comp=Z,456nm,1.9s						
CIT	**Chita**	**24.07**	**302**	*e*P	**P**	**00 05 59.2**	**-1.3**
CIT				*e*		00 06 42.6	
CIT				pmax	pmax		
	comp=Z,214nm,1.7s						
SSE	**Sheshan**	**24.30**	**248**	P	**P**	**00 06 02.2**	**-0.4**
SSE				S	**S**	**00 10 17.5**	**+0.6**
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,350nm,4.0s						
SSE				LR	LR		
	comp=Z,2µm,12.7s						
SSE				LR	LR		
	comp=Z,2µm,13.1s						
TIA	**Tai'an**	**24.38**	**262**	⇓P	**P**	**00 06 03.7**	**+0.4**
TIA				S	**S**	**00 10 22.9**	**+4.9**
TIA				pmax	pmax		
	comp=Z,190nm,1.0s						
KIWB	**Kanaga Island**	**24.89**	**58**	P	**P**	**00 06 08.0**	**+0.2**
BOD	**Bodaibo**	**25.14**	**316**	*e*P	**P**	**00 06 06.9**	**-3.1**
BOD				pmax	pmax		
	comp=Z,172nm,1.5s						
ADK	**Adak**	**25.18**	**58**	P	**P**	**00 06 10.7**	**+0.2**
ADK				pmax	pmax		
	comp=Z,123nm,1.1s						
ADK	**Adak**	**25.18**	**58**	P	**P**	**00 06 10.7**	**+0.2**
ADK				IAmb	IAmb	00 06 40.8	
	comp=Z,123nm,1.1s						
ADK	**Adak**	**25.18**	**58**	P	**P**	**00 06 11.1**	**+0.6**
NJ2	**Nanjing**	**25.32**	**252**	⇓P	**P**	**00 06 13.4**	**+1.5**
NJ2				pP	**pP**	**00 06 27.5**	**-0.3**
NJ2				sP	**sP**	**00 06 35.0**	**-0.7**
NJ2				PP		00 06 48.0	
NJ2				S	**S**	**00 10 37.6**	**+4.5**
NJ2				sS	**sS**	**00 10 57.8**	**-2.3**
NJ2				SS	**SnSn**	**00 11 30.5**	**-0.2**
NJ2				PcS	**PcS**	**00 13 28.0**	**+4.4**
NJ2				pmax	pmax		
	comp=Z,54nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.0s						
NJ2				LR	LR		
	comp=Z,5µm,14.2s						
NJ2				LR	LR		
	comp=Z,4µm,14.2s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
GSTR	**Great Sitkin T**	**25.59**	**58**	P	**P**	**00 06 13.5**	**-0.7**
HNS	**HongShan**	**25.60**	**267**	⇑P	**P**	**00 06 15.7**	**+1.3**
HNS				pP	**pP**	**00 06 30.5**	**0.0**
HNS				sP	**sP**	**00 06 41.1**	**+2.6**
HNS				PP		00 06 59.5	
HNS				S	**S**	**00 10 39.9**	**+2.4**
HNS				pmax	pmax		
	comp=Z,75nm,0.8s						
HNS				LR	LR		
	comp=Z,1µm,12.4s						
HNS				LR	LR		
	comp=Z,2µm,12.6s						
HNS				LR	LR		
	comp=Z,1µm,12.9s						
BILL	**Bilibino**	**26.32**	**16**	d*e*P	**P**	**00 06 18.2**	**-2.4**
BILL				*i*		00 07 02.1	
BILL				*e*S	**S**	**00 10 46.2**	**-2.0**
BILL				*e*SS	**SnSn**	**00 11 53.6**	**-0.9**
BILL				pmax	pmax		
	comp=Z,59nm,1.5s						
BILL				MLR	MLR		
	comp=Z,2µm,22.0s						
BILL	**Bilibino**	**26.32**	**16**	P	**P**	**00 06 19.0**	**-1.6**
ATKA	**Atka Island**	**26.74**	**58**	P	**P**	**00 06 24.9**	**+0.4**
TIY	**Taiyuan**	**27.12**	**269**	⇓P	**P**	**00 06 33.0**	**+4.8**
TIY				pP	**pP**	**00 06 45.6**	**+1.2**
TIY				sP	**sP**	**00 06 54.6**	**+2.3**
TIY				S	**S**	**00 11 02.2**	**+0.5**
TIY				pmax	pmax		
	comp=Z,36nm,0.5s						
TIY				pmax	pmax		
	comp=Z,250nm,3.8s						
TIY				LR	LR		
	comp=Z,790nm,13.1s						
TIY				LR	LR		
	comp=Z,1µm,10.7s						
TIY				LR	LR		
	comp=Z,1µm,17.2s						
BTO	**Baotou**	**27.82**	**277**	*e*P	**P**	**00 06 36.0**	**+1.6**
BTO				S	**S**	**00 11 07.5**	**-5.1**
BTO				LR	LR		
	comp=Z,8µm,15.2s						
BTO				LR	LR		
	comp=Z,5µm,14.7s						
ULN	**Ulaanbaatar**	**28.29**	**293**	*ce*P	**P**	**00 06 39.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,402nm,1.7s						
ULN	**Ulaanbaatar**	**28.29**	**293**	P	**P**	**00 06 39.1**	**+0.5**
ULN				IAmb	IAmb	00 06 41.6	
	comp=Z,288nm,1.2s						
ULN	**Ulaanbaatar**	**28.29**	**293**	P	**P**	**00 06 39.8**	**+1.2**
ULN	**Ulaanbaatar**	**28.29**	**293**	*e*P	**P**	**00 06 39.1**	**+0.5**
LYN	**LuoYang**	**28.51**	**263**	⇓P	**P**	**00 06 41.3**	**+0.8**
LYN				pP	pP	00 06 55.3	-1.4
LYN				PP	**PnPn**	**00 07 36.7**	**+3.3**
LYN				S	**S**	**00 11 23.4**	**0.0**
LYN				pmax	pmax		
	comp=Z,60nm,0.8s						
LYN				pmax	pmax		
	comp=Z,1µm,6.6s						
LYN				LR	LR		
	comp=Z,2µm,14.9s						
LYN				LR	LR		
	comp=Z,2µm,15.9s						
LYN				LR	LR		
	comp=Z,1µm,18.2s						
SONM	**Songino Array**	**28.73**	**293**	P	**P**	**00 06 43.4**	**+0.8**
	comp=Z,109nm,1.0s,baz=84,slow=7.5,SNR=275						
SONM				S	**S**	**00 11 29.5**	**+2.6**
	comp=Z,2.0nm,0.9s,baz=52,slow=21,SNR=1.9						
SONM				LR	LR	00 19 19.9	
	comp=Z,3µm,18.3s,baz=86,slow=39						
	comp=Z,109nm,1.0s						
SONM	**Songino Array**	**28.73**	**293**	P	**P**	**00 06 43.1**	**+0.5**
SONM				IAmb	IAmb	00 06 45.5	
	comp=Z,248nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**28.90**	**140**	T	T	00 37 39.3	
	baz=330,slow=75,SNR=1410						
H11N1	**WAKE ISLAND Hy**	**28.91**	**140**	T	T	00 37 40.3	
	baz=330,slow=75,SNR=1143						
H11N3	**WAKE ISLAND Hy**	**28.92**	**140**	T	T	00 37 40.7	
	baz=330,slow=75,SNR=1075						
WAKE	**Wake Island**	**29.18**	**141**	P	**P**	**00 06 46.5**	**0.0**
WAKE				IAmb	IAmb	00 06 47.6	
	comp=Z,159nm,0.9s						
WHN	**Wuhan**	**29.32**	**255**	⇑P	**P**	**00 06 48.7**	**+0.9**
WHN				pP	**pP**	**00 07 04.6**	**+0.6**
WHN				pmax	pmax		
	comp=Z,68nm,0.6s						
WHN				LR	LR		
	comp=Z,7µm,14.5s						
WHN				LR	LR		
	comp=Z,5µm,16.4s						
WHN				LR	LR		
	comp=Z,4µm,18.6s						
TIXI	**Tiksi**	**29.45**	**348**	P	**P**	**00 06 45.2**	**-3.3**
	comp=Z,12nm,0.6s,baz=90,slow=22,SNR=43						
TIXI				LR	LR	00 19 24.7	
	comp=Z,1µm,18.9s,baz=180,slow=38						
TIXI	**Tiksi**	**29.45**	**348**	*c i*P	**P**	**00 06 45.7**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s						
TIXI	**Tiksi**	**29.45**	**348**	P	**P**	**00 06 46.1**	**-2.4**
SPIA	**Saint Paul Isl**	**29.55**	**48**	P	**P**	**00 06 47.7**	**-1.7**
	baz=261						
YULB	**Yu-li**	**29.60**	**235**	P	**P**	**00 06 51.0**	**+0.7**
IRK	**Irkutsk**	**29.79**	**302**	*e*P	**P**	**00 06 50.9**	**-0.8**
IRK				*e*		00 13 48.8	
IRK				pmax	pmax		
	comp=Z,120nm,1.2s						
IRK	**Irkutsk**	**29.79**	**302**	*e*P	**P**	**00 06 50.9**	**-0.8**
H11S1	**WAKE ISLAND Hy**	**29.87**	**141**	T	T	00 38 45.5	
	baz=331,slow=76,SNR=1867						
H11S3	**WAKE ISLAND Hy**	**29.88**	**141**	T	T	00 38 59.8	
	baz=331,slow=76,SNR=1555						
H11S2	**WAKE ISLAND Hy**	**29.89**	**141**	T	T	00 38 52.5	
	baz=331,slow=76,SNR=1393						
TPUB	**Ta-pu**	**30.07**	**236**	P	**P**	**00 06 54.3**	**-0.1**
TPUB					**pP**	**00 07 11.6**	**+1.3**
TPUB				IAmb	IAmb	00 07 22.5	
	comp=Z,115nm,1.3s						
QZH	**Quanzhou**	**30.13**	**241**	⇓*i*P	P	00 07 07.1	+12
QZH				S	**S**	**00 11 48.6**	**-0.2**
QZH				sS	sS	00 12 16.9	+0.8
QZH				pmax	pmax		
	comp=Z,44nm,1.3s						
QZH				pmax	pmax		
	comp=Z,610nm,3.3s						
QZH				LR	LR		
	comp=N,800nm,9.9s						
QZH				LR	LR		
	comp=E,1µm,13.7s						
QZH				LR	LR		
	comp=Z,1µm,13.7s						
ZAK	**Zakamensk**	**30.50**	**298**	*e*P	**P**	**00 06 58.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,78nm,1.0s						
ZAK	**Zakamensk**	**30.50**	**298**	*e*P	**P**	**00 06 58.2**	**0.0**
GAMB	**Gambell**	**30.58**	**35**	P	**P**	**00 06 58.2**	**-0.3**
GAMB				IAmb	IAmb	00 07 01.3	
	comp=Z,180nm,1.4s						
GAMB	**Gambell**	**30.58**	**35**	P	**P**	**00 06 58.9**	**+0.4**
	baz=248,SNR=7.2						
GAMB				S	**S**	**00 11 57.3**	**+2.0**
	baz=248						
XAN	**Xi'an**	**31.32**	**265**	P	**P**	**00 07 06.2**	**+0.8**
XAN				pP	pP	00 07 24.3	+2.6
XAN				pmax	pmax		
	comp=Z,54nm,0.9s						
XAN				pmax	pmax		
	comp=Z,250nm,3.5s						
XAN				LR	LR		
	comp=Z,1µm,25.0s						
XAN				LR	LR		
	comp=Z,2µm,20.0s						
XAN				LR	LR		
	comp=Z,2µm,25.0s						
UNV	**Unalaska Valle**	**31.42**	**55**	P	**P**	**00 07 06.2**	**+0.1**
	baz=270						
MOY	**Mondy**	**31.84**	**301**	*e*P	**P**	**00 07 09.9**	**0.0**
MOY				pmax	pmax		
	comp=Z,135nm,1.5s						
MOY	**Mondy**	**31.84**	**301**	*e*P	**P**	**00 07 09.9**	**0.0**
MIDW	**Midway**	**32.08**	**107**	P	**P**	**00 07 11.9**	**-0.1**
MIDW	**Midway**	**32.08**	**107**	P	**P**	**00 07 09.7**	**-2.3**
TNA	**Tin City**	**32.73**	**33**	P	**P**	**00 07 18.3**	**+0.9**
	baz=250						
TNA				S	**S**	**00 12 31.5**	**+2.7**
	baz=250						
ENH	**Enshi**	**32.91**	**259**	P	**P**	**00 07 19.0**	**-0.4**
ENH				IAmb	IAmb	00 07 36.9	
	comp=Z,71nm,1.1s						
FALS	**False Pass**	**33.22**	**53**	P	**P**	**00 07 21.3**	**-0.4**
	baz=271						
ANM	**Nome**	**33.46**	**35**	P	**P**	**00 07 24.9**	**+1.1**
	baz=254,SNR=64						
ANM				S	**S**	**00 12 43.6**	**+3.4**
	baz=254						
LZH	**Lanzhou**	**34.04**	**272**	⇑P	**P**	**00 07 31.2**	**+1.9**
LZH				pP	pP	00 07 45.1	-0.6
LZH				sP	sP	00 07 50.2	-3.4
LZH				S	**S**	**00 12 46.2**	**-3.8**
LZH				sS	sS	00 13 17.4	-0.1
LZH				pmax	pmax		
	comp=Z,300nm,1.3s						
LZH				pmax	pmax		
	comp=Z,460nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,13.2s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
KNGR	**Kungurtug, Tuv**	**34.13**	**300**	*i* P	**P**	**00 07 30.3**	**+0.4**
HKPS	**Hong Kong Po S**	**34.88**	**243**	P	**P**	**00 07 36.8**	**+0.4**
HKPS					**pP**	**00 07 54.8**	**+2.0**
HKPS				IAmb	IAmb	00 07 56.5	
	comp=Z,124nm,1.4s						
SDPT	**Sand Point**	**34.89**	**52**	P	**P**	**00 07 37.1**	**+0.9**
SDPT				IAmb	IAmb	00 08 13.1	
	comp=Z,94nm,1.4s						
SDPT	**Sand Point**	**34.89**	**52**	P	**P**	**00 07 36.6**	**+0.4**
	baz=273						
SDPT				S	**S**	**00 13 02.5**	**+0.2**
	baz=273						
GULI	**GuiLin**	**35.34**	**251**	P	**P**	**00 07 40.9**	**+0.5**
GULI				S	**S**	**00 13 10.9**	**+1.1**
GULI				pmax	pmax		
	comp=Z,20nm,1.1s						
GULI				LR	LR		
	comp=Z,2µm,20.6s						
GULI				LR	LR		
	comp=Z,2µm,22.8s						
GULI				LR	LR		
	comp=Z,2µm,15.5s						
RDOG	**Red Dog Mine**	**35.42**	**30**	P	**P**	**00 07 39.4**	**-1.3**
	baz=252,SNR=29						
RDOG				S	**S**	**00 13 10.1**	**-0.1**
	baz=252						
GTA	**Gaotai**	**35.56**	**280**	⇑P	**P**	**00 07 44.2**	**+1.8**
GTA				pP	pP	00 07 59.8	+0.9
GTA				sP	sP	00 08 07.7	+0.9
GTA				S	**S**	**00 13 11.8**	**-1.5**
GTA				sS	sS	00 13 40.0	-0.9
GTA				ScP	**ScP**	**00 13 50.3**	**+0.5**
GTA				ScS	**ScS**	**00 17 55.6**	**+0.8**
GTA				pmax	pmax		
	comp=Z,54nm,1.1s						
GTA				pmax	pmax		
	comp=Z,240nm,8.4s						
GTA				LR	LR		
	comp=Z,2µm,18.3s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,21.1s						
CD2	**Chengdu**	**36.67**	**265**	P	**P**	**00 07 51.8**	**0.0**
CD2				pP	pP	00 08 07.0	-1.3
CD2				S	**S**	**00 13 29.7**	**-0.5**
CD2				sS	sS	00 13 56.6	-1.2
CD2				pmax	pmax		
	comp=Z,160nm,0.9s						
CD2				LR	LR		
	comp=Z,150nm,18.6s						
CD2				LR	LR		
	comp=Z,1µm,15.7s						
CD2				LR	LR		
	comp=Z,980nm,16.7s						
GCSA	**Galena City Sc**	**37.08**	**36**	P	**P**	**00 07 54.8**	**+0.1**
	baz=263						
GCSA				S	**S**	**00 13 35.9**	**+0.4**
	baz=263						
GYA	**Guiyang**	**37.17**	**256**	⇑P	**P**	**00 07 56.3**	**+0.1**
GYA				pP	pP	00 08 10.8	-1.9
GYA				PP	**PP**	**00 09 19.3**	**-2.7**
GYA				PcP	**PcP**	**00 10 16.7**	**+1.7**
GYA				S	**S**	**00 13 39.2**	**+1.1**
GYA				pmax	pmax		
	comp=Z,28nm,0.9s						
GYA				pmax	pmax		
	comp=Z,98nm,3.5s						
GYA				LR	LR		
	comp=Z,730nm,16.3s						
GYA				LR	LR		
	comp=Z,540nm,13.2s						
GYA				LR	LR		
	comp=Z,1µm,15.9s						
N18K	**Kilae Creek**	**37.25**	**43**	P	**P**	**00 07 57.8**	**+1.4**
	baz=269,SNR=79						
N18K				S	**S**	**00 13 40.4**	**+2.1**
	baz=269						
TGY	**Tagaytay City**	**37.26**	**226**	P	**P**	**00 07 57.4**	**+0.5**
	comp=Z,123nm,0.3s,baz=246,slow=1.1,SNR=6.3						
	comp=Z,123nm,0.3s						
TTA	**Tatalina**	**37.29**	**39**	P	**P**	**00 07 57.5**	**+0.8**
TTA				pmax	pmax		
	comp=Z,150nm,1.4s						
TTA	**Tatalina**	**37.29**	**39**	P	**P**	**00 07 57.5**	**+0.8**
TTA				IAmb	IAmb	00 07 59.9	
	comp=Z,150nm,1.4s						
TTA	**Tatalina**	**37.29**	**39**	P	**P**	**00 07 57.4**	**+0.7**
	baz=266,SNR=92						
TTA				S	**S**	**00 13 38.8**	**-0.2**
	baz=266						
SVW2	**Sparrevohn**	**37.41**	**42**	P	**P**	**00 07 58.6**	**+0.9**
SVW2				IAmb	IAmb	00 08 26.9	
	comp=Z,105nm,1.1s						
P18K	**Big Mountain,**	**37.59**	**45**	P	**P**	**00 07 59.9**	**+0.7**
	baz=271						
P18K				S	**S**	**00 13 45.5**	**+1.9**
	baz=271						
O18K	**Koktuh Hills**	**37.59**	**44**	P	**P**	**00 07 59.4**	**+0.1**
	baz=271						
O18K				S	**S**	**00 13 46.3**	**+2.8**
	baz=271						
CHIR	**Chirikof Islan**	**37.60**	**51**	P	**P**	**00 07 59.6**	**+0.2**
L19K	**White Mountain**	**37.78**	**40**	P	**P**	**00 08 01.6**	**+0.7**
L19K				IAmb	IAmb	00 08 29.7	
	comp=Z,58nm,1.2s						
L19K	**White Mountain**	**37.78**	**40**	P	**P**	**00 08 01.5**	**+0.7**
	baz=268,SNR=30						
L19K				S	**S**	**00 13 47.9**	**+1.5**
	baz=268						
PATS	**Pohnpei**	**37.94**	**162**	P	**P**	**00 08 02.2**	**-0.3**
N19K	**Bonanza Creek**	**37.94**	**43**	P	**P**	**00 08 03.3**	**+1.0**
N19K				IAmb	IAmb	00 08 32.0	
	comp=Z,102nm,1.1s						
N19K	**Bonanza Creek**	**37.94**	**43**	P	**P**	**00 08 03.2**	**+0.9**
	baz=270						
N19K				S	**S**	**00 13 51.4**	**+2.4**
	baz=270						
M19K	**Big River Lodg**	**38.00**	**41**	IAmb	IAmb	00 08 58.0	
	comp=Z,58nm,1.2s						

M19K	**Big River Lodg**	**38.00**	**41**	P	**P**	**00 08 03.5**	**+0.9**
	baz=269						
M19K				S	**S**	**00 13 51.3**	**+1.7**
	baz=269						
O19K	**Port Alsworth**	**38.03**	**44**	P	**P**	**00 08 04.4**	**+1.5**
O19K				IAmb	IAmb	00 08 07.7	
	comp=Z,45nm,0.8s						
O19K	**Port Alsworth**	**38.03**	**44**	P	**P**	**00 08 03.5**	**+0.6**
	baz=271						
O19K				S	**S**	**00 13 53.3**	**+3.2**
	baz=271						
K20K	**Telida**	**38.19**	**38**	P	**P**	**00 08 04.8**	**+0.6**
K20K				ScP	**ScP**	**00 13 58.9**	**-0.1**
K20K	**Telida**	**38.19**	**38**	P	**P**	**00 08 05.2**	**+0.9**
	baz=267,SNR=69						
K20K				S	**S**	**00 13 54.8**	**+2.3**
	baz=267						
J20K	**Nowinta River**	**38.20**	**37**	P	**P**	**00 08 05.2**	**+0.9**
	baz=266,SNR=146						
J20K				S	**S**	**00 13 54.6**	**+2.0**
	baz=266						
L20K	**Farewell, AK**	**38.25**	**40**	P	**P**	**00 08 05.6**	**+0.9**
	baz=269,SNR=45						
L20K				S	**S**	**00 13 55.3**	**+1.9**
	baz=269						
SII	**Sitkinak Islan**	**38.33**	**49**	P	**P**	**00 08 06.0**	**+0.5**
SII				IAmb	IAmb	00 08 35.9	
	comp=Z,121nm,1.1s						
SII	**Sitkinak Islan**	**38.33**	**49**	P	**P**	**00 08 03.7**	**-1.8**
	baz=276						
SII	**Sitkinak Islan**	**38.33**	**49**	P	**P**	**00 08 06.3**	**+0.8**
Q19K	**Cape Douglas,**	**38.43**	**46**	P	**P**	**00 08 06.3**	**0.0**
Q19K				IAmb	IAmb	00 08 15.9	
	comp=Z,74nm,0.7s						
Q19K	**Cape Douglas,**	**38.43**	**46**	P	**P**	**00 08 05.8**	**-0.5**
	baz=273,SNR=20						
Q19K				S	**S**	**00 13 59.0**	**+2.8**
	baz=273						
A21K	**Barrow**	**38.46**	**25**	P	**P**	**00 08 06.0**	**-0.4**
	baz=255,SNR=20						
A21K				S	**S**	**00 13 54.8**	**-1.5**
	baz=255						
IMAR	**Indian Mountai**	**38.52**	**34**	P	**P**	**00 08 07.5**	**+0.5**
IMAR					**S**	**00 13 59.6**	**+2.2**
P19K	**Oil Pt**	**38.60**	**44**	P	**P**	**00 08 08.7**	**+1.0**
P19K				IAmb	IAmb	00 08 43.1	
	comp=Z,126nm,1.5s						
P19K	**Oil Pt**	**38.60**	**44**	P	**P**	**00 08 07.4**	**-0.3**
	baz=273,SNR=7.2						
P19K				S	**S**	**00 13 58.0**	**-0.8**
	baz=273						
OHAK	**Old Harbor**	**38.75**	**48**	P	**P**	**00 08 09.7**	**+0.8**
OHAK				IAmb	IAmb	00 08 36.7	
	comp=Z,125nm,1.0s						
OHAK	**Old Harbor**	**38.75**	**48**	P	**P**	**00 08 08.5**	**-0.4**
	baz=276,SNR=9.6						
H21K	**Melozitna Rive**	**38.88**	**35**		**ScP**	**00 14 02.1**	**+0.5**
H21K	**Melozitna Rive**	**38.88**	**35**	P	**P**	**00 08 11.0**	**+1.0**
	baz=266,SNR=454						
H21K				S	**S**	**00 14 04.9**	**+2.0**
	baz=266						
O20K	**Slope Mountain**	**38.88**	**44**	P	**P**	**00 08 09.8**	**-0.3**
	baz=273,SNR=24						
O20K				S	**S**	**00 14 02.8**	**-0.3**
	baz=273						
CHUM	**Lake Minchumin**	**38.99**	**38**	P	**P**	**00 08 12.4**	**+1.5**
	baz=268,SNR=90						
CHUM				S	**S**	**00 14 07.2**	**+2.7**
	baz=268						
PPLA	**Purkeypile**	**39.03**	**39**	P	**P**	**00 08 12.5**	**+1.0**
PPLA	**Purkeypile**	**39.03**	**39**	P	**P**	**00 08 12.9**	**+1.5**
	baz=270,SNR=36						
PPLA				S	**S**	**00 14 07.6**	**+2.1**
	baz=270						
SPCR	**Spurr Chakacha**	**39.05**	**42**	P	**P**	**00 08 12.7**	**+1.2**
	baz=272,SNR=24						
SPCR				S	**S**	**00 14 07.1**	**+1.6**
	baz=272						
KDAK	**Kodiak Island**	**39.07**	**47**	P	**P**	**00 08 11.5**	**-0.2**
	comp=Z,44nm,0.5s,baz=300,slow=4.5,SNR=60						
	comp=Z,44nm,0.5s						
KDAK	**Kodiak Island**	**39.07**	**47**	*i* P	**P**	**00 08 11.9**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,162nm,1.1s						
KDAK	**Kodiak Island**	**39.07**	**47**	P	**P**	**00 08 11.5**	**-0.2**
KDAK	**Kodiak Island**	**39.07**	**47**	P	**P**	**00 08 11.1**	**-0.6**
	baz=276						
KDAK				S	**S**	**00 14 06.1**	**+0.2**
	baz=276						
CAST	**Castle Rocks**	**39.09**	**38**	P	**P**	**00 08 12.9**	**+1.2**
	baz=269,SNR=131						
CAST				S	**S**	**00 14 08.3**	**+2.2**
	baz=269						
I21K	**Tanana**	**39.19**	**36**	P	**P**	**00 08 13.9**	**+1.3**
	baz=267,SNR=67						
I21K				S	**S**	**00 14 09.7**	**+2.2**
	baz=267						
HOM	**Homer**	**39.40**	**44**	P	**P**	**00 08 15.0**	**+0.6**
HOM	**Homer**	**39.40**	**44**	P	**P**	**00 08 14.7**	**+0.3**
	baz=274						
HOM				S	**S**	**00 14 10.1**	**-0.7**
	baz=274						
NRIK	**Noril'sk**	**39.41**	**331**	P	**P**	**00 08 12.6**	**-1.7**
	comp=Z,7.7nm,0.3s,baz=103,slow=7.4,SNR=32						
NRIK				PP	**PnPn**	**00 09 49.3**	**+0.3**
	comp=Z,14nm,0.8s,baz=107,slow=12,SNR=4.9						
NRIK				PcP	**PcP**	**00 10 22.0**	**+1.0**
	comp=Z,12nm,0.4s,baz=44,slow=1.0,SNR=5.2						
NRIK				LR	LR	00 27 25.5	
	comp=Z,1µm,19.4s,baz=96,slow=40						
	comp=Z,7.7nm,0.3s						
NRIK	**Noril'sk**	**39.41**	**331**	*ce*P	**P**	**00 08 12.2**	**-2.1**
NRIK				pmax	pmax		
	comp=Z,55nm,1.5s						
NRIK				MLR	MLR		
	comp=Z,2µm,16.0s						
NRIK	**Noril'sk**	**39.41**	**331**	P	**P**	**00 08 11.7**	**-2.6**
NRIK				IAmb	IAmb	00 08 14.6	
	comp=Z,83nm,1.6s						
CAPN	**Captain Cook N**	**39.58**	**43**	P	**P**	**00 08 17.4**	**+1.6**
CAPN	**Captain Cook N**	**39.58**	**43**	P	**P**	**00 08 16.2**	**+0.4**
	baz=273						
BPAW	**Bear Paw Mtn.**	**39.59**	**37**	P	**P**	**00 08 16.8**	**+0.9**
BPAW	**Bear Paw Mtn.**	**39.59**	**37**	P	**P**	**00 08 16.7**	**+0.9**
	baz=269,SNR=94						
BPAW				S	**S**	**00 14 15.6**	**+2.2**
	baz=269						
CNPM	**China Poot**	**39.62**	**44**	P	**P**	**00 08 16.1**	**-0.1**
CNPM				IAmb	IAmb	00 08 44.3	
	comp=Z,65nm,0.8s						
BRLK	**Bradley Lake**	**39.78**	**44**	IAmb	IAmb	00 08 46.1	
	comp=Z,73nm,1.0s						
BRSE	**Bradley Lake S**	**39.85**	**44**	P	**P**	**00 08 18.3**	**+0.2**
	baz=275,SNR=12						
TRF	**Thorofare Moun**	**39.90**	**38**	IAmb	IAmb	00 08 36.4	
	comp=Z,61nm,1.1s						
TRF	**Thorofare Moun**	**39.90**	**38**	P	**P**	**00 08 18.7**	**+0.1**
	baz=271						
TRF				S	**S**	**00 14 20.1**	**+1.7**
	baz=271						
CUT	**Chulitna**	**39.93**	**40**	P	**P**	**00 08 19.4**	**+0.7**
CUT				IAmb	IAmb	00 08 31.8	
	comp=Z,149nm,1.2s						
CUT	**Chulitna**	**39.93**	**40**	P	**P**	**00 08 18.4**	**-0.2**
	baz=272						
QIZ	**Qiongzhong**	**39.99**	**244**	P	**P**	**00 08 20.5**	**+0.8**
QIZ				pP	**pP**	**00 08 36.8**	**+0.4**
QIZ				PcP	**PcP**	**00 10 25.9**	**+2.2**
QIZ				S	**S**	**00 14 22.4**	**+2.0**
QIZ				sS	**sS**	**00 14 51.8**	**+3.5**
QIZ				LR	LR		
	comp=Z,2µm,15.1s						
QIZ				LR	LR		
	comp=Z,2µm,15.1s						
QIZ				LR	LR		
	comp=Z,880nm,13.7s						
M22K	**Willow**	**40.02**	**41**	P	**P**	**00 08 20.6**	**+1.1**
M22K				IAmb	IAmb	00 09 05.9	
	comp=Z,52nm,0.8s						
M22K	**Willow**	**40.02**	**41**	P	**P**	**00 08 19.9**	**+0.4**
	baz=273						
M22K				S	**S**	**00 14 18.5**	**-1.5**
	baz=273						
COLD	**Coldfoot**	**40.04**	**32**	P	**P**	**00 08 20.4**	**+0.8**
	baz=266,SNR=222						
COLD				S	**S**	**00 14 21.5**	**+1.4**
	baz=266						
H23K	**Yukon River**	**40.23**	**35**	P	**P**	**00 08 22.7**	**+1.5**
	baz=268,SNR=314						
H23K				S	**S**	**00 14 25.3**	**+2.2**
	baz=268						
RC01	**Rabbit Creek A**	**40.25**	**42**	P	**P**	**00 08 21.5**	**+0.1**
RC01				IAmb	IAmb	00 08 23.9	
	comp=Z,87nm,0.7s						
RC01	**Rabbit Creek A**	**40.25**	**42**	P	**P**	**00 08 21.3**	**-0.1**
	baz=274,SNR=20						
RC01				S	**S**	**00 14 21.4**	**-2.0**
	baz=274						
I23K	**Minto, Yukon-K**	**40.30**	**36**	P	**P**	**00 08 22.9**	**+1.2**
	baz=269,SNR=174						
I23K				S	**S**	**00 14 26.4**	**+2.4**
	baz=269						
O22K	**Cooper Landing**	**40.30**	**43**	S	**S**	**00 14 22.4**	**-1.7**
	baz=275						
TOLK	**Toolik Lake Re**	**40.38**	**30**	P	**P**	**00 08 22.9**	**+0.5**
TOLK	**Toolik Lake Re**	**40.38**	**30**	P	**P**	**00 08 23.2**	**+0.7**
	baz=265,SNR=302						
TOLK				S	**S**	**00 14 26.2**	**+0.9**
	baz=265						
NEA2	**Nenana**	**40.42**	**37**	IAmb	IAmb	00 08 25.5	
	comp=Z,85nm,0.8s						
NEA2	**Nenana**	**40.42**	**37**	P	**P**	**00 08 23.7**	**+0.9**
	baz=270,SNR=94						
NEA2				S	**S**	**00 14 27.4**	**+1.5**
	baz=270						
SEW	**Seward**	**40.47**	**43**	P	**P**	**00 08 23.2**	**0.0**
SEW				IAmb	IAmb	00 08 29.0	
	comp=Z,87nm,0.9s						
SEW	**Seward**	**40.47**	**43**	P	**P**	**00 08 22.8**	**-0.4**
	baz=275						
SEW				S	**S**	**00 14 23.3**	**-3.3**
	baz=275						
MCK	**McKinley**	**40.49**	**38**	IAmb	IAmb	00 08 54.3	
	comp=Z,77nm,1.0s						
MCK	**McKinley**	**40.49**	**38**	P	**P**	**00 08 23.6**	**+0.2**
	baz=272,SNR=42						
MCK				S	**S**	**00 14 26.7**	**-0.4**
	baz=272						
PMR	**Palmer**	**40.51**	**41**	P	**P**	**00 08 22.9**	**-0.5**
	baz=274,SNR=13						
PMR				S	**S**	**00 14 25.4**	**-1.7**
	baz=274						
GOMU	**GeErMu**	**40.51**	**278**	P	**P**	**00 08 25.4**	**+1.1**
GOMU				sP	pP	00 08 41.0	0.0
GOMU				PcP	**PcP**	**00 10 27.5**	**+1.8**
GOMU				S	**S**	**00 14 24.8**	**-3.8**
GOMU				sS	sS	00 14 54.4	-2.1
GOMU				ScS	**ScS**	**00 18 16.4**	**-7.3**
GOMU				pmax	pmax		
	comp=Z,57nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,150nm,3.7s						
GOMU				LR	LR		
	comp=Z,1µm,18.2s						
GOMU				LR	LR		
	comp=Z,1µm,17.5s						
GOMU				LR	LR		
	comp=Z,1µm,17.3s						
RND	**Reindeer**	**40.54**	**38**	P	**P**	**00 08 24.0**	**+0.1**
RND				pmax	pmax		
	comp=Z,78nm,1.0s						
RND	**Reindeer**	**40.54**	**38**	P	**P**	**00 08 24.0**	**+0.1**
RND				IAmb	IAmb	00 08 54.0	
	comp=Z,78nm,1.0s						
GHO	**Glory Hole Cre**	**40.59**	**41**	IAmb	IAmb	00 08 35.4	
	comp=Z,63nm,0.8s						
PZH	**PanZhiHua**	**40.64**	**260**	P	**P**	**00 08 25.3**	**+0.1**
PZH				pP	**pP**	**00 08 40.7**	**-1.2**
PZH				S	**S**	**00 14 28.0**	**-2.2**
PZH				sS	**sS**	**00 14 57.8**	**-0.3**
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,490nm,3.5s						
PZH				LR	LR		
	comp=Z,3µm,18.0s						
PZH				LR	LR		
	comp=Z,2µm,19.0s						
PZH				LR	LR		
	comp=Z,3µm,20.2s						
WAT1	**Susitna Watana**	**40.70**	**39**	P	**P**	**00 08 25.0**	**-0.2**
	baz=273						
WAT1				S	**S**	**00 14 28.9**	**-1.3**
	baz=273						
KMI	**Kunming**	**40.77**	**258**	⇓P	**P**	**00 08 26.8**	**+0.4**
KMI				pP	pP	00 08 43.1	0.0
KMI				ScP	**ScP**	**00 14 11.7**	**+1.8**
KMI				S	**S**	**00 14 32.5**	**+0.1**
KMI				sS	sS	00 14 59.4	-0.9
KMI				SS	**SS**	**00 17 28.2**	**-7.2**
KMI				pmax	pmax		
	comp=Z,28nm,1.3s						
KMI				pmax	pmax		
	comp=Z,160nm,3.5s						
KMI				LR	LR		
	comp=Z,880nm,18.1s						
KMI				LR	LR		
	comp=Z,520nm,13.0s						
KMI				LR	LR		
	comp=Z,1µm,17.2s						
KNK	**Knik Glacier**	**40.84**	**41**	P	**P**	**00 08 26.6**	**+0.3**
KNK				IAmb	IAmb	00 08 57.5	
	comp=Z,99nm,1.0s						
KNK	**Knik Glacier**	**40.84**	**41**	P	**P**	**00 08 26.4**	**+0.1**
	baz=275,SNR=39						
KNK				S	**S**	**00 14 31.7**	**-0.5**
	baz=275						
WRH	**Wood River Hil**	**40.85**	**37**	IAmb	IAmb	00 08 31.8	
	comp=Z,142nm,1.2s						
SML	**Sawmill**	**40.87**	**41**	P	**P**	**00 08 26.7**	**+0.2**
	baz=274,SNR=62						
SML				S	**S**	**00 14 32.0**	**-0.8**
	baz=274						
H24K	**Noodor Dome**	**40.92**	**35**	P	**P**	**00 08 28.2**	**+1.2**
H24K	**Noodor Dome**	**40.92**	**35**	P	**P**	**00 08 28.3**	**+1.4**
	baz=270,SNR=164						
H24K				S	**S**	**00 14 37.2**	**+3.8**
	baz=270						
TCOL	**CIGO, UAF Yank**	**40.94**	**36**	P	**P**	**00 08 27.8**	**+0.9**
	baz=271,SNR=8.9						
TCOL				S	**S**	**00 14 35.2**	**+1.7**
	baz=271						
COLA	**College**	**40.94**	**36**	*c i*P	**P**	**00 08 27.7**	**+0.7**
COLA				pmax	pmax		
	comp=Z,260nm,1.5s						
COLA	**College**	**40.94**	**36**	P	**P**	**00 08 28.4**	**+1.4**
COLA	**College**	**40.94**	**36**	P	**P**	**00 08 27.5**	**+0.5**
	baz=271						
COLA				S	**S**	**00 14 35.2**	**+1.7**
	baz=271						
PWL	**Port Wells**	**40.95**	**42**	IAmb	IAmb	00 08 29.6	
	comp=Z,69nm,0.8s						
PWL	**Port Wells**	**40.95**	**42**	P	**P**	**00 08 26.6**	**-0.6**
	baz=275						
PWL				S	**S**	**00 14 32.9**	**-0.9**
	baz=275						
WAT6	**Susitna Watana**	**41.09**	**40**	P	**P**	**00 08 28.4**	**-0.1**
	baz=274,SNR=32						
WAT6				S	**S**	**00 14 35.4**	**-0.8**
	baz=274						
POKR	**Poker Plat Res**	**41.11**	**36**	P	**P**	**00 08 29.5**	**+1.0**
POKR	**Poker Plat Res**	**41.11**	**36**	P	**P**	**00 08 29.5**	**+1.0**
	baz=271,SNR=77						
POKR				S	**S**	**00 14 37.7**	**+1.5**
	baz=271						
M23K	**Glacier View**	**41.16**	**41**	P	**P**	**00 08 29.0**	**+0.1**
	baz=275,SNR=23						
M23K				S	**S**	**00 14 37.3**	**+0.4**
	baz=275						
DHY	**Denali Highway**	**41.23**	**39**	IAmb	IAmb	00 08 32.9	
	comp=Z,262nm,1.6s						
DHY	**Denali Highway**	**41.23**	**39**	P	**P**	**00 08 29.4**	**-0.2**
	baz=274,SNR=75						
DHY				S	**S**	**00 14 36.5**	**-1.7**
	baz=274						
ZAA0	**Zalesovo Array**	**41.23**	**307**	P	**P**	**00 08 29.5**	**-0.1**
ZAA0				IAmb	IAmb	00 08 31.5	
	comp=Z,162nm,1.4s						
ZALV	**Zalesovo Beam**	**41.23**	**307**	P	**P**	**00 08 29.4**	**-0.2**
	comp=Z,28nm,0.4s,baz=72,slow=6.9,SNR=99						
ZALV				PcP	**PcP**	**00 10 27.8**	**+0.6**
	comp=Z,29nm,0.7s,baz=85,slow=3.7,SNR=8.6						
ZALV				S	**S**	**00 14 39.5**	**+1.4**
	comp=Z,2.7nm,0.9s,baz=89,slow=12,SNR=2.1						
ZALV				LR	LR	00 26 52.6	
	comp=Z,1µm,18.6s,baz=77,slow=38						
	comp=Z,28nm,0.4s						
DAV	**Davao City (W)**	**41.26**	**214**	LR	LR	00 23 40.6	
	comp=Z,763nm,20.5s,baz=14,slow=33						
SCM	**Sheep Creek Mo**	**41.34**	**41**	IAmb	IAmb	00 08 35.5	
	comp=Z,150nm,1.2s						
SCM	**Sheep Creek Mo**	**41.34**	**41**	P	**P**	**00 08 30.4**	**0.0**
	baz=275,SNR=31						
SCM				S	**S**	**00 14 40.7**	**+0.9**
	baz=275						
IL31		**41.36**	**36**	IAmb	IAmb	00 08 33.9	
	comp=Z,137nm,1.1s						
ILAR	**Eielson Array**	**41.36**	**36**	P	**P**	**00 08 30.6**	**+0.1**
	comp=Z,40nm,0.8s,baz=266,slow=7.9,SNR=131						
ILAR				LR	LR	00 25 34.2	
	comp=Z,716nm,22.0s,baz=346,slow=36						
	comp=Z,40nm,0.8s						
ILAR	**Eielson Array**	**41.36**	**36**	P	**P**	**00 08 30.2**	**-0.2**
GLI	**Glacier Island**	**41.55**	**42**	P	**P**	**00 08 32.3**	**+0.2**
GLI				IAmb	IAmb	00 08 34.1	
	comp=Z,62nm,0.8s						
GLI	**Glacier Island**	**41.55**	**42**	P	**P**	**00 08 31.8**	**-0.2**
	baz=276,SNR=6.0						
GLI				S	**S**	**00 14 42.7**	**0.0**
	baz=276						
M24K	**Tolsona, Glenn**	**41.86**	**40**	P	**P**	**00 08 35.2**	**+0.5**
M24K				IAmb	IAmb	00 09 04.3	
	comp=Z,156nm,1.1s						
M24K	**Tolsona, Glenn**	**41.86**	**40**	P	**P**	**00 08 35.6**	**+0.9**
	baz=276,SNR=20						
M24K				S	**S**	**00 14 49.0**	**+1.6**
	baz=276						
FID	**Port Fidalgo**	**41.87**	**42**	P	**P**	**00 08 34.4**	**-0.3**
FID				IAmb	IAmb	00 08 40.3	
	comp=Z,110nm,1.3s						
K24K	**Donnelly Dome**	**41.89**	**38**	P	**P**	**00 08 34.6**	**-0.3**
	baz=274,SNR=74						
K24K				S	**S**	**00 14 46.2**	**-1.5**
	baz=274						
J25K	**Salcha River,**	**42.02**	**36**	P	**P**	**00 08 35.1**	**-0.9**
	baz=274,SNR=36						
J25K				S	**S**	**00 14 47.2**	**-2.4**
	baz=274						
KLU	**Klutina**	**42.05**	**41**	IAmb	IAmb	00 09 06.0	
	comp=Z,101nm,1.0s						
KLU	**Klutina**	**42.05**	**41**	P	**P**	**00 08 36.5**	**+0.2**
	baz=277,SNR=47						
KLU				S	**S**	**00 14 52.1**	**+2.0**
	baz=277						
PAX	**Paxson**	**42.10**	**39**	P	**P**	**00 08 37.6**	**+0.9**
PAX				pmax	pmax		
	comp=Z,43nm,1.2s						
PAX	**Paxson**	**42.10**	**39**	P	**P**	**00 08 37.6**	**+0.9**
PAX	**Paxson**	**42.10**	**39**	P	**P**	**00 08 36.6**	**-0.1**
	baz=275,SNR=22						
PAX				S	**S**	**00 14 50.4**	**-0.6**
	baz=275						
DIV	**Divide**	**42.16**	**42**	P	**P**	**00 08 37.8**	**+0.6**
DIV				IAmb	IAmb	00 08 40.0	
	comp=Z,110nm,1.0s						
EYAK	**Cordova Ski Ar**	**42.25**	**42**	P	**P**	**00 08 38.6**	**+0.9**
EYAK				IAmb	IAmb	00 08 40.6	
	comp=Z,68nm,1.0s						
EYAK	**Cordova Ski Ar**	**42.25**	**42**	P	**P**	**00 08 38.2**	**+0.4**
	baz=278,SNR=8.0						
EYAK				S	**S**	**00 14 53.8**	**+0.9**
	baz=278						
HARP	**HAARP**	**42.30**	**40**	P	**P**	**00 08 39.0**	**+0.8**
	baz=276,SNR=16						
HARP				S	**S**	**00 14 56.1**	**+2.3**
	baz=276						
RIDG	**Independent Ri**	**42.31**	**38**	P	**P**	**00 08 39.0**	**+0.7**
RIDG				IAmb	IAmb	00 08 49.9	
	comp=Z,131nm,1.3s						
RIDG	**Independent Ri**	**42.31**	**38**	P	**P**	**00 08 38.0**	**-0.3**
	baz=275,SNR=60						
RIDG				S	**S**	**00 14 52.6**	**-1.4**
	baz=275						
WMQ	**Urumqi**	**42.36**	**292**	⇑*i*P	**P**	**00 08 40.5**	**+1.5**
WMQ				pP	pP	00 08 56.5	+0.7
WMQ				ScP	**ScP**	**00 14 15.4**	**-0.4**
WMQ				PcS	**PcS**	**00 14 24.0**	**+0.8**
WMQ				S	**S**	**00 14 57.4**	**+2.2**
WMQ				ScS	**ScS**	**00 18 35.5**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,230nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,690nm,4.3s						
WMQ				LR	LR		
	comp=Z,4µm,15.3s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.9s						
N25K	**Chitina, Valde**	**42.66**	**41**	P	**P**	**00 08 41.9**	**+0.6**
N25K	**Chitina, Valde**	**42.66**	**41**	P	**P**	**00 08 41.4**	**+0.2**
	baz=278,SNR=19						
N25K				S	**S**	**00 15 00.1**	**+0.9**
	baz=278						
SCRK	**Sand Creek**	**42.67**	**37**	IAmb	IAmb	00 08 44.4	
	comp=Z,73nm,0.9s						
SCRK	**Sand Creek**	**42.67**	**37**	P	**P**	**00 08 40.9**	**-0.4**
	baz=276,SNR=155						
SCRK				S	**S**	**00 14 58.8**	**-0.6**
	baz=276						
BMRM	**Bremner River**	**42.74**	**42**	IAmb	IAmb	00 08 45.2	
	comp=Z,126nm,0.9s						
BMRM	**Bremner River**	**42.74**	**42**	P	**P**	**00 08 42.1**	**+0.3**
	baz=278,SNR=44						
BMRM				S	**S**	**00 15 00.5**	**+0.1**
	baz=278						
RAGM	**Ragged Mountai**	**42.80**	**43**	P	**P**	**00 08 42.8**	**+0.5**
J26L	**Joseph Creek**	**42.80**	**36**	P	**P**	**00 08 41.5**	**-0.8**
	baz=275,SNR=62						
J26L				S	**S**	**00 15 00.4**	**-0.9**
	baz=275						
MENT	**Mentasta**	**42.90**	**39**	IAmb	IAmb	00 09 16.6	
	comp=Z,223nm,1.8s						
ZSN	**Zaisan**	**42.96**	**298**	*d i*P	**P**	**00 08 43.4**	**-0.3**
ZSN				*e*S	**S**	**00 15 04.2**	**+0.4**
ZSN				pmax	pmax		
	comp=Z,61nm,1.7s						
ZSN	**Zaisan**	**42.96**	**298**	⇓*i*P	**P**	**00 08 43.4**	**-0.3**
	comp=Z,61nm,1.7s,baz=298						
ZSN				*e*S	**S**	**00 15 04.3**	**+0.4**
	baz=298						
KAIM	**Kayak Island**	**43.00**	**43**	P	**P**	**00 08 43.8**	**-0.1**
KAIM	**Kayak Island**	**43.00**	**43**	P	**P**	**00 08 44.0**	**+0.2**
	baz=280						
HMT	**Hamilton**	**43.01**	**43**	P	**P**	**00 08 44.0**	**0.0**
HMT				IAmb	IAmb	00 08 47.0	
	comp=Z,98nm,0.9s						
L26K	**Log Cabin Wild**	**43.06**	**39**	IAmb	IAmb	00 09 16.3	
	comp=Z,91nm,1.0s						
L26K	**Log Cabin Wild**	**43.06**	**39**	P	**P**	**00 08 43.9**	**-0.5**
	baz=277						
L26K				S	**S**	**00 15 07.4**	**+2.5**
	baz=277						
VRDI	**Verde Repeater**	**43.26**	**41**	P	**P**	**00 08 46.5**	**+0.4**
VRDI				IAmb	IAmb	00 08 49.1	
	comp=Z,60nm,0.8s						
BERG	**Berg Lake**	**43.27**	**42**	IAmb	IAmb	00 09 14.8	
	comp=Z,214nm,1.6s						
M26K	**Nabesna, AK**	**43.30**	**39**	IAmb	IAmb	00 09 16.4	
	comp=Z,122nm,1.1s						
M26K	**Nabesna, AK**	**43.30**	**39**	P	**P**	**00 08 47.4**	**+1.1**
	baz=278,SNR=77						
M26K				S	**S**	**00 15 12.0**	**+3.5**
	baz=278						
K27K	**Chicken**	**43.50**	**37**	IAmb	IAmb	00 08 52.2	
	comp=Z,215nm,1.3s						
K27K	**Chicken**	**43.50**	**37**	P	**P**	**00 08 48.5**	**+0.7**
	baz=277						
K27K				S	**S**	**00 15 13.6**	**+2.4**
	baz=277						
BGLC	**Bering Glacier**	**43.53**	**43**	P	**P**	**00 08 48.0**	**0.0**
	baz=280						
SNH	**Sunshine Point**	**43.73**	**43**	P	**P**	**00 08 50.4**	**+0.6**
L27K	**Beaver Creek,**	**43.74**	**38**	IAmb	IAmb	00 08 54.0	
	comp=Z,71nm,0.7s						
L27K	**Beaver Creek,**	**43.74**	**38**	P	**P**	**00 08 50.9**	**+1.1**
	baz=278,SNR=102						
L27K				S	**S**	**00 15 16.6**	**+1.8**
	baz=278						
EGAK	**Eagle**	**43.80**	**36**	P	**P**	**00 08 50.3**	**0.0**
	baz=277						

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EGAK                                 S        S        00 15 16.6 +0.9
       baz=277
M27K   Edge Creek, AK    43.82  39   P        P        00 08 51.5 +0.9
       baz=279
M27K                                 S        S        00 15 19.2 +2.9
       baz=279
ISLE   Juniper Island    43.90  42   IAmb     IAmb     00 08 57.0
       comp=Z,106nm,0.8s
BARN   Barnard Glacie    44.15  41   P        P        00 08 54.6 +1.3
BARN                                 IAmb     IAmb     00 08 56.5
       comp=Z,114nm,0.9s
BVCY   Beaver Creek      44.28  39   P        P        00 08 55.0 +0.8
       baz=280,SNR=10
TABL   Table Mountain    44.51  42   IAmb     IAmb     00 08 59.0
       comp=Z,91nm,0.8s
YUK3   Moose Creek       44.58  40   P        P        00 08 57.4 +0.6
       baz=281,SNR=42
YUK3                                 S        S        00 15 27.7 +0.2
       baz=281
DAWY   Dawson            44.66  37   P        P        00 08 58.5 +1.3
DAWY                                 IAmb     IAmb     00 09 04.3
       comp=Z,97nm,1.6s
DAWY   Dawson            44.66  37   P        P        00 08 57.6 +0.3
       baz=279,SNR=16
DAWY                                 S        S        00 15 30.2 +1.9
       baz=279
MK31   Makanchi Array    44.84 298 i P        P        00 08 58.8  0.0
MK31                                 pmax     pmax
       comp=Z,167nm,0.6s
MKAR   Makanchi Array    44.84 298   P        P        00 08 59.3 +0.5
       comp=Z,173nm,0.7s,baz=80,slow=9.9,SNR=739
MKAR                                 LR       LR       00 28 50.6
       comp=Z,2µm,19.7s,baz=64,slow=38
       comp=Z,173nm,0.7s
SEM    Semipalatinsk     44.89 303 i P        P        00 08 57.8 -1.6
SEM                                  pmax     pmax
       comp=Z,61nm,0.8s
SEM    Semipalatinsk     44.89 303 i P        P        00 08 57.9 -1.6
       comp=Z,61nm,0.8s,baz=303
I29M   Ogilvie Camp,     44.92  35   P        P        00 08 59.7 +0.5
       baz=279,SNR=153
I29M                                 S        S        00 15 33.9 +2.0
       baz=279
MAKZ   Makanchi          45.03 298   P        P        00 09 00.5 +0.1
MAKZ                                 pmax     pmax
       comp=Z,196nm,0.7s
MAKZ   Makanchi          45.03 298   P        P        00 09 00.5 +0.1
MAKZ   Makanchi          45.03 298   P        P        00 09 00.6 +0.3
MAKZ                                 pP       pP       00 09 17.7 +0.3
JOHN   Johnston Islan    45.12 113   P        P        00 09 01.3  0.0
BCPM   Bancas Point      45.35  43   P        P        00 09 03.3 +0.6
BCPM                                 IAmb     IAmb     00 09 05.6
       comp=Z,140nm,1.5s
YUK4   Talbot Arm        45.52  40   P        P        00 09 04.6 +0.4
       baz=283,SNR=18
PNL    Peninsula         45.54  43   P        P        00 09 04.5 +0.4
       baz=284
MANU   Manus Island      45.55 180   P        P        00 09 04.4 -0.3
YUK6   Outpost Mounta    45.74  41   P        P        00 09 07.1 +1.1
       baz=283,SNR=7.4
YUK6                                 S        S        00 15 47.2 +2.9
       baz=283
KURK   Kurchatov         45.77 304ceP         P        00 09 06.0 -0.1
KURK                                 pmax     pmax
       comp=Z,312nm,1.7s
KURK   Kurchatov         45.77 304            PcP      00 10 43.4 +0.8
KURK   Kurchatov         45.77 304   P        P        00 09 06.0 -0.1
KURK   Kurchatov         45.77 304   P        P        00 09 06.9 +0.9
KURK                                 P        P        00 09 06.9 +0.9
KURK   Kurchatov         45.77 304 eP         P        00 09 06.0 -0.1
KURBB  Kurchatov Arra    45.85 304   P        P        00 09 06.9 +0.2
       comp=Z,74nm,0.6s,baz=71,slow=8.1,SNR=225
KURBB                                PcP      PcP      00 10 43.4 +0.5
       comp=Z,17nm,0.7s,baz=72,slow=4.0,SNR=5.9
KURBB                                LR       LR       00 29 29.6
       comp=Z,1µm,18.9s,baz=41,slow=38
       comp=Z,74nm,0.6s
KURBB  Kurchatov Arra    45.85 304   P        P        00 09 06.8 +0.1
BAKI   Biak              45.86 196   P        P        00 09 07.2 +0.1
       comp=Z,125nm,1.1s
MOKO   MOKOCHONG         45.95 266 eP         P        00 09 09.2 +1.2
MOKO                                 IAmb     IAmb     00 09 26.4
       comp=Z,69nm,0.8s
M30M   Minto, Yukon      46.10  39   P        P        00 09 09.3 +0.8
M30M   Minto, Yukon      46.10  39   P        P        00 09 09.8 +1.2
       baz=283,SNR=28
M30M                                 S        S        00 15 51.1 +2.1
       baz=283
MYLDM  Lahad Datu        46.11 222   P        P        00 09 10.7 +1.5
MYLDM                                IAmb     IAmb     00 09 54.1
       comp=Z,80nm,1.2s
DLV    T  Lat            46.15 239   P        P        00 09 10.6 +0.9
HYT    Haines Junctio    46.18  41   P        P        00 09 10.9 +1.6
HYT    Haines Junctio    46.18  41   P        P        00 09 10.8 +1.5
       baz=284,SNR=160
HYT                                  S        S        00 15 53.4 +3.0
       baz=284
SMPI   Sarmi             46.18 192   P        P        00 09 10.4 +0.8
       comp=Z,9µmcomp=Z,104nm,1.0s
INK    Inuvik            46.30  30   P        P        00 09 10.7 +0.8
       comp=Z,182nm,0.9s,baz=287,slow=7.7,SNR=183
INK                                  LR       LR       00 29 55.0
       comp=Z,1µm,21.5s,baz=287,slow=38
       comp=Z,182nm,0.9s
INK    Inuvik            46.30  30   P        P        00 09 10.8 +0.8
       baz=280,SNR=260
INK                                  S        S        00 15 52.8 +1.3
       baz=280
TNTI   Ternate           46.38 208   P        P        00 09 11.3 +0.1
       comp=Z,60nm,1.0s
LSA    Lhasa             46.46 272   IAmb     IAmb     00 09 15.4
       comp=Z,61nm,0.7s
LSA    Lhasa             46.46 272   P        P        00 09 14.0 +1.7
LSA                                  pmax     pmax
       comp=Z,100nm,0.8s
LSA    Lhasa             46.46 272   P        P        00 09 14.5 +2.2
LSA                                  P        P        00 09 14.5 +2.2
LSA    Lhasa             46.46 272   P        P        00 09 14.1 +1.8
GENI   Genyem            46.57 190   P        P        00 09 13.8 +1.1
       comp=Z,2µmcomp=Z,124nm,1.0s
KOHI   KOHIMA            46.60 265 eP         P        00 09 13.6 +0.5
SWI    Sorong            46.71 203   P        P        00 09 13.5 -0.3
       comp=Z,2µmcomp=Z,98nm,0.7s
SIJI   Sorong            46.71 203   P        P        00 09 13.9 +0.1
       comp=Z,55nm,0.7s,baz=12,slow=11,SNR=20
SIJI                                 LR       LR       00 25 36.5
       comp=Z,619nm,22.0s,baz=24,slow=32
       comp=Z,55nm,0.7s
N31M   Braeburn, Yuko    46.82  40   P        P        00 09 15.6 +1.3
       baz=285,SNR=23
N31M                                 S        S        00 16 02.2 +2.8
       baz=285
M31M   Drury Creek, Y    47.28  39   P        P        00 09 18.8 +1.1
M31M                                 IAmb     IAmb     00 09 21.1
       comp=Z,73nm,0.9s
M31M   Drury Creek, Y    47.28  39   P        P        00 09 18.9 +1.1
       baz=285,SNR=66
M31M                                 S        S        00 16 09.5 +3.7
       baz=285
WHY    Whitehorse        47.47  41   P        P        00 09 20.1 +0.8
WHY                                  IAmb     IAmb     00 09 22.9
       comp=Z,61nm,0.9s
WHY    Whitehorse        47.47  41   P        P        00 09 20.6 +1.2
       baz=286,SNR=35
WHY                                  S        S        00 16 10.4 +1.8
       baz=286
CHTO   Chiang Mai        47.53 254   P        P        00 09 20.6 +0.4
CHTO                                 pmax     pmax
       comp=Z,193nm,1.7s
CHTO   Chiang Mai        47.53 254   P        P        00 09 20.6 +0.4
CHTO   Chiang Mai        47.53 254   P        P        00 09 20.7 +0.5
SKAG   Skagway           47.59  42   P        P        00 09 20.7 +0.6
SKAG                                 IAmb     IAmb     00 09 23.9
       comp=Z,71nm,1.2s
SKAG   Skagway           47.59  42   P        P        00 09 21.3 +1.2
       baz=287,SNR=6.7
SKAG                                 S        S        00 16 14.2 +4.0
       baz=287
LBMI   Labuha            47.65 208   P        P        00 09 21.9 +0.8
       comp=Z,2µmcomp=Z,57nm,0.9s
FARO   Faro, Yukon       47.74  38   P        P        00 09 22.8 +1.4
       baz=286,SNR=46
CM31   Chiang Mai Arr    47.77 254   P        P        00 09 23.2 +1.1
       SNR=6.3
CMAR   Chiang Mai Arr    47.77 254   P        P        00 09 23.4 +1.3
       comp=Z,9.9nm,0.7s,baz=44,slow=7.3,SNR=48
CMAR                                 LR       LR       00 31 28.0
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       comp=Z,606nm,19.0s,baz=45,slow=38
       comp=Z,9.9nm,0.7s
CMAR   Chiang Mai Arr    47.77 254ceP         P        00 09 23.6 +1.5
CMAR                                 pmax     pmax
       comp=Z,10.0nm,0.7s
CMAR   Chiang Mai Arr    47.77 254   P        P        00 09 22.9 +0.8
KMSI   Cibinong          47.81 213   P        P        00 09 24.1 +1.8
RABL   Rabaul            47.87 174   P        P        00 09 22.9  0.0
KRVT   Keravat (AS076    47.98 174   P        P        00 09 24.1 +0.5
       comp=Z,65nm,0.8s,baz=296,slow=3.8,SNR=25
KRVT                                 LR       LR       00 26 09.1
       comp=Z,937nm,21.9s,baz=138,slow=32
       comp=Z,65nm,0.8s
PDGK   Podgornoye        48.02 294   P        P        00 09 24.4 +0.5
TDK    Taldyqorghan      48.03 297 eP         P        00 09 23.4 -0.4
TDK    Taldyqorghan      48.03 297 eP         P        00 09 23.5 -0.4
       baz=297
GUWA   GUWAHATI          48.07 268 eP         P        00 09 24.9 +0.6
BESE   Bessie Mountai    48.09  43   IAmb     IAmb     00 09 27.7
       comp=Z,113nm,1.2s
SILR   SILCHAR           48.10 265 eP         P        00 09 25.9 +1.3
GTOI   Gorontalo         48.14 214   P        P        00 09 24.6 -0.3
       comp=Z,503nmcomp=Z,21nm,1.2s
A36M   Sachs Harbour     48.29  25   P        P        00 09 25.8 +0.5
       baz=284,SNR=69
A36M                                 S        S        00 16 19.9 +0.1
       baz=284
SHL    Shillong          48.30 267   P        P        00 09 26.9 +0.6
SHL                                  pmax     pmax
       comp=Z,67nm,0.7s
SHL    Shillong          48.30 267   P        P        00 09 26.9 +0.6
SHL                                  IAmb     IAmb     00 09 27.7
       comp=Z,67nm,0.7s
SHL    Shillong          48.30 267 eP         P        00 09 26.7 +0.4
SHL    Shillong          48.30 267   P        P        00 09 27.1 +0.8
       SNR=14
SIT    Sitka             48.33  45   P        P        00 09 26.8 +0.9
       baz=289
UZB    Uzynbulak         48.41 294 eP         P        00 09 26.1 -0.8
UZB                                eS         S        00 16 21.9 -0.6
UZB                                  pmax     pmax
       comp=Z,56nm,0.9s
UZB    Uzynbulak         48.41 294 eP         P        00 09 26.1 -0.8
       comp=Z,56nm,0.9s,baz=294
UZB                                eS         S        00 16 22.0 -0.6
       baz=294
FAKI   Fak Fak           48.41 201   P        P        00 09 26.5 -0.5
FAKI   Fak Fak           48.41 201   P        P        00 09 26.2 -0.8
JIS    Juneau Island     48.42  44   P        P        00 09 28.1 +1.5
JIS                                  IAmb     IAmb     00 09 30.3
       comp=Z,109nm,1.1s
KPKS   Kokpek            48.50 295 eP         P        00 09 27.0 -0.5
KPKS                               i S        S        00 16 23.6  0.0
KPKS                                 pmax     pmax
       comp=Z,91nm,0.8s
KPKS   Kokpek            48.50 295 eP         P        00 09 27.1 -0.5
       comp=Z,91nm,0.8s,baz=295
KPKS                               i S        S        00 16 23.6  0.0
       baz=295
MMPY   Sheldon Lake,     48.56  38   P        P        00 09 29.0 +1.3
       baz=287,SNR=10
MMPY                                 S        S        00 16 26.7 +2.8
       baz=287
MRSI   Marisa            48.72 215   P        P        00 09 29.8 +0.4
       comp=Z,2µmcomp=Z,2µmcomp=Z,100nm,0.9s
ARXS   Arharly           48.74 296 i P        P        00 09 30.7 +1.4
ZHN    Zhinishke         48.79 295 eP         P        00 09 29.6 -0.2
ZHN                                eS         S        00 16 28.2 +0.4
ZHN                                  pmax     pmax
       comp=Z,32nm,0.8s
ZHN    Zhinishke         48.79 295 eP         P        00 09 29.6 -0.2
       comp=Z,32nm,0.8s,baz=295
ZHN                                eS         S        00 16 28.3 +0.4
       baz=295
AZL    Aizawl            48.82 264 eP         P        00 09 30.6 +0.3
AZL                                  IAmb     IAmb     00 09 32.6
       comp=Z,99nm,0.8s
SATY   Saty              48.85 295 eP         P        00 09 29.9 -0.4
SATY                               eS         S        00 16 29.1 +0.3
SATY                                 pmax     pmax
       comp=Z,61nm,0.9s
SATY   Saty              48.85 295 eP         P        00 09 29.9 -0.4
       comp=Z,62nm,0.9s,baz=295
SATY                               eS         S        00 16 29.1 +0.3
       baz=295
PRZ    Przheval'sk       49.11 294   P        P        00 09 31.9 -0.5
PRZ                                  pmax     pmax
       comp=Z,122nm,0.9s
PRZ    Przheval'sk       49.11 294   P        P        00 09 31.9 -0.5
C36M   Paulatuk          49.38  28   P        P        00 09 34.3 +0.5
       baz=287,SNR=96
C36M                                 S        S        00 16 35.9 +0.7
       baz=287
CHKK   Chushkaly         49.44 296 eP         P        00 09 33.2 -1.4
CHKK   Chushkaly         49.44 296 eP         P        00 09 33.3 -1.4
       baz=296
SANI   Sanana            49.49 209   P        P        00 09 34.0 -1.2
       comp=Z,1µmcomp=Z,87nm,1.1s
MDOK   Medeo             49.70 295   P        P        00 09 38.2 +1.4
MDOK   Medeo             49.70 295 i P        P        00 09 36.2 -0.6
       baz=295
MDOK                               i S        S        00 16 40.7  0.0
       baz=295
MPSI   Mapaga            49.73 217   P        P        00 09 36.8 -0.2
       comp=Z,769nmcomp=Z,19nm,1.5s
MSAI   Masohi            49.75 205   P        P        00 09 37.9 +0.7
LUWI   Luwuk             49.76 213   P        P        00 09 37.1 -0.2
       comp=Z,3µmcomp=Z,67nm,1.1s
AAA    Alma-Ata          49.77 295 eP         P        00 09 37.8 +0.6
AAA    Alma-Ata          49.77 295 eP         P        00 09 36.6 -0.6
       baz=295
AAA    Alma-Ata          49.77 295 eP         P        00 09 37.8 +0.6
BRVK   Borovoye          49.78 310ceP         P        00 09 36.9 -0.1
BRVK                                 pmax     pmax
       comp=Z,307nm,1.7s
BRVK   Borovoye          49.78 310   P        P        00 09 37.2 +0.2
BRVK   Borovoye          49.78 310   P        P        00 09 37.9 +0.8
TNSS   Tian-Shan         49.82 295 eP         P        00 09 37.4 -0.6
TNSS   Tian-Shan         49.82 295 eP         P        00 09 37.4 -0.6
       baz=295
KUU    Kurty             49.84 296 eP         P        00 09 36.9 -0.8
KUU                                i S        S        00 16 42.3  0.0
KUU                                  pmax     pmax
       comp=Z,75nm,0.6s
KUU    Kurty             49.84 296 eP         P        00 09 36.9 -0.8
       comp=Z,75nm,0.6s,baz=296
KUU                                i S        S        00 16 42.3  0.0
       baz=296
OPA    Opana             49.84  98   P        P        00 09 38.2 +0.3
OPA                                  pmax     pmax
       comp=Z,387nm,0.9s
OPA    Opana             49.84  98   P        P        00 09 38.2 +0.3
KIP    Kipapa            50.01  98deP         P        00 09 40.8 +1.7
KIP                                  pmax     pmax
       comp=Z,314nm,1.0s
KIP    Kipapa            50.01  98   P        P        00 09 40.5 +1.3
KIP    Kipapa            50.01  98   P        P        00 09 40.8 +1.7
KIP                                  pP       sP       00 10 07.7 +4.7
CRAG   Craig             50.03  47   S        S        00 16 47.3 +2.8
       baz=292
KDJ    Kajisay           50.08 294   P        P        00 09 40.3 +0.6
KDJ                                  pmax     pmax
       comp=Z,91nm,0.9s
KDJ    Kajisay           50.08 294   P        P        00 09 40.3 +0.6
WRAK   Wrangell Islan    50.09  46   P        P        00 09 40.3 +1.0
WRAK                                 IAmb     IAmb     00 10 09.7
       comp=Z,41nm,1.0s
WRAK   Wrangell Islan    50.09  46   P        P        00 09 40.1 +0.7
       baz=291
WRAK                                 S        S        00 16 51.0 +5.7
       baz=291
APSI   Ampana            50.10 215   P        P        00 09 39.5 -0.3
       comp=Z,1µmcomp=Z,60nm,1.0s
TGTN   Hyland Airport    50.24  38   P        P        00 09 41.6 +1.1
       baz=290,SNR=21
TGTN                                 S        S        00 16 49.6 +2.1
       baz=290
TAPN   Taplejung         50.28 272 eP         P        00 09 42.9 +1.3
AAI    Ambon             50.30 205   P        P        00 09 40.5 -0.8
       comp=Z,2µmcomp=Z,54nm,0.7s
OTUK   Ortayu            50.49 303   P        P        00 09 43.0 +0.4
DLBC   Dease Lake        50.52  42   P        P        00 09 43.1 +0.4
DLBC                                 IAmb     IAmb     00 09 46.7
       comp=Z,59nm,1.1s
BOOM   Boomskoye usch    50.73 295   P        P        00 09 46.0 +1.3
BOOM                                 pmax     pmax
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       comp=Z,203nm,0.9s
BOOM   Boomskoye usch    50.73 295   P        P        00 09 46.0 +1.3
ODAN   Odare             50.80 271 eP         P        00 09 46.2 +0.8
BTLS   Baital            50.81 299 eP         P        00 09 44.2 -0.7
BTLS                               eS         S        00 16 55.3 -0.3
BTLS                                 pmax     pmax
       comp=Z,50nm,1.0s
BTLS   Baital            50.81 299 eP         P        00 09 44.3 -0.7
       comp=Z,50nm,1.0s,baz=299
BTLS                               eS         S        00 16 55.4 -0.3
       baz=299
SGDS   Sogindy           51.15 297 eP         P        00 09 47.5 -0.1
SGDS                               i S        S        00 17 01.2 +0.7
SGDS                                 pmax     pmax
       comp=Z,59nm,0.8s
SGDS   Sogindy           51.15 297 eP         P        00 09 47.5 -0.1
       comp=Z,59nm,0.8s,baz=297
SGDS                               i S        S        00 17 01.2 +0.7
       baz=297
JIRN   Jiri              51.20 273 eP         P        00 09 49.9 +1.3
GUN    Gumba             51.28 274 eP         P        00 09 50.3 +1.1
       comp=Z,178nm,0.7s
RAMN   Ramite            51.32 272 eP         P        00 09 50.1 +0.8
       comp=Z,210nm,0.5s
KHLH   Kahului Airpor    51.48  98   P        P        00 09 51.4 +1.2
AAK    Ala-Archa         51.61 296   LR       LR       00 33 03.2
       comp=Z,674nm,18.9s,baz=79,slow=38
AAK    Ala-Archa         51.61 296ceP         P        00 09 52.3 +1.1
AAK                                  pmax     pmax
       comp=Z,185nm,1.7s
AAK    Ala-Archa         51.61 296   P        P        00 09 52.0 +0.8
AAK    Ala-Archa         51.61 296   P        P        00 09 52.6 +1.4
AAK    Ala-Archa         51.61 296 eP         P        00 09 52.3 +1.1
AAK    Ala-Archa         51.61 296 i P        P        00 09 52.1 +0.8
       SNR=66
SBUM   Sibu              51.65 227   P        P        00 09 51.1 -0.4
HLK    Haleakala         51.70  98   P        P        00 09 52.5 +0.3
KKN    Kakani            51.79 274 eP         P        00 09 53.7 +0.9
       comp=Z,140nm,0.8s
PKI    Pulchoki          51.82 273 eP         P        00 09 53.9 +0.8
PKIN   Phulchoki         51.82 274 eP         P        00 09 53.9 +0.8
RUBB   Prince Rupert     52.01  47   P        P        00 09 54.2 +0.5
RUBB                                 IAmb     IAmb     00 10 23.2
       comp=Z,51nm,1.1s
DMN    Daman             52.02 274 eP         P        00 09 55.7 +1.2
       comp=Z,148nm,0.7s
KSH    Kashi             52.12 292   P        P        00 10 00.2 +5.2
KSH                                  pP       pP       00 10 14.4 +2.1
KSH                                  PcP      PcP      00 11 09.9 +3.9
KSH                                  PP       PP       00 12 00.9 +7.3
KSH                                  S        S        00 17 20.2 +6.1
KSH                                  ScS      ScS      00 19 39.4 +0.7
KSH                                  pmax     pmax
       comp=Z,61nm,0.9s
KSH                                  pmax     pmax
       comp=Z,190nm,6.9s
KSH                                  LR       LR
       comp=Z,3µm,19.2s
KSH                                  LR       LR
       comp=Z,820nm,19.4s
KSH                                  LR       LR
       comp=Z,1µm,20.3s
GKN    Gorkha            52.13 274 eP         P        00 09 56.3 +1.1
HG4B   Hotspring         52.34  50   P        P        00 09 57.0 +0.7
HG4B                                 IAmb     IAmb     00 10 26.8
       comp=Z,54nm,1.1s
GRNB   Grenville Isla    52.36  48   P        P        00 09 57.8 +1.4
GRNB                                 IAmb     IAmb     00 10 26.5
       comp=Z,65nm,1.1s
HPAH   Hawaii Prepara    52.56  98   P        P        00 09 59.1 +0.8
DANN   Dangsing          52.56 275 eP         P        00 10 00.1 +1.5
       comp=Z,633nm,0.8s
KHLU   Kahalu`u          52.70  98   P        P        00 09 59.6 +0.2
POHA   Pohakuloa         52.85  98   P        P        00 10 01.4 +0.7
POHA   Pohakuloa         52.85  98   P        P        00 10 02.4 +1.7
POHA                                 pP       sP       00 10 24.4 -0.3
PMG    Port Moresby      52.87 180   LR       LR       00 28 58.2
       comp=Z,450nm,21.0s,baz=9.5,slow=32
PMG    Port Moresby      52.87 180   P        P        00 09 59.7 -0.8
PMG                                  pmax     pmax
       comp=Z,45nm,1.1s
PMG    Port Moresby      52.87 180   P        P        00 09 59.7 -0.8
PMG                                  IAmb     IAmb     00 10 02.0
       comp=Z,45nm,1.1s
MLOA   Mauna Loa Obse    52.96  98   P        P        00 10 02.1 +0.3
MWH    Moku‘aweowe       52.98  98   P        P        00 10 02.0  0.0
HMH    Humu‘ula Sheep    52.99  98   P        P        00 10 02.0 +0.2
KOLN   Koldanda          53.01 275 eP         P        00 10 02.3 +0.5
       comp=Z,281nm,0.9s
VLK    Valmikinagar      53.08 274⇑iP         P        00 10 02.5 +0.5
VLK                                i x        x        00 10 18.6
AIN    Ainahou           53.15  98   P        P        00 10 03.2 +0.4
WRMHI  West Rim          53.24  98   P        P        00 10 02.9 -0.6
PYUN   Piuthan           53.26 276 eP         P        00 10 04.1 +0.4
HLP    Hilina Pali       53.31  98   P        P        00 10 04.0 +0.1
PUH    Pauahi            53.33  98   P        P        00 10 04.0 -0.1
SVE    Sverdlovsk        53.35 317deP         P        00 10 03.6  0.0
SVE                                eS         S        00 17 29.8 -0.3
SVE                                  pmax     pmax
       comp=Z,317nm,0.9s
SVE                                  MLR      MLR
       comp=Z,1µm,16.0s
SVE    Sverdlovsk        53.35 317 eP         P        00 10 03.6  0.0
KSM    Kuching           53.50 229   P        P        00 10 05.6 +0.4
KSM                                  IAmb     IAmb     00 10 26.7
       comp=Z,144nm,1.8s
SPSI   Sidrap Palu       53.64 215   P        P        00 10 05.7 -0.5
       comp=Z,1µmcomp=Z,13nm,1.3s
BOK    Bokaro            53.71 269 eP         P        00 10 07.7 +0.9
BNSI   Bone              53.89 215   P        P        00 10 08.4 +0.4
       comp=Z,1µmcomp=Z,21nm,1.7s
BBSI   Bau Bau           53.91 211   P        P        00 10 08.2  0.0
       comp=Z,4.5nm,0.5s
KK31   Karatay Array     53.97 298   P        P        00 10 08.4  0.0
STKI   Sintang           54.05 227   P        P        00 10 10.5 +1.3
       comp=Z,14µmcomp=Z,7µmcomp=Z,38nm,0.6s
HNR    Honiara           54.09 165   LR       LR       00 35 35.1
       comp=Z,725nm,18.0s,baz=338,slow=38
BBB    Bella Bella       54.09  49   LR       LR       00 34 32.1
       comp=Z,184nm,19.4s,baz=307,slow=37
SRIT   Nakonsritamara    54.35 245   P        P        00 10 12.9 +1.5
PTH    Pithoragarh       54.43 279⇑iP         P        00 10 12.9 +0.8
PTH                                i x        pP       00 10 29.5  0.0
LGTI   Lohaghat          54.47 279⇑iP         P        00 10 13.7 +1.6
ARU    Arti              54.55 317   LR       LR       00 35 60.0
       comp=Z,919nm,19.8s,baz=56,slow=39
ARU    Arti              54.55 317c iP        P        00 10 11.2 -1.2
ARU                                  *PP      pP       00 10 26.0 -3.8
ARU                                                    00 11 14.5
ARU                                  S        S        00 17 45.1 -1.2
ARU                                  *SS      sS       00 18 14.4  0.0
ARU                                                    00 19 51.1
ARU                                  SS       SS       00 21 26.8 -2.3
ARU                                  SSS      SSS      00 23 31.1
ARU                                  pmax     pmax
       comp=Z,421nm,1.2s
ARU                                  MLR      MLR
       comp=Z,2µm,17.0s
ARU    Arti              54.55 317   P        P        00 10 11.7 -0.7
KAPI   Kappang           54.59 215   P        P        00 10 13.3 +0.2
       comp=Z,14nm,0.4s,baz=33,slow=7.1,SNR=7.6
       comp=Z,14nm,0.4s
KAPI   Kappang           54.59 215   P        P        00 10 13.2 +0.1
KAPI                                 IAmb     IAmb     00 10 47.7
       comp=Z,40nm,1.1s
NOR    Nord              54.65 357 i P        P        00 10 10.5 -2.3
NOR                                  IAmb     IAmb     00 10 14.0
       comp=Z,100nm,1.7s
HOPEN  Hopen             54.69 346 eP         P        00 10 12.1 -1.0
BKSI   Bulukumba         54.72 214   P        P        00 10 13.6 -0.4
       comp=Z,594nmcomp=Z,18nm,0.9s
IUG    Iuzhnay           54.74 297d iP        P        00 10 13.6 -0.5
IUG                                i S        S        00 17 49.7 +0.2
IUG    Iuzhnay           54.74 297⇓iP         P        00 10 13.6 -0.5
       baz=297
IUG                                i S        S        00 17 49.7 +0.2
       baz=297
HOLB   Holberg           54.80  51   P        P        00 10 14.7 +0.4
KBS    Kingsbay          54.86 350ceP         P        00 10 13.2 -1.1
KBS                                  pmax     pmax
       comp=Z,91nm,1.3s
KBS    Kingsbay          54.86 350   P        P        00 10 13.9 -0.4
KBS                                  IAmb     IAmb     00 10 16.2
       comp=Z,63nm,1.0s
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KBS    Kingsbay            54.86 350  eP      P       00 10 13.5 -0.8
KBS                                   IAmb    IAmb    00 10 15.9
       comp=Z,161nm,1.1s
KBS    Kingsbay            54.86 350  eP      P       00 10 13.6 -0.7
SPA0   Spitsbergen Ar      54.87 349  eP      P       00 10 12.8 -1.6
SPITS  Spitsbergen Ar      54.87 349  LR      LR      00 37 01.6
       comp=Z,456nm,18.6s,baz=247,slow=40
SPB2   Spitsbergen Ar      54.87 349  IAmb    IAmb    00 11 17.3
       comp=Z,40nm,1.0s
RES    Resolute Bay        54.92  17  LR      LR      00 36 25.1
       comp=Z,681nm,21.3s,baz=308,slow=39
DRK    Karamyk             54.93 294  P       P       00 10 16.2 +0.4
DRK                                   IAmb    IAmb    00 10 22.4
       comp=Z,67nm,0.7s
BSSI   Bau Bau, Buton      55.32 213  P       P       00 10 17.5 -0.8
       comp=Z,628nmcomp=Z,18nm,1.4s
BBKI   Banjar Baru         55.40 221  P       P       00 10 18.6 -0.3
       comp=Z,6µmcomp=Z,36nm,0.9s
DDI    Dehra Dun           55.54 281  eP      P       00 10 21.2 +1.3
DGPR   DIGLIPUR            55.58 254  eP      P       00 10 20.2 -0.1
DGPR                                  IAmb    IAmb    00 10 27.3
       comp=Z,76nm,1.2s
TAS    Tashkent            55.63 297  P       P       00 10 21.3 +0.8
TAS                                   pmax    pmax
       comp=Z,169nm,1.0s
TAS    Tashkent            55.63 297  P       P       00 10 21.3 +0.8
YKA    Yellowknife Ar      55.68  34  P       P       00 10 20.6 +0.2
       comp=Z,53nm,0.6s,baz=298,slow=6.7,SNR=249
YKA                                   LR      LR      00 35 03.8
       comp=Z,755nm,21.4s,baz=304,slow=37
YKA                                   PKPPKP          00 40 03.5
       comp=Z,0.5nm,0.9s,baz=152,slow=2.5,SNR=3.7
       comp=Z,53nm,0.6s
YKA    Yellowknife Ar      55.68  34ceP       P       00 10 20.3 -0.1
YKA                                   pmax    pmax
       comp=Z,90nm,0.9s
SMLA   Simla               55.71 282  eP      P       00 10 21.7 +0.6
HSPB   Hornsund (broa      55.88 348  eP      P       00 10 21.2 -0.4
HSPB                                  eL      L       00 29 59.5
       comp=Z,3µm,33.5s
HSPB   Hornsund (broa      55.88 348  eP      P       00 10 21.3 -0.4
THN    Thein Dam           56.01 284⇑iP       P       00 10 24.1 +0.9
BHK    Bhakra              56.08 283  eP      P       00 10 25.1 +1.3
PBA    Port Blair          56.77 253  P       P       00 10 29.2 +0.4
MMRI   Maumere             56.94 210  P       P       00 10 30.0 +0.1
MMRI                                  IAmb    IAmb    00 11 08.3
       comp=Z,63nm,1.0s
MMRI   Maumere             56.94 210  P       P       00 10 30.2 +0.3
       comp=Z,5µmcomp=Z,41nm,0.8s
BJO1   Bjornoya            57.19 346  eP      P       00 10 31.0 +0.1
TPRI   Tanjung Pinang      57.23 234  P       P       00 10 33.8 +1.8
AYAN   Aya Nagar           57.26 280  eP      P       00 10 32.6 +0.6
AB31   Akbulak array       57.29 309  eP      P       00 10 32.1  0.0
SONA   Sohna               57.42 279  eP      P       00 10 34.0 +0.7
COEN   Coen                57.53 185  P       P       00 10 34.1 +0.1
COEN                                  IAmb    IAmb    00 10 35.5
       comp=Z,57nm,0.8s
COEN   Coen                57.53 185  P       P       00 10 33.9 -0.1
PRGR   Permogore           57.74 326⇑iP       P       00 10 34.8 -0.2
PRGR                                  e*PP    sP      00 10 56.3 -3.9
PRGR                                  e               00 11 25.6
AKTO   Aktyubinsk          57.76 311  LR      LR      00 37 33.9
       comp=Z,1µm,19.7s,baz=55,slow=38
AKTO   Aktyubinsk          57.76 311  P       P       00 10 35.5 +0.2
KIRV   Kirov               57.78 322  LR      LR      00 37 55.9
       comp=Z,1µm,18.8s,baz=51,slow=38
KIRV   Kirov               57.78 322ceP       P       00 10 34.9 -0.4
TULEG  Thule               57.81   9  IAmb    IAmb    00 10 36.5
       comp=Z,154nm,1.0s
TULEG  Thule               57.81   9  i P     P       00 10 33.0 -2.3
TULEG                                 IAmb    IAmb    00 10 36.2
       comp=Z,181nm,1.1s
BATI   Baumata             57.89 208  LR      LR      00 37 09.7
       comp=Z,244nm,19.7s,baz=4.0,slow=38
BATI   Baumata             57.89 208  P       P       00 10 36.5 -0.1
       comp=Z,14nm,0.9s
KUDL   Kundal              57.91 280  eP      P       00 10 36.9 +0.2
LVZ    Lovozero            57.94 336ceP       P       00 10 36.1 -0.3
LVZ                                   pmax    pmax
       comp=Z,117nm,1.3s
LVZ                                   MLR     MLR
       comp=Z,1µm,22.0s
LVZ    Lovozero            57.94 336  P       P       00 10 35.8 -0.6
LVZ    Lovozero            57.94 336  P       P       00 10 36.0 -0.4
JHNI   Jhansi              58.02 276  eP      P       00 10 37.4 -0.1
JHNI                                  i pP    pP      00 10 52.7 -2.4
MTN    Manton Dam          58.24 199  P       P       00 10 38.8 -0.1
LLLB   Lillooet            58.27  49  IAmb    IAmb    00 11 21.3
       comp=Z,53nm,1.5s
DSRI   Dabo                58.33 233  P       P       00 10 41.4 +1.7
       comp=Z,2µmcomp=Z,13nm,0.6s
PGC    Sidney              58.43  51  P       P       00 10 40.1 +0.2
PGC                                   IAmb    IAmb    00 10 50.1
       comp=Z,48nm,1.7s
TPI    Tanjungpandan       58.47 229  P       P       00 10 41.4 +0.8
       comp=Z,290nmcomp=Z,22nm,0.9s
APA    Apatity             58.52 336⇓iP       P       00 10 39.4 -0.9
APA                                   i               00 11 28.0
APA                                   i S     S       00 18 34.0 -4.4
APA                                   i PS    PnS     00 18 45.0  -14
APA                                   i               00 20 21.0
APA                                   pmax    pmax
       comp=Z,48nm,0.8s
APA                                   MLR     MLR
       comp=Z,2µm,16.0s
APA    Apatity             58.52 336  eP      P       00 10 39.4 -0.9
PPBI   Pangkal Pinang      58.81 231  P       P       00 10 44.9 +1.8
KEV    Kevo                58.84 339  P       P       00 10 41.6 -0.9
KEV                                   pmax    pmax
       comp=Z,57nm,0.8s
KEV    Kevo                58.84 339  P       P       00 10 41.6 -0.9
KEV                                   IAmb    IAmb    00 10 44.8
       comp=Z,57nm,0.8s
NLWA   Neilton Lookou      58.85  53  P       P       00 10 43.7 +0.6
PLAI   Plampang            58.85 215  P       P       00 10 41.7 -1.6
       comp=Z,45nm,0.9s
WBSI   Waikabubak, Su      58.94 213  P       P       00 10 41.4 -2.5
       comp=Z,49nm,0.9s
KNTN   Kanton              58.97 130  P       P       00 10 44.4 +0.2
HAMF   Hammerfest          59.03 341  eP      P       00 10 42.3 -1.5
PSI    Prapat              59.18 241  LR      LR      00 36 30.3
       comp=Z,303nm,21.3s,baz=34,slow=36
D03D   Eldon               59.22  52  P       P       00 10 46.5 +0.9
       baz=302,SNR=7.8
SRBI   Singaraja           59.30 218  P       P       00 10 47.5 +1.2
       comp=Z,2µmcomp=Z,187nm,1.0s
ARA0   ARCESS Array S      59.37 340  eP      P       00 10 45.5 -0.8
ARCES  ARCESS Array B      59.37 340  P       P       00 10 45.9 -0.4
       comp=Z,16nm,0.4s,baz=45,slow=7.0,SNR=161
ARCES                                 PcP     PcP     00 11 33.6 +0.2
       comp=Z,12nm,0.7s,baz=44,slow=5.4,SNR=4.3
ARCES                                 LR      LR      00 40 06.6
       comp=Z,1µm,21.0s,baz=46,slow=40
       comp=Z,16nm,0.4s
B05A   Bryant              59.40  51  P       P       00 10 46.6 -0.1
       baz=303
FUNA   Funafuti            59.41 143  P       P       00 10 46.2 -0.9
KBL    Kabul               59.45 290  P       P       00 10 46.8 -0.8
KBL                                   pmax    pmax
       comp=Z,138nm,0.7s
KBL    Kabul               59.45 290  P       P       00 10 46.8 -0.8
KBL    Kabul               59.45 290  P       P       00 10 47.5 -0.1
       SNR=66
KBL                                   P       P       00 10 47.5 -0.1
       SNR=66
DAG    Danmarks Havn       59.47 356  i P     P       00 10 45.0 -1.8
DAG                                   IAmb    IAmb    00 10 48.0
       comp=Z,88nm,0.9s
ABJI   Asem Bagus          59.48 219  P       P       00 10 47.8 +0.2
       comp=Z,66nm,1.2s
E03A   Lebam               59.48  53  P       P       00 10 48.2 +0.8
E03A                                  IAmb    IAmb    00 10 51.0
       comp=Z,44nm,1.1s
D04E   Lakebay             59.60  52  P       P       00 10 47.7 -0.4
       baz=303
BKNI   Bangkinang          59.79 237  P       P       00 10 51.2 +1.4
       comp=Z,2µmcomp=Z,131nm,1.2s
D05A   Enumclaw            60.04  52  P       P       00 10 51.7 +0.5
D05A                                  IAmb    IAmb    00 11 34.9
       comp=Z,40nm,1.1s
E04D   Cinebar             60.05  53  P       P       00 10 52.2 +1.0
E04D                                  IAmb    IAmb    00 11 28.3
       comp=Z,75nm,1.4s
E04D   Cinebar             60.05  53  P       P       00 10 51.7 +0.4
       baz=303,SNR=6.9
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BHPL   Bhopal              60.18 275  eP      P       00 10 52.6 +0.1
BHPL                                  IAmb    IAmb    00 10 53.9
       comp=Z,45nm,0.8s
AJM    Ajmer               60.22 279  eP      P       00 10 53.0 +0.3
AJM                                   i pP    pP      00 11 10.6 +0.2
KTK1   Kautokeino          60.31 340  eP      P       00 10 52.6 -0.1
F04A   Amboy               60.48  53  P       P       00 10 54.9 +0.7
F04A                                  IAmb    IAmb    00 11 03.0
       comp=Z,31nm,0.9s
JETT   Jettan, Norway      60.59 341  eP      P       00 10 54.1 -0.5
KLMR   Klimovskoe          60.61 328  eP      P       00 10 51.6 -3.2
KLMR                                  eS      S       00 19 02.4 -3.0
KLMR                                  eSS     SS      00 23 06.7 +2.9
KLMR                                  pmax    pmax
       comp=Z,327nm,0.9s
KLMR   Klimovskoe          60.61 328  eP      P       00 10 51.7 -3.1
KLMR                                  AMP             00 10 56.7
       comp=Z,327nm,0.9s
KLMR                                  eS      S       00 19 02.4 -3.0
KLMR                                  eS      S       00 19 02.4 -3.0
KLMR                                  eSS     SS      00 23 06.8 +2.9
KLMR                                  eSS     SS      00 23 06.8 +2.9
KLMR                                  LQ      LQ      00 31 27.8
KLMR                                  LQ      LQ      00 31 27.8
KLMR                                  LR      LR      00 35 23.7
SMRI   Semarang            60.65 223  P       P       00 10 55.9 +0.2
SMRI   Semarang            60.65 223  P       P       00 10 55.6  0.0
       comp=Z,171nm,1.0s
PWJI   Pagerwojo           60.82 221  P       P       00 10 55.8 -1.0
       comp=Z,246nm,0.8s
TRO    Tromso              60.87 342  eP      P       00 10 55.9 -0.6
F05D   White Salmon        61.07  53  P       P       00 11 00.5 +2.2
F05D   White Salmon        61.07  53  P       P       00 10 59.1 +0.9
       baz=304
H04D   Lebanon             61.08  55  P       P       00 10 59.2 +0.9
H04D                                  IAmb    IAmb    00 11 30.1
       comp=Z,54nm,1.2s
H04D   Lebanon             61.08  55  P       P       00 10 58.4 +0.1
       baz=304
BUCK   Buck Mountain       61.12  55  P       P       00 10 59.8 +1.2
BUCK                                  IAmb    IAmb    00 11 30.7
       comp=Z,29nm,0.9s
J01E   Myrtle Point        61.13  57  P       P       00 10 59.6 +1.0
J01E                                  IAmb    IAmb    00 11 13.0
       comp=Z,44nm,1.1s
J01E   Myrtle Point        61.13  57  P       P       00 10 57.9 -0.7
       baz=304
I03D   Drain, OR           61.18  56  P       P       00 10 59.3 +0.4
       baz=304
EDM    Edmonton            61.24  43  P       P       00 10 59.5 +0.2
EDM                                   pmax    pmax
       comp=Z,78nm,1.0s
EDM    Edmonton            61.24  43  P       P       00 10 59.5 +0.2
H04A   Detroit Lake        61.32  54  P       P       00 11 01.3 +1.4
H04A                                  IAmb    IAmb    00 11 06.5
       comp=Z,63nm,1.4s
KRJI   Kerinci             61.45 235  P       P       00 11 03.5 +2.2
       comp=Z,36µmcomp=Z,167nm,0.5s
G05D   Wamic, OR           61.51  53  P       P       00 11 01.7 +0.5
       baz=304
KNRA   Kununurra           61.55 201  P       P       00 11 01.4 -0.2
KNRA                                  IAmb    IAmb    00 11 02.7
       comp=Z,86nm,1.4s
K02D   Willamette Mer      61.55  57  P       P       00 11 01.1 -0.5
       baz=304
SANVU  Saraoutou           61.57 158  P       P       00 11 01.0 -0.8
E07A   Sunnyside           61.61  52  P       P       00 11 02.6 +0.8
I04A   Tendick Farm,       61.69  55  P       P       00 11 03.2 +0.7
       baz=305,SNR=5.8
KLI    Kotabumi            61.75 230  P       P       00 11 03.2 +0.1
HAWA   Hanford             61.88  52  IAmb    IAmb    00 11 40.5
       comp=Z,58nm,1.6s
LEM    Lembang             61.90 226  LR      LR      00 39 41.7
       comp=Z,197nm,19.9s,baz=9.5,slow=38
LEM    Lembang             61.90 226  P       P       00 11 05.0 +0.7
       comp=Z,46nm,0.9s
F07A   Phinny Hill Vi      61.94  52  IAmb    IAmb    00 11 27.2
       comp=Z,33nm,0.8s
DBG    Daneborg            61.98 356  i P     P       00 11 03.3 -0.6
DBG                                   IAmb    IAmb    00 11 05.0
       comp=Z,88nm,1.0s
I05D   Terrebonne, OR      62.01  54  P       P       00 11 04.7  0.0
       baz=305
HUMO   Hull Mountain       62.03  57  P       P       00 11 05.3 +0.5
E08A   Dider Farm, El      62.10  51  P       P       00 11 05.8 +0.7
BELG   Belogornoye         62.10 317  LR      LR      00 40 41.9
       comp=Z,1µm,18.2s,baz=49,slow=38
BELG   Belogornoye         62.10 317c iP      P       00 11 04.6 -0.4
BELG                                  pmax    pmax
       comp=Z,78nm,0.8s
BELG                                  MLR     MLR
       comp=Z,187nm,16.0s
NEW    Newport             62.15  49  LR      LR      00 35 03.9
       comp=Z,159nm,21.4s,baz=308,slow=33
NEW    Newport             62.15  49  P       P       00 11 05.8 +0.3
       baz=305,SNR=23
J04D   Umpqua Nationa      62.18  56  IAmb    IAmb    00 11 17.0
       comp=Z,67nm,1.2s
J04D   Umpqua Nationa      62.18  56  P       P       00 11 06.6 +0.6
       baz=305,SNR=8.3
PINE   Pine Mountain       62.56  55  IAmb    IAmb    00 11 44.9
       comp=Z,26nm,0.8s
E09A   Wood Farm, Sta      62.60  51  P       P       00 11 09.6 +1.2
E09A                                  IAmb    IAmb    00 11 42.5
       comp=Z,34nm,1.0s
L04D   Klamath Falls       62.65  57  IAmb    IAmb    00 11 31.3
       comp=Z,39nm,0.8s
L04D   Klamath Falls       62.65  57  P       P       00 11 08.9 -0.2
       baz=305
J05D   Fort Rock, OR       62.68  55  P       P       00 11 10.2 +0.9
       baz=305,SNR=15
YBH    Yreka Blue Hor      62.69  57  LR      LR      00 34 35.0
       comp=Z,274nm,21.6s,baz=308,slow=32
YBH    Yreka Blue Hor      62.69  57  P       P       00 11 10.3 +1.1
YBH                                   pmax    pmax
       comp=Z,78nm,1.9s
YBH    Yreka Blue Hor      62.69  57  P       P       00 11 10.3 +1.1
YBH                                   IAmb    IAmb    00 11 34.3
       comp=Z,78nm,1.9s
G08A   Pilot Rock          62.85  52  P       P       00 11 10.8 +0.5
HYB    Hyderabad           63.04 269  eP      P       00 11 12.1 +0.3
HYBB   Hyderabad (bro      63.04 269⇓eP       P       00 11 11.9 +0.1
HYBB                                  IVmB_BB         00 11 12.5
       comp=Z,419nm,0.5s
HYBB                                  epP     pP      00 11 27.9 -1.7
HYBB                                  esP     sP      00 11 34.4 -2.8
HYBB                                  e               00 11 39.4
HYBB                                  ePcP    PcP     00 11 48.6 -0.5
HYBB                                  eS      S       00 19 38.6 +1.2
STEI   Steigen             63.05 342  eP      P       00 11 10.2 -0.8
K05A   Summer Lake         63.21  56  IAmb    IAmb    00 11 45.9
       comp=Z,73nm,1.2s
LOF    Lofoten             63.26 342  eP      P       00 11 12.4  0.0
F10A   Beach Ranch, E      63.43  51  P       P       00 11 14.9 +0.8
VALR   Valaam              63.46 331c iP      P       00 11 13.1 -0.8
VALR                                  pmax    pmax
       comp=Z,346nm,1.0s
VALR                                  MLR     MLR
       comp=Z,95nm,5.0s
FAUS   Fauske              63.48 341  eP      P       00 11 13.3 -0.6
CTA    Charters Tower      63.50 181  LR      LR      00 34 24.9
       comp=Z,497nm,21.2s,baz=2.0,slow=32
CTAO   Charters Tower      63.50 181  P       P       00 11 14.0 -0.6
CTAO                                  pmax    pmax
       comp=Z,95nm,1.5s
CTAO   Charters Tower      63.50 181  P       P       00 11 14.0 -0.6
CTAO                                  IAmb    IAmb    00 11 15.4
       comp=Z,95nm,1.4s
MOD    Modoc Plateau       64.05  56  IAmb    IAmb    00 11 40.3
       comp=Z,90nm,1.9s
BMO    Blue Mountains      64.05  52  P       P       00 11 18.5 +0.3
BMO                                   pmax    pmax
       comp=Z,24nm,1.4s
BMO    Blue Mountains      64.05  52  P       P       00 11 18.5 +0.3
NUUG   Nuugaatsiaq         64.11   7  eP      P       00 11 18.3 +0.3
NUUG                                  IAmb    IAmb    00 11 18.9
       comp=Z,35nm,1.0s
WB0    Warramunga Arr      64.31 194  IAmb    IAmb    00 11 21.0
       comp=Z,82nm,0.9s
GDXM   Geysers             64.35  60  P       P       00 11 21.0 +0.8
QIS    Mount Isa           64.37 188  P       P       00 11 19.2 -1.1
WR0    Warramunga Arr      64.47 194  IAmb    IAmb    00 11 22.1
       comp=Z,59nm,0.8s
WRAB   Tennant Creek       64.48 194c iP      P       00 11 20.3 -0.7
WRAB                                  pmax    pmax
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       comp=Z,91nm,1.0s
WRAB   Tennant Creek       64.48 194  P       P       00 11 19.9 -1.2
WRAB                                  IAmb    IAmb    00 11 22.1
       comp=Z,88nm,0.9s
WRAB   Tennant Creek       64.48 194  P       P       00 11 19.8 -1.2
WRA    Warramunga Arr      64.49 194  P       P       00 11 19.9 -1.2
       comp=Z,58nm,0.8s,baz=9.3,slow=6.8,SNR=158
WRA                                   LR      LR      00 37 32.2
       comp=Z,167nm,21.8s,baz=360,slow=34
WRA                                   PKP2bc          00 40 12.4
       comp=Z,2.2nm,1.0s,baz=194,slow=2.7,SNR=9.3
       comp=Z,58nm,0.8s
WRA    Warramunga Arr      64.49 194  P       P       00 11 20.5 -0.6
WRA                                   pmax    pmax
       comp=Z,6.0nm,0.9s
WRA    Warramunga Arr      64.49 194  P       P       00 11 20.5 -0.6
MOS    Moscow              64.63 324  eP      P       00 11 19.3 -2.4
MOS                                   e*PP    pP      00 11 39.9 +0.4
MOS                                   e               00 11 54.2
MOS                                   eS      S       00 19 53.3 -2.7
MOS                                   e               00 21 05.0
MOS                                   pmax    pmax
       comp=Z,1µm,1.8s
MOS                                   pmax    pmax
       comp=Z,555nm,1.4s
MOS                                   pmax    pmax
       comp=N,400nm,1.5s
MOS                                   pmax    pmax
       comp=E,200nm,1.3s
MOS                                   pmax    pmax
       comp=N,297nm,1.2s
MOS                                   pmax    pmax
       comp=E,203nm,1.3s
MOS                                   smax    smax
       comp=E,700nm,4.1s
MOS                                   smax    smax
       comp=N,500nm,4.1s
MOS                                   MLR     MLR
       comp=Z,1µm,15.0s
MOR8   Moi Rana            64.66 341  eP      P       00 11 19.7 -2.0
GEYT   Alibeck             64.69 299  P       P       00 11 23.4 +1.0
       comp=Z,39nm,0.6s,baz=45,slow=1.0,SNR=94
GEYT                                  LR      LR      00 42 29.3
       comp=Z,2µm,18.5s,baz=63,slow=39
       comp=Z,39nm,0.6s
KONS   Konsvik             64.70 342  eP      P       00 11 22.5 +0.6
FITZ   Fitzroy Crossi      64.70 203  P       P       00 11 21.5 -1.0
MSO    Missoula            64.74  49  P       P       00 11 22.8 +0.1
       baz=308,SNR=24
PUL    Pulkovo             64.76 330ceP       P       00 11 23.1 +0.7
PUL                                   pmax    pmax
       comp=Z,377nm,0.7s
PUL                                   MLR     MLR
       comp=Z,2µm,24.0s
PUL    Pulkovo             64.76 330  eP      P       00 11 23.1 +0.7
STOK   Stokkvaagen         64.86 341  eP      P       00 11 23.3 +0.4
FINES  FINESS Array B      65.03 333  P       P       00 11 23.8 -0.3
       comp=Z,140nm,0.7s,baz=43,slow=6.1,SNR=516
FINES                                 S       S       00 19 55.6 -5.0
       comp=Z,1.3nm,0.9s,baz=22,slow=13,SNR=2.5
FINES                                 PKPPKP          00 39 52.3
       comp=Z,1.2nm,0.9s,baz=290,slow=4.0,SNR=4.8
FINES                                 LR      LR      00 43 04.7
       comp=Z,2µm,18.2s,baz=46,slow=39
       comp=Z,140nm,0.7s
OBN    Obninsk             65.50 324  LR      LR      00 42 36.1
       comp=Z,223nm,18.4s,baz=42,slow=38
OBN    Obninsk             65.50 324c iP      P       00 11 26.6 -0.6
OBN                                   e               00 13 51.8
OBN                                   eS      S       00 20 04.6 -2.0
OBN                                   eSS     SS      00 24 27.2 +6.9
OBN                                   pmax    pmax
       comp=Z,658nm,1.4s
OBN                                   MLR     MLR
       comp=Z,1µm,15.0s
OBN    Obninsk             65.50 324  P       P       00 11 26.8 -0.5
OBN    Obninsk             65.50 324  i P     P       00 11 26.6 -0.6
OBN    Obninsk             65.50 324  ⇑P      P       00 11 26.7 -0.6
VRH    Novokhopyorsk       65.72 318  eP      P       00 11 28.9 +0.1
VRH                                   pmax    pmax
       comp=Z,310nm,0.7s
VRH                                   MLR     MLR
       comp=Z,1µm,16.0s
MFID   Camas Ranch         65.77  53  IAmb    IAmb    00 11 51.6
       comp=Z,70nm,1.9s
MPK    Martis Peak         65.77  58  IAmb    IAmb    00 11 51.9
       comp=Z,75nm,1.1s
KOUNC  Koumac, New Ca      65.78 163  P       P       00 11 29.8 +0.4
KOUNC                                 IAmb    IAmb    00 11 59.2
       comp=Z,52nm,1.4s
RUBR   Rubicon Trail       65.84  59  IAmb    IAmb    00 11 52.1
       comp=Z,38nm,1.0s
SCO    Scoresbysund        65.86 356  eP      P       00 11 30.2 +0.9
SCO                                   IAmb    IAmb    00 11 30.6
       comp=Z,261nm,1.4s
EMB    Emerald Bay         65.92  59  IAmb    IAmb    00 11 54.3
       comp=Z,42nm,1.0s
LPSR   Galich'ya Gora      66.12 321  eP      P       00 11 31.4  0.0
LPSR                                  pmax    pmax
       comp=Z,270nm,0.7s
LPSR                                  MLR     MLR
       comp=Z,970nm,16.0s
PNTR   Pine Nut            66.17  58  IAmb    IAmb    00 11 56.7
       comp=Z,48nm,1.1s
EGMT   Eagleton            66.22  46  IAmb    IAmb    00 11 57.2
       comp=Z,45nm,1.0s
EGMT   Eagleton            66.22  46  P       P       00 11 32.4 +0.2
       baz=310,SNR=21
EGMT                                  S       S       00 20 17.4 +1.5
       baz=310
DLMT   Dillon              66.38  49  IAmb    IAmb    00 12 00.8
       comp=Z,100nm,1.8s
SAO    San Andreas Ge      66.43  61  P       P       00 11 34.3 +0.7
SAO                                   pmax    pmax
       comp=Z,11nm,1.0s
SAO    San Andreas Ge      66.43  61  P       P       00 11 34.3 +0.7
YERR   Yerington           66.45  58  IAmb    IAmb    00 11 56.1
       comp=Z,71nm,1.2s
HLID   Hailey              66.49  52  P       P       00 11 34.7 +0.6
       baz=309,SNR=16
MEF    Metsahovi           66.49 333  eP      P       00 11 33.3 -0.3
ILULI  Ilulissat           66.55   7  IAmb    IAmb    00 11 35.3
       comp=Z,107nm,1.1s
NSS    Namsos              66.60 341  eP      P       00 11 33.8 -0.4
VORR   Voronezh            66.61 320  eP      P       00 11 35.5 +1.0
VORR                                  pmax    pmax
       comp=Z,240nm,0.5s
LIFNC  LIFOU               66.68 160  P       P       00 11 34.8 -0.4
RAF    Rauma               66.72 335  eP      P       00 11 34.7 -0.3
BOZ    Bozeman (W)         66.76  49  P       P       00 11 36.1 +0.4
       baz=309,SNR=52
BOZ                                   S       S       00 20 23.6 +0.9
       baz=309
BMN    Battle Mountai      66.79  56  P       P       00 11 37.0 +1.0
BMN                                   pmax    pmax
       comp=Z,95nm,1.8s
BMN    Battle Mountai      66.79  56  P       P       00 11 37.0 +1.0
BMN                                   IAmb    IAmb    00 11 58.3
       comp=Z,95nm,1.8s
BBGB   Big Mountain B      66.80  61  P       P       00 11 36.8 +0.7
BBGB                                  IAmb    IAmb    00 11 44.9
       comp=Z,39nm,0.9s
VSR    Storozhevoye        66.93 320  eP      P       00 11 37.1 +0.6
VSR                                   pmax    pmax
       comp=Z,310nm,0.5s
VSR                                   MLR     MLR
       comp=Z,1µm,17.0s
VORD   Divnogorie          67.04 319  eP      P       00 11 37.8 +0.6
VORD                                  pmax    pmax
       comp=Z,170nm,0.7s
KVN    Kaiserville         67.11  57  IAmb    IAmb    00 12 00.3
       comp=Z,55nm,1.1s
PMPB   Monarch Peak        67.17  61  P       P       00 11 39.9 +1.5
MSVF   Nonsavu             67.25 148  LR      LR      00 35 26.9
       comp=Z,828nm,20.7s,baz=342,slow=31
MSVF   Nonsavu             67.25 148  P       P       00 11 39.9 +1.0
MSVF                                  pmax    pmax
       comp=Z,42nm,1.0s
MSVF   Nonsavu             67.25 148  P       P       00 11 39.9 +1.0
MSVF                                  IAmb    IAmb    00 11 41.8
       comp=Z,42nm,1.0s
LHV    Little Huntoon      67.36  58  IAmb    IAmb    00 12 06.6
       comp=Z,82nm,1.1s
NVAR   Mina Array Bea      67.37  58  P       P       00 11 40.1 +0.3
       comp=Z,6.9nm,0.5s,baz=298,slow=7.3,SNR=71
NVAR                                  LR      LR      00 39 08.3
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      comp=Z,150nm,20.3s,baz=297,slow=34
      comp=Z,6.9nm,0.5s
MDPB  Devils Postpil   67.38  59    P      P      00 11 41.4 +1.4
ICESG Greenland Ices   67.39   3  i P      P      00 11 40.2 +0.6
ICESG                             IAmb     IAmb   00 11 41.6
      comp=Z,342nm,1.0s
DZM   Mont Dzumac      67.73 161    LR     LR     00 38 18.4
      comp=Z,537nm,20.5s,baz=328,slow=33
DZM   Mont Dzumac      67.73 161   eP      P      00 11 41.2  -0.7
DZM   Mont Dzumac      67.73 161    IAmb   IAmb   00 12 08.6
      comp=Z,61nm,1.2s
DZM   Mont Dzumac      67.73 161    P      P      00 11 41.8  -0.1
ELK   Elko             67.77  55    LR     LR     00 40 35.3
      comp=Z,152nm,19.5s,baz=312,slow=35
Q09A  Carvers          67.80  57    P      P      00 11 43.0 +0.5
Q09A                                IAmb   IAmb   00 12 04.0
      comp=Z,52nm,1.0s
MTSE  Matsula          67.82 332   eP      P      00 11 42.1 +0.1
PAGB  Antelope Grade   67.83  61    P      P      00 11 44.0 +1.5
YNR   Norris Junctio   67.84  49    P      P      00 11 44.8 +2.1
YFT   Old Faithful     67.93  49    P      P      00 11 44.2 +0.9
AAL   Aland            67.93 335   eP      P      00 11 42.1  -0.6
ONTNC Ouen Toro        67.96 161    P      P      00 11 43.4 +0.2
ONTNC                               IAmb   IAmb   00 12 09.2
      comp=Z,80nm,1.2s
MAK   Makhachkala      67.97 309   eP      P      00 11 41.0  -2.2
MAK                                e*PP    pP     00 11 58.4  -2.8
MAK                                e*SP    sP     00 12 06.3  -2.4
MAK                                eS      S      00 20 34.2  -2.6
MAK                                e*SS    sS     00 21 06.5  -0.8
MAK                                eSS     SS     00 25 00.3 +1.2
MAK                                 pmax   pmax
      comp=Z,174nm,1.1s
MAK                                 MLR    MLR
      comp=Z,882nm,17.0s
YPP   Pitchstone Pla   68.06  49    P      P      00 11 45.5 +1.3
TBLU  Trondheim        68.09 341   eP      P      00 11 41.8  -1.8
LKWY  Lake             68.09  49    P      P      00 11 46.0 +1.6
LKWY                                pmax   pmax
      comp=Z,22nm,1.1s
LKWY  Lake             68.09  49    P      P      00 11 46.0 +1.6
H17A  Grant Village    68.10  49    P      P      00 11 46.2 +1.8
H17A  Grant Village    68.10  49    P      P      00 11 46.3 +1.9
      baz=310,SNR=24
OUENC Ouen Island, N   68.16 161    P      P      00 11 45.2 +0.7
OUENC                               IAmb   IAmb   00 12 10.6
      comp=Z,70nm,1.2s
OUENC Ouen Island, N   68.16 161    P      P      00 11 44.1  -0.4
ASAR  Alice Springs    68.21 193    P      P      00 11 44.7  -0.1
      comp=Z,28nm,0.8s,baz=13,slow=5.9,SNR=124
ASAR                                LR     LR     00 39 13.4
      comp=Z,218nm,21.8s,baz=30,slow=34
ASAR                                PKP2bc        00 40 03.3
      comp=Z,1.4nm,0.8s,baz=202,slow=3.1,SNR=11
      comp=Z,28nm,0.8s
SMMC  Simmler          68.25  62    P      P      00 11 46.5 +1.3
      baz=309
PALK  Pallekele        68.30 259    LR     LR     00 43 31.7
      comp=Z,359nm,20.0s,baz=156,slow=38
PALK  Pallekele        68.30 259    P      P      00 11 46.6 +0.9
PALK                                pmax   pmax
      comp=Z,64nm,1.5s
PALK  Pallekele        68.30 259    P      P      00 11 46.6 +0.9
PALK                                IAmb   IAmb   00 12 05.7
      comp=Z,64nm,1.4s
PALK  Pallekele        68.30 259    P      P      00 11 46.3 +0.6
PALK                                P      P      00 11 46.3 +0.6
AFI   Afiamalu         68.33 137    P      P      00 11 46.1 +0.3
AFI                                 pmax   pmax
      comp=Z,166nm,1.3s
AFI   Afiamalu         68.33 137    P      P      00 11 46.1 +0.3
RLMT  Red Lodge        68.34  48    P      P      00 11 46.6 +0.7
      baz=311
RLMT                                S      S      00 20 43.4 +1.7
      baz=311
TPAW  Teton Pass       68.48  50    IAmb   IAmb   00 12 09.5
      comp=Z,51nm,1.0s
VES   Vestal, Richgr   68.50  61    P      P      00 11 48.0 +1.4
      baz=309
REDW  Red Top Meadow   68.62  50    IAmb   IAmb   00 12 10.1
      comp=Z,45nm,1.1s
PKM   Mcpherson Peak   68.63  62    P      P      00 11 49.6 +1.8
      baz=309,SNR=9.8
DGMT  Dagmar           68.74  43    IAmb   IAmb   00 11 50.1
      comp=Z,71nm,0.9s
DGMT  Dagmar           68.74  43    P      P      00 11 47.3  -0.7
      baz=312
DGMT  Dagmar           68.74  43    P      P      00 11 48.1 +0.1
      baz=312,SNR=8.8
SFJD  Kangerlussuaq    68.75   8    LR     LR     00 43 39.1
      comp=Z,1µm,20.1s,baz=342,slow=37
SFJD  Kangerlussuaq    68.75   8    P      P      00 11 47.5  -0.2
SFJD                                pmax   pmax
      comp=Z,55nm,0.8s
SFJD  Kangerlussuaq    68.75   8    P      P      00 11 47.5  -0.2
SFJD                                IAmb   IAmb   00 11 49.3
      comp=Z,55nm,0.8s
SFJD  Kangerlussuaq    68.75   8   eP      P      00 11 47.2  -0.5
SFJD                                IAmb   IAmb   00 11 49.0
      comp=Z,86nm,1.4s
CWC   Cottonwood Cre   68.75  60    P      P      00 11 49.2 +0.8
      baz=309
GROC  Groznyy          68.78 310   eP      P      00 11 48.8 +0.5
GROC                               e*PP    pP     00 12 08.1 +1.8
GROC                               e*SP    sP     00 12 15.7 +1.9
GROC                               eS      S      00 20 46.9 +0.5
GROC                               eS      SKiKP  00 21 10.3   -23
GROC                               e*SS    sS     00 21 20.7 +3.7
GROC                                pmax   pmax
      comp=Z,83nm,1.0s
EIDS  Eidsvold         68.82 177    IAmb   IAmb   00 11 50.8
      comp=Z,122nm,1.4s
GRAC  Grapevine Rang   68.84  59    IAmb   IAmb   00 12 11.3
      comp=Z,81nm,1.1s
GRAC  Grapevine Rang   68.84  59    P      P      00 11 49.6 +0.7
      baz=309,SNR=17
BCW   Bitter Crk WRg   68.85  62    IAmb   IAmb   00 12 11.6
      comp=Z,114nm,1.5s
UPP   Uppsala          68.91 335   eP      P      00 11 48.6  -0.2
LAO   LASA Array       68.91  45    IAmb   IAmb   00 11 52.6
      comp=Z,119nm,1.7s
LAO   LASA Array       68.91  45    P      P      00 11 49.8 +0.7
      baz=312
LAO   LASA Array       68.91  45    P      P      00 11 49.6 +0.5
      baz=312,SNR=12
LAO                                 S      S      00 20 50.0 +1.9
      baz=312
ISA   Isabella, Lake   68.99  60    P      P      00 11 50.6 +0.8
      baz=309,SNR=9.1
GOF   Gofitskoye       69.06 313⇑eP    P      00 11 51.0 +1.0
GOF                                eS      S      00 20 50.1 +0.3
GOF                                 pmax   pmax
      comp=Z,467nm,0.7s
GOF                                 smax   smax
      comp=N,59nm,1.2s
GOF                                 smax   smax
      comp=E,145nm,1.5s
R11A  Troy Canyon, C   69.08  57    P      P      00 11 50.9 +0.4
      baz=310,SNR=25
R11A                                S      S      00 20 50.7 +0.1
      baz=310
ARVC  Arvin            69.11  61    P      P      00 11 51.1 +0.7
      baz=309
FRB   Frobisher Bay    69.14  16    LR     LR     00 44 51.2
      comp=E,768nm,21.1s,baz=343,slow=38
SLIT  Slitere, Latvi   69.17 332   eP      P      00 11 54.0 +3.6
PCHI  Peechi           69.20 265⇑eP    P      00 11 51.8 +0.5
MOL   Molde            69.31 341   eP      P      00 11 51.8 +0.6
IDID  Didziasalis      69.33 328   eP      P      00 11 51.9 +0.5
MPMC  Manual Prospec   69.36  60    P      P      00 11 52.7 +0.4
      baz=310,SNR=21
DOMB  Dombas           69.41 340   eP      P      00 11 51.9   0.0
MBWA  Marble Bar       69.41 208    P      P      00 11 52.1  -0.2
MBWA                                pP     pwP    00 12 12.5  -0.4
S11A  Rachel           69.43  57    IAmb   IAmb   00 12 15.0
      comp=Z,72nm,1.1s
NC300 NORSAR Array S   69.49 339    P      P      00 11 52.5 +0.1
FURC  Furnace Creek,   69.49  59    P      P      00 11 54.0 +1.2
      baz=310,SNR=13
MNK   Minsk            69.50 327  i P      P      00 11 53.4 +0.9
MNK                               i *PP    pP     00 12 12.0 +1.5
MNK                               i *SP    sP     00 12 20.0 +2.0
MNK                               i                00 14 27.8
MNK                               i PPP    PPP    00 16 09.7
MNK                               i S      S      00 20 56.7 +2.2
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MNK                               i *SS    sS     00 21 28.9 +3.7
MNK                               i SS     SS     00 25 26.7 +4.7
MNK                                 pmax   pmax
      comp=Z,81nm,0.8s
MNK                                 pmax   pmax
      comp=N,52nm,1.0s
MNK                                 pmax   pmax
      comp=E,17nm,1.0s
MNK                                 MLR    MLR
      comp=N,638nm,17.0s
MNK                                 MLR    MLR
      comp=Z,1µm,15.0s
MNK                                 MLR    MLR
      comp=E,132nm,17.0s
MNK   Minsk            69.50 327  i P      P      00 11 53.4 +0.9
      comp=E,17nm,1.1s
MNK                               i P      P      00 11 53.4 +0.9
      comp=N,52nm,1.0s
MNK                               i P      P      00 11 53.4 +0.9
      comp=Z,81nm,0.8s,baz=42
MNK                               i pP     pP     00 12 12.1 +1.5
MNK                               i sP     sP     00 12 20.1 +2.0
MNK                               i PP     PP     00 14 27.9 +1.6
MNK                               i PPP    PPP    00 16 09.7
MNK                               i S      S      00 20 56.7 +2.2
MNK                               i sS     sS     00 21 28.9 +3.7
MNK                               i SS     SS     00 25 26.7 +4.7
MNK                               i SSS    SSS    00 28 54.0
MNK                               i LQ     LQ     00 36 58.7
MNK                               i LR     LR     00 43 01.0
MNK                               i LRM    MLR    00 44 53.1
      comp=N,638nm,16.8s
MNK                               i LRM    MLR    00 45 08.4
      comp=Z,1µm,15.5s
MNK                               i LRM    MLR    00 45 18.9
      comp=E,132nm,16.8s
DUG   Dugway, Tooele   69.55  54    P      P      00 11 53.8 +0.5
      baz=310,SNR=12
DUG                                 S      S      00 20 58.4 +2.5
      baz=310
TPNV  Topopah Spring   69.57  58    IAmb   IAmb   00 12 15.7
      comp=Z,72nm,1.2s
TPNV  Topopah Spring   69.57  58    P      P      00 11 54.2 +0.7
      baz=310,SNR=24
CCAC  Calif City Air   69.61  61    P      P      00 11 53.6   0.0
CCAC                                IAmb   IAmb   00 12 02.2
      comp=Z,41nm,0.9s
LRMC  Laurel Mtn Rad   69.61  60    P      P      00 11 54.5 +0.8
      baz=310,SNR=6.4
NACGM Naroch           69.62 328  i P      P      00 11 52.8  -0.5
DY2G  Dye2             69.63   6  i P      P      00 11 53.1  -0.3
DY2G                                IAmb   IAmb   00 11 55.2
      comp=Z,447nm,1.5s
BW06  Boulder Array    69.73  50    P      P      00 11 54.5   0.0
      baz=311,SNR=23
BW06                                S      S      00 20 59.5 +1.3
      baz=311
PDAR  Pinedale Array   69.73  50    P      P      00 11 54.3  -0.2
      comp=Z,5.6nm,0.5s,baz=294,slow=1.8,SNR=91
PDAR                                PKP2bc        00 39 55.5
      comp=Z,0.6nm,1.0s,baz=104,slow=6.3,SNR=4.8
PDAR                                LR     LR     00 41 38.3
      comp=Z,142nm,20.9s,baz=324,slow=35
      comp=Z,5.6nm,0.5s
NB2   NORSAR Subarra   69.73 339    P      P      00 11 53.4  -0.5
      comp=Z,154nm,0.7s,baz=32,slow=6.2
NB2   NORSAR Subarra   69.73 339    P      P      00 11 53.4  -0.5
      baz=32,slow=6.2
NOA   NORSAR Array B   69.73 339    P      P      00 11 54.0 +0.1
      comp=Z,82nm,0.6s,baz=32,slow=6.6,SNR=385
NOA                                 PKP2bc        00 39 53.6
      comp=Z,2.4nm,1.0s,baz=205,slow=3.4,SNR=4.0
NOA                                 LR     LR     00 47 22.9
      comp=Z,1µm,18.4s,baz=40,slow=40
      comp=Z,82nm,0.6s
PSA00 Pilbara Seismi   69.76 207    P      P      00 11 54.2  -0.3
PSA00                               IAmb   IAmb   00 11 55.5
      comp=Z,59nm,0.9s
PSA00 Pilbara Seismi   69.76 207    P      P      00 11 54.1  -0.3
PSA00                               IAmb   IAmb   00 11 55.5
      comp=Z,32nm,0.9s
PSA00                                      pwP    00 12 13.4  -1.7
PSA00 Pilbara Seismi   69.76 207    P      P      00 11 54.2  -0.3
AKN   Aaknes           69.78 341   eP      P      00 11 54.9 +0.7
EDW2  Edwards Air Fo   69.79  61    P      P      00 11 55.5 +0.7
      baz=310,SNR=14
GWY   Greenwater Val   69.79  59    P      P      00 11 55.6 +0.7
GWY                                 IAmb   IAmb   00 12 21.2
      comp=Z,40nm,0.9s
QSM   Queen of Sheba   69.81  59    IAmb   IAmb   00 12 16.9
      comp=Z,53nm,1.1s
HFS   Hagfors          69.82 337    LR     LR     00 46 12.9
      comp=Z,863nm,20.8s,baz=32,slow=39
SNCC  San Nicolas Is   69.85  63    P      P      00 11 55.4 +0.3
SNCC                                IAmb   IAmb   00 12 17.3
      comp=Z,96nm,1.3s
SNCC  San Nicolas Is   69.85  63    P      P      00 11 55.5 +0.3
      baz=310
RMQ   Roma             69.87 179    P      P      00 11 56.0 +1.0
NC602 NORSAR Array S   69.90 339   eP      P      00 11 54.4  -0.5
DECC  Green Verdugo    69.98  62    P      P      00 11 56.2 +0.3
      baz=310
KVAR  Kislovodsk Arr   69.98 312    LR     LR     00 45 46.3
      comp=Z,1µm,20.6s,baz=262,slow=38
KIV   Kislovodsk       69.98 312  ⇓P      P      00 11 57.8 +2.0
KIV   Kislovodsk       69.98 312   eP      P      00 11 56.2 +0.4
KIV                                e*SP    sP     00 12 23.0 +1.6
KIV                                eS      S      00 21 01.8 +0.9
KIV                                eSS     SS     00 25 33.4 +3.1
KIV                                 pmax   pmax
      comp=Z,76nm,3.3s
KIV                                 pmax   pmax
      comp=Z,393nm,1.1s
KIV                                 MLR    MLR
      comp=Z,1µm,18.0s
KIV   Kislovodsk       69.98 312    P      P      00 11 56.5 +0.7
KIV   Kislovodsk       69.98 312    P      P      00 11 57.6 +1.8
KIV                                 P      P      00 11 57.6 +1.8
KIV   Kislovodsk       69.98 312   eP      P      00 11 56.2 +0.4
KIV   Kislovodsk       69.98 312  i P      P      00 11 56.4 +0.5
      SNR=63
KIV   Kislovodsk       69.98 312    P      P      00 11 56.6 +0.7
KIV                                 pP     sP     00 12 23.4 +2.0
PSUT  Pine Spring      70.00  56    P      P      00 11 57.2 +1.0
PRN   Pahroc Range     70.01  57    IAmb   IAmb   00 12 18.6
      comp=Z,73nm,1.7s
QLP   Quilpie          70.02 183    P      P      00 11 55.8  -0.1
KBZ   Khabaz           70.02 312    P      P      00 11 56.6 +0.8
      comp=Z,197nm,1.0s,baz=56,slow=3.4,SNR=262
KBZ                                 LR     LR     00 47 54.1
      comp=Z,2µm,18.2s,baz=34,slow=40
      comp=Z,197nm,1.0s
KBZ   Khabaz           70.02 312ceP    P      00 11 56.7 +0.8
KBZ                                 pmax   pmax
      comp=Z,220nm,0.9s
ZEI   Tsey             70.10 310   eP      P      00 11 54.4  -2.3
ZEI                                 pmax   pmax
      comp=Z,61nm,0.6s
PASC  Pasadena Art C   70.12  62    P      P      00 11 57.5 +0.7
SHA1  Shidzhatmaz      70.14 312c iP     P      00 11 57.4 +0.4
SHOC  Shoshone, Teco   70.22  59    P      P      00 11 57.9 +0.6
      baz=310
PABE  Paberze          70.22 330   eP      P      00 11 57.1 +0.2
GSC   Goldstone, Bar   70.27  60    P      P      00 11 58.6 +0.8
      baz=310,SNR=8.9
VIKU  Vikbolandet      70.29 335   eP      P      00 11 57.2  -0.1
BFSC  Mount Baldy Ra   70.42  61    P      P      00 11 59.3 +0.6
      baz=310,SNR=9.6
RRX   Edison Barstow   70.43  60    P      P      00 11 58.8 +0.2
      baz=310
NEY   Neytrino         70.44 311  i P      P      00 11 59.4 +0.7
NEY                                 pmax   pmax
      comp=Z,16nm,1.0s
CIS   Catalina Islan   70.47  62    P      P      00 11 59.0 +0.1
      baz=310
PBUR  Paburge          70.55 331   eP      P      00 11 59.2 +0.3
WRKA  Warakurna        70.66 198    P      P      00 11 59.5  -0.4
FOO   Floro            70.74 342   eP      P      00 12 00.4 +0.4
TUQ   Turquoise Moun   70.74  59    P      P      00 12 01.1 +0.5
      baz=310,SNR=16
SKAR  Skarslia         70.78 340   eP      P      00 11 59.8  -0.5
TCRU  Three Creeks R   70.79  55    P      P      00 12 02.1 +1.1
OSL   Oslo             70.80 339   eP      P      00 12 00.8 +0.5
HYA   Hoyanger         70.86 341   eP      P      00 12 01.3 +0.6
BBRC  Big Bear Solar   70.87  61    P      P      00 12 01.7 +0.2
      baz=310
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HEC   Hector,Ludlow    70.87  60    P      P      00 12 02.9 +1.5
      baz=310,SNR=5.9
ANGG  Ammassalik, Gr   70.93   2    IAmb   IAmb   00 12 02.4
      comp=Z,66nm,0.9s
ANGG  Ammassalik, Gr   70.93   2  i P      P      00 12 00.4  -0.6
ANGG                                IAmb   IAmb   00 12 02.0
      comp=Z,341nm,1.8s
CCUT  Cedar City       70.94  56    P      P      00 12 02.5 +0.5
ELS   Elsinore Mount   70.94  62    P      P      00 12 02.3 +0.5
ELS                                 IAmb   IAmb   00 12 24.7
      comp=Z,137nm,2.0s
MSU   Marysvale        71.02  55    P      P      00 12 03.8 +1.4
MSU   Marysvale        71.02  55    P      P      00 12 03.8 +1.4
SZCU  Shurtz Canyon    71.07  56    P      P      00 12 04.0 +1.2
MURC  Murrieta         71.12  61    P      P      00 12 03.7 +0.9
      baz=310
CHVG  Ch'k'valeri      71.14 311  ⇓P      P      00 12 05.0 +2.2
RDMU  Red Mountain     71.17  52    P      P      00 12 03.5 +0.2
P17A  Butcher Ranch,   71.22  53    IAmb   IAmb   00 12 25.8
      comp=Z,46nm,1.1s
AKH   Akhalkalaki      71.24 310  ⇑P      P      00 12 05.8 +2.1
SUE   Sulen            71.28 342   eP      P      00 12 03.9 +0.6
MTPU  Mount Pierson    71.32  55    IAmb   IAmb   00 12 30.4
      comp=Z,94nm,2.0s
GMRC  Granite Mounta   71.32  60    P      P      00 12 05.3 +1.1
      baz=311,SNR=15
GMRC                                S      S      00 21 18.2 +1.4
      baz=311
KONO  Kongsberg        71.34 339ceP    P      00 12 04.3 +0.7
KONO                                pmax   pmax
      comp=Z,175nm,1.7s
KONO  Kongsberg        71.34 339    P      P      00 12 04.2 +0.5
KONO                                IAmb   IAmb   00 12 05.0
      comp=Z,160nm,1.4s
KONO  Kongsberg        71.34 339   eP      P      00 12 04.0 +0.4
LCMT  Little Creek M   71.36  56    P      P      00 12 05.4 +1.0
ULM   Lac du Bonnet    71.36  37    P      P      00 12 04.0   0.0
      comp=Z,19nm,0.7s,baz=312,slow=7.0,SNR=22
      comp=Z,19nm,0.7s
GNI   Garni            71.38 308    LR     LR     00 46 47.7
      comp=Z,1µm,18.8s,baz=52,slow=39
GNI   Garni            71.38 308ceP    P      00 12 06.0 +1.6
GNI                                 pmax   pmax
      comp=Z,153nm,1.3s
GNI   Garni            71.38 308    P      P      00 12 05.5 +1.1
GNI                                 IAmb   IAmb   00 12 09.9
      comp=Z,70nm,0.8s
GNI   Garni            71.38 308    P      P      00 12 06.4 +2.0
NUUK  Nuuk             71.38   9   eP      P      00 12 04.1 +0.3
NUUK                                IAmb   IAmb   00 12 05.7
      comp=Z,134nm,1.0s
MDND  Maddock          71.39  41    P      P      00 12 04.9 +0.7
      baz=315
STRU  Stroemstad       71.44 338  i P      P      00 12 04.8 +0.5
K22A  Casper           71.47  48    IAmb   IAmb   00 12 27.5
      comp=Z,139nm,1.8s
K22A  Casper           71.47  48    P      P      00 12 04.9  -0.1
      baz=313,SNR=9.8
K22A  Casper           71.47  48    P      P      00 12 05.4 +0.4
      baz=313,SNR=9.8
K22A                                S      S      00 21 19.2 +0.9
      baz=313
BORG  Borgarnes        71.52 355    LR     LR     00 41 46.7
      comp=Z,201nm,20.1s,baz=13,slow=34
BORG  Borgarnes        71.52 355    P      P      00 12 05.9 +1.3
BORG                                pmax   pmax
      comp=Z,305nm,1.5s
BORG  Borgarnes        71.52 355    P      P      00 12 05.9 +1.3
PFO   Pinyon Flats O   71.58  61    LR     LR     00 38 40.4
      comp=Z,286nm,21.9s,baz=296,slow=32
PFO   Pinyon Flats O   71.58  61    P      P      00 12 06.8 +1.0
PFO                                 pmax   pmax
      comp=Z,59nm,1.7s
PFO   Pinyon Flats O   71.58  61    P      P      00 12 06.8 +1.0
PFO   Pinyon Flats O   71.58  61    P      P      00 12 06.4 +0.6
      baz=311,SNR=7.4
PFO   Pinyon Flats O   71.58  61    P      P      00 12 07.0 +1.3
PFO                                 pP     sP     00 12 30.8  -0.4
TPFO  Pinon Flats      71.59  61    P      P      00 12 06.6 +0.8
      baz=311,SNR=6.9
BELC  Belle Mtn. Jos   71.62  60    P      P      00 12 06.6 +0.6
      baz=311,SNR=8.3
109C  Camp Elliot, M   71.64  62    P      P      00 12 05.7  -0.2
      baz=311
PKCU  Pink Cliffs      71.64  56    P      P      00 12 07.5 +1.2
SUW   Suwalki          71.67 329   eP      P      00 12 04.9  -0.8
SUW                                eS      S      00 21 14.5  -5.3
SUW                                eL      L      00 40 41.2
      comp=Z,2µm,30.2s
SUW   Suwalki          71.67 329   eP      P      00 12 05.1  -0.6
ASK   Askoy            71.69 341   eP      P      00 12 06.0 +0.2
RWWY  Rawlins          71.74  50    IAmb   IAmb   00 12 57.1
      comp=Z,70nm,1.6s
BER   Bergen           71.75 341   eP      P      00 12 06.8 +0.7
AKASG Malin Array Be   71.76 324    P      P      00 12 06.4   0.0
      comp=Z,94nm,0.6s,baz=38,slow=6.7,SNR=287
AKASG                               S      S      00 21 18.4  -2.6
      comp=Z,2.6nm,1.0s,baz=34,slow=13,SNR=8.1
AKASG                               LR     LR     00 45 07.4
      comp=Z,564nm,21.8s,baz=32,slow=37
      comp=Z,94nm,0.6s
AKASG Malin Array Be   71.76 324  i P      P      00 12 05.8  -0.6
AKASG                               pmax   pmax
      comp=Z,89nm,0.6s
AKBB  Malin Array Si   71.76 324ceP    P      00 12 04.8  -1.6
E28A  Huff             71.77  42    P      P      00 12 06.6 +0.1
E28A  Huff             71.77  42    P      P      00 12 06.2  -0.3
      baz=315
RSSD  Black Hills      71.79  46    P      P      00 12 07.1 +0.2
RSSD                                pmax   pmax
      comp=Z,24nm,0.9s
RSSD  Black Hills      71.79  46    P      P      00 12 07.1 +0.2
RSSD  Black Hills      71.79  46    P      P      00 12 06.8  -0.1
      baz=314,SNR=17
RSSD  Black Hills      71.79  46    P      P      00 12 06.7  -0.2
      baz=314
RSSD                                S      S      00 21 20.3  -1.7
      baz=314
SOC   Sochi            71.82 313   eP      P      00 12 04.7  -2.1
SOC                                e*PP    pP     00 12 23.0  -2.0
SOC                                e*SP    sP     00 12 30.6  -1.8
SOC                                ePPP    PPP    00 16 24.1
SOC                                eS      S      00 21 20.7  -1.2
SOC                                e*SS    sS     00 21 52.4  -0.2
SOC                                e              00 22 02.6
SOC                                 pmax   pmax
      comp=Z,69nm,0.5s
SOC                                 MLR    MLR
      comp=Z,2µm,20.0s
ODD1  Odda             71.86 340   eP      P      00 12 07.6 +0.7
OOD   Oodnadatta       71.98 191    P      P      00 12 08.0 +0.2
BAR   Barrett          72.05  62    P      P      00 12 09.0 +0.5
IRM   Iron Mountain    72.05  60    P      P      00 12 09.7 +1.2
      baz=311,SNR=19
MONP2 Monument Peak    72.07  62    P      P      00 12 09.1 +0.3
      baz=311
BATM  Batumi           72.11 311  ⇑P      P      00 12 09.4 +0.8
ANN   Anapa            72.16 315c iP     P      00 12 09.3 +0.5
ANN                                e*PP    pP     00 12 28.1 +1.1
ANN                                e              00 14 49.5
ANN                                eS      S      00 21 27.0 +1.3
ANN                                 pmax   pmax
      comp=Z,293nm,1.5s
ANN                                 pmax   pmax
      comp=N,17nm,0.4s
ANN   Anapa            72.16 315   eP      P      00 12 09.3 +0.5
TJOU  Tjoern           72.17 337  i P      P      00 12 09.0 +0.4
BC3   Big Chuckawall   72.19  60    P      P      00 12 10.1 +0.8
      baz=311,SNR=9.2
O20A  White River Ci   72.22  51    P      P      00 12 10.0 +0.4
      baz=312,SNR=13
W13A  Hualapai Mount   72.22  58    P      P      00 12 10.9 +1.2
CBX   Cerro Bola       72.29  62    P      P      00 12 09.8  -0.3
U15A  North Rim        72.32  56    IAmb   IAmb   00 12 33.0
      comp=Z,126nm,1.4s
BLS5  Blasjo           72.33 340   eP      P      00 12 10.8 +1.1
BLEU  Blekinge         72.37 334  i P      P      00 12 09.9 +0.1
IKP   In-Ko-Pah, Jac   72.43  62    P      P      00 12 11.7 +0.9
      baz=311,SNR=5.5
SWSC  Sam W. Stewart   72.43  61    P      P      00 12 11.5 +0.8
      baz=311,SNR=5.4
RMX   La Rumorosa      72.48  62    P      P      00 12 12.6 +1.5
YUH   Yuha Desert      72.55  61    P      P      00 12 12.0 +0.6
PDMCI Parker Dam,Lak   72.58  59    P      P      00 12 12.5 +0.9
      baz=311
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ONAU	Onsala	72.63	337	iP	P	00 12 11.3	-0.1
BLYC	Blythe	72.71	60	P	P	00 12 13.8	+1.5
FABU	Falkenberg	72.73	336	iP	P	00 12 12.2	+0.2
AGMN	Agassiz Nation	72.80	39	P	P	00 12 12.2	-0.4
	baz=317						
AGMN	Agassiz Nation	72.80	39	P	P	00 12 11.9	-0.7
	baz=317,SNR=15						
AGMN				S	S	00 21 30.9	-2.0
	baz=317						
KMY	Karmoy	72.81	341	eP	P	00 12 13.4	+1.0
HOMB	Homborsund	72.82	339	eP	P	00 12 12.1	-0.3
DEL	Delary	72.83	335	eP	P	00 12 12.1	-0.5
DEL	Delary	72.83	335	iP	P	00 12 12.8	+0.2
PV14	Lion Creek, Pa	72.96	53	P	P	00 12 14.8	+0.8
PV14				IAmb	IAmb	00 12 36.0	
	comp=Z,36nm,0.9s						
GLA	Glamis	72.98	61	P	P	00 12 15.1	+1.1
	baz=311,SNR=8.6						
N23A	Red Feather La	72.98	49	P	P	00 12 14.5	+0.3
	baz=314,SNR=14						
N23A				S	S	00 21 37.6	+1.7
	baz=314						
PV20	West Nyswonger	73.01	53	P	P	00 12 15.1	+0.8
PV20				IAmb	IAmb	00 12 37.1	
	comp=Z,143nm,1.7s						
PV04	Paradox Valley	73.01	53	P	P	00 12 15.8	+1.6
PV04				IAmb	IAmb	00 12 37.3	
	comp=Z,177nm,1.7s						
PV19	Morning Glory	73.02	53	P	P	00 12 15.6	+1.2
PV19				IAmb	IAmb	00 12 37.3	
	comp=Z,215nm,1.8s						
PV17	East Wray Mesa	73.06	53	P	P	00 12 15.7	+1.1
PV16	Nyswonger Mesa	73.06	53	P	P	00 12 15.4	+0.8
PV16				IAmb	IAmb	00 12 36.7	
	comp=Z,52nm,1.1s						
PV11	David Mesa, Pa	73.09	53	P	P	00 12 15.6	+0.8
PV11				IAmb	IAmb	00 12 36.8	
	comp=Z,57nm,1.1s						
SNART	Snartemo	73.09	339	iP	P	00 12 15.5	+1.4
SNART	Snartemo	73.09	339	eP	P	00 12 14.0	-0.2
PV18	Skein Mesa, Pa	73.11	53	P	P	00 12 15.1	+0.2
PV18				IAmb	IAmb	00 12 37.0	
	comp=Z,130nm,1.7s						
PV05	Paradox Valley	73.11	53	P	P	00 12 16.0	+1.1
PV05				IAmb	IAmb	00 12 37.1	
	comp=Z,46nm,0.9s						
D32A	Dogwood Acres,	73.12	40	P	P	00 12 14.3	-0.3
D32A				IAmb	IAmb	00 12 15.9	
	comp=Z,60nm,0.7s						
D32B	Dogwood Acres,	73.12	40	P	P	00 12 15.1	+0.6
	baz=317						
PV12	Saucer Basin,	73.12	53	P	P	00 12 16.4	+1.4
PV12				IAmb	IAmb	00 12 37.1	
	comp=Z,166nm,1.8s						
PV07	Paradox Valley	73.13	53	P	P	00 12 16.8	+1.8
PV03	Paradox Valley	73.14	53	P	P	00 12 16.3	+1.2
OVD	Ostervraa, Den	73.18	337	eP	P	00 12 13.1	-1.6
OVD				iP	P	00 12 15.3	+0.7
OVD				IAmb	IAmb	00 12 16.3	
	comp=Z,207nm,0.8s						
PV13	Radium Mtn., P	73.22	53	IAmb	IAmb	00 12 38.5	
	comp=Z,150nm,1.7s						
PV15	Paradox Valley	73.29	53	P	P	00 12 17.2	+1.2
PV01	Paradox Valley	73.38	53	P	P	00 12 17.3	+0.8
PV01				IAmb	IAmb	00 12 38.5	
	comp=Z,119nm,1.9s						
BANOM	Banah	73.41	290	P	P	00 12 17.6	+1.0
BANOM				P	P	00 12 17.6	+1.0
BANOM	Banah	73.41	290	iP	P	00 12 17.2	+0.6
	SNR=18						
BJUU	Bjuv	73.42	335	iP	P	00 12 16.7	+0.6
SHME	Shamm	73.44	290	P	P	00 12 17.3	+0.6
SHME	Shamm	73.44	290	iP	P	00 12 17.3	+0.6
	SNR=7.5						
WUAZ	Wupatki	73.48	57	P	P	00 12 17.9	+0.8
	baz=312,SNR=12						
Y14A	Wickenburg	73.53	59	P	P	00 12 18.3	+1.1
Y14A				IAmb	IAmb	00 12 39.5	
	comp=Z,75nm,1.6s						
WSAR	Wadi Sarin	73.55	286	LR	LR	00 47 16.2	
	comp=Z,252nm,19.3s,baz=92,slow=38						
WSAR	Wadi Sarin	73.55	286	P	P	00 12 18.3	+0.9
GEVA	Gevas	73.58	307	P	P	00 12 18.8	+1.2
GEVA				IAmb	IAmb	00 12 20.8	
	comp=Z,55nm,1.0s						
KTUT	Trabzon	73.58	311	⇓P	P	00 12 18.7	+1.4
BSD	Bornholm Skovb	73.64	334	eP	P	00 12 17.3	-0.1
BSD	Bornholm Skovb	73.64	334	iP	P	00 12 17.1	-0.3
BSD				IAmb	IAmb	00 12 18.7	
	comp=Z,108nm,0.6s						
LUNU	Lund	73.67	335	iP	P	00 12 18.0	+0.5
GOET	G??ttrup	73.70	338	iP	P	00 12 19.1	+1.5
B35A	Bob, Littlefor	73.71	38	IAmb	IAmb	00 12 19.3	
	comp=Z,40nm,0.7s						
B35A	Bob, Littlefor	73.71	38	P	P	00 12 17.6	-0.4
	baz=319						
BIDO	Bidbid	73.72	287	P	P	00 12 20.4	+2.0
	SNR=5.3						
BIDO				P	P	00 12 20.4	+2.0
	SNR=5.3						
JLN	Jalan Bani Buh	73.72	285	P	P	00 12 20.0	+1.6
JLN				P	P	00 12 20.0	+1.6
WBK	Wadi Bani Khal	73.73	286	P	P	00 12 20.0	+1.5
WBK				P	P	00 12 20.0	+1.5
KOPT	Kop Dagi	73.86	310	P	P	00 12 21.0	+1.6
KOPT				IAmb	IAmb	00 12 27.9	
	comp=Z,46nm,0.7s						
ARMA	Armidale	73.87	176	IAmb	IAmb	00 12 22.0	
	comp=Z,111nm,1.2s						
MSFE	Esma-Masafi	73.87	290	P	P	00 12 20.2	+0.9
ISCO	Idaho Springs	73.92	50	IAmb	IAmb	00 12 42.1	
	comp=Z,88nm,1.8s						
ISCO	Idaho Springs	73.92	50	P	P	00 12 19.9	+0.1
	baz=314,SNR=15						
ISCO	Idaho Springs	73.92	50	P	P	00 12 19.9	+0.1
	baz=314,SNR=15						
ISCO				S	S	00 21 48.0	+1.4
	baz=314						
COP	Copenhagen	73.93	335	eP	P	00 12 19.7	+0.7
COP				iP	P	00 12 20.2	+1.2
GURO	Guroymak-BITLI	74.00	308	IAmb	IAmb	00 12 23.5	
	comp=Z,125nm,1.1s						
MVCO	Mesa Verde	74.05	54	P	P	00 12 21.0	+0.5
	baz=313,SNR=11						
SORM	Soroca	74.06	323	⇑P	P	00 12 19.1	-0.9
SMDO	Samad	74.08	287	P	P	00 12 22.1	+1.4
SMDO				P	P	00 12 22.1	+1.4
UOSS	Minazif	74.11	289	P	P	00 12 21.1	+0.4
UOSS				IAmb	IAmb	00 12 22.4	
	comp=Z,121nm,1.2s						
UOSS	Minazif	74.11	289	iP	P	00 12 21.3	+0.6
	SNR=11						
SUSD	Miller	74.14	43	P	P	00 12 21.4	+0.8
SUSD				IAmb	IAmb	00 12 51.3	
	comp=Z,40nm,0.8s						
SUSD	Miller	74.14	43	P	P	00 12 21.4	+0.8
	baz=316						
SUSD	Miller	74.14	43	P	P	00 12 20.5	-0.1
	baz=316						
SUSD				S	S	00 21 46.0	-2.3
	baz=316						
MUD	Monsted U'grnd	74.22	337	eP	P	00 12 21.1	+0.4
MUD				IAmb	IAmb	00 12 22.6	
	comp=Z,234nm,1.6s						
HATD	Hatta, Dubai	74.24	289	P	P	00 12 22.6	+1.1
	SNR=8.6						
HATD	Hatta, Dubai	74.24	289	iP	P	00 12 22.4	+1.0
	SNR=14						
HOQ	Hoqain	74.24	288	P	P	00 12 22.5	+1.0
	SNR=9.2						
BEL	Belsk	74.28	329	eP	P	00 12 21.9	+0.7
BEL				eS	SKiKP	00 21 42.9	+1.4
BEL				eL	L	00 42 08.1	
	comp=Z,2µm,30.0s						
SFX	San Felipe	74.30	62	P	P	00 12 22.2	+0.6
LLD	Lille Linde	74.30	335	iP	P	00 12 22.1	+0.9
ASHO	Ashiyiah	74.38	289	P	P	00 12 23.4	+1.0
	SNR=8.4						
ASHO	Ashiyiah	74.38	289	iP	P	00 12 22.9	+0.6
	SNR=14						
GKP	Gorka Klasztor	74.39	332	eP	P	00 12 21.8	-0.1
GKP				eL	L	00 38 46.2	
	comp=Z,2µm,42.4s						
GKP	Gorka Klasztor	74.39	332	eP	P	00 12 22.2	+0.4
F33A	5 Mile Ranch,	74.41	41	P	P	00 12 22.4	+0.3
	baz=318						
NAZ	Nazwa, Dubai	74.46	290	P	P	00 12 23.1	+0.4
NAZ				P	P	00 12 23.1	+0.4
NAZ	Nazwa, Dubai	74.46	290	iP	P	00 12 23.3	+0.6
	SNR=6.1						
JMDO	Jabal Madar	74.49	286	P	P	00 12 24.2	+1.3
	SNR=6.8						
JMDO				P	P	00 12 24.2	+1.3
	SNR=6.8						
PURM	Purcari	74.58	321	⇓P	P	00 12 23.2	+0.2
LVV	L'vov	74.60	326	eP	P	00 12 24.0	+0.9
LVV				e		00 12 49.6	
LVV				e		00 15 07.2	
LVV				ePPP	PPP	00 17 04.9	
LVV				eS	S	00 21 50.7	-2.5
LVV				ePS	PnS	00 22 28.8	-6.6
LVV				eSS	SS	00 26 41.6	+1.4
LVV				pmax	pmax		
	comp=Z,500nm,1.4s						
LVV				MLR	MLR		
	comp=E,1µm,15.0s						
LVV				MLR	MLR		
	comp=N,800nm,17.0s						
LVV				MLR	MLR		
	comp=Z,1µm,15.0s						
S22A	4UR Ranch, Cre	74.65	52	P	P	00 12 24.6	+0.6
	baz=314,SNR=9.9						
IVI	Ivigtut	74.66	8	IAmb	IAmb	00 12 25.0	
	comp=Z,60nm,0.9s						
FAQ	Al Faqa, Dubai	74.66	290	iP	P	00 12 24.5	+0.6
	SNR=12						
KIS	Kishinev	74.71	322	⇑iP	P	00 12 23.0	-0.8
	comp=Z,240nm,1.3s						
KIS				⇓iS	S	00 21 52.0	-2.5
	comp=Z,440nm,4.9s						
KIS				eL	L	00 41 02.0	
KIS				LRM	MLR	00 47 56.0	
	comp=Z,500nm,16.0s						
KIS	Kishinev	74.71	322	⇑P	P	00 12 24.0	+0.2
KIS	Kishinev	74.71	322	c iP	P	00 12 23.0	-0.8
KIS				iS	S	00 21 52.0	-2.5
KIS				pmax	pmax		
	comp=Z,240nm,1.3s						
KIS				smax	smax		
	comp=E,440nm,4.9s						
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
W18A	Petrified Fore	74.74	56	P	P	00 12 25.4	+0.9
W18A	Petrified Fore	74.74	56	P	P	00 12 25.2	+0.8
	baz=313						
Q24A	Divide	74.76	50	P	P	00 12 24.6	0.0
Q24A	Divide	74.76	50	P	P	00 12 24.7	0.0
	baz=314						
Q24A				S	S	00 21 56.2	+0.3
	baz=314						
MILM	Milestii Mici	74.77	321	⇑iP	P	00 12 23.0	-1.1
	comp=Z,340nm,1.2s						
MILM				eS	S	00 21 53.0	-2.1
	comp=Z,800nm,8.0s						
MILM	Milestii Mici	74.77	321	⇑P	P	00 12 24.3	+0.1
MILM	Milestii Mici	74.77	321	c iP	P	00 12 23.0	-1.1
MILM				eS	S	00 21 53.0	-2.1
MILM				ePS		00 22 32.0	
MILM				pmax	pmax		
	comp=Z,340nm,1.2s						
MILM				smax	smax		
	comp=E,800nm,8.0s						
MILM				MLR	MLR		
	comp=Z,1µm,18.0s						
BSY	Bisya	74.87	287	P	P	00 12 26.5	+1.4
	SNR=6.4						
ASUD	Al Ashush, Dub	74.92	290	P	P	00 12 26.5	+1.2
ASUD	Al Ashush, Dub	74.92	290	iP	P	00 12 26.3	+1.0
	SNR=8.5						
ARQ	Araqi	74.95	288	P	P	00 12 27.1	+1.5
	SNR=5.9						
NRS	Narsarsuaq	74.95	6	IAmb	IAmb	00 12 34.9	
	comp=Z,78nm,1.3s						
214A	Organ Pipe Nat	74.98	60	P	P	00 12 26.7	+1.1
214A	Organ Pipe Nat	74.98	60	P	P	00 12 26.7	+1.1
	baz=312,SNR=8.2						
EYMN	Ely	75.00	37	P	P	00 12 25.3	-0.2
	baz=320,SNR=32						
EYMN	Ely	75.00	37	P	P	00 12 24.9	-0.6
	baz=320,SNR=32						
EYMN				S	S	00 21 53.9	-3.9
	baz=320						
ALNE	Al Ain	75.01	289	P	P	00 12 26.7	+0.8
	SNR=11						
ALNE	Al Ain	75.01	289	iP	P	00 12 26.4	+0.5
	SNR=28						
X18A	Snowflake	75.01	57	P	P	00 12 27.2	+1.2
OGNE	Ogallala	75.07	47	P	P	00 12 26.6	+0.5
OGNE				IAmb	IAmb	00 12 47.8	
	comp=Z,86nm,0.9s						
OGNE	Ogallala	75.07	47	P	P	00 12 25.0	-1.1
	baz=315						
OGNE	Ogallala	75.07	47	P	P	00 12 25.7	-0.4
	baz=315						
OGNE				S	S	00 21 57.6	-1.3
	baz=315						
IAS	Iasi	75.12	322	⇓P	P	00 12 26.6	+0.4
KWP	Kalwaria Pacla	75.28	326	eP	P	00 12 27.5	+0.4
KWP				eS	S	00 21 59.3	-1.5
KWP				eL	L	00 41 41.1	
	comp=Z,2µm,35.9s						
LEOM	Leova	75.36	321	⇓P	P	00 12 28.5	+1.0
STKA	Stephens Creek	75.42	185	P	P	00 12 28.1	+0.2
	comp=Z,28nm,0.8s,baz=342,slow=7.5,SNR=29						
STKA				LR	LR	00 42 46.4	
	comp=Z,318nm,21.9s,baz=7.2,slow=33						
	comp=Z,28nm,0.8s						
STKA	Stephens Creek	75.42	185	P	P	00 12 28.2	+0.3
STKA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
STKA	Stephens Creek	75.42	185	P	P	00 12 28.2	+0.3
VASR	Vaslui	75.44	322	⇓P	P	00 12 28.6	+0.5
MHTO	MHTO	75.49	285	P	P	00 12 30.1	+1.4
	SNR=12						
MHTO				P	P	00 12 30.1	+1.4
	SNR=12						
DIKM	Dikmen	75.52	314	⇑P	P	00 12 30.6	+2.0
K31A	O'Neill	75.56	44	IAmb	IAmb	00 12 54.6	
	comp=Z,101nm,1.0s						
K31A	O'Neill	75.56	44	P	P	00 12 29.1	+0.3
	baz=317,SNR=9.1						
F36A	Milaca	75.68	39	P	P	00 12 28.8	-0.7
	baz=319,SNR=12						
BIR	Birlad	75.80	322	⇑P	P	00 12 31.5	+1.5
BUR08	Bucovina Ar. S	75.81	324	IAmb	IAmb	00 12 32.6	
	comp=Z,69nm,0.8s						
ECSD	EROS Data Cent	75.81	42	IAmb	IAmb	00 12 51.3	
	comp=Z,94nm,1.6s						
ECSD	EROS Data Cent	75.81	42	P	P	00 12 29.9	-0.3
	baz=318,SNR=28						
ECSD	EROS Data Cent	75.81	42	P	P	00 12 29.5	-0.7
	baz=318,SNR=28						
ECSD				S	S	00 22 04.9	-1.9
	baz=318						
BURAR	Bucovina Array	75.82	324	⇑P	P	00 12 30.3	0.0
BURAR	Bucovina Array	75.82	324	IAmb	IAmb	00 12 33.0	
	comp=Z,93nm,0.8s						
TOKA	Tokat	75.83	313	IAmb	IAmb	00 12 35.3	
	comp=Z,37nm,0.8s						
VLDR	Vladesti	75.92	321	⇑P	P	00 12 31.8	+1.1
BZK	Bozkurt	75.94	315	⇑P	P	00 12 33.0	+2.1
BZK	Bozkurt	75.94	315	P	P	00 12 31.2	+0.3
OJC	Ojcow	75.95	328	eP	P	00 12 31.2	+0.4
OJC				eS	S	00 22 07.5	-0.6
OJC				eL	L	00 43 09.0	
	comp=Z,2µm,29.8s						
E38A	The Farm, Brul	76.00	38	IAmb	IAmb	00 12 32.4	
	comp=Z,49nm,0.7s						
E38A	The Farm, Brul	76.00	38	P	P	00 12 30.4	-0.8
	baz=320,SNR=29						
TUC	Tucson	76.00	59	P	P	00 12 32.6	+1.0
TUC				pmax	pmax		
	comp=Z,53nm,1.8s						
TUC	Tucson	76.00	59	P	P	00 12 32.6	+1.0
TUC	Tucson	76.00	59	P	P	00 12 31.8	+0.2
	baz=313						
TUC				S	S	00 22 10.5	+1.0
	baz=313						
KOLS	Kolonicke sedl	76.01	326	eP	P	00 12 31.8	+0.6
KOLS				pmax	pmax		
	comp=Z,82nm,0.9s						
KOLS	Kolonicke sedl	76.01	326	eP	P	00 12 31.8	+0.6
TESR	Tescani	76.05	322	⇓P	P	00 12 31.8	+0.3
GHRR		76.06	322	⇓P	P	00 12 32.8	+1.3
KSCO	Kaye Shedlock'	76.12	49	IAmb	IAmb	00 12 53.9	
	comp=Z,65nm,1.1s						
KSCO	Kaye Shedlock'	76.12	49	P	P	00 12 32.3	+0.1
	baz=316						
KSCO				S	S	00 22 09.8	-0.9
	baz=316						
MCD	Coleburn Disti	76.15	344	eP	P	00 12 32.7	+0.8
RUE	Ruedersdorf	76.22	333	eP	P	00 12 32.9	+0.6
UZH	Uzhgorod	76.24	326	eP	P	00 12 30.7	-1.8
UZH				e		00 12 46.6	
UZH				iS	S	00 22 04.4	-6.9
UZH				e		00 22 33.4	
UZH				MLR	MLR		
	comp=N,300nm,17.0s						
UZH				MLR	MLR		
	comp=E,250nm,17.0s						
UZH				MLR	MLR		
	comp=Z,180nm,17.0s						
FORT	Forrest	76.25	197	P	P	00 12 32.9	+0.3
IZVR	Izvoarele	76.29	321	⇓P	P	00 12 34.5	+1.7
UMZA	Um Al Zommool	76.30	288	P	P	00 12 33.6	+0.4
PANC	Panciu	76.32	322	⇑P	P	00 12 34.7	+1.7
CRVS	Cervenica-Dubn	76.36	327	eP	P	00 12 34.1	+0.9
CRVS				pmax	pmax		
	comp=Z,342nm,1.9s						
CRVS	Cervenica-Dubn	76.36	327	eP	P	00 12 34.1	+0.9
CRVS				eS	S	00 22 08.5	-4.2
JURR	Jurilovca	76.36	320	⇓P	P	00 12 33.5	+0.2
JRN	Qarnain Island	76.40	291	P	P	00 12 33.6	-0.2
JRN				P	P	00 12 33.6	-0.2
NIE	Niedzica	76.40	328	eP	P	00 12 35.2	+1.7
NIE				eS	S	00 22 12.8	-0.4
NIE				eL	L	00 41 42.9	
	comp=Z,876nm,34.1s						
ODBI	Odobesti	76.44	322	⇑P	P	00 12 35.9	+2.2
T25A	Trinidad	76.45	51	P	P	00 12 34.2	0.0
	baz=315,SNR=8.0						
T25A				S	S	00 22 15.0	+0.5
	baz=315						
MZWR	Madinat Zayed	76.48	290	P	P	00 12 34.4	+0.1
MZWR				P	P	00 12 34.4	+0.1
SPMN	Marine on St.	76.50	39	P	P	00 12 34.2	+0.2
	baz=320,SNR=5.7						
SPMN	Marine on St.	76.50	39	P	P	00 12 33.8	-0.3
	baz=320,SNR=5.7						
SPMN				S	S	00 22 11.5	-2.7
	baz=320						
BMR	Baia Mare	76.50	325	⇑P	P	00 12 35.4	+1.4
TPGR	Topolog	76.51	320	⇑P	P	00 12 34.4	+0.3
VRI	Vrincioaia	76.51	322	⇑P	P	00 12 35.1	+1.0
PLOR	Plostina	76.56	322	⇓P	P	00 12 36.1	+1.7
ARCR	ARCALIA	76.60	324	⇑P	P	00 12 36.7	+2.1
KAC	Achnashellach	76.62	345	eP	P	00 12 35.5	+1.0
KSP	Ksiaz	76.73	331	eP	P	00 12 35.2	0.0
KSP				eS	SKiKP	00 21 54.8	+9.4
KSP				eL	L	00 43 32.8	
	comp=Z,1µm,31.6s						
ILGA	Ilgaz	76.75	315	P	P	00 12 37.4	+1.6
COVR	Voineasa-Covas	76.76	322	⇑P	P	00 12 36.7	+1.2
BISRR	Bisoca	76.76	322	⇓P	P	00 12 36.8	+1.2
ANMO	Albuquerque	76.81	54	LR	LR	00 43 56.8	
	comp=Z,147nm,21.0s,baz=322,slow=34						
ANMO	Albuquerque	76.81	54	ceP	P	00 12 38.0	+1.8
ANMO	Albuquerque	76.81	54	P	P	00 12 36.9	+0.7
ANMO	Albuquerque	76.81	54	P	P	00 12 36.1	-0.1
	baz=314,SNR=8.2						
ANMO	Albuquerque	76.81	54	P	P	00 12 35.6	-0.6
	baz=314						
ANMO				S	S	00 22 19.8	+1.4
	baz=314						
TIRR	Tirgusor	76.81	320	⇓P	P	00 12 37.6	+1.8
TIRR	Tirgusor	76.81	320	⇓P	P	00 12 37.6	+1.8
TIRR	Tirgusor	76.81	320	P	P	00 12 36.2	+0.4
TIRR				pmax	pmax		
	comp=Z,140nm,1.0s						
TIRR	Tirgusor	76.81	320	P	P	00 12 36.2	+0.4
KPL	Plockton	76.83	345	eP	P	00 12 36.8	+1.1
KPL				IAmb	IAmb	00 12 37.5	
	comp=Z,73nm,0.8s						
HARR	Harsova	76.86	320	⇑P	P	00 12 36.6	+0.6
BBOO	Buckleboo	76.88	190	IAmb	IAmb	00 12 37.5	
	comp=Z,38nm,0.8s						
OKC	Ostrava-Krasne	76.88	329	eP	P	00 12 36.7	+0.6
OKC				eS	S	00 22 13.5	-4.8
OKC	Ostrava-Krasne	76.88	329	eP	P	00 12 36.7	+0.6
OKC				eS	S	00 22 13.5	-4.8
OKC				AMS	AMS	00 43 50.0	
	comp=Z,1µm,29.1s						
TLBR	Topalu	76.92	320	⇓P	P	00 12 37.7	+1.3
CEI	Carei	76.92	325	⇓P	P	00 12 37.8	+1.4
D41A	Chassel	76.94	36	IAmb	IAmb	00 12 38.3	
	comp=Z,96nm,1.2s						
D41A	Chassel	76.94	36	P	P	00 12 36.6	+0.1
	baz=322,SNR=22						
LANS	Liptovska Anna	76.94	328	eP	P	00 12 38.0	+1.5
LANS				pmax	pmax		
	comp=Z,57nm,0.8s						
LANS	Liptovska Anna	76.94	328	eP	P	00 12 38.0	+1.5
TGMR	Targu Mures	76.97	324	⇓P	P	00 12 38.4	+1.7
OSTC	Ostas	76.99	331	eP	P	00 12 36.8	0.0
OSTC				eS	S	00 22 12.6	-7.0
OSTC				AMS	AMS	00 45 40.0	
	comp=Z,2µm,33.4s						
CHVC	Chvalec	77.02	331	eP	P	00 12 37.2	+0.3
CHVC				AMS	AMS	00 45 30.0	
	comp=Z,2µm,29.6s						
DOPR	Dopca	77.03	323	⇓P	P	00 12 38.2	+1.2
KECS	Kecovo	77.08	327	eP	P	00 12 39.0	+1.7
KECS	Kecovo	77.08	327	eP	P	00 12 39.0	+1.7
UPC	Upice	77.10	331	eP	P	00 12 38.0	+0.6
UPC				eS	S	00 22 11.4	-9.4
UPC				AMS	AMS	00 45 40.0	
	comp=Z,2µm,23.9s						
DPC	Dobruska-Polom	77.12	330	eP	P	00 12 37.8	+0.3
DPC				eS	S	00 22 12.2	-8.9
DPC	Dobruska-Polom	77.12	330	eP	P	00 12 37.8	+0.3
DPC				eS	S	00 22 12.2	-8.9
DPC				AMS	AMS	00 45 40.0	
	comp=Z,2µm,29.5s						
Y22D	IRIS PASSCAL I	77.14	55	P	P	00 12 38.7	+0.6
	baz=314						
I37B	Waseca	77.14	40	P	P	00 12 37.9	+0.2
	baz=320,SNR=36						
MLR	Muntele Rosu	77.15	322	⇑P	P	00 12 39.5	+1.6
MLR	Muntele Rosu	77.15	322	LR	LR	00 50 35.0	
	comp=Z,1µm,19.2s,baz=52,slow=39						
MLR	Muntele Rosu	77.15	322	IAmb	IAmb	00 12 41.2	
	comp=Z,92nm,1.2s						
MORC	Moravsky Berou	77.15	329	⇑P	P	00 12 38.1	+0.4
MORC	Moravsky Berou	77.15	329	IAmb	IAmb	00 12 40.3	
	comp=Z,106nm,1.0s						
MORC	Moravsky Berou	77.15	329	eP	P	00 12 37.8	+0.1
KRLC	Kraliky	77.19	330	eP	P	00 12 37.9	0.0
KRLC				eS	S	00 22 13.1	-8.6
KRLC				MLR	MLR		
	comp=Z,1µm,23.1s						
KRLC	Kraliky	77.19	330	eP	P	00 12 37.9	0.0
KRLC				eS	S	00 22 13.1	-8.6
KRLC				AMS	AMS	00 46 30.0	
	comp=Z,1µm,23.1s						
CBBR	Cluj-Babes-Bol	77.19	324	⇑P	P	00 12 39.1	+1.2
AMRR	Amara	77.20	321	⇑P	P	00 12 39.8	+1.9
CJR	Cluj-Napoca	77.22	324	⇓P	P	00 12 39.6	+1.4
L34A	Svendsen Farm,	77.24	43	IAmb	IAmb	00 13 00.7	
	comp=Z,43nm,0.8s						
L34A	Svendsen Farm,	77.24	43	P	P	00 12 38.0	-0.3
	baz=318,SNR=6.8						
BNM	Barren Site	77.26	55	P	P	00 12 39.4	+0.6
MZR	Muzera	77.26	290	P	P	00 12 39.1	+0.4
	SNR=9.8						
MZR	Muzera	77.26	290	iP	P	00 12 38.7	0.0
	SNR=12						
MDB	Medias	77.33	323	⇓P	P	00 12 40.5	+1.8
ICOR	Ion Corvin	77.36	320	⇑P	P	00 12 40.4	+1.5
INVG	Invergeldie, C	77.39	344	eP	P	00 12 39.8	+1.0
INVG				IAmb	IAmb	00 12 40.8	
	comp=Z,31nm,0.8s						
LTVH	Ltavrtes, Hu	77.39	326	P	P	00 12 40.1	+1.2
SECR		77.44	322	⇓P	P	00 12 40.6	+1.2
COWI	Conover	77.45	37	P	P	00 12 38.8	-0.6
	baz=322						

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CLL   Collm              77.47 333 i P     P       00 12 38.9  -0.5
CLL                                e*SP    sP      00 13 06.0  +0.9
CLL                                eS      S       00 22 24.0  -0.6
CLL                                e*SS    ScS     00 22 50.0  -1.5
CLL                                 pmax   pmax
      comp=Z,152nm,0.8s
CLL   Collm              77.47 333 i P     P       00 12 38.9  -0.5
      comp=Z,152nm,0.8s
CLL                                esP     sP      00 13 06.0  +0.9
CLL                                ePP     PP      00 15 30.0  -4.0
CLL                                esPP            00 16 00.0
CLL                                ePPP    PPP     00 17 24.0
CLL                                eS      S       00 22 24.0  -0.6
CLL                                esS     ScS     00 22 50.0  -1.5
CLL                                ePPS    PPS     00 23 31.0
CLL                                eSS     SS      00 27 30.0  +6.6
CLL                                e(SSS)          00 31 18.0
CLL                                 LmV            00 51 00.0
      comp=Z,1µm,20.5s
BRG   Berggiesshubel     77.52 332 eP      P       00 12 39.8  +0.1
BRG                                 Amp            00 12 41.8
      comp=Z,53nm,1.1s
BRG                                ex      x       00 12 49.0
BRG                                 Amp            00 12 52.8
      comp=Z,14nm,1.0s
BRG                                ex      x       00 13 05.9
BRG                                 Amp            00 13 08.1
      comp=Z,25nm,1.1s
BRG   Berggiesshubel     77.52 332 eP      P       00 12 39.8  +0.1
BRG                                e               00 12 49.0
BRG                                e               00 13 05.9
BRG                                 S      S       00 22 24.0  -1.2
BRG                                 pmax   pmax
      comp=Z,53nm,1.1s
BRG                                 MLR    MLR
      comp=N,980nm,16.8s
DRGR                     77.53 325 ⇑P      P       00 12 40.6  +0.8
SCHQ  Schefferville      77.56  20  P      P       00 12 40.0  +0.2
      comp=N,28nm,0.5s,baz=331,slow=5.1,SNR=129
SCHQ                                LR     LR      00 50 10.2
      comp=N,619nm,19.9s,baz=349,slow=38
      comp=N,28nm,0.5s
SCHQ  Schefferville      77.56  20  IAmb   IAmb    00 12 41.9
      comp=Z,71nm,1.1s
319A  Douglas            77.57  59  P      P       00 12 41.7  +1.2
319A                                IAmb   IAmb    00 13 03.1
      comp=Z,191nm,1.8s
VOIR                     77.59 323 ⇑P      P       00 12 40.9  +0.7
PVCC  Panska Ves         77.59 331 eP      P       00 12 40.5  +0.4
PVCC                               eS      S       00 22 19.1  -6.9
PVCC                                MLR    MLR
      comp=Z,2µm,17.6s
PVCC  Panska Ves         77.59 331 eP      P       00 12 40.5  +0.4
PVCC                               eS      S       00 22 19.1  -6.9
PVCC                                AMS    AMS     00 50 20.0
      comp=Z,2µm,17.6s
G40A  Rib Lake           77.63  38  P      P       00 12 39.9  -0.5
      baz=321,SNR=22
BORR  Bors               77.67 325 ⇑P      P       00 12 42.2  +1.6
121A  Cookes Peak, D     77.69  57  P      P       00 12 42.9  +1.7
121A  Cookes Peak, D     77.69  57  P      P       00 12 43.3  +2.1
      baz=314,SNR=5.3
121A  Cookes Peak, D     77.69  57  P      P       00 12 42.2  +1.0
      baz=314,SNR=5.3
121A                                S      S       00 22 30.1  +2.0
      baz=314
VYHS  Vyhne              77.72 328 eP      P       00 12 41.7  +0.9
VYHS                                pmax   pmax
      comp=Z,46nm,1.3s
VYHS  Vyhne              77.72 328 eP      P       00 12 41.7  +0.9
BR131 Keskin Array S     77.76 314  IAmb   IAmb    00 12 44.0
      comp=Z,47nm,0.8s
BR131 Keskin Array S     77.76 314  P      P       00 12 42.3  +0.9
      SNR=17
BR131                               P      P       00 12 42.3  +0.9
      SNR=17
BRTR  Keskin Array B     77.76 314  P      P       00 12 42.0  +0.6
      comp=Z,21nm,0.7s,baz=73,slow=2.9,SNR=97
BRTR                                PP     PP      00 15 38.6  +1.6
      comp=Z,3.8nm,1.0s,baz=56,slow=6.6,SNR=3.6
BRTR                                LR     LR      00 53 56.2
      comp=Z,886nm,18.4s,baz=64,slow=41
      comp=Z,21nm,0.7s
BRTR  Keskin Array B     77.76 314  P      P       00 12 42.0  +0.6
PSZ   Piszkesteto        77.77 327 ⇑P      P       00 12 42.4  +1.2
PSZ   Piszkesteto        77.77 327  IAmb   IAmb    00 12 44.0
      comp=Z,90nm,1.1s
PSZ   Piszkesteto        77.77 327  P      P       00 12 41.4  +0.2
LAWE  Loch Awe, Argy     77.81 345 eP      P       00 12 42.1  +1.0
LAWE                                IAmb   IAmb    00 12 42.5
      comp=Z,51nm,0.9s
KOLL  Kolacno            77.81 328 eP      P       00 12 42.3  +0.9
ARR   Arges              77.82 323 ⇓P      P       00 12 43.7  +2.1
CBKS  Cedar Bluff        77.83  47  P      P       00 12 41.3  -0.4
      baz=317
JAVC  Velka Javorina     77.86 329 eP      P       00 12 42.9  +1.2
SMRA  Abu-Samra          77.89 293  P      P       00 12 42.5  +0.3
VRAC  Vranov             77.89 330 ⇑P      P       00 12 42.4  +0.6
VRAC  Vranov             77.89 330  LR     LR      00 52 14.7
      comp=Z,1µm,18.5s,baz=35,slow=40
VRAC  Vranov             77.89 330 eP      P       00 12 42.0  +0.2
MORW  Morawa             77.97 208  P      P       00 12 41.6  -0.6
PGBU  Glenifferbraes     78.05 344 eP      P       00 12 42.9  +0.4
PGBU                                IAmb   IAmb    00 12 45.0
      comp=Z,104nm,0.9s
PRU   Pruhonice          78.06 331 eP      P       00 12 42.5  -0.2
PRU                                eS      S       00 22 21.2   -10
PRU                                 MLR    MLR
      comp=Z,1µm,15.2s
PRU   Pruhonice          78.06 331 eP      P       00 12 42.5  -0.2
PRU                                eS      S       00 22 21.2   -10
PRU                                 AMS    AMS     00 51 50.0
      comp=Z,1µm,15.2s
ANTO  Ankara             78.09 314  P      P       00 12 44.3  +1.1
ANTO                                pmax   pmax
      comp=Z,117nm,0.8s
ANTO  Ankara             78.09 314  P      P       00 12 44.3  +1.1
BSZH  Besenyszg          78.12 326 ⇑P      P       00 12 44.8  +1.7
BSZH  Besenyszg          78.12 326  P      P       00 12 43.8  +0.8
LOT   Lotru              78.14 323 ⇓P      P       00 12 44.2  +0.9
E43A  Lone Tree Farm     78.14  35  IAmb   IAmb    00 12 44.5
      comp=Z,31nm,0.7s
E43A  Lone Tree Farm     78.14  35  P      P       00 12 42.9  -0.3
      baz=323,SNR=25
HSIG                     78.15  61  P      P       00 12 44.8  +1.2
HSIG                                       pP      00 13 03.8  +2.4
DEV   Deva               78.17 324 ⇑P      P       00 12 44.5  +1.1
KRUC  Moravsky           78.17 330 eP      P       00 12 43.4  +0.1
EKA   Eskdalemuir Ar     78.23 343  LR     LR      00 54 01.3
      comp=Z,621nm,19.5s,baz=32,slow=41
SMOL  Smolenice          78.24 329 eP      P       00 12 45.0  +1.3
SMOL                                pmax   pmax
      comp=Z,43nm,1.1s
SMOL  Smolenice          78.24 329 eP      P       00 12 45.0  +1.3
ESK   Eskdalemuir        78.26 343  P      P       00 12 44.2  +0.5
ESK                                 pmax   pmax
      comp=Z,51nm,0.8s
ESK   Eskdalemuir        78.26 343  P      P       00 12 44.2  +0.5
ESK                                 IAmb   IAmb    00 12 45.7
      comp=Z,51nm,0.8s
TREC  Trest              78.30 330 eP      P       00 12 44.8  +0.7
TREC                               eS      S       00 22 24.9  -8.9
TREC  Trest              78.30 330 eP      P       00 12 44.8  +0.7
TREC                               eS      S       00 22 24.9  -8.9
TREC                                AMS    AMS     00 47 00.0
      comp=Z,2µm,27.6s
RAZG  Razgrad            78.38 321 ⇑P      P       00 12 45.4  +0.8
SIRR  Siria              78.38 325 ⇓P      P       00 12 45.5  +0.9
MODS  Modra-Piesok       78.41 329 eP      P       00 12 46.0  +1.3
MODS                                pmax   pmax
      comp=Z,156nm,1.1s
MODS  Modra-Piesok       78.41 329 eP      P       00 12 46.0  +1.3
MODS                               eS      S       00 22 35.0  +0.1
N35A  Tabor              78.43  44  IAmb   IAmb    00 13 07.8
      comp=Z,51nm,0.7s
N35A  Tabor              78.43  44  P      P       00 12 45.2  +0.3
      baz=319,SNR=9.5
BUD   Budapest           78.47 327  P      P       00 12 45.5  +0.5
K38A  Parkersburg        78.48  41  IAmb   IAmb    00 13 08.5
      comp=Z,90nm,1.8s
SRIG  Santa Rosalia      78.48  63  P      P       00 12 44.9  -0.5
KAAM  Kaadhehdhoo        78.50 260  P      P       00 12 45.3  -0.3
KAAM                                IAmb   IAmb    00 13 06.0
      comp=Z,67nm,1.1s
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I40A  Norwalk            78.52  39  P      P       00 12 45.3  -0.1
      baz=321,SNR=5.7
COPA  Copaceanca         78.53 322 ⇑P      P       00 12 45.9  +0.5
NKC   Novy Kostel        78.57 332 eP      P       00 12 45.4  -0.1
NKC                                eS      S       00 22 26.8   -10
NKC                                 MLR    MLR
      comp=Z,1µm,16.7s
NKC   Novy Kostel        78.57 332 eP      P       00 12 45.4  -0.1
NKC                                eS      S       00 22 26.8   -10
NKC                                 AMS    AMS     00 53 10.0
      comp=Z,1µm,16.7s
ZST   Bratislava         78.62 329 eP      P       00 12 47.6  +1.8
ZST                                 pmax   pmax
      comp=Z,143nm,1.2s
ZST   Bratislava         78.62 329 eP      P       00 12 47.6  +1.8
ZST                                eS      S       00 22 36.2  -0.9
NEWG  New Galloway       78.65 344 eP      P       00 12 46.9  +1.1
R32A  Long Quarter,      78.66  47  P      P       00 12 46.1  -0.2
R32A  Long Quarter,      78.66  47  P      P       00 12 46.3  +0.1
      baz=318
CAN   Canberra           78.68 179  P      P       00 12 46.6  +0.5
CAN                                 pmax   pmax
      comp=Z,36nm,0.9s
CAN   Canberra           78.68 179  P      P       00 12 46.6  +0.5
SCIA  State Center       78.83  42  P      P       00 12 47.3  +0.2
SCIA                                IAmb   IAmb    00 13 08.6
      comp=Z,145nm,1.4s
SCIA  State Center       78.83  42  P      P       00 12 46.6  -0.5
      baz=320,SNR=6.5
SCIA  State Center       78.83  42  P      P       00 12 47.0  -0.1
      baz=320,SNR=6.5
SCIA                                S      S       00 22 36.8  -2.8
      baz=320
CSKK  Cskako             78.86 328  P      P       00 12 48.2  +1.0
SZH   Strazhica          78.88 321 i P     P       00 12 48.1  +0.8
BZS   Buzias             78.92 325 ⇑P      P       00 12 48.3  +0.7
GAL1  Galloway           78.98 344 eP      P       00 12 47.9  +0.3
GAL1                                IAmb   IAmb    00 12 49.4
      comp=Z,59nm,0.7s
VLAD  Vladila            79.00 322 ⇓P      P       00 12 49.0  +1.1
SHAO  Shalim             79.11 284  P      P       00 12 50.3  +1.3
KHC   Kasperske Hory     79.12 331 eP      P       00 12 48.5  -0.1
KHC                                e               00 12 56.5
KHC                                e               00 13 15.0
KHC                                 MLR    MLR
      comp=Z,2µm,18.1s
KHC   Kasperske Hory     79.12 331  P      P       00 12 48.6  -0.1
KHC                                 IAmb   IAmb    00 12 51.0
      comp=Z,84nm,0.8s
KHC   Kasperske Hory     79.12 331 eP      P       00 12 48.5  -0.1
KHC                                ePCP    PcP     00 12 56.5  -0.3
KHC                                esP     sP      00 13 15.0  +0.6
KHC                                eS      S       00 22 30.4   -12
KHC                                 AMS    AMS     00 51 00.0
      comp=Z,2µm,18.1s
CKRC  Cesky Krumlov      79.12 331 eP      P       00 12 48.5  -0.1
CKRC                               eS      S       00 22 40.5  -2.0
HERR  Herculane          79.17 324 ⇑P      P       00 12 49.0  +0.1
EGYH  Egyhazaskeszo      79.18 328  P      P       00 12 50.2  +1.3
HPK   Haverah Park       79.18 342 eP      P       00 12 49.3  +0.5
HPK                                 IAmb   IAmb    00 12 51.0
      comp=Z,149nm,0.7s
RAO   Raoul Island       79.22 150  LR     LR      00 40 00.6
      comp=Z,690nm,21.4s,baz=1.5,slow=30
E46A  Sault Ste Mari     79.25  34  IAmb   IAmb    00 12 50.4
      comp=Z,77nm,1.4s
E46A  Sault Ste Mari     79.25  34  P      P       00 12 48.4  -0.9
      baz=325,SNR=12
SOP   Sopron             79.25 329  P      P       00 12 50.2  +0.9
KSU1  Kansas State U     79.26  45  IAmb   IAmb    00 13 09.9
      comp=Z,59nm,1.4s
KSU1  Kansas State U     79.26  45  P      P       00 12 49.5   0.0
      baz=318
KSU1  Kansas State U     79.26  45  P      P       00 12 49.0  -0.5
      baz=318
KSU1                                S      S       00 22 37.5  -6.7
      baz=318
BORA  Eskisehir          79.28 316  IAmb   IAmb    00 12 53.0
      comp=Z,74nm,1.1s
I42A  Draeger Farm,      79.28  38  P      P       00 12 49.1  -0.4
      baz=322,SNR=14
DJES  Djerdap            79.30 323 ⇑P      P       00 12 49.8  +0.2
MPLH  Magyarpolny        79.30 328  P      P       00 12 50.2  +0.6
CONA  Conrad Observa     79.31 329 i P     P       00 12 50.3  +0.6
      comp=Z,64nm,1.1s,SNR=27
GERES GERESS Array B     79.32 331  P      P       00 12 50.0  +0.3
      comp=Z,16nm,0.8s,baz=47,slow=5.9,SNR=95
GERES                               PKKPbc PKKPbc  00 31 38.0  +0.1
      comp=Z,0.4nm,0.6s,baz=197,slow=1.4,SNR=5.3
GERES                               LR     LR      00 51 31.1
      comp=Z,1µm,18.6s,baz=32,slow=38
      comp=Z,16nm,0.8s
H43A  Windswept, Lux     79.33  37  IAmb   IAmb    00 13 10.6
      comp=Z,118nm,1.6s
H43A  Windswept, Lux     79.33  37  P      P       00 12 49.7  -0.1
      baz=323,SNR=7.6
RONA  Rosalia, Austr     79.34 329 i P     P       00 12 50.4  +0.5
      comp=Z,69nm,1.1s,SNR=34
GRFO  Grafenberg         79.44 333  P      P       00 12 50.9  +0.6
GRFO                                pmax   pmax
      comp=Z,117nm,0.9s
GRFO  Grafenberg         79.44 333  P      P       00 12 50.9  +0.6
JFWS  Jewell Farm        79.45  39  P      P       00 12 50.5  +0.1
      baz=322
JFWS  Jewell Farm        79.45  39  P      P       00 12 49.6  -0.8
      baz=322
BAIL  Bailesti           79.45 323 ⇑P      P       00 12 51.9  +1.5
MDVR  Moldovita          79.55 324 ⇑P      P       00 12 51.5  +0.4
AMTX  Amarillo           79.61  51  P      P       00 12 52.5  +1.0
MSTX  Muleshoe           79.64  53  P      P       00 12 52.2  +0.4
MORH  Mrgy, Hungar       79.66 327⇑iP      P       00 12 51.3  -0.2
MORH  Mrgy, Hungar       79.66 327  P      P       00 12 51.2  -0.3
L40A  Anamosa            79.66  40  P      P       00 12 51.5  -0.1
      baz=321,SNR=10
N38A  Joes South For     79.67  42  IAmb   IAmb    00 13 14.4
      comp=Z,48nm,0.7s
N38A  Joes South For     79.67  42  P      P       00 12 52.0  +0.3
      baz=320
LBWR  Ladybower, Pea     79.72 342 eP      P       00 12 52.4  +0.6
LBWR                                IAmb   IAmb    00 12 53.9
      comp=Z,190nm,0.8s
MNTX  Cornudas Mount     79.72  56  P      P       00 12 52.0  -0.2
      baz=315
MNTX  Cornudas Mount     79.72  56  P      P       00 12 52.4  +0.2
      baz=315,SNR=17
DOK   Doka               79.75 286  P      P       00 12 53.1  +0.6
DOK                                 P      P       00 12 53.1  +0.6
G45A  Suttons Bay        79.77  35  IAmb   IAmb    00 12 53.6
      comp=Z,47nm,1.0s
G45A  Suttons Bay        79.77  35  P      P       00 12 52.1   0.0
      baz=324,SNR=6.6
G45A                                P      P       00 12 52.1   0.0
      baz=324,SNR=6.6
DMTO  DMTO               79.79 285  P      P       00 12 53.1  +0.4
MPEP  Malo Peshtene      79.80 322 i P     P       00 12 53.0  +0.6
MOA   Molln              79.96 330 i P     P       00 12 53.2  +0.1
      comp=Z,20nm,0.8s,SNR=9.6
KOVH  Kovagotottos       79.97 327  P      P       00 12 53.1  -0.1
ARSA  Arzberg            80.00 329 i P     P       00 12 53.6  +0.2
      comp=Z,28nm,1.1s,SNR=13
U32A  Winter Ranch,      80.00  49  P      P       00 12 54.5  +0.8
U32A                                IAmb   IAmb    00 13 16.4
      comp=Z,180nm,1.9s
DIM   Dimitrovgrad       80.01 320 i P     P       00 12 54.9  +1.4
FRGS  Fruska Gora        80.05 325 ⇓P      P       00 12 53.2  -0.4
FRGS  Fruska Gora        80.05 325⇑iP      P       00 12 53.1  -0.6
CWF   Charnwood Fore     80.24 341 eP      P       00 12 54.8  +0.3
CWF                                 IAmb   IAmb    00 12 56.3
      comp=Z,245nm,1.9s
BTNL  Ternell            80.25 336 dP      P       00 12 54.9  +0.3
      comp=Z,33nm,1.2s
PGB   Panagyurishte      80.25 321 i P     P       00 12 55.6  +0.8
MEM   Membach            80.26 336 dP      P       00 12 54.2  -0.5
      comp=Z,40nm,1.0s
ELMS  Elmsett, Ipswi     80.28 340 eP      P       00 12 55.3  +0.6
ELMS                                IAmb   IAmb    00 12 56.9
      comp=Z,193nm,0.7s
WME   Myndd Eilian       80.28 343 eP      P       00 12 55.6  +0.8
BIOA  Bad Ischl, Aus     80.32 330 i P     P       00 12 55.1   0.0
      comp=Z,90nm,1.2s,SNR=24
PLD   Plovdiv            80.35 321 i P     P       00 12 56.7  +1.4
VLDQ  Val d'Or           80.36  29  IAmb   IAmb    00 12 55.8
      comp=Z,79nm,1.1s
GLMI  Grayling           80.38  35  IAmb   IAmb    00 12 57.1
      comp=Z,85nm,0.9s
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GLMI  Grayling           80.38  35  P      P       00 12 55.8  +0.4
      baz=325,SNR=6.2
GLMI  Grayling           80.38  35  P      P       00 12 55.0  -0.5
      baz=325,SNR=6.2
BSTI  Sart Tilman        80.41 337 dP      P       00 12 56.8  +1.3
P38A  Dawn               80.42  43  P      P       00 12 55.5  -0.3
P38A  Dawn               80.42  43  P      P       00 12 55.5  -0.3
      baz=320,SNR=8.0
L42A  Oliver, Polo       80.43  39  P      P       00 12 55.4  -0.4
L42A  Oliver, Polo       80.43  39  P      P       00 12 56.0  +0.3
      baz=322
RBK   Rabkut             80.45 285  P      P       00 12 56.5  +0.2
RBK                                 P      P       00 12 56.5  +0.2
BOVS  Bovan              80.47 323 ⇓P      P       00 12 56.0  +0.1
WHFO  Wadi Hawf          80.48 286  P      P       00 12 56.4   0.0
K43A  Burlington         80.48  38  IAmb   IAmb    00 12 57.1
      comp=Z,55nm,1.2s
K43A  Burlington         80.48  38  P      P       00 12 55.9  -0.1
      baz=323
HWQ   Hawqa              80.48 309 eP      P       00 12 56.9  +0.5
BHOU  Houvegnez          80.49 336 dP      P       00 12 55.5  -0.5
      comp=Z,35nm,1.1s
YLL   Llanberis          80.50 343 eP      P       00 12 55.9   0.0
VTS   Vitosha            80.61 322 ⇓P      P       00 12 56.9   0.0
VTS   Vitosha            80.61 322  IAmb   IAmb    00 12 59.7
      comp=Z,96nm,1.0s
VTS   Vitosha            80.61 322 i P     P       00 12 57.7  +0.8
BCLA  Clavier            80.63 337 dP      P       00 12 56.6   0.0
      comp=Z,38nm,1.1s
TEKS  Tekeris            80.66 325 eP      P       00 12 57.1  +0.1
LLW   Llanuwychllyn      80.66 343 eP      P       00 12 57.3  +0.6
SOKA  Soboth             80.66 329 i P     P       00 12 57.0  -0.1
      comp=Z,50nm,0.8s,SNR=25
RAR   Rarotonga          80.67 131  LR     LR      00 41 43.6
      comp=Z,281nm,20.1s,baz=294,slow=30
ALN   Alexandroupoli     80.67 319  P      P       00 12 57.4  +0.4
ALN                                 pmax   pmax
      comp=Z,168nm,1.3s
ALN   Alexandroupoli     80.67 319  P      P       00 12 57.4  +0.4
PERS  Pernice            80.67 329 i P     P       00 12 57.7  +0.7
PERS                               e               00 13 16.9
RZN   Rozhen             80.67 320 i P     P       00 12 58.2  +0.9
BGES  Gesves             80.73 337 dP      P       00 12 57.0  -0.2
      comp=Z,35nm,1.0s
ISP   Isparta            80.80 314  P      P       00 12 58.3  +0.4
ISP                                 pmax   pmax
      comp=Z,39nm,1.0s
ISP   Isparta            80.80 314  P      P       00 12 58.3  +0.4
HLM1  Long Mynd          80.80 342 eP      P       00 12 58.1  +0.5
HLM1                                IAmb   IAmb    00 12 58.9
      comp=Z,86nm,1.2s
DIVS  Divibare           80.83 325⇑iP      P       00 12 58.1  +0.1
SNF   Seneffe            80.84 337 dP      P       00 12 58.6  +0.8
      comp=Z,36nm,0.9s
N41A  Harden Midland     80.89  41  IAmb   IAmb    00 13 19.3
      comp=Z,171nm,1.6s
N41A  Harden Midland     80.89  41  P      P       00 12 58.7  +0.5
      baz=321
RCHB  Rochefort          80.89 337 dP      P       00 12 57.8  -0.2
      comp=Z,30nm,1.1s
BMRD  Maredsous          80.89 337 dP      P       00 12 58.2  +0.1
      comp=Z,54nm,1.0s
STU   Stuttgart          80.90 334  IAmb   IAmb    00 13 00.2
      comp=Z,74nm,0.9s
BHL   Bhannes            80.92 309 eP      P       00 12 59.3  +0.6
TOO   Toolangi           80.93 182  P      P       00 12 58.9  +0.7
TOO                                 pmax   pmax
      comp=Z,195nm,2.0s
TOO   Toolangi           80.93 182  P      P       00 12 58.9  +0.7
TOO                                 IAmb   IAmb    00 13 20.9
      comp=Z,195nm,1.9s
T35A  Sooner Cattle      80.94  47  IAmb   IAmb    00 13 20.2
      comp=Z,110nm,1.4s
T35B  Sooner Cattle      80.94  47  P      P       00 12 58.8  +0.2
      baz=319,SNR=7.8
KBA   Koelnbreinsper     80.94 330 i P     P       00 12 58.6   0.0
      comp=Z,89nm,1.1s,SNR=37
OBKA  Obir               80.99 329 i P     P       00 12 59.2  +0.4
      comp=Z,23nm,0.8s,SNR=5.8
ZAG   Zagreb             81.02 328⇑iP      P       00 12 58.7  -0.1
WLF   Walferdange        81.06 336  IAmb   IAmb    00 13 04.3
      comp=Z,94nm,1.4s
WLF   Walferdange        81.06 336 dP      P       00 13 01.4  +2.4
      comp=Z,21nm,1.3s
L44A  Lake County Fo     81.09  38  P      P       00 12 59.0  -0.3
L44A                                IAmb   IAmb    00 13 00.6
      comp=Z,54nm,1.2s
L44A  Lake County Fo     81.09  38  P      P       00 12 59.6  +0.3
      baz=323
L44A  Lake County Fo     81.09  38  P      P       00 12 59.0  -0.3
      baz=323
DQRL  Deir Qamar         81.11 309 eP      P       00 13 01.5  +1.8
RCY   Rachaya            81.12 308 eP      P       00 13 00.7  +0.9
DOU   Dourbes            81.13 337 dP      P       00 13 00.1  +0.8
      comp=Z,19nm,1.1s
MMB   Musomiste          81.20 321 i P     P       00 13 01.1  +1.1
MYKA  Terra Mystica      81.22 330 i P     P       00 13 00.2  +0.3
      comp=Z,40nm,1.2s,SNR=8.6
CRES  Cresnjev           81.22 328⇑iP      P       00 13 00.1  +0.2
CRES  Cresnjev           81.22 328 i P     P       00 13 00.5  +0.5
P40A  Paris              81.23  42  IAmb   IAmb    00 13 21.6
      comp=Z,137nm,1.5s
P40A  Paris              81.23  42  P      P       00 12 59.8  -0.2
      baz=321,SNR=23
IGLA  Glengowla, Co      81.23 346 eP      P       00 13 00.9  +1.2
BBLS  Lazi&#263;i        81.27 325⇑iP      P       00 13 01.0  +0.7
SHBL  Chebaa             81.28 308 eP      P       00 13 01.2  +0.6
KKB   Krupnik            81.28 321 i P     P       00 13 02.6  +2.3
MANT  Manisa             81.30 316  IAmb   IAmb    00 13 02.9
      comp=Z,72nm,0.9s
MCH1  Michaelchurch      81.31 342 eP      P       00 13 00.7  +0.5
MCH1                                IAmb   IAmb    00 13 02.3
      comp=Z,68nm,0.7s
WMOK  Wichita Mounta     81.34  50  P      P       00 13 00.1  -0.7
      baz=318,SNR=9.7
WMOK  Wichita Mounta     81.34  50  P      P       00 13 00.7  -0.1
      baz=318,SNR=9.7
WATA  Walderalm          81.35 331 i P     P       00 13 00.8   0.0
      comp=Z,45nm,0.6s,SNR=37
LJU   Ljubljana          81.39 329⇑iP      P       00 13 00.6  -0.2
WTTA  Wattenberg         81.39 331 i P     P       00 13 01.1  +0.1
      comp=Z,45nm,0.6s,SNR=24
MONM  Monmouth           81.42 342 eP      P       00 13 01.3  +0.5
MONM                                IAmb   IAmb    00 13 03.3
      comp=Z,77nm,0.9s
CSS   Mathiatis          81.44 311  IAmb   IAmb    00 13 04.8
      comp=Z,83nm,1.1s
BLY   Banja Luka         81.44 327⇑iP      P       00 13 01.7  +0.6
RUDO  Rudo               81.48 325⇑iP      P       00 13 01.2  -0.2
SWN1  Swindon            81.49 341 eP      P       00 13 02.0  +0.8
SWN1                                IAmb   IAmb    00 13 03.5
      comp=Z,180nm,0.7s
RETA  Reutte             81.50 332 i P     P       00 13 01.6  +0.2
      comp=Z,89nm,1.2s,SNR=20
MOTA  Moosalm            81.50 332 i P     P       00 13 01.5  -0.1
      comp=Z,145nm,1.2s,SNR=38
ABTA  Abfaltersbach      81.52 331 i P     P       00 13 01.7  +0.1
      comp=Z,30nm,1.2s,SNR=9.1
OKCFA Oklahoma City      81.56  48  P      P       00 13 02.8  +0.8
OKCFA                               IAmb   IAmb    00 13 23.8
      comp=Z,151nm,1.6s
BFO   Black Forest       81.57 334  P      P       00 13 01.6  -0.1
BFO                                 pmax   pmax
      comp=Z,51nm,1.0s
BFO   Black Forest       81.57 334  P      P       00 13 01.6  -0.1
BFO                                 IAmb   IAmb    00 13 03.7
      comp=Z,52nm,1.0s
SQTA  Sankt Quirin       81.58 332 i P     P       00 13 02.0  +0.1
      comp=Z,114nm,1.6s,SNR=31
J47A  Sunmer             81.59  36  IAmb   IAmb    00 13 03.9
      comp=Z,46nm,1.0s
J47A  Sunmer             81.59  36  P      P       00 13 01.9   0.0
      baz=325,SNR=7.0
J47A                                P      P       00 13 01.9   0.0
      baz=325,SNR=7.0
M44A  Midewin, Midew     81.66  39  IAmb   IAmb    00 13 03.7
      comp=Z,90nm,1.1s
M44A  Midewin, Midew     81.66  39  P      P       00 13 01.2  -1.1
      baz=323,SNR=12
FNO   Franklin           81.71  49         P       00 13 03.9  +1.2
FNO                                 IAmb   IAmb    00 13 24.6
      comp=Z,145nm,1.5s
PLE   Pljevlja           81.71 325⇑iP      P       00 13 03.1  +0.4
MMAI  Mount Meron Ar     81.72 308  LR     LR      00 53 48.5
      comp=Z,890nm,19.5s,baz=194,slow=39
HDIL  Hopedale           81.74  40  P      P       00 13 02.7  -0.1
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	baz=322,SNR=9.1						
HDIL	**Hopedale**	**81.74**	**40**	P	**P**	**00 13 02.5**	**-0.3**
	baz=322,SNR=9.1						
MGRS	**Mrkonjic Grad**	**81.76**	**327**	⇑*i*P	**P**	**00 13 03.5**	**+0.7**
STIP	**Stip**	**81.82**	**322**	*i* P	**P**	**00 13 02.4**	**-0.8**
I49A	**Point Hope**	**81.84**	**34**	IAmb	IAmb	00 13 04.9	
	comp=Z,36nm,0.9s						
I49A	**Point Hope**	**81.84**	**34**	P	**P**	**00 13 03.5**	**+0.3**
	baz=326						
I49A				P	**P**	**00 13 03.5**	**+0.3**
	baz=326						
IVA	**Berane**	**81.87**	**324**	⇑*i*P	**P**	**00 13 04.2**	**+0.7**
STAL	**STALIGIAL**	**81.87**	**330**	IAmb	IAmb	00 13 05.4	
	comp=Z,49nm,0.9s						
FETA	**Feichten**	**81.91**	**332**	*i* P	**P**	**00 13 03.8**	**0.0**
	comp=Z,60nm,1.2s,SNR=19						
SKO	**Skopje**	**81.93**	**323**	*i* P	**P**	**00 13 04.7**	**+1.0**
L46A	**Eue Claire**	**81.94**	**37**	P	**P**	**00 13 03.2**	**-0.5**
L46A				IAmb	IAmb	00 13 05.2	
	comp=Z,86nm,1.1s						
L46A	**Eue Claire**	**81.94**	**37**	P	**P**	**00 13 04.4**	**+0.6**
	baz=324						
L46A				P	**P**	**00 13 04.4**	**+0.6**
	baz=324						
VAY	**Valandovo**	**81.94**	**321**	*i* P	**P**	**00 13 04.4**	**+0.6**
TRI	**Trieste**	**81.95**	**329**	IAmb	IAmb	00 13 04.7	
	comp=Z,72nm,1.2s						
LPIG	**La Paz**	**81.96**	**64**	LR	LR	00 42 39.4	
	comp=Z,120nm,20.0s,baz=296,slow=31						
X34A	**Smith Ranch, M**	**81.96**	**49**		**sP**	**00 13 24.8**	**-5.0**
X34A				IAmb	IAmb	00 13 26.3	
	comp=Z,82nm,1.3s						
DAVA	**Damuels**	**81.97**	**332**	*i* P	**P**	**00 13 03.9**	**-0.1**
	comp=Z,81nm,1.1s,SNR=21						
SKDS	**Skadanscina**	**82.00**	**329**	⇑*i*P	**P**	**00 13 03.4**	**-0.7**
S39A	**Bolivar**	**82.01**	**44**	P	**P**	**00 13 03.4**	**-0.8**
	baz=320,SNR=5.4						
RIY	**Rijeka**	**82.01**	**329**	⇑*i*P	**P**	**00 13 02.8**	**-1.3**
ECH	**Echery**	**82.04**	**334**	IAmb	IAmb	00 13 06.0	
	comp=Z,54nm,1.0s						
PVY	**Plav**	**82.07**	**324**	⇑*i*P	**P**	**00 13 05.3**	**+0.7**
OUZ	**Omahuta**	**82.08**	**159**	P	**P**	**00 13 05.4**	**+1.2**
OUZ				IAmb	IAmb	00 13 37.9	
	comp=Z,71nm,1.4s						
R40A	**Maddies Statio**	**82.08**	**43**	IAmb	IAmb	00 13 25.7	
	comp=Z,112nm,1.5s						
R40A	**Maddies Statio**	**82.08**	**43**	P	**P**	**00 13 04.1**	**-0.5**
	baz=321,SNR=17						
TUL1	**Leonard**	**82.08**	**47**		**pP**	**00 13 23.9**	**+0.9**
TUL1				IAmb	IAmb	00 13 27.3	
	comp=Z,184nm,1.9s						
TUL1	**Leonard**	**82.08**	**47**	P	**P**	**00 13 04.1**	**-0.5**
	baz=319						
TUL1	**Leonard**	**82.08**	**47**	P	**P**	**00 13 03.7**	**-0.9**
	baz=319						
P43A	**Skaggs, Pawnee**	**82.36**	**41**	IAmb	IAmb	00 13 27.4	
	comp=Z,88nm,1.4s						
P43A	**Skaggs, Pawnee**	**82.36**	**41**	P	**P**	**00 13 06.1**	**+0.1**
	baz=322						
DAVOX	**Davos/Dischmat**	**82.41**	**332**	LR	LR	00 55 15.7	
	comp=Z,649nm,18.9s,baz=27,slow=40						
ABTX	**Abilene, Hawle**	**82.41**	**52**	P	**P**	**00 13 06.9**	**+0.5**
ABTX	**Abilene, Hawle**	**82.41**	**52**	P	**P**	**00 13 06.4**	**-0.1**
	baz=318						
BRY	**Bratogost**	**82.42**	**325**	⇑*i*P	**P**	**00 13 05.7**	**-0.7**
BRY	**Bratogost**	**82.42**	**325**	⇑*i*P	**P**	**00 13 06.0**	**-0.4**
CTI	**Castel Tesino**	**82.43**	**331**	IAmb	IAmb	00 13 34.4	
	comp=Z,70nm,1.3s						
TX31	**Lajitas Ar. Si**	**82.44**	**56**	IAmb	IAmb	00 13 30.3	
	comp=Z,70nm,0.7s						
TX31	**Lajitas Ar. Si**	**82.44**	**56**	P	**P**	**00 13 06.4**	**-0.4**
	baz=316						
TXAR	**Lajitas Array**	**82.44**	**56**	P	**P**	**00 13 06.8**	**0.0**
	comp=Z,6.7nm,0.6s,baz=294,slow=3.8,SNR=96						
TXAR				LR	LR	00 49 41.5	
	comp=Z,132nm,18.8s,baz=318,slow=36						
	comp=Z,6.7nm,0.6s						
O44A	**Mansfield**	**82.45**	**40**	P	**P**	**00 13 07.0**	**+0.5**
O44A				IAmb	IAmb	00 13 27.7	
	comp=Z,76nm,1.5s						
AKAS	**Kas**	**82.48**	**314**	P	**P**	**00 13 07.1**	**+0.2**
SLBS	**Sierra La Lagu**	**82.48**	**65**	P	**P**	**00 13 07.0**	**0.0**
PDG	**Podgorica**	**82.50**	**324**	⇓P	**P**	**00 13 06.8**	**+0.2**
PDG	**Podgorica**	**82.50**	**324**	⇑*i*P	**P**	**00 13 06.7**	**0.0**
TTG	**Podgorica**	**82.50**	**324**	⇑*i*P	**P**	**00 13 07.0**	**+0.3**
CEME	**Cevo**	**82.55**	**324**	⇑*i*P	**P**	**00 13 07.4**	**+0.4**
LATQ	**La Tuque**	**82.56**	**26**	P	**P**	**00 13 06.2**	**-0.7**
LATQ				IAmb	IAmb	00 13 28.0	
	comp=Z,88nm,1.9s						
TREB	**Trebinje**	**82.65**	**325**	⇑*i*P	**P**	**00 13 06.5**	**-1.0**
DRME	**Dracevica, Mon**	**82.73**	**324**	⇑*i*P	**P**	**00 13 08.2**	**+0.3**
DRME	**Dracevica, Mon**	**82.73**	**324**	⇑*i*P	**P**	**00 13 08.8**	**+0.9**
BUM	**Brajici-Budva**	**82.76**	**324**	⇑*i*P	**P**	**00 13 09.0**	**+0.9**
CCM	**Cathedral Cave**	**82.77**	**43**	P	**P**	**00 13 08.1**	**-0.1**
CCM				pmax	pmax		
	comp=Z,122nm,1.6s						
CCM	**Cathedral Cave**	**82.77**	**43**	P	**P**	**00 13 08.1**	**-0.1**
CCM				IAmb	IAmb	00 13 29.5	
	comp=Z,122nm,1.6s						
CCM	**Cathedral Cave**	**82.77**	**43**	P	**P**	**00 13 07.8**	**-0.3**
	baz=321,SNR=12						
CCM	**Cathedral Cave**	**82.77**	**43**	P	**P**	**00 13 08.1**	**-0.1**
	baz=321						
HHAR	**Hobbs**	**82.77**	**46**	P	**P**	**00 13 07.9**	**-0.4**
	baz=320						
STON	**Ston**	**82.79**	**325**	⇑*i*P	**P**	**00 13 07.2**	**-0.9**
SLM	**Saint Louis**	**82.81**	**42**	P	**P**	**00 13 09.1**	**+0.8**
SLM				pmax	pmax		
	comp=Z,47nm,1.0s						
SLM	**Saint Louis**	**82.81**	**42**	P	**P**	**00 13 09.1**	**+0.8**
SLM				IAmb	IAmb	00 13 31.4	
	comp=Z,46nm,1.0s						
L48A	**N Adams**	**82.81**	**36**	IAmb	IAmb	00 13 10.0	
	comp=Z,55nm,0.8s						
L48A	**N Adams**	**82.81**	**36**	P	**P**	**00 13 08.4**	**+0.1**
	baz=325,SNR=13						
L48A				P	**P**	**00 13 08.4**	**+0.1**
	baz=325,SNR=13						
HCY	**Herceg Novi**	**82.81**	**325**	⇑*i*P	**P**	**00 13 07.5**	**-0.8**
HCY	**Herceg Novi**	**82.81**	**325**	⇑*i*P	**P**	**00 13 08.8**	**+0.5**
AAM	**Ann Arbor**	**82.84**	**36**	P	**P**	**00 13 09.2**	**+0.8**
AAM				pmax	pmax		
	comp=Z,52nm,1.1s						
AAM	**Ann Arbor**	**82.84**	**36**	P	**P**	**00 13 09.2**	**+0.8**
AAM				IAmb	IAmb	00 13 10.3	
	comp=Z,52nm,1.1s						
AAM	**Ann Arbor**	**82.84**	**36**	P	**P**	**00 13 09.6**	**+1.1**
	baz=325						
AAM	**Ann Arbor**	**82.84**	**36**	P	**P**	**00 13 08.4**	**-0.1**
	baz=325						
TUE	**Stuetta**	**82.86**	**332**	IAmb	IAmb	00 13 10.9	
	comp=Z,50nm,0.9s						
GHAJ	**Ghor Haditha**	**82.88**	**307**	P	**P**	**00 13 09.7**	**+0.9**
GHAJ				IAmb	IAmb	00 13 11.8	
	comp=Z,61nm,0.8s						
K50A	**Casco**	**82.89**	**35**	P	**P**	**00 13 09.6**	**+0.9**
K50A				IAmb	IAmb	00 13 10.4	
	comp=Z,43nm,1.0s						
K50A	**Casco**	**82.89**	**35**	P	**P**	**00 13 09.6**	**+0.9**
	baz=326						
K50A				P	**P**	**00 13 09.6**	**+0.9**
	baz=326						
ULC	**Ulcinj**	**82.89**	**324**	⇑*i*P	**P**	**00 13 09.6**	**+0.8**
SFIN	**Lafayette**	**82.90**	**39**	IAmb	IAmb	00 13 10.4	
	comp=Z,50nm,1.4s						
SFIN	**Lafayette**	**82.90**	**39**	P	**P**	**00 13 09.3**	**+0.5**
	baz=324						
SFIN	**Lafayette**	**82.90**	**39**	P	**P**	**00 13 08.4**	**-0.4**
	baz=324						
OHR	**Ohrid**	**82.91**	**322**	*i* P	**P**	**00 13 09.2**	**+0.3**
FNA	**Florina**	**82.91**	**322**	IAmb	IAmb	00 13 10.6	
	comp=Z,56nm,1.0s						
HPIG		**82.93**	**59**	P	**P**	**00 13 10.4**	**+0.9**
LIT	**Litokhoron**	**82.96**	**321**	P	**P**	**00 13 09.4**	**+0.2**
LIT				pmax	pmax		
	comp=Z,61nm,1.0s						
LIT	**Litokhoron**	**82.96**	**321**	P	**P**	**00 13 09.4**	**+0.2**
LIT				IAmb	IAmb	00 13 10.6	
	comp=Z,61nm,1.0s						
DYA	**Yadsworthy**	**82.98**	**342**	*e*P	**P**	**00 13 09.3**	**+0.2**
DYA				IAmb	IAmb	00 13 10.8	
	comp=Z,248nm,1.3s						
TRQ	**Mont Tremblant**	**82.99**	**28**	IAmb	IAmb	00 13 10.5	
	comp=Z,48nm,1.0s						
TEOL	**Teolo**	**83.02**	**330**	IAmb	IAmb	00 13 11.7	
	comp=Z,66nm,1.0s						
N47A	**Urbana**	**83.12**	**38**	IAmb	IAmb	00 13 11.1	
	comp=Z,59nm,1.1s						
N47A	**Urbana**	**83.12**	**38**	P	**P**	**00 13 09.7**	**-0.2**
	baz=324,SNR=11						
N47A				P	**P**	**00 13 09.7**	**-0.2**
	baz=324,SNR=11						
TIR	**Tirane**	**83.12**	**323**	⇑P	**P**	**00 13 10.4**	**+0.5**
Q44A	**Meyer Farm, Va**	**83.18**	**41**	P	**P**	**00 13 10.3**	**0.0**
Q44A				pP	**pP**	**00 13 30.1**	**+1.4**
Q44A				IAmb	IAmb	00 13 31.7	
	comp=Z,137nm,1.6s						
Q44A	**Meyer Farm, Va**	**83.18**	**41**	P	**P**	**00 13 10.4**	**+0.2**
	baz=323						
LMQ	**La Malbaie**	**83.18**	**25**	IAmb	IAmb	00 13 11.6	
	comp=Z,85nm,1.0s						
SALO	**Salr**	**83.20**	**331**	IAmb	IAmb	00 13 11.7	
	comp=Z,58nm,0.9s						
FVM	**French Village**	**83.22**	**42**	IAmb	IAmb	00 13 32.1	
	comp=Z,92nm,1.6s						
FVM	**French Village**	**83.22**	**42**	P	**P**	**00 13 10.1**	**-0.4**
	baz=322,SNR=6.7						
Z35A	**Perchaven, San**	**83.23**	**50**	P	**P**	**00 13 11.2**	**+0.6**
Z35A				IAmb	IAmb	00 13 31.2	
	comp=Z,81nm,1.4s						
U40A	**Yellville**	**83.27**	**45**	IAmb	IAmb	00 13 33.6	
	comp=Z,52nm,0.8s						
U40A	**Yellville**	**83.27**	**45**	P	**P**	**00 13 10.2**	**-0.6**
	baz=321,SNR=12						
U40A				P	**P**	**00 13 10.2**	**-0.6**
	baz=321,SNR=12						
U40A	**Yellville**	**83.27**	**45**	P	**P**	**00 13 10.6**	**-0.2**
	baz=321,SNR=12						
KBN	**Korca**	**83.31**	**322**	P	**P**	**00 13 10.9**	**-0.1**
KBN				pmax	pmax		
	comp=Z,127nm,1.2s						
KBN	**Korca**	**83.31**	**322**	P	**P**	**00 13 10.9**	**-0.1**
X37A	**Clayton**	**83.31**	**48**	P	**P**	**00 13 11.6**	**+0.6**
P46A	**Rosedale**	**83.46**	**39**	IAmb	IAmb	00 13 34.8	
	comp=Z,55nm,0.7s						
P46A	**Rosedale**	**83.46**	**39**	P	**P**	**00 13 11.8**	**+0.2**
	baz=324,SNR=5.9						
TAOE	**Nuku Hiva Isla**	**83.56**	**109**	*e*S	**S**	**00 23 23.8**	**-5.6**
SENIN	**Lac Senin/Sane**	**83.63**	**334**	IAmb	IAmb	00 13 14.6	
	comp=Z,30nm,0.8s						
CLF	**Chambon-Foret**	**83.66**	**337**	IAmb	IAmb	00 13 16.3	
	comp=Z,86nm,1.3s						
W39A	**Magazine**	**83.68**	**46**	IAmb	IAmb	00 13 34.5	
	comp=Z,64nm,1.4s						
W39A	**Magazine**	**83.68**	**46**	P	**P**	**00 13 12.6**	**-0.3**
	baz=320,SNR=6.2						
W39A	**Magazine**	**83.68**	**46**	P	**P**	**00 13 13.2**	**+0.3**
	baz=320,SNR=6.2						
OLIL	**Olney**	**83.75**	**40**	P	**P**	**00 13 13.7**	**+0.6**
OLIL				IAmb	IAmb	00 13 34.8	
	comp=Z,107nm,1.4s						
N49A	**Columbus Grove**	**83.75**	**37**	IAmb	IAmb	00 13 14.8	
	comp=Z,46nm,1.1s						
N49A	**Columbus Grove**	**83.75**	**37**	P	**P**	**00 13 13.0**	**-0.2**
	baz=325,SNR=9.0						
N49A				P	**P**	**00 13 13.0**	**-0.2**
	baz=325,SNR=9.0						
PPT	**Papeete**	**83.77**	**121**	LR	LR	00 50 14.1	
	comp=Z,443nm,18.4s,baz=353,slow=35						
M50A	**Fremont**	**83.84**	**36**	P	**P**	**00 13 13.1**	**-0.5**
M50A	**Fremont**	**83.84**	**36**	P	**P**	**00 13 13.1**	**-0.5**
	baz=326						
M50A				P	**P**	**00 13 13.1**	**-0.5**
	baz=326						
O48B	**Farmland**	**83.87**	**38**	P	**P**	**00 13 13.6**	**-0.2**
	baz=325,SNR=12						
O48B	**Farmland**	**83.87**	**38**	P	**P**	**00 13 13.2**	**-0.6**
	baz=325,SNR=12						
AGG	**Agios Georgios**	**83.89**	**320**	IAmb	IAmb	00 13 14.6	
	comp=Z,36nm,0.9s						
JCT	**Junction City**	**83.90**	**53**	IAmb	IAmb	00 13 36.2	
	comp=Z,140nm,1.8s						
JCT	**Junction City**	**83.90**	**53**	P	**P**	**00 13 14.0**	**-0.2**
	baz=318,SNR=7.8						
APE	**Apeiranthos**	**83.91**	**317**	⇑P	**P**	**00 13 14.5**	**+0.3**
MNTQ	**Montreal, Queb**	**83.94**	**28**	P	**P**	**00 13 14.0**	**0.0**
MNTQ				IAmb	IAmb	00 13 15.3	
	comp=Z,36nm,0.9s						
D62A	**Allapoint, All**	**83.98**	**24**	IAmb	IAmb	00 13 15.8	
	comp=Z,49nm,0.6s						
D62A	**Allapoint, All**	**83.98**	**24**	P	**P**	**00 13 13.7**	**-0.5**
	baz=334,SNR=19						
D62A				P	**P**	**00 13 13.7**	**-0.5**
	baz=334,SNR=19						
PRMA	**PARMA**	**84.02**	**331**	P	**P**	**00 13 14.8**	**+0.4**
PRMA				IAmb	IAmb	00 13 17.0	
	comp=Z,48nm,0.9s						
S44A	**Carbondale**	**84.02**	**42**	P	**P**	**00 13 14.6**	**0.0**
	baz=322,SNR=10						
SIUC	**Southern Illin**	**84.02**	**42**	IAmb	IAmb	00 13 39.6	
	comp=Z,54nm,0.9s						
J54A	**Appleton**	**84.06**	**32**	IAmb	IAmb	00 13 16.2	
	comp=Z,41nm,0.9s						
J54A	**Appleton**	**84.06**	**32**	P	**P**	**00 13 15.2**	**+0.5**
	baz=328						
J54A				P	**P**	**00 13 15.2**	**+0.5**
	baz=328						
WHTX	**Lake Whitney,**	**84.12**	**51**	P	**P**	**00 13 15.1**	**-0.1**
	baz=319						
BLO	**Bloomington**	**84.13**	**39**	P	**P**	**00 13 15.7**	**+0.6**
BLO				pmax	pmax		
	comp=Z,138nm,1.7s						
BLO	**Bloomington**	**84.13**	**39**	P	**P**	**00 13 15.7**	**+0.6**
BLO				IAmb	IAmb	00 13 37.7	
	comp=Z,138nm,1.6s						
PBMO	**Poplar Bluff**	**84.17**	**43**	P	**P**	**00 13 15.3**	**0.0**
	baz=322,SNR=10						
SOCY	**Socotra**	**84.22**	**281**	P	**P**	**00 13 14.2**	**-1.8**
SOCY				IAmb	IAmb	00 13 16.3	
	comp=Z,41nm,1.2s						
SOCY	**Socotra**	**84.22**	**281**	P	**P**	**00 13 15.4**	**-0.7**
	SNR=6.1						
BMNY	**Brushton-Moira**	**84.22**	**29**	P	**P**	**00 13 14.7**	**-0.8**
	baz=331,SNR=9.0						
MEDO	**Medina**	**84.22**	**32**	P	**P**	**00 13 15.0**	**-0.5**
MEDO				IAmb	IAmb	00 13 16.9	
	comp=Z,38nm,1.1s						
O49A	**Covington**	**84.29**	**37**	IAmb	IAmb	00 13 38.3	
	comp=Z,62nm,1.6s						
O49A	**Covington**	**84.29**	**37**	P	**P**	**00 13 16.1**	**+0.2**
	baz=325						
O49A				P	**P**	**00 13 16.1**	**+0.2**
	baz=325						
MIAR	**Mount Ida**	**84.29**	**47**	IAmb	IAmb	00 13 37.1	
	comp=Z,49nm,1.1s						
MIAR	**Mount Ida**	**84.29**	**47**	P	**P**	**00 13 16.0**	**-0.1**
	baz=320,SNR=9.8						
MIAR	**Mount Ida**	**84.29**	**47**	P	**P**	**00 13 16.0**	**-0.1**
	baz=320,SNR=9.8						
J55A	**Hilton**	**84.38**	**31**	IAmb	IAmb	00 13 17.5	
	comp=Z,32nm,0.9s						
J55A	**Hilton**	**84.38**	**31**	P	**P**	**00 13 15.7**	**-0.6**
	baz=329,SNR=7.2						
J55A				P	**P**	**00 13 15.7**	**-0.6**
	baz=329,SNR=7.2						
LONY	**Lake Ozonia**	**84.38**	**29**	P	**P**	**00 13 15.8**	**-0.5**
	baz=331						
P48A	**Milroy**	**84.39**	**38**	P	**P**	**00 13 15.1**	**-1.4**
	baz=325,SNR=5.6						
P48A				P	**P**	**00 13 15.1**	**-1.4**
	baz=325,SNR=5.6						
EIL	**Elat**	**84.44**	**306**	LR	LR	00 55 49.6	
	comp=Z,637nm,19.5s,baz=32,slow=39						
M52A	**Chesterland**	**84.44**	**35**	IAmb	IAmb	00 13 18.5	
	comp=Z,56nm,1.0s						
M52A	**Chesterland**	**84.44**	**35**	P	**P**	**00 13 16.9**	**+0.3**
	baz=327,SNR=7.9						
M52A				P	**P**	**00 13 16.9**	**+0.3**
	baz=327,SNR=7.9						
W41B	**Gary Mavity, V**	**84.50**	**45**	P	**P**	**00 13 17.7**	**+0.7**
W41B				IAmb	IAmb	00 13 37.9	
	comp=Z,42nm,1.2s						
W41B	**Gary Mavity, V**	**84.50**	**45**	P	**P**	**00 13 18.0**	**+0.9**
	baz=321,SNR=9.0						
W41B	**Gary Mavity, V**	**84.50**	**45**	P	**P**	**00 13 17.0**	**0.0**
	baz=321,SNR=9.0						
MURB	**Monte Urbino**	**84.50**	**329**	P	**P**	**00 13 17.7**	**+0.7**
ERPA	**Erie**	**84.50**	**33**	IAmb	IAmb	00 13 18.7	
	comp=Z,143nm,1.6s						
ERPA	**Erie**	**84.50**	**33**	P	**P**	**00 13 16.9**	**-0.1**
	baz=328,SNR=10						
ERPA	**Erie**	**84.50**	**33**	P	**P**	**00 13 16.8**	**-0.2**
	baz=328,SNR=10						
Z38A	**Mt. Pleasant**	**84.52**	**48**	P	**P**	**00 13 17.6**	**+0.4**
Z38A				IAmb	IAmb	00 13 38.3	
	comp=Z,40nm,1.0s						
N51A	**Ashland**	**84.53**	**36**	IAmb	IAmb	00 13 39.4	
	comp=Z,143nm,1.8s						
N51A	**Ashland**	**84.53**	**36**	P	**P**	**00 13 17.6**	**+0.5**
	baz=326						
N51A				P	**P**	**00 13 17.6**	**+0.5**
	baz=326						
FRNY	**Flat Rock**	**84.54**	**28**	P	**P**	**00 13 16.3**	**-0.7**
	baz=332						
WCNY	**West Carthage**	**84.56**	**30**	P	**P**	**00 13 17.6**	**+0.4**
	baz=330,SNR=5.6						
NRCA	**Norcia**	**84.65**	**328**	P	**P**	**00 13 17.8**	**0.0**
P49A	**Miami Univ. Ec**	**84.65**	**38**	IAmb	IAmb	00 13 38.9	
	comp=Z,100nm,1.4s						
P49A	**Miami Univ. Ec**	**84.65**	**38**	P	**P**	**00 13 17.6**	**-0.2**
	baz=325,SNR=12						
P49A	**Miami Univ. Ec**	**84.65**	**38**	P	**P**	**00 13 17.7**	**-0.1**
	baz=325,SNR=12						
BATG	**Bathurst New B**	**84.66**	**22**	IAmb	IAmb	00 13 19.6	
	comp=Z,44nm,0.7s						
MSSA	**Maissana**	**84.68**	**331**	IAmb	IAmb	00 13 19.7	
	comp=Z,85nm,1.2s						
J56A	**Wolcott**	**84.73**	**31**	P	**P**	**00 13 16.2**	**-1.8**
	baz=330,SNR=6.3						
J56A				P	**P**	**00 13 16.2**	**-1.8**
	baz=330,SNR=6.3						
X40A	**Basin Creek Fa**	**84.73**	**46**	P	**P**	**00 13 18.9**	**+0.7**
X40A				IAmb	IAmb	00 13 40.0	
	comp=Z,64nm,1.4s						
X40A	**Basin Creek Fa**	**84.73**	**46**	P	**P**	**00 13 19.5**	**+1.3**
	baz=321						
X40A				P	**P**	**00 13 19.5**	**+1.3**
	baz=321						
X40A	**Basin Creek Fa**	**84.73**	**46**	P	**P**	**00 13 18.1**	**-0.1**
	baz=321						
OSSC	**Osservatorio P**	**84.75**	**330**	IAmb	IAmb	00 13 19.5	
	comp=Z,49nm,0.8s						
E63A	**Oxbow**	**84.77**	**24**	P	**P**	**00 13 17.7**	**-0.5**
	baz=335,SNR=5.2						
E63A				P	**P**	**00 13 17.7**	**-0.5**
	baz=335,SNR=5.2						
SCTE	**Santa Cesarea**	**84.78**	**323**	P	**P**	**00 13 18.7**	**+0.3**
MMNY	**Mt. Morris Dam**	**84.80**	**32**	IAmb	IAmb	00 13 19.6	
	comp=Z,37nm,0.8s						
M53A	**WI Miller and**	**84.80**	**34**	P	**P**	**00 13 18.6**	**+0.1**
	baz=327,SNR=10						
ROSF	**Rostrenen**	**84.80**	**341**	*e*P	**P**	**00 13 19.1**	**+0.7**
ROSF				IAmb	IAmb	00 13 20.6	
	comp=Z,126nm,0.9s						
WVNY	**West Valley, N**	**84.81**	**32**	IAmb	IAmb	00 13 20.1	
	comp=Z,35nm,0.9s						
WVNY	**West Valley, N**	**84.81**	**32**	P	**P**	**00 13 18.6**	**0.0**
	baz=328,SNR=8.4						
ACSO	**Alum Creek Sta**	**84.84**	**36**	P	**P**	**00 13 18.9**	**+0.2**
ACSO	**Alum Creek Sta**	**84.84**	**36**	P	**P**	**00 13 18.4**	**-0.2**
	baz=326,SNR=6.9						
ACSO	**Alum Creek Sta**	**84.84**	**36**	P	**P**	**00 13 18.5**	**-0.2**
	baz=326,SNR=6.9						
ALLY	**Alegheny Colle**	**84.84**	**34**	IAmb	IAmb	00 13 20.5	
	comp=Z,46nm,0.9s						
ALLY	**Alegheny Colle**	**84.84**	**34**	P	**P**	**00 13 18.9**	**+0.2**
	baz=328						
DRLN	**Deer Lake**	**84.85**	**16**	P	**P**	**00 13 19.1**	**+0.6**
DRLN				IAmb	IAmb	00 13 20.6	
	comp=Z,98nm,1.4s						
J57A	**Williamstown**	**84.93**	**30**	IAmb	IAmb	00 13 20.5	
	comp=Z,81nm,1.6s						
J57A	**Williamstown**	**84.93**	**30**	P	**P**	**00 13 18.5**	**-0.5**
	baz=330,SNR=7.6						
J57A				P	**P**	**00 13 18.5**	**-0.5**
	baz=330,SNR=7.6						
AQU	**L'Aquila**	**84.94**	**328**	⇑*i*P	**P**	**00 13 18.5**	**-0.8**
435B	**Jarrell**	**84.95**	**52**	P	**P**	**00 13 19.6**	**+0.2**
	baz=319						
BNI	**Bardonecchia**	**85.00**	**333**	IAmb	IAmb	00 13 47.9	
	comp=Z,40nm,1.2s						
MATE	**Matera**	**85.05**	**325**	⇓P	**P**	**00 13 19.2**	**-0.5**
NCB	**Newcomb**	**85.08**	**29**	P	**P**	**00 13 19.4**	**-0.4**
	baz=331,SNR=6.9						
WLAR	**White Oak Lake**	**85.20**	**47**	P	**P**	**00 13 21.8**	**+1.2**
G62A	**West of Eustis**	**85.20**	**26**	IAmb	IAmb	00 13 22.6	
	comp=Z,62nm,1.0s						
G62A	**West of Eustis**	**85.20**	**26**	P	**P**	**00 13 20.0**	**-0.5**
	baz=333,SNR=10						
G62A				P	**P**	**00 13 20.0**	**-0.5**
	baz=333,SNR=10						
J58A	**Remsen**	**85.23**	**30**	IAmb	IAmb	00 13 21.8	
	comp=Z,35nm,1.0s						
J58A	**Remsen**	**85.23**	**30**	P	**P**	**00 13 20.4**	**-0.2**
	baz=330,SNR=9.2						
J58A				P	**P**	**00 13 20.4**	**-0.2**
	baz=330,SNR=9.2						
N53A	**Lisbon**	**85.26**	**35**	IAmb	IAmb	00 13 22.6	
	comp=Z,49nm,1.1s						
N53A	**Lisbon**	**85.26**	**35**	P	**P**	**00 13 21.2**	**+0.4**
	baz=327						
N53A				P	**P**	**00 13 21.2**	**+0.4**
	baz=327						
F64A	**Sherman**	**85.29**	**24**	IAmb	IAmb	00 13 22.4	
	comp=Z,40nm,1.2s						
F64A	**Sherman**	**85.29**	**24**	P	**P**	**00 13 20.6**	**-0.2**
	baz=335						
F64A				P	**P**	**00 13 20.6**	**-0.2**
	baz=335						
K57A	**Scipio Center**	**85.32**	**31**	P	**P**	**00 13 20.9**	**-0.2**
	baz=330						
J59A	**Piesco**	**85.42**	**29**	P	**P**	**00 13 21.1**	**-0.5**
	baz=331,SNR=8.3						
J59A				P	**P**	**00 13 21.1**	**-0.5**
	baz=331,SNR=8.3						
O52A	**Adamsville**	**85.42**	**36**	P	**P**	**00 13 21.6**	**0.0**
	baz=327,SNR=6.8						
O52A				P	**P**	**00 13 21.6**	**0.0**
	baz=327,SNR=6.8						
P51A	**Williamsport**	**85.42**	**37**	IAmb	IAmb	00 13 42.0	
	comp=Z,61nm,1.4s						
L56A	**Greenwood**	**85.44**	**32**	IAmb	IAmb	00 13 23.1	
	comp=Z,27nm,0.8s						
L56A	**Greenwood**	**85.44**	**32**	P	**P**	**00 13 21.7**	**0.0**
	baz=329,SNR=7.2						
L56A				P	**P**	**00 13 21.7**	**0.0**
	baz=329,SNR=7.2						
R49A	**Shelbyville**	**85.46**	**39**	P	**P**	**00 13 22.2**	**+0.4**
SSB	**Saint Sauveur**	**85.47**	**335**	IAmb	IAmb	00 13 24.3	
	comp=Z,64nm,1.1s						
M55A	**Ridgway**	**85.54**	**33**	IAmb	IAmb	00 13 24.0	
	comp=Z,40nm,0.9s						
M55A	**Ridgway**	**85.54**	**33**	P	**P**	**00 13 22.4**	**+0.2**
	baz=328,SNR=15						
M55A				P	**P**	**00 13 22.4**	**+0.2**
	baz=328,SNR=15						
PKME	**Peaks-Kenny Pk**	**85.55**	**25**	P	**P**	**00 13 22.8**	**+0.7**
PKME				IAmb	IAmb	00 13 56.6	
	comp=Z,89nm,1.5s						
PKME	**Peaks-Kenny Pk**	**85.55**	**25**	P	**P**	**00 13 21.9**	**-0.2**
	baz=334						
O53A	**New Philadelph**	**85.57**	**35**	P	**P**	**00 13 22.5**	**+0.2**
O53A				IAmb	IAmb	00 13 24.0	
	comp=Z,48nm,1.1s						
O53A	**New Philadelph**	**85.57**	**35**	P	**P**	**00 13 22.4**	**0.0**
	baz=327,SNR=9.1						
H62A	**Milan**	**85.58**	**27**	P	**P**	**00 13 22.9**	**+0.6**
	baz=333,SNR=16						
H62A				P	**P**	**00 13 22.9**	**+0.6**
	baz=333,SNR=16						
T47A	**Sharon Grove**	**85.61**	**41**	IAmb	IAmb	00 13 46.2	
	comp=Z,41nm,0.8s						
T47A	**Sharon Grove**	**85.61**	**41**	P	**P**	**00 13 22.8**	**+0.2**
	baz=324,SNR=12						
LBNH	**Lisbon**	**85.62**	**27**	P	**P**	**00 13 22.4**	**-0.1**
	baz=333						
IDI	**Anoyia**	**85.63**	**316**	⇓P	**P**	**00 13 22.7**	**-0.1**
IDI	**Anoyia**	**85.63**	**316**	LR	LR	00 57 14.2	
	comp=Z,368nm,19.4s,baz=36,slow=40						
Q51A	**Peebles**	**85.67**	**37**	IAmb	IAmb	00 13 49.9	
	comp=Z,40nm,0.7s						
Q51A	**Peebles**	**85.67**	**37**	P	**P**	**00 13 22.9**	**0.0**
	baz=326,SNR=12						
Q51A				P	**P**	**00 13 22.9**	**0.0**
	baz=326,SNR=12						
Z41A	**Richland Creek**	**85.69**	**47**	P	**P**	**00 13 23.3**	**+0.2**
	baz=321						
P52A	**Corning**	**85.70**	**36**	P	**P**	**00 13 23.0**	**0.0**
P52A				IAmb	IAmb	00 13 24.3	
	comp=Z,32nm,1.1s						
P52A					**pP**	**00 13 42.4**	**+0.9**

P52A	Corning	85.70	36	P	P	00 13 22.7	-0.3
	baz=326,SNR=5.1						
ACCN	Adirondack Com	85.78	29	IAmb	IAmb	00 13 24.8	
	comp=Z,36nm,1.1s						
ACCN	Adirondack Com	85.78	29	P	P	00 13 23.2	-0.2
	baz=332,SNR=7.0						
NATX	Nacogdoches	85.84	49	P	P	00 13 24.1	+0.2
	baz=320						
R50A	Paris	85.85	38	IAmb	IAmb	00 13 46.6	
	comp=Z,60nm,1.6s						
WVT	Waverly	85.96	42	P	P	00 13 24.9	+0.6
WVT				pmax	pmax		
	comp=Z,23nm,0.9s						
WVT	Waverly	85.96	42	P	P	00 13 24.9	+0.6
WVT				IAmb	IAmb	00 13 47.3	
	comp=Z,23nm,0.8s						
WVT	Waverly	85.96	42	P	P	00 13 24.2	-0.1
	baz=323,SNR=10						
WVT	Waverly	85.96	42	P	P	00 13 24.4	+0.1
	baz=323						
O54A	Avella	85.98	35	IAmb	IAmb	00 13 26.3	
	comp=Z,38nm,1.1s						
O54A	Avella	85.98	35	P	P	00 13 24.5	+0.1
	baz=328,SNR=12						
O54A				P	P	00 13 24.5	+0.1
	baz=328,SNR=12						
BINY	Binghamton	85.98	31	P	P	00 13 24.2	-0.2
	baz=330						
W45A	Hickory Valley	86.06	43	P	P	00 13 25.2	+0.4
W45A				IAmb	IAmb	00 13 48.4	
	comp=Z,71nm,1.1s						
G65A	Princeton	86.13	24	IAmb	IAmb	00 13 26.9	
	comp=Z,31nm,0.9s						
Q52A	Bidwell	86.20	37		pP	00 13 44.5	+0.5
I63A	Otisfield	86.23	26	P	P	00 13 26.1	+0.5
I63A				IAmb	IAmb	00 13 27.5	
	comp=Z,82nm,1.2s						
I63A	Otisfield	86.23	26	P	P	00 13 26.6	+1.1
	baz=333,SNR=5.2						
I63A				P	P	00 13 26.6	+1.1
	baz=333,SNR=5.2						
TIP	Timpagrande	86.25	324	P	P	00 13 26.0	+0.2
M57A	Sunshine Farm,	86.29	32	IAmb	IAmb	00 13 27.6	
	comp=Z,32nm,0.8s						
M57A	Sunshine Farm,	86.29	32	P	P	00 13 25.7	-0.2
	baz=329,SNR=14						
M57A				P	P	00 13 25.7	-0.2
	baz=329,SNR=14						
LMN	Caledonia Moun	86.31	22	IAmb	IAmb	00 13 27.7	
	comp=Z,49nm,0.8s						
L59A	Walton	86.34	30	IAmb	IAmb	00 13 27.7	
	comp=Z,38nm,0.9s						
L59A	Walton	86.34	30	P	P	00 13 25.7	-0.4
	baz=331,SNR=8.7						
L59A				P	P	00 13 25.7	-0.4
	baz=331,SNR=8.7						
OXF	Oxford	86.46	44	P	P	00 13 27.2	+0.4
OXF				pmax	pmax		
	comp=Z,163nm,1.5s						
OXF	Oxford	86.46	44	P	P	00 13 27.2	+0.4
OXF	Oxford	86.46	44	P	P	00 13 27.0	+0.1
	baz=323,SNR=7.2						
OXF	Oxford	86.46	44	P	P	00 13 26.8	0.0
	baz=323,SNR=7.2						
SSPA	Standing Stone	86.60	33	P	P	00 13 27.6	+0.2
SSPA				IAmb	IAmb	00 13 29.4	
	comp=Z,54nm,1.4s						
SSPA	Standing Stone	86.60	33	P	P	00 13 27.7	+0.3
	baz=329,SNR=8.3						
SSPA	Standing Stone	86.60	33	P	P	00 13 27.5	+0.1
	baz=329						
SSPA				S	S	00 23 55.8	-2.8
	baz=329						
KSPA	Keystone Colle	86.62	31	P	P	00 13 26.6	-0.9
KSPA				IAmb	IAmb	00 13 49.9	
	comp=Z,56nm,1.7s						
U49A	Red Boiling Sp	86.62	40	IAmb	IAmb	00 13 50.6	
	comp=Z,33nm,0.7s						
U49A	Red Boiling Sp	86.62	40	P	P	00 13 27.8	+0.2
	baz=324,SNR=13						
MCWV	Mont Chateau	86.64	35	P	P	00 13 27.7	+0.1
	baz=328						
MCWV	Mont Chateau	86.64	35	P	P	00 13 27.5	-0.1
	baz=328						
MCWV				S	S	00 23 57.8	-1.3
	baz=328						
T50A	Nancy	86.65	39	IAmb	IAmb	00 13 50.6	
	comp=Z,32nm,0.8s						
T50A	Nancy	86.65	39	P	P	00 13 27.4	-0.3
	baz=325						
T50A				P	P	00 13 27.4	-0.3
	baz=325						
CLTN	Cedars of Leba	86.71	41	IAmb	IAmb	00 13 50.0	
	comp=Z,83nm,1.6s						
S51A	Beattyville	86.71	38	P	P	00 13 28.5	+0.5
S51A				IAmb	IAmb	00 13 50.6	
	comp=Z,116nm,2.0s						
V48A	Smith Brothers	86.75	41	IAmb	IAmb	00 13 50.0	
	comp=Z,60nm,1.5s						
V48A	Smith Brothers	86.75	41	P	P	00 13 28.6	+0.3
	baz=324,SNR=7.5						
Q54A	Coxs Mills	86.79	36	IAmb	IAmb	00 13 51.4	
	comp=Z,33nm,0.7s						
Q54A	Coxs Mills	86.79	36	P	P	00 13 28.9	+0.5
	baz=327,SNR=7.9						
Q54A				P	P	00 13 28.9	+0.5
	baz=327,SNR=7.9						
N58A	Sunbury	86.88	32	IAmb	IAmb	00 13 30.5	
	comp=Z,44nm,1.1s						
N58A	Sunbury	86.88	32	P	P	00 13 28.9	+0.2
	baz=330,SNR=13						
N58A				P	P	00 13 28.9	+0.2
	baz=330,SNR=13						
L61B	Northampton	86.95	29	P	P	00 13 28.8	-0.3
	baz=332						
HRV	Adam Dziewonsk	87.28	28	P	P	00 13 30.6	-0.1
	baz=333						
BRNY	Black Rk. Fore	87.39	30	P	P	00 13 31.6	+0.3
	baz=331,SNR=5.4						
PAGS	Pennsylvania G	87.40	32	IAmb	IAmb	00 13 32.8	
	comp=Z,40nm,0.8s						
Q56A	Snyder Ridge,	87.43	35	IAmb	IAmb	00 13 54.4	
	comp=Z,32nm,1.1s						
Q56A	Snyder Ridge,	87.43	35	P	P	00 13 31.9	+0.4
	baz=328,SNR=5.3						
Q56A				P	P	00 13 31.9	+0.4
	baz=328,SNR=5.3						
P57A	Homestead Farm	87.53	34	IAmb	IAmb	00 13 54.6	
	comp=Z,56nm,1.4s						
P57A	Homestead Farm	87.53	34	P	P	00 13 31.9	0.0
	baz=329						
P57A				P	P	00 13 31.9	0.0
	baz=329						
TRNY	Table Rock, Ra	87.55	30	IAmb	IAmb	00 13 33.7	
	comp=Z,28nm,0.9s						
GBN	Guysborough	87.58	20	IAmb	IAmb	00 13 34.6	
	comp=Z,47nm,1.2s						
LUPA	Lehigh Univers	87.60	31	IAmb	IAmb	00 13 54.8	
	comp=Z,110nm,1.8s						
SWET	Sewanee	87.60	41	IAmb	IAmb	00 13 54.9	
	comp=Z,38nm,0.6s						
TZTN	Tazewell	87.63	39	IAmb	IAmb	00 13 54.5	
	comp=Z,83nm,1.6s						
TZTN	Tazewell	87.63	39	P	P	00 13 32.9	+0.5
	baz=326,SNR=6.3						
TZTN	Tazewell	87.63	39	P	P	00 13 32.5	0.0
	baz=326,SNR=6.3						
TZTN				S	S	00 24 07.7	-1.1
	baz=326						
X48A	Hartselle	87.68	42	P	P	00 13 32.4	-0.3
	baz=324,SNR=5.1						
R55A	Marlinton	87.69	36	P	P	00 13 33.3	+0.5
R55A				IAmb	IAmb	00 13 55.8	
	comp=Z,49nm,1.1s						
R55A	Marlinton	87.69	36	P	P	00 13 33.7	+0.9
	baz=328,SNR=7.9						
R55A				P	P	00 13 33.7	+0.9
	baz=328,SNR=7.9						
UCCT	U. Connecticut	87.69	29	IAmb	IAmb	00 13 33.5	
	comp=Z,41nm,1.0s						
VBMS	Vicksburg	87.70	46	P	P	00 13 33.2	+0.3
	baz=322						
MVL	Millersville	87.74	32	P	P	00 13 32.9	0.0
PAL	Palisades	87.78	30	IAmb	IAmb	00 13 55.7	
	comp=Z,94nm,1.7s						
PAL	Palisades	87.78	30	P	P	00 13 33.6	+0.5
	baz=331						
PAL	Palisades	87.78	30	P	P	00 13 32.4	-0.7
	baz=331						
PAL				S	S	00 24 08.4	-1.6
	baz=331						
BRNJ	Basking Ridge	87.83	31	IAmb	IAmb	00 13 35.2	
	comp=Z,28nm,0.8s						
BRNJ	Basking Ridge	87.83	31	P	P	00 13 33.9	+0.6
	baz=331,SNR=5.4						
V51A	Loudon	87.87	40	IAmb	IAmb	00 13 54.7	
	comp=Z,38nm,1.2s						
V51A	Loudon	87.87	40	P	P	00 13 34.5	+0.9
	baz=325,SNR=6.9						
W50A	Signal Mountai	87.91	41	IAmb	IAmb	00 13 56.7	
	comp=Z,24nm,0.9s						
W50A	Signal Mountai	87.91	41	P	P	00 13 33.6	-0.3
	baz=325,SNR=6.5						
N62A	Caumsett State	88.01	30	P	P	00 13 35.3	+1.2
N62A				IAmb	IAmb	00 13 35.8	
	comp=Z,58nm,1.1s						
N62A	Caumsett State	88.01	30	P	P	00 13 34.9	+0.8
	baz=332						
N62A				P	P	00 13 34.9	+0.8
	baz=332						
PANJ	Princeton	88.04	31	P	P	00 13 34.3	-0.1
	baz=331,SNR=6.8						
TUPA	Temple Univers	88.04	31	P	P	00 13 34.1	-0.3
	baz=331,SNR=8.0						
SDMD	Soldier's Deli	88.06	33	P	P	00 13 34.9	+0.5
GEDE	Greenville	88.18	32	P	P	00 13 34.8	-0.1
	baz=330						
Z47A	Carrollton	88.18	44	P	P	00 13 35.7	+0.6
	baz=323,SNR=5.2						
V52A	Sevierville	88.19	39	P	P	00 13 35.4	+0.2
	baz=326,SNR=12						
TKL	Tuckaleechee C	88.26	39	LR	LR	00 54 32.5	
	comp=Z,570nm,22.0s,baz=340,slow=36						
TKL	Tuckaleechee C	88.26	39	IAmb	IAmb	00 13 58.4	
	comp=Z,24nm,0.8s						
TKL	Tuckaleechee C	88.26	39	P	P	00 13 35.2	-0.2
	baz=326,SNR=10						
FPAL	Fort Paine	88.31	41	P	P	00 13 36.2	+0.4
FPAL				IAmb	IAmb	00 13 58.4	
	comp=Z,28nm,1.0s						
U54A	Nelsons Funny	88.42	38	P	P	00 13 36.6	+0.2
	baz=327						
U54A				P	P	00 13 36.6	+0.2
	baz=327						
Y49A	Blount Mountai	88.47	42	IAmb	IAmb	00 13 59.2	
	comp=Z,19nm,0.8s						
Y49A	Blount Mountai	88.47	42	P	P	00 13 36.0	-0.5
	baz=324,SNR=6.5						
X51A	Calhoun	88.64	41	P	P	00 13 38.0	+0.7
VAE	Valguarnera	88.68	324	LR	LR	00 56 33.8	
	comp=Z,557nm,20.6s,baz=48,slow=38						
V53A	Saluda	88.69	39	IAmb	IAmb	00 14 00.5	
	comp=Z,96nm,2.0s						
LRAL	Lakeview Retre	88.85	43	IAmb	IAmb	00 14 00.9	
	comp=Z,25nm,1.2s						
LRAL	Lakeview Retre	88.85	43	P	P	00 13 37.6	-0.6
	baz=324						
LRAL	Lakeview Retre	88.85	43	P	P	00 13 38.2	-0.1
	baz=324						
LRAL				S	S	00 24 17.6	-2.8
	baz=324						
CBN	Corbin Frederi	88.88	34	S	S	00 24 20.7	+0.2
	baz=329						
T57A	Hurt	89.14	36	IAmb	IAmb	00 14 02.5	
	comp=Z,42nm,1.4s						
BG3	Lake Jocassee	89.19	39	IAmb	IAmb	00 14 03.8	
	comp=Z,48nm,1.2s						
CASEE	Lake Jocassee	89.19	39	P	P	00 13 40.3	+0.4
	baz=326,SNR=9.5						
OXZ	Oxford	89.39	162	P	P	00 13 40.5	+0.2
Z51A	Franklin	89.51	42	P	P	00 13 41.2	-0.2
	baz=325						
RPZ	Rata Peaks	89.55	163	LR	LR	00 48 41.9	
	comp=Z,611nm,20.8s,baz=354,slow=32						
Y52A	Lilburn	89.60	41		pP	00 14 01.7	+1.2
Y52A				IAmb	IAmb	00 14 05.0	
	comp=Z,16nm,0.8s						
MQOL	MQOL	89.76	299	*i* P	P	00 13 43.3	+0.6
KMSC	Kings Mountain	89.79	38	P	P	00 13 43.2	+0.5
KMSC	Kings Mountain	89.79	38	P	P	00 13 41.9	-0.8
	baz=327,SNR=5.9						
KMSC	Kings Mountain	89.79	38	P	P	00 13 42.5	-0.2
	baz=327,SNR=5.9						
PAULI	Pauline	89.84	39		pP	00 14 02.9	+1.3
PAULI				IAmb	IAmb	00 14 06.3	
	comp=Z,18nm,0.9s						
T59A	Double "B" Far	89.87	35	pP	pP	00 14 02.9	+1.3
T59A				IAmb	IAmb	00 14 06.0	
	comp=Z,79nm,1.7s						
T59A	Double "B" Far	89.87	35	P	P	00 13 42.5	-0.5
	baz=329						
T59A				P	P	00 13 42.5	-0.5
	baz=329						
LBZ	Lake Benmore	90.02	164	IAmb	IAmb	00 13 46.1	
	comp=Z,48nm,0.9s						
250A	Grady	90.06	43		pP	00 14 04.6	+1.9
250A	Grady	90.06	43	P	P	00 13 45.1	+1.1
	baz=324						
HODGE	Hodges	90.13	39	P	P	00 13 44.3	+0.1
	baz=326,SNR=5.9						
GOGA	Godfrey	90.25	41		pP	00 14 04.7	+1.2
GOGA	Godfrey	90.25	41	P	P	00 13 44.9	+0.1
	baz=326						
GOGA				S	S	00 24 32.3	-1.1
	baz=326						
U59A	Littleton	90.30	35	IAmb	IAmb	00 14 08.1	
	comp=Z,32nm,1.3s						
W57A	Gilead	90.38	37	IAmb	IAmb	00 14 08.3	
	comp=Z,38nm,1.3s						
ODZ	Otahua Downs	90.74	164	P	P	00 13 46.9	+0.4
CNNC	Cliffs of the	91.21	36	S	S	00 24 41.5	-0.6
	baz=329						
PBRG	Braganca	91.77	341	*e*P	P	00 13 51.6	-0.2
TIGA	Tifton	91.81	42	S	S	00 24 48.3	+0.6
	baz=326						
PGAV	Gavieira, Arco	91.97	342	*e*P	P	00 13 53.0	+0.2
PGAV	Gavieira, Arco	91.97	342	*e*PP	PP	00 17 35.1	+3.2
PGAV				*e*S	SKSac	00 24 20.5	+0.6
PGAV	Gavieira, Arco	91.97	342	*e*LR	LR	00 44 37.9	
	comp=Z,489nm,18.0s						
KEST	Kesra	92.25	327	P	P	00 13 54.4	+0.3
	comp=Z,12nm,0.8s,baz=338,slow=2.1,SNR=7.2						
KEST				LR	LR	01 00 32.1	
	comp=Z,1µm,18.0s,baz=346,slow=39						
	comp=Z,12nm,0.8s						
POLO	Lamas de Olo	92.43	342	*e*P	P	00 13 55.1	+0.2
MVO	Moncorvo	92.45	341	*e*P	P	00 13 55.2	+0.2
	comp=Z,34nm,1.7s						
MVO	Moncorvo	92.45	341	*e*PP	PP	00 17 37.8	+2.1
MVO				*e*S	SKSac	00 24 22.6	+0.1
MVO	Moncorvo	92.45	341	*e*LR	LR	00 44 45.3	
	comp=Z,575nm,20.0s						
ATD	Arta Tunnel	92.48	288	LR	LR	01 00 44.5	
	comp=Z,344nm,19.4s,baz=21,slow=39						
PVRL	Vila Real	92.50	342	*e*P	P	00 13 55.6	+0.4
	comp=Z,45nm,1.9s						
ESBB	Sonseca Array	93.08	338	IAmb	IAmb	00 14 18.2	
	comp=Z,68nm,1.8s						
ESDC	Sonseca Array	93.08	338	P	P	00 13 57.7	-0.2
	comp=Z,8.1nm,0.9s,baz=16,slow=3.8,SNR=37						
ESDC				LR	LR	01 02 09.9	
	comp=Z,649nm,18.2s,baz=15,slow=40						
	comp=Z,8.1nm,0.9s						
ESDC	Sonseca Array	93.08	338	IAmb	IAmb	00 13 59.2	
	comp=Z,15nm,1.1s						
MTE	Manteigas	93.30	341	*e*PP	PP	00 17 45.1	+2.8
MTE				*e*S	SKSac	00 24 28.5	+1.3
MTE	Manteigas	93.30	341	*e*LR	LR	00 45 16.6	
	comp=Z,574nm,18.0s						
PMRV	Marv??o	94.19	341	*e*PP	PP	00 17 52.1	+2.9
PMRV	Marv??o	94.19	341	*e*LR	LR	00 45 38.4	
	comp=Z,547nm,22.0s						
PSBE	So Bento	94.43	342	*e*P	P	00 14 04.0	-0.1
PESTR	Estremoz	94.77	341	*e*P	P	00 14 05.5	-0.1
PVAQ	Vaqueiros	96.19	340	*e*LR	LR	00 46 42.6	
	comp=Z,581nm,18.0s						
JAWL	J.Aulia	96.67	298	*i* P	P	00 14 11.6	-3.1
CMIG	Matias Romero	96.90	59	LR	LR	00 51 44.7	
	comp=Z,252nm,21.7s,baz=320,slow=32						
MDT	Midelt	99.69	336	LR	LR	01 03 51.2	
	comp=Z,443nm,21.6s,baz=35,slow=38						
PMOZ	Porto Moniz, M	102.56	347	*e*LR	LR	00 50 58.2	
	comp=Z,253nm,20.0s						
VNDA	Vanda	121.29	176	PKP	PKiKP	00 19 35.5	0.0
	comp=Z,3.7nm,0.7s,baz=315,slow=3.9,SNR=14						
VNDA				PKKPbc	PKKPbc	00 29 38.5	+0.4
	comp=Z,2.1nm,1.1s,baz=180,slow=1.0,SNR=3.8						
SBA	Scott Base	121.87	175	PKIKP	PKiKP	00 19 37.4	+0.8
SBA	Scott Base	121.87	175	PKPdf	PKiKP	00 19 37.4	+0.8
DBIC	Dimbokro	123.96	326	PKP	PKPdf	00 19 42.1	-0.4
	comp=Z,8.9nm,0.6s,baz=58,slow=2.8,SNR=17						
DBIC				PP	PP	00 21 23.5	-2.2
	comp=Z,17nm,1.0s,baz=28,slow=7.8,SNR=8.6						
TIC	Toumodi	124.05	326	*e*PKP2	PKPdf	00 19 42.4	-0.2
KIC	Kosan Boka	124.20	326	*e*PKP2	PKPdf	00 19 42.6	-0.3
	comp=Z,12nm,0.7s						
LIC	Lamto	124.44	326	*e*PKP2	PKiKP	00 19 43.7	0.0
	comp=Z,17nm,0.8s						
MAW	Mawson	127.60	209	PKP	PKiKP	00 19 47.9	-0.3
	comp=Z,3.0nm,0.8s,baz=16,slow=7.0,SNR=4.2						
BOSA	Boshof	131.94	268	PKP	PKiKP	00 19 58.1	-0.2
	comp=Z,3.0nm,0.9s,baz=36,slow=4.7,SNR=5.2						
MCPB	Macapa, AP	133.43	27	*e*P	PKPdf	00 19 60.0	-0.5
QSPA	South Pole Qui	133.45	180		PKPpre	00 19 50.9	
ETMB	Extrema	135.31	51	*e*P	PKiKP	00 20 05.3	-0.1
ITTB	Itaituba	135.75	34	*e*P	PKPdf	00 20 05.3	+0.5
LPAZ	La Paz	139.27	59	PKhKP	PKPpre	00 20 04.8	
	comp=Z,0.8nm,0.5s,baz=32,slow=5.8,SNR=3.8						
LPAZ				PKP	PKiKP	00 20 13.5	-0.7
	comp=Z,2.6nm,0.6s,baz=9.0,slow=4.1,SNR=8.8						
LPAZ				SKP		00 23 40.5	
	comp=Z,2.2nm,1.0s,baz=33,slow=4.3,SNR=4.0						
LPAZ	La Paz	139.27	59	*e*P	PKPdf	00 20 12.4	+0.5
PRPB	Parauapebas	139.62	27	*e*P	PKPdf	00 20 12.1	+0.2
NBPS	Pedro II - PI	140.04	14	*e*P	PKPdf	00 20 13.9	+1.1
NBCL	Cascavel-CE	140.34	9	*e*P	PKPdf	00 20 14.2	+1.0
VILB	Vilhena	141.18	46	*e*P	PKPdf	00 20 15.1	+0.4
NBPB	Pedra_Branca-C	141.47	11	*e*P	PKPdf	00 20 16.2	+1.0
CLDB	Colider	141.55	39	*e*P	PKiKP	00 20 16.9	-1.3
PDRB	Porto dos Gac	141.76	41	*e*P	PKPdf	00 20 16.2	+0.5
RCBR	Riachuelo	142.14	6	*e*P	PKPdf	00 20 16.2	-0.2
H03N2	Juan Fernandez	142.70	90	T	T	02 59 38.6	
	baz=304,slow=77,SNR=129						
H03N3	Juan Fernandez	142.71	90	T	T	02 59 39.5	
	baz=304,slow=77,SNR=191						
H03N1	Juan Fernandez	142.71	90	T	T	02 59 39.9	
	baz=304,slow=77,SNR=125						
NBPV	Pedro Velho	142.77	5	*e*P	PKPdf	00 20 18.6	+1.1
SMTB	Santa Maria do	142.86	25	*e*P	PKPdf	00 20 19.2	+1.5
LVC	Limon Verde	143.35	67	PKIKP	PKPdf	00 20 19.3	+0.5
LVC	Limon Verde	143.35	67	PKPdf	PKPdf	00 20 19.3	+0.5
LVC	Limon Verde	143.35	67	*e*P	PKPdf	00 20 19.2	+0.5
NBMA	Muriti-CE	143.38	10	*e*P	PKPdf	00 20 19.8	+1.2
PTLB	Pontes e Lacer	143.82	47	*e*P	PKPbc	00 20 18.0	+1.0
SNDB	Serra Nova Dou	144.44	33	*e*P	PKPdf	00 20 20.1	-0.3
NBRF	Rio Formoso -	145.02	5	*e*P	PKPab	00 20 21.0	+0.1
PEXB	Peixe	145.67	28	*e*P	PKPab	00 20 23.4	+0.1
NBAN	Anadia - AL	145.92	7	*e*P	PKPab	00 20 24.9	+0.6
SALV	Santo Antonio	145.97	43	*e*P	PKPab	00 20 24.3	-0.1
LCO	Las Campanas	146.22	77	PKP2	PKPbc	00 20 24.5	-0.1
LCO	Las Campanas	146.22	77		PKPbc	00 20 24.5	-0.1
NBPN	Ponto Novo - B	146.57	14	*e*P	PKPbc	00 20 25.5	-0.2
SDBA	SAO DESIDERIO	147.01	23	*e*P	PKPbc	00 20 26.4	-0.6
TROLL	Troll, Antarti	147.05	199	P	PKPbc	00 20 25.9	+0.4
NBLA	Lagarto - SE	147.07	10	*e*P	PKPbc	00 20 27.6	+0.5
PP1B	Ponte de Pedra	147.82	43	*e*P	PKPbc	00 20 27.6	-1.4
SNAA	Sanae	148.50	197	P	PKPbc	00 20 29.1	-0.2
SNAA	Sanae	148.50	197	PKP2	PKPbc	00 20 28.5	-0.8
SNAA	Sanae	148.50	197		PKPbc	00 20 28.5	-0.8
BDFB	Brasilia	149.04	30	PKPbc	PKPbc	00 20 32.5	+0.2
	comp=Z,21nm,0.7s,baz=356,slow=1.2,SNR=29						
BDFB	Brasilia	149.04	30	PKP2	PKPbc	00 20 31.8	-0.6
BDFB	Brasilia	149.04	30		PKPbc	00 20 31.8	-0.6
JANB	Januaria	149.70	23	*e*P	PKPdf	00 20 30.3	+1.0
AQDB	Aquidauana	149.80	47	*e*P	PKPdf	00 20 30.6	+1.4
VNA2	Neumayer--Watz	150.03	196	P	PKPbc	00 20 32.8	-0.3
	baz=130,slow=1.0						
VNA3	Neumayer Olymp	150.21	195	P	PKPbc	00 20 33.4	-0.1
VNA1	Neumayer--Stat	150.42	196	P	PKPbc	00 20 34.1	+0.2
ITRB	Iturama	151.76	38	*e*P	PKPdf	00 20 32.9	+0.7
PLCA	Paso Flores	151.81	97	PKP	PKPdf	00 20 31.6	-0.2
	comp=Z,5.8nm,1.1s,baz=8.1,slow=2.7,SNR=6.1						
PLCA				PKPbc	PKiKP	00 20 38.8	+0.1
	comp=Z,35nm,0.8s,baz=266,slow=3.0,SNR=61						
PLCA	Paso Flores	151.81	97		PKPbc	00 20 38.1	-0.2
PLCA	Paso Flores	151.81	97	*e*P	PKPdf	00 20 32.9	+1.1
MG05	Puerto Natales	152.20	121		PKiKP	00 20 38.8	-0.1
GUA01	Guaratinga, BA	152.25	15	*e*P	PKPdf	00 20 33.5	+0.5
GO09	Cerro Castillo	152.31	120	PKPab	PKPab	00 20 51.5	+2.3
PCMB	Pacaembu	152.99	41	*e*P	PKPdf	00 20 34.7	+0.7
CPUP	Villa Florida	153.42	57	PKP	PKPdf	00 20 34.9	+0.4
	comp=Z,1.4nm,0.5s,baz=39,slow=0.9,SNR=4.3						
CPUP				PKPbc	PKiKP	00 20 42.6	+0.4
	comp=Z,2.5nm,0.4s,baz=357,slow=1.5,SNR=14						
CPUP				PKPab	PKPab	00 20 55.2	+0.7
	comp=Z,3.7nm,0.5s,baz=294,slow=1.7,SNR=7.0						
SJMB	Sao Joao De Ma	154.01	19	*e*P	PKPdf	00 20 35.6	+0.1
DSPA	Despedida	154.57	126	PKPdf	PKPdf	00 20 37.2	+2.0
RIB01	Linhares ES	154.78	18	*e*P	PKPdf	00 20 37.1	+0.5
PTGB	Pitanga	155.18	47	*e*P	PKPdf	00 20 38.3	+1.2
FRTB	Fartura	155.28	40	*e*P	PKPdf	00 20 37.7	+0.5
RCLB	Rio Claro- Sao	155.38	35	*e*P	PKPdf	00 20 38.3	+0.9
ALF01	Guarapari-ES	155.96	19	*e*P	PKPdf	00 20 38.6	+0.5
CNLB	Canela	159.46	52	*e*P	PKPdf	00 20 43.4	+1.0
PLTB	Pedras Altas	159.53	61	PKPdf	PKPdf	00 20 43.2	+0.9

DJA 03 00:01:37.0±0.6, **4°S**±3°×**12°8E**±°, **h11**^{km}±3^{km}, **M4.0**/6, **mb4.9**/1, **mB5.6**/2, **MLv3.5**/6, **Mw(mB)5.1**/2, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.14	72	P	Pb	00 01 41.5	-0.2
AAI				S	Sg	00 01 44.8	+2.1
MSAI	Masohi	0.95	66	P	Pb	00 01 55.8	+0.3
MSAI				S	Sn	00 02 09.0	-0.8
SANI	Sanana	2.66	309	P	Pn	00 02 20.7	+0.9
SANI				S	Sn	00 02 52.3	+0.2
LBMI	Labuha	3.12	350	P	Pn	00 02 25.7	-0.5
LBMI				S	Sn	00 03 04.4	+0.9
SAUI	Saumlaki	5.31	143	P	Pn	00 02 55.3	-1.1
	0.6nm8µm120nm,1.0s						

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*JMA **03** 00:23:02.8±0.1, 43°.2N±0°.5×145°.6E±0°.6, h52^{km}±1^{km}, MD3.7/40, MV4.0/40, OFF NEMURO PENINSULA*

JMA Felt II J1 at OFF NEMURO PENINSULA .

*MOS **03** 00:23:02.5±1.4, 43°.29N×145°.60E, h62^{km}, mb4.1/5, Error ellipse: s-maj=12.6km s-min=10.9km az=78.6*

*SKHL **03** 00:23:03.5±0.1, 43°.30N×145°.50E, h66^{km}±4^{km}, mb4.8/5*

*NEIC **03** 00:23:04.1±2.6, 43°.09N±0°.07×145°.5E±0°.1, h66^{km}±8^{km}, mb4.2/15, Error ellipse: s-maj=14.0km s-min=9.3km az=99.0*

*IDC **03** 00:23:08.1±2.5, 43°.68N×145°.44E, h80^{km}±21^{km}, mb3.4/11, mbtmp3.7/13, MS3.8/1, Error ellipse: s-maj=36.0km s-min=19.0km az=2.0*

ISC 03 00:23:03.0±0.7, **43°.16N**±0°.04×**145°.61E**±0°.04, **h52**^{km}±5^{km}, **n93**, σ**1^{s}.19**/95, **mb4.0**/21, **2C-2D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMR	Nemuro--Hokkai	0.23	23	⇑*i*PN	Pn	00 23 11.4	-0.3
NMR				*e*S	Sn	00 23 17.4	-0.6
NMR	Nemuro--Hokkai	0.23	23	*i* P	Pn	00 23 11.5	-0.3
NMR				*e*S	Sn	00 23 17.5	-0.6
NEM2	Nemuro 2	0.23	26	*i* P	Pn	00 23 11.4	-0.4
NEM2				S	Sn	00 23 17.4	-0.6
NEM2	Nemuro 2	0.23	26	A	A	00 23 11.4	
	comp=E,26nm,0.3s,comp=E,18nm,1.3s						
JKHN	Kushirohamanak	0.34	257	P	Pn	00 23 12.6	-0.1
JKHN				*e*S	Sn	00 23 19.0	-0.6
JKHN	Kushirohamanak	0.34	257	A	A	00 23 12.6	
	comp=E,12nm,0.5s,comp=E,15nm,0.4s						
AKK	Akkeshi	0.58	256	*i* P	Pn	00 23 14.8	-0.5
AKK				AMB	AMB	00 23 15.1	
	290nm,0.2s						
AKK				*i* S	Sn	00 23 23.3	-0.9
AKK				A	A	00 23 25.0	
	4µm,0.4s						
AKK				A	A	00 23 25.0	
	3µm,0.4s						
JAK	Akkeshi	0.69	257	*i* P	Pn	00 23 16.1	-0.5
JAK				*e*S	Sn	00 23 25.8	-0.7
JAK	Akkeshi	0.69	257	A	A	00 23 16.1	
	comp=E,6.0nm,0.3s,comp=E,10.0nm,0.3s						
JNSB	Nemuroshibetsu	0.76	325	*i* P	Pn	00 23 17.1	-0.5
JNSB				*e*S	Sn	00 23 27.4	-0.7

JNK	Nakash	0.78	304	iP	Pn	00 23 17.1	-0.8
JNK				S	Sn	00 23 27.0	-1.6
JNK	Nakash	0.78	304	A	A	00 23 17.1	
	comp=E,4.0nm,0.4s,comp=E,6.0nm,2.6s						
JRA	Rausu	0.85	336	iP	Pn	00 23 18.5	-0.3
JRA				eS	Sn	00 23 29.8	-0.6
JRA	Rausu	0.85	336	A	A	00 23 18.5	
	comp=E,6.0nm,0.9s,comp=E,5.0nm,1.0s						
YUK	Yuzh-Kuril'sk	0.89	12	ePN	Pn	00 23 18.8	-0.6
YUK				eS	Sn	00 23 29.9	-1.5
YUK				pmax	pmax		
	comp=Z,783nm,0.2s						
YUK				pmax	pmax		
	comp=E,476nm,0.1s						
YUK				smax	smax		
	comp=E,6µm,0.5s						
YUK				smax	smax		
	comp=N,6µm,0.2s						
YUK	Yuzh-Kuril'sk	0.89	12	eP	Pn	00 23 18.8	-0.6
YUK				AMB	AMB	00 23 22.3	
	comp=N,780nm,0.3s						
YUK				eS	Sn	00 23 30.3	-1.1
YUK				A	A	00 23 31.7	
	comp=N,6µm,0.4s						
YUK				A	A	00 23 31.7	
	comp=N,6µm,0.4s						
RUSJ	Misakicho	0.98	345⇓	iPN	Pn	00 23 20.5	0.0
RUSJ				iS	Sn	00 23 34.1	+0.7
SHO	Shikotan	1.14	51c	iPN	Pn	00 23 21.6	-1.0
SHO				iS	Sn	00 23 35.0	-2.1
SHO				pmax	pmax		
	comp=N,63nm,0.2s						
SHO				pmax	pmax		
	comp=E,115nm,0.2s						
SHO				pmax	pmax		
	comp=Z,359nm,0.2s						
SHO				smax	smax		
	comp=E,275nm,0.4s						
SHO				smax	smax		
	comp=N,3µm,0.2s						
SHO	Shikotan	1.14	51	iP	Pn	00 23 21.7	-0.9
SHO				AMB	AMB	00 23 21.8	
	comp=N,60nm,0.2s						
SHO				AMB	AMB	00 23 21.8	
	comp=N,120nm,0.2s						
SHO				AMB	AMB	00 23 21.8	
	comp=N,360nm,0.2s						
SHO				iS	Sn	00 23 35.1	-2.1
SHO				A	A	00 23 36.8	
	comp=N,3µm,0.4s						
SHO				A	A	00 23 36.8	
	comp=N,280nm,0.4s						
JOB	Onbets	1.32	259	iP	Pn	00 23 24.8	-0.4
JAR	Ashorobuto	1.35	276	iP	Pn	00 23 25.2	-0.2
JAR				eS	Sn	00 23 42.4	+0.1
JTKR	Abashiri--Toko	1.48	304	P	Pn	00 23 27.4	+0.2
JTKR				eS	Sn	00 23 46.0	+0.6
ERM	Erimo	2.14	239	PN	Pn	00 23 39.4	+3.2
ERM	Erimo	2.14	239		Pn	00 23 39.4	+3.2
JKA	Kamikawa-asahi	2.38	295		Pn	00 23 40.7	+1.1
JKA	Kamikawa-asahi	2.38	295	eP	Pn	00 23 40.8	+1.2
JKA				eS	Sn	00 24 07.3	-0.3
ASAJ	Asahikawa	2.39	295	P	Pn	00 23 40.8	+1.2
	comp=N,100nm,0.5s,baz=105,slow=13,SNR=151						
ASAJ				S	Sn	00 24 07.2	-0.4
	comp=N,63nm,0.5s,baz=145,slow=13,SNR=4.9						
KUR	Kuril'sk	2.63	37d	iPN	Pn	00 23 44.1	+1.1
KUR				iS	Sn	00 24 14.2	+0.5
KUR				pmax	pmax		
	comp=Z,88nm,0.4s						
KUR				smax	smax		
	comp=N,311nm,0.5s						
KUR				smax	smax		
	comp=E,151nm,0.6s						
KUR	Kuril'sk	2.63	37	iP	Pn	00 23 44.1	+1.1
KUR				AMB	AMB	00 23 44.4	
	comp=E,90nm,0.4s						
KUR				iS	Sn	00 24 14.2	+0.5
KUR				A	A	00 24 16.7	
	comp=E,330nm,0.4s						
KUR				A	A	00 24 16.7	
	comp=E,180nm,0.4s						
JEW	Eniwo	3.07	265	Pn	Pn	00 23 50.6	+1.6
JTM	Tenmabayashi	4.13	237	Pn	Pn	00 24 04.5	+0.9
JTM				Sn	Sn	00 24 50.0	-0.6
YSS	Yuzh-Sakhalins	4.30	333	Pn	Pn	00 24 06.0	+0.2
YSS	Yuzh-Sakhalins	4.30	333	eP	Pn	00 24 06.1	+0.3
YSS				AMB	AMB	00 24 09.3	
	comp=E,10.0nm,0.8s						
JMM	Marumori	6.43	216	Pn	Pn	00 24 33.8	-1.3
JMM				Sn	Sn	00 25 42.5	-4.7
JSD	Sado	7.58	230	Pn	Pn	00 24 50.8	0.0
MJA0	Matsu Arr-Jizo	8.70	223	ePN	Pn	00 25 22.1	+16
MAJO	Matsushiro	8.72	223	iPN	Pn	00 25 21.9	+15
MJAR	Matsushiro Arr	8.72	223	P	Pn	00 25 15.9	+9.5
	comp=E,1.5nm,0.6s,baz=31,slow=13,SNR=2.6						
JGF	Kuroka	9.88	223	Pn	Pn	00 25 23.5	+1.1
VLA	Vladivostok	10.03	274	iPN	Pn	00 25 24.0	-0.3
VLA				pmax	pmax		
	comp=Z,6.0nm,0.3s						
VLA				MLR	MLR		
	comp=Z,198nm,12.0s						
VLA	Vladivostok	10.03	274	iP	Pn	00 25 24.0	-0.3
VLA				AMB	AMB	00 25 24.8	
	comp=Z,10.0nm,0.3s						
KLR	Kul'dur	11.35	307	P	Pn	00 25 44.9	+2.5
	comp=Z,1.0nm,0.8s,baz=111,slow=16,SNR=4.2						
KLR	Kul'dur	11.35	307	eP	Pn	00 25 43.1	+0.7
YAK	Yakutsk	21.12	339	LR	LR	00 37 06.1	
	comp=Z,229nm,19.1s,baz=104,slow=41						
SONM	Songino Array	27.67	293	P	P	00 28 45.6	-0.4
	comp=Z,0.7nm,0.7s,baz=77,slow=7.6,SNR=4.8						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	27.67	293	P	P	00 28 44.9	-1.0
H11N2	WAKE ISLAND Hy	29.43	136	T	T	00 59 51.4	
	baz=328,slow=75,SNR=38						
H11N1	WAKE ISLAND Hy	29.44	136	T	T	00 59 54.9	
	baz=328,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	29.44	136	T	T	01 00 00.5	
	baz=328,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	30.36	137	T	T	01 01 08.0	
	baz=329,slow=76,SNR=288						
H11S3	WAKE ISLAND Hy	30.36	138	T	T	01 01 06.9	
	baz=329,slow=76,SNR=186						
H11S2	WAKE ISLAND Hy	30.37	138	T	T	01 01 01.7	
	baz=329,slow=76,SNR=110						
NRIK	Noril'sk	39.23	332	eP	P	00 30 17.9	-7.8
IMAR	Indian Mountai	39.76	34	P	P	00 30 31.2	+1.0
P19K	Oil Pt	39.97	44	P	P	00 30 35.4	+3.4
P19K				IAmb	IAmb	00 30 43.8	
	comp=Z,7.0nm,0.8s						
CAST	Castle Rocks	40.38	38	P	P	00 30 36.1	+0.7
CNPM	China Poot	40.99	44	P	P	00 30 40.8	+0.3
GHO	Glory Hole Cre	41.92	40	P	P	00 30 47.4	-0.7
GHO				IAmb	IAmb	00 31 02.7	
	comp=Z,4.0nm,0.8s						
MDM	Murphy Dome	42.04	36	P	P	00 30 49.0	0.0
MDM				IAmb	IAmb	00 30 59.4	
	comp=Z,3.4nm,1.1s						
H24K	Noodor Dome	42.17	34	P	P	00 30 51.0	+0.9
H24K				IAmb	IAmb	00 30 51.5	
	comp=Z,1.4nm,0.8s						
ILAR	Eielson Array	42.62	36	P	P	00 30 53.5	-0.2
	comp=Z,0.3nm,0.5s,baz=290,slow=8.8,SNR=5.1						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	42.62	36	eP	P	00 30 55.0	+1.3
MK31	Makanchi Array	43.86	298	P	P	00 31 02.6	-1.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	43.86	298	P	P	00 31 02.6	-1.4
MKAR	Makanchi Array	43.86	298	P	P	00 31 03.3	-0.7
	comp=Z,1.2nm,0.9s,baz=86,slow=8.4,SNR=7.5						
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	43.86	298	P	P	00 31 02.5	-1.5
BCAR	Beaver Creek A	45.05	38	P	P	00 31 14.0	+0.7
INK	Inuvik	47.48	30	P	P	00 31 31.4	-0.7
	comp=Z,1.2nm,1.1s,baz=268,slow=6.2,SNR=1.9						
	comp=Z,1.2nm,1.1s						
INK	Inuvik	47.48	30	IAmb	IAmb	00 31 42.5	
	comp=Z,3.8nm,1.4s						
HYT	Haines Junctio	47.51	40	P	P	00 31 33.5	+0.9
HYT				IAmb	IAmb	00 31 44.8	
	comp=Z,4.6nm,1.2s						
BOOM	Boomskoye usch	49.70	295	P	P	00 31 49.6	-0.2
BOOM				pmax	pmax		
	comp=Z,48nm,1.5s						
BOOM	Boomskoye usch	49.70	295	P	P	00 31 49.6	-0.2
EUNU	Eureka	53.63	10	P	P	00 32 17.9	-0.6
ABKAR	Akbulak array	56.55	308	P	P	00 32 39.1	-0.7
ABKAR				IAmb	IAmb	00 32 39.7	
	comp=Z,4.0nm,1.4s						
COEN	Coen	56.88	183	P	P	00 32 43.1	+0.7
YKA	Yellowknife Ar	56.91	33	P	P	00 32 41.6	-0.6
	comp=Z,0.5nm,0.8s,baz=302,slow=7.3,SNR=6.3						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	56.91	33	eP	P	00 32 41.9	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	64.88	333	P	P	00 33 34.8	-1.5
	comp=Z,0.8nm,0.5s,baz=41,slow=6.1,SNR=11						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	68.84	57	P	P	00 34 03.1	+0.9
	comp=Z,0.1nm,0.3s,baz=325,slow=7.8,SNR=2.0						
	comp=Z,0.1nm,0.3s						
KBZ	Khabaz	69.34	311	P	P	00 34 04.9	+0.1
	comp=Z,1.9nm,0.7s,baz=38,slow=4.9,SNR=7.1						
	comp=Z,1.9nm,0.7s						
KBZ	Khabaz	69.34	311	eP	P	00 34 06.4	+1.6
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	Khabaz	69.34	311	eP	P	00 34 06.4	+1.6
NB2	NORSAR Subarra	69.74	338	P	P	00 34 05.7	-1.3
	comp=Z,2.7nm,1.0s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.74	338	P	P	00 34 05.8	-1.3
	comp=Z,1.2nm,0.8s,baz=36,slow=6.0,SNR=4.7						
	comp=Z,1.2nm,0.8s						
AKASG	Malin Array Be	71.38	323	P	P	00 34 15.8	-1.4
	comp=Z,1.0nm,0.6s,baz=33,slow=5.5,SNR=6.3						
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.38	323	eP	P	00 34 17.1	-0.1
BURAR	Bucovina Array	75.44	323	P	P	00 34 40.6	-0.6
BURAR				IAmb	IAmb	00 34 41.7	
	comp=Z,1.3nm,0.8s						
OJC	Ojcow	75.68	327	P	P	00 34 41.9	-0.6
OJC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OJC	Ojcow	75.68	327	P	P	00 34 41.9	-0.6
OJC				IAmb	IAmb	00 34 43.3	
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	83.91	55	P	P	00 35 27.9	+0.4
	comp=Z,0.3nm,0.8s,baz=323,slow=3.6,SNR=4.6						
	comp=Z,0.3nm,0.8s						
H03N2	Juan Fernandez	144.09	90	T	T	03 23 32.0	
	baz=302,slow=77,SNR=2.9						
H03N3	Juan Fernandez	144.10	90	T	T	03 23 36.7	
	baz=302,slow=77,SNR=3.2						
H03N1	Juan Fernandez	144.11	90	T	T	03 23 35.3	
	baz=302,slow=77,SNR=4.3						

IDC 03 00:23:37.4±2.4, 13°.70N×93°.09E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML4.0/1, Error ellipse: s-maj=47.8km s-min=34.5km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.35	49	Pn	Pn	00 25 27.0	+1.0
	0.6nm,0.3s,baz=239,slow=16,SNR=1.4						
CMAR				Sn	Sn	00 26 49.9	-0.4
	0.6nm,0.3s,baz=221,slow=27,SNR=1.3						
	0.9nm,0.4s						
H08S3	Diego Garcia H	29.45	225	T	T	01 00 45.9	
	baz=47						
H08S2	Diego Garcia H	29.46	225	T	T	01 00 47.4	
	baz=47						
H08S1	Diego Carcia H	29.47	225	T	T	01 00 45.9	
	baz=47						
MKAR	Makanchi Array	34.21	347	P	P	00 30 24.5	-0.2
	0.5nm,0.8s,baz=155,slow=9.1,SNR=4.2						
	0.5nm,0.8s						
WRA	Warramunga Arr	52.58	129	P	P	00 32 53.1	-0.2
	0.5nm,1.1s,baz=308,slow=8.3,SNR=2.1						
	0.5nm,1.1s						

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*IDC **03** 00:31:40.3±5.3, 52°.27N×177°.62E, h197^{km}±49^{km}, mb3.1/5, mbtmp3.7/6, Error ellipse: s-maj=40.8km s-min=21.7km az=142.0*

ISC 03 00:31:40.7±1.5, 52°.3N±0°.3×177°.6E±0°.2, h200^{km}, n6, σ0^{s}.33/6, mb3.5/5, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	12.09	282	P	Pn	00 34 26.5	0.0
	2.3nm,0.8s,baz=92,slow=18,SNR=17						
INK	Inuvik	28.03	37	P	P	00 37 13.1	+0.4
	1.4nm,1.1s,baz=258,slow=9.3,SNR=1.8						
	1.4nm,1.1s						
YKA	Yellowknife Ar	36.23	47	P	P	00 38 23.6	-0.4
	0.3nm,0.6s,baz=285,slow=7.2,SNR=6.5						
	0.3nm,0.6s						
ARCES	ARCESS Array B	56.78	349	P	P	00 41 03.2	-0.1
	1.6nm,0.9s,baz=32,slow=8.8,SNR=2.1						
	1.6nm,0.9s						
FINES	FINESS Array B	64.36	345	P	P	00 41 54.5	0.0
	0.3nm,0.4s,baz=3.4,slow=7.0,SNR=6.1						
	0.3nm,0.4s						
WRA	Warramunga Arr	81.18	221	P	P	00 43 33.9	+0.1
	0.5nm,0.8s,baz=32,slow=5.9,SNR=5.2						
	0.5nm,0.8s						

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*IDC **03** 00:33:42.3±0.8, 37°.57N×135°.42E, h361^{km}±9^{km}, mb2.8/7, mbtmp3.5/11, Error ellipse: s-maj=18.2km s-min=14.5km az=62.0*

ISC 03 00:33:42.7±0.8, 37°.71N±0°.10×135°.53E±0°.09, h365^{km}, n12, σ1^{s}.46/14, mb3.1/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	2.44	118	P	Pn	00 34 38.2	-0.5
	16nm,0.7s,baz=298,slow=9.2,SNR=37						
MJAR				S	S	00 35 23.9	+0.2
	0.9nm,0.5s,baz=113,slow=21,SNR=1.4						
KSRS	Korea Array	6.04	270	P	Pn	00 35 13.4	-1.1
	1.6nm,0.5s,baz=76,slow=13,SNR=4.6						
USRK	Ussuriysk Ar.	7.02	339	P	Pn	00 35 26.3	+0.8
	1.4nm,0.4s,baz=144,slow=9.5,SNR=5.5						
ASAJ	Asahikawa	8.34	38	P	Pn	00 35 41.2	+0.3
	13nm,0.3s,baz=235,slow=10,SNR=19						
ASAJ				S	S	00 37 14.0	-3.7
	5.5nm,0.7s,baz=90,slow=20,SNR=2.4						
SONM	Songino Array	23.53	305	P	P	00 38 22.5	+0.9
	0.6nm,0.4s,baz=106,slow=10.0,SNR=4.2						
	0.6nm,0.4s						
MKAR	Makanchi Array	39.76	301	P	P	00 40 40.6	-0.8
	0.2nm,0.5s,baz=88,slow=9.9,SNR=2.2						
	0.2nm,0.5s						
ILAR	Eielson Array	51.44	32	P	P	00 42 12.7	+1.2
	0.3nm,0.6s,baz=285,slow=9.7,SNR=4.4						
	0.3nm,0.6s						
WRA	Warramunga Arr	57.35	181	P	P	00 42 52.8	-1.3
	0.6nm,0.5s,baz=355,slow=7.6,SNR=16						
	0.6nm,0.5s						
YKA	Yellowknife Ar	65.53	29	P	P	00 43 48.8	+1.1
	0.1nm,0.6s,baz=313,slow=6.3,SNR=2.7						
	0.1nm,0.6s						
FINES	FINESS Array B	65.97	330	P	P	00 43 50.3	-0.1
	0.7nm,0.9s,baz=46,slow=8.2,SNR=4.7						
	0.7nm,0.9s						
TXAR	Lajitas Array	93.31	49	P	P	00 46 18.5	+1.3
	0.1nm,0.5s,baz=258,slow=2.9,SNR=4.0						
	0.1nm,0.5s						
VNDA	Vanda	116.09	174	PKP	PKPdf	00 51 41.2	-0.3
	0.6nm,0.3s,baz=88,slow=3.8,SNR=6.0						

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*TAP **03** 00:51:13.1, 24°.92N×122°.32E, h13^{km}, ML2.7, C*

*JMA **03** 00:51:14.1±0.2, 24°.9N±1°.0×122°.3E±0°.4, h7^{km}±4^{km}, MV2.5/7, TAIWAN REGION*

ISC 03 00:51:13.0±1.1, 24°.93N±0°.05×122°.33E±0°.03, h16^{km}±10^{km}, n31, σ0^{s}.48/51, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.32	283	iP	Pb	00 51 20.2	-0.2
	baz=278						
TWB1				eS	Sb	00 51 24.7	-0.7
	baz=278						
SXI1	Grass Mountain	0.44	291	iP	Pb	00 51 22.8	+0.3
	baz=287						
SXI1				iS	Sb	00 51 29.9	+0.9
	baz=287						
TIPB	Shuangxi	0.46	275	eP	Pb	00 51 22.9	+0.1
	baz=277						
TIPB				eS	Sb	00 51 30.0	+0.6
	baz=277						
NWF	Wu-fen Shan	0.52	285	iP	Pb	00 51 24.4	+0.7
	baz=287						
NWF				eS	Sb	00 51 31.8	+0.7
	baz=287						
WFSB	Wu-fen Shan	0.52	285	P	Pb	00 51 24.3	+0.6
	baz=287						
WFSB				iS	Sb	00 51 31.9	+0.9
	baz=287						
TWC	Suao	0.55	234	iP	Pg	00 51 23.4	-0.3
	baz=234						
TWC				iS	Sg	00 51 30.9	-0.1
	baz=234						
TNOU	National Taiwa	0.55	293	eP	Pb	00 51 25.0	+0.7
	baz=295						
NDS	Dongshan	0.63	242	iP	Pb	00 51 25.8	+0.1
	baz=233						
NDS				eS	Sg	00 51 34.0	+0.1
	baz=233						
FUSB	Fushanzhiwuyua	0.70	256	eP	Pb	00 51 27.1	+0.2
	baz=257						
FUSB				eS	Sb	00 51 36.4	+0.1
	baz=257						
EWUT	Wuta	0.70	226	eP	Pg	00 51 26.7	+0.1
	baz=226						
EWUT				eS	Sg	00 51 36.2	+0.3
	baz=226						
YM08	YM08	0.72	291	P	Pb	00 51 27.7	+0.5
	baz=292						
YM08				eS	Sb	00 51 37.2	+0.4
	baz=292						
YM01	YM01	0.72	287	P	Pn	00 51 28.0	-0.7
	baz=288						
YM01				eS	Sn	00 51 38.4	-1.1
	baz=288						
ENA	Nanau	0.74	227	eP	Pg	00 51 27.3	0.0
	baz=218						
ENA				eS	Sg	00 51 37.1	0.0
	baz=218						
JYNG	Yonagunijimaku	0.74	131	P	Pg	00 51 27.3	0.0
JYNG				S	Sg	00 51 37.1	0.0
TWY	Chenhua	0.75	297	P	Pn	00 51 28.5	-0.4
	baz=298						
TWY				eS	Sn	00 51 39.3	-0.6
	baz=298						
ENTT	Nioudou	0.76	247	iP	Pb	00 51 27.9	+0.1
	baz=240						
TATO	Taipei	0.77	273	eP	Pb	00 51 28.4	+0.4
	baz=275						
TATO				eS	Sb	00 51 39.0	+0.8
	baz=275						
NWLT	Wulai	0.77	258	P	Pb	00 51 28.4	+0.3
	baz=260						
NWLT				eS	Sb	00 51 38.3	0.0
	baz=260						
YOJ	Yonaguni jima	0.78	127	eP	Pg	00 51 27.4	-0.7
	baz=114						
YOJ				eS	Sg	00 51 38.0	-0.3
	baz=114						
YOJ	Yonaguni jima	0.78	127	P	Pg	00 51 28.2	+0.1
YOJ				S	Sg	00 51 38.1	-0.3
LATG	Datong	0.83	242	eP	Pg	00 51 29.1	-0.1
	baz=243						
LATG				eS	Sb	00 51 40.6	+0.4
	baz=243						
YHNB	Yeheng	0.91	253	eP	Pb	00 51 30.5	+0.1
	baz=264						
NSK	Sanguang	0.92	254	iP	Pb	00 51 30.8	+0.2
	baz=255						
NSK				eS	Sb	00 51 42.9	+0.2
	baz=255						
NNS	Nan Shan	1.00	241	iP	Pg	00 51 32.3	-0.1
	baz=241						
NACB	Ninganchiao	1.01	222	eP	Pb	00 51 32.3	+0.2
	baz=222						
ETLH	Xiulin Townshi	1.06	227	eP	Pb	00 51 33.0	0.0
	baz=228						
WHF	Hehuan Shan	1.25	231	eP	Pn	00 51 36.4	+0.2
	baz=232						
IRIF	Iriomote-Funau	1.41	115	eS	Sg	00 51 58.2	-0.1
OWD	Renai	1.44	227	eP	Pn	00 51 39.2	+0.7
	baz=211						
WUSB	Renai	1.45	230	eP	Pb	00 51 39.6	-0.1
	baz=214						
JIJ	Ishigaki jima	1.74	109	eS	Sb	00 52 07.4	+1.1

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*SNET **03** 01:43:09.4±1.2, 13°.56N×91°.48W, h29^{km}, ML3.7*

*UCR **03** 01:43:09.5±1.2, 13°.57N×91°.48W, h29^{km}, ML3.6*

*IDC **03** 01:43:10.1±7.3, 14°.29N×90°.96W, h0^{km}, mb3.6/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=162.9km s-min=51.4km az=15.0*

*GCG **03** 01:43:13.6±1.7, 13°.79N×91°.26W, h55^{km}, MD4.0*

ISC 03 01:43:08.7±2.1, 13°.81N±0°.09×91°.29W±0°.06, h5^{km}±13^{km}, n31, σ1^{s}.47/40, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.77	34	eP	Pn	01 43 29.8	+3.3
RTAL	Retalhuleu	0.81	331	eP	Pn	01 43 27.0	+0.2
RTAL				eS	Sn	01 43 41.3	+2.0
PCG	Pacaya	0.88	49	eP	Pn	01 43 31.0	+3.0
STG3	Santiaguito 3,	0.93	343	eP	Pn	01 43 29.6	+0.9
NBG	Las Nubes	1.19	50	eP	Pn	01 43 36.5	+4.1
NUBE	Las Nubes	1.47	86	eP	Pb	01 43 36.6	-0.1
NUBE				IAML		01 44 04.6	
	comp=Z,325nm,0.3s						
NUBE	Las Nubes	1.47	86	eP	Pb	01 43 36.6	-0.1
NUBE				IAML		01 44 04.6	
	comp=Z,325nm,0.3s						
CEVE	Cerro Verde	1.62	89	eP	Pb	01 43 39.2	0.0
CEVE				eS	Sg	01 44 03.4	+2.7
CEVE				IAML		01 44 10.3	
	comp=Z,2µm,0.2s						
CEVE	Cerro Verde	1.62	89	eP	Pb	01 43 39.2	0.0
CEVE				eS	Sg	01 44 03.4	+2.7
CEVE				IAML		01 44 10.3	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	1.79	95	eP	Pn	01 43 40.7	+0.1
JAYA				eS	Sg	01 44 06.0	-0.5
JAYA				IAML		01 44 10.2	
	comp=Z,830nm,0.3s						
JAYA	Jayaque - finc	1.79	95	eP	Pn	01 43 40.7	+0.1
JAYA				eS	Sg	01 44 06.0	-0.5
JAYA				IAML		01 44 10.2	
	comp=Z,830nm,0.3s						
CEDA	San Andres	1.84	90	eP	Pn	01 43 41.9	+0.8
CEDA				eS	Sg	01 44 07.2	-0.7
CEDA				IAML		01 44 14.5	
	comp=Z,774nm,0.2s						
CEDA	San Andres	1.84	90	eP	Pn	01 43 41.9	+0.8
CEDA				eS	Sg	01 44 07.2	-0.7
CEDA				IAML		01 44 14.5	
	comp=Z,774nm,0.2s						
BOQS	Boqueron	1.95	92	eP	Pn	01 43 43.6	+0.8
BOQS	Boqueron	1.95	92	eP	Pn	01 43 43.6	+0.8
MTO3	Montecristo	1.96	72	eP	Pg	01 43 45.2	-1.1
MTO3				eS	Sg	01 44 13.5	+1.7
MTO3	Montecristo	1.96	72	eP	Pg	01 43 45.2	-1.1
MTO3				eS	Sg	01 44 13.5	+1.7
MRL	Marmol	2.00	51	eS	Sn	01 44 05.6	-3.4
ESQI	Esquipulas	2.03	68	eP	Pb	01 43 44.9	-1.3
ESQI				eS	Sg	01 44 13.6	-0.4
LFRS	El Faro	2.17	95	eP	Pn	01 43 47.4	+1.7
LFRS	El Faro	2.17	95	eP	Pn	01 43 47.4	+1.7
PAVA	Las Pavas	2.29	92	eP	Pn	01 43 49.0	+1.7
PAVA	Las Pavas	2.29	92	eP	Pn	01 43 49.0	+1.7
COEG	Centro de Oper	2.35	94	eP	Pn	01 43 49.6	+1.5
COEG	Centro de Oper	2.35	94	eP	Pn	01 43 49.6	+1.5
COEB	Comit de Eme	2.70	96	eP	Pn	01 43 53.9	+1.0
COEB	Comit de Eme	2.70	96	eP	Pn	01 43 53.9	+1.0
CMIG	Matias Romero	4.76	314	Pn	Pn	01 44 21.5	+0.3
	comp=Z,1.4nm,0.3s,baz=124,slow=7.9,SNR=11						
CMIG				Sn	Sn	01 45 16.0	-0.8
	comp=Z,2.5nm,0.3s,baz=80,slow=16,SNR=6.0						
	comp=Z,2.2nm,0.3s						
TXAR	Lajitas Array	19.24	325	P	Pn	01 47 35.7	+0.6
	baz=155,slow=12,SNR=11						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	34.25	321	P	P	01 49 57.3	+1.3
	comp=Z,0.8nm,0.7s,baz=139,slow=8.4,SNR=9.0						
	comp=Z,0.8nm,0.7s						

YKA	**Yellowknife Ar**	**51.37**	**346**	P	**P**	**01 52 12.4**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=146,slow=7.5,SNR=11						
	comp=Z,0.2nm,0.4s						

IASPEI ***03*** *01:45:50.5±0.8, 38°.90N±0°.02×21°.74E±0°.02, h10^{km}±5^{km}, mb4.0/17, MS3.2/7, Error ellipse: s-maj=3.2km s-min=2.2km az=117.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

IDC ***03*** *01:45:50.4±0.9, 38°.90N×21°.92E, h0^{km}, mb3.8/13, mbtmp3.8/22, ML3.6/8, MS3.1/15, Error ellipse: s-maj=15.5km s-min=12.7km az=11.0*

ATH ***03*** *01:45:50.9, 38°.90N×21°.73E, h9^{km}±1^{km}, ML3.7/25, Error ellipse: s-maj=1.2km s-min=0.5km az=146.0*

NEIC ***03*** *01:45:51.9±2.0, 38°.86N±0°.04×21°.78E±0°.04, h18^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=4.0km az=152.0*

TIR ***03*** *01:45:51.6, 39°.02N×21°.87E, h1^{km}±2^{km}, Md4.0, Ml4.0*

THE ***03*** *01:45:51.2, 38°.90N×21°.74E, h6^{km}, ML3.9/5, Error ellipse: s-maj=0.9km s-min=0.5km az=232.0*

PDG ***03*** *01:45:52.7±0.4, 39°.00N×21°.97E, h14^{km}±1^{km}, ML3.7/9, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ISK ***03*** *01:45:53.7, 38°.99N×22°.02E, h27^{km}, ML3.8/13*

DDA ***03*** *01:45:56.0±0.0, 39°.02N×22°.04E, h23^{km}±8^{km}, MW3.9*

ISC 03 01:45:51.2±0.7, **38°.87N**±0°.01×**21°.81E**±0°.02, **h8**^{km}±4^{km}, **n246**, σ1§**43**/309, **mb4.0**/17, **MS3.2**/7, **15C-20D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.04**	**0**	P	**Pg**	**01 45 52.7**	**-0.3**
EVR				S	**Sg**	**01 45 54.3**	**-0.2**
EVR				AML	AML	01 45 54.8	
EVR				AML	AML	01 45 54.8	
EVR	**Evrytania**	**0.04**	**0**	P	**Pg**	**01 45 52.6**	**-0.5**
EVR				S	**Sg**	**01 45 54.2**	**-0.2**
	528µm,0.5s						
MAKR	**Makrakomi, Fth**	**0.29**	**61**	P	**Pg**	**01 45 57.6**	**+0.6**
MAKR				S	**Sb**	**01 46 02.2**	**-1.4**
MAKR				AML	AML	01 46 04.0	
MAKR				AML	AML	01 46 04.0	
MAKR	**Makrakomi, Fth**	**0.29**	**61**	P	**Pg**	**01 45 57.6**	**+0.6**
MAKR				S	**Sb**	**01 46 03.0**	**-0.6**
ANX	**Ano Chora**	**0.29**	**163**	P	**Pg**	**01 45 57.6**	**+0.6**
ANX				S	**Sb**	**01 46 02.2**	**-1.6**
ANX				AML	AML	01 46 07.2	
	comp=E,94568µm,0.7s						
ANX				AML	AML	01 46 08.4	
	comp=N,86722µm,0.6s						
AGG	**Agios Georgios**	**0.43**	**70**	P	**Pb**	**01 46 00.4**	**-0.7**
AGG				S	**Sb**	**01 46 07.1**	**-0.7**
AGG				AML	AML	01 46 08.5	
	comp=N,52531µm,0.5s						
AGG				AML	AML	01 46 08.8	
	comp=E,52241µm,0.3s						
AGG	**Agios Georgios**	**0.43**	**70**	P	**Pb**	**01 46 00.2**	**-0.9**
AGG				S	**Sb**	**01 46 07.7**	**-0.1**
	comp=E,24µm,0.4s						
AGG	**Agios Georgios**	**0.43**	**70**	PG	**Pb**	**01 46 00.7**	**-0.4**
AGG	**Agios Georgios**	**0.43**	**70**	Pg	**Pg**	**01 46 00.1**	**+0.4**
AGG				Sg	**Sb**	**01 46 07.6**	**-0.2**
AGG	**Agios Georgios**	**0.43**	**70**	P	**Pb**	**01 46 00.2**	**-0.9**
AGG				S	**Sb**	**01 46 08.0**	**+0.2**
EFP	**Efpalio**	**0.45**	**170**	P	**Pg**	**01 46 00.2**	**+0.2**
EFP				S	**Sb**	**01 46 07.3**	**-1.0**
EFP				AML	AML	01 46 11.6	
	comp=N,48480µm,0.4s						
EFP				AML	AML	01 46 12.4	
	comp=E,75347µm,0.8s						
LAKA	**Lakka**	**0.65**	**168**	P	**Pg**	**01 46 03.4**	**-0.3**
LAKA				S	**Sb**	**01 46 13.5**	**-0.4**
LAKA				AML	AML	01 46 25.8	
	comp=N,5682µm,1.0s						
LAKA				AML	AML	01 46 28.4	
	comp=E,4796µm,0.8s						
LAKA	**Lakka**	**0.65**	**168**	P	**Pg**	**01 46 03.6**	**-0.1**
LAKA				S	**Sb**	**01 46 14.0**	**+0.1**
	comp=E,9µm,0.7s						
ALIK	**Aliki, Aigiali**	**0.66**	**159**	P	**Pb**	**01 46 04.5**	**-0.4**
ALIK				S	**Sb**	**01 46 14.5**	**+0.4**
DLFA	**Delphi**	**0.67**	**126**	P	**Pb**	**01 46 04.2**	**-0.9**
DLFA				S	**Sb**	**01 46 14.3**	**-0.2**
DLFA				AML	AML	01 46 16.3	
	comp=N,13408µm,0.6s						
DLFA				AML	AML	01 46 20.7	
	comp=E,15284µm,0.5s						
THL	**Klokotos Trika**	**0.71**	**13**	P	**Pg**	**01 46 03.8**	**-1.1**
THL				S	**Sg**	**01 46 13.9**	**-0.3**
THL				AML	AML	01 46 22.0	
	comp=N,8894µm,0.7s						
THL				AML	AML	01 46 22.4	
	comp=E,6695µm,0.7s						
THL	**Klokotos Trika**	**0.71**	**13**	P	**Pg**	**01 46 03.7**	**-1.1**
THL				S	**Sg**	**01 46 15.1**	**+1.0**
	comp=E,4µm,0.7s						
RLS	**Riolos of Patr**	**0.86**	**198**	P	**Pg**	**01 46 07.5**	**-0.2**
RLS				S	**Sg**	**01 46 18.8**	**-0.1**
RLS				AML	AML	01 46 27.8	
	comp=E,4635µm,0.6s						
RLS				AML	AML	01 46 32.3	
	comp=N,5174µm,0.7s						
RLS	**Riolos of Patr**	**0.86**	**198**	P	**Pg**	**01 46 07.8**	**+0.1**
RLS				S	**Sb**	**01 46 20.1**	**+0.2**
KLV	**Kalavryta, Ach**	**0.87**	**162**	P	**Pg**	**01 46 07.5**	**-0.4**
KLV				S	**Sn**	**01 46 21.2**	**-1.4**
KLV				AML	AML	01 46 25.7	
	comp=E,6260µm,0.7s						
KLV				AML	AML	01 46 27.3	
	comp=N,4096µm,0.6s						
KLV	**Kalavryta, Ach**	**0.87**	**162**	P	**Pb**	**01 46 08.2**	**-0.4**
KLV				S	**Sb**	**01 46 21.0**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.88**	**260**	P	**Pg**	**01 46 06.4**	**-1.8**
NYDR	**Nydri-Lefkada**	**0.88**	**260**	P	**Pg**	**01 46 06.6**	**-1.6**
TYRN	**Tyrnavos**	**0.90**	**21**	P	**Pg**	**01 46 07.6**	**-1.0**
TYRN				S	**Sg**	**01 46 20.3**	**+0.1**
TYRN				AML	AML	01 46 23.8	
	comp=E,19571µm,0.8s						
TYRN				AML	AML	01 46 24.9	
	comp=N,24248µm,0.5s						
TYRN	**Tyrnavos**	**0.90**	**21**	P	**Pg**	**01 46 07.5**	**-1.0**
TYRN				S	**Sg**	**01 46 21.2**	**+1.0**
	comp=N,9µm,0.7s						
TSLK	**Tsoukalades, L**	**0.90**	**267**	P	**Pg**	**01 46 07.1**	**-1.5**
TSLK				S	**Sg**	**01 46 17.8**	**-2.5**
TSLK				AML	AML	01 46 28.5	
	comp=E,4695µm,1.2s						
TSLK				AML	AML	01 46 32.1	
	comp=N,5477µm,0.6s						
TSLK	**Tsoukalades, L**	**0.90**	**267**	P	**Pg**	**01 46 07.8**	**-0.8**
LRSO	**Larissa Observ**	**0.92**	**29**	P	**Pg**	**01 46 07.9**	**-0.9**
LRSO				S	**Sg**	**01 46 20.2**	**-0.5**
LRSO				AML	AML	01 46 26.3	
	comp=E,35160µm,0.7s						
LRSO				AML	AML	01 46 28.0	
	comp=N,37457µm,0.7s						
DRO	**Drossia**	**0.92**	**185**	P	**Pg**	**01 46 08.8**	**-0.2**
DRO				S	**Sb**	**01 46 21.8**	**0.0**
DRO				AML	AML	01 46 31.8	
	comp=E,3760µm,0.7s						
DRO				AML	AML	01 46 34.2	
	comp=N,9522µm,0.5s						
EVGI	**Lefkada island**	**0.94**	**255**	P	**Pg**	**01 46 07.5**	**-1.6**
EVGI	**Lefkada island**	**0.94**	**255**	P	**Pg**	**01 46 07.6**	**-1.6**
EVGI				S	**Sg**	**01 46 20.8**	**-0.6**
ATAL	**Atalanti**	**0.96**	**100**	P	**Pn**	**01 46 10.3**	**-0.8**
ATAL				S	**Sn**	**01 46 23.8**	**-1.1**
ATAL				AML	AML	01 46 27.3	
	comp=N,6942µm,0.8s						
ATAL				AML	AML	01 46 30.2	
	comp=E,3400µm,0.9s						
GUR	**Goura**	**1.03**	**156**	P	**Pb**	**01 46 11.0**	**-0.3**
GUR				S	**Sn**	**01 46 25.8**	**-0.7**
GUR				AML	AML	01 46 31.1	
	comp=N,10496µm,0.5s						
GUR				AML	AML	01 46 31.9	
	comp=E,8250µm,0.8s						
FSK	**Fiskardo**	**1.06**	**247**	P	**Pg**	**01 46 10.1**	**-1.5**
FSK				S	**Sg**	**01 46 23.4**	**-1.9**
FSK				AML	AML	01 46 40.5	
	comp=E,5154µm,1.0s						
FSK				AML	AML	01 46 41.8	
	comp=N,3550µm,0.7s						
THAL	**Thalero**	**1.07**	**141**	P	**Pn**	**01 46 12.4**	**-0.1**
THAL				S	**Sn**	**01 46 27.3**	**-0.1**
THAL				AML	AML	01 46 34.5	
	comp=E,13706µm,0.5s						
THAL				AML	AML	01 46 35.0	
	comp=N,11235µm,0.6s						
KPRO	**Kipourio**	**1.13**	**342**	P	**Pg**	**01 46 10.8**	**-2.2**
KPRO				S	**Sg**	**01 46 26.0**	**-1.8**
KPRO				AML	AML	01 46 37.2	
	comp=E,4588µm,0.6s						
KPRO				AML	AML	01 46 42.2	
	comp=N,6768µm,0.7s						
VLS	**Valsamata**	**1.18**	**234**	P	**Pb**	**01 46 11.8**	**-2.0**
VLS				S	**Sb**	**01 46 27.8**	**-1.5**
VLS				AML	AML	01 46 35.4	
	comp=E,3307µm,1.1s						
VLS				AML	AML	01 46 39.8	
	comp=N,2686µm,0.6s						
NEO	**Neokhori**	**1.18**	**68**	P	**Pg**	**01 46 13.3**	**-0.6**
NEO				S	**Sn**	**01 46 30.1**	**-0.2**
NEO				AML	AML	01 46 34.8	
	comp=E,6489µm,0.5s						
NEO				AML	AML	01 46 41.2	
	comp=N,8685µm,0.5s						
XOR	**Xorichti**	**1.18**	**65**	P	**Pg**	**01 46 13.6**	**-0.3**
XOR				S	**Sn**	**01 46 29.7**	**-0.6**
XOR				AML	AML	01 46 35.7	
	comp=N,13110µm,0.6s						
XOR				AML	AML	01 46 35.7	
	comp=E,4844µm,0.6s						
VIL2	**Platees**	**1.32**	**120**	P	**Pg**	**01 46 17.7**	**+1.1**
VIL2				S	**Sn**	**01 46 36.1**	**+2.4**
VIL2				AML	AML	01 46 44.1	
	comp=N,5000µm,0.8s						
VIL2				AML	AML	01 46 46.2	
	comp=E,11474µm,0.6s						
LIT	**Litokhoron**	**1.33**	**23**	P	**Pn**	**01 46 15.5**	**-0.7**
LIT				S	**Sb**	**01 46 33.3**	**-0.5**
LIT				AML	AML	01 46 39.3	
	comp=E,6665µm,0.5s						
LIT				AML	AML	01 46 40.4	
	comp=N,8952µm,0.7s						
LIT	**Litokhoron**	**1.33**	**23**	Pn	**Pn**	**01 46 14.7**	**-1.4**
LIT				Sn	**Sb**	**01 46 33.0**	**-0.7**
LIT	**Litokhoron**	**1.33**	**23**	P	**Pn**	**01 46 15.2**	**-1.0**
LIT				S	**Sn**	**01 46 34.5**	**+0.4**
PENT	**Pentalofos**	**1.42**	**339**	P	**Pn**	**01 46 16.4**	**-1.0**
KZN	**Kozani**	**1.43**	**359**	P	**Pn**	**01 46 16.5**	**-1.1**
KZN				S	**Sn**	**01 46 35.3**	**-1.2**
KZN				AML	AML	01 46 46.9	
	comp=N,2308µm,0.5s						
KZN				AML	AML	01 46 47.2	
	comp=E,4658µm,1.1s						
LSK	**Leskovik**	**1.58**	**324**	P	**Pn**	**01 46 19.8**	**+0.2**
	baz=320						
LSK				S	**Sg**	**01 46 44.4**	**+2.4**
	baz=320						
LSK				AMP			
	comp=N,14nm,1.0s,baz=320						
EPID	**Epidavros**	**1.63**	**140**	P	**Pg**	**01 46 21.8**	**-0.6**
NEST	**Nestorio**	**1.65**	**339**	P	**Pn**	**01 46 21.1**	**+0.6**
ITM	**Ithomi**	**1.69**	**177**	P	**Pb**	**01 46 22.8**	**+0.2**
ITM	**Ithomi**	**1.69**	**177**	PN	**Pg**	**01 46 23.9**	**+0.2**
ITM	**Ithomi**	**1.69**	**177**		**Pn**	**01 46 20.1**	**-1.0**
SRN	**Sarande**	**1.72**	**306**	P	**Pb**	**01 46 24.7**	**+1.6**
	baz=302						
SRN				S	**Sg**	**01 46 48.5**	**+1.9**
	baz=302						
SRN				AMP			
	comp=N,2.7nm,1.5s,baz=302						
KEK	**Kerkira**	**1.77**	**299**	Pn	**Pn**	**01 46 21.1**	**-1.0**
KEK				Sn	**Sn**	**01 46 42.3**	**-2.5**
ATHU	**Athens Univers**	**1.80**	**120**	P	**Pb**	**01 46 23.6**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.81**	**97**	P	**Pb**	**01 46 23.2**	**-1.3**
KBN	**Korca**	**1.92**	**336**		**Pn**	**01 46 24.7**	**+0.5**
KBN	**Korca**	**1.92**	**336**	P	**Pb**	**01 46 26.8**	**+0.3**
	baz=333						
KBN				S	**Sb**	**01 46 52.5**	**+2.0**
	baz=333						
FNA	**Florina**	**1.94**	**350**	P	**Pn**	**01 46 25.1**	**+0.6**
FNA	**Florina**	**1.94**	**350**	PN	**Pn**	**01 46 24.5**	**0.0**
FNA	**Florina**	**1.94**	**350**		**Pn**	**01 46 24.9**	**+0.4**
FNA	**Florina**	**1.94**	**350**	P	**Pn**	**01 46 24.8**	**+0.3**
FNA				S	**Sn**	**01 46 50.3**	**+1.3**
HORT	**Hortiatis**	**1.99**	**30**	PN	**Pn**	**01 46 23.9**	**-1.3**
HORT				SN	**Sn**	**01 46 46.0**	**-4.3**
GRG	**Griva**	**2.13**	**12**	PN	**Pn**	**01 46 26.4**	**-0.7**
OUR	**Ouranopolis**	**2.22**	**48**	PN	**Pn**	**01 46 26.5**	**-1.8**
OHR	**Ohrid**	**2.37**	**341**	*i* Pn	**Pb**	**01 46 34.0**	**0.0**
VLO	**Vlora**	**2.39**	**312**	Pn	**Pn**	**01 46 30.3**	**-0.3**
VAY	**Valandovo**	**2.51**	**13**	*i* Pn	**Pn**	**01 46 32.2**	**-0.1**
STIP	**Stip**	**2.83**	**6**	*i* Pn	**Pn**	**01 46 37.6**	**+0.9**
SCTE	**Santa Cesarea**	**2.85**	**296**		**Pn**	**01 46 36.5**	**-0.4**
TIR	**Tirane**	**2.88**	**330**		**Pn**	**01 46 37.4**	**-0.1**
TIR	**Tirane**	**2.88**	**330**	P	**Pn**	**01 46 40.9**	**+3.4**
	baz=328						
TIR				S	**Sb**	**01 47 19.6**	**+1.2**
	baz=328						
PHP	**Peshkopia**	**3.00**	**340**	P	**Pb**	**01 46 43.3**	**-1.5**
	baz=339						
PHP				S	**Sb**	**01 47 21.3**	**-0.2**
	baz=339						
MMB	**Musomiste**	**3.08**	**28**	*i* P	**Pn**	**01 46 39.5**	**-0.7**
SKO	**Skopje**	**3.11**	**355**	*i* Pn	**Pn**	**01 46 41.8**	**+1.3**
KKB	**Krupnik**	**3.14**	**18**	*i* P	**Pn**	**01 46 40.3**	**-0.7**
CHOS	**Chios island**	**3.36**	**97**	PN	**Pn**	**01 46 44.3**	**+0.3**
KOCA	**Canakkale, Ayv**	**3.42**	**78**	P	**Pn**	**01 46 43.9**	**-1.0**
KOCA				S	**Sn**	**01 47 20.5**	**-5.1**
BOZC	**Bozcaada**	**3.43**	**72**	PN	**Pn**	**01 46 44.3**	**-0.6**
BOZC	**Bozcaada**	**3.43**	**72**	P	**Pn**	**01 46 44.8**	**-0.1**
APE	**Apeiranthos**	**3.45**	**120**	⇓P	**Pn**	**01 46 47.7**	**+2.5**
APE	**Apeiranthos**	**3.45**	**120**	P	**Pn**	**01 46 47.2**	**+2.0**
APE				S	**Sn**	**01 47 23.5**	**-2.8**
RZN	**Rozhen**	**3.58**	**37**	*i* P	**Pn**	**01 46 46.9**	**-0.3**
EZN	**Ezine**	**3.63**	**73**	PN	**Pn**	**01 46 47.1**	**-0.5**
EZN	**Ezine**	**3.63**	**73**	P	**Pn**	**01 46 46.9**	**-0.7**
RDO	**Rodhopi**	**3.65**	**50**	PN	**Pn**	**01 46 47.3**	**-0.6**
RDO	**Rodhopi**	**3.65**	**50**	Pn	**Pn**	**01 46 47.4**	**-0.6**
BCI	**Bajram Curri**	**3.73**	**340**	P	**Pn**	**01 46 53.2**	**+4.1**
	baz=339						
BCI				S	**Sb**	**01 47 40.1**	**-2.6**
	baz=339						
BAYC	**CANAKKALE_Bayr**	**3.78**	**75**	P	**Pn**	**01 46 50.3**	**+0.6**
BAYC				S	**Sn**	**01 47 31.8**	**-2.5**
URLA	**Izmir**	**3.79**	**96**	PN	**Pn**	**01 46 49.9**	**+0.1**
URLA	**Izmir**	**3.79**	**96**	P	**Pn**	**01 46 50.2**	**+0.4**
AYVA	**Ayvalik**	**3.82**	**82**	P	**Pn**	**01 46 50.8**	**+0.5**
ENEZ	**Enez**	**3.83**	**60**	PN	**Pn**	**01 46 49.8**	**-0.6**
ALN	**Alexandroupoli**	**3.83**	**57**	PN	**Pn**	**01 46 49.9**	**-0.6**
ALN	**Alexandroupoli**	**3.83**	**57**	Pn	**Pn**	**01 46 50.2**	**-0.3**
DRME	**Dracevica, Mon**	**3.87**	**330**	*e*Pn	**Pn**	**01 46 52.9**	**+2.0**
VTS	**Vitosha**	**3.89**	**16**	⇑P	**Pn**	**01 46 51.4**	**-0.1**
VTS				⇓S	**Sn**	**01 47 37.5**	**+0.1**
VTS	**Vitosha**	**3.89**	**16**	Pn	**Pn**	**01 46 51.7**	**+0.2**
VTS	**Vitosha**	**3.89**	**16**	*i* P	**Pn**	**01 46 51.9**	**+0.5**
PLD	**Plovdiv**	**3.91**	**33**	*i* P	**Pn**	**01 46 52.7**	**+1.2**
GELI	**Tayfur-Gelibol**	**3.91**	**66**	PN	**Pn**	**01 46 51.0**	**-0.5**
KDZ	**Kurdzhali**	**3.91**	**44**	*i* P	**Pn**	**01 46 50.9**	**-0.7**
TIP	**Timpagrande**	**3.94**	**276**	⇑P	**Pn**	**01 46 54.2**	**+2.1**
TIP	**Timpagrande**	**3.94**	**276**	Pn	**Pn**	**01 46 51.2**	**-0.9**
DKL	**Dikili**	**3.98**	**86**	PN	**Pn**	**01 46 52.4**	**0.0**
DKL	**Dikili**	**3.98**	**86**	P	**Pn**	**01 46 52.8**	**+0.4**
ERIK	**Erikli-Kesan**	**4.04**	**62**	PN	**Pn**	**01 46 52.7**	**-0.6**
PDG	**Podgorica**	**4.05**	**332**	⇑P	**Pn**	**01 46 55.5**	**+2.1**
PDG				⇓S	**Sn**	**01 47 42.3**	**+1.4**
PDG	**Podgorica**	**4.05**	**332**	Pn	**Pn**	**01 46 53.0**	**-0.4**
PDG	**Podgorica**	**4.05**	**332**	*e*Pn	**Pn**	**01 46 55.3**	**+1.9**
TTG	**Podgorica**	**4.05**	**332**	⇑*i*Pn	**Pn**	**01 46 55.2**	**+1.9**
TTG				*i* Sn	**Sn**	**01 47 42.4**	**+1.4**
BUM	**Brajici-Budva**	**4.08**	**328**	⇓*i*Pn	**Pn**	**01 46 55.2**	**+1.3**
BUM				*i* Sn	**Sn**	**01 47 43.2**	**+1.4**
ZEDA	**zmir-Bergama**	**4.11**	**87**	P	**Pn**	**01 46 55.4**	**+1.1**
BUHA	**Balikesir, Bur**	**4.14**	**80**	P	**Pn**	**01 46 55.7**	**+1.0**
IVA	**Berane**	**4.25**	**341**	⇓*i*Pn	**Pn**	**01 46 58.8**	**+2.5**
IVA				*i* Sn	**Sn**	**01 47 46.8**	**+0.7**
DIM	**Dimitrovgrad**	**4.26**	**41**	*i* P	**Pn**	**01 46 58.9**	**+2.6**
CEME	**Cevo**	**4.28**	**330**	⇓*i*Pn	**Pn**	**01 46 58.3**	**+1.7**
CEME				*i* Sn	**Sn**	**01 47 47.7**	**+1.0**
MATE	**Matera**	**4.31**	**296**	⇑P	**Pn**	**01 47 00.4**	**+3.3**
UKOP	**Uzunkopru-Edir**	**4.33**	**57**	PN	**Pn**	**01 46 56.9**	**-0.4**
KOME	**Kolasin**	**4.34**	**337**	⇑*i*Pn	**Pn**	**01 46 58.8**	**+1.3**
KOME				*i* Sn	**Sn**	**01 47 48.8**	**+0.6**
IDI	**Anoyia**	**4.34**	**145**	⇓P	**Pn**	**01 47 00.2**	**+2.7**
IDI	**Anoyia**	**4.34**	**145**	Pn	**Pn**	**01 46 58.7**	**+1.1**
	comp=N,0.5nm,0.3s,baz=18,slow=3.8,SNR=18						
IDI				Sn	**Sn**	**01 47 49.9**	**+1.5**
	comp=N,1.7nm,0.3s,baz=240,slow=20,SNR=2.1						
	comp=N,7.5nm,0.7s						
IDI	**Anoyia**	**4.34**	**145**	PN	**Pn**	**01 47 00.1**	**+2.5**
IDI	**Anoyia**	**4.34**	**145**		**Pn**	**01 46 58.0**	**+0.4**
HCY	**Herceg Novi**	**4.37**	**326**	⇑*i*Pn	**Pn**	**01 46 59.4**	**+1.6**
HCY				*i* Sn	**Sn**	**01 47 50.3**	**+1.4**
NKME	**Niksic**	**4.45**	**332**	⇑*i*Pn	**Pn**	**01 47 00.4**	**+1.4**
NKME				*i* Sn	**Sn**	**01 47 52.1**	**+1.1**
STEP	**BALIKESIR_Sava**	**4.62**	**82**	P	**Pn**	**01 47 01.5**	**+0.2**
STEP				S	**Sn**	**01 47 50.5**	**-4.7**
TREB	**Trebinje**	**4.65**	**327**	*e*Pn	**Pn**	**01 47 01.9**	**+0.2**
BODT	**Bodrum**	**4.71**	**111**	P	**Pn**	**01 47 03.9**	**+1.4**
MPEP	**Malo Peshtene**	**4.71**	**17**	*e*P	**Pn**	**01 47 04.3**	**+1.8**
BRY	**Bratogost**	**4.72**	**329**	*e*Pn	**Pn**	**01 47 04.5**	**+1.7**
BRY	**Bratogost**	**4.72**	**329**	⇑*i*Pn	**Pn**	**01 47 04.6**	**+1.7**
BRY				*i* Sn	**Sn**	**01 47 58.7**	**+0.8**
BOVS	**Bovan**	**4.76**	**359**	⇓P	**Pn**	**01 47 03.6**	**+0.4**
CUC	**Castrocucco**	**4.77**	**285**		**Pn**	**01 47 02.5**	**-0.9**
BDRM	**Kayabasi**	**4.80**	**110**	P	Pn	01 46 58.0	-5.8
PLE	**Pljevlja**	**4.81**	**338**	⇓*i*Pn	**Pn**	**01 47 05.4**	**+1.4**
PLE				*i* Sn	**Sn**	**01 48 00.3**	**+0.3**
UPM	**Unac-Piva**	**4.85**	**334**	*e*Pn	**Pn**	**01 47 06.7**	**+2.1**
AYDN	**Tasoluk**	**4.93**	**102**	P	**Pn**	**01 47 06.9**	**+1.4**
STON	**Ston**	**5.06**	**323**	*e*Pn	**Pn**	**01 47 05.8**	**-1.5**
RUDO	**Rudo**	**5.08**	**340**	*e*Pn	**Pn**	**01 47 08.4**	**+0.8**
DURS	**Dursunbey**	**5.23**	**80**	P	**Pn**	**01 47 11.0**	**+1.3**
ARMN	**Kirklareli, Me**	**5.23**	**53**	P	**Pn**	**01 47 09.5**	**-0.1**
ARMN				S	**Sn**	**01 48 06.4**	**-3.7**
BBLS	**Lazići**	**5.30**	**341**	*e*Pn	**Pn**	**01 47 12.6**	**+1.9**
KULA	**Kula-Manisa**	**5.37**	**92**	P	**Pn**	**01 47 13.5**	**+1.8**
MULA	**Mugla, Merkez-**	**5.39**	**105**	P	**Pn**	**01 47 14.3**	**+2.4**
DIVS	**Divibare**	**5.39**	**346**	Pn	**Pn**	**01 47 10.7**	**-1.3**
DIVS	**Divibare**	**5.39**	**346**	*e*Pn	**Pn**	**01 47 12.6**	**+0.6**
YER	**Yerkesik**	**5.40**	**107**	P	**Pn**	**01 47 14.5**	**+2.4**
TURN	**Turunc**	**5.51**	**110**	P	**Pn**	**01 47 15.1**	**+1.7**
TAVA	**DENIZLI_Tavas**	**5.77**	**102**	P	**Pn**	**01 47 19.9**	**+2.7**
PAOL	**Paolisi**	**5.97**	**293**		**Pn**	**01 47 17.6**	**-2.2**
VAE	**Valguarnera**	**5.99**	**259**	Pn	**Pn**	**01 47 23.9**	**+3.7**
	comp=N,12nm,0.9s,baz=186,slow=17,SNR=1.9						
VAE				Sn	**Sn**	**01 48 33.5**	**+4.5**
	comp=N,0.6nm,0.3s,baz=138,slow=23,SNR=3.6						
BLJ	**Bijeljina**	**6.20**	**343**	*e*Pn	**Pn**	**01 47 22.5**	**-0.5**
SRKY	**Kupres RS**	**6.25**	**328**	*e*Pn	**Pn**	**01 47 22.7**	**-1.1**
FRGS	**Fruska Gora**	**6.45**	**347**	⇓P	**Pn**	**01 47 27.1**	**+0.7**
FRGS	**Fruska Gora**	**6.45**	**347**	*e*Pn	**Pn**	**01 47 25.5**	**-1.0**
GZR	**Gura Zlata**	**6.55**	**6**	⇓P	**Pn**	**01 47 27.7**	**-0.2**
MGRS	**Mrkonjic Grad**	**6.57**	**329**	*e*Pn	**Pn**	**01 47 28.8**	**+0.7**
LOT	**Lotru**	**6.73**	**12**	⇑P	**Pn**	**01 47 30.4**	**0.0**
BZS	**Buzias**	**6.74**	**359**	⇓P	**Pn**	**01 47 31.7**	**+1.3**
BORA	**Eskisehir**	**6.77**	**79**	Pn	**Pn**	**01 47 30.8**	**-0.1**
BLY	**Banja Luka**	**6.81**	**331**	*e*Pn	**Pn**	**01 47 31.4**	**+0.1**
ARR	**Arges**	**6.82**	**17**	⇓P	**Pn**	**01 47 31.5**	**0.0**
ICOR	**Ion Corvin**	**6.90**	**39**	⇑P	**Pn**	**01 47 32.9**	**+0.3**
VOIR		**6.99**	**19**	⇓P	**Pn**	**01 47 34.3**	**+0.4**
MLR	**Muntele Rosu**	**7.29**	**24**	⇓P	**Pn**	**01 47 38.3**	**+0.3**
MLR	**Muntele Rosu**	**7.29**	**24**	Pn	**Pn**	**01 47 39.3**	**+1.3**
	comp=N,2.3nm,0.3s,baz=217,slow=6.2,SNR=19						
MLR				LR	LR	01 51 07.2	
	comp=N,252nm,21.1s,baz=246,slow=44						
	comp=N,14nm,0.7s						
MLR	**Muntele Rosu**	**7.29**	**24**	Pn	**Pn**	**01 47 36.8**	**-1.2**
NEHR	**Nehoiu**	**7.35**	**26**	⇑P	**Pn**	**01 47 39.5**	**+0.8**
NRCA	**Norcia**	**7.68**	**304**		**Pn**	**01 47 42.1**	**-1.3**
COVR	**Voineasa-Covas**	**7.69**	**24**	⇑P	**Pn**	**01 47 43.9**	**+0.5**
MORH	**Mrgy, Hungar**	**7.70**	**343**	*e*Pn	**Pn**	**01 47 43.5**	**0.0**
MORH	**Mrgy, Hungar**	**7.70**	**343**	P	**Pn**	**01 47 44.5**	**+1.0**
KOVH	**Kovagotottos**	**7.71**	**340**	P	**Pn**	**01 47 44.0**	**+0.3**
PLOR	**Plostina**	**7.84**	**26**	⇓P	**Pn**	**01 47 45.9**	**+0.4**
VRI	**Vrincioaia**	**7.88**	**26**	⇑P	**Pn**	**01 47 46.3**	**+0.3**
ODBI	**Odobesti**	**7.90**	**28**	⇑P	**Pn**	**01 47 46.5**	**+0.2**
VLDR	**Vladesti**	**8.37**	**32**	⇓P	**Pn**	**01 47 52.8**	**+0.1**
CRES	**Cresnjev**	**8.39**	**328**	*e*Pn	**Pn**	**01 47 53.0**	**0.0**
GIRR	**Girov**	**8.78**	**22**	⇓P	**Pn**	**01 47 59.2**	**+0.9**
SKDS	**Skadanscina**	**8.82**	**322**	*e*Pn	**Pn**	**01 47 55.6**	**-3.4**
MPLH	**Magyarpolny**	**8.86**	**341**	P	**Pn**	**01 48 01.7**	**+2.3**
CSKK	**Cskako**	**8.87**	**344**	P	**Pn**	**01 48 02.0**	**+2.4**
BURAR	**Bucovina Array**	**9.08**	**15**	⇓P	**Pn**	**01 48 03.4**	**+0.8**
BUR08	**Bucovina Ar. S**	**9.11**	**15**		**Pn**	**01 48 02.3**	**-0.7**
PSZ	**Piszkesteto**	**9.15**	**352**	⇓P	**Pn**	**01 48 04.2**	**+0.8**
PSZ	**Piszkesteto**	**9.15**	**352**	Pn	**Pn**	**01 48 02.0**	**-1.4**
PSZ	**Piszkesteto**	**9.15**	**352**	P	**Pn**	**01 48 03.8**	**+0.4**
BR131	**Keskin Array S**	**9.21**	**81**		**Pn**	**01 48 04.6**	**+0.1**
BRTR	**Keskin Array B**	**9.21**	**81**	Pn	**Pn**	**01 48 06.8**	**+2.4**
	comp=N,0.5nm,0.3s,baz=260,slow=13,SNR=17						
BRTR				LR	LR	01 52 18.5	
	comp=N,113nm,21.2s,baz=270,slow=42						
	comp=N,1.2nm,0.4s						
BRTR	**Keskin Array B**	**9.21**	**81**		**Pn**	**01 48 03.4**	**-1.1**
SOKA	**Soboth**	**9.25**	**330**	*e*Pn	**Pn**	**01 48 05.7**	**+0.8**
VYHS	**Vyhne**	**9.85**	**348**	*e*PN	**Pn**	**01 48 15.4**	**+2.3**
VYHS				*e*SN	**Sn**	**01 50 07.0**	**+3.2**
TEOL	**Teolo**	**9.93**	**314**	Pn	**Pn**	**01 48 12.0**	**-2.2**
KOLL	**Kolacno**	**10.01**	**347**	*e*PN	**Pn**	**01 48 15.9**	**+0.7**
KOLL				*e*SN	**Sn**	**01 50 09.3**	**+1.7**
CONA	**Conrad Observa**	**10.03**	**336**	*e*Pn	**Pn**	**01 48 16.3**	**+0.8**
MODS	**Modra-Piesok**	**10.05**	**342**	*e*PN	**Pn**	**01 48 18.6**	**+2.9**
CTI	**Castel Tesino**	**10.37**	**317**	Pn	**Pn**	**01 48 18.8**	**-1.5**
KEST	**Kesra**	**10.41**	**256**	LR	LR	01 53 57.5	
	comp=N,68nm,18.3s,baz=262,slow=46						
ABTA	**Abfaltersbach**	**10.41**	**322**	*e*Pn	**Pn**	**01 48 21.8**	**+1.0**
VRAC	**Vranov**	**11.08**	**342**	Pn	**Pn**	**01 48 31.8**	**+2.0**
	comp=N,0.3nm,0.3s,baz=178,slow=10,SNR=5.5						
VRAC				LR	LR	01 52 56.4	
	comp=N,70nm,20.2s,baz=162,slow=38						
	comp=N,4.4nm,0.9s						
WTTA	**Wattenberg**	**11.20**	**322**	*e*Pn	**Pn**	**01 48 32.3**	**+0.6**
WATA	**Walderalm**	**11.28**	**322**	*e*Pn	**Pn**	**01 48 33.5**	**+0.7**
SQTA	**Sankt Quirin**	**11.38**	**321**	*e*Pn	**Pn**	**01 48 35.2**	**+1.1**
MOTA	**Moosalm**	**11.52**	**321**	*e*Pn	**Pn**	**01 48 36.7**	**+0.8**
GERES	**GERESS Array B**	**11.55**	**332**	Pn	**Pn**	**01 48 37.3**	**+1.0**
	comp=N,0.1nm,0.3s,baz=140,slow=15,SNR=4.7						
GERES				Sn	**Sn**	**01 50 45.7**	**+0.2**
	comp=N,0.1nm,0.3s,baz=147,slow=22,SNR=2.2						
GERES				LR	LR	01 53 50.5	
	comp=N,117nm,19.6s,baz=130,slow=42						
	comp=N,0.7nm,0.7s						
GERES	**GERESS Array B**	**11.55**	**332**		**Pn**	**01 48 34.4**	**-2.0**
KRLC	**Kraliky**	**11.76**	**344**	*e*P	**Pn**	**01 48 42.1**	**+3.0**
DAVOX	**Davos/Dischmat**	**11.79**	**316**	Pn	**Pn**	**01 48 42.2**	**+2.5**
	comp=N,0.2nm,0.3s,baz=144,slow=17,SNR=3.8						
DAVOX				Sn	**Sn**	**01 50 48.2**	**-3.2**
	comp=N,0.1nm,0.3s,baz=151,slow=19,SNR=1.9						
DAVOX				LR	LR	01 55 18.9	
	comp=N,60nm,19.2s,baz=39,slow=48						
	comp=N,1.8nm,0.6s						
KHC	**Kasperske Hory**	**11.83**	**333**	*e*P	**Pn**	**01 48 42.8**	**+2.6**
DPC	**Dobruska-Polom**	**12.12**	**343**	*e*P	**Pn**	**01 48 46.8**	**+2.7**
PRU	**Pruhonice**	**12.26**	**337**	*e*P	**Pn**	**01 48 46.2**	**+0.3**
AKASG	**Malin Array Be**	**12.94**	**22**	Pn	**Pn**	**01 48 54.7**	**-0.5**
	comp=N,0.2nm,0.3s,baz=209,slow=11,SNR=2.2						
AKASG				LR	LR	01 54 56.0	
	comp=N,186nm,18.3s,baz=174,slow=42						
	comp=N,0.2nm,0.3s						
CLL	**Collm**	**13.89**	**336**	*i* (sPP)		01 49 17.9	
	comp=Z,12nm,1.1s						
NACGM	**Naroch**	**16.39**	**10**	*e*P	**Pn**	**01 49 42.7**	**+1.4**
KBZ	**Khabaz**	**16.56**	**66**	Pn	**Pn**	**01 49 43.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=242,slow=15,SNR=1.9						
	comp=Z,0.3nm,0.4s						
OBN	**Obninsk**	**19.05**	**27**	LR	LR	01 58 01.3	
	comp=Z,22nm,21.1s,baz=188,slow=38						
ESDC	**Sonseca Array**	**19.95**	**280**	P	**P**	**01 50 25.0**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=76,slow=10,SNR=13						
	comp=Z,2.2nm,0.9s						
MDT	**Midelt**	**22.21**	**262**	P	**P**	**01 50 50.2**	**+2.0**
	comp=Z,3.8nm,1.0s,baz=58,slow=9.5,SNR=4.5						
	comp=Z,3.8nm,1.0s						
FINES	**FINESS Array B**	**22.75**	**5**	P	**P**	**01 50 52.1**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=165,slow=9.8,SNR=8.7						
FINES				LR	LR	02 00 45.9	
	comp=Z,67nm,20.0s,baz=189,slow=39						
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**22.75**	**5**	P	**P**	**01 50 51.1**	**-2.4**
NAO01	**NORSAR Array S**	**23.03**	**346**	P	**P**	**01 50 55.6**	**-0.9**
NAO01				IAmb	IAmb	01 51 08.4	
	comp=Z,22nm,1.1s						
NC405	**NORSAR Array S**	**23.14**	**347**	P	**P**	**01 50 57.7**	**+0.2**
NB2	**NORSAR Subarra**	**23.15**	**347**	P	**P**	**01 50 58.1**	**+0.3**

	comp=Z,5.1nm,0.8s,baz=158,slow=10						
NOA	**NORSAR Array B**	**23.15**	**347**	P	**P**	**01 50 57.9**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=160,slow=9.4,SNR=5.5						
NOA				LR	LR	02 02 25.8	
	comp=Z,17nm,18.6s,baz=165,slow=43						
	comp=Z,3.2nm,0.9s						
NBO00	**NORSAR Array S**	**23.22**	**346**	P	**P**	**01 50 58.1**	**-0.4**
NC303	**NORSAR Array S**	**23.30**	**347**	P	**P**	**01 50 57.6**	**-1.6**
NC303				IAmb	IAmb	01 51 27.0	
	comp=Z,22nm,1.4s						
NC204	**NORSAR Array S**	**23.45**	**347**	P	**P**	**01 51 01.3**	**+0.4**
NC204				IAmb	IAmb	01 51 23.5	
	comp=Z,10nm,1.0s						
EKA	**Eskdalemuir Ar**	**23.46**	**323**	P	**P**	**01 51 01.9**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=114,slow=10,SNR=5.4						
	comp=Z,2.3nm,0.6s						
KIRV	**Kirov**	**26.52**	**33**	LR	LR	02 02 00.6	
	comp=Z,85nm,18.8s,baz=221,slow=37						
AKTO	**Aktyubinsk**	**27.95**	**54**	P	**P**	**01 51 41.9**	**0.0**
	comp=Z,1.4nm,0.6s,baz=308,slow=2.9,SNR=3.6						
	comp=Z,1.4nm,0.6s						
ARU	**Arti**	**29.87**	**42**	LR	LR	02 04 32.5	
	comp=Z,53nm,18.6s,baz=126,slow=38						
ARCES	**ARCESS Array B**	**30.79**	**3**	P	**P**	**01 52 06.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=200,slow=10,SNR=6.6						
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**30.79**	**3**	P	**P**	**01 52 06.4**	**-0.4**
ARCES				IAmb	IAmb	01 52 24.0	
	comp=Z,8.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.21**	**220**	P	**P**	**01 52 08.1**	**-3.0**
KK31	**Karatay Array**	**36.59**	**67**	P	**P**	**01 52 57.2**	**-0.5**
AAK	**Ala-Archa**	**39.56**	**67**	LR	LR	02 11 57.7	
	comp=Z,31nm,18.5s,baz=264,slow=40						
NIL	**Nilore**	**41.36**	**81**	P	**P**	**01 53 37.3**	**-0.4**
NIL				IAmb	IAmb	01 53 39.0	
	comp=Z,6.2nm,0.6s						
MK31	**Makanchi Array**	**44.08**	**59**	P	**P**	**01 53 60.0**	**+0.4**
MKAR	**Makanchi Array**	**44.08**	**59**	P	**P**	**01 53 59.3**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=283,slow=6.7,SNR=13						
MKAR				ScP	**ScP**	**01 59 35.6**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=290,slow=3.6,SNR=5.3						
MKAR				LR	LR	02 18 08.5	
	comp=Z,20nm,18.4s,baz=336,slow=44						
	comp=Z,1.3nm,0.6s						
ZAA0	**Zalesovo Array**	**44.47**	**49**	P	**P**	**01 54 01.1**	**-1.5**
ZAA0				IAmb	IAmb	01 54 10.3	
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**44.47**	**49**	P	**P**	**01 54 02.6**	**0.0**
	comp=Z,1.7nm,0.5s,baz=266,slow=9.5,SNR=6.1						
	comp=Z,1.7nm,0.5s						
NRIK	**Noril'sk**	**45.72**	**27**	LR	LR	02 13 51.5	
	comp=Z,44nm,18.4s,baz=258,slow=37						
SCHQ	**Schefferville**	**58.63**	**317**	P	**P**	**01 55 49.5**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=25,slow=6.8,SNR=3.8						
	comp=Z,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**73.08**	**340**	P	**P**	**01 57 21.3**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=35,slow=5.5,SNR=18						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**76.31**	**355**	P	**P**	**01 57 40.9**	**+0.8**
	comp=Z,0.5nm,1.0s,baz=12,slow=4.9,SNR=3.0						
	comp=Z,0.5nm,1.0s						
TXAR	**Lajitas Array**	**95.22**	**314**	P	**P**	**01 59 16.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=63,slow=5.9,SNR=4.2						
	comp=Z,0.3nm,0.7s						

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*AZER **03** 02:07:56.0±0.3, 39°.68N×53°.38E, h60^{km}, Error ellipse: s-maj=5.7km s-min=4.1km az=1.0*

*NNC **03** 02:08:06.3±3.0, 40°.52N×55°.49E, h0^{km}, mb3.8, Error ellipse: s-maj=50.3km s-min=7.6km az=74.0*

ISC 03 02:07:56.4±1.4, **39°.69N**±0°.07×**53°.44E**±0°.07, **h35^{km}, n32, σ1^{s}54**/50**, 3C-1D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDR	**Nardaran**	**2.79**	**290**	Pn	**Pn**	**02 08 40.7**	**+2.2**
NDR				Sn	**Sn**	**02 09 15.5**	**+4.5**
GOBA	**Gobu**	**2.93**	**285**	Sg	Sn	02 09 29.3	+15
GBS	**Qobustan**	**3.55**	**285**	Sn	**Sn**	**02 09 32.5**	**+2.7**
ATGJ	**Altiaghaj**	**3.64**	**290**	Pn	**Pn**	**02 08 51.2**	**+1.0**
ATGJ				Sn	**Sn**	**02 09 33.4**	**+1.5**
SIZA	**Siyzn**	**3.73**	**293**	Pn	**Pn**	**02 08 52.8**	**+1.2**
SIZA				Sn	**Sn**	**02 09 36.2**	**+1.9**
LKRN	**Lenkeran, Azer**	**3.75**	**256**	Pn	**Pn**	**02 08 51.9**	**+0.3**
LKRN				Sn	**Sn**	**02 09 35.3**	**+0.7**
ASTR	**Astara**	**3.79**	**254**	P	**Pn**	**02 08 52.3**	**+0.1**
ASTR				S	**Sn**	**02 09 36.8**	**+1.4**
PQL	**Pirkuli**	**3.87**	**288**	Pn	**Pn**	**02 08 53.9**	**+0.4**
	SNR=2.9						
PQL				Sn	**Sn**	**02 09 40.2**	**+2.4**
GLBA	**Clilabad**	**3.93**	**265**	Pn	**Pn**	**02 08 54.8**	**+0.6**
GLBA				Sn	**Sn**	**02 09 39.7**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**4.05**	**114**	⇑Pn	**Pn**	**02 08 59.7**	**+3.7**
GYA0B				⇑Sn	**Sn**	**02 09 40.0**	**-2.3**
KDMR	**Kurdemir**	**4.09**	**281**	Pn	**Pn**	**02 08 57.3**	**+0.9**
KDMR				Sn	**Sn**	**02 09 45.1**	**+2.1**
LRK	**Lerik**	**4.10**	**257**	Pn	**Pn**	**02 08 56.9**	**+0.3**
	SNR=3.9						
LRK				Sn	**Sn**	**02 09 43.0**	**-0.5**
YRD	**Yardimli**	**4.10**	**261**	Pn	**Pn**	**02 08 57.0**	**+0.3**
	SNR=14						
YRD				Sn	**Sn**	**02 09 42.9**	**-0.8**
QUBA	**Quba, Azerbaij**	**4.12**	**295**	Sn	**Sn**	**02 09 43.7**	**-0.1**
IML	**Ismayilli**	**4.17**	**287**	Pn	**Pn**	**02 08 58.2**	**+0.6**
IML				Sn	**Sn**	**02 09 44.8**	**-0.3**
XNQ	**Khinaliq**	**4.31**	**292**	Pn	**Pn**	**02 09 00.0**	**+0.5**
	SNR=3.3						
XNQ				Sn	**Sn**	**02 09 47.8**	**-0.9**
QSAR	**Qusar**	**4.34**	**297**	Pn	**Pn**	**02 09 00.4**	**+0.6**
QSAR				Sn	**Sn**	**02 09 49.4**	**+0.2**
ZRD	**Zardab**	**4.46**	**279**	Pn	**Pn**	**02 09 01.7**	**+0.3**
ZRD				Sn	**Sn**	**02 09 52.2**	**+0.1**
QBL	**Gabala**	**4.46**	**288**	Sn	**Sn**	**02 09 51.9**	**-0.3**
BLQ	**Beylaqan**	**4.53**	**272**	Pn	**Pn**	**02 09 03.4**	**+0.9**
BLQ				Sn	**Sn**	**02 09 52.1**	**-1.9**
QRD	**Qoradiz**	**4.73**	**269**	Sn	**Sn**	**02 09 59.0**	**+0.1**
BRDA	**Brd**	**4.84**	**279**	Sn	**Sn**	**02 10 01.9**	**+0.3**
MNGR	**Mingechevir, A**	**4.98**	**285**	Sn	**Sn**	**02 10 05.1**	**+0.2**
SEKA	**Sheki**	**5.00**	**290**	Pn	**Pn**	**02 09 09.0**	**+0.1**
SEKA				Sn	**Sn**	**02 10 05.3**	**-0.1**
GANJ	**Ganja**	**5.53**	**282**	Sn	**Sn**	**02 10 16.0**	**-2.7**
ZKTA	**Zakatala**	**5.54**	**293**	Sn	**Sn**	**02 10 18.6**	**-0.1**
ORD	**Ordubad**	**5.82**	**265**	Pn	**Pn**	**02 09 21.8**	**+1.5**
	SNR=4.0						
ORD				Sn	**Sn**	**02 10 25.6**	**-0.2**
GDB	**GEDABAY**	**5.97**	**282**	Pn	**Pn**	**02 09 23.2**	**+0.8**
	SNR=11						
GDB				Sn	**Sn**	**02 10 26.6**	**-3.1**
SBZ	**Shahbuz**	**6.10**	**270**	Pn	**Pn**	**02 09 25.3**	**+1.1**
	SNR=3.4						
QZX	**Qazax, Azerbai**	**6.31**	**285**	Pn	**Pn**	**02 09 26.5**	**-0.4**
QZX				Sn	**Sn**	**02 10 35.7**	**-2.1**
AB31	**Akbulak array**	**10.63**	**24**	⇑P	Pn	02 10 19.4	-6.6
	1.3nm,0.8s,baz=201,slow=12,SNR=8.8						
AB31				⇓S	Sn	02 12 09.1	-15
	0.5nm,0.3s,baz=198,slow=23,SNR=5.6						
AKTO	**Aktyubinsk**	**11.22**	**15**	P	**Pn**	**02 10 32.1**	**-2.0**
	2.1nm,0.8s						
AKTO				S	Sn	02 12 26.8	-11
	2.2nm,0.5s						

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*NOU **03** 02:08:57.4, 39°.52S×174°.14E, h211^{km}, MLv4.1/8, North Island, New Zealand*

*WEL **03** 02:09:00.7±0.7, 40°S±5°×17°4E±°, h181^{km}±5^{km}, M3.2/43, ML2.5/7, MLv3.2/43, Error ellipse: s-maj=0.0km s-min=0.0km az=135.2*

ISC 03 02:08:55.1±1.6, **39°.62S**±0°.05×**174°.17E**±0°.05, **h221^{km}**±9^{km}**, n133, σ2^{s}09**/150**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LREZ	**Lake Rotokare**	**0.24**	**49**	P	**Pn**	**02 09 25.5**	**+1.4**
LREZ				S	**Sn**	**02 09 44.8**	**-1.7**
PREZ	**Palmer Road**	**0.28**	**359**	P	**Pn**	**02 09 25.7**	**+1.5**
NMEZ	**Namu Road**	**0.30**	**312**	P	**Pn**	**02 09 25.7**	**+1.6**
NMEZ				S	**Sn**	**02 09 46.6**	**-0.1**
KHEZ	**Kahui Hut**	**0.34**	**340**	P	**Pn**	**02 09 25.9**	**+1.5**
NEZ	**North Egmont**	**0.35**	**351**	P	**Pn**	**02 09 26.0**	**+1.6**
NEZ				S	**Sn**	**02 09 46.1**	**-1.1**
NBEZ	**Newall Road No**	**0.42**	**326**	P	**Pn**	**02 09 26.0**	**+1.6**
DREZ	**Durham Road**	**0.43**	**4**	P	**Pn**	**02 09 25.8**	**+1.3**
DREZ				S	**Sn**	**02 09 46.9**	**-0.4**
PKE	**Pukeiti**	**0.45**	**342**	P	**Pn**	**02 09 25.9**	**+1.3**
PKE				S	**Sn**	**02 09 47.5**	**0.0**
MHEZ	**Mangahewa**	**0.55**	**13**	P	**Pn**	**02 09 26.4**	**+1.5**
MHEZ				S	**Sn**	**02 09 47.1**	**-0.9**
WAZ	**Wanganui**	**0.65**	**102**	P	**Pn**	**02 09 27.2**	**+2.0**
WAZ				S	**Sn**	**02 09 47.4**	**-1.2**
VRZ	**Vera Road**	**0.67**	**43**	P	**Pn**	**02 09 26.1**	**+0.8**
VRZ				S	**Sn**	**02 09 46.1**	**-2.7**
PKVZ	**Pokaka**	**0.97**	**71**	P	**Pn**	**02 09 28.1**	**+1.1**
PKVZ				S	**Sn**	**02 09 48.6**	**-3.2**
MTVZ	**Mangateitei**	**1.03**	**77**	P	**Pn**	**02 09 28.8**	**+1.4**
MTVZ				S	**Sn**	**02 09 49.5**	**-3.0**
OHWZ	**Ohakea**	**1.06**	**124**	P	**Pn**	**02 09 29.7**	**+2.3**
OHWZ				S	**Sn**	**02 09 51.5**	**-1.1**
TRVZ	**Turoa**	**1.11**	**74**	P	**Pn**	**02 09 29.4**	**+1.3**
TRVZ				S	**Sn**	**02 09 50.3**	**-3.4**
FWVZ	**Far West T-bar**	**1.13**	**72**	P	**Pn**	**02 09 29.5**	**+1.3**
WNVZ	**Wahianoa**	**1.15**	**76**	P	**Pn**	**02 09 29.6**	**+1.4**
WNVZ				S	**Sn**	**02 09 50.5**	**-3.4**
WHVZ	**Whangaehu Hut**	**1.15**	**74**	P	**Pn**	**02 09 29.7**	**+1.3**
NGZ	**Ngauruhoe**	**1.20**	**69**	P	**Pn**	**02 09 30.1**	**+1.6**
DUWZ	**D'Urville Isla**	**1.20**	**189**	P	**Pn**	**02 09 30.4**	**+2.0**
TUVZ	**Tukino**	**1.20**	**74**	P	**Pn**	**02 09 30.3**	**+1.6**
WTVZ	**West Tongariro**	**1.21**	**66**	P	**Pn**	**02 09 30.0**	**+1.4**
SNVZ	**South Ngauruho**	**1.22**	**70**	P	**Pn**	**02 09 30.8**	**+2.0**
NNVZ	**North Ngauruho**	**1.22**	**67**	P	**Pn**	**02 09 30.2**	**+1.4**
HIZ	**Hauiti**	**1.23**	**26**	P	**Pn**	**02 09 29.6**	**+1.0**
HIZ	**Hauiti**	**1.23**	**26**	P	**Pn**	**02 09 29.8**	**+1.2**
MOVZ	**Moawhango**	**1.25**	**81**	P	**Pn**	**02 09 30.0**	**+1.2**
OTVZ	**Oturere**	**1.25**	**69**	P	**Pn**	**02 09 30.6**	**+1.6**
NTVZ	**North Tongarir**	**1.28**	**67**	P	**Pn**	**02 09 31.1**	**+2.0**
ETVZ	**East Tongariro**	**1.29**	**69**	P	**Pn**	**02 09 31.1**	**+1.9**
TMVZ	**Te Maari**	**1.29**	**68**	P	**Pn**	**02 09 31.2**	**+2.0**
KATZ	**Kakaramea**	**1.35**	**62**	P	**Pn**	**02 09 31.6**	**+1.9**
KIW	**Kapiti Island**	**1.37**	**156**	P	**Pn**	**02 09 31.6**	**+2.0**
OGWZ	**Otaki Gorge**	**1.42**	**148**	P	**Pn**	**02 09 32.2**	**+2.2**
TSZ	**Takapari Road**	**1.45**	**108**	P	**Pn**	**02 09 32.1**	**+1.8**
POWZ	**Post Office Ro**	**1.45**	**123**	P	**Pn**	**02 09 32.1**	**+1.8**
BHHZ	**Black Hill Sta**	**1.47**	**86**	P	**Pn**	**02 09 31.7**	**+1.1**
MRZ	**Mangatainoka R**	**1.50**	**134**	P	**Pn**	**02 09 32.6**	**+1.9**
WATZ	**Wairara**	**1.52**	**54**	P	**Pn**	**02 09 32.5**	**+1.6**
TCW	**Tory Channel**	**1.59**	**177**	P	**Pn**	**02 09 34.1**	**+2.7**
PNHZ	**Pukenui**	**1.59**	**101**	P	**Pn**	**02 09 33.4**	**+1.9**
CAW	**Cannon Point**	**1.64**	**156**	P	**Pn**	**02 09 34.0**	**+2.2**
HOWZ	**Holdsworth Sta**	**1.64**	**142**	P	**Pn**	**02 09 33.8**	**+1.9**
PRWZ	**Pori Road**	**1.67**	**125**	P	**Pn**	**02 09 34.4**	**+2.3**
TLZ	**Tolley Road**	**1.67**	**40**	P	**Pn**	**02 09 33.2**	**+1.0**
DVHZ	**Dannevirke**	**1.68**	**115**	P	**Pn**	**02 09 34.1**	**+1.9**
TKNZ	**Takaka Hill**	**1.69**	**213**	P	**Pn**	**02 09 34.3**	**+2.0**
NNZ	**Nelson**	**1.71**	**200**	P	**Pn**	**02 09 34.8**	**+2.4**
WEL	**Wellington**	**1.73**	**165**	P	**Pn**	**02 09 34.9**	**+2.3**
QRZ	**Quartz Range**	**1.74**	**226**	P	**Pn**	**02 09 34.6**	**+1.9**
QRZ	**Quartz Range**	**1.74**	**226**	P	**Pn**	**02 09 34.6**	**+1.9**
SNZO	**South Karori**	**1.74**	**167**	P	**Pn**	**02 09 34.9**	**+2.2**
TIWZ	**Tintock**	**1.75**	**132**	P	**Pn**	**02 09 34.9**	**+2.0**
WPHZ	**Waipukurau**	**1.81**	**105**	P	**Pn**	**02 09 35.5**	**+2.2**
TUWZ	**Tuamarina**	**1.82**	**185**	P	**Pn**	**02 09 35.8**	**+2.3**
MTW	**Mount Morrison**	**1.85**	**147**	P	**Pn**	**02 09 35.6**	**+1.9**
BKZ	**Black Stump Fm**	**1.86**	**77**	P	**Pn**	**02 09 35.4**	**+1.4**
BKZ	**Black Stump Fm**	**1.86**	**77**	P	**Pn**	**02 09 35.5**	**+1.6**
BHW	**Baring Head**	**1.87**	**164**	P	**Pn**	**02 09 36.0**	**+2.1**
MRHZ	**Matea Rd**	**1.92**	**67**	P	**Pn**	**02 09 35.4**	**+0.9**
BFZ	**Birch Farm**	**1.92**	**124**	P	**Pn**	**02 09 36.5**	**+2.1**
ANWZ	**Angora Road**	**1.96**	**116**	P	**Pn**	**02 09 37.3**	**+2.5**
MCHZ	**McNeill Hill**	**1.96**	**86**	P	**Pn**	**02 09 37.5**	**+2.6**
MSWZ	**Moikau Station**	**1.98**	**156**	P	**Pn**	**02 09 36.9**	**+1.9**
TMWZ	**Te Maipa**	**1.99**	**139**	P	**Pn**	**02 09 37.1**	**+2.1**
PRHZ	**Porangahau**	**2.00**	**110**	P	**Pn**	**02 09 37.6**	**+2.4**
PAWZ	**Paruwai Farm**	**2.01**	**152**	P	**Pn**	**02 09 37.2**	**+2.0**
CPWZ	**Castlepoint**	**2.02**	**130**	P	**Pn**	**02 09 38.0**	**+2.7**
MRNZ	**Matariki Terra**	**2.08**	**211**	P	**Pn**	**02 09 38.2**	**+2.3**
KAHZ	**Kahuranaki**	**2.10**	**96**	P	**Pn**	**02 09 38.7**	**+2.5**
BSWZ	**Blackbirch Sta**	**2.11**	**186**	P	**Pn**	**02 09 38.9**	**+2.7**
NMHZ	**Naumai**	**2.11**	**77**	P	**Pn**	**02 09 38.9**	**+2.5**
PXZ	**Pawanui**	**2.12**	**102**	P	**Pn**	**02 09 38.7**	**+2.4**
PLWZ	**Palliser**	**2.12**	**157**	P	**Pn**	**02 09 38.2**	**+1.9**
TRWZ	**Traveller**	**2.12**	**147**	P	**Pn**	**02 09 38.5**	**+2.1**
CMWZ	**Cape Campbell**	**2.13**	**179**	P	**Pn**	**02 09 39.8**	**+3.3**
TOZ	**Tahuroa Road**	**2.15**	**29**	P	**Pn**	**02 09 38.2**	**+1.4**
MTHZ	**Maungataniwha**	**2.21**	**71**	P	**Pn**	**02 09 38.8**	**+1.4**
ARHZ	**Aropaoanui**	**2.22**	**82**	P	**Pn**	**02 09 39.6**	**+2.2**
CKHZ	**Cape Kidnapper**	**2.25**	**92**	P	**Pn**	**02 09 40.2**	**+2.6**
MUGZ	**Murupara**	**2.33**	**61**	P	**Pn**	**02 09 39.5**	**+1.0**
THZ	**Tophouse**	**2.35**	**204**	P	**Pn**	**02 09 41.2**	**+2.4**
RAHZ	**Arahi**	**2.37**	**74**	P	**Pn**	**02 09 40.9**	**+1.9**
RTZ	**Ruatahuna**	**2.41**	**66**	P	**Pn**	**02 09 40.5**	**+1.1**
AWAZ	**Awhitu Peninsu**	**2.58**	**8**	P	**Pn**	**02 09 44.0**	**+2.8**
SNGZ	**Shannon Statio**	**2.60**	**72**	P	**Pn**	**02 09 43.2**	**+1.7**
MKAZ	**Moumakai**	**2.63**	**18**	P	**Pn**	**02 09 44.3**	**+2.5**
URZ	**Urewera**	**2.67**	**60**	P	**Pn**	**02 09 43.0**	**+0.8**
URZ	**Urewera**	**2.67**	**60**	P	**Pn**	**02 09 43.2**	**+1.1**
DSZ	**Denniston Nort**	**2.78**	**219**	P	**Pn**	**02 09 45.8**	**+2.4**
KNZ	**Kokohu**	**2.78**	**79**	P	**Pn**	**02 09 45.3**	**+1.9**
KHZ	**Kahutara**	**2.84**	**189**	P	**Pn**	**02 09 46.8**	**+2.9**
KHZ	**Kahutara**	**2.84**	**189**	P	**Pn**	**02 09 47.3**	**+3.4**
MWZ	**Matawai**	**2.92**	**65**	P	**Pn**	**02 09 46.2**	**+1.2**
WIAZ	**Waiheke Island**	**2.92**	**15**	P	**Pn**	**02 09 47.9**	**+2.9**
MHGZ	**Mahia Peninsul**	**2.94**	**82**	P	**Pn**	**02 09 47.4**	**+2.3**
RIGZ	**Rimuhau**	**2.94**	**73**	P	**Pn**	**02 09 46.9**	**+1.7**
PRGZ	**Paritu Road**	**2.97**	**78**	P	**Pn**	**02 09 47.4**	**+1.9**
TKGZ	**Te Karaka**	**3.10**	**69**	P	**Pn**	**02 09 48.8**	**+1.8**
KUZ	**Kuaotunu**	**3.12**	**24**	P	**Pn**	**02 09 49.8**	**+2.5**
RUGZ	**Raukumara Rang**	**3.20**	**60**	P	**Pn**	**02 09 48.7**	**+0.4**
TWGZ	**Tauwhareparae**	**3.31**	**65**	P	**Pn**	**02 09 51.3**	**+1.9**
CNGZ	**Carnagh Statio**	**3.34**	**71**	P	**Pn**	**02 09 51.9**	**+2.1**
HAZ	**Te Kaha**	**3.38**	**58**	P	**Pn**	**02 09 50.7**	**+0.4**
GVZ	**Greta Valley S**	**3.45**	**194**	P	**Pn**	**02 09 53.4**	**+2.4**
LTZ	**Lake Taylor**	**3.47**	**204**	P	**Pn**	**02 09 53.8**	**+2.5**
PKGZ	**Pakihiroa**	**3.51**	**62**	P	**Pn**	**02 09 53.1**	**+1.2**
PUZ	**Puketiti**	**3.55**	**65**	P	**Pn**	**02 09 53.3**	**+1.1**
INZ	**Inchbonnie**	**3.72**	**213**	P	**Pn**	**02 09 56.4**	**+2.1**
AMCZ	**Amberley**	**3.73**	**197**	P	**Pn**	**02 09 56.7**	**+2.4**
WMGZ	**Waiomatatini S**	**3.78**	**63**	P	**Pn**	**02 09 56.0**	**+1.0**
MXZ	**Matakaoa Point**	**3.84**	**59**	P	**Pn**	**02 09 57.0**	**+1.3**
OXZ	**Oxford**	**4.04**	**203**	P	**Pn**	**02 10 00.1**	**+2.0**
OKCZ	**Okains Bay**	**4.19**	**191**	P	**Pn**	**02 10 01.8**	**+2.0**
MQZ	**McQueen's Vall**	**4.24**	**195**	P	**Pn**	**02 10 01.9**	**+1.4**
WVZ	**Waitaha Valley**	**4.31**	**216**	P	**Pn**	**02 10 03.5**	**+2.1**
AKCZ	**Akaroa Harbour**	**4.35**	**192**	P	**Pn**	**02 10 03.9**	**+1.9**
RACZ	**Rakaia**	**4.38**	**200**	P	**Pn**	**02 10 04.1**	**+2.0**
WACZ	**Wakanui South**	**4.66**	**201**	P	**Pn**	**02 10 08.2**	**+2.5**
GCSZ	**Gaunt Creek Bo**	**4.69**	**217**	P	**Pn**	**02 10 07.9**	**+1.9**
RPZ	**Rata Peaks**	**4.71**	**209**	P	**Pn**	**02 10 08.5**	**+2.2**
RPZ	**Rata Peaks**	**4.71**	**209**	P	**Pn**	**02 10 08.7**	**+2.4**
ARCZ	**Arundel**	**4.87**	**206**	P	**Pn**	**02 10 10.4**	**+2.0**
FOZ	**Fox Glacier**	**5.09**	**218**	P	**Pn**	**02 10 12.8**	**+1.7**
TMZ	**Timaru**	**5.31**	**205**	P	**Pn**	**02 10 16.3**	**+2.5**
LBZ	**Lake Benmore**	**5.61**	**211**	P	**Pn**	**02 10 19.9**	**+2.3**
LBZ				S	**Sn**	**02 11 19.3**	**-4.0**
JCZ	**Jackson Bay**	**6.00**	**220**	P	**Pn**	**02 10 24.7**	**+2.1**
JCZ				S	**Sn**	**02 11 28.3**	**-3.9**
ODZ	**Otahua Downs**	**6.02**	**205**	P	**Pn**	**02 10 25.3**	**+2.5**
ODZ	**Otahua Downs**	**6.02**	**205**	P	**Pn**	**02 10 26.4**	**+3.6**
WKZ	**Wanaka**	**6.46**	**215**	P	**Pn**	**02 10 29.6**	**+1.2**
WKZ				S	**Sn**	**02 11 39.3**	**-3.5**
EAZ	**Earnscleugh**	**6.66**	**211**	P	**Pn**	**02 10 32.3**	**+1.3**
EAZ				S	**Sn**	**02 11 43.8**	**-3.7**
TUZ	**Tuapeka**	**7.16**	**206**	P	**Pn**	**02 10 39.8**	**+2.5**
MLZ	**Mavora Lakes**	**7.28**	**216**	P	**Pn**	**02 10 42.0**	**+3.0**

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*JMA **03** 02:09:10.4±0.1, 24°.0N±0°.4×121°.6E±0°.5, h19^{km}, TAIWAN REGION*

*TAP **03** 02:09:11.8, 24°.22N×121°.72E, h11^{km}, ML3.4, B*

ISC 03 02:09:11.0±0.8, **24°.24N**±0°.02×**121°.70E**±0°.02, **h17^{km}**±5^{km}**, n100, σ1^{s}03**/134**, 1C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**31**	*i* P	**Pg**	**02 09 14.6**	**+0.2**
	baz=16						
EHP				*i* S	**Sg**	**02 09 16.9**	**+0.2**
	baz=16						
ETL	**Fush Village**	**0.11**	**219**	*i* P	**Pb**	**02 09 14.9**	**+0.2**
	baz=235						
ETL				*i* S	**Sg**	**02 09 17.1**	**0.0**
	baz=235						
NACB	**Ninganchiao**	**0.12**	**234**	⇓*i*P	**Pb**	**02 09 15.0**	**+0.3**
	baz=239						
NACB				*i* S	**Sg**	**02 09 17.6**	**+0.3**
	baz=239						
TWD	**Chiawan**	**0.19**	**210**	*i* P	**Pb**	**02 09 15.8**	**-0.1**
	baz=217						
TWD				*i* S	**Sg**	**02 09 19.0**	**+0.3**
	baz=217						
ENA	**Nanau**	**0.19**	**12**	P	**Pb**	**02 09 16.3**	**+0.3**
	baz=6.0						
ENA				S	**Sg**	**02 09 19.7**	**+0.8**
	baz=6.0						
ETLH	**Xiulin Townshi**	**0.20**	**260**	⇓P	**Pb**	**02 09 16.7**	**+0.4**
	baz=266						
ETLH				S	**Sg**	**02 09 20.5**	**+1.3**
	baz=266						
EWUT	**Wuta**	**0.21**	**20**	⇓*i*P	**Pb**	**02 09 16.8**	**+0.3**
	baz=13						
EWUT				S	**Sg**	**02 09 20.3**	**+0.8**
	baz=13						
HWA	**Hwalien**	**0.28**	**198**	*e*P	**Pb**	**02 09 18.4**	**+0.9**
	baz=204						
LATG	**Datong**	**0.33**	**332**	⇓*i*P	**Pn**	**02 09 19.5**	**-1.6**
	baz=329						
LATG				*i* S	**Sb**	**02 09 24.7**	**+1.1**
	baz=329						
ETM	**Tongmen**	**0.33**	**214**	*e*P	**Pb**	**02 09 18.5**	**0.0**
	baz=219						
NNSB	**Datong**	**0.34**	**303**	⇓*i*P	**Pn**	**02 09 19.8**	**-1.6**
	baz=303						
NNSB				S	**Sb**	**02 09 25.0**	**+1.1**
	baz=303						
NNS	**Nan Shan**	**0.35**	**304**	⇓*i*P	**Pn**	**02 09 20.0**	**-1.5**
	baz=304						
NNS				S	**Sb**	**02 09 25.2**	**+0.9**
	baz=304						
TEYL	**Yanliau Villag**	**0.38**	**194**	*e*P	**Pb**	**02 09 19.4**	**+0.1**
	baz=208						
NDS	**Dongshan**	**0.39**	**2**	⇓P	**Pn**	**02 09 20.4**	**-1.5**
	baz=358						
NDS				*e*S	**Sb**	**02 09 25.8**	**+0.6**
	baz=358						
TWC	**Suao**	**0.39**	**21**	⇓*i*P	**Pn**	**02 09 20.0**	**-1.8**
	baz=10.0						
TWC				*e*S	**Sb**	**02 09 25.2**	**0.0**
	baz=10.0						
WHF	**Hehuan Shan**	**0.41**	**256**	⇓*i*P	**Pb**	**02 09 20.6**	**+0.6**
	baz=259						
WHF				S	**Sb**	**02 09 26.2**	**+0.1**
	baz=259						
ENTT	**Nioudou**	**0.41**	**343**	⇓*i*P	**Pn**	**02 09 21.0**	**-1.2**
	baz=341						
ENTT				*i* S	**Sb**	**02 09 27.2**	**+1.3**
	baz=341						
TWT	**Tachien**	**0.48**	**271**	P	**Pn**	**02 09 22.6**	**-0.5**
	baz=273						
TWT				S	**Sb**	**02 09 29.3**	**+1.4**
	baz=273						
TWE	**Neicheng**	**0.48**	**357**	⇓*i*P	**Pn**	**02 09 22.1**	**-1.0**
	baz=1.0						
TWE				*i* S	**Sb**	**02 09 28.5**	**+0.8**
	baz=1.0						
ESL	**Shilin**	**0.49**	**210**	*e*P	**Pb**	**02 09 20.9**	**-0.3**
	baz=213						
TDCB	**Techi**	**0.49**	**271**	P	**Pn**	**02 09 22.3**	**-1.1**
	baz=273						
TDCB				S	**Sb**	**02 09 29.1**	**+0.8**
	baz=273						
CHGB	**Renai**	**0.51**	**249**	⇓*i*P	**Pn**	**02 09 22.5**	**-1.2**
	baz=245						
CHGB				*i* S	**Sb**	**02 09 29.4**	**+0.5**
	baz=245						
YHNB	**Yeheng**	**0.52**	**326**	⇓*i*P	**Pn**	**02 09 23.2**	**-0.5**
	baz=324						
YHNB				S	**Sb**	**02 09 30.1**	**+1.2**
	baz=324						
FUSB	**Fushanzhiwuyua**	**0.53**	**349**	⇓*i*P	**Pn**	**02 09 23.1**	**-0.6**
	baz=346						
FUSB				S	**Sn**	**02 09 30.4**	**-1.9**
	baz=346						
TEGC	**Jichi Village**	**0.55**	**195**	*e*P	**Pn**	**02 09 23.3**	**-0.7**
	baz=188						
OWD	**Renai**	**0.56**	**239**	*e*P	**Pn**	**02 09 23.1**	**-1.2**
	baz=242						
OWD				*e*S	**Sb**	**02 09 30.6**	**+0.5**
	baz=242						
NWLT	**Wulai**	**0.56**	**342**	P	**Pn**	**02 09 23.8**	**-0.4**
	baz=339						
NWLT				S	**Sn**	**02 09 31.3**	**-1.9**
	baz=339						
WUSB	**Renai**	**0.59**	**245**	⇓*i*P	**Pn**	**02 09 23.8**	**-0.8**
	baz=240						
WUSB				S	**Sb**	**02 09 31.4**	**+0.5**
	baz=240						
NTC	**Toucheng**	**0.62**	**11**	*e*P	**Pn**	**02 09 24.2**	**-0.9**
	baz=8.0						
EGFH	**Guangfu**	**0.62**	**203**	*e*P	**Pn**	**02 09 24.5**	**-0.6**
	baz=212						
NFF	**Wufeng Townshi**	**0.66**	**306**	*e*P	**Pn**	**02 09 25.5**	**-0.1**
	baz=307						
WHP	**Taichung City**	**0.69**	**273**	*e*P	**Pn**	**02 09 26.2**	**+0.2**
	baz=274						
WHP				*e*S	**Sn**	**02 09 36.0**	**-0.3**
	baz=274						
VWDT	**VWDT**	**0.70**	**226**	P	**Pn**	**02 09 25.3**	**-0.8**
	baz=235						
WPL	**Puli Township**	**0.71**	**251**	*e*P	**Pn**	**02 09 26.2**	**-0.1**
	baz=254						
WPL				S	**Sn**	**02 09 35.8**	**-1.1**
	baz=254						
DPDB	**Guoxing**	**0.73**	**254**	*e*P	**Pn**	**02 09 26.3**	**-0.4**
	baz=256						
DPDB				*e*S	**Sn**	**02 09 36.6**	**-0.8**
	baz=256						
TIPB	**Shuangxi**	**0.74**	**9**	⇑P	**Pn**	**02 09 26.7**	**0.0**
	baz=359						
LIOB	**Emei**	**0.74**	**303**	*e*P	**Pn**	**02 09 27.5**	**+0.8**
	baz=303						
WCS	**Beigang Elemen**	**0.74**	**256**	*e*P	**Pn**	**02 09 27.2**	**+0.6**
	baz=258						
TWA	**Mucha**	**0.74**	**352**	*e*P	**Pn**	**02 09 26.4**	**-0.3**
	baz=351						
NSTT	**Nanjuang**	**0.74**	**302**	*e*P	**Pn**	**02 09 27.2**	**+0.5**
	baz=302						
TATO	**Taipei**	**0.75**	**345**	P	**Pn**	**02 09 27.1**	**+0.2**
	baz=343						
TATO				S	**Sn**	**02 09 37.4**	**-0.5**
	baz=343						
HGSD	**Ruisui**	**0.79**	**199**	*e*P	**Pn**	**02 09 27.6**	**+0.3**
	baz=218						
TWB1	**Santiao Chiao**	**0.81**	**19**	*e*P	**Pn**	**02 09 27.2**	**-0.4**
	baz=17						
TWB1				*e*S	**Sn**	**02 09 37.9**	**-1.3**
	baz=17						
EHY	**Hungye**	**0.81**	**205**	*e*P	**Pb**	**02 09 26.3**	**-0.3**
	baz=208						
SMLT	**Sun Moon Lake**	**0.81**	**244**	P	**Pn**	**02 09 27.9**	**+0.1**
	baz=237						
SMLT				*e*S	**Sb**	**02 09 38.2**	**+0.8**
	baz=237						
SSLB	**Suanglung**	**0.82**	**236**	P	**Pn**	**02 09 27.7**	**0.0**
	baz=239						
SSLB				*e*S	**Sb**	**02 09 37.6**	**+0.2**
	baz=239						
NWF	**Wu-fen Shan**	**0.83**	**5**	*e*P	**Pn**	**02 09 28.0**	**0.0**
	baz=3.0						
WFSB	**Wu-fen Shan**	**0.83**	**5**	*e*P	**Pn**	**02 09 27.8**	**-0.1**
	baz=3.0						
SXI1	**Grass Mountain**	**0.86**	**11**	*e*P	**Pn**	**02 09 29.0**	**+0.6**
	baz=356						
NSY	**Sanyi**	**0.87**	**282**	*e*P	**Pn**	**02 09 28.6**	**+0.1**
	baz=282						
TWS1	**Kuangyinshan**	**0.89**	**343**	*e*P	**Pn**	**02 09 29.7**	**+1.0**
	baz=343						
TNOU	**National Taiwa**	**0.91**	**4**	*e*P	**Pn**	**02 09 29.7**	**+0.8**
	baz=9.0						
YM01	**YM01**	**0.91**	**353**	*e*P	**Pn**	**02 09 29.9**	**+0.9**
	baz=4.0						
YULB	**Yu-li**	**0.92**	**203**	*e*P	**Pb**	**02 09 28.3**	**-0.2**
	baz=217						
WWF	**Wufeng**	**0.93**	**258**	*e*P	**Pn**	**02 09 31.5**	**+2.2**
	baz=254						
TCU	**Taichung**	**0.94**	**264**	*e*P	**Pn**	**02 09 31.1**	**+1.7**
	baz=266						
ECBN	**Changbin**	**0.95**	**194**	*e*P	**Pg**	**02 09 28.3**	**-1.2**
	baz=184						
ANP	**Anpu**	**0.95**	**350**	*e*P	**Pn**	**02 09 30.6**	**+0.9**
	baz=349						
EYUL	**Yuli**	**0.96**	**201**	*e*P	**Pg**	**02 09 28.2**	**-1.4**
	baz=216						
TWF1	**Yuli**	**0.96**	**203**	*e*P	**Pn**	**02 09 29.5**	**-0.2**
	baz=217						

WDJ	**Dajia District**	**0.97**	**276**	*e*P	**Pn**	**02 09 30.5**	**+0.7**
	baz=277						
WJS	**Zhushan**	**0.98**	**245**	*e*P	**Pn**	**02 09 31.0**	**+1.0**
	baz=239						
WNT	**Mingjian**	**0.99**	**249**	*e*P	**Pn**	**02 09 31.7**	**+1.6**
	baz=241						
YUS	**Yu-Shan**	**1.01**	**222**	*e*P	**Pn**	**02 09 30.8**	**-0.1**
	baz=234						
WCHH	**Zhanghua**	**1.05**	**261**	*e*P	**Pn**	**02 09 34.0**	**+3.0**
	baz=263						
ALS	**Alishan**	**1.09**	**228**	*e*P	**Pn**	**02 09 32.6**	**+0.8**
	baz=216						
FULB	**Fuli**	**1.10**	**200**	*e*P	**Pn**	**02 09 32.3**	**+0.6**
	baz=214						
CHN5	**Tsauling**	**1.13**	**236**	*e*P	**Pn**	**02 09 34.6**	**+2.5**
	baz=237						
JYNG	**Yonagunijimaku**	**1.16**	**79**	*e*P	**Pg**	**02 09 33.3**	**-0.1**
JYNG				S	**Sn**	**02 09 49.9**	**+2.1**
CHKT	**Chengkung**	**1.18**	**195**	*e*P	**Pb**	**02 09 31.7**	**-1.2**
	baz=178						
YOJ	**Yonaguni jima**	**1.22**	**79**	P	**Pg**	**02 09 33.9**	**-0.6**
	baz=67						
YOJ	**Yonaguni jima**	**1.22**	**79**	P	**Pg**	**02 09 34.4**	**-0.1**
YOJ				*e*S	**Sn**	**02 09 51.3**	**+2.0**
ELDTW	**Lidau**	**1.22**	**211**	*e*P	**Pg**	**02 09 34.0**	**-0.6**
	baz=213						
WRL	**Guolierlin Hig**	**1.25**	**255**	*e*P	**Pg**	**02 09 36.0**	**+0.8**
	baz=256						
EDH	**Donghe**	**1.31**	**196**	*e*P	**Pb**	**02 09 35.0**	**-0.2**
	baz=184						
WTK	**Tuku**	**1.32**	**246**	*e*P	**Pg**	**02 09 36.3**	**-0.2**
	baz=233						
TPUB	**Ta-pu**	**1.35**	**226**	*e*P	**Pg**	**02 09 37.1**	**0.0**
	baz=217						
TPUB				*e*S	**Sg**	**02 09 56.9**	**+2.1**
	baz=217						
STYH	**Taoyuan**	**1.36**	**219**	*e*P	**Pg**	**02 09 35.9**	**-1.4**
	baz=221						
STYT	**Tauyuan**	**1.38**	**219**	*e*P	**Pg**	**02 09 37.2**	**-0.4**
	baz=221						
CHY	**Chiayi**	**1.38**	**238**	*e*P	**Pg**	**02 09 38.0**	**+0.3**
	baz=239						
WTP	**Ta-pu**	**1.40**	**225**	*e*P	**Pg**	**02 09 38.5**	**+0.4**
	baz=227						
TWK	**Hsinying**	**1.47**	**229**	*e*P	**Pg**	**02 09 38.4**	**-1.0**
	baz=231						
CHN1	**Nanshi**	**1.50**	**226**	*e*P	**Pg**	**02 09 39.1**	**-0.8**
	baz=228						
WSL	**Shuilin Townsh**	**1.52**	**242**	*e*P	**Pg**	**02 09 40.4**	**+0.1**
	baz=244						
TWGBT	**Beinan**	**1.53**	**202**	*e*P	**Pn**	**02 09 37.4**	**-0.1**
	baz=188						
SGST	**Jiashian**	**1.54**	**222**	*e*P	**Pg**	**02 09 39.6**	**-1.1**
	baz=223						
ECL	**Taimali**	**1.77**	**203**	*e*P	**Pb**	**02 09 43.2**	**+0.1**
	baz=191						
SSD	**Sandimen**	**1.78**	**214**	*e*P	**Pg**	**02 09 44.0**	**-1.3**
	baz=216						
MASBT	**Mashibuluo**	**1.90**	**211**	*e*P	**Pb**	**02 09 44.5**	**-0.6**
	baz=215						
HATJ	**Hateruma jima**	**1.93**	**95**	*e*S	**Sb**	**02 10 08.6**	**-1.0**
EAST	**Anshuo**	**2.01**	**203**	*e*P	**Pb**	**02 09 45.8**	**-1.3**
	baz=193						
PNG	**Penghu**	**2.07**	**252**	*e*P	**Pb**	**02 09 46.6**	**-1.6**
	baz=253						
PHUB	**P'eng-hu**	**2.08**	**250**	*e*P	**Pn**	**02 09 44.0**	**-1.0**
	baz=252						
WDGT	**Dungji**	**2.11**	**243**	*e*P	**Pb**	**02 09 47.4**	**-1.3**
	baz=245						
JKRS	**Kuro-shima**	**2.11**	**90**	P	**Pb**	**02 09 47.1**	**-1.7**
VWUC	**VWUC**	**2.18**	**290**	*e*P	**Pb**	**02 09 48.1**	**-1.9**
	baz=277						
JIJ	**Ishigaki jima**	**2.23**	**86**	P	**Pn**	**02 09 48.1**	**+0.9**
JIJ				*e*S	**Sn**	**02 10 15.5**	**+1.1**
VCHM	**Qimei**	**2.32**	**244**	*e*P	**Pb**	**02 09 50.0**	**-2.3**
	baz=231						
JISG	**Ishigakijimahi**	**2.41**	**81**	P	**Pn**	**02 09 50.9**	**+1.3**
ZPLA	**Ao Xicun**	**3.62**	**266**	*e*P	**Pn**	**02 10 07.7**	**+1.4**
	baz=265						

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*IDC **03** 02:18:50.7±1.9, 1°.88N×126°.37E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=120.0km s-min=25.0km az=68.0*

*DJA **03** 02:18:57.8±0.6, 2°N±5°×12°6E±°, h59^{km}±30^{km}, M3.9/10, mb4.3/1, mB5.5/2, MLv3.6/10, Mw(mB)5.0/2*

ISC 03 02:18:56.8±1.4, **1°.8N**±0°.1×**126°.49E**±0°.09, **h47**^{km}, **n11**, σ**0^{s}87**/11, **mb3.6**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**138**	P	**Pn**	**02 19 18.5**	**-0.2**
LBMI	**Labuha**	**2.58**	**157**	P	**Pn**	**02 19 36.4**	**+0.3**
KMSI	**Cibinong**	**2.77**	**245**	P	**Pn**	**02 19 38.5**	**-0.2**
GTOI	**Gorontalo**	**3.65**	**252**	P	**Pn**	**02 19 51.7**	**+0.9**
SANI	**Sanana**	**3.81**	**188**	P	**Pn**	**02 19 52.1**	**-0.9**
APSI	**Ampana**	**5.51**	**241**	P	**Pn**	**02 20 16.1**	**-0.4**
	0.1nm19nm,0.5s						
MPSI	**Mapaga**	**6.74**	**258**	P	**Pn**	**02 20 33.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.74**	**182**	P	**Pn**	**02 23 24.2**	**-0.4**
	0.1nm,0.3s,baz=355,slow=11,SNR=1.8						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**02 23 57.5**	**+0.8**
	2.3nm,0.5s,baz=338,slow=11,SNR=38						
	2.3nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**164**	P	**P**	**02 24 29.7**	**+1.7**
	0.4nm,0.3s,baz=346,slow=12,SNR=8.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**02 28 51.4**	**-0.8**
	0.2nm,0.4s,baz=120,slow=7.7,SNR=4.6						
	0.2nm,0.4s						

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*CRAAG **03** 02:24:22.7, 36°.36N×3°.45E, Ml3.3*

*SFS **03** 02:24:23.0, 36°.12N×3°.66W, h14^{km}, ML3.5, BOUIRA (ARGELIA)*

*MDD **03** 02:24:24.6±0.8, 36°.28N×3°.50E, h0^{km}, Mb3.8/12, Error ellipse: s-maj=6.8km s-min=3.8km az=141.0*

ISC 03 02:24:24.1±1.2, **36°.31N**±0°.05×**3°.49E**±0°.06, **h15**^{km}±10^{km}, **n23**, σ**1^{s}71**/31, **9C**, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.16**	**195**	P	**Pg**	**02 24 28.1**	**-0.1**
AKET	**Djebel Ketaf**	**0.41**	**130**	P	**Pb**	**02 24 33.3**	**+0.1**
ABMS	**Boumerdes**	**0.44**	**359**	P	**Pg**	**02 24 32.6**	**-0.3**
EMHD	**Djebel Mahouad**	**0.45**	**256**	P	**Pg**	**02 24 32.5**	**-0.6**
ABA	**Alger-Bouzarea**	**0.61**	**323**	P	**Pg**	**02 24 35.2**	**-0.9**
EBNR	**Beni Rached**	**1.58**	**270**	P	**Pn**	**02 24 48.0**	**-3.6**
ECHA	**Ech Chlef**	**1.73**	**265**	P	**Pn**	**02 24 52.5**	**-1.0**
EANR	**'Ain N'Sour**	**1.97**	**260**	P	**Pn**	**02 24 57.7**	**+0.8**
EIBI	**Ibiza**	**3.20**	**328**	P	**Pn**	**02 25 15.3**	**+1.5**
EIBI				⇑*i*Vmb_V		02 25 19.1	
	275nm,SNR=1.5						
EIBI				S	**Sn**	**02 25 49.6**	**-2.1**
ETOS	**Mallorca**	**3.49**	**351**	P	**Pn**	**02 25 18.4**	**+0.6**
ETOS				⇑*i*Vmb_V		02 25 23.5	
	190nm,SNR=0.7						
ETOS				S	**Sn**	**02 25 56.1**	**-2.8**
CART	**Cartagena**	**3.82**	**291**	P	**Pn**	**02 25 22.3**	**0.0**
AFON	**Font Roja**	**3.98**	**307**	P	**Pn**	**02 25 27.0**	**+2.5**
EMUR	**La Murta**	**4.08**	**293**	P	**Pn**	**02 25 26.6**	**+0.7**
EMUR				⇑*i*Vmb_V		02 25 33.5	
	97nm,SNR=2.3						
EMUR				S	**Sn**	**02 26 14.0**	**+0.6**
ECOL	**Islas Columbre**	**4.21**	**329**	P	**Pn**	**02 25 28.6**	**+1.0**
ECOL				S	**Sn**	**02 26 14.8**	**-1.7**
EZAR	**Zarzadilla de**	**4.43**	**292**	P	**Pn**	**02 25 31.6**	**+0.8**
EZAR				S	**Sn**	**02 26 23.0**	**+0.9**
ETOB	**Tobarra**	**4.63**	**302**	P	**Pn**	**02 25 34.7**	**+1.1**
ETOB				⇑*i*Vmb_V		02 25 39.9	
	103nm,SNR=1.6						
ETOB				S	**Sn**	**02 26 28.0**	**+0.8**
ECHE	**Chera**	**4.81**	**314**	⇑*i*Vmb_V		02 25 41.0	
	172nm,SNR=2.4						
ECHE				S	**Sn**	**02 26 30.0**	**-1.5**
EMOS	**Mosqueruela**	**5.11**	**324**	P	**Pn**	**02 25 41.3**	**+1.1**
EMOS				⇑*i*Vmb_V		02 25 42.0	
	113nm,SNR=1.2						
EMOS				S	**Sn**	**02 26 36.4**	**-2.5**
EBER	**Berja**	**5.17**	**278**	P	**Pn**	**02 25 42.0**	**+1.0**
EQES	**Quesada**	**5.46**	**288**	P	**Pn**	**02 25 46.8**	**+1.8**
EQES				⇑*i*Vmb_V		02 25 48.9	
	47nm,SNR=3.2						
EQES				S	**Sn**	**02 26 49.9**	**+2.5**
ETOR	**Torete**	**6.25**	**318**	P	**Pn**	**02 25 58.7**	**+2.9**
ETOR				⇑*i*Vmb_V		02 26 03.9	
	20nm,SNR=1.4						
PAB	**San Pablo**	**6.99**	**300**	P	**Pn**	**02 26 05.9**	**0.0**
PAB				⇑*i*Vmb_V		02 26 11.5	
	20nm,SNR=2.1						
EARI	**Arriondas**	**9.67**	**319**	P	**Pn**	**02 26 45.1**	**+2.4**

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*SEA **03** 02:29:37.1±1.2, 47°.47N±0°.01×121°.69W±0°.03, h17^{km}±1^{km}, ML1.6/32, ML1.4/8(NEIC), Error ellipse: s-maj=2.6km s-min=1.5km az=97.0*

NEIC 03 02:29:36.5±1.1, **47°.46N**±0°.02×**121°.7W**±0°.1, **h20**^{km}±3^{km}, **Error ellipse: s-maj=12.2km s-min=3.3km az=95.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDMR	**Cedar Moraine**	**0.05**	**226**		Pb	02 29 40.2	+0.1
CDMR					Sb	02 29 42.5	0.0
RATT	**Rattlesnake La**	**0.07**	**246**		Pb	02 29 40.2	0.0
RATT					Sb	02 29 42.6	-0.2
ELW	**Echo Lake**	**0.12**	**290**		Pb	02 29 40.7	-0.4
ELW					Sb	02 29 43.6	-0.7
RAW	**Raver**	**0.19**	**232**		Pb	02 29 41.8	+0.1
RAW					Sb	02 29 45.6	+0.4
TTW	**Tolt Reservoir**	**0.24**	**3**		Pb	02 29 42.2	-0.1
TTW					Sb	02 29 45.8	-0.5
C05A	**Tolt Reservoir**	**0.24**	**3**		Pb	02 29 42.4	0.0
C05A					Sb	02 29 45.8	-0.5
GSM	**Grass Mountain**	**0.26**	**193**		Pb	02 29 42.7	0.0
GSM	**Grass Mountain**	**0.26**	**193**		Sb	02 29 47.0	+0.1
D05A	**Enumclaw**	**0.33**	**216**		Pb	02 29 43.9	+0.3
D05A				Sg	Sb	02 29 48.8	+0.4
D05A				IAML		02 29 51.5	
	comp=E,21nm,0.4s						
HTW	**Haystack Looko**	**0.35**	**353**		Pb	02 29 43.9	-0.2
HTW					Sb	02 29 48.7	-0.5
MBPA	**Monroe Substat**	**0.46**	**345**		Sb	02 29 52.2	0.0
FMW	**Mount Fremont**	**0.52**	**177**		Pb	02 29 46.8	-0.3
RVC	**Mount Rainier-**	**0.54**	**199**		Pb	02 29 47.1	-0.2
OBSR	**Observation Ro**	**0.56**	**188**		Pb	02 29 47.7	0.0
B941	**Kapowsin**	**0.58**	**217**		Pb	02 29 47.5	-0.5
B941					Sb	02 29 55.4	-0.4
RCS	**Mount Rainier-**	**0.58**	**182**		Pb	02 29 48.1	-0.2
PANH	**Panhandle Gap,**	**0.60**	**176**		Pb	02 29 48.1	-0.3
PANH					Sb	02 29 56.8	+0.3
RCM	**Mount Rainier-**	**0.62**	**181**		Pb	02 29 48.6	-0.2
REMR	**Mount Rainier-**	**0.64**	**188**		Pb	02 29 48.9	-0.2
REMR					Sb	02 29 57.6	-0.1
WRW	**Wenatchee Ridg**	**0.69**	**54**		Pb	02 29 50.3	+0.4
LON	**Longmire**	**0.71**	**186**		Pb	02 29 49.9	-0.3
LON					Sb	02 29 59.3	-0.2
LTY	**Liberty**	**0.73**	**105**		Pb	02 29 51.1	+0.5
LTY					Sb	02 30 00.9	+0.7
LTY				IAML		02 30 01.4	
	comp=N,11nm,0.2s						
GNW	**Green Mountain**	**0.77**	**279**		Pb	02 29 50.7	-0.4
GPW	**Glacier Peak**	**0.77**	**30**		Pb	02 29 51.2	-0.1
TBM	**Table Mountain**	**0.81**	**110**		Pn	02 29 52.9	+0.1
B05A	**Bryant**	**0.85**	**342**		Pb	02 29 52.3	-0.3
NAC	**Naches**	**0.94**	**140**		Pn	02 29 54.6	+0.1
EBG	**Ellensburg**	**0.95**	**125**		Pn	02 29 55.5	+0.8
RPW	**Rockport**	**1.00**	**7**		Pb	02 29 54.9	-0.3
CMW	**Cultus Mountai**	**1.01**	**344**		Pb	02 29 55.4	+0.1
E04D	**Cinebar**	**1.07**	**214**	Pn	Pb	02 29 55.8	-0.5
E04D				IAML		02 30 11.2	
	comp=E,22nm,0.5s						
E04D				IAML		02 30 28.6	
	comp=N,14nm,5.0s						
B06A	**Marblemount**	**1.07**	**8**		Pb	02 29 56.0	-0.4
ERK	**Elk Rock**	**1.23**	**201**		Pn	02 29 58.6	0.0
SOSW	**Source of Smit**	**1.25**	**194**		Pn	02 29 59.0	+0.1
FL2	**Flat Top 2**	**1.33**	**200**		Pn	02 30 00.4	+0.3
MBW	**Mount Baker**	**1.34**	**355**		Pb	02 30 00.9	-0.1
CDFW	**Cedar Flats**	**1.36**	**190**		Pb	02 30 01.1	-0.1
SHUK	**Shuksan-Mt. Ba**	**1.40**	**1**		Pb	02 30 01.7	-0.3
NLWA	**Neilton Lookou**	**1.47**	**268**	Pn	Pb	02 30 02.8	-0.3
VDB	**Vedder Mountai**	**1.59**	**351**		Pb	02 30 04.8	-0.4
B011	**North Saanich**	**1.67**	**316**		Pn	02 30 05.0	+0.5
GDR	**Gold River**	**3.69**	**311**		Pb	02 30 40.3	-0.7

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*IDC **03** 02:34:57.1±0.3, 55°.78S×144°.14W, h0^{km}, mb4.9/17, mbtmp4.9/17, MS5.1/49, Error ellipse: s-maj=19.7km s-min=11.6km az=2.0*

*MOS **03** 02:34:57.5±1.2, 55°.90S×144°.02W, h10^{km}, mb5.5/24, Error ellipse: s-maj=18.3km s-min=13.7km az=89.9*

*NEIC **03** 02:34:58.7±1.8, 55°.8S±0°.1×143°.9W±0°.2, h10^{km}±1^{km}, mb5.3/136, Ms_20 5.4/275, Mwb5.5/24, Error ellipse: s-maj=20.3km s-min=15.7km az=14.0*

*NEIC **03** 02:35:00.3, 55°.96S×143°.97W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.60; M$_{\theta\theta}$2.50; M$_{\phi\phi}$-1.90; M$_{r\theta}$-0.57; M$_{\theta\phi}$1.18; M$_{\phi r}$0.19; Fault plane solution: M$_0$2.62000×10^{17} NP1:φ$_s$120.35000°, δ88.01000°, λ-13.91000°. NP2:φ$_s$210.85000°, δ76.10000°, λ-177.95000°. Principal axes: T 2.8653, Plg8.0000°, Azm166.0000°; N -0.6071, Plg76.0000°, Azm292.0000°; P -2.2582, Plg11.0000°, Azm75.0000°;*

*GCMT **03** 02:35:02.7±0.1, 56°.10S±0°.01×144°.08W±0°.01, h15^{km}, MW5.6/136, Moment Tensor Solution. s124,c225; s136,c272; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.10±.03; M$_{\theta\theta}$2.73±.04; M$_{\phi\phi}$-2.64±.03; M$_{r\theta}$0.83±.10; M$_{\theta\phi}$1.04±.03; M$_{\phi r}$0.48±.09; Best double couple: M$_0$3.02400×10^{17} NP1:φ$_s$125.00000°, δ74.00000°, λ6.00000°. NP2:φ$_s$34.00000°, δ84.00000°, λ164.00000°. Principal axes: T 3.1750, Plg16.0000°, Azm349.0000°; N -0.3080, Plg73.0000°, Azm194.0000°; P -2.8730, Plg7.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 02:34:58.6±0.2, **55°.89S**±0°.07×**143°.87W**±0°.06, **h10**^{km}, **n641**, σ**1^{s}51**/423, **mb5.3**/118, **MS5.4**/188, **15C**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**27.73**	**200**	P	**P**	**02 40 47.7**	**+1.0**
SBA				pmax	pmax		
	comp=Z,115nm,1.7s						
SBA	**Scott Base**	**27.73**	**200**	P	**P**	**02 40 47.7**	**+1.0**
SBA				IAmb	IAmb	02 41 02.9	
	comp=Z,115nm,1.6s						
VNDA	**Vanda**	**28.60**	**202**	P	**P**	**02 40 57.8**	**+3.4**
	comp=Z,3.4nm,1.0s,baz=79,slow=11,SNR=9.3						
VNDA				LR	LR	02 49 26.9	
	comp=Z,4µm,19.1s,baz=70,slow=30						
VNDA	**Vanda**	**28.60**	**202**	P	**P**	**02 40 56.8**	**+2.4**
VNDA				pmax	pmax		
	comp=Z,76nm,2.0s						
VNDA	**Vanda**	**28.60**	**202**	P	**P**	**02 40 56.8**	**+2.4**
VNDA				IAmb	IAmb	02 41 03.2	
	comp=Z,76nm,2.0s						
PLWZ	**Palliser**	**30.03**	**281**	P	**P**	**02 41 08.6**	**+1.1**
MQZ	**McQueen's Vall**	**30.08**	**275**	P	**P**	**02 41 08.6**	**+0.8**
MQZ				IAmb	IAmb	02 41 09.9	
	comp=Z,57nm,1.4s						
MSWZ	**Moikau Station**	**30.13**	**281**	P	**P**	**02 41 09.1**	**+0.7**
BHW	**Baring Head**	**30.35**	**281**	P	**P**	**02 41 11.1**	**+0.9**
ODZ	**Otahua Downs**	**30.38**	**272**	P	**P**	**02 41 11.3**	**+0.9**
ODZ				IAmb	IAmb	02 41 12.6	
	comp=Z,37nm,1.0s						
ODZ				IAMs_20	IAMs_20	02 49 56.4	
	comp=Z,8µm,20.0s						
KHZ	**Kahutara**	**30.41**	**278**	IAMs_20	IAMs_20	02 50 02.5	
	comp=Z,5µm,18.0s						
SNZO	**South Karori**	**30.50**	**281**	IAMs_20	IAMs_20	02 50 08.0	
	comp=Z,6µm,20.0s						
LTZ	**Lake Taylor**	**30.88**	**276**	P	**P**	**02 41 16.0**	**+1.0**
LTZ				IAmb	IAmb	02 41 17.4	
	comp=Z,47nm,1.2s						
RPZ	**Rata Peaks**	**30.97**	**274**	P	**P**	**02 41 14.3**	**-1.4**
	comp=Z,8.8nm,0.8s,baz=167,slow=10,SNR=4.0						
RPZ				LR	LR	02 50 35.5	
	comp=Z,5µm,21.2s,baz=124,slow=30						
	comp=Z,8.8nm,0.8s						
RPZ	**Rata Peaks**	**30.97**	**274**	P	**P**	**02 41 16.0**	**+0.3**
RPZ				IAMs_20	IAMs_20	02 50 23.1	
	comp=Z,7µm,20.0s						
BKZ	**Black Stump Fm**	**31.02**	**286**	P	**P**	**02 41 17.1**	**+0.9**
BKZ	**Black Stump Fm**	**31.02**	**286**	P	**P**	**02 41 20.8**	**+4.5**
	comp=Z,131nm,1.8s						
LBZ	**Lake Benmore**	**31.04**	**272**	P	**P**	**02 41 17.3**	**+0.9**
LBZ				IAmb	IAmb	02 41 18.9	
	comp=Z,62nm,1.2s						
LBZ				IAMs_20	IAMs_20	02 50 25.9	
	comp=Z,8µm,20.0s						
THZ	**Tophouse**	**31.20**	**279**	P	**P**	**02 41 18.9**	**+1.0**
THZ				IAmb	IAmb	02 41 20.5	
	comp=Z,59nm,1.1s						
MXZ	**Matakaoa Point**	**31.22**	**290**	P	**P**	**02 41 15.8**	**-2.2**
NNZ	**Nelson**	**31.30**	**280**	P	**P**	**02 41 18.6**	**0.0**
URZ	**Urewera**	**31.34**	**288**	P	**P**	**02 41 18.9**	**-0.1**
	comp=Z,9.4nm,0.9s,baz=321,slow=18,SNR=5.6						
URZ				LR	LR	02 50 49.1	
	comp=Z,3µm,20.9s,baz=209,slow=30						
	comp=Z,9.4nm,0.9s						
URZ	**Urewera**	**31.34**	**288**	P	**P**	**02 41 19.0**	**0.0**
WHZ	**Wether Hill Ro**	**31.39**	**268**	P	**P**	**02 41 19.3**	**-0.1**
WKZ	**Wanaka**	**31.43**	**270**	IAMs_20	IAMs_20	02 50 30.1	
	comp=Z,7µm,21.0s						
FOZ	**Fox Glacier**	**31.78**	**273**	IAMs_20	IAMs_20	02 51 00.6	
	comp=Z,8µm,20.0s						
TBI	**Tubuai**	**32.76**	**350**	*e*LR	LR	02 49 52.2	
	comp=Z,13µm,28.2s,baz=177						
RKT	**Rikitea**	**33.39**	**15**	*e*P	**P**	**02 41 38.3**	**+1.3**
QSPA	**South Pole Qui**	**34.27**	**180**	P	**P**	**02 41 46.0**	**+1.4**
	comp=Z,5.9nm,0.9s,baz=97,slow=1.4,SNR=9.0						
QSPA				PcP	**PcP**	**02 44 21.2**	**+0.7**
	comp=Z,8.4nm,1.0s,baz=28,slow=1.3,SNR=4.2						
QSPA				LR	LR	02 53 47.9	
	comp=Z,6µm,18.6s,baz=58,slow=33						
	comp=Z,5.9nm,0.9s						
QSPA	**South Pole Qui**	**34.27**	**180**	P	**P**	**02 41 43.8**	**-0.8**
QSPA	**South Pole Qui**	**34.27**	**180**	IAMs_20	IAMs_20	02 53 37.0	
	comp=Z,6µm,19.0s						
OUZ	**Omahuta**	**35.49**	**288**	P	**P**	**02 41 54.0**	**-1.1**
OUZ				IAmb	IAmb	02 41 57.8	
	comp=Z,66nm,1.2s						
RAO	**Raoul Island**	**35.94**	**304**	LR	LR	02 53 08.4	
	comp=Z,962nm,21.1s,baz=142,slow=30						
RAR	**Rarotonga**	**36.61**	**335**	LR	LR	02 52 33.9	
	comp=Z,4µm,20.2s,baz=170,slow=29						
PMSA	**Palmer Station**	**37.89**	**137**	LR	LR	02 53 52.0	
	comp=Z,2µm,20.5s,baz=247,slow=30						
RPN	**Rapa Nui**	**37.97**	**55**	LR	LR	02 53 60.0	
	comp=Z,1µm,19.3s,baz=212,slow=30						
PAE	**Paea**	**38.41**	**351**	*e*P	**P**	**02 42 17.9**	**-2.2**
PPT2	**Papeete2**	**38.48**	**351**	*e*P	**P**	**02 42 21.7**	**+0.9**
	comp=Z,123nm,1.4s						
PPT2	**Papeete2**	**38.48**	**351**	*e*LR	LR	02 52 38.8	
	comp=Z,11µm,25.0s,baz=178						
PPT	**Papeete**	**38.50**	**351**	LR	LR	02 53 39.9	
	comp=Z,4µm,20.5s,baz=169,slow=29						
BELA	**Belgrano 2**	**39.80**	**162**	P	**P**	**02 42 31.4**	**+0.2**
MG03	**Isla Dawson**	**40.46**	**119**	P	**P**	**02 42 38.3**	**+1.4**
MG03				IAmb	IAmb	02 43 07.9	
	comp=Z,54nm,1.3s						
MG05	**Puerto Natales**	**40.66**	**115**	P	**P**	**02 42 39.3**	**+0.7**
VAH	**Vaihoa**	**40.67**	**354**	*e*P	**P**	**02 42 40.7**	**+1.7**
	comp=Z,178nm,1.3s						
USHA	**Ushuaia**	**40.90**	**121**	P	**P**	**02 42 42.4**	**+1.9**
	comp=Z,22nm,1.0s,baz=208,slow=7.3,SNR=5.2						
USHA				LR	LR	02 55 49.2	
	comp=Z,1µm,19.4s,baz=238,slow=30						
	comp=Z,22nm,1.0s						
PMOR	**Pomariorio Ree**	**40.92**	**354**	*e*P	**P**	**02 42 42.4**	**+1.4**
	comp=Z,95nm,1.2s						
COYC	**Coyhaique**	**44.62**	**108**	P	**P**	**02 43 11.5**	**+0.7**
COYC				IAmb	IAmb	02 43 15.2	
	comp=Z,28nm,1.0s						
TAU	**Tasmania Unive**	**44.76**	**257**	IAMs_20	IAMs_20	02 56 36.7	
	comp=Z,6µm,20.0s						
AY01	**Puyuhuapi**	**45.07**	**107**	P	**P**	**02 43 14.0**	**-0.4**
AY01				IAmb	IAmb	02 43 21.0	
	comp=Z,23nm,1.0s						
CASY	**Casey**	**46.03**	**213**	P	**P**	**02 43 22.1**	**+0.4**
CASY				IAmb	IAmb	02 43 25.3	
	comp=Z,34nm,1.1s						
LL02	**Futaleuf**	**46.32**	**106**	P	**P**	**02 43 25.0**	**+0.6**
TAOE	**Nuku Hiva Isla**	**47.01**	**5**	*e*S	**S**	**02 50 19.3**	**-2.2**
TAOE				*e*LR	LR	02 56 30.4	
	comp=Z,8µm,27.3s,baz=198						
AFI	**Afiamalu**	**47.09**	**322**	LR	LR	02 57 33.0	
	comp=Z,2µm,21.9s,baz=158,slow=29						
LL04	**Puerto Octay**	**47.57**	**103**	P	**P**	**02 43 33.9**	**-0.2**
MSVF	**Nonsavu**	**47.72**	**307**	LR	LR	02 59 00.2	
	comp=Z,2µm,21.6s,baz=157,slow=30						
MSVF	**Nonsavu**	**47.72**	**307**	*c i*P	**P**	**02 43 34.7**	**-0.8**
MSVF				pmax	pmax		
	comp=Z,20nm,0.7s						
MSVF	**Nonsavu**	**47.72**	**307**	P	**P**	**02 43 35.4**	**-0.1**
MSVF	**Nonsavu**	**47.72**	**307**	P	**P**	**02 43 37.0**	**+1.5**
	comp=Z,73nm,1.1s						
EFI	**East Falkland**	**47.77**	**123**	*i* P	**P**	**02 43 34.1**	**-1.4**
EFI				pmax	pmax		
	comp=Z,124nm,1.4s						
PLCA	**Paso Flores**	**48.71**	**104**	P	**P**	**02 43 44.5**	**+1.5**
	comp=Z,8.9nm,1.0s,baz=218,slow=9.3,SNR=15						
PLCA				LR	LR	02 59 29.2	
	comp=Z,2µm,19.0s,baz=224,slow=30						
	comp=Z,8.9nm,1.0s						
PLCA	**Paso Flores**	**48.71**	**104**	P	**P**	**02 43 43.3**	**+0.3**
PLCA				IAmb	IAmb	02 43 55.7	
	comp=Z,62nm,1.9s						
CNB	**Canberra Magne**	**48.91**	**266**	P	**P**	**02 43 46.2**	**+1.6**
	comp=Z,58nm,2.5s						
H03S2	**Juan Fernandez**	**48.97**	**92**	T	T	03 36 36.4	
	baz=221						
H03S1	**Juan Fernandez**	**48.97**	**92**	T	T	03 36 40.1	
	baz=221						
H03S3	**Juan Fernandez**	**48.98**	**92**	T	T	03 36 46.5	
	baz=221						
VNA3	**Neumayer Olymp**	**49.10**	**162**	P	**P**	**02 43 45.0**	**-0.5**
CAN	**Canberra**	**49.11**	**265**	IAMs_20	IAMs_20	03 00 16.2	
	comp=Z,3µm,18.0s						
H03N3	**Juan Fernandez**	**49.25**	**91**	T	T	03 36 58.1	
	baz=224,slow=72,SNR=1388						
H03N2	**Juan Fernandez**	**49.26**	**91**	T	T	03 36 58.9	
	baz=224,slow=72,SNR=2423						
LC01	**Cunco**	**49.27**	**102**	P	**P**	**02 43 47.6**	**+0.3**
H03N1	**Juan Fernandez**	**49.27**	**91**	T	T	03 36 57.0	
	baz=224,slow=72,SNR=1822						
YATNC	**Mamie plateau,**	**49.48**	**292**	P	**P**	**02 43 50.7**	**+1.7**
	comp=Z,79nm,1.8s						
ONTNC	**Ouen Toro**	**49.50**	**292**	P	**P**	**02 43 48.5**	**-0.7**
ONTNC	**Ouen Toro**	**49.50**	**292**	P	**P**	**02 43 49.9**	**+0.8**
	comp=Z,119nm,1.1s						
DZM	**Mont Dzumac**	**49.70**	**292**	LR	LR	03 01 53.4	
	comp=Z,1µm,18.9s,baz=142,slow=33						
DZM	**Mont Dzumac**	**49.70**	**292**	*e*LR	LR	02 58 06.1	
DZM	**Mont Dzumac**	**49.70**	**292**	P	**P**	**02 43 50.5**	**-0.3**
DZM	**Mont Dzumac**	**49.70**	**292**	P	**P**	**02 43 52.2**	**+1.4**
	comp=Z,57nm,2.0s						
NOUC	**Port Laguerre**	**49.75**	**292**	P	**P**	**02 43 52.1**	**+1.1**
	comp=Z,66nm,1.5s						
VNA2	**Neumayer--Watz**	**49.76**	**163**	P	**P**	**02 43 50.5**	**-0.1**
	baz=208,slow=7.0						
SNAA	**Sanae**	**49.82**	**165**	P	**P**	**02 43 50.8**	**-0.3**
SNAA	**Sanae**	**49.82**	**165**	LR	LR	03 03 43.8	
	comp=Z,1µm,20.0s,baz=234,slow=35						
SNAA	**Sanae**	**49.82**	**165**	*ce*P	**P**	**02 43 52.2**	**+1.1**
SNAA				pmax	pmax		
	comp=Z,62nm,2.5s						
SNAA	**Sanae**	**49.82**	**165**	P	**P**	**02 43 51.4**	**+0.3**
SNAA				IAmb	IAmb	02 43 57.6	
	comp=Z,37nm,1.3s						
VNA1	**Neumayer--Stat**	**49.85**	**162**	P	**P**	**02 43 51.1**	**-0.1**
ARMA	**Armidale**	**51.26**	**272**	P	**P**	**02 44 02.1**	**-0.5**
ARMA				IAmb	IAmb	02 44 04.4	
	comp=Z,39nm,1.1s						
ARMA	**Armidale**	**51.26**	**272**	P	**P**	**02 44 03.6**	**+1.0**
	comp=Z,39nm,1.4s						
ML02	**Panimavida**	**51.77**	**99**	P	**P**	**02 44 06.6**	**+0.5**
ML02				IAmb	IAmb	02 44 32.1	
	comp=Z,32nm,1.1s						
KOUNC	**Koumac, New Ca**	**52.08**	**291**	P	**P**	**02 44 08.1**	**-0.6**
KOUNC				IAmb	IAmb	02 44 09.7	
	comp=Z,50nm,1.0s						
KOUNC	**Koumac, New Ca**	**52.08**	**291**	P	**P**	**02 44 09.3**	**+0.7**
	comp=Z,58nm,1.0s						
BO01	**Tunca**	**52.96**	**98**	P	**P**	**02 44 15.4**	**+0.4**
MT09	**Talagante**	**53.47**	**98**	P	**P**	**02 44 19.1**	**+0.1**
CMSA	**Cobar Meteorol**	**53.76**	**266**	P	**P**	**02 44 21.6**	**+0.7**
	comp=Z,34nm,1.6s						

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MT05  Renca             53.89  98  P        P        02 44 22.7 +0.8
PEL   Peldehue          54.10  98  P        P        02 44 23.4 -0.1
PEL                                pmax     pmax
      comp=Z,26nm,1.1s
PEL   Peldehue          54.10  98  P        P        02 44 23.4 -0.1
PEL                                IAmb     IAmb     02 44 25.7
      comp=Z,26nm,1.1s
VA03  San Esteban       54.46  97  P        P        02 44 25.9 -0.2
MAW   Mawson            55.23 192  P        P        02 44 33.0 +2.0
      comp=Z,12nm,1.0s,baz=183,slow=8.1,SNR=10
MAW                                LR       LR       03 06 00.1
      comp=Z,4µm,18.4s,baz=159,slow=34
      comp=Z,12nm,1.0s
MAW   Mawson            55.23 192  P        P        02 44 32.3 +1.3
MAW                                pmax     pmax
      comp=Z,4.0nm,1.2s
MAW   Mawson            55.23 192  P        P        02 44 32.3 +1.3
TRQA  Tornquist         55.26 108  P        P        02 44 32.7 +0.9
TRQA                               pmax     pmax
      comp=Z,15nm,0.9s
TRQA  Tornquist         55.26 108  P        P        02 44 32.7 +0.9
CO02  Combarbal         55.38  96  P        P        02 44 33.3 +0.4
CO02                               IAmb     IAmb     02 44 36.2
      comp=Z,28nm,0.8s
EIDS  Eidsvold          55.45 275  P        P        02 44 31.6 -1.7
EIDS  Eidsvold          55.45 275  P        P        02 44 32.8 -0.5
      comp=Z,45nm,1.3s
STKA  Stephens Creek    55.80 262  P        P        02 44 35.9 +0.1
      comp=Z,21nm,0.9s,baz=129,slow=7.8,SNR=16
STKA                               LR       LR       03 04 46.6
      comp=Z,3µm,19.4s,baz=126,slow=32
      comp=Z,21nm,0.9s
STKA  Stephens Creek    55.80 262 i P       P        02 44 34.9 -0.8
STKA  Stephens Creek    55.80 262  P        P        02 44 35.0 -0.8
STKA  Stephens Creek    55.80 262  P        P        02 44 36.6 +0.9
      comp=Z,10nm,1.8s
RMQ   Roma              55.89 272  P        P        02 44 37.4 +1.0
      comp=Z,30nm,1.2s
HTT   Hallett           56.12 259  P        P        02 44 39.4 +1.3
      comp=Z,48nm,1.4s
GO04  Tololo Observa    56.27  95  P        P        02 44 39.0 -0.4
GO04                               IAmb     IAmb     02 44 44.6
      comp=Z,41nm,1.2s
CO01  Juntas del Tor    56.82  95  P        P        02 44 43.1 -0.2
RK1H  Rockhampton Ha    57.34 276  P        P        02 44 47.3 +0.6
      comp=Z,49nm,0.9s
AC04  Llanos de Chal    57.62  93  P        P        02 44 49.0 +0.2
AC04                               IAmb     IAmb     02 44 50.5
      comp=Z,24nm,0.7s
QLP   Quilpie           58.36 269  P        P        02 44 54.0 +0.1
      comp=Z,113nm,1.4s
LCRK  Leigh Creek       58.77 261  P        P        02 44 57.4 +0.7
      comp=Z,84nm,1.0s
INKA  Innaminka         59.43 265  P        P        02 45 01.6 +0.3
      comp=Z,125nm,1.1s
AC02  Maricunga         59.77  94  P        P        02 45 04.2 -0.1
AC02                               IAmb     IAmb     02 45 06.9
      comp=Z,16nm,0.9s
PB14  IPOC Station P    60.77  91  P        P        02 45 10.9  0.0
GO02  Mina Guanaco      60.81  92  P        P        02 45 11.3 +0.1
OOD   Oodnadatta        62.22 261  P        P        02 45 20.7 +0.4
      comp=Z,34nm,1.2s
CTA   Charters Tower    62.34 275  LR       LR       03 08 59.9
      comp=Z,1µm,19.2s,baz=129,slow=33
CTA   Charters Tower    62.34 275  P        P        02 45 21.5 +0.3
      comp=Z,100nm,1.1s
CTAO  Charters Tower    62.34 275  P        P        02 45 20.9 -0.3
CTAO                               pmax     pmax
      comp=Z,82nm,1.1s
CTAO  Charters Tower    62.34 275  P        P        02 45 20.9 -0.3
CTAO  Charters Tower    62.34 275  P        P        02 45 21.5 +0.3
      comp=Z,85nm,1.4s
PB15  IPOC Station P    62.41  91  P        P        02 45 22.1 +0.2
PB15                               IAmb     IAmb     02 45 24.6
      comp=Z,41nm,1.2s
PB06  IPOC Station P    62.75  91  P        P        02 45 24.6 +0.5
PB06                               IAmb     IAmb     02 45 32.7
      comp=Z,41nm,1.2s
LVC   Limon Verde       63.20  91  P        P        02 45 28.4 +1.1
      comp=Z,23nm,0.8s,baz=208,slow=6.0,SNR=17
LVC                                LR       LR       03 05 53.4
      comp=Z,2µm,20.2s,baz=220,slow=29
      comp=Z,23nm,0.8s
LVC   Limon Verde       63.20  91  P        P        02 45 27.0 -0.3
LVC                                IAmb     IAmb     02 45 30.0
      comp=Z,24nm,0.8s
PB07  IPOC Station P    63.35  90  P        P        02 45 27.9 -0.2
PB09  IPOC Station P    63.66  90  P        P        02 45 29.6 -0.5
PB09                               IAmb     IAmb     02 45 33.1
      comp=Z,28nm,1.2s
PB02  IPOC Station P    63.66  89  P        P        02 45 30.1  0.0
PB01  IPOC Station P    64.11  90  P        P        02 45 32.9 -0.1
PB01                               IAmb     IAmb     02 45 36.1
      comp=Z,26nm,1.0s
TA02  Huaiquique        64.37  89  P        P        02 45 34.9 +0.3
PLTB  Pedras Altas      64.50 109  P        P        02 45 35.5 +0.1
PLTB                               IAmb     IAmb     02 45 36.5
      comp=Z,17nm,0.7s
ITQB  Itaqui            64.50 106  P        P        02 45 35.6 +0.2
PB08  IPOC Station P    65.02  89  P        P        02 45 38.1 -1.3
PB11  IPOC Station P    65.04  89  P        P        02 45 38.3 -0.9
GO01  Chusmiza          65.37  89  P        P        02 45 40.1 -1.7
QIS   Mount Isa         65.70 269  P        P        02 45 42.8 -0.5
      comp=Z,65nm,1.0s
PB16  IPOC Station P    66.26  88  P        P        02 45 46.6 -1.0
PB16                               IAmb     IAmb     02 45 50.4
      comp=Z,20nm,0.8s
AS31  Alice Springs     66.44 262  P        P        02 45 46.4 -1.7
ASAR  Alice Springs     66.44 262  P        P        02 45 46.7 -1.4
      comp=Z,34nm,0.9s,baz=140,slow=6.6,SNR=151
ASAR                               LR       LR       03 11 11.0
      comp=Z,3µm,19.6s,baz=151,slow=33
      comp=Z,34nm,0.9s
CPUP  Villa Florida     66.74 103  P        P        02 45 50.5 +0.6
      comp=Z,7.1nm,0.6s,baz=234,slow=7.0,SNR=26
      comp=Z,7.1nm,0.6s
CPUP  Villa Florida     66.74 103  P        P        02 45 48.7 -1.1
CPUP                               IAmb     IAmb     02 46 01.1
      comp=Z,43nm,1.6s
NNA   Nana              67.32  78  P        P        02 45 54.1 +0.4
      comp=Z,20nm,0.9s,baz=238,slow=6.8,SNR=6.7
NNA                                LR       LR       03 08 26.2
      comp=Z,3µm,19.3s,baz=225,slow=30
      comp=Z,20nm,0.9s
NNA   Nana              67.32  78ceP        P        02 45 54.9 +1.2
NNA                                pmax     pmax
      comp=Z,3.0nm,0.2s
NNA   Nana              67.32  78  P        P        02 45 52.3 -1.4
NNA   Nana              67.32  78  IAMs_20  IAMs_20  03 07 43.8
      comp=Z,3µm,21.0s
H01W1 Cape Leeuwin H    68.01 240  T        T        04 00 31.4
      baz=142,slow=75,SNR=591
H01W2 Cape Leeuwin H    68.02 240  T        T        04 00 29.6
      baz=142,slow=75,SNR=582
H01W3 Cape Leeuwin H    68.03 240  T        T        04 00 30.4
      baz=142,slow=75,SNR=679
WRKA  Warakurna         68.47 257  P        P        02 46 00.6 -0.3
      comp=Z,46nm,1.3s
LPAZ  La Paz            68.68  88  P        P        02 46 04.0 +1.0
      comp=Z,28nm,1.0s,baz=195,slow=5.1,SNR=51
LPAZ                               LR       LR       03 09 22.9
      comp=Z,1µm,22.0s,baz=198,slow=30
      comp=Z,28nm,1.0s
LPAZ  La Paz            68.68  88  P        P        02 46 04.0 +1.0
LPAZ  La Paz            68.68  88 eP        P        02 46 04.0 +0.1
LPAZ  La Paz            68.68  88  P        P        02 46 04.2 +0.2
ITAB  Concordia         68.85 107  P        P        02 46 02.8 -0.3
ITAB                               IAmb     IAmb     02 46 12.8
      comp=Z,41nm,1.3s
COEN  Coen              69.00 276  P        P        02 46 02.7 -1.5
COEN                               IAmb     IAmb     02 46 05.4
      comp=Z,33nm,1.1s
COEN  Coen              69.00 276  P        P        02 46 04.7 +0.5
      comp=Z,36nm,1.3s
WR0   Warramunga Arr    69.03 265  P        P        02 46 02.7 -1.7
WB2   Warramunga Arr    69.15 265  P        P        02 46 03.1 -2.1
WB2                                IAmb     IAmb     02 46 05.2
      comp=Z,38nm,1.1s
WRA   Warramunga Arr    69.16 265  P        P        02 46 03.6 -1.5
      comp=Z,23nm,1.0s,baz=145,slow=5.5,SNR=96
WRA                                LR       LR       03 13 18.2
      comp=Z,1µm,19.5s,baz=172,slow=33
      comp=Z,23nm,1.0s
WRA   Warramunga Arr    69.16 265  P        P        02 46 03.2 -1.9
WRAB  Tennant Creek     69.16 265ceP        P        02 46 04.3 -0.9
WRAB                               pmax     pmax
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      comp=Z,44nm,1.3s
WRAB  Tennant Creek     69.16 265  P        P        02 46 03.3 -1.8
WRAB  Tennant Creek     69.16 265  P        P        02 46 04.0 -1.2
      comp=Z,39nm,1.1s
WB0   Warramunga Arr    69.27 265  P        P        02 46 04.3 -1.5
WB0                                IAmb     IAmb     02 46 05.8
      comp=Z,33nm,1.0s
PMG   Port Moresby      70.51 282  LR       LR       03 13 02.4
      comp=Z,1µm,19.6s,baz=160,slow=32
PMG   Port Moresby      70.51 282ceP        P        02 46 14.6 +1.1
PMG                                pmax     pmax
      comp=Z,74nm,2.5s
PMG   Port Moresby      70.51 282  P        P        02 46 12.2 -1.3
PMG   Port Moresby      70.51 282  P        P        02 46 15.4 +1.9
      comp=Z,69nm,1.9s
MORW  Morawa            71.76 245  P        P        02 46 20.1 -0.9
MORW                               IAmb     IAmb     02 46 22.0
      comp=Z,27nm,1.1s
MORW  Morawa            71.76 245  P        P        02 46 22.2 +1.2
KRVT  Keravat (AS076    72.12 290  LR       LR       03 11 49.8
      comp=Z,439nm,21.9s,baz=288,slow=31
AQDB  Aquidauana        72.29 100  P        P        02 46 22.9 -1.4
AQDB                               IAmb     IAmb     02 46 32.1
      comp=Z,38nm,1.8s
FITZ  Fitzroy Crossi    75.49 259  LR       LR       03 16 47.8
      comp=Z,3µm,18.8s,baz=144,slow=33
KNRA  Kununurra         75.71 263  P        P        02 46 43.0 -1.2
KNRA                               IAmb     IAmb     02 46 45.1
      comp=Z,36nm,1.1s
KNRA  Kununurra         75.71 263  P        P        02 46 44.5 +0.2
      comp=Z,33nm,1.6s
PSA00 Pilbara Seismi    75.84 253  P        P        02 46 43.1 -1.9
PSA00                              IAmb     IAmb     02 47 12.2
      comp=Z,29nm,1.2s
PSA00 Pilbara Seismi    75.84 253  P        P        02 46 45.8 +0.8
      comp=Z,19nm,1.1s
KDU   Kakadu            76.05 268  P        P        02 46 45.8 -0.4
      comp=Z,46nm,1.6s
MBWA  Marble Bar        76.24 253  P        P        02 46 46.0 -1.2
MBWA                               IAmb     IAmb     02 46 47.7
      comp=Z,26nm,1.1s
MANU  Manus Island      76.51 287  P        P        02 46 47.5 -1.3
OTAV  Otavalo           76.65  69  P        P        02 46 49.7 -0.4
OTAV                               pmax     pmax
      comp=Z,54nm,1.8s
OTAV  Otavalo           76.65  69  P        P        02 46 49.7 -0.4
OTAV                               IAmb     IAmb     02 47 00.9
      comp=Z,54nm,1.8s
MTN   Manton Dam        76.68 267  P        P        02 46 48.3 -1.5
MTN                                IAmb     IAmb     02 46 50.1
      comp=Z,38nm,0.9s
MTN   Manton Dam        76.68 267  P        P        02 46 49.3 -0.5
      comp=Z,52nm,1.0s
KIP   Kipapa            77.94 347 i P       P        02 46 56.3 -0.2
KIP                                pmax     pmax
      comp=Z,51nm,1.2s
H06S1 SOCORRO T         79.37  32  T        T        04 14 37.1
      SNR=24
H06E1 SOCORRO T-PHAS79.43  32      T        T        04 14 17.2
      SNR=51
GENI  Genyem            80.00 280  P        P        02 47 07.7 -0.4
      comp=Z,4µmcomp=Z,79nm,1.5s
GENI  Genyem            80.00 280  P        P        02 47 09.2 +1.1
      comp=Z,77nm,1.5s
BDFB  Brasilia          80.45 104  P        P        02 47 11.4 +0.7
      comp=Z,4.7nm,0.9s,baz=165,slow=5.3,SNR=6.1
BDFB                               LR       LR       03 18 53.4
      comp=Z,2µm,21.2s,baz=195,slow=33
      comp=Z,4.7nm,0.9s
SMPI  Sarmi             81.31 279  P        P        02 47 14.5 -0.6
      comp=Z,1µmcomp=Z,11nm,1.4s
JTS   Las Juntas de     81.98  58 i P       P        02 47 18.3 -0.3
JTS                                pmax     pmax
      comp=Z,35nm,1.1s
JTS   Las Juntas de     81.98  58  P        P        02 47 17.5 -1.1
JTS                                IAmb     IAmb     02 47 27.9
      comp=Z,35nm,1.1s
ROSC  El Rosal          82.71  70  P        P        02 47 25.0 +2.0
      comp=Z,15nm,0.5s,baz=162,slow=7.0,SNR=8.1
ROSC                               LR       LR       03 17 10.7
      comp=Z,869nm,21.2s,baz=216,slow=31
      comp=Z,15nm,0.5s
ROSC  El Rosal          82.71  70  P        P        02 47 25.0 +2.0
ROSC  El Rosal          82.71  70  IAmb     IAmb     02 47 26.1
      comp=Z,23nm,0.8s
BATI  Baumata           83.02 262  LR       LR       03 21 07.1
      comp=Z,2µm,20.4s,baz=154,slow=33
BATI  Baumata           83.02 262  P        P        02 47 24.9 +0.7
      comp=Z,29nm,1.0s
CMIG  Matias Romero     83.56  47  LR       LR       03 16 18.2
      comp=Z,286nm,21.8s,baz=208,slow=30
LPIG  La Paz            84.64  30  LR       LR       03 15 52.4
      comp=Z,821nm,20.3s,baz=199,slow=29
ZARC  Zaragoza, Cauc    84.66  68  IAmb     IAmb     02 47 34.4
      comp=Z,12nm,1.0s
MMRI  Maumere           85.10 262  IAMs_20  IAMs_20  03 22 07.3
      comp=Z,2µm,21.0s
MMRI  Maumere           85.10 262  P        P        02 47 35.3 +0.5
SIJI  Sorong            86.39 274  LR       LR       03 24 23.1
      comp=Z,697nm,20.3s,baz=206,slow=34
SJCC  San Jacinto, C    86.53  67  IAmb     IAmb     02 47 48.6
      comp=Z,17nm,1.0s
PLAI  Plampang          87.42 258  P        P        02 47 45.2 -1.0
      comp=Z,38nm,1.0s
SDV   Santo Domingo     88.07  71  LR       LR       03 22 08.9
      comp=Z,443nm,20.2s,baz=216,slow=32
SANI  Sanana            88.40 269  P        P        02 47 50.4 -0.4
      comp=Z,1µmcomp=Z,53nm,1.2s
SANI  Sanana            88.40 269  P        P        02 47 50.6 -0.2
      comp=Z,53nm,1.3s
HSIG                    89.12  28  IAmb     IAmb     02 47 57.6
      comp=Z,16nm,1.2s
SRBI  Singaraja         89.44 256  P        P        02 47 55.5 -0.2
      comp=Z,47nm,0.9s
KAPI  Kappang           89.46 262  LR       LR       03 26 14.9
      comp=Z,2µm,19.3s,baz=166,slow=34
KAPI  Kappang           89.46 262 i P       P        02 47 54.9 -0.9
KAPI                               pmax     pmax
      comp=Z,38nm,1.2s
KAPI  Kappang           89.46 262  P        P        02 47 54.8 -1.1
KAPI                               IAmb     IAmb     02 47 56.6
      comp=Z,32nm,1.1s
KAPI  Kappang           89.46 262  IAMs_20  IAMs_20  03 25 53.9
      comp=Z,2µm,20.0s
KAPI  Kappang           89.46 262  P        P        02 47 56.0 +0.2
      comp=Z,31nm,1.1s
BAUV  El Baul           89.50  73  P        P        02 47 54.2 -1.7
BNSI  Bone              89.77 263  P        P        02 47 57.1 -0.2
      comp=Z,1µmcomp=Z,21nm,1.6s
SFX   San Felipe        90.06  25  IAmb     IAmb     02 48 01.9
      comp=Z,22nm,1.2s
GMJI  Gumukmas          90.25 255  P        P        02 48 00.0 +0.5
      comp=Z,36nm,1.0s
GUMO  Guam              90.97 293  LR       LR       03 24 40.4
      comp=Z,132nm,19.2s,baz=116,slow=33
LUWI  Luwuk             91.03 267  IAMs_20  IAMs_20  03 27 27.8
      comp=Z,1µm,19.0s
SUR   Sutherland        91.11 167  LR       LR       03 24 26.6
      comp=Z,1µm,20.2s,baz=185,slow=32
IKP   In-Ko-Pah, Jac    91.32  23  P        P        02 48 06.5 +2.5
      baz=195
109C  Camp Elliot, M    91.33  22  IAMs_20  IAMs_20  03 18 48.4
      comp=Z,2µm,18.0s
PWJI  Pagerwojo         91.35 254  P        P        02 48 05.0 +0.4
      comp=Z,58nm,1.1s
YUH   Yuha Desert       91.36  23  IAmb     IAmb     02 48 07.9
      comp=Z,25nm,1.4s
214A  Organ Pipe Nat    91.43  26  P        P        02 48 06.8 +2.3
      baz=197
MONP2 Monument Peak     91.49  23  P        P        02 48 07.0 +2.0
      baz=195
TX31  Lajitas Ar. Si    91.55  34  IAmb     IAmb     02 48 13.6
      comp=Z,10nm,0.8s
TX31  Lajitas Ar. Si    91.55  34  P        P        02 48 07.7 +2.5
      baz=201
TXAR  Lajitas Array     91.55  34  P        P        02 48 06.4 +1.2
      comp=Z,1.3nm,0.8s,baz=189,slow=7.5,SNR=8.8
TXAR                               LR       LR       03 20 32.0
      comp=Z,344nm,20.7s,baz=201,slow=30
      comp=Z,1.3nm,0.8s
SWSC  Sam W. Stewart    91.67  23  P        P        02 48 08.2 +2.6
      baz=195
319A  Douglas           91.80  29  IAmb     IAmb     02 48 10.2
      comp=Z,27nm,1.3s
GLA   Glamis            92.00  24  P        P        02 48 09.4 +2.3
      baz=196
MURC  Murrieta          92.00  22  P        P        02 48 09.0 +1.9
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      baz=195
833A  Chaparral WMA,    92.04  38  IAmb     IAmb     02 48 11.5
      comp=Z,25nm,1.2s
833A  Chaparral WMA,    92.04  38  P        P        02 48 09.5 +2.2
      baz=203
TPFO  Pinon Flats       92.17  23  P        P        02 48 10.2 +2.2
      baz=195
PFO   Pinyon Flats O    92.17  23  LR       LR       03 19 34.3
      comp=Z,2µm,21.8s,baz=198,slow=29
PFO   Pinyon Flats O    92.17  23 i P       P        02 48 08.5 +0.5
PFO                                pmax     pmax
      comp=Z,9.0nm,1.1s
PFO   Pinyon Flats O    92.17  23  IAMs_20  IAMs_20  03 19 55.6
      comp=Z,2µm,21.0s
PFO   Pinyon Flats O    92.17  23  P        P        02 48 10.1 +2.1
      baz=195
TUC   Tucson            92.28  28  P        P        02 48 08.6 +0.1
TUC                                pmax     pmax
      comp=Z,41nm,1.8s
TUC   Tucson            92.28  28  P        P        02 48 08.6 +0.1
TUC   Tucson            92.28  28  IAMs_20  IAMs_20  03 22 06.6
      comp=Z,1µm,19.0s
TUC   Tucson            92.28  28  P        P        02 48 10.6 +2.1
      baz=198
SBC   Santa Barbara     92.31  20  P        P        02 48 10.9 +2.5
      baz=193
DECC  Green Verdugo     92.40  21  P        P        02 48 11.3 +2.4
      baz=194
BC3   Big Chuckawall    92.43  23  P        P        02 48 11.8 +2.6
      baz=196
BFSC  Mount Baldy Ra    92.52  21  P        P        02 48 12.1 +2.5
      baz=194
BELC  Belle Mtn. Jos    92.65  23  P        P        02 48 12.9 +2.7
      baz=195
BBRC  Big Bear Solar    92.70  22  P        P        02 48 13.0 +2.4
      baz=195
PKM   Mcpherson Peak    92.72  20  P        P        02 48 12.8 +2.2
      baz=193
BLYC  Blythe            92.74  24  P        P        02 48 09.4 -1.0
BLYC                               IAmb     IAmb     02 48 14.5
      comp=Z,33nm,1.8s
IRM   Iron Mountain     92.99  24  P        P        02 48 14.3 +2.7
      baz=196
EDW2  Edwards Air Fo    93.07  21  P        P        02 48 14.3 +2.2
      baz=194
SMMC  Simmler           93.11  19  P        P        02 48 14.8 +2.6
      baz=193
ARVC  Arvin             93.15  20  P        P        02 48 14.7 +2.4
      baz=194
MNTX  Cornudas Mount    93.22  32  P        P        02 48 14.3 +1.6
      baz=200
MNTX  Cornudas Mount    93.22  32  P        P        02 48 14.8 +2.1
      baz=200
Y14A  Wickenburg        93.27  25  IAmb     IAmb     02 48 17.0
      comp=Z,22nm,1.7s
121A  Cookes Peak, D    93.30  30  P        P        02 48 15.7 +2.3
      baz=199
121A  Cookes Peak, D    93.30  30  P        P        02 48 15.5 +2.1
      baz=199
PDMCI Parker Dam,Lak    93.36  24  P        P        02 48 15.8 +2.5
      baz=196
HEC   Hector,Ludlow     93.37  22  P        P        02 48 15.5 +2.1
      baz=195
GMRC  Granite Mounta    93.47  23  P        P        02 48 16.5 +2.4
      baz=195
GSC   Goldstone, Bar    93.73  22  IAmb     IAmb     02 48 18.1
      comp=Z,11nm,1.3s
GSC   Goldstone, Bar    93.73  22  P        P        02 48 17.5 +2.4
      baz=195
ISA   Isabella, Lake    93.73  20  IAmb     IAmb     02 48 19.1
      comp=Z,16nm,1.6s
ISA   Isabella, Lake    93.73  20  P        P        02 48 17.7 +2.6
      baz=194
MPSI  Mapaga            93.78 265  P        P        02 48 14.9 -1.0
VES   Vestal, Richgr    93.79  20  P        P        02 48 17.5 +2.2
      baz=194
JCT   Junction City     93.87  37  P        P        02 48 17.9 +2.0
      baz=203
TUQ   Turquoise Moun    94.04  23  P        P        02 48 19.0 +2.3
      baz=195
W13A  Hualapai Mount    94.18  24  IAmb     IAmb     02 48 21.0
      comp=Z,16nm,1.9s
MPMC  Manual Prospec    94.31  21  P        P        02 48 20.1 +2.2
      baz=194
SHOC  Shoshone, Teco    94.41  22  P        P        02 48 20.1 +1.9
      baz=195
CWC   Cottonwood Cre    94.56  21  P        P        02 48 21.6 +2.6
      baz=194
LEM   Lembang           94.59 251  LR       LR       03 27 26.5
      comp=Z,563nm,19.0s,baz=194,slow=33
X18A  Snowflake         94.60  28  IAmb     IAmb     02 48 23.2
      comp=Z,22nm,1.5s
FURC  Furnace Creek,    94.84  22  P        P        02 48 22.5 +2.5
      baz=195
Y22A  Socorro           94.85  30  P        P        02 48 22.8 +2.3
      baz=200
MDP   Montagnes des     94.88  88  LR       LR       03 26 38.7
      comp=Z,508nm,20.0s,baz=187,slow=33
435B  Jarrell           94.92  39  P        P        02 48 22.4 +1.8
      baz=204
Y22D  IRIS PASSCAL I    94.99  30  IAMs_20  IAMs_20  03 21 54.6
      comp=Z,1µm,21.0s
RCBR  Riachuelo         95.14 108  LR       LR       03 29 15.8
      comp=Z,976nm,18.3s,baz=350,slow=34
RCBR  Riachuelo         95.14 108  IAMs_20  IAMs_20  03 28 55.2
      comp=Z,977nm,20.0s
WUAZ  Wupatki           95.18  26  IAMs_20  IAMs_20  03 21 49.3
      comp=Z,1µm,21.0s
SHPR  Sheep Range       95.24  23  P        P        02 48 21.1 -1.0
BOSA  Boshof            95.33 170  LR       LR       03 28 42.2
      comp=Z,1µm,19.2s,baz=185,slow=34
MCCM  Marconi Confer    95.36  16  IAMs_20  IAMs_20  03 22 43.9
      comp=Z,1µm,20.0s
LCH   Last Change Ra    95.42  21  IAmb     IAmb     02 48 27.9
      comp=Z,11nm,1.6s
TPNV  Topopah Spring    95.43  22  IAMs_20  IAMs_20  03 21 54.8
      comp=Z,1µm,20.0s
TPNV  Topopah Spring    95.43  22  P        P        02 48 25.7 +2.8
      baz=195
OMMB  Old Mammoth Mi    95.52  20  IAmb     IAmb     02 48 27.6
      comp=Z,21nm,1.7s
MDPB  Devils Postpil    95.53  20  IAmb     IAmb     02 48 29.4
      comp=Z,7.9nm,1.1s
GRGR  Grenville         95.62  77  IAMs_20  IAMs_20  03 27 42.9
      comp=Z,1µm,18.0s
CMB   Columbia Colle    95.68  18  IAMs_20  IAMs_20  03 21 48.3
      comp=Z,1µm,20.0s
U15A  North Rim         95.82  25  IAmb     IAmb     02 48 31.7
      comp=Z,7.5nm,1.0s
ABTX  Abilene, Hawle    95.89  36  IAmb     IAmb     02 48 28.5
      comp=Z,12nm,1.1s
ABTX  Abilene, Hawle    95.89  36  P        P        02 48 27.3 +2.3
      baz=203
ANMO  Albuquerque       95.94  30  P        P        02 48 26.6 +1.2
      comp=Z,1.1nm,0.8s,baz=191,slow=8.0,SNR=4.1
ANMO                               LR       LR       03 22 45.8
      comp=Z,824nm,21.2s,baz=207,slow=30
      comp=Z,1.1nm,0.8s
ANMO  Albuquerque       95.94  30ceP        P        02 48 25.5 +0.1
ANMO                               pmax     pmax
      comp=Z,2.0nm,1.1s
ANMO  Albuquerque       95.94  30  P        P        02 48 23.9 -1.5
ANMO  Albuquerque       95.94  30  IAMs_20  IAMs_20  03 22 45.7
      comp=Z,887nm,20.0s
ANMO  Albuquerque       95.94  30  P        P        02 48 27.1 +1.7
      baz=200
ANMO  Albuquerque       95.94  30  P        P        02 48 27.3 +1.9
      baz=200
WHTX  Lake Whitney,     96.06  38  P        P        02 48 27.6 +1.8
      baz=204
DAV   Davao City (W)    96.11 274  LR       LR       03 29 09.8
      comp=Z,514nm,21.9s,baz=164,slow=34
MSTX  Muleshoe          96.12  33  P        P        02 48 28.2 +2.0
      baz=202
HOPS  Hopland Field     96.16  16  IAMs_20  IAMs_20  03 20 54.0
      comp=Z,2µm,22.0s
NVAR  Mina Array Bea    96.45  20  LR       LR       03 24 29.3
      comp=Z,974nm,18.0s,baz=197,slow=31
EMB   Emerald Bay       96.64  18  IAmb     IAmb     02 48 32.2
      comp=Z,10nm,1.4s
R11A  Troy Canyon, C    96.92  22  P        P        02 48 32.2 +2.5
      baz=196
ORV   Oroville          96.97  17  IAMs_20  IAMs_20  03 24 06.3
      comp=Z,1µm,20.0s
AMTX  Amarillo          97.31  34  IAMs_20  IAMs_20  03 23 43.1
      comp=Z,969nm,20.0s
PAHR  Pah Rah Range     97.48  19  IAmb     IAmb     02 48 35.9
      comp=Z,10nm,1.5s
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MVCO  Mesa Verde         97.51  28   P        Pdif      02 48 34.4 +1.8
      baz=199
BIM   Bigot              97.90  76   IAMs_20  IAMs_20   03 29 05.4
      comp=Z,883nm,18.0s
MPOM  Morne Pois Mar     97.96  76   IAMs_20  IAMs_20   03 29 15.9
      comp=Z,880nm,19.0s
FDF   Fort de France     98.03  76   IAMs_20  IAMs_20   03 29 11.0
      comp=Z,963nm,19.0s
WMOK  Wichita Mounta     98.11  36   P        Pdif      02 48 36.7 +1.6
      baz=204
SJG   San Juan           98.13  70   LR       LR        03 29 03.2
      comp=Z,240nm,19.4s,baz=190,slow=33
ILAM  Ilet Lapin Mar     98.22  76   IAMs_20  IAMs_20   03 29 15.7
      comp=Z,1µm,18.0s
S22A  4UR Ranch, Cre     98.46  29   P        Pdif      02 48 38.8 +1.9
      baz=200
T25A  Trinidad           98.58  31   P        Pdif      02 48 39.1 +1.8
      baz=201
VBMS  Vicksburg          98.82  43   P        Pdif      02 48 39.9 +1.7
      baz=207
SDCO  Great Sand Dun     98.83  30   IAMs_20  IAMs_20   03 25 17.1
      comp=Z,1µm,19.0s
SDCO  Great Sand Dun     98.83  30   P        Pdif      02 48 40.2 +1.7
      baz=201
CBE   Ff, Capester       98.88  75   IAMs_20  IAMs_20   03 28 10.2
      comp=Z,863nm,19.0s
YBH   Yreka Blue Hor     98.90  16   LR       LR        03 23 45.7
      comp=Z,2µm,20.6s,baz=164,slow=30
YBH   Yreka Blue Hor     98.90  16   IAMs_20  IAMs_20   03 23 23.4
      comp=Z,2µm,21.0s
LBTB  Lobatse            98.92 170   LR       LR        03 28 40.5
      comp=Z,1µm,21.9s,baz=180,slow=32
LBTB  Lobatse            98.92 170   P        P         02 48 37.4 -1.9
LBTB                                 pmax     pmax
      comp=Z,10.0nm,1.0s
LBTB  Lobatse            98.92 170            P         02 48 37.4 -1.9
LBTB                                 IAmb     IAmb      02 48 41.8
      comp=Z,10nm,1.0s
MAGL  Barre de l'ile     98.96  75   IAMs_20  IAMs_20   03 28 50.4
      comp=Z,1µm,19.0s
DWPF  Disney Wildern     99.03  52   P        Pdif      02 48 41.0 +1.7
      baz=210
ABD   La Joyeuse, An     99.28  74   IAMs_20  IAMs_20   03 27 30.8
      comp=Z,930nm,22.0s
DUG   Dugway, Tooele     99.29  24   IAMs_20  IAMs_20   03 23 43.1
      comp=Z,1µm,21.0s
ELK   Elko               99.29  22   LR       LR        03 23 50.6
      comp=Z,1µm,21.7s,baz=208,slow=30
ELK   Elko               99.29  22   IAMs_20  IAMs_20   03 23 50.1
      comp=Z,1µm,20.0s
GDSD  La Dsirade Is      99.38  75   IAMs_20  IAMs_20   03 29 01.4
      comp=Z,850nm,19.0s
PMBI  Palembang          99.38 251   IAMs_20  IAMs_20   03 34 39.3
      comp=Z,2µm,22.0s
L04D  Klamath Falls      99.44  16   IAMs_20  IAMs_20   03 24 02.6
      comp=Z,2µm,19.0s
MOD   Modoc Plateau      99.45  18   IAMs_20  IAMs_20   03 26 32.2
      comp=Z,943nm,20.0s
K02D  Willamette Mer     99.70  15   P        Pdif      02 48 44.1 +2.1
      baz=191
HUMO  Hull Mountain      99.72  16   IAMs_20  IAMs_20   03 25 03.1
      comp=Z,1µm,20.0s
SBUM  Sibu               99.81 260   IAMs_20  IAMs_20   03 29 36.2
      comp=Z,1µm,22.0s
Q24A  Divide            100.07  30   P        Pdif      02 48 45.9 +1.9
      baz=201
J01E  Myrtle Point      100.12  15   P        Pdif      02 48 45.9 +2.2
      baz=191
W39A  Magazine          100.25  40   P        Pdif      02 48 46.9 +2.3
      baz=206
WVOR  Wild Horse Val    100.26  19   IAMs_20  IAMs_20   03 25 05.6
      comp=Z,979nm,20.0s
ISCO  Idaho Springs     100.72  29   IAMs_20  IAMs_20   03 25 37.1
      comp=Z,1µm,20.0s
HWUT  Hardware Ranch    100.92  24   IAMs_20  IAMs_20   03 24 24.3
      comp=Z,999nm,22.0s
CBKS  Cedar Bluff       101.53  34   IAMs_20  IAMs_20   03 26 14.8
      comp=Z,1µm,20.0s
MFID  Camas Ranch       101.74  20   IAMs_20  IAMs_20   03 26 52.8
      comp=Z,979nm,20.0s
RWWY  Rawlins           102.06  27   IAMs_20  IAMs_20   03 26 14.6
      comp=Z,1µm,20.0s
AHID  Auburn Hatcher    102.13  24   IAMs_20  IAMs_20   03 26 04.2
      comp=Z,907nm,20.0s
HLID  Hailey            102.17  21   IAMs_20  IAMs_20   03 26 42.2
      comp=Z,2µm,20.0s
G03D  McMinnville, O    102.22  15   IAMs_20  IAMs_20   03 24 14.3
      comp=Z,1µm,20.0s
BW06  Boulder Array     102.49  25   IAMs_20  IAMs_20   03 26 06.9
      comp=Z,1µm,20.0s
REDW  Red Top Meadow    102.75  24   IAMs_20  IAMs_20   03 29 52.7
      comp=Z,871nm,18.0s
OGNE  Ogallala          102.79  31   IAMs_20  IAMs_20   03 27 01.1
      comp=Z,764nm,20.0s
KSU1  Kansas State U    102.80  36   IAMs_20  IAMs_20   03 29 00.4
      comp=Z,816nm,19.0s
BMO   Blue Mountains    102.85  19   IAMs_20  IAMs_20   03 28 29.0
      comp=Z,995nm,19.0s
TPAW  Teton Pass        102.85  24   IAMs_20  IAMs_20   03 26 37.3
      comp=Z,1µm,21.0s
H10S3 ASCENSION HYDR102.95 128   T        T         04 44 49.8
      baz=205,slow=74,SNR=213
H10S2 ASCENSION HYDR102.95 128   T        T         04 44 55.8
      baz=15,slow=74,SNR=74
LOHW  Long Hollow       103.05  24   IAMs_20  IAMs_20   03 29 47.5
      comp=Z,811nm,19.0s
MOOW  Moose Ponds       103.14  24   IAMs_20  IAMs_20   03 28 03.1
      comp=Z,896nm,18.0s
F05D  White Salmon      103.15  16   IAMs_20  IAMs_20   03 28 34.9
      comp=Z,1µm,18.0s
FLWY  Flagg Ranch       103.47  24   IAMs_20  IAMs_20   03 30 15.7
      comp=Z,825nm,18.0s
TSUM  Tsumeb            103.57 162   IAMs_20  IAMs_20   03 29 27.4
      comp=Z,1µm,20.0s
E04D  Cinebar           103.64  15   IAMs_20  IAMs_20   03 26 11.8
      comp=Z,1µm,20.0s
LKWY  Lake              104.00  24   IAMs_20  IAMs_20   03 28 24.6
      comp=Z,1µm,19.0s
H10N3 ASCENSION HYDR104.01 128   T        T         04 46 08.5
      baz=204,slow=75,SNR=282
H10N1 ASCENSION HYDR104.02 128   T        T         04 46 11.2
      baz=204,slow=75,SNR=324
H10N2 ASCENSION HYDR104.03 128   T        T         04 46 09.9
      baz=204,slow=75,SNR=318
DLMT  Dillon            104.27  22   IAMs_20  IAMs_20   03 26 53.8
      comp=Z,1µm,21.0s
BOZ   Bozeman (W)       104.70  23   IAMs_20  IAMs_20   03 26 33.2
      comp=Z,874nm,22.0s
RLMT  Red Lodge         104.79  25   IAMs_20  IAMs_20   03 28 42.5
      comp=Z,762nm,20.0s
MSO   Missoula          105.39  21   IAMs_20  IAMs_20   03 27 21.5
      comp=Z,1µm,22.0s
NEW   Newport           106.17  18   IAMs_20  IAMs_20   03 28 12.0
      comp=Z,1µm,21.0s
ECSD  EROS Data Cent    106.98  34   IAMs_20  IAMs_20   03 29 56.0
      comp=Z,1µm,20.0s
LAO   LASA Array        106.99  26   IAMs_20  IAMs_20   03 28 59.9
      comp=Z,1µm,20.0s
EGMT  Eagleton          107.41  23   IAMs_20  IAMs_20   03 29 16.0
      comp=Z,793nm,22.0s
DGMT  Dagmar            109.15  27   IAMs_20  IAMs_20   03 29 38.2
      comp=Z,988nm,22.0s
AGMN  Agassiz Nation    111.31  32   IAMs_20  IAMs_20   03 34 12.4
      comp=Z,808nm,18.0s
CHIR  Chirikof Islan    111.76 353   IAMs_20  IAMs_20   03 32 16.3
      comp=Z,1µm,19.0s
WRAK  Wrangell Islan    112.34   7   IAMs_20  IAMs_20   03 29 52.8
      comp=Z,1µm,20.0s
EYMN  Ely               112.36  35   IAMs_20  IAMs_20   03 35 06.4
      comp=Z,1µm,18.0s
JIS   Juneau Island     114.07   5   IAMs_20  IAMs_20   03 30 21.5
      comp=Z,1µm,21.0s
QIZ   Qiongzhong        114.66 268   PKP      PKiKP     02 53 42.5 +3.5
QIZ                                  LR       LR
      comp=Z,380nm,19.9s
QIZ                                  LR       LR
      comp=Z,240nm,19.1s
QIZ                                  LR       LR
      comp=Z,310nm,23.9s
P18K  Big Mountain,     115.29 354   IAMs_20  IAMs_20   03 35 09.6
      comp=Z,1µm,20.0s
ERM   Erimo             115.34 308   IAMs_20  IAMs_20   03 33 45.8
      comp=Z,701nm,19.0s
BCX   Boston College    115.48  52   IAMs_20  IAMs_20   03 52 08.9
      comp=Z,955nm,22.0s
BCPM  Bancas Point      115.55   2   IAMs_20  IAMs_20   03 37 36.4
      comp=Z,1µm,18.0s
O18K  Koktuh Hills      115.75 354   IAMs_20  IAMs_20   03 35 42.7
      comp=Z,1µm,20.0s
TABL  Table Mountain    116.01   2   IAMs_20  IAMs_20   03 33 53.6
      comp=Z,1µm,20.0s
ISLE  Juniper Island    116.16   1   IAMs_20  IAMs_20   03 34 41.5
      comp=Z,1µm,20.0s
N18K  Kilae Creek       116.61 353   IAMs_20  IAMs_20   03 36 18.6
      comp=Z,852nm,18.0s
BARN  Barnard Glacie    116.62   1   IAMs_20  IAMs_20   03 32 43.8
      comp=Z,1µm,20.0s
N19K  Bonanza Creek     116.66 354   IAMs_20  IAMs_20   03 33 55.8
      comp=Z,1µm,20.0s
VRDI  Verde Repeater    116.78   0   IAMs_20  IAMs_20   03 33 24.9
      comp=Z,1µm,20.0s
GLB   Gilahina Butte    116.99   0   IAMs_20  IAMs_20   03 34 10.6
      comp=Z,1µm,20.0s
N25K  Chitina, Valde    117.16 360   IAMs_20  IAMs_20   03 34 17.0
      comp=Z,1µm,20.0s
N31M  Braeburn, Yuko    117.21   4   IAMs_20  IAMs_20   03 39 56.4
      comp=Z,1µm,18.0s
M24K  Tolsona, Glenn    117.67 359   IAMs_20  IAMs_20   03 36 35.6
      comp=Z,1µm,19.0s
M27K  Edge Creek, AK    117.92   1   IAMs_20  IAMs_20   03 33 56.2
      comp=Z,1µm,20.0s
M26K  Nabesna, AK       117.96   0   IAMs_20  IAMs_20   03 34 05.1
      comp=Z,1µm,20.0s
CUT   Chulitna          118.06 357   IAMs_20  IAMs_20   03 34 37.9
      comp=Z,1µm,20.0s
M30M  Minto, Yukon      118.26   4   IAMs_20  IAMs_20   03 38 33.2
      comp=Z,1µm,19.0s
WAT1  Susitna Watana    118.44 358   P        PKiKP     02 53 45.5 +0.6
      baz=177
L26K  Log Cabin Wild    118.58   0   IAMs_20  IAMs_20   03 35 15.6
      comp=Z,1µm,20.0s
L26K  Log Cabin Wild    118.58   0   P        PKiKP     02 53 46.2 +1.0
      baz=180
L27K  Beaver Creek,     118.63   1   PKPdf    PKiKP     02 53 46.2 +0.9
L27K                                 IAMs_20  IAMs_20   03 36 03.9
      comp=Z,1µm,20.0s
L27K  Beaver Creek,     118.63   1   P        PKiKP     02 53 46.0 +0.7
      baz=181
PPLA  Purkeypile        118.63 356   P        PKiKP     02 53 46.0 +0.5
      baz=175
PKME  Peaks-Kenny Pk    118.63  51   P        PKiKP     02 53 46.6 +0.8
      baz=218
BCAR  Beaver Creek A    118.63   1   PKPdf    PKiKP     02 53 45.9 +0.6
DHY   Denali Highway    118.66 358   IAMs_20  IAMs_20   03 37 23.7
      comp=Z,1µm,19.0s
PEA0B Petropavlovsk-    118.77 324c iPKIKP    PKiKP     02 53 47.3 +1.5
PETK  Petropavlovsk-    118.77 324   PKP      PKPdf     02 53 45.6 -0.2
      comp=Z,7.6nm,1.0s,baz=104,slow=6.3,SNR=7.7
TTA   Tatalina          118.86 354   P        PKiKP     02 53 46.1 +0.3
      baz=172,SNR=10
TRF   Thorofare Moun    119.11 357   P        PKPdf     02 53 45.8 -0.6
      baz=176
CAST  Castle Rocks      119.15 356   P        PKPdf     02 53 45.5 -0.8
      baz=175
K20K  Telida            119.18 355   P        PKPdf     02 53 45.9 -0.4
      baz=174
RIDG  Independent Ri    119.30 360   P        PKPdf     02 53 46.3 -0.2
      baz=179
MCK   McKinley          119.35 357   P        PKPdf     02 53 46.3 -0.3
      baz=177,SNR=6.7
K24K  Donnelly Dome     119.37 359   P        PKiKP     02 53 46.8 +0.1
      baz=179
SCRK  Sand Creek        119.54 360   IAMs_20  IAMs_20   03 34 02.8
      comp=Z,1µm,21.0s
SCRK  Sand Creek        119.54 360   P        PKPdf     02 53 46.8 -0.3
      baz=180,SNR=7.8
K27K  Chicken           119.60   1   IAMs_20  IAMs_20   03 33 35.5
      comp=Z,951nm,21.0s
K27K  Chicken           119.60   1   P        PKiKP     02 53 47.5 +0.4
      baz=181
CHUM  Lake Minchumin    119.62 356   P        PKPdf     02 53 46.7 -0.3
      baz=175,SNR=7.1
DAWY  Dawson            119.67   2   P        PKPdf     02 53 47.2 -0.1
      baz=183,SNR=7.8
BPAW  Bear Paw Mtn.     119.78 356   P        PKPdf     02 53 46.9 -0.5
      baz=175,SNR=10
NJ2   Nanjing           119.80 284  ePKP      PKiKP     02 53 51.7 +3.2
J20K  Nowinta River     120.00 355   P        PKiKP     02 53 48.1 +0.2
      baz=173,SNR=11
J26L  Joseph Creek      120.06   0   P        PKiKP     02 53 48.3 +0.1
      baz=180,SNR=12
PALK  Pallekele         120.13 234   IAMs_20  IAMs_20   03 37 31.1
      comp=Z,627nm,19.0s
J25K  Salcha River,     120.18 359   P        PKPdf     02 53 47.9 -0.3
      baz=179,SNR=6.0
NEA2  Nenana            120.22 357   P        PKPdf     02 53 48.2  0.0
      baz=177,SNR=16
YKA   Yellowknife Ar    120.24  15   PKP      PKPdf     02 53 48.2 -0.1
      comp=Z,3.0nm,1.0s,baz=222,slow=1.8,SNR=21
YKA                                  PKKPbc   PKKPbc    03 03 55.3 -0.3
      comp=Z,1.3nm,0.9s,baz=16,slow=4.5,SNR=14
CCB   Clear Creek Bu    120.25 358   IAMs_20  IAMs_20   03 36 21.6
      comp=Z,1µm,20.0s
CMAR  Chiang Mai Arr    120.28 258   PKP      PKiKP     02 53 50.1 +0.2
      comp=Z,1.0nm,0.3s,baz=196,slow=2.1,SNR=8.6
CMAR  Chiang Mai Arr    120.28 258c iPKIKP    PKiKP     02 53 49.9  0.0
CMAR                                 pmax     pmax
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr    120.28 258            PKPdf     02 53 49.4 -0.4
ILAR  Eielson Array     120.36 359   PKP      PKPdf     02 53 48.4 -0.1
      comp=Z,20nm,1.0s,baz=234,slow=1.7,SNR=80
ILAR                                 PKKPbc   PKKPbc    03 03 54.6 -0.6
      comp=Z,0.4nm,0.9s,baz=336,slow=4.5,SNR=4.9
EGAK  Eagle             120.36   1   IAMs_20  IAMs_20   03 35 33.6
      comp=Z,832nm,20.0s
EGAK  Eagle             120.36   1   P        PKPdf     02 53 48.5  0.0
      baz=182
COLA  College           120.47 358   PKIKP    PKPdf     02 53 48.3 -0.3
COLA  College           120.47 358            PKPdf     02 53 48.3 -0.3
COLA  College           120.47 358   IAMs_20  IAMs_20   03 36 58.7
      comp=Z,1µm,20.0s
COLA  College           120.47 358   P        PKPdf     02 53 47.9 -0.8
      baz=177
TCOL  CIGO, UAF Yank    120.47 358   IAMs_20  IAMs_20   03 36 58.6
      comp=Z,1µm,20.0s
TCOL  CIGO, UAF Yank    120.47 358   P        PKPdf     02 53 47.7 -1.0
      baz=177
MDM   Murphy Dome       120.57 358   IAMs_20  IAMs_20   03 37 01.1
      comp=Z,1µm,20.0s
POKR  Poker Plat Res    120.71 358   P        PKPdf     02 53 48.3 -0.8
      baz=178
I23K  Minto, Yukon-K    120.78 357   P        PKPdf     02 53 48.4 -0.9
      baz=176
I21K  Tanana            120.90 356   P        PKPdf     02 53 48.6 -0.9
      baz=175
I29M  Ogilvie Camp,     121.00   3   IAMs_20  IAMs_20   03 34 53.6
      comp=Z,1µm,22.0s
I29M  Ogilvie Camp,     121.00   3   P        PKPdf     02 53 49.6 -0.2
      baz=184
ANM   Nome              121.25 349   IAMs_20  IAMs_20   03 34 57.2
      comp=Z,1µm,22.0s
ANM   Nome              121.25 349   P        PKPdf     02 53 49.9 -0.3
      baz=166
GAMB  Gambell           121.25 346   IAMs_20  IAMs_20   03 36 57.2
      comp=Z,1µm,20.0s
GAMB  Gambell           121.25 346   P        PKPdf     02 53 49.7 -0.5
      baz=162
H21K  Melozitna Rive    121.41 356   P        PKPdf     02 53 50.5  0.0
      baz=174
H24K  Noodor Dome       121.44 358            PKPdf     02 53 49.6 -1.0
H24K  Noodor Dome       121.44 358   P        PKiKP     02 53 50.8  0.0
      baz=177
H23K  Yukon River       121.47 357   P        PKiKP     02 53 50.8  0.0
      baz=176
COLD  Coldfoot          122.89 357   P        PKiKP     02 53 53.5  0.0
      baz=176
KMBO  Kilima Mbogo      123.16 181   IAMs_20  IAMs_20   03 42 14.2
      comp=Z,1µm,20.0s
INK   Inuvik            124.12   5   PKIKP    PKPdf     02 53 55.6  0.0
INK   Inuvik            124.12   5   PKPdf    PKPdf     02 53 55.6  0.0
INK   Inuvik            124.12   5   P        PKPdf     02 53 55.1 -0.5
      baz=187
TOLK  Toolik Lake Re    124.29 357   IAMs_20  IAMs_20   03 41 59.5
      comp=Z,1µm,19.0s
TOLK  Toolik Lake Re    124.29 357   P        PKiKP     02 53 56.6 +0.3
      baz=176
RDOG  Red Dog Mine      124.43 351   IAMs_20  IAMs_20   03 47 14.2
      comp=Z,715nm,18.0s
RDOG  Red Dog Mine      124.43 351   P        PKPdf     02 53 56.3 +0.1
      baz=167
PZH   PanZhiHua         125.11 266   PKP      PKiKP     02 53 59.6 +0.2
LYN   LuoYang           125.19 281  ePKP      PKPdf     02 53 55.4 -3.3
LYN                                  PP       PP        02 55 56.3 +7.3
LYN                                  AMB      AMB
      comp=Z,190nm,4.9s
LYN                                  LR       LR
      comp=Z,390nm,19.0s
LYN                                  LR       LR
      comp=Z,420nm,19.2s
LYN                                  LR       LR
      comp=Z,430nm,20.5s
C36M  Paulatuk          125.76   9   IAMs_20  IAMs_20   03 39 26.6
      comp=Z,1µm,21.0s
C36M  Paulatuk          125.76   9   P        PKPdf     02 53 58.3 -0.4
      baz=194
KLR   Kul'dur           126.00 306c iPKIKP    PKPdf     02 53 59.9 +0.1
KLR                                  pmax     pmax
      comp=Z,23nm,2.5s
MA2   Magadan           126.28 325c iPKIKP    PKiKP     02 54 00.3 -0.1
MA2                                  pmax     pmax
      comp=Z,7.0nm,1.3s
MA2   Magadan           126.28 325   IAMs_20  IAMs_20   03 40 57.4
      comp=Z,1µm,20.0s
SCHQ  Schefferville     126.93  45   PKP      PKPdf     02 54 01.5 +0.1
      comp=Z,6.8nm,1.0s,baz=235,slow=1.5,SNR=6.5
SCHQ  Schefferville     126.93  45   PKPdf    PKPdf     02 54 01.0 -0.4
CD2   Chengdu           127.34 271   PKP      PKiKP     02 54 04.8 +1.2
LODK  Lodwar            127.69 179   IAMs_20  IAMs_20   03 43 28.1
      comp=Z,1µm,22.0s
A36M  Sachs Harbour     128.25   7   IAMs_20  IAMs_20   03 46 56.3
      comp=Z,861nm,18.0s
A36M  Sachs Harbour     128.25   7   P        PKPdf     02 54 03.2 -0.2
      baz=193
SEY   Seymchan          128.37 328c iPKIKP    PKiKP     02 54 04.6 +0.1
SEY                                  pmax     pmax
      comp=Z,8.0nm,1.0s
KOWA  Kowa              128.51 127   IAMs_20  IAMs_20   03 48 45.5
      comp=Z,734nm,20.0s
BILL  Bilibino          128.97 338c iPKIKP    PKiKP     02 54 05.4 -0.2
BILL                                e                   02 56 11.2
BILL                                eSS       SS        03 14 01.2  +29
BILL                                 pmax     pmax
      comp=Z,3.0nm,1.3s
BILL                                 MLR      MLR
      comp=Z,307nm,18.0s
XLT   XiLinHaoTe        129.94 292  ePKP      PKiKP     02 54 08.4  0.0
XLT                                  AMB      AMB
      comp=Z,130nm,5.4s
XLT                                  LR       LR
      comp=Z,620nm,19.4s
XLT                                  LR       LR
      comp=Z,310nm,16.8s
LZH   Lanzhou           131.11 276  ePKP      PKiKP     02 54 12.2 +1.1
LZH                                  AMB      AMB
      comp=Z,470nm,9.0s
LZH                                  LR       LR
      comp=Z,420nm,18.2s
LZH                                  LR       LR
      comp=Z,350nm,17.9s
LZH                                  LR       LR
      comp=Z,500nm,20.1s
FURI  Furi              133.08 183   IAMs_20  IAMs_20   03 47 13.1
      comp=Z,897nm,21.0s
SOCY  Socotra           134.23 205            PKPdf     02 54 16.4 -0.2
SOCY                                 IAMs_20  IAMs_20   03 46 41.0
      comp=Z,751nm,20.0s
YAK   Yakutsk           135.41 318   IAMs_20  IAMs_20   03 43 26.2
      comp=Z,513nm,21.0s
ATD   Arta Tunnel       135.43 189   IAMs_20  IAMs_20   03 47 24.3
      comp=Z,804nm,22.0s
GOMU  GeErMu            136.27 269   PKP      PKPdf     02 54 20.4 +0.2
GOMU                                 LR       LR
      comp=Z,120nm,16.9s
GOMU                                 LR       LR
      comp=Z,130nm,16.3s
GOMU                                 LR       LR
      comp=Z,120nm,17.3s
PMOZ  Porto Moniz, M    136.81  99  eLR       LR        03 42 39.9
      comp=Z,274nm,20.0s
SONM  Songino Array     137.62 290   PKhKP    PKPpre    02 54 11.1
      comp=Z,0.9nm,0.8s,baz=170,slow=4.0,SNR=5.3
SONM                                 PKP      PKPdf     02 54 21.2 -0.8
      comp=Z,1.2nm,0.8s,baz=149,slow=2.1,SNR=4.9
SONM                                 PP       PP        02 56 59.1  -10
      comp=Z,0.3nm,0.7s,baz=141,slow=4.8,SNR=1.7
SONM  Songino Array     137.62 290            PKPdf     02 54 21.5 -0.5
TULEG Thule             140.28  21  i P       PKiKP     02 54 29.1 +0.8
ZAK   Zakamensk         140.78 291  ePKHKP    PKPpre    02 54 13.0
ZAK                                  pmax     pmax
      comp=Z,9.0nm,1.6s
TIXI  Tiksi             140.82 330  i PKIKP   PKPdf     02 54 25.0 -1.9
TIXI                                 pmax     pmax
      comp=Z,22nm,1.1s
TIXI  Tiksi             140.82 330   IAMs_20  IAMs_20   03 48 43.4
      comp=Z,570nm,20.0s
MOY   Mondy             142.70 292  ePKIKP    PKPdf     02 54 27.2 -3.8
MOY                                  pmax     pmax
      comp=Z,50nm,2.4s
KNGR  Kungurtug, Tuv    143.96 288  i PKIKP   PKPbc     02 54 31.2  0.0
ANGG  Ammassalik, Gr    144.79  44            PKPab     02 54 31.9 -1.2
ANGG  Ammassalik, Gr    144.79  44  i P       PKPab     02 54 31.7 -1.3
ICESG Greenland Ices    145.17  38  i P       PKPbc     02 54 32.5 -2.3
PCVE  Castro Verde      145.41 103  ePKPab    PKPab     02 54 37.7 +1.5
PVAQ  Vaqueiros         145.42 104  ePKPab    PKPab     02 54 37.9 +1.6
PVAQ  Vaqueiros         145.42 104  eLR       LR        03 44 12.6
      comp=Z,385nm,20.0s
WMQ   Urumqi            145.44 272   PKPbc    PKPbc     02 54 36.1  0.0
WMQ                                  LR       LR
      comp=Z,470nm,20.9s
WMQ                                  LR       LR
      comp=Z,380nm,20.5s
MESJ  Messejana         145.46 103  ePKP      PKPab     02 54 37.3 +0.9
MESJ                                 IAMs_20  IAMs_20   03 49 53.0
      comp=Z,376nm,16.4s
MESJ  Messejana         145.46 103  ePKIKP    PKPab     02 54 37.3 +0.9
PNCL  Nicolau / Gran    145.48 102  ePKPbc    PKPab     02 54 38.0 +1.5
SFS   San Fernando      145.55 106   IAMs_20  IAMs_20   04 11 13.9
      comp=Z,964nm,19.0s
UOSS  Minazif           145.78 214            PKPdf     02 54 35.6 -1.5
UOSS  Minazif           145.78 214   IAMs_20  IAMs_20   03 52 58.4
      comp=Z,748nm,22.0s
NIL   Nilore            146.14 245   PKIKP    PKPdf     02 54 36.7 -0.8
NIL                                  MLR      MLR
      comp=Z,400nm,19.0s
NIL   Nilore            146.14 245            PKPdf     02 54 36.7 -0.8
NIL   Nilore            146.14 245   IAMs_20  IAMs_20   04 02 27.8
      comp=Z,428nm,19.0s
PMTG  Montargil         146.33 101  ePKPdf    PKPab     02 54 39.5 -0.1
PESTR Estremoz          146.53 102  ePKPdf    PKPbc     02 54 39.6 +0.1
PMRV  Marv??o           147.04 101  eSS       SS        03 17 18.3  +11
PMRV  Marv??o           147.04 101  eLR       LR        03 45 00.1
      comp=Z,567nm,18.0s
PCBR  Castelo Branco    147.28 101  ePKPbc    PKPbc     02 54 42.3 +0.8
MTE   Manteigas         147.63 100  ePKPbc    PKPbc     02 54 43.1 +0.5
MTE   Manteigas         147.63 100  eSS       SS        03 17 19.8 +6.2
MTE   Manteigas         147.63 100  eLR       LR        03 46 41.1
      comp=Z,504nm,20.0s
PVIS  Viseu             147.65  99  ePKPbc    PKPbc     02 54 43.3 +0.7
PVRL  Vila Real         148.13  99  ePKPbc    PKiKP     02 54 45.7 +0.1
POLO  Lamas de Olo      148.15  98  ePKPbc    PKPbc     02 54 44.5 +0.5
PGAV  Gavieira, Arco    148.28  97  ePKPbc    PKiKP     02 54 45.4 -0.5
PGAV  Gavieira, Arco    148.28  97  eLR       LR        03 47 17.4
      comp=Z,332nm,18.0s
MVO   Moncorvo          148.44  99  ePKPbc    PKiKP     02 54 46.0 -0.2
MVO   Moncorvo          148.44  99  eLR       LR        03 45 56.3
      comp=Z,387nm,18.0s
KBL   Kabul             148.95 240   PKP2     PKPbc     02 54 45.7 -0.7
KBL   Kabul             148.95 240            PKPbc     02 54 45.7 -0.7
PBRG  Braganca          149.03  99  ePKPbc    PKiKP     02 54 47.1 -0.3
ESDC  Sonseca Array     149.09 105   PKPbc    PKPbc     02 54 46.8 +0.5
      comp=Z,8.1nm,1.0s,baz=261,slow=2.4,SNR=26
KSH   Kashi             149.11 255   PKPbc    PKPdf     02 54 43.4 +1.0
KSH                                  PP       PP        02 58 18.1 -0.3
KSH                                  SS       SS        03 17 35.9 +5.5
KSH                                  AMB      AMB
      comp=Z,460nm,5.6s
KSH                                  LR       LR
      comp=Z,300nm,18.2s
KSH                                  LR       LR
      comp=Z,160nm,17.9s
KSH                                  LR       LR
      comp=Z,530nm,20.2s
PDGK  Podgornoye        149.75 264   PKP2     PKPbc     02 54 47.1 -0.9
NOR   Nord              150.15  14  i P       PKPbc     02 54 47.4 -0.3
MK31  Makanchi Array    150.27 272  i PKIKP   PKPbc     02 54 48.2 -0.8
MKAR  Makanchi Array    150.27 272   PKP      PKPdf     02 54 43.6 -0.3
      comp=Z,1.3nm,1.0s,baz=90,slow=2.4,SNR=6.3
MKAR                                 PKPbc    PKPbc     02 54 48.7 -0.3
      comp=Z,34nm,1.0s,baz=108,slow=4.0,SNR=124
MKAR  Makanchi Array    150.27 272c iPKIKP    PKPbc     02 54 48.2 -0.8
MKAR                                 pmax     pmax
      comp=Z,34nm,1.0s
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MAKZ	Makanchi	150.46	272	PKIKP	PKPdf	02 54 43.7	-0.4
MAKZ	Makanchi	150.46	272	PKPdf	PKPdf	02 54 43.7	-0.4
DAG	Danmarks Havn	151.50	23	*i* P	PKPbc	02 54 50.0	-1.0
DBG	Daneborg	151.64	28	*e*P	PKPbc	02 54 50.4	-0.9
HRA	Herat	151.99	231	PKPdf	PKPdf	02 54 45.9	-1.3
AAK	Ala-Archa	152.07	258	PKPbc	PKPbc	02 54 53.4	-0.1
	comp=Z,1.6nm,0.3s,baz=289,slow=1.8,SNR=8.7						
AAK	Ala-Archa	152.07	258	*c i*PKIKP	PKPbc	02 54 53.3	-0.2
AAK				pmax	pmax		
	comp=Z,33nm,2.5s						
AAK	Ala-Archa	152.07	258	PKPdf	PKPdf	02 54 45.8	-1.1
ZALV	Zalesovo Beam	152.40	287	PKPbc	PKPbc	02 54 52.6	-1.0
	comp=Z,14nm,0.8s,baz=168,slow=2.7,SNR=36						
ZALV				PKPab	PKPab	02 55 02.6	-1.3
	comp=Z,18nm,0.8s,baz=106,slow=5.2,SNR=14						
ZALV	Zalesovo Beam	152.40	287	PKIKP	PKPdf	02 54 45.1	-1.7
ZALV	Zalesovo Beam	152.40	287	PKPdf	PKPdf	02 54 45.1	-1.7
NRIK	Noril'sk	153.78	321	PKPbc	PKPbc	02 54 55.9	-0.3
	comp=Z,3.3nm,0.5s,baz=88,slow=1.9,SNR=11						
NRIK				PKPab	PKPab	02 55 09.1	-0.2
	comp=Z,28nm,0.7s,baz=108,slow=3.8,SNR=21						
NRIK	Noril'sk	153.78	321		PKPbc	02 54 56.2	0.0
KURK	Kurchatov	154.40	276	PKIKP	PKPdf	02 54 48.1	-1.6
KURK	Kurchatov	154.40	276		PKPdf	02 54 47.4	-2.3
KURK	Kurchatov	154.40	276	IAMs_20	IAMs_20	04 15 01.3	
	comp=Z,423nm,21.0s						
KURBB	Kurchatov Arra	154.41	276	PKP	PKPdf	02 54 48.1	-1.7
	comp=Z,1.0nm,1.0s,baz=158,slow=0.8,SNR=6.4						
KURBB				PKPbc	PKPbc	02 54 57.3	-0.8
	comp=Z,11nm,1.1s,baz=118,slow=1.8,SNR=20						
KURBB	Kurchatov Arra	154.41	276	PKIKP	PKPbc	02 54 56.9	-1.2
GHAJ	Ghor Haditha	155.42	179	IAMs_20	IAMs_20	04 02 35.9	
	comp=Z,650nm,20.0s						
KBS	Kingsbay	155.50	11	IAMs_20	IAMs_20	03 59 46.6	
	comp=Z,544nm,20.0s						
OTUK	Ortayu	156.69	266	PKP2	PKPab	02 55 21.1	-1.3
IDI	Anoyia	158.00	155	IAMs_20	IAMs_20	04 09 36.9	
	comp=Z,824nm,20.0s						
KARP	Karpathos	158.75	159	IAMs_20	IAMs_20	04 06 06.5	
	comp=Z,530nm,21.0s						
CSS	Mathiatis	158.98	174	IAMs_20	IAMs_20	04 05 52.3	
	comp=Z,551nm,20.0s						
BRVK	Borovoye	160.07	276	PKP2	PKPab	02 55 35.0	-1.9
BRVK	Borovoye	160.07	276	PKPab	PKPab	02 55 35.3	-1.6
TUE	Stuetta	160.86	108		PKPdf	02 54 57.2	-1.0
DAVA	Damuels	161.65	107	*e*P	PKPdf	02 54 60.0	+1.0
FETA	Feichten	161.94	109	*e*P	PKPdf	02 55 01.3	+2.1
GURO	Guroymak-BITLI	162.21	195		PKPdf	02 54 59.2	-0.6
GURO					PKPab	02 55 47.5	+0.8
SQTA	Sankt Quirin	162.32	109	*e*P	PKPdf	02 54 59.4	-0.2
MOTA	Moosalm	162.35	108	*e*P	PKPdf	02 54 59.7	0.0
WTTA	Wattenberg	162.58	109	*e*P	PKPdf	02 55 01.2	+1.3
KBA	Koelnbreinsper	163.36	112	*e*P	PKPdf	02 54 60.0	-0.7
BRTR	Keskin Array B	163.74	173	PKP	PKPdf	02 55 00.8	-0.4
	comp=Z,2.4nm,0.9s,baz=222,slow=1.7,SNR=8.9						
BRTR				PKPab	PKPab	02 55 53.0	-0.4
	comp=Z,1.9nm,0.8s,baz=194,slow=6.2,SNR=5.7						
BRTR	Keskin Array B	163.74	173	PKIKP	PKPdf	02 55 00.2	-1.1
BRTR						02 55 53.0	
BRTR	Keskin Array B	163.74	173		PKPdf	02 55 00.2	-1.1
BRTR					PKPab	02 55 53.0	-0.4
ARSA	Arzberg	164.59	116	*e*P	PKPdf	02 55 02.6	+1.0
GERES	GERESS Array B	164.64	108	PKP	PKPdf	02 55 01.7	0.0
	comp=Z,0.9nm,0.9s,baz=41,slow=4.3,SNR=6.0						
MAK	Makhachkala	165.12	214	*e*PKIKP	PKPdf	02 54 57.5	-4.6
MAK				*e*		03 02 02.6	
MAK				*e*SS	SS	03 20 17.7	-2.8
MAK				*e*SSS	SSS	03 26 38.8	
MAK				pmax	pmax		
	comp=Z,18nm,0.4s						
ARCES	ARCESS Array B	165.50	15	PKPab	PKPab	02 55 60.0	-0.3
	comp=Z,1.8nm,0.8s,baz=350,slow=4.7,SNR=4.2						
ARCES	ARCESS Array B	165.50	15	PKP2	PKPab	02 56 00.0	-0.3
CLL	Collm	165.55	99	*e*PKIKP	PKPdf	02 55 02.0	-0.2
CLL				*i*		02 56 01.3	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,15nm,1.6s						
CLL				MLR	MLR		
	comp=Z,700nm,20.4s						
CLL	Collm	165.55	99	LmH		04 19 00.0	
	comp=N,500nm,20.2s						
CLL	Collm	165.55	99	*e*PKPdf	PKPdf	02 55 02.0	-0.2
	comp=Z,5.0nm,1.0s						
CLL	Collm	165.55	99	*e*PKPdif	PKPdf	02 55 27.0	+25
CLL	Collm	165.55	99	*i* PKPab	PKPab	02 56 01.3	+0.3
	comp=Z,15nm,1.6s						
CLL	Collm	165.55	99	*e*PP	PP	02 59 49.0	+0.2
CLL	Collm	165.55	99	*e*SKKSac	SKKSac	03 06 32.0	-3.3
CLL	Collm	165.55	99	*e*PSKS		03 10 13.0	
CLL	Collm	165.55	99	*e*PPS	PPS	03 13 36.0	
CLL	Collm	165.55	99	*e*SS	SS	03 20 14.0	-12
CLL	Collm	165.55	99	*e*PSPS		03 22 08.0	
CLL	Collm	165.55	99	*e*PSSrev		03 26 30.0	
CLL	Collm	165.55	99	*e*SSSS		03 31 24.0	
CLL	Collm	165.55	99	*e*x	x	03 33 30.0	
CLL	Collm	165.55	99	LmV		04 16 00.0	
	comp=Z,700nm,20.4s						
CLL	Collm	165.55	99	LmH		04 19 00.0	
	comp=E,200nm,18.5s						
AKTO	Aktyubinsk	165.81	257	PKPab	PKPab	02 56 00.8	-1.4
	comp=E,4.0nm,0.8s,baz=121,slow=6.0,SNR=11						
AKTO	Aktyubinsk	165.81	257	PKP2	PKPab	02 55 59.3	-2.9
BRG	Berggiesshubel	165.87	102	Amp		02 55 11.4	
	comp=Z,16nm,1.6s						
BRG	Berggiesshubel	165.87	102	*e*PKIKP	PKPdf	02 55 09.7	+7.2
BRG				pmax	pmax		
	comp=Z,16nm,1.6s						
BRG	Berggiesshubel	165.87	102	*e*(PKP)	PKPdf	02 55 09.7	+7.2
ZEI	Tsey	165.96	204	*e*PKP2	PKPab	02 56 01.0	-2.2
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KBZ	Khabaz	167.07	202	PKP	PKPdf	02 55 04.3	+0.7
	comp=Z,1.4nm,0.9s,baz=143,slow=1.1,SNR=3.1						
KBZ				PKPab	PKPab	02 56 08.0	+0.2
	comp=Z,2.9nm,1.0s,baz=100,slow=4.6,SNR=5.0						
KIV	Kislovodsk	167.34	202	*e*PKIKP	PKPdf	02 55 02.9	-1.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	Arti	167.49	282	PKPab	PKPab	02 56 07.5	-2.0
	comp=Z,0.7nm,0.4s,baz=110,slow=5.5,SNR=5.7						
UZH	Uzhgorod	168.85	125	⇑*i*PKP2	PKPab	02 56 16.8	+1.2
ANN	Anapa	168.87	185	*e*PKIKP	PKPdf	02 55 05.5	+0.7
ANN				*e*		03 00 06.7	
ANN				*e*PPP	PPP	03 04 04.4	
ANN				pmax	pmax		
	comp=Z,33nm,1.3s						
BURAR	Bucovina Array	169.32	136		PKPdf	02 55 04.8	-0.5
BURAR					PKPab	02 56 17.7	-0.2
BUR08	Bucovina Ar. S	169.33	136		PKPab	02 56 18.2	+0.3
FINES	FINESS Array B	172.36	39	PKPab	PKPab	02 56 29.3	-1.5
	comp=Z,4.6nm,1.0s,baz=349,slow=5.8,SNR=8.7						
AKASG	Malin Array Be	173.36	139	PKP	PKPdf	02 55 05.6	-1.4
	comp=Z,0.2nm,0.3s,baz=79,slow=1.0,SNR=6.1						
AKASG				PKPab	PKPab	02 56 34.7	-0.9
	comp=Z,0.4nm,0.2s,baz=217,slow=3.2,SNR=4.3						
VRH	Novokhopyorsk	174.24	218	*e*PKP2	PKPab	02 56 34.3	-5.1
VRH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NACGM	Naroch	174.58	97	*e*PKP	PKPdf	02 55 08.1	+0.9
	baz=260						
KLMR	Klimovskoe	174.71	342	*e*PKIKP	PKPdf	02 55 02.5	-4.6
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	Klimovskoe	174.71	342	*e*PKPdf	PKPdf	02 55 02.5	-4.6
KLMR				AMP		02 55 08.3	
	comp=Z,13nm,1.4s						
VORD	Divnogorie	174.72	202	*e*PKP2	PKPab	02 56 37.6	-3.9
VORD				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VSR	Storozhevoye	174.98	202	*e*PKP2	PKPab	02 56 39.6	-3.1
VSR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VORR	Voronezh	175.40	205	*e*PKIKP	PKPdf	02 55 05.7	-1.9
VORR				pmax	pmax		
	comp=Z,30nm,0.5s						
LPSR	Galich'ya Gora	176.32	208	*e*PKP2	PKPab	02 56 45.6	-3.0
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						

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*IDC **03** 02:38:46.5±0.8, 13°.63N×91°.02W, h0^{km}, mb4.2/12, mbtmp4.2/14, ML3.8/2, MS3.8/11, Error ellipse: s-maj=29.3km s-min=15.4km az=55.0*

*INET **03** 02:38:51.1±1.1, 13°.57N×91°.36W, h3^{km}±7^{km}, MW3.9*

*NEIC **03** 02:38:51.6±1.3, 13°.62N±0°.06×91°.40W±0°.07, h27^{km}±5^{km}, mb4.5/199, Mwr4.5/11, Md4.9(SNET), Error ellipse: s-maj=12.0km s-min=6.7km az=52.0*

*UCR **03** 02:38:51.6±1.4, 13°.73N×91°.24W, h4^{km}±6^{km}, ML4.7, mb4.5(NEIC)*

*SNET **03** 02:38:51.7±1.3, 13°.70N×91°.27W, h8^{km}±8^{km}, ML4.9*

*NEIC **03** 02:38:53.8, 13°.61N×91°.37W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.23; M$_{\theta\theta}$0.99; M$_{\phi\phi}$2.24; M$_{r\theta}$-2.98; M$_{\theta\phi}$5.53; M$_{\phi r}$2.16; Fault plane solution: M$_0$7.23000×10^{15} NP1:φ$_s$185.27000°, δ59.71000°, λ-148.88000°. NP2:φ$_s$78.33000°, δ63.50000°, λ-34.31000°. Principal axes: T 7.1910, Plg2.0000°, Azm133.0000°; N 0.0794, Plg48.0000°, Azm225.0000°; P -7.2704, Plg42.0000°, Azm40.0000°;*

*GCG **03** 02:38:57.0±0.6, 13°.94N×91°.30W, h39^{km}±31^{km}, MD4.5*

ISC 03 02:38:53.5±1.0**, 13°.65N**±0°.05×**91°.34W**±0°.05**, h50**^{km}±9^{km}**, n297,** σ1^{s}**03**/244**, mb4.5**/87**, MS3.8**/11**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.93	31	*e*P	Pn	02 39 10.7	+0.2
RTAL	Retalhuleu	0.94	339		Pn	02 39 08.1	-2.2
RTAL				Sn	Sn	02 39 22.0	-0.7
RTAL	Retalhuleu	0.94	339	*e*P	Pn	02 39 08.5	-1.9
RTAL				*e*S	Sn	02 39 22.3	-0.5
PCG	Pacaya	1.03	44	⇓*i*P	Pn	02 39 12.3	+0.6
STG3	Santiaguito 3,	1.08	348	*e*P	Pn	02 39 12.4	0.0
NBG	Las Nubes	1.34	46	*e*P	Pn	02 39 17.3	+1.2
NUBE	Las Nubes	1.54	80	*e*P	Pn	02 39 17.4	-1.2
NUBE				*e*S	Sn	02 39 36.8	-0.8
NUBE	Las Nubes	1.54	80	*e*P	Pn	02 39 17.4	-1.2
NUBE				*e*S	Sn	02 39 36.8	-0.8
SLOZ	Alcaldia de Sa	1.56	76	*e*P	Pn	02 39 18.1	-0.8
HUEH	Huehuetenango	1.67	355		Pn	02 39 20.3	-0.1
HUEH				Sn	Sn	02 39 40.6	-0.2
HUEH	Huehuetenango	1.67	355	*e*P	Pn	02 39 21.2	+0.7
HUEH				*e*S	Sn	02 39 43.0	+2.1
HUEH	Huehuetenango	1.67	355	*e*P	Pn	02 39 21.2	+0.7
HUEH				*e*S	Sn	02 39 43.0	+2.1
HUEH	Huehuetenango	1.67	355	*e*P	Pn	02 39 21.4	+0.9
CEVE	Cerro Verde	1.68	84	*e*P	Pn	02 39 19.9	-0.8
CEVE				*e*S	Sn	02 39 42.8	+1.7
CEVE				IAML		02 39 51.6	
	comp=Z,13μm,0.4s						
CEVE	Cerro Verde	1.68	84	*e*P	Pn	02 39 19.9	-0.8
CEVE				*e*S	Sn	02 39 42.8	+1.7
CEVE				IAML		02 39 51.6	
	comp=Z,13μm,0.4s						
SBLS	San Blas	1.68	83	*e*P	Pn	02 39 19.8	-0.9
SBLS	San Blas	1.68	83	*e*P	Pn	02 39 19.8	-0.9
SNJE	San Jose	1.70	82	*e*P	Pn	02 39 20.2	-0.7
SNJE	San Jose	1.70	82	*e*P	Pn	02 39 20.2	-0.7
JAYA	Jayaque - finc	1.84	90	*e*P	Pn	02 39 22.0	-0.8
JAYA	Jayaque - finc	1.84	90	*e*P	Pn	02 39 22.0	-0.8
CEDA	San Andres	1.90	85	*e*S	Sn	02 39 47.5	+1.3
CEDA				IAML		02 39 58.7	
	comp=Z,11μm,0.5s						
CEDA	San Andres	1.90	85	*e*S	Sn	02 39 47.5	+1.3
CEDA				IAML		02 39 58.7	
	comp=Z,11μm,0.5s						
LALI	Alcalda de L	1.97	94	*e*P	Pn	02 39 23.8	-0.7
LALI				*e*S	Sn	02 39 49.8	+1.9
LALI	Alcalda de L	1.97	94	*e*P	Pn	02 39 23.8	-0.7
LALI				*e*S	Sn	02 39 49.8	+1.9
LALI	Alcalda de L	1.97	94	*e*P	Pn	02 39 24.5	+0.1
BOQS	Boqueron	2.00	87	*e*P	Pn	02 39 24.6	-0.5
BOQS	Boqueron	2.00	87	*e*P	Pn	02 39 24.6	-0.5
UEES	Universidad Ev	2.04	88	*e*P	Pn	02 39 25.4	-0.1
UEES	Universidad Ev	2.04	88	*e*P	Pn	02 39 25.4	-0.1
SNET	Serv Nac Est T	2.05	89		Pn	02 39 25.0	-0.6
SNET	Serv Nac Est T	2.05	89	*e*P	Pn	02 39 24.4	-1.2
SNET				*e*S	Sn	02 39 51.9	+1.9
SNET	Serv Nac Est T	2.05	89	*e*P	Pn	02 39 24.4	-1.2
SNET				*e*S	Sn	02 39 51.9	+1.9
SNET	Serv Nac Est T	2.05	89	*e*P	Pn	02 39 25.4	-0.2
MTO3	Montecristo	2.06	69		Pn	02 39 26.3	+0.4
MTO3	Montecristo	2.06	69	*e*P	Pn	02 39 26.3	+0.4
MTO3				*e*S	Sn	02 39 52.8	+2.3
MTO3	Montecristo	2.06	69	*e*P	Pn	02 39 26.3	+0.4
MTO3				*e*S	Sn	02 39 52.8	+2.3
MTO3	Montecristo	2.06	69	*e*P	Pn	02 39 26.2	+0.4
MTO3				*e*S	Sn	02 39 54.3	+3.8
ESQI	Esquipulas	2.14	65		Pn	02 39 27.6	+0.7
ESQI	Esquipulas	2.14	65	*e*P	Pn	02 39 27.3	+0.5
MRL	Marmol	2.15	48	*e*P	Pn	02 39 28.7	+1.6
LFU	La Fuente	2.17	87	*e*P	Pn	02 39 27.1	-0.1
LFU	La Fuente	2.17	87	*e*P	Pn	02 39 27.1	-0.1
LFRS	El Faro	2.22	90	*e*P	Pn	02 39 28.1	+0.2
LFRS	El Faro	2.22	90	*e*P	Pn	02 39 28.1	+0.2
LBRS	Las Brisas	2.23	87	*e*P	Pn	02 39 27.7	-0.4
LBRS	Las Brisas	2.23	87	*e*P	Pn	02 39 27.7	-0.4
SJTE	Alcalda de S	2.27	91	*e*P	Pn	02 39 28.0	-0.6
SJTE	Alcalda de S	2.27	91	*e*P	Pn	02 39 28.0	-0.6
PAVA	Las Pavas	2.34	88	*e*P	Pn	02 39 29.5	0.0
PAVA	Las Pavas	2.34	88	*e*P	Pn	02 39 29.5	0.0
PAVA	Las Pavas	2.34	88	*e*P	Pn	02 39 29.8	+0.2
COEG	Centro de Oper	2.39	90	*e*P	Pn	02 39 30.7	+0.4
COEG				*e*S	Sn	02 39 59.5	+1.1
COEG	Centro de Oper	2.39	90	*e*P	Pn	02 39 30.7	+0.4
COEG				*e*S	Sn	02 39 59.5	+1.1
COEG	Centro de Oper	2.39	90	*e*P	Pn	02 39 30.6	+0.3
SCLA	Alcaldia de Sa	2.54	89	*e*P	Pn	02 39 32.4	+0.1
SCLA	Alcaldia de Sa	2.54	89	*e*P	Pn	02 39 32.4	+0.1
CCIG	Comitan	2.73	344		Pn	02 39 33.5	-1.5
COEB	Comit de Eme	2.74	93	*e*P	Pn	02 39 34.9	-0.1
COEB	Comit de Eme	2.74	93	*e*P	Pn	02 39 34.9	-0.1
COEB	Comit de Eme	2.74	93	*e*P	Pn	02 39 35.2	+0.1
PACA	Pacayal	2.94	93	*e*P	Pn	02 39 37.9	0.0
PACA	Pacayal	2.94	93	*e*P	Pn	02 39 37.9	0.0
PACA	Pacayal	2.94	93	*e*P	Pn	02 39 37.8	0.0
VSM	San Miguel	2.99	94	*e*P	Pn	02 39 39.7	+1.1
VSM	San Miguel	2.99	94	*e*P	Pn	02 39 39.7	+1.1
PETF	Flores	3.55	23		Pn	02 39 46.9	+0.9
TGUH	Tegucigalpa,Un	3.97	84	Pn	Pn	02 39 52.0	0.0
TGUH	Tegucigalpa,Un	3.97	84	*e*P	Pn	02 39 52.3	+0.3
CRIN	San Cristobal	4.28	102		Pn	02 39 56.1	-0.1
CRIN	San Cristobal	4.28	102	*e*P	Pn	02 39 56.4	+0.1
CRIN				*e*S	Sn	02 40 45.8	+0.8
CNGN	Cerro Negro	4.67	104		Pn	02 39 59.5	-1.9
CNGN	Cerro Negro	4.67	104	*e*P	Pn	02 39 60.0	-1.5
CMIG	Matias Romero	4.84	315	Pn	Pn	02 40 02.2	-1.5
	comp=Z,1.9nm,0.3s,baz=140,slow=11,SNR=26						
CMIG				Sn	Sn	02 41 02.8	+4.3
	comp=Z,9.2nm,0.3s,baz=28,slow=18,SNR=7.1						
CMIG				LR	LR	02 41 58.2	
	comp=Z,517nm,20.7s,baz=160,slow=38						
	comp=Z,6.2nm,0.3s						
MOMN	Momotombo	4.84	104	*e*P	Pn	02 40 04.7	+0.9
COPN	Copaltepe	4.86	107	*e*P	Pn	02 40 03.0	-1.0
APYN	Apoyeque	5.07	106	*e*P	Pn	02 40 06.2	-0.7
HUEN		5.20	104	*e*P	Pn	02 40 07.9	-0.9
MATN	Matagalpa	5.32	97		Pn	02 40 10.0	-0.5
BOAB	BOACO BROADBAN	5.66	102	Pn	Pn	02 40 14.3	-0.7
BOAB	BOACO BROADBAN	5.66	102	*e*P	Pn	02 40 14.0	-1.0
ACON	Acoyapa	6.24	105		Pn	02 40 21.4	-1.7
HZTE	Horizontes, Gu	6.33	117		Pn	02 40 23.8	-0.5
ORTG	Ortega, Santa	6.62	119	Pn	Pn	02 40 28.9	+0.6
DUNO	Dulce Nombre,	6.73	121		Pn	02 40 30.0	+0.2
ESPN	Las Esperanzas	7.01	101		Pn	02 40 32.8	-0.9
JTS	Las Juntas de	7.08	117	Pn	Pn	02 40 35.2	+0.6
CAO2	Cobano, Puntar	7.26	122		Pn	02 40 37.5	+0.5
LAFE	Finca La Fe, P	7.36	121	*e*P	Pn	02 40 38.3	-0.1
JACO	JACO, Garabito	7.65	120		Pn	02 40 41.6	-0.8
TLIG	Tlapa	7.97	300		Pn	02 40 45.0	-1.9
LCR2	La Lucha 2	8.17	118	*e*P	Pn	02 40 52.0	+2.4
RIMA	Rio Macho	8.28	117		Pn	02 40 50.2	-0.9
RIMA	Rio Macho	8.28	117	*e*P	Pn	02 40 53.8	+2.6
BATAN	Batan	8.56	114		Pn	02 40 53.8	-1.0
PEZE	Perez Zeledon,	8.62	119		Pn	02 40 56.4	+0.6
SRBA	San Rafael, Bu	8.97	118	Pn	Pn	02 40 59.8	-0.8
SRBA	San Rafael, Bu	8.97	118	*e*P	Pn	02 41 01.4	+0.8
DRK0	Durika	9.05	118		Pn	02 41 01.6	-0.1
DRK0	Durika	9.05	118	*e*P	Pn	02 41 02.8	+1.0
POTG	Potrero Grande	9.27	119	*e*P	Pn	02 41 05.9	+1.3
PIRO	Carate, Puerto	9.43	123	*e*P	Pn	02 41 08.8	+2.1
CDITO	Canoas	9.72	120		Pn	02 41 10.9	+0.2
BRU2	Volcan	9.76	119		Pn	02 41 11.4	0.0
BCIP	Isla Barro Col	12.12	110	Pn	Pn	02 41 43.0	-0.6
SJCC	San Jacinto, C	16.25	102	Pn	Pn	02 42 38.6	0.0
SJCC				IAmb	IAmb	02 43 00.7	
	comp=Z,31nm,1.1s						
SJCC	San Jacinto, C	16.25	102	*e*P	Pn	02 42 37.1	-1.5
CBOC	Ciudad Bolivar	16.96	116	*e*P	P	02 42 49.5	+0.6
PLMC	San Jos del P	17.20	119	*e*P	P	02 42 51.5	0.0
ZARC	Zaragoza, Cauc	17.31	109		Pn	02 42 52.1	+0.3
ZARC	Zaragoza, Cauc	17.31	109	*e*P	P	02 42 52.4	-0.2
YOTC	Yotoco, Valle	17.64	122	*e*P	P	02 42 57.2	+0.8
553A	Crawfordville	17.66	20	P	Pn	02 42 55.9	0.0
PTBC	PUERTO BERRIO,	18.05	111	*e*P	Pn	02 43 01.0	+0.2
JCT	Junction City	18.48	336		P	02 43 05.4	0.0
ORTC	Ortega, Tolima	18.60	120	*e*P	Pn	02 43 07.7	+0.2
352A	Blakely	18.70	17	P	Pn	02 43 08.2	-0.3
352A				IAmb	IAmb	02 43 14.5	
	comp=Z,32nm,1.1s						
SPBC	San Pablo de B	18.78	113	*e*P	Pn	02 43 09.7	0.0
250A	Grady	18.83	13	P	P	02 43 09.1	0.0
ROSC	El Rosal	18.93	116	Pn	Pn	02 43 13.4	+1.6
	comp=Z,1.3nm,0.3s,baz=260,slow=19,SNR=10						
ROSC	El Rosal	18.93	116		P	02 43 11.1	+0.3
ROSC				IAmb	IAmb	02 43 17.8	
	comp=Z,30nm,0.9s						
TX32	Lajitas Array	19.34	326	P	P	02 43 15.5	+0.6
TXAR	Lajitas Array	19.34	326	P	Pn	02 43 17.2	+0.8
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=59						
	comp=Z,5.5nm,0.8s						
TXAR	Lajitas Array	19.34	326	P	P	02 43 15.5	+0.6
TX31	Lajitas Ar. Si	19.34	326	P	P	02 43 15.3	+0.4
TX31				IAmb	IAmb	02 43 18.4	
	comp=Z,20nm,0.9s						
CHIC	Chingaza	19.54	116	*e*P	Pn	02 43 19.2	+0.1
CHIC				*e*P	P	02 43 21.2	+3.6
RUSC	La Rusia	19.56	111	*e*P	Pn	02 43 19.2	-0.2
Z47A	Carrollton	19.69	8	P	P	02 43 17.8	-0.8
Z47A				IAmb	IAmb	02 43 40.9	
	comp=Z,20nm,0.8s						
LRAL	Lakeview Retre	19.70	11		P	02 43 19.1	+0.4
LRAL				IAmb	IAmb	02 43 27.0	
	comp=Z,24nm,1.2s						
VILC	Villavicencio,	19.83	117	*e*P	Pn	02 43 22.1	-0.1
152A	Waverly Hall	19.88	17	P	P	02 43 21.0	+0.4
152A				IAmb	IAmb	02 43 28.7	
	comp=Z,17nm,0.7s						
Y45A	Yeager Farm, C	20.19	4	P	P	02 43 24.0	0.0
Y45A				IAmb	IAmb	02 43 30.2	
	comp=Z,25nm,0.9s						
154A	Montrose	20.32	20	P	P	02 43 25.0	-0.4
ABTX	Abilene, Hawle	20.36	339	P	P	02 43 24.3	-1.5
ABTX				IAmb	IAmb	02 43 28.5	
	comp=Z,14nm,0.8s						
Z51A	Franklin	20.37	15	P	P	02 43 24.9	-1.0
Z51A				IAmb	IAmb	02 43 31.0	
	comp=Z,16nm,0.8s						
Y49A	Blount Mountai	20.61	12	P	P	02 43 28.4	-0.2
LPIG	La Paz	20.72	303	LR	LR	02 51 28.3	
	comp=Z,222nm,19.0s,baz=150,slow=36						
MACC	Macarena, Meta	20.73	122	*e*P	P	02 43 30.7	+0.7
OXF	Oxford	20.84	4	P	P	02 43 30.1	-0.9
OXF				IAmb	IAmb	02 43 55.0	
	comp=Z,28nm,1.1s						
SDV	Santo Domingo	20.85	101	P	P	02 43 28.7	-2.8
	comp=Z,2.9nm,0.3s,baz=323,slow=8.4,SNR=1.8						
SDV				LR	LR	02 53 16.9	
	comp=Z,170nm,18.3s,baz=266,slow=42						
	comp=Z,2.9nm,0.3s						
SDV	Santo Domingo	20.85	101	P	P	02 43 31.2	-0.3
SDV				IAmb	IAmb	02 43 50.6	
	comp=Z,9.5nm,0.7s						
SDV	Santo Domingo	20.85	101	*e*P	Pn	02 43 33.5	-0.9
MIAR	Mount Ida	20.90	355	P	P	02 43 31.8	+0.1
GOGA	Godfrey	20.94	19	P	P	02 43 31.9	-0.2
GOGA				IAmb	IAmb	02 43 55.0	
	comp=Z,15nm,1.1s						
UALR	University of	21.05	358	P	P	02 43 32.7	-0.6
UALR				IAmb	IAmb	02 43 37.1	
	comp=Z,24nm,1.0s						
X48A	Hartselle	21.07	10	P	P	02 43 33.5	0.0
PTGC	Puerto Gaitan,	21.15	115	*e*P	P	02 43 33.6	-0.9
Y52A	Lilburn	21.18	17	P	P	02 43 34.5	-0.2
Y52A				IAmb	IAmb	02 44 03.3	
	comp=Z,15nm,1.1s						
FPAL	Fort Paine	21.44	13	P	P	02 43 37.0	-0.5
W41B	Gary Mavity, V	21.45	358	P	P	02 43 37.3	-0.1
WHAR	Wooly Hollow	21.57	358	P	P	02 43 38.7	-0.1
SWET	Sewanee	22.02	12	P	P	02 43 44.1	+0.4
WMOK	Wichita Mounta	22.05	343	P	P	02 43 44.4	+0.4
HODGE	Hodges	22.09	20	P	P	02 43 44.5	+0.1
MNTX	Cornudas Mount	22.11	327	P	P	02 43 45.5	+0.9
MNTX				IAmb	IAmb	02 43 48.7	
	comp=Z,19nm,0.8s						
W50A	Signal Mountai	22.14	13	P	P	02 43 44.7	-0.3
FCAR	Ozark Folk Cen	22.16	358	P	P	02 43 44.8	-0.3
FNO	Franklin	22.20	347	P	P	02 43 46.1	+0.6
FNO				IAmb	IAmb	02 43 47.3	
	comp=Z,20nm,1.0s						
LCAR	Lake Charles	22.33	0	P	P	02 43 46.5	-0.4
V48A	Smith Brothers	22.37	10	P	P	02 43 47.4	-0.1
BG3	Lake Jocassee	22.57	18	IAmb	IAmb	02 44 08.6	
	comp=Z,11nm,1.0s						
MSTX	Muleshoe	22.74	335	IAmb	IAmb	02 43 54.9	
	comp=Z,8.4nm,0.8s						
TKL	Tuckaleechee C	22.95	16	P	P	02 43 53.2	-0.4
	comp=Z,8.6nm,0.6s,baz=186,slow=11,SNR=18						
TKL				LR	LR	02 53 52.7	
	comp=Z,215nm,20.1s,baz=208,slow=40						
	comp=Z,8.6nm,0.6s						
TKL	Tuckaleechee C	22.95	16	IAmb	IAmb	02 43 55.6	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	23.05	2	IAmb	IAmb	02 43 55.9	
	comp=Z,17nm,1.1s						
AMTX	Amarillo	23.12	338	IAmb	IAmb	02 43 57.9	
	comp=Z,24nm,1.1s						
V52A	Sevierville	23.17	16	IAmb	IAmb	02 44 24.5	
	comp=Z,13nm,1.1s						
U49A	Red Boiling Sp	23.31	11	IAmb	IAmb	02 43 58.2	
	comp=Z,10nm,0.8s						
BAUV	El Baul	23.32	99	P	P	02 43 56.1	-1.3
BAUV				IAmb	IAmb	02 43 58.2	
	comp=Z,14nm,0.7s						
MGMO	Mountain Grove	23.42	358	IAmb	IAmb	02 43 59.0	
	comp=Z,20nm,1.0s						
T47A	Sharon Grove	23.55	9	IAmb	IAmb	02 44 25.6	
	comp=Z,15nm,0.9s						
T35A	Sooner Cattle	23.63	350	IAmb	IAmb	02 44 19.8	
	comp=Z,10nm,0.9s						
TZTN	Tazewell	23.84	16	P	P	02 44 01.7	-0.4
TZTN				IAmb	IAmb	02 44 25.1	
	comp=Z,21nm,1.2s						
S39A	Bolivar	24.01	356	IAmb	IAmb	02 44 04.4	
	comp=Z,11nm,0.8s						
121A	Cookes Peak, D	24.07	324	IAmb	IAmb	02 44 09.2	
	comp=Z,27nm,1.4s						
319A	Douglas	24.14	320	IAmb	IAmb	02 44 11.6	
	comp=Z,13nm,0.9s						
CCM	Cathedral Cave	24.31	0	P	P	02 44 05.6	-0.7
CCM				IAmb	IAmb	02 44 07.1	
	comp=Z,14nm,1.0s						
U54A	Nelsons Funny	24.32	19	IAmb	IAmb	02 44 12.5	
	comp=Z,13nm,0.6s						
R40A	Maddies Statio	24.56	358	IAmb	IAmb	02 44 09.4	
	comp=Z,14nm,0.9s						
S51A	Beattyville	24.87	15	IAmb	IAmb	02 44 39.4	
	comp=Z,12nm,0.9s						
ANMO	Albuquerque	25.22	330	P	P	02 44 16.3	+1.4
	comp=Z,3.9nm,0.9s,baz=152,slow=13,SNR=14						
ANMO				LR	LR	02 55 46.2	
	comp=Z,108nm,18.8s,baz=174,slow=40						
	comp=Z,3.9nm,0.9s						
ANMO	Albuquerque	25.22	330	P	P	02 44 15.0	+0.1
TUC	Tucson	25.72	319	P	P	02 44 20.6	+1.3
P40A	Paris	25.79	359	IAmb	IAmb	02 44 20.9	
	comp=Z,9.6nm,0.9s						
214A	Organ Pipe Nat	26.81	316	P	P	02 44 29.9	+0.8
N38A	Joes South For	27.09	357	IAmb	IAmb	02 44 33.9	
	comp=Z,11nm,0.9s						
MVCO	Mesa Verde	28.02	330	IAmb	IAmb	02 44 42.9	
	comp=Z,7.7nm,0.9s						
CZSB	Cruzeiro do Su	28.17	138	*e*P	P	02 44 43.1	+1.7
L40A	Anamosa	28.31	0	IAmb	IAmb	02 44 43.5	
	comp=Z,5.7nm,0.8s						
PV13	Radium Mtn., P	28.93	331	IAmb	IAmb	02 44 51.8	
	comp=Z,10nm,1.1s						

PV11	David Mesa, Pa	29.07	331	IAmb	IAmb	02 44 52.9	
	comp=Z,5.9nm,0.9s						
PV07	Paradox Valley	29.07	331	IAmb	IAmb	02 44 52.9	
	comp=Z,9.0nm,1.2s						
PKCU	Pink Cliffs	30.18	325	IAmb	IAmb	02 45 04.4	
	comp=Z,13nm,1.2s						
PFO	Pinyon Flats O	30.26	315	LR	LR	02 57 17.1	
	comp=Z,250nm,19.9s,baz=138,slow=36						
MTPU	Mount Pierson	30.55	326	IAmb	IAmb	02 45 07.1	
	comp=Z,8.4nm,1.0s						
Q16A	Castle Valley	30.67	329	IAmb	IAmb	02 45 07.5	
	comp=Z,7.1nm,1.2s						
SZCU	Shurtz Canyon	30.72	325	IAmb	IAmb	02 45 08.5	
	comp=Z,6.0nm,0.9s						
P17A	Butcher Ranch,	30.89	330	IAmb	IAmb	02 45 08.1	
	comp=Z,7.1nm,1.0s						
TMUT	Trail Mountain	30.98	329	IAmb	IAmb	02 45 12.8	
	comp=Z,7.4nm,1.3s						
TCRU	Three Creeks R	31.10	327	IAmb	IAmb	02 45 11.4	
	comp=Z,7.6nm,0.9s						
PSUT	Pine Spring	31.81	325	IAmb	IAmb	02 45 18.0	
	comp=Z,5.1nm,1.0s						
QSM	Queen of Sheba	31.93	319	IAmb	IAmb	02 45 17.6	
	comp=Z,5.7nm,1.1s						
S11A	Rachel	32.29	322	IAmb	IAmb	02 45 23.4	
	comp=Z,12nm,1.1s						
BOAV	Boa Vista	32.45	107	*e*P	P	02 45 19.2	0.0
R11A	Troy Canyon, C	32.67	323	IAmb	IAmb	02 45 26.1	
	comp=Z,6.5nm,1.4s						
SADO	Sadowa	32.71	16	LR	LR	02 59 45.9	
	comp=Z,223nm,18.7s,baz=202,slow=39						
E43A	Lone Tree Farm	32.83	6	IAmb	IAmb	02 45 21.8	
	comp=Z,9.6nm,1.1s						
GRAC	Grapevine Rang	32.87	320	IAmb	IAmb	02 45 26.7	
	comp=Z,7.8nm,1.1s						
HWUT	Hardware Ranch	32.95	332	IAmb	IAmb	02 45 27.1	
	comp=Z,6.4nm,0.9s						
PDAR	Pinedale Array	33.01	335	P	P	02 45 25.2	+1.1
	comp=Z,0.5nm,0.7s,baz=128,slow=12,SNR=4.3						
PDAR				PcP	PcP	02 48 08.3	+1.2
	comp=Z,0.2nm,0.5s,baz=140,slow=4.7,SNR=2.7						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	33.01	335	P	P	02 45 24.4	+0.3
BGU	Big Grassy Mou	33.13	329	IAmb	IAmb	02 45 27.9	
	comp=Z,4.6nm,1.0s						
HVU	Hansel Valley	33.65	330	IAmb	IAmb	02 45 32.5	
	comp=Z,8.7nm,1.1s						
ELK	Elko	34.13	327	IAmb	IAmb	02 45 37.4	
	comp=Z,5.2nm,1.1s						
LOHW	Long Hollow	34.13	335	IAmb	IAmb	02 45 36.7	
	comp=Z,11nm,1.5s						
ETMB	Extrema	34.14	132	*e*P	P	02 45 33.8	-0.1
TPAW	Teton Pass	34.18	334	IAmb	IAmb	02 45 37.3	
	comp=Z,8.0nm,1.1s						
NV11	Mina Array Sit	34.26	321	IAmb	IAmb	02 45 38.9	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	34.34	321	P	P	02 45 38.5	+2.8
	comp=Z,8.0nm,0.9s,baz=135,slow=8.2,SNR=40						
NVAR				PcP	PcP	02 48 11.9	+1.0
	comp=Z,1.3nm,0.8s,baz=139,slow=3.0,SNR=6.3						
	comp=Z,8.0nm,0.9s						
LHV	Little Huntoon	34.36	320	IAmb	IAmb	02 45 40.5	
	comp=Z,8.5nm,1.0s						
KVN	Kaiserville	34.61	322	IAmb	IAmb	02 45 41.5	
	comp=Z,5.1nm,1.0s						
MACA	Manacapuru-AM	34.70	117	*e*P	P	02 45 39.8	+1.0
YERR	Yerington	35.27	321	IAmb	IAmb	02 45 47.3	
	comp=Z,9.1nm,1.3s						
CMB	Columbia Colle	35.42	319	P	P	02 45 46.4	+1.5
PNTR	Pine Nut	35.55	321	IAmb	IAmb	02 45 49.9	
	comp=Z,7.7nm,1.1s						
HLID	Hailey	35.79	331	IAmb	IAmb	02 45 51.3	
	comp=Z,7.0nm,1.2s						
MPK	Martis Peak	35.94	321	IAmb	IAmb	02 45 53.4	
	comp=Z,9.6nm,1.0s						
MFID	Camas Ranch	36.37	329	P	P	02 45 53.5	+0.6
MFID				IAmb	IAmb	02 46 10.6	
	comp=Z,5.3nm,0.9s						
DLMT	Dillon	36.39	334	IAmb	IAmb	02 45 56.4	
	comp=Z,10nm,1.3s						
BEKR	Beckworth	36.49	321	IAmb	IAmb	02 45 57.6	
	comp=Z,6.0nm,1.1s						
ULM	Lac du Bonnet	36.69	355	LR	LR	03 04 45.9	
	comp=Z,113nm,18.9s,baz=175,slow=42						
WVOR	Wild Horse Val	37.14	326	IAmb	IAmb	02 46 03.3	
	comp=Z,9.6nm,1.1s						
PLID	Pearl Lake	37.69	331	IAmb	IAmb	02 46 06.8	
	comp=Z,14nm,1.2s						
MOD	Modoc Plateau	37.73	324	IAmb	IAmb	02 46 08.4	
	comp=Z,5.4nm,1.1s						
MSO	Missoula	38.12	335	IAmb	IAmb	02 46 10.2	
	comp=Z,7.6nm,1.2s						
BMO	Blue Mountains	38.14	330	IAmb	IAmb	02 46 10.1	
	comp=Z,5.6nm,1.1s						
I07A	Izee	38.72	327	IAmb	IAmb	02 46 16.5	
	comp=Z,6.7nm,1.0s						
PINE	Pine Mountain	39.30	326	IAmb	IAmb	02 46 20.9	
	comp=Z,7.9nm,0.9s						
ITTB	Itaituba	39.61	114	*e*P	P	02 46 19.7	-0.8
MALB	Monte Alegre	39.86	110	*e*P	P	02 46 22.5	-0.1
H04A	Detroit Lake	40.56	326	P	P	02 46 29.0	+0.9
VILB	Vilhena	40.63	129	*e*P	P	02 46 28.8	-0.1
C09A	Chrisman Ranch	40.76	332	IAmb	IAmb	02 46 32.3	
	comp=Z,24nm,1.4s						
MCPB	Macapa, AP	41.33	107	*e*P	P	02 46 34.2	-0.5
B08A	Colville Reser	41.65	332	P	P	02 46 37.1	+0.1
PDRB	Porto dos Gac	42.52	125	*e*P	P	02 46 43.6	-0.8
CLDB	Colider	42.86	123	*e*P	P	02 46 46.9	-0.3
LLLB	Lillooet	44.42	332	IAmb	IAmb	02 47 03.2	
	comp=Z,9.3nm,1.1s						
SCHQ	Schefferville	45.33	20	P	P	02 47 04.8	-1.6
	comp=Z,4.4nm,0.8s,baz=220,slow=5.6,SNR=8.1						
SCHQ				LR	LR	03 07 15.2	
	comp=Z,263nm,18.6s,baz=216,slow=38						
	comp=Z,4.4nm,0.8s						
SCHQ	Schefferville	45.33	20	P	P	02 47 05.4	-1.1
TMAB	Tom-Au,PA,Br	45.74	107	*e*P	P	02 47 10.4	+0.2
AQDB	Aquidauana	48.76	133	*e*P	P	02 47 33.7	+0.1
SMTB	Santa Maria do	48.85	115	*e*P	P	02 47 34.3	-0.2
ROSB	Rosrio	49.63	106	*e*P	P	02 47 37.8	-2.6
VA03	San Esteban	50.25	157	P	P	02 47 45.3	+0.4
YKA	Yellowknife Ar	51.51	346	P	P	02 47 53.5	-0.3
	comp=Z,3.2nm,0.7s,baz=148,slow=7.8,SNR=57						
YKA				PcP	PcP	02 49 07.5	+0.2
	comp=Z,0.9nm,0.7s,baz=148,slow=3.8,SNR=9.6						
	comp=Z,3.2nm,0.7s						
YKA	Yellowknife Ar	51.51	346	P	P	02 47 53.6	-0.2
YKA					PcP	02 49 07.7	+0.3
CPUP	Villa Florida	51.70	140	P	P	02 47 53.9	-1.9
	comp=Z,3.5nm,0.9s,baz=325,slow=2.7,SNR=2.8						
	comp=Z,3.5nm,0.9s						
CPUP	Villa Florida	51.70	140	IAmb	IAmb	02 47 55.3	
	comp=Z,6.6nm,1.1s						
CPUP	Villa Florida	51.70	140	*e*P	P	02 47 54.6	-1.1
FRB	Frobisher Bay	52.51	13	LR	LR	03 11 45.9	
	comp=Z,84nm,18.5s,baz=228,slow=38						
NBPS	Pedro II - PI	52.66	106	*e*P	P	02 48 02.9	-0.3
IPMB	Ipameri, GO	52.89	125	*e*P	P	02 48 04.0	-0.8
DLBC	Dease Lake	53.23	336	IAmb	IAmb	02 48 09.9	
	comp=Z,6.6nm,0.9s						
LC01	Cunco	55.35	162	P	P	02 48 22.2	-0.1
NBMA	Muriti-CE	56.22	109	*e*P	P	02 48 29.1	+0.1
LL04	Puerto Octay	57.05	163	P	P	02 48 33.9	-0.4
PLCA	Paso Flores	57.44	161	P	P	02 48 36.5	-0.7
	comp=Z,4.0nm,1.0s,baz=320,slow=9.7,SNR=7.0						
	comp=Z,4.0nm,1.0s						
LL02	Futaleuf	59.31	164	P	P	02 48 49.7	-0.5
SFJD	Kangerlussuaq	59.66	17	LR	LR	03 15 25.7	
	comp=Z,160nm,18.8s,baz=234,slow=37						
AY01	Puyuhuapi	60.24	165	P	P	02 48 56.2	-0.3
I29M	Ogilvie Camp,	60.59	339	IAmb	IAmb	02 48 59.5	
	comp=Z,5.7nm,1.2s						
L27K	Beaver Creek,	60.63	336	IAmb	IAmb	02 49 00.9	
	comp=Z,4.2nm,0.8s						
COYC	Coyhaique	61.46	165	P	P	02 49 05.4	+0.6
DOT	Dot Lake	61.80	336	IAmb	IAmb	02 49 08.8	
	comp=Z,6.2nm,1.1s						
PAX	Paxson	62.04	335	IAmb	IAmb	02 49 09.8	
	comp=Z,3.2nm,0.8s						
J25K	Salcha River,	62.76	337	IAmb	IAmb	02 49 16.6	
	comp=Z,3.9nm,0.9s						
ILAR	Eielson Array	63.41	337	P	P	02 49 17.9	+0.3
	comp=Z,5.1nm,1.0s,baz=125,slow=4.5,SNR=30						
	comp=Z,5.1nm,1.0s						
N19K	Bonanza Creek	65.19	331	P	P	02 49 30.3	+0.9
COLD	Coldfoot	65.69	339	IAmb	IAmb	02 49 34.8	
	comp=Z,5.5nm,1.3s						
L19K	White Mountain	65.77	333	P	P	02 49 33.1	+0.1
N18K	Kilae Creek	65.81	331	P	P	02 49 34.0	+0.7
H21K	Melozitna Rive	66.05	337	IAmb	IAmb	02 49 35.6	
	comp=Z,3.4nm,0.9s						
J20K	Nowinta River	66.09	335	IAmb	IAmb	02 49 35.6	
	comp=Z,5.3nm,0.9s						
EUNU	Eureka	66.47	1	P	P	02 49 36.6	-0.7
IMAR	Indian Mountai	66.53	337	P	P	02 49 37.4	-0.4
ESDC	Sonseca Array	79.43	52	P	P	02 50 53.0	-1.7
	comp=Z,0.7nm,0.9s,baz=284,slow=4.5,SNR=2.7						
	comp=Z,0.7nm,0.9s						
ESDC	Sonseca Array	79.43	52	P	P	02 50 54.8	0.0
ARCES	ARCESS Array B	86.27	18	P	P	02 51 28.2	-1.3
	comp=Z,1.3nm,0.8s,baz=308,slow=6.0,SNR=3.9						
	comp=Z,1.3nm,0.8s						
ARCES	ARCESS Array B	86.27	18	IAmb	IAmb	02 51 28.9	
	comp=Z,4.9nm,1.1s						
ARCES				P	P	02 51 29.6	0.0
PETK	Petropavlovsk-	91.29	326	LR	LR	03 33 39.5	
	comp=Z,1μm,21.7s,baz=144,slow=36						
KURBB	Kurchatov Arra	115.39	7	PKP	PKPdf	02 57 29.8	+0.1
	comp=Z,0.4nm,0.4s,baz=357,slow=1.9,SNR=2.4						
MKAR	Makanchi Array	119.57	5	PKP	PKPdf	02 57 37.8	-0.1
	comp=Z,1.8nm,0.9s,baz=300,slow=3.2,SNR=2.2						
WRA	Warramunga Arr	135.93	255	PKP	PKPdf	02 58 09.7	0.0
	comp=Z,1.5nm,0.8s,baz=88,slow=1.8,SNR=10.0						
WRA	Warramunga Arr	135.93	255		PKPdf	02 58 10.0	+0.3
ASAR	Alice Springs	136.15	250	PKP	PKPdf	02 58 10.3	+0.3
	comp=Z,1.1nm,0.8s,baz=82,slow=2.5,SNR=8.5						
CMAR	Chiang Mai Arr	146.52	342	PKPbc	PKPab	02 58 30.9	-0.3
	comp=Z,8.4nm,0.7s,baz=342,slow=3.8,SNR=36						

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*GCG **03** 02:43:40.5±1.2, 13°.17N×91°.61W, h42km, MD4.0*
*SNET **03** 02:43:45.4±1.0, 13°.67N×91°.30W, h9km±13km, ML3.9*
*UCR **03** 02:43:45.4±1.0, 13°.67N×91°.30W, h9km±13km, ML3.8*
ISC 03 02:43:38.9±2.9**, 13°.2N**±0°.1×**91°.41W**±0°.09**, h7**km±15km**, n23, σ0ˢ.68**/38**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.34	24	*e*P	Pg	02 44 04.8	+0.1
PCG	Pacaya	1.40	34	*e*P	Pg	02 44 06.3	+0.5
STG3	Santiaguito 3,	1.50	354	*e*P	Pn	02 44 05.6	-0.7
NBG	Las Nubes	1.71	37	*e*P	Pg	02 44 11.8	+0.1
NUBE	Las Nubes	1.72	66	*e*P	Pb	02 44 11.5	+0.5
NUBE	Las Nubes	1.72	66	*e*P	Pb	02 44 11.5	+0.5
SLOZ	Alcaldia de Sa	1.77	63	*e*P	Pb	02 44 12.6	+0.8
SLOZ				*e*S	Sb	02 44 33.4	-0.8
CEVE	Cerro Verde	1.84	70	*e*P	Pb	02 44 14.1	+1.1
CEVE				*e*S	Sg	02 44 37.6	-0.5
CEVE				IAML		02 44 42.5	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	1.84	70	*e*P	Pb	02 44 14.1	+1.1
CEVE				*e*S	Sg	02 44 37.6	-0.5
CEVE				IAML		02 44 42.5	
	comp=Z,2μm,0.3s						
JAYA	Jayaque - finc	1.96	77	*e*P	Pb	02 44 15.5	+0.5
JAYA	Jayaque - finc	1.96	77	*e*P	Pb	02 44 15.5	+0.5
CEDA	San Andres	2.04	73	*e*P	Pb	02 44 17.2	+0.9
CEDA				*e*S	Sb	02 44 42.1	+0.1
CEDA				IAML		02 44 53.7	
	comp=Z,812nm,0.3s						
CEDA	San Andres	2.04	73	*e*P	Pb	02 44 17.2	+0.9
CEDA				*e*S	Sb	02 44 42.1	+0.1
CEDA				IAML		02 44 53.7	
	comp=Z,812nm,0.3s						
LALI	Alcalda de L	2.05	82	*e*P	Pg	02 44 18.5	+0.3
LALI				*e*S	Sb	02 44 43.3	+1.1
LALI	Alcalda de L	2.05	82	*e*P	Pg	02 44 18.5	+0.3
LALI				*e*S	Sb	02 44 43.3	+1.1
UEES	Universidad Ev	2.17	76	*e*S	Sb	02 44 45.7	0.0
UEES	Universidad Ev	2.17	76	*e*S	Sb	02 44 45.7	0.0
SJTE	Alcalda de S	2.37	80	*e*P	Pb	02 44 23.1	+1.2
SJTE				*e*P	Pg	02 44 23.6	-0.7
SJTE				*e*S	Sb	02 44 51.5	+0.1
SJTE	Alcalda de S	2.37	80	*e*P	Pb	02 44 23.1	+1.2
SJTE				*e*P	Pg	02 44 23.6	-0.7
SJTE				*e*S	Sb	02 44 51.5	+0.1
PAVA	Las Pavas	2.45	78	*e*P	Pb	02 44 24.1	+0.6
PAVA				*e*S	Sb	02 44 53.9	-0.1
PAVA	Las Pavas	2.45	78	*e*P	Pb	02 44 24.1	+0.6
PAVA				*e*S	Sb	02 44 53.9	-0.1
COEG	Centro de Oper	2.49	80	*e*P	Pb	02 44 24.2	+0.1
COEG				*e*S	Sb	02 44 54.4	-0.6
COEG	Centro de Oper	2.49	80	*e*P	Pb	02 44 24.2	+0.1
COEG				*e*S	Sb	02 44 54.4	-0.6

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*PRU **03** 02:54:09.5±0.0, 50°.29N×18°.76E, h0km*
ISC 03 02:54:09.1±1.1**, 50°.29N**±0°.06×**18°.76E**±0°.03**, h0**km**, n13, σ0ˢ.69**/20**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.67	96	*e*Pg	Pg	02 54 22.1	+0.1
OJC				*e*Sg	Sg	02 54 30.3	-0.4
OJC	Ojcow	0.67	96	*e*P	Pn	02 54 31.4	+5.5
MORC	Moravsky Berou	0.94	237	*e*PG	Pg	02 54 27.1	0.0
MORC				*e*SG	Sg	02 54 40.2	+0.9
LANS	Liptovska Anna	1.23	158	*e*PG	Pg	02 54 32.3	-0.4
LANS				*e*SG	Sg	02 54 48.9	+0.2
LANS				*e*LG	Lg	02 54 50.8	
KRLC	Kraliky	1.29	261	*e*PG	Pg	02 54 32.5	-1.3
KRLC				*e*SG	Sg	02 54 51.2	+0.7
	comp=Z,2.8nm,0.3s						
NIE	Niedzica	1.33	131	*e*Pg	Pg	02 54 34.6	+0.1
NIE				*e*Sg	Sb	02 54 52.7	+0.2
NIE	Niedzica	1.33	131	*e*P	Pg	02 54 34.9	+0.3
DPC	Dobruska-Polom	1.56	273	*e*PG	Pn	02 54 37.3	-0.9
DPC				*e*SG	Sg	02 55 00.2	+0.9
	comp=Z,3.0nm,0.7s						
OSTC	Ostas	1.65	280	*e*PG	Pn	02 54 39.7	+0.4
OSTC				*e*SG	Sg	02 55 03.0	+1.0
VRAC	Vranov	1.71	236	*e*PN	Pn	02 54 40.6	+0.4
VRAC				*e*SG	Sb	02 55 04.0	+0.4
CHVC	Chvalec	1.75	281	*e*SG	Sg	02 55 06.2	+0.8
VYHS	Vyhne	1.80	178	*e*SN	Sn	02 55 04.1	-0.9
KRUC	Moravsky	1.97	232	*e*SG	Sb	02 55 10.7	-0.2

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*IDC **03** 02:54:22.3±6.1, 36°.71N×71°.92E, h82km±31km, mb3.3/5, mbtmp3.8/11, Error ellipse: s-maj=78.5km s-min=25.8km az=158.0*
*NEIC **03** 02:54:28.4±1.1, 37°.24N±0°.06×71°.71E±0°.08, h103km±5km, mb4.6/5, Error ellipse: s-maj=10.3km s-min=6.8km az=136.0*
*NNC **03** 02:54:32.8±4.4, 37°.77N×70°.47E, h0km, mb4.1, mpv3.5, Error ellipse: s-maj=33.7km s-min=28.0km az=154.0*
ISC 03 02:54:26.0±0.6**, 37°.08N**±0°.05×**71°.74E**±0°.06**, h106**km**, n43, σ2ˢ.26**/48**, mb4.0**/7**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.22	330	Pn	Pn	02 55 02.3	+0.5
DRK	Karamyk	2.39	1	Pn	Pn	02 55 05.8	+1.7
CHGR	Chuyangaron	2.58	308	Pn	Pn	02 55 06.4	0.0
BTK	Batken	3.06	347		Pn	02 55 14.1	+1.4
KBL	Kabul	3.35	222	Pn	Pn	02 55 21.3	+4.4
NIL	Nilore	3.64	160		Pn	02 55 24.4	+3.8
THN	Thein Dam	5.67	144	*e*P	Pn	02 55 51.0	+3.1
THN				*e*S	Sn	02 56 49.4	-2.3
AAK	Ala-Archa	5.94	20	P	Pn	02 55 52.5	+0.9
	6.0nm,0.3s,baz=171,slow=4.0,SNR=10						
AAK				S	Sn	02 56 56.6	-1.7
	7.1nm,0.4s,baz=311,slow=23,SNR=6.0						
AAK	Ala-Archa	5.94	20	Pn	Pn	02 55 51.8	+0.2
KK31	Karatay Array	6.09	351	Pn	Pn	02 55 53.7	+0.2
KK31	Karatay Array	6.09	351	⇑P	Pn	02 55 53.6	+0.2
	2.3nm,0.3s,baz=177,slow=13,SNR=138						
KK31				S	Sn	02 56 57.2	-4.5
	5.1nm,0.3s,baz=180,slow=23,SNR=12						
KKAR	Karatay Array	6.09	351	Pn	Pn	02 55 53.5	0.0
KKAR	Karatay Array	6.09	351	Pn	Pn	02 55 53.5	0.0
BOOM	Boomskoye usch	6.29	30	Pn	Pn	02 55 56.8	+0.4
TARG	Taragay, Kyrgy	6.60	43	Pn	Pn	02 56 01.8	+1.0
BHK	Bhakra	6.85	144	*e*P	Pn	02 56 06.3	+2.4
BHK				*e*S	Sn	02 57 17.4	-3.0
SMLA	Simla	7.45	141	*e*P	Pn	02 56 14.5	+2.5
SMLA				*e*S	Sn	02 57 29.8	-5.1
SMLA				IAML		02 57 34.7	
	comp=N,104nm,0.2s						
SMLA				IAML		02 57 35.0	
	comp=E,89nm,0.2s						
KUDL	Kundal	9.77	154	*e*S	Sn	02 58 24.8	-6.5
GEYT	Alibeck	10.86	279	P	Pn	02 56 56.9	-1.4
	comp=E,1.4nm,0.3s,baz=95,slow=15,SNR=6.2						
GEYT				S	Sn	02 58 54.2	-3.6
	comp=E,2.3nm,0.3s,baz=318,slow=32,SNR=3.2						
GEYT	Alibeck	10.86	279		Pn	02 56 56.8	-1.5
GYA0B	ALIBECK ARRAY	10.86	279	Pn	Pn	02 56 56.8	-1.5
MKAR	Makanchi Array	12.47	36	P	Pn	02 57 18.8	-0.9
	comp=E,1.4nm,0.7s,baz=226,slow=17,SNR=2.4						
KURBB	Kurchatov Arra	14.38	18	P	P	02 57 47.6	-0.7
	comp=E,1.2nm,0.8s,baz=203,slow=11,SNR=4.4						
AB31	Akbulak array	14.88	329	⇑P	Pn	02 57 48.2	-2.5
	comp=E,0.5nm,0.3s,baz=137,slow=13,SNR=30						
AB31				⇑S	Sn	03 00 23.5	-11
	comp=E,0.9nm,0.5s,baz=148,slow=24,SNR=5.8						
ABKAR	Akbulak array	14.88	329		Pn	02 57 48.7	-2.0
ABKAR	Akbulak array	14.88	329	Pn	Pn	02 57 49.7	-1.1
AKTO	Aktyubinsk	16.59	328	P	P	02 58 14.2	+1.4
	comp=E,7.6nm,0.4s,baz=133,slow=8.8,SNR=28						
AKTO	Aktyubinsk	16.59	328	⇑P	P	02 58 14.1	+1.4
	comp=E,5.7nm,0.5s						
AKTO				⇓S	Sn	03 01 03.6	-12
	comp=E,3.3nm,1.1s						
ZALV	Zalesovo Beam	19.14	24	P	P	02 58 41.0	+0.4
	comp=E,1.4nm,0.5s,baz=208,slow=11,SNR=3.6						
ZALV	Zalesovo Beam	19.14	24	P	P	02 58 41.3	+0.7
PCHI	Peechi	26.76	170	*e*x	S	03 04 42.0	+18
ELL	Elmali	33.26	282	P	P	03 00 55.5	+2.2
FIA1	FINESS Array S	37.34	325	P	P	03 01 29.0	+1.2
FIA1				IAmb	IAmb	03 02 00.1	
	comp=Z,9.3nm,1.4s						
FINES	FINESS Array B	37.34	325	P	P	03 01 29.4	+1.7
	comp=Z,0.7nm,0.3s,baz=118,slow=8.8,SNR=14						
	comp=Z,0.7nm,0.3s						
FINES	FINESS Array B	37.34	325	P	P	03 01 29.2	+1.5
ARCES	ARCESS Array B	40.84	337	P	P	03 01 58.4	+1.5
	comp=Z,0.5nm,0.4s,baz=110,slow=8.0,SNR=16						
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	40.84	337	P	P	03 01 58.1	+1.3
ARCES				IAmb	IAmb	03 02 02.9	
	comp=Z,11nm,1.4s						
NC303	NORSAR Array S	44.22	323	P	P	03 02 25.6	+1.3
NC303				IAmb	IAmb	03 02 55.2	
	comp=Z,17nm,1.3s						
NB2	NORSAR Subarra	44.28	323	P	P	03 02 25.9	+1.1
	comp=Z,0.4nm,0.4s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.28	323	P	P	03 02 26.0	+1.2
	comp=Z,0.4nm,0.4s,baz=107,slow=7.2,SNR=5.0						
	comp=Z,0.4nm,0.4s						
ESDC	Sonseca Array	57.71	298	P	P	03 04 07.0	+1.3
	comp=Z,0.5nm,0.7s,baz=59,slow=7.0,SNR=5.0						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	57.71	298	P	P	03 04 06.4	+0.7
YKA	Yellowknife Ar	80.63	3	P	P	03 06 27.5	+0.9
	comp=Z,0.2nm,0.5s,baz=352,slow=5.5,SNR=7.4						
	comp=Z,0.2nm,0.5s						

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*WEL **03** 02:55:36.4±0.9, 36°S±10°×17°8E±1°0, h202km±10km, M3.3/18, ML3.3/8, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=137.7*
*NOU **03** 02:55:40.5, 37°.10S×177°.76E, h230km, mb3.8/7, Off E. Coast of N. Island, N.Z.*
ISC 03 02:55:32.5±3.5**, 36°.5S**±0°.2×**178°.0E**±0°.1**, h247**km±15km**, n74, σ1ˢ.43**/87**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.14	166	P	Pn	02 56 08.6	+0.7
MXZ				S	S	02 56 33.5	-2.4
HAZ	Te Kaha	1.31	186	P	Pn	02 56 09.2	+0.2
HAZ				S	S	02 56 34.5	-3.3
WMGZ	Waiomatatini S	1.41	166	P	Pn	02 56 11.0	+1.3
WMGZ				S	S	02 56 38.1	-1.1
PKGZ	Pakihiroa	1.44	177	P	Pn	02 56 11.1	+1.1
PKGZ				S	S	02 56 38.0	-1.7
RUGZ	Raukumara Rang	1.53	189	P	Pn	02 56 10.6	-0.2
PUZ	Puketiti	1.64	172	P	Pn	02 56 12.8	+1.3
PUZ				S	S	02 56 40.5	-1.8
TWGZ	Tauwhareparae	1.72	180	P	Pn	02 56 14.2	+2.0
TWGZ				S	S	02 56 43.4	-0.2
KUZ	Kuaotunu	1.83	260	P	Pn	02 56 12.4	-0.7
MWZ	Matawai	1.91	190	P	Pn	02 56 14.9	+1.0
MWZ				S	S	02 56 45.2	-1.4
URZ	Urewera	1.93	200	P	Pn	02 56 14.8	+0.8
URZ				S	S	02 56 44.2	-2.5
URZ	Urewera	1.93	200	P	Pn	02 56 14.7	+0.8
TKGZ	Te Karaka	1.99	183	P	Pn	02 56 16.1	+1.7
TKGZ				S	S	02 56 47.3	-0.4
CNGZ	Carnagh Statio	2.04	175	P	Pn	02 56 17.1	+2.2
RAGZ	Rawiri	2.09	192	P	Pn	02 56 17.2	+1.7
TARZ	Mount Tarawera	2.13	213	P	Pn	02 56 18.1	+2.2
MUGZ	Murupara	2.24	205	P	Pn	02 56 17.8	+1.0
RIGZ	Rimuhau	2.26	184	P	Pn	02 56 18.8	+1.7
RIGZ				S	S	02 56 51.9	-0.4
RTZ	Ruatahuna	2.30	200	P	Pn	02 56 18.3	+0.8
RTZ				S	S	02 56 53.3	+0.2
SNGZ	Shannon Statio	2.38	192	P	Pn	02 56 19.8	+1.5
SNGZ				S	S	02 56 54.8	+0.3
PRGZ	Paritu Road	2.47	182	P	Pn	02 56 21.4	+2.3
MTHZ	Maungataniwha	2.56	200	P	Pn	02 56 21.3	+1.2
MTHZ				S	S	02 56 58.6	+0.9
RAHZ	Arahi	2.56	196	P	Pn	02 56 21.8	+1.7
KNZ	Kokohu	2.58	185	P	Pn	02 56 21.7	+1.5
MRHZ	Matea Rd	2.68	207	P	Pn	02 56 22.4	+1.1
TLZ	Tolley Road	2.70	225	P	Pn	02 56 23.9	+2.5
MHGZ	Mahia Peninsul	2.70	181	P	Pn	02 56 23.7	+2.3
WATZ	Wairara	2.87	218	P	Pn	02 56 25.5	+2.2
ARHZ	Aropaoanui	2.91	195	P	Pn	02 56 25.6	+1.9
BKZ	Black Stump Fm	2.95	203	P	Pn	02 56 25.1	+0.9
BKZ	Black Stump Fm	2.95	203	P	Pn	02 56 25.1	+0.9
NTVZ	North Tongarir	3.21	214	P	Pn	02 56 28.8	+1.7
TMVZ	Te Maari	3.21	213	P	Pn	02 56 28.7	+1.6
HIZ	Hauiti	3.22	229	P	Pn	02 56 30.0	+2.9
HIZ	Hauiti	3.22	229	P	Pn	02 56 29.3	+2.2
ETVZ	East Tongariro	3.22	213	P	Pn	02 56 28.6	+1.3
WTVZ	West Tongariro	3.26	215	P	Pn	02 56 29.0	+1.4
NNVZ	North Ngauruho	3.26	214	P	Pn	02 56 29.2	+1.5
OTVZ	Oturere	3.27	213	P	Pn	02 56 29.5	+1.7
CKHZ	Cape Kidnapper	3.28	192	P	Pn	02 56 29.6	+1.9
SNVZ	South Ngauruho	3.30	213	P	Pn	02 56 29.7	+1.6
NGZ	Ngauruhoe	3.31	214	P	Pn	02 56 30.0	+1.8
TUVZ	Tukino	3.36	212	P	Pn	02 56 30.2	+1.4
BHHZ	Black Hill Sta	3.39	206	P	Pn	02 56 29.8	+0.8
WHVZ	Whangaehu Hut	3.40	213	P	Pn	02 56 30.3	+1.0
KRHZ	Kereru	3.43	201	P	Pn	02 56 30.4	+0.9
TRVZ	Turoa	3.43	213	P	Pn	02 56 30.9	+1.2
WNVZ	Wahianoa	3.43	212	P	Pn	02 56 30.6	+0.9
MOVZ	Moawhango	3.43	210	P	Pn	02 56 30.2	+0.6
KAHZ	Kahuranaki	3.45	194	P	Pn	02 56 31.3	+1.6
PKVZ	Pokaka	3.51	215	P	Pn	02 56 31.6	+1.2
PXZ	Pawanui	3.68	193	P	Pn	02 56 32.3	0.0
PNHZ	Pukenui	3.73	201	P	Pn	02 56 33.8	+0.9
WPHZ	Waipukurau	3.80	198	P	Pn	02 56 34.7	+1.0
TSZ	Takapari Road	3.94	203	P	Pn	02 56 35.8	+0.5
PRHZ	Porangahau	3.95	195	P	Pn	02 56 36.9	+1.4
WAZ	Wanganui	4.05	215	P	Pn	02 56 37.8	+1.1
DVHZ	Dannevirke	4.10	200	P	Pn	02 56 37.8	+0.6
NEZ	North Egmont	4.16	226	P	Pn	02 56 41.2	+3.1
ANWZ	Angora Road	4.17	196	P	Pn	02 56 39.3	+1.3
POWZ	Post Office Ro	4.30	203	P	Pn	02 56 40.3	+0.7
PRWZ	Pori Road	4.39	200	P	Pn	02 56 41.5	+0.8
MRZ	Mangatainoka R	4.60	203	P	Pn	02 56 43.5	+0.3
HOWZ	Holdsworth Sta	4.84	203	P	Pn	02 56 46.1	0.0
OGWZ	Otaki Gorge	4.88	206	P	Pn	02 56 46.7	+0.1
TMWZ	Te Maipa	4.92	199	P	Pn	02 56 47.7	+0.5
KIW	Kapiti Island	5.01	208	P	Pn	02 56 47.9	-0.3
MTW	Mount Morrison	5.08	202	P	Pn	02 56 49.0	-0.1
CAW	Cannon Point	5.17	205	P	Pn	02 56 50.0	-0.2
PAWZ	Paruwai Farm	5.31	201	P	Pn	02 56 51.6	-0.3
SNZO	South Karori	5.48	207	P	Pn	02 56 53.4	-0.5
PLWZ	Palliser	5.53	202	P	Pn	02 56 54.1	-0.6
QRZ	Quartz Range	6.10	223	P	Pn	02 57 01.1	-0.6
KHZ	Kahutara	6.87	209	P	Pn	02 57 10.6	-0.8
ODZ	Otahua Downs	10.22	211	P	Pn	02 57 54.6	+0.9

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*TAP **03** 03:11:45.5, 24°.22N×122°.76E, h11km±1km, ML2.8, D*
*JMA **03** 03:11:46.3±0.2, 24°N±1°×122°.8E±0°.8, h14km±4km,*

MV2.4/11, NW OFF ISHIGAKIJIMA IS
ISC 03 03:11:45.1±1.0, **24°.18N**±0°.03×**122°.77E**±0°.02, **h13**^{km}±8^{km}, **n51**, σ**0ˢ.75**/90, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.32**	**30**	P	**Pg**	**03 11 52.4**	**+0.8**
JYNG				eS	**Sg**	**03 11 56.8**	**+0.8**
YOJ	**Yonaguni jima**	**0.36**	**37**	P	**Pb**	**03 11 53.1**	**-0.2**
	baz=41						
YOJ				S	**Sb**	**03 11 58.4**	**-0.6**
	baz=41						
YOJ	**Yonaguni jima**	**0.36**	**37**	P	**Pb**	**03 11 53.2**	**-0.2**
YOJ				S	**Sb**	**03 11 58.3**	**-0.6**
IRIF	**Iriomote-Funau**	**0.89**	**79**	P	**Pb**	**03 12 02.3**	**0.0**
IRIF				eS	**Sb**	**03 12 15.3**	**+1.2**
EWUT	**Wuta**	**0.95**	**287**	P	**Pn**	**03 12 03.4**	**-0.7**
	baz=284						
EWUT				S	**Sn**	**03 12 16.7**	**-0.7**
	baz=284						
TWC	**Suao**	**0.95**	**297**	i P	**Pn**	**03 12 03.3**	**-0.8**
	baz=295						
TWC				S	**Sn**	**03 12 16.0**	**-1.4**
	baz=295						
HATJ	**Hateruma jima**	**0.95**	**97**	P	**Pg**	**03 12 03.4**	**-0.1**
HATJ				S	**Sg**	**03 12 15.7**	**-0.2**
ENA	**Nanau**	**0.97**	**285**	P	**Pn**	**03 12 03.9**	**-0.5**
	baz=282						
NDS	**Dongshan**	**1.07**	**296**	P	**Pn**	**03 12 05.5**	**-0.2**
	baz=293						
NDS				eS	**Sn**	**03 12 19.1**	**-1.3**
	baz=293						
NACB	**Ninganchiao**	**1.08**	**270**	P	**Pn**	**03 12 05.9**	**0.0**
	baz=267						
TWD	**Chiawan**	**1.08**	**265**	P	**Pn**	**03 12 05.8**	**-0.1**
	baz=262						
NTC	**Toucheng**	**1.09**	**308**	P	**Pn**	**03 12 07.0**	**+0.9**
	baz=306						
NTC				S	**Sn**	**03 12 20.3**	**-0.7**
	baz=306						
TWB1	**Santiao Chiao**	**1.09**	**319**	eP	**Pn**	**03 12 07.0**	**+0.9**
	baz=318						
TWB1				eS	**Sn**	**03 12 19.8**	**-1.3**
	baz=318						
JKRS	**Kuro-shima**	**1.13**	**87**	P	**Pg**	**03 12 06.5**	**-0.3**
JKRS				S	**Sb**	**03 12 21.7**	**+0.7**
TWE	**Neicheng**	**1.15**	**299**	P	**Pn**	**03 12 06.5**	**-0.3**
	baz=296						
TIPB	**Shuangxi**	**1.17**	**313**	i P	**Pn**	**03 12 08.0**	**+0.8**
	baz=311						
TIPB				i S	**Sn**	**03 12 22.9**	**-0.1**
	baz=311						
ETLH	**Xiulin Townshi**	**1.18**	**272**	P	**Pn**	**03 12 07.8**	**+0.5**
	baz=269						
ETLH				eS	**Sn**	**03 12 24.2**	**+0.9**
	baz=269						
ETM	**Tongmen**	**1.19**	**260**	eP	**Pg**	**03 12 07.2**	**-0.8**
	baz=257						
ETM				eS	**Sn**	**03 12 24.5**	**+1.1**
	baz=257						
LATG	**Datong**	**1.19**	**288**	P	**Pn**	**03 12 07.8**	**+0.3**
	baz=285						
LATG				eS	**Sn**	**03 12 24.3**	**+0.7**
	baz=285						
ENTT	**Nioudou**	**1.19**	**293**	i P	**Pn**	**03 12 08.2**	**+0.7**
	baz=291						
ENTT				S	**Sn**	**03 12 23.8**	**+0.3**
	baz=291						
NDT	**Datong Townshi**	**1.23**	**291**	eP	**Pn**	**03 12 08.8**	**+0.9**
	baz=288						
NDT				eS	**Sn**	**03 12 25.0**	**+0.7**
	baz=288						
FUSB	**Fushanzhiwuyua**	**1.23**	**299**	P	**Pn**	**03 12 08.6**	**+0.6**
	baz=296						
FUSB				S	**Sn**	**03 12 24.1**	**-0.4**
	baz=296						
SXI1	**Grass Mountain**	**1.23**	**318**	P	**Pn**	**03 12 07.9**	**-0.1**
	baz=317						
JIJ	**Ishigaki jima**	**1.26**	**81**	P	**Pn**	**03 12 08.1**	**-0.3**
JIJ				S	**Sb**	**03 12 24.5**	**-0.5**
NWF	**Wu-fen Shan**	**1.27**	**315**	i P	**Pn**	**03 12 09.1**	**+0.5**
	baz=313						
NWF				eS	**Sn**	**03 12 26.8**	**+1.3**
	baz=313						
WFSB	**Wu-fen Shan**	**1.27**	**315**	eP	**Pn**	**03 12 09.0**	**+0.5**
	baz=313						
WFSB				eS	**Sn**	**03 12 25.7**	**+0.3**
	baz=313						
NNSB	**Datong**	**1.29**	**282**	P	**Pn**	**03 12 09.7**	**+0.8**
	baz=279						
NNSB				S	**Sn**	**03 12 26.5**	**+0.4**
	baz=279						
NWLT	**Wulai**	**1.30**	**298**	i P	**Pn**	**03 12 10.2**	**+1.2**
	baz=295						
NWLT				i S	**Sn**	**03 12 27.6**	**+1.3**
	baz=295						
EGFH	**Guangfu**	**1.33**	**248**	eS	**Sb**	**03 12 28.0**	**+1.2**
	baz=245						
TNOU	**National Taiwa**	**1.33**	**317**	eS	**Sn**	**03 12 26.9**	**0.0**
	baz=315						
TWA	**Mucha**	**1.35**	**307**	eS	**Sn**	**03 12 28.8**	**+1.4**
	baz=305						
YHNB	**Yeheng**	**1.37**	**291**	P	**Pg**	**03 12 11.7**	**+0.3**
	baz=289						
YHNB				eS	**Sn**	**03 12 28.4**	**+0.5**
	baz=289						
WHF	**Hehuan Shan**	**1.38**	**269**	P	**Pg**	**03 12 11.1**	**-0.6**
	baz=266						
WHF				eS	**Sn**	**03 12 29.7**	**+1.0**
	baz=266						
NSK	**Sanguang**	**1.38**	**291**	i P	**Pg**	**03 12 11.6**	**-0.1**
	baz=289						
NSK				i S	**Sn**	**03 12 29.4**	**+1.1**
	baz=289						
HGSD	**Ruisui**	**1.41**	**241**	P	**Pn**	**03 12 11.0**	**+0.6**
	baz=239						
HGSD				eS	**Sn**	**03 12 28.4**	**-0.4**
	baz=239						
JISG	**Ishigakijimahi**	**1.46**	**73**	P	**Pn**	**03 12 10.6**	**-0.5**
JISG				S	**Sn**	**03 12 29.7**	**-0.5**
CHGB	**Renai**	**1.47**	**266**	P	**Pb**	**03 12 12.0**	**-0.3**
	baz=263						
CHGB				eS	**Sg**	**03 12 31.8**	**-0.6**
	baz=263						
OWD	**Renai**	**1.48**	**262**	P	**Pn**	**03 12 12.1**	**+0.6**
	baz=259						
EHY	**Hungye**	**1.49**	**244**	eP	**Pn**	**03 12 10.8**	**-0.7**
	baz=241						
EHY				eS	**Sn**	**03 12 30.4**	**-0.3**
	baz=241						
WUSB	**Renai**	**1.52**	**263**	P	**Pb**	**03 12 12.9**	**-0.4**
	baz=261						
WUSB				eS	**Sn**	**03 12 31.7**	**-0.2**
	baz=261						
VWDT	**VWDT**	**1.55**	**255**	P	**Pn**	**03 12 13.0**	**+0.7**
	baz=252						
VWDT				S	**Sn**	**03 12 33.0**	**+0.7**
	baz=252						
YULB	**Yu-li**	**1.56**	**240**	eP	**Pn**	**03 12 12.1**	**-0.5**
	baz=238						
YULB				eS	**Sn**	**03 12 32.8**	**+0.2**
	baz=238						
NFF	**Wufeng Townshi**	**1.58**	**287**	eP	**Pg**	**03 12 14.0**	**-1.4**
	baz=285						
FULB	**Fuli**	**1.67**	**235**	eP	**Pn**	**03 12 14.8**	**+0.8**
	baz=232						
WHP	**Taichung City**	**1.67**	**274**	eP	**Pg**	**03 12 16.7**	**-0.6**
	baz=272						
WHP				eS	**Sg**	**03 12 38.0**	**-0.9**
	baz=272						
SSLB	**Suanglung**	**1.71**	**257**	P	**Pn**	**03 12 15.2**	**+0.6**
	baz=255						
SSLB				S	**Sn**	**03 12 36.7**	**+0.4**
	baz=255						
SMLT	**Sun Moon Lake**	**1.74**	**261**	P	**Pb**	**03 12 16.6**	**-0.3**
	baz=258						
SMLT				eS	**Sb**	**03 12 39.5**	**+0.8**
	baz=258						
JTJ	**Tarama**	**1.82**	**75**	eP	**Pb**	**03 12 17.7**	**-0.5**
CHN5	**Tsauling**	**2.00**	**254**	eP	**Pb**	**03 12 20.9**	**-0.5**
	baz=252						
CHN5				eS	**Sb**	**03 12 46.0**	**-0.3**
	baz=252						
STYH	**Taoyuan**	**2.09**	**242**	eP	**Pn**	**03 12 20.4**	**+0.6**
	baz=240						
STYH				S	**Sn**	**03 12 46.6**	**+1.1**
	baz=240						
CHN4	**Tsaushan**	**2.16**	**248**	i P	**Pn**	**03 12 22.5**	**+1.7**
	baz=246						
CHN4				S	**Sn**	**03 12 48.5**	**+1.1**
	baz=246						

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*SNET **03** 03:13:37.4±1.0, 12°.99N×90°.70W, h16^{km}±16^{km}, ML3.7*
*UCR **03** 03:13:37.5±1.0, 13°.02N×90°.74W, h21^{km}±12^{km}, ML3.7, mb4.3(NEIC)*
*GCG **03** 03:13:40.2±1.2, 13°.09N×90°.50W, h46^{km}, MD4.1*
*IDC **03** 03:13:44.7±1.2, 14°.71N×90°.31W, h0^{km}, mb4.0/7, mbtmp3.9/8, ML3.0/1, MS4.5/6, Error ellipse: s-maj=35.2km s-min=18.6km az=43.0*
*NEIC **03** 03:13:52±1.2, 14°.49N±0°.09×90°.48W±0°.05, h49^{km}±11^{km}, mb4.3/30, Error ellipse: s-maj=13.7km s-min=6.2km az=194.0*
ISC 03 03:13:36.9±1.2, **13°.0N**±0°.1×**90°.69W**±0°.05, **h24**^{km}, **n75**, σ**2ˢ.01**/65, **mb4.2**/21, **MS4.6**/6, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.28**	**44**	eP	**Pn**	**03 13 59.9**	**+0.5**
NUBE	**Las Nubes**	**1.28**	**44**	eP	**Pn**	**03 13 59.9**	**+0.5**
CEVE	**Cerro Verde**	**1.34**	**50**	eP	**Pb**	**03 14 01.5**	**0.0**
CEVE				eS	**Sn**	**03 14 20.6**	**+3.1**
CEVE				IAML		03 14 30.4	
	comp=Z,1μm,0.4s						
CEVE	**Cerro Verde**	**1.34**	**50**	eP	**Pb**	**03 14 01.5**	**0.0**
CEVE				eS	**Sn**	**03 14 20.6**	**+3.1**
CEVE				IAML		03 14 30.4	
	comp=Z,1μm,0.4s						
SLOZ	**Alcaldia de Sa**	**1.37**	**40**	eP	**Pn**	**03 14 01.2**	**+0.6**
JAYA	**Jayaque - finc**	**1.38**	**60**	eP	**Pn**	**03 14 01.7**	**+0.9**
JAYA	**Jayaque - finc**	**1.38**	**60**	eP	**Pn**	**03 14 01.7**	**+0.9**
PCG	**Pacaya**	**1.41**	**3**	eP	**Pn**	**03 14 03.5**	**+2.2**
FUG	**Fuego 3**	**1.48**	**354**	eP	**Pn**	**03 14 02.7**	**+0.6**
NBG	**Las Nubes**	**1.64**	**12**	eP	**Pn**	**03 14 06.5**	**+2.0**
SJTE	**Alcalda de S**	**1.76**	**68**	eP	**Pn**	**03 14 06.8**	**+0.9**
SJTE	**Alcalda de S**	**1.76**	**68**	eP	**Pn**	**03 14 06.8**	**+0.9**
RTAL	**Retalhuleu**	**1.83**	**328**		**Pn**	**03 14 09.9**	**+3.1**
PAVA	**Las Pavas**	**1.86**	**66**	eP	**Pn**	**03 14 08.8**	**+1.5**
PAVA	**Las Pavas**	**1.86**	**66**	eP	**Pn**	**03 14 08.8**	**+1.5**
COEG	**Centro de Oper**	**1.87**	**70**	eP	**Pb**	**03 14 09.8**	**-0.7**
COEG	**Centro de Oper**	**1.87**	**70**	eP	**Pb**	**03 14 09.8**	**-0.7**
MTO3	**Montecristo**	**1.92**	**42**	Pn	**Pn**	**03 14 09.0**	**+0.7**
STG3	**Santiaguito 3,**	**1.93**	**334**	eP	**Pn**	**03 14 08.3**	**-0.1**
ESQI	**Esquipulas**	**2.05**	**39**	Pn	**Pn**	**03 14 11.6**	**+1.6**
COEB	**Comit de Eme**	**2.17**	**76**	eP	**Pn**	**03 14 12.6**	**+1.0**
COEB	**Comit de Eme**	**2.17**	**76**	eP	**Pn**	**03 14 12.6**	**+1.0**
HUEH	**Huehuetenango**	**2.46**	**341**	Pn	**Pn**	**03 14 15.4**	**-0.4**
TGUH	**Tegucigalpa,Un**	**3.49**	**72**	Pn	**Pb**	**03 14 38.6**	**+0.5**
CCIG	**Comitan**	**3.58**	**337**	Pn	Pn	03 14 28.4	-2.7
PETF	**Flores**	**4.00**	**11**	Pn	Pn	03 14 30.1	-6.6
CMIG	**Matias Romero**	**5.76**	**316**	Pn	**Pn**	**03 15 01.2**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=129,slow=8.4,SNR=6.2						
CMIG				Sn	Sn	03 16 01.7	-4.6
	comp=Z,0.6nm,0.3s,baz=75,slow=6.0,SNR=2.0						
CMIG				Lg	Lg	03 16 23.2	
	comp=Z,1.3nm,0.3s,baz=213,slow=23,SNR=3.7						
	comp=Z,1.6nm,0.3s						
TXAR	**Lajitas Array**	**20.26**	**326**	P	**P**	**03 18 12.5**	**+1.8**
	comp=Z,1.9nm,0.7s,baz=146,slow=11,SNR=25						
TXAR	**Lajitas Array**	**20.26**	**326**	P	**P**	**03 18 11.6**	**+0.8**
TX31	**Lajitas Ar. Si**	**20.26**	**326**	P	**P**	**03 18 11.6**	**+0.8**
TX31				IAmb	IAmb	03 18 17.7	
	comp=Z,7.9nm,0.7s						
TX32	**Lajitas Array**	**20.26**	**326**	P	**P**	**03 18 11.6**	**+0.8**
V48A	**Smith Brothers**	**22.94**	**8**	P	**P**	**03 18 35.2**	**-4.2**
MNTX	**Cornudas Mount**	**23.02**	**326**	P	**P**	**03 18 39.2**	**-1.0**
U40A	**Yellville**	**23.37**	**356**	P	**P**	**03 18 39.9**	**-3.8**
HHAR	**Hobbs**	**23.39**	**353**	P	**P**	**03 18 40.7**	**-3.3**
TKL	**Tuckaleechee C**	**23.43**	**14**	P	**P**	**03 18 41.0**	**-3.3**
	comp=Z,2.2nm,0.5s,baz=174,slow=9.7,SNR=7.3						
U49A	**Red Boiling Sp**	**23.85**	**10**	P	**P**	**03 18 43.9**	**-4.5**
U49A				IAmb	IAmb	03 18 48.7	
	comp=Z,5.9nm,0.8s						
T47A	**Sharon Grove**	**24.13**	**7**	P	**P**	**03 18 49.0**	**-2.0**
T47A				IAmb	IAmb	03 18 51.0	
	comp=Z,7.6nm,0.9s						
T50A	**Nancy**	**24.52**	**11**	P	**P**	**03 18 51.4**	**-3.1**
S39A	**Bolivar**	**24.73**	**355**	P	**P**	**03 18 55.2**	**-1.2**
S39A				IAmb	IAmb	03 18 57.1	
	comp=Z,5.6nm,0.8s						
121A	**Cookes Peak, D**	**24.98**	**324**	P	**P**	**03 19 01.1**	**+2.1**
121A				IAmb	IAmb	03 19 03.6	
	comp=Z,8.2nm,0.8s						
CCM	**Cathedral Cave**	**24.99**	**359**	P	**P**	**03 18 57.0**	**-1.7**
CCM				IAmb	IAmb	03 18 59.1	
	comp=Z,5.8nm,0.7s						
I45A	**Fountain**	**31.19**	**6**	P	P	03 19 51.7	-2.5
MTPU	**Mount Pierson**	**31.46**	**326**	P	**P**	**03 19 58.3**	**+1.2**
MTPU				IAmb	IAmb	03 20 21.3	
	comp=Z,5.9nm,1.5s						
SPMN	**Marine on St.**	**32.20**	**357**	P	**P**	**03 20 01.5**	**-1.5**
G45A	**Suttons Bay**	**32.25**	**7**	P	**P**	**03 20 01.6**	**-1.9**
COWI	**Conover**	**33.05**	**2**	P	**P**	**03 20 08.4**	**-2.1**
COWI				IAmb	IAmb	03 20 09.8	
	comp=Z,5.2nm,0.8s						
SADO	**Sadowa**	**33.19**	**15**	LR	LR	03 34 27.9	
	comp=Z,189nm,20.1s,baz=220,slow=40						
E43A	**Lone Tree Farm**	**33.44**	**5**	P	**P**	**03 20 11.8**	**-2.1**
E43A				IAmb	IAmb	03 20 12.4	
	comp=Z,4.8nm,0.7s						
E38A	**The Farm, Brul**	**33.53**	**359**	P	**P**	**03 20 13.1**	**-1.6**
PDAR	**Pinedale Array**	**33.88**	**335**	P	**P**	**03 20 17.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=134,slow=10,SNR=2.6						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**35.27**	**321**	P	**P**	**03 20 32.6**	**+2.5**
	comp=Z,2.7nm,0.8s,baz=139,slow=8.4,SNR=20						
	comp=Z,2.7nm,0.8s						
NVAR	**Mina Array Bea**	**35.27**	**321**	P	**P**	**03 20 32.9**	**+2.8**
LHV	**Little Huntoon**	**35.28**	**321**	P	**P**	**03 20 33.0**	**+3.1**
LHV				IAmb	IAmb	03 20 33.6	
	comp=Z,3.3nm,0.8s						
B35A	**Bob, Littlefor**	**35.37**	**356**	P	**P**	**03 20 29.0**	**-1.6**
AGMN	**Agassiz Nation**	**35.48**	**354**	P	**P**	**03 20 30.1**	**-1.4**
EMB	**Emerald Bay**	**36.72**	**320**	P	**P**	**03 20 45.6**	**+3.1**
EMB				IAmb	IAmb	03 20 45.8	
	comp=Z,2.5nm,0.8s						
MCMT	**McKenzie Canyo**	**36.95**	**333**	P	**P**	**03 20 45.5**	**+1.1**
ULM	**Lac du Bonnet**	**37.41**	**355**	P	P	03 20 45.6	-2.4
	comp=Z,4.6nm,0.7s,baz=179,slow=7.9,SNR=4.6						
	comp=Z,4.6nm,0.7s						
ULM	**Lac du Bonnet**	**37.41**	**355**	P	**P**	**03 20 46.1**	**-1.9**
ULM				IAmb	IAmb	03 20 46.4	
	comp=Z,4.6nm,0.8s						
WVOR	**Wild Horse Val**	**38.05**	**326**	P	**P**	**03 20 55.9**	**+2.2**
WVOR				IAmb	IAmb	03 21 05.9	
	comp=Z,3.8nm,1.1s						
J08A	**Circle Bar Ran**	**38.59**	**327**	P	**P**	**03 21 00.0**	**+1.8**
J08A				IAmb	IAmb	03 21 08.2	
	comp=Z,3.2nm,0.9s						
F10A	**Beach Ranch, E**	**39.82**	**331**	P	**P**	**03 21 09.2**	**+0.9**
F10A				IAmb	IAmb	03 21 10.1	
	comp=Z,5.7nm,0.8s						
LVC	**Limon Verde**	**41.30**	**149**	P	P	03 21 43.2	+22
	comp=Z,1.5nm,0.4s,baz=344,slow=7.2,SNR=9.8						
	comp=Z,1.5nm,0.4s						
LVC	**Limon Verde**	**41.30**	**149**	P	P	03 21 42.6	+21
SCHQ	**Schefferville**	**45.76**	**19**	P	**P**	**03 21 54.0**	**-2.3**
	comp=Z,4.8nm,0.7s,baz=213,slow=8.3,SNR=11						
	comp=Z,4.8nm,0.7s						
SCHQ	**Schefferville**	**45.76**	**19**	P	**P**	**03 21 54.3**	**-2.0**
SCHQ				IAmb	IAmb	03 21 55.0	
	comp=Z,4.9nm,0.8s						
YKA	**Yellowknife Ar**	**52.32**	**346**	P	**P**	**03 22 45.5**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=148,slow=7.6,SNR=9.6						
	comp=Z,0.5nm,0.7s						
FRB	**Frobisher Bay**	**53.03**	**12**	LR	LR	03 47 55.4	
	comp=Z,1μm,18.2s,baz=224,slow=40						
SFJD	**Kangerlussuaq**	**60.11**	**17**	LR	LR	03 52 01.4	
	comp=Z,572nm,18.6s,baz=254,slow=39						
MENT	**Mentasta**	**62.20**	**336**	P	**P**	**03 24 00.4**	**+4.2**
ILAR	**Eielson Array**	**64.28**	**337**	P	**P**	**03 24 10.6**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=173,slow=5.4,SNR=9.9						
	comp=Z,0.6nm,1.0s						
JMIC	**Jan Mayen**	**75.28**	**20**	LR	LR	04 00 43.0	
	comp=Z,588nm,18.1s,baz=273,slow=38						
AKASG	**Malin Array Be**	**97.87**	**34**	LR	LR	04 11 32.3	
	comp=Z,145nm,20.4s,baz=352,slow=36						
OBN	**Obninsk**	**99.00**	**28**	LR	LR	04 11 37.3	
	comp=Z,118nm,21.6s,baz=8.0,slow=36						

KRSC 03 03:19:39.2±1.7, **48°.14N**×**156°.69E**, **h16**^{km}±35^{km}, **ML3.7**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**3.33**	**1**	P	Pn	03 20 33.3	+2.7
KDTR	**Khodutka, Kamc**	**3.78**	**13**	eP	Pn	03 20 40.3	+3.6
KDTR				eS	Sn	03 21 24.6	+3.7
MIPR	**Malaya Ipel'ka**	**4.14**	**1**	eP	Pn	03 20 45.5	+3.8
ASAK	**Asacha**	**4.32**	**10**	eP	Pn	03 20 48.4	+4.2
MTVR	**Mutnovka**	**4.46**	**12**	eP	Pn	03 20 50.0	+3.9
MTVR				eS	Sn	03 21 42.5	+4.8
RUS	**Russkaya**	**4.46**	**15**	P	Pn	03 20 48.9	+2.9
GRL	**Gorelyy**	**4.51**	**11**	eP	Pn	03 20 51.2	+4.4
UGLR	**Uglovaya**	**5.26**	**14**	eP	Pn	03 21 01.7	+4.6
AVH	**Avacha**	**5.30**	**13**	eP	Pn	03 21 02.9	+5.3
SMAR	**Somma**	**5.30**	**14**	eP	Pn	03 21 03.6	+5.7
KOK	**Koryaka**	**5.31**	**13**	eP	Pn	03 21 02.9	+5.1
SDLR	**Sedlovina**	**5.33**	**14**	eP	Pn	03 21 02.3	+4.1
KRX	**Arik**	**5.38**	**13**	eP	Pn	03 21 03.4	+4.7
SPN	**Mys Shipunski**	**5.40**	**22**	P	Pn	03 21 04.0	+5.0
SPN				eS	Sn	03 22 06.7	+6.0
GNL	**Ganaly**	**5.62**	**8**	eP	Pn	03 21 06.0	+3.9
MKZ	**Mys Kozlova**	**7.16**	**24**	eP	Pn	03 21 27.7	+4.6

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*IDC **03** 03:22:04.6±1.6, 21°.14S×69°.04W, h114^{km}±17^{km}, mb3.2/1, mbtmp3.6/2, Error ellipse: s-maj=117.0km s-min=11.8km az=94.0*
*GUC **03** 03:22:04.2±0.6, 21°.14S×68°.70W, h107^{km}±3^{km}, ML3.3*
ISC 03 03:22:04.2±1.0, **21°.13S**±0°.03×**68°.86W**±0°.08, **h115**^{km}±8^{km}, **n19**, σ**0ˢ.89**/33, **5C-3D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.60**	**278**	⇑iP	**Pn**	**03 22 22.2**	**-0.2**
PB01				i S	**Sn**	**03 22 35.8**	**-0.3**
PB01				IAML		03 22 38.0	
	comp=E,1μm,0.2s						
PB09	**IPOC Station P**	**0.76**	**208**	⇓eP	**Pn**	**03 22 23.8**	**0.0**
PB09				eS	**Sn**	**03 22 38.4**	**-0.2**
PB02	**IPOC Station P**	**0.99**	**259**	⇑iP	**Pn**	**03 22 26.3**	**+0.4**
PB02				i S	**Sn**	**03 22 42.9**	**+0.7**
PB08	**IPOC Station P**	**1.02**	**344**	⇑iP	**Pn**	**03 22 26.6**	**+0.1**
PB08				i S	**Sn**	**03 22 43.0**	**-0.2**
PB08				IAML		03 22 45.4	
	comp=E,475nm,0.2s						
PB07	**IPOC Station P**	**1.13**	**238**	⇓eP	**Pn**	**03 22 27.5**	**+0.1**
PB07				i S	**Sn**	**03 22 45.6**	**+0.6**
PB07				IAML		03 22 48.3	
	comp=E,598nm,0.3s						
TA01	**Diego Aracena**	**1.36**	**294**	⇑iP	**Pn**	**03 22 30.0**	**+0.3**
TA01				i S	**Sn**	**03 22 49.8**	**+0.7**
TA01				IAML		03 22 51.8	
	comp=N,949nm,0.4s						
TA02	**Huaiquique**	**1.47**	**305**	eP	**Pn**	**03 22 31.1**	**+0.2**
LVC	**Limon Verde**	**1.48**	**182**	P	**Pn**	**03 22 31.3**	**-0.2**
	comp=N,43nm,0.4s,baz=18,slow=9.6,SNR=169						
LVC				S	**Sn**	**03 22 52.3**	**+0.1**
	comp=N,99nm,0.4s,baz=328,slow=16,SNR=39						
LVC	**Limon Verde**	**1.48**	**182**	i P	**Pn**	**03 22 30.6**	**-0.9**
LVC				eS	**Sn**	**03 22 51.6**	**-0.5**
GO01	**Chusmiza**	**1.48**	**348**	⇑iP	**Pn**	**03 22 31.6**	**-0.1**
PB04	**IPOC Station P**	**1.70**	**225**	eP	**Pn**	**03 22 34.0**	**+0.1**
PB04				i S	**Sn**	**03 22 56.7**	**+0.1**
PB04				IAML		03 23 04.2	
	comp=N,305nm,0.3s						
PB06	**IPOC Station P**	**1.71**	**203**	i P	**Pn**	**03 22 33.9**	**-0.1**
PB06				i S	**Sn**	**03 22 56.9**	**+0.2**
PB06				IAML		03 22 57.7	
	comp=E,510nm,0.7s						
PB15	**IPOC Station P**	**2.15**	**195**	eP	**Pn**	**03 22 39.4**	**-0.1**
PB15				i S	**Sn**	**03 23 05.7**	**-0.9**
PB16	**IPOC Station P**	**2.84**	**347**	⇓eP	**Pn**	**03 22 49.2**	**+0.3**
PB16				eS	**Sn**	**03 23 20.0**	**-3.2**
PB16				IAML		03 23 25.9	
	comp=N,48nm,0.4s						
PB10	**IPOC Station P**	**2.85**	**213**	eP	**Pn**	**03 22 48.3**	**-0.1**
PB10				IAML		03 23 37.3	
	comp=N,47nm,0.4s						
PB12	**IPOC Station P**	**2.86**	**331**	eP	**Pn**	**03 22 47.3**	**-1.4**
PB12				eS	**Sn**	**03 23 21.4**	**-1.4**
PB12				IAML		03 23 23.7	
	comp=N,88nm,0.4s						
LPAZ	**La Paz**	**4.86**	**8**	P	**Pn**	**03 23 17.1**	**+1.2**
	comp=N,5.2nm,0.4s,baz=217,slow=7.4,SNR=46						
LPAZ				S	**Sn**	**03 24 13.2**	**+1.8**
	comp=N,2.3nm,0.7s,baz=94,slow=16,SNR=4.2						
YKA	**Yellowknife Ar**	**90.85**	**341**	P	**P**	**03 34 54.4**	**+0.2**
	comp=N,0.2nm,0.6s,baz=130,slow=4.6,SNR=5.0						
	comp=N,0.2nm,0.6s						
MKAR	**Makanchi Array**	**145.30**	**36**	PKPbc	**PKPdf**	**03 41 28.5**	**+0.1**
	comp=N,0.8nm,0.8s,baz=335,slow=2.3,SNR=6.4						

IDC 03 03:25:26.5±50.0, **24°.18S**×**177°.03W**, **h0**^{km}, **mb4.3**/3, **mbtmp4.3**/3, **Error ellipse: s-maj=922.8km s-min=165.6km az=89.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.15**	**249**	P	P	03 32 39.1	-0.1
	1.7nm,0.4s,baz=102,slow=8.3,SNR=5.5						
	1.7nm,0.4s						
ASAR	**Alice Springs**	**44.67**	**260**	P	P	03 33 41.1	-0.3
	1.3nm,0.4s,baz=97,slow=7.9,SNR=28						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**45.10**	**265**	P	P	03 33 44.9	0.0
	1.7nm,0.4s,baz=104,slow=7.8,SNR=52						
	1.7nm,0.4s						

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*IDC **03** 03:44:57.2±0.6, 0°.47N×79°.80W, h0^{km}, mb4.1/15, mbtmp4.1/16, ML4.6/1, MS3.9/12, Error ellipse: s-maj=29.7km s-min=12.7km az=63.0*
*IGQ **03** 03:44:58±0.3, 0°N±2°×8°0W±°, h13^{km}*
*NEIC **03** 03:44:59.3±1.9, 0°.25N±0°.03×79°.87W±0°.06, h10^{km}±1^{km}, mb4.5/55, Error ellipse: s-maj=10.1km s-min=5.3km az=276.0*
*VAO **03** 03:45:00.2±0.4, 0°.36N×79°.87W, h18^{km}, mb4.6*
ISC 03 03:44:58.6±1.1, **0°.35N**±0°.02×**79°.84W**±0°.03, **h9**^{km}±7^{km}, **n238**, σ**1ˢ.27**/234, **mb4.4**/35, **MS4.0**/9, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AV18	**Acelerografo,**	**0.37**	**95**	P	**Pn**	**03 45 09.0**	**-1.0**
MAG1	**Magdalena**	**0.42**	**170**	P	**Pn**	**03 45 10.0**	**-0.8**
AV21	**Acelerografo,**	**0.43**	**44**	P	**Pb**	**03 45 08.0**	**-0.3**
AV21				S	**Sb**	**03 45 15.0**	**+0.1**
AMA1	**Acelerografo,**	**0.60**	**12**	P	**Pg**	**03 45 09.0**	**-1.1**
AMA1				S	**Sg**	**03 45 18.0**	**0.0**
BV15	**Puerto Quito-O**	**0.65**	**107**	P	**Pn**	**03 45 13.0**	**-0.9**
BV15				S	**Sn**	**03 45 24.0**	**-0.3**
FLF1	**Flavio Alfaro-**	**0.70**	**180**	P	**Pn**	**03 45 14.0**	**-0.7**
FLF1				S	**Sn**	**03 45 27.0**	**+1.4**
JAMA	**Jama**	**0.70**	**211**	P	**Pg**	**03 45 12.0**	**-0.2**
JAMA				S	**Sg**	**03 45 22.0**	**+0.6**
APR2	**Miler**	**0.92**	**107**	P	**Pn**	**03 45 17.0**	**-0.7**
CABP	**Cabo Pasado**	**0.93**	**219**	P	**Pb**	**03 45 16.0**	**-0.9**
CABP				S	**Sb**	**03 45 30.0**	**+0.6**
ASDO	**Santo Domingo**	**0.94**	**130**	P	**Pn**	**03 45 17.0**	**-1.0**
PAC1	**Pacto, Paraso**	**1.06**	**94**	P	**Pn**	**03 45 19.0**	**-0.6**
APR1	**Acelerografo,**	**1.29**	**108**	P	**Pg**	**03 45 23.0**	**-0.4**
HPAL	**Hacienda Las P**	**1.32**	**115**	P	**Pb**	**03 45 23.0**	**-0.7**
PINO	**Pino**	**1.33**	**112**	P	**Pn**	**03 45 23.0**	**-0.9**
TERV	**Terraza Guagua**	**1.34**	**113**	P	**Pg**	**03 45 24.0**	**-0.4**
GGPT	**Toaza - Volcan**	**1.35**	**115**	P	**Pn**	**03 45 23.0**	**-0.9**
GGPC	**Guagua Pichinc**	**1.35**	**113**	P	**Pg**	**03 45 24.0**	**-0.6**
YANA	**Yana**	**1.35**	**110**	P	**Pg**	**03 45 24.0**	**-0.6**
JUA2	**San Juan 2**	**1.36**	**114**	P	**Pg**	**03 45 24.0**	**-0.7**
OTAV	**Otavalo**	**1.40**	**94**	Pn	**Pg**	**03 45 24.9**	**-0.5**
OTAV				Sn	**Sg**	**03 45 45.0**	**+1.4**
SADP	**Ecuador-Quito-**	**1.44**	**104**	P	**Pg**	**03 45 26.0**	**-0.2**
CUSE	**Cuicocha Este**	**1.45**	**92**	P	**Pb**	**03 45 25.0**	**-0.9**
EPNL	**EPN Laboratori**	**1.46**	**112**	P	**Pg**	**03 45 26.0**	**-0.7**
CUIC	**Cuicocha-Domo**	**1.48**	**92**	P	**Pb**	**03 45 26.0**	**-0.5**
CUSW	**Cuicocha Oeste**	**1.49**	**92**	P	**Pb**	**03 45 26.0**	**-0.7**
COTA	**Cotacachi**	**1.51**	**90**	P	**Pg**	**03 45 27.0**	**-0.5**
AV11	**Acelerografo,**	**1.53**	**106**	P	**Pg**	**03 45 28.0**	**0.0**
ILLI	**Illinizas Sur**	**1.54**	**133**	P	**Pn**	**03 45 26.0**	**-0.6**

ALIT	Ecuador-Imbabu	1.55	73	P	Pn	03 45 25.0	-1.4
ALIT				S	Sn	03 45 45.0	-1.7
AMNT	Manta-Manabi	1.56	215	P	Pn	03 45 26.0	-0.4
AMNT				S	Sb	03 45 49.0	+1.6
PAST	Pastocalle	1.59	131	P	Pb	03 45 28.0	-0.3
URCU	Urcuqui	1.59	87	P	Pn	03 45 27.0	-0.3
AOTA	Otavalo	1.59	94	P	Pg	03 45 29.0	-0.2
CAMI	Rancho Maria	1.68	127	P	Pg	03 45 30.0	-0.9
NAS2	Nasa	1.69	126	P	Pb	03 45 30.0	-0.2
BNAS	Cotopaxi Volca	1.70	127	P	Pb	03 45 30.0	-0.3
AIB1	Ecuador-Imbabu	1.72	90	P	Pg	03 45 31.0	-0.6
BREF	Cotopaxi Volca	1.73	126	P	Pb	03 45 30.0	-0.9
AIB2	Ibarra (Univer	1.74	90	P	Pg	03 45 31.0	-1.0
VC1	Cotopaxi 1	1.74	124	P	Pg	03 45 31.0	-1.1
BVC2	Cotopaxi Volca	1.75	125	P	Pb	03 45 31.0	-0.1
BMOR	Cotopaxi Volca	1.75	128	P	Pb	03 45 31.0	-0.2
BTAM	Cotopaxi Volca	1.77	125	P	Pb	03 45 31.0	-0.5
YAHU	Yahuarcocha	1.77	89	P	Pb	03 45 31.0	-0.5
ANTG	Antisana-Guama	1.80	118	P	Pb	03 45 31.0	-1.0
TAMB	Tambo	1.80	125	P	Pb	03 45 32.0	-0.1
ANTM	Antisana-La Mi	1.84	118	P	Pb	03 45 32.0	-0.8
VCES	Cotopaxi	1.84	128	P	Pb	03 45 32.0	-0.8
CHMA	Chilma	1.85	74	P	Pn	03 45 29.0	-1.8
ANTI	Antisana	1.86	115	P	Pb	03 45 32.0	-1.1
ANGU	Angureal	1.86	99	P	Pg	03 45 34.0	-0.3
CAYR	Refugio Cayamb	1.87	100	P	Pb	03 45 33.0	-0.2
ANTS	Antisana-Sarah	1.87	117	P	Pb	03 45 33.0	-0.3
CAYA	Cayambe	1.87	98	P	Pb	03 45 33.0	-0.3
LNGL	El Angel-Carch	1.88	78	P	Pn	03 45 31.0	-0.3
ECEN	Cerro Negro	1.93	76	P	Pn	03 45 32.0	-0.1
CHL1	Volc¡n Chiles	1.95	77	P	Pn	03 45 32.0	-0.3
CHL2	Volc¡n Chiles	1.98	77	P	Pn	03 45 32.0	-0.7
PIAT	Ana Tenorio	2.07	130	P	Pb	03 45 35.0	-1.5
CHSH	Refugio Sur-Vo	2.07	152	P	Pb	03 45 35.0	-1.7
TULM	Tulcn-Chalpat	2.09	80	P	Pb	03 45 35.0	-1.9
PORT	Chimborazo Vol	2.09	149	P	Pn	03 45 35.0	+0.7
PPLP	Puerto Lpez	2.10	206	P	Pn	03 45 35.0	+1.1
CMBC	Cumbal	2.10	74	P	Pn	03 45 35.0	+0.7
TAMH	Tambohuasha Ch	2.16	150	P	Pn	03 45 36.0	+0.9
ATUL	Tulcn	2.16	79	P	Pb	03 45 37.0	-1.1
IGUA	Igualata	2.19	147	P	Pb	03 45 38.0	-0.6
JUI6	Juive	2.23	142	P	Pb	03 45 38.0	-1.3
BIL2	Estacion Bilba	2.24	143	P	Pb	03 45 38.0	-1.3
POND	Pondoa	2.24	142	P	Pb	03 45 38.0	-1.4
BBIL	Ulba Tungurahu	2.24	143	P	Pb	03 45 39.0	-0.4
RETU	Refugio	2.27	142	P	Pb	03 45 39.0	-1.0
BMAS	Trigal station	2.29	143	P	Pb	03 45 39.0	-1.3
ARRY	Arrayan	2.31	143	P	Pb	03 45 39.0	-1.6
BONI	La Bonita	2.32	87	P	Pb	03 45 39.0	-1.7
BPAT	Tungurahua Vol	2.32	143	P	Pb	03 45 39.0	-1.8
CASC	Dorado de Casc	2.51	95	P	Pb	03 45 43.0	-0.9
APUY	Puyo	2.58	134	P	Pb	03 45 45.0	0.0
PUYO	Puyo, Santa Ro	2.58	135	P	Pb	03 45 45.0	-0.1
MILO	Milagro-Astudi	2.62	174	P	Pn	03 45 40.0	-1.1
CCUFI	Cufio, Nario	2.65	71	*e*P	Pn	03 45 43.4	+1.6
GCUF	Volcan Galeras	2.65	71	*e*P	Pb	03 45 44.4	-2.1
CPAS2	Pasto	2.73	71	*e*P	Pb	03 45 45.3	-2.5
COHC	Cochancay	2.86	168	P	Pn	03 45 44.0	-0.3
GR1C	Gorgona, Isla	3.12	32	*e*P	Pb	03 45 53.0	-1.3
CRUC	La Cruz	3.14	67	*e*P	Pb	03 45 51.1	-3.6
ISPG	Isla Puna-Puer	3.31	186	P	Pn	03 45 53.0	+2.4
SOTA	Rioblanco	3.69	61	*e*P	Pn	03 45 58.8	+2.5
BOSC	San Juan Bosco	3.73	159	P	Pb	03 46 01.0	-3.7
ARNL	Arenillas	3.88	183	P	Pn	03 45 59.0	+0.7
PCON	Cinco Dias	3.97	60	*e*P	Pn	03 46 02.6	+2.5
MALC	Bahia Malaga	4.42	35	*e*P	Pb	03 46 14.1	-2.3
MARP	Paez Belalcaza	4.61	57	*e*P	Pn	03 46 11.2	+2.5
BETC	Betania	4.97	62	*e*P	Pn	03 46 18.0	+4.5
YOTC	Yotoco, Valle	5.03	44	*e*P	Pn	03 46 16.0	+1.8
ZUMB	Zumba	5.22	172	P	Pn	03 46 20.0	+3.0
PLMC	San Jos del P	5.76	38	*e*P	Pb	03 46 37.2	-2.1
ORTC	Ortega, Tolima	5.80	52	*e*P	Pn	03 46 28.5	+3.7
ANIL	Santa Ana	6.05	47	*e*P	Pn	03 46 33.3	+4.8
MACC	Macarena, Meta	6.25	73	*e*P	Pn	03 46 35.2	+4.2
CBOC	Ciudad Bolivar	6.68	35	*e*P	Pn	03 46 44.8	+7.7
ROSC	El Rosal	7.10	51	Pn	Pn	03 46 46.9	+4.0
	5.8nm,0.3s,baz=115,slow=20,SNR=8.9						
ROSC				Sn	Sn	03 48 08.3	+4.4
	3.4nm,0.3s,baz=331,slow=18,SNR=4.2						
ROSC				LR	LR	03 49 44.6	
	comp=Z,639nm,18.8s,baz=218,slow=41						
ROSC	El Rosal	7.10	51	Pn	Pn	03 46 44.0	+1.1
ROSC	El Rosal	7.10	51	*e*P	Pn	03 46 47.7	+4.8
NORC	Norcasia	7.18	44	*e*P	Pn	03 46 49.6	+5.8
VILC	Villavicencio,	7.19	59	*e*P	Pn	03 46 48.7	+4.6
HELC	Santa Helena	7.23	36	*e*P	Pb	03 46 55.4	-9.1
CHIC	Chingaza	7.44	55	*e*P	Pn	03 46 51.6	+3.8
PTBC	PUERTO BERRIO,	8.17	41	*e*P	Pn	03 47 00.2	+2.8
PTGC	Puerto Gaitan,	8.60	63	*e*P	Pn	03 47 18.4	+15
ZARC	Zaragoza, Cauc	8.67	35	Pn	Pn	03 47 05.7	+1.5
BRU2	Volcan	8.86	341		Pn	03 47 08.4	+1.5
DRK0	Durika	9.48	339		Pn	03 47 16.4	+0.8
SRBA	San Rafael, Bu	9.49	338	Pn	Pn	03 47 17.0	+1.3
OCAC	Ocana	10.19	40		Pn	03 47 26.5	+1.4
CZSB	Cruzeiro do Su	10.73	139	*e*P	Pn	03 47 33.9	+1.4
TBTG	Tabatinga, AM	10.90	115	*e*P	Pn	03 47 37.4	+2.6
SDV	Santo Domingo	12.49	47	Pn	Pn	03 48 01.7	+4.9
	0.5nm,0.3s,baz=276,slow=9.2,SNR=1.3						
SDV				LR	LR	03 53 27.5	
	comp=Z,256nm,19.1s,baz=264,slow=41						
SDV	Santo Domingo	12.49	47	Pn	Pn	03 47 58.4	+1.6
NNA	Nana	12.61	166	Pn	Pn	03 47 59.6	+1.3
	3.9nm,0.3s,baz=297,slow=9.8,SNR=6.9						
NNA				Sn	Sn	03 50 18.6	-0.4
	1.5nm,0.3s,baz=213,slow=17,SNR=2.4						
NNA				LR	LR	03 52 54.3	
	comp=Z,171nm,20.9s,baz=354,slow=38						
	7.8nm,0.4s						
NNA	Nana	12.61	166	Pn	Pn	03 47 58.6	+0.3
ACON	Acoyapa	12.70	336	Pn	Pn	03 48 01.2	+1.8
URIC	Uribia, Colomb	13.71	34	Pn	Pn	03 48 15.1	+1.9
BAUV	El Baul	14.53	54	Pn	Pn	03 48 24.2	-0.2
TGUH	Tegucigalpa,Un	15.48	332	P	Pn	03 48 38.7	+1.4
TGUH				IAmb	IAmb	03 48 50.1	
	comp=Z,25nm,0.9s						
MTO3	Montecristo	16.84	326	P	Pn	03 48 55.1	+0.2
ETMB	Extrema	16.91	127	*e*P	Pn	03 48 55.1	-0.5
BOAV	Boa Vista	19.42	84	*e*P	Pn	03 49 27.1	+0.6
MACA	Manacapuru-AM	19.47	100	*e*P	Pn	03 49 25.8	-1.2
LPAZ	La Paz	20.17	146	P	Pn	03 49 35.8	-0.2
	comp=Z,6.5nm,0.7s,baz=337,slow=16,SNR=17						
LPAZ				LR	LR	03 59 08.3	
	comp=Z,626nm,18.7s,baz=317,slow=42						
	comp=Z,6.5nm,0.7s						
LPAZ	La Paz	20.17	146	P	P	03 49 32.5	-1.7
LPAZ	La Paz	20.17	146	*e*P	Pn	03 49 35.5	-0.5
PB12	IPOC Station P	21.04	154	P	P	03 49 43.1	+0.1
PB12				IAmb	IAmb	03 49 45.9	
	comp=Z,16nm,0.8s						
PB16	IPOC Station P	21.16	152	P	P	03 49 45.0	+0.1
PB16				IAmb	IAmb	03 49 49.3	
	comp=Z,20nm,0.7s						
SJG	San Juan	22.20	37	P	P	03 49 54.4	-1.0
	comp=Z,7.8nm,0.8s,baz=271,slow=14,SNR=3.2						
SJG				LR	LR	03 59 08.7	
	comp=Z,113nm,20.9s,baz=202,slow=39						
	comp=Z,7.8nm,0.8s						
SJG	San Juan	22.20	37	P	P	03 49 56.8	+1.5
CMIG	Matias Romero	22.28	319	P	P	03 49 55.9	-0.3
	comp=Z,1.8nm,0.7s,baz=132,slow=10.0,SNR=2.7						
	comp=Z,1.8nm,0.7s						
PB11	IPOC Station P	22.34	154	P	P	03 49 56.4	-0.7
GCPR	Guaynabo City	22.39	36	P	P	03 49 56.6	-0.8
GO01	Chusmiza	22.47	153	P	P	03 49 57.9	-0.9
GO01				IAmb	IAmb	03 50 17.5	
	comp=Z,14nm,0.9s						
VILB	Vilhena	23.54	125	*e*P	P	03 50 10.3	+1.0
PB01	IPOC Station P	23.55	155	P	P	03 50 08.6	-0.9
PB01				IAmb	IAmb	03 50 40.3	
	comp=Z,14nm,1.2s						
PB07	IPOC Station P	24.00	157	P	P	03 50 13.7	-0.2
PB07				IAmb	IAmb	03 50 54.6	
	comp=Z,20nm,1.2s						
ITTB	Itaituba	24.54	101	*e*P	P	03 50 17.5	-1.3
LVC	Limon Verde	25.18	156	P	P	03 50 26.3	+1.4
	comp=Z,3.2nm,0.8s,baz=305,slow=4.9,SNR=4.4						
LVC				LR	LR	04 01 09.4	
	comp=Z,180nm,20.0s,baz=344,slow=38						
	comp=Z,3.2nm,0.8s						
LVC	Limon Verde	25.18	156	P	P	03 50 24.9	0.0
LVC				IAmb	IAmb	03 50 37.0	
	comp=Z,17nm,1.2s						
LVC	Limon Verde	25.18	156	*e*P	P	03 50 24.5	-0.4
MALB	Monte Alegre	25.67	95	*e*P	P	03 50 28.5	-0.6
PTLB	Pontes e Lacer	25.79	128	*e*P	P	03 50 30.6	+0.5
PDRB	Porto dos Gac	25.85	118	*e*P	P	03 50 30.9	+0.2
CLDB	Colider	26.38	116	*e*P	P	03 50 34.9	-0.6
MDP	Montagnes des	27.57	80	LR	LR	04 02 05.2	
	comp=Z,506nm,18.9s,baz=233,slow=37						
SNDB	Serra Nova Dou	30.88	114	*e*P	P	03 51 15.6	0.0
AQDB	Aquidauana	31.41	133	*e*P	P	03 51 20.3	+0.1
TMAB	Tom-Au,PA,Br	31.86	95	*e*P	P	03 51 23.0	-1.2
PEXB	Peixe	33.67	113	*e*P	P	03 51 40.1	0.0
CPUP	Villa Florida	34.27	142	P	P	03 51 46.9	+1.7
	comp=Z,1.1nm,0.8s,baz=256,slow=7.6,SNR=3.0						
CPUP				LR	LR	04 08 58.4	
	comp=Z,381nm,18.2s,baz=324,slow=42						
	comp=Z,1.1nm,0.8s						
CPUP	Villa Florida	34.27	142	*e*P	P	03 51 44.2	-0.9
BDFB	Brasilia	35.22	118	P	P	03 51 53.6	-0.1
	comp=Z,3.2nm,0.6s,baz=282,slow=9.6,SNR=6.4						
	comp=Z,3.2nm,0.6s						
BDFB	Brasilia	35.22	118	P	P	03 51 53.3	-0.4
TKL	Tuckaleechee C	35.32	354	LR	LR	04 06 06.0	
	comp=Z,175nm,18.7s,baz=162,slow=36						
PCMB	Pacaembu	35.42	130	*e*P	P	03 51 54.4	-0.7
ROSB	Rosrio	35.85	95	*e*P	P	03 51 59.3	+0.3
IPMB	Ipameri, GO	36.05	122	*e*P	P	03 51 59.9	-0.8
PTGB	Pitanga	36.67	135	*e*P	P	03 52 05.7	-0.3
TXAR	Lajitas Array	36.71	324	P	P	03 52 05.6	-0.7
	comp=Z,0.2nm,0.6s,baz=140,slow=8.3,SNR=4.7						
TXAR				PcP	PcP	03 54 28.2	-0.7
	comp=Z,1.1nm,0.9s,baz=134,slow=7.2,SNR=8.2						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	36.71	324	P	P	03 52 06.4	+0.2
SDBA	SAO DESIDERIO	36.91	111	*e*P	P	03 52 07.7	-0.4
ITQB	Itaqui	37.17	145	*e*P	P	03 52 10.3	+0.3
BB19B	Bebedouro	37.27	127	*e*P	P	03 52 10.8	-0.3
U40A	Yellville	37.81	343	P	P	03 52 16.1	+0.7
U40A				IAmb	IAmb	03 52 22.9	
	comp=Z,7.0nm,1.1s						
ITAB	Concordia	38.23	138	P	P	03 52 18.2	-0.9
ITAB	Concordia	38.23	138	*e*P	P	03 52 18.7	-0.4
JANB	Januaria	38.31	115	*e*P	P	03 52 19.1	-0.9
WMOK	Wichita Mounta	38.52	335	P	P	03 52 22.6	+1.1
FVM	French Village	38.70	347	P	P	03 52 24.3	+1.4
FVM				IAmb	IAmb	03 52 27.5	
	comp=Z,8.1nm,0.8s						
CCM	Cathedral Cave	38.97	346	P	P	03 52 25.2	+0.1
S39A	Bolivar	39.19	343	P	P	03 52 27.5	+0.5
TIJ01	Guaruva-PR	39.24	133	*e*P	P	03 52 28.4	+0.7
RPN	Rapa Nui	39.37	224	LR	LR	04 04 30.9	
	comp=Z,129nm,20.6s,baz=56,slow=30						
MNTX	Cornudas Mount	39.44	325	P	P	03 52 28.0	-1.2
VAO	Valinhos	39.51	128	*e*P	P	03 52 29.2	-0.8
CPSB	Cacapava Do Su	39.58	143	*e*P	P	03 52 29.9	-0.4
LC01	Cunco	39.73	170	P	P	03 52 29.7	-1.8
LC01				IAmb	IAmb	03 52 33.4	
	comp=Z,7.6nm,1.0s						
MSTX	Muleshoe	39.76	330	P	P	03 52 33.5	+1.6
MSTX				IAmb	IAmb	03 52 38.4	
	comp=Z,16nm,1.1s						
PARB	Paraibuna	40.74	128	*e*P	P	03 52 39.7	-0.5
121A	Cookes Peak, D	41.46	323	P	P	03 52 46.0	-0.1
121A				IAmb	IAmb	03 52 53.3	
	comp=Z,7.3nm,0.9s						
ESAR	Angra dos Reis	41.53	126	*e*P	P	03 52 47.1	+0.6
LL04	Puerto Octay	41.62	172	P	P	03 52 46.7	-0.3
LL04				IAmb	IAmb	03 52 48.2	
	comp=Z,10nm,0.9s						
PLCA	Paso Flores	41.75	169	P	P	03 52 48.8	+0.6
	comp=Z,5.4nm,1.0s,baz=339,slow=10,SNR=9.1						
	comp=Z,5.4nm,1.0s						
PLCA	Paso Flores	41.75	169	P	P	03 52 48.2	-0.1
PLCA				IAmb	IAmb	03 52 49.6	
	comp=Z,8.9nm,1.1s						
PLCA	Paso Flores	41.75	169	*e*P	P	03 52 49.0	+0.8
BNM	Barren Site	41.95	326	P	P	03 52 51.8	+1.6
GDU01	Guandu, BA	42.26	111	*e*P	P	03 52 53.2	+0.5
CBKS	Cedar Bluff	42.41	337	P	P	03 52 54.1	+0.6
CBKS				IAmb	IAmb	03 52 59.8	
	comp=Z,11nm,1.0s						
SJMB	Sao Joao De Ma	42.42	119	*e*P	P	03 52 52.9	-1.1
ANMO	Albuquerque	42.45	327	P	P	03 52 53.2	-1.0
ANMO				IAmb	IAmb	03 53 00.8	
	comp=Z,13nm,0.9s						
L40A	Anamosa	42.78	348	P	P	03 52 58.0	+1.6
L40A				IAmb	IAmb	03 53 00.5	
	comp=Z,9.4nm,1.1s						
CMC01	Camacan, BA	42.78	113	*e*P	P	03 52 56.5	-0.4
DUB01	Friburgo-RJ	42.79	124	*e*P	P	03 52 56.5	-0.4
T25A	Trinidad	43.08	331	P	P	03 53 00.9	+1.6
T25A				IAmb	IAmb	03 53 06.4	
	comp=Z,8.8nm,1.2s						
RIB01	Linhares ES	43.34	119	*e*P	P	03 52 59.8	-1.6
SDCO	Great Sand Dun	44.09	330	P	P	03 53 07.3	-0.2
SDCO				IAmb	IAmb	03 53 14.8	
	comp=Z,8.3nm,1.1s						
I42A	Draeger Farm,	44.10	351	P	P	03 53 09.1	+2.0
RCBR	Riachuelo	44.30	99	LR	LR	04 12 09.9	
	comp=Z,228nm,19.4s,baz=50,slow=37						
W18A	Petrified Fore	44.43	324	P	P	03 53 10.3	+0.2
NBAN	Anadia - AL	44.49	104	*e*P	P	03 53 09.2	-1.5
H43A	Windswept, Lux	44.49	352	P	P	03 53 10.8	+0.6
S22A	4UR Ranch, Cre	44.76	329	P	P	03 53 13.7	+0.9
AY01	Puyuhuapi	45.03	173	P	P	03 53 13.3	-1.2
AY01				IAmb	IAmb	03 53 15.2	
	comp=Z,7.1nm,0.8s						
K31A	O'Neill	45.39	340	P	P	03 53 19.0	+1.6
WUAZ	Wupatki	45.67	323	P	P	03 53 19.8	-0.1
W13A	Hualapai Mount	46.93	321	P	P	03 53 30.2	+0.2
PDAR	Pinedale Array	49.94	332	P	P	03 53 54.1	+1.0
	comp=Z,1.2nm,0.8s,baz=134,slow=8.5,SNR=7.5						
	comp=Z,1.2nm,0.8s						
PDAR	Pinedale Array	49.94	332	P	P	03 53 54.3	+1.2
ULM	Lac du Bonnet	51.57	347	P	P	03 54 04.7	-0.2
	comp=Z,5.0nm,0.9s,baz=166,slow=4.2,SNR=3.7						
	comp=Z,5.0nm,0.9s						
ULM	Lac du Bonnet	51.57	347	P	P	03 54 06.6	+1.7
ULM				IAmb	IAmb	03 54 08.7	
	comp=Z,5.5nm,0.9s						
NV11	Mina Array Sit	51.69	322	P	P	03 54 05.9	-0.3
NV11				IAmb	IAmb	03 54 12.7	
	comp=Z,4.6nm,0.9s						
OMMB	Old Mammoth Mi	51.73	320	P	P	03 54 05.0	-1.7
NVAR	Mina Array Bea	51.78	322	P	P	03 54 06.5	-0.5
	comp=Z,1.6nm,0.8s,baz=140,slow=7.5,SNR=11						
	comp=Z,1.6nm,0.8s						
NVAR	Mina Array Bea	51.78	322	P	P	03 54 06.0	-1.0
YHH	Holmes Hill	52.08	332	P	P	03 54 09.4	+0.2
YHL	Hebgen Lake	52.28	332	P	P	03 54 11.6	+0.9
YHL				IAmb	IAmb	03 54 17.7	
	comp=Z,9.6nm,1.4s						
BOZ	Bozeman (W)	53.05	332	P	P	03 54 16.0	-0.2
MFID	Camas Ranch	53.58	328	P	P	03 54 21.6	+1.5
MFID				IAmb	IAmb	03 54 26.5	
	comp=Z,5.6nm,1.0s						
PINE	Pine Mountain	56.64	325	P	P	03 54 42.6	+0.2
PINE				IAmb	IAmb	03 54 48.2	
	comp=Z,6.7nm,1.1s						
PMSA	Palmer Station	65.99	173	*e*P	P	03 55 44.1	-0.8
YKA	Yellowknife Ar	67.25	343	P	P	03 55 50.6	-2.4
	comp=Z,1.0nm,0.7s,baz=135,slow=6.0,SNR=26						
	comp=Z,1.0nm,0.7s						
PPT	Papeete	70.81	251	LR	LR	04 20 55.8	
	comp=Z,127nm,18.8s,baz=98,slow=30						
BCAR	Beaver Creek A	77.32	336	P	P	03 56 52.4	-0.9
ESDC	Sonseca Array	78.92	50	P	P	03 57 02.4	-0.4
	comp=Z,2.9nm,1.0s,baz=259,slow=6.3,SNR=11						
	comp=Z,2.9nm,1.0s						
ILAR	Eielson Array	80.06	336	P	P	03 57 09.5	+1.2
	comp=Z,1.9nm,1.1s,baz=118,slow=2.9,SNR=9.6						
	comp=Z,1.9nm,1.1s						
ILAR	Eielson Array	80.06	336	P	P	03 57 08.9	+0.5
QSPA	South Pole Qui	90.40	180	P	P	03 58 00.2	0.0
	comp=Z,3.1nm,1.0s,baz=163,slow=0.3,SNR=8.3						
	comp=Z,3.1nm,1.0s						
QSPA	South Pole Qui	90.40	180	P	P	03 57 59.5	-0.7
MKAR	Makanchi Array	130.51	16	PKP	PKPdf	04 04 08.4	-1.6
	comp=Z,0.5nm,0.7s,baz=39,slow=6.2,SNR=4.8						
ASAR	Alice Springs	139.89	232	PKP	PKPdf	04 04 29.4	+1.2
	comp=Z,0.2nm,0.4s,baz=116,slow=2.8,SNR=2.2						
WRA	Warramunga Arr	141.29	238	PKP	PKPdf	04 04 30.9	+0.2
	comp=Z,0.6nm,0.7s,baz=108,slow=2.5,SNR=7.2						

IDC 03 03:51:13.2±19.0,**17°.99S**×**178°.77W**,**h580**^{km}±261^{km}, **mb2.8**/3,**mbtmp3.8**/3,**Error ellipse: s-maj=278.1km s-min=55.9km az=171.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.28	260	P	P	03 58 32.4	-0.2
	0.3nm,0.6s,baz=95,slow=7.2,SNR=8.1						
	0.3nm,0.6s						
ASAR	Alice Springs	44.44	254	P	P	03 58 33.8	-0.1
	3.6nm,0.6s,baz=89,slow=8.3,SNR=43						
	3.6nm,0.6s						
TXAR	Lajitas Array	86.33	58	P	P	04 02 54.9	-0.1
	0.3nm,0.7s,baz=215,slow=6.1,SNR=4.2						
	0.3nm,0.7s						
GERES	GERESS Array B	147.60	345	PKPbc	PKPbc	04 09 52.5	-0.6
	0.5nm,0.6s,baz=29,slow=3.0,SNR=5.7						

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*DJA **03** 03:51:43.5±0.6, 1°N±6°×12°3E±°, h31^{km}±7^{km}, M3.8/7, MLv3.8/7*

ISC 03 03:51:42.5±1.3,**1°.06N**±0°.06×**122°.58E**±0°.05,**h51**^{km},**n7**, σ**2.^{s}22**/10,**1C**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.60	134	P	Pn	03 51 53.8	-1.3
MRSI	Marisa	0.86	228	P	Pn	03 51 58.4	0.0
MRSI				S	Sn	03 52 09.1	-0.9
KMSI	Cibinong	1.48	109	P	Pn	03 52 07.2	+0.4
KMSI				S	Sn	03 52 27.1	+2.0
LUWI	Luwuk	2.10	175	P	Pn	03 52 16.1	+0.9
APSI	Ampana	2.17	205	P	Pn	03 52 15.7	-0.5
MPSI	Mapaga	2.77	255	P	Pn	03 52 26.2	+1.7
PAGZ	Pagadian	6.79	7⇑	*e*P	Pn	03 53 21.9	+2.2
PAGZ				*e*S	Sn	03 54 31.4	-4.3

IDC 03 03:52:08.2±12.0,**12°.30N**×**89°.60W**,**h0**^{km},**mb3.2**/4, **mbtmp3.3**/5,**ML3.3**/1,**MS3.8**/1,**Error ellipse: s-maj=265.2km s-min=82.5km az=15.0,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	6.99	314	Pn	Pn	03 53 52.7	+0.8
	0.5nm,0.3s,baz=128,slow=11,SNR=4.9						
CMIG				Sn	Sn	03 55 03.5	-8.7
	0.4nm,0.3s,baz=103,slow=14,SNR=2.3						
	3.1nm,0.7s						
TXAR	Lajitas Array	21.42	324	P	P	03 56 56.8	-1.1
	0.3nm,0.5s,baz=143,slow=11,SNR=8.5						
	0.3nm,0.5s						
PDAR	Pinedale Array	34.95	334	P	P	03 59 02.9	+0.7
	0.1nm,0.3s,baz=142,slow=8.9,SNR=1.7						
	0.1nm,0.3s						
NVAR	Mina Array Bea	36.46	321	P	P	03 59 15.6	+0.4
	0.6nm,0.8s,baz=135,slow=9.0,SNR=2.5						
	0.6nm,0.8s						
BBB	Bella Bella	50.39	330	LR	LR	04 24 23.8	
	comp=Z,97nm,18.2s,baz=22,slow=38						
YKA	Yellowknife Ar	53.23	346	P	P	04 01 27.5	-0.7
	0.1nm,0.3s,baz=169,slow=6.9,SNR=2.9						
	0.1nm,0.3s						

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*NEIC **03** 03:59:05.9±1.0, 18°.79N±0°.09×145°.3E±0°.2, h200^{km}±6^{km}, mb3.5/7, Error ellipse: s-maj=30.4km s-min=11.9km az=97.0*

*IDC **03** 03:59:09.7±13.0, 18°.67N×145°.38E, h241^{km}±131^{km}, mb3.1/8, mbtmp3.6/8, Error ellipse: s-maj=35.1km s-min=22.5km az=79.0*

ISC 03 03:59:05.6±0.8,**18°.8N**±0°.2×**145°.3E**±0°.2,**h200**^{km},**n20**, σ**0.^{s}77**/20,**mb3.4**/12,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB0	Warramunga Arr	39.76	196	P	P	04 06 18.4	-0.7
WB0				IAmb	IAmb	04 06 28.3	
	comp=Z,2.6nm,0.9s						
WRAB	Tennant Creek	39.93	196	P	P	04 06 20.7	+0.2
WB2	Warramunga Arr	39.94	196	P	P	04 06 20.4	-0.2
WB2				IAmb	IAmb	04 06 27.4	
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	39.94	196	P	P	04 06 20.2	-0.5
	comp=Z,0.6nm,0.3s,baz=14,slow=8.2,SNR=34						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	39.94	196	P	P	04 06 20.3	-0.3
SONM	Songino Array	42.81	322	P	P	04 06 43.5	-0.4
SONM				IAmb	IAmb	04 06 51.6	
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	58.10	314	P	P	04 08 39.4	+1.3
	comp=Z,0.1nm,0.4s,baz=81,slow=9.1,SNR=2.1						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	58.10	314	P	P	04 08 38.3	+0.1
KURK	Kurchatov	60.93	318	P	P	04 08 57.7	+0.3
KURK				IAmb	IAmb	04 09 01.1	
	comp=Z,0.9nm,0.7s						
KURBB	Kurchatov Arra	60.97	318	P	P	04 08 58.8	+1.2
	comp=Z,0.3nm,0.4s,baz=93,slow=7.4,SNR=5.4						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	63.76	26	P	P	04 09 15.3	-0.6
	comp=Z,0.2nm,0.4s,baz=259,slow=5.7,SNR=2.2						
	comp=Z,0.2nm,0.4s						
ILAR	Eielson Array	63.76	26	P	P	04 09 15.9	0.0
INK	Inuvik	69.47	23	P	P	04 09 52.2	+0.4
	comp=Z,0.4nm,0.4s,baz=293,slow=5.3,SNR=4.4						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	69.47	23	P	P	04 09 51.9	0.0
INK				IAmb	IAmb	04 10 03.4	
	comp=Z,1.8nm,1.1s						
YKA	Yellowknife Ar	78.12	28	P	P	04 10 42.2	0.0
	comp=Z,0.5nm,0.7s,baz=290,slow=5.7,SNR=6.5						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	78.12	28	P	P	04 10 41.9	-0.4
NVAR	Mina Array Bea	83.43	52	P	P	04 11 10.9	-0.2
	comp=Z,0.3nm,0.5s,baz=266,slow=6.1,SNR=4.5						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	86.63	335	P	P	04 11 25.6	-0.7
	comp=Z,0.2nm,0.3s,baz=58,slow=7.2,SNR=4.6						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	86.63	335	P	P	04 11 25.3	-1.0
LPAZ	La Paz	148.10	91	PKPbc	PKPdf	04 18 27.8	+1.9
	comp=Z,0.9nm,0.7s,baz=207,slow=3.6,SNR=3.9						

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*NOU **03** 04:10:06.4, 37°.64S×176°.04E, h324^{km}, mb4.1/9, North Island, New Zealand*

*WEL **03** 04:10:12.6±0.7, 38°S±7°×17°6E±°, h270^{km}±5^{km}, M3.1/37, MLv3.1/37, Error ellipse: s-maj=0.0km s-min=0.0km az=146.9*

ISC 03 04:10:05.2±1.6,**37°.7S**±0°.1×**176°.03E**±0°.08,**h318**^{km}±10^{km}, **n112**,σ**2.^{s}36**/129,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRZ	Kaimai	0.14	210	P	Pn	04 10 47.8	+2.5
TLZ	Tolley Road	0.72	213	P	Pn	04 10 49.3	+2.9
MKAZ	Moumakai	0.93	311	P	Pn	04 10 49.9	+2.6
MUGZ	Murupara	0.95	142	P	Pn	04 10 49.0	+1.8
MUGZ				S	S	04 11 18.6	-2.2
URZ	Urewera	1.01	122	P	Pn	04 10 48.9	+1.5
URZ				S	S	04 11 18.3	-2.9
URZ	Urewera	1.01	122	P	Pn	04 10 48.9	+1.5
MRHZ	Matea Rd	1.15	165	P	Pn	04 10 50.3	+2.1
MRHZ				S	S	04 11 20.3	-2.3
RTZ	Ruatahuna	1.16	140	P	Pn	04 10 50.3	+2.0
RTZ				S	S	04 11 20.3	-2.4
HIZ	Hauiti	1.22	229	P	Pn	04 10 51.6	+3.1
MTHZ	Maungataniwha	1.29	151	P	Pn	04 10 51.4	+2.4
MTHZ				S	S	04 11 22.1	-1.8
RUGZ	Raukumara Rang	1.33	101	P	Pn	04 10 50.1	+0.9
MWZ	Matawai	1.33	118	P	Pn	04 10 51.0	+1.8
MWZ				S	S	04 11 22.4	-1.9
RAGZ	Rawiri	1.34	126	P	Pn	04 10 51.7	+2.5
RAGZ				S	S	04 11 22.4	-1.9
HAZ	Te Kaha	1.39	92	P	Pn	04 10 50.7	+1.2
HAZ				S	S	04 11 21.8	-2.9
TMVZ	Te Maari	1.41	190	P	Pn	04 10 52.3	+2.6
ETVZ	East Tongariro	1.43	190	P	Pn	04 10 52.4	+2.6
WTVZ	West Tongariro	1.43	194	P	Pn	04 10 52.3	+2.5
NNVZ	North Ngauruho	1.44	193	P	Pn	04 10 52.6	+2.7
RAHZ	Arahi	1.45	145	P	Pn	04 10 52.6	+2.8
RAHZ				S	S	04 11 24.3	-1.2
SNGZ	Shannon Statio	1.48	136	P	Pn	04 10 52.6	+2.7

SNGZ				S	S	04 11 24.0	-1.7
BKZ	Black Stump Fm	1.48	166	P	Pn	04 10 52.4	+2.4
BKZ				S	S	04 11 23.6	-2.3
BKZ	Black Stump Fm	1.48	166	P	Pn	04 10 52.5	+2.4
NGZ	Ngauruhoe	1.49	193	P	Pn	04 10 52.7	+2.5
SNVZ	South Ngauruho	1.49	192	P	Pn	04 10 52.9	+2.7
NMHZ	Naumai	1.50	156	P	Pn	04 10 53.4	+3.3
NMHZ				S	S	04 11 26.0	-0.1
TUVZ	Tukino	1.57	191	P	Pn	04 10 53.2	+2.5
TUVZ				S	S	04 11 25.2	-1.8
FWVZ	Far West T-bar	1.57	194	P	Pn	04 10 53.2	+2.4
WHVZ	Whangaehu Hut	1.59	192	P	Pn	04 10 53.4	+2.5
TKGZ	Te Karaka	1.60	117	P	Pn	04 10 53.4	+2.7
TKGZ				S	S	04 11 25.4	-1.6
TWGZ	Tauwhareparae	1.61	107	P	Pn	04 10 53.6	+2.8
TWGZ				S	S	04 11 26.4	-0.9
TRVZ	Turoa	1.62	193	P	Pn	04 10 53.6	+2.6
PKGZ	Pakihiroa	1.63	96	P	Pn	04 10 53.3	+2.3
PKGZ				S	S	04 11 26.1	-1.5
WNVZ	Wahianoa	1.64	192	P	Pn	04 10 53.5	+2.4
WNVZ				S	S	04 11 26.1	-1.8
PKVZ	Pokaka	1.65	199	P	Pn	04 10 53.6	+2.5
RIGZ	Rimuhau	1.68	126	P	Pn	04 10 54.1	+2.8
MOVZ	Moawhango	1.69	187	P	Pn	04 10 53.5	+2.1
ARHZ	Aropaoanui	1.71	154	P	Pn	04 10 54.4	+3.0
VRZ	Vera Road	1.72	215	P	Pn	04 10 54.6	+3.1
KWHZ	Kaweka Forest	1.73	170	P	Pn	04 10 54.5	+2.9
BHHZ	Black Hill Sta	1.76	179	P	Pn	04 10 54.3	+2.4
PUZ	Puketiti	1.79	102	P	Pn	04 10 54.2	+2.2
MCHZ	McNeill Hill	1.80	163	P	Pn	04 10 55.1	+3.1
MXZ	Matakaoa Point	1.81	86	P	Pn	04 10 54.3	+2.1
KNZ	Kokohu	1.83	136	P	Pn	04 10 54.7	+2.5
CNGZ	Carnagh Statio	1.88	115	P	Pn	04 10 55.5	+3.0
PRGZ	Paritu Road	1.89	130	P	Pn	04 10 55.4	+2.7
WMGZ	Waiomatatini S	1.89	94	P	Pn	04 10 55.2	+2.5
KRHZ	Kereru	1.94	172	P	Pn	04 10 55.7	+2.7
MHGZ	Mahia Peninsul	2.05	135	P	Pn	04 10 56.7	+2.9
CKHZ	Cape Kidnapper	2.10	157	P	Pn	04 10 57.2	+3.0
KAHZ	Kahuranaki	2.17	163	P	Pn	04 10 57.9	+3.0
PKE	Pukeiti	2.17	227	P	Pn	04 10 58.8	+3.9
WAZ	Wanganui	2.19	202	P	Pn	04 10 57.7	+2.8
PNHZ	Pukenui	2.19	177	P	Pn	04 10 57.6	+2.6
KHEZ	Kahui Hut	2.23	225	P	Pn	04 10 59.3	+4.0
TSZ	Takapari Road	2.33	181	P	Pn	04 10 58.6	+2.5
WPHZ	Waipukurau	2.36	172	P	Pn	04 10 59.5	+3.2
PXZ	Pawanui	2.39	165	P	Pn	04 10 59.5	+2.9
OHWZ	Ohakea	2.54	192	P	Pn	04 11 01.1	+3.2
DVHZ	Dannevirke	2.57	178	P	Pn	04 11 00.5	+2.3
POWZ	Post Office Ro	2.67	184	P	Pn	04 11 01.7	+2.7
PRWZ	Pori Road	2.83	181	P	Pn	04 11 03.1	+2.6
MRZ	Mangatainoka R	2.95	187	P	Pn	04 11 04.4	+2.7
BFZ	Birch Farm	2.96	177	P	Pn	04 11 04.5	+2.8
OGWZ	Otaki Gorge	3.16	192	P	Pn	04 11 05.9	+2.3
HOWZ	Holdsworth Sta	3.19	187	P	Pn	04 11 06.2	+2.2
KIW	Kapiti Island	3.25	195	P	Pn	04 11 06.6	+2.1
TMWZ	Te Maipa	3.38	182	P	Pn	04 11 08.1	+2.2
MTW	Mount Morrison	3.45	187	P	Pn	04 11 08.5	+1.9
CAW	Cannon Point	3.46	192	P	Pn	04 11 08.8	+2.2
DUWZ	D’Urville Isla	3.48	207	P	Pn	04 11 08.9	+2.0
TRWZ	Traveller	3.68	184	P	Pn	04 11 11.2	+2.4
SNZO	South Karori	3.73	196	P	Pn	04 11 11.7	+2.4
MSWZ	Moikau Station	3.74	189	P	Pn	04 11 11.5	+2.1
TCW	Tory Channel	3.74	201	P	Pn	04 11 11.5	+2.1
BHW	Baring Head	3.79	193	P	Pn	04 11 12.4	+2.4
PLWZ	Palliser	3.89	189	P	Pn	04 11 13.1	+2.0
TUWZ	Tuamarina	4.04	203	P	Pn	04 11 14.9	+2.3
NNZ	Nelson	4.05	210	P	Pn	04 11 14.4	+1.7
TKNZ	Takaka Hill	4.07	215	P	Pn	04 11 14.3	+1.2
QRZ	Quartz Range	4.12	220	P	Pn	04 11 14.9	+1.3
QRZ	Quartz Range	4.12	220	P	Pn	04 11 14.8	+1.3
CMWZ	Cape Campbell	4.26	199	P	Pn	04 11 18.4	+3.4
BSWZ	Blackbirch Sta	4.32	202	P	Pn	04 11 18.2	+2.5
MRNZ	Matariki Terra	4.46	214	P	Pn	04 11 18.7	+1.5
THZ	Tophouse	4.70	210	P	Pn	04 11 21.6	+1.6
KHZ	Kahutara	5.06	201	P	Pn	04 11 26.3	+2.4
KHZ	Kahutara	5.06	201	P	Pn	04 11 26.1	+2.2
DSZ	Denniston Nort	5.17	218	P	Pn	04 11 26.8	+1.5
GVZ	Greta Valley S	5.72	203	P	Pn	04 11 33.7	+2.2
LTZ	Lake Taylor	5.81	208	P	Pn	04 11 34.8	+2.1
AMCZ	Amberley	6.03	204	P	Pn	04 11 37.2	+2.1
INZ	Inchbonnie	6.10	214	P	Pn	04 11 37.6	+1.5
OXZ	Oxford	6.37	207	P	Pn	04 11 40.7	+1.5
OKCZ	Okains Bay	6.40	200	P	Pn	04 11 42.2	+2.6
MQZ	McQueen’s Vall	6.50	202	P	Pn	04 11 42.1	+1.4
AKCZ	Akaroa Harbour	6.58	200	P	Pn	04 11 44.2	+2.5
RACZ	Rakaia	6.69	205	P	Pn	04 11 44.9	+1.9
WVZ	Waitaha Valley	6.70	215	P	Pn	04 11 44.8	+1.7
WACZ	Wakanui South	6.98	206	P	Pn	04 11 48.7	+2.3
GCSZ	Gaunt Creek Bo	7.08	216	P	Pn	04 11 49.6	+2.0
RPZ	Rata Peaks	7.08	211	P	Pn	04 11 49.4	+1.7
RPZ	Rata Peaks	7.08	211	P	Pn	04 11 49.3	+1.6
ARCZ	Arundel	7.22	209	P	Pn	04 11 51.3	+1.9
FOZ	Fox Glacier	7.48	217	P	Pn	04 11 54.5	+2.0
TMZ	Timaru	7.66	208	P	Pn	04 11 57.3	+2.6
LBZ	Lake Benmore	7.99	212	P	Pn	04 12 00.6	+2.0
ODZ	Otahua Downs	8.36	207	P	P	04 12 06.3	-1.1
ODZ	Otahua Downs	8.36	207	P	P	04 12 06.4	-0.9
JCZ	Jackson Bay	8.38	219	P	Pn	04 12 05.6	+2.0
WKZ	Wanaka	8.84	214	P	Pn	04 12 09.7	+0.7
TUZ	Tuapeka	9.51	208	P	P	04 12 19.0	-1.3

NEIC 03 04:12:51.2±0.6**, 36°.13N**±0°.01×**97°.06W**±0°.01**, h4**km±4km**,**
ML2.2/44**, Error ellipse: s-maj=1.6km s-min=1.3km**
az=199.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.78	204	Pg	Pg	04 13 05.3	-0.8
OKCFA				Sg	Sg	04 13 16.1	-0.1
OKCSW	OKLAHOMA CITY	0.78	203	Pg	Pg	04 13 05.9	-0.3
OKCSW				Sg	Sg	04 13 16.4	0.0
T35A	Sooner Cattle	0.90	29	Pg	Pg	04 13 07.5	-1.1
T35A				Sg	Sg	04 13 19.4	-0.9
FNO	Franklin	0.91	198	Pg	Pg	04 13 07.3	-1.4
FNO				Sg	Sg	04 13 20.2	-0.3
FNO				IAML		04 13 20.5	
	comp=N,94nm,0.2s						
TUL1	Leonard	1.05	101	Pg	Pg	04 13 09.9	-1.4
TUL1				Sg	Sg	04 13 24.0	-0.9
TUL1				IAML		04 13 25.0	
	comp=N,47nm,0.2s						
TUL1				IAML		04 13 25.4	
	comp=E,30nm,0.2s						
U32A	Winter Ranch,	1.59	280		Pn	04 13 18.4	-1.8
WMOK	Wichita Mounta	1.97	226	Pn	Pn	04 13 25.1	-0.3

IDC 03 04:14:35.1±7.0**, 3°.24S**×**134°.39E, h0**km**, mb3.2**/2**,**
mbtmp3.3/3**, ML2.9**/1**, Error ellipse: s-maj=381.3km**
s-min=32.9km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.60	180	Pn	Pn	04 18 30.5	+1.0
	baz=359,slow=13,SNR=4.7						
	0.3nm,0.7s						
ASAR	Alice Springs	20.31	181	P	P	04 19 12.4	-0.5
	0.5nm,0.6s,baz=4.8,slow=12,SNR=5.1						
	0.5nm,0.6s						
MKAR	Makanchi Array	67.63	324	P	P	04 25 34.0	0.0
	0.2nm,0.5s,baz=130,slow=7.8,SNR=2.5						
	0.2nm,0.5s						

NNC ***03*** *04:33:51.4±7.6, 36°.88N×70°.36E, h0km, mb4.2, mpv3.9,*
Error ellipse: s-maj=61.6km s-min=42.0km az=173.0
IDC ***03*** *04:33:55.4±7.3, 36°.48N×71°.33E, h176km±65km, mb3.2/2,*
mbtmp3.8/7, MS3.5/1, Error ellipse: s-maj=60.6km
s-min=42.0km az=44.0
ISC 03 04:33:54.0±0.9**, 36°.61N**±0°.07×**70°.91E**±0°.08**, h188**km**, n21,**
σ**2.s02**/24**, 5C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.49	357	⇑P	Pn	04 35 26.2	-1.3
	5.5nm,0.4s,baz=183,slow=13,SNR=78						
KK31				⇑S	Sn	04 36 38.3	-3.1
	2.7nm,0.4s,baz=186,slow=26,SNR=8.3						
AAK	Ala-Archa	6.63	24	P	Pn	04 35 31.3	+1.9
	3.7nm,0.4s,baz=205,slow=7.4,SNR=11						
AAK				S	Sn	04 36 43.5	-1.3
	7.4nm,0.7s,baz=330,slow=20,SNR=4.0						
TKM2	Tokmak 2	7.26	28	⇑P	Pn	04 35 37.6	-0.1
	6.6nm,1.2s						
TKM2				⇓S	Sn	04 37 01.0	+1.0
	2.5nm,0.7s						
GEYT	Alibeck	10.28	281	S	S	04 38 11.1	-1.1
	2.4nm,0.4s,baz=87,slow=28,SNR=4.7						
MKAR	Makanchi Array	13.25	36	P	P	04 36 57.2	-0.9
	1.7nm,0.8s,baz=225,slow=14,SNR=12						
PYUN	Piuthan	13.27	126	*e*P	Pn	04 36 52.5	-3.0
DANN	Dangsing	13.61	124	*e*P	Pn	04 36 57.4	-2.5
AB31	Akbulak array	14.95	331	⇑P	P	04 37 18.3	+1.4
	1.7nm,0.7s,baz=145,slow=11,SNR=29						
AB31				S	Sn	04 40 00.4	-2.5
	1.4nm,0.8s,baz=147,slow=24,SNR=4.3						
KURBB	Kurchatov Arra	15.04	19	P	P	04 37 20.4	+2.4
	0.9nm,0.7s,baz=204,slow=11,SNR=5.9						
PKIN	Phulchoki	15.21	122	*e*P	Pn	04 37 18.7	-0.9
	18nm,0.6s						
PKI	Pulchoki	15.22	122	*e*P	Pn	04 37 18.7	-1.2
GUN	Gumba	15.34	120	*e*P	Pn	04 37 19.5	-1.7
	7.9nm,0.4s						
RAMN	Ramite	16.43	121	*e*P	P	04 37 34.0	+0.2
AKTO	Aktyubinsk	16.65	330	P	Pn	04 37 40.6	+4.1
	4.7nm,0.7s,baz=126,slow=8.5,SNR=16						
AKTO	Aktyubinsk	16.65	330	⇑P	Pn	04 37 39.6	+3.1
	4.5nm,0.7s						
TAPN	Taplejung	16.96	118	*e*P	P	04 37 40.6	+1.0
	11nm,0.4s						
ODAN	Odare	17.04	120	*e*P	P	04 37 41.6	+1.2
ZALV	Zalesovo Beam	19.85	25	P	Pn	04 38 12.9	-1.3
	1.7nm,0.4s,baz=225,slow=11,SNR=6.6						
BRTR	Keskin Array B	29.33	288	LR	LR	04 56 18.5	
	comp=Z,73nm,18.2s,baz=130,slow=45						
WRA	Warramunga Arr	82.11	122	P	P	04 45 54.5	+0.7
	0.5nm,0.8s,baz=324,slow=4.9,SNR=9.1						
	0.5nm,0.8s						
ASAR	Alice Springs	84.38	125	P	P	04 46 06.1	+0.8
	0.4nm,0.5s,baz=316,slow=5.1,SNR=4.1						
	0.4nm,0.5s						

JMA ***03*** *04:36:16.6±0.1, 24°.0N±0°.6×121°.6E±0°.7, h23km, TAIWAN REGION*
TAP ***03*** *04:36:18.5, 24°.23N×121°.76E, h12km, ML3.5, B*
ISC 03 04:36:17.7±0.9**, 24°.20N**±0°.01×**121°.84E**±0°.02**, h10**km±6km**,**
n137, σ**0.s65**/189**, 1C-30D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.14	319	*i* P	Pg	04 36 21.4	+0.5
	baz=351						
EHP				*i* S	Sg	04 36 23.6	+0.5
	baz=351						
ETL	Fush Village	0.21	258	P	Pg	04 36 22.1	+0.1
	baz=243						
ETL				S	Sg	04 36 24.8	-0.1
	baz=243						
NACB	Ninganchiao	0.23	263	⇓*i*P	Pg	04 36 22.2	-0.2
	baz=245						
NACB				*i* S	Sg	04 36 25.0	-0.6
	baz=245						
ENA	Nanau	0.24	338	⇓*i*P	Pg	04 36 23.1	+0.4
	baz=356						
ENA				*i* S	Sg	04 36 26.4	+0.4
	baz=356						
EWUT	Wuta	0.25	346	⇓P	Pb	04 36 23.4	-0.9
	baz=3.0						
EWUT				S	Sg	04 36 27.0	+0.8
	baz=3.0						
TWD	Chiawan	0.26	242	⇓P	Pg	04 36 23.0	+0.1
	baz=232						
TWD				S	Sg	04 36 26.3	-0.1
	baz=232						
HWA	Hwalien	0.31	224	*e*P	Pb	04 36 25.4	0.0
	baz=218						
ETLH	Xiulin Townshi	0.33	271	⇓P	Pg	04 36 23.9	-0.4
	baz=267						
ETLH				*e*S	Sg	04 36 27.9	-0.8
	baz=267						
ETM	Tongmen	0.40	234	*e*P	Pg	04 36 25.8	+0.3
	baz=225						
TEYL	Yanliau Villag	0.40	214	*e*P	Pb	04 36 26.9	0.0
	baz=213						
TEYL				*e*S	Sb	04 36 33.4	+0.4
	baz=213						
TWC	Suao	0.41	1	⇓*i*P	Pb	04 36 26.6	-0.5
	baz=5.0						
TWC				*i* S	Sb	04 36 32.0	-1.3
	baz=5.0						
LATG	Datong	0.44	319	⇓*i*P	Pg	04 36 26.4	0.0
	baz=325						
LATG				S	Sg	04 36 32.1	-0.1
	baz=325						
NDS	Dongshan	0.45	345	⇓P	Pb	04 36 27.0	-0.7
	baz=354						
NDS				S	Sg	04 36 32.6	+0.3
	baz=354						
NNSB	Datong	0.48	298	⇓*i*P	Pg	04 36 26.8	-0.2
	baz=301						
NNSB				S	Sg	04 36 32.4	-1.0
	baz=301						
NNS	Nan Shan	0.49	299	⇓*i*P	Pg	04 36 27.0	-0.3
	baz=302						
NNS				S	Sg	04 36 32.7	-1.1
	baz=302						
NDT	Datong Townshi	0.50	323	⇓P	Pg	04 36 27.6	+0.2
	baz=329						
NDT				S	Sg	04 36 34.2	+0.2
	baz=329						
ENTT	Nioudou	0.51	330	⇓*i*P	Pg	04 36 27.8	+0.3
	baz=337						
ENTT				S	Sg	04 36 34.3	+0.1
	baz=337						
WHF	Hehuan Shan	0.53	264	⇓*i*P	Pg	04 36 27.7	-0.4
	baz=260						
WHF				S	Sg	04 36 33.8	-1.4
	baz=260						
ESL	Shilin	0.54	224	*e*P	Pg	04 36 28.6	+0.4
	baz=225						
TWE	Neicheng	0.54	343	⇓*i*P	Pb	04 36 28.8	-0.5
	baz=351						
TWE				S	Sg	04 36 35.4	0.0
	baz=351						
TEGC	Jichi Village	0.56	210	*e*P	Pb	04 36 30.0	+0.4
	baz=192						
ILA	Ilan	0.57	351	*e*P	Pb	04 36 29.6	-0.1
	baz=354						
ILA				S	Sb	04 36 37.4	-0.5
	baz=354						
FUSB	Fushanzhiwuyua	0.60	337	⇓*i*P	Pb	04 36 29.9	-0.5
	baz=343						
FUSB				S	Sg	04 36 37.3	0.0
	baz=343						
TWT	Tachien	0.61	275	P	Pg	04 36 29.6	+0.1
	baz=273						
TWT				S	Sg	04 36 37.1	-0.5
	baz=273						
CHGB	Renai	0.63	257	⇓*i*P	Pg	04 36 29.8	-0.1
	baz=246						
CHGB				*i* S	Sg	04 36 37.3	-0.9
	baz=246						
TDCB	Techi	0.63	275	⇓P	Pg	04 36 29.7	-0.1
	baz=273						
TDCB				S	Sg	04 36 36.6	-1.5
	baz=273						
YHNB	Yeheng	0.63	318	⇓*i*P	Pg	04 36 30.1	+0.1
	baz=321						
YHNB				*i* S	Sg	04 36 37.8	-0.4
	baz=321						
EGS		0.65	7	*e*P	Pb	04 36 31.5	+0.4
	baz=22						
NSK	Sanguang	0.65	317	⇓*i*P	Pg	04 36 30.3	+0.1
	baz=321						
NSK				*i* S	Sg	04 36 38.4	-0.4
	baz=321						
NTC	Toucheng	0.65	359	⇓*e*P	Pb	04 36 31.1	0.0
	baz=5.0						
NTC				*e*S	Sb	04 36 39.7	-0.7
	baz=5.0						
EGFH	Guangfu	0.65	216	*e*P	Pb	04 36 31.2	0.0
	baz=217						
NWLT	Wulai	0.65	332	⇓P	Pb	04 36 30.7	-0.5
	baz=337						
NWLT				S	Sg	04 36 38.6	-0.3
	baz=337						
OWD	Renai	0.66	248	⇓P	Pg	04 36 30.2	-0.2
	baz=244						
OWD				*e*S	Sg	04 36 38.5	-0.6
	baz=244						
WUSB	Renai	0.69	253	⇓P	Pg	04 36 31.0	-0.1
	baz=242						
WUSB				S	Sg	04 36 39.3	-0.9
	baz=242						
TIPB	Shuangxi	0.77	359	⇓P	Pb	04 36 33.3	+0.1
	baz=4.0						
TIPB				S	Sg	04 36 42.6	0.0
	baz=4.0						
VWDT	VWDT	0.78	235	P	Pg	04 36 32.7	-0.1
	baz=231						
VWDT				*e*S	Sg	04 36 43.0	0.0
	baz=231						
NFF	Wufeng Townshi	0.79	303	P	Pg	04 36 32.8	-0.1
	baz=305						
NFF				S	Sg	04 36 42.3	-0.9
	baz=305						
HGSD	Ruisui	0.80	209	*e*P	Pn	04 36 34.5	-0.6
	baz=215						
TWA	Mucha	0.81	343	P	Pb	04 36 33.8	-0.1
	baz=338						
NHDH	Xindian Distri	0.81	339	*e*P	Pb	04 36 34.5	+0.6
	baz=343						
TWB1	Santiao Chiao	0.81	9	*e*P	Pn	04 36 34.8	-0.5
	baz=9.0						
WHP	Taichung City	0.82	276	*e*P	Pg	04 36 33.7	+0.1
	baz=274						
WHP				*e*S	Sg	04 36 43.4	-0.9
	baz=274						
WPL	Puli Township	0.83	257	P	Pg	04 36 33.6	-0.1
	baz=247						
WPL				*e*S	Sg	04 36 43.6	-1.0
	baz=247						
TATO	Taipei	0.84	337	*e*P	Pb	04 36 34.2	-0.2
	baz=341						
TATO				S	Sg	04 36 44.7	0.0
	baz=341						
EHY	Hungye	0.84	215	*e*P	Pb	04 36 34.3	-0.1
	baz=223						
DPDB	Guoxing	0.85	259	*e*P	Pg	04 36 34.1	0.0
	baz=257						
WCS	Beigang Elemen	0.86	261	⇓*e*P	Pg	04 36 34.0	-0.3
	baz=259						
NWF	Wu-fen Shan	0.87	356	⇓P	Pn	04 36 35.4	-0.7
	baz=353						
NWF				S	Sb	04 36 46.2	-0.5
	baz=353						
WFSB	Wu-fen Shan	0.87	356	⇓P	Pn	04 36 35.4	-0.6
	baz=353						
WFSB				S	Sb	04 36 46.2	-0.4
	baz=353						
LIOB	Emei	0.88	301	*e*P	Pb	04 36 35.0	0.0
	baz=302						
NSTT	Nanjuang	0.88	299	*e*P	Pg	04 36 34.7	+0.1
	baz=301						
NSTT				S	Sg	04 36 44.8	-1.3
	baz=301						
TAP1	Taipei	0.88	341	*e*P	Pn	04 36 35.6	-0.6
	baz=333						
SXI1	Grass Mountain	0.89	2	⇓*i*P	Pn	04 36 35.8	-0.6
	baz=12						
SXI1				*e*S	Sb	04 36 47.2	-0.1
	baz=12						
SSLB	Suanglung	0.91	243	⇓P	Pg	04 36 34.9	-0.4
	baz=249						
SSLB				S	Sg	04 36 45.5	-1.6
	baz=249						
SMLT	Sun Moon Lake	0.92	250	⇓P	Pg	04 36 35.2	-0.1
	baz=240						
SMLT				*i* S	Sg	04 36 46.5	-0.9
	baz=240						
HSN1	Hsinchu	0.95	308	*e*P	Pn	04 36 37.0	-0.1
	baz=314						
TNOU	National Taiwa	0.95	356	*e*P	Pn	04 36 36.8	-0.3
YULB	Yu-li	0.95	212	*e*P	Pg	04 36 35.1	-0.8
	baz=218						
TYC	Yuchr	0.95	252	*e*P	Pg	04 36 35.6	-0.4
	baz=250						
ECBN	Changbin	0.95	202	*e*P	Pn	04 36 36.6	-0.5
	baz=187						
NCUH	Zhongli	0.97	322	*e*P	Pb	04 36 36.8	+0.1
	baz=319						
NCU	National Centr	0.97	322	*e*P	Pn	04 36 37.3	-0.1
	baz=319						
YM01	YM01	0.97	345	*e*P	Pn	04 36 37.3	-0.3
	baz=349						
EYUL	Yuli	0.98	210	*e*P	Pn	04 36 37.2	-0.3
	baz=220						
TWS1	Kuangyinshan	0.98	337	*e*P	Pn	04 36 37.7	+0.2
	baz=340						
TWS1				*e*S	Sb	04 36 50.5	+0.8
	baz=340						
SBCB	Hsinchu	0.98	307	*e*P	Pn	04 36 37.6	0.0
	baz=309						
SBCB				*e*S	Sn	04 36 51.8	+0.3
	baz=309						
TWF1	Yuli	0.98	211	*e*P	Pb	04 36 36.5	-0.3
	baz=220						
TWQ1	Liyutan	0.99	279	*e*P	Pb	04 36 37.4	+0.5
	baz=279						
HSN	Hsinchu	1.00	307	*e*P	Pb	04 36 37.3	+0.2
	baz=301						
NJN	Zhunan	1.01	299	*e*P	Pn	04 36 38.5	+0.5
	baz=293						
YM08	YM08	1.01	347	*e*P	Pn	04 36 37.8	-0.2
	baz=350						
NSY	Sanyi	1.01	282	*e*P	Pn	04 36 38.4	+0.4
	baz=282						
NMLH	Miaoli	1.02	289	*e*P	Pn	04 36 38.4	+0.4
	baz=290						
NTST	Danshui	1.02	340	*e*P	Pn	04 36 37.9	-0.3
	baz=342						
ANP	Anpu	1.02	343	*e*P	Pn	04 36 37.9	-0.4
	baz=347						
WWF	Wufeng	1.06	262	*e*P	Pn	04 36 38.7	+0.1
	baz=254						
TCU	Taichung	1.07	267	*e*P	Pn	04 36 39.3	+0.5
	baz=267						
NHW	Xinwu Township	1.08	318	*e*P	Pb	04 36 38.8	+0.2
	baz=319						
YUS	Yu-Shan	1.08	229	P	Pg	04 36 38.4	-0.1
	baz=227						
WJS	Zhushan	1.09	250	*e*P	Pb	04 36 39.0	+0.4
	baz=241						
TWY	Chenhua	1.09	348	*e*P	Pn	04 36 39.5	+0.4
	baz=352						
YOJ	Yonaguni jima	1.10	76	P	Pn	04 36 40.6	+1.5
	baz=67						
YOJ				S	Sn	04 36 57.2	+2.9
	baz=67						
YOJ	Yonaguni jima	1.10	76	P	Pn	04 36 40.6	+1.5
YOJ				*e*S	Sn	04 36 57.4	+3.0
WDJ	Dajia District	1.11	278	*e*P	Pn	04 36 40.0	+0.7
	baz=278						
WNT	Mingjian	1.11	253	*e*P	Pn	04 36 39.8	+0.5
	baz=243						
FULB	Fuli	1.12	207	*e*P	Pn	04 36 39.5	0.0
	baz=219						
ALS	Alishan	1.17	234	⇑P	Pg	04 36 40.1	-0.2
	baz=232						
ALS				S	Sb	04 36 56.1	+0.5
	baz=232						
WCHH	Zhanghua	1.18	264	*e*P	Pn	04 36 40.9	+0.6
	baz=264						
CHKT	Chengkung	1.18	202	*e*P	Pn	04 36 40.1	-0.2
	baz=189						
CHN5	Tsauling	1.22	241	*e*P	Pg	04 36 41.6	+0.4
	baz=239						
CHN5				*e*S	Sn	04 36 58.8	+1.1
	baz=239						
ECS	Chishang	1.24	208	*e*P	Pg	04 36 41.8	+0.3
	baz=206						
ELDTW	Lidau	1.26	217	*e*P	Pn	04 36 41.4	-0.1
	baz=215						
WGK	Gukeng	1.28	247	*e*P	Pn	04 36 41.1	-0.6
	baz=246						
WDLH	Douliu	1.30	247	*e*P	Pg	04 36 42.9	+0.3
	baz=246						
EDH	Donghe	1.32	202	*e*P	Pb	04 36 42.3	-0.2
	baz=186						
WRL	Guolierlin Hig	1.37	258	*e*P	Pn	04 36 43.1	+0.2
	baz=257						
STYH	Taoyuan	1.42	224	*e*P	Pn	04 36 43.6	+0.1
	baz=223						
CHN4	Tsaushan	1.42	234	*e*P	Pg	04 36 45.0	-0.1
	baz=233						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN4				eS	Sg	04 37 04.5	+1.0
	baz=233						
WTK	Tuku	1.43	249	eP	Pb	04 36 44.5	+0.1
	baz=235						
TPUB	Ta-pu	1.43	231	eP	Pb	04 36 44.5	+0.1
	baz=220						
TPUB				eS	Sg	04 37 04.3	+0.7
	baz=220						
STYT	Tauyuan	1.44	224	eP	Pn	04 36 44.2	+0.4
	baz=223						
LONT	Longtian	1.45	207	eP	Pb	04 36 44.7	0.0
	baz=206						
WTP	Ta-pu	1.47	230	eP	Pb	04 36 45.4	+0.2
	baz=230						
CHY	Chiayi	1.48	242	eP	Pb	04 36 45.7	+0.5
	baz=242						
TWG	Pinlang	1.54	207	eP	Pn	04 36 45.6	+0.3
	baz=191						
TWGBT	Beinan	1.54	207	eP	Pn	04 36 45.3	-0.1
	baz=191						
TWK	Hsinying	1.55	233	eP	Pb	04 36 46.8	+0.2
	baz=233						
LDUT	Ludao	1.56	193	eP	Pn	04 36 44.3	-1.2
	baz=192						
CHN1	Nanshi	1.57	230	eP	Pb	04 36 46.9	0.0
	baz=230						
WSF	Szhu	1.59	250	eP	Pn	04 36 46.5	+0.7
	baz=250						
SGST	Jiashian	1.60	226	eP	Pn	04 36 46.9	+0.7
	baz=226						
WSL	Shuilin Townsh	1.63	246	eP	Pb	04 36 47.9	+0.1
	baz=246						
SLGT	Liugui	1.63	223	eP	Pb	04 36 47.9	+0.1
	baz=223						
ICHU	Yijhu	1.66	240	eP	Pb	04 36 48.1	-0.2
	baz=240						
CHN8	Yiju	1.72	241	eP	Pb	04 36 49.3	-0.1
	baz=241						
IRIF	Iriomote-Funau	1.73	85	P	Pg	04 36 50.2	-0.6
ECL	Taimali	1.79	207	eP	Pn	04 36 48.7	0.0
	baz=193						
SSD	Sandimen	1.83	218	eP	Pb	04 36 50.6	-0.6
	baz=230						
TSMG	Majia	1.85	217	eP	Pb	04 36 51.6	0.0
	baz=229						
MASBT	Mashibuluo	1.93	215	eP	Pb	04 36 52.3	-0.7
	baz=228						
MASBT				eS	Sb	04 37 17.3	0.0
	baz=228						
JKRS	Kuro-shima	1.98	88	eP	Pb	04 36 53.3	-0.5
EAST	Anshuo	2.03	207	eP	Pn	04 36 53.0	+1.0
	baz=195						
TAWH	Dawu Township	2.05	206	eP	Pb	04 36 54.2	-0.8
	baz=194						
JIJ	Ishigaki jima	2.10	85	eP	Pb	04 36 54.5	-1.5
JIJ				S	Sb	04 37 21.8	-0.4
PNG	Penghu	2.19	254	eP	Pn	04 36 54.5	+0.4
	baz=255						
PHUB	P'eng-hu	2.19	252	eP	Pn	04 36 54.4	+0.3
	baz=255						
PHUB				eS	Sn	04 37 20.6	-0.7
	baz=255						
WDGT	Dungji	2.21	245	eP	Pn	04 36 55.2	+0.7
	baz=247						
JISG	Ishigakijimahi	2.28	80	P	Pb	04 36 56.5	-2.5
JISG				eS	Sb	04 37 26.1	-1.2
VWUC	VWUC	2.32	290	eP	Pn	04 36 55.3	-0.6
	baz=279						
VCHM	Qimei	2.42	246	eP	Pn	04 36 57.8	+0.4
	baz=234						
MATB	Ma-tsu	2.59	319	eP	Pn	04 36 59.7	-0.1
	baz=318						
LYJJ	Jianjiangzhen	3.00	322	eP	Pn	04 37 05.4	0.0
	baz=321						
XPSS	Dashiqiu	3.10	332	eP	Pn	04 37 06.2	-0.5
	baz=331						
MHZQ	Yeshan	3.17	307	eP	Pn	04 37 07.2	-0.6
	baz=307						
AXDP	Jialang	3.59	282	eP	Pn	04 37 13.4	-0.2
	baz=281						
ZPLA	Ao Xicun	3.75	267	eP	Pn	04 37 16.0	+0.3
	baz=267						
SXFK	Yanhouchang	4.38	301	eP	Pn	04 37 24.6	+0.1
	baz=300						

*KRNET **03** 04:40:57.9±0.1, 40°.24N×76°.91E, mb3.0*
*NNC **03** 04:40:58.8±1.5, 40°.27N×76°.85E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.9km s-min=7.2km az=176.0*
*SOME **03** 04:41:02.8, 40°.40N×76°.85E, h5^{km}*
ISC 03 04:40:54.5±2.7, **40°.1N**±0°.1×**76°.88E**±0°.04, **h2**^{km}±17^{km}, **n39**, σ**1^s.40**/62, **19C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.76	23	⇑eP	Pg	04 41 28.9	+0.7
	baz=24						
TARG				⇑iS	Sg	04 41 51.8	+0.7
	baz=24						
KDJ	Kajisay	2.03	6	⇑eP	Pb	04 41 33.1	+1.0
	baz=6.0						
KDJ				⇑iS	Sg	04 41 58.7	-0.9
	baz=6.0						
ULHL	Ulahol	2.18	348	⇓iP	Pb	04 41 36.0	+1.2
	baz=46						
ULHL				⇓iS	Sg	04 42 03.9	-0.7
	baz=46						
BOOM	Boomskoye usch	2.48	344	⇓iP	Pb	04 41 39.9	+0.1
	baz=42						
BOOM				⇓eS	Sb	04 42 11.0	+0.2
	baz=42						
ARLS	Aral	2.60	313	⇑iP	Pb	04 41 42.4	+0.5
	baz=10.0						
ARLS				⇑iS	Sb	04 42 15.4	+1.0
	baz=10.0						
PRZ	Przheval'sk	2.63	25	⇑iP	Pb	04 41 42.1	-0.3
	baz=26						
PRZ				⇑iS	Sb	04 42 15.0	-0.2
	baz=26						
ANVS	Anan'yevo	2.73	12	⇑iP	Pb	04 41 43.6	-0.5
	baz=12						
ANVS				⇑iS	Sb	04 42 16.9	-1.2
	baz=12						
UCH	Uchtor	2.76	321	⇑eP	Pb	04 41 44.8	0.0
	baz=18						
UCH				⇑iS	Sb	04 42 19.4	+0.1
	baz=18						
TNSS	Tian-Shan	2.92	1	eP	Pg	04 41 52.2	+1.8
	5.7nm,0.2s						
TNSS				eS	Sg	04 42 27.8	-0.5
	5.5nm,0.4s						
TNSS	Tian-Shan	2.92	1	Pg	Pb	04 41 49.7	+2.3
	7.1nm,0.4s						
TNSS				Lg	Lg	04 42 27.8	
	5.5nm,0.4s						
KBK	Karagaybulak	2.92	331	⇓eP	Pb	04 41 46.7	-0.7
	baz=29						
KBK				⇓iS	Sb	04 42 22.5	-1.2
	baz=29						
IZV	Izvestkoviy	2.93	356	eP	Pg	04 41 53.5	+2.9
	4.2nm,0.3s						
IZV				eS	Sg	04 42 29.7	+1.2
	5.9nm,0.4s						
TKM2	Tokmak 2	2.96	342	⇓Pg	Pb	04 41 47.7	-0.4
	2.9nm,0.8s						
TKM2				⇑Lg	Lg	04 42 29.3	
	2.8nm,0.6s						
KST	Kastek	3.01	347	eP	Pg	04 41 54.0	+2.0
	2.2nm,0.0s						
KST				eS	Sg	04 42 31.0	0.0
	5.1nm,0.4s						
KST	Kastek	3.01	347	Pg	Pg	04 41 51.5	-0.6
	4.4nm,0.3s						
KST				Lg	Lg	04 42 31.0	
	5.1nm,0.4s						
MDOK	Medeo	3.05	2	eP	Pg	04 41 54.1	+1.2
	3.2nm,0.4s						
MDOK				eS	Sg	04 42 30.9	-1.6
	10nm,0.6s						
MDOK	Medeo	3.05	2	Pg	Pb	04 41 51.3	+1.8
	4.3nm,0.5s						
MDOK				⇑Lg	Lg	04 42 30.8	
	8.2nm,0.6s						
MDOK	Medeo	3.05	2	Pg	Pb	04 41 51.8	+2.3
	3.8nm,0.2s						
MDOK				Lg	Lg	04 42 30.9	
	10nm,0.6s						
AAK	Ala-Archa	3.09	325	⇑iP	Pb	04 41 49.1	-1.2
	baz=24						
AAK				⇑iS	Sb	04 42 26.8	-1.7
	baz=24						
KOTS	Kotyrbulak	3.12	3	eP	Pg	04 41 56.0	+1.7
	6.5nm,0.2s						
KOTS				eS	Sg	04 42 34.1	-0.6
	15nm,0.6s						
KOTS	Kotyrbulak	3.12	3	Pg	Pg	04 41 53.9	-0.5
	5.7nm,0.2s						
KOTS				Lg	Lg	04 42 34.5	
	15nm,0.6s						
SATY	Saty	3.16	21	eP	Pg	04 41 56.8	+1.8
	3.1nm,0.3s						
SATY				eS	Sg	04 42 35.7	-0.3
	11nm,0.4s						
SATY	Saty	3.16	21	Pg	Pg	04 41 54.8	-0.2
	4.3nm,0.3s						
SATY				Lg	Lg	04 42 35.7	
	11nm,0.4s						
CHMS	Chumysh	3.29	332	⇓Pg	Pg	04 41 57.0	-0.6
	3.1nm,0.7s						
CHMS				⇑Lg	Lg	04 42 39.2	
	4.1nm,0.6s						
UZB	Uzynbulak	3.43	27	eP	Pg	04 42 01.4	+1.2
	4.0nm,0.3s						
UZB				eS	Sg	04 42 43.7	-1.0
	4.5nm,0.7s						
UZB	Uzynbulak	3.43	27	Pg	Pg	04 41 59.1	-1.1
	2.5nm,0.2s						
UZB				Lg	Lg	04 42 43.8	
	4.5nm,0.7s						
KTBS	Karatobe	3.60	358	eP	Pg	04 42 03.3	-0.1
	2.4nm,0.3s						
KTBS				eS	Sg	04 42 47.1	-2.9
	8.3nm,0.3s						
KTBS	Karatobe	3.60	358	Pg	Pb	04 42 00.7	+1.9
	3.0nm,0.6s						
KTBS				Lg	Lg	04 42 46.0	
	8.3nm,0.3s						
KPKS	Kokpek	3.61	21	eP	Pg	04 42 04.6	+0.9
	1.8nm,0.2s						
KPKS				eS	Sg	04 42 48.9	-1.6
	16nm,0.4s						
KRBS	Karabastau	3.69	346	eP	Pg	04 42 05.9	+0.8
	2.0nm,0.3s						
KRBS				eS	Sg	04 42 51.4	-1.6
	4.4nm,0.4s						
KRBS	Karabastau	3.69	346	Pg	Pb	04 42 03.3	+3.0
	2.8nm,0.4s						
KRBS				Lg	Lg	04 42 50.7	
	4.4nm,0.4s						
SGDS	Sogindy	3.73	334	eP	Pg	04 42 06.5	+0.5
	1.6nm,0.3s						
SGDS				eS	Sg	04 42 52.4	-2.0
	2.5nm,0.6s						
SGDS	Sogindy	3.73	334	Pg	Pg	04 42 05.0	-1.0
	2.4nm,0.4s						
SGDS				Lg	Lg	04 42 52.4	
	2.5nm,0.6s						
PDGK	Podgornoye	3.76	30	Pg	Pg	04 42 05.4	-1.1
	1.1nm,0.5s						
PDGK				Lg	Lg	04 42 54.1	
	3.4nm,0.7s						
PDGK	Podgornoye	3.76	30	⇑Pg	Pg	04 42 05.0	-1.5
	6.5nm,1.1s						
PDGK				⇑Lg	Lg	04 42 53.9	
	8.6nm,0.9s						
KUU	Kurty	3.80	354	eP	Pg	04 42 07.3	+0.1
	1.8nm,0.5s						
KUU				eS	Sg	04 42 53.7	-2.7
	4.2nm,0.6s						
KUU	Kurty	3.80	354	Pg	Pb	04 42 04.7	+2.5
	1.4nm,0.4s						
KUU				Lg	Lg	04 42 53.3	
	4.2nm,0.6s						
MRKS	Merke	3.80	315	eP	Pg	04 42 09.0	+1.7
	1.8nm,0.1s						
MRKS				eS	Sg	04 42 56.8	+0.3
	3.9nm,0.3s						
MRKS	Merke	3.80	315	Pg	Pg	04 42 07.1	-0.1
	3.5nm,0.1s						
MRKS				Lg	Lg	04 42 56.8	
	3.9nm,0.3s						

NOU 03 04:52:40.7, 16°.08S×167°.53E, h18^{km}**, MLv4.3**/14, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.70	333	P	Pg	04 52 54.5	-0.1
DVP	Devils Point	1.75	159	P	Pn	04 53 10.6	+0.4
RTV	Rentapao	1.91	153	P	Pn	04 53 12.2	-0.1
MARNC	Mare, Loyalty	5.39	175	P	Pn	04 54 00.6	+0.3
KOUNC	Koumac, New Ca	5.41	214	P	Pn	04 54 00.0	-0.5
DZM	Mont Dzumac	6.05	190	P	Pn	04 54 08.6	-0.8
NOUC	Port Laguerre	6.10	191	P	Pn	04 54 09.6	-0.4
ONTNC	Ouen Toro	6.28	189	P	Pn	04 54 12.8	+0.4
OUENC	Ouen Island, N	6.34	186	P	Pn	04 54 13.5	+0.2

*IDC **03** 05:02:12.3±1.3, 5°.52S×149°.51E, h161^{km}±21^{km}, mb3.4/6, mbtmp3.9/9, Error ellipse: s-maj=47.4km s-min=9.2km az=132.0*
ISC 03 05:02:11.2±0.8, **5°.60S**±0°.10×**149°.5E**±0°.1, **h147**^{km}, **n11**, σ**2^s.59**/14, **mb3.7**/6, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.80	63	P	Pn	05 02 57.4	+1.4
	62nm,0.5s,baz=158,slow=5.1,SNR=3.5						
KRVT				S	Sn	05 03 32.9	+2.3
	30nm,0.4s,baz=239,slow=10,SNR=1.4						
PMG	Port Moresby	4.45	212	P	Pn	05 03 19.3	+1.9
	99nm,0.7s,baz=29,slow=7.4,SNR=21						
PMG				S	Sn	05 04 12.7	+3.8
	28nm,0.5s,baz=6.3,slow=18,SNR=6.6						
CTA	Charters Tower	14.75	192	P	Pn	05 05 34.2	+1.5
	1.9nm,0.7s,baz=22,slow=12,SNR=1.5						
CTA				S	Sn	05 08 10.2	-6.4
	5.9nm,0.6s,baz=58,slow=20,SNR=13						
WRA	Warramunga Arr	20.53	225	P	P	05 06 38.8	+0.5
	1.8nm,0.6s,baz=48,slow=10,SNR=43						
	1.8nm,0.6s						
ASAR	Alice Springs	23.43	218	P	P	05 07 08.0	+0.6
	0.6nm,0.3s,baz=57,slow=8.6,SNR=18						
	0.6nm,0.3s						
BATI	Baumata	26.02	258	P	P	05 07 31.0	+0.1
	16nm,0.5s,baz=19,slow=5.9,SNR=1.5						
FITZ	Fitzroy Crossi	26.43	240	P	P	05 07 33.8	-0.8
	5.0nm,0.9s,baz=47,slow=6.3,SNR=35						
	5.0nm,0.9s						
PETK	Petropavlovsk-	58.89	6	P	P	05 11 53.6	-1.0
	0.9nm,0.6s,baz=152,slow=6.7,SNR=5.8						
	0.9nm,0.6s						
SONM	Songino Array	65.31	330	P	P	05 12 37.1	-0.5
	0.3nm,0.5s,baz=145,slow=5.3,SNR=1.7						
	0.3nm,0.5s						
ILAR	Eielson Array	84.13	23	P	P	05 14 24.0	-1.5
	0.4nm,0.7s,baz=254,slow=5.6,SNR=6.1						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	147.42	286	PKPbc	PKPbc	05 21 38.5	-0.3
	4.7nm,0.3s,baz=74,slow=3.2,SNR=3.2						

*IDC **03** 05:06:30.3±1.0, 57°.25S×144°.25W, h0^{km}, mb4.1/6, mbtmp4.1/6, MS3.8/5, Error ellipse: s-maj=189.6km s-min=22.0km az=1.0*
ISC 03 05:06:31.8±1.0, **57°S**±1°×**144°.3W**±0°.2, **h10**^{km}, **n26**, σ**0^s.59**/8, **mb4.2**/6, **MS3.8**/5, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	39.04	54	LR	LR	05 25 21.4	
	comp=Z,103nm,21.9s,baz=238,slow=29						
H03S2	Juan Fernandez	49.15	91	T	T	06 08 16.6	
	baz=220						
H03S1	Juan Fernandez	49.16	91	T	T	06 08 17.9	
	baz=220						
H03S3	Juan Fernandez	49.17	91	T	T	06 08 17.1	
	baz=220						
H03N3	Juan Fernandez	49.44	90	T	T	06 08 30.7	
	baz=224,slow=72,SNR=111						
H03N2	Juan Fernandez	49.45	90	T	T	06 08 30.9	
	baz=224,slow=72,SNR=96						
H03N1	Juan Fernandez	49.46	90	T	T	06 08 29.6	
	baz=224,slow=72,SNR=96						
STKA	Stephens Creek	55.41	264	LR	LR	05 37 16.7	
	comp=Z,148nm,18.1s,baz=212,slow=33						
CTA	Charters Tower	62.27	276	P	P	05 16 53.8	-0.1
	0.8nm,0.3s,baz=146,slow=7.3,SNR=3.2						
	0.8nm,0.3s						
ASAR	Alice Springs	66.04	263	P	P	05 17 18.5	-0.1
	1.7nm,0.8s,baz=137,slow=5.9,SNR=8.6						
	1.7nm,0.8s						
CPUP	Villa Florida	66.61	102	P	P	05 17 22.1	-0.1
	1.4nm,0.8s,baz=212,slow=8.2,SNR=3.3						
	1.4nm,0.8s						
H01W1	Cape Leeuwin H	67.07	241	T	T	06 32 05.7	
	baz=142,slow=76,SNR=10						
H01W2	Cape Leeuwin H	67.07	241	T	T	06 32 03.6	
	baz=142,slow=76,SNR=10						
H01W3	Cape Leeuwin H	67.08	241	T	T	06 32 09.8	
	baz=142,slow=76,SNR=11						
NNA	Nana	67.86	77	LR	LR	05 40 00.2	
	comp=Z,53nm,19.2s,baz=184,slow=30						
WRA	Warramunga Arr	68.82	266	P	P	05 17 37.0	+0.7
	1.2nm,0.9s,baz=150,slow=5.5,SNR=6.2						
	1.2nm,0.9s						
LPAZ	La Paz	68.96	87	P	P	05 17 38.0	+0.1
	2.8nm,1.1s,baz=187,slow=4.8,SNR=5.8						
	2.8nm,1.1s						
FITZ	Fitzroy Crossi	75.00	260	P	P	05 18 13.8	+0.4
	1.7nm,0.9s,baz=126,slow=8.7,SNR=2.1						
FITZ				LR	LR	05 48 52.4	
	comp=Z,78nm,18.2s,baz=166,slow=34						
	1.7nm,0.9s						
TXAR	Lajitas Array	92.94	35	LR	LR	05 51 16.3	
	comp=Z,27nm,18.8s,baz=180,slow=29						
H10S3	ASCENSION HYDR	102.16	129	T	T	07 16 23.8	
	baz=16						
H10S2	ASCENSION HYDR	102.16	129	T	T	07 16 31.1	
	baz=204						
H10N3	ASCENSION HYDR	103.22	129	T	T	07 17 43.9	
	baz=204,slow=75,SNR=16						
H10N1	ASCENSION HYDR	103.23	129	T	T	07 17 35.5	
	baz=204,slow=75,SNR=21						
H10N2	ASCENSION HYDR	103.24	129	T	T	07 17 53.1	
	baz=204,slow=75,SNR=17						
ESDC	Sonseca Array	148.87	108	PKPbc	PKPbc	05 26 19.4	+0.4
	1.7nm,1.2s,baz=247,slow=6.0,SNR=5.2						
MKAR	Makanchi Array	150.08	269	PKPbc	PKPbc	05 26 20.8	-0.9
	1.6nm,0.9s,baz=103,slow=3.1,SNR=7.6						

*IDC **03** 05:14:50.0±2.9, 20°.71S×169°.76E, h144^{km}±24^{km}, mb3.9/6, mbtmp4.3/8, Error ellipse: s-maj=35.0km s-min=22.6km az=179.0*
*NOU **03** 05:14:50.5, 20°.91S×169°.87E, h112^{km}, MLv4.6/12, Vanuatu Islands*
*NEIC **03** 05:14:50.4±2.0, 20°.9S±0°.1×169°.8E±0°.1, h142^{km}±8^{km}, mb4.4/21, Error ellipse: s-maj=18.1km s-min=15.7km az=186.0*
ISC 03 05:14:50.5±0.7, **20°.87S**±0°.07×**169°.81E**±0°.09, **h150**^{km}, **n47**, σ**1^s.05**/47, **mb4.3**/13, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.77	250	Pn	Pn	05 15 21.5	-1.4
MARNC	Mare, Loyalty	1.77	250	P	Pn	05 15 20.9	-2.0
LIFNC	LIFOU	2.41	272	Pn	Pn	05 15 28.9	-1.5
LIFNC	LIFOU	2.41	272	P	Pn	05 15 28.5	-2.0
PINNC	Pines Island,	2.80	231	Pn	Pn	05 15 34.3	-1.0
YATNC	Mamie plateau,	2.96	246	P	Pn	05 15 34.9	-2.5
OUENC	Ouen Island, N	3.16	240		Pn	05 15 39.7	-0.2
OUENC	Ouen Island, N	3.16	240	P	Pn	05 15 39.1	-0.8
RTV	Rentapao	3.33	337	P	Pn	05 15 42.0	-0.1
DZM	Mont Dzumac	3.35	249	P	Pn	05 15 42.2	-0.3
	34nm,0.6s,baz=32,slow=24,SNR=84						
DZM				S	Sn	05 16 22.4	-0.3
	182nm,0.8s,baz=350,slow=22,SNR=11						
DZM	Mont Dzumac	3.35	249	Pn	Pn	05 15 42.0	-0.4
DZM	Mont Dzumac	3.35	249	P	Pn	05 15 42.4	-0.1
ONTNC	Ouen Toro	3.44	245	Pn	Pn	05 15 43.0	-0.4
ONTNC	Ouen Toro	3.44	245	P	Pn	05 15 43.2	-0.2
DVP	Devils Point	3.49	334	P	Pn	05 15 43.5	-0.6
NOUC	Port Laguerre	3.49	249	P	Pn	05 15 43.9	-0.2
KOUNC	Koumac, New Ca	5.18	273	Pn	Pn	05 16 07.4	+1.1
KOUNC	Koumac, New Ca	5.18	273	P	Pn	05 16 07.8	+1.5
	101nm,0.7s						
EIDS	Eidsvold	17.80	252	P	Pn	05 18 50.1	+1.2
EIDS				IAmb	IAmb	05 18 51.3	
	comp=Z,12nm,0.8s						
URZ	Urewera	18.44	162	P	Pn	05 18 56.0	-0.4
	comp=Z,6.6nm,0.7s,baz=128,slow=22,SNR=6.2						
URZ	Urewera	18.44	162	IAmb	IAmb	05 18 59.5	
	comp=Z,25nm,1.4s						
ARMA	Armidale	18.93	236	P	Pn	05 19 03.0	+0.7
ARMA				IAmb	IAmb	05 19 03.7	
	comp=Z,14nm,0.7s						
BKZ	Black Stump Fm	19.12	164	P	P	05 19 03.0	+1.1
BKZ				IAmb	IAmb	05 19 11.2	
	comp=Z,20nm,1.4s						
CTA	Charters Tower	22.08	268	P	P	05 19 34.3	+0.7
	comp=Z,6.2nm,0.8s,baz=100,slow=12,SNR=13						
	comp=Z,6.2nm,0.8s						
CTAO	Charters Tower	22.08	268	P	P	05 19 34.4	+0.7
CAN	Canberra	23.26	227	P	P	05 19 46.8	+2.1
CAN				IAmb	IAmb	05 19 47.3	
	comp=Z,13nm,0.7s						
STKA	Stephens Creek	27.47	241	P	P	05 20 23.2	+0.5
	comp=Z,1.5nm,0.3s,baz=98,slow=14,SNR=5.3						
	comp=Z,1.5nm,0.3s						
WR0	Warramunga Arr	33.03	265	P	P	05 21 11.4	-0.4
WR0				IAmb	IAmb	05 21 13.4	
	comp=Z,8.3nm,1.4s						
WB0	Warramunga Arr	33.19	266	P	P	05 21 12.4	-0.8
WB0				IAmb	IAmb	05 21 13.3	
	comp=Z,8.0nm,0.9s						
WB2	Warramunga Arr	33.21	265	P	P	05 21 12.4	-0.9
WB2				IAmb	IAmb	05 21 24.5	
	comp=Z,9.1nm,1.3s						
WRAB	Tennant Creek	33.21	265	P	P	05 21 11.4	-2.0
WRAB				IAmb	IAmb	05 21 15.7	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	33.22	265	P	P	05 21 12.6	-0.8
	comp=Z,2.3nm,0.6s,baz=97,slow=8.2,SNR=47						
	comp=Z,2.3nm,0.6s						
WRA	Warramunga Arr	33.22	265	P	P	05 21 12.7	-0.8
AS31	Alice Springs	33.29	258	P	P	05 21 14.2	+0.1
ASAR	Alice Springs	33.29	258	P	P	05 21 14.0	-0.1
	comp=Z,6.1nm,0.6s,baz=89,slow=8.6,SNR=53						
	comp=Z,6.1nm,0.6s						
MTN	Manton Dam	37.79	276	P	P	05 21 52.9	+0.4
MBWA	Marble Bar	46.59	260	P	P	05 23 03.8	+0.1
NWAO	Narrogin (SRO)	47.97	244	P	P	05 23 13.6	-0.6
MORW	Morawa	49.08	249	P	P	05 23 22.4	-0.3
QSPA	South Pole Qui	69.19	180	P	P	05 25 41.2	+0.5
SONM	Songino Array	88.84	323	P	P	05 27 26.2	-1.4
	comp=Z,0.2nm,0.3s,baz=132,slow=2.1,SNR=2.0						
	comp=Z,0.2nm,0.3s						
NVAR	Mina Array Bea	89.48	48	P	P	05 27 31.1	+0.2
	comp=Z,1.9nm,0.7s,baz=226,slow=8.6,SNR=20						
	comp=Z,1.9nm,0.7s						
KVN	Kaiserville	89.90	48	P	P	05 27 33.2	+0.4
KVN				IAmb	IAmb	05 27 33.8	
	comp=Z,3.3nm,0.6s						
TPNV	Topopah Spring	90.27	50	P	P	05 27 35.2	+0.6
TPNV				IAmb	IAmb	05 27 35.8	
	comp=Z,2.7nm,0.8s						
PRN	Pahroc Range	91.33	50	P	P	05 27 40.3	+0.8
EKA	Eskdalemuir Ar	145.19	353	PKPbc	PKPbc	05 34 07.8	-1.9
	comp=Z,2.5nm,0.7s,baz=8.6,slow=1.8,SNR=8.3						
GERES	GERESS Array B	146.18	331	PKPbc	PKPdf	05 34 12.2	+0.3
	comp=Z,1.2nm,0.7s,baz=64,slow=3.1,SNR=7.7						

*IDC **03** 05:16:00.4±0.9, 44°.56N×152°.40E, h0^{km}, mb3.9/18, mbtmp3.9/24, ML3.4/5, MS3.0/7, Error ellipse: s-maj=22.6km s-min=14.8km az=168.0*
*MOS **03** 05:16:01.5±1.2, 44°.44N×152°.46E, h23^{km}, mb4.2/7, Error ellipse: s-maj=8.2km s-min=7.1km az=83.3*
*NEIC **03** 05:16:03.4±1.8, 44°.39N±0°.05×152°.6E±0°.1, h24^{km}±7^{km}, mb4.2/8, Error ellipse: s-maj=16.1km s-min=4.5km az=110.0*
*JMA **03** 05:16:04.7±0.9, 45°N±4°×15°2E±°, h30^{km}, MV5.0/16, FAR SE OFF KURILE ISL*
*SKHL **03** 05:16:05.0±0.7, 44°.70N×152°.20E, h28^{km}±4^{km}, mb5.0/4*
ISC 03 05:16:03.8±0.7, **44°.47N**±0°.08×**152°.39E**±0°.06, **h25**^{km}, **n109**, σ**2^s.18**/119, **mb4.0**/27, **MS3.0**/5, **7C, East of Kuril Islands**

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC       h  m  s    ISC
KUR   Kuril'sk           3.31 285  ePN     Pn       05 16 54.4 +0.5
KUR                                 pmax   pmax
      comp=Z,163nm,0.3s
KUR   Kuril'sk           3.31 285  eP      Pn       05 16 54.4 +0.5
KUR                                 AMB    AMB      05 16 55.3
      comp=Z,160nm,0.3s
KUR                                eS      Sn       05 17 30.0 -2.4
KUR                                 A      A        05 17 33.3
      comp=Z,1µm,0.4s
KUR                                 A      A        05 17 33.3
      comp=Z,610nm,0.4s
SHO   Shikotan           4.04 263  ePN     Pn       05 17 03.3 -0.7
SHO                                 pmax   pmax
      comp=Z,65nm,0.2s
SHO                                 pmax   pmax
      comp=N,8.0nm,0.1s
SHO                                 pmax   pmax
      comp=E,28nm,0.2s
SHO   Shikotan           4.04 263  eP      Pn       05 17 03.4 -0.6
SHO                                 AMB    AMB      05 17 05.3
      comp=E,10.0nm,0.2s
SHO                                 AMB    AMB      05 17 05.3
      comp=E,30nm,0.2s
SHO                                 AMB    AMB      05 17 05.3
      comp=E,90nm,0.2s
SHO                                eS      Sn       05 17 46.6 -3.9
SHO                                 A      A        05 17 48.3
      comp=E,310nm,0.4s
SHO                                 A      A        05 17 48.3
      comp=E,320nm,0.4s
YUK   Yuzh-Kuril'sk      4.71 267  ePN     Pn       05 17 14.0 +0.8
YUK                                 pmax   pmax
      comp=Z,554nm,0.2s
YUK                                 pmax   pmax
      comp=N,223nm,0.1s
YUK                                 pmax   pmax
      comp=E,225nm,0.1s
YUK   Yuzh-Kuril'sk      4.71 267  eP      Pn       05 17 13.5 +0.3
YUK                                 AMB    AMB      05 17 15.6
      comp=E,70nm,0.3s
YUK                                eS      Sn       05 18 04.5 -2.4
YUK                                 A      A        05 18 07.9
      comp=E,90nm,0.5s
YUK                                 A      A        05 18 07.9
      comp=E,180nm,0.5s
NEM2  Nemuro 2           4.92 259  eP      Pn       05 17 15.1 -1.0
NEM2                               eS      Sn       05 18 06.9 -5.3
NMR   Nemuro--Hokkai     4.93 259  ePN     Pn       05 17 15.2 -1.1
NMR   Nemuro--Hokkai     4.93 259  eP      Pn       05 17 15.2 -1.1
NMR                                eS      Sn       05 18 08.4 -4.1
RUSJ  Misakicho          5.14 268  ePN     Pn       05 17 20.3 +1.2
JRA   Rausu              5.25 267  eP      Pn       05 17 21.5 +0.9
JNK   Nakash             5.60 264  eP      Pn       05 17 25.2 -0.2
JNK                                eS      Sn       05 18 25.3 -3.6
AKK   Akkeshi            5.65 258  i P     Pn       05 17 26.0 -0.2
AKK                                i S     Sn       05 18 25.6 -4.7
JAK   Akkeshi            5.76 258  eP      Pn       05 17 26.8 -0.9
JAK                                eS      Sn       05 18 27.1 -5.9
JTKR  Abashiri--Toko     6.11 268  eP      Pn       05 17 33.2 +0.7
JAR   Ashorobuto         6.34 262  eP      Pn       05 17 35.9 +0.3
JAR                                eS      Sn       05 18 44.6 -2.4
JOB   Onbets             6.39 259  eP      Pn       05 17 36.4  0.0
JOB                                eS      Sn       05 18 43.7 -4.8
SKR   Severo-Kuril's     6.71  21  ePN     Pn       05 17 40.0 -0.7
SKR                                 pmax   pmax
      comp=Z,16nm,0.8s
SKR                                 MLR    MLR
      comp=Z,200nm,13.0s
SKR   Severo-Kuril's     6.71  21  eP      Pn       05 17 40.5 -0.2
SKR                                 AMB    AMB      05 17 45.6
      comp=Z,50nm,0.4s
SKR                                eS      Sn       05 18 50.8 -5.5
SKR                                 A      A        05 18 52.9
      comp=Z,140nm,0.3s
SKR                                 A      A        05 18 52.9
      comp=Z,100nm,0.3s
JCH   Churui             6.81 257  eP      Pn       05 17 41.5 -0.6
JCH                                eS      Sn       05 18 52.6 -6.3
JKK2  Kamakawa 2         6.96 268  eP      Pn       05 17 45.4 +1.2
JKA   Kamikawa-asahi     7.03 271   Pn     Pn       05 17 46.8 +1.7
JKA   Kamikawa-asahi     7.03 271  eP      Pn       05 17 46.8 +1.7
ASAJ  Asahikawa          7.04 271   Pn     Pn       05 17 46.6 +1.5
      comp=Z,2.7nm,0.3s,baz=57,slow=32,SNR=11
ASAJ                                Sn     Sn       05 19 11.0 +6.7
      baz=330,slow=23
ASAJ                                LR     LR       05 22 29.0
      comp=Z,87nm,18.7s,baz=22,slow=55
      comp=Z,6.6nm,0.3s
ASAJ  Asahikawa          7.04 271   PN     Pn       05 17 46.8 +1.6
ERM   Erimo              7.17 253c iPN     Pn       05 17 48.4 +1.4
ERM   Erimo              7.17 253   Pn     Pn       05 17 48.7 +1.7
YSS   Yuzh-Sakhalins     7.19 294  ePN     Pb       05 17 58.9 -8.9
YSS                                 MLR    MLR
      comp=Z,300nm,14.0s
YSS   Yuzh-Sakhalins     7.19 294  eP      Pn       05 17 47.4 +0.2
YSS                                 AMB    AMB      05 17 49.7
      comp=Z,20nm,0.3s
JNBK  Urakawa-nobuka     7.35 256  eP      Pn       05 17 49.0 -0.5
PAU   Pauzhetka          7.61  21  eP      Pn       05 17 53.1 +0.1
PAU                                 AMB    AMB      05 18 06.4
      comp=Z,10.0nm,0.6s
PAU                                eS      Sn       05 19 12.7 -5.6
PAU                                 A      A        05 19 17.1
      comp=Z,30nm,0.3s
PAU                                 A      A        05 19 17.1
      comp=Z,20nm,0.3s
JEW   Eniwo              8.10 262   Pn     Pn       05 18 00.8 +1.1
JANG  Nango              9.02 247  eP      Pn       05 18 10.4 -2.0
JANG                               eS      Sn       05 19 43.2  -10
JTH   Tanohata           9.02 244  eP      Pn       05 18 10.6 -1.8
JTH                                eS      Sn       05 19 42.7  -10
TYV   Tymovskoe          9.16 318  eP      Pn       05 18 13.5 -0.8
PEA0B Petropavlovsk-     9.33  20   PN     Pn       05 18 16.1 -0.5
PEA0B Petropavlovsk-     9.33  20   Pn     Pn       05 18 16.1 -0.5
PETK  Petropavlovsk-     9.33  20   Pn     Pn       05 18 15.2 -1.4
      comp=Z,0.4nm,0.3s,baz=179,slow=12,SNR=14
PETK                                Sn     Sn       05 19 55.1 -5.6
      comp=Z,0.3nm,0.3s,baz=199,slow=34,SNR=1.6
PETK                                LR     LR       05 22 23.3
      comp=Z,56nm,19.6s,baz=203,slow=41
      comp=Z,2.8nm,0.6s
PET   Petropavlovsk      9.51  24  eS      Sn       05 19 58.4 -6.6
JMM   Marumori          10.94 237   Pn     Pn       05 18 36.7 -2.0
JSD   Sado              12.41 244   Pn     Pn       05 18 57.7 -1.1
MJA0  Matsu Arr-Jizo    13.34 238  ePN     Pn       05 19 11.1 -0.5
MAJO  Matsushiro        13.37 239   PN     Pn       05 19 11.6 -0.3
MAJO  Matsushiro        13.37 239          Pn       05 19 11.6 -0.3
MJAR  Matsushiro Arr    13.37 239   Pn     Pn       05 19 10.6 -1.3
      comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=7.2
MJAR                                Sn     Sn       05 21 29.1  -11
      comp=Z,0.1nm,0.3s,baz=70,slow=27,SNR=1.4
      comp=Z,1.9nm,0.5s
MJAR  Matsushiro Arr    13.37 239   PN     Pn       05 19 11.1 -0.8
MJAR  Matsushiro Arr    13.37 239   Pn     Pn       05 19 11.1 -0.8
MJB9  Matsu-Tunnel      13.37 239          Pn       05 19 11.9  0.0
USRK  Ussuriysk Ar.     14.60 276   Pn     Pn       05 19 27.9 -0.8
      comp=Z,0.4nm,0.3s,baz=91,slow=13,SNR=14
      comp=Z,10nm,0.8s
MA2   Magadan           15.16 357   Pn     Pn       05 19 36.1  0.0
      comp=Z,7.2nm,0.6s,baz=174,slow=9.4,SNR=10
MA2                                 LR     LR       05 26 16.9
      comp=Z,71nm,18.2s,baz=276,slow=41
MA2   Magadan           15.16 357ceP       Pn       05 19 36.5 +0.4
MA2                                 pmax   pmax
      comp=Z,7.0nm,0.7s
MA2   Magadan           15.16 357   Pn     Pn       05 19 36.2  0.0
MA2                                 IAmb   IAmb     05 19 37.2
      comp=Z,9.1nm,0.7s
SEY   Seymchan          18.50 360   P      P        05 20 15.5 -2.3
      comp=Z,0.2nm,0.3s,baz=175,slow=10.0,SNR=12
      comp=Z,2.3nm,0.6s
ZEA   Zeya              18.80 308  eP      P        05 20 21.1 -0.1
ZEA   Zeya              18.80 308  eP      Pn       05 20 22.1 +0.3
KSRS  Korea Array       19.71 258   LR     LR       05 30 19.9
      comp=Z,30nm,18.8s,baz=125,slow=44
YAK   Yakutsk           22.02 331ceP       P        05 20 57.6 +1.6
YAK                                 pmax   pmax
      comp=Z,24nm,0.8s
YAK   Yakutsk           22.02 331  eP      P        05 20 57.6 +1.6
BILL  Bilibino          24.73  12ceP       P        05 21 22.7 -0.1
BILL                               e                05 21 54.8
BILL                               eS      S        05 25 46.7 +3.6
BILL                                pmax   pmax
      comp=Z,4.0nm,1.3s
BILL                                MLR    MLR
      comp=Z,53nm,20.0s
BILL  Bilibino          24.73  12  eP      P        05 21 22.7 -0.1
TIXI  Tiksi             29.53 345   P      P        05 22 03.4 -2.4
      comp=Z,1.2nm,0.3s,baz=272,slow=23,SNR=8.0
      comp=Z,1.2nm,0.3s
TIXI  Tiksi             29.53 345ceP       P        05 22 04.2 -1.5
TIXI                                pmax   pmax
      comp=Z,6.0nm,2.5s
TIXI  Tiksi             29.53 345   P      P        05 22 04.3 -1.5
TIXI                                IAmb   IAmb     05 22 09.4
      comp=Z,6.1nm,1.3s
ULN   Ulaanbaatar       31.24 293ceP       P        05 22 24.3 +3.0
ULN                                 pmax   pmax
      comp=Z,6.0nm,2.5s
GUMO  Guam              31.44 194   LR     LR       05 33 32.0
      comp=Z,32nm,19.0s,baz=99,slow=33
SONM  Songino Array     31.68 293   P      P        05 22 25.8 +0.6
      comp=Z,0.4nm,0.4s,baz=98,slow=8.9,SNR=1.3
      comp=Z,0.4nm,0.4s
KDAK  Kodiak Island     35.97  48   P      P        05 23 02.0 -0.2
      comp=Z,4.8nm,0.8s,baz=282,slow=8.4,SNR=4.2
      comp=Z,4.8nm,0.8s
KDAK  Kodiak Island     35.97  48   P      P        05 23 02.0 -0.2
KDAK  Kodiak Island     35.97  48   P      P        05 23 02.0 -0.2
ILAR  Eielson Array     38.67  37   P      P        05 23 24.2 -0.8
      comp=Z,0.4nm,0.5s,baz=263,slow=7.2,SNR=4.3
      comp=Z,0.4nm,0.5s
ILAR  Eielson Array     38.67  37  eP      P        05 23 28.0 +3.0
ILAR                                pmax   pmax
      comp=Z,1.0nm,0.7s
NRIK  Noril'sk          40.47 330  i P     P        05 23 39.9  0.0
NRIK                                pmax   pmax
      comp=Z,2.0nm,1.1s
ZALV  Zalesovo Beam     43.57 308   P      P        05 24 06.4 +1.1
      comp=Z,0.5nm,0.4s,baz=77,slow=6.5,SNR=2.0
      comp=Z,0.5nm,0.4s
MK31  Makanchi Array    47.57 299   P      P        05 24 38.2 +1.0
MK31                                pmax   pmax
      comp=Z,2.0nm,0.9s
MK31  Makanchi Array    47.57 299   P      P        05 24 38.2 +1.0
MK31                                IAmb   IAmb     05 24 44.4
      comp=Z,1.7nm,0.9s
MKAR  Makanchi Array    47.57 299   P      P        05 24 36.8 -0.3
      comp=Z,1.8nm,0.7s,baz=70,slow=7.6,SNR=15
      comp=Z,1.8nm,0.7s
MKAR  Makanchi Array    47.57 299  eP      P        05 24 39.5 +2.3
MKAR                                pmax   pmax
      comp=Z,2.0nm,0.7s
MKAR  Makanchi Array    47.57 299   P      P        05 24 39.2 +2.0
MKAR  Makanchi Array    47.57 299  eP      P        05 24 39.5 +2.3
MAKZ  Makanchi          47.76 299   P      P        05 24 40.1 +1.5
MAKZ                                pmax   pmax
      comp=Z,2.0nm,0.5s
MAKZ  Makanchi          47.76 299   P      P        05 24 40.1 +1.5
MAKZ                                IAmb   IAmb     05 24 41.8
      comp=Z,1.7nm,0.5s
KURK  Kurchatov         48.23 305   P      P        05 24 42.2  0.0
KURK  Kurchatov         48.23 305  eP      P        05 24 42.2  0.0
KURBB Kurchatov Arra    48.32 305   P      P        05 24 42.1 -0.7
      comp=Z,0.6nm,0.3s,baz=69,slow=8.7,SNR=5.2
      comp=Z,0.6nm,0.3s
CMAR  Chiang Mai Arr    51.35 257   LR     LR       05 48 37.8
      comp=Z,11nm,20.0s,baz=170,slow=38
BRVK  Borovoye          51.98 311ceP       P        05 25 12.6 +2.0
BRVK                                pmax   pmax
      comp=Z,4.0nm,2.5s
BRVK  Borovoye          51.98 311  eP      P        05 25 12.6 +2.0
YKA   Yellowknife Ar    53.07  35   P      P        05 25 19.3 +0.8
      comp=Z,1.0nm,0.9s,baz=298,slow=7.5,SNR=6.6
      comp=Z,1.0nm,0.9s
YKA   Yellowknife Ar    53.07  35  eP      P        05 25 19.6 +1.1
YKA                                 pmax   pmax
      comp=Z,1.0nm,0.6s
ARU   Arti              56.36 318   P      P        05 25 41.2 -1.2
      comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=3.4
      comp=Z,0.6nm,0.3s
ARU   Arti              56.36 318   P      P        05 25 43.9 +1.5
ARU   Arti              56.36 318  eP      P        05 25 43.9 +1.5
ABKAR Akbulak array     59.51 311   P      P        05 26 05.6 +1.0
ABKAR                               IAmb   IAmb     05 26 08.1
      comp=Z,3.9nm,1.4s
ARCES ARCESS Array B    59.84 341   P      P        05 26 07.0 +0.4
      comp=Z,1.8nm,1.0s,baz=36,slow=7.9,SNR=2.0
      comp=Z,1.8nm,1.0s
ARCES ARCESS Array B    59.84 341   P      P        05 26 07.0 +0.4
PSI   Prapat            62.63 245   LR     LR       05 56 36.3
      comp=Z,151nm,19.4s,baz=229,slow=39
NVAR  Mina Array Bea    63.97  61   P      P        05 26 36.3 +1.2
      comp=Z,1.0nm,0.7s,baz=291,slow=6.4,SNR=12
      comp=Z,1.0nm,0.7s
FINES FINESS Array B    65.89 335   P      P        05 26 47.3 +0.4
      comp=Z,0.8nm,0.4s,baz=33,slow=8.3,SNR=7.5
      comp=Z,0.8nm,0.4s
FINES FINESS Array B    65.89 335  eP      P        05 26 48.0 +1.1
FINES                               pmax   pmax
      comp=Z,1.0nm,0.4s
WRA   Warramunga Arr    66.19 199   P      P        05 26 49.1 -0.2
      comp=Z,0.2nm,0.6s,baz=20,slow=6.9,SNR=1.7
      comp=Z,0.2nm,0.6s
PDAR  Pinedale Array    66.52  53   P      P        05 26 50.5 -1.1
      comp=Z,0.3nm,0.6s,baz=266,slow=4.3,SNR=4.2
      comp=Z,0.3nm,0.6s
NB2   NORSAR Subarra    70.22 341   P      P        05 27 17.1 +2.9
      comp=Z,1.6nm,0.7s,baz=31,slow=6.5
NOA   NORSAR Array B    70.22 341   LR     LR       06 01 41.0
      comp=Z,14nm,18.4s,baz=305,slow=39
HFS   Hagfors           70.42 339   P      P        05 27 16.5 +1.1
      comp=Z,0.7nm,0.6s,baz=342,slow=9.1,SNR=2.4
      comp=Z,0.7nm,0.6s
KBZ   Khabaz            72.08 314   P      P        05 27 26.9 +1.3
      comp=Z,0.9nm,0.6s,baz=312,slow=13,SNR=1.5
      comp=Z,0.9nm,0.6s
KBZ   Khabaz            72.08 314   P      P        05 27 27.0 +1.3
KBZ   Khabaz            72.08 314  eP      P        05 27 27.0 +1.3
AKASG Malin Array Be    73.16 326   P      P        05 27 33.5 +1.6
      comp=Z,0.6nm,0.4s,baz=39,slow=6.5,SNR=4.0
      comp=Z,0.6nm,0.4s
TXAR  Lajitas Array     79.07  60   P      P        05 28 06.3 +0.2
      comp=Z,0.4nm,0.6s,baz=290,slow=3.4,SNR=10.0
      comp=Z,0.4nm,0.6s
```

IDC 03 05:23:38.2±6.4**, 19°.64S**×**177°.89W, h464**km±55km**,**
mb2.7/3**, mbtmp3.7**/5**, Error ellipse: s-maj=183.5km**
s-min=30.4km az=155.0, Fiji Islands region

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC       h  m  s    ISC
MSVF  Nonsavu            4.29 296   P      P        05 24 56.9 -0.1
      14nm,0.6s,baz=126,slow=15,SNR=9.8
DZM   Mont Dzumac       14.84 258   P      P        05 26 47.5 -0.1
      4.7nm,1.0s,baz=111,slow=17,SNR=1.8
ASAR  Alice Springs     44.82 256   P      P        05 31 09.6 -0.3
      0.9nm,0.8s,baz=90,slow=8.6,SNR=7.6
      0.9nm,0.8s
WRA   Warramunga Arr    44.83 261   P      P        05 31 10.0  0.0
      0.3nm,0.3s,baz=96,slow=7.6,SNR=19
      0.3nm,0.3s
TXAR  Lajitas Array     86.51  57   P      P        05 35 31.2 -0.2
      0.3nm,0.8s,baz=213,slow=4.3,SNR=1.6
      0.3nm,0.8s
```

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*IDC **03** 05:25:20.0±1.5, 39°.23N×74°.74E, h0km, mb3.6/7,*
mbtmp3.6/13, ML3.2/5, MS3.9/1, Error ellipse:
s-maj=28.7km s-min=19.1km az=65.0
*SOME **03** 05:25:20.4, 39°.35N×74°.68E, h15km*
*KRNET **03** 05:25:21.0±0.1, 39°.29N×74°.56E, mb4.5*
*NNC **03** 05:25:25.6±0.8, 39°.58N×74°.62E, h0km, mb4.6, mpv4.3,*
Error ellipse: s-maj=6.9km s-min=4.2km az=165.0
ISC 03 05:25:21.3±1.7**, 39°.30N**±0°.05×**74°.45E**±0°.03**, h2**km±10km**,**
n94, σ2°.24/132**, mb3.5**/6**, 34C-30D, Southern Xinjiang**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC       h  m  s    ISC
OHH   Osh                1.77 314⇑iP       Pb       05 25 55.3 +0.8
      baz=13
OHH                              ⇑iS       Sg       05 26 20.6 +2.4
      baz=13
DRK   Karamyk            2.06 276⇓iP       Pb       05 26 00.1 +0.5
      baz=76
DRK                              ⇓iS       Sg       05 26 28.3 +0.9
      baz=76
ARLS  Aral               2.56 358⇓iP       Pn       05 26 05.7 +1.7
      baz=56
ARLS                             ⇓iS       Sb       05 26 38.7 -1.4
      baz=56
AML   Almayashu          2.89 349   P      Pb       05 26 11.2 -2.6
      SNR=110
BTK   Batken             2.90 286⇑iP       Pn       05 26 11.7 +3.1
      baz=86
BTK                              ⇑iS       Sb       05 26 48.6 -1.2
      baz=86
UCH   Uchtor             2.93   1   P      Pb       05 26 11.6 -3.0
      SNR=257
UCH   Uchtor             2.93   1⇓iP       Pb       05 26 11.5 -3.0
      baz=59
UCH                              ⇓iS       Sb       05 26 47.8 -3.1
      baz=59
ARK   Arkit              3.13 324⇑eP       Pn       05 26 14.6 +2.8
      baz=23
ARK                              ⇑iS       Sb       05 26 53.7 -2.8
      baz=23
GAR   Garm               3.23 266⇑eP       Pn       05 26 16.4 +3.3
      baz=66
GAR                              ⇑iS       Sb       05 26 56.6 -2.5
      baz=66
ULHL  Ulahol             3.25  24   P      Pb       05 26 16.1 -3.7
      SNR=14
ULHL  Ulahol             3.25  24⇓eP       Pn       05 26 14.8 +1.3
      baz=23
ULHL                             ⇓eS       Sn       05 26 54.5 +1.7
      baz=23
AAK   Ala-Archa          3.34   1   P      Pn       05 26 17.4 +2.8
      SNR=44
AAK   Ala-Archa          3.34   1   Pn     Pn       05 26 17.3 +2.6
      12nm,0.3s,baz=176,slow=9.3,SNR=74
AAK                                   Sn   Sb       05 27 00.2 -2.2
      7.1nm,0.3s,baz=14,slow=19,SNR=1.8
      36nm,0.3s
AAK   Ala-Archa          3.34   1⇑eP       Pn       05 26 16.9 +2.2
      baz=59
AAK                              ⇑iS       Sb       05 26 57.7 -4.7
      baz=59
TRKS  Terek-Say          3.37 313⇑eP       Pn       05 26 17.1 +2.0
      baz=11
TRKS                             ⇑iS       Sn       05 26 58.0 +2.3
      baz=11
KBK   Karagaybulak       3.38   6   P      Pn       05 26 17.6 +2.4
      SNR=82
KBK   Karagaybulak       3.38   6⇑eP       Pn       05 26 17.2 +2.0
      baz=5.0
KBK                              ⇑eS       Sn       05 26 58.2 +2.2
      baz=5.0
BOOM  Boomskoye usch     3.38  19⇑eP       Pn       05 26 17.0 +1.7
      baz=18
BOOM                             ⇑iS       Sn       05 26 58.3 +2.1
      baz=18
EKS2  Erkin-Say          3.40 352   P      Pb       05 26 19.2 -3.2
      SNR=23
EKS2  Erkin-Say          3.40 352⇓iP       Pn       05 26 17.6 +2.1
      baz=50
EKS2                             ⇓eS       Sn       05 26 59.0 +2.5
      baz=50
KDJ   Kajisay            3.51  35⇑iP       Pn       05 26 18.5 +1.4
      baz=34
KDJ                              ⇑iS       Sn       05 27 00.4 +1.1
      baz=34
MRKS  Merke              3.57 345  eP      Pb       05 26 26.6 +1.5
      41nm,0.6s
MRKS                               eS      Sg       05 27 14.4 -1.5
      114nm,0.3s
CHMS  Chumysh            3.71   3   P      Pn       05 26 22.1 +2.4
      SNR=44
CHMS  Chumysh            3.71   3 ⇓Pn      Pn       05 26 21.7 +2.1
      50nm,0.5s
CHMS                             ⇑Lg       Lg       05 27 14.7
      98nm,0.7s
CHMS  Chumysh            3.71   3⇓eP       Pn       05 26 21.7 +2.1
      baz=2.0
CHMS                             ⇓iS       Sn       05 27 05.8 +1.9
      baz=2.0
TKM2  Tokmak 2           3.72  13   P      Pn       05 26 22.1 +2.1
      SNR=62
TKM2  Tokmak 2           3.72  13 ⇑Pn      Pn       05 26 21.7 +1.7
      74nm,0.7s
TKM2                             ⇑Lg       Lg       05 27 14.8
      190nm,0.6s
TKM2  Tokmak 2           3.72  13⇓eP       Pn       05 26 21.8 +1.8
      baz=12
TKM2                             ⇓eS       Sn       05 27 06.3 +1.7
      baz=12
KST   Kastek             3.91  17  eP      Pb       05 26 30.7 -0.4
      58nm,0.3s
KST                                eS      Sb       05 27 22.0 +3.1
      223nm,0.7s
KST   Kastek             3.91  17   Pg     Pb       05 26 32.3 +1.2
      58nm,0.3s
KST                                 Lg     Lg       05 27 22.0
      223nm,0.7s
USP   Ospenovka          3.97   1   P      Pn       05 26 26.4 +3.2
      SNR=6.3
USP   Ospenovka          3.97   1⇓eP       Pn       05 26 25.2 +2.0
      baz=59
USP                              ⇓eS       Sn       05 27 12.3 +2.0
      baz=59
MTBS  Maitube            4.11  21  eP      Pb       05 26 33.4 -1.0
      60nm,0.4s
MTBS                               eS      Sb       05 27 26.5 +1.9
      117nm,0.6s
MTBS  Maitube            4.11  21   Pg     Pb       05 26 35.3 +0.9
      60nm,0.4s
MTBS                                Lg     Lg       05 27 26.5
      117nm,0.6s
SGDS  Sogindy            4.15   2  eP      Pb       05 26 35.0 -0.2
      29nm,0.4s
SGDS                               eS      Sb       05 27 29.2 +3.4
      85nm,0.6s
SGDS  Sogindy            4.15   2   Pg     Pb       05 26 35.9 +0.8
      38nm,0.5s
SGDS                                Lg     Lg       05 27 29.2
      85nm,0.6s
CHGR  Chuyangaron        4.17 263⇑eP       Pn       05 26 29.2 +3.1
      baz=63
CHGR                             ⇑iS       Sn       05 27 19.2 +3.8
      baz=63
TNSS  Tian-Shan          4.19  26  eP      Pb       05 26 34.8 -1.1
      27nm,0.4s
TNSS                               eS      Sb       05 27 28.6 +1.5
      56nm,0.6s
TNSS  Tian-Shan          4.19  26   Pg     Pb       05 26 36.4 +0.5
      39nm,0.6s
TNSS                                Lg     Lg       05 27 29.5
      56nm,0.6s
AAA   Alma-Ata           4.33  25  eP      Pb       05 26 38.3 +0.2
      40nm,0.1s
AAA                                eS      Sb       05 27 34.2 +3.3
      331nm,0.5s
AAA   Alma-Ata           4.33  25   Pg     Pb       05 26 39.5 +1.3
      40nm,0.1s
AAA                                 Lg     Lg       05 27 34.2
      331nm,0.5s
MDOK  Medeo              4.33  26  eP      Pb       05 26 37.7 -0.6
      33nm,0.4s
MDOK                               eS      Sb       05 27 33.2 +2.1
      91nm,0.6s
MDOK  Medeo              4.33  26 ⇑Pg      Pb       05 26 38.3 +0.1
      56nm,0.8s
MDOK                             ⇓Lg       Lg       05 27 34.8
      80nm,0.6s
MDOK  Medeo              4.33  26   Pg     Pb       05 26 38.4 +0.1
      33nm,0.4s
MDOK                                Lg     Lg       05 27 32.8
      91nm,0.6s
KNDC  Almaty             4.35  25 ⇓Pn      Pn       05 26 28.8 +0.3
      20nm,0.2s
KNDC                             ⇓Pg       Pb       05 26 39.5 +1.0
      86nm,0.5s
KNDC                             ⇓Lg       Lg       05 27 34.1
      689nm,0.9s
IUG   Iuzhnay            4.40 312  eP      Pg       05 26 43.8 -1.8
      955nm,0.5s
IUG                                eS      Sg       05 27 44.0 +1.4
      262nm,0.5s
KOTS  Kotyrbulak         4.42  26  eP      Pb       05 26 39.3 -0.4
      34nm,0.4s
KOTS                               eS      Sb       05 27 36.6 +3.1
      317nm,0.6s
KOTS  Kotyrbulak         4.42  26   Pg     Pb       05 26 41.2 +1.5
      34nm,0.4s
KOTS                                Lg     Lg       05 27 36.6
      317nm,0.6s
KRBS  Karabastau         4.49  11  eP      Pb       05 26 40.5 -0.4
      74nm,0.3s
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KRBS	94nm,0.5s			eS	Sb	05 27 38.4	+2.9
KRBS	Karabastau 74nm,0.3s	4.49	11	Pg	Pb	05 26 42.2	+1.3
KRBS	94nm,0.5s			Lg	Lg	05 27 38.4	
KTBS	Karatobe 33nm,0.5s	4.72	20	eP	Pb	05 26 44.7	-0.1
KTBS	158nm,0.7s			eS	Sb	05 27 45.7	+3.6
KTBS	Karatobe 33nm,0.5s	4.72	20	Pg	Pb	05 26 46.3	+1.5
KTBS	158nm,0.7s			Lg	Lg	05 27 45.7	
CHM	Chimkent 210nm,0.1s	4.76	311	eP	Pg	05 26 52.1	-0.3
CHM	404nm,0.3s			eS	Sg	05 27 57.5	+3.4
SATY	Saty 19nm,0.8s	4.80	37	eP	Pb	05 26 44.8	-1.4
SATY	94nm,0.9s			eS	Sb	05 27 46.3	+1.8
SATY	Saty 34nm,0.4s	4.80	37	Pg	Pb	05 26 45.7	-0.6
SATY	94nm,0.9s			Lg	Lg	05 27 44.4	
KUU	Kurty 35nm,0.7s	4.81	17	eP	Pb	05 26 45.7	-0.6
KUU	207nm,0.6s			eS	Sb	05 27 47.7	+3.2
KUU	Kurty 35nm,0.7s	4.81	17	Pg	Pb	05 26 47.5	+1.2
KUU	207nm,0.6s			Lg	Lg	05 27 48.5	
KK31	Karatay Array 5.0nm,0.2s,baz=129,slow=12,SNR=168	4.82	323	⇓Pn	Pn	05 26 37.7	+2.8
KK31	12nm,0.5s,baz=137,slow=15,SNR=8.0			⇓Pg	Pg	05 26 51.5	-2.1
KK31	17nm,0.4s,baz=144,slow=24,SNR=4.3			⇑Sn	Sn	05 27 34.0	+2.6
KK31	19nm,0.3s,baz=140,slow=27,SNR=5.2			⇑Lg	Lg	05 27 54.5	
KKAR	Karatay Array baz=23	4.82	323	⇓eP	Pn	05 26 37.7	+2.7
KKAR	baz=23			⇓iS	Sn	05 27 34.0	+2.6
CHKK	Chushkaly 26nm,0.7s	4.94	22	eP	Pb	05 26 48.6	+0.1
CHKK	81nm,0.6s			eS	Sb	05 27 51.7	+3.4
CHKK	Chushkaly 26nm,0.7s	4.94	22	Pg	Pb	05 26 49.9	+1.4
CHKK	81nm,0.6s			Lg	Lg	05 27 51.7	
KURS	Kuram 15nm,0.7s	5.04	33	eP	Pb	05 26 49.8	-0.4
KURS	55nm,0.6s			eS	Sb	05 27 54.6	+3.4
KURS	Kuram 15nm,0.7s	5.04	33	Pg	Pb	05 26 51.6	+1.4
KURS	55nm,0.6s			Lg	Lg	05 27 54.6	
BRLS	Borolday 9.2nm,0.5s	5.10	318	eP	Pg	05 26 56.1	-2.9
BRLS	85nm,0.8s			eS	Sg	05 28 05.1	+0.1
BRLS	Borolday 9.2nm,0.5s	5.10	318	Pg	Pb	05 26 52.7	+1.4
BRLS	85nm,0.8s			Lg	Lg	05 27 57.4	
UZB	Uzynbulak 23nm,0.5s	5.17	40	eP	Pb	05 26 53.0	+0.6
UZB	67nm,1.0s			eS	Sb	05 27 59.4	+4.4
UZB	Uzynbulak 23nm,0.5s	5.17	40	Pg	Pb	05 26 54.3	+1.8
UZB	67nm,1.0s			Lg	Lg	05 27 59.4	
KPKS	Kokpek 35nm,0.6s	5.24	36	eP	Pb	05 26 54.1	+0.4
KPKS	107nm,0.6s			eS	Sb	05 28 00.9	+3.7
ARXS	Arharly 50nm,0.8s	5.52	26	eP	Pb	05 26 58.6	+0.1
ARXS	56nm,0.8s			eS	Sb	05 28 09.4	+4.2
ARXS	Arharly 50nm,0.8s	5.52	26	Pg	Pb	05 27 00.1	+1.6
ARXS	56nm,0.8s			Lg	Lg	05 28 09.4	
PDGK	Podgornoye 10nm,0.6s	5.54	42	Pg	Pb	05 27 00.3	+1.6
PDGK	31nm,0.9s			Lg	Lg	05 28 08.8	
PDGK	Podgornoye 4.4nm,0.7s	5.54	42	⇓Pn	Pn	05 26 45.0	+0.2
PDGK	30nm,0.8s			⇑Pg	Pb	05 27 02.1	+3.3
PDGK	141nm,0.9s			⇑Lg	Lg	05 28 11.6	
CHCP	Chirah Chowk	5.71	190	⇑P	Pb	05 26 55.3	-6.3
CEP	Cherat	5.83	201	P	Pn	05 26 56.9	+8.0
OTUK	Ortayu 4.7nm,1.2s	9.07	351	⇓Pn	Pn	05 27 33.2	-0.1
OTUK	12nm,1.0s			⇓Lg	Lg	05 30 07.2	
MAKZ	Makanchi 16nm,1.4s	9.31	34	⇑Lg	Lg	05 30 10.3	
MK31	Makanchi Array 2.1nm,0.8s,baz=212,slow=12,SNR=4.1	9.44	35	⇑Pn	Pn	05 27 36.3	-1.9
MK31	7.4nm,1.0s			⇓Lg	Lg	05 30 15.1	
MKAR	Makanchi Array 0.1nm,0.3s,baz=211,slow=14,SNR=5.2	9.44	35	Pn	Pn	05 27 38.0	-0.2
MKAR	0.1nm,0.3s,baz=207,slow=29,SNR=1.1			Sn	Sn	05 29 17.4	-7.4
MKAR	0.1nm,0.3s,baz=222,slow=21,SNR=2.4 0.2nm,0.3s			Lg	Lg	05 30 07.0	
KURBB	Kurchatov Arra baz=202,slow=13,SNR=1.5	11.69	13	Pn	Pn	05 28 06.9	-2.0
KURBB	0.1nm,0.3s,baz=358,slow=21,SNR=4.5 0.2nm,0.3s			Lg	Lg	05 31 18.9	
KURBB	Kurchatov Arra 21nm,0.8s	11.69	13	⇑Lg	Lg	05 31 25.9	
KURK	Kurchatov 29nm,1.0s	11.79	13	⇓Lg	Lg	05 31 28.6	
BVAR	Borovoye Array 0.3nm,0.3s	14.01	350	Pn	Pn	05 28 38.7	-2.1
AB31	Akbulak array 1.8nm,0.4s,baz=123,slow=14,SNR=46	14.36	319	⇑Pn	Pn	05 28 47.3	+1.7
AKTO	Aktyubinsk 0.4nm,0.3s,baz=128,slow=16,SNR=7.9 1.4nm,0.4s	16.07	319	Pn	Pn	05 29 08.5	+0.2
AKTO	Aktyubinsk 6.6nm,1.1s	16.07	319	⇑Pn	P	05 29 11.6	-0.2
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=215,slow=12,SNR=1.6 0.5nm,0.3s	16.27	22	Pn	Pn	05 29 09.3	-1.4
ARU	Arti 2.2nm,0.6s,baz=155,slow=5.7,SNR=8.1 2.2nm,0.6s	20.10	334	P	Pn	05 29 56.6	-1.2
SONM	Songino Array 0.2nm,0.4s,baz=251,slow=9.0,SNR=2.0 0.2nm,0.4s	24.53	59	P	P	05 30 39.9	-2.4
ARCES	ARCESS Array B 1.7nm,0.8s,baz=95,slow=7.3,SNR=2.0 1.7nm,0.8s	39.67	335	P	P	05 32 54.4	+0.1
TIXI	Tiksi 0.5nm,0.2s,baz=279,slow=19,SNR=1.2 0.5nm,0.2s	42.16	23	P	P	05 33 13.4	-1.3
JNU	Nakatsue comp=Z,158nm,21.4s,baz=208,slow=40	45.32	80	LR	LR	05 55 06.2	
ILAR	Eielson Array 0.2nm,0.6s,baz=330,slow=5.2,SNR=2.1 0.2nm,0.6s	71.32	17	P	P	05 36 41.0	-1.0
YKA	Yellowknife Ar 0.2nm,0.6s,baz=349,slow=5.6,SNR=6.6 0.2nm,0.6s	78.29	4	P	P	05 37 21.6	-0.8
WRA	Warramunga Arr 0.4nm,0.9s,baz=324,slow=4.4,SNR=1.9 0.4nm,0.9s	81.24	125	P	P	05 37 36.6	-2.3

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*KOLA **03** 05:29:05.8, 67°.72N×20°.09E, h0^{km}, ML2.5*
*IDC **03** 05:29:07.2±0.9, 67°.81N×20°.78E, h0^{km}, mbtmp3.4/4,*
ML2.6/4, Error ellipse: s-maj=14.5km s-min=6.7km
az=114.0
*HEL **03** 05:29:07.0±0.0, 67°.82N×20°.21E, h1^{km}, ML2.2,*
ML2.4(UPP), Confirmed Induced event
*NAO **03** 05:29:07.3±1.0, 67°.83N×20°.71E, ML2.9*
*BER **03** 05:29:08.6±3.4, 67°.84N×20°.14E, h1^{km}, ML2.1,*
ML2.9(NAO), Confirmed Induced event
ISC 03 05:29:05.7±0.7**, 67°.78N**±0°.03×**20°.29E**±0°.02**, h0^{km}, n48,**
σ**1^{s}.20**/79**, 6D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.18	6	⇓iP	Pg	05 29 09.4	+0.3
KUA				iS	Sg	05 29 11.5	+0.1
RATU	Laukkuluspa	0.27	280	⇓iP	Pg	05 29 11.1	+0.2
RATU				iS	Sg	05 29 14.3	0.0
KOVU	Salmi	0.45	354	⇓iP	Pg	05 29 14.1	-0.2
KOVU				iS	Sg	05 29 19.6	-0.5
NIKU	Nikkaluokta	0.48	281	⇓iP	Pg	05 29 14.9	0.0
NIKU				iS	Sg	05 29 21.1	-0.1
DUNU	Dundret	0.67	171	iP	Pb	05 29 19.9	-0.3
DUNU				iS	Sb	05 29 29.4	-0.6
LANU	Lannavaara	0.70	66	eP	Pg	05 29 19.2	+0.2
LANU				eS	Sg	05 29 29.0	+1.0
MASU	Masugnsbyn	0.73	115	⇓iP	Pb	05 29 21.0	-0.3
SALU	Saltoluokta	0.79	241	⇓iP	Pg	05 29 21.1	+0.3
SALU				eS	Sb	05 29 32.5	-1.1
KIF	Kilpisjarvi	1.25	9	Pg	Pg	05 29 29.7	+0.1
KIF				Lg	Lg	05 29 45.8	
KIF	Kilpisjarvi	1.25	9	eP	Pg	05 29 29.4	-0.2
KIF	Kilpisjarvi	1.25	9	eP	Pg	05 29 29.6	+0.1
KIF				eS	Sg	05 29 45.4	-0.3
PAJU	Pajala	1.33	123	eP	Pg	05 29 31.2	+0.1
PAJU				eS	Sb	05 29 49.4	+0.4
HEF	Hetta	1.42	62	eP	Pn	05 29 32.3	-0.3
HEF	Hetta	1.42	62	eP	Pn	05 29 32.4	-0.2
HEF				eS	Sg	05 29 50.2	-0.8
ERTU	Ertsjaerv	1.44	148	eP	Pb	05 29 33.4	+0.1
ERTU				eS	Sn	05 29 53.0	+0.6
KTK1	Kautokeino	1.65	40	Pn	Pn	05 29 36.3	+0.4
KTK1				Sn	Sn	05 29 57.8	0.0
KTK1	Kautokeino	1.65	40	eP	Pn	05 29 36.3	+0.4
KTK1	comp=Z,47nm,0.3s			IAML		05 30 00.8	
JETT	Jettan, Norway	1.79	1	Pn	Pn	05 29 38.0	+0.1
JETT				Sn	Sn	05 30 01.6	+0.3
TRO	Tromso	1.93	346	eP	Pn	05 29 39.9	+0.3
TRO				eS	Sn	05 30 04.4	-0.2
FAUS	Fauske	1.96	261	eP	Pb	05 29 41.5	-0.6
FAUS	comp=Z,26nm,0.2s			IAML		05 30 09.9	
KALU	Kalix	2.28	146	eP	Pb	05 29 47.0	-0.5
KALU				eS	Sb	05 30 15.9	-0.3
TOF	Tornio	2.33	135	eP	Pb	05 29 48.2	-0.3
TOF				eS	Sb	05 30 17.3	-0.5
TOF	comp=Z,11nm,0.2s			MSG		05 30 21.0	
SGF	Sodankyl	2.41	95	eP	Pn	05 29 47.7	+1.4
SGF				eS	Sn	05 30 17.9	+1.4
SGF	comp=Z,9.5nm,0.2s			MSG		05 30 24.0	
RNF	Rovaniemi	2.52	115	eP	Pb	05 29 50.5	-1.2
RNF				eSB	Sb	05 30 23.6	+0.3
ARA0	ARCESS Array S baz=228,slow=14	2.60	45	Pn	Pn	05 29 49.9	+1.0
ARA0	baz=225,slow=28			Lg	Lg	05 30 23.9	
ARA0	ARCESS Array S	2.60	45	eP	Pn	05 29 50.0	+1.0
ARA0				eS	Sn	05 30 21.0	-0.2
ARA0	comp=Z,17nm,0.4s			IAML		05 30 27.6	
ARA0	ARCESS Array S	2.60	45	eP	Pn	05 29 50.3	+1.4
ARA0				eS	Sn	05 30 21.2	0.0
ARCES	ARCESS Array B comp=Z,1.3nm,0.3s,baz=230,slow=14,SNR=107	2.60	45	Pn	Pn	05 29 49.8	+0.9
ARCES	comp=Z,4.4nm,0.3s,baz=231,slow=23,SNR=17 comp=Z,2.8nm,0.3s			Lg	Lg	05 30 23.1	
ARCES	ARCESS Array B	2.60	45	P	Pn	05 29 50.0	+1.1
ARCES				S	Sn	05 30 22.2	+1.0
PRVG	Vayda Guba	4.75	60	P	Pn	05 30 19.4	+1.0
PRVG				S	Sn	05 31 14.5	+0.3
APA0	Apatity Array baz=265,slow=12	4.84	86	Pn	Pn	05 30 19.8	+0.1
APA0	baz=284,slow=28			Sn	Sn	05 31 16.0	-0.4
APA0	baz=286,slow=28			Lg	Lg	05 31 34.9	
APA0	Apatity Array baz=265,slow=12	4.84	86	Pn	Pn	05 30 19.8	+0.1
APA0	baz=284,slow=28			Sn	Sn	05 31 16.0	-0.4
APA0	Apatity Array	4.84	86	P	Pn	05 30 18.8	-0.9
APA0				S	Sn	05 31 14.2	-2.2
APA	Apatity	5.01	86	P	Pn	05 30 22.6	+0.7
LVZ	Lovozero	5.44	82	P	Pn	05 30 27.9	-0.1
LVZ				S	Sn	05 31 30.4	-0.7
TERR	Teriberka	5.63	69	P	Pn	05 30 30.8	+0.2
TERR				S	Sn	05 31 32.5	-3.4
FIA0	FINESS Array S baz=350,slow=16	6.83	156	Pn	Pn	05 30 49.1	+2.2
FIA0	baz=353,slow=28			Sn	Sn	05 32 05.2	+0.1
FIA0	baz=348,slow=28			Lg	Lg	05 32 38.8	
FIA0	FINESS Array S baz=350,slow=16	6.83	156	Pn	Pn	05 30 49.1	+2.2
FIA0	baz=353,slow=28			Sn	Sn	05 32 05.2	+0.1
FINES	FINESS Array B comp=Z,0.3nm,0.3s,baz=349,slow=14,SNR=14	6.83	156	Pn	Pn	05 30 48.4	+1.5
FINES	comp=Z,0.3nm,0.3s,baz=349,slow=21,SNR=2.9			Sn	Sn	05 32 04.5	-0.7
FINES	comp=Z,0.9nm,0.3s,baz=346,slow=29,SNR=12 comp=Z,1.3nm,0.4s			Lg	Lg	05 32 38.5	
NB2	NORSAR Subarra	7.81	214	Pn	Pn	05 31 01.5	+1.0
NB2	NORSAR Subarra	7.81	214	Pn	Pn	05 31 01.5	+1.0
NOA	NORSAR Array B baz=22,slow=11,SNR=3.8	7.81	214	Pn	Pn	05 31 01.0	+0.5
NOA	baz=1.1,slow=16,SNR=1.4			Sn	Sn	05 32 30.2	+0.7
NOA	comp=Z,0.1nm,0.3s,baz=5.2,slow=15,SNR=2.5 comp=Z,0.5nm,0.7s			Lg	Lg	05 33 13.3	
NRA0	NORESS Array S baz=21,slow=14	8.02	212	Pn	Pn	05 31 06.5	+3.2
NRA0	NORESS Array S baz=21,slow=14	8.02	212	Pn	Pn	05 31 06.5	+3.2
HFS	Hagfors comp=Z,0.2nm,0.3s,baz=170,slow=41,SNR=1.4	8.20	204	Sn	Sn	05 32 33.0	-5.9
SPA0	Spitsbergen Ar baz=152,slow=14	10.52	356	Pn	Pn	05 31 37.0	-0.4
SPA0	Spitsbergen Ar baz=152,slow=14	10.52	356	Pn	Pn	05 31 37.0	-0.4
SPITS	Spitsbergen Ar baz=171,slow=10 comp=Z,13nm,1.0s	10.52	356	Pn	Pn	05 31 36.8	-0.6

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*IDC **03** 05:45:32.6±0.9, 36°.99N×98°.14W, h0^{km}, mb3.4/3,*
mbtmp3.4/7, ML3.9/3, Error ellipse: s-maj=13.9km
s-min=13.5km az=113.0
*ANF **03** 05:45:33.6±0.2, 36°.86N×98°.12W, h6^{km}, ML4.2/14,*
ML4.2/13, Error ellipse: s-maj=2.3km s-min=2.0km
az=169.0
*TUL **03** 05:45:33.5±0.6, 36°.88N±0°.04×98°.15W±0°.05, h7^{km}±7^{km},*
ML3.7, mb_Lg3.5/104(NEIC), Error ellipse: s-maj=6.0km
s-min=5.3km az=185.0
*NEIC **03** 05:45:34.1±1.2, 36°.87N±0°.03×98°.13W±0°.04, h11^{km}±6^{km},*
Error ellipse: s-maj=6.3km s-min=1.1km az=223.0
ISC 03 05:45:33.2±1.6**, 36°.87N**±0°.03×**98°.11W**±0°.03**, h4^{km}**±12^{km}**,**
n137, σ**0^{s}.94**/121**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.87	236	Pg	Pg	05 45 49.7	-0.2
U32A	Winter Ranch, baz=55,SNR=82	0.87	236	P	Pg	05 45 49.6	-0.2
U32A	baz=55			S	Sg	05 46 01.3	+0.1
T35A	Sooner Cattle	1.28	87		Pn	05 45 58.1	+0.3
T35B	Sooner Cattle baz=268,SNR=188	1.28	87	P	Pn	05 45 57.9	+0.1
T35B	baz=268			S	Sb	05 46 15.2	+0.6
ADOK	Arcadia Dam	1.35	154	Pn	Pn	05 45 59.1	+0.3
OKCFA	Oklahoma City	1.55	160		Pn	05 46 02.1	+0.6
OKCFA	Oklahoma City baz=339,SNR=21	1.55	160	P	Pn	05 46 01.8	+0.3
OKCFA	baz=339			S	Sb	05 46 23.1	+0.8
R32A	Long Quarter,	1.62	343		Pn	05 46 03.2	+0.6
R32A	Long Quarter, baz=164,SNR=82	1.62	343	P	Pn	05 46 03.2	+0.6
R32A	baz=164			S	Sb	05 46 24.7	+0.2
TUL1	Leonard	2.10	116		Pn	05 46 09.9	+0.9
TUL1	comp=Z,291nm,0.8s			IAmb_Lg		05 46 44.1	
TUL1	Leonard baz=297,SNR=250	2.10	116	P	Pn	05 46 09.7	+0.6
TUL1	baz=297			Sb	Sb	05 46 40.1	+2.0
TUL1	Leonard baz=297,SNR=52	2.10	116	P	Pn	05 46 09.6	+0.6
TUL1	baz=297			Sb	Sb	05 46 40.1	+2.0
WMOK	Wichita Mounta	2.20	195		Pn	05 46 11.1	+0.6
WMOK	comp=Z,223nm,0.7s			IAmb_Lg		05 46 46.4	
WMOK	Wichita Mounta baz=13,SNR=89	2.20	195	P	Pn	05 46 10.7	+0.2
WMOK	Wichita Mounta baz=13,SNR=89	2.20	195	P	Pn	05 46 10.4	0.0
WMOK	baz=13			Sb	Sb	05 46 41.0	0.0
X34A	Smith Ranch, M	2.28	174		Pn	05 46 13.0	+1.5
X34A	comp=Z,147nm,0.8s			IAmb_Lg		05 46 48.1	
CBKS	Cedar Bluff	2.33	327		Pn	05 46 13.0	+0.6
CBKS	comp=Z,132nm,0.7s			IAmb_Lg		05 46 48.5	
CBKS	Cedar Bluff baz=147,SNR=41	2.33	327	P	Pn	05 46 13.0	+0.6
CBKS	Cedar Bluff baz=147,SNR=60	2.33	327	P	Pn	05 46 12.4	+0.1
CBKS	baz=147			S	Sn	05 46 42.8	+1.3
KSU1	Kansas State U baz=209,SNR=76	2.52	27	P	Pn	05 46 15.9	+1.0
KSU1	Kansas State U baz=209,SNR=66	2.52	27	P	Pn	05 46 15.7	+0.8
KSU1	baz=209			S	Sn	05 46 47.8	+1.7
X37A	Clayton	3.18	135		Pn	05 46 25.4	+1.4
X37A	comp=Z,143nm,0.8s			IAmb_Lg		05 47 22.9	
X37A	Clayton baz=316	3.18	135	S	Sn	05 47 03.7	+1.3
HHAR	Hobbs comp=Z,143nm,0.8s	3.40	99	IAmb_Lg		05 47 27.1	
HHAR	Hobbs baz=281	3.40	99	P	Pn	05 46 28.2	+1.2
AMTX	Amarillo comp=Z,121nm,0.7s	3.52	237	IAmb_Lg		05 47 25.6	
AMTX	Amarillo baz=54	3.52	237	P	Pn	05 46 27.9	-0.8
AMTX	baz=54			Sb	Sb	05 47 20.2	+1.1
Z35A	Perchaven, San comp=Z,88nm,0.9s	3.60	169	IAmb_Lg		05 47 36.5	
Z35A	Perchaven, San baz=348,SNR=27	3.60	169	P	Pn	05 46 30.6	+0.8
Z35A	baz=348			S	Sn	05 47 13.6	+0.9
W39A	Magazine	3.88	114		Pn	05 46 34.5	+0.9
W39A	comp=Z,134nm,0.7s			IAmb_Lg		05 47 45.5	
W39A	Magazine baz=296,SNR=21	3.88	114	P	Pn	05 46 34.8	+1.2
W39A	Magazine baz=296	3.88	114	P	Pn	05 46 34.6	+1.0
N33A	J Bar K, Exete	3.90	7	Pn	Pn	05 46 34.0	+0.2
N33A	comp=Z,106nm,1.0s			IAmb_Lg		05 47 41.5	
S39A	Bolivar comp=Z,80nm,0.8s	3.90	76	IAmb_Lg		05 47 40.2	
S39A	Bolivar baz=259,SNR=82	3.90	76	P	Pn	05 46 35.0	+1.1
S39A	baz=259			S	Sn	05 47 20.5	+0.4
KSCO	Kaye Shedlock’	4.17	302		Pn	05 46 37.4	-0.2
KSCO	Kaye Shedlock’ baz=120	4.17	302	P	Pn	05 46 37.3	-0.3
KSCO	baz=120			S	Sn	05 47 25.5	-1.3
U40A	Yellville	4.26	95	Pn	Pn	05 46 39.6	+0.9
U40A	Yellville baz=278	4.26	95	S	Sn	05 47 29.1	+0.2
U40A	baz=278			S	Sn	05 47 29.1	+0.2
U40A	Yellville baz=278,SNR=18	4.26	95	P	Pn	05 46 39.5	+0.7
U40A	baz=278			S	Sn	05 47 29.1	+0.2
MIAR	Mount Ida	4.35	121		Pn	05 46 41.0	+0.9
MIAR	Mount Ida baz=303,SNR=6.1	4.35	121	P	Pn	05 46 40.6	+0.6
Z38A	Mt. Pleasant	4.42	144		Pn	05 46 41.8	+0.8
ABTX	Abilene, Hawle comp=Z,62nm,0.8s	4.42	197	IAmb_Lg		05 47 56.4	
ABTX	Abilene, Hawle baz=16	4.42	197	P	Pn	05 46 41.6	+0.5
ABTX	baz=16			S	Sn	05 47 32.9	-0.1
N35A	Tabor	4.42	25		Pn	05 46 42.1	+1.0
P38A	Dawn	4.53	51	Pn	Pn	05 46 43.6	+1.1
P38A	comp=Z,106nm,0.7s			IAmb_Lg		05 47 59.9	
BGNE	Belgrade	4.53	360		Pn	05 46 42.9	+0.4
BGNE	comp=Z,94nm,0.8s			IAmb_Lg		05 47 58.5	
BGNE	Belgrade baz=180,SNR=32	4.53	360	P	Pn	05 46 42.9	+0.4
BGNE	Belgrade baz=180,SNR=12	4.53	360	P	Pn	05 46 42.9	+0.4
MGMO	Mountain Grove comp=Z,59nm,0.8s	4.68	85	IAmb_Lg		05 48 14.3	
MSTX	Muleshoe	4.79	234	Pn	Pn	05 46 46.5	+0.3
MSTX	Muleshoe baz=51	4.79	234	Sb	Sb	05 48 00.9	+5.2
MSTX	Muleshoe baz=51	4.79	234	P	Pn	05 46 46.2	+0.1
R40A	Maddies Statio baz=255,SNR=37	4.85	71	P	Pn	05 46 48.1	+1.2
WHTX	Lake Whitney, baz=354,SNR=42	4.90	174	P	Pn	05 46 47.9	+0.3
WHTX	Lake Whitney, baz=354,SNR=14	4.90	174	P	Pn	05 46 47.7	+0.1
WHTX	baz=354			S	Sn	05 47 42.4	-2.3
X40A	Basin Creek Fa comp=Z,85nm,0.9s	4.91	117	IAmb_Lg		05 48 19.3	
X40A	Basin Creek Fa baz=300,SNR=11	4.91	117	P	Pn	05 46 48.3	+0.7
FCAR	Ozark Folk Cen	4.92	100		Pn	05 46 48.5	+0.6
WHAR	Wooly Hollow	4.97	107	Pn	Pn	05 46 49.4	+0.9
WHAR	comp=Z,74nm,0.8s			IAmb_Lg		05 48 14.6	
W41B	Gary Mavity, V comp=Z,55nm,0.8s	5.04	108	IAmb_Lg		05 48 18.4	
W41B	Gary Mavity, V baz=291	5.04	108	P	Pn	05 46 50.2	+0.7
T25A	Trinidad	5.05	275	Pn	Pn	05 46 49.8	-0.2
T25A	comp=Z,78nm,1.1s			IAmb_Lg		05 48 21.8	
T25A	Trinidad baz=91	5.05	275	P	Pn	05 46 49.5	-0.4
OGNE	Ogallala	5.09	324	Pn	Pn	05 46 51.5	+1.2
OGNE	comp=Z,99nm,0.8s			IAmb_Lg		05 48 14.6	
OGNE	Ogallala baz=142	5.09	324	P	Pn	05 46 51.3	+1.0
UALR	University of comp=Z,66nm,0.7s	5.13	112	IAmb_Lg		05 48 23.6	
WLAR	White Oak Lake comp=Z,67nm,0.8s	5.17	126	IAmb_Lg		05 48 28.0	
237A	Washetta, Mont	5.21	158	Pn	Pn	05 46 51.7	-0.2
237A	comp=Z,64nm,0.9s			IAmb_Lg		05 48 31.3	

N38A	Joes South For	5.46	43	Pn	Pn	05 46 55.6	+0.3
N38A	Joes South For	5.46	43	P	Pn	05 46 55.6	+0.3
	baz=226,SNR=13						
P40A	Paris	5.46	59	IAmb_Lg		05 48 34.2	
	comp=Z,91nm,0.9s						
CCM	Cathedral Cave	5.58	76		Pn	05 46 57.6	+0.6
CCM	Cathedral Cave	5.58	76	P	Pn	05 46 57.5	+0.6
	baz=260						
Z41A	Richland Creek	5.65	128	S	Sn	05 48 01.0	-2.1
	baz=311						
LCAR	Lake Charles	5.66	96	Pn	Pn	05 46 58.5	+0.5
LCAR				IAmb_Lg		05 48 33.9	
	comp=Z,52nm,0.8s						
CCAR	Cane Creek	5.95	118	IAmb_Lg		05 48 53.5	
	comp=Z,58nm,0.9s						
SDCO	Great Sand Dun	5.96	281	P	Pn	05 47 03.2	+0.8
	baz=96						
435B	Jarrell	6.09	176	IAmb_Lg		05 48 57.5	
	comp=Z,89nm,0.7s						
435B	Jarrell	6.09	176	P	Pn	05 47 03.1	-0.8
	baz=356						
PBMO	Poplar Bluff	6.16	89	IAmb_Lg		05 48 51.0	
	comp=Z,58nm,0.7s						
FVM	French Village	6.21	77	Pn	Pn	05 47 06.3	+0.7
SLM	Saint Louis	6.48	72	IAmb_Lg		05 48 59.7	
	comp=Z,67nm,0.9s						
JCT	Junction City	6.53	193	P	Pn	05 47 10.7	+0.6
	baz=12						
GNAR	Gosnell	6.58	95	IAmb_Lg		05 49 04.6	
	comp=Z,80nm,0.8s						
ECSD	EROS Data Cent	6.95	9	Pn	Pn	05 47 15.2	-0.5
ECSD	EROS Data Cent	6.95	9	P	Pn	05 47 15.3	-0.5
	baz=190						
ANMO	Albuquerque	7.04	257	Pn	Pn	05 47 18.0	+0.8
	comp=Z,0.5nm,0.4s,baz=81,slow=17,SNR=2.3						
ANMO				Pg	Pg	05 47 43.8	-4.3
	comp=Z,0.9nm,0.3s,baz=70,slow=18,SNR=7.1						
ANMO				Lg	Lg	05 49 09.7	
	comp=Z,0.8nm,0.3s,baz=359,slow=9.1,SNR=3.1						
S44A	Carbondale	7.10	81		Pn	05 47 18.0	+0.1
S44A				IAmb_Lg		05 49 20.3	
	comp=Z,41nm,0.7s						
HALT	Halls	7.13	95	IAmb_Lg		05 49 35.4	
	comp=Z,73nm,1.1s						
SIUC	Southern Illin	7.13	81	IAmb_Lg		05 49 22.6	
	comp=Z,43nm,0.7s						
PHWY	Pilot Hill	7.23	310		Pn	05 47 19.9	+0.1
PHWY				IAmb_Lg		05 49 36.2	
	comp=Z,61nm,1.1s						
P43A	Skaggs, Pawnee	7.30	65		Pn	05 47 21.0	+0.5
N23A	Red Feather La	7.32	306	IAmb_Lg		05 49 31.6	
	comp=Z,66nm,0.7s						
N23A	Red Feather La	7.32	306	P	Pn	05 47 22.0	+1.0
	baz=121						
W45A	Hickory Valley	7.43	101	IAmb_Lg		05 49 34.8	
	comp=Z,65nm,0.9s						
L40A	Anamosa	7.43	44		Pn	05 47 23.2	+0.8
L40A				IAmb_Lg		05 49 30.3	
	comp=Z,48nm,0.7s						
OXF	Oxford	7.46	106	IAmb_Lg		05 49 34.9	
	comp=Z,43nm,0.9s						
OXF	Oxford	7.46	106	P	Pn	05 47 22.1	-0.6
	baz=291						
Q44A	Meyer Farm, Va	7.47	71	IAmb_Lg		05 49 36.3	
	comp=Z,38nm,0.8s						
SUSD	Miller	7.59	355	IAmb_Lg		05 49 47.9	
	comp=Z,49nm,0.8s						
SUSD	Miller	7.59	355	P	Pn	05 47 24.7	+0.1
	baz=175						
Y45A	Yeager Farm, C	7.61	111	IAmb_Lg		05 49 48.9	
	comp=Z,36nm,0.8s						
HDIL	Hopedale	7.81	59		Pn	05 47 27.9	+0.3
HDIL	Hopedale	7.81	59	P	Pn	05 47 28.2	+0.7
	baz=245,SNR=12						
MNTX	Cornudas Mount	7.93	232	Pn	Pn	05 47 28.8	-0.4
MNTX	Cornudas Mount	7.93	232	P	Pn	05 47 29.2	0.0
	baz=47,SNR=7.1						
MNTX	Cornudas Mount	7.93	232	P	Pn	05 47 29.0	-0.2
	baz=47,SNR=5.6						
I37A	Lemond, Waseca	7.99	25	IAmb_Lg		05 49 49.7	
	comp=Z,41nm,0.8s						
L42A	Oliver, Polo	8.30	49	IAmb_Lg		05 50 03.0	
	comp=Z,50nm,0.8s						
WVT	Waverly	8.31	92	P	Pn	05 47 35.1	+0.7
	baz=278						
RSSD	Black Hills	8.53	330	P	Pn	05 47 38.3	+0.6
	baz=146						
JFWS	Jewell Farm	8.54	43	Pn	Pn	05 47 37.1	-0.4
JFWS				IAmb_Lg		05 50 17.4	
	comp=Z,49nm,0.7s						
JFWS	Jewell Farm	8.54	43	P	Pn	05 47 37.3	-0.2
	baz=228,SNR=7.2						
RWWY	Rawlins	8.54	307	IAmb_Lg		05 50 12.9	
	comp=Z,35nm,1.1s						
K22A	Casper	8.68	314	IAmb_Lg		05 50 20.6	
	comp=Z,28nm,0.9s						
TX31	Lajitas Ar. Si	8.84	213		Pn	05 47 41.3	-0.6
TX32	Lajitas Array	8.84	213		Pn	05 47 41.3	-0.6
TXAR	Lajitas Array	8.84	213	Pn	Pn	05 47 41.0	-0.8
	comp=Z,0.5nm,0.3s,baz=32,slow=11,SNR=34						
TXAR				Lg	Lg	05 50 07.9	
	comp=Z,0.9nm,0.3s,baz=32,slow=29,SNR=9.3 comp=Z,0.6nm,0.4s						
I40A	Norwalk	9.04	37	IAmb_Lg		05 50 24.3	
	comp=Z,28nm,0.9s						
SPMN	Marine on St.	9.25	24	IAmb_Lg		05 50 32.8	
	comp=Z,37nm,1.1s						
SPMN	Marine on St.	9.25	24	P	Pn	05 47 47.2	-0.1
	baz=208						
SFIN	Lafayette	9.30	65	Pn	Pn	05 47 48.9	+1.0
SFIN	Lafayette	9.30	65	P	Pn	05 47 49.0	+1.0
	baz=251,SNR=9.4						
E28A	Huff	9.89	350	IAmb_Lg		05 51 03.1	
	comp=Z,43nm,1.1s						
I42A	Draeger Farm,	9.91	42	IAmb_Lg		05 50 51.2	
	comp=Z,24nm,0.9s						
G40A	Rib Lake	10.29	33		Pn	05 48 01.0	-0.5
P48A	Milroy	10.31	72		Pn	05 48 00.8	-1.1
PDAR	Pinedale Array	10.59	307	Pn	Pn	05 48 06.5	+0.6
	comp=Z,0.1nm,0.3s,baz=119,slow=15,SNR=2.4						
PDAR				Lg	Lg	05 50 59.0	
	comp=Z,0.3nm,0.3s,baz=123,slow=18,SNR=1.7 comp=Z,0.1nm,0.3s						
O48B	Farmland	10.69	68	P	Pn	05 48 06.3	-0.6
	baz=256						
P49A	Miami Univ. Ec	10.87	72	P	Pn	05 48 08.9	-0.6
	baz=260						
TKL	Tuckaleechee C	11.63	92	Pn	Pn	05 48 19.3	-0.6
	comp=Z,0.7nm,0.3s,baz=224,slow=6.9,SNR=10						
TKL				Lg	Lg	05 51 29.3	
	comp=Z,0.6nm,0.3s,baz=186,slow=22,SNR=2.3 comp=Z,1.8nm,0.4s						
ULM	Lac du Bonnet	13.47	6	Lg	Lg	05 52 27.4	
	comp=Z,0.1nm,0.3s,baz=290,slow=23,SNR=2.0						
CMIG	Matias Romero	19.91	171	P	Pn	05 50 08.2	+0.8
	comp=Z,0.6nm,0.4s,baz=336,slow=10.0,SNR=1.4 comp=Z,0.6nm,0.4s						
YKA	Yellowknife Ar	27.61	343	P	P	05 51 20.1	-1.2
	comp=Z,0.6nm,0.6s,baz=146,slow=8.5,SNR=11 comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	39.98	330	P	P	05 53 07.4	-1.1
	comp=Z,0.3nm,0.7s,baz=99,slow=7.0,SNR=2.3 comp=Z,0.3nm,0.7s						

WEL 03 05:46:33.2±0.5**, 44°S**±2°×**17°3E**±°**, h8**km±3km**, M3.6**/12**,**
ML3.8/12**, MLv3.6**/12**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=108.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.18	215	P	Pg	05 46 37.4	+0.6
MQZ				S	Sg	05 46 40.2	+0.9
OKCZ	Okains Bay	0.25	130	P	Pb	05 46 39.3	-0.8
AKCZ	Akaroa Harbour	0.32	165	P	Pb	05 46 40.6	-0.7
AKCZ				S	Sb	05 46 45.6	-1.1
AMCZ	Amberley	0.40	345	P	Pb	05 46 41.8	-0.7
AMCZ				S	Sg	05 46 47.2	+1.0
RACZ	Rakaia	0.50	250	P	Pb	05 46 43.8	-0.5
RACZ				S	Sb	05 46 51.1	-0.6
OXZ	Oxford	0.60	293	P	Pg	05 46 44.9	+0.2
OXZ				S	Sb	05 46 53.7	-0.8
GVZ	Greta Valley S	0.62	17	P	Pb	05 46 46.0	-0.2
GVZ				S	Sb	05 46 55.0	-0.1
WACZ	Wakanui South	0.79	241	P	Pb	05 46 49.4	+0.2
WACZ				S	Sb	05 47 00.5	+0.6
LTZ	Lake Taylor	0.87	334	P	Pb	05 46 50.2	-0.3
LTZ				S	Sb	05 47 02.3	0.0
MHCZ	Mount Hutt	0.89	271	P	Pb	05 46 51.1	+0.1
MHCZ				S	Sb	05 47 03.7	+0.7
ARCZ	Arundel	1.23	251	P	Pb	05 46 55.6	-1.1
KHZ	Kahutara	1.27	26	P	Pn	05 46 55.8	-1.4
RPZ	Rata Peaks	1.27	262	P	Pn	05 46 56.4	-0.9
RPZ				S	Sb	05 47 12.9	-1.0
INZ	Inchbonnie	1.29	310	P	Pn	05 46 56.7	-0.8
TMZ	Timaru	1.53	237	P	Pn	05 46 59.8	-1.0
WVZ	Waitaha Valley	1.58	287	P	Pn	05 47 01.3	-0.2
THZ	Tophouse	1.80	3	P	Pn	05 47 03.3	-1.3
GCSZ	Gaunt Creek Bo	1.81	277	P	Pn	05 47 04.8	+0.2
DSZ	Denniston Nort	1.96	338	P	Pn	05 47 06.5	-0.3
BSWZ	Blackbirch Sta	2.01	24	P	Pn	05 47 06.4	-1.0
LBZ	Lake Benmore	2.06	245	P	Pn	05 47 07.5	-0.5
ODZ	Otahua Downs	2.14	225	P	Pn	05 47 08.4	-0.8
MRNZ	Matariki Terra	2.16	359	P	Pn	05 47 09.4	-0.1
FOZ	Fox Glacier	2.16	270	P	Pn	05 47 10.2	+0.7
TUWZ	Tuamarina	2.29	22	P	Pn	05 47 07.5	-3.8
NNZ	Nelson	2.38	11	P	Pn	05 47 11.9	-0.6
TKNZ	Takaka Hill	2.53	3	P	Pn	05 47 14.5	-0.1
TCW	Tory Channel	2.59	26	P	Pn	05 47 13.7	-1.7
PLWZ	Palliser	2.70	43	P	Pn	05 47 14.8	-2.1
QRZ	Quartz Range	2.74	356	P	Pn	05 47 16.8	-0.7
HHSZ	Highcliff Hill	2.80	213	P	Pn	05 47 18.0	-0.3
MSWZ	Moikau Station	2.81	41	P	Pn	05 47 16.2	-2.3
DUWZ	D'Urville Isla	2.88	17	P	Pn	05 47 19.1	-0.4
JCZ	Jackson Bay	2.94	259	P	Pn	05 47 20.7	+0.4
CAW	Cannon Point	2.98	35	P	Pn	05 47 18.6	-2.1
WKZ	Wanaka	3.00	244	P	Pn	05 47 20.4	-0.6
EAZ	Earnscleugh	3.00	235	P	Pn	05 47 19.1	-2.0
TRWZ	Traveller	3.04	46	P	Pn	05 47 20.5	-1.2
KIW	Kapiti Island	3.12	31	P	Pn	05 47 21.0	-1.8
MTW	Mount Morrison	3.13	41	P	Pn	05 47 20.3	-2.6
OGWZ	Otaki Gorge	3.26	34	P	Pn	05 47 22.9	-1.8
TUZ	Tuapeka	3.29	222	P	Pn	05 47 24.8	-0.2
MRZ	Mangatainoka R	3.56	37	P	Pn	05 47 26.7	-2.1
BFZ	Birch Farm	3.86	43	P	Pn	05 47 30.0	-2.8
SYZ	Scrubby Hill	3.94	220	P	Pn	05 47 34.5	+0.6
KHEZ	Kahui Hut	4.36	13	P	Pn	05 47 40.8	+0.9
NEZ	North Egmont	4.40	13	P	Pn	05 47 40.5	+0.2
PKE	Pukeiti	4.46	12	P	Pn	05 47 41.8	+0.7
VRZ	Vera Road	4.67	19	P	Pn	05 47 44.7	+0.7
PKVZ	Pokaka	4.68	25	P	Pn	05 47 44.1	-0.1
MOVZ	Moawhango	4.71	29	P	Pn	05 47 43.4	-1.2
WNVZ	Wahianoa	4.73	27	P	Pn	05 47 45.1	+0.2
TRVZ	Turoa	4.74	27	P	Pn	05 47 44.7	-0.4
TUVZ	Tukino	4.80	28	P	Pn	05 47 45.3	-0.6
KAHZ	Kahuranaki	4.85	40	P	Pn	05 47 44.5	-2.0
NGZ	Ngauruhoe	4.87	27	P	Pn	05 47 46.6	-0.3
SNVZ	South Ngauruho	4.87	27	P	Pn	05 47 45.9	-0.9
OTVZ	Oturere	4.90	27	P	Pn	05 47 44.1	-3.1
NNVZ	North Ngauruho	4.91	27	P	Pn	05 47 46.8	-0.6
WTVZ	West Tongariro	4.92	26	P	Pn	05 47 46.8	-0.7
ETVZ	East Tongariro	4.94	27	P	Pn	05 47 47.1	-0.7
TMVZ	Te Maari	4.95	27	P	Pn	05 47 47.1	-0.9
NTVZ	North Tongarir	4.96	27	P	Pn	05 47 45.8	-2.3
TLZ	Tolley Road	5.62	23	P	Pn	05 47 56.5	-0.7
PRGZ	Paritu Road	6.02	41	P	Pn	05 48 00.9	-1.6
PKGZ	Pakihiroa	6.94	37	P	Pn	05 48 13.1	-2.2
WIAZ	Waiheke Island	6.99	16	P	Pn	05 48 15.3	-0.6

*IDC **03** 05:53:43.2±0.9, 1°.74N×126°.42E, h0km, mb4.0/7,*
mbtmp3.9/8, ML3.6/1, MS2.8/1, Error ellipse: s-maj=58.8km
s-min=17.4km az=78.0
*DJA **03** 05:53:48.5±0.7, 2°N±4°×12°7E±°, h66km±21km, M3.9/6,*
MLv3.9/6
*NEIC **03** 05:53:50.8±1.9, 1°.5N±0°.1×126°.42E±0°.07, h51km±12km,*
mb4.2/9, Error ellipse: s-maj=21.6km s-min=6.7km
az=200.0
ISC 03 05:53:49.1±0.7**, 1°.67N**±0°.07×**126°.52E**±0°.08**, h47**km**, n29,**
σ**1**^{s}**55**/27**, mb4.1**/12**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	136	Pn	Pn	05 54 10.7	+0.8
TNTI	Ternate	1.23	136	P	Pn	05 54 10.4	+0.5
TNTI				S	Sn	05 54 26.5	+1.1
SGSI	Sangihe	2.23	334	P	Pn	05 54 22.5	-1.2
LBMI	Labuha	2.49	157	P	Pn	05 54 25.8	-1.4
KMSI	Cibinong	2.76	247	P	Pn	05 54 29.9	-1.0
GTOI	Gorontalo	3.66	254	P	Pn	05 54 45.4	+2.2
SIJI	Sorong	5.38	118	LR	LR	05 57 41.0	
	comp=Z,94nm,20.6s,baz=243,slow=43						
KCP	Kidapawan	5.49	345	⇓eP	Pn	05 55 16.1	+7.6
TOLI2	Tolitoli	5.76	265	Pn	Pn	05 55 12.1	-0.1
MYLDM	Lahad Datu	8.73	294	Pn	Pn	05 55 56.1	+3.3
FITZ	Fitzroy Crossi	19.66	182	P	Pn	05 58 15.9	0.0
	0.1nm,0.3s,baz=5.5,slow=13,SNR=2.2 2.2nm,1.0s						
MYKOM	Kota Tinggi	22.66	271	P	P	05 58 41.2	-5.4
WB0	Warramunga Arr	22.66	160	P	P	05 58 47.1	+0.5
WRAB	Tennant Creek	22.80	161	P	P	05 58 48.4	+0.3
WRAB				IAmb	IAmb	05 58 51.1	
	comp=Z,8.5nm,1.0s						
WRA	Warramunga Arr	22.81	161	P	P	05 58 47.9	-0.2
	comp=Z,3.1nm,0.5s,baz=338,slow=11,SNR=54 comp=Z,3.1nm,0.5s						
WRA	Warramunga Arr	22.81	161	IAmb	IAmb	05 58 51.8	
	comp=Z,0.6nm,1.4s						
WB2	Warramunga Arr	22.81	161	P	P	05 58 48.3	+0.1
WB2				IAmb	IAmb	05 58 54.7	
	comp=Z,6.0nm,0.7s						
WR0	Warramunga Arr	22.89	160	P	P	05 58 49.1	+0.1
WR0				IAmb	IAmb	05 58 52.0	
	comp=Z,10nm,1.2s						
ASAR	Alice Springs	26.19	165	P	P	05 59 20.7	+1.2
	comp=Z,0.9nm,0.4s,baz=350,slow=15,SNR=16 comp=Z,0.9nm,0.4s						
KLR	Kul'dur	47.59	5	P	P	06 02 19.2	-0.9
	comp=Z,0.7nm,0.5s,baz=191,slow=5.2,SNR=2.3 comp=Z,0.7nm,0.5s						
SONM	Songino Array	49.18	342	P	P	06 02 32.6	0.0
	comp=Z,0.3nm,0.3s,baz=150,slow=6.1,SNR=2.1 comp=Z,0.3nm,0.3s						
PETK	Petropavlovsk-	57.41	22	P	P	06 03 34.0	+1.2
	comp=Z,1.2nm,0.7s,baz=199,slow=5.0,SNR=5.2 comp=Z,1.2nm,0.7s						
MK31	Makanchi Array	59.13	326	P	P	06 03 45.5	+0.5
MKAR	Makanchi Array	59.13	326	P	P	06 03 44.7	-0.2
	comp=Z,1.4nm,0.5s,baz=120,slow=8.8,SNR=9.7 comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	59.13	326	P	P	06 03 45.5	+0.5
MAKZ	Makanchi	59.31	326	P	P	06 03 46.6	+0.4
MAKZ				IAmb	IAmb	06 03 47.8	
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	63.36	328	P	P	06 04 14.4	+0.9
KURK				IAmb	IAmb	06 04 16.5	
	comp=Z,2.7nm,0.6s						
ABKAR	Akbulak array	73.61	321	P	P	06 05 18.2	+0.7
FINES	FINESS Array B	93.54	332	P	P	06 06 59.9	+0.1
	comp=Z,0.8nm,0.9s,baz=103,slow=6.3,SNR=1.7 comp=Z,0.8nm,0.9s						

*KRNET **03** 06:09:32.4±0.1, 40°.56N×73°.25E, h20km, mb3.0*
*NNC **03** 06:09:35.5±2.0, 40°.67N×73°.22E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=17.0km s-min=7.6km az=173.0
*SOME **03** 06:09:39.8, 40°.78N×73°.20E, h15km*
*ISU **03** 06:09:56, 40°.70N×72°.53E, h0km*
ISC 03 06:09:32.2±1.2**, 40°.57N**±0°.04×**73°.28E**±0°.03**, h4**km±10km**,**
n50, σ**1**^{s}**57**/80**, 24C-16D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.38	263	⇑iP	Pg	06 09 39.6	+0.1
	baz=65						
OHH				⇑iS	Sg	06 09 44.5	0.0
	baz=65						
OHH	Osh	0.38	263	P	Pg	06 09 39.7	+0.2
OHH				S	Sg	06 09 44.4	0.0
FRG	Fergana	1.16	261	P	Pn	06 09 56.7	+1.5
FRG				S	Sb	06 10 07.5	-2.7
NAM	Namangan	1.30	289	S	Sg	06 10 19.4	+5.5
SHAK	Shakhimardan	1.33	243	P	Pg	06 10 01.0	+3.3
SHAK				S	Sg	06 10 16.0	+1.0
ARLS	Aral	1.51	31	⇓iP	Pb	06 10 00.4	-0.5
	baz=32						
ARLS				⇓iS	Sg	06 10 20.6	-0.1
	baz=32						
ARK	Arkit	1.57	321	⇓iP	Pb	06 10 01.4	-0.6
	baz=22						
ARK				⇓iS	Sg	06 10 22.6	-0.2
	baz=22						
DRK	Karamyk	1.57	227	⇑iP	Pn	06 10 00.7	-0.5
	baz=26						
DRK				⇑iS	Sn	06 10 21.0	-1.2
	baz=26						
AML	Almayashu	1.59	11	P	Pg	06 10 02.5	-0.1
	SNR=40						
TRKS	Terek-Say	1.88	301	⇓iP	Pb	06 10 05.4	-1.8
	baz=1.0						
TRKS				⇓iS	Sb	06 10 29.1	-2.0
	baz=1.0						
UCH	Uchtor	1.90	29	P	Pg	06 10 08.3	-0.2
	SNR=18						
UCH	Uchtor	1.90	29	⇑iP	Pb	06 10 07.0	-0.7
	baz=29						
UCH				⇑eS	Sb	06 10 31.6	-0.3
	baz=29						
BTK	Batken	1.95	255	⇓eP	Pb	06 10 07.0	-1.3
	baz=56						
BTK				⇓eS	Sb	06 10 32.2	-0.8
	baz=56						
BTK	Batken	1.95	255	P	Pg	06 10 10.2	+0.6
BTK				S	Sn	06 10 30.5	-0.6
EKS2	Erkin-Say	2.12	10	P	Pg	06 10 12.1	-0.7
	SNR=13						
EKS2	Erkin-Say	2.12	10	⇑iP	Pb	06 10 10.0	-1.3
	baz=10.0						
EKS2				⇑iS	Sb	06 10 36.7	-1.3
	baz=10.0						
MRKS	Merke	2.17	359	eP	Pg	06 10 17.5	+3.7
	17nm,0.3s						
MRKS				eS	Sg	06 10 44.6	+2.7
	89nm,0.3s						
MRKS	Merke	2.17	359	Pg	Pg	06 10 16.2	+2.4
	29nm,0.3s						
MRKS				Lg	Lg	06 10 45.2	
	89nm,0.3s						
AAK	Ala-Archa	2.25	23	P	Pb	06 10 13.8	+0.2
	SNR=11						
AAK	Ala-Archa	2.25	23	⇑iP	Pb	06 10 11.6	-2.0
	baz=24						
AAK				⇑iS	Sb	06 10 39.9	-2.0
	baz=24						
KBK	Karagaybulak	2.43	30	P	Pg	06 10 18.3	-0.5
	SNR=6.2						
KBK	Karagaybulak	2.43	30	⇑eP	Pn	06 10 14.0	+1.2
	baz=31						
KBK				⇑iS	Sn	06 10 43.9	+0.8
	baz=31						
FRU1	Bishkek	2.45	24	⇑iP	Pb	06 10 14.5	-2.4
	baz=24						
FRU1				⇑iS	Sb	06 10 45.5	-2.0
	baz=24						
CHMS	Chumysh	2.66	24	⇑Pn	Pb	06 10 18.9	-1.5
	5.8nm,0.5s						
CHMS				⇓Lg	Lg	06 10 57.5	
	5.2nm,0.5s						
CHMS	Chumysh	2.66	24	⇑eP	Pn	06 10 17.3	+1.4
	baz=24						
CHMS				⇑eS	Sn	06 10 49.5	+0.9
	baz=24						
GAR	Garm	2.77	236	⇓iP	Pn	06 10 18.1	+0.6
	baz=36						
GAR				⇓iS	Sn	06 10 51.4	0.0
	baz=36						
ULHL	Ulahol	2.79	52	⇑iP	Pn	06 10 19.2	+1.4
	baz=52						
ULHL				⇑iS	Sn	06 10 53.8	+1.8
	baz=52						
USP	Ospenovka	2.84	18	⇑iP	Pn	06 10 19.7	+1.3
	baz=19						
USP				⇑iS	Sn	06 10 54.7	+1.6
	baz=19						
IUG	Iuzhnay	2.91	304	eP	Pg	06 10 28.1	+0.2
	143nm,0.2s						
IUG				eS	Sg	06 11 02.7	-2.8
	76nm,0.4s						
IUG	Iuzhnay	2.91	304	Pg	Pg	06 10 27.1	-0.7
	138nm,0.3s						
IUG				Lg	Lg	06 11 02.6	
	76nm,0.4s						
TKM2	Tokmak 2	2.92	36	⇓Pg	Pb	06 10 26.2	+1.3
	3.1nm,0.5s						
TKM2				⇓Lg	Lg	06 11 05.3	
	5.9nm,0.5s						
TKM2	Tokmak 2	2.92	36	⇓iP	Pn	06 10 21.0	+1.4
	baz=36						
TKM2				⇓eS	Sn	06 10 56.7	+1.5
	baz=36						
SGDS	Sogindy	3.05	19	eP	Pg	06 10 31.6	+1.0
	1.3nm,0.1s						
SGDS				eS	Sg	06 11 08.8	-1.3
	11nm,0.4s						
SGDS	Sogindy	3.05	19	Pg	Pg	06 10 30.2	-0.4
	2.5nm,0.1s						
SGDS				Lg	Lg	06 11 08.6	
	11nm,0.4s						
KST	Kastek	3.18	38	eP	Pg	06 10 34.9	+1.7
	2.9nm,0.4s						
KST				eS	Sg	06 11 14.6	+0.3
	9.3nm,0.3s						
KST	Kastek	3.18	38	Pg	Pg	06 10 34.1	+0.9
	2.1nm,0.2s						
KST				Lg	Lg	06 11 14.6	
	9.3nm,0.3s						
KK31	Karatay Array	3.27	322	⇑Pg	Pb	06 10 31.6	+0.9
	0.8nm,0.3s,baz=137,slow=17,SNR=13						
KK31				⇑Lg	Lg	06 11 13.7	
	8.6nm,0.6s,baz=128,slow=28,SNR=8.2						
MTBS	Maitube	3.47	42	eP	Pg	06 10 40.1	+1.3
	3.1nm,0.2s						
MTBS				eS	Sg	06 11 23.6	-0.2
	8.5nm,0.3s						
MTBS	Maitube	3.47	42	Pg	Pg	06 10 39.2	+0.4
	3.6nm,0.1s						
MTBS				Lg	Lg	06 11 23.2	
	8.5nm,0.3s						
BRLS	Borolday	3.56	315	eP	Pg	06 10 38.8	-1.6
	2.0nm,0.3s						
BRLS				eS	Sb	06 11 21.2	+2.0
	14nm,0.2s						
BRLS	Borolday	3.56	315	Pg	Pg	06 10 37.7	-2.6
	3.1nm,0.2s						
BRLS				Lg	Lg	06 11 20.9	
	14nm,0.2s						
KRBS	Karabastau	3.59	29	eP	Pg	06 10 41.1	0.0
	1.8nm,0.2s						
KRBS				eS	Sg	06 11 25.4	-2.2
	8.5nm,0.7s						
KRBS	Karabastau	3.59	29	Pg	Pg	06 10 40.7	-0.4
	2.2nm,0.3s						
KRBS				Lg	Lg	06 11 25.4	
	8.5nm,0.7s						
TNSS	Tian-Shan	3.69	47	eP	Pg	06 10 44.0	+1.2
	2.9nm,0.2s						
TNSS				eS	Sg	06 11 30.3	-0.3
	6.1nm,0.5s						
TNSS	Tian-Shan	3.69	47	Pg	Pg	06 10 43.4	+0.6
	2.9nm,0.2s						
TNSS				Lg	Lg	06 11 30.3	
	6.1nm,0.5s						
MDOK	Medeo	3.82	46	eP	Pg	06 10 46.3	+0.8
	2.2nm,0.3s						
MDOK				eS	Sg	06 11 34.2	-0.8
	10nm,0.8s						
MDOK	Medeo	3.82	46	⇑Pg	Pg	06 10 43.1	-2.4
	5.9nm,1.1s						
MDOK				⇓Lg	Lg	06 11 33.9	
	15nm,0.9s						
MDOK	Medeo	3.82	46	Pg	Pg	06 10 45.0	-0.5
	2.2nm,0.3s						
MDOK				Lg	Lg	06 11 33.8	
	10nm,0.8s						
KTBS	Karatobe	4.03	38	eP	Pg	06 10 49.7	+0.3
	0.8nm,0.4s						
KTBS				eS	Sg	06 11 39.9	-1.7
	12nm,0.5s						
KTBS	Karatobe	4.03	38	Pg	Pg	06 10 47.7	-1.7
	1.0nm,0.2s						
KTBS				Lg	Lg	06 11 39.5	
	12nm,0.5s						

*TUL **03** 06:30:03.5±0.6, 36°.87N±0°.01×98°.14W±0°.02, h7km±4km,*
ML2.7, mb_Lg2.3/24(NEIC), Error ellipse: s-maj=2.0km
s-min=1.4km az=134.0

NEIC 03 06:30:03.8±0.4, 36.°865N±0.°009×98.°15W±0.°02, h8^{km}±5^{km}, Error ellipse: s-maj=2.4km s-min=0.6km az=121.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
R32A	**Long Quarter,**	**1.62**	**344**		Pn	06 30 32.8	+0.1
FNO	**Franklin**	**1.71**	**159**	Pn	Pn	06 30 34.0	0.0
TUL1	**Leonard**	**2.13**	**116**	IAmb_Lg		06 31 14.0	
	comp=Z,15nm,0.8s						
WMOK	**Wichita Mounta**	**2.18**	**194**	IAmb_Lg		06 31 14.9	
	comp=Z,14nm,0.7s						
KSU1	**Kansas State U**	**2.54**	**28**	Pn	Pn	06 30 45.5	+0.2
KSU1				IAmb_Lg		06 31 24.3	
	comp=Z,13nm,0.7s						
X37A	**Clayton**	**3.20**	**134**	IAmb_Lg		06 31 52.8	
	comp=Z,7.8nm,0.8s						
HHAR	**Hobbs**	**3.44**	**98**	Pn	Pn	06 30 57.0	-0.6
HHAR				IAmb_Lg		06 31 54.4	
	comp=Z,6.5nm,0.8s						
W39A	**Magazine**	**3.91**	**114**	IAmb_Lg		06 32 11.5	
	comp=Z,8.2nm,0.7s						
S39A	**Bolivar**	**3.94**	**76**	IAmb_Lg		06 32 15.7	
	comp=Z,5.4nm,0.9s						
U40A	**Yellville**	**4.29**	**95**	IAmb_Lg		06 32 19.5	
	comp=Z,7.8nm,0.8s						
MIAR	**Mount Ida**	**4.38**	**121**	IAmb_Lg		06 32 28.4	
	comp=Z,7.5nm,1.0s						
P38A	**Dawn**	**4.56**	**51**	IAmb_Lg		06 32 27.9	
	comp=Z,5.4nm,0.7s						
X40A	**Basin Creek Fa**	**4.93**	**117**	IAmb_Lg		06 32 50.6	
	comp=Z,4.1nm,0.8s						

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*IDC **03** 06:40:32.4±7.8, 12.°16S×166.°60E, h331^{km}±89^{km}, mb3.0/6, mbtmp3.7/7, Error ellipse: s-maj=70.5km s-min=29.1km az=162.0*

ISC 03 06:40:34.0±0.9, 12.°23S±0.°10×166.°6E±0.°2, h350^{km}, n8, σ1.^{s}04/9, mb3.4/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.79**	**181**	P	**Pn**	**06 42 49.2**	**-0.3**
	2.9nm,0.6s,baz=316,slow=20,SNR=8.2						
DZM				S	**S**	**06 44 41.4**	**+0.8**
	3.2nm,0.8s,baz=144,slow=22,SNR=1.2						
WRA	**Warramunga Arr**	**31.91**	**252**	P	**P**	**06 46 28.7**	**+0.3**
	0.1nm,0.5s,baz=84,slow=9.3,SNR=4.9						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**33.06**	**245**	P	**P**	**06 46 36.6**	**-1.7**
	0.3nm,0.7s,baz=68,slow=10,SNR=2.0						
	0.3nm,0.7s						
SONM	**Songino Array**	**80.13**	**324**	P	**P**	**06 52 06.8**	**+0.9**
	0.3nm,0.4s,baz=99,slow=7.4,SNR=1.7						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**84.36**	**18**	P	**P**	**06 52 26.3**	**-0.8**
	0.7nm,0.6s,baz=234,slow=5.3,SNR=8.8						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**94.97**	**317**	P	**P**	**06 53 17.8**	**+0.5**
	0.4nm,0.5s,baz=96,slow=6.2,SNR=5.7						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**95.62**	**27**	P	**P**	**06 53 19.6**	**-0.3**
	0.1nm,0.5s,baz=255,slow=4.9,SNR=2.7						
	0.1nm,0.5s						
ARCES	**ARCESS Array B**	**117.69**	**346**	PKP	**PKiKP**	**06 58 39.4**	**+1.0**
	1.1nm,0.8s,baz=72,slow=2.9,SNR=4.5						

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*TRN **03** 06:45:19.0, 10.°29N×62.°20W, h3^{km}, MD3.2*
*FUNV **03** 06:45:25.1, 10.°43N×62.°28W, h32^{km}, MW3.1*

ISC 03 06:45:20.0±1.3, 10.°26N±0.°09×62.°23W±0.°05, h25^{km}, n9, σ2.^{s}24/14, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.90**	**65**	*e*P	**Pb**	**06 45 35.8**	**-1.1**
TRN				*e*S	**Sb**	**06 45 47.8**	**-0.8**
CRUV	**Carupano**	**1.07**	**293**	*e*P	**Pn**	**06 45 40.9**	**+1.6**
CRUV				*e*S	**Sb**	**06 45 54.1**	**+0.7**
GRGR	**Grenville**	**1.94**	**17**	*e*P	**Pn**	**06 45 52.2**	**+0.8**
GRGR				*e*S	**Sb**	**06 46 17.6**	**-0.9**
TOSP	**Speyside**	**1.96**	**58**	*e*P	**Pn**	**06 45 53.9**	**+2.3**
GRHS	**Sauteurs**	**2.03**	**17**	*e*S	**Sn**	**06 46 19.3**	**+2.1**
GCMP	**Grenada, Carri**	**2.34**	**20**	*e*P	**Pn**	**06 45 58.0**	**+1.1**
GCMP				*e*S	**Sb**	**06 46 28.5**	**-1.6**
CACV	**CAICARA DEL OR**	**5.03**	**238**	*e*P	Pn	06 46 32.0	-1.9
CACV				*e*S	Sn	06 47 21.5	-10
BENV	**Beln**	**5.29**	**267**	*e*P	**Pn**	**06 46 40.3**	**+2.7**
BENV				*e*S	**Sn**	**06 47 34.6**	**-3.2**
BAUV	**El Baul**	**5.88**	**258**	*e*P	**Pn**	**06 46 48.2**	**+2.6**
BAUV				*e*S	**Sn**	**06 47 48.8**	**-3.3**

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*IDC **03** 06:49:39.9±1.0, 36.°99N×98.°18W, h0^{km}, mb3.5/2, mbtmp3.3/7, ML3.6/5, MS3.3/1, Error ellipse: s-maj=14.0km s-min=13.3km az=155.0*
*TUL **03** 06:49:40.7±0.9, 36.°87N±0.°04×98.°14W±0.°04, h6^{km}±7^{km}, ML3.6, mb_Lg3.4/110(NEIC), Error ellipse: s-maj=5.7km s-min=4.7km az=179.0*
*ANF **03** 06:49:41.0±0.3, 36.°87N×98.°13W, h6^{km}, ML4.2/15, Error ellipse: s-maj=3.1km s-min=2.6km az=174.0*
*NEIC **03** 06:49:41.4±1.4, 36.°85N±0.°03×98.°10W±0.°05, h8^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=3.3km az=105.0*

ISC 03 06:49:40.0±1.5, 36.°90N±0.°04×98.°05W±0.°03, h0^{km}±11^{km}, n131, σ1.^{s}25/118, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.92**	**236**	Pg	**Pg**	**06 49 57.1**	**-0.5**
U32A	**Winter Ranch,**	**0.92**	**236**	P	**Pg**	**06 49 57.0**	**-0.7**
	baz=58,SNR=38						
U32A				S	**Sg**	**06 50 08.6**	**-1.0**
	baz=58						
T35A	**Sooner Cattle**	**1.23**	**89**		**Pn**	**06 50 05.5**	**+1.0**
T35B	**Sooner Cattle**	**1.23**	**89**	P	**Pn**	**06 50 05.1**	**+0.6**
	baz=266						
T35B				S	**Sn**	**06 50 22.8**	**+0.9**
	baz=266						
ADOK	**Arcadia Dam**	**1.36**	**156**	Pn	**Pn**	**06 50 06.2**	**+0.1**
OKCFA	**Oklahoma City**	**1.56**	**162**	P	**Pn**	**06 50 09.0**	**+0.2**
	baz=340,SNR=13						
OKCFA				S	**Sg**	**06 50 30.3**	**+0.3**
	baz=340						
R32A	**Long Quarter,**	**1.61**	**341**	Pn	**Pn**	**06 50 10.5**	**+0.8**
R32A	**Long Quarter,**	**1.61**	**341**	P	**Pn**	**06 50 10.5**	**+0.8**
	baz=163,SNR=68						
R32A				S	**Sn**	**06 50 32.0**	**+0.9**
	baz=163						
FNO	**Franklin**	**1.72**	**162**	IAmb_Lg		06 50 38.7	
	comp=Z,210nm,0.9s						
TUL1	**Leonard**	**2.07**	**118**		**Pn**	**06 50 17.5**	**+1.6**
TUL1	**Leonard**	**2.07**	**118**	P	**Pb**	**06 50 18.4**	**0.0**
	baz=297,SNR=19						
TUL1				Sb	**Sb**	**06 50 46.7**	**+2.0**
	baz=297						
TUL1	**Leonard**	**2.07**	**118**	P	**Pn**	**06 50 17.2**	**+1.2**
	baz=297,SNR=34						
TUL1				S	**Sb**	**06 50 45.3**	**+0.6**
	baz=297						
WMOK	**Wichita Mounta**	**2.23**	**196**		**Pn**	**06 50 18.4**	**+0.1**
WMOK				IAmb_Lg		06 50 53.9	
	comp=Z,200nm,0.8s						
WMOK	**Wichita Mounta**	**2.23**	**196**	P	**Pn**	**06 50 18.5**	**+0.3**
	baz=14,SNR=18						
WMOK	**Wichita Mounta**	**2.23**	**196**	P	**Pn**	**06 50 18.4**	**+0.3**
	baz=14,SNR=44						
WMOK				S	**Sb**	**06 50 47.0**	**-2.4**
	baz=14						
X34A	**Smith Ranch, M**	**2.30**	**175**		**Pn**	**06 50 20.2**	**+1.1**
CBKS	**Cedar Bluff**	**2.33**	**326**		**Pn**	**06 50 20.6**	**+1.0**
CBKS				IAmb_Lg		06 50 53.9	
	comp=Z,118nm,0.8s						
CBKS	**Cedar Bluff**	**2.33**	**326**	P	**Pn**	**06 50 20.1**	**+0.5**
	baz=147						
CBKS				S	**Sn**	**06 50 50.0**	**+1.0**
	baz=147						
KSU1	**Kansas State U**	**2.48**	**27**		**Pn**	**06 50 23.4**	**+1.8**
KSU1	**Kansas State U**	**2.48**	**27**	P	**Pn**	**06 50 23.6**	**+2.0**
	baz=208,SNR=18						
KSU1	**Kansas State U**	**2.48**	**27**	P	**Pn**	**06 50 22.6**	**+1.1**
	baz=208						
X37A	**Clayton**	**3.17**	**136**	Pn	**Pn**	**06 50 32.5**	**+1.5**
X37A				IAmb_Lg		06 51 26.5	
	comp=Z,170nm,1.0s						
X37A	**Clayton**	**3.17**	**136**	P	**Pn**	**06 50 32.6**	**+1.5**
	baz=316,SNR=13						
HHAR	**Hobbs**	**3.37**	**99**	Pn	**Pn**	**06 50 35.2**	**+1.4**
HHAR				IAmb_Lg		06 51 31.2	
	comp=Z,99nm,1.0s						
AMTX	**Amarillo**	**3.57**	**237**	Pn	**Pn**	**06 50 37.2**	**+0.6**
AMTX				IAmb_Lg		06 51 37.2	
	comp=Z,157nm,0.9s						
AMTX	**Amarillo**	**3.57**	**237**	P	**Pn**	**06 50 36.3**	**-0.3**
	baz=55						
AMTX				Sb	**Sb**	**06 51 29.4**	**+1.6**
	baz=55						
Z35A	**Perchaven, San**	**3.62**	**169**	Pn	**Pn**	**06 50 38.1**	**+0.9**
Z35A				IAmb_Lg		06 51 41.1	
	comp=Z,84nm,1.0s						
Z35A	**Perchaven, San**	**3.62**	**169**	P	**Pn**	**06 50 37.8**	**+0.5**
	baz=349,SNR=18						
Z35A				S	**Sn**	**06 51 20.8**	**+0.2**
	baz=349						
W39A	**Magazine**	**3.85**	**115**	Pn	**Pn**	**06 50 40.0**	**-0.4**
W39A				IAmb_Lg		06 51 53.1	
	comp=Z,101nm,0.8s						
W39A	**Magazine**	**3.85**	**115**	Sb	**Sg**	**06 51 42.0**	**-1.7**
	baz=296						
W39A	**Magazine**	**3.85**	**115**	P	**Pn**	**06 50 41.2**	**+0.8**
	baz=296						
W39A				S	**Sn**	**06 51 27.7**	**+1.3**
	baz=296						
S39A	**Bolivar**	**3.85**	**77**		**Pn**	**06 50 38.4**	**-2.1**
S39A				IAmb_Lg		06 51 53.0	
	comp=Z,69nm,0.8s						
S39A	**Bolivar**	**3.85**	**77**	P	**Pn**	**06 50 42.2**	**+1.7**
	baz=259,SNR=6.9						
S39A				S	**Sn**	**06 51 27.2**	**+0.7**
	baz=259						
N33A	**J Bar K, Exete**	**3.87**	**7**	Pn	**Pn**	**06 50 41.1**	**+0.4**
N33A				IAmb_Lg		06 51 47.5	
	comp=Z,74nm,0.9s						
KSCO	**Kaye Shedlock’**	**4.19**	**302**		**Pn**	**06 50 45.8**	**+0.7**
KSCO				IAmb_Lg		06 51 52.2	
	comp=Z,65nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.19**	**302**	P	**Pn**	**06 50 45.4**	**+0.2**
	baz=120,SNR=16						
KSCO				S	**Sn**	**06 51 33.0**	**-1.9**
	baz=120						
U40A	**Yellville**	**4.22**	**96**	IAmb_Lg		06 51 58.4	
	comp=Z,126nm,0.9s						
U40A	**Yellville**	**4.22**	**96**	P	**Pn**	**06 50 46.8**	**+1.3**
	baz=278,SNR=16						
U40A				S	**Sn**	**06 51 36.0**	**+0.6**
	baz=278						
MIAR	**Mount Ida**	**4.33**	**121**		**Pn**	**06 50 48.4**	**+1.3**
MIAR	**Mount Ida**	**4.33**	**121**	P	**Pn**	**06 50 48.5**	**+1.5**
	baz=303						
N35A	**Tabor**	**4.38**	**25**	Pn	**Pn**	**06 50 49.8**	**+2.1**
Z38A	**Mt. Pleasant**	**4.42**	**144**		**Pn**	**06 50 48.8**	**+0.7**
Z38A	**Mt. Pleasant**	**4.42**	**144**	P	**Pn**	**06 50 49.1**	**+0.9**
	baz=325						
ABTX	**Abilene, Hawle**	**4.46**	**198**	Pn	**Pn**	**06 50 49.0**	**+0.2**
ABTX				IAmb_Lg		06 52 05.7	
	comp=Z,58nm,0.8s						
ABTX	**Abilene, Hawle**	**4.46**	**198**	P	**Pn**	**06 50 48.8**	**0.0**
	baz=16,SNR=6.5						
ABTX				Sb	**Sb**	**06 51 56.5**	**+3.1**
	baz=16						
P38A	**Dawn**	**4.48**	**51**		**Pn**	**06 50 50.7**	**+1.6**
P38A				IAmb_Lg		06 52 16.6	
	comp=Z,88nm,0.8s						
BGNE	**Belgrade**	**4.51**	**359**		**Pn**	**06 50 49.9**	**+0.5**
BGNE	**Belgrade**	**4.51**	**359**	P	**Pn**	**06 50 50.3**	**+0.9**
	baz=180,SNR=25						
BGNE	**Belgrade**	**4.51**	**359**	P	**Pn**	**06 50 49.9**	**+0.5**
	baz=180						
MGMO	**Mountain Grove**	**4.63**	**85**	IAmb_Lg		06 52 21.1	
	comp=Z,54nm,0.8s						
MSTX	**Muleshoe**	**4.83**	**234**		**Pn**	**06 50 53.6**	**-0.4**
MSTX				IAmb_Lg		06 52 12.1	
	comp=Z,52nm,1.0s						
MSTX	**Muleshoe**	**4.83**	**234**	P	**Pn**	**06 50 53.8**	**-0.3**
	baz=52,SNR=10						
MSTX				Sb	**Sb**	**06 52 08.2**	**+3.9**
	baz=52						
MSTX	**Muleshoe**	**4.83**	**234**	P	**Pn**	**06 50 53.6**	**-0.4**
	baz=52						
X40A	**Basin Creek Fa**	**4.88**	**118**	IAmb_Lg		06 52 25.0	
	comp=Z,62nm,0.8s						
X40A	**Basin Creek Fa**	**4.88**	**118**	P	**Pn**	**06 50 56.5**	**+1.9**
	baz=300,SNR=7.2						
X40A				P	**Pn**	**06 50 56.5**	**+1.9**
	baz=300,SNR=7.2						
X40A	**Basin Creek Fa**	**4.88**	**118**	P	**Pn**	**06 50 55.7**	**+1.2**
	baz=300						
FCAR	**Ozark Folk Cen**	**4.89**	**100**		**Pn**	**06 50 56.0**	**+1.3**
FCAR				IAmb_Lg		06 52 26.6	
	comp=Z,52nm,0.8s						
WHTX	**Lake Whitney,**	**4.92**	**174**	P	**Pn**	**06 50 55.1**	**0.0**
	baz=354,SNR=28						
WHTX	**Lake Whitney,**	**4.92**	**174**	P	**Pn**	**06 50 55.1**	**0.0**
	baz=354,SNR=11						
WHAR	**Wooly Hollow**	**4.94**	**107**	Pn	**Pn**	**06 50 56.4**	**+1.1**
W41B	**Gary Mavity, V**	**5.01**	**108**	IAmb_Lg		06 52 25.9	
	comp=Z,55nm,0.9s						
W41B	**Gary Mavity, V**	**5.01**	**108**	P	**Pn**	**06 50 57.4**	**+1.1**
	baz=291						
T25A	**Trinidad**	**5.09**	**275**	Pn	**Pn**	**06 50 57.3**	**-0.4**
T25A				IAmb_Lg		06 52 29.1	
	comp=Z,95nm,1.2s						
T25A	**Trinidad**	**5.09**	**275**	P	**Pn**	**06 50 56.7**	**-1.0**
	baz=92,SNR=6.0						
T25A				S	**Sn**	**06 51 54.9**	**-2.5**
	baz=92						
OGNE	**Ogallala**	**5.10**	**324**	P	**Pn**	**06 50 58.8**	**+1.1**
	baz=142,SNR=11						
UALR	**University of**	**5.10**	**113**	IAmb_Lg		06 52 38.4	
	comp=Z,54nm,0.8s						
WLAR	**White Oak Lake**	**5.16**	**127**	IAmb_Lg		06 52 35.6	
	comp=Z,67nm,0.9s						
237A	**Washetta, Mont**	**5.22**	**159**	Pn	**Pn**	**06 50 58.8**	**-0.5**
237A				IAmb_Lg		06 52 38.6	
	comp=Z,67nm,1.0s						
L34A	**Svendsen Farm,**	**5.23**	**14**	IAmb_Lg		06 52 36.9	
	comp=Z,103nm,0.9s						
P40A	**Paris**	**5.41**	**59**		**Pn**	**06 51 03.4**	**+1.6**
N38A	**Joes South For**	**5.41**	**43**	Pn	**Pn**	**06 51 03.1**	**+1.2**
CCM	**Cathedral Cave**	**5.54**	**76**		**Pn**	**06 51 04.8**	**+1.2**
CCM				IAmb_Lg		06 52 46.6	
	comp=Z,43nm,0.7s						
CCM	**Cathedral Cave**	**5.54**	**76**	P	**Pn**	**06 51 04.2**	**+0.6**
	baz=259						
LCAR	**Lake Charles**	**5.62**	**96**	Pn	**Pn**	**06 51 06.0**	**+1.3**
K31A	**O'Neill**	**5.74**	**355**	Pn	**Pn**	**06 51 08.0**	**+1.5**
Q24A	**Divide**	**5.98**	**292**	IAmb_Lg		06 52 50.4	
	comp=Z,39nm,0.9s						
Q24A	**Divide**	**5.98**	**292**	P	**Pn**	**06 51 10.2**	**+0.2**
	baz=109,SNR=12						
SDCO	**Great Sand Dun**	**6.00**	**280**		**Pn**	**06 51 10.4**	**+0.2**
SDCO	**Great Sand Dun**	**6.00**	**280**	P	**Pn**	**06 51 09.7**	**-0.4**
	baz=97						
435B	**Jarrell**	**6.11**	**176**	P	**Pn**	**06 51 11.7**	**+0.2**
	baz=356						
PBMO	**Poplar Bluff**	**6.12**	**89**	IAmb_Lg		06 53 05.9	
	comp=Z,43nm,0.7s						
SCIA	**State Center**	**6.25**	**35**	IAmb_Lg		06 53 06.1	
	comp=Z,84nm,0.7s						
SLM	**Saint Louis**	**6.43**	**72**	IAmb_Lg		06 53 07.0	
	comp=Z,59nm,0.8s						
GNAR	**Gosnell**	**6.54**	**96**	IAmb_Lg		06 53 11.8	
	comp=Z,68nm,0.8s						
JCT	**Junction City**	**6.56**	**193**	P	**Pn**	**06 51 17.0**	**-0.8**
	baz=12						
ISCO	**Idaho Springs**	**6.61**	**298**	P	**Pn**	**06 51 18.9**	**+0.2**
	baz=114						
ECSD	**EROS Data Cent**	**6.92**	**9**	Pn	**Pn**	**06 51 22.4**	**-0.2**
ECSD	**EROS Data Cent**	**6.92**	**9**	P	**Pn**	**06 51 22.1**	**-0.4**
	baz=190						
K38A	**Parkersburg**	**7.04**	**34**	IAmb_Lg		06 53 37.9	
	comp=Z,64nm,0.8s						
S44A	**Carbondale**	**7.06**	**81**	IAmb_Lg		06 53 37.3	
	comp=Z,41nm,0.7s						
GLAT	**Glass**	**7.08**	**92**	IAmb_Lg		06 53 39.1	
	comp=Z,57nm,0.7s						
SIUC	**Southern Illin**	**7.09**	**81**	IAmb_Lg		06 53 32.8	
	comp=Z,39nm,0.8s						
ANMO	**Albuquerque**	**7.09**	**257**	Pn	**Pn**	**06 51 24.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=77,slow=19,SNR=2.8						
ANMO				Pg	**Pb**	**06 51 48.1**	**+4.0**
	comp=Z,0.6nm,0.3s,baz=83,slow=15,SNR=7.6						
ANMO				Lg	Lg	06 53 15.8	
	comp=Z,0.7nm,0.3s,baz=70,slow=14,SNR=1.9						
	comp=Z,0.3nm,0.3s						
HALT	**Halls**	**7.09**	**95**	IAmb_Lg		06 53 33.0	
	comp=Z,41nm,0.7s						
PHWY	**Pilot Hill**	**7.25**	**310**		**Pn**	**06 51 26.9**	**-0.4**
PHWY				IAmb_Lg		06 53 43.5	
	comp=Z,54nm,1.0s						
N23A	**Red Feather La**	**7.33**	**305**	Pn	**Pn**	**06 51 30.2**	**+1.7**
N23A	**Red Feather La**	**7.33**	**305**	P	**Pn**	**06 51 28.9**	**+0.4**
	baz=121						
L40A	**Anamosa**	**7.38**	**44**	IAmb_Lg		06 53 46.3	
	comp=Z,45nm,0.7s						
W45A	**Hickory Valley**	**7.39**	**101**	IAmb_Lg		06 53 42.7	
	comp=Z,47nm,0.7s						
Q44A	**Meyer Farm, Va**	**7.42**	**72**	IAmb_Lg		06 53 44.9	
	comp=Z,43nm,0.9s						
OXF	**Oxford**	**7.42**	**106**	Pn	**Pn**	**06 51 29.6**	**+0.1**
OXF				IAmb_Lg		06 53 42.1	
	comp=Z,41nm,0.9s						
OXF	**Oxford**	**7.42**	**106**	P	**Pn**	**06 51 30.0**	**+0.5**
	baz=291						
T45A	**Paducah**	**7.53**	**86**	IAmb_Lg		06 53 46.8	
	comp=Z,54nm,0.8s						
SUSD	**Miller**	**7.57**	**355**	IAmb_Lg		06 53 55.1	
	comp=Z,52nm,0.8s						
SUSD	**Miller**	**7.57**	**355**	P	**Pn**	**06 51 31.9**	**+0.4**
	baz=175						
HDIL	**Hopedale**	**7.76**	**59**	P	**Pn**	**06 51 36.0**	**+1.9**
	baz=244						
I37A	**Lemond, Waseca**	**7.94**	**25**	IAmb_Lg		06 53 56.3	
	comp=Z,37nm,0.7s						
MNTX	**Cornudas Mount**	**7.98**	**232**	Pn	**Pn**	**06 51 36.1**	**-1.1**
MNTX	**Cornudas Mount**	**7.98**	**232**	P	**Pn**	**06 51 36.3**	**-0.8**
	baz=48						
735A	**Kenedy**	**8.02**	**178**	IAmb_Lg		06 54 10.8	
	comp=Z,45nm,0.9s						
O44A	**Mansfield**	**8.19**	**64**		**Pn**	**06 51 40.9**	**+0.9**
O44A				IAmb_Lg		06 54 12.5	
	comp=Z,48nm,0.8s						
L42A	**Oliver, Polo**	**8.25**	**49**		**Pn**	**06 51 41.4**	**+0.6**
L42A				IAmb_Lg		06 54 10.3	
	comp=Z,47nm,0.8s						
JFWS	**Jewell Farm**	**8.49**	**43**	IAmb_Lg		06 54 11.9	
	comp=Z,42nm,0.7s						
JFWS	**Jewell Farm**	**8.49**	**43**	P	**Pn**	**06 51 43.0**	**-1.1**
	baz=227						
RSSD	**Black Hills**	**8.53**	**330**	IAmb_Lg		06 54 22.9	
	comp=Z,26nm,0.8s						
RSSD	**Black Hills**	**8.53**	**330**	P	**Pn**	**06 51 46.5**	**+1.6**
	baz=146						
RWWY	**Rawlins**	**8.56**	**307**	IAmb_Lg		06 54 20.2	
	comp=Z,36nm,1.1s						
T47A	**Sharon Grove**	**8.77**	**86**	Pn	**Pn**	**06 51 49.1**	**+1.1**
TX31	**Lajitas Ar. Si**	**8.89**	**214**	Pn	**Pn**	**06 51 48.5**	**-1.2**
TXAR	**Lajitas Array**	**8.89**	**214**	Pn	**Pn**	**06 51 48.3**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=39,slow=11,SNR=32						
TXAR				Pg	Pg	06 52 21.4	-8.8
	comp=Z,0.8nm,0.3s,baz=35,slow=15,SNR=8.9						
TXAR				Lg	Lg	06 54 15.1	
	comp=Z,1.1nm,0.3s,baz=30,slow=28,SNR=9.2						
	comp=Z,0.6nm,0.3s						
F33A	**5 Mile Ranch,**	**9.03**	**8**	IAmb_Lg		06 54 34.0	
	comp=Z,24nm,0.7s						
SPMN	**Marine on St.**	**9.21**	**24**	P	**Pn**	**06 51 55.4**	**+1.4**
	baz=207						
K43A	**Burlington**	**9.46**	**49**	IAmb_Lg		06 54 42.4	
	comp=Z,44nm,0.9s						
I42A	**Draeger Farm,**	**9.86**	**42**	IAmb_Lg		06 54 58.0	
	comp=Z,30nm,1.1s						
PDAR	**Pinedale Array**	**10.61**	**307**	Pn	**Pn**	**06 52 13.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=116,slow=16,SNR=2.3						
PDAR				Lg	Lg	06 55 05.5	
	comp=Z,0.4nm,0.3s,baz=100,slow=31,SNR=2.8						
	comp=Z,0.1nm,0.3s						
O48B	**Farmland**	**10.64**	**68**	P	**Pn**	**06 52 13.2**	**-0.4**
	baz=255						
TKL	**Tuckaleechee C**	**11.59**	**92**	Pn	**Pn**	**06 52 27.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=284,slow=12,SNR=8.9						
TKL				Lg	Lg	06 55 40.1	
	comp=Z,0.2nm,0.3s,baz=6.5,slow=23,SNR=1.8						
	comp=Z,1.6nm,0.4s						
ULM	**Lac du Bonnet**	**13.44**	**6**	Lg	Lg	06 56 36.9	
	comp=Z,0.6nm,0.3s,baz=232,slow=9.7,SNR=2.3						
NVAR	**Mina Array Bea**	**16.11**	**282**	Pn	**Pn**	**06 53 26.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=90,slow=11,SNR=2.4						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**27.60**	**343**	P	**P**	**06 55 27.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=144,slow=9.1,SNR=12						
YKA				LR	LR	07 05 38.1	
	comp=Z,58nm,19.2s,baz=312,slow=35						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**39.98**	**330**	P	**P**	**06 57 14.3**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=104,slow=7.5,SNR=2.4						
	comp=Z,0.4nm,0.8s						

NOU 03 06:55:21.1, 15.°57S×167.°55E, h32^{km}, MLv4.0/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.36**	**290**	P	Pn	06 55 30.9	+0.9
DVP	**Devils Point**	**2.23**	**164**	P	Pn	06 55 56.4	+0.6
YATNC	**Mamie plateau,**	**6.49**	**185**	P	Pn	06 56 54.3	-0.1
	17nm,0.9s						
DZM	**Mont Dzumac**	**6.55**	**189**	P	Pn	06 56 55.4	0.0
	15nm,2.6s						
NOUC	**Port Laguerre**	**6.60**	**190**	P	Pn	06 56 55.2	-0.8
	12nm,2.1s						

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*DSN **03** 07:03:23.5±1.4, 27.°92N×56.°83E, h10^{km}, ML3.5/7, Error ellipse: s-maj=60.6km s-min=12.6km az=101.0*
*TEH **03** 07:03:25.1, 27.°98N×56.°33E, h20^{km}, ML3.5*
*IDC **03** 07:03:27.0±3.6, 27.°83N×56.°33E, h60^{km}±46^{km}, mb3.4/8, mbtmp3.7/9, ML3.3/1, MS2.9/1, Error ellipse: s-maj=28.5km s-min=23.6km az=74.0*

ISC 03 07:03:24.9±0.7, 27.°93N±0.°04×56.°32E±0.°05, h28^{km}, n52, σ1.^{s}85/55, mb3.6/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.52**	**158**	*e*Pg	**Pb**	**07 03 36.1**	**+0.5**
IBND				*e*Sg	**Sn**	**07 03 45.7**	**+1.3**
IBND				*e*		07 03 56.9	
	comp=Z,60µm,0.3s						
GENO	**Geno**	**0.55**	**194**	*e*Pg	**Pb**	**07 03 37.3**	**+1.2**
GENO				*e*Sg	**Sn**	**07 03 47.1**	**+1.8**
GENO				*e*		07 03 49.0	
	comp=Z,50µm,0.2s						
KHNJ	**Kahnooj**	**1.23**	**89**	*e*Pg	**Pn**	**07 03 46.8**	**+0.6**
LAR1	**LAR**	**1.74**	**262**	*e*Pn	**Pn**	**07 03 55.2**	**+1.9**
NGRK	**Negar Kerman**	**1.74**	**12**	*e*Pn	**Pn**	**07 03 55.0**	**+1.4**
NGRK				*e*		07 04 21.2	
	comp=Z,7µm,0.4s						
SHME	**Shamm**	**1.88**	**185**	P	**Pn**	**07 03 56.6**	**+1.4**
BANOM	**Banah**	**2.00**	**180**	P	**Pn**	**07 03 59.3**	**+2.4**
BANOM				S	**Sb**	**07 04 24.6**	**-0.5**
KRBR	**Kerman**	**2.08**	**11**	*e*Pn	**Pn**	**07 04 00.8**	**+2.6**
TVBK	**TV Kerman**	**2.08**	**11**	*e*Pn	**Pn**	**07 04 01.3**	**+3.0**
TVBK				*e*		07 04 32.5	
	comp=Z,7µm,0.3s						
CHMN	**Cheshme madani**	**2.20**	**29**	*e*Pn	**Pn**	**07 04 02.5**	**+2.6**
CHMN				*e*		07 04 35.7	
	comp=Z,3µm,0.4s						
KBAM	**BAM**	**2.23**	**57**	*e*Pn	**Pn**	**07 04 02.5**	**+2.5**
KBAM				*e*		07 04 33.2	
	comp=Z,4µm,0.3s						
KHGB	**Koh Gabri**	**2.44**	**3**	*e*		07 04 46.1	
	comp=Z,2µm,0.6s						
KHGB				*e*Pn	**Pn**	**07 04 05.7**	**+2.6**
JHRM	**Jahrom**	**2.48**	**284**	*e*Pn	**Pn**	**07 04 05.4**	**+1.8**
MSFE	**Esma-Masafi**	**2.57**	**183**	*e*P	**Pn**	**07 04 05.7**	**+1.1**
	SNR=6.2						
UOSS	**Minazif**	**2.98**	**182**	*i* P	**Pn**	**07 04 10.3**	**0.0**
	SNR=5.4						
HATD	**Hatta, Dubai**	**3.10**	**183**	P	**Pn**	**07 04 13.1**	**+1.1**
FAQ	**Al Faqa, Dubai**	**3.24**	**192**	*i* P	**Pn**	**07 04 15.4**	**+1.5**
	SNR=11						
ASHO	**Ashiyiah**	**3.24**	**184**	*i* P	**Pn**	**07 04 16.0**	**+2.0**
	SNR=14						
ASUD	**Al Ashush, Dub**	**3.41**	**195**	*i* P	**Pn**	**07 04 19.3**	**+3.1**
	SNR=18						
IBAF	**Bafgh**	**3.70**	**350**	*e*Pn	**Pn**	**07 04 21.9**	**+1.5**
IMEH	**Mehriz**	**3.75**	**337**	*e*Pn	**Pn**	**07 04 23.2**	**+2.1**
IMEH				*e*		07 04 24.9	
	comp=Z,573nm,0.2s						

CHBR	Chabahar	4.39	121	*e*Pn	Pn	07 04 31.9	+2.2
AHBU	AHRAM	4.52	283	*e*Pn	Pn	07 04 33.2	+1.7
ISAD	Sadrabad	4.58	331	*e*Pn	Pn	07 04 35.1	+2.6
YZKH	Yazd	4.69	342	*e*Pn	Pn	07 04 36.0	+2.1
BSRN	Basiran	4.70	31	*e*Pn	Pn	07 04 36.2	+2.1
WSAR	Wadi Sarin	5.12	155	P	Pn	07 04 40.6	+0.9
	comp=Z,1.1nm,0.3s,baz=339,slow=6.6,SNR=15						
WSAR				S	Sn	07 05 36.9	-1.1
	comp=Z,10.0nm,0.3s,baz=181,slow=21,SNR=8.5						
	comp=Z,2.5nm,0.3s						
KLNJ	Kolanjah	5.13	308	*e*Pn	Pn	07 04 41.8	+1.5
KLNJ				*e*		07 05 43.8	
	comp=Z,406nm,0.6s						
IRAM	Ramesheh	5.16	319	*e*Pn	Pn	07 04 42.4	+1.9
ANAR	Anarak	5.70	338	*e*Pn	Pn	07 04 49.2	+1.4
TABS	Tabas	5.74	7	*e*Pn	Pn	07 04 49.8	+1.5
IGAR	Gharneh	5.79	321	*e*Pn	Pn	07 04 51.4	+2.2
IBRJ	Brojen	5.91	313	*e*Pn	Pn	07 04 53.9	+3.0
IZEF	Zefreh	6.03	326	*e*Pn	Pn	07 04 53.4	+1.0
SHRT	Shahrakht	6.64	30	*e*Pn	Pn	07 05 02.5	+1.8
IPIR	Pirpir	6.67	317	*e*Pn	Pn	07 05 02.9	+1.7
IKLH	Kolahrood	6.75	324	*e*Pn	Pn	07 05 04.1	+1.8
KRSH	Karshahi	7.01	330	*e*Pn	Pn	07 05 08.2	+2.4
ISFB	Sefidab	7.29	332	*e*Pn	Pn	07 05 11.5	+1.9
KHMZ	Khomeyn	7.96	318	*e*Pn	Pn	07 05 20.5	+1.6
SHRO	Shahrood	8.04	358	*e*Pn	Pn	07 05 21.9	+2.0
ASAO	Ashtian	8.51	322	*e*Pn	Pn	07 05 28.7	+2.2
SNGE	Sanandaj	10.46	315	*e*Pn	Pn	07 05 50.8	-2.4
AAK	Ala-Archa	20.80	40	LR	LR	07 17 10.2	
	comp=Z,35nm,19.7s,baz=218,slow=39						
BRTR	Keskin Array B	22.14	308	P	P	07 08 18.2	-0.3
	comp=Z,2.2nm,0.9s,baz=136,slow=12,SNR=6.1						
	comp=Z,2.2nm,0.9s						
AKTO	Aktyubinsk	22.51	3	P	P	07 08 22.7	+0.5
	comp=Z,1.3nm,0.6s,baz=195,slow=12,SNR=5.3						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	27.74	40	P	P	07 09 10.2	-0.8
	comp=Z,0.6nm,0.6s,baz=226,slow=7.4,SNR=6.9						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	39.11	337	P	P	07 10 49.4	0.0
	comp=Z,0.8nm,0.6s,baz=146,slow=10,SNR=2.6						
	comp=Z,0.8nm,0.6s						
NOA	NORSAR Array B	44.68	331	P	P	07 11 33.4	-1.7
	comp=Z,0.6nm,0.8s,baz=116,slow=8.1,SNR=2.4						
	comp=Z,0.6nm,0.8s						
ARCES	ARCESS Array B	45.29	345	P	P	07 11 39.7	-0.1
	comp=Z,0.9nm,1.0s,baz=144,slow=11,SNR=1.9						
	comp=Z,0.9nm,1.0s						
TORD	Torodi Ar. Bea	52.82	265	P	P	07 12 36.9	-1.3
	comp=Z,0.8nm,0.3s,baz=59,slow=7.4,SNR=2.0						
	comp=Z,0.8nm,0.3s						
YKA	Yellowknife Ar	89.60	356	P	P	07 16 18.2	-1.4
	comp=Z,0.2nm,0.7s,baz=356,slow=4.3,SNR=3.9						
	comp=Z,0.2nm,0.7s						

MOS ***03*** *07:04:47.3±1.3, 26°.37N×62°.03E, h46^{km}, mb4.9/7, Error ellipse: s-maj=11.5km s-min=6.9km az=105.7*

NEIC ***03*** *07:04:48.3±0.9, 26°.16N±0°.08×62°.13E±0°.07, h47^{km}±7^{km}, mb4.4/20, mb_Lg4.1(TEH), Error ellipse: s-maj=12.5km s-min=8.1km az=206.0*

TEH ***03*** *07:04:50.9, 26°.70N×61°.72E, h15^{km}, ML4.1*

IDC ***03*** *07:04:52.9±2.8, 26°.27N×61°.94E, h84^{km}±31^{km}, mb3.6/14, mbtmp4.0/17, Error ellipse: s-maj=19.0km s-min=18.0km az=12.0*

OMAN ***03*** *07:04:58.7±0.4, 26°.31N×61°.42E, h30^{km}, mb4.7/8, ml4.3/15, ms2.8/1, Error ellipse: s-maj=6.1km s-min=3.7km az=228.0*

DSN ***03*** *07:05:00.2±2.3, 26°.35N×61°.15E, h10^{km}, ML3.9/10, Error ellipse: s-maj=41.0km s-min=16.4km az=10.0*

ISC 03 07:04:47.6±0.5**, 26°.66N**±0°.04×**61°.89E**±0°.05**, h10**^{km}**, n154, σ2^{s}36**/174**, mb4.1**/30**, 5C-8D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRVN	Saravan	0.87	31	*e*Pg	Pn	07 05 08.8	+2.8
NGCH	Negor - Chabah	1.46	208	*e*Pg	Pg	07 05 18.2	+2.5
NGCH				*e*Sg	Sg	07 05 36.8	+2.1
CHBR	Chabahar	1.65	230	*e*Pn	Pb	07 05 20.3	+2.1
ZHDN	Zahedan	2.89	341	*e*Pn	Pn	07 05 36.1	+2.2
JASK	Jask - Hormozg	3.70	259	*e*Pn	Pn	07 05 48.2	+3.3
KBAM	BAM	3.92	310	*e*Pn	Pn	07 05 49.9	+2.0
KBAM				*e*		07 05 50.2	
	comp=Z,2μm,0.3s						
WSAR	Wadi Sarin	4.51	222	P	Pn	07 05 57.4	+1.3
	comp=Z,21nm,0.3s,baz=344,slow=10,SNR=9.6						
WSAR				S	Sn	07 06 44.3	-4.3
	comp=Z,114nm,0.3s,baz=263,slow=16,SNR=25						
WSAR	Wadi Sarin	4.51	222	P	Pn	07 05 57.4	+1.3
WSAR				S	Sn	07 06 44.5	-4.1
BIDO	Bidbid	4.63	228	P	Pn	07 06 00.4	+2.8
	SNR=6.8						
BIDO				S	Sn	07 06 46.8	-4.6
WBK	Wadi Bani Khal	4.83	214	P	Pn	07 06 01.5	+1.1
	SNR=19						
WBK				S	Sn	07 06 52.2	-4.3
IBND	Bandar-abas	4.84	281	*e*Pn	Pn	07 06 03.0	+2.5
CHMN	Cheshme madani	4.99	311	*e*		07 06 05.6	
	comp=Z,2μm,0.2s						
CHMN				*e*Pn	Pn	07 06 05.2	+2.3
SMDO	Samad	5.00	225	P	Pn	07 06 04.7	+1.9
	SNR=10						
SMDO				S	Sn	07 06 56.7	-4.2
JLN	Jalan Bani Buh	5.03	207	P	Pn	07 06 04.0	+0.9
	SNR=45						
JLN				S	Sn	07 06 57.7	-3.6
BANOM	Banah	5.07	263	*e*Pn	Pn	07 06 06.2	+2.4
BANOM	Banah	5.07	263	P	Pn	07 06 06.2	+2.4
BANOM				S	Sn	07 06 59.5	-3.0
BANOM	Banah	5.07	263	P	Pn	07 06 05.9	+2.1
BANOM				S	Sn	07 06 58.8	-3.7
HOQ	Hoqain	5.16	235	P	Pn	07 06 06.1	+1.2
HOQ				S	Sn	07 06 59.2	-5.4
SHME	Shamm	5.20	265	*e*Pn	Pn	07 06 08.9	+3.5
SHME	Shamm	5.20	265	P	Pn	07 06 09.0	+3.6
SHME				S	Sn	07 07 03.2	-2.2
SHME	Shamm	5.20	265	P	Pn	07 06 09.2	+3.8
MASF	Masafi	5.32	257	P	Pn	07 06 08.6	+1.4
	SNR=16						
MASF				S	Sn	07 07 02.4	-6.1
MSFE	Esma-Masafi	5.32	257	*e*Pn	Pn	07 06 08.7	+1.6
MSFE	Esma-Masafi	5.32	257	*i* P	Pn	07 06 09.2	+2.0
	SNR=9.2						
UOSS	Minazif	5.40	253	Pn	Pn	07 06 07.4	-0.9
UOSS	Minazif	5.40	253	*e*Pn	Pn	07 06 09.5	+1.2
UOSS	Minazif	5.40	253	P	Pn	07 06 09.3	+1.0
UOSS				S	Sn	07 07 04.7	-5.9
UOSS	Minazif	5.40	253	*i* P	Pn	07 06 09.4	+1.2
	SNR=104						
NGRK	Negar Kerman	5.44	304	*e*Pn	Pn	07 06 11.8	+2.7
NGRK				*e*		07 07 20.4	
	comp=Z,1μm,0.5s						
SOHO	SOHO	5.46	244	*e*Pn	Pn	07 06 10.4	+1.4
SOHO	SOHO	5.46	244	P	Pn	07 06 10.4	+1.4
SOHO				S	Sn	07 07 07.7	-4.2
SOHO	SOHO	5.46	244	*i* P	Pn	07 06 10.3	+1.2
	SNR=7.9						
JMDO	Jabal Madar	5.49	220	P	Pn	07 06 12.2	+2.7
	SNR=38						
JMDO				S	Sn	07 07 09.6	-3.1
HATD	Hatta, Dubai	5.51	252	*e*Pn	Pn	07 06 11.4	+1.7
HATD	Hatta, Dubai	5.51	252	P	Pn	07 06 11.4	+1.7
	SNR=33						
HATD				S	Sn	07 07 08.8	-4.4
HATD	Hatta, Dubai	5.51	252	*i* P	Pn	07 06 11.4	+1.7
	SNR=33						
KRBR	Kerman	5.61	307	*e*Pn	Pn	07 06 14.4	+3.1
TVBK	TV Kerman	5.61	307	*e*Pn	Pn	07 06 14.7	+3.3
TVBK				*e*		07 06 49.7	
	comp=Z,870nm,0.6s						
ASHO	Ashiyiah	5.62	251	*e*Pn	Pn	07 06 13.0	+1.7
ASHO	Ashiyiah	5.62	251	P	Pn	07 06 12.8	+1.5
ASHO				S	Sn	07 07 11.7	-4.2
ASHO	Ashiyiah	5.62	251	*i* P	Pn	07 06 12.6	+1.3
	SNR=51						
BSY	Bisya	5.78	229	P	Pn	07 06 16.5	+3.1
	SNR=18						
BSY				S	Sn	07 07 18.2	-1.7
BSRN	Basiran	5.81	336	*e*Pn	Pn	07 06 15.4	+1.4
NAZ	Nazwa, Dubai	5.86	255	*e*Pn	Pn	07 06 17.5	+3.0
NAZ	Nazwa, Dubai	5.86	255	*i* P	Pn	07 06 18.5	+4.0
	SNR=8.2						
ARQ	Araqi	5.89	237	P	Pn	07 06 20.0	+5.0
	SNR=59						
ARQ				S	Sn	07 07 23.4	+0.8
FAQ	Al Faqa, Dubai	5.99	253	*e*Pn	Pn	07 06 20.1	+3.7
FAQ	Al Faqa, Dubai	5.99	253	P	Pn	07 06 20.7	+4.3
	SNR=42						
FAQ				S	Sn	07 07 23.9	-1.3
	SNR=7.3						
FAQ	Al Faqa, Dubai	5.99	253	*i* P	Pn	07 06 20.1	+3.7
	SNR=42						
KHGB	Koh Gabri	6.03	309	*e*Pn	Pn	07 06 20.0	+2.9
ALNE	Al Ain	6.13	246	*e*Pn	Pn	07 06 21.8	+3.5
ALNE	Al Ain	6.13	246	P	Pn	07 06 22.2	+3.9
	SNR=17						
ALNE				S	Sn	07 07 27.5	-1.0
ALNE	Al Ain	6.13	246	*i* P	Pn	07 06 22.4	+4.2
	SNR=8.7						
ASUD	Al Ashush, Dub	6.26	253	*e*Pn	Pn	07 06 23.9	+3.9
ASUD	Al Ashush, Dub	6.26	253	P	Pn	07 06 24.6	+4.6
	SNR=45						
ASUD	Al Ashush, Dub	6.26	253	*i* P	Pn	07 06 24.0	+4.0
	SNR=45						
AJN	Ajban	6.57	253	*e*Pn	Pn	07 06 28.0	+3.6
AJN	Ajban	6.57	253	P	Pn	07 06 27.6	+3.2
	SNR=14						
AJN	Ajban	6.57	253	P	Pn	07 06 26.8	+2.4
MHTO	MHTO	6.69	213	P	Pn	07 06 28.1	+2.1
MHTO				S	Sn	07 07 38.2	-4.2
SHRT	Shahrakht	7.10	349	*e*Pn	Pn	07 06 34.3	+2.7
UMZA	Um Al Zommool	7.27	239	*e*Pn	Pn	07 06 37.7	+3.7
UMZA	Um Al Zommool	7.27	239	P	Pn	07 06 37.3	+3.3
HRA	Herat	7.71	2	Pn	Pn	07 06 43.7	+3.6
TABS	Tabas	8.10	330	*e*Pn	Pn	07 06 47.8	+2.4
JRN	Qarnain Island	8.33	260	*e*Pn	Pn	07 06 49.3	+0.9
MZR	Muzera	8.46	246	*e*Pn	Pn	07 06 51.7	+1.4
GHWR	Ruwais	8.59	254	*e*Pn	Pn	07 06 53.3	+1.3
AHBU	AHRAM	9.64	286	*e*Pn	Pn	07 07 09.2	+2.8
SHMA	Al-Shehemyia	9.84	268	P	Pn	07 07 11.2	+1.9
SHMA				S	Sn	07 08 50.2	-10
KBL	Kabul	9.98	36	P	Pn	07 07 13.3	+2.0
KBL	Kabul	9.98	36	Pn	Pn	07 07 13.3	+2.0
THW	Thamme Wali	10.52	52	P	Pn	07 07 18.8	+0.3
SHRO	Shahrood	10.57	333	*e*Pn	Pn	07 07 21.5	+2.2
DOK	Doka	10.74	223	P	Pn	07 07 19.9	-1.7
DOK				S	Sn	07 09 12.3	-10
CEP	Cherat	11.22	48	P	Pn	07 07 28.6	+0.4
AJM	Ajmer	11.42	88	*e*x	x	07 07 28.5	
WHFO	Wadi Hawf	11.49	222	P	Pn	07 07 33.0	+1.1
	SNR=19						
WHFO				P	Pn	07 07 33.0	+1.1
	SNR=19						
WHFO				S	Sn	07 09 28.4	-12
WHFO				S	Sn	07 09 28.4	-12
NIL	Nilore	12.04	52	P	Pn	07 07 38.9	-0.5
NIL	Nilore	12.04	52	Pn	Pn	07 07 38.9	-0.5
KUDL	Kundal	13.05	80	*e*x	x	07 07 55.1	
BHK	Bhakra	13.56	66	*e*x	x	07 08 00.6	
KSH	Kashi	17.39	39	P	Pn	07 08 46.7	-3.9
KSH				pP	sP	07 08 59.4	+3.0
KSH				sP	pP	07 09 02.8	+7.8
KSH				S	Sn	07 11 45.6	-19
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKT	Akhty	18.83	325	⇓*i*P	P	07 09 07.0	-0.7
AAK	Ala-Archa	18.98	30	P	Pn	07 09 10.8	+0.8
	comp=Z,2.7nm,0.6s,baz=188,slow=16,SNR=6.9						
AAK	Ala-Archa	18.98	30	⇓*e*P	Pn	07 09 10.7	+0.7
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AAK	Ala-Archa	18.98	30	P	Pn	07 09 10.2	+0.2
BOOM	Boomskoye usch	19.53	32	P	P	07 09 13.2	-2.2
BOOM				pmax	pmax		
	comp=Z,19nm,1.4s						
BOOM	Boomskoye usch	19.53	32	P	P	07 09 13.2	-2.2
BOOM				IAmb	IAmb	07 09 30.4	
	comp=Z,19nm,1.4s						
GNI	Garni	19.60	318	P	P	07 09 16.0	-0.2
	comp=Z,12nm,0.3s,baz=118,slow=5.2,SNR=4.5						
GNI	Garni	19.60	318	⇓*e*P	P	07 09 15.6	-0.6
GNI				pmax	pmax		
	comp=Z,18nm,1.3s						
DBC	Dubki	20.42	327	*d i*P	P	07 09 25.1	+0.1
DVE	Vedeno	20.73	326	⇓*e*P	P	07 09 28.2	-0.1
GROC	Groznyy	21.07	326	*d i*P	P	07 09 32.4	+0.5
ZEI	Tsey	21.78	322	*e*P	P	07 09 40.4	+0.6
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ASF	Jabal al Asfar	22.43	290	P	P	07 09 45.8	-1.0
	comp=Z,1.2nm,0.4s,baz=59,slow=7.1,SNR=2.3						
	comp=Z,1.2nm,0.4s						
ABKAR	Akbulak array	22.61	357	P	P	07 09 48.2	-0.2
KBZ	Khabaz	22.95	323	P	P	07 09 53.0	+1.0
	comp=Z,5.1nm,0.9s,baz=128,slow=7.2,SNR=9.9						
	comp=Z,5.1nm,0.9s						
KBZ	Khabaz	22.95	323	⇑*e*P	P	07 09 53.6	+1.6
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHA1	Shidzhatmaz	23.09	322	⇑*e*P	P	07 09 55.2	+1.5
KIV	Kislovodsk	23.22	323	*e*P	P	07 09 55.2	+0.3
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	Kislovodsk	23.22	323	P	P	07 09 55.1	+0.2
KIV				IAmb	IAmb	07 09 58.7	
	comp=Z,19nm,1.2s						
AKTO	Aktyubinsk	23.93	354	P	P	07 10 00.1	-1.5
	comp=Z,1.0nm,0.4s,baz=152,slow=7.9,SNR=4.0						
MAKZ	Makanchi	25.62	33	P	P	07 10 14.7	-2.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	25.62	33	P	P	07 10 14.7	-2.5
MK31	Makanchi Array	25.77	33	*ce*P	P	07 10 19.5	+1.0
MK31	Makanchi Array	25.77	33	P	P	07 10 17.0	-1.6
MKAR	Makanchi Array	25.77	33	P	P	07 10 18.3	-0.2
	comp=Z,2.1nm,0.8s,baz=216,slow=8.4,SNR=10.0						
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	25.77	33	*ce*P	P	07 10 19.6	+1.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	25.77	33	P	P	07 10 17.7	-0.8
BRTR	Keskin Array B	26.87	306	P	P	07 10 28.5	-0.2
	comp=Z,1.0nm,0.7s,baz=112,slow=9.5,SNR=3.1						
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	26.87	306	P	P	07 10 28.0	-0.7
KURBB	Kurchatov Arra	27.10	24	P	P	07 10 30.3	-0.2
	comp=Z,0.4nm,0.3s,baz=218,slow=9.3,SNR=1.9						
	comp=Z,0.4nm,0.3s						
BRVK	Borovoye	27.10	11	⇑*i*P	P	07 10 31.7	+1.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	27.10	11	P	P	07 10 30.1	-0.4
KURK	Kurchatov	27.21	24	P	P	07 10 30.3	-1.2
OBN	Obninsk	33.90	334	⇓*e*P	P	07 11 31.1	+0.7
OBN				pmax	pmax		
	comp=Z,15nm,0.4s						
LODK	Lodwar	34.34	232	P	P	07 11 28.5	-6.3
LODK				IAmb	IAmb	07 11 45.0	
	comp=Z,3.8nm,1.2s						
AKASG	Malin Array Be	34.57	323	P	P	07 11 36.4	+0.1
	comp=Z,1.2nm,0.3s,baz=119,slow=8.8,SNR=8.3						
	comp=Z,1.2nm,0.3s						
AKASG	Malin Array Be	34.57	323	P	P	07 11 36.3	0.0
AKASG				IAmb	IAmb	07 12 01.4	
	comp=Z,3.1nm,1.4s						
AKBB	Malin Array Si	34.57	323	*de*P	P	07 11 36.4	+0.1
AKBB	Malin Array Si	34.57	323	P	P	07 11 36.5	+0.2
AKBB				IAmb	IAmb	07 11 37.6	
	comp=Z,9.1nm,1.0s						
BURAR	Bucovina Array	35.49	316	P	P	07 11 45.0	+0.5
BUR08	Bucovina Ar. S	35.51	316	P	P	07 11 45.6	+0.9
BUR08				IAmb	IAmb	07 11 46.1	
	comp=Z,3.9nm,1.3s						
MNK	Minsk	37.33	327	*i* P	P	07 12 03.7	+3.8
MNK				*i*		07 13 27.2	
MNK				*i* PPP	PPP	07 13 43.8	
MNK				*i* S	S	07 17 47.8	+0.4
MNK				*i* SS	SnSn	07 20 20.4	-2.9
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,0.6s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MNK	Minsk	37.33	327	*i* P	P	07 12 03.7	+3.8
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	07 12 03.7	+3.8
	comp=N,16nm,0.7s						
MNK				*i* P	P	07 12 03.7	+3.8
	comp=Z,8.0nm,0.7s,baz=124						
MNK				*i* PP	PnPn	07 13 27.2	+1.7
MNK				*i* PPP	PPP	07 13 43.9	
MNK				*i* S	S	07 17 47.8	+0.4
MNK				*i* SS	SnSn	07 20 20.4	-2.9
MNK				*i* SSS	SSS	07 20 37.9	
MNK				*i* LQ	LQ	07 24 28.0	
MNK				*i* LR	LR	07 27 16.1	
KLMR	Klimovskoe	37.41	342	*e*P	P	07 11 59.1	-1.5
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	Klimovskoe	37.41	342	*e*P	P	07 11 59.1	-1.5
KLMR				AMP		07 12 00.7	
	comp=Z,12nm,0.8s						
NACGM	Naroch	38.08	327	*e*P	P	07 12 06.8	+0.5
	baz=124						
SONM	Songino Array	40.55	47	P	P	07 12 26.2	-1.0
	comp=Z,0.3nm,0.5s,baz=286,slow=10,SNR=2.6						
	comp=Z,0.3nm,0.5s						
FIA1	FINESS Array S	42.26	335	P	P	07 12 41.0	+0.2
FIA1				IAmb	IAmb	07 12 41.9	
	comp=Z,7.8nm,0.5s						
FINES	FINESS Array B	42.26	335	P	P	07 12 40.9	0.0
	comp=Z,6.6nm,0.4s,baz=133,slow=8.5,SNR=59						
	comp=Z,6.6nm,0.4s						
FINES	FINESS Array B	42.26	335	P	P	07 12 40.6	-0.3
GEC2	GERESS Array S	43.19	314	P	P	07 12 48.0	-0.8
GEC2				IAmb	IAmb	07 12 50.1	
	comp=Z,2.2nm,0.7s						
GERES	GERESS Array B	43.19	314	P	P	07 12 48.1	-0.6
	comp=Z,1.2nm,0.6s,baz=99,slow=8.2,SNR=10						
	comp=Z,1.2nm,0.6s						
GERES	GERESS Array B	43.19	314	P	P	07 12 48.2	-0.5
GERES	GERESS Array B	43.19	314	P	P	07 12 48.2	-0.5
CLL	Collm	44.21	317	*e*P	P	07 12 54.0	-2.8
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL	Collm	44.21	317	*i* P	P	07 12 57.9	+1.1
	comp=Z,8.0nm,0.9s						
SENIN	Lac Senin/Sane	47.08	310	P	P	07 13 19.3	-0.5
SENIN				IAmb	IAmb	07 13 33.5	
	comp=Z,6.8nm,1.4s						
KEV	Kevo	47.63	344	P	P	07 13 23.6	+0.1
KEV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KEV	Kevo	47.63	344	P	P	07 13 23.6	+0.1
ARCES	ARCESS Array B	47.84	344	P	P	07 13 25.1	-0.1
	comp=Z,1.8nm,0.5s,baz=143,slow=8.5,SNR=34						
	comp=Z,1.8nm,0.5s						
ARCES	ARCESS Array B	47.84	344	P	P	07 13 25.6	+0.4
ARCES				pmax	pmax		
	comp=Z,17nm,1.5s						
ARCES	ARCESS Array B	47.84	344	P	P	07 13 25.6	+0.4
NC405	NORSAR Array S	48.05	330	P	P	07 13 26.6	-0.4
NB2	NORSAR Subarra	48.25	330	P	P	07 13 27.9	-0.6
	comp=Z,0.6nm,0.5s,baz=111,slow=7.4						
NOA	NORSAR Array B	48.25	330	P	P	07 13 27.7	-0.8
	comp=Z,1.1nm,0.6s,baz=118,slow=7.4,SNR=5.2						
	comp=Z,1.1nm,0.6s						
SPITS	Spitsbergen Ar	55.53	350	P	P	07 14 21.5	-1.0
SPITS				pmax	pmax		
	comp=Z,18nm,1.2s						
KOWA	Kowa	62.30	273	P	P	07 15 05.9	-4.6
KOWA				IAmb	IAmb	07 15 24.6	
	comp=Z,7.7nm,1.3s						
MORW	Morawa	75.93	133	P	P	07 16 26.8	-7.9
WRA	Warramunga Arr	84.11	116	P	P	07 17 13.7	-5.5
	comp=Z,0.1nm,0.5s,baz=315,slow=3.6,SNR=1.1						
	comp=Z,0.1nm,0.5s						
ASAR	Alice Springs	85.68	119	P	P	07 17 20.8	-6.3
	comp=Z,0.2nm,0.5s,baz=318,slow=5.4,SNR=2.0						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	91.11	358	P	P	07 17 50.4	-1.9
	comp=Z,0.2nm,0.8s,baz=354,slow=5.0,SNR=2.6						
	comp=Z,0.2nm,0.8s						

IDC ***03*** *07:08:08.5±0.6, 52°.48S×12°.95E, h0^{km}, mb4.3/12, mbtmp4.3/12, MS4.0/30, Error ellipse: s-maj=22.4km s-min=18.1km az=101.0*

NEIC ***03*** *07:08:12.4±1.4, 52°.4S±0°.1×12°.9E±0°.2, h15^{km}±3^{km}, mb4.9/21, Error ellipse: s-maj=22.2km s-min=10.3km az=126.0*

GCMT ***03*** *07:08:13.4±0.3, 52°.56S±0°.02×13°.20E±0°.06, h19^{km}±1^{km}, MW4.9/74, Moment Tensor Solution. s15,c16; s74,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.99±.22; M$_{\theta\theta}$2.76±.16; M$_{\phi\phi}$-0.76±.13; M$_{r\theta}$0.40±.26; M$_{\theta\phi}$0.06±.09; M$_{\phi r}$1.66±.38; Best double couple: M$_0$2.98500×10^{16} NP1:φ$_s$118.00000°, δ49.00000°, λ-42.00000°. NP2: φ$_s$239.00000°, δ60.00000°, λ-131.00000°. Principal axes: T 2.8070, Plg6.0000°, Azm356.0000°; N 0.3570, Plg34.0000°, Azm262.0000°; P -3.1620, Plg55.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 07:08:10.6±0.5**, 52°.43S**±0°.09×**12°.9E**±0°.1**, h10**^{km}**, n91, σ1^{s}12**/64**, mb4.6**/14**, MS4.1**/30**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	20.53	194	P	P	07 12 49.3	+0.5
SNAA	Sanae	20.53	194	P	P	07 12 47.4	-1.3
	4.3nm,0.7s,baz=22,slow=11,SNR=10.0						
SNAA				LR	LR	07 18 53.1	
	comp=Z,392nm,21.2s,baz=52,slow=32						
	4.3nm,0.7s						
SNAA	Sanae	20.53	194		P	07 12 49.6	+0.8
VNA2	Neumayer--Watz	20.69	199	P	P	07 12 51.2	+0.8
	baz=26,slow=11						
SUR	Sutherland	20.85	19	P	P	07 12 52.4	-0.2
	19nm,0.9s,baz=185,slow=10,SNR=7.1						
SUR				LR	LR	07 18 57.7	
	comp=Z,418nm,21.4s,baz=164,slow=31						
	19nm,0.9s						
SUR	Sutherland	20.85	19	P	P	07 12 53.2	+0.6
SUR				IAmb	IAmb	07 12 54.8	
	comp=Z,91nm,1.5s						
VNA3	Neumayer Olymp	21.40	200	P	P	07 12 58.3	+0.2
BOSA	Boshof	25.51	26	P	P	07 13 39.0	-0.2
	comp=Z,5.0nm,1.0s,baz=197,slow=10,SNR=3.4						
BOSA				LR	LR	07 21 45.6	
	comp=Z,400nm,21.9s,baz=193,slow=32						
	comp=Z,5.0nm,1.0s						
BOSA	Boshof	25.51	26	P	P	07 13 40.3	+1.1
MAW	Mawson	28.21	142	LR	LR	07 22 53.1	
	comp=Z,258nm,21.6s,baz=294,slow=31						
LBTB	Lobatse	29.03	24	LR	LR	07 24 11.5	
	comp=Z,263nm,19.2s,baz=190,slow=33						
BELA	Belgrano 2	30.66	198	P	P	07 14 25.0	+0.3
TSUM	Tsumeb	33.37	8	LR	LR	07 26 30.4	
	comp=Z,477nm,19.5s,baz=149,slow=33						
QSPA	South Pole Qui	37.80	180	P	P	07 15 25.9	-0.9
	comp=Z,3.4nm,0.6s,baz=49,slow=1.2,SNR=22						
QSPA				LR	LR	07 29 48.6	
	comp=Z,367nm,21.0s,baz=232,slow=34						
	comp=Z,3.4nm,0.6s						
QSPA	South Pole Qui	37.80	180	P	P	07 15 27.3	+0.5
PMSA	Palmer Station	39.32	221	LR	LR	07 27 57.1	
	comp=Z,178nm,20.3s,baz=104,slow=30						
H10S2	ASCENSION HYDR	48.80	323	T	T	08 09 46.6	
	baz=156,slow=74,SNR=5.8						
H10S3	ASCENSION HYDR	48.81	323	T	T	08 09 47.0	
	baz=64,slow=74,SNR=10						
VNDA	Vanda	48.88	171	P	P	07 16 54.9	-0.9
	comp=Z,1.7nm,0.7s,baz=239,slow=9.1,SNR=3.0						
VNDA				LR	LR	07 36 23.2	
	comp=Z,343nm,20.5s,baz=200,slow=35						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	48.88	171	P	P	07 16 57.3	+1.5
TRQA	Tornquist	52.30	254	P	P	07 17 22.4	+0.2
TRQA				IAmb	IAmb	07 17 23.9	
	comp=Z,18nm,1.3s						
MBAR	Mbarara	53.77	22	LR	LR	07 39 46.2	
	comp=Z,336nm,18.5s,baz=176,slow=35						
KIBK	Kibwezi	54.14	32	P	P	07 17 35.6	-0.4
KIBK				IAmb	IAmb	07 17 47.2	
	comp=Z,12nm,1.3s						
ITQB	Itaqui	54.84	266	P	P	07 17 41.3	+0.4
KMBO	Kilima Mbogo	55.03	30	LR	LR	07 39 59.4	
	comp=Z,116nm,18.3s,baz=146,slow=35						
PLCA	Paso Flores	55.46	246	P	P	07 17 44.1	-1.2
	comp=Z,3.3nm,1.1s,baz=146,slow=6.3,SNR=5.3						

PLCA				LR	LR	07 37 41.6	
	comp=Z,63nm,21.0s,baz=142,slow=32						
	comp=Z,3.3nm,1.1s						
PLCA	Paso Flores	55.46	246	P	P	07 17 45.5	+0.2
PLCA				IAmb	IAmb	07 18 03.2	
	comp=Z,25nm,1.9s						
LC01	Cunco	57.45	247	P	P	07 18 00.2	+0.8
LC01				IAmb	IAmb	07 18 01.0	
	comp=Z,13nm,1.2s						
CPUP	Villa Florida	57.68	268	P	P	07 18 01.3	+0.2
	comp=Z,3.2nm,0.8s,baz=125,slow=5.9,SNR=7.4						
	comp=Z,3.2nm,0.8s						
CPUP	Villa Florida	57.68	268	P	P	07 18 01.9	+0.8
CPUP				IAmb	IAmb	07 18 02.8	
	comp=Z,20nm,1.4s						
BDFB	Brasilia	60.09	284	P	P	07 18 17.2	-0.9
	comp=Z,3.1nm,0.7s,baz=119,slow=2.7,SNR=5.0						
	comp=Z,3.1nm,0.7s						
BDFB	Brasilia	60.09	284	P	P	07 18 18.2	0.0
BDFB				IAmb	IAmb	07 18 20.9	
	comp=Z,11nm,1.2s						
DBIC	Dimbokro	60.79	340	LR	LR	07 40 16.1	
	comp=Z,105nm,19.0s,baz=168,slow=32						
RCBR	Riachuelo	61.25	301	LR	LR	07 37 48.7	
	comp=Z,47nm,21.8s,baz=300,slow=29						
CO01	Juntas del Tor	62.75	256	P	P	07 18 36.4	+0.3
LVC	Limon Verde	67.49	262	P	P	07 19 07.2	0.0
ATD	Arta Tunnel	68.72	32	LR	LR	07 49 27.2	
	comp=Z,61nm,18.1s,baz=160,slow=36						
H01W2	Cape Leeuwin H	69.38	121	T	T	08 35 38.9	
	baz=219						
H01W3	Cape Leeuwin H	69.39	121	T	T	08 35 42.0	
	baz=219						
H01W1	Cape Leeuwin H	69.39	121	T	T	08 35 40.0	
	baz=219						
LPAZ	La Paz	71.81	267	P	P	07 19 34.5	+0.3
	comp=Z,11nm,1.0s,baz=129,slow=4.4,SNR=28						
	comp=Z,11nm,1.0s						
LPAZ	La Paz	71.81	267	P	P	07 19 34.5	+0.3
RPZ	Rata Peaks	82.39	164	LR	LR	07 56 13.7	
	comp=Z,222nm,18.3s,baz=222,slow=35						
PALK	Pallekele	82.53	68	LR	LR	07 48 45.8	
	comp=Z,68nm,18.3s,baz=263,slow=30						
EIL	Elat	84.00	19	LR	LR	07 57 53.8	
	comp=Z,95nm,19.0s,baz=263,slow=36						
MDT	Midelt	86.26	345	LR	LR	07 55 19.0	
	comp=Z,78nm,19.4s,baz=193,slow=33						
MMAI	Mount Meron Ar	87.34	19	LR	LR	08 00 42.1	
	comp=Z,63nm,18.2s,baz=37,slow=36						
KEST	Kesra	87.85	357	LR	LR	07 59 51.0	
	comp=Z,72nm,18.4s,baz=238,slow=35						
IDI	Anoyia	87.98	10	LR	LR	08 00 55.1	
	comp=Z,66nm,20.5s,baz=249,slow=36						
ASAR	Alice Springs	88.49	128	P	P	07 21 02.8	-0.5
	comp=Z,2.5nm,0.8s,baz=199,slow=4.7,SNR=13						
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	88.49	128	P	P	07 21 03.6	+0.3
URZ	Urewera	88.64	168	LR	LR	08 01 06.5	
	comp=Z,121nm,18.1s,baz=211,slow=36						
OTAV	Otavalo	91.01	269	P	P	07 21 15.0	-0.7
OTAV				IAmb	IAmb	07 21 18.5	
	comp=Z,9.8nm,1.6s						
WRA	Warramunga Arr	91.86	127	P	P	07 21 19.0	0.0
	comp=Z,0.5nm,0.7s,baz=200,slow=3.4,SNR=3.7						
	comp=Z,0.5nm,0.7s						
ROSC	El Rosal	92.10	275	LR	LR	08 01 48.0	
	comp=Z,117nm,18.6s,baz=324,slow=35						
ESDC	Sonseca Array	92.90	347	P	P	07 21 22.4	-0.8
	comp=Z,0.9nm,0.9s,baz=187,slow=5.2,SNR=2.9						
ESDC				LR	LR	07 57 10.2	
	comp=Z,56nm,20.3s,baz=179,slow=32						
	comp=Z,0.9nm,0.9s						
BRTR	Keskin Array B	93.54	16	LR	LR	08 05 12.7	
	comp=Z,71nm,18.0s,baz=164,slow=37						
GNI	Garni	96.27	24	LR	LR	08 05 31.7	
	comp=Z,100nm,19.9s,baz=166,slow=36						
SJG	San Juan	97.68	290	LR	LR	08 02 55.4	
	comp=Z,377nm,19.9s,baz=272,slow=34						
MLR	Muntele Rosu	98.19	9	LR	LR	08 10 02.7	
	comp=Z,66nm,18.5s,baz=88,slow=38						
KBZ	Khabaz	99.22	22	LR	LR	08 07 26.9	
	comp=Z,24nm,19.1s,baz=204,slow=36						
WMQ	Urumqi	115.43	51	PKP	PKiKP	07 26 54.0	+2.1
WMQ				pPKP	PKPdf	07 27 06.4	+15
WMQ				PP	PP	07 27 57.8	+3.7
WMQ				SKS	SKSdf	07 34 02.4	-1.2
WMQ				AMB	AMB		
	comp=Z,170nm,4.1s						
LZH	Lanzhou	118.16	67	*e*PKP	PKPdf	07 26 52.7	-4.8
SCHQ	Schefferville	125.57	316	PKP	PKPdf	07 27 11.0	+0.1
	comp=Z,1.8nm,0.8s,baz=230,slow=16,SNR=2.5						
SONM	Songino Array	127.55	58	PKP	PKPdf	07 27 12.9	-2.2
	comp=Z,0.5nm,0.7s,baz=225,slow=3.5,SNR=2.4						
TXAR	Lajitas Array	128.64	269	PKP	PKPdf	07 27 15.3	-2.4
	comp=Z,1.0nm,1.1s,baz=157,slow=2.9,SNR=4.4						
PDAR	Pinedale Array	140.97	279	PKhKP	PKPpre	07 27 33.2	
	comp=Z,1.0nm,1.0s,baz=104,slow=6.3,SNR=5.8						
NVAR	Mina Array Bea	143.72	267	PKhKP	PKPpre	07 27 41.8	
	comp=Z,0.1nm,0.2s,baz=164,slow=3.6,SNR=1.8						
DLMT	Dillon	144.23	281		PKPdf	07 27 46.0	-0.1
RES	Resolute Bay	144.29	334		PKPdf	07 27 45.7	+0.7
HLID	Hailey	144.36	277		PKPdf	07 27 45.9	-0.5
YERR	Yerington	144.64	267		PKPdf	07 27 47.8	+0.7
PNTR	Pine Nut	144.92	267		PKPdf	07 27 48.0	+0.4
MFID	Camas Ranch	145.14	276		PKPdf	07 27 48.5	+0.8
MPK	Martis Peak	145.31	267		PKPab	07 27 49.6	+1.3
MSO	Missoula	145.78	282		PKPbc	07 27 49.5	+0.3
BEKR	Beckworth	145.87	267		PKPab	07 27 50.8	+0.5
PLID	Pearl Lake	146.14	278		PKPab	07 27 51.5	+0.3
JTMT	Jette	146.42	284		PKPbc	07 27 51.7	+0.5
TIXI	Tiksi	146.60	31	PKPbc	PKPdf	07 27 49.3	+0.2
	comp=Z,5.8nm,0.8s,baz=90,slow=23,SNR=16						
TIXI	Tiksi	146.60	31		PKPdf	07 27 49.6	+0.5
J08A	Circle Bar Ran	146.72	274		PKPbc	07 27 52.8	+0.7
WALA	Waterton Lakes	146.81	286		PKPbc	07 27 52.7	+0.6
BMO	Blue Mountains	146.81	277		PKPbc	07 27 52.5	+0.3
I07A	Izee	147.74	274		PKPbc	07 27 54.9	0.0
G08A	Pilot Rock	148.04	277		PKiKP	07 27 57.1	-0.3
EDM	Edmonton	148.15	293		PKPbc	07 27 55.2	-0.4
YKA	Yellowknife Ar	150.85	311	PKPbc	PKPbc	07 28 01.4	-0.5
	comp=Z,4.8nm,0.7s,baz=97,slow=2.2,SNR=87						
YKA	Yellowknife Ar	150.85	311		PKPbc	07 28 01.0	-0.9
ILAR	Eielson Array	163.86	328	PKPab	PKPab	07 29 05.7	+0.4
	comp=Z,1.4nm,1.0s,baz=35,slow=2.8,SNR=8.7						
ILAR	Eielson Array	163.86	328	PKPdf	PKPdf	07 28 13.0	+0.6
ILAR					PKPab	07 29 06.4	+1.1

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*IDC **03** 07:46:47.1±0.5, 13°.64N×91°.08W, h0km, mb4.5/20, mbtmp4.5/22, ML4.5/2, MS3.9/40, Error ellipse: s-maj=24.7km s-min=11.4km az=58.0*

*UCR **03** 07:46:51.5±1.7, 13°.62N×91°.30W, h6km±10km, ML4.5*

*SNET **03** 07:46:51.6±1.4, 13°.58N×91°.34W, h12km±18km, ML4.7*

*INET **03** 07:46:52.0±1.1, 13°.61N×91°.38W, h8km±9km, MW4.1*

*GCG **03** 07:46:52.8±0.8, 13°.62N×91°.50W, h41km, MD4.6*

*NEIC **03** 07:46:54.2±3.0, 13°.66N±0°.07×91°.29W±0°.07, h35km±1km, mb4.7/73, Md4.7(SNET), Error ellipse: s-maj=13.7km s-min=8.4km az=222.0*

ISC 03 07:46:53.4±1.0, **13°.59N**±0°.05×**91°.40W**±0°.05, **h43**km±9km, **n547**, σ1s08/536, **mb4.6**/47, **MS4.0**/39, **53C-31D, Fault plane solution: NP1:**φs152.37297°, δ2.78247°, λ-40.25761°. **NP2:**φs282.59726°, δ88.20231°, λ-92.12413°. **Principal axes:** T Plg43.1642°, Azm14.6564°; N Plg2.1231°, Azm282.6639°; P Plg46.7571°, Azm190.4048°; **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.98	343		Pn	07 47 09.4	-1.3
RTAL	Retalhuleu	0.98	343	*e*P	Pn	07 47 08.8	-1.9
RTAL				*e*S	Sn	07 47 24.0	+0.6
FUG	Fuego 3	1.01	32	⇑*e*P	Pn	07 47 11.2	-0.2
PCG	Pacaya	1.11	44	⇑*e*P	Pn	07 47 12.9	+0.1
STG3	Santiaguito 3,	1.13	352	⇑*e*P	Pn	07 47 12.1	-0.9
NBG	Las Nubes	1.43	46	⇑*e*P	Pn	07 47 18.0	+0.9
SLOZ	Alcaldia de Sa	1.63	74	*e*P	Pn	07 47 19.1	-0.6
SLOZ				*e*S	Sn	07 47 39.6	0.0
SLOZ				IAML		07 47 51.8	
	comp=Z,5μm,0.5s						
HUEH	Huehuetenango	1.73	357		Pn	07 47 21.5	+0.3
HUEH	Huehuetenango	1.73	357	*e*P	Pn	07 47 21.5	+0.3
HUEH	Huehuetenango	1.73	357	*e*P	Pn	07 47 21.5	+0.3
HUEH	Huehuetenango	1.73	357	*e*P	Pn	07 47 21.4	+0.2
CEVE	Cerro Verde	1.75	82	*e*P	Pn	07 47 20.7	-0.8
CEVE				IAML		07 47 55.1	
	comp=Z,20μm,0.4s						
CEVE	Cerro Verde	1.75	82	*e*P	Pn	07 47 20.7	-0.8
CEVE				IAML		07 47 55.1	
	comp=Z,20μm,0.4s						
SNJE	San Jose	1.77	81	*e*P	Pn	07 47 20.5	-1.2
SNJE	San Jose	1.77	81	*e*P	Pn	07 47 20.5	-1.2
JAYA	Jayaque - finc	1.90	88	*e*P	Pn	07 47 21.8	-1.7
JAYA	Jayaque - finc	1.90	88	*e*P	Pn	07 47 21.8	-1.7
CEDA	San Andres	1.96	83	*e*P	Pn	07 47 23.1	-1.2
CEDA				IAML		07 47 58.7	
	comp=Z,9μm,0.5s						
CEDA	San Andres	1.96	83	*e*P	Pn	07 47 23.1	-1.2
CEDA				IAML		07 47 58.7	
	comp=Z,9μm,0.5s						
CEDA	San Andres	1.96	83	*e*P	Pn	07 47 23.0	-1.3
CEDA				*e*S	Sn	07 47 48.2	+0.5
LALI	Alcalda de L	2.03	92	*e*P	Pn	07 47 24.9	-0.2
LALI	Alcalda de L	2.03	92	*e*P	Pn	07 47 24.9	-0.2
LALI	Alcalda de L	2.03	92	*e*P	Pn	07 47 24.6	-0.5
ITCA	Escuela Especi	2.07	87	*e*P	Pn	07 47 25.3	-0.4
ITCA	Escuela Especi	2.07	87	*e*P	Pn	07 47 25.3	-0.4
BOQS	Boqueron	2.07	86	*e*P	Pn	07 47 25.8	-0.1
BOQS	Boqueron	2.07	86	*e*P	Pn	07 47 25.8	-0.1
SNET	Serv Nac Est T	2.11	87		Pn	07 47 25.4	-0.9
SNET	Serv Nac Est T	2.11	87	*e*P	Pn	07 47 25.9	-0.5
SNET				*e*S	Sn	07 47 51.2	-0.2
MTO3	Montecristo	2.14	68		Pn	07 47 26.8	-0.1
MTO3	Montecristo	2.14	68	*i* P	Pn	07 47 26.9	0.0
MTO3				*e*S	Sn	07 47 54.5	+2.2
MTO3				IAML		07 48 00.7	
	comp=Z,2μm,0.6s						
MTO3	Montecristo	2.14	68	*i* P	Pn	07 47 26.9	0.0
MTO3				*e*S	Sn	07 47 54.5	+2.2
MTO3				IAML		07 48 00.7	
	comp=Z,2μm,0.6s						
MTO3	Montecristo	2.14	68	*e*P	Pn	07 47 26.9	0.0
MTO3				*e*S	Sn	07 47 54.5	+2.2
IGN	Direccin Gen	2.17	86	*e*P	Pn	07 47 27.1	-0.1
IGN	Direccin Gen	2.17	86	*e*P	Pn	07 47 27.1	-0.1
ESQI	Esquipulas	2.22	64		Pn	07 47 28.4	+0.5
ESQI	Esquipulas	2.22	64	*e*P	Pn	07 47 28.0	+0.1
ESQI				*e*S	Sn	07 47 56.1	+1.9
AEIL	Aeropuerto Ilo	2.23	87	*e*P	Pn	07 47 27.4	-0.5
AEIL				*e*S	Sn	07 47 54.4	+0.2
AEIL				IAML		07 48 05.8	
	comp=Z,11μm,0.4s						
AEIL	Aeropuerto Ilo	2.23	87	*e*P	Pn	07 47 27.4	-0.5
AEIL				*e*S	Sn	07 47 54.4	+0.2
AEIL				IAML		07 48 05.8	
	comp=Z,11μm,0.4s						
MRL	Marmol	2.23	48	*e*P	Pn	07 47 29.4	+1.3
LFRS	El Faro	2.28	89	*e*P	Pn	07 47 28.6	0.0
LFRS	El Faro	2.28	89	*e*P	Pn	07 47 28.6	0.0
LBRS	Las Brisas	2.30	86	*e*P	Pn	07 47 28.0	-1.0
LBRS	Las Brisas	2.30	86	*e*P	Pn	07 47 28.0	-1.0
PAVA	Las Pavas	2.40	87	*e*P	Pn	07 47 30.4	0.0
COEG	Centro de Oper	2.45	89	*e*P	Pn	07 47 31.3	+0.2
COEG				IAML		07 48 10.8	
	comp=Z,6μm,0.6s						
COEG	Centro de Oper	2.45	89	*e*P	Pn	07 47 31.3	+0.2
COEG				IAML		07 48 10.8	
	comp=Z,6μm,0.6s						
COEG	Centro de Oper	2.45	89	*e*P	Pn	07 47 31.2	+0.2
CCIG	Comitan	2.77	345		Pn	07 47 37.4	+1.9
COEB	Comit de Eme	2.79	91	*e*P	Pn	07 47 35.7	0.0
LCY	Lacayo	3.03	93	*e*P	Pn	07 47 39.0	0.0
LCY	Lacayo	3.03	93	*e*P	Pn	07 47 39.0	0.0
CAHU	Cacacuatique	3.11	86	*e*P	Pn	07 47 40.1	-0.1
CAHU	Cacacuatique	3.11	86	*e*P	Pn	07 47 40.1	-0.1
LCND	La Caada	3.43	94	*e*P	Pn	07 47 44.2	-0.1
LCND	La Caada	3.43	94	*e*P	Pn	07 47 44.2	-0.1
PETF	Flores	3.63	24		Pn	07 47 48.8	+1.6
CSGN	Cosiguina Volc	3.79	99	*e*P	Pn	07 47 48.9	-0.5
TGUH	Tegucigalpa,Un	4.04	83	Pn	Pn	07 47 52.8	-0.1
TGUH	Tegucigalpa,Un	4.04	83	*e*P	Pn	07 47 52.3	-0.6
CRIN	San Cristobal	4.33	101		Pn	07 47 56.9	0.0
CRIN	San Cristobal	4.33	101	*e*P	Pn	07 47 56.5	-0.3
CNGN	Cerro Negro	4.71	103		Pn	07 48 00.8	-1.3
CMIG	Matias Romero	4.84	317	Pn	Pn	07 48 02.9	-0.9
	comp=Z,4.0nm,0.3s,baz=138,slow=11,SNR=59						
CMIG				Sn	Sn	07 48 56.8	-1.8
	comp=Z,8.9nm,0.3s,baz=181,slow=21,SNR=1.9						
CMIG				LR	LR	07 50 00.7	
	comp=Z,738nm,21.9s,baz=158,slow=38						
	comp=Z,45nm,0.5s						
COPN	Copaltepe	4.89	106	*e*P	Pn	07 48 04.8	+0.3
MGAN	Managua	5.23	105	*e*P	Pn	07 48 08.3	-0.8
HUEN		5.25	103	*e*P	Pn	07 48 08.4	-1.0
MATN	Matagalpa	5.37	96		Pn	07 48 10.8	-0.4
MATN	Matagalpa	5.37	96	*e*P	Pn	07 48 10.2	-1.0
BOAB	BOACO BROADBAN	5.70	101	Pn	Pn	07 48 14.7	-1.0
ACON	Acoyapa	6.29	104		Pn	07 48 22.4	-1.2
HZTE	Horizontes, Gu	6.36	116		Pn	07 48 26.1	+1.5
GBS3	Finca Las Img	6.45	115	*e*P	Pn	07 48 26.9	+1.0
GB1A	Borinquen Arri	6.48	114	*e*P	Pn	07 48 26.7	+0.3
BUEV	Buena Vista	6.48	115	*e*P	Pn	07 48 27.1	+0.6
BUAI	Buenos Aires	6.52	114	*e*P	Pn	07 48 26.7	-0.2
GPS2	Hotel Rincn d	6.55	115	*e*P	Pn	07 48 29.2	+1.8
ORTG	Ortega, Santa	6.64	118	Pn	Pn	07 48 29.7	+1.1
GUAI	GUAI	6.64	119	*e*P	Pn	07 48 29.4	+0.8
LIM1	Limonal	6.66	115	*e*P	Pn	07 48 29.3	+0.4
GUAB	Guayabo de Bag	6.68	115	*e*P	Pn	07 48 30.1	+0.9
COLC	Colonia	6.72	115	*e*P	Pn	07 48 31.0	+1.3
HORNC	Hornillas	6.72	114	*e*P	Pn	07 48 30.1	+0.4
VMAR	Armenia, Volca	6.73	113	*e*P	Pn	07 48 29.5	-0.3
DUNO	Dulce Nombre,	6.75	120		Pn	07 48 30.4	+0.3
DUNO	Dulce Nombre,	6.75	120	*e*P	Pn	07 48 30.6	+0.5
CUI	Cuipilapa	6.76	115	*e*P	Pn	07 48 31.0	+0.8
ACAL	Aguas Claras	6.88	115	*e*P	Pn	07 48 32.2	+0.2
PTEN	Parque Tenorio	6.89	114	*e*P	Pn	07 48 32.0	-0.1
ESPN	Las Esperanzas	7.06	100		Pn	07 48 34.0	-0.3
ESPN	Las Esperanzas	7.06	100	*e*P	Pn	07 48 33.8	-0.5
JTS	Las Juntas de	7.11	117	Pn	Pn	07 48 35.8	+0.8
JTS	Las Juntas de	7.11	117	⇓*e*P	Pn	07 48 36.1	+1.1
ARE1	Arenal 1	7.24	115	⇓*i*P	Pn	07 48 37.9	+1.1
CAO2	Cobano, Puntar	7.28	121		Pn	07 48 38.7	+1.4
LAFE	Finca La Fe, P	7.38	120	⇓*e*P	Pn	07 48 39.1	+0.4
JACO	JACO, Garabito	7.67	120	Pn	Pn	07 48 44.2	+1.5
TLIG	Tlapa	7.96	301		Pn	07 48 48.5	+1.8
HDC	Heredia	7.97	116		Pn	07 48 47.1	+0.1
HDC	Heredia	7.97	116	*e*P	Pn	07 48 47.7	+0.8
LCR2	La Lucha 2	8.19	117	⇓*e*P	Pn	07 48 52.2	+2.2
RIMA	Rio Macho	8.30	116		Pn	07 48 53.0	+1.5
PEZE	Perez Zeledon,	8.65	118		Pn	07 48 58.0	+1.8
PEZE	Perez Zeledon,	8.65	118	*e*P	Pn	07 48 58.9	+2.8
SRBA	San Rafael, Bu	8.99	118	Pn	Pn	07 49 02.5	+1.6
SRBA	San Rafael, Bu	8.99	118	*e*P	Pn	07 49 01.8	+0.9
DRK0	Durika	9.08	117		Pn	07 49 04.0	+1.8
CDITO	Canoas	9.74	120		Pn	07 49 13.7	+2.6
BRU2	Volcan	9.78	118		Pn	07 49 13.8	+2.1
BRU2	Volcan	9.78	118	*e*P	Pn	07 49 12.9	+1.1
SOR	Soroa	12.14	40	Pn	Pn	07 49 46.5	+2.7
BCIP	Isla Barro Col	12.16	110	Pn	Pn	07 49 45.5	+1.3
BCIP	Isla Barro Col	12.16	110	*e*P	Pn	07 49 44.5	+0.3
AZU	Azuero	12.36	117	*e*P	Pn	07 49 47.5	+0.7
SJCC	San Jacinto, C	16.30	101	Pn	Pn	07 50 37.5	-2.0
SJCC	San Jacinto, C	16.30	101	*e*P	Pn	07 50 36.2	-3.3
833A	Chaparral WMA,	16.44	334	P	P	07 50 42.9	-0.5
833A	Chaparral WMA,	16.44	334	P	P	07 50 43.1	-0.3
	baz=151						
UREC	San Jos de Ur	16.63	109	*e*P	Pn	07 50 43.4	-0.3
CBOC	Ciudad Bolivar	16.99	115	*e*P	Pn	07 50 49.0	+0.8
ARGC	Ariguani, Magd	17.20	101	*e*P	P	07 50 52.3	+0.4
PLMC	San Jos del P	17.23	119	*e*P	Pn	07 50 50.4	-0.7
HELC	Santa Helena	17.27	114	*e*P	Pn	07 50 51.9	0.0
ZARC	Zaragoza, Cauc	17.35	109		Pn	07 50 52.2	-0.4
ZARC	Zaragoza, Cauc	17.35	109	*e*P	Pn	07 50 52.7	+0.1
YOTC	Yotoco, Valle	17.66	121	*e*P	Pn	07 50 55.4	-1.1
656A	Willston	17.73	26	P	P	07 50 58.5	+1.0
656A				IAmb	IAmb	07 51 01.2	
	comp=Z,75nm,0.9s						
553A	Crawfordville	17.73	20	P	P	07 50 59.1	+1.5
BRAL	Brewton	17.95	12	P	P	07 51 00.3	+0.3
	baz=193						
435B	Jarrell	18.04	343	P	P	07 51 02.3	+1.3
	baz=160						
PTBC	PUERTO BERRIO,	18.09	111	*e*P	P	07 51 01.2	-0.5
NORC	Norcasia	18.14	114	*e*P	Pn	07 51 03.7	+1.4
NATX	Nacogdoches	18.34	351	P	Pn	07 51 05.4	+0.9
	baz=169						
OTAV	Otavalo	18.45	135	P	Pn	07 51 07.2	+0.6
JCT	Junction City	18.51	337	P	Pn	07 51 08.3	+1.5
	baz=153						
OCAC	Ocana	18.53	105	P	Pn	07 51 07.2	0.0
OCAC	Ocana	18.53	105	*e*P	P	07 51 05.2	-1.5
SOTA	Rioblanco	18.53	127	*e*P	Pn	07 51 10.2	+2.7
GCUF	Volcan Galeras	18.56	130	*e*P	Pn	07 51 08.3	+0.4
VBMS	Vicksburg	18.57	2	P	Pn	07 51 08.1	+0.8
	baz=182						
ORTC	Ortega, Tolima	18.62	120	*e*P	Pn	07 51 09.8	+1.6
SPBC	San Pablo de B	18.81	113	*e*P	Pn	07 51 11.3	+0.8
ROSC	El Rosal	18.95	116	P	P	07 51 11.0	-0.6
	comp=Z,29nm,0.8s,baz=35,slow=5.2,SNR=13						
ROSC	El Rosal	18.95	116	*e*P	Pn	07 51 14.2	+1.6
URIC	Uribia, Colomb	19.03	93	P	Pn	07 51 12.8	-0.3
URIC				IAmb	IAmb	07 51 18.2	
	comp=Z,50nm,1.4s						
WHTX	Lake Whitney,	19.14	344	P	P	07 51 13.8	+0.7
	baz=161,SNR=9.1						
TIGA	Tifton	19.16	21	P	P	07 51 12.6	-0.7
	baz=203,SNR=7.9						
BARC	Barichara	19.23	109	*e*P	Pn	07 51 17.3	+1.6
TXAR	Lajitas Array	19.36	326	P	Pn	07 51 18.0	+1.0
	comp=Z,0.8nm,0.3s,baz=154,slow=12,SNR=156						
	comp=Z,15nm,0.7s						
TX31	Lajitas Ar. Si	19.36	326	P	Pn	07 51 18.3	+1.3
TX31				IAmb	IAmb	07 51 20.9	
	comp=Z,45nm,0.8s						
TX32	Lajitas Array	19.36	326	P	Pn	07 51 18.4	+1.4
PAMC	Pamplona, Colo	19.40	107	*e*P	P	07 51 16.9	+0.3
CHIC	Chingaza	19.57	115	*e*P	Pn	07 51 20.6	+0.7
RUSC	La Rusia	19.59	111	*e*P	P	07 51 19.1	+0.4
RUSC				*e*P	Pn	07 51 20.4	+0.1
Z41A	Richland Creek	19.62	357	P	P	07 51 18.9	+0.6
	baz=175						
LRAL	Lakeview Retre	19.77	11		Pn	07 51 21.4	-0.4
LRAL				IAmb	IAmb	07 51 27.9	
	comp=Z,52nm,1.0s						
LRAL	Lakeview Retre	19.77	11	P	P	07 51 20.1	+0.2
	baz=192,SNR=36						
VILC	Villavicencio,	19.85	117	*e*P	P	07 51 21.3	+0.2
ABTX	Abilene, Hawle	20.39	340	P	P	07 51 27.6	+0.8
ABTX				IAmb	IAmb	07 51 29.5	
	comp=Z,39nm,0.8s						
ABTX	Abilene, Hawle	20.39	340	P	P	07 51 27.8	+1.0
	baz=156,SNR=39						
Y49A	Blount Mountai	20.68	12	P	P	07 51 30.6	+0.7
Y49A				IAmb	IAmb	07 51 38.7	
	comp=Z,29nm,0.8s						
LPIG	La Paz	20.70	303	LR	LR	07 59 21.9	
	comp=Z,189nm,18.2s,baz=142,slow=36						
MACC	Macarena, Meta	20.75	122	*e*P	P	07 51 29.9	-0.9
X40A	Basin Creek Fa	20.85	357	P	P	07 51 31.6	0.0
	baz=176						
SDV	Santo Domingo	20.89	101	P	P	07 51 29.5	-3.0
	comp=Z,8.6nm,0.3s,baz=331,slow=7.1,SNR=3.8						
	comp=Z,8.6nm,0.3s						
OXF	Oxford	20.91	5	P	P	07 51 32.3	0.0
	baz=185						
MIAR	Mount Ida	20.96	355	P	P	07 51 32.9	0.0
MIAR	Mount Ida	20.96	355	P	P	07 51 32.8	0.0
	baz=174						
GOGA	Godfrey	21.02	19	P	P	07 51 33.0	-0.4
GOGA				IAmb	IAmb	07 51 47.9	
	comp=Z,24nm,0.9s						
GOGA	Godfrey	21.02	19	P	P	07 51 33.6	+0.1
	baz=202						
PTGC	Puerto Gaitan,	21.18	114	*e*P	P	07 51 35.8	+0.4
Y52A	Lilburn	21.26	17	P	P	07 51 36.8	+0.7
Y52A				IAmb	IAmb	07 52 04.9	
	comp=Z,48nm,1.3s						
W41B	Gary Mavity, V	21.51	358	P	P	07 51 39.0	+0.3
	baz=177,SNR=6.4						
W39A	Magazine	21.62	355	P	P	07 51 40.9	+1.0
	baz=173,SNR=6.0						
WHAR	Wooly Hollow	21.63	358	P	P	07 51 40.0	0.0
WHAR				IAmb	IAmb	07 51 42.6	
	comp=Z,20nm,0.9s						
NHSC	New Hope	21.96	26	P	P	07 51 43.2	-0.4
	baz=210						
WMOK	Wichita Mounta	22.09	344	P	P	07 51 45.2	+0.2
WMOK	Wichita Mounta	22.09	344	P	P	07 51 45.2	+0.2
	baz=160,SNR=10						
SWET	Sewanee	22.10	12	P	P	07 51 45.0	0.0
SWET				IAmb	IAmb	07 51 54.9	
	comp=Z,18nm,0.8s						
MNTX	Cornudas Mount	22.13	327	P	P	07 51 46.2	+0.7
MNTX	Cornudas Mount	22.13	327	P	P	07 51 46.2	+0.7
	baz=141,SNR=137						
FCAR	Ozark Folk Cen	22.22	358	P	P	07 51 45.5	-0.8
FCAR				IAmb	IAmb	07 51 47.6	
	comp=Z,21nm,0.9s						
LCAR	Lake Charles	22.39	1	P	P	07 51 47.5	-0.7
LCAR				IAmb	IAmb	07 51 49.8	
	comp=Z,22nm,0.6s						
TUL1	Leonard	22.58	351	P	P	07 51 50.1	-0.1
	baz=168						
WVT	Waverly	22.68	8	P	P	07 51 50.2	-1.0
WVT	Waverly	22.68	8	P	P	07 51 50.9	-0.3
	baz=189						
U40A	Yellville	22.71	357	P	P	07 51 50.7	-0.9
U40A				IAmb	IAmb	07 51 54.0	
	comp=Z,17nm,1.0s						
U40A	Yellville	22.71	357	P	P	07 51 51.2	-0.4
	baz=176,SNR=19						
MSTX	Muleshoe	22.77	335	P	P	07 51 52.2	-0.2
	baz=150,SNR=16						
TKL	Tuckaleechee C	23.03	16	P	P	07 51 53.4	-1.5
	comp=Z,7.8nm,0.4s,baz=183,slow=11,SNR=23						
TKL				LR	LR	08 01 43.7	
	comp=Z,299nm,20.8s,baz=200,slow=39						
	comp=Z,7.8nm,0.4s						
TKL	Tuckaleechee C	23.03	16	P	P	07 51 55.1	+0.2
TKL				IAmb	IAmb	07 51 56.4	
	comp=Z,52nm,1.3s						
PBMO	Poplar Bluff	23.11	2	P	P	07 51 54.4	-1.3
PBMO				IAmb	IAmb	07 51 56.8	
	comp=Z,34nm,1.0s						
AMTX	Amarillo	23.15	338	P	P	07 51 56.4	+0.2
	baz=153						
KMSC	Kings Mountain	23.31	21	P	P	07 51 57.7	+0.1
	baz=205						
V53A	Saluda	23.31	18	P	P	07 51 57.2	-0.5
V53A				IAmb	IAmb	07 52 24.7	
	comp=Z,19nm,1.1s						
BAUV	El Baul	23.36	99	P	P	07 51 56.8	-1.6
BAUV				IAmb	IAmb	07 52 00.3	
	comp=Z,24nm,0.7s						
U49A	Red Boiling Sp	23.38	11	P	P	07 51 57.5	-0.9
U49A				IAmb	IAmb	07 51 59.0	
	comp=Z,43nm,1.2s						
TZTN	Tazewell	23.92	16	P	P	07 52 03.1	-0.3
TZTN				IAmb	IAmb	07 52 26.4	
	comp=Z,20nm,0.9s						
TZTN	Tazewell	23.92	16	P	P	07 52 03.0	-0.5
	baz=199						
T50A	Nancy	24.07	13	P	P	07 52 03.9	-0.9
T50A				IAmb	IAmb	07 52 26.7	
	comp=Z,21nm,1.1s						
S39A	Bolivar	24.07	356	P	P	07 52 04.0	-0.8
121A	Cookes Peak, D	24.08	324	P	P	07 52 05.8	+0.7
	baz=137,SNR=15						
CCM	Cathedral Cave	24.37	0	P	P	07 52 07.1	-0.4
CCM				IAmb	IAmb	07 52 08.5	
	comp=Z,27nm,0.7s						
CCM	Cathedral Cave	24.37	0	P	P	07 52 06.8	-0.8
	baz=180						
BNM	Barren Site	24.70	329	P	P	07 52 13.0	+2.2
ANMO	Albuquerque	25.25	330	P	P	07 52 17.4	+1.7
	comp=Z,7.7nm,0.7s,baz=144,slow=12,SNR=51						
	comp=Z,7.7nm,0.7s						
ANMO	Albuquerque	25.25	330	P	P	07 52 17.8	+2.0
ANMO	Albuquerque	25.25	330	P	P	07 52 16.3	+0.6
	baz=143						
TUC	Tucson	25.73	320	P	P	07 52 21.1	+1.1
	baz=132						
KSU1	Kansas State U	25.83	351	P	P	07 52 21.3	+0.5
	baz=168						
T25A	Trinidad	26.18	336	P	P	07 52 24.0	-0.2
	baz=150						
P49A	Miami Univ. Ec	26.51	12	P	P	07 52 26.3	-0.6
	baz=194						
214A	Organ Pipe Nat	26.81	317	P	P	07 52 30.3	+0.5
	baz=128,SNR=12						
HDIL	Hopedale	26.93	4	P	P	07 52 29.9	-0.8
	baz=184						

SFIN	Lafayette	26.96	7	P	P	07 52 30.2	-0.7
	baz=189						
W18A	Petrified Fore	27.08	326	P	P	07 52 33.2	+0.9
	baz=137,SNR=7.1						
O48B	Farmland	27.13	11	P	P	07 52 31.9	-0.6
	baz=193						
SDCO	Great Sand Dun	27.14	335	P	P	07 52 35.0	+2.0
SDCO	Great Sand Dun	27.14	335	P	P	07 52 33.2	+0.3
	baz=148,SNR=10						
KSCO	Kaye Shedlock'	27.20	341	P	P	07 52 33.9	+0.6
	baz=155						
ACSO	Alum Creek Sta	27.55	14	P	P	07 52 35.8	-0.5
ACSO				IAmb	IAmb	07 52 36.8	
	comp=Z,40nm,1.3s						
ACSO	Alum Creek Sta	27.55	14	P	P	07 52 35.3	-1.0
	baz=198,SNR=6.5						
TBTG	Tabatinga, AM	27.69	128	*e*P	P	07 52 38.6	+0.8
S22A	4UR Ranch, Cre	27.71	333	P	P	07 52 38.9	+0.8
	baz=146,SNR=13						
MCWV	Mont Chateau	27.90	19	P	P	07 52 39.2	-0.1
	baz=204						
O53A	New Philadelph	28.03	17	P	P	07 52 39.9	-0.6
	baz=201						
MVCO	Mesa Verde	28.05	330	P	P	07 52 42.4	+1.4
	baz=142,SNR=16						
Q24A	Divide	28.05	337	P	P	07 52 41.9	+0.8
	baz=150						
CZSB	Cruzeiro do Su	28.16	138	*e*P	P	07 52 43.4	+1.5
WUAZ	Wupatki	28.29	324	P	P	07 52 44.9	+1.7
	baz=135,SNR=10						
OGNE	Ogallala	28.80	343	P	P	07 52 48.2	+0.7
	baz=158						
ISCO	Idaho Springs	28.95	337	P	P	07 52 50.0	+0.9
	baz=150						
SMCO	Snowmass	28.96	334	P	P	07 52 51.5	+2.1
PV11	David Mesa, Pa	29.09	331	P	P	07 52 52.6	+2.4
PV11				IAmb	IAmb	07 52 55.1	
	comp=Z,22nm,1.2s						
PDMCI	Parker Dam,Lak	29.15	319	P	P	07 52 52.0	+1.4
	baz=129,SNR=6.3						
NNA	Nana	29.22	150	LR	LR	08 02 35.4	
	comp=Z,101nm,18.7s,baz=322,slow=33						
JFWS	Jewell Farm	29.24	2	P	P	07 52 51.1	-0.2
	baz=182						
M53A	WI Miller and	29.28	17	P	P	07 52 51.0	-0.7
	baz=201						
SWSC	Sam W. Stewart	29.43	315	P	P	07 52 54.6	+1.5
	baz=125						
SSPA	Standing Stone	29.43	21	P	P	07 52 52.4	-0.6
	baz=207						
IKP	In-Ko-Pah, Jac	29.48	314	P	P	07 52 54.8	+1.2
	baz=124						
BC3	Big Chuckawall	29.61	317	P	P	07 52 56.9	+2.1
	baz=126,SNR=13						
IRM	Iron Mountain	29.71	318	P	P	07 52 57.3	+1.7
	baz=128,SNR=6.9						
MONP2	Monument Peak	29.83	314	P	P	07 52 58.0	+1.1
	baz=124						
N23A	Red Feather La	30.03	338	P	P	07 52 59.2	+0.6
	baz=150						
BELC	Belle Mtn. Jos	30.18	317	P	P	07 53 01.4	+1.5
	baz=126						
TPFO	Pinon Flats	30.26	315	P	P	07 53 02.0	+1.5
	baz=125						
PFO	Pinyon Flats O	30.27	315	LR	LR	08 05 30.3	
	comp=Z,245nm,20.8s,baz=136,slow=37						
PFO	Pinyon Flats O	30.27	315	P	P	07 53 02.2	+1.6
	baz=125						
O20A	White River Ci	30.30	334	P	P	07 53 02.8	+1.9
	baz=146						
ECSD	EROS Data Cent	30.38	353	P	P	07 53 02.4	+1.1
	baz=170						
GMRC	Granite Mounta	30.43	318	P	P	07 53 03.3	+1.2
	baz=128,SNR=8.7						
MURC	Murrieta	30.76	315	P	P	07 53 07.1	+2.1
	baz=124						
HEC	Hector,Ludlow	30.90	318	P	P	07 53 08.0	+1.8
	baz=127						
BBRC	Big Bear Solar	30.95	316	P	P	07 53 08.4	+1.5
	baz=125						
TUQ	Turquoise Moun	31.00	319	P	P	07 53 08.6	+1.5
	baz=128						
BFSC	Mount Baldy Ra	31.44	315	P	P	07 53 11.7	+0.7
	baz=124						
BINY	Binghamton	31.49	22	P	P	07 53 10.7	-0.5
	baz=209						
GSC	Goldstone, Bar	31.49	318	P	P	07 53 13.6	+2.2
	baz=127						
SHOC	Shoshone, Teco	31.51	319	P	P	07 53 13.7	+2.2
	baz=128						
SPMN	Marine on St.	31.56	358	P	P	07 53 11.3	-0.4
	baz=177,SNR=5.4						
G45A	Suttons Bay	31.73	8	P	P	07 53 12.2	-1.0
K22A	Casper	31.78	339	P	P	07 53 14.5	+0.7
	baz=151						
TPNV	Topopah Spring	32.16	321	P	P	07 53 18.9	+1.5
	baz=130,SNR=5.9						
LRMC	Laurel Mtn Rad	32.17	317	P	P	07 53 19.1	+1.7
	baz=126						
FURC	Furnace Creek,	32.24	319	P	P	07 53 19.9	+2.1
	baz=128						
RSSD	Black Hills	32.30	343	P	P	07 53 18.8	+0.3
	baz=156						
MPMC	Manual Prospec	32.39	318	P	P	07 53 20.8	+1.4
	baz=127,SNR=15						
COWI	Conover	32.47	3	P	P	07 53 18.5	-1.2
COWI				IAmb	IAmb	07 53 19.9	
	comp=Z,6.6nm,0.6s						
BOAV	Boa Vista	32.49	107	*e*P	P	07 53 19.8	-0.5
DUG	Dugway, Tooele	32.49	329	P	P	07 53 22.0	+1.8
	baz=138,SNR=6.2						
R11A	Troy Canyon, C	32.68	323	P	P	07 53 24.4	+2.5
	baz=132,SNR=11						
SADO	Sadowa	32.79	16	LR	LR	08 07 46.4	
	comp=Z,338nm,18.8s,baz=228,slow=39						
SADO	Sadowa	32.79	16	P	P	07 53 21.5	-1.1
SADO				IAmb	IAmb	07 53 21.7	
	comp=Z,12nm,1.0s						
ISA	Isabella, Lake	32.80	317	P	P	07 53 24.9	+2.0
	baz=125						
GRAC	Grapevine Rang	32.88	320	P	P	07 53 25.6	+2.1
	baz=128,SNR=13						
SBC	Santa Barbara	32.97	314	P	P	07 53 26.3	+2.0
	baz=122						
CWC	Cottonwood Cre	33.00	318	P	P	07 53 26.7	+2.0
	baz=126						
L61B	Northampton	33.01	26	P	P	07 53 25.6	+1.1
	baz=215						
BW06	Boulder Array	33.04	335	P	P	07 53 26.0	+0.9
BW06	Boulder Array	33.04	335	P	P	07 53 26.0	+0.9
	baz=146						
PD31	Pinedale Array	33.04	335	P	P	07 53 26.2	+1.2
PDAR	Pinedale Array	33.04	335	P	P	07 53 25.0	0.0
	comp=Z,1.0nm,0.5s,baz=128,slow=10.0,SNR=14						
PDAR				PcP	PcP	07 56 08.6	+0.6
	comp=Z,0.4nm,0.6s,baz=125,slow=5.4,SNR=3.9						
PDAR				ScP	ScP	07 59 53.5	+4.6
	comp=Z,0.3nm,0.6s,baz=145,slow=5.4,SNR=4.6						
PDAR				LR	LR	08 09 35.2	
	comp=Z,86nm,18.5s,baz=149,slow=41						
	comp=Z,1.0nm,0.5s						
PDAR	Pinedale Array	33.04	335	P	P	07 53 26.4	+1.4
PKM	Mcpherson Peak	33.28	315	P	P	07 53 28.3	+1.1
	baz=122						
VES	Vestal, Richgr	33.31	317	P	P	07 53 28.9	+1.8
	baz=124,SNR=6.6						
SMMC	Simmler	33.64	315	P	P	07 53 31.7	+1.6
	baz=122						
REDW	Red Top Meadow	34.06	334	P	P	07 53 35.2	+1.2
LONY	Lake Ozonia	34.10	22	P	P	07 53 33.5	-0.5
	baz=210						
ETMB	Extrema	34.14	132	*e*P	P	07 53 33.8	-0.8
ELK	Elko	34.15	327	LR	LR	08 09 08.5	
	comp=Z,159nm,18.5s,baz=153,slow=39						
EYMN	Ely	34.26	360	P	P	07 53 34.7	-0.6
	baz=180						
NV11	Mina Array Sit	34.27	321	P	P	07 53 38.8	+3.1
NVAR	Mina Array Bea	34.36	321	P	P	07 53 39.0	+2.4
	comp=Z,17nm,0.9s,baz=136,slow=8.2,SNR=88						
NVAR				PcP	PcP	07 56 13.3	+1.5
	comp=Z,1.0nm,0.7s,baz=143,slow=3.9,SNR=5.1						
NVAR				ScP	ScP	07 59 57.8	+4.1
	comp=Z,0.6nm,0.9s,baz=131,slow=3.8,SNR=2.3						
NVAR				LR	LR	08 09 39.9	
	comp=Z,301nm,20.2s,baz=122,slow=40						
	comp=Z,17nm,0.9s						
MACA	Manacapuru-AM	34.73	116	*e*P	P	07 53 39.6	-0.1
H17A	Grant Village	34.80	336	P	P	07 53 41.1	+0.7
	baz=146						
AGMN	Agassiz Nation	34.81	355	P	P	07 53 40.2	+0.2
	baz=172						
RLMT	Red Lodge	34.91	338	P	P	07 53 41.2	0.0
	baz=148						
LAO	LASA Array	35.27	342	P	P	07 53 44.1	0.0
	baz=154						
GCMT	Greycliff	35.63	338	P	P	07 53 47.5	+0.2
HLID	Hailey	35.82	331	P	P	07 53 49.4	+0.4
	baz=139,SNR=18						
MCMT	McKenzie Canyo	36.10	334	P	P	07 53 53.6	+2.1
BOZ	Bozeman (W)	36.22	336	P	P	07 53 52.4	0.0
	baz=145						
DGMT	Dagmar	36.36	346	P	P	07 53 53.3	-0.1
	baz=158						
ULM	Lac du Bonnet	36.74	355	P	P	07 53 54.6	-1.9
	comp=Z,3.0nm,0.5s,baz=190,slow=10,SNR=5.3						
ULM				LR	LR	08 10 30.6	
	comp=Z,96nm,21.6s,baz=147,slow=39						
	comp=Z,3.0nm,0.5s						
LPAZ	La Paz	37.55	141	P	P	07 54 03.1	-1.4
	comp=Z,4.2nm,0.9s,baz=354,slow=12,SNR=4.9						
	comp=Z,4.2nm,0.9s						
LPAZ	La Paz	37.55	141	P	P	07 54 04.6	+0.1
LPAZ	La Paz	37.55	141	*e*P	P	07 54 04.3	-0.2
EGMT	Eagleton	37.58	340	P	P	07 54 04.6	+0.8
EGMT				IAmb	IAmb	07 54 06.1	
	comp=Z,16nm,1.4s						
EGMT	Eagleton	37.58	340	P	P	07 54 04.3	+0.5
	baz=150,SNR=6.9						
MSO	Missoula	38.15	335	P	P	07 54 09.9	+1.2
	baz=143,SNR=6.4						
K04D	Chiloquin, OR	39.03	324	P	P	07 54 17.4	+1.2
	baz=128						
YBH	Yreka Blue Hor	39.05	322	LR	LR	08 11 35.2	
	comp=Z,190nm,19.6s,baz=147,slow=38						
L04D	Klamath Falls	39.10	323	P	P	07 54 17.8	+1.0
	baz=127						
J05D	Fort Rock, OR	39.16	325	P	P	07 54 18.6	+1.4
	baz=130,SNR=6.4						
J04D	Umpqua Nationa	39.62	324	P	P	07 54 22.6	+1.5
	baz=129						
ITTB	Itaituba	39.64	114	*e*P	P	07 54 20.1	-1.4
L02F	Cave Junction	39.80	322	P	P	07 54 23.4	+1.0
	baz=126						
MALB	Monte Alegre	39.89	110	*e*P	P	07 54 22.9	-0.6
I05D	Terrebonne, OR	39.90	326	P	P	07 54 25.1	+1.9
	baz=131,SNR=6.7						
I04A	Tendick Farm,	40.14	325	P	P	07 54 26.6	+1.3
	baz=129						
K02D	Willamette Mer	40.19	322	P	P	07 54 27.2	+1.4
	baz=126						
G05D	Wamic, OR	40.48	327	P	P	07 54 29.5	+1.4
	baz=131,SNR=5.8						
H04A	Detroit Lake	40.58	326	P	P	07 54 30.5	+1.6
I03D	Drain, OR	40.61	324	P	P	07 54 30.0	+0.9
	baz=128						
NEW	Newport	40.62	334	LR	LR	08 14 56.4	
	comp=Z,124nm,18.1s,baz=142,slow=42						
NEW	Newport	40.62	334	P	P	07 54 29.9	+0.7
	baz=139,SNR=5.5						
J01E	Myrtle Point	40.63	323	P	P	07 54 30.7	+1.5
	baz=126						
VILB	Vilhena	40.64	129	*e*P	P	07 54 29.5	-0.2
H04D	Lebanon	40.78	325	P	P	07 54 31.3	+0.8
	baz=129,SNR=6.7						
F05D	White Salmon	40.98	328	P	P	07 54 34.0	+1.9
	baz=132,SNR=6.5						
I02E	Swisshome, OR	41.15	324	P	P	07 54 35.4	+1.9
	baz=127						
MCPB	Macapa, AP	41.37	106	*e*P	P	07 54 34.7	-1.0
G03D	McMinnville, O	41.51	326	P	P	07 54 38.1	+1.7
	baz=129						
F04D	Rainier, OR	41.93	327	P	P	07 54 41.4	+1.5
	baz=130						
E04D	Cinebar	42.00	328	P	P	07 54 42.3	+1.8
	baz=131						
LVC	Limon Verde	42.19	148	P	P	07 54 40.9	-1.8
	comp=Z,6.9nm,1.0s,baz=305,slow=7.6,SNR=4.0						
LVC				LR	LR	08 11 01.2	
	comp=Z,80nm,18.8s,baz=306,slow=35						
	comp=Z,6.9nm,1.0s						
LVC	Limon Verde	42.19	148	*e*P	P	07 54 42.8	+0.2
PDRB	Porto dos Gac	42.54	124	*e*P	P	07 54 44.1	-1.2
CLDB	Colider	42.88	123	*e*P	P	07 54 47.2	-0.8
B05A	Bryant	42.91	330	P	P	07 54 48.2	+0.4
	baz=133						
D03D	Eldon	42.92	328	P	P	07 54 48.2	+0.3
	baz=131						
PTLB	Pontes e Lacer	43.02	131	*e*P	P	07 54 48.9	-0.2
EDM	Edmonton	43.21	341	P	P	07 54 50.3	+0.1
EDM				IAmb	IAmb	07 54 50.8	
	comp=Z,9.9nm,0.6s						
A04D	Lummi Island	43.52	330	P	P	07 54 53.6	+0.8
	baz=133						
RPN	Rapa Nui	44.06	203	LR	LR	08 08 26.5	
	comp=Z,178nm,19.9s,baz=44,slow=29						
NBRS	Nobres	44.87	127	*e*P	P	07 55 03.0	-1.0
SCHQ	Schefferville	45.41	20	P	P	07 55 05.7	-2.1
	comp=Z,12nm,0.9s,baz=208,slow=4.8,SNR=14						
SCHQ				LR	LR	08 15 15.6	
	comp=Z,399nm,19.1s,baz=222,slow=38						
	comp=Z,12nm,0.9s						
SCHQ	Schefferville	45.41	20	P	P	07 55 05.7	-2.1
SCHQ				IAmb	IAmb	07 55 07.3	
	comp=Z,14nm,0.9s						
PRPB	Parauapebas	45.72	113	*e*P	P	07 55 11.0	+0.3
TMAB	Tom-Au,PA,Br	45.78	107	*e*P	P	07 55 11.1	-0.2
SALV	Santo Antonio	45.88	129	*e*P	P	07 55 10.9	-1.1
CFSA	Confresa	46.35	119	*e*P	P	07 55 15.1	-0.7
SNDB	Serra Nova Dou	47.19	121	*e*P	P	07 55 21.7	-0.6
PP1B	Ponte de Pedra	47.53	130	*e*P	P	07 55 25.2	+0.3
H03N2	Juan Fernandez	48.25	166	T	T	08 47 19.2	
	baz=347,slow=76,SNR=37						
H03N1	Juan Fernandez	48.26	166	T	T	08 47 20.2	
	baz=347,slow=76,SNR=41						
H03N3	Juan Fernandez	48.27	166	T	T	08 47 19.1	
	baz=347,slow=76,SNR=32						
BBB	Bella Bella	48.40	331	LR	LR	08 19 38.8	
	comp=Z,131nm,18.5s,baz=156,slow=41						
AQDB	Aquidauana	48.76	133	*e*P	P	07 55 33.8	-0.5
SMTB	Santa Maria do	48.88	115	*e*P	P	07 55 35.1	-0.2
ROSB	Rosrio	49.67	106	*e*P	P	07 55 41.5	+0.1
PEXB	Peixe	49.78	119	*e*P	P	07 55 42.0	-0.2
C2SB	Chapadao do Su	49.78	129	*e*P	P	07 55 40.4	-1.7
YKA	Yellowknife Ar	51.56	346	P	P	07 55 54.3	-0.7
	comp=Z,4.7nm,0.7s,baz=144,slow=6.6,SNR=79						
YKA				PcP	PcP	07 57 08.7	+0.3
	comp=Z,1.5nm,0.8s,baz=150,slow=4.2,SNR=5.5						
YKA				ScP	ScP	08 01 05.2	+3.4
	comp=Z,0.2nm,0.6s,baz=145,slow=4.3,SNR=3.6						
	comp=Z,4.7nm,0.7s						
YKA	Yellowknife Ar	51.56	346	P	P	07 55 54.5	-0.5
CPUP	Villa Florida	51.70	140	P	P	07 55 54.7	-1.7
	comp=Z,4.8nm,0.9s,baz=314,slow=7.1,SNR=13						
CPUP				LR	LR	08 18 59.8	
	comp=Z,118nm,18.3s,baz=310,slow=38						
	comp=Z,4.8nm,0.9s						
CPUP	Villa Florida	51.70	140	P	P	07 55 55.1	-1.3
CPUP				IAmb	IAmb	07 55 55.4	
	comp=Z,5.5nm,0.9s						
CPUP	Villa Florida	51.70	140	*e*P	P	07 55 55.9	-0.5
BDFB	Brasilia	51.81	123	P	P	07 55 56.3	-1.3
	comp=Z,5.8nm,0.9s,baz=261,slow=5.7,SNR=6.9						
	comp=Z,5.8nm,0.9s						
FRB	Frobisher Bay	52.59	13	LR	LR	08 19 47.3	
	comp=Z,191nm,18.7s,baz=200,slow=38						
PCMB	Pacaembu	52.68	131	*e*P	P	07 56 03.5	-0.4
NBPS	Pedro II - PI	52.70	106	*e*P	P	07 56 03.0	-1.3
SDBA	SAO DESIDERIO	52.84	117	*e*P	P	07 56 04.9	-0.3
IPMB	Ipameri, GO	52.91	125	*e*P	P	07 56 05.3	-0.4
WRAK	Wrangell Islan	52.97	333	P	P	07 56 06.8	+1.3
	baz=127						
DLBC	Dease Lake	53.27	336	LR	LR	08 23 40.1	
	comp=Z,155nm,18.1s,baz=127,slow=42						
NBMO	Morrinhos-CE	53.65	104	*e*P	P	07 56 10.5	-0.7
BB19B	Bebedouro	54.40	129	*e*P	P	07 56 15.8	-0.8
ITQB	Itaqui	54.54	142	P	P	07 56 16.8	-0.5
ITQB	Itaqui	54.54	142	*e*P	P	07 56 16.8	-0.5
JANB	Januaria	54.60	120	*e*P	P	07 56 17.6	-0.5
NBPB	Pedra_Branca-C	54.84	107	*e*P	P	07 56 19.2	-0.7
ITAB	Concordia	55.67	137	*e*P	P	07 56 24.4	-1.1
SKAG	Skagway	56.06	335	P	P	07 56 28.7	+0.9
	baz=125						
NBMA	Muriti-CE	56.25	109	*e*P	P	07 56 29.9	-0.1
NBPN	Ponto Novo - B	56.30	113	*e*P	P	07 56 29.6	-0.7
MMPY	Sheldon Lake,	56.49	339	P	P	07 56 31.5	+0.5
	baz=131,SNR=8.5						
WHY	Whitehorse	56.59	336	P	P	07 56 32.1	+0.3
	baz=126						
VAO	Valinhos	56.70	129	*e*P	P	07 56 32.9	-0.2
DIAM	Diamantina, MG	56.73	123	*e*P	P	07 56 33.1	-0.4
FARO	Faro, Yukon	56.98	338	P	P	07 56 34.8	+0.4
	baz=129						
CPSB	Cacapava Do Su	56.99	141	*e*P	P	07 56 33.8	-1.1
M31M	Drury Creek, Y	57.34	338	P	P	07 56 37.4	+0.4
	baz=128						
PLCA	Paso Flores	57.40	161	P	P	07 56 37.3	-0.4
	comp=Z,6.5nm,1.1s,baz=342,slow=6.3,SNR=11						
PLCA				LR	LR	08 15 59.2	
	comp=Z,94nm,18.4s,baz=330,slow=31						
	comp=Z,6.5nm,1.1s						
PLCA	Paso Flores	57.40	161	P	P	07 56 37.7	+0.1
PLCA	Paso Flores	57.40	161	*e*P	P	07 56 37.8	+0.1
N31M	Braeburn, Yuko	57.43	337	P	P	07 56 38.3	+0.6
	baz=126						
HYT	Haines Junctio	57.73	335	P	P	07 56 40.4	+0.5
	baz=124						
PLTB	Pedras Altas	57.84	142	*e*P	P	07 56 39.9	-1.0
PARB	Paraibuna	57.90	129	*e*P	P	07 56 41.7	+0.2
PNL	Peninsula	57.90	334	P	P	07 56 42.2	+1.2
	baz=121						
YUK6	Outpost Mounta	58.15	335	P	P	07 56 43.1	+0.1
	baz=123						
RCBR	Riachuelo	58.37	106	LR	LR	08 24 17.3	
	comp=Z,107nm,19.1s,baz=102,slow=39						
RCBR	Riachuelo	58.37	106	*e*P	P	07 56 45.5	+0.5
M30M	Minto, Yukon	58.46	337	P	P	07 56 45.2	+0.3
	baz=126						
YUK4	Talbot Arm	58.49	335	P	P	07 56 45.9	+0.7
	baz=123						
NBLA	Lagarto - SE	58.52	112	*e*P	P	07 56 45.4	-0.5
ESAR	Angra dos Reis	58.62	128	*e*P	P	07 56 47.1	+0.6
CMC01	Camacan, BA	58.83	117	*e*P	P	07 56 49.2	+1.2
SJMB	Sao Joao De Ma	58.98	122	*e*P	P	07 56 48.9	-0.1
VAS01	Vassouras-RJ	58.99	127	*e*P	P	07 56 49.6	+0.5
GUA01	Guaratinga, BA	59.14	119	*e*P	P	07 56 50.2	0.0
NBPV	Pedro Velho	59.14	106	*e*P	P	07 56 50.9	+0.6
NBAN	Anadia - AL	59.39	110	*e*P	P	07 56 52.5	+0.5
YUK3	Moose Creek	59.45	335	P	P	07 56 52.2	+0.2
	baz=121						
SFJD	Kangerlussuaq	59.73	17	LR	LR	08 23 36.1	
	comp=Z,293nm,18.9s,baz=208,slow=37						
RIB01	Linhares ES	59.93	122	*e*P	P	07 56 55.3	-0.3
BVCY	Beaver Creek	59.95	336	P	P	07 56 55.9	+0.8
	baz=121						
NBRF	Rio Formoso -	60.08	108	*e*P	P	07 56 57.9	+1.2
DAWY	Dawson	60.28	338	P	P	07 56 57.4	+0.1
	baz=124						
M27K	Edge Creek, AK	60.32	336	P	P	07 56 58.3	+0.4
	baz=120						
I29M	Ogilvie Camp,	60.63	339	P	P	07 56 59.8	+0.1
	baz=125						
BCAR	Beaver Creek A	60.65	336	P	P	07 57 00.7	+0.8
L27K	Beaver Creek,	60.66	336	P	P	07 57 00.9	+0.9
L27K				IAmb	IAmb	07 57 01.8	
	comp=Z,7.2nm,0.9s						
L27K	Beaver Creek,	60.66	336	P	P	07 57 00.7	+0.7
	baz=120,SNR=7.7						
EPYK	Eagle Plains	60.71	341	P	P	07 57 00.7	+0.4
	baz=127						
M26K	Nabesna, AK	60.80	335	P	P	07 57 01.5	+0.5
	baz=119						
BMRM	Bremner River	60.80	333	P	P	07 57 02.0	+1.0
	baz=117						
INK	Inuvik	61.00	343	LR	LR	08 27 31.1	
	comp=Z,101nm,19.7s,baz=180,slow=40						
INK	Inuvik	61.00	343	P	P	07 57 02.2	+0.1
INK				IAmb	IAmb	07 57 03.4	
	comp=Z,9.6nm,1.2s						
INK	Inuvik	61.00	343	P	P	07 57 02.9	+0.8
	baz=132,SNR=5.7						
N25K	Chitina, Valde	61.09	334	P	P	07 57 04.7	+1.7
N25K	Chitina, Valde	61.09	334	P	P	07 57 03.5	+0.6
	baz=117,SNR=7.1						
RES	Resolute Bay	61.12	359	LR	LR	08 26 37.6	
	comp=Z,121nm,18.3s,baz=90,slow=39						
RES	Resolute Bay	61.12	359	P	P	07 57 01.5	-1.3
RES				IAmb	IAmb	07 57 01.8	
	comp=Z,4.1nm,0.8s						
L26K	Log Cabin Wild	61.24	336	P	P	07 57 04.5	+0.5
	baz=119						
K27K	Chicken	61.26	337	P	P	07 57 04.4	+0.4
K27K				IAmb	IAmb	07 57 26.6	
	comp=Z,4.6nm,1.1s						
K27K	Chicken	61.26	337	P	P	07 57 04.4	+0.4
	baz=121						
EGAK	Eagle	61.31	338	P	P	07 57 04.3	0.0
EGAK				IAmb	IAmb	07 57 05.0	
	comp=Z,4.1nm,0.9s						
EGAK	Eagle	61.31	338	P	P	07 57 04.4	+0.1
	baz=122						
COYC	Coyhaique	61.42	165	P	P	07 57 05.7	+0.5
KLU	Klutina	61.60	334	P	P	07 57 06.8	+0.3
	baz=116,SNR=8.7						
HARP	HAARP	61.69	335	P	P	07 57 07.1	+0.2
	baz=117						
SCRK	Sand Creek	61.96	337	P	P	07 57 09.7	+0.9
	baz=119						
M24K	Tolsona, Glenn	61.98	334	P	P	07 57 09.6	+0.6
	baz=116						
J26L	Joseph Creek	62.06	337	P	P	07 57 10.2	+0.7
	baz=119,SNR=8.9						
PAX	Paxson	62.07	335	P	P	07 57 10.3	+0.7
	baz=117						
RIDG	Independent Ri	62.18	336	P	P	07 57 11.0	+0.8
	baz=118,SNR=7.5						
SCM	Sheep Creek Mo	62.36	334	P	P	07 57 11.3	-0.2
	baz=114						
M23K	Glacier View	62.51	334	P	P	07 57 12.6	+0.1
	baz=114,SNR=6.4						
SEW	Seward	62.63	331	P	P	07 57 13.7	+0.5
	baz=112						
KNK	Knik Glacier	62.68	333	P	P	07 57 13.6	0.0
	baz=113,SNR=5.0						
SML	Sawmill	62.78	333	P	P	07 57 14.2	-0.1
	baz=113						
J25K	Salcha River,	62.79	337	P	P	07 57 14.4	+0.1
	baz=118,SNR=8.5						
WAT6	Susitna Watana	62.84	334	P	P	07 57 14.7	-0.1
	baz=114,SNR=12						
PMR	Palmer	63.05	333	P	P	07 57 16.0	0.0
	baz=112,SNR=6.4						
BRSE	Bradley Lake S	63.10	331	P	P	07 57 17.0	+0.5
	baz=110						
RC01	Rabbit Creek A	63.12	332	P	P	07 57 16.8	+0.3
	baz=112,SNR=7.5						
WAT1	Susitna Watana	63.29	334	P	P	07 57 17.8	+0.1
	baz=114						
KDAK	Kodiak Island	63.37	328	P	P	07 57 18.9	+0.7
	baz=107						
ILAR	Eielson Array	63.45	337	P	P	07 57 18.8	+0.1
	comp=Z,7.5nm,1.0s,baz=121,slow=4.9,SNR=43						
ILAR				LR	LR	08 27 57.4	
	comp=Z,112nm,19.2s,baz=130,slow=39						
	comp=Z,7.5nm,1.0s						
M22K	Willow	63.54	333	P	P	07 57 19.7	+0.5
	baz=112						
OHAK	Old Harbor	63.57	328	P	P	07 57 20.5	+1.0
	baz=106						
POKR	Poker Plat Res	63.81	337	P	P	07 57 20.9	-0.1
	baz=116						
MCK	McKinley	63.81	335	P	P	07 57 21.3	+0.2
	baz=114,SNR=7.4						
CUT	Chulitna	63.85	334	P	P	07 57 21.5	+0.2
	baz=112,SNR=11						
COLA	College	63.86	337	P	P	07 57 21.3	0.0
	baz=115						
TCOL	CIGO, UAF Yank	63.87	337	P	P	07 57 21.7	+0.3
	baz=115						
BMAR	Burnt Mountain	63.88	340	P	P	07 57 22.2	+0.7
O20K	Slope Mountain	64.11	331	P	P	07 57 23.0	-0.1
	baz=108						
NEA2	Nenana	64.22	336	P	P	07 57 24.2	+0.5
	baz=114,SNR=6.0						
Q19K	Cape Douglas,	64.25	329	P	P	07 57 24.8	+0.7
	baz=107						
TRF	Thorofare Moun	64.26	335	P	P	07 57 24.6	+0.4
	baz=112,SNR=11						
SPCR	Spurr Chakacha	64.28	332	P	P	07 57 24.7	+0.4
	baz=109,SNR=5.5						
H24K	Noodor Dome	64.29	338	P	P	07 57 24.5	+0.3
	baz=116						

I23K	**Minto, Yukon-K**	**64.56**	**337**	P	**P**	**07 57 26.6**	**+0.7**
I23K	**Minto, Yukon-K**	**64.56**	**337**	P	**P**	**07 57 26.4**	**+0.5**
	baz=114,SNR=16						
KTH	**Kantishna Hill**	**64.56**	**335**	P	**P**	**07 57 26.3**	**+0.3**
BPAW	**Bear Paw Mtn.**	**64.79**	**335**	P	**P**	**07 57 27.8**	**+0.3**
	baz=112,SNR=14						
PPLA	**Purkeypile**	**64.86**	**334**	P	**P**	**07 57 28.1**	**0.0**
	baz=110,SNR=8.8						
H23K	**Yukon River**	**64.91**	**337**	P	**P**	**07 57 28.3**	**+0.1**
	baz=114						
O19K	**Port Alsworth**	**64.95**	**331**	P	**P**	**07 57 28.4**	**-0.1**
	baz=107,SNR=5.4						
CAST	**Castle Rocks**	**65.00**	**334**	P	**P**	**07 57 28.6**	**-0.2**
	baz=110,SNR=14						
N19K	**Bonanza Creek**	**65.21**	**331**	P	**P**	**07 57 30.6**	**+0.3**
	baz=107						
PPT	**Papeete**	**65.22**	**243**	LR	LR	08 18 34.1	
	comp=Z,163nm,19.0s,baz=125,slow=29						
CHUM	**Lake Minchumin**	**65.26**	**335**	P	**P**	**07 57 29.9**	**-0.5**
	baz=110,SNR=6.2						
O18K	**Koktuh Hills**	**65.28**	**330**	P	**P**	**07 57 31.0**	**+0.3**
O18K	**Koktuh Hills**	**65.28**	**330**	P	**P**	**07 57 30.9**	**+0.1**
	baz=106						
L20K	**Farewell, AK**	**65.45**	**333**	P	**P**	**07 57 32.0**	**+0.2**
	baz=108						
M19K	**Big River Lodg**	**65.50**	**332**	P	**P**	**07 57 32.4**	**+0.2**
M19K	**Big River Lodg**	**65.50**	**332**	P	**P**	**07 57 32.6**	**+0.5**
	baz=108						
I21K	**Tanana**	**65.59**	**336**	P	**P**	**07 57 32.9**	**+0.3**
	baz=111						
COLD	**Coldfoot**	**65.73**	**339**	P	**P**	**07 57 34.6**	**+1.2**
COLD				IAmb	IAmb	07 57 36.3	
	comp=Z,4.9nm,1.0s						
COLD	**Coldfoot**	**65.73**	**339**	P	**P**	**07 57 34.1**	**+0.7**
	baz=114						
L19K	**White Mountain**	**65.79**	**333**	P	**P**	**07 57 34.3**	**+0.3**
	baz=107						
K20K	**Telida**	**65.82**	**334**	P	**P**	**07 57 34.1**	**0.0**
	baz=108						
N18K	**Kilae Creek**	**65.84**	**331**	P	**P**	**07 57 34.5**	**+0.2**
	baz=106						
H21K	**Melozitna Rive**	**66.09**	**337**	P	**P**	**07 57 35.3**	**-0.5**
	baz=111						
TOLK	**Toolik Lake Re**	**66.11**	**340**	P	**P**	**07 57 36.1**	**+0.2**
	baz=115,SNR=5.2						
J20K	**Nowinta River**	**66.12**	**335**	P	**P**	**07 57 35.8**	**-0.2**
J20K	**Nowinta River**	**66.12**	**335**	P	**P**	**07 57 36.1**	**+0.1**
	baz=109						
TTA	**Tatalina**	**66.53**	**333**	P	**P**	**07 57 39.0**	**+0.2**
TTA	**Tatalina**	**66.53**	**333**	P	**P**	**07 57 38.5**	**-0.2**
	baz=106,SNR=19						
EUNU	**Eureka**	**66.53**	**1**	P	**P**	**07 57 37.5**	**-1.0**
IMAR	**Indian Mountai**	**66.57**	**337**	P	**P**	**07 57 39.1**	**+0.3**
FALS	**False Pass**	**68.65**	**324**	P	**P**	**07 57 52.7**	**+0.5**
	baz=96						
UNV	**Unalaska Valle**	**70.36**	**323**	P	**P**	**07 58 03.0**	**+0.3**
	baz=94						
ANM	**Nome**	**70.94**	**334**	P	**P**	**07 58 06.4**	**+0.2**
	baz=98						
NIKH	**Nikolski High**	**71.72**	**322**	P	**P**	**07 58 11.5**	**+0.5**
	baz=91						
TNA	**Tin City**	**72.15**	**335**	P	**P**	**07 58 13.0**	**-0.3**
	baz=96						
SPIA	**Saint Paul Isl**	**72.65**	**326**	P	**P**	**07 58 16.6**	**+0.2**
	baz=92						
DAG	**Danmarks Havn**	**72.93**	**13**	*i* P	**P**	**07 58 15.0**	**-2.8**
GAMB	**Gambell**	**73.63**	**333**	P	**P**	**07 58 22.0**	**-0.1**
	baz=92						
ESDC	**Sonseca Array**	**79.52**	**52**	P	**P**	**07 58 54.7**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=288,slow=4.9,SNR=3.2						
	comp=Z,0.8nm,0.8s						
MDT	**Midelt**	**80.12**	**59**	LR	LR	08 27 39.3	
	comp=Z,53nm,21.7s,baz=308,slow=31						
NOA	**NORSAR Array B**	**84.23**	**29**	LR	LR	08 34 59.2	
	comp=Z,45nm,21.0s,baz=295,slow=34						
TIC	**Toumodi**	**84.96**	**84**	*e*PKIKP	**P**	**07 59 24.0**	**-0.9**
LIC	**Lamto**	**85.05**	**85**	*e*PKIKP	**P**	**07 59 24.4**	**-1.0**
	comp=Z,18nm,1.3s						
DBIC	**Dimbokro**	**85.12**	**84**	P	**P**	**07 59 24.5**	**-1.1**
	comp=Z,4.2nm,0.9s,baz=254,slow=9.9,SNR=1.8						
	comp=Z,4.2nm,0.9s						
KIC	**Kosan Boka**	**85.30**	**85**	*e*PKIKP	**P**	**07 59 24.4**	**-2.2**
	comp=Z,8.0nm,0.8s						
HFS	**Hagfors**	**85.68**	**29**	LR	LR	08 35 42.4	
	comp=Z,47nm,21.2s,baz=330,slow=34						
ARCES	**ARCESS Array B**	**86.35**	**18**	P	**P**	**07 59 28.9**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=303,slow=5.2,SNR=4.9						
ARCES				LR	LR	08 38 32.2	
	comp=Z,81nm,18.8s,baz=270,slow=36						
	comp=Z,1.1nm,0.8s						
ARCES	**ARCESS Array B**	**86.35**	**18**	P	**P**	**07 59 28.9**	**-1.8**
ARCES				IAmb	IAmb	07 59 51.9	
	comp=Z,7.2nm,1.3s						
DAVOX	**Davos/Dischmat**	**87.78**	**42**	LR	LR	08 33 59.6	
	comp=Z,52nm,20.4s,baz=264,slow=32						
CLL	**Collm**	**88.29**	**37**	*e*P	**P**	**07 59 43.0**	**+2.6**
SEY	**Seymchan**	**89.37**	**336**	P	**P**	**07 59 45.4**	**+0.1**
	comp=Z,5.7nm,1.1s,baz=70,slow=5.1,SNR=12						
SEY				LR	LR	08 44 23.2	
	comp=Z,53nm,18.3s,baz=5.0,slow=39						
	comp=Z,5.7nm,1.1s						
GERES	**GERESS Array B**	**89.55**	**40**	LR	LR	08 37 33.5	
	comp=Z,50nm,19.2s,baz=276,slow=34						
TORD	**Torodi Ar. Bea**	**89.91**	**77**	P	**P**	**07 59 45.5**	**-3.3**
FINES	**FINESS Array B**	**90.62**	**25**	P	**P**	**07 59 51.1**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=316,slow=5.8,SNR=2.1						
FINES				LR	LR	08 41 25.4	
	comp=Z,77nm,18.3s,baz=250,slow=36						
	comp=Z,0.8nm,0.8s						
FINES	**FINESS Array B**	**90.62**	**25**	P	**P**	**07 59 49.0**	**-2.1**
TIXI	**Tiksi**	**90.78**	**348**	LR	LR	08 43 49.0	
	comp=Z,42nm,21.9s,baz=0.0,slow=38						
VRAC	**Vranov**	**91.16**	**39**	LR	LR	08 38 20.1	
	comp=Z,50nm,20.1s,baz=284,slow=34						
PETK	**Petropavlovsk-**	**91.31**	**326**	LR	LR	08 43 08.1	
	comp=Z,30nm,19.3s,baz=127,slow=37						
MA2	**Magadan**	**91.72**	**333**	P	**P**	**07 59 56.4**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=102,slow=4.7,SNR=5.8						
MA2				LR	LR	08 48 03.7	
	comp=Z,31nm,18.6s,baz=8.5,slow=40						
	comp=Z,4.6nm,0.8s						
NRIK	**Noril'sk**	**97.29**	**0**	LR	LR	08 48 21.6	
	comp=Z,102nm,19.7s,baz=331,slow=38						
AKASG	**Malin Array Be**	**97.75**	**34**	LR	LR	08 44 48.0	
	comp=Z,31nm,19.9s,baz=225,slow=36						
MKAR	**Makanchi Array**	**119.63**	**5**	PKP	**PKPdf**	**08 05 38.5**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=321,slow=2.7,SNR=6.7						
MKAR	**Makanchi Array**	**119.63**	**5**		**PKPdf**	**08 05 38.7**	**-0.2**
WRA	**Warramunga Arr**	**135.85**	**255**	PKP	**PKPdf**	**08 06 10.9**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=87,slow=2.0,SNR=16						
ASAR	**Alice Springs**	**136.07**	**250**	PKP	**PKPdf**	**08 06 10.5**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=83,slow=2.0,SNR=11						
PZH	**PanZhiHua**	**138.15**	**342**	PKP	**PKPdf**	**08 06 14.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**144.12**	**258**	PKP	PKPbc	08 06 23.8	+0.2
	comp=Z,7.3nm,1.1s,baz=108,slow=6.4,SNR=5.2						
BATI	**Baumata**	**145.54**	**272**	PKPbc	**PKPbc**	**08 06 28.5**	**+0.3**
	comp=Z,22nm,0.6s,baz=55,slow=2.1,SNR=6.2						
CMAR	**Chiang Mai Arr**	**146.57**	**342**	PKPbc	**PKPbc**	**08 06 31.8**	**+0.7**
	comp=Z,19nm,1.0s,baz=342,slow=3.9,SNR=50						
KAPI	**Kappang**	**148.13**	**283**	PKPbc	**PKPbc**	**08 06 35.9**	**+0.3**
	comp=Z,8.2nm,0.9s,baz=174,slow=5.2,SNR=4.4						
KAPI	**Kappang**	**148.13**	**283**	PKPdf	**PKPdf**	**08 06 30.3**	**-2.1**
KAPI				PKPab	**PKPab**	**08 06 39.9**	**+1.4**

IDC 03 07:48:03.1±4.2**, 50°.59S**×**108°.51E, h0**^{km}**, mb4.0**/3**,**
mbtmp4.0/3**, MS3.6**/2 **Error ellipse: s-maj=190.9km**
s-min=24.9km az=112.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.21**	**17**	T	T	08 07 33.4	
	baz=201,slow=74,SNR=14						
H01W1	**Cape Leeuwin H**	**16.22**	**17**	T	T	08 07 35.0	
	baz=201,slow=74,SNR=17						
H01W3	**Cape Leeuwin H**	**16.23**	**17**	T	T	08 07 35.3	
	baz=201,slow=74,SNR=17						
MAW	**Mawson**	**28.05**	**216**	LR	LR	08 02 32.9	
	comp=Z,88nm,20.6s,baz=72,slow=31						
ASAR	**Alice Springs**	**33.33**	**46**	P	P	07 54 42.9	+0.1
	1.5nm,0.8s,baz=211,slow=8.2,SNR=11						
	1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.19**	**29**	LR	LR	08 06 55.7	
	comp=Z,152nm,19.0s,baz=168,slow=32						
WRA	**Warramunga Arr**	**36.78**	**43**	P	P	07 55 11.7	-0.7
	1.9nm,0.7s,baz=208,slow=8.4,SNR=16						
	1.9nm,0.7s						
QSPA	**South Pole Qui**	**39.54**	**180**	P	P	07 55 34.8	-0.6
	0.7nm,0.4s,baz=287,slow=5.3,SNR=11						
	0.7nm,0.4s						
NVAR	**Mina Array Bea**	**145.04**	**92**	PKPbc	PKPbc	08 07 41.0	-0.5
	0.5nm,0.7s,baz=238,slow=4.0,SNR=4.2						
TXAR	**Lajitas Array**	**147.85**	**119**	PKPbc	PKPbc	08 07 50.1	+0.3
	0.7nm,0.9s,baz=195,slow=2.8,SNR=5.5						

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*IDC **03** 07:49:33.0±3.5, 13°.58N×91°.03W, h0^{km}, mb3.5/2,*
mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=109.8km
s-min=61.0km az=50.0
*UCR **03** 07:49:39.3±1.9, 13°.57N×91°.40W, h30^{km}, ML4.1*
*SNET **03** 07:49:39.3±1.9, 13°.56N×91°.40W, h30^{km}, ML4.3*
*GCG **03** 07:49:40.4±1.1, 13°.65N×91°.43W, h48^{km}, MD4.2*
ISC 03 07:49:33.4±2.2**, 13°.25N**±0°.07×**91°.32W**±0°.07**, h17**^{km}±13^{km}**,**
n48, σ1^{s}.17/60**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.28**	**21**	⇑*e*P	**Pb**	**07 49 58.0**	**+0.8**
PCG	**Pacaya**	**1.33**	**31**	*e*P	**Pg**	**07 49 59.6**	**+0.5**
STG3	**Santiaguito 3,**	**1.47**	**351**	*e*P	**Pn**	**07 49 58.7**	**-0.7**
NBG	**Las Nubes**	**1.63**	**35**	*e*P	**Pg**	**07 50 04.9**	**0.0**
NBG				*e*S	**Sb**	**07 50 23.6**	**-0.1**
NUBE	**Las Nubes**	**1.63**	**66**	*e*S	**Sg**	**07 50 25.4**	**-0.7**
NUBE	**Las Nubes**	**1.63**	**66**	*e*S	**Sg**	**07 50 25.4**	**-0.7**
LOAL	**Lomas de Alarc**	**1.67**	**63**	*e*P	**Pg**	**07 50 06.0**	**+0.4**
LOAL	**Lomas de Alarc**	**1.67**	**63**	*e*P	**Pg**	**07 50 06.0**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.68**	**63**	*e*P	**Pg**	**07 50 06.5**	**+0.7**
SLOZ				*e*S	**Sg**	**07 50 27.3**	**-0.4**
CEVE	**Cerro Verde**	**1.75**	**71**	*e*P	**Pg**	**07 50 07.2**	**+0.1**
CEVE				*e*S	**Sg**	**07 50 30.6**	**+0.8**
CEVE				IAML		07 50 33.5	
	comp=Z,3µm,0.3s						
CEVE	**Cerro Verde**	**1.75**	**71**	*e*P	**Pg**	**07 50 07.2**	**+0.1**
CEVE				*e*S	**Sg**	**07 50 30.6**	**+0.8**
CEVE				IAML		07 50 33.5	
	comp=Z,3µm,0.3s						
JAYA	**Jayaque - finc**	**1.86**	**77**	*e*P	**Pg**	**07 50 09.4**	**+0.1**
JAYA				*e*S	**Sg**	**07 50 32.9**	**-0.6**
JAYA	**Jayaque - finc**	**1.86**	**77**	*e*P	**Pg**	**07 50 09.4**	**+0.1**
JAYA				*e*S	**Sg**	**07 50 32.9**	**-0.6**
UNIC	**Universidad Ca**	**1.87**	**67**	*e*P	**Pg**	**07 50 08.5**	**-0.9**
UNIC				*e*S	**Sg**	**07 50 33.1**	**-0.6**
UNIC	**Universidad Ca**	**1.87**	**67**	*e*P	**Pg**	**07 50 08.5**	**-0.9**
UNIC				*e*S	**Sg**	**07 50 33.1**	**-0.6**
CEDA	**San Andres**	**1.95**	**73**	*e*P	**Pg**	**07 50 10.4**	**-0.6**
CEDA				IAML		07 50 47.6	
	comp=Z,2µm,0.4s						
CEDA	**San Andres**	**1.95**	**73**	*e*P	**Pg**	**07 50 10.4**	**-0.6**
CEDA				IAML		07 50 47.6	
	comp=Z,2µm,0.4s						
LALI	**Alcalda de L**	**1.96**	**83**	*e*P	**Pg**	**07 50 12.0**	**+0.9**
LALI	**Alcalda de L**	**1.96**	**83**	*e*P	**Pg**	**07 50 12.0**	**+0.9**
BOQS	**Boqueron**	**2.04**	**76**	*e*P	**Pg**	**07 50 13.2**	**+0.5**
BOQS	**Boqueron**	**2.04**	**76**	*e*P	**Pg**	**07 50 13.2**	**+0.5**
SEMO	**Seminario San**	**2.09**	**77**	*e*S	**Sg**	**07 50 39.7**	**-1.0**
AEIL	**Aeropuerto Ilo**	**2.19**	**78**	*e*S	**Sg**	**07 50 42.3**	**-1.6**
AEIL	**Aeropuerto Ilo**	**2.19**	**78**	*e*S	**Sg**	**07 50 42.3**	**-1.6**
MTO3	**Montecristo**	**2.22**	**59**	*e*P	**Pb**	**07 50 14.3**	**+1.0**
MTO3				*e*P	**Pg**	**07 50 15.0**	**-1.1**
MTO3				*e*S	**Sb**	**07 50 41.8**	**+1.2**
MTO3	**Montecristo**	**2.22**	**59**	*e*P	**Pb**	**07 50 14.3**	**+1.0**
MTO3				*e*P	**Pg**	**07 50 15.0**	**-1.1**
MTO3				*e*S	**Sb**	**07 50 41.8**	**+1.2**
LFRS	**El Faro**	**2.23**	**80**	*e*P	**Pg**	**07 50 15.1**	**-1.2**
LFRS				*e*S	**Sg**	**07 50 43.9**	**-1.3**
LFRS	**El Faro**	**2.23**	**80**	*e*P	**Pg**	**07 50 15.1**	**-1.2**
LFRS				*e*S	**Sg**	**07 50 43.9**	**-1.3**
SJTE	**Alcalda de S**	**2.28**	**81**	*e*P	**Pg**	**07 50 16.2**	**-1.0**
SJTE	**Alcalda de S**	**2.28**	**81**	*e*P	**Pg**	**07 50 16.2**	**-1.0**
ESQI	**Esquipulas**	**2.32**	**56**	*e*P	**Pb**	**07 50 15.5**	**+0.6**
COEG	**Centro de Oper**	**2.40**	**81**	*e*P	**Pg**	**07 50 18.4**	**-1.2**
COEG	**Centro de Oper**	**2.40**	**81**	*e*P	**Pg**	**07 50 18.4**	**-1.2**
MRL	**Marmol**	**2.41**	**41**	*e*P	**Pb**	**07 50 18.0**	**+1.4**
LLGN	**La Laguna**	**2.48**	**68**	*e*P	**Pb**	**07 50 17.6**	**-0.1**
LLGN	**La Laguna**	**2.48**	**68**	*e*P	**Pb**	**07 50 17.6**	**-0.1**
PQSS	**Presa 15 de Se**	**2.71**	**82**	*e*P	**Pb**	**07 50 21.4**	**-0.1**
PQSS	**Presa 15 de Se**	**2.71**	**82**	*e*P	**Pb**	**07 50 21.4**	**-0.1**
COEB	**Comit de Eme**	**2.73**	**85**	*e*P	**Pb**	**07 50 22.8**	**+0.9**
COEB	**Comit de Eme**	**2.73**	**85**	*e*P	**Pb**	**07 50 22.8**	**+0.9**
CMIG	**Matias Romero**	**5.14**	**318**	Pn	**Pn**	**07 50 50.2**	**+0.5**
	comp=Z,53nm,0.8s,baz=137,slow=19,SNR=0.7						
CMIG				Sn	**Sn**	**07 51 43.1**	**-5.6**
	comp=Z,4.4nm,0.3s,baz=52,slow=11,SNR=1.0						
TXAR	**Lajitas Array**	**19.68**	**326**	P	**P**	**07 54 03.8**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=4.4						
	comp=Z,1.7nm,0.7s						
H03N2	**Juan Fernandez**	**47.91**	**166**	T	T	08 50 00.4	
	baz=346						
H03N1	**Juan Fernandez**	**47.91**	**166**	T	T	08 49 58.8	
	baz=346						
H03N3	**Juan Fernandez**	**47.93**	**166**	T	T	08 50 00.4	
	baz=346						
YKA	**Yellowknife Ar**	**51.90**	**347**	P	**P**	**07 58 40.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=152,slow=8.0,SNR=4.5						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**63.78**	**337**	P	**P**	**08 00 05.4**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=173,slow=4.5,SNR=4.2						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**135.85**	**255**	PKP	**PKiKP**	**08 08 57.1**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=85,slow=1.8,SNR=2.4						

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*IDC **03** 07:49:46.3±0.8, 24°.31N×125°.11E, h0^{km}, mb3.8/11,*
mbtmp3.9/13, ML3.1/2, MS3.1/2, Error ellipse:
s-maj=26.8km s-min=17.4km az=78.0
*NEIC **03** 07:49:51.2±2.4, 24°.20N±0°.10×125°.3E±0°.1, h35^{km}±8^{km},*
mb4.3/13, Error ellipse: s-maj=15.8km s-min=13.6km
az=51.0
ISC 03 07:49:50.9±0.7**, 24°.21N**±0°.10×**125°.26E**±0°.07**, h35**^{km}**, n45,**
σ1^{s}.20/39**, mb4.0**/17**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**2.07**	**277**	Pn	**Pn**	**07 50 25.2**	**+2.2**
YHNB	**Yeheng**	**3.57**	**278**	Pn	**Pn**	**07 50 43.8**	**-0.1**
YULB	**Yu-li**	**3.72**	**258**	Pn	**Pn**	**07 50 45.0**	**-0.8**
JOW	**Kunigami**	**3.77**	**46**	Pn	**Pn**	**07 50 46.1**	**-0.4**
	4.1nm,0.3s,baz=23,slow=16,SNR=1.8						
	12nm,0.4s						
SSLB	**Suanglung**	**3.96**	**265**	Pn	**Pn**	**07 50 49.3**	**+0.1**
TWG	**Pinlang**	**4.09**	**251**	Pn	**Pn**	**07 50 49.0**	**-1.8**
TPUB	**Ta-pu**	**4.34**	**259**	Pn	**Pn**	**07 50 55.2**	**+0.9**
TGY	**Tagaytay City**	**10.85**	**203**	Pn	**Pn**	**07 52 22.9**	**-0.9**
	61nm,0.3s,baz=38,slow=1.8,SNR=4.2						
MJAR	**Matsushiro Arr**	**16.59**	**39**	Pn	**Pn**	**07 53 40.3**	**-0.4**
	baz=224,slow=11,SNR=4.3						
	3.0nm,0.7s						
SONM	**Songino Array**	**27.94**	**332**	P	**P**	**07 55 36.0**	**-1.9**
	0.3nm,0.3s,baz=152,slow=9.4,SNR=1.5						
SONM				LR	LR	08 07 39.9	
	comp=Z,48nm,18.4s,baz=157,slow=39						
	0.3nm,0.3s						
PETK	**Petropavlovsk-**	**37.82**	**32**	P	**P**	**07 57 04.6**	**+0.7**
	0.6nm,0.6s,baz=242,slow=3.1,SNR=1.6						
	0.6nm,0.6s						
PETK	**Petropavlovsk-**	**37.82**	**32**	P	**P**	**07 57 02.4**	**-1.4**
H11N1	**WAKE ISLAND Hy**	**38.77**	**88**	T	T	08 38 36.8	
	baz=284						
H11N2	**WAKE ISLAND Hy**	**38.77**	**88**	T	T	08 38 32.9	
	baz=284						
H11N3	**WAKE ISLAND Hy**	**38.78**	**88**	T	T	08 38 35.1	
	baz=284						
H11S3	**WAKE ISLAND Hy**	**38.90**	**90**	T	T	08 38 49.5	
	baz=288						
H11S1	**WAKE ISLAND Hy**	**38.90**	**90**	T	T	08 38 48.5	
	baz=288						
H11S2	**WAKE ISLAND Hy**	**38.91**	**90**	T	T	08 39 09.3	
	baz=288						
MK31	**Makanchi Array**	**40.95**	**314**	P	**P**	**07 57 30.1**	**+0.1**
MKAR	**Makanchi Array**	**40.95**	**314**	P	**P**	**07 57 29.8**	**-0.2**
	1.6nm,0.5s,baz=102,slow=10.0,SNR=29						
	1.6nm,0.5s						
MAKZ	**Makanchi**	**41.16**	**314**	P	**P**	**07 57 31.3**	**-0.5**
ZALV	**Zalesovo Beam**	**42.30**	**325**	P	**P**	**07 57 39.8**	**-1.2**
	1.3nm,0.4s,baz=109,slow=8.1,SNR=5.4						
ZALV				LR	LR	08 14 34.3	
	comp=Z,20nm,19.5s,baz=179,slow=35						
	1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**42.30**	**325**	P	**P**	**07 57 39.2**	**-1.8**
KURK	**Kurchatov**	**44.50**	**319**	P	**P**	**07 57 57.8**	**-1.0**
KURK				IAmb	IAmb	07 58 08.4	
	comp=Z,3.3nm,0.8s						
KURBB	**Kurchatov Arra**	**44.52**	**319**	P	**P**	**07 57 58.3**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=108,slow=8.4,SNR=8.0						
	comp=Z,0.9nm,0.5s						
WB0	**Warramunga Arr**	**44.61**	**168**	P	**P**	**07 58 00.7**	**+0.8**
WB0				IAmb	IAmb	07 58 12.5	
	comp=Z,4.6nm,1.0s						
WRA	**Warramunga Arr**	**44.77**	**168**	P	**P**	**07 58 02.1**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=348,slow=8.8,SNR=6.8						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.77**	**168**	P	**P**	**07 58 02.2**	**+1.0**
WB2	**Warramunga Arr**	**44.77**	**168**	P	**P**	**07 58 01.6**	**+0.4**
WB2				IAmb	IAmb	07 58 03.6	
	comp=Z,2.5nm,0.9s						
WR0	**Warramunga Arr**	**44.82**	**168**	P	**P**	**07 58 02.0**	**+0.4**
WR0				IAmb	IAmb	07 58 13.1	
	comp=Z,5.5nm,1.0s						
ASAR	**Alice Springs**	**48.33**	**169**	P	**P**	**07 58 31.2**	**+2.1**
	comp=Z,0.4nm,0.5s,baz=354,slow=7.5,SNR=6.3						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**48.33**	**169**	P	**P**	**07 58 30.1**	**+1.0**
GAR	**Garm**	**48.38**	**301**		**P**	**07 58 29.9**	**+0.4**
ABKAR	**Akbulak array**	**56.09**	**314**	P	**P**	**07 59 27.0**	**+0.5**
IMAR	**Indian Mountai**	**64.49**	**27**	P	**P**	**08 00 24.8**	**+1.1**
H21K	**Melozitna Rive**	**64.90**	**27**		**P**	**08 00 28.1**	**+1.7**
H21K				IAmb	IAmb	08 00 31.1	
	comp=Z,2.0nm,0.7s						
BMAR	**Burnt Mountain**	**67.96**	**25**	P	**P**	**08 00 49.4**	**+3.4**
SOCY	**Socotra**	**68.15**	**274**	P	**P**	**08 00 46.5**	**-1.6**
ARCES	**ARCESS Array B**	**70.89**	**338**	P	**P**	**08 01 03.6**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=64,slow=6.1,SNR=1.1						
	comp=Z,0.9nm,0.9s						
FIA1	**FINESS Array S**	**73.28**	**330**	P	**P**	**08 01 18.4**	**0.0**
FIA1				IAmb	IAmb	08 01 43.4	
	comp=Z,6.2nm,1.5s						
FINES	**FINESS Array B**	**73.29**	**330**	P	**P**	**08 01 18.9**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=67,slow=6.2,SNR=11						
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**	**73.29**	**330**	P	**P**	**08 01 18.6**	**+0.2**
NOA	**NORSAR Array B**	**79.91**	**333**	P	**P**	**08 01 55.9**	**0.0**
	comp=Z,0.7nm,0.7s,baz=55,slow=5.7,SNR=3.3						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**81.47**	**24**	P	**P**	**08 02 05.2**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=301,slow=5.2,SNR=6.5						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**81.47**	**24**	P	**P**	**08 02 04.1**	**-0.1**

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*IDC **03** 07:56:01.4±0.6, 13°.83N×145°.20E, h113^{km}±3^{km}, mb3.9/18,*
mbtmp4.3/18, Error ellipse: s-maj=21.5km s-min=10.3km
az=99.0
*NEIC **03** 07:56:03.1±1.3, 13°.80N±0°.08×145°.1E±0°.1, h115^{km}±6^{km},*
mb4.5/54, Error ellipse: s-maj=17.7km s-min=10.2km
az=111.0
ISC 03 07:56:03.3±0.4**, 13°.79N**±0°.06×**145°.11E**±0°.09**, h125**^{km}**,**
n102, σ0^{s}.85/96**, mb4.4**/44**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.31**	**230**	P	**Pn**	**07 56 19.3**	**-1.6**
	6µm,0.3s,baz=130,slow=2.7,SNR=995						
GUMO				S	**Sn**	**07 56 32.1**	**-2.0**
	6µm,0.3s,baz=205,slow=23,SNR=22						
GUMO	**Guam**	**0.31**	**230**	Pn	**Pn**	**07 56 19.5**	**-1.4**
PATS	**Pohnpei**	**14.70**	**117**	Pn	**Pn**	**07 59 25.3**	**0.0**
SIJI	**Sorong**	**20.01**	**224**	P	**P**	**08 00 26.2**	**-0.2**
	15nm,0.6s,baz=284,slow=23,SNR=1.4						
	15nm,0.6s						
FAKI	**Fak Fak**	**20.94**	**218**	P	**P**	**08 00 38.2**	**+1.9**
FAKI				IAmb	IAmb	08 00 40.5	
	comp=Z,19nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**21.24**	**74**	T	T	08 22 50.6	
	baz=261,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**21.25**	**74**	T	T	08 22 50.5	
	baz=261,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**21.25**	**74**	T	T	08 22 49.8	
	baz=261,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**21.66**	**71**	T	T	08 23 44.2	
	baz=257,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**21.67**	**71**	T	T	08 23 55.7	
	baz=257,slow=75,SNR=8.5						
H11N3	**WAKE ISLAND Hy**	**21.68**	**71**	T	T	08 23 56.4	
	baz=257,slow=75,SNR=13						
JNU	**Nakatsue**	**23.21**	**328**	P	**P**	**08 00 58.9**	**-0.5**
	comp=Z,27nm,1.3s,baz=290,slow=18,SNR=1.5						
	comp=Z,27nm,1.3s						
MJAR	**Matsushiro Arr**	**23.49**	**346**	P	**P**	**08 01 00.1**	**-1.7**
	comp=Z,1.7nm,0.7s,baz=166,slow=11,SNR=3.5						
	comp=Z,1.7nm,0.7s						
NJ2	**Nanjing**	**30.12**	**312**	*e*P	**P**	**08 02 02.4**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
BATI	**Baumata**	**31.96**	**223**	P	**P**	**08 02 18.0**	**+0.3**
	comp=Z,33nm,0.4s,baz=143,slow=22,SNR=1.8						
CTA	**Charters Tower**	**33.68**	**178**	P	**P**	**08 02 32.0**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=11,slow=10,SNR=2.9						
CTA				ScP	**ScP**	**08 08 43.7**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=69,slow=23,SNR=8.9						
	comp=Z,1.3nm,0.7s						
CTAO	**Charters Tower**	**33.68**	**178**	P	**P**	**08 02 32.8**	**+0.2**
CTAO				IAmb	IAmb	08 02 49.2	
	comp=Z,5.0nm,1.2s						
WB0	**Warramunga Arr**	**34.98**	**198**	P	**P**	**08 02 43.9**	**+0.2**
WB0				IAmb	IAmb	08 03 04.0	
	comp=Z,8.5nm,1.3s						
WR0	**Warramunga Arr**	**35.11**	**197**	P	**P**	**08 02 44.6**	**-0.3**
WR0				IAmb	IAmb	08 02 48.6	
	comp=Z,16nm,1.5s						
WRAB	**Tennant Creek**	**35.14**	**198**	P	**P**	**08 02 45.2**	**+0.1**
WRAB				IAmb	IAmb	08 02 45.7	
	comp=Z,4.6nm,0.7s						
WB2	**Warramunga Arr**	**35.15**	**198**	P	**P**	**08 02 45.2**	**-0.1**
WB2				IAmb	IAmb	08 02 46.6	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	**35.16**	**198**	P	**P**	**08 02 45.0**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=21,slow=9.4,SNR=52						
WRA				PcP	**PcP**	**08 05 12.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=15,slow=3.6,SNR=2.2						
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**35.16**	**198**	P	**P**	**08 02 45.0**	**-0.3**
KLR	**Kul'dur**	**37.01**	**345**	P	**P**	**08 03 00.1**	**-0.6**
	comp=Z,3.6nm,0.7s,baz=329,slow=6.1,SNR=9.8						
KLR				PcP	**PcP**	**08 05 18.0**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=139,slow=2.7,SNR=4.5						
	comp=Z,3.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**37.05**	**212**	P	**P**	**08 03 01.6**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=25,slow=8.2,SNR=13						
	comp=Z,2.8nm,0.4s						
AS31	**Alice Springs**	**38.80**	**197**	P	**P**	**08 03 16.6**	**+0.4**
ASAR	**Alice Springs**	**38.81**	**197**	P	**P**	**08 03 15.8**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=22,slow=11,SNR=26						
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**38.81**	**197**	P	**P**	**08 03 17.0**	**+0.8**
PZH	**PanZhiHua**	**42.44**	**294**	P	**P**	**08 03 48.2**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
ARMA	**Armidale**	**44.40**	**172**	P	**P**	**08 04 01.9**	**+0.2**
ARMA				IAmb	IAmb	08 04 13.3	
	comp=Z,10nm,1.2s						
STKA	**Stephens Creek**	**45.53**	**184**	P	**P**	**08 04 10.1**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=359,slow=9.0,SNR=9.5						
	comp=Z,2.7nm,0.4s						
STKA	**Stephens Creek**	**45.53**	**184**	P	**P**	**08 04 09.9**	**-0.6**
SONM	**Songino Array**	**46.71**	**325**	P	**P**	**08 04 19.1**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=130,slow=6.4,SNR=4.5						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**46.71**	**325**	P	**P**	**08 04 19.5**	**-0.2**
BBOO	**Buckleboo**	**47.14**	**190**	P	**P**	**08 04 22.9**	**-0.2**
BBOO				IAmb	IAmb	08 04 50.2	
	comp=Z,25nm,1.2s						
FORT	**Forrest**	**47.25**	**200**	P	**P**	**08 04 24.5**	**+0.5**
ADK	**Adak**	**48.77**	**31**	P	**P**	**08 04 35.7**	**+0.3**
MORW	**Morawa**	**51.03**	**213**	P	**P**	**08 04 52.1**	**-0.8**
MORW				IAmb	IAmb	08 05 17.1	
	comp=Z,18nm,1.3s						
TOO	**Toolangi**	**51.09**	**180**	P	**P**	**08 04 53.4**	**+0.3**
UNV	**Unalaska Valle**	**55.03**	**33**	P	**P**	**08 05 22.0**	**+0.2**
AKUT	**Akutan**	**55.55**	**33**	P	**P**	**08 05 25.5**	**0.0**
WMQ	**Urumqi**	**57.17**	**313**	*e*P	P	08 05 45.7	+8.3
SDPT	**Sand Point**	**58.84**	**33**	P	**P**	**08 05 48.4**	**-0.2**
MK31	**Makanchi Array**	**61.51**	**316**	P	**P**	**08 06 07.8**	**+0.8**
MKAR	**Makanchi Array**	**61.51**	**316**	P	**P**	**08 06 07.6**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=91,slow=8.5,SNR=21						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	**61.51**	**316**	P	**P**	**08 06 07.8**	**+0.7**

CHIR	Chirikof Islan	61.59	33	P	P	08 06 07.8	+0.4
ZALV	Zalesovo Beam	61.60	324	PcP	PcP	08 06 47.0	-0.9
	comp=Z,1.1nm,0.4s,baz=126,slow=6.3,SNR=4.6						
MAKZ	Makanchi	61.73	316	P	P	08 06 09.4	+0.8
MAKZ				IAmb	IAmb	08 06 11.0	
	comp=Z,2.9nm,0.6s						
KHZ	Kahutara	61.73	156	P	P	08 06 09.3	+0.9
SII	Sitkinak Islan	62.58	33	P	P	08 06 14.6	+0.6
N18K	Kilae Creek	63.10	28	P	P	08 06 18.4	+1.1
O18K	Koktuh Hills	63.13	29	P	P	08 06 17.9	+0.3
O18K				IAmb	IAmb	08 06 22.7	
	comp=Z,7.1nm,1.1s						
KDAK	Kodiak Island	63.77	32	P	P	08 06 21.6	-0.2
N19K	Bonanza Creek	63.79	28	P	P	08 06 21.9	-0.1
N19K				IAmb	IAmb	08 06 42.7	
	comp=Z,6.1nm,1.2s						
KURK	Kurchatov	64.58	320	P	P	08 06 28.3	+1.1
KURK				IAmb	IAmb	08 06 29.0	
	comp=Z,3.9nm,0.6s						
J20K	Nowinta River	65.11	25	P	P	08 06 30.9	+0.5
CAST	Castle Rocks	65.71	26	P	P	08 06 34.3	-0.1
CAST				IAmb	IAmb	08 06 36.5	
	comp=Z,4.8nm,1.3s						
IMAR	Indian Mountai	65.92	23	P	P	08 06 36.1	+0.5
I23K	Minto, Yukon-K	67.37	25	P	P	08 06 45.2	+0.4
IL31		68.29	25	P	P	08 06 48.9	-1.6
ILAR	Eielson Array	68.29	25	P	P	08 06 48.7	-1.9
	comp=Z,1.3nm,0.4s,baz=251,slow=5.7,SNR=41						
	comp=Z,1.3nm,0.4s						
TOLK	Toolik Lake Re	68.34	21	P	P	08 06 51.6	+0.7
TOLK				IAmb	IAmb	08 06 51.7	
	comp=Z,2.3nm,0.5s						
KKAR	Karatay Array	69.50	311	P	P	08 06 59.4	+0.9
BMAR	Burnt Mountain	69.83	23	P	P	08 07 01.0	+0.9
BRVK	Borovoye	69.98	322	P	P	08 07 01.8	+0.5
BRVK				IAmb	IAmb	08 07 03.3	
	comp=Z,4.3nm,0.6s						
BCAR	Beaver Creek A	70.16	28	P	P	08 07 02.2	0.0
EGAK	Eagle	70.69	26	P	P	08 07 04.9	-0.4
DAWY	Dawson	71.36	27	P	P	08 07 09.9	+0.4
HYT	Haines Junctio	71.91	30	P	P	08 07 14.3	+1.4
HYT				IAmb	IAmb	08 07 26.9	
	comp=Z,8.0nm,1.4s						
M31M	Drury Creek, Y	73.48	29	P	P	08 07 22.1	0.0
INK	Inuvik	74.09	22	P	P	08 07 24.6	-0.8
	comp=Z,1.7nm,0.7s,baz=294,slow=5.5,SNR=7.4						
	comp=Z,1.7nm,0.7s						
INK	Inuvik	74.09	22	P	P	08 07 26.0	+0.6
INK				IAmb	IAmb	08 07 37.9	
	comp=Z,6.7nm,1.4s						
DIB	Dawson Inlet,	74.55	38	P	P	08 07 28.6	+0.2
DLBC	Dease Lake	75.69	33	P	P	08 07 36.1	+1.2
DLBC				IAmb	IAmb	08 07 36.6	
	comp=Z,3.1nm,0.6s						
RUBB	Prince Rupert	75.81	37	P	P	08 07 36.0	+0.5
ABKAR	Akbulak array	76.56	318	P	P	08 07 39.7	-0.2
ABKAR	Akbulak array	76.56	318	P	P	08 07 39.5	-0.4
C36M	Paulatuk	77.50	21	P	P	08 07 44.1	-0.7
C36M				IAmb	IAmb	08 08 04.7	
	comp=Z,18nm,1.5s						
NLWA	Neilton Lookou	80.67	44	P	P	08 08 03.1	+0.5
NLWA				IAmb	IAmb	08 08 04.9	
	comp=Z,6.0nm,0.8s						
BUCK	Buck Mountain	81.87	47	P	P	08 08 10.5	+1.4
BUCK				IAmb	IAmb	08 08 11.5	
	comp=Z,20nm,1.1s						
YKA	Yellowknife Ar	82.57	27	P	P	08 08 11.7	-0.5
	comp=Z,0.9nm,0.3s,baz=286,slow=5.1,SNR=40						
	comp=Z,0.9nm,0.3s						
HOPS	Hopland Field	82.85	52	P	P	08 08 15.0	+0.8
BEKR	Beckworth	84.71	50	P	P	08 08 24.7	+0.9
BEKR				IAmb	IAmb	08 08 25.1	
	comp=Z,3.6nm,0.6s						
NEW	Newport	84.92	42	P	P	08 08 25.4	+0.8
NEW				IAmb	IAmb	08 08 25.9	
	comp=Z,7.9nm,0.8s						
EDM	Edmonton	85.85	36	P	P	08 08 29.0	0.0
EDM				IAmb	IAmb	08 08 30.0	
	comp=Z,8.9nm,0.6s						
NVAR	Mina Array Bea	86.61	51	P	P	08 08 34.0	+0.7
	comp=Z,1.9nm,0.5s,baz=265,slow=5.9,SNR=27						
	comp=Z,1.9nm,0.5s						
NVAR	Mina Array Bea	86.61	51	P	P	08 08 34.4	+1.1
JTMT	Jette	86.90	42	P	P	08 08 35.6	+1.2
JTMT				IAmb	IAmb	08 08 36.3	
	comp=Z,3.6nm,0.8s						
ARCES	ARCESS Array B	86.97	342	P	P	08 08 33.3	-0.8
	comp=Z,2.0nm,0.6s,baz=65,slow=8.7,SNR=10						
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	86.97	342	P	P	08 08 33.4	-0.7
ARCES				IAmb	IAmb	08 08 35.8	
	comp=Z,6.4nm,1.2s						
LRM	Limekiln Ridge	88.68	43	P	P	08 08 43.6	+0.6
FINES	FINESS Array B	91.08	335	P	P	08 08 51.6	-1.9
	comp=Z,1.0nm,0.6s,baz=46,slow=5.5,SNR=7.0						
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	91.65	176	P	P	08 08 56.5	+0.8
VNDA				IAmb	IAmb	08 09 10.1	
	comp=Z,3.3nm,1.2s						
PDAR	Pinedale Array	91.66	45	P	P	08 08 55.4	-1.6
	comp=Z,0.5nm,0.6s,baz=221,slow=3.3,SNR=7.2						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	91.66	45	P	P	08 08 57.3	+0.3
DBIC	Dimbokro	143.92	302	PKP	PKPbc	08 15 23.4	+0.3
	comp=Z,11nm,0.5s,baz=53,slow=3.3,SNR=28						
DBIC	Dimbokro	143.92	302		PKPbc	08 15 23.5	+0.4
KIC	Kosan Boka	144.00	302	ePKP2	PKPab	08 15 23.0	+0.2
	comp=Z,26nm,0.5s						
TIC	Toumodi	144.07	303	ePKP2	PKPbc	08 15 23.5	-0.1
LIC	Lamto	144.31	302	ePKP2	PKPab	08 15 24.2	+0.3
	comp=Z,40nm,0.5s						
LPAZ	La Paz	147.82	99	PKPbc	PKPbc	08 15 34.0	-1.3
	comp=Z,2.0nm,0.7s,baz=296,slow=3.4,SNR=9.8						

NOU 03 08:05:48.0, 15°.82S×166°.95E, h17^{km}, MLv4.2/10,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.44	33	P	Pb	08 05 57.9	+0.5
DVP	Devils Point	2.23	148	P	Pn	08 06 24.6	+0.3
KOUNC	Koumac, New Ca	5.34	208	P	Pn	08 07 07.4	+0.4
YATNC	Mamie plateau,	6.21	181	P	Pn	08 07 17.7	-1.2
DZM	Mont Dzumac	6.24	184	P	Pn	08 07 18.8	-0.6
OUENC	Ouen Island, N	6.56	181	P	Pn	08 07 24.6	+0.8

IDC 03 08:26:13.0±999.0, 53°.70N×0°.03W, h0^{km}, Error ellipse:
s-maj=555.4km s-min=66.7km az=23.0, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	I37NO	17.68	22	i		10 12 20.0	
	baz=219,slow=324,SNR=1.7						
I43RU	DUBNA INFRASON	21.29	67	i		10 34 40.0	
	baz=277,slow=320,SNR=1.0						
I46RU	ZALESOVO INFRA	47.15	53	i		13 19 50.0	
	baz=308,slow=327,SNR=1.0						

IDC 03 08:48:02.5±9.3, 3°.01S×138°.69E, h0^{km}, mb3.4/2,
mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=392.1km
s-min=32.6km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.35	194	P	Pn	08 52 06.3	0.0
	0.3nm,0.3s,baz=15,slow=12,SNR=16						
	0.7nm,0.4s						
ASAR	Alice Springs	21.05	192	P	P	08 52 48.2	0.0
	1.9nm,0.8s,baz=12,slow=11,SNR=16						
	1.9nm,0.8s						
MKAR	Makanchi Array	70.01	322	P	P	08 59 16.2	+0.1
	0.2nm,0.5s,baz=109,slow=8.0,SNR=2.5						
	0.2nm,0.5s						

DJA 03 08:56:51.2±2.1, 1°S±3°×12°0E±°, h12^{km}±17^{km}, M3.1/5,
MLv3.1/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	1.57	5	P	Pn	08 57 16.6	-2.4
MPSI				S	Sb	08 57 40.0	-0.1
APSI	Ampana	1.93	80	P	Pg	08 57 39.1	+11
SPSI	Sidrap Palu	2.71	180	P	Pn	08 57 35.2	+0.6
MRSI	Marisa	2.78	52	P	Pn	08 57 37.0	+1.5
BNSI	Bone	3.16	174	P	Pn	08 57 38.3	-2.5

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*DJA **03** 09:16:46.3±0.5, 4°S±5°×10°4E±°, h217^{km}±5^{km}, M4.0/11,*
MLv4.0/11
*IDC **03** 09:16:47.2±2.0, 3°.44S×105°.55E, h199^{km}±25^{km}, mb3.3/5,*
mbtmp3.9/7, Error ellipse: s-maj=80.6km s-min=14.2km
az=51.0
ISC 03 09:16:45.9±0.8, **4°.30S**±0°.08×**104°.55E**±0°.07, **h200^{km}, n19,**
σ**2^{s}.55**/24, **mb3.5**/5, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDSI	Maura Dua	0.41	244	P	Pn	09 17 16.5	+3.8
MDSI				S	Sn	09 17 37.7	+4.3
LWLI	Liwa	0.86	214	P	Pn	09 17 18.3	+3.4
LWLI				S	Sn	09 17 41.1	+3.6
KASI	Kota Agung	1.21	182	P	Pn	09 17 19.6	+2.4
KASI				S	Sn	09 17 41.6	-0.1
BLSI	Bandar Lampung	1.27	147	P	Pn	09 17 20.7	+3.1
PMBI	Palembang	1.39	9	P	Pn	09 17 21.8	+3.2
MNAI	Manna	1.59	268	P	Pn	09 17 21.5	+1.1
MNAI				S	Sn	09 17 50.7	+3.6
TNG	Tangerang	2.79	132	P	Pn	09 17 33.5	+0.4
DBJI	Dramaga	3.13	136	P	Pn	09 17 38.3	+1.2
TPI	Tanjungpandan	3.46	64	P	Pn	09 17 43.9	+2.8
KRJI	Kerinci	3.78	305	P	Pn	09 17 41.7	-3.4
CNJI	Cibinong	3.94	139	P	Pn	09 17 44.6	-2.3
LEM	Lembang	3.95	129	P	Pn	09 17 48.7	+1.5
	27nm,0.6s,baz=344,slow=23,SNR=5.9						
PPSI	Pulau Pagai	4.78	289	P	Pn	09 17 58.3	+0.8
PSI	Prapat	9.02	321	P	Pn	09 18 52.2	-0.4
	6.6nm,0.4s,baz=138,slow=12,SNR=4.6						
WRA	Warramunga Arr	32.92	121	P	P	09 23 00.5	-1.2
	0.2nm,0.3s,baz=311,slow=8.7,SNR=8.3						
	0.2nm,0.3s						
ASAR	Alice Springs	34.24	127	P	P	09 23 12.4	-0.7
	0.6nm,0.5s,baz=298,slow=7.6,SNR=13						
ASAR				PcP	PcP	09 25 43.6	-1.4
	0.3nm,0.4s,baz=304,slow=2.1,SNR=4.6						
	0.6nm,0.5s						
STKA	Stephens Creek	44.25	133	P	P	09 24 35.2	-0.5
	2.2nm,0.7s,baz=326,slow=8.8,SNR=7.3						
	2.2nm,0.7s						
MKAR	Makanchi Array	54.55	341	P	P	09 25 51.8	-1.6
	0.3nm,0.3s,baz=145,slow=8.7,SNR=4.7						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	60.35	347	P	P	09 26 31.7	-1.9
	0.4nm,0.3s,baz=197,slow=3.0,SNR=1.8						
	0.4nm,0.3s						

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*GUC **03** 09:17:16.6±0.9, 17°.35S×69°.89W, h15^{km}±12^{km}, ML3.8*
*IDC **03** 09:17:17.7±1.1, 17°.29S×70°.09W, h0^{km}, mb3.6/5,*
mbtmp3.7/8, ML3.5/3, MS2.6/2, Error ellipse: s-maj=27.4km
s-min=22.2km az=74.0
*ARE **03** 09:17:18±3.0, 17°.42S±0°.04×69°.91W±0°.07, h12^{km}±5^{km},*
ML4.3, mb4.1/2(NEIC), Error ellipse: s-maj=0.0km
s-min=0.0km az=192.0
*NEIC **03** 09:17:19.2±3.0, 17°.50S±0°.04×70°.1W±0°.1, h10^{km}±1^{km},*
Error ellipse: s-maj=20.7km s-min=5.4km az=98.0
ISC 03 09:17:17.9±0.7, **17°.47S**±0°.04×**70°.06W**±0°.07, **h10^{km}, n45,**
σ**1^{s}.91**/51, **mb3.9**/7, **1C-1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	0.93	196		Pn	09 17 36.4	-0.7
AP01				Sn	Sn	09 17 51.0	+0.5
AP01	Chacalluta	0.93	196	⇑iP	Pn	09 17 36.5	-0.7
AP01				i S	Sn	09 17 50.9	+0.5
AP01				IAML		09 17 51.5	
	comp=E,11μm,0.3s						
PB16	IPOC Station P	1.01	148	Pg	Pg	09 17 35.4	-2.1
PB16	IPOC Station P	1.01	148	⇓iP	Pg	09 17 35.8	-1.7
PB16				i S	Sg	09 17 48.7	-2.0
PB12	IPOC Station P	1.16	192		Pb	09 17 39.7	-0.5
PB12	IPOC Station P	1.16	192	i P	Pn	09 17 40.0	-0.3
PB12				i S	Sn	09 17 57.1	+0.7
PB12				IAML		09 17 57.7	
	comp=E,2μm,0.2s						
LPAZ	La Paz	2.19	58	Pn	Pb	09 17 56.6	-1.5
	comp=E,14nm,0.3s,baz=246,slow=9.7,SNR=398						
LPAZ				LR	LR	09 19 07.9	
	comp=E,88nm,19.3s,baz=264,slow=52						
	comp=E,60nm,0.6s						
LPAZ	La Paz	2.19	58		Pb	09 17 56.4	-1.8
LPAZ	La Paz	2.19	58	eP	Pb	09 17 56.3	-1.8
PB11	IPOC Station P	2.31	170		Pb	09 17 57.7	-2.2
PB11	IPOC Station P	2.31	170	eP	Pb	09 17 57.6	-2.2
PB11				eS	Sb	09 18 29.1	+0.6
GO01	Chusmiza	2.33	159	eP	Pb	09 18 00.1	-0.4
GO01				eS	Sb	09 18 30.2	+0.7
TA02	Huaiquique	2.78	181		Pn	09 18 03.0	+0.4
TA02	Huaiquique	2.78	181	eP	Pn	09 18 03.2	+0.6
PB08	IPOC Station P	2.79	162		Pb	09 18 05.0	-3.2
PB08	IPOC Station P	2.79	162	eP	Pb	09 18 07.0	-1.1
PB08				eS	Sb	09 18 44.6	+2.0
PB08				IAML		09 18 46.9	
	comp=E,278nm,0.5s						
TA01	Diego Aracena	3.08	182		Pb	09 18 09.3	-3.5
TA01	Diego Aracena	3.08	182	eP	Pn	09 18 07.3	+0.7
TA01				eS	Sn	09 18 46.7	+3.2
PB01	IPOC Station P	3.59	171		Pn	09 18 16.4	+2.5
PB01	IPOC Station P	3.59	171	eP	Pn	09 18 17.1	+3.3
PB01				eS	Sb	09 19 03.3	-2.1
PB02	IPOC Station P	3.83	178		Pn	09 18 18.9	+1.8
PB02	IPOC Station P	3.83	178	eP	Pn	09 18 19.7	+2.6
PB07	IPOC Station P	4.23	178		Pn	09 18 24.6	+1.9
PB09	IPOC Station P	4.37	170		Pn	09 18 25.7	+1.1
PB04	IPOC Station P	4.84	181	Pn	Pn	09 18 32.5	+1.5
LVC	Limon Verde	5.22	168	Pn	Pn	09 18 41.6	+5.1
	comp=E,1.0nm,0.3s,baz=348,slow=13,SNR=3.7						
LVC				Sn	Sn	09 19 42.9	+5.9
	comp=E,0.9nm,0.3s,baz=8.9,slow=15,SNR=1.0						
LVC				LR	LR	09 21 08.4	
	comp=E,86nm,20.3s,baz=332,slow=43						
	comp=E,3.3nm,0.4s						
LVC	Limon Verde	5.22	168		Pn	09 18 36.9	+0.4
PB06	IPOC Station P	5.23	175	Pn	Pn	09 18 36.3	0.0
PB15	IPOC Station P	5.73	175		Pn	09 18 44.1	+0.7
PB10	IPOC Station P	6.03	184	Pn	Pn	09 18 49.5	+2.3
PB14	IPOC Station P	7.12	182	Pn	Pn	09 19 04.8	+2.3
GO02	Mina Guanaco	7.66	177	Pn	Pn	09 19 09.7	-0.3
AC01	Pan de Azucar	8.65	183	Pn	Pn	09 19 23.5	+0.3
SIV	San Ignacio	8.74	82	Pn	Pn	09 19 25.5	+1.0
	comp=E,0.1nm,0.3s,baz=271,slow=9.8,SNR=15						
	comp=E,4.8nm,0.6s						
AC02	Maricunga	9.36	175	Pn	Pn	09 19 34.1	+0.7
H03N1	Juan Fernandez	17.78	205	T	T	09 39 00.7	
	baz=29,slow=73,SNR=12						
H03N2	Juan Fernandez	17.79	205	T	T	09 38 45.7	
	baz=29,slow=73,SNR=9.4						
H03N3	Juan Fernandez	17.80	205	T	T	09 38 44.6	
	baz=29,slow=73,SNR=12						
TRQA	Tornquist	21.70	163	P	P	09 22 07.1	-2.0
TRQA				IAmb	IAmb	09 22 13.7	
	comp=Z,4.3nm,0.8s						
PLCA	Paso Flores	23.18	181	P	P	09 22 28.2	+3.3
	comp=Z,2.8nm,1.1s,baz=319,slow=6.7,SNR=3.1						
	comp=Z,2.8nm,1.1s						
TXAR	Lajitas Array	56.72	325	P	P	09 27 01.5	-0.7
	comp=Z,0.1nm,0.5s,baz=158,slow=7.8,SNR=1.8						
	comp=Z,0.1nm,0.5s						
PDAR	Pinedale Array	70.09	330	P	P	09 28 31.7	+1.0
	comp=Z,0.2nm,0.4s,baz=107,slow=4.8,SNR=1.5						
	comp=Z,0.2nm,0.4s						
QSPA	South Pole Qui	72.70	180	P	P	09 28 45.4	-0.6
QSPA				IAmb	IAmb	09 28 46.7	
	comp=Z,2.8nm,1.1s						
TORD	Torodi Ar. Bea	77.08	72	P	P	09 29 11.4	-0.7
	comp=Z,1.4nm,0.4s,baz=239,slow=3.7,SNR=2.2						
	comp=Z,1.4nm,0.4s						
YKA	Yellowknife Ar	87.05	341	P	P	09 30 04.4	+1.1
	comp=Z,0.6nm,0.8s,baz=134,slow=4.9,SNR=10						
	comp=Z,0.6nm,0.8s						

KRSC 03 09:18:31.4±1.3, **50°.62N×157°.29E, h120^{km}**±14^{km}, **ML3.6,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.75	275	i P	Pn	09 18 52.3	+1.2
SKR				eS	Sn	09 19 06.5	+0.6
PAU	Pauzhetka	0.90	340	eP	Pn	09 18 53.7	+1.3
PAU				eS	Sn	09 19 09.5	+1.2
KDTR	Khodutka, Kamc	1.28	22	eP	Pn	09 18 58.3	+2.0
KDTR				eS	Sn	09 19 16.6	+1.3
MIPR	Malaya Ipel'ka	1.69	349	eP	Pn	09 19 01.7	+0.7
ASAK	Asacha	1.80	12	eP	Pn	09 19 04.2	+1.7
MTVR	Mutnovka	1.94	16	eP	Pn	09 19 06.2	+2.0
MTVR				eS	Sn	09 19 31.1	+1.8
RUS	Russkaya	1.97	22	eP	Pn	09 19 05.9	+1.6
RUS				eS	Sn	09 19 30.3	+0.7
GRL	Gorelyy	1.99	14	eP	Pn	09 19 06.7	+1.9
KRMR	Karymshinskiy	2.27	13	eP	Pn	09 19 09.8	+1.6
PET	Petropavlovsk	2.55	19	eP	Pn	09 19 13.0	+1.3
DALK	Dalny	2.58	20	eP	Pn	09 19 13.9	+1.8
UGLR	Uglovaya	2.76	20	eP	Pn	09 19 16.9	+2.3
AVH	Avacha	2.79	18	eP	Pn	09 19 17.5	+2.5
KOK	Koryaka	2.80	17	eP	Pn	09 19 17.8	+2.7
SMAR	Somma	2.80	19	eP	Pn	09 19 17.4	+2.1
KRER	Koryakskii	2.83	18	eP	Pn	09 19 17.8	+2.2
SDLR	Sedlovina	2.83	20	eP	Pn	09 19 17.4	+1.8
NLC	Nalytchevo	2.85	26	eP	Pn	09 19 16.5	+0.9
KRX	Arik	2.87	16	eP	Pn	09 19 18.2	+2.2
SPN	Mys Shipunski	3.00	33	eP	Pn	09 19 19.7	+2.1
GNL	Ganaly	3.10	7	eP	Pn	09 19 20.0	+0.9
MKZ	Mys Kozlova	4.78	33	eP	Pn	09 19 42.0	+0.8
KBTR	Krutoberegovo	6.50	28	eP	Pn	09 20 05.7	+1.3

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*IDC **03** 09:50:37.8±2.8, 25°.33N×122°.14E, h226^{km}±29^{km},*
mb3.4/10, mbtmp4.0/11, Error ellipse: s-maj=26.7km
s-min=12.3km az=64.0
*TAP **03** 09:50:37.8, 25°.31N×122°.15E, h243^{km}, ML4.5, B*
*JMA **03** 09:50:39.8±0.2, 25°N±2°×122°.1E±0°.6, h218^{km}±2^{km},*
MV4.6/15, TAIWAN REGION
ISC 03 09:50:38.0±0.7, **25°.31N**±0°.04×**122°.16E**±0°.03, **h232^{km}**±5^{km},
n168, σ**1^{s}.12**/279, **mb3.6**/10, **8C-30D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SXI1	Grass Mountain	0.33	231	⇓iP	Pn	09 51 08.6	+0.1
	baz=229						
SXI1				i S	S	09 51 30.8	-1.4
	baz=229						
TWB1	Santiao Chiao	0.33	207	⇓iP	Pn	09 51 08.8	+0.4
	baz=204						
TWB1				S	S	09 51 31.2	-0.9
	baz=204						
TNOU	National Taiwa	0.38	246	P	Pn	09 51 08.8	+0.4
	baz=245						
TNOU				S	S	09 51 32.1	-0.1
	baz=245						
NWF	Wu-fen Shan	0.41	236	⇓iP	Pn	09 51 08.8	+0.2
	baz=234						
NWF				i S	S	09 51 32.1	-0.5
	baz=234						
WFSB	Wu-fen Shan	0.41	236	⇓P	Pn	09 51 08.8	+0.3
	baz=234						
WFSB				S	S	09 51 31.8	-0.6
	baz=234						
TIPB	Shuangxi	0.45	222	⇓iP	Pn	09 51 08.8	+0.1
	baz=221						
TIPB				S	S	09 51 32.2	-0.5
	baz=221						
EGS		0.50	204	P	Pn	09 51 09.3	+0.5
	baz=201						
EGS				eS	S	09 51 34.1	+1.1
	baz=201						
TWY	Chenhua	0.51	267	⇓iP	Pn	09 51 09.4	+0.7
	baz=265						
TWY				S	S	09 51 32.1	-0.7
	baz=265						
NTC	Toucheng	0.54	214	eP	Pn	09 51 09.0	+0.1
	baz=212						
NTC				eS	S	09 51 33.3	+0.1
	baz=212						
YM01	YM01	0.56	254	eP	Pn	09 51 09.3	+0.3
	baz=252						
YM01				eS	S	09 51 32.5	-0.7
	baz=252						
ANP	Anpu	0.59	259	eP	Pn	09 51 09.7	+0.5
	baz=257						
ANP				eS	S	09 51 33.2	-0.4
	baz=257						
NHY	Taipei	0.59	244	eP	Pn	09 51 09.6	+0.5
	baz=243						
TWA	Mucha	0.61	238	P	Pn	09 51 09.5	+0.3
	baz=236						
TWA				S	S	09 51 32.5	-1.1
	baz=236						
TAP	Taipei	0.65	246	eP	Pn	09 51 09.6	+0.3
	baz=244						
TAP				S	S	09 51 32.7	-1.1
	baz=244						
ILA	Ilan	0.65	215	eP	Pn	09 51 10.1	+0.7
	baz=213						
ILA				eS	S	09 51 33.2	-0.7
	baz=213						
NTST	Danshui	0.66	258	eP	Pn	09 51 09.9	+0.6
	baz=257						
NHDH	Xindian Distri	0.67	239	P	Pn	09 51 09.7	+0.3
	baz=238						
NHDH				S	S	09 51 33.0	-1.0
	baz=238						
TATO	Taipei	0.69	242	eP	Pn	09 51 09.5	0.0
	baz=240						
TATO				eS	S	09 51 32.7	-1.4
	baz=240						
TWS1	Kuangyinshan	0.70	253	⇓iP	Pn	09 51 10.0	+0.5
	baz=252						
TWS1				S	S	09 51 33.4	-0.7
	baz=252						
BACT	New Taipei Cit	0.72	245	eP	Pn	09 51 09.9	+0.3
	baz=244						
BACT				eS	S	09 51 34.0	-0.2
	baz=244						
TWE	Neicheng	0.73	217	P	Pn	09 51 10.0	+0.3
	baz=215						
TWE				S	S	09 51 33.9	-0.5
	baz=215						
TWC	Suao	0.75	202	⇓iP	Pn	09 51 09.8	0.0
	baz=200						
TWC				eS	S	09 51 31.8	-2.8
	baz=200						
FUSB	Fushanzhiwuyua	0.75	224	⇓P	Pn	09 51 09.9	0.0
	baz=223						
FUSB				S	S	09 51 33.2	-1.6
	baz=223						
NDS	Dongshan	0.78	211	eP	Pn	09 51 10.6	+0.6
	baz=210						
NDS				S	S	09 51 34.7	-0.2
	baz=210						
NWLT	Wulai	0.79	229	eP	Pn	09 51 10.1	+0.1
	baz=228						
NWLT				eS	S	09 51 33.0	-2.0
	baz=228						
NTY	Taoyuan	0.84	249	eP	Pn	09 51 10.6	+0.5
	baz=248						
NTY				eS	S	09 51 34.6	-0.7
	baz=248						
ENTT	Nioudou	0.85	219	⇓P	Pn	09 51 10.5	+0.2
	baz=218						
ENTT				S	S	09 51 34.2	-1.4
	baz=218						
NDT	Datong Townshi	0.91	220	⇓eP	Pn	09 51 10.8	+0.1
	baz=219						
NDT				eS	S	09 51 33.9	-2.2
	baz=219						
EWUT	Wuta	0.92	202	⇓eP	Pn	09 51 11.1	+0.4
	baz=201						
EWUT				S	S	09 51 35.2	-1.0
	baz=201						
NCU	National Centr	0.94	249	P	Pn	09 51 11.4	+0.6
	baz=248						
NCU				S	S	09 51 35.4	-0.9
	baz=248						
NCUH	Zhongli	0.94	249	P	Pn	09 51 11.3	+0.5
	baz=248						
NCUH				eS	S	09 51 35.5	-0.9
	baz=248						
YHNB	Yeheng	0.95	228	P	Pn	09 51 11.1	+0.2
YHNB	Yeheng	0.95	228	⇓iP	Pn	09 51 10.7	-0.2
	baz=227						
YHNB				eS	S	09 51 34.4	-2.3
	baz=227						

ENA	Nanau baz=202	0.95	203	P	Pn	09 51 11.3	+0.5
ENA	baz=202			eS	S	09 51 35.4	-1.1
LATG	Datong baz=216	0.96	217	⇓P	Pn	09 51 11.4	+0.4
LATG	baz=216			S	S	09 51 35.4	-1.4
NSK	Sanguang baz=228	0.96	229	⇓iP	Pn	09 51 10.8	-0.2
NSK	baz=228			eS	S	09 51 34.2	-2.5
NHW	Xinwu Township baz=253	1.05	254	P	Pn	09 51 11.9	+0.6
NHW	baz=253			S	S	09 51 37.2	-0.3
EHP	Heping Village baz=200	1.06	201	P	Pn	09 51 11.8	+0.3
EHP	baz=200			S	S	09 51 36.8	-0.9
JYNG	Yonagunijimaku	1.11	140	P	Pn	09 51 11.7	-0.1
JYNG				eS	S	09 51 36.6	-1.6
NNS	Nan Shan baz=218	1.12	220	⇓P	Pn	09 51 12.2	+0.2
NNS	baz=218			eS	S	09 51 37.0	-1.6
NNSB	Datong baz=218	1.12	219	⇓iP	Pn	09 51 12.2	+0.2
NNSB	baz=218			S	S	09 51 36.7	-1.9
NJD	Zhudong baz=239	1.12	240	eP	Pn	09 51 12.0	+0.1
NJD	baz=239			eS	S	09 51 37.5	-0.8
YOJ	Yonaguni jima	1.14	137	P	Pn	09 51 12.3	+0.3
YOJ	Yonaguni jima baz=137	1.14	137	⇓iP	Pn	09 51 11.9	-0.1
YOJ	baz=137			eS	S	09 51 36.3	-2.2
YOJ	Yonaguni jima	1.14	137	P	Pn	09 51 11.9	-0.1
YOJ				S	S	09 51 37.0	-1.5
NFF	Wufeng Townshi baz=234	1.16	235	⇓P	Pn	09 51 12.2	0.0
NFF	baz=234			S	S	09 51 36.9	-2.0
HSN1	Hsinchu baz=242	1.16	243	eP	Pn	09 51 12.7	+0.6
HSN1	baz=242			eS	S	09 51 37.9	-0.8
SBCB	Hsinchu baz=244	1.18	245	P	Pn	09 51 12.1	-0.1
SBCB	baz=244			eS	S	09 51 37.7	-1.3
HSN	Hsinchu baz=245	1.19	245	eP	Pn	09 51 12.8	+0.6
HSN	baz=245			S	S	09 51 37.6	-1.4
LIOB	Emei baz=237	1.23	238	P	Pn	09 51 12.9	+0.3
LIOB	baz=237			S	S	09 51 38.3	-1.3
NACB	Ninganchiao baz=204	1.24	205	⇓P	Pn	09 51 12.1	-0.6
NACB	baz=204			eS	S	09 51 37.6	-2.2
ETL	Fush Village baz=202	1.24	203	eP	Pn	09 51 12.6	-0.1
ETL	baz=202			eS	S	09 51 37.7	-2.2
NSTT	Nanjuang baz=236	1.25	238	⇓iP	Pn	09 51 12.9	+0.2
NSTT	baz=236			S	S	09 51 37.9	-1.9
ETLH	Xiulin Townshi baz=208	1.25	209	eP	Pn	09 51 12.9	0.0
ETLH	baz=208			eS	S	09 51 38.6	-1.6
TWD	Chiawan baz=202	1.32	203	eP	Pn	09 51 12.8	-0.4
TWD	baz=202			eS	S	09 51 38.4	-2.4
TWT	Tachien baz=220	1.38	221	eP	Pn	09 51 14.6	+0.7
TWT	baz=220			eS	S	09 51 40.9	-1.0
TDCB	Techi baz=220	1.39	221	P	Pn	09 51 14.3	+0.4
TDCB	baz=220			S	S	09 51 40.2	-1.8
WHF	Hehuan Shan baz=214	1.41	215	⇓iP	Pn	09 51 14.9	+0.5
WHF	baz=214			S	S	09 51 41.3	-1.5
HWA	Hwalien baz=200	1.42	201	eP	Pn	09 51 14.2	+0.2
HWA	baz=200			eS	S	09 51 41.5	-0.6
NMLH	Miaoli baz=238	1.46	239	eP	Pn	09 51 14.8	+0.5
NMLH	baz=238			eS	S	09 51 41.1	-1.5
ETM	Tongmen baz=204	1.46	205	eP	Pn	09 51 13.9	-0.4
ETM	baz=204			eS	S	09 51 40.6	-2.2
WHP	Taichung City baz=226	1.50	227	⇓P	Pn	09 51 15.1	+0.3
WHP	baz=226			eS	S	09 51 41.9	-1.6
TEYL	Yanliau Villag baz=199	1.52	200	P	Pn	09 51 15.1	+0.3
TEYL	baz=199			eS	S	09 51 42.9	-0.6
CHGB	Renai baz=215	1.53	216	⇓P	Pn	09 51 15.6	+0.5
CHGB	baz=215			eS	S	09 51 41.7	-2.4
TWQ1	Liyutan baz=232	1.58	233	⇓P	Pn	09 51 15.7	+0.4
TWQ1	baz=232			eS	S	09 51 43.1	-1.2
OWD	Renai baz=213	1.61	214	⇓P	Pn	09 51 16.3	+0.5
OWD	baz=213			eS	S	09 51 43.8	-1.4
WUSB	Renai baz=215	1.61	216	⇓iP	Pn	09 51 16.2	+0.5
WUSB	baz=215			eS	S	09 51 43.4	-1.7
ESL	Shilin baz=203	1.62	204	eP	Pn	09 51 15.6	-0.1
WDJ	Dajia District baz=235	1.68	236	eP	Pn	09 51 16.5	+0.5
WDJ	baz=235			S	S	09 51 45.2	-0.5
TEGC	Jichi Village baz=198	1.69	200	eP	Pn	09 51 16.6	+0.4
TEGC	baz=198			eS	S	09 51 45.6	-0.4
WPL	Puli Township baz=220	1.69	221	P	Pn	09 51 16.5	+0.3
WPL	baz=220			eS	S	09 51 44.9	-1.1
DPDB	Guoxing baz=221	1.69	222	P	Pn	09 51 16.5	+0.2
DPDB	baz=221			eS	S	09 51 45.1	-1.0
IRIF	Iriomote-Funau	1.73	124	P	Pn	09 51 16.5	0.0
IRIF				S	S	09 51 45.4	-1.1
EGFH	Guangfu baz=201	1.76	202	eP	Pn	09 51 16.9	+0.1
VWDT	VWDT baz=210	1.80	211	P	Pn	09 51 18.1	+1.0
VWDT	baz=210			S	S	09 51 47.5	-0.2
SMLT	Sun Moon Lake baz=218	1.82	219	P	Pn	09 51 17.7	+0.3
SMLT	baz=218			S	S	09 51 47.3	-1.1
WWF	Wufeng baz=226	1.83	227	P	Pn	09 51 17.8	+0.4
WWF	baz=226			eS	S	09 51 47.1	-1.0
TYC	Yuchr baz=219	1.83	221	eP	Pn	09 51 17.8	+0.4
TYC	baz=219			eS	S	09 51 45.4	-2.8
SSLB	Suanglung	1.87	216	P	Pn	09 51 18.3	+0.5
SSLB	Suanglung baz=215	1.87	216	⇓P	Pn	09 51 18.0	+0.2
SSLB	baz=215			eS	S	09 51 46.5	-2.4
HGSD	Ruisui baz=200	1.93	200	⇓P	Pn	09 51 18.6	+0.3
HGSD	baz=200			eS	S	09 51 49.3	-0.6
WNT1	Nantou City baz=223	1.94	224	eP	Pn	09 51 18.2	-0.2
EHY	Hungye baz=202	1.95	203	eP	Pn	09 51 18.1	-0.4
HATJ	Hateruma jima	1.95	129	P	Pn	09 51 19.2	+0.7
HATJ				S	S	09 51 49.3	-0.8
WNT	Mingjian baz=222	1.95	224	eP	Pn	09 51 18.9	+0.4
WNT	baz=222			eS	S	09 51 49.1	-1.1
WJS	Zhushan baz=221	1.97	222	eP	Pn	09 51 19.1	+0.4
WJS	baz=221			eS	S	09 51 49.6	-1.0
JKRS	Kuro-shima	1.99	122	P	Pn	09 51 19.7	+0.8
JKRS				S	S	09 51 49.7	-1.2
JIJ	Ishigaki jima	2.03	117	P	Pn	09 51 19.5	+0.2
JIJ				S	S	09 51 49.4	-2.1
YULB	Yu-li baz=202	2.06	203	eP	Pn	09 51 18.8	-0.8
YULB	baz=202			eS	S	09 51 49.9	-2.3
ECBN	Changbin baz=197	2.08	198	eP	Pn	09 51 20.0	+0.3
JISG	Ishigakijimahi	2.08	110	i P	Pn	09 51 20.2	+0.5
JISG				S	S	09 51 51.2	-1.2
EYUL	Yuli baz=201	2.09	202	eP	Pn	09 51 21.0	+1.0
TWF1	Yuli baz=201	2.10	202	eP	Pn	09 51 19.0	-1.0
TWF1	baz=201			eS	S	09 51 51.0	-1.8
YUS	Yu-Shan baz=210	2.12	212	eP	Pn	09 51 21.0	+0.4
YUS	baz=210			eS	S	09 51 52.7	-1.3
WRL	Guolierlin Hig baz=229	2.14	230	eP	Pn	09 51 21.0	+0.6
WRL	baz=229			eS	S	09 51 52.4	-1.0
MATB	Ma-tsu baz=292	2.17	293	⇑iP	Pn	09 51 20.7	+0.2
CHN5	Tsauling baz=218	2.17	219	P	Pn	09 51 21.1	+0.4
CHN5	baz=218			S	S	09 51 52.6	-1.6
ALS	Alishan baz=214	2.17	215	eP	Pn	09 51 21.3	+0.4
ALS	baz=214			eS	S	09 51 52.9	-1.7
WDLH	Douliu baz=222	2.18	223	eP	Pn	09 51 21.1	+0.3
WDLH	baz=222			eS	S	09 51 53.3	-0.9
MSUT	Lienchiang baz=293	2.19	294	⇑iP	Pn	09 51 20.9	+0.2
FULB	Fuli baz=200	2.24	201	eP	Pn	09 51 21.7	+0.3
WTK	Tuku baz=224	2.28	225	eP	Pn	09 51 22.3	+0.6
WTK	baz=224			eS	S	09 51 54.4	-1.4
CHKT	Chengkung baz=197	2.31	198	eP	Pn	09 51 22.2	+0.2
ELDTW	Lidau baz=205	2.35	207	P	Pn	09 51 23.0	+0.4
ELDTW	baz=205			eS	S	09 51 57.0	-0.5
ECS	Chishang baz=201	2.36	201	eP	Pn	09 51 22.7	+0.1
CHY	Chiayi baz=220	2.40	222	eP	Pn	09 51 23.4	+0.5
XPSS	Dashiqiu baz=312	2.40	313	⇑iP	Pn	09 51 23.2	+0.4
JTJ	Tarama	2.40	105	P	Pn	09 51 23.9	+1.0
JTJ				S	S	09 51 57.4	-0.7
CHN4	Tsaushan baz=216	2.41	217	P	Pn	09 51 23.4	+0.3
CHN4	baz=216			S	S	09 51 56.7	-1.7
TPUB	Ta-pu	2.43	215	P	Pn	09 51 24.0	+0.7
TPUB	Ta-pu baz=214	2.43	215	eP	Pn	09 51 23.2	-0.2
TPUB	baz=214			eS	S	09 51 57.1	-1.7
EDH	Donghe baz=198	2.45	199	eP	Pn	09 51 23.8	+0.3
STYH	Taoyuan baz=210	2.47	211	P	Pn	09 51 24.0	+0.3
STYH	baz=210			eS	S	09 51 58.0	-1.4
VWUC	VWUC baz=262	2.47	263	⇑iP	Pn	09 51 23.5	-0.2
STYT	Tauyuan baz=210	2.49	211	P	Pn	09 51 24.4	+0.5
STYT	baz=210			S	S	09 51 58.5	-1.4
WTP	Ta-pu baz=214	2.49	215	P	Pn	09 51 24.1	+0.1
WTP	baz=214			eS	S	09 51 57.9	-2.0
LYJJ	Jianjiangzhen baz=299	2.49	300	⇑iP	Pn	09 51 24.1	+0.3
WSL	Shuilin Townsh baz=224	2.50	225	eP	Pn	09 51 24.3	+0.4
WSL	baz=224			eS	S	09 51 58.8	-1.1
LONT	Longtian baz=201	2.57	202	eP	Pn	09 51 24.7	0.0
SNST	Tainan City baz=215	2.57	216	P	Pn	09 51 25.2	+0.5
SNST	baz=215			S	S	09 51 59.8	-1.6
CHN1	Nanshi baz=214	2.58	215	P	Pn	09 51 25.2	+0.3
CHN1	baz=214			eS	S	09 51 60.0	-1.6
SGST	Jiashian baz=212	2.64	213	eP	Pn	09 51 25.5	0.0
SGST	baz=212			eS	S	09 52 00.1	-2.6
TWG	Pinlang baz=201	2.67	202	eP	Pn	09 51 25.3	-0.4
TWGBT	Beinan baz=201	2.67	202	eP	Pn	09 51 25.1	-0.7
LDUT	Ludao baz=193	2.69	194	eP	Pn	09 51 26.0	0.0
LDUT	baz=193			eS	S	09 52 02.6	-1.2
PTMZ	Houxiangcun baz=264	2.76	265	⇑eP	Pn	09 51 24.5	-2.2
JIRB	Irabujima	2.78	99	P	Pn	09 51 27.9	+1.0
JIRB				S	S	09 52 04.0	-1.2
JIKM	Ikemajima	2.83	97	P	Pn	09 51 28.8	+1.3
JIKM				S	S	09 52 05.8	-0.4
SCST	Cishan baz=212	2.85	213	eP	Pn	09 51 28.8	+1.1
JMJ	Miyako jima 2 baz=99	2.89	99	⇓eP	Pn	09 51 30.1	+2.0
JMJ	baz=99			eS	S	09 52 07.4	0.0
SSD	Sandimen baz=208	2.90	209	P	Pn	09 51 28.8	+0.4
SSD	baz=208			S	S	09 52 06.3	-1.6
ECL	Taimali baz=201	2.91	202	eP	Pn	09 51 29.3	+0.9
ECL	baz=201			eS	S	09 52 06.2	-1.8
MHZQ	Yeshan baz=285	2.93	286	⇑iP	Pn	09 51 28.6	+0.1
JMJ2	Miyako jima3	2.93	100	P	Pn	09 51 30.1	+1.5
JMJ2				S	S	09 52 08.0	-0.3
TSMG	Majia baz=207	2.93	208	eP	Pn	09 51 29.2	+0.6
TSMG	baz=207			eS	S	09 52 06.6	-1.9
PNG	Penghu baz=233	2.94	234	eP	Pn	09 51 28.9	+0.2
JOGS	Gusukube	3.00	100	P	Pn	09 51 30.8	+1.5
JOGS				eS	S	09 52 09.3	-0.3
MASBT	Mashibuluo baz=207	3.02	208	⇑P	Pn	09 51 30.3	+0.6
MASBT	baz=207			S	S	09 52 08.6	-1.6
WDGT	Dungji baz=227	3.06	229	eP	Pn	09 51 30.4	+0.4
EAST	Anshuo baz=202	3.15	203	eP	Pn	09 51 31.6	+0.5
EAST	baz=202			eS	S	09 52 11.4	-1.5
SSPT	Xinbi baz=207	3.16	208	eP	Pn	09 51 31.8	+0.6
WSSB	Gushan baz=213	3.17	214	eP	Pn	09 51 32.5	+1.2
TAWH	Dawu Township baz=201	3.17	202	eP	Pn	09 51 32.3	+0.9
VCHM	Qimei baz=229	3.25	231	eP	Pn	09 51 32.4	+0.2
SLIU	Shizi baz=201	3.32	202	eP	Pn	09 51 33.6	+0.6
LYUB	Lan-yu baz=188	3.33	189	eP	Pn	09 51 32.8	-0.4
WLCH	Liuqiu baz=208	3.36	209	eP	Pn	09 51 35.0	+1.5
KNM	Kinmen baz=255	3.50	256	eP	Pn	09 51 36.2	+1.2
KNMB	Chin-men Tao baz=256	3.52	257	eP	Pn	09 51 34.9	-0.4
TWK1	Hengchun baz=200	3.57	201	eP	Pn	09 51 36.3	+0.4
TWKBT	Hengchun baz=200	3.57	200	eP	Pn	09 51 36.5	+0.6
TSEB	Hengchuen, Pin baz=199	3.58	199	eP	Pn	09 51 36.9	+0.8
AXDP	Jialang baz=263	3.82	265	eP	Pn	09 51 38.9	+0.1
SXFK	Yanhouchang baz=284	4.21	286	eP	Pn	09 51 43.5	0.0
ZPLA	Ao Xicun baz=251	4.24	252	eP	Pn	09 51 43.8	0.0
JOW	Kunigami 11nm,0.2s,baz=128,slow=22,SNR=21	5.71	73	P	Pn	09 52 01.3	-0.7
JOW	26nm,0.2s,baz=97,slow=24,SNR=16			S	S	09 53 02.7	-6.2
JOW	Kunigami	5.71	73	P	Pn	09 52 01.9	-0.2
JOW	Kunigami baz=74	5.71	73	eS	S	09 53 03.6	-5.3
KLR	Kul'dur 0.9nm,0.4s,baz=193,slow=2.3,SNR=5.0 0.9nm,0.4s	25.03	15	P	P	09 55 42.0	+1.2
SONM	Songino Array 3.9nm,0.7s,baz=152,slow=10.0,SNR=22 3.9nm,0.7s	25.70	335	P	P	09 55 47.4	+0.4
MKAR	Makanchi Array 0.9nm,0.4s,baz=100,slow=9.7,SNR=18 0.9nm,0.4s	38.17	315	P	P	09 57 35.5	+0.4
ZALV	Zalesovo Beam 2.2nm,0.5s,baz=101,slow=8.0,SNR=7.6 2.2nm,0.5s	39.80	326	P	P	09 57 48.1	-0.3
KURBB	Kurchatov Arra 0.9nm,0.3s,baz=108,slow=10.0,SNR=16 0.9nm,0.3s	41.84	319	P	P	09 58 05.1	0.0
WRA	Warramunga Arr 1.2nm,0.5s,baz=347,slow=8.7,SNR=6.4 1.2nm,0.5s	46.51	164	P	P	09 58 42.8	+0.4
ASAR	Alice Springs 1.0nm,0.7s,baz=351,slow=6.7,SNR=8.9 1.0nm,0.7s	49.99	166	P	P	09 59 09.8	+0.8
ARCES	ARCESS Array B 0.5nm,0.4s,baz=79,slow=7.5,SNR=6.6 0.5nm,0.4s	68.83	338	P	P	10 01 16.5	-0.5
FINES	FINESS Array B 1.1nm,0.8s,baz=30,slow=6.4,SNR=2.6 1.1nm,0.8s	70.93	330	P	P	10 01 30.0	+0.3
YKA	Yellowknife Ar 0.4nm,0.6s,baz=312,slow=5.1,SNR=15 0.4nm,0.6s	81.60	23	P	P	10 02 30.0	+0.4

NEIC ***03*** *09:58:40.2±1.1, 18°.4S±0°.1×178°.1W±0°.2, h473^{km}±6^{km}, mb4.2/33, Error ellipse: s-maj=24.3km s-min=14.4km az=104.0*

IDC ***03*** *09:58:41.6±2.1, 18°.46S×178°.23W, h485^{km}±20^{km}, mb3.4/10, mbtmp4.1/11, Error ellipse: s-maj=40.7km s-min=15.9km az=147.0*

ISC 03 09:58:42.9±0.8**, 18°.3S**±0°.2×**178°.5W**±0°.1**, h500^{km}, n48,** σ**1^{s}.21**/48**, mb4.1**/26**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 41nm,0.8s,baz=127,slow=12,SNR=16	3.35	279	P	P	09 59 56.3	-0.2
MSVF	12nm,0.6s,baz=66,slow=23,SNR=1.8			S	S	10 00 51.1	-5.2
MSVF	Nonsavu	3.35	279	P	P	09 59 54.8	-1.7
CTAO	Charters Tower	33.31	261	P	P	10 04 40.9	+2.0
STKA	Stephens Creek 1.9nm,0.8s,baz=48,slow=5.5,SNR=3.6 1.9nm,0.8s	38.37	242	P	P	10 05 21.2	+0.4
WR0	Warramunga Arr	44.30	260	P	P	10 06 07.9	-0.2
WR0	comp=Z,6.9nm,1.4s			IAmb	IAmb	10 06 19.2	
WB0	Warramunga Arr	44.46	260	P	P	10 06 10.4	+1.2
WB2	Warramunga Arr	44.48	260	P	P	10 06 10.1	+0.7
WB2	comp=Z,6.8nm,1.2s			IAmb	IAmb	10 06 17.9	
WRAB	Tennant Creek	44.48	260	P	P	10 06 10.5	+1.1
WRAB	comp=Z,8.2nm,1.4s			IAmb	IAmb	10 06 32.2	
WRA	Warramunga Arr comp=Z,1.0nm,0.6s,baz=97,slow=6.7,SNR=22 comp=Z,1.0nm,0.6s	44.49	260	P	P	10 06 10.4	+0.9
WRA	Warramunga Arr	44.49	260	P	P	10 06 10.8	+1.2
AS31	Alice Springs	44.61	255	P	P	10 06 11.8	+1.4
ASAR	Alice Springs comp=Z,5.6nm,0.5s,baz=89,slow=8.6,SNR=113 comp=Z,5.6nm,0.5s	44.61	255	P	P	10 06 11.8	+1.4
KNRA	Kununurra	50.38	265	P	P	10 06 54.8	+0.9
KNRA	comp=Z,16nm,1.2s			IAmb	IAmb	10 07 16.5	
FITZ	Fitzroy Crossi	52.89	261	P	P	10 07 13.2	+1.2
MJAR	Matsushiro Arr comp=Z,0.9nm,0.4s,baz=153,slow=7.2,SNR=3.7 comp=Z,0.9nm,0.4s	68.19	323	P	P	10 08 54.8	+1.8
MJAR	Matsushiro Arr comp=Z,2.3nm,1.2s	68.19	323	IAmb	IAmb	10 09 01.3	
MAJO	Matsushiro	68.19	323	P	P	10 08 54.3	+1.3
MAJO	comp=Z,12nm,1.2s			IAmb	IAmb	10 09 12.7	
MJB9	Matsu-Tunnel	68.20	323	P	P	10 08 54.2	+1.2
MJB9	comp=Z,12nm,1.3s			IAmb	IAmb	10 09 12.7	
ADK	Adak	69.92	1	P	P	10 09 04.1	+1.1
QSPA	South Pole Qui	71.74	180	P	P	10 09 13.0	-0.9
QSPA	comp=Z,5.9nm,0.9s			IAmb	IAmb	10 09 14.6	
PEA0B	Petropavlovsk-	74.06	345	P	P	10 09 27.6	+0.5
PETK	Petropavlovsk- comp=Z,6.0nm,0.8s,baz=148,slow=8.7,SNR=11 comp=Z,6.0nm,0.8s	74.06	345	P	P	10 09 28.2	+1.1
PETK	Petropavlovsk-	74.06	345	P	P	10 09 25.4	-1.7
P18K	Big Mountain,	79.73	12	P	P	10 09 58.1	0.0
NVAR	Mina Array Bea comp=Z,1.1nm,0.7s,baz=224,slow=8.6,SNR=11 comp=Z,1.1nm,0.7s	79.77	44	P	P	10 09 58.7	-0.3
NVAR	Mina Array Bea	79.77	44	P	P	10 09 57.7	-1.3
O18K	Koktuh Hills	80.17	12	P	P	10 10 00.7	+0.4
PINE	Pine Mountain	81.16	38		P	10 10 05.8	-0.3
PINE	comp=Z,7.3nm,1.1s			IAmb	IAmb	10 10 08.5	
TTA	Tatalina	82.89	10	P	P	10 10 15.0	+0.7
TTA	comp=Z,5.6nm,1.1s			IAmb	IAmb	10 10 16.9	
K20K	Telida	83.62	11	P	P	10 10 18.4	+0.5
K20K	comp=Z,7.7nm,0.9s			IAmb	IAmb	10 10 20.1	
CAST	Castle Rocks	84.04	12	P	P	10 10 19.0	-0.9
J20K	Nowinta River	84.36	10	P	P	10 10 22.0	+0.6
J20K	comp=Z,4.4nm,0.7s			IAmb	IAmb	10 10 23.3	
KTH	Kantishna Hill	84.39	12	P	P	10 10 21.1	-0.7
KTH	comp=Z,7.0nm,0.9s			IAmb	IAmb	10 10 22.2	
TRF	Thorofare Moun	84.42	12	P	P	10 10 21.8	-0.3
F10A	Beach Ranch, E	84.56	38	P	P	10 10 22.5	-0.6

F10A				IAmb	IAmb	10 10 24.0	
	comp=Z,4.3nm,1.1s						
RND	Reindeer	84.68	13	P	P	10 10 23.4	+0.3
WRH	Wood River Hil	85.78	13	P	P	10 10 28.3	-0.1
WRH				IAmb	IAmb	10 10 30.7	
	comp=Z,6.6nm,0.9s						
TXAR	Lajitas Array	86.27	58	P	P	10 10 31.4	-0.3
	comp=Z,1.0nm,0.8s,baz=215,slow=6.0,SNR=12						
	comp=Z,1.0nm,0.8s						
IL31		86.30	13	P	P	10 10 30.6	-0.2
IL31				IAmb	IAmb	10 10 32.2	
	comp=Z,9.2nm,1.4s						
ILAR	Eielson Array	86.30	13	P	P	10 10 30.4	-0.5
	comp=Z,1.2nm,0.7s,baz=218,slow=5.3,SNR=16						
	comp=Z,1.2nm,0.7s						
J25K	Salcha River,	86.50	14	P	P	10 10 31.4	-0.5
M30M	Minto, Yukon	87.05	18	P	P	10 10 33.9	-0.5
M30M				IAmb	IAmb	10 10 36.3	
	comp=Z,4.0nm,0.8s						
PDAR	Pinedale Array	87.70	43	P	P	10 10 38.2	0.0
	comp=Z,0.6nm,0.9s,baz=188,slow=3.0,SNR=3.6						
	comp=Z,0.6nm,0.9s						
YKA	Yellowknife Ar	94.73	25	P	P	10 11 09.6	-0.3
	comp=Z,0.8nm,0.8s,baz=244,slow=4.5,SNR=10.0						
	comp=Z,0.8nm,0.8s						
ARCES	ARCESS Array B	126.70	350	PKP	PKiKP	10 16 48.9	-0.2
	comp=Z,0.9nm,0.9s,baz=45,slow=1.9,SNR=6.0						
BRTR	Keskin Array B	145.02	314	PKPbc	PKPab	10 17 25.3	+0.6
	comp=Z,1.0nm,0.6s,baz=46,slow=8.4,SNR=3.4						
CLL	Collm	145.85	347⇓	*i*PKPbc	PKPab	10 17 26.8	-0.6
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	147.99	345	PKPbc	PKiKP	10 17 32.1	-1.0
	comp=Z,1.4nm,0.5s,baz=345,slow=4.7,SNR=10						

DDA 03 10:04:38.2±0.0**, 37°.11N×27°.94E, h7**^{km}±3^{km}**, ML1.2, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MULA	Mugla, Merkez-	0.34	64	P	Pg	10 04 45.1	+0.3
MULA				S	Sg	10 04 49.5	+0.1
MULA				*i* AML	AML	10 04 52.0	
	comp=E,26nm,0.4s						
MULA				*i* AML	AML	10 04 53.0	
	comp=N,18nm,0.5s						
BDRM	Kayabasi	0.40	264	P	Pg	10 04 45.6	-0.4
BDRM				S	Sg	10 04 52.5	+1.2
BDRM				*i* AML	AML	10 04 53.0	
	comp=N,34nm,0.3s						
BDRM				*i* AML	AML	10 04 55.0	
	comp=E,34nm,0.5s						
TURN	Turunc	0.41	144	P	Pg	10 04 46.4	+0.2
TURN				S	Sg	10 04 52.7	+1.2
TURN				*i* AML	AML	10 04 55.0	
	comp=N,30nm,0.5s						
TURN				*i* AML	AML	10 04 58.0	
	comp=E,21nm,0.6s						
DAT	Datca	0.48	218	P	Pg	10 04 46.2	-1.3
DAT				S	Sb	10 04 56.0	-0.3
DAT				*i* AML	AML	10 04 57.0	
	comp=N,8.9nm,0.7s						
DAT				*i* AML	AML	10 04 59.0	
	comp=E,11nm,0.6s						
AYDN	Tasoluk	0.56	355	P	Pg	10 04 49.1	+0.2
AYDN				S	Sb	10 04 57.4	-1.1
AYDN				*i* AML	AML	10 04 59.0	
	comp=N,23nm,0.5s						
AYDN				*i* AML	AML	10 04 59.0	
	comp=E,37nm,0.3s						
AYDN	Tasoluk	0.56	355	P	Pg	10 04 49.2	+0.3
AYDN				S	Sb	10 04 57.5	-1.0
TAVA	DENIZLI_Tavas	0.85	65	P	Pb	10 04 55.2	-0.2
TAVA				S	Sb	10 05 06.7	-0.4
TAVA				*i* AML	AML	10 05 13.0	
	comp=E,3.8nm,0.5s						
TAVA				*i* AML	AML	10 05 14.0	
	comp=N,5.6nm,1.3s						

DDA ***03*** *10:04:44.2±0.0, 38°.00N×27°.87E, h7^{km}±22^{km}, ML2.3*
ISK ***03*** *10:04:58.0, 38°.93N×26°.49E, h13^{km}±1^{km}, ML2.4/7*
ISC 03 10:04:58.1±1.1**, 38°.90N**±0°.02×**26°.48E**±0°.03**, h20**^{km}±4^{km}**, n17, σ0^{s}.56**/33**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOCM	Foa	0.27	134	PG	Pb	10 05 04.3	0.0
FOCM				SG	Sg	10 05 08.9	+0.4
DKL	Dikili	0.37	63	PG	Pg	10 05 05.7	-0.3
DKL				SG	Sg	10 05 11.2	-0.1
AYVA	Ayvalik	0.44	22	P	Pg	10 05 06.7	-0.4
AYVA				S	Sg	10 05 12.1	-1.1
AYVA				*i* AML	AML	10 05 16.0	
	comp=E,56nm,0.3s						
AYVA				*i* AML	AML	10 05 17.0	
	comp=N,101nm,0.4s						
ZEDA	zmir-Bergama	0.47	82	P	Pg	10 05 07.9	+0.2
ZEDA				S	Sb	10 05 14.5	+0.2
ZEDA				*i* AML	AML	10 05 17.0	
	comp=N,39nm,0.2s						
ZEDA				*i* AML	AML	10 05 17.0	
	comp=E,30nm,0.1s						
URLA	Izmir	0.55	171	PG	Pg	10 05 09.4	+0.2
URLA				SG	Sn	10 05 18.1	-1.4
URLA	Izmir	0.55	171	P	Pg	10 05 09.3	+0.1
URLA	Izmir	0.55	171	P	Pg	10 05 09.3	+0.1
URLA				S	Sn	10 05 18.7	-0.8
URLA				*i* AML	AML	10 05 21.0	
	comp=N,114nm,0.3s						
URLA				*i* AML	AML	10 05 21.0	
	comp=E,66nm,0.2s						
CHOS	Chios island	0.61	213	PG	Pg	10 05 10.9	+0.5
CHOS				SG	Sn	10 05 20.3	-0.9
KOCA	Canakkale, Ayv	0.66	336	P	Pb	10 05 10.5	-0.3
KOCA				S	Sn	10 05 21.6	-0.6
KOCA				*i* AML	AML	10 05 23.0	
	comp=N,79nm,0.5s						
KOCA				*i* AML	AML	10 05 23.0	
	comp=E,73nm,0.4s						
ZEYE	Izmir, Urla-Ze	0.66	178	P	Pg	10 05 11.5	+0.2
ZEYE				S	Sn	10 05 22.2	0.0
ZEYE				*i* AML	AML	10 05 24.0	
	comp=N,129nm,0.5s						
ZEYE				*i* AML	AML	10 05 24.0	
	comp=E,125nm,0.3s						
BLCB	Balcova	0.68	139	PG	Pg	10 05 11.9	+0.4
BLCB				SG	Sn	10 05 22.1	-0.5
BUHA	Balikesir, Bur	0.76	38	P	Pb	10 05 12.2	-0.4
BUHA				S	Sn	10 05 24.3	-0.3
BUHA				*i* AML	AML	10 05 26.0	
	comp=E,94nm,0.4s						
BUHA				*i* AML	AML	10 05 27.0	
	comp=N,46nm,0.4s						
BAYC	CANAKKALE_Bayr	0.84	3	P	Pb	10 05 13.8	-0.2
BAYC				*i* AML	AML	10 05 26.0	
	comp=E,69nm,0.5s						
BAYC				S	Sg	10 05 26.4	+0.6
BAYC				*i* AML	AML	10 05 27.0	
	comp=N,74nm,0.6s						
EZN	Ezine	0.93	353	PG	Pb	10 05 15.9	+0.3
EZN				SG	Sn	10 05 29.1	+0.2
BOZC	Bozcaada	0.99	341	PG	Pn	10 05 17.1	+0.1
BOZC				SG	Sg	10 05 31.1	+0.5
STEP	BALIKESIR_Sava	1.07	63	P	Pn	10 05 18.5	+0.4
STEP				S	Sg	10 05 33.5	+0.4
STEP				*i* AML	AML	10 05 35.0	
	comp=N,63nm,0.4s						
STEP				*i* AML	AML	10 05 36.0	
	comp=E,57nm,0.3s						
BALY	Balya	1.22	46	P	Pg	10 05 22.7	+1.0
BALY				S	Sg	10 05 37.4	-0.3
BALY				*i* AML	AML	10 05 40.0	
	comp=N,24nm,0.5s						
BALY				*i* AML	AML	10 05 40.0	
	comp=E,22nm,0.5s						

IDC 03 10:06:06.5±5.9**, 53°.25N×90°.66E, h0**^{km}**, mbtmp2.6**/2**, ML1.9**/2**, Error ellipse: s-maj=59.9km s-min=29.3km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.55	284	*i*		10 30 10.0	
	0.2nm,1.1s,baz=96,slow=336,SNR=4.4						
ZALV	Zalesovo Beam	3.55	284	Pn	Pn	10 07 05.0	+2.2
	0.2nm,0.3s,baz=86,slow=20,SNR=3.7						
ZALV				Lg	Lg	10 07 57.8	
	baz=96,slow=28						
	0.6nm,0.3s						
MKAR	Makanchi Array	8.41	223	Pn	Pn	10 08 09.9	+0.4
	baz=51,slow=11,SNR=2.0						
MKAR				Lg	Lg	10 10 38.6	
	baz=40,slow=27,SNR=2.4						
	0.4nm,0.9s						
I34MN	SONGINO INFRAS	11.40	112	*i*		11 11 10.0	
	baz=304,slow=323,SNR=2.0						

TUL ***03*** *10:35:01.6±1.5, 36°.812N±0°.010×97°.799W±0°.008, h7^{km}±4^{km}, ML3.0, mb_Lg2.5/39(NEIC), Error ellipse: s-maj=1.5km s-min=0.8km az=158.0*
NEIC 03 10:35:01.7±0.8**, 36°.796N**±0°.010×**97°.79W**±0°.01**, h8**^{km}±5^{km}**, Error ellipse: s-maj=1.6km s-min=1.3km az=102.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.03	83	Pg	Pg	10 35 21.1	-0.4
U32A	Winter Ranch,	1.06	247	Pg	Pg	10 35 21.5	-0.5
OKCFA	Oklahoma City	1.41	169	Pn	Pn	10 35 27.9	+0.2
OKCFA				IAmb_Lg		10 35 50.2	
	comp=Z,29nm,0.9s						
OKCSW	OKLAHOMA CITY	1.42	168		Pb	10 35 28.2	-0.2
FNO	Franklin	1.57	168	Pn	Pn	10 35 29.4	-0.5
R32A	Long Quarter,	1.78	336	Pn	Pn	10 35 31.9	-0.9
TUL1	Leonard	1.84	118	Pn	Pn	10 35 33.2	-0.4
TUL1				IAmb_Lg		10 36 02.5	
	comp=Z,28nm,0.7s						
X34A	Smith Ranch, M	2.19	181		Pb	10 35 40.2	-1.4
X34A				IAmb_Lg		10 36 16.7	
	comp=Z,16nm,0.7s						
WMOK	Wichita Mounta	2.21	202		Pn	10 35 39.5	+0.8
WMOK				IAmb_Lg		10 36 11.8	
	comp=Z,15nm,1.0s						
KSU1	Kansas State U	2.48	22	Pn	Pn	10 35 42.3	-0.2
KSU1				IAmb_Lg		10 36 21.7	
	comp=Z,14nm,1.0s						
CBKS	Cedar Bluff	2.54	323	Pn	Pn	10 35 42.5	-0.7
HHAR	Hobbs	3.14	98		Pn	10 35 51.8	+0.2
HHAR				IAmb_Lg		10 36 45.7	
	comp=Z,11nm,0.8s						
Z35A	Perchaven, San	3.49	173	Pn	Pn	10 35 56.0	-0.2
W39A	Magazine	3.62	115	IAmb_Lg		10 37 06.0	
	comp=Z,8.1nm,0.8s						
S39A	Bolivar	3.68	75	Pn	Pn	10 35 57.6	-1.3
S39A				IAmb_Lg		10 37 00.7	
	comp=Z,13nm,0.7s						
AMTX	Amarillo	3.69	240	IAmb_Lg		10 37 01.8	
	comp=Z,15nm,0.9s						
U40A	Yellville	4.00	95		Pn	10 36 04.9	+1.5
U40A				IAmb_Lg		10 37 12.4	
	comp=Z,9.4nm,0.7s						
Z38A	Mt. Pleasant	4.21	146	IAmb_Lg		10 37 19.2	
	comp=Z,14nm,0.8s						
MGMO	Mountain Grove	4.44	84	IAmb_Lg		10 37 23.7	
	comp=Z,9.7nm,0.7s						
FCAR	Ozark Folk Cen	4.66	100	IAmb_Lg		10 37 26.4	
	comp=Z,6.3nm,0.8s						
L34A	Svendsen Farm,	5.28	12	IAmb_Lg		10 37 51.3	
	comp=Z,11nm,0.9s						
P40A	Paris	5.29	57	IAmb_Lg		10 37 57.0	
	comp=Z,6.6nm,0.8s						
T25A	Trinidad	5.31	276	Pn	Pn	10 36 19.4	-2.2
T25A				IAmb_Lg		10 37 52.1	
	comp=Z,8.3nm,0.9s						
PBMO	Poplar Bluff	5.91	88	IAmb_Lg		10 38 15.4	
	comp=Z,7.9nm,0.7s						
S44A	Carbondale	6.87	80	IAmb_Lg		10 38 43.7	
	comp=Z,7.3nm,0.7s						
SIUC	Southern Illin	6.90	80	IAmb_Lg		10 38 36.5	
	comp=Z,7.8nm,0.8s						
ECSD	EROS Data Cent	6.99	7	IAmb_Lg		10 38 53.8	
	comp=Z,4.6nm,1.2s						

HEL ***03*** *10:39:58.5±0.1, 63°.13N×27°.73E, h0^{km}, ML1.9, Explosion*
IDC ***03*** *10:39:59.3±1.7, 63°.04N×28°.00E, h0^{km}, mbtmp2.9/3, ML2.1/2, Error ellipse: s-maj=23.6km s-min=7.1km az=105.0*
ISC 03 10:39:58.2±0.9**, 63°.05N**±0°.03×**27°.76E**±0°.04**, h0**^{km}**, n25, σ1^{s}.33**/38**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUF	Sumiainen	0.81	247	PG	Pg	10 40 13.6	0.0
KAF	Kangasniemi	1.16	216	PG	Pg	10 40 20.4	+0.1
KAF				SN	Sn	10 40 38.5	+0.5
KEF	Keuruu	1.60	238	PG	Pn	10 40 28.2	+0.5
KEF				MSG		10 40 47.5	
	comp=Z,4.8nm,0.2s						
JOF	Joensuu	1.63	93	PG	Pn	10 40 28.3	+0.3
	baz=283						
JOF				SN	Sn	10 40 50.0	+0.3
FIA0	FINESS Array S	1.79	207	PG	Pb	10 40 32.0	+0.1
	baz=20						
FIA0				SG	Sg	10 40 55.7	0.0
FINES	FINESS Array B	1.79	207	Pg	Pb	10 40 31.9	+0.1
	comp=Z,0.2nm,0.3s,baz=25,slow=17,SNR=17						
FINES				Lg	Lg	10 40 56.6	
	comp=Z,1.9nm,0.3s,baz=24,slow=28,SNR=22						
FINES				Rg	Rg	10 41 09.7	
	comp=Z,5.3nm,0.8s,baz=20,slow=33,SNR=7.7						
OUF	Merijarvi	1.89	316	PG	Pn	10 40 31.4	-0.2
OUF				MSG		10 40 52.7	
	comp=Z,6.3nm,0.2s						
OUF				SG	Sn	10 40 56.6	+0.5
OBF0	Syolatti, Pyha	2.14	314	PG	Pn	10 40 35.9	+0.9
OBF0				SG	Sn	10 41 01.7	-0.5
OUL	Oulu	2.20	339	PG	Pn	10 40 36.5	+0.5
	baz=153						
OUL				SG	Sn	10 41 05.3	+1.5
VAF	Ylistaro	2.32	272	PG	Pn	10 40 39.4	+1.9
	baz=88						
VAF				MSG		10 41 06.7	
	comp=Z,8.6nm,0.2s						
VAF				SG	Sb	10 41 10.3	+0.4
VJF	Virojoki	2.52	182	PG	Pb	10 40 44.1	-0.1
VJF				MSG		10 41 15.2	
	comp=Z,5.0nm,0.2s						
VJF				SG	Sg	10 41 18.2	-0.8
PVF	Pernaja	2.67	201	PG	Pb	10 40 46.3	-0.5
	baz=14						
PVF				MSG		10 41 19.3	
	comp=Z,2.8nm,0.2s						
PVF				SG	Sg	10 41 22.9	-0.9
MSF	Maaselka	2.93	10	PB	Pn	10 40 46.6	+0.7
MSF				SB	Sn	10 41 23.6	+1.9
NUR	Nurmijrvi	2.94	211	SG	Sg	10 41 32.2	-0.5
KU6	Riekki	3.13	16	PB	Pn	10 40 50.6	+1.9
	baz=201						
KU6				MSG		10 41 28.1	
	comp=Z,3.8nm,0.2s						
UMAU	Umeaa	3.29	288	PN	Pn	10 40 51.8	+1.0
OLKF	Oulanka, Finla	3.36	11	PB	Pn	10 40 53.6	+1.7
OLKF				SG	Sb	10 41 38.5	-1.5
TOF	Tornio	3.39	336	PB	Pn	10 40 54.4	+2.2
	baz=155						
RAF	Rauma	3.48	237	PG	Pb	10 41 01.2	+0.6
ERTU	Ertsjaerv	4.25	328	PN	Pn	10 41 05.4	+1.4
PAJU	Pajala	4.45	336	PN	Pn	10 41 07.6	+0.8
HEMU	Hemsoen	4.47	270	PN	Pn	10 41 08.0	+0.9
ARCES	ARCESS Array B	6.58	353	Pn	Pn	10 41 35.9	-0.1
	comp=Z,0.1nm,0.3s,baz=166,slow=14,SNR=5.6						
ARCES				Pg	Pb	10 41 44.5	-8.8
	comp=Z,0.1nm,0.3s,baz=178,slow=37,SNR=1.8						
ARCES				Sn	Sn	10 42 47.6	-4.0
	comp=Z,0.1nm,0.3s,baz=16,slow=9.2,SNR=2.2						
	comp=Z,0.6nm,0.6s						
HFS	Hagfors	7.32	253	Pn	Pn	10 41 48.0	+1.9
	comp=Z,0.1nm,0.3s,baz=238,slow=24,SNR=1.1						
HFS				Sn	Sn	10 43 07.1	-2.6
	comp=Z,0.2nm,0.3s,baz=94,slow=40,SNR=1.4						
	comp=Z,0.8nm,0.7s						
NOA	NORSAR Array B	8.03	263	Pn	Pn	10 41 57.5	+1.5
	comp=Z,0.6nm,0.9s,baz=229,slow=25,SNR=1.4						

IDC ***03*** *10:40:56.6±0.9, 27°.92N×56°.30E, h0^{km}, mb3.9/15, mbtmp3.9/16, ML3.3/1, MS2.4/2, Error ellipse: s-maj=23.0km s-min=17.9km az=55.0*
DSN ***03*** *10:40:56.1±1.1, 28°.12N×57°.00E, h10^{km}, ML3.6/8, Error ellipse: s-maj=36.3km s-min=10.1km az=110.0*
MOS ***03*** *10:40:59.6±1.5, 28°.04N×56°.21E, h30^{km}, mb4.3/10, Error ellipse: s-maj=13.5km s-min=7.8km az=98.8*
NEIC ***03*** *10:40:59.8±2.6, 28°.07N±0°.04×56°.33E±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=6.9km s-min=6.1km az=298.0*
TEH ***03*** *10:41:01.0, 27°.95N×56°.33E, h20^{km}, ML3.8*
OMAN ***03*** *10:41:04.6±1.8, 27°.64N×56°.23E, h10^{km}, mb4.1/6, ml3.5/15, Error ellipse: s-maj=15.4km s-min=8.6km az=24.0*
ISC 03 10:40:59.6±1.2**, 28°.00N**±0°.02×**56°.34E**±0°.03**, h15**^{km}±8^{km}**, n141, σ1^{s}.95**/169**, mb4.1**/26**, MS3.0**/3**, 7C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.57	162	*e*Pg	Pg	10 41 11.7	+0.8
IBND				*e*		10 41 36.0	
	comp=Z,93µm,0.4s						
GENO	Geno	0.61	194	Pg	Pb	10 41 13.2	+1.1
GENO	Geno	0.61	194	*e*Pg	Pb	10 41 13.3	+1.1
KHNJ	Kahnooj	1.21	92		Pb	10 41 23.0	+0.8
KHNJ	Kahnooj	1.21	92	*e*Pg	Pb	10 41 23.0	+0.8
KHNJ				*e*Sg	Sn	10 41 40.2	+2.0
NGRK	Negar Kerman	1.68	12	Pn	Pg	10 41 31.2	-0.6
NGRK	Negar Kerman	1.68	12	*e*Pn	Pg	10 41 31.4	-0.4
NGRK				*e*		10 42 01.9	
	comp=Z,10µm,0.6s						
LAR1	LAR	1.77	260	Pn	Pg	10 41 33.4	-0.2
LAR1	LAR	1.77	260	*e*Pn	Pb	10 41 31.9	+0.1
SHME	Shamm	1.95	185	*e*Pn	Pn	10 41 33.8	+1.6
SHME	Shamm	1.95	185	P	Pb	10 41 34.8	0.0
SHME				S	Sn	10 41 54.7	-1.7
SHME	Shamm	1.95	185	P	Pn	10 41 33.1	+0.9
SHME				S	Sb	10 42 02.1	+3.2
TVBK	TV Kerman	2.02	10	Pn	Pg	10 41 37.2	-1.1
TVBK	TV Kerman	2.02	10	*e*Pn	Pg	10 41 37.4	-0.9
TVBK				*e*		10 42 08.8	
	comp=Z,12µm,0.3s						
BANOM	Banah	2.07	181	*e*Pn	Pn	10 41 35.4	+1.6
BANOM	Banah	2.07	181	P	Pn	10 41 35.5	+1.7
	SNR=26						
BANOM				S	Sn	10 42 00.8	+1.4
BANOM	Banah	2.07	181	P	Pn	10 41 33.9	+0.1
BANOM				S	Sn	10 42 02.1	+2.7
CHMN	Cheshme madani	2.13	29	Pn	Pb	10 41 39.1	+0.9
CHMN	Cheshme madani	2.13	29	*e*Pn	Pb	10 41 37.8	-0.4
CHMN				*e*		10 42 12.0	
	comp=Z,5µm,0.4s						
KBAM	BAM	2.18	58	*e*Pn	Pb	10 41 38.9	+0.1
KBAM				*e*		10 42 12.1	
	comp=Z,6µm,0.3s						
KHGB	Koh Gabri	2.37	3	Pn	Pb	10 41 42.1	-0.1
KHGB	Koh Gabri	2.37	3	*e*Pn	Pb	10 41 41.8	-0.4
KHGB				*e*		10 42 22.5	
	comp=Z,4µm,0.4s						
JASK	Jask - Hormozg	2.52	147	Pn	Pb	10 41 44.5	-0.1
JASK	Jask - Hormozg	2.52	147	*e*Pn	Pn	10 41 41.3	+1.2
UMQ	Umm Al-Quwin	2.54	194	*e*Pn	Pn	10 41 42.3	+2.1
MASF	Masafi	2.62	184	P	Pn	10 41 43.1	+1.7
MASF				S	Sn	10 42 14.6	+1.5
MSFE	Esma-Masafi	2.63	184	*e*Pn	Pn	10 41 43.0	+1.3
MSFE	Esma-Masafi	2.63	184	P	Pn	10 41 42.9	+1.3
QIR1	Qir	2.95	280	*e*Pn	Pn	10 41 48.8	+2.8
UOSS	Minazif	3.04	182	Pn	Pn	10 41 47.9	+0.6
UOSS	Minazif	3.04	182	*e*Pn	Pn	10 41 48.5	+1.2
UOSS	Minazif	3.04	182	P	Pn	10 41 48.4	+1.2
UOSS	Minazif	3.04	182	P	Pn	10 41 47.6	+0.3
NAZ	Nazwa, Dubai	3.06	192	*e*Pn	Pn	10 41 49.7	+2.3
NAZ	Nazwa, Dubai	3.06	192	P	Pn	10 41 49.5	+2.1
NAZ	Nazwa, Dubai	3.06	192	P	Pn	10 41 48.7	+1.2
HATD	Hatta, Dubai	3.17	183	*e*Pn	Pn	10 41 49.9	+1.0
HATD	Hatta, Dubai	3.17	183	P	Pn	10 41 50.7	+1.8
HATD				S	Sn	10 42 28.3	+1.8
HATD	Hatta, Dubai	3.17	183	P	Pn	10 41 49.2	+0.2
FAQ	Al Faqa, Dubai	3.31	192	*e*Pn	Pn	10 41 52.5	+1.6
FAQ	Al Faqa, Dubai	3.31	192	P	Pn	10 41 52.8	+1.9
	SNR=8.1						
FAQ				S	Sn	10 42 30.8	+0.8
FAQ	Al Faqa, Dubai	3.31	192	P	Pn	10 41 51.3	+0.5
ASHO	Ashiyiah	3.31	184	*e*Pn	Pn	10 41 52.6	+1.6
ASHO	Ashiyiah	3.31	184	P	Pn	10 41 52.7	+1.8
	SNR=16						
ASHO				S	Sn	10 42 30.9	+0.8
ASUD	Al Ashush, Dub	3.48	195	*e*Pn	Pn	10 41 54.9	+1.7
ASUD	Al Ashush, Dub	3.48	195	P	Pn	10 41 55.5	+2.3
ASUD	Al Ashush, Dub	3.48	195	P	Pn	10 41 53.8	+0.6
IBAF	Bafgh	3.64	350	Pn	Pn	10 41 58.2	+2.6
IBAF	Bafgh	3.64	350	*e*Pn	Pn	10 41 58.4	+2.8
IMEH	Mehriz	3.70	336	*e*Pn	Pn	10 41 59.8	+3.3
IMEH				*e*		10 42 01.2	
	comp=Z,2µm,0.2s						
SOHO	SOHO	3.85	177	*e*Pn	Pn	10 41 59.6	+1.2
SOHO	SOHO	3.85	177	P	Pn	10 41 57.3	-1.1
ALNE	Al Ain	3.96	188	*e*Pn	Pn	10 42 01.6	+1.7
ALNE	Al Ain	3.96	188	P	Pn	10 42 01.4	+1.5
ALNE				S	Sn	10 42 46.9	+0.8
ZHDN	Zahedan	4.17	69	*e*Pn	Pn	10 42 06.2	+3.3
JRN	Qarnain Island	4.37	227	*e*Pn	Pn	10 42 07.0	+1.6
JRN	Qarnain Island	4.37	227	P	Pn	10 42 05.9	+0.5
JRN				S	Sn	10 42 56.3	+0.2
HOQ	Hoqain	4.48	169	P	Pn	10 42 09.2	+2.1
ISAD	Sadrabad	4.53	330	*e*Pn	Pn	10 42 11.5	+3.5
ISAD				*e*		10 42 14.0	
	comp=Z,571nm,0.3s						
ICHK	Chekchek	4.55	339	*e*Pn	Pn	10 42 10.8	+2.6
ARQ	Araqi	4.64	178	P	Pn	10 42 11.2	+1.9
BIDO	Bidbid	4.74	160	*e*Pn	Pn	10 42 12.1	+1.5
TPRV	Parvadeh(Tabas	5.02	3	*e*Pn	Pn	10 42 16.2	+1.7
KLNJ	Kolanjah	5.11	307	*e*Pn	Pn	10 42 18.3	+2.3
IRAM	Ramesheh	5.12	319	*e*Pn	Pn	10 42 18.8	+2.8
IRAM				*e*		10 43 21.4	
	comp=Z,400nm,0.4s						
SMDO	Samad	5.16	162	P	Pn	10 42 19.9	+3.5
SMDO				S	Sn	10 43 13.8	-1.9
WSAR	Wadi Sarin	5.17	156	Pn	Pn	10 42 16.2	-0.3
	comp=Z,1.1nm,0.3s,baz=341,slow=8.2,SNR=13						
WSAR				Sn	Sn	10 43 12.2	-3.8
	comp=Z,4.0nm,0.3s,baz=216,slow=19,SNR=8.2						
	comp=Z,4.5nm,0.5s						
WSAR	Wadi Sarin	5.17	156	P	Pn	10 42 18.0	+1.4
	SNR=8.5						
WSAR				S	Sn	10 43 14.7	-1.3
SHMA	Al-Shehemyia	5.25	247	P	Pn	10 42 19.8	+2.2
SHMA				S	Sn	10 43 17.4	-0.5
BSY	Bisya	5.29	171	P	Pn	10 42 20.1	+1.9
SRVN	Saravan	5.40	95	*e*Pn	Pn	10 42 23.4	+3.6
TRNA	Turayna	5.63	236	P	Pn	10 42 24.9	+2.1
TRNA				S	Sn	10 43 25.7	-1.6
ANAR	Anarak	5.64	337	*e*Pn	Pn	10 42 25.6	+2.5
JMDO	Jabal Madar	5.83	164	P	Pn	10 42 27.8	+2.2
WBK	Wadi Bani Khal	5.87	156	P	Pn	10 42 28.3	+2.1
WBK				S	Sn	10 43 30.4	-2.8
IBRJ	Brojen	5.88	313	*e*Pn	Pn	10 42 29.5	+3.0
IBRJ				*e*		10 42 30.6	
	comp=Z,438nm,0.3s						
SMRA	Abu-Samra	5.91	238	P	Pn	10 42 28.7	+2.1
SMRA				S	Sn	10 43 32.7	-1.5
TNSJ	Nastanj	5.95	2	*e*Pn	Pn	10 42 30.7	+3.4
IZEF	Zefreh	5.98	326	*e*Pn	Pn	10 42 29.9	+2.0
JLN	Jalan Bani Buh	6.45	154	P	Pn	10 42 36.0	+1.8
JLN				S	Sn	10 43 45.7	-1.9
IPIR	Pirpir	6.63	316	*e*Pn	Pn	10 42 39.4	+2.6
IKLH	Kolahrood	6.70	323	*e*Pn	Pn	10 42 40.4	+2.6
QAMS	Qamsar	7.12	325	*e*Pn	Pn	10 42 45.8	+2.2
MHTO	MHTO	7.14	168	P	Pn	10 42 44.4	+0.9
MHTO				S	Sn	10 44 00.4	-4.0
ISFB	Sefidab	7.24	332	*e*Pn	Pn	10 42 47.9	+2.9
IVRN	Varamin	8.01	332	*e*Pn	Pn	10 42 59.1	+3.6
DOK	Doka	9.55	193	P	Pn	10 43 16.6	-0.1
DOK				S	Sn	10 44 57.2	-6.7
GEYT	Alibeck	10.02	8	LR	LR	10 46 54.4	
	comp=Z,18nm,21.1s,baz=194,slow=35						
WHFO	Wadi Hawf	10.31	194	P	Pn	10 43 25.4	-1.7
	SNR=9.4						
DMTO	DMTO	10.31	187	P	Pn	10 43 25.3	-1.8
DMTO				S	Sn	10 45 15.8	-6.8
ABTO	Aybut	10.96	195	P	Pn	10 43 34.2	-1.8
	SNR=9.4						
KBZ	Khabaz	19.07	329⇑	*e*P	P	10 45 18.4	-3.0
KIV	Kislovodsk	19.34	329	*e*P	P	10 45 21.3	-3.2

KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SOC	**Sochi**	20.52	324	*e*P	P	10 45 34.2	-3.1
SOC				*e*PPP	PPP	10 46 00.9	
SOC				*e*S	S	10 49 25.2	-1.3
SOC				*e*SS	SnSn	10 49 44.1	-1.3
SOC				*e*SSS	SSS	10 49 57.3	
SOC				MLR	MLR		
	comp=Z,52nm,14.0s						
AAK	**Ala-Archa**	20.74	40	LR	LR	10 53 28.3	
	comp=Z,16nm,21.0s,baz=224,slow=36						
ABKAR	**Akbulak array**	21.41	6	P	P	10 45 47.4	+0.6
BRTR	**Keskin Array B**	22.12	308	P	P	10 45 55.6	+0.8
	comp=Z,3.4nm,0.8s,baz=122,slow=12,SNR=10.0						
	comp=Z,3.4nm,0.8s						
BR131	**Keskin Array S**	22.12	308	c*e*P	P	10 45 55.5	+0.8
BR131	**Keskin Array S**	22.12	308	P	P	10 45 54.8	0.0
BR131				IAmb	IAmb	10 45 58.2	
	comp=Z,7.9nm,0.8s						
AKTO	**Aktyubinsk**	22.44	3	P	P	10 45 59.3	+1.4
	comp=Z,4.9nm,0.8s,baz=194,slow=10,SNR=15						
	comp=Z,4.9nm,0.8s						
BRVK	**Borovoye**	27.09	19	c *i*P	P	10 46 41.6	0.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	27.50	40	P	P	10 46 44.7	-0.8
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MAKZ	**Makanchi**	27.50	40	P	P	10 46 44.7	-0.8
MAKZ				IAmb	IAmb	10 46 46.9	
	comp=Z,8.4nm,1.4s						
MK31	**Makanchi Array**	27.67	40	c *i*P	P	10 46 47.4	+0.4
MK31	**Makanchi Array**	27.67	40	P	P	10 46 46.8	-0.1
MKAR	**Makanchi Array**	27.67	40	P	P	10 46 47.6	+0.7
	comp=Z,1.3nm,0.4s,baz=221,slow=9.1,SNR=19						
	comp=Z,1.3nm,0.4s						
KURK	**Kurchatov**	28.28	31	d*e*P	P	10 46 50.1	-2.2
KURK				pmax	pmax		
	comp=Z,14nm,0.7s						
KURK	**Kurchatov**	28.28	31	P	P	10 46 50.6	-1.7
AKASG	**Malin Array Be**	30.58	325	P	P	10 47 12.1	-0.6
	comp=Z,1.0nm,0.5s,baz=126,slow=8.0,SNR=8.3						
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	30.58	325	⇑*e*P	P	10 47 12.2	-0.5
AKBB	**Malin Array Si**	30.58	325	P	P	10 47 11.6	-1.1
AKBB				IAmb	IAmb	10 47 12.9	
	comp=Z,4.4nm,0.7s						
OBN	**Obninsk**	30.65	338	⇓*e*P	P	10 47 13.1	-0.1
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ZAA0	**Zalesovo Array**	33.27	31	P	P	10 47 36.8	+0.5
ZAA0				IAmb	IAmb	10 47 36.8	
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	33.27	31	P	P	10 47 36.3	+0.1
	comp=Z,1.7nm,0.3s,baz=241,slow=9.8,SNR=8.1						
	comp=Z,1.7nm,0.3s						
ZALV	**Zalesovo Beam**	33.27	31	*i* P	P	10 47 36.2	-0.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	33.27	31	P	P	10 47 35.6	-0.6
MNK	**Minsk**	33.62	330	*i* P	P	10 47 40.2	+0.9
MNK				*i*		10 48 49.5	
MNK				*i* PPP	PPP	10 49 02.6	
MNK				*i* S	S	10 53 05.6	+4.4
MNK				*i* SS	SnSn	10 55 08.7	+4.2
MNK				*i* SSS	SSS	10 55 24.4	
MNK				pmax	pmax		
	comp=E,1.0nm,0.4s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,12nm,0.6s						
MNK				MLR	MLR		
	comp=N,30nm,14.0s						
MNK				MLR	MLR		
	comp=E,5.0nm,15.0s						
MNK				MLR	MLR		
	comp=Z,147nm,19.0s						
MNK	**Minsk**	33.62	330	*i* P	P	10 47 40.2	+0.9
	comp=E,1.0nm,0.5s						
MNK				*i* P	P	10 47 40.2	+0.9
	comp=N,12nm,0.6s						
MNK				*i* P	P	10 47 40.2	+0.9
	comp=Z,10.0nm,0.7s,baz=131						
MNK				*i* PP	PnPn	10 48 49.5	-1.4
MNK				*i* PPP	PPP	10 49 02.6	
MNK				*i* S	S	10 53 05.7	+4.4
MNK				*i* SS	SnSn	10 55 08.8	+4.2
MNK				*i* SSS	SSS	10 55 24.5	
MNK				*i* LR	LR	11 01 22.4	
MNK				*i* LRM	MLR	11 02 40.1	
	comp=N,30nm,14.1s						
MNK				*i* LRM	MLR	11 02 51.1	
	comp=E,5.0nm,15.3s						
MNK				*i* LRM	MLR	11 02 52.3	
	comp=Z,147nm,19.1s						
NACGM	**Naroch**	34.36	330	*e*P	P	10 47 44.5	-1.3
	baz=130						
KLMR	**Klimovskoe**	34.76	346	*e*P	P	10 47 47.6	-1.5
KLMR				pmax	pmax		
	comp=Z,11nm,1.4s						
KLMR	**Klimovskoe**	34.76	346	*e*P	P	10 47 47.7	-1.4
KLMR				AMP		10 48 02.2	
	comp=Z,11nm,1.4s						
KNGR	**Kungurtug, Tuv**	38.37	43	⇓*e*P	P	10 48 22.0	+1.8
GERES	**GERESS Array B**	38.71	314	P	P	10 48 22.3	-0.8
GERES	**GERESS Array B**	38.71	314	P	P	10 48 22.3	-0.8
FINES	**FINESS Array B**	39.06	337	P	P	10 48 25.2	-0.4
	comp=Z,0.9nm,0.5s,baz=123,slow=7.0,SNR=5.6						
	comp=Z,0.9nm,0.5s						
ULN	**Ulaanbaatar**	43.76	49	⇑*e*P	P	10 49 05.7	+1.1
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
NC405	**NORSAR Array S**	44.45	331	P	P	10 49 09.3	-0.5
NB201	**NORSAR Array S**	44.60	331	P	P	10 49 10.6	-0.5
NB2	**NORSAR Subarra**	44.63	331	P	P	10 49 10.3	-1.0
	comp=Z,1.4nm,0.9s,baz=118,slow=8.6						
NOA	**NORSAR Array B**	44.63	331	P	P	10 49 10.0	-1.3
	comp=Z,1.3nm,0.8s,baz=116,slow=7.9,SNR=5.8						
	comp=Z,1.3nm,0.8s						
NRIK	**Noril'sk**	45.17	15	⇓*e*P	P	10 49 15.9	+0.5
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARCES	**ARCESS Array B**	45.24	345	P	P	10 49 15.7	-0.2
	comp=Z,0.6nm,0.6s,baz=133,slow=6.8,SNR=5.2						
	comp=Z,0.6nm,0.6s						
ARCES	**ARCESS Array B**	45.24	345	IAmb	IAmb	10 49 27.3	
	comp=Z,6.4nm,1.2s						
ESDC	**Sonseca Array**	50.58	300	P	P	10 49 56.7	-1.2
	comp=Z,0.4nm,0.4s,baz=68,slow=7.5,SNR=2.5						
	comp=Z,0.4nm,0.4s						
KSRS	**Korea Array**	59.66	61	P	P	10 51 02.7	-0.7
	comp=Z,2.4nm,0.8s,baz=293,slow=6.2,SNR=5.1						
	comp=Z,2.4nm,0.8s						
BOSA	**Boshof**	63.68	210	P	P	10 51 29.7	-0.9
	comp=Z,2.2nm,0.7s,baz=64,slow=20,SNR=1.4						
	comp=Z,2.2nm,0.7s						
SEY	**Seymchan**	68.12	29	⇑*e*P	P	10 51 58.4	-0.3
SEY				pmax	pmax		
	comp=Z,4.0nm,2.5s						
ILAR	**Eielson Array**	85.78	10	P	P	10 53 36.6	-1.4
	comp=Z,0.2nm,0.7s,baz=322,slow=34,SNR=2.3						
	comp=Z,0.2nm,0.7s						
WRA	**Warramunga Arr**	89.16	113	P	P	10 53 54.5	-0.6
	comp=Z,1.2nm,1.1s,baz=323,slow=3.9,SNR=3.0						
	comp=Z,1.2nm,1.1s						
YKA	**Yellowknife Ar**	89.53	356	P	P	10 53 55.6	-0.5
	comp=Z,0.7nm,0.8s,baz=2.0,slow=5.6,SNR=12						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	90.68	116	P	P	10 54 01.0	-1.1
	comp=Z,0.3nm,0.7s,baz=285,slow=4.4,SNR=4.4						
	comp=Z,0.3nm,0.7s						

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*NNC **03** 10:45:38.0±1.1, 51°.90N×75°.55E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=15.2km s-min=6.8km az=25.0, Suspected Mining explosion.*

*IDC **03** 10:45:43.5±3.4, 51°.62N×75°.70E, h0km, mbtmp2.6/3, ML2.0/2, Error ellipse: s-maj=39.5km s-min=27.4km az=51.0*

ISC 03 10:45:43.6±1.4, 51°.7N±0°.1×75°.73E±0°.07, h0km, n10, $\sigma 1^{s}51$/8, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	2.05	119	Pn	Pn	10 46 18.5	-0.7
	0.3nm,0.3s,baz=299,slow=19,SNR=11						
KURBB				Lg	Lg	10 46 48.5	
	0.3nm,0.3s,baz=306,slow=32,SNR=6.3						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	2.05	119	⇓Pg	Pb	10 46 20.5	-1.1
	3.3nm,0.7s,baz=305,slow=16						
KURBB				⇓Lg	Lg	10 46 49.4	
	23nm,0.6s,baz=308,slow=30						
KURK	**Kurchatov**	2.05	116	⇑Pg	Pn	10 46 18.6	-0.6
	1.5nm,0.6s						
BRVK	**Borovoye**	3.62	295	⇑Pg	Pn	10 46 40.8	0.0
	2.0nm,0.6s						
BRVK				⇑Lg	Lg	10 47 25.5	
	7.5nm,0.6s						
OTUK	**Ortayu**	4.05	214	⇑Lg	Lg	10 47 49.8	
	3.6nm,0.7s						
ZALV	**Zalesovo Beam**	5.97	64	Pn	Pn	10 47 13.5	+0.3
	0.9nm,0.5s,baz=259,slow=13,SNR=2.3						
I46RU	**ZALESOVO INFRA**	5.97	64	*i*		11 22 40.0	
	baz=252,slow=326,SNR=5.6						
MAKZ	**Makanchi**	6.35	137	⇑Lg	Lg	10 49 06.6	
	3.4nm,0.8s						
MK31	**Makanchi Array**	6.49	136	⇑Sn	Sn	10 48 35.9	+0.9
	0.6nm,0.5s						
MK31				⇓Lg	Lg	10 49 09.5	
	2.1nm,0.7s,baz=319,slow=27,SNR=6.3						
MKAR	**Makanchi Array**	6.49	136	Pn	Pn	10 47 20.0	-0.3
	0.1nm,0.3s,baz=300,slow=12,SNR=2.0						
MKAR				Sn	Sn	10 48 37.9	+2.9
	0.1nm,0.3s,baz=310,slow=24,SNR=4.4						
MKAR				Lg	Lg	10 49 08.5	
	0.2nm,0.3s,baz=323,slow=20,SNR=7.2						
	0.6nm,1.0s						

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*IDC **03** 10:54:42.4±2.5, 38°.62N×142°.61E, h0km, mb3.4/2, mbtmp3.4/4, ML2.4/2, Error ellipse: s-maj=48.0km s-min=28.6km az=64.0*

*JMA **03** 10:54:52.8±0.1, 38°.5N±0°.2×141°.7E±0°.5, h53km, MV3.5/40, KINKAZAN REGION*

JMA Felt I J1 at KINKAZAN REGION .

ISC 03 10:54:51.9±1.3, 38°.50N±0°.05×141°.82E±0°.10, h52km±8km, n16, $\sigma 0^{s}68$/27, 17D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.33	236	*i* P	Pn	10 55 02.3	+0.7
JIKH				S	Sn	10 55 08.8	+0.3
JIO	**Ouri**	0.37	264	⇓*i*P	Pn	10 55 02.3	+0.4
JIO				⇓S	Sn	10 55 08.7	-0.4
JKMT	**Kesennumamotoy**	0.41	320	⇓*i*P	Pn	10 55 02.7	+0.3
JKMT				⇓*i*S	Sn	10 55 09.4	-0.5
OFUJ	**Ofunato**	0.59	349	*i* P	Pn	10 55 04.8	+0.3
OFUJ				S	Sn	10 55 13.1	-0.5
JMK	**Ichinoseki**	0.65	314	⇓*i*P	Pn	10 55 05.3	+0.2
JMK				⇓S	Sn	10 55 14.0	-0.7
JOU	**Okura**	0.92	262	⇓*i*P	Pn	10 55 08.5	-0.1
JOU				⇓S	Sn	10 55 20.3	-0.6
JMM	**Marumori**	1.02	232	⇓*i*P	Pn	10 55 09.9	-0.1
JMM				⇓S	Sn	10 55 22.8	-0.5
JOM	**Ohasama**	1.06	337	⇓*i*P	Pn	10 55 10.7	+0.2
JOM				⇓S	Sn	10 55 23.9	-0.3
JYK	**Kaneyama**	1.22	291	⇓*i*P	Pn	10 55 12.5	-0.1
JRG	**Rokugo**	1.29	315	⇓P	Pn	10 55 13.6	0.0
JRG				⇓*e*S	Sn	10 55 29.3	-0.4
JFK	**Kawauchi**	1.35	214	P	Pn	10 55 15.0	+0.5
JFK				S	Sn	10 55 31.2	-0.2
JYS	**Shirataka**	1.40	259	⇓*i*P	Pn	10 55 15.4	+0.3
JYS				⇓S	Sn	10 55 32.6	0.0
MJAR	**Matsushiro Arr**	3.47	237	Pn	Pn	10 55 45.2	+1.8
	0.3nm,0.3s,baz=32,slow=12,SNR=15						
MJAR				Sn	Sn	10 56 35.6	+12
	0.1nm,0.3s,baz=59,slow=47,SNR=1.7						
	2.3nm,0.4s						
USRK	**Ussuriysk Ar.**	9.33	311	Pn	Pn	10 57 05.6	+2.0
	0.2nm,0.3s,baz=120,slow=17,SNR=1.3						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	43.63	301	P	P	11 02 51.0	-0.1
	0.5nm,0.6s,baz=94,slow=7.3,SNR=4.7						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	58.55	188	P	P	11 04 42.7	-0.4
	0.3nm,0.7s,baz=2.5,slow=7.1,SNR=5.4						
	0.3nm,0.7s						

ASRS 03 11:02:14.0±0.5, 52°N±2°×9°8E±°, h3km, MLh3.2/5, Error ellipse: s-maj=5.3km s-min=3.2km az=75.9, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	1.80	184	Pg	Pg	11 02 49.3	+0.8
KNGR				Sg	Sg	11 03 12.7	+0.9
KZLR	**Kyzyl**	2.12	252	Sg	Sg	11 03 26.1	+4.1
ARDR	**Aradan**	2.62	276	Pg	Pg	11 03 06.7	+2.6
ARDR				Sg	Sg	11 03 42.3	+4.4
ERNS	**Erzin**	2.67	218	Pg	Pg	11 03 04.5	-0.6
ERNS				Sg	Sg	11 03 40.7	+1.1
MINR	**Mina**	3.26	322	Pg	Pg	11 03 17.7	+1.4
MINR				Sg	Sg	11 04 04.4	+5.9
CERR	**Cheremushki**	3.85	279	Pg	Pg	11 03 28.3	+0.5
CERR				Sg	Sg	11 04 22.2	+4.5
DJOS	**Djoyskaya Sosn**	3.86	278	Sg	Sg	11 04 23.9	+6.0
DJO	**Djoy, Khakassi**	3.97	278	Pg	Pg	11 03 31.3	+1.3
DJO				Sg	Sg	11 04 26.1	+4.7
GZLN	**Zheleznogorsk**	4.60	332	Pg	Pg	11 03 41.1	-1.0
GZLN				Sg	Sg	11 04 45.8	+4.1
LUZB	**Luzhba, Kemero**	5.46	287	Sg	Sg	11 05 10.7	+1.6
TASR	**Tashtagol**	6.00	277	Sg	Sg	11 05 26.2	-0.2
BRCR	**Berchikul'**	6.41	304	Sg	Sg	11 05 41.6	+2.0
AKAR	**Aktash**	6.64	256	Sg	Sg	11 05 49.4	+2.1
CHBI	**Chibit, Altay**	6.72	256	Sg	Sg	11 05 56.1	+6.5

TRN 03 11:12:44.9, 19°.21N×61°.41W, h64km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	1.58	193	*e*P	Pn	11 13 11.8	+1.1
ANWB				*e*S	Sn	11 13 32.5	+2.3
ANBD	**Bethesda, Anti**	2.18	189	*e*P	Pn	11 13 20.6	+1.7
ANBD				*e*S	Sn	11 13 46.1	+1.4
BPA	**Boggy Peak**	2.20	191	*e*P	Pn	11 13 20.2	+1.0
BPA				*e*S	Sn	11 13 47.6	+2.3
SKI	**Saint Kitts**	2.26	214	*e*P	Pn	11 13 22.4	+2.5
SKI				*e*S	Sn	11 13 47.8	+1.1

IDC 03 11:13:00.1±1.3, 55°.37S×144°.71W, h0km, mb3.8/3, mbtmp3.8/3, MS3.7/8, Error ellipse: s-maj=194.4km s-min=31.5km az=174.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	28.91	201	LR	LR	11 27 38.5	
	comp=Z,128nm,18.6s,baz=348,slow=30						
QSPA	**South Pole Qui**	34.78	180	LR	LR	11 31 40.0	
	comp=Z,105nm,18.2s,baz=21,slow=32						
RAR	**Rarotonga**	35.94	336	LR	LR	11 31 16.9	
	comp=Z,240nm,21.0s,baz=92,slow=30						
PPT	**Papeete**	37.92	352	LR	LR	11 31 42.1	
	comp=Z,131nm,21.8s,baz=116,slow=30						
AFI	**Afiamalu**	46.39	322	LR	LR	11 37 15.7	
	comp=Z,42nm,18.9s,baz=172,slow=31						
H03S2	**Juan Fernandez**	49.46	93	T	T	12 14 38.9	
	SNR=45						
H03S1	**Juan Fernandez**	49.47	93	T	T	12 14 40.6	
	SNR=52						
H03S3	**Juan Fernandez**	49.48	93	T	T	12 14 39.0	
	SNR=38						
H03N3	**Juan Fernandez**	49.74	92	T	T	12 15 01.9	
	baz=224,slow=72,SNR=75						
H03N2	**Juan Fernandez**	49.74	92	T	T	12 15 02.4	
	baz=224,slow=72,SNR=78						
H03N1	**Juan Fernandez**	49.75	92	T	T	12 14 58.1	
	baz=224,slow=72,SNR=83						
ASAR	**Alice Springs**	66.04	263	P	P	11 23 49.0	+0.4
	0.9nm,0.9s,baz=126,slow=6.7,SNR=5.5						
	0.9nm,0.9s						
NNA	**Nana**	67.67	78	LR	LR	11 45 56.7	
	comp=Z,46nm,19.1s,baz=210,slow=29						
H01W1	**Cape Leeuwin H**	67.86	241	T	T	12 38 35.8	
	baz=142,slow=76,SNR=35						
H01W2	**Cape Leeuwin H**	67.86	241	T	T	12 38 33.0	
	baz=142,slow=76,SNR=28						
H01W3	**Cape Leeuwin H**	67.87	241	T	T	12 38 39.9	
	baz=142,slow=76,SNR=32						
WRA	**Warramunga Arr**	68.73	266	P	P	11 24 05.1	-0.5
	0.7nm,0.9s,baz=148,slow=5.4,SNR=5.4						
	0.7nm,0.9s						
LPAZ	**La Paz**	69.14	89	P	P	11 24 08.8	-0.1
	0.6nm,0.4s,baz=256,slow=4.2,SNR=4.4						
LPAZ				LR	LR	11 46 41.7	
	comp=Z,32nm,21.9s,baz=208,slow=29						
	0.6nm,0.4s						
BOSA	**Boshof**	95.91	171	LR	LR	12 06 23.6	
	comp=Z,58nm,18.7s,baz=187,slow=33						
H10S3	**ASCENSION HYDR**	103.64	129	T	T	13 22 46.3	
	baz=205,slow=74,SNR=7.5						
H10S2	**ASCENSION HYDR**	103.65	129	T	T	13 22 48.2	
	baz=15,slow=74,SNR=3.5						
H10N3	**ASCENSION HYDR**	104.70	129	T	T	13 24 07.1	
	baz=205,slow=75,SNR=14						
H10N1	**ASCENSION HYDR**	104.71	129	T	T	13 24 06.0	
	baz=205,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	104.72	129	T	T	13 24 10.6	
	baz=205,slow=75,SNR=18						
ILAR	**Eielson Array**	119.83	359	PKP	PKiKP	11 31 50.7	0.0
	0.4nm,0.8s,baz=236,slow=1.7,SNR=5.1						

TAP 03 11:25:01.3, 24°.28N×121°.80E, h11km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.16	340	P	Pg	11 25 04.7	-0.2
	baz=342						
ENA				S	Sg	11 25 07.4	0.0
	baz=342						
EWUT	**Wuta**	0.17	353	P	Pg	11 25 04.9	-0.1
	baz=353						
EWUT				*e*S	Sg	11 25 07.8	+0.1
	baz=353						
ETL	**Fush Village**	0.20	233	*e*P	Pg	11 25 06.0	+0.4
	baz=233						
ETL				*e*S	Sg	11 25 08.9	+0.3
	baz=233						
NACB	**Ninganchiao**	0.21	240	*e*P	Pg	11 25 05.5	-0.4
	baz=240						
NACB				S	Sg	11 25 09.2	+0.3
	baz=240						
ETLH	**Xiulin Townshi**	0.30	256	*e*P	Pg	11 25 07.3	-0.1
	baz=255						
ETLH				*e*S	Sg	11 25 11.7	+0.3
	baz=255						
LATG	**Datong**	0.35	316	P	Pg	11 25 08.4	-0.1
	baz=315						
LATG				S	Sg	11 25 13.3	+0.1
	baz=315						
NDS	**Dongshan**	0.36	348	*e*P	Pg	11 25 08.2	-0.3
	baz=347						
NDS				*e*S	Sg	11 25 13.5	+0.2
	baz=347						
NNSB	**Datong**	0.41	291	P	Pg	11 25 09.6	+0.2
	baz=291						
NNSB				S	Sg	11 25 14.8	0.0
	baz=291						
NDT	**Datong Townshi**	0.41	321	*e*P	Pg	11 25 09.5	0.0
	baz=320						
NDT				S	Sg	11 25 15.5	+0.5
	baz=320						
ENTT	**Nioudou**	0.42	329	P	Pg	11 25 09.5	-0.1
	baz=330						
ENTT				S	Sg	11 25 15.3	+0.2
	baz=330						
NNS	**Nan Shan**	0.42	292	*e*S	Sg	11 25 15.3	+0.1
	baz=292						
WHF	**Hehuan Shan**	0.51	255	*e*P	Pg	11 25 11.5	+0.2
	baz=254						
WHF				*e*S	Sg	11 25 18.6	+0.5
	baz=254						
FUSS	**Fushou**	0.51	266	*e*P	Pg	11 25 10.8	-0.5
	baz=266						
FUSS				*e*S	Sg	11 25 17.2	-0.9
	baz=266						
YHNB	**Yeheng**	0.55	315	*e*P	Pg	11 25 11.7	-0.3
	baz=315						
YHNB				*e*S	Sg	11 25 19.6	+0.3
	baz=315						
WHP	**Taichung City**	0.78	270	*e*P	Pg	11 25 16.3	-0.1
	baz=269						
WHP				*e*S	Sb	11 25 27.2	-0.3
	baz=269						

KRSZO 03 11:25:03.6, 47°.23N×18°.28E, h0km, ML1.7/3, Explosion. GT info : GT2 explosion locality : Iszkaszentgyrgy, Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSKK	**Cskako**	0.13	353	Pg	Pg	11 25 07.4	+1.1
CSKK				Lg	Lg	11 25 10.2	
CSKK	**Cskako**	0.13	353	P	Pg	11 25 07.4	+1.1
CSKK				S	Sg	11 25 10.2	+2.3
MPLH	**Magyarpolny**	0.51	264	Pg	Pb	11 25 15.3	-0.2
MPLH				Lg	Lg	11 25 24.0	
MPLH	**Magyarpolny**	0.51	264	P	Pb	11 25 15.3	-0.2
MPLH				S	Sb	11 25 24.0	+0.5
EGYH	**Egyhazaskeszo**	0.67	286	Sn	Sn	11 25 30.6	-1.1
EGYH	**Egyhazaskeszo**	0.67	286	S	Sn	11 25 30.6	-1.1
KOVH	**Kovagotottos**	1.15	186	Pn	Pg	11 25 25.1	-0.6
KOVH				Sn	Sn	11 25 43.1	-0.3
KOVH	**Kovagotottos**	1.15	186	P	Pg	11 25 25.1	-0.6
KOVH				S	Sn	11 25 43.1	-0.3

JMA 03 11:25:18.0±0.2, 24°.3N±0°.4×123°.8E±0°.5, h16km±1km, MV1.1/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	0.11	318	P	Pg	11 25 21.5	0.0
IRIF				*e*S	Sb	11 25 24.1	-0.2
JKRS	**Kuro-shima**	0.18	94	P	Pg	11 25 22.5	0.0
JKRS				*e*S	Sg	11 25 25.9	+0.4
HATJ	**Hateruma jima**	0.19	182	P	Pg	11 25 22.5	-0.2
HATJ				*e*S	Sg	11 25 25.9	+0.2
JIJ	**Ishigaki jima**	0.32	70	*e*P	Pg	11 25 24.5	-0.3
JIJ				*e*S	Sg	11 25 29.1	-0.3
JISG	**Ishigakijimahi**	0.56	54	*e*P	Pg	11 25 29.3	+0.1
JTJ	**Tarama**	0.90	64	*e*P	Pg	11 25 35.4	-0.1
JTJ				*e*S	Sg	11 25 47.7	+0.3

IDC 03 11:27:32.1±1.5, 29°.36N×101°.72E, h0km, mb3.4/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=83.5km s-min=24.8km az=66.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	18.80	10	P	P	11 31 53.4	+0.2
	0.1nm,0.3s,baz=195,slow=13,SNR=5.4						
	1.0nm,1.0s						
MKAR	**Makanchi Array**	23.07	324	P	P	11 32 39.0	-0.2
	0.2nm,0.4s,baz=122,slow=11,SNR=2.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	58.24	143	P	P	11 37 27.9	-0.6
	0.7nm,0.5s,baz=332,slow=7.8,SNR=20						
	0.7nm,0.5s						
ASAR	**Alice Springs**	61.13	146	P	P	11 37 49.0	+0.6
	0.3nm,0.5s,baz=335,slow=6.8,SNR=6.8						
	0.3nm,0.5s						

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*IDC **03** 11:41:30.5±17.0, 13°.44N×89°.79W, h112km±59km, mb3.0/4, mbtmp3.5/5, Error ellipse: s-maj=269.9km s-min=55.1km az=177.0*

*SNET **03** 11:41:39.8±1.0, 14°.10N×90°.16W, h129km±4km, ML3.4*

*GCG **03** 11:41:43.4±2.7, 14°.07N×90°.17W, h108km, MD3.9*

ISC 03 11:41:38.2±1.0, 14°.0N±0°.1×90°.20W±0°.06, h148km±6km, n29, $\sigma 1^{s}14$/43, mb3.4/3, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	0.41	83	*e*P	Pn	11 41 58.5	-0.4
SLOZ				*e*S	Sn	11 42 13.3	-1.5
NUBE	**Las Nubes**	0.42	100	*e*P	Pn	11 41 58.7	-0.4
NUBE				*e*S	Sn	11 42 13.6	-1.4

RTR	El Retiro	0.55	98	eP	Pn	11 41 59.9	+0.1
PCG	Pacaya	0.57	317	eP	Pn	11 42 01.0	+1.0
PCG				eS	Sn	11 42 16.2	-0.4
SBLS	San Blas	0.58	103	eP	Pn	11 41 60.0	-0.1
CEVE	Cerro Verde	0.58	105	eP	Pn	11 42 00.0	0.0
CEVE				eS	Sn	11 42 15.7	-1.0
CEVE				IAML		11 42 20.4	
	comp=Z,672nm,0.4s						
SNJE	San Jose	0.59	100	eP	Pn	11 41 60.0	-0.1
NBG	Las Nubes	0.62	347⇑	eP	Pn	11 42 01.4	+1.1
NBG				eS	Sn	11 42 17.3	0.0
FUG	Fuego 3	0.78	307	eP	Pn	11 42 02.0	+0.8
FUG				eS	Sn	11 42 19.2	+0.4
JAYA	Jayaque - finc	0.80	113	i P	Pn	11 42 01.3	-0.1
JAYA				eS	Sn	11 42 18.0	-1.0
CEDA	San Andres	0.81	102	eS	Sn	11 42 17.6	-1.2
MTO3	Montecristo	0.92	63	eP	Pn	11 42 02.2	-0.1
MTO3				eS	Sn	11 42 18.6	-2.2
BOQS	Boqueron	0.93	105	eP	Pn	11 42 02.7	+0.3
UEES	Universidad Ev	0.97	105	eP	Pn	11 42 02.8	+0.2
LALI	Alcalda de L	0.99	119	eP	Pn	11 42 03.0	+0.4
LALI				eS	Sn	11 42 20.6	-0.7
ESQI	Esquipulas	1.02	55	eP	Pn	11 42 03.3	+0.3
LFRS	El Faro	1.16	107	eP	Pn	11 42 05.0	+0.7
MRL	Marmol	1.21	25	eS	Sn	11 42 26.3	+0.9
SJTE	Alcalda de S	1.22	107	eP	Pn	11 42 05.2	+0.3
SJTE				eS	Sn	11 42 25.7	+0.6
PAVA	Las Pavas	1.26	102	eP	Pn	11 42 05.8	+0.5
COEG	Centro de Oper	1.33	105	eP	Pn	11 42 06.3	+0.3
COEG				eS	Sn	11 42 26.9	-0.3
COEG				IAML		11 42 32.2	
	comp=Z,328nm,0.5s						
SCLA	Alcaldia de Sa	1.46	101	eP	Pn	11 42 07.7	+0.5
SCLA				eS	Sn	11 42 29.9	+0.5
STG3	Santiaguito 3,	1.51	299	eP	Pn	11 42 08.7	+0.8
STG3				eS	Sn	11 42 31.1	+0.4
RTAL	Retalhuleu	1.54	291	eS	Sn	11 42 30.9	-0.1
CMIG	Matias Romero	5.47	305	P	Pn	11 42 57.9	+0.1
	comp=Z,8.3nm,0.3s,baz=153,slow=11,SNR=46						
CMIG				S	Sn	11 43 55.2	-4.9
	comp=Z,6.3nm,0.7s,baz=93,slow=14,SNR=1.7						
TXAR	Lajitas Array	19.72	323	P	Pn	11 45 59.1	-0.3
	comp=Z,0.2nm,0.4s,baz=145,slow=8.9,SNR=7.7						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	34.80	320	P	P	11 48 17.3	+2.4
	comp=Z,0.2nm,0.6s,baz=122,slow=9.6,SNR=3.0						
	comp=Z,0.2nm,0.6s						
SCHQ	Schefferville	44.66	19	P	P	11 49 35.4	-0.5
	comp=Z,0.9nm,0.4s,baz=221,slow=8.1,SNR=5.6						
	comp=Z,0.9nm,0.4s						
YKA	Yellowknife Ar	51.46	346	P	P	11 50 27.1	-0.9
	comp=Z,0.6nm,0.8s,baz=144,slow=7.8,SNR=7.4						
	comp=Z,0.6nm,0.8s						

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*LDG **03** 11:56:37.7±0.2, 37°.60N×1°.45W, h10^{km}, Ml3.6/13, Error ellipse: s-maj=5.0km s-min=2.4km az=142.0*
*IGIL **03** 11:56:38.0, 37°.72N×1°.59W, h0^{km}, ML2.7*
*INMG **03** 11:56:38.8±1.9, 37°.66N×1°.57W, h17^{km}±5^{km}, MD3.8, ML3.8, Error ellipse: s-maj=4.5km s-min=3.2km az=121.0*
*IDC **03** 11:56:38.9±2.1, 37°.75N×1°.73W, h0^{km}, mbtmp3.7/5, ML3.9/5, Error ellipse: s-maj=24.1km s-min=18.2km az=43.0*
*MDD **03** 11:56:38.8±0.2, 37°.71N×1°.61W, h0^{km}, mb_Lg3.7/38, Error ellipse: s-maj=1.7km s-min=1.3km az=139.0*
*SFS **03** 11:56:38.0, 37°.70N×1°.50W, ML3.7, ALEDO (MURCIA)*
*CNRM **03** 11:56:38.8, 37°.74N×1°.56W, h25^{km}, ml3.5*
ISC 03 11:56:37.4±0.8**, 37°.77N**±0°.02×**1°.61W**±0°.02**, h12**^{km}±5^{km}**, n111,** σ**1^{s}78**/214**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZAR	Zarzadilla de	0.12	329	Pg	Pg	11 56 41.1	+0.4
EZAR				Sg	Sg	11 56 44.1	+1.0
TLOR	Lorca, Murcia	0.13	208	Pg	Pg	11 56 39.9	-0.8
TLOR				Sg	Sg	11 56 41.7	-1.3
EMUR	La Murta	0.30	76	Pg	Pb	11 56 45.0	+0.1
EMUR				Sg	Sb	11 56 49.8	0.0
EMUR				i Vmb_Lg		11 56 51.1	
CART	Cartagena	0.52	110	P	Pb	11 56 48.7	+0.2
CART				S	Sb	11 56 55.5	-0.3
CART	Cartagena	0.52	110	P	Pb	11 56 48.5	0.0
ETOB	Tobarra	0.88	3	Pg	Pn	11 56 56.2	+0.5
ETOB				Sg	Sn	11 57 10.4	+2.0
ETOB				i Vmb_Lg		11 57 12.4	
ENIJ	Nijar	0.93	211	Pg	Pg	11 56 54.1	-1.2
ENIJ				Sg	Sg	11 57 05.6	-1.7
ENIJ				i Vmb_Lg		11 57 11.3	
EQES	Quesada	1.16	272	Pg	Pg	11 57 00.5	+0.8
EQES				Sg	Sn	11 57 16.9	+1.6
EQES				i Vmb_Lg		11 57 20.1	
AFON	Font Roja	1.23	43	Pg	Pg	11 57 01.6	+0.5
AFON				Sg	Sn	11 57 20.0	+2.8
AFON				i Vmb_Lg		11 57 28.6	
EBER	Berja	1.34	230	Pg	Pn	11 57 02.1	0.0
EBER				Sg	Sg	11 57 21.2	+0.7
EBER				i Vmb_Lg		11 57 25.7	
EBEN2	Beniarda presa	1.44	51	Pn	Pb	11 57 03.6	-0.6
EBEN2				Sn	Sb	11 57 22.7	+0.2
EBEN2				i Vmb_Lg		11 57 36.1	
EQUE	Quentar	1.56	249	Pn	Pb	11 57 06.6	+0.4
EQUE				Sn	Sg	11 57 28.4	+0.9
EQUE				i Vmb_Lg		11 57 34.3	
ELGU	Los Guajares,	1.84	241	Pn	Pb	11 57 10.6	-0.4
ELGU				Sn	Sn	11 57 32.9	+0.8
ELGU				i Vmb_Lg		11 57 43.8	
ECHE	Chera	1.89	15	Pn	Pn	11 57 10.6	+1.1
ECHE				Sn	Sb	11 57 36.7	+1.2
ECHE				i Vmb_Lg		11 57 44.8	
EGOR	Sierra Gorda,	2.09	252	Pn	Pb	11 57 15.3	-0.1
EGOR				Sn	Sb	11 57 42.0	+0.6
EGOR				i Vmb_Lg		11 57 54.5	
EADA	Adamuz	2.38	281	Pn	Pn	11 57 16.9	+0.6
EADA				Sn	Sn	11 57 47.2	+1.8
EADA				i Vmb_Lg		11 57 58.3	
EIBI	Ibiza	2.64	61	Pn	Pn	11 57 20.6	+0.7
EIBI				Sn	Sn	11 57 52.1	+0.3
EIBI				i Vmb_Lg		11 57 55.8	
ESDC	Sonseca Array	2.65	317	Pn	Pn	11 57 20.6	+0.6
	4.9nm,0.3s,baz=132,slow=13,SNR=101						
ESDC				Pg	Pg	11 57 27.5	-0.6
	29nm,0.3s,baz=131,slow=16,SNR=53						
ESDC				Lg	Lg	11 58 01.3	
	61nm,0.3s,baz=135,slow=29,SNR=20						
	17nm,0.6s						
ESDC	Sonseca Array	2.65	317	Pn	Pn	11 57 21.1	+1.1
ESDC				Pg	Pg	11 57 27.0	-1.1
ESDC				Sn	Sb	11 57 56.4	-0.8
ESDC				Sg	Sg	11 58 01.3	-1.1
ESDC				i Vmb_Lg		11 58 06.9	
EMOS	Mosqueruela	2.74	19	Pn	Pn	11 57 22.7	+1.4
EMOS				Sn	Sn	11 57 55.5	+1.0
EMOS				i Vmb_Lg		11 58 08.8	
GOG	Mont Gurugu	2.77	204	P	Pn	11 57 22.0	+0.2
PAB	San Pablo	2.78	311	Pn	Pn	11 57 22.9	+1.0
PAB				Sn	Sn	11 57 57.9	+2.5
PAB				Sg	Sg	11 58 05.5	-1.3
PAB				i Vmb_Lg		11 58 12.7	
PAB	San Pablo	2.78	311	P	Pn	11 57 22.6	+0.8
ECOL	Islas Columbre	2.78	39	Pn	Pn	11 57 23.5	+1.7
ECOL				Sn	Sn	11 57 57.5	+2.2
EMIJ	Mijas	2.79	246	Pn	Pn	11 57 23.0	+1.0
EMIJ				Sn	Sn	11 57 55.3	-0.4
EMIJ				i Vmb_Lg		11 58 18.6	
UCM	Universidad Co	2.84	334	P	Pn	11 57 21.2	-1.3
UCM				S	Sb	11 58 02.5	-0.2
TAF	Taforalt	3.02	193	P	Pn	11 57 25.4	+0.3
ECAB	El Cabril	3.02	277	Pn	Pn	11 57 25.6	+0.5
ECAB				Sn	Sn	11 58 01.8	+0.5
ECAB				Sg	Sg	11 58 13.0	-1.6
ECAB				i Vmb_Lg		11 58 18.8	
ETOR	Torete	3.07	354	Pn	Pn	11 57 27.8	+2.0
ETOR				Pg	Pg	11 57 35.6	-0.6
ETOR				Sn	Sb	11 58 06.3	-3.1
ETOR				Sg	Sg	11 58 17.3	+1.4
ETOR				i Vmb_Lg		11 58 21.0	
LIJA	Lijar	3.14	255	P	Pg	11 57 39.0	+1.4
GUD	Guadarrama	3.48	326	Pn	Pn	11 57 33.1	+1.6
GUD				Pg	Pg	11 57 42.6	-1.6
GUD				Sn	Sn	11 58 16.0	+3.2
GUD				Sg	Sg	11 58 27.8	-1.5
GUD				i Vmb_Lg		11 58 33.7	
JBK	JBK	3.51	193	P	Pn	11 57 32.9	+0.9
ERTA	Horta de San J	3.52	25	Pn	Pn	11 57 34.5	+2.5
ERTA				Sn	Sn	11 58 15.8	+2.1
ERTA				i Vmb_Lg		11 58 31.2	
SMIR	Smir Dam	3.67	237	P	Pn	11 57 33.1	-0.9
ETOS	Mallorca	4.00	59	Pn	Pn	11 57 39.8	+1.3
ETOS				i Vmb_Lg		11 57 41.4	
ETOS				Sn	Sn	11 58 26.0	+0.8
EMIN	Mina Concepcio	4.01	272	Pn	Pn	11 57 39.2	+0.6
EMIN				Sn	Sn	11 58 26.0	+0.5
EMIN				i Vmb_Lg		11 58 51.7	
ESAC	San Caprasio	4.05	12	Pn	Pn	11 57 42.0	+2.8
EPOB	Poblet	4.14	29	Pn	Pn	11 57 41.8	+1.3
EPOB				Sn	Sn	11 58 29.8	+0.9
EPOB				i Vmb_Lg		11 58 54.4	
EPLA	Plasencia	4.17	305	Pn	Pn	11 57 41.5	+0.6
EPLA				Sn	Sn	11 58 29.8	+0.3
EPLA				Sg	Sb	11 58 46.1	+5.0
EPLA				i Vmb_Lg		11 58 53.6	
PBAR	Barrancos	4.31	277	ePn	Pn	11 57 43.3	+0.6
PBAR				eSn	Sn	11 58 33.6	+0.7
PBAR				eSg	Sg	11 58 54.1	-1.6
PBAR				A	A	11 59 05.5	
	155nm,0.5s						
EBAD	Badajoz	4.36	285	Pn	Pn	11 57 43.8	+0.3
EBAD				Sn	Sn	11 58 34.4	+0.1
EBAD				i Vmb_Lg		11 59 01.3	
EGRO	El Granado	4.66	269	Pn	Pn	11 57 47.1	-0.5
EGRO				Sn	Sn	11 58 41.2	-0.4
EGRO				i Vmb_Lg		11 59 11.8	
TDRA	Tendrara	4.73	184	P	Pn	11 57 48.9	+0.1
PMRV	Marv??o	4.82	292	ePn	Pn	11 57 51.2	+1.4
PMRV				eSn	Sn	11 58 45.1	-0.5
PMRV				eSg	Sg	11 59 09.6	-2.6
PMRV				A	A	11 59 24.0	
	144nm,0.7s						
PESTR	Estremoz	4.83	285	ePn	Pn	11 57 50.9	+1.0
PESTR				eSn	Sn	11 58 45.7	0.0
PESTR				eSg	Sg	11 59 11.3	-1.1
PESTR				A	A	11 59 20.9	
	129nm,0.5s						
PESTR	Estremoz	4.83	285	P	Pn	11 57 50.8	+0.9
PVAQ	Vaqueiros	4.86	268	ePn	Pn	11 57 50.3	-0.1
PVAQ				eSn	Sn	11 58 45.3	-1.3
PVAQ				A	A	11 59 28.0	
	65nm,0.8s						
PVAQ	Vaqueiros	4.86	268	P	Pn	11 57 50.7	+0.3
PBEJ	Beja	4.95	275	ePn	Pn	11 57 52.1	+0.5
PBEJ				eSn	Sn	11 58 47.4	-1.4
PBEJ				eSg	Sg	11 59 12.6	-3.8
PBEJ				A	A	11 59 22.5	
	15nm,0.5s						
PCBR	Castelo Branco	5.03	296	ePn	Pn	11 57 53.5	+0.9
PCBR				eSn	Sn	11 58 49.3	-1.3
PCBR				A	A	11 59 27.0	
	102nm,0.6s						
PBDV	Barranco-do-Ve	5.05	266	ePn	Pn	11 57 53.4	+0.4
PBDV				eSn	Sn	11 58 51.5	+0.2
PBDV				A	A	11 59 29.2	
	89nm,0.6s						
ECHI	Chisagues Biel	5.08	15	Pn	Pn	11 57 56.3	+2.7
ECHI				i Vmb_Lg		11 59 31.2	
PCVE	Castro Verde	5.10	270	ePn	Pn	11 57 53.9	+0.3
PCVE				eSg	Sg	11 59 19.0	-2.0
PCVE				A	A	11 59 30.5	
	66nm,0.8s						
EVO	Evora	5.10	281	P	Pn	11 57 53.9	+0.3
EVO				S	Sn	11 58 50.3	-2.2
EVO	Evora	5.10	281	ePn	Pn	11 57 54.9	+1.2
EVO				eSn	Sn	11 58 52.1	-0.4
EVO				eSg	Sg	11 59 19.8	-1.4
EVO				A	A	11 59 29.7	
	82nm,0.8s						
EORO	Oroz-Betelu	5.12	3	Pn	Pn	11 57 57.0	+3.0
EORO				i Vmb_Lg		11 59 35.7	
ETSF	Etsaut	5.19	9	ePn	Pn	11 57 55.7	+0.8
ETSF	Etsaut	5.19	9	eP	Pn	11 58 00.3	+5.4
ETSF	Etsaut	5.19	9	ePg	Pg	11 58 16.6	-0.2
ETSF				eSn	Sn	11 58 54.1	-0.6
	22nm,0.5s						
ETSF				eSg	Sg	11 59 24.1	+0.2
	16nm,0.4s						
MESJ	Messejana	5.23	273	eP	Pn	11 57 55.5	+0.1
MESJ				eS	Sn	11 58 52.3	-3.4
MESJ				IAML		11 58 58.1	
	comp=E,11nm,0.4s						
MTE	Manteigas	5.31	301	ePn	Pn	11 57 58.2	+1.6
MTE				eSn	Sn	11 58 56.2	-1.5
MTE				eSg	Sg	11 59 23.9	-3.9
MTE				A	A	11 59 44.7	
	comp=E,145nm,0.6s						
SJPF	Ste Jean	5.35	3	ePn	Pn	11 57 57.6	+0.6
SJPF	Ste Jean	5.35	3	eP	Pn	11 58 01.9	+4.9
SJPF				eSn	Sn	11 58 57.8	-0.8
SJPF				eSg	Sg	11 59 29.1	+0.1
	comp=E,44nm,0.6s						
PMTG	Montargil	5.35	286	ePn	Pn	11 57 57.9	+0.8
PMTG				eSn	Sn	11 58 56.7	-1.9
PMTG				eSg	Sg	11 59 28.9	-0.3
PMTG				A	A	11 59 36.7	
	comp=E,157nm,0.6s						
MVO	Moncorvo	5.39	311	ePn	Pn	11 57 58.6	+0.9
MVO				eSn	Sn	11 58 59.1	-0.6
MVO				eSg	Sg	11 59 28.9	-1.5
MVO				A	A	11 59 39.4	
	comp=E,131nm,0.9s						
EALK	Alkurruntz	5.45	1	Pn	Pn	11 58 01.1	+2.6
EPF	Esparros	5.46	15	ePn	Pn	11 57 58.9	+0.2
EPF	Esparros	5.46	15	eP	Pn	11 58 02.8	+4.1
EPF				eSn	Sn	11 59 00.2	-1.3
EPF				eSg	Sg	11 59 32.0	-0.8
	comp=E,58nm,0.6s						
PNCL	Nicolau / Gran	5.48	276	ePn	Pn	11 57 59.8	+1.0
PNCL				eSn	Sn	11 59 01.8	+0.1
PNCL				eSg	Sg	11 59 29.7	-3.5
PNCL				A	A	11 59 41.1	
	comp=E,71nm,0.5s						
MDT	Midelt	5.51	207	Pn	Pn	11 58 00.4	+1.0
	comp=E,0.6nm,0.3s,baz=203,slow=6.8,SNR=11						
MDT				Sn	Sn	11 58 58.5	-4.4
	comp=E,0.2nm,0.3s,baz=247,slow=5.9,SNR=3.9						
	comp=E,1.5nm,0.3s						
MD31	MD31	5.52	209	P	Pn	11 58 01.6	+2.1
MORF	Marmelete	5.61	267	eP	Pn	11 58 00.6	-0.1
MORF	Marmelete	5.61	267	ePn	Pn	11 58 02.1	+1.4
MORF				eSn	Sn	11 59 03.5	-1.6
MORF				A	A	11 59 51.8	
	comp=E,29nm,0.6s						
FIGM	Figuig	5.63	177	P	Pn	11 58 00.6	-0.4
ELAN	Lanestosa	5.63	346	Pn	Pn	11 58 02.9	+1.9
ELAN				Sn	Sn	11 59 08.4	+2.9
ELAN				i Vmb_Lg		11 59 45.5	
PBRG	Braganca	5.64	317	ePn	Pn	11 58 02.1	+1.0
PBRG				eSn	Sn	11 59 03.9	-2.0
PBRG				eSg	Sg	11 59 34.2	-4.3
PBRG				A	A	11 59 45.4	
	comp=E,89nm,0.6s						
PTEO	Sao Teotonio	5.65	270	ePn	Pn	11 58 01.7	+0.6
PTEO				eSn	Sn	11 59 05.8	-0.1
PTEO				A	A	11 59 59.8	
	comp=E,63nm,0.6s						
PVIS	Viseu	5.70	303	ePn	Pn	11 58 03.1	+1.2
PVIS				eSn	Sn	11 59 05.6	-1.6
PVIS				eSg	Sg	11 59 40.1	-0.1
PVIS				A	A	11 59 47.5	
	comp=E,67nm,0.5s						
PACT	Alcochete	5.77	282	ePn	Pn	11 58 04.6	+1.8
PACT				eSn	Sn	11 59 08.1	-0.8
PACT				eSg	Sg	11 59 44.8	+2.3
PACT				A	A	11 59 54.0	
	comp=E,110nm,0.5s						
PFVI	Vila Bisbo	5.77	266	ePn	Pn	11 58 05.4	+2.5
PFVI				eSn	Sn	11 59 09.7	+0.7
PFVI				A	A	11 59 50.7	
	comp=E,44nm,0.6s						
COI	Coimbra	5.83	297	ePn	Pn	11 58 05.5	+1.9
COI				eSn	Sn	11 59 09.3	-1.1
COI				eSg	Sg	11 59 46.9	+2.4
COI				A	A	12 00 00.6	
	comp=E,173nm,0.7s						
PCAS	Casmilo, Conde	5.83	295	ePn	Pn	11 58 05.0	+1.3
PCAS				eSn	Sn	11 59 08.6	-1.9
PCAS				eSg	Sg	11 59 42.0	-2.6
PCAS				A	A	12 00 00.1	
	comp=E,142nm,0.7s						
PVRL	Vila Real	5.88	308	ePn	Pn	11 58 04.9	+0.6
PVRL				eSn	Sn	11 59 09.7	-1.9
PVRL				eSg	Sg	11 59 50.8	+4.8
PVRL				A	A	11 59 52.9	
	comp=E,113nm,0.1s						
PSBE	So Bento	5.89	289	ePn	Pn	11 58 06.6	+2.1
PSBE				eSn	Sn	11 59 10.6	-1.3
PSBE				A	A	11 59 56.4	
	comp=E,104nm,0.7s						
ZHG	ZHG	5.95	225	P	Pn	11 58 08.1	+2.8
POLO	Lamas de Olo	5.98	309	ePn	Pn	11 58 06.4	+0.6
POLO				eSn	Sn	11 59 11.8	-2.5
POLO				eSg	Sg	11 59 50.9	+1.6
POLO				A	A	11 59 53.8	
	comp=E,107nm,0.8s						
PMST	Lisbon--Monsan	6.04	282	eSn	Sn	11 59 14.6	-0.9
PMST				eSg	Sg	11 59 51.9	+0.8
PMST				A	A	12 00 03.6	
	comp=E,104nm,0.5s						
PMAFR	Mafra	6.14	283	ePn	Pn	11 58 08.8	+0.8
PMAFR				eSn	Sn	11 59 16.2	-1.9
PMAFR				eSg	Sg	11 59 54.3	-0.2
PMAFR				A	A	12 00 08.2	
	comp=E,115nm,0.5s						
EARI	Arriondas	6.17	335	Pn	Pn	11 58 10.2	+1.9
EARI				Sn	Sn	11 59 19.6	+0.8
EARI				i Vmb_Lg		12 00 19.5	
MTLF	Montolieu	6.28	26	ePn	Pn	11 58 09.5	-0.4
MTLF				eSg	Sg	11 59 56.6	-2.5
	comp=E,25nm,0.6s						
PCAB	Cabril	6.32	311	ePn	Pn	11 58 11.2	+0.8
PCAB				eSn	Sn	11 59 19.8	-2.7
PCAB				eSg	Sg	11 59 59.0	-1.2
PCAB				A	A	12 00 08.9	
	comp=E,71nm,0.8s						
ELOB	Lobios	6.43	312	Pn	Pn	11 58 12.8	+0.8
ELOB				Sn	Sn	11 59 25.0	-0.4
ELOB				i Vmb_Lg		12 00 09.4	
PGAV	Gavieira, Arco	6.62	311	ePn	Pn	11 58 15.5	+1.0
PGAV				eSn	Sn	11 59 26.8	-3.1
PGAV				eSg	Sg	12 00 07.8	-1.9
PGAV				A	A	12 00 14.9	
	comp=E,104nm,0.6s						
LFF	La Frestale	7.38	13	ePn	Pn	11 58 25.2	+0.3
LFF				eSn	Sn	11 59 44.8	-3.7
	comp=E,11nm,0.5s						
LASF	Ste Croix	7.54	32	ePn	Pn	11 58 26.6	-0.5
CAF	Calviac	7.67	20	ePn	Pn	11 58 29.1	+0.2
CAF	Calviac	7.67	20	eP	Pn	11 58 32.1	+3.2
CAF				eSn	Sn	11 59 52.3	-3.4
CAF				eSg	Sg	12 00 40.1	-3.3
	comp=E,11nm,0.6s						
RJF	Les Rejaudoux	7.89	16	ePn	Pn	11 58 31.9	0.0
RJF				eSn	Sn	11 59 55.6	-5.4
	comp=E,3.4nm,0.3s						
MFF	Saint Martin d	8.89	7	ePn	Pn	11 58 44.8	-0.9
TCF	Toulx Ste Croi	8.97	17	ePn	Pn	11 58 47.5	+0.7
KEST	Kesra	9.03	100	Pn	Pn	11 58 52.6	+5.0
	comp=E,2.0nm,0.3s,baz=244,slow=5.5,SNR=8.4						
	comp=E,7.2nm,0.5s						
ORIF	Oris-en-Rattie	9.10	36	ePn	Pn	11 58 47.9	-0.6
PGF	Pioggiola	9.42	56	ePn	Pn	11 58 51.2	-1.8
PGF				eSn	Sn	12 00 32.0	-6.9
	comp=E,0.9nm,0.3s						
SMF	Signal de Mont	9.75	23	ePn	Pn	11 58 57.3	-0.1
HYF	Humbligny	10.00	17	ePg	Pn	11 59 42.9	+42
QUIF	Quistinic	10.21	354	ePn	Pn	11 59 04.3	+0.7
QUIF	Quistinic	10.21	354	ePg	Pn	11 59 48.3	+45
QUIF				eSn	Sn	12 00 54.3	-3.6
	comp=E,6.0nm,0.5s						
ROSF	Rostrenen	10.63	354	ePn	Pn	11 59 10.1	+0.6
ROSF				eSn	Sn	12 01 04.4	-4.0
	comp=E,13nm,0.7s						
COLI	Coloredo	13.92	48	ePg	Pn	11 59 44.6	-10
GERES	GERESS Array B	15.68	40	Pn	P	12 00 23.6	+1.4
	comp=E,0.5nm,0.3s,baz=228,slow=10.0,SNR=7.1						
	comp=E,1.1nm,0.5s						
EKA	Eskdalemuir Ar	17.60	357	Pn	P	12 00 45.5	+2.2
	baz=178,slow=13						
	comp=E,0.4nm,0.4s						

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*IDC **03** 11:57:25.7±0.9, 32°.48N×105°.27E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.7/1, MS3.6/2, Error ellipse: s-maj=52.3km s-min=17.6km az=60.0*
ISC 03 11:57:27.6±1.0**, 32°.5N**±0°.1×**105°.3E**±0°.2**, h11**^{km}**, n11,** σ**0^{s}77**/9**, mb3.8**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.13	204	Pn	Pn	12 01 01.9	+0.5
	0.1nm,0.3s,baz=9.1,slow=8.0,SNR=5.6						
	0.8nm,0.3s						
MKAR	Makanchi Array	22.63	316	P	P	12 02 28.4	-0.2
	0.5nm,0.4s,baz=119,slow=9.9,SNR=9.0						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	26.77	320	P	P	12 03 07.1	-0.2
	1.0nm,0.2s,baz=130,slow=7.9,SNR=5.0						
	1.0nm,0.2s						
OBN	Obninsk	52.13	317	LR	LR	12 30 18.6	
	comp=Z,26nm,18.3s,baz=270,slow=38						
ARCES	ARCESS Array B	56.40	335	P	P	12 07 07.5	-1.1
	0.6nm,0.5s,baz=72,slow=7.8,SNR=5.5						
	0.6nm,0.5s						
ASF	Jabal al Asfar	56.83	290	LR	LR	12 33 42.7	
	comp=Z,121nm,18.4s,baz=105,slow=38						
FINES	FINESS Array B	56.97	326	P	P	12 07 12.7	-0.1
	0.8nm,0.4s,baz=97,slow=7.7,SNR=7.6						
	0.8nm,0.4s						
WRA	Warramunga Arr	59.10	148	P	P	12 07 27.6	-0.6
	0.8nm,0.7s,baz=341,slow=7.6,SNR=9.3						
	0.8nm,0.7s						
ASAR	Alice Springs	62.19	150	P	P	12 07 48.8	-0.5
	0.3nm,0.5s,baz=326,slow=6.3,SNR=8.4						
	0.3nm,0.5s						
NOA	NORSAR Array B	64.02	327	P	P	12 08 01.2	+0.2
	0.1nm,0.3s,baz=116,slow=7.0,SNR=2.2						
	0.1nm,0.3s						
YKA	Yellowknife Ar	80.04	18	P	P	12 09 38.0	+1.1
	0.1nm,0.5s,baz=332,slow=5.3,SNR=5.2						
	0.1nm,0.5s						

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*IDC **03** 12:06:06.6±0.8, 39°.89N×143°.72E, h0^{km}, mb3.8/18, mbtmp3.9/21, ML3.0/3, MS3.3/11, Error ellipse: s-maj=19.0km s-min=15.5km az=103.0*
*JMA **03** 12:06:08.9±0.2, 40°.0N±0°.5×14°4E±°, h15^{km}±3^{km}, MD4.2/35, MV4.1/35, FAR E OFF SANRIKU*
*NIED **03** 12:06:08.9, 40°.01N×143°.54E, h15^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.81; M$_{\theta\theta}$0.24; M$_{\phi\phi}$-1.05; M$_{r\theta}$0.31; M$_{\theta\phi}$-0.57; M$_{\phi r}$0.57; Fault plane solution: M$_0$1.22000×10^{15} NP1: ϕ_s189.00000°, δ30.00000°, λ73.00000°. NP2: ϕ_s28.00000°, δ61.00000°, λ99.00000°.*
*MOS **03** 12:06:08.9±1.5, 39°.96N×143°.64E, h29^{km}, mb4.3/12 Error ellipse: s-maj=10.8km s-min=5.8km az=91.2*
*NEIC **03** 12:06:11.1±2.3, 39°.95N±0°.06×143°.70E±0°.08, h35^{km}±2^{km}, mb4.2/14, Error ellipse: s-maj=10.2km s-min=9.8km az=141.0*
ISC 03 12:06:08.2±3.1**, 39°.96N**±0°.05×**143°.66E**±0°.05**, h10**^{km}±19^{km}**, n113,** σ**1^{s}51**/115**, mb4.2**/29**, MS3.5**/7**, 6C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.38	270	P	Pn	12 06 32.2	-1.4
JTH				eS	Sb	12 06 49.3	-2.7
MIYJ	Miyakonagasawa	1.47	256	i P	Pn	12 06 34.0	-0.9
MIYJ				eS	Sn	12 06 52.2	-1.9
JKEN	Kujiedanarisaw	1.52	280	P	Pn	12 06 34.1	-1.4
JKEN				eS	Sn	12 06 52.4	-2.9
JANG	Nango	1.70	285	i P	Pn	12 06 36.8	-1.2
JANG				eS	Sn	12 06 56.8	-3.0
JOM	Ohasama	1.89	256	i P	Pn	12 06 40.6	0.0
JOM				eS	Sn	12 07 03.1	-1.4
ERM	Erimo	2.09	350	ceP	Pb	12 06 44.8	-1.4
ERM	Erimo	2.09	350	Pn	Pn	12 06 42.5	-0.9
JEM	Erimo	2.09	350	eS	Sn	12 07 08.6	-0.9

JMK	**Ichinoseki**	**2.14**	**243**	P	**Pn**	**12 06 43.5**	**-0.5**
JMK				eS	**Sn**	**12 07 09.5**	**-1.2**
JTM	**Tenmabayashi**	**2.15**	**294**	P	**Pn**	**12 06 43.9**	**-0.2**
JAH	**Hinai**	**2.33**	**277**	iP	**Pn**	**12 06 46.9**	**+0.2**
JAH				eS	**Sn**	**12 07 14.8**	**-0.6**
JRG	**Rokugo**	**2.41**	**257**	A	A	12 06 47.6	
	comp=E,3.0nm,1.4s,comp=E,4.0nm,1.2s						
JNBK	**Urakawa-nobuka**	**2.42**	**344**	eP	**Pn**	**12 06 48.9**	**+1.0**
JNBK				eS	**Sn**	**12 07 17.3**	**-0.2**
JOT	**Ohata**	**2.45**	**306**	P	**Pn**	**12 06 48.1**	**-0.1**
JOT				eS	**Sn**	**12 07 16.9**	**-1.3**
JCH	**Churui**	**2.66**	**355**	P	**Pn**	**12 06 51.3**	**+0.1**
JCH				eS	**Sn**	**12 07 22.5**	**-1.1**
JSI2	**Shiura 2**	**2.71**	**295**	A	A	12 06 51.7	
	comp=E,3.0nm,0.8s,comp=E,3.0nm,1.8s						
JYK	**Kaneyama**	**2.76**	**249**	P	**Pn**	**12 06 52.7**	**+0.1**
JYK				eS	**Sn**	**12 07 25.1**	**-0.9**
JMM	**Marumori**	**3.06**	**228**		**Pn**	**12 06 55.6**	**-1.1**
JEW	**Eniwo**	**3.33**	**331**	Pn	**Pn**	**12 06 60.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**3.74**	**24**	eP	**Pn**	**12 07 04.9**	**-1.1**
NMR				eS	**Sn**	**12 07 46.6**	**-3.6**
JKA	**Kamikawa-asahi**	**4.23**	**350**	Pn	**Pn**	**12 07 11.7**	**-1.0**
ASAJ	**Asahikawa**	**4.23**	**350**	Pn	**Pn**	**12 07 13.8**	**+1.1**
	1.3nm,0.3s,baz=211,slow=6.3,SNR=15						
ASAJ				Sn	**Sn**	**12 08 05.0**	**+2.8**
	2.7nm,0.3s,baz=125,slow=31,SNR=8.9						
	4.0nm,0.3s						
ASAJ	**Asahikawa**	**4.23**	**350**	P	**Pn**	**12 07 11.7**	**-1.1**
RUSJ	**Misakicho**	**4.31**	**15**	eP	**Pn**	**12 07 14.1**	**+0.3**
RUSJ				eS	**Sn**	**12 08 03.1**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**4.39**	**21**	eP	**Pn**	**12 07 14.2**	**-0.7**
YUK				eS	**Sn**	**12 08 03.0**	**-3.1**
YUK				pmax	pmax		
	comp=Z,72nm,0.2s						
YUK				smax	smax		
	comp=N,152nm,0.3s						
YUK				smax	smax		
	comp=E,220nm,0.6s						
SHO	**Shikotan**	**4.57**	**30**	P	**Pn**	**12 07 14.8**	**-2.5**
SHO				eS	**Sn**	**12 08 04.4**	**-6.1**
SHO				smax	smax		
	comp=N,123nm,0.2s						
SHO				smax	smax		
	comp=E,99nm,0.3s						
JYT	**Yasato**	**4.62**	**217**	Pn	**Pn**	**12 07 16.6**	**-1.5**
JSD	**Sado**	**4.63**	**247**	Pn	**Pn**	**12 07 18.5**	**+0.3**
MJAR	**Matsushiro Arr**	**5.48**	**233**	Pn	**Pn**	**12 07 30.3**	**+0.3**
	comp=E,0.5nm,0.3s,baz=50,slow=14,SNR=16						
MJAR				LR	LR	12 09 35.9	
	comp=E,117nm,20.5s,baz=187,slow=38						
	comp=E,18nm,1.1s						
MJAR	**Matsushiro Arr**	**5.48**	**233**	P	**Pn**	**12 07 29.2**	**-0.8**
MJAR	**Matsushiro Arr**	**5.48**	**233**	Pn	**Pn**	**12 07 29.2**	**-0.8**
MAJO	**Matsushiro**	**5.48**	**233**	ceP	**Pn**	**12 07 30.7**	**+0.7**
MAJO	**Matsushiro**	**5.48**	**233**	Pn	**Pn**	**12 07 29.6**	**-0.4**
MJB9	**Matsu-Tunnel**	**5.48**	**233**		**Pn**	**12 07 30.0**	**0.0**
KUR	**Kuril'sk**	**6.12**	**29**	eP	**Pn**	**12 07 38.6**	**0.0**
KUR				eS	**Sn**	**12 08 44.0**	**-4.6**
KUR				pmax	pmax		
	comp=Z,34nm,0.6s						
KUR				pmax	pmax		
	comp=N,14nm,0.4s						
KUR				pmax	pmax		
	comp=E,15nm,0.4s						
KUR				smax	smax		
	comp=E,56nm,0.7s						
KUR				smax	smax		
	comp=N,30nm,0.4s						
JGF	**Kuroka**	**6.62**	**231**	Pn	**Pn**	**12 07 46.1**	**+0.5**
INU	**Inuyama**	**7.00**	**231**	Pn	**Pn**	**12 07 49.5**	**-1.2**
YSS	**Yuzh-Sakhalins**	**7.03**	**355**	eP	**Pn**	**12 07 54.1**	**+3.0**
YSS				eS	**Sn**	**12 09 10.6**	**-0.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,18.0s						
USRK	**Ussuriysk Ar.**	**9.66**	**300**	Pn	**Pn**	**12 08 29.7**	**+2.5**
	comp=N,0.4nm,0.3s,baz=91,slow=12,SNR=5.7						
	comp=N,7.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**9.66**	**300**	P	**Pn**	**12 08 25.5**	**-1.7**
USRK	**Ussuriysk Ar.**	**9.66**	**300**	Pn	**Pn**	**12 08 25.5**	**-1.7**
JHS	**Saijyo**	**9.73**	**243**	Pn	**Pn**	**12 08 28.6**	**+0.3**
KSRS	**Korea Array**	**12.55**	**264**	Pn	**Pn**	**12 09 11.0**	**+4.2**
	comp=N,0.2nm,0.3s,baz=76,slow=13,SNR=2.9						
KSRS				LR	LR	12 13 45.8	
	comp=N,154nm,18.0s,baz=80,slow=36						
KLR	**Kul'dur**	**12.56**	**322**	LR	LR	12 14 09.9	
	comp=N,91nm,19.4s,baz=125,slow=38						
KLR	**Kul'dur**	**12.56**	**322**	⇓eP	**Pn**	**12 09 08.2**	**+1.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BNX	**BinXian**	**13.25**	**301**	⇓P	**Pn**	**12 09 14.7**	**-1.6**
BNX				pmax	pmax		
	comp=Z,18nm,1.1s						
BNX				pmax	pmax		
	comp=Z,830nm,4.0s						
PETK	**Petropavlovsk-**	**16.28**	**31**	LR	LR	12 15 47.8	
	comp=Z,30nm,21.1s,baz=143,slow=36						
ZEA	**Zeya**	**17.71**	**327**	eP	**Pn**	**12 10 12.3**	**-2.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				MLR	MLR		
	comp=E,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
MA2	**Magadan**	**20.14**	**11**	P	Pn	12 10 43.4	-0.7
	comp=Z,2.8nm,0.6s,baz=170,slow=10,SNR=6.3						
	comp=Z,2.8nm,0.6s						
MA2	**Magadan**	**20.14**	**11**	deP	Pn	12 10 44.1	-0.1
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MA2	**Magadan**	**20.14**	**11**	P	Pn	12 10 43.2	-1.0
SEY	**Seymchan**	**23.60**	**10**	P	**P**	**12 11 19.1**	**+0.1**
	comp=Z,4.5nm,0.9s,baz=192,slow=6.2,SNR=23						
	comp=Z,4.5nm,0.9s						
SEY	**Seymchan**	**23.60**	**10**	⇓eP	**P**	**12 11 19.3**	**+0.4**
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	**Yakutsk**	**23.68**	**344**	P	**P**	**12 11 19.1**	**-0.6**
	comp=Z,9.8nm,0.4s,baz=355,slow=3.3,SNR=4.7						
YAK				LR	LR	12 21 08.1	
	comp=Z,62nm,18.5s,baz=90,slow=38						
	comp=Z,9.8nm,0.4s						
YAK	**Yakutsk**	**23.68**	**344**	eP	**P**	**12 11 18.9**	**-0.9**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK	**Yakutsk**	**23.68**	**344**	IAmb	IAmb	12 11 20.7	
	comp=Z,23nm,0.5s						
ULN	**Ulaanbaatar**	**27.33**	**299**	⇑eP	**P**	**12 11 53.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	**Ulaanbaatar**	**27.33**	**299**	P	**P**	**12 11 51.5**	**-1.8**
ULN				IAmb	IAmb	12 12 02.5	
	comp=Z,5.4nm,0.8s						
SONM	**Songino Array**	**27.77**	**299**	P	**P**	**12 11 57.9**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=92,slow=8.9,SNR=15						
SONM				LR	LR	12 23 46.8	
	comp=Z,113nm,18.6s,baz=128,slow=38						
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**27.77**	**299**	P	**P**	**12 11 56.8**	**-0.5**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**27.77**	**299**	P	**P**	**12 11 56.8**	**-0.5**
SONM				IAmb	IAmb	12 12 07.2	
	comp=Z,4.3nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**28.35**	**129**	T	T	12 43 05.8	
	baz=318,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**28.36**	**129**	T	T	12 43 11.1	
	baz=318,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	**28.37**	**129**	T	T	12 43 05.1	
	baz=318,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**29.18**	**130**	T	T	12 42 49.4	
	baz=322,slow=76,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**29.19**	**130**	T	T	12 42 49.7	
	baz=322,slow=76,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**29.20**	**130**	T	T	12 42 50.0	
	baz=322,slow=76,SNR=5.1						
GTA	**Gaotai**	**33.50**	**283**	eP	**P**	**12 12 48.6**	**+0.7**
GTA				pP	pwP	12 12 53.6	+0.2
GTA				sP	sP	12 12 56.6	+5.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PZH	**PanZhiHua**	**37.21**	**262**	P	**P**	**12 13 20.0**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
GOMU	**GeErMu**	**38.26**	**280**	P	**P**	**12 13 29.0**	**0.0**
GOMU				pP	pwP	12 13 32.2	-2.3
GOMU				sP	sP	12 13 33.1	+1.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,130nm,5.0s						
WMQ	**Urumqi**	**41.17**	**294**	eP	**P**	**12 13 55.2**	**+2.4**
ZAA0	**Zalesovo Array**	**41.32**	**310**	P	**P**	**12 13 53.4**	**-0.4**
ZAA0				IAmb	IAmb	12 14 02.6	
	comp=Z,3.5nm,0.6s						
ZALV	**Zalesovo Beam**	**41.32**	**310**	P	**P**	**12 13 53.8**	**0.0**
	comp=Z,1.9nm,0.7s,baz=87,slow=10,SNR=7.0						
ZALV				LR	LR	12 31 37.3	
	comp=Z,42nm,18.3s,baz=87,slow=37						
	comp=Z,1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**41.32**	**310**	P	**P**	**12 13 52.7**	**-1.1**
MK31	**Makanchi Array**	**44.13**	**300**	⇓eP	**P**	**12 14 16.8**	**0.0**
MK31	**Makanchi Array**	**44.13**	**300**	P	**P**	**12 14 16.1**	**-0.6**
MKAR	**Makanchi Array**	**44.13**	**300**	P	**P**	**12 14 16.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=87,slow=9.4,SNR=7.6						
MKAR				LR	LR	12 33 53.9	
	comp=Z,52nm,18.3s,baz=68,slow=38						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**44.13**	**300**	P	**P**	**12 14 16.3**	**-0.5**
MKAR	**Makanchi Array**	**44.13**	**300**	P	**P**	**12 14 16.2**	**-0.5**
MAKZ	**Makanchi**	**44.33**	**300**	P	**P**	**12 14 18.4**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**44.33**	**300**	P	**P**	**12 14 18.4**	**0.0**
MAKZ				IAmb	IAmb	12 14 26.8	
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**45.58**	**306**	⇓eP	**P**	**12 14 28.3**	**+0.1**
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
KURK	**Kurchatov**	**45.58**	**306**	P	**P**	**12 14 26.7**	**-1.4**
KURBB	**Kurchatov Arra**	**45.65**	**306**	P	**P**	**12 14 28.9**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=80,slow=8.5,SNR=15						
	comp=Z,2.6nm,0.6s						
ILAR	**Eielson Array**	**46.09**	**34**	P	**P**	**12 14 33.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=273,slow=6.0,SNR=2.6						
	comp=Z,0.3nm,0.6s						
BRVK	**Borovoye**	**50.01**	**311**	⇑eP	**P**	**12 15 03.9**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	**Inuvik**	**50.98**	**28**	P	**P**	**12 15 08.2**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=289,slow=7.4,SNR=4.4						
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**50.98**	**28**	P	**P**	**12 15 08.9**	**-0.7**
INK				IAmb	IAmb	12 15 18.3	
	comp=Z,4.0nm,1.2s						
KK31	**Karatay Array**	**53.22**	**299**	P	**P**	**12 15 25.3**	**-1.5**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	**53.22**	**299**	P	**P**	**12 15 25.2**	**-1.5**
KK31				IAmb	IAmb	12 15 34.9	
	comp=Z,1.8nm,0.7s						
KKAR	**Karatay Array**	**53.22**	**299**	P	**P**	**12 15 26.2**	**-0.6**
KKAR	**Karatay Array**	**53.22**	**299**	P	**P**	**12 15 26.2**	**-0.6**
LEM	**Lembang**	**57.21**	**224**	LR	LR	12 42 15.2	
	comp=Z,63nm,19.9s,baz=162,slow=38						
ABKAR	**Akbulak array**	**57.43**	**309**	P	**P**	**12 15 56.7**	**-0.2**
WB0	**Warramunga Arr**	**60.04**	**190**	P	**P**	**12 16 13.5**	**-1.8**
WR0	**Warramunga Arr**	**60.21**	**190**	P	**P**	**12 16 15.2**	**-1.3**
WR0				IAmb	IAmb	12 16 36.6	
	comp=Z,3.0nm,1.2s						
WB2	**Warramunga Arr**	**60.22**	**190**	P	**P**	**12 16 16.0**	**-0.6**
WB2				IAmb	IAmb	12 16 40.0	
	comp=Z,5.9nm,1.4s						
WRA	**Warramunga Arr**	**60.22**	**190**	P	**P**	**12 16 14.9**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=8.5,slow=7.1,SNR=12						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**60.22**	**190**	P	**P**	**12 16 15.0**	**-1.6**
YKA	**Yellowknife Ar**	**60.40**	**32**	P	**P**	**12 16 17.4**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=298,slow=6.8,SNR=3.3						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**61.88**	**339**	P	**P**	**12 16 28.1**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=38,slow=9.2,SNR=1.9						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**63.95**	**190**	P	**P**	**12 16 41.7**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=8.6,slow=6.0,SNR=4.7						
	comp=Z,0.9nm,1.1s						
FINES	**FINESS Array B**	**67.05**	**332**	P	**P**	**12 17 01.1**	**0.0**
	comp=Z,1.2nm,0.6s,baz=53,slow=10,SNR=4.6						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**67.05**	**332**	iP	**P**	**12 17 01.5**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	**Kislovodsk**	**70.32**	**311**	eP	**P**	**12 17 23.8**	**+1.7**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	**Khabaz**	**70.33**	**311**	P	**P**	**12 17 23.3**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=338,slow=4.4,SNR=5.5						
	comp=Z,1.8nm,0.8s						
KBZ	**Khabaz**	**70.33**	**311**	⇑eP	**P**	**12 17 23.5**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NVAR	**Mina Array Bea**	**71.84**	**55**	P	**P**	**12 17 32.2**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=317,slow=3.7,SNR=2.3						
	comp=Z,0.2nm,0.7s						
NB2	**NORSAR Subarra**	**72.16**	**338**	P	**P**	**12 17 33.0**	**+0.2**
	comp=Z,3.8nm,1.0s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**72.16**	**338**	P	**P**	**12 17 32.9**	**0.0**
	comp=Z,1.1nm,0.9s,baz=40,slow=4.9,SNR=3.4						
NOA				LR	LR	12 52 31.6	
	comp=Z,26nm,20.9s,baz=60,slow=39						
	comp=Z,1.1nm,0.9s						
AKBB	**Malin Array Si**	**73.06**	**323**	⇑eP	**P**	**12 17 39.0**	**+0.8**
EKA	**Eskdalemuir Ar**	**80.95**	**342**	LR	LR	12 57 56.8	
	comp=Z,20nm,18.6s,baz=166,slow=38						
TXAR	**Lajitas Array**	**86.95**	**54**	P	**P**	**12 18 55.0**	**+1.1**
	comp=Z,0.1nm,0.7s,baz=325,slow=1.4,SNR=2.0						
	comp=Z,0.1nm,0.7s						

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*IDC **03** 12:09:45.8±3.3, 31°.06S×177°.68W, h0^{km}, mb3.7/3, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=74.8km s-min=46.5km az=122.0*

ISC 03 12:09:48.4±3.1**, 31°.2S**±0°.1×**177°.6W**±0°.4**, h27^{km}, n6, σ2^{s}85**/7**, mb3.6**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.93**	**353**	Sn	**Sn**	**12 10 39.7**	**-3.2**
	141nm,0.3s,baz=107,slow=19,SNR=5.2						
URZ	**Urewera**	**8.28**	**210**	Pn	**Pn**	**12 11 46.4**	**-0.3**
	0.4nm,0.3s,baz=97,slow=22,SNR=1.6						
URZ				Sn	**Sn**	**12 13 15.6**	**-3.7**
	0.5nm,0.3s,baz=131,slow=19,SNR=2.3						
	3.0nm,0.7s						
STKA	**Stephens Creek**	**34.62**	**258**	P	**P**	**12 16 37.9**	**+2.6**
	1.5nm,0.8s,baz=110,slow=15,SNR=1.1						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**43.38**	**268**	P	**P**	**12 17 49.9**	**+1.1**
	0.3nm,0.4s,baz=105,slow=7.4,SNR=11						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.44**	**273**	P	**P**	**12 17 57.9**	**+0.6**
	0.4nm,0.4s,baz=111,slow=7.8,SNR=9.8						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**145.98**	**340**	PKPbc	**PKPab**	**12 29 25.7**	**+0.3**
	0.6nm,0.6s,baz=84,slow=5.7,SNR=4.1						

IDC 03 12:17:42.4±1.5**, 1°.98S**×**152°.38E, h0^{km}, mb3.6**/3**, mbtmp3.6**/4**, ML3.7**/1**, Error ellipse: s-maj=67.8km s-min=22.5km az=109.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.34**	**189**	Pn	Pn	12 18 21.8	-0.4
	17nm,0.3s,baz=50,slow=1.0,SNR=18						
KRVT				Sn	Sb	12 18 54.7	-0.3
	12nm,0.3s,baz=345,slow=22,SNR=5.6						
	74nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**24.74**	**34**	T	T	12 49 40.2	
	baz=221,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**24.75**	**34**	T	T	12 49 45.0	
	baz=221						
H11S1	**WAKE ISLAND Hy**	**24.76**	**34**	T	T	12 49 53.8	
	baz=221						
WRA	**Warramunga Arr**	**25.09**	**223**	P	P	12 23 09.2	+0.2
	1.4nm,0.6s,baz=47,slow=9.5,SNR=18						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**28.02**	**218**	P	P	12 23 34.5	-1.0
	0.3nm,0.7s,baz=52,slow=8.5,SNR=5.8						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**79.72**	**22**	P	P	12 29 51.8	-0.1
	0.3nm,0.7s,baz=239,slow=6.2,SNR=5.5						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.94**	**292**	PKPbc	PKPbc	12 37 33.7	+0.3
	3.2nm,0.3s,baz=112,slow=2.5,SNR=1.4						

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*DDA **03** 12:22:32.5±0.0, 40°.82N×41°.51E, h7^{km}±1^{km}, MC2.2*

*ISK **03** 12:22:32.2, 40°.84N×41°.54E, h18^{km}, ML2.7/7*

*TIF **03** 12:22:32.8, 40°.86N×41°.53E, h17^{km}±1^{km}*

ISC 03 12:22:32.5±1.0**, 40°.84N**±0°.04×**41°.53E**±0°.04**, h18^{km}**±6^{km}**, n15, σ0^{s}65**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDEM	**Demirkent**	**0.17**	**72**	P	**Pg**	**12 22 36.6**	**-0.5**
DDEM				S	**Sg**	**12 22 40.2**	**-0.1**
DBAD	**Bademkaya**	**0.22**	**34**	P	**Pb**	**12 22 38.0**	**0.0**
DAGI	**Agillar**	**0.38**	**50**	P	**Pb**	**12 22 40.6**	**-0.1**
DAGI				S	**Sb**	**12 22 46.5**	**+0.2**
DBOC	**Borcka**	**0.52**	**11**	P	**Pb**	**12 22 43.2**	**+0.1**
DBOC				S	**Sb**	**12 22 50.6**	**+0.3**
DBOC				iAML	AML	12 22 51.0	
	comp=E,342nm,0.2s						
HOPA	**Hopa-Artvin**	**0.55**	**353**	PG	**Pb**	**12 22 43.5**	**-0.1**
HOPA				SG	**Sb**	**12 22 51.7**	**+0.5**
CHOM	**Cayeli-Rize**	**0.64**	**294**	PG	**Pb**	**12 22 45.2**	**+0.1**
CHOM				SG	**Sb**	**12 22 54.8**	**+1.1**
CHAY	**Cayeli-Rize**	**0.66**	**292**	PG	**Pb**	**12 22 45.5**	**0.0**
CHAY				SG	**Sn**	**12 22 55.5**	**-1.4**
BATM	**Batumi**	**0.78**	**9**	P	**Pg**	**12 22 47.9**	**+0.3**
BATM				S	**Sn**	**12 22 58.8**	**-1.0**
BATM	**Batumi**	**0.78**	**9**	PG	**Pg**	**12 22 47.6**	**0.0**
BATM				SG	**Sn**	**12 22 58.8**	**-1.0**
KOPR	**Koprukoy-ERZUR**	**0.88**	**164**	PG	**Pg**	**12 22 49.7**	**+0.1**
ERZM	**Erzurum**	**0.94**	**188**	PG	**Pg**	**12 22 51.0**	**+0.2**
EPOS	**Posof**	**1.12**	**53**	P	**Pg**	**12 22 54.4**	**+0.2**
EPOS				S	**Sg**	**12 23 10.3**	**+1.4**
BAYT	**Aydıntepe-Bayb**	**1.15**	**248**	PN	**Pn**	**12 22 53.9**	**+0.1**
ABS	**Abastumani**	**1.33**	**46**	P	**Pg**	**12 22 57.7**	**-0.5**
ABS				S	**Sg**	**12 23 16.5**	**+0.9**
KTUT	**Trabzon**	**1.35**	**277**	PN	**Pb**	**12 22 56.8**	**-0.4**

TAP 03 12:38:48.5, 24°.24N×121°.72E, h12^{km}, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**228**	P	Pg	12 38 51.9	+0.2
	baz=228						
ETL				S	Sg	12 38 53.8	-0.1
	baz=228						
NACB	**Ninganchiao**	**0.13**	**241**	P	Pg	12 38 51.8	0.0
	baz=241						
NACB				eS	Sg	12 38 53.9	-0.3
	baz=241						
ENA	**Nanau**	**0.19**	**6**	eP	Pg	12 38 52.9	+0.2
	baz=1.0						
ENA				eS	Sg	12 38 56.1	+0.5
	baz=1.0						
TWD	**Chiawan**	**0.20**	**216**	P	Pg	12 38 52.8	0.0
	baz=221						
TWD				eS	Sg	12 38 55.7	0.0
	baz=221						
EWUT	**Wuta**	**0.21**	**14**	P	Pg	12 38 53.2	+0.1
	baz=14						
EWUT				S	Sg	12 38 56.4	+0.1
	baz=14						
ETLH	**Xiulin Townshi**	**0.22**	**262**	eP	Pg	12 38 53.8	+0.5
	baz=262						
ETLH				eS	Sg	12 38 56.7	+0.2
	baz=262						
LATG	**Datong**	**0.34**	**329**	P	Pg	12 38 56.0	+0.5
	baz=329						
LATG				eS	Sg	12 39 00.7	+0.5
	baz=329						
NNSB	**Datong**	**0.36**	**302**	eP	Pg	12 38 56.2	+0.4
	baz=301						
NNSB				eS	Sg	12 39 01.4	+0.6
	baz=301						
NNS	**Nan Shan**	**0.38**	**302**	eP	Pg	12 38 56.7	+0.6
	baz=303						
NNS				eS	Sg	12 39 01.2	0.0
	baz=303						
NDS	**Dongshan**	**0.39**	**359**	eP	Pg	12 38 56.8	+0.4
	baz=6.0						
ENTT	**Nioudou**	**0.42**	**341**	eP	Pb	12 38 57.6	-0.5
	baz=341						
ENTT				eS	Sb	12 39 03.6	-0.8
	baz=341						
WHF	**Hehuan Shan**	**0.43**	**257**	eP	Pg	12 38 57.2	+0.1
	baz=258						
WHF				eS	Sg	12 39 02.8	-0.1
	baz=258						
FUSS	**Fushou**	**0.44**	**271**	eP	Pg	12 38 56.5	-0.8
	baz=265						
FUSS				eS	Sg	12 39 02.2	-0.9
	baz=265						
YHNB	**Yeheng**	**0.53**	**324**	eP	Pg	12 38 59.2	+0.2
	baz=323						
YHNB				eS	Sg	12 39 05.3	-0.8
	baz=323						

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*NNC **03** 13:02:13.3±0.3, 50°.01N×78°.74E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=4.9km s-min=1.3km az=83.0, Suspected Mining explosion.*

*IDC **03** 13:02:14.5±1.1, 50°.07N×78°.71E, h0^{km}, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=19.4km s-min=6.6km az=69.0*

ISC 03 13:02:11.8±0.8**, 49°.89N**±0°.03×**78°.77E**±0°.05**, h0^{km}, n37, σ1^{s}81**/48**, 27C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.71**	**347**	⇑P	**Pg**	**13 02 24.9**	**-0.6**
KUR07				⇑S	**Sg**	**13 02 34.0**	**-0.7**
KUR06	**Kurchatov Arra**	**0.73**	**348**	⇑P	**Pg**	**13 02 25.2**	**-0.6**
KUR06				⇑S	**Sg**	**13 02 34.4**	**-0.9**
KUR14	**Kurchatov Arra**	**0.74**	**351**	⇑P	**Pg**	**13 02 25.2**	**-0.6**
KUR14				⇓S	**Sg**	**13 02 34.3**	**-1.1**
KUR15	**Kurchatov Arra**	**0.74**	**350**	⇑P	**Pg**	**13 02 25.3**	**-0.7**
KUR15				⇑S	**Sg**	**13 02 34.4**	**-1.3**
KURBB	**Kurchatov Arra**	**0.75**	**348**	Pg	**Pg**	**13 02 25.6**	**-0.6**
	9.6nm,0.3s,baz=167,slow=18,SNR=118						
KURBB				Lg	Lg	13 02 33.7	
	14nm,0.3s,baz=177,slow=31,SNR=25						
KURBB	**Kurchatov Arra**	**0.75**	**348**	⇑P	**Pg**	**13 02 25.5**	**-0.7**
	46nm,0.3s						
KURBB				⇑S	**Sg**	**13 02 34.6**	**-1.3**
	269nm,0.6s						
KUR16	**Kurchatov Arra**	**0.76**	**347**	⇓P	**Pg**	**13 02 25.7**	**-0.7**
KUR16				⇑S	**Sg**	**13 02 34.7**	**-1.5**
KUR17	**Kurchatov Arra**	**0.77**	**346**	⇓P	**Pg**	**13 02 25.8**	**-0.7**
KUR17				⇑S	**Sg**	**13 02 34.9**	**-1.6**
KUR05	**Kurchatov Arra**	**0.77**	**349**	⇑P	**Pg**	**13 02 25.8**	**-0.7**
KUR05				⇑S	**Sg**	**13 02 35.0**	**-1.5**
KUR04	**Kurchatov Arra**	**0.79**	**350**	⇓P	**Pg**	**13 02 26.1**	**-0.8**
KUR04				⇑S	**Sg**	**13 02 35.5**	**-1.6**
KURK	**Kurchatov**	**0.83**	**354**	⇑P	**Pg**	**13 02 26.8**	**-0.9**
	28nm,0.4s						
KURK				⇑S	**Sg**	**13 02 37.1**	**-1.5**
	51nm,0.5s						
MAKZ	**Makanchi**	**3.75**	**144**	⇑Pn	**Pb**	**13 03 16.1**	**-2.8**
	0.3nm,0.2s						
MAKZ				⇓Pg	**Pg**	**13 03 22.6**	**-1.1**
	3.7nm,0.5s						
MAKZ				⇓Lg	Lg	13 04 14.1	
	17nm,0.5s						
MK31	**Makanchi Array**	**3.89**	**141**	⇑Pn	**Pb**	**13 03 17.6**	**-3.6**
	0.4nm,0.2s,baz=324,slow=10.0,SNR=140						
MK31				⇑Pg	**Pg**	**13 03 25.3**	**-0.9**
	1.5nm,0.3s,baz=322,slow=14,SNR=34						
MK31				⇓Lg	Lg	13 04 19.7	
	16nm,0.5s,baz=328,slow=26,SNR=15						
MKAR	**Makanchi Array**	**3.89**	**141**	Pn	**Pb**	**13 03 17.5**	**-3.7**
	0.9nm,0.3s,baz=327,slow=11,SNR=83						
MKAR				Pg	**Pg**	**13 03 25.9**	**-0.4**
	2.5nm,0.3s,baz=319,slow=16,SNR=23						

MKAR				Lg	Lg	13 04 18.4	
	4.9nm,0.3s,baz=329,slow=27,SNR=14						
	1.2nm,0.3s						
OTUK	**Ortayu**	**4.54**	**251**	⇑Pn	**Pn**	**13 03 24.4**	**+2.7**
	3.3nm,0.3s						
OTUK				⇑Pg	**Pg**	**13 03 36.0**	**-2.7**
	1.5nm,0.4s						
OTUK				⇑Lg	Lg	13 04 38.5	
	9.6nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.53**	**40**	i		13 35 39.3	
	baz=225,slow=326,SNR=2.9						
ZALV	**Zalesovo Beam**	**5.53**	**40**	Pn	**Pn**	**13 03 38.2**	**+2.9**
	2.7nm,0.3s,baz=232,slow=14,SNR=23						
ZALV				Lg	Lg	13 05 04.4	
	0.7nm,0.3s,baz=234,slow=19,SNR=6.6						
	5.0nm,0.3s						
ARXS	**Arharly**	**5.71**	**187**	Pg	**Pg**	**13 04 00.5**	**-0.7**
ARXS				Lg	Lg	13 05 16.5	
	28nm,0.7s						
BLB	**Baldybastay**	**5.80**	**182**	Pg	**Pg**	**13 04 02.6**	**-0.2**
	12nm,0.7s						
BLB				Lg	Lg	13 05 19.7	
	38nm,0.7s						
CHKK	**Chushkaly**	**6.16**	**192**	Pg	**Pg**	**13 04 08.8**	**-1.0**
	0.9nm,0.3s						
CHKK				Lg	Lg	13 05 30.2	
	19nm,0.5s						
BRVK	**Borovoye**	**6.18**	**304**	⇓Pn	**Pn**	**13 03 45.7**	**+1.5**
	2.8nm,1.0s						
BRVK				⇑Sn	**Sn**	**13 04 54.9**	**-0.6**
	4.9nm,0.6s						
BRVK				⇑Lg	Lg	13 05 26.8	
	3.6nm,0.6s						
KUU	**Kurty**	**6.22**	**196**	Pg	**Pg**	**13 04 08.1**	**-2.9**
	1.0nm,0.1s						
KUU				Lg	Lg	13 05 29.4	
	27nm,0.8s						
KTBS	**Karatobe**	**6.34**	**194**	Pg	**Pg**	**13 04 11.0**	**-2.2**
	1.4nm,0.5s						
KTBS				Lg	Lg	13 05 35.4	
	42nm,0.7s						
KURS	**Kuram**	**6.42**	**184**	Pg	**Pg**	**13 04 14.5**	**-0.1**
	2.2nm,0.3s						
KURS				Lg	Lg	13 05 40.5	
	14nm,0.6s						
KRBS	**Karabastau**	**6.55**	**200**	Pg	**Pg**	**13 04 16.6**	**-0.6**
	2.9nm,0.3s						
KRBS				Lg	Lg	13 05 43.6	
	15nm,0.5s						
PDGK	**Podgornoye**	**6.58**	**175**	Pg	**Pg**	**13 04 17.9**	**+0.1**
	1.0nm,0.3s						
PDGK				Lg	Lg	13 05 46.7	
	4.2nm,0.7s						
PDGK	**Podgornoye**	**6.58**	**175**	⇑Lg	Lg	13 05 46.6	
	6.6nm,0.6s						
UZB	**Uzynbulak**	**6.75**	**178**	Pg	**Pg**	**13 04 19.2**	**-1.8**
	3.0nm,0.3s						
UZB				Lg	Lg	13 05 49.1	
	11nm,0.7s						
MDOK	**Medeo**	**6.83**	**191**	Lg	Lg	13 05 52.1	
	7.9nm,0.6s						
SATY	**Saty**	**6.84**	**182**	Pg	**Pg**	**13 04 22.4**	**-0.4**
	1.2nm,0.2s						
SATY				Lg	Lg	13 05 54.0	
	13nm,0.6s						
MTBS	**Maitube**	**6.95**	**194**	Pg	**Pg**	**13 04 24.2**	**-0.7**
	2.1nm,0.2s						
MTBS				Lg	Lg	13 05 56.8	
	11nm,1.0s						
TNSS	**Tian-Shan**	**6.97**	**191**	Pg	**Pg**	**13 04 23.0**	**-2.3**
	1.4nm,0.2s						
TNSS				Lg	Lg	13 05 55.7	
	6.2nm,0.7s						
SGDS	**Sogindy**	**7.04**	**205**	Pg	**Pg**	**13 04 25.8**	**-0.8**
	0.9nm,0.1s						
SGDS				Lg	Lg	13 05 59.8	
	11nm,0.7s						
KST	**Kastek**	**7.12**	**197**	Pg	**Pg**	**13 04 27.0**	**-1.1**
	1.6nm,0.2s						
KST				Lg	Lg	13 06 02.2	
	18nm,0.5s						
TKM2	**Tokmak 2**	**7.30**	**199**	⇓Lg	Lg	13 06 09.2	
	4.7nm,0.6s						
AAK	**Ala-Archa**	**7.83**	**204**	Lg	Lg	13 06 22.5	
	0.3nm,0.3s,baz=65,slow=22,SNR=2.1						
KK31	**Karatay Array**	**8.85**	**223**	⇓Pn	**Pn**	**13 04 22.8**	**+1.8**
	0.2nm,0.3s,baz=0.0,slow=0.1,SNR=5.8						
KK31				⇑Sn	**Sn**	**13 06 07.1**	**+5.7**
	0.5nm,0.4s						
KK31				⇑Lg	Lg	13 06 54.9	
	3.8nm,0.6s,baz=33,slow=29,SNR=6.6						

IDC ***03*** *13:10:10.0±0.8, 27°.69N×127°.95E, h101^{km}±8^{km}, mb3.4/7, mbtmp3.8/7, Error ellipse: s-maj=41.6km s-min=16.2km az=69.0*

NEIC ***03*** *13:10:09.2±1.0, 27°.76N±0°.07×127°.64E±0°.10, h95^{km}±5^{km}, mb4.7/19, Error ellipse: s-maj=13.4km s-min=8.1km az=61.0*

JMA ***03*** *13:10:10.9±0.2, 28°N±1°×12°8E±°, h99^{km}±2^{km}, MV3.7/15, NW OFF OKINAWAJIMA IS*

ISC 03 13:10:09.7±0.8**, 27°.74N**±0°.06×**127°.82E**±0°.06**, h101**^{km}±8^{km}**, n42, σ1^s.06**/55**, mb4.5**/18**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIH	**Iheya**	**0.71**	**169**	P	**Pn**	**13 10 28.3**	**+0.9**
JIH				S	**Sn**	**13 10 40.8**	**+0.3**
JOKE	**Okinoerabujima**	**0.77**	**119**	iP	**Pn**	**13 10 28.4**	**+0.5**
JOKE				eS	**Sn**	**13 10 41.2**	**-0.3**
JYRO	**Yoronjima**	**0.90**	**141**	iP	**Pn**	**13 10 29.6**	**+0.4**
JYRO				eS	**Sn**	**13 10 43.2**	**-0.7**
JOW	**Kunigami**	**0.99**	**156**	P	**Pn**	**13 10 30.8**	**+0.6**
	2µm,0.3s,baz=110,slow=24,SNR=2659						
JOW				S	**Sn**	**13 10 44.6**	**-0.9**
	352nm,0.2s,baz=132,slow=29,SNR=13						
JOW	**Kunigami**	**0.99**	**156**	P	**Pn**	**13 10 30.8**	**+0.6**
JOW				eS	**Sn**	**13 10 45.1**	**-0.3**
JTK	**Tokunoshima**	**1.00**	**87**	P	**Pn**	**13 10 30.8**	**+0.5**
JTK				S	**Sn**	**13 10 45.2**	**-0.6**
JNTH	**Nagotoyohara**	**1.23**	**171**	P	**Pn**	**13 10 33.6**	**+0.8**
JNTH				eS	**Sn**	**13 10 49.8**	**-0.3**
JAGN	**Aguni-jima**	**1.25**	**204**	P	**Pn**	**13 10 33.9**	**+0.8**
JAGN				S	**Sn**	**13 10 51.8**	**+1.1**
JAMN	**Amaminishikomi**	**1.30**	**67**	iP	**Pn**	**13 10 34.2**	**+0.5**
JAMN				eS	**Sn**	**13 10 51.2**	**-0.5**
JJT3	**Tamagusuku3**	**1.58**	**181**	P	**Pn**	**13 10 38.5**	**+1.4**
JJT3				S	**Sn**	**13 10 59.0**	**+1.2**
JKE	**Kume jima 2**	**1.68**	**214**	P	**Pn**	**13 10 39.5**	**+1.2**
JKE				S	**Sn**	**13 11 00.6**	**+0.7**
JAM	**Amami Oshima**	**1.72**	**66**	P	**Pn**	**13 10 39.3**	**+0.6**
JAM				S	**Sn**	**13 11 00.7**	**0.0**
JZK	**Kikaishima**	**1.99**	**73**	P	**Pn**	**13 10 43.4**	**+1.2**
JZK				S	**Sn**	**13 11 07.7**	**+0.7**
JSU	**Suzuyama**	**4.40**	**31**	Pn	**Pn**	**13 11 15.1**	**+0.8**
YULB	**Yu-li**	**7.30**	**235**	Pn	**Pn**	**13 11 50.9**	**-2.9**
SSLB	**Suanglung**	**7.33**	**239**	Pn	**Pn**	**13 11 51.4**	**-2.7**
TPUB	**Ta-pu**	**7.85**	**237**	Pn	**Pn**	**13 11 58.8**	**-2.5**
ULN	**Ulaanbaatar**	**25.80**	**327**	P	**P**	**13 15 30.2**	**-1.1**
SONM	**Songino Array**	**26.10**	**326**	P	**P**	**13 15 36.6**	**+2.5**
	1.8nm,0.6s,baz=140,slow=10,SNR=10						
	1.8nm,0.6s						
SONM	**Songino Array**	**26.10**	**326**	P	**P**	**13 15 31.8**	**-2.3**
MKAR	**Makanchi Array**	**40.27**	**311**	P	**P**	**13 17 36.8**	**+0.1**
	0.1nm,0.4s,baz=74,slow=11,SNR=2.8						
	0.1nm,0.4s						
MTN	**Manton Dam**	**40.47**	**175**	P	**P**	**13 17 37.2**	**-1.4**
KNRA	**Kununurra**	**43.16**	**179**	P	**P**	**13 18 00.3**	**-0.2**
KURK	**Kurchatov**	**43.48**	**316**	P	**P**	**13 18 03.3**	**+0.5**
KURK				IAmb	IAmb	13 18 15.2	
	comp=Z,6.4nm,1.7s						
KURBB	**Kurchatov Arra**	**43.52**	**315**	P	**P**	**13 18 04.4**	**+1.4**
	comp=Z,1.7nm,0.2s,baz=103,slow=9.2,SNR=4.1						
	comp=Z,1.7nm,0.2s						
FITZ	**Fitzroy Crossi**	**45.61**	**183**	P	**P**	**13 18 20.0**	**0.0**
FITZ				IAmb	IAmb	13 18 27.5	
	comp=Z,21nm,1.6s						
WB0	**Warramunga Arr**	**47.65**	**172**	P	**P**	**13 18 35.4**	**-0.4**
WB0				IAmb	IAmb	13 18 56.7	
	comp=Z,33nm,1.9s						
WRAB	**Tennant Creek**	**47.81**	**172**	P	**P**	**13 18 36.8**	**-0.3**
WRAB				IAmb	IAmb	13 19 16.6	
	comp=Z,15nm,1.6s						
WRA	**Warramunga Arr**	**47.81**	**172**	P	**P**	**13 18 36.8**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=354,slow=8.4,SNR=13						
	comp=Z,1.2nm,0.7s						
WB2	**Warramunga Arr**	**47.82**	**172**	P	**P**	**13 18 36.8**	**-0.3**
WB2				IAmb	IAmb	13 19 57.1	
	comp=Z,21nm,1.6s						
CTAO	**Charters Tower**	**50.78**	**157**	P	**P**	**13 19 00.0**	**+0.3**
CTAO				IAmb	IAmb	13 20 13.3	
	comp=Z,18nm,1.7s						
ASAR	**Alice Springs**	**51.44**	**173**	P	**P**	**13 19 04.8**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=6.0,slow=13,SNR=10						
	comp=Z,0.6nm,0.7s						
STKA	**Stephens Creek**	**60.72**	**167**	P	**P**	**13 20 10.3**	**-0.2**
STKA				IAmb	IAmb	13 20 28.7	
	comp=Z,4.6nm,1.4s						
RND	**Reindeer**	**62.63**	**30**	P	**P**	**13 20 22.9**	**-0.3**
RND				IAmb	IAmb	13 22 17.8	
	comp=Z,24nm,1.8s						
M24K	**Tolsona, Glenn**	**64.05**	**31**	P	**P**	**13 20 32.6**	**+0.1**
GLB	**Gilahina Butte**	**65.29**	**32**	P	**P**	**13 20 41.0**	**+0.4**
GLB				IAmb	IAmb	13 22 42.9	
	comp=Z,26nm,1.6s						
M26K	**Nabesna, AK**	**65.45**	**31**	P	**P**	**13 20 41.9**	**+0.3**
M26K				IAmb	IAmb	13 22 41.0	
	comp=Z,12nm,1.6s						
VRDI	**Verde Repeater**	**65.50**	**32**	P	**P**	**13 20 42.2**	**+0.1**
M27K	**Edge Creek, AK**	**65.96**	**31**	P	**P**	**13 20 45.2**	**+0.2**
M27K				IAmb	IAmb	13 20 47.1	
	comp=Z,31nm,1.9s						
FINES	**FINESS Array B**	**71.38**	**330**	P	**P**	**13 21 17.3**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=70,slow=6.3,SNR=4.0						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**77.32**	**25**	P	**P**	**13 21 53.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=304,slow=5.7,SNR=11						
	comp=Z,0.4nm,0.6s						
BURAR	**Bucovina Array**	**77.87**	**318**	P	**P**	**13 21 56.8**	**+0.4**

IDC 03 13:24:11.8±3.2**, 6°.58S**×**147°.81E, h0**^{km}**, mb3.3**/2**, mbtmp3.4**/4**, ML3.4**/1**, Error ellipse: s-maj=70.6km s-min=34.1km az=97.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.88**	**193**	Pn	Pn	13 25 01.1	+2.2
	20nm,0.4s,baz=13,slow=6.6,SNR=16						
PMG				Sn	Sn	13 25 36.0	+1.7
	9.6nm,0.3s,baz=133,slow=12,SNR=7.5						
WRA	**Warramunga Arr**	**18.64**	**223**	P	P	13 28 29.9	-1.4
	0.1nm,0.3s,baz=52,slow=11,SNR=10						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.62**	**217**	P	P	13 29 02.8	-0.8
	0.2nm,0.3s,baz=26,slow=13,SNR=10						
	0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**24.46**	**240**	P	P	13 29 31.7	-1.0
	0.8nm,0.4s,baz=49,slow=6.6,SNR=8.4						
	0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**146.02**	**284**	PKPbc	PKPab	13 43 55.4	+0.2
	6.5nm,0.4s,baz=36,slow=3.6,SNR=1.9						

IASPEI ***03*** *13:26:01.6±0.8, 23°.15N±0°.01×120°.78E±0°.01, h8^{km}±4^{km}, Error ellipse: s-maj=2.1km s-min=1.9km az=4.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

TAP ***03*** *13:26:01.2, 23°.14N×120°.77E, h7^{km}, ML4.0, B*

JMA ***03*** *13:26:02.3±0.4, 23°N±1°×12°1E±°, h0^{km}, MV3.7/11, TAIWAN REGION*

NIED ***03*** *13:26:02.3, 23°.20N×120°.80E, h0^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.40; M$_{\theta\theta}$-6.21; M$_{\phi\phi}$3.81; M$_{r\theta}$-2.59; M$_{\theta\phi}$0.96; M$_{\phi r}$-1.18; Fault plane solution: M$_0$5.94000×10^{14} NP1: φ$_s$138.00000°, δ54.00000°, λ164.00000°. NP2: φ$_s$238.00000°, δ77.00000°, λ37.00000°.*

ISC 03 13:26:01.5±0.8**, 23°.16N**±0°.01×**120°.78E**±0°.01**, h6**^{km}±4^{km}**, n148, σ1^s.11**/232**, 31C-24D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYH	**Taoyuan**	**0.01**	**330**	⇑iP	**Pg**	**13 26 03.0**	**+0.4**
	baz=10.0						
STYH				iS	**Sg**	**13 26 04.1**	**+0.6**
	baz=10.0						
STYT	**Tauyuan**	**0.02**	**280**	⇑iP	**Pg**	**13 26 02.8**	**0.0**
	baz=353						
STYT				iS	**Sg**	**13 26 03.6**	**-0.1**
	baz=353						
WTP	**Ta-pu**	**0.18**	**299**	⇓iP	**Pg**	**13 26 05.8**	**+0.7**
	baz=309						
WTP				iS	**Sg**	**13 26 08.8**	**+1.2**
	baz=309						
SGST	**Jiashian**	**0.20**	**248**	⇑iP	**Pg**	**13 26 04.7**	**-0.8**
	baz=258						
SGST				eS	**Sg**	**13 26 07.7**	**-0.5**
	baz=258						
TPUB	**Ta-pu**	**0.20**	**315**	⇓iP	**Pg**	**13 26 06.3**	**+0.9**
	baz=323						
TPUB				iS	**Sg**	**13 26 09.8**	**+1.6**
	baz=323						
SLGT	**Liugui**	**0.21**	**217**	⇑P	**Pg**	**13 26 05.9**	**+0.3**
	baz=219						
ELDTW	**Lidau**	**0.22**	**82**	⇓iP	**Pg**	**13 26 06.8**	**+1.0**
	baz=78						
ELDTW				iS	**Sg**	**13 26 10.3**	**+1.5**
	baz=78						
CHN1	**Nanshi**	**0.24**	**276**	⇓iP	**Pg**	**13 26 06.9**	**+0.7**
	baz=283						
CHN1				S	**Sg**	**13 26 10.4**	**+1.1**
	baz=283						
CHN4	**Tsaushan**	**0.26**	**318**	⇓iP	**Pg**	**13 26 07.7**	**+1.1**
	baz=333						
CHN4				iS	**Sg**	**13 26 12.2**	**+2.1**
	baz=333						
SNST	**Tainan City**	**0.27**	**283**	⇓iP	**Pb**	**13 26 07.8**	**-1.0**
	baz=290						
SNST				S	**Sb**	**13 26 12.8**	**-0.8**
	baz=290						
TWK	**Hsinying**	**0.29**	**292**	⇓iP	**Pb**	**13 26 08.2**	**-1.0**
	baz=298						
TWK				iS	**Sb**	**13 26 13.3**	**-0.9**
	baz=298						
ALS	**Alishan**	**0.35**	**3**	⇑iP	**Pb**	**13 26 09.5**	**-0.9**
	baz=7.0						
ALS				iS	**Sb**	**13 26 15.2**	**-1.1**
	baz=7.0						
YUS	**Yu-Shan**	**0.36**	**25**	⇑iP	**Pb**	**13 26 09.8**	**-0.9**
	baz=27						
YUS				S	**Sb**	**13 26 16.1**	**-0.7**
	baz=27						
SCST	**Cishan**	**0.38**	**224**	⇑P	**Pg**	**13 26 09.5**	**+0.6**
	baz=225						
SCST				S	**Sb**	**13 26 17.3**	**+0.5**
	baz=225						
CHN3	**Shinhua**	**0.39**	**258**	⇓iP	**Pb**	**13 26 11.2**	**+0.3**
	baz=261						
CHN3				eS	**Sb**	**13 26 19.6**	**+2.5**
	baz=261						
LONT	**Longtian**	**0.41**	**128**	⇓iP	**Pg**	**13 26 10.1**	**+0.7**
	baz=125						
LONT				S	**Sb**	**13 26 16.2**	**-1.3**
	baz=125						
ECS	**Chishang**	**0.41**	**99**	⇓P	**Pb**	**13 26 10.5**	**-0.6**
	baz=93						
ECS				S	**Sb**	**13 26 16.7**	**-0.8**
	baz=93						
SHHT	**Tainan City**	**0.42**	**251**	eP	**Pb**	**13 26 11.8**	**+0.4**
	baz=253						
SHHT				eS	**Sb**	**13 26 19.7**	**+1.7**
	baz=253						
TWG	**Pinlang**	**0.43**	**142**	⇓iP	**Pg**	**13 26 10.4**	**+0.7**
	baz=138						
TWG				iS	**Sg**	**13 26 16.4**	**+1.0**
	baz=138						
SSD	**Sandimen**	**0.43**	**199**	⇑iP	**Pg**	**13 26 09.7**	**-0.2**
	baz=189						
SSD				eS	**Sg**	**13 26 14.4**	**-1.2**
	baz=189						
TWGBT	**Beinan**	**0.44**	**141**	⇓iP	**Pg**	**13 26 10.4**	**+0.5**
	baz=138						
TWGBT				iS	**Sg**	**13 26 16.5**	**+0.9**
	baz=138						
CHN5	**Tsauling**	**0.45**	**348**	⇑iP	**Pb**	**13 26 11.2**	**-0.6**
	baz=359						
CHN5				eS	**Sb**	**13 26 20.0**	**+1.2**
	baz=359						
CHN2	**Minshiung**	**0.47**	**323**	eP	**Pb**	**13 26 12.3**	**+0.2**
	baz=326						
CHN2				S	**Sb**	**13 26 20.5**	**+1.2**
	baz=326						
TSMG	**Majia**	**0.47**	**196**	⇑iP	**Pg**	**13 26 10.2**	**-0.3**
	baz=189						
TWM1	**Shoushan**	**0.47**	**225**	P	**Pb**	**13 26 12.5**	**+0.3**
	baz=216						
CHY	**Chiayi**	**0.47**	**316**	⇓P	**Pb**	**13 26 12.2**	**0.0**
	baz=320						
CHY				eS	**Sb**	**13 26 20.1**	**+0.7**
	baz=320						
FULB	**Fuli**	**0.47**	**85**	⇓iP	**Pb**	**13 26 12.1**	**-0.1**
	baz=77						
FULB				eS	**Sb**	**13 26 18.8**	**-0.6**
	baz=77						
ICHU	**Yijhu**	**0.51**	**294**	eP	**Pb**	**13 26 12.7**	**-0.1**
	baz=297						
SGLT	**Jiouru**	**0.51**	**212**	⇑P	**Pb**	**13 26 12.6**	**-0.2**
	baz=203						
TWF1	**Yuli**	**0.51**	**68**	⇑iP	**Pb**	**13 26 12.3**	**-0.6**
	baz=73						
TWF1				S	**Sg**	**13 26 18.8**	**+0.8**
	baz=73						
EDH	**Donghe**	**0.51**	**111**	⇓P	**Pb**	**13 26 12.6**	**-0.3**
	baz=113						
TAI1	**Yung-k'ang**	**0.52**	**257**	eP	**Pb**	**13 26 12.9**	**-0.1**
	baz=274						
TTN	**Taitung**	**0.52**	**140**	⇓P	**Pb**	**13 26 13.0**	**-0.1**
	baz=137						
TTN				S	**Sb**	**13 26 21.2**	**+0.3**
	baz=137						
YULB	**Yu-li**	**0.53**	**64**	⇑iP	**Pb**	**13 26 12.4**	**-0.8**
	baz=63						
YULB				S	**Sg**	**13 26 19.0**	**+0.5**
	baz=63						
EYUL	**Yuli**	**0.53**	**69**	eP	**Pb**	**13 26 12.7**	**-0.5**
	baz=73						
EYUL				eS	**Sg**	**13 26 18.9**	**+0.4**
	baz=73						
CHKT	**Chengkung**	**0.54**	**96**	⇓iP	**Pb**	**13 26 13.6**	**+0.3**
	baz=95						
CHKT				S	**Sb**	**13 26 22.3**	**+1.0**
	baz=95						
SCLT	**Jiali**	**0.54**	**272**	eP	**Pb**	**13 26 13.3**	**-0.1**
	baz=290						
TSPT	**Pingtung City**	**0.55**	**209**	eP	**Pb**	**13 26 13.1**	**-0.4**
	baz=202						
CHN8	**Yiju**	**0.56**	**290**	eP	**Pb**	**13 26 13.3**	**-0.4**
	baz=293						
MASBT	**Mashibuluo**	**0.56**	**194**	⇑iP	**Pg**	**13 26 11.9**	**-0.4**
	baz=189						
MASBT				eS	**Sg**	**13 26 18.2**	**-1.5**
	baz=189						
WGK	**Gukeng**	**0.56**	**339**	P	**Pn**	**13 26 14.3**	**-1.8**
	baz=342						
WGK				S	**Sn**	**13 26 23.6**	**-2.1**
	baz=342						
WDLH	**Douliu**	**0.57**	**337**	eP	**Pn**	**13 26 14.5**	**-1.7**
	baz=339						
WDLH				S	**Sn**	**13 26 24.5**	**-1.4**
	baz=339						
ECL	**Taimali**	**0.58**	**164**	⇑iP	**Pg**	**13 26 12.8**	**+0.1**
	baz=154						
ECL				eS	**Sg**	**13 26 19.7**	**-0.5**
	baz=154						
EHY	**Hungye**	**0.60**	**55**	⇑iP	**Pb**	**13 26 13.9**	**-0.6**
	baz=60						
EHY				S	**Sb**	**13 26 21.6**	**-1.6**
	baz=60						
WSL	**Shuilin Townsh**	**0.63**	**305**	⇓P	**Pb**	**13 26 14.7**	**-0.2**
	baz=308						
WSL				eS	**Sb**	**13 26 24.1**	**+0.3**
	baz=308						
ECBN	**Changbin**	**0.63**	**76**	eP	**Pn**	**13 26 15.6**	**-1.4**
	baz=67						
ECBN				eS	**Sn**	**13 26 25.9**	**-1.5**
	baz=67						
WTK	**Tuku**	**0.64**	**326**	⇓iP	**Pn**	**13 26 15.4**	**-1.7**
	baz=328						
WTK				S	**Sn**	**13 26 25.7**	**-1.8**
	baz=328						
SSLB	**Suanglung**	**0.65**	**14**	⇑iP	**Pb**	**13 26 14.5**	**-0.7**
	baz=22						
SSLB				eS	**Sn**	**13 26 26.9**	**-0.9**
	baz=22						
WJS	**Zhushan**	**0.66**	**356**	⇑P	**Pn**	**13 26 16.0**	**-1.4**
	baz=340						
WJS				eS	**Sn**	**13 26 27.1**	**-1.0**
	baz=340						
HGSD	**Ruisui**	**0.68**	**60**	eP	**Pb**	**13 26 16.0**	**+0.3**
	baz=60						
HGSD				eS	**Sn**	**13 26 26.2**	**-2.3**
	baz=60						
SSPT	**Xinbi**	**0.70**	**196**	⇑P	**Pg**	**13 26 15.1**	**+0.1**
	baz=185						
WSF	**Szhu**	**0.70**	**313**	⇓P	**Pb**	**13 26 16.1**	**0.0**
	baz=315						
WSF				iS	**Sn**	**13 26 27.4**	**-1.7**
	baz=315						
WNT	**Mingjian**	**0.72**	**353**	⇑P	**Pn**	**13 26 17.2**	**-1.0**
	baz=338						
WNT				iS	**Sn**	**13 26 28.5**	**-1.0**
	baz=338						
SMLT	**Sun Moon Lake**	**0.73**	**8**	P	**Pb**	**13 26 16.7**	**+0.1**
	baz=18						
SMLT				iS	**Sn**	**13 26 30.2**	**+0.3**
	baz=18						
KAU	**Kaohsiung**	**0.73**	**217**	eP	**Pn**	**13 26 17.6**	**-0.7**
	baz=218						
TYC	**Yuchr**	**0.74**	**5**	P	**Pn**	**13 26 17.2**	**-1.3**
	baz=15						
TYC				S	**Sn**	**13 26 30.3**	**+0.2**
	baz=15						
WNT1	**Nantou City**	**0.75**	**353**	eP	**Pn**	**13 26 17.4**	**-1.2**
	baz=353						
EAST	**Anshuo**	**0.77**	**176**	⇑iP	**Pg**	**13 26 16.4**	**0.0**
	baz=180						
EGFH	**Guangfu**	**0.78**	**49**	eP	**Pb**	**13 26 17.3**	**-0.2**
	baz=57						
EGFH				eS	**Sn**	**13 26 28.8**	**-2.3**
	baz=57						
LDUT	**Ludao**	**0.80**	**127**	eP	**Pg**	**13 26 17.2**	**+0.4**
	baz=125						
TAW	**Tawu**	**0.80**	**173**	eP	**Pg**	**13 26 16.9**	**-0.1**
	baz=165						
WYL	**Yuanlin Townsh**	**0.82**	**347**	eP	**Pn**	**13 26 18.8**	**-0.8**
	baz=348						
WYL				eS	**Sn**	**13 26 31.6**	**-0.4**
	baz=348						
TAWH	**Dawu Township**	**0.82**	**173**	eP	**Pg**	**13 26 17.0**	**-0.3**
	baz=178						
WRL	**Guolierlin Hig**	**0.83**	**333**	eP	**Pb**	**13 26 18.1**	**-0.2**
	baz=335						
WRL				eS	**Sn**	**13 26 31.2**	**-1.0**
	baz=335						
WTCT	**Ta-ch'eng**	**0.84**	**327**	eP	**Pn**	**13 26 18.5**	**-1.3**
	baz=329						
WTCT				S	**Sn**	**13 26 31.1**	**-1.4**
	baz=329						
WPL	**Puli Township**	**0.86**	**11**	⇑eP	**Pb**	**13 26 18.6**	**-0.3**
	baz=11						
WPL				eS	**Sn**	**13 26 31.9**	**-1.3**
	baz=11						
OWD	**Renai**	**0.87**	**24**	⇑iP	**Pb**	**13 26 18.3**	**-0.7**
	baz=25						
OWD				eS	**Sn**	**13 26 33.9**	**+0.4**
	baz=25						
DPDB	**Guoxing**	**0.88**	**9**	eP	**Pn**	**13 26 19.1**	**-1.3**
	baz=9.0						
DPDB				S	**Sn**	**13 26 33.5**	**-0.1**
	baz=9.0						
WWF	**Wufeng**	**0.88**	**355**	P	**Pn**	**13 26 20.1**	**-0.4**
	baz=341						
WWF				S	**Sn**	**13 26 33.5**	**-0.1**
	baz=341						
ESL	**Shilin**	**0.88**	**42**	P	**Pb**	**13 26 19.1**	**-0.2**
	baz=42						
ESL				eS	**Sn**	**13 26 31.6**	**-2.0**
	baz=42						
WUSB	**Renai**	**0.88**	**20**	⇑eP	**Pb**	**13 26 18.5**	**-0.8**
	baz=12						
TEGC	**Jichi Village**	**0.89**	**52**	eP	**Pn**	**13 26 20.3**	**-0.1**
	baz=50						
WLCH	**Liuqiu**	**0.89**	**205**	eP	**Pn**	**13 26 21.7**	**+1.2**
	baz=207						
TWP	**Hsiaoliuchiu**	**0.90**	**206**	⇓eP	**Pn**	**13 26 22.3**	**+1.7**
	baz=208						

WCHH	**Zhanghua**	**0.94**	**347**	*e*P	**Pn**	**13 26 20.8**	**-0.4**
	baz=348						
WCHH				*e*S	**Sn**	**13 26 34.9**	**-0.1**
	baz=348						
CHGB	**Renai**	**0.97**	**22**	⇑*e*P	**Pb**	**13 26 20.2**	**-0.6**
	baz=30						
CHGB				*e*S	**Sn**	**13 26 36.4**	**+0.5**
	baz=30						
TCU	**Taichung**	**0.99**	**354**	*e*P	**Pn**	**13 26 21.6**	**-0.3**
	baz=340						
TCU				*e*S	**Sn**	**13 26 36.6**	**+0.4**
	baz=340						
TEYL	**Yanliau Villag**	**1.03**	**46**	P	**Pn**	**13 26 22.3**	**-0.1**
	baz=56						
ETM	**Tongmen**	**1.03**	**39**	*e*P	**Pn**	**13 26 21.7**	**-0.8**
	baz=37						
WDGT	**Dungji**	**1.04**	**276**	⇓*i*P	**Pg**	**13 26 21.0**	**-0.4**
	baz=277						
WDGT				*i* S	**Sb**	**13 26 35.8**	**+0.1**
	baz=277						
WHF	**Hehuan Shan**	**1.08**	**24**	⇑*i*P	**Pb**	**13 26 22.3**	**-0.5**
	baz=37						
WHF				*e*S	**Sn**	**13 26 40.6**	**+1.7**
	baz=37						
HWA	**Hwalien**	**1.11**	**43**	*e*P	**Pn**	**13 26 24.0**	**+0.5**
	baz=54						
WHP	**Taichung City**	**1.12**	**8**	⇑P	**Pn**	**13 26 24.1**	**+0.3**
	baz=17						
WHP				*e*S	**Sn**	**13 26 42.3**	**+2.7**
	baz=17						
SMST	**Manzhou Townsh**	**1.13**	**177**	*e*P	**Pb**	**13 26 23.2**	**-0.3**
	baz=183						
TDCB	**Techi**	**1.14**	**17**	*e*P	**Pn**	**13 26 23.2**	**-0.9**
	baz=17						
HEN	**Hengchun**	**1.15**	**182**	*e*P	**Pb**	**13 26 23.2**	**-0.5**
	baz=175						
TWT	**Tachien**	**1.15**	**18**	*e*P	**Pn**	**13 26 23.7**	**-0.6**
	baz=16						
PHUB	**P'eng-hu**	**1.17**	**288**	⇓*i*P	**Pb**	**13 26 22.6**	**-1.5**
	baz=289						
PHUB				S	**Sb**	**13 26 38.4**	**-1.1**
	baz=289						
TWD	**Chiawan**	**1.18**	**39**	*i* P	**Pn**	**13 26 24.6**	**0.0**
	baz=38						
TWD				*i* S	**Sn**	**13 26 41.2**	**+0.3**
	baz=38						
TWQ1	**Liyutan**	**1.18**	**360**	⇑P	**Pn**	**13 26 24.9**	**+0.3**
	baz=347						
TWQ1				S	**Sn**	**13 26 43.5**	**+2.5**
	baz=347						
WDJ	**Dajia District**	**1.19**	**354**	*e*P	**Pn**	**13 26 25.5**	**+0.8**
	baz=342						
WDJ				S	**Sn**	**13 26 43.6**	**+2.4**
	baz=342						
PNG	**Penghu**	**1.20**	**290**	⇓P	**Pb**	**13 26 23.3**	**-1.3**
	baz=291						
TWK1	**Hengchun**	**1.21**	**179**	*e*P	**Pb**	**13 26 24.7**	**-0.1**
	baz=179						
TWKBT	**Hengchun**	**1.21**	**179**	*e*P	**Pn**	**13 26 24.7**	**-0.3**
	baz=179						
ETLH	**Xiulin Townshi**	**1.22**	**31**	*e*P	**Pg**	**13 26 24.8**	**-0.2**
	baz=25						
NSY	**Sanyi**	**1.25**	**359**	*e*P	**Pg**	**13 26 26.6**	**+1.1**
	baz=357						
NACB	**Ninganchiao**	**1.25**	**36**	⇑P	**Pg**	**13 26 25.2**	**-0.3**
	baz=45						
NACB				S	**Sn**	**13 26 43.1**	**+0.4**
	baz=45						
TSEB	**Hengchuen, Pin**	**1.26**	**175**	*e*P	**Pg**	**13 26 26.3**	**+0.7**
	baz=182						
TSEB				*e*S	**Sn**	**13 26 44.7**	**+2.0**
	baz=182						
ETL	**Fush Village**	**1.26**	**38**	*e*P	**Pg**	**13 26 25.6**	**-0.1**
	baz=35						
LYUB	**Lan-yu**	**1.37**	**147**	*e*P	**Pn**	**13 26 25.5**	**-1.6**
	baz=134						
NMLH	**Miaoli**	**1.37**	**0**	*e*P	**Pg**	**13 26 28.6**	**+0.8**
	baz=339						
NNSB	**Datong**	**1.38**	**23**	⇑*e*P	**Pb**	**13 26 27.2**	**-0.6**
	baz=12						
NNSB				S	**Sg**	**13 26 48.6**	**+2.7**
	baz=12						
NNS	**Nan Shan**	**1.39**	**23**	*e*P	**Pg**	**13 26 27.5**	**-0.6**
	baz=12						
NNS				S	**Sg**	**13 26 49.2**	**+3.2**
	baz=12						
NSTT	**Nanjuang**	**1.48**	**8**	*e*P	**Pg**	**13 26 29.4**	**-0.5**
	baz=356						
NSTT				S	**Sg**	**13 26 50.2**	**+1.1**
	baz=356						
LIOB	**Emei**	**1.50**	**8**	*e*P	**Pg**	**13 26 29.6**	**-0.6**
	baz=347						
NFF	**Wufeng Townshi**	**1.50**	**12**	*e*P	**Pg**	**13 26 30.4**	**+0.1**
	baz=358						
NFF				*e*S	**Sg**	**13 26 51.3**	**+1.6**
	baz=358						
LATG	**Datong**	**1.53**	**26**	P	**Pg**	**13 26 30.3**	**-0.6**
	baz=36						
LATG				S	**Sg**	**13 26 53.0**	**+2.3**
	baz=36						
ENA	**Nanau**	**1.54**	**35**	*e*P	**Pg**	**13 26 30.8**	**-0.2**
	baz=47						
EWUT	**Wuta**	**1.57**	**35**	*e*P	**Pg**	**13 26 31.5**	**-0.2**
	baz=46						
NDT	**Datong Townshi**	**1.58**	**25**	*e*P	**Pg**	**13 26 31.4**	**-0.5**
	baz=33						
YHNB	**Yeheng**	**1.60**	**20**	*e*P	**Pg**	**13 26 31.4**	**-0.8**
	baz=19						
YHNB				*e*S	**Sg**	**13 26 54.7**	**+1.7**
	baz=19						
NSK	**Sanguang**	**1.60**	**19**	*e*P	**Pg**	**13 26 31.8**	**-0.4**
	baz=18						
NSK				*e*S	**Sg**	**13 26 54.9**	**+2.0**
	baz=18						
SBCB	**Hsinchu**	**1.64**	**6**	*e*P	**Pg**	**13 26 32.4**	**-0.5**
	baz=345						
ENTT	**Nioudou**	**1.64**	**26**	*e*P	**Pg**	**13 26 33.0**	**+0.1**
	baz=35						
ENTT				*e*S	**Sg**	**13 26 56.5**	**+2.2**
	baz=35						
NDS	**Dongshan**	**1.70**	**30**	*e*P	**Pg**	**13 26 33.9**	**-0.1**
	baz=45						
NWLT	**Wulai**	**1.74**	**22**	*e*P	**Pg**	**13 26 34.3**	**-0.6**
	baz=19						
TWC	**Suao**	**1.74**	**34**	P	**Pg**	**13 26 34.9**	**0.0**
	baz=43						
TWC				*e*S	**Sg**	**13 26 58.1**	**+0.6**
	baz=43						
TWE	**Neicheng**	**1.75**	**27**	*e*P	**Pg**	**13 26 34.6**	**-0.6**
	baz=26						
TWE				*e*S	**Sg**	**13 27 00.2**	**+2.3**
	baz=26						
FUSB	**Fushanzhiwuyua**	**1.76**	**25**	*e*P	**Pg**	**13 26 35.0**	**-0.2**
	baz=13						
FUSB				*e*S	**Sg**	**13 26 59.0**	**+1.1**
	baz=13						
NHDH	**Xindian Distri**	**1.92**	**21**	*e*P	**Pg**	**13 26 38.4**	**+0.1**
	baz=18						
TATO	**Taipei**	**1.92**	**19**	*e*P	**Pg**	**13 26 37.8**	**-0.5**
	baz=358						
NTC	**Toucheng**	**1.94**	**29**	*e*P	**Pb**	**13 26 37.1**	**-0.1**
	baz=43						
TWA	**Mucha**	**1.96**	**22**	*e*P	**Pb**	**13 26 37.2**	**-0.4**
	baz=29						
EGS		**1.98**	**32**	*e*P	**Pg**	**13 26 39.2**	**-0.2**
	baz=43						
TIPB	**Shuangxi**	**2.04**	**28**	*e*P	**Pb**	**13 26 38.3**	**-0.7**
	baz=42						
YM01	**YM01**	**2.10**	**20**	*e*P	**Pb**	**13 26 38.9**	**-1.2**
	baz=1.0						
NWF	**Wu-fen Shan**	**2.11**	**25**	*e*P	**Pb**	**13 26 39.5**	**-0.7**
	baz=3.0						
WFSB	**Wu-fen Shan**	**2.11**	**25**	*e*P	**Pb**	**13 26 39.6**	**-0.6**
	baz=3.0						
TWB1	**Santiao Chiao**	**2.15**	**31**	*e*P	**Pb**	**13 26 40.9**	**+0.2**
	baz=41						
SXI1	**Grass Mountain**	**2.17**	**27**	*e*P	**Pb**	**13 26 41.6**	**+0.3**
	baz=4.0						
VWUC	**VWUC**	**2.19**	**327**	*e*P	**Pn**	**13 26 37.8**	**-0.7**
	baz=326						
JYNG	**Yonagunijimaku**	**2.36**	**57**	P	**Pb**	**13 26 43.4**	**-1.0**
JYNG				S	**Sb**	**13 27 12.4**	**-1.5**
YOJ	**Yonaguni jima**	**2.42**	**57**	*e*P	**Pb**	**13 26 42.9**	**-2.5**
	baz=70						
YOJ				*e*S	**Sb**	**13 27 13.9**	**-1.5**
	baz=70						
YOJ	**Yonaguni jima**	**2.42**	**57**	P	**Pb**	**13 26 44.5**	**-0.9**
YOJ				S	**Sb**	**13 27 14.2**	**-1.2**
KNMB	**Chin-men Tao**	**2.55**	**301**	*e*P	**Pn**	**13 26 41.8**	**-1.6**
	baz=301						
ZPLA	**Ao Xicun**	**2.89**	**286**	*e*P	**Pn**	**13 26 46.9**	**-1.1**
	baz=286						
HATJ	**Hateruma jima**	**2.91**	**72**	S	**Sn**	**13 27 23.9**	**+0.2**
IRIF	**Iriomote-Funau**	**2.94**	**66**	P	**Pb**	**13 26 51.1**	**-3.2**
IRIF				S	**Sn**	**13 27 25.8**	**+1.4**
MATB	**Ma-tsu**	**3.08**	**346**	*e*P	**Pn**	**13 26 49.8**	**-0.8**
	baz=343						
AXDP	**Jialang**	**3.10**	**305**	*e*P	**Pn**	**13 26 50.1**	**-0.8**
	baz=304						
JKRS	**Kuro-shima**	**3.15**	**69**	*e*P	**Pb**	**13 26 54.2**	**-3.6**
JKRS				S	**Sn**	**13 27 31.9**	**+2.5**
JIJ	**Ishigaki jima**	**3.30**	**68**	P	**Pn**	**13 26 55.3**	**+1.6**
JIJ				S	**Sn**	**13 27 36.1**	**+2.8**
MHZQ	**Yeshan**	**3.33**	**332**	*e*P	**Pn**	**13 26 54.0**	**-0.2**
	baz=330						
LYJJ	**Jianjiangzhen**	**3.50**	**345**	*e*P	**Pn**	**13 26 55.9**	**-0.5**
	baz=342						
JISG	**Ishigakijimahi**	**3.53**	**66**	P	**Pn**	**13 26 58.7**	**+1.9**
JISG				S	**Sn**	**13 27 40.3**	**+1.4**
XPSS	**Dashiqiu**	**3.79**	**352**	*e*P	**Pn**	**13 27 00.0**	**-0.4**
	baz=349						
JTJ	**Tarama**	**3.88**	**67**	S	**Sn**	**13 27 47.9**	**+0.4**
APYP	**Conner**	**5.29**	**175**	⇑*e*P	**Pn**	**13 27 22.6**	**+1.6**
APYP				*e*S	**Sn**	**13 28 22.9**	**+0.7**

TAP 03 13:33:07.7,23°.14N×120°.76E,h6^{km}±1^{km},ML0.9,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.02**	**355**	*i* P	Pg	13 33 09.3	+0.4
	baz=16						
STYT				*i* S	Sg	13 33 10.3	+0.5
	baz=16						
STYH	**Taoyuan**	**0.03**	**29**	*i* P	Pg	13 33 09.5	+0.6
	baz=28						
STYH				S	Sg	13 33 10.7	+0.8
	baz=28						
WTP	**Ta-pu**	**0.17**	**308**	P	Pg	13 33 12.2	+1.0
	baz=308						
SLGT	**Liugui**	**0.18**	**215**	P	Pg	13 33 12.4	+1.0
	baz=215						
TPUB	**Ta-pu**	**0.20**	**323**	P	Pg	13 33 12.7	+1.1
	baz=322						
TPUB				*e*S	Sg	13 33 16.0	+1.6
	baz=322						
ELDTW	**Lidau**	**0.24**	**79**	*e*P	Pg	13 33 13.4	+0.9
	baz=79						

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*GUC **03** 13:35:59.5±0.7,22°.07S×67°.72W,h198^{km}±6^{km},ML3.8*
*SCB **03** 13:36:00.7±1.9,22°.10S×67°.45W,h156^{km}±29^{km},ML3.4/11, MW3.3,Error ellipse: s-maj=9.0km s-min=8.7km az=0.0*
*IDC **03** 13:36:07.7±4.8,21°.44S×67°.11W,h239^{km}±28^{km},mb3.7/2, mbtmp3.8/4,Error ellipse: s-maj=97.5km s-min=23.7km az=54.0*
ISC 03 13:35:58.8±0.9**,22°.10S**±0°.05×**67°.48W**±0°.05**,h189**^{km}±8^{km}**, n35,**σ1^{s}.**43**/51**,2C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.42**	**249**	*e*P	**Pn**	**13 36 31.6**	**+0.4**
LVC				*i* S	**Sn**	**13 36 56.7**	**+0.4**
LVC	**Limon Verde**	**1.42**	**249**	P	**Pn**	**13 36 32.2**	**+1.0**
PB09	**IPOC Station P**	**1.66**	**280**	*e*P	**Pn**	**13 36 34.3**	**+1.0**
PB09				*i* S	**Sn**	**13 36 59.9**	**-0.1**
PB09	**IPOC Station P**	**1.66**	**280**	P	**Pn**	**13 36 34.6**	**+1.3**
PB09				IAML		13 37 04.8	
	77nm,0.7s						
YJA	**Yavi**	**1.82**	**93**	P	**Pn**	**13 36 35.5**	**+0.3**
MOCB	**Mochara**	**1.91**	**64**	P	**Pn**	**13 36 36.4**	**+0.3**
MOCB				S	**Sn**	**13 37 01.7**	**-3.3**
MOCB				IAML		13 37 04.2	
	365nm,0.4s						
MOCB				IAML		13 37 06.5	
	235nm,0.7s						
PB06	**IPOC Station P**	**2.03**	**252**	*e*P	**Pn**	**13 36 37.5**	**+0.5**
PB06				*i* S	**Sn**	**13 37 06.4**	**-0.2**
PB06				IAML		13 37 08.5	
	comp=E,281nm,0.2s						
PB06	**IPOC Station P**	**2.03**	**252**	P	**Pn**	**13 36 37.7**	**+0.7**
PB06				IAML		13 37 09.8	
	comp=E,142nm,0.2s						
PB15	**IPOC Station P**	**2.14**	**239**	*e*P	**Pn**	**13 36 39.0**	**+0.7**
PB15				*i* S	**Sn**	**13 37 09.3**	**+0.3**
PB15	**IPOC Station P**	**2.14**	**239**	P	**Pn**	**13 36 39.3**	**+1.0**
PB15				IAML		13 37 11.0	
	comp=E,941nm,0.3s						
PB01	**IPOC Station P**	**2.15**	**299**	*e*P	**Pn**	**13 36 38.7**	**+0.5**
PB01				*i* S	**Sn**	**13 37 08.0**	**-0.8**
PB01				IAML		13 37 09.4	
	comp=E,510nm,0.2s						
PB01	**IPOC Station P**	**2.15**	**299**	P	**Pn**	**13 36 38.8**	**+0.6**
PB01				IAML		13 37 09.8	
	comp=E,180nm,0.2s						
PB07	**IPOC Station P**	**2.27**	**279**	*e*P	**Pn**	**13 36 40.0**	**+0.4**
PB07				*i* S	**Sn**	**13 37 10.2**	**-1.1**
PB07				IAML		13 37 12.4	
	comp=N,232nm,0.1s						
PB07	**IPOC Station P**	**2.27**	**279**	P	**Pn**	**13 36 40.2**	**+0.6**
PB07				IAML		13 37 18.8	
	comp=N,100nm,0.2s						
PB02	**IPOC Station P**	**2.38**	**289**	*e*P	**Pn**	**13 36 41.0**	**+0.2**
PB02				*i* S	**Sn**	**13 37 12.3**	**-1.1**
PB02				IAML		13 37 13.4	
	comp=N,344nm,0.5s						
PB02	**IPOC Station P**	**2.38**	**289**	P	**Pn**	**13 36 41.2**	**+0.4**
PB02				IAML		13 37 14.4	
	comp=N,199nm,0.1s						
PB04	**IPOC Station P**	**2.48**	**264**	*e*P	**Pn**	**13 36 42.4**	**+0.4**
PB04				*i* S	**Sn**	**13 37 14.9**	**-0.7**
PB04				IAML		13 37 19.6	
	comp=E,211nm,0.2s						
PB08	**IPOC Station P**	**2.50**	**321**	*e*P	**Pn**	**13 36 43.7**	**+1.2**
PB08				*i* S	**Sn**	**13 37 16.8**	**+0.4**
PB08				IAML		13 37 18.4	
	comp=N,226nm,0.3s						
PB08	**IPOC Station P**	**2.50**	**321**	P	**Pn**	**13 36 43.9**	**+1.4**
PB08				IAML		13 37 17.8	
	comp=N,123nm,0.8s						
TA01	**Diego Aracena**	**2.95**	**301**	*e*P	**Pn**	**13 36 46.7**	**-0.6**
TA01				*i* S	**Sn**	**13 37 23.1**	**-2.0**
TA01				IAML		13 37 24.7	
	comp=E,287nm,0.3s						
PB11	**IPOC Station P**	**3.09**	**318**	⇑*i*P	**Pn**	**13 36 48.9**	**-0.4**
PB11				*i* S	**Sn**	**13 37 26.7**	**-1.9**
PB11				IAML		13 37 28.0	
	comp=E,362nm,0.4s						
PB11	**IPOC Station P**	**3.09**	**318**	P	**Pn**	**13 36 49.3**	**+0.1**
PB11				IAML		13 37 33.2	
	comp=E,83nm,0.2s						
PB10	**IPOC Station P**	**3.17**	**243**	⇑*i*P	**Pn**	**13 36 49.9**	**+0.1**
PB10				*e*S	**Sn**	**13 37 27.4**	**-2.4**
PB10				IAML		13 37 29.6	
	comp=N,90nm,0.2s						
PB10	**IPOC Station P**	**3.17**	**243**	P	**Pn**	**13 36 50.1**	**+0.2**
PB10				IAML		13 37 30.4	
	comp=N,68nm,0.2s						
PB16	**IPOC Station P**	**4.20**	**333**	*e*P	**Pn**	**13 37 03.7**	**+0.2**
PB16	**IPOC Station P**	**4.20**	**333**	P	**Pn**	**13 37 04.6**	**+1.2**
PB12	**IPOC Station P**	**4.38**	**322**	⇓*i*P	**Pn**	**13 37 03.6**	**-1.6**
PB12				*e*S	**Sn**	**13 37 53.1**	**-4.1**
AC01	**Pan de Azucar**	**4.93**	**215**	*e*P	**Pn**	**13 37 11.3**	**-0.8**
AC01				*e*S	**Sn**	**13 38 05.5**	**-4.3**
BBOE	**La Paz, Chanca**	**5.28**	**355**	P	**Pn**	**13 37 19.1**	**+1.9**
BBOD	**La Paz, Gloria**	**5.54**	**349**	P	**Pn**	**13 37 22.8**	**+2.3**
LPAZ	**La Paz**	**5.82**	**354**	P	**Pn**	**13 37 25.6**	**+1.4**
	comp=N,1.8nm,0.5s,baz=194,slow=6.7,SNR=8.5						
LPAZ				S	**Sn**	**13 38 30.1**	**-1.3**
	comp=N,0.8nm,0.5s,baz=281,slow=23,SNR=1.5						
LPAZ	**La Paz**	**5.82**	**354**	P	**Pn**	**13 37 25.7**	**+1.5**
CPUP	**Villa Florida**	**10.17**	**116**	P	**P**	**13 38 29.2**	**+0.4**
	comp=N,1.4nm,0.7s,baz=309,slow=8.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**76.31**	**70**	P	**P**	**13 47 27.5**	**+0.2**
	comp=N,3.8nm,0.3s,baz=256,slow=5.8,SNR=2.4						
	comp=N,3.8nm,0.3s						
YKA	**Yellowknife Ar**	**92.20**	**340**	P	**P**	**13 48 47.6**	**+1.2**
	comp=N,0.1nm,0.5s,baz=135,slow=4.7,SNR=3.5						
	comp=N,0.1nm,0.5s						

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*IDC **03** 13:43:29.8±0.7,26°.87N×128°.18E,h0^{km},mb3.8/9, mbtmp3.8/9,MS2.9/2,Error ellipse: s-maj=21.4km s-min=6.4km az=28.0*
*JMA **03** 13:43:32.3±0.1,26°.8N±0°.2×127°.9E±0°.3,h16^{km}±1^{km}, MV3.9/10,NEAR OKINAWAJIMA ISLAND*
JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .
*NEIC **03** 13:43:32.4±0.7,26°.9N±0°.1×127°.91E±0°.04,h13^{km}±5^{km}, mb4.4/16,Error ellipse: s-maj=16.4km s-min=4.9km az=191.0*
ISC 03 13:43:31.8±1.0**,26°.85N**±0°.04×**127°.89E**±0°.04**,h13**^{km}±7^{km}**, n47,**σ**0**^{s}.**71**/48**,mb4.2**/17**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.20**	**21**	P	**Pb**	**13 43 37.4**	**+0.2**
JIH				S	**Sb**	**13 43 41.0**	**+0.1**
JOW	**Kunigami**	**0.35**	**93**	Pn	**Pg**	**13 43 38.8**	**0.0**
	857nm,0.3s,baz=208,slow=5.4,SNR=2928						
JOW				Sn	**Sg**	**13 43 43.6**	**+0.1**
	15µm,0.3s,baz=132,slow=22,SNR=244						
JOW	**Kunigami**	**0.35**	**93**		**Pg**	**13 43 39.1**	**+0.3**
JOW				Sg	**Sg**	**13 43 43.1**	**-0.5**
JOW	**Kunigami**	**0.35**	**93**	P	**Pg**	**13 43 39.0**	**+0.3**
JOW				S	**Sg**	**13 43 43.7**	**+0.1**
JNTH	**Nagotoyohara**	**0.35**	**160**	*i* P	**Pg**	**13 43 38.8**	**-0.1**
JNTH				S	**Sg**	**13 43 43.1**	**-0.5**
JYRO	**Yoronjima**	**0.53**	**71**	*i* P	**Pg**	**13 43 42.4**	**+0.2**
JYRO				*e*S	**Sg**	**13 43 49.8**	**+0.4**
JAGN	**Aguni-jima**	**0.63**	**246**	P	**Pg**	**13 43 44.5**	**+0.4**
JAGN				S	**Sg**	**13 43 53.0**	**+0.5**
JJT3	**Tamagusuku3**	**0.71**	**188**	*i* P	**Pg**	**13 43 45.8**	**+0.2**
JJT3				S	**Sg**	**13 43 56.2**	**+1.3**
JOKE	**Okinoerabujima**	**0.80**	**50**	P	**Pg**	**13 43 47.2**	**0.0**
JOKE				S	**Sb**	**13 43 58.2**	**+0.1**
JKE	**Kume jima 2**	**1.11**	**242**	P	**Pb**	**13 43 52.8**	**-0.1**
JKE				S	**Sb**	**13 44 07.1**	**-0.2**
JSU	**Suzuyama**	**5.15**	**25**	Pn	**Pn**	**13 44 50.6**	**+2.0**
NACB	**Ninganchiao**	**6.28**	**246**	Pn	**Pn**	**13 45 04.2**	**+0.1**
JNU	**Nakatsue**	**6.77**	**22**	Pn	**Pn**	**13 45 07.9**	**-2.9**
YULB	**Yu-li**	**6.89**	**241**	Pn	**Pn**	**13 45 11.1**	**-1.4**
KSRS	**Korea Array**	**10.57**	**0**	LR	LR	13 50 25.2	
	comp=Z,40nm,20.2s,baz=190,slow=39						
ASAJ	**Asahikawa**	**20.93**	**31**	LR	LR	13 56 33.6	
	comp=Z,45nm,19.7s,baz=180,slow=38						
SONM	**Songino Array**	**26.87**	**327**	P	**P**	**13 49 12.1**	**-0.1**
	0.3nm,0.4s,baz=120,slow=8.5,SNR=2.8						
	0.3nm,0.4s						
PETK	**Petropavlovsk-**	**34.34**	**32**	P	**P**	**13 50 18.3**	**+0.4**
	1.9nm,0.9s,baz=218,slow=9.1,SNR=4.5						
	1.9nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**36.42**	**93**	T	T	14 28 48.1	
	baz=290,slow=75,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**36.42**	**93**	T	T	14 28 49.7	
	baz=290,slow=75,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**36.43**	**93**	T	T	14 28 47.8	
	baz=290,slow=75,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**36.64**	**95**	T	T	14 29 06.3	
	baz=290,slow=75,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**36.65**	**95**	T	T	14 29 11.0	
	baz=290,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**36.66**	**95**	T	T	14 29 08.5	
	baz=290,slow=75,SNR=8.2						
MTN	**Manton Dam**	**39.58**	**175**	P	**P**	**13 51 02.6**	**-0.2**
MTN				IAmb	IAmb	13 51 04.6	
	comp=Z,23nm,1.4s						
MKAR	**Makanchi Array**	**40.89**	**311**	P	**P**	**13 51 13.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=105,slow=8.4,SNR=7.1						
	comp=Z,0.6nm,0.6s						
MAKZ	**Makanchi**	**41.11**	**311**	P	**P**	**13 51 15.1**	**-0.2**
ZAA0	**Zalesovo Array**	**41.57**	**323**	P	**P**	**13 51 18.5**	**-0.4**
ZALV	**Zalesovo Beam**	**41.57**	**323**	P	**P**	**13 51 19.3**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=118,slow=8.8,SNR=2.5						
	comp=Z,0.4nm,0.4s						
COEN	**Coen**	**43.20**	**158**	P	**P**	**13 51 32.6**	**+0.1**
COEN				IAmb	IAmb	13 52 00.1	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**44.73**	**183**	P	**P**	**13 51 45.0**	**+0.2**
FITZ				IAmb	IAmb	13 51 54.0	
	comp=Z,3.4nm,1.1s						
WB0	**Warramunga Arr**	**46.77**	**172**	P	**P**	**13 52 00.9**	**-0.1**
WB0				IAmb	IAmb	13 52 16.3	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**46.92**	**172**	P	**P**	**13 52 02.2**	**+0.1**
WRAB				IAmb	IAmb	13 52 26.4	
	comp=Z,8.9nm,1.3s						
WRA	**Warramunga Arr**	**46.93**	**172**	P	**P**	**13 52 02.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=353,slow=8.5,SNR=14						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**46.93**	**172**	IAmb	IAmb	13 52 02.8	
	comp=Z,0.4nm,1.4s						
WB2	**Warramunga Arr**	**46.94**	**172**	P	**P**	**13 52 02.4**	**+0.2**
WB2				IAmb	IAmb	13 52 25.0	
	comp=Z,2.9nm,1.2s						
WR0	**Warramunga Arr**	**46.98**	**171**	P	**P**	**13 52 02.9**	**+0.3**
WR0				IAmb	IAmb	13 52 06.0	
	comp=Z,1.6nm,0.8s						
AS31	**Alice Springs**	**50.55**	**173**	P	**P**	**13 52 30.8**	**+0.7**
ASAR	**Alice Springs**	**50.55**	**173**	P	**P**	**13 52 30.9**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=2.4,slow=14,SNR=32						
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**56.00**	**313**	P	**P**	**13 53 09.7**	**-0.2**
KDAK	**Kodiak Island**	**62.20**	**37**	P	**P**	**13 53 53.1**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=274,slow=7.1,SNR=4.8						
	comp=Z,2.8nm,0.7s						
RND	**Reindeer**	**63.36**	**30**	P	**P**	**13 54 01.1**	**+0.6**
RND				IAmb	IAmb	13 54 14.6	
	comp=Z,3.7nm,1.2s						
M26K	**Nabesna, AK**	**66.17**	**31**	P	**P**	**13 54 18.9**	**+0.1**
SOCY	**Socotra**	**70.34**	**274**	P	**P**	**13 54 44.7**	**-1.0**
C36M	**Paulatuk**	**71.23**	**21**	P	**P**	**13 54 50.7**	**+0.7**
FINES	**FINESS Array B**	**72.17**	**330**	P	**P**	**13 54 55.7**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=83,slow=6.0,SNR=6.4						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**78.09**	**25**	P	**P**	**13 55 30.9**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=304,slow=5.7,SNR=5.8						
	comp=Z,0.4nm,0.7s						

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*NEIC **03** 14:13:50.7±1.1,5°.6S±0°.1×148°.7E±0°.1,h159^{km}±5^{km}, mb4.1/10,Error ellipse: s-maj=22.5km s-min=5.7km az=130.0*
*IDC **03** 14:13:50.4±2.0,5°.78S×148°.94E,h167^{km}±31^{km},mb3.5/3, mbtmp3.9/6,MS4.2/1,Error ellipse: s-maj=76.3km s-min=13.9km az=128.0*
ISC 03 14:13:50.5±0.9**,5°.7S**±0°.1×**148°.8E**±0°.1**,h163**^{km}**,n21,** σ**1**^{s}.**10**/21**,mb4.1**/4**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.45**	**67**	P	**Pn**	**14 14 42.8**	**-1.3**
	15nm,0.6s,baz=59,slow=5.9,SNR=4.2						
PMG	**Port Moresby**	**4.07**	**204**	P	**Pn**	**14 14 53.2**	**+1.1**
	22nm,0.6s,baz=54,slow=9.2,SNR=12						
PMG				S	**Sn**	**14 15 39.0**	**-1.0**
	20nm,0.4s,baz=354,slow=18,SNR=7.2						
PMG	**Port Moresby**	**4.07**	**204**	Pn	**Pn**	**14 14 49.8**	**-2.2**
HNR	**Honiara**	**11.62**	**109**	Pn	**Pn**	**14 16 30.9**	**-0.7**
MTN	**Manton Dam**	**18.86**	**247**	P	**P**	**14 17 57.5**	**-0.9**
MTN				IAmb	IAmb	14 18 07.9	
	comp=Z,16nm,1.4s						
EIDS	**Eidsvold**	**19.70**	**174**	P	**P**	**14 18 08.3**	**+0.9**
EIDS				IAmb	IAmb	14 18 26.7	
	comp=Z,8.8nm,1.4s						
WB0	**Warramunga Arr**	**19.85**	**224**	P	**P**	**14 18 08.8**	**-0.3**
WB0				IAmb	IAmb	14 18 23.2	
	comp=Z,5.7nm,1.2s						
WR0	**Warramunga Arr**	**19.88**	**223**	P	**P**	**14 18 08.5**	**-0.8**
WR0				IAmb	IAmb	14 18 11.9	
	comp=Z,7.8nm,1.3s						
WRAB	**Tennant Creek**	**19.99**	**224**	P	**P**	**14 18 09.5**	**-1.0**
WRAB				IAmb	IAmb	14 18 23.6	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**20.00**	**224**	P	**P**	**14 18 10.1**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=49,slow=10,SNR=19						
WRA	**Warramunga Arr**	**20.00**	**224**	P	**P**	**14 18 09.6**	**-1.1**
KNRA	**Kununurra**	**22.07**	**242**	P	**P**	**14 18 31.7**	**-0.9**
AS31	**Alice Springs**	**22.95**	**217**	P	**P**	**14 18 40.5**	**-0.4**
ASAR	**Alice Springs**	**22.96**	**217**	P	**P**	**14 18 40.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=50,slow=8.2,SNR=28						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**22.96**	**217**	P	**P**	**14 18 40.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**25.80**	**239**	P	**P**	**14 19 05.7**	**-1.0**
	comp=Z,4.2nm,0.5s,baz=52,slow=10,SNR=28						
	comp=Z,4.2nm,0.5s						

RAO	Raoul Island	39.19	131	LR	LR	14 32 37.7	
	comp=Z,375nm,20.7s,baz=132,slow=29						
LTZ	Lake Taylor	42.38	154	P	P	14 21 30.8	+2.0
LTZ				IAmb	IAmb	14 21 51.9	
	comp=Z,11nm,1.1s						
PEA0B	Petropavlovsk-	59.03	6	P	P	14 23 33.8	+0.7
PETK	Petropavlovsk-	59.03	6	P	P	14 23 33.5	+0.4
	comp=Z,1.3nm,0.9s,baz=138,slow=7.6,SNR=7.0						
	comp=Z,1.3nm,0.9s						
BCAR	Beaver Creek A	85.86	25	P	P	14 26 12.1	+0.5

TUL ***03*** *14:31:25.8±0.8, 36°.87N±0°.02×98°.16W±0°.02, h4^{km}±6^{km}, ML2.6, mb_Lg2.2/15(NEIC), Error ellipse: s-maj=3.4km s-min=1.7km az=135.0*

NEIC 03 14:31:25.9±0.5**, 36°.87N**±0°.02×**98°.16W**±0°.02**, h9**^{km}±2^{km}**, Error ellipse: s-maj=2.8km s-min=1.8km az=127.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.83	235	Pg	Pg	14 31 42.1	+0.2
T35A	Sooner Cattle	1.32	87	Pn	Pn	14 31 50.5	-0.1
R32A	Long Quarter,	1.61	345		Pn	14 31 55.1	+0.5
R32A				IAmb_Lg		14 32 17.2	
	comp=Z,11nm,1.2s						
FNO	Franklin	1.72	159	Pn	Pb	14 31 57.4	-0.3
TUL1	Leonard	2.14	116	IAmb_Lg		14 32 36.6	
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	2.18	193	Pn	Pn	14 32 02.5	+0.1
WMOK				IAmb_Lg		14 32 37.4	
	comp=Z,10nm,0.8s						
X34A	Smith Ranch, M	2.28	173	IAmb_Lg		14 32 38.2	
	comp=Z,12nm,1.2s						
X37A	Clayton	3.21	134	IAmb_Lg		14 33 15.3	
	comp=Z,7.5nm,0.8s						
AMTX	Amarillo	3.47	236	IAmb_Lg		14 33 20.6	
	comp=Z,6.9nm,0.8s						
P38A	Dawn	4.57	52	IAmb_Lg		14 33 52.0	
	comp=Z,3.5nm,0.7s						
Q24A	Divide	5.91	293	IAmb_Lg		14 34 35.1	
	comp=Z,2.6nm,0.9s						

ISU ***03*** *14:34:16, 39°.62N×73°.66E, h0^{km}*
KRNET ***03*** *14:34:17.7±0.1, 39°.50N×73°.53E, mb3.2*
NNC ***03*** *14:34:20.1±1.2, 39°.60N×73°.71E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=9.2km s-min=4.8km az=171.0*
SOME ***03*** *14:34:25.0, 39°.78N×73°.68E, h10^{km}*

ISC 03 14:34:18.8±1.1**, 39°.55N**±0°.05×**73°.54E**±0°.03**, h10**^{km}**, n49, σ2^{s}.16**/81**, 16C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	1.13	330	⇑iP	Pb	14 34 39.7	-0.8
	baz=31						
OHH				⇑iS	Sn	14 34 56.0	-0.4
	baz=31						
DRK	Karamyk	1.34	268	⇑iP	Pb	14 34 43.2	-1.1
	baz=70						
DRK				⇑iS	Sg	14 35 01.7	-0.4
	baz=70						
SHAK	Shakhimardan	1.44	287	P	Pb	14 34 44.6	-1.3
SHAK				S	Sg	14 35 05.3	+0.1
ANR	Andizhan	1.50	324	P	Pg	14 34 49.4	+1.7
ANR				S	Sg	14 35 10.1	+2.9
FRG	Fergana	1.58	302	P	Pb	14 34 46.9	-1.2
FRG				S	Sg	14 35 10.1	+0.6
CHMI	Chimion	1.71	296	P	Pg	14 34 50.2	-1.3
CHMI				S	Sg	14 35 14.6	+0.9
BTK	Batken	2.15	285	⇑eP	Pb	14 34 57.3	-0.6
	baz=86						
BTK				⇑iS	Sb	14 35 25.1	+0.4
	baz=86						
ARLS	Aral	2.39	14	⇓eP	Pb	14 35 00.9	-1.0
	baz=14						
ARLS				⇓iS	Sb	14 35 31.8	+0.3
	baz=14						
ARK	Arkit	2.54	332	⇓eP	Pb	14 35 03.1	-1.5
	baz=33						
ARK				⇓iS	Sb	14 35 35.9	-0.1
	baz=33						
GAR	Garm	2.56	259	⇑iP	Pb	14 35 02.5	-2.3
	baz=60						
GAR				⇑eS	Sb	14 35 34.1	-2.3
	baz=60						
CHDK	Chadak	2.56	305	S	Sg	14 35 40.1	-0.9
UCH	Uchtor	2.78	15	⇓eP	Pn	14 35 05.4	+1.6
	baz=15						
UCH				⇓iS	Sb	14 35 41.7	-1.3
	baz=15						
EKS2	Erkin-Say	3.12	3	⇑iP	Pn	14 35 10.7	+2.6
	baz=3.0						
EKS2				⇑iS	Sb	14 35 49.5	-2.9
	baz=3.0						
AAK	Ala-Archa	3.17	13	⇑iP	Pn	14 35 11.0	+2.1
	baz=13						
AAK				⇑eS	Sb	14 35 50.9	-3.1
	baz=13						
MRKS	Merke	3.20	356	eP	Pg	14 35 21.7	+1.6
	7.0nm,0.4s						
MRKS				eS	Sg	14 36 01.9	+0.3
	46nm,0.4s						
ULHL	Ulahol	3.39	36	⇓eP	Pn	14 35 14.1	+2.2
	baz=36						
ULHL				⇓eS	Sn	14 35 55.9	+3.7
	baz=36						
CHMS	Chumysh	3.57	15	⇑Pg	Pb	14 35 21.9	-0.1
	4.7nm,0.9s						
CHMS				⇑Lg	Lg	14 36 11.5	
	11nm,0.7s						
TKM2	Tokmak 2	3.71	24	⇓Pn	Pn	14 35 19.0	+2.6
	2.7nm,0.6s						
TKM2				⇓Lg	Lg	14 36 16.4	
	6.5nm,0.6s						
IUG	Iuzhnay	3.71	315	eP	Pg	14 35 30.8	+0.9
	139nm,0.6s						
IUG				eS	Sg	14 36 17.8	-0.2
	55nm,0.9s						
KST	Kastek	3.94	27	eP	Pg	14 35 33.1	-1.1
	2.6nm,0.3s						
KST				eS	Sg	14 36 21.8	-3.6
	15nm,0.7s						
KST	Kastek	3.94	27	Pg	Pb	14 35 29.4	+1.0
	3.6nm,0.5s						
KST				Lg	Lg	14 36 21.8	
	15nm,0.7s						
SGDS	Sogindy	3.98	12	eP	Pg	14 35 33.7	-1.4
	4.3nm,0.7s						
SGDS				eS	Sg	14 36 22.9	-3.8
	8.8nm,0.8s						
SGDS	Sogindy	3.98	12	Pg	Pb	14 35 30.0	+0.9
	3.3nm,0.3s						
SGDS				Lg	Lg	14 36 22.9	
	4.6nm,1.1s						
DGS	Degeres	4.05	24	eP	Pg	14 35 36.9	+0.5
	50nm,0.4s						
DGS				eS	Sg	14 36 28.0	-1.0
	11nm,0.8s						
DGS	Degeres	4.05	24	Pg	Pb	14 35 32.1	+1.8
DGS				Lg	Lg	14 36 26.4	
MTBS	Maitube	4.19	30	eP	Pg	14 35 38.8	-0.3
	3.7nm,0.6s						
MTBS				eS	Sg	14 36 31.1	-2.2
	8.7nm,0.5s						
MTBS	Maitube	4.19	30	Pg	Pb	14 35 34.1	+1.5
	5.1nm,0.2s						
MTBS				Lg	Lg	14 36 30.0	
	8.7nm,0.5s						
KK31	Karatay Array	4.22	328	⇓Pn	Pn	14 35 26.5	+3.3
	0.4nm,0.2s,baz=133,slow=12,SNR=18						
KK31				⇑Pg	Pg	14 35 36.0	-3.6
	1.2nm,0.5s,baz=145,slow=16,SNR=3.1						
KK31				⇑Sn	Sb	14 36 18.5	-5.5
	1.3nm,0.3s,baz=152,slow=25,SNR=4.5						
KK31				Lg	Lg	14 36 33.8	
	4.9nm,0.5s,baz=151,slow=28,SNR=4.1						
TNSS	Tian-Shan	4.33	35	eP	Pg	14 35 42.0	+0.2
	2.7nm,0.4s						
TNSS				eS	Sg	14 36 36.9	-1.0
	4.5nm,0.9s						
TNSS	Tian-Shan	4.33	35	Pg	Pb	14 35 36.8	+1.6
	4.6nm,0.5s						
TNSS				Lg	Lg	14 36 34.4	
	4.5nm,0.9s						
KRBS	Karabastau	4.44	20	eP	Pg	14 35 42.9	-1.0
	3.3nm,0.5s						
KRBS				eS	Sg	14 36 38.6	-2.9
	8.6nm,0.7s						
KRBS	Karabastau	4.44	20	Pg	Pb	14 35 38.9	+2.0
	4.8nm,0.6s						
KRBS				Lg	Lg	14 36 38.0	
	8.6nm,0.7s						
BRLS	Borolday	4.46	322	eP	Pg	14 35 43.6	-0.5
	2.3nm,0.2s						
BRLS				eS	Sg	14 36 39.8	-2.0
	13nm,0.7s						
BRLS	Borolday	4.46	322	Pg	Pb	14 35 39.3	+2.2
BRLS				Lg	Lg	14 36 38.5	
MDOK	Medeo	4.47	35	eP	Pg	14 35 43.0	-1.5
	4.1nm,0.4s						
MDOK				eS	Sg	14 36 39.0	-3.5
	5.3nm,0.7s						
MDOK	Medeo	4.47	35	Pg	Pb	14 35 38.8	+1.3
	3.9nm,0.6s						
MDOK				Lg	Lg	14 36 39.6	
	11nm,0.8s						
MDOK	Medeo	4.47	35	Pg	Pb	14 35 39.4	+1.9
	3.4nm,0.3s						
MDOK				Lg	Lg	14 36 39.0	
	7.9nm,0.9s						
KOTS	Kotyrbulak	4.56	35	eP	Pg	14 35 44.5	-1.6
	3.4nm,0.4s						
KOTS				eS	Sg	14 36 41.6	-3.6
	20nm,0.9s						
KOTS	Kotyrbulak	4.56	35	Pg	Pb	14 35 41.0	+2.1
	4.4nm,0.6s						
KOTS				Lg	Lg	14 36 41.6	
	20nm,0.9s						
KTBS	Karatobe	4.78	29	eP	Pg	14 35 49.2	-1.1
	2.6nm,0.4s						
KTBS				eS	Sg	14 36 49.4	-2.9
	8.8nm,0.6s						
KTBS	Karatobe	4.78	29	Pg	Pb	14 35 45.0	+2.3
	1.9nm,0.3s						
KTBS				Lg	Lg	14 36 48.6	
	12nm,0.9s						
KUU	Kurty	4.82	25	eP	Pg	14 35 49.5	-1.6
	4.2nm,0.1s						
KUU				eS	Sg	14 36 50.0	-3.6
	8.4nm,0.6s						
KUU	Kurty	4.82	25	Pg	Pb	14 35 45.8	+2.4
KUU				Lg	Lg	14 36 49.3	
CHKK	Chushkaly	5.02	30	eP	Pg	14 35 53.1	-1.7
	0.7nm,0.1s						
CHKK				eS	Sg	14 36 56.0	-3.8
	6.2nm,0.6s						
CHKK	Chushkaly	5.02	30	Pg	Pb	14 35 49.6	+2.9
	2.2nm,0.5s						
CHKK				Lg	Lg	14 36 56.0	
	6.2nm,0.6s						
SATY	Saty	5.07	45	eP	Pg	14 35 54.5	-1.5
	4.0nm,0.5s						
SATY				eS	Sg	14 36 59.0	-2.7
	5.8nm,0.0s						
SATY	Saty	5.07	45	Pg	Pb	14 35 51.1	+3.4
	3.7nm,0.4s						
SATY				Lg	Lg	14 36 59.0	
	6.0nm,0.5s						
BLB	Baldybastay	5.85	37	eP	Pg	14 36 09.7	-1.2
	2.0nm,0.6s						
BLB				eS	Sg	14 37 24.4	-2.3
	5.7nm,0.5s						
BLB	Baldybastay	5.85	37	Pg	Pb	14 36 04.4	+3.4
	6.2nm,0.6s						
BLB				Lg	Lg	14 37 22.2	
	5.8nm,0.7s						

IDC 03 15:25:21.7±4.6**, 2°.33S**×**138°.76E, h0**^{km}**, mb3.2**/2**, mbtmp3.4**/3**, ML3.9**/1**, Error ellipse: s-maj=184.5km s-min=30.5km az=87.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.03	194	P	Pn	15 29 33.7	-0.2
	0.4nm,0.3s,baz=16,slow=13,SNR=18						
	1.0nm,0.4s						
ASAR	Alice Springs	21.73	192	P	P	15 30 14.9	+0.2
	0.4nm,0.5s,baz=5.9,slow=11,SNR=12						
	0.4nm,0.5s						
MKAR	Makanchi Array	69.52	322	P	P	15 36 32.3	-0.1
	0.2nm,0.6s,baz=103,slow=6.5,SNR=2.0						
	0.2nm,0.6s						

IDC 03 16:16:18.6±2.3**, 5°.05N**×**123°.14E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=301.5km s-min=26.6km az=63.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.17	156	P	P	16 22 03.8	-0.2
	0.3nm,0.3s,baz=333,slow=9.9,SNR=12						
	0.3nm,0.3s						
ASAR	Alice Springs	30.41	160	P	P	16 22 33.0	+0.2
	0.2nm,0.4s,baz=339,slow=7.3,SNR=7.8						
	0.2nm,0.4s						
MKAR	Makanchi Array	54.46	326	P	P	16 25 47.9	-0.1
	0.2nm,0.3s,baz=123,slow=8.3,SNR=5.0						
	0.2nm,0.3s						

IDC ***03*** *16:31:48.3±1.0, 29°.68N×88°.25E, h0^{km}, mb3.8/9, mbtmp3.7/11, ML3.2/1, MS3.3/5, Error ellipse: s-maj=34.6km s-min=18.0km az=62.0*
NDI ***03*** *16:31:50.4±2.5, 29°.95N×88°.32E, h10^{km}±54^{km}, ML3.0, mb4.1(NEIC)*
NEIC ***03*** *16:31:51.9±1.2, 29°.6N±0°.2×87°.9E±0°.1, h26^{km}±6^{km}, mb4.1/25, Error ellipse: s-maj=23.7km s-min=12.2km az=198.0*

ISC 03 16:31:50.8±0.5**, 29°.93N**±0°.06×**88°.30E**±0°.05**, h10**^{km}**, n51, σ1^{s}.78**/46**, mb4.1**/16**, MS3.3**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	2.48	94	Pn	Pb	16 32 35.3	-0.6
GTK	Tadong	2.61	174	eP	Pb	16 32 38.6	+0.8
GTK				eS	Sn	16 33 06.2	+1.1
GTK				IAML		16 33 15.8	
	comp=N,97nm,0.9s						
GTK				IAML		16 33 25.5	
	comp=E,78nm,0.8s						
VLK	Valmikinagar	4.69	237	eP	Pb	16 33 14.1	+1.0
VLK				eS	Sb	16 34 07.7	-1.9
GUWA	GUWAHATI	4.77	140	eP	Pn	16 33 03.2	+0.4
MOKO	MOKOCHONG	6.56	122	eP	Pn	16 33 29.2	+1.8
KOHI	KOHIMA	6.63	128	eP	Pn	16 33 29.1	+0.6
LGTI	Lohaghat	7.02	268	eP	Pn	16 33 35.9	+2.1
PTH	Pithoragarh	7.04	269	eP	Pn	16 33 35.1	+0.9
NIL	Nilore	13.33	290	Pn	Pn	16 34 56.0	-4.2
CMAR	Chiang Mai Arr	14.97	137	Pn	Pn	16 35 18.2	-4.4
	comp=E,0.5nm,0.6s,baz=318,slow=13,SNR=2.1						
CMAR				LR	LR	16 42 08.2	
	comp=E,30nm,19.7s,baz=230,slow=42						
KBL	Kabul	16.93	291	Pn	Pn	16 35 43.0	-5.1
GAR	Garm	17.35	306	Pn	Pn	16 35 50.0	-3.2
GAR				IAmb	IAmb	16 35 55.4	
	comp=Z,9.7nm,1.1s						
MK31	Makanchi Array	17.48	346	P	P	16 35 57.1	+1.3
MKAR	Makanchi Array	17.48	346	P	P	16 35 56.1	+0.2
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=2.5						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	17.48	346	P	P	16 35 57.1	+1.2
BTK	Batken	17.50	310		Pn	16 35 54.9	-0.2
BTK				IAmb	IAmb	16 36 04.9	
	comp=Z,6.7nm,0.7s						
MAKZ	Makanchi	17.56	345	P	P	16 35 58.0	+1.2
KK31	Karatay Array	19.38	318	P	P	16 36 15.2	-1.6
KKAR	Karatay Array	19.38	318	P	P	16 36 15.2	-1.5
KURBB	Kurchatov Arra	21.94	343	P	P	16 36 45.5	+1.2
	comp=Z,0.8nm,0.2s,baz=153,slow=10,SNR=2.3						
	comp=Z,0.8nm,0.2s						
KURK	Kurchatov	22.00	343	P	P	16 36 45.5	+0.5
KURK	Kurchatov	22.00	343	IAmb	IAmb	16 36 58.6	
	comp=Z,2.8nm,1.0s						
SONM	Songino Array	22.67	33	P	P	16 36 54.2	+1.8
	comp=Z,1.9nm,0.7s,baz=216,slow=11,SNR=15						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	22.67	33	IAmb	IAmb	16 36 57.4	
	comp=Z,2.0nm,0.9s						
PALK	Pallekele	23.64	199	LR	LR	16 46 27.5	
	comp=Z,67nm,18.1s,baz=241,slow=38						
GEYT	Alibeck	26.20	296	LR	LR	16 49 44.0	
	comp=Z,65nm,21.1s,baz=171,slow=41						
ABKAR	Akbulak array	28.90	320	P	P	16 37 49.3	-0.4
YAK	Yakutsk	41.86	28	P	P	16 39 42.6	+1.9
	comp=Z,1.4nm,0.5s,baz=235,slow=1.1,SNR=2.8						
	comp=Z,1.4nm,0.5s						
TIXI	Tiksi	47.18	16	P	P	16 40 23.8	+0.7
TIXI				IAmb	IAmb	16 40 24.9	
	comp=Z,1.8nm,0.7s						
AKASG	Malin Array Be	48.18	313	LR	LR	17 03 46.1	
	comp=Z,36nm,18.1s,baz=246,slow=40						
FINES	FINESS Array B	50.97	327	P	P	16 40 52.0	-0.3
	comp=Z,0.8nm,0.6s,baz=103,slow=8.4,SNR=6.9						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	52.83	337	P	P	16 41 06.1	0.0
	comp=Z,1.5nm,0.8s,baz=103,slow=6.6,SNR=4.5						
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	52.83	337	IAmb	IAmb	16 41 28.3	
	comp=Z,7.9nm,1.4s						
WB0	Warramunga Arr	66.41	132	P	P	16 42 38.5	-1.9
WRA	Warramunga Arr	66.51	132	P	P	16 42 39.1	-1.9
	comp=Z,1.1nm,0.9s,baz=325,slow=6.6,SNR=9.4						
	comp=Z,1.1nm,0.9s						
WB2	Warramunga Arr	66.51	132	P	P	16 42 39.1	-2.0
WR0	Warramunga Arr	66.65	132	P	P	16 42 40.0	-1.9
AS31	Alice Springs	68.97	135	P	P	16 42 54.5	-2.1
AS31				IAmb	IAmb	16 43 01.2	
	comp=Z,2.3nm,1.4s						
ASAR	Alice Springs	68.97	135	P	P	16 42 54.9	-1.6
	comp=Z,1.0nm,0.8s,baz=316,slow=6.0,SNR=12						
	comp=Z,1.0nm,0.8s						
J20K	Nowinta River	74.31	24	P	P	16 43 29.6	+1.4
J20K				IAmb	IAmb	16 43 42.6	
	comp=Z,3.9nm,1.3s						
K20K	Telida	74.84	24	P	P	16 43 32.4	+1.1
K20K				IAmb	IAmb	16 43 34.3	
	comp=Z,5.3nm,1.4s						
BMAR	Burnt Mountain	75.19	19	P	P	16 43 34.0	+0.7
CAST	Castle Rocks	75.50	24	P	P	16 43 36.1	+1.0
CAST				IAmb	IAmb	16 44 05.1	
	comp=Z,3.7nm,1.3s						
SVW2	Sparrevohn	75.63	27	P	P	16 43 36.0	+0.2
A36M	Sachs Harbour	75.72	10	P	P	16 43 36.5	+0.4
ILAR	Eielson Array	76.35	21	P	P	16 43 39.2	-0.6
SCRK	Sand Creek	77.81	21	P	P	16 43 48.8	+0.5
SCRK				IAmb	IAmb	16 43 51.1	
	comp=Z,3.0nm,1.2s						
SCM	Sheep Creek Mo	78.21	24	P	P	16 43 50.6	+0.2
TORD	Torodi Ar. Bea	80.66	280	P	P	16 44 05.0	+0.5
	comp=Z,0.4nm,0.8s,baz=95,slow=4.2,SNR=2.0						
	comp=Z,0.4nm,0.8s						
LBTB	Lobatse	81.23	235	LR	LR	17 18 05.7	
	comp=Z,30nm,19.0s,baz=137,slow=34						
YKA	Yellowknife Ar	86.08	10	P	P	16 44 30.9	-0.6
	comp=Z,0.7nm,1.0s,baz=333,slow=5.3,SNR=4.7						
	comp=Z,0.7nm,1.0s						

KRSC 03 17:22:57.9±2.3**, 48°.35N**×**156°.58E, h17**^{km}±34^{km}**, ML3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.35	353	eP	Pn	17 23 35.0	-0.7
SKR				eS	Sn	17 24 03.9	-0.3
PAU	Pauzhetka	3.12	3	eP	Pn	17 23 48.4	+2.1
PAU				eS	Sn	17 24 26.5	+3.4
KDTR	Khodutka, Kamc	3.59	15	eP	Pn	17 23 56.4	+3.7
KDTR				eS	Sb	17 24 40.7	-3.4
MIPR	Malaya Ipel'ka	3.93	2	eP	Pn	17 23 58.4	+1.0
ASAK	Asacha	4.12	11	eP	Pn	17 24 03.9	+3.8
MTVR	Mutnovka	4.26	13	eP	Pn	17 24 06.1	+4.0
MTVR				eS	Sb	17 24 57.6	-5.9
RUS	Russkaya	4.27	16	eP	Pn	17 24 05.5	+3.5
RUS				eS	Sn	17 24 56.9	+5.5
GRL	Gorelyy	4.31	12	eP	Pn	17 24 07.1	+4.3
KRMR	Karymshinskiy	4.59	12	eP	Pn	17 24 10.8	+4.3
PET	Petropavlovsk	4.86	15	eP	Pn	17 24 15.2	+5.1
PET				eS	Sn	17 25 12.6	+6.7
DALK	Dalny	4.88	16	eP	Pn	17 24 14.8	+4.3
DALK				eS	Sn	17 25 12.9	+6.4
UGLR	Uglovaya	5.06	15	eP	Pn	17 24 18.0	+4.9
AVH	Avacha	5.10	15	eP	Pn	17 24 18.6	+5.0
KOK	Koryaka	5.11	14	eP	Pn	17 24 19.0	+5.2
SMAR	Somma	5.11	15	eP	Pn	17 24 19.1	+5.2
SDLR	Sedlovina	5.14	16	eP	Pn	17 24 18.3	+4.1
KRER	Koryakskii	5.14	15	eP	Pn	17 24 19.0	+4.7
KRX	Arik	5.18	14	eP	Pn	17 24 19.4	+4.7
SPN	Mys Shipunski	5.23	23	eP	Pn	17 24 20.1	+4.9
SPN				eS	Sn	17 25 21.1	+6.0
GNL	Ganaly	5.42	9	eP	Pn	17 24 23.0	+5.0
MKZ	Mys Kozlova	6.99	25	eP	Pn	17 24 44.3	+4.9
KBTR	Krutoberegovo	8.74	24	eP	Pn	17 25 09.9	+6.5
BKI	Bering	8.99	37	eS	Sn	17 26 51.1	+3.6

AUST 03 17:28:39.7±1.8**, 29°.65S**×**114°.55E, h10**^{km}**, Error ellipse: s-maj=20.2km s-min=8.5km az=97.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORW	Morawa	1.43	66	P	Pb	17 29 06.7	+0.3
	baz=1.5,SNR=73						
MORW				S	Sg	17 29 25.5	-0.1
	baz=1.5,SNR=18						
BLDU	Ballidu	2.10	118	P	Pb	17 29 16.8	-1.2
	baz=2.3,SNR=8.6						
BLDU				S	Sb	17 29 43.3	-0.8
	baz=2.3,SNR=5.0						
MUN	Mundaring	2.73	149	P	Pn	17 29 24.9	+1.4
	baz=2.9,SNR=4.6						
MUN				S	Sn	17 29 56.5	0.0
	baz=2.9						
KLBR	Kellerberrin	3.37	126	P	Pn	17 29 33.2	+0.8
	baz=3.6,SNR=6.1						
KLBR				S	Sn	17 30 13.2	+0.6
	baz=3.6						
MEEK	Meekatharra	4.68	51	P	Pn	17 29 48.8	-1.6
	baz=4.7,SNR=8.6						
MEEK				S	Sn	17 30 39.7	-5.1
	baz=4.7						
RKGY	Rocky Gully	5.36	158	P	Pn	17 29 59.9	+0.2
	baz=5.5						
RKGY				S	Sn	17 30 58.8	-2.6
	baz=5.5						
GIRL	Giralia	6.98	358	P	Pn	17 30 19.0	-3.1
	baz=6.9						
GIRL				S	Sn	17 31 32.0	-10
	baz=6.9						
AUKAR	St Luke's Coll	9.10	14	P	Pn	17 30 47.4	-3.7
	baz=9.0						

IDC ***03*** *17:38:39.5±0.9, 5°.21N×125°.37E, h0^{km}, mb3.6/6, mbtmp3.6/6, MS3.0/1, Error ellipse: s-maj=47.5km s-min=12.3km az=88.0*
MAN ***03*** *17:38:43.8, 5°.70N×126°.90E, h15^{km}, mb4.4, ML3.2, MS3.0, Hypocentre not reviewed by the ISC*

ISC 03 17:38:42.8±1.0**, 5°.64N**±0°.08×**126°.97E**±0°.10**, h35**^{km}**, n14, σ2^{s}.66**/18**, mb3.6**/6**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.98	316	Pg	Pn	17 39 13.7	-0.1
	61nm,0.3s,baz=303,slow=2.1,SNR=6.0						
DAV				Lg	Lg	17 39 39.5	
	44nm,0.3s,baz=252,slow=22,SNR=8.6						
GSPH	General Santos	2.05	282	⇑iP	Pn	17 39 13.8	-1.2
GSPH				i S	Sn	17 39 35.8	-3.7
KCP	Kidapawan	2.31	306	⇑eP	Pn	17 39 18.9	+0.5
KCP				i S	Sn	17 39 45.3	-0.3
BIPH	Bislig	2.59	347	⇓eP	Pn	17 39 22.6	+0.3
BIPH				eS	Sn	17 39 48.3	-4.3
CTBH	Cotabato--PC H	3.12	300	⇑iP	Pn	17 39 31.8	+2.2
CGP	Cagayan de Oro	3.59	321	⇑eP	Pn	17 39 39.1	+3.1
CGP				eS	Sn	17 40 21.4	+4.2
PAGZ	Pagadian	4.18	302	⇓eP	Pn	17 39 48.6	+4.5
JOW	Kunigami	21.11	3	LR	LR	17 53 24.3	
	comp=Z,42nm,18.9s,baz=251,slow=41						
FITZ	Fitzroy Crossi	23.63	183	P	P	17 43 49.4	-1.5
	0.9nm,0.6s,baz=8.0,slow=11,SNR=1.6						
	0.9nm,0.6s						
WRA	Warramunga Arr	26.44	164	P	P	17 44 19.8	+3.1
	0.5nm,0.6s,baz=343,slow=10,SNR=6.1						

	0.5nm,0.6s						
ASAR	Alice Springs	29.91	167	P	P	17 44 49.0	+1.4
	0.2nm,0.3s,baz=340,slow=7.4,SNR=5.1						
ASAR				PcP	PcP	17 47 50.5	+0.5
	0.5nm,0.4s,baz=349,slow=2.3,SNR=16						
	0.2nm,0.3s						
MKAR	Makanchi Array	56.13	324	P	P	17 48 17.2	-1.8
	0.3nm,0.4s,baz=113,slow=6.9,SNR=1.3						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	60.27	327	P	P	17 48 46.6	-1.1
	0.7nm,0.5s,baz=127,slow=5.9,SNR=4.1						
	0.7nm,0.5s						
FINES	FINESS Array B	90.27	332	P	P	17 51 39.0	-0.8
	0.4nm,0.6s,baz=73,slow=4.7,SNR=3.8						
	0.4nm,0.6s						

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*NSSP **03** 17:43:15.4, 41°.93N×45°.98E, h10^{km}, Ms2.9*
*TIF **03** 17:43:16.5, 41°.95N×46°.17E, h22^{km}*
*MOS **03** 17:43:17.2±0.0, 41°.97N×46°.24E, h21^{km}, MPVA3.9*
*DRS **03** 17:43:18.9±0.0, 41°.95N×46°.10E, h18^{km}*
*NORS **03** 17:43:18.4±0.0, 41°.96N×46°.24E, h15^{km}, MPVA3.7*
ISC 03 17:43:16.5±1.0, **41°.91N**±0°.02×**46°.10E**±0°.01, **h13**^{km}±8^{km}, **n98**, σ**0^{s}.96**/175, **11C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.13	123	P	Pb	17 43 21.4	+0.6
LGD				S	Sb	17 43 24.6	+0.9
LGD	Lagodekhi	0.13	123	PG	Pb	17 43 21.4	+0.6
LGD				S	Sb	17 43 24.6	+0.9
DDFL	Dedoflistskaro	0.46	178	P	Pn	17 43 30.4	+1.5
DDFL				S	Sn	17 43 43.1	+6.2
DDFL	Dedoflistskaro	0.46	178	PG	Pn	17 43 30.4	+1.5
DGRG	David-gareji	0.71	230	P	Pn	17 43 32.5	+0.2
DGRG				S	Sn	17 43 44.1	+1.0
DGRG	David-gareji	0.71	230	PG	Pn	17 43 32.5	+0.2
DGRG				S	Sn	17 43 44.1	+1.0
BTLR	Botlikh	0.76	7	⇑iPG	Pg	17 43 31.2	-0.2
BTLR				eS	Sg	17 43 41.2	-0.2
BTLR	Botlikh	0.76	7	i Pg	Pg	17 43 31.2	-0.2
BTLR				eSg	Sg	17 43 41.2	-0.2
KMKR	Kumukh	0.78	73	⇑iPG	Pg	17 43 31.8	+0.1
KMKR				i S	Sb	17 43 42.4	-0.2
KMKR				pmax	pmax		
	comp=Z,161nm,0.2s						
KMKR				smax	smax		
	comp=N,958nm,0.2s						
KMKR	Kumukh	0.78	73	i Pg	Pg	17 43 31.8	+0.1
KMKR				eSg	Sg	17 43 42.0	+0.1
XNZR	Khunzakh	0.78	35	⇓iPG	Pg	17 43 31.7	0.0
XNZR				i S	Sg	17 43 41.8	-0.2
XNZR				pmax	pmax		
	comp=Z,96nm,0.2s						
XNZR				smax	smax		
	comp=N,672nm,0.6s						
XNZR	Khunzakh	0.78	35	i Pg	Pg	17 43 31.7	0.0
XNZR				eSg	Sg	17 43 41.7	-0.2
GNBR	Gunib	0.80	53	ePG	Pg	17 43 32.1	0.0
GNBR				i S	Sb	17 43 43.1	-0.1
GNBR				pmax	pmax		
	comp=Z,120nm,0.4s						
GNBR				smax	smax		
	comp=E,1μm,0.5s						
GNBR	Gunib	0.80	53	ePg	Pb	17 43 32.3	-0.1
GNBR				eSg	Sb	17 43 43.1	-0.1
UNCR	Uncukul	0.96	32	⇑iPG	Pb	17 43 34.7	-0.3
UNCR				i S	Sg	17 43 47.4	-0.2
UNCR				pmax	pmax		
	comp=Z,144nm,0.2s						
UNCR				smax	smax		
	comp=N,770nm,0.6s						
UNCR	Uncukul	0.96	32	i Pg	Pb	17 43 34.7	-0.3
UNCR				eSg	Sg	17 43 47.2	-0.4
ARKR	Arakani	0.96	43	⇑iPG	Pb	17 43 34.9	-0.2
ARKR				eS	Sg	17 43 47.2	-0.5
ARKR	Arakani	0.96	43	i Pg	Pb	17 43 34.9	-0.2
ARKR				eSg	Sg	17 43 47.2	-0.5
SEAG	Tbilisi Sea	0.98	262	P	Pn	17 43 36.0	0.0
SEAG				S	Sn	17 43 50.8	+1.0
SEAG	Tbilisi Sea	0.98	262	PG	Pn	17 43 36.0	0.0
SEAG				S	Sn	17 43 50.8	+1.0
BTNK	Botanikuri	1.00	258	P	Pb	17 43 30.9	-4.8
BTNK				S	Sb	17 43 45.9	-2.8
BTNK	Botanikuri	1.00	258	PG	Pb	17 43 30.9	-4.8
DVE	Vedeno	1.05	1	ePG	Pb	17 43 36.6	-0.1
DVE				eS	Sg	17 43 50.7	+0.1
DVE	Vedeno	1.05	1	ePg	Pb	17 43 36.6	-0.1
DVE				eSg	Sg	17 43 50.7	+0.1
KRNR	Karanay	1.10	33	⇑iPG	Pb	17 43 36.9	-0.6
KRNR				i S	Sb	17 43 51.2	-0.5
KRNR				pmax	pmax		
	comp=Z,55nm,0.3s						
KRNR				smax	smax		
	comp=E,266nm,0.4s						
KRNR	Karanay	1.10	33	i Pg	Pb	17 43 36.9	-0.6
KRNR				eSg	Sb	17 43 51.1	-0.7
URKR	Urkarakh	1.17	77	ePG	Pb	17 43 38.1	-0.6
URKR				i S	Sb	17 43 53.6	-0.3
URKR				pmax	pmax		
	comp=Z,40nm,0.4s						
URKR				smax	smax		
	comp=N,93nm,0.6s						
URKR	Urkarakh	1.17	77	ePg	Pb	17 43 38.1	-0.6
URKR				eSg	Sb	17 43 53.2	-0.6
BUJR	Buynaksk	1.19	39	ePG	Pg	17 43 39.2	-0.2
BUJR				eS	Sn	17 43 55.0	+0.1
BUJR	Buynaksk	1.19	39	ePg	Pg	17 43 39.1	-0.2
BUJR				eSg	Sn	17 43 55.0	+0.1
DLMR	Dylym	1.23	18	ePG	Pb	17 43 39.6	-0.1
DLMR				eS	Sg	17 43 56.0	-0.2
DLMR	Dylym	1.23	18	ePg	Pb	17 43 39.6	-0.1
DLMR				eSg	Sg	17 43 56.0	-0.2
DBC	Dubki	1.24	26	⇓iPG	Pn	17 43 39.5	-0.1
DBC				i S	Sn	17 43 56.2	0.0
DBC				pmax	pmax		
	comp=Z,43nm,0.3s						
DBC				smax	smax		
	comp=N,201nm,0.6s						
DBC	Dubki	1.24	26	i Pg	Pn	17 43 39.5	-0.1
DBC				eSg	Sn	17 43 55.9	-0.3
AKT	Akhty	1.29	109	ePG	Pb	17 43 41.0	+0.2
AKT				i S	Sg	17 43 59.1	+0.9
AKT				pmax	pmax		
	comp=Z,58nm,0.5s						
AKT				smax	smax		
	comp=N,194nm,0.6s						
AKT	Akhty	1.29	109	ePg	Pb	17 43 41.0	+0.2
AKT				eSg	Sg	17 43 58.8	+0.5
GROC	Groznyy	1.32	350	ePG	Pg	17 43 42.9	+1.0
GROC				eS	Sg	17 44 00.8	+1.8
GROC	Groznyy	1.32	350	ePg	Pg	17 43 42.5	+0.6
GROC				eSg	Sg	17 44 00.8	+1.8
GUDG	Gudauri	1.33	295	P	Pb	17 43 41.5	0.0
GUDG				S	Sg	17 43 59.9	+0.5
GUDG	Gudauri	1.33	295	PG	Pb	17 43 41.5	0.0
GUDG				S	Sg	17 43 59.9	+0.5
MTEO	Meteo	1.40	304	P	Pb	17 43 42.9	+0.2
MTEO				S	Sg	17 44 02.0	+0.3
KMGR	Komgaron	1.47	322	ePG	Pg	17 43 47.1	+2.3
KMGR				eS	Sg	17 44 08.0	+4.1
KMGR	Komgaron	1.47	322	ePg	Pg	17 43 47.1	+2.3
KMGR				eSg	Sg	17 44 08.0	+4.1
MAK	Makhachkala	1.48	44	⇑iPG	Pn	17 43 41.8	-1.1
MAK				e		17 44 02.3	
MAK				pmax	pmax		
	comp=Z,160nm,0.2s						
MAK				smax	smax		
	comp=E,403nm,0.6s						
MAK				smax	smax		
	comp=E,317nm,0.6s						
TRLG	Trialeti	1.54	257	P	Pg	17 43 45.6	-0.5
TRLG				S	Sg	17 44 06.6	+0.5
TRLG	Trialeti	1.54	257	PG	Pg	17 43 45.6	-0.5
TRLG				S	Sg	17 44 06.6	+0.5
DMNI	Dmanisi	1.54	249	P	Pn	17 43 44.1	+0.2
DMNI				S	Sb	17 44 05.2	+0.7
DMNI	Dmanisi	1.54	249	PG	Pn	17 43 44.1	+0.2
VLKR	Vladikavkaz	1.55	318	ePG	Pg	17 43 47.7	+1.3
VLKR				eS	Sg	17 44 08.4	+1.9
VLKR	Vladikavkaz	1.55	318	ePg	Pg	17 43 47.7	+1.3
VLKR				eSg	Sg	17 44 08.4	+1.9
STE	Stepanavan	1.58	236	⇓iP	Pn	17 43 44.6	+0.2
STE				⇓iS	Sb	17 44 06.4	+0.7
LACR	Lac	1.62	305	ePN	Pb	17 43 46.8	+0.4
LACR	Lac	1.62	305	ePg	Pb	17 43 46.8	+0.4
LACR				eSg	Sg	17 44 07.8	-1.0
KANR	Karaman	1.65	38	ePG	Pg	17 43 48.1	-0.1
KANR				eS	Sb	17 44 07.5	+0.1
KANR	Karaman	1.65	38	ePg	Pg	17 43 48.1	-0.1
KANR				eSg	Sb	17 44 07.5	+0.1
DRN	Derbent	1.67	85	ePG	Pb	17 43 46.5	-0.6
DRN				eS	Sb	17 44 08.3	+0.3
DRN	Derbent	1.67	85	ePg	Pb	17 43 46.5	-0.6
DRN				eSg	Sb	17 44 08.3	+0.3
BRNG	Burnasheti	1.72	261	P	Pb	17 43 47.6	-0.5
BRNG				S	Sg	17 44 11.1	-0.9
ZEI	Tsey	1.85	299	ePN	Pg	17 43 51.4	-0.7
ZEI	Tsey	1.85	299	ePg	Pg	17 43 51.4	-0.7
ZEI				eSg	Sg	17 44 15.8	-0.4
BTKR	Batakoyurt	1.86	322	ePN	Pg	17 43 51.7	-0.6
BTKR				eS	Sg	17 44 17.1	+0.7
BTKR	Batakoyurt	1.86	322	ePg	Pg	17 43 51.7	-0.6
BTKR				eSg	Sg	17 44 17.1	+0.7
KAPZ	Kaputan	1.90	214	⇓iP	Pb	17 43 50.9	-0.3
KAPZ				⇓iS	Sg	17 44 17.0	-0.8
KORR	Kora	1.91	309	ePN	Pg	17 43 52.4	-0.8
KORR	Kora	1.91	309	ePg	Pg	17 43 52.4	-0.8
KORR				eSg	Sg	17 44 17.8	-0.2
BKRG	Bakuriani	1.93	267	P	Pb	17 43 50.8	-0.9
BKRG				S	Sg	17 44 17.1	-1.6
BKRG	Bakuriani	1.93	267	PN	Pb	17 43 50.8	-0.9
BGD	Bogdanovka	1.98	252	P	Pb	17 43 51.9	-0.7
BGD				S	Sg	17 44 18.9	-1.4
BGD	Bogdanovka	1.98	252	PN	Pb	17 43 51.9	-0.7
AKH	Akhalkalaki	2.02	257	P	Pb	17 43 52.8	-0.3
AKH				S	Sb	17 44 19.3	+1.1
AKH	Akhalkalaki	2.02	257	PN	Pb	17 43 52.8	-0.3
GNI	Garni	2.03	211	⇑iP	Pb	17 43 53.0	-0.4
GNI				⇓iS	Sg	17 44 22.2	+0.3
GNI	Garni	2.03	211	ePN	Pb	17 43 52.8	-0.6
GNI	Garni	2.03	211	ePg	Pb	17 43 52.8	-0.6
GNI				eSg	Sg	17 44 21.1	-0.8
ONI	Oni	2.08	290	P	Pb	17 43 53.8	-0.4
ONI				S	Sb	17 44 21.3	+1.3
ONI	Oni	2.08	290	ePN	Pb	17 43 54.6	+0.4
ONI				eS	Sb	17 44 21.5	+1.5
ONI	Oni	2.08	290	ePg	Pb	17 43 54.6	+0.4
ONI				eSg	Sb	17 44 21.5	+1.5
STDR	Stavd-Durt	2.10	315	ePN	Pb	17 43 55.1	+0.7
STDR				eS	Sg	17 44 22.4	-1.5
STDR	Stavd-Durt	2.10	315	ePg	Pb	17 43 55.1	+0.7
STDR				eSg	Sg	17 44 22.4	-1.5
DIGR	Digorskoe uzhe	2.11	299	ePN	Pg	17 43 56.1	-1.0
DIGR				eS	Sg	17 44 23.2	-1.3
DIGR	Digorskoe uzhe	2.11	299	ePg	Pg	17 43 56.1	-1.0
DIGR				eSg	Sg	17 44 23.2	-1.3
LSNR	Lesken	2.17	310	ePN	Pg	17 43 58.4	+0.3
LSNR				eS	Sg	17 44 26.8	+0.6
LSNR	Lesken	2.17	310	ePg	Pg	17 43 58.2	+0.1
LSNR				eSg	Sg	17 44 25.8	-0.5
NRKZ	NAREK	2.19	210	eP	Pb	17 43 56.3	+0.2
NRKZ				eS	Sg	17 44 26.7	-0.3
METS	Metsamor	2.33	222	eP	Pb	17 43 58.3	-0.1
METS				eS	Sg	17 44 29.5	-1.8
TKB	Tkibuli	2.35	282	P	Pb	17 43 57.9	-0.9
TKB				S	Sb	17 44 26.6	-1.2
TKB	Tkibuli	2.35	282	PN	Pb	17 43 57.9	-0.9
TKB				S	Sb	17 44 26.6	-1.2
NCK	Nalchik	2.44	312	⇑ePN	Pn	17 43 55.4	-0.6
NCK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ABS	Abastumani	2.46	268	P	Pb	17 43 59.5	-1.2
ABS				S	Sb	17 44 33.1	+2.1
ABS	Abastumani	2.46	268	PN	Pb	17 43 59.5	-1.2
ABS				S	Sb	17 44 33.1	+2.1
VNNZ	Vanand	2.49	224	eP	Pb	17 44 01.4	+0.2
VNNZ				eS	Sn	17 43 35.5	-52
KBZ	Khabaz	2.98	309	ePN	Pb	17 44 07.9	-1.5
KBZ				eS	Sb	17 44 45.4	-0.3
KBZ	Khabaz	2.98	309	ePn	Pb	17 44 07.9	-1.5
KBZ				eSn	Sb	17 44 45.4	-0.3
SHA1	Shidzhatmaz	3.13	307	⇓ePN	Pn	17 44 06.2	+0.5
BRVK	Borovoye	19.69	47	⇑eP	P	17 47 45.1	-0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	20.99	78	⇑eP	P	17 47 57.7	-2.0
KURK	Kurchatov	23.97	57	⇑eP	P	17 48 31.6	+1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	74.80	351	i P	P	17 54 56.4	+0.4

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*ATH **03** 17:47:08.0, 40°.20N×19°.35E, h51^{km}±7^{km}, ML2.3/5, Error ellipse: s-maj=7.1km s-min=1.3km az=298.0*
*TIR **03** 17:47:07.7, 40°.33N×19°.34E, h10^{km}, Md2.6, Ml2.4*
*THE **03** 17:47:07.5, 40°.39N×19°.27E, h2^{km}±4^{km}, ML2.4/4, Error ellipse: s-maj=6.0km s-min=1.2km az=281.0*
ISC 03 17:47:07.0±1.0, **40°.34N**±0°.03×**19°.25E**±0°.03, **h11**^{km}±8^{km}, **n43**, σ**1^{s}.45**/65, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.23	57	P	Pg	17 47 11.7	0.0
VLO				S	Sg	17 47 13.4	-1.6
	6μm,0.1s						
VLO	Vlora	0.23	57	P	Pg	17 47 11.8	0.0
	baz=39						
VLO				S	Sg	17 47 15.3	+0.4
	baz=39						
VLO				AMP			
	comp=E,22nm,0.1s,baz=39						
SCTE	Santa Cesarea	0.66	246	P	Pn	17 47 22.7	+0.4
SCTE				S	Sn	17 47 32.5	-0.1
SCTE				AML	AML	17 47 35.7	
	comp=N,257μm,0.4s						
SCTE				AML	AML	17 47 37.1	
	comp=E,264μm,0.3s						
SCTE	Santa Cesarea	0.66	246	P	Pn	17 47 22.7	+0.4
	baz=250						
SCTE				S	Sn	17 47 33.6	+1.0
	baz=250						
SCTE				AMP			
	comp=N,0.5nm,0.4s,baz=250						
SRN	Sarande	0.74	128	P	Pg	17 47 21.4	0.0
SRN				S	Sn	17 47 33.2	-1.5
SRN	Sarande	0.74	128	P	Pb	17 47 21.8	-0.2
	baz=131						
SRN				S	Sb	17 47 32.4	+0.3
	baz=131						
SRN				AMP			
	comp=N,0.4nm,0.2s,baz=131						
KEK	Kerkira	0.76	146	P	Pg	17 47 20.9	-0.8
KEK				AML	AML	17 47 38.2	
	comp=N,195μm,0.2s						
KEK				AML	AML	17 47 38.9	
	comp=E,327μm,0.2s						
KEK	Kerkira	0.76	146	P	Pg	17 47 21.8	+0.1
KEK				S	Sn	17 47 34.3	-0.9
	comp=E,145nm,0.4s						
LSK	Leskovik	1.05	100	P	Pb	17 47 27.0	-0.4
LSK				S	Sn	17 47 42.9	+0.3
	comp=E,188nm,0.6s						
LSK	Leskovik	1.05	100	P	Pn	17 47 27.6	-0.2
	baz=99						
LSK				S	Sn	17 47 43.0	+0.4
	baz=99						
LSK				AMP			
	comp=N,0.9nm,0.6s,baz=99						
TIR	Tirane	1.11	25	P	Pg	17 47 29.8	+1.5
	baz=21						
TIR				S	Sn	17 47 46.5	+2.7
	baz=21						
KBN	Korca	1.21	76	S	Sn	17 47 48.1	+1.7
	baz=74						
NEST	Nestorio	1.38	87	P	Pb	17 47 32.9	0.0
OHR	Ohrid	1.41	57	eSg	Sg	17 47 54.6	+2.3
OHR	Ohrid	1.41	57	ePn	Pg	17 47 35.1	+1.1
JAN	Janina	1.41	119	P	Pn	17 47 32.3	-0.4
PHP	Peshkopia	1.62	34	P	Pg	17 47 39.1	+1.1
	baz=31						
PHP				S	Sg	17 48 02.1	+3.1
	baz=31						
PHP				AMP			
	comp=N,0.2nm,0.5s,baz=31						
KPRO	Kipourio	1.67	103	P	Pb	17 47 36.8	-1.1
KPRO				AML	AML	17 48 06.6	
	comp=E,131μm,0.6s						
KPRO				AML	AML	17 48 08.5	
	comp=N,140μm,0.6s						
FNA	Florina	1.68	74	P	Pb	17 47 37.1	-0.9
FNA				S	Sb	17 47 59.0	-0.2
FNA				AML	AML	17 48 05.8	
	comp=N,126μm,0.4s						
FNA				AML	AML	17 48 11.5	
	comp=E,150μm,0.6s						
FNA	Florina	1.68	74	P	Pb	17 47 37.2	-0.9
FNA				S	Sg	17 47 59.5	-1.6
	comp=E,68nm,0.5s						
NOCI	Noci	1.72	286	P	Pg	17 47 41.3	+1.3
NOCI				AML	AML	17 48 13.8	
	comp=N,368μm,0.4s						
NOCI				AML	AML	17 48 14.3	
	comp=E,539μm,0.5s						
NOCI	Noci	1.72	286	P	Pg	17 47 42.2	+2.2
	baz=286						
NYDR	Nydri-Lefkada	1.98	145	P	Pn	17 47 41.0	+0.5
EVGI	Lefkada island	2.04	147	P	Pn	17 47 41.8	+0.5
TIP	Timpagrande	2.24	240	P	Pn	17 47 46.3	+2.2
THL	Klokotos Trika	2.27	109	P	Pn	17 47 45.6	+1.1
VLS	Valsamata	2.40	154	P	Pn	17 47 46.7	+0.4
EVR	Evrytania	2.44	125	P	Pn	17 47 47.6	+0.7
DBRK	Dubrovnik	2.46	341	ePn	Pn	17 47 47.5	+0.3
DBRK				Sn	Sn	17 48 15.3	-2.0
MAKR	Makrakomi, Fth	2.59	120	P	Pb	17 47 51.4	-2.2
STIP	Stip	2.60	58	ePn	Pb	17 47 52.6	-1.1
ANX	Ano Chora	2.71	129	P	Pn	17 47 52.8	+2.2
AGG	Agios Georgios	2.72	118	P	Pn	17 47 52.6	+1.8
STON	Ston	2.78	336	ePn	Pn	17 47 51.5	+0.1
STON				Sn	Sn	17 48 21.8	-3.1
LSTV	Lastovo	3.00	325	ePn	Pn	17 47 54.4	-0.1
LSTV				Sn	Sn	17 48 28.2	-2.2
HVAR	Hvar	3.52	324	ePn	Pn	17 48 02.3	+0.6
HVAR				Sn	Sn	17 48 40.7	-2.6
RICI	Ricice	3.52	334	ePn	Pn	17 48 02.6	+0.9
RICI				Sn	Sn	17 48 40.1	-3.2
KIJV	Kijevo	4.22	331	ePn	Pn	17 48 11.0	-0.4
KIJV				Sn	Sn	17 48 58.0	-2.6
ZIRJ	Zirje	4.26	322	Sn	Sn	17 49 00.2	-1.3
ZIRJ	Zirje	4.26	322	ePn	Pn	17 48 12.1	+0.3
MORI	Morici	4.39	324	ePn	Pn	17 48 14.8	+1.2
MORI				Sn	Sn	17 49 03.3	-1.5
DUGI	Dugi Otok	4.79	321	ePn	Pn	17 48 19.5	+0.3
DUGI				Sn	Sn	17 49 12.7	-2.0
VIRC	Vir	5.02	323	ePn	Pn	17 48 22.5	+0.2
VIRC				Sn	Sn	17 49 18.4	-1.9

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*IDC **03** 17:47:46.7±49.0, 16°.52S×176°.88W, h0^{km}, mb4.0/3, mbtmp4.0/3, MS3.7/1, Error ellipse: s-maj=921.2km s-min=164.3km az=78.0*
*NEIC **03** 17:48:22.3±0.7, 16°.61S±0°.05×177°.0W±0°.1, h335^{km}±11^{km}, mb4.1/14, Error ellipse: s-maj=20.3km s-min=4.9km az=73.0*
ISC 03 17:48:23.0±0.7, **16°.7S**±0°.1×**176°.8W**±0°.1, **h350**^{km}, **n20**, σ**1^{s}.23**/18, **mb3.9**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.00	111	Pn	Pn	17 50 05.4	0.0
KNTN	Kanton	14.70	21	P	P	17 51 33.9	-0.6
THZ	Tophouse	26.52	197	P	P	17 53 31.0	+1.2
KHZ	Kahutara	26.95	196	P	P	17 53 33.1	-0.4
KHZ				IAmb	IAmb	17 53 35.0	
	comp=Z,24nm,1.4s						
PMG	Port Moresby	35.76	277	LR	LR	18 07 23.0	
	comp=Z,104nm,18.7s,baz=202,slow=33						
COEN	Coen	38.62	268	P	P	17 55 16.4	+2.3
COEN				IAmb	IAmb	17 55 20.0	
	comp=Z,16nm,1.4s						
TOO	Toolangi	39.11	230	P	P	17 55 16.9	-1.0
TOO				IAmb	IAmb	17 55 21.4	
	comp=Z,27nm,1.4s						
STKA	Stephens Creek	40.54	240	P	P	17 55 28.8	-0.8
	comp=Z,3.2nm,0.8s,baz=72,slow=10.0,SNR=5.0						
	comp=Z,3.2nm,0.8s						
STKA	Stephens Creek	40.54	240	IAmb	IAmb	17 55 37.9	
	comp=Z,3.1nm,1.2s						
WR0	Warramunga Arr	46.15	258	P	P	17 56 13.4	-0.7
WR0				IAmb	IAmb	17 56 20.1	
	comp=Z,7.1nm,1.3s						
WB0	Warramunga Arr	46.30	258	P	P	17 56 14.2	-1.2
WB0				IAmb	IAmb	17 56 25.4	
	comp=Z,12nm,1.6s						
WB2	Warramunga Arr	46.33	258	P	P	17 56 14.5	-1.0
WB2				IAmb	IAmb	17 56 28.0	
	comp=Z,13nm,1.6s						
WRAB	Tennant Creek	46.33	258	P	P	17 56 14.1	-1.5
WRAB				IAmb	IAmb	17 56 26.9	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	46.34	258	P	P	17 56 14.7	-0.9
	comp=Z,0.3nm,0.3s,baz=94,slow=7.4,SNR=7.3						
	comp=Z,0.3nm,0.3s						
AS31	Alice Springs	46.58	253	P	P	17 56 16.2	-1.2
ASAR	Alice Springs	46.58	253	P	P	17 56 16.4	-1.1
	comp=Z,2.1nm,0.5s,baz=90,slow=8.4,SNR=43						
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	46.58	253	P	P	17 56 15.3	-2.1
CASY	Casey	67.88	205	P	P	17 58 44.8	+0.6
PET	Petropavlovsk	72.56	345	P	P	17 59 12.6	+0.2
PAGB	Antelope Grade	74.71	45	P	P	17 59 25.7	+0.4

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*JMA **03** 17:50:17.8±0.2, 24°.0N±0°.8×12°2E±°, h22^{km}, MV3.0/10, TAIWAN REGION*
*TAP **03** 17:50:20.3, 24°.22N×121°.71E, h11^{km}, ML3.6, B*
ISC 03 17:50:19.5±0.8, **24°.22N**±0°.01×**121°.81E**±0°.02, **h16**^{km}±5^{km}, **n127**, σ**1^{s}.04**/187, **35D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.11	327	i P	Pg	17 50 23.1	+0.2
	baz=25						
EHP				i S	Sg	17 50 25.3	+0.1
	baz=25						
ETL	Fush Village	0.18	250	⇓iP	Pg	17 50 23.2	-0.6
	baz=231						
ETL				i S	Sg	17 50 25.4	-1.4
	baz=231						
NACB	Ninganchiao	0.20	257	⇓iP	Pg	17 50 23.4	-0.7
	baz=245						
NACB				i S	Sg	17 50 25.8	-1.6
	baz=245						
ENA	Nanau	0.22	344	⇓iP	Pg	17 50 24.9	+0.5
	baz=11						
ENA				i S	Sg	17 50 28.2	+0.4
	baz=11						
EWUT	Wuta	0.23	353	⇓iP	Pg	17 50 25.3	+0.6
	baz=16						
EWUT				i S	Sg	17 50 28.6	+0.5
	baz=16						
TWD	Chiawan	0.24	234	⇓iP	Pg	17 50 24.1	-0.7
	baz=214						
TWD				i S	Sg	17 50 27.1	-1.3
	baz=214						
ETLH	Xiulin Townshi	0.30	268	⇓iP	Pg	17 50 25.1	-0.7
	baz=266						
ETLH				i S	Sg	17 50 28.5	-1.7
	baz=266						
HWA	Hwalien	0.30	217	P	Pg	17 50 26.1	+0.2
	baz=199						
HWA				eS	Sg	17 50 30.3	0.0
	baz=199						
ETM	Tongmen	0.38	229	⇓iP	Pg	17 50 26.6	-0.7
	baz=217						
ETM				eS	Sg	17 50 31.4	-1.2
	baz=217						
TWC	Suao	0.39	6	⇓iP	Pb	17 50 28.5	+0.5
	baz=20						
TWC				eS	Sb	17 50 34.5	+0.6
	baz=20						
TEYL	Yanliau Villag	0.40	209	eP	Pg	17 50 27.6	0.0
	baz=197						
TEYL				eS	Sb	17 50 35.0	+1.0
	baz=197						
LATG	Datong	0.41	321	⇓iP	Pb	17 50 28.0	-0.4
	baz=332						
LATG				i S	Sg	17 50 33.4	0.0
	baz=332						

NDS	Dongshan baz=1.0	0.42	349	⇓iP	Pb	17 50 28.8	+0.3
NDS	baz=1.0			iS	Sb	17 50 34.5	-0.2
NNSB	Datong baz=305	0.44	298	⇓iP	Pg	17 50 28.2	-0.2
NNSB	baz=305			iS	Sg	17 50 33.4	-1.0
NNS	Nan Shan baz=306	0.45	299	⇓iP	Pg	17 50 28.4	-0.3
NNS	baz=306			eS	Sg	17 50 33.8	-1.0
NDT	Datong Townshi baz=335	0.47	325	⇓iP	Pb	17 50 29.4	0.0
NDT	baz=335			S	Sb	17 50 35.4	-0.6
ENTT	Nioudou baz=344	0.47	332	⇓iP	Pb	17 50 29.5	+0.1
ENTT	baz=344			S	Sb	17 50 35.9	-0.3
WHF	Hehuan Shan baz=259	0.50	262	⇓iP	Pg	17 50 28.9	-0.6
WHF	baz=259			eS	Sg	17 50 34.8	-1.6
FUSS	Fushou baz=274	0.52	273	⇓iP	Pg	17 50 28.3	-1.5
FUSS	baz=274			eS	Sg	17 50 34.4	-2.4
TWE	Neicheng baz=358	0.52	346	⇓P	Pb	17 50 30.6	+0.4
TWE	baz=358			eS	Sb	17 50 37.3	-0.1
ESL	Shilin baz=211	0.53	220	⇓iP	Pg	17 50 29.3	-0.7
ESL	baz=211			eS	Sg	17 50 37.0	-0.1
ILA	Ilan baz=5.0	0.55	354	eP	Pb	17 50 31.3	+0.6
TEGC	Jichi Village baz=196	0.56	206	eP	Pb	17 50 31.5	+0.5
FUSB	Fushanzhiwuyua baz=349	0.57	340	⇓iP	Pb	17 50 31.6	+0.4
FUSB	baz=349			S	Sb	17 50 39.1	-0.1
TWT	Tachien baz=273	0.58	274	⇓P	Pg	17 50 30.9	0.0
TWT	baz=273			eS	Sg	17 50 37.7	-0.9
TDCB	Techi baz=274	0.59	273	⇓iP	Pg	17 50 31.0	-0.2
TDCB	baz=274			eS	Sg	17 50 37.6	-1.5
YHNB	Yeheng baz=326	0.60	319	⇓iP	Pb	17 50 31.6	0.0
YHNB	baz=326			eS	Sg	17 50 39.0	-0.2
CHGB	Renai baz=252	0.60	255	⇓iP	Pg	17 50 30.9	-0.5
CHGB	baz=252			eS	Sg	17 50 38.1	-1.3
NSK	Sanguang baz=326	0.61	318	⇓iP	Pb	17 50 31.8	-0.1
NSK	baz=326			eS	Sg	17 50 39.1	-0.6
NWLT	Wulai baz=342	0.62	334	P	Pb	17 50 32.3	+0.3
NWLT	baz=342			eS	Sb	17 50 39.8	-0.7
NTC	Toucheng baz=10.0	0.63	2	eP	Pn	17 50 33.0	-0.9
NTC	baz=10.0			eS	Sb	17 50 41.5	+0.7
EGS	baz=19	0.63	10	eP	Pb	17 50 32.3	+0.1
OWD	Renai baz=241	0.63	246	⇓iP	Pg	17 50 31.2	-0.8
OWD	baz=241			eS	Sg	17 50 38.8	-1.6
EGFH	Guangfu baz=205	0.65	212	⇓P	Pg	17 50 31.8	-0.4
EGFH	baz=205			eS	Sg	17 50 41.4	+0.6
WUSB	Renai baz=247	0.67	250	⇓P	Pg	17 50 32.1	-0.5
WUSB	baz=247			eS	Sg	17 50 40.0	-1.6
TIPB	Shuangxi baz=8.0	0.75	1	⇓P	Pn	17 50 35.2	-0.2
TIPB	baz=8.0			eS	Sb	17 50 45.1	+0.9
NFF	Wufeng Townshi baz=307	0.75	303	eP	Pb	17 50 34.1	-0.1
NFF	baz=307			eS	Sg	17 50 43.5	-0.5
VWDT	VWDT baz=228	0.77	233	⇓P	Pg	17 50 33.8	-0.6
VWDT	baz=228			eS	Sg	17 50 44.6	+0.1
NHDH	Xindian Distri baz=347	0.78	341	eP	Pn	17 50 35.8	-0.1
NHDH	baz=347			eS	Sb	17 50 45.6	+0.5
TWA	Mucha baz=352	0.79	345	eP	Pn	17 50 35.9	0.0
WHP	Taichung City baz=275	0.79	274	⇓P	Pg	17 50 34.6	-0.3
WHP	baz=275			eS	Sg	17 50 44.1	-1.2
TWB1	Santiao Chiao baz=19	0.80	12	eP	Pn	17 50 36.9	+0.7
WPL	Puli Township baz=253	0.80	255	⇓eP	Pg	17 50 34.6	-0.5
WPL	baz=253			eS	Sg	17 50 44.0	-1.7
HGSD	Ruisui baz=200	0.80	206	eP	Pb	17 50 35.4	+0.4
HGSD	baz=200			eS	Sb	17 50 47.9	+2.2
TATO	Taipei baz=346	0.81	339	eP	Pn	17 50 36.0	-0.2
DPDB	Guoxing baz=255	0.82	257	⇓eP	Pg	17 50 35.1	-0.4
DPDB	baz=255			eS	Sg	17 50 45.3	-1.1
NJD	Zhudong baz=312	0.83	308	eP	Pn	17 50 36.7	+0.2
WCS	Beigang Elemen baz=257	0.83	259	eP	Pg	17 50 35.3	-0.4
WCS	baz=257			eS	Sg	17 50 45.2	-1.4
EHY	Hungye baz=206	0.84	212	eP	Pg	17 50 34.7	-1.1
EHY	baz=206			eS	Sb	17 50 48.0	+1.3
LIOB	Emei baz=304	0.84	301	eP	Pb	17 50 36.0	+0.3
LIOB	baz=304			eS	Sg	17 50 46.7	-0.1
NSTT	Nanjuang baz=303	0.84	299	eP	Pb	17 50 35.8	+0.1
NSTT	baz=303			eS	Sg	17 50 46.4	-0.5
NWF	Wu-fen Shan baz=5.0	0.85	358	eP	Pn	17 50 37.4	+0.5
WFSB	Wu-fen Shan baz=5.0	0.85	358	eP	Pn	17 50 37.4	+0.6
WFSB	baz=5.0			eS	Sn	17 50 48.5	-0.4
SXI1	Grass Mountain baz=10.0	0.87	4	eP	Pn	17 50 37.8	+0.6
SSLB	Suanglung baz=238	0.89	241	⇓eP	Pg	17 50 35.9	-0.9
SSLB	baz=238			eS	Sg	17 50 46.3	-2.2
SMLT	Sun Moon Lake baz=245	0.89	248	⇓eP	Pg	17 50 36.2	-0.7
SMLT	baz=245			eS	Sg	17 50 47.5	-1.1
NTY	Taoyuan baz=334	0.91	329	eP	Pn	17 50 38.2	+0.6
HSN1	Hsinchu baz=312	0.91	308	eP	Pn	17 50 38.0	+0.4
TYC	Yuchr baz=248	0.92	250	eP	Pg	17 50 36.6	-0.8
NCUH	Zhongli baz=327	0.94	323	eP	Pn	17 50 39.1	+1.1
NCU	National Centr baz=328	0.94	323	eP	Pn	17 50 39.5	+1.5
SBCB	Hsinchu baz=311	0.94	308	eP	Pn	17 50 39.3	+1.3
YULB	Yu-li baz=204	0.95	210	eP	Pg	17 50 36.1	-1.7
YULB	baz=204			eS	Sg	17 50 50.6	+0.3
TWS1	Kuangyinshan baz=344	0.95	338	eP	Pn	17 50 39.3	+1.2
YM01	YM01 baz=352	0.95	347	eP	Pn	17 50 39.1	+0.9
YM01	baz=352			eS	Sn	17 50 52.1	+0.7
TWQ1	Liyutan baz=278	0.95	278	eP	Pb	17 50 38.3	+0.6
ECBN	Changbin baz=195	0.96	200	eP	Pb	17 50 38.0	+0.3
NSY	Sanyi baz=283	0.97	282	eP	Pn	17 50 38.9	+0.4
EYUL	Yuli baz=202	0.98	207	eP	Pg	17 50 38.1	-0.2
NMLH	Miaoli baz=291	0.98	289	eP	Pn	17 50 39.3	+0.7
TWF1	Yuli baz=203	0.98	209	eP	Pg	17 50 36.7	-1.7
YM08	YM08 baz=354	0.98	348	eP	Pn	17 50 39.6	+0.9
NTST	Danshui baz=346	1.00	341	eP	Pn	17 50 39.9	+1.1
ANP	Anpu baz=350	1.00	345	eP	Pn	17 50 40.1	+1.1
WWF	Wufeng baz=259	1.03	260	eP	Pn	17 50 40.1	+0.9
TCU	Taichung baz=265	1.03	266	eP	Pn	17 50 40.6	+1.3
WJS	Zhushan baz=246	1.06	248	eP	Pb	17 50 40.1	+0.6
JYNG	Yonagunijimaku	1.06	77	P	Pn	17 50 41.8	+2.0
YUS	Yu-Shan baz=223	1.07	227	eP	Pg	17 50 39.6	-0.6
TWY	Chenhua baz=355	1.07	350	eP	Pn	17 50 42.2	+2.4
WDJ	Dajia District baz=277	1.07	277	eP	Pn	17 50 41.0	+1.2
WNT	Mingjian baz=250	1.08	252	eP	Pn	17 50 40.8	+0.9
FULB	Fuli baz=200	1.12	205	eP	Pg	17 50 40.5	-0.6
YOJ	Yonaguni jima baz=78	1.12	77	P	Pn	17 50 42.6	+2.0
YOJ	baz=78			eS	Sn	17 50 59.3	+3.6
YOJ	Yonaguni jima	1.12	77	P	Pn	17 50 42.6	+2.0
YOJ				S	Sn	17 50 59.0	+3.3
WCHH	Zhanghua baz=262	1.15	263	eP	Pn	17 50 42.5	+1.6
WYL	Yuanlin Townsh baz=256	1.15	257	eP	Pn	17 50 42.3	+1.4
ALS	Alishan baz=229	1.16	233	⇓eP	Pg	17 50 41.3	-0.6
ALS	baz=229			eS	Sb	17 50 57.8	+1.6
CHKT	Chengkung baz=195	1.19	200	eP	Pg	17 50 41.5	-0.8
CHN5	Tsauling baz=237	1.20	239	eP	Pn	17 50 42.7	+0.9
ELDTW	Lidau baz=211	1.25	215	eP	Pn	17 50 41.1	-1.3
WGK	Gukeng baz=243	1.26	245	eP	Pg	17 50 43.5	-0.1
WDLH	Douliu baz=244	1.27	246	eP	Pb	17 50 43.7	+0.6
EDH	Donghe baz=197	1.32	200	eP	Pn	17 50 43.5	+0.2
WRL	Guolierlin Hig baz=255	1.34	257	eP	Pn	17 50 44.4	+0.8
WTK	Tuku baz=246	1.40	248	eP	Pb	17 50 45.7	+0.5
CHN4	Tsaushan baz=230	1.41	232	eP	Pb	17 50 46.1	+0.7
CHN4	baz=230			eS	Sg	17 51 06.1	+1.2
STYH	Taoyuan baz=219	1.41	222	eP	Pn	17 50 45.0	+0.5
TPUB	Ta-pu baz=227	1.41	230	eP	Pb	17 50 46.0	+0.5
TPUB	baz=227			eS	Sb	17 51 04.5	+1.2
STYT	Tauyuan baz=219	1.43	223	eP	Pn	17 50 45.4	+0.7
CHY	Chiayi baz=238	1.46	241	eP	Pb	17 50 47.0	+0.8
WTP	Ta-pu baz=226	1.46	229	eP	Pb	17 50 46.8	+0.5
TWK	Hsinying baz=229	1.54	232	eP	Pb	17 50 47.9	+0.3
TWGBT	Beinan baz=202	1.55	206	eP	Pn	17 50 46.3	-0.1
SNST	Tainan City baz=228	1.56	231	eP	Pb	17 50 48.3	+0.3
CHN1	Nanshi baz=226	1.56	229	eP	Pb	17 50 48.3	+0.3
CHN1	baz=226			eS	Sg	17 51 10.4	+0.6
WSF	Szhu baz=247	1.56	249	eP	Pb	17 50 48.1	+0.1
LDUT	Ludao baz=188	1.57	191	eP	Pn	17 50 45.5	-1.2
WSL	Shuilin Townsh baz=243	1.60	245	eP	Pn	17 50 47.9	+0.8
ICHU	Yijhu baz=237	1.64	239	eP	Pb	17 50 49.6	+0.3
IRIF	Iriomote-Funau	1.76	86	P	Pg	17 50 51.2	-2.1
IRIF				eS	Sg	17 51 15.6	-0.5
SCST	Cishan baz=220	1.79	222	eP	Pb	17 50 52.2	+0.3
SHHT	Tainan City baz=226	1.79	229	eP	Pb	17 50 53.0	+1.1
ECL	Taimali baz=203	1.79	206	eP	Pn	17 50 50.2	+0.5
SSD	Sandimen baz=214	1.82	217	eP	Pb	17 50 52.1	-0.4
HATJ	Hateruma jima	1.83	95	eS	Sg	17 51 16.8	-1.7
TSMG	Majia baz=213	1.85	216	eP	Pb	17 50 52.6	-0.3
MASBT	Mashibuluo baz=212	1.93	214	eP	Pn	17 50 52.4	+0.8
JKRS	Kuro-shima	2.01	89	eP	Pb	17 50 55.0	-0.7
JKRS				S	Sg	17 51 22.2	-2.0
JIJ	Ishigaki jima	2.14	86	P	Pb	17 50 56.4	-1.4
JIJ				S	Sb	17 51 23.2	-0.9
PHUB	P'eng-hu baz=250	2.16	252	eP	Pn	17 50 55.4	+0.6
WDGT	Dungji baz=243	2.19	245	eP	Pn	17 50 56.3	+1.2
VWUC	VWUC baz=290	2.28	290	eP	Pn	17 50 56.6	+0.1
JISG	Ishigakijimahi	2.31	80	P	Pb	17 50 59.0	-1.8
JISG				eS	Sb	17 51 28.0	-1.2
VCHM	Qimei baz=244	2.40	246	eP	Pn	17 50 59.2	+1.1
PTMZ	Houxiangcun baz=289	2.58	289	eP	Pn	17 50 58.9	-1.6
PTMZ	baz=289			eS	Sn	17 51 28.4	-3.2
KNMB	Chin-men Tao baz=275	3.13	275	eP	Pn	17 51 08.5	+0.4

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*ANF **03** 17:50:56.7±0.2, 36°.01N×97°.19W, h7^{km}, ML3.1/8, Error ellipse: s-maj=2.0km s-min=1.5km az=125.0*

*TUL **03** 17:50:56.9±1.4, 35°.994N±0°.009×97°.22W±0°.02, h6^{km}±6^{km}, ML2.9, mb_Lg2.9/70(NEIC), Error ellipse: s-maj=1.8km s-min=1.3km az=71.0*

*NEIC **03** 17:50:57.2±1.2, 36°.01N±0°.01×97°.23W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=1.9km s-min=1.9km az=58.0*

ISC 03 17:50:57.1±1.2, **36°.00N**±0°.03×**97°.21W**±0°.03, **h1**^{km}±14^{km}, **n75,** σ**1**^{s}**09**/66, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.62	199	Pg	Pg	17 51 08.7	-0.3
OKCFA	Oklahoma City baz=17	0.62	199	P	Pg	17 51 08.8	-0.1
OKCFA	baz=17			S	Sg	17 51 17.5	+0.5
OKCSW	OKLAHOMA CITY	0.62	198	Pg	Pg	17 51 09.2	+0.1
FNO	Franklin	0.76	192	Pg	Pg	17 51 11.2	-0.4
FNO				Sg	Sg	17 51 21.7	+0.2
T35A	Sooner Cattle	1.07	31		Pg	17 51 17.4	-0.3
T35A				Sg	Sg	17 51 31.5	0.0
T35B	Sooner Cattle baz=212	1.07	31	P	Pg	17 51 17.3	-0.3
T35B	baz=212			S	Sg	17 51 31.9	+0.3
TUL1	Leonard	1.15	94		Pg	17 51 18.2	-0.9
TUL1					Sg	17 51 34.0	0.0
TUL1	Leonard baz=275	1.15	94	P	Pg	17 51 18.2	-0.9
TUL1	baz=275			S	Sg	17 51 34.3	+0.3
X34A	Smith Ranch, M	1.49	200		Pn	17 51 24.3	-0.7
U32A	Winter Ranch,	1.50	285		Pn	17 51 24.1	-1.0
U32A	Winter Ranch, baz=104	1.50	285	P	Pn	17 51 24.1	-1.0
U32A	baz=104			S	Sg	17 51 45.1	-0.2
WMOK	Wichita Mounta	1.80	226		Pn	17 51 29.1	-0.2
WMOK	comp=Z,43nm,0.7s			IAmb_Lg		17 51 58.0	
WMOK	Wichita Mounta baz=44	1.80	226	P	Pn	17 51 29.0	-0.2
X37A	Clayton	2.06	133		Pn	17 51 31.8	-1.0
X37A	comp=Z,57nm,0.9s			IAmb_Lg		17 52 06.4	
X37A	Clayton baz=314	2.06	133	Sb	Sb	17 52 02.4	+1.1
HHAR	Hobbs	2.66	83		Pn	17 51 41.1	+0.1
Z35A	Perchaven, San	2.66	181	Pn	Pn	17 51 40.6	-0.5
R32A	Long Quarter,	2.70	334	Pn	Pn	17 51 41.4	-0.3
R32A	comp=Z,32nm,0.8s			IAmb_Lg		17 52 23.4	
R32A	Long Quarter, baz=154	2.70	334	Sb	Sb	17 52 20.3	+0.4
W39A	Magazine	2.90	105	Pn	Pn	17 51 44.4	0.0
W39A	Magazine baz=287	2.90	105	P	Pn	17 51 44.5	0.0
KSU1	Kansas State U	3.13	9	Pn	Pn	17 51 48.5	+1.0
KSU1	comp=Z,29nm,0.7s			IAmb_Lg		17 52 44.3	
KSU1	Kansas State U baz=189	3.13	9	P	Pb	17 51 54.9	+1.4
Z38A	Mt. Pleasant	3.29	146	Pn	Pn	17 51 51.0	+1.2
Z38A	comp=Z,30nm,0.7s			IAmb_Lg		17 52 49.5	
MIAR	Mount Ida	3.31	115		Pn	17 51 50.2	+0.2
MIAR	comp=Z,24nm,0.8s			IAmb_Lg		17 52 47.4	
CBKS	Cedar Bluff	3.46	325	Pn	Pn	17 51 53.3	+1.2
U40A	Yellville	3.54	83	Pn	Pn	17 51 53.0	-0.2
S39A	Bolivar	3.54	60		Pn	17 51 55.0	+1.7
AMTX	Amarillo	3.82	254	Pn	Pn	17 51 56.6	-0.5
AMTX	comp=Z,28nm,0.9s			IAmb_Lg		17 53 03.8	
X40A	Basin Creek Fa	3.88	112		Pn	17 51 58.7	+0.9
ABTX	Abilene, Hawle	3.93	212		Pn	17 51 58.9	+0.4
WHTX	Lake Whitney,	4.00	183	Pn	Pn	17 52 00.8	+1.2
WHAR	Wooly Hollow	4.07	99		Pn	17 52 00.3	-0.2
WHAR	comp=Z,33nm,1.1s			IAmb_Lg		17 53 08.6	
WLAR	White Oak Lake	4.08	123	Pn	Pn	17 52 00.0	-0.6
WLAR	comp=Z,19nm,1.1s			IAmb_Lg		17 53 08.0	
W41B	Gary Mavity, V	4.12	100		Pn	17 52 01.0	-0.2
W41B	comp=Z,19nm,0.7s			IAmb_Lg		17 53 09.9	
FCAR	Ozark Folk Cen	4.12	90		Pn	17 52 02.1	+0.9
FCAR	comp=Z,31nm,1.1s			IAmb_Lg		17 53 07.1	
MGMO	Mountain Grove	4.14	72		Pn	17 52 00.4	-1.0
MGMO	comp=Z,25nm,0.8s			IAmb_Lg		17 53 09.8	
237A	Washetta, Mont	4.15	163	Pn	Pn	17 52 01.5	-0.2
UALR	University of	4.16	106	Pn	Pn	17 52 01.9	+0.2
R40A	Maddies Statio	4.56	58		Pn	17 52 07.2	0.0
P38A	Dawn	4.64	38		Pn	17 52 08.7	+0.3
P38A	comp=Z,19nm,0.8s			IAmb_Lg		17 53 30.3	
N33A	J Bar K, Exete	4.73	358	Pn	Pn	17 52 09.4	-0.2
LCAR	Lake Charles	4.90	87	Pn	Pn	17 52 11.3	-0.6
MSTX	Muleshoe	5.00	248		Pn	17 52 11.0	-2.4
N35A	Tabor	5.00	14		Pn	17 52 10.9	-2.4
N35A	comp=Z,28nm,0.7s			IAmb_Lg		17 53 49.8	
CCM	Cathedral Cave	5.19	65	Pn	Pn	17 52 13.1	-2.7
CCM	comp=Z,24nm,0.8s			IAmb_Lg		17 53 41.4	
KSCO	Kaye Shedlock' comp=Z,15nm,0.7s	5.25	306	IAmb_Lg		17 53 51.3	
HBAR	Harrisburg	5.34	93	Pn	Pn	17 52 16.3	-1.7
X43A	Marvell	5.38	104	Pn	Pn	17 52 16.6	-1.9
P40A	Paris	5.39	48	Pn	Pn	17 52 16.5	-2.1
P40A	comp=Z,23nm,0.7s			IAmb_Lg		17 53 46.0	
N38A	Joes South For	5.71	32	Pn	Pn	17 52 21.6	-1.4
N38A	comp=Z,21nm,0.7s			IAmb_Lg		17 54 09.7	
FVM	French Village	5.78	68	Pn	Pn	17 52 24.4	+0.5
FVM	comp=Z,13nm,0.7s			IAmb_Lg		17 54 08.0	
143A	Socs Landing, comp=Z,18nm,0.9s	5.82	123	IAmb_Lg		17 54 10.0	
T25A	Trinidad	5.91	283	Pn	Pn	17 52 23.2	-2.8
T25A	comp=Z,14nm,0.8s			IAmb_Lg		17 54 07.0	
JCT	Junction City comp=Z,14nm,1.0s	5.92	202	IAmb_Lg		17 54 20.7	
L34A	Svendsen Farm, comp=Z,22nm,0.8s	5.99	6	IAmb_Lg		17 54 20.0	
OGNE	Ogallala comp=Z,20nm,0.9s	6.22	324	IAmb_Lg		17 54 20.3	
OXF	Oxford	6.55	101	Pn	Pn	17 52 33.2	-1.3
W45A	Hickory Valley comp=Z,25nm,0.9s	6.59	95	IAmb_Lg		17 54 41.4	
S44A	Carbondale	6.59	73	Pn	Pn	17 52 34.8	-0.4
SIUC	Southern Illin	6.63	73	Pn	Pn	17 52 34.3	-1.3
Y45A	Yeager Farm, C	6.64	106	Pn	Pn	17 52 33.3	-2.5
K31A	O'Neill comp=Z,26nm,0.7s	6.72	350	IAmb_Lg		17 54 36.4	
N41A	Harden Midland	6.85	45	Pn	Pn	17 52 38.5	-0.2
N41A	comp=Z,24nm,0.8s			IAmb_Lg		17 54 38.7	
SDCO	Great Sand Dun	6.87	287	Pn	Pn	17 52 38.3	-1.0
Q24A	Divide comp=Z,9.0nm,0.7s	6.97	297	IAmb_Lg		17 54 52.1	
344A	Westbrook Farm	7.04	128	Pn	Pn	17 52 40.8	-0.5
L40A	Anamosa comp=Z,10nm,0.7s	7.63	36	IAmb_Lg		17 55 12.6	
O44A	Mansfield comp=Z,22nm,0.7s	8.04	56	IAmb_Lg		17 55 13.8	
PHWY	Pilot Hill comp=Z,9.3nm,0.8s	8.35	312	IAmb_Lg		17 55 29.6	
L42A	Oliver, Polo comp=Z,13nm,0.9s	8.39	42	IAmb_Lg		17 55 32.8	
N23A	Red Feather La comp=Z,12nm,0.9s	8.42	308	IAmb_Lg		17 55 34.5	
JFWS	Jewell Farm comp=Z,10nm,0.7s	8.75	36	IAmb_Lg		17 55 37.7	
M44A	Midewin, Midew comp=Z,14nm,0.8s	8.95	50	IAmb_Lg		17 55 40.4	
K22A	Casper comp=Z,13nm,1.1s	9.80	315	IAmb_Lg		17 56 30.7	

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*IDC **03** 17:51:39.8±0.8, 1°.46N×66°.78E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML3.7/1, MS3.8/44, Error ellipse: s-maj=27.3km s-min=19.5km az=72.0*

*NEIC **03** 17:51:41.7±1.7, 1°.47N±0°.07×66°.83E±0°.07, h10^{km}±1^{km}, mb4.6/46, Error ellipse: s-maj=13.3km s-min=10.8km az=136.0*

*GCMT **03** 17:51:43.7±0.3, 1°.58N±0°.04×66°.77E±0°.03, h14^{km}±1^{km}, MW4.8/81, Moment Tensor Solution. s8,c9; s81,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.66±.17; $M_{\theta\theta}$0.44±.10; $M_{\phi\phi}$1.22±.11; $M_{r\theta}$0.77±.33; $M_{\theta\phi}$-0.80±.06; $M_{\phi r}$0.14±.21; Best double couple: $M_0$1.85700×10^{16} NP1:ϕ_s167.00000°, δ44.00000°, λ-59.00000°. NP2: ϕ_s308.00000°, δ54.00000°, λ-116.00000°. Principal axes: T 1.7510, Plg5.0000°, Azm56.0000°; N 0.2110, Plg21.0000°, Azm324.0000°; P -1.9630, Plg69.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s.*

nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 03 17:51:41.3±0.4, **1°.44N**±0°.08×**66°.89E**±0°.06, **h13^{km}, n105, σ1ˢ.04**/66, **mb4.5**/31, **MS3.8**/43, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAAM	Kaadhehdhoo	6.18	99		Pn	17 53 13.0	+0.8
KAAM				Sn	Sn	17 54 18.3	-4.5
MSEY	Mahe Island	12.91	242	Pn	Pn	17 54 44.6	-0.1
PALK	Pallekele	14.94	67	Pn	Pn	17 55 14.4	+2.0
	0.4nm,0.3s,baz=352,slow=9.5,SNR=1.5						
PALK				LR	LR	17 59 57.8	
	comp=Z,740nm,18.5s,baz=336,slow=33						
	1.8nm,0.4s						
SOCY	Socotra	16.66	310	Pn	P	17 55 36.9	-0.3
WSAR	Wadi Sarin	23.11	340	LR	LR	18 04 12.5	
	comp=Z,93nm,18.8s,baz=169,slow=33						
RER	Riviere de l'E	24.96	205	P	P	17 57 04.1	-0.7
ATD	Arta Tunnel	25.88	294	LR	LR	18 05 17.9	
	comp=Z,70nm,21.7s,baz=132,slow=32						
OPO	Ambohidratompo	27.76	223	LR	LR	18 06 04.7	
	comp=Z,226nm,18.9s,baz=190,slow=31						
KMBO	Kilima Mbogo	29.74	265	LR	LR	18 09 11.9	
	comp=Z,214nm,18.4s,baz=94,slow=36						
PSI	Prapat	32.04	87	LR	LR	18 08 48.6	
	comp=Z,385nm,20.1s,baz=238,slow=32						
KULM	Kulim	33.91	83	P	P	17 58 23.3	-1.1
KULM				IAmb	IAmb	17 59 27.7	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	35.70	60	P	P	17 58 41.2	+1.4
	comp=Z,0.8nm,1.0s,baz=248,slow=6.7,SNR=5.7						
CMAR				LR	LR	18 12 50.5	
	comp=Z,94nm,19.6s,baz=245,slow=36						
	comp=Z,0.8nm,1.0s						
CMAR	Chiang Mai Arr	35.70	60	P	P	17 58 39.8	0.0
CHTO	Chiang Mai	35.85	59	P	P	17 58 39.3	-1.8
CHTO				IAmb	IAmb	17 58 48.5	
	comp=Z,14nm,1.5s						
MBAR	Mbarara	36.20	267	LR	LR	18 11 58.9	
	comp=Z,308nm,20.0s,baz=75,slow=34						
LSA	Lhasa	36.37	37	P	P	17 58 44.7	-1.2
LSA				IAmb	IAmb	17 58 52.7	
	comp=Z,7.8nm,1.0s						
MNAI	Manna	36.50	99	P	P	17 58 47.9	+1.2
GEYT	Alibeck	37.20	348	LR	LR	18 12 53.0	
	comp=Z,79nm,21.8s,baz=131,slow=34						
GYA0B	ALIBECK ARRAY	37.20	348	P	P	17 58 52.8	+0.4
GYA0B				IAmb	IAmb	18 00 09.4	
	comp=Z,3.9nm,0.5s						
GAR	Garm	37.52	4	P	P	17 58 55.2	+0.1
GAR				IAmb	IAmb	17 59 01.6	
	comp=Z,16nm,1.3s						
DRK	Karamyk	38.13	6	P	P	17 58 59.0	-1.5
BTK	Batken	38.61	5	P	P	17 59 04.5	+0.2
BTK				IAmb	IAmb	17 59 10.2	
	comp=Z,18nm,1.9s						
AIS	Amsterdam Isla	40.27	167	P	P	17 59 17.9	-0.1
XMIS	Christmas Isla	40.35	108	P	P	17 59 18.4	-0.7
TARG	Taragay, Kyrgy	41.30	12	P	P	17 59 27.2	+0.2
LEM	Lembang	41.47	102	LR	LR	18 13 14.8	
	comp=Z,199nm,22.0s,baz=254,slow=31						
KDJ	Kajisay	41.56	12	P	P	17 59 28.5	-0.4
KDJ				IAmb	IAmb	18 00 53.8	
	comp=Z,11nm,1.4s						
AAK	Ala-Archa	41.58	8	LR	LR	18 17 14.0	
	comp=Z,50nm,20.4s,baz=196,slow=37						
AAK	Ala-Archa	41.58	8	P	P	17 59 29.5	+0.5
KK31	Karatay Array	41.61	4	P	P	17 59 28.9	-0.2
KKAR	Karatay Array	41.61	4	P	P	17 59 29.0	-0.1
KKAR	Karatay Array	41.61	4	P	P	17 59 28.5	-0.6
BOOM	Boomskoye usch	41.67	10	P	P	17 59 29.0	-0.8
LSZ	Lusaka	41.72	245	LR	LR	18 14 43.1	
	comp=Z,370nm,19.1s,baz=112,slow=33						
LSZ	Lusaka	41.72	245	P	P	17 59 30.0	-0.5
GNI	Garni	43.47	335	LR	LR	18 17 22.0	
	comp=Z,47nm,21.7s,baz=130,slow=36						
BNN	Bunyan	46.82	326	P	P	18 00 10.3	-0.7
MAKZ	Makanchi	47.07	14	P	P	18 00 12.9	+0.2
MAKZ				IAmb	IAmb	18 00 17.5	
	comp=Z,4.0nm,1.2s						
MK31	Makanchi Array	47.14	14	P	P	18 00 12.6	-0.7
MK31				IAmb	IAmb	18 00 45.5	
	comp=Z,6.7nm,1.9s						
MKAR	Makanchi Array	47.14	14	P	P	18 00 14.1	+0.8
	comp=Z,0.5nm,0.8s,baz=217,slow=5.9,SNR=4.0						
MKAR				LR	LR	18 21 14.8	
	comp=Z,52nm,18.2s,baz=190,slow=38						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	47.14	14	P	P	18 00 12.4	-0.8
KBZ	Khabaz	47.22	336	P	P	18 00 14.3	+0.5
	comp=Z,1.7nm,0.9s,baz=159,slow=7.7,SNR=4.4						
KBZ				LR	LR	18 20 50.9	
	comp=Z,34nm,19.8s,baz=128,slow=37						
	comp=Z,1.7nm,0.9s						
KIV	Kislovodsk	47.49	336	P	P	18 00 15.6	-0.5
KIV				IAmb	IAmb	18 00 22.0	
	comp=Z,5.4nm,1.2s						
TOKA	Tokat	47.53	328	P	P	18 00 15.6	-0.9
LBTB	Lobatse	47.85	234	LR	LR	18 17 51.0	
	comp=Z,131nm,20.1s,baz=74,slow=33						
LBTB	Lobatse	47.85	234	P	P	18 00 18.5	-0.8
LBTB				IAmb	IAmb	18 00 25.4	
	comp=Z,15nm,1.4s						
ABKAR	Akbulak array	48.01	354	P	P	18 00 19.8	-0.2
ABKAR	Akbulak array	48.01	354	P	P	18 00 19.2	-0.7
ABKAR				IAmb	IAmb	18 00 27.1	
	comp=Z,4.8nm,1.4s						
BR131	Keskin Array S	48.65	326	P	P	18 00 24.7	-0.6
BR131				IAmb	IAmb	18 01 39.0	
	comp=Z,5.4nm,0.9s						
BRTR	Keskin Array B	48.65	326	LR	LR	18 22 58.8	
	comp=Z,46nm,18.8s,baz=130,slow=39						
ISP	Isparta	49.26	322	P	P	18 00 29.9	0.0
ISP				IAmb	IAmb	18 00 46.6	
	comp=Z,12nm,0.8s						
AKTO	Aktyubinsk	49.40	353	P	P	18 00 30.6	0.0
	comp=Z,2.0nm,0.8s,baz=186,slow=5.0,SNR=6.5						
AKTO				LR	LR	18 21 20.9	
	comp=Z,11nm,20.2s,baz=141,slow=36						
	comp=Z,2.0nm,0.8s						
ILGA	Ilgaz	49.52	327	P	P	18 00 32.6	+0.6
ENH	Enshi	49.53	50	P	P	18 00 33.7	+1.7
ENH				IAmb	IAmb	18 00 47.3	
	comp=Z,30nm,1.8s						
BOSA	Boshof	49.83	230	LR	LR	18 19 07.6	
	comp=Z,224nm,20.1s,baz=32,slow=33						
BOSA	Boshof	49.83	230	P	P	18 00 35.4	+0.9
KURBB	Kurchatov Arra	49.99	10	LR	LR	18 21 33.9	
	comp=Z,76nm,19.6s,baz=162,slow=36						
IDI	Anoyia	51.53	316	LR	LR	18 23 24.5	
	comp=Z,25nm,18.0s,baz=266,slow=37						
TSUM	Tsumeb	52.56	244	LR	LR	18 21 11.0	
	comp=Z,335nm,19.8s,baz=78,slow=34						
KAPI	Kappang	53.20	97	LR	LR	18 20 16.3	
	comp=Z,107nm,21.9s,baz=238,slow=32						
BELG	Belogornoye	53.27	345	LR	LR	18 25 55.6	
	comp=Z,34nm,18.1s,baz=141,slow=39						
ZAA0	Zalesovo Array	54.39	13	P	P	18 01 07.6	-0.1
ZAA0				IAmb	IAmb	18 01 11.4	
	comp=Z,3.7nm,0.9s						
ZALV	Zalesovo Beam	54.39	13	P	P	18 01 07.5	-0.3
	comp=Z,1.6nm,0.6s,baz=223,slow=8.1,SNR=8.7						
ZALV				LR	LR	18 24 22.3	
	comp=Z,60nm,18.9s,baz=188,slow=36						
	comp=Z,1.6nm,0.6s						
ZALV	Zalesovo Beam	54.39	13	P	P	18 01 07.2	-0.6
SUR	Sutherland	55.00	228	LR	LR	18 21 20.0	
	comp=Z,253nm,21.0s,baz=66,slow=32						
ARU	Arti	55.23	354	LR	LR	18 26 58.5	
	comp=Z,43nm,18.1s,baz=165,slow=38						
LUWI	Luwuk	55.93	92	P	P	18 01 20.4	+0.7
H01W3	Cape Leeuwin H	57.06	134	T	T	19 03 11.2	
	baz=300,slow=75						
H01W2	Cape Leeuwin H	57.07	134	T	T	19 03 11.6	
	baz=300,slow=75						
H01W1	Cape Leeuwin H	57.08	134	T	T	19 03 12.5	
	baz=300,slow=75						
SONM	Songino Array	57.45	31	P	P	18 01 30.3	+0.3
	comp=Z,1.2nm,0.9s,baz=218,slow=9.0,SNR=5.4						
SONM				LR	LR	18 26 16.8	
	comp=Z,229nm,21.9s,baz=235,slow=36						
	comp=Z,1.2nm,0.9s						
SONM	Songino Array	57.45	31	P	P	18 01 29.9	-0.1
SONM				IAmb	IAmb	18 01 35.8	
	comp=Z,8.3nm,1.6s						
ULN	Ulaanbaatar	57.80	31	P	P	18 01 33.9	+1.3
AKBB	Malin Array Si	58.50	333	P	P	18 01 36.1	-1.0
AKBB				IAmb	IAmb	18 03 29.1	
	comp=Z,5.4nm,1.1s						
DAV	Davao City (W)	58.76	83	LR	LR	18 28 37.4	
	comp=Z,28nm,19.6s,baz=263,slow=38						
JOW	Kunigami	63.96	61	LR	LR	18 29 23.5	
	comp=Z,114nm,21.8s,baz=306,slow=35						
KSRS	Korea Array	66.40	49	LR	LR	18 34 42.3	
	comp=Z,47nm,18.5s,baz=235,slow=39						
MAW	Mawson	68.95	182	P	P	18 02 46.4	+0.7
	comp=Z,8.2nm,0.8s,baz=243,slow=22,SNR=13						
	comp=Z,8.2nm,0.8s						
MAW	Mawson	68.95	182	P	P	18 02 46.5	+0.8
NRIK	Noril'sk	69.19	8	LR	LR	18 35 44.6	
	comp=Z,45nm,18.5s,baz=160,slow=38						
NRIK	Noril'sk	69.19	8	P	P	18 02 48.1	+0.9
NRIK				IAmb	IAmb	18 02 54.6	
	comp=Z,16nm,1.9s						
WRA	Warramunga Arr	69.38	112	P	P	18 02 50.3	+0.9
	comp=Z,1.0nm,0.8s,baz=288,slow=5.9,SNR=6.4						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	69.38	112	P	P	18 02 49.9	+0.5
WB2	Warramunga Arr	69.39	112	P	P	18 02 50.9	+1.5
WB2				IAmb	IAmb	18 04 05.1	
	comp=Z,26nm,1.9s						
WB0	Warramunga Arr	69.40	112	P	P	18 02 50.6	+1.0
WR0	Warramunga Arr	69.57	112	P	P	18 02 52.9	+2.3
WR0				IAmb	IAmb	18 03 09.5	
	comp=Z,18nm,1.6s						
ASAR	Alice Springs	69.64	116	P	P	18 02 52.4	+1.4
	comp=Z,0.8nm,0.8s,baz=292,slow=6.2,SNR=7.2						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	69.64	116	P	P	18 02 51.9	+0.9
JHS	Saijyo	69.82	53	P	P	18 02 52.1	+0.2
DBIC	Dimbokro	71.70	277	LR	LR	18 32 54.0	
	comp=Z,66nm,20.2s,baz=126,slow=35						
KLR	Kul'dur	72.71	38	LR	LR	18 35 40.8	
	comp=Z,76nm,20.2s,baz=239,slow=36						
MDT	Midelt	73.70	304	LR	LR	18 36 26.8	
	comp=Z,36nm,18.9s,baz=126,slow=36						
MJAR	Matsushiro Arr	74.18	52	LR	LR	18 41 24.9	
	comp=Z,55nm,18.1s,baz=225,slow=40						
ESDC	Sonseca Array	74.40	311	P	P	18 03 18.9	-0.4
	comp=Z,1.1nm,0.9s,baz=93,slow=4.4,SNR=5.5						
	comp=Z,1.1nm,0.9s						
YAK	Yakutsk	76.27	26	LR	LR	18 37 26.2	
	comp=Z,46nm,21.4s,baz=268,slow=36						
TIXI	Tiksi	80.08	16	LR	LR	18 40 01.2	
	comp=Z,48nm,21.5s,baz=182,slow=36						
TIXI	Tiksi	80.08	16	P	P	18 03 50.3	-0.1
TIXI				IAmb	IAmb	18 03 55.7	
	comp=Z,9.7nm,1.8s						
SNAA	Sanae	85.07	197	LR	LR	18 36 20.4	
	comp=Z,57nm,18.8s,baz=136,slow=32						
MA2	Magadan	85.66	30	LR	LR	18 43 50.6	
	comp=Z,87nm,18.6s,baz=271,slow=36						
SEY	Seymchan	86.67	27	LR	LR	18 44 30.8	
	comp=Z,108nm,19.6s,baz=190,slow=37						
PETK	Petropavlovsk-	89.35	37	LR	LR	18 47 45.5	
	comp=Z,62nm,18.0s,baz=241,slow=38						
SHEM	Shemya Is, Ala	99.22	36	LR	LR	18 53 20.1	
	comp=Z,38nm,19.1s,baz=316,slow=37						
DZM	Mont Dzumac	99.40	112	LR	LR	18 51 01.0	
	comp=Z,99nm,18.5s,baz=211,slow=36						
TXAR	Lajitas Array	148.10	344	PKPbc	PKiKP	18 11 28.8	-0.7
	comp=Z,1.8nm,0.8s,baz=68,slow=2.9,SNR=19						
TXAR	Lajitas Array	148.10	344		PKiKP	18 11 29.1	-0.4

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*TUL **03** 18:22:27.7±1.6, 35°.98N±0°.01×97°.55W±0°.02, h5^{km}±7^{km}, ML2.7, mb_Lg2.6/58(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=46.0*

NEIC 03 18:22:27.6±1.1, **35°.978N**±0°.007×**97°.56W**±0°.02, **h12**^{km}±3^{km}**, Error ellipse: s-maj=2.3km s-min=0.7km az=69.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	Arcadia Dam	0.36	155	Pg	Pg	18 22 34.9	+0.1
OKCFA	Oklahoma City	0.57	171	Pg	Pg	18 22 38.8	+0.2
OKCFA				Sg	Sg	18 22 45.0	-1.2
OKCSW	OKLAHOMA CITY	0.58	170	Pg	Pg	18 22 38.8	-0.1
OKCSW				Sg	Sb	18 22 47.3	-0.6
FNO	Franklin	0.73	170	Pg	Pg	18 22 41.7	-0.1
FNO				Sg	Sg	18 22 50.8	-0.5
U32A	Winter Ranch,	1.23	289		Pn	18 22 50.8	0.0
U32A					Sn	18 23 07.8	+0.4
T35A	Sooner Cattle	1.26	42	Pn	Pn	18 22 51.2	+0.1
X34A	Smith Ranch, M	1.39	189		Pg	18 22 54.1	-0.2
TUL1	Leonard	1.43	92	Pn	Pn	18 22 53.5	0.0
TUL1				IAmb_Lg		18 23 14.4	
	comp=Z,36nm,0.8s						
WMOK	Wichita Mounta	1.59	219		Pb	18 22 56.4	-0.6
X37A	Clayton	2.26	127		Pn	18 23 05.2	+0.3
X37A				IAmb_Lg		18 23 40.8	
	comp=Z,24nm,0.9s						
R32A	Long Quarter,	2.61	340		Pn	18 23 09.1	-0.5
Z35A	Perchaven, San	2.65	174	Pn	Pn	18 23 12.4	+2.2
HHAR	Hobbs	2.94	83		Pn	18 23 15.1	+0.8
W39A	Magazine	3.17	103	Pn	Pn	18 23 17.9	+0.5
W39A				IAmb_Lg		18 24 16.0	
	comp=Z,20nm,1.0s						
KSU1	Kansas State U	3.21	13		Pn	18 23 19.7	+1.8
KSU1				IAmb_Lg		18 24 15.0	
	comp=Z,13nm,0.8s						
CBKS	Cedar Bluff	3.32	329		Pn	18 23 21.0	+1.5
CBKS				IAmb_Lg		18 24 18.9	
	comp=Z,17nm,0.8s						
Z38A	Mt. Pleasant	3.44	141	Pn	Pn	18 23 20.7	-0.4
Z38A				IAmb_Lg		18 24 21.6	
	comp=Z,18nm,0.9s						
AMTX	Amarillo	3.54	253		Pn	18 23 21.5	-1.0
AMTX				IAmb_Lg		18 24 23.0	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	3.56	113	IAmb_Lg		18 24 20.3	
	comp=Z,18nm,0.8s						
ABTX	Abilene, Hawle	3.77	208		Pn	18 23 24.3	-1.3
ABTX				IAmb_Lg		18 24 28.2	
	comp=Z,15nm,1.1s						
S39A	Bolivar	3.80	62		Pn	18 23 26.5	+0.4
S39A				IAmb_Lg		18 24 29.8	
	comp=Z,19nm,0.8s						
U40A	Yellville	3.83	83		Pn	18 23 26.6	+0.2
U40A				IAmb_Lg		18 24 33.6	
	comp=Z,11nm,0.8s						
WHTX	Lake Whitney,	3.98	179	Pn	Pn	18 23 27.9	-0.6
X40A	Basin Creek Fa	4.14	110		Pn	18 23 30.1	-0.7
X40A				IAmb_Lg		18 24 38.9	
	comp=Z,15nm,0.7s						
237A	Washetta, Mont	4.22	159	Pn	Pn	18 23 30.9	-0.9
WLAR	White Oak Lake	4.31	121	Pn	Pn	18 23 31.7	-1.3
WHAR	Wooly Hollow	4.35	98		Pn	18 23 33.2	-0.3
WHAR				IAmb_Lg		18 24 43.2	
	comp=Z,13nm,0.8s						
W41B	Gary Mavity, V	4.40	99	Pn	Pn	18 23 34.2	-0.1
W41B				IAmb_Lg		18 24 46.9	
	comp=Z,15nm,1.1s						
FCAR	Ozark Folk Cen	4.41	90		Pn	18 23 33.7	-0.7
FCAR				IAmb_Lg		18 24 44.4	
	comp=Z,11nm,0.9s						
MGMO	Mountain Grove	4.42	73	Pn	Pn	18 23 32.8	-1.7
MGMO				IAmb_Lg		18 24 46.3	
	comp=Z,14nm,0.7s						
UALR	University of	4.43	104	IAmb_Lg		18 24 55.1	
	comp=Z,9.4nm,0.8s						
MSTX	Muleshoe	4.73	246		Pn	18 23 37.2	-1.7
R40A	Maddies Statio	4.81	60	Pn	Pn	18 23 39.5	-0.5
R40A				IAmb_Lg		18 24 59.6	
	comp=Z,11nm,0.7s						
P38A	Dawn	4.84	40	Pn	Pn	18 23 39.0	-1.3
P38A				IAmb_Lg		18 25 12.6	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock'	5.04	308	IAmb_Lg		18 25 15.1	
	comp=Z,8.1nm,0.7s						
N35A	Tabor	5.10	17		Pn	18 23 42.8	-1.1
LCAR	Lake Charles	5.19	87	Pn	Pn	18 23 44.4	-0.7
CCM	Cathedral Cave	5.46	66	Pn	Pn	18 23 48.4	-0.5
CCM				IAmb_Lg		18 25 32.3	
	comp=Z,8.5nm,0.8s						
P40A	Paris	5.62	49	Pn	Pn	18 23 50.8	-0.3
T25A	Trinidad	5.64	284	Pn	Pn	18 23 50.4	-1.1
T25A				IAmb_Lg		18 25 31.5	
	comp=Z,10nm,0.9s						
JCT	Junction City	5.80	200	Pn	Pn	18 23 52.0	-1.5
JCT				IAmb_Lg		18 25 47.4	
	comp=Z,13nm,0.9s						
PBMO	Poplar Bluff	5.81	80	IAmb_Lg		18 25 34.6	
	comp=Z,12nm,0.7s						
N38A	Joes South For	5.88	34	Pn	Pn	18 23 53.6	-1.1
FVM	French Village	6.05	69	Pn	Pn	18 23 56.7	-0.3
FVM				IAmb_Lg		18 25 42.7	
	comp=Z,8.2nm,0.9s						
L34A	Svendsen Farm,	6.05	8	Pn	Pn	18 23 55.0	-1.9
OGNE	Ogallala	6.08	326	Pn	Pn	18 23 57.4	0.0
SDCO	Great Sand Dun	6.61	288	Pn	Pn	18 24 04.4	-0.5
HALT	Halls	6.67	88	Pn	Pn	18 24 04.2	-1.2
Q24A	Divide	6.73	299	IAmb_Lg		18 26 21.1	
	comp=Z,9.5nm,0.8s						
S44A	Carbondale	6.88	73	Pn	Pn	18 24 08.6	+0.3
SIUC	Southern Illin	6.91	73	Pn	Pn	18 24 08.3	-0.4
P43A	Skaggs, Pawnee	7.34	58	IAmb_Lg		18 26 36.3	
	comp=Z,9.8nm,0.8s						
L40A	Anamosa	7.82	37	IAmb_Lg		18 26 37.6	
	comp=Z,9.7nm,0.8s						
JFWS	Jewell Farm	8.94	37	IAmb_Lg		18 27 20.3	
	comp=Z,8.3nm,0.9s						

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*IDC **03** 18:27:35.0±0.8, 12°.13N×143°.90E, h0^{km}, mb4.0/14, mbtmp4.0/14, MS3.5/6, Error ellipse: s-maj=25.7km s-min=15.8km az=114.0*

*NEIC **03** 18:27:39.2±1.9, 11°.95N±0°.06×144°.0E±0°.1, h38^{km}±6^{km}, mb4.6/66, Error ellipse: s-maj=15.9km s-min=8.8km az=97.0*

ISC 03 18:27:37.5±0.5, **11°.92N**±0°.06×**144°.01E**±0°.08, **h26^{km}, n95, σ1ˢ.05**/90, **mb4.6**/48, **MS3.5**/6, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.86	27	Pn	Pn	18 28 07.1	-0.6
	260nm,0.3s,baz=215,slow=0.6,SNR=125						
GUMO				Sn	Sn	18 28 32.0	+1.6
	442nm,0.3s,baz=180,slow=23,SNR=30						
GUMO				LR	LR	18 28 42.4	
	comp=Z,103nm,19.1s,baz=234,slow=39						
GUMO	Guam	1.86	27	Pn	Pn	18 28 08.8	+1.1
GUMO				Sn	Sn	18 28 31.2	+0.9
PATS	Pohnpei	14.98	108	Pn	Pn	18 31 08.3	+0.7
JOW	Kunigami	20.95	317	LR	LR	18 39 06.1	
	comp=Z,107nm,21.4s,baz=348,slow=33						
PMG	Port Moresby	21.41	171	LR	LR	18 40 33.0	
	comp=Z,178nm,18.0s,baz=220,slow=36						
WAKE	Wake Island	22.99	69	P	P	18 32 38.3	-2.1
H11N1	WAKE ISLAND Hy	23.32	68	T	T	18 57 23.4	
	baz=255,slow=75						
H11N2	WAKE ISLAND Hy	23.33	68	T	T	18 57 23.5	
	baz=255,slow=75						
H11N3	WAKE ISLAND Hy	23.34	68	T	T	18 57 21.1	
	baz=255,slow=75						
JNU	Nakatsue	24.30	332	P	P	18 32 52.7	-0.2
LUWI	Luwuk	24.71	240	P	P	18 32 57.8	+1.0
LUWI				IAmb	IAmb	18 33 11.5	
	comp=Z,22nm,0.8s						
SSLB	Suanglung	24.87	301	P	P	18 32 57.9	-0.3
SSLB				IAmb	IAmb	18 33 17.0	
	comp=Z,49nm,1.8s						
MJAR	Matsushiro Arr	25.07	349	P	P	18 32 59.3	-0.6
	comp=Z,2.1nm,0.9s,baz=172,slow=13,SNR=1.5						
	comp=Z,2.1nm,0.9s						
MAJO	Matsushiro	25.07	349	P	P	18 32 59.6	-0.3
MAJO				IAmb	IAmb	18 33 22.4	
	comp=Z,30nm,1.5s						
MJB9	Matsu-Tunnel	25.07	349	P	P	18 32 59.6	-0.3
MJB9				IAmb	IAmb	18 33 22.4	
	comp=Z,32nm,1.6s						
COEN	Coen	25.72	182	P	P	18 33 06.1	+0.2
COEN				IAmb	IAmb	18 33 31.4	
	comp=Z,22nm,1.4s						
HNR	Honiara	26.47	143	P	P	18 33 12.3	-0.4
WB0	Warramunga Arr	32.88	197	P	P	18 34 10.1	+0.5
WB0				IAmb	IAmb	18 34 20.1	
	comp=Z,16nm,1.5s						
WR0	Warramunga Arr	33.02	196	P	P	18 34 09.2	-1.6
WR0				IAmb	IAmb	18 34 50.4	
	comp=Z,18nm,1.8s						
WRAB	Tennant Creek	33.05	197	P	P	18 34 10.6	-0.5
WRAB				IAmb	IAmb	18 34 21.2	
	comp=Z,14nm,1.6s						
WB2	Warramunga Arr	33.06	197	P	P	18 34 11.4	+0.3
WB2				IAmb	IAmb	18 34 33.0	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	33.06	197	P	P	18 34 13.8	+2.6
	comp=Z,1.3nm,0.7s,baz=20,slow=9.9,SNR=14						
	comp=Z,1.3nm,0.7s						
AS31	Alice Springs	36.72	196	P	P	18 34 43.7	+1.0
ASAR	Alice Springs	36.72	196	P	P	18 34 46.4	+3.6
	comp=Z,0.8nm,0.9s,baz=17,slow=10,SNR=7.5						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	36.72	196	P	P	18 34 43.8	+1.1
EIDS	Eidsvold	37.70	170	P	P	18 34 50.6	-0.3
EIDS				IAmb	IAmb	18 35 24.6	
	comp=Z,15nm,1.7s						
KOUNC	Koumac, New Ca	37.93	148	P	P	18 34 51.9	-1.0
KOUNC				IAmb	IAmb	18 35 38.8	
	comp=Z,11nm,0.9s						
KLR	Kul'dur	38.56	347	LR	LR	18 49 28.1	
	comp=Z,56nm,19.9s,baz=154,slow=34						
DZM	Mont Dzumac	40.32	147	P	P	18 35 12.5	-0.6
DZM				IAmb	IAmb	18 35 59.9	
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	43.89	284	P	P	18 35 43.4	+1.2
	comp=Z,0.4nm,0.6s,baz=89,slow=6.6,SNR=7.5						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	47.63	326	P	P	18 36 11.9	+0.4
	comp=Z,0.9nm,0.6s,baz=147,slow=7.8,SNR=6.1						
SONM				LR	LR	18 56 32.2	
	comp=Z,42nm,19.0s,baz=143,slow=37						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	47.63	326	P	P	18 36 11.4	-0.1
GTA	Gaotai	47.67	313	*e*P	P	18 36 12.6	+0.6
GTA				pP	pP	18 36 18.6	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MA2	Magadan	47.84	5	P	P	18 36 11.9	-0.9
YAK	Yakutsk	51.10	351	LR	LR	18 57 44.9	
	comp=Z,51nm,18.4s,baz=86,slow=36						
YAK	Yakutsk	51.10	351	P	P	18 36 36.6	-1.0
YAK				IAmb	IAmb	18 37 08.8	
	comp=Z,6.5nm,0.5s						
SEY	Seymchan	51.29	5	P	P	18 36 39.6	+0.6
	comp=Z,0.8nm,0.7s,baz=196,slow=12,SNR=3.9						
	comp=Z,0.8nm,0.7s						
MK31	Makanchi Array	62.12	317	P	P	18 37 55.1	-1.2
MKAR	Makanchi Array	62.12	317	P	P	18 37 56.2	-0.1
	comp=Z,0.6nm,0.5s,baz=98,slow=8.7,SNR=7.1						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	62.12	317	P	P	18 37 55.4	-0.9
MAKZ	Makanchi	62.33	317	P	P	18 37 57.2	-0.5
ZALV	Zalesovo Beam	62.50	325	P	P	18 37 57.9	-0.7
	comp=Z,0.5nm,0.4s,baz=97,slow=7.4,SNR=2.4						
ZALV				LR	LR	19 05 55.0	
	comp=Z,38nm,19.1s,baz=66,slow=37						
	comp=Z,0.5nm,0.4s						
KURK	Kurchatov	65.32	321	P	P	18 38 16.5	-0.8
KURK				IAmb	IAmb	18 38 18.6	
	comp=Z,5.5nm,0.9s						
Q19K	Cape Douglas,	65.73	30	P	P	18 38 19.5	-0.4
KDAK	Kodiak Island	65.92	32	P	P	18 38 21.0	0.0
N19K	Bonanza Creek	65.94	28	P	P	18 38 23.2	+2.0
L19K	White Mountain	66.24	27	P	P	18 38 21.9	-1.2
L19K				IAmb	IAmb	18 38 26.9	
	comp=Z,8.1nm,1.4s						
M19K	Big River Lodg	66.35	27	P	P	18 38 22.3	-1.5
M19K				IAmb	IAmb	18 38 24.6	
	comp=Z,11nm,1.6s						
K20K	Telida	66.99	26	P	P	18 38 27.1	-0.7
K20K				IAmb	IAmb	18 38 35.1	
	comp=Z,10nm,1.5s						
CNPM	China Poot	67.09	30	P	P	18 38 26.9	-1.6
BRLK	Bradley Lake	67.33	30	P	P	18 38 30.6	+0.6
PPLA	Purkeypile	67.65	26	P	P	18 38 30.9	-1.3
CAST	Castle Rocks	67.86	26	P	P	18 38 32.2	-1.1
CAST				IAmb	IAmb	18 38 35.6	
	comp=Z,3.1nm,0.7s						
IMAR	Indian Mountai	68.05	23	P	P	18 38 34.1	-0.4
SEW	Seward	68.11	30	P	P	18 38 33.7	-1.2
RC01	Rabbit Creek A	68.23	29	P	P	18 38 34.9	-0.7
KTH	Kantishna Hill	68.40	26	P	P	18 38 36.5	-0.2
KTH				IAmb	IAmb	18 38 40.4	
	comp=Z,9.0nm,1.2s						

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TRF   Thorofare Moun   68.64  26  P      P       18 38 37.3 -1.1
TRF                               IAmb   IAmb    18 38 45.6
        comp=Z,14nm,1.6s
SML   Sawmill          69.07  28  P      P       18 38 40.7 -0.3
A21K  Barrow           69.21  17  P      P       18 38 42.4 +0.8
MID   Middleton Isla   69.49  31  P      P       18 38 43.6 +0.1
H23K  Yukon River      69.63  24  P      P       18 38 43.4 -0.9
H23K                              IAmb   IAmb    18 38 47.1
        comp=Z,9.1nm,1.6s
DHY   Denali Highway   69.81  27  P      P       18 38 44.4 -1.2
DHY                               IAmb   IAmb    18 39 32.8
        comp=Z,16nm,1.8s
WRH   Wood River Hil   69.85  25  P      P       18 38 43.9 -1.7
KK31  Karatay Array    69.92 312  P      P       18 38 45.0 -1.5
KKAR  Karatay Array    69.92 312  P      P       18 38 45.7 -0.9
KKAR  Karatay Array    69.92 312  P      P       18 38 45.3 -1.3
KKAR                              IAmb   IAmb    18 38 48.1
        comp=Z,4.1nm,1.2s
GAR   Garm             69.96 307  P      P       18 38 46.4 -0.6
GAR                               IAmb   IAmb    18 38 58.7
        comp=Z,3.1nm,0.7s
KLU   Klutina          70.12  29  P      P       18 38 47.3 -0.1
KLU                               IAmb   IAmb    18 38 50.2
        comp=Z,20nm,1.5s
H24K  Noodor Dome      70.30  24  P      P       18 38 48.3 -0.1
H24K                              IAmb   IAmb    18 38 51.1
        comp=Z,6.3nm,1.2s
IL31                   70.43  25  P      P       18 38 48.9 -0.2
ILAR  Eielson Array    70.43  25  P      P       18 38 48.9 -0.3
        comp=Z,1.4nm,0.5s,baz=249,slow=5.8,SNR=23
        comp=Z,1.4nm,0.5s
TOLK  Toolik Lake Re   70.47  21  P      P       18 38 49.9 +0.5
BRVK  Borovoye         70.78 322  P      P       18 38 51.9 +0.3
J25K  Salcha River,    71.03  25  P      P       18 38 51.4 -1.5
VRDI  Verde Repeater   71.24  29  P      P       18 38 55.8 +1.4
VRDI                              IAmb   IAmb    18 39 15.7
        comp=Z,20nm,1.6s
SCRK  Sand Creek       71.49  26  P      P       18 38 55.7 -0.1
SCRK                              IAmb   IAmb    18 38 58.6
        comp=Z,13nm,1.8s
BMAR  Burnt Mountain   71.96  23  P      P       18 38 59.1 +0.6
L27K  Beaver Creek,    72.28  27  P      P       18 39 00.9 +0.4
L27K                              IAmb   IAmb    18 39 24.4
        comp=Z,16nm,1.8s
BCAR  Beaver Creek A   72.30  27  P      P       18 38 59.5 -1.2
K27K  Chicken          72.33  26  P      P       18 39 01.0 +0.3
K27K                              IAmb   IAmb    18 39 04.0
        comp=Z,4.8nm,1.1s
M31M  Drury Creek, Y   75.62  29  P      P       18 39 19.2 -0.9
M31M                              IAmb   IAmb    18 39 29.5
        comp=Z,8.5nm,1.6s
INK   Inuvik           76.22  22  P      P       18 39 22.7 -0.5
INK                               IAmb   IAmb    18 39 25.6
        comp=Z,6.6nm,0.9s
ABKAR Akbulak array    77.22 318  P      P       18 39 28.9 -0.4
ABKAR Akbulak array    77.22 318  P      P       18 39 28.6 -0.6
ARU   Arti             77.66 325  P      P       18 39 30.7 -0.9
ARU                               IAmb   IAmb    18 39 32.8
        comp=Z,6.6nm,1.4s
GEYT  Alibeck          79.57 307  P      P       18 39 42.9 +0.3
GYA0B ALIBECK ARRAY    79.57 307  P      P       18 39 42.3 -0.3
GYA0B                             IAmb   IAmb    18 39 52.6
        comp=Z,2.8nm,0.6s
C36M  Paulatuk         79.62  21  P      P       18 39 43.0 +0.9
YKA   Yellowknife Ar   84.72  27  P      P       18 40 10.6 +1.6
        comp=Z,1.9nm,0.5s,baz=286,slow=5.0,SNR=24
        comp=Z,1.9nm,0.5s
ARCES ARCESS Array B   88.41 342  P      P       18 40 27.6 +0.6
        comp=Z,1.2nm,0.5s,baz=66,slow=7.2,SNR=17
        comp=Z,1.2nm,0.5s
NVAR  Mina Array Bea   88.61  51  P      P       18 40 31.2 +2.3
        comp=Z,1.4nm,0.6s,baz=243,slow=4.0,SNR=6.5
        comp=Z,1.4nm,0.6s
NVAR  Mina Array Bea   88.61  51  P      P       18 40 27.7 -1.2
FINES FINESS Array B   92.31 335  P      P       18 40 44.4 -0.9
        comp=Z,2.5nm,0.6s,baz=68,slow=4.9,SNR=23
        comp=Z,2.5nm,0.6s
PDAR  Pinedale Array   93.73  45  P      P       18 40 53.3 +0.8
        comp=Z,0.2nm,0.5s,baz=238,slow=1.7,SNR=3.7
        comp=Z,0.2nm,0.5s
```

IDC 03 19:29:02.8±3.9**,57°.79S**×**142°.76W,h0km,mb4.0**/2**,**
mbtmp4.0/2**,Error ellipse: s-maj=376.4km**
s-min=57.6km az=160.0,Pacific-Antarctic Ridge

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Code  Station Name       Δ°  AZ°   Phase ID           Time     Res
                                   Op     ISC      h  m  s    ISC
H03S2 Juan Fernandez   48.35  89  T      T       20 30 46.5
        baz=221
H03S1 Juan Fernandez   48.35  89  T      T       20 30 47.8
        baz=221
H03S3 Juan Fernandez   48.36  89  T      T       20 30 46.9
        baz=221
H03N3 Juan Fernandez   48.64  89  T      T       20 31 05.6
        baz=224,slow=72
H03N2 Juan Fernandez   48.65  89  T      T       20 31 05.4
        baz=224,slow=72
H03N1 Juan Fernandez   48.66  89  T      T       20 31 04.6
        baz=224,slow=72
ASAR  Alice Springs    66.79 262  P      P       19 39 56.2 +0.2
        2.0nm,0.9s,baz=145,slow=6.5,SNR=8.9
        2.0nm,0.9s
H01W1 Cape Leeuwin H   67.59 240  T      T       20 54 40.5
        baz=142,slow=75
H01W2 Cape Leeuwin H   67.59 240  T      T       20 54 44.1
        baz=142,slow=75
H01W3 Cape Leeuwin H   67.60 240  T      T       20 54 41.4
        baz=142,slow=75
WRA   Warramunga Arr   69.60 265  P      P       19 40 13.4 -0.3
        1.0nm,0.9s,baz=149,slow=5.6,SNR=4.5
        1.0nm,0.9s
H10N3 ASCENSION HYDR  102.36 127  T      T       21 40 04.2
        baz=205,slow=76
H10N1 ASCENSION HYDR  102.37 127  T      T       21 40 04.2
        baz=205,slow=76
H10N2 ASCENSION HYDR  102.38 127  T      T       21 40 04.2
        baz=205,slow=76
ILAR  Eielson Array   122.28 358  PKP    PKPdf   19 47 57.8 -0.3
        0.5nm,0.7s,baz=207,slow=3.7,SNR=5.0
MKAR  Makanchi Array  150.87 268  PKPbc  PKPbc   19 48 56.2  0.0
        1.3nm,0.9s,baz=129,slow=3.9,SNR=8.0
ZALV  Zalesovo Beam   153.47 282  PKPbc  PKPbc   19 49 01.5 -0.3
        0.6nm,0.6s,baz=108,slow=4.7,SNR=2.2
```

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*IDC **03** 19:39:54.5±1.4,8°.14S×156°.50E,h0km,mb3.9/3,*
mbtmp3.9/4,ML3.7/1,MS3.9/1,Error ellipse: s-maj=41.7km
s-min=27.7km az=20.0
*NEIC **03** 19:39:55.1±1.4,8°.1S±0°.2×156°.69E±0°.08,h10km±2km,*
mb4.3/7,Error ellipse: s-maj=32.0km s-min=4.2km
az=202.0
ISC 03 19:39:56.0±0.9**,8°.2S**±0°.2×**156°.7E**±0°.1**,h18km,n14,**
σ1s.06/14**,mb4.2**/5**,Bougainville-Solomon Islands region**

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Code  Station Name       Δ°  AZ°   Phase ID           Time     Res
                                   Op     ISC      h  m  s    ISC
HNR   Honiara           3.47 111  Pn     Pn      19 40 50.9 +1.6
        6.0nm,0.3s,baz=2.3,slow=5.4,SNR=1.7
HNR                               Sn     Sb      19 41 38.5 -0.4
        8.2nm,0.3s,baz=227,slow=11,SNR=3.6
        19nm,0.3s
HNR   Honiara           3.47 111  Pn     Pn      19 40 47.8 -1.4
WRAB  Tennant Creek    24.54 239  P      P       19 45 14.6 -0.3
WRAB                              IAmb   IAmb    19 45 19.9
        comp=Z,11nm,1.4s
WB2   Warramunga Arr   24.54 239  P      P       19 45 15.0  0.0
WB2                               IAmb   IAmb    19 45 38.0
        comp=Z,12nm,1.6s
WRA   Warramunga Arr   24.55 239  P      P       19 45 15.9 +0.9
        comp=Z,1.8nm,0.9s,baz=64,slow=9.9,SNR=6.8
        comp=Z,1.8nm,0.9s
JHJ   Hachijo jima 2   44.12 340  LR     LR      20 05 53.1
        comp=Z,140nm,20.1s,baz=67,slow=35
PEA0B Petropavlovsk-   61.09   1  P      P       19 50 08.5 -0.3
PETK  Petropavlovsk-   61.09   1  P      P       19 50 08.2 -0.6
ULN   Ulaanbaatar      70.91 327  P      P       19 51 11.0 -1.3
SONM  Songino Array    71.24 327  P      P       19 51 15.5 +1.2
        comp=Z,2.5nm,0.9s,baz=139,slow=4.4,SNR=9.5
        comp=Z,2.5nm,0.9s
SONM  Songino Array    71.24 327  P      P       19 51 14.3 -0.1
SONM                              IAmb   IAmb    19 51 17.7
        comp=Z,3.9nm,1.2s
GHO   Glory Hole Cre   81.43  23  P      P       19 52 13.3 +1.4
MKAR  Makanchi Array   85.40 318  P      P       19 52 32.2 -0.4
        comp=Z,0.5nm,0.7s,baz=101,slow=6.3,SNR=5.7
        comp=Z,0.5nm,0.7s
MKAR  Makanchi Array   85.40 318  P      P       19 52 31.6 -0.9
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*IDC **03** 19:53:42.6±1.2,34°.02S×73°.13W,h0km,mb3.8/2,*
mbtmp3.7/4,ML3.8/2,MS2.4/1,Error ellipse: s-maj=58.5km
s-min=26.5km az=77.0
*GUC **03** 19:53:46.3±0.7,34°.02S×73°.20W,h40km±3km,ML3.5*
ISC 03 19:53:42.0±3.3**,33°.93S**±0°.04×**73°.23W**±0°.06**,h1km**±21km**,**
n24,σ1s.54/43**,1C,Off coast of central Chile**

```
Code  Station Name       Δ°  AZ°   Phase ID           Time     Res
                                   Op     ISC      h  m  s    ISC
BO03  Pichilemu         1.20 119  eP     Pb      19 54 06.0 +0.5
BO03                              i S    Sb      19 54 20.5 -0.9
BO03                               IAML          19 54 22.0
        comp=N,1µm,0.4s
VA05  Santo Domingo     1.37  79  eP     Pn      19 54 08.4 +0.1
VA05                              i S    Sb      19 54 25.1 -1.4
GO05  Huala             1.52 135  eP     Pn      19 54 10.3 -0.1
GO05                              i S    Sn      19 54 28.9 -2.1
GO05                               IAML          19 54 29.9
        comp=E,2µm,0.2s
VA01  Torpederas        1.60  56  eP     Pn      19 54 11.1 -0.4
BO01  Tunca             1.84 105  eP     Pn      19 54 15.2 +0.4
BO01                              i S    Sn      19 54 37.3 -1.4
BO01                               IAML          19 54 45.5
        comp=N,294nm,0.3s
MT02  Curacav           1.87  70  eP     Pn      19 54 15.1 -0.1
MT02                              i S    Sn      19 54 37.2 -2.3
MT09  Talagante         1.87  86  eP     Pn      19 54 15.5 +0.2
MT09                              i S    Sn      19 54 37.5 -2.2
MT09                               IAML          19 54 38.6
        comp=N,666nm,0.3s
ROCH  El Roble          2.09  63  i P    Pb      19 54 18.8 -2.0
ROCH                              eP     Pn      19 54 16.6 -1.7
ROCH                              eS     Sn      19 54 45.4 +0.3
ROCH                               IAML          19 54 48.0
        comp=N,262nm,0.6s
VA06  Catapilco         2.12  50  eP     Pn      19 54 18.0 -0.5
VA06                              i S    Sn      19 54 42.8 -2.8
VA06                               IAML          19 54 47.5
        comp=N,395nm,0.3s
MT05  Renca             2.15  76  eP     Pn      19 54 20.3 +1.3
MT05                              i S    Sn      19 54 46.0 -0.4
MT05                               IAML          19 54 48.2
        comp=N,252nm,0.2s
BO04  La Punta          2.18  92  eP     Pn      19 54 20.4 +1.0
BO04                              i S    Sn      19 54 46.5 -0.7
BO04                               IAML          19 54 47.9
        comp=E,419nm,0.5s
PEL   Peldehue          2.27  71  eP     Pn      19 54 22.4 +1.7
PEL                               i S    Sn      19 54 49.7 +0.4
MT03  Universidad Ad    2.31  80  eP     Pn      19 54 22.5 +1.2
MT03                              i S    Sn      19 54 49.7 -0.7
MT03                               IAML          19 54 55.9
        comp=N,389nm,0.3s
ML02  Panimavida        2.36 141  eP     Pn      19 54 23.9 +1.9
ML02                              i S    Sn      19 54 51.7 +0.1
LMEL  Las Melosas       2.52  89  eP     Pn      19 54 25.3 +1.1
LMEL                              i S    Sn      19 54 55.4 -0.3
LMEL                               IAML          19 54 58.1
        comp=N,311nm,0.2s
FCH   Farellones        2.52  77  eP     Pn      19 54 25.7 +1.2
FCH                               i S    Sn      19 54 55.8 -0.3
FCH                                IAML          19 54 56.2
        comp=N,232nm,0.5s
BI05  Punta Hualpn      2.81 179  eP     Pn      19 54 27.9 -0.3
BI05                              i S    Sn      19 54 58.1 -4.6
CO02  Combarbal         3.31  35⇑ i P    Pn      19 54 35.5 +0.5
CO02                              i S    Sn      19 55 12.6 -2.5
CO02                               IAML          19 55 20.0
        comp=E,239nm,0.3s
PLCA  Paso Flores       7.12 163  Pn     Pn      19 55 28.4 +1.0
        comp=E,0.8nm,0.3s,baz=342,slow=11,SNR=15
PLCA                              Sn     Sn      19 56 46.6 -2.4
        baz=246,slow=19
PLCA                              LR     LR      19 57 46.2
        comp=E,33nm,21.3s,baz=358,slow=35
        comp=E,1.9nm,0.4s
LPAZ  La Paz           18.16  16  P      P       19 57 58.8 +2.3
        baz=195,slow=11,SNR=3.8
        comp=E,0.9nm,0.7s
TXAR  Lajitas Array    69.19 332  P      P       20 04 52.0 +1.5
        comp=E,0.4nm,0.7s,baz=156,slow=8.2,SNR=5.4
        comp=E,0.4nm,0.7s
TORD  Torodi Ar. Bea   85.12  71  P      P       20 06 20.1 -0.1
        comp=E,0.8nm,0.7s,baz=237,slow=4.1,SNR=4.6
        comp=E,0.8nm,0.7s
WRA   Warramunga Arr  120.33 210  PKP    PKPdf   20 12 35.8 +0.1
        comp=E,0.3nm,0.6s,baz=157,slow=1.5,SNR=1.9
KURBB Kurchatov Arra  153.49  42  PKPbc  PKPbc   20 13 42.6 +0.8
        comp=E,0.7nm,0.8s,baz=299,slow=3.1,SNR=7.2
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*NEIC **03** 19:59:26.6±2.1,40°.54N±0°.03×112°.13W±0°.06,h0km±2km,*
ML2.5/123,Error ellipse: s-maj=7.9km s-min=4.4km
az=84.0
*IDC **03** 19:59:29.7±1.4,40°.74N×112°.34W,h0km,mb2.7/1,*
mbtmp2.6/4,ML2.9/3,Error ellipse: s-maj=27.5km
s-min=8.1km az=159.0
ISC 03 19:59:26.6±0.9**,40°.53N**±0°.03×**112°.12W**±0°.03**,h0km,n70,**
σ1s.10/72**,Utah**

```
Code  Station Name       Δ°  AZ°   Phase ID           Time     Res
                                   Op     ISC      h  m  s    ISC
CTU   Camp Tracy        0.33  60         Pg      19 59 33.0 +0.1
JLU   Jordanelle        0.52  82         Pg      19 59 36.9 +0.4
NLU   North Lily Min    0.57 176  Pg     Pg      19 59 37.1 -0.4
NLU                               IAML           19 59 52.0
        comp=N,161nm,0.8s
DUG   Dugway, Tooele    0.62 238         Pg      19 59 37.5 -1.0
DUG                               IAML           19 59 53.2
        comp=N,195nm,0.9s
BGU   Big Grassy Mou    0.80 300  Pg     Pg      19 59 41.3 -0.6
HWUT  Hardware Ranch    1.16  21  Pg     Pg      19 59 48.4 -0.4
HWUT                              IAML           20 00 09.6
        comp=N,63nm,0.6s
HVU   Hansel Valley     1.34 339         Pg      19 59 51.0 -1.3
HVU                               IAML           20 00 13.9
        comp=E,46nm,0.9s
HVU                               IAML           20 00 13.9
        comp=N,44nm,0.5s
TMUT  Trail Mountain    1.42 150         Pg      19 59 53.3 -0.4
TMUT                              IAML           20 00 16.8
        comp=E,97nm,0.6s
TMUT                              IAML           20 00 21.1
        comp=N,70nm,0.7s
P17A  Butcher Ranch,    1.50 134         Pg      19 59 55.3  0.0
P17A                              IAML           20 00 18.6
        comp=E,38nm,0.8s
P18A  Preston Nutter    1.70 121         Pb      19 59 58.4 -0.5
Q16A  Castle Valley     1.77 155         Pn      19 59 58.4 -0.2
Q16A                              IAML           20 00 25.3
        comp=N,27nm,1.4s
SRU   San Rafael Swe    1.88 138         Pn      20 00 00.1  0.0
SRU                               IAML           20 00 35.0
        comp=N,32nm,0.9s
SRU                               IAML           20 00 35.7
        comp=E,36nm,0.8s
RDMU  Red Mountain      1.95  88         Pb      20 00 03.3 +0.3
MSU   Marysvale         2.01 181  Pn     Pn      20 00 01.5 -0.5
AHID  Auburn Hatcher    2.36  19         Pn      20 00 06.1 -0.7
AHID                              IAML           20 00 49.6
        comp=E,37nm,0.7s
AHID                              IAML           20 00 50.3
        comp=E,43nm,0.6s
ELK   Elko              2.38 276  Pn     Pn      20 00 07.3 +0.2
        comp=E,0.6nm,0.3s,baz=96,slow=14,SNR=7.2
ELK                               Lg     Lg      20 00 39.5
        comp=E,0.6nm,0.3s,baz=25,slow=23,SNR=6.5
        comp=E,1.3nm,0.3s
ELK   Elko              2.38 276         Pn      20 00 07.6 +0.5
PSUT  Pine Spring       2.40 214         Pn      20 00 07.5 +0.2
PSUT                              IAML           20 00 50.8
        comp=E,25nm,1.2s
PSUT                              IAML           20 00 56.8
        comp=N,18nm,0.9s
MTPU  Mount Pierson     2.48 181         Pn      20 00 09.5 +0.9
ECR   Eagle Creek       2.59  12         Pn      20 00 09.8 -0.1
BW06  Boulder Array     2.95  40         Pn      20 00 15.0 +0.1
BW06                              IAML           20 01 07.7
        comp=N,10nm,0.7s
BW06                              IAML           20 01 08.1
        comp=N,11nm,1.1s
PD31  Pinedale Array    2.95  40         Pn      20 00 16.0 +1.0
PDAR  Pinedale Array    2.95  40  Pn     Pb      20 00 19.1 -1.1
        comp=N,1.0nm,0.3s,baz=214,slow=12,SNR=42
PDAR                              Sn     Sb      20 00 58.2 +1.4
        comp=N,1.3nm,0.3s,baz=61,slow=27,SNR=8.9
        comp=N,5.5nm,0.6s
PDAR  Pinedale Array    2.95  40         Pn      20 00 15.2 +0.3
REDW  Red Top Meadow    2.99  18         Pn      20 00 15.6 +0.1
REDW                              IAML           20 01 08.9
        comp=N,16nm,1.2s
REDW                              IAML           20 01 17.4
        comp=N,18nm,1.2s
O20A  White River Ci    2.99  96  Pn     Pn      20 00 15.1 -0.4
O20A                              IAML           20 01 24.0
        comp=E,20nm,0.8s
O20A                              IAML           20 01 31.0
        comp=N,20nm,1.0s
SZCU  Shurtz Canyon     3.02 195         Pb      20 00 21.9 +0.5
PKCU  Pink Cliffs       3.08 183  Pn     Pn      20 00 16.5 -0.3
PKCU                              IAML           20 01 21.4
        comp=N,14nm,2.6s
PKCU                              IAML           20 01 48.5
        comp=E,18nm,3.0s
TPAW  Teton Pass        3.09  16         Pn      20 00 16.6 -0.2
TPAW                              IAML           20 01 23.3
        comp=E,9.0nm,1.1s
TPAW                              IAML           20 01 33.4
        comp=E,10nm,1.0s
SNOW  Snow King Moun    3.10  19  Pn     Pn      20 00 17.1  0.0
SNOW                              IAML           20 01 24.4
        comp=E,23nm,0.3s
CCUT  Cedar City        3.12 198         Pn      20 00 16.2 -1.1
CCUT                              IAML           20 01 28.8
        comp=E,7.0nm,5.0s
PV23  Carpenter Ridg    3.18 130         Pn      20 00 18.2 +0.1
PV10  Paradox Valley    3.21 131  Pn     Pn      20 00 18.7 +0.2
PV20  West Nyswonger    3.28 131  Pn     Pn      20 00 18.6 -0.8
LOHW  Long Hollow       3.28  20         Pn      20 00 19.4 -0.1
LOHW                              IAML           20 01 13.6
        comp=E,8.2nm,1.4s
PV11  David Mesa, Pa    3.36 130         Pn      20 00 19.8 -0.8
MOOW  Moose Ponds       3.38  17         Pn      20 00 21.0 +0.2
PV07  Paradox Valley    3.40 127  Pn     Pn      20 00 18.6 -2.6
PV07                              IAML           20 01 21.2
        comp=E,13nm,1.9s
PV07                              IAML           20 01 24.2
        comp=N,16nm,1.2s
R11A  Troy Canyon, C    3.45 232         Pn      20 00 20.7 -1.0
R11A                              IAML           20 01 17.8
        comp=N,7.5nm,1.9s
R11A                              IAML           20 01 21.7
        comp=E,7.3nm,1.3s
HLID  Hailey            3.48 331  Pn     Pn      20 00 22.1 -0.1
PV13  Radium Mtn., P    3.49 132         Pn      20 00 22.4 +0.2
PV15  Paradox Valley    3.57 127         Pn      20 00 22.6 -0.8
PV15                              IAML           20 01 23.1
        comp=N,15nm,1.0s
LCMT  Little Creek M    3.62 194         Pn      20 00 23.6 -0.4
FLWY  Flagg Ranch       3.71  16         Pn      20 00 27.1 +1.8
FLWY                              IAML           20 01 30.5
        comp=N,9.4nm,1.9s
FLWY                              IAML           20 01 32.7
        comp=N,11nm,3.2s
PRN   Pahroc Range      3.86 217         Pn      20 00 28.0 +0.6
PRN                               IAML           20 01 41.2
        comp=E,12nm,0.9s
PRN                               IAML           20 01 53.7
        comp=N,10nm,1.4s
YPP   Pitchstone Pla    3.87  14         Pn      20 00 28.4 +0.8
YPP                               IAML           20 01 00.0
        comp=E,6.3nm,4.5s
YPP                               IAML           20 02 34.1
        comp=N,5.2nm,4.4s
RWWY  Rawlins           3.89  71         Pn      20 00 28.9 +1.0
RWWY                              IAML           20 01 59.6
        comp=N,11nm,3.4s
BMN   Battle Mountai    3.89 270         Pn      20 00 25.9 -1.8
BMN                               IAML           20 01 33.4
        comp=E,7.2nm,1.4s
BMN                               IAML           20 01 36.2
        comp=N,6.8nm,1.0s
MFID  Camas Ranch       3.99 317         Pn      20 00 29.1 -0.1
MFID                              IAML           20 01 38.8
        comp=N,5.1nm,2.3s
MFID                              IAML           20 01 48.3
        comp=N,7.6nm,3.9s
S11A  Rachel            4.03 226  Pn     Pn      20 00 31.5 +1.8
H17A  Grant Village     4.03  16         Pn      20 00 31.8 +2.0
H17A                              IAML           20 01 24.1
        comp=N,6.9nm,0.1s
YFT   Old Faithful      4.04  13  Pn     Pn      20 00 32.3 +2.4
U15A  North Rim         4.09 182         Pn      20 00 31.6 +0.9
U15A                              IAML           20 01 54.0
        comp=N,6.3nm,4.8s
U15A                              IAML           20 02 23.2
        comp=E,5.5nm,4.1s
SMCO  Snowmass          4.19 107         Pn      20 00 31.7 -0.4
SMCO                              IAML           20 01 47.0
        comp=E,3.6nm,0.8s
SMCO                              IAML           20 01 50.6
        comp=E,3.2nm,1.0s
Q09A  Carvers           4.25 248  Pn     Pn      20 00 34.5 +1.7
YNR   Norris Junctio    4.32  14  Pn     Pn      20 00 33.5 -0.2
YNR                               IAML           20 01 07.2
        comp=E,5.0nm,0.3s
YNR                               IAML           20 01 11.3
        comp=N,4.7nm,3.9s
MCMT  McKenzie Canyo    4.33 353         Pn      20 00 32.1 -1.8
MVCO  Mesa Verde        4.36 138         Pn      20 00 34.4 +0.1
YHH   Holmes Hill       4.36  12  Pn     Pn      20 00 33.4 -1.0
YHH                               IAML           20 01 18.2
        comp=E,4.1nm,4.8s
YHH                               IAML           20 01 59.0
        comp=N,4.0nm,5.0s
YHL   Hebgen Lake       4.38   9         Pn      20 00 32.6 -2.0
YHL                               IAML           20 01 14.4
        comp=N,6.6nm,1.1s
YHL                               IAML           20 01 15.1
        comp=E,5.4nm,1.7s
TPH   Tonopah           4.65 240  Pn     Pn      20 00 37.0 -1.3
SHPR  Sheep Range       4.67 212         Pn      20 00 36.3 -2.2
SHPR                              IAML           20 02 13.1
        comp=E,5.6nm,4.8s
K22A  Casper            4.70  61         Pn      20 00 38.3 -0.7
N23A  Red Feather La    4.71  84         Pn      20 00 40.1 +1.0
TPNV  Topopah Spring    4.81 223  Pn     Pn      20 00 39.4 -1.0
TPNV                              IAML           20 02 05.1
        comp=E,5.9nm,2.5s
KVN   Kaiserville       4.83 254  Pn     Pn      20 00 39.5 -1.3
KVN                               IAML           20 02 11.9
        comp=E,6.1nm,3.5s
S22A  4UR Ranch, Cre    4.96 122  Pn     Pn      20 00 41.0 -1.7
S22A                              IAML           20 01 24.5
        comp=E,4.4nm,2.9s
WUAZ  Wupatki           5.04 173         Pn      20 00 42.2 -1.3
NVAR  Mina Array Bea    5.22 248  Pn     Pn      20 00 48.7 +2.5
        comp=E,0.1nm,0.3s,baz=70,slow=8.7,SNR=2.4
NVAR                              Pg     Pb      20 01 01.1 +2.2
        comp=E,0.1nm,0.3s,baz=75,slow=16,SNR=5.2
NVAR                              Lg     Lg      20 02 08.3
        comp=E,0.2nm,0.3s,baz=2.8,slow=39,SNR=1.8
        comp=E,0.4nm,0.7s
YKA   Yellowknife Ar   22.05 357  P      P       20 04 21.8 -0.7
        comp=E,0.2nm,0.7s,baz=173,slow=10,SNR=3.5
        comp=E,0.2nm,0.7s
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*IDC **03** 20:11:14.1±2.4,32°.71N×130°.79E,h0km,mb3.2/1,*
mbtmp3.2/2,ML2.5/1,Error ellipse: s-maj=16.5km
s-min=14.0km az=130.0
*JMA **03** 20:11:18.2±0.0,33°.1N±0°.1×131°.2E±0°.1,h7km,MV3.1/20,*
NE KUMAMOTO PREF
JMA Felt II J1 at NE KUMAMOTO PREF .
ISC 03 20:11:19.6±1.1**,33°.03N**±0°.05×**131°.18E**±0°.03**,h12km,n9,**
σ1s.79/12**,Kyushu**

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Code  Station Name       Δ°  AZ°   Phase ID           Time     Res
                                   Op     ISC      h  m  s    ISC
JNU   Nakatsue          0.27 290  Pg     Pg      20 11 23.1 -2.2
        374nm,0.3s,baz=168,slow=20,SNR=1699
JNU                               Lg     Lg      20 11 27.1
        412nm,0.3s,baz=186,slow=22,SNR=26
JNU   Nakatsue          0.27 290  P      Pg      20 11 23.7 -1.6
JNU                               S      Sg      20 11 27.5 -1.6
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OIT2	Oita 2	0.34	42	P	Pg	20 11 24.9	-1.5
OIT2				S	Sg	20 11 29.7	-1.2
JUS	Usuki	0.48	85	i P	Pg	20 11 27.3	-1.7
JUS				S	Sg	20 11 34.2	-1.1
JTA	Tamana	0.55	264	i P	Pg	20 11 28.9	-1.4
JIU3	Izumi3	0.57	213	P	Pg	20 11 29.7	-1.0
JIU3				eS	Sg	20 11 37.6	-0.6
KSRS	Korea Array	5.16	330	Pg	Pb	20 12 52.4	+2.7
	0.3nm,0.3s,baz=145,slow=18,SNR=1.9						
KSRS				Lg	Lg	20 13 57.8	
	0.9nm,0.3s,baz=151,slow=30,SNR=7.7						
MJAR	Matsushiro Arr	6.76	57	Pn	Pn	20 12 59.5	+0.9
	0.1nm,0.3s,baz=243,slow=13,SNR=5.2						
	1.2nm,0.5s						
MKAR	Makanchi Array	39.32	305	P	P	20 18 42.2	-6.2
	0.2nm,0.7s,baz=77,slow=9.0,SNR=2.5						
	0.2nm,0.7s						

NOU 03 20:19:57.0, 16°.24S × 167°.48E, h7^{km}, MLv4.2/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.83	341	P	Pg	20 20 12.6	-0.4
DVP	Devils Point	1.62	155	P	Pn	20 20 25.7	-0.4
RTV	Rentapao	1.79	150	P	Pn	20 20 28.2	-0.1
YATNC	Mamie plateau,	5.81	185	P	Pn	20 21 23.2	-0.5
NOUC	Port Laguerre	5.94	191	P	Pn	20 21 25.2	-0.2
OUENC	Ouen Island, N	6.17	186	P	Pn	20 21 29.0	+0.3

NEIC 03 20:20:55.7±1.3, 37°.20N±0°.02 × 97°.61W±0°.02, h8^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.1km az=177.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.93	108		Pg	20 21 13.2	-0.3
T35A				Sg	Sg	20 21 25.3	-0.3
U32A	Winter Ranch,	1.38	234		Pn	20 21 21.5	+0.1
R32A	Long Quarter,	1.50	325		Pn	20 21 23.0	0.0
FNO	Franklin	1.95	175		Pn	20 21 29.6	+0.4
TUL1	Leonard	1.95	131		Pb	20 21 30.8	-0.8
TUL1				IAmb_Lg		20 22 00.4	
	comp=Z,28nm,0.8s						
KSU1	Kansas State U	2.05	22		Pn	20 21 30.9	+0.3
KSU1				IAmb_Lg		20 22 03.9	
	comp=Z,36nm,0.8s						
CBKS	Cedar Bluff	2.33	314		Pn	20 21 34.9	+0.5
X34A	Smith Ranch, M	2.60	184	Pn	Pn	20 21 39.2	+1.1
X34A				IAmb_Lg		20 22 24.8	
	comp=Z,18nm,0.7s						
WMOK	Wichita Mounta	2.63	201	Pn	Pn	20 21 39.7	+1.1
HHAR	Hobbs	3.09	106	Pn	Pn	20 21 43.4	-1.5
X37A	Clayton	3.18	144	Pn	Pn	20 21 45.5	-0.6
S39A	Bolivar	3.45	81		Pn	20 21 49.8	0.0
N33A	J Bar K, Exete	3.53	2	Pn	Pn	20 21 49.8	-1.2
W39A	Magazine	3.69	122	Pn	Pn	20 21 52.6	-0.4
U40A	Yellville	3.91	101	Pn	Pn	20 21 56.7	+0.5
U40A				IAmb_Lg		20 23 02.8	
	comp=Z,16nm,0.7s						
P38A	Dawn	4.01	52	Pn	Pn	20 21 57.7	+0.1
P38A				IAmb_Lg		20 23 07.7	
	comp=Z,13nm,0.9s						
AMTX	Amarillo	4.03	236		Pn	20 21 56.9	-1.0
BGNE	Belgrade	4.22	355	Pn	Pn	20 21 59.9	-0.5
MGMO	Mountain Grove	4.27	89	Pn	Pn	20 22 01.5	+0.5
MGMO				IAmb_Lg		20 23 12.9	
	comp=Z,13nm,0.7s						
R40A	Maddies Statio	4.37	74	Pn	Pn	20 22 02.8	+0.4
R40A				IAmb_Lg		20 23 18.3	
	comp=Z,11nm,0.8s						
FCAR	Ozark Folk Cen	4.61	105	Pn	Pn	20 22 06.7	+1.0
FCAR				IAmb_Lg		20 23 19.6	
	comp=Z,13nm,0.7s						
WHAR	Wooly Hollow	4.71	112	Pn	Pn	20 22 07.7	+0.6
X40A	Basin Creek Fa	4.73	123	Pn	Pn	20 22 08.6	+1.2
W41B	Gary Mavity, V	4.79	113	Pn	Pn	20 22 08.8	+0.7
W41B				IAmb_Lg		20 23 32.4	
	comp=Z,14nm,1.1s						
N38A	Joes South For	4.95	42	IAmb_Lg		20 23 42.9	
	comp=Z,10nm,0.7s						
P40A	Paris	4.95	60	Pn	Pn	20 22 11.5	+1.1
P40A				IAmb_Lg		20 23 35.6	
	comp=Z,9.0nm,0.9s						
CCM	Cathedral Cave	5.13	79	Pn	Pn	20 22 12.5	-0.3
MSTX	Muleshoe	5.30	234	Pn	Pn	20 22 13.1	-2.2
LCAR	Lake Charles	5.32	100	Pn	Pn	20 22 15.9	+0.5
LCAR				IAmb_Lg		20 23 45.7	
	comp=Z,7.9nm,0.8s						
T25A	Trinidad	5.43	271	Pn	Pn	20 22 15.1	-2.1
FVM	French Village	5.76	80	Pn	Pn	20 22 20.8	-0.7
Q24A	Divide	6.20	289	Pn	Pn	20 22 23.6	-4.2
SDCO	Great Sand Dun	6.30	277	Pn	Pn	20 22 26.4	-2.8
S44A	Carbondale	6.67	83	IAmb_Lg		20 24 24.2	
	comp=Z,10nm,0.8s						
RWWY	Rawlins	8.67	304	IAmb_Lg		20 25 26.5	
	comp=Z,7.1nm,0.8s						
Z47A	Carrollton	8.77	114	IAmb_Lg		20 25 45.7	
	comp=Z,8.3nm,0.8s						

*IDC **03** 20:24:41.3±1.5, 2°.80N × 83°.70W, h0^{km}, mb3.5/5, mbtmp3.6/6, ML3.5/1, MS3.7/4, Error ellipse: s-maj=152.0km s-min=24.1km az=56.0*

*NEIC **03** 20:24:45.8±1.6, 2°.7N±0°.1 × 83°.7W±0°.2, h10^{km}±2^{km}, mb4.1/4, Error ellipse: s-maj=28.9km s-min=15.2km az=238.0*

ISC 03 20:24:46.8±1.0, 2°.7N±0°.1 × 83°.8W±0°.1, h35^{km}, n23, σ1^{s}.94/18, mb3.6/6, MS3.8/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	5.91	115	Pn	Pn	20 26 15.0	+2.6
DRK0	Durika	6.53	5	Pn	Pn	20 26 26.5	+5.8
JACO	JACO, Garabito	6.95	353	Pn	Pn	20 26 28.4	+2.2
DUNO	Dulce Nombre,	7.50	347	Pn	Pn	20 26 34.1	+0.3
JTS	Las Juntas de	7.61	352	Pn	Pn	20 26 38.3	+2.9
ORTG	Ortega, Santa	7.77	348	Pn	Pn	20 26 39.5	+1.9
HZTE	Horizontes, Gu	8.14	348	Pn	Pn	20 26 45.6	+3.1
MTO3	Montecristo	12.83	335		Pn	20 27 49.6	+2.6
URIC	Uribia, Colomb	14.74	52	Pn	Pn	20 28 11.8	-1.1
CMIG	Matias Romero	17.95	323	P	P	20 28 54.1	0.0
	0.2nm,0.3s,baz=154,slow=10,SNR=2.0						
	2.7nm,0.8s						
CBYP	Canovanas	23.43	47	P	P	20 29 49.9	-3.2
LPAZ	La Paz	24.43	141	P	P	20 30 02.9	-0.3
	3.8nm,0.8s,baz=323,slow=9.8,SNR=10						
	3.8nm,0.8s						
LPAZ	La Paz	24.43	141	P	P	20 30 02.9	-0.3
LPAZ				IAmb	IAmb	20 30 06.1	
	comp=Z,4.3nm,0.9s						
PB16	IPOC Station P	25.23	147	P	P	20 30 10.6	+0.3
PB16				IAmb	IAmb	20 30 13.2	
	comp=Z,4.0nm,0.9s						
LVC	Limon Verde	29.08	151	LR	LR	20 43 41.0	
	comp=Z,214nm,18.6s,baz=302,slow=39						
PDAR	Pinedale Array	46.02	334	P	P	20 33 06.8	-0.4
	comp=Z,0.2nm,0.5s,baz=134,slow=10,SNR=1.8						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	47.48	323	P	P	20 33 18.1	-0.7
	comp=Z,0.1nm,0.3s,baz=146,slow=8.3,SNR=2.7						
	comp=Z,0.1nm,0.3s						
YBH	Yreka Blue Hor	52.18	324	LR	LR	20 56 51.8	
	comp=Z,118nm,19.1s,baz=151,slow=37						
NEW	Newport	53.64	333	LR	LR	20 58 13.0	
	comp=Z,66nm,19.1s,baz=144,slow=38						
YKA	Yellowknife Ar	63.89	345	P	P	20 35 15.0	-0.8
	comp=Z,0.6nm,0.9s,baz=138,slow=6.5,SNR=7.1						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	76.32	337	P	P	20 36 31.8	-0.2
	comp=Z,0.6nm,1.0s,baz=150,slow=6.8,SNR=5.2						
	comp=Z,0.6nm,1.0s						
NOA	NORSAR Array B	90.09	29	LR	LR	21 15 24.6	
	comp=Z,12nm,19.5s,baz=255,slow=34						
WRA	Warramunga Arr	139.01	242	PKP	PKPdf	20 44 08.9	-1.9
	comp=Z,0.5nm,1.0s,baz=108,slow=2.4,SNR=2.0						

*IDC **03** 20:25:34.7±0.8, 2°.29N × 84°.46W, h0^{km}, mb4.1/11, mbtmp4.1/13, ML3.3/2, MS3.8/16, Error ellipse: s-maj=43.9km s-min=18.2km az=59.0*

*NEIC **03** 20:25:36.5±1.8, 2°.18N±0°.10 × 84°.5W±0°.1, h10^{km}±1^{km}, mb4.6/58, Error ellipse: s-maj=25.8km s-min=12.4km az=242.0*

*GCMT **03** 20:25:43.5±0.4, 2°.24N±0°.02 × 84°.30W±0°.04, h12^{km}, MW4.9/78, Moment Tensor Solution. s18,c18; s78,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.20±.07; M$_{\theta\theta}$1.55±.05; M$_{\phi\phi}$-0.35±.09; M$_{r\theta}$0.90±.25; M$_{\theta\phi}$0.02±.06; M$_{\phi r}$-2.13±.30; Best double couple: M$_0$2.57500×10^{16} NP1:φ$_s$72.00000°, δ28.00000°, λ-153.00000°. NP2: φ$_s$318.00000°, δ78.00000°, λ-65.00000°. Principal axes: T 2.0930, Plg29.0000°, Azm28.0000°; N 0.9640, Plg24.0000°, Azm132.0000°; P -3.0580, Plg51.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 20:25:35.9±0.6, 2°.20N±0°.09 × 84°.6W±0°.1, h10^{km}, n104, σ0^{s}.96/90, mb4.6/37, MS3.9/13, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	6.41	108	Pn	Pn	20 27 09.8	-1.0
DRK0	Durika	7.14	10	Pn	Pn	20 27 21.3	+0.7
DUNO	Dulce Nombre,	7.89	353	Pn	Pn	20 27 31.0	+0.3
JTS	Las Juntas de	8.05	357	Pn	Pn	20 27 33.8	+0.8
ORTG	Ortega, Santa	8.16	354	Pn	Pn	20 27 34.9	+0.4
HZTE	Horizontes, Gu	8.53	353	Pn	Pn	20 27 40.6	+1.2
ROSC	El Rosal	10.55	75	LR	LR	20 31 56.3	
	comp=Z,228nm,19.7s,baz=216,slow=37						
MTO3	Montecristo	13.02	339	Pn	Pn	20 28 44.6	+3.3
SDV	Santo Domingo	15.36	64	Pn	Pn	20 29 13.3	+0.2
	1.8nm,0.3s,baz=292,slow=17,SNR=1.4						
SDV				LR	LR	20 34 45.2	
	comp=Z,258nm,19.8s,baz=251,slow=36						
	4.2nm,0.3s						
CMIG	Matias Romero	17.95	326	P	Pn	20 29 45.9	+0.2
	0.1nm,0.3s,baz=140,slow=9.0,SNR=1.5						
CMIG				LR	LR	20 35 29.8	
	comp=Z,185nm,18.9s,baz=186,slow=33						
	1.2nm,0.4s						
TLIG	Tlapa	20.56	319	P	P	20 30 15.5	+0.5
LPAZ	La Paz	24.51	139	P	P	20 30 58.3	+1.9
	2.1nm,0.5s,baz=330,slow=8.9,SNR=5.6						
	2.1nm,0.5s						
LPAZ	La Paz	24.51	139	P	P	20 30 57.8	+1.5
PB16	IPOC Station P	25.21	145	P	P	20 31 05.0	+2.3
PB11	IPOC Station P	26.27	147	P	P	20 31 13.1	+1.3
PB11				IAmb	IAmb	20 31 15.6	
	comp=Z,18nm,1.3s						
MDP	Montagnes des	31.98	84	LR	LR	20 45 05.6	
	comp=Z,94nm,18.5s,baz=331,slow=37						
TXAR	Lajitas Array	32.54	328	P	P	20 32 08.2	+0.8
	comp=Z,0.6nm,0.8s,baz=146,slow=9.1,SNR=5.1						
	comp=Z,0.6nm,0.8s						
TXAR	Lajitas Array	32.54	328	P	P	20 32 07.0	-0.4
TKL	Tuckaleechee C	33.30	1	LR	LR	20 45 08.3	
	comp=Z,269nm,19.1s,baz=170,slow=35						
V48A	Smith Brothers	33.44	357	P	P	20 32 15.2	+0.1
MNTX	Cornudas Mount	35.31	328	P	P	20 32 31.3	0.0
MNTX				IAmb	IAmb	20 32 34.7	
	comp=Z,11nm,1.3s						
MGMO	Mountain Grove	35.51	349	P	P	20 32 33.0	+0.1
MGMO				IAmb	IAmb	20 32 41.3	
	comp=Z,14nm,1.2s						
H03N2	Juan Fernandez	35.84	172	T	T	21 10 30.6	
	baz=351,slow=76,SNR=24						
H03N1	Juan Fernandez	35.84	172	T	T	21 10 34.5	
	baz=351,slow=76,SNR=33						
H03N3	Juan Fernandez	35.86	172	T	T	21 10 30.6	
	baz=351,slow=76,SNR=47						
VA03	San Esteban	37.21	160	P	P	20 32 49.1	+1.5
T25A	Trinidad	39.29	335	P	P	20 33 06.0	+0.7
T25A				IAmb	IAmb	20 33 08.6	
	comp=Z,12nm,1.3s						
BDFB	Brasilia	40.24	117	LR	LR	20 52 13.8	
	comp=Z,95nm,18.6s,baz=318,slow=40						
SDCO	Great Sand Dun	40.27	334	P	P	20 33 13.7	+0.2
S22A	4UR Ranch, Cre	40.87	333	P	P	20 33 18.9	+0.5
MVCO	Mesa Verde	41.23	331	P	P	20 33 20.3	-1.1
ISCO	Idaho Springs	42.04	336	P	P	20 33 28.6	+0.5
SMCO	Snowmass	42.10	334	P	P	20 33 28.5	-0.2
PV13	Radium Mtn., P	42.13	331	P	P	20 33 29.5	+0.7
PV11	David Mesa, Pa	42.27	331	P	P	20 33 29.3	-0.5
ECSD	EROS Data Cent	42.73	347	P	P	20 33 33.3	+0.1
N23A	Red Feather La	43.10	336	P	P	20 33 36.7	+0.1
I62A	Tamworth	43.13	14	P	P	20 33 37.7	+1.2
SPMN	Marine on St.	43.46	352	P	P	20 33 39.0	-0.1
CCUT	Cedar City	44.03	327	P	P	20 33 45.2	+1.1
CCUT				IAmb	IAmb	20 33 47.6	
	comp=Z,8.4nm,1.1s						
F36A	Milaca	44.19	351	P	P	20 33 44.9	-0.1
F36A				IAmb	IAmb	20 33 52.7	
	comp=Z,15nm,1.3s						
RWWY	Rawlins	44.28	336	P	P	20 33 46.1	-0.1
RWWY				IAmb	IAmb	20 33 48.9	
	comp=Z,8.0nm,1.0s						
SHPR	Sheep Range	44.31	324	P	P	20 33 46.1	-0.3
SHPR				IAmb	IAmb	20 33 49.3	
	comp=Z,7.4nm,1.3s						
PLCA	Paso Flores	44.60	165	P	P	20 33 49.9	+1.5
	comp=Z,1.1nm,0.7s,baz=351,slow=13,SNR=2.3						
	comp=Z,1.1nm,0.7s						
PLCA	Paso Flores	44.60	165	P	P	20 33 48.6	+0.2
QSM	Queen of Sheba	44.98	322	P	P	20 33 51.6	+0.1
QSM				IAmb	IAmb	20 33 54.3	
	comp=Z,7.5nm,1.0s						
PSUT	Pine Spring	45.00	327	P	P	20 33 52.3	+0.4
HWUT	Hardware Ranch	46.15	332	P	P	20 34 00.9	+0.1
HWUT				IAmb	IAmb	20 34 02.6	
	comp=Z,4.4nm,0.8s						
PDAR	Pinedale Array	46.16	334	P	P	20 34 01.4	+0.4
	comp=Z,1.1nm,0.8s,baz=134,slow=10,SNR=6.1						
PDAR				PcP	PcP	20 35 36.3	-0.6
	comp=Z,0.6nm,0.8s,baz=100,slow=4.7,SNR=2.7						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	46.16	334	P	P	20 34 01.2	+0.1
TPH	Tonopah	46.59	324	P	P	20 34 04.5	+0.1
REDW	Red Top Meadow	47.20	334	P	P	20 34 09.5	+0.3
REDW				IAmb	IAmb	20 34 17.2	
	comp=Z,6.9nm,1.1s						
ELK	Elko	47.34	328	P	P	20 34 10.9	+0.7
ELK				IAmb	IAmb	20 34 18.8	
	comp=Z,3.9nm,1.1s						
OMMB	Old Mammoth Mi	47.35	322	P	P	20 34 11.7	+1.2
OMMB				IAmb	IAmb	20 34 13.2	
	comp=Z,6.4nm,1.2s						
NV11	Mina Array Sit	47.37	324	P	P	20 34 11.2	+0.7
NV11				IAmb	IAmb	20 34 20.3	
	comp=Z,7.7nm,1.3s						
NVAR	Mina Array Bea	47.46	324	P	P	20 34 12.6	+1.4
	comp=Z,1.9nm,0.9s,baz=129,slow=7.6,SNR=9.6						
NVAR				PcP	PcP	20 35 41.8	+0.2
	comp=Z,1.1nm,0.8s,baz=160,slow=7.0,SNR=4.1						
	comp=Z,1.9nm,0.9s						
NVAR	Mina Array Bea	47.46	324	P	P	20 34 12.0	+0.8
NVAR				PcP	PcP	20 35 41.1	-0.5
KVN	Kaiserville	47.75	324	P	P	20 34 14.2	+0.7
ULM	Lac du Bonnet	48.84	350	P	P	20 34 21.4	0.0
	comp=Z,4.6nm,0.8s,baz=142,slow=5.1,SNR=3.9						
	comp=Z,4.6nm,0.8s						
ULM	Lac du Bonnet	48.84	350	P	P	20 34 20.8	-0.6
RUBR	Rubicon Trail	48.96	323	P	P	20 34 23.1	+0.2
HLID	Hailey	48.99	331	P	P	20 34 23.3	+0.3
BOZ	Bozeman (W)	49.32	335	P	P	20 34 25.3	-0.1
WVOR	Wild Horse Val	50.34	327	P	P	20 34 33.0	-0.2
WVOR				IAmb	IAmb	20 34 41.3	
	comp=Z,10nm,1.2s						
WALA	Waterton Lakes	53.02	336	P	P	20 34 52.0	-1.1
WALA				IAmb	IAmb	20 34 55.2	
	comp=Z,8.0nm,1.1s						
YKA	Yellowknife Ar	64.19	345	P	P	20 36 10.1	-0.5
	comp=Z,2.7nm,0.9s,baz=140,slow=6.9,SNR=20						
	comp=Z,2.7nm,0.9s						
YKA	Yellowknife Ar	64.19	345	P	P	20 36 09.6	-0.9
DLBC	Dease Lake	66.36	336	P	P	20 36 25.4	+0.6
	comp=Z,3.9nm,0.9s,baz=138,slow=6.2,SNR=4.9						
	comp=Z,3.9nm,0.9s						
DLBC	Dease Lake	66.36	336	P	P	20 36 23.6	-1.2
I29M	Ogilvie Camp,	73.61	339	P	P	20 37 08.6	-0.6
I29M				IAmb	IAmb	20 37 11.0	
	comp=Z,6.4nm,1.1s						
BCAR	Beaver Creek A	73.73	336	P	P	20 37 10.7	+0.7
INK	Inuvik	73.79	343	P	P	20 37 10.3	+0.3
	comp=Z,4.1nm,1.0s,baz=108,slow=5.4,SNR=5.4						
	comp=Z,4.1nm,1.0s						
INK	Inuvik	73.79	343	P	P	20 37 10.6	+0.5
INK				IAmb	IAmb	20 37 12.1	
	comp=Z,6.2nm,1.1s						
K27K	Chicken	74.31	337	P	P	20 37 13.7	+0.4
K27K				IAmb	IAmb	20 37 16.9	
	comp=Z,9.7nm,1.3s						
PAX	Paxson	75.18	336	P	P	20 37 16.3	-2.1
PAX				IAmb	IAmb	20 37 20.1	
	comp=Z,8.7nm,1.1s						
J25K	Salcha River,	75.85	337	P	P	20 37 21.4	-0.8
J25K				IAmb	IAmb	20 37 23.6	
	comp=Z,7.8nm,1.3s						
ILAR	Eielson Array	76.51	337	P	P	20 37 26.3	+0.4
	comp=Z,2.5nm,1.0s,baz=127,slow=4.1,SNR=15						
	comp=Z,2.5nm,1.0s						
ILAR	Eielson Array	76.51	337	P	P	20 37 25.5	-0.4
BMAR	Burnt Mountain	76.83	340	P	P	20 37 28.2	+0.5
NEA2	Nenana	77.30	336	P	P	20 37 30.8	+0.4
NEA2				IAmb	IAmb	20 37 31.8	
	comp=Z,6.9nm,1.1s						
H24K	Noodor Dome	77.33	338	P	P	20 37 30.4	-0.2
H24K				IAmb	IAmb	20 37 32.5	
	comp=Z,8.6nm,1.2s						
CAST	Castle Rocks	78.12	335	P	P	20 37 33.7	-1.3
CAST				IAmb	IAmb	20 37 43.0	
	comp=Z,10nm,1.4s						
I21K	Tanana	78.67	337	P	P	20 37 36.3	-1.7
I21K				IAmb	IAmb	20 37 46.3	
	comp=Z,12nm,1.5s						
COLD	Coldfoot	78.73	339	P	P	20 37 37.1	-1.1
COLD				IAmb	IAmb	20 37 40.8	
	comp=Z,6.3nm,1.2s						
K20K	Telida	78.95	335	P	P	20 37 38.8	-0.8
J20K	Nowinta River	79.23	335	P	P	20 37 40.3	-0.7
J20K				IAmb	IAmb	20 37 42.3	
	comp=Z,11nm,1.3s						
ESDC	Sonseca Array	81.36	50	P	P	20 37 52.7	-0.4
	comp=Z,1.2nm,1.1s,baz=272,slow=4.6,SNR=2.5						
	comp=Z,1.2nm,1.1s						
JMIC	Jan Mayen	83.40	19	LR	LR	21 12 53.8	
	comp=Z,23nm,21.8s,baz=174,slow=34						
SNAA	Sanae	89.46	162	LR	LR	21 11 31.9	
	comp=Z,55nm,20.3s,baz=224,slow=31						
SPITS	Spitsbergen Ar	90.10	12	LR	LR	21 20 08.5	
	comp=Z,173nm,18.6s,baz=30,slow=36						
DAVOX	Davos/Dischmat	91.46	43	LR	LR	21 16 58.0	
	comp=Z,24nm,18.4s,baz=260,slow=34						
HFS	Hagfors	92.22	30	LR	LR	21 13 39.7	
	comp=Z,28nm,20.9s,baz=286,slow=31						
QSPA	South Pole Qui	92.23	180	LR	LR	21 12 53.2	
	comp=Z,109nm,18.0s,baz=34,slow=31						
GERES	GERESS Array B	93.80	41	LR	LR	21 13 09.9	
	comp=Z,35nm,21.0s,baz=272,slow=30						
VRAC	Vranov	95.61	40	LR	LR	21 16 27.6	
	comp=Z,50nm,18.9s,baz=278,slow=32						
VNDA	Vanda	97.13	192	LR	LR	21 17 36.9	
	comp=Z,32nm,18.0s,baz=21,slow=32						
FINES	FINESS Array B	97.81	27	LR	LR	21 23 35.7	
	comp=Z,34nm,18.3s,baz=271,slow=36						
SONM	Songino Array	129.26	350	PKP	PKPdf	20 44 42.9	-2.1
	comp=Z,0.4nm,0.6s,baz=22,slow=1.6,SNR=2.0						
MKAR	Makanchi Array	129.86	12	PKP	PKPdf	20 44 44.4	-1.6
	comp=Z,0.5nm,0.9s,baz=180,slow=2.1,SNR=3.8						
MKAR	Makanchi Array	129.86	12		PKPdf	20 44 43.8	-2.2
ASAR	Alice Springs	137.11	237	PKP	PKPdf	20 44 59.5	-0.8
	comp=Z,0.7nm,1.0s,baz=113,slow=2.4,SNR=3.2						
WRA	Warramunga Arr	138.12	242	PKP	PKPdf	20 45 01.3	-0.9
	comp=Z,0.7nm,0.9s,baz=100,slow=2.5,SNR=3.1						
CMAR	Chiang Mai Arr	159.19	351	PKPab	PKPab	20 46 11.7	-0.4
	comp=Z,0.4nm,0.6s,baz=339,slow=4.1,SNR=4.7						
CMAR	Chiang Mai Arr	159.19	351	PKPdf	PKPdf	20 45 34.3	-1.2

*IDC **03** 20:26:57.6±0.8, 40°.28N × 77°.73E, h0^{km}, mb3.8/15, mbtmp3.8/20, ML3.4/5, MS3.0/5, Error ellipse: s-maj=15.5km s-min=15.0km az=47.0*

*MOS **03** 20:27:00.5±1.1, 40°.25N × 77°.79E, h33^{km}, mb3.9/5, Error ellipse: s-maj=6.8km s-min=4.2km az=110.8*

*SOME **03** 20:27:00.4, 40°.60N × 77°.28E, h5^{km}, MS3.6*

*BJI **03** 20:27:00.0±0.0, 40°.42N × 77°.62E, h7^{km}, mb4.0/16, mB4.3/8, ML4.0/7, Ms3.8/6, Ms7 3.5/6*

*KRNET **03** 20:27:01.2±0.1, 40°.61N × 77°.63E, mb4.6*

*NNC **03** 20:27:03.6±0.7, 40°.58N × 77°.59E, h0^{km}, mb5.0, mpv4.7, Error ellipse: s-maj=5.1km s-min=4.0km az=161.0*

*NEIC **03** 20:27:03.3±2.4, 40°.42N±0°.05 × 77°.74E±0°.08, h35^{km}±6^{km}, mb4.1/22, Error ellipse: s-maj=9.6km s-min=7.2km az=121.0*

ISC 03 20:26:58.6±1.3, 40°.41N±0°.03 × 77°.76E±0°.03, h4^{km}±8^{km}, n249, σ1^{s}.91/295, mb4.0/26, MS3.0/3, 36C-28D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.31	1		Pn	20 27 23.2	-0.9
TARG				Sn	Sg	20 27 40.5	-0.4
KSH	Kashi	1.64	237	Pn	Pg	20 27 36.8	+6.8
KSH				Sn	Sg	20 28 05.4	+14
KSH				smax	smax		
	comp=N,2μm,0.9s						
KSH				smax	smax		
	comp=E,6μm,0.7s						
KDJ	Kajisay	1.77	346	i PN	Pn	20 27 30.5	+0.3
KDJ	Kajisay	1.77	346		Pn	20 27 30.8	+0.6
KDJ				Sn	Sn	20 27 50.7	-2.5
KDJ	Kajisay	1.77	346	⇓iP	Pn	20 27 30.5	+0.3
	baz=48						
KDJ				⇓iS	Sn	20 27 51.8	-1.4
	baz=48						
PRZ	Przheval'sk	2.12	13	PN	Pb	20 27 37.6	-0.1
PRZ						20 28 05.5	
PRZ	Przheval'sk	2.12	13		Pb	20 27 37.6	-0.1
PRZ				Sn	Sb	20 28 05.5	+1.0
PRZ	Przheval'sk	2.12	13	⇑iP	Pb	20 27 37.7	-0.1
	baz=17						
PRZ				⇑iS	Sb	20 28 04.6	+0.1
	baz=17						
ULHL	Ulahol	2.16	329	P	Pn	20 27 37.2	+1.7
	SNR=359						
ULHL	Ulahol	2.16	329	i PN	Pn	20 27 37.2	+1.7
ULHL	Ulahol	2.16	329	⇓iP	Pn	20 27 37.2	+1.7
	baz=28						
ULHL				⇓iS	Sn	20 28 03.2	+0.4
	baz=28						
ANVS	Anan'yevo	2.37	358	⇑iP	Pb	20 27 40.7	-1.2
	baz=1.0						
ANVS				⇑iS	Sn	20 28 09.0	+1.0
	baz=1.0						
BOOM	Boomskoye usch	2.48	327	PN	Pn	20 27 42.7	+2.7
BOOM						20 28 14.3	
BOOM	Boomskoye usch	2.48	327		Pn	20 27 42.7	+2.7
BOOM				Sn	Sn	20 28 14.3	+3.4
BOOM	Boomskoye usch	2.48	327	⇑iP	Pn	20 27 41.8	+1.8
	baz=27						
BOOM				⇑iS	Sn	20 28 11.6	+0.8
	baz=27						
SATY	Saty	2.69	10	i PN	Pb	20 27 46.3	-1.0
SATY				e		20 28 24.5	
SATY	Saty	2.69	10	eP	Pb	20 27 48.7	+1.4
	378nm,1.0s						
SATY				eS	Sg	20 28 23.9	-1.0
	1μm,0.5s						
SATY	Saty	2.69	10	i Pb	Pb	20 27 46.3	-1.0
	baz=14						
SATY				i Pg	Pg	20 27 48.9	-1.2
	baz=14						
SATY				eLg	Lg	20 28 24.5	
	baz=14						
SATY	Saty	2.69	10	Pg	Pg	20 27 50.1	0.0
	378nm,1.0s						
SATY				Lg	Lg	20 28 23.9	
	1μm,0.5s						
TNSS	Tian-Shan	2.69	347	i PN	Pb	20 27 46.0	-1.5
TNSS				e		20 28 22.7	
TNSS	Tian-Shan	2.69	347	eP	Pb	20 27 49.0	+1.5
	525nm,0.5s						
TNSS				eS	Sb	20 28 23.3	+2.2
	1μm,0.0s						
TNSS	Tian-Shan	2.69	347	i Pb	Pb	20 27 46.0	-1.5
	baz=350						
TNSS				i Pg	Pg	20 27 47.9	-2.3
	baz=350						
TNSS				eLg	Lg	20 28 22.8	
	baz=350						
TNSS	Tian-Shan	2.69	347	Pg	Pg	20 27 50.1	-0.1

	525nm,0.5s						
TNSS				Lg	Lg	20 28 23.9	
	1µm,0.0s						
MDOK	Medeo	2.80	349	i PN	Pb	20 27 47.4	-1.8
MDOK				e		20 28 26.7	
MDOK	Medeo	2.80	349	eP	Pb	20 27 50.8	+1.6
	764nm,0.5s						
MDOK				eS	Sb	20 28 26.6	+2.7
	5µm,0.6s						
MDOK	Medeo	2.80	349	i Pb	Pb	20 27 47.4	-1.8
	baz=352						
MDOK				i Pg	Pg	20 27 49.2	-3.0
	baz=352						
MDOK				eLg	Lg	20 28 26.7	
	baz=352						
MDOK	Medeo	2.80	349	⇑Pn	Pb	20 27 47.5	-1.8
	654nm,0.6s						
MDOK				⇑Lg	Lg	20 28 26.9	
	2µm,0.6s						
MDOK	Medeo	2.80	349	Pg	Pg	20 27 52.3	+0.1
	764nm,0.5s						
MDOK				Lg	Lg	20 28 27.6	
	5µm,0.6s						
ZHN	Zhinishke	2.80	10	i PN	Pb	20 27 48.1	-1.1
ZHN				e		20 28 28.1	
ZHN	Zhinishke	2.80	10	eP	Pg	20 27 51.8	-0.4
	160nm,0.5s						
ZHN				eS	Sg	20 28 28.1	-0.4
	2µm,0.3s						
ZHN	Zhinishke	2.80	10	i Pb	Pb	20 27 48.2	-1.1
	baz=13						
ZHN				ePg	Pg	20 27 50.3	-1.9
	baz=13						
ZHN				eLg	Lg	20 28 28.1	
	baz=13						
ZHN	Zhinishke	2.80	10	Pg	Pg	20 27 52.6	+0.4
	160nm,0.5s						
ZHN				Lg	Lg	20 28 28.1	
	2µm,0.3s						
KOTS	Kotyrbulak	2.86	350	eP	Pb	20 27 52.6	+2.3
	697nm,0.5s						
KOTS				eS	Sg	20 28 30.1	-0.4
	5µm,0.5s						
KOTS	Kotyrbulak	2.86	350	Pg	Pg	20 27 53.9	+0.5
	697nm,0.5s						
KOTS				Lg	Lg	20 28 30.1	
	5µm,0.5s						
AAA	Alma-Ata	2.86	348	i PN	Pb	20 27 49.0	-1.3
AAA				i		20 28 28.8	
AAA	Alma-Ata	2.86	348	eP	Pb	20 27 51.6	+1.3
	1µm,0.4s						
AAA				eS	Sb	20 28 28.5	+2.8
	5µm,0.5s						
AAA	Alma-Ata	2.86	348	i Pb	Pb	20 27 49.0	-1.3
	baz=350						
AAA				i Pg	Pg	20 27 51.1	-2.4
	baz=350						
AAA				i Lg	Lg	20 28 28.8	
	baz=350						
AAA	Alma-Ata	2.86	348	Pg	Pg	20 27 53.8	+0.3
	1µm,0.6s						
AAA				Lg	Lg	20 28 30.0	
	5µm,0.5s						
KNDC	Almaty	2.86	348	⇑Pn	Pb	20 27 48.8	-1.4
	1µm,0.7s						
KNDC				⇑Lg	Lg	20 28 29.6	
	9µm,0.7s						
UZB	Uzynbulak	2.89	19	i PN	Pg	20 27 52.6	-1.3
UZB				i		20 28 31.8	
UZB	Uzynbulak	2.89	19	eP	Pg	20 27 53.1	-0.9
	118nm,0.0s						
UZB				eS	Sg	20 28 31.8	+0.3
	903nm,0.9s						
UZB	Uzynbulak	2.89	19	i Pg	Pg	20 27 52.7	-1.3
	baz=22						
UZB				i Lg	Lg	20 28 31.8	
	baz=22						
UZB	Uzynbulak	2.89	19	Pg	Pg	20 27 54.8	+0.8
	118nm,0.0s						
UZB				Lg	Lg	20 28 31.8	
	903nm,0.9s						
MTBS	Maitube	2.89	340	eP	Pb	20 27 52.5	+1.7
	308nm,0.4s						
MTBS				eS	Sb	20 28 29.4	+2.9
	2µm,0.4s						
MTBS	Maitube	2.89	340	Pg	Pb	20 27 53.3	+2.5
	307nm,0.4s						
MTBS				Lg	Lg	20 28 29.4	
	2µm,0.4s						
KST	Kastek	2.95	333	eP	Pb	20 27 53.1	+1.2
	157nm,0.3s						
KST				eS	Sb	20 28 31.2	+2.9
	1µm,0.6s						
KST	Kastek	2.95	333	Pg	Pb	20 27 54.4	+2.6
	157nm,0.3s						
KST				Lg	Lg	20 28 31.2	
	1µm,0.6s						
ARLS	Aral	2.97	300	i PN	Pn	20 27 48.9	+2.2
ARLS	Aral	2.97	300	⇑iP	Pn	20 27 48.9	+2.2
	baz=98						
ARLS				⇑iS	Sn	20 28 24.0	+1.2
	baz=98						
TKM2	Tokmak 2	2.98	328	P	Pn	20 27 49.7	+2.9
	SNR=199						
TKM2	Tokmak 2	2.98	328	i PN	Pn	20 27 49.8	+2.9
TKM2				pmax	pmax		
	comp=Z,221nm,0.6s						
TKM2	Tokmak 2	2.98	328	⇓Pn	Pn	20 27 49.6	+2.9
	comp=Z,221nm,0.7s						
TKM2				⇓Lg	Lg	20 28 31.0	
	comp=Z,642nm,0.7s						
TKM2	Tokmak 2	2.98	328	⇑eP	Pn	20 27 48.5	+1.6
	baz=27						
TKM2				⇑iS	Sn	20 28 23.0	-0.2
	baz=27						
UCH	Uchtor	3.04	308	P	Pn	20 27 50.0	+2.1
	SNR=88						
UCH	Uchtor	3.04	308	i PN	Pn	20 27 49.9	+2.0
UCH	Uchtor	3.04	308	⇓eP	Pn	20 27 49.9	+2.0
	baz=6.0						
UCH				⇓iS	Sn	20 28 25.5	+0.5
	baz=6.0						
KBK	Karagaybulak	3.08	318	P	Pn	20 27 51.2	+3.1
	SNR=285						
KBK	Karagaybulak	3.08	318	i PN	Pn	20 27 50.0	+1.9
KBK	Karagaybulak	3.08	318	⇓iP	Pn	20 27 50.0	+1.9
	baz=16						
KBK				⇓iS	Sn	20 28 25.3	-0.2
	baz=16						
KURS	Kuram	3.09	6	eP	Pb	20 27 55.5	+1.5
	comp=Z,162nm,0.7s						
KURS				eS	Sb	20 28 35.5	+3.3
	comp=Z,934nm,0.6s						
KURS	Kuram	3.09	6	Pg	Pg	20 27 58.3	+0.5
	comp=Z,162nm,0.7s						
KURS				Lg	Lg	20 28 37.0	
	comp=Z,934nm,0.6s						
KPKS	Kokpek	3.13	12	i PN	Pb	20 27 56.4	+1.7
KPKS				i		20 28 38.8	
KPKS	Kokpek	3.13	12	eP	Pg	20 27 57.4	-1.1
	comp=Z,307nm,0.4s						
KPKS				eS	Sg	20 28 38.5	-0.5
	comp=Z,3µm,0.7s						
KPKS	Kokpek	3.13	12	i Pg	Pb	20 27 56.5	+1.7
	baz=15						
KPKS				i Lg	Lg	20 28 38.8	
	baz=15						
PDGK	Podgornoye	3.19	23	Pg	Pg	20 28 00.1	+0.4
	comp=Z,93nm,0.5s						
PDGK				Lg	Lg	20 28 40.8	
	comp=Z,797nm,0.6s						
PDGK	Podgornoye	3.19	23	⇓Pn	Pb	20 27 53.1	-2.7
	comp=Z,145nm,0.6s						
PDGK				⇓Lg	Lg	20 28 40.3	
	comp=Z,1µm,0.9s						
DGS	Degeres	3.19	333	eP	Pb	20 27 56.7	+0.7
	comp=Z,467nm,0.5s						
DGS				eS	Sb	20 28 38.0	+2.8
	comp=Z,773nm,0.5s						
DGS	Degeres	3.19	333	Pg	Pb	20 27 58.8	+2.9
	comp=Z,467nm,0.5s						
DGS				Lg	Lg	20 28 38.7	
	comp=Z,773nm,0.5s						
AAK	Ala-Archa	3.31	313	P	Pn	20 27 54.1	+2.8
	SNR=11						
AAK	Ala-Archa	3.31	313	Pn	Pn	20 27 54.1	+2.8
	comp=Z,16nm,0.3s,baz=138,slow=9.0,SNR=52						
AAK				LR	LR	20 28 34.1	
	comp=Z,52nm,21.6s,baz=156,slow=28						
AAK				Lg	Lg	20 28 39.0	
	comp=Z,69nm,0.3s,baz=303,slow=17,SNR=26						
	comp=Z,176nm,0.4s						
AAK	Ala-Archa	3.31	313c	iPN	Pn	20 27 53.9	+2.6
AAK				pmax	pmax		
	comp=Z,168nm,0.7s						
AAK	Ala-Archa	3.31	313		Pn	20 27 53.9	+2.6
AAK	Ala-Archa	3.31	313	⇓iP	Pn	20 27 53.3	+2.0
	baz=12						
AAK				⇓iS	Sn	20 28 31.5	+0.4
	baz=12						
FRU1	Bishkek	3.35	317	PN	Pn	20 27 55.1	+3.3
FRU1	Bishkek	3.35	317		Pn	20 27 55.1	+3.3
FRU1	Bishkek	3.35	317	⇓iP	Pn	20 27 54.0	+2.2
	baz=15						
FRU1				⇓iS	Sn	20 28 32.5	+0.4
	baz=15						
KTBS	Karatobe	3.39	347	eP	Pb	20 28 00.5	+1.2
	comp=Z,255nm,0.5s						
KTBS				eS	Sb	20 28 43.6	+2.7
	comp=Z,1µm,0.5s						
KTBS	Karatobe	3.39	347	Pg	Pb	20 28 01.6	+2.4
	comp=Z,255nm,0.5s						
KTBS				Lg	Lg	20 28 43.6	
	comp=Z,1µm,0.5s						
CHMS	Chumysh	3.43	320	P	Pn	20 27 55.6	+2.8
	SNR=32						
CHMS	Chumysh	3.43	320	i PN	Pn	20 27 55.6	+2.8
CHMS				pmax	pmax		
	comp=Z,178nm,0.4s						
CHMS	Chumysh	3.43	320	⇑Pn	Pn	20 27 55.0	+2.2
	comp=Z,245nm,0.6s						
CHMS				⇑Lg	Lg	20 28 44.3	
	comp=Z,240nm,0.6s						
CHMS	Chumysh	3.43	320	⇑iP	Pn	20 27 54.7	+1.9
	baz=19						
CHMS				⇑iS	Sn	20 28 33.9	0.0
	baz=19						
CHKK	Chushkaly	3.48	351	ePN	Pb	20 28 01.5	+0.7
CHKK				e		20 28 47.7	
CHKK	Chushkaly	3.48	351	eP	Pb	20 28 02.4	+1.5
	comp=Z,314nm,0.5s						
CHKK				eS	Sb	20 28 46.6	+3.1
	comp=Z,1µm,0.6s						
CHKK	Chushkaly	3.48	351	ePg	Pb	20 28 01.6	+0.7
	baz=353						
CHKK				eLg	Lg	20 28 47.8	
	baz=353						
CHKK	Chushkaly	3.48	351	Pg	Pg	20 28 04.3	-1.0
	comp=Z,314nm,0.5s						
CHKK				Lg	Lg	20 28 47.9	
	comp=Z,1µm,0.6s						
AML	Almayashu	3.51	301	P	Pn	20 27 56.6	+2.3
	SNR=74						
AML	Almayashu	3.51	301	i PN	Pn	20 27 56.4	+2.1
KTMS	Ketmen	3.59	32	eP	Pg	20 28 08.2	+0.7
	comp=Z,21nm,0.1s						
KTMS				eS	Sg	20 28 56.7	+2.6
	comp=Z,295nm,0.5s						
KTMS	Ketmen	3.59	32	Pg	Pg	20 28 09.2	+1.7
	comp=Z,21nm,0.1s						
KTMS				Lg	Lg	20 28 56.7	
	comp=Z,295nm,0.5s						
KRBS	Karabastau	3.63	335	eP	Pb	20 28 03.9	+0.5
	comp=Z,117nm,0.5s						
KRBS				eS	Sb	20 28 49.5	+1.8
	comp=Z,500nm,0.6s						
KRBS	Karabastau	3.63	335	Pg	Pb	20 28 05.6	+2.3
	comp=Z,141nm,0.3s						
KRBS				Lg	Lg	20 28 50.1	
	comp=Z,500nm,0.6s						
KUU	Kurty	3.63	344	i PN	Pb	20 28 04.0	+0.6
KUU				e		20 28 51.3	
KUU	Kurty	3.63	344	eP	Pb	20 28 03.9	+0.5
	comp=Z,48nm,1.1s						
KUU				eS	Sb	20 28 50.3	+2.5
	comp=Z,596nm,0.9s						
KUU	Kurty	3.63	344	i Pg	Pb	20 28 04.0	+0.6
	baz=346						
KUU				eLg	Lg	20 28 51.3	
	baz=346						
KUU	Kurty	3.63	344	Pg	Pb	20 28 06.2	+2.8
	comp=Z,79nm,0.3s						
KUU				Lg	Lg	20 28 51.2	
	comp=Z,596nm,0.9s						
BLB	Baldybastay	3.72	8	eP	Pb	20 28 07.5	+2.6
	comp=Z,131nm,0.6s						
BLB				eS	Sg	20 28 55.4	-2.6
	comp=Z,2µm,0.4s						
BLB	Baldybastay	3.72	8	Pg	Pg	20 28 08.9	-1.0
	comp=Z,275nm,0.8s						
BLB				Lg	Lg	20 28 55.4	
	comp=Z,2µm,0.4s						
EKS2	Erkin-Say	3.74	308	P	Pn	20 28 00.2	+3.1
	SNR=109						
EKS2	Erkin-Say	3.74	308	i PN	Pn	20 27 59.2	+2.0
EKS2	Erkin-Say	3.74	308	⇓iP	Pn	20 27 59.2	+2.0
	baz=7.0						
EKS2				⇓iS	Sn	20 28 41.4	-0.3
	baz=7.0						
USP	Ospenovka	3.75	321	P	Pn	20 28 01.1	+3.8
	SNR=7.0						
USP	Ospenovka	3.75	321	i PN	Pn	20 27 58.9	+1.7
USP	Ospenovka	3.75	321	⇑iP	Pn	20 27 58.9	+1.7
	baz=20						
USP				⇑iS	Sn	20 28 41.4	-0.4
	baz=20						
SGDS	Sogindy	3.83	323	ePN	Pb	20 28 06.6	-0.1
SGDS				i		20 28 56.7	
SGDS	Sogindy	3.83	323	eP	Pb	20 28 07.0	+0.2
	comp=Z,382nm,0.6s						
SGDS				eS	Sb	20 28 55.4	+1.9
	comp=Z,297nm,0.6s						
SGDS	Sogindy	3.83	323	ePg	Pb	20 28 06.6	-0.1
	baz=324						
SGDS				i Lg	Lg	20 28 56.8	
	baz=324						
SGDS	Sogindy	3.83	323	Pg	Pb	20 28 09.2	+2.4
	comp=Z,295nm,0.7s						
SGDS				Lg	Lg	20 28 56.4	
	comp=Z,297nm,0.6s						
MRKS	Merke	4.12	306	eP	Pb	20 28 11.6	-0.1
	comp=Z,85nm,0.8s						
MRKS				eS	Sb	20 29 05.0	+3.1
	comp=Z,131nm,0.6s						
MRKS	Merke	4.12	306	Pg	Pg	20 28 16.2	-1.4
	comp=Z,85nm,0.8s						
MRKS				Lg	Lg	20 29 08.8	
	comp=Z,131nm,0.6s						
DJR	Jarkent	4.19	20	eP	Pg	20 28 17.2	-1.8
	comp=Z,64nm,0.4s						
DJR				eS	Sg	20 29 11.7	-1.6
	comp=Z,244nm,0.6s						
DJR	Jarkent	4.19	20	Pg	Pg	20 28 18.1	-0.8
	comp=Z,64nm,0.4s						
DJR				Lg	Lg	20 29 11.7	
	comp=Z,244nm,0.6s						
ARK	Arkit	4.59	289	i PN	Pn	20 28 11.9	+3.0
ARK	Arkit	4.59	289	⇑iP	Pn	20 28 11.9	+3.0
	baz=87						
ARK				⇑iS	Sn	20 29 03.5	+0.8
	baz=87						
TDK	Taldyqorghan	4.61	6	ePN	Pg	20 28 24.9	-2.0
TDK	Taldyqorghan	4.61	6	ePg	Pg	20 28 24.9	-2.0
	baz=7.6						
DRK	Karamyk	4.67	260	Pn	Pn	20 28 12.2	+2.0
KAPS	Kapalarasan	5.01	13	eP	Pg	20 28 31.7	-2.8
	comp=Z,42nm,0.6s						
KAPS				eS	Sg	20 29 37.5	-1.9
	comp=Z,231nm,0.6s						
KAPS	Kapalarasan	5.01	13	Pg	Pg	20 28 33.9	-0.6
	comp=Z,42nm,0.6s						
KAPS				Lg	Lg	20 29 39.2	
	comp=Z,231nm,0.6s						
BTK	Batken	5.33	268	PN	Pn	20 28 20.6	+1.7
BTK	Batken	5.33	268	Pn	Pn	20 28 20.6	+1.7
BTLS	Baital	5.37	331	ePN	Pb	20 28 34.9	+1.9
BTLS	Baital	5.37	331	eP	Pb	20 28 35.5	+2.5
	comp=Z,44nm,0.5s						
BTLS				eS	Sb	20 29 43.6	+5.9
	comp=Z,133nm,0.6s						
BTLS	Baital	5.37	331	ePg	Pb	20 28 34.1	+1.1
	baz=332						
BTLS	Baital	5.37	331	Pg	Pb	20 28 37.1	+4.1
	comp=Z,44nm,0.5s						
BTLS				Lg	Lg	20 29 44.3	
	comp=Z,133nm,0.6s						
GAR	Garm	5.91	259		Pn	20 28 28.6	+1.6
KK31	Karatay Array	6.05	299	PN	Pn	20 28 29.8	+1.0
KK31	Karatay Array	6.05	299		Pn	20 28 29.8	+1.0
KK31	Karatay Array	6.05	299	Pn	Pn	20 28 29.6	+0.8
	comp=Z,0.5nm,0.3s,baz=115,slow=12,SNR=20						
KK31				⇓Pg	Pb	20 28 49.0	+4.5
	comp=Z,27nm,0.8s,baz=113,slow=15,SNR=28						
KK31				⇓Lg	Lg	20 30 10.3	
	comp=Z,23nm,0.5s,baz=116,slow=26,SNR=5.7						
KKAR	Karatay Array	6.05	299	PN	Pn	20 28 29.8	+1.0
KKAR	Karatay Array	6.05	299		Pn	20 28 29.8	+1.0
IUG	Iuzhnay	6.07	289	i PN	Pn	20 28 31.0	+1.8
IUG				i		20 30 08.0	
IUG	Iuzhnay	6.07	289	i Pn	Pn	20 28 31.1	+1.8
	baz=289						
IUG				ePg	Pb	20 28 48.3	+3.3
	baz=289						
IUG				i Lg	Lg	20 30 08.1	
	baz=289						
BRLS	Borolday	6.48	296	Pg	Pg	20 28 59.6	-3.1
	comp=Z,12nm,0.1s						
BRLS				Lg	Lg	20 30 23.1	
	comp=Z,44nm,0.7s						
TAS	Tashkent	6.48	281	PN	Pn	20 28 36.0	+1.3
TAS	Tashkent	6.48	281	Pn	Pn	20 28 36.0	+1.3
CHGR	Chuyangaron	6.88	258	PN	Pn	20 28 40.5	+0.2
CHGR	Chuyangaron	6.88	258		Pn	20 28 40.5	+0.2
MAKZ	Makanchi	7.08	24	P	Pn	20 28 45.4	+2.4
MAKZ	Makanchi	7.08	24		Pn	20 28 45.4	+2.4
MAKZ	Makanchi	7.08	24	⇓Pn	Pn	20 28 45.9	+2.8
	comp=Z,9.2nm,0.8s						
MAKZ				⇑Lg	Lg	20 30 46.1	
	comp=Z,65nm,1.1s						
MK31	Makanchi Array	7.17	26d	iP	Pn	20 28 46.4	+2.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK31	Makanchi Array	7.17	26		Pn	20 28 45.9	+1.6
MK31	Makanchi Array	7.17	26	⇓Pn	Pn	20 28 46.7	+2.5
	comp=Z,2.1nm,0.4s,baz=207,slow=13,SNR=90						
MK31				⇑Pg	Pg	20 29 11.6	-4.4
	comp=Z,7.0nm,0.6s,baz=214,slow=14,SNR=3.9						
MK31				⇑Sn	Sn	20 30 09.4	+3.2
	comp=Z,6.3nm,0.5s						
MK31				⇑Lg	Lg	20 30 47.7	
	comp=Z,31nm,0.7s,baz=207,slow=26,SNR=4.7						
MKAR	Makanchi Array	7.17	26	Pn	Pn	20 28 46.7	+2.5
	comp=Z,1.2nm,0.3s,baz=202,slow=15,SNR=51						
MKAR				Sn	Sn	20 30 07.3	+1.1
	comp=Z,2.5nm,0.3s,baz=202,slow=24,SNR=4.6						
MKAR				Lg	Lg	20 30 45.9	
	comp=Z,3.4nm,0.3s,baz=197,slow=30,SNR=6.9						
MKAR				LR	LR	20 31 14.6	
	comp=Z,60nm,19.4s,baz=204,slow=35						
	comp=Z,1.5nm,0.3s						
MKAR	Makanchi Array	7.17	26	P	Pn	20 28 46.4	+2.1
MKAR	Makanchi Array	7.17	26		Pn	20 28 46.4	+2.1
CHCP	Chirah Chowk	7.64	209	P	Pn	20 28 53.6	+2.9
NIL	Nilore	7.65	209	P	Pn	20 28 53.0	+2.1
NIL	Nilore	7.65	209	Pn	Pn	20 28 53.0	+2.1
CEP	Cherat	8.07	217	P	Pn	20 28 58.3	+1.7
WMQ	Urumqi	8.13	62	eP	Pn	20 29 02.8	+5.4
WMQ				S	Sn	20 30 35.5	+5.7
WMQ				smax	smax		
	comp=Z,34nm,1.1s						
WMQ				smax	smax		
	comp=Z,41nm,1.1s						
ZSN	Zaisan	8.70	34	eP	Pn	20 29 06.7	+1.6
ZSN	Zaisan	8.70	34	ePn	Pn	20 29 06.8	+1.6
	baz=35						
OTUK	Ortayu	8.74	335	⇑Pg	Pg	20 29 38.8	-7.0
	comp=Z,7.3nm,0.6s						
OTUK				⇓Lg	Lg	20 31 33.8	
	comp=Z,59nm,0.8s						
THW	Thamme Wali	9.01	214	P	Pn	20 29 10.5	+1.0
KBL	Kabul	9.07	233	P	Pn	20 29 10.3	-0.2
KBL	Kabul	9.07	233	Pn	Pn	20 29 10.3	-0.2
KURBB	Kurchatov Arra	10.22	3	Pn	Pn	20 29 27.2	+1.2
	comp=Z,0.1nm,0.3s,baz=194,slow=12,SNR=16						
KURBB				Lg	Lg	20 32 21.1	
	comp=Z,0.4nm,0.3s,baz=183,slow=28,SNR=4.3						
KURBB				LR	LR	20 33 38.0	
	comp=Z,130nm,21.2s,baz=198,slow=39						
	comp=Z,1.7nm,0.6s						
KURBB	Kurchatov Arra	10.22	3	⇓Pn	Pn	20 29 27.1	+1.2
	comp=Z,7.7nm,0.8s						
KURBB				⇓Lg	Lg	20 32 23.5	
	comp=Z,106nm,0.8s						
KURK	Kurchatov	10.32	3c	eP	Pn	20 29 28.6	+1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	10.32	3	Pn	Pn	20 29 27.3	0.0
KURK	Kurchatov	10.32	3	⇑Pn	Pn	20 29 28.0	+0.7
	comp=Z,6.5nm,0.8s						
KURK				⇓Lg	Lg	20 32 25.9	
	comp=Z,81nm,1.0s						
DANN	Dangsing	13.01	156	eP	Pn	20 30 03.5	-1.0
	comp=Z,18nm,0.6s						
PYUN	Piuthan	13.02	159	eP	Pn	20 30 03.3	-1.2
KOLN	Koldanda	13.50	157	eP	Pn	20 30 09.9	-1.2
GKN	Gorkha	13.62	153	eP	Pn	20 30 11.0	-1.6
	comp=Z,9.6nm,0.4s						
BRVK	Borovoye	13.64	341	P	Pn	20 30 12.3	-0.3
BRVK	Borovoye	13.64	341	Pn	Pn	20 30 12.3	-0.3
GOMU	GeErMu	14.04	102	P	Pn	20 30 18.8	+0.3
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GUN	Gumba	14.16	149	eP	Pn	20 30 19.4	-0.8
	comp=Z,9.8nm,0.4s						
PKIN	Phulchoki	14.28	151	eP	Pn	20 30 20.2	-1.5
	comp=Z,11nm,0.5s						
PKI	Pulchoki	14.29	151	eP	Pn	20 30 20.4	-1.5
	comp=Z,7.6nm,0.4s						
ZAA0	Zalesovo Array	14.35	17		Pn	20 30 22.3	-0.1
ZALV	Zalesovo Beam	14.35	17	Pn	Pn	20 30 24.8	+2.4
	comp=Z,0.3nm,0.3s,baz=207,slow=13,SNR=9.9						
ZALV				Lg	Lg	20 34 30.0	
	comp=Z,0.1nm,0.3s,baz=197,slow=24,SNR=3.7						
ZALV				LR	LR	20 36 37.9	
	comp=Z,27nm,21.6s,baz=194,slow=40						
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	14.35	17	P	Pn	20 30 21.8	-0.6
ZALV	Zalesovo Beam	14.35	17	P	Pn	20 30 21.8	-0.6
RAMN	Ramite	15.30	149	eP	Pn	20 30 34.1	-1.5
	comp=Z,8.0nm,0.5s						
ABKAR	Akbulak array	15.39	311	P	Pn	20 30 31.2	-5.2
ABKAR	Akbulak array	15.39	311	P	Pn	20 30 30.9	-5.5
ODAN	Odare	15.70	146	eP	Pn	20 30 40.6	-0.2
	comp=Z,10nm,0.5s						
GTA	Gaotai	16.95	86	eP	P	20 31 02.5	+3.8
GTA				pP	sP	20 31 08.8	+7.5
GTA				sP	pP	20 31 12.7	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKTO	Aktyubinsk	17.05	313	P	Pn	20 30 57.2	-0.5
	comp=Z,0.2nm,0.3s,baz=100,slow=11,SNR=6.1						
	comp=Z,1.9nm,0.6s						
ARU	Arti	20.36	328	P	P	20 31 35.4	-0.4
	comp=Z,0.9nm,0.6s,baz=117,slow=16,SNR=2.7						
ARU				LR	LR	20 39 35.1	
	comp=Z,58nm,19.1s,baz=182,slow=37						
	comp=Z,0.9nm,0.6s						
ARU	Arti	20.36	328c	iP	P	20 31 34.0	-1.8
ARU						20 31 46.9	
ARU				S	S	20 35 17.9	-6.3
ARU				SS	Sn	20 35 33.5	+6.2
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	20.36	328	P	P	20 31 34.2	-1.6
ZAK	Zakamensk	20.41	52	eP	Pn	20 31 38.8	+0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SONM	Songino Array	21.77	61	P	P	20 31 53.0	+1.7
	comp=Z,1.2nm,0.7s,baz=268,slow=10,SNR=8.0						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	21.77	61	P	P	20 31 51.5	+0.2
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	21.77	61	P	P	20 31 51.5	+0.2
ULN	Ulaanbaatar	22.21	61	P	P	20 31 55.8	-0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	22.21	61		P	20 31 55.8	-0.2
ULN				IAmb	IAmb	20 32 09.3	
	comp=Z,5.3nm,1.0s						
PZH	PanZhiHua	24.25	118	P	P	20 32 21.5	+4.7

PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,3.6s						
KIRV	Kirov	25.57	325	ceP	P	20 32 29.8	+1.6
ONI	Oni	25.69	286	P	P	20 32 29.5	-0.1
ONI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ONI	Oni	25.69	286	P	P	20 32 29.5	-0.1
ONI				IAmb	IAmb	20 32 45.7	
	comp=Z,4.9nm,1.1s						
KMI	Kunming	25.84	119	⇑P	P	20 32 36.9	+5.6
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KBZ	Khabaz	25.97	289	⇑eP	P	20 32 31.5	-0.6
KBZ				pmax	pmax		
	comp=Z,5.0nm,2.0s						
KIV	Kislovodsk	26.11	289	eP	P	20 32 32.1	-1.4
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,30nm,15.0s						
KIV	Kislovodsk	26.11	289	P	P	20 32 32.3	-1.2
KIV				IAmb	IAmb	20 32 40.2	
	comp=Z,5.5nm,1.1s						
GEVA	Gevas	26.81	277	P	P	20 32 37.7	-2.3
CMAR	Chiang Mai Arr	28.48	134	P	P	20 32 53.7	-1.2
	comp=Z,0.1nm,0.3s,baz=323,slow=10,SNR=1.2						
	comp=Z,0.1nm,0.3s						
NRIK	Noril'sk	29.45	7	⇓eP	P	20 33 04.6	+1.6
KLMR	Klimovskoe	31.05	324	eP	P	20 33 16.9	-0.4
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	Klimovskoe	31.05	324	eP	P	20 33 16.9	-0.4
KLMR				AMP		20 33 23.9	
	comp=Z,8.0nm,1.1s						
PALK	Pallekele	33.10	175	LR	LR	20 46 37.9	
	comp=Z,64nm,18.1s,baz=214,slow=36						
BR131	Keskin Array S	33.51	283	ceP	P	20 33 40.1	+0.9
BRTR	Keskin Array B	33.51	283	P	P	20 33 39.9	+0.6
	comp=Z,2.2nm,0.7s,baz=99,slow=7.6,SNR=6.4						
	comp=Z,2.2nm,0.7s						
BRTR	Keskin Array B	33.51	283	P	P	20 33 38.3	-0.9
BRTR	Keskin Array B	33.51	283	P	P	20 33 38.3	-0.9
QIZ	Qiongzhong	34.78	118	P	P	20 33 51.0	+0.7
SOCY	Socotra	35.05	223	P	P	20 33 50.1	-2.6
FIA1	FINESS Array S	37.46	322	P	P	20 34 11.9	-0.8
FINES	FINESS Array B	37.46	322	P	P	20 34 13.2	+0.6
	comp=Z,1.5nm,0.7s,baz=117,slow=8.5,SNR=9.7						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	37.46	322	P	P	20 34 12.4	-0.3
FINES	FINESS Array B	37.46	322	P	P	20 34 12.4	-0.3
MLR	Muntele Rosu	37.72	295	P	P	20 34 12.6	-2.7
MLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	Muntele Rosu	37.72	295	P	P	20 34 12.6	-2.7
MLR				IAmb	IAmb	20 34 18.1	
	comp=Z,3.7nm,0.9s						
KEV	Kevo	39.33	335	P	P	20 34 28.9	+0.6
KEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KEV	Kevo	39.33	335	P	P	20 34 28.9	+0.6
KEV				IAmb	IAmb	20 34 50.1	
	comp=Z,6.1nm,0.9s						
ARCES	ARCESS Array B	39.74	334	P	P	20 34 32.7	+0.8
	comp=Z,4.4nm,0.7s,baz=103,slow=8.3,SNR=18						
	comp=Z,4.4nm,0.7s						
ARCES	ARCESS Array B	39.74	334	P	P	20 34 32.5	+0.6
ARCES				pmax	pmax		
	comp=Z,12nm,1.2s						
ARCES	ARCESS Array B	39.74	334	P	P	20 34 32.5	+0.6
TIXI	Tiksi	40.15	22	⇑eP	P	20 34 36.3	+1.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s						
DIVS	Divibare	42.16	295	P	P	20 34 52.4	+0.2
DIVS				IAmb	IAmb	20 34 53.5	
	comp=Z,3.3nm,0.9s						
NC405	NORSAR Array S	44.35	321	P	P	20 35 09.4	-0.1
NC602	NORSAR Array S	44.46	320	P	P	20 35 09.3	-1.1
NOA	NORSAR Array B	44.60	321	P	P	20 35 11.6	0.0
	comp=Z,0.3nm,0.4s,baz=190,slow=17,SNR=1.5						
	comp=Z,0.3nm,0.4s						
NC204	NORSAR Array S	44.80	321	P	P	20 35 12.3	-0.9
CLL	Collm	45.00	307	eP	P	20 35 15.0	+0.2
CLL	Collm	45.00	307	eP	P	20 35 15.0	+0.2
GEC2	GERESS Array S	45.13	303	P	P	20 35 16.4	+0.3
GEC2				IAmb	IAmb	20 35 43.9	
	comp=Z,6.6nm,1.5s						
GERES	GERESS Array B	45.13	303	P	P	20 35 16.7	+0.7
	comp=Z,0.5nm,0.7s,baz=65,slow=10,SNR=4.8						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	45.13	303	P	P	20 35 16.5	+0.4
GERES	GERESS Array B	45.13	303	P	P	20 35 16.5	+0.4
TIP	Timpagrande	46.05	289	P	P	20 35 22.4	-1.1
ESK	Eskdalemuir	53.24	315	P	P	20 36 15.9	-2.0
ESK				pmax	pmax		
	comp=Z,33nm,1.3s						
ESK	Eskdalemuir	53.24	315	P	P	20 36 15.9	-2.0
PETK	Petropavlovsk-	53.44	48	P	P	20 36 18.9	-0.5
PETK	Petropavlovsk-	53.44	48	P	P	20 36 18.9	-0.5
ESDC	Sonseca Array	60.30	298	P	P	20 37 07.9	-0.4
	comp=Z,0.5nm,0.7s,baz=61,slow=6.8,SNR=2.1						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	60.30	298	IAmb	IAmb	20 37 14.8	
	comp=Z,2.6nm,1.5s						
INK	Inuvik	69.09	12	P	P	20 38 04.8	-0.4
	comp=Z,1.2nm,0.6s,baz=11,slow=5.4,SNR=4.5						
	comp=Z,1.2nm,0.6s						
INK	Inuvik	69.09	12	IAmb	IAmb	20 38 12.2	
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	69.47	19	P	P	20 38 07.5	-0.1
	comp=Z,0.5nm,0.7s,baz=329,slow=6.4,SNR=4.7						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	71.03	271	P	P	20 38 17.2	-0.7
	comp=Z,4.5nm,0.6s,baz=45,slow=5.3,SNR=29						
	comp=Z,4.5nm,0.6s						
YKA	Yellowknife Ar	76.96	6	P	P	20 38 51.8	0.0
	comp=Z,1.2nm,0.7s,baz=347,slow=5.5,SNR=15						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	79.82	127	P	P	20 39 07.1	-1.2
	comp=Z,0.4nm,0.8s,baz=330,slow=5.8,SNR=3.0						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	82.40	130	P	P	20 39 22.3	+0.4
	comp=Z,0.6nm,0.7s,baz=324,slow=5.4,SNR=6.4						
	comp=Z,0.6nm,0.7s						

KRSC 03 20:40:51.4±1.7, 53°.92N×168°.57E, h9km±39km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.99	311	eP	Pn	20 41 24.7	-0.4
KBTR	Krutoberegovo	4.03	307	P	Pn	20 41 56.7	+3.6
MKZ	Mys Kozlova	4.07	282	eP	Pn	20 41 56.9	+3.3
MKZ				eS	Sn	20 42 44.6	+3.3
TUMR	Tumrok	5.09	289	eP	Pn	20 42 13.1	+5.3
TUMR				eS	Sn	20 43 13.1	+6.5
SDLR	Sedlovina	5.80	268	eP	Pn	20 42 22.0	+4.3
UGLR	Uglovaya	5.85	267	eP	Pn	20 42 23.2	+4.9
SMAR	Somma	5.86	268	eP	Pn	20 42 23.1	+4.6
KRER	Koryakskii	5.88	268	eP	Pn	20 42 23.5	+4.7
AVH	Avacha	5.89	268	eP	Pn	20 42 23.7	+4.9
KRX	Arik	5.93	269	eP	Pn	20 42 23.9	+4.5
KOK	Koryaka	5.95	268	eP	Pn	20 42 24.2	+4.6
RUS	Russkaya	6.23	260	eP	Pn	20 42 28.9	+5.5
GNL	Ganaly	6.30	272	eP	Pn	20 42 29.7	+5.2
KRMR	Karymshinskiy	6.34	264	eP	Pn	20 42 30.3	+5.4
MTVR	Mutnovka	6.41	261	eP	Pn	20 42 31.0	+5.1
MTVR				eS	Sn	20 43 44.1	+4.9
GRL	Gorelyy	6.45	262	eP	Pn	20 42 31.1	+4.6
ASAK	Asacha	6.60	261	eP	Pn	20 42 33.8	+5.2
KDTR	Khodutka, Kamc	6.70	256	eP	Pn	20 42 34.2	+4.4
KDTR				eS	Sn	20 43 50.3	+4.2

IDC 03 21:00:04.7±2.1, 16°.21S×176°.25W, h0km, mb3.7/3, mbtmp3.8/4, ML4.4/1, Error ellipse: s-maj=184.6km s-min=31.0km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.89	63	Pn	Pn	21 01 19.6	+0.1
	16nm,0.3s,baz=66,slow=1.3,SNR=8.1						
AFI				Sn	Sn	21 02 04.4	-13
	39nm,0.3s,baz=39,slow=21,SNR=15						
	38nm,0.4s						
STKA	Stephens Creek	41.26	240	P	P	21 07 51.9	0.0
	2.0nm,0.9s,baz=66,slow=12,SNR=1.1						
	2.0nm,0.9s						
WRA	Warramunga Arr	46.99	258	P	P	21 08 38.0	-0.1
	0.2nm,0.5s,baz=92,slow=6.9,SNR=6.3						
	0.2nm,0.5s						
ASAR	Alice Springs	47.26	253	P	P	21 08 39.9	-0.3
	0.6nm,0.5s,baz=88,slow=8.4,SNR=16						
	0.6nm,0.5s						

*IDC **03** 21:02:04.7±3.1, 35°.06N×71°.35E, h105km±11km, mb3.3/4, mbtmp3.6/9, Error ellipse: s-maj=60.0km s-min=24.5km az=144.0*

*NNC **03** 21:02:11.8±2.9, 35°.92N×69°.92E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=22.7km s-min=20.7km az=166.0*

ISC 03 21:02:03.9±0.9, 35°.10N±0°.08×71°.41E±0°.09, h100km, n29, σ1s.51/34, mb3.6/4, 4C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	7.25	14	P	Pn	21 03 48.6	+1.2
	SNR=31						
UCH	Uchtor	7.52	18	P	Pn	21 03 52.4	+1.2
	SNR=7.5						
EKS2	Erkin-Say	7.78	13	P	Pn	21 03 55.8	+1.4
	SNR=7.7						
AAK	Ala-Archa	7.91	17	P	Pn	21 03 57.6	+1.4
	SNR=5.3						
AAK	Ala-Archa	7.91	17	P	Pn	21 03 57.4	+1.3
	4.8nm,0.4s,baz=168,slow=8.6,SNR=12						
AAK				S	Sn	21 05 21.4	-2.6
	0.7nm,0.3s,baz=342,slow=20,SNR=1.3						
KK31	Karatay Array	8.03	355	⇑P	Pn	21 03 57.7	0.0
	3.3nm,0.5s,baz=179,slow=13,SNR=89						
KK31				⇑S	Sn	21 05 22.1	-4.6
	1.4nm,0.4s,baz=184,slow=23,SNR=5.0						
CHMS	Chumysh	8.31	17	P	Pn	21 04 02.8	+1.3
	SNR=5.4						
GEYT	Alibeck	11.06	289	P	Pn	21 04 38.2	-0.9
	1.0nm,0.4s,baz=134,slow=10,SNR=2.3						
PYUN	Piuthan	12.08	122	eP	Pn	21 04 51.6	-1.3
	11nm,0.3s						
DANN	Dangsing	12.47	119	eP	Pn	21 04 56.8	-1.4
	11nm,0.3s						
KOLN	Koldanda	12.71	122	eP	Pn	21 04 59.8	-1.4
	4.0nm,0.2s						
GKN	Gorkha	13.31	118	eP	Pn	21 05 07.5	-1.5
	10.0nm,0.2s						
DMN	Daman	13.87	119	eP	Pn	21 05 14.9	-1.5
	11nm,0.5s						
KKN	Kakani	13.89	118	eP	Pn	21 05 15.4	-1.3
	4.1nm,0.2s						
PKIN	Phulchoki	14.10	118	eP	Pn	21 05 18.2	-1.2
	13nm,0.4s						
PKI	Pulchoki	14.11	118	eP	Pn	21 05 18.1	-1.5
GUN	Gumba	14.26	116	eP	Pn	21 05 20.5	-1.1
MKAR	Makanchi Array	14.27	32	P	Pn	21 05 22.6	+1.4
	0.3nm,0.5s,baz=225,slow=13,SNR=5.5						
RAMN	Ramite	15.34	118	eP	Pn	21 05 33.9	-1.2
	11nm,0.4s						
TAPN	Taplejung	15.93	115	eP	Pn	21 05 41.9	-0.7
	6.3nm,0.3s						
ODAN	Odare	15.96	117	eP	Pn	21 05 42.1	-0.8
KURBB	Kurchatov Arra	16.36	16	P	Pn	21 05 47.7	+0.3
	0.3nm,0.7s,baz=201,slow=10,SNR=3.0						
KURBB				pP	pP	21 06 09.4	+1.2
	0.3nm,0.5s,baz=204,slow=10,SNR=2.3						
AB31	Akbulak array	16.48	333	⇑P	Pn	21 05 48.8	-0.1
	0.3nm,0.3s,baz=152,slow=10,SNR=21						
AB31				⇓S	Sn	21 08 38.0	-13
	0.8nm,0.6s,baz=152,slow=22,SNR=8.7						
AKTO	Aktyubinsk	18.17	332	P	P	21 06 09.6	+1.2
	2.9nm,0.6s,baz=147,slow=9.8,SNR=9.5						
AKTO	Aktyubinsk	18.17	332	⇓P	P	21 06 09.4	+1.0
	2.7nm,0.7s						
AKTO				⇑S	S	21 09 17.4	-14
	2.9nm,1.1s						
ZALV	Zalesovo Beam	21.07	22	P	P	21 06 40.0	+0.2
	1.2nm,0.3s,baz=225,slow=10,SNR=7.9						
ZALV				pP	pP	21 07 02.3	+2.4
	1.2nm,0.5s,baz=215,slow=9.1,SNR=3.1						
ZALV				sP	sP	21 07 13.8	+0.9
	1.2nm,0.4s,baz=214,slow=11,SNR=4.4						
	1.2nm,0.3s						
FINES	FINESS Array B	38.84	327	P	P	21 09 19.3	+0.5
	0.3nm,0.5s,baz=116,slow=8.7,SNR=5.2						
	0.3nm,0.5s						
ESDC	Sonseca Array	58.41	299	P	P	21 11 49.2	+0.1
	0.4nm,0.8s,baz=60,slow=6.9,SNR=2.0						
	0.4nm,0.8s						
TORD	Torodi Ar. Bea	66.03	270	P	P	21 12 40.2	0.0
	1.0nm,1.1s,baz=43,slow=6.4,SNR=4.4						
	1.0nm,1.1s						

IDC 03 21:11:48.2±11.0, 7°.09S×105°.12E, h153km±69km, mb3.0/3, mbtmp3.4/4, Error ellipse: s-maj=202.1km s-min=24.8km az=50.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	2.49	84	P	Pn	21 12 30.1	+0.5
	13nm,0.5s,baz=345,slow=13,SNR=5.6						
LEM				S	Sn	21 13 05.5	+4.1
	14nm,0.4s,baz=1.6,slow=23,SNR=1.9						
CMAR	Chiang Mai Arr	26.10	347	P	P	21 17 06.3	-1.7
	0.2nm,0.3s,baz=184,slow=9.6,SNR=4.7						
	0.2nm,0.3s						
WRA	Warramunga Arr	31.08	117	P	P	21 17 51.8	-0.5
	0.4nm,0.6s,baz=287,slow=11,SNR=5.4						
	0.4nm,0.6s						
MKAR	Makanchi Array	57.36	342	P	P	21 21 22.2	+1.8
	0.1nm,0.4s,baz=159,slow=7.9,SNR=2.1						
	0.1nm,0.4s						
TXAR	Lajitas Array	145.01	47	PKPbc	PKPbc	21 31 07.3	-0.5
	0.2nm,0.6s,baz=278,slow=2.6,SNR=1.8						

DDA 03 21:34:49.9±0.0, 38°.74N×27°.38E, h7km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEDA	zmir-Bergama	0.33	314	P	Pg	21 34 56.7	+0.4
ZEDA				i AML	AML	21 35 01.0	
	comp=E,10nm,0.5s						
ZEDA				S	Sg	21 35 01.7	+1.0
ZEDA				i AML	AML	21 35 02.0	
	comp=N,8.9nm,0.4s						

*NNC **03** 22:20:57.3±0.9, 42°.66N×78°.84E, h0km, mb2.4, mpv2.7, Error ellipse: s-maj=6.2km s-min=2.3km az=161.0*

*KRNET **03** 22:20:58.6±0.1, 42°.70N×78°.82E, h21km, mb2.5*

*SOME **03** 22:20:58.6, 42°.72N×78°.73E, h5km*

ISC 03 22:20:58.0±1.2, 42°.69N±0°.04×78°.86E±0°.03, h16km±8km, n42, σ0s.49/80, 11C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.40	238	⇓iP	Pg	22 21 06.2	0.0
	baz=38						
PRZ				⇓eS	Sg	22 21 11.7	-0.1
	baz=38						
UZB	Uzynbulak	0.47	15	eP	Pg	22 21 07.7	+0.2
	2.8nm,0.1s						
UZB				eS	Sb	22 21 14.3	-0.4
	7.9nm,0.1s						
UZB	Uzynbulak	0.47	15	P	Pg	22 21 07.7	+0.2
	2.8nm,0.1s						
UZB				S	Sb	22 21 14.3	-0.4
	7.9nm,0.1s						
UZB	Uzynbulak	0.47	15	eP	Pg	22 21 07.7	+0.2
	baz=18						
UZB				eS	Sb	22 21 14.3	-0.4
	baz=18						
SATY	Saty	0.49	318	eP	Pg	22 21 07.7	-0.2
	2.7nm,0.1s						
SATY				eS	Sg	22 21 14.3	-0.3
	81nm,0.1s						
SATY	Saty	0.49	318	P	Pg	22 21 07.7	-0.2
	2.7nm,0.1s						
SATY				S	Sg	22 21 14.3	-0.3
	81nm,0.1s						
SATY	Saty	0.49	318	eP	Pg	22 21 07.7	-0.2
	baz=20						
SATY				eS	Sg	22 21 14.4	-0.3
	baz=20						
ZHN	Zhinishke	0.57	327	eP	Pg	22 21 09.2	0.0
	2.2nm,0.1s						
ZHN				eS	Sb	22 21 17.1	-0.4
	20nm,0.1s						
ZHN	Zhinishke	0.57	327	P	Pg	22 21 09.2	0.0
	2.2nm,0.1s						
ZHN				S	Sb	22 21 17.1	-0.4
	20nm,0.1s						
ZHN	Zhinishke	0.57	327	eP	Pg	22 21 09.3	0.0
	baz=29						
ZHN				eS	Sb	22 21 17.1	-0.4
	baz=29						
KPKS	Kokpek	0.78	351	eP	Pb	22 21 13.2	0.0
	5.1nm,0.1s						
KPKS				eS	Sb	22 21 24.0	+0.3
	16nm,0.3s						
KPKS	Kokpek	0.78	351	eP	Pb	22 21 13.3	0.0
	baz=52						
KPKS				eS	Sb	22 21 24.0	+0.3
	baz=52						
PDGK	Podgornoye	0.79	36	P	Pg	22 21 13.1	-0.2
	1.2nm,0.1s						
PDGK				S	Sb	22 21 23.8	+0.1
	1.2nm,0.2s						
PDGK	Podgornoye	0.79	36	⇑P	Pg	22 21 13.1	-0.2
	0.4nm,0.2s						
PDGK				⇓S	Sb	22 21 24.2	+0.4
	1.3nm,0.5s						
ANVS	Anan'yevo	0.88	276	⇑iP	Pb	22 21 15.1	+0.1
	baz=76						
ANVS				⇑iS	Sb	22 21 26.9	+0.2
	baz=76						
KURS	Kuram	0.94	328	eP	Pg	22 21 16.2	-0.1
	0.5nm,0.1s						
KURS				eS	Sg	22 21 28.8	+0.1
	3.0nm,0.2s						
KURS	Kuram	0.94	328	P	Pg	22 21 16.2	-0.1
	0.5nm,0.1s						
KURS				S	Sg	22 21 28.8	+0.1
	3.0nm,0.2s						
KURS	Kuram	0.94	328	eP	Pg	22 21 16.2	-0.1
	baz=29						
KURS				eS	Sg	22 21 28.8	+0.1
	baz=29						
KDJ	Kajisay	1.37	246	⇑eP	Pn	22 21 23.1	+0.6
	baz=45						
KDJ				⇑iS	Sn	22 21 40.4	0.0
	baz=45						
KOTS	Kotyrbulak	1.39	293	eP	Pb	22 21 23.6	-0.1
	2.3nm,0.2s						
KOTS				eS	Sb	22 21 41.5	+0.3
	3.0nm,0.2s						
KOTS	Kotyrbulak	1.39	293	P	Pb	22 21 23.6	-0.1
	2.3nm,0.2s						
KOTS				S	Sb	22 21 41.5	+0.3
	3.0nm,0.2s						
KOTS	Kotyrbulak	1.39	293	eP	Pb	22 21 23.6	-0.1
	baz=94						
KOTS				eS	Sb	22 21 41.6	+0.3
	baz=94						
MDOK	Medeo	1.41	290	eP	Pb	22 21 24.1	+0.1
	1.5nm,0.2s						
MDOK				eS	Sg	22 21 42.6	-0.9
	2.5nm,0.3s						
MDOK	Medeo	1.41	290	⇓P	Pb	22 21 23.9	-0.1
	1.0nm,0.5s						
MDOK				⇑S	Sg	22 21 42.7	-0.9
	2.1nm,0.7s						
MDOK	Medeo	1.41	290	Pg	Pb	22 21 24.1	+0.1
	1.5nm,0.2s						
MDOK				Lg	Lg	22 21 42.6	
	2.5nm,0.3s						
MDOK	Medeo	1.41	290	eP	Pb	22 21 24.1	+0.1
	baz=90						
MDOK				eS	Sg	22 21 42.6	-0.9
	baz=90						
BLB	Baldybastay	1.43	349	eP	Pg	22 21 25.2	-0.3
	2.9nm,0.1s						
BLB				eS	Sg	22 21 44.2	0.0
	7.9nm,0.3s						
BLB	Baldybastay	1.43	349	P	Pg	22 21 25.2	-0.3
	2.9nm,0.1s						
BLB				S	Sg	22 21 44.2	0.0
	7.9nm,0.3s						
TNSS	Tian-Shan	1.45	284	eP	Pb	22 21 24.6	-0.2
	1.6nm,0.2s						
TNSS				eS	Sb	22 21 43.2	+0.1
	2.0nm,0.1s						
TNSS	Tian-Shan	1.45	284	P	Pb	22 21 24.6	-0.2
	1.6nm,0.2s						
TNSS				S	Sb	22 21 43.2	+0.1
	2.0nm,0.1s						
TNSS	Tian-Shan	1.45	284	eP	Pb	22 21 24.6	-0.2
	baz=85						
TNSS				eS	Sb	22 21 43.3	+0.1
	baz=85						
KNOS	Konyrlen	1.68	8	eP	Pg	22 21 30.1	-0.2
	3.8nm,0.2s						
KNOS				eS	Sg	22 21 52.7	+0.5
	2.0nm,0.3s						
KNOS	Konyrlen	1.68	8	P	Pg	22 21 30.1	-0.2
	3.8nm,0.2s						
KNOS				S	Sg	22 21 52.7	+0.5
	2.0nm,0.3s						
DJR	Jarkent	1.77	22	eP	Pg	22 21 31.2	-0.8
	6.2nm,0.0s						
DJR				eS	Sg	22 21 54.7	-0.4
	3.1nm,0.3s						
DJR	Jarkent	1.77	22	P	Pg	22 21 31.2	-0.8
	6.2nm,0.0s						
DJR				S	Sg	22 21 54.7	-0.4
	3.1nm,0.3s						
ULHL	Ulahol	1.99	258	⇑iP	Pb	22 21 33.7	-0.2
	baz=58						
ULHL				⇑iS	Sb	22 21 58.9	+0.4
	baz=58						
BOOM	Boomskoye usch	2.17	266	⇑eP	Pb	22 21 36.3	-0.6
	baz=65						
BOOM				⇑iS	Sb	22 22 03.6	0.0
	baz=65						
KUU	Kurty	2.20	304	eP	Pb	22 21 38.6	+1.3
	0.6nm,0.1s						
KUU				eS	Sg	22 22 07.2	-1.5
	4.5nm,0.2s						
KUU	Kurty	2.20	304	Pg	Pb	22 21 38.6	+1.3
	0.6nm,0.1s						
KUU				Lg	Lg	22 22 07.2	
	4.5nm,0.2s						
TKM2	Tokmak 2	2.41	276	⇑Pg	Pn	22 21 37.7	+0.8
	0.7nm,0.5s						
TKM2				⇓Lg	Lg	22 22 12.7	
	2.5nm,0.6s						
KAPS	Kapalarasan	2.62	8	eP	Pg	22 21 46.8	-1.3
	0.4nm,0.1s						
KAPS				eS	Sg	22 22 21.2	-0.8
	2.2nm,0.1s						
KAPS	Kapalarasan	2.62	8	Pg	Pg	22 21 46.8	-1.3
	0.4nm,0.1s						
KAPS				Lg	Lg	22 22 21.2	
	2.2nm,0.1s						

*DJA **03** 22:32:36.3±0.3, 2°S±2°×10°0E±°, h39km±4km, M4.7/25, mb4.7/25, mB5.2/8, MLv4.8/18, Mw(mB)4.6/8, MwMwp6.4/1, Mwp6.4/1*

*NEIC **03** 22:32:36.0±1.7, 1°.88S±0°.06×99°.73E±0°.07, h35km±1km, mb4.5/47, Error ellipse: s-maj=13.8km s-min=6.6km az=54.0*

*IDC **03** 22:32:38.3±2.8, 1°.78S×99°.88E, h58km±24km, mb4.0/21, mbtmp4.3/22, ML3.5/1, MS3.5/14, Error ellipse: s-maj=18.5km s-min=11.1km az=38.0*

ISC 03 22:32:35.5±0.4, 1°.89S±0°.05×99°.74E±0°.04, h35km, n146, σ1s.11/132, mb4.5/46, MS3.5/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	Saibi	0.85	311	P	Pn	22 32 51.8	+0.7
SISI				S	Sn	22 33 04.2	+1.8
PPSI	Pulau Pagai	0.91	163	P	Pn	22 32 53.6	+1.7
PPI	Padang Panjang	1.56	25	P	Pn	22 33 01.4	+0.5
PPI				S	Sn	22 33 20.2	+0.3
KRJI	Kerinci	1.73	97	P	Pn	22 33 05.2	+1.9
KRJI				S	Sn	22 33 26.0	+1.8
BKNI	Bangkinang	2.55	31	Pn	Pn	22 33 15.6	+1.1
BKNI	Bangkinang	2.55	31	P	Pn	22 33 15.7	+1.2
BKNI	Bangkinang	2.55	31	P	Pn	22 33 16.4	+1.9

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RGRI  Rengat             3.01  60  P      Pn      22 33 22.7 +2.0
GSI   Gunungsitoli       3.84 326  Pn     Pn      22 33 31.9 -0.2
GSI   Gunungsitoli       3.84 326  P      Pn      22 33 32.3 +0.2
GSI   Gunungsitoli       3.84 326  P      Pn      22 33 32.5 +0.4
JMBI  JAMBI              3.91  86  P      Pn      22 33 34.8 +1.7
MNAI  Manna              4.04 128  Pn     Pn      22 33 36.5 +1.6
MNAI  Manna              4.04 128  P      Pn      22 33 36.8 +1.8
MNAI  Manna              4.04 128  P      Pn      22 33 36.0 +1.0
RPSI  Rantau Prapat      4.62 350         Pn      22 33 43.8 +0.9
PSI   Prapat             4.73 350  P      Pn      22 33 43.8 -0.7
      2.2nm,0.3s,baz=185,slow=14,SNR=8.5
PSI                                S      Sn      22 34 47.6 +9.4
PSI                                LR     LR      22 35 53.1
      comp=Z,311nm,18.2s,baz=230,slow=43
      5.7nm,0.3s
DSRI  Dabo               5.04  74  P      Pn      22 33 50.0 +1.4
      0.5nm2µm71nm,0.4s
LWLI  Liwa               5.32 126  P      Pn      22 33 54.4 +1.8
      2.6nm364µm8µm295nm,0.6s
TSI   Tuntungan          5.48 348  P      Pn      22 33 55.3 +0.6
MYKOM Kota Tinggi        5.50  48         Pn      22 33 55.1 +0.1
TPRI  Tanjung Pinang     5.54  60  P      Pn      22 33 57.1 +1.6
      1.1nm5µm243nm,0.8s
KCSI  Kotacane, Aceh     5.72 340  P      Pn      22 33 59.0 +0.9
      0.4nm771nm38nm,0.6s
KASI  Kota Agung         5.96 127  P      Pn      22 34 01.3 -0.1
      0.6nm1µm90nm,0.7s
PPBI  Pangkal Pinang     6.40  93  P      Pn      22 34 02.3 -5.1
IPM   Ipoh               6.45  11  Pn     Pn      22 34 09.4 +1.3
IPM   Ipoh               6.45  11  P      Pn      22 34 11.3 +3.2
      36nm,0.7s
KULM  Kulim              7.19   7  Pn     Pn      22 34 18.9 +0.7
LHMI  Lhok Sumawe        7.60 338  P      Pn      22 34 24.2 +0.4
TPI   Tanjungpandan      7.96  96  P      Pn      22 34 27.9 -0.8
CNJI  Cibinong           9.12 126  P      Pn      22 34 45.1 +0.3
      39nm,0.7s
LEM   Lembang            9.26 122  LR     LR      22 38 55.9
      comp=Z,192nm,22.0s,baz=303,slow=41
CMJI  Cimerak           10.47 124  P      Pn      22 35 02.9 -0.3
      37nm,1.2s
KPJI  Karang Pucung     10.64 121  P      Pn      22 35 06.8 +1.3
      34nm,0.9s
YOGI  Yogyakarta        12.05 120  P      Pn      22 35 25.8 +0.9
      89nm,1.6s
UGM   Wanagama          12.30 120  Pn     Pn      22 35 27.5 -0.8
UGM   Wanagama          12.30 120  P      Pn      22 35 29.1 +0.8
      75nm,1.6s
UGM   Wanagama          12.30 120  P      Pn      22 35 29.3 +1.0
PCJI  Pacitan           13.00 119  P      Pn      22 35 36.3 -1.6
PWJI  Pagerwojo         13.47 117  P      Pn      22 35 45.0 +0.7
      18nm,0.8s
GMJI  Gumukmas          15.05 115  P      Pn      22 36 06.0 +0.3
      2µm19nm,1.5s
PLAI  Plampang          19.23 112  P      P       22 36 56.1 -0.8
MYLDM Lahad Datu        20.01  69  P      Pn      22 37 06.5 -0.9
MYLDM                              IAmb   IAmb    22 37 12.1
      comp=Z,16nm,0.9s
TTSI  Tana Toraja       20.09  94  P      P       22 37 07.2 +0.8
      comp=Z,9.3nm,0.6s
SPSI  Sidrap Palu       20.11  96  P      Pn      22 37 14.2 +5.7
KAPI  Kappang           20.21  99  P      P       22 37 05.8 -1.8
      comp=Z,8.6nm,0.6s,baz=275,slow=15,SNR=1.4
KAPI                               LR     LR      22 45 52.7
      comp=Z,135nm,19.2s,baz=278,slow=40
      comp=Z,8.6nm,0.6s
KAPI  Kappang           20.21  99  P      P       22 37 07.6 -0.1
KAPI                               IAmb   IAmb    22 37 16.9
      comp=Z,15nm,0.7s
CMAR  Chiang Mai Arr    20.23 358  P      P       22 37 06.7 -1.1
      comp=Z,1.8nm,0.3s,baz=188,slow=10,SNR=6.5
      comp=Z,1.8nm,0.3s
CMAR  Chiang Mai Arr    20.23 358  P      P       22 37 07.7 -0.1
MPSI  Mapaga            20.28  84  P      Pn      22 37 09.8 -0.7
      comp=Z,31nm,1.1s
BNSI  Bone              20.49  97  P      P       22 37 11.5 +0.9
      comp=Z,30nm,1.0s
BKSI  Bulukumba         20.62 100  P      P       22 37 13.2 +1.1
      comp=Z,24nm,1.0s
PALK  Pallekele         21.06 296  P      P       22 37 18.8 +1.9
      comp=Z,10nm,0.9s,baz=210,slow=7.8,SNR=5.9
PALK                               LR     LR      22 44 29.6
      comp=Z,132nm,19.9s,baz=219,slow=34
      comp=Z,10nm,0.9s
PALK  Pallekele         21.06 296  P      P       22 37 18.0 +1.1
PALK                               IAmb   IAmb    22 37 20.6
      comp=Z,14nm,1.0s
TOLI2 Tolitoli          21.25  82  P      P       22 37 18.2 -0.6
TOLI2 Tolitoli          21.25  82  P      P       22 37 18.9  0.0
MRSI  Marisa            22.32  84  P      P       22 37 32.3 +1.9
      comp=Z,29nm,0.8s
LUWI  Luwuk             23.04  88  P      P       22 37 37.5 -0.4
BBSI  Bau Bau           23.06 100  P      P       22 37 48.8  +11
GTOI  Gorontalo         23.40  84  P      P       22 37 41.5 -0.1
      comp=Z,14nm,1.0s
DAV   Davao City (W)    27.28  71  LR     LR      22 48 57.7
      comp=Z,74nm,19.7s,baz=294,slow=36
MBWA  Marble Bar        27.32 136  P      P       22 38 17.8 +0.4
MBWA                               IAmb   IAmb    22 38 28.6
      comp=Z,13nm,1.1s
DGAR  Diego Garcia      27.73 258  P      P       22 38 21.1  0.0
H08S2 Diego Garcia H    27.74 257  T      T       23 07 03.2
      baz=80,slow=76,SNR=179
H08S3 Diego Garcia H    27.74 257  T      T       23 07 03.6
      baz=80,slow=76,SNR=286
H08S1 Diego Carcia H    27.75 257  T      T       23 07 04.5
      baz=80,slow=76,SNR=81
PZH   PanZhiHua         28.29   4  P      P       22 38 28.8 +2.8
PZH                                pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax   pmax
      comp=Z,50nm,4.3s
FITZ  Fitzroy Crossi    30.09 124  P      P       22 38 41.6 -0.4
FITZ                               IAmb   IAmb    22 38 57.4
      comp=Z,16nm,1.4s
SWI   Sorong            31.53  89  P      P       22 38 54.1 -0.6
      comp=Z,31nm,0.8s
SIJI  Sorong            31.53  89  P      P       22 38 53.3 -1.5
      comp=Z,17nm,0.7s,baz=280,slow=6.1,SNR=5.0
      comp=Z,17nm,0.7s
LSA   Lhasa             32.47 346  P      P       22 39 03.1 -0.1
LSA                                IAmb   IAmb    22 39 24.8
      comp=Z,3.4nm,0.5s
YULB  Yu-li             32.74  39  P      P       22 39 06.1 +0.9
LYN   LuoYang           38.17  17 eP      P       22 39 51.0 -0.7
LYN                                pmax   pmax
      comp=Z,10.0nm,0.5s
WB0   Warramunga Arr    38.25 120  P      P       22 39 51.5 -1.2
WB0                                IAmb   IAmb    22 39 53.1
      comp=Z,6.1nm,0.8s
WRA   Warramunga Arr    38.27 120  P      P       22 39 52.4 -0.5
      comp=Z,4.5nm,0.8s,baz=303,slow=9.1,SNR=41
WRA                                PcP    PcP     22 42 08.3 +1.6
      comp=Z,0.3nm,0.6s,baz=314,slow=2.3,SNR=1.8
      comp=Z,4.5nm,0.8s
WRA   Warramunga Arr    38.27 120  P      P       22 39 51.6 -1.3
NJ2   Nanjing           38.31  27 eP      P       22 39 55.2 +2.3
NJ2                                pmax   pmax
      comp=Z,11nm,0.5s
ASAR  Alice Springs     39.53 126  P      P       22 40 03.6 +0.2
      comp=Z,2.1nm,0.5s,baz=306,slow=8.3,SNR=25
ASAR                               PcP    PcP     22 42 11.7 +1.1
      comp=Z,0.7nm,1.0s,baz=290,slow=2.5,SNR=1.8
ASAR                               S      S       22 46 00.6 -3.2
      comp=Z,0.5nm,0.6s,baz=296,slow=15,SNR=5.4
      comp=Z,2.1nm,0.5s
ASAR  Alice Springs     39.53 126  P      P       22 40 02.9 -0.5
AS31  Alice Springs     39.53 126  P      P       22 40 02.2 -1.2
NIL   Nilore            43.27 327  P      P       22 40 32.7 -1.2
NIL                                IAmb   IAmb    22 40 33.9
      comp=Z,8.3nm,0.7s
JNU   Nakatsue          45.56  37  P      P       22 40 51.2 -1.0
      comp=Z,10nm,0.9s,baz=194,slow=8.3,SNR=2.0
      comp=Z,10nm,0.9s
BBOO  Buckleboo         45.91 136  P      P       22 40 56.8 +1.8
WMQ   Urumqi            46.77 348 eP      P       22 41 03.1 +1.5
WMQ                                pP     sP      22 41 15.4  0.0
WMQ                                sP     pwP     22 41 22.4 +8.7
WMQ                                pmax   pmax
      comp=Z,12nm,0.7s
KSRS  Korea Array       47.06  31  P      P       22 41 03.2 -0.6
      comp=Z,1.6nm,0.6s,baz=234,slow=7.2,SNR=5.2
KSRS                               LR     LR      23 03 10.2
      comp=Z,35nm,18.4s,baz=250,slow=39
      comp=Z,1.6nm,0.6s
TARG  Taragay, Kyrgy    47.76 338  P      P       22 41 09.6 -0.1
TARG                               IAmb   IAmb    22 41 28.1
      comp=Z,2.2nm,0.7s
KDJ   Kajisay           48.34 338  P      P       22 41 14.4 +0.4
KDJ                                IAmb   IAmb    22 41 43.5
      comp=Z,8.6nm,1.4s
DRK   Karamyk           48.50 331  P      P       22 41 16.0 +0.6
BOOM  Boomskoye usch    49.13 337  P      P       22 41 20.0  0.0
STKA  Stephens Creek    49.42 132  P      P       22 41 23.2 +1.0
      comp=Z,1.5nm,0.4s,baz=310,slow=8.1,SNR=5.0
      comp=Z,1.5nm,0.4s
STKA  Stephens Creek    49.42 132  P      P       22 41 22.4 +0.1
BTK   Batken            49.42 331  P      P       22 41 21.5 -0.7
BTK                                IAmb   IAmb    22 41 47.3
      comp=Z,2.2nm,0.6s
SONM  Songino Array     49.86   6  P      P       22 41 24.8 -0.6
      comp=Z,2.3nm,0.7s,baz=184,slow=12,SNR=5.0
      comp=Z,2.3nm,0.7s
SONM  Songino Array     49.86   6  P      P       22 41 24.4 -1.0
MK31  Makanchi Array    50.85 345  P      P       22 41 32.7 -0.1
MKAR  Makanchi Array    50.85 345  P      P       22 41 33.1 +0.2
      comp=Z,2.0nm,0.3s,baz=156,slow=8.7,SNR=36
      comp=Z,2.0nm,0.3s
MAKZ  Makanchi          50.95 344  P      P       22 41 32.9 -0.7
KK31  Karatay Array     51.94 333  P      P       22 41 39.4 -1.6
KKAR  Karatay Array     51.94 333  P      P       22 41 39.7 -1.3
USA0B Ussuriysk Arra    54.18  28  P      P       22 41 57.4 -0.1
USRK  Ussuriysk Ar.     54.18  28  P      P       22 41 57.4 -0.1
      comp=Z,4.0nm,0.8s,baz=218,slow=5.6,SNR=10
      comp=Z,4.0nm,0.8s
EIDS  Eidsvold          54.64 120  P      P       22 42 00.1 -1.1
GEYT  Alibeck           55.19 320  P      P       22 42 04.6 -0.4
      comp=Z,2.5nm,0.7s,baz=154,slow=11,SNR=4.6
      comp=Z,2.5nm,0.7s
GEYT  Alibeck           55.19 320  P      P       22 42 04.1 -0.9
KURK  Kurchatov         55.43 344  P      P       22 42 06.0 -0.3
KURK                               IAmb   IAmb    22 42 24.9
      comp=Z,4.4nm,0.8s
ARMA  Armidale          56.68 126  P      P       22 42 13.8 -2.1
ZAA0  Zalesovo Array    57.01 350  P      P       22 42 17.1 -0.5
ZAA0                               IAmb   IAmb    22 42 38.4
      comp=Z,3.6nm,0.7s
ZALV  Zalesovo Beam     57.01 350  P      P       22 42 17.4 -0.2
      comp=Z,1.7nm,0.4s,baz=185,slow=7.3,SNR=13
      comp=Z,1.7nm,0.4s
KLR   Kul'dur           57.94  24  LR     LR      23 11 37.1
      comp=Z,38nm,19.4s,baz=237,slow=40
BRVK  Borovoye          60.05 340  P      P       22 42 38.0 -0.8
BRVK                               IAmb   IAmb    22 42 53.2
      comp=Z,2.0nm,0.7s
ABKAR Akbulak array     61.42 331  P      P       22 42 47.4 -0.8
ABKAR Akbulak array     61.42 331  P      P       22 42 47.4 -0.8
ABKAR                              IAmb   IAmb    22 42 48.5
      comp=Z,4.7nm,0.8s
KMBO  Kilima Mbogo      62.47 270  LR     LR      23 04 46.9
      comp=Z,45nm,21.6s,baz=89,slow=31
GURO  Guroymak-BITLI    66.52 314  P      P       22 43 22.3  0.0
GURO                               IAmb   IAmb    22 43 23.7
      comp=Z,2.3nm,0.7s
YAK   Yakutsk           67.70  15  LR     LR      23 16 46.9
      comp=Z,60nm,18.4s,baz=266,slow=39
KBZ   Khabaz            68.05 319  P      P       22 43 31.2 -0.4
      comp=Z,3.4nm,0.8s,baz=114,slow=6.5,SNR=9.4
      comp=Z,3.4nm,0.8s
MBAR  Mbarara           68.99 270  LR     LR      23 09 43.8
      comp=Z,30nm,19.8s,baz=84,slow=32
NRIK  Noril'sk          71.57 355  P      P       22 43 53.5 +0.8
LSZ   Lusaka            71.71 255  LR     LR      23 09 33.7
      comp=Z,29nm,21.8s,baz=132,slow=31
MATP  Matopo            71.77 249  P      P       22 43 56.8 +1.6
      comp=Z,3.2nm,0.7s,baz=85,slow=5.8,SNR=9.9
      comp=Z,3.2nm,0.7s
MA2   Magadan           73.04  24  P      P       22 44 01.8 +0.1
MA2                                IAmb   IAmb    22 44 17.1
      comp=Z,4.3nm,0.8s
BRTR  Keskin Array B    73.05 313  P      P       22 44 01.1 -1.3
      comp=Z,1.5nm,0.9s,baz=139,slow=6.4,SNR=3.0
      comp=Z,1.5nm,0.9s
LBTB  Lobatse           74.84 245  LR     LR      23 14 09.5
      comp=Z,46nm,18.1s,baz=104,slow=33
BOSA  Boshof            75.48 241  P      P       22 44 17.8 +1.0
      comp=Z,3.5nm,1.0s,baz=92,slow=6.0,SNR=3.5
      comp=Z,3.5nm,1.0s
BOSA  Boshof            75.48 241  P      P       22 44 16.9 +0.1
BOSA                               IAmb   IAmb    22 44 39.1
      comp=Z,16nm,1.4s
TIXI  Tiksi             75.79   9  P      P       22 44 16.2 -1.3
TIXI                               IAmb   IAmb    22 44 32.1
      comp=Z,2.2nm,0.5s
SUR   Sutherland        79.64 238  LR     LR      23 13 17.3
      comp=Z,62nm,19.5s,baz=124,slow=31
BURAR Bucovina Array    81.00 319  P      P       22 44 47.7 +0.8
BUR08 Bucovina Ar. S    81.02 319  P      P       22 44 47.6 +0.6
BUR08                              IAmb   IAmb    22 44 48.9
      comp=Z,4.2nm,1.1s
VTS   Vitosha           81.37 313  P      P       22 44 48.8 -0.3
VTS                                IAmb   IAmb    22 45 03.0
      comp=Z,7.2nm,1.5s
LIT   Litokhoron        81.48 311  P      P       22 44 48.6 -0.9
LIT                                IAmb   IAmb    22 45 04.5
      comp=Z,12nm,1.2s
LVZ   Lovozero          82.58 340  P      P       22 44 54.4 -0.4
KOLS  Kolonicke sedl    83.20 320 eP      P       22 45 00.0 +1.7
FIA1  FINESS Array S    83.89 332  P      P       22 45 01.4 -0.1
FIA1                               IAmb   IAmb    22 45 02.6
      comp=Z,8.3nm,1.4s
FINES FINESS Array B    83.89 332  P      P       22 45 01.9 +0.4
      comp=Z,1.7nm,0.6s,baz=111,slow=5.5,SNR=20
      comp=Z,1.7nm,0.6s
FINES FINESS Array B    83.89 332  P      P       22 45 01.6 +0.1
ARCES ARCESS Array B    86.28 340  P      P       22 45 13.1 -0.3
      comp=Z,3.1nm,0.9s,baz=68,slow=3.1,SNR=3.8
      comp=Z,3.1nm,0.9s
ARCES ARCESS Array B    86.28 340  P      P       22 45 13.3  0.0
ARCES                              IAmb   IAmb    22 45 27.2
      comp=Z,5.2nm,1.1s
QSPA  South Pole Qui    88.08 180  P      P       22 45 23.0 +0.7
QSPA                               IAmb   IAmb    22 45 23.9
      comp=Z,3.2nm,1.2s
GERES GERESS Array B    88.79 319  P      P       22 45 26.1 +0.1
      comp=Z,0.7nm,0.7s,baz=134,slow=3.9,SNR=5.6
      comp=Z,0.7nm,0.7s
GERES GERESS Array B    88.79 319  P      P       22 45 25.8 -0.2
NOA   NORSAR Array B    90.92 331  LR     LR      23 29 43.9
      comp=Z,12nm,20.0s,baz=315,slow=38
CPUP  Villa Florida    144.26 217  PKP    PKPdf   22 52 08.1 -0.6
      comp=Z,4.0nm,0.7s,baz=136,slow=3.8,SNR=12
CPUP  Villa Florida    144.26 217         PKPbc   22 52 07.3 +0.4
TXAR  Lajitas Array    144.77  37  PKP    PKPdf   22 52 09.3 -0.3
      comp=Z,1.1nm,0.7s,baz=294,slow=1.1,SNR=11
TXAR  Lajitas Array    144.77  37         PKPbc   22 52 08.9 +0.4
```

IDC ***03*** *22:52:03.2±0.8, 32°.58N×130°.62E, h0^{km}, mb3.8/12, mbtmp3.8/14, ML3.0/2, MS3.3/3, Error ellipse: s-maj=18.9km s-min=8.7km az=114.0*

JMA ***03*** *22:52:04.7±0.0, 32°.6N±0°.2×130°.7E±0°.2, h5^{km}, MD4.0/20, MV3.9/20, SOUTHERN KUMAMOTO PREF*

JMA Felt IV J1 at SOUTHERN KUMAMOTO PREF .

NIED ***03*** *22:52:04.7, 32°.61N×130°.72E, h5^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.71; $M_{\theta\theta}$0.97; $M_{\phi\phi}$-6.68; $M_{r\theta}$-2.29; $M_{\theta\phi}$0.93; $M_{\phi r}$6.45; Fault plane solution: $M_0$9.29000×10^{14} NP1: ϕ_s186.00000°, δ23.00000°, λ111.00000°. NP2: ϕ_s343.00000°, δ69.00000°, λ81.00000°.*

NEIC ***03*** *22:52:06.1±1.8, 32°.66N±0°.04×130°.60E±0°.04, h10^{km}±1^{km}, mb4.3/10 Error ellipse: s-maj=7.9km s-min=3.9km az=131.0*

ISC 03 22:52:04.8±1.1**, 32°.58N**±0°.03×**130°.64E**±0°.05**, h7**^{km}±7^{km}**, n65, σ1ˢ.04**/50**, mb4.1**/18**, 4D, Kyushu**

```
Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
JIU3  Izumi3             0.14 102 ⇓P      Pg      22 52 07.1 -0.7
JIU3                              ⇓S      Sg      22 52 08.9 -1.0
JIU3  Izumi3             0.14 102  A      A       22 52 07.1
      comp=E,38nm,0.9s,comp=E,106nm,2.7s
JTA   Tamana             0.39 346 iP      Pg      22 52 12.5 +0.1
JTA                                S      Sg      22 52 18.0 +0.3
JTA   Tamana             0.39 346  A      A       22 52 12.5
      comp=E,10.0nm,0.8s,comp=E,9.0nm,0.6s
JZO   Okuchi             0.44 185 iP      Pb      22 52 14.2 -0.6
JZO                                S      Sb      22 52 20.9 -0.8
JZO   Okuchi             0.44 185  A      A       22 52 14.2
      comp=E,14nm,5.0s,comp=E,9.0nm,0.2s
JHD   Hondo              0.44 255  A      A       22 52 14.8
      comp=E,19nm,0.6s,comp=E,14nm,1.8s
JNU   Nakatsue           0.57  20  Pg     Pg      22 52 14.8 -1.0
      baz=207,slow=9.0
JNU                                Lg     Lg      22 52 22.1
      2µm,0.3s,baz=14,slow=9.0,SNR=68
JNU   Nakatsue           0.57  20         Pg      22 52 15.3 -0.6
JNU                                Sg     Sg      22 52 22.6 -0.8
JNU   Nakatsue           0.57  20  A      A       22 52 15.1
      comp=E,9.0nm,1.0s,comp=E,11nm,2.7s
JKIT  Kitakata           0.68  86  A      A       22 52 16.8
      comp=E,16nm,2.3s,comp=E,15nm,2.0s
NGSJ  Nagasakinomoza     0.72 274  A      A       22 52 19.8
      comp=N,5.0nm,5.6s
JTZ   Takazaki           0.77 151 ⇓iP     Pg      22 52 20.4 +0.7
JTZ                               ⇓S      Sg      22 52 30.8 +1.1
JTZ   Takazaki           0.77 151  A      A       22 52 20.4
      comp=E,8.0nm,2.5s,comp=E,8.0nm,2.8s
JTSN  Tsuno              0.80 114  A      A       22 52 19.3
      comp=E,8.0nm,4.0s,comp=E,12nm,3.5s
JHHC  Hyugahichiya       0.85  99  A      A       22 52 20.0
      comp=E,11nm,3.2s,comp=E,11nm,3.8s
JFI   Itaya              0.87 346  A      A       22 52 21.3
      comp=E,7.0nm,0.4s,comp=E,5.0nm,0.6s
JBEP  Beppuamama         0.99  40  A      A       22 52 22.5
      comp=E,10.0nm,6.5s,comp=E,9.0nm,4.0s
JUS   Usuki              1.05  62  A      A       22 52 23.4
      comp=E,7.0nm,3.6s,comp=E,8.0nm,3.4s
JSKE  Saikikamae         1.08  78  A      A       22 52 24.0
      comp=E,6.0nm,3.6s,comp=E,6.0nm,2.1s
JSU   Suzuyama           1.08 189         Pn      22 52 26.4  0.0
JNKG  Nichinankitago     1.11 146  A      A       22 52 25.6
      comp=E,8.0nm,3.9s,comp=E,5.0nm,4.5s
JNAR  Kushima--Naru      1.18 153  A      A       22 52 26.9
      comp=E,7.0nm,5.1s,comp=E,5.0nm,2.0s
JKI   Kunimi             1.30  36  A      A       22 52 28.1
      comp=E,10.0nm,0.8s,comp=E,14nm,0.8s
JTY   Toyota             1.71  12  A      A       22 52 35.0
      comp=N,4.0nm,0.6s
JKU   Kubokawa           2.16  70  A      A       22 52 41.1
      comp=E,3.0nm,5.1s,comp=E,3.0nm,6.0s
JTU   Tsushima           2.20 332         Pn      22 52 40.8 -0.9
JHS   Saijyo             3.17  40         Pn      22 52 55.2 +0.1
TJN   Taejon             4.66 325  Pn     Pn      22 53 14.2 -1.3
KSRS  Korea Array        5.35 336  Pn     Pn      22 53 25.8 +0.8
      0.5nm,0.3s,baz=151,slow=14,SNR=2.9
KSRS                               Pg     Pb      22 53 41.3 +2.7
      1.4nm,0.3s,baz=151,slow=17,SNR=7.9
KSRS                               Lg     Lg      22 54 50.7
      2.7nm,0.3s,baz=156,slow=30,SNR=11
      0.9nm,0.3s
INU   Inuyama            5.97  61         Pn      22 53 34.3 +0.8
JOW   Kunigami           6.09 200  Pn     Pn      22 53 38.5 +3.3
      3.7nm,0.3s,baz=78,slow=12,SNR=7.6
JGF   Kuroka             6.33  60  Pn     Pn      22 53 38.9 +0.4
MJB9  Matsu-Tunnel       7.38  56  Pn     Pn      22 53 54.2 +1.2
MJAR  Matsushiro Arr     7.38  56  Pn     Pn      22 53 54.5 +1.5
      0.2nm,0.3s,baz=241,slow=13,SNR=11
MJAR                               LR     LR      22 57 05.3
      comp=Z,88nm,21.8s,baz=219,slow=41
      2.2nm,0.4s
MJAR  Matsushiro Arr     7.38  56         Pn      22 53 53.8 +0.8
KLR   Kul'dur           16.66   3  Pn     P       22 56 02.6 +1.6
      0.3nm,0.3s,baz=179,slow=6.6,SNR=10
PETK  Petropavlovsk-    28.25  35  P      P       22 57 59.3 +0.9
CHTO  Chiang Mai        31.55 252  P      P       22 58 27.6 -0.2
CHTO                               IAmb   IAmb    22 58 30.7
      comp=Z,2.8nm,0.8s
CMAR  Chiang Mai Arr    31.74 251  LR     LR      23 13 07.7
      comp=Z,43nm,18.1s,baz=175,slow=40
MK31  Makanchi Array    39.21 306  P      P       22 59 33.6 +0.1
MKAR  Makanchi Array    39.21 306  P      P       22 59 33.6 +0.1
      comp=Z,1.1nm,0.9s,baz=92,slow=11,SNR=7.1
      comp=Z,1.1nm,0.9s
MKAR  Makanchi Array    39.21 306  P      P       22 59 33.3 -0.2
KURK  Kurchatov         41.93 311  P      P       22 59 55.5 -0.4
KURK                               IAmb   IAmb    22 59 58.9
      comp=Z,4.2nm,1.1s
KURBB Kurchatov Arra    41.98 311  P      P       22 59 56.2 -0.1
      comp=Z,1.2nm,0.7s,baz=98,slow=9.2,SNR=7.1
      comp=Z,1.2nm,0.7s
TARG  Taragay, Kyrgy    42.52 298  P      P       23 00 01.2 -0.1
NRIK  Noril'sk          43.96 340  P      P       23 00 12.6 +0.6
NRIK                               IAmb   IAmb    23 00 27.9
      comp=Z,2.8nm,0.6s
AAK   Ala-Archa         44.87 300  P      P       23 00 20.0  0.0
      comp=Z,1.0nm,0.5s,baz=120,slow=8.0,SNR=4.6
      comp=Z,1.0nm,0.5s
BRVK  Borovoye          47.21 314  P      P       23 00 38.4 +0.4
BRVK                               IAmb   IAmb    23 00 39.2
      comp=Z,2.2nm,0.7s
KK31  Karatay Array     47.72 301  P      P       23 00 41.7 -0.5
KKAR  Karatay Array     47.72 301  P      P       23 00 42.2  0.0
WRA   Warramunga Arr    52.34 176  P      P       23 01 15.3 -2.1
      comp=Z,0.2nm,0.5s,baz=354,slow=8.0,SNR=2.6
      comp=Z,0.2nm,0.5s
ABKAR Akbulak array     54.01 310  P      P       23 01 29.6 +0.2
ABKAR                              IAmb   IAmb    23 01 30.5
      comp=Z,1.6nm,0.7s
ABKAR Akbulak array     54.01 310  P      P       23 01 29.4  0.0
ASAR  Alice Springs     56.02 176  P      P       23 01 44.2  0.0
      comp=Z,0.3nm,0.6s,baz=9.9,slow=7.3,SNR=5.5
      comp=Z,0.3nm,0.6s
ARCES ARCESS Array B    64.91 338  P      P       23 02 43.4 -1.0
      comp=Z,1.6nm,1.0s,baz=39,slow=7.8,SNR=4.7
      comp=Z,1.6nm,1.0s
KBZ   Khabaz            66.85 308  P      P       23 02 57.8 +0.5
      comp=Z,2.0nm,0.8s,baz=76,slow=2.7,SNR=4.9
      comp=Z,2.0nm,0.8s
FIA1  FINESS Array S    68.41 330  P      P       23 03 06.0 -0.8
FIA1                               IAmb   IAmb    23 03 06.8
      comp=Z,2.9nm,0.8s
FINES FINESS Array B    68.41 330  P      P       23 03 06.0 -0.9
      comp=Z,1.5nm,0.4s,baz=68,slow=6.1,SNR=39
      comp=Z,1.5nm,0.4s
YKA   Yellowknife Ar    71.91  26  P      P       23 03 28.6 +0.3
      comp=Z,0.2nm,0.5s,baz=305,slow=6.7,SNR=4.2
      comp=Z,0.2nm,0.5s
AKASG Malin Array Be    72.10 319  P      P       23 03 28.3 -1.4
      comp=Z,0.6nm,0.4s,baz=82,slow=20,SNR=5.1
      comp=Z,0.6nm,0.4s
NB2   NORSAR Subarra    74.56 334  P      P       23 03 42.7 -1.4
      comp=Z,2.0nm,0.9s,baz=50,slow=5.9
NOA   NORSAR Array B    74.56 334  P      P       23 03 42.9 -1.2
      comp=Z,0.8nm,0.7s,baz=49,slow=5.7,SNR=6.1
      comp=Z,0.8nm,0.7s
NVAR  Mina Array Bea    84.63  47  P      P       23 04 39.5  0.0
      comp=Z,0.4nm,0.7s,baz=302,slow=4.1,SNR=1.7
      comp=Z,0.4nm,0.7s
KEST  Kesra             92.59 316  LR     LR      23 50 05.3
      comp=Z,47nm,18.7s,baz=260,slow=38
```

IDC ***03*** *22:56:46.2±1.0, 51°.85N×175°.65E, h0^{km}, mb3.8/11, mbtmp3.8/13, ML3.6/2, MS3.1/5, Error ellipse: s-maj=23.5km s-min=16.1km az=5.0*

NEIC ***03*** *22:56:53.6±1.9, 51°.9N±0°.2×175°.5E±0°.1, h47^{km}±10^{km}, mb4.1/40, Error ellipse: s-maj=24.7km s-min=8.6km az=202.0*

ISC 03 22:56:52.1±0.8**, 51°.9N**±0°.1×**175°.53E**±0°.06**, h36**^{km}**, n75, σ0ˢ.91**/68**, mb4.1**/25**, MS3.0**/4**, Rat Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
SHEM  Shemya Is, Ala     1.23 315  Pn     Pn      22 57 13.2 +0.6
      298nm,0.3s,baz=133,slow=2.7,SNR=116
SHEM                               Sn     Sn      22 57 29.3 +1.4
      205nm,0.3s,baz=287,slow=22,SNR=41
SHEM                               LR     LR      22 57 47.6
      comp=Z,442nm,19.2s,baz=45,slow=48
SMY   Shemya             1.23 315  Pn     Pn      22 57 13.2 +0.6
SMY                                Sn     Sn      22 57 28.9 +1.0
ADK   Adak               4.82  87  Pn     Pn      22 58 03.0 +0.9
NIKH  Nikolski High      9.61  77  Pn     Pn      22 59 10.2 +2.7
PETK  Petropavlovsk-    10.94 283  Pn     Pn      22 59 26.9 +1.0
      0.2nm,0.3s,baz=92,slow=17,SNR=1.7
      0.5nm,0.5s
MA2   Magadan           15.86 309  LR     LR      23 05 23.8
      comp=Z,38nm,20.9s,baz=122,slow=32
ANM   Nome              16.12  31  P      P       23 00 37.6 -0.9
ANM                                IAmb   IAmb    23 00 42.4
      comp=Z,21nm,1.4s
N18K  Kilae Creek       18.02  50         P       23 01 00.6 +1.1
N18K                               IAmb   IAmb    23 01 15.7
      comp=Z,13nm,1.4s
O18K  Koktuh Hills      18.13  52  P      P       23 01 03.4 +2.6
O18K                               IAmb   IAmb    23 01 09.4
      comp=Z,20nm,1.4s
```

SVW2	**Sparrevohn**	**18.28**	**48**	P	**Pn**	**23 01 03.0**	**+0.5**
N19K	**Bonanza Creek**	**18.72**	**50**	P	**Pn**	**23 01 08.4**	**+0.6**
N19K				IAmb	IAmb	23 01 15.5	
	comp=Z,5.9nm,0.8s						
TTA	**Tatalina**	**18.73**	**43**	P	**Pn**	**23 01 08.4**	**+0.4**
Q19K	**Cape Douglas,**	**18.74**	**56**	P	**Pn**	**23 01 07.8**	**-0.3**
L19K	**White Mountain**	**18.95**	**46**	P	**Pn**	**23 01 11.1**	**+0.5**
M19K	**Big River Lodg**	**19.07**	**47**	P	**Pn**	**23 01 12.3**	**+0.2**
KDAK	**Kodiak Island**	**19.17**	**60**	P	**P**	**23 01 11.3**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=316,slow=1.4,SNR=20						
	comp=Z,3.4nm,0.4s						
KDAK	**Kodiak Island**	**19.17**	**60**	P	**P**	**23 01 11.0**	**-1.1**
KDAK				IAmb	IAmb	23 01 32.4	
	comp=Z,34nm,1.4s						
K20K	**Telida**	**19.70**	**43**	P	**Pn**	**23 01 18.8**	**-0.8**
J20K	**Nowinta River**	**19.99**	**40**	P	**Pn**	**23 01 22.1**	**-0.8**
J20K				IAmb	IAmb	23 01 23.6	
	comp=Z,10nm,0.8s						
CNPM	**China Poot**	**20.05**	**55**	P	**P**	**23 01 22.0**	**+0.2**
CAST	**Castle Rocks**	**20.57**	**43**	P	**P**	**23 01 28.3**	**+1.0**
IMAR	**Indian Mountai**	**20.93**	**36**	P	**P**	**23 01 32.2**	**+1.1**
H21K	**Melozitna Rive**	**21.13**	**37**	P	**P**	**23 01 34.4**	**+1.1**
M24K	**Tolsona, Glenn**	**22.89**	**49**	P	**P**	**23 01 53.2**	**+1.0**
H24K	**Noodor Dome**	**23.08**	**39**	P	**P**	**23 01 53.6**	**-0.5**
ILAR	**Eielson Array**	**23.15**	**42**	P	**P**	**23 01 52.8**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=247,slow=9.2,SNR=5.5						
ILAR				LR	LR	23 10 25.1	
	comp=Z,27nm,20.6s,baz=253,slow=35						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**23.15**	**42**	P	**P**	**23 01 53.1**	**-1.7**
ASAJ	**Asahikawa**	**23.21**	**264**	LR	LR	23 10 18.8	
	comp=Z,18nm,19.5s,baz=170,slow=35						
PAX	**Paxson**	**23.35**	**46**	P	**P**	**23 01 55.0**	**-1.9**
PAX				IAmb	IAmb	23 01 57.1	
	comp=Z,9.5nm,1.4s						
N25K	**Chitina, Valde**	**23.56**	**50**	P	**P**	**23 01 58.3**	**-0.7**
N25K				IAmb	IAmb	23 02 13.9	
	comp=Z,9.7nm,1.2s						
TOLK	**Toolik Lake Re**	**23.60**	**32**	P	**P**	**23 01 59.6**	**+0.5**
RIDG	**Independent Ri**	**23.77**	**45**	P	**P**	**23 01 59.5**	**-1.4**
RIDG				IAmb	IAmb	23 02 17.7	
	comp=Z,8.9nm,1.2s						
VRDI	**Verde Repeater**	**24.08**	**51**	P	**P**	**23 02 03.3**	**-0.6**
VRDI				IAmb	IAmb	23 02 18.0	
	comp=Z,6.0nm,0.9s						
SCRK	**Sand Creek**	**24.19**	**44**	P	**P**	**23 02 04.0**	**-0.9**
SCRK				IAmb	IAmb	23 02 05.1	
	comp=Z,2.4nm,0.6s						
BMAR	**Burnt Mountain**	**24.85**	**36**	P	**P**	**23 02 11.2**	**+0.6**
L27K	**Beaver Creek,**	**25.01**	**47**	P	**P**	**23 02 12.5**	**+0.3**
L27K				IAmb	IAmb	23 02 19.3	
	comp=Z,8.0nm,1.4s						
BCAR	**Beaver Creek A**	**25.03**	**47**	P	**P**	**23 02 13.1**	**+0.7**
HYT	**Haines Junctio**	**26.96**	**52**	P	**P**	**23 02 30.0**	**0.0**
HYT				IAmb	IAmb	23 02 44.2	
	comp=Z,4.4nm,1.0s						
INK	**Inuvik**	**29.12**	**36**	P	**P**	**23 02 48.7**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=262,slow=7.1,SNR=3.8						
	comp=Z,0.7nm,0.5s						
INK	**Inuvik**	**29.12**	**36**	P	**P**	**23 02 48.7**	**-0.2**
DLBC	**Dease Lake**	**31.02**	**56**	LR	LR	23 14 04.5	
	comp=Z,71nm,19.5s,baz=136,slow=34						
H11N2	**WAKE ISLAND Hy**	**32.78**	**195**	T	T	23 37 53.3	
	baz=10,slow=76						
H11N3	**WAKE ISLAND Hy**	**32.80**	**195**	T	T	23 37 57.7	
	baz=10,slow=76						
H11N1	**WAKE ISLAND Hy**	**32.80**	**195**	T	T	23 37 57.6	
	baz=10,slow=76						
H11S1	**WAKE ISLAND Hy**	**34.01**	**195**	T	T	23 39 31.8	
	baz=9.9,slow=76						
H11S3	**WAKE ISLAND Hy**	**34.03**	**195**	T	T	23 39 30.3	
	baz=9.9,slow=76						
H11S2	**WAKE ISLAND Hy**	**34.03**	**195**	T	T	23 39 30.1	
	baz=9.9,slow=76						
YKA	**Yellowknife Ar**	**37.44**	**46**	P	**P**	**23 04 00.7**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=288,slow=8.2,SNR=7.2						
YKA				PcP	**PcP**	**23 06 17.5**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=304,slow=2.3,SNR=4.8						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**37.44**	**46**	P	**P**	**23 04 00.2**	**-1.1**
E03A	**Lebam**	**39.12**	**73**	P	**P**	**23 04 15.6**	**-0.1**
SPB2	**Spitsbergen Ar**	**49.59**	**354**	P	**P**	**23 05 38.3**	**-0.6**
GSC	**Goldstone, Bar**	**49.90**	**82**	P	**P**	**23 05 42.0**	**0.0**
GSC				IAmb	IAmb	23 05 51.7	
	comp=Z,2.5nm,0.9s						
KURK	**Kurchatov**	**56.06**	**310**	P	**P**	**23 06 27.0**	**0.0**
MK31	**Makanchi Array**	**56.90**	**305**	P	**P**	**23 06 32.7**	**-0.3**
MK31				IAmb	IAmb	23 06 33.1	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**56.90**	**305**	P	**P**	**23 06 32.8**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=53,slow=6.1,SNR=16						
	comp=Z,0.8nm,0.4s						
ARCES	**ARCESS Array B**	**56.93**	**348**	P	**P**	**23 06 32.0**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=28,slow=11,SNR=4.4						
	comp=Z,1.7nm,0.8s						
ARCES	**ARCESS Array B**	**56.93**	**348**	P	**P**	**23 06 32.8**	**-0.1**
MAKZ	**Makanchi**	**57.05**	**305**	P	**P**	**23 06 33.5**	**-0.7**
MAKZ				IAmb	IAmb	23 06 40.5	
	comp=Z,2.5nm,1.1s						
KIRV	**Kirov**	**61.51**	**331**	LR	LR	23 38 08.9	
	comp=Z,34nm,18.5s,baz=29,slow=40						
SCHQ	**Schefferville**	**61.73**	**36**	P	**P**	**23 07 05.4**	**-0.8**
	comp=Z,3.7nm,0.8s,baz=302,slow=5.8,SNR=5.9						
	comp=Z,3.7nm,0.8s						
SCHQ	**Schefferville**	**61.73**	**36**	P	**P**	**23 07 05.7**	**-0.6**
TX31	**Lajitas Ar. Si**	**62.03**	**77**	P	**P**	**23 07 09.5**	**+0.7**
TX31				IAmb	IAmb	23 07 10.0	
	comp=Z,3.4nm,1.0s						
TXAR	**Lajitas Array**	**62.03**	**77**	P	**P**	**23 07 08.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=304,slow=5.1,SNR=9.2						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**62.03**	**77**	P	**P**	**23 07 09.1**	**+0.3**
KDJ	**Kajisay**	**62.78**	**304**	P	**P**	**23 07 13.9**	**+0.2**
KDJ				IAmb	IAmb	23 07 15.1	
	comp=Z,1.7nm,0.9s						
FINES	**FINESS Array B**	**64.43**	**344**	P	**P**	**23 07 23.4**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=28,slow=8.6,SNR=4.6						
	comp=Z,1.6nm,0.9s						
FINES	**FINESS Array B**	**64.43**	**344**	P	**P**	**23 07 24.2**	**+0.2**
ABKAR	**Akbulak array**	**65.33**	**319**	P	**P**	**23 07 30.3**	**+0.2**
ABKAR	**Akbulak array**	**65.33**	**319**	P	**P**	**23 07 30.4**	**+0.3**
ABKAR				IAmb	IAmb	23 07 31.6	
	comp=Z,2.1nm,0.9s						
KK31	**Karatay Array**	**65.38**	**309**	P	**P**	**23 07 30.4**	**-0.2**
KK31				IAmb	IAmb	23 07 49.5	
	comp=Z,3.4nm,1.5s						
KKAR	**Karatay Array**	**65.38**	**309**	P	**P**	**23 07 30.4**	**-0.2**
NB2	**NORSAR Subarra**	**66.74**	**352**	P	**P**	**23 07 38.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=9.0,slow=6.9						
NOA	**NORSAR Array B**	**66.74**	**352**	P	**P**	**23 07 38.8**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=11,slow=6.6,SNR=5.0						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**80.05**	**219**	P	**P**	**23 08 57.2**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=36,slow=7.2,SNR=2.0						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**83.59**	**218**	P	**P**	**23 09 16.8**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=17,slow=6.9,SNR=2.7						
	comp=Z,0.3nm,0.7s						

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*IDC **03** 23:05:57.7±0.8, 16°.38S×167°.53E, h0^{km}, mb4.5/14, mbtmp4.6/17, ML4.7/3, MS4.2/49, Error ellipse: s-maj=23.0km s-min=17.9km az=112.0*

*NEIC **03** 23:05:59.9±2.0, 16°.30S±0°.04×167°.33E±0°.09, h7^{km}±4^{km}, mb5.0/43, Error ellipse: s-maj=12.7km s-min=5.6km az=78.0*

*NOU **03** 23:05:59.9, 16°.31S×167°.25E, h3^{km}, MLv5.1/18, Vanuatu Islands*

*BJI **03** 23:06:00.0±0.0, 16°.30S×167°.40E, h10^{km}, mb4.9/44, mB5.1/22, Ms5.0/7, Ms7 4.6/4*

*MOS **03** 23:06:01.7±0.8, 16°.28S×167°.21E, h30^{km}, mb5.0/18, Error ellipse: s-maj=11.8km s-min=9.1km az=28.3*

*GCMT **03** 23:06:03.9±0.2, 16°.31S±0°.02×167°.12E±0°.01, h19^{km}, MW5.0/98, Moment Tensor Solution. s61,c71; s98,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.90±.15; $M_{\theta\theta}$-0.68±.10; $M_{\phi\phi}$-3.22±.10; $M_{r\theta}$1.76±.21; $M_{\theta\phi}$1.14±.06; $M_{\phi r}$-2.19±.20; Best double couple: $M_0$4.70300×10^{16} NP1:ϕ_s347.00000°,δ28.00000°,λ106.00000°. NP2: ϕ_s149.00000°,δ63.00000°,λ81.00000°. Principal axes: T 4.8820, Plg70.0000°, Azm41.0000°; N -0.3550, Plg8.0000°, Azm153.0000°; P -4.5230, Plg18.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 23:06:01.8±0.3, **16°.31S**±0°.04×**167°.34E**±0°.06, **h20**^{km}, **n249**, σ**1**^{s}.**70**/204, **mb5.0**/75, **MS4.2**/52, **13C-6D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.87**	**352**	Pg	**Pb**	**23 06 16.2**	**-2.0**
SANVU				Sg	**Sb**	**23 06 27.9**	**-1.5**
SANVU	**Saraoutou**	**0.87**	**352**	P	**Pb**	**23 06 16.9**	**-1.3**
DVP	**Devils Point**	**1.63**	**150**	P	**Pb**	**23 06 30.0**	**-1.2**
RTV	**Rentapao**	**1.81**	**145**	P	**Pb**	**23 06 33.1**	**-1.1**
LIFNC	**LIFOU**	**4.45**	**181**		**Pn**	**23 07 05.6**	**-2.5**
LIFNC	**LIFOU**	**4.45**	**181**	P	**Pn**	**23 07 06.8**	**-1.3**
KOUNC	**Koumac, New Ca**	**5.12**	**214**	Pn	**Pn**	**23 07 16.5**	**-0.9**
KOUNC	**Koumac, New Ca**	**5.12**	**214**	P	**Pn**	**23 07 17.7**	**+0.3**
	232nm,1.0s						
MARNC	**Mare, Loyalty**	**5.19**	**173**	Pn	**Pn**	**23 07 18.0**	**-0.4**
MARNC	**Mare, Loyalty**	**5.19**	**173**	P	**Pn**	**23 07 18.7**	**+0.4**
	2.4nm,0.5s						
YATNC	**Mamie plateau,**	**5.74**	**184**	P	**Pn**	**23 07 24.6**	**-1.3**
DZM	**Mont Dzumac**	**5.79**	**188**	Pn	**Pn**	**23 07 26.0**	**-0.8**
	11nm,0.3s,baz=355,slow=23,SNR=60						
DZM				Sn	**Sn**	**23 08 30.1**	**-2.6**
	0.7nm,0.3s,baz=305,slow=22,SNR=1.4						
DZM				LR	LR	23 08 44.9	
	comp=Z,322nm,18.4s,baz=73,slow=29						
	40nm,0.3s						
DZM	**Mont Dzumac**	**5.79**	**188**	*e*P	**Pn**	**23 07 26.0**	**-0.8**
DZM	**Mont Dzumac**	**5.79**	**188**	*e*Pn	**Pn**	**23 07 30.6**	**+3.8**
DZM				*e*Sn	**Sn**	**23 08 32.3**	**-0.4**
DZM				*e*LR	LR	23 08 49.5	
	comp=Z,3µm,24.6s						
DZM	**Mont Dzumac**	**5.79**	**188**	Pn	**Pn**	**23 07 26.3**	**-0.5**
DZM	**Mont Dzumac**	**5.79**	**188**	P	**Pn**	**23 07 26.2**	**-0.6**
	130nm,0.5s						
NOUC	**Port Laguerre**	**5.84**	**189**	P	**Pn**	**23 07 27.0**	**-0.4**
	89nm,1.1s						
ONTNC	**Ouen Toro**	**6.03**	**188**	Pn	**Pn**	**23 07 29.3**	**-0.6**
ONTNC	**Ouen Toro**	**6.03**	**188**	P	**Pn**	**23 07 29.9**	**0.0**
	128nm,0.8s						
OUENC	**Ouen Island, N**	**6.09**	**184**	Pn	**Pn**	**23 07 30.0**	**-0.8**
OUENC	**Ouen Island, N**	**6.09**	**184**	P	**Pn**	**23 07 30.6**	**-0.2**
	103nm,1.3s						
PINNC	**Pines Island,**	**6.27**	**179**	Pn	**Pn**	**23 07 33.2**	**0.0**
HNR	**Honiara**	**9.93**	**313**	Pn	**Pn**	**23 08 23.6**	**+0.1**
	16nm,0.3s,baz=281,slow=4.3,SNR=7.6						
HNR				Sn	**Sn**	**23 10 10.9**	**-3.5**
	baz=0.8,slow=19						
HNR				LR	LR	23 12 08.9	
	comp=Z,817nm,21.0s,baz=121,slow=37						
	61nm,0.3s						
HNR	**Honiara**	**9.93**	**313**	Pn	**Pn**	**23 08 21.3**	**-2.1**
MSVF	**Nonsavu**	**10.35**	**99**	Pn	Pn	23 08 35.1	+5.8
	0.8nm,0.3s,baz=258,slow=8.7,SNR=9.8						
MSVF				LR	LR	23 11 43.2	
	comp=Z,4µm,18.3s,baz=270,slow=34						
MSVF	**Nonsavu**	**10.35**	**99**	⇑*e*P	Pn	23 08 34.1	+4.8
MSVF				pmax	pmax		
	comp=Z,23nm,1.0s						
MSVF	**Nonsavu**	**10.35**	**99**	Pn	**Pn**	**23 08 31.8**	**+2.5**
EIDS	**Eidsvold**	**17.65**	**237**	P	**P**	**23 10 07.5**	**-0.1**
EIDS				IAmb	IAmb	23 10 20.5	
	comp=Z,126nm,1.6s						
KRVT	**Keravat (AS076**	**19.19**	**307**	P	**Pn**	**23 10 26.8**	**+1.3**
	comp=Z,1.6nm,0.3s,baz=106,slow=2.7,SNR=12						
	comp=Z,74nm,0.9s						
RMQ	**Roma**	**20.02**	**237**	P	Pn	23 10 34.4	-1.0
	baz=20,SNR=8.2						
ARMA	**Armidale**	**20.09**	**223**	P	Pn	23 10 36.5	+0.2
	baz=20,SNR=5.5						
ARMA	**Armidale**	**20.09**	**223**	P	**P**	**23 10 33.8**	**-0.6**
AFI	**Afiamalu**	**20.31**	**86**	LR	LR	23 16 31.4	
	comp=Z,868nm,20.6s,baz=268,slow=32						
CTA	**Charters Tower**	**20.37**	**256**	P	Pn	23 10 38.5	-1.1
	comp=Z,24nm,0.9s,baz=82,slow=11,SNR=26						
CTA				LR	LR	23 17 27.1	
	comp=Z,632nm,19.2s,baz=75,slow=34						
	comp=Z,24nm,0.9s						
CTAO	**Charters Tower**	**20.37**	**256**	P	**P**	**23 10 37.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,93nm,1.4s						
CTAO	**Charters Tower**	**20.37**	**256**	P	**P**	**23 10 37.6**	**+0.1**
CTAO				IAmb	IAmb	23 10 44.1	
	comp=Z,93nm,1.4s						
PMG	**Port Moresby**	**20.82**	**287**	P	Pn	23 10 44.0	-0.8
	comp=Z,82nm,0.9s,baz=90,slow=15,SNR=5.6						
PMG				LR	LR	23 18 05.1	
	comp=Z,2µm,18.0s,baz=116,slow=35						
	comp=Z,82nm,0.9s						
PMG	**Port Moresby**	**20.82**	**287**	*de*P	**P**	**23 10 42.4**	**+0.1**
PMG				pmax	pmax		
	comp=Z,21nm,1.0s						
PMG	**Port Moresby**	**20.82**	**287**	P	**P**	**23 10 41.6**	**-0.7**
MTSU	**Mount Surprise**	**22.06**	**262**	P	**P**	**23 10 56.6**	**+0.9**
	baz=22,SNR=15						
HAZ	**Te Kaha**	**23.27**	**159**	P	**P**	**23 11 10.9**	**+2.8**
COEN	**Coen**	**23.44**	**272**	P	**P**	**23 11 11.2**	**+1.2**
	baz=23,SNR=5.9						
COEN	**Coen**	**23.44**	**272**	P	**P**	**23 11 10.0**	**0.0**
PKGZ	**Pakihiroa**	**23.49**	**158**	P	**P**	**23 11 12.7**	**+2.3**
URZ	**Urewera**	**23.50**	**160**	P	**P**	**23 11 11.9**	**+1.5**
	comp=Z,24nm,0.9s,baz=350,slow=3.2,SNR=14						
URZ	**Urewera**	**23.50**	**160**		**P**	**23 11 10.8**	**+0.4**
WMGZ	**Waiomatatini S**	**23.55**	**158**	P	**P**	**23 11 13.3**	**+2.4**
MWZ	**Matawai**	**23.70**	**160**	P	**P**	**23 11 15.2**	**+2.8**
TWGZ	**Tauwhareparae**	**23.71**	**159**	P	**P**	**23 11 15.5**	**+3.0**
PUZ	**Puketiti**	**23.72**	**158**	P	**P**	**23 11 11.9**	**-0.7**
QLP	**Quilpie**	**23.77**	**241**	P	**P**	**23 11 13.9**	**+0.7**
	baz=23,SNR=7.3						
MRHZ	**Matea Rd**	**23.81**	**162**	P	**P**	**23 11 17.4**	**+3.9**
CNGZ	**Carnagh Statio**	**24.07**	**159**	P	**P**	**23 11 16.6**	**+0.8**
BKZ	**Black Stump Fm**	**24.14**	**162**	P	**P**	**23 11 16.4**	**-0.2**
BKZ	**Black Stump Fm**	**24.14**	**162**	P	**P**	**23 11 19.1**	**+2.5**
BHHZ	**Black Hill Sta**	**24.32**	**163**	P	**P**	**23 11 20.6**	**+2.3**
CMSA	**Cobar Meteorol**	**24.85**	**229**	P	**P**	**23 11 23.0**	**-0.1**
	baz=24,SNR=7.8						
BFZ	**Birch Farm**	**25.49**	**164**	P	**P**	**23 11 30.1**	**+1.4**
BFZ				IAmb	IAmb	23 11 35.5	
	comp=Z,30nm,0.8s						
MSWZ	**Moikau Station**	**25.94**	**166**	P	**P**	**23 11 31.3**	**-1.5**
KHZ	**Kahutara**	**26.56**	**170**	P	**P**	**23 11 38.4**	**0.0**
KHZ				IAmb	IAmb	23 11 47.6	
	comp=Z,69nm,1.5s						
QIS	**Mount Isa**	**26.63**	**257**	P	**P**	**23 11 41.0**	**+1.6**
	baz=26,SNR=10.0						
RPZ	**Rata Peaks**	**27.50**	**174**	LR	LR	23 22 28.6	
	comp=Z,1µm,18.4s,baz=348,slow=36						
STKA	**Stephens Creek**	**28.05**	**232**	P	**P**	**23 11 51.5**	**-0.4**
	comp=Z,5.3nm,1.0s,baz=84,slow=11,SNR=3.3						
STKA				PcP	**PcP**	**23 15 05.7**	**-0.8**
	comp=Z,3.9nm,0.7s,baz=349,slow=5.2,SNR=3.8						
STKA				LR	LR	23 22 20.8	
	comp=Z,440nm,18.6s,baz=79,slow=35						
	comp=Z,5.3nm,1.0s						
STKA	**Stephens Creek**	**28.05**	**232**	P	**P**	**23 11 51.9**	**-0.1**
	baz=28,SNR=6.5						
STKA	**Stephens Creek**	**28.05**	**232**	⇑*e*P	**P**	**23 11 52.2**	**+0.3**
STKA	**Stephens Creek**	**28.05**	**232**	P	**P**	**23 11 52.0**	**+0.1**
WR0	**Warramunga Arr**	**31.35**	**258**	P	**P**	**23 12 19.2**	**-2.2**
WB0	**Warramunga Arr**	**31.48**	**259**	P	**P**	**23 12 19.7**	**-2.9**
WB0				IAmb	IAmb	23 12 26.0	
	comp=Z,41nm,1.6s						
RAR	**Rarotonga**	**31.49**	**104**	LR	LR	23 24 28.2	
	comp=Z,270nm,18.5s,baz=278,slow=36						
WB2	**Warramunga Arr**	**31.53**	**258**	P	**P**	**23 12 21.4**	**-1.5**
WB2				IAmb	IAmb	23 12 33.3	
	comp=Z,16nm,1.2s						
WRAB	**Tennant Creek**	**31.53**	**258**	⇓*e*P	**P**	**23 12 20.9**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.4s						
WRA	**Warramunga Arr**	**31.54**	**258**	P	**P**	**23 12 21.5**	**-1.5**
	comp=Z,2.9nm,0.9s,baz=87,slow=6.6,SNR=12						
WRA				PcP	**PcP**	**23 15 15.5**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=97,slow=3.2,SNR=1.4						
WRA				LR	LR	23 24 16.2	
	comp=Z,441nm,18.3s,baz=12,slow=35						
	comp=Z,2.9nm,0.9s						
WRA	**Warramunga Arr**	**31.54**	**258**	*i* P	**P**	**23 12 22.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**31.54**	**258**	P	**P**	**23 12 21.1**	**-1.9**
SMPI	**Sarmi**	**31.57**	**294**	P	**P**	**23 12 26.6**	**+3.3**
	comp=Z,42nm,1.2s						
AS31	**Alice Springs**	**32.20**	**251**	P	**P**	**23 12 27.7**	**-1.1**
AS31				IAmb	IAmb	23 12 33.9	
	comp=Z,12nm,1.0s						
ASAR	**Alice Springs**	**32.20**	**251**	P	**P**	**23 12 27.9**	**-0.9**
	comp=Z,12nm,0.7s,baz=75,slow=9.1,SNR=84						
ASAR				PcP	**PcP**	**23 15 16.6**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=89,slow=3.8,SNR=2.2						
ASAR				LR	LR	23 25 01.4	
	comp=Z,1µm,18.8s,baz=90,slow=35						
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**32.20**	**251**	P	**P**	**23 12 28.0**	**-0.9**
ASAR	**Alice Springs**	**32.20**	**251**	P	**P**	**23 12 28.0**	**-0.9**
KDU	**Kakadu**	**33.92**	**271**	P	**P**	**23 12 46.1**	**+2.2**
	baz=34,SNR=4.3						
KNRA	**Kununurra**	**37.05**	**265**	P	**P**	**23 13 12.0**	**+1.2**
	baz=37,SNR=5.5						
KNRA	**Kununurra**	**37.05**	**265**	P	**P**	**23 13 09.6**	**-1.2**
GUMO	**Guam**	**37.09**	**322**	LR	LR	23 30 21.5	
	comp=Z,303nm,18.0s,baz=136,slow=39						
WRKA	**Warakurna**	**37.44**	**250**	P	**P**	**23 13 13.6**	**-0.5**
	baz=37,SNR=5.1						
FORT	**Forrest**	**38.57**	**241**	P	**P**	**23 13 23.4**	**-0.1**
FORT				IAmb	IAmb	23 14 09.9	
	comp=Z,33nm,0.9s						
SIJI	**Sorong**	**38.71**	**290**	LR	LR	23 30 31.2	
	comp=Z,552nm,18.2s,baz=96,slow=38						
SWI	**Sorong**	**38.72**	**290**	P	P	23 13 28.9	+4.0
	comp=Z,75nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.81**	**261**	LR	LR	23 30 07.8	
	comp=Z,830nm,18.2s,baz=96,slow=36						
FITZ	**Fitzroy Crossi**	**39.81**	**261**	P	**P**	**23 13 33.4**	**-0.6**
	baz=40,SNR=4.0						
FITZ	**Fitzroy Crossi**	**39.81**	**261**	P	**P**	**23 13 33.3**	**-0.7**
TBI	**Tubuai**	**41.12**	**107**	*e*S	S	23 19 37.7	-19
TBI				*e*LR	LR	23 25 28.0	
	comp=Z,468nm,24.5s						
PPT2	**Papeete2**	**41.17**	**98**	*e*LR	LR	23 24 50.4	
	comp=Z,703nm,28.2s						
PPT	**Papeete**	**41.17**	**98**	LR	LR	23 26 08.8	
	comp=Z,343nm,20.9s,baz=290,slow=30						
LBMI	**Labuha**	**42.23**	**288**	P	P	23 13 58.1	+4.1
	comp=Z,808nmcomp=Z,56nm,1.3s						
BATI	**Baumata**	**42.87**	**272**	LR	LR	23 31 35.4	
	comp=Z,472nm,19.7s,baz=136,slow=36						
BATI	**Baumata**	**42.87**	**272**	P	P	23 14 13.0	+14
SANI	**Sanana**	**43.08**	**285**	P	**P**	**23 14 02.7**	**+1.8**
	comp=Z,30nm,0.9s						
PSA00	**Pilbara Seismi**	**45.09**	**256**	P	**P**	**23 14 15.4**	**-1.6**
PSA00				IAmb	IAmb	23 14 21.7	
	comp=Z,16nm,1.4s						
MBWA	**Marble Bar**	**45.21**	**256**	P	**P**	**23 14 15.9**	**-2.1**
MBWA				IAmb	IAmb	23 14 18.1	
	comp=Z,30nm,1.4s						
KMSI	**Cibinong**	**45.94**	**287**	P	**P**	**23 14 26.5**	**+2.7**
	comp=Z,88nm,0.6s						
LUWI	**Luwuk**	**46.44**	**285**	P	**P**	**23 14 30.9**	**+3.2**
	comp=Z,46nm,1.1s						
DAV	**Davao City (W)**	**47.40**	**296**	LR	LR	23 34 52.6	
	comp=Z,61nm,18.3s,baz=130,slow=36						
BKSI	**Bulukumba**	**47.53**	**278**	P	**P**	**23 14 40.0**	**+3.8**
	comp=Z,8.2nm,1.6s						
APSI	**Ampana**	**47.53**	**284**	P	**P**	**23 14 39.3**	**+3.0**
	comp=Z,26nm,1.2s						
BNSI	**Bone**	**47.82**	**279**	P	**P**	**23 14 41.4**	**+2.9**
	comp=Z,793nmcomp=Z,18nm,1.0s						
KAPI	**Kappang**	**47.97**	**278**	LR	LR	23 35 01.8	
	comp=Z,161nm,20.5s,baz=118,slow=36						
KAPI	**Kappang**	**47.97**	**278**	⇑*e*P	**P**	**23 14 39.1**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,20nm,1.8s						
KAPI	**Kappang**	**47.97**	**278**	P	**P**	**23 14 39.6**	**0.0**
KAPI				IAmb	IAmb	23 15 01.1	
	comp=Z,21nm,1.2s						
SPSI	**Sidrap Palu**	**48.27**	**279**	P	**P**	**23 14 44.1**	**+2.1**
	comp=Z,10nm,1.2s						
TTSI	**Tana Toraja**	**48.52**	**281**	P	**P**	**23 14 47.6**	**+3.7**
PLAI	**Plampang**	**48.84**	**272**	P	**P**	**23 14 48.2**	**+1.8**
	comp=Z,22nm,1.1s						
TOLI2	**Tolitoli**	**49.09**	**286**	P	**P**	**23 14 47.1**	**-1.2**
TOLI2				IAmb	IAmb	23 15 06.1	
	comp=Z,10.0nm,0.9s						
MPSI	**Mapaga**	**49.62**	**285**	P	**P**	**23 14 53.3**	**+1.0**
	comp=Z,22nm,1.1s						
TAOE	**Nuku Hiva Isla**	**51.67**	**88**	*e*S	**S**	**23 22 31.5**	**+2.7**
TAOE				*e*LR	LR	23 30 07.6	
	comp=Z,443nm,27.3s						
JAGI	**Jajag, Banyuwa**	**52.40**	**272**	P	**P**	**23 15 16.5**	**+3.2**
	comp=Z,26nm,1.6s						
ABJI	**Asem Bagus**	**52.49**	**273**	P	P	23 15 18.3	+4.4
	comp=Z,48nm,1.0s						
KMMI	**Kalianget**	**52.94**	**273**	P	**P**	**23 15 21.0**	**+3.8**
	comp=Z,25nm,1.0s						
BBKI	**Banjar Baru**	**53.10**	**278**	P	P	23 15 22.6	+4.1
BLJI	**Banyuglugur**	**53.12**	**273**	P	P	23 15 22.6	+4.0
	comp=Z,2µmcomp=Z,18nm,0.5s						
JOW	**Kunigami**	**57.25**	**318**	LR	LR	23 40 30.2	
	comp=Z,179nm,18.6s,baz=167,slow=36						
KPJI	**Karang Pucung**	**57.69**	**272**	P	**P**	**23 15 54.5**	**+2.9**
	comp=Z,27nm,0.8s						
KSM	**Kuching**	**58.98**	**282**	P	**P**	**23 16 00.1**	**-0.5**
KSM				IAmb	IAmb	23 16 06.4	
	comp=Z,18nm,1.1s						
MJAR	**Matsushiro Arr**	**59.33**	**333**	P	**P**	**23 16 04.3**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=152,slow=10.0,SNR=4.6						
	comp=Z,2.9nm,0.8s						
MJAR	**Matsushiro Arr**	**59.33**	**333**	P	**P**	**23 16 03.1**	**+0.5**
MJAR				IAmb	IAmb	23 16 08.4	
	comp=Z,20nm,1.6s						
DBJI	**Dramaga**	**59.99**	**272**	P	**P**	**23 16 11.3**	**+3.8**
	comp=Z,48nm,0.5s						
TPI	**Tanjungpandan**	**60.16**	**276**	P	P	23 16 14.3	+5.6
	comp=Z,6.6nm,1.2s						
VNDA	**Vanda**	**61.29**	**181**	P	**P**	**23 16 15.4**	**0.0**
	comp=Z,1.2nm,0.8s,baz=3.8,slow=6.7,SNR=5.0						
VNDA				LR	LR	23 40 44.3	
	comp=Z,179nm,18.5s,baz=5.0,slow=34						
	comp=Z,1.2nm,0.8s						
VNDA	**Vanda**	**61.29**	**181**	P	**P**	**23 16 15.4**	**0.0**
VNDA				pmax	pmax		
	comp=Z,30nm,2.0s						
VNDA	**Vanda**	**61.29**	**181**	P	**P**	**23 16 15.4**	**0.0**
VNDA				IAmb	IAmb	23 16 21.8	
	comp=Z,30nm,1.9s						
SBA	**Scott Base**	**61.57**	**180**	P	**P**	**23 16 17.5**	**+0.3**
SBA				pmax	pmax		
	comp=Z,15nm,1.1s						
SBA	**Scott Base**	**61.57**	**180**	P	**P**	**23 16 17.5**	**+0.3**
SBA				IAmb	IAmb	23 16 24.7	
	comp=Z,15nm,1.1s						
PPBI	**Pangkal Pinang**	**61.79**	**276**	P	P	23 16 24.8	+5.0
KASI	**Kota Agung**	**62.42**	**272**	P	P	23 16 28.2	+4.2
	comp=Z,47nm,1.0s						
DSRI	**Dabo**	**63.78**	**278**	P	P	23 16 39.0	+6.0
KSRS	**Korea Array**	**65.08**	**326**	LR	LR	23 39 57.6	
	comp=Z,75nm,21.7s,baz=150,slow=31						
NJ2	**Nanjing**	**66.85**	**316**	*e*P	**P**	**23 16 52.9**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USRK	**Ussuriysk Ar.**	**68.32**	**333**	P	**P**	**23 17 01.2**	**-0.4**
	comp=Z,7.6nm,1.1s,baz=167,slow=8.7,SNR=3.5						
	comp=Z,7.6nm,1.1s						
USRK	**Ussuriysk Ar.**	**68.32**	**333**	P	**P**	**23 17 01.8**	**+0.2**
USRK	**Ussuriysk Ar.**	**68.32**	**333**	P	**P**	**23 17 01.8**	**+0.2**
SHEM	**Shemya Is, Ala**	**69.00**	**4**	LR	LR	23 43 02.1	
	comp=Z,254nm,18.9s,baz=99,slow=32						
PET	**Petropavlovsk**	**69.45**	**354**	*e*P	**P**	**23 17 03.8**	**-4.6**
PET				*e*S	**S**	**23 26 21.0**	**+6.5**
PET				pmax	pmax		
	comp=Z,18nm,0.7s						
PEA0B	**Petropavlovsk-**	**69.63**	**354**	P	**P**	**23 17 08.6**	**-0.9**
PEA0B				pmax	pmax		
	comp=Z,25nm,1.2s						
PEA0B	**Petropavlovsk-**	**69.63**	**354**	P	**P**	**23 17 08.6**	**-0.9**
PETK	**Petropavlovsk-**	**69.63**	**354**	P	**P**	**23 17 09.4**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=102,slow=8.3,SNR=6.0						
PETK				LR	LR	23 45 01.7	
	comp=Z,165nm,19.1s,baz=154,slow=34						
	comp=Z,5.7nm,0.9s						
PETK	**Petropavlovsk-**	**69.63**	**354**	P	**P**	**23 17 08.4**	**-1.1**
MDJ	**Mudanjiang**	**69.70**	**332**	P	**P**	**23 17 13.3**	**+3.2**
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,430nm,5.7s						
BNX	**BinXian**	**71.55**	**332**	⇑P	**P**	**23 17 23.6**	**+2.2**
BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR	**Gornyy**	**72.09**	**340**	⇓*i*P	**P**	**23 17 25.2**	**+0.7**
GRNR				pmax	pmax		

	comp=Z,1.0nm,0.7s						
ENH	Enshi	72.42	310	P	P	23 17 25.8	-1.2
KLR	Kul'dur	72.47	336	LR	LR	23 49 04.8	
	comp=Z,49nm,18.3s,baz=41,slow=36						
KLR	Kul'dur	72.47	336	⇓eP	P	23 17 27.1	+0.2
KLR				pmax	pmax		
	comp=Z,15nm,1.7s						
LYN	LuoYang	72.63	315	eP	P	23 17 28.8	+0.7
LYN				pP	pP	23 17 33.2	-1.2
LYN				sP	sP	23 17 37.1	+0.5
LYN				S	SKiKP	23 26 58.7	-3.2
LYN				SS	SS	23 31 36.2	+4.1
LYN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LYN				pmax	pmax		
	comp=Z,80nm,5.9s						
LYN				LR	LR		
	comp=Z,230nm,11.2s						
LYN				LR	LR		
	comp=Z,180nm,14.3s						
LYN				LR	LR		
	comp=Z,200nm,17.5s						
GYA	Guiyang	72.66	305	⇑P	P	23 17 32.1	+3.4
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HNS	HongShan	72.82	319	⇑P	P	23 17 29.5	+0.3
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
QSPA	South Pole Qui	73.73	180	LR	LR	23 47 15.5	
	comp=Z,135nm,19.3s,baz=26,slow=34						
QSPA	South Pole Qui	73.73	180	P	P	23 17 34.6	+0.3
XAN	Xi'an	74.80	313	P	P	23 17 45.9	+4.9
XAN				pP	sP	23 17 50.4	+0.9
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI	Kunming	75.19	302	⇑P	P	23 17 44.8	+1.2
KMI				pP	pP	23 17 47.6	-2.3
KMI				sP	sP	23 17 49.4	-2.8
KMI				S	S	23 27 23.2	+1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,140nm,6.4s						
KMI				LR	LR		
	comp=Z,130nm,17.2s						
KMI				LR	LR		
	comp=Z,140nm,21.3s						
CMAR	Chiang Mai Arr	75.65	294	P	P	23 17 47.3	+1.2
	comp=Z,3.2nm,0.3s,baz=120,slow=3.1,SNR=10						
CMAR				LR	LR	23 51 54.6	
	comp=Z,35nm,18.7s,baz=120,slow=36						
	comp=Z,3.2nm,0.3s						
CMAR	Chiang Mai Arr	75.65	294	P	P	23 17 45.8	-0.3
CHTO	Chiang Mai	75.79	295	P	P	23 17 46.7	-0.2
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	75.79	295	P	P	23 17 46.7	-0.2
PZH	PanZhiHua	76.60	303	P	P	23 17 54.8	+3.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.9s						
MA2	Magadan	76.81	351	LR	LR	23 49 01.6	
	comp=Z,71nm,19.3s,baz=160,slow=34						
MA2	Magadan	76.81	351	⇓eP	P	23 17 50.6	-1.2
MA2				pmax	pmax		
	comp=Z,8.0nm,2.5s						
MA2	Magadan	76.81	351	P	P	23 17 50.6	-1.2
CD2	Chengdu	77.02	308	P	P	23 17 53.4	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
HIA	Hailar	77.68	330	⇑eP	P	23 17 57.2	+0.2
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZEA	Zeya	77.76	337	eP	P	23 18 02.2	+4.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	Lanzhou	79.43	312	eP	P	23 18 08.8	+1.7
LZH				pP	pP	23 18 13.0	-0.4
LZH				sP	sP	23 18 16.7	+1.1
LZH				sS	sS	23 28 18.6	+0.9
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,7.8s						
LZH				LR	LR		
	comp=Z,320nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,18.2s						
SEY	Seymchan	79.85	353	LR	LR	23 50 37.1	
	comp=Z,134nm,19.5s,baz=180,slow=34						
SEY	Seymchan	79.85	353	⇓eP	P	23 18 08.0	-0.5
SEY				pmax	pmax		
	comp=Z,14nm,2.5s						
MAW	Mawson	80.45	202	LR	LR	23 50 31.3	
	comp=Z,125nm,18.8s,baz=104,slow=33						
KDAK	Kodiak Island	80.91	20	LR	LR	23 48 38.6	
	comp=Z,147nm,19.8s,baz=226,slow=32						
ULN	Ulaanbaatar	83.44	324	ceP	P	23 18 27.7	-0.4
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	Ulaanbaatar	83.44	324	P	P	23 18 26.9	-1.1
ULN				IAmb	IAmb	23 18 33.9	
	comp=Z,7.6nm,0.9s						
YAK	Yakutsk	83.55	343	LR	LR	23 55 44.1	
	comp=Z,60nm,18.0s,baz=12,slow=36						
YAK	Yakutsk	83.55	343	P	P	23 18 27.4	-0.6
L19K	White Mountain	83.72	17	P	P	23 18 28.5	-0.5
L19K				IAmb	IAmb	23 18 46.1	
	comp=Z,16nm,1.5s						
SONM	Songino Array	83.80	324	P	P	23 18 29.6	-0.3
	comp=Z,1.2nm,0.6s,baz=158,slow=6.1,SNR=5.9						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	83.80	324	P	P	23 18 29.4	-0.5
SONM				IAmb	IAmb	23 18 39.1	
	comp=Z,11nm,1.4s						
GTA	Gaotai	83.80	314	eP	P	23 18 30.9	+0.8
GTA				pP	pP	23 18 35.6	-0.8
GTA				sP	sP	23 18 38.6	-0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL	Bilibino	84.11	360	⇑iP	P	23 18 30.1	-0.8
BILL				i		23 18 47.2	
BILL				e		23 21 40.8	
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
BILL	Bilibino	84.11	360	P	P	23 18 29.0	-1.9
BILL				IAmb	IAmb	23 18 31.0	
	comp=Z,11nm,1.2s						
SHL	Shillong	84.37	299	P	P	23 18 32.7	-0.7
SHL				pmax	pmax		
	comp=Z,23nm,1.0s						
SHL	Shillong	84.37	299	P	P	23 18 32.7	-0.7
BELA	Belgrano 2	85.15	175	P	P	23 18 35.6	-0.6
BELA				IAmb	IAmb	23 18 41.5	
	comp=Z,15nm,1.1s						
CAST	Castle Rocks	85.48	17	P	P	23 18 36.0	-1.8
J20K	Nowinta River	85.52	16	P	P	23 18 36.9	-1.1
J20K				IAmb	IAmb	23 18 56.2	
	comp=Z,19nm,1.8s						
YBH	Yreka Blue Hor	86.49	45	LR	LR	23 54 02.1	
	comp=Z,76nm,18.0s,baz=236,slow=33						
ZAK	Zakamensk	86.87	325	eP	P	23 18 43.7	-1.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
I21K	Tanana	86.88	16	P	P	23 18 43.9	-0.8
H21K	Melozitna Rive	87.05	15	P	P	23 18 45.8	+0.2
H21K				IAmb	IAmb	23 18 47.3	
	comp=Z,8.6nm,1.4s						
IMAR	Indian Mountai	87.07	15	P	P	23 18 44.7	-0.9
PFO	Pinyon Flats O	87.86	54	LR	LR	23 52 21.0	
	comp=Z,242nm,18.6s,baz=222,slow=32						
ILAR	Eielson Array	88.00	18	P	P	23 18 48.3	-1.8
	comp=Z,1.0nm,0.6s,baz=239,slow=4.3,SNR=11						
ILAR				LR	LR	23 53 37.0	
	comp=Z,152nm,19.4s,baz=174,slow=32						
	comp=Z,1.0nm,0.6s						
BBB	Bella Bella	88.04	34	LR	LR	23 52 19.9	
	comp=Z,95nm,19.7s,baz=259,slow=32						
NVAR	Mina Array Bea	88.25	49	LR	LR	23 49 53.5	
	comp=Z,100nm,20.7s,baz=280,slow=30						
PALK	Pallekele	88.81	278	LR	LR	23 59 49.7	
	comp=Z,84nm,19.8s,baz=229,slow=36						
LPIG	La Paz	89.81	65	LR	LR	23 53 13.2	
	comp=Z,197nm,18.0s,baz=223,slow=32						
PMSA	Palmer Station	90.27	160	LR	LR	23 53 07.5	
	comp=Z,45nm,21.5s,baz=232,slow=31						
DLBC	Dease Lake	90.30	28	LR	LR	23 53 55.0	
	comp=Z,75nm,18.8s,baz=256,slow=32						
ELK	Elko	91.30	48	LR	LR	23 58 05.3	
	comp=Z,100nm,18.1s,baz=260,slow=34						
TIXI	Tiksi	91.52	349	⇑eP	P	23 19 05.5	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SNAA	Sanae	91.98	183	LR	LR	00 00 10.7	
	comp=Z,89nm,18.1s,baz=140,slow=35						
SNAA	Sanae	91.98	183	⇑eP	P	23 19 09.5	+0.6
SNAA				pmax	pmax		
	comp=Z,18nm,1.3s						
SNAA	Sanae	91.98	183	P	P	23 19 08.6	-0.3
NEW	Newport	92.72	40	LR	LR	23 54 59.4	
	comp=Z,56nm,19.9s,baz=229,slow=32						
WMQ	Urumqi	93.87	314	eP	P	23 19 21.8	+3.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
INK	Inuvik	94.36	19	LR	LR	23 56 55.8	
	comp=Z,156nm,20.1s,baz=200,slow=32						
PDAR	Pinedale Array	95.97	47	LR	LR	00 03 56.9	
	comp=Z,63nm,18.2s,baz=271,slow=36						
ANMO	Albuquerque	96.14	56	LR	LR	23 57 56.5	
	comp=Z,105nm,18.1s,baz=256,slow=32						
TXAR	Lajitas Array	96.97	62	LR	LR	23 56 46.2	
	comp=Z,104nm,18.7s,baz=258,slow=32						
MKAR	Makanchi Array	98.38	316	P	Pdif	23 19 39.0	+0.6
	comp=Z,0.4nm,0.7s,baz=150,slow=3.2,SNR=2.9						
MKAR				LR	LR	00 07 22.5	
	comp=Z,46nm,18.1s,baz=98,slow=37						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	98.38	316	P	Pdif	23 19 38.6	+0.2
YKA	Yellowknife Ar	98.91	27	P	P	23 19 38.0	-2.3
	comp=Z,0.5nm,0.8s,baz=257,slow=4.7,SNR=6.6						
YKA				LR	LR	23 58 55.8	
	comp=Z,54nm,19.3s,baz=329,slow=32						
	comp=Z,0.5nm,0.8s						
YKA	Yellowknife Ar	98.91	27	P	P	23 19 39.1	-1.2
YKA	Yellowknife Ar	98.91	27	P	P	23 19 39.1	-1.2
ARCES	ARCESS Array B	121.79	345	PKP	PKPdf	23 24 52.2	-1.7
	comp=Z,1.6nm,0.7s,baz=29,slow=2.8,SNR=5.2						
ARCES	ARCESS Array B	121.79	345		PKPdf	23 24 52.8	-1.1
KLMR	Klimovskoe	122.11	333	ePKIKP	PKPdf	23 24 52.2	-2.5
KLMR				pmax	pmax		
	comp=Z,11nm,1.3s						
KLMR	Klimovskoe	122.11	333	ePKPdf	PKPdf	23 24 52.2	-2.5
KLMR				AMP		23 25 07.6	
	comp=Z,11nm,1.3s						
VRH	Novokhopyorsk	124.66	322	ePKIKP	PKPdf	23 24 57.5	-2.4
VRH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPSR	Galich'ya Gora	125.81	324	ePKIKP	PKPdf	23 25 00.7	-1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORR	Voronezh	125.98	323	ePKIKP	PKiKP	23 25 01.9	-0.9
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
OBN	Obninsk	126.06	327	⇑iPKIKP	PKiKP	23 25 02.5	-0.3
OBN				e		23 27 02.8	
OBN				i SS	SS	23 44 00.1	+3.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VSR	Storozhevoye	126.17	322	ePKIKP	PKPdf	23 25 00.4	-2.4
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	127.20	338	PKP	PKiKP	23 25 04.2	-0.7
	comp=Z,4.2nm,1.2s,baz=83,slow=3.5,SNR=5.6						
FINES	FINESS Array B	127.20	338	PKIKP	PKPdf	23 25 03.1	-1.3
FINES	FINESS Array B	127.20	338	PKPdf	PKPdf	23 25 03.1	-1.3
GURO	Guroymak-BITLI	127.47	306	PKPdf	PKiKP	23 25 05.6	-0.8
AKASG	Malin Array Be	132.06	325	PKIKP	PKPdf	23 25 13.3	-0.7
AKASG	Malin Array Be	132.06	325	PKPdf	PKPdf	23 25 13.3	-0.7
NOA	NORSAR Array B	132.16	345	PKP	PKPdf	23 25 13.1	-0.9
	comp=Z,0.5nm,0.7s,baz=32,slow=1.9,SNR=2.3						
CONA	Conrad Observa	140.71	330	P	PKPdf	23 25 30.3	0.0
	comp=Z,3.7nm,1.2s						
GERES	GERESS Array B	141.07	332	PKP	PKPdf	23 25 28.8	-2.1
	comp=Z,0.6nm,0.8s,baz=0.0,slow=4.3,SNR=4.7						
SOKA	Soboth	141.98	329	eP	PKPdf	23 25 32.2	-0.3
	comp=Z,5.0nm,1.3s						
ABTA	Abfaltersbach	143.15	331	eP	PKPdf	23 25 34.4	-0.3
	comp=Z,4.4nm,1.4s						
WTTA	Wattenberg	143.17	332	eP	PKPdf	23 25 35.0	+0.2
	comp=Z,6.6nm,1.4s						
FETA	Feichten	143.76	333	P	PKPdf	23 25 36.1	+0.3
	comp=Z,5.5nm,1.0s						
DAVA	Damuels	143.92	334	eP	PKPdf	23 25 36.4	+0.3
	comp=Z,3.3nm,0.7s						
TEOL	Teolo	144.57	330	PKPdf	PKPbc	23 25 35.1	-0.7
TUE	Stuetta	144.78	333	PKPdf	PKPdf	23 25 37.2	-0.5
NRCA	Norcia	145.60	326		PKPdf	23 25 37.6	-1.5
MURB	Monte Urbino	145.62	327		PKPab	23 25 39.7	+0.1
SENIN	Lac Senin/Sane	145.73	335	PKPdf	PKPdf	23 25 38.5	-0.9
KEST	Kesra	152.45	319	PKPbc	PKiKP	23 25 56.5	-0.9
	comp=Z,5.4nm,0.7s,baz=113,slow=3.4,SNR=4.0						
KEST	Kesra	152.45	319		PKPbc	23 25 55.8	-1.4
TORD	Torodi Ar. Bea	165.76	259	PKP	PKPdf	23 26 04.5	-1.7
	comp=Z,1.1nm,1.1s,baz=39,slow=1.5,SNR=4.9						
TORD				PKPab	PKPab	23 27 04.5	-1.1
	comp=Z,1.5nm,1.0s,baz=107,slow=2.0,SNR=4.4						
TORD				PP	PP	23 30 51.8	-1.1
	comp=Z,1.7nm,1.2s,baz=85,slow=3.1,SNR=4.2						

IDC 03 23:49:02.1±1.4**,29°.80N×103°.51E,h0**^{km}**,mb3.7**/4**,**
mbtmp3.7/4**,Error ellipse: s-maj=99.6km s-min=25.2km**
az=58.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.65	322	P	P	23 54 15.9	+0.8
	0.7nm,0.6s,baz=126,slow=11,SNR=11						
	0.7nm,0.6s						
WRA	Warramunga Arr	57.69	145	P	P	23 58 54.6	-0.1
	0.7nm,0.7s,baz=335,slow=8.2,SNR=12						
	0.7nm,0.7s						
ARCES	ARCESS Array B	58.23	336	P	P	23 58 56.6	-1.2
	2.5nm,1.0s,baz=91,slow=6.5,SNR=5.0						
	2.5nm,1.0s						
YKA	Yellowknife Ar	83.08	17	P	P	00 01 29.9	+0.6
	0.2nm,0.6s,baz=332,slow=4.3,SNR=3.9						
	0.2nm,0.6s						

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*JMA **04** 00:00:48.5±0.1,24°.1N±0°.7×121°.7E±0°.9,h18^{km}±1^{km},*
MV2.7/11,TAIWAN REGION
*TAP **04** 00:00:48.7,24°.21N×121°.72E,h11^{km},ML3.5,C*
ISC 04 00:00:48.8±0.8**,24°.20N**±0°.01×**121°.74E**±0°.02**,h11**^{km}±5^{km}**,**
n110,σ**0**^{s}**.57**/194**,3C-21D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.11	1	P	Pg	00 00 51.5	0.0
	baz=14						
EHP				S	Sg	00 00 54.0	+0.5
	baz=14						
ETL	Fush Village	0.11	248	⇑iP	Pg	00 00 51.8	+0.2
	baz=241						
ETL				i S	Sg	00 00 54.0	+0.2
	baz=241						
NACB	Ninganchiao	0.14	258	⇑iP	Pg	00 00 52.0	+0.1
	baz=254						
NACB				i S	Sg	00 00 54.3	+0.1
	baz=254						
TWD	Chiawan	0.18	227	⇑iP	Pg	00 00 52.7	0.0
	baz=220						
TWD				i S	Sg	00 00 55.4	+0.1
	baz=220						
ENA	Nanau	0.22	1	⇓iP	Pg	00 00 53.7	+0.2
	baz=6.0						
ENA				i S	Sg	00 00 57.0	+0.4
	baz=6.0						
ETLH	Xiulin Townshi	0.23	271	⇓iP	Pg	00 00 53.7	0.0
	baz=270						
ETLH				S	Sg	00 00 57.0	0.0
	baz=270						
EWUT	Wuta	0.24	8	⇓iP	Pg	00 00 54.0	+0.2
	baz=12						
EWUT				S	Sg	00 00 57.8	+0.6
	baz=12						
HWA	Hwalien	0.26	209	eP	Pg	00 00 54.7	+0.7
	baz=205						
HWA				eS	Sb	00 00 59.3	-0.6
	baz=205						
ETM	Tongmen	0.33	224	eP	Pg	00 00 55.2	-0.1
	baz=213						
ETM				eS	Sg	00 00 59.5	-0.1
	baz=213						
TEYL	Yanliau Villag	0.36	201	P	Pb	00 00 57.0	-0.2
	baz=209						
TEYL				eS	Sb	00 01 03.9	+1.1
	baz=209						
LATG	Datong	0.38	330	⇓iP	Pg	00 00 56.6	+0.2
	baz=331						
LATG				S	Sg	00 01 00.4	-1.1
	baz=331						
NNSB	Datong	0.40	305	⇓iP	Pg	00 00 56.8	+0.2
	baz=305						
NNSB				i S	Sg	00 01 02.0	+0.1
	baz=305						
NNS	Nan Shan	0.41	305	⇓iP	Pg	00 00 57.0	+0.1
	baz=306						
NNS				i S	Sg	00 01 02.6	+0.3
	baz=306						
TWC	Suao	0.42	14	⇓iP	Pg	00 00 57.2	+0.2
	baz=10.0						
TWC				i S	Sg	00 01 02.0	-0.5
	baz=10.0						
NDS	Dongshan	0.43	357	⇓iP	Pg	00 00 57.5	+0.3
	baz=359						
NDS				i S	Sg	00 01 03.2	+0.3
	baz=359						
WHF	Hehuan Shan	0.44	262	⇓iP	Pg	00 00 57.5	0.0
	baz=261						
WHF				i S	Sg	00 01 03.1	-0.2
	baz=261						
ENTT	Nioudou	0.46	340	⇓iP	Pg	00 00 58.2	+0.4
	baz=342						
ENTT				i S	Sg	00 01 04.5	+0.4
	baz=342						
ESL	Shilin	0.48	216	⇓iP	Pg	00 00 57.9	-0.2
	baz=223						
ESL				eS	Sb	00 01 06.2	-0.1
	baz=223						
TWT	Tachien	0.52	276	⇓iP	Pg	00 00 59.5	+0.7
	baz=275						
TWT				i S	Sg	00 01 06.0	+0.2
	baz=275						
TWE	Neicheng	0.52	353	⇓iP	Pg	00 00 59.2	+0.2
	baz=355						
TWE				S	Sg	00 01 06.1	+0.3
	baz=355						
TDCB	Techi	0.53	275	⇓iP	Pg	00 00 59.6	+0.4
	baz=275						
TDCB				i S	Sg	00 01 05.9	-0.4
	baz=275						
CHGB	Renai	0.54	255	⇓iP	Pg	00 00 59.5	+0.2
	baz=246						
CHGB				i S	Sg	00 01 06.3	-0.1
	baz=246						
ILA	Ilan	0.56	1	eP	Pg	00 00 58.5	-1.2
	baz=3.0						
ILA				eS	Sb	00 01 08.6	-0.1
	baz=3.0						
YHNB	Yeheng	0.57	325	P	Pg	00 01 00.3	+0.4
YHNB	Yeheng	0.57	325	⇓iP	Pg	00 01 00.3	+0.4
	baz=325						
YHNB				i S	Sg	00 01 07.6	+0.1
	baz=325						
FUSB	Fushanzhiwuyua	0.57	346	⇓iP	Pg	00 01 00.1	+0.2
	baz=346						
FUSB				i S	Sg	00 01 06.9	-0.6
	baz=346						
OWD	Renai	0.57	244	P	Pg	00 00 59.9	0.0
	baz=244						
OWD				S	Sg	00 01 07.4	-0.1
	baz=244						
NSK	Sanguang	0.58	324	⇓iP	Pg	00 01 00.4	+0.3
	baz=324						
NSK				i S	Sg	00 01 08.2	+0.3
	baz=324						
EGFH	Guangfu	0.60	208	eP	Pg	00 01 00.4	-0.1
	baz=215						
EGFH				eS	Sb	00 01 09.6	-0.3
	baz=215						
WUSB	Renai	0.60	250	⇓iP	Pg	00 01 00.7	+0.2
	baz=241						
WUSB				i S	Sg	00 01 08.3	-0.3
	baz=241						
NWLT	Wulai	0.61	339	⇓iP	Pg	00 01 01.1	+0.4
	baz=340						
NWLT				S	Sg	00 01 08.5	-0.2
	baz=340						
NTC	Toucheng	0.65	7	P	Pg	00 01 01.6	+0.2
	baz=8.0						
NTC				eS	Sg	00 01 09.3	-0.8
	baz=8.0						
EGS		0.66	15	eP	Pb	00 01 02.6	+0.2
	baz=26						
VWDT	VWDT	0.71	231	P	Pg	00 01 02.4	0.0
	baz=230						
VWDT				S	Sg	00 01 12.0	+0.4
	baz=230						
NFF	Wufeng Townshi	0.71	307	P	Pg	00 01 02.7	+0.2
	baz=314						
NFF				eS	Sg	00 01 12.2	+0.4
	baz=314						
WHP	Taichung City	0.73	276	P	Pg	00 01 03.2	+0.4
	baz=276						
WHP				S	Sg	00 01 12.8	+0.4
	baz=276						
WPL	Puli Township	0.74	255	P	Pb	00 01 03.4	-0.3
	baz=246						
WPL				S	Sb	00 01 13.5	-0.4
	baz=246						
DPDB	Guoxing	0.76	257	eP	Pb	00 01 03.9	-0.3
	baz=257						
DPDB				eS	Sg	00 01 13.2	-0.3
	baz=257						
HGSD	Ruisui	0.76	202	eP	Pb	00 01 04.2	+0.1
	baz=216						
HGSD				eS	Sn	00 01 17.9	+0.8
	baz=216						
TIPB	Shuangxi	0.77	6	P	Pg	00 01 03.9	+0.2
	baz=358						
TIPB				eS	Sg	00 01 13.9	+0.2
	baz=358						
WCS	Beigang Elemen	0.77	259	eP	Pg	00 01 03.8	+0.1
	baz=259						
WCS				eS	Sg	00 01 12.9	-0.8
	baz=259						
NHDH	Xindian Distri	0.78	346	eP	Pg	00 01 04.2	+0.3
	baz=346						
TWA	Mucha	0.79	350	eP	Pg	00 01 04.3	+0.3
	baz=350						
TWA				eS	Sb	00 01 15.5	+0.2
	baz=350						
LIOB	Emei	0.79	304	P	Pb	00 01 04.7	+0.1
	baz=304						
LIOB				eS	Sg	00 01 14.8	+0.3
	baz=304						
NSTT	Nanjuang	0.80	303	⇓iP	Pg	00 01 04.5	+0.3
	baz=302						
NSTT				S	Sg	00 01 14.8	+0.2
	baz=302						
TATO	Taipei	0.80	344	eP	Pb	00 01 04.9	+0.1
	baz=344						
SSLB	Suanglung	0.83	240	P	Pg	00 01 04.7	-0.1
SSLB	Suanglung	0.83	240	P	Pg	00 01 04.5	-0.3
	baz=240						
SSLB				S	Sg	00 01 14.4	-1.2
	baz=240						
SMLT	Sun Moon Lake	0.83	248	P	Pb	00 01 05.2	-0.1
	baz=238						
SMLT				S	Sg	00 01 15.6	-0.1
	baz=238						
TWB1	Santiao Chiao	0.83	16	eP	Pg	00 01 05.2	+0.3
	baz=17						
TWB1				eS	Sb	00 01 17.3	+0.7
	baz=17						
TYC	Yuchr	0.86	250	P	Pb	00 01 05.5	-0.3
	baz=240						
TYC				S	Sg	00 01 15.6	-1.0
	baz=240						
NWF	Wu-fen Shan	0.86	3	P	Pb	00 01 05.8	-0.1
	baz=354						
NWF				S	Sg	00 01 16.1	-0.7
	baz=354						
TWQ1	Liyutan	0.89	280	eP	Pn	00 01 07.0	-0.4
	baz=279						
TWQ1				eS	Sn	00 01 19.4	-0.9
	baz=279						
SXI1	Grass Mountain	0.90	8	P	Pb	00 01 05.7	-0.7
	baz=355						

SBCB	Hsinchu	0.90	311	eP	Pn	00 01 07.4	-0.1
	baz=310						
SBCB				eS	Sn	00 01 21.8	+1.3
	baz=310						
YULB	Yu-li	0.90	207	eP	Pb	00 01 05.4	-1.1
	baz=217						
YULB				eS	Sg	00 01 18.2	+0.3
	baz=217						
NCUH	Zhongli	0.91	327	eP	Pg	00 01 07.1	+0.7
	baz=326						
NCUH				eS	Sn	00 01 19.9	-0.9
	baz=326						
NCU	National Centr	0.91	327	eP	Pn	00 01 07.7	0.0
	baz=327						
NCU				eS	Sn	00 01 20.9	0.0
	baz=327						
NSY	Sanyi	0.92	284	eP	Pn	00 01 07.2	-0.5
	baz=283						
NSY				eS	Sn	00 01 19.9	-1.0
	baz=283						
HSN	Hsinchu	0.92	311	eS	Sn	00 01 22.0	+1.1
	baz=313						
NMLH	Miaoli	0.93	291	eP	Pb	00 01 06.4	-0.5
	baz=291						
NMLH				eS	Sb	00 01 18.1	-1.1
	baz=291						
EYUL	Yuli	0.94	204	eP	Pn	00 01 07.8	-0.1
	baz=218						
TWF1	Yuli	0.94	206	P	Pn	00 01 07.7	-0.3
	baz=215						
TWF1				eS	Sn	00 01 21.2	-0.2
	baz=215						
TWS1	Kuangyinshan	0.94	342	eP	Pb	00 01 06.7	-0.4
	baz=350						
TWS1				eS	Sn	00 01 21.1	-0.3
	baz=350						
YM01	YM01	0.95	351	eP	Pg	00 01 07.7	+0.6
	baz=4.0						
WWF	Wufeng	0.96	261	eP	Pb	00 01 07.2	-0.3
	baz=255						
WWF				eS	Sn	00 01 21.0	-1.0
	baz=255						
TCU	Taichung	0.97	267	eP	Pn	00 01 09.6	+1.2
	baz=267						
TCU				eS	Sn	00 01 24.4	+2.1
	baz=267						
NTST	Danshui	0.99	345	eP	Pn	00 01 09.1	+0.4
	baz=354						
NTST				eS	Sn	00 01 22.7	-0.1
	baz=354						
ANP	Anpu	1.00	349	P	Pg	00 01 08.4	+0.3
	baz=349						
WJS	Zhushan	1.00	248	eP	Pb	00 01 07.9	-0.2
	baz=243						
WJS				eS	Sn	00 01 22.3	-0.6
	baz=243						
YUS	Yu-Shan	1.01	226	P	Pn	00 01 08.8	-0.6
	baz=215						
YUS				eS	Sn	00 01 23.0	-0.9
	baz=215						
WDJ	Dajia District	1.01	278	eP	Pn	00 01 09.5	+0.5
	baz=287						
WDJ				eS	Sn	00 01 23.8	+0.6
	baz=287						
WNT	Mingjian	1.02	252	P	Pn	00 01 10.0	+0.9
	baz=246						
WNT				S	Sn	00 01 24.3	+1.0
	baz=246						
TWY	Chenhua	1.08	353	P	Pb	00 01 08.8	-0.7
	baz=353						
TWY				eS	Sn	00 01 24.3	-0.5
	baz=353						
FULB	Fuli	1.08	202	P	Pn	00 01 09.4	-0.5
	baz=217						
FULB				eS	Sb	00 01 23.3	-0.4
	baz=217						
WCHH	Zhanghua	1.08	264	eP	Pg	00 01 09.9	+0.2
	baz=263						
WCHH				eS	Sn	00 01 24.3	-0.7
	baz=263						
ALS	Alishan	1.10	231	eP	Pg	00 01 10.2	+0.2
	baz=231						
ALS				eS	Sg	00 01 24.2	0.0
	baz=231						
JYNG	Yonagunijimaku	1.13	77	eP	Pg	00 01 10.6	+0.1
JYNG				eS	Sn	00 01 27.0	+0.9
YOJ	Yonaguni jima	1.19	77	P	Pb	00 01 11.5	+0.1
YOJ	Yonaguni jima	1.19	77	eP	Pb	00 01 11.2	-0.1
	baz=70						
YOJ				eS	Sn	00 01 27.3	-0.3
	baz=70						
YOJ	Yonaguni jima	1.19	77	P	Pb	00 01 11.2	-0.1
YOJ				S	Sg	00 01 28.2	+1.2
ELDTW	Lidau	1.21	213	eP	Pg	00 01 11.8	-0.2
	baz=214						
WDLH	Douliu	1.21	245	eP	Pb	00 01 11.8	+0.1
	baz=245						
WRL	Guolierlin Hig	1.28	257	eP	Pg	00 01 13.2	-0.2
	baz=257						
WRL				eS	Sg	00 01 31.1	+1.1
	baz=257						
EDH	Donghe	1.29	198	eP	Pn	00 01 12.2	-0.6
	baz=182						
EDH				eS	Sg	00 01 31.5	+1.2
	baz=182						
WTK	Tuku	1.34	248	eP	Pg	00 01 14.4	-0.1
	baz=236						
WTK				eS	Sg	00 01 32.9	+1.1
	baz=236						
STYH	Taoyuan	1.35	221	eP	Pg	00 01 15.3	+0.5
	baz=222						
STYH				eS	Sb	00 01 31.4	-0.2
	baz=222						
TPUB	Ta-pu	1.36	229	P	Pb	00 01 14.4	+0.2
TPUB	Ta-pu	1.36	229	P	Pb	00 01 14.5	+0.2
	baz=218						
TPUB				S	Sg	00 01 33.1	+0.6
	baz=218						
STYT	Tauyuan	1.37	221	P	Pb	00 01 14.7	+0.2
	baz=222						
STYT				eS	Sg	00 01 33.1	+0.2
	baz=222						
CHY	Chiayi	1.39	240	eP	Pg	00 01 16.0	+0.5
	baz=241						
CHY				eS	Sg	00 01 35.6	+2.0
	baz=241						
WTP	Ta-pu	1.40	227	eP	Pb	00 01 14.6	-0.5
	baz=218						
WTP				eS	Sg	00 01 33.8	-0.2
	baz=218						
LONT	Longtian	1.41	204	eP	Pb	00 01 15.0	-0.1
	baz=206						
TWK	Hsinying	1.48	231	P	Pb	00 01 16.6	+0.2
	baz=233						
TWK				S	Sg	00 01 37.4	+1.0
	baz=233						
SNST	Tainan City	1.50	230	eP	Pg	00 01 17.5	-0.1
	baz=232						
SNST				eS	Sg	00 01 37.9	+0.8
	baz=232						
CHN1	Nanshi	1.50	228	eP	Pb	00 01 16.5	-0.3
	baz=230						
CHN1				eS	Sg	00 01 37.0	-0.1
	baz=230						
TWG	Pinlang	1.51	204	eP	Pn	00 01 15.3	-0.4
	baz=214						
TWGBT	Beinan	1.51	204	eP	Pn	00 01 15.6	-0.2
	baz=214						
WSL	Shuilin Townsh	1.54	244	eP	Pb	00 01 16.9	-0.4
	baz=245						
WSL				eS	Sg	00 01 39.5	+1.1
	baz=245						
LDUT	Ludao	1.54	189	eP	Pn	00 01 16.3	0.0
	baz=191						
ICHU	Yijhu	1.58	238	eP	Pb	00 01 17.9	-0.1
	baz=239						
ICHU				eS	Sg	00 01 40.6	+1.0
	baz=239						
IRIF	Iriomote-Funau	1.82	85	S	Sb	00 01 43.9	-1.1
MASBT	Mashibuluo	1.88	213	eP	Pb	00 01 22.5	-0.7
	baz=217						
HATJ	Hateruma jima	1.89	94	eS	Sn	00 01 45.1	+0.2
JKRS	Kuro-shima	2.07	89	eS	Sb	00 01 50.9	-1.3
WDGT	Dungji	2.12	244	eP	Pn	00 01 24.9	+0.6
	baz=232						
WDGT				eS	Sn	00 01 51.2	+0.6
	baz=232						
JIJ	Ishigaki jima	2.20	85	eS	Sn	00 01 52.3	-0.3
VWUC	VWUC	2.23	291	P	Pn	00 01 25.1	-0.6
	baz=278						
JISG	Ishigakijimahi	2.38	80	S	Sn	00 01 56.8	-0.1
JTJ	Tarama	2.74	80	eS	Sn	00 02 07.1	+1.3

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*IDC **04** 00:19:50.2±1.6, 2°.57N×84°.14W, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=82.5km s-min=24.7km az=53.0*

ISC 04 00:19:53.7±1.3, **2°.4N**±0°.3×**84°.3W**±0°.4, **h26**^{km}, **n10**, σ**1^{s}.05**/7, **mb3.8**/6, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	24.52	140	P	P	00 25 12.7	+0.7
	2.9nm,1.0s,baz=337,slow=12,SNR=8.6						
	2.9nm,1.0s						
H03N2	Juan Fernandez	36.04	172	T	T	01 04 47.7	
	baz=351,slow=76,SNR=14						
H03N1	Juan Fernandez	36.05	172	T	T	01 04 50.6	
	baz=351,slow=76,SNR=23						
H03N3	Juan Fernandez	36.06	172	T	T	01 04 50.7	
	baz=351,slow=76,SNR=20						
PDAR	Pinedale Array	46.06	334	P	P	00 28 15.3	-0.4
	0.1nm,0.4s,baz=141,slow=5.8,SNR=2.1						
	0.1nm,0.4s						
NVAR	Mina Array Bea	47.42	323	P	P	00 28 27.6	+1.2
	0.5nm,0.7s,baz=137,slow=8.4,SNR=2.1						
	0.5nm,0.7s						
YKA	Yellowknife Ar	64.03	345	P	P	00 30 24.8	-0.1
	0.6nm,0.8s,baz=139,slow=6.3,SNR=10						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	85.53	77	P	P	00 32 30.0	-0.3
	0.5nm,0.7s,baz=273,slow=4.3,SNR=3.5						
	0.5nm,0.7s						
NOA	NORSAR Array B	90.55	29	P	P	00 32 53.7	+0.3
	0.4nm,0.8s,baz=235,slow=17,SNR=2.0						
	0.4nm,0.8s						
WRA	Warramunga Arr	138.48	242	PKP	PKPdf	00 39 16.5	-1.5
	0.5nm,0.8s,baz=108,slow=2.5,SNR=3.1						

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*IDC **04** 00:24:03.3±1.1, 16°.09S×167°.16E, h0^{km}, mb3.9/6, mbtmp4.0/8, ML5.0/2, MS3.4/4, Error ellipse: s-maj=27.1km s-min=24.5km az=143.0*

*NOU **04** 00:24:06.2, 16°.21S×167°.34E, h13^{km}, MLv4.6/13, Vanuatu Islands*

*NEIC **04** 00:24:07.2±3.0, 16°.14S±0°.02×167°.2E±0°.2, h21^{km}±6^{km}, mb4.5/6, Error ellipse: s-maj=21.6km s-min=2.8km az=90.0*

ISC 04 00:24:07.5±0.6, **16°.17S**±0°.05×**167°.19E**±0°.10, **h27**^{km}, **n34**, σ**1^{s}.15**/34, **mb4.3**/8, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.72	1		Pb	00 24 20.4	-1.1
SANVU				Sn	Sn	00 24 31.8	-0.3
SANVU	Saraoutou	0.72	1	P	Pb	00 24 21.0	-0.5
LIFNC	LIFOU	4.58	179	Pn	Pn	00 25 14.1	-0.9
LIFNC	LIFOU	4.58	179	P	Pn	00 25 14.7	-0.3
KOUNC	Koumac, New Ca	5.15	212	Pn	Pn	00 25 21.6	-1.3
KOUNC	Koumac, New Ca	5.15	212	P	Pn	00 25 24.7	+1.8
MARNC	Mare, Loyalty	5.34	172	Pn	Pn	00 25 23.5	-2.0
MARNC	Mare, Loyalty	5.34	172	P	Pn	00 25 24.5	-1.0
YATNC	Mamie plateau,	5.86	183	P	Pn	00 25 32.1	-0.6
DZM	Mont Dzumac	5.91	187	Pn	Pn	00 25 32.0	-1.4
	6.5nm,0.3s,baz=46,slow=14,SNR=41						
DZM				Sn	Sn	00 26 37.7	-2.6
	baz=280,slow=17						
DZM				LR	LR	00 27 36.8	
	comp=Z,235nm,19.5s,baz=120,slow=36						
	29nm,0.3s						
DZM	Mont Dzumac	5.91	187	P	Pn	00 25 32.7	-0.7
NOUC	Port Laguerre	5.96	188	P	Pn	00 25 33.9	-0.1
ONTNC	Ouen Toro	6.14	186	Pn	Pn	00 25 36.2	-0.3
ONTNC	Ouen Toro	6.14	186	P	Pn	00 25 37.0	+0.5
OUENC	Ouen Island, N	6.22	183	Pn	Pn	00 25 36.6	-1.0
OUENC	Ouen Island, N	6.22	183	P	Pn	00 25 37.1	-0.5
PINNC	Pines Island,	6.41	178	Pn	Pn	00 25 40.8	+0.6
MSVF	Nonsavu	10.51	100	Pn	Pn	00 26 37.6	+1.0
	1.1nm,0.3s,baz=246,slow=20,SNR=2.1						
MSVF				LR	LR	00 29 48.3	
	comp=Z,304nm,19.3s,baz=251,slow=33						
	1.3nm,0.3s						
CTA	Charters Tower	20.27	256	P	P	00 28 41.6	+0.5
	1.0nm,0.3s,baz=77,slow=17,SNR=3.6						
	1.0nm,0.3s						
AFI	Afiamalu	20.44	86	LR	LR	00 34 11.7	
	comp=Z,88nm,19.2s,baz=262,slow=30						
MXZ	Matakaoa Point	23.46	157	P	P	00 29 16.2	+1.3
MXZ				IAmb	IAmb	00 29 44.2	
	comp=Z,33nm,0.9s						
URZ	Urewera	23.68	160	P	P	00 29 17.7	+0.8
	comp=Z,3.2nm,0.5s,baz=114,slow=20,SNR=2.4						
	comp=Z,3.2nm,0.5s						
URZ	Urewera	23.68	160	P	P	00 29 18.1	+1.2
URZ				IAmb	IAmb	00 29 37.9	
	comp=Z,14nm,1.2s						
BKZ	Black Stump Fm	24.32	162	P	P	00 29 23.2	+0.3
BKZ				IAmb	IAmb	00 29 25.5	
	comp=Z,9.5nm,0.7s						
WRA	Warramunga Arr	31.43	258	P	P	00 30 25.5	-1.2
	comp=Z,0.7nm,1.1s,baz=88,slow=9.1,SNR=2.8						
	comp=Z,0.7nm,1.1s						
ASAR	Alice Springs	32.11	251	P	P	00 30 32.9	+0.1
	comp=Z,2.2nm,0.8s,baz=77,slow=8.7,SNR=26						
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	32.11	251	P	P	00 30 33.7	+0.9
FITZ	Fitzroy Crossi	39.69	261	LR	LR	00 46 45.3	
	comp=Z,62nm,18.1s,baz=151,slow=34						
SBA	Scott Base	61.70	180	P	P	00 34 24.7	+1.9
PEA0B	Petropavlovsk-	69.48	354	P	P	00 35 14.1	+0.9
PETK	Petropavlovsk-	69.48	354	P	P	00 35 13.7	+0.4
	comp=Z,2.4nm,0.9s,baz=174,slow=16,SNR=4.2						
	comp=Z,2.4nm,0.9s						
PETK	Petropavlovsk-	69.48	354	P	P	00 35 11.8	-1.4
QSPA	South Pole Qui	73.86	180	P	P	00 35 40.3	+0.5
QSPA				IAmb	IAmb	00 35 41.4	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	87.92	18	P	P	00 36 52.7	-1.6
	comp=Z,0.7nm,0.9s,baz=224,slow=6.3,SNR=4.5						
	comp=Z,0.7nm,0.9s						

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*NEIC **04** 00:28:31.0±1.8, 2°.22N±0°.07×84°.56W±0°.08, h10^{km}±1^{km}, mb4.7/184, Error ellipse: s-maj=13.3km s-min=12.1km az=243.0*

*GCMT **04** 00:28:33.0±0.2, 2°.22N±0°.01×84°.64W±0°.02, h12^{km}, MW5.0/109, Moment Tensor Solution. s55,c75; s109,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.25±.07; M$_{\theta\theta}$3.22±.06; M$_{\phi\phi}$0.03±.08; M$_{r\theta}$1.30±.20; M$_{\theta\phi}$-0.13±.06; M$_{\phi r}$1.29±.29; Best double couple: M$_0$3.69900×10^{16} NP1:ϕ_s109.00000°, δ37.00000°, λ-60.00000°. NP2:ϕ_s253.00000°, δ59.00000°, λ-110.00000°. Principal axes: T 3.4760, Plg11.0000°, Azm358.0000°; N 0.4490, Plg17.0000°, Azm264.0000°; P -3.9230, Plg69.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **04** 00:28:38.4±3.6, 2°.33N×84°.46W, h79^{km}±32^{km}, mb3.8/16, mbtmp4.2/19, MS4.1/50 Error ellipse: s-maj=27.1km s-min=13.2km az=57.0*

ISC 04 00:28:29.6±0.5, **2°.15N**±0°.07×**84°.52W**±0°.08, **h10**^{km}, **n234**, σ**1^{s}.60**/135, **mb4.7**/93, **MS4.1**/46, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	6.36	107	Pn	Pn	00 30 03.2	-0.6
GR1C	Gorgona, Isla	6.40	82	eP	Pn	00 30 03.2	-0.8
PAYG	Puerto Ayora	6.42	244	Pn	Pn	00 30 05.8	+1.5
BRU2	Volcan	6.84	15	Pn	Pn	00 30 10.1	-0.2
SRBA	San Rafael, Bu	7.13	9	Pn	Pn	00 30 13.8	-0.3
DRK0	Durika	7.18	10		Pn	00 30 14.9	+0.1
GCUF	Volcan Galeras	7.23	97	eP	Pn	00 30 16.4	+0.5
PEZE	Perez Zeledon,	7.23	7		Pn	00 30 14.7	-0.9
JACO	JACO, Garabito	7.46	359		Pn	00 30 15.8	-2.8
CRUC	La Cruz	7.58	94	eP	Pn	00 30 20.3	-0.3
RIMA	Rio Macho	7.59	5	Pn	Pn	00 30 19.9	-0.8
HDC	Heredia	7.81	3	Pn	Pn	00 30 23.4	-0.1
SOTA	Rioblanco	7.90	90	eP	Pn	00 30 26.3	+1.2
DUNO	Dulce Nombre,	7.94	353	Pn	Pn	00 30 23.6	-1.6
JTS	Las Juntas de	8.10	357	Pn	Pn	00 30 27.0	-0.4
JTS	Las Juntas de	8.10	357	eP	Pn	00 30 26.6	-0.8
PCON	Cinco Dias	8.12	89	eP	Pn	00 30 29.2	+1.1
ORTG	Ortega, Santa	8.21	353	Pn	Pn	00 30 27.9	-1.1
YOTC	Yotoco, Valle	8.36	77	eP	Pn	00 30 31.9	+0.8
BCIP	Isla Barro Col	8.38	34	Pn	Pn	00 30 32.2	+1.0
BCIP	Isla Barro Col	8.38	34	eP	Pn	00 30 30.6	-0.6
BCIP				eP	Pn	00 30 34.1	+2.9
MARP	Paez Belalcaza	8.58	85	eP	Pn	00 30 37.1	+2.9
PLMC	San Jos del P	8.66	71	eP	Pn	00 30 35.3	+0.2
GARC	Garzon, Huila	9.02	90	eP	Pn	00 30 38.8	-1.4
BETC	Betania	9.08	86	eP	Pn	00 30 39.5	-1.4
CBOC	Ciudad Bolivar	9.25	66	eP	Pn	00 30 44.9	+1.6
CBOC				eP	Pn	00 30 45.4	+2.0
ANIL	Santa Ana	9.39	75	eP	Pn	00 30 46.6	+1.3
ORTC	Ortega, Tolima	9.42	79	eP	Pn	00 30 48.4	+2.8
DBBC	Dabeiba	9.59	59	eP	Pn	00 30 50.1	+2.3
ACON	Acoyapa	9.78	356	Pn	Pn	00 30 51.0	+0.7
ESPN	Las Esperanzas	9.98	1	Pn	Pn	00 30 54.0	+0.8
NORC	Norcasia	10.20	70	eP	Pn	00 30 59.5	+3.2
BOAB	BOACO BROADBAN	10.29	354	Pn	Pn	00 30 58.0	+0.5
ROSC	El Rosal	10.52	75	P	Pn	00 31 05.1	+4.1
	7.1nm,0.4s,baz=224,slow=11,SNR=10						
ROSC				LR	LR	00 34 50.4	
	comp=Z,531nm,21.1s,baz=230,slow=36						
ROSC	El Rosal	10.52	75	Pn	Pn	00 31 03.5	+2.5
ROSC	El Rosal	10.52	75	eP	Pn	00 31 04.4	+3.5
MACC	Macarena, Meta	10.66	90	eP	Pn	00 31 04.1	+1.5
CRIN	San Cristobal	10.78	347	Pn	Pn	00 31 05.4	+1.2
MATN	Matagalpa	10.80	353	Pn	Pn	00 31 06.5	+2.0
PTBC	PUERTO BERRIO,	10.94	66	eP	Pn	00 31 09.5	+3.2
ZARC	Zaragoza, Cauc	10.99	61	Pn	Pn	00 31 10.4	+3.4
ZARC	Zaragoza, Cauc	10.99	61	eP	Pn	00 31 04.1	-2.9
CHIC	Chingaza	11.04	77	eP	Pn	00 31 08.4	+0.3
BRRC	Barranca, Sant	11.84	65	eP	Pn	00 31 21.2	+2.5
RUSC	La Rusia	11.99	72	eP	Pn	00 31 15.8	-5.4
SJCC	San Jacinto, C	12.05	50	Pn	Pn	00 31 23.6	+2.0
SJCC	San Jacinto, C	12.05	50	eP	Pn	00 31 21.5	-0.1
BARC	Barichara	12.13	68	eP	Pn	00 31 26.0	+3.2
TGUH	Tegucigalpa,Un	12.14	347	Pn	Pn	00 31 24.7	+1.8
TGUH	Tegucigalpa,Un	12.14	347	eP	Pn	00 31 25.9	+3.0
SNET	Serv Nac Est T	12.37	338	Pn	Pn	00 31 29.0	+3.0
OCAC	Ocana	12.68	61	Pn	Pn	00 31 33.0	+2.7
ARGC	Ariguani, Magd	12.76	53	eP	Pn	00 31 33.7	+2.4
PAMC	Pamplona, Colo	12.85	66	eP	Pn	00 31 37.0	+4.0
SDV	Santo Domingo	15.35	64	P	Pn	00 32 10.0	+3.3
	5.0nm,0.3s,baz=240,slow=9.9,SNR=8.7						
SDV				LR	LR	00 37 38.6	
	comp=Z,758nm,20.1s,baz=244,slow=36						
SDV	Santo Domingo	15.35	64	Pn	Pn	00 32 09.0	+2.4
SDV				IAmb	IAmb	00 32 21.4	
	comp=Z,63nm,1.2s						
URIC	Uribia, Colomb	15.63	52	IAmb	IAmb	00 32 17.4	
	comp=Z,83nm,1.5s						
NNA	Nana	15.98	152	LR	LR	00 38 18.7	
	comp=Z,350nm,18.5s,baz=320,slow=36						
CMIG	Matias Romero	18.01	326	P	P	00 32 41.5	+0.8
	comp=Z,5.6nm,1.0s,baz=141,slow=7.5,SNR=5.1						
CMIG				LR	LR	00 38 11.7	
	comp=Z,760nm,20.9s,baz=148,slow=32						
BIRV	Birongo	19.92	65	P	P	00 33 02.5	+0.8
TLIG	Tlapa	20.61	319	P	P	00 33 11.0	+1.6
TLIG				IAmb	IAmb	00 33 19.2	
	comp=Z,38nm,1.2s						
OBIP	Obispado Ponce	23.63	47	P	P	00 33 42.6	+1.5
CELP	Cerrillos	23.67	47	P	P	00 33 42.3	+0.8
SJG	San Juan	24.00	47	P	P	00 33 44.1	-0.7
	comp=Z,7.6nm,0.7s,baz=315,slow=12,SNR=2.6						
SJG				LR	LR	00 43 13.9	
	comp=Z,96nm,21.8s,baz=241,slow=37						
	comp=Z,7.6nm,0.7s						
SJG	San Juan	24.00	47	P	P	00 33 43.6	-1.2
SJG				IAmb	IAmb	00 33 49.3	
	comp=Z,25nm,1.1s						
LPAZ	La Paz	24.45	139	P	P	00 33 51.6	+2.0
	comp=Z,4.3nm,0.8s,baz=326,slow=12,SNR=15						
	comp=Z,4.3nm,0.8s						
LPAZ	La Paz	24.45	139	P	P	00 33 50.9	+1.3
LPAZ				IAmb	IAmb	00 34 06.1	
	comp=Z,14nm,1.0s						
LPAZ	La Paz	24.45	139	eP	P	00 33 51.5	+1.9
PB16	IPOC Station P	25.16	145	P	P	00 33 58.2	+2.3
PB16				IAmb	IAmb	00 34 07.0	
	comp=Z,16nm,1.1s						
PB11	IPOC Station P	26.21	147	P	P	00 34 06.0	+1.0
PB11				IAmb	IAmb	00 34 22.0	
	comp=Z,14nm,1.1s						
PB08	IPOC Station P	26.80	146	P	P	00 34 13.7	+3.2
LVC	Limon Verde	28.94	149	P	P	00 34 33.4	+3.7
	comp=Z,2.5nm,0.7s,baz=358,slow=9.2,SNR=3.2						
LVC				LR	LR	00 47 02.4	
	comp=Z,401nm,18.6s,baz=304,slow=38						
	comp=Z,2.5nm,0.7s						
LVC	Limon Verde	28.94	149	P	P	00 34 30.9	+1.1
HKT	Hockley	29.66	340	P	P	00 34 35.9	+0.4
HKT				IAmb	IAmb	00 34 46.3	
	comp=Z,19nm,1.4s						
LRAL	Lakeview Retre	30.81	356	IAmb	IAmb	00 34 47.7	
	comp=Z,10nm,1.0s						
JCT	Junction City	31.68	334	P	P	00 34 54.6	+1.1
JCT				IAmb	IAmb	00 35 04.0	
	comp=Z,13nm,1.4s						
MDP	Montagnes des	31.94	84	LR	LR	00 48 07.3	
	comp=Z,271nm,18.2s,baz=258,slow=37						
X48A	Hartselle	32.22	356	IAmb	IAmb	00 34 59.5	
	comp=Z,15nm,1.3s						
TXAR	Lajitas Array	32.60	328	P	P	00 35 01.6	-0.1
	comp=Z,1.6nm,1.1s,baz=143,slow=8.9,SNR=8.5						
TXAR				LR	LR	00 47 21.7	
	comp=Z,230nm,19.6s,baz=138,slow=35						
	comp=Z,1.6nm,1.1s						
TX31	Lajitas Ar. Si	32.60	328	P	P	00 35 01.3	-0.4
TX31				IAmb	IAmb	00 35 09.8	
	comp=Z,18nm,1.4s						
CPCT	Cooper Cave	33.13	360	P	P	00 35 05.8	-0.3
CPCT				IAmb	IAmb	00 35 13.8	
	comp=Z,14nm,1.2s						
TKL	Tuckaleechee C	33.35	1	LR	LR	00 48 21.9	
	comp=Z,510nm,19.6s,baz=176,slow=36						
CLTN	Cedars of Leba	33.81	357	IAmb	IAmb	00 35 19.2	
	comp=Z,18nm,1.4s						
WVT	Waverly	33.95	355	P	P	00 35 11.9	-1.3
WVT				IAmb	IAmb	00 35 14.0	
	comp=Z,14nm,1.4s						
U49A	Red Boiling Sp	34.21	358	IAmb	IAmb	00 35 22.6	
	comp=Z,17nm,1.4s						
U54A	Nelsons Funny	34.29	4	P	P	00 35 15.8	-0.4
LCAR	Lake Charles	34.30	350	IAmb	IAmb	00 35 17.4	
	comp=Z,14nm,1.4s						
U59A	Littleton	34.60	10	P	P	00 35 18.3	-0.5
U40A	Yellville	34.90	348	IAmb	IAmb	00 35 22.8	
	comp=Z,14nm,1.4s						
T59A	Double "B" Far	35.24	10	P	P	00 35 24.7	+0.3
MNTX	Cornudas Mount	35.37	328	IAmb	IAmb	00 35 27.7	
	comp=Z,20nm,1.4s						
MGMO	Mountain Grove	35.56	349	IAmb	IAmb	00 35 34.2	
	comp=Z,12nm,1.1s						
S44A	Carbondale	35.64	354	IAmb	IAmb	00 35 34.9	
	comp=Z,16nm,1.1s						
SIUC	Southern Illin	35.66	354	IAmb	IAmb	00 35 35.7	
	comp=Z,12nm,0.9s						
H03N2	Juan Fernandez	35.79	172	T	T	01 13 23.5	
	baz=351,slow=76,SNR=94						
H03N1	Juan Fernandez	35.80	172	T	T	01 13 24.5	
	baz=351,slow=76,SNR=111						
H03N3	Juan Fernandez	35.81	172	T	T	01 13 23.3	
	baz=351,slow=76,SNR=78						
MSTX	Muleshoe	35.96	334	IAmb	IAmb	00 35 32.4	
	comp=Z,22nm,1.5s						
R53A	Hurricane	36.08	3	IAmb	IAmb	00 35 38.9	
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	36.26	351	P	P	00 35 32.2	-0.9
CCM				IAmb	IAmb	00 35 39.9	
	comp=Z,13nm,1.1s						
S39A	Bolivar	36.28	348	IAmb	IAmb	00 35 34.5	
	comp=Z,11nm,1.1s						
OLIL	Olney	36.56	355	P	P	00 35 35.5	-0.1
319A	Douglas	37.30	324	IAmb	IAmb	00 35 51.2	
	comp=Z,24nm,1.4s						
P43A	Skaggs, Pawnee	37.59	354	P	P	00 35 43.9	-0.6
RPN	Rapa Nui	37.68	218	LR	LR	00 47 00.9	
	comp=Z,731nm,21.6s,baz=41,slow=29						
P40A	Paris	37.83	350	IAmb	IAmb	00 35 47.6	
	comp=Z,19nm,1.2s						
O52A	Adamsville	37.87	3	IAmb	IAmb	00 35 53.4	

	comp=Z,20nm,1.1s						
O53A	New Philadelph	38.04	4	IAmb	IAmb	00 35 49.9	
	comp=Z,18nm,1.1s						
SFIN	Lafayette	38.12	357	IAmb	IAmb	00 35 54.8	
	comp=Z,20nm,1.1s						
LENM	Lemitar	38.13	329	P	P	00 35 50.7	+1.4
R32A	Long Quarter,	38.37	342	P	P	00 35 51.1	+0.1
HDIL	Hopedale	38.47	354	IAmb	IAmb	00 35 57.8	
	comp=Z,24nm,1.1s						
ANMO	Albuquerque	38.49	330	LR	LR	00 51 06.1	
	comp=Z,161nm,21.8s,baz=141,slow=35						
ANMO	Albuquerque	38.49	330	P	P	00 35 52.5	+0.2
CPUP	Villa Florida	38.62	139	LR	LR	00 53 47.3	
	comp=Z,125nm,20.8s,baz=318,slow=39						
TUC	Tucson	38.86	323	P	P	00 35 55.5	+0.1
M55A	Ridgway	39.48	7	IAmb	IAmb	00 36 07.1	
	comp=Z,18nm,0.9s						
M57A	Sunshine Farm,	39.57	9	P	P	00 35 59.8	-1.3
X18A	Snowflake	39.99	327	P	P	00 36 06.2	+1.2
L40A	Anamosa	40.19	352	IAmb	IAmb	00 36 07.1	
	comp=Z,33nm,1.3s						
BDFB	Brasilia	40.19	117	LR	LR	00 55 15.1	
	comp=Z,284nm,18.0s,baz=323,slow=40						
W18A	Petrified Fore	40.32	327	IAmb	IAmb	00 36 17.1	
	comp=Z,25nm,1.2s						
113A	Mohawk Valley,	41.00	321	IAmb	IAmb	00 36 21.6	
	comp=Z,14nm,1.3s						
Q24A	Divide	41.20	335	P	P	00 36 15.3	+0.4
MVCO	Mesa Verde	41.29	331	IAmb	IAmb	00 36 24.2	
	comp=Z,21nm,1.5s						
Y14A	Wickenburg	41.33	323	IAmb	IAmb	00 36 24.3	
	comp=Z,16nm,1.3s						
WUAZ	Wupatki	41.51	326	IAmb	IAmb	00 36 26.1	
	comp=Z,13nm,1.1s						
J56A	Wolcott	41.51	8	IAmb	IAmb	00 36 23.5	
	comp=Z,23nm,1.0s						
OGNE	Ogallala	41.73	340	P	P	00 36 19.1	0.0
J57A	Williamstown	41.78	9	IAmb	IAmb	00 36 19.4	
	comp=Z,20nm,1.4s						
PECO	Prince Edward	42.14	8	IAmb	IAmb	00 36 22.8	
	comp=Z,23nm,1.3s						
K31A	O'Neill	42.26	344	P	P	00 36 23.4	+0.1
SADO	Sadowa	42.70	6	LR	LR	00 54 03.1	
	comp=Z,677nm,18.1s,baz=193,slow=36						
SADO	Sadowa	42.70	6	IAmb	IAmb	00 36 27.2	
	comp=Z,23nm,1.4s						
ECSD	EROS Data Cent	42.78	347	IAmb	IAmb	00 36 28.4	
	comp=Z,31nm,1.4s						
PFO	Pinyon Flats O	43.26	320	LR	LR	00 54 27.1	
	comp=Z,168nm,18.0s,baz=117,slow=36						
PHWY	Pilot Hill	43.31	337	IAmb	IAmb	00 36 34.3	
	comp=Z,20nm,1.5s						
SRU	San Rafael Swe	43.77	330	IAmb	IAmb	00 36 43.8	
	comp=Z,13nm,1.4s						
SZCU	Shurtz Canyon	43.97	327	IAmb	IAmb	00 36 46.9	
	comp=Z,14nm,1.5s						
CCUT	Cedar City	44.09	327	IAmb	IAmb	00 36 47.4	
	comp=Z,12nm,1.2s						
P17A	Butcher Ranch,	44.15	331	P	P	00 36 39.3	+0.5
F36A	Milaca	44.24	351	IAmb	IAmb	00 36 39.9	
	comp=Z,21nm,1.4s						
RWWY	Rawlins	44.34	336	IAmb	IAmb	00 36 47.4	
	comp=Z,11nm,1.2s						
SHPR	Sheep Range	44.37	324	P	P	00 36 40.6	0.0
PLCA	Paso Flores	44.54	165	P	P	00 36 42.1	+0.4
	comp=Z,1.8nm,1.0s,baz=360,slow=7.8,SNR=4.0						
PLCA				LR	LR	00 51 14.3	
	comp=Z,199nm,20.1s,baz=354,slow=30						
	comp=Z,1.8nm,1.0s						
PLCA	Paso Flores	44.54	165	P	P	00 36 42.1	+0.4
GSC	Goldstone, Bar	44.57	321	IAmb	IAmb	00 36 51.3	
	comp=Z,13nm,1.5s						
TRQ	Mont Tremblant	44.75	10	P	P	00 36 43.4	0.0
TRQ				IAmb	IAmb	00 36 49.4	
	comp=Z,13nm,1.0s						
QSM	Queen of Sheba	45.04	322	IAmb	IAmb	00 36 54.0	
	comp=Z,8.9nm,1.1s						
PSUT	Pine Spring	45.06	327	IAmb	IAmb	00 36 54.5	
	comp=Z,7.1nm,1.1s						
RSSD	Black Hills	45.23	340	P	P	00 36 47.6	+0.2
RSSD				IAmb	IAmb	00 36 55.5	
	comp=Z,18nm,1.4s						
F64A	Sherman	45.78	16	P	P	00 36 51.2	-0.3
R11A	Troy Canyon, C	45.89	326	IAmb	IAmb	00 37 01.1	
	comp=Z,7.5nm,1.3s						
HWUT	Hardware Ranch	46.20	332	IAmb	IAmb	00 37 02.4	
	comp=Z,14nm,1.4s						
PDAR	Pinedale Array	46.22	334	P	P	00 36 54.2	-1.0
	comp=Z,1.2nm,0.9s,baz=134,slow=8.5,SNR=9.8						
PDAR				PcP	PcP	00 38 29.5	-1.4
	comp=Z,0.5nm,0.6s,baz=128,slow=5.8,SNR=4.7						
PDAR				LR	LR	00 57 23.3	
	comp=Z,343nm,18.3s,baz=144,slow=37						
	comp=Z,1.2nm,0.9s						
BGU	Big Grassy Mou	46.39	330	P	P	00 36 55.9	-0.7
ELK	Elko	47.40	328	LR	LR	00 56 49.2	
	comp=Z,558nm,18.3s,baz=150,slow=36						
ELK	Elko	47.40	328	P	P	00 37 04.7	+0.2
TPAW	Teton Pass	47.40	334	IAmb	IAmb	00 37 13.2	
	comp=Z,5.1nm,1.1s						
OMMB	Old Mammoth Mi	47.41	322	IAmb	IAmb	00 37 12.9	
	comp=Z,10nm,1.2s						
NV11	Mina Array Sit	47.43	324	IAmb	IAmb	00 37 13.2	
	comp=Z,8.8nm,1.1s						
MDPB	Devils Postpil	47.47	322	P	P	00 37 05.2	+0.1
MDPB				IAmb	IAmb	00 37 13.9	
	comp=Z,8.1nm,1.1s						
NVAR	Mina Array Bea	47.52	324	P	P	00 37 05.8	+0.3
	comp=Z,1.0nm,0.7s,baz=124,slow=6.8,SNR=9.2						
NVAR				PcP	PcP	00 38 35.3	-0.3
	comp=Z,0.3nm,0.5s,baz=129,slow=5.3,SNR=2.2						
NVAR				LR	LR	00 56 59.6	
	comp=Z,169nm,18.6s,baz=158,slow=36						
	comp=Z,1.0nm,0.7s						
RYN	Ryan	47.78	324	IAmb	IAmb	00 37 10.8	
	comp=Z,5.3nm,1.2s						
BMN	Battle Mountai	48.24	326	IAmb	IAmb	00 37 18.9	
	comp=Z,9.6nm,1.2s						
YERR	Yerington	48.43	324	IAmb	IAmb	00 37 15.7	
	comp=Z,6.8nm,1.3s						
YHL	Hebgen Lake	48.59	335	IAmb	IAmb	00 37 17.2	
	comp=Z,10nm,1.5s						
GCMT	Greycliff	48.73	337	P	P	00 37 15.1	+0.4
ULM	Lac du Bonnet	48.89	350	P	P	00 37 15.6	0.0
	comp=Z,5.7nm,0.9s,baz=178,slow=6.0,SNR=5.3						
ULM				LR	LR	00 58 14.9	
	comp=Z,123nm,19.1s,baz=154,slow=36						
	comp=Z,5.7nm,0.9s						
BOZ	Bozeman (W)	49.38	335	P	P	00 37 18.4	-1.2
BOZ				IAmb	IAmb	00 37 27.2	
	comp=Z,6.3nm,1.1s						
WVOR	Wild Horse Val	50.39	327	IAmb	IAmb	00 37 34.8	
	comp=Z,14nm,1.2s						
EGMT	Eagleton	50.62	338	IAmb	IAmb	00 37 36.4	
	comp=Z,13nm,1.4s						
MSO	Missoula	51.34	334	P	P	00 37 34.3	-0.1
MSO				IAmb	IAmb	00 37 41.7	
	comp=Z,9.3nm,1.1s						
JTMT	Jette	52.20	335	P	P	00 37 40.9	0.0
JTMT				IAmb	IAmb	00 37 48.3	
	comp=Z,10nm,1.4s						
YBH	Yreka Blue Hor	52.23	324	LR	LR	01 00 05.9	
	comp=Z,181nm,18.2s,baz=148,slow=36						
WALA	Waterton Lakes	53.07	336	IAmb	IAmb	00 37 54.9	
	comp=Z,14nm,1.3s						
NEW	Newport	53.83	334	LR	LR	01 01 06.6	
	comp=Z,112nm,21.1s,baz=145,slow=36						
SCHQ	Schefferville	54.46	12	P	P	00 37 55.1	-2.0
	comp=Z,5.3nm,1.0s,baz=227,slow=8.9,SNR=3.8						
SCHQ				LR	LR	01 01 40.2	
	comp=Z,315nm,18.3s,baz=222,slow=36						
	comp=Z,5.3nm,1.0s						
SCHQ	Schefferville	54.46	12	P	P	00 37 56.0	-1.2
EDM	Edmonton	56.21	340	P	P	00 38 08.9	-0.9
USHA	Ushuaia	58.32	169	LR	LR	00 58 22.4	
	comp=Z,345nm,22.0s,baz=22,slow=30						
BBB	Bella Bella	61.64	331	LR	LR	01 06 40.0	
	comp=Z,143nm,18.9s,baz=148,slow=37						
FRB	Frobisher Bay	62.57	8	LR	LR	01 06 04.5	
	comp=Z,699nm,18.4s,baz=196,slow=36						
YKA	Yellowknife Ar	64.25	345	P	P	00 39 02.9	-1.8
	comp=Z,2.6nm,0.9s,baz=141,slow=6.5,SNR=30						
YKA				LR	LR	01 08 41.4	
	comp=Z,126nm,19.3s,baz=139,slow=38						
	comp=Z,2.6nm,0.9s						
DLBC	Dease Lake	66.42	336	P	P	00 39 19.4	+0.5
	comp=Z,5.7nm,1.1s,baz=149,slow=8.1,SNR=6.6						
	comp=Z,5.7nm,1.1s						
PPT	Papeete	67.00	250	LR	LR	01 01 43.8	
	comp=Z,292nm,18.5s,baz=108,slow=30						
PMSA	Palmer Station	68.44	171	LR	LR	01 04 48.7	
	comp=Z,98nm,19.0s,baz=318,slow=32						
SFJD	Kangerlussuaq	68.88	14	LR	LR	01 08 54.6	
	comp=Z,309nm,21.2s,baz=222,slow=35						
M31M	Drury Creek, Y	70.44	338	IAmb	IAmb	00 39 47.2	
	comp=Z,9.3nm,1.5s						
M30M	Minto, Yukon	71.57	337	IAmb	IAmb	00 39 59.6	
	comp=Z,5.3nm,1.2s						
RES	Resolute Bay	72.71	357	P	P	00 39 56.5	-0.9
	comp=Z,1.0nm,0.9s,baz=191,slow=5.4,SNR=3.7						
RES				LR	LR	01 12 38.7	
	comp=Z,217nm,18.4s,baz=147,slow=36						
	comp=Z,1.0nm,0.9s						
BCAR	Beaver Creek A	73.78	336	P	P	00 40 04.4	+0.4
L27K	Beaver Creek,	73.80	336	P	P	00 40 04.1	0.0
L27K				IAmb	IAmb	00 40 12.5	
	comp=Z,8.4nm,1.2s						
INK	Inuvik	73.84	343	P	P	00 40 03.5	-0.7
	comp=Z,3.7nm,1.0s,baz=109,slow=9.2,SNR=6.7						
	comp=Z,3.7nm,1.0s						
INK	Inuvik	73.84	343	IAmb	IAmb	00 40 07.1	
	comp=Z,13nm,1.4s						
K27K	Chicken	74.36	337	IAmb	IAmb	00 40 10.2	
	comp=Z,16nm,1.4s						
PAX	Paxson	75.24	336	P	P	00 40 12.9	+0.3
PAX				IAmb	IAmb	00 40 31.3	
	comp=Z,11nm,1.5s						
J25K	Salcha River,	75.91	337	IAmb	IAmb	00 40 24.1	
	comp=Z,7.1nm,1.2s						
ILAR	Eielson Array	76.57	337	P	P	00 40 18.6	-1.4
	comp=Z,2.0nm,1.1s,baz=135,slow=3.6,SNR=11						
ILAR				LR	LR	01 16 21.1	
	comp=Z,191nm,18.8s,baz=171,slow=38						
	comp=Z,2.0nm,1.1s						
KDAK	Kodiak Island	76.62	329	LR	LR	01 13 48.2	
	comp=Z,113nm,19.2s,baz=114,slow=35						
RAR	Rarotonga	77.06	248	LR	LR	01 07 47.7	
	comp=Z,342nm,21.1s,baz=108,slow=30						
NEA2	Nenana	77.36	336	IAmb	IAmb	00 40 32.4	
	comp=Z,7.1nm,1.2s						
H24K	Noodor Dome	77.38	338	P	P	00 40 24.0	-0.6
I23K	Minto, Yukon-K	77.68	337	IAmb	IAmb	00 40 34.0	
	comp=Z,11nm,1.3s						
BPAW	Bear Paw Mtn.	77.95	336	IAmb	IAmb	00 40 35.1	
	comp=Z,7.7nm,1.1s						
CAST	Castle Rocks	78.18	335	IAmb	IAmb	00 40 29.3	
	comp=Z,14nm,1.5s						
I21K	Tanana	78.73	337	IAmb	IAmb	00 40 39.2	
	comp=Z,8.6nm,1.2s						
DBIC	Dimbokro	79.49	84	LR	LR	01 13 34.1	
	comp=Z,38nm,21.2s,baz=247,slow=34						
MDT	Midelt	80.35	57	LR	LR	01 10 49.6	
	comp=Z,50nm,21.8s,baz=343,slow=32						
ESDC	Sonseca Array	81.36	50	P	P	00 40 46.6	-0.3
	comp=Z,2.5nm,1.0s,baz=281,slow=5.5,SNR=8.6						
	comp=Z,2.5nm,1.0s						
ESDC	Sonseca Array	81.36	50	P	P	00 40 48.1	+1.2
ESDC				IAmb	IAmb	00 40 55.2	
	comp=Z,9.0nm,1.3s						
EKA	Eskdalemuir Ar	83.31	35	LR	LR	01 11 31.7	
	comp=Z,94nm,21.8s,baz=252,slow=31						
JMIC	Jan Mayen	83.43	19	LR	LR	01 15 48.1	
	comp=Z,60nm,21.8s,baz=260,slow=34						
TORD	Torodi Ar. Bea	85.83	77	P	P	00 41 09.2	-1.1
	comp=Z,2.0nm,1.1s,baz=268,slow=3.1,SNR=8.3						
	comp=Z,2.0nm,1.1s						
SPITS	Spitsbergen Ar	90.14	12	LR	LR	01 23 20.5	
	comp=Z,295nm,18.7s,baz=33,slow=36						
NOA	NORSAR Array B	90.92	29	LR	LR	01 18 08.0	
	comp=Z,50nm,20.9s,baz=270,slow=33						
KEST	Kesra	91.90	54	LR	LR	01 21 20.7	
	comp=Z,19nm,19.9s,baz=212,slow=34						
QSPA	South Pole Qui	92.18	180	LR	LR	01 17 36.8	
	comp=Z,133nm,18.2s,baz=119,slow=32						
HFS	Hagfors	92.24	30	LR	LR	01 17 06.8	
	comp=Z,67nm,19.9s,baz=271,slow=32						
GERES	GERESS Array B	93.81	41	LR	LR	01 17 29.7	
	comp=Z,85nm,20.7s,baz=276,slow=31						
ARCES	ARCESS Array B	94.90	19	LR	LR	01 19 55.9	
	comp=Z,60nm,21.9s,baz=308,slow=32						
VRAC	Vranov	95.61	40	LR	LR	01 19 00.4	
	comp=Z,117nm,21.9s,baz=282,slow=32						
VAE	Valguarnera	95.78	52	LR	LR	01 19 46.7	
	comp=Z,57nm,19.8s,baz=336,slow=32						
VNDA	Vanda	97.10	192	LR	LR	01 17 25.1	
	comp=Z,115nm,20.0s,baz=100,slow=30						
FINES	FINESS Array B	97.83	27	LR	LR	01 26 48.2	
	comp=Z,63nm,18.4s,baz=276,slow=36						
URZ	Urewera	97.91	232	LR	LR	01 19 20.5	
	comp=Z,97nm,18.5s,baz=211,slow=31						
KURK	Kurchatov	125.39	13	PKPdf	PKPdf	00 47 31.2	+0.2
KURBB	Kurchatov Arra	125.46	13	PKP	PKPdf	00 47 30.3	-0.9
	comp=Z,0.4nm,0.5s,baz=330,slow=2.6,SNR=2.4						
MKAR	Makanchi Array	129.89	12	PKP	PKPdf	00 47 36.8	-3.0
	comp=Z,0.2nm,0.4s,baz=349,slow=1.5,SNR=2.5						
MKAR	Makanchi Array	129.89	12	PKPdf	PKPdf	00 47 38.0	-1.8
ASAR	Alice Springs	137.12	237	PKP	PKPdf	00 47 52.7	-1.4
	comp=Z,0.3nm,0.6s,baz=100,slow=2.6,SNR=1.9						
ASAR	Alice Springs	137.12	237	PKPdf	PKPdf	00 47 53.0	-1.0
WRA	Warramunga Arr	138.14	242	PKP	PKPdf	00 47 54.6	-1.3
	comp=Z,0.5nm,0.6s,baz=95,slow=2.0,SNR=6.4						
WRA	Warramunga Arr	138.14	242	PKPdf	PKPdf	00 47 54.0	-2.0

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*IDC **04** 00:34:10.9±2.5, 38°.47N×73°.84E, h95^{km}±22^{km}, mb3.9/27, mbtmp4.3/32, MS3.2/7, Error ellipse: s-maj=14.6km s-min=9.8km az=21.0*

*MOS **04** 00:34:11.0±0.9, 38°.58N×73°.86E, h107^{km}, mb4.5/22, Error ellipse: s-maj=5.3km s-min=3.2km az=95.0*

*SOME **04** 00:34:12.8, 39°.08N×73°.53E, h10^{km}*

*NEIC **04** 00:34:12.6±1.5, 38°.60N±0°.05×73°.86E±0°.07, h104^{km}±3^{km}, mb4.4/59, ML4.5(BJI), Error ellipse: s-maj=8.6km s-min=7.3km az=111.0*

*BJI **04** 00:34:13.0±0.0, 38°.58N×73°.97E, h120^{km}, mb4.4/27, mB4.3/14*

*NNC **04** 00:34:14.0±1.5, 38°.82N×73°.68E, h153^{km}±25^{km}, mb3.8, mpv4.6, Error ellipse: s-maj=17.7km s-min=8.2km az=12.0*

ISC 04 00:34:11.1±0.5**, 38°.55N**±0°.04×**73°.90E**±0°.04**, h97^{km}**±4^{km}**,**
h97^{km}:pP-P, n354, σ1^{s}.76/361**, mb4.4**/76**, 21C-9D,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.88	58	P	Pn	00 34 39.4	-2.7
KSH				S	Sn	00 34 58.7	-7.0
KSH				smax	smax		
	comp=N,8μm,0.5s						
KSH				smax	smax		
	comp=E,5μm,0.6s						
DRK	Karamyk	1.88	300		Pn	00 34 43.4	+1.1
BTK	Batken	2.83	303	PN	Pn	00 34 55.7	+1.2
BTK	Batken	2.83	303		Pn	00 34 55.7	+1.2
GAR	Garm	2.84	280	*i* PN	Pn	00 34 55.3	+0.6
GAR	Garm	2.84	280		Pn	00 34 54.9	+0.1
ARLS	Aral	3.32	5	*i* PN	Pn	00 35 01.7	+0.5
ARK	Arkit	3.57	336	*i* PN	Pn	00 35 03.6	-0.9
AML	Almayashu	3.58	358	P	Pn	00 35 05.9	+1.0
	SNR=334						
AML	Almayashu	3.58	358	*i* PN	Pn	00 35 05.3	+0.4
TRKS	Terek-Say	3.66	325	*i* PN	Pn	00 35 04.5	-1.2
UCH	Uchtor	3.70	7	P	Pn	00 35 08.2	+1.5
	SNR=254						
UCH	Uchtor	3.70	7	*i* PN	Pn	00 35 07.5	+0.9
CHGR	Chuyangaron	3.72	273	Pn	Pn	00 35 05.9	-0.6
ULHL	Ulahol	4.10	25	P	Pn	00 35 13.2	+1.5
	SNR=115						
AAK	Ala-Archa	4.11	6	P	Pn	00 35 13.6	+1.8
	SNR=89						
AAK	Ala-Archa	4.11	6	P	Pn	00 35 13.6	+1.8
	43nm,0.3s,baz=185,slow=8.3,SNR=97						
AAK				S	Sn	00 35 59.2	+0.3
	129nm,0.7s,baz=95,slow=19,SNR=5.6						
AAK	Ala-Archa	4.11	6	Pn	Pn	00 35 13.4	+1.6
EKS2	Erkin-Say	4.11	359	P	Pn	00 35 13.3	+1.5
	SNR=271						
EKS2	Erkin-Say	4.11	359	*i* PN	Pn	00 35 12.6	+0.8
KBK	Karagaybulak	4.18	11	P	Pn	00 35 14.7	+1.9
	SNR=89						
KBK	Karagaybulak	4.18	11	*i* PN	Pn	00 35 14.0	+1.2
MRKS	Merke	4.22	353	Pg	Pn	00 35 14.7	+1.4
	178nm,0.2s						
BOOM	Boomskoye usch	4.23	21	PN	Pn	00 35 15.3	+1.8
BOOM	Boomskoye usch	4.23	21		Pn	00 35 15.3	+1.8
FRU1	Bishkek	4.29	7	PN	Pn	00 35 16.0	+1.8
FRU1	Bishkek	4.29	7	Pn	Pn	00 35 16.0	+1.8
TARG	Taragay, Kyrgy	4.36	42		Pn	00 35 17.1	+1.6
KDJ	Kajisay	4.37	34	PN	Pn	00 35 16.7	+1.4
KDJ	Kajisay	4.37	34		Pn	00 35 16.7	+1.4
CHMS	Chumysh	4.49	8	P	Pn	00 35 18.5	+1.6
	SNR=29						
CHMS	Chumysh	4.49	8	PN	Pn	00 35 18.3	+1.5
CHMS	Chumysh	4.49	8	⇑P	Pn	00 35 18.4	+1.5
	49nm,0.4s						
CHMS				⇑S	Sn	00 36 07.3	-0.6
	68nm,0.6s						
TAS	Tashkent	4.50	310	PN	Pn	00 35 17.0	0.0
TAS	Tashkent	4.50	310	Pn	Pn	00 35 17.0	0.0
TKM2	Tokmak 2	4.55	16	P	Pn	00 35 19.6	+1.7
	SNR=60						
TKM2	Tokmak 2	4.55	16	PN	Pn	00 35 19.5	+1.7
TKM2	Tokmak 2	4.55	16	⇑P	Pn	00 35 19.5	+1.7
	39nm,0.5s						
TKM2				⇑S	Sn	00 36 08.7	-1.0
	165nm,0.8s						
IUG	Iuzhnay	4.65	322	*d i*PN	Pn	00 35 19.4	+0.3
IUG	Iuzhnay	4.65	322	*e*P	Pn	00 35 30.7	+12
	1μm,0.4s						
IUG				*e*S	Sn	00 36 27.1	+15
	679nm,0.7s						
IUG	Iuzhnay	4.65	322	⇓*i*P	Pn	00 35 19.4	+0.3
	baz=321						
IUG	Iuzhnay	4.65	322	Pg	Pn	00 35 19.4	+0.3
	3μm,0.3s						
IUG				Lg	Lg	00 36 07.0	
	927nm,0.3s						
USP	Ospenovka	4.74	5	P	Pn	00 35 21.6	+1.4
	SNR=12						
KST	Kastek	4.75	19	*e*P	Pn	00 35 33.5	+13
	30nm,0.3s						
KST				*e*S	Sn	00 36 31.8	+17
	112nm,0.8s						
KST	Kastek	4.75	19	P	Pn	00 35 22.3	+1.7
	108nm,0.6s						
KST				Lg	Lg	00 36 15.1	
	557nm,0.9s						
DZA	Taraz	4.76	337	*c i*PN	Pn	00 35 21.4	+0.9
DZA	Taraz	4.76	337	*e*P	Pn	00 35 30.0	+9.5
	133nm,0.4s						
DZA				*e*S	Sn	00 36 25.5	+11
	473nm,0.6s						
DZA	Taraz	4.76	337	⇑*i*P	Pn	00 35 21.4	+0.9
	baz=337						
DZA				*e*S	Sn	00 36 13.9	-0.6
	baz=337						
DZA	Taraz	4.76	337	Pg	Pn	00 35 21.5	+0.9
	634nm,0.3s						
DGS	Degeres	4.90	16	*e*P	Pn	00 35 37.0	+15
	35nm,0.5s						
DGS				*e*S	Sn	00 36 37.3	+19
	84nm,0.8s						
DGS	Degeres	4.90	16	P	Pn	00 35 21.9	-0.5
	74nm,0.7s						
DGS				Lg	Lg	00 36 18.3	
	130nm,0.3s						
CHCP	Chirah Chowk	4.91	186	P	Pn	00 35 25.7	+3.1
NIL	Nilore	4.92	186	PN	Pn	00 35 25.2	+2.5
NIL	Nilore	4.92	186	Pn	Pn	00 35 25.2	+2.5
SGDS	Sogindy	4.93	6	*d i*PN	Pn	00 35 23.6	+0.8
SGDS	Sogindy	4.93	6	*e*P	Pn	00 35 33.4	+11
	6.3nm,0.4s						
SGDS				*e*S	Sn	00 36 31.7	+13
	46nm,0.8s						
SGDS	Sogindy	4.93	6	⇓*i*P	Pn	00 35 23.7	+0.8
	baz=7.6						
SGDS	Sogindy	4.93	6	Pg	Pn	00 35 23.7	+0.8
	18nm,0.4s						
SGDS				Lg	Lg	00 36 14.4	
	48nm,0.5s						
MTBS	Maitube	4.96	22	*e*P	Pn	00 35 36.4	+13
	23nm,0.5s						
MTBS				*e*S	Sn	00 36 37.1	+18
	42nm,0.8s						
MTBS	Maitube	4.96	22	Lg	Lg	00 36 17.1	
	80nm,0.4s						
CEP	Cherat	4.98	199	P	Pn	00 35 26.6	+2.9
CEP				S	Sn	00 36 20.0	-0.2
CHM	Chimkent	4.99	320	*e*P	Pn	00 35 36.0	+12
	140nm,0.2s						
CHM				*e*S	Sn	00 36 35.8	+16
	602nm,0.7s						
TNSS	Tian-Shan	5.04	26	*e*PN	Pn	00 35 25.9	+1.3
TNSS	Tian-Shan	5.04	26	*e*P	Pn	00 35 25.9	+1.3
	baz=28						
TNSS	Tian-Shan	5.04	26	P	Pn	00 35 26.0	+1.3
	19nm,0.4s						
AAA	Alma-Ata	5.18	25	*e*PN	Pn	00 35 28.9	+2.6
AAA				*e*S	Sn	00 36 26.3	+1.5
AAA	Alma-Ata	5.18	25	*e*P	Pn	00 35 28.9	+2.6
	baz=27						
AAA				*e*S	Sn	00 36 26.3	+1.5
	baz=27						
MDOK	Medeo	5.19	26	*i* PN	Pn	00 35 28.8	+2.4
MDOK	Medeo	5.19	26	*i* P	Pn	00 35 28.9	+2.4
	baz=28						
MDOK	Medeo	5.19	26	⇑P	Pn	00 35 27.6	+1.2
	8.8nm,0.6s						
MDOK				⇑S	Sn	00 36 49.6	+25
	95nm,0.7s						
KNDC	Almaty	5.21	25	PN	Pn	00 35 29.0	+2.4
KNDC	Almaty	5.21	25	⇑P	Pn	00 35 29.1	+2.4
	60nm,0.8s						
PRZ	Przheval'sk	5.21	40	PN	Pn	00 35 28.7	+1.9
PRZ	Przheval'sk	5.21	40	Pn	Pn	00 35 28.7	+1.9
KK31	Karatay Array	5.23	332	*e*PN	Pn	00 35 26.9	+0.1
KK31	Karatay Array	5.23	332	Pn	Pn	00 35 27.0	+0.1
KK31	Karatay Array	5.23	332	⇑P	Pn	00 35 27.0	+0.1
	37nm,0.3s,baz=137,slow=12,SNR=1195						
KK31				⇑S	Sn	00 36 23.1	-2.6
	98nm,0.5s,baz=148,slow=15,SNR=8.3						
KKAR	Karatay Array	5.23	332	PN	Pn	00 35 26.9	+0.1
KKAR	Karatay Array	5.23	332		Pn	00 35 26.9	+0.1
KOTS	Kotyrbulak	5.27	26	P	Pn	00 35 29.7	+2.1
	18nm,0.4s						
KRBS	Karabastau	5.31	14	*e*P	Pn	00 35 40.7	+13
	15nm,0.5s						
KRBS				*e*S	Sn	00 36 43.6	+16
	59nm,0.5s						
KRBS	Karabastau	5.31	14	P	Pn	00 35 29.1	+1.1
	32nm,0.3s						
BRLS	Borolday	5.44	327	*e*P	Pn	00 35 35.8	+6.1
	8.3nm,0.3s						
BRLS				*e*S	Sn	00 36 35.7	+4.8
	27nm,0.7s						
BRLS	Borolday	5.44	327	Lg	Lg	00 36 20.4	
	34nm,0.4s						
KBL	Kabul	5.59	226	PN	Pn	00 35 33.4	+1.3
KBL	Kabul	5.59	226	Pn	Pn	00 35 33.4	+1.3
KUU	Kurty	5.65	18	*d i*PN	Pn	00 35 33.0	+0.5
KUU	Kurty	5.65	18	⇓*i*P	Pn	00 35 33.1	+0.5
	baz=20						
KUU	Kurty	5.65	18	P	Pn	00 35 33.0	+0.5
	12nm,0.5s						
SATY	Saty	5.65	36	*e*PN	Pn	00 35 35.6	+2.9
SATY	Saty	5.65	36	*e*P	Pn	00 35 35.7	+2.9
	baz=38						
SATY	Saty	5.65	36	P	Pn	00 35 34.2	+1.5
	15nm,0.6s						
CHKK	Chushkaly	5.79	23	*e*PN	Pn	00 35 35.1	+0.7
CHKK	Chushkaly	5.79	23	*e*P	Pn	00 35 35.2	+0.8
	baz=24						
CHKK	Chushkaly	5.79	23	P	Pn	00 35 36.0	+1.6
	7.7nm,0.6s						
JMU	Jammu	5.88	172	*e*P	Pn	00 35 37.9	+2.2
JMU				*e*S	Sn	00 36 38.5	-3.1
KURS	Kuram	5.89	32	P	Pn	00 35 38.0	+2.0
	16nm,0.5s						
THW	Thamme Wali	6.00	198	P	Pn	00 35 38.9	+1.4
UZB	Uzynbulak	6.01	39	*e*PN	Pn	00 35 39.0	+1.4
UZB	Uzynbulak	6.01	39	*e*P	Pn	00 35 39.1	+1.4
	baz=40						
KPKS	Kokpek	6.10	35	*e*PN	Pn	00 35 40.1	+1.4
KPKS	Kokpek	6.10	35	*e*P	Pn	00 35 40.2	+1.4
	baz=37						
THN	Thein Dam	6.28	166	*e*P	Pn	00 35 43.0	+1.9
THN				*e*S	Sn	00 36 47.9	-3.6
PDGK	Podgornoye	6.38	40	PN	Pn	00 35 43.1	+0.5
PDGK	Podgornoye	6.38	40	P	Pn	00 35 43.8	+1.2
	6.0nm,0.4s						
PDGK	Podgornoye	6.38	40	⇑P	Pn	00 35 43.6	+1.0

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      13nm,0.8s
BTLS  Baital             6.49   1 i PN    Pn     00 35 44.7 +0.8
BTLS  Baital             6.49   1 i P     Pn     00 35 44.7 +0.8
      baz=1.8
BTLS  Baital             6.49   1   P     Pn     00 35 44.6 +0.7
      25nm,0.3s
SARP  Sargodha           6.69 189   P     Pn     00 35 47.6 +0.9
TDK   Taldyqorghan       7.27  26 ePN     Pn     00 35 55.3 +0.7
TDK   Taldyqorghan       7.27  26 eP      Pn     00 35 55.3 +0.7
      baz=27
BHK   Bhakra             7.41 163 eP      Pn     00 35 57.1 +0.5
BHK                               eS      Sn     00 37 13.8 -5.2
SMLA  Simla              7.87 159 eP      Pn     00 36 03.1 +0.3
SMLA                              eS      Sn     00 37 22.4 -7.9
SMLA                                IAML         00 37 28.1
      comp=N,622nm,0.5s
SMLA                                IAML         00 37 29.1
      comp=E,705nm,0.4s
DDI   Dehra Dun          8.89 156   IAML         00 37 58.2
      comp=E,400nm,0.7s
DDI                                 IAML         00 38 01.0
      comp=N,492nm,0.1s
OTUK  Ortayu             9.76 354   P     Pn     00 36 27.6 -0.8
OTUK  Ortayu             9.76 354 ⇑P      Pn     00 36 27.7 -0.8
      comp=N,37nm,0.6s
MAKZ  Makanchi          10.17  33   P     Pn     00 36 34.8 +0.8
MAKZ  Makanchi          10.17  33   Pn    Pn     00 36 34.8 +0.8
MAKZ  Makanchi          10.17  33 ⇑P      Pn     00 36 34.8 +0.8
      comp=N,3.8nm,0.8s
NDI   New Delhi         10.22 163 ex      Sn     00 38 20.0 -7.5
HRA   Herat             10.27 250   Pn    Pn     00 36 35.2 -0.4
MK31  Makanchi Array    10.29  34   P     Pn     00 36 36.5 +0.8
MK31  Makanchi Array    10.29  34   Pn    Pn     00 36 36.5 +0.8
MK31  Makanchi Array    10.29  34   P     Pn     00 36 35.7  0.0
      comp=N,1.8nm,0.6s,baz=205,slow=10,SNR=17
MKAR  Makanchi Array    10.29  34   P     Pn     00 36 36.4 +0.7
      comp=N,3.4nm,0.9s,baz=216,slow=15,SNR=14
MKAR  Makanchi Array    10.29  34   Pn    Pn     00 36 35.6 -0.1
LGTI  Lohaghat          10.49 148 eP      Pn     00 36 40.9 +2.5
LGTI                              eS      Sn     00 38 28.6 -5.4
KUDL  Kundal            10.60 167 eP      Pn     00 36 38.7 -1.3
KUDL                              eS      Sn     00 38 26.2  -10
WMQ   Urumqi            11.65  59 eP      Pn     00 36 53.6 -0.5
WMQ                                 sP           00 37 23.3
WMQ                                 S     Sn     00 38 59.0 -3.1
WMQ                                 pmax  pmax
      comp=N,22nm,1.3s
AJM   Ajmer             12.05 177 eP      Pn     00 36 57.6 -1.9
GEYT  Alibeck           12.43 272   P     Pn     00 37 00.6 -3.9
      comp=N,5.4nm,0.5s,baz=79,slow=17,SNR=15
GEYT                                S     Sn     00 39 11.6  -10
      comp=N,8.1nm,0.6s,baz=94,slow=23,SNR=3.5
GEYT                                LR    LR     00 42 21.0
      comp=N,56nm,20.3s,baz=122,slow=40
GEYT  Alibeck           12.43 272   Pn    Pn     00 36 59.8 -4.7
GYA0B ALIBECK ARRAY     12.43 272   Pn    Pn     00 36 59.9 -4.6
GYA0B ALIBECK ARRAY     12.43 272 ⇑P      Pn     00 37 00.3 -4.3
KURBB Kurchatov Arra    12.51  14   P     Pn     00 37 03.4 -2.0
      comp=N,2.1nm,0.6s,baz=204,slow=12,SNR=15
KURBB                               S     Sn     00 39 26.1 +3.3
      comp=N,0.8nm,0.6s,baz=307,slow=6.1,SNR=1.2
KURBB Kurchatov Arra    12.51  14   P     Pn     00 37 02.7 -2.7
KURBB Kurchatov Arra    12.51  14 ⇓P      Pn     00 37 03.0 -2.5
      comp=N,16nm,1.1s
KURK  Kurchatov         12.62  14   P     Pn     00 37 04.2 -2.6
KURK  Kurchatov         12.62  14   Pn    Pn     00 37 04.2 -2.6
PYUN  Piuthan           12.89 141 eP      Pn     00 37 06.3 -4.5
      comp=N,62nm,0.4s
DANN  Dangsing          13.07 138 eP      Pn     00 37 08.6 -4.7
KOLN  Koldanda          13.46 140 eP      Pn     00 37 14.2 -4.1
      comp=N,43nm,0.5s
GKN   Gorkha            13.82 136 eP      Pn     00 37 19.1 -3.8
      comp=N,46nm,0.4s
KKN   Kakani            14.34 135 eP      Pn     00 37 25.9 -3.8
      comp=N,24nm,0.5s
PKIN  Phulchoki         14.56 135 eP      Pn     00 37 28.2 -4.5
PKI   Pulchoki          14.58 135 eP      Pn     00 37 28.4 -4.5
GUN   Gumba             14.58 133 eP      Pn     00 37 29.2 -3.7
      comp=N,29nm,0.4s
AB31  Akbulak array     14.66 321 eP      Pn     00 37 30.5 -3.0
AB31  Akbulak array     14.66 321   P     Pn     00 37 30.5 -3.0
      comp=N,10nm,0.5s,baz=129,slow=13,SNR=217
AB31                                S     Sn     00 40 06.3 -8.7
      comp=N,15nm,0.8s,baz=162,slow=21,SNR=11
ABKAR Akbulak array     14.66 321         Pn     00 37 30.7 -2.8
BRVK  Borovoye          14.73 351   P     Pn     00 37 32.4 -1.9
BRVK  Borovoye          14.73 351   Pn    Pn     00 37 32.4 -1.9
BRVK  Borovoye          14.73 351 ⇑P      Pn     00 37 32.3 -1.9
      comp=N,67nm,0.6s
BHPL  Bhopal            15.55 168 eP      Pn     00 37 42.7 -2.3
RAMN  Ramite            15.72 134 eP      Pn     00 37 43.5 -3.8
      comp=N,61nm,0.5s
TAPN  Taplejung         16.07 130 eP      Pn     00 37 48.4 -3.3
      comp=N,18nm,0.4s
JBP   Jabalpur          16.19 160 ex      x      00 37 54.6
JBP                               eP      P      00 37 54.6 +0.4
JBP                                 IAmb  IAmb   00 37 56.0
      comp=Z,28nm,0.9s
JBP                              ⇓ex      x      00 40 36.1
ODAN  Odare             16.25 132 eP      Pn     00 37 51.1 -2.7
      comp=Z,59nm,0.7s
AKTO  Aktyubinsk        16.38 322   P     Pn     00 37 53.7 -1.3
      comp=Z,17nm,0.4s,baz=126,slow=13,SNR=58
AKTO                                S     Sn     00 40 46.5  -10
      comp=Z,4.6nm,0.5s,baz=327,slow=19,SNR=3.9
AKTO                                LR    LR     00 44 28.7
      comp=Z,60nm,18.1s,baz=110,slow=38
AKTO  Aktyubinsk        16.38 322 ⇑P      Pn     00 37 52.4 -2.6
      comp=Z,38nm,0.6s
LSA   Lhasa             16.77 117   P     Pn     00 37 59.8 -0.6
LSA                                 pmax  pmax
      comp=Z,8.0nm,0.7s
LSA   Lhasa             16.77 117         Pn     00 37 59.8 -0.6
GOMU  GeErMu            16.79  92   P     Pn     00 37 59.6 -0.9
GOMU                                pmax  pmax
      comp=Z,3.0nm,0.6s
GOMU                                pmax  pmax
      comp=Z,48nm,4.9s
ZAA0  Zalesovo Array    17.12  22   P     Pn     00 38 02.9 -1.1
ZAA0                                IAmb  IAmb   00 38 06.0
      comp=Z,19nm,1.2s
ZALV  Zalesovo Beam     17.12  22   P     Pn     00 38 03.5 -0.6
      comp=Z,4.5nm,0.4s,baz=219,slow=11,SNR=27
ZALV                                S     Sn     00 41 08.5 -5.6
      comp=Z,0.4nm,0.4s,baz=30,slow=22,SNR=1.5
ZALV                                LR    LR     00 44 37.8
      comp=Z,32nm,18.1s,baz=140,slow=36
ZALV  Zalesovo Beam     17.12  22         Pn     00 38 03.0 -1.0
LKRN  Lenkeran, Azer    19.62 278   P     P      00 38 32.9 +1.2
SHL   Shillong          19.95 125   P     P      00 38 35.2 -0.4
SHL                                 pmax  pmax
      comp=Z,14nm,0.6s
SHL   Shillong          19.95 125   P     P      00 38 35.2 -0.4
SHL                                 IAmb  IAmb   00 38 38.5
      comp=Z,14nm,0.6s
WSAR  Wadi Sarin        20.07 225   P     P      00 38 36.3 -0.5
      comp=Z,2.8nm,0.9s,baz=43,slow=20,SNR=2.1
GTA   Gaotai            20.14  79 ⇑P      P      00 38 39.6 +2.0
GTA                                 pmax  pmax
      comp=Z,24nm,0.8s
SVE   Sverdlovsk        20.28 339⇑eP      P      00 38 38.7 -0.1
SVE                                 pmax  pmax
      comp=Z,35nm,0.8s
ARU   Arti              20.59 335   P     P      00 38 42.2 +0.2
      comp=Z,7.1nm,0.6s,baz=152,slow=6.2,SNR=37
ARU                                 LR    LR     00 47 02.5
      comp=Z,43nm,19.6s,baz=146,slow=37
      comp=Z,7.1nm,0.6s
ARU   Arti              20.59 335c iP     P      00 38 42.1 +0.1
ARU                                 SS    Sn     00 42 56.8  +20
ARU                                 pmax  pmax
      comp=Z,36nm,0.9s
ARU   Arti              20.59 335   P     P      00 38 40.9 -1.2
ARU                                 IAmb  IAmb   00 38 43.9
      comp=Z,26nm,0.8s
SEKA  Sheki             20.64 286   P     P      00 38 44.0 +1.2
MNGR  Mingechevir, A    20.74 285   P     P      00 38 45.0 +1.2
GANJ  Ganja             21.33 284   P     P      00 38 50.9 +0.7
HYBB  Hyderabad (bro    21.44 168 eP      P      00 38 52.2 +0.7
HYBB                                IVmB_BB      00 38 52.6
      comp=Z,104nm,0.5s
GROC  Groznyy           21.71 291 eP      P      00 38 55.1 +1.0
GROC                              eS      Sn     00 42 59.0 -5.2
GROC                                pmax  pmax
      comp=Z,91nm,1.0s
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GROC                                MLR   MLR
      comp=Z,707nm,15.0s
NAX   Nakhchivan        22.10 281   P     P      00 38 59.9 +1.5
GNI   Garni             22.57 283   P     P      00 39 05.6 +2.2
      comp=Z,11nm,0.7s,baz=88,slow=4.8,SNR=14
GNI   Garni             22.57 283   P     P      00 39 04.1 +0.7
GNI                                 pmax  pmax
      comp=Z,20nm,0.9s
GNI   Garni             22.57 283   P     P      00 39 04.1 +0.7
GNI                                 IAmb  IAmb   00 39 12.7
      comp=Z,20nm,0.8s
BELG  Belogornoye       22.89 316   P     P      00 39 05.6 -0.7
      comp=Z,20nm,0.7s,baz=234,slow=1.1,SNR=8.9
      comp=Z,20nm,0.7s
ZEI   Tsey              23.08 290 eP      P      00 39 12.3 +3.7
ZEI                                 pmax  pmax
      comp=Z,10.0nm,1.2s
ONI   Oni               23.41 290   P     P      00 39 12.3 +0.8
ONI                                 pmax  pmax
      comp=Z,14nm,0.7s
ONI   Oni               23.41 290   P     P      00 39 12.3 +0.8
ONI                                 IAmb  IAmb   00 39 16.0
      comp=Z,14nm,0.7s
GOF   Gofitskoye        23.81 296⇑eP      P      00 39 16.3 +1.4
GOF                                 pmax  pmax
      comp=Z,23nm,0.6s
KBZ   Khabaz            23.84 292   P     P      00 39 15.3 +0.2
      comp=Z,2.0nm,0.8s,baz=116,slow=9.2,SNR=4.5
      comp=Z,2.0nm,0.8s
LZH   Lanzhou           23.89  87 eP      P      00 39 18.0 +2.1
LZH                                 pP    pP     00 39 39.0 +0.8
LZH                                 sP    sP     00 39 52.2 +1.8
LZH                                 pmax  pmax
      comp=Z,23nm,1.5s
ZAK   Zakamensk         23.91  51 eP      P      00 39 16.7 +0.8
ZAK                                 pmax  pmax
      comp=Z,6.0nm,1.2s
KIV   Kislovodsk        24.00 293 eP      P      00 39 14.8 -1.9
KIV                                 pmax  pmax
      comp=Z,5.0nm,1.1s
KIV   Kislovodsk        24.00 293   P     P      00 39 16.8  0.0
KIV                                 IAmb  IAmb   00 39 31.3
      comp=Z,15nm,0.7s
GEVA  Gevas             24.11 279   P     P      00 39 18.1 +0.2
GURO  Guroymak-BITLI    24.86 280   P     P      00 39 25.1 +0.3
SONM  Songino Array     25.28  58   P     P      00 39 30.3 +1.9
      comp=Z,4.1nm,0.6s,baz=248,slow=12,SNR=8.1
      comp=Z,4.1nm,0.6s
SONM  Songino Array     25.28  58   P     P      00 39 27.8 -0.6
KIRV  Kirov             25.52 330   P     P      00 39 30.5 +0.3
      comp=Z,10.0nm,0.6s,baz=153,slow=16,SNR=4.1
      comp=Z,10.0nm,0.6s
VRH   Novokhopyorsk     25.85 310 eP      P      00 39 31.9 -1.4
VRH                                 pmax  pmax
      comp=Z,10.0nm,0.6s
MARD  Mardin            26.08 278   P     P      00 39 37.0 +1.3
PZH   PanZhiHua         26.26 109   P     P      00 39 38.5 +1.1
PZH                                 pmax  pmax
      comp=Z,10.0nm,0.5s
PZH                                 pmax  pmax
      comp=Z,90nm,3.9s
VSR   Storozhevoye      27.41 309 eP      P      00 39 47.7 +0.4
VSR                                 pmax  pmax
      comp=Z,6.0nm,0.8s
VORR  Voronezh          27.49 310 eP      P      00 39 47.9 -0.2
VORR                                pmax  pmax
      comp=Z,9.0nm,0.5s
LPSR  Galich'ya Gora    27.91 312 eP      P      00 39 52.3 +0.6
LPSR                                pmax  pmax
      comp=Z,5.0nm,0.7s
XAN   Xi'an             28.47  88   P     P      00 39 58.0 +1.0
XAN                                 pP    pP     00 40 19.9 -0.3
XAN                                 pmax  pmax
      comp=Z,9.0nm,0.7s
PRGR  Permogore         28.95 332 eP      P      00 39 59.6 -1.3
CMAR  Chiang Mai Arr    29.59 126   P     P      00 40 07.4 +0.5
      comp=Z,0.7nm,0.4s,baz=114,slow=41,SNR=1.3
      comp=Z,0.7nm,0.4s
MOS   Moscow            29.62 317 eP      P      00 40 06.5 -0.4
MOS                               ePPP    PPP    00 41 15.2
OBN   Obninsk           29.98 316   P     P      00 40 10.2 +0.1
      comp=Z,2.8nm,0.5s,baz=68,slow=2.8,SNR=2.7
      comp=Z,2.8nm,0.5s
OBN   Obninsk           29.98 316 eP      P      00 40 10.2 +0.1
OBN                               e*PP    pP     00 40 30.9 -2.3
OBN                               e              00 41 09.0
OBN                                 pmax  pmax
      comp=Z,7.0nm,1.0s
GYA   Guiyang           29.99 104 ⇓P      P      00 40 11.7 +1.1
GYA                                 pmax  pmax
      comp=Z,6.0nm,0.6s
SIM   Simferopol'       30.14 295 eP      P      00 40 10.8 -0.8
SIM                               eS      S      00 45 11.0 +7.7
SIM                               eSS     SnSn   00 46 47.0 +0.4
SIM                               eSSS    SSS    00 47 05.0
SIM                                 pmax  pmax
      comp=Z,16nm,0.8s
KLMR  Klimovskoe        30.91 327 eP      P      00 40 17.1 -1.1
KLMR                                pmax  pmax
      comp=Z,7.0nm,0.6s
KLMR  Klimovskoe        30.91 327 eP      P      00 40 17.1 -1.1
KLMR                                AMP          00 40 18.8
      comp=Z,7.0nm,0.6s
BRTR  Keskin Array B    31.07 285   P     P      00 40 20.9 +0.8
      comp=Z,1.8nm,0.9s,baz=49,slow=15,SNR=4.5
      comp=Z,1.8nm,0.9s
BRTR  Keskin Array B    31.07 285   P     P      00 40 20.2 +0.1
NRIK  Noril'sk          31.72   9   P     P      00 40 26.4 +1.2
      comp=Z,3.6nm,1.0s,baz=186,slow=7.3,SNR=7.3
      comp=Z,3.6nm,1.0s
NRIK  Noril'sk          31.72   9   P     P      00 40 24.8 -0.4
NRIK                                IAmb  IAmb   00 40 27.7
      comp=Z,5.8nm,1.1s
PALK  Pallekele         31.74 167   LR    LR     00 53 26.9
      comp=Z,79nm,20.9s,baz=243,slow=36
AKASG Malin Array Be    33.54 306   P     P      00 40 41.0 -0.3
      comp=Z,0.3nm,0.3s,baz=84,slow=7.7,SNR=7.9
      comp=Z,0.3nm,0.3s
AKASG Malin Array Be    33.54 306   P     P      00 40 40.9 -0.4
AKBB  Malin Array Si    33.54 306   P     P      00 40 40.5 -0.8
AKBB                                pmax  pmax
      comp=Z,7.0nm,1.1s
AKBB  Malin Array Si    33.54 306   P     P      00 40 40.5 -0.8
AKBB                                IAmb  IAmb   00 40 42.2
      comp=Z,6.7nm,1.1s
MNK   Minsk             34.74 313 i P     P      00 40 52.3 +0.6
MNK                               i              00 42 07.6
MNK                               i              00 43 24.4
MNK                                 MLR   MLR
      comp=E,7.0nm,19.0s
MNK                                 MLR   MLR
      comp=N,21nm,14.0s
MNK                                 MLR   MLR
      comp=Z,202nm,29.0s
MNK   Minsk             34.74 313 i P     P      00 40 52.3 +0.6
MNK                               i P     P      00 40 52.3 +0.6
MNK                               i P     P      00 40 52.3 +0.6
      baz=98
MNK                               i PP    PnPn   00 42 07.6 -3.2
MNK                               i S     S      00 46 25.9  +11
MNK                               i SS    SnSn   00 48 40.9 +3.1
MNK                               i LQ    LQ     00 52 30.5
MNK                               i LR    LR     00 55 10.2
MNK                               i LRM   MLR    00 56 15.7
      comp=E,7.0nm,19.4s
MNK                               i LRM   MLR    00 56 28.2
      comp=N,21nm,14.2s
MNK                               i LRM   MLR    00 56 28.2
      comp=Z,202nm,28.8s
MLR   Muntele Rosu      35.86 297   LR    LR     00 58 47.7
      comp=Z,62nm,19.3s,baz=326,slow=41
VSU   Vasula            36.08 319 eP      P      00 41 03.0 -0.1
BURAR Bucovina Array    36.17 301   P     P      00 41 04.0 -0.2
BUR08 Bucovina Ar. S    36.18 301   P     P      00 41 04.5 +0.2
PABE  Paberze           37.10 314   P     P      00 41 11.4 -0.4
FIA1  FINESS Array S    37.13 324   P     P      00 41 12.0 +0.1
FINES FINESS Array B    37.13 324   P     P      00 41 12.5 +0.6
      comp=Z,9.8nm,0.6s,baz=110,slow=9.6,SNR=111
      comp=Z,9.8nm,0.6s
FINES FINESS Array B    37.13 324   P     P      00 41 12.3 +0.4
MTSE  Matsula           37.63 319 eP      P      00 41 16.9 +0.8
MEF   Metsahovi         37.63 322 eP      P      00 41 16.5 +0.4
KWP   Kalwaria Pacla    37.72 304   P     P      00 41 15.4 -1.7
KWP                                 pmax  pmax
      comp=Z,112nm,1.4s
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KWP   Kalwaria Pacla    37.72 304   P     P      00 41 15.4 -1.7
VTS   Vitosha           38.23 293   P     P      00 41 20.8 -0.8
VTS                                 pmax  pmax
      comp=Z,5.0nm,1.2s
VTS   Vitosha           38.23 293   P     P      00 41 20.8 -0.8
VTS                                 IAmb  IAmb   00 41 24.3
      comp=Z,4.6nm,1.2s
SLIT  Slitere, Latvi    38.27 317 eP      P      00 41 21.0 -0.6
ATD   Arta Tunnel       38.59 234   P     P      00 41 25.2 +0.3
ATD                                 IAmb  IAmb   00 41 41.0
      comp=Z,4.8nm,1.0s
OJC   Ojcow             39.56 305   P     P      00 41 32.5  0.0
OJC                                 pmax  pmax
      comp=Z,6.0nm,1.0s
OJC   Ojcow             39.56 305   P     P      00 41 32.5  0.0
OJC                                 IAmb  IAmb   00 41 34.1
      comp=Z,6.2nm,1.0s
ARA0  ARCESS Array S    40.17 336 eP      P      00 41 38.0 +0.7
ARCES ARCESS Array B    40.17 336   P     P      00 41 38.0 +0.7
      comp=Z,5.8nm,0.6s,baz=110,slow=7.9,SNR=46
      comp=Z,5.8nm,0.6s
ARCES ARCESS Array B    40.17 336   P     P      00 41 38.0 +0.7
ARCES                               IAmb  IAmb   00 41 39.0
      comp=Z,7.6nm,0.8s
DIVS  Divibare          40.26 296   P     P      00 41 38.3 -0.2
DIVS                                IAmb  IAmb   00 41 40.2
      comp=Z,3.4nm,0.8s
KTK1  Kautokeino        40.71 335 eP      P      00 41 41.9 +0.2
UPP   Uppsala           40.93 320 eP      P      00 41 43.5 -0.1
MORC  Moravsky Berou    41.05 305 eP      P      00 41 48.7 +3.9
MORC                              e              00 42 24.5
JAVC  Velka Javorina    41.08 303 eP      P      00 41 48.3 +3.2
JAVC                              e              00 42 25.5
VIKU  Vikbolandet       41.31 318 eP      P      00 41 46.1 -0.6
KRLC  Kraliky           41.51 305 eP      P      00 41 49.3 +0.7
KRLC                              e*PP    sP     00 42 27.7 +3.7
KRLC  Kraliky           41.51 305 eP      P      00 41 49.3 +0.7
KRLC                              epP     sP     00 42 27.7 +3.7
VRAC  Vranov            41.72 304 eP      P      00 41 51.8 +1.5
VRAC                              e              00 42 29.6
DPC   Dobruska-Polom    41.77 306 eP      P      00 41 51.8 +1.1
DPC                               e*PP    sP     00 42 30.5 +4.3
DPC   Dobruska-Polom    41.77 306 eP      P      00 41 51.8 +1.1
DPC                               epP     sP     00 42 30.5 +4.3
JETT  Jettan, Norway    41.84 335 eP      P      00 41 51.2 +0.1
KRUC  Moravsky          41.88 304 eP      P      00 41 52.5 +0.9
KRUC                              e              00 42 30.4
CHVC  Chvalec           41.91 306 eP      P      00 41 52.5 +0.7
KSAR  Wonju Array Be    42.04  74   P     P      00 41 53.6 +0.6
KSAR  Wonju Array Be    42.04  74   P     P      00 41 53.6 +0.6
KSRS  Korea Array       42.06  74   P     P      00 41 54.3 +1.1
      comp=Z,1.9nm,0.7s,baz=39,slow=22,SNR=2.9
      comp=Z,1.9nm,0.7s
KLR   Kul'dur           42.08  56   P     P      00 41 54.0 +0.9
      comp=Z,1.4nm,0.5s,baz=264,slow=7.7,SNR=9.1
      comp=Z,1.4nm,0.5s
PSI   Prapat            42.28 141   P     P      00 41 55.6 +0.3
      comp=Z,3.1nm,0.6s,baz=281,slow=5.9,SNR=4.2
      comp=Z,3.1nm,0.6s
TRO   Tromso            42.36 335 eP      P      00 41 55.5 +0.4
RPSI  Rantau Prapat     42.38 141   P     P      00 41 55.6 -0.3
CONA  Conrad Observa    42.40 302 eP      P      00 41 57.0 +1.0
      comp=Z,4.3nm,1.0s
CONA                              eS      sP     00 42 35.1 +3.7
      comp=Z,6.4nm,1.1s
TIXI  Tiksi             43.01  22   P     P      00 42 01.0 +0.6
      comp=Z,1.4nm,0.3s,baz=269,slow=23,SNR=5.5
      comp=Z,1.4nm,0.3s
TIXI  Tiksi             43.01  22   P     P      00 42 01.0 +0.6
TIXI  Tiksi             43.01  22   P     P      00 42 00.5 +0.2
FAUS  Fauske            43.09 331 eP      P      00 42 00.5 -0.6
SOKA  Soboth            43.18 301 eP      P      00 42 03.5 +1.3
      comp=Z,5.0nm,1.1s
SOKA                              eS      sP     00 42 41.9 +4.2
      comp=Z,7.0nm,1.0s
MOR8  Moi Rana          43.20 329 eP      P      00 42 01.4 -0.6
BRG   Berggiesshubel    43.21 307 eP      P      00 42 03.7 +1.4
BRG                                 Amp          00 42 04.4
      comp=Z,5.6nm,1.1s
BRG                                 pP    sP     00 42 42.1 +4.2
BRG                                 Amp          00 42 43.0
      comp=Z,6.5nm,1.0s
BRG   Berggiesshubel    43.21 307 eP      P      00 42 03.6 +1.4
BRG                                              00 42 42.1
BRG                                 pmax  pmax
      comp=Z,6.0nm,1.1s
BRG                                 pmax  pmax
      comp=Z,7.0nm,1.0s
STEI  Steigen           43.22 332 eP      P      00 42 02.2 +0.1
MOA   Molln             43.47 302 eP      P      00 42 05.7 +1.2
      comp=Z,2.9nm,1.1s
GERES GERESS Array B    43.67 304   P     P      00 42 07.4 +1.3
      comp=Z,1.5nm,0.9s,baz=90,slow=7.8,SNR=6.9
      comp=Z,1.5nm,0.9s
KHC   Kasperske Hory    43.70 304 eP      P      00 42 07.4 +1.1
KHC                               e*PP    sP     00 42 46.0 +4.1
KHC   Kasperske Hory    43.70 304   P     P      00 42 06.4 +0.1
KHC                                 IAmb  IAmb   00 42 08.5
      comp=Z,5.9nm,1.2s
KHC   Kasperske Hory    43.70 304 eP      P      00 42 07.4 +1.1
KHC                               epP     sP     00 42 46.0 +4.1
CLL   Collm             43.74 308 eP      P      00 42 07.0 +0.5
CLL                                 pmax  pmax
      comp=Z,5.0nm,0.9s
CLL   Collm             43.74 308 eP      P      00 42 07.0 +0.5
      comp=Z,5.0nm,0.9s
KONS  Konsvik           43.78 330 eP      P      00 42 06.5 -0.1
NC405 NORSAR Array S    43.93 322   P     P      00 42 07.9  0.0
NC602 NORSAR Array S    44.01 321 eP      P      00 42 08.4 -0.2
BJO1  Bjornoya          44.03 342 eP      P      00 42 08.8 +0.2
NC303 NORSAR Array S    44.10 322   P     P      00 42 08.2 -1.1
NB201 NORSAR Array S    44.13 322   P     P      00 42 09.4 -0.2
NB2   NORSAR Subarra    44.17 322   P     P      00 42 10.1 +0.2
      comp=Z,4.3nm,0.6s,baz=91,slow=7.9
NB2   NORSAR Subarra    44.17 322   P     P      00 42 10.1 +0.2
      baz=91,slow=7.9
NOA   NORSAR Array B    44.17 322   P     P      00 42 09.9  0.0
      comp=Z,6.7nm,0.7s,baz=92,slow=7.8,SNR=32
      comp=Z,6.7nm,0.7s
NAO01 NORSAR Array S    44.33 321   P     P      00 42 10.6 -0.5
NAO01                               IAmb  IAmb   00 42 22.6
      comp=Z,8.2nm,1.1s
NBO00 NORSAR Array S    44.38 322   P     P      00 42 11.3 -0.3
NC204 NORSAR Array S    44.39 322   P     P      00 42 11.2 -0.5
OSL   Oslo              44.41 320 eP      P      00 42 11.7  0.0
KONO  Kongsberg         44.98 320   P     P      00 42 16.3  0.0
KONO                                pmax  pmax
      comp=Z,12nm,1.0s
KONO  Kongsberg         44.98 320   P     P      00 42 16.3  0.0
KONO                                IAmb  IAmb   00 42 16.8
      comp=Z,12nm,1.0s
KONO  Kongsberg         44.98 320 eP      P      00 42 16.3  0.0
DOMB  Dombas            45.21 323 eP      P      00 42 17.3 -0.8
HOMB  Homborsund        45.62 318 eP      P      00 42 21.2 -0.1
TEOL  Teolo             45.76 299   P     P      00 42 23.0 +0.3
TEOL                                IAmb  IAmb   00 42 24.3
      comp=Z,10nm,0.8s
RETA  Reutte            45.87 303   P     P      00 42 24.1 +0.6
      comp=Z,8.1nm,1.6s
SPB2  Spitsbergen Ar    46.04 346   P     P      00 42 24.9 +0.5
SPA0  Spitsbergen Ar    46.05 346 eP      P      00 42 24.6 +0.1
SPITS Spitsbergen Ar    46.05 346   P     P      00 42 25.8 +1.3
SPITS                               pmax  pmax
      comp=Z,12nm,1.1s
SALO  Salr              46.47 300   P     P      00 42 28.7 +0.4
SALO                                IAmb  IAmb   00 42 29.9
      comp=Z,9.3nm,0.7s
DAVA  Damuels           46.50 302 eP      P      00 42 29.0 +0.4
      comp=Z,8.4nm,0.8s
JOW   Kunigami          46.62  88   P     P      00 42 30.4 +0.8
JOW                                 IAmb  IAmb   00 42 42.4
      comp=Z,15nm,1.1s
JHS   Saijyo            46.85  75   P     P      00 42 32.0 +0.6
TUE   Stuetta           47.05 301   P     P      00 42 33.7 +0.7
TUE                                 IAmb  IAmb   00 42 39.4
      comp=Z,3.7nm,1.0s
KBS   Kingsbay          47.14 347   P     P      00 42 34.1 +1.1
KBS                                 pmax  pmax
      comp=Z,15nm,1.2s
KBS   Kingsbay          47.14 347   P     P      00 42 34.0 +1.1
KBS   Kingsbay          47.14 347 eP      P      00 42 32.6 -0.4
KBS                                 IAmb  IAmb   00 42 34.8
      comp=Z,24nm,0.5s
MSSA  Maissana          47.51 299   P     P      00 42 37.3 +0.9
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TGY	**Tagaytay City**	**48.03**	**107**	P	**P**	**00 42 40.6**	**-0.1**
	comp=Z,304nm,0.3s,baz=196,slow=9.6,SNR=1.8						
WLF	**Walferdange**	**48.34**	**306**	P	**P**	**00 42 43.6**	**+0.9**
WLF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WLF	**Walferdange**	**48.34**	**306**	P	**P**	**00 42 43.6**	**+0.9**
WLF				IAmb	IAmb	00 42 58.9	
	comp=Z,4.5nm,0.9s						
SENIN	**Lac Senin/Sane**	**48.45**	**302**	P	**P**	**00 42 44.1**	**+0.3**
SENIN				IAmb	IAmb	00 42 45.5	
	comp=Z,3.8nm,1.0s						
JGF	**Kuroka**	**49.81**	**73**	P	**P**	**00 42 54.7**	**+0.6**
MJAR	**Matsushiro Arr**	**50.08**	**71**	P	**P**	**00 42 56.7**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=286,slow=9.5,SNR=2.9						
	comp=Z,2.6nm,0.7s						
DAG	**Danmarks Havn**	**53.42**	**343**	*i* P	**P**	**00 43 21.0**	**+0.7**
DAG				IAmb	IAmb	00 43 21.7	
	comp=Z,6.5nm,0.7s						
DBG	**Daneborg**	**54.42**	**341**	*e*P	**P**	**00 43 28.4**	**+0.8**
BILL	**Bilibino**	**55.75**	**27**	*e*P	**P**	**00 43 38.6**	**+1.3**
BILL				*e*		00 45 49.8	
BILL				*e*PPP	PPP	00 47 03.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BORG	**Borgarnes**	**58.00**	**330**	P	**P**	**00 43 53.7**	**+0.5**
BORG				pmax	pmax		
	comp=Z,44nm,1.1s						
BORG	**Borgarnes**	**58.00**	**330**	P	**P**	**00 43 53.6**	**+0.5**
ESBB	**Sonseca Array**	**58.54**	**298**	P	**P**	**00 43 57.3**	**-0.2**
ESBB				IAmb	IAmb	00 44 04.4	
	comp=Z,6.1nm,1.3s						
ESDC	**Sonseca Array**	**58.54**	**298**	P	**P**	**00 43 57.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=56,slow=7.1,SNR=15						
	comp=Z,1.1nm,0.5s						
ESDC	**Sonseca Array**	**58.54**	**298**	P	**P**	**00 43 57.8**	**+0.3**
EUNU	**Eureka**	**61.13**	**356**	P	**P**	**00 44 14.6**	**0.0**
EUNU				IAmb	IAmb	00 44 16.5	
	comp=Z,2.0nm,0.8s						
ICESG	**Greenland Ices**	**62.17**	**338**	*e*P	**P**	**00 44 22.2**	**+0.1**
ICESG				IAmb	IAmb	00 44 24.4	
	comp=Z,10nm,0.8s						
DY2G	**Dye2**	**65.78**	**338**	*e*P	**P**	**00 44 46.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**68.06**	**270**	P	**P**	**00 45 00.1**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=47,slow=5.6,SNR=71						
	comp=Z,2.6nm,0.5s						
TOLK	**Toolik Lake Re**	**68.34**	**16**	P	**P**	**00 45 00.6**	**-0.9**
TOLK				IAmb	IAmb	00 45 03.1	
	comp=Z,3.2nm,0.9s						
A36M	**Sachs Harbour**	**68.94**	**6**	P	**P**	**00 45 06.2**	**+1.1**
A36M				IAmb	IAmb	00 45 16.3	
	comp=Z,9.1nm,1.1s						
COLD	**Coldfoot**	**69.36**	**17**	P	**P**	**00 45 07.4**	**-0.4**
BMAR	**Burnt Mountain**	**70.39**	**15**	P	**P**	**00 45 15.0**	**+0.9**
INK	**Inuvik**	**71.50**	**10**	P	**P**	**00 45 21.8**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=334,slow=6.2,SNR=10						
	comp=Z,0.9nm,0.4s						
INK	**Inuvik**	**71.50**	**10**	P	**P**	**00 45 20.3**	**-0.4**
INK				IAmb	IAmb	00 45 21.0	
	comp=Z,5.7nm,1.4s						
K20K	**Telida**	**71.50**	**21**	P	**P**	**00 45 24.1**	**+3.2**
C36M	**Paulatuk**	**71.60**	**7**	P	**P**	**00 45 21.1**	**-0.2**
C36M				IAmb	IAmb	00 45 26.7	
	comp=Z,9.3nm,1.1s						
CAST	**Castle Rocks**	**71.99**	**20**	P	**P**	**00 45 24.6**	**+0.7**
ILAR	**Eielson Array**	**72.16**	**17**	P	**P**	**00 45 24.9**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=299,slow=3.7,SNR=10						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**72.16**	**17**	P	**P**	**00 45 25.0**	**+0.1**
MBWA	**Marble Bar**	**73.31**	**136**	P	**P**	**00 45 32.7**	**+0.6**
MBWA				IAmb	IAmb	00 45 38.2	
	comp=Z,5.4nm,1.0s						
PSA00	**Pilbara Seismi**	**73.70**	**136**	P	**P**	**00 45 34.2**	**-0.2**
YKA	**Yellowknife Ar**	**79.07**	**4**	P	**P**	**00 46 04.9**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=347,slow=5.3,SNR=21						
	comp=Z,1.1nm,0.7s						
SCHQ	**Schefferville**	**81.08**	**338**	P	**P**	**00 46 15.4**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=356,slow=5.8,SNR=3.5						
	comp=Z,2.1nm,0.8s						
WRA	**Warramunga Arr**	**81.17**	**124**	P	**P**	**00 46 15.9**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=324,slow=5.3,SNR=27						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**83.58**	**127**	P	**P**	**00 46 28.2**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=318,slow=5.5,SNR=10						
	comp=Z,1.0nm,0.7s						
SUR	**Sutherland**	**86.12**	**223**	LR	LR	01 27 55.3	
	comp=Z,70nm,19.6s,baz=252,slow=38						

IDC 04 00:35:41.4±3.6,**7°.43S**×**148°.64E,h0**^{km}**,mb3.4**/2, **mbtmp3.5**/4**,ML3.6**/1**,Error ellipse: s-maj=113.1km s-min=36.3km az=118.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.45**	**217**	Pn	Pn	00 36 24.4	+1.7
	18nm,0.3s,baz=33,slow=5.0,SNR=5.9						
PMG				Sn	Sn	00 36 52.6	-0.8
	16nm,0.3s,baz=338,slow=19,SNR=7.1						
WRA	**Warramunga Arr**	**18.63**	**227**	P	P	00 40 00.2	-0.5
	0.2nm,0.3s,baz=53,slow=10,SNR=13						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**21.46**	**220**	P	P	00 40 30.2	-1.5
	0.3nm,0.4s,baz=48,slow=9.6,SNR=4.8						
	0.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.78**	**242**	P	P	00 41 05.1	-0.1
	1.3nm,0.7s,baz=55,slow=9.1,SNR=5.9						
	1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**147.01**	**283**	PKPbc	PKPbc	00 55 27.2	0.0
	0.7nm,1.0s,baz=92,slow=2.4,SNR=2.8						

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*IDC **04** 00:47:21.0±1.6,2°.81N×83°.88W,h0^{km},mb3.5/6, mbtmp3.5/6,MS3.5/12,Error ellipse: s-maj=94.6km s-min=25.3km az=52.0*

ISC 04 00:47:26.0±1.2,**2°.7N**±0°.3×**84°.0W**±0°.4**,h35**^{km}**,n21,**σ**0**^{s}**.80**/7, **mb3.6**/6**,MS3.6**/10**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**16.23**	**154**	LR	LR	00 56 25.6	
	comp=Z,111nm,18.8s,baz=324,slow=33						
CMIG	**Matias Romero**	**17.85**	**324**	LR	LR	00 56 24.5	
	comp=Z,94nm,20.2s,baz=165,slow=30						
LPAZ	**La Paz**	**24.54**	**141**	P	**P**	**00 52 42.9**	**-0.5**
	1.6nm,0.9s,baz=345,slow=9.8,SNR=4.7						
	1.6nm,0.9s						
LVC	**Limon Verde**	**29.15**	**150**	LR	LR	01 03 21.8	
	comp=Z,75nm,19.8s,baz=310,slow=33						
TXAR	**Lajitas Array**	**32.42**	**327**	LR	LR	01 05 50.4	
	comp=Z,60nm,18.3s,baz=164,slow=34						
TKL	**Tuckaleechee C**	**32.81**	**0**	LR	LR	01 07 22.3	
	comp=Z,50nm,18.1s,baz=147,slow=37						
H03N2	**Juan Fernandez**	**36.25**	**173**	T	T	01 32 18.6	
	baz=351,slow=76,SNR=14						
H03N1	**Juan Fernandez**	**36.26**	**173**	T	T	01 32 22.9	
	baz=351,slow=76,SNR=21						
H03N3	**Juan Fernandez**	**36.27**	**173**	T	T	01 32 16.9	
	baz=351,slow=76,SNR=22						
SADO	**Sadowa**	**42.13**	**5**	LR	LR	01 13 02.9	
	comp=Z,112nm,18.2s,baz=191,slow=37						
PFO	**Pinyon Flats O**	**43.18**	**319**	LR	LR	01 11 02.6	
	comp=Z,94nm,18.7s,baz=202,slow=33						
PDAR	**Pinedale Array**	**45.95**	**334**	P	**P**	**00 55 46.8**	**+0.8**
	0.1nm,0.6s,baz=123,slow=6.6,SNR=1.3						
	0.1nm,0.6s						
ELK	**Elko**	**47.20**	**328**	LR	LR	01 15 18.7	
	comp=Z,58nm,18.7s,baz=160,slow=36						
NVAR	**Mina Array Bea**	**47.38**	**323**	P	**P**	**00 55 57.5**	**+0.3**
	0.2nm,0.5s,baz=138,slow=7.3,SNR=1.5						
NVAR				LR	LR	01 14 46.0	
	comp=Z,59nm,18.1s,baz=232,slow=35						
	0.2nm,0.5s						
SCHQ	**Schefferville**	**53.83**	**12**	LR	LR	01 21 49.6	
	comp=Z,40nm,18.1s,baz=147,slow=38						
FRB	**Frobisher Bay**	**61.97**	**8**	LR	LR	01 24 46.9	
	comp=Z,84nm,19.1s,baz=194,slow=36						
YKA	**Yellowknife Ar**	**63.86**	**345**	P	**P**	**00 57 53.9**	**-0.9**
	0.7nm,0.8s,baz=139,slow=6.8,SNR=12						
	0.7nm,0.8s						
SFJD	**Kangerlussuaq**	**68.25**	**13**	LR	LR	01 28 05.5	
	comp=Z,32nm,20.3s,baz=212,slow=36						
ILAR	**Eielson Array**	**76.27**	**337**	P	**P**	**00 59 10.4**	**-0.4**
	0.7nm,0.9s,baz=110,slow=4.9,SNR=6.3						
	0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**85.23**	**77**	P	**P**	**01 00 00.3**	**+0.5**
	0.6nm,1.0s,baz=282,slow=6.8,SNR=2.2						
	0.6nm,1.0s						
WRA	**Warramunga Arr**	**138.82**	**242**	PKP	**PKiKP**	**01 06 52.4**	**+0.6**
	0.3nm,0.9s,baz=103,slow=3.0,SNR=1.4						

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*IDC **04** 01:13:13.3±1.9,8°.49N×92°.78E,h0^{km},mb3.5/7, mbtmp3.5/7,Error ellipse: s-maj=122.7km s-min=19.7km az=57.0*

ISC 04 01:13:18.6±2.0,**8°.5N**±0°.5×**92°.8E**±0°.7**,h35**^{km}**,n10,** σ**0**^{s}**.83**/10**,mb3.5**/7**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**25.85**	**232**	T	T	01 45 55.3	
	baz=53,slow=74						
H08S2	**Diego Garcia H**	**25.86**	**232**	T	T	01 46 22.8	
	baz=53,slow=74						
H08S1	**Diego Carcia H**	**25.87**	**232**	T	T	01 46 16.6	
	baz=53						
MKAR	**Makanchi Array**	**39.20**	**349**	P	**P**	**01 20 42.6**	**-0.7**
	0.2nm,0.5s,baz=157,slow=7.8,SNR=2.6						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**43.62**	**347**	P	**P**	**01 21 19.4**	**-0.1**
	0.1nm,0.5s,baz=162,slow=7.7,SNR=2.2						
KURBB				PcP	**PcP**	**01 23 06.0**	**-0.5**
	0.2nm,0.3s,baz=171,slow=2.0,SNR=5.5						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**45.77**	**353**	P	**P**	**01 21 37.3**	**+0.7**
	0.4nm,0.5s,baz=165,slow=6.0,SNR=2.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**49.69**	**125**	P	**P**	**01 22 07.8**	**+0.3**
	0.5nm,0.5s,baz=307,slow=8.4,SNR=21						
WRA				PcP	**PcP**	**01 23 28.9**	**+0.4**
	0.4nm,0.9s,baz=324,slow=2.7,SNR=5.0						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**51.32**	**129**	P	**P**	**01 22 18.7**	**-1.1**
	0.4nm,0.7s,baz=308,slow=6.4,SNR=2.5						
ASAR				PcP	**PcP**	**01 23 35.8**	**+1.3**
	0.3nm,0.4s,baz=306,slow=3.2,SNR=4.1						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**71.55**	**332**	P	**P**	**01 24 36.3**	**+0.4**
	0.4nm,0.8s,baz=66,slow=5.0,SNR=3.8						
	0.4nm,0.8s						
ARCES	**ARCESS Array B**	**74.23**	**340**	P	**P**	**01 24 51.5**	**-0.2**
	2.9nm,1.0s,baz=99,slow=5.6,SNR=4.0						
	2.9nm,1.0s						

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*MOS **04** 01:49:24.1±1.1,51°.79N×176°.37E,h26^{km},mb5.4/45, MS4.0/7,Error ellipse: s-maj=8.1km s-min=5.2km az=111.8*

*BJI **04** 01:49:25.7±0.0,52°.03N×176°.09E,h33^{km},mb5.2/68, mB5.0/30,Ms4.6/19,Ms7 4.3/18*

*IDC **04** 01:49:27.2±2.0,51°.79N×176°.40E,h36^{km}±15^{km},mb4.6/38, mbtmp4.8/40,ML4.4/2,MS3.9/69,Error ellipse: s-maj=14.3km s-min=8.3km az=166.0*

*AEIC **04** 01:49:28±2.6,51°.82N±0°.08×176°.29E±0°.07,h26^{km}±4^{km}, Error ellipse: s-maj=12.5km s-min=5.8km az=194.0*

*NEIC **04** 01:49:28.7±1.6,51°.82N±0°.08×176°.29E±0°.08,h50^{km}±5^{km}, mb5.0/362,ML4.8(AEIC),Error ellipse: s-maj=12.4km s-min=6.5km az=193.0*

*GCMT **04** 01:49:29.7±0.4,51°.81N±0°.03×176°.41E±0°.03,h36^{km}±1^{km}, MW4.9/78,Moment Tensor Solution. s26,c27; s78,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.92±.21; $M_{\theta\theta}$-2.99±.13; $M_{\phi\phi}$1.06±.13; $M_{r\theta}$0.90±.13; $M_{\theta\phi}$-0.20±.08; $M_{\phi r}$1.04±.10; Best double couple: $M_0$2.93800×10^{16} NP1:ϕ_s297.00000°,δ43.00000°,λ137.00000°. NP2: ϕ_s61.00000°,δ63.00000°,λ56.00000°. Principal axes: T 2.6900, Plg58.0000°, Azm282.0000°; N 0.4860, Plg30.0000°, Azm78.0000°; P -3.1860, Plg11.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:49:27.9±0.4**,51°.77N**±0°.06×**176°.31E**±0°.03**,h43**^{km}±2^{km}**, h43**^{km}**:pP-P,n898,**σ**1**^{s}**.00**/790**,mb5.0**/294**,MS4.0**/78**, 22C-15D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**1.67**	**306**	Pn	**Pn**	**01 49 54.6**	**0.0**
	6μm,0.3s,baz=149,slow=3.1,SNR=917						
SHEM				Sn	**Sn**	**01 50 16.4**	**+1.7**
	3μm,0.3s,baz=262,slow=23,SNR=39						
SMY	**Shemya**	**1.67**	**306**	P	**Pn**	**01 49 54.6**	**0.0**
SMY						01 50 16.2	
SMY	**Shemya**	**1.67**	**306**	Pn	**Pn**	**01 49 54.6**	**0.0**
SMY				Sn	**Sn**	**01 50 16.2**	**+1.4**
GASW	**Gareloi Southw**	**3.00**	**88**		**Pn**	**01 50 14.5**	**+1.5**
GANO	**Gareloi North**	**3.03**	**87**		**Pn**	**01 50 14.3**	**+0.9**
GALAA	**Gareloi Lava P**	**3.06**	**88**		**Pn**	**01 50 15.1**	**+1.4**
GAEA	**Gareloi East**	**3.07**	**88**		**Pn**	**01 50 15.2**	**+1.3**
TASE	**Tanaga Southea**	**3.51**	**87**		**Pn**	**01 50 21.2**	**+1.3**
TAFP	**Tanaga Falls P**	**3.54**	**86**		**Pn**	**01 50 21.2**	**+0.9**
TAFP					**Sn**	**01 51 01.9**	**+0.9**
TAPA	**Tanaga Point A**	**3.65**	**87**		**Pn**	**01 50 22.9**	**+1.0**
KIMD	**Kanaga Island**	**4.01**	**88**		**Pn**	**01 50 27.8**	**+1.0**
KICM	**Kanaga Island**	**4.03**	**85**		**Pn**	**01 50 28.4**	**+1.4**
KIKV	**Kanaga Island**	**4.05**	**86**		**Pn**	**01 50 28.7**	**+1.4**
KIWB	**Kanaga Island**	**4.06**	**86**		**Pn**	**01 50 28.0**	**+0.6**
ADK	**Adak**	**4.35**	**86**	P	**Pn**	**01 50 32.2**	**+0.8**
ADK						01 51 22.1	
ADK	**Adak**	**4.35**	**86**	Pn	**Pn**	**01 50 32.2**	**+0.8**
ADK				Sn	**Sn**	**01 51 22.1**	**+1.3**
GSTD	**Great Sitkin T**	**4.68**	**83**		**Pn**	**01 50 37.9**	**+1.9**
GSTD					**Sn**	**01 51 30.5**	**+1.4**
GSTR	**Great Sitkin T**	**4.73**	**83**	Pn	**Pn**	**01 50 37.2**	**+0.5**
GSMY	**Great Sitkin M**	**4.74**	**84**		**Pn**	**01 50 38.9**	**+2.2**
KOKL	**Mount Kliuchef**	**5.88**	**81**		**Pn**	**01 50 54.2**	**+1.7**
ATKA	**Atka Island**	**5.88**	**82**		**Pn**	**01 50 53.8**	**+1.4**
KOFP	**Korovin Flat P**	**5.95**	**81**		**Pn**	**01 50 55.6**	**+2.3**
NIKH	**Nikolski High**	**9.16**	**77**	Pn	**Pn**	**01 51 38.8**	**+1.5**
NIKH	**Nikolski High**	**9.16**	**77**	P	**Pn**	**01 51 37.6**	**+0.3**
	baz=268						
SPIA	**Saint Paul Isl**	**9.51**	**50**	Pn	**Pn**	**01 51 44.1**	**+2.0**
SPIA	**Saint Paul Isl**	**9.51**	**50**	P	**Pn**	**01 51 42.5**	**+0.4**
	baz=241						
UNV	**Unalaska Valle**	**10.61**	**72**	Pn	**Pn**	**01 51 59.1**	**+1.9**
UNV	**Unalaska Valle**	**10.61**	**72**	P	**Pn**	**01 51 57.9**	**+0.7**
	baz=265						
PET	**Petropavlovsk**	**10.87**	**284**	*e*P	**Pn**	**01 52 00.6**	**0.0**
PET				pmax	pmax		
	comp=Z,20nm,0.4s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET	**Petropavlovsk**	**10.87**	**284**	Pn	**Pn**	**01 52 00.4**	**-0.2**
AKUT	**Akutan**	**11.07**	**71**	Pn	**Pn**	**01 52 05.3**	**+1.9**
PEA0B	**Petropavlovsk-**	**11.44**	**284**	P	**Pn**	**01 52 08.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**11.44**	**284**		**Pn**	**01 52 08.8**	**+0.3**
PETK	**Petropavlovsk-**	**11.44**	**284**	Pn	**Pn**	**01 52 08.7**	**+0.2**
	comp=Z,2.8nm,0.3s,baz=100,slow=19,SNR=55						
PETK				Sn	**Sn**	**01 54 10.9**	**-3.9**
	comp=Z,2.7nm,0.3s,baz=284,slow=12,SNR=2.5						
PETK				LR	LR	01 56 29.6	
	comp=Z,320nm,21.5s,baz=107,slow=37						
	comp=Z,30nm,0.8s						
PETK	**Petropavlovsk-**	**11.44**	**284**	Pn	**Pn**	**01 52 07.9**	**-0.6**
FALS	**False Pass**	**12.50**	**68**	Pn	**Pn**	**01 52 24.4**	**+1.4**
FALS	**False Pass**	**12.50**	**68**	P	**Pn**	**01 52 22.6**	**-0.3**
	baz=264						
SKR	**Severo-Kuril's**	**12.70**	**273**	*e*P	**Pn**	**01 52 24.3**	**-1.4**
SKR				pmax	pmax		
	comp=Z,41nm,0.9s						
SKR				pmax	pmax		
	comp=Z,200nm,2.3s						
SKR				pmax	pmax		
	comp=Z,100nm,2.8s						
SKR				MLR	MLR		
	comp=Z,100nm,17.0s						
SKR				MLR	MLR		
	comp=Z,200nm,19.0s						
GAMB	**Gambell**	**13.60**	**23**	Pn	**Pn**	**01 52 40.0**	**+2.1**
GAMB	**Gambell**	**13.60**	**23**	P	**Pn**	**01 52 37.7**	**-0.1**
	baz=213						
SDPT	**Sand Point**	**14.23**	**66**	Pn	**Pn**	**01 52 46.2**	**-0.3**
SDPT	**Sand Point**	**14.23**	**66**	P	**Pn**	**01 52 46.9**	**+0.4**
	baz=265						
ANM	**Nome**	**15.97**	**30**	P	**Pn**	**01 53 09.0**	**-0.2**
	baz=225						
MA2	**Magadan**	**16.31**	**309**	Pn	**P**	**01 53 16.7**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=111,slow=9.9,SNR=26						
MA2				LR	LR	01 59 32.7	
	comp=Z,686nm,18.3s,baz=110,slow=37						
MA2	**Magadan**	**16.31**	**309**	P	**P**	**01 53 16.1**	**+0.2**
MA2				pmax	pmax		
	comp=Z,36nm,1.0s						
MA2	**Magadan**	**16.31**	**309**	P	**P**	**01 53 16.1**	**+0.2**
SEY	**Seymchan**	**16.96**	**320**	Pn	**P**	**01 53 22.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=120,slow=12,SNR=32						
SEY				LR	LR	01 59 36.3	
	comp=Z,648nm,18.3s,baz=98,slow=36						
CHIR	**Chirikof Islan**	**17.01**	**65**	Pn	**Pn**	**01 53 22.1**	**-0.3**
CHIR				IAmb	IAmb	01 53 38.8	
	comp=Z,120nm,1.2s						
CHIR	**Chirikof Islan**	**17.01**	**65**	P	**Pn**	**01 53 21.7**	**-0.6**
	baz=268						
BILL	**Bilibino**	**17.04**	**347**	*de*P	**P**	**01 53 24.2**	**+0.2**
BILL				pmax	pmax		
	comp=Z,22nm,1.0s						
BILL				MLR	MLR		
	comp=Z,636nm,18.0s						
BILL	**Bilibino**	**17.04**	**347**	P	**P**	**01 53 24.0**	**0.0**
P18K	**Big Mountain,**	**17.70**	**53**	P	**Pn**	**01 53 30.0**	**-0.8**
	baz=257						
N18K	**Kilae Creek**	**17.72**	**49**		**P**	**01 53 33.0**	**+1.4**
N18K	**Kilae Creek**	**17.72**	**49**	P	**P**	**01 53 32.5**	**+0.9**
	baz=252,SNR=16						
O18K	**Koktuh Hills**	**17.82**	**52**	IAmb	IAmb	01 53 57.6	
	comp=Z,82nm,0.9s						
O18K	**Koktuh Hills**	**17.82**	**52**	P	**P**	**01 53 33.1**	**+0.5**
	baz=256,SNR=8.0						
SII	**Sitkinak Islan**	**17.85**	**63**	P	**Pn**	**01 53 32.1**	**-0.6**
	baz=267						
O19K	**Port Alsworth**	**18.33**	**51**	IAmb	IAmb	01 54 00.5	
	comp=Z,156nm,1.3s						
O19K	**Port Alsworth**	**18.33**	**51**	P	**P**	**01 53 38.2**	**-0.1**
	baz=256						
OHAK	**Old Harbor**	**18.38**	**61**	IAmb	IAmb	01 54 00.2	
	comp=Z,111nm,1.6s						
OHAK	**Old Harbor**	**18.38**	**61**	P	**P**	**01 53 38.3**	**-0.5**
	baz=266,SNR=5.6						
Q19K	**Cape Douglas,**	**18.41**	**55**	IAmb	IAmb	01 53 52.3	
	comp=Z,78nm,0.8s						
Q19K	**Cape Douglas,**	**18.41**	**55**	P	**P**	**01 53 38.5**	**-0.6**
	baz=260,SNR=8.7						
N19K	**Bonanza Creek**	**18.42**	**49**		**Pn**	**01 53 41.4**	**+1.6**
N19K				IAmb	IAmb	01 54 03.8	
	comp=Z,97nm,0.8s						
N19K	**Bonanza Creek**	**18.42**	**49**	P	**Pn**	**01 53 39.5**	**-0.2**
	baz=254,SNR=21						
TTA	**Tatalina**	**18.48**	**42**	P	**Pn**	**01 53 40.5**	**+0.1**
	baz=246,SNR=29						
L19K	**White Mountain**	**18.69**	**45**	P	**P**	**01 53 42.1**	**-0.1**
	baz=249,SNR=15						
P19K	**Oil Pt**	**18.75**	**53**	IAmb	IAmb	01 54 06.7	
	comp=Z,120nm,0.9s						
P19K	**Oil Pt**	**18.75**	**53**	P	**Pn**	**01 53 43.7**	**0.0**
	baz=258,SNR=5.7						
M19K	**Big River Lodg**	**18.80**	**46**	P	**Pn**	**01 53 44.5**	**+0.3**
	baz=251,SNR=12						
KDAK	**Kodiak Island**	**18.81**	**59**	P	**P**	**01 53 41.6**	**-1.9**
	comp=Z,5.3nm,0.3s,baz=282,slow=5.1,SNR=53						
	comp=Z,17nm,0.5s						
KDAK	**Kodiak Island**	**18.81**	**59**	P	**P**	**01 53 41.8**	**-1.7**
KDAK				pmax	pmax		
	comp=Z,81nm,1.3s						
KDAK	**Kodiak Island**	**18.81**	**59**	P	**P**	**01 53 41.8**	**-1.7**
KDAK				IAmb	IAmb	01 54 06.0	
	comp=Z,81nm,1.3s						
KDAK	**Kodiak Island**	**18.81**	**59**	P	**P**	**01 53 42.9**	**-0.6**
	baz=265						
GCSA	**Galena City Sc**	**18.98**	**37**	P	**P**	**01 53 45.7**	**+0.4**
	baz=240,SNR=9.6						
O20K	**Slope Mountain**	**19.14**	**52**	P	**P**	**01 53 47.3**	**+0.1**
	baz=258,SNR=10						
RDOG	**Red Dog Mine**	**19.20**	**24**	P	**Pn**	**01 53 48.4**	**-0.6**
RDOG				IAmb	IAmb	01 53 49.7	
	comp=Z,119nm,0.8s						
RDOG	**Red Dog Mine**	**19.20**	**24**	P	**Pn**	**01 53 48.2**	**-0.7**
	baz=222,SNR=17						
L20K	**Farewell, AK**	**19.22**	**45**	P	**P**	**01 53 48.3**	**+0.3**
	baz=250,SNR=16						
K20K	**Telida**	**19.46**	**42**	P	**P**	**01 53 51.2**	**+0.5**
	baz=247,SNR=36						
HOM	**Homer**	**19.54**	**54**	P	**Pn**	**01 53 52.3**	**-0.7**
	baz=260						
SPCR	**Spurr Chakacha**	**19.59**	**49**	P	**Pn**	**01 53 53.7**	**-0.1**
	baz=255,SNR=68						
CNPM	**China Poot**	**19.72**	**54**	IAmb	IAmb	01 53 55.3	
	comp=Z,74nm,0.6s						
J20K	**Nowinta River**	**19.76**	**40**	P	**Pn**	**01 53 55.6**	**0.0**
J20K				IAmb	IAmb	01 53 56.5	
	comp=Z,71nm,0.7s						
J20K	**Nowinta River**	**19.76**	**40**	P	**P**	**01 53 54.7**	**+0.8**
	baz=245,SNR=102						
BRLK	**Bradley Lake**	**19.94**	**54**	IAmb	IAmb	01 54 09.2	
	comp=Z,114nm,0.9s						
BRSE	**Bradley Lake S**	**20.01**	**54**	P	**P**	**01 53 56.6**	**0.0**
	baz=261,SNR=9.7						
PPLA	**Purkeypile**	**20.09**	**44**	IAmb	IAmb	01 54 37.4	
	comp=Z,49nm,0.8s						
PPLA	**Purkeypile**	**20.09**	**44**	P	Pn	01 53 58.9	-0.9
	baz=251,SNR=16						
CAST	**Castle Rocks**	**20.31**	**43**	P	Pn	01 54 01.8	-0.4
CAST				IAmb	IAmb	01 54 02.7	
	comp=Z,37nm,0.7s						
CAST	**Castle Rocks**	**20.31**	**43**	P	Pn	01 54 01.5	-0.7
	baz=250,SNR=59						
CHUM	**Lake Minchumin**	**20.39**	**41**	P	**P**	**01 54 01.4**	**+0.7**
	baz=248,SNR=13						
O22K	**Cooper Landing**	**20.63**	**52**	P	**P**	**01 54 03.7**	**+0.4**
	baz=260						
M22K	**Willow**	**20.70**	**48**	IAmb	IAmb	01 54 50.2	
	comp=Z,84nm,0.9s						
M22K	**Willow**	**20.70**	**48**	P	**P**	**01 54 03.7**	**-0.3**
	baz=256,SNR=8.0						
SEW	**Seward**	**20.70**	**53**	P	**P**	**01 54 03.7**	**-0.4**
SEW				IAmb	IAmb	01 54 19.4	
	comp=Z,117nm,1.1s						
SEW	**Seward**	**20.70**	**53**	P	**P**	**01 54 04.0**	**-0.1**
	baz=261,SNR=6.8						
IMAR	**Indian Mountai**	**20.73**	**35**	P	**P**	**01 54 05.2**	**+0.8**
RC01	**Rabbit Creek A**	**20.73**	**50**	IAmb	IAmb	01 54 11.0	
	comp=Z,54nm,0.7s						
RC01	**Rabbit Creek A**	**20.73**	**50**	P	**P**	**01 54 04.6**	**+0.1**
	baz=258,SNR=8.3						
CUT	**Chulitna**	**20.79**	**46**	IAmb	IAmb	01 54 34.1	
	comp=Z,58nm,0.8s						
CUT	**Chulitna**	**20.79**	**46**	P	**P**	**01 54 04.6**	**-0.4**
	baz=255						
KTH	**Kantishna Hill**	**20.85**	**43**	IAmb	IAmb	01 54 21.2	
	comp=Z,43nm,0.9s						
H21K	**Melozitna Rive**	**20.93**	**37**	P	**P**	**01 54 06.4**	**-0.1**
	baz=243,SNR=39						
TYV	**Tymovskoe**	**20.95**	**281**	*e*P	Pn	01 54 09.3	-0.5
TYV				*e*S	Sn	01 58 02.5	-2.8
TYV				pmax	pmax		
	comp=Z,98nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				smax	smax		
	comp=N,400nm,4.7s						
TYV				smax	smax		
	comp=E,300nm,4.7s						
BPAW	**Bear Paw Mtn.**	**21.01**	**41**	P	**P**	**01 54 08.1**	**+0.7**
	baz=249,SNR=26						
I21K	**Tanana**	**21.03**	**38**	IAmb	IAmb	01 54 16.1	
	comp=Z,40nm,0.9s						
I21K	**Tanana**	**21.03**	**38**	P	**P**	**01 54 08.5**	**+0.9**
	baz=246,SNR=39						
TRF	**Thorofare Moun**	**21.09**	**43**	P	**P**	**01 54 08.9**	**+0.5**
	baz=252,SNR=13						
PMR	**Palmer**	**21.12**	**49**	P	**P**	**01 54 07.9**	**-0.7**
	baz=258						
GHO	**Glory Hole Cre**	**21.26**	**48**	IAmb	IAmb	01 54 28.6	
	comp=Z,34nm,0.8s						
KNK	**Knik Glacier**	**21.40**	**49**	P	**P**	**01 54 10.6**	**-1.0**
KNK				IAmb	IAmb	01 54 18.1	
	comp=Z,55nm,0.9s						
KNK	**Knik Glacier**	**21.40**	**49**	P	**P**	**01 54 11.1**	**-0.6**
	baz=259,SNR=12						
SML	**Sawmill**	**21.54**	**48**	P	**P**	**01 54 12.8**	**-0.3**
	baz=258,SNR=34						
WAT1	**Susitna Watana**	**21.67**	**46**	P	**P**	**01 54 13.8**	**-0.8**
	baz=256						
MCK	**McKinley**	**21.75**	**43**	P	**P**	**01 54 14.4**	**-1.0**
	baz=253,SNR=12						
M23K	**Glacier View**	**21.82**	**49**	P	**P**	**01 54 15.9**	**-0.2**
	baz=259,SNR=24						
NEA2	**Nenana**	**21.96**	**41**	IAmb	IAmb	01 54 20.7	
	comp=Z,67nm,0.8s						
NEA2	**Nenana**	**21.96**	**41**	P	**P**	**01 54 18.1**	**+0.5**
	baz=251,SNR=89						

GLI	**Glacier Island**	**21.97**	**51**	P	**P**	**01 54 17.0**	**-0.7**
	baz=262						
WAT6	**Susitna Watana**	**21.98**	**47**	P	**P**	**01 54 17.4**	**-0.6**
	baz=257,SNR=30						
SCM	**Sheep Creek Mo**	**22.01**	**49**	P	**P**	**01 54 18.2**	**-0.1**
	baz=259,SNR=24						
I23K	**Minto, Yukon-K**	**22.04**	**39**	P	**P**	**01 54 18.6**	**+0.2**
	baz=249,SNR=19						
Q23K	**Middleton Isla**	**22.19**	**55**	P	**P**	**01 54 19.2**	**-0.9**
	baz=266						
H23K	**Yukon River**	**22.22**	**38**	P	**P**	**01 54 20.5**	**+0.1**
	baz=247,SNR=6.3						
DHY	**Denali Highway**	**22.25**	**45**	IAmb	IAmb	01 54 43.2	
	comp=Z,29nm,0.8s						
DHY	**Denali Highway**	**22.25**	**45**	P	**P**	**01 54 20.3**	**-0.6**
	baz=256,SNR=34						
YSS	**Yuzh-Sakhalins**	**22.25**	**271**	*e*P	**P**	**01 54 22.6**	**+1.8**
YSS				*e*S	**S**	**01 58 20.6**	**-2.3**
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**22.25**	**271**	P	**P**	**01 54 21.3**	**+0.5**
YSS				IAmb	IAmb	01 54 24.6	
	comp=Z,58nm,0.8s						
MDM	**Murphy Dome**	**22.42**	**40**	IAmb	IAmb	01 54 25.2	
	comp=Z,42nm,0.9s						
TCOL	**CIGO, UAF Yank**	**22.55**	**41**	IAmb	IAmb	01 54 49.9	
	comp=Z,38nm,0.9s						
TCOL	**CIGO, UAF Yank**	**22.55**	**41**	P	**P**	**01 54 23.1**	**-0.7**
	baz=252						
COLA	**College**	**22.55**	**41**	P	**P**	**01 54 23.5**	**-0.4**
COLA				pmax	pmax		
	comp=Z,37nm,1.0s						
COLA	**College**	**22.55**	**41**	P	**P**	**01 54 23.4**	**-0.4**
COLA				IAmb	IAmb	01 54 49.9	
	comp=Z,37nm,0.9s						
COLA	**College**	**22.55**	**41**	P	**P**	**01 54 23.4**	**-0.4**
	baz=252						
COLD	**Coldfoot**	**22.57**	**34**	P	**P**	**01 54 23.7**	**-0.4**
	baz=243						
EYAK	**Cordova Ski Ar**	**22.59**	**52**	IAmb	IAmb	01 54 44.3	
	comp=Z,42nm,1.0s						
EYAK	**Cordova Ski Ar**	**22.59**	**52**	P	**P**	**01 54 23.8**	**-0.4**
	baz=264						
M24K	**Tolsona, Glenn**	**22.60**	**48**	P	**P**	**01 54 24.8**	**+0.3**
	baz=260,SNR=12						
KLU	**Klutina**	**22.62**	**50**	IAmb	IAmb	01 54 36.0	
	comp=Z,104nm,1.6s						
KLU	**Klutina**	**22.62**	**50**	P	**P**	**01 54 23.8**	**-0.9**
	baz=262,SNR=13						
DIV	**Divide**	**22.64**	**51**	IAmb	IAmb	01 54 35.3	
	comp=Z,37nm,0.8s						
POKR	**Poker Plat Res**	**22.80**	**40**	P	**P**	**01 54 25.8**	**-0.7**
	baz=252,SNR=7.8						
H24K	**Noodor Dome**	**22.86**	**38**	P	**P**	**01 54 26.9**	**-0.3**
H24K				IAmb	IAmb	01 54 30.4	
	comp=Z,35nm,0.9s						
H24K	**Noodor Dome**	**22.86**	**38**	P	**P**	**01 54 27.0**	**-0.2**
	baz=249,SNR=47						
ILAR	**Eielson Array**	**22.91**	**41**	P	**P**	**01 54 25.9**	**-1.8**
	comp=Z,8.6nm,0.8s,baz=239,slow=9.5,SNR=50						
ILAR				ScP	**ScP**	**02 01 48.8**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=286,slow=3.3,SNR=3.1						
ILAR				LR	LR	02 04 11.5	
	comp=Z,316nm,18.1s,baz=348,slow=39						
	comp=Z,8.6nm,0.8s						
ILAR	**Eielson Array**	**22.91**	**41**	P	**P**	**01 54 25.1**	**-2.6**
PAX	**Paxson**	**23.08**	**46**	IAmb	IAmb	01 54 50.9	
	comp=Z,37nm,0.9s						
PAX	**Paxson**	**23.08**	**46**	P	**P**	**01 54 29.1**	**-0.4**
	baz=259,SNR=30						
A21K	**Barrow**	**23.08**	**22**	P	**P**	**01 54 28.5**	**-0.7**
	baz=226						
HARP	**HAARP**	**23.12**	**48**	P	**P**	**01 54 28.9**	**-0.9**
	baz=260,SNR=6.8						
K24K	**Donnelly Dome**	**23.12**	**44**	P	**P**	**01 54 28.9**	**-0.9**
	baz=256,SNR=20						
BMRM	**Bremner River**	**23.19**	**51**	IAmb	IAmb	01 54 48.2	
	comp=Z,83nm,1.2s						
BMRM	**Bremner River**	**23.19**	**51**	P	**P**	**01 54 29.7**	**-0.8**
	baz=264,SNR=11						
KAIM	**Kayak Island**	**23.20**	**54**	P	**P**	**01 54 30.5**	**-0.1**
	baz=267						
N25K	**Chitina, Valde**	**23.26**	**50**	IAmb	IAmb	01 54 32.4	
	comp=Z,30nm,0.7s						
N25K	**Chitina, Valde**	**23.26**	**50**	P	**P**	**01 54 31.3**	**0.0**
	baz=263,SNR=22						
HMT	**Hamilton**	**23.30**	**53**	IAmb	IAmb	01 54 54.8	
	comp=Z,82nm,1.0s						
TOLK	**Toolik Lake Re**	**23.44**	**31**	IAmb	IAmb	01 54 35.3	
	comp=Z,43nm,0.7s						
TOLK	**Toolik Lake Re**	**23.44**	**31**	P	**P**	**01 54 32.9**	**-0.1**
	baz=241,SNR=72						
J25K	**Salcha River,**	**23.49**	**42**	P	**P**	**01 54 31.8**	**-1.7**
	baz=255,SNR=11						
RIDG	**Independent Ri**	**23.51**	**44**	P	**P**	**01 54 32.0**	**-1.7**
	baz=258,SNR=10						
BERG	**Berg Lake**	**23.58**	**53**	IAmb	IAmb	01 54 58.8	
	comp=Z,58nm,0.7s						
GLB	**Gilahina Butte**	**23.62**	**50**	IAmb	IAmb	01 54 36.0	
	comp=Z,44nm,0.6s						
JKA	**Kamikawa-asahi**	**23.68**	**265**	P	**P**	**01 54 36.0**	**+0.7**
ASAJ	**Asahikawa**	**23.68**	**265**	P	**P**	**01 54 36.5**	**+1.2**
	comp=Z,83nm,0.8s,baz=74,slow=6.5,SNR=41						
ASAJ				LR	LR	02 02 58.6	
	comp=Z,115nm,20.9s,baz=48,slow=34						
	comp=Z,83nm,0.8s						
VRDI	**Verde Repeater**	**23.77**	**51**	IAmb	IAmb	01 54 51.1	
	comp=Z,56nm,1.0s						
DOT	**Dot Lake**	**23.84**	**45**	IAmb	IAmb	01 54 58.1	
	comp=Z,30nm,0.8s						
MENT	**Mentasta**	**23.86**	**47**	IAmb	IAmb	01 54 48.1	
	comp=Z,42nm,0.6s						
SCRK	**Sand Creek**	**23.93**	**44**	P	**P**	**01 54 36.6**	**-1.0**
SCRK				IAmb	IAmb	01 54 37.9	
	comp=Z,26nm,0.8s						
SCRK	**Sand Creek**	**23.93**	**44**	P	**P**	**01 54 35.9**	**-1.8**
	baz=258,SNR=34						
L26K	**Log Cabin Wild**	**24.04**	**46**	IAmb	IAmb	01 54 57.6	
	comp=Z,39nm,0.7s						
L26K	**Log Cabin Wild**	**24.04**	**46**	P	**P**	**01 54 39.2**	**+0.6**
	baz=261,SNR=38						
M26K	**Nabesna, AK**	**24.11**	**48**	IAmb	IAmb	01 55 18.8	
	comp=Z,29nm,0.9s						
M26K	**Nabesna, AK**	**24.11**	**48**	P	**P**	**01 54 38.7**	**-0.6**
	baz=263,SNR=23						
J26L	**Joseph Creek**	**24.23**	**43**	P	**P**	**01 54 39.4**	**-1.0**
	baz=257,SNR=59						
ISLE	**Juniper Island**	**24.27**	**52**	IAmb	IAmb	01 55 04.4	
	comp=Z,60nm,0.8s						
ERM	**Erimo**	**24.47**	**260**	P	**P**	**01 54 44.0**	**+1.4**
ERM				pmax	pmax		
	comp=Z,66nm,0.7s						
ERM	**Erimo**	**24.47**	**260**	P	**P**	**01 54 44.0**	**+1.4**
M27K	**Edge Creek, AK**	**24.62**	**48**	P	**P**	**01 54 44.7**	**+0.7**
	baz=264,SNR=33						
BMAR	**Burnt Mountain**	**24.65**	**36**	P	**P**	**01 54 43.8**	**-0.3**
L27K	**Beaver Creek,**	**24.73**	**47**	IAmb	IAmb	01 55 08.6	
	comp=Z,65nm,0.9s						
L27K	**Beaver Creek,**	**24.73**	**47**	P	**P**	**01 54 44.2**	**-0.7**
	baz=262,SNR=56						
GRNR	**Gornyy**	**24.77**	**284**	⇑*i*P	**P**	**01 54 46.0**	**+0.7**
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
GRNR				MLR	MLR		
	comp=E,60nm,16.0s						
GRNR				MLR	MLR		
	comp=N,200nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,190nm,14.0s						
K27K	**Chicken**	**24.77**	**44**	IAmb	IAmb	01 55 01.1	
	comp=Z,18nm,0.7s						
K27K	**Chicken**	**24.77**	**44**	P	**P**	**01 54 44.5**	**-0.6**
	baz=260						
BVCY	**Beaver Creek**	**25.10**	**48**	P	**P**	**01 54 47.9**	**-0.3**
	baz=265,SNR=27						
YUK3	**Moose Creek**	**25.24**	**50**	P	**P**	**01 54 48.9**	**-0.8**
	baz=266,SNR=74						
EGAK	**Eagle**	**25.30**	**43**	P	**P**	**01 54 49.4**	**-0.5**
EGAK				IAmb	IAmb	01 54 53.1	
	comp=Z,42nm,0.8s						
PINM	**Pinnacle**	**25.30**	**54**	P	**P**	**01 54 50.3**	**+0.2**
	baz=270,SNR=16						
BCPM	**Bancas Point**	**25.61**	**54**	IAmb	IAmb	01 55 08.1	
	comp=Z,60nm,0.8s						
PNL	**Peninsula**	**25.73**	**55**	P	**P**	**01 54 53.8**	**-0.2**
	baz=272						
DAWY	**Dawson**	**25.94**	**45**	IAmb	IAmb	01 54 59.7	
	comp=Z,36nm,0.9s						
DAWY	**Dawson**	**25.94**	**45**	P	**P**	**01 54 56.2**	**+0.3**
	baz=263,SNR=53						
YUK4	**Talbot Arm**	**26.09**	**51**	P	**P**	**01 54 57.4**	**0.0**
	baz=269,SNR=11						
YUK6	**Outpost Mounta**	**26.23**	**52**	P	**P**	**01 54 58.9**	**+0.3**
	baz=270,SNR=14						
JTM	**Tenmabayashi**	**26.46**	**259**	P	**P**	**01 55 01.2**	**+0.5**
I29M	**Ogilvie Camp,**	**26.59**	**42**	IAmb	IAmb	01 55 05.0	
	comp=Z,28nm,0.8s						
I29M	**Ogilvie Camp,**	**26.59**	**42**	P	**P**	**01 55 00.8**	**-0.8**
	baz=261						
HYT	**Haines Junctio**	**26.65**	**52**	IAmb	IAmb	01 55 26.7	
	comp=Z,40nm,0.8s						
HYT	**Haines Junctio**	**26.65**	**52**	P	**P**	**01 55 02.3**	**0.0**
	baz=271,SNR=19						
YAK	**Yakutsk**	**26.86**	**311**	P	**P**	**01 55 03.3**	**-0.8**
	comp=Z,21nm,0.5s,baz=283,slow=3.7,SNR=9.6						
YAK				LR	LR	02 05 21.2	
	comp=Z,136nm,18.5s,baz=92,slow=36						
	comp=Z,21nm,0.5s						
YAK	**Yakutsk**	**26.86**	**311**	*c* *i*P	**P**	**01 55 02.8**	**-1.3**
YAK				*e**PP	**pP**	**01 55 15.2**	**-0.3**
YAK				*e*		01 55 46.3	
YAK				*e*		01 58 24.2	
YAK				*e*S	**S**	**01 59 36.2**	**-1.0**
YAK				*e*SS	**SnSn**	**02 00 47.1**	**+2.7**
YAK				*e*		02 05 49.9	
YAK				pmax	pmax		
	comp=Z,102nm,1.0s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.0s						
YAK				pmax	pmax		
	comp=Z,213nm,4.4s						
YAK				pmax	pmax		
	comp=N,64nm,3.0s						
YAK				pmax	pmax		
	comp=E,97nm,3.2s						
YAK				smax	smax		
	comp=E,138nm,3.2s						
YAK				smax	smax		
	comp=N,36nm,1.8s						
YAK	**Yakutsk**	**26.86**	**311**	P	**P**	**01 55 02.7**	**-1.3**
M30M	**Minto, Yukon**	**27.00**	**48**	P	**P**	**01 55 04.7**	**-0.6**
	baz=268						
EPYK	**Eagle Plains**	**27.39**	**40**	P	**P**	**01 55 07.7**	**-1.1**
	baz=261,SNR=14						
N31M	**Braeburn, Yuko**	**27.47**	**51**	IAmb	IAmb	01 55 42.3	
	comp=Z,18nm,0.8s						
N31M	**Braeburn, Yuko**	**27.47**	**51**	P	**P**	**01 55 08.5**	**-1.1**
	baz=271						
SKAG	**Skagway**	**27.82**	**55**	P	**P**	**01 55 12.5**	**-0.1**
	baz=276						
WHY	**Whitehorse**	**27.94**	**52**	P	**P**	**01 55 14.3**	**+0.4**
WHY	**Whitehorse**	**27.94**	**52**	P	**P**	**01 55 13.9**	**-0.1**
	baz=274						
M31M	**Drury Creek, Y**	**28.11**	**49**	P	**P**	**01 55 15.1**	**-0.2**
	baz=271,SNR=8.9						
KLR	**Kul'dur**	**28.13**	**283**	P	**P**	**01 55 15.6**	**0.0**
	comp=Z,19nm,0.5s,baz=72,slow=6.1,SNR=52						
KLR				LR	LR	02 07 11.1	
	comp=Z,98nm,19.4s,baz=77,slow=38						
	comp=Z,19nm,0.5s						
FARO	**Faro, Yukon**	**28.60**	**49**	P	**P**	**01 55 19.4**	**-0.2**
	baz=272						
TIXI	**Tiksi**	**28.81**	**331**	P	**P**	**01 55 20.6**	**-0.7**
	comp=Z,7.8nm,0.6s,baz=90,slow=23,SNR=24						
TIXI				PcP	**PcP**	**01 58 30.0**	**+0.2**
	comp=Z,7.4nm,0.5s,baz=273,slow=21,SNR=7.9						
TIXI				ScP	**ScP**	**02 02 07.4**	**0.0**
	comp=Z,1.3nm,0.3s,baz=90,slow=24,SNR=4.8						
TIXI				LR	LR	02 07 29.2	
	comp=Z,343nm,18.7s,baz=180,slow=38						
	comp=Z,7.8nm,0.6s						
TIXI	**Tiksi**	**28.81**	**331**	P	**P**	**01 55 20.4**	**-1.0**
INK	**Inuvik**	**28.92**	**36**	P	**P**	**01 55 21.9**	**-0.4**
	comp=Z,1.8nm,0.4s,baz=248,slow=15,SNR=18						
INK				LR	LR	02 07 34.8	
	comp=Z,269nm,20.6s,baz=230,slow=38						
	comp=Z,1.8nm,0.4s						
INK	**Inuvik**	**28.92**	**36**	P	**P**	**01 55 21.9**	**-0.4**
	baz=261						
ZEA	**Zeya**	**29.29**	**293**	*e*P	**P**	**01 55 25.3**	**-0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,100nm,14.0s						
MMPY	**Sheldon Lake,**	**29.55**	**48**	P	**P**	**01 55 28.1**	**-0.1**
	baz=273,SNR=14						
USA0B	**Ussuriysk Arra**	**30.22**	**273**	P	**P**	**01 55 33.8**	**-0.3**
USA0B				pmax	pmax		
	comp=Z,92nm,2.0s						
USA0B	**Ussuriysk Arra**	**30.22**	**273**	P	**P**	**01 55 33.8**	**-0.3**
USA0B				IAmb	IAmb	01 56 28.6	
	comp=Z,92nm,1.9s						
USRK	**Ussuriysk Ar.**	**30.22**	**273**	P	**P**	**01 55 34.0**	**-0.1**
	comp=Z,11nm,0.7s,baz=44,slow=8.6,SNR=5.8						
USRK				PcP	**PcP**	**01 58 34.5**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=59,slow=6.7,SNR=7.4						
USRK				LR	LR	02 06 53.6	
	comp=Z,159nm,21.5s,baz=54,slow=35						
	comp=Z,11nm,0.7s						
DLBC	**Dease Lake**	**30.68**	**56**	P	**P**	**01 55 38.4**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=283,slow=10,SNR=6.2						
DLBC				LR	LR	02 08 32.4	
	comp=Z,394nm,19.3s,baz=290,slow=37						
	comp=Z,4.1nm,0.6s						
DLBC	**Dease Lake**	**30.68**	**56**	P	**P**	**01 55 38.0**	**-0.1**
MJAR	**Matsushiro Arr**	**30.88**	**256**	P	**P**	**01 55 40.1**	**+0.1**
	comp=Z,5.5nm,0.7s,baz=63,slow=8.1,SNR=12						
MJAR				LR	LR	02 07 22.2	
	comp=Z,67nm,21.1s,baz=44,slow=35						
	comp=Z,5.5nm,0.7s						
MJAR	**Matsushiro Arr**	**30.88**	**256**	P	**P**	**01 55 40.3**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,13nm,1.4s						
MJAR	**Matsushiro Arr**	**30.88**	**256**	P	**P**	**01 55 40.3**	**+0.3**
MAJO	**Matsushiro**	**30.88**	**256**	P	**P**	**01 55 41.1**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,49nm,1.5s						
MAJO	**Matsushiro**	**30.88**	**256**	P	**P**	**01 55 41.1**	**+1.1**
MAJO				IAmb	IAmb	01 56 04.7	
	comp=Z,49nm,1.5s						
MJB9	**Matsu-Tunnel**	**30.88**	**256**	P	**P**	**01 55 41.0**	**+1.0**
MJB9				IAmb	IAmb	01 56 04.7	
	comp=Z,49nm,1.5s						
TGTN	**Hyland Airport**	**31.05**	**50**	P	**P**	**01 55 41.0**	**-0.4**
	baz=277,SNR=9.5						
JGF	**Kuroka**	**32.02**	**255**	P	**P**	**01 55 50.8**	**+0.7**
JGF				IAmb	IAmb	01 55 52.4	
	comp=Z,36nm,0.9s						
A36M	**Sachs Harbour**	**32.25**	**30**	IAmb	IAmb	01 55 53.8	
	comp=Z,18nm,0.7s						
A36M	**Sachs Harbour**	**32.25**	**30**	P	**P**	**01 55 50.6**	**-1.0**
	baz=263,SNR=5.1						
BNX	**BinXian**	**32.29**	**279**	⇑P	**P**	**01 55 51.5**	**-0.9**
BNX				pmax	pmax		
	comp=Z,54nm,0.9s						
BNX				pmax	pmax		
	comp=Z,170nm,5.7s						
C36M	**Paulatuk**	**32.44**	**35**	P	**P**	**01 55 53.3**	**0.0**
	baz=268						
H11N2	**WAKE ISLAND Hy**	**32.81**	**197**	T	T	02 30 27.5	
	baz=11,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**32.82**	**196**	T	T	02 30 30.1	
	baz=11,slow=76,SNR=76						
H11N1	**WAKE ISLAND Hy**	**32.83**	**197**	T	T	02 30 31.7	
	baz=11,slow=76,SNR=103						
BBB	**Bella Bella**	**33.52**	**67**	LR	LR	02 10 16.3	
	comp=Z,96nm,18.5s,baz=282,slow=37						
H11S1	**WAKE ISLAND Hy**	**34.04**	**196**	T	T	02 32 07.8	
	baz=10,slow=76,SNR=775						
H11S3	**WAKE ISLAND Hy**	**34.06**	**196**	T	T	02 32 23.2	
	baz=10,slow=76,SNR=901						
H11S2	**WAKE ISLAND Hy**	**34.06**	**196**	T	T	02 32 20.7	
	baz=10,slow=76,SNR=455						
BOD	**Bodaibo**	**35.28**	**305**	*e*P	**P**	**01 56 17.4**	**-0.7**
BOD				pmax	pmax		
	comp=Z,62nm,0.7s						
HIA	**Hailar**	**35.29**	**289**	P	**P**	**01 56 17.7**	**-0.7**
HIA				pmax	pmax		
	comp=Z,20nm,0.9s						
HIA	**Hailar**	**35.29**	**289**	P	**P**	**01 56 17.7**	**-0.7**
HIA				IAmb	IAmb	01 56 18.8	
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**36.60**	**266**	P	**P**	**01 56 31.1**	**+1.5**
	comp=Z,6.9nm,0.8s,baz=55,slow=8.1,SNR=12						
KSRS				LR	LR	02 10 35.1	
	comp=Z,65nm,21.4s,baz=45,slow=35						
	comp=Z,6.9nm,0.8s						
YKA	**Yellowknife Ar**	**37.17**	**46**	P	**P**	**01 56 34.4**	**+0.2**
	comp=Z,7.1nm,0.6s,baz=285,slow=7.6,SNR=140						
YKA				PcP	**PcP**	**01 58 53.5**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=286,slow=3.2,SNR=4.5						
YKA				ScP	**ScP**	**02 02 37.2**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=291,slow=3.4,SNR=3.9						
YKA				PKiKP	**PKiKP**	**02 06 08.3**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=280,slow=1.1,SNR=3.9						
	comp=Z,7.1nm,0.6s						
YKA	**Yellowknife Ar**	**37.17**	**46**	P	**P**	**01 56 34.1**	**0.0**
B05A	**Bryant**	**38.70**	**70**	P	**P**	**01 56 46.5**	**-0.8**
	baz=299						
XLT	**XiLinHaoTe**	**40.15**	**283**	⇑*i*P	**P**	**01 56 59.9**	**+0.4**
XLT				pP	sP	01 57 13.6	-2.7
XLT				sP	pP	01 57 17.6	+6.4
XLT				pmax	pmax		
	comp=Z,35nm,0.9s						
XLT				pmax	pmax		
	comp=Z,66nm,4.6s						
H04A	**Detroit Lake**	**40.49**	**75**	P	**P**	**01 57 03.5**	**+1.2**
H04A				IAmb	IAmb	01 57 23.8	
	comp=Z,14nm,0.8s						
RES	**Resolute Bay**	**40.64**	**24**	P	**P**	**01 57 03.1**	**-0.1**
	comp=Z,3.6nm,0.4s,baz=254,slow=9.6,SNR=34						
RES				PcP	**PcP**	**01 59 04.1**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=240,slow=5.3,SNR=4.6						
RES				LR	LR	02 15 19.1	
	comp=Z,86nm,21.7s,baz=278,slow=38						
	comp=Z,3.6nm,0.4s						
RES	**Resolute Bay**	**40.64**	**24**	P	**P**	**01 57 03.0**	**-0.1**
EUNU	**Eureka**	**40.73**	**15**	P	**P**	**01 57 03.3**	**-0.5**
HAWA	**Hanford**	**41.15**	**71**	P	**P**	**01 57 08.7**	**+1.0**
NEW	**Newport**	**41.58**	**67**	P	**P**	**01 57 09.9**	**-1.3**
	comp=Z,4.1nm,0.7s,baz=302,slow=5.3,SNR=13						
NEW				PcP	**PcP**	**01 59 09.2**	**+1.6**
	comp=Z,2.8nm,0.6s,baz=293,slow=6.0,SNR=3.2						
NEW				LR	LR	02 14 43.7	
	comp=Z,107nm,19.1s,baz=296,slow=36						
	comp=Z,4.1nm,0.7s						
NEW	**Newport**	**41.58**	**67**	P	**P**	**01 57 10.1**	**-1.1**
	baz=301,SNR=5.3						
YBH	**Yreka Blue Hor**	**41.82**	**79**	LR	LR	02 11 31.2	
	comp=Z,208nm,21.1s,baz=304,slow=32						
J05D	**Fort Rock, OR**	**41.83**	**76**	P	**P**	**01 57 12.0**	**-1.4**
	baz=304						
BJI	**Beijing**	**42.30**	**278**	P	**P**	**01 57 17.8**	**+0.7**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
BJT	**Baijiatuau**	**42.32**	**278**	P	**P**	**01 57 16.9**	**-0.4**
BJT				pmax	pmax		
	comp=Z,12nm,0.9s						
BJT	**Baijiatuau**	**42.32**	**278**	P	**P**	**01 57 16.9**	**-0.4**
NRIK	**Noril'sk**	**42.50**	**328**	P	**P**	**01 57 18.1**	**-0.3**
	comp=Z,25nm,0.7s,baz=87,slow=9.4,SNR=35						
NRIK				PcP	**PcP**	**01 59 11.4**	**+1.2**
	comp=Z,5.2nm,0.7s,baz=66,slow=4.9,SNR=3.5						
NRIK				LR	LR	02 15 14.8	
	comp=Z,69nm,20.4s,baz=100,slow=36						
	comp=Z,25nm,0.7s						
NRIK	**Noril'sk**	**42.50**	**328**	P	**P**	**01 57 18.2**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,21nm,0.8s						
NRIK	**Noril'sk**	**42.50**	**328**	P	**P**	**01 57 18.2**	**-0.2**
NRIK				IAmb	IAmb	01 57 20.4	
	comp=Z,21nm,0.8s						
ALE	**Alert**	**42.76**	**10**	P	**P**	**01 57 21.0**	**+0.6**
ALE				pP	**sP**	**01 57 34.3**	**-2.6**
ULN	**Ulaanbaatar**	**43.33**	**293**	P	**P**	**01 57 25.8**	**+0.3**
ULN				pmax	pmax		
	comp=Z,19nm,0.7s						
ULN	**Ulaanbaatar**	**43.33**	**293**	P	**P**	**01 57 25.8**	**+0.3**
ULN				IAmb	IAmb	01 57 27.1	
	comp=Z,19nm,0.7s						
JOW	**Kunigami**	**43.69**	**254**	LR	LR	02 12 36.2	
	comp=Z,68nm,21.9s,baz=182,slow=32						
SONM	**Songino Array**	**43.72**	**294**	P	**P**	**01 57 29.5**	**+0.8**
	comp=Z,22nm,0.7s,baz=61,slow=8.2,SNR=77						
SONM				PcP	**PcP**	**01 59 15.3**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=70,slow=1.9,SNR=4.1						
SONM				LR	LR	02 16 30.5	
	comp=Z,171nm,19.6s,baz=72,slow=37						
	comp=Z,22nm,0.7s						
SONM	**Songino Array**	**43.72**	**294**	P	**P**	**01 57 28.9**	**+0.3**
SONM				IAmb	IAmb	01 57 30.4	
	comp=Z,23nm,0.9s						
TIA	**Tai'an**	**44.09**	**273**	⇑P	**P**	**01 57 32.3**	**+0.7**
TIA				pmax	pmax		
	comp=Z,40nm,0.8s						
MSO	**Missoula**	**44.17**	**68**	P	**P**	**01 57 30.4**	**-1.9**
	baz=303						
MOY	**Mondy**	**44.68**	**301**	*e*P	**P**	**01 57 36.3**	**0.0**
MOY				pmax	pmax		
	comp=Z,26nm,1.3s						
HNS	**HongShan**	**44.83**	**276**	⇑P	**P**	**01 57 38.7**	**+1.2**
HNS				S	**S**	**02 04 10.3**	**-1.4**
HNS				pmax	pmax		
	comp=Z,22nm,0.9s						
HNS				LR	LR		
	comp=Z,220nm,14.0s						
HNS				LR	LR		
	comp=Z,180nm,19.4s						
VCNR	**Virginia City**	**45.15**	**80**	IAmb	IAmb	01 58 01.6	
	comp=Z,14nm,0.9s						
PNTR	**Pine Nut**	**45.31**	**80**	IAmb	IAmb	01 58 09.2	
	comp=Z,26nm,0.8s						
TULEG	**Thule**	**45.54**	**17**	P	**P**	**01 57 41.9**	**-0.7**
TULEG				IAmb	IAmb	01 57 55.1	
	comp=Z,18nm,1.2s						
TULEG	**Thule**	**45.54**	**17**	*i* P	**P**	**01 57 42.2**	**-0.4**
TULEG				IAmb	IAmb	01 57 43.0	
	comp=Z,7.9nm,0.8s						
YERR	**Yerington**	**45.59**	**80**	IAmb	IAmb	01 58 04.9	
	comp=Z,12nm,0.8s						
GUMO	**Guam**	**45.70**	**225**	LR	LR	02 14 44.8	
	comp=Z,77nm,20.9s,baz=84,slow=33						
BTO	**Baotou**	**45.72**	**283**	*e*P	**P**	**01 57 45.8**	**+1.2**
HLID	**Hailey**	**45.74**	**72**	P	**P**	**01 57 43.2**	**-1.7**
	baz=306						
NJ2	**Nanjing**	**45.76**	**268**	*e*P	**P**	**01 57 45.7**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,18nm,0.8s						
EGMT	**Eagleton**	**45.88**	**64**	P	**P**	**01 57 44.8**	**-1.0**
	baz=304						
BOZ	**Bozeman (W)**	**46.19**	**68**	P	**P**	**01 57 46.8**	**-1.6**
	baz=305,SNR=7.5						
RYN	**Ryan**	**46.25**	**80**	IAmb	IAmb	01 58 10.0	
	comp=Z,12nm,0.9s						
NVAR	**Mina Array Bea**	**46.51**	**80**	P	**P**	**01 57 50.9**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=296,slow=7.0,SNR=22						
NVAR				LR	LR	02 14 10.5	
	comp=Z,110nm,20.9s,baz=290,slow=32						
	comp=Z,3.3nm,0.8s						
MDPB	**Devils Postpil**	**46.54**	**81**	IAmb	IAmb	01 58 12.6	
	comp=Z,18nm,0.8s						
OMMB	**Old Mammoth Mi**	**46.60**	**81**	P	**P**	**01 57 52.6**	**+0.8**
OMMB				IAmb	IAmb	01 58 13.2	
	comp=Z,12nm,1.0s						
ELK	**Elko**	**46.94**	**75**	LR	LR	02 17 01.9	
	comp=Z,175nm,18.1s,baz=309,slow=35						
ELK	**Elko**	**46.94**	**75**	P	**P**	**01 57 53.6**	**-0.8**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ELK	**Elko**	**46.94**	**75**	P	**P**	**01 57 53.6**	**-0.8**
PAGB	**Antelope Grade**	**47.03**	**84**	IAmb	IAmb	01 58 15.8	
	comp=Z,21nm,0.6s						
H17A	**Grant Village**	**47.50**	**69**	P	**P**	**01 57 58.4**	**-0.3**
	baz=306						
LCH	**Last Change Ra**	**47.67**	**81**	IAmb	IAmb	01 58 21.1	
	comp=Z,12nm,0.8s						
VES	**Vestal, Richgr**	**47.68**	**83**	P	**P**	**01 57 59.5**	**-0.4**
	baz=311						
HVU	**Hansel Valley**	**47.78**	**73**	IAmb	IAmb	01 58 22.9	
	comp=Z,7.4nm,0.8s						
RLMT	**Red Lodge**	**47.82**	**67**	P	**P**	**01 58 00.2**	**-0.9**
	baz=306						
FCC	**Fort Churchill**	**47.86**	**45**	IAmb	IAmb	01 58 13.7	
	comp=Z,20nm,1.5s						

CWC	**Cottonwood Cre**	47.91	82	P	P	01 58 01.2	-0.6
	baz=310						
GRAC	**Grapevine Rang**	47.99	81	P	P	01 58 02.7	+0.3
GRAC				IAmb	IAmb	01 58 23.3	
	comp=Z,8.2nm,0.8s						
GRAC	**Grapevine Rang**	47.99	81	P	P	01 58 02.2	-0.2
	baz=310						
LYN	**LuoYang**	48.05	275	⇓iP	P	01 58 04.0	+1.2
LYN				pmax	pmax		
	comp=Z,40nm,0.7s						
ISA	**Isabella, Lake**	48.17	83	P	P	01 58 02.7	-1.1
	baz=311						
R11A	**Troy Canyon, C**	48.22	78	IAmb	IAmb	01 58 25.1	
	comp=Z,8.7nm,0.9s						
R11A	**Troy Canyon, C**	48.22	78	P	P	01 58 04.0	-0.3
	baz=309,SNR=12						
MPMC	**Manual Prospec**	48.52	82	P	P	01 58 06.2	-0.5
	baz=311						
S11A	**Rachel**	48.57	79	IAmb	IAmb	01 58 28.1	
	comp=Z,16nm,0.8s						
FURC	**Furnace Creek,**	48.64	81	P	P	01 58 08.0	+0.7
	baz=310						
TPNV	**Topopah Spring**	48.71	80	P	P	01 58 07.8	-0.2
	baz=310,SNR=14						
DUG	**Dugway, Tooele**	48.73	74	IAmb	IAmb	01 58 44.0	
	comp=Z,8.2nm,0.8s						
DUG	**Dugway, Tooele**	48.73	74	P	P	01 58 07.4	-0.7
	baz=309						
LRMC	**Laurel Mtn Rad**	48.78	82	P	P	01 58 07.4	-1.2
	baz=311						
GWY	**Greenwater Val**	48.94	81	P	P	01 58 09.5	-0.4
GWY				IAmb	IAmb	01 58 30.5	
	comp=Z,11nm,0.8s						
QSM	**Queen of Sheba**	48.97	81	IAmb	IAmb	01 58 32.1	
	comp=Z,8.5nm,0.7s						
EDW2	**Edwards Air Fo**	48.98	83	P	P	01 58 09.3	-0.7
	baz=311						
BW06	**Boulder Array**	49.07	70	P	P	01 58 09.1	-1.7
	baz=308						
PDAR	**Pinedale Array**	49.07	70	P	P	01 58 09.6	-1.2
	comp=Z,2.3nm,0.6s,baz=325,slow=3.4,SNR=20						
PDAR				LR	LR	02 16 51.9	
	comp=Z,63nm,21.6s,baz=296,slow=34						
	comp=Z,2.3nm,0.6s						
PSUT	**Pine Spring**	49.15	77	IAmb	IAmb	01 58 21.9	
	comp=Z,6.1nm,0.7s						
KBS	**Kingsbay**	49.23	356	iP	P	01 58 11.9	+0.6
KBS	**Kingsbay**	49.23	356	eP	P	01 58 11.9	+0.6
NLU	**North Lily Min**	49.32	74	P	P	01 58 12.4	-0.4
SHOC	**Shoshone, Teco**	49.37	81	P	P	01 58 12.8	-0.2
	baz=311,SNR=5.1						
GSC	**Goldstone, Bar**	49.44	82	P	P	01 58 13.4	-0.2
	baz=311,SNR=7.7						
WHN	**Wuhan**	49.59	270	⇑iP	P	01 58 15.0	+0.4
SPA0	**Spitsbergen Ar**	49.74	355	eP	P	01 58 15.0	-0.2
SPITS	**Spitsbergen Ar**	49.74	355	P	P	01 58 14.9	-0.2
	comp=Z,19nm,0.4s,baz=52,slow=5.4,SNR=147						
SPITS				LR	LR	02 20 44.2	
	comp=Z,202nm,18.4s,baz=277,slow=38						
	comp=Z,19nm,0.4s						
TUQ	**Turquoise Moun**	49.89	81	P	P	01 58 16.4	-0.6
	baz=311						
TMUT	**Trail Mountain**	50.26	74	P	P	01 58 19.4	-0.6
RDMU	**Red Mountain**	50.42	72	IAmb	IAmb	01 58 43.9	
	comp=Z,19nm,0.8s						
GMRC	**Granite Mounta**	50.48	82	P	P	01 58 21.2	-0.3
	baz=312,SNR=5.4						
LCMT	**Little Creek M**	50.50	78	IAmb	IAmb	01 58 43.0	
	comp=Z,15nm,0.8s						
XAN	**Xi'an**	50.59	277	P	P	01 58 22.3	+0.1
XAN				pP	pP	01 58 30.6	-3.7
XAN				pmax	pmax		
	comp=Z,21nm,0.9s						
HOPEN	**Hopen**	50.69	352	eP	P	01 58 22.6	+0.3
PFO	**Pinyon Flats O**	50.77	83	LR	LR	02 15 48.7	
	comp=Z,108nm,21.9s,baz=294,slow=31						
SRU	**San Rafael Swe**	50.78	74	IAmb	IAmb	01 59 07.7	
	comp=Z,7.0nm,0.7s						
BELC	**Belle Mtn. Jos**	50.80	83	P	P	01 58 23.1	-0.8
	baz=312						
K22A	**Casper**	50.90	68	P	P	01 58 22.5	-2.1
	baz=309						
HSPB	**Hornsund (broa**	50.93	354	eP	P	01 58 24.3	+0.2
TPUB	**Ta-pu**	50.93	258	P	P	01 58 25.0	+0.1
IRM	**Iron Mountain**	51.22	82	P	P	01 58 26.8	-0.1
	baz=312						
MONP2	**Monument Peak**	51.28	84	P	P	01 58 27.5	-0.2
	baz=313						
W13A	**Hualapai Mount**	51.36	80	IAmb	IAmb	01 58 48.9	
	comp=Z,9.0nm,0.8s						
BC3	**Big Chuckawall**	51.37	83	P	P	01 58 27.2	-0.9
	baz=312						
DAG	**Danmarks Havn**	51.38	4	iP	P	01 58 26.9	-0.6
DAG				IAmb	IAmb	01 58 27.1	
	comp=Z,5.9nm,0.7s						
RSSD	**Black Hills**	51.40	65	P	P	01 58 26.8	-1.6
	baz=309						
U15A	**North Rim**	51.46	78	IAmb	IAmb	01 58 50.4	
	comp=Z,20nm,0.8s						
O20A	**White River Ci**	51.48	72	IAmb	IAmb	01 58 51.3	
	comp=Z,15nm,1.2s						
O20A	**White River Ci**	51.48	72	P	P	01 58 27.8	-1.3
	baz=310						
ZAA0	**Zalesovo Array**	51.51	311	P	P	01 58 27.1	-1.6
ZAA0				IAmb	IAmb	01 58 28.4	
	comp=Z,5.6nm,0.6s						
ZALV	**Zalesovo Beam**	51.51	311	P	P	01 58 27.9	-0.9
	comp=Z,5.1nm,0.5s,baz=45,slow=6.6,SNR=20						
ZALV				PcP	PcP	01 59 43.1	+0.7
	comp=Z,5.4nm,0.7s,baz=36,slow=2.9,SNR=6.4						
ZALV				LR	LR	02 22 19.5	
	comp=Z,143nm,18.1s,baz=52,slow=38						
	comp=Z,5.1nm,0.5s						
ZALV	**Zalesovo Beam**	51.51	311	P	P	01 58 27.3	-1.5
CBX	**Cerro Bola**	51.52	85	P	P	01 58 29.0	-0.3
CBX				IAmb	IAmb	01 58 50.5	
	comp=Z,8.6nm,0.7s						
IKP	**In-Ko-Pah, Jac**	51.64	84	P	P	01 58 30.0	-0.1
	baz=313						
PDMCI	**Parker Dam,Lak**	51.74	81	P	P	01 58 30.4	-0.3
	baz=312						
ULM	**Lac du Bonnet**	51.98	55	P	P	01 58 31.6	-0.8
	comp=Z,3.2nm,0.4s,baz=306,slow=7.1,SNR=4.9						
ULM				LR	LR	02 21 42.5	
	comp=Z,165nm,18.3s,baz=282,slow=37						
	comp=Z,3.2nm,0.4s						
GLA	**Glamis**	52.16	83	P	P	01 58 33.6	-0.3
	baz=313						
LZH	**Lanzhou**	52.33	283	⇑P	P	01 58 36.5	+1.1
LZH				pP	pP	01 58 47.8	+0.6
LZH				sP	sP	01 58 53.3	+1.3
LZH				pmax	pmax		
	comp=Z,41nm,1.5s						
LZH				LR	LR		
	comp=Z,210nm,15.7s						
LZH				LR	LR		
	comp=Z,230nm,14.6s						
LZH				LR	LR		
	comp=Z,140nm,15.2s						
N23A	**Red Feather La**	52.34	69	P	P	01 58 34.4	-1.1
	baz=310						
GTA	**Gaotai**	52.57	288	⇑P	P	01 58 37.8	+0.8
GTA				pP	pP	01 58 50.3	+1.5
GTA				sP	sP	01 58 54.9	+1.2
GTA				pmax	pmax		
	comp=Z,24nm,1.0s						
GTA				pmax	pmax		
	comp=Z,85nm,7.6s						
GTA				LR	LR		
	comp=Z,92nm,14.3s						
GTA				LR	LR		
	comp=Z,210nm,13.9s						
GTA				LR	LR		
	comp=Z,170nm,18.7s						
WUAZ	**Wupatki**	52.62	78	IAmb	IAmb	01 58 58.9	
	comp=Z,13nm,0.8s						
WUAZ	**Wupatki**	52.62	78	P	P	01 58 37.3	-0.2
	baz=312						
ENH	**Enshi**	52.80	273	P	P	01 58 38.3	-0.5
ENH				IAmb	IAmb	01 58 39.4	
	comp=Z,19nm,0.7s						
BJO1	**Bjornoya**	53.10	353	eP	P	01 58 40.5	+0.2
AGMN	**Agassiz Nation**	53.21	56	P	P	01 58 39.7	-1.8
	baz=309						
MVCO	**Mesa Verde**	53.23	74	P	P	01 58 41.3	-0.8
	baz=311						
ISCO	**Idaho Springs**	53.24	70	P	P	01 58 40.6	-1.7
	baz=311						
DBG	**Daneborg**	53.72	6	iP	P	01 58 44.0	-0.8
DBG				IAmb	IAmb	01 58 44.6	
	comp=Z,20nm,0.9s						
S22A	**4UR Ranch, Cre**	53.87	73	P	P	01 58 46.6	-0.2
	baz=312						
Q24A	**Divide**	54.06	71	P	P	01 58 47.6	-0.7
	baz=311						
214A	**Organ Pipe Nat**	54.15	82	P	P	01 58 47.9	-0.7
	baz=314						
FRB	**Frobisher Bay**	54.25	30	P	P	01 58 48.0	-0.8
	comp=Z,16nm,0.4s,baz=309,slow=8.1,SNR=114						
FRB				LR	LR	02 24 44.9	
	comp=Z,239nm,19.8s,baz=356,slow=39						
	comp=Z,16nm,0.4s						
FRB	**Frobisher Bay**	54.25	30	P	P	01 58 48.0	-0.8
ILULI	**Ilulissat**	54.43	19	IAmb	IAmb	01 58 50.5	
	comp=Z,35nm,0.7s						
ILULI	**Ilulissat**	54.43	19	iP	P	01 58 49.6	-0.5
ILULI				IAmb	IAmb	01 58 50.1	
	comp=Z,35nm,0.7s						
SDCO	**Great Sand Dun**	54.66	72	P	P	01 58 52.0	-0.6
	baz=312						
TUC	**Tucson**	55.15	80	P	P	01 58 55.2	-0.7
TUC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TUC	**Tucson**	55.15	80	P	P	01 58 55.2	-0.7
TUC				IAmb	IAmb	01 59 17.0	
	comp=Z,9.4nm,0.8s						
TUC	**Tucson**	55.15	80	P	P	01 58 56.0	0.0
	baz=314						
TUC	**Tucson**	55.15	80	P	P	01 58 56.5	+0.6
TUC				pP	sP	01 59 15.8	+3.9
EYMN	**Ely**	55.67	54	P	P	01 58 58.3	-1.0
	baz=311						
T25A	**Trinidad**	55.71	72	P	P	01 58 59.8	-0.3
	baz=312						
ECSD	**EROS Data Cent**	55.76	61	P	P	01 58 58.9	-1.2
	baz=311						
CD2	**Chengdu**	55.90	278	P	P	01 59 00.5	-0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
ANMO	**Albuquerque**	55.98	75	LR	LR	02 22 27.3	
	comp=Z,62nm,18.4s,baz=313,slow=35						
F36A	**Milaca**	56.00	57	IAmb	IAmb	01 59 59.6	
	comp=Z,23nm,1.8s						
HAMF	**Hammerfest**	56.32	349	eP	P	01 59 02.9	-0.7
SFJD	**Kangerlussuaq**	56.38	20	P	P	01 59 03.7	-0.4
	comp=Z,11nm,0.4s,baz=339,slow=5.1,SNR=15						
SFJD				LR	LR	02 26 13.0	
	comp=Z,79nm,19.8s,baz=334,slow=39						
	comp=Z,11nm,0.4s						
SFJD	**Kangerlussuaq**	56.38	20	P	P	01 59 02.7	-1.4
SFJD				IAmb	IAmb	01 59 04.5	
	comp=Z,23nm,1.1s						
SFJD	**Kangerlussuaq**	56.38	20	iP	P	01 59 03.7	-0.4
SFJD				IAmb	IAmb	01 59 04.2	
	comp=Z,16nm,1.1s						
KURK	**Kurchatov**	56.50	311	P	P	01 59 05.2	0.0
KURK				pmax	pmax		
	comp=Z,86nm,0.8s						
KURK	**Kurchatov**	56.50	311	P	P	01 59 05.2	0.0
KURK	**Kurchatov**	56.50	311	P	P	01 59 05.5	+0.2
KURK				pP	sP	01 59 22.9	+0.9
WMQ	**Urumqi**	56.53	300	⇑P	P	01 59 06.4	+0.7
WMQ				pP	pP	01 59 18.7	+0.8
WMQ				PcP	PcP	02 00 04.4	+2.5
WMQ				S	S	02 06 53.8	-0.1
WMQ				pmax	pmax		
	comp=Z,40nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.5s						
WMQ				LR	LR		
	comp=Z,300nm,18.3s						
WMQ				LR	LR		
	comp=Z,210nm,19.5s						
WMQ				LR	LR		
	comp=Z,290nm,22.1s						
ICESG	**Greenland Ices**	56.59	15	iP	P	01 59 05.4	-0.6
ICESG				IAmb	IAmb	01 59 06.1	
	comp=Z,20nm,0.8s						
KURBB	**Kurchatov Arra**	56.61	311	LR	LR	02 26 10.1	
	comp=Z,192nm,18.8s,baz=36,slow=39						
KURBB	**Kurchatov Arra**	56.61	311	P	P	01 59 06.2	+0.2
SPMN	**Marine on St.**	56.80	58	P	P	01 59 06.5	-1.0
	baz=312						
121A	**Cookes Peak, D**	56.83	78	IAmb	IAmb	01 59 29.4	
	comp=Z,7.4nm,0.8s						
121A	**Cookes Peak, D**	56.83	78	P	P	01 59 08.8	+0.8
	baz=314						
ARA0	**ARCESS Array S**	57.14	348	eP	P	01 59 09.2	-0.3
ARCES	**ARCESS Array B**	57.14	348	P	P	01 59 09.1	-0.4
	comp=Z,9.2nm,0.5s,baz=31,slow=8.4,SNR=90						
ARCES				PcP	PcP	02 00 03.2	-0.5
	comp=Z,5.3nm,0.7s,baz=357,slow=5.4,SNR=5.2						
ARCES				LR	LR	02 24 25.8	
	comp=Z,141nm,20.9s,baz=353,slow=37						
	comp=Z,9.2nm,0.5s						
ARCES	**ARCESS Array B**	57.14	348	P	P	01 59 08.5	-0.9
ARCES				IAmb	IAmb	01 59 10.3	
	comp=Z,14nm,0.8s						
GYA	**Guiyang**	57.25	272	⇓P	P	01 59 11.4	+0.4
GYA				pmax	pmax		
	comp=Z,22nm,1.0s						
LVZ	**Lovozero**	57.27	344	P	P	01 59 09.4	-1.0
LVZ				pmax	pmax		
	comp=Z,36nm,0.7s						
LVZ	**Lovozero**	57.27	344	P	P	01 59 09.4	-1.0
LVZ	**Lovozero**	57.27	344	P	P	01 59 10.1	-0.4
SCO	**Scoresbysund**	57.35	7	iP	P	01 59 10.0	-0.9
SCO				IAmb	IAmb	01 59 12.3	
	comp=Z,20nm,1.0s						
MK31	**Makanchi Array**	57.36	306	iP	P	01 59 10.8	-0.6
MK31	**Makanchi Array**	57.36	306	IAmb	IAmb	01 59 11.7	
	comp=Z,15nm,0.8s						
MKAR	**Makanchi Array**	57.36	306	P	P	01 59 10.9	-0.6
	comp=Z,18nm,0.7s,baz=52,slow=7.0,SNR=188						
MKAR				LR	LR	02 24 54.3	
	comp=Z,253nm,20.4s,baz=44,slow=37						
	comp=Z,18nm,0.7s						
JMIC	**Jan Mayen**	57.51	2	LR	LR	02 24 39.5	
	comp=Z,34nm,18.1s,baz=67,slow=37						
MAKZ	**Makanchi**	57.51	306	P	P	01 59 11.6	-0.9
MAKZ				pmax	pmax		
	comp=Z,24nm,0.7s						
MAKZ	**Makanchi**	57.51	306	P	P	01 59 11.6	-0.9
MAKZ	**Makanchi**	57.51	306	P	P	01 59 11.9	-0.6
MAKZ				pP	sP	01 59 27.6	-2.2
GOMU	**GeErMu**	57.66	289	P	P	01 59 14.2	+0.1
GOMU				pP	pP	01 59 21.7	-4.3
GOMU				sP	sP	01 59 27.1	-3.8
GOMU				PcP	PcP	02 00 08.6	+1.8
GOMU				S	S	02 07 11.1	+1.6
GOMU				pmax	pmax		
	comp=Z,26nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,120nm,4.8s						
GOMU				LR	LR		
	comp=Z,86nm,12.9s						
GOMU				LR	LR		
	comp=Z,56nm,12.7s						
JETT	**Jettan, Norway**	57.71	350	eP	P	01 59 13.5	0.0
DY2G	**Dye2**	57.73	19	iP	P	01 59 13.2	-0.7
DY2G				IAmb	IAmb	01 59 14.4	
	comp=Z,16nm,0.7s						
TRO	**Tromso**	57.79	351	eP	P	01 59 13.8	-0.2
KTK1	**Kautokeino**	57.91	349	eP	P	01 59 14.7	-0.2
N35A	**Tabor**	58.22	63	P	P	01 59 17.3	-0.2
	baz=313						
BRVK	**Borovoye**	58.59	317	P	P	01 59 20.3	+0.4
BRVK				pmax	pmax		
	comp=Z,52nm,0.7s						
BRVK	**Borovoye**	58.59	317	P	P	01 59 20.3	+0.4
BRVK	**Borovoye**	58.59	317	⇑P	P	01 59 20.4	+0.5
SCIA	**State Center**	58.84	61	P	P	01 59 21.2	-0.6
	baz=314						
MSTX	**Muleshoe**	58.85	74	P	P	01 59 22.0	-0.2
	baz=314						
AMTX	**Amarillo**	58.86	72	P	P	01 59 21.0	-1.2
	baz=314						
MNTX	**Cornudas Mount**	58.87	77	IAmb	IAmb	01 59 43.7	
	comp=Z,9.7nm,0.9s						
MNTX	**Cornudas Mount**	58.87	77	P	P	01 59 21.8	-0.3
	baz=315,SNR=5.9						
KRVT	**Keravat (AS076**	59.57	208	LR	LR	02 23 02.2	
	comp=Z,97nm,19.5s,baz=152,slow=34						
SVE	**Sverdlovsk**	59.57	325	⇓eP	P	01 59 27.7	+1.1
SVE				pmax	pmax		
	comp=Z,41nm,1.2s						
JFWS	**Jewell Farm**	59.73	58	P	P	01 59 26.4	-1.5
	baz=314						
LOF	**Lofoten**	59.73	353	eP	P	01 59 26.8	-0.7
STEI	**Steigen**	59.79	352	eP	P	01 59 27.8	-0.1
ANGG	**Ammassalik, Gr**	60.09	16	P	P	01 59 27.7	-2.2
ANGG	**Ammassalik, Gr**	60.09	16	iP	P	01 59 28.1	-1.9
ANGG				IAmb	IAmb	01 59 29.2	
	comp=Z,22nm,0.9s						
PZH	**PanZhiHua**	60.27	276	P	P	01 59 31.8	-0.2
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,150nm,4.3s						
FAUS	**Fauske**	60.32	352	eP	P	01 59 31.7	+0.2
PRGR	**Permogore**	60.34	335	eP	P	01 59 32.1	+0.4
PRGR				e*PP	sP	01 59 46.3	-2.6
ARU	**Arti**	60.62	326	LR	LR	02 29 03.1	
	comp=Z,181nm,19.1s,baz=40,slow=39						
ARU	**Arti**	60.62	326	c iP	P	01 59 34.4	+0.7
ARU				*PP	pwP	01 59 47.3	+1.4
ARU						02 00 16.3	
ARU				S	S	02 07 48.8	+2.4
ARU				SS	SS	02 11 42.0	-2.3
ARU				pmax	pmax		
	comp=Z,47nm,0.9s						
ARU				MLR	MLR		
	comp=Z,252nm,18.0s						
ARU	**Arti**	60.62	326	P	P	01 59 34.2	+0.5
ARU	**Arti**	60.62	326	P	P	01 59 34.4	+0.7
ARU				pP	sP	01 59 52.3	+1.6
KMI	**Kunming**	60.65	274	⇑P	P	01 59 35.6	+0.9
KMI				pmax	pmax		
	comp=Z,20nm,0.7s						
WMOK	**Wichita Mounta**	60.67	70	P	P	01 59 33.8	-0.7
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMOK	**Wichita Mounta**	60.67	70	P	P	01 59 33.8	-0.7
WMOK	**Wichita Mounta**	60.67	70	P	P	01 59 33.1	-1.4
	baz=315						
P40A	**Paris**	61.13	62	IAmb	IAmb	02 00 09.2	
	comp=Z,9.5nm,0.8s						
P40A	**Paris**	61.13	62	P	P	01 59 36.5	-1.0
	baz=315						
OTUK	**Ortayu**	61.16	312	P	P	01 59 37.9	+0.3
PDGK	**Podgornoye**	61.20	304	P	P	01 59 37.9	-0.2
LPIG	**La Paz**	61.28	87	LR	LR	02 20 51.0	
	comp=Z,31nm,20.4s,baz=244,slow=31						
KONS	**Konsvik**	61.37	352	eP	P	01 59 38.1	-0.6
SCHQ	**Schefferville**	61.54	36	P	P	01 59 39.7	-0.4
	comp=Z,14nm,0.8s,baz=337,slow=7.0,SNR=23						
SCHQ				LR	LR	02 26 32.2	
	comp=Z,90nm,18.9s,baz=38,slow=36						
	comp=Z,14nm,0.8s						
SCHQ	**Schefferville**	61.54	36	P	P	01 59 39.5	-0.5
SCHQ				IAmb	IAmb	01 59 40.6	
	comp=Z,14nm,0.8s						
STOK	**Stokkvaagen**	61.54	352	eP	P	01 59 39.9	0.0
TUL1	**Leonard**	61.58	67	P	P	01 59 39.6	-0.9
	baz=315						
MOR8	**Moi Rana**	61.58	352	eP	P	01 59 38.8	-1.4
TX31	**Lajitas Ar. Si**	61.58	78	P	P	01 59 40.3	-0.6
TX31	**Lajitas Ar. Si**	61.58	78	P	P	01 59 40.6	-0.3
	baz=316						
TX32	**Lajitas Array**	61.58	78	IAmb	IAmb	02 00 02.1	
	comp=Z,6.5nm,0.7s						
TXAR	**Lajitas Array**	61.58	78	P	P	01 59 40.7	-0.2
	comp=Z,2.0nm,0.4s,baz=305,slow=5.5,SNR=103						
TXAR				LR	LR	02 25 15.9	
	comp=Z,66nm,19.2s,baz=306,slow=35						
	comp=Z,2.0nm,0.4s						
ABTX	**Abilene, Hawle**	61.66	72	IAmb	IAmb	02 00 28.0	
	comp=Z,15nm,1.2s						
ABTX	**Abilene, Hawle**	61.66	72	P	P	01 59 40.4	-0.8
	baz=315						
HDIL	**Hopedale**	61.89	59	P	P	01 59 41.7	-0.9
	baz=316						
HDIL	**Hopedale**	61.89	59	P	P	01 59 41.9	-0.8
	baz=315						
IVI	**Ivigtut**	61.91	23	P	P	01 59 41.6	-0.8
IVI	**Ivigtut**	61.91	23	iP	P	01 59 42.2	-0.1
IVI				IAmb	IAmb	01 59 42.9	
	comp=Z,38nm,1.0s						
VLDQ	**Val d'Or**	62.29	47	IAmb	IAmb	01 59 43.9	
	comp=Z,13nm,0.8s						
KLMR	**Klimovskoe**	62.52	338	eP	P	01 59 45.6	-0.9
KLMR				e		02 02 04.5	
KLMR				pmax	pmax		
	comp=Z,31nm,0.9s						
KLMR	**Klimovskoe**	62.52	338	eP	P	01 59 45.7	-0.8
KLMR				AMP		01 59 47.8	
	comp=Z,31nm,0.9s						
KLMR				ePP	PP	02 02 04.6	+0.9
MDOK	**Medeo**	62.56	306	P	P	01 59 47.3	0.0
NRS	**Narsarsuaq**	62.59	21	P	P	01 59 45.7	-1.3
NRS				pmax	pmax		
	comp=Z,25nm,1.0s						
NRS	**Narsarsuaq**	62.59	21	P	P	01 59 45.6	-1.3
CCM	**Cathedral Cave**	62.61	63	P	P	01 59 46.7	-0.8
	baz=316						
O44A	**Mansfield**	62.62	59	IAmb	IAmb	01 59 49.5	
	comp=Z,9.2nm,0.5s						
U40A	**Yellville**	62.93	65	IAmb	IAmb	02 00 27.8	
	comp=Z,14nm,1.2s						
U40A	**Yellville**	62.93	65	P	P	01 59 47.5	-2.1
	baz=316						
BORG	**Borgarnes**	63.02	8	LR	LR	02 28 26.5	
	comp=Z,51nm,18.8s,baz=340,slow=37						
JCT	**Junction City**	63.09	74	IAmb	IAmb	02 00 12.3	
	comp=Z,17nm,1.2s						
JCT	**Junction City**	63.09	74	P	P	01 59 50.1	-0.8
	baz=316						
SFIN	**Lafayette**	63.19	58	IAmb	IAmb	01 59 52.3	
	comp=Z,17nm,0.9s						
SFIN	**Lafayette**	63.19	58	P	P	01 59 50.6	-0.7
	baz=316						
TARG	**Taragay, Kyrgy**	63.21	304	IAmb	IAmb	01 59 56.1	
	comp=Z,5.4nm,0.6s						
W39A	**Magazine**	63.23	67	P	P	01 59 50.2	-1.5
	baz=316						
WHTX	**Lake Whitney,**	63.40	71	P	P	01 59 52.0	-0.8
	baz=316						
NSS	**Namsos**	63.41	353	eP	P	01 59 52.2	-0.1
TKM2	**Tokmak 2**	63.47	306	P	P	01 59 53.8	+0.4
	SNR=21						
TKM2	**Tokmak 2**	63.47	306	P	P	01 59 53.5	+0.1
AAM	**Ann Arbor**	63.58	55	P	P	01 59 53.2	-0.6
	baz=317						
BOOM	**Boomskoye usch**	63.61	306	IAmb	IAmb	01 59 55.9	
	comp=Z,18nm,0.9s						
ULHL	**Ulahol**	63.63	305	P	P	01 59 54.8	+0.3
	SNR=19						
FCAR	**Ozark Folk Cen**	63.67	65	P	P	01 59 52.7	-1.8
FCAR				IAmb	IAmb	02 00 07.1	
	comp=Z,9.5nm,0.8s						
P46A	**Rosedale**	63.68	59	IAmb	IAmb	01 59 54.6	
	comp=Z,9.9nm,0.8s						
USP	**Ospenovka**	63.76	307	P	P	01 59 55.9	+0.8
	SNR=34						
MIAR	**Mount Ida**	63.82	67	P	P	01 59 54.0	-1.5
	baz=316						
OLIL	**Olney**	63.84	60	IAmb	IAmb	02 00 19.2	
	comp=Z,15nm,1.1s						
OLIL	**Olney**	63.84	60	P	P	01 59 54.4	-1.2
	baz=317						
SADO	**Sadowa**	63.98	50	LR	LR	02 28 16.9	
	comp=Z,110nm,19.5s,baz=336,slow=36						
PBMO	**Poplar Bluff**	63.98	63	IAmb	IAmb	02 00 32.3	
	comp=Z,6.5nm,0.7s						
PBMO	**Poplar Bluff**	63.98	63	P	P	01 59 55.3	-1.3
	baz=316						
KBK	**Karagaybulak**	63.98	306	P	P	01 59 57.4	+0.7
	SNR=14						
W41B	**Gary Mavity, V**	64.12	66	P	P	01 59 56.3	-1.2
	baz=316						
AAK	**Ala-Archa**	64.22	307	P	P	01 59 59.0	+0.7
	SNR=17						
AAK	**Ala-Archa**	64.22	307	LR	LR	02 28 52.4	
	comp=Z,160nm,20.4s,baz=52,slow=37						
AAK	**Ala-Archa**	64.22	307	P	P	01 59 58.8	+0.5
AAK				pmax	pmax		
	comp=Z,22nm,1.0s						
AAK	**Ala-Archa**	64.22	307	P	P	01 59 58.8	+0.5
AAK				IAmb	IAmb	01 59 59.9	

	comp=Z,22nm,0.9s						
AAK	Ala-Archa	64.22	307	i P	P	01 59 58.8	+0.5
	SNR=20						
AAK	Ala-Archa	64.22	307	⇑P	P	01 59 58.9	+0.7
AAK				sP	sP	02 00 20.5	+5.1
O48B	Farmland	64.30	57	P	P	01 59 56.9	-1.6
	baz=317						
O48B	Farmland	64.30	57	P	P	01 59 57.0	-1.6
	baz=317						
N49A	Columbus Grove	64.31	56	IAmb	IAmb	01 59 59.5	
	comp=Z,10nm,0.9s						
LSA	Lhasa	64.42	286	P	P	02 00 01.3	+1.2
LSA				pmax	pmax		
	comp=Z,48nm,0.7s						
LSA	Lhasa	64.42	286	P	P	02 00 01.6	+1.5
UCH	Uchtor	64.52	306	P	P	02 00 01.2	+0.7
	SNR=11						
EKS2	Erkin-Say	64.56	307	P	P	02 00 01.3	+0.8
	SNR=33						
FIA1	FINESS Array S	64.67	345	P	P	02 00 00.0	-0.6
FIA1				IAmb	IAmb	02 00 01.1	
	comp=Z,18nm,0.9s						
FINES	FINESS Array B	64.67	345	P	P	02 00 00.0	-0.6
	comp=Z,7.9nm,0.4s,baz=16,slow=7.2,SNR=119						
FINES				LR	LR	02 32 01.2	
	comp=Z,64nm,19.3s,baz=27,slow=40						
	comp=Z,7.9nm,0.4s						
SWI	Sorong	64.70	232	P	P	02 00 01.7	+0.2
P48A	Milroy	64.74	58	IAmb	IAmb	02 00 00.9	
	comp=Z,15nm,0.6s						
P48A	Milroy	64.74	58	P	P	02 00 00.5	-1.0
	baz=317,SNR=7.9						
P48A				P	P	02 00 00.5	-1.0
	baz=317,SNR=7.9						
O49A	Covington	64.77	57	IAmb	IAmb	02 00 01.9	
	comp=Z,12nm,0.7s						
O49A	Covington	64.77	57	P	P	02 00 00.6	-1.2
	baz=318,SNR=5.4						
O49A				P	P	02 00 00.6	-1.2
	baz=318,SNR=5.4						
TBLU	Trondheim	64.80	353	eP	P	02 00 00.6	-0.9
AML	Almayashu	65.00	307	P	P	02 00 04.7	+1.0
	SNR=27						
AML	Almayashu	65.00	307	i P	P	02 00 04.7	+1.0
	SNR=27						
TRQ	Mont Tremblant	65.01	46	IAmb	IAmb	02 00 23.3	
	comp=Z,12nm,0.9s						
P49A	Miami Univ. Ec	65.06	57	IAmb	IAmb	02 00 03.0	
	comp=Z,10nm,0.8s						
Z41A	Richland Creek	65.19	67	P	P	02 00 03.4	-1.1
	baz=317						
ACSO	Alum Creek Sta	65.44	56	P	P	02 00 05.3	-0.8
	baz=318						
ACSO	Alum Creek Sta	65.44	56	P	P	02 00 05.1	-0.9
	baz=318						
ERPA	Erie	65.55	53	P	P	02 00 05.9	-0.8
	baz=318						
AKTO	Aktyubinsk	65.55	322	LR	LR	02 31 18.5	
	comp=Z,178nm,18.5s,baz=33,slow=38						
PECO	Prince Edward	65.63	49	P	P	02 00 05.9	-1.3
PECO				IAmb	IAmb	02 00 07.1	
	comp=Z,10nm,0.8s						
T47A	Sharon Grove	65.65	61	IAmb	IAmb	02 00 07.8	
	comp=Z,14nm,0.9s						
T47A	Sharon Grove	65.65	61	P	P	02 00 07.1	-0.3
	baz=318,SNR=6.7						
M53A	WI Miller and	65.71	53	IAmb	IAmb	02 00 08.0	
	comp=Z,19nm,0.9s						
M53A	WI Miller and	65.71	53	P	P	02 00 06.8	-1.0
	baz=318,SNR=6.8						
RAF	Rauma	65.73	347	eP	P	02 00 07.4	-0.1
AB31	Akbulak array	65.73	320	i P	P	02 00 08.4	+0.7
KSH	Kashi	65.78	303	P	P	02 00 12.4	+4.0
KSH				pP	sP	02 00 25.9	+0.4
KSH				PcP	PcP	02 00 43.8	+4.5
KSH				PP	PP	02 02 36.3	+3.3
KSH				ScP		02 04 39.7	
KSH				pmax	pmax		
	comp=Z,35nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,4.6s						
KSH				LR	LR		
	comp=Z,140nm,18.2s						
KSH				LR	LR		
	comp=Z,250nm,19.9s						
KSH				LR	LR		
	comp=Z,200nm,19.0s						
ALLY	Alegheny Colle	65.82	53	IAmb	IAmb	02 00 08.9	
	comp=Z,18nm,0.7s						
KK31	Karatay Array	65.83	309	i P	P	02 00 08.6	+0.1
WVT	Waverly	65.89	62	P	P	02 00 08.2	-0.7
WVT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WVT	Waverly	65.89	62	P	P	02 00 08.2	-0.7
WVT	Waverly	65.89	62	P	P	02 00 08.1	-0.9
	baz=317						
PMG	Port Moresby	65.90	212	LR	LR	02 32 09.1	
	comp=Z,101nm,18.0s,baz=185,slow=39						
WVNY	West Valley, N	66.01	52	P	P	02 00 09.5	-0.2
	baz=319,SNR=7.8						
AKN	Aaknes	66.09	355	eP	P	02 00 09.7	-0.1
DOMB	Dombas	66.09	353	eP	P	02 00 09.9	0.0
BMNY	Brushton-Moira	66.09	47	P	P	02 00 08.6	-1.6
	baz=320						
MEF	Metsahovi	66.10	345	eP	P	02 00 09.7	-0.2
O52A	Adamsville	66.11	55	IAmb	IAmb	02 00 10.3	
	comp=Z,15nm,0.8s						
O52A	Adamsville	66.11	55	P	P	02 00 09.6	-0.8
	baz=318,SNR=6.8						
O52A				P	P	02 00 09.6	-0.8
	baz=318,SNR=6.8						
Q51A	Peebles	66.15	57	P	P	02 00 09.9	-0.7
	baz=318,SNR=8.6						
Q51A				P	P	02 00 09.9	-0.7
	baz=318,SNR=8.6						
J56A	Wolcott	66.19	50	IAmb	IAmb	02 00 11.1	
	comp=Z,12nm,0.8s						
J56A	Wolcott	66.19	50	P	P	02 00 09.7	-1.0
	baz=320,SNR=6.7						
J56A				P	P	02 00 09.7	-1.0
	baz=320,SNR=6.7						
OXF	Oxford	66.20	64	IAmb	IAmb	02 00 10.9	
	comp=Z,31nm,1.1s						
OXF	Oxford	66.20	64	P	P	02 00 09.8	-1.1
	baz=318						
OXF	Oxford	66.20	64	P	P	02 00 09.8	-1.1
	baz=317						
WCNY	West Carthage	66.22	49	P	P	02 00 09.8	-1.2
	baz=320						
LONY	Lake Ozonia	66.22	48	P	P	02 00 09.5	-1.5
	baz=320						
P52A	Corning	66.32	56	P	P	02 00 10.1	-1.6
	baz=318						
O53A	New Philadelph	66.33	55	P	P	02 00 10.6	-1.2
	baz=319						
J57A	Williamstown	66.49	49	P	P	02 00 11.7	-1.0
	baz=320						
J57A				P	P	02 00 11.7	-1.0
	baz=320						
M55A	Ridgway	66.64	52	P	P	02 00 13.6	-0.1
	baz=319,SNR=8.6						
M55A				P	P	02 00 13.6	-0.1
	baz=319,SNR=8.6						
NC303	NORSAR Array S	66.72	352	P	P	02 00 13.2	-0.7
L56A	Greenwood	66.72	51	P	P	02 00 13.2	-1.0
L56A	Greenwood	66.72	51	P	P	02 00 14.0	-0.2
	baz=320,SNR=9.9						
L56A				P	P	02 00 14.0	-0.2
	baz=320,SNR=9.9						
U49A	Red Boiling Sp	66.72	60	IAmb	IAmb	02 00 43.7	
	comp=Z,6.3nm,0.7s						
CLTN	Cedars of Leba	66.73	61	IAmb	IAmb	02 00 14.8	
	comp=Z,16nm,0.8s						
D62A	Allapoint, All	66.74	43	IAmb	IAmb	02 00 14.4	
	comp=Z,9.9nm,0.8s						
Q52A	Bidwell	66.75	56	IAmb	IAmb	02 00 13.9	
	comp=Z,10nm,0.5s						
K57A	Scipio Center	66.77	50	IAmb	IAmb	02 00 14.1	
	comp=Z,19nm,0.8s						
K57A	Scipio Center	66.77	50	P	P	02 00 13.8	-0.7
	baz=320,SNR=6.6						
AAL	Aland	66.79	347	eP	P	02 00 14.1	-0.2
T50A	Nancy	66.85	59	IAmb	IAmb	02 00 27.8	
	comp=Z,39nm,1.7s						
J58A	Remsen	66.87	49	IAmb	IAmb	02 00 31.2	
	comp=Z,13nm,1.1s						
NB201	NORSAR Array S	66.90	352	P	P	02 00 14.4	-0.7
NB2	NORSAR Subarra	66.91	352	P	P	02 00 14.8	-0.4
	comp=Z,19nm,0.7s,baz=10.0,slow=6.5						
NB2	NORSAR Subarra	66.91	352	P	P	02 00 14.8	-0.4
	baz=10.0,slow=6.5						
NOA	NORSAR Array B	66.91	352	P	P	02 00 15.1	-0.1
	comp=Z,19nm,0.8s,baz=11,slow=6.4,SNR=105						
NOA				LR	LR	02 29 34.9	
	comp=Z,63nm,20.8s,baz=15,slow=36						
	comp=Z,19nm,0.8s						
S51A	Beattyville	67.05	58	IAmb	IAmb	02 00 44.8	
	comp=Z,7.0nm,0.8s						
HYA	Hoyanger	67.14	355	eP	P	02 00 17.0	+0.5
J59A	Piesco	67.15	48	IAmb	IAmb	02 00 16.3	
	comp=Z,14nm,0.6s						
J59A	Piesco	67.15	48	P	P	02 00 15.6	-1.3
	baz=321						
J59A				P	P	02 00 15.6	-1.3
	baz=321						
NC602	NORSAR Array S	67.19	352	eP	P	02 00 17.2	+0.3
VSU	Vasula	67.37	343	eP	P	02 00 18.1	+0.1
R53A	Hurricane	67.39	57	P	P	02 00 18.2	-0.3
	baz=319,SNR=6.8						
R53A				P	P	02 00 18.2	-0.3
	baz=319,SNR=6.8						
UPP	Uppsala	67.41	349	eP	P	02 00 18.1	-0.1
BINY	Binghamton	67.42	50	P	P	02 00 18.0	-0.7
	baz=320						
SKAR	Skarslia	67.49	354	eP	P	02 00 19.4	+0.5
MOS	Moscow	67.53	336	eP	P	02 00 19.0	-0.1
MOS				pmax	pmax		
	comp=Z,39nm,0.7s						
MOS				MLR	MLR		
	comp=N,300nm,19.0s						
MOS				MLR	MLR		
	comp=Z,500nm,19.0s						
M57A	Sunshine Farm,	67.54	51	IAmb	IAmb	02 00 19.8	
	comp=Z,17nm,0.8s						
M57A	Sunshine Farm,	67.54	51	P	P	02 00 18.5	-0.9
	baz=320						
M57A				P	P	02 00 18.5	-0.9
	baz=320						
G62A	West of Eustis	67.57	45	P	P	02 00 18.3	-1.3
	baz=322						
G62A				P	P	02 00 18.3	-1.3
	baz=322						
HFS	Hagfors	67.58	351	LR	LR	02 28 45.5	
	comp=Z,93nm,22.0s,baz=348,slow=35						
ACCN	Adirondack Com	67.60	48	IAmb	IAmb	02 00 19.4	
	comp=Z,14nm,0.7s						
ACCN	Adirondack Com	67.60	48	P	P	02 00 18.7	-1.1
	baz=321,SNR=5.6						
SWET	Sewanee	67.60	61	IAmb	IAmb	02 02 15.7	
	comp=Z,46nm,1.9s						
MTSE	Matsula	67.63	345	eP	P	02 00 19.8	+0.2
CHTO	Chiang Mai	67.67	272	P	P	02 00 20.2	-0.4
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	Chiang Mai	67.67	272	P	P	02 00 20.2	-0.4
CHTO				IAmb	IAmb	02 00 21.6	
	comp=Z,10nm,0.9s						
SSPA	Standing Stone	67.70	52	P	P	02 00 19.8	-0.7
SSPA	Standing Stone	67.70	52	P	P	02 00 20.1	-0.4
	baz=320,SNR=8.2						
SSPA	Standing Stone	67.70	52	P	P	02 00 20.0	-0.4
SSPA				pP	sP	02 00 36.5	-1.1
LBNH	Lisbon	67.72	46	P	P	02 00 19.2	-1.3
	baz=322						
H62A	Milan	67.81	45	P	P	02 00 20.6	-0.5
	baz=322,SNR=9.6						
H62A				P	P	02 00 20.6	-0.5
	baz=322,SNR=9.6						
ASK	Askoy	67.88	355	eP	P	02 00 21.8	+0.7
TZTN	Tazewell	67.89	59	P	P	02 00 21.2	-0.5
	baz=319						
CMAR	Chiang Mai Arr	67.94	272	P	P	02 00 22.6	+0.3
	comp=Z,8.8nm,0.7s,baz=25,slow=6.6,SNR=35						
CMAR				LR	LR	02 31 48.3	
	comp=Z,42nm,19.3s,baz=0.0,slow=37						
	comp=Z,8.8nm,0.7s						
CMAR	Chiang Mai Arr	67.94	272	P	P	02 00 22.2	0.0
BER	Bergen	67.97	355	eP	P	02 00 22.1	+0.4
F64A	Sherman	68.00	43	IAmb	IAmb	02 00 22.1	
	comp=Z,14nm,0.7s						
OSL	Oslo	68.05	352	eP	P	02 00 22.9	+0.6
PKME	Peaks-Kenny Pk	68.08	44	P	P	02 00 21.8	-0.9
	baz=322						
N58A	Sunbury	68.12	51	P	P	02 00 22.8	-0.3
	baz=320,SNR=5.2						
N58A				P	P	02 00 22.8	-0.3
	baz=320,SNR=5.2						
TAPN	Taplejung	68.19	287	eP	P	02 00 24.9	+0.8
FPAL	Fort Paine	68.28	62	IAmb	IAmb	02 00 23.9	
	comp=Z,9.0nm,0.9s						
OBN	Obninsk	68.36	336	LR	LR	02 34 11.1	
	comp=Z,53nm,18.0s,baz=3.0,slow=39						
OBN	Obninsk	68.36	336c	iP	P	02 00 24.3	0.0
OBN				e*PP	sP	02 00 38.5	-2.6
OBN				e		02 00 49.1	
OBN				e		02 02 56.2	
OBN				pmax	pmax		
	comp=Z,50nm,1.3s						
OBN				MLR	MLR		
	comp=Z,224nm,18.0s						
OBN	Obninsk	68.36	336	P	P	02 00 24.2	-0.1
SANI	Sanana	68.36	236	P	P	02 00 23.8	-1.1
	comp=Z,1µmcomp=Z,12nm,0.6s						
ODD1	Odda	68.37	354	eP	P	02 00 24.8	+0.5
KONO	Kongsberg	68.42	353	P	P	02 00 24.4	-0.2
KONO				pmax	pmax		
	comp=Z,18nm,0.8s						
KONO	Kongsberg	68.42	353	P	P	02 00 24.4	-0.2
KONO				IAmb	IAmb	02 00 25.9	
	comp=Z,18nm,0.8s						
KONO	Kongsberg	68.42	353	eP	P	02 00 25.2	+0.6
TKL	Tuckaleechee C	68.44	60	LR	LR	02 31 49.8	
	comp=Z,217nm,18.5s,baz=330,slow=37						
LRAL	Lakeview Retre	68.64	64	P	P	02 00 25.4	-1.1
	baz=319						
ODAN	Odare	68.74	287	eP	P	02 00 27.9	+0.4
	comp=Z,41nm,0.5s						
L61B	Northampton	68.78	48	P	P	02 00 25.9	-1.3
	baz=322						
VIKU	Vikbolandet	68.84	349	eP	P	02 00 27.2	0.0
GUN	Gumba	68.86	288	eP	P	02 00 29.0	+0.7
	comp=Z,242nm,0.6s						
JIRN	Jiri	68.86	288	eP	P	02 00 29.3	+0.9
	comp=Z,8.4nm,0.8s						
BLS5	Blasjo	68.86	354	eP	P	02 00 27.8	+0.4
STRU	Stroemstad	68.90	352	eP	P	02 00 27.7	+0.1
SLIT	Slitere, Latvi	68.91	345	eP	P	02 00 27.6	-0.1
KMY	Karmoy	69.14	355	eP	P	02 00 29.5	+0.4
RAMN	Ramite	69.15	287	eP	P	02 00 30.6	+0.6
	comp=Z,181nm,0.5s						
GGN	Saint George	69.23	42	IAmb	IAmb	02 00 29.5	
	comp=Z,14nm,0.8s						
HRV	Adam Dziewonsk	69.25	47	P	P	02 00 29.0	-1.0
	baz=322						
KKN	Kakani	69.30	289	eP	P	02 00 31.7	+0.8
	comp=Z,100nm,0.5s						
PAL	Palisades	69.33	50	P	P	02 00 29.0	-1.7
	baz=321						
PKI	Pulchoki	69.39	289	eP	P	02 00 31.8	+0.2
	comp=Z,99nm,0.5s						
PKIN	Phulchoki	69.39	289	eP	P	02 00 31.9	+0.4
	comp=Z,114nm,0.5s						
GKN	Gorkha	69.52	289	eP	P	02 00 32.7	+0.5
DMN	Daman	69.54	289	eP	P	02 00 33.2	+0.8
	comp=Z,68nm,0.5s						
MPSI	Mapaga	69.61	243	P	P	02 00 32.2	-0.4
	comp=Z,18nm,0.6s						
Y52A	Lilburn	69.63	61	IAmb	IAmb	02 00 32.5	
	comp=Z,7.4nm,0.7s						
APSI	Ampana	69.69	240	P	P	02 00 32.4	-0.7
	comp=Z,20nm,0.8s						
DANN	Dangsing	69.77	290	eP	P	02 00 34.5	+0.6
	comp=Z,153nm,0.8s						
HOMB	Homborsund	69.87	353	eP	P	02 00 34.0	+0.4
CHGR	Chuyangaron	69.89	307	P	P	02 00 34.6	+0.4
SNART	Snartemo	69.90	354	eP	P	02 00 34.1	+0.4
LPSR	Galich'ya Gora	70.01	334	eP	P	02 00 34.2	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
KMSC	Kings Mountain	70.13	58	IAmb	IAmb	02 00 35.7	
	comp=Z,16nm,0.9s						
KMSC	Kings Mountain	70.13	58	P	P	02 00 34.9	-0.7
	baz=320						
KMSC	Kings Mountain	70.13	58	P	P	02 00 34.8	-0.9
	baz=320,SNR=5.6						
KOLN	Koldanda	70.30	290	eP	P	02 00 37.5	+0.5
HODGE	Hodges	70.33	60	IAmb	IAmb	02 00 37.0	
	comp=Z,10nm,0.7s						
HODGE	Hodges	70.33	60	P	P	02 00 36.0	-0.8
	baz=320						
IDID	Didziasalis	70.34	342	eP	P	02 00 36.7	+0.2
IIGN	Ignalina	70.40	342	eP	P	02 00 37.4	+0.4
PYUN	Piuthan	70.41	291	eP	P	02 00 38.2	+0.5
	comp=Z,132nm,0.9s						
VRH	Novokhopyorsk	70.46	332	eP	P	02 00 36.9	-0.4
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
PABE	Paberze	70.66	344	eP	P	02 00 38.7	+0.2
NACGM	Naroch	70.72	342⇓	eP	P	02 00 39.2	+0.4
	baz=19						
FABU	Falkenberg	70.76	351	i P	P	02 00 38.4	-0.6
VORR	Voronezh	70.76	333	eP	P	02 00 39.7	+0.5
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
JSC	Jenkinsville	70.82	59	IAmb	IAmb	02 00 40.0	
	comp=Z,10nm,0.6s						
MNK	Minsk	70.88	341	i P	P	02 00 40.8	+1.0
MNK				i *PP	sP	02 00 55.0	-1.7
MNK				i		02 03 17.8	
MNK				i PPP	PPP	02 05 00.8	
MNK				i S	S	02 09 56.0	+4.5
MNK				i SS	SS	02 14 26.0	+2.7
MNK				pmax	pmax		
	comp=E,3.0nm,1.5s						
MNK				pmax	pmax		
	comp=Z,19nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,1.3s						
MNK	Minsk	70.88	341	i P	P	02 00 40.8	+1.0
	comp=E,3.0nm,1.5s						
MNK				i P	P	02 00 40.8	+1.0
	comp=N,19nm,1.3s						
MNK				i P	P	02 00 40.8	+1.0
	comp=Z,19nm,0.9s,baz=200						
MNK				i pP	sP	02 00 55.0	-1.7
MNK				i PP	PP	02 03 17.8	+1.3
MNK				i PPP	PPP	02 05 00.8	
MNK				i S	S	02 09 56.1	+4.5
MNK				i SS	SS	02 14 26.1	+2.7
MNK				i SSS	SSS	02 17 45.0	
MNK				i LQ	LQ	02 26 58.0	
MNK				i LR	LR	02 28 13.0	
MNK				i LRM	MLR	02 35 59.7	
	comp=E,15nm,15.8s						
MNK				i LRM	MLR	02 36 50.0	
	comp=Z,168nm,18.3s						
MNK				i LRM	MLR	02 37 08.0	
	comp=N,245nm,18.2s						
BLEU	Blekinge	71.10	349	i P	P	02 00 39.6	-1.5
DEL	Delary	71.16	350	i P	P	02 00 40.2	-1.3
VSR	Storozhevoye	71.18	333	eP	P	02 00 41.1	-0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KPL	Plockton	71.25	1	eP	P	02 00 42.7	+0.7
VORD	Divnogorie	71.37	333	eP	P	02 00 41.9	-1.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NIL	Nilore	71.64	301	P	P	02 00 45.2	+0.3
NIL				pmax	pmax		
	comp=Z,66nm,1.1s						
NIL	Nilore	71.64	301	P	P	02 00 45.2	+0.3
DRUM	Mains of Drumt	71.68	359	eP	P	02 00 44.4	-0.3
LUNU	Lund	72.03	350	i P	P	02 00 46.0	-0.7
INVG	Invergeldie, C	72.17	0	eP	P	02 00 47.6	0.0
SUW	Suwalki	72.22	344	eP	P	02 00 47.5	-0.4
SUW	Suwalki	72.22	344	eP	P	02 00 47.6	-0.4
LAWE	Loch Awe, Argy	72.33	1	eP	P	02 00 48.8	+0.3
EAB	Aberfoyle	72.41	0	eP	P	02 00 48.7	-0.4
KBL	Kabul	73.15	305	P	P	02 00 53.3	-0.8
KBL				pmax	pmax		
	comp=Z,52nm,0.8s						
KBL	Kabul	73.15	305	P	P	02 00 53.2	-0.8
EDMD	Edmundbyers	73.76	359	eP	P	02 00 57.0	0.0
GKP	Gorka Klasztor	73.87	347	eP	P	02 00 57.7	0.0
KAPI	Kappang	74.15	240	LR	LR	02 37 49.3	
	comp=Z,49nm,18.0s,baz=48,slow=39						
AKASG	Malin Array Be	74.16	339	P	P	02 00 59.5	+0.1
	comp=Z,14nm,0.5s,baz=24,slow=6.6,SNR=38						
AKASG				LR	LR	02 37 23.7	
	comp=Z,114nm,19.0s,baz=350,slow=39						
	comp=Z,14nm,0.5s						
BKSI	Bulukumba	74.21	239	P	P	02 01 00.2	+0.1
	comp=Z,11nm,0.6s						
HPK	Haverah Park	74.63	359	eP	P	02 01 02.2	+0.1
BSSI	Bau Bau, Buton	74.70	239	P	P	02 01 03.4	+0.4
	comp=Z,7.7nm,0.6s						
BEL	Belsk	74.72	345	eP	P	02 01 03.6	+0.9
PPT	Papeete	75.18	146	LR	LR	02 25 43.2	
	comp=Z,219nm,21.8s,baz=303,slow=29						
GOF	Gofitskoye	75.48	328⇑	eP	P	02 01 08.3	+1.1
GOF				pmax	pmax		
	comp=Z,82nm,0.8s						
BBKI	Banjar Baru	75.56	245	P	P	02 01 07.9	-0.1
GEYT	Alibeck	75.68	314	P	P	02 01 09.6	+1.1
	comp=Z,23nm,0.8s,baz=294,slow=1.4,SNR=48						
GEYT				LR	LR	02 37 27.2	
	comp=Z,233nm,20.3s,baz=40,slow=38						
	comp=Z,23nm,0.8s						
GEYT	Alibeck	75.68	314	IAmb	IAmb	02 01 10.6	
	comp=Z,26nm,0.8s						
GYA0B	ALIBECK ARRAY	75.68	314	P	P	02 01 09.1	+0.6
FOEL	Foel Wylfa	75.72	360	eP	P	02 01 08.2	-0.2
FOEL				IAmb	IAmb	02 01 10.7	
	comp=Z,99nm,1.8s						
CWF	Charnwood Fore	75.85	359	eP	P	02 01 09.1	0.0
CMIG	Matias Romero	76.04	80	LR	LR	02 30 06.2	
	comp=Z,67nm,22.0s,baz=312,slow=32						
LVV	L'vov	76.08	342	eP	P	02 01 10.9	+0.4
GROC	Groznyy	76.16	325	eP	P	02 01 11.1	0.0
GROC				e		02 01 23.0	
GROC				e*PP	PcP	02 01 24.6	+1.6
GROC				pmax	pmax		
	comp=Z,14nm,0.7s						
CLL	Collm	76.33	349	i P	P	02 01 11.6	-0.3
CLL				e*PP	PcP	02 01 25.0	+1.3
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	76.33	349	i P	P	02 01 11.6	-0.3
	comp=Z,4.0nm,0.7s						
CLL				epP	PcP	02 01 25.0	+1.3
KSP	Ksiaz	76.37	347	eP	P	02 01 12.2	+0.1
OJC	Ojcow	76.45	345	eP	P	02 01 13.1	+0.5
OJC	Ojcow	76.45	345	IAmb	IAmb	02 01 14.2	
	comp=Z,21nm,0.9s						
KWP	Kalwaria Pacla	76.51	343	eP	P	02 01 14.1	+1.1
KIV	Kislovodsk	76.57	327	eP	P	02 01 14.5	+1.0
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	76.57	327	P	P	02 01 13.9	+0.4
KIV				IAmb	IAmb	02 01 15.7	
	comp=Z,15nm,0.9s						
KIV	Kislovodsk	76.57	327	i P	P	02 01 14.2	+0.6
	SNR=5.3						
MCH1	Michaelchurch	76.61	360	eP	P	02 01 13.6	+0.1
MCH1				IAmb	IAmb	02 01 14.3	
	comp=Z,15nm,0.9s						
BRG	Berggiesshubel	76.65	349	eP	P	02 01 14.0	+0.2
BRG				Amp		02 01 15.5	
	comp=Z,5.4nm,0.8s						
BRG	Berggiesshubel	76.65	349	eP	P	02 01 13.9	+0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHVC	Chvalec	76.66	347	eP	P	02 01 13.4	-0.4
KBZ	Khabaz	76.70	327	P	P	02 01 15.2	+1.1
	comp=Z,13nm,0.8s,baz=16,slow=3.2,SNR=28						
KBZ				LR	LR	02 41 19.6	
	comp=Z,104nm,18.5s,baz=14,slow=41						
	comp=Z,13nm,0.8s						
MONM	Monmouth	76.77	359	eP	P	02 01 14.7	+0.3
MONM				IAmb	IAmb	02 01 15.8	
	comp=Z,18nm,1.0s						
DPC	Dobruska-Polom	76.85	347	eP	P	02 01 15.7	+0.8
DPC	Dobruska-Polom	76.85	347	eP	P	02 01 15.7	+0.8
KRLC	Kraliky	77.05	347	eP	P	02 01 16.5	+0.4
KRLC	Kraliky	77.05	347	eP	P	02 01 16.5	+0.4
OKC	Ostrava-Krasne	77.08	346	eP	P	02 01 16.8	+0.6
OKC	Ostrava-Krasne	77.08	346	eP	P	02 01 16.8	+0.6
NIE	Niedzica	77.14	344	eP	P	02 01 18.3	+1.7

ZEI	Tsey	77.19	326	eP	P	02 01 17.4	+0.2
ZEI				pmax	pmax		
	comp=Z,37nm,1.0s						
MORC	Moravsky Berou	77.23	346	⇑P	P	02 01 17.5	+0.3
MORC	Moravsky Berou	77.23	346	eP	P	02 01 17.4	+0.3
IPM	Ipoh	77.40	261	P	P	02 01 18.0	-0.4
IPM				IAmb	IAmb	02 01 18.7	
	comp=Z,14nm,0.9s						
CRVS	Cervenica-Dubn	77.44	343	eP	P	02 01 19.1	+0.9
CRVS				pmax	pmax		
	comp=Z,20nm,0.8s						
CRVS	Cervenica-Dubn	77.44	343	eP	P	02 01 19.1	+0.9
PRU	Pruhonice	77.44	348	eP	P	02 01 18.5	+0.3
PRU	Pruhonice	77.44	348	eP	P	02 01 18.5	+0.3
ANN	Anapa	77.47	331	eP	P	02 01 16.1	-2.3
ANN				pmax	pmax		
	comp=Z,44nm,0.9s						
ONI	Oni	77.52	326	IAmb	IAmb	02 01 24.5	
	comp=Z,15nm,0.9s						
LANS	Liptovska Anna	77.54	345	eP	P	02 01 20.6	+1.8
LANS				pmax	pmax		
	comp=Z,14nm,0.8s						
LANS	Liptovska Anna	77.54	345	eP	P	02 01 20.6	+1.8
UZH	Uzhgorod	77.55	343	⇑iP	P	02 01 19.6	+0.8
UZH				e		02 01 24.2	
UZH				e		02 01 32.0	
UZH				e		02 01 34.6	
MAUC	Maruska	77.59	346	eP	P	02 01 20.0	+0.9
MEM	Membach	77.67	354	dP	P	02 01 19.7	+0.2
	comp=Z,14nm,0.8s						
BTNL	Ternell	77.69	354	dP	P	02 01 20.0	+0.4
	comp=Z,11nm,0.9s						
BTNL				dPcP	PcP	02 01 29.4	-0.1
BSTI	Sart Tilman	77.73	354	dP	P	02 01 20.4	+0.7
MILM	Milestii Mici	77.81	338	⇑iP	P	02 01 20.0	-0.3
	comp=Z,20nm,0.6s						
MILM	Milestii Mici	77.81	338	c iP	P	02 01 20.0	-0.3
MILM				pmax	pmax		
	comp=Z,20nm,0.6s						
VRAC	Vranov	77.83	347	⇑P	P	02 01 21.1	+0.8
VRAC	Vranov	77.83	347	LR	LR	02 39 01.5	
	comp=Z,94nm,19.8s,baz=14,slow=38						
VRAC	Vranov	77.83	347	eP	P	02 01 20.8	+0.4
SOC	Sochi	77.87	329	eP	P	02 01 18.2	-2.5
SOC				ePPP	PPP	02 06 02.9	
SOC				eS	S	02 11 06.2	-4.0
SOC				eSS	SS	02 16 08.7	-1.3
SOC				eSSS	SSS	02 19 37.1	
SOC				MLR	MLR		
	comp=Z,129nm,16.0s						
BCLA	Clavier	77.91	354	dP	P	02 01 20.9	+0.2
	comp=Z,8.0nm,0.9s						
BUR08	Bucovina Ar. S	77.92	340	IAmb	IAmb	02 01 22.9	
	comp=Z,15nm,0.7s						
BHOU	Houvegnez	77.92	354	dP	P	02 01 22.4	+1.5
	comp=Z,4.3nm,0.7s						
BURAR	Bucovina Array	77.95	340	⇑P	P	02 01 22.0	+0.8
BURAR	Bucovina Array	77.95	340	P	P	02 01 22.1	+0.9
KECS	Kecovo	78.01	344	eP	P	02 01 21.4	0.0
KECS	Kecovo	78.01	344	eP	P	02 01 21.4	0.0
BMRD	Maredsous	78.06	354	dP	P	02 01 21.7	+0.1
	comp=Z,8.9nm,0.9s						
KRUC	Moravsky	78.10	347	eP	P	02 01 22.2	+0.3
JAVC	Velka Javorina	78.11	346	eP	P	02 01 23.6	+1.6
RCHB	Rochefort	78.17	354	dP	P	02 01 22.4	+0.1
	comp=Z,7.3nm,0.9s						
DYA	Yadsworthy	78.18	0	eP	P	02 01 22.1	-0.1
DYA				IAmb	IAmb	02 01 23.9	
	comp=Z,38nm,1.2s						
DOU	Dourbes	78.27	355	dP	P	02 01 23.1	+0.3
	comp=Z,4.9nm,1.1s						
VYHS	Vyhne	78.28	345	eP	P	02 01 23.7	+0.8
VYHS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VYHS	Vyhne	78.28	345	eP	P	02 01 23.7	+0.8
SIM	Simferopol'	78.29	334	eP	P	02 01 29.8	+6.8
SIM				ePPP	PPP	02 06 16.0	
SIM				pmax	pmax		
	comp=Z,31nm,1.3s						
PLAI	Plampang	78.39	239	P	P	02 01 21.7	-2.2
	comp=Z,20nm,0.7s						
KHC	Kasperske Hory	78.41	349	eP	P	02 01 24.1	+0.5
KHC				e		02 01 32.5	
KHC	Kasperske Hory	78.41	349	eP	P	02 01 24.1	+0.5
KHC				ePCP	PcP	02 01 32.5	-0.3
WLF	Walferdange	78.60	353	dP	P	02 01 25.5	+0.8
	comp=Z,8.2nm,1.0s						
CKRC	Cesky Krumlov	78.62	348	eP	P	02 01 24.8	0.0
MODS	Modra-Piesok	78.64	346	eP	P	02 01 26.2	+1.3
MODS				pmax	pmax		
	comp=Z,30nm,1.1s						
MODS	Modra-Piesok	78.64	346	eP	P	02 01 26.2	+1.3
PSZ	Piszkesteto	78.66	344	IAmb	IAmb	02 01 27.6	
	comp=Z,19nm,1.1s						
PSZ	Piszkesteto	78.66	344	P	P	02 01 25.9	+0.8
GERES	GERESS Array B	78.67	348	P	P	02 01 25.4	+0.2
	comp=Z,1.9nm,0.7s,baz=35,slow=4.9,SNR=16						
GERES				LR	LR	02 38 51.0	
	comp=Z,61nm,20.7s,baz=24,slow=38						
	comp=Z,1.9nm,0.7s						
GERES	GERESS Array B	78.67	348	P	P	02 01 24.9	-0.2
ZST	Bratislava	78.84	346	eP	P	02 01 27.3	+1.3
ZST				pmax	pmax		
	comp=Z,45nm,1.0s						
ZST	Bratislava	78.84	346	eP	P	02 01 27.2	+1.3
SRO	Srobarova	79.03	345	eP	P	02 01 28.3	+1.3
SRO				pmax	pmax		
	comp=Z,11nm,0.8s						
SRO	Srobarova	79.03	345	eP	P	02 01 28.3	+1.3
BSZH	Besenyszg	79.20	344	P	P	02 01 29.1	+1.2
GNI	Garni	79.22	324	LR	LR	02 41 32.4	
	comp=Z,188nm,19.4s,baz=34,slow=39						
GNI	Garni	79.22	324	P	P	02 01 29.3	+0.9
GNI				pmax	pmax		
	comp=Z,13nm,0.9s						
GNI	Garni	79.22	324	P	P	02 01 29.3	+0.9
GNI				IAmb	IAmb	02 01 54.3	
	comp=Z,12nm,0.8s						
GNI	Garni	79.22	324	P	P	02 01 29.9	+1.6
BUD	Budapest	79.23	345	P	P	02 01 29.7	+1.6
CONA	Conrad Observa	79.28	347	eP	P	02 01 29.4	+0.9
	comp=Z,5.4nm,0.6s,SNR=9.3						
JVM	Valle D.L. Mar	79.39	359	eP	P	02 01 29.1	+0.3
JSA	Saint Aubin	79.42	359	eP	P	02 01 29.3	+0.2
RONA	Rosalia, Austr	79.44	346	eP	P	02 01 30.7	+1.3
	comp=Z,3.6nm,0.6s						
CSKK	Cskako	79.47	345	P	P	02 01 30.7	+1.3
BFO	Black Forest	79.75	352	P	P	02 01 30.1	-0.9
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	79.75	352	P	P	02 01 30.1	-0.9
MPLH	Magyarpolny	79.77	345	P	P	02 01 32.2	+1.1
BIOA	Bad Ischl, Aus	79.81	348	eP	P	02 01 32.6	+1.2
	comp=Z,8.0nm,0.9s						
EIDS	Eidsvold	79.94	203	P	P	02 01 32.6	+0.6
EIDS				IAmb	IAmb	02 03 36.2	
	comp=Z,26nm,1.6s						
ARSA	Arzberg	80.00	347	eP	P	02 01 33.3	+1.0
	comp=Z,4.9nm,0.6s,SNR=5.5						
WB0	Warramunga Arr	80.09	220	P	P	02 01 32.3	-0.7
WB0				IAmb	IAmb	02 01 33.4	
	comp=Z,23nm,1.6s						
WR0	Warramunga Arr	80.20	219	P	P	02 01 33.1	-0.5
WB2	Warramunga Arr	80.26	220	P	P	02 01 33.2	-0.7
WRA	Warramunga Arr	80.27	220	P	P	02 01 33.5	-0.5
	comp=Z,3.8nm,0.6s,baz=32,slow=6.2,SNR=42						
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	80.27	220	P	P	02 01 33.1	-0.9
RETA	Reutte	80.35	350	eP	P	02 01 34.6	+0.3
	comp=Z,7.6nm,1.2s						
WATA	Walderalm	80.41	350	eP	P	02 01 35.2	+0.5
	comp=Z,7.4nm,0.5s,SNR=8.5						
KBA	Koelnbreinsper	80.45	348	i P	P	02 01 36.1	+1.2
	comp=Z,34nm,0.6s,SNR=30						
MOTA	Moosalm	80.46	350	i P	P	02 01 35.3	+0.4
	comp=Z,14nm,1.2s,SNR=7.9						
CLF	Chambon-Foret	80.46	356	IAmb	IAmb	02 01 36.1	
	comp=Z,18nm,0.9s						
WTTA	Wattenberg	80.48	349	i P	P	02 01 35.9	+0.8
	comp=Z,10nm,0.5s,SNR=8.4						
MORH	Mrgy, Hungar	80.52	344	eP	P	02 01 35.2	+0.1
MORH	Mrgy, Hungar	80.52	344	P	P	02 01 34.8	-0.3
SQTA	Sankt Quirin	80.57	350	i P	P	02 01 36.1	+0.6
	comp=Z,14nm,0.9s,SNR=7.9						
SOKA	Soboth	80.62	347	i P	P	02 01 36.5	+0.8
	comp=Z,12nm,0.5s,SNR=13						
FETA	Feichten	80.82	350	i P	P	02 01 37.5	+0.6
	comp=Z,8.1nm,0.6s,SNR=6.4						
OBKA	Obir	80.86	347	i P	P	02 01 37.7	+0.7
	comp=Z,18nm,0.5s,SNR=18						
ABTA	Abfaltersbach	80.88	349	eP	P	02 01 37.5	+0.4
	comp=Z,14nm,1.0s,SNR=9.7						
HYBB	Hyderabad (bro	81.20	287	eP	P	02 01 39.4	+0.2
HYBB				IVmB_BB		02 01 39.6	
	comp=Z,216nm,0.7s						
GCIS	Gornji Cirnik	81.33	346	i P	P	02 01 40.0	+0.6
GCIS				IAMb		02 01 40.9	
	comp=Z,12nm,0.7s						
FRGS	Fruska Gora	81.35	343	eP	P	02 01 39.5	-0.1
CRES	Cresnjev	81.40	347	eP	P	02 01 40.0	+0.2
GEVA	Gevas	81.45	325	IAmb	IAmb	02 01 42.7	
	comp=Z,14nm,1.1s						
TUE	Stuetta	81.50	351	IAmb	IAmb	02 01 45.3	
	comp=Z,12nm,0.7s						
CEY	Cerknica	81.63	347	eP	P	02 01 41.0	-0.1
CTI	Castel Tesino	81.67	349	IAmb	IAmb	02 01 43.7	
	comp=Z,7.4nm,0.7s						
GBRS	Gornja Briga	81.78	347	i P	P	02 01 42.4	+0.5
GBRS				IAMb		02 01 43.0	
	comp=Z,16nm,0.7s						
TOKA	Tokat	81.84	330	IAmb	IAmb	02 01 44.6	
	comp=Z,19nm,1.0s						
SKDS	Skadanscina	81.87	348	eP	P	02 01 42.2	-0.1
RIY	Rijeka	82.03	347	eP	P	02 01 42.4	-0.7
KPJI	Karang Pucung	82.08	248	P	P	02 01 41.6	-2.1
	comp=Z,25nm,1.5s						
BLY	Banja Luka	82.19	345	eP	P	02 01 44.2	+0.2
SALO	Salr	82.22	350	P	P	02 01 43.7	-0.5
DIVS	Divibare	82.34	343	IAmb	IAmb	02 01 46.6	
	comp=Z,14nm,0.9s						
DIVS	Divibare	82.34	343	eP	P	02 01 45.3	+0.4
BBLS	Lazići	82.67	343	eP	P	02 01 47.1	+0.5
SRKY	Kupres RS	82.86	345	eP	P	02 01 48.4	+0.8
RUDO	Rudo	82.92	343	eP	P	02 01 48.1	+0.3
POO	Poona	83.09	291	ex	x	02 01 44.0	
VTS	Vitosha	83.13	340	IAmb	IAmb	02 01 50.6	
	comp=Z,10nm,0.8s						
BNI	Bardonecchia	83.15	353	IAmb	IAmb	02 01 52.2	
	comp=Z,19nm,1.0s						
MARD	Mardin	83.15	326	IAmb	IAmb	02 01 51.7	
	comp=Z,29nm,1.2s						
BR131	Keskin Array S	83.25	332	IAmb	IAmb	02 02 09.0	
	comp=Z,8.2nm,0.8s						
BRTR	Keskin Array B	83.25	332	P	P	02 01 50.4	+0.6
	comp=Z,5.0nm,0.6s,baz=39,slow=2.4,SNR=23						
BRTR				LR	LR	02 43 03.9	
	comp=Z,71nm,19.1s,baz=337,slow=39						
	comp=Z,5.0nm,0.6s						
BRTR	Keskin Array B	83.25	332	P	P	02 01 49.9	+0.1
BRY	Bratogost	83.76	344	eP	P	02 01 51.5	-0.8
AS31	Alice Springs	83.80	218	P	P	02 01 52.3	-0.1
ASAR	Alice Springs	83.80	218	P	P	02 01 52.6	+0.2
	comp=Z,4.5nm,0.7s,baz=22,slow=5.3,SNR=36						
	comp=Z,4.5nm,0.7s						
ASAR	Alice Springs	83.80	218	P	P	02 01 51.9	-0.6
TREB	Trebinje	83.97	344	eP	P	02 01 51.6	-1.6
PDG	Podgorica	84.09	343	IAmb	IAmb	02 01 55.0	
	comp=Z,20nm,0.9s						
PDG	Podgorica	84.09	343	eP	P	02 01 53.7	-0.1
OSSC	Osservatorio P	84.21	349	IAmb	IAmb	02 01 55.8	
	comp=Z,19nm,1.0s						
DRME	Dracevica, Mon	84.34	343	eP	P	02 01 55.3	+0.2
FNA	Florina	85.28	341	IAmb	IAmb	02 02 01.7	
	comp=Z,35nm,1.8s						
MANT	Manisa	85.81	335	IAmb	IAmb	02 02 04.3	
	comp=Z,12nm,0.9s						
SHME	Shamm	86.49	309	i P	P	02 02 05.3	-0.8
	SNR=6.1						
BANOM	Banah	86.52	309	i P	P	02 02 05.8	-0.4
	SNR=6.7						
MSFE	Esma-Masafi	87.06	308	P	P	02 02 08.4	-0.6
UOSS	Minazif	87.39	308	P	P	02 02 09.1	-1.4
UOSS	Minazif	87.39	308	P	P	02 02 09.3	-1.1
HATD	Hatta, Dubai	87.52	308	P	P	02 02 10.2	-0.9
WSAR	Wadi Sarin	87.60	305	LR	LR	02 45 57.5	
	comp=Z,76nm,18.5s,baz=94,slow=39						
NAZ	Nazwa, Dubai	87.61	309	P	P	02 02 10.6	-1.0
ASHO	Ashiyiah	87.68	308	P	P	02 02 11.0	-0.9
PALK	Pallekele	87.81	279	LR	LR	02 47 01.5	
	comp=Z,52nm,19.1s,baz=221,slow=39						
FAQ	Al Faqa, Dubai	87.85	309	P	P	02 02 11.9	-0.8
ASUD	Al Ashush, Dub	88.08	309	P	P	02 02 13.1	-0.6
STKA	Stephens Creek	88.69	209	P	P	02 02 16.2	0.0
	comp=Z,2.0nm,0.7s,baz=359,slow=8.4,SNR=3.4						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	88.69	209	P	P	02 02 16.8	+0.6
STKA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
STKA	Stephens Creek	88.69	209	P	P	02 02 16.8	+0.6
STKA				IAmb	IAmb	02 02 44.8	
	comp=Z,9.2nm,1.6s						
MMAI	Mount Meron Ar	88.88	328	LR	LR	02 46 51.7	
	comp=Z,67nm,18.9s,baz=211,slow=39						
ESDC	Sonseca Array	88.94	0	P	P	02 02 17.0	-0.7
	comp=Z,1.1nm,0.8s,baz=0.9,slow=5.2,SNR=6.8						
	comp=Z,1.1nm,0.8s						
URZ	Urewera	89.65	179	LR	LR	02 36 18.4	
	comp=Z,128nm,21.1s,baz=31,slow=31						
VAE	Valguarnera	89.73	346	LR	LR	02 47 51.1	
	comp=Z,50nm,19.0s,baz=16,slow=39						
IDI	Anoyia	89.77	337	LR	LR	02 45 19.8	
	comp=Z,73nm,22.0s,baz=68,slow=37						
MZR	Muzera	90.35	309	i P	P	02 02 24.1	-0.4
	SNR=13						
SJG	San Juan	91.79	58	LR	LR	02 46 07.9	
	comp=Z,119nm,19.3s,baz=288,slow=37						
KEST	Kesra	92.13	349	LR	LR	02 46 03.6	
	comp=Z,45nm,20.0s,baz=269,slow=37						
TORD	Torodi Ar. Bea	115.19	354	PKP	PKiKP	02 08 03.8	-0.8
	comp=Z,1.5nm,0.5s,baz=350,slow=2.2,SNR=30						
DBIC	Dimbokro	121.79	1	PKP	PKPdf	02 08 16.8	-0.5
	comp=Z,4.1nm,0.5s,baz=25,slow=2.2,SNR=12						
TIC	Toumodi	121.81	2	ePKP2	PKPdf	02 08 17.2	-0.2
KIC	Kosan Boka	122.10	1	ePKP2	PKPdf	02 08 17.3	-0.6
	comp=Z,7.3nm,0.6s						
LIC	Lamto	122.23	2	ePKP2	PKiKP	02 08 18.5	+0.2
	comp=Z,42nm,1.9s						
H03N2	Juan Fernandez	124.20	102	T	T	04 25 37.2	
	baz=314,slow=77,SNR=39						
H03N1	Juan Fernandez	124.21	102	T	T	04 25 38.7	
	baz=314,slow=77,SNR=61						
H03N3	Juan Fernandez	124.22	102	T	T	04 25 38.9	
	baz=314,slow=77,SNR=48						
PLCA	Paso Flores	134.01	104	PKP	PKPdf	02 08 40.4	+0.6
	comp=Z,4.3nm,0.7s,baz=277,slow=2.3,SNR=13						
PLCA	Paso Flores	134.01	104	PKIKP	PKiKP	02 08 40.5	-0.6
PLCA	Paso Flores	134.01	104		PKiKP	02 08 40.5	-0.6
QSPA	South Pole Qui	141.52	180		PKPpre	02 08 47.0	
MAW	Mawson	144.92	218	PKP	PKPbc	02 08 58.0	+0.1
	comp=Z,35nm,0.7s,baz=95,slow=4.6,SNR=53						
MAW	Mawson	144.92	218		PKPbc	02 08 57.9	0.0
PMSA	Palmer Station	147.09	137	eP	PKPdf	02 09 01.9	-0.5
BOSA	Boshof	148.36	306	PKPbc	PKPbc	02 09 09.4	+0.1
	comp=Z,8.4nm,0.6s,baz=31,slow=3.2,SNR=26						

IDC ***04*** *02:17:05.1±3.4, 6°.19S×130°.83E, h0^{km}, mb3.9/2, mbtmp4.0/4, ML4.4/2, MS3.1/1, Error ellipse: s-maj=280.2km s-min=29.1km az=72.0*

NEIC ***04*** *02:17:20.5±2.4, 6°.90S±0°.08×129°.2E±0°.1, h112^{km}±14^{km}, mb4.1/7, Error ellipse: s-maj=20.2km s-min=11.9km az=98.0*

ISC 04 02:17:23.2±0.9**, 7°.3S**±0°.1×**129°.3E**±0°.1**, h150**^{km}**, n26, σ2^{s}.28**/24**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.08	111	Pn	Pn	02 17 58.1	-1.1
FAKI	Fak Fak	5.19	34	Pn	Pn	02 18 32.1	-7.1
MTN	Manton Dam	5.83	162	Pn	Pn	02 18 48.6	+0.9
TNTI	Ternate	8.21	346	Pn	Pn	02 19 06.0	-14
KNRA	Kununurra	8.39	184	Pn	Pn	02 19 23.1	+1.3
FITZ	Fitzroy Crossi	11.36	198	Pn	Pn	02 20 01.6	+0.5
WB0	Warramunga Arr	13.37	159		Pn	02 20 25.3	-1.9
WRAB	Tennant Creek	13.51	159	Pn	Pn	02 20 27.4	-1.6
WRA	Warramunga Arr	13.52	159	Pn	Pn	02 20 26.6	-2.4
	1.7nm,0.3s,baz=346,slow=14,SNR=44						
WRA				Sn	Sn	02 22 48.1	-11
	3.6nm,0.3s,baz=330,slow=23,SNR=9.2						
	2.5nm,0.4s						
WRA	Warramunga Arr	13.52	159	Pn	Pn	02 20 25.3	-3.7
WB2	Warramunga Arr	13.52	159	Pn	Pn	02 20 26.5	-2.6
WR0	Warramunga Arr	13.60	159	Pn	Pn	02 20 28.1	-2.1
AS31	Alice Springs	16.90	165	P	Pn	02 21 13.1	+2.2
ASAR	Alice Springs	16.90	165	P	Pn	02 21 12.0	+1.1
	1.1nm,0.3s,baz=346,slow=12,SNR=32						
ASAR				S	S	02 24 13.5	-5.4
	2.4nm,0.6s,baz=360,slow=27,SNR=8.1						
	1.7nm,0.4s						
ASAR	Alice Springs	16.90	165	P	Pn	02 21 12.6	+1.6
PSA00	Pilbara Seismi	16.93	212		Pn	02 21 14.6	+3.3
PSA00				IAmb	IAmb	02 21 40.1	
	comp=Z,31nm,1.4s						
PMG	Port Moresby	17.77	98	P	Pn	02 21 22.0	+0.6
PMG				IAmb	IAmb	02 21 49.9	
	comp=Z,19nm,1.1s						
SBUM	Sibu	19.61	299	P	P	02 21 37.4	-2.8
SBUM				IAmb	IAmb	02 21 44.2	
	comp=Z,6.8nm,0.8s						
FORT	Forrest	23.43	183	P	P	02 22 22.2	+3.2
MJAR	Matsushiro Arr	44.35	10	LR	LR	02 44 34.7	
	comp=Z,24nm,18.1s,baz=228,slow=38						
MK31	Makanchi Array	68.08	327	P	P	02 28 06.5	-0.2
MK31				IAmb	IAmb	02 28 26.0	
	comp=Z,1.1nm,1.2s						
MKAR	Makanchi Array	68.08	327	P	P	02 28 06.6	-0.1
	comp=Z,0.7nm,0.4s,baz=126,slow=7.5,SNR=19						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	68.08	327	P	P	02 28 06.8	+0.2
MAKZ	Makanchi	68.26	327	P	P	02 28 07.8	0.0
MAKZ				IAmb	IAmb	02 28 30.4	
	comp=Z,3.3nm,1.4s						
KURBB	Kurchatov Arra	72.38	329	P	P	02 28 31.9	-0.8
	comp=Z,0.2nm,0.3s,baz=132,slow=5.1,SNR=4.9						
	comp=Z,0.2nm,0.3s						
ABKAR	Akbulak array	82.30	322	P	P	02 29 27.4	-0.6

DJA ***04*** *02:23:12.8±0.6, 2°N±3°×12°6E±°, h40^{km}±19^{km}, M4.0/8, mb4.1/1, mB4.7/1, MLv3.9/8, Mw(mB)3.9/1*

ISC 04 02:23:13.9±1.5**, 1°.88N**±0°.06×**125°.58E**±0°.06**, h41**^{km}**, n8, σ1^{s}.06**/9**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.80	358	P	Pn	02 23 42.0	-0.4
KMSI	Cibinong	2.06	231	P	Pn	02 23 45.1	-0.9
TNTI	Ternate	2.10	122	P	Pn	02 23 45.5	-1.0
GTOI	Gorontalo	2.85	244	P	Pn	02 23 56.9	0.0
GTOI				S	Sn	02 24 31.0	+1.0
LBMI	Labuha	3.15	142	P	Pn	02 24 02.7	+1.7
SANI	Sanana	3.92	174	S	Sn	02 24 55.5	-1.0
KCP	Kidapawan	5.12	355	⇓eP	Pn	02 24 28.4	+0.3
MPSI	Mapaga	5.89	255	P	Pn	02 24 38.6	0.0

SKHL ***04*** *02:23:13.0±0.1, 44°.70N×147°.70E, h116^{km}±2^{km}, mb4.4/4, msha5.1/4*

IDC ***04*** *02:23:23.1±2.9, 46°.10N×147°.97E, h47^{km}±27^{km}, mb3.4/9, mbtmp3.6/11, ML2.6/2, Error ellipse: s-maj=30.8km s-min=18.3km az=153.0*

ISC 04 02:23:22.6±0.7**, 45°.96N**±0°.08×**147°.96E**±0°.07**, h50**^{km}**, n15, σ1^{s}.24**/18**, mb3.6**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.73	185	eP	Pn	02 23 30.8	-5.9
KUR				AMB	AMB	02 23 34.0	
	210nm,0.4s						
KUR				i S	Sn	02 23 44.2	-2.8
KUR				A	A	02 23 49.6	
	4µm,2.2s						
KUR				A	A	02 23 51.5	
	1µm,0.6s						
KUR				A	A	02 23 51.5	
	1µm,0.6s						
YUK	Yuzh-Kuril'sk	2.44	218	eP	Pn	02 23 39.7	-20
YUK				AMB	AMB	02 23 42.0	
	230nm,0.7s						
YUK				eS	Sn	02 23 59.7	-29
YUK				A	A	02 24 03.1	
	210nm,0.5s						
YUK				A	A	02 24 03.1	
	160nm,0.5s						
YSS	Yuzh-Sakhalins	3.73	287	eP	Pn	02 24 15.0	-2.6
YSS				AMB	AMB	02 24 15.7	
	20nm,0.6s						
YSS				eS	Sn	02 25 00.9	+0.6
YSS				A	A	02 25 04.2	
	90nm,0.6s						
YSS				A	A	02 25 04.2	
	40nm,0.6s						
ASAJ	Asahikawa	4.22	246	P	Pn	02 24 25.4	+1.0
	0.6nm,0.3s,baz=225,slow=19,SNR=1.4						
ASAJ				S	Sn	02 25 11.5	-0.9
	7.4nm,0.4s,baz=76,slow=30,SNR=6.4						
	2.4nm,0.4s						
PETK	Petropavlovsk-	9.54	38	P	Pn	02 25 37.3	0.0
	0.1nm,0.3s,baz=229,slow=15,SNR=4.1						
	2.7nm,0.9s						
ILAR	Eielson Array	39.38	38	P	P	02 30 45.7	-1.1
	1.2nm,1.0s,baz=277,slow=8.9,SNR=9.0						
	1.2nm,1.0s						
MKAR	Makanchi Array	44.10	296	P	P	02 31 26.1	+0.3
	0.1nm,0.3s,baz=79,slow=10,SNR=2.2						
MKAR				PcP	PcP	02 33 10.8	+0.7
	0.4nm,0.6s,baz=90,slow=5.8,SNR=2.9						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	44.89	302	P	P	02 31 32.2	+0.4
	0.2nm,0.4s,baz=74,slow=8.7,SNR=2.1						
KURBB				PcP	PcP	02 33 13.6	+1.0
	0.3nm,0.2s,baz=85,slow=3.4,SNR=4.4						
	0.2nm,0.4s						
YKA	Yellowknife Ar	53.65	35	P	P	02 32 38.2	-0.3
	1.4nm,0.9s,baz=301,slow=7.1,SNR=12						
	1.4nm,0.9s						
FINES	FINESS Array B	63.17	333	P	P	02 33 44.3	-0.5
	1.2nm,0.8s,baz=38,slow=7.0,SNR=3.9						
	1.2nm,0.8s						
NVAR	Mina Array Bea	65.93	59	P	P	02 34 04.0	+0.4
	0.3nm,0.5s,baz=276,slow=3.5,SNR=4.2						
	0.3nm,0.5s						
PDAR	Pinedale Array	68.05	51	P	P	02 34 17.8	+0.8
	0.3nm,0.3s,baz=349,slow=3.0,SNR=4.4						
	0.3nm,0.3s						
ASAR	Alice Springs	70.46	194	P	P	02 34 33.0	+1.3
	0.3nm,0.4s,baz=8.9,slow=6.6,SNR=2.2						
	0.3nm,0.4s						
TXAR	Lajitas Array	80.95	57	P	P	02 35 32.3	+0.4
	0.4nm,0.5s,baz=319,slow=5.0,SNR=4.5						
	0.4nm,0.5s						
PLCA	Paso Flores	151.71	93	PKPbc	PKiKP	02 43 11.9	+0.4
	0.8nm,0.7s,baz=284,slow=2.0,SNR=8.6						

IDC ***04*** *02:25:40.0±1.1, 9°.10N×126°.84E, h0^{km}, mb4.0/7, mbtmp4.0/7, MS3.0/1, Error ellipse: s-maj=64.9km s-min=19.2km az=69.0*

NEIC ***04*** *02:25:41.3±0.8, 9°.3N±0°.1×127°.1E±0°.2, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=30.4km s-min=17.5km az=94.0*

MAN ***04*** *02:25:46.1, 8°.97N×126°.45E, h12^{km}, mb4.7, ML3.6, MS3.5, Hypocentre not reviewed by the ISC*

ISC 04 02:25:45.7±0.7**, 8°.99N**±0°.05×**126°.67E**±0°.08**, h35**^{km}**, n36, σ1^{s}.65**/42**, mb4.1**/12**, 2C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.86	201	⇑iP	Pn	02 26 00.4	-0.8
BIPH				i S	Sn	02 26 10.4	-2.2
MSLP	Maasin	2.12	303	⇑eP	Pn	02 26 19.2	+0.6
MSLP				eS	Sn	02 26 46.5	+2.9
DAV	Davao City (W)	2.19	210	Sn	Sn	02 26 49.1	+3.5
	64nm,0.3s,baz=119,slow=23,SNR=4.1						
DAV				LR	LR	02 27 23.9	
	comp=Z,337nm,20.1s,baz=344,slow=44						
DAV	Davao City (W)	2.19	210	Pn	Pn	02 26 24.2	+4.6
TBP	Tagbilaran	2.85	284	⇓eP	Pn	02 26 29.1	+0.4
TBP				i S	Sn	02 27 00.8	-1.1
LLP	Lapu-Lapu	2.97	297	eP	Pn	02 26 31.6	+1.2
LLP				i S	Sn	02 27 06.0	+1.2
CTBH	Cotabato--PC H	2.97	234	eP	Pn	02 26 30.9	+0.5
CTBH				i S	Sn	02 27 03.1	-1.7
SNPH	Sibulan	3.41	276	⇓iP	Pn	02 26 36.6	+0.2
SNPH				eS	Sn	02 27 12.5	-3.1

PAGZ	**Pagadian**	**3.44**	**251⇓**	*e*P	**Pn**	**02 26 38.2**	**+1.4**
PAGZ				*e*S	**Sn**	**02 27 16.1**	**-0.3**
RCP	**Roxas**	**4.63**	**304⇓**	*e*P	**Pn**	**02 26 55.6**	**+2.5**
RCP				*e*S	**Sn**	**02 27 47.0**	**+1.3**
SBUM	**Sibu**	**15.77**	**247**		**P**	**02 29 28.9**	**+0.1**
KNRA	**Kununurra**	**24.60**	**175**	P	**P**	**02 31 03.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**26.93**	**182**	P	**P**	**02 31 23.9**	**0.0**
	2.0nm,0.5s,baz=9.0,slow=11,SNR=8.7						
	2.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**26.93**	**182**	P	**P**	**02 31 24.0**	**+0.2**
FITZ				IAmb	IAmb	02 31 38.7	
	comp=Z,6.3nm,1.4s						
CMAR	**Chiang Mai Arr**	**28.49**	**292**	P	**P**	**02 31 39.1**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=120,slow=8.4,SNR=4.6						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**29.73**	**165**	P	**P**	**02 31 47.8**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=348,slow=9.5,SNR=2.2						
	comp=Z,0.4nm,0.7s						
WB2	**Warramunga Arr**	**29.73**	**165**	P	**P**	**02 31 48.8**	**-0.1**
WB2				IAmb	IAmb	02 31 49.1	
	comp=Z,3.2nm,1.0s						
WR0	**Warramunga Arr**	**29.79**	**165**	P	**P**	**02 31 50.4**	**+1.0**
WR0				IAmb	IAmb	02 32 16.8	
	comp=Z,4.5nm,1.0s						
ASAR	**Alice Springs**	**33.22**	**168**	P	**P**	**02 32 19.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=348,slow=6.7,SNR=4.6						
	comp=Z,0.4nm,0.5s						
MORW	**Morawa**	**39.20**	**195**	P	**P**	**02 33 11.1**	**+0.5**
MORW				IAmb	IAmb	02 33 39.1	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**39.56**	**178**	P	**P**	**02 33 14.5**	**+1.0**
H11S3	**WAKE ISLAND Hy**	**39.92**	**72**	T	T	03 16 18.0	
	baz=262,slow=70,SNR=96						
H11S1	**WAKE ISLAND Hy**	**39.94**	**72**	T	T	03 16 18.5	
	baz=262,slow=70,SNR=69						
H11S2	**WAKE ISLAND Hy**	**39.94**	**72**	T	T	03 16 19.5	
	baz=262,slow=70,SNR=76						
BBOO	**Buckleboo**	**42.52**	**168**	P	**P**	**02 33 37.3**	**-0.6**
BBOO				IAmb	IAmb	02 33 57.4	
	comp=Z,28nm,1.2s						
MK31	**Makanchi Array**	**53.28**	**323**	P	**P**	**02 34 59.6**	**-1.5**
MKAR	**Makanchi Array**	**53.28**	**323**	P	**P**	**02 34 59.5**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=127,slow=7.6,SNR=9.6						
MKAR				PcP	**PcP**	**02 36 10.5**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=110,slow=3.7,SNR=4.5						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**53.28**	**323**	P	**P**	**02 34 59.7**	**-1.4**
KURK	**Kurchatov**	**57.34**	**326**	P	**P**	**02 35 28.5**	**-1.7**
KURK				IAmb	IAmb	02 35 32.3	
	comp=Z,1.9nm,0.7s						
KKAR	**Karatay Array**	**59.42**	**315**	P	**P**	**02 35 43.6**	**-1.4**
ABKAR	**Akbulak array**	**68.10**	**320**	P	**P**	**02 36 41.2**	**-0.8**
ARCES	**ARCESS Array B**	**85.52**	**340**	P	**P**	**02 38 20.0**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=65,slow=7.1,SNR=4.5						
	comp=Z,2.8nm,1.0s						
FINES	**FINESS Array B**	**87.20**	**332**	P	**P**	**02 38 27.0**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=79,slow=7.2,SNR=9.4						
	comp=Z,0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**121.10**	**291**	PKP	**PKPdf**	**02 44 35.2**	**-0.5**
	comp=Z,0.5nm,1.1s,baz=69,slow=2.4,SNR=4.2						
PLCA	**Paso Flores**	**144.88**	**157**	PKP	**PKPdf**	**02 45 21.0**	**+1.5**
	comp=Z,2.3nm,1.0s,baz=212,slow=7.5,SNR=3.8						
PLCA	**Paso Flores**	**144.88**	**157**		**PKPab**	**02 45 16.3**	**-2.3**

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*NEIC **04** 02:42:28.8±1.5, 17.°45S±0.°06×174.°06W±0.°08, h61^{km}±5^{km}, mb4.6/104, Error ellipse: s-maj=11.8km s-min=7.8km az=60.0*

*IDC **04** 02:42:29.9±3.1, 17.°26S×174.°20W, h72^{km}±27^{km}, mb3.9/12, mbtmp4.3/13, MS3.4/5, Error ellipse: s-maj=24.6km s-min=12.7km az=140.0*

ISC 04 02:42:33.1±0.3**, 17.°65S**±0.°07×**173.°99W**±0.°07**, h108**^{km}**, n285,** σ**1.^{s}37**/250**, mb4.5**/62**, 5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.11**	**111**	Pn	**Pn**	**02 43 30.8**	**-3.2**
AFI	**Afiamalu**	**4.29**	**30**	P	Pn	02 43 29.8	-6.7
	542nm,0.3s,baz=190,slow=1.9,SNR=135						
AFI				S	Sn	02 44 12.0	-14
	910nm,0.4s,baz=60,slow=23,SNR=8.8						
AFI	**Afiamalu**	**4.29**	**30**	P	Pn	02 43 30.0	-6.5
MSVF	**Nonsavu**	**7.58**	**268**	P	Pn	02 44 27.2	+6.1
	66nm,0.7s,baz=122,slow=14,SNR=41						
MSVF				LR	LR	02 46 42.9	
	comp=Z,221nm,20.8s,baz=121,slow=34						
RAR	**Rarotonga**	**13.87**	**107**	P	**Pn**	**02 45 43.7**	**-1.4**
	29nm,0.6s,baz=279,slow=13,SNR=6.1						
RAR				LR	LR	02 50 04.5	
	comp=Z,80nm,21.0s,baz=276,slow=32						
RAR	**Rarotonga**	**13.87**	**107**	Pn	**Pn**	**02 45 44.2**	**-1.0**
MARNC	**Mare, Loyalty**	**17.36**	**254**	P	**P**	**02 46 27.4**	**-1.0**
LIFNC	**LIFOU**	**17.99**	**257**	P	**P**	**02 46 35.6**	**+0.2**
OUENC	**Ouen Island, N**	**18.61**	**252**		**P**	**02 46 42.0**	**-0.2**
OUENC				IAmb	IAmb	02 46 48.8	
	comp=Z,58nm,1.3s						
DZM	**Mont Dzumac**	**18.91**	**253**	P	**P**	**02 46 44.4**	**-1.2**
	comp=Z,9.4nm,0.9s,baz=91,slow=17,SNR=4.7						
DZM				LR	LR	02 52 34.0	
	comp=Z,128nm,19.6s,baz=224,slow=32						
DZM	**Mont Dzumac**	**18.91**	**253**	P	**P**	**02 46 43.5**	**-2.1**
ONTNC	**Ouen Toro**	**18.95**	**253**	P	**P**	**02 46 46.4**	**+0.5**
ONTNC				IAmb	IAmb	02 46 52.7	
	comp=Z,51nm,1.1s						
OUZ	**Omahuta**	**20.69**	**210**	P	Pn	02 47 06.3	-1.6
OUZ				IAmb	IAmb	02 47 11.5	
	comp=Z,40nm,0.9s						
OUZ	**Omahuta**	**20.69**	**210**	P	Pn	02 47 07.0	-0.9
KOUNC	**Koumac, New Ca**	**20.72**	**259**	P	**P**	**02 47 05.3**	**+0.2**
KOUNC				IAmb	IAmb	02 47 26.9	
	comp=Z,57nm,1.4s						
GRZ	**Great Barrier**	**20.75**	**205**	P	Pn	02 47 07.0	-1.5
WCZ	**Waipu Caves**	**20.95**	**207**	P	Pn	02 47 10.4	-0.5
MXZ	**Matakaoa Point**	**20.96**	**197**	P	Pn	02 47 09.2	-1.8
KUZ	**Kuaotunu**	**21.08**	**204**	P	**P**	**02 47 11.2**	**+2.5**
WMGZ	**Waiomatatini S**	**21.17**	**197**	P	**P**	**02 47 08.6**	**-1.1**
WMGZ				S	**S**	**02 50 50.4**	**-8.6**
HAZ	**Te Kaha**	**21.29**	**198**	P	**P**	**02 47 12.8**	**+1.8**
PKGZ	**Pakihiroa**	**21.33**	**197**	P	**P**	**02 47 16.2**	**+4.8**
WIAZ	**Waiheke Island**	**21.35**	**205**	P	**P**	**02 47 14.6**	**+2.9**
PUZ	**Puketiti**	**21.45**	**197**	P	**P**	**02 47 14.6**	**+1.9**
RUGZ	**Raukumara Rang**	**21.52**	**198**	P	**P**	**02 47 15.9**	**+2.4**
RUGZ				S	**S**	**02 50 59.8**	**-6.1**
TWGZ	**Tauwhareparae**	**21.62**	**197**	P	**P**	**02 47 17.5**	**+2.9**
TWGZ				S	**S**	**02 51 05.1**	**-2.7**
WHRZ	**Whale Island**	**21.63**	**200**	P	**P**	**02 47 18.0**	**+3.3**
CNGZ	**Carnagh Statio**	**21.85**	**197**	P	**P**	**02 47 19.9**	**+3.1**
MWZ	**Matawai**	**21.90**	**198**	P	**P**	**02 47 20.8**	**+3.3**
URZ	**Urewera**	**21.96**	**199**	P	**P**	**02 47 17.2**	**-0.8**
	comp=Z,37nm,0.3s,baz=335,slow=3.3,SNR=63						
URZ				S	**S**	**02 51 13.0**	**-0.8**
	comp=Z,5.9nm,0.7s,baz=313,slow=21,SNR=3.2						
URZ	**Urewera**	**21.96**	**199**	P	**P**	**02 47 18.1**	**0.0**
URZ	**Urewera**	**21.96**	**199**	P	**P**	**02 47 19.5**	**+1.4**
KMRZ	**Kaimai**	**21.97**	**202**	P	**P**	**02 47 21.8**	**+3.5**
OMRZ	**Omania**	**22.06**	**201**	P	**P**	**02 47 22.8**	**+3.6**
RAGZ	**Rawiri**	**22.08**	**198**	P	**P**	**02 47 20.6**	**+1.1**
TARZ	**Mount Tarawera**	**22.13**	**200**	P	**P**	**02 47 23.5**	**+3.5**
RIGZ	**Rimuhau**	**22.18**	**197**	P	**P**	**02 47 22.7**	**+2.3**
MUGZ	**Murupara**	**22.26**	**199**	P	**P**	**02 47 23.4**	**+2.1**
PRGZ	**Paritu Road**	**22.35**	**197**	P	**P**	**02 47 26.1**	**+3.9**
ALRZ	**Allen Road**	**22.48**	**200**	P	**P**	**02 47 25.5**	**+2.0**
RAHZ	**Arahi**	**22.57**	**198**	P	**P**	**02 47 26.9**	**+2.4**
MTHZ	**Maungataniwha**	**22.59**	**199**	P	**P**	**02 47 27.4**	**+2.8**
BKZ	**Black Stump Fm**	**22.98**	**199**	P	**P**	**02 47 30.1**	**+1.6**
BFZ	**Birch Farm**	**24.45**	**198**	P	**P**	**02 47 42.8**	**+1.0**
RPZ	**Rata Peaks**	**28.89**	**203**	P	**P**	**02 48 26.3**	**+4.6**
	comp=Z,40nm,0.4s,baz=20,slow=4.3,SNR=18						
MLZ	**Mavora Lakes**	**31.41**	**205**	P	**P**	**02 48 44.6**	**+0.7**
EIDS	**Eidsvold**	**33.31**	**251**	P	**P**	**02 49 01.8**	**+1.0**
EIDS				IAmb	IAmb	02 49 03.2	
	comp=Z,12nm,1.3s						
ARMA	**Armidale**	**33.73**	**241**	P	**P**	**02 49 04.7**	**+0.2**
ARMA				IAmb	IAmb	02 49 09.4	
	comp=Z,9.6nm,1.1s						
CTA	**Charters Tower**	**37.63**	**260**	P	**P**	**02 49 36.7**	**-1.1**
	comp=Z,2.6nm,0.3s,baz=112,slow=11,SNR=6.7						
	comp=Z,2.6nm,0.3s						
CTAO	**Charters Tower**	**37.63**	**260**	P	**P**	**02 49 36.8**	**-1.1**
CTAO				IAmb	IAmb	02 50 06.3	
	comp=Z,7.5nm,1.1s						
PMG	**Port Moresby**	**38.58**	**277**	LR	LR	03 05 08.9	
	comp=Z,117nm,18.7s,baz=157,slow=35						
COEN	**Coen**	**41.31**	**269**	P	**P**	**02 50 07.9**	**-0.6**
COEN				IAmb	IAmb	02 50 12.8	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	**42.45**	**242**	P	**P**	**02 50 17.7**	**+0.2**
	comp=Z,5.7nm,0.7s,baz=66,slow=7.4,SNR=7.1						
	comp=Z,5.7nm,0.7s						
STKA	**Stephens Creek**	**42.45**	**242**	P	**P**	**02 50 17.0**	**-0.6**
BBOO	**Buckleboo**	**47.22**	**241**	P	**P**	**02 50 55.2**	**-0.1**
WR0	**Warramunga Arr**	**48.62**	**259**	P	**P**	**02 51 05.5**	**-0.8**
WR0				IAmb	IAmb	02 51 34.8	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**48.78**	**259**	P	**P**	**02 51 06.0**	**-1.6**
WB0				IAmb	IAmb	02 51 07.1	
	comp=Z,4.5nm,0.8s						
WB2	**Warramunga Arr**	**48.80**	**259**	P	**P**	**02 51 06.3**	**-1.4**
WB2				IAmb	IAmb	02 51 07.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**48.81**	**259**	P	**P**	**02 51 06.1**	**-1.7**
	comp=Z,2.3nm,0.3s,baz=98,slow=6.8,SNR=90						
	comp=Z,2.3nm,0.3s						
WRA	**Warramunga Arr**	**48.81**	**259**	P	**P**	**02 51 06.7**	**-1.1**
AS31	**Alice Springs**	**48.90**	**254**	P	**P**	**02 51 07.7**	**-0.8**
ASAR	**Alice Springs**	**48.90**	**254**	P	**P**	**02 51 07.8**	**-0.7**
	comp=Z,38nm,0.8s,baz=89,slow=8.6,SNR=283						
ASAR	**Alice Springs**	**48.90**	**254**	P	**P**	**02 51 08.0**	**-0.5**
MTN	**Manton Dam**	**53.01**	**267**	P	**P**	**02 51 37.8**	**-1.5**
MTN				IAmb	IAmb	02 51 47.3	
	comp=Z,6.3nm,0.8s						
FORT	**Forrest**	**53.91**	**245**	P	**P**	**02 51 44.4**	**-1.4**
KNRA	**Kununurra**	**54.70**	**263**	P	**P**	**02 51 51.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**57.22**	**260**	P	**P**	**02 52 09.3**	**-0.2**
FITZ				IAmb	IAmb	02 52 37.1	
	comp=Z,14nm,1.5s						
SBA	**Scott Base**	**60.97**	**185**	P	**P**	**02 52 38.4**	**+3.9**
SBA				IAmb	IAmb	02 52 43.9	
	comp=Z,5.1nm,1.1s						
VNDA	**Vanda**	**61.09**	**186**	P	**P**	**02 52 38.5**	**+3.2**
	comp=Z,1.4nm,0.8s,baz=13,slow=8.0,SNR=4.6						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**61.09**	**186**	P	**P**	**02 52 38.5**	**+3.2**
PSA00	**Pilbara Seismi**	**62.04**	**255**	P	**P**	**02 52 41.8**	**-0.8**
MBWA	**Marble Bar**	**62.21**	**255**	P	**P**	**02 52 43.0**	**-0.7**
MORW	**Morawa**	**64.43**	**246**	P	**P**	**02 52 56.9**	**-1.4**
QSPA	**South Pole Qui**	**72.40**	**180**	P	**P**	**02 53 49.6**	**+2.2**
QSPA				IAmb	IAmb	02 53 50.6	
	comp=Z,7.5nm,0.8s						
SCI2	**San Clemente I**	**73.07**	**46**	P	**P**	**02 53 51.8**	**+0.1**
	baz=235						
SBC	**Santa Barbara**	**73.12**	**45**	P	**P**	**02 53 52.5**	**+0.6**
	baz=234						
VES	**Vestal, Richgr**	**74.36**	**44**	P	**P**	**02 53 58.9**	**-0.2**
	baz=234						
BFSC	**Mount Baldy Ra**	**74.39**	**46**	P	**P**	**02 53 58.8**	**-0.7**
	baz=236						
EDW2	**Edwards Air Fo**	**74.53**	**45**	P	**P**	**02 54 00.7**	**+0.4**
	baz=235						
IKP	**In-Ko-Pah, Jac**	**74.58**	**48**	P	**P**	**02 54 00.1**	**-0.6**
	baz=237						
PEA0B	**Petropavlovsk-**	**74.59**	**343**	P	**P**	**02 54 00.0**	**-0.1**
ISA	**Isabella, Lake**	**74.66**	**44**	P	**P**	**02 54 01.3**	**+0.3**
	baz=235						
LRMC	**Laurel Mtn Rad**	**75.08**	**45**	P	**P**	**02 54 03.3**	**-0.2**
	baz=235						
CWC	**Cottonwood Cre**	**75.36**	**44**	P	**P**	**02 54 05.4**	**+0.2**
	baz=235						
BELC	**Belle Mtn. Jos**	**75.40**	**47**	P	**P**	**02 54 05.9**	**+0.5**
	baz=237						
MPMC	**Manual Prospec**	**75.54**	**44**	P	**P**	**02 54 06.7**	**+0.5**
	baz=235						
GSC	**Goldstone, Bar**	**75.57**	**45**	P	**P**	**02 54 06.6**	**+0.4**
	baz=236						
HEC	**Hector,Ludlow**	**75.63**	**46**	P	**P**	**02 54 07.3**	**+0.8**
	baz=236						
SII	**Sitkinak Islan**	**75.78**	**11**	P	**P**	**02 54 07.6**	**+0.8**
	baz=200						
PNTR	**Pine Nut**	**75.95**	**41**	P	**P**	**02 54 09.6**	**+1.1**
PNTR				IAmb	IAmb	02 54 11.0	
	comp=Z,4.1nm,0.8s						
GMRC	**Granite Mounta**	**76.06**	**46**	P	**P**	**02 54 09.5**	**+0.3**
	baz=237						
IRM	**Iron Mountain**	**76.08**	**47**	P	**P**	**02 54 08.9**	**-0.2**
	baz=237						
FURC	**Furnace Creek,**	**76.19**	**44**	P	**P**	**02 54 10.5**	**+1.0**
	baz=236						
TUQ	**Turquoise Moun**	**76.24**	**46**	P	**P**	**02 54 10.9**	**+0.8**
	baz=236						
NVAR	**Mina Array Bea**	**76.38**	**42**	P	**P**	**02 54 11.3**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=223,slow=9.5,SNR=7.6						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**76.38**	**42**	P	**P**	**02 54 11.0**	**+0.1**
NV11	**Mina Array Sit**	**76.47**	**42**	P	**P**	**02 54 11.7**	**+0.3**
214A	**Organ Pipe Nat**	**76.59**	**50**	P	**P**	**02 54 12.2**	**+0.2**
	baz=239						
PDMCI	**Parker Dam,Lak**	**76.86**	**47**	P	**P**	**02 54 14.3**	**+0.9**
	baz=238						
TPH	**Tonopah**	**76.86**	**43**	P	**P**	**02 54 13.9**	**+0.2**
TPNV	**Topopah Spring**	**76.86**	**44**	P	**P**	**02 54 14.4**	**+0.7**
	baz=236						
J04D	**Umpqua Nationa**	**77.03**	**36**	P	**P**	**02 54 14.9**	**+0.4**
	baz=230						
J05D	**Fort Rock, OR**	**77.56**	**37**	P	**P**	**02 54 17.7**	**+0.3**
	baz=231						
PRN	**Pahroc Range**	**77.91**	**44**	IAmb	IAmb	02 54 21.7	
	comp=Z,6.9nm,1.3s						
R11A	**Troy Canyon, C**	**78.08**	**43**	P	**P**	**02 54 21.5**	**+1.0**
	baz=236						
TUC	**Tucson**	**78.25**	**51**	P	**P**	**02 54 21.6**	**+0.2**
TUC				IAmb	IAmb	02 54 23.4	
	comp=Z,5.3nm,1.1s						
TUC	**Tucson**	**78.25**	**51**	P	**P**	**02 54 22.9**	**+1.5**
	baz=240						
E04D	**Cinebar**	**78.92**	**33**	P	**P**	**02 54 25.3**	**+0.7**
	baz=230						
CCUT	**Cedar City**	**79.12**	**45**	IAmb	IAmb	02 54 29.1	
	comp=Z,7.6nm,1.5s						
U15A	**North Rim**	**79.26**	**46**	IAmb	IAmb	02 54 29.2	
	comp=Z,7.0nm,1.4s						
SZCU	**Shurtz Canyon**	**79.33**	**45**	P	**P**	**02 54 27.9**	**+0.5**
BRSE	**Bradley Lake S**	**79.41**	**12**	P	**P**	**02 54 27.7**	**+0.7**
	baz=203						
WUAZ	**Wupatki**	**79.43**	**47**	IAmb	IAmb	02 54 30.0	
	comp=Z,6.5nm,1.2s						
WUAZ	**Wupatki**	**79.43**	**47**	P	**P**	**02 54 28.0**	**+0.2**
	baz=240						
N19K	**Bonanza Creek**	**79.76**	**10**	P	**P**	**02 54 29.1**	**+0.1**
	baz=199						
PKCU	**Pink Cliffs**	**79.78**	**45**	IAmb	IAmb	02 54 32.7	
	comp=Z,8.9nm,1.2s						
MTPU	**Mount Pierson**	**80.17**	**45**	IAmb	IAmb	02 54 35.3	
	comp=Z,7.1nm,1.4s						
MSU	**Marysvale**	**80.42**	**45**	P	**P**	**02 54 34.3**	**+1.1**
121A	**Cookes Peak, D**	**80.58**	**52**	P	**P**	**02 54 33.3**	**-0.8**
	baz=242						
M19K	**Big River Lodg**	**80.81**	**9**	P	**P**	**02 54 34.6**	**+0.1**
	baz=199						
DUG	**Dugway, Tooele**	**80.89**	**43**	P	**P**	**02 54 35.2**	**-0.4**
	baz=238						
L19K	**White Mountain**	**81.00**	**9**	P	**P**	**02 54 35.2**	**-0.2**
	baz=198						
GAMB	**Gambell**	**81.18**	**1**	P	**P**	**02 54 35.5**	**-0.8**
	baz=182						
GLI	**Glacier Island**	**81.20**	**13**	P	**P**	**02 54 36.0**	**-0.5**
	baz=206						
TTA	**Tatalina**	**81.55**	**8**	P	**P**	**02 54 38.5**	**+0.1**
TTA				IAmb	IAmb	02 54 39.9	
	comp=Z,7.9nm,1.2s						
TTA	**Tatalina**	**81.55**	**8**	P	**P**	**02 54 38.5**	**+0.1**
	baz=197,SNR=5.8						
HLID	**Hailey**	**81.72**	**39**	P	**P**	**02 54 40.6**	**+0.7**
HLID				IAmb	IAmb	02 54 41.8	
	comp=Z,6.9nm,1.3s						
HLID	**Hailey**	**81.72**	**39**	P	**P**	**02 54 39.8**	**-0.1**
	baz=236						
BMRM	**Bremner River**	**81.83**	**14**	P	**P**	**02 54 39.8**	**-0.1**
	baz=208						
BELA	**Belgrano 2**	**81.86**	**172**	P	**P**	**02 54 40.7**	**+0.8**
BELA				IAmb	IAmb	02 54 42.0	
	comp=Z,6.6nm,1.0s						
M23K	**Glacier View**	**81.89**	**12**	P	**P**	**02 54 40.4**	**+0.2**
	baz=205						
LENM	**Lemitar**	**81.94**	**50**	P	**P**	**02 54 41.2**	**-0.1**
CUT	**Chulitna**	**81.97**	**11**	P	**P**	**02 54 40.8**	**+0.3**
	baz=203						
SCM	**Sheep Creek Mo**	**82.01**	**12**	P	**P**	**02 54 40.5**	**-0.4**
	baz=206						
MNTX	**Cornudas Mount**	**82.02**	**53**	IAmb	IAmb	02 54 44.1	
	comp=Z,4.1nm,0.9s						
MNTX	**Cornudas Mount**	**82.02**	**53**	P	**P**	**02 54 42.2**	**+0.6**
	baz=244						
PPLA	**Purkeypile**	**82.09**	**10**	P	**P**	**02 54 41.1**	**-0.3**
	baz=201						
K20K	**Telida**	**82.23**	**9**	P	**P**	**02 54 41.6**	**-0.3**
	baz=199						
P18A	**Preston Nutter**	**82.28**	**44**	IAmb	IAmb	02 54 45.0	
	comp=Z,5.2nm,1.2s						
TX31	**Lajitas Ar. Si**	**82.33**	**56**	IAmb	IAmb	02 54 46.4	
	comp=Z,13nm,1.2s						
TXAR	**Lajitas Array**	**82.33**	**56**	P	**P**	**02 54 44.4**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=264,slow=4.5,SNR=7.0						
	comp=Z,1.4nm,0.9s						
N25K	**Chitina, Valde**	**82.39**	**14**	P	**P**	**02 54 42.5**	**-0.4**
	baz=208						
M24K	**Tolsona, Glenn**	**82.50**	**13**	P	**P**	**02 54 43.8**	**+0.4**
	baz=207						
CAST	**Castle Rocks**	**82.60**	**10**	P	**P**	**02 54 42.9**	**-0.9**
	baz=201						
WAT6	**Susitna Watana**	**82.61**	**12**	P	**P**	**02 54 43.7**	**-0.4**
	baz=205						
WAT1	**Susitna Watana**	**82.67**	**11**	P	**P**	**02 54 42.8**	**-1.4**
	baz=204						
ANMO	**Albuquerque**	**82.68**	**50**	LR	LR	03 25 59.9	
	comp=Z,33nm,19.6s,baz=246,slow=32						
ANMO	**Albuquerque**	**82.68**	**50**	P	**P**	**02 54 45.6**	**+0.5**
ANMO	**Albuquerque**	**82.68**	**50**	P	**P**	**02 54 44.8**	**-0.4**
	baz=243						
KTH	**Kantishna Hill**	**82.92**	**10**	IAmb	IAmb	02 54 46.0	
	comp=Z,4.5nm,0.9s						
TRF	**Thorofare Moun**	**82.93**	**10**	P	**P**	**02 54 45.4**	**-0.4**
	baz=203						
CHUM	**Lake Minchumin**	**83.00**	**9**	P	**P**	**02 54 44.7**	**-1.1**
	baz=201						
J20K	**Nowinta River**	**83.00**	**9**	P	**P**	**02 54 45.6**	**-0.2**
J20K				IAmb	IAmb	02 54 47.0	
	comp=Z,4.8nm,0.8s						
J20K	**Nowinta River**	**83.00**	**9**	P	**P**	**02 54 45.6**	**-0.2**
	baz=199,SNR=6.1						
BPAW	**Bear Paw Mtn.**	**83.42**	**10**	P	**P**	**02 54 47.5**	**-0.5**
	baz=202						
PAX	**Paxson**	**83.42**	**13**	P	**P**	**02 54 47.3**	**-0.8**
	baz=207						
MCK	**McKinley**	**83.43**	**11**	P	**P**	**02 54 47.4**	**-0.7**
MCK	**McKinley**	**83.43**	**11**	P	**P**	**02 54 47.7**	**-0.5**
	baz=204						
M26K	**Nabesna, AK**	**83.46**	**14**	IAmb	IAmb	02 54 49.5	
	comp=Z,7.0nm,1.1s						
M26K	**Nabesna, AK**	**83.46**	**14**	P	**P**	**02 54 48.4**	**0.0**
	baz=210,SNR=5.4						
HYT	**Haines Junctio**	**83.52**	**17**	P	**P**	**02 54 49.3**	**+0.6**
	baz=215						
YUK3	**Moose Creek**	**83.53**	**15**	P	**P**	**02 54 49.3**	**+0.3**
	baz=212						
YUK4	**Talbot Arm**	**83.64**	**16**	P	**P**	**02 54 49.7**	**+0.2**
	baz=214						
M27K	**Edge Creek, AK**	**83.68**	**14**	IAmb	IAmb	02 54 51.7	
	comp=Z,10nm,1.1s						
M27K	**Edge Creek, AK**	**83.68**	**14**	P	**P**	**02 54 50.3**	**+0.8**
	baz=211						
S22A	**4UR Ranch, Cre**	**83.71**	**47**	IAmb	IAmb	02 54 52.5	
	comp=Z,12nm,1.4s						
S22A	**4UR Ranch, Cre**	**83.71**	**47**	P	**P**	**02 54 51.4**	**+0.9**
	baz=242						
REDW	**Red Top Meadow**	**83.80**	**41**	P	**P**	**02 54 50.7**	**0.0**
REDW				IAmb	IAmb	02 54 52.3	
	comp=Z,6.9nm,1.1s						
TPAW	**Teton Pass**	**83.81**	**41**	IAmb	IAmb	02 54 53.1	
	comp=Z,4.9nm,1.2s						
MSO	**Missoula**	**83.82**	**37**	P	**P**	**02 54 50.6**	**0.0**
	baz=236						
O20A	**White River Ci**	**83.88**	**45**	P	**P**	**02 54 50.9**	**-0.3**
	baz=241						
L26K	**Log Cabin Wild**	**83.92**	**14**	P	**P**	**02 54 51.4**	**+0.8**
	baz=209						
BVCY	**Beaver Creek**	**83.98**	**15**	P	**P**	**02 54 51.3**	**+0.4**
	baz=212						
DLBC	**Dease Lake**	**83.99**	**22**	P	**P**	**02 54 51.2**	**0.0**
	comp=Z,1.8nm,0.8s,baz=212,slow=13,SNR=4.1						
	comp=Z,1.8nm,0.8s						
LOHW	**Long Hollow**	**84.09**	**41**	IAmb	IAmb	02 54 53.6	
	comp=Z,7.4nm,1.4s						
K24K	**Donnelly Dome**	**84.10**	**12**	P	**P**	**02 54 51.3**	**-0.2**
	baz=207						
WHY	**Whitehorse**	**84.14**	**18**	P	**P**	**02 54 51.9**	**0.0**
	baz=217						
NEA2	**Nenana**	**84.20**	**11**	IAmb	IAmb	02 54 53.4	
	comp=Z,4.3nm,0.8s						
NEA2	**Nenana**	**84.20**	**11**	P	**P**	**02 54 52.1**	**+0.1**
	baz=204,SNR=6.7						
RIDG	**Independent Ri**	**84.23**	**13**	P	**P**	**02 54 51.9**	**-0.3**
	baz=208,SNR=5.1						
WRH	**Wood River Hil**	**84.26**	**11**	P	**P**	**02 54 51.6**	**-0.6**
I21K	**Tanana**	**84.27**	**9**	IAmb	IAmb	02 54 53.0	
	comp=Z,6.8nm,1.1s						
I21K	**Tanana**	**84.27**	**9**	P	**P**	**02 54 52.7**	**+0.5**
	baz=201						
FLWY	**Flagg Ranch**	**84.27**	**40**	IAmb	IAmb	02 54 54.9	
	comp=Z,7.4nm,1.2s						
L27K	**Beaver Creek,**	**84.30**	**14**	P	**P**	**02 54 52.4**	**-0.2**
	baz=211						
BW06	**Boulder Array**	**84.31**	**42**	P	**P**	**02 54 53.5**	**+0.1**
	baz=240						
PD31	**Pinedale Array**	**84.31**	**42**	P	**P**	**02 54 52.8**	**-0.6**
PDAR	**Pinedale Array**	**84.31**	**42**	P	**P**	**02 54 53.0**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=212,slow=3.2,SNR=16						
	comp=Z,1.9nm,0.8s						
DOT	**Dot Lake**	**84.32**	**13**	IAmb	IAmb	02 54 53.5	
	comp=Z,6.3nm,0.9s						
YHL	**Hebgen Lake**	**84.37**	**39**	IAmb	IAmb	02 54 56.6	
	comp=Z,9.1nm,0.9s						
H03S2	**Juan Fernandez**	**84.44**	**124**	T	T	04 28 10.6	
	baz=251						
H03S1	**Juan Fernandez**	**84.45**	**124**	T	T	04 28 05.8	
	baz=251						
H03S3	**Juan Fernandez**	**84.45**	**124**	T	T	04 28 00.5	
	baz=251						
BOZ	**Bozeman (W)**	**84.50**	**39**	IAmb	IAmb	02 54 55.6	
	comp=Z,5.4nm,1.1s						
BOZ	**Bozeman (W)**	**84.50**	**39**	P	**P**	**02 54 54.1**	**0.0**
	baz=238						
H17A	**Grant Village**	**84.51**	**40**	P	**P**	**02 54 56.1**	**+1.8**
	baz=239						
N31M	**Braeburn, Yuko**	**84.55**	**17**	P	**P**	**02 54 53.4**	**-0.5**
	baz=216						
H21K	**Melozitna Rive**	**84.59**	**9**	IAmb	IAmb	02 54 56.0	
	comp=Z,5.6nm,1.1s						
H21K	**Melozitna Rive**	**84.59**	**9**	P	**P**	**02 54 53.7**	**-0.2**
	baz=200,SNR=7.3						
SCRK	**Sand Creek**	**84.62**	**13**	IAmb	IAmb	02 54 55.3	
	comp=Z,5.0nm,1.0s						
SCRK	**Sand Creek**	**84.62**	**13**	P	**P**	**02 54 53.6**	**-0.7**
	baz=209,SNR=8.6						
I23K	**Minto, Yukon-K**	**84.66**	**10**	IAmb	IAmb	02 54 54.8	
	comp=Z,9.5nm,1.2s						
I23K	**Minto, Yukon-K**	**84.66**	**10**	P	**P**	**02 54 53.7**	**-0.5**
	baz=204,SNR=5.7						
TCOL	**CIGO, UAF Yank**	**84.67**	**11**	P	**P**	**02 54 54.2**	**0.0**
	baz=205						
COLA	**College**	**84.67**	**11**	P	**P**	**02 54 54.0**	**-0.2**
COLA	**College**	**84.67**	**11**	P	**P**	**02 54 53.9**	**-0.4**
	baz=205						
MDM	**Murphy Dome**	**84.68**	**11**	P	**P**	**02 54 53.7**	**-0.7**
IL31		**84.75**	**11**	IAmb	IAmb	02 54 55.2	
	comp=Z,13nm,1.4s						
ILAR	**Eielson Array**	**84.75**	**11**	P	**P**	**02 54 54.1**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=233,slow=6.2,SNR=67						
	comp=Z,2.9nm,0.7s						
ILAR	**Eielson Array**	**84.75**	**11**	P	**P**	**02 54 54.0**	**-0.8**
IMAR	**Indian Mountai**	**84.77**	**8**	P	**P**	**02 54 55.1**	**+0.3**
J25K	**Salcha River,**	**84.90**	**12**	IAmb	IAmb	02 54 56.5	
	comp=Z,7.0nm,0.8s						
J25K	**Salcha River,**	**84.90**	**12**	P	**P**	**02 54 55.3**	**-0.3**
	baz=207,SNR=9.1						
POKR	**Poker Plat Res**	**84.97**	**11**	P	**P**	**02 54 55.1**	**-0.8**
	baz=205,SNR=10						
MSTX	**Muleshoe**	**84.98**	**52**	P	**P**	**02 54 56.7**	**0.0**
MSTX				IAmb	IAmb	02 54 57.9	
	comp=Z,5.7nm,0.8s						
MSTX	**Muleshoe**	**84.98**	**52**	P	**P**	**02 54 57.6**	**+0.8**
	baz=245						
K27K	**Chicken**	**85.08**	**14**	P	**P**	**02 54 57.2**	**+0.8**
	baz=210						
T25A	**Trinidad**	**85.15**	**49**	P	**P**	**02 54 57.7**	**+0.1**
	baz=244						
M30M	**Minto, Yukon**	**85.15**	**16**	IAmb	IAmb	02 54 58.3	
	comp=Z,4.5nm,1.1s						
M30M	**Minto, Yukon**	**85.15**	**16**	P	**P**	**02 54 57.2**	**+0.4**
	baz=215						

CMIG	Matias Romero	85.17	70	P	P	02 54 59.0	+1.1
	comp=Z,2.6nm,0.8s,baz=301,slow=5.9,SNR=4.3						
	comp=Z,2.6nm,0.8s						
J26L	Joseph Creek	85.17	13	P	P	02 54 56.8	-0.1
	baz=209,SNR=11						
H23K	Yukon River	85.25	10	P	P	02 54 57.4	+0.1
	baz=203						
H24K	Noodor Dome	85.54	10	P	P	02 54 57.6	-1.1
	baz=205						
RLMT	Red Lodge	85.68	40	P	P	02 55 00.5	+0.4
	baz=240						
DAWY	Dawson	85.73	15	IAmb	IAmb	02 55 01.0	
	comp=Z,6.6nm,0.9s						
DAWY	Dawson	85.73	15	P	P	02 54 59.9	+0.1
	baz=213						
N23A	Red Feather La	85.78	45	P	P	02 55 00.2	-0.6
	baz=243						
FARO	Faro, Yukon	85.84	18	P	P	02 55 00.1	-0.2
	baz=219						
EGAK	Eagle	85.93	13	P	P	02 55 00.9	+0.3
	baz=211						
COLD	Coldfoot	86.44	9	P	P	02 55 03.6	+0.6
	baz=203						
BILL	Bilibino	86.66	353	P	P	02 55 03.5	-0.6
BILL				IAmb	IAmb	02 55 06.0	
	comp=Z,5.6nm,1.2s						
MMPY	Sheldon Lake,	86.76	18	P	P	02 55 05.3	+0.5
	baz=220						
ABTX	Abilene, Hawle	86.83	54	P	P	02 55 06.0	+0.2
	baz=247						
I29M	Ogilvie Camp,	87.08	14	P	P	02 55 06.0	-0.2
	baz=214						
BMAR	Burnt Mountain	87.56	11	P	P	02 55 09.1	+0.6
TOLK	Toolik Lake Re	87.84	9	P	P	02 55 10.3	+0.4
	baz=203						
EPYK	Eagle Plains	88.28	14	P	P	02 55 12.7	+0.7
	baz=215						
PLCA	Paso Flores	88.43	132	P	P	02 55 15.4	+1.9
	comp=Z,1.3nm,0.8s,baz=220,slow=4.9,SNR=5.0						
	comp=Z,1.3nm,0.8s						
PLCA	Paso Flores	88.43	132		P	02 55 14.4	+0.9
RSSD	Black Hills	88.50	43	P	P	02 55 13.8	0.0
	baz=244						
INK	Inuvik	90.58	14	P	P	02 55 23.2	+0.7
	baz=218						
YKA	Yellowknife Ar	92.38	24	P	P	02 55 29.5	-1.6
	comp=Z,0.4nm,0.8s,baz=232,slow=4.6,SNR=8.1						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	92.38	24	P	P	02 55 29.7	-1.4
U40A	Yellville	93.40	53	P	P	02 55 36.7	+0.2
	baz=251						
W41B	Gary Mavity, V	93.48	54	P	P	02 55 37.0	+0.2
	baz=251						
C36M	Paulatuk	93.67	16	P	P	02 55 37.2	+0.3
	baz=227						
AGMN	Agassiz Nation	95.36	41	P	P	02 55 44.7	-0.5
	baz=250						
ARCES	ARCESS Array B	126.75	352	PKP	PKiKP	03 01 23.9	+0.1
	comp=Z,2.1nm,0.9s,baz=80,slow=1.0,SNR=4.9						
ARCES	ARCESS Array B	126.75	352		PKPdf	03 01 23.5	+0.2
CLL	Collm	145.96	352	*i* PKPbc	PKPab	03 02 00.6	-0.1
	comp=Z,13nm,0.9s						
CLL				*i* PKiKP	PKiKP	03 02 03.2	-0.2
	comp=Z,9.0nm,1.0s						
OSTC	Ostas	146.17	348	*e*P	PKPab	03 02 01.8	+0.2
CHVC	Chvalec	146.17	348	*e*P	PKPab	03 02 01.8	+0.2
BRG	Berggiesshubel	146.25	351	*e*PKP	PKPab	03 02 02.0	+0.1
BRG				Amp		03 02 02.8	
	comp=Z,6.6nm,1.0s						
DPC	Dobruska-Polom	146.35	348	*e*P	PKPab	03 02 02.7	+0.4
PVCC	Panska Ves	146.49	350	*e*P	PKPab	03 02 03.2	+0.4
KRLC	Kraliky	146.51	347	*e*P	PKPbc	03 02 01.5	-0.3
MORC	Moravsky Berou	146.63	346	*e*PKP	PKPab	03 02 03.2	-0.2
MAUC	Maruska	146.95	346	*e*P	PKPab	03 02 04.4	-0.3
PRU	Pruhonice	147.02	350	*e*P	PKPab	03 02 04.2	-0.7
MEM	Membach	147.12	360	*d*PKPab	PKPbc	03 02 04.0	+0.5
BSTI	Sart Tilman	147.15	1	*d*PKPab	PKPab	03 02 04.6	-0.7
VRAC	Vranov	147.28	347	*e*PKP	PKPab	03 02 05.5	-0.5
BMRD	Maredsous	147.41	1	*d*PKP	PKPbc	03 02 04.5	+0.3
BRTR	Keskin Array B	147.50	318	PKPbc	PKPbc	03 02 05.9	+0.9
	comp=Z,1.9nm,0.7s,baz=197,slow=3.9,SNR=5.1						
BRTR	Keskin Array B	147.50	318		PKPbc	03 02 05.1	0.0
KRUC	Moravsky	147.56	347	*e*PKP	PKiKP	03 02 05.8	-1.0
RCHB	Rochefort	147.57	1	*d*PKPdf	PKPdf	03 02 02.7	+0.8
KHC	Kasperske Hory	148.01	351	*e*P	PKiKP	03 02 06.9	-0.8
WLF	Walferdange	148.07	360	*d*PKPab	PKiKP	03 02 07.6	-0.2
CKRC	Cesky Krumlov	148.19	350	*e*P	PKPbc	03 02 07.0	+0.6
GERES	GERESS Array B	148.26	350	PKPbc	PKPbc	03 02 07.2	+0.5
	comp=Z,2.5nm,0.8s,baz=33,slow=3.2,SNR=16						
GERES	GERESS Array B	148.26	350	PKPbc	PKPbc	03 02 06.3	-0.4
CONA	Conrad Observa	148.74	347	*e*P	PKiKP	03 02 09.2	-0.2
	comp=Z,5.2nm,0.8s						
MOA	Molln	149.13	349	*e*P	PKiKP	03 02 09.5	-0.6
	comp=Z,2.7nm,1.0s						
RETA	Reutte	149.99	354	*i* P	PKiKP	03 02 12.1	+0.1
	comp=Z,4.9nm,1.2s						
WATA	Walderalm	150.04	352	*e*P	PKiKP	03 02 11.8	-0.3
	comp=Z,2.5nm,0.8s						
MOTA	Moosalm	150.09	353	*i* P	PKiKP	03 02 12.1	-0.1
	comp=Z,4.0nm,0.8s						
SOKA	Soboth	150.11	347	*e*P	PKiKP	03 02 11.8	-0.4
	comp=Z,4.9nm,1.1s						
WTTA	Wattenberg	150.11	352	*e*P	PKiKP	03 02 12.2	-0.2
	comp=Z,2.6nm,0.4s						
SQTA	Sankt Quirin	150.20	353	*e*P	PKiKP	03 02 12.1	-0.3
	comp=Z,4.8nm,0.8s						
DAVA	Damuels	150.28	355	*e*P	PKiKP	03 02 12.9	+0.3
	comp=Z,4.7nm,0.8s						
FETA	Feichten	150.45	353	*i* P	PKPbc	03 02 12.6	+0.3
	comp=Z,5.2nm,0.9s						
ABTA	Abfaltersbach	150.49	351	*e*P	PKPbc	03 02 12.3	0.0
	comp=Z,5.9nm,0.8s						
TORD	Torodi Ar. Bea	173.89	137	PKP	PKPdf	03 02 30.3	-0.5
	comp=Z,0.8nm,0.9s,baz=94,slow=0.1,SNR=4.8						
TORD				PKPab	PKPab	03 04 02.2	+0.5
	comp=Z,1.0nm,0.8s,baz=242,slow=3.7,SNR=4.8						

NEIC ***04*** *02:49:37.0±1.7, 7°.6S±0°.1×156°.0E±0°.1, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=21.9km s-min=19.0km az=51.0*

IDC ***04*** *02:49:43.5±7.5, 7°.52S×155°.76E, h62^{km}±60^{km}, mb3.5/6, mbtmp3.9/7, ML4.2/1, MS3.1/2, Error ellipse: s-maj=53.9km s-min=21.7km az=113.0*

ISC 04 02:49:41.9±0.8, 7°.59S±0°.09×155°.8E±0°.1, h44^{km}, n30, σ1^s.06/30, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.93	313	Pn	Pn	02 50 52.4	-1.2
KRVT	Keravat (AS076	4.96	311	P	Pn	02 50 54.0	0.0
	9.7nm,0.3s,baz=207,slow=3.3,SNR=6.2						
KRVT				S	Sn	02 51 50.8	+0.8
	115nm,0.8s,baz=224,slow=19,SNR=2.2						
KRVT				LR	LR	02 52 40.4	
	comp=Z,119nm,21.4s,baz=319,slow=36						
	51nm,0.5s						
COEN	Coen	13.90	242	P	P	02 53 05.4	+1.7
PATS	Pohnpei	14.55	10	P	Pn	02 53 07.1	+2.0
WR0	Warramunga Arr	23.98	237	P	P	02 54 52.6	0.0
WB0	Warramunga Arr	24.01	238	P	P	02 54 53.1	+0.2
WB0				IAmb	IAmb	02 54 54.6	
	comp=Z,20nm,1.5s						
WB2	Warramunga Arr	24.13	237	P	P	02 54 54.3	+0.3
WB2				IAmb	IAmb	02 55 07.6	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	24.14	237	P	P	02 54 54.4	+0.3
	comp=Z,1.6nm,0.5s,baz=59,slow=9.4,SNR=13						
	comp=Z,1.6nm,0.5s						
WRA	Warramunga Arr	24.14	237	P	P	02 54 52.3	-1.7
AS31	Alice Springs	26.38	230	P	P	02 55 12.3	-2.1
ASAR	Alice Springs	26.38	230	P	P	02 55 14.5	+0.1
	comp=Z,1.0nm,0.5s,baz=57,slow=10.0,SNR=6.7						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	26.38	230	P	P	02 55 14.8	+0.4
FITZ	Fitzroy Crossi	31.14	247	P	P	02 55 55.4	-1.3
FITZ				IAmb	IAmb	02 55 56.7	
	comp=Z,3.2nm,0.8s						
MBWA	Marble Bar	37.33	245	P	P	02 56 49.9	-0.5
PSA00	Pilbara Seismi	37.34	244	P	P	02 56 50.0	-0.4
PEA0B	Petropavlovsk-	60.48	1	P	P	02 59 47.0	-0.2
PETK	Petropavlovsk-	60.48	1	P	P	02 59 46.9	-0.3
	comp=Z,1.2nm,0.6s,baz=157,slow=7.7,SNR=4.1						
	comp=Z,1.2nm,0.6s						
PETK	Petropavlovsk-	60.48	1	P	P	02 59 47.7	+0.5
TIXI	Tiksi	81.05	352	LR	LR	03 39 05.2	
	comp=Z,19nm,18.5s,baz=186,slow=37						
IMAR	Indian Mountai	82.03	19	P	P	03 01 56.6	-0.6
RND	Reindeer	82.16	22	P	P	03 01 56.7	-1.3
RND				IAmb	IAmb	03 02 01.8	
	comp=Z,9.9nm,1.4s						
QSPA	South Pole Qui	82.39	180	P	P	03 02 01.0	+1.7
QSPA				IAmb	IAmb	03 02 14.4	
	comp=Z,2.9nm,1.2s						
ILAR	Eielson Array	83.64	21	P	P	03 02 04.2	-1.3
	comp=Z,0.2nm,0.5s,baz=241,slow=4.5,SNR=5.2						
	comp=Z,0.2nm,0.5s						
J25K	Salcha River,	84.10	22	P	P	03 02 07.2	-0.8
J25K				IAmb	IAmb	03 02 08.2	
	comp=Z,5.3nm,1.4s						
M27K	Edge Creek, AK	84.34	25	P	P	03 02 09.2	-0.1
M27K				IAmb	IAmb	03 02 17.6	
	comp=Z,6.4nm,1.3s						
MKAR	Makanchi Array	84.36	319	P	P	03 02 08.0	-1.6
	comp=Z,0.4nm,0.7s,baz=102,slow=6.6,SNR=3.6						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	84.36	319	P	P	03 02 09.2	-0.5
TOLK	Toolik Lake Re	84.95	17	P	P	03 02 11.7	-0.5
TOLK				IAmb	IAmb	03 02 12.7	
	comp=Z,2.8nm,1.1s						
YKA	Yellowknife Ar	96.49	28	P	P	03 03 05.8	-0.6
	comp=Z,0.2nm,0.6s,baz=269,slow=4.3,SNR=5.3						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	153.93	284	PKPbc	PKPbc	03 09 36.9	-0.8
	comp=Z,0.1nm,0.4s,baz=104,slow=2.2,SNR=5.5						

KRSC 04 02:55:47.2±2.5, 48°.23N×156°.38E, h16^{km}±37^{km}, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	3.75	16	*e*P	Pn	02 56 47.3	+3.1
KDTR				*e*S	Sn	02 57 32.7	+4.8
MIPR	Malaya Ipel'ka	4.06	3	*e*P	Pn	02 56 50.9	+2.4
ASAK	Asacha	4.27	13	*e*P	Pn	02 56 55.5	+4.0
MTVR	Mutnovka	4.41	14	*e*P	Pn	02 56 57.2	+3.7
MTVR				*e*S	Sn	02 57 49.7	+5.1
RUS	Russkaya	4.42	17	*e*P	Pn	02 56 56.7	+3.2
GRL	Gorelyy	4.46	13	*e*P	Pn	02 56 58.3	+4.1
KRMR	Karymshinskiy	4.74	13	*e*P	Pn	02 57 02.0	+4.1
UGLR	Uglovaya	5.22	16	*e*P	Pn	02 57 09.9	+5.3
AVH	Avacha	5.26	16	*e*P	Pn	02 57 10.9	+5.8
KOK	Koryaka	5.27	15	*e*P	Pn	02 57 09.9	+4.7
SMAR	Somma	5.27	16	*e*P	Pn	02 57 11.6	+6.3
KRER	Koryakskii	5.30	16	*e*P	Pn	02 57 11.1	+5.4
SDLR	Sedlovina	5.30	16	*e*P	Pn	02 57 09.4	+3.7
KRX	Arik	5.33	15	*e*P	Pn	02 57 10.5	+4.3
SPN	Mys Shipunski	5.40	24	*e*P	Pn	02 57 11.1	+4.2
GNL	Ganaly	5.56	10	*e*P	Pn	02 57 12.9	+3.6
MKZ	Mys Kozlova	7.16	26	*e*P	Pn	02 57 35.8	+4.7

NNC ***04*** *03:02:50.3±4.5, 37°.29N×71°.15E, h157^{km}±64^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=53.0km s-min=14.4km az=37.0*

ISC 04 03:02:46.8±3.2, 37°.1N±0°.2×70°.9E±0°.1, h100^{km}, n16, σ0^s.74/17, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.49	22	P	Pn	03 04 06.7	+0.3
	SNR=39						
UCH	Uchtor	5.85	27	P	Pn	03 04 11.8	+0.4
	SNR=7.9						
EKS2	Erkin-Say	6.00	21	P	Pn	03 04 14.0	+0.9
	SNR=11						
BRLS	Borolday	6.00	352	Lg	Lg	03 05 11.1	
	8.6nm,0.1s						
KK31	Karatay Array	6.03	357	⇑P	Pn	03 04 14.6	+1.3
	3.9nm,0.2s,baz=176,slow=12,SNR=126						
KK31				⇓S	Sn	03 05 21.7	+0.8
	4.5nm,0.5s,baz=146,slow=26,SNR=4.6						
AAK	Ala-Archa	6.20	25	P	Pn	03 04 16.0	+0.2
	SNR=8.0						
CHMS	Chumysh	6.61	25	P	Pn	03 04 21.8	+0.5
	SNR=8.2						
CHMS	Chumysh	6.61	25	⇓P	Pn	03 04 21.5	+0.2
	13nm,0.7s						
USP	Ospenovka	6.77	23	P	Pn	03 04 23.5	0.0
	SNR=5.1						
TKM2	Tokmak 2	6.86	30	P	Pn	03 04 25.1	+0.3
	SNR=9.4						
TKM2	Tokmak 2	6.86	30	⇑P	Pn	03 04 24.9	+0.1
	3.8nm,0.5s						
SGDS	Sogindy	6.97	23	P	Pn	03 04 26.0	-0.3
	5.6nm,0.3s						
DGS	Degeres	7.20	30	P	Pn	03 04 29.3	0.0
	3.6nm,0.5s						
KRBS	Karabastau	7.54	27	P	Pn	03 04 33.3	-0.7
	1.7nm,0.5s						
AB31	Akbulak array	14.54	330	⇑P	Pn	03 06 07.6	+0.2
	1.0nm,0.5s,baz=139,slow=14,SNR=41						
AB31				⇑S	Sn	03 08 45.9	-1.8
	1.5nm,0.8s,baz=150,slow=23,SNR=4.5						
AKTO	Aktyubinsk	16.25	329	⇑P	P	03 06 29.9	-0.2
	1.6nm,0.4s						

IDC ***04*** *03:28:33.6±1.0, 50°.63N×179°.01E, h0^{km}, mb3.8/12, mbtmp3.8/15, ML3.6/3, MS3.3/1, Error ellipse: s-maj=26.5km s-min=17.9km az=175.0*

NEIC ***04*** *03:28:38.2±1.6, 50°.6N±0°.1×178°.9E±0°.1, h30^{km}±6^{km}, mb3.8/27, Error ellipse: s-maj=21.2km s-min=9.5km az=174.0*

ISC 04 03:28:37.6±1.0, 50°.4N±0°.1×178°.96E±0°.06, h35^{km}, n57, σ0^s.82/55, mb3.8/22, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	Adak	3.11	60		Pn	03 29 24.1	0.0
ADK				Sn	Sn	03 30 01.2	+1.1
SHEM	Shemya Is, Ala	3.81	309	Pn	Pn	03 29 32.8	-0.9
	9.8nm,0.3s,baz=168,slow=19,SNR=7.7						
SHEM				Sn	Sn	03 30 18.3	+1.0
	11nm,0.3s,baz=295,slow=20,SNR=14						
	21nm,0.3s						
SMY	Shemya	3.81	309	Pn	Pn	03 29 33.5	-0.3
NIKH	Nikolski High	8.00	67	Pn	Pn	03 30 31.0	-0.2
UNV	Unalaska Valle	9.58	63	Pn	Pn	03 30 52.5	-0.3
PEA0B	Petropavlovsk-	13.43	290	Pn	Pn	03 31 44.5	-0.9
PETK	Petropavlovsk-	13.43	290	Pn	Pn	03 31 44.5	-0.9
	0.4nm,0.3s,baz=91,slow=23,SNR=7.3						
	1.7nm,0.6s						
PETK	Petropavlovsk-	13.43	290		Pn	03 31 44.4	-1.1
OHAK	Old Harbor	17.66	57	Pn	Pn	03 32 39.7	-0.8
SVW2	Sparrevohn	17.75	43	P	P	03 32 42.1	-0.1
KDAK	Kodiak Island	18.14	55	P	P	03 32 44.6	-1.9
	0.4nm,0.3s,baz=315,slow=17,SNR=6.9						
KDAK				LR	LR	03 41 31.3	
	comp=Z,80nm,18.2s,baz=224,slow=43						
	2.3nm,0.5s						
L19K	White Mountain	18.54	41	P	P	03 32 50.7	-0.3
L19K				IAmb	IAmb	03 33 15.8	
	comp=Z,8.1nm,1.4s						
SEY	Seymchan	19.05	321	P	Pn	03 32 58.6	+1.2
	comp=Z,1.7nm,0.4s,baz=120,slow=14,SNR=9.2						
K20K	Telida	19.42	38	P	P	03 33 01.0	+0.4
J20K	Nowinta River	19.81	36	P	Pn	03 33 05.8	-0.7
J20K				IAmb	IAmb	03 33 29.2	
	comp=Z,4.6nm,1.1s						
PPLA	Purkeypile	19.97	40	P	Pn	03 33 11.9	+3.4
PPLA				IAmb	IAmb	03 33 12.1	
	comp=Z,8.0nm,1.2s						
CAST	Castle Rocks	20.24	39	P	P	03 33 09.4	-0.1
KTH	Kantishna Hill	20.77	39	P	P	03 33 16.0	+0.8
KTH				IAmb	IAmb	03 33 19.9	
	comp=Z,6.9nm,0.9s						
IMAR	Indian Mountai	20.94	32	P	P	03 33 16.4	-0.6
BPAW	Bear Paw Mtn.	20.98	38	P	P	03 33 18.9	+1.5
BPAW				IAmb	IAmb	03 33 22.2	
	comp=Z,4.9nm,1.1s						
H21K	Melozitna Rive	21.08	33	P	P	03 33 18.5	0.0
RND	Reindeer	21.56	41	P	P	03 33 24.4	+0.6
RND				IAmb	IAmb	03 33 34.7	
	comp=Z,7.3nm,1.4s						
SCM	Sheep Creek Mo	21.71	45	P	P	03 33 24.4	-1.0
NEA2	Nenana	21.95	38	P	P	03 33 28.0	+0.2
NEA2				IAmb	IAmb	03 33 39.5	
	comp=Z,3.9nm,1.1s						
DHY	Denali Highway	22.07	42	P	P	03 33 30.0	+0.7
DHY				IAmb	IAmb	03 33 35.1	
	comp=Z,4.8nm,0.8s						
KLU	Klutina	22.27	47	P	P	03 33 31.6	+0.2
WRH	Wood River Hil	22.29	38	P	P	03 33 30.4	-1.0
WRH				IAmb	IAmb	03 33 38.9	
	comp=Z,4.7nm,1.3s						
M24K	Tolsona, Glenn	22.31	45	P	P	03 33 31.4	-0.4
MDM	Murphy Dome	22.43	37	P	P	03 33 33.0	0.0
MDM				IAmb	IAmb	03 33 35.8	
	comp=Z,6.0nm,1.4s						
CCB	Clear Creek Bu	22.47	38	P	P	03 33 33.8	+0.5
ILAR	Eielson Array	22.88	38	P	P	03 33 37.0	-0.7
	comp=Z,0.2nm,0.4s,baz=264,slow=11,SNR=5.4						
	comp=Z,0.2nm,0.4s						
H24K	Noodor Dome	22.94	35	P	P	03 33 38.8	+0.4
H24K				IAmb	IAmb	03 33 44.5	
	comp=Z,3.1nm,1.1s						
DOT	Dot Lake	23.67	42	P	P	03 33 45.5	-0.1
DOT				IAmb	IAmb	03 34 14.9	
	comp=Z,8.5nm,1.4s						
TOLK	Toolik Lake Re	23.79	28	P	P	03 33 46.8	+0.1
TOLK				IAmb	IAmb	03 33 52.2	
	comp=Z,2.2nm,0.9s						
L27K	Beaver Creek,	24.50	44	P	P	03 33 53.8	+0.6
L27K				IAmb	IAmb	03 33 58.6	
	comp=Z,3.2nm,1.1s						
EGAK	Eagle	25.20	40	P	P	03 34 00.1	+0.5
EGAK				IAmb	IAmb	03 34 03.7	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	36.92	45	P	P	03 35 43.6	+0.9
	comp=Z,1.3nm,0.5s,baz=281,slow=8.1,SNR=26						
	comp=Z,1.3nm,0.5s						
YKA	Yellowknife Ar	36.92	45	P	P	03 35 43.8	+1.2
PDAR	Pinedale Array	47.97	70	P	P	03 37 11.9	-1.0
	comp=Z,0.9nm,0.9s,baz=318,slow=3.6,SNR=5.9						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	47.97	70	P	P	03 37 12.2	-0.7
ARCES	ARCESS Array B	58.78	349	P	P	03 38 31.8	+0.1
	comp=Z,2.7nm,0.8s,baz=24,slow=9.3,SNR=7.0						
	comp=Z,2.7nm,0.8s						
ARCES	ARCESS Array B	58.78	349	P	P	03 38 31.1	-0.5
MKAR	Makanchi Array	59.51	308	P	P	03 38 35.6	-1.4
	comp=Z,0.5nm,0.6s,baz=52,slow=6.7,SNR=5.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	60.22	79	P	P	03 38 41.3	-0.9
	comp=Z,0.4nm,0.6s,baz=327,slow=6.5,SNR=3.1						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	60.22	79	P	P	03 38 41.1	-1.1
SCHQ	Schefferville	61.63	37	P	P	03 38 51.8	+0.5
	comp=Z,2.1nm,0.9s,baz=290,slow=15,SNR=3.5						
	comp=Z,2.1nm,0.9s						
SCHQ	Schefferville	61.63	37	P	P	03 38 51.3	-0.1
FINES	FINESS Array B	66.39	346	P	P	03 39 22.2	-0.2
	comp=Z,0.8nm,0.5s,baz=21,slow=8.1,SNR=9.1						
	comp=Z,0.8nm,0.5s						
FINES	FINESS Array B	66.39	346	P	P	03 39 22.5	+0.1
NB2	NORSAR Subarra	68.46	354	P	P	03 39 36.4	+0.8
	comp=Z,0.9nm,0.6s,baz=9.2,slow=6.5						
NOA	NORSAR Array B	68.46	354	P	P	03 39 36.1	+0.6
	comp=Z,2.0nm,0.7s,baz=8.9,slow=6.3,SNR=8.5						
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	80.34	222	P	P	03 40 48.3	+3.3
	comp=Z,0.4nm,0.6s,baz=32,slow=6.3,SNR=1.9						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	80.34	222	P	P	03 40 47.2	+2.2
ASAR	Alice Springs	83.82	221	P	P	03 41 06.9	+3.6
	comp=Z,0.4nm,0.9s,baz=25,slow=5.4,SNR=2.5						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	83.82	221	P	P	03 41 06.5	+3.2
BRTR	Keskin Array B	85.20	334	P	P	03 41 10.7	+0.3
	comp=Z,0.8nm,0.8s,baz=37,slow=13,SNR=3.6						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	85.20	334	P	P	03 41 11.0	+0.6

NOU 04 03:30:06.3, 16°.26S×167°.26E, h4^{km}, MLv4.4/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.81	356	P	Pg	03 30 22.3	+0.4
DVP	Devils Point	1.71	149	P	Pn	03 30 37.2	+0.4
RTV	Rentapao	1.89	144	P	Pn	03 30 39.9	+0.6
YATNC	Mamie plateau,	5.78	183	P	Pn	03 31 31.2	-1.7
DZM	Mont Dzumac	5.83	187	P	Pn	03 31 32.2	-1.5
NOUC	Port Laguerre	5.88	189	P	Pn	03 31 35.0	+0.7
	10nm,0.5s						
OUENC	Ouen Island, N	6.14	184	P	Pn	03 31 38.5	+0.7

IDC ***04*** *03:39:16.0±2.6, 31°.91S×179°.85E, h415^{km}±25^{km}, mb3.1/2, mbtmp4.2/6, Error ellipse: s-maj=31.4km s-min=22.4km az=69.0*

WEL ***04*** *03:39:23.9±0.9, 32°S±10°×18°0W±2°4, h313^{km}±13^{km}, M4.6/12, mB4.8/7, MLv5.0/12, Mw(mB)4.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.1*

ISC 04 03:39:16.9±1.1, 31°.88S±0°.08×179°.7E±0°.2, h400^{km}, n26, σ2^s.28/36, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.34	39	P	Pn	03 40 22.7	-0.3
GLKZ				S	S	03 41 11.3	-5.2
GRZ	Great Barrier	5.58	218	P	Pn	03 40 50.9	+6.0
MXZ	Matakaoa Point	5.78	191	P	Pn	03 40 49.9	+3.0
MXZ				S	S	03 41 59.9	-0.5
WMGZ	Waiomatatini S	6.01	189	P	Pn	03 40 52.8	+3.4
WMGZ				S	S	03 42 01.8	-3.2
HAZ	Te Kaha	6.06	194	P	Pn	03 40 52.5	+2.5
HAZ				S	S	03 42 04.5	-1.4
PKGZ	Pakihiroa	6.13	192	S	S	03 42 04.7	-2.8
PUZ	Puketiti	6.28	190	P	Pn	03 40 53.8	+1.3
PUZ				S	S	03 42 07.7	-2.8
RUGZ	Raukumara Rang	6.28	194	P	Pn	03 40 57.3	+4.7
RUGZ				S	S	03 42 04.5	-6.2
WHRZ	Whale Island	6.36	200	P	Pn	03 40 58.9	+5.6
WHRZ				S	S	03 42 15.2	+3.2
TWGZ	Tauwhareparae	6.43	192	P	Pn	03 40 58.9	+4.8
TWGZ				S	S	03 42 13.5	0.0
MWZ	Matawai	6.67	195	P	Pn	03 40 59.8	+3.0
MWZ				S	S	03 42 18.5	+0.1
URZ	Urewera	6.70	198	P	Pn	03 40 57.5	+0.5
	52nm,0.5s,baz=14,slow=6.9,SNR=59						
URZ				S	S	03 42 17.8	-1.1
	136nm,0.6s,baz=76,slow=23,SNR=23						
URZ	Urewera	6.70	198	P	Pn	03 40 59.8	+2.7
URZ				S	S	03 42 16.8	-2.0
TKGZ	Te Karaka	6.71	192	P	Pn	03 40 58.9	+1.8
TKGZ				S	S	03 42 19.3	+0.2
RIGZ	Rimuhau	6.98	192	P	P	03 41 02.2	+1.3
RIGZ				S	S	03 42 24.2	-0.6
MUGZ	Murupara	6.99	199	P	P	03 41 03.0	+2.1
MUGZ				S	S	03 42 24.2	-0.7
RTZ	Ruatahuna	7.07	197	P	P	03 41 03.0	+1.2
RTZ				S	S	03 42 25.0	-1.5
PRGZ	Paritu Road	7.17	191	P	P	03 41 03.6	+0.6
PRGZ				S	S	03 42 25.0	-3.7
RPZ	Rata Peaks	13.62	207	P	P	03 42 13.2	-1.0
	6.9nm,0.5s,baz=38,slow=13,SNR=2.3						
MSVF	Nonsavu	14.16	354	P	P	03 42 20.4	-0.2
	2.9nm,0.4s,baz=166,slow=19,SNR=2.0						
DZM	Mont Dzumac	15.30	306	P	P	03 42 33.6	+0.8
	4.0nm,0.8s,baz=124,slow=18,SNR=2.3						
ASAR	Alice Springs	41.06	270	P	P	03 46 23.1	-0.6
	0.6nm,0.5s,baz=106,slow=7.5,SNR=11						
	0.6nm,0.5s						
WRA	Warramunga Arr	42.19	275	P	P	03 46 31.5	-1.2
	1.0nm,0.3s,baz=111,slow=7.9,SNR=44						
	1.0nm,0.3s						
FINES	FINESS Array B	145.80	338	PKPbc	PKPdf	03 58 06.0	-1.9
	2.9nm,0.7s,baz=59,slow=3.4,SNR=21						
NOA	NORSAR Array B	149.86	349	PKPbc	PKPdf	03 58 16.5	+1.9
	0.2nm,0.4s,baz=19,slow=3.9,SNR=1.4						
TORD	Torodi Ar. Bea	161.26	186	PKPab	PKPab	03 59 14.4	-2.5
	0.2nm,0.5s,baz=161,slow=3.8,SNR=7.4						

TEH 04 03:41:31.7, 39°.73N×50°.15E, h16^{km}, ML3.7, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALA	Gala	0.68	0	*e*Pn	Pb	03 41 45.8	+0.6
GOBA	Gobu	0.75	335	*e*Pg	Pn	03 41 49.0	+1.4
NDR	Nardaran	0.86	352	*e*Pn	Pg	03 41 48.7	+0.2

ALIB	**Äli-Bayra**	**0.91**	**285**	ePn	Pb	03 41 48.4	-0.7
GBS	**Qobustan**	**1.23**	**311**	ePn	Pn	03 41 54.3	0.0
GLBA	**Clilabad**	**1.45**	**251**	ePn	Pn	03 41 57.7	+0.5
ASTR	**Astara**	**1.57**	**223**	ePn	Pb	03 42 00.9	+0.5
PQL	**Pirkuli**	**1.60**	**312**	ePn	Pb	03 42 00.2	-0.7
SIZA	**Siyzn**	**1.65**	**325**	ePn	Pb	03 42 01.2	-0.6
YRD	**Yardimli**	**1.69**	**242**	ePn	Pb	03 42 02.1	-0.4
IML	**Ismayilli**	**1.85**	**306**	ePn	Pb	03 42 04.1	-1.0
XNQ	**Khinaliq**	**2.11**	**314**	ePn	Pn	03 42 07.2	+0.7
QUB	**Quba**	**2.14**	**321**	ePn	Pn	03 42 06.4	-0.5
QSAR	**Qusar**	**2.29**	**322**	ePn	Pn	03 42 09.5	+0.6
LHJ2	**Lahijan - Gila**	**2.56**	**182**	ePn	Pn	03 42 13.8	+1.3
SEKA	**Sheki**	**2.70**	**304**	ePn	Pn	03 42 15.2	+0.7
GANJ	**Ganja**	**3.08**	**289**	ePn	Pn	03 42 20.9	+1.3
ZKT	**Zaqatala**	**3.28**	**307**	ePn	Pn	03 42 24.2	+1.8
QALM	**Alamut, Qazvin**	**3.31**	**173**	ePn	Pn	03 42 24.5	+1.4
QALM				e		03 43 04.2	
	comp=Z,1µm,0.4s						
ORD	**Ordubad**	**3.32**	**257**	ePn	Pn	03 42 25.2	+2.1
GDB	**GEDABAY**	**3.51**	**288**	ePn	Pn	03 42 26.9	+1.1
IPRN	**Peran**	**3.88**	**153**	ePn	Pn	03 42 31.9	+1.0
QZX	**Qazax, Azerbai**	**3.88**	**292**	ePn	Pn	03 42 31.6	+0.8
IRAZ	**Razeghan**	**4.32**	**182**	ePn	Pn	03 42 39.1	+2.2
IRAZ				e		03 43 37.9	
	comp=Z,590nm,0.4s						
IGLO	**Ghaloghah**	**4.33**	**137**	ePn	Pn	03 42 37.8	+0.7
IDMV	**Damavand**	**4.40**	**160**	ePn	Pn	03 42 40.4	+2.3
IDMV				e		03 43 35.8	
	comp=Z,900nm,0.2s						
IFIR	**Firoozkooh**	**4.57**	**152**	ePn	Pn	03 42 42.8	+2.4
IFIR				e		03 43 38.8	
	comp=Z,768nm,0.3s						
ILAS	**Lasjerd**	**4.88**	**152**	ePn	Pn	03 42 46.6	+2.0
IVRN	**Varamin**	**4.89**	**165**	ePn	Pn	03 42 46.6	+2.0
ISFB	**Sefidab**	**5.62**	**162**	ePn	Pn	03 42 56.3	+1.6
ISFR	**Sfrayin**	**6.72**	**111**	ePn	Pn	03 43 11.0	+1.1
IAKL	**Akhelmad**	**7.46**	**112**	ePn	Pn	03 43 20.1	0.0
TNSJ	**Nastanj**	**7.74**	**136**	ePn	Pn	03 43 25.5	+1.7
TKDS	**Koohdasht(Taba**	**8.28**	**135**	ePn	Pn	03 43 32.7	+1.5
TPRV	**Parvadeh(Tabas**	**8.51**	**140**	ePn	Pn	03 43 36.1	+1.8

TAP 04 03:47:40.4, 24°.14N×121°.62E, h3km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.02**	**18**	eP	Pg	03 47 41.6	+0.4
	baz=19						
ETL				eS	Sg	03 47 42.2	+0.4
	baz=19						
NACB	**Ninganchiao**	**0.04**	**334**	eP	Pg	03 47 42.2	+0.8
	baz=334						
NACB				eS	Sg	03 47 42.9	+0.8
	baz=334						
TWD	**Chiawan**	**0.06**	**197**	eP	Pg	03 47 41.9	+0.3
	baz=189						
TWD				eS	Sg	03 47 42.8	+0.4
	baz=189						
ETLH	**Xiulin Townshi**	**0.14**	**300**	eP	Pg	03 47 44.3	+1.1
	baz=300						
ETLH				eS	Sg	03 47 46.6	+1.5
	baz=300						
WHF	**Hehuan Shan**	**0.32**	**272**	eP	Pb	03 47 47.9	-1.0
	baz=271						
WHF				eS	Sb	03 47 52.9	-1.7
	baz=271						
CHGB	**Renai**	**0.41**	**259**	eP	Pb	03 47 49.9	-0.4
	baz=259						
OWD	**Renai**	**0.44**	**246**	eP	Pb	03 47 50.4	-0.4
	baz=245						
OWD				eS	Sb	03 47 57.5	-0.4
	baz=245						

*NEIC **04** 04:10:44.0±1.8, 52°.3N±0°.2×170°.9W±0°.1, h56km±21km, Error ellipse: s-maj=31.0km s-min=6.6km az=160.0*
*AEIC **04** 04:10:43±1.7, 52°.1N±0°.1×170°.9W±0°.1, h41km±9km, ML2.9, ML3.4/6(NEIC), Error ellipse: s-maj=22.3km s-min=6.0km az=154.0*
*IDC **04** 04:10:48.2±6.6, 52°.29N×168°.77W, h0km, mb3.4/4, mbtmp3.5/6, ML3.1/2, MS3.4/1, Error ellipse: s-maj=103.0km s-min=59.0km az=79.0*
ISC 04 04:10:43.1±1.7**, 52°.1N**±0°.3×**170°.88W**±0°.10**, h42km, n25, σ1s.26**/20**, mb3.4**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.50**	**55**		**Pn**	**04 11 07.0**	**-0.4**
NIKH				Sn	**Sn**	**04 11 26.6**	**+0.8**
KOFP	**Korovin Flat P**	**1.98**	**276**		**Pn**	**04 11 14.5**	**+0.3**
ATKA	**Atka Island**	**2.04**	**273**		**Pn**	**04 11 14.8**	**-0.2**
KOKL	**Mount Kliuchef**	**2.05**	**277**		**Pn**	**04 11 16.4**	**+1.3**
MSW	**Makushin Switc**	**3.05**	**53**		**Pn**	**04 11 30.6**	**+1.7**
UNV	**Unalaska Valle**	**3.15**	**55**		**Pn**	**04 11 31.6**	**+1.4**
ADK	**Adak**	**3.59**	**268**	Pn	**Pn**	**04 11 36.1**	**-0.1**
ADK				Sn	**Sn**	**04 12 16.2**	**-1.2**
ADK				IAML		04 12 18.7	
	61nm,0.2s						
ADK				IAML		04 12 32.5	
	68nm,1.1s						
AKUT	**Akutan**	**3.67**	**55**	Pn	**Pn**	**04 11 36.5**	**-0.8**
AKUT				IAML		04 12 43.4	
	comp=E,52nm,2.0s						
FALS	**False Pass**	**5.23**	**56**	Pn	**Pn**	**04 11 58.8**	**+0.2**
SDPT	**Sand Point**	**6.96**	**58**	Pn	**Pn**	**04 12 22.5**	**+0.1**
OHAK	**Old Harbor**	**11.38**	**56**	Pn	**Pn**	**04 13 21.2**	**-1.6**
KDAK	**Kodiak Island**	**11.93**	**54**	Pn	**Pn**	**04 13 28.1**	**-2.2**
	comp=E,0.2nm,0.3s,baz=265,slow=3.9,SNR=9.9						
	comp=E,6.7nm,1.1s						
ILAR	**Eielson Array**	**17.68**	**35**	Pn	**Pn**	**04 14 44.4**	**-1.4**
	baz=234,slow=10,SNR=1.8						
	comp=E,0.1nm,0.5s						
ILAR	**Eielson Array**	**17.68**	**35**		**Pn**	**04 14 44.6**	**-1.2**
DLBC	**Dease Lake**	**23.80**	**58**	P	**P**	**04 15 50.1**	**-1.7**
	comp=E,0.8nm,0.4s,baz=252,slow=15,SNR=2.5						
	comp=E,0.8nm,0.4s						
INK	**Inuvik**	**24.06**	**34**	P	**P**	**04 15 54.4**	**+0.5**
	comp=E,0.9nm,0.4s,baz=245,slow=7.0,SNR=7.6						
	comp=E,0.9nm,0.4s						
YKA	**Yellowknife Ar**	**31.10**	**48**	P	**P**	**04 16 58.7**	**+1.7**
	comp=E,0.3nm,0.7s,baz=271,slow=7.6,SNR=15						
	comp=E,0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**36.70**	**217**	T	T	04 56 59.7	
	baz=23						
H11N3	**WAKE ISLAND Hy**	**36.70**	**217**	T	T	04 56 58.8	
	baz=23						
H11N1	**WAKE ISLAND Hy**	**36.71**	**217**	T	T	04 57 00.3	
	baz=23						
H11S1	**WAKE ISLAND Hy**	**37.89**	**216**	T	T	04 58 34.7	
	baz=22,slow=76,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**37.90**	**216**	T	T	04 58 32.9	
	baz=22,slow=76,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**37.91**	**216**	T	T	04 58 37.0	
	baz=22,slow=76,SNR=4.2						
PDAR	**Pinedale Array**	**41.36**	**78**	P	**P**	**04 18 25.5**	**+0.5**
	comp=E,0.2nm,0.6s,baz=308,slow=4.4,SNR=2.6						
	comp=E,0.2nm,0.6s						
JNU	**Nakatsue**	**45.53**	**269**	LR	LR	04 39 32.8	
	comp=E,45nm,21.0s,baz=98,slow=37						

*VAO **04** 04:18:39.8±1.5, 21°.46S×70°.94W, h10km, mb4.0*
*GUC **04** 04:19:08.9±0.7, 21°.16S×68°.58W, h115km±5km, ML3.6*
*IDC **04** 04:19:09.8±0.8, 21°.31S×68°.34W, h125km±12km, mb3.5/4, mbtmp3.8/6, Error ellipse: s-maj=36.9km s-min=11.8km az=98.0*
ISC 04 04:19:08.3±0.7**, 21°.17S**±0°.04×**68°.69W**±0°.07**, h123km**±8km**, n37, σ1s.51**/50**, mb4.1**/3**, 5C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.75**	**280**	⇑ iP	**Pn**	**04 19 28.2**	**-0.3**
PB01				i S	**Sn**	**04 19 43.3**	**-0.3**
PB01				IAML		04 19 46.9	
	comp=E,1µm,0.2s						
PB09	**IPOC Station P**	**0.81**	**219**	⇑ iP	**Pn**	**04 19 29.5**	**+0.5**
PB09				i S	**Sn**	**04 19 45.7**	**+1.0**
PB09				IAML		04 19 50.2	
	comp=N,829nm,0.5s						
PB08	**IPOC Station P**	**1.11**	**337**	⇓ iP	**Pn**	**04 19 32.3**	**+0.2**
PB08				i S	**Sn**	**04 19 50.3**	**+0.2**
PB08				IAML		04 19 52.7	
	comp=N,604nm,0.7s						
PB02	**IPOC Station P**	**1.13**	**262**	⇑ iP	**Pn**	**04 19 32.4**	**+0.4**
PB02				i S	**Sn**	**04 19 50.6**	**+0.7**
PB02				IAML		04 19 54.1	
	comp=E,3µm,0.6s						
PB07	**IPOC Station P**	**1.24**	**243**	⇑ iP	**Pn**	**04 19 33.7**	**+0.5**
PB07				i S	**Sn**	**04 19 53.0**	**+0.8**
PB07				IAML		04 19 58.5	
	comp=E,1µm,0.6s						
LVC	**Limon Verde**	**1.45**	**188**	P	**Pn**	**04 19 36.4**	**+0.8**
	comp=E,145nm,0.2s,baz=38,slow=12,SNR=782						
LVC				S	**Sn**	**04 19 57.2**	**+0.7**
	comp=E,106nm,0.3s,baz=106,slow=21,SNR=21						
LVC	**Limon Verde**	**1.45**	**188**	eP	**Pn**	**04 19 35.9**	**+0.2**
LVC				i S	**Sn**	**04 19 57.4**	**+0.9**
TA01	**Diego Aracena**	**1.52**	**293**	⇓ iP	**Pn**	**04 19 36.6**	**+0.5**
TA01				i S	**Sn**	**04 19 57.9**	**+0.7**
TA01				IAML		04 19 59.1	
	comp=E,1µm,0.3s						
TA02	**Huaiquique**	**1.62**	**303**	eP	**Pn**	**04 19 37.5**	**+0.2**
TA02				i S	**Sn**	**04 19 59.6**	**+0.3**
TA02				IAML		04 20 03.8	
	comp=N,1µm,0.1s						
PB11	**IPOC Station P**	**1.67**	**327**	⇓ iP	**Pn**	**04 19 37.9**	**-0.2**
PB11				i S	**Sn**	**04 20 00.6**	**-0.1**
PB11				IAML		04 20 04.3	
	comp=E,721nm,0.6s						
PB06	**IPOC Station P**	**1.73**	**208**	⇑ iP	**Pn**	**04 19 39.5**	**+0.7**
PB06				i S	**Sn**	**04 20 03.0**	**+0.9**
PB06				IAML		04 20 04.0	
	comp=E,827nm,0.4s						
PB04	**IPOC Station P**	**1.78**	**229**	eP	**Pn**	**04 19 39.6**	**+0.2**
PB04				IAML		04 20 14.4	
	comp=E,794nm,0.5s						
PB15	**IPOC Station P**	**2.15**	**199**	⇓ iP	**Pn**	**04 19 44.8**	**+0.8**
PB15				i S	**Sn**	**04 20 11.9**	**+0.6**
PB10	**IPOC Station P**	**2.90**	**216**	eP	**Pn**	**04 19 54.7**	**+1.3**
LPAZ	**La Paz**	**4.89**	**6**	P	**Pn**	**04 20 21.8**	**+1.5**
	comp=E,3.3nm,0.4s,baz=189,slow=2.2,SNR=40						
LPAZ				S	**Sn**	**04 21 22.7**	**+6.4**
	comp=E,1.6nm,0.6s,baz=199,slow=13,SNR=1.3						
VILB	**Vilhena**	**11.52**	**46**	eP	**Pn**	**04 21 46.5**	**-2.7**
AQDB	**Aquidauana**	**12.17**	**89**	eP	**Pn**	**04 22 00.9**	**+3.3**
SALV	**Santo Antonio**	**13.39**	**69**	eP	**P**	**04 22 18.1**	**-0.6**
PDRB	**Porto dos Gac**	**14.89**	**52**	eP	**Pn**	**04 22 32.8**	**0.0**
TRCB	**Terra Rica**	**14.98**	**99**	eP	**P**	**04 22 36.8**	**+0.5**
PTGB	**Pitanga**	**15.72**	**106**	eP	**P**	**04 22 45.0**	**+0.5**
CLDB	**Colider**	**16.06**	**52**	eP	**Pn**	**04 22 47.7**	**+0.4**
PCMB	**Pacaembu**	**16.24**	**95**	eP	**P**	**04 22 51.2**	**+1.0**
ITAB	**Concordia**	**16.26**	**115**	eP	**Pn**	**04 22 49.9**	**+0.2**
CPSB	**Cacapava Do Su**	**16.52**	**127**	eP	**Pn**	**04 22 49.4**	**-3.4**
PLCA	**Paso Flores**	**19.57**	**184**	P	**P**	**04 23 27.0**	**+0.4**
	comp=E,1.0nm,0.8s,baz=349,slow=11,SNR=6.0						
BDFB	**Brasilia**	**20.37**	**78**	P	**P**	**04 23 33.4**	**-2.1**
	comp=E,1.4nm,0.6s,baz=232,slow=10,SNR=3.5						
	comp=E,1.4nm,0.6s						
ITTB	**Itaituba**	**20.91**	**39**	eP	**P**	**04 23 39.1**	**-2.1**
PRPB	**Parauapebas**	**23.59**	**53**	eP	**P**	**04 24 06.3**	**-1.8**
SMTB	**Santa Maria do**	**23.73**	**62**	eP	**P**	**04 24 09.4**	**-0.1**
MALB	**Monte Alegre**	**23.80**	**38**	eP	**P**	**04 24 08.2**	**-1.8**
SDBA	**SAO DESIDERIO**	**24.36**	**73**	eP	**P**	**04 24 15.8**	**+0.7**
ALF01	**Guarapari-ES**	**26.12**	**94**	eP	**P**	**04 24 31.9**	**+0.9**
DBIC	**Dimbokro**	**68.45**	**73**	P	**P**	**04 29 56.7**	**-0.8**
	comp=E,2.6nm,0.8s,baz=253,slow=6.7,SNR=1.7						
	comp=E,2.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.05**	**70**	P	**P**	**04 30 48.2**	**-0.2**
	comp=E,2.1nm,0.5s,baz=252,slow=5.2,SNR=32						
	comp=E,2.1nm,0.5s						
YKA	**Yellowknife Ar**	**90.94**	**341**	P	**P**	**04 31 58.5**	**+0.7**
	comp=E,0.1nm,0.6s,baz=136,slow=4.1,SNR=2.7						
	comp=E,0.1nm,0.6s						
MKAR	**Makanchi Array**	**145.25**	**36**	PKPbc	**PKPab**	**04 38 33.1**	**+1.4**
	comp=E,1.1nm,0.8s,baz=350,slow=3.7,SNR=9.5						

NOU 04 04:27:57.9, 16°.79S×167°.30E, h12km, MLv3.7/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.26**	**138**	P	Pn	04 28 20.8	-0.5
SANVU	**Saraoutou**	**1.34**	**356**	P	Pn	04 28 21.4	-1.0
RTV	**Rentapao**	**1.47**	**133**	P	Pn	04 28 24.1	-0.1
KOUNC	**Koumac, New Ca**	**4.71**	**217**	P	Pn	04 29 08.7	-0.1
YATNC	**Mamie plateau,**	**5.26**	**184**	P	Pn	04 29 15.7	-0.6
	14nm,1.9s						
NOUC	**Port Laguerre**	**5.37**	**190**	P	Pn	04 29 18.4	+0.6

*DDA **04** 04:29:56.8±0.0, 42°.40N×45°.83E, h7km±7km, ML3.0*
*TIF **04** 04:30:02.7, 41°.88N×46°.18E, h28km±1km*
*NORS **04** 04:30:04.2±0.0, 41°.97N×46°.25E, h17km, MPVA3.5*
*DRS **04** 04:30:04.4±0.0, 42°.00N×46°.08E, h13km*
*MOS **04** 04:30:04.2±0.0, 41°.99N×46°.23E, h18km, MPVA3.6*
ISC 04 04:30:04.4±0.9**, 41°.96N**±0°.03×**46°.10E**±0°.03**, h13km**±7km**, n23, σ1s.51**/42**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.16**	**139**	P	**Pg**	**04 30 08.1**	**-0.1**
LGD				S	**Sg**	**04 30 11.4**	**+0.5**
DDFL	**Dedoflistskaro**	**0.51**	**179**	P	**Pb**	**04 30 17.1**	**+1.8**
DDFL	**Dedoflistskaro**	**0.51**	**179**	P	**Pn**	**04 30 17.2**	**-0.2**
DDFL				S	**Sn**	**04 30 30.0**	**+3.9**
DDFL				i AML	AML	04 30 35.0	
	comp=N,686nm,0.9s						
DDFL				i AML	AML	04 30 39.0	
	comp=E,396nm,0.7s						
BTLR	**Botlikh**	**0.71**	**7**	ePg	**Pb**	**04 30 17.9**	**-0.8**
BTLR				eSg	**Sg**	**04 30 28.1**	**+0.4**
XNZR	**Khunzakh**	**0.74**	**37**	ePg	**Pb**	**04 30 18.6**	**-0.6**
XNZR				eSg	**Sg**	**04 30 28.7**	**+0.2**
DGRG	**David-gareji**	**0.74**	**227**	P	**Pb**	**04 30 19.3**	**+0.1**
KMKR	**Kumukh**	**0.76**	**76**	ePg	**Pb**	**04 30 19.0**	**-0.6**
KMKR				eSg	**Sg**	**04 30 29.3**	**0.0**
GNBR	**Gunib**	**0.77**	**56**	ePg	**Pb**	**04 30 19.1**	**-0.7**
GNBR				eSg	**Sb**	**04 30 29.8**	**-0.4**
UNCR	**Uncukul**	**0.92**	**34**	ePg	**Pb**	**04 30 21.6**	**-0.5**
UNCR				eSg	**Sb**	**04 30 33.9**	**-0.4**
ARKR	**Arakani**	**0.93**	**45**	ePg	**Pb**	**04 30 22.1**	**-0.3**
ARKR				eSg	**Sb**	**04 30 34.2**	**-0.4**
BTNK	**Botanikuri**	**1.01**	**255**	P	Pb	04 30 17.5	-6.2
BTNK				S	**Sb**	**04 30 32.4**	**-4.6**
BTNK	**Botanikuri**	**1.01**	**255**	P	Pb	04 30 17.5	-6.3
BTNK				S	**Sb**	**04 30 32.3**	**-4.7**
BTNK				i AML	AML	04 30 34.0	
	comp=E,354nm,0.1s						
KRNR	**Karanay**	**1.05**	**34**	ePg	**Pb**	**04 30 23.8**	**-0.8**
KRNR				eSg	**Sb**	**04 30 38.0**	**-0.4**
DLMR	**Dylym**	**1.18**	**19**	ePg	**Pn**	**04 30 26.7**	**+0.1**
DLMR				eSg	**Sn**	**04 30 42.9**	**+0.3**
DBC	**Dubki**	**1.19**	**27**	ePg	**Pn**	**04 30 26.5**	**-0.3**
DBC				eSg	**Sn**	**04 30 43.3**	**+0.3**
GROC	**Groznyy**	**1.27**	**350**	ePg	**Pn**	**04 30 28.8**	**+1.0**
GROC				eSg	**Sg**	**04 30 47.8**	**+2.6**
AKT	**Akhty**	**1.31**	**111**	ePg	**Pn**	**04 30 27.6**	**-0.8**
AKT				eSg	**Sg**	**04 30 46.5**	**-0.1**
GUDG	**Gudauri**	**1.31**	**293**	P	**Pn**	**04 30 28.2**	**-0.4**
GUDG				S	**Sn**	**04 30 46.1**	**+0.1**
TRLG	**Trialeti**	**1.55**	**255**	P	**Pn**	**04 30 31.4**	**-0.5**
TRLG				S	**Sn**	**04 30 52.4**	**+0.4**
DMNI	**Dmanisi**	**1.56**	**247**	P	**Pn**	**04 30 31.0**	**-0.9**
DMNI				S	**Sn**	**04 30 52.0**	**-0.2**
LACR	**Lac**	**1.59**	**304**	ePg	**Pb**	**04 30 34.3**	**+0.5**
LACR				eSg	**Sn**	**04 30 54.6**	**+1.6**
BRNG	**Burnasheti**	**1.73**	**260**	P	**Pn**	**04 30 34.4**	**0.0**
BRNG				S	**Sn**	**04 30 58.4**	**+1.9**
ZEI	**Tsey**	**1.83**	**298**	ePg	**Pb**	**04 30 38.1**	**+0.3**
ZEI				eSg	**Sb**	**04 31 02.5**	**+1.8**

KRSC 04 04:30:56.0±1.6**, 50°.09N×156°.82E, h100km**±23km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.75**	**323**	eP	Pn	04 31 14.5	+0.7
SKR				eS	Sn	04 31 28.0	+0.8
KDTR	**Khodutka, Kamc**	**1.90**	**24**	eP	Pn	04 31 29.1	+1.8
KDTR				eS	Sn	04 31 53.3	+2.2
MIPR	**Malaya Ipel'ka**	**2.19**	**359**	eP	Pn	04 31 31.5	+0.4
ASAK	**Asacha**	**2.40**	**16**	eP	Pn	04 31 35.8	+2.0
MTVR	**Mutnovka**	**2.55**	**19**	eP	Pn	04 31 38.1	+2.2
MTVR				eS	Sn	04 32 08.9	+2.5
RUS	**Russkaya**	**2.58**	**24**	eP	Pn	04 31 37.7	+1.6
RUS				eS	Sn	04 32 08.1	+1.2
GRL	**Gorelyy**	**2.59**	**17**	eP	Pn	04 31 39.1	+2.7
GRL				eS	Sn	04 32 11.0	+3.6
KRMR	**Karymshinskiy**	**2.87**	**16**	P	Pn	04 31 41.9	+2.0
UGLR	**Uglovaya**	**3.37**	**21**	eP	Pn	04 31 49.3	+2.6
AVH	**Avacha**	**3.40**	**20**	eP	Pn	04 31 50.1	+2.9
KOK	**Koryaka**	**3.41**	**19**	eP	Pn	04 31 49.9	+2.7
SMAR	**Somma**	**3.41**	**20**	eP	Pn	04 31 49.8	+2.3
KRER	**Koryakskii**	**3.44**	**20**	eP	Pn	04 31 50.3	+2.5
SDLR	**Sedlovina**	**3.45**	**21**	eP	Pn	04 31 49.9	+2.1
KRX	**Arik**	**3.47**	**18**	eP	Pn	04 31 50.6	+2.4
SPN	**Mys Shipunski**	**3.62**	**32**	eP	Pn	04 31 52.5	+2.5
SPN				eS	Sn	04 32 32.1	+0.4
GNL	**Ganaly**	**3.68**	**10**	eP	Pn	04 31 52.3	+1.3
MKZ	**Mys Kozlova**	**5.40**	**32**	eP	Pn	04 32 15.3	+1.3

*IDC **04** 04:59:44.6±1.7, 18°.36N×104°.70W, h0km, mb3.6/5, mbtmp3.4/6, ML3.1/1, MS3.2/10, Error ellipse: s-maj=43.1km s-min=34.4km az=115.0*
*MEX **04** 04:59:48.8±1.6, 18°.57N×105°.06W, h17km±43km, MD4.3*
ISC 04 04:59:45.7±1.8**, 18°.59N**±0°.05×**104°.94W**±0°.05**, h1km**±10km**, n48, σ2s.34**/63**, mb3.4**/5**, MS3.2**/5**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.91**	**354**	i P	**Pg**	**05 00 02.6**	**-0.5**
CJM				i S	**Sg**	**05 00 12.9**	**-2.0**
CDAR	**Ciudad de Arme**	**0.95**	**68**	i P	**Pg**	**05 00 04.6**	**+0.8**
CDAR				i S	**Sb**	**05 00 17.8**	**-0.2**
R15V		**1.07**	**58**	i P	**Pg**	**05 00 06.6**	**+0.3**
R15V				i S	**Sn**	**05 00 21.7**	**-1.8**
COIG	**Colima**	**1.32**	**64**	i P	**Pb**	**05 00 10.4**	**-1.0**
COIG				i S	**Sn**	**05 00 29.0**	**-0.7**
COMA	**Comala**	**1.33**	**57**	i P	**Pb**	**05 00 10.8**	**-0.7**
COMA				i S	**Sg**	**05 00 27.8**	**-0.8**
MNGA	**Volcan de Coli**	**1.52**	**55**	i P	**Pn**	**05 00 14.9**	**+0.6**
MNGA				eS	**Sg**	**05 00 35.4**	**+0.8**
EZ5V		**1.54**	**55**	eP	**Pn**	**05 00 15.1**	**+0.5**
EZ5V				eS	**Sb**	**05 00 33.5**	**-1.9**
MMIG	**Aquila**	**1.54**	**101**	i P	**Pn**	**05 00 13.6**	**-0.7**
MMIG				i S	**Sn**	**05 00 31.8**	**-3.3**
INCO	**Volcan de Coli**	**1.57**	**54**	eP	**Pn**	**05 00 15.1**	**0.0**
INCO				eS	**Sg**	**05 00 40.7**	**+4.6**
JUBC	**Volcan de Coli**	**1.59**	**55**	i P	**Pn**	**05 00 15.3**	**+0.1**
JUBC				i S	**Sg**	**05 00 38.1**	**+1.4**
ANIG	**Ahuacatlan**	**2.48**	**9**	eP	**Pn**	**05 00 27.1**	**-0.2**
ANIG				eS	**Sb**	**05 00 58.1**	**-4.1**
ZIIG	**Zihuatanejo**	**3.45**	**106**	i P	**Pn**	**05 00 41.9**	**+1.3**
ZIIG				eS	**Sn**	**05 01 20.1**	**-2.0**
MOIG	**Morelia**	**3.71**	**72**	i P	**Pn**	**05 00 47.0**	**+2.7**
MOIG				eS	**Sn**	**05 01 28.2**	**-0.7**
AAIG	**Aguscalientes**	**4.13**	**35**	eP	**Pn**	**05 00 52.0**	**+1.8**
AAIG				eS	**Sn**	**05 01 38.2**	**-1.1**
ARIG	**Puente Sto Nin**	**4.37**	**93**	eP	**Pn**	**05 00 55.2**	**+1.9**
ARIG				eS	**Sn**	**05 01 45.4**	**+0.5**
CAIG	**El Cayaco**	**4.71**	**108**	eP	**Pn**	**05 01 00.6**	**+2.7**
CAIG				eS	**Sn**	**05 01 53.1**	**-0.1**
ZAIG	**Zacatecas**	**4.71**	**28**	i P	**Pn**	**05 00 55.8**	**-2.4**
ZAIG				i S	**Sn**	**05 01 55.0**	**+1.4**
MEIG	**Mezcala**	**5.10**	**97**	i P	**Pn**	**05 01 05.8**	**+2.4**
MEIG				i S	**Sn**	**05 02 02.3**	**-0.7**
PLIG	**Platanillo**	**5.17**	**91**	eP	**Pn**	**05 01 07.7**	**+3.4**
PLIG				eS	**Sn**	**05 02 07.4**	**+2.8**
DAIG	**Los Arroyos**	**5.28**	**106**	eP	**Pn**	**05 01 08.7**	**+3.0**
DAIG				eS	**Sn**	**05 02 05.0**	**-2.2**
YAIG	**Yautepec**	**5.57**	**86**	eP	**Pn**	**05 01 13.6**	**+3.6**
YAIG				eS	**Sn**	**05 02 15.2**	**+0.4**
H06E1	**SOCORRO T-PHAS**	**5.67**	**273**	T	T	05 06 53.7	
	SNR=5.9						
RPIG	**Rio Verde**	**5.69**	**54**	i P	**Pn**	**05 01 14.7**	**+3.2**
RPIG				i S	**Sn**	**05 02 20.0**	**+2.4**
CRIG	**Cruz Grande**	**5.84**	**108**	eP	**Pn**	**05 01 16.3**	**+2.8**
CRIG				eS	**Sn**	**05 02 17.8**	**-3.3**
PPM	**Popocatepetl**	**6.00**	**84**	eP	**Pn**	**05 01 20.1**	**+4.1**
PPM				eS	**Sg**	**05 02 52.8**	**-5.8**
TLIG	**Tlapa**	**6.15**	**99**	eP	**Pn**	**05 01 20.8**	**+3.0**
TLIG				eS	**Sn**	**05 02 24.2**	**-4.8**
MGIG	**Malinaltepec**	**6.16**	**102**	eP	**Pn**	**05 01 21.1**	**+3.1**
MGIG				eS	**Sn**	**05 02 27.2**	**-1.9**
FTIG	**Fresnillo de T**	**6.51**	**95**	eP	**Pn**	**05 01 25.8**	**+3.0**
FTIG				eS	**Sn**	**05 02 36.1**	**-1.6**
LPIG	**La Paz**	**7.42**	**319**	LR	LR	05 03 59.6	
	comp=Z,140nm,20.6s,baz=172,slow=33						
CMIG	**Matias Romero**	**9.69**	**97**	Pn	**Pn**	**05 02 09.4**	**+3.0**
	1.0nm,0.3s,baz=268,slow=14,SNR=23						
CMIG				Sn	**Sn**	**05 03 53.8**	**-2.2**
	0.2nm,0.3s,baz=148,slow=21,SNR=1.7						
CMIG				LR	LR	05 06 11.1	
	comp=Z,111nm,18.9s,baz=32,slow=41						
TXAR	**Lajitas Array**	**10.76**	**6**	Pn	Pn	05 02 26.0	+5.0
	baz=187,slow=13,SNR=2.0						
TXAR				LR	LR	05 06 22.8	
	comp=Z,46nm,20.6s,baz=179,slow=36						
	0.2nm,0.7s						
ANMO	**Albuquerque**	**16.34**	**356**	LR	LR	05 10 15.2	
	comp=Z,82nm,20.5s,baz=198,slow=38						
PFO	**Pinyon Flats O**	**18.16**	**328**	LR	LR	05 09 06.0	
	comp=Z,70nm,18.8s,baz=170,slow=30						
NVAR	**Mina Array Bea**	**22.94**	**332**	P	**P**	**05 04 53.5**	**+1.9**
	0.4nm,0.6s,baz=154,slow=12,SNR=5.0						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**24.41**	**352**	LR	LR	05 15 12.1	
	comp=Z,66nm,20.8s,baz=165,slow=38						
TKL	**Tuckaleechee C**	**25.28**	**44**	P	**P**	**05 05 13.2**	**-0.4**
	2.3nm,0.7s,baz=224,slow=9.2,SNR=5.1						
	2.3nm,0.7s						
YBH	**Yreka Blue Hor**	**27.60**	**330**	LR	LR	05 16 33.1	
	comp=Z,49nm,18.6s,baz=202,slow=36						
NEW	**Newport**	**31.21**	**344**	LR	LR	05 18 05.2	
	comp=Z,58nm,20.7s,baz=196,slow=35						
ULM	**Lac du Bonnet**	**32.41**	**11**	LR	LR	05 19 07.3	
	comp=Z,65nm,19.9s,baz=282,slow=36						
YKA	**Yellowknife Ar**	**44.37**	**354**	P	**P**	**05 07 57.4**	**0.0**
	0.5nm,0.8s,baz=166,slow=7.7,SNR=8.0						
	0.5nm,0.8s						
SCHQ	**Schefferville**	**46.35**	**30**	P	**P**	**05 08 12.4**	**-0.8**
	2.2nm,0.8s,baz=249,slow=7.1,SNR=4.0						
	2.2nm,0.8s						
ILAR	**Eielson Array**	**53.94**	**339**	P	**P**	**05 09 13.1**	**+2.4**
	0.3nm,0.8s,baz=152,slow=8.1,SNR=4.3						
	0.3nm,0.8s						
RES	**Resolute Bay**	**56.38**	**3**	LR	LR	05 34 58.8	
	comp=Z,52nm,19.9s,baz=9.0,slow=37						
H03N2	**Juan Fernandez**	**57.39**	**154**	T	T	06 12 08.8	
	baz=333,slow=77,SNR=6.1						
H03N1	**Juan Fernandez**	**57.40**	**154**	T	T	06 12 10.5	
	baz=333,slow=77,SNR=7.6						
H03N3	**Juan Fernandez**	**57.41**	**154**	T	T	06 12 13.3	
	baz=333,slow=77,SNR=8.2						
WRA	**Warramunga Arr**	**124.28**	**258**	PKP	**PKPdf**	**05 18 46.1**	**-1.1**
	0.2nm,0.5s,baz=75,slow=2.3,SNR=5.1						
ASAR	**Alice Springs**	**125.20**	**254**	PKP	**PKPdf**	**05 18 48.4**	**-0.5**
	1.0nm,1.1s,baz=110,slow=2.2,SNR=2.7						

*IDC **04** 05:16:18.5±2.4, 39°.85N×144°.06E, h0km, mb3.5/3, mbtmp3.4/5, ML2.9/2, MS3.9/1, Error ellipse: s-maj=64.5km s-min=27.2km az=80.0*
*JMA **04** 05:16:21.7±0.3, 40°.0N±0°.7×14°4E±°, h26km, MV3.4/27, FAR E OFF SANRIKU*
ISC 04 05:16:20.5±1.4**, 39°.99N**±0°.08×**143°.6E**±0°.1**, h6km, n21, σ1s.28**/16**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.36**	**268**	eP	**Pn**	**05 16 44.9**	**-1.1**
MIYJ	**Miyakonagasawa**	**1.46**	**254**	P	**Pn**	**05 16 46.8**	**-0.5**
JKEN	**Kujiedanarisaw**	**1.49**	**279**	P	**Pn**	**05 16 47.0**	**-0.8**
JANG	**Nango**	**1.67**	**284**	P	**Pn**	**05 16 49.4**	**-0.8**
JOM	**Ohasama**	**1.88**	**255**	P	**Pn**	**05 16 53.2**	**+0.1**
JMK	**Ichinoseki**	**2.14**	**242**	eP	**Pn**	**05 16 56.3**	**-0.3**
JCH	**Churui**	**2.63**	**356**	eP	**Pn**	**05 17 03.2**	**-0.2**
JCH				eS	**Sn**	**05 17 33.6**	**-2.0**
JYK	**Kaneyama**	**2.75**	**248**	eP	**Pn**	**05 17 05.5**	**+0.4**
JAK	**Akkeshi**	**3.11**	**15**	eS	**Sn**	**05 17 45.5**	**-1.8**
ASAJ	**Asahikawa**	**4.19**	**350**	Pn	**Pn**	**05 17 25.9**	**+1.0**
	1.0nm,0.3s,baz=227,slow=11,SNR=6.3						
ASAJ				Sn	**Sn**	**05 18 14.6**	**+0.4**
	1.3nm,0.3s,baz=103,slow=32,SNR=2.3						
	2.3nm,0.3s						
MJAR	**Matsushiro Arr**	**5.48**	**233**	Pn	**Pn**	**05 17 43.3**	**+0.6**

	0.1nm,0.3s,baz=40,slow=9.8,SNR=2.2 1.2nm,0.4s						
H11N2	WAKE ISLAND Hy baz=321,slow=75	28.39	129	T	T	05 51 57.9	
H11N1	WAKE ISLAND Hy baz=321,slow=75	28.41	129	T	T	05 51 58.6	
H11N3	WAKE ISLAND Hy baz=321,slow=75	28.41	129	T	T	05 51 59.3	
H11S1	WAKE ISLAND Hy baz=322,slow=76	29.23	130	T	T	05 53 04.2	
H11S3	WAKE ISLAND Hy baz=322,slow=76	29.23	130	T	T	05 53 01.1	
H11S2	WAKE ISLAND Hy baz=322,slow=76	29.24	130	T	T	05 53 01.9	
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=68,slow=9.4,SNR=2.2 0.5nm,0.4s	41.28	310	P	P	05 24 08.3	+2.0
MKAR	Makanchi Array 0.2nm,0.5s,baz=80,slow=6.7,SNR=1.9 0.2nm,0.5s	44.09	300	P	P	05 24 31.2	+1.9
LEM	Lembang comp=Z,101nm,19.6s,baz=160,slow=38	57.22	224	LR	LR	05 52 18.8	
WRA	Warramunga Arr 0.3nm,0.5s,baz=8.4,slow=7.0,SNR=7.8 0.3nm,0.5s	60.25	190	P	P	05 26 28.1	-1.5

*IDC **04** 05:30:51.5±2.8, 16°.71S×167°.45E, h0^{km}, mb3.9/4, mbtmp3.8/4, Error ellipse: s-maj=164.9km s-min=34.5km az=154.0*

NOU 04 05:31:03.8, 16°.15S×166°.93E, h9^{km}, MLv3.8/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.75	21	P	Pg	05 31 18.5	+0.3
DVP	Devils Point	1.98	143	P	Pn	05 31 38.2	+0.8
RTV	Rentapao	2.17	139	P	Pn	05 31 39.7	-0.4
WRA	Warramunga Arr 0.5nm,0.8s,baz=90,slow=10,SNR=2.9 0.5nm,0.8s	31.19	258	P	P	05 37 15.2	-8.4
ASAR	Alice Springs 1.1nm,0.5s,baz=77,slow=8.9,SNR=18 1.1nm,0.5s	31.88	251	P	P	05 37 21.8	-8.0
NVAR	Mina Array Bea 0.5nm,0.8s,baz=270,slow=2.7,SNR=3.5 0.5nm,0.8s	88.44	49	P	P	05 43 45.8	-11
MKAR	Makanchi Array 0.1nm,0.5s,baz=87,slow=7.5,SNR=2.2 0.1nm,0.5s	98.00	316	P	P	05 44 33.6	-7.0

*IDC **04** 05:31:56.0±1.8, 29°.32N×81°.96E, h0^{km}, mb3.4/6, mbtmp3.4/7, ML3.1/1, MS3.7/1, Error ellipse: s-maj=70.6km s-min=29.6km az=61.0*

ISC 04 05:32:01.0±1.7, 29°.4N±0°.2×82°.0E±0°.4, h31^{km}, n8, σ0^{s}.55/7, mb3.5/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.1nm,0.3s,baz=187,slow=13,SNR=3.1 0.4nm,0.6s	17.38	1	P	Pn	05 36 00.6	-0.5
KURBB	Kurchatov Arra 0.2nm,0.4s,baz=180,slow=10.0,SNR=2.8 0.2nm,0.4s	21.37	354	P	P	05 36 46.6	+1.0
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=201,slow=10,SNR=2.2 0.7nm,0.4s	24.62	4	P	P	05 37 18.3	-0.1
FINES	FINESS Array B 0.5nm,0.4s,baz=115,slow=8.6,SNR=6.4 0.5nm,0.4s	48.47	328	P	P	05 40 40.2	-0.2
NOA	NORSAR Array B 0.7nm,0.7s,baz=95,slow=4.9,SNR=2.1 0.7nm,0.7s	55.52	326	P	P	05 41 32.8	-0.1
MBAR	Mbarara comp=Z,61nm,20.0s,baz=132,slow=34	57.27	248	LR	LR	06 03 56.7	
WRA	Warramunga Arr 0.2nm,0.6s,baz=329,slow=6.0,SNR=2.1 0.2nm,0.6s	70.35	128	P	P	05 43 12.1	0.0
YKA	Yellowknife Ar 0.1nm,0.5s,baz=336,slow=5.0,SNR=5.6 0.1nm,0.5s	87.47	8	P	P	05 44 45.3	+0.1

NOU 04 05:40:53.2, 16°.04S×167°.25E, h10^{km}, MLv4.2/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.59	356	P	Pb	05 41 05.4	-0.2
DVP	Devils Point	1.90	152	P	Pn	05 41 26.3	+0.6
RTV	Rentapao	2.07	147	P	Pn	05 41 29.0	+0.9
KOUNC	Koumac, New Ca	5.30	212	P	Pn	05 42 12.5	+0.1
YATNC	Mamie plateau,	6.00	183	P	Pn	05 42 21.0	-1.1
DZM	Mont Dzumac	6.05	187	P	Pn	05 42 22.4	-0.4
NOUC	Port Laguerre	6.09	188	P	Pn	05 42 23.4	0.0
ONTNC	Ouen Toro 17nm,1.4s	6.28	187	P	Pn	05 42 26.6	+0.7
OUENC	Ouen Island, N 21nm,1.7s	6.36	183	P	Pn	05 42 26.8	-0.2

*IDC **04** 06:00:12.9±1.4, 16°.01S×167°.38E, h0^{km}, mb4.0/5, mbtmp3.9/6, ML3.7/1, MS3.2/1, Error ellipse: s-maj=51.6km s-min=25.4km az=128.0*

*NOU **04** 06:00:15.9, 16°.04S×167°.08E, h8^{km}, MLv4.6/14, Vanuatu Islands*

ISC 04 06:00:18.3±0.9, 15°.99S±0°.06×167°.1E±0°.1, h35^{km}, n16, σ1^{s}.69/15, mb3.9/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.54	8	P	Pn	06 00 28.0	-1.5
DVP	Devils Point	2.01	150	P	Pn	06 00 49.7	0.0
RTV	Rentapao	2.19	145	P	Pn	06 00 52.7	+0.5
MARNC	Mare, Loyalty	5.53	171	P	Pn	06 01 38.4	+0.2
YATNC	Mamie plateau,	6.04	182	P	Pn	06 01 43.9	-1.4
DZM	Mont Dzumac 1.9nm,0.3s,baz=19,slow=5.3,SNR=38	6.09	186	Pn	Pn	06 01 44.9	-1.0
DZM	1.6nm,0.3s,baz=37,slow=20,SNR=1.7 4.2nm,0.3s			Sn	Sn	06 02 50.8	-3.6
DZM	Mont Dzumac	6.09	186	P	Pn	06 01 44.9	-1.0
NOUC	Port Laguerre	6.13	187	P	Pn	06 01 46.2	-0.2
OUENC	Ouen Island, N	6.40	182	P	Pn	06 01 50.2	0.0
HNR	Honiara comp=Z,135nm,21.5s,baz=80,slow=31	9.56	312	LR	LR	06 05 14.6	
WRA	Warramunga Arr 0.7nm,0.9s,baz=86,slow=9.1,SNR=3.7 0.7nm,0.9s	31.41	258	P	P	06 06 39.5	+3.1
ASAR	Alice Springs 1.0nm,0.9s,baz=73,slow=9.0,SNR=9.2 1.0nm,0.9s	32.11	251	P	P	06 06 42.7	+0.1
PETK	Petropavlovsk- 3.0nm,0.9s,baz=177,slow=8.9,SNR=3.6 3.0nm,0.9s	69.29	354	P	P	06 11 23.0	+1.3
ILAR	Eielson Array 0.7nm,0.6s,baz=234,slow=5.2,SNR=13 0.7nm,0.6s	87.76	18	P	P	06 13 01.8	-1.5
YKA	Yellowknife Ar 0.2nm,0.7s,baz=254,slow=4.4,SNR=4.9 0.2nm,0.7s	98.72	27	P	Pdif	06 13 53.9	+0.1
ARCES	ARCESS Array B 2.2nm,1.0s,baz=64,slow=2.1,SNR=4.5	121.42	345	PKP	PKiKP	06 19 08.7	+1.2

*SNET **04** 06:00:43.6±0.7, 13°.18N×90°.97W, h14^{km}±4^{km}, ML3.0*

*GCG **04** 06:01:00.4±0.3, 14°.78N×90°.94W, h25^{km}±20^{km}, MD3.6*

ISC 04 06:00:42.7±3.2, 13°.1N±0°.1×90°.91W±0°.08, h3^{km}±15^{km}, n18, σ0^{s}.65/24, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.31	3	*e*P	Pb	06 01 08.5	+0.3
NUBE	Las Nubes	1.34	55	*e*P	Pn	06 01 07.4	-1.1
NUBE				*e*S	Sb	06 01 25.6	-0.7
SLOZ	Alcaldia de Sa	1.41	51	*e*P	Pn	06 01 08.5	-0.9
SLOZ				*e*S	Sg	06 01 28.5	+0.4
CEVE	Cerro Verde	1.43	61	*e*P	Pb	06 01 09.8	-0.4
CEVE				*e*S	Sn	06 01 30.9	+1.6
CEVE	comp=Z,337nm,0.3s			IAML		06 01 39.7	
SBLS	San Blas	1.44	61	*e*P	Pn	06 01 09.6	-0.3
RTR	El Retiro	1.45	58	*e*P	Pn	06 01 09.8	-0.2
SNJE	San Jose	1.47	60	*e*P	Pn	06 01 10.2	-0.1
JAYA	Jayaque - finc	1.51	70	*e*P	Pn	06 01 10.7	-0.3
JAYA				*e*S	Sg	06 01 31.0	-0.4
JAYA	comp=Z,167nm,0.2s			IAML		06 01 36.5	
NBG	Las Nubes	1.55	21	*e*P	Pg	06 01 12.9	+0.4
UNIC	Universidad Ca	1.57	57	*e*P	Pn	06 01 11.5	-0.2
STG3	Santiaguito 3,	1.69	338	*e*P	Pn	06 01 12.8	-0.6
SJTE	Alcalda de S	1.91	75	*e*P	Pn	06 01 16.1	-0.2
MTO3	Montecristo	1.96	50	*e*P	Pn	06 01 17.2	0.0
PAVA	Las Pavas	2.00	73	*e*P	Pn	06 01 17.9	+0.3
PAVA	comp=Z,64nm,0.4s			IAML		06 01 49.9	
COEG	Centro de Oper	2.03	76	*e*P	Pn	06 01 18.2	+0.2
COEG				*e*S	Sb	06 01 45.1	-1.1
COEG	comp=Z,86nm,0.3s			IAML		06 01 57.5	
ESQI	Esquipulas	2.08	47	*e*P	Pn	06 01 18.3	-0.4
PQSS	Presa 15 de Se	2.34	78	*e*P	Pn	06 01 22.4	+0.3
PQSS				*e*S	Sn	06 01 51.8	+0.4
LCND	La Caada	2.95	86	*e*P	Pn	06 01 30.5	0.0

*IDC **04** 06:00:56.4±1.4, 15°.93S×166°.49E, h0^{km}, mb3.9/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=58.4km s-min=31.7km az=115.0*

ISC 04 06:01:00.0±1.1, 16°.05S±0°.10×166°.5E±0°.3, h26^{km}, n6, σ1^{s}.33/7, mb4.2/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.0nm,0.3s,baz=359,slow=23,SNR=1.3	5.99	181	Pn	Pn	06 02 27.9	+0.7
DZM	baz=287,slow=19 4.5nm,0.4s			Sn	Sn	06 03 34.2	-0.8
ASAR	Alice Springs 0.3nm,0.6s,baz=80,slow=8.9,SNR=1.0 0.3nm,0.6s	31.56	251	P	P	06 07 20.3	-0.3
PETK	Petropavlovsk- 1.7nm,0.9s,baz=167,slow=9.8,SNR=2.4 1.7nm,0.9s	69.29	354	P	P	06 12 05.0	+0.2
ILAR	Eielson Array 0.5nm,0.4s,baz=239,slow=5.0,SNR=7.9 0.5nm,0.4s	87.99	18	P	P	06 13 46.0	-1.4
YKA	Yellowknife Ar 0.1nm,0.6s,baz=263,slow=4.9,SNR=2.6 0.1nm,0.6s	99.04	27	P	Pdif	06 14 38.3	+0.1
ARCES	ARCESS Array B 2.2nm,0.9s,baz=20,slow=3.9,SNR=3.6	121.34	345	PKP	PKiKP	06 19 52.4	+2.0

IDC 04 06:25:19.4±2.6, 53°.70N×86°.80E, h0^{km}, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=23.6km s-min=14.1km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=100,slow=329,SNR=2.4	1.20	283	*i*		06 33 41.5	
ZALV	Zalesovo Beam 1.1nm,0.3s,baz=103,slow=12,SNR=14	1.20	283	Pg	Pg	06 25 41.0	-1.3
ZALV	0.9nm,0.3s,baz=103,slow=30,SNR=9.7			Lg	Lg	06 25 58.8	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=58,slow=13,SNR=6.7	5.95	242	Pn	Pn	06 26 49.9	+1.3
KURBB	baz=58,slow=32 0.5nm,0.5s			Lg	Lg	06 28 27.3	
MKAR	Makanchi Array 0.1nm,0.3s,baz=25,slow=14,SNR=5.9	7.49	204	Pn	Pn	06 27 11.0	+1.1
MKAR	baz=29,slow=32,SNR=1.5 0.2nm,0.4s			Lg	Lg	06 29 15.4	

*SOME **04** 06:26:42.9, 40°.60N×77°.52E, h0^{km}*

*KRNET **04** 06:26:42.6±0.1, 40°.50N×77°.72E, mb3.1*

*NNC **04** 06:26:45.7±1.1, 40°.63N×77°.56E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=7.6km s-min=5.6km az=170.0*

ISC 04 06:26:47.1±1.9, 40°.64N±0°.08×77°.60E±0°.04, h10^{km}, n62, σ1^{s}.62/91, 25C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy baz=3.0	1.10	8	⇑*i*P	Pg	06 27 05.9	-2.5
TARG	baz=3.0			⇑*i*S	Sg	06 27 23.0	+0.2
KDJ	Kajisay baz=46	1.53	348	⇑*i*P	Pn	06 27 13.3	-1.4
KDJ	baz=46			⇑*i*S	Sb	06 27 36.2	+1.1
ULHL	Ulahol SNR=10	1.91	328	P	Pn	06 27 20.0	+0.1
ULHL	Ulahol baz=28	1.91	328	⇑*i*P	Pb	06 27 20.4	-1.7
ULHL	baz=28			⇑*i*S	Sb	06 27 47.5	+1.4
PRZ	Przheval'sk baz=14	1.94	18	⇓*i*P	Pn	06 27 20.2	-0.2
PRZ	baz=14			⇓*i*S	Sb	06 27 47.3	+0.2
ANVS	Anan'yevo baz=59	2.15	1	⇓*i*P	Pn	06 27 23.5	+0.3
ANVS	baz=59			⇓*i*S	Sb	06 27 52.6	-0.4
BOOM	Boomskoye usch baz=27	2.23	327	⇑*i*P	Pn	06 27 24.8	+0.4
BOOM	baz=27			⇑*i*S	Sb	06 27 55.5	0.0
TNSS	Tian-Shan 16nm,0.4s	2.45	349	*e*P	Pb	06 27 30.2	-1.3
TNSS	42nm,0.5s			*e*S	Sb	06 28 04.4	+2.5
TNSS	Tian-Shan 23nm,0.4s	2.45	349	Pg	Pb	06 27 30.2	-1.3
TNSS	42nm,0.5s			Lg	Lg	06 28 04.4	
SATY	Saty 8.7nm,0.4s	2.50	14	*e*P	Pb	06 27 31.4	-0.7
SATY	28nm,0.4s			*e*S	Sg	06 28 06.5	-0.8
SATY	Saty 8.7nm,0.4s	2.50	14	Pg	Pb	06 27 31.7	-0.4
SATY	28nm,0.4s			Lg	Lg	06 28 07.0	
IZV	Izvestkoviy 6.9nm,0.2s	2.51	343	Pg	Pb	06 27 30.8	-1.6
IZV	58nm,0.4s			Lg	Lg	06 28 04.8	
MDOK	Medeo 9.8nm,0.4s	2.56	351	⇓*e*P	Pb	06 27 32.3	-1.0
MDOK	144nm,0.4s			*e*S	Sg	06 28 08.1	-1.3
MDOK	Medeo 16nm,0.5s	2.56	351	⇑Pn	Pn	06 27 30.3	+1.5
MDOK	128nm,0.6s			Lg	Lg	06 28 08.1	
MDOK	Medeo 22nm,0.6s	2.56	351	Pg	Pb	06 27 32.3	-1.0
MDOK	144nm,0.4s			Lg	Lg	06 28 08.1	
ZHN	Zhinishke 10.0nm,0.1s	2.61	14	*e*P	Pb	06 27 33.8	-0.2
ZHN	64nm,0.2s			*e*S	Sg	06 28 10.2	-0.6
ZHN	Zhinishke 10.0nm,0.1s	2.61	14	Pg	Pb	06 27 33.8	-0.2
ZHN	64nm,0.2s			Lg	Lg	06 28 10.2	
KNDC	Almaty 199nm,0.6s	2.62	350	⇑Lg	Lg	06 28 10.1	
MTBS	Maitube 6.5nm,0.2s	2.64	341	*e*P	Pb	06 27 33.2	-1.4
MTBS	27nm,0.2s			*e*S	Sb	06 28 09.4	+2.3
MTBS	Maitube 6.5nm,0.2s	2.64	341	Pg	Pb	06 27 33.2	-1.4
MTBS	27nm,0.2s			Lg	Lg	06 28 09.4	
KST	Kastek 3.8nm,0.5s	2.70	334	*e*P	Pb	06 27 34.6	-1.0
KST	30nm,0.5s			*e*S	Sb	06 28 11.6	+2.8
KST	Kastek 3.8nm,0.5s	2.70	334	Pg	Pb	06 27 34.6	-1.0
KST	30nm,0.5s			Lg	Lg	06 28 11.6	
UZB	Uzynbulak 4.0nm,0.2s	2.73	22	*e*P	Pb	06 27 34.8	-1.2
UZB	22nm,0.6s			*e*S	Sg	06 28 12.3	-2.4
UZB	Uzynbulak 4.0nm,0.2s	2.73	22	Pg	Pb	06 27 34.8	-1.2
UZB	22nm,0.6s			Lg	Lg	06 28 12.3	
TKM2	Tokmak 2 SNR=9.8	2.73	327	P	Pn	06 27 32.3	+1.0
TKM2	Tokmak 2 5.2nm,0.6s	2.73	327	⇓Pn	Pn	06 27 31.7	+0.5
TKM2	26nm,0.8s			⇑Lg	Lg	06 28 14.0	
TKM2	Tokmak 2 baz=27	2.73	327	⇑*e*P	Pn	06 27 31.7	+0.5
TKM2	baz=27			⇑*i*S	Sb	06 28 07.6	-2.2
ARLS	Aral baz=99	2.76	297	⇓*i*P	Pn	06 27 31.6	0.0
ARLS	baz=99			⇓*i*S	Sn	06 28 07.6	+2.6
UCH	Uchtor SNR=11	2.81	305	P	Pn	06 27 32.6	0.0
UCH	Uchtor baz=7.0	2.81	305	⇑*e*P	Pn	06 27 32.8	+0.2
UCH	baz=7.0			⇑*i*S	Sn	06 28 09.4	+2.6
KBK	Karagaybulak SNR=7.8	2.83	316	P	Pb	06 27 36.7	-1.3
KBK	Karagaybulak baz=17	2.83	316	⇓*i*P	Pn	06 27 33.0	+0.4
KBK	baz=17			⇓*i*S	Sb	06 28 10.3	-2.5
KURS	Kuram 5.0nm,0.4s	2.88	8	*e*P	Pb	06 27 38.2	-0.4
KURS	22nm,0.4s			*e*S	Sg	06 28 17.9	-1.8
KURS	Kuram 5.0nm,0.4s	2.88	8	Pg	Pb	06 27 38.2	-0.4
KURS	22nm,0.4s			Lg	Lg	06 28 17.9	
DGS	Degeres 16nm,0.4s	2.94	333	*e*P	Pb	06 27 39.0	-0.7
DGS	19nm,0.2s			*e*S	Sg	06 28 19.4	-2.2
DGS	Degeres 16nm,0.4s	2.94	333	Pg	Pb	06 27 39.0	-0.7
DGS	19nm,0.2s			Lg	Lg	06 28 19.4	
KPKS	Kokpek 8.2nm,0.2s	2.94	16	*e*P	Pb	06 27 39.2	-0.5
KPKS	72nm,0.3s			*e*S	Sg	06 28 19.7	-1.9
PDGK	Podgornoye 2.3nm,0.3s	3.04	27	Pg	Pb	06 27 41.0	-0.4
PDGK	23nm,0.7s			Lg	Lg	06 28 22.6	
PDGK	Podgornoye 2.7nm,0.5s	3.04	27	⇓Pg	Pb	06 27 40.7	-0.6
PDGK	47nm,0.7s			⇓Lg	Lg	06 28 22.9	
AAK	Ala-Archa SNR=7.3	3.07	312	P	Pb	06 27 40.5	-1.4
AAK	Ala-Archa baz=12	3.07	312	⇑*i*P	Pn	06 27 36.2	+0.4
AAK	baz=12			⇑*i*S	Sn	06 28 15.9	+3.2
CHMS	Chumysh 8.4nm,0.6s	3.18	319	⇑Pg	Pb	06 27 42.3	-1.5
CHMS	6.9nm,0.4s			⇑Lg	Lg	06 28 27.3	
CHMS	Chumysh baz=19	3.18	319	⇑*i*P	Pn	06 27 37.7	+0.5
CHMS	baz=19			⇑*i*S	Sn	06 28 18.2	+3.0
CHKK	Chushkaly 11nm,0.3s	3.25	352	⇑*i*P	Pb	06 27 45.6	+0.7
CHKK	35nm,0.9s			⇓*i*S	Sg	06 28 30.8	-0.6
CHKK	Chushkaly 11nm,0.3s	3.25	352	Pg	Pb	06 27 45.6	+0.7
CHKK	35nm,0.9s			Lg	Lg	06 28 30.8	
KRBS	Karabastau 5.7nm,0.3s	3.38	336	*e*P	Pb	06 27 46.0	-1.1
KRBS	15nm,0.3s			*e*S	Sb	06 28 31.7	+3.4
KRBS	Karabastau 5.7nm,0.3s	3.38	336	Pg	Pb	06 27 46.0	-1.1
KRBS	15nm,0.3s			Lg	Lg	06 28 31.7	
KUU	Kurty 1.4nm,0.1s	3.39	344	*e*P	Pb	06 27 46.4	-0.9
KUU	18nm,0.6s			*e*S	Sb	06 28 32.1	+3.6
KUU	Kurty 1.4nm,0.1s	3.39	344	Pg	Pb	06 27 46.4	-0.9
KUU	18nm,0.6s			Lg	Lg	06 28 32.1	
KTMS	Ketmen 1.0nm,0.3s	3.48	35	*e*P	Pb	06 27 49.3	+0.5
KTMS	9.6nm,0.4s			*e*S	Sg	06 28 37.1	-1.6
KTMS	Ketmen 1.0nm,0.3s	3.48	35	Pg	Pb	06 27 49.3	+0.5
KTMS	9.6nm,0.4s			Lg	Lg	06 28 37.1	
USP	Ospenovka SNR=21	3.50	320	P	Pb	06 27 48.3	-0.9
USP	Ospenovka baz=20	3.50	320	⇑*e*P	Pn	06 27 42.2	+0.5
USP	baz=20			⇑*i*S	Sn	06 28 25.9	+2.7
SGDS	Sogindy 11nm,0.2s	3.58	323	*e*P	Pb	06 27 49.6	-1.0
SGDS	6.9nm,0.4s			*e*S	Sb	06 28 37.5	+3.4
SGDS	Sogindy 11nm,0.2s	3.58	323	Pg	Pb	06 27 49.6	-1.0
SGDS	6.9nm,0.4s			Lg	Lg	06 28 37.5	
MRKS	Merke 4.6nm,0.3s	3.90	304	*e*P	Pb	06 27 55.0	-1.0
MRKS	4.4nm,0.3s			*e*S	Sb	06 28 46.7	+3.5
MRKS	Merke 4.6nm,0.3s	3.90	304	Pg	Pb	06 27 55.0	-1.0
MRKS	4.4nm,0.3s			Lg	Lg	06 28 46.7	
DJR	Jarkent 1.3nm,0.2s	4.03	23	*e*P	Pb	06 27 59.1	+0.8
DJR	7.2nm,0.4s			*e*S	Sg	06 28 54.0	-2.7
DJR	Jarkent 1.3nm,0.2s	4.03	23	Pg	Pb	06 27 59.1	+0.8
DJR	7.2nm,0.4s			Lg	Lg	06 28 54.0	
BTLS	Baital 2.2nm,0.3s	5.12	330	*e*P	Pb	06 28 18.1	+1.4
BTLS	3.4nm,0.4s			*e*S	Sg	06 29 26.6	-4.8
BTLS	Baital 2.2nm,0.3s	5.12	330	Pg	Pb	06 28 18.1	+1.4
BTLS	3.4nm,0.4s			Lg	Lg	06 29 26.6	
KK31	Karatay Array 0.8nm,0.4s,baz=107,slow=28,SNR=3.8	5.84	297	⇑Lg	Lg	06 29 50.7	

*IDC **04** 06:29:36.2±3.1, 54°.16N×86°.72E, h0^{km}, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=25.2km s-min=16.2km az=49.0*

*NNC **04** 06:29:44.0±1.5, 53°.78N×86°.27E, h0^{km}, mb3.3, mpv2.4, Error ellipse: s-maj=26.5km s-min=8.3km az=25.0, Suspected Mining explosion.*

ISC 04 06:29:38.2±4.3, 54°.1N±0°.3×86°.6E±0°.2, h0^{km}, n7, σ0^{s}.79/7, 2C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=75,slow=330,SNR=1.8	1.08	263	*i*		06 36 42.5	
ZAA0	Zalesovo Array 0.2nm,0.3s	1.08	263	⇓P	Pn	06 30 00.9	+0.2
ZAA0	1.1nm,0.6s			⇓S	Sg	06 30 13.1	+0.1
ZALV	Zalesovo Beam	1.08	263	Pg	Pg	06 29 58.4	-0.6

	1.2nm,0.3s,baz=81,slow=17,SNR=8.7						
ZALV				Lg	Lg	06 30 12.7	
	2.8nm,0.3s,baz=90,slow=28,SNR=15						
KURBB	Kurchatov Arra	6.06	238	Pn	Pn	06 31 09.6	+0.6
	0.1nm,0.3s,baz=55,slow=13,SNR=5.1						
KURBB				Lg	Lg	06 32 51.1	
	baz=56,slow=32,SNR=2.6						
	0.4nm,0.3s						
KURBB	Kurchatov Arra	6.06	238	⇑Pn	Pn	06 31 09.6	+0.6
	0.7nm,0.4s						
KURBB				⇓Lg	Lg	06 32 46.1	
	3.8nm,0.7s						
MK31	Makanchi Array	7.82	203	⇑Pn	Pn	06 31 34.1	+0.9
	0.4nm,0.6s,baz=26,slow=12,SNR=7.0						
MKAR	Makanchi Array	7.82	203	Pn	Pn	06 31 32.4	-0.8
	0.2nm,0.3s,baz=21,slow=12,SNR=5.5						
MKAR				Lg	Lg	06 33 44.2	
	baz=26,slow=27,SNR=2.3						
	0.2nm,0.3s						

*TIF **04** 06:31:37.9, 41°.84N×46°.20E, h28^{km}±2^{km}*
*MOS **04** 06:31:39.1±0.0, 42°.00N×46°.20E, h21^{km}, MPVA3.3*
*NORS **04** 06:31:40.3±0.0, 42°.04N×46°.24E, h20^{km}, MPVA3.2*
*DRS **04** 06:31:40.5±0.0, 41°.95N×46°.08E, h17^{km}*
ISC 04 06:31:39.5±0.9, **41°.95N**±0°.03×**46°.12E**±0°.03, **h15**^{km}±7^{km}, **n19**, σ**1**^{s}**.12**/35, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.15	142	P	Pg	06 31 43.1	-0.3
LGD				S	Sg	06 31 46.3	+0.3
DDFL	Dedoflistskaro	0.51	180	P	Pb	06 31 52.2	+2.1
BTLR	Botlikh	0.71	6	*e*Pg	Pg	06 31 53.3	-0.3
BTLR				*e*Sg	Sg	06 32 02.9	-0.2
XNZR	Khunzakh	0.73	36	*e*Pg	Pg	06 31 53.4	-0.5
XNZR				*e*Sg	Sg	06 32 03.7	+0.1
KMKR	Kumukh	0.75	76	*e*Pg	Pg	06 31 54.1	-0.1
KMKR				*e*Sg	Sb	06 32 04.7	+0.2
DGRG	David-gareji	0.75	228	P	Pb	06 31 54.4	0.0
GNBR	Gunib	0.76	55	*e*Pg	Pb	06 31 54.0	-0.6
GNBR				*e*Sg	Sb	06 32 04.6	-0.1
UNCR	Uncukul	0.91	33	*e*Pg	Pb	06 31 56.6	-0.4
UNCR				*e*Sg	Sb	06 32 09.1	+0.1
ARKR	Arakani	0.92	45	*e*Pg	Pb	06 31 56.8	-0.3
ARKR				*e*Sg	Sb	06 32 09.6	+0.4
DVE	Vedeno	1.00	0	*e*Pg	Pb	06 31 59.3	+0.7
DVE				*e*Sg	Sb	06 32 12.6	+0.8
BTNK	Botanikuri	1.02	255	P	Pb	06 31 52.6	-6.4
BTNK				S	Sb	06 32 07.6	-4.6
KRNR	Karanay	1.05	33	*e*Pg	Pb	06 31 58.9	-0.6
KRNR				*e*Sg	Sb	06 32 13.3	+0.3
DLMR	Dylym	1.18	18	*e*Pg	Pn	06 32 01.2	-0.3
DLMR				*e*Sg	Sb	06 32 17.0	+0.3
DBC	Dubki	1.19	26	*e*Pg	Pn	06 32 01.3	-0.4
DBC				*e*Sg	Sb	06 32 17.4	+0.4
AKT	Akhty	1.29	111	*e*Pg	Pn	06 32 03.5	+0.3
AKT				*e*Sg	Sg	06 32 21.4	+0.1
TRLG	Trialeti	1.57	255	P	Pn	06 32 06.5	-0.5
TRLG				S	Sn	06 32 27.5	+0.4
DMNI	Dmanisi	1.58	247	P	Pn	06 32 05.9	-1.1
DMNI				S	Sn	06 32 27.0	-0.2
LACR	Lac	1.61	304	*e*Pg	Pb	06 32 10.8	+1.8
LACR				*e*Sg	Sg	06 32 32.0	+0.6
ZEI	Tsey	1.84	298	*e*Pg	Pb	06 32 14.0	+0.9
ZEI				*e*Sg	Sb	06 32 38.0	+2.0

*IDC **04** 06:31:37.4±3.9, 51°.98N×171°.10W, h0^{km}, mb3.6/5, mbtmp3.5/6, ML2.5/1, Error ellipse: s-maj=74.0km s-min=42.4km az=46.0*
*AEIC **04** 06:31:40±2.3, 51°.7N±0°.1×170°.8W±0°.1, h23^{km}±7^{km}, ML3.0/18, ML3.4/6(NEIC), Error ellipse: s-maj=18.2km s-min=5.9km az=155.0*
*NEIC **04** 06:31:44.6±1.5, 52°.1N±0°.2×171°.0W±0°.1, h42^{km}±14^{km}, Error ellipse: s-maj=25.9km s-min=6.1km az=157.0*
ISC 04 06:31:43.6±1.8, **52°.1N**±0°.2×**171°.1W**±0°.2, **h42**^{km}, **n21**, σ**1**^{s}**.26**/15, **mb3.5**/5, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.64	56		Pn	06 32 08.7	-1.2
NIKH					Sn	06 32 30.0	+0.3
KOFP	Korovin Flat P	1.86	277		Pn	06 32 15.4	+2.5
ATKA	Atka Island	1.92	275		Pn	06 32 15.3	+1.7
OKFG	Magazine Ridge	2.35	54		Pn	06 32 19.4	-0.2
GSMY	Great Sitkin M	3.06	271		Pn	06 32 31.6	+2.1
GSTR	Great Sitkin T	3.06	272	Pn	Pn	06 32 32.3	+2.8
GSTD	Great Sitkin T	3.12	272		Pn	06 32 32.9	+2.7
UNV	Unalaska Valle	3.29	56		Pn	06 32 32.9	+0.4
ADK	Adak	3.46	269	Pn	Pn	06 32 36.7	+1.8
ADK					Sn	06 33 18.6	+4.0
ADK				IAML		06 33 19.7	
	74nm,0.3s						
ADK				IAML		06 33 20.9	
	63nm,0.3s						
AKBBA	Akutan Broad B	3.71	55		Pn	06 32 39.2	+0.9
KIWB	Kanaga Island	3.75	269		Pn	06 32 41.3	+2.4
AKUT	Akutan	3.81	55	Pn	Pn	06 32 42.0	+2.3
AKUT				IAML		06 34 58.5	
	comp=N,41nm,2.2s						
FALS	False Pass	5.37	56		Pn	06 33 02.2	+1.2
SDPT	Sand Point	7.10	58		Pn	06 33 25.2	+0.4
KDAK	Kodiak Island	12.06	54	Pn	Pn	06 34 30.0	-2.6
	comp=N,0.3nm,0.3s,baz=256,slow=2.9,SNR=11						
ILAR	Eielson Array	17.80	35	P	P	06 35 46.5	-1.6
	baz=227,slow=9.2,SNR=1.8						
	comp=N,0.2nm,0.7s						
INK	Inuvik	24.18	34	P	P	06 36 55.5	0.0
	comp=N,1.5nm,0.7s,baz=237,slow=7.6,SNR=9.2						
	comp=N,1.5nm,0.7s						
YKA	Yellowknife Ar	31.23	48	P	P	06 37 58.9	+0.2
	comp=N,0.2nm,0.6s,baz=271,slow=7.7,SNR=12						
	comp=N,0.2nm,0.6s						
PDAR	Pinedale Array	41.50	78	P	P	06 39 26.6	0.0
	comp=N,0.2nm,0.6s,baz=302,slow=5.2,SNR=3.6						
	comp=N,0.2nm,0.6s						
TXAR	Lajitas Array	53.82	87	P	P	06 41 02.1	0.0
	comp=N,0.3nm,0.6s,baz=335,slow=4.0,SNR=3.6						
	comp=N,0.3nm,0.6s						
ARCES	ARCESS Array B	58.09	353	P	P	06 41 32.3	+0.3
	comp=N,3.3nm,1.0s,baz=13,slow=7.3,SNR=1.9						
	comp=N,3.3nm,1.0s						

*ATH **04** 06:40:14.2, 37°.52N×23°.57E, h25^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=2.7km s-min=1.0km az=232.0*
*THE **04** 06:40:15.2, 37°.54N×23°.57E, h9^{km}±2^{km}, ML2.7/8, Error ellipse: s-maj=2.5km s-min=0.5km az=315.0*
ISC 04 06:40:14.9±1.1, **37°.55N**±0°.03×**23°.55E**±0°.03, **h15**^{km}±11^{km}, **n25**, σ**0**^{s}**.44**/39, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YDRA	Hydra	0.21	198	P	Pb	06 40 19.8	-0.5
YDRA				AML	AML	06 40 25.6	
	comp=N,7643µm,0.2s						
YDRA				AML	AML	06 40 26.3	
	comp=E,13377µm,0.3s						
EPID	Epidavros	0.34	281	P	Pg	06 40 22.1	+0.1
EPID				S	Sb	06 40 28.2	+0.2
EPID	Epidavros	0.34	281	P	Pg	06 40 22.1	+0.1
EPID				S	Sb	06 40 28.2	+0.2
	comp=E,2µm,0.1s						
KRND	KRANIDI	0.36	242	P	Pg	06 40 22.0	-0.1
KRND				S	Sb	06 40 28.3	+0.1
KRND				AML	AML	06 40 29.6	
	comp=E,3111µm,0.2s						
KRND				AML	AML	06 40 31.1	
	comp=N,2886µm,0.3s						
KRND	KRANIDI	0.36	242	P	Pg	06 40 22.0	-0.1
KRND				S	Sb	06 40 28.3	+0.1
	comp=N,1µm,0.3s						
VLY	Voula,Athens	0.36	33	P	Pg	06 40 22.1	-0.2
VLY				S	Sb	06 40 28.2	-0.3
VLY				AML	AML	06 40 28.2	
	comp=E,2691µm,0.3s						
VLY				AML	AML	06 40 29.2	
	comp=N,1709µm,0.2s						
VLY	Voula,Athens	0.36	33	P	Pg	06 40 22.1	-0.2
VLY				S	Sb	06 40 28.2	-0.3
	comp=N,1µm,0.3s						
ATH	Athens Observa	0.44	18	P	Pg	06 40 24.0	+0.2
ATH				S	Sb	06 40 31.5	+0.7
ATH				AML	AML	06 40 31.8	
	comp=E,2658µm,0.4s						
ATH				AML	AML	06 40 32.0	
	comp=N,4444µm,0.5s						
ATH	Athens Observa	0.44	18	P	Pg	06 40 24.0	+0.2
ATH				S	Sb	06 40 31.5	+0.7
	comp=N,2µm,0.4s						
ATHU	Athens Univers	0.46	24	P	Pg	06 40 23.8	-0.2
ATHU				S	Sb	06 40 30.9	-0.3
ATHU	Athens Univers	0.46	24	P	Pg	06 40 23.8	-0.2
ATHU				S	Sb	06 40 30.9	-0.3
	comp=N,258nm,0.2s						
PTL	Penteli	0.56	27	P	Pg	06 40 25.4	-0.5
PTL	Penteli	0.56	27	P	Pg	06 40 25.4	-0.5
PTL				S	Sb	06 40 34.0	-0.2
	comp=N,488nm,0.3s						
DION	Dionisos Attik	0.61	30	P	Pg	06 40 26.9	0.0
DION				AML	AML	06 40 39.6	
	comp=N,2000µm,0.4s						
DION				AML	AML	06 40 41.2	
	comp=E,1786µm,0.5s						
DION	Dionisos Attik	0.61	30	P	Pg	06 40 26.9	0.0
VILL	Villia	0.64	343	P	Pg	06 40 27.2	-0.3
VILL				S	Sb	06 40 37.8	+1.2
	comp=E,882nm,0.3s						
VIL2	Platees	0.70	342	P	Pb	06 40 27.2	-1.5
VIL2				S	Sg	06 40 37.8	+0.1
VIL2				AML	AML	06 40 40.5	
	comp=E,2140µm,0.4s						
VIL2				AML	AML	06 40 43.1	
	comp=N,1020µm,0.3s						
KARY	Karystos	0.85	55	P	Pg	06 40 31.4	-0.1
KARY	Karystos	0.85	55	P	Pg	06 40 31.4	-0.1
VLI	Veliai	0.96	211	P	Pb	06 40 33.0	-0.2
MHLO	Agia Marina, M	1.10	141	P	Pg	06 40 36.2	+0.2
MHLO				S	Sg	06 40 50.8	+0.4
	comp=N,732nm,0.3s						
KYMI	Kymi, Euboea I	1.17	22	P	Pb	06 40 37.0	+0.3
KYMI	Kymi, Euboea I	1.17	22	P	Pb	06 40 37.0	+0.3
ATAL	Atalanti	1.21	340	P	Pb	06 40 37.7	+0.2
ATAL	Atalanti	1.21	340	P	Pb	06 40 37.7	+0.2

*IDC **04** 07:04:39.1±0.8, 8°.24N×82°.93W, h0^{km}, mb4.0/12, mbtmp4.1/16, ML3.2/3, MS3.4/12, Error ellipse: s-maj=26.2km s-min=14.5km az=43.0*
*UCR **04** 07:04:40.6±2.2, 8°.14N×82°.81W, h5^{km}, MW4.6, mb4.4(NEIC)*
*UPA **04** 07:04:41.3±1.6, 8°.26N×82°.81W, h5^{km}±5^{km}, MW4.8, Fault plane solution: NP1:ϕ_s137.00000°, δ19.00000°, λ98.00000°.*
*NEIC **04** 07:04:42.3±1.7, 8°.27N±0°.03×82°.83W±0°.06, h10^{km}±1^{km}, mb4.4/74, Error ellipse: s-maj=10.1km s-min=4.6km az=254.0*
ISC 04 07:04:41.1±1.1, **8°.21N**±0°.04×**82°.81W**±0°.03, **h10**^{km}±7^{km}, **n206**, σ**1**^{s}**.46**/205, **mb4.4**/42, **MS3.3**/9, **13C-9D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LESP3	La Esperanza,	0.19	4	⇑*e*P	Pg	07 04 45.7	+0.5
LESP3				*e*S	Sg	07 04 48.5	+0.4
CDITO	Canoas	0.36	349		Pg	07 04 48.3	-0.1
BAGA3	Bagala, Chiriq	0.37	47	*e*P	Pb	07 04 49.5	-0.4
BAGA3				*e*S	Sb	07 04 55.9	+0.2
DVD	David	0.41	58	*e*P	Pg	07 04 49.8	+0.5
DVD				*e*S	Sb	07 04 56.5	-0.5
PEDE3	Pedregal, Chir	0.42	66	⇓*e*P	Pg	07 04 49.8	+0.5
LOMA3	Las Lomas, Chi	0.46	62	⇓*e*P	Pg	07 04 50.7	+0.5
LOMA3				*e*S	Sg	07 04 52.8	-3.5
CHIR3	Chiriqui UPA,	0.50	69	⇓*e*P	Pg	07 04 51.2	+0.3
CHIR3				*e*S	Sb	07 04 58.7	-0.8
BCO2	Palmira	0.57	28	⇓*e*P	Pg	07 04 52.7	+0.4
BCO2				*e*S	Sb	07 05 01.3	-0.4
MLIR3	Monte Lirio, C	0.58	358	*e*P	Pb	07 04 53.1	-0.4
BRU2	Volcan	0.59	11		Pg	07 04 52.8	+0.2
BRU2	Volcan	0.59	11	*e*P	Pg	07 04 52.8	+0.2
BRU2	Volcan	0.59	11	⇓*i*P	Pg	07 04 52.9	+0.2
BRU2				*e*S	Sb	07 05 00.6	-1.6
EDSV	San Vito	0.63	345	⇑*e*P	Pg	07 04 53.1	-0.2
EDSV				*e*S	Sb	07 05 03.4	+0.2
BC3P	Paso Ancho	0.63	18	*e*P	Pg	07 04 53.3	-0.1
BC3P				*e*S	Sn	07 05 08.0	+1.4
LNBQ3	Los Naranjos,	0.68	32	⇓*e*P	Pg	07 04 53.9	-0.4
REME3	Remedios, Chir	0.96	89	⇓*e*P	Pb	07 04 58.5	-1.4
REME3				*e*S	Sb	07 05 08.2	-4.6
CHGR2	Aguacate	0.97	42	⇑*e*P	Pb	07 04 58.5	-1.6
CHGR2				*e*S	Sg	07 05 11.3	-1.3
EDBA	Buenos Aires	1.05	334	*e*S	Sn	07 05 17.1	+0.3
DRK0	Durika	1.13	337	Pg	Pb	07 05 02.9	0.0
DRK0	Durika	1.13	337	*e*P	Pb	07 05 01.0	-1.9
DRK0				*e*S	Sb	07 05 15.4	-2.4
SRBA	San Rafael, Bu	1.15	332		Pb	07 05 01.3	-2.0
CNI2	El Empalme, Bo	1.25	15	*e*P	Pn	07 05 03.4	-1.3
CNI2				*e*S	Sb	07 05 19.3	-1.6
RGM0	Gandoca	1.38	8		Pn	07 05 06.4	-0.1
RGM0	Gandoca	1.38	8	*e*P	Pb	07 05 06.9	-0.2
RGM0				*e*S	Sg	07 05 27.3	+1.6
PEZE	Perez Zeledon,	1.45	324		Pn	07 05 06.2	-1.3
EDDO	Dominical	1.47	315	*e*P	Pn	07 05 07.3	-0.5
EDDO				*e*S	Sg	07 05 28.8	+0.2
GMAL	Guarumal, Vera	1.62	106	*e*P	Pn	07 05 07.0	-2.8
GMAL	Guarumal, Vera	1.62	106	⇑*e*P	Pn	07 05 07.8	-2.0
GMAL				*e*S	Sn	07 05 29.1	-1.6
RIMA	Rio Macho	1.87	326		Pn	07 05 12.4	-0.9
LCR2	La Lucha 2	1.93	322	⇑*e*P	Pn	07 05 13.3	-0.9
LCR2				*e*S	Sb	07 05 41.4	+0.7
BATAN	Batan	1.96	343		Pn	07 05 14.9	+0.5
BATAN	Batan	1.96	343	*e*P	Pn	07 05 15.3	+0.9
BATAN				*e*S	Sb	07 05 39.6	-1.7
CVTR	Volcan Turrial	2.03	332		Pn	07 05 15.9	+0.1
CACAO	El Cacao, Vera	2.11	114	*e*P	Pn	07 05 16.5	0.0
CACAO				*e*S	Sb	07 05 45.8	+0.1
CACAO				*i*		07 05 50.5	
	comp=Z,1µm,0.4s						
CACAO	El Cacao, Vera	2.11	114	*e*P	Pn	07 05 16.7	+0.2
CACAO				*e*S	Sn	07 05 44.4	+1.5
HDC	Heredia	2.20	324		Pn	07 05 18.3	+0.5
HDC	Heredia	2.20	324	⇑*e*P	Pn	07 05 19.2	+1.3
HDC	Heredia	2.20	324	⇑*i*P	Pn	07 05 19.4	+1.5
HDC				*e*S	Sn	07 05 45.7	+0.5
JACO	JACO, Garabito	2.33	308		Pn	07 05 18.5	-1.1
JACO	JACO, Garabito	2.33	308	⇑*e*P	Pn	07 05 18.3	-1.2
CHIT3	Chitre	2.38	96	*e*P	Pn	07 05 21.0	+0.8
CHIT3				*e*S	Sn	07 05 50.7	+1.3
PNME	Penonome	2.47	83	*e*P	Pn	07 05 21.9	+0.4
PNME	Penonome	2.47	83	⇓*e*P	Pn	07 05 21.9	+0.4
PNME				*e*S	Sb	07 05 55.6	-0.5
SRA1	San Ramn	2.49	318	*e*P	Pn	07 05 22.1	+0.2
AZU	Azuero	2.54	99	*e*P	Pn	07 05 22.6	+0.2
AZU				*e*S	Sn	07 05 56.0	+2.5
AZU				*i*		07 06 03.9	
	comp=Z,2µm,0.5s						
AZU	Azuero	2.54	99	⇓*i*P	Pn	07 05 23.5	+1.1
AZU				*e*S	Sn	07 05 54.4	+1.0
LAFE	Finca La Fe, P	2.62	307	⇑*e*P	Pn	07 05 22.4	-1.1
CAO2	Cobano, Puntar	2.71	303		Pn	07 05 23.4	-1.4
PCRI3	Pocri, Los San	2.72	101	*e*P	Pn	07 05 26.3	+1.5
PCRI3				*e*S	Sb	07 06 03.7	+0.4
PEDA3	Pedasi	2.84	104	*e*P	Pn	07 05 27.5	+0.9
PEDA3				*e*S	Sb	07 06 05.7	-1.0
FORC	Fortuna	2.90	321	*e*P	Pn	07 05 29.2	+1.8
CASO	Castillo	2.92	319	*e*P	Pn	07 05 28.8	+1.1
ARE1	Arenal 1	2.93	320	*e*P	Pn	07 05 29.6	+1.8
CEDE	Laguna Cedeo	2.94	320	*e*P	Pn	07 05 29.8	+1.9
JTS	Las Juntas de	2.96	314	Pn	Pn	07 05 28.0	-0.2
JTS	Las Juntas de	2.96	314	*e*P	Pn	07 05 27.5	-0.7
JTS	Las Juntas de	2.96	314	*e*P	Pn	07 05 28.0	-0.2
JTS				*e*S	Sn	07 06 05.3	+1.4
BCIP	Isla Barro Col	3.08	72	Pn	Pn	07 05 29.4	-0.5
BCIP	Isla Barro Col	3.08	72	*e*P	Pn	07 05 30.2	+0.3
BCIP				*e*S	Sb	07 06 13.5	-0.4
BCIP				*i*		07 06 35.6	
	comp=Z,397nm,0.6s						
BCIP	Isla Barro Col	3.08	72	*e*P	Pn	07 05 30.2	+0.3
BCIP				*e*S	Sn	07 06 06.6	-0.3
INDI	Punta indio, G	3.13	302	⇑*e*P	Pn	07 05 30.1	-0.4
GAMB1	Gamboa	3.19	73	*e*P	Pn	07 05 32.3	+0.9
GAMB1				*e*S	Sn	07 06 09.5	0.0
DUNO	Dulce Nombre,	3.24	305		Pn	07 05 31.6	-0.4
ACAL	Aguas Claras	3.26	318	*e*P	Pn	07 05 33.5	+1.0
PTEN	Parque Tenorio	3.29	319	*e*P	Pn	07 05 34.3	+1.5
UPA	Univ. de Panam	3.32	76	*e*P	Pn	07 05 36.5	+3.2
UPA	Univ. de Panam	3.32	76	*e*P	Pn	07 05 37.0	+3.8
UPA				*e*S	Sn	07 06 16.6	+3.8
GUAI	GUAI	3.36	308	*e*P	Pn	07 05 34.0	+0.2
CUI	Cuipilapa	3.37	316	*e*P	Pn	07 05 34.3	+0.4
ORTG	Ortega, Santa	3.38	309	Pn	Pn	07 05 34.4	+0.3
COLC	Colonia	3.40	316	*e*P	Pn	07 05 36.4	+2.1
SAJU	San Juanillo,	3.41	303	⇑*e*P	Pn	07 05 33.9	-0.6
GUAB	Guayabo de Bag	3.44	316	*e*P	Pn	07 05 36.5	+1.5
VMAR	Armenia, Volca	3.45	319	⇑*e*P	Pn	07 05 36.8	+1.8
LIM1	Limonal	3.45	316	*e*P	Pn	07 05 37.0	+1.9
GPS2	Hotel Rincn d	3.56	315	*e*P	Pn	07 05 38.4	+1.8
BUEV	Buena Vista	3.63	315	*e*P	Pn	07 05 39.0	+1.4
BUAI	Buenos Aires	3.64	317	*e*P	Pn	07 05 39.1	+1.6
GB1A	Borinquen Arri	3.64	316	*e*P	Pn	07 05 38.5	+0.8
GBS3	Finca Las Img	3.65	315	*e*P	Pn	07 05 39.0	+1.2
HZTE	Horizontes, Gu	3.71	312	⇑*e*P	Pn	07 05 39.8	+1.3
ESPN	Las Esperanzas	4.22	340		Pn	07 05 46.9	+1.3
ACON	Acoyapa	4.40	328		Pn	07 05 49.1	+1.0
BOAB	BOACO BROADBAN	5.07	326	Pn	Pn	07 05 58.3	+1.1
PRVC	Isla de Provid	5.32	15	Pn	Pn	07 06 00.4	-0.3
PRVC	Isla de Provid	5.32	15	*e*P	Pn	07 05 59.8	-1.0
MATN	Matagalpa	5.60	327		Pn	07 06 06.3	+1.6
SOLC	Bahia Solano	5.71	110	*e*P	Pn	07 06 04.8	-1.2
SOLC	Bahia Solano	5.71	110	*e*P	Pn	07 06 05.0	-1.0
CNGN	Cerro Negro	5.73	318		Pn	07 06 07.4	+1.0
CBOC	Ciudad Bolivar	7.13	109	*e*P	Pn	07 06 25.9	+0.1
CBOC				*e*S	Sn	07 07 46.0	-1.1
CBOC				*i*		07 07 55.9	
	comp=Z,6.1nm,0.6s						
UREC	San Jos de Ur	7.22	93	*e*P	Pn	07 06 27.8	+1.0
PLMC	San Jos del P	7.26	116	*e*P	Pn	07 06 26.5	-1.0
TGUH	Tegucigalpa,Un	7.28	323	Pn	Pn	07 06 28.6	+0.8
HELC	Santa Helena	7.49	105	*e*P	Pn	07 06 29.7	-1.2
YOTC	Yotoco, Valle	7.67	123	*e*P	Pn	07 06 34.3	+1.1
SJCC	San Jacinto, C	7.71	77	Pn	Pn	07 06 34.4	+0.7
SJCC	San Jacinto, C	7.71	77	*e*P	Pn	07 06 34.9	+1.2
ZARC	Zaragoza, Cauc	7.91	95	Pn	Pn	07 06 36.5	+0.3
ZARC	Zaragoza, Cauc	7.91	95	*e*P	Pn	07 06 37.4	+1.2
ANIL	Santa Ana	8.23	116	*e*P	Pn	07 06 43.6	+2.6
NORC	Norcasia	8.31	108	*e*P	Pn	07 06 44.6	+2.8
PTBC	PUERTO BERRIO,	8.45	101	*e*P	Pn	07 06 44.3	+0.6
SOTA	Rioblanco	8.63	134	*e*P	Pn	07 06 50.6	+4.0
ORTC	Ortega, Tolima	8.65	119	*e*P	Pn	07 06 50.5	+4.0
PCON	Cinco Dias	8.65	132	*e*P	Pn	07 06 49.8	+2.9
MTO3	Montecristo	8.89	314		Pn	07 06 51.0	+1.0
OTAV	Otavalo	9.03	151		Pn	07 06 55.2	+3.1
SPBC	San Pablo de B	9.03	106	*e*P	Pn	07 06 54.9	+3.0
ROSC	El Rosal	9.07	111	Pn	Pn	07 06 55.5	+2.9
	comp=Z,1.4nm,0.3s,baz=42,slow=1.6,SNR=6.7						
ROSC				LR	LR	07 09 59.9	
	comp=Z,341nm,19.2s,baz=262,slow=35						
	comp=Z,14nm,1.0s						
ROSC	El Rosal	9.07	111	Pn	Pn	07 06 54.9	+2.3
OCAC	Ocana	9.39	89		Pn	07 06 57.4	+0.7
OCAC	Ocana	9.39	89	*e*P	Pn	07 06 59.4	+2.7
GARC	Garzon, Huila	9.42	129	*e*P	Pn	07 07 01.6	+4.2
BARC	Barichara	9.68	99	*e*P	Pn	07 07 04.5	+3.7
CHIC	Chingaza	9.69	111	*e*P	Pn	07 07 06.1	+5.0
RUSC	La Rusia	9.92	103	*e*P	Pn	07 07 05.6	+1.3
PAMC	Pamplona, Colo	10.05	94	*e*P	Pn	07 07 07.4	+1.3
SDV	Santo Domingo	12.06	86	Pn	Pn	07 07 35.2	+1.8
	comp=Z,2.4nm,0.3s,baz=309,slow=4.8,SNR=1.9						
SDV				Sn	Sn	07 09 51.8	+3.8
	comp=Z,0.7nm,0.3s,baz=302,slow=7.8,SNR=1.1						
SDV				LR	LR	07 12 53.6	
	comp=Z,289nm,19.4s,baz=254,slow=41						
	comp=Z,6.4nm,0.3s						
BAUV	El Baul	14.62	86	Pn	Pn	07 08 07.8	-0.4
CMIG	Matias Romero	14.71	308	Pn	Pn	07 08 08.7	-0.9
	comp=Z,0.3nm,0.3s,baz=107,slow=6.3,SNR=4.1						
	comp=Z,3.6nm,0.7s						
SDDR	Presa de Saban	15.48	45	Pn	Pn	07 08 20.3	+0.5
SDDR				IAmb	IAmb	07 08 27.9	
	comp=Z,18nm,0.9s						
BANI	BANI	15.77	49	Pn	Pn	07 08 23.2	-0.4
CELP	Cerrillos	18.58	57	P	Pn	07 09 00.3	+1.6
SJG	San Juan	18.95	57	P	Pn	07 09 04.0	+0.7
	comp=Z,22nm,1.0s,baz=240,slow=12,SNR=4.0						
SJG				LR	LR	07 15 54.9	
	comp=Z,51nm,19.1s,baz=247,slow=36						
SJG	San Juan	18.95	57	P	P	07 09 03.1	+0.5
SJG				IAmb	IAmb	07 09 07.2	
	comp=Z,48nm,1.4s						
GCPR	Guaynabo City	19.10	57	P	P	07 09 04.8	+0.5
MTP	Monte Pirata	19.44	58	P	Pn	07 09 09.7	+0.5
MTP				IAmb	IAmb	07 09 10.3	
	comp=Z,18nm,0.8s						
CDVI	St. Croix	19.95	60	P	Pn	07 09 14.8	-0.4
NNA	Nana	20.92	163	P	P	07 09 25.1	+0.9
	comp=Z,7.3nm,0.8s,baz=290,slow=11,SNR=4.3						
	comp=Z,7.3nm,0.8s						
344A	Westbrook Farm	24.28	343	P	P	07 09 59.3	+0.7
342A	Flagon Creek P	24.70	340	P	P	07 10 03.4	+0.9
146A	Union	24.99	347	P	P	07 10 07.0	+1.9
GOGA	Godfrey	25.08	359	P	P	07 10 06.4	+0.4
GOGA				IAmb	IAmb	07 10 08.4	
	comp=Z,5.1nm,0.8s						
TKL	Tuckaleechee C	27.33	358	LR	LR	07 21 08.2	
	comp=Z,39nm,18.7s,baz=175,slow=36						
W41B	Gary Mavity, V	28.20	343	P	P	07 10 33.8	-0.2
W41B				IAmb	IAmb	07 10 38.5	
	comp=Z,10nm,1.1s						
WHAR	Wooly Hollow	28.32	343	P	P	07 10 34.3	-0.8
LPAZ	La Paz	28.35	149	P	P	07 10 37.4	+1.1
W39A	Magazine	28.68	341	IAmb	IAmb	07 10 43.3	
	comp=Z,7.6nm,0.9s						
TXAR	Lajitas Array	28.74	320	P	P	07 10 37.5	-1.6
	comp=Z,0.4nm,0.7s,baz=138,slow=9.6,SNR=2.1						
TXAR				LR	LR	07 23 02.6	
	comp=Z,49nm,18.1s,baz=149,slow=38						
	comp=Z,0.4nm,0.7s						
LCAR	Lake Charles	28.76	346	IAmb	IAmb	07 10 39.3	
	comp=Z,8.9nm,0.7s						
FCAR	Ozark Folk Cen	28.84	344	IAmb	IAmb	07 10 43.9	
	comp=Z,14nm,1.3s						
H06E1	SOCORRO T-PHAS	29.25	294	T	T	07 41 00.8	
	SNR=4.3						
PB16	IPOC Station P	29.46	154	P	P	07 10 46.9	+0.8
PB16				IAmb	IAmb	07 10 51.7	
	comp=Z,5.0nm,0.7s						
U40A	Yellville	29.48	343	IAmb	IAmb	07 10 51.4	
	comp=Z,11nm,1.2s						
MGMO	Mountain Grove	30.07	345	IAmb	IAmb	07 10 55.2	
	comp=Z,13nm,1.1s						
MDP	Montagnes des	30.11	94	LR	LR	07 23 34.0	
	comp=Z,217nm,18.1s,baz=217,slow=38						
CCM	Cathedral Cave	30.68	347	P	P	07 10 55.1	-0.9
CCM				IAmb	IAmb	07 10 56.4	
	comp=Z,6.6nm,0.8s						
KSU1	Kansas State U	33.16	340	IAmb	IAmb	07 11 22.2	
	comp=Z,7.5nm,0.8s						
319A	Douglas	33.76	317	P	P	07 11 23.4	+0.1
ANMO	Albuquerque	34.33	324	LR	LR	07 29 11.8	
	comp=Z,45nm,18.4s,baz=159,slow=43						
TUC	Tucson	35.34	317	P	P	07 11 37.2	+0.2
214A	Organ Pipe Nat	36.54	314	P	P	07 11 49.2	+2.0
214A				IAmb	IAmb	07 11 50.2	
	comp=Z,6.5nm,0.9s						
SADO	Sadowa	36.56	4	LR	LR	07 26 37.5	
	comp=Z,58nm,19.1s,baz=216,slow=36						
TMUT	Trail Mountain	40.08	325	IAmb	IAmb	07 12 18.4	
	comp=Z,13nm,1.5s						
TCRU	Three Creeks R	40.34	323	P	P	07 12 19.5	+0.2
GSC	Goldstone, Bar	41.16	316	P	P	07 12 27.6	+1.7
GSC				IAmb	IAmb	07 12 28.9	
	comp=Z,6.8nm,1.1s						
QSM	Queen of Sheba	41.56	317	IAmb	IAmb	07 12 31.9	
	comp=Z,5.2nm,1.1s						
H03N2	Juan Fernandez	41.58	175	T	T	07 56 40.1	
	baz=354,slow=76,SNR=21						
H03N1	Juan Fernandez	41.59	175	T	T	07 56 41.0	
	baz=354,slow=76,SNR=22						
H03N3	Juan Fernandez	41.60	175	T	T	07 56 39.4	
	baz=354,slow=76,SNR=20						
PDAR	Pinedale Array	41.68	330	P	P	07 12 28.6	-1.7
	comp=Z,0.5nm,0.6s,baz=141,slow=9.6,SNR=7.5						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	41.68	330	P	P	07 12 28.2	-2.1
BDFB	Brasilia	41.83	124	P	P	07 12 31.9	+0.3
	comp=Z,1.7nm,0.8s,baz=272,slow=9.2,SNR=3.1						

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BDFB                                LR      LR      07 31 22.0
          comp=Z,106nm,18.6s,baz=42,slow=38
          comp=Z,1.7nm,0.8s
BDFB  Brasilia         41.83 124    IAmb    IAmb    07 12 49.2
          comp=Z,10nm,1.4s
HWUT  Hardware Ranch   41.87 327    P       P       07 12 31.1 -0.7
HWUT                                IAmb    IAmb    07 12 37.0
          comp=Z,9.2nm,1.1s
CCAC  Calif City Air   41.92 315    IAmb    IAmb    07 12 35.7
          comp=Z,9.0nm,0.9s
CPUP  Villa Florida    42.32 145    LR      LR      07 29 42.4
          comp=Z,22nm,18.1s,baz=228,slow=35
REDW  Red Top Meadow   42.76 330    P       P       07 12 39.0 -0.1
REDW                                IAmb    IAmb    07 12 44.1
          comp=Z,8.2nm,1.1s
SNOW  Snow King Moun   42.78 330    IAmb    IAmb    07 12 45.1
          comp=Z,11nm,1.3s
MOOW  Moose Ponds      42.99 330    P       P       07 12 40.6 -0.4
FLWY  Flagg Ranch      43.21 330    IAmb    IAmb    07 12 43.9
          comp=Z,4.3nm,0.9s
LAO   LASA Array       43.26 336    IAmb    IAmb    07 12 48.6
          comp=Z,14nm,1.4s
ULM   Lac du Bonnet    43.30 348    P       P       07 12 40.8 -2.2
          comp=Z,6.0nm,1.0s,baz=162,slow=5.6,SNR=3.5
          comp=Z,6.0nm,1.0s
ULM   Lac du Bonnet    43.30 348    IAmb    IAmb    07 12 44.8
          comp=Z,9.1nm,1.1s
RLMT  Red Lodge        43.31 333    IAmb    IAmb    07 12 43.9
          comp=Z,4.2nm,0.7s
YMR   Madison River    43.77 331    IAmb    IAmb    07 12 52.7
          comp=Z,6.6nm,1.2s
NVAR  Mina Array Bea   43.88 319    P       P       07 12 48.6 +0.4
          comp=Z,1.2nm,0.7s,baz=129,slow=6.7,SNR=12
          comp=Z,1.2nm,0.7s
OMMB  Old Mammoth Mi   43.90 317    P       P       07 12 49.7 +1.3
MDPB  Devils Postpil   43.96 317    IAmb    IAmb    07 12 51.9
          comp=Z,4.5nm,0.9s
YHL   Hebgen Lake      44.01 331    P       P       07 12 49.4 +0.2
YHL                                 IAmb    IAmb    07 12 55.1
          comp=Z,14nm,1.5s
BMN   Battle Mountai   44.36 322    IAmb    IAmb    07 12 54.1
          comp=Z,5.6nm,0.8s
HLID  Hailey           44.74 327    P       P       07 12 53.6 -1.4
HLID                                IAmb    IAmb    07 12 59.7
          comp=Z,4.1nm,1.1s
BOZ   Bozeman (W)      44.77 331    P       P       07 12 54.6 -0.5
BOZ                                 IAmb    IAmb    07 12 56.1
          comp=Z,3.9nm,0.9s
DLMT  Dillon           45.07 330    IAmb    IAmb    07 13 04.3
          comp=Z,5.1nm,0.9s
LRM   Limekiln Ridge   45.33 331    P       P       07 12 59.2 -0.5
MFID  Camas Ranch      45.41 326    IAmb    IAmb    07 13 05.8
          comp=Z,4.5nm,1.3s
WVOR  Wild Horse Val   46.41 323    P       P       07 13 07.8 -0.3
WVOR                                IAmb    IAmb    07 13 13.4
          comp=Z,5.6nm,0.9s
PLID  Pearl Lake       46.61 328    P       P       07 13 08.9 -0.9
PLID                                IAmb    IAmb    07 13 14.1
          comp=Z,5.6nm,1.2s
RCBR  Riachuelo        48.81 105    LR      LR      07 36 19.5
          comp=Z,32nm,21.1s,baz=100,slow=39
PLCA  Paso Flores      49.99 168    P       P       07 13 34.9 -0.9
          comp=Z,0.9nm,0.8s,baz=348,slow=11,SNR=4.1
          comp=Z,0.9nm,0.8s
YKA   Yellowknife Ar   58.92 343    P       P       07 14 39.0 -1.2
          comp=Z,2.9nm,1.1s,baz=140,slow=6.9,SNR=18
          comp=Z,2.9nm,1.1s
INK   Inuvik           68.61 342    P       P       07 15 42.9 -1.1
BCAR  Beaver Creek A   68.98 335    P       P       07 15 46.5 -0.1
L27K  Beaver Creek,    69.00 335    P       P       07 15 47.2 +0.5
ILAR  Eielson Array    71.72 336    P       P       07 16 02.6 -0.6
          comp=Z,1.3nm,0.9s,baz=112,slow=4.4,SNR=10
          comp=Z,1.3nm,0.9s
ILAR  Eielson Array    71.72 336    P       P       07 16 02.9 -0.3
ESDC  Sonseca Array    76.23  51    P       P       07 16 30.2  0.0
          comp=Z,1.0nm,1.0s,baz=263,slow=5.5,SNR=4.4
          comp=Z,1.0nm,1.0s
DBIC  Dimbokro         77.19  85    P       P       07 16 36.7 +0.7
          comp=Z,11nm,1.0s,baz=302,slow=4.5,SNR=3.7
          comp=Z,11nm,1.0s
DBIC  Dimbokro         77.19  85    IAmb    IAmb    07 16 42.4
          comp=Z,20nm,1.2s
TORD  Torodi Ar. Bea   82.85  78    P       P       07 17 06.5 -0.1
          comp=Z,1.4nm,1.0s,baz=295,slow=6.3,SNR=6.9
          comp=Z,1.4nm,1.0s
GERES GERESS Array B   88.14  41    LR      LR      07 55 38.5
          comp=Z,27nm,18.4s,baz=280,slow=35
ASAR  Alice Springs   141.65 242    PKhKP   PKPpre  07 24 07.4
          comp=Z,0.4nm,0.6s,baz=118,slow=3.8,SNR=5.9
WRA   Warramunga Arr  142.23 248    PKhKP   PKPpre  07 24 09.2
          comp=Z,1.2nm,0.9s,baz=111,slow=3.1,SNR=7.9
FITZ  Fitzroy Crossi  150.65 248    PKPbc   PKPbc   07 24 33.8 -0.7
          comp=Z,2.2nm,0.7s,baz=158,slow=12,SNR=3.0
CMAR  Chiang Mai Arr  153.44 356    PKPbc   PKPbc   07 24 38.2 -2.6
          comp=Z,1.3nm,0.4s,baz=345,slow=3.1,SNR=1.8
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*JMA **04** 07:06:59.2±0.1, 24°.0N±0°.7×121°.5E±0°.9, h22^{km}, TAIWAN REGION*

*TAP **04** 07:07:01.2, 24°.23N×121°.75E, h9^{km}, ML3.6, C*

ISC 04 07:07:01.9±0.8**, 24°.25N**±0°.01×**121°.74E**±0°.02**, h9**^{km}±5^{km}**, n95, σ0^{s}.98**/171**, 3C-19D, Taiwan**

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Code  Station Name       Δ°   AZ°   Phase ID        Time     Res
                                   Op     ISC      h  m  s   ISC
EHP   Heping Village    0.06    0   P      Pg     07 07 03.8  0.0
          baz=357
EHP                                 S      Sg     07 07 05.8 +0.5
          baz=357
ETL   Fush Village      0.14 230⇑iP     Pg     07 07 04.7 -0.4
          baz=239
ETL                                 S      Sg     07 07 07.2  0.0
          baz=239
NACB  Ninganchiao       0.15 240⇑iP     Pg     07 07 04.8 -0.4
          baz=241
NACB                               iS      Sg     07 07 07.5  0.0
          baz=241
ENA   Nanau             0.18    0⇓iP     Pg     07 07 05.7  0.0
          baz=359
ENA                                 S      Sg     07 07 08.5 +0.3
          baz=359
EWUT  Wuta              0.20   10⇓iP     Pg     07 07 06.0  0.0
          baz=6.0
EWUT                                S      Sg     07 07 09.2 +0.4
          baz=6.0
TWD   Chiawan           0.21 218⇑iP     Pg     07 07 05.6 -0.7
          baz=223
TWD                                 S      Sg     07 07 08.9 -0.4
          baz=223
ETLH  Xiulin Townshi    0.24 260⇓iP     Pg     07 07 06.7 -0.1
          baz=265
ETLH                               eS      Sg     07 07 10.8 +0.7
          baz=265
HWA   Hwalien           0.30 205    P      Pg     07 07 08.0 +0.1
          baz=216
HWA                                eS      Sg     07 07 14.1 +2.3
          baz=216
LATG  Datong            0.34 325⇓iP     Pb     07 07 09.1 -1.3
          baz=326
LATG                                S      Sb     07 07 14.5 -1.5
          baz=326
ETM   Tongmen           0.36 219   eP      Pg     07 07 08.3 -0.7
          baz=215
ETM                                eS      Sg     07 07 13.7 -0.1
          baz=215
TWC   Suao              0.37   15⇓iP     Pg     07 07 09.1 -0.2
          baz=7.0
TWC                                 S      Sg     07 07 14.4 +0.2
          baz=7.0
NNSB  Datong            0.37 299⇓iP     Pb     07 07 09.6 -1.2
          baz=300
NNSB                                S      Sb     07 07 15.0 -1.8
          baz=300
NDS   Dongshan          0.38 357⇓iP     Pg     07 07 09.6 +0.1
          baz=355
NDS                                iS      Sg     07 07 14.9 +0.4
          baz=355
NNS   Nan Shan          0.39 299⇓iP     Pb     07 07 09.8 -1.2
          baz=301
NNS                                iS      Sb     07 07 15.6 -1.6
          baz=301
TEYL  Yanliau Villag    0.40 199   eP      Pg     07 07 10.1 +0.3
          baz=215
ENTT  Nioudou           0.42 338⇓iP     Pb     07 07 10.5 -1.1
          baz=338
ENTT                                S      Sb     07 07 16.9 -1.2
          baz=338
WHF   Hehuan Shan       0.45 257⇓iP     Pg     07 07 10.5 -0.2
          baz=259
WHF                                iS      Sg     07 07 16.9 +0.3
          baz=259
FUSS  Fushou            0.45 270    P      Pg     07 07 11.0 +0.2
          baz=273
FUSS                                S      Sb     07 07 17.5 -1.7
          baz=273
TWE   Neicheng          0.47 352⇓iP     Pg     07 07 11.4 +0.3
          baz=352
TWE                                iS      Sg     07 07 18.0 +0.6
          baz=352
ILA   Ilan              0.51    1  eP      Pg     07 07 12.1 +0.1
ILA                                 S      Sb     07 07 19.6 -1.2
TWT   Tachien           0.52 270   eP      Pb     07 07 12.4 -0.9
          baz=273
TWT                                eS      Sb     07 07 19.7 -1.3
          baz=273
ESL   Shilin            0.52 213   eP      Pg     07 07 11.4 -0.5
          baz=223
ESL                                eS      Sg     07 07 20.0 +1.2
          baz=223
FUSB  Fushanzhiwuyua    0.53 345⇓iP     Pb     07 07 12.6 -0.8
          baz=344
FUSB                                S      Sb     07 07 19.8 -1.4
          baz=344
TDCB  Techi             0.53 270⇓iP     Pb     07 07 12.5 -1.0
          baz=273
TDCB                                S      Sb     07 07 19.4 -2.1
          baz=273
YHNB  Yeheng            0.53 322⇓iP     Pb     07 07 13.0 -0.6
          baz=322
YHNB                                S      Sb     07 07 20.2 -1.2
          baz=322
NSK   Sanguang          0.55 321⇓iP     Pb     07 07 13.1 -0.7
          baz=321
NSK                                iS      Sb     07 07 20.7 -1.1
          baz=321
CHGB  Renai             0.55 250⇓iP     Pg     07 07 12.6 -0.1
          baz=245
CHGB                                S      Sg     07 07 19.8 -0.2
          baz=245
NWLT  Wulai             0.57 338⇓iP     Pb     07 07 13.4 -0.8
          baz=337
NWLT                                S      Sb     07 07 21.3 -1.1
          baz=337
OWD   Renai             0.59 240   eP      Pg     07 07 13.0 -0.5
          baz=243
OWD                                eS      Sg     07 07 20.5 -0.8
          baz=243
NTC   Toucheng          0.61    8  eP      Pg     07 07 13.5 -0.2
          baz=6.0
NTC                                eS      Sg     07 07 21.4 -0.3
          baz=6.0
EGS                     0.62   16  eP      Pg     07 07 14.0 +0.1
          baz=26
WUSB  Renai             0.62 246    P      Pg     07 07 13.9 -0.2
          baz=241
WUSB                                S      Sg     07 07 22.0 -0.3
          baz=241
EGFH  Guangfu           0.65 206   eP      Pg     07 07 14.1 -0.3
          baz=216
EGFH                               eS      Sg     07 07 24.0 +1.1
          baz=216
NFF   Wufeng Townshi    0.68 304    P      Pb     07 07 15.6 -0.5
          baz=304
NFF                                 S      Sb     07 07 24.4 -1.3
          baz=304
TIPB  Shuangxi          0.72    6  eP      Pg     07 07 15.7 -0.2
          baz=5.0
TIPB                               eS      Sg     07 07 25.1 -0.2
          baz=5.0
WHP   Taichung City     0.73 272    P      Pb     07 07 16.4 -0.4
          baz=274
WHP                                 S      Sb     07 07 25.9 -1.1
          baz=274
NHDH  Xindian Distri    0.74 345   eP      Pb     07 07 16.4 -0.6
          baz=344
VWDT  VWDT              0.74 228   eP      Pg     07 07 16.0 -0.2
          baz=230
VWDT                               eS      Sg     07 07 26.2 +0.4
          baz=230
TWA   Mucha             0.74 349   eP      Pb     07 07 16.6 -0.4
          baz=349
TWA                                eS      Sb     07 07 26.8 -0.5
          baz=349
LIOB  Emei              0.77 301   eP      Pb     07 07 17.8 +0.2
          baz=302
LIOB                               eS      Sb     07 07 28.4 +0.2
          baz=302
NSTT  Nanjuang          0.77 300    P      Pb     07 07 17.4 -0.2
          baz=300
NSTT                                S      Sb     07 07 27.4 -0.8
          baz=300
WCS   Beigang Elemen    0.78 256   eP      Pg     07 07 16.6 -0.4
          baz=258
WCS                                eS      Sg     07 07 27.0 -0.2
          baz=258
TWB1  Santiao Chiao     0.79   17  eP      Pg     07 07 16.6 -0.6
          baz=8.0
HGSD  Ruisui            0.81 201    P      Pg     07 07 17.1 -0.4
          baz=191
NWF   Wu-fen Shan       0.82    3⇓iP     Pg     07 07 18.0 +0.3
          baz=352
NWF                                iS      Sg     07 07 28.0 -0.4
          baz=352
EHY   Hungye            0.83 207    P      Pg     07 07 17.4 -0.6
          baz=218
EHY                                eS      Sg     07 07 29.8 +0.9
          baz=218
SXI1  Grass Mountain    0.85    8   P      Pg     07 07 17.6 -0.7
          baz=14
SXI1                                S      Sg     07 07 29.0 -0.4
          baz=14
SMLT  Sun Moon Lake     0.85 245    P      Pg     07 07 18.3  0.0
          baz=237
SMLT                                S      Sg     07 07 29.1 -0.3
          baz=237
SSLB  Suanglung         0.85 238⇓iP     Pg     07 07 17.7 -0.7
          baz=240
SSLB                                S      Sg     07 07 27.3 -2.2
          baz=240
SBCB  Hsinchu           0.88 308   eP      Pb     07 07 19.8 +0.5
          baz=308
NCU   National Centr    0.88 325   eS      Sn     07 07 34.0 +0.6
          baz=325
NCUH  Zhongli           0.88 325   eP      Pn     07 07 20.2 -0.3
          baz=325
NCUH                               eS      Sn     07 07 34.8 +1.4
          baz=325
TWS1  Kuangyinshan      0.90 341   eP      Pb     07 07 20.3 +0.6
          baz=349
TWS1                               eS      Sn     07 07 34.4 +0.5
          baz=349
YM01  YM01              0.91 350   eP      Pb     07 07 19.8 -0.1
          baz=349
YM01                               eS      Sb     07 07 33.2 +1.0
          baz=349
NMLH  Miaoli            0.91 288   eP      Pn     07 07 21.6 +0.6
          baz=289
YULB  Yu-li             0.95 206   eP      Pg     07 07 19.2 -1.0
          baz=217
YULB                               eS      Sg     07 07 32.2 -0.2
          baz=217
ANP   Anpu              0.95 348   eP      Pb     07 07 20.7  0.0
          baz=348
EYUL  Yuli              0.98 203   eP      Pg     07 07 20.7 -0.1
          baz=220
TCU   Taichung          0.98 264    P      Pn     07 07 22.8 +1.0
          baz=266
TCU                                eS      Sn     07 07 37.2 +1.3
          baz=266
WDJ   Dajia District    1.01 276   eP      Pn     07 07 23.1 +0.8
          baz=277
WDJ                                eS      Sn     07 07 38.1 +1.4
          baz=277
WJS   Zhushan           1.02 245   eP      Pn     07 07 22.6 +0.2
          baz=241
WJS                                eS      Sn     07 07 37.8 +0.8
          baz=241
TWY   Chenhua           1.03 353   eP      Pn     07 07 23.0 +0.4
          baz=352
WNT   Mingjian          1.03 249   eP      Pn     07 07 22.8 +0.1
          baz=246
WNT                                eS      Sn     07 07 38.2 +0.9
          baz=246
WCHH  Zhanghua          1.09 261   eP      Pn     07 07 24.1 +0.7
          baz=263
WCHH                               eS      Sn     07 07 40.6 +1.9
          baz=263
JYNG  Yonagunijimaku    1.12   79   P      Pg     07 07 23.5 +0.1
JYNG                               eS      Sg     07 07 39.9 +2.0
FULB  Fuli              1.12 201   eP      Pg     07 07 22.4 -1.2
          baz=218
ALS   Alishan           1.13 230    P      Pg     07 07 23.3 -0.4
          baz=231
ALS                                eS      Sb     07 07 39.4 +0.7
          baz=231
CHN5  Tsauling          1.17 236    P      Pb     07 07 24.7 +0.3
          baz=238
CHN5                                S      Sn     07 07 40.9 +0.2
          baz=238
YOJ   Yonaguni jima     1.18   79  eP      Pg     07 07 23.2 -1.3
          baz=66
YOJ                                eS      Sg     07 07 40.7 +0.8
          baz=66
CHKT  Chengkung         1.20 197   eP      Pg     07 07 21.9 -3.0
          baz=190
CHKT                               eS      Sg     07 07 40.4 -0.1
          baz=190
WDLH  Douliu            1.23 243   eP      Pg     07 07 25.2 -0.4
          baz=245
WDLH                               eS      Sn     07 07 43.9 +1.6
          baz=245
ELDTW Lidau             1.25 212    P      Pg     07 07 23.7 -2.2
          baz=224
ELDTW                              eS      Sg     07 07 41.6 -0.5
          baz=224
WRL   Guolierlin Hig    1.29 255   eP      Pn     07 07 26.8 +0.5
          baz=256
WRL                                eS      Sn     07 07 46.0 +2.3
          baz=256
WTK   Tuku              1.36 246   eP      Pb     07 07 28.2 +0.7
          baz=236
WTK                                eS      Sn     07 07 46.9 +1.7
          baz=236
CHN4  Tsaushan          1.38 230    P      Pb     07 07 28.7 +0.7
          baz=232
CHN4                                S      Sn     07 07 48.1 +2.2
          baz=232
TPUB  Ta-pu             1.39 227   eP      Pn     07 07 27.6  0.0
          baz=230
TPUB                               eS      Sn     07 07 46.9 +0.8
          baz=230
STYH  Taoyuan           1.39 220   eP      Pn     07 07 26.8 -0.8
          baz=222
STYH                               eS      Sg     07 07 45.2 -1.5
          baz=222
CHY   Chiayi            1.42 238   eP      Pg     07 07 29.3 +0.1
          baz=240
CHY                                eS      Sn     07 07 49.1 +2.3
          baz=240
WTP   Ta-pu             1.44 226   eP      Pn     07 07 28.6 +0.4
          baz=228
WTP                                eS      Sn     07 07 49.2 +1.9
          baz=228
TWK   Hsinying          1.51 230   eP      Pb     07 07 30.5 +0.3
          baz=232
TWK                                eS      Sg     07 07 50.5 +0.1
          baz=232
WSF   Szhu              1.52 247   eS      Sg     07 07 51.8 +1.0
          baz=259
SNST  Tainan City       1.53 228   eP      Pg     07 07 32.2 +0.8
          baz=231
SNST                               eS      Sg     07 07 52.2 +1.0
          baz=231
CHN1  Nanshi            1.54 227   eP      Pn     07 07 30.5 +0.9
          baz=229
CHN1                               eS      Sg     07 07 52.1 +0.8
          baz=229
TWG   Pinlang           1.55 203   eP      Pn     07 07 27.0 -2.8
          baz=206
WSL   Shuilin Townsh    1.56 243   eP      Pb     07 07 30.9 -0.1
          baz=245
WSL                                eS      Sg     07 07 52.3 +0.1
          baz=245
SGST  Jiashian          1.57 223   eP      Pn     07 07 29.6 -0.5
          baz=226
ICHU  Yijhu             1.60 237   eP      Pb     07 07 32.1 +0.3
          baz=224
ICHU                               eS      Sg     07 07 54.0 +0.5
          baz=224
IRIF  Iriomote-Funau    1.82   87   P      Pn     07 07 33.1 -0.3
IRIF                               eS      Sn     07 07 57.6 +1.0
MASBT Mashibuluo        1.92 212   eP      Pn     07 07 35.6 +0.7
          baz=227
MASBT                              eS      Sb     07 08 01.8 +0.4
          baz=227
JKRS  Kuro-shima        2.07   90  eS      Sn     07 08 05.8 +3.0
PNG   Penghu            2.11 252   eP      Pn     07 07 39.2 +1.7
          baz=254
PNG                                eS      Sb     07 08 05.9 -0.9
          baz=254
WDGT  Dungji            2.15 243   eP      Pn     07 07 38.3 +0.3
          baz=247
WDGT                               eS      Sb     07 08 07.3 -0.5
          baz=247
JIJ   Ishigaki jima     2.19   87  eS      Sn     07 08 04.6 -1.3
VWUC  VWUC              2.21 290   eP      Pn     07 07 38.0 -0.9
          baz=277
VCHM  Qimei             2.36 244   eP      Pn     07 07 40.0 -0.9
          baz=232
```

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*IDC **04** 07:15:57.1±1.8, 6°.13S×152°.54E, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=57.9km s-min=21.9km az=116.0*

ISC 04 07:16:03.1±1.7**, 6°.0S**±0°.1×**152°.3E**±0°.3**, h38**^{km}**, n6, σ0^{s}.43**/7**,** **mb3.7**/4**, New Britain region**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time     Res
                                   Op     ISC      h  m  s   ISC
KRVT  Keravat (AS076    1.72 350   Pn     Pn      07 16 30.6 +0.2
          51nm,0.3s,baz=220,slow=1.9,SNR=27
KRVT                               Sn     Sn      07 16 51.1 -0.1
          42nm,0.3s,baz=235,slow=22,SNR=15
WRA   Warramunga Arr   22.30 230   P      P       07 20 57.4  0.0
          1.4nm,0.7s,baz=55,slow=10.0,SNR=15
          1.4nm,0.7s
ASAR  Alice Springs    24.94 223   P      P       07 21 23.3 +0.3
          2.1nm,0.8s,baz=64,slow=8.5,SNR=20
          2.1nm,0.8s
FITZ  Fitzroy Crossi   28.67 243   P      P       07 21 56.6  0.0
          2.2nm,0.5s,baz=53,slow=9.2,SNR=14
          2.2nm,0.5s
ILAR  Eielson Array    83.46  22   P      P       07 28 26.5 +0.2
          0.4nm,0.6s,baz=254,slow=5.6,SNR=6.3
          0.4nm,0.6s
TORD  Torodi Ar. Bea  150.20 286   PKPbc  PKiKP   07 35 51.2 -0.7
          0.4nm,0.6s,baz=84,slow=3.7,SNR=2.7
```

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*IDC **04** 07:22:30.0±2.0, 32°.66N×130°.48E, h0^{km}, mb3.6/2, mbtmp3.5/3, ML2.5/1, Error ellipse: s-maj=29.3km s-min=12.7km az=138.0*

*JMA **04** 07:22:31.5±0.0, 32°.6N±0°.1×130°.7E±0°.2, h5^{km}, MV3.4/20, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

ISC 04 07:22:31.3±0.8**, 32°.61N**±0°.04×**130°.70E**±0°.08**, h11**^{km}**, n9,** **σ0^{s}.69**/13**, 4D, Kyushu**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time     Res
                                   Op     ISC      h  m  s   ISC
JIU3  Izumi3            0.11 124⇓iP     Pg      07 22 33.9 -0.3
JIU3                            ⇓eS     Sg      07 22 35.7 -0.6
JTA   Tamana            0.38 338  iP     Pg      07 22 39.2 +0.3
JTA                               eS     Sg      07 22 44.5 +0.5
JZO   Okuchi            0.48 191  iP     Pb      07 22 41.1 -0.7
JZO                               eS     Sb      07 22 47.9 -0.9
JNU   Nakatsue          0.53  16  Pg     Pg      07 22 41.4 -0.3
          134nm,0.3s,baz=185,slow=8.6,SNR=899
JNU                               Lg     Lg      07 22 48.5
          540nm,0.3s,baz=347,slow=10,SNR=46
JTZ   Takazaki          0.78 155⇓iP     Pg      07 22 47.2 +0.8
JTZ                              ⇓S     Sg      07 22 57.6 +1.0
KSRS  Korea Array       5.34 336  Pg     Pb      07 24 04.2 -0.5
          0.3nm,0.3s,baz=159,slow=42,SNR=1.3
KSRS                              Lg     Lg      07 25 17.1
          1.2nm,0.3s,baz=157,slow=31,SNR=7.2
MJAR  Matsushiro Arr    7.33  56  Pn     Pn      07 24 18.7 +0.4
          0.1nm,0.3s,baz=246,slow=14,SNR=2.8
          0.5nm,0.3s
ILAR  Eielson Array    57.83  30  P      P       07 32 23.2 +0.7
          0.3nm,0.7s,baz=280,slow=7.2,SNR=4.8
          0.3nm,0.7s
FINES FINESS Array B   68.41 330  P      P       07 33 32.5 -0.2
```

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              0.4nm,0.4s,baz=69,slow=6.3,SNR=5.9
              0.4nm,0.4s
```

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*IDC **04** 07:24:41.7±1.0, 23°.05S×66°.52W, h206^{km}±13^{km}, mb3.4/3, mbtmp4.1/9, Error ellipse: s-maj=18.5km s-min=16.6km az=82.0*
*SJA **04** 07:24:41.9±0.7, 23°.07S×66°.63W, h224^{km}±5^{km}, ML4.5, MW4.2*
*VAO **04** 07:24:42.9±0.4, 23°.04S×66°.73W, h241^{km}±5^{km}, mb4.1*
*NEIC **04** 07:24:43.1±1.8, 23°.07S±0°.08×66°.8W±0°.1, h232^{km}±9^{km}, Error ellipse: s-maj=15.0km s-min=11.0km az=100.0*
*GUC **04** 07:24:43.4±0.6, 23°.03S×66°.94W, h251^{km}±7^{km}, ML4.7*
ISC 04 07:24:42.2±0.6**, 23°.07S**±0°.04×**66°.68W**±0°.04**, h225**^{km}±6^{km}**, n121, σ1^{s}00**/146**, mb3.6**/3**, 13C, Jujuy Province**

```
Code  Station Name      Δ°   AZ°    Phase ID             Time     Res
                                   Op      ISC         h  m  s    ISC
HJA   Humahuaca        1.18   97  eP      Pn         07 25 16.6 +0.4
HJA                               eS      S          07 25 41.5 -1.0
AF01  San Pedro de A   1.39 275           Pn         07 25 19.0 +1.4
AF01  San Pedro de A   1.39 275⇑iP        Pn         07 25 18.9 +1.4
YJA   Yavi             1.40   51  eP      Pn         07 25 18.4 +0.5
YJA                               eS      S          07 25 44.5 -1.0
LVC   Limon Verde      2.11 282   P       Pn         07 25 24.8 +0.7
      352nm,0.5s,baz=95,slow=6.5,SNR=524
LVC                               S       S          07 25 56.2 -0.4
      99nm,0.3s,baz=273,slow=18,SNR=16
LVC   Limon Verde      2.11 282⇑iP        Pn         07 25 24.7 +0.7
LVC                               i S     S          07 25 56.4 -0.2
LVC   Limon Verde      2.11 282  eP       Pn         07 25 24.7 +0.7
PB15  IPOC Station P   2.58 266           Pn         07 25 29.5 +0.7
PB15  IPOC Station P   2.58 266⇑iP        Pn         07 25 29.4 +0.7
PB15                              i S     S          07 26 04.5 -0.4
PB15  IPOC Station P   2.58 266  eP       Pn         07 25 29.4 +0.7
PB15                             eS       S          07 26 04.8 -0.1
PB15                               IAML              07 26 05.8
      comp=Z,4µm,0.2s
PB09  IPOC Station P   2.69 298           Pn         07 25 31.2 +1.2
PB09  IPOC Station P   2.69 298⇑iP        Pn         07 25 31.1 +1.2
PB09                              i S     S          07 26 07.1  0.0
PB09                               IAML              07 26 09.1
      comp=E,570nm,0.7s
PB09  IPOC Station P   2.69 298  eP       Pn         07 25 31.1 +1.2
PB09                             eS       S          07 26 06.4 -0.8
PB09                               IAML              07 26 08.7
      comp=Z,478nm,0.5s
PB06  IPOC Station P   2.69 277           Pn         07 25 30.4 +0.5
PB06  IPOC Station P   2.69 277⇑iP        Pn         07 25 30.4 +0.5
PB06                              i S     S          07 26 06.3 -0.8
PB06                               IAML              07 26 08.7
      comp=N,686nm,0.3s
FSA   Cafayete         3.10 168  eP       Pn         07 25 35.0 +0.6
FSA                              eS       S          07 26 13.6 -1.8
PB07  IPOC Station P   3.26 294           Pn         07 25 36.7 +0.4
PB07  IPOC Station P   3.26 294⇑iP        Pn         07 25 36.7 +0.4
PB07                              i S     S          07 26 16.5 -2.2
PB07                               IAML              07 26 17.1
      comp=N,1µm,0.4s
PB07  IPOC Station P   3.26 294  eP       Pn         07 25 36.8 +0.4
PB07                             eS       S          07 26 17.3 -1.3
PB07                               IAML              07 26 17.8
      comp=Z,774nm,0.5s
PB04  IPOC Station P   3.29 282           Pn         07 25 37.0 +0.3
PB04  IPOC Station P   3.29 282⇑iP        Pn         07 25 37.0 +0.3
PB04                              i S     S          07 26 17.4 -1.9
PB04                               IAML              07 26 21.3
      comp=N,879nm,0.4s
PB04  IPOC Station P   3.29 282  eP       Pn         07 25 36.9 +0.3
PB04                             eS       S          07 26 18.3 -1.0
PB04                               IAML              07 26 22.8
      comp=Z,582nm,0.5s
PB01  IPOC Station P   3.29 307⇑iP        Pn         07 25 37.0 +0.3
PB01                              i S     S          07 26 18.2 -1.2
PB01                               IAML              07 26 19.6
      comp=N,904nm,0.2s
PB01  IPOC Station P   3.29 307  eP       Pn         07 25 37.2 +0.5
PB01                             eS       S          07 26 18.3 -1.1
PB01                               IAML              07 26 19.6
      comp=Z,478nm,0.2s
GO02  Mina Guanaco     3.38 231   Pn      Pn         07 25 38.4 +0.5
GO02  Mina Guanaco     3.38 231⇑iP        Pn         07 25 38.3 +0.5
GO02                              i S     S          07 26 20.9 -0.6
GO02  Mina Guanaco     3.38 231  eP       Pn         07 25 38.5 +0.5
GO02                             eS       S          07 26 20.8 -0.6
PB02  IPOC Station P   3.45 300           Pn         07 25 38.6  0.0
PB02  IPOC Station P   3.45 300  eP       Pn         07 25 38.9 +0.3
PB02                             eS       S          07 26 21.5 -1.2
PB02                               IAML              07 26 24.0
      comp=Z,951nm,0.3s
PB10  IPOC Station P   3.59 262   Pn      Pn         07 25 40.4 +0.4
PB10  IPOC Station P   3.59 262⇑iP        Pn         07 25 40.5 +0.4
PB10                              i S     S          07 26 23.2 -2.2
PB10  IPOC Station P   3.59 262  eP       Pn         07 25 40.5 +0.4
PB10                             eS       S          07 26 24.4 -1.0
PB10                               IAML              07 26 25.5
      comp=Z,323nm,0.7s
PB08  IPOC Station P   3.71 321           Pn         07 25 42.7 +0.7
PB08  IPOC Station P   3.71 321⇑iP        Pn         07 25 43.1 +1.2
PB08                              i S     S          07 26 28.2 -0.5
PB08  IPOC Station P   3.71 321  eP       Pn         07 25 43.1 +1.2
PB08                             eS       S          07 26 27.7 -1.0
PB14  IPOC Station P   3.75 245   Pn      Pn         07 25 42.3 +0.1
PB14  IPOC Station P   3.75 245⇑iP        Pn         07 25 42.3 +0.1
PB14                             eS       S          07 26 27.0 -2.3
TA01  Diego Aracena    4.10 307   Pn      Pn         07 25 45.4 -0.7
TA01  Diego Aracena    4.10 307  eP       Pn         07 25 46.5 +0.4
TA01                              i S     S          07 26 33.3 -3.1
TA02  Huaiquique       4.25 310           Pn         07 25 47.0 -1.0
PB11  IPOC Station P   4.30 319   Pn      Pn         07 25 48.5 -0.3
PB11  IPOC Station P   4.30 319⇑iP        Pn         07 25 48.3 -0.6
PB11                              i S     S          07 26 39.2 -2.1
AC02  Maricunga        4.36 210   Pn      Pn         07 25 50.3 +0.5
AC01  Pan de Azucar    4.70 229   Pn      Pn         07 25 52.5 -1.0
PB16  IPOC Station P   5.40 330           Pn         07 26 03.6 +0.6
AC06  Mina Casimiro    5.41 217           Pn         07 26 01.5 -1.0
PB12  IPOC Station P   5.59 322   Pn      Pn         07 26 02.9 -2.0
LPAZ  La Paz           6.88 348   P       Pn         07 26 22.6 +0.8
      comp=Z,14nm,0.4s,baz=151,slow=5.9,SNR=113
LPAZ                              S       S          07 27 38.7 -2.4
      comp=Z,7.2nm,0.7s,baz=295,slow=14,SNR=2.5
LPAZ  La Paz           6.88 348  eP       Pn         07 26 22.1 +0.3
LCO   Las Campanas     6.94 211   Pn      Pn         07 26 20.2 -1.8
CO01  Juntas del Tor   7.53 203           Pn         07 26 29.4 -0.2
CPUP  Villa Florida    9.10 113   P       Pn         07 26 47.2 -2.3
      comp=Z,1.3nm,0.7s,baz=286,slow=12,SNR=5.2
VA03  San Esteban     10.25 199           Pn         07 27 04.0 -0.3
PTLB  Pontes e Lacer  10.40   45  eP      Pn         07 27 05.2 -1.1
AQDB  Aquidauana      10.52   78          P          07 27 12.1 -1.8
AQDB  Aquidauana      10.52   78  eP      Pn         07 27 09.3 +1.4
MT02  Curacav         10.89 200           Pn         07 27 12.2 -0.1
ITQB  Itaqui          11.15 128  eP       Pn         07 27 16.8 +1.1
VILB  Vilhena         11.79   33  eP      Pn         07 27 24.8 +0.8
SALV  Santo Antonio   12.57   57  eP      Pn         07 27 34.9 +1.2
GO05  Huala           12.75 200   Pn      Pn         07 27 35.7 -0.1
TRCB  Terra Rica      12.95   92   P      P          07 27 41.8 +0.9
TRCB  Terra Rica      12.95   92  eP      Pn         07 27 38.2 -0.2
ETMB  Extrema         13.19    2  eP      Pn         07 27 40.5 -0.8
ML02  Panimavida      13.30 197           Pn         07 27 42.4 -0.2
PTGB  Pitanga         13.47 100  eP       Pn         07 27 45.5 +0.6
ITAB  Concordia       13.81 110   P       P          07 27 50.9 +0.5
ITAB  Concordia       13.81 110  eP       Pn         07 27 50.4 +1.5
CPSB  Cacapava Do Su  13.90 125  eP       Pn         07 27 49.7 -0.2
PCMB  Pacaembu        14.34   87  eP      Pn         07 27 56.7 +1.2
PLTB  Pedras Altas    14.47 130   P       Pn         07 27 56.3 -0.7
PLTB  Pedras Altas    14.47 130  eP       P          07 27 58.4 +0.7
NNA   Nana            14.67 317   P       P          07 28 02.6 +2.5
      comp=Z,4.1nm,0.5s,baz=128,slow=18,SNR=2.2
PDRB  Porto dos Gac   14.82   41  eP      P          07 28 02.8 +1.1
TRQA  Tornquist       15.47 166   P       P          07 28 07.8 -1.0
TRQA                              IAmb    IAmb       07 28 30.4
      comp=Z,9.0nm,1.1s
ITRB  Iturama         15.56   81  eP      P          07 28 10.6 +0.7
FRTB  Fartura         15.74   94  eP      P          07 28 12.8 +1.0
CLDB  Colider         15.97   42  eP      P          07 28 14.9 +0.6
TER01 Tubaro-SC       16.71 113  eP       P          07 28 22.3 -0.1
BB19B Bebedouro       16.94   87  eP      P          07 28 26.3 +1.2
RCLB  Rio Claro- Sao  17.68   92  eP      P          07 28 33.1 +0.1
PET01 Itanhaem-SP     17.82   98  eP      P          07 28 34.5  0.0
PLCA  Paso Flores     17.91 190   P       P          07 28 36.7 +1.3
      comp=Z,2.5nm,0.6s,baz=6.4,slow=12,SNR=15
PLCA  Paso Flores     17.91 190   IAmb    IAmb       07 28 37.3
      comp=Z,3.6nm,0.9s
PLCA  Paso Flores     17.91 190  eP       P          07 28 36.1 +0.6
IPMB  Ipameri, GO     18.02   77  eP      P          07 28 37.3 +0.5
VAO   Valinhos        18.14   94  eP      P          07 28 38.0 -0.2
SNDB  Serra Nova Dou  18.34   56  eP      P          07 28 39.7 -0.5
BDFB  Brasilia        19.09   71   P      P          07 28 48.9 +0.5
      comp=Z,20nm,0.8s,baz=242,slow=11,SNR=37
BDFB  Brasilia        19.09   71   P      P          07 28 48.9 +0.5
BDFB                              IAmb    IAmb       07 28 50.0
      comp=Z,22nm,0.8s
PARB  Paraibuna       19.36   95  eP      P          07 28 51.5 +0.2
ESAR  Angra dos Reis  20.46   94  eP      P          07 29 02.3 -0.7
PEXB  Peixe           20.61   61  eP      P          07 29 03.9 -0.7
MACA  Manacapuru-AM   20.62   17  eP      P          07 29 04.6 -0.1
GO07  Milladeo Hill,  20.82 195   P       P          07 29 05.2 -1.3
MAN01 Angra dos Reis  20.91   94  eP      P          07 29 07.5 -0.3
ITTB  Itaituba        21.39   31  eP      P          07 29 11.4 -1.3
VAS01 Vassouras-RJ    21.45   92  eP      P          07 29 13.4 +0.2
DIAM  Diamantina, MG  22.03   82  eP      P          07 29 18.6 -0.4
DUB01 Friburgo-RJ     22.46   92  eP      P          07 29 22.0 -0.7
JANB  Januaria        22.57   73  eP      P          07 29 23.0 -0.8
SMTB  Santa Maria do  23.12   55  eP      P          07 29 28.2 -0.5
SDBA  SAO DESIDERIO   23.26   67  eP      P          07 29 29.3 -0.7
PRPB  Parauapebas     23.37   47  eP      P          07 29 30.3 -0.7
SJMB  Sao Joao De Ma  24.20   84  eP      P          07 29 37.8 -0.6
RIB01 Linhares ES     24.78   86  eP      P          07 29 43.3 -0.4
NAN01 Guarapari, ES   25.40   83  eP      P          07 29 48.7 -0.7
GUA01 Guaratinga, BA  26.07   81  eP      P          07 29 55.4 +0.1
MCPB  Macapa, AP      26.68   34  eP      P          07 29 59.8 -1.0
GDU01 Guandu, BA      27.30   75  eP      P          07 30 04.5 -1.9
NBPN  Ponto Novo - B  28.03   69  eP      P          07 30 12.4 -0.5
NBLA  Lagarto - SE    30.05   71  eP      P          07 30 29.5 -1.2
NBPS  Pedro II - PI   30.64   56  eP      P          07 30 35.4 -0.6
NBMA  Muriti-CE       31.04   64  eP      P          07 30 38.5 -0.9
NBAN  Anadia - AL     31.98   70  eP      P          07 30 47.4 -0.3
NBPV  Pedro Velho     34.45   66  eP      P          07 31 09.1 +0.2
TORD  Torodi Ar. Bea  75.96   69   P      P          07 36 04.2 -0.6
      comp=Z,0.7nm,0.3s,baz=262,slow=5.7,SNR=19
      comp=Z,0.7nm,0.3s
ESDC  Sonseca Array   85.52   43   P      P          07 36 55.7 +0.7
      comp=Z,0.7nm,0.7s,baz=242,slow=5.5,SNR=4.7
      comp=Z,0.7nm,0.7s
ESDC  Sonseca Array   85.52   43   IAmb   IAmb       07 37 04.3
      comp=Z,1.6nm,1.3s
YKA   Yellowknife Ar  93.36 340    P      P          07 37 32.3 +1.1
      comp=Z,0.1nm,0.5s,baz=132,slow=4.5,SNR=4.4
      comp=Z,0.1nm,0.5s
MKAR  Makanchi Array 145.62   39   PKPbc  PKPab      07 43 56.1 +1.1
      comp=Z,1.9nm,0.5s,baz=319,slow=3.1,SNR=26
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*IDC **04** 07:25:17.2±8.7, 36°.04N×70°.52E, h162^{km}±84^{km}, mb3.0/4, mbtmp3.4/5, Error ellipse: s-maj=47.3km s-min=26.1km az=44.0*
*NNC **04** 07:25:28.6±9.2, 36°.96N×70°.55E, h194^{km}±152^{km}, mb3.0, mpv4.1, Error ellipse: s-maj=123.0km s-min=42.1km az=35.0*
ISC 04 07:25:26.7±2.2**, 36°.8N**±0°.2×**70°.4E**±0°.2**, h200**^{km}**, n17, σ0^{s}57**/16**, mb3.3**/5**, 4C, Hindu Kush region**

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Code  Station Name      Δ°   AZ°    Phase ID             Time     Res
                                   Op      ISC         h  m  s    ISC
AML   Almayashu        5.86   25   P      Pn         07 26 52.7 +0.3
      SNR=142
UCH   Uchtor           6.24   29   P      Pn         07 26 57.6 +0.2
      SNR=53
KK31  Karatay Array    6.25    1   P      Pn         07 26 57.4 +0.2
      2.5nm,0.3s,baz=170,slow=7.9,SNR=83
KK31                             ⇑S       Sn         07 28 08.2 -0.7
      1.6nm,0.3s,baz=246,slow=60,SNR=4.5
EKS2  Erkin-Say        6.36   23   P      Pn         07 26 59.5 +0.8
      SNR=8.5
AAK   Ala-Archa        6.59   27   P      Pn         07 27 02.2 +0.6
      SNR=13
KBK   Karagaybulak     6.78   30   P      Pn         07 27 04.8 +0.7
      SNR=6.2
CHMS  Chumysh          6.99   27   P      Pn         07 27 07.6 +0.8
      SNR=6.1
CHMS  Chumysh          6.99   27  ⇑P      Pn         07 27 06.3 -0.5
      6.3nm,0.5s
TKM2  Tokmak 2         7.26   32   P      Pn         07 27 11.1 +0.7
      SNR=11
TKM2  Tokmak 2         7.26   32  ⇑P      Pn         07 27 10.5 +0.1
      17nm,0.5s
MKAR  Makanchi Array  13.30   38   P      Pn         07 28 27.6 -0.1
      0.7nm,0.8s,baz=212,slow=10,SNR=6.9
AB31  Akbulak array   14.56 332   ⇑P      P          07 28 44.8 +0.3
      0.9nm,0.7s,baz=164,slow=11,SNR=14
CMAR  Chiang Mai Arr  31.03 118    P      P          07 31 15.7  -10
      1.6nm,0.3s,baz=311,slow=7.5,SNR=2.0
FINES FINESS Array B  36.94 326    P      P          07 32 15.9 -0.1
      0.6nm,0.7s,baz=199,slow=34,SNR=2.0
      0.6nm,0.7s
ARCES ARCESS Array B  40.65 338    P      P          07 32 47.0 +0.2
      2.0nm,0.9s,baz=119,slow=10.0,SNR=4.3
      2.0nm,0.9s
TORD  Torodi Ar. Bea  65.25 268    P      P          07 35 42.5 -4.8
      0.2nm,0.7s,baz=49,slow=8.0,SNR=1.5
      0.2nm,0.7s
YKA   Yellowknife Ar  80.92    2   P      P          07 37 17.5 -0.7
      0.1nm,0.5s,baz=351,slow=5.1,SNR=2.3
      0.1nm,0.5s
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*BJI **04** 07:51:48.2±0.0, 23°.25N×103°.24E, h10^{km}, mb4.5/36, mB4.7/17, ML4.5/7, Ms4.6/52, Ms7 4.2/40*
*IDC **04** 07:51:49.1±0.6, 23°.32N×103°.36E, h0^{km}, mb4.2/18, mbtmp4.2/19, ML4.7/1, MS3.7/26, Error ellipse: s-maj=20.9km s-min=13.2km az=66.0*
*MOS **04** 07:51:51.3±0.9, 23°.26N×103°.29E, h31^{km}, mb4.8/6, Error ellipse: s-maj=16.0km s-min=8.7km az=103.6*
*NEIC **04** 07:51:52.3±2.0, 23°.31N±0°.08×103°.34E±0°.09, h16^{km}±4^{km}, mb4.5/32, Error ellipse: s-maj=12.0km s-min=10.8km az=111.0*
ISC 04 07:51:50.0±0.4**, 23°.27N**±0°.03×**103°.28E**±0°.04**, h10**^{km}**, n110, σ1^{s}86**/108**, mb4.4**/41**, MS3.7**/29**, 3C-7D, Yunnan**

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Code  Station Name      Δ°   AZ°    Phase ID             Time     Res
                                   Op      ISC         h  m  s    ISC
KMI   Kunming          1.91 345  ⇓Pn      Pb         07 52 23.5 -1.5
KMI                               Pg      Pg         07 52 24.7 -1.9
KMI                               Sn      Sb         07 52 47.1 -1.9
KMI                               Sg      Sg         07 52 51.7 +0.3
KMI                               smax    smax
      comp=N,3µm,1.0s
KMI                               smax    smax
      comp=E,6µm,0.9s
PZH   PanZhiHua        3.51 337   Pn      Pn         07 52 44.4 -0.3
PZH                               Pg      Pg         07 52 53.9 -3.3
PZH                               Sn      Sn         07 53 26.2 -0.1
PZH                               Sg      Sg         07 53 38.9 -3.8
PZH                               LR      LR
      comp=N,3µm,4.0s
PZH                               LR      LR
      comp=E,2µm,4.0s
PZH                               LR      LR
      comp=Z,2µm,6.5s
GYA   Guiyang          4.41   43⇓iPn      Pn         07 52 57.0 -0.2
GYA                               Sn      Sn         07 53 47.8 -0.9
GYA                               Sg      Sg         07 54 10.2 -1.6
GYA                               smax    smax
      comp=N,550nm,0.7s
GYA                               smax    smax
      comp=E,1µm,0.8s
GYA                               LR      LR
      comp=N,920nm,3.8s
GYA                               LR      LR
      comp=E,2µm,3.8s
GYA                               LR      LR
      comp=Z,1µm,3.7s
CHTO  Chiang Mai       6.01 223   Pn      Pn         07 53 19.9 +0.9
CM31  Chiang Mai Arr   6.28 221   Pn      Pn         07 53 23.4 +0.7
CMAR  Chiang Mai Arr   6.28 221   Pn      Pn         07 53 23.5 +0.8
      4.0nm,0.3s,baz=33,slow=12,SNR=23
CMAR                              Pg      Pg         07 53 45.8 -4.5
      1.6nm,0.3s,baz=43,slow=18,SNR=22
CMAR                              Sn      Sn         07 54 33.0 -1.6
      4.2nm,0.3s,baz=47,slow=18,SNR=5.7
CMAR                              Lg      Lg         07 55 07.1
      baz=41,slow=31
      6.1nm,0.4s
CMAR  Chiang Mai Arr   6.28 221   Pn      Pn         07 53 22.8 +0.1
GULI  GuiLin           6.77   71 ⇓Pn      Pn         07 53 28.9 -0.5
QIZ   Qiongzhong       7.44 123   Pn      Pn         07 53 38.4 -0.2
QIZ   Qiongzhong       7.44 123⇓iPn      Pn         07 53 37.1 -1.5
QIZ                               Sn      Sn         07 55 03.5 +0.5
QIZ                               LR      LR
      comp=N,3µm,12.3s
QIZ                               LR      LR
      comp=E,2µm,11.2s
CD2   Chengdu          7.62    3  Pn      Pn         07 53 42.2 +1.1
CD2                               Sn      Sn         07 55 05.9 -1.7
CD2                               smax    smax
      comp=E,180nm,0.8s
CD2                               LR      LR
      comp=E,4µm,7.6s
CD2                               LR      LR
      comp=Z,1µm,6.4s
ENH   Enshi            8.90   37  Pn      Pn         07 53 58.9 +0.1
CNSH  ChangSha         9.98   59 ⇓P       Pn         07 54 11.1 -2.3
CNSH                              S       Sn         07 56 04.4 -1.0
CNSH                              smax    smax
      comp=N,210nm,1.6s
CNSH                              smax    smax
      comp=E,200nm,1.2s
XAN   Xi'an           11.81   23  P       Pn         07 54 36.1 -2.5
XAN                               LR      LR
      comp=E,3µm,11.6s
XAN                               LR      LR
      comp=E,4µm,11.3s
XAN                               LR      LR
      comp=E,2µm,10.7s
WHN   Wuhan           12.24   51 ⇑P       Pn         07 54 44.8 +0.4
WHN                               S       Sn         07 57 03.3 +2.4
WHN                               LR      LR
      comp=E,960nm,4.0s
WHN                               LR      LR
      comp=E,3µm,5.2s
LZH   Lanzhou         12.78    2 eP       Pn         07 54 51.0 -0.9
LZH                               pP                 07 54 56.9
LZH                               pmax    pmax
      comp=E,17nm,1.5s
LZH                               pmax    pmax
      comp=E,96nm,5.4s
LZH                               LR      LR
      comp=E,1µm,8.1s
LZH                               LR      LR
      comp=E,2µm,8.7s
LZH                               LR      LR
      comp=E,790nm,8.7s
LYN   LuoYang         13.81   34 ⇑P       Pn         07 55 06.8 +1.0
LYN                               S       Sn         07 57 45.6 +6.3
LYN                               pmax    pmax
      comp=E,10.0nm,0.5s
LYN                               LR      LR
      comp=E,2µm,9.6s
LYN                               LR      LR
      comp=E,2µm,11.4s
LYN                               LR      LR
      comp=E,970nm,8.6s
GOMU  GeErMu          14.82 332   P       P          07 55 21.7 -4.3
GOMU                              S       Sn         07 58 07.8 +3.3
GOMU                              pmax    pmax
      comp=E,6.0nm,0.9s
GOMU                              pmax    pmax
      comp=E,66nm,5.7s
GOMU                              LR      LR
      comp=E,670nm,8.6s
GOMU                              LR      LR
      comp=E,720nm,8.6s
GOMU                              LR      LR
      comp=E,440nm,8.4s
NJ2   Nanjing         16.32   54 eP       P          07 55 40.4 -1.8
NJ2                               pmax    pmax
      comp=E,7.0nm,0.5s
NJ2                               LR      LR
      comp=E,610nm,5.2s
NJ2                               LR      LR
      comp=E,880nm,4.7s
NJ2                               LR      LR
      comp=E,540nm,5.7s
GTA   Gaotai          16.36 350 ⇓P        P          07 55 44.7 +2.0
GTA                               pP      sP         07 55 48.4 +1.0
GTA                               sP      pP         07 55 51.3 +5.4
GTA                               pmax    pmax
      comp=E,23nm,0.7s
GTA                               pmax    pmax
      comp=E,55nm,6.0s
GTA                               LR      LR
      comp=E,540nm,10.4s
GTA                               LR      LR
      comp=E,650nm,13.5s
GTA                               LR      LR
      comp=E,470nm,8.8s
HNS   HongShan        17.17   32 ⇓P       Pn         07 55 46.2 -3.7
HNS                               S       Sn         07 58 53.4 -7.5
HNS                               pmax    pmax
      comp=E,8.0nm,0.9s
HNS                               LR      LR
      comp=E,650nm,9.1s
HNS                               LR      LR
      comp=E,840nm,9.6s
HNS                               LR      LR
      comp=E,400nm,10.1s
BTO   Baotou          18.19   17 eP       P          07 56 02.0 -1.0
BTO                               S       S          07 59 30.1 -1.2
BTO                               LR      LR
      comp=E,2µm,12.0s
BTO                               LR      LR
      comp=E,5µm,14.1s
BJT   Baijiatuau      19.94   30  P       Pn         07 56 23.4 -0.3
BJI   Beijing         19.96   30  P       Pn         07 56 24.1 +0.2
BJI                               pP      sP         07 56 26.0 -1.2
BJI                               pmax    pmax
      comp=E,12nm,1.0s
BJI                               LR      LR
      comp=E,400nm,8.9s
BJI                               LR      LR
      comp=E,430nm,11.2s
BJI                               LR      LR
      comp=E,400nm,11.0s
PSI   Prapat          20.79 192   P       Pn         07 56 34.0 +0.1
      comp=E,2.7nm,0.5s,baz=4.4,slow=11,SNR=7.9
      comp=E,2.7nm,0.5s
RPSI  Rantau Prapat   20.89 192   P       Pn         07 56 34.0 -1.0
SBUM  Sibu            22.44 156   P       P          07 56 50.6 +1.5
JOW   Kunigami        22.90   76  LR      LR         08 06 40.7
      comp=E,306nm,18.4s,baz=146,slow=39
WMQ   Urumqi          24.19 332 eP        P          07 57 05.3 -1.3
WMQ                               pP      sP         07 57 09.9 -1.8
WMQ                               PcP     PcP        08 00 46.8 -0.4
WMQ                               pmax    pmax
      comp=E,15nm,0.9s
WMQ                               pmax    pmax
      comp=E,130nm,4.9s
WMQ                               LR      LR
      comp=E,320nm,13.1s
WMQ                               LR      LR
      comp=E,290nm,14.1s
SONM  Songino Array   24.64    5  P       P          07 57 11.0 +0.3
      comp=E,3.7nm,0.7s,baz=185,slow=10,SNR=4.4
      comp=E,3.7nm,0.7s
SONM  Songino Array   24.64    5  IAmb    IAmb       07 57 20.6
      comp=Z,5.0nm,1.0s
ULN   Ulaanbaatar     24.72    6  P       P          07 57 11.8 +0.2
KSRS  Korea Array     25.43   51  LR      LR         08 08 30.3
      comp=Z,269nm,18.8s,baz=235,slow=40
PALK  Pallekele       26.91 237   LR      LR         08 08 52.5
      comp=Z,78nm,18.3s,baz=169,slow=38
ZAK   Zakamensk       27.06 360 eP        P          07 57 33.6 +1.0
ZAK                               pmax    pmax
      comp=Z,10.0nm,1.4s
TARG  Taragay, Kyrgy  28.13 317   P       P          07 57 45.0 +2.4
TARG                              IAmb    IAmb       07 57 47.6
      comp=Z,5.6nm,0.6s
KDJ   Kajisay         28.74 317   P       P          07 57 50.4 +2.6
KDJ                               IAmb    IAmb       07 57 57.7
      comp=Z,8.0nm,1.4s
MK31  Makanchi Array  28.91 329   P       P          07 57 51.3 +2.2
MK31                              IAmb    IAmb       07 57 52.2
      comp=Z,7.5nm,1.0s
MKAR  Makanchi Array  28.91 329   P       P          07 57 50.6 +1.5
      comp=Z,5.9nm,0.8s,baz=134,slow=10,SNR=51
MKAR                              PcP     PcP        08 00 59.0 +0.9
      comp=Z,0.4nm,0.7s,baz=86,slow=4.5,SNR=3.4
MKAR                              LR      LR         08 10 55.4
      comp=Z,71nm,19.1s,baz=150,slow=40
      comp=Z,5.9nm,0.8s
MKAR  Makanchi Array  28.91 329   P       P          07 57 51.2 +2.1
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MKAR	Makanchi Array	28.91	329		PcP	08 00 59.0	+0.9
MAKZ	Makanchi	29.07	329	P	P	07 57 52.2	+1.7
MAKZ				IAmb	IAmb	07 57 53.4	
	comp=Z,10nm,1.4s						
BOOM	Boomskoye usch	29.71	317	P	P	07 57 58.5	+2.1
AAK	Ala-Archa	30.70	316	LR	LR	08 11 11.6	
	comp=Z,82nm,20.5s,baz=57,slow=38						
AAK	Ala-Archa	30.70	316	P	P	07 58 07.4	+2.2
AAK				IAmb	IAmb	07 58 08.8	
	comp=Z,3.8nm,0.6s						
USRK	Ussuriysk Ar.	31.45	41	LR	LR	08 11 56.3	
	comp=Z,112nm,20.3s,baz=214,slow=38						
KBL	Kabul	31.86	298	P	P	07 58 17.6	+2.0
GAR	Garm	32.07	307	P	P	07 58 18.6	+1.3
BTK	Batken	32.08	309	P	P	07 58 17.8	+0.6
BTK				IAmb	IAmb	07 58 21.0	
	comp=Z,9.5nm,1.2s						
KAPI	Kappang	32.39	148	LR	LR	08 11 46.3	
	comp=Z,119nm,18.4s,baz=328,slow=37						
CHGR	Chuyangaron	32.82	306	P	P	07 58 25.1	+1.4
MJAR	Matsushiro Arr	32.85	58	LR	LR	08 13 09.6	
	comp=Z,196nm,19.0s,baz=213,slow=39						
KURBB	Kurchatov Arra	33.41	331	P	P	07 58 29.5	+0.9
	comp=Z,5.4nm,0.8s,baz=138,slow=9.3,SNR=60						
KURBB				PcP	PcP	08 01 09.8	-0.1
	comp=Z,0.6nm,0.6s,baz=130,slow=2.3,SNR=5.7						
KURBB				LR	LR	08 13 16.2	
	comp=Z,208nm,18.6s,baz=119,slow=38						
	comp=Z,5.4nm,0.8s						
KURK	Kurchatov	33.43	331	P	P	07 58 29.5	+0.7
KURK						08 01 09.8	
KURK	Kurchatov	33.43	331	P	P	07 58 29.7	+0.8
ZAA0	Zalesovo Array	33.65	340	P	P	07 58 31.8	+1.2
ZALV	Zalesovo Beam	33.65	340	P	P	07 58 31.7	+1.0
	comp=Z,1.3nm,0.3s,baz=138,slow=9.1,SNR=14						
ZALV				LR	LR	08 12 37.5	
	comp=Z,155nm,19.2s,baz=159,slow=37						
	comp=Z,1.3nm,0.3s						
ZALV	Zalesovo Beam	33.65	340	P	P	07 58 31.3	+0.7
KLR	Kul'dur	34.25	34	P	P	07 58 36.3	+0.3
	comp=Z,2.7nm,0.8s,baz=260,slow=11,SNR=5.8						
KLR				LR	LR	08 14 27.6	
	comp=Z,219nm,18.1s,baz=234,slow=40						
	comp=Z,2.7nm,0.8s						
ZEA	Zeya	35.39	25	eP	P	07 58 46.3	+0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=E,100nm,11.0s						
ZEA				MLR	MLR		
	comp=N,300nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,10.0s						
ASAJ	Asahikawa	38.28	47	LR	LR	08 15 04.2	
	comp=Z,74nm,18.9s,baz=42,slow=36						
BVAR	Borovoye Array	38.78	328	P	P	07 59 15.2	+0.5
	comp=Z,0.7nm,0.4s						
	comp=Z,0.7nm,0.4s						
BRVK	Borovoye	38.85	328	P	P	07 59 16.6	+1.4
BRVK				IAmb	IAmb	07 59 17.9	
	comp=Z,7.6nm,0.9s						
GUMO	Guam	40.49	96	P	P	07 59 28.6	-0.6
	comp=Z,35nm,0.6s,baz=49,slow=17,SNR=1.2						
WSAR	Wadi Sarin	40.90	279	LR	LR	08 18 09.3	
	comp=Z,102nm,19.1s,baz=103,slow=39						
GEYT	Alibeck	41.13	302	P	P	07 59 36.0	+1.6
	comp=Z,7.6nm,0.7s,baz=127,slow=9.4,SNR=9.7						
	comp=Z,7.6nm,0.7s						
GEYT	Alibeck	41.13	302	P	P	07 59 36.7	+2.3
GEYT				IAmb	IAmb	07 59 37.8	
	comp=Z,9.8nm,0.8s						
GYA0B	ALIBECK ARRAY	41.13	302	P	P	07 59 37.0	+2.6
ABKAR	Akbulak array	42.69	318	P	P	07 59 48.2	+1.2
AKTO	Aktyubinsk	44.28	319	P	P	07 59 59.8	+0.1
	comp=Z,2.1nm,0.6s,baz=110,slow=9.7,SNR=4.3						
AKTO				LR	LR	08 20 30.1	
	comp=Z,199nm,19.4s,baz=116,slow=39						
	comp=Z,2.1nm,0.6s						
ARU	Arti	46.40	327	c iP	P	08 00 17.9	+1.5
ARU						08 02 01.3	
ARU				S	S	08 07 08.6	+4.7
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FITZ	Fitzroy Crossi	46.56	150	LR	LR	08 24 31.2	
	comp=Z,95nm,18.9s,baz=184,slow=42						
NRIK	Noril'sk	47.04	352	P	P	08 00 20.7	-0.6
	comp=Z,6.7nm,0.5s,baz=164,slow=6.7,SNR=11						
NRIK				LR	LR	08 20 43.0	
	comp=Z,79nm,18.1s,baz=196,slow=37						
	comp=Z,6.7nm,0.5s						
NRIK	Noril'sk	47.04	352	P	P	08 00 22.5	+1.2
PSA00	Pilbara Seismi	47.40	159	P	P	08 00 25.1	+0.4
PSA00				IAmb	IAmb	08 00 27.9	
	comp=Z,6.2nm,1.1s						
MA2	Magadan	49.12	30	LR	LR	08 23 32.4	
	comp=Z,97nm,18.5s,baz=270,slow=39						
PETK	Petropavlovsk-	50.50	39	LR	LR	08 23 25.3	
	comp=Z,121nm,19.8s,baz=244,slow=38						
TIXI	Tiksi	50.55	10	P	P	08 00 48.1	-0.1
TIXI				IAmb	IAmb	08 00 50.3	
	comp=Z,3.5nm,0.6s						
BELG	Belogornoye	51.07	319	LR	LR	08 24 34.6	
	comp=Z,75nm,20.8s,baz=281,slow=38						
GNI	Garni	51.67	304	LR	LR	08 25 48.4	
	comp=Z,35nm,18.3s,baz=119,slow=39						
WRA	Warramunga Arr	52.56	142	P	P	08 01 04.5	+0.5
	comp=Z,3.2nm,0.8s,baz=329,slow=8.6,SNR=22						
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	52.56	142	IAmb	IAmb	08 01 05.7	
	comp=Z,0.1nm,0.8s						
KBZ	Khabaz	53.13	308	LR	LR	08 27 21.4	
	comp=Z,64nm,21.3s,baz=100,slow=40						
KIV	Kislovodsk	53.29	308	eP	P	08 01 08.9	-0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,41nm,17.0s						
ASAR	Alice Springs	55.34	145	P	P	08 01 25.0	+0.8
	comp=Z,1.4nm,0.8s,baz=325,slow=6.0,SNR=12						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	55.34	145	P	P	08 01 25.0	+0.8
ASAR	Alice Springs	55.34	145	P	P	08 01 25.0	+0.8
VORR	Voronezh	56.10	318	eP	P	08 01 29.1	-0.2
VORR				pmax	pmax		
	comp=Z,80nm,0.4s						
KLMR	Klimovskoe	57.21	329	eP	P	08 01 35.3	-1.7
KLMR				e		08 03 42.5	
KLMR				pmax	pmax		
	comp=Z,19nm,1.2s						
KLMR	Klimovskoe	57.21	329	eP	P	08 01 35.4	-1.6
KLMR				AMP		08 01 39.7	
	comp=Z,19nm,1.2s						
KLMR				ePP	PP	08 03 42.5	-1.4
OBN	Obninsk	57.97	321	eP	P	08 01 43.4	+0.9
OBN				e		08 02 33.1	
OBN				ePPP	PPP	08 05 09.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	Bilibino	58.59	23	eP	P	08 01 46.1	-0.6
BILL				e		08 02 36.6	
BILL				e		08 03 55.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	Malin Array Be	62.37	316	P	P	08 02 13.6	+0.9
	comp=Z,1.4nm,0.6s,baz=71,slow=7.5,SNR=8.6						
	comp=Z,1.4nm,0.6s						
AKASG	Malin Array Be	62.37	316	IAmb	IAmb	08 02 18.4	
	comp=Z,1.5nm,0.9s						
FINES	FINESS Array B	63.74	329	P	P	08 02 21.7	+0.1
	comp=Z,3.8nm,0.9s,baz=90,slow=9.5,SNR=9.1						
	comp=Z,3.8nm,0.9s						
ARCES	ARCESS Array B	64.14	338	P	P	08 02 25.6	+1.4
	comp=Z,2.6nm,0.9s,baz=66,slow=9.0,SNR=2.2						
ARCES				LR	LR	08 32 02.0	
	comp=Z,52nm,19.1s,baz=98,slow=38						
	comp=Z,2.6nm,0.9s						
SPITS	Spitsbergen Ar	66.76	347	LR	LR	08 36 41.6	
	comp=Z,78nm,18.1s,baz=224,slow=40						
KMBO	Kilima Mbogo	68.54	259	LR	LR	08 31 20.7	
	comp=Z,18nm,21.6s,baz=92,slow=35						
NB2	NORSAR Subarra	70.91	329	P	P	08 03 07.3	+0.1
	comp=Z,1.6nm,0.8s,baz=75,slow=6.2						
NOA	NORSAR Array B	70.91	329	P	P	08 03 07.0	-0.2
	comp=Z,1.3nm,0.8s,baz=77,slow=6.0,SNR=4.4						
NOA				LR	LR	08 36 00.7	
	comp=Z,45nm,19.3s,baz=165,slow=37						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	70.91	329	P	P	08 03 07.0	-0.2
GERES	GERESS Array B	72.58	316	P	P	08 03 18.2	+0.7
	comp=Z,0.5nm,0.5s,baz=54,slow=6.8,SNR=5.5						
	comp=Z,0.5nm,0.5s						
TOLK	Toolik Lake Re	74.56	21	P	P	08 03 29.6	+0.9
TOLK				IAmb	IAmb	08 03 34.4	
	comp=Z,3.8nm,1.1s						
H21K	Melozitna Rive	74.58	25	IAmb	IAmb	08 03 32.5	
	comp=Z,4.8nm,1.1s						
JMIC	Jan Mayen	74.97	342	LR	LR	08 40 19.5	
	comp=Z,42nm,20.3s,baz=62,slow=39						
I21K	Tanana	75.08	25	IAmb	IAmb	08 03 34.5	
	comp=Z,5.2nm,1.2s						
BPAW	Bear Paw Mtn.	75.91	26	P	P	08 03 37.2	+0.7
MDM	Murphy Dome	76.62	25	IAmb	IAmb	08 03 43.8	
	comp=Z,5.3nm,1.0s						
RND	Reindeer	77.06	26	P	P	08 03 45.2	+2.0
RND				IAmb	IAmb	08 03 47.1	
	comp=Z,8.0nm,1.3s						
YKA	Yellowknife Ar	89.37	17	P	P	08 04 48.6	+2.1
	comp=Z,0.4nm,1.0s,baz=334,slow=5.7,SNR=3.4						
	comp=Z,0.4nm,1.0s						

*IDC **04** 07:57:41.9±0.8, 23°.34N×103°.36E, h0^{km}, mb3.8/12, mbtmp3.8/13, ML4.4/1, MS3.1/2, Error ellipse: s-maj=27.2km s-min=15.9km az=81.0*

*NEIC **04** 07:57:44.8±1.4, 23°.2N±0°.1×103°.28E±0°.10, h14^{km}±2^{km}, mb4.2/13, Error ellipse: s-maj=16.1km s-min=12.5km az=191.0*

ISC 04 07:57:43.3±0.6**, 23°.22N**±0°.08×**103°.20E**±0°.10**, h10^{km}, n36, σ0^{s}.96**/32**, mb4.0**/16**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHTO	Chiang Mai	5.91	223	Pn	Pn	07 59 12.7	+1.6
CM31	Chiang Mai Arr	6.18	221	Pn	Pn	07 59 16.8	+2.0
CMAR	Chiang Mai Arr	6.18	221	Pn	Pn	07 59 16.4	+1.7
	2.1nm,0.3s,baz=33,slow=12,SNR=8.2						
CMAR				Pg	Pg	07 59 39.9	-2.0
	1.7nm,0.3s,baz=48,slow=18,SNR=7.5						
CMAR				Lg	Lg	08 00 58.2	
	2.4nm,0.3s,baz=196,slow=20,SNR=4.7						
CMAR				LR	LR	08 01 27.0	
	comp=Z,53nm,19.1s,baz=5.0,slow=35						
	5.7nm,0.5s						
CMAR	Chiang Mai Arr	6.18	221	Pn	Pn	07 59 15.9	+1.2
QIZ	Qiongzhong	7.47	123	Pn	Pn	07 59 32.4	0.0
PSI	Prapat	20.71	192	P	Pn	08 02 28.5	+2.1
	1.7nm,0.3s,baz=20,slow=9.5,SNR=3.9						
	1.7nm,0.3s						
SONM	Songino Array	24.70	5	P	P	08 03 05.0	+0.3
	3.9nm,0.7s,baz=189,slow=8.0,SNR=3.4						
	3.9nm,0.7s						
SONM	Songino Array	24.70	5	IAmb	IAmb	08 03 08.0	
	comp=Z,2.8nm,0.9s						
PALK	Pallekele	26.81	237	P	P	08 03 25.4	+1.4
	comp=Z,4.9nm,0.9s,baz=160,slow=7.5,SNR=3.5						
	comp=Z,4.9nm,0.9s						
PALK	Pallekele	26.81	237	IAmb	IAmb	08 03 29.3	
	comp=Z,6.7nm,1.1s						
MK31	Makanchi Array	28.93	330	P	P	08 03 43.1	+0.5
MKAR	Makanchi Array	28.93	330	P	P	08 03 42.9	+0.3
	comp=Z,1.0nm,0.6s,baz=142,slow=10,SNR=8.8						
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	33.42	331	P	P	08 04 22.6	+0.5
	comp=Z,1.1nm,0.6s,baz=134,slow=10,SNR=13						
KURBB				PcP	PcP	08 07 02.9	-0.5
	comp=Z,0.3nm,0.6s,baz=112,slow=2.2,SNR=2.2						
	comp=Z,1.1nm,0.6s						
KURK	Kurchatov	33.45	331	P	P	08 04 22.6	+0.3
KURK	Kurchatov	33.45	331	IAmb	IAmb	08 04 27.3	
	comp=Z,1.9nm,0.7s						
ZALV	Zalesovo Beam	33.67	340	P	P	08 04 24.2	0.0
	comp=Z,1.0nm,0.5s,baz=142,slow=7.3,SNR=2.9						
	comp=Z,1.0nm,0.5s						
ABKAR	Akbulak array	42.69	319	P	P	08 05 40.3	0.0
KNRA	Kununurra	46.04	145	P	P	08 06 06.5	-0.8
FITZ	Fitzroy Crossi	46.55	150	P	P	08 06 10.4	-1.0
WB0	Warramunga Arr	52.45	142	P	P	08 06 56.7	+0.2
WRA	Warramunga Arr	52.56	142	P	P	08 06 57.0	-0.3
	comp=Z,0.4nm,0.5s,baz=331,slow=8.4,SNR=10						
	comp=Z,0.4nm,0.5s						
WB2	Warramunga Arr	52.57	142	P	P	08 06 57.0	-0.3
WB2				IAmb	IAmb	08 07 00.0	
	comp=Z,5.2nm,1.2s						
WR0	Warramunga Arr	52.69	142	P	P	08 06 58.6	+0.3
WR0				IAmb	IAmb	08 07 06.4	
	comp=Z,5.2nm,1.1s						
AS31	Alice Springs	55.33	145	P	P	08 07 18.2	+0.7
ASAR	Alice Springs	55.33	145	P	P	08 07 18.1	+0.6
	comp=Z,0.2nm,0.5s,baz=321,slow=6.8,SNR=2.9						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	62.35	316	P	P	08 08 04.5	-1.5
	comp=Z,0.2nm,0.3s,baz=68,slow=4.4,SNR=1.1						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	62.35	316	IAmb	IAmb	08 08 07.3	
	comp=Z,2.9nm,1.3s						
FINES	FINESS Array B	63.75	329	P	P	08 08 14.8	-0.3
	comp=Z,1.2nm,0.8s,baz=94,slow=11,SNR=3.2						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	63.75	329	P	P	08 08 15.2	+0.1
GERES	GERESS Array B	72.57	316	P	P	08 09 11.2	+0.4
	comp=Z,0.3nm,0.2s,baz=101,slow=5.1,SNR=1.9						
	comp=Z,0.3nm,0.2s						
TOLK	Toolik Lake Re	74.64	21	P	P	08 09 23.3	+0.7
TOLK				IAmb	IAmb	08 09 37.3	
	comp=Z,2.0nm,1.2s						
PPLA	Purkeypile	75.99	27	P	P	08 09 31.4	+0.8
BPAW	Bear Paw Mtn.	75.99	26	P	P	08 09 31.2	+0.8
BPAW				IAmb	IAmb	08 09 34.8	
	comp=Z,2.4nm,1.0s						
BMAR	Burnt Mountain	76.86	22	P	P	08 09 35.7	+0.3
YKA	Yellowknife Ar	89.45	17	P	P	08 10 38.9	-1.3
	comp=Z,0.2nm,0.9s,baz=327,slow=5.1,SNR=2.1						
	comp=Z,0.2nm,0.9s						
MDT	Midelt	91.46	307	LR	LR	08 59 35.0	
	comp=Z,29nm,20.5s,baz=94,slow=41						

IDC 04 08:04:54.0±3.4**, 53°.62N**×**87°.85E, h0^{km}, mbtmp2.7**/2**, ML2.0**/1**, Error ellipse: s-maj=29.2km s-min=17.8km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.83	282	i		08 17 17.6	
	0.1nm,0.9s,baz=96,slow=329,SNR=8.5						
ZALV	Zalesovo Beam	1.83	282	Pg	Pn	08 05 26.4	-0.2
	0.9nm,0.3s,baz=99,slow=16,SNR=11						
ZALV				Lg	Lg	08 05 51.7	
	1.8nm,0.3s,baz=100,slow=21,SNR=8.5						
KURBB	Kurchatov Arra	6.48	246	Pn	Pn	08 06 32.0	+1.4
	baz=61,slow=14,SNR=4.5						
KURBB				Lg	Lg	08 08 19.6	
	baz=63,slow=32,SNR=5.5						
	0.4nm,0.5s						
MKAR	Makanchi Array	7.71	210	Pn	Pn	08 06 48.4	+0.9
	0.2nm,0.4s,baz=28,slow=15,SNR=1.3						
MKAR				Lg	Lg	08 08 55.0	
	0.1nm,0.3s,baz=31,slow=29,SNR=2.6						

IDC 04 08:10:11.8±20.0**, 13°.21S**×**65°.81E, h0^{km}, mb3.7**/3**, mbtmp3.7**/3**, MS3.8**/2**, Error ellipse: s-maj=648.8km s-min=41.0km az=62.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	8.57	51	T	T	08 20 38.7	
	baz=226,slow=75,SNR=195						
H08S2	Diego Garcia H	8.59	51	T	T	08 20 37.8	
	baz=226,slow=75,SNR=550						
H08S3	Diego Garcia H	8.59	50	T	T	08 20 38.2	
	baz=226,slow=75,SNR=818						
LSZ	Lusaka	36.49	262	LR	LR	08 31 50.1	
	comp=Z,70nm,18.4s,baz=235,slow=36						
H01W3	Cape Leeuwin H	48.58	125	T	T	09 10 08.7	
	baz=284,slow=75,SNR=10.0						
H01W2	Cape Leeuwin H	48.58	125	T	T	09 10 05.5	
	baz=284,slow=75,SNR=12						
H01W1	Cape Leeuwin H	48.59	125	T	T	09 10 06.9	
	baz=284,slow=75,SNR=9.6						
MKAR	Makanchi Array	61.53	13	P	P	08 20 30.6	-0.1
	0.5nm,0.6s,baz=205,slow=7.5,SNR=5.8						
	0.5nm,0.6s						
ASAR	Alice Springs	64.93	110	P	P	08 20 53.5	-0.3
	0.4nm,0.6s,baz=272,slow=6.7,SNR=2.1						
	0.4nm,0.6s						
WRA	Warramunga Arr	65.65	106	P	P	08 20 58.8	+0.2
	1.0nm,0.9s,baz=268,slow=6.6,SNR=5.6						
	1.0nm,0.9s						
HNR	Honiara	91.85	100	LR	LR	09 04 59.8	
	comp=Z,81nm,18.6s,baz=258,slow=36						

IDC 04 08:13:36.1±4.0**, 4°.14S**×**142°.99E, h0^{km}, mb2.9**/1**, mbtmp3.1**/2**, ML3.0**/1**, MS3.8**/1**, Error ellipse: s-maj=241.0km s-min=61.0km az=117.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.83	208	P	Pn	08 17 45.1	-0.8
	0.1nm,0.3s,baz=29,slow=12,SNR=2.2						
	0.3nm,0.6s						
BATI	Baumata	20.09	252	LR	LR	08 28 20.7	
	comp=Z,239nm,19.3s,baz=261,slow=44						
ASAR	Alice Springs	21.30	203	P	P	08 18 25.0	+0.4
	0.3nm,0.5s,baz=31,slow=8.5,SNR=4.6						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	140.76	286	PKP	PKPdf	08 33 09.8	+0.7
	0.2nm,0.9s,baz=113,slow=2.5,SNR=1.5						
LPAZ	La Paz	143.13	124	PKP	PKPdf	08 33 12.7	-1.4
	0.5nm,0.3s,baz=228,slow=3.4,SNR=8.1						

*INET **04** 08:13:37.8±1.6, 10°.23N×86°.26W, h11^{km}±15^{km}, MW3.9*

*UCR **04** 08:13:37.6±1.4, 10°.37N×86°.35W, h5^{km}, MW4.0*

*IDC **04** 08:13:39.7±1.8, 11°.60N×85°.17W, h0^{km}, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=112.0km s-min=28.1km az=65.0*

ISC 04 08:13:38.6±1.8**, 10°.36N**±0°.06×**86°.27W**±0°.05**, h18^{km}**±8^{km}**, n30, σ0^{s}.92**/38**, mb3.5**/5**, 6C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.75	97	i P	Pn	08 13 53.9	-0.4
GUAI				i S	Sn	08 14 06.7	+1.5
HZTE	Horizontes, Gu	0.75	62	eP	Pn	08 13 53.8	-0.4
HZTE				eS	Sn	08 14 05.4	+0.2
ORTG	Ortega, Santa	0.79	90	eP	Pn	08 13 54.6	-0.4
ORTG				eS	Sb	08 14 04.9	+0.6
GBS3	Finca Las Img	0.90	62	i P	Pg	08 13 55.8	-0.3
GBS3				i S	Sn	08 14 09.1	+0.1
BUEV	Buena Vista	0.95	62	i P	Pb	08 13 56.6	0.0
BUEV				i S	Sn	08 14 10.5	+0.1
GPS2	Hotel Rincn d	0.98	66	i P	Pb	08 13 57.1	0.0
BUAI	Buenos Aires	1.05	61	⇑iP	Pb	08 13 58.4	+0.1
COLC	Colonia	1.09	74	i P	Pb	08 13 58.9	0.0
CUI	Cuipilapa	1.12	74	⇑iP	Pn	08 13 59.5	-0.1
VMAR	Armenia, Volca	1.21	68	⇑eP	Pb	08 14 01.0	-0.1
ACAL	Aguas Claras	1.24	77	i P	Pb	08 14 01.4	-0.1
JTS	Las Juntas de	1.29	93	⇑eP	Pn	08 14 02.0	+0.2
CONN	Concepcion	1.35	28	eP	Pn	08 14 02.2	-0.4
LAFE	Finca La Fe, P	1.44	112	⇑eP	Pn	08 14 03.5	-0.3
ARE1	Arenal 1	1.52	86	⇑eP	Pb	08 14 06.0	-0.4
ARE1				eS	Sg	08 14 29.2	+1.3
SRA1	San Ramn	1.78	99	eP	Pb	08 14 09.9	-0.8
APYN	Apoyeque	1.87	357	eP	Pn	08 14 09.5	-0.2
APYN				eS	Sb	08 14 35.5	+0.2
ACON	Acoyapa	1.93	34	eP	Pn	08 14 10.2	-0.3
ACON				eS	Sn	08 14 34.6	+0.3
BOAB	BOACO BROADBAN	2.16	16	eP	Pn	08 14 13.3	-0.5
LCR2	La Lucha 2	2.31	105	eP	Pb	08 14 18.7	-1.2
RIMA	Rio Macho	2.44	104	eP	Pn	08 14 19.0	+1.3
CRIN	San Cristobal	2.45	342	eP	Pn	08 14 18.4	+0.6
CRIN				eS	Sn	08 14 48.7	+1.3
MATN	Matagalpa	2.58	7	eP	Pn	08 14 19.3	-0.3
ESPN	Las Esperanzas	2.66	46	eP	Pn	08 14 20.6	+0.1
CSGN	Cosiguina Volc	2.90	334	eP	Pn	08 14 24.0	+0.1
TXAR	Lajitas Array	24.92	322	P	P	08 19 01.8	+0.8
	0.6nm,0.5s,baz=145,slow=9.2,SNR=9.4						
	0.6nm,0.5s						
PDAR	Pinedale Array	38.16	332	P	P	08 20 56.4	-0.9
	0.2nm,0.5s,baz=128,slow=8.1,SNR=2.6						
	0.2nm,0.5s						
NVAR	Mina Array Bea	40.04	320	P	P	08 21 15.8	+2.8
	0.8nm,0.6s,baz=130,slow=7.8,SNR=8.7						
	0.8nm,0.6s						
PLCA	Paso Flores	52.87	165	P	P	08 23 04.2	+11
	1.4nm,1.1s,baz=330,slow=13,SNR=1.2						
	1.4nm,1.1s						
YKA	Yellowknife Ar	55.93	345	P	P	08 23 12.6	-2.8
	0.2nm,0.7s,baz=140,slow=7.4,SNR=5.5						
	0.2nm,0.7s						

IDC 04 08:14:04.0±3.5**, 53°.47N**×**87°.32E, h0^{km}, mbtmp2.5**/1**, ML2.6**/1**, Error ellipse: s-maj=31.0km s-min=16.4km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.56	289	i		08 24 42.3	
	0.1nm,0.8s,baz=104,slow=322,SNR=2.6						
ZALV	Zalesovo Beam	1.56	289	Pg	Pn	08 14 33.0	0.0
	1.0nm,0.3s,baz=108,slow=13,SNR=12						
ZALV				Lg	Lg	08 14 53.1	
	1.1nm,0.3s,baz=107,slow=26,SNR=6.3						
MKAR	Makanchi Array	7.42	208	Pn	Pn	08 15 54.8	+1.4
	0.1nm,0.3s,baz=23,slow=6.6,SNR=2.0						
MKAR				Lg	Lg	08 17 57.0	
	baz=23,slow=27,SNR=3.1						
	0.1nm,0.4s						

*IDC **04** 08:16:48.5±2.0, 32°.64N×130°.62E, h0^{km}, mb3.7/4, mbtmp3.6/6, ML2.7/2, Error ellipse: s-maj=43.0km s-min=25.2km az=38.0*

*JMA **04** 08:16:52.2±0.1, 32°.7N±0°.1×130°.8E±0°.2, h17^{km}, MV3.8/20, NW KUMAMOTO PREF*

JMA Felt II J1 at NW KUMAMOTO PREF .

*NIED **04** 08:16:52.2, 32°.74N×130°.78E, h17^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.83; $M_{\theta\theta}$3.67; $M_{\phi\phi}$1.16; $M_{r\theta}$0.64; $M_{\theta\phi}$2.86; $M_{\phi r}$0.57; Fault plane solution: $M_0$5.25000×10^{14} NP1:ϕ_s59.00000°, δ40.00000°, λ-87.00000°. NP2:ϕ_s235.00000°, δ50.00000°, λ-92.00000°.*

ISC 04 08:16:49.8±0.8**, 32°.71N**±0°.04×**130°.55E**±0°.07**, h11^{km}, n10, σ1^{s}.29**/15**, mb3.7**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.26	356	P	Pn	08 16 58.6	-1.0
JTA				S	Sb	08 17 03.2	+2.2
JIU3	Izumi3	0.27	126	P	Pb	08 16 56.9	+0.1
JIU3				S	Sb	08 17 00.1	-1.2
JNU	Nakatsue	0.49	33	i P	Pb	08 17 00.3	-0.3
JNU				eS	Sg	08 17 05.4	-0.7
JZO	Okuchi	0.57	176	i P	Pn	08 17 04.1	+0.2
JZO				S	Sn	08 17 12.5	-0.7
KSRS	Korea Array	5.20	336	Pn	Pn	08 18 07.9	+0.3
	0.3nm,0.3s,baz=150,slow=15,SNR=2.3						
KSRS				Pg	Pg	08 18 26.9	-2.6
	0.8nm,0.3s,baz=150,slow=17,SNR=9.7						
KSRS				Lg	Lg	08 19 35.5	
	1.7nm,0.3s,baz=155,slow=30,SNR=5.6						
	0.6nm,0.3s						
MJAR	Matsushiro Arr	7.38	57	Pn	Pn	08 18 38.9	+1.4
	0.1nm,0.3s,baz=242,slow=13,SNR=4.2						
	2.1nm,0.6s						
KURBB	Kurchatov Arra	41.84	311	P	P	08 24 41.1	+1.5
	0.4nm,0.7s,baz=101,slow=8.8,SNR=2.8						
	0.4nm,0.7s						
FINES	FINESS Array B	68.26	330	P	P	08 27 51.1	+0.7
	2.4nm,0.9s,baz=51,slow=4.4,SNR=2.9						
	2.4nm,0.9s						
NVAR	Mina Array Bea	84.60	47	P	P	08 29 24.1	+0.3
	0.4nm,0.7s,baz=294,slow=4.6,SNR=3.7						
	0.4nm,0.7s						
PDAR	Pinedale Array	86.88	40	P	P	08 29 35.2	+0.2
	0.2nm,0.4s,baz=321,slow=1.2,SNR=1.8						
	0.2nm,0.4s						

*ISN **04** 08:25:37.3±0.8, 28°.97N×47°.53E, h8^{km}±508^{km}, ML3.4*

*TEH **04** 08:25:38.1, 28°.87N×47°.38E, h12^{km}, ML3.6*

*SGS **04** 08:25:46.3, 28°.89N×47°.50E, h9^{km}, Ml3.8*

ISC 04 08:25:42.9±1.0**, 29°.02N**±0°.05×**47°.43E**±0°.07**, h13^{km}, n24, σ0^{s}.90**/27**, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QYSM	**Um Kedad**	**1.26**	**203**	P	**Pg**	**08 26 07.2**	**+0.1**
QYSM				S	**Sb**	**08 26 22.9**	**+0.3**
RAFI	**Al-Rafai**	**2.93**	**337**	*e*Pn	**Pn**	**08 26 28.0**	**-1.1**
RAFI				*e*Sn	**Sn**	**08 27 05.0**	**+0.8**
RAFI				AML	AML	08 27 19.8	
	comp=E,194nm,0.5s						
AMIS	**Naft Sefid**	**3.09**	**31**	*e*Pn	**Pn**	**08 26 31.9**	**+0.5**
AMIS				*e*		08 27 32.4	
	comp=Z,2µm,0.4s						
RMAH	**Rumah**	**3.69**	**188**	P	**Pn**	**08 26 40.8**	**+1.2**
KLNJ	**Kolanjah**	**4.12**	**60**	*e*Pn	**Pn**	**08 26 46.1**	**+0.3**
KLNJ				*e*		08 27 41.2	
	comp=Z,556nm,0.4s						
IBDR	**Badra**	**4.28**	**343**	*e*Pn	**Pn**	**08 26 47.0**	**-0.7**
IBDR				*e*Sn	**Sn**	**08 27 38.0**	**+0.5**
NHRD	**Haradh**	**4.50**	**161**	P	**Pn**	**08 26 51.1**	**+0.3**
IPIR	**Pirpir**	**4.71**	**38**	*e*Pn	**Pn**	**08 26 53.9**	**-0.1**
IPIR				*e*		08 28 00.4	
	comp=Z,359nm,0.7s						
BHD	**Baghdad**	**4.98**	**329**	*e*Pn	**Pn**	**08 26 57.0**	**-0.4**
BHD				*e*Sn	**Sn**	**08 27 55.0**	**+0.2**
IRAM	**Ramesheh**	**5.10**	**56**	*e*Pn	**Pn**	**08 26 59.6**	**+0.4**
IRAM				*e*		08 28 03.9	
	comp=Z,317nm,0.4s						
IGHG	**Ghaleghazi**	**5.35**	**352**	*e*Pn	**Pn**	**08 27 03.4**	**+0.8**
IGHG				*e*		08 28 13.1	
	comp=Z,650nm,0.8s						
IBZA	**Bozab**	**5.45**	**4**	*e*	Pg	08 27 41.8	+15
	comp=Z,592nm,0.4s						
IKLH	**Kolahrood**	**5.57**	**39**	*e*Pn	**Pn**	**08 27 05.7**	**0.0**
IKLH				*e*		08 28 27.1	
	comp=Z,198nm,0.5s						
IZEF	**Zefreh**	**5.71**	**46**	*e*Pn	**Pn**	**08 27 08.4**	**+0.7**
IDHR	**Dehrash**	**5.74**	**351**	*e*Pn	**Pn**	**08 27 08.1**	**+0.2**
QAMS	**Qamsar**	**5.80**	**35**	*e*Pn	**Pn**	**08 27 09.2**	**+0.4**
QAMS				*e*		08 28 15.9	
	comp=N,262nm,0.6s						
KRSH	**Karshahi**	**6.36**	**38**	*e*Pn	**Pn**	**08 27 16.5**	**0.0**
IRAZ	**Razeghan**	**6.71**	**18**	*e*Pn	**Pn**	**08 27 21.7**	**+0.4**
IRAZ				*e*		08 27 24.0	
	comp=Z,242nm,0.6s						
ISFB	**Sefidab**	**6.71**	**36**	*e*Pn	**Pn**	**08 27 20.0**	**-1.2**
QABG	**Abgarm-Qazvin**	**6.92**	**15**	*e*Pn	**Pn**	**08 27 23.6**	**-0.6**
QABG				*e*		08 27 24.4	
	comp=Z,107nm,0.4s						
IVRN	**Varamin**	**6.99**	**30**	*e*Pn	**Pn**	**08 27 24.6**	**-0.4**
HATD	**Hatta, Dubai**	**8.81**	**116**	*e*Pn	**Pn**	**08 27 47.3**	**-2.7**
ASHO	**Ashiyiah**	**8.83**	**117**	*e*Pn	**Pn**	**08 27 48.4**	**-1.8**
ALNE	**Al Ain**	**8.94**	**122**	*e*Pn	**Pn**	**08 27 52.1**	**+0.4**

IDC 04 08:25:42.7±445.0**, 53°.39N×2°.36E, h0^{km}, Error ellipse: s-maj=166.4km s-min=61.6km az=20.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**8.46**	**118**	*i*		09 15 00.0	
	baz=309,slow=329,SNR=1.7						
I37NO	**I37NO**	**17.47**	**20**	*i*		10 01 00.0	
	baz=214,slow=322,SNR=2.1						
I31KZ	**AKTYUBINSK INF**	**33.75**	**72**	*i*		11 53 10.0	
	baz=296,slow=330,SNR=1.1						
I46RU	**ZALESOVO INFRA**	**46.18**	**54**	*i*		13 10 10.0	
	baz=305,slow=324,SNR=1.4						

IDC 04 08:26:44.5±2.8**, 53°.41N×87°.29E, h0^{km}, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=26.5km s-min=15.1km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.56**	**291**	*i*		08 36 53.5	
	baz=108,slow=320,SNR=4.5						
ZALV	**Zalesovo Beam**	**1.56**	**291**	Pg	Pn	08 27 12.6	-1.0
	0.7nm,0.3s,baz=113,slow=15,SNR=7.7						
ZALV				Lg	Lg	08 27 33.6	
	1.2nm,0.3s,baz=109,slow=31,SNR=10						
KURBB	**Kurchatov Arra**	**6.08**	**246**	Pn	Pn	08 28 16.7	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Lg	Lg	08 29 57.1	
	baz=64,slow=32,SNR=6.0 0.9nm,0.5s						
MKAR	**Makanchi Array**	**7.36**	**208**	Pn	Pn	08 28 34.0	+0.9
	0.1nm,0.3s,baz=28,slow=12,SNR=6.3						
MKAR				Lg	Lg	08 30 37.9	
	baz=25,slow=32,SNR=6.1 0.3nm,0.4s						

KRSZO 04 08:40:16.0±1.2**, 48°.59N×20°.75E, h7^{km}**±10^{km}**, ML1.9**/7**, Error ellipse: s-maj=8.3km s-min=4.3km az=140.0, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KECS	**Kecovo**	**0.21**	**239**	Pg	Pg	08 40 20.1	0.0
	comp=Z,1.4nm,SNR=23						
KECS				Lg	Lg	08 40 24.2	
KECS	**Kecovo**	**0.21**	**239**	*e*PG	Pg	08 40 20.0	-0.1
KECS				*e*SG	Sg	08 40 24.1	+1.2
KECS				*e*LG	Lg	08 40 25.0	
CRVS	**Cervenica-Dubn**	**0.56**	**56**	Pg	Pg	08 40 27.0	+0.2
	SNR=2.7						
CRVS				Lg	Lg	08 40 34.9	
CRVS	**Cervenica-Dubn**	**0.56**	**56**	*e*PG	Pg	08 40 26.9	+0.1
CRVS				*e*SG	Sg	08 40 34.9	+0.7
PSZ	**Piszkesteto**	**0.89**	**221**	Pg	Pb	08 40 33.8	+0.1
	comp=Z,0.1nm,SNR=2.3						
PSZ				Lg	Lg	08 40 47.0	
PSZ	**Piszkesteto**	**0.89**	**221**	P	Pb	08 40 33.8	+0.1
PSZ				S	Sn	08 40 47.0	-1.1
LANS	**Liptovska Anna**	**1.02**	**304**	Pg	Pb	08 40 35.8	-0.1
	comp=Z,0.1nm,SNR=2.9						
LANS	**Liptovska Anna**	**1.02**	**304**	*e*PG	Pb	08 40 35.9	0.0
LANS				*e*SG	Sb	08 40 49.2	-0.3
KOLS	**Kolonicke sedl**	**1.06**	**71**	Pn	Pn	08 40 38.1	+0.8
	comp=Z,10nm,SNR=5.8						
VYHS	**Vyhne**	**1.28**	**266**	Pn	Pg	08 40 40.7	+0.2
	SNR=3.7						
VYHS				Sn	Sn	08 40 59.0	+1.3
VYHS	**Vyhne**	**1.28**	**266**	*e*PG	Pg	08 40 40.8	+0.3
VYHS				*e*SG	Sn	08 40 59.2	+1.6
VYHS				*e*LG	Lg	08 41 00.4	
OJC	**Ojcow**	**1.75**	**339**	Pg	Pg	08 40 50.0	+0.6
	comp=Z,0.1nm,SNR=3.4						
OJC				Sn	Sn	08 41 07.2	-2.0

*STR **04** 08:40:38.0±0.5, 44°N±8°×°±1°1, h8^{km}±5^{km}, MLv1.1/7, preliminary*

*ROM **04** 08:40:37.8±0.2, 44°.47N±0°.01×6°.98E±0°.02, h11^{km}±2^{km}, ML0.9/1, Error ellipse: s-maj=1.8km s-min=1.0km az=48.0*

*GEN **04** 08:40:37.2, 44°.46N×6°.92E, h6^{km}±1^{km}, Ml0.7*

LDG 04 08:40:37.9±0.0**, 44°.46N×6°.93E, h2^{km}, Md1.2**/1**, Ml1.4**/4**, 3D, Error ellipse: s-maj=1.1km s-min=0.7km az=52.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SURF	**Saint Ours**	**0.09**	**288**	P	Pg	08 40 40.0	+0.3
SURF				S	Sg	08 40 41.6	+0.7
SURF	**Saint Ours**	**0.09**	**288**	⇓Pg	Pg	08 40 40.0	+0.3
SURF				Sg	Sg	08 40 41.6	+0.7
PZZ	**Stroppo**	**0.14**	**69**	P	Pg	08 40 41.1	+0.4
PZZ				S	Sg	08 40 43.3	+0.7
PZZ	**Stroppo**	**0.14**	**69**	P	Pg	08 40 41.1	+0.3
PZZ				S	Sg	08 40 43.3	+0.6
PZZ				AML	AML		
	comp=E,95µm,0.7s						
PZZ				AML	AML		
	comp=N,92µm,1.0s						
OGAG	**Argentiere**	**0.28**	**270**	Pg	Pb	08 40 46.4	+0.6
ISO	**Isola**	**0.28**	**162**	P	Pg	08 40 43.5	+0.2
ISO				S	Sg	08 40 47.2	+0.1
ISO	**Isola**	**0.28**	**162**	⇓Pg	Pg	08 40 43.5	+0.2
ISO				Sg	Sg	08 40 47.3	+0.2
MBDF	**Montbardon**	**0.29**	**338**	*e*Pg	Pg	08 40 43.6	0.0
MBDF				*e*Sg	Sg	08 40 48.3	+0.8
	comp=N,8.7nm,0.2s						
STV	**Sant Anna di V**	**0.35**	**126**	P	Pg	08 40 44.7	0.0
STV				S	Sg	08 40 49.6	+0.4
STV	**Sant Anna di V**	**0.35**	**126**	P	Pg	08 40 45.0	+0.3
STV				S	Sg	08 40 49.6	+0.3
ENR	**Entracque**	**0.42**	**123**	P	Pg	08 40 45.8	-0.1
ENR				S	Sg	08 40 52.2	+0.8
ENR	**Entracque**	**0.42**	**123**	⇓P	Pg	08 40 45.8	-0.1
ENR				S	Sg	08 40 52.0	+0.6
BHB	**Bricherasio**	**0.46**	**32**	P	Pg	08 40 46.4	-0.2
BHB	**Bricherasio**	**0.46**	**32**	P	Pg	08 40 46.5	-0.2
SPIF	**crte de Spivo**	**0.46**	**151**	Pg	Pg	08 40 46.8	+0.2
RRL	**Rocca Remolon**	**0.48**	**348**	P	Pg	08 40 47.1	0.0
RRL				S	Sg	08 40 54.1	+0.8
RRL	**Rocca Remolon**	**0.48**	**348**	P	Pg	08 40 47.1	0.0
RRL				S	Sg	08 40 54.4	+1.1
TURF	**col de Turini**	**0.58**	**145**	P	Pg	08 40 49.0	-0.1
TURF				S	Sg	08 40 57.4	+0.7
TURF	**col de Turini**	**0.58**	**145**	Pg	Pg	08 40 49.5	+0.4
TURF				Sg	Sg	08 40 57.4	+0.7
GBOS	**Grotte di Boss**	**0.69**	**108**	P	Pg	08 40 51.0	-0.1
GBOS				S	Sg	08 41 00.3	+0.3
SBF	**Sospel**	**0.69**	**148**	*e*Pg	Pg	08 40 51.1	-0.1
SBF				*e*Sg	Sg	08 41 00.0	-0.2
	comp=N,2.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.88**	**302**	*e*Pg	Pg	08 40 54.4	-0.4
ORIF				*e*Sg	Sg	08 41 06.2	0.0
	comp=N,1.6nm,0.2s						
QLNO	**Quiliano**	**1.02**	**97**	P	Pg	08 40 54.4	-3.1
LPG	**La Plagne**	**1.05**	**353**	*e*Pg	Pg	08 40 57.7	-0.4
LPG				*e*Sg	Sg	08 41 11.5	-0.2
	comp=N,0.7nm,0.2s						
SMRF	**Simiane la Rot**	**1.08**	**244**	*e*Pg	Pg	08 40 58.0	-0.7
LMR	**La Mourre**	**1.16**	**195**	*e*Pg	Pg	08 41 00.0	-0.1
LMR				*e*Sg	Sg	08 41 14.4	-0.8
	comp=N,0.4nm,0.2s						
MGRS	**Mrkonjic Grad**	**7.27**	**87**	*e*Pn	Pn	08 42 26.0	+0.9
MPLH	**Magyarpolny**	**7.89**	**66**	P	Pb	08 42 57.1	+1.7
MORH	**Mrgy, Hungar**	**8.44**	**74**	P	Pn	08 42 40.3	-0.9

*TIR **04** 08:40:45.5, 38°.74N×22°.18E, h65^{km}±33^{km}, Md4.8*

*ATH **04** 08:40:45.9, 38°.90N×21°.75E, h20^{km}, ML4.0/31, Error ellipse: s-maj=0.8km s-min=0.5km az=246.0*

*IDC **04** 08:40:45.5±0.6, 38°.89N×21°.83E, h0^{km}, mb4.0/20, mbtmp4.0/28, ML4.1/9, MS3.5/39, Error ellipse: s-maj=13.5km s-min=10.9km az=115.0*

*IASPEI **04** 08:40:46.2±0.8, 38°.89N±0°.02×21°.75E±0°.02, h11^{km}±5^{km}, mb4.1/30, MS3.6/33, Error ellipse: s-maj=2.7km s-min=2.3km az=137.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **04** 08:40:46.5, 38°.91N×21°.75E, h10^{km}±1^{km}, ML4.1/15, Error ellipse: s-maj=1.2km s-min=0.4km az=133.0*

*PDG **04** 08:40:46.6±0.7, 38°.90N×21°.83E, h11^{km}±1^{km}, ML4.2/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*NEIC **04** 08:40:47.9±2.6, 38°.94N±0°.03×21°.82E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=9.1km s-min=4.7km az=87.0*

*MOS **04** 08:40:48.0±1.2, 38°.93N×21°.93E, h25^{km}, mb4.6/6, Error ellipse: s-maj=8.5km s-min=4.6km az=85.2*

ISC 04 08:40:46.7±0.7**, 38°.88N**±0°.01×**21°.77E**±0°.01**, h9^{km}**±4^{km}**, n323, σ1^{s}46**/379**, mb4.1**/30**, MS3.6**/33**, 28C-9D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.05**	**45**	P	**Pg**	**08 40 48.4**	**-0.3**
EVR	**Evrytania**	**0.05**	**45**	P	**Pg**	**08 40 48.2**	**-0.4**
EVR				S	**Sg**	**08 40 49.8**	**-0.2**
	617µm,0.6s						
MAKR	**Makrakomi, Fth**	**0.31**	**65**	P	**Pg**	**08 40 53.0**	**+0.1**
MAKR				S	**Sb**	**08 40 58.2**	**-1.6**
MAKR				AML	AML	08 40 59.5	
MAKR				AML	AML	08 40 59.5	
MAKR	**Makrakomi, Fth**	**0.31**	**65**	P	**Pg**	**08 40 53.2**	**+0.3**
MAKR				S	**Sg**	**08 40 57.6**	**+0.5**
	183µm,0.3s						
ANX	**Ano Chora**	**0.31**	**157**	P	**Pg**	**08 40 53.0**	**0.0**
ANX				S	**Sb**	**08 40 58.5**	**-1.3**
ANX				AML	AML	08 41 02.0	
ANX				AML	AML	08 41 02.5	
ANX	**Ano Chora**	**0.31**	**157**	P	**Pg**	**08 40 52.9**	**-0.1**
ANX				S	**Sb**	**08 40 58.4**	**-1.4**
	104µm,0.4s						
AGG	**Agios Georgios**	**0.46**	**72**	P	**Pg**	**08 40 55.7**	**+0.1**
AGG				S	**Sb**	**08 41 02.6**	**-1.4**
AGG				AML	AML	08 41 04.0	
AGG				AML	AML	08 41 04.3	
	comp=E,64450µm,0.4s						
AGG	**Agios Georgios**	**0.46**	**72**	P	**Pg**	**08 40 55.7**	**+0.1**
AGG				S	**Sg**	**08 41 02.2**	**+0.4**
	comp=E,44µm,0.6s						
AGG	**Agios Georgios**	**0.46**	**72**	P	**Pg**	**08 40 55.8**	**+0.1**
AGG	**Agios Georgios**	**0.46**	**72**		**Pg**	**08 40 55.8**	**+0.1**
EFP	**Efpalio**	**0.47**	**167**	P	**Pg**	**08 40 55.6**	**-0.2**
EFP				S	**Sb**	**08 41 03.2**	**-0.9**
EFP				AML	AML	08 41 04.4	
EFP				AML	AML	08 41 05.9	
	comp=N,71939µm,0.3s						
EFP	**Efpalio**	**0.47**	**167**	P	**Pg**	**08 40 55.6**	**-0.2**
EFP				S	**Sb**	**08 41 03.3**	**-0.9**
	comp=N,60µm,0.6s						
UPR	**University Cam**	**0.60**	**179**	P	**Pg**	**08 40 58.5**	**+0.2**
LAKA	**Lakka**	**0.66**	**165**	P	**Pg**	**08 40 59.2**	**-0.3**
LAKA				S	**Sb**	**08 41 09.1**	**-0.8**
LAKA				AML	AML	08 41 15.9	
	comp=N,12052µm,0.6s						
LAKA				AML	AML	08 41 20.7	
	comp=E,8304µm,0.7s						
LAKA	**Lakka**	**0.66**	**165**	P	**Pg**	**08 40 58.4**	**-1.1**
LAKA				S	**Sb**	**08 41 10.3**	**+0.5**
	comp=E,26µm,0.6s						
ALIK	**Aliki, Aigiali**	**0.68**	**156**	P	**Pg**	**08 40 59.2**	**-0.6**
ALIK				S	**Sb**	**08 41 10.5**	**+0.3**
DLFA	**Delphi**	**0.70**	**125**	P	**Pg**	**08 40 59.7**	**-0.5**
DLFA				S	**Sb**	**08 41 10.2**	**-0.7**
DLFA				AML	AML	08 41 11.6	
	comp=N,28155µm,0.3s						
DLFA				AML	AML	08 41 16.0	
	comp=E,31782µm,0.7s						
THL	**Klokotos Trika**	**0.71**	**16**	P	**Pg**	**08 40 59.7**	**-0.6**
THL				S	**Sg**	**08 41 09.5**	**0.0**
THL				AML	AML	08 41 15.1	
	comp=N,13487µm,0.5s						
THL				AML	AML	08 41 19.1	
	comp=E,18478µm,0.5s						
THL	**Klokotos Trika**	**0.71**	**16**	P	**Pg**	**08 40 59.6**	**-0.8**
THL				S	**Sg**	**08 41 09.6**	**0.0**
	comp=E,8µm,0.5s						
NYDR	**Nydri-Lefkada**	**0.85**	**259**	P	**Pg**	**08 41 02.2**	**-0.9**
NYDR				S	**Sg**	**08 41 14.0**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.85**	**259**	P	**Pg**	**08 41 01.9**	**-1.2**
NYDR				S	**Sg**	**08 41 14.9**	**+0.7**
	comp=E,7µm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**196**	P	**Pg**	**08 41 03.0**	**-0.2**
RLS				S	**Sb**	**08 41 15.0**	**-0.4**
RLS				AML	AML	08 41 18.6	
	comp=N,14742µm,0.4s						
RLS				AML	AML	08 41 22.4	
	comp=E,13322µm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**196**	P	**Pg**	**08 41 02.8**	**-0.4**
RLS				S	**Sn**	**08 41 16.5**	**-1.1**
	comp=E,7µm,0.5s						
TSLK	**Tsoukalades, L**	**0.87**	**266**	P	**Pg**	**08 41 02.9**	**-0.6**
TSLK				S	**Sg**	**08 41 14.5**	**-0.3**
TSLK	**Tsoukalades, L**	**0.87**	**266**	P	**Pg**	**08 41 03.0**	**-0.4**
TSLK				S	**Sg**	**08 41 15.5**	**+0.7**
	comp=E,12µm,0.6s						
KLV	**Kalavryta, Ach**	**0.89**	**160**	P	**Pg**	**08 41 03.2**	**-0.7**
KLV				S	**Sb**	**08 41 16.4**	**0.0**
KLV				AML	AML	08 41 21.1	
	comp=E,9607µm,0.8s						
KLV				AML	AML	08 41 23.4	
	comp=N,12368µm,0.6s						
TYRN	**Tyrnavos**	**0.90**	**23**	P	**Pg**	**08 41 03.0**	**-1.0**
TYRN				S	**Sg**	**08 41 15.8**	**0.0**
TYRN				AML	AML	08 41 19.5	
	comp=E,29105µm,0.6s						
TYRN				AML	AML	08 41 20.5	
	comp=N,31533µm,0.4s						
TYRN	**Tyrnavos**	**0.90**	**23**	P	**Pg**	**08 41 02.8**	**-1.3**
TYRN				S	**Sb**	**08 41 16.7**	**0.0**
	comp=N,12µm,0.5s						
EVGI	**Lefkada island**	**0.91**	**254**	P	**Pg**	**08 41 03.3**	**-0.8**
EVGI				S	**Sg**	**08 41 15.7**	**-0.3**
EVGI	**Lefkada island**	**0.91**	**254**	P	**Pg**	**08 41 02.9**	**-1.3**
EVGI				S	**Sb**	**08 41 17.1**	**+0.3**
	comp=N,8µm,0.6s						
LRSO	**Larissa Observ**	**0.92**	**31**	P	**Pg**	**08 41 03.6**	**-0.9**
LRSO	**Larissa Observ**	**0.92**	**31**	P	**Pg**	**08 41 03.3**	**-1.2**
LRSO				S	**Sg**	**08 41 16.6**	**+0.1**
	comp=N,17µm,0.6s						
DRO	**Drossia**	**0.93**	**183**	P	**Pg**	**08 41 04.3**	**-0.3**
DRO				S	**Sb**	**08 41 17.8**	**+0.2**
DRO				AML	AML	08 41 29.0	
	comp=N,23095µm,0.7s						
DRO				AML	AML	08 41 31.3	
	comp=E,9628µm,0.4s						
DRAG	**Dragano-Lefkad**	**0.95**	**258**	P	**Pg**	**08 41 03.8**	**-1.2**
ATAL	**Atalanti**	**1.00**	**101**	P	**Pg**	**08 41 04.8**	**-1.1**
ATAL				S	**Sb**	**08 41 19.2**	**-0.3**
ATAL				AML	AML	08 41 23.6	
	comp=N,11918µm,0.6s						
ATAL				AML	AML	08 41 26.4	
	comp=E,6170µm,0.8s						
FSK	**Fiskardo**	**1.03**	**246**	P	**Pg**	**08 41 05.7**	**-0.8**
FSK				S	**Sg**	**08 41 20.3**	**+0.3**
FSK				AML	AML	08 41 28.5	
	comp=E,17235µm,0.7s						
FSK				AML	AML	08 41 34.6	
	comp=N,9715µm,0.9s						
GUR	**Goura**	**1.05**	**154**	P	**Pg**	**08 41 06.0**	**-0.9**
GUR				S	**Sb**	**08 41 21.1**	**+0.1**
GUR				AML	AML	08 41 27.7	
	comp=N,16037µm,0.4s						
GUR				AML	AML	08 41 31.7	
	comp=E,17708µm,0.5s						
THAL	**Thalero**	**1.10**	**140**	P	**Pb**	**08 41 07.5**	**-0.5**
THAL				S	**Sn**	**08 41 23.0**	**-0.6**
THAL				AML	AML	08 41 27.9	
	comp=E,24262µm,0.4s						
THAL				AML	AML	08 41 32.8	
	comp=N,14320µm,0.4s						
KPRO	**Kipourio**	**1.11**	**344**	P	**Pg**	**08 41 06.5**	**-1.6**
KPRO				S	**Sg**	**08 41 22.3**	**-0.3**
KPRO				AML	AML	08 41 27.4	
	comp=N,9899µm,0.4s						
KPRO				AML	AML	08 41 33.0	
	comp=E,15256µm,0.5s						
KPRO	**Kipourio**	**1.11**	**344**	P	**Pg**	**08 41 06.5**	**-1.6**
KPRO				S	**Sg**	**08 41 22.0**	**-0.6**
	comp=E,7µm,1.1s						
VLS	**Valsamata**	**1.16**	**233**	P	**Pb**	**08 41 07.4**	**-1.6**
PSDA	**Pessada-Kefalo**	**1.21**	**231**	P	**Pb**	**08 41 08.0**	**-1.7**
XOR	**Xorichti**	**1.21**	**66**	P	**Pb**	**08 41 09.1**	**-0.7**
XOR				S	**Sg**	**08 41 25.4**	**-0.3**
XOR				AML	AML	08 41 31.8	
	comp=N,19462µm,0.5s						
XOR				AML	AML	08 41 34.2	
	comp=E,11166µm,0.7s						
NEO	**Neokhori**	**1.21**	**69**	P	**Pb**	**08 41 09.2**	**-0.6**
NEO				S	**Sn**	**08 41 25.7**	**-0.8**
NEO				AML	AML	08 41 30.1	
	comp=E,13056µm,0.8s						
NEO				AML	AML	08 41 31.6	
	comp=N,12784µm,0.5s						
KEF4	**Livadi, Kephal**	**1.22**	**240**	P	**Pn**	**08 41 08.4**	**-1.6**
ARGA	**Argostoli. Kep**	**1.23**	**235**	P	**Pn**	**08 41 09.6**	**-0.5**
DMLN	**Damoulianata-K**	**1.27**	**240**	P	**Pn**	**08 41 09.9**	**-0.7**
KEF3	**Kipouria, Keph**	**1.30**	**239**	P	**Pn**	**08 41 09.9**	**-1.2**
LIT	**Litokhoron**	**1.34**	**24**	P	**Pn**	**08 41 11.3**	**-0.4**
LIT				S	**Sg**	**08 41 29.6**	**-0.1**
LIT				AML	AML	08 41 34.4	
	comp=N,10376µm,0.5s						
LIT				AML	AML	08 41 34.8	
	comp=E,12978µm,0.4s						
LIT	**Litokhoron**	**1.34**	**24**	P	**Pn**	**08 41 10.8**	**-0.8**
LIT				S	**Sb**	**08 41 28.7**	**-0.6**
	comp=E,7µm,0.6s						
LIT	**Litokhoron**	**1.34**	**24**	P	**Pn**	**08 41 10.5**	**-1.1**
LIT	**Litokhoron**	**1.34**	**24**		**Pn**	**08 41 10.5**	**-1.1**
VIL2	**Platees**	**1.35**	**119**	P	**Pg**	**08 41 12.6**	**-0.1**
VIL2				S	**Sg**	**08 41 32.6**	**+2.4**
VIL2				AML	AML	08 41 39.5	
	comp=N,8473µm,0.8s						
VIL2				AML	AML	08 41 41.7	
	comp=E,19326µm,0.7s						
PENT	**Pentalofos**	**1.40**	**340**	P	**Pn**	**08 41 11.6**	**-1.0**
PENT				S	**Sb**	**08 41 31.1**	**0.0**
PENT				AML	AML	08 41 43.8	
	comp=N,2400µm,0.6s						
PENT				AML	AML	08 41 43.9	
	comp=E,10789µm,0.7s						
KZN	**Kozani**	**1.42**	**0**	P	**Pn**	**08 41 12.0**	**-0.8**
KZN				S	**Sn**	**08 41 31.5**	**-0.2**
KZN				AML	AML	08 41 40.2	
	comp=N,7908µm,0.5s						
KZN				AML	AML	08 41 41.7	
	comp=E,8490µm,0.5s						
LSK	**Leskovik**	**1.55**	**325**	P	**Pb**	**08 41 15.6**	**-0.1**
	baz=320						
LSK				S	**Sg**	**08 41 42.1**	**+5.4**
	baz=320						
NEST	**Nestorio**	**1.63**	**340**	P	**Pn**	**08 41 15.9**	**+0.2**
NEST				S	**Sn**	**08 41 36.0**	**-0.8**
NEST				AML	AML	08 41 47.0	
	comp=N,18771µm,1.2s						
NEST				AML	AML	08 41 48.0	
	comp=E,14087µm,0.7s						
ALNA	**Alonissos**	**1.66**	**80**	P	**Pn**	**08 41 15.7**	**-0.2**
ALNA				S	**Sb**	**08 41 38.3**	**-0.1**
ALNA				AML	AML	08 41 48.3	
	comp=E,4628µm,0.5s						
ALNA				AML	AML	08 41 50.2	
	comp=N,3988µm,0.7s						
SRN	**Sarande**	**1.69**	**307**	P	**Pg**	**08 41 19.7**	**+0.5**
	baz=305						
ITM	**Ithomi**	**1.71**	**176**	Pn	**Pg**	**08 41 19.2**	**-0.2**
ATH	**Athens Observa**	**1.78**	**120**	P	**Pn**	**08 41 17.9**	**+0.2**
ATH				S	**Sb**	**08 41 41.2**	**-0.8**
ATH				AML	AML	08 41 49.1	
	comp=E,4969µm,0.4s						
ATH				AML	AML	08 41 55.8	
	comp=N,5313µm,0.4s						
ATHU	**Athens Univers**	**1.83**	**119**	P	**Pn**	**08 41 18.8**	**+0.4**
ATHU				S	**Sb**	**08 41 42.8**	**-0.7**
ATHU				AML	AML	08 41 51.5	
	comp=E,1720µm,0.8s						
ATHU				AML	AML	08 41 55.1	
	comp=N,2198µm,0.7s						
KYMI	**Kymi, Euboea I**	**1.84**	**97**	P	**Pn**	**08 41 18.7**	**+0.2**
KYMI				S	**Sb**	**08 41 43.0**	**-0.7**
KYMI				AML	AML	08 41 55.6	
	comp=E,2098µm,0.7s						
KYMI				AML	AML	08 42 01.3	
	comp=N,2015µm,0.7s						
PTL	**Penteli**	**1.85**	**116**	P	**Pn**	**08 41 18.9**	**+0.3**
PTL				S	**Sb**	**08 41 42.5**	**-1.3**
KRND	**KRANIDI**	**1.85**	**144**	P	**Pb**	**08 41 19.6**	**-1.2**
KRND				S	**Sb**	**08 41 43.5**	**-0.6**
KRND				AML	AML	08 41 53.4	
	comp=N,7251µm,0.7s						
KRND				AML	AML	08 41 54.3	
	comp=E,5227µm,0.6s						
DION	**Dionisos Attik**	**1.88**	**115**	P	**Pn**	**08 41 19.7**	**+0.6**
KBN	**Korca**	**1.89**	**337**	P	**Pb**	**08 41 22.0**	**+0.5**
KBN	**Korca**	**1.89**	**337**		**Pb**	**08 41 22.0**	**+0.5**
KBN	**Korca**	**1.89**	**337**	P	**Pb**	**08 41 22.0**	**+0.5**
	baz=331						
VLY	**Voula,Athens**	**1.90**	**122**	P	**Pn**	**08 41 19.8**	**+0.5**
FNA	**Florina**	**1.92**	**351**	P	**Pn**	**08 41 19.9**	**+0.2**
FNA				S	**Sn**	**08 41 44.1**	**+0.1**
FNA				AML	AML	08 41 52.4	
	comp=E,6379µm,0.4s						
FNA				AML	AML	08 41 52.5	
	comp=N,9805µm,0.6s						
FNA	**Florina**	**1.92**	**351**	P	**Pn**	**08 41 20.0**	**+0.3**
FNA	**Florina**	**1.92**	**351**		**Pn**	**08 41 20.0**	**+0.3**
HORT	**Hortiatis**	**2.00**	**31**	P	**Pn**	**08 41 19.8**	**-1.0**
HORT				S	**Sn**	**08 41 46.7**	**+0.7**
HORT				AML	AML	08 41 54.0	
	comp=E,1377µm,0.5s						
HORT				AML	AML	08 41 58.0	
	comp=N,1672µm,0.4s						
GRG	**Griva**	**2.13**	**13**	P	**Pn**	**08 41 22.2**	**-0.3**
SOH	**Sokhos**	**2.29**	**32**	P	**Pn**	**08 41 24.6**	**-0.2**
SOH				S	**Sn**	**08 41 52.5**	**-0.6**

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SOH                                  AML     AML     08 41 59.0
       comp=E,3441µm,0.7s
SOH                                  AML     AML     08 42 03.0
       comp=N,6739µm,0.5s
OHR    Ohrid               2.35 342  ePn     Pb      08 41 28.9 -0.3
OHR                                  eSn     Sg      08 42 01.1 -1.0
OHR                                  eLg     Lg      08 42 06.7
       comp=E,1µm,0.7s
OHR                                  eLg     Lg      08 42 09.3
       comp=N,2µm,1.2s
VLI    Veliai              2.35 156   P      Pn      08 41 26.3 +0.7
VLO    Vlora               2.36 313   P      Pb      08 41 29.0 -0.4
VLO    Vlora               2.36 313   Pn     Pb      08 41 29.0 -0.4
VAY    Valandovo           2.51  14  i Pn    Pn      08 41 27.8 +0.1
VAY                                  eSn     Sb      08 42 02.7 -0.3
VAY                                  eLg     Lg      08 42 12.0
       comp=E,818nm,0.9s
VAY                                  eLg     Lg      08 42 16.6
       comp=N,1µm,1.1s
SCTE   Santa Cesarea       2.82 296   Pn     Pn      08 41 33.9 +1.9
STIP   Stip                2.83   6  ePn     Pn      08 41 33.3 +1.3
STIP                                 eSn     Sb      08 42 12.9 +0.9
TIR    Tirane              2.86 330   P      Pb      08 41 36.1 -1.8
TIR    Tirane              2.86 330          Pb      08 41 36.1 -1.8
TIR    Tirane              2.86 330   P      Pb      08 41 37.3 -0.6
       baz=327
PHP    Peshkopia           2.98 340   P      Pb      08 41 37.5 -2.5
       baz=337
PHP                                   S      Sb      08 42 16.4  0.0
       baz=337
SKO    Skopje              3.10 355  ePn     Pn      08 41 36.5 +0.8
SKO                                  eSn     Sb      08 42 18.1 -1.7
APE    Apeiranthos         3.48 120 ⇑P       Pn      08 41 42.1 +1.0
ULC    Ulcinj              3.63 329⇑iPn      Pn      08 41 44.5 +1.4
ULC                                  i Sn    Sn      08 42 28.4 +2.3
RDO    Rodhopi             3.67  51   Pn     Pn      08 41 42.8 -0.9
BCI    Bajram Curri        3.71 340   P      Pb      08 41 50.2 -2.3
       baz=337
DRME   Dracevica, Mon      3.84 330  ePn     Pn      08 41 48.1 +2.1
DRME   Dracevica, Mon      3.84 330⇓iPn      Pn      08 41 48.1 +2.1
DRME                                 i Sn    Sn      08 42 33.6 +2.3
ALN    Alexandroupoli      3.86  57   P      Pn      08 41 45.4 -0.8
ALN    Alexandroupoli      3.86  57          Pn      08 41 45.4 -0.8
VTS    Vitosha             3.89  16 ⇑P       Pn      08 41 47.1 +0.2
VTS    Vitosha             3.89  16   P      Pn      08 41 47.1 +0.2
VTS    Vitosha             3.89  16   Pn     Pn      08 41 47.1 +0.2
TIP    Timpagrande         3.91 276 ⇑P       Pn      08 41 48.6 +1.6
TIP    Timpagrande         3.91 276   Pn     Pn      08 41 48.2 +1.1
PVY    Plav                3.95 340⇑iPn      Pn      08 41 48.9 +1.2
PVY                                  i Sn    Sn      08 42 36.5 +2.3
PDG    Podgorica           4.02 332 ⇑P       Pn      08 41 49.9 +1.4
PDG    Podgorica           4.02 332   Pn     Pn      08 41 50.5 +2.0
PDG    Podgorica           4.02 332  ePn     Pn      08 41 51.0 +2.5
TTG    Podgorica           4.02 332⇑iPn      Pn      08 41 49.8 +1.3
TTG                                  i Sn    Sn      08 42 37.8 +2.0
BUM    Brajici-Budva       4.05 328⇓iPn      Pn      08 41 50.5 +1.5
BUM                                  i Sn    Sn      08 42 38.9 +2.3
IVA    Berane              4.23 341  ePn     Pn      08 41 53.4 +2.0
IVA                                  i Sn    Sn      08 42 42.7 +1.7
CEME   Cevo                4.25 330  ePn     Pn      08 41 53.3 +1.6
CEME                                 i Sn    Sn      08 42 43.4 +1.9
MATE   Matera              4.28 296 ⇓P       Pn      08 41 53.9 +1.8
KOME   Kolasin             4.31 337⇓iPn      Pn      08 41 53.4 +0.8
KOME                                 i Sn    Sn      08 42 44.8 +1.7
HCY    Herceg Novi         4.34 326  ePn     Pn      08 41 53.9 +1.0
HCY    Herceg Novi         4.34 326⇓iPn      Pn      08 41 54.3 +1.4
HCY                                  i Sn    Sn      08 42 45.7 +2.0
IDI    Anoyia              4.37 144 ⇓P       Pn      08 41 56.2 +2.8
IDI    Anoyia              4.37 144   Pn     Pn      08 41 54.6 +1.2
       comp=N,2.9nm,0.3s,baz=323,slow=16,SNR=11
IDI                                   Sn     Sn      08 42 42.8 -1.7
       comp=N,4.2nm,0.3s,baz=104,slow=23,SNR=3.8
       comp=N,12nm,0.5s
IDI    Anoyia              4.37 144   Pn     Pn      08 41 54.2 +0.8
NKME   Niksic              4.43 332⇓iPn      Pn      08 41 56.5 +2.4
NKME                                 i Sn    Sn      08 42 47.6 +1.8
TREB   Trebinje            4.62 327  ePn     Pn      08 41 57.7 +0.9
CEL    Celeste             4.64 264          Pn      08 41 57.6 +0.5
BRY    Bratogost           4.70 330  ePn     Pn      08 41 59.7 +1.7
BRY    Bratogost           4.70 330⇓iPn      Pn      08 41 59.5 +1.5
BRY                                  i Sn    Sn      08 42 54.0 +1.3
CUC    Castrocucco         4.74 285          Pn      08 42 01.7 +3.3
BOVS   Bovan               4.75 359 ⇑P       Pn      08 41 58.3 -0.1
PLE    Pljevlja            4.79 339⇑iPn      Pn      08 42 00.5 +1.3
PLE                                  i Sn    Sn      08 42 57.0 +2.1
UPM    Unac-Piva           4.83 334  ePn     Pn      08 42 02.3 +2.6
UPM    Unac-Piva           4.83 334⇑iPn      Pn      08 42 00.7 +1.0
UPM                                  i Sn    Sn      08 42 57.2 +1.3
STON   Ston                5.04 324  ePn     Pn      08 42 02.9 +0.5
RUDO   Rudo                5.06 340  ePn     Pn      08 42 05.3 +2.5
BBLS   Lazi&#263;i         5.29 341  ePn     Pn      08 42 07.9 +2.0
MANT   Manisa              5.33  92          Pn      08 42 08.4 +1.8
DIVS   Divibare            5.38 346          Pn      08 42 08.0 +0.8
DIVS   Divibare            5.38 346  ePn     Pn      08 42 07.9 +0.7
SGRT   San Giovanni R      5.42 304          Pn      08 42 09.9 +2.1
KARP   Karpathos           5.44 126          Pn      08 42 09.8 +1.7
MDVR   Moldovita           5.89 360 ⇑P       Pn      08 42 14.3 +0.1
TEKS   Tekeris             5.90 344  ePn     Pn      08 42 16.1 +1.7
PAOL   Paolisi             5.93 293          Pn      08 42 17.8 +3.0
VAE    Valguarnera         5.96 259   Sn     Sn      08 43 25.4 +1.7
       comp=N,2.9nm,0.3s,baz=18,slow=20,SNR=3.0
HERR   Herculane           6.01   4 ⇑P       Pn      08 42 15.8  0.0
SRKY   Kupres RS           6.22 328  ePn     Pn      08 42 15.9 -3.0
FRGS   Fruska Gora         6.44 348 ⇑P       Pn      08 42 22.5 +0.8
FRGS   Fruska Gora         6.44 348  ePn     Pn      08 42 22.3 +0.6
GZR    Gura Zlata          6.55   6 ⇑P       Pn      08 42 23.4 +0.1
BZS    Buzias              6.73 359 ⇑P       Pn      08 42 26.1 +0.4
BLY    Banja Luka          6.79 331  ePn     Pn      08 42 27.6 +1.2
BORA   Eskisehir           6.80  79          Pn      08 42 28.5 +1.7
ARR    Arges               6.82  17 ⇑P       Pn      08 42 26.8 -0.2
ICOR   Ion Corvin          6.92  39 ⇑P       Pn      08 42 28.4 +0.1
VOIR                       6.99  19 ⇑P       Pn      08 42 29.8 +0.5
PRIJ   Prijedor            7.16 330  ePn     Pn      08 42 36.2 +4.7
ISR    Istrita             7.17  28 ⇑P       Pn      08 42 32.0 +0.2
AQU    L'Aquila            7.25 301  ePn     Pb      08 42 45.8 -6.9
MLR    Muntele Rosu        7.29  24 ⇑P       Pn      08 42 34.6 +1.0
MLR    Muntele Rosu        7.29  24   Pn     Pn      08 42 35.1 +1.5
       comp=N,8.8nm,0.3s,baz=197,slow=5.5,SNR=30
MLR                                   LR     LR      08 46 01.1
       comp=N,646nm,18.7s,baz=220,slow=43
MLR    Muntele Rosu        7.29  24   P      Pn      08 42 34.8 +1.3
MLR    Muntele Rosu        7.29  24          Pn      08 42 34.8 +1.3
MDUB   Mudurnu             7.45  75          Pn      08 42 37.1 +1.5
TIRR   Tirgusor            7.46  40   P      Pn      08 42 36.9 +1.1
TIRR   Tirgusor            7.46  40   Pn     Pn      08 42 36.9 +1.1
DOPR   Dopca               7.57  20 ⇑P       Pn      08 42 37.7 +0.4
MORH   Mrgy, Hungar        7.68 344  ePn     Pn      08 42 39.0 +0.3
COVR   Voineasa-Covas      7.69  24 ⇑P       Pn      08 42 40.1 +1.1
KOVH   Kovagotottos        7.69 341   P      Pn      08 42 39.5 +0.6
KOVH                                  S      Sn      08 44 03.2 -2.9
PLOR   Plostina            7.84  26 ⇑P       Pn      08 42 41.9 +0.9
CFR    Carcaliu            7.87  35 ⇑P       Pn      08 42 41.9 +0.6
VRI    Vrincioaia          7.88  26 ⇑P       Pn      08 42 42.3 +0.8
MURB   Monte Urbino        8.24 305          Pn      08 42 46.5 +0.1
CRES   Cresnjev            8.36 328  ePn     Pn      08 42 48.9 +0.8
VLDR   Vladesti            8.38  32 ⇑P       Pn      08 42 49.0 +0.7
RIY    Rijeka              8.41 322  ePn     Pn      08 42 48.8 +0.1
CEY    Cerknica            8.74 324  ePn     Pn      08 42 54.2 +0.9
SKDS   Skadanscina         8.79 322  ePn     Pn      08 42 53.2 -0.8
TRI    Trieste             9.03 322   P      Pn      08 42 56.5 -0.8
TRI    Trieste             9.03 322          Pn      08 42 56.5 -0.8
BURAR  Bucovina Array      9.08  15 ⇑P       Pn      08 42 59.1 +1.0
BURAR  Bucovina Array      9.08  15   Pn     Pn      08 42 58.8 +0.7
BUR08  Bucovina Ar. S      9.11  15          Pn      08 42 58.5 +0.2
PSZ    Piszkesteto         9.13 352 ⇑P       Pn      08 42 59.1 +0.4
PSZ    Piszkesteto         9.13 352   P      Pn      08 42 58.9 +0.2
PSZ    Piszkesteto         9.13 352   Pn     Pn      08 42 58.9 +0.2
PSZ    Piszkesteto         9.13 352   P      Pn      08 42 59.8 +1.0
SOKA   Soboth              9.23 330  ePn     Pn      08 43 00.5 +0.5
       comp=N,4.6nm,0.3s
BRTR   Keskin Array B      9.24  81   Pn     Pn      08 43 02.4 +2.0
       comp=N,0.5nm,0.3s,baz=265,slow=13,SNR=4.5
       comp=N,2.3nm,0.4s
OBKA   Obir                9.29 327  ePn     Pn      08 43 02.8 +2.0
       comp=N,3.9nm,0.5s
ARSA   Arzberg             9.53 333  ePn     Pn      08 43 04.7 +0.7
       comp=N,6.9nm,0.7s,SNR=6.7
RONA   Rosalia, Austr      9.67 337   Pn     Pn      08 43 08.9 +2.8
       comp=N,8.3nm,0.9s
VYHS   Vyhne               9.84 349  eP      Pn      08 43 10.4 +2.1
VYHS                                 e               08 45 02.6
VYHS   Vyhne               9.84 349  ePN     Pn      08 43 10.4 +2.1
VYHS                                 eSN     Sn      08 45 02.6 +3.8
STAL   STALIGIAL           9.94 321          Pn      08 43 13.0 +3.3
KOLL   Kolacno             9.99 347  eSN     Sn      08 45 05.8 +3.2
CONA   Conrad Observa     10.01 337  ePn     Pn      08 43 11.2 +0.5
       comp=N,0.9nm,0.3s
MODS   Modra-Piesok       10.03 343  eP      Pn      08 43 14.2 +3.3
MODS   Modra-Piesok       10.03 343  ePN     Pn      08 43 14.2 +3.3
KBA    Koelnbreinsper     10.25 326  ePn     Pn      08 43 13.7 -0.4
       comp=N,9.1nm,1.4s
KBA                                  eSn     Sn      08 45 06.3 -2.9
       comp=N,11nm,0.8s
CTI    Castel Tesino      10.34 317   P      Pn      08 43 16.8 +1.4
CTI    Castel Tesino      10.34 317   Pn     Pn      08 43 16.8 +1.4
KEST   Kesra              10.38 256   Pn     Pn      08 43 18.0 +2.1
       comp=N,0.4nm,0.3s,baz=39,slow=5.6,SNR=4.5
       comp=N,5.3nm,0.7s
ABTA   Abfaltersbach      10.38 322  ePn     Pn      08 43 16.2 +0.3
       comp=N,4.5nm,0.6s
ABTA                                  Sn     Sn      08 45 08.8 -3.6
       comp=N,18nm,0.9s
JAVC   Velka Javorina     10.40 345  ePN     Pn      08 43 20.0 +4.0
MOA    Molln              10.49 331  ePn     Pn      08 43 19.1 +1.9
       comp=N,8.5nm,1.4s
BIOA   Bad Ischl, Aus     10.60 329  ePn     Pn      08 43 21.3 +2.5
       comp=N,3.4nm,0.4s
KRUC   Moravsky           10.88 341  ePN     Pn      08 43 23.6 +1.0
SIM    Simferopol'        11.01  53  eP      Pn      08 43 23.1 -1.3
SIM                                   pmax   pmax
       comp=Z,36nm,0.4s
SIM                                   MLR    MLR
       comp=Z,100nm,18.0s
VRAC   Vranov             11.06 342   Pn     Pn      08 43 26.0 +1.0
       comp=Z,0.5nm,0.3s,baz=165,slow=12,SNR=6.8
VRAC                                  LR     LR      08 48 05.5
       comp=Z,148nm,21.3s,baz=154,slow=40
       comp=Z,5.1nm,0.6s
VRAC   Vranov             11.06 342  ePN     Pn      08 43 26.3 +1.2
WTTA   Wattenberg         11.17 322  ePn     Pn      08 43 28.7 +2.0
       comp=Z,6.3nm,0.4s
WTTA                                  Sn     Sn      08 45 27.3 -4.5
       comp=Z,58nm,1.1s
WATA   Walderalm          11.25 322   Pn     Pn      08 43 29.0 +1.2
       comp=Z,16nm,1.0s
WATA                                 eSn     Sn      08 45 29.6 -4.1
       comp=Z,27nm,1.1s
MORC   Moravsky Berou     11.30 346  ePN     Pn      08 43 29.5 +1.1
SQTA   Sankt Quirin       11.35 321  ePn     Pn      08 43 30.9 +1.7
       comp=Z,10nm,0.5s
FETA   Feichten           11.46 319  ePn     Pn      08 43 33.9 +3.2
       comp=Z,4.6nm,0.6s
MOTA   Moosalm            11.49 321  ePn     Pn      08 43 31.1 +0.1
       comp=Z,12nm,0.8s
MOTA                                 eSn     Sn      08 45 38.2 -1.4
       comp=Z,36nm,0.9s
GERES  GERESS Array B     11.53 332   Pn     Pn      08 43 32.8 +1.3
       comp=Z,0.2nm,0.3s,baz=146,slow=14,SNR=2.9
GERES                                 Sn     Sn      08 45 35.0 -5.4
       comp=Z,0.1nm,0.3s,baz=130,slow=26,SNR=1.3
GERES                                 LR     LR      08 48 34.9
       comp=Z,260nm,19.3s,baz=144,slow=41
       comp=Z,1.4nm,0.6s
DAVOX  Davos/Dischmat     11.76 316   Pn     Pn      08 43 36.4 +1.7
       comp=Z,1.3nm,0.3s,baz=133,slow=13,SNR=6.8
DAVOX                                 Sn     Sn      08 45 36.2  -10
       comp=Z,0.2nm,0.3s,baz=129,slow=21,SNR=2.3
DAVOX                                 LR     LR      08 49 19.2
       comp=Z,109nm,18.5s,baz=83,slow=44
       comp=Z,3.2nm,0.4s
RETA   Reutte             11.76 321  eSn     Sn      08 45 41.5 -4.4
       comp=Z,24nm,1.1s
KHC    Kasperske Hory     11.81 333  eP      Pn      08 43 36.9 +1.6
KHC    Kasperske Hory     11.81 333  ePN     Pn      08 43 36.9 +1.6
KHC                                  ex      x       08 43 51.5
TUE    Stuetta            11.87 314   Pn     Pn      08 43 37.1 +0.8
DAVA   Damuels            12.07 318  ePn     Pn      08 43 41.1 +2.1
       comp=Z,6.6nm,0.6s
DAVA                                  Sn     Sn      08 45 49.8 -4.1
       comp=Z,25nm,0.8s
AKASG  Malin Array Be     12.94  22   Pn     Pn      08 43 50.2 -0.5
       comp=Z,0.7nm,0.3s,baz=209,slow=12,SNR=4.6
       comp=Z,0.5nm,0.4s
SENIN  Lac Senin/Sane     13.00 310   Pn     Pn      08 43 52.7 +0.9
CLL    Collm              13.87 336  i P     P       08 44 14.2 +2.5
CLL                                   pmax   pmax
       comp=Z,14nm,1.0s
CLL    Collm              13.87 336  ex      x       08 44 40.0
CLL    Collm              13.87 336  i (sPP)         08 44 14.2
       comp=Z,14nm,1.0s
CLL    Collm              13.87 336  esP     P       08 44 10.0 -1.7
CLL    Collm              13.87 336  i x     x       08 44 18.1
ECH    Echery             14.09 316   P      P       08 44 12.6 -1.7
ECH    Echery             14.09 316          P       08 44 12.6 -1.7
SUW    Suwalki            15.16   3  eP      P       08 44 26.1  0.0
NACGM  Naroch             16.38  10⇓eP       P       08 44 39.6  0.0
       baz=193
KIV    Kislovodsk         16.48  65  eP      Pn      08 44 37.1 -1.0
KIV                                   pmax   pmax
       comp=Z,6.0nm,1.0s
KIV                                   MLR    MLR
       comp=Z,29nm,17.0s
KBZ    Khabaz             16.59  66   LR     LR      08 53 11.9
       comp=Z,63nm,19.0s,baz=184,slow=45
PABE   Paberze            16.70   4   P      Pn      08 44 39.4 -1.3
PABE                                  IAmb   IAmb    08 44 53.9
       comp=Z,44nm,1.2s
PABE   Paberze            16.70   4  eP      Pn      08 44 40.8 +0.1
PABE                                  IAmb   IAmb    08 44 50.1
       comp=Z,21nm,0.7s
PBUR   Paburge            17.15   0   IAmb   IAmb    08 45 03.8
       comp=Z,24nm,0.4s
VORD   Divnogorie         17.27  40  eP      P       08 44 49.9 +0.5
VORD                                  pmax   pmax
       comp=Z,9.0nm,0.4s
VSR    Storozhevoye       17.36  39  eP      Pn      08 44 48.5 -0.6
VSR                                   pmax   pmax
       comp=Z,5.0nm,0.5s
VORR   Voronezh           17.66  38  eP      Pn      08 44 50.1 -2.8
VORR                                  pmax   pmax
       comp=Z,80nm,0.5s
OBN    Obninsk            19.05  27   LR     LR      08 51 46.6
       comp=Z,24nm,20.6s,baz=315,slow=35
OBN    Obninsk            19.05  27  eP      Pn      08 45 10.0 +0.3
OBN                                   pmax   pmax
       comp=Z,6.0nm,0.7s
OBN                                   MLR    MLR
       comp=Z,210nm,23.0s
VSU    Vasula             19.86   8  eP      P       08 45 17.5 -0.3
MTSE   Matsula            19.89   3  eP      P       08 45 17.5 -0.7
MOS    Moscow             19.91  27  eP      Pn      08 45 21.7 +1.6
ESDC   Sonseca Array      19.92 280   P      Pn      08 45 20.1 -0.2
       comp=Z,0.2nm,0.3s,baz=77,slow=11,SNR=14
ESDC                                  LR     LR      08 53 43.5
       comp=Z,50nm,18.4s,baz=126,slow=39
       comp=Z,2.6nm,0.7s
PAB    San Pablo          20.23 280   P      P       08 45 19.8 -2.3
PAB                                   pmax   pmax
       comp=Z,11nm,1.1s
PAB    San Pablo          20.23 280   P      P       08 45 19.8 -2.3
AAL    Aland              21.34 358  eP      P       08 45 33.8 -0.1
MEF    Metsahovi          21.42   4  eP      P       08 45 34.1 -0.6
HFS    Hagfors            21.87 349   P      P       08 45 40.5 +0.9
       comp=Z,1.2nm,0.5s,baz=134,slow=4.2,SNR=4.7
HFS                                   LR     LR      08 55 35.2
       comp=Z,85nm,18.8s,baz=159,slow=41
       comp=Z,1.2nm,0.5s
MDT    Midelt             22.18 262   P      P       08 45 44.1 +0.9
       comp=Z,3.3nm,0.8s,baz=84,slow=22,SNR=4.3
       comp=Z,3.3nm,0.8s
BELG   Belogornoye        22.42  44   P      P       08 45 44.9 -0.6
       comp=Z,5.2nm,0.7s,baz=234,slow=2.0,SNR=2.0
BELG                                  LR     LR      08 55 20.0
       comp=Z,132nm,18.6s,baz=275,slow=39
       comp=Z,5.2nm,0.7s
FINES  FINESS Array B     22.74   5   P      P       08 45 47.5 -1.4
       comp=Z,1.4nm,0.5s,baz=168,slow=11,SNR=13
FINES                                 PcP    PcP     08 49 40.1 -0.3
       comp=Z,0.5nm,0.4s,baz=98,slow=4.2,SNR=4.3
FINES                                 ScP    ScP     08 53 17.5 -0.7
       comp=Z,0.8nm,0.7s,baz=140,slow=4.5,SNR=1.8
       comp=Z,1.4nm,0.5s
NC602  NORSAR Array S     22.79 347   P      P       08 45 50.2 +0.8
NC602                                 IAmb   IAmb    08 45 55.1
       comp=Z,16nm,0.8s
NAO01  NORSAR Array S     23.01 346   P      P       08 45 50.4 -1.3
NC405  NORSAR Array S     23.12 348   P      P       08 45 52.2 -0.6
NB201  NORSAR Array S     23.13 347   P      P       08 45 51.0 -2.0
NB2    NORSAR Subarra     23.14 347   P      P       08 45 53.7 +0.7
       comp=Z,2.2nm,0.5s,baz=159,slow=11
NOA    NORSAR Array B     23.14 347   P      P       08 45 53.3 +0.3
       comp=Z,1.1nm,0.4s,baz=161,slow=10,SNR=22
NOA                                   LR     LR      08 56 17.7
       comp=Z,47nm,20.9s,baz=175,slow=40
       comp=Z,1.1nm,0.4s
NBO00  NORSAR Array S     23.21 346   P      P       08 45 53.0 -0.7
NC303  NORSAR Array S     23.28 347   P      P       08 45 52.1 -2.4
NC303                                 IAmb   IAmb    08 46 02.4
       comp=Z,14nm,0.9s
NC204  NORSAR Array S     23.44 347   P      P       08 45 55.6 -0.5
EKA    Eskdalemuir Ar     23.44 323   P      P       08 45 57.3 +1.2
       comp=Z,2.5nm,0.5s,baz=122,slow=10,SNR=8.1
       comp=Z,2.5nm,0.5s
KLMR   Klimovskoe         24.63  21  eP      P       08 46 06.3 -0.9
KLMR                                  pmax   pmax
       comp=Z,17nm,1.1s
KLMR   Klimovskoe         24.63  21  eP      P       08 46 06.4 -0.8
KLMR                                  AMP            08 46 25.3
       comp=Z,17nm,1.1s
KIRV   Kirov              26.53  33   LR     LR      08 57 37.9
       comp=Z,93nm,20.5s,baz=247,slow=38
AKTO   Aktyubinsk         27.98  54   P      P       08 46 37.6 +0.1
       comp=Z,0.8nm,0.5s,baz=259,slow=3.2,SNR=1.3
AKTO                                  LR     LR      08 59 34.7
       comp=Z,77nm,21.4s,baz=257,slow=40
       comp=Z,0.8nm,0.5s
GEYT   Alibeck            28.39  80   LR     LR      09 00 07.2
       comp=Z,62nm,20.9s,baz=306,slow=41
ARU    Arti               29.88  42   P      P       08 46 55.3 +0.9
ARU                                                  08 47 49.7
ARU                                   S      S       08 51 53.7 +2.3
ARU                                   SS     SnSn    08 53 20.6 -1.2
ARCES  ARCESS Array B     30.78   3   P      P       08 47 01.6 -0.6
       comp=Z,1.1nm,0.5s,baz=191,slow=9.4,SNR=18
ARCES                                 PcP    PcP     08 49 58.5 -0.8
       comp=Z,1.0nm,0.7s,baz=177,slow=2.1,SNR=6.3
       comp=Z,1.1nm,0.5s
ARCES  ARCESS Array B     30.78   3   P      P       08 47 01.6 -0.6
ARCES                                 pmax   pmax
       comp=Z,17nm,1.5s
ARCES  ARCESS Array B     30.78   3   IAmb   IAmb    08 47 06.5
       comp=Z,17nm,1.5s
TORD   Torodi Ar. Bea     31.20 220   P      P       08 47 06.6 +0.2
       comp=Z,2.5nm,0.5s,baz=31,slow=8.8,SNR=26
TORD                                  PcP    PcP     08 50 01.2  0.0
       comp=Z,0.6nm,0.6s,baz=163,slow=1.2,SNR=4.9
       comp=Z,2.5nm,0.5s
WSAR   Wadi Sarin         34.95 106   LR     LR      09 04 05.9
       comp=Z,48nm,20.1s,baz=237,slow=40
JMIC   Jan Mayen          35.75 344   LR     LR      09 03 39.6
       comp=Z,22nm,20.1s,baz=200,slow=38
BORG   Borgarnes          35.98 330   LR     LR      09 02 54.2
       comp=Z,74nm,20.0s,baz=127,slow=37
GAR    Garm               37.40  74   P      P       08 47 60.0 -0.1
AAK    Ala-Archa          39.58  67   LR     LR      09 09 42.8
       comp=Z,58nm,19.1s,baz=308,slow=44
DBIC   Dimbokro           40.08 224   P      P       08 48 23.5 +0.9
       comp=Z,2.2nm,0.5s,baz=15,slow=10,SNR=4.8
DBIC                                  LR     LR      09 04 55.1
       comp=Z,58nm,21.8s,baz=18,slow=36
       comp=Z,2.2nm,0.5s
MBAR   Mbarara            40.15 166   LR     LR      09 06 53.5
       comp=Z,40nm,18.2s,baz=140,slow=39
KURBB  Kurchatov Arra     41.02  54   LR     LR      09 08 29.9
       comp=Z,63nm,18.2s,baz=274,slow=41
KSH    Kashi              41.47  71   P      P       08 48 30.9 -3.2
KSH                                   pP     pP      08 48 35.8 -1.4
KSH                                   PcP    PcP     08 50 31.2 -0.5
KSH                                   pmax   pmax
       comp=Z,9.0nm,0.8s
KMBO   Kilima Mbogo       42.29 157   LR     LR      09 06 52.8
       comp=Z,36nm,18.7s,baz=108,slow=37
MK31   Makanchi Array     44.10  59   P      P       08 48 51.8 -3.4
MK31                                  pmax   pmax
       comp=Z,2.0nm,0.6s
MK31   Makanchi Array     44.10  59   P      P       08 48 51.8 -3.4
MKAR   Makanchi Array     44.10  59   P      P       08 48 55.0 -0.2
       comp=Z,1.2nm,0.4s,baz=277,slow=7.9,SNR=16
MKAR                                  ScP    ScP     08 54 30.6 -1.6
       comp=Z,0.7nm,0.8s,baz=289,slow=3.7,SNR=5.1
MKAR                                  LR     LR      09 09 37.8
       comp=Z,51nm,21.6s,baz=285,slow=39
       comp=Z,1.2nm,0.4s
MKAR   Makanchi Array     44.10  59   P      P       08 48 55.1 -0.1
ZAA0   Zalesovo Array     44.49  49   P      P       08 48 57.0 -1.2
ZAA0                                  IAmb   IAmb    08 49 04.5
       comp=Z,6.1nm,0.7s
ZALV   Zalesovo Beam      44.49  49   P      P       08 48 58.5 +0.3
       comp=Z,4.5nm,0.5s,baz=274,slow=7.9,SNR=16
ZALV                                  LR     LR      09 09 36.9
       comp=Z,63nm,19.1s,baz=319,slow=39
       comp=Z,4.5nm,0.5s
ZALV   Zalesovo Beam      44.49  49   P      P       08 48 57.2 -1.0
ZALV   Zalesovo Beam      44.49  49   P      P       08 48 57.2 -1.0
NRIK   Noril'sk           45.73  27   LR     LR      09 10 00.9
       comp=Z,114nm,21.9s,baz=227,slow=38
SFJD   Kangerlussuaq      48.11 330   LR     LR      09 09 39.2
       comp=Z,79nm,20.4s,baz=104,slow=36
TSUM   Tsumeb             57.91 185   LR     LR      09 17 59.8
       comp=Z,71nm,18.0s,baz=325,slow=39
SCHQ   Schefferville      58.60 317   P      P       08 50 42.8 -0.9
       comp=Z,2.3nm,0.9s,baz=48,slow=5.6,SNR=7.7
       comp=Z,2.3nm,0.9s
SCHQ   Schefferville      58.60 317   IAmb   IAmb    08 50 59.1
       comp=Z,7.5nm,1.4s
LBTB   Lobatse            63.66 176   LR     LR      09 19 58.5
       comp=Z,52nm,18.0s,baz=30,slow=37
BOSA   Boshof             67.23 177   P      P       08 51 42.4 +1.0
       comp=Z,2.8nm,0.6s,baz=354,slow=5.6,SNR=6.7
BOSA                                  LR     LR      09 22 54.5
       comp=Z,32nm,18.1s,baz=16,slow=38
       comp=Z,2.8nm,0.6s
BOSA   Boshof             67.23 177   P      P       08 51 42.4 +1.0
BOSA                                  pmax   pmax
       comp=Z,14nm,1.3s
RCBR   Riachuelo          69.38 244   LR     LR      09 22 27.9
       comp=Z,49nm,18.6s,baz=280,slow=36
BILL   Bilibino           70.11  13  eP      P       08 52 01.2 +2.3
BILL                                 e               08 52 18.8
BILL                                 e               08 54 33.7
BILL                                 ePPP    PPP     08 56 15.7
BILL                                  pmax   pmax
       comp=Z,2.0nm,0.9s
BILL                                  MLR    MLR
       comp=Z,196nm,18.0s
SADO   Sadowa             70.51 312   LR     LR      09 24 03.0
       comp=Z,71nm,18.1s,baz=288,slow=37
SUR    Sutherland         70.91 181   LR     LR      09 24 33.8
       comp=Z,49nm,18.5s,baz=30,slow=37
INK    Inuvik             71.53 351   P      P       08 52 07.2 -0.3
       comp=Z,0.8nm,0.6s,baz=19,slow=4.3,SNR=10
       comp=Z,0.8nm,0.6s
INK    Inuvik             71.53 351   P      P       08 52 07.2 -0.3
INK                                   pmax   pmax
       comp=Z,5.0nm,1.5s
YKA    Yellowknife Ar     73.06 340   P      P       08 52 16.8  0.0
       comp=Z,0.6nm,0.5s,baz=38,slow=5.7,SNR=42
       comp=Z,0.6nm,0.5s
MA2    Magadan            73.25  24   LR     LR      09 27 31.0
       comp=Z,49nm,20.3s,baz=268,slow=38
I29M   Ogilvie Camp,      74.93 351   P      P       08 52 28.4 +0.7
ULM    Lac du Bonnet      75.71 324   P      P       08 52 33.1 +0.7
       comp=Z,1.7nm,0.5s,baz=39,slow=9.6,SNR=2.0
       comp=Z,1.7nm,0.5s
ULM    Lac du Bonnet      75.71 324   P      P       08 52 33.1 +0.7
ULM                                   pmax   pmax
       comp=Z,9.0nm,1.5s
ULM    Lac du Bonnet      75.71 324   IAmb   IAmb    08 52 60.0
       comp=Z,8.8nm,1.5s
ILAR   Eielson Array      76.30 355   P      P       08 52 34.9 -0.6
       comp=Z,0.4nm,0.7s,baz=350,slow=2.9,SNR=8.3
ILAR                                  LR     LR      09 28 38.7
       comp=Z,40nm,18.9s,baz=168,slow=38
       comp=Z,0.4nm,0.7s
DAWY   Dawson             76.31 352   P      P       08 52 36.9 +1.2
DAWY                                  IAmb   IAmb    08 52 37.6
       comp=Z,5.6nm,1.2s
K27K   Chicken            76.63 353   P      P       08 52 38.9 +1.5
K27K                                  IAmb   IAmb    08 52 42.1
       comp=Z,5.8nm,1.1s
SCRK   Sand Creek         76.86 354   P      P       08 52 40.1 +1.3
SCRK                                  IAmb   IAmb    08 52 41.5
       comp=Z,6.2nm,1.4s
M31M   Drury Creek, Y     77.43 349   P      P       08 52 43.6 +1.6
KSRS   Korea Array        78.13  51   P      P       08 52 45.5 -0.7
       comp=Z,0.9nm,0.7s,baz=301,slow=5.7,SNR=2.0
       comp=Z,0.9nm,0.7s
```

BBB	Bella Bella	85.58	342	LR	LR	09 32 29.0	
	comp=Z,61nm,18.3s,baz=307,slow=36						
NEW	Newport	85.86	334	LR	LR	09 33 13.9	
	comp=Z,54nm,18.7s,baz=262,slow=37						
PDAR	Pinedale Array	87.51	326	LR	LR	09 32 48.5	
	comp=Z,28nm,20.9s,baz=16,slow=36						
ELK	Elko	91.56	329	LR	LR	09 36 00.4	
	comp=Z,91nm,18.2s,baz=237,slow=36						
TXAR	Lajitas Array	95.19	314	P	P	08 54 11.1	+0.2
	comp=Z,0.4nm,0.7s,baz=64,slow=5.7,SNR=3.4						
TXAR				LR	LR	09 39 32.8	
	comp=Z,50nm,18.0s,baz=204,slow=37						
	comp=Z,0.4nm,0.7s						
PFO	Pinyon Flats O	98.12	326	LR	LR	09 40 32.1	
	comp=Z,33nm,18.1s,baz=242,slow=36						
WRA	Warramunga Arr	119.59	93	PKP	PKPdf	08 59 34.7	-2.6
	comp=Z,0.2nm,0.4s,baz=316,slow=1.7,SNR=6.5						
ASAR	Alice Springs	121.28	96	PKP	PKPdf	08 59 39.6	-0.9
	comp=Z,0.4nm,0.6s,baz=319,slow=1.7,SNR=6.5						

GEN 04 08:44:37.1, 44°.25N×10°.77E, h18^{km}±1^{km}, Ml0.9, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSCL	Gusciola	0.17	308	P	Pg	08 44 42.3	+0.7
GSCL				S	Sg	08 44 46.2	+1.6
GSCL	Gusciola	0.17	308	P	Pg	08 44 42.3	+0.7
GSCL				S	Sg	08 44 46.2	+1.6
ZCCA	Zocca	0.18	55	P	Pb	08 44 42.2	+0.4
ZCCA				S	Sg	08 44 47.2	+2.3
ZCCA	Zocca	0.18	55	P	Pb	08 44 42.2	+0.4
ZCCA				S	Sg	08 44 47.2	+2.3
FNVD	Fontana Vidola	0.27	108	P	Pb	08 44 44.0	+0.6
FNVD				S	Sb	08 44 49.7	+2.0
FNVD	Fontana Vidola	0.27	108	P	Pb	08 44 44.0	+0.6
FNVD				S	Sb	08 44 49.7	+2.0
SARO	Sassorosso	0.27	256	P	Pb	08 44 44.9	+1.3
SARO				S	Sg	08 44 46.7	-0.7
SARO	Sassorosso	0.27	256	P	Pb	08 44 43.6	0.0
SARO				S	Sg	08 44 46.7	-0.8
MTCR	Monte La Croce	0.28	144	P	Pn	08 44 45.7	-0.7
MTCR				S	Sn	08 44 51.6	-0.6
MTCR	Monte La Croce	0.28	144	P	Pb	08 44 43.8	+0.1
MTCR				S	Sn	08 44 51.8	-0.5
EQUI	Equi	0.45	260	P	Pn	08 44 48.9	+0.1
EQUI				S	Sn	08 44 58.6	+2.1

NOU 04 09:01:18.1, 16°.05S×167°.67E, h19^{km}, ML4.0/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.75	323	P	Pg	09 01 32.7	-0.1
DVP	Devils Point	1.74	164	P	Pn	09 01 47.9	+0.6
KOUNC	Koumac, New Ca	5.51	215	P	Pn	09 02 38.4	-0.8
DZM	Mont Dzumac	6.10	191	P	Pn	09 02 47.6	+0.2

TIR 04 09:04:32.5, 39°.72N×20°.37E, h5^{km}±2^{km}, Md0.4, Ml0.9, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.33	300	P	Pb	09 04 39.9	-1.0
	baz=301						
SRN				S	Sb	09 04 45.6	-0.9
	baz=301						
SRN				AMP			
	comp=N,0.4nm,0.2s,baz=301						
LSK	Leskovik	0.47	22	P	Pg	09 04 41.8	+0.2
	baz=22						
LSK				S	Sb	09 04 49.7	-1.0
	baz=22						
LSK				AMP			
	comp=N,0.7nm,0.3s,baz=22						
FNA	Florina	1.32	36	P	Pn	09 04 57.5	-0.2
	baz=35						
FNA				S	Sn	09 05 16.3	+0.6
	baz=35						
SCTE	Santa Cesarea	1.50	284	S	Sg	09 05 21.9	+1.0
	baz=285						

*ISK **04** 09:06:18.6, 39°.48N×28°.11E, h0^{km}, ML2.0/10, Suspected Mining explosion.*

DDA 04 09:06:17.8±0.0, 39°.46N×28°.16E, h7^{km}±2^{km}, ML1.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	Dursunbey	0.28	60	P	Pg	09 06 23.4	0.0
STEP	BALIKESIR_Sava	0.35	257	P	Pg	09 06 24.9	+0.3
STEP				S	Sg	09 06 30.4	+1.2
STEP				*i* AML	AML	09 06 32.0	
	comp=E,97nm,0.7s						
STEP				*i* AML	AML	09 06 35.0	
	comp=N,113nm,0.6s						
BALY	Balya	0.50	304	P	Pg	09 06 26.6	-0.9
BALY				S	Sg	09 06 35.2	+1.2
SIMA	Simav-Kutahya	0.74	120	PG	Pn	09 06 34.2	-0.6
SIMA				SG	Sn	09 06 45.7	-0.7
KCTX	Karacabey (Bur	0.82	11	PG	Pb	09 06 34.5	+0.1
KCTX				SG	Sb	09 06 45.9	+0.2
BUHA	Balikesir, Bur	0.84	273	P	Pb	09 06 34.3	-0.3
BUHA				S	Sb	09 06 45.5	-0.5
BUHA				*i* AML	AML	09 06 52.0	
	comp=E,33nm,1.1s						
BUHA				*i* AML	AML	09 06 52.0	
	comp=N,28nm,0.9s						
EDC	Edincik	0.92	346	PG	Pg	09 06 35.5	+0.1
SHAP	Saphane-Kutahy	0.94	117	PG	Pn	09 06 37.9	+0.5
TVSB	Tavsanli	1.01	90	PG	Pn	09 06 39.2	+0.7
TVSB				SG	Sn	09 06 54.0	+1.0
ULDT	Uludag	1.02	48	P	Pb	09 06 37.8	-0.1
KULA	Kula-Manisa	1.02	157	PG	Pn	09 06 39.2	+0.6
MDNY	Mudanya-Bursa	1.07	31	PG	Pn	09 06 39.2	0.0
GDZ	Gediz	1.09	109	P	Pg	09 06 38.9	+0.1
GDZ				S	Sn	09 06 54.4	-0.7
GDZ				*i* AML	AML	09 06 59.0	
	comp=E,13nm,0.7s						
GDZ				*i* AML	AML	09 07 00.0	
	comp=N,26nm,0.9s						
KRBG	Karabiga-Canak	1.14	325	PN	Pg	09 06 39.4	-0.3
KRBG				SN	Sn	09 06 56.3	+0.2
MRMT	Marmara Adasi	1.22	340	PN	Pn	09 06 41.8	+0.4
ARMT	Armutlu	1.23	26	PN	Pn	09 06 41.8	+0.3
BAYC	CANAKKALE_Bayr	1.27	283	P	Pn	09 06 41.3	-0.7
BAYC				S	Sn	09 06 59.3	-0.1
BAYC				*i* AML	AML	09 07 02.0	
	comp=N,24nm,0.8s						
BAYC				*i* AML	AML	09 07 04.0	
	comp=E,13nm,0.3s						
ANDZ	Kutahya, Merke	1.35	87	P	Pn	09 06 42.3	-0.8
ANDZ				S	Sn	09 07 01.7	+0.3
GZKV	Gazikoy-Tekird	1.44	334	PN	Pg	09 06 45.2	-0.1
RKY	Sarkoy-Tekirda	1.44	329	PN	Pb	09 06 44.9	-0.1
SART	Tekirdag	1.44	329	P	Pb	09 06 45.0	0.0
MAR3	Marsite Statio	1.44	333	PN	Pg	09 06 45.4	-0.1
GELI	Tayfur-Gelibol	1.60	306	PN	Pn	09 06 46.7	+0.2

*UCR **04** 09:06:23.2±1.8, 8°.25N×82°.87W, h3^{km}±7^{km}, MW3.7*
*UPA **04** 09:06:24.4±2.5, 8°.32N×82°.77W, h10^{km}±5^{km}, MW4.2*

ISC 04 09:06:23.5±1.1, 8°.30N±0°.05×82°.78W±0°.03, h16^{km}±7^{km}, n39, σ1^{s}.10/62, 3C-9D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.10	356	⇓*i*P	Pg	09 06 27.4	+0.4
CCOL	Caracol de Cor	0.21	299	*e*P	Pg	09 06 28.4	0.0
BAGA3	Bagala, Chiriq	0.30	57	⇓*i*P	Pb	09 06 31.1	+0.5
DVD	David	0.35	68	⇑*i*P	Pb	09 06 31.5	0.0
DVD				*e*S	Sb	09 06 38.1	+1.3
PEDE3	Pedregal, Chir	0.37	77	⇓*i*P	Pb	09 06 31.5	-0.2
LOMA3	Las Lomas, Chi	0.41	72	⇓*i*P	Pb	09 06 32.2	-0.2
LOMA3				*e*S	Sb	09 06 38.5	+0.1
CHIR3	Chiriqui UPA,	0.46	78	⇓*i*P	Pb	09 06 32.8	-0.4
CHIR3				*e*S	Sb	09 06 40.4	+0.6
BCO2	Palmira	0.48	31	⇓*i*P	Pb	09 06 34.2	+0.4
BCO2				*e*S	Sb	09 06 41.6	+0.8
MLIR3	Monte Lirio, C	0.49	355	*e*P	Pb	09 06 34.5	+0.7
BRU2	Volcan	0.50	11	*e*P	Pb	09 06 34.2	+0.2
BRU2	Volcan	0.50	11	⇓*i*P	Pb	09 06 34.3	+0.2
BRU2				*e*S	Sb	09 06 43.2	+2.1
BC3P	Paso Ancho	0.54	18	⇓*i*P	Pb	09 06 34.9	+0.1
BC3P				*e*S	Sb	09 06 43.6	+1.3
EDSV	San Vito	0.55	340	*e*P	Pb	09 06 34.8	-0.1
EDSV				*e*S	Sb	09 06 44.4	+1.9
LNBQ3	Los Naranjos,	0.59	35	⇓*e*P	Pb	09 06 35.4	-0.2
LNBQ3				*e*S	Sb	09 06 43.4	-0.5
CHGR2	Aguacate	0.89	45	⇑*e*P	Pb	09 06 40.2	-0.5
CHGR2				*e*S	Sb	09 06 52.7	+0.3
EDPN	Palmar Norte	0.94	315	*e*P	Pg	09 06 39.9	-1.8
EDPN				*e*S	Sb	09 06 53.8	+0.2
REME3	Remedios, Chir	0.94	94	*e*P	Pg	09 06 40.1	-1.8
REME3				*e*S	Sg	09 06 53.0	-1.2
EDBA	Buenos Aires	0.98	330	*e*P	Pb	09 06 42.2	-0.1
EDBA				*e*S	Sn	09 06 57.4	+0.9
DRK0	Durika	1.06	334	*e*P	Pg	09 06 42.6	-1.4
DRK0	Durika	1.06	334	*e*P	Pg	09 06 42.6	-1.4
DRK0				*e*S	Sb	09 06 57.8	+0.5
CNI2	El Empalme, Bo	1.16	15	*e*P	Pn	09 06 45.1	0.0
CNI2				*e*S	Sb	09 07 00.2	+0.2
PEZE	Perez Zeledon,	1.39	321	*e*P	Pg	09 06 48.0	-2.4
PEZE				*e*S	Sn	09 07 07.6	+1.0
EDDO	Dominical	1.43	312	*e*P	Pn	09 06 49.7	+0.9
RIMA	Rio Macho	1.80	324	*e*P	Pn	09 06 54.3	+0.1
LCR2	La Lucha 2	1.87	320	*e*P	Pn	09 06 55.3	+0.2
BATAN	Batan	1.88	342	*e*P	Pb	09 06 57.4	-0.1
CACAO	El Cacao, Vera	2.13	116	*e*P	Pn	09 06 59.1	+0.6
CACAO				*e*S	Sn	09 07 27.6	+2.9
HDC	Heredia	2.14	322	*e*P	Pb	09 07 02.1	+0.1
HDC				*e*S	Sg	09 07 30.8	-1.6
JACO	JACO, Garabito	2.29	306	*e*P	Pn	09 07 00.2	-0.6
CHIT3	Chitre	2.37	98	*e*P	Pn	09 07 02.6	+0.9
CHIT3				*e*S	Sn	09 07 31.8	+1.3
PNME	Penonome	2.44	86	*e*P	Pg	09 07 08.8	-1.5
PNME				*e*S	Sn	09 07 30.7	-1.6
SRA1	San Ramn	2.44	317	*e*P	Pn	09 07 03.3	+0.4
AZU	Azuero	2.54	101	*e*P	Pn	09 07 05.1	+1.0
AZU				*e*S	Sn	09 07 34.0	-0.6
LAFE	Finca La Fe, P	2.58	306	*e*P	Pn	09 07 04.7	0.0
JTS	Las Juntas de	2.91	313	*e*P	Pn	09 07 09.9	+0.6
JTS	Las Juntas de	2.91	313	*e*P	Pn	09 07 11.8	+2.4
JTS				*e*S	Sn	09 07 44.6	+0.5
BCIP	Isla Barro Col	3.04	73	*e*P	Pn	09 07 12.5	+1.5
BCIP				*e*S	Sn	09 07 48.8	+1.8
GAMB1	Gamboa	3.15	75	⇑*e*P	Pb	09 07 20.3	+1.2
GAMB1				*e*S	Sb	09 07 55.9	-1.4
SAJU	San Juanillo,	3.38	301	*e*P	Pn	09 07 15.7	-0.1

*IDC **04** 09:23:59.6±0.8, 23°.26N×103°.23E, h0^{km}, mb4.0/10, mbtmp4.0/11, ML4.7/1, MS3.9/51, Error ellipse: s-maj=24.7km s-min=14.2km az=81.0*
*BJI **04** 09:24:00.3±0.0, 23°.27N×103°.22E, h10^{km}, mb4.3/38, mB4.6/19, ML4.5/9, Ms4.8/53, Ms7 4.4/47*
*NEIC **04** 09:24:02.6±1.2, 23°.25N±0°.07×103°.30E±0°.07, h15^{km}±4^{km}, mb4.5/42, Error ellipse: s-maj=9.9km s-min=9.7km az=92.0*

ISC 04 09:24:00.8±0.4, 23°.28N±0°.03×103°.27E±0°.04, h10^{km}, n126, σ1^{s}.52/99, mb4.4/29, MS3.9/53, 2C-6D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	1.90	345	⇓Pn	Pn	09 24 34.0	+0.5
KMI				Pg	Pb	09 24 35.8	+0.1
KMI				Sg	Sg	09 25 02.7	+0.8
KMI				smax	smax		
	comp=N,3µm,1.0s						
KMI				smax	smax		
	comp=E,5µm,1.0s						
PZH	PanZhiHua	3.50	337	Pn	Pn	09 24 54.9	-0.5
PZH				Pg	Pg	09 25 05.3	-2.5
PZH				Sn	Sn	09 25 36.0	-0.9
PZH				Sg	Sg	09 25 50.8	-2.3
PZH				smax	smax		
	comp=N,450nm,1.0s						
PZH				smax	smax		
	comp=E,560nm,1.0s						
PZH				LR	LR		
	comp=N,4µm,5.5s						
PZH				LR	LR		
	comp=E,5µm,6.0s						
PZH				LR	LR		
	comp=Z,3µm,7.5s						
GYA	Guiyang	4.42	44	⇓Pn	Pn	09 25 08.0	-0.1
GYA				Pg	Pg	09 25 23.3	-2.2
GYA				Sn	Sn	09 25 57.8	-1.9
GYA				Sg	Sg	09 26 21.2	-1.6
GYA				smax	smax		
	comp=N,620nm,1.0s						
GYA				smax	smax		
	comp=E,540nm,1.1s						
GYA				LR	LR		
	comp=N,2µm,3.8s						
GYA				LR	LR		
	comp=E,2µm,3.8s						
GYA				LR	LR		
	comp=Z,2µm,4.2s						
CHTO	Chiang Mai	6.00	223	Pn	Pn	09 25 30.8	+1.0
CHTO				Sn	Sn	09 26 36.7	-1.9
CM31	Chiang Mai Arr	6.27	221		Pn	09 25 34.1	+0.6
CMAR	Chiang Mai Arr	6.27	221	Pn	Pn	09 25 34.0	+0.6
	4.6nm,0.3s,baz=34,slow=12,SNR=18						
CMAR				Pg	Pg	09 25 55.1	-5.9
	1.6nm,0.3s,baz=32,slow=18,SNR=30						
CMAR				Lg	Lg	09 27 14.6	
	baz=56,slow=32						
CMAR				LR	LR	09 28 13.8	
	comp=Z,1µm,18.0s,baz=50,slow=41						
	3.3nm,0.4s						
GULI	GuiLin	6.78	71	⇓Pn	Pn	09 25 39.3	-1.1
QIZ	Qiongzhong	7.45	123	Pn	Pn	09 25 49.1	-0.5
QIZ	Qiongzhong	7.45	123	⇓*i*Pn	Pn	09 25 49.0	-0.6
QIZ				Sn	Sn	09 27 13.9	-0.4
QIZ				LR	LR		
	comp=N,4µm,12.7s						
QIZ				LR	LR		
	comp=E,3µm,11.9s						
QIZ				LR	LR		
	comp=Z,840nm,11.5s						
CD2	Chengdu	7.61	3	Pn	Pn	09 25 53.3	+1.4
CD2				Sn	Sn	09 27 15.4	-2.9
CD2				smax	smax		
	comp=E,190nm,0.8s						
CD2				LR	LR		
	comp=E,7µm,5.7s						
CD2				LR	LR		
	comp=Z,2µm,6.6s						
ENH	Enshi	8.91	37	Pn	Pn	09 26 10.1	+0.5
CNSH	ChangSha	9.98	59	⇓P	Pn	09 26 21.5	-2.9
CNSH				S	Sn	09 28 15.6	-0.9
CNSH				smax	smax		
	comp=N,280nm,1.0s						
CNSH				smax	smax		
	comp=E,200nm,0.9s						
HKPS	Hong Kong Po S	10.08	94	Pn	Pn	09 26 25.3	-0.4
SHL	Shillong	10.62	285	Pn	Pn	09 26 33.4	+0.2
XAN	Xi'an	11.81	24	Pn	Pn	09 26 47.0	-2.4
XAN				Sn	Sn	09 28 51.8	-10
XAN				smax	smax		
	comp=N,93nm,1.6s						
XAN				smax	smax		
	comp=E,120nm,1.6s						
XAN				LR	LR		
	comp=N,5µm,12.4s						
XAN				LR	LR		
	comp=E,7µm,12.1s						
XAN				LR	LR		
	comp=Z,2µm,10.3s						
WHN	Wuhan	12.25	51	⇓P	Pn	09 26 55.0	-0.3
WHN				S	Sn	09 29 10.8	-1.1
WHN				LR	LR		
	comp=Z,4µm,7.1s						
WHN				LR	LR		
	comp=Z,2µm,7.1s						
WHN				LR	LR		
	comp=Z,3µm,6.3s						
LZH	Lanzhou	12.77	2	*e*P	Pn	09 27 07.3	+4.6
LZH				pP		09 27 11.0	
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				LR	LR		
	comp=Z,1µm,8.7s						
LZH				LR	LR		
	comp=Z,3µm,8.1s						
LZH				LR	LR		
	comp=Z,1µm,8.7s						
LYN	LuoYang	13.81	34	*e*P	Pn	09 27 20.5	+3.8
LYN				S	Sn	09 29 57.1	+6.9
LYN				LR	LR		
	comp=Z,3µm,9.6s						
LYN				LR	LR		
	comp=Z,4µm,9.7s						
LYN				LR	LR		
	comp=Z,2µm,8.8s						
GOMU	GeErMu	14.81	332	P	Pn	09 27 30.6	-0.1
GOMU				pP	P	09 27 32.8	-3.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,72nm,4.6s						
GOMU				LR	LR		
	comp=Z,630nm,11.2s						
GOMU				LR	LR		
	comp=Z,2µm,11.9s						
GOMU				LR	LR		
	comp=Z,660nm,11.0s						
NJ2	Nanjing	16.33	54	*e*P	Pn	09 27 51.0	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				LR	LR		
	comp=Z,1µm,6.6s						
NJ2				LR	LR		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=Z,1µm,9.5s						
GTA	Gaotai	16.35	350	*e*P	P	09 27 53.9	+0.4
GTA				pP	sP	09 27 58.0	-0.1
GTA				sP	pP	09 28 01.2	+4.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,100nm,4.4s						
GTA				LR	LR		
	comp=Z,790nm,10.8s						
GTA				LR	LR		
	comp=Z,710nm,8.0s						
GTA				LR	LR		
	comp=Z,750nm,10.0s						
HNS	HongShan	17.17	32	⇑P	P	09 28 03.9	+1.5
HNS				S	Sn	09 31 11.2	-0.6
HNS				pmax	pmax		
	comp=Z,18nm,1.5s						
HNS				LR	LR		
	comp=Z,1µm,10.4s						
HNS				LR	LR		
	comp=Z,2µm,10.4s						
HNS				LR	LR		
	comp=Z,680nm,9.4s						
TIA	Tai'an	17.61	40	⇑P	Pn	09 28 05.9	-0.4
TIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TIA				LR	LR		
	comp=Z,730nm,15.5s						
TIA				LR	LR		
	comp=Z,1µm,16.3s						
TIA				LR	LR		
	comp=Z,710nm,8.3s						
BTO	Baotou	18.19	17	*e*P	Pn	09 28 12.1	-1.4
BTO				S	S	09 31 40.3	-1.8
BTO				LR	LR		
	comp=Z,4µm,12.1s						
BTO				LR	LR		
	comp=Z,9µm,14.9s						
IPM	Ipoh	18.82	187	P	P	09 28 20.1	-0.6
IPM				IAmb	IAmb	09 28 23.2	
	comp=Z,45nm,1.8s						
LHMI	Lhok Sumawe	18.95	200	P	P	09 28 21.6	-0.6
BJT	Baijiatuau	19.94	30	P	Pn	09 28 33.9	-0.6
BJT				IAmb	IAmb	09 28 35.8	
	comp=Z,17nm,1.2s						
BJI	Beijing	19.96	30	P	Pn	09 28 34.9	+0.1
BJI				pmax	pmax		
	comp=Z,13nm,1.3s						
BJI				LR	LR		
	comp=Z,690nm,9.0s						
BJI				LR	LR		
	comp=Z,680nm,11.0s						
BJI				LR	LR		
	comp=Z,680nm,11.7s						
PSI	Prapat	20.79	192	P	Pn	09 28 44.4	-0.4
	comp=Z,2.9nm,0.4s,baz=7.9,slow=10,SNR=10						
PSI				LR	LR	09 37 49.3	
	comp=Z,217nm,20.5s,baz=332,slow=40						
	comp=Z,2.9nm,0.4s						
RPSI	Rantau Prapat	20.89	192	P	Pn	09 28 44.4	-1.4
DL2	Dalian	22.07	41	P	P	09 28 54.6	-1.3
DL2				S	S	09 33 02.7	+3.5
DL2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DL2				pmax	pmax		
	comp=Z,64nm,4.0s						
DL2				LR	LR		
	comp=Z,380nm,10.4s						
DL2				LR	LR		
	comp=Z,410nm,7.8s						
DL2				LR	LR		
	comp=Z,450nm,11.8s						
SBUM	Sibu	22.45	156	P	P	09 28 58.4	-1.7
GSI	Gunungsitoli	22.53	195	P	P	09 28 60.0	-1.0
GSI				IAmb	IAmb	09 29 05.7	
	comp=Z,36nm,1.4s						
KSM	Kuching	22.73	162	P	P	09 29 01.1	-2.0
JOW	Kunigami	22.92	76	LR	LR	09 38 41.7	
	comp=Z,463nm,19.3s,baz=238,slow=38						
XLT	XiLinHaoTe	23.12	24	*e*P	P	09 29 10.5	+3.5
XLT				pP	sP	09 29 15.3	+3.5
XLT				sP	pP	09 29 18.1	+7.8
XLT				S	S	09 33 18.8	+0.4
XLT				sS	sS	09 33 24.8	+0.7
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,130nm,4.9s						
XLT				LR	LR		
	comp=Z,3µm,13.0s						
XLT				LR	LR		
	comp=Z,640nm,12.5s						
MYLDM	Lahad Datu	23.23	138	P	P	09 29 08.4	+0.1
MYLDM				IAmb	IAmb	09 29 40.5	
	comp=Z,16nm,1.2s						
WMQ	Urumqi	24.17	332	*e*P	P	09 29 16.9	-0.4
WMQ				S	S	09 33 30.2	-5.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				LR	LR		
	comp=Z,690nm,12.5s						
WMQ				LR	LR		
	comp=Z,730nm,11.3s						
SONM	Songino Array	24.63	5	LR	LR	09 40 25.6	
	comp=Z,264nm,20.5s,baz=273,slow=40						
SONM	Songino Array	24.63	5	P	P	09 29 21.9	+0.3
SONM				IAmb	IAmb	09 29 33.7	
	comp=Z,7.8nm,1.1s						
ULN	Ulaanbaatar	24.72	6	P	P	09 29 21.4	-0.9
ULN				IAmb	IAmb	09 30 11.1	
	comp=Z,10nm,1.3s						
KSRS	Korea Array	25.44	51	LR	LR	09 40 41.5	
	comp=Z,381nm,18.2s,baz=230,slow=39						
DAV	Davao City (W)	26.83	123	LR	LR	09 39 54.1	
	comp=Z,115nm,18.7s,baz=283,slow=36						
PALK	Pallekele	26.89	237	LR	LR	09 41 20.6	
	comp=Z,110nm,18.4s,baz=161,slow=39						
PALK	Pallekele	26.89	237	P	P	09 29 43.4	+1.2
PALK				IAmb	IAmb	09 29 48.8	
	comp=Z,40nm,1.9s						
TARG	Taragay, Kyrgy	28.11	317	P	P	09 29 54.1	+0.7
NIL	Nilore	28.25	298	P	P	09 29 55.0	+0.8
KDJ	Kajisay	28.72	317	P	P	09 29 58.9	+0.4
MK31	Makanchi Array	28.90	329	P	P	09 30 00.2	+0.3
MKAR	Makanchi Array	28.90	329	P	P	09 30 01.0	+1.1
	comp=Z,3.0nm,0.8s,baz=134,slow=8.7,SNR=25						
MKAR				LR	LR	09 42 42.1	
	comp=Z,187nm,18.2s,baz=145,slow=39						
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	28.90	329	P	P	09 30 00.1	+0.2
MAKZ	Makanchi	29.06	329	P	P	09 30 02.4	+1.2
BOOM	Boomskoye usch	29.69	317	P	P	09 30 08.0	+0.9

BOOM				IAmb	IAmb	09 30 52.6	
	comp=Z,8.3nm,1.5s						
LEM	Lembang	30.22	171	LR	LR	09 44 25.0	
	comp=Z,367nm,18.6s,baz=350,slow=41						
AAK	Ala-Archa	30.68	316	P	P	09 30 16.9	+1.0
AAK				IAmb	IAmb	09 30 28.6	
	comp=Z,13nm,1.9s						
LUWI	Luwuk	30.73	139	P	P	09 30 17.4	+1.1
USRK	Ussuriysk Ar.	31.46	41	LR	LR	09 43 42.7	
	comp=Z,247nm,18.6s,baz=228,slow=38						
KBL	Kabul	31.85	298	P	P	09 30 26.6	+0.3
KBL				IAmb	IAmb	09 30 31.3	
	comp=Z,4.5nm,0.6s						
GAR	Garm	32.05	307	P	P	09 30 28.4	+0.5
GAR				IAmb	IAmb	09 30 45.7	
	comp=Z,6.1nm,0.9s						
BTK	Batken	32.06	309	P	P	09 30 29.1	+1.1
BTK				IAmb	IAmb	09 30 42.5	
	comp=Z,5.0nm,1.1s						
KAPI	Kappang	32.40	148	LR	LR	09 45 11.5	
	comp=Z,93nm,18.1s,baz=322,slow=39						
CHGR	Chuyangaron	32.80	306	P	P	09 30 35.7	+1.2
MJAR	Matsushiro Arr	32.86	58	LR	LR	09 45 29.3	
	comp=Z,223nm,18.8s,baz=247,slow=39						
KURBB	Kurchatov Arra	33.39	331	P	P	09 30 39.8	+0.5
	comp=Z,1.4nm,0.7s,baz=146,slow=8.5,SNR=21						
KURBB				LR	LR	09 45 27.0	
	comp=Z,317nm,19.1s,baz=116,slow=39						
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	33.42	331	P	P	09 30 39.8	+0.3
ZAA0	Zalesovo Array	33.63	340	P	P	09 30 42.2	+0.8
ZALV	Zalesovo Beam	33.63	340	P	P	09 30 42.2	+0.8
	comp=Z,2.0nm,0.6s,baz=153,slow=10.0,SNR=9.2						
ZALV				LR	LR	09 44 48.0	
	comp=Z,263nm,18.3s,baz=144,slow=37						
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	33.63	340	P	P	09 30 42.5	+1.1
KLR	Kul'dur	34.25	34	LR	LR	09 46 39.2	
	comp=Z,201nm,19.2s,baz=230,slow=40						
JCJ	Chichijima	35.33	76	LR	LR	09 43 55.5	
	comp=Z,98nm,21.3s,baz=140,slow=34						
MMRI	Maumere	36.75	148	P	P	09 31 08.5	-0.1
ASAJ	Asahikawa	38.29	47	LR	LR	09 47 36.2	
	comp=Z,96nm,19.1s,baz=14,slow=37						
BRVK	Borovoye	38.84	328	P	P	09 31 27.1	+1.1
GUMO	Guam	40.50	96	LR	LR	09 48 21.3	
	comp=Z,75nm,20.4s,baz=188,slow=36						
WSAR	Wadi Sarin	40.88	279	LR	LR	09 50 09.5	
	comp=Z,125nm,21.4s,baz=112,slow=38						
GEYT	Alibeck	41.12	302	P	P	09 31 46.0	+0.9
GEYT				IAmb	IAmb	09 31 50.9	
	comp=Z,5.7nm,0.9s						
GYA0B	ALIBECK ARRAY	41.12	302	P	P	09 31 46.1	+1.0
GYA0B				IAmb	IAmb	09 31 49.0	
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	42.68	318	P	P	09 31 58.2	+0.6
AKTO	Aktyubinsk	44.27	319	P	P	09 32 09.9	-0.5
	comp=Z,1.1nm,0.6s,baz=106,slow=3.7,SNR=4.7						
AKTO				LR	LR	09 52 40.5	
	comp=Z,278nm,18.6s,baz=121,slow=39						
	comp=Z,1.1nm,0.6s						
KNRA	Kununurra	46.05	145	P	P	09 32 25.2	+0.3
ARU	Arti	46.38	327	P	P	09 32 28.3	+1.2
FITZ	Fitzroy Crossi	46.57	150	LR	LR	09 55 09.2	
	comp=Z,104nm,18.7s,baz=146,slow=40						
NRIK	Noril'sk	47.03	352	P	P	09 32 32.2	+0.1
	comp=Z,4.5nm,0.8s,baz=144,slow=5.0,SNR=8.9						
NRIK				LR	LR	09 53 22.7	
	comp=Z,233nm,18.1s,baz=178,slow=38						
	comp=Z,4.5nm,0.8s						
NRIK	Noril'sk	47.03	352	P	P	09 32 33.4	+1.3
NRIK				IAmb	IAmb	09 34 15.4	
	comp=Z,6.2nm,0.8s						
PSA00	Pilbara Seismi	47.42	159	P	P	09 32 36.1	+0.6
MA2	Magadan	49.12	30	LR	LR	09 54 26.8	
	comp=Z,77nm,18.7s,baz=258,slow=37						
MA2	Magadan	49.12	30	P	P	09 32 49.1	+0.8
MA2				IAmb	IAmb	09 32 50.5	
	comp=Z,7.7nm,1.3s						
PETK	Petropavlovsk-	50.51	39	LR	LR	09 55 04.7	
	comp=Z,175nm,20.1s,baz=249,slow=37						
TIXI	Tiksi	50.55	10	P	P	09 32 59.2	+0.2
KIRV	Kirov	51.77	327	LR	LR	09 57 10.0	
	comp=Z,94nm,20.3s,baz=112,slow=38						
WRAB	Tennant Creek	52.57	142	P	P	09 33 15.7	+0.8
WRAB				IAmb	IAmb	09 34 05.6	
	comp=Z,24nm,1.6s						
WRA	Warramunga Arr	52.58	142	P	P	09 33 14.9	+0.1
	comp=Z,4.2nm,0.8s,baz=329,slow=8.5,SNR=28						
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	52.58	142	P	P	09 33 14.6	-0.3
WB2	Warramunga Arr	52.58	142	P	P	09 33 15.7	+0.8
WB2				IAmb	IAmb	09 33 18.4	
	comp=Z,10.0nm,1.1s						
WR0	Warramunga Arr	52.70	142	P	P	09 33 16.2	+0.4
WR0				IAmb	IAmb	09 33 16.9	
	comp=Z,6.6nm,0.8s						
ASAR	Alice Springs	55.35	145	P	P	09 33 35.5	+0.4
	comp=Z,1.6nm,0.9s,baz=338,slow=7.1,SNR=13						
	comp=Z,1.6nm,0.9s						
ASAR	Alice Springs	55.35	145	P	P	09 33 35.4	+0.3
ATD	Arta Tunnel	58.47	269	LR	LR	09 57 33.7	
	comp=Z,51nm,20.4s,baz=34,slow=34						
SHEM	Shemya Is, Ala	60.29	41	LR	LR	10 00 55.6	
	comp=Z,57nm,19.9s,baz=324,slow=37						
ARCES	ARCESS Array B	64.12	338	LR	LR	10 05 43.6	
	comp=Z,108nm,18.4s,baz=86,slow=39						
MLR	Muntele Rosu	65.08	311	LR	LR	10 05 51.5	
	comp=Z,91nm,21.5s,baz=92,slow=39						
SPITS	Spitsbergen Ar	66.75	347	LR	LR	10 08 01.8	
	comp=Z,113nm,18.9s,baz=220,slow=40						
IDI	Anoyia	67.82	300	LR	LR	10 06 58.6	
	comp=Z,36nm,21.6s,baz=80,slow=38						
KMBO	Kilima Mbogo	68.53	259	LR	LR	10 07 12.5	
	comp=Z,49nm,18.1s,baz=70,slow=38						
HFS	Hagfors	69.90	328	LR	LR	10 08 03.6	
	comp=Z,90nm,19.4s,baz=81,slow=38						
VRAC	Vranov	70.61	316	LR	LR	10 09 19.8	
	comp=Z,68nm,20.2s,baz=69,slow=38						
NOA	NORSAR Array B	70.90	329	P	P	09 35 16.9	-1.0
	comp=Z,0.5nm,0.6s,baz=77,slow=6.4,SNR=2.3						
NOA				LR	LR	10 09 11.7	
	comp=Z,56nm,18.5s,baz=65,slow=38						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	72.56	316	LR	LR	10 10 48.9	
	comp=Z,88nm,19.7s,baz=80,slow=39						
MBAR	Mbarara	74.22	262	LR	LR	10 11 53.4	
	comp=Z,55nm,18.1s,baz=99,slow=39						
JMIC	Jan Mayen	74.96	342	LR	LR	10 12 09.5	
	comp=Z,50nm,20.0s,baz=76,slow=39						
DAVOX	Davos/Dischmat	75.63	315	LR	LR	10 14 24.2	
	comp=Z,63nm,18.4s,baz=82,slow=40						
BMAR	Burnt Mountain	76.78	22	P	P	09 35 53.5	+1.1
KDAK	Kodiak Island	77.80	32	LR	LR	10 16 49.9	
	comp=Z,83nm,18.1s,baz=266,slow=41						
INK	Inuvik	79.77	18	LR	LR	10 17 55.8	
	comp=Z,52nm,18.1s,baz=327,slow=41						
EKA	Eskdalemuir Ar	79.98	326	LR	LR	10 16 23.7	
	comp=Z,95nm,18.6s,baz=2.0,slow=39						
DAWY	Dawson	80.37	23	P	P	09 36 12.6	+0.4
DAWY				IAmb	IAmb	09 38 08.7	
	comp=Z,16nm,2.0s						
BORG	Borgarnes	82.47	339	LR	LR	10 16 02.1	
	comp=Z,36nm,18.1s,baz=15,slow=38						
LSZ	Lusaka	82.78	250	LR	LR	10 12 53.2	
	comp=Z,69nm,18.1s,baz=152,slow=36						
ESDC	Sonseca Array	87.73	312	LR	LR	10 20 16.0	
	comp=Z,34nm,21.4s,baz=92,slow=38						
SFJD	Kangerlussuaq	87.89	350	LR	LR	10 20 36.2	
	comp=Z,108nm,19.8s,baz=24,slow=39						
LBTB	Lobatse	89.26	242	LR	LR	10 18 23.8	
	comp=Z,29nm,19.1s,baz=87,slow=37						
YKA	Yellowknife Ar	89.37	17	P	P	09 36 58.5	+1.1
	comp=Z,0.2nm,0.8s,baz=332,slow=4.6,SNR=3.3						
	comp=Z,0.2nm,0.8s						
BOSA	Boshof	91.11	239	LR	LR	10 16 45.8	
	comp=Z,41nm,20.2s,baz=87,slow=35						
FRB	Frobisher Bay	93.03	356	LR	LR	10 22 24.3	
	comp=Z,55nm,18.3s,baz=34,slow=38						
TSUM	Tsumeb	93.62	251	LR	LR	10 19 49.1	
	comp=Z,45nm,18.1s,baz=101,slow=36						
SUR	Sutherland	96.16	238	LR	LR	10 19 33.5	
	comp=Z,54nm,18.2s,baz=108,slow=35						

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*IDC **04** 09:39:31.3±1.5, 1°.76S×115°.49E, h0^{km}, mb3.8/6, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=146.2km s-min=16.8km az=55.0*

*DJA **04** 09:39:35.9±1.9, 1°S±4°×11°6E±°, h17^{km}±17^{km}, M4.1/12, mb4.1/5, mB4.8/2, MLv4.2/12, Mw(mB)4.0/2*

ISC 04 09:39:34.0±0.8, **1°.48S**±0°.07×**115°.88E**±0°.06, **h10^{km}, n17,** σ**1ˢ41**/20, **mb3.8**/6, **Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTKI	Muara Teweh, K	1.12	299	P	Pg	09 39 55.1	-0.4
MTKI				S	Sb	09 40 10.8	+0.8
BBKI	Banjar Baru	2.23	208	P	Pn	09 40 10.9	-0.1
BBKI				S	Sn	09 40 39.4	+0.9
TTSI	Tana Toraja	4.23	112	P	Pn	09 40 42.1	+3.5
PBKI	Pangkalan Bun	4.38	254	P	Pn	09 40 41.6	+1.0
MPSI	Mapaga	4.41	66	P	Pn	09 40 41.7	+0.7
SPSI	Sidrap Palu	4.60	122	P	Pn	09 40 44.3	+0.6
STKI	Sintang	4.66	289	P	Pn	09 40 45.3	+0.8
KAPI	Kappang	5.22	132	Pn	Pn	09 40 52.8	+0.6
	2.3nm,0.3s,baz=265,slow=5.1,SNR=4.4						
KAPI				Sn	Sn	09 41 51.1	-1.4
	2.4nm,0.3s,baz=88,slow=18,SNR=1.9						
	5.9nm,0.3s						
BKSI	Bulukumba	5.70	132	P	Pn	09 41 01.0	+2.2
	0.2nm564nm32nm,0.5s						
MRSI	Marisa	6.37	72	P	Pn	09 41 09.2	+1.3
	0.1nm838nm22nm,0.8s						
GTOI	Gorontalo	7.43	74	P	Pn	09 41 24.7	+2.1
WRA	Warramunga Arr	25.74	137	P	P	09 45 04.1	-0.9
	1.5nm,0.5s,baz=314,slow=11,SNR=28						
	1.5nm,0.5s						
ASAR	Alice Springs	28.14	143	P	P	09 45 25.7	-0.9
	0.5nm,0.5s,baz=316,slow=8.2,SNR=14						
	0.5nm,0.5s						
STKA	Stephens Creek	38.76	144	P	P	09 46 57.8	-1.0
	1.8nm,0.7s,baz=340,slow=10,SNR=4.9						
	1.8nm,0.7s						
MKAR	Makanchi Array	56.39	333	P	P	09 49 15.6	0.0
	0.5nm,0.6s,baz=142,slow=7.4,SNR=7.3						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	60.89	334	P	P	09 49 46.0	-0.8
	0.4nm,0.8s,baz=128,slow=6.2,SNR=4.3						
	0.4nm,0.8s						
ZALV	Zalesovo Beam	60.95	340	P	P	09 49 46.4	-0.8
	1.1nm,0.5s,baz=136,slow=5.7,SNR=5.9						
	1.1nm,0.5s						

IDC 04 09:45:13.7±2.6, **3°.21S**×**151°.31E, h0^{km}, mb3.7**/3, **mbtmp3.8**/3, **MS4.4**/1, **Error ellipse: s-maj=50.0km s-min=23.2km az=35.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.30	147	Pn	Pn	09 45 39.2	0.0
	112nm,0.3s,baz=256,slow=1.7,SNR=201						
KRVT				Sn	Sn	09 45 58.5	+1.1
	530nm,0.3s,baz=99,slow=21,SNR=16						
WRA	Warramunga Arr	23.47	224	P	P	09 50 24.9	-0.4
	1.0nm,0.4s,baz=49,slow=9.4,SNR=22						
	1.0nm,0.4s						
ASAR	Alice Springs	26.40	218	P	P	09 50 52.6	+0.5
	0.2nm,0.3s,baz=47,slow=8.4,SNR=3.0						
	0.2nm,0.3s						
FITZ	Fitzroy Crossi	29.18	238	P	P	09 51 17.3	+0.2
	1.7nm,0.7s,baz=80,slow=6.1,SNR=2.2						
	1.7nm,0.7s						
RAO	Raoul Island	39.04	135	LR	LR	10 05 14.3	
	comp=Z,530nm,21.1s,baz=127,slow=31						
TORD	Torodi Ar. Bea	148.39	290	PKPbc	PKPbc	10 05 02.5	-0.9
	0.3nm,0.4s,baz=51,slow=2.1,SNR=2.0						

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*MOS **04** 09:51:48.3±0.8, 38°.13N×74°.25E, h172^{km}, mb4.3/11, Error ellipse: s-maj=7.7km s-min=4.0km az=85.5*

*IDC **04** 09:51:48.0±1.9, 38°.10N×74°.32E, h155^{km}±16^{km}, mb3.9/20, mbtmp4.4/26, MS3.4/4, Error ellipse: s-maj=13.1km s-min=11.3km az=40.0*

*SOME **04** 09:51:48.5, 38°.28N×74°.27E, h0^{km}*

*BJI **04** 09:51:49.0±0.0, 38°.26N×74°.35E, h166^{km}, mb4.5/17, mB4.5/9*

*NEIC **04** 09:51:49.8±1.8, 38°.19N±0°.06×74°.18E±0°.07, h166^{km}±4^{km}, mb4.3/35, Error ellipse: s-maj=9.0km s-min=7.7km az=135.0*

*NNC **04** 09:51:52.3±1.4, 38°.50N×74°.06E, h200^{km}±16^{km}, mb3.8, mpv4.8, Error ellipse: s-maj=15.1km s-min=10.9km az=9.0*

ISC 04 09:51:48.5±0.4, **38°.15N**±0°.03×**74°.24E**±0°.04, **h161^{km}**±4^{km}, **h161^{km}:pP-P, n230,** σ**1ˢ89**/268, **mb4.2**/44, **13C-21D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.92	44	P	Pn	09 52 21.3	-2.2
KSH				S	Sn	09 52 43.3	-7.3
KSH				smax	smax		
	comp=N,13μm,0.5s						
KSH				smax	smax		
	comp=E,4μm,0.5s						
DRK	Karamyk	2.32	306		Pn	09 52 30.1	+1.8
DRK				Sn	Sn	09 52 59.4	+0.4
GAR	Garm	3.19	287		Pn	09 52 39.4	+0.6
GAR				Sn	Sn	09 53 16.7	-1.0
BTK	Batken	3.27	307	PN	Pn	09 52 41.8	+2.1
BTK	Batken	3.27	307	Pn	Pn	09 52 41.8	+2.1
AML	Almayashu	3.99	354	P	Pn	09 52 50.8	+1.5
	SNR=332						
CHGR	Chuyangaron	4.02	279	PN	Pn	09 52 49.4	+0.1
CHGR	Chuyangaron	4.02	279	Pn	Pn	09 52 49.4	+0.1
UCH	Uchtor	4.07	3	P	Pn	09 52 52.1	+1.7
	SNR=119						
ULHL	Ulahol	4.37	20	P	Pn	09 52 55.4	+1.5
	SNR=181						
AAK	Ala-Archa	4.48	2	P	Pn	09 52 57.5	+2.1
	SNR=53						
AAK	Ala-Archa	4.48	2	P	Pn	09 52 57.5	+2.1
	46nm,0.4s,baz=175,slow=7.9,SNR=54						
AAK				S	Sn	09 53 46.8	-0.9
	147nm,0.6s,baz=330,slow=13,SNR=8.3						
TARG	Taragay, Kyrgy	4.50	36	Pn	Pn	09 52 57.2	+1.3
EKS2	Erkin-Say	4.52	356	P	Pn	09 52 57.6	+1.8
	SNR=37						
BOOM	Boomskoye usch	4.52	16	PN	Pn	09 52 57.7	+1.8
BOOM	Boomskoye usch	4.52	16	Pn	Pn	09 52 57.7	+1.8
KBK	Karagaybulak	4.53	7	P	Pn	09 52 58.1	+2.1
	SNR=65						
CHCP	Chirah Chowk	4.55	190	P	Pn	09 52 58.8	+2.5
NIL	Nilore	4.56	190	PN	Pn	09 52 58.3	+1.8
NIL	Nilore	4.56	190	Pn	Pn	09 52 58.3	+1.8
KDJ	Kajisay	4.57	29	PN	Pn	09 52 58.0	+1.5
KDJ	Kajisay	4.57	29		Pn	09 52 58.0	+1.5
CEP	Cherat	4.71	204	P	Pn	09 53 00.1	+1.6
CHMS	Chumysh	4.86	4	P	Pn	09 53 02.1	+1.9
	SNR=92						
CHMS	Chumysh	4.86	4	⇑P	Pn	09 53 00.8	+0.6
	117nm,0.4s						
CHMS				⇑S	Sn	09 53 54.4	-1.8
	327nm,1.4s						
TKM2	Tokmak 2	4.87	12	P	Pn	09 53 02.4	+1.8
	SNR=327						
TKM2	Tokmak 2	4.87	12	⇑P	Pn	09 53 02.1	+1.5
	113nm,0.5s						
TKM2				⇓S	Sn	09 53 56.3	-0.6
	306nm,0.8s						
TAS	Tashkent	4.95	311	PN	Pn	09 53 02.3	+0.9
TAS	Tashkent	4.95	311	Pn	Pn	09 53 02.3	+0.9
KST	Kastek	5.06	15	*e*P	Pn	09 53 04.8	+1.9
	138nm,0.6s						
KST				*e*S	Sn	09 53 59.3	-1.9
	373nm,0.7s						
USP	Ospenovka	5.11	2	P	Pn	09 53 05.2	+1.7
	SNR=6.8						
IUG	Iuzhnay	5.13	322	*d i*PN	Pn	09 53 05.1	+1.3
IUG	Iuzhnay	5.13	322	*e*P	Pn	09 53 05.3	+1.5
	7μm,0.4s						
IUG				*e*S	Sn	09 54 00.3	-2.4
	1μm,0.6s						
IUG	Iuzhnay	5.13	322	⇓*i*P	Pn	09 53 05.2	+1.3
	baz=321						
DGS	Degeres	5.21	12	*e*P	Pn	09 53 06.7	+1.7
	149nm,0.6s						
DGS				*e*S	Sn	09 54 02.7	-2.1
	139nm,0.7s						
DZA	Taraz	5.22	336	*i* PN	Pn	09 53 05.7	+0.7
DZA	Taraz	5.22	336	*i* P	Pn	09 53 05.8	+0.7
	baz=335						
MTBS	Maitube	5.24	18	*e*P	Pn	09 53 07.2	+1.8
	86nm,0.5s						
MTBS				*e*S	Sn	09 54 03.5	-2.0
	104nm,1.0s						
TNSS	Tian-Shan	5.30	22	*i* PN	Pn	09 53 07.5	+1.2
TNSS	Tian-Shan	5.30	22	*e*P	Pn	09 53 07.6	+1.2
	164nm,0.7s						
TNSS				*e*S	Sn	09 54 04.3	-2.9
	32nm,0.5s						
TNSS	Tian-Shan	5.30	22	*i* P	Pn	09 53 07.5	+1.2
	baz=21						
SGDS	Sogindy	5.30	3	*d i*PN	Pn	09 53 07.2	+1.2
SGDS	Sogindy	5.30	3	*e*P	Pn	09 53 07.3	+1.2
	42nm,0.8s						
SGDS				*e*S	Sn	09 54 03.8	-3.0
	47nm,0.9s						
SGDS	Sogindy	5.30	3	⇓*i*P	Pn	09 53 07.3	+1.2
	baz=1.7						
PRZ	Przheval'sk	5.37	35	PN	Pn	09 53 08.7	+1.6
PRZ	Przheval'sk	5.37	35	Pn	Pn	09 53 08.7	+1.6
MDOK	Medeo	5.44	22	*i* PN	Pn	09 53 09.2	+1.3
MDOK	Medeo	5.44	22	*e*P	Pn	09 53 09.3	+1.3
	37nm,0.7s						
MDOK				*e*S	Sn	09 54 07.2	-3.0
	34nm,0.9s						
MDOK	Medeo	5.44	22	*i* P	Pn	09 53 09.3	+1.3
	baz=21						
MDOK	Medeo	5.44	22	⇓P	Pn	09 53 09.0	+1.0
	28nm,0.5s						
AAA	Alma-Ata	5.45	21	*i* PN	Pn	09 53 09.7	+1.8
AAA	Alma-Ata	5.45	21	*i* P	Pn	09 53 09.7	+1.8
	baz=20						
JMU	Jammu	5.45	174	*e*P	Pn	09 53 09.3	+1.2
JMU				*e*S	Sn	09 54 08.2	-2.1
KNDC	Almaty	5.47	21	⇑P	Pn	09 53 10.1	+1.9
	111nm,0.6s						
KBL	Kabul	5.53	231	PN	Pn	09 53 10.3	+1.0
KBL	Kabul	5.53	231	Pn	Pn	09 53 10.2	+1.0
KRBS	Karabastau	5.64	11	*e*P	Pn	09 53 11.5	+0.9
	7.3nm,0.5s						
KRBS				*e*S	Sn	09 54 11.4	-3.5
	35nm,0.7s						
KK31	Karatay Array	5.70	331	PN	Pn	09 53 12.1	+0.8
KK31	Karatay Array	5.70	331		Pn	09 53 12.1	+0.8
KK31	Karatay Array	5.70	331	⇑P	Pn	09 53 11.8	+0.6
	15nm,0.3s,baz=128,slow=12,SNR=430						
KK31				⇑S	Sn	09 54 12.9	-3.2
	93nm,0.4s,baz=148,slow=25,SNR=9.0						
KKAR	Karatay Array	5.70	331	PN	Pn	09 53 12.1	+0.9
KKAR	Karatay Array	5.70	331		Pn	09 53 12.1	+0.9
KKAR	Karatay Array	5.70	331	Pn	Pn	09 53 12.1	+0.9
THW	Thamme Wali	5.72	202	P	Pn	09 53 12.3	+0.6
THN	Thein Dam	5.83	168	*e*P	Pn	09 53 14.5	+1.4
THN				*e*S	Sn	09 54 17.0	-2.4
SATY	Saty	5.84	32	*d i*PN	Pn	09 53 13.9	+0.7
SATY	Saty	5.84	32	⇓*i*P	Pn	09 53 13.9	+0.7
	baz=30						
BRLS	Borolday	5.91	327	*e*P	Pn	09 53 13.1	-0.9
	15nm,0.1s						
BRLS				*e*S	Sn	09 54 13.9	-7.3
	147nm,0.4s						
ZHN	Zhinishke	5.94	31	*e*PN	Pn	09 53 14.9	+0.4
ZHN	Zhinishke	5.94	31	*e*P	Pn	09 53 15.0	+0.4
	baz=30						
KUU	Kurty	5.95	15	*d i*PN	Pn	09 53 15.2	+0.6
KUU	Kurty	5.95	15	*e*P	Pn	09 53 15.2	+0.6
	34nm,0.9s						
KUU				*e*S	Sn	09 54 17.7	-4.4
	48nm,0.7s						
KUU	Kurty	5.95	15	⇓*i*P	Pn	09 53 15.2	+0.6
	baz=14						
CHKK	Chushkaly	6.06	19	*i* PN	Pn	09 53 17.1	+1.0
CHKK	Chushkaly	6.06	19	*i* P	Pn	09 53 17.1	+1.0
	baz=18						
UZB	Uzynbulak	6.17	35	*d i*PN	Pn	09 53 18.3	+0.7
UZB	Uzynbulak	6.17	35	⇓*i*P	Pn	09 53 18.4	+0.7
	baz=34						
KPKS	Kokpek	6.29	31	*d i*PN	Pn	09 53 20.0	+0.9
KPKS	Kokpek	6.29	31	⇓*i*P	Pn	09 53 20.1	+0.9
	baz=30						
SARP	Sargodha	6.35	192	P	Pn	09 53 19.6	-0.4
PDGK	Podgornoye	6.53	36	⇑P	Pn	09 53 22.5	+0.1
	66nm,0.7s						
BTLS	Baital	6.88	359	*i* PN	Pn	09 53 27.8	+0.9
BTLS	Baital	6.88	359	*i* P	Pn	09 53 27.9	+0.9
	baz=358						
BHK	Bhakra	6.96	164	*e*PN	Pn	09 53 27.0	-1.1
BHK				*e*P	Pn	09 53 28.5	+0.4
BHK				*e*SN	Sn	09 54 41.0	-5.3
BHK				*e*S	Sn	09 54 42.2	-4.0
SMLA	Simla	7.41	160	*e*P	Pn	09 53 34.1	+0.1
SMLA				*i* x	Pn	09 53 36.7	+2.6
SMLA				*e*S	Sn	09 54 51.6	-5.5
SMLA				IAML		09 54 58.7	
	comp=N,735nm,0.4s						
SMLA				IAML		09 54 59.3	
	comp=E,380nm,0.0s						
TDK	Taldyqorghan	7.52	23	*e*PN	Pn	09 53 35.7	+0.3
TDK	Taldyqorghan	7.52	23	*e*P	Pn	09 53 35.7	+0.3
	baz=22						
DDI	Dehra Dun	8.43	157	*e*P	Pn	09 53 47.9	+0.3
DDI				*e*S	Sn	09 55 16.8	-4.8
DDI				IAML		09 55 20.2	
	comp=N,507nm,0.4s						
DDI				IAML		09 55 20.3	
	comp=E,486nm,0.0s						
NDI	New Delhi	9.77	164	*e*P	Pn	09 54 06.5	+1.2
NDI				*e*S	Sn	09 55 47.0	-6.7
KUDL	Kundal	10.16	169	*e*P	Pn	09 54 09.6	-0.8
KUDL				*e*S	Sn	09 55 52.8	-10
OTUK	Ortayu	10.18	353	⇓P	Pn	09 54 09.6	-1.0
	comp=E,6.9nm,0.7s						
MAKZ	Makanchi	10.36	31	P	Pn	09 54 13.3	+0.3
MAKZ	Makanchi	10.36	31	Pn	Pn	09 54 13.3	+0.3
MAKZ	Makanchi	10.36	31	⇑P	Pn	09 54 13.0	+0.1
	comp=E,28nm,0.8s						
HRA	Herat	10.38	252	Pn	Pn	09 54 13.7	+0.1
MK31	Makanchi Array	10.48	32	P	Pn	09 54 14.7	+0.2
MK31	Makanchi Array	10.48	32		Pn	09 54 14.7	+0.2
MK31	Makanchi Array	10.48	32	P	Pn	09 54 14.7	+0.2
	comp=E,32nm,0.7s,baz=203,slow=12,SNR=290						
MKAR	Makanchi Array	10.48	32	P	Pn	09 54 14.8	+0.2
	comp=E,32nm,0.7s,baz=215,slow=14,SNR=159						
MKAR	Makanchi Array	10.48	32	P	Pn	09 54 14.5	0.0
MKAR	Makanchi Array	10.48	32	Pn	Pn	09 54 14.5	0.0
WMQ	Urumqi	11.64	57	*e*P	Pn	09 54 29.6	-0.1
WMQ				S	Sn	09 56 39.0	+0.5
WMQ				pmax	pmax		
	comp=E,26nm,1.1s						
AJM	Ajmer	11.65	178	*e*P	Pn	09 54 29.0	-1.0
AJM				*e*S	Sn	09 56 29.0	-10
ZSN	Zaisan	12.12	37	*i* P	Pn	09 54 35.4	-0.5
ZSN	Zaisan	12.12	37	*i* P	Pn	09 54 35.5	-0.5
	baz=36						
PYUN	Piuthan	12.42	141	*e*P	Pn	09 54 38.3	-1.8
	comp=E,180nm,0.4s						
DANN	Dangsing	12.61	138	*e*P	Pn	09 54 40.6	-2.0
GEYT	Alibeck	12.71	274	P	Pn	09 54 41.2	-2.4
	comp=E,8.7nm,0.6s,baz=131,slow=6.1,SNR=7.2						
GEYT				S	Sn	09 56 52.5	-12
	comp=E,5.6nm,0.6s,baz=78,slow=11,SNR=2.5						
GEYT	Alibeck	12.71	274		Pn	09 54 41.7	-1.9
GYA0	ALIBECK ARRAY	12.71	274	P	Pn	09 54 41.7	-1.9
GYA0B	ALIBECK ARRAY	12.71	274	Pn	Pn	09 54 41.7	-1.9
GYA0B	ALIBECK ARRAY	12.71	274	⇑P	Pn	09 54 41.3	-2.3
KURBB	Kurchatov Arra	12.84	12	P	Pn	09 54 43.7	-1.3
	comp=E,2.8nm,0.5s,baz=198,slow=11,SNR=38						
KURBB				LR	LR	10 00 01.5	
	comp=E,56nm,21.4s,baz=109,slow=38						
KURBB	Kurchatov Arra	12.84	12	⇑P	Pn	09 54 43.2	-1.8
	comp=E,56nm,1.0s						
KURK	Kurchatov	12.94	13	P	Pn	09 54 44.8	-1.5
KURK	Kurchatov	12.94	13	Pn	Pn	09 54 44.8	-1.5
KURK	Kurchatov	12.94	13	⇑P	Pn	09 54 44.1	-2.2
	comp=E,54nm,1.0s						
SEM	Semipalatinsk	12.98	17	*i* P	Pn	09 54 45.5	-1.5
SEM	Semipalatinsk	12.98	17	*i* P	Pn	09 54 45.6	-1.5
	baz=17						
KOLN	Koldanda	12.99	140	*e*P	Pn	09 54 46.1	-1.3
	comp=E,43nm,0.3s						
GKN	Gorkha	13.35	136	*e*P	Pn	09 54 50.6	-1.4
	comp=E,208nm,0.4s						
KKN	Kakani	13.87	135	*e*P	Pn	09 54 56.9	-1.7
	comp=E,112nm,0.5s						
DMN	Daman	13.92	136	*e*P	Pn	09 54 57.8	-1.4
PKIN	Phulchoki	14.10	135	*e*P	Pn	09 54 59.5	-2.0

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PKI    Pulchoki           14.11 135  eP      Pn      09 55 00.2 -1.5
GUN    Gumba              14.12 133  eP      Pn      09 54 59.9 -1.9
       comp=E,49nm,0.3s
JIRN   Jiri               14.49 133  eP      Pn      09 55 05.3 -1.2
       comp=E,7.7nm,0.4s
BVAR   Borovoye Array     15.11 351   P      Pn      09 55 13.3 -0.2
       comp=E,5.1nm,0.3s
BHPL   Bhopal             15.11 169  eP      P       09 55 15.5 +0.2
BHPL                                 eS      Sn      09 57 49.0  -13
AB31   Akbulak array      15.13 322 ⇓P       Pn      09 55 12.9 -1.0
       comp=E,2.2nm,0.4s,baz=129,slow=12,SNR=103
AB31                                ⇓S       Sn      09 57 55.3 -7.0
       comp=E,8.5nm,0.7s,baz=142,slow=20,SNR=11
ABKAR  Akbulak array      15.13 322   Pn     Pn      09 55 13.1 -0.8
ABKAR  Akbulak array      15.13 322          Pn      09 55 13.1 -0.8
BRVK   Borovoye           15.16 351   P      Pn      09 55 13.9 -0.2
BRVK                                  pmax   pmax
       comp=Z,22nm,0.7s
BRVK   Borovoye           15.16 351   Pn     Pn      09 55 13.9 -0.2
BRVK   Borovoye           15.16 351 ⇑P       Pn      09 55 12.8 -1.3
       comp=Z,21nm,0.7s
RAMN   Ramite             15.26 133  eP      Pn      09 55 14.2 -1.7
       comp=Z,100nm,0.4s
TAPN   Taplejung          15.62 130  eP      Pn      09 55 18.9 -1.5
       comp=Z,29nm,0.4s
JBP    Jabalpur           15.73 160  eP      P       09 55 23.1 +1.0
JBP                                  ex      P       09 55 23.1 +1.0
JBP                                   IAmb   IAmb    09 55 23.7
       comp=Z,18nm,0.5s
JBP                                  eS      Sn      09 58 01.8  -15
ODAN   Odare              15.79 132  eP      Pn      09 55 21.1 -1.3
       comp=Z,43nm,0.4s
GOMU   GeErMu             16.52  90   P      Pn      09 55 31.9 +0.6
GOMU                                  pP     P       09 55 33.2 +2.1
GOMU                                  pmax   pmax
       comp=Z,2.0nm,0.3s
GOMU                                  pmax   pmax
       comp=Z,120nm,5.1s
AKTO   Aktyubinsk         16.85 322   P      Pn      09 55 35.0 +0.2
       comp=Z,3.5nm,0.3s,baz=121,slow=7.8,SNR=18
AKTO                                  S      S       09 58 34.1 -7.2
       comp=Z,7.2nm,0.7s,baz=184,slow=19,SNR=5.8
AKTO                                  LR     LR      10 02 21.3
       comp=Z,45nm,18.8s,baz=91,slow=37
AKTO   Aktyubinsk         16.85 322   P      Pn      09 55 35.0 +0.2
AKTO   Aktyubinsk         16.85 322 ⇓P       P       09 55 33.2 -1.0
       comp=Z,9.7nm,0.9s
AKTO                                ⇓S       S       09 58 33.8 -7.5
       comp=Z,12nm,0.7s
ZAA0   Zalesovo Array     17.39  21   P      Pn      09 55 41.1  0.0
ZALV   Zalesovo Beam      17.39  21   P      Pn      09 55 41.1  0.0
       comp=Z,65nm,0.4s,baz=212,slow=11,SNR=245
SHL    Shillong           19.51 125   P      P       09 56 03.5 -0.1
SHL                                   pmax   pmax
       comp=Z,16nm,0.7s
SHL    Shillong           19.51 125   P      P       09 56 03.5 -0.1
GTA    Gaotai             19.96  78  eP      Pn      09 56 13.0 +1.2
GTA                                   pmax   pmax
       comp=Z,5.0nm,1.0s
GTA                                   pmax   pmax
       comp=Z,64nm,7.2s
GTA                                   LR     LR
       comp=Z,60nm,13.5s
GTA                                   LR     LR
       comp=Z,140nm,17.9s
GTA                                   LR     LR
       comp=Z,160nm,18.7s
WSAR   Wadi Sarin         19.98 226   P      P       09 56 10.0 +1.5
       comp=Z,7.6nm,0.9s,baz=58,slow=3.9,SNR=4.5
MAK    Makhachkala        20.83 292  eP      P       09 56 17.8 +0.5
MAK                                  e*PP    pP      09 56 47.0 +0.2
MAK                                  e*SP    sP      09 57 08.6 +1.1
MAK                                  eS      S       10 00 02.5 +1.9
MAK                                   pmax   pmax
       comp=Z,93nm,0.9s
HYBB   Hyderabad (bro     21.00 168  eP      P       09 56 20.5 +1.0
HYBB                                 epP     pP      09 56 48.9  0.0
HYBB                                 e               09 56 52.0
HYBB                                 eS      S       10 00 07.0 +2.7
ARU    Arti               21.06 335c iP      P       09 56 21.6 +2.0
ARU                                   *PP    pP      09 56 51.9 +3.2
ARU                                   pmax   pmax
       comp=Z,10.0nm,0.7s
ARU    Arti               21.06 335   P      P       09 56 18.8 -0.8
ARU                                   IAmb   IAmb    09 56 26.6
       comp=Z,13nm,0.8s
ZAK    Zakamensk          23.96  50  eP      P       09 56 49.8 +1.9
ZAK                                  e               09 57 22.8
ZAK                                   pmax   pmax
       comp=Z,9.0nm,1.3s
ZAK                                   pmax   pmax
       comp=Z,6.0nm,1.4s
KARS   Kars               24.14 286   P      P       09 56 47.9 -1.8
KARS                                  pmax   pmax
       comp=Z,61nm,1.1s
KARS   Kars               24.14 286   P      P       09 56 47.9 -1.8
KIV    Kislovodsk         24.39 294  eP      P       09 56 52.8 +0.9
KIV                                  eS      S       10 01 01.6 +1.9
KIV                                   pmax   pmax
       comp=Z,7.0nm,1.0s
GEVA   Gevas              24.43 280   P      P       09 56 48.5 -4.0
GEVA                                  IAmb   IAmb    09 56 59.4
       comp=Z,3.6nm,0.8s
PZH    PanZhiHua          25.89 109   P      P       09 57 07.6 +2.0
PZH                                   pmax   pmax
       comp=Z,10.0nm,0.8s
PZH                                   pmax   pmax
       comp=Z,100nm,5.0s
CMAR   Chiang Mai Arr     29.14 125   P      P       09 57 34.3 -0.2
       comp=Z,0.8nm,0.3s,baz=309,slow=9.1,SNR=5.5
       comp=Z,0.8nm,0.3s
GYA    Guiyang            29.64 104 ⇓P       P       09 57 44.3 +5.3
GYA                                   pmax   pmax
       comp=Z,16nm,0.6s
OBN    Obninsk            30.45 316d iP      P       09 57 46.4 +0.8
OBN                                  e*PP    pP      09 58 22.5 +1.8
OBN                                  e*SP    sP      09 58 41.8 +2.0
OBN                                  e               09 58 54.8
OBN                                  e               10 00 43.2
OBN                                   pmax   pmax
       comp=Z,66nm,0.9s
SIM    Simferopol'        30.54 296  eP      P       09 57 41.1 -5.5
SIM                                  eS      S       10 02 29.0 -7.2
SIM                                   pmax   pmax
       comp=Z,11nm,0.7s
BRTR   Keskin Array B     31.43 286   P      P       09 57 56.0 +1.4
       comp=Z,2.1nm,0.7s,baz=83,slow=10,SNR=5.1
       comp=Z,2.1nm,0.7s
NRIK   Noril'sk           32.07   9   P      P       09 58 00.3 +0.6
       comp=Z,2.8nm,0.5s,baz=183,slow=2.1,SNR=4.6
       comp=Z,2.8nm,0.5s
NRIK   Noril'sk           32.07   9   P      P       09 58 01.5 +1.8
NRIK                                  pmax   pmax
       comp=Z,4.0nm,0.8s
NRIK   Noril'sk           32.07   9   P      P       09 58 01.4 +1.8
NRIK                                  IAmb   IAmb    09 58 02.2
       comp=Z,4.0nm,0.8s
NACGM  Naroch             35.89 313  eP      P       09 58 36.2 +3.4
       baz=98
FIA1   FINESS Array S     37.60 324   P      P       09 58 48.8 +1.6
FIA1                                  IAmb   IAmb    09 58 50.5
       comp=Z,4.7nm,1.1s
FINES  FINESS Array B     37.60 324   P      P       09 58 48.5 +1.4
       comp=Z,1.3nm,0.3s,baz=119,slow=10,SNR=23
       comp=Z,1.3nm,0.3s
FINES  FINESS Array B     37.60 324   P      P       09 58 48.7 +1.5
FINES  FINESS Array B     37.60 324   P      P       09 58 48.7 +1.5
ARCES  ARCESS Array B     40.64 336   P      P       09 59 13.9 +1.6
       comp=Z,1.4nm,0.4s,baz=108,slow=7.7,SNR=16
       comp=Z,1.4nm,0.4s
ARCES  ARCESS Array B     40.64 336   P      P       09 59 12.9 +0.6
PSI    Prapat             41.81 141   P      P       09 59 21.8 -0.8
       comp=Z,2.4nm,0.4s,baz=247,slow=7.9,SNR=4.2
       comp=Z,2.4nm,0.4s
TIXI   Tiksi              43.27  22   P      P       09 59 34.3 +0.8
TIXI                                  pmax   pmax
       comp=Z,2.0nm,0.7s
TIXI   Tiksi              43.27  22   P      P       09 59 34.3 +0.8
HFS    Hagfors            43.39 321   P      P       09 59 35.7 +1.0
       comp=Z,1.2nm,0.7s,baz=356,slow=20,SNR=4.0
       comp=Z,1.2nm,0.7s
NC303  NORSAR Array S     44.57 322   P      P       09 59 45.8 +1.7
NC303                                 IAmb   IAmb    10 00 13.6
       comp=Z,12nm,1.2s
NB2    NORSAR Subarra     44.64 322   P      P       09 59 45.4 +0.7
       comp=Z,1.2nm,0.5s,baz=92,slow=7.9
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NOA    NORSAR Array B     44.64 322   P      P       09 59 45.0 +0.3
       comp=Z,1.2nm,0.5s,baz=93,slow=8.5,SNR=7.3
       comp=Z,1.2nm,0.5s
NC204  NORSAR Array S     44.87 322   P      P       09 59 47.6 +1.1
NC204                                 IAmb   IAmb    09 59 57.6
       comp=Z,21nm,1.5s
JOW    Kunigami           46.38  88   P      P       09 59 59.0 +0.3
       comp=Z,7.8nm,0.4s,baz=291,slow=7.3,SNR=8.5
       comp=Z,7.8nm,0.4s
JOW    Kunigami           46.38  88   P      P       09 59 59.4 +0.7
JOW                                   IAmb   IAmb    10 00 02.3
       comp=Z,13nm,1.0s
SPITS  Spitsbergen Ar     46.49 346   P      P       09 59 59.9 +1.0
       comp=Z,9.2nm,1.0s,baz=111,slow=3.2,SNR=2.5
       comp=Z,9.2nm,1.0s
DAVOX  Davos/Dischmat     47.05 302   P      P       10 00 04.6 +0.7
       comp=Z,1.8nm,0.4s,baz=127,slow=15
       comp=Z,1.8nm,0.4s
BILL   Bilibino           55.98  27  eP      P       10 01 09.4 -0.2
BILL                                 e*PP    pP      10 01 49.5 +1.4
BILL                                 e               10 02 06.8
BILL                                 e               10 03 17.5
BILL                                  pmax   pmax
       comp=Z,5.0nm,2.0s
ESDC   Sonseca Array      58.96 298   P      P       10 01 31.7 +0.7
       comp=Z,0.9nm,0.5s,baz=57,slow=6.6,SNR=8.9
       comp=Z,0.9nm,0.5s
VOI    Vohitsoka          65.07 208   P      P       10 02 12.3 +0.5
VOI                                   IAmb   IAmb    10 02 13.5
       comp=Z,4.9nm,0.9s
RES    Resolute Bay       67.21 357   P      P       10 02 26.0 +1.3
RES                                   pmax   pmax
       comp=Z,3.0nm,1.5s
RES    Resolute Bay       67.21 357   P      P       10 02 26.0 +1.3
TORD   Torodi Ar. Bea     68.32 270   P      P       10 02 32.5 -0.1
       comp=Z,6.4nm,0.4s,baz=46,slow=5.7,SNR=169
       comp=Z,6.4nm,0.4s
TOLK   Toolik Lake Re     68.65  16   P      P       10 02 35.1 +1.2
IMAR   Indian Mountai     69.80  19   P      P       10 02 41.3 +0.4
H21K   Melozitna Rive     70.30  19   P      P       10 02 44.6 +0.7
BMAR   Burnt Mountain     70.71  15   P      P       10 02 48.0 +1.6
INK    Inuvik             71.84  11   P      P       10 02 54.0 +0.9
       comp=Z,3.6nm,0.6s,baz=344,slow=5.5,SNR=29
       comp=Z,3.6nm,0.6s
INK    Inuvik             71.84  11   P      P       10 02 54.2 +1.1
INK                                   pmax   pmax
       comp=Z,3.0nm,0.7s
INK    Inuvik             71.84  11   P      P       10 02 54.2 +1.1
INK                                   IAmb   IAmb    10 02 54.8
       comp=Z,2.6nm,0.7s
C36M   Paulatuk           71.96   7   P      P       10 02 54.5 +0.7
ILAR   Eielson Array      72.46  17   P      P       10 02 56.6 -0.3
       comp=Z,1.1nm,0.8s,baz=314,slow=4.4,SNR=11
       comp=Z,1.1nm,0.8s
DHY    Denali Highway     73.77  18   P      P       10 03 05.2 +0.3
DHY                                   IAmb   IAmb    10 03 06.0
       comp=Z,3.3nm,0.6s
RIDG   Independent Ri     73.81  17   P      P       10 03 05.2 +0.3
RIDG                                  IAmb   IAmb    10 03 08.2
       comp=Z,7.1nm,1.3s
DAWY   Dawson             74.70  15   P      P       10 03 10.6 +0.6
BCAR   Beaver Creek A     75.09  16   P      P       10 03 13.5 +1.2
KDAK   Kodiak Island      76.67  24   LR     LR      10 39 49.3
       comp=Z,74nm,21.0s,baz=238,slow=38
DBIC   Dimbokro           77.34 269   P      P       10 03 26.2 +0.5
       comp=Z,4.6nm,0.6s,baz=46,slow=5.2,SNR=6.3
       comp=Z,4.6nm,0.6s
DBIC   Dimbokro           77.34 269   P      P       10 03 26.5 +0.8
DBIC                                  pmax   pmax
       comp=Z,8.0nm,1.0s
DBIC   Dimbokro           77.34 269   P      P       10 03 26.5 +0.8
DBIC                                  IAmb   IAmb    10 03 26.9
       comp=Z,8.3nm,0.9s
M31M   Drury Creek, Y     77.35  13   P      P       10 03 26.0 +1.0
MORW   Morawa             77.46 143   P      P       10 03 26.3 +0.3
LBTB   Lobatse            77.65 224   P      P       10 03 27.0 -0.2
       comp=Z,1.7nm,0.4s,baz=43,slow=4.2,SNR=5.7
       comp=Z,1.7nm,0.4s
LBTB   Lobatse            77.65 224   P      P       10 03 27.4 +0.2
LBTB                                  pmax   pmax
       comp=Z,12nm,1.4s
LBTB   Lobatse            77.65 224   P      P       10 03 27.4 +0.2
LBTB                                  IAmb   IAmb    10 03 54.1
       comp=Z,12nm,1.4s
HYT    Haines Junctio     78.01  15   P      P       10 03 30.3 +1.5
HYT                                   IAmb   IAmb    10 03 30.8
       comp=Z,2.7nm,0.6s
WHY    Whitehorse         78.68  14   P      P       10 03 32.9 +0.4
WHY                                   IAmb   IAmb    10 03 38.7
       comp=Z,5.2nm,1.4s
YKA    Yellowknife Ar     79.44   4   P      P       10 03 37.0 +0.6
       comp=Z,1.8nm,0.4s,baz=347,slow=5.7,SNR=99
       comp=Z,1.8nm,0.4s
YKA    Yellowknife Ar     79.44   4   P      P       10 03 36.7 +0.2
BOSA   Boshof             80.69 222   P      P       10 03 43.0 -0.7
BOSA                                  pmax   pmax
       comp=Z,18nm,1.5s
BOSA   Boshof             80.69 222   P      P       10 03 43.0 -0.7
WRA    Warramunga Arr     80.73 124   P      P       10 03 43.4 -0.6
       comp=Z,4.7nm,0.7s,baz=326,slow=5.5,SNR=7.1
       comp=Z,4.7nm,0.7s
WRA    Warramunga Arr     80.73 124   P      P       10 03 43.9  0.0
WRA    Warramunga Arr     80.73 124   P      P       10 03 43.9  0.0
WRAB   Tennant Creek      80.73 124   P      P       10 03 43.8 -0.1
WRAB                                  pmax   pmax
       comp=Z,9.0nm,0.9s
WRAB   Tennant Creek      80.73 124   P      P       10 03 43.8 -0.1
WRAB                                  IAmb   IAmb    10 03 44.4
       comp=Z,8.6nm,0.9s
WB2    Warramunga Arr     80.74 124   P      P       10 03 43.4 -0.6
WB2                                   IAmb   IAmb    10 03 44.4
       comp=Z,9.0nm,0.9s
WR0    Warramunga Arr     80.88 124   P      P       10 03 44.3 -0.4
WR0                                   IAmb   IAmb    10 03 44.4
       comp=Z,8.3nm,1.2s
SCHQ   Schefferville      81.55 338   P      P       10 03 48.2 +0.4
       comp=Z,1.4nm,0.4s,baz=12,slow=1.6,SNR=10
       comp=Z,1.4nm,0.4s
SCHQ   Schefferville      81.55 338   P      P       10 03 48.3 +0.4
SCHQ                                  IAmb   IAmb    10 03 49.0
       comp=Z,15nm,1.4s
PDAR   Pinedale Array     99.38   3   LR     LR      10 54 26.6
       comp=Z,32nm,19.3s,baz=298,slow=38
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*MAN **04** 09:56:30.9, 7°.67N×126°.09E, $h36^{km}$, mb5.1, ML4.1, MS4.2,*
Hypocentre not reviewed by the ISC
MAN INTYENSITY II - BISLIG CITY.
*DJA **04** 09:56:31.9±0.5, 8°N±3°×12°6E±°, $h32^{km}$±4^{km}, M4.9/30,*
mB5.3/12, mb4.9/30, MLv5.2/8, Mw(mB)4.7/12
*BJI **04** 09:56:32.6±0.0, 7°.58N×125°.65E, $h44^{km}$, mb4.6/36,*
mB4.8/17, Ms4.3/3, Ms7 3.9/4
*NEIC **04** 09:56:32.7±1.7, 7°.70N±0°.06×125°.83E±0°.08, $h48^{km}$±5^{km},*
mb4.6/53, Error ellipse: s-maj=11.9km s-min=8.6km
az=96.0
*IDC **04** 09:56:33.1±1.1, 7°.64N×126°.01E, $h57^{km}$±10^{km}, mb4.0/22,*
mbtmp4.3/26, MS3.5/21, Error ellipse: s-maj=18.2km
s-min=9.9km az=75.0
ISC 04 09:56:32.7±0.8, **7°.67N**±0°.03×**126°.05E**±0°.05, **$h52^{km}$**±7^{km},
n162, σ1^{s}**48**/161, **mb4.5**/51, **MS3.7**/18, **6C-7D, Mindanao**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op     ISC       h  m  s    ISC
BIPH   Bislig              0.60  31⇑iP       Pn      09 56 43.1 -2.2
BIPH                                 i S     Sn      09 56 52.3 -2.1
DAV    Davao City (W)      0.76 218   P      Pn      09 56 47.4 +0.1
       9µm,0.4s,baz=11,slow=1.8,SNR=139
DAV                                   S      Sn      09 56 59.5 +1.6
       8µm,0.5s,baz=72,slow=19,SNR=7.0
DAV    Davao City (W)      0.76 218          Pn      09 56 45.7 -1.6
DAV                                   Sn     Sn      09 57 00.9 +3.0
KCP    Kidapawan           1.15 235⇑iP       Pn      09 56 51.2 -1.4
KCP                                  i S     Sn      09 57 07.3 -0.1
CTBH   Cotabato--PC H      1.84 256⇓iP       Pn      09 57 01.2 -0.7
CTBH                                 i S     Sn      09 57 24.0  0.0
PAGZ   Pagadian            2.65 274⇓eP       Pn      09 57 12.5 -0.5
PAGZ                                 eS      Sn      09 57 45.1 +1.2
MSLP   Maasin              2.71 334⇑iP       Pn      09 57 13.1 -0.8
MSLP                                 i S     Sn      09 57 50.3 +4.8
DCPH   Dipolog City        2.82 289⇑eP       Pn      09 57 17.4 +2.1
TBP    Tagbilaran          2.95 313⇓iP       Pn      09 57 16.4 -0.8
TBP                                  i S     Sn      09 57 48.1 -3.3
SNPH   Sibulan             3.24 301⇓eP       Pn      09 57 20.9 -0.2
SNPH                                 i S     Sn      09 57 57.6 -0.9
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LLP    Lapu-Lapu           3.34 322⇓eP       Pn      09 57 22.9 +0.4
LLP                                  eS      Sn      09 58 02.9 +2.0
SGSI   Sangihe             3.99 187   P      Pn      09 57 33.9 +2.5
CNOP   Candoni, Negro      3.99 303⇓iP       Pn      09 57 30.7 -0.8
RCP    Roxas               5.05 320⇑eP       Pn      09 57 46.8 +0.8
TNTI   Ternate             6.98 169   Pn     Pn      09 58 12.6 +0.1
TNTI   Ternate             6.98 169   P      Pn      09 58 13.9 +1.5
       0.8nm2µm270nm,0.9s
TNTI   Ternate             6.98 169   P      Pn      09 58 14.0 +1.5
       273nm,0.9s
KMSI   Cibinong            7.34 196   P      Pn      09 58 19.2 +1.8
       1.2nm285nm,0.8s
JCNP   Jose Panganiba      7.35 334⇓eP       Pn      09 58 20.8 +3.3
GTOI   Gorontalo           7.62 204   P      Pn      09 58 19.4 -1.7
       0.3nm957nm75nm,0.9s
MYLDM  Lahad Datu          7.90 252   Pn     Pn      09 58 22.1 -2.9
MRSI   Marisa              8.23 210   P      Pn      09 58 29.4 -0.2
       0.5nm1µm127nm,0.9s
TOLI2  Tolitoli            8.37 219   Pn     Pn      09 58 27.9 -3.5
LBMI   Labuha              8.38 170   P      Pn      09 58 32.6 +1.0
       82nm,1.0s
LUWI   Luwuk               9.25 201   Pn     Pn      09 58 43.9 +0.3
LUWI   Luwuk               9.25 201   P      Pn      09 58 45.1 +1.5
       2µm217nm,0.9s
APSI   Ampana              9.59 207   P      Pn      09 58 49.0 +0.8
       560nm41nm,0.5s
SANI   Sanana              9.65 180   P      Pn      09 58 46.9 -2.2
       2µm130nm,0.8s
SANI   Sanana              9.65 180   P      Pn      09 58 48.0 -1.1
       130nm,0.8s
SWI    Sorong              9.94 148   P      Pn      09 58 56.0 +2.9
       1µm60nm,0.5s
SIJI   Sorong              9.95 148   P      Pn      09 58 54.9 +1.6
       44nm,0.5s,baz=343,slow=13,SNR=25
SIJI                                  LR     LR      10 02 53.5
       comp=Z,180nm,21.1s,baz=27,slow=38
TTSI   Tana Toraja        12.32 210   P      Pn      09 59 26.5 +0.9
       37nm,0.8s
SPSI   Sidrap Palu        13.14 209   P      Pn      09 59 39.3 +2.5
       21nm,0.9s
BNSI   Bone               13.38 206   P      Pn      09 59 43.0 +3.0
       596nm57nm,1.0s
KAPI   Kappang            14.08 207   P      Pn      09 59 50.5 +1.0
       3.9nm,0.4s,baz=36,slow=9.7,SNR=5.6
KAPI                                  LR     LR      10 05 57.1
       comp=Z,170nm,19.8s,baz=33,slow=40
KAPI   Kappang            14.08 207          Pn      09 59 47.4 -2.1
BKSI   Bulukumba          14.19 205   P      Pn      09 59 54.1 +3.0
       14nm,0.8s
SBUM   Sibu               14.71 250   Pn     Pn      09 59 53.8 -4.1
BBKI   Banjar Baru        15.72 226   P      P       10 00 12.7 -1.4
SMPI   Sarmi              15.87 127   P      P       10 00 15.4 -0.3
       31nm,1.0s
YULB   Yu-li              16.29 344          Pn      10 00 17.9 -0.2
TPUB   Ta-pu              16.39 342          P       10 00 20.2 -1.2
SAUI   Saumlaki           16.41 161   P      Pn      10 00 18.5 -1.1
SAUI                                  IAmb   IAmb    10 00 37.2
       comp=Z,106nm,0.9s
MMRI   Maumere            16.64 193   Pn     Pn      10 00 19.2 -3.3
MMRI                                  IAmb   IAmb    10 00 39.4
       comp=Z,32nm,0.8s
KSM    Kuching            16.84 249   Pn     Pn      10 00 19.7 -5.4
YOJ    Yonaguni jima      16.95 350   P      P       10 00 27.3 -0.3
YOJ                                   IAmb   IAmb    10 00 44.0
       comp=Z,92nm,1.0s
YHNB   Yeheng             17.48 346   P      P       10 00 33.1 -0.5
BATI   Baumata            17.92 188   P      Pn      10 00 37.6 -0.8
       comp=Z,64nm,0.7s,baz=336,slow=0.6,SNR=14
BATI                                  LR     LR      10 07 06.7
       comp=Z,266nm,21.2s,baz=260,slow=35
BATI   Baumata            17.92 188   P      P       10 00 39.3 +0.9
       comp=Z,51nm,0.8s
PLAI   Plampang           18.34 207   P      Pn      10 00 45.2 +1.7
       comp=Z,31nm,1.0s
PLAI   Plampang           18.34 207   P      Pn      10 00 45.4 +1.9
       comp=Z,34nm,0.8s
HKPS   Hong Kong Po S     18.50 323   P      P       10 00 43.5 -1.3
HKPS                                  IAmb   IAmb    10 00 50.5
       comp=Z,31nm,1.1s
KMMI   Kalianget          18.95 220   P      Pn      10 00 52.2 +1.4
       comp=Z,47nm,1.2s
SRBI   Singaraja          19.02 215   P      Pn      10 00 51.7 +0.1
       comp=Z,50nm,0.9s
JOW    Kunigami           19.18   6   P      P       10 00 51.7 -0.4
       comp=Z,9.8nm,0.8s,baz=190,slow=6.1,SNR=2.2
JOW                                   LR     LR      10 09 40.7
       comp=Z,52nm,18.6s,baz=262,slow=41
JOW    Kunigami           19.18   6          Pn      10 00 54.5 +1.0
JOW                                   IAmb   IAmb    10 01 02.8
       comp=Z,26nm,0.9s
GUMO   Guam               19.41  71   LR     LR      10 08 39.9
       comp=Z,36nm,19.9s,baz=220,slow=37
MTN    Manton Dam         21.00 166   P      P       10 01 11.8 -0.2
MTN                                   IAmb   IAmb    10 01 30.0
       comp=Z,22nm,0.8s
MTN    Manton Dam         21.00 166   P      P       10 01 12.4 +0.4
       comp=Z,28nm,0.7s
KDU    Kakadu             21.21 162   P      P       10 01 14.3 +0.1
       comp=Z,86nm,0.8s
KPJI   Karang Pucung      22.66 229   P      P       10 01 32.3 +2.5
       comp=Z,67nm,1.1s
LEM    Lembang            23.35 232   P      P       10 01 35.2 -1.8
       comp=Z,15nm,0.4s,baz=142,slow=17,SNR=4.3
       comp=Z,15nm,0.4s
KNRA   Kununurra          23.35 173   P      P       10 01 36.1 -0.6
KNRA                                  IAmb   IAmb    10 01 50.6
       comp=Z,33nm,0.8s
KNRA   Kununurra          23.35 173   P      P       10 01 36.7  0.0
       comp=Z,46nm,1.1s
JCJ    Chichijima         24.65  36   P      P       10 01 49.0 +0.4
       comp=Z,28nm,0.5s,baz=283,slow=17,SNR=3.8
JCJ    Chichijima         24.65  36   P      P       10 01 49.2 +0.6
MDSI   Maura Dua          24.94 242   P      P       10 01 51.0 -0.4
       comp=Z,6.0nm,1.1s
NJ2    Nanjing            25.17 346  eP      P       10 01 54.7 +1.5
NJ2                                   pmax   pmax
       comp=Z,8.0nm,0.6s
FITZ   Fitzroy Crossi     25.61 181   P      P       10 01 56.9 -0.5
       comp=Z,12nm,0.7s,baz=17,slow=10,SNR=30
       comp=Z,12nm,0.7s
FITZ   Fitzroy Crossi     25.61 181   P      P       10 01 55.4 -1.9
FITZ                                  IAmb   IAmb    10 01 58.1
       comp=Z,14nm,0.8s
COEN   Coen               27.40 142   P      P       10 02 13.8 +0.2
COEN                                  IAmb   IAmb    10 02 19.8
       comp=Z,13nm,1.1s
COEN   Coen               27.40 142   P      P       10 02 16.6 +3.0
       comp=Z,18nm,1.0s
PSI    Prapat             27.43 261   LR     LR      10 14 37.0
       comp=Z,184nm,18.0s,baz=188,slow=40
CMAR   Chiang Mai Arr     28.45 295   P      P       10 02 22.6 -0.4
       comp=Z,0.8nm,0.3s,baz=118,slow=9.3,SNR=1.4
CMAR                                  LR     LR      10 14 48.1
       comp=Z,87nm,18.8s,baz=120,slow=38
       comp=Z,0.8nm,0.3s
CMAR   Chiang Mai Arr     28.45 295   P      P       10 02 20.1 -2.9
WB0    Warramunga Arr     28.48 163   P      P       10 02 21.2 -1.9
WB0                                   IAmb   IAmb    10 02 40.8
       comp=Z,8.9nm,1.0s
WRAB   Tennant Creek      28.62 164   P      P       10 02 22.7 -1.7
WRAB                                  IAmb   IAmb    10 02 47.4
       comp=Z,15nm,1.1s
WRA    Warramunga Arr     28.63 164   P      P       10 02 23.5 -1.0
       comp=Z,1.0nm,0.4s,baz=332,slow=11,SNR=26
WRA                                   PcP    PcP     10 05 34.8 +0.2
       comp=Z,1.2nm,0.6s,baz=339,slow=2.9,SNR=3.9
       comp=Z,1.0nm,0.4s
WRA    Warramunga Arr     28.63 164   P      P       10 02 22.7 -1.8
WB2    Warramunga Arr     28.63 164   P      P       10 02 23.7 -0.8
WB2                                   IAmb   IAmb    10 02 47.4
       comp=Z,10nm,1.1s
WR0    Warramunga Arr     28.70 163   P      P       10 02 24.5 -0.6
MBWA   Marble Bar         29.31 192   P      P       10 02 28.9 -1.6
MBWA                                  IAmb   IAmb    10 02 39.4
       comp=Z,16nm,1.4s
PSA00  Pilbara Seismi     29.69 192   P      P       10 02 32.6 -1.3
PSA00                                 IAmb   IAmb    10 02 51.5
       comp=Z,6.8nm,0.8s
KSRS   Korea Array        29.70   3   P      P       10 02 32.8 -1.0
       comp=Z,0.7nm,0.7s,baz=185,slow=9.9,SNR=1.5
KSRS                                  LR     LR      10 13 13.3
       comp=Z,69nm,22.0s,baz=180,slow=34
       comp=Z,0.7nm,0.7s
PZH    PanZhiHua          29.73 312   P      P       10 02 36.1 +1.6
PZH                                   pmax   pmax
       comp=Z,10.0nm,0.8s
PZH                                   pmax   pmax
```

	comp=Z,100nm,5.0s						
MJAR	**Matsushiro Arr**	**30.81**	**19**	P	**P**	**10 02 43.6**	**0.0**
	comp=Z,2.3nm,0.9s,baz=194,slow=9.4,SNR=2.8						
MJAR				LR	LR	10 15 20.8	
	comp=Z,60nm,19.5s,baz=216,slow=37						
	comp=Z,2.3nm,0.9s						
QIS	**Mount Isa**	**31.06**	**155**	P	**P**	**10 02 46.0**	**0.0**
	comp=Z,10nm,1.7s						
AS31	**Alice Springs**	**32.08**	**166**	P	**P**	**10 02 54.5**	**-0.5**
ASAR	**Alice Springs**	**32.08**	**166**	P	**P**	**10 02 54.5**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=345,slow=7.1,SNR=52						
ASAR				PcP	**PcP**	**10 05 44.1**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=340,slow=2.2,SNR=4.6						
ASAR				LR	LR	10 17 24.7	
	comp=Z,101nm,19.4s,baz=152,slow=39						
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**32.08**	**166**	P	**P**	**10 02 55.0**	**+0.1**
JMM	**Marumori**	**32.90**	**22**	P	**P**	**10 03 01.6**	**-0.3**
CTA	**Charters Tower**	**34.01**	**145**	P	**P**	**10 03 11.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=304,slow=7.3,SNR=1.4						
	comp=Z,0.7nm,0.4s						
LZH	**Lanzhou**	**34.81**	**328**	⇑P	P	10 03 28.5	+10
LZH				pP	sP	10 03 42.6	+4.1
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=N,220nm,14.6s						
LZH				LR	LR		
	comp=E,190nm,13.6s						
LZH				LR	LR		
	comp=Z,260nm,14.6s						
USA0B	**Ussuriysk Arra**	**36.76**	**7**	P	**P**	**10 03 34.7**	**-0.5**
USA0B				IAmb	IAmb	10 03 44.5	
	comp=Z,15nm,0.9s						
USRK	**Ussuriysk Ar.**	**36.76**	**7**	P	**P**	**10 03 34.3**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=194,slow=6.2,SNR=3.0						
	comp=Z,1.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**36.76**	**7**	P	**P**	**10 03 34.5**	**-0.6**
MORW	**Morawa**	**37.78**	**194**	P	**P**	**10 03 42.8**	**-1.1**
MORW				IAmb	IAmb	10 03 54.0	
	comp=Z,29nm,1.4s						
FORT	**Forrest**	**38.28**	**177**	P	**P**	**10 03 48.3**	**+0.2**
ASAJ	**Asahikawa**	**39.08**	**19**	LR	LR	10 18 14.8	
	comp=Z,67nm,21.4s,baz=342,slow=33						
JKA	**Kamikawa-asahi**	**39.08**	**19**	P	**P**	**10 03 56.4**	**+1.7**
JKA				IAmb	IAmb	10 04 21.0	
	comp=Z,32nm,1.5s						
GTA	**Gaotai**	**39.41**	**327**	*e*P	**P**	**10 03 58.4**	**+0.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU	**GeErMu**	**40.23**	**320**	P	**P**	**10 04 07.4**	**+2.5**
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.6s						
NWAO	**Narrogin (SRO)**	**41.23**	**191**	P	**P**	**10 04 12.3**	**-0.4**
H11N1	**WAKE ISLAND Hy**	**41.34**	**69**	T	T	10 48 16.0	
	baz=265,slow=74,SNR=71						
H11N2	**WAKE ISLAND Hy**	**41.34**	**69**	T	T	10 48 16.5	
	baz=265,slow=74,SNR=39						
H11N3	**WAKE ISLAND Hy**	**41.35**	**69**	T	T	10 48 17.4	
	baz=265,slow=74,SNR=79						
BBOO	**Buckleboo**	**41.37**	**167**	P	**P**	**10 04 14.3**	**+0.5**
STKA	**Stephens Creek**	**42.04**	**160**	P	**P**	**10 04 19.4**	**+0.1**
	comp=Z,6.7nm,0.6s,baz=337,slow=8.9,SNR=23						
STKA				LR	LR	10 23 28.3	
	comp=Z,207nm,18.6s,baz=202,slow=38						
	comp=Z,6.7nm,0.6s						
STKA	**Stephens Creek**	**42.04**	**160**	P	**P**	**10 04 19.7**	**+0.4**
WMQ	**Urumqi**	**49.15**	**324**	*e*P	**P**	**10 05 16.2**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,20.5s						
WMQ				LR	LR		
	comp=Z,140nm,20.5s						
DZM	**Mont Dzumac**	**49.41**	**128**	P	**P**	**10 05 18.4**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=229,slow=9.1,SNR=7.8						
DZM				LR	LR	10 26 22.2	
	comp=Z,62nm,18.2s,baz=188,slow=36						
	comp=Z,2.9nm,0.5s						
DZM	**Mont Dzumac**	**49.41**	**128**	P	**P**	**10 05 18.8**	**+1.0**
DZM				IAmb	IAmb	10 05 43.4	
	comp=Z,5.8nm,1.0s						
PEA0B	**Petropavlovsk-**	**52.09**	**24**	P	**P**	**10 05 37.9**	**+0.5**
PEA0B				IAmb	IAmb	10 05 50.5	
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**52.09**	**24**	P	**P**	**10 05 38.4**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=238,slow=8.2,SNR=1.2						
	comp=Z,0.8nm,0.7s						
PETK	**Petropavlovsk-**	**52.09**	**24**	P	**P**	**10 05 37.4**	**0.0**
MK31	**Makanchi Array**	**53.97**	**324**	P	**P**	**10 05 52.7**	**+1.3**
MKAR	**Makanchi Array**	**53.97**	**324**	P	**P**	**10 05 52.4**	**+1.0**
	comp=Z,4.9nm,0.8s,baz=125,slow=8.0,SNR=39						
	comp=Z,4.9nm,0.8s						
MKAR	**Makanchi Array**	**53.97**	**324**	P	**P**	**10 05 51.8**	**+0.4**
MAKZ	**Makanchi**	**54.16**	**324**	P	**P**	**10 05 53.9**	**+1.1**
MA2	**Magadan**	**55.09**	**15**	LR	LR	10 30 48.2	
	comp=Z,25nm,18.4s,baz=156,slow=37						
ZAA0	**Zalesovo Array**	**56.80**	**332**	P	**P**	**10 06 11.3**	**-0.2**
ZAA0				IAmb	IAmb	10 06 13.6	
	comp=Z,4.4nm,0.8s						
ZALV	**Zalesovo Beam**	**56.80**	**332**	P	**P**	**10 06 11.6**	**0.0**
	comp=Z,3.8nm,0.7s,baz=116,slow=6.8,SNR=12						
	comp=Z,3.8nm,0.7s						
ZALV	**Zalesovo Beam**	**56.80**	**332**	P	**P**	**10 06 11.3**	**-0.2**
AAK	**Ala-Archa**	**57.02**	**316**	P	**P**	**10 06 12.9**	**-0.7**
KURK	**Kurchatov**	**58.09**	**327**	P	**P**	**10 06 20.6**	**-0.1**
KURBB	**Kurchatov Arra**	**58.09**	**326**	P	**P**	**10 06 21.5**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=125,slow=6.5,SNR=25						
	comp=Z,3.2nm,0.6s						
GAR	**Garm**	**58.80**	**311**	P	**P**	**10 06 25.1**	**-0.9**
KKAR	**Karatay Array**	**59.93**	**316**	P	**P**	**10 06 32.9**	**-0.7**
KKAR	**Karatay Array**	**59.93**	**316**	P	**P**	**10 06 32.5**	**-1.1**
KKAR				IAmb	IAmb	10 06 51.8	
	comp=Z,3.3nm,0.8s						
BRVK	**Borovoye**	**63.75**	**326**	P	**P**	**10 06 59.2**	**+0.1**
TIXI	**Tiksi**	**63.94**	**1**	P	**P**	**10 06 59.9**	**-0.1**
TIXI				IAmb	IAmb	10 07 09.8	
	comp=Z,5.3nm,1.1s						
BKZ	**Black Stump Fm**	**65.97**	**139**	P	**P**	**10 07 14.1**	**+0.3**
BKZ				IAmb	IAmb	10 07 24.5	
	comp=Z,20nm,1.4s						
NRIK	**Noril'sk**	**66.47**	**346**	LR	LR	10 38 20.3	
	comp=Z,58nm,20.0s,baz=130,slow=38						
ABKAR	**Akbulak array**	**68.70**	**320**	P	**P**	**10 07 30.7**	**-0.2**
ABKAR				IAmb	IAmb	10 07 41.6	
	comp=Z,4.3nm,0.8s						
ABKAR	**Akbulak array**	**68.70**	**320**	P	**P**	**10 07 31.1**	**+0.2**
AKTO	**Aktyubinsk**	**70.18**	**321**	P	**P**	**10 07 40.1**	**0.0**
	comp=Z,1.1nm,0.6s,baz=84,slow=9.8,SNR=4.7						
	comp=Z,1.1nm,0.6s						
CASY	**Casey**	**74.63**	**186**	P	**P**	**10 08 06.4**	**+0.3**
BELG	**Belogornoye**	**76.90**	**322**	LR	LR	10 46 18.4	
	comp=Z,30nm,18.4s,baz=136,slow=39						
IMAR	**Indian Mountai**	**79.05**	**24**	P	**P**	**10 08 32.1**	**+1.0**
H21K	**Melozitna Rive**	**79.40**	**25**	P	**P**	**10 08 33.9**	**+0.8**
CAST	**Castle Rocks**	**79.54**	**27**	P	**P**	**10 08 34.7**	**+0.8**
BPAW	**Bear Paw Mtn.**	**80.07**	**26**	P	**P**	**10 08 37.1**	**+0.4**
I23K	**Minto, Yukon-K**	**80.81**	**25**	P	**P**	**10 08 41.6**	**+1.0**
PMR	**Palmer**	**80.84**	**29**	P	**P**	**10 08 40.7**	**-0.1**
PMR				IAmb	IAmb	10 09 04.4	
	comp=Z,10nm,1.4s						
RND	**Reindeer**	**81.00**	**27**	P	**P**	**10 08 41.9**	**+0.1**
RND				IAmb	IAmb	10 09 07.9	
	comp=Z,4.9nm,1.2s						
KLMR	**Klimovskoe**	**81.66**	**330**	*e*P	**P**	**10 08 44.5**	**-0.7**
KLMR				AMP		10 08 47.5	
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**81.86**	**26**	P	**P**	**10 08 45.5**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=254,slow=4.3,SNR=5.1						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**81.86**	**26**	P	**P**	**10 08 46.6**	**+0.4**
ARCES	**ARCESS Array B**	**86.54**	**340**	P	**P**	**10 09 08.8**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=82,slow=6.5,SNR=2.4						
	comp=Z,2.5nm,0.8s						
VNDA	**Vanda**	**87.39**	**173**	P	**P**	**10 09 11.8**	**-2.0**
	comp=Z,1.2nm,0.6s,baz=298,slow=6.8,SNR=5.8						
VNDA				LR	LR	10 50 05.7	
	comp=Z,67nm,18.1s,baz=354,slow=37						
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**87.39**	**173**	P	**P**	**10 09 14.2**	**+0.4**
VNDA				IAmb	IAmb	10 09 34.8	
	comp=Z,4.0nm,1.4s						
FIA1	**FINESS Array S**	**88.06**	**332**	P	**P**	**10 09 17.2**	**-0.1**
FINES	**FINESS Array B**	**88.06**	**332**	P	**P**	**10 09 17.1**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=62,slow=4.7,SNR=23						
	comp=Z,3.6nm,0.6s						
FINES	**FINESS Array B**	**88.06**	**332**	P	**P**	**10 09 17.4**	**0.0**
AKASG	**Malin Array Be**	**88.43**	**321**	LR	LR	10 49 00.5	
	comp=Z,8.4nm,20.7s,baz=148,slow=36						
HFS	**Hagfors**	**94.24**	**332**	LR	LR	10 54 14.9	
	comp=Z,60nm,18.9s,baz=54,slow=37						
NOA	**NORSAR Array B**	**94.98**	**334**	P	**P**	**10 09 47.3**	**-2.2**
	comp=Z,0.9nm,0.9s,baz=66,slow=4.6,SNR=2.8						
NOA				LR	LR	10 56 40.4	
	comp=Z,41nm,18.3s,baz=55,slow=38						
	comp=Z,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**96.21**	**24**	P	**P**	**10 09 54.7**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=298,slow=4.1,SNR=5.5						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**96.21**	**24**	P	**P**	**10 09 55.1**	**+0.1**
GERES	**GERESS Array B**	**98.59**	**322**	LR	LR	10 58 16.4	
	comp=Z,38nm,18.4s,baz=30,slow=38						
TORD	**Torodi Ar. Bea**	**120.99**	**290**	PKP	**PKPdf**	**10 15 19.8**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=49,slow=1.6,SNR=4.9						
PLCA	**Paso Flores**	**143.90**	**158**	PKP	**PKPdf**	**10 16 02.7**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=236,slow=2.6,SNR=10						

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*IDC **04** 10:00:45.7±5.2, 35°.31S×178°.73W, h0^{km}, mb3.6/3, mbtmp3.5/3, Error ellipse: s-maj=378.8km s-min=41.5km az=172.0*

*WEL **04** 10:00:53.8±1.0, 37°S±11°×18°0W±°, h33^{km}, M3.0/13, ML3.2/17, MLv3.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=153.4*

ISC 04 10:00:51.2±3.0, **37°.0S**±0°.1×**179°.5W**±0°.2, **h87**^{km}±33^{km}, **n24**, σ**0^s.94**/38, **mb3.4**/3, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.86**	**253**	P	**Pn**	**10 01 21.3**	**0.0**
MXZ				S	**Sn**	**10 01 42.8**	**-1.6**
WMGZ	**Waiomatatini S**	**1.86**	**244**	P	**Pn**	**10 01 22.0**	**+0.6**
PUZ	**Puketiti**	**2.09**	**239**	P	**Pn**	**10 01 24.7**	**+0.3**
PUZ				S	**Sn**	**10 01 48.8**	**-1.1**
PKGZ	**Pakihiroa**	**2.14**	**246**	P	**Pn**	**10 01 25.9**	**+0.8**
PKGZ				S	**Sn**	**10 01 49.5**	**-1.5**
HAZ	**Te Kaha**	**2.31**	**251**	P	**Pn**	**10 01 28.2**	**+0.9**
TWGZ	**Tauwhareparae**	**2.33**	**240**	P	**Pn**	**10 01 28.7**	**+1.0**
TWGZ				S	**Sn**	**10 01 56.1**	**+0.5**
CNGZ	**Carnagh Statio**	**2.35**	**231**	P	**Pn**	**10 01 28.6**	**+0.8**
CNGZ				S	**Sn**	**10 01 57.8**	**+1.8**
RUGZ	**Raukumara Rang**	**2.46**	**247**	P	**Pn**	**10 01 30.0**	**+0.6**
RUGZ				S	**Sn**	**10 01 59.7**	**+0.9**
TKGZ	**Te Karaka**	**2.56**	**236**	P	**Pn**	**10 01 31.1**	**+0.5**
TKGZ				S	**Sn**	**10 01 60.0**	**-0.9**
MWZ	**Matawai**	**2.72**	**240**	P	**Pn**	**10 01 33.4**	**+0.5**
MWZ				S	**Sn**	**10 02 03.4**	**-1.5**
RIGZ	**Rimuhau**	**2.76**	**232**	P	**Pn**	**10 01 33.8**	**+0.4**
RIGZ				S	**Sn**	**10 02 05.4**	**-0.5**
PRGZ	**Paritu Road**	**2.82**	**227**	P	**Pn**	**10 01 34.7**	**+0.4**
MHGZ	**Mahia Peninsul**	**2.97**	**224**	P	**Pn**	**10 01 36.3**	**+0.1**
URZ	**Urewera**	**2.98**	**245**	P	**Pn**	**10 01 37.2**	**+0.8**
URZ				S	**Sn**	**10 02 11.2**	**0.0**
KNZ	**Kokohu**	**3.01**	**228**	P	**Pn**	**10 01 36.4**	**-0.3**
KNZ				S	**Sn**	**10 02 11.5**	**-0.3**
SNGZ	**Shannon Statio**	**3.08**	**234**	P	**Pn**	**10 01 38.0**	**+0.3**
SNGZ				S	**Sn**	**10 02 13.0**	**-0.5**
RTZ	**Ruatahuna**	**3.23**	**240**	P	**Pn**	**10 01 40.7**	**+0.9**
RTZ				S	**Sn**	**10 02 18.1**	**+0.8**
MUGZ	**Murupara**	**3.32**	**243**	P	**Pn**	**10 01 42.5**	**+1.6**
MUGZ				S	**Sn**	**10 02 17.5**	**-1.8**
ARHZ	**Aropaoanui**	**3.57**	**230**	P	**Pn**	**10 01 45.5**	**+1.2**
ARHZ				S	**Sn**	**10 02 25.9**	**+0.5**
BKZ	**Black Stump Fm**	**3.84**	**235**	P	**Pn**	**10 01 48.5**	**+0.5**
BKZ				S	**Sn**	**10 02 31.0**	**-1.0**
KAHZ	**Kahuranaki**	**3.99**	**225**	P	**Pn**	**10 01 49.7**	**-0.3**
ASAR	**Alice Springs**	**42.00**	**275**	P	P	10 08 42.5	+8.6
	0.4nm,0.6s,baz=113,slow=7.2,SNR=5.0						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**43.58**	**280**	P	P	10 08 54.3	+7.5
	0.3nm,0.5s,baz=122,slow=7.4,SNR=1.8						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**96.94**	**59**	P	**P**	**10 14 12.7**	**-0.3**
	0.2nm,0.8s,baz=224,slow=6.3,SNR=2.1						
	0.2nm,0.8s						

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*IDC **04** 10:17:31.4±2.8, 5°.60S×152°.35E, h0^{km}, mb3.7/3, mbtmp3.8/4, ML2.2/1, Error ellipse: s-maj=62.2km s-min=17.9km az=101.0*

ISC 04 10:17:35.8±2.2, **5°.57S**±0°.10×**152°.5E**±0°.3, **h40**^{km}, **n6**, σ**0^s.84**/8, **mb3.6**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.33**	**341**	Pn	**Pn**	**10 17 57.5**	**-0.4**
	224nm,0.3s,baz=304,slow=1.7,SNR=42						
KRVT				Sn	**Sn**	**10 18 15.1**	**+0.7**
	124nm,0.3s,baz=342,slow=24,SNR=6.1						
PMG	**Port Moresby**	**6.49**	**234**	Pn	**Pn**	**10 19 09.1**	**+0.3**
	3.6nm,0.3s,baz=356,slow=6.6,SNR=8.7						
PMG				Sn	**Sn**	**10 20 21.9**	**+0.2**
	3.7nm,0.3s,baz=131,slow=23,SNR=2.8						
	8.0nm,0.3s						
WRA	**Warramunga Arr**	**22.69**	**229**	P	**P**	**10 22 33.2**	**-0.9**
	0.9nm,0.6s,baz=55,slow=10,SNR=17						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**25.36**	**223**	P	**P**	**10 22 59.5**	**+0.2**
	0.9nm,0.5s,baz=59,slow=9.0,SNR=33						
	0.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**29.00**	**242**	P	**P**	**10 23 31.2**	**-0.9**
	0.9nm,0.5s,baz=82,slow=7.1,SNR=1.9						
	0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.21**	**287**	PKPbc	**PKiKP**	**10 37 25.5**	**+1.1**
	0.3nm,0.7s,baz=108,slow=2.4,SNR=2.2						

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*IDC **04** 10:18:54.9±3.5, 53°.40N×90°.79E, h0^{km}, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=31.5km s-min=23.7km az=44.0*

*NNC **04** 10:18:55.2±1.5, 53°.60N×90°.51E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=12.6km s-min=10.4km az=14.0, Suspected Mining explosion.*

ISC 04 10:18:56.7±3.9, **53°.4N**±0°.1×**90°.5E**±0°.2, **h0**^{km}, **n8**, σ**1^s.42**/11, **7C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.43**	**282**	*i*		10 41 37.0	
	0.1nm,1.0s,baz=92,slow=332,SNR=16						
ZAA0	**Zalesovo Array**	**3.43**	**282**	⇑Pg	**Pb**	**10 19 56.7**	**-1.5**
	1.0nm,0.7s						
ZAA0				⇑Lg	Lg	10 20 44.2	
	8.1nm,1.0s						
ZALV	**Zalesovo Beam**	**3.43**	**282**	Pn	**Pn**	**10 19 53.9**	**+2.7**
	0.6nm,0.3s,baz=98,slow=15,SNR=4.8						
ZALV				Pg	**Pg**	**10 20 01.2**	**-1.1**
	0.6nm,0.3s,baz=98,slow=14,SNR=3.9						
ZALV				Lg	Lg	10 20 47.1	
	0.8nm,0.3s,baz=96,slow=24,SNR=6.2						
	1.2nm,0.3s						
KURK	**Kurchatov**	**7.80**	**255**	⇑Pn	**Pn**	**10 20 50.8**	**-0.5**
	2.4nm,0.9s						
KURK				⇑Sn	**Sn**	**10 22 21.2**	**+1.1**
	5.1nm,1.1s						
KURK				⇑Lg	Lg	10 23 05.2	
	16nm,1.1s						
KURBB	**Kurchatov Arra**	**7.89**	**254**	Pn	**Pn**	**10 20 52.5**	**0.0**
	0.1nm,0.3s,baz=65,slow=14,SNR=7.0						
KURBB				Sn	**Sn**	**10 22 23.9**	**+1.5**
	baz=68,slow=24,SNR=4.6						
KURBB				Lg	Lg	10 23 10.9	
	baz=65,slow=33,SNR=2.7						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**7.89**	**254**	⇑Pn	**Pn**	**10 20 52.5**	**0.0**
	2.1nm,0.7s						
KURBB				⇑Sn	**Sn**	**10 22 23.5**	**+1.1**
	17nm,0.9s						
KURBB				⇓Lg	Lg	10 23 08.4	
	24nm,1.1s						
MK31	**Makanchi Array**	**8.45**	**222**	Pn	**Pn**	**10 21 01.2**	**+1.0**
	0.4nm,0.5s,baz=43,slow=13,SNR=4.9						
MK31				⇓Lg	Lg	10 23 29.4	
	0.1nm,0.1s,baz=100,slow=19,SNR=2.9						
MKAR	**Makanchi Array**	**8.45**	**222**	Pn	**Pn**	**10 21 00.8**	**+0.5**
	0.1nm,0.3s,baz=43,slow=13,SNR=5.8						
MKAR				Lg	Lg	10 23 25.2	
	baz=35,slow=23,SNR=2.1						
	0.2nm,0.4s						

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*IDC **04** 10:20:02.3±0.8, 32°.77N×130°.65E, h0^{km}, mb3.6/9, mbtmp3.6/11, ML3.0/2, MS3.7/1, Error ellipse: s-maj=19.0km s-min=7.9km az=120.0*

*NIED **04** 10:20:04.4, 32°.81N×130°.82E, h8^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.50; $M_{\theta\theta}$5.20; $M_{\phi\phi}$-0.70; $M_{r\theta}$-2.55; $M_{\theta\phi}$2.46; $M_{\phi r}$-6.07; Fault plane solution: $M_0$8.52000×10^{14} NP1: ϕ_s277.00000°, δ31.00000°, λ-35.00000°. NP2: ϕ_s37.00000°, δ73.00000°, λ-117.00000°.*

*JMA **04** 10:20:04.4±0.0, 32°.81N±0°.07×130°.82E±0°.09, h8^{km}, MD4.0/20, MV4.0/20, NW KUMAMOTO PREF*

JMA Felt IV J1 at NW KUMAMOTO PREF .

ISC 04 10:20:04.6±0.6, **32°.81N**±0°.03×**130°.81E**±0°.06, **h12**^{km}, **n31**, σ**1^s.17**/22, **mb3.5**/9, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.26**	**180**	*i* P	**Pg**	**10 20 09.8**	**-0.2**
JIU3				*e*S	**Sg**	**10 20 13.6**	**+0.1**
JIU3	**Izumi3**	**0.26**	**180**	A	A	10 20 09.8	
	comp=E,17nm,1.4s,comp=E,23nm,0.4s						
JTA	**Tamana**	**0.28**	**304**	*i* P	**Pg**	**10 20 10.2**	**-0.2**
JTA				S	**Sg**	**10 20 14.3**	**0.0**
JTA	**Tamana**	**0.28**	**304**	A	A	10 20 10.2	
	comp=E,26nm,1.6s,comp=E,24nm,1.1s						
JNU	**Nakatsue**	**0.32**	**10**	Pg	**Pg**	**10 20 10.4**	**-0.7**
	743nm,0.3s,baz=188,slow=9.8,SNR=4109						
JNU				Lg	Lg	10 20 14.8	
	baz=261,slow=19						
JNU	**Nakatsue**	**0.32**	**10**	*i* P	**Pg**	**10 20 10.7**	**-0.4**
JNU				S	**Sg**	**10 20 15.0**	**-0.5**
JNU	**Nakatsue**	**0.32**	**10**	A	A	10 20 10.7	
	comp=E,23nm,1.0s,comp=E,12nm,0.6s						
JKIT	**Kitakata**	**0.57**	**108**	A	A	10 20 15.2	
	comp=E,19nm,0.3s,comp=E,36nm,0.4s						
JHD	**Hondo**	**0.67**	**239**	A	A	10 20 17.4	
	comp=E,5.0nm,0.6s,comp=E,6.0nm,1.6s						
JZO	**Okuchi**	**0.69**	**195**	A	A	10 20 17.8	
	comp=E,7.0nm,0.3s,comp=E,8.0nm,0.6s						
JFI	**Itaya**	**0.71**	**330**	A	A	10 20 18.2	
	comp=E,21nm,0.4s,comp=E,24nm,0.3s						
JUR	**Ureshino**	**0.78**	**292**	A	A	10 20 19.5	
	comp=E,10.0nm,1.9s,comp=E,8.0nm,2.1s						
JHHC	**Hyugahichiya**	**0.78**	**117**	A	A	10 20 19.4	
	comp=E,10.0nm,0.7s,comp=E,10.0nm,0.6s						
JTSN	**Tsuno**	**0.81**	**134**	A	A	10 20 19.8	
	comp=E,5.0nm,0.8s,comp=E,7.0nm,1.2s						
JUS	**Usuki**	**0.83**	**72**	A	A	10 20 20.1	
	comp=E,5.0nm,0.5s,comp=E,5.0nm,0.5s						
JTZ	**Takazaki**	**0.93**	**166**	*i* P	**Pb**	**10 20 22.5**	**-0.2**
JTZ				S	**Sn**	**10 20 35.2**	**-1.6**
JII	**Iki**	**1.34**	**318**	A	A	10 20 29.1	
	comp=E,8.0nm,1.4s,comp=E,7.0nm,1.3s						
JTY	**Toyota**	**1.47**	**8**	A	A	10 20 31.0	
	comp=E,3.0nm,1.2s,comp=E,5.0nm,0.7s						
KSRS	**Korea Array**	**5.21**	**334**	Pn	**Pn**	**10 21 22.6**	**+0.4**
	0.5nm,0.3s,baz=151,slow=15,SNR=5.5						
KSRS				Pg	**Pb**	**10 21 36.7**	**+1.1**
	1.0nm,0.3s,baz=152,slow=16,SNR=5.9						
KSRS				Lg	Lg	10 22 43.4	
	1.6nm,0.3s,baz=148,slow=28,SNR=5.6						
	1.5nm,0.5s						
JOW	**Kunigami**	**6.35**	**201**	Pn	**Pn**	**10 21 41.1**	**+3.1**
	2.7nm,0.3s,baz=197,slow=2.3,SNR=4.1						
MJAR	**Matsushiro Arr**	**7.14**	**57**	Pn	**Pn**	**10 21 51.0**	**+2.1**
	0.3nm,0.3s,baz=240,slow=12,SNR=13						
	3.4nm,0.4s						
MKAR	**Makanchi Array**	**39.19**	**305**	P	**P**	**10 27 32.1**	**-0.3**
	0.4nm,0.7s,baz=98,slow=8.9,SNR=3.4						
	0.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**50.86**	**186**	LR	LR	10 53 17.1	
	comp=Z,74nm,19.1s,baz=146,slow=39						
WRA	**Warramunga Arr**	**52.56**	**176**	P	**P**	**10 29 17.1**	**-1.0**
	0.6nm,0.8s,baz=354,slow=8.2,SNR=3.7						
	0.6nm,0.8s						
AKTO	**Aktyubinsk**	**54.98**	**312**	P	**P**	**10 29 35.4**	**-0.1**
	1.2nm,0.7s,baz=77,slow=9.4,SNR=4.9						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**56.23**	**177**	P	**P**	**10 29 43.3**	**-1.5**
	0.4nm,0.8s,baz=358,slow=6.4,SNR=5.9						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**57.62**	**30**	P	**P**	**10 29 55.1**	**+0.9**
	0.6nm,0.6s,baz=252,slow=5.9,SNR=11						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**68.29**	**330**	P	**P**	**10 31 03.8**	**-1.3**
	1.2nm,0.7s,baz=57,slow=7.0,SNR=7.0						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**71.64**	**26**	P	**P**	**10 31 25.4**	**-0.3**
	0.4nm,0.9s,baz=310,slow=5.5,SNR=4.9						
	0.4nm,0.9s						
AKASG	**Malin Array Be**	**72.03**	**319**	P	**P**	**10 31 27.3**	**-0.9**
	0.7nm,0.4s,baz=57,slow=5.7,SNR=6.6						
	0.7nm,0.4s						
PDAR	**Pinedale Array**	**86.66**	**40**	P	**P**	**10 32 48.3**	**-0.2**
	0.1nm,0.4s,baz=327,slow=1.5,SNR=1.8						
	0.1nm,0.4s						

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*IDC **04** 10:28:02.5±1.1, 17°.57S×73°.79W, h0^{km}, mb3.6/5, mbtmp3.7/7, ML3.8/2, MS3.0/2, Error ellipse: s-maj=33.9km s-min=23.5km az=44.0*

*VAO **04** 10:28:03.0±1.2, 17°.54S×74°.17W, h10^{km}, mb4.1*

ISC 04 10:28:03.8±0.9, **17°.66S**±0°.07×**73°.79W**±0°.09, **h10**^{km}, **n24**, σ**2^s.51**/23, **mb3.6**/5, **Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**3.43**	**107**	*e*P	**Pn**	**10 28 56.0**	**-1.4**
PB12				IAML		10 30 03.8	
	comp=E,83nm,0.5s						
PB11	**IPOC Station P**	**4.44**	**119**	*e*P	**Pn**	**10 29 10.9**	**-0.5**
PB11				*i* S	**Sn**	**10 29 57.3**	**-5.9**
PB08	**IPOC Station P**	**5.04**	**120**	*e*P	**Pn**	**10 29 19.4**	**-0.4**
PB08				*i* S	**Sn**	**10 30 14.0**	**-4.3**
LPAZ	**La Paz**	**5.59**	**77**	Pn	**Pn**	**10 29 28.6**	**+1.0**
	comp=E,1.0nm,0.3s,baz=264,slow=11,SNR=24						
LPAZ				Sn	**Sn**	**10 30 32.2**	**0.0**
	baz=333,slow=4.5						
LPAZ				LR	LR	10 31 47.9	
	comp=E,118nm,21.8s,baz=248,slow=40						
	comp=E,3.6nm,0.4s						
LPAZ	**La Paz**	**5.59**	**77**	*e*P	**Pn**	**10 29 29.3**	**+1.7**
NNA	**Nana**	**6.37**	**332**	Sn	**Sn**	**10 30 46.6**	**-4.1**
	comp=E,2.9nm,0.3s,baz=259,slow=10,SNR=5.6						
LVC	**Limon Verde**	**6.73**	**138**	Pn	**Pn**	**10 29 44.6**	**+1.6**
	comp=E,3.2nm,0.3s,baz=32,slow=8.9,SNR=46						
LVC				Sn	**Sn**	**10 30 56.9**	**-3.0**
	comp=E,2.3nm,0.3s,baz=280,slow=16,SNR=7.1						
	comp=E,14nm,0.3s						
LVC	**Limon Verde**	**6.73**	**138**	*e*P	**Pn**	**10 29 45.4**	**+2.4**
CZSB	**Cruzeiro do Su**	**9.93**	**6**	*e*P	Pn	10 30 24.2	-2.5
H03N1	**Juan Fernandez**	**16.37**	**195**	T	T	10 50 43.7	
	baz=17,slow=74,SNR=6.9						
H03N2	**Juan Fernandez**	**16.38**	**195**	T	T	10 50 42.5	
	baz=17,slow=74,SNR=6.9						
H03N3	**Juan Fernandez**	**16.39**	**195**	T	T	10 50 41.4	
	baz=17,slow=74,SNR=7.7						
SALV	**Santo Antonio**	**17.42**	**87**	*e*P	**Pn**	**10 32 09.4**	**+2.4**
PDRB	**Porto dos Gac**	**17.57**	**72**	*e*P	**Pn**	**10 32 10.7**	**+1.7**
PP1B	**Ponte de Pedra**	**18.03**	**93**	*e*P	**Pn**	**10 32 16.9**	**+2.3**
PTGB	**Pitanga**	**21.42**	**113**	*e*P	**P**	**10 32 56.0**	**+3.8**
PLCA	**Paso Flores**	**23.16**	**174**	P	**P**	**10 33 11.6**	**+1.0**
	comp=E,0.5nm,0.7s,baz=346,slow=8.3,SNR=1.4						
	comp=E,0.5nm,0.7s						
BOAV	**Boa Vista**	**23.84**	**35**	*e*P	**P**	**10 33 16.1**	**-1.2**
MDP	**Montagnes des**	**30.78**	**45**	LR	LR	10 47 16.4	
	comp=E,38nm,20.1s,baz=305,slow=38						
PDAR	**Pinedale Array**	**68.55**	**332**	P	**P**	**10 39 07.5**	**+0.6**
	comp=E,0.1nm,0.4s,baz=133,slow=3.8,SNR=2.0						
	comp=E,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**69.68**	**324**	P	**P**	**10 39 14.4**	**+0.4**
	comp=E,0.3nm,0.7s,baz=150,slow=7.3,SNR=2.7						
	comp=E,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.53**	**73**	P	**P**	**10 40 16.5**	**-0.4**
	comp=E,0.9nm,0.9s,baz=270,slow=4.3,SNR=3.9						
	comp=E,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**86.11**	**342**	P	**P**	**10 40 44.1**	**-0.4**
	comp=E,1.1nm,0.7s,baz=141,slow=5.1,SNR=28						
	comp=E,1.1nm,0.7s						
MKAR	**Makanchi Array**	**144.88**	**29**	PKP	**PKPab**	**10 47 40.0**	**-0.3**
	comp=E,0.8nm,0.9s,baz=343,slow=3.8,SNR=4.8						

IDC ***04*** *10:47:47.4±4.7, 23°.58N×121°.42E, h0^{km}, mb3.3/4, mbtmp3.3/4, MS2.8/1, Error ellipse: s-maj=277.9km s-min=27.9km az=91.0*

JMA ***04*** *10:47:52.2±0.5, 23°N±2°×12°1E±°, h0^{km}, MV3.8/8, TAIWAN REGION*

IASPEI ***04*** *10:47:54.6±0.8, 22°.91N±0°.01×120°.52E±0°.02, h15^{km}±5^{km}, mb3.6/3, Error ellipse: s-maj=2.4km s-min=1.8km az=82.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

TAP ***04*** *10:47:54.2, 22°.92N×120°.53E, h13^{km}, ML3.8, B*

ISC 04 10:47:54.3±0.9**, 22°.91N**±0°.01×**120°.53E**±0°.02**, h14**^{km}±4^{km}**, n123, σ1^{s}.01**/203**, mb3.6**/3**, 36C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCST	Cishan baz=229	0.04	233	⇑iP	Pb	10 47 57.2	+0.2
SCST	baz=229			iS	Sb	10 47 59.6	+0.8
TWM1	Shoushan baz=224	0.13	229	⇑iP	Pb	10 47 58.8	+0.2
TWM1	baz=224			eS	Sb	10 48 03.0	+1.5
SGST	Jiashian baz=19	0.17	16	eP	Pb	10 47 58.4	-1.0
SGST	baz=19			eS	Sb	10 48 03.1	+0.4
SGLT	Jiouru baz=189	0.19	191	P	Pb	10 48 00.1	+0.5
SGLT	baz=189			eS	Sb	10 48 05.3	+2.2
SSD	Sandimen baz=149	0.19	151	⇓iP	Pb	10 47 59.3	-0.3
SSD	baz=149			iS	Sb	10 48 03.1	0.0
SHHT	Tainan City baz=302	0.20	303	P	Pb	10 48 00.8	+1.0
SHHT	baz=302			S	Sb	10 48 06.2	+2.7
CHN3	Shinhua baz=316	0.22	317	P	Pb	10 48 01.2	+1.0
CHN3	baz=316			eS	Sb	10 48 07.4	+3.3
TSMG	Majia baz=153	0.23	153	iP	Pb	10 47 59.8	-0.5
TSMG	baz=153			iS	Sb	10 48 03.9	-0.4
TSPT	Pingtung City baz=189	0.24	188	eP	Pb	10 48 01.2	+0.8
SNJT	Kaohsiung City baz=228	0.24	229	eP	Pb	10 48 00.9	+0.4
SNJT	baz=228			eS	Sb	10 48 07.1	+2.6
CHN1	Nanshi baz=360	0.27	359	⇑iP	Pb	10 48 01.1	+0.1
CHN1	baz=360			eS	Sb	10 48 06.4	+0.9
TAI1	Yung-k'ang baz=294	0.31	294	eP	Pb	10 48 02.2	+0.6
SNST	Tainan City baz=354	0.31	354	⇑iP	Pb	10 48 01.8	+0.2
SNST	baz=354			eS	Sb	10 48 07.5	+1.0
MASBT	Mashibuluo baz=163	0.31	163	⇑iP	Pb	10 48 01.4	-0.3
MASBT	baz=163			iS	Sb	10 48 06.6	-0.1
TAI	Tainan baz=284	0.32	285	eP	Pb	10 48 02.5	+0.7
STYT	Tauyuan baz=42	0.33	40	⇓iP	Pb	10 48 02.0	0.0
STYT	baz=42			S	Sb	10 48 08.3	+1.3
STYH	Taoyuan baz=41	0.34	41	⇓iP	Pb	10 48 02.3	+0.2
STYH	baz=41			S	Sb	10 48 08.8	+1.3
WTP	Ta-pu baz=15	0.34	13	⇓iP	Pb	10 48 02.4	+0.2
WTP	baz=15			iS	Sb	10 48 08.9	+1.4
TWK	Hsinying baz=355	0.35	354	⇑iP	Pb	10 48 02.7	+0.3
TWK	baz=355			eS	Sb	10 48 09.3	+1.3
WSSB	Gushan baz=222	0.37	223	⇓eP	Pb	10 48 03.5	+0.9
WSSB	baz=222			eS	Sn	10 48 11.0	-1.2
TPUB	Ta-pu baz=13	0.40	13	⇑iP	Pb	10 48 03.2	0.0
TPUB	baz=13			S	Sb	10 48 09.9	+0.8
KAU	Kaohsiung baz=210	0.40	211	eP	Pb	10 48 04.1	+0.9
SCLT	Jiali baz=310	0.41	310	eP	Pb	10 48 03.5	+0.2
SCLT	baz=310			eS	Sn	10 48 11.8	-1.3
SSPT	Xinbi baz=175	0.43	175	⇑P	Pb	10 48 03.9	+0.2
SSPT	baz=175			eS	Sb	10 48 11.3	+1.3
CHN4	Tsaushan baz=8.0	0.44	7	⇑eP	Pb	10 48 03.9	0.0
CHN4	baz=8.0			eS	Sb	10 48 11.5	+1.1
ECL	Taimali baz=129	0.50	129	⇑P	Pb	10 48 04.6	-0.3
ECL	baz=129			eS	Sb	10 48 11.5	-0.5
ICHU	Yijhu baz=332	0.50	333	eP	Pb	10 48 05.3	+0.4
ICHU	baz=332			eS	Sb	10 48 13.4	+1.3
TWG	Pinlang baz=101	0.51	100	⇓iP	Pb	10 48 05.0	0.0
TWG	baz=101			eS	Sb	10 48 13.3	+1.1
TWGBT	Beinan baz=101	0.52	100	⇓P	Pb	10 48 05.0	-0.1
TWGBT	baz=101			eS	Sb	10 48 13.3	+0.8
CHN8	Yiju baz=327	0.52	326	P	Pb	10 48 05.8	+0.5
CHN8	baz=327			eS	Sn	10 48 15.3	-0.7
ELDTW	Lidau baz=59	0.53	58	⇑eP	Pb	10 48 05.6	+0.2
ELDTW	baz=59			eS	Sb	10 48 13.9	+1.0
SCZT	Fangliau baz=171	0.54	171	⇑P	Pb	10 48 05.5	-0.2
SCZT	baz=171			eS	Sb	10 48 14.7	+1.4
LONT	Longtian baz=91	0.55	90	P	Pb	10 48 05.8	0.0
LONT	baz=91			eS	Sn	10 48 15.0	-1.7
WLCH	Liuqiu baz=194	0.58	194	eP	Pn	10 48 08.6	+0.5
WLCH	baz=194			eS	Sn	10 48 19.8	+2.5
TWP	Hsiaoliuchiu baz=195	0.58	196	eP	Pn	10 48 08.5	+0.3
TWP	baz=195			eS	Sn	10 48 19.8	+2.3
TTN	Taitung baz=106	0.59	105	eP	Pn	10 48 07.5	-0.8
CHY	Chiayi baz=351	0.59	350	⇓P	Pb	10 48 07.1	+0.7
CHY	baz=351			eS	Sn	10 48 16.4	-1.3
EAST	Anshuo baz=150	0.60	151	⇑P	Pb	10 48 06.6	-0.1
EAST	baz=150			eS	Sb	10 48 15.4	+0.4
CHN2	Minshiung baz=355	0.62	355	eP	Pb	10 48 07.6	+0.7
CHN2	baz=355			eS	Sn	10 48 18.1	-0.3
ALS	Alishan baz=24	0.65	23	⇑P	Pb	10 48 07.6	0.0
ALS	baz=24			eS	Sb	10 48 17.7	+1.1
TAW	Tawu baz=148	0.65	149	eP	Pb	10 48 07.4	0.0
TAW	baz=148			eS	Sb	10 48 16.4	+0.2
TAWH	Dawu Township baz=150	0.66	150	⇑eP	Pb	10 48 07.5	-0.1
TAWH	baz=150			eS	Sb	10 48 17.3	+0.7
ECS	Chishang baz=74	0.66	74	eP	Pb	10 48 08.2	+0.6
ECS	baz=74			eS	Sn	10 48 18.8	-0.7
WSL	Shuilin Townsh baz=335	0.67	335	eP	Pb	10 48 08.0	+0.2
WSL	baz=335			eS	Sb	10 48 17.9	+1.0
YUS	Yu-Shan baz=35	0.69	34	⇑eP	Pb	10 48 08.7	+0.2
YUS	baz=35			eS	Sn	10 48 19.4	-1.5
CHN5	Tsauling baz=11	0.69	11	⇑P	Pb	10 48 08.3	0.0
CHN5	baz=11			eS	Sn	10 48 20.0	-0.4
EDH	Donghe baz=85	0.71	85	⇑eP	Pb	10 48 09.1	+0.5
EDH	baz=85			eS	Sn	10 48 20.6	-0.2
SLIU	Shizi baz=160	0.74	160	⇑eP	Pb	10 48 08.9	0.0
SLIU	baz=160			eS	Sn	10 48 21.7	+0.4
FULB	Fuli baz=68	0.76	68	⇑eP	Pn	10 48 10.2	-0.5
FULB	baz=68			eS	Sn	10 48 22.9	+1.0
WGK	Gukeng baz=3.0	0.77	2	eP	Pn	10 48 10.4	-0.3
WDLH	Douliu baz=1.0	0.77	0	eP	Pb	10 48 10.2	+0.6
WDLH	baz=1.0			eS	Sn	10 48 22.3	+0.1
WSF	Szhu baz=339	0.78	339	eP	Pb	10 48 09.9	+0.3
WSF	baz=339			eS	Sn	10 48 22.3	0.0
WTK	Tuku baz=350	0.78	350	eP	Pb	10 48 10.2	+0.4
WTK	baz=350			eS	Sn	10 48 21.5	-1.0
CHKT	Chengkung baz=77	0.79	76	eP	Pn	10 48 10.6	-0.5
CHKT	baz=77			eS	Sn	10 48 24.1	+1.5
TWF1	Yuli baz=59	0.83	58	⇑eP	Pb	10 48 10.8	+0.3
TWF1	baz=59			eS	Sn	10 48 23.6	-0.1
EYUL	Yuli baz=59	0.84	59	⇑eP	Pb	10 48 11.0	+0.2
EYUL	baz=59			eS	Sn	10 48 23.1	-0.9
YULB	Yu-li baz=56	0.85	56	⇑eP	Pb	10 48 10.9	0.0
YULB	baz=56			eS	Sn	10 48 23.0	-1.2
WDGT	Dungji baz=293	0.87	293	⇓eP	Pb	10 48 10.5	-0.8
WDGT	baz=293			eS	Sb	10 48 22.1	-0.7
LDUT	Ludao baz=106	0.90	105	⇑eP	Pb	10 48 11.7	0.0
LDUT	baz=106			eS	Sn	10 48 25.5	+0.3
HEN	Hengchun baz=168	0.92	168	eP	Pn	10 48 12.9	+0.1
HEN	baz=168			eS	Sn	10 48 26.8	+1.0
WJS	Zhushan baz=11	0.92	11	eP	Pn	10 48 12.6	-0.3
WJS	baz=11			eS	Sn	10 48 25.7	-0.2
SMST	Manzhou Townsh baz=162	0.93	162	eP	Pn	10 48 12.8	-0.2
ECBN	Changbin baz=65	0.94	64	eP	Pn	10 48 14.0	+1.0
EHY	Hungye baz=51	0.94	51	eP	Pb	10 48 12.6	+0.2
EHY	baz=51			eS	Sn	10 48 27.4	+1.1
SSLB	Suanglung baz=24	0.95	24	⇑eP	Pb	10 48 12.6	-0.1
SSLB	baz=24			eS	Sn	10 48 27.2	+0.5
WNT	Mingjian baz=9.0	0.97	8	eP	Pn	10 48 13.4	-0.2
WTCT	Ta-ch'eng baz=347	0.97	346	eP	Pn	10 48 14.4	+0.9
WTCT	baz=347			eS	Sn	10 48 27.3	+0.2
WRL	Guolierlin Hig baz=352	0.99	352	eP	Pb	10 48 13.1	-0.2
WRL	baz=352			eS	Sn	10 48 26.9	-0.8
TWK1	Hengchun baz=165	1.00	165	⇑eP	Pn	10 48 13.8	-0.1
TWK1	baz=165			eS	Sn	10 48 28.3	+0.6
WNT1	Nantou City baz=8.0	1.00	8	eP	Pn	10 48 14.1	+0.2
WNT1	baz=8.0			eS	Sn	10 48 28.8	+0.9
TWKBT	Hengchun baz=165	1.00	165	⇑eP	Pn	10 48 13.8	-0.1
TWKBT	baz=165			eS	Sn	10 48 28.1	+0.3
HGSD	Ruisui baz=55	1.00	55	⇑eP	Pn	10 48 14.3	+0.4
HGSD	baz=55			eS	Sn	10 48 30.9	+3.0
VWDT	VWDT baz=34	1.01	34	eP	Pb	10 48 13.8	+0.2
VWDT	baz=34			eS	Sn	10 48 28.1	+0.1
SMLT	Sun Moon Lake baz=20	1.02	19	⇑eP	Pn	10 48 14.4	0.0
SMLT	baz=20			eS	Sn	10 48 30.3	+1.7
TYC	Yuchr baz=18	1.03	17	eP	Pn	10 48 14.6	+0.2
TYC	baz=18			eS	Sn	10 48 29.9	+1.4
VCHM	Qimei baz=286	1.06	286	⇓eP	Pb	10 48 12.9	-1.5
VCHM	baz=286			eS	Sb	10 48 26.7	-1.4
TSEB	Hengchuen, Pin baz=163	1.06	161	eP	Pb	10 48 14.7	+0.2
TSEB	baz=163			eS	Sn	10 48 30.1	+0.7
PHUB	P'eng-hu baz=304	1.07	304	⇓eP	Pb	10 48 13.0	-1.5
PHUB	baz=304			eS	Sb	10 48 26.8	-1.5
PNG	Penghu baz=306	1.11	306	⇓eP	Pn	10 48 13.8	-1.7
PNG	baz=306			eS	Sb	10 48 28.4	-1.2
EGFH	Guangfu baz=48	1.12	47	eP	Pb	10 48 15.7	+0.3
EGFH	baz=48			eS	Sn	10 48 32.9	+2.2
WWF	Wufeng baz=8.0	1.14	8	eP	Pb	10 48 16.2	+0.4
WWF	baz=8.0			eS	Sn	10 48 32.6	+1.4
WCHH	Zhanghua baz=1.0	1.16	1	eP	Pb	10 48 16.9	+0.7
WPL	Puli Township baz=19	1.16	20	eP	Pb	10 48 16.6	+0.4
DPDB	Guoxing baz=18	1.17	18	eP	Pb	10 48 16.5	+0.1
WCS	Beigang Elemen baz=17	1.19	17	⇑eP	Pb	10 48 16.7	0.0
WCS	baz=17			eS	Sn	10 48 33.1	+0.5
OWD	Renai baz=30	1.19	30	⇑eP	Pb	10 48 17.0	+0.2
OWD	baz=30			eS	Sn	10 48 34.1	+1.3
WUSB	Renai baz=27	1.20	26	⇑P	Pb	10 48 17.1	+0.1
WUSB	baz=27			eS	Sn	10 48 33.9	+0.9
ESL	Shilin baz=43	1.22	43	⇑eP	Pb	10 48 17.6	+0.4
ESL	baz=43			eS	Sn	10 48 35.2	+1.9
TCU	Taichung baz=7.0	1.24	6	eP	Pb	10 48 17.5	0.0
LAY	Lan-yu baz=133	1.28	132	eP	Pn	10 48 17.3	-0.6
LAY	baz=133			eS	Sb	10 48 35.1	+0.5
CHGB	Renai baz=27	1.29	27	⇑eP	Pb	10 48 18.4	0.0
CHGB	baz=27			eS	Sb	10 48 35.9	+1.0
LYUB	Lan-yu baz=133	1.33	133	eP	Pn	10 48 16.6	-1.9
TEYL	Yanliau Villag baz=45	1.37	46	eP	Pn	10 48 19.2	+0.3
ETM	Tongmen baz=40	1.37	40	eP	Pb	10 48 19.8	+0.1
WHF	Hehuan Shan baz=29	1.40	29	⇓eP	Pb	10 48 20.7	+0.2
WHP	Taichung City baz=16	1.41	16	⇑eP	Pn	10 48 20.0	+0.3
WHP	baz=16			eS	Sb	10 48 39.3	+0.9
WDJ	Dajia District baz=4.0	1.43	4	eP	Pn	10 48 20.2	+0.3
TWQ1	Liyutan baz=9.0	1.45	9	eP	Pb	10 48 20.6	-0.4
TWQ1	baz=9.0			eS	Sb	10 48 40.6	+1.2
TDCB	Techi baz=23	1.45	23	eP	Pb	10 48 20.8	-0.4
TWT	Tachien baz=24	1.46	24	eP	Pb	10 48 21.0	-0.4
FUSS	Fushou baz=26	1.48	26	eP	Pn	10 48 21.2	+0.4
NSY	Sanyi baz=8.0	1.51	8	eP	Pb	10 48 21.9	-0.3
TWD	Chiawan baz=40	1.52	40	eP	Pb	10 48 22.1	-0.2
ETLH	Xiulin Townshi baz=34	1.56	34	eP	Pb	10 48 22.7	-0.3
NACB	Ninganchiao baz=38	1.59	38	⇑eP	Pb	10 48 22.9	-0.6
NNSB	Datong baz=27	1.70	27	eP	Pn	10 48 24.5	+0.9
NNS	Nan Shan baz=27	1.71	27	eP	Pb	10 48 24.9	-0.6
NSTT	Nanjuang baz=14	1.76	14	eP	Pn	10 48 25.1	+0.7
LIOB	Emei baz=14	1.78	14	eP	Pn	10 48 25.3	+0.6
NFF	Wufeng Townshi baz=17	1.79	17	eP	Pn	10 48 25.2	+0.3
LATG	Datong baz=30	1.85	29	eP	Pb	10 48 27.1	-1.0
YHNB	Yeheng baz=24	1.91	24	eP	Pn	10 48 27.1	+0.5
JYNG	Yonagunijimaku	2.69	55	P	Pn	10 48 39.1	+1.9
JYNG				eS	Sb	10 49 12.7	-2.5
YOJ	Yonaguni jima	2.75	55	eP	Pn	10 48 40.0	+2.0
YOJ				eS	Sb	10 49 14.4	-2.3
HATJ	Hateruma jima	3.21	69	S	Sn	10 49 25.0	+2.6
IRIF	Iriomote-Funau	3.26	64	P	Pn	10 48 47.1	+2.2
JKRS	Kuro-shima	3.45	67	eP	Pn	10 48 49.4	+1.7
JIJ	Ishigaki jima	3.61	66	P	Pn	10 48 50.8	+0.9
JIJ				eS	Sn	10 49 34.2	+1.9
CMAR	Chiang Mai Arr comp=Z,29nm,21.2s,baz=180,slow=40	20.67	262	LR	LR	11 02 01.5	
WRA	Warramunga Arr 1.0nm,0.6s,baz=343,slow=8.8,SNR=11 1.0nm,0.6s	44.68	161	P	P	10 56 04.8	-2.1
ASAR	Alice Springs 0.3nm,0.6s,baz=354,slow=14,SNR=7.1 0.3nm,0.6s	48.09	163	P	P	10 56 32.6	-1.1
ILAR	Eielson Array 0.1nm,0.4s,baz=294,slow=6.8,SNR=1.8 0.1nm,0.4s	70.61	27	P	P	10 58 58.2	-11
YKA	Yellowknife Ar baz=311,slow=4.8,SNR=1.8	84.37	23	P	P	11 00 16.6	-9.2

IDC ***04*** *10:58:48.5±2.3, 33°.03N×90°.10E, h0^{km}, mb3.5/4, mbtmp3.4/6, ML3.1/2, MS2.9/1, Error ellipse: s-maj=54.4km s-min=49.0km az=104.0*

ISC 04 10:58:55.1±2.0**, 33°.3N**±0°.2×**89°.9E**±0°.3**, h35**^{km}**, n7, σ0^{s}.39**/6**, mb3.5**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.1nm,0.3s,baz=153,slow=16,SNR=2.2 0.2nm,0.6s	14.68	339	Pn	Pn	11 02 20.1	-0.1
AAK	Ala-Archa comp=Z,52nm,21.0s,baz=126,slow=42	15.29	312	LR	LR	11 09 39.1	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=148,slow=12,SNR=3.3 1.0nm,0.8s	19.23	338	P	Pn	11 03 16.8	-0.5
ZALV	Zalesovo Beam 1.2nm,0.6s,baz=170,slow=11,SNR=5.5 1.2nm,0.6s	20.96	352	P	P	11 03 35.4	+0.4
ILAR	Eielson Array 0.6nm,0.8s,baz=303,slow=5.6,SNR=8.0 0.6nm,0.8s	72.73	22	P	P	11 10 19.2	0.0
TORD	Torodi Ar. Bea 0.1nm,0.4s,baz=57,slow=5.3,SNR=1.7 0.1nm,0.4s	81.41	280	P	P	11 11 09.0	+0.1
YKA	Yellowknife Ar 0.4nm,0.9s,baz=334,slow=4.9,SNR=5.6 0.4nm,0.9s	82.54	11	P	P	11 11 13.8	-0.1

IDC ***04*** *11:02:10.6±1.7, 6°.62S×129°.31E, h0^{km}, mb3.6/2, mbtmp3.6/6, ML3.5/4, Error ellipse: s-maj=51.1km s-min=24.7km az=83.0*

ISC 04 11:02:33.3±2.0**, 7°.9S**±0°.1×**128°.63E**±0°.08**, h150**^{km}**, n13, σ1^{s}.70**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 7.4nm,0.3s,baz=48,slow=12,SNR=17	5.40	245	Pn	Pn	11 03 49.9	-2.2
BATI	10.0nm,0.3s,baz=36,slow=14,SNR=3.6 16nm,0.3s			Sn	Sn	11 04 53.1	-0.5
MTN	Manton Dam	5.46	153	P	Pn	11 03 53.9	+1.1
KDU	Kakadu	6.04	142	P	Pn	11 04 00.7	+0.1
KNRA	Kununurra	7.69	179	P	Pn	11 04 22.6	0.0
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=21,slow=12,SNR=12	10.51	196	Pn	Pn	11 05 00.4	+0.4
FITZ	0.3nm,0.3s,baz=301,slow=9.9,SNR=3.4 1.1nm,0.6s			Sn	Sn	11 06 58.3	+2.0
WRAB	Tennant Creek	13.15	156	P	Pn	11 05 36.3	+1.9
WRA	Warramunga Arr 0.2nm,0.3s,baz=344,slow=13,SNR=12	13.15	156	Pn	Pn	11 05 32.9	-1.6
WRA	0.4nm,0.3s,baz=330,slow=23,SNR=8.3 0.2nm,0.4s			Sn	Sn	11 07 57.4	-2.7
COEN	Coen	15.47	114	P	P	11 06 04.8	-0.1
ASAR	Alice Springs 0.1nm,0.3s,baz=343,slow=12,SNR=18	16.44	163	P	P	11 06 16.9	+1.4
ASAR	0.3nm,0.7s,baz=346,slow=28,SNR=1.6 0.4nm,0.5s			S	S	11 09 16.9	-1.2
WRKA	Warakurna	17.01	181	P	Pn	11 06 24.5	+2.2
OOD	Oodnadatta 18nm,2.9s	20.85	162	P	Pn	11 07 05.5	-2.2
MKAR	Makanchi Array 0.3nm,0.4s,baz=114,slow=7.2,SNR=6.2 0.3nm,0.4s	68.28	328	P	P	11 13 09.2	-8.8
KURBB	Kurchatov Arra 0.4nm,0.6s,baz=142,slow=5.1,SNR=4.6 0.4nm,0.6s	72.61	329	P	P	11 13 34.7	-9.4

INET ***04*** *11:04:30.0±1.4, 7°.87N×82°.78W, h15^{km}±12^{km}, MW3.6*

UPA ***04*** *11:04:30.9±1.6, 8°.25N×82°.81W, h3^{km}±3^{km}, MW4.2*

NEIC ***04*** *11:04:31.4±1.4, 8°.26N±0°.05×82°.88W±0°.06, h10^{km}±1^{km},* *mb4.4/4,ML4.2(UCR),Error ellipse: s-maj=11.3km s-min=6.1km az=232.0*

*IDC **04** 11:04:33.0±4.7,9°.26N×82°.18W,h0^{km},mb3.4/5, mbtmp3.5/6,ML3.8/1,MS3.1/1,Error ellipse: s-maj=169.4km s-min=34.6km az=27.0*

*UCR **04** 11:04:32.9±2.2,8°.29N×82°.91W,h5^{km},MW4.3, mb4.4(NEIC)*

ISC 04 11:04:30.3±1.3,**8°.20N**±0°.04×**82°.83W**±0°.02,**h8**^{km}±8^{km}, **n108**,σ**1^{s}49**/139,**mb3.5**/6,**10C-3D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	Canoas	0.38	353		Pg	11 04 38.1	+0.4
CDITO	Canoas	0.38	353	eP	Pg	11 04 38.2	+0.4
CDITO				i S	Sb	11 04 43.8	-1.4
BAGA3	Bagala, Chiriq	0.40	48	i P	Pb	11 04 39.2	-0.4
BAGA3				eS	Sb	11 04 45.2	-0.7
DVD	David	0.44	57	eP	Pg	11 04 39.5	+0.6
DVD				eS	Sb	11 04 46.4	-0.7
CHIR3	Chiriqui UPA,	0.53	68	eP	Pg	11 04 40.9	+0.3
CHIR3				eS	Sb	11 04 49.0	-0.7
PIRO	Carate, Puerto	0.54	292	⇓eP	Pg	11 04 41.4	+0.6
PIRO				eS	Sb	11 04 51.7	+1.7
BCO2	Palmira	0.60	30	eP	Pg	11 04 42.3	+0.4
BCO2				i S	Sb	11 04 51.3	-0.4
BRU2	Volcan	0.61	13		Pg	11 04 42.4	+0.2
BRU2				Sg	Sb	11 04 51.0	-1.1
BRU2	Volcan	0.61	13	eP	Pg	11 04 42.5	+0.4
BRU2				i S	Sb	11 04 51.3	-0.8
EDSV	San Vito	0.64	347	eP	Pg	11 04 43.1	+0.5
EDSV				eS	Sb	11 04 53.3	+0.5
BC3P	Paso Ancho	0.65	19	i P	Pg	11 04 43.0	0.0
BC3P				eS	Sb	11 04 53.6	+0.3
EDPN	Palmar Norte	0.98	321	eP	Pg	11 04 48.0	-1.2
EDPN				eS	Sg	11 05 01.7	-0.3
CHGR2	Aguacate	1.00	42	⇑iP	Pg	11 04 48.2	-1.3
CHGR2				eS	Sg	11 05 01.4	-1.2
EDBA	Buenos Aires	1.06	335	eP	Pg	11 04 50.7	+0.1
DRK0	Durika	1.14	339	Pg	Pg	11 04 50.7	-1.5
DRK0				Sg	Sg	11 05 05.6	-1.4
SRBA	San Rafael, Bu	1.16	333	Pg	Pg	11 04 50.8	-1.7
SRBA				Sg	Sg	11 05 05.3	-2.3
SRBA	San Rafael, Bu	1.16	333	⇑eP	Pg	11 04 50.8	-1.7
CNI2	El Empalme, Bo	1.27	16	⇑iP	Pg	11 04 53.1	-1.6
CNI2				eS	Sg	11 05 09.9	-1.3
RGM0	Gandoca	1.40	9		Pn	11 04 56.6	+0.5
RGM0	Gandoca	1.40	9	eP	Pn	11 04 56.8	+0.7
PEZE	Perez Zeledon,	1.45	325		Pn	11 04 55.7	-1.1
PEZE	Perez Zeledon,	1.45	325	eP	Pn	11 04 55.9	-0.9
EDDO	Dominical	1.47	316	⇑eP	Pn	11 04 57.0	0.0
EDDO				eS	Sg	11 05 17.7	+0.2
GMAL	Guarumal, Vera	1.64	105	⇑iP	Pn	11 04 57.4	-1.9
GMAL				eS	Sn	11 05 18.8	-1.8
RIMA	Rio Macho	1.87	327		Pn	11 05 01.7	-0.9
LCR2	La Lucha 2	1.93	323	⇑eP	Pn	11 05 03.5	0.0
LCR2				eS	Sn	11 05 28.2	+0.2
BATAN	Batan	1.97	344		Pn	11 05 05.0	+1.1
BATAN	Batan	1.97	344	eP	Pn	11 05 04.9	+1.1
BATAN				eS	Sg	11 05 37.8	+4.3
CALO3	Calobre, Verag	1.97	86	⇑iP	Pn	11 05 03.4	-0.5
CALO3				i S	Sn	11 05 30.1	+1.2
CVTR	Volcan Turrial	2.03	333		Pn	11 05 04.8	-0.3
CACAO	El Cacao, Vera	2.12	113	eP	Pn	11 05 06.5	+0.5
CACAO				eS	Sb	11 05 38.4	+2.9
CRIS3	El Cristo, Coc	2.19	88	eP	Pn	11 05 06.4	-0.5
CRIS3				eS	Sn	11 05 36.5	+2.3
HDC3	Heredia 3	2.20	325	eP	Pn	11 05 08.9	+1.8
HDC3				eS	Sg	11 05 39.8	-1.1
HDC	Heredia	2.20	325		Pn	11 05 08.2	+1.0
HDC	Heredia	2.20	325	⇑eP	Pn	11 05 08.8	+1.6
HDC				eS	Sb	11 05 37.1	-0.7
HDC	Heredia	2.20	325	i P	Pn	11 05 08.9	+1.8
HDC				eS	Sb	11 05 37.4	-0.4
JACO	JACO, Garabito	2.32	309		Pn	11 05 08.1	-0.6
CHIT3	Chitre	2.40	96	eP	Pn	11 05 10.1	+0.3
CHIT3				eS	Sn	11 05 41.8	+2.4
SRA1	San Ramn	2.49	319	eP	Pn	11 05 12.5	+1.4
PNME	Penonome	2.49	83	⇓eP	Pn	11 05 11.6	+0.5
AZU	Azuero	2.56	99	⇓iP	Pn	11 05 13.3	+1.2
AZU				i S	Sn	11 05 45.9	+2.5
LAFE	Finca La Fe, P	2.61	308	eP	Pn	11 05 12.0	-0.6
LAFE	Finca La Fe, P	2.61	308	eP	Pn	11 05 12.2	-0.5
LAFE				eS	Sn	11 05 47.6	+3.1
CAO2	Cobano, Puntar	2.69	304		Pn	11 05 12.8	-1.1
CASO	Castillo	2.91	320	eP	Pn	11 05 19.5	+2.6
ARE1	Arenal 1	2.92	321	eP	Pn	11 05 18.9	+1.9
CEDE	Laguna Cedeo	2.93	321	eP	Pn	11 05 19.1	+1.9
JTS	Las Juntas de	2.96	315	Pn	Pn	11 05 17.8	+0.4
JTS	Las Juntas de	2.96	315	eP	Pn	11 05 17.1	-0.3
BCIP	Isla Barro Col	3.11	72	Pn	Pn	11 05 20.2	+0.6
BCIP	Isla Barro Col	3.11	72	eP	Pn	11 05 19.9	+0.3
BCIP				eS	Sn	11 05 57.3	+0.3
INDI	Punta indio, G	3.12	302	eP	Pn	11 05 19.8	0.0
GAMB1	Gamboa	3.22	73	eP	Pn	11 05 22.6	+1.5
ARRA3	Arraijan, Pana	3.23	76	eP	Pn	11 05 24.6	+3.4
ARRA3				eS	Sb	11 06 07.2	-0.1
DUNO	Dulce Nombre,	3.23	306		Pn	11 05 21.2	-0.1
DUNO	Dulce Nombre,	3.23	306	eP	Pn	11 05 21.5	+0.3
FRIJ	El Hiral	3.23	71	eP	Pn	11 05 23.7	+2.4
ACAL	Aguas Claras	3.26	318	eP	Pn	11 05 23.8	+2.1
PTEN	Parque Tenorio	3.29	320	eP	Pn	11 05 23.9	+1.8
TABO3	Taboga, Panama	3.29	79	eP	Pb	11 05 30.7	+1.7
TABO3				eS	Sb	11 06 10.8	+1.6
UPA	Univ. de Panam	3.35	76	eP	Pb	11 05 31.2	+1.3
UPA				eS	Sb	11 06 09.1	-1.8
GUAI	GUAI	3.35	308	eP	Pn	11 05 23.6	+0.6
CUI	Cuipilapa	3.36	317	eP	Pn	11 05 24.0	+0.9
ORTG	Ortega, Santa	3.37	310	Pn	Pn	11 05 23.2	-0.1
ORTG	Ortega, Santa	3.37	310	eP	Pn	11 05 24.3	+1.0
ORTG				eS	Sn	11 06 05.5	+2.0
COLC	Colonia	3.39	317	eP	Pn	11 05 26.0	+2.5
SAJU	San Juanillo,	3.40	303	⇑eP	Pn	11 05 23.5	0.0
HORNC	Hornillas	3.41	317	eP	Pn	11 05 26.1	+2.3
GUAB	Guayabo de Bag	3.44	317	eP	Pn	11 05 26.5	+2.3
VMAR	Armenia, Volca	3.45	319	⇑eP	Pn	11 05 26.6	+2.3
LIM1	Limonal	3.45	316	eP	Pn	11 05 26.4	+2.1
GPS2	Hotel Rincn d	3.56	316	eP	Pn	11 05 28.1	+2.3
BUEV	Buena Vista	3.63	316	eP	Pn	11 05 28.9	+2.1
BUAI	Buenos Aires	3.63	317	eP	Pn	11 05 28.8	+2.0
GB1A	Borinquen Arri	3.63	316	eP	Pn	11 05 29.0	+2.1
GBS3	Finca Las Img	3.65	315	eP	Pn	11 05 29.0	+1.9
HZTE	Horizontes, Gu	3.70	313		Pn	11 05 27.9	+0.1
HZTE	Horizontes, Gu	3.70	313	eP	Pn	11 05 29.7	+2.0
HZTE	Horizontes, Gu	3.70	313	eP	Pn	11 05 29.8	+2.0
ESPN	Las Esperanzas	4.23	340		Pn	11 05 35.5	+0.5
ESPN	Las Esperanzas	4.23	340	eP	Pn	11 05 37.2	+2.2
ESPN				eS	Sn	11 06 28.9	+4.3
ACON	Acoyapa	4.40	329		Pn	11 05 38.6	+1.2
ACON	Acoyapa	4.40	329	eP	Pn	11 05 39.5	+2.1
ACON				eS	Sn	11 06 32.6	+3.7
BOAB	BOACO BROADBAN	5.07	327	Pn	Pn	11 05 47.7	+1.2
PRVC	Isla de Provid	5.35	15	Pn	Pn	11 05 50.2	-0.2
MATN	Matagalpa	5.60	327		Pn	11 05 54.7	+0.7
CNGN	Cerro Negro	5.73	319		Pn	11 05 55.1	-0.5
CRIN	San Cristobal	6.11	318		Pn	11 06 00.2	-0.7
TGUH	Tegucigalpa,Un	7.28	324		Pn	11 06 16.2	-0.8
SJCC	San Jacinto, C	7.74	77	Pn	Pn	11 06 24.6	+1.3
ZARC	Zaragoza, Cauc	7.93	95	Pn	Pn	11 06 27.1	+1.2
SNET	Serv Nac Est T	8.32	312	Pn	Pn	11 06 30.4	-1.0
MTO3	Montecristo	8.89	314		Pn	11 06 38.5	-0.8
SDV	Santo Domingo	12.08	86	LR	LR	11 12 43.2	
	comp=Z,103nm,21.5s,baz=200,slow=43						
CMIG	Matias Romero	14.71	308	Pn	Pn	11 07 59.3	+0.6
	0.4nm,0.3s,baz=122,slow=9.4,SNR=4.1						
	1.2nm,0.3s						
ICMP	Isla Caja de M	18.56	57	P	P	11 08 45.2	-2.4
WHAR	Wooly Hollow	28.33	344	P	P	11 10 24.4	-0.1
U40A	Yellville	29.48	343	P	P	11 10 34.2	-0.7
U40A				IAmb	IAmb	11 10 40.7	
	comp=Z,11nm,1.5s						
H03N2	Juan Fernandez	41.57	175	T	T	11 56 34.4	
	baz=355,slow=76,SNR=31						
H03N1	Juan Fernandez	41.57	175	T	T	11 56 35.5	
	baz=355,slow=76,SNR=46						
H03N3	Juan Fernandez	41.59	175	T	T	11 56 33.9	
	baz=355,slow=76,SNR=39						
PDAR	Pinedale Array	41.68	330	P	P	11 12 19.1	-0.6
	comp=Z,0.3nm,0.6s,baz=143,slow=9.5,SNR=2.2						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	43.88	319	P	P	11 12 39.0	+1.4
	comp=Z,0.5nm,0.7s,baz=144,slow=6.1,SNR=6.1						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	43.88	319	P	P	11 12 36.7	-0.9
YKA	Yellowknife Ar	58.93	343	P	P	11 14 27.6	-2.1
	comp=Z,0.2nm,0.6s,baz=139,slow=7.0,SNR=6.6						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	71.73	336	P	P	11 15 52.6	0.0
	comp=Z,0.3nm,0.6s,baz=121,slow=5.8,SNR=3.0						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	71.73	336	P	P	11 15 52.8	+0.2
TORD	Torodi Ar. Bea	82.88	78	P	P	11 16 55.8	-0.4
	comp=Z,0.5nm,0.9s,baz=266,slow=6.9,SNR=4.5						
	comp=Z,0.5nm,0.9s						

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*IDC **04** 11:11:19.4±1.9,6°.81S×155°.33E,h66^{km}±18^{km},mb3.9/12, mbtmp4.2/17,MS3.5/12,Error ellipse: s-maj=16.2km s-min=12.6km az=12.0*

*NEIC **04** 11:11:20.4±1.5,6°.78S±0°.10×155°.3E±0°.1,h63^{km}±7^{km}, mb4.6/23,Error ellipse: s-maj=17.1km s-min=13.6km az=70.0*

ISC 04 11:11:18.1±0.5,**6°.78S**±0°.07×**155°.35E**±0°.06,**h50**^{km},**n62**, σ**1^{s}48**/56,**mb4.5**/24,**MS3.7**/8,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.08	309	Pn	Pn	11 12 18.9	+1.0
KRVT	Keravat (AS076	4.11	306	P	Pn	11 12 19.3	+0.8
	14nm,0.4s,baz=187,slow=11,SNR=6.0						
KRVT				S	Sn	11 13 11.6	+6.2
	65nm,0.4s,baz=217,slow=23,SNR=4.3						
HNR	Honiara	5.27	120	P	Pn	11 12 35.2	+1.0
	30nm,0.4s,baz=216,slow=6.4,SNR=1.7						
HNR				S	Sn	11 13 36.1	+2.4
	47nm,0.5s,baz=350,slow=21,SNR=1.1						
HNR				LR	LR	11 14 23.6	
	comp=Z,173nm,19.9s,baz=274,slow=35						
PMG	Port Moresby	8.52	252	P	Pn	11 13 18.9	+0.1
	8.0nm,0.4s,baz=90,slow=4.0,SNR=2.0						
PMG				S	Sn	11 14 55.5	+1.9
	12nm,0.6s,baz=103,slow=3.5,SNR=2.0						
PMG				LR	LR	11 16 28.0	
	comp=Z,165nm,18.1s,baz=81,slow=36						
PMG	Port Moresby	8.52	252		Pn	11 13 17.4	-1.4
COEN	Coen	13.93	238	Pn	Pn	11 14 33.9	+0.9
CTA	Charters Tower	15.90	213	P	Pn	11 14 59.4	+0.7
	3.1nm,0.8s,baz=47,slow=13,SNR=3.3						
CTA				LR	LR	11 20 32.2	
	comp=Z,198nm,18.1s,baz=86,slow=35						
DZM	Mont Dzumac	18.60	146	P	P	11 15 32.3	+0.8
	5.7nm,0.6s,baz=271,slow=9.0,SNR=16						
DZM				LR	LR	11 22 24.3	
	comp=Z,118nm,18.0s,baz=199,slow=36						
DZM	Mont Dzumac	18.60	146	P	Pn	11 15 33.0	+0.8
EIDS	Eidsvold	18.93	192	P	Pn	11 15 40.5	+4.5
OUENC	Ouen Island, N	19.10	146	P	P	11 15 37.9	+1.1
OUENC				IAmb	IAmb	11 16 36.5	
	comp=Z,38nm,1.4s						
WR0	Warramunga Arr	24.07	235	P	P	11 16 28.9	-0.1
WR0				IAmb	IAmb	11 16 29.5	
	comp=Z,19nm,1.1s						
WB0	Warramunga Arr	24.10	236	P	P	11 16 28.9	-0.4
WB0				IAmb	IAmb	11 16 29.4	
	comp=Z,10nm,0.6s						
WRAB	Tennant Creek	24.21	235	P	P	11 16 30.3	0.0
WRAB				IAmb	IAmb	11 16 30.8	
	comp=Z,25nm,1.2s						
WB2	Warramunga Arr	24.22	235	P	P	11 16 30.1	-0.2
WB2				IAmb	IAmb	11 16 30.9	
	comp=Z,29nm,1.2s						
WRA	Warramunga Arr	24.23	235	P	P	11 16 29.8	-0.6
	comp=Z,8.6nm,0.5s,baz=60,slow=9.6,SNR=167						
WRA				PcP	PcP	11 20 09.7	-0.3
	comp=Z,0.3nm,0.4s,baz=62,slow=2.3,SNR=4.7						
	comp=Z,8.6nm,0.5s						
WRA	Warramunga Arr	24.23	235	P	P	11 16 29.1	-1.3
MTN	Manton Dam	24.60	254	P	P	11 16 35.1	+1.3
MTN				IAmb	IAmb	11 17 06.8	
	comp=Z,33nm,1.4s						
SIJI	Sorong	24.72	283	P	P	11 16 34.8	-0.2
	comp=Z,7.1nm,0.6s,baz=74,slow=12,SNR=6.6						
	comp=Z,7.1nm,0.6s						
AS31	Alice Springs	26.58	229	P	P	11 16 50.7	-1.0
ASAR	Alice Springs	26.58	229	P	P	11 16 50.4	-1.4
	comp=Z,3.6nm,0.7s,baz=60,slow=9.5,SNR=58						
ASAR				PcP	PcP	11 20 14.7	-0.6
	comp=Z,0.4nm,0.5s,baz=62,slow=3.0,SNR=4.2						
ASAR				LR	LR	11 26 04.3	
	comp=Z,131nm,18.4s,baz=142,slow=33						
	comp=Z,3.6nm,0.7s						
ASAR	Alice Springs	26.58	229	P	P	11 16 50.7	-1.0
H11S3	WAKE ISLAND Hy	27.49	24	T	T	11 45 22.3	
	baz=203,slow=75,SNR=48						
H11S2	WAKE ISLAND Hy	27.49	24	T	T	11 45 19.1	
	baz=203,slow=75,SNR=58						
H11S1	WAKE ISLAND Hy	27.51	24	T	T	11 45 22.5	
	baz=203,slow=75,SNR=51						
STKA	Stephens Creek	28.08	205	P	P	11 17 04.4	-0.7
	comp=Z,4.4nm,1.1s,baz=95,slow=11,SNR=2.7						
	comp=Z,4.4nm,1.1s						
H11N1	WAKE ISLAND Hy	28.67	23	T	T	11 47 12.6	
	baz=203,slow=76						
H11N3	WAKE ISLAND Hy	28.68	23	T	T	11 46 48.8	
	baz=203,slow=76						
H11N2	WAKE ISLAND Hy	28.69	23	T	T	11 47 11.7	
	baz=203,slow=76						
FITZ	Fitzroy Crossi	31.06	246	LR	LR	11 29 14.5	
	comp=Z,70nm,19.0s,baz=98,slow=35						
FITZ	Fitzroy Crossi	31.06	246	P	P	11 17 31.1	-0.5
AFI	Afiamalu	33.08	105	LR	LR	11 28 16.8	
	comp=Z,95nm,19.8s,baz=168,slow=31						
FORT	Forrest	34.99	223	P	P	11 18 05.1	-0.7
PSA00	Pilbara Seismi	37.31	243	P	P	11 18 25.2	-0.5
PSA00				IAmb	IAmb	11 18 25.8	
	comp=Z,7.9nm,1.3s						
BKZ	Black Stump Fm	37.46	153	P	P	11 18 26.0	-0.9
TPUB	Ta-pu	45.22	312	P	P	11 19 28.7	-2.0
PEA0B	Petropavlovsk-	59.69	2	P	P	11 21 18.6	+1.4
PETK	Petropavlovsk-	59.69	2	P	P	11 21 17.8	+0.5
	comp=Z,3.7nm,0.8s,baz=154,slow=8.6,SNR=6.9						
PETK				LR	LR	11 47 34.8	
	comp=Z,22nm,18.8s,baz=176,slow=36						
	comp=Z,3.7nm,0.8s						
PETK	Petropavlovsk-	59.69	2	P	P	11 21 18.4	+1.1
CM31	Chiang Mai Arr	61.00	295	P	P	11 21 27.2	+0.3
CMAR	Chiang Mai Arr	61.00	295	P	P	11 21 27.5	+0.6
	comp=Z,2.1nm,0.5s,baz=125,slow=5.3,SNR=14						
	comp=Z,2.1nm,0.5s						
CMAR	Chiang Mai Arr	61.00	295	P	P	11 21 26.6	-0.3
MA2	Magadan	66.24	357	P	P	11 22 00.6	-0.1
MA2				IAmb	IAmb	11 22 01.7	
	comp=Z,3.1nm,0.8s						
VNDA	Vanda	70.79	179	P	P	11 22 27.9	-1.0
	comp=Z,1.5nm,0.9s,baz=341,slow=5.5,SNR=4.7						
	comp=Z,1.5nm,0.9s						
TTA	Tatalina	78.70	20	P	P	11 23 16.6	+1.8
TTA				IAmb	IAmb	11 25 23.7	
	comp=Z,19nm,2.0s						
CAST	Castle Rocks	80.39	21	P	P	11 23 24.9	+0.9
CAST				IAmb	IAmb	11 23 26.5	
	comp=Z,17nm,1.8s						
IMAR	Indian Mountai	81.41	19	P	P	11 23 30.1	+0.8
ILAR	Eielson Array	83.04	21	P	P	11 23 36.4	-1.5
	comp=Z,0.5nm,0.7s,baz=252,slow=4.9,SNR=6.2						
	comp=Z,0.5nm,0.7s						
QSPA	South Pole Qui	83.20	180	P	P	11 23 38.6	-0.3
QSPA				IAmb	IAmb	11 25 45.8	
	comp=Z,16nm,1.7s						
MKAR	Makanchi Array	83.47	319	P	P	11 23 38.9	-1.6
	comp=Z,0.4nm,0.6s,baz=112,slow=5.4,SNR=4.1						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	83.47	319	P	P	11 23 39.0	-1.5
J25K	Salcha River,	83.52	22	P	P	11 23 40.8	+0.4
J25K				IAmb	IAmb	11 26 01.7	
	comp=Z,14nm,1.9s						
M27K	Edge Creek, AK	83.79	25	P	P	11 23 43.2	+1.2
M27K				IAmb	IAmb	11 23 46.0	
	comp=Z,4.5nm,1.0s						
MAW	Mawson	84.73	203	P	P	11 23 46.1	-0.4
	comp=Z,2.8nm,0.6s,baz=109,slow=6.5,SNR=4.5						
	comp=Z,2.8nm,0.6s						
MAW	Mawson	84.73	203	P	P	11 23 46.4	-0.1
BBB	Bella Bella	87.14	37	LR	LR	11 57 25.0	
	comp=Z,41nm,18.7s,baz=254,slow=32						
YBH	Yreka Blue Hor	88.48	48	LR	LR	12 01 06.0	
	comp=Z,35nm,18.4s,baz=242,slow=34						
NVAR	Mina Array Bea	91.31	52	P	P	11 24 18.0	-1.0
	comp=Z,0.1nm,0.4s,baz=271,slow=8.0,SNR=2.4						
	comp=Z,0.1nm,0.4s						
NEW	Newport	93.36	42	LR	LR	11 58 44.6	
	comp=Z,44nm,20.7s,baz=237,slow=30						
YKA	Yellowknife Ar	95.98	28	P	P	11 24 38.8	-0.7
	comp=Z,0.5nm,0.8s,baz=269,slow=4.4,SNR=10						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	98.29	48	LR	LR	12 05 36.0	
	comp=Z,32nm,18.3s,baz=250,slow=33						
TORD	Torodi Ar. Bea	153.30	286	PKPbc	PKPbc	11 31 09.5	-2.2
	comp=Z,0.5nm,0.6s,baz=18,slow=1.9,SNR=4.4						
TORD				PKPab	PKPab	11 31 22.9	-0.9
	comp=Z,0.8nm,0.6s,baz=78,slow=3.6,SNR=6.4						

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*NNC **04** 11:58:15.2±0.9,43°.37N×70°.96E,h0^{km},mb3.4,mpv2.6, Error ellipse: s-maj=16.1km s-min=4.2km az=146.0, Suspected Mining explosion.*

*KRNET **04** 11:58:15.3±0.1,42°.72N×70°.63E,h25^{km},mb2.4*

ISC 04 11:58:15.3±1.0,**42°.71N**±0°.03×**70°.69E**±0°.05,**h0**^{km},**n16**, σ**0^{s}85**/32,**24C-8D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK06	Karatay Array	0.40	343	⇑P	Pg	11 58 23.3	+0.2
KK06				⇑S	Sg	11 58 29.2	+0.9
KK07	Karatay Array	0.41	340	⇑P	Pg	11 58 23.6	+0.5
KK07				⇓S	Sg	11 58 29.7	+1.3
KK02	Karatay Array	0.42	342	⇓P	Pg	11 58 23.5	+0.2
KK02				⇑S	Sg	11 58 29.6	+0.9
KK31	Karatay Array	0.42	342	⇑P	Pg	11 58 23.7	+0.4
	1.5nm,0.4s,baz=117,slow=18,SNR=40						
KK31				⇑S	Sg	11 58 29.5	+0.8
	2.2nm,0.3s,baz=154,slow=40,SNR=19						
KKAR	Karatay Array	0.42	342	⇑iP	Pg	11 58 23.7	+0.4
	baz=47						
KKAR				⇑iS	Sg	11 58 29.6	+0.9
	baz=47						
KK03	Karatay Array	0.42	341	⇑P	Pg	11 58 23.7	+0.3
KK03				⇑S	Sg	11 58 29.6	+0.8
KK01	Karatay Array	0.42	342	⇑P	Pg	11 58 23.7	+0.3
KK01				⇑S	Sg	11 58 29.6	+0.8
KK04	Karatay Array	0.42	342	⇑P	Pg	11 58 23.7	+0.2
KK04				⇑S	Sg	11 58 29.6	+0.6
KK08	Karatay Array	0.42	340	⇑P	Pg	11 58 23.8	+0.4
KK08				⇑S	Sg	11 58 29.7	+0.8
KK05	Karatay Array	0.43	344	⇑P	Pg	11 58 23.5	0.0
KK05				⇓S	Sg	11 58 29.5	+0.5
KK09	Karatay Array	0.44	342	⇓P	Pg	11 58 23.8	+0.1
KK09				⇑S	Sg	11 58 30.0	+0.6
TRKS	Terek-Say	1.22	164	⇑iP	Pg	11 58 39.6	+0.8
	baz=62						
TRKS				⇑iS	Sg	11 58 57.0	+2.3
	baz=62						
ARK	Arkit	1.31	133	⇑iP	Pg	11 58 40.3	-0.2
	baz=32						
ARK				⇑iS	Sg	11 58 57.8	+0.3
	baz=32						
TAS	Tashkent	1.73	217	⇑eP	Pn	11 58 46.0	-0.7
	baz=16						
TAS				⇑eS	Sn	11 59 07.7	-1.7
	baz=16						
ARLS	Aral	2.83	106	⇓iP	Pn	11 59 02.1	+0.2
	baz=6.0						
ARLS				⇓iS	Sn	11 59 35.8	-1.0
	baz=6.0						
UCH	Uchtor	2.87	98	⇓iP	Pn	11 59 02.6	-0.2
	baz=98						
UCH				⇓iS	Sn	11 59 36.9	-1.4
	baz=98						

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*IDC **04** 12:20:25.0±1.1,36°.94N×98°.15W,h0^{km},mb3.3/1, mbtmp3.3/5,ML3.5/4,Error ellipse: s-maj=15.1km s-min=12.8km az=172.0*

*TUL **04** 12:20:25.9±0.9,36°.87N±0°.01×98°.14W±0°.02,h5^{km}±7^{km}, ML3.3,mb_Lg3.0/85(NEIC),Error ellipse: s-maj=2.7km s-min=1.7km az=121.0*

*ANF **04** 12:20:26.1±0.3,36°.87N×98°.11W,h5^{km},ML3.8/15,Error ellipse: s-maj=3.6km s-min=2.7km az=177.0*

*NEIC **04** 12:20:26.1±0.5,36°.85N±0°.03×98°.13W±0°.04,h5^{km}±2^{km}, Error ellipse: s-maj=7.2km s-min=3.0km az=316.0*

ISC 04 12:20:26.2±0.7,**36°.88N**±0°.03×**98°.09W**±0°.03,**h10**^{km},**n88**, σ**1^{s}18**/65,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.88	236	Pg	Pg	12 20 42.2	-1.0
U32A	Winter Ranch,	0.88	236	P	Pg	12 20 42.3	-1.0
	baz=54,SNR=36						
U32A				S	Sg	12 20 53.9	-0.9
	baz=54						
T35A	Sooner Cattle	1.27	88		Pg	12 20 50.6	+0.1
T35B	Sooner Cattle	1.27	88	P	Pb	12 20 50.3	+0.1
	baz=269						
T35B				S	Sn	12 21 07.9	+0.8
	baz=269						
OKCFA	Oklahoma City	1.55	160	S	Sg	12 21 15.5	-0.5
	baz=339						
R32A	Long Quarter,	1.62	343		Pn	12 20 55.5	+0.6
R32A	Long Quarter,	1.62	343	P	Pb	12 20 55.8	-0.4
	baz=164,SNR=115						
R32A				S	Sb	12 21 17.4	+0.6
	baz=164						
FNO	Franklin	1.71	161		Pn	12 20 56.3	+0.2
TUL1	Leonard	2.09	117		Pn	12 21 02.0	+0.7
TUL1	Leonard	2.09	117	Sb	Sg	12 21 32.2	-1.3
	baz=298						
TUL1	Leonard	2.09	117	S	Sg	12 21 32.1	-1.3
	baz=298						
WMOK	Wichita Mounta	2.21	195		Pn	12 21 02.8	-0.2
WMOK				IAmb_Lg		12 21 39.2	
	comp=Z,60nm,0.8s						
WMOK	Wichita Mounta	2.21	195	P	Pn	12 21 03.8	+0.9
	baz=14,SNR=55						
WMOK	Wichita Mounta	2.21	195	P	Pn	12 21 03.8	+0.9
	baz=14						
WMOK				S	Sb	12 21 32.3	-1.3
	baz=14						
X34A	Smith Ranch, M	2.28	175		Pn	12 21 05.5	+1.6
X34A				IAmb_Lg		12 21 41.0	
	comp=Z,72nm,0.8s						
CBKS	Cedar Bluff	2.33	327		Pn	12 21 06.0	+1.4
CBKS	Cedar Bluff	2.33	327	P	Pn	12 21 06.2	+1.5
	baz=146,SNR=33						
CBKS	Cedar Bluff	2.33	327	S	Sb	12 21 38.0	+0.8
	baz=146						
KSU1	Kansas State U	2.51	27	IAmb_Lg		12 21 49.7	
	comp=Z,94nm,0.8s						
KSU1	Kansas State U	2.51	27	S	Sb	12 21 43.3	+1.0
	baz=209						
X37A	Clayton	3.18	135	Pn	Pn	12 21 16.4	+0.1
X37A				IAmb_Lg		12 22 12.3	
	comp=Z,57nm,0.7s						
X37A	Clayton	3.18	135	P	Pn	12 21 18.3	+2.0
	baz=316,SNR=12						
HHAR	Hobbs	3.40	99		Pn	12 21 19.6	+0.4
HHAR				IAmb_Lg		12 22 19.8	
	comp=Z,40nm,0.7s						
HHAR	Hobbs	3.40	99	P	Pn	12 21 20.8	+1.5
	baz=281						
AMTX	Amarillo	3.53	237	IAmb_Lg		12 22 18.2	
	comp=Z,46nm,0.8s						
Z35A	Perchaven, San	3.60	169	IAmb_Lg		12 22 26.3	
	comp=Z,51nm,1.2s						
Z35A	Perchaven, San	3.60	169	S	Sn	12 22 06.1	+1.3
	baz=349						
W39A	Magazine	3.87	114		Pn	12 21 26.4	+0.5
W39A	Magazine	3.87	114	Sb	Sg	12 22 28.2	-2.4
	baz=297						
W39A	Magazine	3.87	114	P	Pn	12 21 27.5	+1.6
	baz=297						
S39A	Bolivar	3.89	77		Pn	12 21 26.6	+0.6
S39A				IAmb_Lg		12 22 37.8	
	comp=Z,27nm,0.8s						
S39A	Bolivar	3.89	77	P	Pn	12 21 27.4	+1.3
	baz=259,SNR=15						
S39A				S	Sn	12 22 12.2	+0.4
	baz=259						
KSCO	Kaye Shedlock’	4.17	302	S	Sn	12 22 18.6	-0.3
	baz=120						
KSCO	Kaye Shedlock’	4.17	302	S	Sn	12 22 18.6	-0.3

	baz=120						
U40A	Yellville	4.25	95	Pn	Pn	12 21 31.8	+0.8
U40A				IAmb_Lg		12 22 48.5	
	comp=Z,25nm,0.7s						
U40A	Yellville	4.25	95	S	Sn	12 22 21.5	+0.9
	baz=278						
U40A				S	Sn	12 22 21.5	+0.9
	baz=278						
U40A	Yellville	4.25	95	P	Pn	12 21 32.2	+1.2
	baz=278						
U40A				S	Sn	12 22 21.2	+0.6
	baz=278						
MIAR	Mount Ida	4.35	121	Pn	Pn	12 21 33.0	+0.6
Z38A	Mt. Pleasant	4.42	144	IAmb_Lg		12 22 56.7	
	comp=Z,30nm,0.7s						
ABTX	Abilene, Hawle	4.43	197	IAmb_Lg		12 22 45.1	
	comp=Z,32nm,1.1s						
P38A	Dawn	4.52	51	IAmb_Lg		12 23 01.8	
	comp=Z,37nm,0.8s						
MGMO	Mountain Grove	4.67	85	Pn	Pn	12 21 37.8	+1.0
MSTX	Muleshoe	4.80	234	Sb	Sb	12 22 53.1	+4.8
	baz=51						
R40A	Maddies Statio	4.84	71		Pn	12 21 39.8	+0.7
X40A	Basin Creek Fa	4.90	118		Pn	12 21 40.9	+1.0
X40A				IAmb_Lg		12 23 11.9	
	comp=Z,32nm,0.8s						
X40A	Basin Creek Fa	4.90	118	P	Pn	12 21 41.4	+1.5
	baz=300,SNR=11						
X40A				P	Pn	12 21 41.4	+1.5
	baz=300,SNR=11						
X40A	Basin Creek Fa	4.90	118	P	Pn	12 21 41.3	+1.3
	baz=300						
WHTX	Lake Whitney,	4.90	174		Pn	12 21 40.2	+0.2
WHTX				IAmb_Lg		12 23 05.1	
	comp=Z,24nm,1.1s						
WHTX	Lake Whitney,	4.90	174	P	Pn	12 21 40.5	+0.6
	baz=354,SNR=11						
WHTX	Lake Whitney,	4.90	174	P	Pn	12 21 40.5	+0.6
	baz=354						
WHAR	Wooly Hollow	4.96	107	Pn	Pn	12 21 40.4	-0.4
WHAR				IAmb_Lg		12 23 06.7	
	comp=Z,30nm,0.9s						
W41B	Gary Mavity, V	5.03	108	Pn	Pn	12 21 41.9	+0.1
W41B				IAmb_Lg		12 23 10.6	
	comp=Z,22nm,0.8s						
W41B	Gary Mavity, V	5.03	108	P	Pn	12 21 42.7	+0.9
	baz=291						
T25A	Trinidad	5.06	275	Pn	Pn	12 21 41.5	-0.9
T25A				IAmb_Lg		12 23 15.3	
	comp=Z,35nm,1.2s						
OGNE	Ogallala	5.09	324	IAmb_Lg		12 23 07.3	
	comp=Z,46nm,0.8s						
UALR	University of	5.12	112	IAmb_Lg		12 23 23.5	
	comp=Z,26nm,0.8s						
WLAR	White Oak Lake	5.17	127	IAmb_Lg		12 23 19.8	
	comp=Z,29nm,0.7s						
237A	Washetta, Mont	5.22	158	IAmb_Lg		12 23 11.6	
	comp=Z,24nm,0.9s						
L34A	Svendsen Farm,	5.25	14	IAmb_Lg		12 23 20.0	
	comp=Z,40nm,0.7s						
CCM	Cathedral Cave	5.57	76	Pn	Pn	12 21 49.5	+0.3
LCAR	Lake Charles	5.65	96	IAmb_Lg		12 23 30.6	
	comp=Z,19nm,0.9s						
K31A	O'Neill	5.76	355	IAmb_Lg		12 23 40.1	
	comp=Z,41nm,0.7s						
NATX	Nacogdoches	5.84	150	IAmb_Lg		12 23 47.5	
	comp=Z,18nm,0.9s						
435B	Jarrell	6.09	176	IAmb_Lg		12 23 49.9	
	comp=Z,33nm,0.8s						
SLM	Saint Louis	6.47	72	IAmb_Lg		12 23 52.4	
	comp=Z,25nm,0.8s						
ANMO	Albuquerque	7.06	257	Pn	Pn	12 22 10.8	+1.1
	comp=Z,0.1nm,0.3s,baz=76,slow=4.2,SNR=1.6						
ANMO				Lg	Lg	12 24 06.3	
	comp=Z,0.7nm,0.3s,baz=98,slow=7.1,SNR=3.7						
	comp=Z,0.3nm,0.3s						
S44A	Carbondale	7.09	81	IAmb_Lg		12 24 22.7	
	comp=Z,16nm,0.8s						
SIUC	Southern Illin	7.12	81	IAmb_Lg		12 24 16.3	
	comp=Z,17nm,0.8s						
PHWY	Pilot Hill	7.23	310	IAmb_Lg		12 24 28.4	
	comp=Z,22nm,0.9s						
N23A	Red Feather La	7.32	306	IAmb_Lg		12 24 24.3	
	comp=Z,28nm,0.7s						
L40A	Anamosa	7.42	44	IAmb_Lg		12 24 26.5	
	comp=Z,19nm,0.9s						
Q44A	Meyer Farm, Va	7.46	72	IAmb_Lg		12 24 29.4	
	comp=Z,18nm,0.9s						
SUSD	Miller	7.59	355	IAmb_Lg		12 24 42.6	
	comp=Z,20nm,1.0s						
MNTX	Cornudas Mount	7.94	232	IAmb_Lg		12 24 47.1	
	comp=Z,16nm,1.0s						
O44A	Mansfield	8.22	64	IAmb_Lg		12 24 57.2	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	8.52	43	IAmb_Lg		12 24 59.5	
	comp=Z,19nm,0.8s						
RWWY	Rawlins	8.55	307	IAmb_Lg		12 25 08.5	
	comp=Z,16nm,1.1s						
K22A	Casper	8.68	314	IAmb_Lg		12 25 07.2	
	comp=Z,13nm,0.9s						
TXAR	Lajitas Array	8.85	213	Pn	Pn	12 22 33.1	-1.2
	comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=10						
TXAR				Lg	Lg	12 24 57.4	
	comp=Z,0.5nm,0.3s,baz=30,slow=28,SNR=7.3						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	8.85	213		Pn	12 22 32.9	-1.5
TX31	Lajitas Ar. Si	8.86	213	Pn	Pn	12 22 34.0	-0.4
F33A	5 Mile Ranch,	9.06	8	IAmb_Lg		12 25 26.5	
	comp=Z,10nm,1.1s						
SPMN	Marine on St.	9.24	24	IAmb_Lg		12 25 26.2	
	comp=Z,9.0nm,0.8s						
PDAR	Pinedale Array	10.60	307	Pn	Pn	12 22 59.6	+1.3
	comp=Z,0.1nm,0.3s,baz=116,slow=15,SNR=1.5						
PDAR				Pg		12 23 39.6	
	comp=Z,0.2nm,0.3s,baz=115,slow=15,SNR=2.7						
PDAR				Lg	Lg	12 25 49.9	
	comp=Z,0.1nm,0.3s,baz=122,slow=39,SNR=1.2						
	comp=Z,0.2nm,0.3s						
TKL	Tuckaleechee C	11.62	92	Pn	Pn	12 23 11.5	-0.7
	comp=Z,0.4nm,0.3s,baz=342,slow=18,SNR=4.1						
TKL				Lg	Lg	12 26 25.2	
	comp=Z,0.4nm,0.3s,baz=305,slow=12,SNR=2.0						
	comp=Z,1.4nm,0.5s						
TKL	Tuckaleechee C	11.62	92		Pn	12 23 12.4	+0.2
ULM	Lac du Bonnet	13.46	6	Lg	Lg	12 27 23.9	
	comp=Z,0.4nm,0.3s,baz=253,slow=4.5,SNR=2.2						
YKA	Yellowknife Ar	27.61	343	P	P	12 26 12.5	-0.9
	comp=Z,0.2nm,0.4s,baz=147,slow=8.5,SNR=5.1						
	comp=Z,0.2nm,0.4s						

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*IDC **04** 12:33:20.9±1.1, 8.°49N×71.°40W, h0km, mb3.4/4, mbtmp3.4/5, ML2.4/1, Error ellipse: s-maj=32.1km s-min=10.0km az=159.0*

*FUNV **04** 12:33:23.1, 8.°47N×71.°43W, h5km, MW3.7*

ISC 04 12:33:22.4±1.2**, 8.°63N**±0.°03×**71.°38W**±0.°03**, h6km**±9km**, n35, σ1.s47**/48**, mb3.6**/4**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.62	123	eP	Pg	12 33 34.2	-0.2
SOCV				eS	Sg	12 33 42.8	+0.3
SDV	Santo Domingo	0.79	71	Pg	Pg	12 33 38.3	+0.8
	20nm,0.3s,baz=252,slow=13,SNR=30						
SDV				Lg	Lg	12 33 48.8	
	64nm,0.3s,baz=331,slow=19,SNR=21						
SDV	Santo Domingo	0.79	71	eP	Pg	12 33 38.3	+0.8
SDV				eS	Sg	12 33 48.2	+0.4
CAPV	Capacho	1.19	231	eP	Pb	12 33 43.6	-2.0
CAPV				eS	Sg	12 33 57.6	-3.1
PAMC	Pamplona, Colo	1.82	226	eP	Pn	12 33 56.1	+1.3
PAMC				eS	Sb	12 34 21.7	+1.9
OCAC	Ocana	1.95	259	eP	Pn	12 33 57.3	+1.1
OCAC				eS	Sb	12 34 23.9	+0.7
CURV	Curarigua	1.97	45	eS	Sg	12 34 25.1	-0.6
SANV	Sanarito	2.02	64	eP	Pb	12 33 59.4	-0.3
SANV				eS	Sb	12 34 25.0	-0.2
TAMC	Tame, Arauca	2.21	191	eP	Pb	12 34 03.0	+0.1
DABV	Dabajuro	2.40	18	eP	Pb	12 34 04.9	-1.1
DABV				eS	Sb	12 34 35.1	-0.8
ELOV	Elorza	2.48	130	eS	Sn	12 34 31.7	-2.3
BARC	Barichara	2.69	222	eP	Pn	12 34 10.1	+3.5
BARC				eS	Sb	12 34 45.1	+0.5
CRJC	Cerrejon, Guaj	2.80	328	eP	Pn	12 34 09.2	+1.3
MAPV	Macapo	3.13	67	eP	Pn	12 34 14.1	+1.8
MAPV				eS	Sn	12 34 50.6	+0.6
RUSC	La Rusia	3.20	212	eP	Pn	12 34 14.9	+1.2
BAUV	El Baul	3.32	84	eP	Pn	12 34 16.2	+1.2
BAUV				eS	Sn	12 34 54.6	-0.1
ZARC	Zaragoza, Cauc	3.62	252	eP	Pn	12 34 19.7	+0.7
PTBC	PUERTO BERRIO,	3.68	236	eP	Pn	12 34 19.7	-0.3
SJCC	San Jacinto, C	3.95	289	eP	Pn	12 34 26.1	+2.4
SPBC	San Pablo de B	3.98	222	eP	Pn	12 34 25.3	+1.2
UREC	San Jos de Ur	4.20	258	eP	Pn	12 34 27.8	+0.8
CHIC	Chingaza	4.60	211	eP	Pn	12 34 34.2	+1.2
CHIC				eS	Sn	12 35 26.2	-0.9
NORC	Norcasia	4.61	229	eP	Pn	12 34 34.3	+1.6
ROSC	El Rosal	4.76	218	Pn	Pn	12 34 34.6	-0.5
	3.5nm,0.3s,baz=6.0,slow=22,SNR=2.3						
ROSC				Sn	Sn	12 35 34.2	+3.4
	3.0nm,0.3s,baz=103,slow=19,SNR=2.0						
	4.8nm,0.3s						
CBOC	Ciudad Bolivar	5.35	239	eP	Pn	12 34 45.0	+1.9
BIRV	Birongo	5.37	70	eP	Pn	12 34 43.8	+0.7
BIRV				eS	Sn	12 35 43.5	-1.9
ANIL	Santa Ana	5.73	224	eP	Pn	12 34 49.4	+1.1
ORTC	Ortega, Tolima	6.06	220	eP	Pn	12 34 53.9	+1.2
PLMC	San Jos del P	6.11	233	eP	Pn	12 34 55.5	+2.1
TXAR	Lajitas Array	36.62	309	P	P	12 40 29.9	0.0
	0.2nm,0.5s,baz=128,slow=5.8,SNR=2.5						
	0.2nm,0.5s						
PDAR	Pinedale Array	47.68	322	P	P	12 42 00.8	+0.7
	0.4nm,0.5s,baz=135,slow=11,SNR=4.9						
	0.4nm,0.5s						
YKA	Yellowknife Ar	62.19	339	P	P	12 43 44.5	0.0
	0.4nm,0.7s,baz=126,slow=7.1,SNR=9.2						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	71.70	79	P	P	12 44 45.4	-0.6
	0.2nm,0.6s,baz=287,slow=5.3,SNR=1.7						
	0.2nm,0.6s						
ASAR	Alice Springs	151.55	235	PKPbc	PKPbc	12 53 17.0	-1.5
	0.3nm,0.7s,baz=112,slow=3.0,SNR=2.2						
WRA	Warramunga Arr	152.70	243	PKPbc	PKPbc	12 53 19.8	-1.3
	0.5nm,0.5s,baz=104,slow=2.9,SNR=15						

LJU 04 12:53:03.1, 45.°73N×14.°21E, h16km, ML1.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEY	Cerknica	0.15	88	i Sg	Sg	12 53 06.9	-2.9
CEY	Cerknica	0.15	88	i Sg	Sg	12 53 09.8	0.0
CEY				IAML		12 53 10.9	
	comp=Z,5.6nm,0.0s						
JAVS	Javornik	0.19	328	i Pg	Pg	12 53 04.7	-3.0
JAVS				i Sg	Sg	12 53 07.7	-3.1
JAVS	Javornik	0.19	328	i Pg	Pb	12 53 08.1	-0.2
JAVS				i Sg	Sg	12 53 11.0	+0.2
JAVS				IAML		12 53 11.1	
	comp=Z,23nm,0.1s						
SKDS	Skadanscina	0.23	216	i Pg	Pg	12 53 05.2	-3.1
SKDS	Skadanscina	0.23	216	i Sg	Sg	12 53 12.1	+0.2
SKDS				IAML		12 53 12.5	
	comp=Z,13nm,0.0s						
KNDS	Knezji Dol	0.24	150	i Pg	Pb	12 53 09.0	-0.1
KNDS				i Sg	Sb	12 53 12.7	-0.5
KNDS				IAML		12 53 13.4	
	comp=Z,8.9nm,0.1s						
GBAS	Gorenja Brezov	0.26	39	i Sg	Sb	12 53 13.2	-0.5
GBAS				IAML		12 53 13.6	
	comp=Z,7.1nm,0.1s						
CRNS	Crni Vrh	0.35	6	i Sg	Sb	12 53 16.0	-0.4
CRNS				IAML		12 53 18.1	
	comp=Z,2.9nm,0.1s						
VOJS	Vojsko	0.38	323	i Sg	Sb	12 53 16.9	-0.3
VOJS				IAML		12 53 18.0	
	comp=Z,5.2nm,0.1s						
VISS	Visnje	0.45	81	i Sg	Sb	12 53 18.7	-0.4
VISS				IAML		12 53 20.8	
	comp=Z,2.2nm,0.1s						
GBRS	Gornja Briga	0.47	115	i Sg	Sb	12 53 19.9	+0.2
GBRS				IAML		12 53 20.3	
	comp=Z,4.1nm,0.1s						
BOJS	Bojanci	0.77	107	i Sg	Sb	12 53 28.9	+0.6
BOJS				IAML		12 53 32.6	
	comp=Z,1.0nm,0.1s						
A250A	Rusevo Krmpots	0.82	142	ePg	Pn	12 53 24.8	+4.8
A250A				Sg	Sn	12 53 31.1	-0.8
BRJN	Brijuni	0.89	202	ePg	Pn	12 53 24.8	+3.8
BRJN				Sg	Sg	12 53 31.9	0.0
NVLJ	Novalja	1.26	158	Sn	Sg	12 53 45.4	+1.6
VIRC	Vir	1.56	157	Sg	Sb	12 53 52.2	+1.1
DUGI	Dugi Otok	1.84	161	ePg	Pg	12 53 42.0	+3.5
DUGI				Sg	Sb	12 53 59.2	0.0

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*TUL **04** 12:55:20.4±0.8, 36.°87N±0.°01×98.°13W±0.°01, h5km±4km, ML2.7, ML2.4/26(NEIC), Error ellipse: s-maj=1.8km s-min=1.2km az=124.0*

NEIC 04 12:55:20.8±1.0**, 36.°87N**±0.°01×**98.°13W**±0.°01**, h5km**±2km**, Error ellipse: s-maj=3.0km s-min=2.0km az=297.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.30	87		Pn	12 55 44.9	-0.7
T35A				IAML		12 56 05.5	
	comp=N,97nm,0.4s						
T35A				IAML		12 56 05.7	
	comp=E,77nm,0.4s						
R32A	Long Quarter,	1.62	344		Pn	12 55 49.6	-0.5
WMOK	Wichita Mounta	2.19	194		Pn	12 55 57.9	0.0

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*NNC **04** 13:08:44.8±0.3, 50.°05N×78.°82E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=6.9km s-min=1.6km az=71.0, Suspected Mining explosion.*

*IDC **04** 13:08:45.9±1.2, 50.°05N×78.°69E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=21.8km s-min=6.6km az=68.0*

ISC 04 13:08:45.2±2.0**, 50.°00N**±0.°07×**78.°6E**±0.°3**, h0km, n17, σ0.s54**/27**, 18C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.58	358	⇑P	Pg	13 08 56.0	-0.4
KUR07				⇑S	Sg	13 09 04.4	+0.5
KUR06	Kurchatov Arra	0.60	358	⇑P	Pg	13 08 56.3	-0.5
KUR06				⇑S	Sg	13 09 05.8	+1.2
KUR14	Kurchatov Arra	0.62	3	⇑P	Pg	13 08 56.2	-0.8
KUR14				⇓S	Sg	13 09 04.8	-0.2
KUR15	Kurchatov Arra	0.62	1	⇓P	Pg	13 08 56.5	-0.6
KUR15				⇓S	Sg	13 09 05.1	0.0
KURBB	Kurchatov Arra	0.62	359	Pg	Pg	13 08 56.7	-0.4
	1.2nm,0.3s,baz=165,slow=18,SNR=83						
KURBB				Lg	Lg	13 09 06.0	
	0.9nm,0.3s,baz=158,slow=36,SNR=7.7						
KURBB	Kurchatov Arra	0.62	359	⇑P	Pg	13 08 56.7	-0.4
	9.2nm,0.3s						
KURBB				⇑S	Sg	13 09 05.4	+0.2
	38nm,0.7s						
KUR16	Kurchatov Arra	0.63	357	⇑P	Pg	13 08 56.9	-0.3
KUR16				⇑S	Sg	13 09 05.4	0.0
KUR17	Kurchatov Arra	0.64	355	⇑P	Pg	13 08 57.0	-0.4
KUR17				⇓S	Sg	13 09 05.9	+0.3
KUR05	Kurchatov Arra	0.64	359	⇓P	Pg	13 08 56.9	-0.6
KUR05				⇑S	Sg	13 09 06.3	+0.4
KUR04	Kurchatov Arra	0.66	360	⇑P	Pg	13 08 57.3	-0.6
KUR04				⇑S	Sg	13 09 06.4	-0.1
KURK	Kurchatov	0.72	4	⇑P	Pg	13 08 58.0	-1.0
	3.5nm,0.3s						
KURK				⇓S	Sg	13 09 07.7	-0.6
	24nm,0.9s						
MAKZ	Makanchi	3.93	143	⇓Pg	Pb	13 09 55.8	+0.6
	0.8nm,0.5s						
MAKZ				⇑Lg	Lg	13 10 47.5	
	3.9nm,0.8s						
MK31	Makanchi Array	4.06	141	⇑Pn	Pn	13 09 48.0	-0.6
	0.1nm,0.2s,baz=322,slow=9.8,SNR=10.0						
MK31				⇓Pg	Pb	13 09 57.9	+0.3
	0.3nm,0.2s,baz=326,slow=14,SNR=12						
MK31				⇑Lg	Lg	13 10 52.5	
	1.8nm,0.5s,baz=343,slow=26,SNR=13						
MKAR	Makanchi Array	4.06	141	Pn	Pn	13 09 49.0	+0.4
	0.2nm,0.3s,baz=319,slow=10,SNR=13						
MKAR				Pg	Pb	13 09 57.4	-0.1
	0.8nm,0.3s,baz=325,slow=14,SNR=16						
MKAR				Lg	Lg	13 10 52.4	
	0.8nm,0.3s,baz=319,slow=28,SNR=22						
	0.2nm,0.3s						
OTUK	Ortayu	4.44	249	⇑Lg	Lg	13 11 10.7	
	3.6nm,0.8s						
ZALV	Zalesovo Beam	5.53	42	Pn	Pn	13 10 09.3	+0.6
	0.7nm,0.3s,baz=231,slow=14,SNR=7.7						
	1.6nm,0.2s						
I46RU	ZALESOVO INFRA	5.54	42	i		13 41 50.0	
	baz=226,slow=324,SNR=0.7						

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*VAO **04** 13:11:03.9±0.5, 24.°98S×66.°24W, h10km, mb4.2*

*IDC **04** 13:11:12.4±1.9, 24.°25S×66.°50W, h161km±18km, mb3.1/2, mbtmp3.7/7, Error ellipse: s-maj=32.7km s-min=21.5km az=28.0*

*NEIC **04** 13:11:15.3±2.2, 24.°26S±0.°08×67.°2W±0.°2, h180km±13km, mb4.2/3, Md3.6(SJA), ML4.1(GUC), Error ellipse: s-maj=21.6km s-min=10.9km az=100.0*

*GUC **04** 13:11:17.0±0.7, 24.°17S×67.°51W, h193km±9km, ML3.9*

ISC 04 13:11:15.9±0.9**, 24.°18S**±0.°04×**67.°28W**±0.°09**, h188km**±11km**, n72, σ1.s28**/75**, mb3.5**/3**, 7C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.47	326	Pn	Pn	13 11 49.6	+1.0
LVC	Limon Verde	2.16	316	P	Pn	13 11 56.9	+1.2
	30nm,0.3s,baz=125,slow=7.0,SNR=82						
LVC				S	Sn	13 12 27.1	+0.6
	170nm,0.4s,baz=18,slow=22,SNR=62						
LVC	Limon Verde	2.16	316		Pn	13 11 56.4	+0.7
LVC	Limon Verde	2.16	316	eP	Pn	13 11 56.8	+1.1
LVC				i S	Sn	13 12 26.8	+0.2
LVC	Limon Verde	2.16	316	eP	Pn	13 11 56.8	+1.1
PB15	IPOC Station P	2.23	295		Pn	13 11 56.9	+0.7
PB15	IPOC Station P	2.23	295	⇑iP	Pn	13 11 57.2	+1.1
PB15				i S	Sn	13 12 27.2	-0.2
GO02	Mina Guanaco	2.32	245		Pn	13 11 57.5	+0.2
GO02	Mina Guanaco	2.32	245	⇑iP	Pn	13 11 57.9	+0.7
GO02				eS	Sn	13 12 29.9	+0.4
GO02				IAML		13 12 30.9	
	comp=N,310nm,0.3s						
PB06	IPOC Station P	2.56	304		Pn	13 12 00.7	+0.8
PB06	IPOC Station P	2.56	304	⇑iP	Pn	13 12 01.2	+1.2
PB06				eS	Sn	13 12 34.2	0.0
PB06				IAML		13 12 37.1	
	comp=N,668nm,0.3s						
PB14	IPOC Station P	2.88	260		Pn	13 12 03.2	-0.5
PB14	IPOC Station P	2.88	260	eP	Pn	13 12 04.3	+0.6
PB14				i S	Sn	13 12 40.8	-0.3
PB14				IAML		13 12 41.8	
	comp=E,85nm,0.6s						
PB09	IPOC Station P	2.98	322		Pn	13 12 05.6	+0.7
PB09	IPOC Station P	2.98	322	⇓iP	Pn	13 12 06.4	+1.5
PB09				eS	Sn	13 12 43.8	+0.7
PB09				IAML		13 12 46.3	
	comp=N,369nm,0.4s						
PB10	IPOC Station P	3.07	282		Pn	13 12 06.2	+0.4
PB10	IPOC Station P	3.07	282	⇑iP	Pn	13 12 06.7	+1.0
PB10				eS	Sn	13 12 43.2	-1.4
PB10				IAML		13 12 49.4	
	comp=E,232nm,0.4s						
AC02	Maricunga	3.13	212	Pn	Pn	13 12 06.4	-0.5
AC02	Maricunga	3.13	212	⇑iP	Pn	13 12 07.2	+0.3
AC02				eS	Sn	13 12 48.9	+2.1
AC02				IAML		13 13 02.2	
	comp=E,69nm,0.2s						
PB04	IPOC Station P	3.21	304		Pn	13 12 07.5	-0.2
PB04	IPOC Station P	3.21	304	eP	Pn	13 12 08.7	+1.0
PB04				eS	Sn	13 12 46.8	-1.3
PB07	IPOC Station P	3.42	315		Pn	13 12 10.8	+0.5
PB07	IPOC Station P	3.42	315	eP	Pn	13 12 11.0	+0.7
PB07				eS	Sn	13 12 51.3	-1.4
AC01	Pan de Azucar	3.59	236	Pn	Pn	13 12 11.0	-1.1
AC01	Pan de Azucar	3.59	236	⇑iP	Pn	13 12 11.4	-0.7
AC01				i S	Sn	13 12 53.7	-2.4
AC01				IAML		13 12 55.0	
	comp=E,184nm,0.4s						
PB01	IPOC Station P	3.73	326		Pn	13 12 12.8	-1.2
PB02	IPOC Station P	3.73	319		Pn	13 12 13.5	-0.5
PB02	IPOC Station P	3.73	319	⇑iP	Pn	13 12 14.4	+0.4
PB02				i S	Sn	13 12 57.7	-1.8
AC06	Mina Casimiro	4.21	221		Pn	13 12 18.2	-1.6
GO03	Copiap	4.32	217		Pn	13 12 19.7	-1.6
PB08	IPOC Station P	4.38	336		Pn	13 12 22.5	0.0
PB08	IPOC Station P	4.38	336	i P	Pn	13 12 23.1	+0.6
PB08				eS	Sn	13 13 13.1	-1.5
TA01	Diego Aracena	4.49	323	Pn	Pn	13 12 23.2	-0.2
TA02	Huaiquique	4.70	325		Pn	13 12 27.9	+1.7
PB11	IPOC Station P	4.92	333	Pn	Pn	13 12 29.7	+0.5
LCO	Las Campanas	5.70	212	Pn	Pn	13 12 36.8	-2.6
LCO	Las Campanas	5.70	212	eP	Pn	13 12 36.8	-2.6
PB16	IPOC Station P	6.17	340		Pn	13 12 44.9	-1.0
GO04	Tololo Observa	6.74	207		Pn	13 12 50.3	-2.5
LPAZ	La Paz	7.89	354	P	Pn	13 13 08.4	0.0
	comp=E,4.8nm,0.3s,baz=138,slow=5.6,SNR=32						
LPAZ				S	Sn	13 14 36.2	-1.4
	comp=E,2.9nm,0.7s,baz=112,slow=19,SNR=2.4						
LPAZ	La Paz	7.89	354		Pn	13 13 08.6	+0.2
CPUP	Villa Florida	9.26	105	P	Pn	13 13 12.1	-14
	comp=E,1.0nm,0.4s,baz=77,slow=7.0,SNR=1.9						
AQDB	Aquidauana	11.33	73	eP	Pn	13 13 35.6	-17
PTLB	Pontes e Lacer	11.58	43	eP	Pn	13 13 48.5	-7.2
VILB	Vilhena	13.02	32	eP	Pn	13 14 11.6	-2.6
PP1B	Ponte de Pedra	13.31	63	eP	Pn	13 14 06.0	-12
PDRB	Porto dos Gac	16.02	41	eP	P	13 14 49.2	-1.8
PLCA	Paso Flores	16.73	189	P	P	13 14 59.1	+0.4
	comp=E,1.6nm,1.0s,baz=9.3,slow=13,SNR=3.1						
CLDB	Colider	17.16	42	eP	P	13 15 02.4	-1.1
VAO	Valinhos	18.66	91	eP	P	13 15 09.9	-10
LL02	Futaleuf	19.33	190	P	Pn	13 15 30.2	+0.1
LL02				IAmb	IAmb	13 15 31.0	
	comp=Z,8.2nm,0.7s						
SNDB	Serra Nova Dou	19.43	54	eP	P	13 15 26.7	-1.4
BDFB	Brasilia	19.99	68	P	P	13 15 27.1	-7.2
	comp=Z,1.2nm,0.3s,baz=237,slow=10,SNR=1.8						
BDFB	Brasilia	19.99	68	P	P	13 15 33.0	-1.2
BDFB				IAmb	IAmb	13 15 34.2	
	comp=Z,14nm,0.9s						
PEXB	Peixe	21.64	60	eP	P	13 15 49.7	-1.9
MACA	Manacapuru-AM	21.84	18	eP	P	13 16 02.0	+8.3
DIAM	Diamantina, MG	22.76	80	eP	P	13 15 57.0	-5.3
JANB	Januaria	23.43	71	eP	P	13 16 06.9	-1.5
CAM01	Campos-RJ	23.69	89	eP	P	13 16 05.5	-5.2
SMTB	Santa Maria do	24.20	54	eP	P	13 16 15.5	0.0
SDBA	SAO DESIDERIO	24.22	65	eP	P	13 16 14.4	-1.1
SJMB	Sao Joao De Ma	24.87	82	eP	P	13 16 18.2	-3.3
GUA01	Guaratinga, BA	26.81	79	eP	P	13 16 37.5	-1.3
BOAV	Boa Vista	27.22	15	eP	P	13 16 52.7	+10
CMC01	Camacan, BA	27.52	77	eP	P	13 16 43.1	-2.1
GDU01	Guandu, BA	28.14	73	eP	P	13 16 48.9	-1.8
NBMA	Muriti-CE	32.02	63	eP	P	13 17 25.7	+0.7
NBPB	Pedra_Branca-C	32.44	60	eP	P	13 17 29.4	+0.9
TXAR	Lajitas Array	63.67	325	P	P	13 21 29.4	+2.0
	comp=Z,0.2nm,0.7s,baz=76,slow=3.8,SNR=2.1						
	comp=Z,0.2nm,0.7s						
QSPA	South Pole Qui	66.03	180	P	P	13 21 43.5	+1.3
QSPA				IAmb	IAmb	13 21 57.2	
	comp=Z,1.7nm,1.1s						
TORD	Torodi Ar. Bea	76.87	69	P	P	13 22 42.9	-4.8
	comp=Z,0.5nm,0.5s,baz=258,slow=5.6,SNR=7.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	146.83	39	PKPbc	PKPdf	13 30 34.6	+0.9
	comp=Z,0.3nm,0.6s,baz=278,slow=4.2,SNR=3.7						

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*TUL **04** 13:18:01.7±0.3, 36.°87N±0.°01×98.°14W±0.°02, h7km±2km, ML2.6, mb_Lg2.3/7(NEIC), Error ellipse: s-maj=2.8km s-min=1.3km az=114.0*

NEIC 04 13:18:02.2±0.1**, 36.°87N**±0.°02×**98.°14W**±0.°03**, h6km**±4km**, Error ellipse: s-maj=4.2km s-min=0.6km az=125.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUL1	Leonard	2.12	116	IAmb_Lg		13 19 12.0	
	comp=Z,17nm,1.0s						
X34A	Smith Ranch, M	2.27	174	IAmb_Lg		13 19 14.4	
	comp=Z,7.5nm,0.7s						
AMTX	Amarillo	3.49	237	IAmb_Lg		13 19 60.0	
	comp=Z,5.1nm,0.8s						

*IDC **04** 13:24:16.3±1.4, 32°.60N×130°.58E, h0^{km}, mb3.5/4, mbtmp3.4/6, ML2.6/2, MS2.9/1, Error ellipse: s-maj=27.5km s-min=15.6km az=125.0*

*JMA **04** 13:24:17.2±0.0, 32°.6N±0°.2×130°.7E±0°.2, h5^{km}, MV3.5/20, SOUTHERN KUMAMOTO PREF*

JMA Felt IV J1 at SOUTHERN KUMAMOTO PREF .

*NIED **04** 13:24:17.2, 32°.61N×130°.72E, h5^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.31; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-4.39; $M_{r\theta}$-0.03; $M_{\theta\phi}$0.92; $M_{\phi r}$4.31; Fault plane solution: $M_0$6.19000×10^{14} NP1: ϕ_s161.00000°, δ24.00000°, λ75.00000°. NP2: ϕ_s356.00000°, δ67.00000°, λ96.00000°.*

ISC 04 13:24:17.9±1.0**, 32°.60N**±0°.03×**130°.72E**±0°.06**, h7**^{km}±7^{km}**, n13, σ1^s.47**/17**, mb3.5**/4**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.09	122	⇓iP	Pg	13 24 19.5	-0.6
JIU3				⇓S	Sg	13 24 21.3	-0.3
JTA	Tamana	0.40	337	P	Pg	13 24 24.9	-0.7
JTA				S	Sg	13 24 30.5	-0.4
JZO	Okuchi	0.47	193	P	Pg	13 24 26.6	-0.4
JZO				S	Sg	13 24 33.5	+0.4
JNU	Nakatsue	0.54	14	Pg	Pg	13 24 27.3	-1.1
	95nm,0.3s,baz=202,slow=11,SNR=1016						
JNU				Lg	Lg	13 24 34.8	
	1µm,0.3s,baz=218,slow=19,SNR=84						
JTZ	Takazaki	0.76	156	iP	Pb	13 24 32.8	-0.7
JTZ				S	Sb	13 24 43.1	-0.9
KSRS	Korea Array	5.36	335	Pn	Pn	13 25 37.9	-0.4
	0.2nm,0.3s,baz=154,slow=16,SNR=1.5						
KSRS				Pg	Pb	13 25 54.0	+2.1
	0.4nm,0.3s,baz=152,slow=17,SNR=3.2						
KSRS				Lg	Lg	13 27 06.0	
	1.3nm,0.3s,baz=159,slow=30,SNR=9.3						
	0.6nm,0.5s						
JOW	Kunigami	6.13	201	Pn	Pn	13 25 51.6	+2.8
	1.8nm,0.3s,baz=53,slow=14,SNR=4.5						
MJAR	Matsushiro Arr	7.32	55	Pn	Pn	13 26 07.8	+2.5
	0.1nm,0.3s,baz=243,slow=13,SNR=5.7						
	1.8nm,0.5s						
CMAR	Chiang Mai Arr	31.80	252	LR	LR	13 45 05.1	
	comp=Z,23nm,19.4s,baz=100,slow=39						
MKAR	Makanchi Array	39.25	306	P	P	13 31 45.5	-1.5
	0.5nm,1.0s,baz=92,slow=8.7,SNR=3.1						
	0.5nm,1.0s						
KURBB	Kurchatov Arra	42.02	311	P	P	13 32 08.7	-1.0
	0.6nm,0.8s,baz=97,slow=9.2,SNR=5.1						
	0.6nm,0.8s						
ASAR	Alice Springs	56.03	176	P	P	13 33 57.0	-0.4
	0.4nm,0.8s,baz=7.5,slow=7.9,SNR=2.5						
	0.4nm,0.8s						
FINES	FINESS Array B	68.43	330	P	P	13 35 18.6	-1.5
	0.8nm,0.6s,baz=76,slow=8.0,SNR=5.8						
	0.8nm,0.6s						

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*NOU **04** 13:58:31.0, 14°.24S×172°.84W, h11^{km}, MLv3.2/4, Samoa Islands*

IDC 04 13:58:01.5±2.5**, 15°.92S×173°.76W, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/4**, ML3.7**/1**, MS2.4**/1**, Error ellipse: s-maj=171.1km s-min=24.1km az=150.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.76	44	Pn	Pn	13 58 47.0	-0.1
	12nm,0.3s,baz=210,slow=3.3,SNR=21						
AFI				Sn	Sn	13 59 11.6	-10
	56nm,0.3s,baz=229,slow=17,SNR=16						
AFI				LR	LR	13 59 21.2	
	comp=Z,64nm,20.9s,baz=168,slow=29						
	40nm,0.2s						
H11S2	WAKE ISLAND Hy	39.23	330	T	T	14 46 40.4	
	baz=146						
H11S3	WAKE ISLAND Hy	39.24	330	T	T	14 46 35.2	
	baz=146						
H11S1	WAKE ISLAND Hy	39.25	330	T	T	14 46 41.7	
	baz=146						
WRA	Warramunga Arr	49.39	257	P	P	14 06 53.3	-0.1
	0.5nm,0.7s,baz=94,slow=6.7,SNR=14						
	0.5nm,0.7s						
ASAR	Alice Springs	49.63	252	P	P	14 06 55.0	-0.2
	3.4nm,0.6s,baz=87,slow=7.6,SNR=76						
	3.4nm,0.6s						
TXAR	Lajitas Array	81.18	56	P	P	14 10 19.7	+0.1
	0.3nm,0.9s,baz=201,slow=4.8,SNR=2.1						
	0.3nm,0.9s						

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*JMA **04** 14:03:06.5±0.2, 24°.0N±0°.9×12°2E± °, h20^{km}±1^{km}, MV2.9/8, TAIWAN REGION*

*TAP **04** 14:03:08.8, 24°.22N×121°.73E, h11^{km}, ML3.8, B*

ISC 04 14:03:08.4±0.8**, 24°.19N**±0°.01×**121°.75E**±0°.02**, h18**^{km}±2^{km}**, n142, σ0^s.68**/189**, 2C-28D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.12	356	P	Pg	14 03 11.8	-0.5
	baz=11						
EHP				S	Sg	14 03 13.8	-1.2
	baz=11						
ETL	Fush Village	0.12	253	iP	Pg	14 03 12.0	-0.4
	baz=230						
ETL				iS	Sg	14 03 14.4	-0.7
	baz=230						
NACB	Ninganchiao	0.14	262	⇓iP	Pg	14 03 12.2	-0.4
	baz=242						
NACB				iS	Sg	14 03 14.7	-0.8
	baz=242						
TWD	Chiawan	0.18	231	⇓iP	Pg	14 03 13.0	-0.1
	baz=220						
TWD				iS	Sg	14 03 16.1	-0.2
	baz=220						
ENA	Nanau	0.23	358	⇓iP	Pb	14 03 13.5	-0.3
	baz=5.0						
ENA				iS	Sb	14 03 16.6	-0.8
	baz=5.0						
ETLH	Xiulin Townshi	0.24	273	⇓iP	Pb	14 03 13.9	-0.3
	baz=267						
ETLH				S	Sb	14 03 17.2	-0.7
	baz=267						
EWUT	Wuta	0.25	6	⇓iP	Pg	14 03 13.9	-0.3
	baz=11						
EWUT				S	Sb	14 03 17.4	-0.7
	baz=11						
HWA	Hwalien	0.25	212	eP	Pg	14 03 15.2	+1.0
	baz=214						
ETM	Tongmen	0.33	226	iP	Pb	14 03 15.5	-0.2
	baz=213						
ETM				eS	Sb	14 03 20.3	-0.4
	baz=213						
TEYL	Yanliau Villag	0.35	203	eP	Pb	14 03 16.8	+0.6
	baz=209						
LATG	Datong	0.40	329	⇓iP	Pg	14 03 16.6	-0.1
	baz=329						
LATG				S	Sg	14 03 21.8	-0.5
	baz=329						
NNSB	Datong	0.41	305	⇓iP	Pg	14 03 16.9	-0.1
	baz=303						
NNSB				S	Sg	14 03 22.1	-0.6
	baz=303						
NNS	Nan Shan	0.42	306	⇓iP	Pg	14 03 17.1	-0.1
	baz=304						
NNS				iS	Sg	14 03 22.6	-0.5
	baz=304						
TWC	Suao	0.42	12	⇓iP	Pg	14 03 17.1	-0.1
	baz=10.0						
TWC				iS	Sg	14 03 22.6	-0.5
	baz=10.0						
NDS	Dongshan	0.44	356	⇓iP	Pg	14 03 17.5	+0.1
	baz=358						
NDS				S	Sg	14 03 23.0	-0.5
	baz=358						
WHF	Hehuan Shan	0.45	264	⇓iP	Pg	14 03 17.7	0.0
	baz=260						
WHF				S	Sg	14 03 23.3	-0.7
	baz=260						
NDT	Datong Townshi	0.46	332	⇓P	Pg	14 03 17.9	0.0
	baz=332						
NDT				S	Sg	14 03 24.2	0.0
	baz=332						
FUSS	Fushou	0.47	277	⇓iP	Pb	14 03 18.1	-0.1
	baz=274						
FUSS				iS	Sg	14 03 24.2	-0.2
	baz=274						
ENTT	Nioudou	0.47	339	⇓iP	Pg	14 03 18.1	+0.1
	baz=341						
ENTT				iS	Sg	14 03 24.3	-0.3
	baz=341						
ESL	Shilin	0.48	218	eP	Pb	14 03 18.3	0.0
	baz=222						
TEGC	Jichi Village	0.52	202	eP	Pn	14 03 20.5	-0.3
	baz=189						
TWT	Tachien	0.53	277	⇓P	Pb	14 03 19.6	+0.4
	baz=273						
TWT				S	Sg	14 03 26.3	0.0
	baz=273						
TWE	Neicheng	0.53	352	⇓iP	Pg	14 03 19.2	+0.1
	baz=355						
TWE				iS	Sg	14 03 26.1	-0.2
	baz=355						
CHGB	Renai	0.54	256	⇓iP	Pb	14 03 19.7	+0.3
	baz=245						
CHGB				S	Sg	14 03 26.5	-0.2
	baz=245						
TDCB	Techi	0.54	276	⇓iP	Pb	14 03 19.6	+0.3
	baz=274						
TDCB				S	Sg	14 03 26.2	-0.5
	baz=274						
ILA	Ilan	0.57	360	eP	Pg	14 03 20.0	+0.2
	baz=2.0						
ILA				eS	Sg	14 03 28.0	+0.5
	baz=2.0						
OWD	Renai	0.58	246	⇓P	Pg	14 03 20.1	+0.1
	baz=243						
OWD				eS	Sb	14 03 27.8	+0.1
	baz=243						
FUSB	Fushanzhiwuyua	0.58	345	⇓eP	Pb	14 03 20.1	+0.1
	baz=346						
FUSB				S	Sb	14 03 27.4	-0.5
	baz=346						
YHNB	Yeheng	0.58	324	⇓iP	Pg	14 03 20.2	+0.1
	baz=324						
YHNB				S	Sb	14 03 27.6	-0.4
	baz=324						
NSK	Sanguang	0.60	323	⇓iP	Pg	14 03 20.4	0.0
	baz=323						
NSK				S	Sb	14 03 27.7	-0.7
	baz=323						
EGFH	Guangfu	0.60	210	eP	Pn	14 03 21.2	-0.8
	baz=215						
WUSB	Renai	0.61	251	⇓iP	Pg	14 03 21.0	+0.4
	baz=241						
WUSB				S	Sb	14 03 28.6	-0.2
	baz=241						
NWLT	Wulai	0.62	339	⇓iP	Pg	14 03 21.0	+0.2
	baz=339						
NWLT				S	Sb	14 03 28.6	-0.5
	baz=339						
NFF	Wufeng Townshi	0.72	307	eP	Pg	14 03 22.8	+0.1
	baz=306						
WHP	Taichung City	0.74	277	eP	Pg	14 03 23.4	+0.5
	baz=275						
WHP				S	Sg	14 03 32.7	-0.1
	baz=275						
WPL	Puli Township	0.75	256	P	Pn	14 03 23.5	-0.5
	baz=254						
WPL				S	Sg	14 03 32.8	-0.2
	baz=254						
DPDB	Guoxing	0.77	258	P	Pn	14 03 24.1	-0.3
	baz=256						
DPDB				eS	Sg	14 03 34.0	+0.3
	baz=256						
TIPB	Shuangxi	0.78	5	⇓eP	Pg	14 03 23.6	0.0
	baz=6.0						
TIPB				eS	Sb	14 03 33.2	-0.4
	baz=6.0						
WCS	Beigang Elemen	0.78	260	eP	Pg	14 03 23.9	+0.3
	baz=258						
EHY	Hungye	0.79	210	eP	Pg	14 03 23.5	-0.3
	baz=208						
NHDH	Xindian Distri	0.79	345	eP	Pg	14 03 23.9	-0.1
	baz=346						
TWA	Mucha	0.80	349	eP	Pg	14 03 24.2	+0.2
	baz=350						
LIOB	Emei	0.81	304	eP	Pn	14 03 24.7	-0.2
	baz=303						
LIOB				eS	Sg	14 03 35.1	+0.2
	baz=303						
NSTT	Nanjuang	0.81	303	eP	Pg	14 03 24.6	+0.3
	baz=301						
NSTT				eS	Sb	14 03 34.7	+0.2
	baz=301						
TATO	Taipei	0.81	343	eP	Pg	14 03 24.3	0.0
	baz=343						
TATO				S	Sb	14 03 34.5	-0.1
	baz=343						
SSLB	Suanglung	0.83	241	⇓iP	Pg	14 03 24.8	+0.1
	baz=239						
SSLB				iS	Sb	14 03 34.8	-0.4
	baz=239						
SMLT	Sun Moon Lake	0.84	248	iP	Pn	14 03 25.2	-0.1
	baz=237						
SMLT				eS	Sn	14 03 36.5	-0.7
	baz=237						
TWB1	Santiao Chiao	0.84	15	eP	Pb	14 03 24.6	+0.2
	baz=17						
TWB1				S	Sb	14 03 35.1	-0.2
	baz=17						
TYC	Yuchr	0.87	251	eP	Pg	14 03 25.2	-0.1
	baz=249						
TAP1	Taipei	0.87	346	eP	Pg	14 03 25.4	0.0
	baz=346						
NWF	Wu-fen Shan	0.87	2	eP	Pg	14 03 25.6	+0.1
	baz=3.0						
WFSB	Wu-fen Shan	0.87	2	eP	Pg	14 03 25.6	+0.2
	baz=3.0						
HSN1	Hsinchu	0.89	311	eP	Pn	14 03 26.4	+0.5
	baz=311						
YULB	Yu-li	0.90	208	eP	Pb	14 03 24.9	-0.5
	baz=219						
SXI1	Grass Mountain	0.90	7	⇓P	Pg	14 03 26.1	+0.1
	baz=355						
SXI1				S	Sb	14 03 37.6	+0.3
	baz=355						
TWQ1	Liyutan	0.91	280	eP	Pn	14 03 27.0	+0.8
	baz=278						
TWQ1				eS	Sn	14 03 38.7	-0.1
	baz=278						
ECBN	Changbin	0.92	197	eP	Pn	14 03 27.0	+0.7
	baz=184						
SBCB	Hsinchu	0.92	311	eP	Pn	14 03 27.1	+0.7
	baz=310						
NCU	National Centr	0.93	327	eP	Pg	14 03 26.8	+0.3
	baz=322						
NCUH	Zhongli	0.93	326	eP	Pg	14 03 26.7	+0.3
	baz=321						
NSY	Sanyi	0.93	284	eP	Pg	14 03 26.8	+0.3
	baz=283						
EYUL	Yuli	0.93	205	eP	Pn	14 03 27.3	+0.7
	baz=218						
HSN	Hsinchu	0.93	311	eP	Pg	14 03 26.7	+0.1
	baz=303						
TWF1	Yuli	0.94	206	eP	Pb	14 03 25.7	-0.4
	baz=218						
NMLH	Miaoli	0.94	292	eP	Pg	14 03 27.9	+1.2
	baz=290						
TNOU	National Taiwa	0.95	1	eP	Pn	14 03 26.7	-0.1
	baz=2.0						
TWS1	Kuangyinshan	0.95	342	eP	Pg	14 03 27.4	+0.5
	baz=342						
YM01	YM01	0.96	350	eP	Pg	14 03 27.4	+0.2
	baz=351						
WWF	Wufeng	0.97	261	eP	Pg	14 03 28.8	+1.5
	baz=255						
TCU	Taichung	0.98	268	eP	Pg	14 03 29.2	+1.7
	baz=266						
YM08	YM08	1.00	352	eP	Pg	14 03 28.4	+0.5
	baz=352						
NTST	Danshui	1.00	344	eP	Pg	14 03 28.5	+0.6
	baz=345						
WJS	Zhushan	1.00	249	eP	Pg	14 03 29.0	+1.1
	baz=240						
ANP	Anpu	1.01	348	eP	Pb	14 03 26.6	-0.8
	baz=349						
YUS	Yu-Shan	1.01	226	eP	Pg	14 03 28.2	+0.1
	baz=225						
WNT1	Nantou City	1.02	254	eP	Pg	14 03 29.1	+0.9
	baz=242						
WDJ	Dajia District	1.02	279	eP	Pg	14 03 29.2	+0.9
	baz=278						
WNT	Mingjian	1.02	252	eP	Pg	14 03 29.2	+0.9
	baz=246						
WNT				eS	Sg	14 03 43.5	+1.8
	baz=246						
NHW	Xinwu Township	1.03	322	eP	Pg	14 03 28.6	+0.2
	baz=322						
FULB	Fuli	1.07	203	eP	Pg	14 03 29.4	+0.1
	baz=217						
TWY	Chenhua	1.09	353	eP	Pg	14 03 29.7	+0.2
	baz=340						
WYL	Yuanlin Townsh	1.09	258	eP	Pg	14 03 29.6	0.0
	baz=257						
WCHH	Zhanghua	1.09	264	eP	Pg	14 03 30.9	+1.3
	baz=263						
ALS	Alishan	1.10	232	⇑iP	Pg	14 03 30.2	+0.4
	baz=231						
ALS				S	Sg	14 03 45.4	+1.1
	baz=231						
JYNG	Yonagunijimaku	1.12	77	P	Pg	14 03 30.6	+0.5
JYNG				eS	Sg	14 03 47.1	+2.3
CHKT	Chengkung	1.15	198	eP	Pb	14 03 29.8	+0.2
	baz=182						
CHN5	Tsauling	1.15	239	P	Pg	14 03 31.3	+0.7
	baz=239						
CHN5				eS	Sg	14 03 47.9	+2.2
	baz=239						
YOJ	Yonaguni jima	1.18	77	⇓P	Pg	14 03 31.2	0.0
	baz=67						
YOJ				eS	Sg	14 03 48.9	+2.2
	baz=67						
ECS	Chishang	1.20	204	eP	Pg	14 03 31.5	-0.1
	baz=217						
WGK	Gukeng	1.20	245	eP	Pg	14 03 32.2	+0.6
	baz=244						
ELDTW	Lidau	1.21	214	eP	Pb	14 03 30.7	-0.1
	baz=214						
WDLH	Douliu	1.22	246	eP	Pg	14 03 32.7	+0.7
	baz=245						
EDH	Donghe	1.28	199	eP	Pb	14 03 31.7	-0.2
	baz=184						
CHN2	Minshiung	1.34	241	eP	Pg	14 03 34.9	+0.6
	baz=225						
WTK	Tuku	1.34	248	eP	Pg	14 03 34.5	+0.2
	baz=233						
CHN4	Tsaushan	1.35	232	eP	Pg	14 03 34.7	+0.2
	baz=232						
STYH	Taoyuan	1.35	221	eP	Pb	14 03 33.5	+0.3
	baz=222						
TPUB	Ta-pu	1.36	229	eP	Pg	14 03 34.6	0.0
	baz=230						
STYT	Tauyuan	1.37	222	eP	Pg	14 03 34.2	-0.7
	baz=222						
WTCT	Ta-ch'eng	1.38	257	eP	Pg	14 03 34.7	-0.4
	baz=256						
CHY	Chiayi	1.40	241	eP	Pg	14 03 35.6	+0.2
	baz=240						
LONT	Longtian	1.40	204	eP	Pg	14 03 35.2	-0.3
	baz=205						
WTP	Ta-pu	1.41	228	eP	Pg	14 03 35.3	-0.2
	baz=228						
TWK	Hsinying	1.48	232	eP	Pg	14 03 36.4	-0.6
	baz=231						
TWG	Pinlang	1.50	205	eP	Pb	14 03 35.6	-0.2
	baz=189						
TWGBT	Beinan	1.50	204	eP	Pb	14 03 35.5	-0.2
	baz=189						
WSF	Szhu	1.50	249	eP	Pb	14 03 36.5	+0.7
	baz=248						
CHN1	Nanshi	1.50	228	eP	Pg	14 03 37.0	-0.4
	baz=229						
LDUT	Ludao	1.54	190	eP	Pb	14 03 36.0	-0.3
	baz=191						
SGST	Jiashian	1.54	224	eP	Pb	14 03 36.6	+0.2
	baz=225						
WSL	Shuilin Townsh	1.55	245	eP	Pb	14 03 36.8	+0.4
	baz=244						
ICHU	Yijhu	1.58	239	eP	Pg	14 03 38.0	-0.9
	baz=239						
CHN8	Yiju	1.64	239	eP	Pb	14 03 38.9	+0.8
	baz=224						
SHHT	Tainan City	1.74	228	eP	Pg	14 03 40.8	-1.0
	baz=230						
ECL	Taimali	1.75	205	eP	Pb	14 03 38.9	-1.0
	baz=192						
SSD	Sandimen	1.77	216	eP	Pb	14 03 40.5	+0.2
	baz=217						
TSMG	Majia	1.80	215	eP	Pb	14 03 41.3	+0.6
	baz=217						
IRIF	Iriomote-Funau	1.81	85	eP	Pb	14 03 41.0	0.0
TWM1	Shoushan	1.83	222	eP	Pg	14 03 42.5	-1.1
	baz=224						
MASBT	Mashibuluo	1.88	213	eP	Pb	14 03 41.0	-1.1
	baz=217						
EAST	Anshuo	1.98	205	eP	Pb	14 03 44.0	0.0
	baz=194						
SSPT	Xinbi	2.02	213	eP	Pb	14 03 44.7	+0.2
	baz=217						
JKRS	Kuro-shima	2.06	88	P	Pb	14 03 44.2	-1.1
SCZT	Fangliau	2.09	210	eP	Pb	14 03 45.9	+0.1
	baz=195						
PNG	Penghu	2.10	253	eP	Pn	14 03 44.1	+1.4
	baz=253						
PHUB	P'eng-hu	2.11	252	eP	Pn	14 03 43.9	+1.2
	baz=252						
WDGT	Dungji	2.13	245	P	Pb	14 03 44.8	-1.7
	baz=245						
LAY	Lan-yu	2.15	185	eP	Pn	14 03 42.9	-0.5
	baz=187						
JIJ	Ishigaki jima	2.19	85	P	Pn	14 03 45.3	+1.4
JIJ				eS	Sb	14 04 12.6	-1.7
WLCH	Liuqiu	2.23	215	eP	Pb	14 03 47.5	-0.6
	baz=236						
VWUC	VWUC	2.24	291	⇑eP	Pn	14 03 45.3	+0.8
	baz=289						
VWUC				eS	Sn	14 04 12.1	+0.4
	baz=289						
VCHM	Qimei	2.34	246	eP	Pb	14 03 48.0	-2.1
	baz=232						
TWK1	Hengchun	2.40	201	eP	Pb	14 03 49.5	-1.6
	baz=191						
TWKBT	Hengchun	2.40	201	eP	Pb	14 03 50.6	-0.5
	baz=191						
MATB	Ma-tsu	2.54	320	eP	Pn	14 03 49.6	+0.9
	baz=319						
LYJJ	Jianjiangzhen	2.96	323	eP	Pn	14 03 55.6	+1.2
	baz=323						
XPSS	Dashiqiu	3.07	333	eP	Pn	14 03 56.7	+0.8
	baz=332						
KNMB	Chin-men Tao	3.08	276	eP	Pn	14 03 57.1	+1.0
	baz=275						
MHZQ	Yeshan	3.11	308	eP	Pn	14 03 57.2	+0.7
	baz=308						
AXDP	Jialang	3.51	282	eP	Pn	14 04 02.5	+0.4
	baz=281						
ZPLA	Ao Xicun	3.67	267	eP	Pn	14 04 05.4	+1.2
	baz=265						
SXFK	Yanhouchang	4.32	301	eP	Pn	14 04 13.1	0.0
	baz=300						

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*IDC **04** 14:21:17.3±2.0, 0°.07S×124°.79E, h0^{km}, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=224.0km s-min=27.8km az=63.0*

*DJA **04** 14:21:21.0±0.3, 0°S±3°×12°5E± °, h10^{km}, M3.5/9, MLv3.5/9*

ISC 04 14:21:23.9±1.0**, 0°.18S**±0°.08×**124°.78E**±0°.06**, h53**^{km}**, n11, σ1^s.36**/14**, mb2.9**/3**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.10	313	P	Pn	14 21 41.8	-1.2
KMSI				S	Sn	14 21 56.1	-1.1
GTOI	Gorontalo	1.94	295	P	Pn	14 21 54.8	+0.2
LUWI	Luwuk	2.18	247	P	Pn	14 21 57.2	-0.6
SANI	Sanana	2.21	147	P	Pn	14 21 57.0	-1.3
SANI				S	Sn	14 22 22.7	-1.8
LBMI	Labuha	2.76	99	P	Pn	14 22 05.7	0.0
LBMI				S	Sn	14 22 40.1	+2.2
MRSI	Marisa	2.91	283	P	Pn	14 22 07.1	-0.7
APSI	Ampana	3.21	257	P	Pn	14 22 13.9	+2.0
MPSI	Mapaga	4.91	276	P	Pn	14 22 35.8	+0.6
WRA	Warramunga Arr	21.76	155	P	P	14 26 10.7	-0.5
	0.5nm,0.9s,baz=333,slow=10,SNR=2.5						
	0.5nm,0.9s						
ASAR	Alice Springs	24.97	160	P	P	14 26 44.3	+1.6
	0.2nm,0.7s,baz=336,slow=7.9,SNR=5.0						
	0.2nm,0.7s						
MKAR	Makanchi Array	59.71	327	P	P	14 31 23.1	-0.1
	0.2nm,0.3s,baz=116,slow=8.4,SNR=4.4						
	0.2nm,0.3s						

IDC **04** *14:29:35.3±1.5, 40°.70N×29°.42W, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=106.9km s-min=29.8km az=35.0*

SVSA **04** *14:29:37.5±0.9, 40°.67N×29°.56W, h10^{km}, ML3.4(INMG), Error ellipse: s-maj=7.3km s-min=3.8km az=80.0*

ISC 04 14:29:36.8±1.0, **40°.45N**±0°.09×**29°.42W**±0°.09, **h14^{km}, n20, σ0^{s}61**/32, **mb3.4**/4, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBC	Serra Branca	1.77	142	eP	Pn	14 30 06.6	-0.4
SRBC				eS	Sn	14 30 28.9	-0.3
SRBC				A	A	14 30 32.1	
	212nm,0.1s						
PGRA	Graciosa	1.80	141	eP	Pn	14 30 07.2	-0.2
PGRA				eS	Sn	14 30 29.6	-0.4
PGRA				A	A	14 30 31.8	
	75nm,0.3s						
PCED	Cedros	1.90	163	eS	Sn	14 30 32.2	-0.3
PCED				A	A	14 30 33.9	
	51nm,0.3s						
CALA	Caldeira	1.94	163	eP	Pn	14 30 09.2	-0.3
CALA				eS	Sn	14 30 33.3	-0.4
CALA				A	A	14 30 36.1	
	94nm,0.2s						
ROSA	Rosais	1.95	152	eP	Pn	14 30 09.6	+0.1
ROSA				eS	Sn	14 30 33.4	-0.4
ROSA				A	A	14 30 34.2	
	64nm,0.2s						
HOR	Horta	2.01	162	eS	Sn	14 30 35.2	-0.1
HOR				A	A	14 30 36.5	
	79nm,0.2s						
PMAN	Manadas	2.08	150	eP	Pn	14 30 11.3	0.0
PMAN				eS	Sn	14 30 36.3	-0.8
PMAN				A	A	14 30 37.9	
	88nm,0.2s						
PICO	Pico	2.09	158	eP	Pn	14 30 11.4	-0.1
PICO				eS	Sn	14 30 37.2	-0.1
PICO				A	A	14 30 40.2	
	64nm,0.2s						
PCAN	Candelaria	2.11	160	eP	Pn	14 30 11.7	0.0
PCAN				eS	Sn	14 30 37.3	-0.4
PCAN				A	A	14 30 44.6	
	100nm,0.2s						
PTOPO	Topo S. Jorge	2.29	145	eP	Pn	14 30 14.2	0.0
PTOPO				eS	Sn	14 30 41.1	-1.1
PTOPO				A	A	14 30 43.0	
	168nm,0.3s						
PAGU	Agualva, Azore	2.41	133	eP	Pn	14 30 15.4	-0.4
PAGU				eS	Sn	14 30 44.0	-1.1
PAGU				A	A	14 30 44.6	
	118nm,0.2s						
ADH	Angra Heroismo	2.46	136	eP	Pn	14 30 16.4	-0.1
ADH				eS	Sn	14 30 45.3	-1.1
ADH				A	A	14 30 47.0	
	30nm,0.3s						
CMLA	Cha da Macela	4.05	130	eP	Pn	14 30 38.3	0.0
CMLA				eS	Sn	14 31 24.5	-1.0
CMLA				A	A	14 31 30.8	
	76nm,0.2s						
BART	Pico Bartolome	4.25	128	eP	Pn	14 30 41.3	+0.1
BART				eS	Sn	14 31 30.7	+0.1
BART				A	A	14 31 33.0	
	22nm,0.3s						
PSMA	Santa Maria	4.81	134	eP	Pn	14 30 49.0	+0.2
PSMN	Pico do Norte,	4.84	134	eP	Pn	14 30 49.5	+0.3
TORD	Torodi Ar. Bea	38.51	126	P	P	14 37 00.6	+1.8
	0.6nm,1.0s,baz=339,slow=7.7,SNR=2.8						
	0.6nm,1.0s						
YKA	Yellowknife Ar	52.98	325	P	P	14 38 51.8	-0.7
	0.2nm,0.7s,baz=69,slow=6.9,SNR=2.3						
	0.2nm,0.7s						
PDAR	Pinedale Array	57.76	301	P	P	14 39 27.2	-0.4
	0.4nm,0.8s,baz=66,slow=9.0,SNR=4.4						
	0.4nm,0.8s						
TXAR	Lajitas Array	60.27	285	P	P	14 39 45.2	+0.2
	0.2nm,0.6s,baz=60,slow=7.6,SNR=4.1						
	0.2nm,0.6s						

IDC **04** *14:30:30.4±3.1, 3°.01S×129°.91E, h44^{km}±35^{km}, mb3.6/6, mbtmp3.9/9, ML3.7/3, MS3.0/3, Error ellipse: s-maj=35.5km s-min=12.6km az=82.0*

DJA **04** *14:30:31.4±1.2, 3°S±4°×13°0E±°, h19^{km}±10^{km}, M3.7/7, MLv3.7/7*

ISC 04 14:30:29.1±0.7, **2°.97S**±0°.07×**129°.87E**±0°.06, **h25^{km}, n17, σ1^{s}52**/19, **mb4.0**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	248	P	Pb	14 30 50.8	+2.9
AAI	Ambon	1.81	247	P	Pb	14 31 01.6	0.0
AAI				S	Sb	14 31 25.5	+1.6
SIJI	Sorong	2.51	34	P	Pn	14 31 08.1	-0.2
	32nm,0.3s,baz=241,slow=22,SNR=108						
SIJI				S	Sn	14 31 38.9	+0.7
	58nm,0.4s,baz=162,slow=20,SNR=7.6						
SIJI				LR	LR	14 32 23.5	
	comp=Z,147nm,18.0s,baz=161,slow=45						
	63nm,0.3s						
SWI	Sorong	2.51	34	P	Pn	14 31 09.3	+1.0
SWI				S	Sn	14 31 38.4	+0.2
LBMI	Labuha	3.31	314	P	Pn	14 31 19.1	-0.2
SANI	Sanana	3.98	283	P	Pn	14 31 27.7	-0.8
KAPI	Kappang	10.29	258	LR	LR	14 37 18.5	
	comp=Z,114nm,19.7s,baz=71,slow=40						
DAV	Davao City (W)	10.85	337	LR	LR	14 38 34.3	
	comp=Z,76nm,18.6s,baz=106,slow=44						
FITZ	Fitzroy Crossi	15.60	195	P	Pn	14 34 05.9	-1.6
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=2.6						
	3.8nm,1.0s						
WRA	Warramunga Arr	17.43	166	P	Pn	14 34 29.9	-0.8
	0.4nm,0.3s,baz=347,slow=12,SNR=19						
WRA				S	Sn	14 37 34.9	-9.3
	0.5nm,0.7s,baz=334,slow=25,SNR=2.5						
	0.9nm,0.5s						
ASAR	Alice Springs	20.95	170	P	P	14 35 11.0	+0.7
	6.0nm,0.7s,baz=350,slow=11,SNR=77						
ASAR				S	S	14 38 59.5	-3.2
	0.2nm,0.6s,baz=343,slow=13,SNR=2.5						
	6.0nm,0.7s						
STKA	Stephens Creek	30.81	160	P	P	14 36 44.9	+2.0
	1.4nm,0.6s,baz=336,slow=10,SNR=4.5						
CMAR	Chiang Mai Arr	37.15	306	P	P	14 37 36.9	-1.4
	0.2nm,0.4s,baz=120,slow=5.3,SNR=2.0						
	0.2nm,0.4s						
SONM	Songino Array	54.60	341	P	P	14 39 55.1	-0.5
	3.6nm,0.5s,baz=152,slow=6.5,SNR=2.2						
	3.6nm,0.5s						
MKAR	Makanchi Array	64.81	326	P	P	14 41 05.5	-0.4
	0.1nm,0.4s,baz=109,slow=9.4,SNR=2.4						
	0.1nm,0.4s						
ZALV	Zalesovo Beam	67.94	333	P	P	14 41 23.7	-1.9
	0.3nm,0.3s,baz=104,slow=6.1,SNR=1.7						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	69.03	328	P	P	14 41 33.0	+0.5
	0.5nm,0.2s,baz=128,slow=5.8,SNR=3.0						
	0.5nm,0.2s						

IDC **04** *14:36:18.4±0.3, 14°.85S×167°.02E, h0^{km}, mb5.2/36, mbtmp5.2/38, ML4.6/2, MS5.1/58, Error ellipse: s-maj=10.3km s-min=9.5km az=85.0*

BJI **04** *14:36:21.9±0.0, 14°.70S×167°.20E, h35^{km}, mb5.2/84, mB5.6/66, Ms5.4/89, Ms7 5.2/85*

NOU **04** *14:36:22.7, 14°.85S×166°.85E, h3^{km}, ML5.6/123, Vanuatu Islands*

MOS **04** *14:36:23.0±1.3, 14°.79S×166°.83E, h33^{km}, mb5.9/46, MS5.4/14, Error ellipse: s-maj=8.5km s-min=6.8km az=131.2*

NEIC **04** *14:36:23.8±1.7, 14°.86S±0°.07×166°.93E±0°.08, h26^{km}±1^{km}, mb5.7/137, Ms_20 5.4/335, Mwb5.6/54, Mww5.7, Error ellipse: s-maj=13.5km s-min=11.5km az=59.0*

NEIC **04** *14:36:25.3, 14°.92S×166°.90E, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.04; M$_{\theta\theta}$-0.61; M$_{\phi\phi}$-2.43; M$_{r\theta}$0.08; M$_{\theta\phi}$1.56; M$_{\phi r}$-0.43; Fault plane solution: M$_0$3.23000×10^{17} NP1:φ$_s$153.12000°, δ48.76000°, λ94.03000°. NP2:φ$_s$327.02000°, δ41.40000°, λ85.41000°. Principal axes: T 3.0787, Plg85.0000°, Azm100.0000°; N 0.2806, Plg3.0000°, Azm330.0000°; P -3.3594, Plg4.0000°, Azm240.0000°;*

GCMT **04** *14:36:26.8±0.1, 14°.92S±0°.01×166°.72E±0°.01, h36^{km}, MW5.7/148, Moment Tensor Solution. s148,c282; s148,c276; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$4.44±.05; M$_{\theta\theta}$-0.16±.04; M$_{\phi\phi}$-4.28±.03; M$_{r\theta}$0.43±.05; M$_{\theta\phi}$1.01±.03; M$_{\phi r}$-0.39±.04; Best double couple: M$_0$4.51400×10^{17} NP1:φ$_s$351.00000°, δ42.00000°, λ96.00000°. NP2:φ$_s$163.00000°, δ48.00000°, λ84.00000°. Principal axes: T 4.4900, Plg85.0000°, Azm22.0000°; N 0.0530, Plg4.0000°, Azm167.0000°; P -4.5390, Plg3.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **04** *14:36:27, 14°.71S×166°.69E, h36^{km}, Moment Tensor Solution. Duration: 4^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.43; M$_{\theta\theta}$-0.38; M$_{\phi\phi}$-4.05; M$_{r\theta}$0.83; M$_{\theta\phi}$0.56; M$_{\phi r}$-2.01; Fault plane solution: M$_0$4.81000×10^{17} NP1: φ$_s$357.00000°, δ32.00000°, λ99.00000°. NP2: φ$_s$165.00000°, δ58.00000°, λ84.00000°. Principal axes: T 4.9718, Plg76.0000°, Azm58.0000°; N -0.3433, Plg5.0000°, Azm169.0000°; P -4.6285, Plg13.0000°, Azm260.0000°;*

ISC 04 14:36:23.5±0.3, **14°.79S**±0°.03×**167°.07E**±0°.04, **h29^{km}**±1^{km}, **h30^{km}:pP-P, n1033, σ1^{s}66**/943, **mb5.6**/189, **MS5.4**/258, **33C-33D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.67	169		Pb	14 36 35.3	-1.4
SANVU	Saraoutou	0.67	169	P	Pb	14 36 35.7	-1.0
DVP	Devils Point	3.12	160	P	Pn	14 37 13.4	+2.8
RTV	Rentapao	3.26	157	P	Pn	14 37 15.6	+2.9
LIFNC	LIFOU	5.96	178		Pn	14 37 48.2	-1.6
LIFNC	LIFOU	5.96	178	P	Pn	14 37 49.4	-0.4
KOUNC	Koumac, New Ca	6.32	204		Pn	14 37 53.4	-1.2
KOUNC	Koumac, New Ca	6.32	204	P	Pn	14 37 54.3	-0.4
MARNC	Mare, Loyalty	6.72	172		Pn	14 38 00.0	-0.2
MARNC	Mare, Loyalty	6.72	172	P	Pn	14 38 01.2	+1.0
YATNC	Mamie plateau,	7.24	181	P	Pn	14 38 06.9	-0.4
DZM	Mont Dzumac	7.27	185	ePn	Pn	14 38 09.5	+1.6
DZM				eSn	Sn	14 39 31.0	+1.5
	49µm,24.7s						
DZM	Mont Dzumac	7.27	185	Pn	Pn	14 38 05.8	-2.1
	44nm,0.3s,baz=342,slow=7.2,SNR=249						
DZM				Sn	Sn	14 39 26.9	-2.6
	41nm,0.3s,baz=312,slow=22,SNR=2.2						
DZM				LR	LR	14 40 39.5	
	comp=Z,37µm,20.5s,baz=350,slow=36						
	84nm,0.3s						
DZM	Mont Dzumac	7.27	185		Pn	14 38 07.2	-0.7
DZM	Mont Dzumac	7.27	185	P	Pn	14 38 08.5	+0.6
NOUC	Port Laguerre	7.31	186	P	Pn	14 38 09.0	+0.6
ONTNC	Ouen Toro	7.50	184		Pn	14 38 10.5	-0.5
ONTNC	Ouen Toro	7.50	184	P	Pn	14 38 11.8	+0.8
OUENC	Ouen Island, N	7.60	182		Pn	14 38 12.1	-0.2
OUENC	Ouen Island, N	7.60	182	P	Pn	14 38 13.1	+0.9
PINNC	Pines Island,	7.79	177		Pn	14 38 15.4	+0.4
PINNC	Pines Island,	7.79	177	P	Pn	14 38 16.6	+1.6
HNR	Honiara	8.76	307	Pn	Pn	14 38 29.1	+0.9
	91nm,0.3s,baz=166,slow=8.5,SNR=26						
HNR				Sn	Sn	14 40 06.2	+0.1
	222nm,0.3s,baz=180,slow=20,SNR=6.5						
HNR				LR	LR	14 41 39.1	
	comp=Z,27µm,20.0s,baz=156,slow=37						
HNR	Honiara	8.76	307	P	Pn	14 38 29.5	+1.3
HNR	Honiara	8.76	307		Pn	14 38 29.5	+1.3
HNR	Honiara	8.76	307	P	Pn	14 38 29.7	+1.4
MSVF	Nonsavu	10.95	107	Pn	Pn	14 39 04.2	+5.9
	1.1nm,0.3s,baz=266,slow=7.5,SNR=28						
MSVF				LR	LR	14 42 31.2	
	comp=Z,37µm,19.1s,baz=285,slow=34						
MSVF	Nonsavu	10.95	107	P	Pn	14 39 04.9	+6.6
MSVF	Nonsavu	10.95	107	Pn	Pn	14 39 04.9	+6.6
MSVF	Nonsavu	10.95	107	P	Pn	14 39 04.4	+6.1
DGTI	Dogotuki	12.30	99	P	Pn	14 39 22.5	+5.7
FUNA	Funafuti	13.41	64	P	P	14 39 37.2	-3.8
LKBA	Tubou, Lakemba	13.97	106	P	P	14 39 45.6	-1.6
TARA	Tarawa	17.05	20		P	14 40 23.3	+1.8
TARA				IAmb	IAmb	14 40 46.9	
	comp=Z,573nm,1.3s						
TARA	Tarawa	17.05	20	P	P	14 40 25.6	+4.1
RK1H	Rockhampton Ha	17.83	239	P	P	14 40 30.7	+0.6
	comp=Z,148nm,0.7s						
RABL	Rabaul	18.06	304	P	P	14 40 33.5	+0.8
RABL				IAmb	IAmb	14 41 10.4	
	comp=Z,418nm,1.4s						
RABL	Rabaul	18.06	304	P	P	14 40 34.8	+2.1
KRVT	Keravat (AS076	18.11	304	P	Pn	14 40 32.9	-0.1
	comp=Z,0.5nm,0.3s,baz=124,slow=1.8,SNR=8.4						
KRVT				LR	LR	14 46 38.2	
	comp=Z,5µm,20.8s,baz=271,slow=34						
	comp=Z,54nm,1.0s						
LHI	Lord Howe Isla	18.20	202	P	P	14 40 34.4	+0.4
LHI	Lord Howe Isla	18.20	202	P	P	14 40 35.8	+1.8
EIDS	Eidsvold	18.32	232	P	P	14 40 35.2	-0.3
	baz=18,SNR=24						
EIDS	Eidsvold	18.32	232		P	14 40 34.4	-1.1
EIDS				IAmb	IAmb	14 40 54.4	
	comp=Z,660nm,1.8s						
EIDS	Eidsvold	18.32	232	P	Pn	14 40 35.6	+0.1
RAO	Raoul Island	19.99	139	P	P	14 40 53.1	-0.6
	comp=Z,260nm,0.3s,baz=63,slow=23,SNR=1.9						
RAO				LR	LR	14 47 33.2	
	comp=Z,4µm,19.0s,baz=316,slow=34						
RAO	Raoul Island	19.99	139	IAmb	IAmb	14 41 04.2	
	comp=Z,592nm,1.0s						
GLKZ	Green Lake	20.00	139	P	Pn	14 40 58.5	+2.8
PMG	Port Moresby	20.18	283	P	P	14 40 55.9	0.0
	comp=Z,124nm,1.0s,baz=148,slow=4.8,SNR=17						
	comp=Z,124nm,1.0s						
PMG	Port Moresby	20.18	283	P	Pn	14 40 57.2	-0.7
PMG				IAmb	IAmb	14 41 08.0	
	comp=Z,728nm,1.3s						
PMG	Port Moresby	20.18	283	P	Pn	14 40 57.4	-0.5
PMG	Port Moresby	20.18	283	P	Pn	14 40 57.6	-0.3
AFI	Afiamalu	20.52	90	LR	LR	14 47 11.1	
	comp=Z,7µm,21.3s,baz=248,slow=32						
AFI	Afiamalu	20.52	90	P	Pn	14 41 04.7	+2.8
CTA	Charters Tower	20.54	252	P	P	14 40 59.2	-0.6
	comp=Z,140nm,0.9s,baz=77,slow=12,SNR=104						
CTA				S	S	14 44 49.4	+1.2
	comp=Z,20nm,0.8s,baz=13,slow=9.7,SNR=3.7						
CTA				LR	LR	14 48 17.4	
	comp=Z,16µm,18.4s,baz=90,slow=35						
	comp=Z,140nm,0.9s						
CTA	Charters Tower	20.54	252	P	P	14 41 00.8	+1.0
CTAO	Charters Tower	20.54	252	P	P	14 40 57.5	-2.3
CTAO				pmax	pmax		
	comp=Z,280nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,16µm,18.0s						
CTAO	Charters Tower	20.54	252	P	P	14 40 57.5	-2.3
CTAO				IAmb	IAmb	14 41 10.3	
	comp=Z,280nm,1.1s						
CTAO	Charters Tower	20.54	252	IAMs_20	IAMs_20	14 48 23.3	
	comp=Z,17µm,18.0s						
CTAO	Charters Tower	20.54	252	P	P	14 41 00.7	+1.0
RMQ	Roma	20.68	233	P	P	14 41 02.0	+0.8
	baz=21,SNR=127						
RMQ	Roma	20.68	233	P	Pn	14 41 02.9	-0.8
ARMA	Armidale	21.06	220	P	P	14 41 06.2	+0.8
	baz=21,SNR=22						
ARMA	Armidale	21.06	220	P	P	14 41 03.6	-1.8
ARMA				IAmb	IAmb	14 41 20.6	
	comp=Z,246nm,1.4s						
ARMA	Armidale	21.06	220	P	P	14 41 06.8	+1.4
OUZ	Omahuta	21.18	165	P	P	14 41 10.1	+3.6
WCZ	Waipu Caves	22.05	164	P	P	14 41 17.6	+1.7
MTSU	Mount Surprise	22.07	258	P	P	14 41 16.4	+0.1
	baz=22,SNR=20						
MTSU	Mount Surprise	22.07	258	P	P	14 41 17.7	+1.4
NTLS	Newcastle Soft	22.80	215	P	P	14 41 25.8	+1.9
NTLH	Newcastle Hard	22.81	215	P	P	14 41 26.2	+2.2
COEN	Coen	23.16	269	P	P	14 41 27.9	+0.1
	baz=23,SNR=7.7						
COEN	Coen	23.16	269	P	P	14 41 27.1	-0.6
COEN				IAmb	IAmb	14 41 37.0	
	comp=Z,176nm,1.1s						
COEN	Coen	23.16	269	P	P	14 41 30.1	+2.3
PATS	Pohnpei	23.17	337	P	P	14 41 30.0	+2.2
	baz=23,SNR=9.0						
PATS	Pohnpei	23.17	337	P	P	14 41 28.3	+0.6
PATS	Pohnpei	23.17	337	P	P	14 41 29.9	+2.1
MANU	Manus Island	23.20	301	P	P	14 41 28.5	+0.3
MGCD	Mangrove Creek	23.37	216	P	P	14 41 30.1	+0.3
	baz=23,SNR=8.1						
MGCD	Mangrove Creek	23.37	216	P	P	14 41 31.2	+1.5
RIV	Riverview	23.81	214	P	P	14 41 34.3	+0.4
	baz=24,SNR=5.5						
SYDH	Sydney Hard Ro	23.99	215	P	P	14 41 37.1	+1.5
TGRZ	Tauranga	24.27	162	P	P	14 41 45.8	+7.7
KMRZ	Kaimai	24.28	163	P	P	14 41 36.0	-2.3
QLP	Quilpie	24.33	238	P	P	14 41 38.2	-0.6
	baz=24,SNR=11						
QLP	Quilpie	24.33	238	P	P	14 41 39.2	+0.4
OPRZ	Ohinepanea	24.46	162	P	P	14 41 45.1	+5.2
HIZ	Hauiti	24.62	165	P	P	14 41 41.6	+0.3
HIZ				IAmb	IAmb	14 42 15.5	
	comp=Z,320nm,1.4s						
HAZ	Te Kaha	24.78	159	P	P	14 41 44.4	+1.7
HAZ				S	S	14 46 03.2	0.0
MXZ	Matakaoa Point	24.79	158	P	P	14 41 42.8	-0.1
MXZ				IAmb	IAmb	14 41 48.6	
	comp=Z,87nm,0.7s						
MXZ	Matakaoa Point	24.79	158	P	P	14 41 44.1	+1.3
MXZ				S	S	14 46 03.7	+0.3
URZ	Urewera	25.01	161	P	P	14 41 44.1	-0.8
	comp=Z,57nm,0.8s,baz=319,slow=9.3,SNR=32						
URZ				S	S	14 46 10.3	+3.2
	comp=Z,7.1nm,0.6s,baz=311,slow=20,SNR=2.0						
URZ				LR	LR	14 50 39.0	
	comp=Z,6µm,18.2s,baz=32,slow=34						
	comp=Z,57nm,0.8s						
URZ	Urewera	25.01	161	P	P	14 41 44.4	-0.5
URZ				IAmb	IAmb	14 42 14.9	
	comp=Z,230nm,1.4s						
URZ	Urewera	25.01	161	P	P	14 41 46.3	+1.4
URZ				S	S	14 46 12.4	+5.4
URZ	Urewera	25.01	161	P	P	14 41 48.5	+3.6
WMGZ	Waiomatatini S	25.05	158	P	P	14 41 46.9	+1.6
WMGZ				S	S	14 46 07.3	-0.4
MUGZ	Murupara	25.11	162	P	P	14 41 47.2	+1.4
MUGZ				S	S	14 46 14.2	+5.5
MWZ	Matawai	25.21	160	P	P	14 41 47.6	+0.8
MWZ				S	S	14 46 11.3	+0.9
PUZ	Puketiti	25.22	159	P	P	14 41 46.9	+0.1
PUZ				S	S	14 46 12.3	+1.8
TWGZ	Tauwhareparae	25.22	160	P	P	14 41 49.0	+2.2
TWGZ				S	S	14 46 11.9	+1.3
TKGZ	Te Karaka	25.42	160	P	P	14 41 50.5	+2.0
BKZ	Black Stump Fm	25.66	163	P	P	14 41 50.9	+0.1
BKZ				IAmb	IAmb	14 41 56.2	
	comp=Z,96nm,0.6s						
BKZ	Black Stump Fm	25.66	163	P	P	14 41 54.7	+3.8
CMSA	Cobar Meteorol	25.69	226	P	P	14 41 50.9	-0.2
	baz=26,SNR=38						
CMSA	Cobar Meteorol	25.69	226	P	P	14 41 53.6	+2.5
CNB	Canberra Magne	25.90	215	P	P	14 41 53.2	+0.1
	baz=26,SNR=8.8						
CNB	Canberra Magne	25.90	215	P	P	14 41 55.8	+2.7
CAN	Canberra	26.11	215	P	P	14 41 55.8	+0.9
CAN				pmax	pmax		
	comp=Z,149nm,1.1s						
CAN				MLR	MLR		
	comp=Z,8µm,20.0s						
CAN	Canberra	26.11	215	P	P	14 41 55.8	+0.9
CAN				IAmb	IAmb	14 42 13.2	
	comp=Z,149nm,1.1s						
CAN	Canberra	26.11	215	P	P	14 41 58.1	+3.2
QIS	Mount Isa	26.77	254	P	P	14 42 00.6	-0.4
	baz=27,SNR=26						
QIS	Mount Isa	26.77	254	P	P	14 42 00.3	-0.7
BFZ	Birch Farm	27.02	165	P	P	14 42 01.6	-1.4
BFZ				IAmb	IAmb	14 42 12.7	
	comp=Z,93nm,0.9s						
BFZ	Birch Farm	27.02	165	P	P	14 42 05.4	+2.4
TUWZ	Tuamarina	27.21	169	P	P	14 42 04.3	-0.4
THZ	Tophouse	27.35	170	P	P	14 42 06.9	+0.9
MSWZ	Moikau Station	27.47	167	P	P	14 42 06.6	-0.4
INKA	Innaminka	27.64	238	P	P	14 42 11.8	+3.1
KHZ	Kahutara	28.09	170	P	P	14 42 12.0	-0.6
LTZ	Lake Taylor	28.26	172	P	P	14 42 13.8	-0.3
LTZ				IAmb	IAmb	14 42 20.4	
	comp=Z,98nm,0.8s						
STKA	Stephens Creek	28.81	229	P	P	14 42 17.2	-1.9
	comp=Z,24nm,0.6s,baz=44,slow=8.0,SNR=63						
STKA				LR	LR	14 52 50.6	
	comp=Z,11µm,21.3s,baz=62,slow=34						
STKA				PKiKP	PKiKP	14 53 03.6	+0.4
	comp=Z,1.2nm,0.6s,baz=27,slow=2.3,SNR=3.4						
	comp=Z,24nm,0.6s						
STKA	Stephens Creek	28.81	229	P	P	14 42 19.8	+0.7
	baz=29,SNR=13						
STKA	Stephens Creek	28.81	229	P	P	14 42 18.2	-0.9
STKA	Stephens Creek	28.81	229	P	P	14 42 19.8	+0.7
RPZ	Rata Peaks	29.03	174	P	P	14 42 19.2	-1.8
	comp=Z,26nm,0.7s,baz=7.4,slow=1.8,SNR=8.8						
RPZ				LR	LR	14 52 28.4	
	comp=Z,5µm,21.4s,baz=354,slow=34						
	comp=Z,26nm,0.7s						
RPZ	Rata Peaks	29.03	174	IAmb	IAmb	14 42 47.3	
	comp=Z,135nm,1.4s						
TOO	Toolangi	29.69	216	P	P	14 42 27.5	+0.6
	baz=30,SNR=5.7						
TOO	Toolangi	29.69	216	P	P	14 42 28.3	+1.4
WKZ	Wanaka	29.99	177	IAMs_20	IAMs_20	14 52 50.3	
	comp=Z,8µm,21.0s						
MLZ	Mavora Lakes	30.50	179	IAMs_20	IAMs_20	14 53 58.6	
	comp=Z,8µm,19.0s						
BRAT	Ballarat	30.58	218	P	P	14 42 37.0	+2.3
LCRK	Leigh Creek	30.74	235	P	P	14 42 39.3	+3.1
SMPI	Sarmi	30.74	292	P	P	14 42 37.0	+0.6
	comp=Z,68nm,1.1s						
ARPS	Mount Arapiles	31.38	221	P	P	14 42 44.8	+3.0
WR0	Warramunga Arr	31.43	256	P	P	14 42 40.1	-2.4
WR0				IAmb	IAmb	14 42 51.8	
	comp=Z,64nm,1.1s						
HTT	Hallett	31.54	229	P	P	14 42 43.6	+0.3
	baz=31,SNR=6.6						
HTT	Hallett	31.54	229	P	P	14 42 44.3	+1.0
WB2	Warramunga Arr	31.61	256	P	P	14 42 42.2	-1.9
	baz=32						
WB2	Warramunga Arr	31.61	256	P	P	14 42 41.5	-2.6
WB2				IAmb	IAmb	14 42 53.4	
	comp=Z,86nm,1.1s						
WRAB	Tennant Creek	31.61	256	P	P	14 42 44.2	+0.1
WRA	Warramunga Arr	31.62	256	P	P	14 42 41.6	-2.5
	comp=Z,22nm,0.8s,baz=86,slow=9.4,SNR=73						
WRA				PcP	PcP	14 45 37.1	+1.0
	comp=Z,2.7nm,0.8s,baz=79,slow=4.4,SNR=2.7						
WRA				ScP	ScP	14 49 22.4	+4.9
	comp=Z,2.0nm,1.0s,baz=82,slow=3.2,SNR=3.9						
WRA				PKiKP	PKiKP	14 53 04.1	-1.3
	comp=Z,0.8nm,0.7s,baz=34,slow=0.7,SNR=5.7						
WRA				LR	LR	14 55 03.5	
	comp=Z,17µm,19.1s,baz=60,slow=36						
	comp=Z,22nm,0.8s						
WRA	Warramunga Arr	31.62	256	P	P	14 42 41.3	-2.9
WRA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	31.62	256	P	P	14 42 41.3	-2.9
OOD	Oodnadatta	31.87	241	P	P	14 42 46.6	+0.4
NAPP	Napperby	31.98	230	P	P	14 42 49.7	+2.5
RAR	Rarotonga	32.13	106	LR	LR	14 53 24.3	
	comp=Z,2µm,20.5s,baz=286,slow=32						
WHYH	Whyalla	32.34	231	P	P	14 42 51.2	+0.9
	comp=Z,37nm,0.7s						
AS31	Alice Springs	32.47	249	P	P	14 42 49.6	-2.0
ASAR	Alice Springs	32.47	249	P	P	14 42 49.5	-2.1
	comp=Z,16nm,0.9s,baz=74,slow=9.5,SNR=111						
ASAR				PcP	PcP	14 45 40.4	+1.9
	comp=Z,4.4nm,0.7s,baz=110,slow=2.7,SNR=2.3						
ASAR				ScP	ScP	14 49 24.1	+3.8
	comp=Z,3.6nm,1.1s,baz=55,slow=2.7,SNR=3.8						
ASAR				PKiKP	PKiKP	14 53 03.9	-2.1
	comp=Z,2.2nm,1.2s,baz=133,slow=0.7,SNR=6.4						
ASAR				LR	LR	14 55 33.6	
	comp=Z,12µm,18.5s,baz=88,slow=36						
	comp=Z,16nm,0.9s						
ASPA	Alice Springs	32.47	249	P	P	14 42 49.9	-1.8
	baz=32						
TAU	Tasmania Unive	32.76	207	IAMs_20	IAMs_20	14 53 42.0	
	comp=Z,8µm,18.0s						
H11S2	WAKE ISLAND Hy	33.07	359	T	T	15 18 24.7	
	baz=184,slow=74						
H11S3	WAKE ISLAND Hy	33.07	359	T	T	15 18 24.5	
	baz=184,slow=74						
H11S1	WAKE ISLAND Hy	33.09	359	T	T	15 18 20.7	
	baz=184						

BBOO	Buckleboo	33.39	232	P	P	14 42 58.9	-0.6
	baz=33,SNR=27						
BBOO	Buckleboo	33.39	232	P	P	14 42 58.0	-1.5
BBOO				IAmb	IAmb	14 43 09.7	
	comp=Z,151nm,0.9s						
BBOO	Buckleboo	33.39	232	P	P	14 43 00.1	+0.6
KDU	Kakadu	33.65	269	P	P	14 43 00.8	-1.2
	baz=34,SNR=6.0						
KDU	Kakadu	33.65	269	P	P	14 43 05.1	+3.2
MULG	Mulgathing	34.01	237	P	P	14 43 04.2	-0.7
H11N1	WAKE ISLAND Hy	34.28	360	T	T	15 18 58.8	
	baz=184,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	34.29	360	T	T	15 19 07.1	
	baz=184,slow=76,SNR=15						
H11N2	WAKE ISLAND Hy	34.30	360	T	T	15 19 00.7	
	baz=184,slow=76,SNR=18						
MTN	Manton Dam	34.93	269	P	P	14 43 12.5	-0.5
	baz=35,SNR=4.8						
MTN	Manton Dam	34.93	269	P	P	14 43 15.8	+2.8
	comp=Z,48nm,1.2s						
GUMO	Guam	35.74	321	LR	LR	14 57 07.3	
	comp=Z,2µm,20.4s,baz=137,slow=35						
KNRA	Kununurra	36.94	263	P	P	14 43 28.7	-1.6
	baz=37,SNR=28						
KNRA	Kununurra	36.94	263	P	P	14 43 28.6	-1.6
KNRA	Kununurra	36.94	263	P	P	14 43 32.1	+1.9
WRKA	Warakurna	37.73	248	P	P	14 43 35.2	-1.8
	baz=38,SNR=41						
WRKA	Warakurna	37.73	248	P	P	14 43 36.4	-0.6
SIJI	Sorong	37.98	288	LR	LR	14 58 59.9	
	comp=Z,6µm,21.6s,baz=102,slow=36						
SWI	Sorong	37.98	288	P	P	14 43 39.5	+0.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,120nm,1.0s						
FORT	Forrest	39.10	239	P	P	14 43 47.7	-0.6
	baz=39,SNR=18						
FORT	Forrest	39.10	239	P	P	14 43 46.6	-1.7
FORT	Forrest	39.10	239	P	P	14 43 48.1	-0.2
FITZ	Fitzroy Crossi	39.81	259	P	P	14 43 52.9	-1.5
	comp=Z,55nm,0.9s,baz=100,slow=8.0,SNR=43						
FITZ				LR	LR	15 00 50.9	
	comp=Z,9µm,18.1s,baz=98,slow=37						
	comp=Z,55nm,0.9s						
FITZ	Fitzroy Crossi	39.81	259	P	P	14 43 52.9	-1.5
	baz=40,SNR=42						
FITZ	Fitzroy Crossi	39.81	259	P	P	14 43 52.5	-1.9
FITZ				IAmb	IAmb	14 44 04.7	
	comp=Z,116nm,1.0s						
FITZ	Fitzroy Crossi	39.81	259	P	P	14 43 54.7	+0.3
LBMI	Labuha	41.54	286	P	P	14 44 11.2	+2.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,206nm,1.4s						
PAE	Paea	41.66	100	eP	P	14 44 13.6	+3.9
PPT2	Papeete2	41.67	100	eP	P	14 44 15.0	+5.2
	comp=Z,213nm,1.0s						
PPT2				eS	S	14 50 38.3	+13
PPT2				eLR	LR	14 56 04.1	
	comp=Z,7µm,25.8s						
PPT	Papeete	41.67	100	P	P	14 44 10.4	+0.7
	comp=Z,86nm,0.9s,baz=240,slow=20,SNR=8.6						
PPT				LR	LR	14 57 28.2	
	comp=Z,3µm,21.8s,baz=272,slow=30						
	comp=Z,86nm,0.9s						
PPTF	Pamatai, Papee	41.68	100	P	P	14 44 10.8	+0.9
PPTF	Pamatai, Papee	41.68	100	P	P	14 44 15.9	+6.0
TBI	Tubuai	41.83	109	eS	S	14 50 41.6	+14
TBI				eLQ	LQ	14 54 14.4	
	comp=Z,6µm,29.2s						
TBI				eLR	LR	14 56 10.4	
	comp=Z,5µm,27.0s						
TNTI	Ternate	42.20	288	P	P	14 44 14.2	+0.1
TNTI	Ternate	42.20	288	P	P	14 44 17.3	+3.2
	comp=Z,2µmcomp=Z,49nm,1.1s						
TNTI	Ternate	42.20	288	P	P	14 44 15.3	+1.2
SANI	Sanana	42.46	283	P	P	14 44 16.5	+0.2
	comp=Z,3µmcomp=Z,3µmcomp=Z,110nm,1.1s						
SANI	Sanana	42.46	283	P	P	14 44 17.5	+1.2
BATI	Baumata	42.57	271	LR	LR	15 02 17.7	
	comp=Z,2µm,18.2s,baz=90,slow=37						
BATI	Baumata	42.57	271	P	P	14 44 18.4	+1.2
	comp=Z,2µmcomp=Z,114nm,1.1s						
PMOR	Pomariorio Ree	43.47	96	eP	P	14 44 29.2	+4.8
VAH	Vaihoa	43.70	97	eP	P	14 44 34.5	+8.2
MMRI	Maumere	44.26	273	P	P	14 44 29.5	-1.3
MMRI				IAmb	IAmb	14 44 50.4	
	comp=Z,239nm,1.3s						
MMRI	Maumere	44.26	273	P	P	14 44 30.5	-0.3
	comp=Z,2µmcomp=Z,3µmcomp=Z,163nm,1.2s						
MMRI	Maumere	44.26	273	P	P	14 44 31.4	+0.6
BBSI	Bau Bau	44.69	277	P	P	14 44 41.1	+6.9
PSA00	Pilbara Seismi	45.23	254	P	P	14 44 36.8	-1.7
PSA00				IAmb	IAmb	14 44 48.7	
	comp=Z,80nm,1.2s						
PSA00	Pilbara Seismi	45.23	254	P	P	14 44 36.7	-1.7
PSA00				IAmb	IAmb	14 44 48.7	
	comp=Z,85nm,1.4s						
PSA00	Pilbara Seismi	45.23	254	P	P	14 44 38.5	0.0
KMSI	Cibinong	45.26	286	P	P	14 44 47.9	+9.2
MBWA	Marble Bar	45.34	255	P	P	14 44 38.0	-1.3
MBWA				IAmb	IAmb	14 44 49.5	
	comp=Z,185nm,1.5s						
MBWA	Marble Bar	45.34	255	P	P	14 44 39.0	-0.3
	comp=Z,49nm,2.1s						
LUWI	Luwuk	45.83	283	P	P	14 44 42.7	-0.6
LUWI	Luwuk	45.83	283	P	P	14 44 44.9	+1.6
	comp=Z,11µmcomp=Z,149nm,1.3s						
LUWI	Luwuk	45.83	283	P	P	14 44 45.6	+2.3
GTOI	Gorontalo	46.19	286	P	P	14 44 48.2	+2.1
	comp=Z,1µmcomp=Z,692nmcomp=Z,35nm,0.9s						
DAV	Davao City (W)	46.52	295	LR	LR	14 59 46.1	
	comp=Z,838nm,21.6s,baz=117,slow=30						
BSSI	Bau Bau, Buton	46.52	276	P	P	14 44 49.5	+0.8
	comp=Z,1µmcomp=Z,1µmcomp=Z,51nm,1.7s						
MEEK	Meekatharra	46.58	247	P	P	14 44 48.0	-1.1
	baz=46,SNR=40						
MEEK	Meekatharra	46.58	247	P	P	14 44 48.2	-0.9
WBSI	Waikabubak, Su	46.81	271	P	P	14 44 51.2	+0.2
	comp=Z,2µmcomp=Z,167nm,0.9s						
APSI	Ampana	46.93	283	P	P	14 44 53.8	+1.9
	comp=Z,1µmcomp=Z,82nm,1.2s						
BKSI	Bulukumba	47.08	277	P	P	14 44 53.1	0.0
	comp=Z,3µmcomp=Z,1µmcomp=Z,63nm,1.0s						
MRSI	Marisa	47.13	285	P	P	14 45 03.5	+10
BNSI	Bone	47.34	278	P	P	14 44 55.6	+0.5
	comp=Z,4µmcomp=Z,2µmcomp=Z,156nm,1.0s						
KAPI	Kappang	47.52	277	P	P	14 44 56.4	-0.1
	comp=Z,110nm,1.1s,baz=104,slow=4.8,SNR=3.1						
	comp=Z,110nm,1.1s						
KAPI	Kappang	47.52	277	P	P	14 44 56.4	-0.1
KAPI				pmax	pmax		
	comp=Z,154nm,1.1s						
KAPI	Kappang	47.52	277	P	P	14 44 56.4	-0.1
KAPI	Kappang	47.52	277	P	P	14 44 57.6	+1.1
SPSI	Sidrap Palu	47.79	278	P	P	14 44 58.2	-0.4
	comp=Z,1µmcomp=Z,57nm,1.1s						
KLBR	Kellerberrin	47.91	241	P	P	14 44 58.2	-1.2
	baz=48,SNR=4.8						
KLBR	Kellerberrin	47.91	241	P	P	14 44 59.2	-0.1
TTSI	Tana Toraja	48.00	279	P	P	14 45 01.6	+1.3
	comp=Z,2µmcomp=Z,1µmcomp=Z,67nm,1.3s						
JCJ	Chichijima	48.13	330	P	P	14 45 00.9	-0.1
	comp=Z,106nm,0.8s,baz=219,slow=13,SNR=3.4						
JCJ				LR	LR	15 03 44.7	
	comp=Z,2µm,21.9s,baz=122,slow=34						
	comp=Z,106nm,0.8s						
JCJ	Chichijima	48.13	330	P	P	14 45 01.6	+0.6
JCJ	Chichijima	48.13	330	P	P	14 45 03.1	+2.1
TOLI2	Tolitoli	48.44	285	P	P	14 45 02.1	-1.5
TOLI2				IAmb	IAmb	14 45 20.1	
	comp=Z,200nm,1.9s						
TOLI2	Tolitoli	48.44	285	P	P	14 45 04.3	+0.7
PLAI	Plampang	48.53	271	P	P	14 45 04.2	-0.2
	comp=Z,4µmcomp=Z,4µmcomp=Z,178nm,1.8s						
PLAI	Plampang	48.53	271	P	P	14 45 05.2	+0.8
NWAO	Narrogin (SRO)	48.55	239	P	P	14 45 02.8	-1.5
NWAO				pmax	pmax		
	comp=Z,186nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,14µm,18.0s						
NWAO	Narrogin (SRO)	48.55	239	P	P	14 45 02.8	-1.5
NWAO	Narrogin (SRO)	48.55	239	P	P	14 45 04.5	+0.2
BLDU	Ballidu	48.66	242	P	P	14 45 04.2	-0.9
	baz=48,SNR=4.9						
BLDU	Ballidu	48.66	242	P	P	14 45 07.6	+2.4
MPSI	Mapaga	48.99	284	P	P	14 45 07.6	-0.3
	comp=Z,2µmcomp=Z,1µmcomp=Z,93nm,0.9s						
MORW	Morawa	49.07	244	P	P	14 45 07.4	-0.9
	baz=49,SNR=14						
MORW	Morawa	49.07	244	P	P	14 45 07.4	-0.9
MORW				IAmb	IAmb	14 45 18.8	
	comp=Z,112nm,1.0s						
MORW	Morawa	49.07	244	P	P	14 45 07.6	-0.7
	comp=Z,134nm,1.2s						
MUN	Mundaring	49.27	240	P	P	14 45 08.9	-0.9
	baz=49,SNR=7.2						
MUN	Mundaring	49.27	240	P	P	14 45 09.7	-0.1
	comp=Z,168nm,1.4s						
POHA	Pohakuloa	50.32	48	IAMs_20	IAMs_20	15 01 27.2	
	comp=Z,3µm,21.0s						
GIRL	Giralia	50.44	253	P	P	14 45 19.2	+0.4
	baz=50,SNR=9.3						
GIRL	Giralia	50.44	253	P	P	14 45 19.4	+0.6
DNP	Denpasar	51.05	271	P	P	14 45 26.0	+2.5
	comp=Z,43µmcomp=Z,774nm,0.9s						
IGBI	Denpasar	51.08	271	P	P	14 45 24.0	+0.3
	comp=Z,6µmcomp=Z,737nm,0.8s						
SRBI	Singaraja	51.17	271	P	P	14 45 24.0	-0.4
	comp=Z,3µmcomp=Z,150nm,0.8s						
JAGI	Jajag, Banyuwa	52.11	271	P	P	14 45 29.5	-2.0
JAGI				IAmb	IAmb	14 45 48.4	
	comp=Z,141nm,1.0s						
JAGI	Jajag, Banyuwa	52.11	271	P	P	14 45 30.4	-1.1
JAGI	Jajag, Banyuwa	52.11	271	P	P	14 45 32.3	+0.8
ABJI	Asem Bagus	52.18	272	P	P	14 45 32.4	+0.5
	comp=Z,5µmcomp=Z,365nm,1.0s						
KMMI	Kalianget	52.60	272	P	P	14 45 36.2	+1.1
	comp=Z,4µmcomp=Z,125nm,0.9s						
BBKI	Banjar Baru	52.65	277	P	P	14 45 36.7	+1.2
BLJI	Banyuglugur	52.80	271	P	P	14 45 37.8	+1.2
	comp=Z,2µmcomp=Z,101nm,0.9s						
GMJI	Gumukmas	52.84	271	P	P	14 45 37.7	+0.9
	comp=Z,3µmcomp=Z,138nm,1.0s						
MTKI	Muara Teweh, K	53.32	280	P	P	14 45 41.6	+1.2
	comp=Z,1µmcomp=Z,57nm,0.9s						
TGY	Tagaytay City	53.91	300	P	P	14 45 43.2	-1.5
	comp=Z,72nm,0.3s,baz=149,slow=7.6,SNR=3.2						
TGY				LR	LR	15 10 32.7	
	comp=Z,758nm,18.1s,baz=114,slow=38						
	comp=Z,72nm,0.3s						
JHJ	Hachijo jima 2	54.30	332	LR	LR	15 09 44.7	
	comp=Z,523nm,19.2s,baz=112,slow=37						
PWJI	Pagerwojo	54.48	271	P	P	14 45 57.8	+8.9
PCJI	Pacitan	55.05	270	P	P	14 45 53.5	+0.5
	comp=Z,4µmcomp=Z,447nm,1.1s						
UWJI	Ujung Watu	55.66	272	P	P	14 46 12.0	+15
UGM	Wanagama	55.74	270	P	P	14 45 57.5	-0.6
UGM	Wanagama	55.74	270	P	P	14 45 57.2	-0.8
	comp=Z,5µmcomp=Z,362nm,1.1s						
UGM	Wanagama	55.74	270	P	P	14 45 59.5	+1.4
PBKI	Pangkalan Bun	55.90	277	P	P	14 46 10.5	+11
JOW	Kunigami	55.96	317	P	P	14 45 58.1	-1.1
	comp=Z,29nm,0.8s,baz=158,slow=5.3,SNR=9.2						
JOW				LR	LR	15 08 28.5	
	comp=Z,1µm,21.4s,baz=136,slow=34						
	comp=Z,29nm,0.8s						
JOW	Kunigami	55.96	317	P	P	14 46 00.5	+1.2
JOW				IAmb	IAmb	14 46 12.0	
	comp=Z,86nm,0.9s						
JOW	Kunigami	55.96	317	P	P	14 46 01.2	+1.9
YOGI	Yogyakarta	55.98	270	P	P	14 46 10.2	+10
SMRI	Semarang	56.01	271	P	P	14 46 10.2	+10
SMRI	Semarang	56.01	271	P	P	14 46 03.0	+3.0
STKI	Sintang	56.88	280	P	P	14 46 07.6	+1.4
	comp=Z,6µmcomp=Z,51nm,1.1s						
SBUM	Sibu	56.93	283	P	P	14 46 06.6	+0.1
SBUM				IAmb	IAmb	14 46 17.7	
	comp=Z,54nm,1.1s						
KPJI	Karang Pucung	57.41	271	P	P	14 46 10.2	+0.3
	comp=Z,3µmcomp=Z,176nm,0.8s						
INU	Inuyama	57.42	331	P	P	14 46 12.8	+3.3
JGF	Kuroka	57.47	331	P	P	14 46 10.4	+0.5
JGF				IAmb	IAmb	14 46 22.5	
	comp=Z,66nm,1.0s						
CMJI	Cimerak	57.77	270	P	P	14 46 24.3	+12
MJAR	Matsushiro Arr	57.86	333	P	P	14 46 11.7	-1.0
	comp=Z,12nm,0.7s,baz=164,slow=6.4,SNR=13						
MJAR				LR	LR	15 09 47.5	
	comp=Z,410nm,20.9s,baz=138,slow=35						
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	57.86	333	P	P	14 46 12.6	0.0
MJAR				IAmb	IAmb	14 46 24.2	
	comp=Z,62nm,1.0s						
MAJO	Matsushiro	57.87	333	P	P	14 46 12.5	-0.1
MAJO				pmax	pmax		
	comp=Z,132nm,1.1s						
MAJO	Matsushiro	57.87	333	P	P	14 46 12.5	-0.1
MAJO				IAmb	IAmb	14 46 24.0	
	comp=Z,132nm,1.1s						
MAJO	Matsushiro	57.87	333	P	P	14 46 13.8	+1.2
MJB9	Matsu-Tunnel	57.87	333	P	P	14 46 12.2	-0.5
MJB9				IAmb	IAmb	14 46 24.0	
	comp=Z,124nm,1.0s						
JSU	Suzuyama	57.90	323	P	P	14 46 13.2	+0.1
JSU				IAmb	IAmb	14 46 25.4	
	comp=Z,128nm,1.1s						
KSM	Kuching	58.43	281	P	P	14 46 16.9	-0.1
KSM				IAmb	IAmb	14 46 28.1	
	comp=Z,79nm,1.0s						
KSM	Kuching	58.43	281	P	P	14 46 17.8	+0.8
YULB	Yu-li	58.68	310	P	P	14 46 18.7	+0.1
YULB				IAmb	IAmb	14 46 34.2	
	comp=Z,48nm,0.9s						
LEM	Lembang	58.79	271	P	P	14 46 18.7	-1.0
	comp=Z,56nm,0.6s,baz=109,slow=6.6,SNR=16						
LEM				LR	LR	15 12 08.6	
	comp=Z,950nm,19.8s,baz=135,slow=37						
	comp=Z,56nm,0.6s						
JNU	Nakatsue	58.85	325	P	P	14 46 19.5	-0.1
	comp=Z,28nm,0.7s,baz=61,slow=6.2,SNR=14						
JNU				LR	LR	15 08 36.4	
	comp=Z,1µm,21.9s,baz=136,slow=33						
	comp=Z,28nm,0.7s						
JNU	Nakatsue	58.85	325	P	P	14 46 20.1	+0.5
JNU	Nakatsue	58.85	325	P	P	14 46 21.7	+2.1
NACB	Ninganchiao	58.92	311	P	P	14 46 19.7	-0.5
JHS	Saijyo	59.07	328	P	P	14 46 21.0	-0.1
JHS				IAmb	IAmb	14 46 33.3	
	comp=Z,97nm,1.0s						
TPUB	Ta-pu	59.13	309	P	P	14 46 20.9	-0.8
TPUB				IAmb	IAmb	14 46 34.3	
	comp=Z,70nm,0.7s						
TPUB	Ta-pu	59.13	309	P	P	14 46 22.6	+0.9
CNJI	Cibinong	59.15	270	P	P	14 46 22.6	+0.5
	comp=Z,3µmcomp=Z,244nm,1.1s						
SSLB	Suanglung	59.16	310	P	P	14 46 21.5	-0.5
SSLB				IAmb	IAmb	14 46 31.1	
	comp=Z,35nm,0.8s						
SSLB	Suanglung	59.16	310	P	P	14 46 23.9	+1.9
YHNB	Yeheng	59.37	311	P	P	14 46 23.0	-0.5
YHNB	Yeheng	59.37	311	P	P	14 46 25.2	+1.8
TATO	Taipei	59.47	311	IAMs_20	IAMs_20	15 07 46.0	
	comp=Z,3µm,22.0s						
CBJI	Citeko	59.62	271	P	P	14 46 26.7	+1.4
	comp=Z,7µmcomp=Z,218nm,1.9s						
XMI	Christmas Isla	59.90	266	P	P	14 46 28.0	+0.7
XMIS	Christmas Isla	59.93	266	P	P	14 46 27.9	+0.4
JTM	Tenmabayashi	60.32	337	P	P	14 46 30.9	+1.4
ERM	Erimo	60.67	340	IAMs_20	IAMs_20	15 09 05.8	
	comp=Z,3µm,20.0s						
PPBI	Pangkal Pinang	61.37	276	P	P	14 46 37.9	+0.6
	comp=Z,7µmcomp=Z,22nm,0.4s						
BLSI	Bandar Lampung	61.42	272	P	P	14 46 47.4	+10
QZH	Quanzhou	61.59	309	⇑iP	P	14 46 39.0	+0.5
QZH				S	S	14 55 00.8	+1.9
QZH				pmax	pmax		
	comp=Z,39nm,0.8s						
QZH				pmax	pmax		
	comp=Z,670nm,3.4s						
QZH				LR	LR		
	comp=Z,690nm,21.8s						
QZH				LR	LR		
	comp=Z,980nm,19.4s						
QZH				LR	LR		
	comp=Z,1µm,23.2s						
KASI	Kota Agung	62.11	272	P	P	14 46 42.2	0.0
	comp=Z,3µmcomp=Z,211nm,1.1s						
PMBI	Palembang	62.48	274	P	P	14 46 58.0	+13
PMBI	Palembang	62.48	274	P	P	14 46 46.0	+1.2
LWLI	Liwa	62.65	272	P	P	14 46 46.1	+0.1
	comp=Z,92µmcomp=Z,3µmcomp=Z,202nm,1.4s						
MDSI	Maura Dua	62.66	273	P	P	14 46 44.2	-1.8
	comp=Z,972nmcomp=Z,45nm,1.2s						
JKA	Kamikawa-asahi	62.73	340	P	P	14 46 47.0	+1.2
ASAJ	Asahikawa	62.73	340	P	P	14 46 46.6	+0.8
	comp=Z,47nm,0.8s,baz=212,slow=9.6,SNR=23						
ASAJ				LR	LR	15 10 20.1	
	comp=Z,3µm,21.4s,baz=156,slow=32						
	comp=Z,47nm,0.8s						
VNDA	Vanda	62.80	181	P	P	14 46 45.2	-0.6
	comp=Z,8.2nm,0.7s,baz=360,slow=6.5,SNR=27						
VNDA				LR	LR	15 12 09.3	
	comp=Z,672nm,18.4s,baz=24,slow=34						
	comp=Z,8.2nm,0.7s						
VNDA	Vanda	62.80	181	P	P	14 46 46.3	+0.4
VNDA				IAmb	IAmb	14 46 57.7	
	comp=Z,29nm,0.9s						
SBA	Scott Base	63.08	180	P	P	14 46 48.4	+0.7
SBA				pmax	pmax		
	comp=Z,111nm,1.0s						
SBA	Scott Base	63.08	180	P	P	14 46 48.4	+0.7
TJN	Taejon	63.20	325	P	P	14 46 51.5	+2.5
DSRI	Dabo	63.33	277	P	P	14 46 51.5	+1.1
	comp=Z,1µmcomp=Z,1µmcomp=Z,51nm,1.4s						
CASY	Casey	63.40	202	P	P	14 46 49.0	-0.9
CASY				IAmb	IAmb	14 47 01.2	
	comp=Z,100nm,1.4s						
SSE	Sheshan	63.43	316	P	P	14 46 51.4	+0.8
SSE				S	S	14 55 25.7	+3.9
SSE				pmax	pmax		
	comp=Z,20nm,1.2s						
SSE				pmax	pmax		
	comp=Z,230nm,6.9s						
SSE				LR	LR		
	comp=Z,260nm,18.7s						
SSE				LR	LR		
	comp=Z,340nm,18.7s						
HKPS	Hong Kong Po S	63.60	304	IAMs_20	IAMs_20	15 10 10.4	
	comp=Z,2µm,20.0s						
KSRS	Korea Array	63.67	326	P	P	14 46 52.6	+0.5
	comp=Z,8.9nm,0.8s,baz=140,slow=7.6,SNR=17						
KSRS				LR	LR	15 11 18.1	
	comp=Z,713nm,21.9s,baz=135,slow=33						
	comp=Z,8.9nm,0.8s						
TPRI	Tanjung Pinang	63.77	278	P	P	14 47 05.8	+12
DLV	T Lat	63.81	291	P	P	14 46 55.6	+1.9
	comp=Z,62nm,1.8s						
JMBI	JAMBI	63.91	275	P	P	14 46 57.5	+3.3
	comp=Z,3µmcomp=Z,120nm,0.8s						
INCN	Inchon	64.40	325	P	P	14 46 58.8	+1.8
MYKOM	Kota Tinggi	64.67	279	P	P	14 46 57.8	-1.4
MYKOM				IAmb	IAmb	14 47 12.1	
	comp=Z,67nm,1.1s						
YSS	Yuzh-Sakhalins	65.22	342	ceP	P	14 47 03.5	+1.5
YSS				e*PP	sP	14 47 14.6	+0.3
YSS				e		14 49 25.4	
YSS				eS	S	14 55 42.5	-0.8
YSS				ePS	PnS	14 56 00.1	-4.8
YSS				eSS	SS	14 59 52.0	-4.8
YSS				pmax	pmax		
	comp=Z,800nm,5.7s						
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS	Yuzh-Sakhalins	65.22	342	P	P	14 47 03.2	+1.2
YSS				IAMs_20	IAMs_20	15 10 59.5	
	comp=Z,2µm,21.0s						
YSS	Yuzh-Sakhalins	65.22	342	P	P	14 47 04.7	+2.7
NJ2	Nanjing	65.58	316	⇑iP	P	14 47 03.3	-1.4
NJ2				pP	sP	14 47 15.6	-1.4
NJ2				sP	pP	14 47 22.4	+8.8
NJ2				S	S	14 55 45.7	-2.6
NJ2				sS	sS	14 56 05.7	+2.9
NJ2				SS	SS	14 59 57.9	-5.0
NJ2				pmax	pmax		
	comp=Z,31nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,560nm,5.2s						
NJ2				LR	LR		
	comp=Z,630nm,18.0s						
NJ2				LR	LR		
	comp=Z,890nm,19.9s						
NJ2				LR	LR		
	comp=Z,2µm,16.7s						
QIZ	Qiongzhong	65.59	299	P	P	14 47 05.9	+0.8
QIZ				pP	pP	14 47 15.0	+1.0
QIZ				S	S	14 55 53.0	+4.0
QIZ				pmax	pmax		
	comp=Z,23nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,340nm,5.2s						
QIZ				LR	LR		
	comp=Z,650nm,22.3s						
QIZ				LR	LR		
	comp=Z,690nm,23.7s						
QIZ				LR	LR		
	comp=Z,1µm,20.9s						
QIZ	Qiongzhong	65.59	299	P	P	14 47 06.6	+1.5
SKR	Severo-Kuril's	65.89	352	eP	P	14 47 06.9	+0.6
SKR				eS	S	14 55 52.8	+1.5
SKR				pmax	pmax		
	comp=Z,124nm,1.7s						
SKR				pmax	pmax		
	comp=Z,200nm,2.5s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
SKR				MLR	MLR		
	comp=Z,600nm,17.0s						
KRJI	Kerinci	65.89	274	P	P	14 47 19.2	+12
USA0B	Ussuriysk Arra	66.85	333	P	P	14 47 13.9	+1.3
USA0B				pmax	pmax		
	comp=Z,331nm,1.3s						
USA0B	Ussuriysk Arra	66.85	333	P	P	14 47 13.9	+1.3
USRK	Ussuriysk Ar.	66.85	333	P	P	14 47 13.2	+0.7
	comp=Z,29nm,0.9s,baz=134,slow=5.5,SNR=23						
USRK				LR	LR	15 14 35.9	
	comp=Z,683nm,20.4s,baz=141,slow=34						
	comp=Z,29nm,0.9s						
USRK	Ussuriysk Ar.	66.85	333	P	P	14 47 13.8	+1.2
BKNI	Bangkinang	66.95	277	P	P	14 47 12.7	-1.2
BKNI	Bangkinang	66.95	277	P	P	14 47 15.8	+1.9
	comp=Z,4µmcomp=Z,410nm,1.0s						
BKNI	Bangkinang	66.95	277	P	P	14 47 16.0	+2.1
PPSI	Pulau Pagai	67.12	273	P	P	14 47 27.9	+13
UGL	Uglegorsk	67.33	342	eP	P	14 47 18.4	+2.9
UGL				pmax	pmax		
	comp=Z,220nm,1.0s						
SHEM	Shemya Is, Ala	67.51	5	P	P	14 47 16.9	+0.4
	comp=Z,45nm,0.6s,baz=243,slow=4.5,SNR=7.1						
SHEM				LR	LR	15 11 09.7	
	comp=Z,1µm,21.9s,baz=162,slow=31						
	comp=Z,45nm,0.6s						
CNSH	ChangSha	67.60	309	⇑P	P	14 47 18.2	+0.5
CNSH				S	S	14 56 12.6	-0.3
CNSH				pmax	pmax		
	comp=Z,560nm,7.2s						
CNSH				LR	LR		
	comp=Z,620nm,22.5s						
CNSH				LR	LR		
	comp=Z,730nm,20.5s						
CNSH				LR	LR		
	comp=Z,1µm,23.1s						
KIWB	Kanaga Island	67.76	11	P	P	14 47 20.0	+1.8
WHN	Wuhan	67.83	312	⇑P	P	14 47 19.6	+0.5
WHN				pP	sP	14 47 30.3	-1.2
WHN				S	S	14 56 18.1	+2.4
WHN				sS	sS	14 56 34.0	+3.8
WHN				pmax	pmax		
	comp=Z,420nm,1.9s						
WHN				pmax	pmax		
	comp=Z,860nm,5.0s						
WHN				LR	LR		
	comp=Z,4µm,25.0s						
WHN				LR	LR		
	comp=Z,3µm,28.7s						
WHN				LR	LR		
	comp=Z,4µm,23.6s						
ADK	Adak	67.88	11	P	P	14 47 22.4	+3.5
PET	Petropavlovsk	67.92	355	ceP	P	14 47 20.0	+0.9
PET				i S	S	14 56 15.5	-0.3
PET				pmax	pmax		
	comp=Z,600nm,17.0s						
PET				pmax	pmax		
	comp=Z,75nm,0.9s						
PET	Petropavlovsk	67.92	355	P	P	14 47 20.6	+1.5
	comp=Z,218nm,1.1s						
COCO	West Island	68.09	263	IAMs_20	IAMs_20	15 18 47.0	
	comp=Z,3µm,19.0s						
PEA0B	Petropavlovsk-	68.09	354	P	P	14 47 21.2	+0.9
PEA0B				pmax	pmax		
	comp=Z,86nm,1.0s						
PEA0B	Petropavlovsk-	68.09	354	P	P	14 47 21.2	+0.9

PEA0B				IAmb	IAmb	14 47 27.6	
	comp=Z,86nm,0.9s						
PETK	**Petropavlovsk-**	**68.09**	**354**	P	**P**	**14 47 20.9**	**+0.6**
	comp=Z,27nm,0.8s,baz=176,slow=9.4,SNR=17						
PETK				LR	LR	15 11 57.3	
	comp=Z,906nm,21.2s,baz=177,slow=31						
	comp=Z,27nm,0.8s						
PETK	**Petropavlovsk-**	**68.09**	**354**	P	**P**	**14 47 21.1**	**+0.8**
GULI	**GuiLin**	**68.10**	**305**	⇑P	**P**	**14 47 21.9**	**+1.0**
GULI				sP	**sP**	**14 47 33.9**	**+0.6**
GULI				S	**S**	**14 56 22.1**	**+3.0**
GULI				sS	**sS**	**14 56 35.7**	**+2.0**
GULI				pmax	pmax		
	comp=Z,60nm,1.5s						
GULI				LR	LR		
	comp=Z,540nm,19.0s						
GULI				LR	LR		
	comp=Z,550nm,19.5s						
GULI				LR	LR		
	comp=Z,1µm,26.0s						
IPM	**Ipoh**	**68.16**	**281**	P	**P**	**14 47 20.9**	**-0.7**
IPM	**Ipoh**	**68.16**	**281**	P	**P**	**14 47 23.1**	**+1.5**
DL2	**Dalian**	**68.22**	**323**	P	**P**	**14 47 21.9**	**+0.5**
DL2				S	**S**	**14 56 21.7**	**+1.7**
DL2				pmax	pmax		
	comp=Z,48nm,0.8s						
DL2				pmax	pmax		
	comp=Z,360nm,7.5s						
DL2				LR	LR		
	comp=Z,330nm,10.8s						
DL2				LR	LR		
	comp=Z,380nm,14.5s						
DL2				LR	LR		
	comp=Z,820nm,26.9s						
MDJ	**Mudanjiang**	**68.24**	**332**	P	**P**	**14 47 21.8**	**+0.5**
MDJ	**Mudanjiang**	**68.24**	**332**	P	**P**	**14 47 22.4**	**+1.0**
MDJ				pP	sP	14 47 35.7	+2.0
MDJ				sP	pP	14 47 37.4	+7.1
MDJ				PP	**PP**	**14 49 50.8**	**-1.6**
MDJ				S	**S**	**14 56 23.3**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,66nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,520nm,6.9s						
MDJ				LR	LR		
	comp=Z,870nm,21.2s						
MDJ				LR	LR		
	comp=Z,790nm,17.0s						
MDJ				LR	LR		
	comp=Z,1µm,20.9s						
MDJ	**Mudanjiang**	**68.24**	**332**	P	**P**	**14 47 23.7**	**+2.3**
SISI	**Saibi**	**68.38**	**274**	P	P	14 47 35.9	+13
ATKA	**Atka Island**	**68.66**	**12**	P	**P**	**14 47 25.5**	**+1.7**
KULM	**Kulim**	**68.77**	**282**	P	**P**	**14 47 24.4**	**-1.0**
KULM				IAmb	IAmb	14 47 38.3	
	comp=Z,94nm,1.1s						
TYV	**Tymovskoe**	**68.77**	**344**	*e*P	P	14 47 31.9	+7.3
TYV				pmax	pmax		
	comp=Z,500nm,4.7s						
TYV				pmax	pmax		
	comp=Z,59nm,1.4s						
SNY	**Shenyang**	**69.14**	**327**	⇑P	**P**	**14 47 27.2**	**+0.1**
SNY				S	**S**	**14 56 36.8**	**+6.0**
SNY				pmax	pmax		
	comp=Z,21nm,1.7s						
SNY				pmax	pmax		
	comp=Z,560nm,5.2s						
SNY				LR	LR		
	comp=Z,960nm,14.7s						
SNY				LR	LR		
	comp=Z,840nm,19.0s						
SNY				LR	LR		
	comp=Z,1µm,20.6s						
TIA	**Tai'an**	**69.25**	**319**	⇑P	**P**	**14 47 27.8**	**-0.1**
TIA				sP	**sP**	**14 47 39.0**	**-1.2**
TIA				pmax	pmax		
	comp=Z,28nm,1.4s						
TIA				pmax	pmax		
	comp=Z,380nm,3.5s						
TIA				LR	LR		
	comp=Z,670nm,17.2s						
TIA				LR	LR		
	comp=Z,790nm,16.7s						
TIA				LR	LR		
	comp=Z,1µm,17.6s						
CN2	**Changchun**	**69.59**	**329**	*e*P	**P**	**14 47 27.7**	**-2.1**
CN2				PP	**PP**	**14 50 04.4**	**+0.2**
CN2				S	**S**	**14 56 32.3**	**-3.8**
CN2				sS	sS	14 56 54.4	+3.4
CN2				SS	**SS**	**15 01 03.1**	**-1.6**
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				LR	LR		
	comp=Z,780nm,22.0s						
CN2				LR	LR		
	comp=Z,890nm,22.0s						
CN2				LR	LR		
	comp=Z,1µm,24.0s						
PSI	**Prapat**	**69.67**	**279**	P	**P**	**14 47 29.6**	**-1.5**
	comp=Z,13nm,0.8s,baz=147,slow=3.8,SNR=17						
PSI				LR	LR	15 21 43.6	
	comp=Z,956nm,18.3s,baz=97,slow=39						
	comp=Z,13nm,0.8s						
BNX	**BinXian**	**70.09**	**332**	⇓P	**P**	**14 47 33.6**	**+0.8**
BNX				pmax	pmax		
	comp=Z,140nm,0.6s						
BNX				pmax	pmax		
	comp=Z,490nm,4.2s						
TSI	**Tuntungan**	**70.22**	**279**	P	P	14 47 43.0	+8.7
GSI	**Gunungsitoli**	**70.54**	**277**	P	**P**	**14 47 35.4**	**-0.9**
GSI	**Gunungsitoli**	**70.54**	**277**	P	**P**	**14 47 37.3**	**+1.0**
	comp=Z,210nm,0.9s						
GSI	**Gunungsitoli**	**70.54**	**277**	P	**P**	**14 47 38.1**	**+1.8**
GRNR	**Gornyy**	**70.58**	**340**	⇑*i*P	**P**	**14 47 37.5**	**+1.8**
GRNR				pmax	pmax		
	comp=E,7.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
NIKH	**Nikolski High**	**70.60**	**15**	P	**P**	**14 47 36.8**	**+1.0**
NIKH				IAmb	IAmb	14 47 52.7	
	comp=Z,68nm,0.8s						
NIKH	**Nikolski High**	**70.60**	**15**	P	**P**	**14 47 35.6**	**-0.1**
	baz=205						
KCSI	**Kotacane, Aceh**	**70.98**	**279**	P	P	14 47 47.0	+8.0
ENH	**Enshi**	**71.25**	**310**	P	**P**	**14 47 40.1**	**-0.2**
NKL	**Nikolayevsk**	**71.37**	**344**	*e*P	**P**	**14 47 38.4**	**-2.0**
NKL				*e*S	**S**	**14 56 55.6**	**-0.7**
NKL				pmax	pmax		
	comp=N,2.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,120nm,1.1s						
NKL				pmax	pmax		
	comp=E,5.0nm,0.8s						
NKL				smax	smax		
	comp=E,3.0nm,1.7s						
NKL				smax	smax		
	comp=N,60nm,3.6s						
LYN	**LuoYang**	**71.38**	**315**	⇑*i*P	**P**	**14 47 41.4**	**+0.5**
LYN				pP	sP	14 47 51.9	-1.3
LYN				S	**S**	**14 56 51.9**	**-5.4**
LYN				pmax	pmax		
	comp=N,60nm,1.4s						
LYN				pmax	pmax		
	comp=N,530nm,3.1s						
LYN				LR	LR		
	comp=N,1µm,19.6s						
LYN				LR	LR		
	comp=N,780nm,17.0s						
LYN				LR	LR		
	comp=N,2µm,19.1s						
HNS	**HongShan**	**71.51**	**318**	⇑P	**P**	**14 47 42.6**	**+0.9**
HNS				S	**S**	**14 56 56.1**	**-2.6**
HNS				SKS	**SKSac**	**14 57 37.7**	**-5.3**
HNS				pmax	pmax		
	comp=N,57nm,1.5s						
HNS				pmax	pmax		
	comp=N,710nm,6.5s						
HNS				LR	LR		
	comp=N,700nm,18.9s						
HNS				LR	LR		
	comp=N,690nm,19.5s						
HNS				LR	LR		
	comp=N,1µm,18.6s						
GYA	**Guiyang**	**71.58**	**305**	⇓*i*P	**P**	**14 47 43.7**	**+1.2**
GYA				pP	sP	14 47 54.2	-0.7
GYA				PcP	**PcP**	**14 48 02.8**	**+1.1**
GYA				PP	**PP**	**14 50 21.3**	**-0.5**
GYA				S	**S**	**14 57 00.3**	**+0.1**
GYA				SKS	**SKSac**	**14 57 38.4**	**-6.0**
GYA				pmax	pmax		
	comp=N,47nm,1.3s						
GYA				pmax	pmax		
	comp=N,410nm,4.1s						
GYA				LR	LR		
	comp=N,760nm,20.2s						
GYA				LR	LR		
	comp=N,990nm,20.2s						
GYA				LR	LR		
	comp=N,1µm,20.5s						
UNV	**Unalaska Valle**	**72.00**	**16**	P	**P**	**14 47 44.1**	**0.0**
	baz=207						
BJI	**Beijing**	**72.19**	**321**	P	**P**	**14 47 46.4**	**+0.8**
BJI				pP	**pP**	**14 47 54.9**	**+0.3**
BJI				S	**S**	**14 57 07.8**	**+1.5**
BJI				sS	**sS**	**14 57 23.5**	**+2.2**
BJI				pmax	pmax		
	comp=N,41nm,1.4s						
BJI				pmax	pmax		
	comp=N,470nm,3.7s						
BJI				LR	LR		
	comp=N,700nm,18.2s						
BJI				LR	LR		
	comp=N,480nm,21.7s						
BJI				LR	LR		
	comp=N,1µm,23.3s						
TIY	**Taiyuan**	**73.17**	**317**	P	**P**	**14 47 53.7**	**+2.0**
TIY				pP	**sP**	**14 48 02.0**	**-2.0**
TIY				sP	**pP**	**14 48 03.3**	**+2.6**
TIY				S	**S**	**14 57 19.3**	**+1.5**
TIY				sS	**sS**	**14 57 33.7**	**+0.9**
TIY				pmax	pmax		
	comp=N,550nm,5.3s						
TIY				LR	LR		
	comp=N,530nm,15.8s						
TIY				LR	LR		
	comp=N,390nm,17.2s						
TIY				LR	LR		
	comp=N,510nm,17.9s						
XAN	**Xi'an**	**73.58**	**313**	P	**P**	**14 47 54.6**	**+0.4**
XAN				pP	sP	14 48 05.7	-0.8
XAN				S	**S**	**14 57 19.3**	**-3.3**
XAN				pmax	pmax		
	comp=N,41nm,1.8s						
XAN				pmax	pmax		
	comp=N,700nm,6.8s						
XAN				LR	LR		
	comp=N,940nm,19.9s						
XAN				LR	LR		
	comp=N,1µm,21.5s						
XAN				LR	LR		
	comp=N,3µm,23.0s						
FALS	**False Pass**	**73.75**	**17**	P	**P**	**14 47 55.1**	**+0.6**
	baz=210						
SPIA	**Saint Paul Isl**	**74.13**	**13**	P	**P**	**14 47 56.3**	**-0.4**
	baz=203						
KMI	**Kunming**	**74.17**	**302**	⇑P	**P**	**14 47 59.4**	**+1.4**
KMI				pP	sP	14 48 10.8	+0.4
KMI				S	**S**	**14 57 30.0**	**+0.1**
KMI				sS	sS	14 57 47.4	+2.7
KMI				SS	**SS**	**15 02 13.2**	**-2.8**
KMI				pmax	pmax		
	comp=N,76nm,1.5s						
KMI				pmax	pmax		
	comp=N,780nm,11.4s						
KMI				LR	LR		
	comp=N,360nm,22.8s						
KMI				LR	LR		
	comp=N,670nm,23.6s						
KMI				LR	LR		
	comp=N,1µm,27.0s						
XLT	**XiLinHaoTe**	**74.64**	**324**	⇑*i*P	**P**	**14 48 00.9**	**+0.8**
XLT				pP	sP	14 48 11.5	-1.0
XLT				sP	PcP	14 48 15.0	+0.7
XLT				S	**S**	**14 57 40.5**	**+6.3**
XLT				sS	sS	14 57 49.6	+0.4
XLT				SKS	**SKSac**	**14 58 01.9**	**-4.6**
XLT				SS	**SS**	**15 02 22.2**	**0.0**
XLT				pmax	pmax		
	comp=N,45nm,1.4s						
XLT				pmax	pmax		
	comp=N,570nm,3.8s						
XLT				LR	LR		
	comp=N,67nm,20.9s						
XLT				LR	LR		
	comp=N,540nm,22.9s						
XLT				LR	LR		
	comp=N,620nm,20.0s						
CMAR	**Chiang Mai Arr**	**74.79**	**294**	P	**P**	**14 48 01.8**	**+0.3**
	comp=N,11nm,0.8s,baz=120,slow=4.2,SNR=66						
CMAR				PKPPKP	**P'P'df**	**15 15 26.8**	**-2.1**
	comp=N,0.2nm,0.5s,baz=250,slow=2.7,SNR=4.0						
	comp=N,11nm,0.8s						
CHTO	**Chiang Mai**	**74.92**	**294**	P	**P**	**14 48 01.4**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,68nm,1.0s						
CHTO	**Chiang Mai**	**74.92**	**294**	P	**P**	**14 48 01.4**	**-0.8**
CHTO				IAmb	IAmb	14 48 16.6	
	comp=Z,68nm,0.9s						
CHTO	**Chiang Mai**	**74.92**	**294**	P	**P**	**14 48 04.2**	**+2.0**
SDPT	**Sand Point**	**75.05**	**18**	P	**P**	**14 48 01.4**	**-0.7**
	baz=213						
QSPA	**South Pole Qui**	**75.24**	**180**	LR	LR	15 16 33.4	
	comp=Z,961nm,21.3s,baz=32,slow=32						
QSPA	**South Pole Qui**	**75.24**	**180**	P	**P**	**14 48 03.0**	**-0.4**
MA2	**Magadan**	**75.27**	**352**	P	**P**	**14 48 02.8**	**-0.5**
MA2				pmax	pmax		
	comp=Z,37nm,1.0s						
MA2	**Magadan**	**75.27**	**352**	P	**P**	**14 48 02.8**	**-0.5**
MA2				IAmb	IAmb	14 48 16.9	
	comp=Z,37nm,1.0s						
MA2				IAMs_20	IAMs_20	15 15 25.0	
	comp=Z,3µm,22.0s						
PZH	**PanZhiHua**	**75.56**	**303**	⇑P	**P**	**14 48 06.1**	**+0.2**
PZH				pP	**sP**	**14 48 17.5**	**-0.9**
PZH				S	**S**	**14 57 42.7**	**-2.5**
PZH				sS	**sS**	**14 57 59.4**	**-0.6**
PZH				SS	**SS**	**15 02 38.4**	**+1.4**
PZH				pmax	pmax		
	comp=Z,30nm,1.4s						
PZH				pmax	pmax		
	comp=Z,390nm,5.3s						
PZH				LR	LR		
	comp=Z,3µm,22.5s						
PZH				LR	LR		
	comp=Z,3µm,22.3s						
PZH				LR	LR		
	comp=Z,4µm,20.6s						
CD2	**Chengdu**	**75.89**	**308**	P	**P**	**14 48 08.4**	**+0.8**
CD2				pP	pP	14 48 17.2	+0.5
CD2				PP	**PP**	**14 51 04.4**	**+6.1**
CD2				S	**S**	**14 57 49.7**	**+1.2**
CD2				sS	sS	14 58 05.9	+2.6
CD2				SS	**SS**	**15 02 45.7**	**+4.1**
CD2				pmax	pmax		
	comp=Z,50nm,1.6s						
CD2				pmax	pmax		
	comp=Z,750nm,8.6s						
CD2				LR	LR		
	comp=Z,1µm,23.0s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
HIA	**Hailar**	**76.24**	**330**	P	**P**	**14 48 09.6**	**+0.5**
HIA				pmax	pmax		
	comp=Z,124nm,1.2s						
HIA	**Hailar**	**76.24**	**330**	P	**P**	**14 48 09.6**	**+0.5**
HIA				IAmb	IAmb	14 48 21.3	
	comp=Z,124nm,1.2s						
ZEA	**Zeya**	**76.27**	**337**	*e*P	**P**	**14 48 10.1**	**+1.0**
ZEA				*e*S	**S**	**14 57 53.5**	**+1.9**
ZEA				pmax	pmax		
	comp=E,100nm,8.2s						
ZEA				pmax	pmax		
	comp=N,200nm,5.3s						
ZEA				pmax	pmax		
	comp=Z,300nm,10.9s						
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=N,40nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.1s						
ZEA				smax	smax		
	comp=N,200nm,16.3s						
ZEA				smax	smax		
	comp=E,200nm,16.0s						
CHIR	**Chirikof Islan**	**77.01**	**21**	P	**P**	**14 48 13.4**	**+0.2**
	baz=217						
RPN	**Rapa Nui**	**77.81**	**115**	LR	LR	15 14 35.1	
	comp=E,543nm,21.6s,baz=301,slow=30						
SII	**Sitkinak Islan**	**78.08**	**21**	P	**P**	**14 48 19.5**	**+0.2**
	baz=218						
LZH	**Lanzhou**	**78.21**	**312**	⇑P	**P**	**14 48 22.7**	**+2.0**
LZH				pP	sP	14 48 31.9	-1.2
LZH				sP	PcP	14 48 36.1	+6.0
LZH				S	**S**	**14 58 13.2**	**-0.7**
LZH				sS	sS	14 58 30.1	+1.2
LZH				pmax	pmax		
	comp=E,64nm,1.5s						
LZH				pmax	pmax		
	comp=E,660nm,5.4s						
LZH				LR	LR		
	comp=E,820nm,19.0s						
LZH				LR	LR		
	comp=E,1µm,19.0s						
LZH				LR	LR		
	comp=E,2µm,17.9s						
DGPR	**DIGLIPUR**	**78.46**	**287**	*i* x	**P**	**14 48 20.6**	**-1.6**
OHAK	**Old Harbor**	**78.91**	**21**	P	**P**	**14 48 23.8**	**0.0**
	baz=219						
KDAK	**Kodiak Island**	**79.58**	**21**	P	**P**	**14 48 27.5**	**0.0**
	comp=E,13nm,0.8s,baz=252,slow=5.3,SNR=7.3						
KDAK				LR	LR	15 18 16.7	
	comp=E,3µm,20.2s,baz=238,slow=32						
	comp=E,13nm,0.8s						
KDAK	**Kodiak Island**	**79.58**	**21**	P	**P**	**14 48 27.1**	**-0.4**
	baz=220						
P18K	**Big Mountain,**	**80.00**	**19**	P	**P**	**14 48 30.0**	**+0.3**
P18K				IAmb	IAmb	14 48 50.1	
	comp=Z,33nm,0.8s						
P18K				IAMs_20	IAMs_20	15 17 51.9	
	comp=Z,2µm,21.0s						
P18K	**Big Mountain,**	**80.00**	**19**	P	**P**	**14 48 29.1**	**-0.7**
	baz=217						
GAMB	**Gambell**	**80.01**	**9**	P	**P**	**14 48 29.8**	**+0.2**
	baz=201,SNR=12						
Q19K	**Cape Douglas,**	**80.13**	**19**	P	**P**	**14 48 30.2**	**-0.2**
	baz=218						
O18K	**Koktuh Hills**	**80.37**	**18**	IAMs_20	IAMs_20	15 16 59.9	
	comp=Z,2µm,22.0s						
O18K	**Koktuh Hills**	**80.37**	**18**	P	**P**	**14 48 31.7**	**-0.1**
	baz=217						
P19K	**Oil Pt**	**80.83**	**19**	P	**P**	**14 48 33.5**	**-0.7**
	baz=219						
N18K	**Kilae Creek**	**80.84**	**17**	P	**P**	**14 48 34.1**	**-0.1**
	baz=216						
O19K	**Port Alsworth**	**80.92**	**18**	IAMs_20	IAMs_20	15 17 49.2	
	comp=Z,2µm,21.0s						
O19K	**Port Alsworth**	**80.92**	**18**	P	**P**	**14 48 34.3**	**-0.3**
	baz=218						
CIT	**Chita**	**81.02**	**330**	*e*P	**P**	**14 48 36.8**	**+1.3**
CIT				*e*		14 48 51.4	
CIT				pmax	pmax		
	comp=Z,301nm,1.5s						
SVW2	**Sparrevohn**	**81.26**	**17**	P	**P**	**14 48 37.6**	**+1.2**
HOM	**Homer**	**81.34**	**20**	P	**P**	**14 48 36.2**	**-0.7**
	baz=220						
O20K	**Slope Mountain**	**81.35**	**19**	P	**P**	**14 48 36.0**	**-1.0**
	baz=219						
N19K	**Bonanza Creek**	**81.36**	**18**	P	**P**	**14 48 36.4**	**-0.7**
	baz=218						
CNPM	**China Poot**	**81.38**	**20**	IAMs_20	IAMs_20	15 19 20.5	
	comp=Z,2µm,20.0s						
BRLK	**Bradley Lake**	**81.67**	**20**	P	**P**	**14 48 40.0**	**+1.3**
BRLK				IAmb	IAmb	14 48 52.2	
	comp=Z,45nm,0.8s						
BRLK				IAMs_20	IAMs_20	15 19 19.0	
	comp=Z,2µm,21.0s						
BRSE	**Bradley Lake S**	**81.70**	**20**	P	**P**	**14 48 38.9**	**+0.1**
	baz=221						
MAW	**Mawson**	**81.76**	**202**	P	**P**	**14 48 37.7**	**-1.4**
	comp=Z,14nm,0.9s,baz=96,slow=7.4,SNR=14						
MAW				LR	LR	15 19 32.7	
	comp=Z,3µm,21.6s,baz=100,slow=32						
	comp=Z,14nm,0.9s						
MAW	**Mawson**	**81.76**	**202**	P	**P**	**14 48 39.5**	**+0.4**
	baz=82,SNR=10						
MAW	**Mawson**	**81.76**	**202**	P	**P**	**14 48 38.9**	**-0.3**
ANM	**Nome**	**81.86**	**12**	P	**P**	**14 48 40.1**	**+0.6**
	baz=207,SNR=14						
YAK	**Yakutsk**	**82.03**	**343**	*c* *i*P	**P**	**14 48 40.3**	**-0.1**
YAK				*e**PP	**sP**	**14 48 51.1**	**-1.8**
YAK				*e*		14 51 57.8	
YAK				*e*S	**S**	**14 58 52.0**	**-0.5**
YAK				*e*SS	**SS**	**15 04 09.8**	**-2.6**
YAK				*e*SSS	SSS	15 07 37.2	
YAK				pmax	pmax		
	comp=Z,79nm,1.5s						
YAK				pmax	pmax		
	comp=N,16nm,1.3s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,53nm,1.6s						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				smax	smax		
	comp=E,6.0nm,1.4s						
YAK				smax	smax		
	comp=N,12nm,1.5s						
YAK	**Yakutsk**	**82.03**	**343**	P	**P**	**14 48 40.2**	**-0.3**
YAK				IAMs_20	IAMs_20	15 20 04.0	
	comp=Z,2µm,22.0s						
ULN	**Ulaanbaatar**	**82.06**	**324**	P	**P**	**14 48 40.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,73nm,1.2s						
ULN	**Ulaanbaatar**	**82.06**	**324**	P	**P**	**14 48 40.9**	**-0.3**
ULN				IAmb	IAmb	14 48 53.9	
	comp=Z,73nm,1.1s						
M19K	**Big River Lodg**	**82.25**	**17**	P	**P**	**14 48 42.3**	**+0.6**
	baz=218						
TNA	**Tin City**	**82.29**	**10**	P	**P**	**14 48 42.6**	**+0.9**
	baz=204						
L19K	**White Mountain**	**82.34**	**17**	IAMs_20	IAMs_20	15 18 58.8	
	comp=Z,2µm,21.0s						
L19K	**White Mountain**	**82.34**	**17**	P	**P**	**14 48 42.8**	**+0.6**
	baz=217,SNR=17						
CAPN	**Captain Cook N**	**82.35**	**19**	P	**P**	**14 48 42.7**	**+0.6**
	baz=221						
SPCR	**Spurr Chakacha**	**82.35**	**19**	P	**P**	**14 48 41.1**	**-1.2**
	baz=220						
SEW	**Seward**	**82.41**	**20**	P	**P**	**14 48 42.9**	**+0.4**
	baz=222,SNR=5.4						
SONM	**Songino Array**	**82.42**	**324**	P	**P**	**14 48 42.4**	**-0.7**
	comp=Z,4.2nm,0.5s,baz=142,slow=7.5,SNR=6.0						
SONM				LR	LR	15 25 36.3	
	comp=Z,342nm,19.3s,baz=122,slow=36						
	comp=Z,4.2nm,0.5s						
SONM	**Songino Array**	**82.42**	**324**	P	**P**	**14 48 43.4**	**+0.3**
SONM				IAmb	IAmb	14 48 55.6	
	comp=Z,117nm,1.4s						
GTA	**Gaotai**	**82.56**	**314**	⇑P	**P**	**14 48 45.0**	**+1.0**
GTA				pP	sP	14 48 54.4	-2.0
GTA				sP	pP	14 48 59.8	+6.7
GTA				S	**S**	**14 58 59.7**	**+0.4**
GTA				sS	ScS	14 59 17.6	+3.2
GTA				pmax	pmax		
	comp=Z,45nm,1.6s						
GTA				pmax	pmax		
	comp=Z,470nm,7.2s						
GTA				LR	LR		
	comp=Z,370nm,18.3s						
GTA				LR	LR		
	comp=Z,960nm,20.7s						
GTA				LR	LR		
	comp=Z,1µm,20.3s						
BILL	**Bilibino**	**82.60**	**360**	*d* *i*P	**P**	**14 48 43.8**	**+0.5**
BILL				*e**PP	**pP**	**14 48 52.8**	**+0.3**
BILL				*e*		14 51 54.5	
BILL				*e*PPP	PPP	14 53 43.5	
BILL				*e*S	**S**	**14 58 57.7**	**-0.5**
BILL				pmax	pmax		
	comp=Z,150nm,1.3s						
BILL				MLR	MLR		
	comp=Z,335nm,22.0s						
BILL	**Bilibino**	**82.60**	**360**	P	**P**	**14 48 43.3**	**0.0**
O22K	**Cooper Landing**	**82.60**	**20**	P	**P**	**14 48 43.6**	**+0.2**
	baz=222						

TTA	Tatalina	82.63	16	P	P	14 48 44.0	+0.3
	baz=216,SNR=11						
L20K	Farewell, AK	82.86	17	P	P	14 48 45.1	+0.2
	baz=218,SNR=9.5						
Q23K	Middleton Isla	83.00	22	P	P	14 48 44.6	-1.0
	baz=225						
RC01	Rabbit Creek A	83.05	20	IAMs_20	IAMs_20	15 20 35.7	
	comp=Z,2µm,20.0s						
RC01	Rabbit Creek A	83.05	20	P	P	14 48 45.8	0.0
	baz=222						
SHL	Shillong	83.42	298	P	P	14 48 48.6	-0.2
SHL				pmax	pmax		
	comp=Z,82nm,0.8s						
SHL	Shillong	83.42	298	P	P	14 48 48.6	-0.2
SHL	Shillong	83.42	298	*i* x	P	14 48 48.7	-0.1
M22K	Willow	83.42	19	P	P	14 48 49.2	+1.5
M22K	Willow	83.42	19	P	P	14 48 47.3	-0.4
	baz=222,SNR=14						
K20K	Telida	83.50	17	IAMs_20	IAMs_20	15 19 46.4	
	comp=Z,2µm,21.0s						
K20K	Telida	83.50	17	P	P	14 48 48.2	+0.1
	baz=218,SNR=12						
PMR	Palmer	83.62	19	P	P	14 48 50.1	+1.4
PMR				pmax	pmax		
	comp=Z,85nm,1.1s						
PMR	Palmer	83.62	19	P	P	14 48 50.1	+1.4
PMR				IAmb	IAmb	14 49 01.8	
	comp=Z,85nm,1.1s						
PMR	Palmer	83.62	19	P	P	14 48 47.6	-1.1
	baz=222,SNR=7.5						
PPLA	Purkeypile	83.67	18	P	P	14 48 47.9	-1.3
	baz=220						
KNK	Knik Glacier	83.70	20	P	P	14 48 49.0	-0.3
	baz=223						
GLI	Glacier Island	83.77	21	IAMs_20	IAMs_20	15 19 31.0	
	comp=Z,1µm,21.0s						
GLI	Glacier Island	83.77	21	P	P	14 48 49.2	-0.4
	baz=224						
CUT	Chulitna	83.87	19	P	P	14 48 51.1	+1.1
CUT				IAMs_20	IAMs_20	15 20 17.4	
	comp=Z,2µm,21.0s						
CUT	Chulitna	83.87	19	P	P	14 48 48.8	-1.2
	baz=221,SNR=10						
GCSA	Galena City Sc	83.89	15	P	P	14 48 50.3	+0.3
	baz=215						
FID	Port Fidalgo	83.89	21	IAMs_20	IAMs_20	15 19 21.7	
	comp=Z,2µm,22.0s						
EYAK	Cordova Ski Ar	84.00	21	P	P	14 48 50.7	0.0
	baz=226						
SML	Sawmill	84.03	20	P	P	14 48 52.2	+1.3
SML				IAmb	IAmb	14 49 24.2	
	comp=Z,67nm,0.9s						
SML				IAMs_20	IAMs_20	15 21 16.8	
	comp=Z,1µm,20.0s						
SML	Sawmill	84.03	20	P	P	14 48 50.8	-0.1
	baz=223						
CAST	Castle Rocks	84.11	17	P	P	14 48 51.6	+0.3
CAST				IAMs_20	IAMs_20	15 19 42.5	
	comp=Z,2µm,21.0s						
CAST	Castle Rocks	84.11	17	P	P	14 48 50.5	-0.7
	baz=220,SNR=51						
J20K	Nowinta River	84.13	16	IAMs_20	IAMs_20	15 20 39.0	
	comp=Z,2µm,21.0s						
J20K	Nowinta River	84.13	16	P	P	14 48 52.1	+0.8
	baz=218,SNR=18						
M23K	Glacier View	84.22	20	P	P	14 48 51.4	-0.4
	baz=224						
RAGM	Ragged Mountai	84.28	22	IAMs_20	IAMs_20	15 24 29.3	
	comp=Z,1µm,19.0s						
JCC	Jacoby Creek,	84.31	45	IAMs_20	IAMs_20	15 18 06.3	
	comp=Z,2µm,21.0s						
SCM	Sheep Creek Mo	84.38	20	P	P	14 48 52.6	-0.2
	baz=224						
SUCK	Suckling Hills	84.39	22	IAMs_20	IAMs_20	15 22 26.4	
	comp=Z,2µm,19.0s						
HMT	Hamilton	84.39	22	IAMs_20	IAMs_20	15 25 20.4	
	comp=Z,1µm,18.0s						
CHUM	Lake Minchumin	84.40	17	P	P	14 48 52.2	-0.4
	baz=219,SNR=17						
BOD	Bodaibo	84.44	335	*e*P	P	14 48 52.3	-0.7
BOD				pmax	pmax		
	comp=Z,92nm,1.4s						
SAO	San Andreas Ge	84.52	50	IAMs_20	IAMs_20	15 17 54.1	
	comp=Z,2µm,20.0s						
BGLC	Bering Glacier	84.60	23	P	P	14 48 54.1	+0.4
	baz=228						
KLU	Klutina	84.61	21	IAMs_20	IAMs_20	15 20 09.1	
	comp=Z,1µm,21.0s						
KLU	Klutina	84.61	21	P	P	14 48 53.7	-0.2
	baz=225						
BERG	Berg Lake	84.63	22	P	P	14 48 55.0	+1.1
BMRM	Bremner River	84.70	21	P	P	14 48 54.5	+0.2
	baz=227						
WAT1	Susitna Watana	84.72	19	P	P	14 48 54.0	-0.3
	baz=223						
WAT6	Susitna Watana	84.79	19	P	P	14 48 54.7	-0.2
	baz=224						
SNH	Sunshine Point	84.81	23	IAMs_20	IAMs_20	15 22 41.5	
	comp=Z,1µm,20.0s						
BPAW	Bear Paw Mtn.	84.94	17	P	P	14 48 55.5	0.0
BPAW				IAmb	IAmb	14 49 07.5	
	comp=Z,39nm,1.0s						
BPAW				IAMs_20	IAMs_20	15 20 06.6	
	comp=Z,2µm,22.0s						
BPAW	Bear Paw Mtn.	84.94	17	P	P	14 48 54.3	-1.1
	baz=220,SNR=11						
SBC	Santa Barbara	84.95	53	P	P	14 48 54.3	-1.9
	baz=248						
M24K	Tolsona, Glenn	84.96	20	P	P	14 48 55.5	-0.2
	baz=225,SNR=5.1						
WAX	Waxell Ridge	84.98	22	IAMs_20	IAMs_20	15 22 54.1	
	comp=Z,2µm,20.0s						
PKM	Mcpherson Peak	85.04	52	P	P	14 48 56.7	-0.1
	baz=248						
N25K	Chitina, Valde	85.14	21	P	P	14 48 57.1	+0.5
N25K				IAmb	IAmb	14 49 13.7	
	comp=Z,31nm,0.9s						
N25K				IAMs_20	IAMs_20	15 19 29.3	
	comp=Z,2µm,22.0s						
N25K	Chitina, Valde	85.14	21	P	P	14 48 56.7	+0.1
	baz=226,SNR=11						
DHY	Denali Highway	85.27	19	P	P	14 48 56.2	-1.1
	baz=224						
ISLE	Juniper Island	85.28	22	P	P	14 48 58.1	+0.7
ISLE				IAmb	IAmb	14 49 01.2	
	comp=Z,32nm,0.8s						
K02D	Willamette Mer	85.35	44	P	P	14 48 58.7	+0.7
	baz=245						
BCW	Bitter Crk WRg	85.36	52	P	P	14 48 59.3	+0.9
J01E	Myrtle Point	85.37	43	IAMs_20	IAMs_20	15 21 53.1	
	comp=Z,2µm,20.0s						
J01E	Myrtle Point	85.37	43	P	P	14 48 59.9	+1.9
	baz=245						
RDOG	Red Dog Mine	85.42	11	P	P	14 48 57.7	-0.1
RDOG	Red Dog Mine	85.42	11	P	P	14 48 57.6	-0.1
	baz=209						
LSA	Lhasa	85.42	302	P	P	14 49 00.0	+0.8
LSA				S	S	14 59 29.6	+0.5
LSA				pmax	pmax		
	comp=Z,32nm,1.4s						
LSA				LR	LR		
	comp=Z,430nm,25.6s						
LSA				LR	LR		
	comp=Z,500nm,24.9s						
LSA				LR	LR		
	comp=Z,660nm,22.8s						
BWN	Browne	85.44	18	P	P	14 48 58.5	+0.6
BWN				IAMs_20	IAMs_20	15 20 46.0	
	comp=Z,2µm,21.0s						
ZAK	Zakamensk	85.48	325	*e*P	P	14 48 58.3	-0.3
ZAK				pmax	pmax		
	comp=Z,61nm,1.5s						
I21K	Tanana	85.50	16	P	P	14 48 58.8	+0.7
I21K				IAMs_20	IAMs_20	15 20 47.2	
	comp=Z,2µm,21.0s						
I21K	Tanana	85.50	16	P	P	14 48 58.7	+0.5
	baz=220,SNR=14						
HARP	HAARP	85.50	20	P	P	14 48 58.5	+0.2
	baz=226,SNR=5.6						
ORV	Oroville	85.57	47	IAMs_20	IAMs_20	15 18 47.7	
	comp=Z,2µm,21.0s						
YBH	Yreka Blue Hor	85.59	45	LR	LR	15 19 21.7	
	comp=Z,1µm,21.3s,baz=232,slow=30						
YBH	Yreka Blue Hor	85.59	45	IAMs_20	IAMs_20	15 18 28.2	
	comp=Z,1µm,21.0s						
TABL	Table Mountain	85.62	23	P	P	14 49 00.5	+1.3
TABL				IAmb	IAmb	14 49 02.7	
	comp=Z,33nm,0.7s						
TABL				IAMs_20	IAMs_20	15 23 17.9	
	comp=Z,1µm,19.0s						
H21K	Melozitna Rive	85.65	16	P	P	14 48 59.7	+0.7
	baz=219,SNR=31						
IMAR	Indian Mountai	85.67	15	P	P	14 49 00.4	+1.4
PINM	Pinnacle	85.73	24	P	P	14 48 59.2	-0.4
	baz=230,SNR=6.3						
OSI	Osito Audit: C	85.77	53	P	P	14 49 00.0	-0.3
	baz=249						
HUMO	Hull Mountain	85.79	44	P	P	14 49 01.2	+1.1
HUMO				IAMs_20	IAMs_20	15 18 21.2	
	comp=Z,1µm,21.0s						
PNL	Peninsula	85.80	24	P	P	14 48 59.2	-0.6
	baz=231						
PAX	Paxson	85.80	20	P	P	14 48 59.4	-0.5
	baz=226						
I02E	Swisshome, OR	85.82	42	IAMs_20	IAMs_20	15 21 08.1	
	comp=Z,2µm,19.0s						
NEA2	Nenana	85.87	17	P	P	14 49 00.2	+0.2
NEA2				IAmb	IAmb	14 49 12.4	
	comp=Z,79nm,1.4s						
NEA2				IAMs_20	IAMs_20	15 20 35.0	
	comp=Z,2µm,21.0s						
NEA2	Nenana	85.87	17	P	P	14 48 59.0	-1.0
	baz=222,SNR=11						
IRK	Irkutsk	85.88	327	*e*P	P	14 48 59.4	-0.9
IRK				pmax	pmax		
	comp=Z,102nm,2.4s						
BCPM	Bancas Point	85.88	24	IAMs_20	IAMs_20	15 18 51.7	
	comp=Z,1µm,21.0s						
SIT	Sitka	85.94	28	P	P	14 48 59.2	-1.3
	baz=235						
I03D	Drain, OR	85.98	43	P	P	14 48 59.5	-1.6
	baz=245						
L04D	Klamath Falls	86.07	45	IAMs_20	IAMs_20	15 19 56.7	
	comp=Z,1µm,20.0s						
L04D	Klamath Falls	86.07	45	P	P	14 48 59.9	-1.8
	baz=246						
CRAG	Craig	86.07	30	P	P	14 48 59.7	-1.5
	baz=237						
I23K	Minto, Yukon-K	86.20	17	IAMs_20	IAMs_20	15 20 33.7	
	comp=Z,2µm,22.0s						
I23K	Minto, Yukon-K	86.20	17	P	P	14 49 00.8	-0.7
	baz=222,SNR=8.7						
M26K	Nabesna, AK	86.24	21	IAMs_20	IAMs_20	15 19 53.3	
	comp=Z,1µm,22.0s						
M26K	Nabesna, AK	86.24	21	P	P	14 49 01.1	-0.9
	baz=228,SNR=11						
K24K	Donnelly Dome	86.29	19	P	P	14 49 02.0	-0.2
	baz=225,SNR=8.9						
ISA	Isabella, Lake	86.34	52	P	P	14 49 01.5	-1.7
	baz=249						
COR	Corvallis	86.38	42	IAMs_20	IAMs_20	15 18 53.7	
	comp=Z,1µm,21.0s						
MDM	Murphy Dome	86.38	17	IAMs_20	IAMs_20	15 20 50.6	
	comp=Z,2µm,22.0s						
TCOL	CIGO, UAF Yank	86.42	18	IAMs_20	IAMs_20	15 20 29.8	
	comp=Z,2µm,22.0s						
TCOL	CIGO, UAF Yank	86.42	18	P	P	14 49 01.8	-0.9
	baz=223						
COLA	College	86.43	18	P	P	14 49 02.8	+0.1
COLA				pmax	pmax		
	comp=Z,60nm,0.9s						
COLA	College	86.43	18	P	P	14 49 02.8	+0.1
COLA				IAmb	IAmb	14 49 19.1	
	comp=Z,60nm,0.9s						
COLA	College	86.43	18	IAMs_20	IAMs_20	15 20 29.8	
	comp=Z,2µm,22.0s						
COLA	College	86.43	18	P	P	14 49 01.7	-1.0
	baz=223						
EDW2	Edwards Air Fo	86.43	53	P	P	14 49 03.5	-0.1
	baz=249,SNR=7.3						
109C	Camp Elliot, M	86.43	55	P	P	14 49 01.8	-1.8
	baz=250						
BFSC	Mount Baldy Ra	86.46	53	P	P	14 49 03.6	-0.2
	baz=250						
BEKR	Beckworth	86.50	47	P	P	14 49 03.4	-0.5
MPK	Martis Peak	86.52	48	P	P	14 49 04.2	+0.1
RIDG	Independent Ri	86.54	19	IAMs_20	IAMs_20	15 22 58.1	
	comp=Z,1µm,21.0s						
RIDG	Independent Ri	86.54	19	P	P	14 49 02.9	-0.6
	baz=226,SNR=12						
L26K	Log Cabin Wild	86.54	20	P	P	14 49 04.5	+1.0
L26K				IAMs_20	IAMs_20	15 21 10.2	
	comp=Z,1µm,21.0s						
L26K	Log Cabin Wild	86.54	20	P	P	14 49 03.3	-0.1
	baz=228						
M27K	Edge Creek, AK	86.60	21	P	P	14 49 03.9	0.0
	baz=229						
J04D	Umpqua Nationa	86.61	44	IAMs_20	IAMs_20	15 21 10.1	
	comp=Z,1µm,20.0s						
J04D	Umpqua Nationa	86.61	44	P	P	14 49 04.3	-0.2
	baz=246						
I04A	Tendick Farm,	86.64	43	P	P	14 49 03.9	-0.4
	baz=246						
IL31		86.64	18	P	P	14 49 03.4	-0.4
IL31				IAmb	IAmb	14 49 21.4	
	comp=Z,35nm,0.8s						
ILAR	Eielson Array	86.64	18	P	P	14 49 02.7	-1.1
	comp=Z,18nm,0.7s,baz=235,slow=5.3,SNR=82						
ILAR				PKKPbc	PKKPbc	15 06 59.8	-2.6
	comp=Z,0.8nm,0.9s,baz=304,slow=2.7,SNR=6.3						
ILAR				LR	LR	15 22 46.8	
	comp=Z,3µm,20.4s,baz=179,slow=32						
	comp=Z,18nm,0.7s						
H23K	Yukon River	86.65	16	IAMs_20	IAMs_20	15 21 43.7	
	comp=Z,2µm,22.0s						
H23K	Yukon River	86.65	16	P	P	14 49 03.7	-0.2
	baz=222,SNR=20						
G03D	McMinnville, O	86.66	42	IAMs_20	IAMs_20	15 23 22.3	
	comp=Z,1µm,19.0s						
H04D	Lebanon	86.72	42	IAMs_20	IAMs_20	15 26 33.8	
	comp=Z,1µm,19.0s						
H04D	Lebanon	86.72	42	P	P	14 49 02.6	-2.0
	baz=246						
POKR	Poker Plat Res	86.73	18	IAMs_20	IAMs_20	15 21 23.8	
	comp=Z,2µm,21.0s						
POKR	Poker Plat Res	86.73	18	P	P	14 49 03.2	-1.1
	baz=224						
YUK3	Moose Creek	86.73	22	P	P	14 49 04.8	+0.2
	baz=230,SNR=6.2						
MLAC	Mammoth, Mammo	86.78	50	P	P	14 49 04.2	-1.3
	baz=249						
LRMC	Laurel Mtn Rad	86.88	52	P	P	14 49 05.7	-0.1
	baz=250						
CWC	Cottonwood Cre	86.91	51	P	P	14 49 05.2	-0.9
	baz=249						
BBB	Bella Bella	86.93	34	LR	LR	15 19 58.7	
	comp=Z,2µm,21.2s,baz=250,slow=30						
WRAK	Wrangell Islan	86.95	29	IAMs_20	IAMs_20	15 20 08.8	
	comp=Z,1µm,20.0s						
WRAK	Wrangell Islan	86.95	29	P	P	14 49 05.3	-0.2
	baz=238						
MONP2	Monument Peak	86.97	55	P	P	14 49 05.8	-0.7
	baz=250						
SCRK	Sand Creek	86.98	19	P	P	14 49 05.2	-0.5
	baz=227,SNR=17						
J25K	Salcha River,	86.99	19	P	P	14 49 04.8	-0.8
	baz=226,SNR=45						
YUK6	Outpost Mounta	87.00	23	P	P	14 49 06.2	+0.3
	baz=232						
BVCY	Beaver Creek	87.00	22	P	P	14 49 06.2	+0.5
	baz=230						
TIN	Tinemaha, Big	87.02	51	P	P	14 49 06.4	0.0
	baz=249						
BBRC	Big Bear Solar	87.05	54	P	P	14 49 06.6	-0.3
	baz=250						
JIS	Juneau Island	87.06	27	IAMs_20	IAMs_20	15 21 12.3	
	comp=Z,1µm,20.0s						
L27K	Beaver Creek,	87.08	21	IAMs_20	IAMs_20	15 21 25.5	
	comp=Z,1µm,22.0s						
L27K	Beaver Creek,	87.08	21	P	P	14 49 07.0	+0.9
	baz=229						
BCAR	Beaver Creek A	87.10	21	P	P	14 49 07.9	+1.7
H24K	Noodor Dome	87.12	17	IAMs_20	IAMs_20	15 21 36.3	
	comp=Z,2µm,22.0s						
H24K	Noodor Dome	87.12	17	P	P	14 49 06.9	+0.7
	baz=223						
YUK4	Talbot Arm	87.14	23	P	P	14 49 06.6	+0.1
	baz=232,SNR=8.3						
IKP	In-Ko-Pah, Jac	87.14	55	P	P	14 49 07.3	+0.2
	baz=250						
PFO	Pinyon Flats O	87.19	54	LR	LR	15 23 03.2	
	comp=Z,3µm,18.5s,baz=274,slow=32						
PFO	Pinyon Flats O	87.19	54	P	P	14 49 06.4	-1.0
	baz=250						
TPFO	Pinon Flats	87.19	54	P	P	14 49 07.0	-0.4
	baz=250						
NLWA	Neilton Lookou	87.20	39	IAMs_20	IAMs_20	15 19 22.4	
	comp=Z,1µm,21.0s						
J05D	Fort Rock, OR	87.22	44	P	P	14 49 07.5	+0.2
	baz=247						
MPMC	Manual Prospec	87.23	52	P	P	14 49 07.6	-0.1
	baz=250,SNR=9.8						
HYT	Haines Junctio	87.26	24	P	P	14 49 08.5	+1.5
HYT	Haines Junctio	87.26	24	P	P	14 49 08.2	+1.2
	baz=233,SNR=7.6						
MOD	Modoc Plateau	87.31	46	IAMs_20	IAMs_20	15 19 10.8	
	comp=Z,2µm,22.0s						
MOY	Mondy	87.37	325	*e*P	P	14 49 04.7	-3.1
MOY				pmax	pmax		
	comp=Z,61nm,2.4s						
NVAR	Mina Array Bea	87.45	49	P	P	14 49 08.3	-0.4
	comp=Z,3.2nm,0.8s,baz=234,slow=7.5,SNR=20						
NVAR				PKPPKP	P'P'df	15 15 04.8	+0.2
	comp=Z,0.7nm,0.9s,baz=80,slow=5.1,SNR=5.7						
NVAR				LR	LR	15 20 45.7	
	comp=Z,2µm,20.5s,baz=271,slow=30						
	comp=Z,3.2nm,0.8s						
J26L	Joseph Creek	87.48	19	P	P	14 49 09.1	+1.1
	baz=227,SNR=11						
SWSC	Sam W. Stewart	87.49	55	P	P	14 49 09.0	+0.3
	baz=251						
GSC	Goldstone, Bar	87.49	53	P	P	14 49 09.1	+0.3
GSC				pmax	pmax		
	comp=Z,29nm,1.5s						
GSC	Goldstone, Bar	87.49	53	P	P	14 49 09.1	+0.3
GSC				IAmb	IAmb	14 49 22.0	
	comp=Z,29nm,1.4s						
GSC	Goldstone, Bar	87.49	53	P	P	14 49 09.0	+0.3
	baz=250						
LCH	Last Change Ra	87.52	51	P	P	14 49 09.1	+0.2
TAPN	Taplejung	87.53	299	*e*P	P	14 49 09.3	-0.1
	comp=Z,140nm,1.5s						
COLD	Coldfoot	87.53	15	P	P	14 49 09.8	+1.7
	baz=221,SNR=26						
I05D	Terrebonne, OR	87.56	43	P	P	14 49 08.5	-0.4
	baz=247						
K27K	Chicken	87.64	20	P	P	14 49 09.5	+0.8
	baz=229						
GRAC	Grapevine Rang	87.65	51	P	P	14 49 10.5	+1.1
	baz=250						
ODAN	Odare	87.66	298	*e*P	P	14 49 09.7	-0.2
E04D	Cinebar	87.66	41	P	P	14 49 08.9	-0.3
	baz=246						
QSM	Queen of Sheba	87.67	52	P	P	14 49 09.7	+0.2
BELC	Belle Mtn. Jos	87.68	54	P	P	14 49 09.0	-0.8
	baz=250,SNR=8.8						
HEC	Hector,Ludlow	87.69	53	P	P	14 49 08.8	-0.9
	baz=250						
D03D	Eldon	87.74	40	P	P	14 49 09.1	-0.4
	baz=245						
D04E	Lakebay	87.79	40	P	P	14 49 09.2	-0.5
	baz=246						
FURC	Furnace Creek,	87.84	52	P	P	14 49 10.1	-0.1
	baz=250,SNR=7.5						
G05D	Wamic, OR	87.93	42	P	P	14 49 10.6	0.0
	baz=247						
BC3	Big Chuckawall	87.99	55	P	P	14 49 10.6	-0.7
	baz=251						
F05D	White Salmon	88.10	42	IAMs_20	IAMs_20	15 24 54.2	
	comp=Z,1µm,19.0s						
F05D	White Salmon	88.10	42	P	P	14 49 12.2	+0.9
	baz=247						
GMRC	Granite Mounta	88.20	53	P	P	14 49 12.6	+0.4
	baz=251,SNR=6.2						
WHY	Whitehorse	88.20	25	P	P	14 49 12.0	+0.4
	baz=235						
TUQ	Turquoise Moun	88.21	53	P	P	14 49 12.3	+0.1
	baz=250						
GLA	Glamis	88.29	55	P	P	14 49 12.3	-0.3
	baz=251,SNR=5.6						
N31M	Braeburn, Yuko	88.32	24	P	P	14 49 12.8	+0.7
N31M				IAMs_20	IAMs_20	15 20 30.6	
	comp=Z,1µm,21.0s						
N31M	Braeburn, Yuko	88.32	24	P	P	14 49 12.9	+0.9
	baz=234						
PALK	Pallekele	88.34	278	P	P	14 49 11.4	-1.8
	comp=Z,7.1nm,0.9s,baz=90,slow=3.0,SNR=4.4						
PALK				LR	LR	15 31 07.8	
	comp=Z,736nm,18.2s,baz=217,slow=37						
	comp=Z,7.1nm,0.9s						
PALK	Pallekele	88.34	278	IAMs_20	IAMs_20	15 33 12.8	
	comp=Z,2µm,19.0s						
RAMN	Ramite	88.36	298	*e*P	P	14 49 13.1	-0.2
	comp=Z,8.8nm,0.5s						
IRM	Iron Mountain	88.40	54	P	P	14 49 13.3	+0.2
	baz=251,SNR=10						
EGAK	Eagle	88.43	20	P	P	14 49 12.0	-0.5
	baz=230						
TPNV	Topopah Spring	88.47	51	IAMs_20	IAMs_20	15 27 22.8	
	comp=Z,1µm,18.0s						
TPNV	Topopah Spring	88.47	51	P	P	14 49 13.3	-0.2
	baz=250,SNR=9.1						
DAWY	Dawson	88.57	21	P	P	14 49 13.3	+0.1
	baz=231,SNR=6.4						
M30M	Minto, Yukon	88.58	23	IAMs_20	IAMs_20	15 27 28.3	
	comp=Z,1µm,19.0s						
M30M	Minto, Yukon	88.58	23	P	P	14 49 13.0	-0.3
	baz=234,SNR=7.2						
B05A	Bryant	88.65	39	P	P	14 49 13.5	-0.3
	baz=246						
WVOR	Wild Horse Val	88.66	45	IAMs_20	IAMs_20	15 21 00.5	
	comp=Z,1µm,21.0s						
BLYC	Blythe	88.76	55	P	P	14 49 15.2	+0.5
BLYC				IAmb	IAmb	14 49 28.1	
	comp=Z,39nm,1.4s						
TOLK	Toolik Lake Re	88.76	15	IAMs_20	IAMs_20	15 26 13.2	
	comp=Z,1µm,20.0s						
TOLK	Toolik Lake Re	88.76	15	P	P	14 49 13.6	-0.4
	baz=222						
JIRN	Jiri	88.92	299	*e*P	P	14 49 16.6	+0.5
	comp=Z,28nm,1.0s						
BMN	Battle Mountai	88.94	48	P	P	14 49 15.9	+0.2
BMN				pmax	pmax		
	comp=Z,16nm,1.0s						
BMN	Battle Mountai	88.94	48	P	P	14 49 15.9	+0.2
113A	Mohawk Valley,	89.05	56	P	P	14 49 16.4	+0.3
DLBC	Dease Lake	89.08	28	LR	LR	15 22 07.8	
	comp=Z,1µm,20.4s,baz=246,slow=31						
J08A	Circle Bar Ran	89.11	45	P	P	14 49 16.3	+0.1
J08A				IAmb	IAmb	14 49 32.1	
	comp=Z,45nm,1.0s						
PDMCI	Parker Dam,Lak	89.23	54	P	P	14 49 16.4	-0.5
	baz=252						
GUN	Gumba	89.25	299	*e*P	P	14 49 17.2	-0.4
	comp=Z,105nm,1.1s						
M31M	Drury Creek, Y	89.28	24	IAMs_20	IAMs_20	15 23 44.7	
	comp=Z,1µm,20.0s						
M31M	Drury Creek, Y	89.28	24	P	P	14 49 17.6	+1.1
	baz=236						
LPIG	La Paz	89.40	65	LR	LR	15 22 06.3	
	comp=Z,1µm,19.3s,baz=238,slow=31						
R11A	Troy Canyon, C	89.43	50	P	P	14 49 18.0	0.0
R11A	Troy Canyon, C	89.43	50	P	P	14 49 17.8	-0.2
	baz=251,SNR=13						
HAWA	Hanford	89.53	42	IAMs_20	IAMs_20	15 26 46.0	
	comp=Z,1µm,18.0s						
PKI	Pulchoki	89.55	299	*e*P	P	14 49 18.5	-0.5
	comp=Z,50nm,0.8s						
PKIN	Phulchoki	89.56	299	*e*P	P	14 49 18.4	-0.6
214A	Organ Pipe Nat	89.57	57	P	P	14 49 19.7	+1.1
214A	Organ Pipe Nat	89.57	57	P	P	14 49 18.3	-0.3
	baz=252						
FARO	Faro, Yukon	89.69	24	P	P	14 49 18.4	0.0
	baz=237						
KKN	Kakani	89.72	299	*e*P	P	14 49 19.3	-0.4
	comp=Z,68nm,1.0s						
I29M	Ogilvie Camp,	89.74	20	IAMs_20	IAMs_20	15 25 28.7	
	comp=Z,1µm,20.0s						
I29M	Ogilvie Camp,	89.74	20	P	P	14 49 19.7	+1.1
	baz=232						
DMN	Daman	89.82	299	*e*P	P	14 49 20.0	-0.2
	comp=Z,92nm,0.9s						
E08A	Dider Farm, El	89.87	42	P	P	14 49 19.9	+0.3
TIXI	Tiksi	89.99	349	P	P	14 49 18.3	-1.2
TIXI				pmax	pmax		
	comp=Z,36nm,1.2s						
TIXI	Tiksi	89.99	349	P	P	14 49 18.3	-1.2
TIXI				IAmb	IAmb	14 49 32.1	
	comp=Z,36nm,1.2s						
D08A	Wollman Farm,	90.17	41	P	P	14 49 22.1	+1.1
GKN	Gorkha	90.33	299	*e*P	P	14 49 21.6	-0.8
	comp=Z,124nm,1.0s						

B08A	Colville Reser	90.39	40	P	P	14 49 21.9	-0.2
BMO	Blue Mountains	90.43	44	IAMs_20	IAMs_20	15 22 10.0	
	comp=Z,1µm,20.0s						
ELK	Elko	90.47	48	LR	LR	15 24 42.4	
	comp=Z,2µm,19.0s,baz=252,slow=32						
ELK	Elko	90.47	48	IAMs_20	IAMs_20	15 24 01.5	
	comp=Z,2µm,19.0s						
MMPY	Sheldon Lake,	90.72	24	P	P	14 49 23.8	+0.5
	baz=238						
PSUT	Pine Spring	90.78	50	P	P	14 49 25.0	+0.7
CCUT	Cedar City	90.84	51	P	P	14 49 25.6	+0.9
MFID	Camas Ranch	90.94	45	IAMs_20	IAMs_20	15 22 44.7	
	comp=Z,1µm,20.0s						
KOLN	Koldanda	91.15	298	*e*P	P	14 49 25.2	-1.1
	comp=Z,90nm,1.1s						
DANN	Dangsing	91.17	299	*e*P	P	14 49 25.2	-1.3
	comp=Z,135nm,1.2s						
TUC	Tucson	91.32	57	P	P	14 49 26.8	0.0
TUC				pmax	pmax		
	comp=Z,14nm,1.2s						
TUC	Tucson	91.32	57	P	P	14 49 26.8	0.0
TUC	Tucson	91.32	57	IAMs_20	IAMs_20	15 20 56.5	
	comp=Z,1µm,21.0s						
TUC	Tucson	91.32	57	P	P	14 49 27.2	+0.4
	baz=253						
PLID	Pearl Lake	91.38	44	P	P	14 49 26.9	-0.1
PLID				IAMs_20	IAMs_20	15 26 21.2	
	comp=Z,2µm,19.0s						
TGTN	Hyland Airport	91.39	26	P	P	14 49 25.7	-0.6
	baz=241						
NEW	Newport	91.73	40	P	P	14 49 27.2	-1.1
	comp=Z,3.2nm,0.6s,baz=262,slow=3.6,SNR=6.2						
NEW				LR	LR	15 27 44.4	
	comp=Z,958nm,18.1s,baz=241,slow=34						
	comp=Z,3.2nm,0.6s						
NEW	Newport	91.73	40	P	P	14 49 28.5	+0.2
NEW	Newport	91.73	40	IAMs_20	IAMs_20	15 28 54.3	
	comp=Z,1µm,18.0s						
NEW	Newport	91.73	40	P	P	14 49 28.9	+0.6
	baz=250						
PYUN	Piuthan	91.75	298	*e*P	P	14 49 27.7	-1.4
	comp=Z,64nm,1.0s						
WUAZ	Wupatki	91.77	54	P	P	14 49 28.2	-0.7
	baz=253						
PMSA	Palmer Station	91.78	161	LR	LR	15 25 26.9	
	comp=Z,652nm,19.4s,baz=224,slow=32						
PMSA	Palmer Station	91.78	161	*e*P	P	14 49 34.4	+6.1
HLID	Hailey	91.96	45	IAMs_20	IAMs_20	15 23 27.7	
	comp=Z,2µm,21.0s						
HLID	Hailey	91.96	45	P	P	14 49 29.2	-0.5
	baz=252						
MSU	Marysvale	92.03	51	P	P	14 49 31.6	+1.5
MSU	Marysvale	92.03	51	P	P	14 49 31.6	+1.5
DUG	Dugway, Tooele	92.06	49	P	P	14 49 28.5	-1.6
	baz=252						
WMQ	Urumqi	92.63	315	⇓*i*P	P	14 49 33.5	+0.9
WMQ				pP	sP	14 49 44.1	-1.0
WMQ				S	S	15 00 31.1	-4.3
WMQ				pmax	pmax		
	comp=Z,41nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,660nm,5.3s						
WMQ				LR	LR		
	comp=Z,540nm,20.5s						
WMQ				LR	LR		
	comp=Z,740nm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,20.7s						
TROLL	Troll, Antarti	92.79	185	P	P	14 49 33.3	+0.3
HYBB	Hyderabad (bro	92.95	287	*e*P	P	14 49 33.9	-0.7
HYBB				IVmB_BB		14 49 34.5	
	comp=Z,168nm,1.9s						
HYBB				*e*PP	PP	14 53 17.1	-0.6
HYBB				*e*SKSac	SKSac	15 00 06.1	-1.0
INK	Inuvik	93.00	19	P	P	14 49 31.9	-1.7
	comp=Z,1.6nm,1.0s,baz=270,slow=7.8,SNR=2.6						
INK				LR	LR	15 26 34.0	
	comp=Z,2µm,20.6s,baz=218,slow=32						
	comp=Z,1.6nm,1.0s						
INK	Inuvik	93.00	19	P	P	14 49 32.2	-1.4
	baz=237						
MSO	Missoula	93.30	42	IAMs_20	IAMs_20	15 29 30.9	
	comp=Z,2µm,19.0s						
MSO	Missoula	93.30	42	P	P	14 49 34.9	-0.7
	baz=252						
PCHI	Peechi	93.33	280	*e*P	P	14 49 36.5	+0.2
PCHI				*e*S	S	15 00 14.3	-28
HWUT	Hardware Ranch	93.38	48	IAMs_20	IAMs_20	15 23 16.4	
	comp=Z,1µm,21.0s						
SNAA	Sanae	93.48	183	P	P	14 49 35.1	-1.0
SNAA	Sanae	93.48	183	LR	LR	15 30 59.5	
	comp=Z,1µm,19.0s,baz=192,slow=35						
SNAA	Sanae	93.48	183	P	P	14 49 35.3	-0.8
SNAA				pmax	pmax		
	comp=Z,66nm,1.6s						
SNAA	Sanae	93.48	183	P	P	14 49 35.3	-0.8
SNAA				IAmb	IAmb	14 49 46.2	
	comp=Z,66nm,1.6s						
DLMT	Dillon	93.75	44	IAMs_20	IAMs_20	15 26 08.9	
	comp=Z,1µm,20.0s						
121A	Cookes Peak, D	93.82	58	P	P	14 49 36.8	-1.7
	baz=255						
AHID	Auburn Hatcher	94.03	47	IAMs_20	IAMs_20	15 23 59.7	
	comp=Z,2µm,21.0s						
TPAW	Teton Pass	94.34	46	IAMs_20	IAMs_20	15 24 34.8	
	comp=Z,2µm,21.0s						
REDW	Red Top Meadow	94.38	46	IAMs_20	IAMs_20	15 23 51.7	
	comp=Z,2µm,21.0s						
VNA2	Neumayer--Watz	94.42	182	P	P	14 49 39.7	-0.6
	baz=185,slow=3.0						
BOZ	Bozeman (W)	94.47	44	IAMs_20	IAMs_20	15 26 48.9	
	comp=Z,1µm,19.0s						
BOZ	Bozeman (W)	94.47	44	P	P	14 49 39.8	-1.3
	baz=254						
SNOW	Snow King Moun	94.47	46	IAMs_20	IAMs_20	15 23 34.3	
	comp=Z,2µm,21.0s						
MOOW	Moose Ponds	94.56	46	IAMs_20	IAMs_20	15 24 41.5	
	comp=Z,2µm,20.0s						
LOHW	Long Hollow	94.62	46	IAMs_20	IAMs_20	15 24 32.1	
	comp=Z,2µm,21.0s						
FLWY	Flagg Ranch	94.68	46	IAMs_20	IAMs_20	15 23 41.7	
	comp=Z,2µm,22.0s						
Y22D	IRIS PASSCAL I	94.91	56	IAMs_20	IAMs_20	15 24 48.6	
	comp=Z,1µm,20.0s						
BW06	Boulder Array	95.13	47	P	P	14 49 44.0	-0.4
	baz=255						
PDAR	Pinedale Array	95.13	47	P	P	14 49 44.0	-0.3
	comp=Z,0.5nm,0.5s,baz=224,slow=2.3,SNR=5.6						
PDAR				PKKPbc	PKKPbc	15 06 38.0	-2.0
	comp=Z,0.7nm,1.0s,baz=90,slow=7.4,SNR=3.7						
PDAR				LR	LR	15 24 56.8	
	comp=Z,808nm,21.3s,baz=273,slow=31						
ANMO	Albuquerque	95.50	55	LR	LR	15 27 08.3	
	comp=Z,1µm,19.0s,baz=275,slow=32						
ANMO	Albuquerque	95.50	55	IAMs_20	IAMs_20	15 26 38.0	
	comp=Z,1µm,19.0s						
ANMO	Albuquerque	95.50	55	P	P	14 49 44.9	-1.2
	baz=256						
RLMT	Red Lodge	95.94	45	IAMs_20	IAMs_20	15 25 59.1	
	comp=Z,1µm,20.0s						
SMCO	Snowmass	96.12	51	IAMs_20	IAMs_20	15 27 53.2	
	comp=Z,974nm,20.0s						
USHA	Ushuaia	96.32	151	LR	LR	15 24 22.3	
	comp=Z,962nm,21.4s,baz=205,slow=30						
EGMT	Eagleton	96.36	42	IAMs_20	IAMs_20	15 30 22.9	
	comp=Z,1µm,18.0s						
EGMT	Eagleton	96.36	42	P	P	14 49 47.2	-2.4
	baz=255						
TXAR	Lajitas Array	96.48	61	P	P	14 49 50.0	-0.6
	comp=Z,0.9nm,0.8s,baz=205,slow=5.5,SNR=4.0						
TXAR				PKKPbc	PKKPbc	15 06 34.2	-1.5
	comp=Z,0.2nm,0.6s,baz=49,slow=6.1,SNR=2.9						
TXAR				LR	LR	15 28 39.5	
	comp=Z,429nm,18.6s,baz=270,slow=32						
	comp=Z,0.9nm,0.8s						
C36M	Paulatuk	96.51	19	IAMs_20	IAMs_20	15 26 44.5	
	comp=Z,1µm,21.0s						
C36M	Paulatuk	96.51	19	P	P	14 49 48.2	-1.5
	baz=245						
RWWY	Rawlins	96.55	49	IAMs_20	IAMs_20	15 24 49.3	
	comp=Z,2µm,22.0s						
MK31	Makanchi Array	97.11	316	P	P	14 49 52.3	-0.7
MK31				pmax	pmax		
	comp=Z,31nm,1.2s						
MK31	Makanchi Array	97.11	316	P	P	14 49 52.3	-0.7
MK31				IAmb	IAmb	14 50 04.9	
	comp=Z,31nm,1.1s						
MKAR	Makanchi Array	97.11	316	P	P	14 49 52.8	-0.2
	comp=Z,4.5nm,0.6s,baz=94,slow=4.7,SNR=40						
MKAR				PP	PP	14 53 48.0	-1.4
	comp=Z,2.3nm,1.0s,baz=98,slow=8.7,SNR=3.6						
MKAR				PKKP	PKKPbc	15 06 32.2	-2.4
	comp=Z,0.7nm,0.8s,baz=294,slow=2.9,SNR=6.4						
MKAR				LR	LR	15 34 02.9	
	comp=Z,295nm,20.4s,baz=100,slow=36						
	comp=Z,4.5nm,0.6s						
MKAR	Makanchi Array	97.11	316	P	P	14 49 52.3	-0.7
MKAR	Makanchi Array	97.11	316	P	P	14 49 52.3	-0.7
A36M	Sachs Harbour	97.28	17	IAMs_20	IAMs_20	15 28 32.7	
	comp=Z,1µm,22.0s						
ISCO	Idaho Springs	97.29	51	IAMs_20	IAMs_20	15 25 08.1	
	comp=Z,1µm,22.0s						
ZAA0	Zalesovo Array	97.32	324	P	P	14 49 52.6	-1.0
ZALV	Zalesovo Beam	97.32	324	P	P	14 49 52.6	-1.0
	comp=Z,8.1nm,0.7s,baz=114,slow=4.7,SNR=30						
ZALV				LR	LR	15 32 56.8	
	comp=Z,812nm,21.4s,baz=103,slow=35						
	comp=Z,8.1nm,0.7s						
MAKZ	Makanchi	97.32	316	P	P	14 49 53.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,53nm,1.4s						
MAKZ	Makanchi	97.32	316	P	P	14 49 53.1	-0.8
MAKZ				IAmb	IAmb	14 50 06.5	
	comp=Z,53nm,1.4s						
SMLA	Simla	97.41	300	*i* x	P	14 49 54.4	-0.3
YKA	Yellowknife Ar	97.69	27	P	P	14 49 55.0	-0.1
	comp=Z,4.8nm,0.7s,baz=254,slow=4.6,SNR=58						
YKA				PP	PP	14 53 53.9	+0.6
	comp=Z,0.7nm,0.9s,baz=254,slow=7.0,SNR=3.5						
YKA				PKKPbc	PKKPbc	15 06 30.4	-3.1
	comp=Z,0.4nm,0.7s,baz=64,slow=4.1,SNR=4.1						
YKA				PKPPKP	P'P'df	15 14 45.0	+1.7
	comp=Z,0.1nm,0.8s,baz=82,slow=4.4,SNR=2.7						
YKA				LR	LR	15 26 04.9	
	comp=Z,775nm,21.4s,baz=300,slow=30						
	comp=Z,4.8nm,0.7s						
YKA	Yellowknife Ar	97.69	27	P	P	14 49 55.0	-0.1
YKA	Yellowknife Ar	97.69	27	P	Pdif	14 49 55.6	+0.5
PHWY	Pilot Hill	97.74	49	IAMs_20	IAMs_20	15 28 51.9	
	comp=Z,1µm,20.0s						
LAO	LASA Array	98.38	44	IAMs_20	IAMs_20	15 28 33.4	
	comp=Z,1µm,20.0s						
AMTX	Amarillo	99.31	56	IAMs_20	IAMs_20	15 27 50.1	
	comp=Z,979nm,20.0s						
JCT	Junction City	100.00	61	IAMs_20	IAMs_20	15 37 24.6	
	comp=Z,890nm,18.0s						
NRIK	Noril'sk	100.06	339	P	Pdif	14 50 05.1	-0.5
	comp=Z,7.0nm,0.8s,baz=129,slow=4.7,SNR=18						
KURK	Kurchatov	100.32	320	P	Pdif	14 50 06.8	-0.4
KURBB	Kurchatov Arra	100.36	320	P	Pdif	14 50 06.8	-0.6
	comp=Z,0.7nm,0.8s,baz=94,slow=4.2,SNR=7.2						
KURBB				PKKPbc	PKKPbc	15 06 23.9	-1.5
	comp=Z,1.6nm,0.8s,baz=278,slow=3.4,SNR=13						
WMOK	Wichita Mounta	101.63	57	IAMs_20	IAMs_20	15 28 01.5	
	comp=Z,1µm,21.0s						
435B	Jarrell	101.93	61	IAMs_20	IAMs_20	15 32 04.8	
	comp=Z,1µm,18.0s						
HKT	Hockley	103.28	62	IAMs_20	IAMs_20	15 36 25.6	
	comp=Z,1µm,18.0s						
KSU1	Kansas State U	104.02	53	IAMs_20	IAMs_20	15 33 59.4	
	comp=Z,1µm,20.0s						
TUL1	Leonard	104.22	56	IAMs_20	IAMs_20	15 31 56.2	
	comp=Z,2µm,20.0s						
NATX	Nacogdoches	104.56	61	IAMs_20	IAMs_20	15 37 55.4	
	comp=Z,858nm,18.0s						
ECSD	EROS Data Cent	104.59	48	IAMs_20	IAMs_20	15 33 11.1	
	comp=Z,1µm,19.0s						
AGMN	Agassiz Nation	105.56	43	IAMs_20	IAMs_20	15 32 03.4	
	comp=Z,1µm,20.0s						
BVAR	Borovoye Array	105.67	321	Pdiff	Pdif	14 50 29.9	-1.1
W39A	Magazine	105.75	57	IAMs_20	IAMs_20	15 30 30.7	
	comp=Z,929nm,19.0s						
CCM	Cathedral Cave	108.08	54	IAMs_20	IAMs_20	15 32 40.2	
	comp=Z,1µm,21.0s						
VBMS	Vicksburg	108.11	61	IAMs_20	IAMs_20	15 42 03.4	
	comp=Z,747nm,18.0s						
EYMN	Ely	108.46	44	IAMs_20	IAMs_20	15 35 07.2	
	comp=Z,1µm,20.0s						
OXF	Oxford	109.26	58	IAMs_20	IAMs_20	15 44 07.6	
	comp=Z,779nm,19.0s						
BOAB	BOACO BROADBAN	109.56	82	IAMs_20	IAMs_20	15 28 31.0	
	comp=Z,986nm,21.0s						
COWI	Conover	110.04	46	IAMs_20	IAMs_20	15 34 34.1	
	comp=Z,1µm,20.0s						
PLAL	Pickwick Lake	110.39	58	IAMs_20	IAMs_20	15 39 09.6	
	comp=Z,976nm,19.0s						
HDC	Heredia	110.56	85	IAMs_20	IAMs_20	15 29 31.4	
	comp=Z,1µm,22.0s						
WVT	Waverly	110.67	57	IAMs_20	IAMs_20	15 33 50.7	
	comp=Z,1µm,21.0s						
LRAL	Lakeview Retre	111.14	60	IAMs_20	IAMs_20	15 44 22.6	
	comp=Z,845nm,18.0s						
SVE	Sverdlovsk	111.24	326	*i* PKIKP	PKiKP	14 54 59.4	+5.2
NNA	Nana	111.34	109	IAMs_20	IAMs_20	15 32 58.0	
	comp=Z,830nm,20.0s						
AKTO	Aktyubinsk	113.38	319	PKiKP	PKiKP	14 54 58.5	0.0
	comp=Z,2.3nm,0.6s,baz=71,slow=6.1,SNR=7.2						
GOGA	Godfrey	114.12	60	IAMs_20	IAMs_20	15 37 57.4	
	comp=Z,883nm,20.0s						
KBS	Kingsbay	114.74	355	IAMs_20	IAMs_20	15 40 37.2	
	comp=Z,935nm,21.0s						
SOCY	Socotra	115.08	277	IAMs_20	IAMs_20	15 45 32.1	
	comp=Z,1µm,19.0s						
M53A	WI Miller and	116.28	51	IAMs_20	IAMs_20	15 40 33.7	
	comp=Z,957nm,20.0s						
ERPA	Erie	116.74	50	IAMs_20	IAMs_20	15 40 48.0	
	comp=Z,1µm,20.0s						
NHSC	New Hope	116.87	60	IAMs_20	IAMs_20	15 48 24.2	
	comp=Z,731nm,18.0s						
LPAZ	La Paz	117.36	117	PKP	PKPdf	14 55 07.7	-0.2
	comp=Z,2.6nm,0.7s,baz=216,slow=2.7,SNR=9.1						
LPAZ				PKKPbc	PKKPbc	15 05 30.0	-1.0
	comp=Z,1.2nm,0.7s,baz=64,slow=4.1,SNR=4.3						
PRGR	Permogore	117.63	333	*e*PKIKP	PKiKP	14 55 07.8	+1.5
DAG	Danmarks Havn	117.93	1	*i* P	PKiKP	14 55 15.0	+8.5
MTDJ	Mount Denham	118.24	77	IAMs_20	IAMs_20	15 39 03.1	
	comp=Z,649nm,19.0s						
CNNC	Cliffs of the	118.74	58	IAMs_20	IAMs_20	15 45 05.6	
	comp=Z,1µm,19.0s						
CBN	Corbin Frederi	119.01	54	IAMs_20	IAMs_20	15 40 20.5	
	comp=Z,1µm,20.0s						
APA	Apatity	119.37	341	⇓*i*PKIKP	PKiKP	14 55 18.3	+8.8
APA				*i*		14 56 28.4	
APA				pmax	pmax		
	comp=Z,11nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,19.0s						
ARCES	ARCESS Array B	120.26	345	PKP	PKPdf	14 55 10.2	-1.0
	comp=Z,6.9nm,0.6s,baz=69,slow=1.4,SNR=50						
ARCES				PKKPbc	PKKPab	15 05 17.4	-1.8
	comp=Z,4.6nm,0.9s,baz=213,slow=3.7,SNR=8.1						
ILULI	Ilulissat	120.56	15	IAMs_20	IAMs_20	15 41 38.4	
	comp=Z,1µm,21.0s						
CPUP	Villa Florida	120.56	133	PKP	PKPdf	14 55 12.2	-0.8
	comp=Z,5.1nm,0.9s,baz=239,slow=2.6,SNR=11						
KLMR	Klimovskoe	120.64	333	*e*PKIKP	PKPdf	14 55 09.0	-3.1
KLMR				pmax	pmax		
	comp=Z,48nm,1.3s						
KLMR	Klimovskoe	120.64	333	*e*PKPdf	PKPdf	14 55 09.0	-3.1
KLMR				AMP		14 55 23.3	
	comp=Z,48nm,1.3s						
KLMR				*e*PP	PP	14 56 31.2	-8.5
KLMR				*e*SKP		14 58 41.1	
KLMR				LQ	LQ	15 36 58.7	
KLMR				LQ	LQ	15 36 58.7	
KLMR				LR	LR	15 41 29.2	
MAK	Makhachkala	121.50	312	*e*P	Pdif	14 51 40.4	-1.2
MAK				*i*		14 55 13.2	
MAK				*e*		14 56 42.5	
MAK				*e*PS	PS	15 06 41.2	+1.5
MAK				pmax	pmax		
	comp=Z,99nm,1.0s						
SFJD	Kangerlussuaq	122.28	17	*i* P	PKPdf	14 55 12.4	-2.6
SCHQ	Schefferville	122.45	34	PKP	PKPdf	14 55 15.1	-0.8
	comp=Z,6.8nm,0.8s,baz=28,slow=1.6,SNR=12						
SCHQ				PKKPbc	PKKPab	15 05 10.8	+0.7
	comp=Z,2.4nm,0.7s,baz=68,slow=3.4,SNR=6.6						
GROC	Groznyy	122.69	312	*i* PKIKP	PKiKP	14 55 18.7	+1.9
GROC				*e*		14 56 56.6	
GROC				pmax	pmax		
	comp=Z,16nm,0.5s						
ICESG	Greenland Ices	123.15	11	*i* P	PKiKP	14 55 18.4	+1.0
VRH	Novokhopyorsk	123.31	322	*e*PKIKP	PKPdf	14 55 16.4	-1.1
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
SDV	Santo Domingo	123.34	89	IAMs_20	IAMs_20	15 38 11.1	
	comp=Z,815nm,21.0s						
DY2G	Dye2	123.83	15	*i* P	PKPdf	14 55 18.4	0.0
MOS	Moscow	123.83	328	*i* PKIKP	PKPdf	14 55 17.9	-0.5
MOS				*e*		14 57 02.2	
NUUK	Nuuk	123.93	19	*i* P	PKiKP	14 55 19.4	+0.8
ZEI	Tsey	124.14	312	*i* PKIKP	PKiKP	14 55 20.5	+0.5
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s						
SDDR	Presa de Saban	124.21	77	IAMs_20	IAMs_20	15 39 05.2	
	comp=Z,774nm,21.0s						
LPSR	Galich'ya Gora	124.42	324	*e*PKIKP	PKiKP	14 55 20.6	+0.7
LPSR				pmax	pmax		
	comp=Z,70nm,1.0s						
RAYN	Ar Rayn	124.43	289	IAMs_20	IAMs_20	15 52 49.7	
	comp=Z,870nm,19.0s						
GRTK	Grand Turk	124.55	74	IAMs_20	IAMs_20	15 40 43.1	
	comp=Z,839nm,20.0s						
VORR	Voronezh	124.62	323	*e*PKIKP	PKiKP	14 55 20.7	+0.4
VORR				pmax	pmax		
	comp=Z,71nm,1.6s						
OBN	Obninsk	124.64	328	*i* PKIKP	PKiKP	14 55 20.8	+0.6
OBN				*e*		14 55 29.2	
OBN				*e*		14 57 04.8	
OBN				*e*PPP	PPP	14 59 45.4	
OBN				*e*SS	SS	15 14 01.9	+3.3
OBN				*e*SSS	SSS	15 18 30.4	
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
KBZ	Khabaz	124.65	313	PKP	PKiKP	14 55 20.9	+0.3
	comp=Z,4.1nm,1.0s,baz=124,slow=0.5,SNR=5.0						
KIV	Kislovodsk	124.74	314	*i* PKIKP	PKiKP	14 55 21.0	0.0
KIV				*e*		14 57 06.6	
KIV				*e*PS	PS	15 07 05.2	-3.4
KIV				*e*SS	SS	15 13 57.3	-3.8
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
VSR	Storozhevoye	124.81	323	*e*PKIKP	PKPdf	14 55 19.6	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VORD	Divnogorie	124.83	322	*e*PKIKP	PKPdf	14 55 20.2	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,1.2s						
AQDB	Aquidauana	125.28	129	*e*P	PKiKP	14 55 25.6	+3.0
PTLB	Pontes e Lacer	125.34	121	*e*P	PKiKP	14 55 27.7	+4.9
ATD	Arta Tunnel	125.70	274	IAMs_20	IAMs_20	15 47 43.6	
	comp=Z,930nm,20.0s						
FINES	FINESS Array B	125.70	338	PKP	PKPdf	14 55 21.3	-0.5
	comp=Z,7.6nm,0.8s,baz=43,slow=2.2,SNR=8.0						
SOC	Sochi	126.92	314	*i* PKIKP	PKPdf	14 55 22.4	-2.3
SOC				*e*		14 57 17.1	
SOC				*e*		15 02 24.9	
SOC				*e*PS	PS	15 07 20.9	-6.6
SOC				*e*SS	SS	15 14 23.8	-4.3
SOC				*e*SSS	SSS	15 19 06.9	
SOC				MLR	MLR		
	comp=Z,378nm,19.0s						
MEF	Metsahovi	127.14	338	*e*P	PKiKP	14 55 25.6	+0.6
IVI	Ivigtut	127.19	21	*i* P	PKPdf	14 55 22.4	-2.2
VSU	Vasula	127.38	335	*e*P	PKiKP	14 55 26.1	+0.5
RAF	Rauma	127.50	340	*e*P	PKiKP	14 55 25.8	+0.1
KMBO	Kilima Mbogo	127.90	257	PKP	PKPdf	14 55 27.6	-0.2
	comp=Z,2.0nm,0.7s,baz=60,slow=0.7,SNR=11						
NRS	Narsarsuaq	128.13	19	*i* P	PKPdf	14 55 25.4	-1.0
MTSE	Matsula	128.38	337	*e*P	PKPdf	14 55 26.2	-0.7
AAL	Aland	128.72	340	*e*P	PKPdf	14 55 27.1	-0.5
MNK	Minsk	129.27	330	*i* PKIKP	PKPdf	14 55 25.4	-3.4
MNK				*i*		15 02 34.3	
MNK				*i* SS	SS	15 14 50.4	-5.7
MNK				MLR	MLR		
	comp=Z,702nm,22.0s						
MNK				MLR	MLR		
	comp=N,438nm,22.0s						
MNK	Minsk	129.27	330	*i* PKP	PKPdf	14 55 25.4	-3.4
MNK				*i* PKP	PKPdf	14 55 25.4	-3.4
MNK				*i* PKP	PKPdf	14 55 25.4	-3.4
	baz=234						
MNK				*i* PP	PP	14 57 27.6	-10
MNK				*i* PPP	PPP	15 00 18.8	
MNK				*i* SKS	SKSdf	15 02 34.3	-4.0
MNK				*i* SS	SS	15 14 50.5	-5.6
MNK				*i* SSS	SSS	15 19 36.6	
MNK				*i* LQ	LQ	15 44 36.0	
MNK				*i* LR	LR	15 47 52.2	
MNK				*i* LRM	MLR	15 51 49.2	
	comp=N,438nm,22.1s						
MNK				*i* LRM	MLR	15 51 49.2	
	comp=Z,702nm,22.1s						
NACGM	Naroch	129.55	331	⇓*e*PKP	PKiKP	14 55 33.4	+3.3
	baz=53						
PABE	Paberze	130.44	333	*e*P	PKPdf	14 55 28.8	-2.2
CLDB	Colider	130.46	119	*e*P	PKiKP	14 55 36.9	+3.7
NB2	NORSAR Subarra	130.63	345	PKPdf	PKPdf	14 55 31.5	+0.2
	comp=Z,18nm,1.7s,baz=31,slow=1.9						
NB2	NORSAR Subarra	130.63	345	PKPdf	PKPdf	14 55 31.5	+0.2
	baz=31,slow=1.9						
NOA	NORSAR Array B	130.63	345	PKP	PKPdf	14 55 30.0	-1.3
	comp=Z,3.4nm,0.8s,baz=33,slow=2.0,SNR=11						
NOA				SKPbc	SKPab	14 58 56.2	+3.1
	comp=Z,1.7nm,1.0s,baz=28,slow=1.3,SNR=2.8						
NOA	NORSAR Array B	130.63	345	PKIKP	PKPdf	14 55 30.0	-1.3
AKASG	Malin Array Be	130.67	326	PKP	PKPdf	14 55 30.4	-1.2
	comp=Z,1.0nm,0.5s,baz=69,slow=2.6,SNR=12						
AKASG				SKPbc	SKPab	14 58 55.6	+2.1
	comp=Z,0.5nm,0.4s,baz=45,slow=4.1,SNR=2.1						
VIKU	Vikbolandet	131.09	340	*e*P	PKiKP	14 55 33.3	+0.3
BRTR	Keskin Array B	132.40	311	PKhKP	PKPpre	14 55 25.9	
	comp=Z,0.7nm,0.4s,baz=117,slow=4.4,SNR=2.5						
BRTR				PKP	PKPdf	14 55 35.5	+0.1
	comp=Z,2.5nm,0.7s,baz=64,slow=3.4,SNR=7.4						
BRTR				PP	PP	14 57 59.2	+0.6
	comp=Z,0.5nm,0.4s,baz=135,slow=14,SNR=3.1						
SORM	Soroca	132.47	323	⇑P	PKPdf	14 55 35.3	+0.2
SORM	Soroca	132.47	323	⇑PKIKP	PKPdf	14 55 35.3	+0.2
GRGR	Grenville	132.61	87	IAMs_20	IAMs_20	15 45 48.8	
	comp=Z,622nm,20.0s						
KIS	Kishinev	132.75	322	*e*PKP	PKiKP	14 55 37.0	+0.2
KIS				*e*L	L	15 52 16.0	
KIS				LRM	MLR	15 54 23.0	
	comp=Z,900nm,16.5s						
KIS	Kishinev	132.75	322	*e*PKIKP	PKiKP	14 55 37.0	+0.2
KIS				MLR	MLR		
	comp=Z,900nm,16.5s						
MILM	Milestii Mici	132.79	322	*e*PKP	PKPdf	14 55 36.0	+0.3
MILM				*e*L	L	15 48 27.0	
MILM				LRM	MLR	15 55 52.0	
	comp=Z,500nm,19.0s						
MILM	Milestii Mici	132.79	322	*e*PKIKP	PKPdf	14 55 36.0	+0.3
MILM				*e*		14 55 46.0	
MILM				MLR	MLR		
	comp=Z,600nm,19.0s						
GHAJ	Ghor Haditha	132.82	299	IAMs_20	IAMs_20	16 00 24.3	
	comp=Z,794nm,20.0s						
TDBA	Terre de Bas,	133.10	82	IAMs_20	IAMs_20	15 43 50.8	
	comp=Z,647nm,21.0s						
FDF	Fort de France	133.45	84	IAMs_20	IAMs_20	15 44 57.1	
	comp=Z,642nm,20.0s						
BIM	Bigot	133.50	84	IAMs_20	IAMs_20	15 45 29.5	
	comp=Z,808nm,21.0s						
DEL	Delary	133.64	340	*e*P	PKPdf	14 55 34.4	-2.6
MPOM	Morne Pois Mar	133.69	84	IAMs_20	IAMs_20	15 46 21.6	
	comp=Z,673nm,20.0s						
LVV	L'vov	133.93	327	*e*PKIKP	PKiKP	14 55 50.3	+11
BDFB	Brasilia	134.00	130	PKP	PKPdf	14 55 38.7	-0.4
	comp=Z,7.8nm,0.8s,baz=173,slow=2.6,SNR=9.2						
BURAR	Bucovina Array	134.54	324	⇑P	PKiKP	14 55 40.3	-0.2
BURAR	Bucovina Array	134.54	324	⇑PKIKP	PKiKP	14 55 40.3	-0.2
MLR	Muntele Rosu	135.23	321	⇑P	PKPdf	14 55 40.0	-0.6
MLR	Muntele Rosu	135.23	321	⇑PKIKP	PKPdf	14 55 40.0	-0.6
ISP	Isparta	135.31	309	IAMs_20	IAMs_20	16 08 19.9	
	comp=Z,539nm,19.0s						
KOLS	Kolonicke sedl	135.38	327	*e*PKIKP	PKiKP	14 55 44.9	+2.8
KOLS	Kolonicke sedl	135.38	327	*e*PKP	PKiKP	14 55 44.9	+2.8
UZH	Uzhgorod	135.56	327	*e*PKHKP	PKPpre	14 55 31.0	
VOIR		135.80	322	⇑P	PKiKP	14 55 45.2	+2.1
VOIR		135.80	322	⇑PKIKP	PKiKP	14 55 45.2	+2.1
CRVS	Cervenica-Dubn	135.83	328	*e*PKIKP	PKiKP	14 55 45.3	+2.3
CRVS	Cervenica-Dubn	135.83	328	*e*PKP	PKiKP	14 55 45.3	+2.3
ARR	Arges	136.08	322	⇓P	PKPdf	14 55 38.2	-3.9
DRGR		136.42	324	⇓P	PKPdf	14 55 43.4	+0.8
DRGR		136.42	324	⇓PKIKP	PKPdf	14 55 43.4	+0.8
LANS	Liptovska Anna	136.68	329	*e*PKIKP	PKiKP	14 55 47.5	+2.7
LANS	Liptovska Anna	136.68	329	*e*PKP	PKiKP	14 55 47.5	+2.7

OKC	Ostrava-Krasne	136.86	331	AMS	AMS	15 51 50.0	
	comp=Z,1µm,28.4s						
GZR	Gura Zlata	137.17	323	⇑P	PKiKP	14 55 45.9	0.0
GZR	Gura Zlata	137.17	323	⇑PKIKP	PKiKP	14 55 45.9	0.0
MORC	Moravsky Berou	137.18	331	⇑P	PKPdf	14 55 43.9	0.0
MORC	Moravsky Berou	137.18	331	⇑PKIKP	PKPdf	14 55 43.9	0.0
MORC	Moravsky Berou	137.18	331	ePKP	PKPdf	14 55 43.6	-0.3
OSTC	Ostas	137.24	333	ePKPDF	PKiKP	14 55 48.3	+2.5
OSTC				AMS	AMS	16 00 50.0	
	comp=Z,900nm,21.4s						
PSZ	Piszkesteto	137.26	328	⇓P	PKiKP	14 55 45.9	-0.2
PSZ	Piszkesteto	137.26	328	⇓PKIKP	PKiKP	14 55 45.9	-0.2
PSZ	Piszkesteto	137.26	328	IAMs_20	IAMs_20	15 55 30.8	
	comp=Z,966nm,22.0s						
CHVC	Chvalec	137.28	333	ePKPDF	PKiKP	14 55 48.3	+2.4
CHVC				AMS	AMS	16 01 30.0	
	comp=Z,900nm,18.3s						
SIRR	Siria	137.31	324	⇑P	PKPdf	14 55 44.9	+0.7
KRLC	Kraliky	137.33	332	ePKIKP	PKiKP	14 55 46.1	0.0
KRLC				MLR	MLR		
	comp=Z,1µm,20.7s						
KRLC	Kraliky	137.33	332	ePKPDF	PKiKP	14 55 46.1	0.0
KRLC				epPKP	pPKPdf	14 55 50.1	-3.6
KRLC				AMS	AMS	15 55 50.0	
	comp=Z,1µm,20.7s						
MAUC	Maruska	137.33	330	ePKPDF	PKiKP	14 55 48.2	+2.1
DPC	Dobruska-Polom	137.34	332	ePKIKP	PKiKP	14 55 46.2	+0.1
DPC				e		14 55 50.5	
DPC				MLR	MLR		
	comp=Z,1µm,18.8s						
DPC	Dobruska-Polom	137.34	332	ePKPDF	PKiKP	14 55 46.2	+0.1
DPC				ex	x	14 55 50.5	
DPC				AMS	AMS	15 55 40.0	
	comp=Z,1µm,18.8s						
UPC	Upice	137.36	333	AMS	AMS	16 01 00.0	
	comp=Z,900nm,22.2s						
HERR	Herculane	137.67	322	⇓P	PKiKP	14 55 46.3	-0.6
JAVC	Velka Javorina	137.75	330	ePKP	PKPdf	14 55 45.7	+0.7
VRAC	Vranov	137.95	331	ePKP	PKPdf	14 55 46.1	+0.8
BRG	Berggiesshubel	137.98	335	ePKP	PKPdf	14 55 42.5	-2.9
BRG				Amp		14 56 05.1	
	comp=Z,25nm,1.1s						
BRG				ex	x	14 58 42.7	
BRG				Amp		14 58 44.9	
	comp=Z,5.1nm,1.0s						
BRG				ex	x	14 59 26.1	
BRG				Amp		14 59 33.3	
	comp=Z,8.2nm,1.3s						
BRG	Berggiesshubel	137.98	335	ePKIKP	PKPdf	14 55 42.4	-2.9
BRG				e		14 58 42.6	
BRG				pmax	pmax		
	comp=Z,25nm,1.1s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRG				MLR	MLR		
	comp=Z,940nm,21.7s						
BRG				MLR	MLR		
	comp=N,760nm,20.9s						
BRG				MLR	MLR		
	comp=E,320nm,22.5s						
CLL	Collm	138.03	336	ePKIKP	PKPdf	14 55 46.0	+0.6
CLL				i		14 55 56.2	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,1µm,21.4s						
CLL	Collm	138.03	336	ePKPdf	PKPdf	14 55 46.0	+0.6
	comp=Z,8.0nm,0.9s						
CLL				i pPKiKP	pPKiKP	14 55 56.2	-0.7
CLL				esPKiKP	sPKiKP	14 56 00.0	-0.2
CLL				ex	x	14 58 26.0	
CLL				ePP	PP	14 58 35.0	+2.0
CLL				esPP		14 58 45.0	
CLL				eSKPbc	SKPbc	14 59 19.0	+1.5
CLL				ePKSab	PKSab	14 59 30.0	+1.4
CLL				eSPP	SPP	15 10 42.0	
CLL				eSS	SS	15 16 48.0	+6.4
CLL				ex	x	15 17 54.0	
CLL				e(SSS)		15 21 36.0	
CLL				Lm	MLR	15 58 00.0	
	comp=N,900nm,21.6s						
CLL				Lm	MLR	15 58 00.0	
	comp=E,400nm,20.9s						
CLL				Lm	MLR	15 58 00.0	
	comp=Z,1µm,21.4s						
MDVR	Moldovita	138.14	323	⇑P	PKPdf	14 55 46.0	+0.2
KRUC	Moravsky	138.22	331	ePKP	PKPdf	14 55 45.8	0.0
VTS	Vitosha	138.37	319	⇓P	PKPdf	14 55 45.4	-1.1
VTS	Vitosha	138.37	319	⇓PKIKP	PKPdf	14 55 45.4	-1.1
PRU	Pruhonice	138.39	333	ePKIKP	PKiKP	14 55 47.3	-0.9
PRU				MLR	MLR		
	comp=Z,1µm,20.2s						
PRU	Pruhonice	138.39	333	ePKPDF	PKiKP	14 55 47.3	-0.9
PRU				AMS	AMS	15 59 30.0	
	comp=Z,1µm,20.2s						
TREC	Trest	138.47	332	AMS	AMS	15 57 10.0	
	comp=Z,1µm,20.5s						
MPLH	Magyarpolny	138.96	328	PKP	PKiKP	14 55 51.3	+1.9
MORH	Mrgy, Hungar	139.00	326	⇓P	PKiKP	14 55 49.0	-0.5
MORH	Mrgy, Hungar	139.00	326	PKP	PKiKP	14 55 49.0	-0.5
FRGS	Fruska Gora	139.01	324	⇓P	PKPdf	14 55 48.4	+1.0
NKC	Novy Kostel	139.08	335	ePKIKP	PKiKP	14 55 50.3	+0.7
NKC				MLR	MLR		
	comp=Z,1µm,23.0s						
NKC	Novy Kostel	139.08	335	ePKPDF	PKiKP	14 55 50.3	+0.7
NKC				AMS	AMS	15 58 50.0	
	comp=Z,1µm,23.0s						
RONA	Rosalia, Austr	139.22	330	eP	PKPdf	14 55 46.0	-1.7
	comp=Z,5.3nm,1.0s						
CONA	Conrad Observa	139.27	330	eP	PKPdf	14 55 44.8	-3.1
	comp=Z,4.2nm,0.8s						
CKRC	Cesky Krumlov	139.35	332	ePKPDF	PKPdf	14 55 46.6	-1.3
CKRC				AMS	AMS	16 01 20.0	
	comp=Z,700nm,20.5s						
KOVH	Kovagotottos	139.37	327	PKP	PKPdf	14 55 46.0	-2.0
KHC	Kasperske Hory	139.44	333	ePKIKP	PKPdf	14 55 44.0	-4.1
KHC				e		14 55 50.7	
KHC				e		15 11 02.8	
KHC				MLR	MLR		
	comp=Z,1µm,24.8s						
KHC	Kasperske Hory	139.44	333	ePKPpre	PKPpre	14 55 44.0	
KHC				ePKPDF	PKiKP	14 55 50.7	+0.3
KHC				ex	x	15 11 02.8	
KHC				AMS	AMS	16 00 00.0	
	comp=Z,1µm,24.8s						
STIP	Stip	139.52	318	i P	PKiKP	14 55 51.4	+0.7
DIVS	Divibare	139.54	323	IAMs_20	IAMs_20	15 59 03.2	
	comp=Z,704nm,22.0s						
GERES	GERESS Array B	139.60	333	PKhKP	PKPpre	14 55 44.2	
	comp=Z,1.0nm,0.7s,baz=75,slow=1.5,SNR=4.8						
SKO	Skopje	139.85	319	i P	PKPdf	14 55 38.6	-10
GRA1	Grafenberg Arr	140.00	336	IAMs_20	IAMs_20	16 00 04.2	
	comp=Z,979nm,21.0s						
MOA	Molln	140.08	331	eP	PKPdf	14 55 44.3	-5.0
	comp=Z,4.2nm,0.9s						
BIOA	Bad Ischl, Aus	140.48	332	eP	PKPdf	14 55 46.6	-3.4
	comp=Z,1.7nm,0.4s						
SOKA	Soboth	140.55	329	eP	PKPdf	14 55 46.3	-4.0
	comp=Z,2.5nm,0.8s						
PDG	Podgorica	140.94	321	IAMs_20	IAMs_20	16 00 22.4	
	comp=Z,746nm,22.0s						
KBA	Koelnbreinsper	141.07	331	eP	PKPdf	14 55 45.4	-5.9
	comp=Z,2.3nm,0.5s						
BTNL	Ternell	141.09	341	dPKPab	PKiKP	14 55 54.2	+0.5
BTNL				dpPKPdf	sPKPdf	14 56 01.6	-2.2
BTNL				dpPKiKP	pPKiKP	14 56 04.5	+1.2
MEM	Membach	141.12	341	dPKPdf	PKPdf	14 55 48.5	-2.6
MEM				dpPKPdf	sPKPdf	14 56 02.5	-1.3
BHOU	Houvegnez	141.34	341	dPKP	PKiKP	14 55 55.5	+1.3
BHOU				dpPKPdf	sPKPdf	14 56 02.7	-1.6
STU	Stuttgart	141.53	336	IAMs_20	IAMs_20	16 00 54.7	
	comp=Z,637nm,20.0s						
BGES	Gesves	141.60	341	dPKPdf	PKPdf	14 55 50.3	-1.6
BGES				dPKP	PKiKP	14 55 56.4	+1.6
BGES				dpPKPdf	sPKPdf	14 56 03.4	-1.3
WATA	Walderalm	141.68	333	eP	PKPdf	14 55 47.9	-4.4
	comp=Z,4.0nm,0.9s						
ABTA	Abfaltersbach	141.70	332	eP	PKPdf	14 55 48.4	-3.9
	comp=Z,9.4nm,1.3s						
WTTA	Wattenberg	141.71	333	eP	PKPdf	14 55 48.5	-4.0
RCHB	Rochefort	141.76	341	dPKiKP	PKiKP	14 55 55.0	0.0
BMRD	Maredsous	141.77	342	dPKiKP	PKiKP	14 55 54.9	-0.1
BMRD				dpPKPdf	sPKPdf	14 56 03.8	-1.2
MOTA	Moosalm	141.88	333	eP	PKPdf	14 55 47.0	-5.7
	comp=Z,17nm,1.2s						
WLF	Walferdange	141.88	340	dPKPdf	PKPdf	14 55 48.7	-3.8
RETA	Reutte	141.91	334	eP	PKPdf	14 55 49.1	-3.5
	comp=Z,3.4nm,0.7s						
SQTA	Sankt Quirin	141.93	333	eP	PKPdf	14 55 46.8	-6.0
	comp=Z,2.8nm,0.4s						
DOU	Dourbes	142.00	342	dPKPdf	PKPdf	14 55 50.3	-2.4
DOU				dPKP	PKiKP	14 55 58.5	+2.9
FETA	Feichten	142.29	333	eP	PKPdf	14 55 49.5	-4.0
	comp=Z,18nm,1.5s,SNR=7.1						
DAVA	Damuels	142.44	334	eP	PKPdf	14 55 48.4	-5.4
	comp=Z,15nm,1.4s,SNR=7.7						
ECH	Echery	142.76	338	IAMs_20	IAMs_20	16 02 10.2	
	comp=Z,692nm,20.0s						
MATE	Matera	143.54	321	⇓P	PKPdf	14 55 54.9	-0.7
TIP	Timpagrande	144.36	319	⇑P	PKPdf	14 55 56.4	-0.8
TIP	Timpagrande	144.36	319	PKPdf	PKPbc	14 55 56.3	+0.7
TIP				IAMs_20	IAMs_20	16 05 45.0	
	comp=Z,525nm,21.0s						
AQU	L'Aquila	144.37	326	PKIKP	PKPbc	14 55 56.0	+0.5
AQU	L'Aquila	144.37	326	PKPdf	PKPbc	14 55 56.0	+0.4
AQU				IAMs_20	IAMs_20	16 03 21.0	
	comp=Z,958nm,22.0s						
PAOL	Paolisi	144.58	323		PKPab	14 55 56.0	0.0
MSSA	Maissana	144.91	332		PKPab	14 55 56.9	-0.3
CASP	Castiglione de	145.40	328		PKPbc	14 55 58.7	-0.1
VSL	Villasalto	148.55	326	IAMs_20	IAMs_20	16 06 53.6	
	comp=Z,597nm,22.0s						
RCBR	Riachuelo	149.37	130	IAMs_20	IAMs_20	15 57 15.6	
	comp=Z,727nm,21.0s						
KEST	Kesra	151.13	320	PKPbc	PKPbc	14 56 14.3	-0.1
	comp=Z,46nm,0.8s,baz=118,slow=1.9,SNR=15						
CMAH	Djebel Manchou	151.67	324	P	PKPbc	14 56 15.4	-0.2
ABSA	Djebel Ababsia	151.88	323	P	PKiKP	14 56 16.4	-0.1
CKFL	Kef-Lekhel	152.22	324	P	PKiKP	14 56 17.4	+0.2
PBRG	Braganca	152.55	350	ePKPbc	PKiKP	14 56 18.1	+0.5
DFRA	Djebel Bou Aff	152.59	326	P	PKiKP	14 56 18.4	+0.4
PGAV	Gavieira, Arco	152.62	352	ePKPbc	PKiKP	14 56 19.9	+2.1
PGAV	Gavieira, Arco	152.62	352	ePKPab	PKPab	14 56 28.6	+0.6
PGAV				i LQ	LQ	14 56 30.8	
PGAV	Gavieira, Arco	152.62	352	eLR	LR	15 52 32.1	
	comp=Z,702nm,20.0s						
CTEI	Djebel Teioual	152.64	324	P	PKPbc	14 56 17.8	-0.1
PCAB	Cabril	152.84	352	ePKPbc	PKiKP	14 56 19.9	+1.7
PCAB				i LQ	LQ	14 56 41.5	
POLO	Lamas de Olo	153.13	351	ePKPbc	PKiKP	14 56 20.6	+1.7
POLO				i LQ	LQ	14 56 36.5	
MVO	Moncorvo	153.22	350	ePKPbc	PKiKP	14 56 19.8	+0.8
MVO				i LQ	LQ	14 56 36.2	
MVO	Moncorvo	153.22	350	eLR	LR	15 53 23.4	
	comp=Z,880nm,20.0s						
PVIS	Viseu	153.79	351	ePKPbc	PKiKP	14 56 22.1	+1.9
ESDC	Sonseca Array	153.99	344	PKP	PKPdf	14 56 10.6	-2.0
	comp=Z,0.2nm,0.4s,baz=350,slow=2.9,SNR=2.5						
ESDC				PKPbc	pPKPdf	14 56 21.1	-1.0
	comp=Z,2.6nm,0.8s,baz=355,slow=3.5,SNR=6.7						
ESDC				PP	PP	15 00 06.7	-0.7
	comp=Z,0.5nm,0.9s,baz=15,slow=6.2,SNR=3.0						
MTE	Manteigas	154.05	351	ePKPdf	PKPdf	14 56 15.2	+2.5
MTE				i LQ	LQ	14 56 40.2	
MTE	Manteigas	154.05	351	eLR	LR	15 53 28.3	
	comp=Z,617nm,20.0s						
PCAS	Casmilo, Conde	154.53	352	ePKPab	PKPab	14 56 38.5	+2.5
PCAS				i LQ	LQ	14 56 48.2	
PCBR	Castelo Branco	154.59	350	ePKPbc	PKiKP	14 56 23.9	+2.1
PCBR	Castelo Branco	154.59	350	ePKPab	PKPab	14 56 38.2	+1.9
PCBR				i LQ	LQ	14 56 48.5	
PMRV	Marv??o	154.97	350	ePKPbc	PKiKP	14 56 23.3	+0.6
PMRV	Marv??o	154.97	350	ePKPab	PKPab	14 56 38.8	+0.8
PMRV				i LQ	LQ	14 56 50.5	
PMRV	Marv??o	154.97	350	eLR	LR	15 54 03.6	
	comp=Z,602nm,20.0s						
PESTR	Estremoz	155.55	350	i LQ	LQ	14 56 52.5	
LIS	Lisbon	155.93	353	ePKPdf	PKPdf	14 56 14.3	-0.8
LIS				IAMs_20	IAMs_20	16 11 15.6	
	comp=Z,7µm,59.3s						
LIS	Lisbon	155.93	353	ePKIKP	PKPdf	14 56 14.3	-0.8
PBAR	Barrancos	156.12	348	ePKPab	PKPab	14 56 45.6	+2.7
PBEJ	Beja	156.42	350	ePKPab	PKPab	14 56 46.3	+2.1
PNCL	Nicolau / Gran	156.44	351	ePKPab	PKPab	14 56 44.7	+0.5
PNCL				i LQ	LQ	14 56 50.4	
MESJ	Messejana	156.66	351	ePKPdf	PKPdf	14 56 15.5	-0.6
MESJ				IAMs_20	IAMs_20	16 06 53.4	
	comp=Z,819nm,13.9s						
MESJ	Messejana	156.66	351	ePKIKP	PKPdf	14 56 15.5	-0.6
PCVE	Castro Verde	156.83	350	ePKPdf	PKPdf	14 56 16.7	+0.3
PCVE	Castro Verde	156.83	350	ePKPab	PKPab	14 56 47.8	+1.9
PCVE				i LQ	LQ	14 56 58.9	
PVAQ	Vaqueiros	157.00	349	eLR	LR	15 55 07.6	
	comp=Z,776nm,22.0s						
PBDV	Barranco-do-Ve	157.19	350	ePKPab	PKPab	14 56 49.3	+1.7
MORF	Marmelete	157.25	351	ePKPdf	PKPdf	14 56 16.1	-0.9
MORF				IAMs_20	IAMs_20	16 17 32.8	
	comp=Z,788nm,16.0s						
MORF	Marmelete	157.25	351	ePKIKP	PKPdf	14 56 16.1	-0.9
PFVI	Vila Bisbo	157.44	351	i LQ	LQ	14 57 01.3	
PMOZ	Porto Moniz, M	161.63	11	eLR	LR	15 53 56.9	
	comp=Z,404nm,18.0s						
TORD	Torodi Ar. Bea	165.71	265	PKP	PKPdf	14 56 24.5	-1.9
	comp=Z,5.1nm,0.9s,baz=125,slow=2.2,SNR=12						
TORD				PKPab	PKPab	14 57 24.7	-0.9
	comp=Z,3.4nm,0.7s,baz=95,slow=3.2,SNR=4.5						
KIC	Kosan Boka	168.39	225	ePKIKP	PKPdf	14 56 27.9	-0.5
	comp=Z,10nm,0.8s						
KIC	Kosan Boka	168.39	225	ePKP1	PKPab	14 57 36.5	-0.8
	comp=Z,9.2nm,0.8s						
LIC	Lamto	168.48	223	ePKIKP	PKPdf	14 56 27.7	-0.8
	comp=Z,52nm,1.8s						
LIC	Lamto	168.48	223	ePKP1	PKPab	14 57 37.0	-0.6
	comp=Z,30nm,1.4s						
DBIC	Dimbokro	168.69	225	PKP	PKPdf	14 56 27.2	-1.4
	comp=Z,5.5nm,0.8s,baz=173,slow=8.1,SNR=5.3						
DBIC				PKPab	PKPab	14 57 37.6	-1.0
	comp=Z,4.7nm,0.8s,baz=144,slow=6.1,SNR=3.8						
TIC	Toumodi	168.78	225	ePKIKP	PKPdf	14 56 27.6	-1.1
TIC	Toumodi	168.78	225	ePKP1	PKPab	14 57 37.3	-1.7
KOWA	Kowa	171.37	269		PKPdf	14 56 29.4	-0.7

CNRM ***04*** *14:42:34.9, 36°.03N×5°.19W, h2^{km}, ml2.7*
MDD ***04*** *14:42:36.8±1.4, 35°.80N×5°.25W, h3^{km}±5^{km}, mb_Lg2.0/3, Error ellipse: s-maj=10.5km s-min=5.1km az=177.0*
SFS ***04*** *14:42:36.0, 35°.73N×5°.23W, h3^{km}, ML2.0, RESTINGA (MARRUECOS)*
ISC 04 14:42:36.1±0.9**, 35°.89N**±0°.03×**5°.25W**±0°.03**, h14**^{km}±7^{km}**, n14, σ1^{s}.69**/26**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECEU	Ceuta	0.10	274	Pg	Pg	14 42 39.5	+0.2
ECEU				Sg	Sb	14 42 40.7	-1.7
SMIR	Smir Dam	0.23	207	P	Pg	14 42 42.3	+1.1
SMIR				S	Sg	14 42 45.5	+0.9
EJIF	Jimena Fronter	0.59	343	Pg	Pn	14 42 50.2	+0.1
EJIF				Sg	Sn	14 42 59.4	-0.1
EMIJ	Mijas	0.78	30	Pg	Pg	14 42 51.5	+0.3
EMIJ				Sg	Sn	14 43 04.3	+0.1
EMIJ				i Vmb_Lg		14 43 08.1	
CHEFC	Chefchaouen	0.79	185	P	Pn	14 42 52.9	0.0
CHEFC				S	Sn	14 43 09.1	+4.6
PVLZ	Peæn de	1.06	132	P	Pg	14 42 58.2	+1.7
PVLZ				S	Sg	14 43 11.6	+1.4
ESPR	Espera	1.09	334	Pg	Pg	14 42 59.0	+1.8
ESPR				i Vmb_Lg		14 43 08.5	
PALE	Palemas	1.27	122	P	Pg	14 43 00.9	+0.4
PALE				S	Sg	14 43 15.3	-1.7
ELGU	Los Guajares,	1.64	53	Pn	Pb	14 43 05.6	-0.5
ELGU				Sn	Sb	14 43 26.8	+0.2
ELGU				i Vmb_Lg		14 43 30.6	
GOG	Mont Gurugu	1.96	109	P	Pb	14 43 10.6	-1.0
GOG				S	Sb	14 43 34.7	-1.2
PVAQ	Vaqueiros	2.49	308	ePn	Pn	14 43 18.5	+2.2
PVAQ	Vaqueiros	2.49	308	P	Pn	14 43 16.1	-0.1
PVAQ				S	Sn	14 43 46.7	+0.2
PBAR	Barrancos	2.69	328	ePn	Pb	14 43 22.3	-1.8
PBAR				eSn	Sn	14 43 52.7	+1.3
PBAR				A	A	14 43 57.1	
	2.8nm,0.3s						
MD31	MD31	3.04	172	P	Pb	14 43 27.3	-2.9
MD31				S	Sb	14 44 05.0	-2.2

IDC 04 14:50:36.6±5.9**, 17°.31S**×**172°.90W, h0**^{km}**, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=330.8km s-min=42.8km az=5.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.90	258	P	P	14 59 31.9	-0.5
	0.1nm,0.3s,baz=96,slow=7.6,SNR=7.3						
	0.1nm,0.3s						
ASAR	Alice Springs	50.00	253	P	P	14 59 33.4	+0.2
	0.2nm,0.4s,baz=88,slow=8.8,SNR=14						
	0.2nm,0.4s						
TORD	Torodi Ar. Bea	173.34	128	PKPab	PKPab	15 12 16.6	-0.5
	0.3nm,0.4s,baz=228,slow=3.7,SNR=3.6						

IDC 04 15:03:46.0±2.1**, 5°.75S**×**127°.22E, h0**^{km}**, mb3.4**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=192.1km s-min=28.4km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.71	154	Pn	Pn	15 07 30.4	+1.5
	0.1nm,0.3s,baz=334,slow=13,SNR=4.8						
WRA				Sn	Sn	15 10 24.8	+0.9
	0.1nm,0.3s,baz=333,slow=22,SNR=1.9						
	0.2nm,0.4s						
ASAR	Alice Springs	18.94	161	P	P	15 08 08.2	-0.6
	0.1nm,0.3s,baz=340,slow=9.1,SNR=12						
	0.5nm,0.6s						
MKAR	Makanchi Array	65.69	328	P	P	15 14 32.4	0.0
	0.2nm,0.5s,baz=141,slow=4.8,SNR=3.5						
	0.2nm,0.5s						

DJA ***04*** *15:20:55.2±0.4, 1°S±2°×13°0E±°, h18^{km}±3^{km}, M5.0/56, mb5.1/56, mB5.5/28, MLv5.1/16, Mw(mB)4.9/28, MwMwp4.6/2, Mwp5.0/2*
BJI ***04*** *15:20:55.0±0.0, 0°.70S×130°.00E, h40^{km}, mb4.6/46, mB5.1/21, Ms4.5/13, Ms7 4.3/12*
GCMT ***04*** *15:20:55.6±0.2, 0°.56S±0°.02×129°.98E±0°.02, h23^{km}±1^{km}, MW5.0/94, Moment Tensor Solution. s23,c28; s94,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.30±.21; $M_{\theta\theta}$2.60±.12; $M_{\phi\phi}$-3.90±.16; $M_{r\theta}$-0.03±.20; $M_{\theta\phi}$-1.89±.12; $M_{\phi r}$0.47±.22; Best double couple: $M_0$3.78400×10^{16} NP1:ϕ_s240.00000°, δ83.00000°, λ180.00000°. NP2: ϕ_s330.00000°, δ90.00000°, λ7.00000°. Principal axes: T 3.1230, Plg5.0000°, Azm195.0000°; N 1.3210, Plg83.0000°, Azm333.0000°; P -4.4440, Plg4.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***04*** *15:20:56.6±2.7, 0°.64S±0°.07×129°.98E±0°.05, h31^{km}±4^{km}, mb4.9/77 Error ellipse: s-maj=10.6km s-min=7.0km az=201.0*
IDC ***04*** *15:20:57.3±1.5, 0°.67S×130°.14E, h48^{km}±14^{km}, mb4.3/19, mbtmp4.6/23, ML4.9/3, MS4.1/22, Error ellipse: s-maj=14.9km s-min=9.7km az=67.0*
ISC 04 15:20:55.6±0.5**, 0°.70S**±0°.04×**129°.98E**±0°.04**, h26**^{km}±3^{km}**, h26**^{km}**:pP-P, n272, σ1^{s}.59**/264**, mb4.8**/68**, MS4.1**/24**, 6C-3D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.29	97	P	Pn	15 21 17.9	-0.1
SWI				S	Sb	15 21 35.4	0.0
SIJI	Sorong	1.30	98	P	Pn	15 21 17.6	-0.6
	8µm,0.3s,baz=270,slow=12						
SIJI				S	Sb	15 21 36.0	+0.4
	5µm,0.4s,baz=55,slow=21,SNR=32						
SIJI				LR	LR	15 21 44.4	
	comp=Z,6µm,19.4s,baz=37,slow=41						
LBMI	Labuha	2.48	271	P	Pn	15 21 33.9	-0.5
LBMI				S	Sn	15 22 03.5	-0.3
MSAI	Masohi	2.83	202	P	Pn	15 21 42.6	+3.3
TNTI	Ternate	2.99	299	Pn	Pn	15 21 40.6	-0.8
TNTI	Ternate	2.99	299	P	Pn	15 21 40.6	-0.8
AAI	Ambon	3.46	211	P	Pn	15 21 50.0	+2.1
SANI	Sanana	4.21	251	P	Pn	15 21 57.3	-0.9
SANI	Sanana	4.21	251	P	Pn	15 21 57.6	-0.6
KMSI	Cibinong	6.13	282	P	Pn	15 22 24.7	+0.1
	1.5nm4µm416nm,0.5s						
SRPI	Serui, Papua	6.37	101	P	Pn	15 22 29.2	+1.3
	0.8nm190nm,0.6s						
LUWI	Luwuk	7.21	267	Pn	Pn	15 22 38.6	-0.9
LUWI	Luwuk	7.21	267	P	Pn	15 22 39.5	0.0
	1.5nm4µm275nm,0.9s						
LUWI	Luwuk	7.21	267	P	Pn	15 22 39.7	+0.2
SAUI	Saumlaki	7.36	170	Pn	Pn	15 22 41.4	-0.1
SAUI	Saumlaki	7.36	170	P	Pn	15 22 41.9	+0.4
	9.3nm21µm2µm,0.6s						
MRSI	Marisa	8.12	278	P	Pn	15 22 50.3	-1.7
	1µm110nm,0.6s						
APSI	Ampana	8.33	268	P	Pn	15 22 54.7	-0.2
	7µm682nm,0.6s						
BBSI	Bau Bau	8.79	237	P	Pn	15 23 03.2	+2.0
	155nm16nm,0.8s						
SMPI	Sarmi	8.82	98	P	Pn	15 23 02.7	+1.1
	34nm,1.3s						
KCP	Kidapawan	9.08	328	⇓eP	Pn	15 23 05.5	+0.4
TOLI2	Tolitoli	9.37	281	Pn	Pn	15 23 08.0	-1.2
TOLI2	Tolitoli	9.37	281	P	Pn	15 23 11.1	+2.0
MPSI	Mapaga	10.13	276	P	Pn	15 23 19.9	+0.3
	1µm50nm,1.0s						
TTSI	Tana Toraja	10.42	257	P	Pn	15 23 25.9	+2.4
	926nm83nm,0.7s						
BNSI	Bone	10.53	249	P	Pn	15 23 25.6	+0.7
	48nm,1.0s						
SPSI	Sidrap Palu	10.71	252	P	Pn	15 23 29.2	+1.8
	1µm125nm,0.6s						
BKSI	Bulukumba	10.86	245	P	Pn	15 23 32.0	+2.5
	1µm91nm,0.6s						
BSSI	Bau Bau, Buton	10.90	240	P	Pn	15 23 32.7	+2.5
	645nm50nm,0.7s						
MMRI	Maumere	11.03	224	Pn	Pn	15 23 34.8	+3.0
MMRI	Maumere	11.03	224	P	Pn	15 23 29.6	-2.3
	52nm,1.5s						
KAPI	Kappang	11.08	247	P	Pn	15 23 35.2	+2.7
	3.5nm,0.3s,baz=48,slow=5.5,SNR=20						
	34nm,0.7s						
KAPI	Kappang	11.08	247	Pn	Pn	15 23 34.7	+2.2
BATI	Baumata	11.35	213	P	Pn	15 23 37.5	+1.3
	5.1nm,0.3s,baz=126,slow=2.7,SNR=13						
BATI				LR	LR	15 29 11.9	
	comp=Z,476nm,19.9s,baz=23,slow=43						
	44nm,0.8s						
BATI	Baumata	11.35	213	P	Pn	15 23 38.4	+2.2
	796nm72nm,1.0s						
MTN	Manton Dam	12.12	175	P	Pn	15 23 44.3	-2.5
	baz=12,SNR=623						
MTN	Manton Dam	12.12	175	Pn	Pn	15 23 43.6	-3.2
MTN	Manton Dam	12.12	175	P	Pn	15 23 45.1	-1.7
KDU	Kakadu	12.17	168	P	Pn	15 23 44.2	-3.2
	baz=12,SNR=293						
KDU	Kakadu	12.17	168	P	Pn	15 23 44.3	-3.1
MYLDM	Lahad Datu	12.87	297	Pn	Pn	15 23 57.7	+0.7
WBSI	Waikabubak, Su	13.78	230	P	P	15 24 22.2	+4.4
PLAI	Plampang	14.59	236	P	Pn	15 24 21.9	+1.3
	2µm109nm,1.3s						
KNRA	Kununurra	14.93	185	P	Pn	15 24 21.0	-4.1
	baz=15,SNR=125						
KNRA				S	Sn	15 26 58.0	-12
	baz=15						
KNRA	Kununurra	14.93	185	Pn	Pn	15 24 21.5	-3.7
KNRA	Kununurra	14.93	185	P	Pn	15 24 21.5	-3.7
MTKI	Muara Teweh, K	15.08	269	P	Pn	15 24 27.9	+0.7
	3µm29nm,0.8s						
BBKI	Banjar Baru	15.37	259	P	Pn	15 24 33.0	+2.0
	62nm,1.0s						
SRBI	Singaraja	16.44	243	P	P	15 24 53.6	+6.3
JCNP	Jose Panganiba	16.54	334	⇑eP	P	15 24 48.4	0.0
LQP	Lukban	16.92	331	⇓eP	Pn	15 24 43.6	-7.3
KMMI	Kalianget	17.17	248	P	P	15 25 11.3	+16
ABJI	Asem Bagus	17.20	245	P	P	15 25 08.9	+13
MANU	Manus Island	17.43	95		P	15 24 58.4	+0.1
JAGI	Jajag, Banyuwa	17.55	243	P	P	15 24 59.3	-0.3
JAGI				IAmb	IAmb	15 25 09.7	
	comp=Z,61nm,0.9s						
JAGI	Jajag, Banyuwa	17.55	243	P	P	15 25 00.0	+0.4
	comp=Z,75nm,1.0s						
FITZ	Fitzroy Crossi	17.81	194	P	Pn	15 24 58.1	-3.7
	comp=Z,24nm,0.6s,baz=26,slow=9.2,SNR=47						

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FITZ  Fitzroy Crossi   17.81 194   P      Pn       15 24 58.2  -3.7
      baz=18,SNR=29
FITZ  Fitzroy Crossi   17.81 194   Pn     Pn       15 24 57.6  -4.2
SBUM  Sibu             18.03 280          Pn       15 25 03.3  -1.3
GMJI  Gumukmas         18.11 245   P      P        15 25 06.3  +0.5
      comp=Z,87nm,1.0s
STKI  Sintang          18.52 272   P      Pn       15 25 11.1  +0.5
      comp=Z,20nm,1.0s
COEN  Coen             18.55 136   P      P        15 25 09.7  -0.9
      baz=18,SNR=36
COEN  Coen             18.55 136   P      P        15 25 08.2  -2.5
COEN  Coen             18.55 136   P      P        15 25 10.3  -0.3
PMG   Port Moresby     19.16 117   P      P        15 25 15.0  -2.3
      comp=Z,16nm,1.0s,baz=273,slow=17,SNR=2.2
PMG                                LR     LR       15 35 07.1
      comp=Z,1µm,19.3s,baz=280,slow=45
PMG   Port Moresby     19.16 117   P      P        15 25 17.6  +0.2
PMG                                IAmb   IAmb     15 25 21.7
      comp=Z,72nm,0.9s
PMG   Port Moresby     19.16 117   P      Pn       15 25 20.8  +2.4
PMG   Port Moresby     19.16 117   P      Pn       15 25 20.7  +2.4
WB0   Warramunga Arr   19.44 167   P      P        15 25 17.4  -3.0
PWJI  Pagerwojo        19.52 248   P      Pn       15 25 22.4  -0.2
      comp=Z,75nm,1.6s
WRAB  Tennant Creek    19.59 168   P      P        15 25 19.6  -2.4
WRAB  Tennant Creek    19.59 168   P      P        15 25 20.7  -1.3
WRA   Warramunga Arr   19.60 168   P      P        15 25 20.0  -2.1
      comp=Z,5.7nm,0.3s,baz=345,slow=10,SNR=68
      comp=Z,32nm,0.5s
WRA   Warramunga Arr   19.60 168   P      P        15 25 19.2  -2.9
WB2   Warramunga Arr   19.60 168   P      P        15 25 20.6  -1.5
      baz=19
WB2   Warramunga Arr   19.60 168   P      P        15 25 19.4  -2.7
WR0   Warramunga Arr   19.66 167   P      P        15 25 21.5  -1.2
WR0                                IAmb   IAmb     15 25 24.9
      comp=Z,85nm,1.1s
KSM   Kuching          19.79 276   P      P        15 25 23.4  -0.8
KSM                                IAmb   IAmb     15 25 45.2
      comp=Z,46nm,1.0s
KSM   Kuching          19.79 276   P      Pn       15 25 25.5  -0.3
APYP  Conner           20.35 335⇓eP    P        15 25 31.1  +0.9
GUMO  Guam             20.47  46   LR     LR       15 32 17.8
      comp=Z,403nm,21.4s,baz=224,slow=34
QIS   Mount Isa        21.87 155   P      P        15 25 47.3  +0.6
      baz=22,SNR=77
QIS   Mount Isa        21.87 155   P      P        15 25 48.1  +1.4
KPJI  Karang Pucung    22.00 252   P      P        15 25 56.2  +8.1
KRVT  Keravat (AS076   22.31 100   P      P        15 25 50.1  -1.4
      comp=Z,39nm,0.8s,baz=223,slow=4.9,SNR=18
KRVT                               LR     LR       15 34 02.7
      comp=Z,494nm,19.8s,baz=50,slow=35
      comp=Z,39nm,0.8s
MTSU  Mount Surprise   22.33 142   P      P        15 25 51.4  -0.3
      baz=22,SNR=22
MTSU  Mount Surprise   22.33 142   P      P        15 25 53.8  +2.1
RABL  Rabaul           22.43  99   P      P        15 25 54.1  +1.3
MBWA  Marble Bar       22.67 206   P      P        15 25 53.3  -1.9
MBWA                               IAmb   IAmb     15 26 05.8
      comp=Z,46nm,0.9s
MBWA  Marble Bar       22.67 206   P      P        15 25 54.8  -0.4
PSA00 Pilbara Seismi   22.98 205   P      P        15 25 57.2  -1.3
PSA00                              IAmb   IAmb     15 26 00.5
      comp=Z,39nm,0.8s
PSA00 Pilbara Seismi   22.98 205   P      P        15 25 59.2  +0.7
AS31  Alice Springs    23.15 171   P      P        15 26 00.7  +0.5
ASAR  Alice Springs    23.15 171   P      P        15 26 00.1  -0.1
      comp=Z,79nm,0.7s,baz=351,slow=9.2,SNR=853
ASAR                               S      S        15 30 09.7  -0.6
      comp=Z,4.0nm,0.8s,baz=352,slow=25,SNR=3.8
ASAR                               LR     LR       15 36 21.1
      comp=Z,734nm,18.9s,baz=358,slow=40
      comp=Z,79nm,0.7s
ASAR  Alice Springs    23.15 171   P      P        15 26 00.8  +0.6
PPBI  Pangkal Pinang   23.88 266   P      P        15 26 07.4   0.0
      comp=Z,5µmcomp=Z,29nm,0.4s
WRKA  Warakurna        24.25 184   P      P        15 26 11.4  +0.6
      baz=24,SNR=282
WRKA  Warakurna        24.25 184   P      P        15 26 11.6  +0.8
DLV   T  Lat           24.77 301   P      P        15 26 15.8  +0.1
DLV                                IAmb   IAmb     15 26 26.4
      comp=Z,24nm,0.9s
CTA   Charters Tower   25.00 141   P      P        15 26 15.9  -1.7
      comp=Z,14nm,0.9s,baz=330,slow=10,SNR=15
CTA                                LR     LR       15 37 47.4
      comp=Z,655nm,18.6s,baz=323,slow=40
      comp=Z,14nm,0.9s
CTA   Charters Tower   25.00 141   P      P        15 26 19.3  +1.6
CTAO  Charters Tower   25.00 141   P      P        15 26 18.2  +0.6
CTAO                               IAmb   IAmb     15 26 34.2
      comp=Z,25nm,0.8s
CTAO  Charters Tower   25.00 141   P      P        15 26 19.2  +1.6
DSRI  Dabo             25.40 270   P      P        15 26 21.4  +0.1
      comp=Z,13nm,0.8s
KLI   Kotabumi         25.43 260   P      P        15 26 22.3  +0.8
      comp=Z,3µmcomp=Z,134nm,0.9s
TPUB  Ta-pu            25.53 340   P      P        15 26 21.1  -1.2
TPUB                               IAmb   IAmb     15 26 32.6
      comp=Z,40nm,0.9s
SSLB  Suanglung        25.87 341   P      P        15 26 23.8  -1.6
SSLB                               IAmb   IAmb     15 26 33.7
      comp=Z,27nm,0.9s
KASI  Kota Agung       25.89 259   P      P        15 26 25.2  -0.5
      comp=Z,53nm,1.0s
LWLI  Liwa             26.23 260   P      sP       15 26 34.7  -5.1
LWLI                               pP     pP       15 26 33.8  -2.8
MYKOM Kota Tinggi      26.24 275   P      P        15 26 28.3  -0.7
GIRL  Giralia          26.66 214   P      P        15 26 34.4  +1.9
JOW   Kunigami         27.42 357   LR     LR       15 36 27.3
      comp=Z,436nm,20.4s,baz=222,slow=34
OOD   Oodnadatta       27.50 169   P      P        15 26 40.9  +0.9
MEEK  Meekatharra      28.02 202   P      P        15 26 44.3  -0.5
      baz=28,SNR=12
MEEK  Meekatharra      28.02 202   P      P        15 26 44.5  -0.2
INKA  Innaminka        28.80 160   P      P        15 26 52.8  +1.1
QLP   Quilpie          29.16 153   P      P        15 26 55.8  +0.9
      baz=29,SNR=5.6
PPI   Padang Panjang   29.58 270   P      P        15 27 12.2   +13
MULG  Mulgathing       29.68 173   P      P        15 27 00.3  +0.9
FORT  Forrest          29.97 183   P      P        15 27 02.5  +0.4
      baz=30,SNR=32
FORT  Forrest          29.97 183   P      P        15 27 02.2  +0.1
FORT  Forrest          29.97 183   P      P        15 27 02.2  +0.1
RK1H  Rockhampton Ha   30.09 140   P      P        15 27 05.9  +2.7
LCRK  Leigh Creek      30.61 166   P      P        15 27 08.8  +1.2
HNR   Honiara          31.06 107   LR     LR       15 41 25.0
      comp=Z,199nm,19.8s,baz=288,slow=40
MORW  Morawa           31.19 204   P      P        15 27 12.7  -0.1
      baz=31,SNR=4.1
MORW  Morawa           31.19 204   P      P        15 27 12.9   0.0
RPSI  Rantau Prapat    31.23 276   P      P        15 27 14.4  +1.1
PSI   Prapat           31.24 277   P      P        15 27 14.4  +0.8
      comp=Z,4.1nm,0.4s,baz=90,slow=10,SNR=6.4
PSI                                LR     LR       15 40 51.0
      comp=Z,400nm,20.0s,baz=95,slow=38
      comp=Z,4.1nm,0.4s
EIDS  Eidsvold         31.89 142   P      P        15 27 19.1  +0.1
      baz=32,SNR=4.3
EIDS  Eidsvold         31.89 142   P      P        15 27 17.9  -1.1
EIDS                               IAmb   IAmb     15 27 35.0
      comp=Z,17nm,0.9s
BLDU  Ballidu          32.31 202   P      P        15 27 23.0  +0.3
      baz=32,SNR=13
BLDU  Ballidu          32.31 202   P      P        15 27 23.2  +0.5
BBOO  Buckleboo        32.45 170   P      P        15 27 24.4  +0.5
      baz=32,SNR=11
BBOO  Buckleboo        32.45 170   P      P        15 27 24.4  +0.5
BBOO  Buckleboo        32.45 170   P      P        15 27 24.4  +0.5
GSI   Gunungsitoli     32.46 274   P      P        15 27 28.2  +3.9
KLBR  Kellerberrin     32.83 199   P      P        15 27 27.6  +0.3
      baz=33,SNR=7.6
KLBR  Kellerberrin     32.83 199   P      P        15 27 27.6  +0.3
STKA  Stephens Creek   32.90 162   LR     LR       15 41 02.9
      comp=Z,216nm,19.7s,baz=336,slow=37
STKA  Stephens Creek   32.90 162   P      P        15 27 28.7  +0.9
      baz=33,SNR=21
STKA  Stephens Creek   32.90 162   P      P        15 27 28.0  +0.2
STKA  Stephens Creek   32.90 162   P      P        15 27 28.9  +1.1
HTT   Hallett          33.63 166   P      P        15 27 34.9  +0.6
      baz=34,SNR=8.0
HTT   Hallett          33.63 166   P      P        15 27 35.5  +1.3
MUN   Mundaring        33.73 201   P      P        15 27 35.4  +0.3
      baz=34,SNR=5.8
MUN   Mundaring        33.73 201   P      P        15 27 35.6  +0.6
CMSA  Cobar Meteorol   34.09 156   P      P        15 27 39.2  +1.0
      baz=34,SNR=11
CMSA  Cobar Meteorol   34.09 156   P      P        15 27 39.6  +1.4
NJ2   Nanjing          34.23 343  eP      P        15 27 40.6  +1.2
NJ2                                pmax   pmax
      comp=Z,13nm,0.8s
NWAO  Narrogin (SRO)   34.23 199   P      P        15 27 39.7  +0.3
WHN   Wuhan            34.45 336 ⇑P      P        15 27 46.2  +4.9
WHN                                pP     pP       15 27 50.7  +1.8
TWOA  Tennyson Woods   35.09 168   P      P        15 27 48.6  +1.8
CM31  Chiang Mai Arr   35.96 304   P      P        15 27 55.3  +0.8
CM31                               IAmb   IAmb     15 28 06.3
      comp=Z,18nm,0.8s
CMAR  Chiang Mai Arr   35.96 304   P      P        15 27 55.2  +0.7
      comp=Z,3.3nm,1.0s,baz=124,slow=7.1,SNR=20
CMAR                               PcP    PcP      15 30 21.9  +0.8
      comp=Z,1.1nm,0.7s,baz=140,slow=4.4,SNR=1.8
      comp=Z,3.3nm,1.0s
CMAR  Chiang Mai Arr   35.96 304   P      P        15 27 55.0  +0.5
ARMA  Armidale         36.01 147   P      P        15 27 55.8  +0.9
      baz=36,SNR=5.2
ARMA  Armidale         36.01 147   P      P        15 27 54.7  -0.2
ARMA                               IAmb   IAmb     15 28 12.0
      comp=Z,13nm,0.8s
ARMA  Armidale         36.01 147   P      P        15 27 56.1  +1.2
CHTO  Chiang Mai       36.13 304   P      P        15 27 56.1  +0.2
CHTO                               IAmb   IAmb     15 28 07.5
      comp=Z,21nm,0.9s
CHTO  Chiang Mai       36.13 304   P      P        15 27 56.8  +0.8
CHTO                               pP     pP       15 28 03.4  -0.2
ARPS  Mount Arapiles   37.54 164   P      P        15 28 09.3  +1.7
      baz=37,SNR=19
ARPS  Mount Arapiles   37.54 164   P      P        15 28 09.4  +1.7
MAJO  Matsushiro       37.83  11   P      P        15 28 07.9  -2.3
MAJO                               IAmb   IAmb     15 28 19.0
      comp=Z,15nm,0.9s
MJAR  Matsushiro Arr   37.83  11   P      P        15 28 07.7  -2.5
      comp=Z,6.3nm,0.8s,baz=179,slow=9.3,SNR=15
MJAR                               LR     LR       15 41 57.6
      comp=Z,318nm,21.7s,baz=190,slow=33
      comp=Z,6.3nm,0.8s
MJAR  Matsushiro Arr   37.83  11   P      P        15 28 07.5  -2.7
MJB9  Matsu-Tunnel     37.83  11   P      P        15 28 08.2  -2.0
MJB9                               IAmb   IAmb     15 28 18.9
      comp=Z,14nm,0.9s
KSRS  Korea Array      38.01 357   P      P        15 28 08.6  -3.0
      comp=Z,1.5nm,0.8s,baz=223,slow=14,SNR=4.4
KSRS                               LR     LR       15 42 35.5
      comp=Z,164nm,21.6s,baz=190,slow=34
      comp=Z,1.5nm,0.8s
PZH   PanZhiHua        38.37 317   P      P        15 28 15.3  +0.3
PZH                                S      S        15 34 09.9  +1.4
PZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,100nm,4.5s
PZH                                LR     LR
      comp=Z,660nm,21.1s
PZH                                LR     LR
      comp=Z,720nm,20.1s
CAN   Canberra         38.74 155   P      P        15 28 19.7  +1.8
CAN   Canberra         38.74 155   P      P        15 28 20.0  +2.1
KOUNC Koumac, New Ca   38.90 123   P      P        15 28 20.0  +0.6
KOUNC                              IAmb   IAmb     15 28 21.9
      comp=Z,18nm,1.1s
TOO   Toolangi         39.38 160   P      P        15 28 25.2  +1.9
TOO                                IAmb   IAmb     15 28 26.7
      comp=Z,28nm,1.2s
JMM   Marumori         39.65  13   P      P        15 28 25.2  -0.1
XAN   Xi'an            39.81 332   P      P        15 28 26.4  -0.5
XAN                                pP     pP       15 28 33.7  -0.9
XAN                                pmax   pmax
      comp=Z,6.0nm,1.1s
HNS   HongShan         40.45 341 ⇑P      P        15 28 39.6  +7.5
HNS                                pmax   pmax
      comp=Z,18nm,1.2s
DZM   Mont Dzumac      41.37 123   P      P        15 28 38.0  -2.0
      comp=Z,26nm,1.2s,baz=321,slow=4.3,SNR=8.9
      comp=Z,26nm,1.2s
DZM   Mont Dzumac      41.37 123   P      P        15 28 39.5  -0.5
DZM                                IAmb   IAmb     15 28 52.0
      comp=Z,31nm,1.1s
DZM   Mont Dzumac      41.37 123   P      P        15 28 43.4  +3.4
DZM   Mont Dzumac      41.37 123   P      P        15 28 40.7  +0.7
DZM                                pP     sP       15 28 50.2  -0.6
H11N1 WAKE ISLAND Hy   41.48  59   T      T        16 11 41.1
      baz=245,slow=74,SNR=28
H11N2 WAKE ISLAND Hy   41.49  59   T      T        16 11 44.0
      baz=245,slow=74,SNR=26
H11N3 WAKE ISLAND Hy   41.50  59   T      T        16 11 44.4
      baz=245,slow=74,SNR=28
BJT   Baijiatuau       42.44 344   P      P        15 28 47.2  -1.1
BJT                                IAmb   IAmb     15 28 57.0
      comp=Z,36nm,1.4s
BJI   Beijing          42.46 344   P      P        15 28 47.9  -0.6
BJI                                pP     pP       15 28 55.7  -0.6
BJI                                pmax   pmax
      comp=Z,12nm,0.8s
LZH   Lanzhou          43.94 329  eP      P        15 29 02.5  +1.7
LZH                                sP     sP       15 29 17.5  +5.8
LZH                                pmax   pmax
      comp=Z,18nm,1.5s
LZH                                LR     LR
      comp=Z,470nm,17.5s
LZH                                LR     LR
      comp=Z,320nm,18.7s
LZH                                LR     LR
      comp=Z,300nm,19.5s
USRK  Ussuriysk Ar.    44.73   2   P      P        15 29 05.1  -1.6
      comp=Z,6.6nm,0.7s,baz=174,slow=7.0,SNR=6.0
      comp=Z,6.6nm,0.7s
ASAJ  Asahikawa        46.02  13   LR     LR       15 46 36.8
      comp=Z,169nm,21.4s,baz=260,slow=34
XLT   XiLinHaoTe       46.11 346⇑iP     P        15 29 25.0  +7.2
XLT                                pP     sP       15 29 34.6  +5.9
XLT                                sP     pP       15 29 40.2   +15
XLT                                PP     PP       15 31 10.5  +4.3
XLT                                S      S        15 36 07.2  +5.1
XLT                                sS     sS       15 36 22.9  +8.0
XLT   XiLinHaoTe       46.11 346   SS     SS       15 39 27.9  +0.3
XLT                                pmax   pmax
      comp=Z,31nm,0.9s
XLT                                pmax   pmax
      comp=Z,180nm,5.9s
XLT                                LR     LR
      comp=N,24nm,14.8s
XLT                                LR     LR
      comp=E,490nm,16.5s
XLT                                LR     LR
      comp=Z,210nm,14.2s
GTA   Gaotai           48.54 329 ⇑P      P        15 29 36.8  -0.1
GTA                                pP     pP       15 29 44.8  +0.1
GTA                                sP     sP       15 29 49.5  +1.7
GTA                                pmax   pmax
      comp=Z,5.0nm,1.1s
GTA                                pmax   pmax
      comp=Z,72nm,7.2s
GTA                                LR     LR
      comp=Z,300nm,17.5s
GTA                                LR     LR
      comp=Z,200nm,18.7s
GTA                                LR     LR
      comp=Z,340nm,19.5s
GOMU  GeErMu           49.15 322   P      P        15 29 56.7   +15
GOMU                               pP     sP       15 29 58.1  +5.3
GOMU                               sP     pP       15 30 01.4   +12
GOMU                               pmax   pmax
      comp=Z,3.0nm,0.7s
RAMN  Ramite           49.96 307  eP      P        15 29 48.2  +0.1
MSVF  Nonsavu          50.17 113   LR     LR       15 49 52.0
      comp=Z,214nm,19.9s,baz=289,slow=35
GUN   Gumba            50.96 308  eP      P        15 29 55.4  -0.4
ULN   Ulaanbaatar      52.32 341   P      P        15 30 05.1  -0.2
ULN                                IAmb   IAmb     15 30 14.1
      comp=Z,13nm,0.8s
ULN   Ulaanbaatar      52.32 341   P      P        15 30 05.7  +0.3
ULN                                pP     pP       15 30 13.6  +0.4
SONM  Songino Array    52.52 340   LR     LR       15 53 46.3
      comp=Z,148nm,21.4s,baz=196,slow=38
KOLN  Koldanda         52.72 306  eP      P        15 30 08.7   0.0
      comp=Z,20nm,0.8s
DANN  Dangsing         52.84 307  eP      P        15 30 09.2  -0.5
PYUN  Piuthan          53.35 306  eP      P        15 30 13.2  -0.2
HYBB  Hyderabad (bro   53.73 292  eP      P        15 30 15.2  -0.9
LBZ   Lake Benmore     56.22 146   P      P        15 30 35.6  +2.0
TUWZ  Tuamarina        56.69 141   P      P        15 30 37.0   0.0
URZ   Urewera          57.11 137   P      P        15 30 40.1   0.0
URZ                                IAmb   IAmb     15 30 43.2
      comp=Z,17nm,1.0s
BKZ   Black Stump Fm   57.14 138   P      P        15 30 41.5  +1.1
WMQ   Urumqi           58.19 325  eP      P        15 30 48.6  +1.0
WMQ                                pmax   pmax
      comp=Z,17nm,0.9s
PETK  Petropavlovsk-   58.40  19   P      P        15 30 48.9  +0.1
      comp=Z,3.7nm,0.9s,baz=186,slow=8.8,SNR=6.1
PETK                               LR     LR       15 53 48.9
      comp=Z,118nm,22.0s,baz=192,slow=34
      comp=Z,3.7nm,0.9s
MA2   Magadan          62.27  12   P      P        15 31 16.1  +1.0
MA2                                IAmb   IAmb     15 31 24.1
      comp=Z,7.4nm,1.0s
MA2   Magadan          62.27  12   P      P        15 31 15.9  +0.7
MA2                                pP     pP       15 31 24.5  +1.3
YAK   Yakutsk          62.56 360   P      P        15 31 18.3  +1.2
YAK   Yakutsk          62.56 360   P      P        15 31 17.2  +0.2
YAK                                pP     pP       15 31 26.0  +0.9
MK31  Makanchi Array   63.02 325   P      P        15 31 20.5   0.0
MK31                               IAmb   IAmb     15 31 30.9
      comp=Z,6.1nm,0.8s
MKAR  Makanchi Array   63.02 325   P      P        15 31 20.1  -0.4
      comp=Z,5.3nm,0.7s,baz=122,slow=7.8,SNR=60
      comp=Z,5.3nm,0.7s
MKAR  Makanchi Array   63.02 325   P      P        15 31 20.2  -0.3
MAKZ  Makanchi         63.20 325   P      P        15 31 20.9  -0.8
MAKZ                               IAmb   IAmb     15 31 32.1
      comp=Z,8.1nm,0.9s
MAKZ  Makanchi         63.20 325   P      P        15 31 21.4  -0.3
KSH   Kashi            63.45 316   P      P        15 31 24.6  +1.0
KSH                                pP     sP       15 31 34.6  -0.1
KSH                                sP     pP       15 31 40.2  +8.5
KSH                                pmax   pmax
      comp=Z,5.0nm,0.9s
KDJ   Kajisay          63.79 319   P      P        15 31 26.3  +0.4
SHEM  Shemya Is, Ala   64.72  28   LR     LR       15 54 45.7
      comp=Z,122nm,20.9s,baz=204,slow=31
BOOM  Boomskoye usch   64.77 319   P      P        15 31 32.8  +0.4
BOOM                               IAmb   IAmb     15 31 48.5
      comp=Z,6.5nm,0.9s
ZAA0  Zalesovo Array   65.98 333   P      P        15 31 38.2  -1.4
ZAA0                               IAmb   IAmb     15 31 47.7
      comp=Z,11nm,0.9s
ZALV  Zalesovo Beam    65.98 333   P      P        15 31 38.8  -0.8
      comp=Z,5.7nm,0.9s,baz=109,slow=5.5,SNR=17
      comp=Z,5.7nm,0.9s
ZALV  Zalesovo Beam    65.98 333   P      P        15 31 37.4  -2.3
DRK   Karamyk          66.40 314   P      P        15 31 42.4  -0.6
KURK  Kurchatov        67.19 327   P      P        15 31 46.8  -0.7
KURK  Kurchatov        67.19 327 ⇑P      P        15 31 47.1  -0.3
GAR   Garm             67.30 313   P      P        15 31 47.0  -1.5
GAR                                IAmb   IAmb     15 31 54.8
      comp=Z,11nm,0.9s
KK31  Karatay Array    68.66 317   P      P        15 31 55.3  -1.7
KK31                               IAmb   IAmb     15 32 12.1
      comp=Z,15nm,1.4s
KKAR  Karatay Array    68.66 317   P      P        15 31 55.4  -1.5
KKAR                               IAmb   IAmb     15 32 12.1
      comp=Z,15nm,1.4s
KKAR  Karatay Array    68.66 317   P      P        15 31 55.0  -1.9
TIXI  Tiksi            72.23 360   P      P        15 32 17.7  -0.3
BRVK  Borovoye         72.85 327   P      P        15 32 20.9  -1.2
BRVK                               IAmb   IAmb     15 32 35.3
      comp=Z,15nm,0.9s
BILL  Bilibino         73.02  13   P      P        15 32 22.5  -0.4
NRIK  Noril'sk         75.48 346   P      P        15 32 36.8  -0.4
      comp=Z,1.5nm,0.4s,baz=163,slow=3.6,SNR=5.9
      comp=Z,1.5nm,0.4s
NRIK  Noril'sk         75.48 346   P      P        15 32 36.1  -1.1
GEYT  Alibeck          76.19 309   P      P        15 32 41.6  -0.3
      comp=Z,1.0nm,0.4s,baz=213,slow=9.5,SNR=2.2
      comp=Z,1.0nm,0.4s
SOCY  Socotra          76.46 283   P      P        15 32 42.4  -1.6
SOCY                               IAmb   IAmb     15 33 01.4
      comp=Z,11nm,0.9s
ABKAR Akbulak array    77.61 321   P      P        15 32 49.0  -0.7
VNDA  Vanda            78.67 173   P      P        15 32 54.4  -0.6
      comp=Z,4.2nm,0.8s,baz=314,slow=5.8,SNR=17
VNDA                               LR     LR       16 08 49.4
      comp=Z,100nm,18.2s,baz=325,slow=36
      comp=Z,4.2nm,0.8s
VNDA  Vanda            78.67 173   P      P        15 32 55.1  +0.1
SDPT  Sand Point       79.06  33   P      P        15 32 58.6  +1.0
SBA   Scott Base       79.55 173   P      P        15 33 01.2  +1.5
SBA                                IAmb   IAmb     15 33 18.9
      comp=Z,17nm,1.4s
MAW   Mawson           80.78 201   P      P        15 33 05.8  -0.7
      comp=Z,2.2nm,0.6s,baz=45,slow=9.1,SNR=3.6
MAW                                LR     LR       16 05 04.9
      comp=Z,97nm,21.6s,baz=34,slow=33
      comp=Z,2.2nm,0.6s
MAW   Mawson           80.78 201   P      P        15 33 06.3  -0.3
TTA   Tatalina         83.38  26   P      P        15 33 20.6  +0.2
VOI   Vohitsoka        83.42 248   P      P        15 33 21.6   0.0
M19K  Big River Lodg   83.86  27   P      P        15 33 23.0  +0.1
M19K                               IAmb   IAmb     15 33 40.0
      comp=Z,16nm,1.5s
KDAK  Kodiak Island    83.90  32   LR     LR       16 05 24.5
      comp=Z,112nm,22.0s,baz=270,slow=32
K20K  Telida           84.34  26   P      P        15 33 25.9  +0.6
K20K                               IAmb   IAmb     15 33 48.9
      comp=Z,9.5nm,1.1s
J20K  Nowinta River    84.49  25   P      P        15 33 26.8  +0.8
J20K                               IAmb   IAmb     15 33 49.5
      comp=Z,7.5nm,1.1s
CAST  Castle Rocks     85.22  26   P      P        15 33 29.4  -0.3
RND   Reindeer         86.66  26   P      P        15 33 35.2  -1.6
RND                                IAmb   IAmb     15 33 53.4
      comp=Z,8.5nm,1.0s
I23K  Minto, Yukon-K   86.70  25   P      P        15 33 37.0   0.0
TOLK  Toolik Lake Re   87.16  21   P      P        15 33 38.2  -1.0
ILAR  Eielson Array    87.69  25   P      P        15 33 39.1  -2.7
      comp=Z,0.8nm,1.0s,baz=258,slow=4.2,SNR=3.6
ILAR                               LR     LR       16 13 06.3
      comp=Z,66nm,18.8s,baz=169,slow=36
      comp=Z,0.8nm,1.0s
GURO  Guroymak-BITLI   88.82 308   P      P        15 33 46.1  -1.8
GURO                               IAmb   IAmb     15 34 03.1
      comp=Z,9.2nm,1.2s
QSPA  South Pole Qui   89.24 180   P      P        15 33 48.7  -0.5
K27K  Chicken          89.72  26   P      P        15 33 50.4  -1.0
I29M  Ogilvie Camp,    91.35  25   P      P        15 33 58.2  -0.7
I29M                               IAmb   IAmb     15 34 12.3
      comp=Z,5.0nm,1.0s
ARCES ARCESS Array B   95.69 340   P      P        15 34 18.4  -0.4
      comp=Z,1.0nm,0.7s,baz=64,slow=6.5,SNR=1.3
      comp=Z,1.0nm,0.7s
ARCES ARCESS Array B   95.69 340   P      P        15 34 20.0  +1.2
FINES FINESS Array B   97.24 332   P      P        15 34 24.6  -1.3
      comp=Z,1.8nm,0.9s,baz=318,slow=10,SNR=2.6
      comp=Z,1.8nm,0.9s
BBB   Bella Bella      97.85  37   LR     LR       16 16 24.0
      comp=Z,71nm,18.1s,baz=282,slow=34
YKA   Yellowknife Ar  102.12  25   P      Pdif     15 34 47.0  -0.7
      comp=Z,0.1nm,0.4s,baz=310,slow=11,SNR=2.4
PDAR  Pinedale Array  112.42  43   PKKPbc PKKPbc   15 50 26.7  +5.6
      comp=Z,0.3nm,0.8s,baz=149,slow=3.5,SNR=3.6
TXAR  Lajitas Array   121.56  56   PKP    PKPdf    15 39 45.3  -2.5
      baz=351,slow=11,SNR=1.8
TXAR                               PKKPbc PKKPbc   15 49 47.0  -1.1
      comp=Z,0.4nm,0.8s,baz=111,slow=6.9,SNR=4.3
TXAR  Lajitas Array   121.56  56   PKPdf  PKPdf    15 39 47.0  -0.9
TORD  Torodi Ar. Bea  127.32 286   PKP    PKPdf    15 39 57.1  -1.9
      comp=Z,0.8nm,0.7s,baz=64,slow=1.4,SNR=5.0
CPUP  Villa Florida   152.22 166   PKPbc  PKPbc    15 40 47.3  -2.5
      comp=Z,2.0nm,0.8s,baz=229,slow=0.8,SNR=3.7
CPUP                               PKPab  sPKPdf   15 40 56.1  +1.4
      comp=Z,4.7nm,0.8s,baz=236,slow=3.3,SNR=8.0
CPUP  Villa Florida   152.22 166          PKPbc    15 40 49.1  -0.8
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*BJI **04** 16:10:17.8±0.0, 38.°41N×141.°89E, h54^{km}, mb4.9/69, mB4.9/35, Ms4.2/35, Ms7 4.0/39*

*MOS **04** 16:10:19.4±0.9, 38.°68N×141.°76E, h47^{km}, mb5.2/49, Error ellipse: s-maj=5.9km s-min=4.1km az=102.0*

*JMA **04** 16:10:20.9±0.1, 38.°5N±0.°2×141.°8E±0.°5, h50^{km}, MD4.8/40, MW4.7/40, KINKAZAN REGION*

JMA Felt III J1 at KINKAZAN REGION .

*NIED **04** 16:10:20.9, 38.°53N×141.°82E, h50^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.93; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.35; $M_{\phi r}$0.90; Fault plane solution: $M_0$1.36000×10^{16} NP1: ϕ_s204.00000°, δ22.00000°, λ90.00000°. NP2:ϕ_s24.00000°,* *δ68.00000°,λ90.00000°.*

NEIC ***04*** *16:10:20.6,38°.52N×141°.75E,h51^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.51; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.53; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.03000×10^{16} NP1:ϕ_s181.13000°, δ15.78000°,λ74.19000°. NP2:ϕ_s17.53000°,δ74.83000°, λ94.40000°. Principal axes: T 1.0190, Plg60.0000°, Azm294.0000°; N 0.0286, Plg4.0000°, Azm196.0000°; P -1.0475, Plg30.0000°, Azm104.0000°;*

IDC ***04*** *16:10:20.4±1.5,38°.48N×141°.76E,h51^{km}±13^{km},mb4.4/32, mbtmp4.7/41,ML4.3/7,MS3.9/35 Error ellipse: s-maj=12.2km s-min=8.6km az=104.0*

NEIC ***04*** *16:10:20.6±2.0,38°.52N±0°.05×141°.75E±0°.09,h46^{km}±5^{km}, mb4.8/219,Mwr4.6/19,Error ellipse: s-maj=10.3km s-min=7.1km az=117.0*

GCMT ***04*** *16:10:23.6±0.5,38°.65N±0°.03×141°.92E±0°.04,h51^{km}±1^{km}, MW4.8/67,Moment Tensor Solution. s30,c35; s67,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.16; $M_{\theta\theta}$-0.66±.10; $M_{\phi\phi}$-1.59±.10; $M_{r\theta}$0.66±.07; $M_{\theta\phi}$-0.36±.08; $M_{\phi r}$1.02±.07; Best double couple: $M_0$2.32200×10^{16} NP1:ϕ_s196.00000°,δ30.00000°,λ81.00000°. NP2: ϕ_s26.00000°,δ61.00000°,λ95.00000°. Principal axes: T 2.6010, Plg74.0000°, Azm308.0000°; N -0.5550, Plg4.0000°, Azm203.0000°; P -2.0430, Plg16.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 16:10:20.0±0.4**,38°.53N**±0°.03×**141°.87E**±0°.04**,h47**^{km}±3^{km}**, h47**^{km}**:pP-P,n753,**σ1^{s}**48**/670**,mb4.9**/222**,MS4.0**/42**, 122C-69D,Fault plane solution: NP1:**ϕ_s359.04721°**,**δ68.35751°**,**λ109.39447°. **NP2:**ϕ_s135.37965°**,**δ28.74624°**,** λ50.07406°. **Principal axes:** T Plg61.7333°**,** Azm298.7711°**;** N Plg17.9785°**,** Azm171.6493°**;** P Plg21.0493°**,** Azm74.4751°**; Fault plane solution: NP1:**ϕ_s265.28305°**,**δ33.58389°**,**λ146.91458°. **NP2:** ϕ_s23.77500°**,**δ72.42449°**,**λ60.91142°. **Principal axes:** T Plg53.3785°**,** Azm258.5854°**;** N Plg27.6111°**,** Azm33.3112°**;** P Plg22.0586°**,** Azm135.5473°**; Fault plane solution: NP1:**ϕ_s182.74063°**,**δ34.60677°**,** λ44.96574°. **NP2:**ϕ_s53.31751°**,**δ66.33711°**,**λ116.02234°. **Principal axes:** T Plg59.9740°**,** Azm1.6306°**;** N Plg23.6929°**,** Azm222.2310°**;** P Plg17.3494°**,** Azm124.3514°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.39**	**235**	*i* P	**Pn**	**16 10 30.5**	**+0.8**
JIKH				S	**Sn**	**16 10 37.2**	**+0.5**
JIKH	**Ishinomakikobu**	**0.39**	**235**	A	A	16 10 30.5	
	comp=E,327nm,1.6s,comp=E,174nm,0.9s						
JKMT	**Kesennumamotoy**	**0.42**	**312**	⇓*i*P	**Pn**	**16 10 31.0**	**+1.0**
JKMT				⇓S	**Sn**	**16 10 37.9**	**+0.7**
JKMT	**Kesennumamotoy**	**0.42**	**312**	A	A	16 10 31.0	
	comp=E,116nm,1.2s,comp=E,72nm,2.2s						
JIO	**Ouri**	**0.42**	**259**	⇓*i*P	**Pn**	**16 10 30.8**	**+0.7**
JIO				⇓*i*S	**Sn**	**16 10 37.5**	**+0.3**
JIO	**Ouri**	**0.42**	**259**	A	A	16 10 30.8	
	comp=E,212nm,0.3s,comp=E,140nm,0.5s						
OFUJ	**Ofunato**	**0.57**	**344**	*i* P	**Pn**	**16 10 32.9**	**+1.0**
OFUJ				S	**Sn**	**16 10 41.3**	**+0.8**
OFUJ	**Ofunato**	**0.57**	**344**	A	A	16 10 32.9	
	comp=E,155nm,1.3s,comp=E,92nm,0.6s						
JMK	**Ichinoseki**	**0.66**	**310**	⇓*i*P	**Pn**	**16 10 34.0**	**+1.0**
JMK				⇓S	**Sn**	**16 10 43.2**	**+0.7**
JMK	**Ichinoseki**	**0.66**	**310**	A	A	16 10 34.0	
	comp=E,135nm,0.7s,comp=E,41nm,1.3s						
JOFO	**Osakifurukawao**	**0.76**	**275**	A	A	16 10 34.9	
	comp=E,132nm,1.9s,comp=E,226nm,1.0s						
JOU	**Okura**	**0.96**	**260**	⇓*i*P	**Pn**	**16 10 37.6**	**+0.4**
JOU				⇓S	**Sn**	**16 10 50.1**	**+0.4**
JOU	**Okura**	**0.96**	**260**	A	A	16 10 37.6	
	comp=E,47nm,0.6s,comp=E,58nm,1.3s						
JOM	**Ohasama**	**1.04**	**334**	⇓*i*P	**Pn**	**16 10 39.3**	**+1.1**
JOM				⇓*e*S	**Sn**	**16 10 52.8**	**+1.2**
JOM	**Ohasama**	**1.04**	**334**	A	A	16 10 39.3	
	comp=E,39nm,2.3s,comp=E,25nm,0.2s						
MIYJ	**Miyakonagasawa**	**1.04**	**358**	A	A	16 10 39.5	
	comp=E,17nm,2.2s,comp=E,24nm,2.1s						
JMM	**Marumori**	**1.08**	**232**		**Pn**	**16 10 38.7**	**0.0**
JMM				Sn	**Sn**	**16 10 49.6**	**-2.9**
JMM	**Marumori**	**1.08**	**232**	⇓*i*P	**Pn**	**16 10 38.8**	**0.0**
JMM				⇓S	**Sn**	**16 10 51.9**	**-0.7**
JMM	**Marumori**	**1.08**	**232**	A	A	16 10 38.8	
	comp=E,19nm,0.6s,comp=E,23nm,0.4s						
JMST	**Minamisoumatoc**	**1.12**	**224**	A	A	16 10 40.1	
	comp=E,25nm,0.6s,comp=E,34nm,1.3s						
JYK	**Kaneyama**	**1.24**	**288**	⇓*i*P	**Pn**	**16 10 41.7**	**+0.8**
JYK				⇓S	**Sn**	**16 10 57.0**	**+0.4**
JYK	**Kaneyama**	**1.24**	**288**	A	A	16 10 41.7	
	comp=E,28nm,0.8s,comp=E,17nm,1.2s						
JRG	**Rokugo**	**1.29**	**312**	⇓*i*P	**Pn**	**16 10 42.4**	**+0.8**
JRG	**Rokugo**	**1.29**	**312**	A	A	16 10 42.4	
	comp=E,25nm,1.7s,comp=E,21nm,1.7s						
JSZI	**Iwateshizukuis**	**1.40**	**330**	A	A	16 10 44.3	
	comp=E,35nm,1.9s,comp=E,39nm,2.3s						
JTH	**Tanohata**	**1.40**	**360**	A	A	16 10 44.7	
	comp=E,16nm,3.4s,comp=E,11nm,1.3s						
JFK	**Kawauchi**	**1.41**	**214**	⇓*i*P	**Pn**	**16 10 43.5**	**+0.3**
JFK				⇓S	**Sn**	**16 10 59.8**	**-0.8**
JFK	**Kawauchi**	**1.41**	**214**	A	A	16 10 43.5	
	comp=E,21nm,1.0s,comp=E,28nm,3.7s						
JYS	**Shirataka**	**1.45**	**258**	⇓*i*P	**Pn**	**16 10 44.5**	**+0.7**
JYS	**Shirataka**	**1.45**	**258**	A	A	16 10 44.5	
	comp=E,25nm,2.5s,comp=E,37nm,2.9s						
JYAR	**Yonezawaarcadi**	**1.50**	**246**	A	A	16 10 45.3	
	comp=E,44nm,1.2s,comp=E,42nm,1.4s						
JKZ	**Kuzumaki**	**1.51**	**344**	A	A	16 10 46.0	
	comp=E,15nm,2.9s,comp=E,13nm,0.8s						
JFT	**Otama**	**1.58**	**231**	A	A	16 10 46.6	
	comp=E,27nm,0.5s,comp=E,32nm,1.6s						
JYYZ	**Yamagatayuza**	**1.59**	**288**	A	A	16 10 46.7	
	comp=E,51nm,2.9s,comp=E,36nm,2.5s						
JYW	**Yuwa**	**1.64**	**308**	A	A	16 10 47.6	
	comp=E,51nm,1.3s,comp=E,60nm,1.5s						
ONAJ	**Iwakimizuishiy**	**1.66**	**211**	A	A	16 10 47.9	
	comp=E,23nm,0.3s,comp=E,23nm,0.3s						
JKEN	**Kujiedanarisaw**	**1.67**	**356**	A	A	16 10 48.5	
	comp=E,42nm,0.4s,comp=E,62nm,0.4s						
JYA	**Atsumi**	**1.69**	**273**	A	A	16 10 48.1	
	comp=E,20nm,0.7s,comp=E,17nm,0.8s						
JFFD	**Fukushimafurud**	**1.78**	**216**	A	A	16 10 49.5	
	comp=E,10.0nm,1.4s,comp=E,9.0nm,1.0s						
JANG	**Nango**	**1.86**	**352**	A	A	16 10 51.1	
	comp=E,11nm,0.6s,comp=E,10.0nm,1.1s						
JAH	**Hinai**	**1.91**	**330**	A	A	16 10 51.6	
	comp=E,12nm,1.0s,comp=E,11nm,1.7s						
JTB	**Tobi-shima**	**1.92**	**291**	A	A	16 10 51.5	
	comp=E,19nm,2.8s,comp=E,13nm,3.7s						
JFY	**Yanaizu**	**2.05**	**237**	A	A	16 10 53.2	
	comp=E,8.0nm,2.0s,comp=E,6.0nm,1.4s						
JAW	**Awa shima**	**2.06**	**269**	A	A	16 10 53.4	
	comp=E,10.0nm,4.1s,comp=E,9.0nm,2.9s						
JNS	**Sasagawa**	**2.14**	**251**	A	A	16 10 54.4	
	comp=E,8.0nm,0.6s,comp=E,7.0nm,2.1s						
JHO	**Hitachi**	**2.18**	**209**	A	A	16 10 55.3	
	comp=E,5.0nm,2.7s,comp=E,8.0nm,0.9s						
JNTW	**Noshirotokiwa**	**2.18**	**323**	A	A	16 10 55.4	
	comp=E,32nm,2.8s,comp=E,33nm,2.0s						
JSB	**Shiboa**	**2.20**	**225**	A	A	16 10 55.4	
	comp=E,18nm,3.9s,comp=E,20nm,1.8s						
JTM	**Tenmabayashi**	**2.33**	**345**		**Pn**	**16 10 56.9**	**+1.1**
JHHS	**Hirosakihyakuz**	**2.42**	**332**	A	A	16 10 58.8	
	comp=E,18nm,3.4s,comp=E,22nm,1.3s						
JARK	**Aomorirokkasho**	**2.50**	**351**	A	A	16 11 00.2	
	comp=E,13nm,2.2s,comp=E,11nm,1.2s						
JIW	**Iwasaki**	**2.51**	**326**	A	A	16 11 00.1	
	comp=E,9.0nm,0.9s,comp=E,8.0nm,1.1s						
JOG3	**Oga3**	**2.57**	**303**	A	A	16 10 54.4	
	comp=E,17nm,1.0s,comp=E,16nm,2.8s						
JYT	**Yasato**	**2.66**	**211**	Pn	**Pn**	**16 11 00.1**	**-0.3**
JYT	**Yasato**	**2.66**	**211**	A	A	16 11 02.1	
	comp=E,11nm,0.4s,comp=E,9.0nm,3.2s						
JIZZ	**Izumozaki**	**2.69**	**249**	A	A	16 11 02.3	
	comp=E,13nm,4.3s,comp=E,14nm,2.6s						
JKT	**Katashina**	**2.73**	**231**	A	A	16 11 02.9	
	comp=E,5.0nm,5.1s,comp=E,5.0nm,7.2s						
JAHD	**Aomorihigashid**	**2.76**	**352**	A	A	16 11 03.9	
	comp=E,26nm,0.7s,comp=E,24nm,1.1s						
JSI2	**Shiura 2**	**2.76**	**336**	A	A	16 11 03.8	
	comp=E,8.0nm,2.1s,comp=E,10.0nm,1.1s						
JAG	**Ashikaga**	**2.85**	**223**	A	A	16 11 04.7	
	comp=E,5.0nm,3.4s,comp=E,4.0nm,2.9s						
JSD	**Sado**	**2.88**	**261**	Pn	**Pn**	**16 11 03.7**	**+0.3**
JOT	**Ohata**	**2.91**	**348**	A	A	16 11 06.1	
	comp=E,6.0nm,2.6s,comp=E,4.0nm,1.2s						
JSR	**Shiriuchi**	**3.19**	**340**	A	A	16 11 09.9	
	comp=E,7.0nm,4.3s,comp=E,8.0nm,1.8s						
JGK	**Kuni**	**3.24**	**234**	A	A	16 11 10.1	
	comp=E,5.0nm,1.6s,comp=E,4.0nm,2.2s						
JJN	**Nakama**	**3.27**	**245**	A	A	16 11 10.4	
	comp=E,5.0nm,1.9s,comp=E,5.0nm,6.1s						
JHU	**Hanno**	**3.38**	**218**	A	A	16 11 12.2	
	comp=E,5.0nm,2.6s,comp=E,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	**3.52**	**237**	P	**Pn**	**16 11 12.5**	**+0.3**
	8.0nm,0.3s,baz=33,slow=12,SNR=304						
MJAR				LR	LR	16 12 59.0	
	comp=Z,1µm,20.8s,baz=59,slow=46						
	81nm,0.4s						
MJAR	**Matsushiro Arr**	**3.52**	**237**	P	**Pn**	**16 11 13.7**	**+1.5**
MJAR	**Matsushiro Arr**	**3.52**	**237**		**Pn**	**16 11 13.7**	**+1.5**
MAJO	**Matsushiro**	**3.53**	**237**	P	**Pn**	**16 11 14.2**	**+2.0**
MAJO	**Matsushiro**	**3.53**	**237**	Pn	**Pn**	**16 11 14.2**	**+2.0**
MJB9	**Matsu-Tunnel**	**3.53**	**237**	Pn	**Pn**	**16 11 14.2**	**+1.9**
ERM	**Erimo**	**3.61**	**15**	P	**Pn**	**16 11 15.1**	**+1.7**
ERM	**Erimo**	**3.61**	**15**	Pn	**Pn**	**16 11 15.1**	**+1.7**
JNBK	**Urakawa-nobuka**	**3.80**	**10**	A	A	16 11 18.8	
	comp=E,7.0nm,2.6s,comp=E,7.0nm,0.6s						
JSHD	**Hidakashinhida**	**3.90**	**6**	A	A	16 11 20.1	
	comp=E,8.0nm,1.9s,comp=E,8.0nm,2.5s						
JOD2	**Odawara 2**	**3.95**	**215**	A	A	16 11 20.3	
	comp=E,7.0nm,1.4s,comp=E,6.0nm,2.2s						
JIAM	**Iburiatsuma**	**4.08**	**1**	A	A	16 11 22.6	
	comp=E,11nm,4.6s,comp=E,11nm,1.3s						
JHTM	**Izuhatsuma**	**4.24**	**214**	A	A	16 11 24.4	
	comp=E,8.0nm,0.6s,comp=E,10.0nm,1.3s						
JEW	**Eniwo**	**4.31**	**356**	Pn	**Pn**	**16 11 24.6**	**+1.6**
JNY	**Yasuok**	**4.51**	**227**	A	A	16 11 28.0	
	comp=E,5.0nm,3.2s,comp=E,10.0nm,2.0s						
SHZ3	**Shizuoka 3**	**4.54**	**221**	A	A	16 11 28.5	
	comp=E,4.0nm,0.9s,comp=E,4.0nm,2.4s						
JGF	**Kuroka**	**4.65**	**232**	Pn	**Pn**	**16 11 29.7**	**+2.0**
JAB	**Ashibetsu**	**4.97**	**3**	A	A	16 11 35.2	
	comp=E,4.0nm,2.8s,comp=E,5.0nm,1.9s						
INU	**Inuyama**	**5.02**	**232**	Pn	**Pn**	**16 11 35.1**	**+2.4**
ASAJ	**Asahikawa**	**5.60**	**5**	P	**Pn**	**16 11 41.7**	**+1.0**
	14nm,0.3s,baz=216,slow=9.9,SNR=86						
ASAJ				S	**Sn**	**16 12 46.2**	**+2.4**
	81nm,0.6s,baz=126,slow=19,SNR=4.1						
	40nm,0.4s						
JKA	**Kamikawa-asahi**	**5.60**	**5**	Pn	**Pn**	**16 11 40.8**	**+0.1**
NMR	**Nemuro--Hokkai**	**5.64**	**30**	⇑*i*P	**Pn**	**16 11 40.4**	**-0.8**
NMR				*e*S	**Sn**	**16 12 39.7**	**-5.0**
JHJ2	**Mitsune**	**5.66**	**198**	Pn	**Pn**	**16 11 41.0**	**-0.5**
JHJ	**Hachijo jima 2**	**5.66**	**198**	P	**Pn**	**16 11 41.1**	**-0.4**
	38nm,0.3s,baz=315,slow=23,SNR=17						
JHJ				S	**Sn**	**16 12 43.5**	**-1.8**
	205nm,0.4s,baz=103,slow=22,SNR=1.6						
JHJ				LR	LR	16 13 18.3	
	comp=Z,131nm,21.3s,baz=252,slow=32						
	95nm,0.4s						
GLVR	**Golovnino**	**5.88**	**27**	⇓*i*P	**Pn**	**16 11 44.3**	**-0.2**
GLVR				*e*S	**Sn**	**16 12 48.3**	**-2.3**
GLVR				pmax	pmax		
	comp=Z,335nm,0.5s						
GLVR				pmax	pmax		
	comp=N,119nm,0.2s						
GLVR				pmax	pmax		
	comp=E,78nm,0.3s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.4s						
RUSJ	**Misakicho**	**6.12**	**23**	⇑*i*P	**Pn**	**16 11 48.8**	**+1.1**
RUSJ				*i* S	**Sn**	**16 12 54.1**	**-2.2**
YUK	**Yuzh-Kuril'sk**	**6.26**	**27**	*d i*P	**Pn**	**16 11 49.4**	**-0.3**
YUK				*e*S	**Sn**	**16 12 56.0**	**-3.9**
YUK				pmax	pmax		
	comp=Z,421nm,0.4s						
YUK				pmax	pmax		
	comp=E,125nm,0.2s						
YUK				pmax	pmax		
	comp=N,101nm,0.3s						
YUK				smax	smax		
	comp=N,2µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
SHO	**Shikotan**	**6.51**	**33**	*d i*P	**Pn**	**16 11 51.6**	**-1.5**
SHO				*e*S	**Sn**	**16 12 59.8**	**-6.2**
SHO				pmax	pmax		
	comp=Z,72nm,0.4s						
SHO				pmax	pmax		
	comp=N,43nm,0.3s						
SHO				pmax	pmax		
	comp=E,81nm,0.4s						
SHO				smax	smax		
	comp=E,257nm,0.2s						
SHO				smax	smax		
	comp=N,918nm,0.4s						
JHS	**Saijyo**	**7.86**	**246**	Pn	**Pn**	**16 12 14.9**	**+3.2**
KUR	**Kuril'sk**	**8.05**	**32**	*e*P	**Pn**	**16 12 14.4**	**+0.2**
KUR				*e*S	**Sn**	**16 13 39.6**	**-4.1**
KUR				pmax	pmax		
	comp=Z,138nm,0.6s						
KUR				pmax	pmax		
	comp=N,36nm,0.3s						
KUR				pmax	pmax		
	comp=E,63nm,0.5s						
KUR				smax	smax		
	comp=N,103nm,0.4s						
KUR				smax	smax		
	comp=E,404nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.44**	**4**	*e*P	**Pn**	**16 12 20.0**	**+0.5**
YSS				*e*S	**Sn**	**16 13 53.0**	**-0.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	**Yuzh-Sakhalins**	**8.44**	**4**	Pn	**Pn**	**16 12 20.2**	**+0.6**
USA0B	**Ussuriysk Arra**	**9.34**	**310**	P	**Pn**	**16 12 32.8**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.34**	**310**	Pn	**Pn**	**16 12 32.8**	**+1.0**
USRK	**Ussuriysk Ar.**	**9.34**	**310**	P	**Pn**	**16 12 32.5**	**+0.7**
	comp=Z,3.7nm,0.3s,baz=125,slow=13,SNR=44						
USRK				LR	LR	16 15 49.0	
	comp=Z,788nm,21.4s,baz=117,slow=35						
	comp=Z,64nm,0.9s						
USRK	**Ussuriysk Ar.**	**9.34**	**310**	P	**Pn**	**16 12 33.0**	**+1.2**
USRK	**Ussuriysk Ar.**	**9.34**	**310**	Pn	**Pn**	**16 12 33.0**	**+1.2**
JNU	**Nakatsue**	**10.43**	**242**	P	**Pn**	**16 12 47.5**	**+0.6**
	comp=Z,2.5nm,0.3s,baz=49,slow=14,SNR=23						
JNU				LR	LR	16 17 08.4	
	comp=Z,704nm,19.9s,baz=38,slow=40						
	comp=Z,34nm,0.7s						
JNU	**Nakatsue**	**10.43**	**242**	Pn	**Pn**	**16 12 48.9**	**+2.0**
MDJ	**Mudanjiang**	**11.02**	**307**	Pn	**Pn**	**16 12 57.4**	**+2.6**
MDJ	**Mudanjiang**	**11.02**	**307**	P	**Pn**	**16 12 57.8**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,26nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,390nm,5.1s						
KSRS	**Korea Array**	**11.06**	**269**	P	**Pn**	**16 12 56.7**	**+1.3**
	comp=Z,1.6nm,0.3s,baz=80,slow=14,SNR=44						
KSRS				LR	LR	16 16 51.9	
	comp=Z,478nm,20.9s,baz=75,slow=36						
KSRS				PcP	**PcP**	**16 18 51.2**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=64,slow=1.1,SNR=4.3						
	comp=Z,11nm,0.6s						
KSAR	**Wonju Array Be**	**11.10**	**269**	P	**Pn**	**16 12 59.6**	**+3.7**
KSAR	**Wonju Array Be**	**11.10**	**269**	Pn	**Pn**	**16 12 59.6**	**+3.7**
KS19	**Wonju Array Si**	**11.10**	**269**	Pn	**Pn**	**16 12 59.3**	**+3.3**
JCJ	**Chichijima**	**11.41**	**179**	P	**Pn**	**16 12 58.2**	**-2.1**
	comp=Z,8.2nm,0.3s,baz=291,slow=21,SNR=7.7						
JCJ				S	Sn	16 14 55.7	-11
	comp=Z,61nm,0.5s,baz=311,slow=19,SNR=2.5						
	comp=Z,26nm,0.4s						
JCJ	**Chichijima**	**11.41**	**179**	Pn	**Pn**	**16 12 58.3**	**-1.9**
JSU	**Suzuyama**	**11.69**	**237**	Pn	**Pn**	**16 13 05.5**	**+1.5**
TJN	**Taejon**	**11.73**	**264**	P	**Pn**	**16 13 07.9**	**+3.3**
TJN	**Taejon**	**11.73**	**264**	Pn	**Pn**	**16 13 07.9**	**+3.3**
TYV	**Tymovskoe**	**12.34**	**2**	*e*P	**Pn**	**16 13 10.9**	**-1.9**
TYV				pmax	pmax		
	comp=Z,13nm,1.7s						
TYV				pmax	pmax		
	comp=Z,400nm,5.4s						
GRNR	**Gornyy**	**12.83**	**344**	*e*P	**Pn**	**16 13 16.0**	**-3.5**
GRNR				MLR	MLR		
	comp=E,180nm,13.0s						
GRNR				MLR	MLR		
	comp=N,210nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,340nm,15.0s						
BNX	**BinXian**	**12.92**	**308**	⇓P	**Pn**	**16 13 23.7**	**+3.0**
BNX				pmax	pmax		
	comp=Z,32nm,0.8s						
BNX				pmax	pmax		
	comp=Z,530nm,3.9s						
CN2	**Changchun**	**13.44**	**298**	*e*P	**Pn**	**16 13 27.4**	**-0.5**
CN2				sP	P	16 13 46.0	+10
CN2				S	**Sn**	**16 15 55.4**	**-0.3**
CN2				sS	S	16 16 10.1	-7.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,260nm,16.0s						
CN2				LR	LR		
	comp=Z,370nm,16.0s						
CN2				LR	LR		
	comp=Z,410nm,18.0s						
DL2	**Dalian**	**15.81**	**278**	P	**P**	**16 14 01.1**	**-1.3**
DL2				S	**Sn**	**16 16 57.7**	**+4.4**
DL2				pmax	pmax		
	comp=Z,47nm,0.9s						
DL2				pmax	pmax		
	comp=Z,82nm,4.6s						
DL2				LR	LR		
	comp=Z,300nm,17.5s						
DL2				LR	LR		
	comp=Z,270nm,15.9s						
DL2				LR	LR		
	comp=Z,390nm,15.7s						
JOW	**Kunigami**	**16.32**	**228**	P	**Pn**	**16 14 03.0**	**-2.9**
	comp=Z,14nm,0.7s,baz=94,slow=14,SNR=2.0						
JOW	**Kunigami**	**16.32**	**228**	Pn	**Pn**	**16 14 05.1**	**-0.8**
ZEA	**Zeya**	**18.21**	**331**	*e*P	**P**	**16 14 27.5**	**-1.4**
ZEA				pmax	pmax		
	comp=N,40nm,0.7s						
ZEA				pmax	pmax		
	comp=E,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.7s						
ZEA				MLR	MLR		
	comp=N,100nm,16.0s						
ZEA				MLR	MLR		
	comp=E,100nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,18.0s						
PEA0B	**Petropavlovsk-**	**18.22**	**32**	P	**Pn**	**16 14 29.1**	**0.0**
PEA0B				pmax	pmax		
	comp=Z,24nm,1.3s						
PEA0B	**Petropavlovsk-**	**18.22**	**32**	P	**Pn**	**16 14 29.1**	**0.0**
PETK	**Petropavlovsk-**	**18.22**	**32**	P	**P**	**16 14 28.3**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=199,slow=2.7,SNR=4.5						
PETK				LR	LR	16 22 39.8	
	comp=Z,136nm,18.5s,baz=216,slow=40						
PETK	**Petropavlovsk-**	**18.22**	**32**	P	**P**	**16 14 27.8**	**-1.1**
PET	**Petropavlovsk**	**18.56**	**33**	*e*P	**Pn**	**16 14 34.7**	**+1.5**
PET				*e*S	**Sn**	**16 17 56.4**	**-3.2**
PET				pmax	pmax		
	comp=Z,18nm,0.9s						
PET	**Petropavlovsk**	**18.56**	**33**	P	**Pn**	**16 14 33.8**	**+0.6**
TIA	**Tai'an**	**19.79**	**271**	⇓P	**P**	**16 14 45.4**	**-0.9**
TIA				pmax	pmax		
	comp=Z,22nm,0.9s						
TIA				LR	LR		
	comp=Z,250nm,9.9s						
TIA				LR	LR		
	comp=Z,270nm,19.0s						
TIA				LR	LR		
	comp=Z,320nm,25.7s						
BJI	**Beijing**	**19.93**	**282**	P	**P**	**16 14 47.2**	**-0.5**
BJI				pmax	pmax		
	comp=Z,25nm,0.8s						
BJT	**Baijiatuau**	**19.94**	**282**	P	**P**	**16 14 45.6**	**-2.2**
BJT				pmax	pmax		
	comp=Z,19nm,0.7s						
BJT	**Baijiatuau**	**19.94**	**282**	P	**P**	**16 14 45.6**	**-2.2**
XLT	**XiLinHaoTe**	**20.09**	**294**	⇓*i*P	**P**	**16 14 47.8**	**-1.8**
XLT				pP	pP	16 15 00.0	-0.6
XLT				sP	sP	16 15 04.6	-2.0
XLT				PP	**PnPn**	**16 15 09.2**	**+2.2**
XLT				S	**S**	**16 18 24.4**	**-8.3**
XLT				SS	**SnSn**	**16 18 59.5**	**+7.9**
XLT				pmax	pmax		
	comp=Z,28nm,1.0s						
XLT				pmax	pmax		
	comp=Z,140nm,6.4s						
XLT				LR	LR		
	comp=Z,270nm,17.0s						
XLT				LR	LR		
	comp=Z,290nm,22.6s						
HNS	**HongShan**	**21.42**	**275**	⇑P	**P**	**16 15 01.2**	**-2.6**
HNS				S	**S**	**16 18 48.7**	**-10**
HNS				pmax	pmax		
	comp=Z,16nm,0.8s						
HNS				LR	LR		
	comp=Z,130nm,14.0s						
HNS				LR	LR		
	comp=Z,330nm,13.9s						
HNS				LR	LR		
	comp=Z,290nm,22.8s						
MA2	**Magadan**	**21.81**	**12**	P	**P**	**16 15 08.3**	**+0.5**
MA2				pmax	pmax		
	comp=Z,56nm,0.7s						
MA2	**Magadan**	**21.81**	**12**	P	**P**	**16 15 08.3**	**+0.5**
MA2				IAmb	IAmb	16 15 27.3	
	comp=Z,56nm,0.7s						
TATO	**Taipei**	**21.92**	**238**	P	**P**	**16 15 09.7**	**+0.5**
TATO				IAmb	IAmb	16 15 29.0	
	comp=Z,55nm,0.8s						
YHNB	**Yeheng**	**22.20**	**237**	P	**P**	**16 15 10.0**	**-2.4**
YHNB				IAmb	IAmb	16 15 30.2	
	comp=Z,55nm,1.0s						
SSLB	**Suanglung**	**23.09**	**237**	P	**P**	**16 15 19.1**	**-2.5**
SSLB				IAmb	IAmb	16 15 39.6	
	comp=Z,36nm,0.9s						
YULB	**Yu-li**	**23.14**	**235**	P	**P**	**16 15 19.2**	**-3.0**
YULB				IAmb	IAmb	16 15 26.4	
	comp=Z,19nm,0.8s						
TPUB	**Ta-pu**	**23.64**	**236**	P	**P**	**16 15 23.6**	**-3.4**
TWG	**Pinlang**	**23.69**	**235**	IAmb	IAmb	16 15 35.6	
	comp=Z,56nm,1.1s						
LYN	**LuoYang**	**23.91**	**270**	⇓*i*P	**P**	**16 15 29.1**	**-0.2**
LYN				pP	pP	16 15 43.6	+2.2
LYN				S	**S**	**16 19 40.4**	**-2.0**
LYN				pmax	pmax		
	comp=Z,70nm,0.6s						
LYN				LR	LR		
	comp=Z,180nm,12.2s						
LYN				LR	LR		
	comp=Z,240nm,25.5s						
LYN				LR	LR		
	comp=Z,360nm,22.6s						
WHN	**Wuhan**	**23.97**	**259**	⇓P	**P**	**16 15 29.5**	**-0.4**
WHN				pP	**sP**	**16 15 46.8**	**-0.9**
WHN				S	**S**	**16 19 43.4**	**0.0**
WHN				pmax	pmax		
	comp=Z,68nm,0.8s						
WHN				LR	LR		
	comp=Z,700nm,18.3s						
YAK	**Yakutsk**	**24.70**	**346**	*c i*P	**P**	**16 15 35.2**	**-1.0**
YAK				*e**PP	**pP**	**16 15 49.6**	**+1.1**
YAK				*e*		16 16 09.2	
YAK				*e*		16 19 10.6	
YAK				*e*S	**S**	**16 19 53.1**	**-1.4**
YAK				*e*SS	**SnSn**	**16 20 42.2**	**-1.7**
YAK				*e*		16 26 35.7	
YAK				pmax	pmax		
	comp=Z,88nm,1.0s						
YAK				pmax	pmax		
	comp=N,46nm,1.2s						
YAK				pmax	pmax		
	comp=E,19nm,1.0s						
YAK				pmax	pmax		
	comp=Z,32nm,1.1s						
YAK				pmax	pmax		
	comp=N,24nm,1.0s						
YAK				pmax	pmax		
	comp=E,23nm,1.2s						
YAK				smax	smax		
	comp=E,67nm,2.1s						
YAK				smax	smax		
	comp=N,52nm,2.1s						
YAK	**Yakutsk**	**24.70**	**346**	P	**P**	**16 15 35.1**	**-1.1**

GUMO	**Guam**	**24.99**	**173**	LR	LR	16 24 55.3	
	comp=N,50nm,20.8s,baz=29,slow=35						
CNSH	**ChangSha**	**26.19**	**255**	⇑P	**P**	**16 15 49.5**	**-0.6**
CNSH				pmax	pmax		
	comp=N,29nm,1.0s						
BOD	**Bodaibo**	**26.48**	**326**	*e*P	**P**	**16 15 52.0**	**-0.4**
BOD				pmax	pmax		
	comp=Z,42nm,0.8s						
ULN	**Ulaanbaatar**	**26.84**	**302**	P	**P**	**16 15 55.5**	**-0.6**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN	**Ulaanbaatar**	**26.84**	**302**	P	**P**	**16 15 55.5**	**-0.6**
XAN	**Xi'an**	**26.85**	**271**	P	**P**	**16 15 55.7**	**-0.4**
XAN				pP	sP	16 16 12.4	-1.6
XAN				pmax	pmax		
	comp=Z,25nm,0.6s						
SONM	**Songino Array**	**27.28**	**301**	P	**P**	**16 15 58.4**	**-1.6**
	comp=Z,5.0nm,0.6s,baz=139,slow=3.3,SNR=3.9						
SONM				PcP	**PcP**	**16 19 15.9**	**-2.6**
	comp=Z,3.6nm,0.5s,baz=58,slow=3.7,SNR=3.7						
SONM				LR	LR	16 27 33.0	
	comp=Z,216nm,18.1s,baz=104,slow=38						
	comp=Z,5.0nm,0.6s						
SONM	**Songino Array**	**27.28**	**301**	P	**P**	**16 16 00.1**	**+0.1**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**27.28**	**301**	P	**P**	**16 16 00.1**	**+0.1**
ENH	**Enshi**	**27.85**	**263**	P	**P**	**16 16 03.7**	**-1.4**
H11N2	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	16 46 40.1	
	baz=317,slow=75,SNR=4296						
H11N1	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	16 46 30.2	
	baz=317,slow=75,SNR=5241						
H11N3	**WAKE ISLAND Hy**	**28.66**	**124**	T	T	16 46 30.8	
	baz=317,slow=75,SNR=3682						
H11S1	**WAKE ISLAND Hy**	**29.40**	**126**	T	T	16 47 23.8	
	baz=318,slow=76,SNR=717						
H11S3	**WAKE ISLAND Hy**	**29.41**	**126**	T	T	16 47 24.0	
	baz=318,slow=76,SNR=1639						
H11S2	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	16 47 34.1	
	baz=318,slow=76,SNR=919						
ZAK	**Zakamensk**	**29.65**	**306**	*e*P	**P**	**16 16 19.7**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH	**Lanzhou**	**30.20**	**277**	⇑P	**P**	**16 16 26.1**	**0.0**
LZH				sP	sP	16 16 42.1	-2.0
LZH				pmax	pmax		
	comp=Z,37nm,1.5s						
LZH				pmax	pmax		
	comp=Z,100nm,6.0s						
LZH				LR	LR		
	comp=Z,260nm,14.6s						
LZH				LR	LR		
	comp=Z,150nm,15.7s						
LZH				LR	LR		
	comp=Z,240nm,16.8s						
MOY	**Mondy**	**31.27**	**308**	*e*P	**P**	**16 16 35.1**	**-0.2**
MOY				pmax	pmax		
	comp=Z,14nm,1.9s						
GYA	**Guiyang**	**31.86**	**258**	⇓P	**P**	**16 16 41.2**	**+0.5**
GYA				pP	pP	16 16 52.9	-0.1
GYA				S	**S**	**16 21 47.1**	**-1.1**
GYA				pmax	pmax		
	comp=Z,49nm,1.0s						
GYA				pmax	pmax		
	comp=Z,250nm,6.6s						
GYA				LR	LR		
	comp=Z,77nm,6.3s						
GYA				LR	LR		
	comp=Z,100nm,7.3s						
GYA				LR	LR		
	comp=Z,190nm,11.3s						
CD2	**Chengdu**	**32.06**	**268**	P	**P**	**16 16 41.8**	**-0.6**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
BILL	**Bilibino**	**32.49**	**17**	⇓*i*P	**P**	**16 16 45.9**	**+0.3**
BILL				*e**PP	**sP**	**16 17 03.1**	**-0.4**
BILL				*e*		16 17 53.1	
BILL				*e*		16 19 31.6	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL	**Bilibino**	**32.49**	**17**	P	**P**	**16 16 45.6**	**0.0**
BILL				IAmb	IAmb	16 17 06.1	
	comp=Z,10nm,0.9s						
GTA	**Gaotai**	**32.50**	**285**	*e*P	**P**	**16 16 46.6**	**+0.4**
GTA				PcP	**PcP**	**16 19 33.2**	**+1.0**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,98nm,6.4s						
GTA				LR	LR		
	comp=Z,170nm,16.3s						
GTA				LR	LR		
	comp=Z,340nm,17.9s						
GTA				LR	LR		
	comp=Z,370nm,17.9s						
TIXI	**Tiksi**	**33.85**	**353**	P	**P**	**16 16 56.7**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIXI	**Tiksi**	**33.85**	**353**	P	**P**	**16 16 56.7**	**-0.7**
TIXI				IAmb	IAmb	16 16 58.0	
	comp=Z,9.5nm,0.7s						
QIZ	**Qiongzhong**	**33.89**	**244**	P	**P**	**16 16 56.6**	**-1.8**
QIZ				LR	LR		
	comp=Z,140nm,23.9s						
QIZ				LR	LR		
	comp=Z,97nm,14.3s						
QIZ				LR	LR		
	comp=Z,190nm,17.5s						
DAV	**Davao City (W)**	**34.62**	**209**	LR	LR	16 32 49.4	
	comp=Z,77nm,18.2s,baz=20,slow=39						
KMI	**Kunming**	**35.57**	**260**	⇓P	**P**	**16 17 13.1**	**0.0**
KMI				pP	pP	16 17 25.4	-0.1
KMI				sP	sP	16 17 30.6	-0.5
KMI				pmax	pmax		
	comp=Z,16nm,1.2s						
KMI				LR	LR		
	comp=Z,210nm,20.5s						
KMI				LR	LR		
	comp=Z,180nm,17.5s						
KMI				LR	LR		
	comp=Z,180nm,17.2s						
PZH	**PanZhiHua**	**35.64**	**262**	P	**P**	**16 17 12.8**	**-0.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
GOMU	**GeErMu**	**37.16**	**281**	P	**P**	**16 17 27.2**	**+0.5**
GOMU				PcP	**PcP**	**16 19 47.5**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,13nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,71nm,4.5s						
MYLDM	**Lahad Datu**	**39.41**	**218**	IAmb	IAmb	16 17 51.1	
	comp=Z,18nm,0.8s						
DLV	**T Lat**	**39.79**	**237**	IAmb	IAmb	16 18 09.4	
	comp=Z,14nm,0.7s						
ANM	**Nome**	**40.13**	**32**	P	**P**	**16 17 53.2**	**+2.4**
ANM				pmax	pmax		
	comp=Z,13nm,1.2s						
ANM	**Nome**	**40.13**	**32**	P	**P**	**16 17 53.2**	**+2.4**
ANM				IAmb	IAmb	16 18 13.7	
	comp=Z,13nm,1.2s						
ANM	**Nome**	**40.13**	**32**	P	**P**	**16 17 52.2**	**+1.4**
	baz=256						
WMQ	**Urumqi**	**40.51**	**295**	⇑P	**P**	**16 17 55.1**	**+0.8**
WMQ				pP	sP	16 18 11.2	-1.2
WMQ				pmax	pmax		
	comp=Z,100nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				LR	LR		
	comp=Z,160nm,19.9s						
ZAA0	**Zalesovo Array**	**41.19**	**311**	IAmb	IAmb	16 18 00.7	
	comp=Z,24nm,0.8s						
ZALV	**Zalesovo Beam**	**41.19**	**311**	P	**P**	**16 17 59.7**	**+0.1**
	comp=Z,17nm,0.5s,baz=89,slow=7.5,SNR=70						
ZALV				PP	**PP**	**16 19 32.8**	**-2.4**
	comp=Z,1.0nm,0.5s,baz=69,slow=7.9,SNR=1.2						
ZALV				PcP	**PcP**	**16 19 58.1**	**+0.2**
	comp=Z,5.9nm,0.5s,baz=97,slow=3.4,SNR=7.9						
ZALV				LR	LR	16 35 50.1	
	comp=Z,174nm,19.2s,baz=30,slow=37						
	comp=Z,17nm,0.5s						
KMSI	**Cibinong**	**41.19**	**208**	P	**P**	**16 18 00.2**	**+0.1**
	comp=Z,59nm,0.8s						
GTOI	**Gorontalo**	**41.50**	**209**	P	**P**	**16 18 02.8**	**+0.2**
	comp=Z,14nm,0.9s						
ZSN	**Zaisan**	**41.80**	**301***c*	*i*P	**P**	**16 18 05.7**	**+0.9**
ZSN				pmax	pmax		
	comp=Z,36nm,0.9s						
ZSN	**Zaisan**	**41.80**	**301**	⇑*i*P	**P**	**16 18 05.8**	**+0.9**
	comp=Z,36nm,0.9s,baz=301						
CHTO	**Chiang Mai**	**42.03**	**255**	P	**P**	**16 18 07.0**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,16nm,0.7s						
CHTO	**Chiang Mai**	**42.03**	**255**	P	**P**	**16 18 07.0**	**+0.1**
CHTO				IAmb	IAmb	16 18 17.1	
	comp=Z,16nm,0.7s						
MRSI	**Marisa**	**42.06**	**211**	P	**P**	**16 18 08.3**	**+1.1**
	comp=Z,28nm,1.0s						
NRIK	**Noril'sk**	**42.06**	**335**	P	**P**	**16 18 06.5**	**-0.2**
	comp=Z,6.4nm,0.6s,baz=108,slow=9.4,SNR=15						
NRIK				LR	LR	16 36 41.6	
	comp=Z,310nm,19.9s,baz=62,slow=38						
	comp=Z,6.4nm,0.6s						
NRIK	**Noril'sk**	**42.06**	**335**	P	**P**	**16 18 05.8**	**-0.8**
NRIK				IAmb	IAmb	16 18 07.4	
	comp=Z,36nm,1.5s						
CM31	**Chiang Mai Arr**	**42.24**	**254**	P	**P**	**16 18 08.7**	**0.0**
CM31				IAmb	IAmb	16 18 19.1	
	comp=Z,8.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.24**	**254**	P	**P**	**16 18 07.5**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=41,slow=7.2,SNR=14						
CMAR				PcP	**PcP**	**16 20 03.0**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=24,slow=2.0,SNR=7.5						
CMAR				LR	LR	16 37 16.0	
	comp=Z,48nm,20.8s,baz=200,slow=38						
	comp=Z,1.6nm,0.8s						
LSA	**Lhasa**	**42.45**	**274**	P	**P**	**16 18 11.2**	**+0.3**
LSA				pmax	pmax		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**42.45**	**274**	P	**P**	**16 18 11.2**	**+0.3**
LSA				IAmb	IAmb	16 18 32.8	
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**42.45**	**274**	P	**P**	**16 18 11.6**	**+0.7**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**42.45**	**274**	P	**P**	**16 18 12.1**	**+1.3**
SANI	**Sanana**	**42.96**	**204**	P	**P**	**16 18 14.2**	**-0.3**
	comp=Z,28nm,0.7s						
APSI	**Ampana**	**43.45**	**210**	P	**P**	**16 18 18.3**	**-0.1**
	comp=Z,23nm,0.9s						
MK31	**Makanchi Array**	**43.65**	**301**	*i* P	**P**	**16 18 19.3**	**-0.5**
MK31	**Makanchi Array**	**43.65**	**301**	IAmb	IAmb	16 18 21.0	
	comp=Z,25nm,0.9s						
MKAR	**Makanchi Array**	**43.65**	**301**	P	**P**	**16 18 19.7**	**-0.1**
	comp=Z,24nm,0.8s,baz=86,slow=9.4,SNR=178						
MKAR				PcP	**PcP**	**16 20 05.7**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=83,slow=6.0,SNR=2.2						
MKAR				LR	LR	16 38 23.1	
	comp=Z,102nm,19.0s,baz=330,slow=39						
	comp=Z,24nm,0.8s						
SHL	**Shillong**	**43.80**	**268**	P	**P**	**16 18 20.6**	**-0.9**
SHL				pmax	pmax		
	comp=Z,24nm,0.9s						
SHL	**Shillong**	**43.80**	**268**	P	**P**	**16 18 20.6**	**-0.9**
SHL				IAmb	IAmb	16 18 26.6	
	comp=Z,24nm,0.9s						
MAKZ	**Makanchi**	**43.85**	**301**	P	**P**	**16 18 21.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,24nm,0.9s						
MAKZ	**Makanchi**	**43.85**	**301**	P	**P**	**16 18 21.3**	**-0.1**
MAKZ				IAmb	IAmb	16 18 22.8	
	comp=Z,24nm,0.8s						
N18K	**Kilae Creek**	**43.96**	**39**	P	**P**	**16 18 24.3**	**+2.3**
	baz=269						
TTA	**Tatalina**	**43.99**	**36**	P	**P**	**16 18 24.1**	**+1.7**
	baz=267						
SVW2	**Sparrevohn**	**44.12**	**38**	P	**P**	**16 18 25.4**	**+2.0**
SEM	**Semipalatinsk**	**44.33**	**306**	*i* P	**P**	**16 18 24.8**	**-0.6**
SEM				pmax	pmax		
	comp=Z,19nm,0.8s						
SEM	**Semipalatinsk**	**44.33**	**306**	*i* P	**P**	**16 18 24.9**	**-0.6**
	comp=Z,19nm,0.8s,baz=306						
L19K	**White Mountain**	**44.49**	**37**	P	**P**	**16 18 28.1**	**+1.8**
L19K	**White Mountain**	**44.49**	**37**	P	**P**	**16 18 28.3**	**+2.0**
	baz=268						
M19K	**Big River Lodg**	**44.70**	**37**	P	**P**	**16 18 29.7**	**+1.7**
	baz=269						
K20K	**Telida**	**44.89**	**35**	P	**P**	**16 18 31.8**	**+2.3**
K20K	**Telida**	**44.89**	**35**	P	**P**	**16 18 31.5**	**+2.1**
	baz=268						
J20K	**Nowinta River**	**44.89**	**34**	IAmb	IAmb	16 18 51.6	
	comp=Z,13nm,1.1s						
J20K	**Nowinta River**	**44.89**	**34**	P	**P**	**16 18 31.8**	**+2.4**
	baz=267						
L20K	**Farewell, AK**	**44.95**	**36**	P	**P**	**16 18 30.5**	**+0.5**
	baz=269						
Q19K	**Cape Douglas,**	**45.12**	**41**	P	**P**	**16 18 32.3**	**+1.0**
	baz=273						
IMAR	**Indian Mountai**	**45.18**	**31**	P	**P**	**16 18 32.9**	**+1.1**
KURK	**Kurchatov**	**45.31**	**307**	P	**P**	**16 18 33.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,97nm,0.8s						
KURK	**Kurchatov**	**45.31**	**307**	P	**P**	**16 18 33.1**	**+0.2**
KURBB	**Kurchatov Arra**	**45.38**	**307**	LR	LR	16 38 14.4	
	comp=Z,169nm,18.8s,baz=18,slow=37						
OHAK	**Old Harbor**	**45.41**	**44**	P	**P**	**16 18 36.0**	**+2.4**
	baz=275						
H21K	**Melozitna Rive**	**45.55**	**32**	IAmb	IAmb	16 18 56.5	
	comp=Z,8.7nm,1.1s						
H21K	**Melozitna Rive**	**45.55**	**32**	P	**P**	**16 18 36.6**	**+2.0**
	baz=267						
CHUM	**Lake Minchumin**	**45.69**	**34**	P	**P**	**16 18 38.0**	**+2.3**
	baz=269						
KDAK	**Kodiak Island**	**45.75**	**43**	P	**P**	**16 18 37.2**	**+0.9**
	comp=Z,2.4nm,0.4s,baz=277,slow=6.9,SNR=6.1						
	comp=Z,2.4nm,0.4s						
SPCR	**Spurr Chakacha**	**45.75**	**38**	P	**P**	**16 18 39.1**	**+2.8**
	baz=272						
CAST	**Castle Rocks**	**45.78**	**35**	P	**P**	**16 18 38.7**	**+2.1**
	baz=270						
TAPN	**Taplejung**	**46.21**	**273**	*e*P	**P**	**16 18 41.2**	**+0.4**
	comp=Z,44nm,0.9s						
BPAW	**Bear Paw Mtn.**	**46.28**	**34**	P	**P**	**16 18 41.7**	**+1.3**
	baz=270						
KTH	**Kantishna Hill**	**46.31**	**35**	P	**P**	**16 18 42.4**	**+1.7**
KTH				IAmb	IAmb	16 19 04.8	
	comp=Z,20nm,1.2s						
PDGK	**Podgornoye**	**46.41**	**297**	P	**P**	**16 18 41.6**	**-0.3**
ODAN	**Odare**	**46.70**	**272**	*e*P	**P**	**16 18 44.8**	**+0.3**
TDK	**Taldyqorghan**	**46.70**	**299**	*e*P	**P**	**16 18 44.5**	**+0.5**
TDK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TDK	**Taldyqorghan**	**46.70**	**299**	*e*P	**P**	**16 18 44.6**	**+0.5**
	comp=Z,9.0nm,0.6s,baz=299						
UZB	**Uzynbulak**	**46.79**	**297***c*	*i*P	**P**	**16 18 44.8**	**-0.1**
UZB	**Uzynbulak**	**46.79**	**297**	⇑*i*P	**P**	**16 18 44.9**	**-0.1**
	baz=297						
H23K	**Yukon River**	**46.90**	**32**	IAmb	IAmb	16 19 03.1	
	comp=Z,7.8nm,0.9s						
H23K	**Yukon River**	**46.90**	**32**	P	**P**	**16 18 47.7**	**+2.4**
	baz=270,SNR=8.5						
KPKS	**Kokpek**	**46.93**	**297**	*e*P	**P**	**16 18 46.0**	**+0.1**
KPKS	**Kokpek**	**46.93**	**297**	*e*P	**P**	**16 18 46.0**	**+0.1**
	baz=297						
RC01	**Rabbit Creek A**	**46.95**	**38**	P	**P**	**16 18 47.6**	**+1.9**
	baz=274						
I23K	**Minto, Yukon-K**	**46.98**	**33**	P	**P**	**16 18 47.7**	**+1.9**
	baz=270						
TOLK	**Toolik Lake Re**	**46.98**	**28**	IAmb	IAmb	16 19 07.7	
	comp=Z,12nm,0.8s						
TOLK	**Toolik Lake Re**	**46.98**	**28**	P	**P**	**16 18 47.6**	**+1.8**
	baz=267,SNR=10						
NEA2	**Nenana**	**47.11**	**33**	IAmb	IAmb	16 19 10.2	
	comp=Z,19nm,1.4s						
NEA2	**Nenana**	**47.11**	**33**	P	**P**	**16 18 48.7**	**+1.8**
	baz=271,SNR=5.7						
SEW	**Seward**	**47.17**	**40**	P	**P**	**16 18 49.8**	**+2.4**
	baz=275						
ZHN	**Zhinishke**	**47.19**	**297**	*e*P	**P**	**16 18 47.9**	**-0.1**
ZHN	**Zhinishke**	**47.19**	**297**	*e*P	**P**	**16 18 47.9**	**-0.1**
	baz=297						
PMR	**Palmer**	**47.21**	**37**	P	**P**	**16 18 49.8**	**+2.1**
	baz=274						
BNSI	**Bone**	**47.24**	**210**	P	**P**	**16 18 50.5**	**+2.1**
	comp=Z,19nm,0.9s						
RND	**Reindeer**	**47.24**	**35**	P	**P**	**16 18 48.9**	**+0.9**
RND				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RND	**Reindeer**	**47.24**	**35**	P	**P**	**16 18 48.9**	**+0.9**
RND				IAmb	IAmb	16 19 09.0	
	comp=Z,9.1nm,1.0s						
SATY	**Saty**	**47.24**	**297***c*	*i*P	**P**	**16 18 48.6**	**+0.2**
SATY	**Saty**	**47.24**	**297**	⇑*i*P	**P**	**16 18 48.7**	**+0.3**
	baz=297						
JIRN	**Jiri**	**47.26**	**274**	*e*P	**P**	**16 18 49.3**	**+0.3**
	comp=Z,14nm,0.9s						
RAMN	**Ramite**	**47.27**	**273**	*e*P	**P**	**16 18 49.2**	**+0.2**
	comp=Z,83nm,0.6s						
GHO	**Glory Hole Cre**	**47.30**	**37**	IAmb	IAmb	16 19 09.6	
	comp=Z,13nm,0.6s						
STKI	**Sintang**	**47.38**	**223**	P	**P**	**16 18 51.2**	**+1.7**
GUN	**Gumba**	**47.38**	**275**	*e*P	**P**	**16 18 50.2**	**+0.2**
	comp=Z,148nm,0.8s						
WAT1	**Susitna Watana**	**47.41**	**36**	P	**P**	**16 18 51.3**	**+2.0**
	baz=273						
MDM	**Murphy Dome**	**47.46**	**33**	IAmb	IAmb	16 19 11.5	
	comp=Z,26nm,1.2s						
SML	**Sawmill**	**47.58**	**37**	P	**P**	**16 18 51.9**	**+1.3**
	baz=274						
H24K	**Noodor Dome**	**47.58**	**32**	P	**P**	**16 18 52.8**	**+2.2**
H24K				IAmb	IAmb	16 19 13.4	
	comp=Z,6.0nm,0.8s						
H24K	**Noodor Dome**	**47.58**	**32**	P	**P**	**16 18 52.9**	**+2.2**
	baz=271						
POKR	**Poker Plat Res**	**47.79**	**33**	P	**P**	**16 18 54.3**	**+2.1**
	baz=272						
WAT6	**Susitna Watana**	**47.79**	**36**	P	**P**	**16 18 53.4**	**+1.0**
	baz=274						
M23K	**Glacier View**	**47.86**	**37**	P	**P**	**16 18 54.2**	**+1.4**
	baz=275						
KKN	**Kakani**	**47.91**	**275**	*e*P	**P**	**16 18 54.2**	**+0.3**
	comp=Z,123nm,0.8s						
PKI	**Pulchoki**	**47.91**	**274**	*e*P	**P**	**16 18 53.9**	**-0.1**
PKIN	**Phulchoki**	**47.92**	**274**	*e*P	**P**	**16 18 53.9**	**-0.1**
	comp=Z,35nm,0.6s						
DHY	**Denali Highway**	**47.93**	**35**	P	**P**	**16 18 55.1**	**+1.6**
	baz=274						
PMG	**Port Moresby**	**47.95**	**173**	LR	LR	16 42 50.9	
	comp=Z,37nm,19.3s,baz=236,slow=41						
CHKK	**Chushkaly**	**48.00**	**298**	*i* P	**P**	**16 18 53.9**	**-0.2**
CHKK	**Chushkaly**	**48.00**	**298**	*i* P	**P**	**16 18 54.0**	**-0.2**
	baz=298						
ILAR	**Eielson Array**	**48.04**	**33**	P	**P**	**16 18 54.6**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=269,slow=6.6,SNR=47						
ILAR				PcP	**PcP**	**16 20 21.0**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=256,slow=3.0,SNR=1.1						
	comp=Z,3.7nm,0.7s						
ILAR	**Eielson Array**	**48.04**	**33**	P	**P**	**16 18 55.0**	**+0.9**
ILAR	**Eielson Array**	**48.04**	**33**	P	**P**	**16 18 55.0**	**+0.9**
SCM	**Sheep Creek Mo**	**48.05**	**37**	P	**P**	**16 18 56.5**	**+2.1**
	baz=275						
BKSI	**Bulukumba**	**48.07**	**210**	P	**P**	**16 18 56.3**	**+1.4**
	comp=Z,15nm,0.7s						
DMN	**Daman**	**48.13**	**275**	*e*P	**P**	**16 18 55.8**	**+0.2**
MDOK	**Medeo**	**48.16**	**297**	*i* P	**P**	**16 18 55.9**	**+0.4**
MDOK	**Medeo**	**48.16**	**297**	*i* P	**P**	**16 18 56.0**	**+0.4**
	baz=297						
AAA	**Alma-Ata**	**48.24**	**297**	*e*P	**P**	**16 18 56.6**	**+0.6**
AAA	**Alma-Ata**	**48.24**	**297**	*e*P	**P**	**16 18 56.7**	**+0.6**
	baz=297						
TNSS	**Tian-Shan**	**48.27**	**297**	*i* P	**P**	**16 18 57.4**	**+0.7**
TNSS	**Tian-Shan**	**48.27**	**297**	*i* P	**P**	**16 18 57.5**	**+0.7**
	baz=297						
GKN	**Gorkha**	**48.31**	**275**	*e*P	**P**	**16 18 57.0**	**+0.1**
	comp=Z,137nm,1.0s						
KDJ	**Kajisay**	**48.39**	**296**	IAmb	IAmb	16 18 58.7	
	comp=Z,12nm,0.8s						
KUU	**Kurty**	**48.44**	**298***c*	*i*P	**P**	**16 18 57.2**	**-0.3**
KUU				pmax	pmax		
	comp=Z,13nm,0.7s						
KUU	**Kurty**	**48.44**	**298**	⇑*i*P	**P**	**16 18 57.3**	**-0.3**
	comp=Z,12nm,0.7s,baz=298						
M24K	**Tolsona, Glenn**	**48.56**	**37**	P	**P**	**16 18 58.9**	**+0.6**
	baz=276						
BBKI	**Banjar Baru**	**48.69**	**217**	P	**P**	**16 19 00.5**	**+0.8**
J25K	**Salcha River,**	**48.70**	**33**	P	**P**	**16 18 59.7**	**+0.4**
	baz=274						
KLU	**Klutina**	**48.75**	**37**	P	**P**	**16 19 01.3**	**+1.5**
KLU				IAmb	IAmb	16 19 29.3	
	comp=Z,26nm,1.4s						
KLU	**Klutina**	**48.75**	**37**	P	**P**	**16 19 01.8**	**+2.0**
	baz=277						
PAX	**Paxson**	**48.80**	**35**	P	**P**	**16 19 01.7**	**+1.6**
	baz=276						
DANN	**Dangsing**	**48.83**	**276**	*e*P	**P**	**16 19 01.6**	**+0.5**
	comp=Z,227nm,0.8s						
BMAR	**Burnt Mountain**	**48.85**	**29**	P	**P**	**16 19 02.9**	**+2.6**
RIDG	**Independent Ri**	**49.00**	**34**	P	**P**	**16 19 02.8**	**+1.2**
	baz=276						
HARP	**HAARP**	**49.01**	**36**	P	**P**	**16 19 03.1**	**+1.5**
	baz=277						
ULHL	**Ulahol**	**49.02**	**296**	P	**P**	**16 19 02.5**	**+0.3**
	SNR=8.2						
KOLN	**Koldanda**	**49.23**	**276**	*e*P	**P**	**16 19 04.3**	**+0.3**
TKM2	**Tokmak 2**	**49.25**	**297**	P	**P**	**16 19 04.9**	**+0.9**
	SNR=43						
TKM2	**Tokmak 2**	**49.25**	**297**	P	**P**	**16 19 04.3**	**+0.3**
SCRK	**Sand Creek**	**49.36**	**34**	IAmb	IAmb	16 19 20.3	
	comp=Z,8.6nm,1.0s						
SCRK	**Sand Creek**	**49.36**	**34**	P	**P**	**16 19 05.3**	**+1.0**
	baz=276,SNR=6.4						
N25K	**Chitina, Valde**	**49.37**	**37**	P	**P**	**16 19 06.1**	**+1.7**
	baz=278						
BMRM	**Bremner River**	**49.45**	**38**	IAmb	IAmb	16 19 30.8	
	comp=Z,11nm,0.8s						
BMRM	**Bremner River**	**49.45**	**38**	P	**P**	**16 19 05.8**	**+0.8**
	baz=278						
J26L	**Joseph Creek**	**49.49**	**33**	P	**P**	**16 19 06.6**	**+1.3**
	baz=276						
PYUN	**Piuthan**	**49.55**	**276**	*e*P	**P**	**16 19 06.8**	**+0.3**
	comp=Z,139nm,0.9s						
BTLS	**Baital**	**49.65**	**301**	*e*P	**P**	**16 19 06.3**	**-0.4**
BTLS	**Baital**	**49.65**	**301**	*e*P	**P**	**16 19 06.4**	**-0.4**
	baz=300						
SGDS	**Sogindy**	**49.75**	**298***c*	*i*P	**P**	**16 19 07.6**	**0.0**
SGDS	**Sogindy**	**49.75**	**298**	⇑*i*P	**P**	**16 19 07.7**	**0.0**
	baz=298						
L26K	**Log Cabin Wild**	**49.76**	**35**	IAmb	IAmb	16 19 31.0	
	comp=Z,6.7nm,0.8s						
L26K	**Log Cabin Wild**	**49.76**	**35**	P	**P**	**16 19 09.5**	**+2.2**
	baz=278						
KBK	**Karagaybulak**	**49.79**	**297**	P	**P**	**16 19 08.7**	**+0.7**
	SNR=25						
OTUK	**Ortayu**	**49.85**	**305**	P	**P**	**16 19 07.9**	**-0.4**
KULM	**Kulim**	**49.89**	**239**	P	**P**	**16 19 09.2**	**+0.4**
BRVK	**Borovoye**	**49.90**	**312**	P	**P**	**16 19 08.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,17nm,1.0s						
BRVK	**Borovoye**	**49.90**	**312**	P	**P**	**16 19 08.7**	**+0.2**
BRVK				IAmb	IAmb	16 19 09.7	
	comp=Z,17nm,0.9s						
USP	**Ospenovka**	**49.90**	**298**	P	**P**	**16 19 09.0**	**+0.3**
	SNR=10						
M26K	**Nabesna, AK**	**50.00**	**36**	P	**P**	**16 19 11.7**	**+2.5**
	baz=278						
AAK	**Ala-Archa**	**50.11**	**297**	LR	LR	16 42 17.1	
	comp=Z,131nm,18.6s,baz=14,slow=38						
AAK	**Ala-Archa**	**50.11**	**297**	P	**P**	**16 19 09.8**	**-0.7**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AAK	**Ala-Archa**	**50.11**	**297**	P	**P**	**16 19 09.8**	**-0.7**
AAK				IAmb	IAmb	16 19 11.6	
	comp=Z,9.7nm,1.1s						
AAK	**Ala-Archa**	**50.11**	**297**	*i* P	**P**	**16 19 10.4**	**-0.1**
	SNR=5.8						
KSH	**Kashi**	**50.14**	**293**	P	**P**	**16 19 15.1**	**+4.4**
KSH				pP	sP	16 19 29.4	+0.3
KSH				sP	pP	16 19 33.0	+9.4
KSH				S	**S**	**16 26 24.6**	**+5.5**
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
K27K	**Chicken**	**50.19**	**34**	P	**P**	**16 19 12.1**	**+1.6**
	baz=278						
UCH	**Uchtor**	**50.23**	**297**	P	**P**	**16 19 12.4**	**+0.7**
	SNR=7.0						
IPM	**Ipoh**	**50.24**	**238**	P	**P**	**16 19 11.6**	**+0.1**
L27K	**Beaver Creek,**	**50.44**	**35**	IAmb	IAmb	16 19 15.7	
	comp=Z,5.2nm,0.9s						
L27K	**Beaver Creek,**	**50.44**	**35**	P	**P**	**16 19 14.7**	**+2.2**
	baz=279,SNR=8.1						
M27K	**Edge Creek, AK**	**50.52**	**36**	P	**P**	**16 19 15.3**	**+2.0**
M27K				IAmb	IAmb	16 19 16.9	
	comp=Z,6.4nm,0.9s						
M27K	**Edge Creek, AK**	**50.52**	**36**	P	**P**	**16 19 15.3**	**+2.0**
	baz=279						
EKS2	**Erkin-Say**	**50.60**	**298**	P	**P**	**16 19 14.4**	**+0.2**
	SNR=8.7						
AML	**Almayashu**	**50.84**	**297**	P	**P**	**16 19 17.1**	**+0.9**

	SNR=22						
AML	Almayashu	50.84	297	*i* P	P	16 19 17.2	+0.9
	SNR=23						
BVCY	Beaver Creek	50.98	36	P	P	16 19 18.6	+2.1
	baz=280						
YUK3	Moose Creek	51.28	37	P	P	16 19 21.0	+1.9
	baz=281						
I29M	Ogilvie Camp,	51.58	32	IAmb	IAmb	16 19 43.0	
	comp=Z,9.1nm,1.0s						
I29M	Ogilvie Camp,	51.58	32	P	P	16 19 22.6	+1.5
	baz=280						
DSRI	Dabo	51.78	230	P	P	16 19 26.1	+3.1
MTN	Manton Dam	52.09	193	P	P	16 19 25.6	+0.4
MTN				IAmb	IAmb	16 19 26.6	
	comp=Z,20nm,1.1s						
DZA	Taraz	52.21	299	*e*P	P	16 19 26.4	+0.4
DZA				pmax	pmax		
	comp=Z,13nm,1.0s						
DZA	Taraz	52.21	299	*e*P	P	16 19 26.5	+0.4
	comp=Z,13nm,1.0s,baz=299						
YUK4	Talbot Arm	52.22	37	P	P	16 19 28.2	+2.1
	baz=283,SNR=5.7						
COEN	Coen	52.23	178	P	P	16 19 26.9	+0.7
COEN				IAmb	IAmb	16 19 41.4	
	comp=Z,9.9nm,0.9s						
KK31	Karatay Array	52.70	299	*i* P	P	16 19 29.4	-0.3
KK31	Karatay Array	52.70	299	IAmb	IAmb	16 19 30.6	
	comp=Z,18nm,0.8s						
KKAR	Karatay Array	52.70	299	P	P	16 19 29.9	+0.2
KKAR	Karatay Array	52.70	299	P	P	16 19 29.9	+0.2
M30M	Minto, Yukon	52.80	35	P	P	16 19 32.5	+2.4
	baz=283						
PSI	Prapat	52.88	239	LR	LR	16 45 34.8	
	comp=Z,237nm,18.4s,baz=322,slow=40						
HYT	Haines Junctio	52.88	37	IAmb	IAmb	16 19 55.9	
	comp=Z,14nm,1.0s						
HYT	Haines Junctio	52.88	37	P	P	16 19 33.5	+2.6
	baz=284,SNR=8.4						
INK	Inuvik	52.89	28	P	P	16 19 31.2	+0.6
	comp=Z,5.3nm,0.5s,baz=299,slow=6.5,SNR=43						
	comp=Z,5.3nm,0.5s						
INK	Inuvik	52.89	28	P	P	16 19 31.9	+1.3
INK				pmax	pmax		
	comp=Z,13nm,1.0s						
INK	Inuvik	52.89	28	P	P	16 19 31.9	+1.3
INK				IAmb	IAmb	16 19 52.2	
	comp=Z,13nm,0.9s						
INK	Inuvik	52.89	28	P	P	16 19 32.2	+1.7
	baz=282,SNR=11						
IUG	Iuzhnay	53.38	298	c *i*P	P	16 19 35.1	+0.4
IUG	Iuzhnay	53.38	298	⇑*i*P	P	16 19 35.2	+0.4
	baz=298						
N31M	Braeburn, Yuko	53.53	36	P	P	16 19 36.8	+1.3
N31M				IAmb	IAmb	16 19 54.3	
	comp=Z,8.2nm,0.9s						
N31M	Braeburn, Yuko	53.53	36	P	P	16 19 37.9	+2.4
	baz=285						
M31M	Drury Creek, Y	53.98	35	IAmb	IAmb	16 19 42.3	
	comp=Z,4.1nm,0.8s						
M31M	Drury Creek, Y	53.98	35	P	P	16 19 40.6	+1.8
	baz=286,SNR=5.6						
WHY	Whitehorse	54.17	37	P	P	16 19 42.2	+1.9
	baz=286						
SVE	Sverdlovsk	54.27	318	d*e*P	P	16 19 41.6	+0.7
SVE				pmax	pmax		
	comp=Z,53nm,0.9s						
GAR	Garm	54.39	295	IAmb	IAmb	16 19 47.2	
	comp=Z,15nm,0.7s						
FARO	Faro, Yukon	54.44	35	P	P	16 19 43.4	+1.3
	baz=286						
NIL	Nilore	54.50	287	P	P	16 19 42.2	-0.8
NIL				pmax	pmax		
	comp=Z,44nm,0.7s						
NIL	Nilore	54.50	287	P	P	16 19 42.2	-0.8
A36M	Sachs Harbour	54.73	22	P	P	16 19 46.4	+2.3
	baz=286						
GSI	Gunungsitoli	54.88	239	P	P	16 19 44.8	-1.1
MMPY	Sheldon Lake,	55.25	34	P	P	16 19 48.8	+0.8
	baz=288						
ARU	Arti	55.48	318	c *i*P	P	16 19 49.8	+0.1
ARU				*PP	pP	16 20 03.4	+0.6
ARU						16 20 48.4	
ARU						16 21 50.9	
ARU				S	S	16 27 32.9	+1.8
ARU				SS	SS	16 31 21.4	+5.6
ARU				pmax	pmax		
	comp=Z,53nm,1.1s						
ARU				MLR	MLR		
	comp=Z,326nm,20.0s						
ARU	Arti	55.48	318	P	P	16 19 49.7	0.0
C36M	Paulatuk	55.92	25	IAmb	IAmb	16 20 13.9	
	comp=Z,11nm,0.8s						
C36M	Paulatuk	55.92	25	P	P	16 19 54.3	+1.7
	baz=289						
TGTN	Hyland Airport	56.94	35	P	P	16 20 02.5	+2.4
	baz=291						
KBL	Kabul	57.23	290	P	P	16 20 01.4	-1.3
KBL				pmax	pmax		
	comp=Z,18nm,0.9s						
KBL	Kabul	57.23	290	P	P	16 20 01.4	-1.3
AB31	Akbulak array	57.26	310	*i* P	P	16 20 02.0	-0.4
ABKAR	Akbulak array	57.26	310	P	P	16 20 02.2	-0.2
AKTO	Aktyubinsk	57.95	311	LR	LR	16 46 24.5	
	comp=Z,161nm,20.5s,baz=286,slow=37						
FITZ	Fitzroy Crossi	58.35	198	P	P	16 20 11.1	+0.7
FITZ				IAmb	IAmb	16 20 26.8	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	58.41	188	P	P	16 20 10.2	-0.6
CTA	Charters Tower	58.46	175	LR	LR	16 54 01.5	
	comp=Z,29nm,18.0s,baz=199,slow=45						
WRAB	Tennant Creek	58.58	188	P	P	16 20 11.8	-0.2
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	58.58	188	P	P	16 20 11.8	-0.2
WRAB				IAmb	IAmb	16 20 12.6	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	58.59	188	P	P	16 20 11.4	-0.6
WR0				IAmb	IAmb	16 20 12.5	
	comp=Z,11nm,0.8s						
WB2	Warramunga Arr	58.59	188	P	P	16 20 11.4	-0.6
WB2				IAmb	IAmb	16 20 12.7	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	58.59	188	P	P	16 20 10.7	-1.3
	comp=Z,14nm,0.8s,baz=5.8,slow=7.1,SNR=146						
	comp=Z,14nm,0.8s						
SPA0	Spitsbergen Ar	59.12	349	*e*P	P	16 20 16.8	+1.7
SPB2	Spitsbergen Ar	59.12	349	P	P	16 20 16.4	+1.4
KIRV	Kirov	59.28	323	LR	LR	16 46 12.7	
	comp=Z,187nm,20.7s,baz=255,slow=36						
NOR	Nord	59.58	356	*i* P	P	16 20 18.4	+0.3
NOR				IAmb	IAmb	16 20 19.3	
	comp=Z,7.9nm,0.8s						
PRGR	Permogore	59.71	327	*e*P	P	16 20 19.0	-0.3
PRGR				*e**PP	sP	16 20 38.0	+0.1
PRGR				*e*		16 22 29.8	
RES	Resolute Bay	61.06	15	LR	LR	16 49 57.5	
	comp=Z,108nm,19.1s,baz=78,slow=39						
RES	Resolute Bay	61.06	15	P	P	16 20 28.9	+0.6
RES				pmax	pmax		
	comp=Z,12nm,1.0s						
RES	Resolute Bay	61.06	15	P	P	16 20 28.9	+0.6
RES				IAmb	IAmb	16 20 29.7	
	comp=Z,12nm,0.9s						
AS31	Alice Springs	62.32	188	P	P	16 20 37.1	-0.3
ASAR	Alice Springs	62.32	188	P	P	16 20 36.4	-1.0
	comp=Z,5.3nm,0.7s,baz=9.9,slow=5.2,SNR=68						
ASAR				LR	LR	16 46 09.5	
	comp=Z,78nm,21.4s,baz=282,slow=34						
	comp=Z,5.3nm,0.7s						
YKA	Yellowknife Ar	62.33	31	P	P	16 20 37.2	+0.1
	comp=Z,4.5nm,0.7s,baz=301,slow=6.7,SNR=58						
	comp=Z,4.5nm,0.7s						
YKA	Yellowknife Ar	62.33	31	P	P	16 20 37.3	+0.2
YKA	Yellowknife Ar	62.33	31	P	P	16 20 37.3	+0.2
KLMR	Klimovskoe	62.69	327	*e*P	P	16 20 36.9	-2.5
KLMR				*e**PP	sP	16 20 57.1	-1.0
KLMR				*e*		16 22 54.6	
KLMR				pmax	pmax		
	comp=Z,13nm,0.9s						
KLMR	Klimovskoe	62.69	327	*e*P	P	16 20 37.0	-2.5
KLMR				AMP		16 20 41.3	
	comp=Z,13nm,0.9s						
KLMR				*e*pP	sP	16 20 57.2	-0.9
KLMR				*e*PP	PP	16 22 54.6	-2.6
ARA0	ARCESS Array S	62.72	339	*e*P	P	16 20 39.0	-0.5
ARCES	ARCESS Array B	62.72	339	P	P	16 20 39.3	-0.3
	comp=Z,11nm,1.0s,baz=43,slow=7.3,SNR=12						
	comp=Z,11nm,1.0s						
ARCES	ARCESS Array B	62.72	339	P	P	16 20 38.6	-1.0
MBWA	Marble Bar	62.91	203	P	P	16 20 40.7	-0.7
MBWA				IAmb	IAmb	16 21 02.7	
	comp=Z,8.9nm,0.9s						
BELG	Belogornoye	62.96	317	LR	LR	16 49 14.6	
	comp=Z,148nm,21.2s,baz=292,slow=37						
GEYT	Alibeck	63.43	298	P	P	16 20 44.3	-0.5
	comp=Z,6.0nm,0.7s,baz=28,slow=3.5,SNR=8.5						
GEYT				LR	LR	16 51 27.7	
	comp=Z,106nm,18.1s,baz=351,slow=39						
	comp=Z,6.0nm,0.7s						
GEYT	Alibeck	63.43	298	P	P	16 20 44.6	-0.3
GYA0B	ALIBECK ARRAY	63.43	298	IAmb	IAmb	16 20 45.5	
	comp=Z,7.1nm,0.8s						
TULEG	Thule	63.57	8	P	P	16 20 44.9	-0.1
TULEG	Thule	63.57	8	*i* P	P	16 20 45.2	+0.1
TULEG				IAmb	IAmb	16 20 45.7	
	comp=Z,22nm,0.7s						
KTK1	Kautokeino	63.68	339	*e*P	P	16 20 46.3	+0.3
JETT	Jettan, Norway	64.08	341	*e*P	P	16 20 48.4	-0.2
EIDS	Eidsvold	64.15	171	P	P	16 20 50.6	+1.2
EIDS				IAmb	IAmb	16 21 07.0	
	comp=Z,8.0nm,0.6s						
TRO	Tromso	64.42	341	*e*P	P	16 20 50.9	+0.2
DZM	Mont Dzumac	64.54	155	LR	LR	16 45 52.3	
	comp=Z,139nm,21.4s,baz=310,slow=33						
MSVF	Nonsavu	65.45	142	LR	LR	16 43 32.9	
	comp=Z,103nm,21.0s,baz=335,slow=30						
D03D	Eldon	65.82	48	P	P	16 21 01.4	+1.2
	baz=301						
B05A	Bryant	66.01	47	P	P	16 21 03.7	+2.3
	baz=302						
STEI	Steigen	66.57	341	*e*P	P	16 21 04.6	0.0
E04D	Cinebar	66.64	48	P	P	16 21 07.8	+2.4
	baz=302						
FAUS	Fauske	66.96	340	*e*P	P	16 21 07.5	+0.3
OBN	Obninsk	67.12	323	d *i*P	P	16 21 07.0	-1.3
OBN				*e**PP	sP	16 21 25.5	-1.6
OBN				*e*		16 21 35.4	
OBN				*e*		16 23 34.5	
OBN				*e*PPP	PPP	16 25 21.3	
OBN				pmax	pmax		
	comp=Z,37nm,1.7s						
OBN				MLR	MLR		
	comp=Z,97nm,18.0s						
LPSR	Galich'ya Gora	67.39	320	*e*P	P	16 21 09.8	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
FIA1	FINESS Array S	67.66	332	P	P	16 21 11.6	-0.1
FINES	FINESS Array B	67.66	332	P	P	16 21 11.7	0.0
	comp=Z,12nm,0.7s,baz=53,slow=7.4,SNR=39						
	comp=Z,12nm,0.7s						
AFI	Afiamalu	67.82	131	LR	LR	16 46 43.8	
	comp=Z,39nm,21.5s,baz=290,slow=32						
VSR	Storozhevoye	68.05	319	*e*P	P	16 21 12.6	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MOR8	Moi Rana	68.08	340	*e*P	P	16 21 13.2	-1.1
VORD	Divnogorie	68.12	318	*e*P	P	16 21 13.6	-1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
I04A	Tendick Farm,	68.20	51	P	P	16 21 16.4	+1.0
	baz=303						
C09A	Chrisman Ranch	68.42	46	IAmb	IAmb	16 21 19.3	
	comp=Z,6.7nm,0.7s						
NEW	Newport	68.81	45	P	P	16 21 19.7	+0.6
	baz=304						
MEF	Metsahovi	69.09	332	*e*P	P	16 21 21.1	+0.5
PINE	Pine Mountain	69.10	50	IAmb	IAmb	16 21 25.1	
	comp=Z,8.8nm,0.8s						
L04D	Klamath Falls	69.13	52	P	P	16 21 22.0	+0.6
	baz=304						
J05D	Fort Rock, OR	69.20	51	P	P	16 21 23.6	+1.8
	baz=304						
VSU	Vasula	69.35	329	*e*P	P	16 21 22.9	+0.7
RAF	Rauma	69.49	333	*e*P	P	16 21 23.3	+0.3
K05A	Summer Lake	69.72	51	IAmb	IAmb	16 21 28.4	
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	70.05	180	P	P	16 21 27.2	+0.5
	comp=Z,2.3nm,0.9s,baz=55,slow=4.4,SNR=4.1						
STKA				LR	LR	16 52 18.1	
	comp=Z,108nm,18.1s,baz=203,slow=36						
	comp=Z,2.3nm,0.9s						
STKA	Stephens Creek	70.05	180	P	P	16 21 26.9	+0.1
WALA	Waterton Lakes	70.09	43	IAmb	IAmb	16 21 29.6	
	comp=Z,7.2nm,0.9s						
ZEI	Tsey	70.13	309	*e*P	P	16 21 26.1	-1.5
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FORT	Forrest	70.15	193	P	P	16 21 27.4	0.0
KIV	Kislovodsk	70.20	311	⇓P	P	16 21 29.9	+2.0
KIV	Kislovodsk	70.20	311	*e*P	P	16 21 28.5	+0.6
KIV				pmax	pmax		
	comp=Z,58nm,1.1s						
KIV	Kislovodsk	70.20	311	P	P	16 21 27.3	-0.6
KIV	Kislovodsk	70.20	311	*i* P	P	16 21 29.5	+1.6
	SNR=6.0						
KBZ	Khabaz	70.20	310	P	P	16 21 28.2	+0.5
	comp=Z,20nm,0.9s,baz=41,slow=3.6,SNR=37						
	comp=Z,20nm,0.9s						
MTSE	Matsula	70.32	331	*e*P	P	16 21 29.0	+0.9
ONI	Oni	70.52	309	IAmb	IAmb	16 21 31.7	
	comp=Z,14nm,1.0s						
JTMT	Jette	70.66	44	P	P	16 21 32.5	+1.8
JTMT				IAmb	IAmb	16 21 33.4	
	comp=Z,8.7nm,0.8s						
AAL	Aland	70.71	333	*e*P	P	16 21 30.4	-0.1
BANOM	Banah	71.08	288	P	P	16 21 33.9	+0.5
BANOM				P	pP	16 21 34.1	-13
SHME	Shamm	71.12	289	P	P	16 21 33.7	0.0
BBOO	Buckleboo	71.19	185	P	P	16 21 34.1	+0.5
MSO	Missoula	71.39	45	P	P	16 21 37.0	+1.9
	baz=307						
MORW	Morawa	71.45	204	P	P	16 21 36.2	+0.9
MORW				IAmb	IAmb	16 21 41.0	
	comp=Z,28nm,1.5s						
MNK	Minsk	71.46	326	*i* P	P	16 21 33.8	-1.3
MNK				*i* *PP	pP	16 21 50.3	+1.6
MNK				*i*		16 24 12.5	
MNK				*i* PPP	PPP	16 25 56.1	
MNK				*i* S	S	16 30 45.8	-4.1
MNK				*i* SS	SS	16 35 24.2	-0.1
MNK				pmax	pmax		
	comp=Z,27nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,23nm,0.7s						
MNK				MLR	MLR		
	comp=Z,299nm,28.0s						
MNK				MLR	MLR		
	comp=E,17nm,18.0s						
MNK				MLR	MLR		
	comp=N,52nm,14.0s						
MNK	Minsk	71.46	326	*i* P	P	16 21 33.9	-1.3
	comp=E,3.0nm,1.0s,baz=229						
MNK				*i* P	P	16 21 33.9	-1.3
	comp=N,23nm,0.7s						
MNK				*i* P	P	16 21 33.9	-1.3
	comp=Z,27nm,0.9s						
MNK				*i* pP	pP	16 21 50.3	+1.6
MNK				*i* PP	PP	16 24 12.6	-1.0
MNK				*i* PPP	PPP	16 25 56.2	
MNK				*i* S	S	16 30 45.8	-4.1
MNK				*i* SS	SS	16 35 24.3	-0.1
MNK				*i* SSS	SSS	16 38 43.8	
MNK				*i* LQ	LQ	16 48 08.2	
MNK				*i* LR	LR	16 52 27.8	
MNK				*i* LRM	MLR	16 54 40.5	
	comp=Z,299nm,27.5s						
MNK				*i* LRM	MLR	16 55 34.1	
	comp=E,17nm,18.5s						
MNK				*i* LRM	MLR	16 55 34.1	
	comp=N,52nm,14.2s						
MSFE	Esma-Masafi	71.50	288	P	P	16 21 36.3	+0.3
ISAL	Salakas	71.51	327	*e*P	P	16 21 36.1	+0.6
BEKR	Beckworth	71.67	53	P	P	16 21 38.0	+1.1
NACGM	Naroch	71.67	327	⇑*e*P	P	16 21 37.1	+0.6
	baz=48						
UOSS	Minazif	71.70	288	P	P	16 21 36.5	-0.6
UOSS				IAmb	IAmb	16 21 38.0	
	comp=Z,10nm,1.0s						
UOSS	Minazif	71.70	288	P	P	16 21 37.0	-0.2
UPP	Uppsala	71.77	334	*e*P	P	16 21 37.0	+0.1
HATD	Hatta, Dubai	71.82	287	*i* P	P	16 21 38.4	+0.5
	SNR=6.0						
ASHO	Ashiyiah	71.96	287	*i* P	P	16 21 38.9	+0.1
	SNR=5.8						
ILULI	Ilulissat	72.14	5	IAmb	IAmb	16 21 40.5	
	comp=Z,13nm,0.7s						
MPK	Martis Peak	72.20	54	P	P	16 21 42.3	+2.0
MPK				IAmb	IAmb	16 21 58.3	
	comp=Z,13nm,1.2s						
PABE	Paberze	72.46	328	P	P	16 21 41.5	+0.4
PABE	Paberze	72.46	328	*e*P	P	16 21 41.9	+0.7
FCC	Fort Churchill	72.50	27	IAmb	IAmb	16 21 42.9	
	comp=Z,18nm,1.2s						
ASUD	Al Ashush, Dub	72.53	288	*i* P	P	16 21 42.6	+0.4
	SNR=6.5						
ALNE	Al Ain	72.54	287	P	P	16 21 42.5	+0.3
ICESG	Greenland Ices	72.69	1	*i* P	P	16 21 43.6	+0.9
ICESG				IAmb	IAmb	16 21 44.2	
	comp=Z,24nm,0.8s						
NC303	NORSAR Array S	72.75	337	P	P	16 21 42.9	+0.1
NC303				IAmb	IAmb	16 21 44.3	
	comp=Z,34nm,1.4s						
ANN	Anapa	72.75	314	*e*P	P	16 21 42.4	-0.7
ANN				pmax	pmax		
	comp=Z,21nm,0.7s						
MOL	Molde	72.78	340	*e*P	P	16 21 43.2	+0.3
DOMB	Dombas	72.78	339	*e*P	P	16 21 43.2	+0.2
HFS	Hagfors	72.87	336	P	P	16 21 43.8	+0.2
	comp=Z,8.0nm,0.8s,baz=21,slow=12,SNR=16						
HFS				LR	LR	16 56 51.4	
	comp=Z,146nm,19.7s,baz=28,slow=38						
	comp=Z,8.0nm,0.8s						
EGMT	Eagleton	72.91	42	IAmb	IAmb	16 21 46.9	
	comp=Z,18nm,1.0s						
EGMT	Eagleton	72.91	42	P	P	16 21 45.5	+1.3
	baz=309						
NB2	NORSAR Subarra	72.94	337	P	P	16 21 44.0	0.0
	comp=Z,17nm,0.7s,baz=38,slow=6.2						
NB2	NORSAR Subarra	72.94	337	P	P	16 21 44.0	0.0
	baz=38,slow=6.2						
NOA	NORSAR Array B	72.94	337	P	P	16 21 44.1	+0.1
	comp=Z,14nm,0.7s,baz=39,slow=6.0,SNR=58						
NOA				LR	LR	16 56 23.5	
	comp=Z,104nm,21.4s,baz=45,slow=38						
	comp=Z,14nm,0.7s						
DLMT	Dillon	73.03	45	P	P	16 21 46.4	+1.5
DLMT				IAmb	IAmb	16 21 48.1	
	comp=Z,8.9nm,1.1s						
NC602	NORSAR Array S	73.08	337	*e*P	P	16 21 44.9	+0.1
HLID	Hailey	73.09	48	P	P	16 21 47.5	+2.1
	baz=307						
VIKU	Vikbolandet	73.09	333	*e*P	P	16 21 45.5	+0.6
AKN	Aaknes	73.25	340	*e*P	P	16 21 45.0	-0.7
BMN	Battle Mountai	73.29	51	P	P	16 21 48.1	+1.5
BMN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BMN	Battle Mountai	73.29	51	P	P	16 21 48.1	+1.5
AKASG	Malin Array Be	73.33	322	P	P	16 21 45.8	-0.7
	comp=Z,12nm,0.7s,baz=48,slow=6.1,SNR=47						
	comp=Z,12nm,0.7s						
AKASG	Malin Array Be	73.33	322	IAmb	IAmb	16 21 47.4	
	comp=Z,7.5nm,0.8s						
BOZ	Bozeman (W)	73.42	45	IAmb	IAmb	16 21 49.8	
	comp=Z,6.8nm,1.1s						
BOZ	Bozeman (W)	73.42	45	P	P	16 21 48.8	+1.6
	baz=308						
GURO	Guroymak-BITLI	73.74	306	IAmb	IAmb	16 21 51.0	
	comp=Z,11nm,1.0s						
LHV	Little Huntoon	73.78	54	IAmb	IAmb	16 21 52.8	
	comp=Z,8.0nm,1.0s						
NVAR	Mina Array Bea	73.80	54	P	P	16 21 51.0	+1.3
	comp=Z,2.4nm,0.7s,baz=288,slow=6.4,SNR=11						
	comp=Z,2.4nm,0.7s						
SUW	Suwalki	73.82	327	*e*P	P	16 21 49.6	+0.4
SUW	Suwalki	73.82	327	*e*P	P	16 21 50.4	+1.1
SKAR	Skarslia	74.10	338	*e*P	P	16 21 51.1	+0.3
ELK	Elko	74.31	50	P	P	16 21 52.7	0.0
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ELK	Elko	74.31	50	P	P	16 21 52.7	0.0
SFJD	Kangerlussuaq	74.36	5	P	P	16 21 52.1	0.0
SFJD				pmax	pmax		
	comp=Z,13nm,0.9s						
SFJD	Kangerlussuaq	74.36	5	P	P	16 21 52.1	0.0
SFJD				IAmb	IAmb	16 21 53.6	
	comp=Z,13nm,0.9s						
KONO	Kongsberg	74.54	337	*e*P	P	16 21 53.6	+0.3
H17A	Grant Village	74.75	45	IAmb	IAmb	16 21 59.7	
	comp=Z,9.4nm,0.9s						
H17A	Grant Village	74.75	45	P	P	16 21 57.8	+2.6
	baz=309						
MZR	Muzera	74.85	287	*i* P	P	16 21 55.3	-0.5
	SNR=7.4						
PKM	Mcpherson Peak	74.93	57	P	P	16 21 58.4	+2.1
	baz=307						
RLMT	Red Lodge	75.01	44	P	P	16 21 57.6	+1.0
	baz=310						
CWC	Cottonwood Cre	75.13	55	P	P	16 21 58.8	+1.4
	baz=307						
DY2G	Dye2	75.13	3	*i* P	P	16 21 57.6	+0.7
DY2G				IAmb	IAmb	16 21 58.4	
	comp=Z,19nm,0.7s						
GRAC	Grapevine Rang	75.26	54	P	P	16 22 00.2	+2.3
	baz=307						
MARD	Mardin	75.28	306	IAmb	IAmb	16 21 59.7	
	comp=Z,15nm,0.7s						
ISA	Isabella, Lake	75.34	56	P	P	16 21 59.1	+0.6
	baz=307						
SORM	Soroca	75.46	321	⇑P	P	16 21 58.1	-0.7
SORM	Soroca	75.46	321	⇑P	P	16 21 58.1	-0.7
R11A	Troy Canyon, C	75.56	52	P	P	16 22 00.8	+1.0
R11A	Troy Canyon, C	75.56	52	P	P	16 22 01.5	+1.7
	baz=308						
LAO	LASA Array	75.61	41	P	P	16 22 01.9	+2.1
	baz=312						
DEL	Delary	75.63	333	*e*P	P	16 21 59.4	-0.2
BLS5	Blasjo	75.66	338	*e*P	P	16 22 00.4	+0.5
MPMC	Manual Prospec	75.74	55	P	P	16 22 02.5	+1.5
	baz=308						
FURC	Furnace Creek,	75.90	55	P	P	16 22 03.8	+2.3
	baz=308						
LRMC	Laurel Mtn Rad	75.97	56	P	P	16 22 04.0	+1.8
	baz=308						
TPNV	Topopah Spring	76.00	54	P	P	16 22 03.8	+1.5
	baz=308						
MILM	Milestii Mici	76.05	319	*e*P	P	16 22 07.5	+5.3
	comp=Z,14nm,0.5s						
MILM	Milestii Mici	76.05	319	*e*P	P	16 22 07.0	+4.8
MILM				pmax	pmax		
	comp=Z,14nm,0.5s						
DUG	Dugway, Tooele	76.10	50	P	P	16 22 04.6	+1.8
	baz=309						
EDW2	Edwards Air Fo	76.13	56	P	P	16 22 04.7	+1.7
	baz=308						
KMY	Karmoy	76.19	339	*e*P	P	16 22 03.0	+0.3
GWY	Greenwater Val	76.19	55	P	P	16 22 03.8	+0.3
QSM	Queen of Sheba	76.20	55	IAmb	IAmb	16 22 06.3	
	comp=Z,7.8nm,1.1s						
BORG	Borgarnes	76.21	353	P	P	16 22 03.6	+0.8
	comp=Z,33nm,0.9s,baz=359,slow=7.7,SNR=3.6						
	comp=Z,33nm,0.9s						
BORG	Borgarnes	76.21	353	P	P	16 22 05.4	+2.6
BORG				pmax	pmax		
	comp=Z,44nm,1.0s						
BORG	Borgarnes	76.21	353	P	P	16 22 05.4	+2.6
BSD	Bornholm Skovb	76.30	332	*e*P	P	16 22 03.5	0.0
SNART	Snartemo	76.33	337	*e*P	P	16 22 03.3	-0.3
BW06	Boulder Array	76.36	46	P	P	16 22 05.1	+0.7
	baz=310						
PD31	Pinedale Array	76.36	46	P	P	16 22 05.3	+0.9
PDAR	Pinedale Array	76.36	46	P	P	16 22 05.6	+1.2
	comp=Z,4.8nm,0.8s,baz=275,slow=1.5,SNR=41						
	comp=Z,4.8nm,0.8s						
GSC	Goldstone, Bar	76.64	56	P	P	16 22 07.6	+1.7
	baz=308						
KWP	Kalwaria Pacla	77.12	324	*e*P	P	16 22 09.2	+0.9
VLDR	Vladesti	77.14	319	⇑P	P	16 22 09.2	+0.7
BUR08	Bucovina Ar. S	77.35	322	P	P	16 22 09.8	+0.1
BUR08				IAmb	IAmb	16 22 10.8	
	comp=Z,7.6nm,0.8s						
BURAR	Bucovina Array	77.36	322	⇑P	P	16 22 10.2	+0.4
BURAR	Bucovina Array	77.36	322	⇑P	P	16 22 10.2	+0.4
BURAR	Bucovina Array	77.36	322	IAmb	IAmb	16 22 11.2	
	comp=Z,10nm,0.7s						
TESR	Tescani	77.42	320	⇑P	P	16 22 10.3	+0.3

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CFR   Carcaliu          77.57 318 ⇓P     P       16 22 11.2 +0.4
CFR   Carcaliu          77.57 318 ⇓P     P       16 22 11.2 +0.4
GMRC  Granite Mounta    77.70  55  P     P       16 22 13.3 +1.3
      baz=309
RDMU  Red Mountain      77.77  48  IAmb  IAmb    16 22 15.1
      comp=Z,14nm,1.0s
P17A  Butcher Ranch,    77.80  49  P     P       16 22 13.6 +1.2
P17A                               IAmb  IAmb    16 22 15.2
      comp=Z,8.3nm,0.8s
VRI   Vrincioaia        77.82 320 ⇑P     P       16 22 13.3 +1.0
VRI   Vrincioaia        77.82 320 ⇑P     P       16 22 13.3 +1.0
MTPU  Mount Pierson     77.84  51  IAmb  IAmb    16 22 16.3
      comp=Z,4.7nm,0.8s
P18A  Preston Nutter    77.99  49  IAmb  IAmb    16 22 40.1
      comp=Z,4.2nm,0.8s
OJC   Ojcow             78.00 326 eP     P       16 22 13.7 +0.6
OJC   Ojcow             78.00 326  P     P       16 22 12.8 -0.3
OJC                                pmax  pmax
      comp=Z,28nm,1.1s
OJC   Ojcow             78.00 326  P     P       16 22 12.8 -0.3
UZH   Uzhgorod          78.03 324 eP     P       16 22 19.6 +6.3
UZH                               e              16 22 27.0
UZH                               e              16 22 38.2
ULM   Lac du Bonnet     78.05  34  P     P       16 22 13.9 +0.5
      comp=Z,3.7nm,0.6s,baz=320,slow=4.1,SNR=3.8
      comp=Z,3.7nm,0.6s
ULM   Lac du Bonnet     78.05  34  P     P       16 22 14.0 +0.5
ULM   Lac du Bonnet     78.05  34  IAmb  IAmb    16 22 15.2
      comp=Z,6.8nm,1.0s
K22A  Casper            78.12  45  P     P       16 22 14.7 +0.5
      baz=312
BR131 Keskin Array S    78.13 312  IAmb  IAmb    16 22 15.7
      comp=Z,7.3nm,1.0s
BRTR  Keskin Array B    78.13 312  P     P       16 22 14.5 +0.2
      comp=Z,2.5nm,0.6s,baz=84,slow=5.1,SNR=15
      comp=Z,2.5nm,0.6s
SRU   San Rafael Swe    78.16  49  P     P       16 22 15.6 +1.1
SRU                                pmax  pmax
      comp=Z,9.0nm,0.6s
SRU   San Rafael Swe    78.16  49  P     P       16 22 15.6 +1.1
SRU                                IAmb  IAmb    16 22 36.5
      comp=Z,9.0nm,0.6s
CRVS  Cervenica-Dubn    78.22 324 eP     P       16 22 14.8 +0.4
CRVS                               pmax  pmax
      comp=Z,16nm,1.1s
CRVS  Cervenica-Dubn    78.22 324 eP     P       16 22 14.8 +0.4
NIE   Niedzica          78.36 325 eP     P       16 22 17.1 +1.9
RWWY  Rawlins           78.38  46  IAmb  IAmb    16 22 17.3
      comp=Z,7.4nm,1.0s
DOPR  Dopca             78.42 320 ⇓P     P       16 22 17.2 +1.6
IRM   Iron Mountain     78.43  56  P     P       16 22 17.7 +1.8
      baz=309
RSSD  Black Hills       78.47  42  P     P       16 22 16.7 +0.5
      baz=313
MLR   Muntele Rosu      78.48 320  LR    LR      16 59 46.4
      comp=Z,157nm,18.6s,baz=60,slow=38
BC3   Big Chuckawall    78.54  56  P     P       16 22 17.4 +0.8
      baz=309
BR231 Keskin MP Arra    78.56 312  P     P       16 22 16.7 +0.1
BR231                              IAmb  IAmb    16 22 18.1
      comp=Z,18nm,0.8s
LANS  Liptovska Anna    78.93 326 eP     P       16 22 19.6 +1.2
LANS                               pmax  pmax
      comp=Z,4.0nm,0.7s
LANS  Liptovska Anna    78.93 326 eP     P       16 22 19.6 +1.2
VOIR                    78.97 320 ⇑P     P       16 22 19.4 +0.8
VOIR                    78.97 320 ⇑P     P       16 22 19.4 +0.8
KSP   Ksiaz             79.02 328 eP     P       16 22 19.4 +0.6
MDUB  Mudurnu           79.05 313  P     P       16 22 19.6 +0.3
MTUR  Matau             79.11 320 ⇑P     P       16 22 27.7 +8.2
MTUR  Matau             79.11 320 ⇑P     P       16 22 27.7 +8.3
DRGR                    79.15 322 ⇑P     P       16 22 19.8 +0.1
DRGR                    79.15 322 ⇑P     P       16 22 19.8 +0.1
ARR   Arges             79.22 320 ⇓P     P       16 22 21.4 +1.3
MORC  Moravsky Berou    79.30 327 ⇑P     P       16 22 21.3 +0.9
MORC  Moravsky Berou    79.30 327 ⇑P     P       16 22 21.3 +0.9
MORC  Moravsky Berou    79.30 327  IAmb  IAmb    16 22 22.2
      comp=Z,16nm,1.0s
MORC  Moravsky Berou    79.30 327 eP     P       16 22 21.2 +0.9
CHVC  Chvalec           79.31 328 eP     P       16 22 21.2 +0.8
DPC   Dobruska-Polom    79.38 328 eP     P       16 22 22.0 +1.2
DPC   Dobruska-Polom    79.38 328 eP     P       16 22 22.0 +1.2
KRLC  Kraliky           79.40 328 eP     P       16 22 21.7 +0.8
KRLC  Kraliky           79.40 328 eP     P       16 22 21.7 +0.8
RAZG  Razgrad           79.52 318 ⇓P     P       16 22 26.5 +4.9
LOT   Lotru             79.60 321 ⇓P     P       16 22 22.1 -0.1
N23A  Red Feather La    79.62  46  IAmb  IAmb    16 22 52.6
      comp=Z,6.2nm,0.9s
N23A  Red Feather La    79.62  46  P     P       16 22 24.4 +1.8
      baz=313
PSZ   Piszkesteto       79.65 325 ⇑P     P       16 22 23.4 +1.1
PSZ   Piszkesteto       79.65 325 ⇑P     P       16 22 23.4 +1.1
PSZ   Piszkesteto       79.65 325  IAmb  IAmb    16 22 24.3
      comp=Z,24nm,1.2s
VYHS  Vyhne             79.70 325 eP     P       16 22 23.5 +1.0
VYHS                               pmax  pmax
      comp=Z,6.0nm,1.2s
VYHS  Vyhne             79.70 325 eP     P       16 22 23.5 +1.0
JAVC  Velka Javorina    79.94 326 eP     P       16 22 25.3 +1.4
Y14A  Wickenburg        79.94  55  P     P       16 22 24.9 +0.8
BRG   Berggiesshubel    79.95 329 eP     P       16 22 24.7 +0.9
BRG                                Amp           16 22 25.3
      comp=Z,8.8nm,0.8s
BRG   Berggiesshubel    79.95 329 eP     P       16 22 24.6 +0.9
BRG                                pmax  pmax
      comp=Z,9.0nm,0.8s
WUAZ  Wupatki           79.96  52  P     P       16 22 26.7 +2.4
      baz=310
PVCC  Panska Ves        79.96 329 eP     P       16 22 25.0 +1.1
PVCC  Panska Ves        79.96 329 eP     P       16 22 25.0 +1.1
CLL   Collm             79.98 330⇑iP     P       16 22 24.2 +0.3
CLL                                pmax  pmax
      comp=Z,21nm,0.9s
CLL   Collm             79.98 330  IAmb  IAmb    16 22 25.1
      comp=Z,20nm,0.9s
CLL   Collm             79.98 330⇑iP     P       16 22 24.2 +0.3
      comp=Z,21nm,0.9s
VRAC  Vranov            80.06 327 ⇑P     P       16 22 24.9 +0.5
VRAC  Vranov            80.06 327  P     P       16 22 24.8 +0.4
      comp=Z,11nm,0.9s,baz=46,slow=5.3,SNR=9.4
      comp=Z,11nm,0.9s
VRAC  Vranov            80.06 327 eP     P       16 22 25.3 +0.8
GZR   Gura Zlata        80.12 321 ⇓P     P       16 22 25.6 +0.7
GZR   Gura Zlata        80.12 321 ⇓P     P       16 22 25.6 +0.7
KRUC  Moravsky          80.33 327 eP     P       16 22 26.6 +0.7
PRU   Pruhonice         80.39 329 eP     P       16 22 27.0 +0.8
PRU   Pruhonice         80.39 329 eP     P       16 22 27.0 +0.8
MODS  Modra-Piesok      80.47 326 eP     P       16 22 27.1 +0.4
MODS                               pmax  pmax
      comp=Z,19nm,0.9s
MODS  Modra-Piesok      80.47 326 eP     P       16 22 27.1 +0.4
BZS   Buzias            80.53 322 ⇑P     P       16 22 26.3 -0.7
BZS   Buzias            80.53 322 ⇑P     P       16 22 26.3 -0.7
ISCO  Idaho Springs     80.55  46  P     P       16 22 29.6 +1.9
      baz=313
HERR  Herculane         80.67 321 ⇑P     P       16 22 27.2 -0.6
ZST   Bratislava        80.69 326 eP     P       16 22 30.0 +2.2
ZST   Bratislava        80.69 326 eP     P       16 22 30.0 +2.2
SUSD  Miller            80.85  39  P     P       16 22 29.8 +1.0
SUSD                               IAmb  IAmb    16 22 30.4
      comp=Z,17nm,0.7s
SOCY  Socotra           80.88 278  P     P       16 22 27.1 -2.4
SOCY                               IAmb  IAmb    16 22 28.5
      comp=Z,19nm,0.9s
NKC   Novy Kostel       81.04 330 eP     P       16 22 30.3 +0.6
NKC   Novy Kostel       81.04 330 eP     P       16 22 30.3 +0.6
S22A  4UR Ranch, Cre    81.23  48  P     P       16 22 33.8 +2.5
      baz=312
Q24A  Divide            81.38  47  P     P       16 22 33.2 +1.1
      baz=313
CKRC  Cesky Krumlov     81.40 328 eP     P       16 22 32.4 +0.8
RONA  Rosalia, Austr    81.42 326 eP     P       16 22 32.9 +1.2
      comp=Z,8.7nm,0.6s,SNR=5.5
KHC   Kasperske Hory    81.46 329 eP     P       16 22 32.5 +0.6
KHC   Kasperske Hory    81.46 329  IAmb  IAmb    16 22 33.7
      comp=Z,12nm,0.8s
KHC   Kasperske Hory    81.46 329 eP     P       16 22 32.5 +0.6
MORH  Mrgy, Hungar      81.49 324 ⇓P     P       16 22 32.4 +0.3
GEC2  GERESS Array S    81.63 328  IAmb  IAmb    16 22 34.2
      comp=Z,15nm,1.3s
GERES GERESS Array B    81.63 328  P     P       16 22 32.6 -0.4
      comp=Z,5.8nm,0.9s,baz=49,slow=6.2,SNR=29
GERES                              LR    LR      17 01 39.5
      comp=Z,121nm,19.0s,baz=76,slow=38
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      comp=Z,5.8nm,0.9s
GERES GERESS Array B    81.63 328  P     P       16 22 33.1 +0.2
GERES GERESS Array B    81.63 328  P     P       16 22 33.1 +0.2
EYMN  Ely               81.68  33  P     P       16 22 33.5 +0.4
      baz=321
FRGS  Fruska Gora       81.73 323 ⇑P     P       16 22 32.8 -0.6
EKA   Eskdalemuir Ar    81.84 341  P     P       16 22 34.0 +0.2
      comp=Z,1.6nm,0.5s,baz=30,slow=4.5,SNR=6.2
      comp=Z,1.6nm,0.5s
VTS   Vitosha           81.89 319 ⇓P     P       16 22 35.2 +0.7
VTS   Vitosha           81.89 319 ⇓P     P       16 22 35.2 +0.7
VTS   Vitosha           81.89 319  IAmb  IAmb    16 22 36.4
      comp=Z,14nm,0.8s
GRA1  Grafenberg Arr    81.95 330  P     P       16 22 34.6 +0.1
GRF   Grafenberg Arr    81.95 330  P     P       16 22 34.6 +0.1
GRF                                pmax  pmax
      comp=Z,21nm,0.8s
GRFO  Grafenberg        81.95 330  P     P       16 22 34.4 -0.1
GRFO                               pmax  pmax
      comp=Z,22nm,0.9s
GRFO  Grafenberg        81.95 330  P     P       16 22 34.4 -0.1
SDCO  Great Sand Dun    82.01  48  P     P       16 22 36.5 +1.1
      baz=313
ARSA  Arzberg           82.10 326 eP     P       16 22 36.0 +0.7
      comp=Z,1.9nm,0.5s
DIVS  Divibare          82.43 322  IAmb  IAmb    16 22 37.9
      comp=Z,6.0nm,0.8s
ECSD  EROS Data Cent    82.52  39  P     P       16 22 37.5 -0.1
ECSD                               IAmb  IAmb    16 22 39.1
      comp=Z,7.5nm,1.1s
ECSD  EROS Data Cent    82.52  39  P     P       16 22 38.5 +0.9
      baz=318
BIOA  Bad Ischl, Aus    82.56 328 eP     P       16 22 38.4 +0.7
      comp=Z,7.7nm,0.6s,SNR=6.8
PERS  Pernice           82.75 326 i P    P       16 22 39.1 +0.4
SOKA  Soboth            82.75 326 eP     P       16 22 39.2 +0.3
      comp=Z,29nm,1.1s,SNR=11
T25A  Trinidad          83.06  47  P     P       16 22 42.6 +1.8
      baz=314
BTNL  Ternell           83.11 333 dP     P       16 22 40.6 +0.1
      comp=Z,7.1nm,0.9s
GCIS  Gornji Cirnik     83.12 325 i P    P       16 22 40.8 +0.1
MEM   Membach           83.13 333 dP     P       16 22 41.0 +0.4
      comp=Z,9.6nm,0.9s
KBA   Koelnbreinsper    83.16 327 eP     P       16 22 41.8 +0.7
      comp=Z,13nm,0.9s,SNR=7.4
ANMO  Albuquerque       83.35  50  P     P       16 22 43.8 +1.5
      baz=313
BHOU  Houvegnez         83.35 333 dP     P       16 22 41.3 -0.4
BHOU                              dpP    pP      16 22 54.9 -0.7
MYKA  Terra Mystica     83.39 327 eP     P       16 22 41.8 -0.3
      comp=Z,5.2nm,0.5s
STU   Stuttgart         83.48 331  P     P       16 22 42.0 -0.5
STU                                pmax  pmax
      comp=Z,44nm,1.5s
STU   Stuttgart         83.48 331  P     P       16 22 42.0 -0.5
BCLA  Clavier           83.54 334 dP     P       16 22 42.8 +0.1
      comp=Z,8.0nm,1.0s
BGES  Gesves            83.64 334 dP     P       16 22 43.0 -0.2
      comp=Z,5.7nm,0.9s
WATA  Walderalm         83.69 329 eP     P       16 22 44.0 +0.2
      comp=Z,3.4nm,0.6s
WTTA  Wattenberg        83.73 328 eP     P       16 22 44.2 +0.2
      comp=Z,6.3nm,0.7s
SCHQ  Schefferville     83.80  16  P     P       16 22 44.1 +0.2
      comp=Z,8.1nm,0.9s,baz=2.3,slow=5.7,SNR=11
      comp=Z,8.1nm,0.9s
SCHQ  Schefferville     83.80  16  IAmb  IAmb    16 22 45.4
      comp=Z,7.4nm,0.8s
SNF   Seneffe           83.81 334 dP     P       16 22 44.2 +0.2
      comp=Z,16nm,0.8s
BMRD  Maredsous         83.82 334 dP     P       16 22 44.5 +0.3
      comp=Z,12nm,1.1s
MOTA  Moosalm           83.88 329 eP     P       16 22 44.8  0.0
      comp=Z,15nm,0.9s,SNR=9.0
RETA  Reutte            83.90 329 i P    P       16 22 45.2 +0.5
      SNR=10
SQTA  Sankt Quirin      83.94 329 eP     P       16 22 45.1 +0.1
      comp=Z,8.8nm,0.8s
PDG   Podgorica         84.03 321 ⇑P     P       16 22 45.8 +0.5
DOU   Dourbes           84.06 334 dP     P       16 22 45.5 +0.2
      comp=Z,5.9nm,1.0s
121A  Cookes Peak, D    84.16  53  IAmb  IAmb    16 22 49.3
      comp=Z,5.4nm,0.8s
121A  Cookes Peak, D    84.16  53  P     P       16 22 49.0 +2.5
      baz=312
BFO   Black Forest      84.17 331  P     P       16 22 45.5 -0.5
BFO                                pmax  pmax
      comp=Z,23nm,1.0s
BFO   Black Forest      84.17 331  P     P       16 22 45.5 -0.5
FETA  Feichten          84.29 329 eP     P       16 22 47.1 +0.2
      comp=Z,4.9nm,0.6s,SNR=7.5
DAVA  Damuels           84.42 329 i P    P       16 22 47.7 +0.2
      SNR=11
CTI   Castel Tesino     84.69 328  IAmb  IAmb    16 22 48.8
      comp=Z,9.7nm,0.6s
ECH   Echery            84.71 331  IAmb  IAmb    16 22 49.9
      comp=Z,14nm,0.8s
DAVOX Davos/Dischmat    84.83 329  P     P       16 22 49.6 +0.1
      comp=Z,10nm,0.8s,baz=12,slow=3.8,SNR=19
DAVOX                              LR    LR      17 03 35.9
      comp=Z,112nm,18.9s,baz=82,slow=38
      comp=Z,10nm,0.8s
PPT   Papeete           84.98 117  LR    LR      16 56 44.4
      comp=Z,71nm,20.7s,baz=354,slow=33
SENIN Lac Senin/Sane    86.19 330  IAmb  IAmb    16 22 57.4
      comp=Z,9.0nm,0.8s
AMTX  Amarillo          86.21  48  P     P       16 22 57.7 +1.1
      baz=316
MNTX  Cornudas Mount    86.22  52  P     P       16 22 58.3 +1.7
      baz=314
IDI   Anoyia            86.23 313  P     P       16 22 55.2 -1.5
      comp=Z,6.1nm,0.5s,baz=39,slow=9.0,SNR=5.8
      comp=Z,6.1nm,0.5s
SSB   Saint Sauveur     88.15 331  P     P       16 23 05.1 -0.6
SSB                                pmax  pmax
      comp=Z,6.0nm,0.7s
SSB   Saint Sauveur     88.15 331  P     P       16 23 05.1 -0.6
SSB                                IAmb  IAmb    16 23 07.1
      comp=Z,5.8nm,0.7s
TX31  Lajitas Ar. Si    88.92  53  P     P       16 23 09.6  0.0
TX32  Lajitas Array     88.92  53  IAmb  IAmb    16 23 12.1
      comp=Z,3.3nm,0.9s
TXAR  Lajitas Array     88.92  53  P     P       16 23 10.8 +1.1
      comp=Z,2.3nm,0.7s,baz=297,slow=3.3,SNR=28
      comp=Z,2.3nm,0.7s
CCM   Cathedral Cave    89.47  39  P     P       16 23 11.7 -0.3
CCM                                pmax  pmax
      comp=Z,12nm,1.1s
CCM   Cathedral Cave    89.47  39  P     P       16 23 11.7 -0.3
CCM   Cathedral Cave    89.47  39  P     P       16 23 13.1 +1.1
      baz=321
U40A  Yellville         89.97  41  IAmb  IAmb    16 23 15.8
      comp=Z,7.6nm,0.8s
U40A  Yellville         89.97  41  P     P       16 23 15.0 +0.7
      baz=320
MIAR  Mount Ida         90.97  43  P     P       16 23 20.5 +1.5
      baz=320
W41B  Gary Mavity, V    91.19  42  P     P       16 23 20.9 +0.8
      baz=321
ESDC  Sonseca Array     96.10 334  P     P       16 23 41.5 -1.1
      comp=Z,1.0nm,0.7s,baz=10,slow=4.2,SNR=7.0
ESDC                               LR    LR      17 11 41.6
      comp=Z,130nm,18.1s,baz=8.0,slow=38
      comp=Z,1.0nm,0.7s
VNDA  Vanda            116.44 175  PKP   PKPdf   16 28 55.9 -1.2
      comp=Z,0.6nm,0.6s,baz=311,slow=5.0,SNR=4.2
TORD  Torodi Ar. Bea   116.52 316  PKP   PKPdf   16 28 58.5 -0.7
      comp=Z,0.3nm,0.4s,baz=37,slow=0.8,SNR=4.4
LPAZ  La Paz           145.61  58  PKPbc PKPab   16 29 54.8  0.0
      comp=Z,10nm,0.8s,baz=351,slow=4.3,SNR=36
LPAZ  La Paz           145.61  58  PKP2  PKPab   16 29 55.0 +0.2
LPAZ  La Paz           145.61  58        PKPab   16 29 55.0 +0.2
LPAZ  La Paz           145.61  58 eP     PKPab   16 29 55.5 +0.7
NBPS  Pedro II - PI    145.88   6 eP     PKPdf   16 29 54.1 -0.1
PRPB  Parauapebas      146.09  21 eP     PKPab   16 29 56.2 +0.3
NBPB  Pedra_Branca-C   147.13   3 eP     PKPdf   16 29 55.4 -0.7
PLCA  Paso Flores      155.01 105  PKP   PKPdf   16 30 07.3 -0.1
      comp=Z,1.7nm,1.0s,baz=311,slow=4.0,SNR=2.8
PLCA                               PKPab PKPab   16 30 32.9 +0.8
      comp=Z,1.7nm,0.8s,baz=280,slow=6.1,SNR=4.7
BDFB  Brasilia         155.59  24  PKPab PKPab   16 30 34.1 -0.9
      comp=Z,1.3nm,0.3s,baz=272,slow=11,SNR=3.5
```

IDC 04 16:25:30.3±25.0**,11°.79S**×**166°.28E,h252**km±218km**,** **mb2.9**/3**,mbtmp3.5**/3 **Error ellipse: s-maj=223.2km s-min=60.6km az=131.0,Santa Cruz Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                   Op    ISC        h  m  s    ISC
WRA   Warramunga Arr    31.73 251  P     P       16 31 31.6 +0.5
      0.3nm,0.5s,baz=82,slow=9.1,SNR=5.2
      0.3nm,0.5s
ASAR  Alice Springs     32.94 245  P     P       16 31 41.0 -0.6
      0.3nm,0.7s,baz=67,slow=11,SNR=7.9
      0.3nm,0.7s
ILAR  Eielson Array     84.05  18  P     P       16 37 32.2  0.0
      0.6nm,0.6s,baz=235,slow=5.7,SNR=7.3
      0.6nm,0.6s
ARCES ARCESS Array B   117.18 346  PKP   PKPdf   16 43 44.7 -0.2
      3.2nm,1.0s,baz=75,slow=1.4,SNR=7.8
```

IDC ***04*** *16:38:16.0±0.8, 1°.58S×80°.94W, h0km, mb3.8/12, mbtmp4.0/16, ML3.5/4, MS3.9/5, Error ellipse: s-maj=29.0km s-min=13.0km az=62.0*

NEIC ***04*** *16:38:19.9±2.0, 1°.59S±0°.07×80°.86W±0°.06, h10km±1km, mb4.5/34, Error ellipse: s-maj=11.9km s-min=10.1km az=146.0*

IGQ ***04*** *16:38:20±0.4, 2°S±2°×8°1W±°, h5km*

VAO ***04*** *16:38:27.4±1.3, 2°.08S×80°.49W, h10km, mb4.6*

ISC 04 16:38:19.6±1.2**, 1°.52S**±0°.04×**80°.95W**±0°.05**, h15**km±7km**, n153,**σ**1ˢ79**/146**, mb4.4**/25**, MS4.0**/4**, Near coast of Ecuador**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                   Op    ISC        h  m  s    ISC
PPLP  Puerto Lpez        0.18  97  P     Pg      16 38 22.0 -2.0
PPLP                               S     Sb      16 38 27.0 -1.0
PPLP  Puerto Lpez        0.18  97  P     Pg      16 38 24.0  0.0
PPLP                               S     Sb      16 38 27.0 -1.0
CABP  Cabo Pasado        1.25  25  P     Pn      16 38 42.0 -0.5
CABP                               S     Sg      16 39 02.0 +2.2
JAMA  Jama               1.46  31  P     Pn      16 38 45.0 -0.5
AMIL  Milagro (Trans     1.49 114  P     Pn      16 38 46.0 +0.2
AMIL                               S     Sg      16 39 10.0 +2.4
FLF1  Flavio Alfaro-     1.60  44  P     Pn      16 38 48.0 +0.6
ISPG  Isla Puna-Puer     1.64 151  P     Pb      16 38 50.0 +0.5
MAG1  Magdalena          1.86  39  P     Pn      16 38 52.0 +1.0
CHSH  Refugio Sur-Vo     2.08  89  P     Pn      16 38 54.0 -0.5
TAMH  Tambohuasha Ch     2.17  91  P     Pn      16 38 56.0 +0.4
PORT  Chimborazo Vol     2.18  88  P     Pn      16 38 56.0 +0.2
ARNL  Arenillas          2.20 156  P     Pn      16 38 55.0 -0.6
IGUA  Igualata           2.31  89  P     Pn      16 38 59.0 +1.3
ILLI  Illinizas Sur      2.37  70  P     Pn      16 38 59.0 +0.7
BV15  Puerto Quito-O     2.41  46  P     Pn      16 39 00.0 +1.6
PAST  Pastocalle         2.45  70  P     Pn      16 39 01.0 +1.5
BBIL  Ulba Tungurahu     2.47  88  P     Pn      16 39 01.0 +1.4
BMAS  Trigal station     2.47  90  P     Pn      16 39 01.0 +1.3
JUI6  Juive              2.49  88  P     Pn      16 39 01.0 +1.2
ARRY  Arrayan            2.50  90  P     Pn      16 39 01.0 +1.0
RETU  Refugio            2.51  88  P     Pn      16 39 02.0 +1.7
BPAT  Tungurahua Vol     2.52  90  P     Pn      16 39 02.0 +1.6
SLOR  San Lorenzo -      2.58  72  P     Pn      16 39 03.0 +1.8
CAMI  Rancho Maria       2.59  71  P     Pn      16 39 04.0 +2.6
BNAS  Cotopaxi Volca     2.61  71  P     Pn      16 39 04.0 +2.3
BMOR  Cotopaxi Volca     2.62  73  P     Pn      16 39 04.0 +2.2
NAS2  Nasa               2.63  71  P     Pb      16 39 05.0 -1.8
SANGA Volcan Sangay      2.63 102  P     Pn      16 39 04.0 +2.0
HPAL  Hacienda Las P     2.64  61  P     Pn      16 39 02.0  0.0
VCES  Cotopaxi           2.66  74  P     Pn      16 39 05.0 +2.6
GGPT  Toaza - Volcan     2.67  61  P     Pn      16 39 03.0 +0.6
BVC2  Cotopaxi Volca     2.68  71  P     Pb      16 39 06.0 -1.7
JUA2  San Juan 2         2.68  61  P     Pn      16 39 04.0 +1.3
BTAM  Cotopaxi Volca     2.69  72  P     Pb      16 39 06.0 -1.8
VC1   Cotopaxi 1         2.70  71  P     Pb      16 39 06.0 -1.9
TERV  Terraza Guagua     2.70  60  P     Pn      16 39 05.0 +2.0
GGPC  Guagua Pichinc     2.71  60  P     Pn      16 39 04.0 +0.9
PINO  Pino               2.71  60  P     Pn      16 39 04.0 +0.9
TAMB  Tambo              2.71  72  P     Pn      16 39 05.0 +1.9
YANA  Yana               2.76  60  P     Pn      16 39 05.0 +1.2
PAC1  Pacto, Paraso      2.80  51  P     Pn      16 39 05.0 +1.0
ANTG  Antisana-Guama     2.88  69  P     Pb      16 39 09.0 -2.1
BOSC  San Juan Bosco     2.94 123  P     Pn      16 39 08.0 +2.0
ANTS  Antisana-Sarah     2.96  70  P     Pn      16 39 09.0 +2.4
ANTI  Antisana           2.99  69  P     Pn      16 39 10.0 +3.0
OTAV  Otavalo            3.05  55  Pn    Pn      16 39 08.0 +0.2
CUIC  Cuicocha-Domo      3.16  55  P     Pn      16 39 11.0 +1.8
CAYR  Refugio Cayamb     3.32  63  P     Pb      16 39 16.0 -2.6
URCU  Urcuqui            3.33  54  P     Pn      16 39 14.0 +2.5
YAHU  Yahuarcocha        3.44  57  P     Pn      16 39 17.0 +4.0
CONE  Cono NE Rev Vo     3.61  66  P     Pb      16 39 21.0 -2.4
LNGL  El Angel-Carch     3.71  53  P     Pn      16 39 20.0 +3.2
ZUMB  Zumba              3.78 151  P     Pn      16 39 19.0 +1.5
ECEN  Cerro Negro        3.79  52  P     Pn      16 39 20.0 +2.1
CHL1  Volc¡n Chiles      3.79  53  P     Pn      16 39 20.0 +2.1
CHL2  Volc¡n Chiles      3.81  53  P     Pn      16 39 20.0 +1.7
CMBC  Cumbal             3.97  52 eP     Pn      16 39 22.3 +1.9
TUMC  Tumaco             4.00  34        Pn      16 39 21.1 +0.7
TUMC  Tumaco             4.00  34 eP     Pn      16 39 19.8 -0.5
GCUF  Volcan Galeras     4.53  53 eP     Pn      16 39 32.0 +4.0
CRUC  La Cruz            5.04  53 eP     Pn      16 39 37.2 +2.2
GR1C  Gorgona, Isla      5.29  32 eP     Pn      16 39 43.0 +4.9
SOTA  Rioblanco          5.66  50 eP     Pn      16 39 45.6 +1.9
PCON  Cinco Dias         5.95  50 eP     Pn      16 39 48.5 +0.8
MALC  Bahia Malaga       6.58  33 eP     Pn      16 40 01.7 +5.8
GARC  Garzon, Huila      6.59  56 eP     Pn      16 39 58.2 +2.0
MARP  Paez Belalcaza     6.62  49 eP     Pn      16 40 01.5 +4.9
BETC  Betania            6.91  53 eP     Pn      16 40 04.2 +3.7
YOTC  Yotoco, Valle      7.15  40 eP     Pn      16 40 07.1 +3.3
ORTC  Ortega, Tolima     7.85  47 eP     Pn      16 40 19.2 +5.8
PLMC  San Jos del P      7.91  36 eP     Pn      16 40 18.7 +4.5
MACC  Macarena, Meta     7.98  63 eP     Pn      16 40 20.0 +4.8
ANIL  Santa Ana          8.15  43 eP     Pn      16 40 20.9 +3.2
CBOC  Ciudad Bolivar     8.84  34 eP     Pn      16 40 34.0 +6.9
ROSC  El Rosal           9.16  46  Pn    Pn      16 40 30.1 -1.5
      2.4nm,0.3s,baz=139,slow=19,SNR=1.9
      8.1nm,0.4s
ROSC  El Rosal           9.16  46  Pn    Pn      16 40 33.6 +2.0
PAYG  Puerto Ayora       9.37 275  Pn    Pn      16 40 35.2 +1.0
CZSB  Cruzeiro do Su    10.27 127 eP     Pn      16 40 45.6 -0.9
ZARC  Zaragoza, Cauc    10.82  34  Pn    Pn      16 40 56.1 +2.0
NNA   Nana              11.17 159  Pn    Pn      16 40 55.9 -3.0
      1.7nm,0.3s,baz=304,slow=15,SNR=2.1
NNA                                Sn    Sn      16 43 01.4 -2.1
      2.9nm,0.3s,baz=245,slow=20,SNR=2.5
      5.6nm,0.4s
NNA   Nana              11.17 159  Pn    Pn      16 40 58.2 -0.7
SJCC  San Jacinto, C    12.72  27        Pn      16 41 21.6 +1.5
SDV   Santo Domingo     14.58  45  Pn    Pn      16 41 45.7  0.0
      1.4nm,0.3s,baz=311,slow=6.8,SNR=1.5
      6.1nm,0.4s
SDV   Santo Domingo     14.58  45  Pn    Pn      16 41 45.2 -0.6
SDV                                      P       16 41 52.8 +0.7
SDV   Santo Domingo     14.58  45 eP     P       16 41 53.7 +1.5
BAUV  El Baul           16.54  51        Pn      16 42 12.4 +1.2
TGUH  Tegucigalpa,Un    16.70 338        Pn      16 42 15.3 +2.0
TGUH                               IAmb  IAmb    16 42 27.5
      comp=Z,33nm,1.0s
ETMB  Extrema           16.81 120 eP     Pn      16 42 12.1 -2.6
SNET  Serv Nac Est T    17.20 332  Pn    Pn      16 42 20.3 +0.8
BIRV  Birongo           18.86  50  P     P       16 42 40.0 +0.6
BIRV                               IAmb  IAmb    16 42 42.4
      comp=Z,41nm,1.1s
LPAZ  La Paz            19.36 140  P     P       16 42 43.7 -1.8
      comp=Z,0.2nm,0.3s,baz=326,slow=12,SNR=14
LPAZ                               LR    LR      16 51 27.9
      comp=Z,416nm,18.1s,baz=341,slow=41
      comp=Z,6.0nm,1.0s
LPAZ  La Paz            19.36 140  P     P       16 42 45.9 +0.4
PB16  IPOC Station P    20.13 147  P     P       16 42 51.4 -2.5
BOAV  Boa Vista         20.79  79 eP     Pn      16 43 04.6 +1.7
PB11  IPOC Station P    21.23 149  P     P       16 43 04.7 -0.6
PB11                               IAmb  IAmb    16 43 06.6
      comp=Z,20nm,0.9s
PB08  IPOC Station P    21.80 149  P     P       16 43 09.1 -2.6
PATCX Punta Patache     21.89 152  P     P       16 43 12.1 -0.1
PATCX                              IAmb  IAmb    16 43 13.9
      comp=Z,18nm,0.9s
PB01  IPOC Station P    22.40 151  P     P       16 43 15.5 -2.2
PB02  IPOC Station P    22.44 152  P     P       16 43 17.6 -0.6
PB02                               IAmb  IAmb    16 43 19.9
      comp=Z,16nm,0.9s
CMIG  Matias Romero     23.04 324  P     P       16 43 23.1 -1.3
      comp=Z,0.5nm,0.3s,baz=104,slow=7.9,SNR=3.3
      comp=Z,0.5nm,0.3s
VILB  Vilhena           23.48 120 eP     P       16 43 30.3 +1.3
```

LVC	**Limon Verde**	**24.01**	**152**	P	**P**	**16 43 33.3**	**-1.1**
	comp=Z,8.4nm,0.9s,baz=306,slow=5.9,SNR=6.6						
LVC				LR	LR	16 52 10.2	
	comp=Z,71nm,21.5s,baz=340,slow=35						
	comp=Z,8.4nm,0.9s						
LVC	**Limon Verde**	**24.01**	**152**	P	**P**	**16 43 34.4**	**+0.1**
LVC				IAmb	IAmb	16 43 37.9	
	comp=Z,11nm,0.9s						
LVC	**Limon Verde**	**24.01**	**152**	*e*P	**P**	**16 43 36.0**	**+1.7**
SIV	**San Ignacio**	**24.30**	**127**	P	**P**	**16 43 35.2**	**-1.6**
	comp=Z,3.5nm,0.7s,baz=292,slow=9.3,SNR=20						
	comp=Z,3.5nm,0.7s						
SJG	**San Juan**	**24.35**	**36**	P	**P**	**16 43 36.5**	**-0.7**
	comp=Z,11nm,0.2s,baz=289,slow=9.7,SNR=2.4						
GCPR	**Guaynabo City**	**24.55**	**36**	P	**P**	**16 43 39.7**	**+0.8**
PTLB	**Pontes e Lacer**	**25.59**	**124**	*e*P	**P**	**16 43 49.1**	**+0.7**
GO02	**Mina Guanaco**	**25.93**	**156**	P	**P**	**16 43 52.4**	**+0.6**
GO02				IAmb	IAmb	16 43 56.4	
	comp=Z,8.1nm,0.8s						
PDRB	**Porto dos Gac**	**26.04**	**114**	*e*P	**P**	**16 43 54.9**	**+2.4**
AC01	**Pan de Azucar**	**26.43**	**159**	P	**P**	**16 43 56.1**	**+0.1**
AC01				IAmb	IAmb	16 43 57.4	
	comp=Z,14nm,1.1s						
MALB	**Monte Alegre**	**26.68**	**91**	*e*P	**P**	**16 44 02.3**	**+4.0**
AC02	**Maricunga**	**27.61**	**157**	P	**P**	**16 44 07.7**	**+0.6**
AC02				IAmb	IAmb	16 44 09.6	
	comp=Z,8.6nm,0.9s						
MDP	**Montagnes des**	**29.04**	**77**	LR	LR	16 55 36.0	
	comp=Z,272nm,20.8s,baz=262,slow=36						
AQDB	**Aquidauana**	**31.03**	**129**	P	**P**	**16 44 35.5**	**-1.5**
AQDB				IAmb	IAmb	16 44 37.3	
	comp=Z,6.5nm,0.7s						
AQDB	**Aquidauana**	**31.03**	**129**	*e*P	**P**	**16 44 36.8**	**-0.3**
CPUP	**Villa Florida**	**33.53**	**139**	P	**P**	**16 44 57.7**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=325,slow=8.1,SNR=3.4						
	comp=Z,1.4nm,0.7s						
CPUP	**Villa Florida**	**33.53**	**139**	P	**P**	**16 44 58.3**	**-0.6**
CPUP	**Villa Florida**	**33.53**	**139**	*e*P	**P**	**16 45 01.0**	**+2.1**
BDFB	**Brasilia**	**35.38**	**115**	P	**P**	**16 45 12.5**	**-2.7**
	comp=Z,1.6nm,0.4s,baz=286,slow=9.7,SNR=3.9						
	comp=Z,1.6nm,0.4s						
BDFB	**Brasilia**	**35.38**	**115**	P	**P**	**16 45 12.9**	**-2.3**
BDFB				IAmb	IAmb	16 45 28.0	
	comp=Z,14nm,1.4s						
ITQB	**Itaqui**	**36.32**	**143**	P	**P**	**16 45 22.5**	**-0.4**
ITQB	**Itaqui**	**36.32**	**143**	*e*P	**P**	**16 45 23.4**	**+0.5**
ROSB	**Rosrio**	**36.83**	**93**	*e*P	**P**	**16 45 31.8**	**+4.3**
BB19B	**Bebedouro**	**37.11**	**124**	*e*P	**P**	**16 45 31.7**	**+1.9**
TXAR	**Lajitas Array**	**37.60**	**326**	PcP	**PcP**	**16 47 51.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=119,slow=4.4,SNR=5.1						
LC01	**Cunco**	**38.11**	**168**	P	**P**	**16 45 36.9**	**-1.1**
LC01				IAmb	IAmb	16 45 45.7	
	comp=Z,5.9nm,0.9s						
PLTB	**Pedras Altas**	**39.63**	**142**	P	**P**	**16 45 50.4**	**-0.5**
PLTB				IAmb	IAmb	16 45 51.5	
	comp=Z,9.7nm,0.9s						
PLCA	**Paso Flores**	**40.15**	**168**	P	**P**	**16 45 53.5**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=335,slow=9.4,SNR=5.3						
	comp=Z,2.5nm,0.9s						
PLCA	**Paso Flores**	**40.15**	**168**	P	**P**	**16 45 54.7**	**-0.5**
RCBR	**Riachuelo**	**45.15**	**97**	LR	LR	17 07 15.0	
	comp=Z,296nm,20.1s,baz=62,slow=38						
WUAZ	**Wupatki**	**46.53**	**325**	P	**P**	**16 46 48.0**	**+1.1**
WUAZ				IAmb	IAmb	16 46 57.0	
	comp=Z,3.9nm,0.9s						
CCUT	**Cedar City**	**49.10**	**326**	P	**P**	**16 47 08.9**	**+2.0**
CCUT				IAmb	IAmb	16 47 17.2	
	comp=Z,4.5nm,1.2s						
PDAR	**Pinedale Array**	**51.07**	**333**	P	**P**	**16 47 20.5**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=98,slow=5.5,SNR=1.8						
	comp=Z,0.2nm,0.7s						
NVAR	**Mina Array Bea**	**52.57**	**323**	P	**P**	**16 47 31.9**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=148,slow=5.3,SNR=1.7						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**52.57**	**323**	P	**P**	**16 47 34.2**	**+1.2**
ULM	**Lac du Bonnet**	**53.14**	**348**	P	**P**	**16 47 36.5**	**-0.2**
	comp=Z,7.7nm,0.7s,baz=165,slow=6.8,SNR=6.1						
	comp=Z,7.7nm,0.7s						
ULM	**Lac du Bonnet**	**53.14**	**348**	P	**P**	**16 47 36.1**	**-0.6**
GCMT	**Greycliff**	**53.52**	**335**	P	**P**	**16 47 40.7**	**+1.0**
YKA	**Yellowknife Ar**	**68.72**	**344**	P	**P**	**16 49 22.0**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=137,slow=6.8,SNR=7.2						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**68.72**	**344**	P	**P**	**16 49 23.8**	**+1.4**
ILAR	**Eielson Array**	**81.32**	**337**	P	**P**	**16 50 34.5**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=108,slow=9.0,SNR=2.9						
	comp=Z,0.3nm,0.8s						
BPAW	**Bear Paw Mtn.**	**82.75**	**335**	P	**P**	**16 50 43.9**	**+1.2**
BPAW				IAmb	IAmb	16 50 50.5	
	comp=Z,3.7nm,0.8s						
PPLA	**Purkeypile**	**82.89**	**334**	P	**P**	**16 50 45.6**	**+2.0**
CAST	**Castle Rocks**	**83.00**	**335**	P	**P**	**16 50 42.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**83.19**	**77**	P	**P**	**16 50 44.2**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=292,slow=6.1,SNR=2.3						
	comp=Z,0.3nm,0.7s						
TSUM	**Tsumeb**	**97.56**	**109**	LR	LR	17 33 36.3	
	comp=Z,85nm,19.3s,baz=300,slow=34						
H11S2	**WAKE ISLAND Hy**	**111.65**	**289**	T	T	18 57 53.0	
	baz=86,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**111.65**	**289**	T	T	18 57 51.8	
	baz=86,slow=75,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**111.67**	**289**	T	T	18 57 55.3	
	baz=86,slow=75,SNR=17						
KURBB	**Kurchatov Arra**	**128.08**	**16**	PKP	**PKPdf**	**16 57 23.1**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=337,slow=1.7,SNR=4.1						
ASAR	**Alice Springs**	**137.87**	**231**	PKP	**PKPdf**	**16 57 42.0**	**-2.5**
	comp=Z,0.3nm,0.9s,baz=118,slow=2.5,SNR=1.8						
WRA	**Warramunga Arr**	**139.34**	**237**	PKP	**PKPdf**	**16 57 46.0**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=118,slow=1.8,SNR=4.2						

*TUL **04** 16:38:53.6±0.7, 36°.46N±0°.02×98°.76W±0°.02, h7^{km}±2^{km}, ML3.2, mb_Lg2.8/49(NEIC), Error ellipse: s-maj=2.5km s-min=1.9km az=134.0*

NEIC 04 16:38:54.4±0.8, **36°.461N**±0°.008×**98°.76W**±0°.02, **h6**^{km}±2^{km}, **Error ellipse: s-maj=2.0km s-min=1.0km az=64.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.21**	**248**	Pg	Pg	16 38 58.1	-0.5
U32A				Sg	Sg	16 39 01.6	+0.1
FNO	**Franklin**	**1.63**	**137**	Pn	Pn	16 39 22.9	-0.8
WMOK	**Wichita Mounta**	**1.72**	**181**	Pn	Pn	16 39 23.9	-1.1
T35A	**Sooner Cattle**	**1.86**	**75**	Pn	Pn	16 39 26.9	0.0
R32A	**Long Quarter,**	**1.96**	**1**	Pn	Pn	16 39 28.2	0.0
X34A	**Smith Ranch, M**	**2.00**	**158**	Pn	Pn	16 39 29.1	+0.3
TUL1	**Leonard**	**2.46**	**102**	IAmb_Lg		16 40 12.3	
	comp=Z,32nm,0.9s						
KSU1	**Kansas State U**	**3.14**	**32**	IAmb_Lg		16 40 38.0	
	comp=Z,22nm,0.9s						
X37A	**Clayton**	**3.33**	**123**	Pn	Pn	16 39 43.9	-3.2
HHAR	**Hobbs**	**3.89**	**91**	IAmb_Lg		16 41 02.0	
	comp=Z,22nm,1.0s						
KSCO	**Kaye Shedlock'**	**3.99**	**311**	IAmb_Lg		16 41 07.8	
	comp=Z,30nm,0.8s						
MSTX	**Muleshoe**	**4.12**	**234**	IAmb_Lg		16 41 09.4	
	comp=Z,26nm,0.9s						
W39A	**Magazine**	**4.23**	**106**	IAmb_Lg		16 41 14.8	
	comp=Z,23nm,0.9s						
Z38A	**Mt. Pleasant**	**4.45**	**135**	IAmb_Lg		16 41 18.2	
	comp=Z,21nm,0.8s						
S39A	**Bolivar**	**4.51**	**73**	IAmb_Lg		16 41 25.9	
	comp=Z,15nm,0.7s						
T25A	**Trinidad**	**4.59**	**280**	Pn	Pn	16 40 03.3	-1.3
T25A				IAmb_Lg		16 41 23.9	
	comp=Z,17nm,0.7s						
U40A	**Yellville**	**4.76**	**90**	Pn	Pn	16 40 06.2	-0.6
U40A				IAmb_Lg		16 41 21.0	
	comp=Z,20nm,0.8s						
BGNE	**Belgrade**	**4.96**	**5**	Pn	Pn	16 40 08.9	-0.6
OGNE	**Ogallala**	**5.16**	**331**	IAmb_Lg		16 41 46.8	
	comp=Z,23nm,0.7s						
P38A	**Dawn**	**5.19**	**51**	Pn	Pn	16 40 10.5	-2.2
MGMO	**Mountain Grove**	**5.25**	**81**	Pn	Pn	16 40 13.3	-0.2
MGMO				IAmb_Lg		16 41 41.5	
	comp=Z,13nm,0.8s						
WHAR	**Wooly Hollow**	**5.38**	**101**	IAmb_Lg		16 41 47.5	
	comp=Z,22nm,1.0s						
FCAR	**Ozark Folk Cen**	**5.39**	**94**	IAmb_Lg		16 41 52.1	
	comp=Z,19nm,1.0s						
W41B	**Gary Mavity, V**	**5.44**	**102**	IAmb_Lg		16 41 47.3	
	comp=Z,13nm,0.9s						
R40A	**Maddies Statio**	**5.48**	**69**	Pn	Pn	16 40 15.6	-1.0
UALR	**University of**	**5.49**	**106**	IAmb_Lg		16 41 53.5	
	comp=Z,12nm,0.9s						
SDCO	**Great Sand Dun**	**5.54**	**285**	Pn	Pn	16 40 16.4	-1.4
K31A	**O'Neill**	**6.15**	**0**	IAmb_Lg		16 42 12.7	
	comp=Z,18nm,0.7s						
LCAR	**Lake Charles**	**6.15**	**91**	Pn	Pn	16 40 25.4	-0.4
CCM	**Cathedral Cave**	**6.20**	**73**	Pn	Pn	16 40 25.6	-0.8
PBMO	**Poplar Bluff**	**6.70**	**85**	IAmb_Lg		16 42 27.2	
	comp=Z,11nm,0.8s						
FVM	**French Village**	**6.82**	**75**	IAmb_Lg		16 42 33.0	
	comp=Z,12nm,0.8s						
PHWY	**Pilot Hill**	**7.12**	**315**	IAmb_Lg		16 42 47.0	
	comp=Z,8.5nm,0.8s						
N23A	**Red Feather La**	**7.16**	**310**	IAmb_Lg		16 42 44.8	
	comp=Z,12nm,0.8s						
MNTX	**Cornudas Mount**	**7.26**	**231**	IAmb_Lg		16 42 53.3	
	comp=Z,9.5nm,1.0s						
N41A	**Harden Midland**	**7.50**	**53**	Pn	Pn	16 40 43.6	-0.7
S44A	**Carbondale**	**7.69**	**78**	IAmb_Lg		16 43 00.1	
	comp=Z,13nm,0.8s						
K22A	**Casper**	**8.61**	**318**	IAmb_Lg		16 43 41.7	
	comp=Z,8.9nm,0.7s						
RSSD	**Black Hills**	**8.65**	**334**	IAmb_Lg		16 43 33.4	
	comp=Z,9.7nm,1.1s						

*IDC **04** 16:42:31.8±4.1, 26°.39N×96°.36E, h53^{km}±40^{km}, mb3.4/10, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=59.4km s-min=15.0km az=58.0*

ISC 04 16:42:35.5±1.0, **26°.5N**±0°.3×**96°.5E**±0°.3, **h88**^{km}**, n11,** σ**0^{s}.62**/10, **mb3.5**/10, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.32**	**164**	P	Pn	16 44 27.9	-5.5
	0.2nm,0.3s,baz=337,slow=13,SNR=2.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**23.17**	**335**	P	**P**	**16 47 35.4**	**+1.0**
	0.6nm,0.5s,baz=146,slow=8.8,SNR=12						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**27.73**	**335**	P	**P**	**16 48 15.7**	**+0.2**
	0.4nm,0.2s,baz=150,slow=9.4,SNR=1.6						
	0.4nm,0.2s						
ZALV	**Zalesovo Beam**	**28.75**	**346**	P	**P**	**16 48 23.8**	**-0.8**
	0.3nm,0.4s,baz=159,slow=9.1,SNR=2.0						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**57.75**	**328**	P	**P**	**16 52 16.8**	**-0.2**
	3.2nm,1.1s,baz=89,slow=7.0,SNR=2.7						
	3.2nm,1.1s						
WRA	**Warramunga Arr**	**58.99**	**138**	P	**P**	**16 52 26.1**	**0.0**
	1.1nm,0.7s,baz=326,slow=7.6,SNR=19						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**61.62**	**141**	P	**P**	**16 52 44.2**	**+0.2**
	0.5nm,0.6s,baz=323,slow=6.4,SNR=17						
	0.5nm,0.6s						
NOA	**NORSAR Array B**	**64.93**	**328**	P	**P**	**16 53 06.4**	**+0.9**
	0.4nm,0.7s,baz=80,slow=6.2,SNR=1.8						
	0.4nm,0.7s						
GERES	**GERESS Array B**	**65.95**	**314**	P	**P**	**16 53 11.9**	**-0.4**
	0.2nm,0.3s,baz=90,slow=2.9,SNR=3.7						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**87.90**	**14**	P	**P**	**16 55 15.2**	**+0.2**
	0.3nm,0.7s,baz=330,slow=3.6,SNR=3.8						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**88.42**	**284**	P	**P**	**16 55 18.1**	**-0.3**
	0.3nm,0.7s,baz=35,slow=5.3,SNR=1.9						
	0.3nm,0.7s						

*SKHL **04** 17:02:01.6±0.2, 41°.60N×144°.20E, h35^{km}±4^{km}, mb3.8/4*

*JMA **04** 17:02:02.1±0.1, 42°.9N±0°.4×142°.9E±0°.6, h94^{km}±1^{km}, MV2.2/36, HIDAKA MOUNTAINS REGION*

ISC 04 17:02:03.1±1.7, **42°.91N**±0°.05×**142°.90E**±0°.04, **h89**^{km}±11^{km}, **n20,** σ**1^{s}.28**/37, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFR	**Furan**	**0.34**	**319**	P	**Pn**	**17 02 16.1**	**-0.5**
JFR				*e*S	**Sn**	**17 02 26.9**	**+0.2**
JBT2	**Biratori 2**	**0.42**	**252**	P	**Pn**	**17 02 16.7**	**-0.4**
JBT2				*e*S	**Sn**	**17 02 27.9**	**+0.3**
JCH	**Churui**	**0.45**	**131**	P	**Pn**	**17 02 16.8**	**-0.6**
JCH				*e*S	**Sn**	**17 02 28.0**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.64**	**190**	*e*P	**Pn**	**17 02 18.8**	**-0.1**
JOB	**Onbets**	**0.69**	**90**	P	**Pn**	**17 02 19.3**	**0.0**
JOB				*e*S	**Sn**	**17 02 32.2**	**+0.8**
JAR	**Ashorobuto**	**0.74**	**58**	P	**Pn**	**17 02 19.5**	**-0.4**
JAR				*e*S	**Sn**	**17 02 33.0**	**+0.4**
JAB	**Ashibetsu**	**0.78**	**320**	*e*P	**Pn**	**17 02 19.6**	**-0.7**
JAB				*e*S	**Sn**	**17 02 33.3**	**+0.3**
JIAM	**Iburiatsuma**	**0.78**	**249**	*e*P	**Pn**	**17 02 20.4**	**+0.2**
JIAM				*e*S	**Sn**	**17 02 34.6**	**+1.6**
JEM	**Erimo**	**0.91**	**168**	*e*P	**Pn**	**17 02 22.0**	**+0.2**
JEM				*e*S	**Sn**	**17 02 36.5**	**+0.8**
JKK2	**Kamakawa 2**	**0.97**	**353**	P	**Pn**	**17 02 21.9**	**-0.5**
JEW	**Eniwo**	**1.07**	**267**	*e*P	**Pn**	**17 02 22.7**	**-0.8**
JEW				*e*S	**Sn**	**17 02 38.8**	**0.0**
JISS	**Ishikarishitsu**	**1.15**	**289**	*e*P	**Pn**	**17 02 23.7**	**-0.7**
JISS				*e*S	**Sn**	**17 02 40.2**	**-0.2**
JMP	**Maruseppu**	**1.15**	**17**	P	**Pn**	**17 02 24.2**	**-0.3**
JMP				*e*S	**Sn**	**17 02 41.1**	**+0.5**
JTKR	**Abashiri--Toko**	**1.29**	**34**	*e*P	**Pn**	**17 02 25.8**	**-0.3**
JTKR				*e*S	**Sn**	**17 02 43.6**	**+0.1**
JAK	**Akkeshi**	**1.32**	**86**	*e*P	**Pn**	**17 02 25.6**	**-0.9**
JAK				*e*S	**Sn**	**17 02 43.3**	**-0.9**
AKK	**Akkeshi**	**1.43**	**85**	*e*P	**Pn**	**17 02 26.9**	**-1.0**
AKK				*e*S	**Sn**	**17 02 45.9**	**-0.7**
AKK				A	A	17 02 49.2	
	80nm,0.4s						
AKK				A	A	17 02 49.2	
	90nm,0.4s						
GLVR	**Golovnino**	**2.08**	**66**	*e*S	**Sn**	**17 03 05.0**	**+3.3**
NMR	**Nemuro--Hokkai**	**2.12**	**76**	*e*P	**Pn**	**17 02 35.2**	**-1.6**
NMR				AMB	AMB	17 02 39.4	
	10.0nm,0.4s						
NMR				*e*S	**Sn**	**17 03 00.6**	**-1.9**
NMR				A	A	17 03 02.3	
	20nm,0.2s						
NMR				A	A	17 03 02.3	
	30nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.43**	**61**	*e*P	**Pn**	**17 02 43.6**	**+2.7**
YUK				AMB	AMB	17 02 44.3	
	20nm,0.5s						
YUK				*e*S	**Sn**	**17 03 13.7**	**+3.8**
YUK				A	A	17 03 18.2	
	60nm,0.6s						
YUK				A	A	17 03 18.2	
	50nm,0.6s						
SHO	**Shikotan**	**3.02**	**70**	*e*P	**Pn**	**17 02 47.7**	**-1.1**
SHO				AMB	AMB	17 02 50.4	
	10.0nm,0.2s						
SHO				*e*S	**Sn**	**17 03 22.2**	**-1.9**
SHO				A	A	17 03 29.6	
	10.0nm,0.2s						
SHO				A	A	17 03 29.6	
	40nm,0.2s						

IDC 04 17:37:15.8±22.0, **19°.54S**×**179°.31W, h650**^{km}±307^{km}, **mb2.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=224.4km s-min=93.9km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.52**	**261**	P	P	17 44 25.2	+0.2
	0.4nm,0.3s,baz=96,slow=8.4,SNR=23						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**43.55**	**256**	P	P	17 44 25.1	-0.1
	0.6nm,0.5s,baz=87,slow=8.7,SNR=5.5						
	0.6nm,0.5s						
TXAR	**Lajitas Array**	**87.58**	**58**	P	P	17 48 57.3	0.0
	0.3nm,0.8s,baz=232,slow=4.4,SNR=4.1						
	0.3nm,0.8s						
PDAR	**Pinedale Array**	**89.11**	**44**	P	P	17 49 04.4	+0.1
	0.3nm,0.5s,baz=207,slow=3.7,SNR=1.8						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**141.58**	**331**	PKP	PKPdf	17 55 32.7	-1.9
	0.3nm,0.3s,baz=39,slow=3.8,SNR=1.9						

*BUC **04** 17:37:32.2±0.3, 45°.48N×26°.36E, h126^{km}±2^{km}, ml3.6/34, Error ellipse: s-maj=2.0km s-min=1.9km az=163.0*

*SOF **04** 17:37:33.0, 45°.46N×26°.29E, h100^{km}, MD3.2*

ISC 04 17:37:31.5±1.3, **45°.49N**±0°.03×**26°.35E**±0°.03, **h134**^{km}±6^{km}, **n101,** σ**0^{s}.76**/173, **104C-63D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.08**	**210**	⇑P	**Pn**	**17 37 50.2**	**+0.5**
NEHR				⇓S	**Sn**	**17 38 03.2**	**-0.2**
NEHR	**Nehoiu**	**0.08**	**210**	⇑P	**Pn**	**17 37 50.2**	**+0.5**
NEHR				⇓S	**Sn**	**17 38 03.2**	**-0.2**
BISRR	**Bisoca**	**0.26**	**78**	⇓P	**Pn**	**17 37 50.8**	**+0.7**
BISRR				⇑S	**Sn**	**17 38 04.0**	**-0.2**
BISRR	**Bisoca**	**0.26**	**78**	⇓P	**Pn**	**17 37 50.8**	**+0.7**
BISRR				⇑S	**Sn**	**17 38 04.0**	**-0.2**
MLR	**Muntele Rosu**	**0.28**	**270**	⇓P	**Pn**	**17 37 50.4**	**+0.2**
MLR				⇓S	**Sn**	**17 38 03.8**	**-0.6**
MLR	**Muntele Rosu**	**0.28**	**270**	⇓P	**Pn**	**17 37 50.4**	**+0.2**
MLR				⇓S	**Sn**	**17 38 03.8**	**-0.6**
COVR	**Voineasa-Covas**	**0.37**	**344**	⇑P	**Pn**	**17 37 50.3**	**-0.1**
COVR				⇑S	**Sn**	**17 38 03.8**	**-1.0**
COVR	**Voineasa-Covas**	**0.37**	**344**	⇑P	**Pn**	**17 37 50.3**	**-0.1**
COVR				⇑S	**Sn**	**17 38 03.8**	**-1.0**
ISR	**Istrita**	**0.40**	**160**	⇑P	**Pn**	**17 37 50.2**	**-0.4**
ISR				⇑S	**Sn**	**17 38 04.8**	**-0.2**
ISR	**Istrita**	**0.40**	**160**	⇑P	**Pn**	**17 37 50.2**	**-0.4**
ISR				⇑S	**Sn**	**17 38 04.8**	**-0.2**
PLOR	**Plostina**	**0.42**	**30**	⇑P	**Pn**	**17 37 50.7**	**+0.1**
PLOR				⇑S	**Sn**	**17 38 05.7**	**+0.5**
PLOR	**Plostina**	**0.42**	**30**	⇑P	**Pn**	**17 37 50.7**	**+0.1**
PLOR				⇑S	**Sn**	**17 38 05.7**	**+0.5**
GRER		**0.45**	**104**	⇑P	**Pn**	**17 37 50.8**	**+0.1**
GRER				⇑S	**Sn**	**17 38 04.2**	**-1.1**
GRER		**0.45**	**104**	⇑P	**Pn**	**17 37 50.8**	**+0.1**
GRER				⇑S	**Sn**	**17 38 04.2**	**-1.1**
VRI	**Vrincioaia**	**0.46**	**35**	⇑P	**Pn**	**17 37 51.1**	**+0.3**
VRI				⇓S	**Sn**	**17 38 05.7**	**+0.3**
VRI	**Vrincioaia**	**0.46**	**35**	⇑P	**Pn**	**17 37 51.1**	**+0.3**
VRI				⇓S	**Sn**	**17 38 05.7**	**+0.3**
SECR		**0.50**	**204**	⇓P	**Pn**	**17 37 51.8**	**+0.8**
SECR		**0.50**	**204**	⇓P	**Pn**	**17 37 51.8**	**+0.8**
ODBI	**Odobesti**	**0.56**	**61**	⇑S	**Sn**	**17 38 07.0**	**+0.6**
PANC	**Panciu**	**0.68**	**56**	⇑P	**Pn**	**17 37 52.8**	**+0.7**
PANC				⇓S	**Sn**	**17 38 08.7**	**+1.0**
PANC	**Panciu**	**0.68**	**56**	⇑P	**Pn**	**17 37 52.8**	**+0.7**
PANC				⇓S	**Sn**	**17 38 08.7**	**+1.0**
PGOR	**Pogoanele**	**0.74**	**142**	⇑S	**Sn**	**17 38 09.2**	**+0.8**
PGOR	**Pogoanele**	**0.74**	**142**	⇑S	**Sn**	**17 38 09.2**	**+0.8**
SULR		**0.82**	**185**	⇓P	**Pn**	**17 37 53.9**	**+0.8**
SULR				⇓S	**Sn**	**17 38 10.2**	**+0.7**
SULR		**0.82**	**185**	⇓P	**Pn**	**17 37 53.9**	**+0.8**
SULR				⇓S	**Sn**	**17 38 10.2**	**+0.7**
DOPR	**Dopca**	**0.82**	**306**	⇑P	**Pn**	**17 37 53.2**	**-0.1**
DOPR				⇑S	**Sn**	**17 38 08.6**	**-1.2**
DOPR	**Dopca**	**0.82**	**306**	⇑P	**Pn**	**17 37 53.2**	**-0.1**
DOPR				⇑S	**Sn**	**17 38 08.6**	**-1.2**
VOIR		**0.92**	**267**	⇑P	**Pn**	**17 37 54.1**	**0.0**
VOIR				⇑S	**Sn**	**17 38 09.7**	**-1.5**
VOIR		**0.92**	**267**	⇑P	**Pn**	**17 37 54.1**	**0.0**
VOIR				⇑S	**Sn**	**17 38 09.7**	**-1.5**
GHRR		**0.93**	**52**	⇑P	**Pn**	**17 37 55.0**	**+0.8**
GHRR				⇓S	**Sn**	**17 38 11.5**	**+0.1**
GHRR		**0.93**	**52**	⇑P	**Pn**	**17 37 55.0**	**+0.8**
GHRR				⇓S	**Sn**	**17 38 11.5**	**+0.1**
IZVR	**Izvoarele**	**1.00**	**87**	⇑S	**Sn**	**17 38 11.1**	**-1.2**
IZVR	**Izvoarele**	**1.00**	**87**	⇑S	**Sn**	**17 38 11.1**	**-1.2**
SCHL	**Schela**	**1.04**	**89**	⇑S	**Sn**	**17 38 12.3**	**-0.7**
SCHL	**Schela**	**1.04**	**89**	⇑S	**Sn**	**17 38 12.3**	**-0.7**
TESR	**Tescani**	**1.04**	**11**	⇓P	**Pn**	**17 37 55.1**	**-0.1**
TESR				⇓S	**Sn**	**17 38 12.0**	**-1.1**
TESR	**Tescani**	**1.04**	**11**	⇓P	**Pn**	**17 37 55.1**	**-0.1**
TESR				⇓S	**Sn**	**17 38 12.0**	**-1.1**
LEHL	**Lehliu**	**1.07**	**162**	⇓P	**Pn**	**17 37 56.3**	**+0.9**
LEHL				⇑S	**Sn**	**17 38 13.3**	**-0.2**
LEHL	**Lehliu**	**1.07**	**162**	⇓P	**Pn**	**17 37 56.3**	**+0.9**
LEHL				⇑S	**Sn**	**17 38 13.3**	**-0.2**
AMRR	**Amara**	**1.12**	**141**	⇑P	**Pn**	**17 37 56.7**	**+0.7**
AMRR				⇓S	**Sn**	**17 38 14.7**	**+0.2**
AMRR	**Amara**	**1.12**	**141**	⇑P	**Pn**	**17 37 56.7**	**+0.7**
AMRR				⇓S	**Sn**	**17 38 14.7**	**+0.2**
VARL	**Varlezi**	**1.13**	**68**	⇑P	**Pn**	**17 37 56.6**	**+0.6**
VARL				⇓S	**Sn**	**17 38 14.4**	**-0.1**
VARL	**Varlezi**	**1.13**	**68**	⇑P	**Pn**	**17 37 56.6**	**+0.6**
VARL				⇓S	**Sn**	**17 38 14.4**	**-0.1**
SCTR	**Scanteiesti**	**1.17**	**80**	⇑P	**Pn**	**17 37 57.0**	**+0.7**
SCTR				⇓S	**Sn**	**17 38 15.9**	**+0.7**
SCTR	**Scanteiesti**	**1.17**	**80**	⇑P	**Pn**	**17 37 57.0**	**+0.7**
SCTR				⇓S	**Sn**	**17 38 15.9**	**+0.7**
BIR	**Birlad**	**1.18**	**49**	⇑P	**Pn**	**17 37 57.0**	**+0.6**
BIR				⇓S	**Sn**	**17 38 15.0**	**-0.5**
BIR	**Birlad**	**1.18**	**49**	⇑P	**Pn**	**17 37 57.0**	**+0.6**
BIR				⇓S	**Sn**	**17 38 15.0**	**-0.5**
TATR	**Tatarca**	**1.20**	**84**	⇓S	**Sn**	**17 38 15.9**	**+0.2**
TATR	**Tatarca**	**1.20**	**84**	⇓S	**Sn**	**17 38 15.9**	**+0.2**
ARR	**Arges**	**1.22**	**265**	⇓P	**Pn**	**17 37 57.7**	**+0.8**
ARR				⇓S	**Sn**	**17 38 15.6**	**-0.6**
ARR	**Arges**	**1.22**	**265**	⇓P	**Pn**	**17 37 57.7**	**+0.8**
ARR				⇓S	**Sn**	**17 38 15.6**	**-0.6**
VLDR	**Vladesti**	**1.26**	**73**	⇑P	**Pn**	**17 37 57.9**	**+0.6**
VLDR				⇓S	**Sn**	**17 38 16.7**	**-0.2**
VLDR	**Vladesti**	**1.26**	**73**	⇑P	**Pn**	**17 37 57.9**	**+0.6**
VLDR				⇓S	**Sn**	**17 38 16.7**	**-0.2**
SGRR	**Singureni**	**1.30**	**192**	⇑P	**Pn**	**17 37 58.2**	**+0.5**
SGRR				⇑S	**Sn**	**17 38 17.1**	**-0.4**
SGRR	**Singureni**	**1.30**	**192**	⇑P	**Pn**	**17 37 58.2**	**+0.5**
SGRR				⇑S	**Sn**	**17 38 17.1**	**-0.4**
CFR	**Carcaliu**	**1.30**	**103**	⇑P	**Pn**	**17 37 57.8**	**+0.2**
CFR				⇑S	**Sn**	**17 38 16.4**	**-1.2**
CFR	**Carcaliu**	**1.30**	**103**	⇑P	**Pn**	**17 37 57.8**	**+0.2**
CFR				⇑S	**Sn**	**17 38 16.4**	**-1.2**
HUMR	**Humele**	**1.37**	**226**	⇓P	**Pn**	**17 37 58.9**	**+0.4**
HUMR				⇑S	**Sn**	**17 38 18.4**	**-0.5**
HUMR	**Humele**	**1.37**	**226**	⇓P	**Pn**	**17 37 58.9**	**+0.4**
HUMR				⇑S	**Sn**	**17 38 18.4**	**-0.5**
HARR	**Harsova**	**1.38**	**125**	⇓P	**Pn**	**17 37 59.0**	**+0.4**
HARR	**Harsova**	**1.38**	**125**	⇓P	**Pn**	**17 37 59.0**	**+0.4**
GIRR	**Girov**	**1.47**	**4**	⇑P	**Pn**	**17 38 00.1**	**+0.6**
GIRR	**Girov**	**1.47**	**4**	⇑P	**Pn**	**17 38 00.1**	**+0.6**
VASR	**Vaslui**	**1.53**	**41**	⇓P	**Pn**	**17 38 00.5**	**+0.3**
VASR				⇑S	**Sn**	**17 38 20.8**	**-1.2**
VASR	**Vaslui**	**1.53**	**41**	⇓P	**Pn**	**17 38 00.5**	**+0.3**
VASR				⇑S	**Sn**	**17 38 20.8**	**-1.2**
TLBR	**Topalu**	**1.53**	**128**	⇓P	**Pn**	**17 38 00.7**	**+0.5**
TLBR				⇑S	**Sn**	**17 38 21.0**	**-1.1**
TLBR	**Topalu**	**1.53**	**128**	⇓P	**Pn**	**17 38 00.7**	**+0.5**
TLBR				⇑S	**Sn**	**17 38 21.0**	**-1.1**
COPA	**Copaceanca**	**1.58**	**211**	⇓P	**Pn**	**17 38 01.0**	**+0.2**
COPA				⇑S	**Sn**	**17 38 23.0**	**0.0**
COPA	**Copaceanca**	**1.58**	**211**	⇓P	**Pn**	**17 38 01.0**	**+0.2**
COPA				⇑S	**Sn**	**17 38 23.0**	**0.0**
TPGR	**Topolog**	**1.60**	**113**	⇑P	**Pn**	**17 38 01.0**	**+0.1**
TPGR				⇑S	**Sn**	**17 38 22.1**	**-1.4**
TPGR	**Topolog**	**1.60**	**113**	⇑P	**Pn**	**17 38 01.0**	**+0.1**
TPGR				⇑S	**Sn**	**17 38 22.1**	**-1.4**
LEOM	**Leova**	**1.65**	**53**	⇑P	**Pn**	**17 38 01.9**	**+0.4**
LEOM				⇑S	**Sn**	**17 38 24.0**	**-0.4**
LEOM	**Leova**	**1.65**	**53**	⇑P	**Pn**	**17 38 01.9**	**+0.4**
LEOM				⇑S	**Sn**	**17 38 24.0**	**-0.4**
CVDA	**Cernavoda**	**1.67**	**133**	⇑P	**Pn**	**17 38 02.3**	**+0.5**
CVDA				⇑S	**Sn**	**17 38 23.9**	**-0.8**
CVDA	**Cernavoda**	**1.67**	**133**	⇑P	**Pn**	**17 38 02.3**	**+0.5**
CVDA				⇑S	**Sn**	**17 38 23.9**	**-0.8**
ICOR	**Ion Corvin**	**1.72**	**143**	⇑P	**Pn**	**17 38 03.3**	**+1.0**
ICOR				⇑S	**Sn**	**17 38 26.3**	**+0.4**
ICOR	**Ion Corvin**	**1.72**	**143**	⇑P	**Pn**	**17 38 03.3**	**+1.0**
ICOR				⇑S	**Sn**	**17 38 26.3**	**+0.4**
TLCR		**1.77**	**99**	⇑P	**Pn**	**17 38 03.2**	**+0.4**
TLCR				⇓S	**Sn**	**17 38 27.0**	**+0.2**
TLCR		**1.77**	**99**	⇑P	**Pn**	**17 38 03.2**	**+0.4**
TLCR				⇓S	**Sn**	**17 38 27.0**	**+0.2**
TIRR	**Tirgusor**	**1.79**	**125**	⇓P	**Pn**	**17 38 03.6**	**+0.4**
TIRR				⇑S	**Sn**	**17 38 26.1**	**-1.3**
TIRR	**Tirgusor**	**1.79**	**125**	⇓P	**Pn**	**17 38 03.6**	**+0.4**
TIRR				⇑S	**Sn**	**17 38 26.1**	**-1.3**
RAZG	**Razgrad**	**1.93**	**177**	⇑P	**Pn**	**17 38 05.0**	**+0.1**
RAZG				⇑S	**Sn**	**17 38 29.2**	**-1.2**
RAZG	**Razgrad**	**1.93**	**177**	⇑P	**Pn**	**17 38 05.0**	**+0.1**
RAZG				⇑S	**Sn**	**17 38 29.2**	**-1.2**
MILM	**Milestii Mici**	**2.23**	**49**	⇑*i*P	**Pn**	**17 38 08.6**	**+0.2**
	9.0nm,0.1s						
MILM				*i* S	**Sn**	**17 38 34.6**	**-2.2**
	40nm,0.2s						
MILM	**Milestii Mici**	**2.23**	**49**	⇑P	**Pn**	**17 38 08.6**	**+0.2**
MILM	**Milestii Mici**	**2.23**	**49**	⇑P	**Pn**	**17 38 08.6**	**+0.2**
PSN	**Preselentsi**	**2.23**	**143**	P	**Pn**	**17 38 10.0**	**+1.5**
BURAR	**Bucovina Array**	**2.26**	**340**	⇑P	**Pn**	**17 38 10.3**	**+1.3**

BURAR				⇑S	**Sn**	**17 38 40.4**	**+2.6**
BURAR	**Bucovina Array**	**2.26**	**340**	⇑P	**Pn**	**17 38 10.3**	**+1.3**
BURAR				⇑S	**Sn**	**17 38 40.4**	**+2.6**
KIS	**Kishinev**	**2.28**	**48**	eP	**Pn**	**17 38 09.0**	**-0.1**
	18nm,0.2s						
KIS				⇓iS	**Sn**	**17 38 36.6**	**-1.3**
	40nm,0.3s						
PRD	**Provadia**	**2.41**	**161**	i P	**Pn**	**17 38 11.9**	**+1.1**
GZR	**Gura Zlata**	**2.52**	**269**	⇓S	**Sn**	**17 38 44.0**	**+0.6**
GZR	**Gura Zlata**	**2.52**	**269**	⇓S	**Sn**	**17 38 44.0**	**+0.6**
MPEP	**Malo Peshtene**	**2.84**	**222**	P	**Pn**	**17 38 16.6**	**+0.4**
DRGR		**2.84**	**298**	⇓P	**Pn**	**17 38 16.0**	**-0.3**
DRGR		**2.84**	**298**	⇓P	**Pn**	**17 38 16.0**	**-0.3**
HERR	**Herculane**	**2.85**	**259**	⇓P	**Pn**	**17 38 15.4**	**-0.8**
HERR	**Herculane**	**2.85**	**259**	⇓P	**Pn**	**17 38 15.4**	**-0.8**
SORM	**Soroca**	**2.98**	**27**	⇑P	**Pn**	**17 38 17.5**	**-0.4**
SORM	**Soroca**	**2.98**	**27**	⇑P	**Pn**	**17 38 17.5**	**-0.4**
JMB	**Yambol**	**3.03**	**177**	P	**Pn**	**17 38 19.1**	**+0.5**

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*IDC **04** 17:47:15.2±5.8, 8°.07S×105°.91E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=266.2km s-min=32.2km az=47.0*

*DJA **04** 17:47:25.5±0.7, 8°S±3°×10°7E±°, h26km±7km, M4.2/12, mb4.6/2, MLv4.0/12*

ISC 04 17:47:24.6±2.2**, 7°.97S**±0°.10×**106°.57E**±0°.06**, h31**km±15km**, n22,** σ**1s.39**/21**, mb4.0**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.86**	**40**	P	**Pb**	**17 47 41.0**	**-0.1**
CNJI				S	**Sb**	**17 47 51.4**	**-0.9**
SKJI	**Sukabumi**	**0.96**	**359**	P	**Pb**	**17 47 42.8**	**0.0**
SKJI				S	**Sn**	**17 47 55.5**	**+0.9**
DBJI	**Dramaga**	**1.42**	**7**	P	**Pn**	**17 47 49.2**	**+0.9**
DBJI				S	**Sb**	**17 48 07.4**	**-0.9**
LEM	**Lembang**	**1.54**	**42**	P	**Pn**	**17 47 51.2**	**+1.1**
LEM				S	**Sb**	**17 48 11.2**	**-0.6**
CMJI	**Cimerak**	**1.87**	**84**	P	**Pn**	**17 47 55.0**	**+0.6**
CMJI				S	**Sn**	**17 48 16.1**	**-0.9**
KPJI	**Karang Pucung**	**2.42**	**75**	P	**Pn**	**17 48 04.4**	**+2.3**
KPJI				S	**Sn**	**17 48 31.6**	**+0.9**
KASI	**Kota Agung**	**3.19**	**320**	P	**Pn**	**17 48 14.0**	**+1.4**
KASI				S	**Sn**	**17 48 48.7**	**-0.9**
LWLI	**Liwa**	**3.85**	**319**	P	**Pn**	**17 48 23.7**	**+1.8**
UGM	**Wanagama**	**3.91**	**89**	P	**Pn**	**17 48 23.7**	**+1.1**
PCJI	**Pacitan**	**4.56**	**93**	P	**Pn**	**17 48 33.0**	**+1.5**
MNAI	**Manna**	**5.08**	**315**	P	**Pn**	**17 48 39.8**	**+1.1**
	1.1nm254nm,1.1s						
PWJI	**Pagerwojo**	**5.18**	**91**	P	**Pn**	**17 48 42.4**	**+2.4**
H01W3	**Cape Leeuwin H**	**27.67**	**167**	T	T	18 22 43.2	
	baz=347,slow=76,SNR=7.4						
H01W1	**Cape Leeuwin H**	**27.68**	**167**	T	T	18 22 41.6	
	baz=347,slow=76,SNR=7.6						
H01W2	**Cape Leeuwin H**	**27.68**	**167**	T	T	18 22 44.5	
	baz=347,slow=76,SNR=10						
WRA	**Warramunga Arr**	**29.40**	**117**	P	**P**	**17 53 24.8**	**-0.6**
	0.3nm,0.8s,baz=288,slow=11,SNR=1.9 0.3nm,0.8s						
H08S2	**Diego Garcia H**	**33.76**	**268**	T	T	18 29 36.2	
	baz=93,slow=74						
H08S3	**Diego Garcia H**	**33.77**	**268**	T	T	18 29 38.0	
	baz=93,slow=74						
H08S1	**Diego Carcia H**	**33.78**	**268**	T	T	18 29 33.9	
	baz=93						
MKAR	**Makanchi Array**	**58.65**	**341**	P	P	17 57 13.0	-5.9
	0.5nm,0.4s,baz=149,slow=8.1,SNR=13 0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**64.36**	**346**	P	P	17 57 52.4	-4.9
	0.7nm,0.4s,baz=140,slow=6.0,SNR=4.0 0.7nm,0.4s						
TXAR	**Lajitas Array**	**144.52**	**49**	PKPbc	**PKPab**	**18 06 55.1**	**-2.0**
	0.1nm,0.4s,baz=316,slow=2.5,SNR=3.6						

IDC 04 17:59:57.7±4.3**, 32°.23N**×**140°.79E, h0**km**, mb3.3**/2**, mbtmp3.2**/3**, ML2.2**/1**, Error ellipse: s-maj=161.2km s-min=26.7km az=72.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**4.80**	**334**	Pn	Pn	18 01 11.0	-0.2
	0.1nm,0.3s,baz=146,slow=12,SNR=5.2						
MJAR				Sn	Sn	18 02 08.2	+0.7
	baz=169,slow=21,SNR=1.6 1.0nm,0.4s						
MKAR	**Makanchi Array**	**46.38**	**306**	P	P	18 08 25.4	-0.2
	0.2nm,0.7s,baz=86,slow=9.6,SNR=2.3 0.2nm,0.7s						
WRA	**Warramunga Arr**	**52.25**	**188**	P	P	18 09 10.6	-0.1
	0.3nm,0.6s,baz=4.3,slow=7.5,SNR=6.2 0.3nm,0.6s						

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*IDC **04** 18:09:03.5±43.0, 36°.46N×70°.86E, h216km±224km, mb3.5/1, mbtmp3.6/3, ML3.0/2, Error ellipse: s-maj=840.2km s-min=125.3km az=161.0*

ISC 04 18:09:05.2±2.7**, 36°.7N**±0°.2×**70°.9E**±0°.2**, h188**km**, n10,** σ**1s.47**/11**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.80**	**21**	P	**Pn**	**18 10 30.5**	**+0.5**
	SNR=64						
UCH	**Uchtor**	**6.15**	**26**	P	**Pn**	**18 10 35.2**	**+0.6**
	SNR=8.3						
EKS2	**Erkin-Say**	**6.32**	**20**	P	**Pn**	**18 10 37.6**	**+1.2**
	SNR=8.7						
KK31	**Karatay Array**	**6.36**	**357**	P	**Pn**	**18 10 36.6**	**-0.3**
	2.0nm,0.4s,baz=184,slow=12,SNR=66						
KK31				S	**Sn**	**18 11 48.6**	**-0.9**
	3.3nm,0.4s,baz=185,slow=22,SNR=9.9						
KBK	**Karagaybulak**	**6.68**	**27**	P	**Pn**	**18 10 42.4**	**+1.1**
	SNR=5.7						
TKM2	**Tokmak 2**	**7.15**	**29**	P	**Pn**	**18 10 47.8**	**+0.4**
	SNR=12						
MKAR	**Makanchi Array**	**13.14**	**37**	P	**Pn**	**18 12 05.3**	**+0.5**
	0.1nm,0.3s,baz=220,slow=13,SNR=3.4 0.5nm,0.9s						
AB31	**Akbulak array**	**14.84**	**331**	P	**P**	**18 12 29.2**	**+2.4**
	0.1nm,0.3s,baz=153,slow=12,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.73**	**25**	P	**P**	**18 13 19.4**	**-0.8**
	0.4nm,0.3s,baz=220,slow=12,SNR=5.3 0.8nm,0.3s						
ARCES	**ARCESS Array B**	**40.89**	**338**	P	**P**	**18 16 26.0**	**-2.4**
	1.8nm,0.7s,baz=116,slow=9.2,SNR=2.4 1.8nm,0.7s						

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*IDC **04** 18:12:55.5±1.9, 32°.52N×141°.82E, h0km, mb3.4/3, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=52.3km s-min=21.1km az=67.0*

*JMA **04** 18:12:58.6±0.5, 33°N±2°×14°2E±°, h93km, MV3.0/34, E OFF HACHIJOJIMA ISLAND*

ISC 04 18:12:59.4±0.9**, 32°.54N**±0°.06×**141°.9E**±0°.1**, h39**km**, n19,** σ**1s.38**/20**, mb3.5**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.85**	**289**	Pn	**Pn**	**18 13 27.9**	**-0.7**
	baz=93,slow=19						
JHJ				Sn	**Sn**	**18 13 49.4**	**-1.4**
	baz=90,slow=20						
BSO3	**Boso 3**	**2.53**	**334**	eP	**Pn**	**18 13 38.2**	**+0.5**
JYT	**Yasato**	**3.93**	**340**	eP	**Pn**	**18 13 58.7**	**+1.5**
JHU	**Hanno**	**3.94**	**328**	eP	**Pn**	**18 13 56.5**	**-0.8**
JHO	**Hitachi**	**4.20**	**346**	P	**Pn**	**18 13 59.9**	**-1.0**
JRY	**Ryogami san**	**4.25**	**325**	eP	**Pn**	**18 14 01.2**	**-0.4**
JAG	**Ashikaga**	**4.36**	**333**	P	**Pn**	**18 14 02.9**	**-0.2**
JNG	**Nsakai**	**4.96**	**322**	eP	**Pn**	**18 14 12.0**	**+0.6**
MJAR	**Matsushiro Arr**	**5.01**	**324**	Pn	**Pn**	**18 14 11.5**	**-0.5**
	0.2nm,0.3s,baz=144,slow=12,SNR=11						
MJAR				Sn	**Sn**	**18 15 07.9**	**-0.8**
	0.1nm,0.3s,baz=152,slow=22,SNR=4.8 1.1nm,0.3s						
JFT	**Otama**	**5.13**	**346**	eP	**Pn**	**18 14 13.3**	**-0.3**
JFT				eS	**Sn**	**18 15 08.7**	**-2.9**
CBIJ	**Chichi jima**	**5.43**	**177**	eP	**Pn**	**18 14 18.1**	**+0.3**
CBIJ				eS	**Sn**	**18 15 17.1**	**-1.9**
JCJ	**Chichijima**	**5.43**	**177**	Sn	**Sn**	**18 15 16.8**	**-2.2**
	5.7nm,0.3s,baz=297,slow=22,SNR=1.7						
ASAJ	**Asahikawa**	**11.57**	**3**	Pn	**Pn**	**18 15 41.2**	**-0.7**
	0.4nm,0.3s,baz=134,slow=24,SNR=1.2 0.9nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**25.76**	**114**	T	T	18 45 52.0	
	baz=306						
H11N1	**WAKE ISLAND Hy**	**25.76**	**114**	T	T	18 45 41.6	
	baz=306						
H11N3	**WAKE ISLAND Hy**	**25.78**	**114**	T	T	18 45 31.1	
	baz=306						
MKAR	**Makanchi Array**	**46.94**	**306**	P	**P**	**18 21 27.8**	**+1.6**
	0.3nm,0.5s,baz=85,slow=9.6,SNR=5.7 0.3nm,0.5s						
WRA	**Warramunga Arr**	**52.68**	**189**	P	**P**	**18 22 11.3**	**+1.4**
	0.5nm,0.5s,baz=3.6,slow=7.6,SNR=14 0.5nm,0.5s						
ASAR	**Alice Springs**	**56.40**	**189**	P	**P**	**18 22 38.5**	**+1.6**
	0.2nm,0.5s,baz=0.0,slow=6.9,SNR=7.8 0.2nm,0.5s						

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*IDC **04** 18:14:56.2±1.9, 33°.94S×72°.44W, h0km, mb3.7/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=93.5km s-min=34.3km az=95.0*

*GUC **04** 18:15:00.5±0.7, 34°.02S×72°.32W, h32km±2km, ML3.5*

ISC 04 18:14:56.7±1.8**, 34°.01S**±0°.03×**72°.35W**±0°.06**, h5**km±11km**, n31,** σ**0s.64**/42**, 8C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**0.59**	**146**	⇓iP	**Pn**	**18 15 10.7**	**-1.1**
BO03				eS	**Sb**	**18 15 18.4**	**+0.3**
BO03				IAML		18 15 21.2	
	comp=E,5µm,0.5s						
VA05	**Santo Domingo**	**0.71**	**61**	⇓iP	**Pn**	**18 15 13.1**	**-0.3**
VA05				i S	**Sb**	**18 15 22.6**	**+1.0**
VA05				IAML		18 15 25.7	
	comp=N,8µm,0.2s						
GO05	**Huala**	**1.06**	**161**	⇑iP	**Pn**	**18 15 18.6**	**+0.3**
GO05				i S	**Sb**	**18 15 32.2**	**+0.4**
GO05				IAML		18 15 35.4	
	comp=E,2µm,0.4s						
BO01	**Tunca**	**1.12**	**110**	⇓iP	**Pb**	**18 15 18.4**	**-0.2**
BO01				eS	**Sb**	**18 15 33.4**	**-0.1**
VA01	**Torpederas**	**1.15**	**31**	⇑iP	**Pn**	**18 15 19.9**	**+0.5**
VA01				eS	**Sn**	**18 15 34.8**	**-0.7**
MT09	**Talagante**	**1.16**	**79**	⇓eP	**Pn**	**18 15 19.8**	**0.0**
MT09				eS	**Sb**	**18 15 34.5**	**-0.3**
MT09				IAML		18 15 37.8	
	comp=N,2µm,0.3s						
MT02	**Curacav**	**1.26**	**54**	⇑iP	**Pn**	**18 15 21.4**	**+0.3**
MT02				eS	**Sb**	**18 15 37.5**	**0.0**
MT02				IAML		18 15 43.8	
	comp=E,670nm,0.4s						
BO04	**La Punta**	**1.45**	**90**	⇓iP	**Pg**	**18 15 24.4**	**-0.2**
BO04				i S	**Sg**	**18 15 43.4**	**+0.1**
MT05	**Renca**	**1.48**	**66**	eP	**Pg**	**18 15 25.1**	**-0.1**
MT05				eS	**Sg**	**18 15 46.3**	**+2.0**
MT05				IAML		18 15 53.9	
	comp=E,1µm,0.3s						
ROCH	**El Roble**	**1.52**	**48**	⇑iP	**Pg**	**18 15 25.7**	**-0.3**
ROCH				eS	**Sb**	**18 15 45.2**	**-0.2**
ROCH				IAML		18 15 59.8	
	comp=N,1µm,0.5s						
MT03	**Universidad Ad**	**1.62**	**72**	⇑eP	**Pb**	**18 15 27.1**	**-0.1**
MT03				eS	**Sg**	**18 15 48.5**	**-0.3**
MT03				IAML		18 15 58.4	
	comp=E,905nm,0.4s						
PEL	**Peldehue**	**1.64**	**59**	⇑eP	**Pg**	**18 15 27.7**	**-0.4**
PEL				eS	**Sn**	**18 15 47.6**	**-0.1**
PEL				IAML		18 15 57.5	
	comp=N,1µm,0.4s						
VA06	**Catapilco**	**1.69**	**32**	eP	**Pn**	**18 15 27.1**	**+0.1**
VA06				eS	**Sb**	**18 15 49.8**	**-0.2**
VA06				IAML		18 15 57.8	
	comp=E,1µm,0.4s						
LMEL	**Las Melosas**	**1.79**	**85**	⇑iP	**Pb**	**18 15 30.0**	**-0.2**
LMEL				eS	**Sb**	**18 15 52.8**	**-0.3**
LMEL				IAML		18 15 57.0	
	comp=N,693nm,0.2s						
FCH	**Farellones**	**1.85**	**69**	⇑iP	**Pb**	**18 15 30.5**	**-0.7**
FCH				eS	**Sb**	**18 15 54.3**	**-0.5**
FCH				IAML		18 16 01.5	
	comp=E,534nm,0.3s						
ML02	**Panimavida**	**1.91**	**157**	eP	**Pb**	**18 15 31.4**	**-0.7**
ML02				eS	**Sn**	**18 15 54.6**	**+0.2**
ML02				IAML		18 16 11.4	
	comp=E,1µm,0.6s						
VA03	**San Esteban**	**1.95**	**51**	eP	**Pb**	**18 15 32.0**	**-0.8**
VA03				eS	**Sn**	**18 15 56.2**	**+0.6**
VA03				IAML		18 16 07.1	
	comp=E,1µm,0.4s						
BI05	**Punta Hualpn**	**2.82**	**194**	eP	**Pn**	**18 15 42.3**	**-0.1**
CO02	**Combarbal**	**3.02**	**23**	eP	**Pn**	**18 15 46.2**	**+0.8**
H03S1	**Juan Fernandez**	**5.45**	**270**	T	T	18 21 57.2	
	baz=90						
H03S3	**Juan Fernandez**	**5.45**	**270**	T	T	18 22 03.6	
	baz=90						
H03S2	**Juan Fernandez**	**5.47**	**270**	T	T	18 21 56.3	
	baz=90						
H03N1	**Juan Fernandez**	**5.49**	**274**	T	T	18 22 08.0	
	baz=97,slow=73						
H03N3	**Juan Fernandez**	**5.50**	**274**	T	T	18 22 35.4	
	baz=97,slow=73						
H03N2	**Juan Fernandez**	**5.51**	**274**	T	T	18 22 25.9	
	baz=97,slow=73						
PLCA	**Paso Flores**	**6.86**	**168**	Pn	**Pn**	**18 16 40.1**	**+2.0**
	comp=E,0.2nm,0.3s,baz=341,slow=14,SNR=9.2 comp=E,0.7nm,0.4s						
LPAZ	**La Paz**	**18.05**	**13**	P	**P**	**18 19 09.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=207,slow=7.2,SNR=3.9 comp=E,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**84.46**	**70**	P	**P**	**18 27 30.8**	**-0.1**
	comp=E,0.4nm,0.6s,baz=251,slow=4.4,SNR=2.8 comp=E,0.4nm,0.6s						
WRA	**Warramunga Arr**	**120.63**	**209**	PKP	**PKPdf**	**18 33 50.0**	**-0.3**
	comp=E,0.4nm,0.9s,baz=152,slow=1.9,SNR=1.8						
ZALV	**Zalesovo Beam**	**154.37**	**32**	PKPbc	**PKiKP**	**18 34 58.0**	**+0.4**
	comp=E,1.0nm,0.6s,baz=311,slow=4.1,SNR=4.6						
MKAR	**Makanchi Array**	**156.97**	**49**	PKPab	**PKPab**	**18 35 23.4**	**+0.1**
	comp=E,0.2nm,0.4s,baz=279,slow=2.8,SNR=1.8						

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*IDC **04** 18:17:09.7±2.2, 32°.88N×130°.99E, h0km, mb3.3/1, mbtmp3.1/3, ML2.4/2, MS2.3/1, Error ellipse: s-maj=48.7km s-min=10.8km az=61.0*

*JMA **04** 18:17:10.2±0.0, 33°.0N±0°.1×131°.2E±0°.1, h9km, MV3.4/20, NE KUMAMOTO PREF*

JMA Felt II J1 at NE KUMAMOTO PREF .

ISC 04 18:17:11.3±1.6**, 32°.9N**±0°.1×**131°.12E**±0°.04**, h12**km**, n8,** σ**2s.32**/11**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.27**	**311**	Pg	**Pg**	**18 17 14.7**	**-2.2**
	209nm,0.3s,baz=100,slow=18,SNR=3213						
JNU				Lg	Lg	18 17 18.4	
	844nm,0.3s,baz=106,slow=23,SNR=111						
JNU	**Nakatsue**	**0.27**	**311**	P	**Pg**	**18 17 15.4**	**-1.5**
JNU				S	**Sg**	**18 17 18.9**	**-1.7**
OIT2	**Oita 2**	**0.43**	**40**	P	**Pg**	**18 17 17.5**	**-2.4**
JTA	**Tamana**	**0.49**	**272**	S	**Sb**	**18 17 27.7**	**-1.4**
JUS	**Usuki**	**0.55**	**77**	⇓iP	**Pg**	**18 17 19.7**	**-2.2**
JUS				⇓S	**Sg**	**18 17 27.0**	**-2.1**
KSRS	**Korea Array**	**5.21**	**331**	Pn	**Pn**	**18 18 28.0**	**-0.9**
	0.2nm,0.3s,baz=148,slow=16,SNR=2.4						
KSRS				Pg	**Pb**	**18 18 45.3**	**+3.1**
	0.5nm,0.3s,baz=148,slow=17,SNR=4.9						
KSRS				Lg	Lg	18 19 50.1	
	0.6nm,0.3s,baz=148,slow=30,SNR=1.8						
KSRS				LR	LR	18 20 35.4	
	comp=Z,31nm,20.9s,baz=95,slow=39 0.3nm,0.3s						
MJAR	**Matsushiro Arr**	**6.85**	**56**	Pn	**Pn**	**18 18 53.5**	**+1.9**
	0.1nm,0.3s,baz=241,slow=13,SNR=5.9 1.2nm,0.5s						
YKA	**Yellowknife Ar**	**71.41**	**27**	P	**P**	**18 28 32.4**	**+1.5**
	0.1nm,0.4s,baz=302,slow=5.8,SNR=2.6 0.1nm,0.4s						

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*IDC **04** 18:17:18.7±3.4, 33°.90S×72°.35W, h0km, mb3.9/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=144.8km s-min=37.1km az=90.0*

*GUC **04** 18:17:22.7±0.7, 34°.02S×72°.34W, h30km±3km, ML3.5*

ISC 04 18:17:20.3±1.4**, 33°.99S**±0°.03×**72°.37W**±0°.06**, h15**km±9km**, n30,** σ**0s.97**/42**, 7C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**0.61**	**146**	⇓iP	**Pg**	**18 17 33.0**	**+0.7**
BO03				i S	**Sg**	**18 17 41.1**	**+0.6**
BO03				IAML		18 17 43.5	
	comp=E,9µm,0.5s						
VA05	**Santo Domingo**	**0.71**	**63**	⇓iP	**Pn**	**18 17 35.4**	**-0.3**
VA05				i S	**Sn**	**18 17 44.9**	**-1.4**
VA05				IAML		18 17 50.1	
	comp=E,5µm,0.3s						
GO05	**Huala**	**1.08**	**161**	⇓eP	**Pb**	**18 17 40.6**	**-0.1**
GO05				eS	**Sb**	**18 17 54.6**	**-0.1**
GO05				IAML		18 17 56.2	
	comp=E,4µm,0.4s						
VA01	**Torpederas**	**1.14**	**32**	⇑eP	**Pg**	**18 17 42.2**	**0.0**
VA01				eS	**Sn**	**18 17 57.1**	**+0.3**
BO01	**Tunca**	**1.14**	**111**	⇓iP	**Pb**	**18 17 40.7**	**-0.9**
BO01				eS	**Sb**	**18 17 55.5**	**-0.7**
BO01				IAML		18 18 03.7	
	comp=N,1µm,0.3s						
MT09	**Talagante**	**1.17**	**80**	⇓iP	**Pb**	**18 17 42.0**	**-0.2**
MT09				eS	**Sg**	**18 17 57.6**	**-0.5**
MT09				IAML		18 18 03.4	
	comp=N,1µm,0.5s						
MT02	**Curacav**	**1.26**	**55**	⇑iP	**Pb**	**18 17 43.7**	**0.0**
MT02				i S	**Sg**	**18 18 00.0**	**-0.9**
MT02				IAML		18 18 07.8	
	comp=N,652nm,0.5s						
BO04	**La Punta**	**1.46**	**91**	⇓iP	**Pn**	**18 17 46.7**	**+0.5**
BO04				eS	**Sn**	**18 18 04.5**	**-0.5**
BO04				IAML		18 18 11.5	
	comp=N,827nm,0.3s						
MT05	**Renca**	**1.48**	**67**	eP	**Pb**	**18 17 47.8**	**+0.3**
MT05				eS	**Sb**	**18 18 05.8**	**-0.4**
MT05				IAML		18 18 16.2	
	comp=E,987nm,0.3s						
ROCH	**El Roble**	**1.52**	**49**	⇑eP	**Pb**	**18 17 48.0**	**-0.2**
ROCH				eS	**Sg**	**18 18 07.9**	**-1.4**
ROCH				IAML		18 18 17.9	
	comp=E,1µm,0.5s						
MT03	**Universidad Ad**	**1.63**	**73**	eP	**Pb**	**18 17 49.3**	**-0.7**
MT03				eS	**Sb**	**18 18 10.2**	**-0.1**
MT03				IAML		18 18 16.6	
	comp=N,855nm,0.4s						
PEL	**Peldehue**	**1.64**	**60**	⇑iP	**Pb**	**18 17 49.8**	**-0.4**
PEL				eS	**Sb**	**18 18 10.6**	**0.0**
PEL				IAML		18 18 19.9	
	comp=N,995nm,0.3s						
VA06	**Catapilco**	**1.68**	**33**	eP	**Pn**	**18 17 49.7**	**+0.7**
VA06				eS	**Sb**	**18 18 12.1**	**+0.3**
VA06				IAML		18 18 22.2	
	comp=E,1µm,0.5s						
LMEL	**Las Melosas**	**1.81**	**86**	⇑iP	**Pb**	**18 17 52.3**	**-0.9**
LMEL				eS	**Sb**	**18 18 15.2**	**-0.4**
LMEL				IAML		18 18 22.1	
	comp=N,763nm,0.3s						
FCH	**Farellones**	**1.85**	**70**	⇑iP	**Pn**	**18 17 52.8**	**+1.0**
FCH				eS	**Sb**	**18 18 17.2**	**0.0**
FCH				IAML		18 18 23.9	
	comp=E,689nm,0.3s						
ML02	**Panimavida**	**1.94**	**156**	eP	**Pb**	**18 17 54.7**	**-0.6**
ML02				eS	**Sn**	**18 18 17.4**	**+0.7**
ML02				IAML		18 18 24.6	
	comp=E,2µm,0.5s						
VA03	**San Esteban**	**1.95**	**52**	⇑eP	**Pb**	**18 17 54.4**	**-1.1**
VA03				eS	**Sb**	**18 18 19.2**	**-0.5**
VA03				IAML		18 18 29.1	
	comp=E,1µm,0.4s						
BI05	**Punta Hualpn**	**2.84**	**193**	eP	**Pn**	**18 18 04.6**	**-0.4**
BI05				eS	**Sn**	**18 18 35.1**	**-3.7**
CO02	**Combarbal**	**3.01**	**23**	eP	**Pn**	**18 18 08.8**	**+1.4**
H03S1	**Juan Fernandez**	**5.44**	**270**	T	T	18 24 44.7	
	baz=94						
H03S3	**Juan Fernandez**	**5.44**	**270**	T	T	18 24 43.5	
	baz=94						
H03S2	**Juan Fernandez**	**5.45**	**270**	T	T	18 24 34.5	
	baz=94						
H03N1	**Juan Fernandez**	**5.48**	**274**	T	T	18 24 56.8	
	baz=101						
H03N3	**Juan Fernandez**	**5.49**	**274**	T	T	18 25 03.6	
	baz=101						
H03N2	**Juan Fernandez**	**5.50**	**274**	T	T	18 24 57.1	
	baz=101						
PLCA	**Paso Flores**	**6.89**	**168**	Pn	**Pn**	**18 19 02.8**	**+2.1**
	comp=E,0.3nm,0.3s,baz=339,slow=13,SNR=1.8 comp=E,1.3nm,0.5s						
LPAZ	**La Paz**	**18.03**	**13**	P	**P**	**18 21 31.5**	**+0.2**
	comp=E,0.2nm,0.3s,baz=186,slow=9.2,SNR=2.5 comp=E,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**84.46**	**70**	P	**P**	**18 29 53.5**	**+0.8**
	comp=E,0.9nm,0.9s,baz=234,slow=4.6,SNR=3.7 comp=E,0.9nm,0.9s						
ZALV	**Zalesovo Beam**	**154.36**	**32**	PKPbc	**PKiKP**	**18 37 20.2**	**+0.9**
	comp=E,0.9nm,0.6s,baz=294,slow=2.0,SNR=4.1						
MKAR	**Makanchi Array**	**156.96**	**49**	PKPab	**PKPab**	**18 37 44.6**	**-0.4**
	comp=E,0.1nm,0.5s,baz=282,slow=3.7,SNR=2.0						

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*JMA **04** 18:18:18.1±0.2, 23°.3N±0°.7×12°2E±°, h21km±3km, MV3.0/15, TAIWAN REGION*

*TAP **04** 18:18:18.8, 23°.31N×121°.55E, h49km, ML3.5, B*

ISC 04 18:18:19.9±1.4**, 23°.29N**±0°.02×**121°.57E**±0°.02**, h36**km±1km**, n126,** σ**1s.07**/190**, 6C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin**	**0.11**	**283**	i P	Pn	18 18 27.0	-2.6
	baz=275						
ECBN				eS	Sn	18 18 32.9	-5.5
	baz=275						
EYUL	**Yuli**	**0.24**	**284**	P	**Pn**	**18 18 27.1**	**-0.8**
	baz=280						
HGSD	**Ruisui**	**0.24**	**326**	i P	**Pn**	**18 18 27.4**	**-0.5**
	baz=325						
HGSD				S	**Sn**	**18 18 33.9**	**-0.6**
	baz=325						
CHKT	**Chengkung**	**0.27**	**225**	⇑iP	**Pn**	**18 18 27.7**	**-0.1**
	baz=215						
CHKT				S	**Sn**	**18 18 34.4**	**+0.1**
	baz=215						
FULB	**Fuli**	**0.27**	**250**	i P	**Pn**	**18 18 27.7**	**-0.2**
	baz=259						
FULB				eS	**Sn**	**18 18 35.3**	**+1.0**
	baz=259						
YULB	**Yu-li**	**0.27**	**292**	⇑iP	**Pn**	**18 18 27.0**	**-0.9**
	baz=290						
YULB				S	**Sn**	**18 18 32.5**	**-1.8**
	baz=290						
EHY	**Hungye**	**0.31**	**313**	i P	**Pn**	**18 18 27.4**	**-0.8**
	baz=302						
EGFH	**Guangfu**	**0.40**	**341**	P	**Pn**	**18 18 28.5**	**-0.6**
	baz=332						
EGFH				eS	**Sn**	**18 18 35.2**	**-0.5**
	baz=332						
EDH	**Donghe**	**0.40**	**218**	i P	**Pn**	**18 18 28.8**	**-0.3**
	baz=224						
EDH				S	**Sn**	**18 18 37.3**	**+1.7**
	baz=224						
ELDTW	**Lidau**	**0.52**	**259**	⇑iP	**Pn**	**18 18 29.7**	**-1.3**
	baz=253						
ELDTW				eS	**Sn**	**18 18 37.0**	**-1.6**
	baz=253						
ESL	**Shilin**	**0.54**	**346**	i P	**Pn**	**18 18 29.6**	**-1.5**
	baz=340						
LONT	**Longtian**	**0.56**	**227**	i P	**Pn**	**18 18 30.1**	**-1.3**
	baz=229						
YUS	**Yu-Shan**	**0.60**	**289**	i P	**Pn**	**18 18 31.8**	**-0.8**
	baz=288						
YUS				eS	**Sn**	**18 18 40.3**	**-0.9**
	baz=288						
VWDT	**VWDT**	**0.61**	**319**	⇓iP	**Pn**	**18 18 31.5**	**-0.7**
	baz=319						
VWDT				eS	**Sn**	**18 18 40.3**	**-0.4**
	baz=319						
LDUT	**Ludao**	**0.62**	**189**	i P	**Pn**	**18 18 31.5**	**-0.8**
	baz=188						
LDUT				S	**Sn**	**18 18 41.2**	**+0.1**
	baz=188						
TWGBT	**Beinan**	**0.65**	**224**	⇑iP	**Pn**	**18 18 31.1**	**-1.6**
	baz=222						
TWGBT				eS	**Sn**	**18 18 40.7**	**-1.1**
	baz=222						
TWG	**Pinlang**	**0.66**	**225**	i P	**Pn**	**18 18 31.1**	**-1.7**
	baz=222						
TTN	**Taitung**	**0.66**	**216**	i P	**Pn**	**18 18 32.6**	**-0.2**
	baz=214						
TTN				eS	**Sn**	**18 18 43.9**	**+1.9**
	baz=214						

HWA	**Hwalien**	**0.68**	**3**	*e*P	**Pn**	**18 18 32.9**	**-0.3**
	baz=10.0						
ALS	**Alishan**	**0.74**	**287⇓**	*i*P	**Pn**	**18 18 33.8**	**-0.3**
	baz=286						
ALS				S	**Sn**	**18 18 44.2**	**0.0**
	baz=286						
STYH	**Taoyuan**	**0.74**	**261**	*i* P	**Pn**	**18 18 33.3**	**-0.6**
	baz=257						
STYH				S	**Sn**	**18 18 43.6**	**-0.3**
	baz=257						
SSLB	**Suanglung**	**0.75**	**311**	*i* P	**Pn**	**18 18 33.3**	**-0.8**
	baz=314						
SSLB				*e*S	**Sn**	**18 18 43.4**	**-0.9**
	baz=314						
OWD	**Renai**	**0.75**	**331⇑**	*i*P	**Pn**	**18 18 33.1**	**-1.1**
	baz=336						
OWD				*e*S	**Sn**	**18 18 42.3**	**-2.1**
	baz=336						
TWD	**Chiawan**	**0.79**	**2**	*i* P	**Pn**	**18 18 33.1**	**-1.4**
	baz=350						
TWD				S	**Sn**	**18 18 43.6**	**-1.4**
	baz=350						
WUSB	**Renai**	**0.81**	**329⇑**	*i*P	**Pn**	**18 18 34.3**	**-0.7**
	baz=335						
WUSB				*e*S	**Sn**	**18 18 44.1**	**-1.8**
	baz=335						
CHGB	**Renai**	**0.85**	**335**	*i* P	**Pn**	**18 18 34.8**	**-0.8**
	baz=341						
CHGB				*e*S	**Sn**	**18 18 45.5**	**-1.5**
	baz=341						
SMLT	**Sun Moon Lake**	**0.85**	**314⇓**	*i*P	**Pn**	**18 18 35.2**	**-0.3**
	baz=317						
SMLT				*e*S	**Sn**	**18 18 47.0**	**+0.1**
	baz=317						
ETL	**Fush Village**	**0.86**	**3**	*e*P	**Pn**	**18 18 34.1**	**-1.5**
	baz=352						
TPUB	**Ta-pu**	**0.87**	**271**	*i* P	**Pn**	**18 18 35.6**	**-0.1**
	baz=270						
TPUB				S	**Sn**	**18 18 47.8**	**+0.7**
	baz=270						
CHN5	**Tsauling**	**0.88**	**291**	P	**Pn**	**18 18 35.9**	**0.0**
	baz=299						
CHN5				*e*S	**Sn**	**18 18 48.7**	**+1.3**
	baz=299						
NACB	**Ninganchiao**	**0.88**	**1**	*e*P	**Pn**	**18 18 34.1**	**-1.7**
	baz=352						
WTP	**Ta-pu**	**0.88**	**267**	*i* P	**Pn**	**18 18 35.8**	**-0.1**
	baz=266						
WTP				*e*S	**Sn**	**18 18 48.6**	**+1.1**
	baz=266						
ECL	**Taimali**	**0.90**	**220**	*i* P	**Pn**	**18 18 34.1**	**-1.9**
	baz=218						
WHF	**Hehuan Shan**	**0.90**	**342**	*i* P	**Pn**	**18 18 35.0**	**-1.4**
	baz=349						
WHF				*e*S	**Sn**	**18 18 46.7**	**-1.8**
	baz=349						
CHN4	**Tsaushan**	**0.90**	**274**	*i* P	**Pn**	**18 18 36.2**	**+0.1**
	baz=273						
CHN4				S	**Sn**	**18 18 49.4**	**+1.5**
	baz=273						
ETLH	**Xiulin Townshi**	**0.92**	**355**	*i* P	**Pn**	**18 18 34.6**	**-1.8**
	baz=354						
SGST	**Jiashian**	**0.93**	**257**	*e*P	**Pn**	**18 18 36.2**	**-0.4**
	baz=256						
WJS	**Zhushan**	**0.94**	**304**	P	**Pn**	**18 18 36.5**	**-0.1**
	baz=304						
WJS				*e*S	**Sn**	**18 18 50.8**	**+2.0**
	baz=304						
CHN1	**Nanshi**	**0.97**	**264**	P	**Pn**	**18 18 37.2**	**+0.2**
	baz=263						
CHN1				*e*S	**Sn**	**18 18 50.8**	**+1.3**
	baz=263						
SNST	**Tainan City**	**0.99**	**266**	P	**Pn**	**18 18 37.3**	**0.0**
	baz=265						
SNST				*e*S	**Sn**	**18 18 51.3**	**+1.3**
	baz=265						
TWK	**Hsinying**	**1.00**	**269**	P	**Pn**	**18 18 37.5**	**0.0**
	baz=268						
TWK				S	**Sn**	**18 18 51.3**	**+1.0**
	baz=268						
FUSS	**Fushou**	**1.00**	**343**	*e*P	**Pn**	**18 18 36.8**	**-0.8**
	baz=347						
FUSS				*e*S	**Sn**	**18 18 49.1**	**-1.5**
	baz=347						
WNT	**Mingjian**	**1.00**	**306**	*i* P	**Pn**	**18 18 37.6**	**+0.1**
	baz=295						
WNT				*e*S	**Sn**	**18 18 51.6**	**+1.2**
	baz=295						
SSD	**Sandimen**	**1.02**	**238**	P	**Pn**	**18 18 37.2**	**-0.6**
	baz=237						
SSD				*e*S	**Sn**	**18 18 51.9**	**+1.1**
	baz=237						
TWT	**Tachien**	**1.02**	**339**	*e*P	**Pn**	**18 18 37.7**	**-0.3**
	baz=341						
TWT				*e*S	**Sn**	**18 18 50.2**	**-1.0**
	baz=341						
WDLH	**Douliu**	**1.03**	**293**	*e*P	**Pn**	**18 18 38.0**	**+0.2**
	baz=292						
WDLH				*e*S	**Sn**	**18 18 52.6**	**+1.6**
	baz=292						
TDCB	**Techi**	**1.03**	**339**	P	**Pn**	**18 18 37.7**	**-0.3**
	baz=342						
TDCB				*e*S	**Sn**	**18 18 50.0**	**-1.2**
	baz=342						
TSMG	**Majia**	**1.03**	**236**	P	**Pn**	**18 18 37.8**	**-0.2**
	baz=233						
CHN2	**Minshiung**	**1.03**	**284**	*e*P	**Pn**	**18 18 38.6**	**+0.6**
	baz=283						
CHN2				*e*S	**Sn**	**18 18 52.4**	**+1.3**
	baz=283						
SCST	**Cishan**	**1.07**	**248**	P	**Pn**	**18 18 39.4**	**+0.9**
	baz=247						
SCST				*e*S	**Sn**	**18 18 55.0**	**+2.9**
	baz=247						
CHY	**Chiayi**	**1.07**	**281**	*e*P	**Pn**	**18 18 38.4**	**-0.1**
	baz=280						
MASBT	**Mashibuluo**	**1.10**	**232**	P	**Pn**	**18 18 38.1**	**-0.7**
	baz=230						
MASBT				*e*S	**Sn**	**18 18 54.5**	**+1.8**
	baz=230						
TAW	**Tawu**	**1.12**	**214**	P	**Pn**	**18 18 37.7**	**-1.4**
	baz=213						
TAW				*e*S	**Sn**	**18 18 51.4**	**-1.9**
	baz=213						
EAST	**Anshuo**	**1.12**	**217**	*i* P	**Pn**	**18 18 37.6**	**-1.6**
	baz=211						
CHN3	**Shinhua**	**1.13**	**259**	*e*P	**Pn**	**18 18 41.1**	**+1.9**
	baz=258						
WHP	**Taichung City**	**1.14**	**330**	P	**Pn**	**18 18 39.9**	**+0.4**
	baz=333						
TAWH	**Dawu Township**	**1.14**	**214**	P	**Pn**	**18 18 37.8**	**-1.6**
	baz=213						
ENA	**Nanau**	**1.14**	**8**	*e*P	**Pn**	**18 18 38.2**	**-1.2**
	baz=357						
SGLT	**Jiouru**	**1.14**	**241**	*e*P	**Pn**	**18 18 41.2**	**+1.8**
	baz=239						
NNSB	**Datong**	**1.15**	**351**	P	**Pn**	**18 18 38.6**	**-1.0**
	baz=358						
WTK	**Tuku**	**1.16**	**290**	P	**Pn**	**18 18 39.2**	**-0.3**
	baz=289						
TWM1	**Shoushan**	**1.16**	**246**	*e*P	**Pn**	**18 18 41.5**	**+1.8**
	baz=245						
NNS	**Nan Shan**	**1.16**	**351**	*e*P	**Pn**	**18 18 38.8**	**-0.9**
	baz=357						
SHHT	**Tainan City**	**1.16**	**257**	*e*P	**Pn**	**18 18 41.5**	**+1.9**
	baz=255						
EWUT	**Wuta**	**1.16**	**9**	P	**Pn**	**18 18 39.3**	**-0.4**
	baz=17						
TCU	**Taichung**	**1.18**	**316**	*e*P	**Pn**	**18 18 40.6**	**+0.6**
	baz=304						
TCU				*e*S	**Sn**	**18 18 56.4**	**+1.5**
	baz=304						
ICHU	**Yijhu**	**1.19**	**274**	P	**Pn**	**18 18 39.9**	**-0.1**
	baz=273						
ICHU				*e*S	**Sn**	**18 18 55.3**	**+0.3**
	baz=273						
WCHH	**Zhanghua**	**1.22**	**310**	P	**Pn**	**18 18 40.9**	**+0.5**
	baz=308						
SSPT	**Xinbi**	**1.23**	**229**	*e*P	**Pn**	**18 18 41.4**	**+0.9**
	baz=218						
LATG	**Datong**	**1.24**	**358**	*i* P	**Pn**	**18 18 39.7**	**-1.1**
	baz=357						
LAY	**Lan-yu**	**1.25**	**181**	P	**Pn**	**18 18 40.0**	**-0.9**
	baz=175						
CHN8	**Yiju**	**1.25**	**273**	P	**Pn**	**18 18 40.7**	**-0.2**
	baz=272						
CHN8				*e*S	**Sn**	**18 18 57.4**	**+0.8**
	baz=272						
WRL	**Guolierlin Hig**	**1.25**	**299**	*e*P	**Pn**	**18 18 40.6**	**-0.3**
	baz=288						
WRL				*e*S	**Sn**	**18 18 56.7**	**+0.2**
	baz=288						
SCZT	**Fangliau**	**1.27**	**224**	*e*P	**Pn**	**18 18 40.9**	**-0.3**
	baz=217						
TWQ1	**Liyutan**	**1.28**	**325**	P	**Pn**	**18 18 42.1**	**+0.7**
	baz=324						
TWQ1				*e*S	**Sn**	**18 18 59.1**	**+1.8**
	baz=324						
LYUB	**Lan-yu**	**1.28**	**179**	*e*P	**Pn**	**18 18 39.7**	**-1.7**
	baz=175						
SLIU	**Shizi**	**1.29**	**214**	*e*P	**Pn**	**18 18 39.9**	**-1.5**
	baz=204						
WSF	**Szhu**	**1.29**	**286**	*e*P	**Pn**	**18 18 41.0**	**-0.4**
	baz=285						
WSF				*e*S	**Sn**	**18 18 57.4**	**0.0**
	baz=285						
TWC	**Suao**	**1.34**	**11**	*e*P	**Pn**	**18 18 42.0**	**-0.1**
	baz=16						
ENTT	**Nioudou**	**1.34**	**360**	*e*P	**Pn**	**18 18 41.3**	**-0.9**
	baz=359						
NDS	**Dongshan**	**1.34**	**6**	*e*P	**Pn**	**18 18 41.4**	**-0.8**
	baz=355						
NSY	**Sanyi**	**1.34**	**327**	P	**Pn**	**18 18 43.0**	**+0.8**
	baz=325						
NSY				*e*S	**Sn**	**18 19 01.0**	**+2.2**
	baz=325						
WDJ	**Dajia District**	**1.35**	**321**	*e*P	**Pn**	**18 18 43.1**	**+0.7**
	baz=330						
WDJ				*e*S	**Sn**	**18 19 01.4**	**+2.3**
	baz=330						
YHNB	**Yeheng**	**1.38**	**353**	P	**Pn**	**18 18 42.4**	**-0.4**
	baz=351						
NSK	**Sanguang**	**1.39**	**352**	P	**Pn**	**18 18 42.6**	**-0.3**
	baz=350						
NSK				*e*S	**Sn**	**18 18 59.1**	**-1.0**
	baz=350						
NFF	**Wufeng Townshi**	**1.40**	**343**	*e*P	**Pn**	**18 18 43.6**	**+0.6**
	baz=346						
TWE	**Neicheng**	**1.43**	**3**	*e*P	**Pn**	**18 18 42.6**	**-0.7**
	baz=355						
NMLH	**Miaoli**	**1.43**	**330**	*e*P	**Pn**	**18 18 43.7**	**+0.3**
	baz=328						
NMLH				*e*S	**Sn**	**18 19 02.1**	**+1.1**
	baz=328						
NSTT	**Nanjuang**	**1.43**	**339**	*e*P	**Pn**	**18 18 43.7**	**+0.3**
	baz=336						
NSTT				*e*S	**Sn**	**18 19 02.4**	**+1.4**
	baz=336						
SMST	**Manzhou Townsh**	**1.44**	**208**	*e*P	**Pn**	**18 18 42.5**	**-0.9**
	baz=200						
LIOB	**Emei**	**1.44**	**339**	*e*P	**Pn**	**18 18 43.9**	**+0.4**
	baz=338						
WLCH	**Liuqiu**	**1.45**	**230**	*e*P	**Pn**	**18 18 46.2**	**+2.6**
	baz=229						
FUSB	**Fushanzhiwuyua**	**1.46**	**1**	*e*P	**Pn**	**18 18 43.5**	**-0.3**
	baz=359						
NWLT	**Wulai**	**1.48**	**358**	*e*P	**Pn**	**18 18 43.9**	**-0.2**
	baz=5.0						
HEN	**Hengchun**	**1.49**	**211**	*e*P	**Pn**	**18 18 44.5**	**+0.3**
	baz=202						
TWKBT	**Hengchun**	**1.52**	**208**	*e*P	**Pn**	**18 18 43.9**	**-0.7**
	baz=201						
TWK1	**Hengchun**	**1.52**	**208**	*e*P	**Pn**	**18 18 44.0**	**-0.5**
	baz=199						
TWK1				*e*S	**Sn**	**18 19 02.5**	**-0.5**
	baz=199						
EGS		**1.58**	**12**	*e*P	**Pn**	**18 18 47.5**	**+2.0**
	baz=11						
NHDH	**Xindian Distri**	**1.67**	**359**	*e*P	**Pn**	**18 18 46.7**	**+0.1**
	baz=355						
NHDH				*e*S	**Sn**	**18 19 07.2**	**+0.5**
	baz=355						
TIPB	**Shuangxi**	**1.69**	**8**	*e*P	**Pn**	**18 18 47.2**	**+0.2**
	baz=356						
JYNG	**Yonagunijimaku**	**1.71**	**47**	P	**Pn**	**18 18 47.4**	**+0.2**
JYNG				S	**Sn**	**18 19 08.2**	**+0.4**
TWB1	**Santiao Chiao**	**1.75**	**12**	*e*P	**Pn**	**18 18 48.3**	**+0.5**
	baz=11						
WDGT	**Dungji**	**1.76**	**269**	*e*P	**Pn**	**18 18 47.0**	**-0.9**
	baz=260						
WDGT				*e*S	**Sn**	**18 19 08.2**	**-0.8**
	baz=260						
YOJ	**Yonaguni jima**	**1.76**	**48**	*e*P	**Pn**	**18 18 48.4**	**+0.5**
	baz=46						
YOJ				*e*S	**Sn**	**18 19 09.7**	**+0.6**
	baz=46						
YOJ	**Yonaguni jima**	**1.76**	**48**	P	**Pn**	**18 18 48.3**	**+0.5**
YOJ				S	**Sn**	**18 19 09.6**	**+0.6**
NWF	**Wu-fen Shan**	**1.78**	**6**	*e*P	**Pn**	**18 18 48.2**	**-0.1**
	baz=354						
TWS1	**Kuangyinshan**	**1.81**	**356**	*e*P	**Pn**	**18 18 48.7**	**+0.2**
	baz=6.0						
SXI1	**Grass Mountain**	**1.82**	**9**	*e*P	**Pn**	**18 18 49.5**	**+0.8**
	baz=356						
YM01	**YM01**	**1.85**	**360**	*e*P	**Pn**	**18 18 48.8**	**-0.4**
	baz=358						
PHUB	**P'eng-hu**	**1.85**	**277**	P	**Pn**	**18 18 48.1**	**-1.1**
	baz=266						
PHUB				*e*S	**Sn**	**18 19 09.1**	**-2.2**
	baz=266						
PNG	**Penghu**	**1.87**	**279**	*e*P	**Pn**	**18 18 48.5**	**-1.0**
	baz=267						
PNG				*e*S	**Sn**	**18 19 10.1**	**-1.8**
	baz=267						
ANP	**Anpu**	**1.89**	**359**	*e*P	**Pn**	**18 18 50.6**	**+0.9**
	baz=357						
HATJ	**Hateruma jima**	**2.19**	**69**	P	**Pn**	**18 18 53.9**	**+0.2**
HATJ				*e*S	**Sn**	**18 19 19.6**	**+0.1**
IRIF	**Iriomote-Funau**	**2.23**	**62**	P	**Pn**	**18 18 55.0**	**+0.6**
IRIF				*e*S	**Sn**	**18 19 21.4**	**+0.6**
JKRS	**Kuro-shima**	**2.42**	**67**	P	**Pn**	**18 18 57.7**	**+0.6**
JKRS				S	**Sn**	**18 19 26.8**	**+1.3**
VWUC	**VWUC**	**2.57**	**312**	*e*P	**Pn**	**18 18 57.8**	**-1.3**
	baz=310						
JIJ	**Ishigaki jima**	**2.58**	**65**	P	**Pn**	**18 18 59.2**	**0.0**
JIJ				S	**Sn**	**18 19 29.0**	**-0.4**
JISG	**Ishigakijimahi**	**2.82**	**62**	P	**Pn**	**18 19 02.2**	**-0.2**
KNMB	**Chin-men Tao**	**3.14**	**292**	*e*P	**Pn**	**18 19 05.2**	**-1.7**
	baz=291						
JTJ	**Tarama**	**3.16**	**64**	P	**Pn**	**18 19 07.4**	**+0.2**
JTJ				S	**Sn**	**18 19 43.2**	**-0.5**
MATB	**Ma-tsu**	**3.21**	**333**	*e*P	**Pn**	**18 19 06.2**	**-1.6**
	baz=329						
ZPLA	**Ao Xicun**	**3.56**	**281**	*e*P	**Pn**	**18 19 11.2**	**-1.5**
	baz=280						
JIRB	**Irabujima**	**3.63**	**64**	P	**Pn**	**18 19 13.8**	**+0.1**
JMJ2	**Miyako jima3**	**3.73**	**66**	P	**Pn**	**18 19 15.5**	**+0.6**
JMJ2				*e*S	**Sn**	**18 19 57.7**	**+0.2**
JIKM	**Ikemajima**	**3.73**	**63**	*e*S	**Sn**	**18 19 56.9**	**-0.8**
JOGS	**Gusukube**	**3.80**	**67**	*e*P	**Pn**	**18 19 16.7**	**+0.7**
JOGS				*e*S	**Sn**	**18 20 00.6**	**+1.2**

IDC ***04*** *18:19:16.6±62.0, 38°.61N×20°.92E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=1155.0km s-min=66.4km az=47.0*

THE ***04*** *18:19:16.3, 38°.46N×20°.50E, h0^{km}±2^{km}, ML2.8/7, Error ellipse: s-maj=2.2km s-min=0.5km az=217.0*

ATH ***04*** *18:19:16.6, 38°.46N×20°.50E, h10^{km}±1^{km}, ML2.7/15, Error ellipse: s-maj=1.4km s-min=0.6km az=281.0*

ISC 04 18:19:15.9±0.8**, 38°.47N**±0°.02×**20°.50E**±0°.03**, h13**^{km}±5^{km}**, n46, σ0^{s}.53**/66**, mb3.4**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.05**	**100**	P	**Pg**	**18 19 18.3**	**-0.1**
FSK				S	**Sg**	**18 19 19.4**	**-0.8**
FSK				AML	AML	18 19 19.8	
	comp=N,47540μm,0.4s						
FSK				AML	AML	18 19 20.6	
	comp=E,64423μm,0.2s						
EVGI	**Lefkada island**	**0.20**	**38**	P	**Pb**	**18 19 20.7**	**-0.7**
EVGI				S	**Sb**	**18 19 24.6**	**-0.5**
EVGI	**Lefkada island**	**0.20**	**38**	P	**Pg**	**18 19 20.6**	**+0.3**
EVGI				S	**Sb**	**18 19 24.3**	**-0.7**
	comp=E,1μm,0.4s						
KEF4	**Livadi, Kephal**	**0.22**	**196**	P	**Pg**	**18 19 20.6**	**-0.1**
KEF4				S	**Sg**	**18 19 24.2**	**+0.3**
KEF4	**Livadi, Kephal**	**0.22**	**196**	P	**Pg**	**18 19 20.5**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.22**	**15**	P	**Pg**	**18 19 21.0**	**+0.2**
DRAG				S	**Sb**	**18 19 25.4**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.22**	**15**	P	**Pg**	**18 19 20.9**	**+0.1**
DRAG				S	**Sb**	**18 19 25.0**	**-0.9**
DMLN	**Damoulianata-K**	**0.25**	**204**	P	**Pg**	**18 19 21.1**	**-0.1**
DMLN				S	**Sg**	**18 19 25.4**	**+0.6**
	comp=E,4μm,0.6s						
LXRA	**Lixouri, Kepha**	**0.27**	**191**	P	**Pg**	**18 19 21.8**	**+0.2**
LXRA				S	**Sg**	**18 19 26.6**	**+1.2**
ARGA	**Argostoli. Kep**	**0.29**	**183**	P	**Pb**	**18 19 22.9**	**-0.1**
ARGA				S	**Sg**	**18 19 26.9**	**+0.9**
KEF3	**Kipouria, Keph**	**0.29**	**205**	P	**Pg**	**18 19 21.3**	**-0.6**
KEF3				S	**Sg**	**18 19 26.0**	**0.0**
KEF3	**Kipouria, Keph**	**0.29**	**205**	P	**Pg**	**18 19 21.2**	**-0.7**
KEF3				S	**Sg**	**18 19 25.7**	**-0.2**
	comp=E,7μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.29**	**32**	P	**Pg**	**18 19 22.3**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.29**	**32**	P	**Pg**	**18 19 22.0**	**+0.1**
NYDR				S	**Sg**	**18 19 25.7**	**-0.3**
	comp=E,2μm,0.6s						
VLS	**Valsamata**	**0.30**	**166**	P	**Pg**	**18 19 22.1**	**0.0**
VLS				S	**Sg**	**18 19 26.3**	**+0.1**
VLS				AML	AML	18 19 28.6	
	comp=E,3182μm,0.3s						
VLS				AML	AML	18 19 30.9	
	comp=N,2671μm,0.3s						
VLS	**Valsamata**	**0.30**	**166**	P	**Pg**	**18 19 21.9**	**-0.2**
VLS				S	**Sg**	**18 19 26.6**	**+0.4**
	comp=N,1μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.36**	**170**	P	**Pg**	**18 19 23.3**	**+0.1**
PSDA				S	**Sg**	**18 19 28.6**	**+0.6**
TSLK	**Tsoukalades, L**	**0.38**	**19**	P	**Pb**	**18 19 24.0**	**-0.5**
TSLK				S	**Sb**	**18 19 30.3**	**0.0**
TSLK				AML	AML	18 19 33.3	
	comp=E,3615μm,0.4s						
TSLK				AML	AML	18 19 35.4	
	comp=N,4018μm,0.5s						
TSLK	**Tsoukalades, L**	**0.38**	**19**	P	**Pb**	**18 19 24.1**	**-0.4**
TSLK				S	**Sb**	**18 19 29.7**	**-0.6**
	comp=N,2μm,0.5s						
LTHK	**Lithakia**	**0.80**	**161**	P	**Pg**	**18 19 30.8**	**-0.6**
RLS	**Riolos of Patr**	**0.86**	**118**	P	**Pg**	**18 19 32.5**	**-0.2**
RLS				AML	AML	18 19 54.5	
	comp=N,433μm,0.5s						
RLS				AML	AML	18 19 57.8	
	comp=E,547μm,0.6s						
RLS	**Riolos of Patr**	**0.86**	**118**	P	**Pg**	**18 19 32.4**	**-0.2**
IGT	**Igoumenitsa**	**1.07**	**353**	P	**Pb**	**18 19 36.1**	**-0.2**
IGT				S	**Sg**	**18 19 50.6**	**0.0**
IGT				AML	AML	18 19 58.2	
	comp=E,468μm,0.5s						
IGT				AML	AML	18 19 59.8	
	comp=N,401μm,0.6s						
EFP	**Efpalio**	**1.10**	**92**	P	**Pn**	**18 19 37.0**	**0.0**
EFP				AML	AML	18 20 00.0	
	comp=N,1053μm,0.6s						
EFP				AML	AML	18 20 01.4	
	comp=E,1022μm,0.7s						
EVR	**Evrytania**	**1.12**	**66**	P	**Pb**	**18 19 36.7**	**-0.4**
EVR				AML	AML	18 20 00.9	
	comp=E,355μm,0.9s						
EVR				AML	AML	18 20 13.3	
	comp=N,570μm,0.8s						
EVR	**Evrytania**	**1.12**	**66**	P	**Pb**	**18 19 36.9**	**-0.3**
ANX	**Ano Chora**	**1.12**	**83**	P	**Pn**	**18 19 37.6**	**+0.2**
ANX				AML	AML	18 20 01.7	
	comp=E,796μm,0.7s						
ANX				AML	AML	18 20 02.3	
	comp=N,1011μm,0.6s						
ANX	**Ano Chora**	**1.12**	**83**	P	**Pn**	**18 19 37.4**	**0.0**
LAKA	**Lakka**	**1.18**	**101**	P	**Pb**	**18 19 37.9**	**-0.3**
LAKA				S	**Sn**	**18 19 54.7**	**+0.5**
LAKA				AML	AML	18 20 02.6	
	comp=E,522μm,0.8s						
LAKA				AML	AML	18 20 15.0	
	comp=N,305μm,0.7s						
LAKA	**Lakka**	**1.18**	**101**	P	**Pb**	**18 19 38.0**	**-0.3**
KASA	**Kassiopi**	**1.35**	**341**	P	**Pb**	**18 19 41.5**	**+0.4**
KEK	**Kerkira**	**1.36**	**336**	P	**Pb**	**18 19 41.7**	**+0.4**
KEK				AML	AML	18 20 08.6	
	comp=E,282μm,0.3s						
KEK				AML	AML	18 20 10.4	
	comp=N,273μm,0.4s						
KLV	**Kalavryta, Ach**	**1.36**	**108**	P	**Pn**	**18 19 40.9**	**+0.1**
KLV				AML	AML	18 20 16.1	
	comp=N,187μm,1.3s						
KLV				AML	AML	18 20 22.4	
	comp=E,234μm,1.0s						
MAKR	**Makrakomi, Fth**	**1.39**	**66**	P	**Pg**	**18 19 42.7**	**+0.1**
MAKR				AML	AML	18 20 11.2	
	comp=E,1280μm,0.4s						
MAKR				AML	AML	18 20 18.7	
	comp=N,861μm,0.8s						
MAKR	**Makrakomi, Fth**	**1.39**	**66**	P	**Pg**	**18 19 42.6**	**+0.1**
MAKR				S	**Sg**	**18 20 02.6**	**+2.0**
	comp=N,535nm,0.6s						
AGG	**Agios Georgios**	**1.53**	**68**	P	**Pg**	**18 19 45.1**	**-0.3**
AGG				AML	AML	18 20 13.3	
	comp=N,347μm,0.5s						
AGG				AML	AML	18 20 19.3	
	comp=E,638μm,0.7s						
AGG	**Agios Georgios**	**1.53**	**68**	P	**Pg**	**18 19 45.1**	**-0.3**
GUR	**Goura**	**1.54**	**110**	P	**Pb**	**18 19 44.1**	**-0.3**
GUR				AML	AML	18 20 15.8	
	comp=N,429μm,0.5s						
GUR				AML	AML	18 20 18.4	
	comp=E,504μm,0.5s						
THL	**Klokotos Trika**	**1.61**	**47**	P	**Pg**	**18 19 46.1**	**-0.7**
THL				AML	AML	18 20 15.8	
	comp=N,509μm,0.7s						
THL				AML	AML	18 20 16.0	
	comp=E,450μm,0.8s						
KPRO	**Kipourio**	**1.63**	**24**	P	**Pg**	**18 19 47.4**	**+0.2**
THAL	**Thalero**	**1.75**	**103**	P	**Pg**	**18 19 48.8**	**-0.8**
ATAL	**Atalanti**	**1.99**	**83**	P	**Pb**	**18 19 52.6**	**+0.6**
NEST	**Nestorio**	**1.99**	**12**	P	**Pg**	**18 19 53.1**	**-1.0**
FINES	**FINESS Array B**	**23.26**	**7**	P	**P**	**18 24 23.5**	**+0.7**
	comp=E,0.8nm,0.6s,baz=194,slow=11,SNR=4.9						
	comp=E,0.8nm,0.6s						
MKAR	**Makanchi Array**	**45.16**	**59**	P	**P**	**18 27 31.7**	**-0.5**
	comp=E,0.1nm,0.4s,baz=290,slow=7.9,SNR=1.8						
	comp=E,0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**45.51**	**48**	P	**P**	**18 27 35.1**	**+0.2**
	comp=E,0.5nm,0.4s,baz=282,slow=8.5,SNR=2.9						
	comp=E,0.5nm,0.4s						

RSNC 04 18:19:19.5±1.1**, 6°.83N×73°.13W, h150**^{km}±5^{km}**, ML3.0, Mw3.5, 3C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**193⇓**	*e*P	Pn	18 19 39.6	-0.6
BARC				*i*		18 19 57.5	
	comp=Z,200nm,0.3s						
BRRC	**Barranca, Sant**	**0.64**	**295⇓**	*e*P	Pn	18 19 41.5	-0.1
BRRC				*e*S	Sn	18 19 58.8	+0.3
BRRC				*i*		18 20 00.0	
	comp=Z,87nm,0.1s						
PAMC	**Pamplona, Colo**	**0.66**	**40⇑**	*e*P	Pn	18 19 42.4	+0.1
PAMC				*e*S	Sn	18 19 59.6	0.0
PAMC				*i*		18 20 04.5	
	comp=Z,94nm,0.4s						
RUSC	**La Rusia**	**0.94**	**177⇓**	*e*P	Pn	18 19 43.5	-0.8
RUSC				*e*S	Sn	18 20 02.6	-0.7
RUSC				*i*		18 20 05.1	
	comp=Z,112nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*e*P	Pn	18 19 46.1	-1.4
PTBC				*e*S	Sn	18 20 07.7	-1.3
PTBC				*i*		18 20 15.0	
	comp=Z,166nm,0.3s						
TAMC	**Tame, Arauca**	**1.38**	**107⇑**	*e*P	Pn	18 19 47.8	-0.1
TAMC				*e*S	Sn	18 20 09.6	0.0
OCAC	**Ocana**	**1.41**	**352**	*e*P	Pn	18 19 47.8	-0.5
OCAC				*i*		18 20 15.3	
	comp=Z,163nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**219**	*e*P	Pn	18 19 48.5	-0.8
SPBC				*e*S	Sn	18 20 11.0	-1.0
SPBC				*i*		18 20 16.5	
	comp=Z,174nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	Pn	18 19 52.2	-0.6
ZARC				*e*S	Sn	18 20 18.1	-0.3
ZARC				*i*		18 20 28.3	
	comp=Z,70nm,0.2s						
NORC	**Norcasia**	**2.14**	**234**	*e*P	Pn	18 19 55.4	-1.0
NORC				*e*S	Sn	18 20 23.8	-1.0
NORC				*i*		18 20 27.4	
	comp=Z,84nm,0.2s						
CHIC	**Chingaza**	**2.27**	**195**	*e*P	Pn	18 19 57.6	-0.7

CHIC				eS	Sn	18 20 27.0	-1.1
CHIC				i		18 20 36.8	
	comp=Z,40nm,0.3s						
ROSC	**El Rosal**	**2.31**	**211**	eP	Pn	18 19 59.5	+0.7
ROSC				eS	Sn	18 20 29.1	+0.2
ROSC				i		18 20 35.5	
	comp=Z,90nm,0.4s						
HELC	**Santa Helena**	**2.47**	**255**	eP	Pn	18 20 01.0	+0.4
HELC				eS	Sn	18 20 32.5	+0.2
UREC	**San Jos de Ur**	**2.56**	**291**	eP	Pn	18 19 59.6	-1.7
UREC				eS	Sn	18 20 30.9	-2.7
UREC				i		18 20 43.7	
	comp=Z,56nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	eP	Pn	18 20 04.8	+1.4
LL1C				eS	Sn	18 20 41.2	+3.8
VILC	**Villavicencio,**	**2.76**	**192**	eP	Pn	18 20 03.6	-0.4
VILC				eS	Sn	18 20 38.7	+0.2
PTGC	**Puerto Gaitan,**	**2.80**	**159**	eP	Pn	18 20 02.6	-1.8
LL6C	**La Loma 6 Bece**	**2.89**	**357**	eP	Pn	18 20 04.1	-1.4
CBOC	**Ciudad Bolivar**	**3.03**	**252**	eP	Pn	18 20 07.5	+0.2
CBOC				eS	Sn	18 20 44.1	-0.3
CBOC				i		18 20 52.2	
	comp=Z,20nm,0.3s						
DBBC	**Dabeiba**	**3.07**	**274**	eP	Pn	18 20 07.2	-0.6
DBBC				i		18 20 47.7	
	comp=Z,102nm,0.4s						
ARGC	**Ariguani, Magd**	**3.20**	**340**	eP	Pn	18 20 09.5	0.0
ARGC				eS	Sn	18 20 47.5	-0.8
ARGC				eS		18 20 48.5	
SDV	**Santo Domingo**	**3.20**	**50**	eP	Pn	18 20 09.0	-0.7
SDV				eS	Sn	18 20 47.2	-1.3
ANIL	**Santa Ana**	**3.25**	**224**	eP	Pn	18 20 10.7	+0.4
ANIL				eS	Sn	18 20 50.0	+0.4
ANIL				i		18 20 55.8	
	comp=Z,105nm,0.4s						
PRAC	**Prado**	**3.56**	**210**	⇑eP	Pn	18 20 13.3	-0.8
PRAC				eS	Sn	18 20 55.3	-1.2
PRAC				i		18 20 59.8	
	comp=Z,35nm,0.3s						
ORTC	**Ortega, Tolima**	**3.59**	**216**	eP	Pn	18 20 14.0	-0.5
ORTC				eS	Sn	18 20 57.3	+0.2
ORTC				i		18 21 03.3	
	comp=Z,27nm,0.5s						
SJCC	**San Jacinto, C**	**3.66**	**326**	eP	Pn	18 20 13.3	-2.1
SJCC				eS	Sn	18 20 55.2	-3.6
SJCC				i		18 20 58.7	
	comp=Z,11nm,0.3s						
PLMC	**San Jos del P**	**3.68**	**239**	eP	Pn	18 20 15.4	-0.3
PLMC				eS	Sn	18 20 58.8	-0.5
PLMC				i		18 21 04.5	
	comp=Z,18nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	eP	Pn	18 20 20.1	-2.0
CRJC				eS	Sn	18 21 08.1	-2.7
SMRC	**Santa Marta, M**	**4.44**	**346**	eP	Pn	18 20 24.9	-0.7
SMRC				eS	Sn	18 21 13.5	-3.4

OSPL ***04*** *18:49:19.3±2.2, 19°.39N×68°.62W, h31km±999km, ML2.4*
NEIC ***04*** *18:49:32.2±0.8, 19°.1N±0°.2×67°.2W±0°.1, h34km±32km,*
Error ellipse: s-maj=32.6km s-min=7.6km az=151.0
RSPR ***04*** *18:49:33.3, 19°.07N×67°.22W, h52km±6km, MD2.8/11*
ISC 04 18:49:33.0±2.8**, 19°.0N**±0°.1×**67°.19W**±0°.08**, h29**km**, n40,**
σ**0s.54**/41**, 10C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.57**	**172**	⇑eP	**Pb**	**18 49 44.4**	**-0.1**
AGPR	**Aguadilla, PR**	**0.57**	**172**	eS	**Sb**	**18 49 52.9**	**+0.5**
AGPR	**Aguadilla, PR**	**0.57**	**172**		**Pb**	**18 49 44.4**	**-0.1**
AGPR					**Sb**	**18 49 52.9**	**+0.5**
AGPR	**Aguadilla, PR**	**0.57**	**172**	IAML		18 49 53.3	
	comp=E,127nm,0.2s						
AGPR				IAML		18 49 55.0	
	comp=N,160nm,0.8s						
AGPR	**Aguadilla, PR**	**0.57**	**172**	i P	**Pb**	**18 49 44.2**	**-0.3**
AGPR				IAML		18 49 54.3	
	comp=Z,81nm,0.2s						
IDE	**Isla Desecheo**	**0.70**	**203**	⇑eP	**Pn**	**18 49 47.1**	**+0.1**
IDE	**Isla Desecheo**	**0.70**	**203**	eS	**Sn**	**18 49 57.3**	**+0.6**
AOPR	**Arecibo Observ**	**0.80**	**149**	⇑eP	**Pn**	**18 49 47.6**	**-0.7**
AOPR	**Arecibo Observ**	**0.80**	**149**	eS	**Sn**	**18 50 00.3**	**+1.0**
AOPR	**Arecibo Observ**	**0.80**	**149**		**Pn**	**18 49 47.6**	**-0.7**
AOPR					**Sn**	**18 50 00.3**	**+1.0**
EMPR	**Esperanza - Ma**	**0.83**	**131**	⇑eP	**Pn**	**18 49 48.6**	**-0.2**
EMPR	**Esperanza - Ma**	**0.83**	**131**	eS	**Sn**	**18 50 00.6**	**+0.4**
EMPR	**Esperanza - Ma**	**0.83**	**131**		**Pn**	**18 49 48.6**	**-0.2**
EMPR				IAML		18 50 04.2	
	comp=E,108nm,1.2s						
EMPR	**Esperanza - Ma**	**0.83**	**131**		**Sn**	**18 50 00.6**	**+0.4**
EMPR	**Esperanza - Ma**	**0.83**	**131**	IAML		18 49 57.1	
	comp=N,112nm,1.1s						
LSP	**Las Mesas**	**0.86**	**173**	⇑eP	**Pn**	**18 49 48.3**	**-0.9**
LSP	**Las Mesas**	**0.86**	**173**	eS	**Sn**	**18 50 01.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.02**	**176**	⇑eP	**Pn**	**18 49 51.2**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.02**	**176**	eS	**Sn**	**18 50 04.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.02**	**176**		**Pn**	**18 49 51.2**	**-0.2**
CRPR					**Sn**	**18 50 04.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.02**	**176**	IAML		18 50 06.9	
	comp=N,57nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.02**	**176**	i P	**Pn**	**18 49 50.5**	**-0.9**
CRPR				IAML		18 50 05.0	
	comp=Z,29nm,0.3s						
MLPR	**Magueyes Islan**	**1.07**	**172**	⇓eP	**Pn**	**18 49 51.6**	**-0.4**
MLPR	**Magueyes Islan**	**1.07**	**172**	eS	**Sn**	**18 50 06.1**	**+0.3**
MLPR	**Magueyes Islan**	**1.07**	**172**		**Pn**	**18 49 51.6**	**-0.4**
MLPR					**Sn**	**18 50 06.1**	**+0.3**
CELP	**Cerrillos**	**1.11**	**149**	⇑eP	**Pn**	**18 49 52.2**	**-0.5**
CELP	**Cerrillos**	**1.11**	**149**	eS	**Sn**	**18 50 06.9**	**-0.2**
CELP	**Cerrillos**	**1.11**	**149**		**Pn**	**18 49 52.2**	**-0.5**
CELP					**Sn**	**18 50 06.9**	**-0.2**
CELP	**Cerrillos**	**1.11**	**149**	IAML		18 50 07.4	
	comp=E,43nm,0.3s						
CELP				IAML		18 50 11.2	
	comp=N,49nm,0.2s						
OBIP	**Obispado Ponce**	**1.13**	**150**	⇑eP	**Pn**	**18 49 53.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.13**	**150**	eS	**Sn**	**18 50 07.1**	**-0.4**
OBIP	**Obispado Ponce**	**1.13**	**150**		**Pn**	**18 49 53.0**	**+0.1**
OBIP					**Sn**	**18 50 07.1**	**-0.4**
OBIP	**Obispado Ponce**	**1.13**	**150**	IAML		18 50 08.4	
	comp=N,44nm,0.2s						
IGPR	**InterUniversit**	**1.48**	**136**	⇑eP	**Pn**	**18 49 57.9**	**+0.2**
IGPR	**InterUniversit**	**1.48**	**136**	eS	**Sn**	**18 50 15.1**	**-0.9**
PDPR	**Patillas Dam,**	**1.50**	**132**	Pn	**Pn**	**18 49 57.6**	**-0.4**
PDPR				IAML		18 50 36.1	
	comp=E,40nm,1.2s						
MTP	**Monte Pirata**	**1.81**	**121**	⇑eP	**Pn**	**18 50 01.8**	**-0.5**
MTP	**Monte Pirata**	**1.81**	**121**	eS	**Sn**	**18 50 25.2**	**+1.0**
MTP	**Monte Pirata**	**1.81**	**121**		**Pn**	**18 50 01.8**	**-0.5**
MTP					**Sn**	**18 50 25.2**	**+1.0**
MTP	**Monte Pirata**	**1.81**	**121**	IAML		18 50 34.3	
	comp=E,20nm,0.2s						

IDC 04 18:51:16.9±10.0**, 12°.98S**×**166°.87E, h217**km±107km**,**
mb3.0/3**, mbtmp3.6**/4**, Error ellipse: s-maj=87.6km**
s-min=31.2km az=160.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.05**	**183**	P	Pn	18 53 24.3	+0.5
	4.5nm,1.0s,baz=311,slow=20,SNR=2.0						
DZM				S	S	18 55 05.6	-0.2
	2.5nm,0.8s,baz=202,slow=20,SNR=1.5						
WRA	**Warramunga Arr**	**31.92**	**253**	P	P	18 57 22.6	+0.2
	0.3nm,0.9s,baz=85,slow=9.9,SNR=1.9						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**32.98**	**246**	P	P	18 57 31.4	-0.2
	0.3nm,0.4s,baz=76,slow=9.0,SNR=22						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**84.99**	**18**	P	P	19 03 27.1	-0.2
	0.4nm,0.4s,baz=239,slow=5.1,SNR=5.7						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**118.47**	**346**	PKP	PKiKP	19 09 38.2	0.0
	0.9nm,0.7s,baz=57,slow=3.0,SNR=1.2						

GUC ***04*** *19:26:04.2±0.5, 18°.95S×69°.10W, h134km±2km, ML3.5*
IDC ***04*** *19:26:05.9±7.0, 18°.88S×68°.71W, h154km±46km, mb3.2/2,*
mbtmp3.7/4, Error ellipse: s-maj=83.6km s-min=34.0km
az=36.0
ISC 04 19:26:03.1±0.9**, 18°.97S**±0°.04×**69°.11W**±0°.09**, h138**km±9km**,**
n16, σ**0s.85**/27**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.73**	**329**	eP	**Pn**	**19 26 25.9**	**+0.6**
PB16				i S	**Sn**	**19 26 42.7**	**+0.6**
PB11	**IPOC Station P**	**0.94**	**213**	eP	**Pn**	**19 26 26.8**	**+0.4**
PB11				i S	**Sn**	**19 26 44.0**	**-0.2**
PB11				IAML		19 26 45.4	
	comp=E,2µm,0.2s						
PB08	**IPOC Station P**	**1.17**	**182**	eP	**Pn**	**19 26 29.7**	**+0.9**
PB08				i S	**Sn**	**19 26 48.9**	**+0.6**
PB08				IAML		19 26 51.1	
	comp=N,683nm,0.3s						
PB12	**IPOC Station P**	**1.21**	**287**	eP	**Pn**	**19 26 28.9**	**0.0**
PB12				i S	**Sn**	**19 26 48.0**	**-0.3**
PB12				IAML		19 26 49.0	
	comp=E,841nm,0.5s						
AP01	**Chacalluta**	**1.31**	**297**	eP	**Pn**	**19 26 30.0**	**+0.2**
AP01				i S	**Sn**	**19 26 49.8**	**-0.2**
AP01				IAML		19 26 51.7	
	comp=N,984nm,0.3s						
HMBC	**Humberstone**	**1.49**	**209**	eP	**Pn**	**19 26 32.0**	**+0.1**
HMBC				i S	**Sn**	**19 26 53.7**	**-0.1**
TA01	**Diego Aracena**	**1.88**	**212**	eP	**Pn**	**19 26 36.3**	**+0.2**
TA01				i S	**Sn**	**19 27 00.8**	**-0.6**
TA01				IAML		19 27 07.4	
	comp=E,194nm,0.2s						
PATCX	**Punta Patache**	**2.08**	**208**	eP	**Pn**	**19 26 38.8**	**+0.1**
PATCX				i S	**Sn**	**19 27 05.4**	**-0.6**
PATCX				IAML		19 27 09.6	
	comp=E,188nm,0.5s						
PB01	**IPOC Station P**	**2.09**	**190**	eP	**Pn**	**19 26 39.2**	**+0.5**
PB01				i S	**Sn**	**19 27 06.6**	**+0.5**
PB01				IAML		19 27 07.6	
	comp=E,318nm,0.3s						
PB02	**IPOC Station P**	**2.45**	**197**	eP	**Pn**	**19 26 43.5**	**+0.3**
PB02				i S	**Sn**	**19 27 14.1**	**+0.1**
PB02				IAML		19 27 22.1	
	comp=E,246nm,0.2s						
PB09	**IPOC Station P**	**2.81**	**182**	eP	**Pn**	**19 26 48.7**	**+0.9**
LPAZ	**La Paz**	**2.83**	**19**	P	**Pn**	**19 26 49.6**	**+1.2**
	comp=E,40nm,0.4s,baz=202,slow=6.5,SNR=171						
LPAZ				S	**Sn**	**19 27 23.6**	**+0.3**
	comp=E,4.1nm,0.5s,baz=66,slow=20,SNR=1.7						
PB07	**IPOC Station P**	**2.84**	**195**	eP	**Pn**	**19 26 48.6**	**+0.5**
SIV	**San Ignacio**	**8.22**	**70**	P	**Pn**	**19 27 56.8**	**-2.9**
	comp=E,1.8nm,0.3s,baz=258,slow=12,SNR=12						
TORD	**Torodi Ar. Bea**	**76.70**	**71**	P	**P**	**19 37 38.5**	**-1.1**
	comp=E,0.2nm,0.4s,baz=265,slow=7.1,SNR=1.9						
	comp=E,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**88.75**	**341**	P	**P**	**19 38 41.6**	**+1.0**
	comp=E,0.4nm,0.6s,baz=134,slow=4.8,SNR=8.3						
	comp=E,0.4nm,0.6s						

IDC 04 19:43:15.2±1.6**, 27°.55N**×**102°.25E, h0**km**, mb3.3**/3**,**
mbtmp3.2/4**, ML3.2**/1**, Error ellipse: s-maj=51.3km**
s-min=28.6km az=67.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.55**	**199**	Pn	Pn	19 45 34.6	+0.5
	0.1nm,0.3s,baz=16,slow=11,SNR=5.3						
CMAR				Pg		19 46 10.4	
	0.1nm,0.3s,baz=5.1,slow=16,SNR=11						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**24.81**	**326**	P	P	19 48 39.3	+0.3
	0.3nm,0.8s,baz=123,slow=10,SNR=2.3						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**56.52**	**143**	P	P	19 52 59.1	-0.4
	0.3nm,0.8s,baz=326,slow=8.3,SNR=7.3						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**59.39**	**146**	P	P	19 53 19.5	-0.1
	0.1nm,0.3s,baz=326,slow=6.5,SNR=2.5						
	0.1nm,0.3s						

IDC ***04*** *20:04:33.1±2.3, 6°.47S×129°.95E, h116km±29km, mb3.0/1,*
mbtmp3.7/6, Error ellipse: s-maj=30.5km s-min=19.5km
az=111.0
ISC 04 20:04:32.2±0.9**, 6°.51S**±0°.06×**130°.1E**±0°.1**, h146**km**, n6,**
σ**3s.67**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.73**	**12**	P	**Pn**	**20 05 56.0**	**+0.7**
	5.1nm,0.2s,baz=73,slow=5.5,SNR=33						
SIJI				S	**Sn**	**20 06 54.5**	**-5.7**
	21nm,0.2s,baz=261,slow=23,SNR=18						
BATI	**Baumata**	**7.35**	**240**	P	**Pn**	**20 06 15.4**	**-1.5**
	4.4nm,0.4s,baz=346,slow=23,SNR=1.8						
BATI				S	**Sn**	**20 07 39.0**	**0.0**
	9.2nm,0.3s,baz=270,slow=20,SNR=1.9						
FITZ	**Fitzroy Crossi**	**12.31**	**200**	P	**Pn**	**20 07 23.8**	**+1.2**
	0.9nm,0.3s,baz=24,slow=10,SNR=18						
FITZ				S	**Sn**	**20 09 33.7**	**-4.9**
	1.7nm,0.2s,baz=245,slow=14,SNR=2.6						
WRA	**Warramunga Arr**	**13.97**	**163**	P	**Pn**	**20 07 46.4**	**+2.5**
	0.5nm,0.4s,baz=344,slow=13,SNR=17						
WRA				S	**Sn**	**20 10 16.0**	**-2.7**
	0.8nm,0.3s,baz=291,slow=18,SNR=9.3						
ASAR	**Alice Springs**	**17.44**	**168**	P	**Pn**	**20 08 30.8**	**+4.1**
	0.4nm,0.4s,baz=343,slow=10.0,SNR=12						
ASAR				S	**S**	**20 11 37.7**	**-2.3**
	0.5nm,0.5s,baz=0.2,slow=26,SNR=6.5						
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**20 15 18.2**	**+3.4**
	0.1nm,0.4s,baz=120,slow=7.5,SNR=2.8						
	0.1nm,0.4s						

IDC ***04*** *20:10:27.6±1.0, 3°.18N×127°.98E, h0km, mb3.9/6,*
mbtmp3.9/7, ML3.5/1, MS3.0/2, Error ellipse: s-maj=52.6km
s-min=18.2km az=74.0
DJA ***04*** *20:10:35.5±1.4, 3°N±4°×12°8E±°, h31km±23km, M4.0/13,*
mb4.2/6, mB4.8/2, MLv3.9/13, Mw(mB)4.1/2
NEIC ***04*** *20:10:35.0±0.8, 3°.22N±0°.09×128°.26E±0°.10, h54km±12km,*
mb4.1/13, Error ellipse: s-maj=18.5km s-min=4.1km
az=48.0
ISC 04 20:10:38.6±0.8**, 3°.06N**±0°.08×**128°.01E**±0°.08**, h100**km**, n37,**
σ**1s.56**/35**, mb3.9**/12**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.36**	**196**	Pn	**Pn**	**20 11 14.3**	**-1.5**
TNTI	**Ternate**	**2.36**	**196**	P	**Pn**	**20 11 14.7**	**-1.2**
SGSI	**Sangihe**	**2.56**	**284**	P	**Pn**	**20 11 15.9**	**-2.5**
LBMI	**Labuha**	**3.71**	**188**	P	**Pn**	**20 11 35.2**	**+1.4**
KMSI	**Cibinong**	**4.72**	**239**	P	**Pn**	**20 11 48.0**	**+0.4**
SWI	**Sorong**	**5.07**	**140**	P	**Pn**	**20 11 49.3**	**-2.9**
	0.1nm10nm,0.8s						
SIJI	**Sorong**	**5.08**	**140**	Pn	Pn	20 11 48.0	-4.4
	1.8nm,0.3s,baz=73,slow=23,SNR=9.8						
SIJI				Sn	**Sn**	**20 12 44.9**	**-5.0**
	0.8nm,0.3s,baz=196,slow=23,SNR=1.7						
SIJI				LR	LR	20 13 59.1	
	comp=Z,70nm,19.8s,baz=146,slow=41						
	4.4nm,0.3s						
SANI	**Sanana**	**5.46**	**202**	P	**Pn**	**20 11 57.7**	**+0.1**
GTOI	**Gorontalo**	**5.55**	**244**	P	**Pn**	**20 11 59.5**	**+0.8**
	0.0nm8.0nm,0.7s						
MRSI	**Marisa**	**6.59**	**247**	P	**Pn**	**20 12 13.4**	**+0.5**
	0.4nm1µm134nm,0.6s						
LUWI	**Luwuk**	**6.63**	**232**	Pn	**Pn**	**20 12 14.3**	**+0.7**
LUWI	**Luwuk**	**6.63**	**232**	P	**Pn**	**20 12 13.5**	**0.0**
	0.1nm14nm,0.5s						
TOLI2	**Tolitoli**	**7.48**	**255**	Pn	**Pn**	**20 12 24.2**	**-0.8**
TOLI2				Sn	**Sn**	**20 13 45.3**	**-3.1**
MPSI	**Mapaga**	**8.55**	**252**	P	**Pn**	**20 12 38.2**	**-1.4**
MYLDM	**Lahad Datu**	**9.72**	**283**	Pn	**Pn**	**20 12 55.5**	**-0.1**
MTN	**Manton Dam**	**16.10**	**169**	Pn	**Pn**	**20 14 19.1**	**0.0**
KNRA	**Kununurra**	**18.63**	**178**		**P**	**20 14 49.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**21.15**	**186**	P	**P**	**20 15 16.4**	**+0.7**
	2.1nm,0.9s,baz=27,slow=14,SNR=2.0						
	2.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.15**	**186**	P	**P**	**20 15 16.4**	**+0.7**
FITZ				IAmb	IAmb	20 15 34.9	
	comp=Z,17nm,1.5s						
WB0	**Warramunga Arr**	**23.53**	**165**	P	**P**	**20 15 40.7**	**+0.8**
WRAB	**Tennant Creek**	**23.68**	**165**	P	**P**	**20 15 42.8**	**+1.5**
WRAB				IAmb	IAmb	20 15 43.2	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**23.68**	**165**	P	**P**	**20 15 42.4**	**+1.1**
	comp=Z,1.9nm,0.4s,baz=345,slow=10,SNR=27						
	comp=Z,1.9nm,0.4s						
WRA	**Warramunga Arr**	**23.68**	**165**	P	**P**	**20 15 41.5**	**+0.2**
WB2	**Warramunga Arr**	**23.69**	**165**	P	**P**	**20 15 42.2**	**+0.8**
WB2				IAmb	IAmb	20 15 43.3	
	comp=Z,3.9nm,0.8s						
WR0	**Warramunga Arr**	**23.75**	**165**	P	**P**	**20 15 43.0**	**+1.1**
WR0				IAmb	IAmb	20 15 44.2	
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**27.17**	**168**	P	**P**	**20 16 13.8**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=354,slow=8.0,SNR=11						
ASAR				PcP	**PcP**	**20 19 32.6**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=346,slow=2.1,SNR=6.5						
	comp=Z,0.7nm,0.5s						
BBOO	**Buckleboo**	**36.48**	**169**	P	**P**	**20 17 35.2**	**+1.1**
STKA	**Stephens Creek**	**37.06**	**161**	P	**P**	**20 17 40.5**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=327,slow=9.8,SNR=5.1						
	comp=Z,3.2nm,0.8s						
STKA	**Stephens Creek**	**37.06**	**161**	IAmb	IAmb	20 17 49.6	
	comp=Z,2.6nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**40.84**	**65**	T	T	21 01 22.3	
	baz=253,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.85**	**65**	T	T	21 01 19.8	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**40.85**	**65**	T	T	21 01 22.8	
	baz=253,slow=74						
ASAJ	**Asahikawa**	**42.88**	**15**	P	**P**	**20 18 26.8**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=194,slow=17,SNR=1.3						
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**58.84**	**325**	P	**P**	**20 20 28.1**	**+1.4**
MK31				IAmb	IAmb	20 20 28.3	
	comp=Z,1.8nm,1.4s						
MKAR	**Makanchi Array**	**58.84**	**325**	P	**P**	**20 20 27.9**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=116,slow=8.8,SNR=11						
MKAR				LR	LR	20 47 47.5	
	comp=Z,31nm,18.2s,baz=141,slow=38						
	comp=Z,0.4nm,0.4s						
MAKZ	**Makanchi**	**59.02**	**325**	P	**P**	**20 20 28.6**	**+0.5**
MAKZ				IAmb	IAmb	20 20 33.1	
	comp=Z,1.3nm,0.9s						
KURK	**Kurchatov**	**62.99**	**327**	P	**P**	**20 20 55.7**	**+0.9**
KURK				IAmb	IAmb	20 21 04.5	
	comp=Z,1.2nm,0.8s						

RHSSO ***04*** *20:12:01.9±1.2, 43°.19N×20°.89E, h4km, ML2.0/4*
BEO 04 20:12:01.4±0.3**, 43°.26N**×**20°.99E, h0**km**, ML1.8**/10**, 1D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SELS	**Selova**	**0.10**	**110**	ePg	Pg	20 12 03.1	-0.3
SELS				eSg	Sg	20 12 04.9	+0.2
GRUS	**Gruza**	**0.66**	**343**	ePg	Pg	20 12 13.2	-0.9
GRUS				eSg	Sg	20 12 22.2	-0.5
SJES	**Sjenica**	**0.74**	**271**	ePg	Pg	20 12 14.7	-0.9
SJES				eSg	Sg	20 12 24.3	-0.9
BARS	**Barje**	**0.75**	**126**	ePg	Pg	20 12 15.0	-0.8
BARS	**Barje**	**0.75**	**126**	ePg	Pn	20 12 20.9	+1.6
BARS				eSg	Sg	20 12 25.0	-0.5
BARS				eSg	Sn	20 12 36.1	+4.8
SVIS	**Svilajnac**	**1.02**	**9**	eSg	Pn	20 12 20.6	-2.4
SVIS	**Svilajnac**	**1.02**	**9**	ePg	Sg	20 12 34.9	+0.6
TRUS	**Trudelj**	**1.05**	**337**	ePg	Pg	20 12 21.2	-0.4
TRUS				eSg	Sg	20 12 36.0	+0.7
ZAGS	**Zajecar**	**1.06**	**58**	ePg	Pg	20 12 21.0	-0.8
ZAGS				eSg	Sg	20 12 34.5	-1.1
DIVS	**Divibare**	**1.11**	**320**	ePg	Pg	20 12 21.3	-1.4
DIVS				eSg	Sg	20 12 36.8	-0.3
DIVS	**Divibare**	**1.11**	**320**	ePg	Pg	20 12 21.6	-1.1
DIVS				eSg	Sg	20 12 37.3	+0.2
RUDO	**Rudo**	**1.23**	**288**	ePg	Pg	20 12 23.4	-1.6
RUDO				eSg	Sg	20 12 39.1	-1.9
KUBS	**Kucevo**	**1.26**	**23**	ePg	Pg	20 12 24.7	-0.8
KUBS				eSg	Sg	20 12 40.0	-1.9
BBLS	**Lazići**	**1.30**	**299**	ePg	Pg	20 12 25.1	-1.2
BBLS				eSg	Sg	20 12 41.1	-2.1
BBLS	**Lazići**	**1.30**	**299**	ePg	Pg	20 12 24.6	-1.7
BBLS				eSg	Sg	20 12 42.5	-0.7
BOSS	**Bosilegrad**	**1.33**	**124**	ePg	Pg	20 12 25.5	-1.5
BOSS				eSg	Sg	20 12 43.3	-1.0
FRGS	**Fruska Gora**	**2.08**	**336**	ePn	Pn	20 12 37.9	+0.3
FRGS				eSn	Sn	20 13 04.4	+0.2
DRGR		**3.74**	**18**	⇓S	Sb	20 13 50.8	-3.5

BUC 04 20:12:47.1±0.7**, 44°.75N**×**21°.85E, h8**km±3km**, ml0.9**/4**, 16C,**
Error ellipse: s-maj=5.4km s-min=2.4km az=7.0,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDVR	**Moldovita**	**0.10**	**291**	⇑P	Pg	20 12 48.6	-0.9
MDVR				⇑S	Sg	20 12 51.9	+0.7
MDVR	**Moldovita**	**0.10**	**291**	⇑P	Pg	20 12 48.6	-0.9
MDVR				⇑S	Sg	20 12 51.9	+0.7
HERR	**Herculane**	**0.43**	**71**	⇑P	Pg	20 12 56.2	+0.7
HERR				⇑S	Sg	20 13 01.1	0.0
HERR	**Herculane**	**0.43**	**71**	⇑P	Pg	20 12 56.2	+0.7
HERR				⇑S	Sg	20 13 01.1	0.0
BZS	**Buzias**	**0.89**	**350**	⇑P	Pb	20 13 04.6	-0.2
BZS				⇑S	Sb	20 13 16.5	-0.3
BZS	**Buzias**	**0.89**	**350**	⇑P	Pb	20 13 04.6	-0.2
BZS				⇑S	Sb	20 13 16.5	-0.3
GZR	**Gura Zlata**	**0.93**	**45**	⇑P	Pg	20 13 05.1	+0.2
GZR				⇑S	Sb	20 13 17.8	-0.2
GZR	**Gura Zlata**	**0.93**	**45**	⇑P	Pg	20 13 05.1	+0.2
GZR				⇑S	Sb	20 13 17.8	-0.2

IDC 04 20:17:52.2±0.8**, 12°.96N**×**144°.47E, h127**km±11km**, mb2.9**/4**,**
mbtmp3.3/4**, Error ellipse: s-maj=42.2km s-min=22.7km**
az=91.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.74**	**32**	P	Pn	20 18 13.3	+0.8
	225nm,0.3s,baz=188,slow=21,SNR=49						
GUMO				S	Sn	20 18 28.9	+1.0
	607nm,0.3s,baz=38,slow=23,SNR=60						
WRA	**Warramunga Arr**	**34.18**	**197**	P	P	20 24 25.5	-0.1
	0.4nm,0.5s,baz=7.6,slow=8.7,SNR=8.2						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**37.84**	**196**	P	P	20 24 56.8	0.0
	0.2nm,0.5s,baz=20,slow=12,SNR=5.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**61.67**	**316**	P	P	20 27 55.8	-1.0
	0.1nm,0.3s,baz=97,slow=8.5,SNR=2.1						
	0.1nm,0.3s						
YKA	**Yellowknife Ar**	**83.59**	**27**	P	P	20 30 06.6	+0.6
	0.2nm,0.5s,baz=286,slow=4.8,SNR=2.3						
	0.2nm,0.5s						

IDC ***04*** *20:42:54.0±1.3, 8°.65S×112°.66E, h0km, mb3.8/6,*
mbtmp3.8/8, ML3.6/2, MS3.2/6, Error ellipse: s-maj=74.2km
s-min=16.4km az=47.0
DJA ***04*** *20:42:59.2±0.3, 9°S±3°×11°2E±°, h41km±30km, M4.3/27,*
mb4.4/12, mB5.8/1, MLv4.3/27, Mw(mB)5.4/1
NEIC ***04*** *20:43:00.9±1.3, 9°.10S±0°.06×112°.18E±0°.07, h61km±9km,*
mb4.1/11, Error ellipse: s-maj=11.4km s-min=6.9km
az=53.0
ISC 04 20:42:58.4±1.0**, 9°.36S**±0°.06×**112°.02E**±0°.03**, h49**km±11km**,**
n65, σ**1s.53**/82**, mb4.1**/12**, MS3.2**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWJI	**Pagerwojo**	**1.35**	**351**	P	**Pn**	**20 43 20.5**	**-0.3**
PWJI				S	**Sn**	**20 43 36.4**	**-1.2**
PCJI	**Pacitan**	**1.43**	**324**	P	**Pn**	**20 43 21.8**	**-0.1**
PCJI				S	**Sn**	**20 43 36.5**	**-3.0**
GMJI	**Gumukmas**	**1.77**	**53**	P	**Pn**	**20 43 26.1**	**-0.6**
GMJI				S	**Sn**	**20 43 48.2**	**+0.1**
UGM	**Wanagama**	**2.06**	**314**		**Pn**	**20 43 31.9**	**+1.2**
UGM				Sn	**Sn**	**20 43 55.3**	**+0.1**
UGM	**Wanagama**	**2.06**	**314**	P	**Pn**	**20 43 31.7**	**+1.0**
UGM				S	**Sn**	**20 43 56.6**	**+1.4**
UGM	**Wanagama**	**2.06**	**314**	P	**Pn**	**20 43 32.4**	**+1.7**
BLJI	**Banyuglugur**	**2.24**	**44**	P	**Pn**	**20 43 35.0**	**+2.0**
BLJI				S	**Sn**	**20 44 00.9**	**+1.4**
JAGI	**Jajag, Banyuwa**	**2.29**	**67**		**Pn**	**20 43 33.0**	**-0.7**
JAGI	**Jajag, Banyuwa**	**2.29**	**67**	P	**Pn**	**20 43 33.5**	**-0.2**
JAGI				S	**Sn**	**20 44 00.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**2.29**	**67**	P	**Pn**	**20 43 35.0**	**+1.3**
YOGI	**Yogyakarta**	**2.29**	**312**	P	**Pn**	**20 43 35.0**	**+1.2**
YOGI				S	**Sn**	**20 44 02.0**	**+1.1**
GRJI	**Gresik**	**2.47**	**11**	P	**Pn**	**20 43 36.8**	**+0.5**

GRJI				S	Sn	20 44 05.9	+0.7
TBJI	Tambak Boyo	2.53	356	P	Pn	20 43 34.7	-2.4
TBJI				S	Sn	20 44 07.4	+0.7
ABJI	Asem Bagus	2.69	55	P	Pn	20 43 40.3	+1.1
ABJI				S	Sn	20 44 10.8	+0.3
SMRI	Semarang	2.78	326	Pn	Pn	20 43 43.3	+2.9
SMRI	Semarang	2.78	326	P	Pn	20 43 41.6	+1.1
SMRI				S	Sn	20 44 17.2	+4.4
KMMI	Kalianget	3.00	40	P	Pn	20 43 43.7	+0.2
KMMI				S	Sn	20 44 19.8	+1.6
UWJI	Ujung Watu	3.11	340	P	Pn	20 43 46.8	+1.8
IGBI	Denpasar	3.13	80	P	Pn	20 43 47.4	+2.1
DNP	Denpasar	3.23	78	P	Pn	20 43 47.2	+0.6
DNP				S	Sn	20 44 25.4	+1.6
SRBI	Singaraja	3.40	68	P	Pn	20 43 49.6	+0.6
SRBI				S	Sn	20 44 29.1	+1.0
BWJI	Bawean	3.54	10	P	Pn	20 43 51.5	+0.5
BWJI				S	Sn	20 44 31.9	+0.3
KPJI	Karang Pucung	3.66	303	P	Pn	20 43 54.6	+2.1
KPJI				S	Sn	20 44 37.0	+2.5
CMJI	Cimerak	3.86	294	P	Pn	20 43 57.6	+2.3
CMJI				S	Sn	20 44 37.2	-2.3
JCJI	Jatiwangi	4.68	307	P	Pn	20 44 00.8	-5.8
JCJI				S	Sn	20 44 56.2	-3.5
LEM	Lembang	5.03	300	Pn	Pn	20 44 15.2	+3.6
	4.5nm,0.3s,baz=128,slow=18,SNR=2.6						
LEM				Sn	Sn	20 45 12.7	+4.1
	3.9nm,0.3s,baz=140,slow=21,SNR=3.8						
LEM				LR	LR	20 46 36.5	
	comp=Z,200nm,20.0s,baz=210,slow=42						
	19nm,0.5s						
LEM	Lembang	5.03	300	P	Pn	20 44 13.2	+1.6
	0.2nm22nm,0.7s						
CNJI	Cibinong	5.25	292	P	Pn	20 44 14.0	-0.4
	0.5nm54nm,0.8s						
CNJI				S	Sn	20 45 12.5	-1.2
	0.5nm54nm,0.8s						
PLAI	Plampang	5.71	85	P	Pn	20 44 20.9	+0.2
	0.2nm25nm,0.6s						
PLAI				S	Sn	20 45 24.5	-0.5
	0.2nm25nm,0.6s						
PLAI	Plampang	5.71	85	P	Pn	20 44 19.8	-0.9
SKJI	Sukabumi	5.89	293	P	Pn	20 44 24.8	+1.6
	0.3nm57nm,0.5s						
DBJI	Dramaga	5.92	298	P	Pn	20 44 23.1	-0.5
	0.2nm19nm,0.5s						
XMI	Christmas Isla	6.33	260	P	Pn	20 44 29.6	+0.4
XMIS	Christmas Isla	6.37	259	Pn	Pn	20 44 29.5	-0.2
XMIS	Christmas Isla	6.37	259	P	Pn	20 44 29.6	-0.2
BBKI	Banjar Baru	6.50	26	P	Pn	20 44 33.4	+1.9
	0.2nm23nm,0.7s						
WBSI	Waikabubak, Su	7.28	93	P	Pn	20 44 43.3	+1.0
	0.1nm18nm,0.8s						
KASI	Kota Agung	8.38	297	P	Pn	20 44 58.1	+0.8
	24nm,1.2s						
KAPI	Kappang	8.80	61	Pn	Pn	20 45 01.6	-1.5
BSSI	Bau Bau, Buton	8.98	70	P	Pn	20 45 05.4	-0.2
	12nm,1.2s						
PPBI	Pangkal Pinang	9.24	320	P	Pn	20 45 09.1	0.0
MNAI	Manna	10.28	298	Pn	Pn	20 45 24.7	+1.3
GIRL	Giralia	13.38	171	P	Pn	20 46 05.1	-0.6
MBWA	Marble Bar	13.88	149	P	Pn	20 46 10.6	-2.0
FITZ	Fitzroy Crossi	15.82	125	Pn	Pn	20 46 36.1	-1.9
	0.1nm,0.3s,baz=325,slow=7.5,SNR=1.1						
FITZ				Sn	Sn	20 49 20.4	-12
	0.1nm,0.3s,baz=180,slow=19,SNR=1.1						
FITZ				LR	LR	20 52 50.9	
	comp=Z,68nm,19.3s,baz=340,slow=38						
	0.8nm,0.6s						
FITZ	Fitzroy Crossi	15.82	125	Pn	Pn	20 46 36.5	-1.5
FITZ				IAmb	IAmb	20 46 44.5	
	comp=Z,13nm,1.5s						
DAV	Davao City (W)	21.19	40	LR	LR	20 55 43.4	
	comp=Z,34nm,20.4s,baz=142,slow=38						
WB0	Warramunga Arr	23.97	118	P	P	20 48 08.9	+0.4
WB0				IAmb	IAmb	20 48 11.4	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	23.99	118	P	P	20 48 09.3	+0.5
	comp=Z,1.5nm,0.7s,baz=294,slow=12,SNR=20						
	comp=Z,1.5nm,0.7s						
WB2	Warramunga Arr	24.00	118	P	P	20 48 08.6	-0.2
WB2				IAmb	IAmb	20 48 25.5	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	24.17	118	P	P	20 48 11.5	+1.1
WR0				IAmb	IAmb	20 48 12.4	
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	25.30	127	P	P	20 48 21.9	+1.3
	comp=Z,1.2nm,0.7s,baz=304,slow=9.0,SNR=17						
	comp=Z,1.2nm,0.7s						
CMAR	Chiang Mai Arr	30.50	335	P	P	20 49 06.8	-0.3
	comp=Z,0.4nm,0.8s,baz=167,slow=8.6,SNR=4.2						
CMAR				LR	LR	21 04 31.2	
	comp=Z,54nm,18.1s,baz=145,slow=43						
	comp=Z,0.4nm,0.8s						
STKA	Stephens Creek	35.40	134	P	P	20 49 51.6	+1.8
	comp=Z,1.1nm,0.7s,baz=304,slow=17,SNR=3.2						
	comp=Z,1.1nm,0.7s						
STKA	Stephens Creek	35.40	134	IAmb	IAmb	20 49 59.1	
	comp=Z,1.2nm,1.1s						
KDJ	Kajisay	60.36	331	P	P	20 53 02.7	-0.1
KDJ				IAmb	IAmb	20 53 04.6	
	comp=Z,3.2nm,1.0s						
MK31	Makanchi Array	61.88	337	P	P	20 53 12.3	-0.4
MK31				IAmb	IAmb	20 53 12.9	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	61.88	337	P	P	20 53 12.2	-0.6
	comp=Z,1.3nm,0.6s,baz=150,slow=7.3,SNR=18						
	comp=Z,1.3nm,0.6s						
OPO	Ambohidratompo	63.30	254	LR	LR	21 17 39.0	
	comp=Z,16nm,20.4s,baz=184,slow=32						
ZALV	Zalesovo Beam	67.14	343	P	P	20 53 45.9	-1.1
	comp=Z,0.9nm,0.4s,baz=163,slow=1.5,SNR=6.7						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	67.14	343	P	P	20 53 46.0	-1.0
YAK	Yakutsk	72.49	9	P	P	20 54 18.5	-1.1
ABKAR	Akbulak array	74.02	327	P	P	20 54 28.6	-0.3
ABKAR	Akbulak array	74.02	327	P	P	20 54 28.7	-0.3
ABKAR				IAmb	IAmb	20 54 43.2	
	comp=Z,1.7nm,0.7s						
BOSA	Boshof	82.76	242	LR	LR	21 31 07.0	
	comp=Z,25nm,18.7s,baz=184,slow=35						

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*ATH **04** 20:56:28.4, 36°.49N×26°.54E, h134^{km}±4^{km}, ML3.8/14,*
Error ellipse: s-maj=5.4km s-min=2.1km az=76.0
*IDC **04** 20:56:32.4±0.8, 36°.46N×26°.56E, h125^{km}±11^{km}, mb3.3/10,*
mbtmp3.7/19, Error ellipse: s-maj=15.8km s-min=9.3km
az=160.0
*ISK **04** 20:56:33.5, 36°.48N×26°.61E, h118^{km}, ML3.4/25*
*DDA **04** 20:56:33.7±0.0, 36°.42N×26°.54E, h48^{km}±5^{km}, MW3.7*
*HLW **04** 20:56:35.5, 36°.13N×26°.88E, h22^{km}±15^{km}, Md4.3*
*THE **04** 20:56:35.3, 36°.48N×26°.60E, h124^{km}±3^{km}, ML3.7/18,*
Error ellipse: s-maj=3.4km s-min=0.8km az=95.0
*GII **04** 20:56:39.4±0.3, 35°.97N×27°.05E, h100^{km}, mb4.1/3,*
MD3.9/3, Mm3.9/4

ISC 04 20:56:32.3±0.6**, 36°.42N**±0°.03×**26°.68E**±0°.03**, h126**^{km}±6^{km}**,**
n199, σ**1§79**/264**, mb3.5**/10**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	Kos Island	0.41	36	P	Pn	20 56 51.3	+0.9
KOSK				S	Sn	20 57 05.2	+1.0
KOSK				AML	AML	20 57 05.6	
	comp=E,4819µm,0.4s						
KOSK				AML	AML	20 57 05.6	
	comp=N,7970µm,1.0s						
KOSK	Kos Island	0.41	36	P	Pn	20 56 51.3	+0.9
KOSK				S	Sn	20 57 03.8	-0.4
	comp=N,1µm,0.7s						
KOSK	Kos Island	0.41	36	PG	Pn	20 56 51.3	+0.9
KOSK				SG	Sn	20 57 03.9	-0.3
NISR	Nisiros	0.41	62	P	Pn	20 56 51.5	+1.0
DAT	Datca	0.79	67	P	Pn	20 56 54.2	+1.1
DAT	Datca	0.79	67	PG	Pn	20 56 54.2	+1.1
DAT	Datca	0.79	67	P	Pn	20 56 53.9	+0.8
BODT	Bodrum	0.82	38	P	Pn	20 56 54.1	+0.8
BODT				S	Sn	20 57 09.0	-0.2
BODT	Bodrum	0.82	38	PG	Pn	20 56 54.2	+0.9
BODT				SG	Sn	20 57 08.9	-0.2
YKAV	Yalikavak-Bodr	0.85	34	PG	Pn	20 56 54.2	+0.7
BDRM	Kayabasi	0.89	44	P	Pn	20 56 54.6	+0.7
BDRM				S	Sn	20 57 09.5	-0.8
KARP	Karpathos	0.96	156	P	Pn	20 56 56.0	+1.4
KARP				AML	AML	20 57 13.8	
	comp=N,7467µm,0.2s						
KARP				AML	AML	20 57 14.1	
	comp=E,4962µm,0.1s						
KARP	Karpathos	0.96	156	P	Pn	20 56 56.0	+1.4
KARP				S	Sn	20 57 12.0	+0.6
	comp=E,3µm,0.2s						
KARP	Karpathos	0.96	156	PG	Pn	20 56 56.2	+1.6
KARP				SG	Sn	20 57 12.7	+1.3
THR8	Santorini-Mono	0.97	269	P	Pn	20 56 55.2	+0.7
THR8	Santorini-Mono	0.97	269	P	Pn	20 56 55.2	+0.7
SFIR	Foira Santorin	1.01	270	P	Pn	20 56 55.8	+0.9
CMBO	Columbo, Santo	1.03	273	P	Pn	20 56 55.8	+0.7
CMBO	Columbo, Santo	1.03	273	P	Pn	20 56 55.8	+0.7
THR3	Thira Island,	1.03	270	P	Pn	20 56 56.0	+0.8
THR3	Thira Island,	1.03	270	P	Pn	20 56 55.9	+0.8
THR6	Thira Island,	1.03	267	P	Pn	20 56 55.6	+0.5
THR6	Thira Island,	1.03	267	P	Pn	20 56 55.7	+0.5
SAP4	Santorini-Oia	1.05	273	P	Pn	20 56 56.1	+0.8
THR5	Thira Island,	1.07	270	P	Pn	20 56 55.8	+0.3
THR5	Thira Island,	1.07	270	P	Pn	20 56 55.9	+0.3
APE	Apeiranthos	1.12	305	P	Pn	20 56 56.6	+0.5
APE	Apeiranthos	1.12	305	P	Pn	20 56 56.6	+0.5
APE	Apeiranthos	1.12	305	PG	Pn	20 56 56.7	+0.5
DDIM	Aydin, Didim	1.13	24	P	Pn	20 56 57.0	+0.8
DDIM				S	Sn	20 57 14.3	+0.1
ARG	Arkhangelos	1.19	100	P	Pn	20 56 58.5	+1.8
ARG				AML	AML	20 57 17.1	
	comp=E,2333µm,0.3s						
ARG				AML	AML	20 57 17.4	
	comp=N,1784µm,0.3s						
ARG	Arkhangelos	1.19	100	P	Pn	20 56 58.5	+1.8
ARG	Arkhangelos	1.19	100	PN	Pn	20 56 58.5	+1.8
ARG				SN	Sn	20 57 16.9	+1.6
MLSB	Milas	1.24	45	PN	Pn	20 56 58.7	+1.4
MLSB				SN	Sn	20 57 16.6	+0.2
SMG	Samos	1.29	6	P	Pn	20 56 58.1	+0.2
SMG				AML	AML	20 57 16.9	
	comp=N,446µm,1.0s						
SMG				AML	AML	20 57 18.1	
	comp=E,282µm,0.6s						
SMG	Samos	1.29	6	P	Pn	20 56 58.2	+0.4
SMG				S	Sn	20 57 13.8	-3.5
	comp=E,190nm,0.9s						
TURN	Turunc	1.31	74	PN	Pn	20 56 59.4	+1.4
TURN				SN	Sn	20 57 18.1	+0.6
TURN	Turunc	1.31	74	P	Pn	20 56 59.4	+1.4
TURN				S	Sn	20 57 17.7	+0.2
GCAM	G?zelcaml?	1.35	19	PN	Pn	20 56 59.3	+0.8
GCAM				SN	Sn	20 57 18.4	0.0
GCAM	G?zelcaml?	1.35	19	P	Pn	20 56 58.8	+0.4
GCAM				S	Sn	20 57 17.9	-0.5
ZKR	Zakros	1.36	196	P	Pn	20 57 00.5	+1.9
ZKR				AML	AML	20 57 21.7	
	comp=E,3655µm,0.3s						
ZKR				AML	AML	20 57 22.5	
	comp=N,2000µm,0.3s						
ZKR	Zakros	1.36	196	P	Pn	20 57 00.5	+1.9
ZKR				S	Sn	20 57 19.4	+0.9
	comp=N,1µm,0.3s						
ZKR	Zakros	1.36	196	PN	Pn	20 57 00.9	+2.3
ZKR				SN	Sn	20 57 20.0	+1.5
YER	Yerkesik	1.47	61	P	Pn	20 57 01.7	+1.9
YER				S	Sn	20 57 21.4	+0.5
YER	Yerkesik	1.47	61	PN	Pn	20 57 01.8	+1.9
YER				SN	Sn	20 57 21.7	+0.8
MULA	Mugla, Merkez-	1.56	57	P	Pn	20 57 02.6	+1.7
MULA				S	Sn	20 57 23.1	+0.3
AYDN	Tasoluk	1.57	38	P	Pn	20 57 02.1	+1.1
AYDN				S	Sn	20 57 22.1	-0.7
FRMA	Ierapetra Chan	1.60	209	P	Pn	20 57 02.5	+1.2
FRMA				AML	AML	20 57 25.1	
	comp=E,4103µm,0.4s						
FRMA				AML	AML	20 57 28.7	
	comp=N,2480µm,0.5s						
FRMA	Ierapetra Chan	1.60	209	P	Pn	20 57 03.1	+1.8
FRMA				S	Sn	20 57 24.4	+1.0
	comp=N,565nm,0.4s						
DGB	zmir	1.64	6	P	Pn	20 57 01.9	+0.3
DGB				S	Sn	20 57 22.8	-1.3
DALY	Dalyan (Mula)	1.64	75	PN	Pn	20 57 04.3	+2.6
DALY				SN	Sn	20 57 25.9	+1.8
TNSA	Tinos	1.65	313	P	Pn	20 57 01.9	+0.1
HRKL	Herakleio	1.69	230	P	Pn	20 57 03.2	+0.8
HRKL				AML	AML	20 57 28.8	
	comp=E,14416µm,0.5s						
HRKL				AML	AML	20 57 31.4	
	comp=N,8888µm,0.4s						
HRKL	Herakleio	1.69	230	P	Pn	20 57 03.2	+0.8
HRKL				S	Sn	20 57 24.8	-0.5
	comp=N,2µm,0.5s						
HRKL	Herakleio	1.69	230	PN	Pn	20 57 03.5	+1.1
HRKL				SN	Sn	20 57 25.8	+0.5
IACM	Heraklion	1.71	230	P	Pn	20 57 03.9	+1.2
IACM	Heraklion	1.71	230	P	Pn	20 57 03.7	+1.1
IACM				S	Sn	20 57 25.6	-0.1
KSTL	Kastelli Herak	1.72	230	P	Pn	20 57 02.8	+0.1
KSTL				AML	AML	20 57 25.5	
	comp=N,2524µm,0.4s						
KSTL				AML	AML	20 57 26.6	
	comp=E,1341µm,0.2s						
KSTL	Kastelli Herak	1.72	230	P	Pn	20 57 02.9	+0.3
KSTL				S	Sn	20 57 24.0	-1.8
	comp=E,330nm,0.3s						
AYDB	Zeytinkoy-Aydi	1.81	32	PN	Pn	20 57 04.8	+1.0
AYDB				SN	Sn	20 57 27.8	-0.1
ZEYE	Izmir, Urla-Ze	1.82	356	P	Pn	20 57 03.8	-0.1
IDI	Anoyia	1.84	233	P	Pn	20 57 04.6	+0.4
	comp=E,56nm,0.3s,baz=357,slow=6.3,SNR=822						
IDI				S	Sn	20 57 27.3	-1.3
	comp=E,179nm,0.3s,baz=352,slow=23,SNR=20						
IDI	Anoyia	1.84	233	P	Pn	20 57 04.8	+0.6
IDI				AML	AML	20 57 29.8	
	comp=N,1933µm,0.3s						
IDI				AML	AML	20 57 29.9	
	comp=E,1328µm,0.4s						
IDI	Anoyia	1.84	233	P	Pn	20 57 04.8	+0.6
IDI				S	Sn	20 57 27.3	-1.3
	comp=E,828nm,0.3s						
IDI	Anoyia	1.84	233	PN	Pn	20 57 05.1	+0.9
MHLO	Agia Marina, M	1.85	279	P	Pn	20 57 04.0	-0.3
MHLO	Agia Marina, M	1.85	279	P	Pn	20 57 05.3	+1.1
URLA	Izmir	1.94	358	PN	Pn	20 57 06.1	+0.8
URLA	Izmir	1.94	358	P	Pn	20 57 05.2	-0.1
FETY	Fethiye	1.95	83	PN	Pn	20 57 07.5	+2.0
FETY	Fethiye	1.95	83	P	Pn	20 57 07.8	+2.3
FETY				S	Sn	20 57 31.5	+0.7
BLCB	Balcova	1.98	8	P	Pn	20 57 06.2	+0.4
BLCB	Balcova	1.98	8	PN	Pn	20 57 06.5	+0.7
CHOS	Chios island	2.02	346	P	Pn	20 57 06.7	+0.3
CHOS	Chios island	2.02	346	P	Pn	20 57 06.7	+0.3
CHOS	Chios island	2.02	346	PN	Pn	20 57 06.8	+0.4
TMBK	Timbaki Herakl	2.06	230	P	Pn	20 57 08.2	+1.5
TMBK				AML	AML	20 57 37.7	
	comp=E,2374µm,0.5s						
TMBK				AML	AML	20 57 39.5	
	comp=N,2135µm,0.3s						
TMBK	Timbaki Herakl	2.06	230	P	Pn	20 57 08.3	+1.5
TMBK				S	Sn	20 57 33.1	0.0
	comp=N,420nm,0.5s						
SIVA	Sivas	2.07	228	P	Pn	20 57 08.6	+1.7
SIVA				AML	AML	20 57 37.9	
	comp=N,1705µm,0.4s						
SIVA				AML	AML	20 57 41.6	
	comp=E,2475µm,0.4s						
SIVA	Sivas	2.07	228	P	Pn	20 57 08.6	+1.7
SIVA				S	Sn	20 57 34.2	+0.9
	comp=E,1µm,0.4s						
TAVA	DENIZLI_Tavas	2.07	59	P	Pn	20 57 08.8	+1.7
TAVA				S	Sn	20 57 34.2	+0.5
CAME	Cameli-Denizli	2.17	75	PN	Pn	20 57 10.3	+1.9
CAEL	Denizli, Camel	2.23	71	P	Pn	20 57 11.1	+2.0
CAEL				S	Sn	20 57 36.7	-0.7
CHAN	Chania	2.32	248	P	Pn	20 57 10.5	+0.5
CHAN				AML	AML	20 57 40.3	
	comp=E,1713µm,0.3s						
CHAN				AML	AML	20 57 44.1	
	comp=N,1477µm,0.3s						
KSL	Kastellorizon	2.36	96	P	Pn	20 57 12.5	+1.9
KSL				S	Sn	20 57 39.5	-0.5
	comp=N,1µm,0.3s						
AKAS	Kas	2.37	94	PN	Pn	20 57 12.8	+1.9
AKAS	Kas	2.37	94	P	Pn	20 57 12.5	+1.7
AKAS				S	Sn	20 57 39.5	-0.9
IMMV	Iera Moni Meta	2.39	247	P	Pn	20 57 11.6	+0.7
IMMV				AML	AML	20 57 45.8	
	comp=E,1457µm,0.3s						
IMMV				AML	AML	20 57 46.5	
	comp=N,2214µm,0.3s						
IMMV	Iera Moni Meta	2.39	247	P	Pn	20 57 11.6	+0.7
IMMV				S	Sn	20 57 38.8	-1.8
	comp=N,920nm,0.3s						
KARY	Karystos	2.40	313	P	Pn	20 57 11.7	+0.6
KARY	Karystos	2.40	313	P	Pn	20 57 11.8	+0.7
GOLH	Golhisar	2.45	70	P	Pn	20 57 14.0	+2.2
GOLH				S	Sn	20 57 42.2	0.0
MANT	Manisa	2.55	35	P	Pn	20 57 13.6	+0.4
DEMR	Demre-Antalya	2.61	93	PN	Pn	20 57 16.3	+2.5
KULA	Kula-Manisa	2.62	36	PN	Pn	20 57 15.3	+1.4
ELL	Elmali	2.62	82	PN	Pn	20 57 16.4	+2.4
GVDS	Gavdos	2.63	234	P	Pn	20 57 15.9	+1.9
GVDS				S	Sn	20 57 47.2	+1.1
	comp=N,842nm,0.3s						
GVD	Gavdhos	2.63	234	P	Pn	20 57 16.0	+2.0
GVD				AML	AML	20 57 50.4	
	comp=E,3517µm,0.3s						
GVD				AML	AML	20 57 50.6	
	comp=N,2854µm,0.4s						
GVD	Gavdhos	2.63	234	P	Pn	20 57 15.7	+1.6
GVD				S	Sn	20 57 47.0	+0.8
	comp=N,2µm,0.3s						
VLY	Voula,Athens	2.71	303	P	Pn	20 57 15.9	+0.9
VLY	Voula,Athens	2.71	303	P	Pn	20 57 15.9	+0.9
DION	Dionisos Attik	2.74	308	P	Pn	20 57 16.4	+0.9
DION	Dionisos Attik	2.74	308	P	Pn	20 57 16.4	+0.9
PTL	Penteli	2.77	307	P	Pn	20 57 16.8	+1.0
ATHU	Athens Univers	2.78	305	P	Pn	20 57 16.9	+1.0
ANKY	Antikythira Is	2.79	260	P	Pn	20 57 16.3	+0.3
USAK	Uak-Merkez	2.95	38	P	Pn	20 57 19.5	+1.3
AKUM	Antalya-Kumluc	2.96	91	P	Pn	20 57 20.3	+2.0
KTHR	Kythira	2.97	268	P	Pn	20 57 19.3	+0.9
KTHR				S	Sn	20 57 50.0	-3.9
	comp=N,400nm,0.3s						
KRND	KRANIDI	2.98	290	P	Pn	20 57 19.6	+1.1
KRND	KRANIDI	2.98	290	P	Pn	20 57 19.6	+1.1
KRND				S	Sn	20 57 54.5	+0.3
	comp=N,468nm,0.6s						
BRDR	BURDUR-Merkez	2.99	64	P	Pn	20 57 20.4	+1.7
KORT	Korkueli	3.01	78	PN	Pn	20 57 21.6	+2.6
KORT	Korkueli	3.01	78	P	Pn	20 57 21.6	+2.6
VLI	Veliai	3.02	277	P	Pn	20 57 21.1	+2.0
VLI				S	Sn	20 57 52.0	-3.2
	comp=N,245nm,0.3s						
BASM	Basmaki-Afyon	3.08	60	PN	Pn	20 57 21.8	+1.9
ANTB	Antalya	3.23	80	PN	Pn	20 57 24.5	+2.7
BUCA	Burdur, Bucak-	3.24	73	P	Pn	20 57 24.2	+2.2
KZIL	AFYON_Kizioren	3.31	55	P	Pn	20 57 24.2	+1.2
BAYC	CANAKKALE_Bayr	3.31	358	P	Pn	20 57 23.2	+0.3
GDZ	Gediz	3.47	39	P	Pn	20 57 26.1	+1.1
DURS	Dursunbey	3.48	24	P	Pn	20 57 25.8	+0.7
BAGO	Egridir - ISPA	3.64	63	P	Pn	20 57 28.5	+1.2
GUR	Goura	3.78	295	P	Pn	20 57 30.7	+1.6
ITM	Ithomi	3.89	283	P	Pn	20 57 31.8	+1.3
ITM				S	Sn	20 58 13.9	-1.6
	comp=N,162nm,0.4s						
KEPZ	Antalya-Kepez	3.99	82	P	Pn	20 57 33.3	+1.4
PYL	PYLOS	4.00	278	P	Pn	20 57 31.9	0.0
YVAC	Isparta, Yalva	4.08	62	P	Pn	20 57 34.7	+1.6
LAKA	Lakka	4.16	297	P	Pn	20 57 35.6	+1.5
SEDI	Konya, Seydise	4.20	74	P	Pn	20 57 36.4	+1.7
DRO	Drossia	4.25	293	P	Pn	20 57 37.2	+1.9
RLS	Riolos of Patr	4.47	293	P	Pn	20 57 40.4	+2.3
KDHN	Kadinhani	4.81	63	P	Pn	20 57 44.4	+1.6
THL	Klokotos Trika	4.84	312	P	Pn	20 57 46.8	+3.7
ERMK	Ermenek	5.03	86	P	Pn	20 57 48.2	+2.4
SLUM	Salum	5.07	194	P	Pn	20 57 47.0	+0.7
	baz=198						
SLUM				SN	Sn	20 58 38.8	-5.0
	baz=198						
MATC	Matruh	5.08	175	PN	Pn	20 57 46.6	+0.2
	baz=176						
LEF	Lefka	5.22	103	P	Pn	20 57 47.8	-0.4
NYDR	Nydri-Lefkada	5.27	298	P	Pn	20 57 49.6	+0.7
BRTR	Keskin Array B	6.41	57	P	Pn	20 58 06.5	+2.2
	comp=N,8.4nm,0.8s,baz=236,slow=13,SNR=16						
BRTR				S	Sn	20 59 18.2	+2.0
	comp=N,1.8nm,0.6s,baz=236,slow=22,SNR=2.7						
SWA2		7.23	189	PN	Pn	20 58 15.8	+0.4
	baz=191						
SWA2				SN	Sn	20 59 30.7	-5.4
	baz=191						
HNAT	Natroun	7.54	153	PN	Pn	20 58 19.4	-0.1
	baz=153						
HNAT				SN	Sn	20 59 36.6	-6.9
	baz=153						
KOT	Kottamia	7.78	145	PN	Pn	20 58 23.2	+0.3
	baz=144						
HHAG	Hagoal	7.89	143	PN	Pn	20 58 25.9	+1.6
	baz=143						
RYAN	Fayoum	7.92	156	PN	Pn	20 58 24.8	+0.1
	baz=156						
HSAF	As Saff	7.92	148	PN	Pn	20 58 25.3	+0.5
	baz=147						
MMA0B	Mount Meron ar	7.95	113	Pn	Pn	20 58 26.6	+1.5
MMA0B				Sn	Sn	20 59 50.5	-3.0
MMAI	Mount Meron Ar	7.95	113	P	Pn	20 58 25.4	+0.3
	comp=N,1.5nm,0.3s,baz=227,slow=9.7,SNR=3.9						
MMAI				S	Sn	20 59 47.8	-5.7
	comp=N,5.1nm,0.3s,baz=122,slow=26,SNR=8.8						
GLL	Jalalah	8.03	147	PN	Pn	20 58 26.6	+0.4
	baz=146						
GEM	Giv'at Ha'Em	8.05	111	Pn	Pn	20 58 26.8	+0.3
GEM				Sn	Sn	20 59 52.9	-3.0
NATI	Neve Ativ	8.09	110	Pn	Pn	20 58 27.7	+0.8
NATI				Sn	Sn	20 59 53.2	-3.5
MMLI	Mount Malkishu	8.24	116	Pn	Pn	20 58 30.3	+1.2
SUZ	Suez	8.35	140	PN	Pn	20 58 31.2	+0.7
	baz=139						
AMAZ	Amatzia	8.40	123	Pn	Pn	20 58 31.9	+0.7
AMAZ				Sn	Sn	21 00 00.5	-3.9
HMDT	Nahal Hemdat	8.42	117	Pn	Pn	20 58 32.6	+1.2
HMDT				Sn	Sn	21 00 01.5	-3.2
KZIT	Kziot	8.46	128	Pn	Pn	20 58 32.0	0.0
KZIT				Sn	Sn	21 00 01.2	-4.7
YTIR	Yattir	8.64	123	Pn	Pn	20 58 35.2	+0.7
YTIR				Sn	Sn	21 00 06.4	-3.9
DSI	Dead Sea	8.70	121	Pn	Pn	20 58 36.3	+1.2
DSI				Sn	Sn	21 00 07.3	-4.2
NBNS	Bani Suef	8.70	152	PN	Pn	20 58 35.5	+0.3
	baz=152						
ZNM	Zenema	8.75	142	PN	Pn	20 58 36.7	+0.9
	baz=141						
GHAJ	Ghor Haditha	8.98	122	Pn	Pn	20 58 40.8	+1.8
GHAJ				Sn	Sn	21 00 14.7	-3.7
KRMI	Paran Flat	9.21	131	Pn	Pn	20 58 41.8	-0.3
KRMI				Sn	Sn	21 00 18.8	-5.3
PRNI	Paran	9.22	129	Pn	Pn	20 58 42.7	+0.4
PRNI				Sn	Sn	21 00 18.8	-5.5
ASF	Jabal al Asfar	9.46	114	P	Pn	20 58 47.8	+2.3
	comp=N,1.4nm,0.3s,baz=315,slow=8.6,SNR=0.9						
ASF				S	Sn	21 00 26.9	-3.1
	comp=N,2.4nm,0.4s,baz=108,slow=6.4,SNR=2.3						
HRFI	Mount Harif	9.46	130	Pn	Pn	20 58 45.4	-0.1
HRFI				Sn	Sn	21 00 25.4	-4.7
MBRI	Mt Berech	9.56	131	Pn	Pn	20 58 47.7	+0.9
MBRI				Sn	Sn	21 00 27.6	-4.9
EIL	Elat	9.67	132	P	Pn	20 58 48.9	+0.7
	comp=N,2.3nm,0.4s,baz=0.0,slow=20,SNR=17						
EIL				S	Sn	21 00 28.9	-6.2
	comp=N,21nm,0.5s,baz=7.2,slow=11,SNR=13						
EIL	Elat	9.67	132	Pn	Pn	20 58 49.2	+0.9
EIL				Sn	Sn	21 00 29.1	-6.0
VAE	Valguarnera	9.87	280	S	Sn	21 00 29.8	-10
	comp=N,7.9nm,0.4s,baz=207,slow=20,SNR=5.6						
NUB	Nuweibaa	9.97	135	PN	Pn	20 58 54.7	+2.4
	baz=135						
TR2	Tor 2	9.98	141	PN	Pn	20 58 54.3	+1.8
	baz=141						
HKAT	Jabal Katrina	10.01	140	PN	Pn	20 58 54.5	+1.5
	baz=139						
HDHB	Dhahab	10.19	137	PN	Pn	20 58 57.7	+2.5
	baz=136						
HHRG	Al Ghardaqah	10.88	146	PN	Pn	20 59 08.8	+4.2
	baz=145						
KEST	Kesra	14.04	272	P	Pn	20 59 45.7	0.0
	comp=N,3.2nm,1.0s,baz=18,slow=3.2,SNR=1.5						
KEST				S	Sn	21 02 11.8	-8.9

	comp=N,3.1nm,1.0s,baz=60,slow=20,SNR=1.7						
KBZ	Khabaz	14.39	55	P	Pn	20 59 52.5	+2.5
	comp=N,7.1nm,0.8s,baz=241,slow=6.4,SNR=15						
AKASG	Malin Array Be	14.39	7	P	Pn	20 59 49.2	-0.7
	comp=N,0.3nm,0.3s,baz=201,slow=11,SNR=3.8						
KBA	Koelnbreinsper	14.55	321	*e*Pn	P	20 59 56.2	+1.0
	comp=N,7.4nm,0.6s						
ABTA	Abfaltersbach	14.77	319	*e*Pn	P	20 59 58.7	+1.2
	comp=N,4.3nm,0.7s,SNR=5.2						
BIOA	Bad Ischl, Aus	14.83	323	*e*Pn	P	20 59 59.4	+1.2
	comp=N,2.5nm,0.6s						
VRAC	Vranov	14.83	333	P	P	20 59 58.2	0.0
	comp=N,1.8nm,0.4s,baz=113,slow=13,SNR=4.8						
WTTA	Wattenberg	15.56	319	*i* Pn	P	21 00 08.2	+1.8
	comp=N,1.2nm,0.3s,SNR=4.5						
GERES	GERESS Array B	15.63	327	P	Pn	21 00 05.7	+0.1
	comp=N,1.2nm,0.6s,baz=134,slow=15,SNR=11						
WATA	Walderalm	15.63	319	*i* Pn	P	21 00 08.5	+1.3
	comp=N,5.1nm,0.7s						
SQTA	Sankt Quirin	15.76	318	*e*Pn	P	21 00 10.2	+1.6
	comp=N,2.4nm,0.4s,SNR=4.5						
MOTA	Moosalm	15.89	318	*i* Pn	Pn	21 00 10.5	+1.6
	comp=N,0.9nm,0.4s						
FETA	Feichten	15.90	317	*e*P	P	21 00 11.7	+1.5
	comp=N,6.0nm,0.7s,SNR=11						
DAVOX	Davos/Dischmat	16.24	315	P	Pn	21 00 12.5	-0.8
	comp=N,1.4nm,0.6s,baz=137,slow=19						
DAVA	Damuels	16.53	316	*i* Pn	P	21 00 18.2	+1.1
	comp=N,1.7nm,0.3s						
ESDC	Sonseca Array	24.29	287	P	P	21 01 37.0	-0.9
	comp=N,0.6nm,0.5s,baz=84,slow=9.1,SNR=9.9						
	comp=N,0.6nm,0.5s						
FINES	FINESS Array B	25.05	359	P	P	21 01 44.9	+0.5
	comp=N,0.7nm,0.4s,baz=193,slow=5.4,SNR=14						
	comp=N,0.7nm,0.4s						
HFS	Hagfors	25.16	345	P	P	21 01 44.5	-1.0
	comp=N,0.2nm,0.3s,baz=147,slow=8.1,SNR=1.4						
	comp=N,0.2nm,0.3s						
NOA	NORSAR Array B	26.52	343	P	P	21 01 56.5	-1.4
	comp=N,0.3nm,0.5s,baz=149,slow=10.0,SNR=2.3						
	comp=N,0.3nm,0.5s						
EKA	Eskdalemuir Ar	27.76	322	P	P	21 02 09.2	+0.3
	comp=N,0.1nm,0.3s,baz=115,slow=9.5,SNR=1.1						
	comp=N,0.1nm,0.3s						
TORD	Torodi Ar. Bea	32.24	230	P	P	21 02 49.9	+1.0
	comp=N,1.7nm,0.3s,baz=34,slow=8.8,SNR=49						
	comp=N,1.7nm,0.3s						
MKAR	Makanchi Array	42.06	58	P	P	21 04 12.0	+0.6
	comp=N,0.5nm,0.6s,baz=271,slow=8.3,SNR=6.8						
	comp=N,0.5nm,0.6s						
ZALV	Zalesovo Beam	43.24	47	P	P	21 04 20.8	0.0
	comp=N,0.4nm,0.3s,baz=262,slow=9.2,SNR=2.4						
	comp=N,0.4nm,0.3s						
SCHQ	Schefferville	63.03	320	P	P	21 06 43.7	-2.0
	comp=N,1.7nm,0.9s,baz=40,slow=7.9,SNR=2.2						
	comp=N,1.7nm,0.9s						
CMAR	Chiang Mai Arr	65.22	85	P	P	21 07 00.6	+0.1
	comp=N,0.5nm,0.7s,baz=311,slow=7.0,SNR=5.0						
	comp=N,0.5nm,0.7s						

TRN 04 21:06:31.5, 14°.55N×60°.71W, h24km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPOM	Morne Pois Mar	0.18	235	*i* P	Pn	21 06 38.3	-0.4
MPOM				*i* S	Sb	21 06 42.9	+2.4
MVM	Montagne Vaucl	0.18	272	*e*P	Pn	21 06 38.7	-0.1
MVM				*e*S	Sb	21 06 43.3	+2.7
LPMF	Morne Lapointe	0.25	276	*e*P	Pn	21 06 39.5	-0.2
LPMF				*e*S	Sb	21 06 44.7	+2.6
ILAM	Ilet Lapin Mar	0.28	325	*e*P	Pn	21 06 39.4	-0.7
ILAM				*e*S	Sn	21 06 44.4	-1.1
ZAM	Aeronautique	0.31	275	*e*P	Pn	21 06 40.5	-0.1
ZAM				*e*S	Sn	21 06 46.2	-0.1
TRMF	Trois Ilets	0.33	268	*e*P	Pn	21 06 40.9	0.0
TRMF				*e*S	Sn	21 06 47.1	+0.3
BIM	Bigot	0.35	265	*e*P	Pn	21 06 41.0	-0.1
BIM				*e*S	Sn	21 06 48.0	+0.6
FDF	Fort de France	0.47	294	*e*P	Pn	21 06 42.6	-0.1
FDF				*e*S	Sn	21 06 50.6	+0.3
BAMF	Morne Balai	0.50	302	*e*P	Pn	21 06 43.4	+0.1
GBMF	Grand Be	0.51	300	*e*P	Pn	21 06 43.5	+0.1
PML	Morne Lenard	0.51	297	*e*P	Pn	21 06 43.6	+0.2
CXM	Morne La Croix	0.52	301	*e*P	Pn	21 06 43.0	-0.5
CXM				*e*S	Sn	21 06 51.6	0.0
SVN	Savane Anatole	0.53	304	*e*P	Pn	21 06 43.8	+0.1
SVN				*e*S	Sn	21 06 52.5	+0.6
PCM	Pelee Case Pet	0.55	299	*e*P	Pn	21 06 44.2	+0.3
SLBI	Saint Lucia, B	0.58	206	*i* P	Pn	21 06 44.1	-0.2
SLBI				*e*S	Sn	21 06 53.3	+0.3
SLCP	Castries, St.	0.60	207	*e*P	Pn	21 06 44.7	+0.1
SLCP				*e*S	Sn	21 06 53.8	+0.3
MCLT	Moule a Chique	0.86	195	*e*P	Pn	21 06 48.8	+0.7
MCLT				*e*S	Sn	21 07 02.2	+2.2
DLPL	La Plaine	0.94	326	*e*P	Pn	21 06 50.0	+0.8
DLPL				*e*S	Sn	21 07 03.6	+1.7
MDN	Morne-Daniel	1.01	319	*e*P	Pb	21 06 51.5	+1.1
MDN				*e*S	Sn	21 07 04.5	+0.9
DSLB	Salisbury	1.12	322	*e*P	Pb	21 06 53.3	+1.0
DSLB				*e*S	Sb	21 07 09.1	+2.6
MDVC	Dominica, Viel	1.26	328	*e*P	Pb	21 06 54.8	+0.2
MDVC				*e*S	Sb	21 07 11.8	+1.5
SSV	Crater Summit	1.30	201	*e*P	Pb	21 06 54.9	-0.4
SVV	Soufriere Volc	1.32	202	*e*P	Pb	21 06 57.9	+2.3
SVV	Soufriere Volc	1.32	202	*e*	Sn	21 07 09.7	-1.6
SVB	Belmont	1.37	203	*e*P	Pb	21 06 56.5	-0.1
SVB				*e*S	Sb	21 07 14.9	+1.2
SVOC	Richmond Hill,	1.47	200	*e*	Pb	21 06 57.6	-0.7
MAGL	Barre de l’ile	1.50	338	*e*P	Pn	21 06 57.5	+0.5
MAGL				*e*S	Sb	21 07 16.8	-0.6
TDBA	Terre de Bas,	1.57	325	*e*P	Pb	21 06 59.9	-0.1
TDBA				*e*S	Sb	21 07 20.5	+1.1
TBG	Guadaloupe-3	1.58	325	*e*P	Pb	21 06 59.5	-0.6
TBG				*e*S	Sb	21 07 19.7	0.0
CBE	Ff, Capester	1.74	330	*e*P	Pn	21 07 01.3	+0.9
CBE				*e*S	Sb	21 07 23.2	-1.2
BBGH	Gun Hill	1.79	141	*e*P	Pn	21 07 01.6	+0.7
ABD	La Joyeuse, An	2.06	339	*e*P	Pn	21 07 05.8	+1.2
ABD				*e*S	Sn	21 07 31.4	+1.9
GCMP	Grenada, Carri	2.16	199	*e*P	Pn	21 07 07.7	+1.6
GRSS	Sisters	2.40	202	*e*P	Pn	21 07 10.5	+1.2
GRGR	Grenville	2.57	201	*e*P	Pn	21 07 14.1	+2.4
ANBD	Bethesda, Anti	2.69	338	*e*P	Pn	21 07 14.4	+1.1
ANBD				*e*S	Sn	21 07 46.3	+1.3
BPA	Boggy Peak	2.72	336	*e*P	Pn	21 07 14.5	+0.8
BPA				*e*S	Sn	21 07 46.4	+0.5
TOSP	Speyside	3.23	177	*e*	Pn	21 07 23.9	+3.1
ANWB	Willy Bob	3.27	342	*e*P	Pn	21 07 23.4	+2.0
ANWB				*e*S	Sn	21 08 01.4	+1.9
TRN	Trinidad (W)	3.93	190	*e*S	Sn	21 08 16.3	+0.4
SMRT	St. Maarten	4.16	327	*e*P	Pn	21 07 34.8	+1.2

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*IDC **04** 21:09:55.1±1.9, 16°.72S×167°.62E, h0km, mb4.1/1, mbtmp4.4/2, ML4.7/1, Error ellipse: s-maj=64.8km s-min=39.9km az=119.0*

*NOU **04** 21:10:00.1, 16°.88S×167°.58E, h24km, MLv4.4/17, Vanuatu Islands*

*NEIC **04** 21:10:00.5±1.5, 16°.91S±0°.06×167°.7E±0°.2, h33km±7km, mb4.1/2, Error ellipse: s-maj=22.2km s-min=7.7km az=81.0*

ISC 04 21:09:58.9±0.8**, 16°.84S**±0°.06×**167°.6E**±0°.1**, h25km, n28, σ1ˢ06**/30**, mb4.2**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.05	147	P	Pb	21 10 18.9	+0.3
RTV	Rentapao	1.25	140	P	Pb	21 10 23.0	+1.2
SANVU	Saraoutou	1.43	345	Pn	Pb	21 10 24.6	-0.4
SANVU				Sn	Sb	21 10 43.5	+0.8
SANVU	Saraoutou	1.43	345	P	Pb	21 10 24.8	-0.2
LIFNC	LIFOU	3.93	185	Pn	Pn	21 10 56.0	-1.8
LIFNC	LIFOU	3.93	185	P	Pn	21 10 57.2	-0.5
MARNC	Mare, Loyalty	4.64	175		Pn	21 11 06.0	-1.4
MARNC	Mare, Loyalty	4.64	175	P	Pn	21 11 07.2	-0.2
KOUNC	Koumac, New Ca	4.83	220		Pn	21 11 10.6	+0.5
KOUNC	Koumac, New Ca	4.83	220	P	Pn	21 11 11.7	+1.6
YATNC	Mamie plateau,	5.23	187	P	Pn	21 11 14.8	-0.8
DZM	Mont Dzumac	5.31	191	Pn	Pn	21 11 17.3	+0.5
	23nm,0.3s,baz=91,slow=4.7,SNR=334						
DZM				Sn	Sn	21 12 14.1	-3.2
	2.6nm,0.3s,baz=306,slow=23,SNR=1.9						
	44nm,0.3s						
DZM	Mont Dzumac	5.31	191		Pn	21 11 17.5	+0.7
DZM	Mont Dzumac	5.31	191	P	Pn	21 11 17.6	+0.7
NOUC	Port Laguerre	5.37	193	P	Pn	21 11 18.6	+1.1
ONTNC	Ouen Toro	5.54	191		Pn	21 11 20.3	+0.4
ONTNC	Ouen Toro	5.54	191	P	Pn	21 11 20.9	+1.0
OUENC	Ouen Island, N	5.59	187		Pn	21 11 21.4	+0.8
OUENC	Ouen Island, N	5.59	187	P	Pn	21 11 22.1	+1.5
PINNC	Pines Island,	5.75	181		Pn	21 11 23.4	+0.7
PINNC	Pines Island,	5.75	181	P	Pn	21 11 23.9	+1.2
AS31	Alice Springs	32.26	252	P	P	21 16 26.0	+0.2
AS31				IAmb	IAmb	21 16 46.2	
	comp=Z,1.1nm,1.1s						
ASAR	Alice Springs	32.26	252	P	P	21 16 26.4	+0.5
	comp=Z,1.4nm,0.5s,baz=76,slow=8.7,SNR=28						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	32.26	252	P	P	21 16 26.2	+0.4
QSPA	South Pole Qui	73.20	180	P	P	21 21 27.9	+0.3
BELA	Belgrano 2	84.61	175	P	P	21 22 29.8	-0.1
BELA				IAmb	IAmb	21 22 31.6	
	comp=Z,5.2nm,1.5s						
ARCES	ARCESS Array B	122.36	345	PKP	PKPdf	21 28 50.9	-0.4
	comp=Z,8.1nm,1.1s,baz=31,slow=2.8,SNR=5.3						
FINES	FINESS Array B	127.78	338	PKP	PKiKP	21 29 02.2	-0.2
	comp=Z,1.5nm,1.1s,baz=29,slow=3.2,SNR=3.9						

IDC 04 21:25:10.8±10.0**, 6°.90S**×**129°.23E, h214km**±120km**, mb2.7**/1**, mbtmp3.5**/4**, Error ellipse: s-maj=71.6km s-min=48.0km az=35.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.66	197	P	Pn	21 27 53.0	+2.0
	6.9nm,1.2s,baz=23,slow=7.7,SNR=3.0						
FITZ				S	S	21 29 59.1	-1.0
	1.0nm,0.6s,baz=147,slow=21,SNR=1.2						
WRA	Warramunga Arr	13.88	160	P	Pn	21 28 17.8	-1.0
	0.2nm,0.3s,baz=338,slow=12,SNR=17						
WRA				S	S	21 30 41.0	-12
	0.4nm,0.8s,baz=334,slow=23,SNR=2.1						
ASAR	Alice Springs	17.26	165	P	P	21 28 57.9	+0.1
	0.4nm,0.5s,baz=341,slow=9.1,SNR=7.1						
MKAR	Makanchi Array	67.73	327	P	P	21 35 45.1	-0.2
	0.2nm,0.5s,baz=110,slow=5.3,SNR=2.9						
	0.2nm,0.5s						

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*KRNET **04** 21:28:35.4±0.1, 42°.13N×78°.83E, h14km, mb2.3*

*SOME **04** 21:28:35.3, 42°.07N×78°.75E, h5km*

*NNC **04** 21:28:37.7±1.8, 42°.23N×78°.80E, h0km, mb2.3, mpv2.5, Error ellipse: s-maj=13.2km s-min=5.4km az=160.0*

ISC 04 21:28:35.9±1.4**, 42°.13N**±0°.05×**78°.78E**±0°.03**, h9km**±12km**, n33, σ0ˢ92**/60**, 11C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.45	322	⇑*i*P	Pg	21 28 44.9	+0.1
	baz=19						
PRZ				⇑*i*S	Sg	21 28 51.6	+0.8
	baz=19						
TARG	Taragay, Kyrgy	0.83	242	⇑*i*P	Pg	21 28 52.0	0.0
	baz=43						
TARG				⇑*i*S	Sb	21 29 03.8	-0.5
	baz=43						
UZB	Uzynbulak	1.03	10	*e*P	Pg	21 28 54.6	-1.1
	1.3nm,0.1s						
UZB				*e*S	Sg	21 29 08.7	-0.5
	4.0nm,0.2s						
UZB	Uzynbulak	1.03	10	P	Pg	21 28 54.7	-1.1
	1.3nm,0.1s						
UZB				S	Sg	21 29 08.7	-0.5
	4.0nm,0.2s						
UZB	Uzynbulak	1.03	10	*e*P	Pg	21 28 54.7	-1.1
	baz=8.0						
UZB				*e*S	Sg	21 29 08.8	-0.5
	baz=8.0						
ANVS	Anan'yevo	1.05	309	⇓*i*P	Pb	21 28 56.2	-0.2
	baz=8.0						
ANVS				⇓*i*S	Sb	21 29 10.6	+0.2
	baz=8.0						
KDJ	Kajisay	1.19	271	⇑*i*P	Pg	21 28 58.4	-0.4
	baz=70						
KDJ				⇑*i*S	Sb	21 29 14.9	+0.5
	baz=70						
PDGK	Podgornoye	1.31	23	⇑P	Pg	21 29 00.1	-0.9
	0.3nm,0.3s						
PDGK				⇓S	Sg	21 29 16.5	-1.5
	2.9nm,0.6s						
KPKS	Kokpek	1.34	357	*e*P	Pn	21 29 00.4	-0.5
	1.0nm,0.2s						
KPKS				*e*S	Sb	21 29 18.6	0.0
	3.1nm,0.2s						
KPKS	Kokpek	1.34	357	*e*P	Pn	21 29 00.4	-0.5
	baz=55						
KPKS				*e*S	Sb	21 29 18.6	0.0
	baz=55						
TNSS	Tian-Shan	1.63	304	*e*P	Pb	21 29 06.5	0.0
	0.5nm,0.1s						
TNSS				*e*S	Sg	21 29 28.7	+0.4
	1.5nm,0.3s						
TNSS	Tian-Shan	1.63	304	P	Pb	21 29 06.3	-0.2
	0.5nm,0.1s						
TNSS				S	Sg	21 29 28.7	+0.4
	1.5nm,0.3s						
TNSS	Tian-Shan	1.63	304	*e*P	Pb	21 29 06.5	0.0
	baz=4.0						
TNSS				*e*S	Sg	21 29 28.8	+0.4
	baz=4.0						
MDOK	Medeo	1.64	310	*e*P	Pg	21 29 07.2	-0.2
	0.7nm,0.2s						
MDOK				*e*S	Sg	21 29 30.6	+1.8
	3.1nm,0.4s						
MDOK	Medeo	1.64	310	Pg	Pg	21 29 08.1	+0.6
	0.7nm,0.2s						
MDOK				Lg	Lg	21 29 31.8	
	3.1nm,0.4s						
KOTS	Kotyrbulak	1.65	312	*e*P	Pb	21 29 06.8	+0.1
	0.9nm,0.1s						
KOTS				*e*S	Sg	21 29 29.9	+0.8
	3.6nm,0.2s						
KOTS	Kotyrbulak	1.65	312	P	Pb	21 29 06.8	+0.1
	0.9nm,0.1s						
KOTS				S	Sg	21 29 29.9	+0.8
	3.6nm,0.2s						
KOTS	Kotyrbulak	1.65	312	*e*P	Pb	21 29 06.8	+0.1
	baz=12						
KOTS				*e*S	Sg	21 29 29.8	+0.8
	baz=12						
KTMS	Ketmen	1.75	41	*e*P	Pg	21 29 09.8	+0.2
	0.4nm,0.3s						
KTMS				*e*S	Sg	21 29 34.7	+2.5
	1.7nm,0.2s						
KTMS	Ketmen	1.75	41	P	Pg	21 29 09.8	+0.2
	0.4nm,0.3s						
KTMS				S	Sg	21 29 34.7	+2.5
	1.7nm,0.2s						
ULHL	Ulahol	1.89	274	⇑*i*P	Pb	21 29 10.7	-0.1
	baz=74						
ULHL				⇑*i*S	Sg	21 29 36.5	-0.2
	baz=74						
BOOM	Boomskoye usch	2.14	281	⇓*i*P	Pb	21 29 14.1	-0.8
	baz=80						
BOOM				⇓*i*S	Sb	21 29 42.4	+0.8
	baz=80						
CHKK	Chushkaly	2.17	323	*e*P	Pg	21 29 16.3	-1.2
	1.3nm,0.1s						
CHKK				*e*S	Sg	21 29 45.8	+0.2
	7.6nm,0.3s						
CHKK	Chushkaly	2.17	323	Pg	Pg	21 29 16.3	-1.2
	1.3nm,0.1s						
CHKK				Lg	Lg	21 29 45.8	
	7.6nm,0.3s						
KTBS	Karatobe	2.21	316	*e*P	Pb	21 29 16.9	+0.8
	0.9nm,0.2s						
KTBS				*e*S	Sg	21 29 46.9	0.0
	5.6nm,0.2s						
KTBS	Karatobe	2.21	316	Pg	Pb	21 29 16.9	+0.8
	0.9nm,0.2s						
KTBS				Lg	Lg	21 29 46.9	
	5.6nm,0.2s						
KST	Kastek	2.27	295	*e*P	Pb	21 29 17.9	+0.7
	1.0nm,0.2s						
KST				*e*S	Sg	21 29 48.7	-0.2
	4.7nm,0.4s						
KST	Kastek	2.27	295	Pg	Pb	21 29 17.9	+0.7
	1.0nm,0.2s						
KST				Lg	Lg	21 29 48.7	
	4.7nm,0.4s						
TKM2	Tokmak 2	2.48	290	⇑*i*P	Pb	21 29 19.1	-1.8
	baz=89						
TKM2				⇑*i*S	Sb	21 29 50.9	-0.7
	baz=89						
KUU	Kurty	2.51	315	*e*P	Pb	21 29 21.2	0.0
	0.5nm,0.3s						
KUU				*e*S	Sb	21 29 54.3	+2.0
	4.4nm,0.4s						
KUU	Kurty	2.51	315	Pg	Pb	21 29 21.2	0.0
	0.5nm,0.3s						
KUU				Lg	Lg	21 29 54.3	
	4.4nm,0.4s						
KRBS	Karabastau	2.77	306	*e*P	Pb	21 29 25.4	-0.2
	0.9nm,0.2s						
KRBS				*e*S	Sb	21 30 02.0	+2.3
	2.4nm,0.3s						
KRBS	Karabastau	2.77	306	Pg	Pb	21 29 25.4	-0.2
	0.9nm,0.2s						
KRBS				Lg	Lg	21 30 02.0	
	2.4nm,0.3s						

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*IDC **04** 21:41:14.2±1.5, 14°.64S×167°.46E, h0km, mb3.9/3, mbtmp3.9/4, ML3.9/1, MS3.9/1, Error ellipse: s-maj=68.1km s-min=31.2km az=120.0*

*NOU **04** 21:41:18.9, 14°.80S×166°.36E, h4km, mb4.2/9, Vanuatu Islands*

ISC 04 21:41:17.5±1.3**, 14°.57S**±0°.10×**166°.4E**±0°.2**, h28km, n10, σ0ˢ93**/9**, mb4.1**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.14	140	P	Pb	21 41 38.7	+0.1
KOUNC	Koumac, New Ca	6.30	199	P	Pn	21 42 49.2	+0.7
DZM	Mont Dzumac	7.46	180	Pn	Pn	21 43 04.1	-0.5
	1.7nm,0.3s,baz=129,slow=15,SNR=28						
DZM				Sn	Sn	21 44 27.3	-1.1
	baz=127,slow=23						
	6.0nm,0.5s						
DZM	Mont Dzumac	7.46	180	P	Pn	21 43 04.7	+0.1
YATNC	Mamie plateau,	7.46	177	P	Pn	21 43 06.0	+1.4
OUENC	Ouen Island, N	7.82	177	P	Pn	21 43 10.4	+1.0
ASAR	Alice Springs	31.98	249	P	P	21 47 50.2	+8.7
	0.3nm,0.7s,baz=69,slow=10,SNR=2.4						
	0.3nm,0.7s						
JHJ	Hachijo jima 2	53.82	332	LR	LR	22 11 52.9	
	comp=Z,122nm,21.2s,baz=96,slow=34						
ILAR	Eielson Array	86.62	18	P	P	21 53 58.0	+0.1
	1.1nm,0.7s,baz=233,slow=5.4,SNR=12						
	1.1nm,0.7s						
YKA	Yellowknife Ar	97.77	27	P	P	21 54 49.2	-0.5
	0.4nm,0.6s,baz=256,slow=4.9,SNR=6.2						
	0.4nm,0.6s						

IDC 04 21:43:27.4±2.2**, 1°.69N**×**126°.06E, h0km, mb3.1**/3**, mbtmp3.1**/3**, MS3.6**/1**, Error ellipse: s-maj=188.4km s-min=28.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.98	160	P	P	21 48 33.0	-0.9
	0.5nm,0.6s,baz=338,slow=11,SNR=6.6						
	0.5nm,0.6s						
ASAR	Alice Springs	26.33	164	P	P	21 49 06.3	+1.0
	0.3nm,0.9s,baz=347,slow=11,SNR=1.8						
	0.3nm,0.9s						
HNR	Honiara	35.52	109	LR	LR	22 04 54.3	
	comp=Z,103nm,21.0s,baz=219,slow=36						
MKAR	Makanchi Array	58.85	326	P	P	21 53 27.9	-0.2
	0.2nm,0.7s,baz=128,slow=8.3,SNR=1.5						
	0.2nm,0.7s						

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*IDC **04** 22:17:52.8±1.2, 10°.27S×124°.18E, h0km, mb4.1/3, mbtmp4.0/6, ML3.8/3, Error ellipse: s-maj=26.5km s-min=9.8km az=5.0*

*NEIC **04** 22:17:54.9±1.1, 10°.4S±0°.1×123°.99E±0°.09, h10km±1km, mb4.4/9, Error ellipse: s-maj=21.1km s-min=6.7km az=38.0*

ISC 04 22:17:56.2±0.7**, 10°.39S**±0°.07×**124°.05E**±0°.09**, h27km, n35, σ1ˢ97**/37**, mb4.3**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.42	296	Pg	Pb	22 18 02.3	-3.0
	3µm,0.3s,baz=158,slow=5.1,SNR=670						
BATI				Lg	Lg	22 18 10.1	
	2µm,0.3s,baz=150,slow=21,SNR=14						
BATI				LR	LR	22 18 14.1	
	comp=Z,320nm,21.7s,baz=36,slow=41						
MMRI	Maumere	2.50	314		Pn	22 18 36.2	+1.0
MMRI	Maumere	2.50	314	P	Pn	22 18 37.4	+2.2
PLAI	Plampang	6.38	284	P	Pn	22 19 29.8	+1.2
KAPI	Kappang	6.83	321		Pn	22 19 35.4	+0.6
KNRA	Kununurra	6.98	139		Pn	22 19 37.1	+0.3
KNRA	Kununurra	6.98	139	P	Pn	22 19 40.3	+3.6
FITZ	Fitzroy Crossi	7.81	169	Pn	Pn	22 19 50.2	+1.9
	0.8nm,0.3s,baz=351,slow=8.5,SNR=35						
FITZ				Sn	Sn	22 21 14.5	-1.3
	3.3nm,0.3s,baz=140,slow=14,SNR=11						
	2.3nm,0.3s						
MBWA	Marble Bar	11.48	201	Pn	Pn	22 20 37.6	-1.0
MBWA	Marble Bar	11.48	201	P	Pn	22 20 39.8	+1.3
PSA00	Pilbara Seismi	11.83	199	Pn	Pn	22 20 42.7	-0.6
PSA00	Pilbara Seismi	11.83	199	P	Pn	22 20 44.1	+0.8
TOLI2	Tolitoli	11.88	344	Pn	Pn	22 20 44.3	+0.3
WB0	Warramunga Arr	13.65	134	Pn	Pn	22 21 07.6	-0.7
WRA	Warramunga Arr	13.73	135	Pn	Pn	22 21 08.1	-1.3
	0.4nm,0.3s,baz=314,slow=14,SNR=54						
WRA				Sn	Sn	22 23 34.0	-7.0
	1.7nm,0.3s,baz=266,slow=18,SNR=12						
	0.8nm,0.3s						
WRA	Warramunga Arr	13.73	135		Pn	22 21 07.2	-2.1
GIRL	Giralia	15.38	216	Pn	Pn	22 21 31.1	-0.5
GIRL	Giralia	15.38	216	P	Pn	22 21 32.1	+0.5
AS31	Alice Springs	16.20	146		Pn	22 21 42.4	+0.1
ASAR	Alice Springs	16.20	146	Pn	Pn	22 21 42.0	-0.2
	0.8nm,0.3s,baz=318,slow=12,SNR=36						
ASAR				Sn	Sn	22 24 38.0	-3.3
	0.5nm,0.3s,baz=314,slow=21,SNR=14						
	2.0nm,0.5s						
ASAR	Alice Springs	16.20	146		Pn	22 21 42.2	0.0
MEEK	Meekatharra	16.96	197	P	P	22 21 53.8	+0.3
XMIS	Christmas Isla	18.10	268	Pn	Pn	22 22 03.3	-2.7
XMIS				IAmb	IAmb	22 22 11.3	
	comp=Z,30nm,1.0s						
FORT	Forrest	20.63	170	P	Pn	22 22 36.6	+0.6
MULG	Mulgathing	21.88	156	P	P	22 22 50.9	+3.8
CMAR	Chiang Mai Arr	37.89	319	P	P	22 25 10.9	-0.4
MK31	Makanchi Array	68.04	330	P	P	22 28 54.2	+0.9
MK31				IAmb	IAmb	22 28 55.0	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	68.04	330	P	P	22 28 54.3	+1.0
	comp=Z,1.9nm,0.6s,baz=138,slow=7.2,SNR=26						
	comp=Z,1.9nm,0.6s						
MAKZ	Makanchi	68.20	330	P	P	22 28 54.5	+0.2
ZAA0	Zalesovo Array	72.19	337	P	P	22 29 19.0	+0.4
ZAA0				IAmb	IAmb	22 29 20.5	
	comp=Z,2.8nm,0.9s						
ZALV	Zalesovo Beam	72.19	337	P	P	22 29 18.8	+0.3
	comp=Z,2.4nm,0.8s,baz=134,slow=5.6,SNR=8.5						
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	72.19	337	P	P	22 29 18.6	0.0
KURBB	Kurchatov Arra	72.49	332	P	P	22 29 20.7	+0.3
	comp=Z,0.7nm,0.8s,baz=149,slow=5.4,SNR=6.5						
	comp=Z,0.7nm,0.8s						
KURK	Kurchatov	72.51	332	P	P	22 29 21.6	+1.0
KURK				IAmb	IAmb	22 29 29.7	
	comp=Z,3.8nm,1.2s						
SOCY	Socotra	73.12	286	P	P	22 29 25.4	+0.4
SOCY				IAmb	IAmb	22 29 49.0	
	comp=Z,12nm,1.3s						

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*IDC **04** 22:28:52.6±0.8, 1°.11S×81°.02W, h0km, mb3.9/13, mbtmp4.0/15, ML4.0/2, MS3.4/20, Error ellipse: s-maj=33.7km s-min=16.5km az=58.0*

*IGQ **04** 22:28:52±0.7, 1°S±2°×8°1W±°, h5km*

*NEIC **04** 22:28:55.0±2.2, 1°.15S±0°.05×80°.88W±0°.06, h10km±1km, mb4.3/24, Error ellipse: s-maj=13.2km s-min=5.2km*

az=310.0

*VAO **04** 22:29:12.2±1.3, 1°.70S×79°.60W, h10^{km}, mb4.4*

ISC 04 22:28:53.9±0.5**, 1°.15S**±0°.04×**81°.01W**±0°.06**, h10^{km}, n157, σ1.^{s}87**/137**, mb4.2**/21**, MS3.5**/18**, 1C, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.30	71	P	Pb	22 29 01.0	-0.4
AMNT	Manta-Manabi	0.35	53	P	Pb	22 29 03.0	+0.9
PPLP	Puerto Lpez	0.46	149	P	Pg	22 29 00.0	-2.9
PPLP				S	Sg	22 29 07.0	-1.9
PPLP	Puerto Lpez	0.46	149	P	Pg	22 29 00.0	-2.9
PPLP				S	Sg	22 29 08.0	-0.9
CABP	Cabo Pasado	0.96	37	P	Pn	22 29 13.0	-0.4
JAMA	Jama	1.20	42	P	Pb	22 29 15.0	-1.7
FLF1	Flavio Alfaro-	1.41	56	P	Pb	22 29 20.0	-0.3
MAG1	Magdalena	1.64	49	P	Pn	22 29 23.0	+0.2
AMIL	Milagro (Trans	1.72	125	P	Pn	22 29 23.0	-0.9
ISPG	Isla Puna-Puer	1.99	155	P	Pn	22 29 27.0	-0.7
CHSH	Refugio Sur-Vo	2.17	99	P	Pn	22 29 30.0	-0.6
BV15	Puerto Quito-O	2.21	54	P	Pn	22 29 30.0	-0.7
TAMH	Tambohuasha Ch	2.26	100	P	Pn	22 29 32.0	+0.2
ILLI	Illinizas Sur	2.32	79	P	Pn	22 29 32.0	-0.7
IGUA	Igualata	2.40	98	P	Pn	22 29 34.0	+0.3
PAST	Pastocalle	2.41	79	P	Pn	22 29 35.0	+1.2
HPAL	Hacienda Las P	2.54	69	P	Pn	22 29 36.0	+0.6
BBIL	Ulba Tungurahu	2.54	97	P	Pn	22 29 37.0	+1.5
SLOR	San Lorenzo -	2.55	81	P	Pn	22 29 37.0	+1.3
CAMI	Rancho Maria	2.55	79	P	Pn	22 29 37.0	+1.2
BMAS	Trigal station	2.56	98	P	Pn	22 29 36.0	+0.3
JUI6	Juive	2.56	96	P	Pn	22 29 37.0	+1.3
ARNL	Arenillas	2.56	158	P	Pn	22 29 32.0	-3.5
GGPT	Toaza - Volcan	2.56	69	P	Pn	22 29 36.0	+0.1
ARRY	Arrayan	2.58	98	P	Pn	22 29 37.0	+0.9
JUA2	San Juan 2	2.58	69	P	Pn	22 29 37.0	+0.8
RETU	Refugio	2.58	97	P	Pn	22 29 38.0	+1.8
NAS2	Nasa	2.59	79	P	Pb	22 29 39.0	-1.8
TERV	Terraza Guagua	2.59	68	P	Pn	22 29 37.0	+0.6
PINO	Pino	2.60	68	P	Pn	22 29 37.0	+0.5
GGPC	Guagua Pichinc	2.60	68	P	Pn	22 29 37.0	+0.5
BPAT	Tungurahua Vol	2.60	98	P	Pn	22 29 38.0	+1.5
BREF	Cotopaxi Volca	2.61	79	P	Pn	22 29 38.0	+1.2
PAC1	Pacto, Paraso	2.63	58	P	Pn	22 29 36.0	-0.5
VCES	Cotopaxi	2.64	82	P	Pn	22 29 38.0	+1.0
BVC2	Cotopaxi Volca	2.65	79	P	Pn	22 29 38.0	+0.9
YANA	Yana	2.65	67	P	Pn	22 29 38.0	+0.9
BTAM	Cotopaxi Volca	2.66	80	P	Pn	22 29 39.0	+1.7
TAMB	Tambo	2.68	80	P	Pn	22 29 39.0	+1.4
PIAT	Ana Tenorio	2.75	87	P	Pn	22 29 40.0	+1.5
SANGA	Volcan Sangay	2.79	109	P	Pn	22 29 40.0	+1.0
ANTG	Antisana-Guama	2.83	77	P	Pn	22 29 41.0	+1.3
ANTM	Antisana-La Mi	2.85	78	P	Pn	22 29 42.0	+2.0
OTAV	Otavalo	2.91	62	Pn	Pn	22 29 40.4	-0.2
ANTS	Antisana-Sarah	2.91	77	P	Pn	22 29 43.0	+2.1
ANTI	Antisana	2.93	76	P	Pn	22 29 43.0	+1.9
PUYO	Puyo, Santa Ro	3.01	97	P	Pn	22 29 45.0	+3.3
CUIC	Cuicocha-Domo	3.02	61	P	Pn	22 29 42.0	-0.1
URCU	Urcuqui	3.18	60	P	Pn	22 29 45.0	+0.7
BOSC	San Juan Bosco	3.21	128	P	Pn	22 29 47.0	+2.5
CAYR	Refugio Cayamb	3.22	69	P	Pn	22 29 48.0	+2.9
CAYA	Cayambe	3.26	68	P	Pn	22 29 46.0	+0.5
YAHU	Yahuarcocha	3.31	63	P	Pn	22 29 48.0	+1.9
GONZ	Gonzanam	3.46	152	P	Pn	22 29 47.0	-1.3
CONE	Cono NE Rev Vo	3.54	72	P	Pb	22 29 55.0	-1.8
LNGL	El Angel-Carch	3.55	58	P	Pn	22 29 51.0	+1.5
CHMA	Chilma	3.56	56	P	Pn	22 29 49.0	-0.5
ECEN	Cerro Negro	3.62	57	P	Pn	22 29 52.0	+1.5
CHL1	Volc¡n Chiles	3.62	58	P	Pn	22 29 52.0	+1.4
CHL2	Volc¡n Chiles	3.65	58	P	Pn	22 29 52.0	+1.0
TULM	Tulcn-Chalpat	3.72	60	P	Pn	22 29 55.0	+3.1
TUMC	Tumaco	3.73	38	Pn	Pn	22 29 52.7	+1.1
BONI	La Bonita	3.83	65	P	Pn	22 29 56.0	+2.8
CASC	Dorado de Casc	3.89	71	P	Pn	22 29 56.0	+2.1
ZUMB	Zumba	4.13	153	P	Pn	22 29 57.0	-0.3
CCUFI	Cufio, Nario	4.36	57	*e*P	Pn	22 30 02.6	+2.0
GCUF	Volcan Galeras	4.36	57	*e*P	Pb	22 30 06.9	-4.0
GR1C	Gorgona, Isla	5.01	35	*e*P	Pb	22 30 16.6	-5.1
SOTA	Rioblanco	5.48	53	*e*P	Pn	22 30 17.6	+1.5
PCON	Cinco Dias	5.76	53	*e*P	Pn	22 30 21.0	+0.9
PCON				*e*S	Sb	22 31 41.6	-2.8
MALC	Bahia Malaga	6.31	36	*e*P	Pb	22 30 38.6	-5.3
MARP	Paez Belalcaza	6.43	52	*e*P	Pn	22 30 29.0	+0.1
GARC	Garzon, Huila	6.44	59⇑	*e*P	Pn	22 30 36.0	+7.0
ORTC	Ortega, Tolima	7.65	49	*e*P	Pn	22 30 48.5	+3.0
MACC	Macarena, Meta	7.88	65	*e*P	Pn	22 30 53.1	+4.6
ROSC	El Rosal	8.95	48	Pn	Pn	22 31 10.2	+6.6
	2.9nm,0.3s,baz=187,slow=11,SNR=3.8						
ROSC				Sn	Sn	22 32 43.4	-1.4
	1.8nm,0.3s,baz=80,slow=23,SNR=1.4						
ROSC				LR	LR	22 34 58.0	
	comp=Z,190nm,20.1s,baz=196,slow=41						
ROSC	El Rosal	8.95	48		Pn	22 31 02.2	-1.4
NORC	Norcasia	9.06	43	*e*P	Pn	22 31 15.4	+10
BCIP	Isla Barro Col	10.32	6	Pn	Pn	22 31 21.3	-0.8
CZSB	Cruzeiro do Su	10.55	129	*e*P	Pn	22 31 23.9	-1.3
ZARC	Zaragoza, Cauc	10.55	35		Pn	22 31 27.6	+2.2
RIMA	Rio Macho	11.21	345	Pn	Pn	22 31 34.6	+0.1
TBTG	Tabatinga, AM	11.49	105	*e*P	Pn	22 31 33.4	-4.8
NNA	Nana	11.53	159	Pn	Pn	22 31 38.4	-0.4
	2.6nm,0.3s,baz=301,slow=11,SNR=6.9						
NNA				Sn	Sn	22 33 43.7	-4.1
	2.1nm,0.3s,baz=220,slow=20,SNR=6.3						
NNA				LR	LR	22 36 20.7	
	comp=Z,149nm,19.6s,baz=318,slow=39						
	10nm,0.5s						
NNA	Nana	11.53	159		Pn	22 31 38.7	-0.1
SJCC	San Jacinto, C	12.42	28		Pn	22 31 51.6	+0.8
SDV	Santo Domingo	14.37	46	Pn	Pn	22 32 16.1	-1.6
SDV	Santo Domingo	14.37	46	*e*P	P	22 32 26.2	+1.4
MATN	Matagalpa	14.81	341	Pn	P	22 32 25.5	-4.1
TGUH	Tegucigalpa,Un	16.33	338		P	22 32 47.9	+1.4
TGUH				IAmb	IAmb	22 33 09.6	
	comp=Z,20nm,0.7s						
BIRV	Birongo	18.67	51	P	P	22 33 10.4	-1.9
BIRV				IAmb	IAmb	22 33 10.8	
	comp=Z,29nm,1.3s						
LPAZ	La Paz	19.68	141	P	P	22 33 25.0	+1.0
	comp=Z,0.1nm,0.3s,baz=332,slow=8.5,SNR=11						
	comp=Z,9.0nm,1.2s						
LPAZ	La Paz	19.68	141	P	P	22 33 24.7	+0.7
LPAZ	La Paz	19.68	141	*e*P	Pn	22 33 25.4	0.0
MACA	Manacapuru-AM	20.41	96	*e*P	Pn	22 33 33.1	-0.3
PB16	IPOC Station P	20.47	147	P	P	22 33 31.9	-0.7
BOAV	Boa Vista	20.79	80	*e*P	Pn	22 33 39.1	+1.2
PB11	IPOC Station P	21.58	150	P	P	22 33 44.5	+0.4
PB11				IAmb	IAmb	22 33 50.8	
	comp=Z,9.5nm,0.8s						
PB08	IPOC Station P	22.15	149	P	P	22 33 50.8	+0.4
PB08				IAmb	IAmb	22 34 07.7	
	comp=Z,7.5nm,1.0s						
CMIG	Matias Romero	22.71	324	LR	LR	22 40 55.1	
	comp=Z,104nm,21.1s,baz=196,slow=32						
PB01	IPOC Station P	22.75	151	P	P	22 33 56.0	-0.5
VILB	Vilhena	23.72	121	*e*P	P	22 34 08.6	+2.2
SJG	San Juan	24.09	37	P	P	22 34 10.1	+0.3
	comp=Z,14nm,0.9s,baz=220,slow=1.8,SNR=3.6						
	comp=Z,14nm,0.9s						
SJG	San Juan	24.09	37	P	P	22 34 09.6	-0.2
LVC	Limon Verde	24.36	152	P	P	22 34 15.7	+3.0
	comp=Z,1.4nm,0.5s,baz=332,slow=22,SNR=1.8						
LVC				LR	LR	22 45 06.1	
	comp=Z,75nm,18.5s,baz=326,slow=40						
LVC	Limon Verde	24.36	152	P	P	22 34 12.9	+0.2
LVC				IAmb	IAmb	22 34 40.7	
	comp=Z,4.4nm,0.9s						
LVC	Limon Verde	24.36	152	*e*P	P	22 34 17.2	+4.5
CBYP	Canovanas	24.39	37	P	P	22 34 12.5	-0.1
CUPR	Culebra, Puert	24.77	38	P	P	22 34 15.9	-0.1
STVI	Saint Thomas	25.00	38	P	P	22 34 18.0	-0.1
ITTB	Itaituba	25.45	98	*e*P	P	22 34 25.8	+3.5
PTLB	Pontes e Lacer	25.84	124	*e*P	P	22 34 28.8	+3.0
PDRB	Porto dos Gac	26.24	114	*e*P	P	22 34 33.7	+4.3
GO02	Mina Guanaco	26.30	156	P	P	22 34 30.8	+0.6
GO02				IAmb	IAmb	22 34 40.4	
	comp=Z,5.3nm,1.1s						
CLDB	Colider	26.84	112	*e*P	P	22 34 39.2	+4.3
MDP	Montagnes des	29.01	77	LR	LR	22 48 52.2	
	comp=Z,73nm,19.9s,baz=5.0,slow=41						
AQDB	Aquidauana	31.31	130	*e*P	P	22 35 20.6	+6.0
SNDB	Serra Nova Dou	31.38	111	*e*P	P	22 35 19.8	+4.6
MT02	Curacav	33.26	165	P	P	22 35 33.3	+1.8
MT02				IAmb	IAmb	22 35 59.7	
	comp=Z,9.6nm,1.4s						
CPUP	Villa Florida	33.85	140	LR	LR	22 51 42.6	
	comp=Z,92nm,19.7s,baz=358,slow=40						
SMTB	Santa Maria do	34.14	104	*e*P	P	22 35 44.0	+4.6
PEXB	Peixe	34.22	110	*e*P	P	22 35 44.8	+4.7
H06E1	SOCORRO T-PHAS	35.45	305	T	T	23 13 13.9	
	SNR=115						
IPMB	Ipameri, GO	36.30	119	*e*P	P	22 36 02.5	+4.5
TKL	Tuckaleechee C	36.71	356	LR	LR	22 50 48.6	
	comp=Z,67nm,19.2s,baz=176,slow=36						
TXAR	Lajitas Array	37.26	326	P	P	22 36 07.2	+1.1
	comp=Z,0.3nm,0.7s,baz=142,slow=7.7,SNR=2.1						
TXAR				LR	LR	22 50 26.4	
	comp=Z,40nm,19.5s,baz=152,slow=35						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	37.26	326	P	P	22 36 08.1	+2.0
RPN	Rapa Nui	37.49	224	LR	LR	22 47 25.7	
	comp=Z,58nm,18.2s,baz=310,slow=30						
WMOK	Wichita Mounta	39.40	337	P	P	22 36 22.5	-1.4
WMOK				IAmb	IAmb	22 36 23.8	
	comp=Z,5.8nm,0.9s						
PLCA	Paso Flores	40.53	168	P	P	22 36 33.8	+0.4
	comp=Z,2.5nm,0.8s,baz=330,slow=11,SNR=6.2						
	comp=Z,2.5nm,0.8s						
ANMO	Albuquerque	43.09	329	P	P	22 36 54.9	+0.3
	comp=Z,0.4nm,0.4s,baz=136,slow=4.9,SNR=2.4						
ANMO				LR	LR	22 55 33.9	
	comp=Z,36nm,18.2s,baz=150,slow=37						
	comp=Z,0.4nm,0.4s						
ANMO	Albuquerque	43.09	329	P	P	22 36 55.1	+0.6
AY01	Puyuhuapi	43.72	171	P	P	22 36 58.9	-0.3
AY01				IAmb	IAmb	22 37 01.8	
	comp=Z,6.1nm,0.9s						
SDCO	Great Sand Dun	44.84	332	P	P	22 37 10.1	+1.4
RCBR	Riachuelo	45.25	97	LR	LR	22 58 06.7	
	comp=Z,70nm,18.4s,baz=58,slow=39						
SADO	Sadowa	45.75	2	LR	LR	22 58 54.4	
	comp=Z,38nm,18.3s,baz=246,slow=39						
PFO	Pinyon Flats O	48.03	319	LR	LR	22 56 10.2	
	comp=Z,56nm,19.4s,baz=222,slow=34						
PDAR	Pinedale Array	50.71	333	P	P	22 37 53.3	-0.8
	comp=Z,0.3nm,0.7s,baz=99,slow=5.6,SNR=1.8						
PDAR				LR	LR	23 00 05.0	
	comp=Z,35nm,19.3s,baz=128,slow=37						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	52.24	323	P	P	22 38 03.9	-1.8
	comp=Z,0.2nm,0.5s,baz=100,slow=7.9,SNR=1.6						
NVAR				LR	LR	22 58 11.3	
	comp=Z,47nm,19.5s,baz=257,slow=34						
	comp=Z,0.2nm,0.5s						
YBH	Yreka Blue Hor	56.94	324	LR	LR	23 01 34.9	
	comp=Z,40nm,19.0s,baz=156,slow=34						
NEW	Newport	58.34	332	LR	LR	23 03 59.1	
	comp=Z,32nm,18.3s,baz=174,slow=36						
FCC	Fort Churchill	60.63	352	P	P	22 39 04.2	-0.6
FCC				IAmb	IAmb	22 39 08.5	
	comp=Z,4.4nm,0.8s						
YKA	Yellowknife Ar	68.35	344	P	P	22 39 54.2	-1.0
	comp=Z,1.5nm,0.8s,baz=136,slow=6.1,SNR=21						
	comp=Z,1.5nm,0.8s						
YKA	Yellowknife Ar	68.35	344	P	P	22 39 55.4	+0.2
DLBC	Dease Lake	70.86	335	P	P	22 40 11.6	+0.6
	comp=Z,3.2nm,0.8s,baz=354,slow=25,SNR=4.6						
	comp=Z,3.2nm,0.8s						
DBIC	Dimbokro	76.39	83	P	P	22 40 44.9	+0.6
	comp=Z,5.1nm,1.1s,baz=302,slow=7.6,SNR=2.8						
DBIC				LR	LR	23 11 37.6	
	comp=Z,24nm,19.3s,baz=186,slow=34						
	comp=Z,5.1nm,1.1s						
INK	Inuvik	78.01	342	P	P	22 40 53.0	+0.8
	comp=Z,2.0nm,0.9s,baz=97,slow=4.4,SNR=5.6						
	comp=Z,2.0nm,0.9s						
ESDC	Sonseca Array	80.78	50	P	P	22 41 07.6	-0.4
	comp=Z,0.9nm,1.0s,baz=286,slow=5.1,SNR=2.3						
	comp=Z,0.9nm,1.0s						
ILAR	Eielson Array	80.96	337	P	P	22 41 09.7	+1.3
	comp=Z,0.6nm,0.8s,baz=138,slow=2.9,SNR=5.4						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	83.16	77	P	P	22 41 21.4	+0.5
	comp=Z,1.3nm,1.0s,baz=286,slow=4.3,SNR=5.0						
	comp=Z,1.3nm,1.0s						
SPITS	Spitsbergen Ar	92.64	12	LR	LR	23 26 41.9	
	comp=Z,24nm,18.0s,baz=115,slow=38						
TSUM	Tsumeb	97.74	109	LR	LR	23 26 30.7	
	comp=Z,31nm,18.1s,baz=147,slow=35						
H11S2	WAKE ISLAND Hy	111.47	289	T	T	00 48 14.2	
	baz=85,slow=74,SNR=104						
H11S1	WAKE ISLAND Hy	111.48	289	T	T	00 48 14.4	
	baz=85,slow=74,SNR=96						
H11S3	WAKE ISLAND Hy	111.49	289	T	T	00 48 12.5	
	baz=85,slow=74,SNR=74						
ASAR	Alice Springs	138.05	232	PKP	PKPdf	22 48 20.4	+0.3
	comp=Z,0.8nm,1.1s,baz=114,slow=2.3,SNR=4.2						
WRA	Warramunga Arr	139.50	237	PKP	PKPdf	22 48 23.0	+0.3
	comp=Z,0.2nm,0.8s,baz=106,slow=2.0,SNR=1.7						

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*IDC **04** 22:31:08.3±1.2, 15°.97S×167°.22E, h0^{km}, mb4.0/6, mbtmp3.9/7, ML3.6/1, MS3.6/5, Error ellipse: s-maj=49.1km s-min=25.2km az=137.0*

*NOU **04** 22:31:11.6, 16°.03S×167°.09E, h8^{km}, MLv4.9/11, Vanuatu Islands*

*NEIC **04** 22:31:11.1±2.8, 16°.06S±0°.05×167°.4E±0°.1, h9^{km}±5^{km}, mb4.6/11, Error ellipse: s-maj=20.8km s-min=5.1km az=74.0*

ISC 04 22:31:12.8±0.6**, 16°.06S**±0°.06×**167°.1E**±0°.1**, h27^{km}, n40, σ1.^{s}60**/37**, mb4.5**/12**, MS3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.61	6		Pb	22 31 23.5	-1.6
SANVU				Sg	Sb	22 31 32.6	-0.8
SANVU	Saraoutou	0.61	6	P	Pb	22 31 23.8	-1.2
DVP	Devils Point	1.94	149	P	Pn	22 31 45.7	+1.7
LIFNC	LIFOU	4.69	179	Pn	Pn	22 32 21.2	-0.7
KOUNC	Koumac, New Ca	5.22	211		Pn	22 32 29.0	-0.1
KOUNC	Koumac, New Ca	5.22	211	P	Pn	22 32 29.8	+0.6
MARNC	Mare, Loyalty	5.46	171	Pn	Pn	22 32 32.8	+0.4
DZM	Mont Dzumac	6.01	186	Pn	Pn	22 32 39.9	-0.3
	1.6nm,0.3s,baz=312,slow=8.2,SNR=26						
DZM				Sn	Sn	22 33 42.7	-5.5
	baz=320,slow=17						
	5.6nm,0.3s						
DZM	Mont Dzumac	6.01	186		Pn	22 32 40.2	+0.1
DZM	Mont Dzumac	6.01	186	P	Pn	22 32 40.5	+0.3
NOUC	Port Laguerre	6.06	187	P	Pn	22 32 42.4	+1.7
ONTNC	Ouen Toro	6.25	186	Pn	Pn	22 32 44.2	+1.0
OUENC	Ouen Island, N	6.33	182	Pn	Pn	22 32 46.0	+1.6
PINNC	Pines Island,	6.53	177	Pn	Pn	22 32 48.5	+1.4
MSVF	Nonsavu	10.58	101	Pn	Pn	22 33 49.1	+6.3
	0.7nm,0.3s,baz=262,slow=9.0,SNR=5.6						
MSVF				LR	LR	22 36 50.0	
	comp=Z,176nm,18.2s,baz=225,slow=32						
CTA	Charters Tower	20.25	255	LR	LR	22 41 33.9	
	comp=Z,112nm,21.1s,baz=100,slow=31						
URZ	Urewera	23.80	160	P	P	22 36 23.6	+0.2
URZ				IAmb	IAmb	22 36 40.1	
	comp=Z,15nm,1.0s						
WB0	Warramunga Arr	31.34	258	P	P	22 37 34.4	+3.0
WB0				IAmb	IAmb	22 38 00.1	
	comp=Z,10nm,1.5s						
WB2	Warramunga Arr	31.39	258	P	P	22 37 35.5	+3.8
WB2				IAmb	IAmb	22 37 48.1	
	comp=Z,9.8nm,1.4s						
WRA	Warramunga Arr	31.40	258	P	P	22 37 31.2	-0.6
	comp=Z,0.7nm,0.9s,baz=87,slow=8.8,SNR=2.8						
	comp=Z,0.7nm,0.9s						
AS31	Alice Springs	32.09	251	P	P	22 37 39.5	+1.5
ASAR	Alice Springs	32.10	251	P	P	22 37 38.9	+0.8
	comp=Z,2.4nm,0.8s,baz=79,slow=9.1,SNR=18						
ASAR				LR	LR	22 51 05.4	
	comp=Z,95nm,18.6s,baz=124,slow=37						
	comp=Z,2.4nm,0.8s						
ASAR	Alice Springs	32.10	251	P	P	22 37 38.6	+0.6
FITZ	Fitzroy Crossi	39.66	261	LR	LR	22 53 29.4	
	comp=Z,94nm,18.6s,baz=105,slow=34						
QSPA	South Pole Qui	73.97	180	P	P	22 42 47.9	+2.1
QSPA				IAmb	IAmb	22 42 50.6	
	comp=Z,7.6nm,1.3s						
L19K	White Mountain	83.54	17	P	P	22 43 39.0	+0.9
L19K				IAmb	IAmb	22 43 39.8	
	comp=Z,6.7nm,1.3s						
BILL	Bilibino	83.87	360	P	P	22 43 40.1	+0.6
BILL				IAmb	IAmb	22 43 41.3	
	comp=Z,4.4nm,1.1s						
CAST	Castle Rocks	85.30	17	P	P	22 43 47.1	+0.2
CAST				IAmb	IAmb	22 43 52.2	
	comp=Z,3.3nm,0.9s						
J20K	Nowinta River	85.33	16	P	P	22 43 48.2	+1.1
KTH	Kantishna Hill	85.73	17	P	P	22 43 48.6	-0.5
IMAR	Indian Mountai	86.88	15	P	P	22 43 54.6	0.0
IL31		87.83	18	P	P	22 43 58.7	-0.5
ILAR	Eielson Array	87.83	18	P	P	22 43 58.1	-1.1
	comp=Z,1.0nm,0.6s,baz=236,slow=4.9,SNR=13						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	87.83	18	P	P	22 43 58.4	-0.9
PFO	Pinyon Flats O	87.88	54	LR	LR	23 22 44.4	
	comp=Z,39nm,18.3s,baz=195,slow=35						
NVAR	Mina Array Bea	88.23	49	P	P	22 44 02.1	0.0
	comp=Z,0.3nm,0.4s,baz=230,slow=5.6,SNR=2.8						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	98.07	316	P	Pdif	22 44 47.8	+0.8
	comp=Z,0.1nm,0.7s,baz=80,slow=5.1,SNR=1.3						
	comp=Z,0.1nm,0.7s						
YKA	Yellowknife Ar	98.78	27	P	P	22 44 48.7	-1.0
	comp=Z,0.4nm,0.8s,baz=257,slow=4.4,SNR=7.3						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	98.78	27	P	P	22 44 49.3	-0.5
ARCES	ARCESS Array B	121.50	345	PKP	PKPdf	22 50 02.2	-1.0
	comp=Z,1.7nm,0.8s,baz=79,slow=1.9,SNR=3.7						

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*NOU **04** 22:38:59.7, 37°.74S×178°.25E, h111^{km}, mb4.5/6, Off E. Coast of N. Island, N.Z.*

*WEL **04** 22:39:11.3±0.8, 38°S±4°×17°7E±°, h46^{km}±7^{km}, M3.4/17, ML3.7/17, MLv3.4/17, Error ellipse: s-maj=0.0km s-min=0.0km az=159.5*

ISC 04 22:39:10.7±1.5**, 38°.11S**±0°.03×**177°.28E**±0°.03**, h68^{km}**±8^{km}**, n117, σ1.^{s}01**/126**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.20	222	P	Pn	22 39 21.0	-0.1
URZ				S	Sn	22 39 28.2	-0.5
URZ	Urewera	0.20	222	P	Pn	22 39 21.1	-0.1
MWZ	Matawai	0.29	139	P	Pn	22 39 22.0	+0.2
MWZ				S	Sn	22 39 30.2	+0.4
RUGZ	Raukumara Rang	0.35	65	P	Pn	22 39 21.9	-0.4
RUGZ				S	Sn	22 39 29.4	-1.2
WHRZ	Whale Island	0.35	317	P	Pn	22 39 22.2	0.0
WHRZ				S	Sn	22 39 30.8	+0.3
RAGZ	Rawiri	0.40	164	P	Pn	22 39 23.2	+0.6
RAGZ				S	Sn	22 39 32.6	+1.3
EDRZ	Edgecumbe	0.43	271	P	Pn	22 39 22.9	0.0
EDRZ				S	Sn	22 39 31.2	-0.5
MARZ	Manawahe	0.49	285	P	Pn	22 39 23.2	-0.1
HAZ	Te Kaha	0.53	48	P	Pn	22 39 23.6	-0.1
HAZ				S	Sn	22 39 32.6	-0.7
MUGZ	Murupara	0.54	228	P	Pn	22 39 23.9	+0.1
MUGZ				S	Sn	22 39 33.6	+0.1
TKGZ	Te Karaka	0.55	126	P	Pn	22 39 24.9	+1.0
RTZ	Ruatahuna	0.56	205	P	Pn	22 39 24.2	+0.2
RTZ				S	Sn	22 39 34.3	+0.4
TWGZ	Tauwhareparae	0.56	97	P	Pn	22 39 25.3	+1.3
WIZ	White Island	0.59	353	P	Pn	22 39 24.1	-0.2
WSRZ	White Island S	0.60	352	P	Pn	22 39 24.5	+0.1
TARZ	Mount Tarawera	0.62	258	P	Pn	22 39 25.2	+0.5
OPRZ	Ohinepanea	0.63	295	P	Pn	22 39 24.5	-0.2
MKRZ	Makatiti	0.64	267	P	Pn	22 39 25.6	+0.7
RRRZ	Republican Roa	0.64	249	P	Pn	22 39 25.2	+0.3
PKGZ	Pakihiroa	0.67	71	P	Pn	22 39 26.0	+0.8
SNGZ	Shannon Statio	0.67	176	P	Pn	22 39 26.1	+0.9
RIGZ	Rimuhau	0.70	148	P	Pn	22 39 26.9	+1.2
LIRZ	Lichensteins R	0.71	278	P	Pn	22 39 26.0	+0.3
OMRZ	Omania	0.72	270	P	Pn	22 39 26.1	+0.3
HLRZ	Highlands Stat	0.74	259	P	Pn	22 39 26.7	+0.6
PUZ	Puketiti	0.77	87	P	Pn	22 39 27.0	+0.7
PRRZ	Plateau Road	0.80	241	P	Pn	22 39 26.9	+0.2
MTHZ	Maungataniwha	0.81	205	P	Pn	22 39 27.4	+0.4
RAHZ	Arahi	0.82	191	P	Pn	22 39 28.1	+1.1
CNGZ	Carnagh Statio	0.82	117	P	Pn	22 39 28.0	+1.1
KARZ	Kaharoa	0.82	276	P	Pn	22 39 27.1	+0.1
HRRZ	Handcock Road	0.83	250	P	Pn	22 39 27.5	+0.4
HSRZ	Hossack Road	0.84	256	P	Pn	22 39 28.0	+0.8
NGRZ	Ngongotaha	0.86	270	P	Pn	22 39 28.2	+0.7
ALRZ	Allen Road	0.86	238	P	Pn	22 39 27.8	+0.4
TGRZ	Tauranga	0.89	295	P	Pn	22 39 26.6	-1.2
PRGZ	Paritu Road	0.94	150	P	Pn	22 39 28.9	+0.5
WMGZ	Waiomatatini S	0.94	72	P	Pn	22 39 29.3	+0.8
GRRZ	Galatos Road	0.95	255	P	Pn	22 39 29.3	+0.8
KNZ	Kokohu	0.96	161	P	Pn	22 39 28.9	+0.3
WPRZ	Whakapapatarin	0.97	245	P	Pn	22 39 29.5	+0.7
MXZ	Matakaoa Point	0.98	56	P	Pn	22 39 30.4	+1.5
MRHZ	Matea Rd	0.99	223	P	Pn	22 39 29.4	+0.4
NMHZ	Naumai	1.05	200	P	Pn	22 39 31.3	+1.4
KMRZ	Kaimai	1.09	284	P	Pn	22 39 30.3	0.0
MHGZ	Mahia Peninsul	1.15	155	P	Pn	22 39 31.7	+0.6
ARHZ	Aropaoanui	1.17	191	P	Pn	22 39 32.1	+0.8
MYRZ	Mayor Island	1.17	315	P	Pn	22 39 31.2	-0.1
KUTZ	Kaahu Road	1.21	251	P	Pn	22 39 32.6	+0.8
HATZ	Hinemaiaia	1.21	230	P	Pn	22 39 32.4	+0.5
BKZ	Black Stump Fm	1.22	210	P	Pn	22 39 32.7	+0.7
BKZ	Black Stump Fm	1.22	210	P	Pn	22 39 32.8	+0.8
WATZ	Wairara	1.35	243	P	Pn	22 39 34.6	+0.9
TLZ	Tolley Road	1.39	260	P	Pn	22 39 34.6	+0.4
RATZ	Rangitukua	1.40	237	P	Pn	22 39 35.4	+1.0
MCHZ	McNeill Hill	1.41	199	P	Pn	22 39 35.1	+0.7
RITZ	Rihia Road	1.41	232	P	Pn	22 39 35.5	+1.0
TOZ	Tahuroa Road	1.46	285	P	Pn	22 39 35.3	+0.3
KWHZ	Kaweka Forest	1.47	207	P	Pn	22 39 35.8	+0.4
KATZ	Kakaramea	1.51	235	P	Pn	22 39 37.1	+1.2
CKHZ	Cape Kidnapper	1.55	186	P	Pn	22 39 36.0	-0.3
TMVZ	Te Maari	1.59	230	P	Pn	22 39 37.8	+0.9
NTVZ	North Tongarir	1.60	231	P	Pn	22 39 37.9	+0.9
ETVZ	East Tongariro	1.60	230	P	Pn	22 39 37.9	+0.8
OTVZ	Oturere	1.64	230	P	Pn	22 39 38.6	+0.9
NNVZ	North Ngauruho	1.65	231	P	Pn	22 39 38.9	+1.0
WTVZ	West Tongariro	1.66	232	P	Pn	22 39 39.0	+1.1
BHHZ	Black Hill Sta	1.67	214	P	Pn	22 39 38.4	+0.4
SNVZ	South Ngauruho	1.67	230	P	Pn	22 39 39.0	+0.9
KRHZ	Kereru	1.69	205	P	Pn	22 39 37.9	-0.3
NGZ	Ngauruhoe	1.69	231	P	Pn	22 39 39.4	+1.0
KAHZ	Kahuranaki	1.71	190	P	Pn	22 39 38.3	-0.2
TUVZ	Tukino	1.72	227	P	Pn	22 39 39.5	+0.8
MOVZ	Moawhango	1.76	222	P	Pn	22 39 39.5	+0.3
WHVZ	Whangaehu Hut	1.77	228	P	Pn	22 39 40.1	+0.7
FWVZ	Far West T-bar	1.77	229	P	Pn	22 39 40.3	+0.8
WNVZ	Wahianoa	1.79	227	P	Pn	22 39 40.3	+0.6
KUZ	Kuaotunu	1.84	317	P	Pn	22 39 40.1	-0.1
PXZ	Pawanui	1.94	189	P	Pn	22 39 40.5	-1.0
HIZ	Hauiti	1.95	257	P	Pn	22 39 43.0	+1.4
HIZ	Hauiti	1.95	257	P	Pn	22 39 43.2	+1.6
MKAZ	Moumakai	1.96	300	P	Pn	22 39 42.2	+0.4
PNHZ	Pukenui	1.98	205	P	Pn	22 39 41.3	-0.9
WPHZ	Waipukurau	2.06	198	P	Pn	22 39 42.3	-0.8
WIAZ	Waiheke Island	2.16	307	P	Pn	22 39 45.0	+0.6
ETAZ	East Tamaki Re	2.20	301	P	Pn	22 39 45.9	+0.9
TSZ	Takapari Road	2.20	207	P	Pn	22 39 43.9	-1.2
PRHZ	Porangahau	2.21	193	P	Pn	22 39 43.8	-1.4
VRZ	Vera Road	2.22	242	P	Pn	22 39 46.8	+1.5
MBAZ	Motutapu North	2.32	305	P	Pn	22 39 47.2	+0.5
AWAZ	Awhitu Peninsu	2.34	296	P	Pn	22 39 48.0	+1.1
DVHZ	Dannevirke	2.35	201	P	Pn	22 39 45.3	-1.8
GRZ	Great Barrier	2.36	321	P	Pn	22 39 47.5	+0.3
EPAZ	Eden Park BICE	2.37	301	P	Pn	22 39 48.3	+1.1
HBAZ	Herne Bay Bore	2.39	301	P	Pn	22 39 48.9	+1.3
ANWZ	Angora Road	2.43	195	P	Pn	22 39 46.4	-1.7
WAZ	Wanganui	2.43	227	P	Pn	22 39 49.2	+1.1
ABAZ	Army Bay	2.47	307	P	Pn	22 39 49.6	+1.0
RVAZ	Riverhead Bore	2.53	301	P	Pn	22 39 50.5	+1.0
POWZ	Post Office Ro	2.56	207	P	Pn	22 39 49.2	-0.7
LREZ	Lake Rotokare	2.62	238	P	Pn	22 39 52.8	+2.1
PRWZ	Pori Road	2.64	202	P	Pn	22 39 50.4	-0.6
BFZ	Birch Farm	2.69	197	P	Pn	22 39 50.3	-1.3
BFZ	Birch Farm	2.69	197	P	Pn	22 39 49.7	-2.0
NEZ	North Egmont	2.75	244	P	Pn	22 39 55.4	+2.9
KHEZ	Kahui Hut	2.81	244	P	Pn	22 39 56.6	+3.2
MRZ	Mangatainoka R	2.87	207	P	Pn	22 39 51.9	-2.2
TIWZ	Tintock	2.87	202	P	Pn	22 39 52.3	-1.9
CPWZ	Castlepoint	2.92	196	P	Pn	22 39 53.5	-1.3
WCZ	Waipu Caves	3.20	312	P	Pn	22 39 59.9	+1.4
KIW	Kapiti Island	3.30	213	P	Pn	22 39 57.9	-2.1
DUWZ	D'Urville Isla	3.74	223	P	Pn	22 40 03.9	-2.1
SNZO	South Karori	3.76	211	P	Pn	22 40 06.0	-0.2
OUZ	Omahuta	4.13	313	P	Pn	22 40 09.7	-1.7
QRZ	Quartz Range	4.57	232	P	Pn	22 40 16.1	-1.1

QRZ	Quartz Range	4.57	232	P	Pn	22 40 17.2	-0.1
CTZ	Chatham Island	7.27	142	P	Pn	22 40 54.7	+0.5

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*NEIC **04** 22:39:33.7±1.5, 15.°86S±0.°08×71.°61W±0.°04, h141^{km}±10^{km}, mb4.1/19, Error ellipse: s-maj=11.6km s-min=2.9km az=200.0*

*IDC **04** 22:39:34.1±1.6, 16.°06S×71.°62W, h155^{km}±14^{km}, mb3.8/5, mbtmp4.2/9, Error ellipse: s-maj=21.0km s-min=15.7km az=38.0*

*VAO **04** 22:39:34.0±0.7, 15.°80S×71.°58W, h147^{km}±5^{km}, mb4.3*

*GUC **04** 22:39:37.0±0.7, 16.°09S×71.°38W, h190^{km}±6^{km}, ML4.3*

ISC 04 22:39:32.9±0.6**, 15.°91S**±0.°05×**71.°64W**±0.°07**, h133**^{km}**, n102, σ1**^{s}**.64**/119**, mb4.2**/8**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.74	153		Pn	22 40 19.0	+2.7
AP01				Sn	Sn	22 40 51.9	+2.2
AP01	Chacalluta	2.74	153	eP	Pn	22 40 19.3	+3.1
AP01				i S	Sn	22 40 51.9	+2.2
AP01				IAML		22 40 53.6	
	comp=N,2μm,0.2s						
PB12	IPOC Station P	2.96	155		Pn	22 40 21.6	+2.4
PB12				Sn	Sn	22 40 55.6	+0.6
PB12	IPOC Station P	2.96	155	eP	Pn	22 40 21.6	+2.4
PB12				i S	Sn	22 40 56.3	+1.3
PB12				IAML		22 40 57.7	
	comp=N,846nm,0.2s						
PB16	IPOC Station P	3.15	140		Pn	22 40 25.3	+3.2
PB16				Sn	Sn	22 41 01.4	+1.2
PB16	IPOC Station P	3.15	140	eP	Pn	22 40 25.4	+3.3
PB16				i S	Sn	22 41 01.7	+1.6
PB16				IAML		22 41 09.9	
	comp=N,197nm,0.3s						
LPAZ	La Paz	3.39	97	P	Pn	22 40 27.6	+2.3
	comp=N,69nm,0.5s,baz=320,slow=7.0,SNR=348						
LPAZ				S	Sn	22 41 07.9	+2.2
	comp=N,24nm,0.6s,baz=181,slow=23,SNR=4.4						
LPAZ	La Paz	3.39	97		Pn	22 40 27.8	+2.5
LPAZ	La Paz	3.39	97	eP	Pn	22 40 27.8	+2.5
PB11	IPOC Station P	4.27	154		Pn	22 40 37.5	+1.1
PB11	IPOC Station P	4.27	154	eP	Pn	22 40 37.5	+1.1
PB11				i S	Sn	22 41 24.6	-1.1
TA02	Huaiquique	4.56	162		Pn	22 40 41.5	+1.3
PB08	IPOC Station P	4.82	151		Pn	22 40 45.8	+1.8
PB08	IPOC Station P	4.82	151	eP	Pn	22 40 45.5	+1.5
PB08				i S	Sn	22 41 38.3	-1.0
TA01	Diego Aracena	4.83	164	Pn	Pn	22 40 45.1	+1.3
TA01	Diego Aracena	4.83	164	eP	Pn	22 40 45.0	+1.3
TA01				i S	Sn	22 41 37.0	-2.0
PATCX	Punta Patache	5.08	164		Pn	22 40 48.5	+1.3
PATCX	Punta Patache	5.08	164	eP	Pn	22 40 48.7	+1.6
PATCX				i S	Sn	22 41 42.6	-2.5
PB01	IPOC Station P	5.50	159		Pn	22 40 53.8	+1.0
PB01	IPOC Station P	5.50	159	eP	Pn	22 40 53.2	+0.5
PB01				i S	Sn	22 41 51.8	-3.2
PB02	IPOC Station P	5.63	163		Pn	22 40 55.8	+1.3
PB02	IPOC Station P	5.63	163	eP	Pn	22 40 55.8	+1.3
PB02				i S	Sn	22 41 55.3	-2.8
PB07	IPOC Station P	6.02	164		Pn	22 41 01.1	+1.3
PB07	IPOC Station P	6.02	164	eP	Pn	22 41 00.8	+1.0
PB07				i S	Sn	22 42 04.7	-2.9
PB09	IPOC Station P	6.28	159		Pn	22 41 05.2	+1.9
NNA	Nana	6.38	307	P	Pn	22 41 05.9	+1.2
	comp=N,27nm,0.3s,baz=139,slow=11,SNR=15						
NNA				S	Sn	22 42 14.7	-1.6
	comp=N,44nm,0.4s,baz=29,slow=16,SNR=9.4						
PB04	IPOC Station P	6.54	168		Pn	22 41 07.7	+0.9
PB06	IPOC Station P	7.03	164		Pn	22 41 14.3	+0.8
LVC	Limon Verde	7.14	159	P	Pn	22 41 16.0	+0.9
	comp=N,18nm,0.2s,baz=357,slow=9.5,SNR=98						
LVC				S	Sn	22 42 32.5	-2.6
	comp=N,31nm,0.4s,baz=220,slow=21,SNR=18						
LVC	Limon Verde	7.14	159	Pn	Pn	22 41 16.5	+1.4
LVC	Limon Verde	7.14	159	eP	Pn	22 41 16.4	+1.4
PB15	IPOC Station P	7.54	165		Pn	22 41 21.8	+1.4
PB10	IPOC Station P	7.63	172	Pn	Pn	22 41 22.5	+1.2
ETMB	Extrema	8.04	42	eP	Pn	22 41 26.2	-0.7
CZSB	Cruzeiro do Su	8.20	353	eP	Pn	22 41 27.9	-1.2
PB14	IPOC Station P	8.75	173		Pn	22 41 36.9	+0.3
GO02	Mina Guanaco	9.40	169		Pn	22 41 45.8	+0.4
AC01	Pan de Azucar	10.23	175	Pn	Pn	22 41 57.4	+1.1
AC02	Maricunga	11.12	168		Pn	22 42 09.5	+1.0
AC06	Mina Casimiro	11.45	174	Pn	Pn	22 42 14.0	+1.5
PTLB	Pontes e Lacer	12.05	89	eP	Pn	22 42 19.6	-0.8
LCO	Las Campanas	13.06	176		Pn	22 42 36.3	+2.6
CO01	Juntas del Tor	14.07	174		Pn	22 42 48.1	+1.5
GO04	Tololo Observa	14.21	177		Pn	22 42 49.4	+1.0
PDRB	Porto dos Gac	15.10	75	eP	Pn	22 42 59.2	-0.2
CO02	Combarbal	15.23	178		Pn	22 43 01.7	+0.7
CO02				IAmb	IAmb	22 43 08.1	
	comp=Z,17nm,1.0s						
SALV	Santo Antonio	15.34	92	eP	Pn	22 43 02.4	0.0
AQDB	Aquidauana	15.81	109		Pn	22 43 07.9	-0.3
AQDB				IAmb	IAmb	22 43 09.1	
	comp=Z,11nm,1.2s						
AQDB	Aquidauana	15.81	109	eP	Pn	22 43 07.5	-0.7
PP1B	Ponte de Pedra	16.14	98	eP	Pn	22 43 11.3	-0.9
CLDB	Colider	16.20	74	eP	Pn	22 43 11.9	-1.2
MACA	Manacapuru-AM	16.64	42	eP	P	22 43 17.5	-1.0
CPUP	Villa Florida	16.89	130	P	P	22 43 20.3	-0.8
	comp=Z,1.4nm,0.7s,baz=320,slow=9.9,SNR=3.3						
CPUP	Villa Florida	16.89	130	eP	P	22 43 21.6	+0.4
MT02	Curacav	17.28	179	P	Pn	22 43 28.0	+2.0
MT02				IAmb	IAmb	22 43 31.9	
	comp=Z,5.6nm,0.9s						
MT09	Talagante	17.80	178	P	Pn	22 43 33.6	+1.3
MT09				IAmb	IAmb	22 43 38.9	
	comp=Z,4.9nm,0.8s						
LMEL	Las Melosas	17.91	176	P	Pn	22 43 36.1	+2.4
LMEL				IAmb	IAmb	22 43 39.9	
	comp=Z,8.3nm,0.7s						
TRCB	Terra Rica	19.18	114	eP	P	22 43 47.0	+0.7
ITTB	Itaituba	19.39	55	eP	P	22 43 47.4	-1.2
ITQB	Itaqui	19.44	137	eP	Pn	22 43 51.7	+0.1
ML02	Panimavida	19.77	179	P	P	22 43 54.3	+1.7
PCMB	Pacaembu	20.10	109	eP	P	22 43 56.6	+0.3
SNDB	Serra Nova Dou	20.13	81	eP	P	22 43 55.6	-1.0
PTGB	Pitanga	20.32	119	eP	P	22 43 58.6	-0.1
ITRB	Iturama	20.61	104	eP	P	22 44 01.4	-0.3
BOAV	Boa Vista	21.25	32	eP	P	22 44 08.0	-0.7
ITAB	Concordia	21.32	125	P	P	22 44 08.3	-1.0
ITAB				IAmb	IAmb	22 44 22.2	
	comp=Z,19nm,1.4s						
ITAB	Concordia	21.32	125	eP	P	22 44 09.3	0.0
FRTB	Fartura	22.05	113	eP	P	22 44 15.9	-1.1
MALB	Monte Alegre	22.10	52	eP	P	22 44 16.2	-1.4
BB19B	Bebedouro	22.50	107	eP	P	22 44 21.0	-0.6
IPMB	Ipameri, GO	22.50	99	eP	P	22 44 19.4	-2.3
BDFB	Brasilia	22.74	93	P	P	22 44 22.4	-1.5
	comp=Z,3.9nm,0.4s,baz=262,slow=12,SNR=11						
	comp=Z,3.9nm,0.4s						
BDFB	Brasilia	22.74	93	P	P	22 44 21.6	-2.3
BDFB				IAmb	IAmb	22 44 23.5	
	comp=Z,5.6nm,0.9s						
PLTB	Pedras Altas	22.77	137	eP	P	22 44 25.1	+1.0
LC01	Cunco	22.90	180	P	P	22 44 26.4	+1.3
PEXB	Peixe	22.95	83	eP	P	22 44 24.6	-1.4
ZARC	Zaragoza, Cauc	23.47	352	P	P	22 44 29.8	-0.8
PRPB	Parauapebas	23.48	68	eP	P	22 44 30.2	-0.6
VAO	Valinhos	24.29	111	eP	P	22 44 37.7	-0.4
SMTB	Santa Maria do	24.50	76	eP	P	22 44 40.5	+0.5
SDV	Santo Domingo	24.66	2	P	P	22 44 42.8	+1.2
	comp=Z,5.8nm,0.3s,baz=204,slow=7.7,SNR=3.4						
	comp=Z,5.8nm,0.3s						
MCPB	Macapa, AP	24.74	53	eP	P	22 44 41.7	-0.5
BAUV	El Baul	24.95	8	P	P	22 44 43.0	-1.1
SJCC	San Jacinto, C	25.88	352	P	P	22 44 52.2	-0.3
SJCC				IAmb	IAmb	22 44 55.8	
	comp=Z,13nm,1.4s						
SDBA	SAO DESIDERIO	26.15	86	eP	P	22 44 53.6	-1.4
JANB	Januaria	26.34	92	eP	P	22 44 55.4	-1.4
RIB01	Linhares ES	29.95	101	eP	P	22 45 29.7	+0.9
ROSB	Rosrio	30.01	67	eP	P	22 45 28.5	-0.8
NAN01	Guarapari, ES	30.20	98	eP	P	22 45 31.2	+0.3
GUA01	Guaratinga, BA	30.55	96	eP	P	22 45 33.8	-0.3
CMC01	Camacan, BA	30.92	93	eP	P	22 45 36.5	-0.8
GDU01	Guandu, BA	31.06	90	eP	P	22 45 37.1	-1.5
NBPB	Pedra_Branca-C	33.09	75	eP	P	22 45 56.6	+0.3
NBLA	Lagarto - SE	33.26	86	eP	P	22 45 55.7	-2.0
NBAN	Anadia - AL	35.01	84	eP	P	22 46 11.3	-1.5
DBIC	Dimbokro	69.80	77	P	P	22 50 28.1	-1.3
KOWA	Kowa	73.32	69	P	P	22 50 49.1	-1.4
KOWA				IAmb	IAmb	22 51 14.5	
	comp=Z,4.0nm,1.2s						
TORD	Torodi Ar. Bea	78.04	73	P	P	22 51 15.7	-1.7
	comp=Z,3.3nm,0.6s,baz=256,slow=4.5,SNR=55						
	comp=Z,3.3nm,0.6s						
ESDC	Sonseca Array	83.75	46	P	P	22 51 47.0	-0.3
	comp=Z,0.7nm,0.7s,baz=243,slow=4.8,SNR=6.3						
	comp=Z,0.7nm,0.7s						
ESDC	Sonseca Array	83.75	46	P	P	22 51 46.9	-0.3
YKA	Yellowknife Ar	85.09	341	P	P	22 51 53.5	+0.2
	comp=Z,0.2nm,0.5s,baz=134,slow=5.1,SNR=4.5						
YKA				pP	pP	22 52 35.7	+6.9
	comp=Z,0.5nm,0.9s,baz=132,slow=5.0,SNR=6.3						
	comp=Z,0.2nm,0.5s						

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*IDC **04** 22:51:12.3±2.8, 31.°82S×177.°87W, h0^{km}, mb3.8/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=69.0km s-min=35.8km az=118.0*

*NEIC **04** 22:51:19.5±2.5, 31.°81S±0.°07×178.°0W±0.°2, h35^{km}±2^{km}, mb4.6/7, Error ellipse: s-maj=25.4km s-min=12.1km az=96.0*

ISC 04 22:51:17.7±1.2**, 31.°78S**±0.°09×**178.°1W**±0.°2**, h24**^{km}**, n19, σ1**^{s}**.05**/17**, mb4.5**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.52	4	Pn	Pn	22 51 57.0	-0.2
URZ	Urewera	7.56	210	Pn	Pn	22 53 04.0	-2.4
	0.3nm,0.3s,baz=312,slow=21,SNR=2.1						
URZ				Sn	Sn	22 54 32.2	+0.9
	1.8nm,0.3s,baz=193,slow=20,SNR=5.1						
	2.2nm,0.3s						
URZ	Urewera	7.56	210		Pn	22 53 04.4	-2.0
BKZ	Black Stump Fm	8.59	209	Pn	Pn	22 53 20.1	-0.4
MARNC	Mare, Loyalty	16.08	306	Pn	Pn	22 55 01.9	-0.3
CTAO	Charters Tower	33.96	281		P	22 58 00.2	+0.8
CTAO				IAmb	IAmb	22 58 25.4	
	comp=Z,11nm,1.2s						
AS31	Alice Springs	42.97	268	P	P	22 59 15.0	-0.1
AS31				IAmb	IAmb	22 59 28.7	
	comp=Z,2.1nm,0.8s						
ASAR	Alice Springs	42.97	268	P	P	22 59 14.7	-0.4
	comp=Z,0.5nm,0.4s,baz=107,slow=7.7,SNR=4.6						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	42.97	268	P	P	22 59 16.5	+1.4
WR0	Warramunga Arr	43.90	274	P	P	22 59 22.7	0.0
WR0				IAmb	IAmb	22 59 35.9	
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	44.08	274	P	P	22 59 24.2	+0.1
	comp=Z,0.7nm,0.4s,baz=113,slow=8.1,SNR=24						
	comp=Z,0.7nm,0.4s						
WRA	Warramunga Arr	44.08	274	P	P	22 59 23.8	-0.3
KNRA	Kununurra	50.74	275	P	P	23 00 15.8	-0.1
KNRA				IAmb	IAmb	23 00 17.6	
	comp=Z,24nm,1.5s						
CASY	Casey	53.88	208	P	P	23 00 39.6	+1.0
QSPA	South Pole Qui	58.33	180	P	P	23 01 11.2	+0.6
QSPA				IAmb	IAmb	23 01 22.2	
	comp=Z,4.4nm,0.8s						
H03S2	Juan Fernandez	79.78	123	T	T	00 32 28.1	
	baz=237						
H03S1	Juan Fernandez	79.79	123	T	T	00 32 24.2	
	baz=237						
H03S3	Juan Fernandez	79.80	123	T	T	00 32 23.0	
	baz=237						
FINES	FINESS Array B	146.41	339	PKPbc	PKPdf	23 10 53.9	-0.6
	comp=Z,1.3nm,0.5s,baz=54,slow=3.7,SNR=28						

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*UPA **04** 23:02:17.1±0.8, 9.°40N×84.°17W, h16^{km}±6^{km}, MW4.0*

*INET **04** 23:02:18.4±0.4, 9.°40N×84.°10W, h24^{km}±4^{km}, MW3.4*

*UCR **04** 23:02:18.5±1.6, 9.°43N×84.°08W, h46^{km}±3^{km}, MW3.9*

ISC 04 23:02:18.0±1.1**, 9.°39N**±0.°03×**84.°12W**±0.°03**, h28**^{km}±11^{km}**, n37, σ0**^{s}**.65**/53**, 2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.28	119	eP	Pn	23 02 26.9	+0.6
EDDO				eS	Sn	23 02 34.1	+2.5
LCR2	La Lucha 2	0.37	18	eP	Pb	23 02 27.2	+0.8
LCR2				eS	Sn	23 02 34.0	0.0
CDM	Cerro de Muert	0.39	65	eP	Pn	23 02 28.0	-0.1
CDM				eS	Sn	23 02 35.5	+0.8
CDM	Cerro de Muert	0.39	65	eP	Pn	23 02 28.0	-0.1
PEZE	Perez Zeledon,	0.43	91	eP	Pn	23 02 28.5	0.0
PEZE	Perez Zeledon,	0.43	91	eP	Pn	23 02 28.5	0.0
RIMA	Rio Macho	0.45	34	eP	Pb	23 02 28.0	+0.3
RIMA	Rio Macho	0.45	34	eP	Pb	23 02 28.0	+0.3
JACO	JACO, Garabito	0.60	297	eP	Pb	23 02 30.4	+0.5
HDC	Heredia	0.61	0	eP	Pb	23 02 29.9	-0.3
HDC	Heredia	0.61	0	⇑ iP	Pb	23 02 30.4	+0.2
HDC				eS	Sb	23 02 38.2	-0.3
HDC3	Heredia 3	0.61	1	eP	Pb	23 02 30.3	+0.1
EDPN	Palmar Norte	0.78	123	eP	Pb	23 02 33.0	+0.1
EDPN				eS	Sn	23 02 45.0	+1.2
SRA1	San Ramn	0.78	333	eP	Pb	23 02 32.5	-0.5
EDBA	Buenos Aires	0.86	105	eP	Pb	23 02 32.9	-1.5
EDBA				eS	Sb	23 02 45.1	-0.5
DRK0	Durika	0.87	98	eP	Pb	23 02 34.1	-0.6
DRK0				eS	Sb	23 02 46.2	+0.3
LAFE	Finca La Fe, P	0.89	298	eP	Pb	23 02 34.2	-0.5
RIOS	Rincon, Osa	0.91	139	eP	Pb	23 02 34.3	-0.8
BATAN	Batan	1.01	46	⇑ eP	Pn	23 02 36.0	-0.4
BATAN				eS	Sb	23 02 49.5	-0.4
ARE1	Arenal 1	1.22	331	eP	Pn	23 02 39.6	+0.4
CEDE	Laguna Cedeo	1.23	332	i P	Pn	23 02 40.0	+0.6
PIRO	Carate, Puerto	1.25	142	eP	Pn	23 02 39.1	-0.4
PIRO				eS	Sn	23 02 55.9	+0.5
PIRO	Carate, Puerto	1.25	142	eP	Pn	23 02 39.2	-0.4
CDITO	Canoas	1.47	123	eP	Pn	23 02 43.0	+0.4
CDITO				eS	Sn	23 03 02.0	+1.0
RGM0	Gandoca	1.50	82	eS	Sn	23 03 02.4	+0.6
DUNO	Dulce Nombre,	1.52	297	eP	Pn	23 02 43.3	0.0
BRU2	Volcan	1.53	113	eP	Pn	23 02 43.7	+0.1
BRU2				eS	Sb	23 03 04.2	-0.6
ACAL	Aguas Claras	1.53	324	i P	Pn	23 02 43.9	+0.4
PTEN	Parque Tenorio	1.57	327	i P	Pn	23 02 44.7	+0.6
BC3P	Paso Ancho	1.59	111	eP	Pn	23 02 44.7	+0.1
BC3P				eS	Sb	23 03 06.5	-0.2
CNI2	El Empalme, Bo	1.62	89	eS	Sn	23 03 04.3	-0.4
CUI	Cuipilapa	1.63	321	i P	Pn	23 02 44.9	0.0
CUI				i S	Sn	23 03 05.3	+0.4
ORTG	Ortega, Santa	1.64	306	eP	Pn	23 02 44.8	-0.3
HORNC	Hornillas	1.68	322	i P	Pn	23 02 45.4	-0.2
HORNC				i S	Sn	23 03 05.9	-0.3
PTPM	Petroterminale	1.70	134	eP	Pn	23 02 46.0	+0.3
PTPM				eS	Sn	23 03 07.4	+0.8
BCO2	Palmira	1.71	113	eP	Pn	23 02 46.3	+0.3
BCO2				eS	Sb	23 03 09.1	-0.8
ESPN	Las Esperanzas	2.79	356	eP	Pn	23 02 59.9	-0.9

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*GII **04** 23:13:46.6±0.0, 27.°55N×34.°29E, h1^{km}, MD3.3/4, Mm3.5/2*

*HLW **04** 23:13:53.1, 28.°01N×34.°08E, h3^{km}±1^{km}, Md2.9, Ml3.8*

ISC 04 23:13:49.5±1.5**, 27.°85N**±0.°03×**34.°17E**±0.°04**, h3**^{km}±14^{km}**, n37, σ1**^{s}**.48**/45**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TR1	Tor 1	0.25	309	PG	Pg	23 13 55.7	+1.5
	baz=271						
TR2	Tor 2	0.66	324	PG	Pg	23 14 02.7	+0.5
	baz=321						
TR2				SG	Sg	23 14 09.7	-1.1
	baz=321						
HKAT	Jabal Katrina	0.69	347	PG	Pg	23 14 03.2	+0.5
	baz=352						
HHRG	Al Ghardaqah	0.82	220	PN	Pn	23 14 11.2	+3.2
	baz=204						
HDHB	Dhahab	0.95	24	PG	Pn	23 14 09.5	-0.3
	baz=33						
HRDS	Abu Rudays	1.15	318	PN	Pb	23 14 11.7	-0.4
	baz=316						
HRDS				SN	Sb	23 14 24.9	-2.5
	baz=316						
NUB	Nuweibaa	1.25	20	PN	Pb	23 14 13.7	+0.1
	baz=26						
GRB	Gharib	1.29	289	PN	Pb	23 14 13.9	-0.6
	baz=284						
HBST	Basata	1.45	20	PN	Pg	23 14 17.6	+0.4
	baz=25						
EIL	Elat	1.94	21	Pn	Pb	23 14 24.3	-1.2
EIL				Sn	Sg	23 14 51.9	+0.1
ZAF	Zafarana	2.02	315	PN	Pb	23 14 25.1	-1.7
	baz=314						
MBRI	Mt Berech	2.04	18	Pn	Pn	23 14 25.8	+0.9
MBRI				Sn	Sb	23 14 54.2	+1.0
SUZ	Suez	2.30	330	PN	Pn	23 14 29.1	+0.7
	baz=330						
HRFI	Mount Harif	2.31	19	Pn	Pn	23 14 29.3	+0.8
HRFI				Sn	Sb	23 15 01.8	+1.1
KRMI	Paran Flat	2.31	12	Pn	Pn	23 14 29.4	+0.9
KRMI				Sn	Sb	23 15 02.3	+1.5
ASUT		2.36	260	PN	Pb	23 14 30.3	-2.3
	baz=256						
NADB	Abo Dabab	2.52	173	PN	Pb	23 14 34.0	-1.4
	baz=171						
PRNI	Paran	2.60	16	Pn	Pn	23 14 33.5	+1.0
PRNI				Sn	Sb	23 15 09.1	0.0
NBNS	Bani Suef	2.65	288	PN	Pn	23 14 34.0	+0.8
	baz=285						
GLL	Jalalah	2.76	309	PN	Pn	23 14 35.5	+0.7
	baz=308						
HHAG	Hagoal	2.77	320	PN	Pn	23 14 35.7	+0.8
	baz=319						
ZFRI	Zfri	2.83	18	Pn	Pn	23 14 36.6	+0.9
TAMRE	El Minia	2.89	267	PN	Pn	23 14 37.2	+0.8
	baz=265						
HSAF	As Saff	2.89	308	PN	Pn	23 14 37.1	+0.6
	baz=307						
KOT	Kottamia	2.91	316	PN	Pn	23 14 37.1	+0.3
	baz=315						
KZIT	Kziot	3.05	4	Pn	Pn	23 14 39.6	+0.9
HAGS	Hagol	3.54	168	PN	Pb	23 14 49.3	-3.5
	baz=167						
HNAT	Natroun	3.59	300	PN	Pn	23 14 47.0	+0.9
	baz=299						
YTIR	Yattir	3.59	13	Pn	Pn	23 14 47.5	+1.3
YTIR				Sn	Sb	23 15 35.2	-2.7
MDBI	Mazsada	3.60	16	Pn	Pn	23 14 46.8	+0.6
RYAN	Fayoum	3.64	291	PN	Pn	23 14 47.6	+0.9
	baz=289						
GHAJ	Ghor Haditha	3.65	19	Pn	Pn	23 14 47.9	+1.0
DSI	Dead Sea	3.85	16	Pn	Pn	23 14 51.5	+1.8
GTR	Jabal at Tayr	3.98	235	PN	Pn	23 14 53.8	+2.3
	baz=233						
AKRG	Al Kharijah	4.03	235	PN	Pn	23 14 54.6	+2.5
	baz=233						
SLTI	Sal'it	4.44	10	Pn	Pn	23 14 59.4	+1.6
MMA0B	Mount Meron ar	5.26	11	Pn	Pn	23 15 10.9	+1.8

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*IDC **04** 23:22:22.0±2.9, 23.°07S×179.°88W, h562^{km}±30^{km}, mb3.3/4, mbtmp4.3/6, Error ellipse: s-maj=50.4km s-min=26.5km az=169.0*

*NEIC **04** 23:22:22.8±1.5, 23.°2S±0.°1×179.°7W±0.°1, h580^{km}±11^{km}, mb4.3/23, Error ellipse: s-maj=22.5km s-min=15.7km az=224.0*

ISC 04 23:22:20.6±0.9**, 23.°1S**±0.°1×**179.°7W**±0.°1**, h550**^{km}**, n31, σ1**^{s}**.15**/32**, mb4.2**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.84	272	P	P	23 25 09.8	+1.8
	3.0nm,0.6s,baz=85,slow=18,SNR=6.1						
DZM	Mont Dzumac	12.84	272	P	P	23 25 11.4	+3.4
URZ	Urewera	15.33	190	P	P	23 25 33.1	-0.1
	2.9nm,0.3s,baz=134,slow=21,SNR=3.0						
URZ	Urewera	15.33	190	P	P	23 25 32.0	-1.2
URZ				IAmb	IAmb	23 25 33.6	
	comp=Z,27nm,1.4s						
BFZ	Birch Farm	17.83	190	P	P	23 25 55.0	-1.7
ARMA	Armidale	26.55	248	P	P	23 27 15.6	+0.4
ARMA				IAmb	IAmb	23 27 17.0	
	comp=Z,9.0nm,1.2s						
EIDS	Eidsvold	26.71	259	P	P	23 27 16.4	-0.1
EIDS				IAmb	IAmb	23 27 17.2	
	comp=Z,3.6nm,0.8s						
CAN	Canberra	29.77	239	P	P	23 27 43.2	+0.2
CAN				IAmb	IAmb	23 27 52.3	
	comp=Z,21nm,1.2s						
CTAO	Charters Tower	31.75	269	P	P	23 28 00.4	+0.1
TOO	Toolangi	33.10	236	P	P	23 28 11.5	0.0
TOO				IAmb	IAmb	23 28 20.0	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	35.27	247	P	P	23 28 29.5	-0.2
	comp=Z,1.7nm,0.4s,baz=80,slow=10,SNR=5.6						
	comp=Z,1.7nm,0.4s						
STKA	Stephens Creek	35.27	247	P	P	23 28 29.6	0.0
BBOO	Buckleboo	40.00	246	P	P	23 29 07.2	-1.0
BBOO				IAmb	IAmb	23 29 21.5	
	comp=Z,22nm,1.2s						
AS31	Alice Springs	42.43	260	P	P	23 29 27.2	-0.5
ASAR	Alice Springs	42.43	260	P	P	23 29 27.2	-0.5
	comp=Z,5.6nm,0.8s,baz=97,slow=7.9,SNR=43						
	comp=Z,5.6nm,0.8s						
ASAR	Alice Springs	42.43	260	P	P	23 29 27.0	-0.7
WR0	Warramunga Arr	42.55	265	P	P	23 29 27.1	-1.5
WR0				IAmb	IAmb	23 29 27.8	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	42.73	265	P	P	23 29 28.7	-1.4
	comp=Z,4.7nm,0.7s,baz=91,slow=8.3,SNR=103						
WRA				ScP	ScP	23 34 06.3	-1.6
	comp=Z,1.0nm,1.0s,baz=101,slow=3.4,SNR=6.0						
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	42.73	265	P	P	23 29 29.0	-1.1
FORT	Forrest	46.84	249	P	P	23 30 00.6	-0.8
MTN	Manton Dam	47.67	274	P	P	23 30 06.8	-1.1
MTN				IAmb	IAmb	23 30 26.1	
	comp=Z,22nm,1.4s						
VNDA	Vanda	55.17	185	P	P	23 31 02.2	+1.2
PSA00	Pilbara Seismi	55.57	259	P	P	23 31 05.0	+0.3
PSA00				IAmb	IAmb	23 31 07.3	
	comp=Z,7.8nm,1.1s						
PSA00	Pilbara Seismi	55.57	259	P	P	23 31 03.6	-1.1
PSA00				IAmb	IAmb	23 31 26.9	
	comp=Z,9.7nm,1.2s						
MBWA	Marble Bar	55.77	259	P	P	23 31 05.2	-0.9
MBWA				IAmb	IAmb	23 31 05.8	
	comp=Z,6.3nm,0.7s						
MORW	Morawa	57.40	249	P	P	23 31 16.5	-0.7
MORW				IAmb	IAmb	23 31 26.0	
	comp=Z,31nm,1.4s						
TOLI2	Tolitoli	62.65	284	P	P	23 31 52.3	+0.1
TOLI2				IAmb	IAmb	23 32 11.2	
	comp=Z,4.7nm,0.7s						
QSPA	South Pole Qui	66.95	180	P	P	23 32 19.8	+1.2
GHO	Glory Hole Cre	88.14	14	P	P	23 34 12.5	-0.2
SCM	Sheep Creek Mo	88.56	15	P	P	23 34 13.4	-1.2
TXAR	Lajitas Array	89.80	58	P	P	23 34 22.1	+0.9
	comp=Z,0.4nm,0.7s,baz=211,slow=6.7,SNR=6.6						
	comp=Z,0.4nm,0.7s						

IDC 04 23:46:21.9±14.0**, 3.°15S**×**102.°51W, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/3**, MS3.4**/5**, Error ellipse: s-maj=479.6km s-min=204.0km az=113.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	23.31	339	T	T	00 15 57.0	
TXAR	Lajitas Array	32.31	358	LR	LR	00 04 12.3	
	comp=Z,47nm,18.8s,baz=190,slow=33						
H03N2	Juan Fernandez	37.33	147	T	T	00 33 24.7	
	baz=318,slow=77,SNR=20						
H03N1	Juan Fernandez	37.34	147	T	T	00 33 24.7	
	baz=318,slow=77,SNR=35						
H03N3	Juan Fernandez	37.35	147	T	T	00 33 24.7	
	baz=318,slow=77,SNR=18						
LVC	Limon Verde	37.87	124	LR	LR	00 05 22.4	
	comp=Z,37nm,19.9s,baz=243,slow=30						
PFO	Pinyon Flats O	38.86	341	LR	LR	00 06 11.8	
	comp=Z,66nm,19.7s,baz=256,slow=31						
PDAR	Pinedale Array	46.14	353	P	P	23 54 47.9	-0.5
	0.1nm,0.4s,baz=162,slow=8.5,SNR=2.1						
	0.1nm,0.4s						
PLCA	Paso Flores	47.22	147	LR	LR	00 09 40.0	
	comp=Z,38nm,20.9s,baz=272,slow=30						
YBH	Yreka Blue Hor	48.30	340	LR	LR	00 10 32.9	
	comp=Z,48nm,19.5s,baz=117,slow=30						
YKA	Yellowknife Ar	66.11	354	P	P	23 57 11.9	+1.3
	0.1nm,0.6s,baz=161,slow=6.2,SNR=1.8						
	0.1nm,0.6s						
ILAR	Eielson Array	75.13	342	P	P	23 58 04.9	-0.7

	0.5nm,0.6s,baz=147,slow=6.1,SNR=4.9						
	0.5nm,0.6s						

IDC 04 23:48:28.5±2.9**,6°.37S**×**129°.58E,h140**km±40km**,mb3.1**/1**,**
mbtmp3.6/5**,Error ellipse: s-maj=69.7km s-min=20.8km**
az=89.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.71**	**17**	P	Pn	23 49 51.1	-0.3
	2.9nm,0.3s,baz=151,slow=6.0,SNR=11						
SIJI				S	Sn	23 50 53.1	-2.9
	4.0nm,0.3s,baz=265,slow=24,SNR=6.5						
FITZ	**Fitzroy Crossi**	**12.28**	**198**	P	Pn	23 51 19.7	+0.9
	1.6nm,0.9s,baz=29,slow=12,SNR=7.3						
FITZ				S	Sn	23 53 28.1	-6.3
	0.8nm,0.3s,baz=236,slow=18,SNR=7.6						
WRA	**Warramunga Arr**	**14.27**	**162**	P	Pn	23 51 44.6	+0.3
	0.6nm,0.3s,baz=341,slow=13,SNR=22						
WRA				S	Sn	23 54 10.0	-12
	0.3nm,0.3s,baz=302,slow=14,SNR=9.7						
ASAR	**Alice Springs**	**17.70**	**167**	P	P	23 52 24.4	-1.0
	1.1nm,0.6s,baz=348,slow=11,SNR=11						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	23 59 09.4	+0.1
	0.3nm,0.5s,baz=114,slow=8.3,SNR=4.5						
	0.3nm,0.5s						

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*IDC **04** 23:51:44.1±1.7,36°.21N×140°.40E,h0km,mb3.7/4,*
mbtmp3.9/6,ML4.3/2,MS2.6/1,Error ellipse: s-maj=46.2km
s-min=19.5km az=70.0
*NEIC **04** 23:51:52.2±1.0,36°.03N±0°.05×140°.03E±0°.07,h52km±3km,*
mb4.3/15,Error ellipse: s-maj=10.1km s-min=4.9km
az=130.0
*JMA **04** 23:51:52.7±0.1,36°.0N±0°.2×139°.9E±0°.3,h43km,MV3.5/35,*
SW IBARAKI PREF
JMA Felt II J1 at SW IBARAKI PREF .
ISC 04 23:51:51.6±0.7**,35°.98N**±0°.04×**139°.98E**±0°.04**,h50**km±6km**,**
n50,σ**0s.94**/54**,mb4.2**/13**,8D,Near south coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.30**	**35**		**Pn**	**23 52 01.2**	**+0.5**
JYT				Sn	**Sn**	**23 52 07.2**	**+0.1**
JYT	**Yasato**	**0.30**	**35**	P	**Pn**	**23 52 01.2**	**+0.5**
JYT				S	**Sn**	**23 52 07.3**	**+0.1**
TOK	**Tokyo**	**0.34**	**212**	P	**Pn**	**23 52 02.2**	**+1.2**
TOK				S	**Sn**	**23 52 08.4**	**+0.7**
JHU	**Hanno**	**0.58**	**257**	⇓P	**Pn**	**23 52 03.7**	**-0.1**
JHU				⇓S	**Sn**	**23 52 11.9**	**-0.7**
JAG	**Ashikaga**	**0.61**	**316**	⇓P	**Pn**	**23 52 04.2**	**-0.1**
JAG				⇓S	**Sn**	**23 52 12.2**	**-1.2**
JRY	**Ryogami san**	**0.88**	**273**	⇓P	**Pn**	**23 52 07.6**	**0.0**
JRY				⇓S	**Sn**	**23 52 18.3**	**-1.1**
JKT	**Katashina**	**0.98**	**323**	⇓P	**Pn**	**23 52 09.0**	**-0.1**
JKT				⇓S	**Sn**	**23 52 21.5**	**-0.6**
JOD2	**Odawara 2**	**1.02**	**226**	P	**Pn**	**23 52 11.0**	**+1.4**
JOD2				S	**Sn**	**23 52 23.5**	**+0.7**
MJAR	**Matsushiro Arr**	**1.54**	**292**	Pn	**Pn**	**23 52 16.2**	**-0.4**
	4.9nm,0.3s,baz=99,slow=15,SNR=158						
MJAR				Sn	**Sn**	**23 52 36.0**	**+0.6**
	3.8nm,0.3s,baz=124,slow=19,SNR=3.9						
MJAR				LR	LR	23 53 05.0	
	comp=Z,83nm,20.2s,baz=148,slow=45						
MJAR	**Matsushiro Arr**	**1.54**	**292**	Pn	**Pn**	**23 52 16.4**	**-0.2**
MAJO	**Matsushiro**	**1.54**	**292**	Pn	**Pn**	**23 52 17.0**	**+0.4**
MJB9	**Matsu-Tunnel**	**1.54**	**292**	Pn	**Pn**	**23 52 17.2**	**+0.5**
JMM	**Marumori**	**1.99**	**19**	Pn	**Pn**	**23 52 24.3**	**+1.5**
JGF	**Kuroka**	**2.17**	**261**	Pn	**Pn**	**23 52 27.5**	**+2.3**
JSD	**Sado**	**2.47**	**327**	Pn	**Pn**	**23 52 29.1**	**-0.2**
INU	**Inuyama**	**2.49**	**256**	Pn	**Pn**	**23 52 31.4**	**+1.7**
JHJ	**Hachijo jima 2**	**2.86**	**183**	Pn	**Pn**	**23 52 36.0**	**+1.3**
	69nm,0.3s,baz=315,slow=18,SNR=37						
JHJ				Sn	**Sn**	**23 53 07.8**	**-0.1**
	42nm,0.3s,baz=230,slow=24,SNR=6.7						
	119nm,0.3s						
JHJ2	**Mitsune**	**2.87**	**183**	Pn	**Pn**	**23 52 35.4**	**+0.6**
JHS	**Saijyo**	**5.69**	**262**	Pn	**Pn**	**23 53 15.5**	**+2.1**
JCJ	**Chichijima**	**9.05**	**167**	Pn	**Pn**	**23 53 58.0**	**-1.7**
	3.7nm,0.3s,baz=343,slow=20,SNR=5.8						
JCJ				Sn	**Sn**	**23 55 37.5**	**-2.8**
	3.1nm,0.3s,baz=273,slow=20,SNR=2.0						
	36nm,0.8s						
KSRS	**Korea Array**	**9.79**	**282**	LR	LR	23 57 26.1	
	comp=Z,36nm,20.1s,baz=0.0,slow=34						
ENH	**Enshi**	**26.10**	**266**	P	**P**	**23 57 21.9**	**+1.1**
H11N2	**WAKE ISLAND Hy**	**28.65**	**117**	T	T	00 27 56.3	
	baz=312,slow=75,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	**28.66**	**117**	T	T	00 27 56.8	
	baz=312,slow=75,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**28.67**	**117**	T	T	00 27 57.7	
	baz=312,slow=75,SNR=2.9						
H11S1	**WAKE ISLAND Hy**	**29.30**	**119**	T	T	00 28 46.9	
	baz=314,slow=75,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**29.30**	**119**	T	T	00 28 48.5	
	baz=314,slow=75,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	**29.32**	**119**	T	T	00 28 48.2	
	baz=314,slow=75,SNR=5.7						
ZAA0	**Zalesovo Array**	**41.78**	**313**	P	**P**	**23 59 35.5**	**-0.3**
ZAA0				IAmb	IAmb	23 59 36.4	
	comp=Z,5.1nm,1.4s						
ZALV	**Zalesovo Beam**	**41.78**	**313**	P	**P**	**23 59 35.9**	**0.0**
	comp=Z,1.7nm,0.6s,baz=93,slow=6.5,SNR=7.3						
	comp=Z,1.7nm,0.6s						
TNA	**Tin City**	**42.34**	**29**	P	**P**	**23 59 39.4**	**-0.8**
MKAR	**Makanchi Array**	**43.71**	**303**	P	**P**	**23 59 51.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=82,slow=9.3,SNR=4.4						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**43.71**	**303**	P	**P**	**23 59 51.6**	**0.0**
KURK	**Kurchatov**	**45.68**	**309**	P	**P**	**00 00 07.0**	**-0.2**
KURK				IAmb	IAmb	00 00 07.8	
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**52.66**	**300**	P	**P**	**00 01 00.8**	**+0.1**
MNAI	**Manna**	**53.02**	**229**	P	**P**	**00 01 02.5**	**-1.1**
WB0	**Warramunga Arr**	**55.70**	**186**	P	**P**	**00 01 23.4**	**+0.5**
WR0	**Warramunga Arr**	**55.87**	**186**	P	**P**	**00 01 24.4**	**+0.2**
WR0				IAmb	IAmb	00 01 47.3	
	comp=Z,5.2nm,1.4s						
WRA	**Warramunga Arr**	**55.87**	**186**	P	**P**	**00 01 24.9**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=0.9,slow=7.6,SNR=8.9						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**55.87**	**186**	P	**P**	**00 01 24.1**	**-0.1**
ARU	**Arti**	**56.39**	**319**	P	**P**	**00 01 27.8**	**+0.3**
ARU				IAmb	IAmb	00 01 29.0	
	comp=Z,2.1nm,0.9s						
ABKAR	**Akbulak array**	**57.74**	**310**	P	**P**	**00 01 37.0**	**-0.1**
ABKAR	**Akbulak array**	**57.74**	**310**	P	**P**	**00 01 37.1**	**-0.1**
ABKAR				IAmb	IAmb	00 01 43.1	
	comp=Z,1.9nm,1.4s						
EUNU	**Eureka**	**61.40**	**8**	P	**P**	**00 02 03.2**	**+1.2**
EUNU				IAmb	IAmb	00 02 29.9	
	comp=Z,5.0nm,1.4s						
FINES	**FINESS Array B**	**69.20**	**332**	P	**P**	**00 02 52.0**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=38,slow=7.2,SNR=5.3						
	comp=Z,0.7nm,0.8s						
FINES	**FINESS Array B**	**69.20**	**332**	P	**P**	**00 02 52.4**	**-0.2**
PINE	**Pine Mountain**	**71.90**	**49**	P	**P**	**00 03 09.3**	**-0.4**
PINE				IAmb	IAmb	00 03 17.6	
	comp=Z,8.6nm,1.4s						
BMO	**Blue Mountains**	**73.49**	**46**	P	**P**	**00 03 18.9**	**0.0**
BMO				IAmb	IAmb	00 03 21.6	
	comp=Z,4.1nm,1.4s						
NC405	**NORSAR Array S**	**74.49**	**337**	P	**P**	**00 03 24.7**	**+0.3**
NC405				IAmb	IAmb	00 03 33.7	
	comp=Z,23nm,1.4s						
BURAR	**Bucovina Array**	**78.41**	**321**	P	**P**	**00 03 46.4**	**-0.6**

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*IDC **05** 00:26:07.7±0.5,13°.92N×144°.56E,h175km±4km,mb3.3/7,*
mbtmp3.8/7,Error ellipse: s-maj=28.3km s-min=16.1km
az=87.0
*NEIC **05** 00:26:08.7±1.9,13°.99N±0°.09×144°.5E±0°.2,h178km±6km,*
mb3.9/11,Error ellipse: s-maj=23.6km s-min=11.2km
az=104.0
ISC 05 00:26:08.0±0.6**,14°.0N**±0°.1×**144°.5E**±0°.2**,h178**km**,n31,**
σ**0s.78**/32**,mb3.8**/13**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.51**	**139**	P	**Pn**	**00 26 33.0**	**+0.4**
	686nm,0.3s,baz=329,slow=3.4,SNR=52						
GUMO				S	**Sn**	**00 26 51.3**	**-0.2**
	954nm,0.3s,baz=337,slow=22,SNR=49						
GUMO	**Guam**	**0.51**	**139**	Pn	**Pn**	**00 26 33.0**	**+0.4**
GUMO				Sn	**Sn**	**00 26 51.8**	**+0.3**
FAKI	**Fak Fak**	**20.74**	**217**	P	**P**	**00 30 36.5**	**+1.6**
FAKI				IAmb	IAmb	00 30 55.7	
	comp=Z,8.9nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**22.14**	**72**	T	T	00 54 19.8	
	baz=260,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.15**	**72**	T	T	00 54 23.9	
	baz=260,slow=75						
H11N3	**WAKE ISLAND Hy**	**22.16**	**72**	T	T	00 54 15.7	
	baz=260,slow=75						
WB0	**Warramunga Arr**	**34.98**	**197**	P	**P**	**00 32 42.9**	**-0.6**
WB0				IAmb	IAmb	00 33 01.1	
	comp=Z,3.4nm,1.0s						
WRA	**Warramunga Arr**	**35.16**	**197**	P	**P**	**00 32 44.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=14,slow=9.4,SNR=12						
WRA				PcP	**PcP**	**00 35 12.4**	**0.0**
	comp=Z,1.6nm,1.3s,baz=11,slow=3.5,SNR=2.5						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**35.16**	**197**	P	**P**	**00 32 45.1**	**+0.1**
ASAR	**Alice Springs**	**38.83**	**196**	P	**P**	**00 33 15.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=22,slow=11,SNR=4.4						
ASAR				PcP	**PcP**	**00 35 23.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=20,slow=3.0,SNR=2.3						
	comp=Z,0.3nm,0.6s						
DZM	**Mont Dzumac**	**41.77**	**149**	P	**P**	**00 33 41.0**	**+0.8**
STKA	**Stephens Creek**	**45.67**	**183**	P	**P**	**00 34 09.7**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=342,slow=9.6,SNR=3.6						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**45.67**	**183**	P	**P**	**00 34 09.7**	**-1.3**
TOO	**Toolangi**	**51.28**	**179**	P	**P**	**00 34 52.5**	**-1.2**
MK31	**Makanchi Array**	**60.99**	**316**	P	**P**	**00 36 03.4**	**+0.8**
MK31				IAmb	IAmb	00 36 03.9	
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**60.99**	**316**	P	**P**	**00 36 03.3**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=91,slow=9.5,SNR=7.4						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**60.99**	**316**	P	**P**	**00 36 03.0**	**+0.5**
MAKZ	**Makanchi**	**61.20**	**316**	P	**P**	**00 36 04.3**	**+0.3**
MAKZ				IAmb	IAmb	00 36 05.2	
	comp=Z,1.4nm,0.6s						
KURK	**Kurchatov**	**64.08**	**320**	P	**P**	**00 36 22.9**	**0.0**
KURK				IAmb	IAmb	00 36 23.9	
	comp=Z,4.2nm,1.0s						
KURBB	**Kurchatov Arra**	**64.12**	**320**	P	**P**	**00 36 23.3**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=103,slow=6.5,SNR=12						
	comp=Z,2.1nm,0.6s						
BRVK	**Borovoye**	**69.49**	**322**	P	**P**	**00 36 57.3**	**+0.2**
BRVK				IAmb	IAmb	00 36 57.9	
	comp=Z,1.5nm,0.7s						
BMAR	**Burnt Mountain**	**69.88**	**23**	P	**P**	**00 36 59.8**	**+0.5**
ABKAR	**Akbulak array**	**76.04**	**318**	P	**P**	**00 37 35.1**	**-0.6**
ABKAR	**Akbulak array**	**76.04**	**318**	P	**P**	**00 37 35.0**	**-0.7**
ABKAR				IAmb	IAmb	00 37 40.3	
	comp=Z,1.4nm,1.1s						
YKA	**Yellowknife Ar**	**82.67**	**27**	P	**P**	**00 38 10.1**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=285,slow=5.1,SNR=6.1						
	comp=Z,0.1nm,0.5s						
NVAR	**Mina Array Bea**	**86.94**	**51**	P	**P**	**00 38 33.9**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=267,slow=5.1,SNR=2.0						
	comp=Z,0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**134.38**	**305**	PKP	**PKPdf**	**00 45 05.1**	**-0.7**
	comp=Z,0.6nm,1.1s,baz=32,slow=3.4,SNR=2.2						
LVC	**Limon Verde**	**147.17**	**110**	PKPbc	**PKPbc**	**00 45 31.8**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=297,slow=4.5,SNR=4.1						
LVC	**Limon Verde**	**147.17**	**110**		**PKPdf**	**00 45 30.4**	**+1.5**
LPAZ	**La Paz**	**148.41**	**98**	PKPbc	**PKPbc**	**00 45 34.7**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=356,slow=2.1,SNR=6.6						
LPAZ	**La Paz**	**148.41**	**98**		**PKPbc**	**00 45 34.4**	**-0.7**

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*IDC **05** 00:32:42.9±0.8,31°.89N×141°.89E,h0km,mb3.7/9,*
mbtmp3.7/12,ML3.4/3,MS3.0/3,Error ellipse:
s-maj=26.0km s-min=16.6km az=76.0
*JMA **05** 00:32:43.1±0.3,32°N±1°×14°2E±°,h24km,MV4.0/15,FAR*
E OFF IZU ISLANDS
ISC 05 00:32:46.8±0.7**,31°.88N**±0°.06×**141°.87E**±0°.10**,h29**km**,n24,**
σ**1s.31**/24**,mb3.8**/9**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.12**	**306**	*e*P	**Pn**	**00 33 19.4**	**-0.9**
JHJ2				S	**Sn**	**00 33 46.2**	**+0.4**
JHJ	**Hachijo jima 2**	**2.15**	**306**	Pn	**Pn**	**00 33 19.6**	**-1.1**
	25nm,0.3s,baz=109,slow=18,SNR=12						
JHJ				Sn	**Sn**	**00 33 43.4**	**-3.1**
	30nm,0.3s,baz=74,slow=22,SNR=2.2						
	89nm,0.4s						
BSO1	**Boso 1**	**2.87**	**345**	P	**Pn**	**00 33 28.9**	**-1.2**
JHU	**Hanno**	**4.51**	**332**	*e*P	**Pn**	**00 33 52.3**	**-0.8**
CBIJ	**Chichi jima**	**4.77**	**177**	P	**Pn**	**00 33 56.3**	**-0.5**
JCJ	**Chichijima**	**4.77**	**177**	Pn	**Pn**	**00 33 56.5**	**-0.3**
	10nm,0.3s,baz=285,slow=19,SNR=13						
JCJ				Sn	**Sn**	**00 34 48.7**	**-2.4**
	15nm,0.3s,baz=258,slow=22,SNR=2.1						
	25nm,0.3s						
JRY	**Ryogami san**	**4.81**	**330**	P	**Pn**	**00 33 57.1**	**-0.1**
JRY				*e*S	**Sn**	**00 34 53.0**	**+1.0**
JHO	**Hitachi**	**4.84**	**348**	P	**Pn**	**00 33 55.6**	**-2.1**
JHO				*e*S	**Sn**	**00 34 50.9**	**-1.9**
MJAR	**Matsushiro Arr**	**5.55**	**328**	Pn	**Pn**	**00 34 07.0**	**-0.5**
	0.3nm,0.3s,baz=148,slow=12,SNR=9.7						
MJAR				Sn	**Sn**	**00 35 09.8**	**-0.6**
	baz=155,slow=26						
	3.6nm,0.5s						
ASAJ	**Asahikawa**	**12.23**	**2**	LR	LR	00 41 03.1	
	comp=Z,39nm,20.7s,baz=116,slow=41						
KSRS	**Korea Array**	**12.75**	**300**	LR	LR	00 40 42.1	
	comp=Z,19nm,18.9s,baz=100,slow=38						
H11N2	**WAKE ISLAND Hy**	**25.51**	**112**	T	T	01 04 47.7	
	baz=304						
H11N1	**WAKE ISLAND Hy**	**25.51**	**112**	T	T	01 04 49.2	
	baz=304						
H11N3	**WAKE ISLAND Hy**	**25.53**	**112**	T	T	01 04 46.9	
	baz=304						
MKAR	**Makanchi Array**	**47.32**	**306**	P	**P**	**00 41 18.5**	**+0.7**
	1.3nm,0.6s,baz=90,slow=9.5,SNR=18						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**49.58**	**312**	P	**P**	**00 41 34.6**	**-0.5**
	1.5nm,0.8s,baz=88,slow=7.3,SNR=11						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**52.03**	**189**	P	**P**	**00 41 53.7**	**-0.1**
	0.9nm,0.4s,baz=7.0,slow=7.7,SNR=18						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**53.70**	**30**	P	**P**	**00 42 05.6**	**-0.1**
	0.4nm,0.7s,baz=277,slow=7.2,SNR=3.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**55.75**	**189**	P	**P**	**00 42 22.1**	**+1.1**
	0.4nm,0.6s,baz=8.4,slow=8.9,SNR=5.9						
	0.4nm,0.6s						
INK	**Inuvik**	**58.83**	**26**	P	**P**	**00 42 42.8**	**+0.7**
	0.7nm,0.7s,baz=279,slow=7.1,SNR=1.3						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**68.10**	**29**	P	**P**	**00 43 43.3**	**-0.2**
	0.1nm,0.6s,baz=301,slow=6.2,SNR=1.8						
	0.1nm,0.6s						
FINES	**FINESS Array B**	**73.56**	**333**	P	**P**	**00 44 18.6**	**+1.9**
	0.9nm,0.9s,baz=36,slow=5.2,SNR=4.4						
	0.9nm,0.9s						
IDI	**Anoyia**	**90.77**	**313**	LR	LR	01 30 18.7	
	comp=Z,33nm,18.2s,baz=180,slow=38						
TXAR	**Lajitas Array**	**92.95**	**53**	P	**P**	**00 45 58.5**	**+0.8**
	0.2nm,0.5s,baz=319,slow=4.0,SNR=3.6						
	0.2nm,0.5s						

IDC 05 00:34:38.4±2.2**,30°.04N**×**42°.17W,h0**km**,mb3.5**/4**,**
mbtmp3.5/4**,MS3.4**/11**,Error ellipse: s-maj=64.0km**
s-min=32.2km az=16.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**24.85**	**247**	LR	LR	00 50 07.5	
	comp=Z,11nm,18.8s,baz=95,slow=37						
MDT	**Midelt**	**32.07**	**75**	LR	LR	00 52 04.3	
	comp=Z,36nm,18.4s,baz=322,slow=33						
SADO	**Sadowa**	**32.54**	**307**	LR	LR	00 52 13.1	
	comp=Z,43nm,19.9s,baz=50,slow=32						
TKL	**Tuckaleechee C**	**35.21**	**290**	LR	LR	00 52 59.6	
	comp=Z,25nm,21.9s,baz=82,slow=31						
TORD	**Torodi Ar. Bea**	**43.81**	**103**	P	P	00 42 46.4	-0.1
	0.7nm,0.9s,baz=310,slow=9.6,SNR=6.6						
	0.7nm,0.9s						
GERES	**GERESS Array B**	**45.95**	**50**	P	P	00 43 02.4	-0.8
	0.3nm,0.6s,baz=268,slow=6.4,SNR=3.5						
	0.3nm,0.6s						
H10N2	**ASCENSION HYDR**	**46.09**	**140**	T	T	01 32 11.8	
	baz=326,slow=76,SNR=200						
H10N3	**ASCENSION HYDR**	**46.10**	**140**	T	T	01 32 13.9	
	baz=326,slow=76,SNR=165						
H10N1	**ASCENSION HYDR**	**46.11**	**140**	T	T	01 32 15.0	
	baz=326,slow=76,SNR=185						
H10S3	**ASCENSION HYDR**	**46.93**	**141**	T	T	01 33 16.7	
	baz=326,slow=74,SNR=128						
H10S2	**ASCENSION HYDR**	**46.94**	**141**	T	T	01 33 17.8	
	baz=254,slow=74,SNR=55						
FINES	**FINESS Array B**	**53.76**	**34**	P	P	00 44 02.7	+0.5
	1.1nm,1.0s,baz=252,slow=5.6,SNR=4.4						
	1.1nm,1.0s						
PDAR	**Pinedale Array**	**54.38**	**303**	P	P	00 44 07.2	-0.2
	0.3nm,0.5s,baz=78,slow=8.4,SNR=4.4						
	0.3nm,0.5s						
NEW	**Newport**	**58.60**	**311**	LR	LR	01 10 41.0	
	comp=Z,43nm,18.4s,baz=342,slow=37						
ELK	**Elko**	**58.96**	**302**	LR	LR	01 07 51.5	
	comp=Z,30nm,20.1s,baz=34,slow=34						
PFO	**Pinyon Flats O**	**61.94**	**294**	LR	LR	01 10 41.8	
	comp=Z,42nm,18.1s,baz=178,slow=35						
INK	**Inuvik**	**62.96**	**335**	LR	LR	01 10 01.6	
	comp=Z,55nm,19.1s,baz=160,slow=34						
DLBC	**Dease Lake**	**63.86**	**324**	LR	LR	01 12 19.5	
	comp=Z,49nm,19.1s,baz=297,slow=35						
KDAK	**Kodiak Island**	**75.02**	**329**	LR	LR	01 19 23.9	
	comp=Z,36nm,19.6s,baz=104,slow=36						
TSUM	**Tsumeb**	**75.52**	**123**	LR	LR	01 11 32.6	
	comp=Z,68nm,21.3s,baz=324,slow=29						

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*IDC **05** 00:39:20.7±1.4,0°.32N×80°.04W,h0km,mb3.8/5,*
mbtmp3.9/6,ML4.0/1,MS3.6/3,Error ellipse: s-maj=68.5km
s-min=24.1km az=58.0
ISC 05 00:39:19.4±1.2**,0°.5S**±0°.1×**80°.6W**±0°.1**,h10**km**,n25,**
σ**2s.17**/22**,mb4.0**/4**,MS3.5**/3**,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMC	**Tumaco**	**3.00**	**39**	*e*P	**Pn**	**00 40 05.8**	**-1.3**
CMBC	**Cumbal**	**3.15**	**63**	*e*P	**Pn**	**00 40 09.4**	**-0.2**
CRUC	**La Cruz**	**4.22**	**61**	*e*P	**Pn**	**00 40 23.4**	**-0.8**
SOTA	**Rioblanco**	**4.80**	**57**	*e*P	**Pn**	**00 40 30.1**	**-2.2**
SOTA				*e*S	**Sn**	**00 41 30.7**	**+2.3**
SOTA				*i*		00 41 43.0	
	comp=Z,37nm,0.5s						
PCON	**Cinco Dias**	**5.09**	**56**	*e*P	**Pn**	**00 40 34.1**	**-2.1**
MALC	**Bahia Malaga**	**5.57**	**36**	*e*P	**Pn**	**00 40 45.6**	**+3.2**
MARP	**Paez Belalcaza**	**5.74**	**55**	*e*P	**Pn**	**00 40 42.9**	**-2.1**
YOTC	**Yotoco, Valle**	**6.19**	**44**	*e*P	**Pn**	**00 40 48.0**	**-3.0**
PLMC	**San Jos del P**	**6.91**	**39**	*e*P	**Pn**	**00 40 59.1**	**-1.8**
ORTC	**Ortega, Tolima**	**6.95**	**51**	*e*P	**Pn**	**00 40 59.1**	**-2.2**
PRAC	**Prado**	**7.11**	**54**	*e*P	**Pn**	**00 41 00.2**	**-3.4**
MACC	**Macarena, Meta**	**7.28**	**69**	*e*P	**Pn**	**00 41 06.1**	**+0.2**
CBOC	**Ciudad Bolivar**	**7.83**	**36**	*e*P	**Pn**	**00 41 14.8**	**+1.2**
NORC	**Norcasia**	**8.34**	**44**	*e*P	**Pn**	**00 41 22.2**	**+1.7**
CHIC	**Chingaza**	**8.58**	**53**	*e*P	**Pn**	**00 41 23.2**	**-0.9**
ZARC	**Zaragoza, Cauc**	**9.81**	**36**	*e*P	**Pn**	**00 41 43.0**	**+2.3**
NNA	**Nana**	**12.01**	**162**	Pn	Pn	00 42 23.3	+13
	comp=Z,1.1nm,0.3s,baz=336,slow=12,SNR=2.2						
	comp=Z,3.4nm,0.3s						
LPAZ	**La Paz**	**19.95**	**142**	P	**Pn**	**00 43 57.3**	**+3.2**
	comp=Z,1.4nm,0.8s,baz=346,slow=8.3,SNR=2.7						
	comp=Z,1.4nm,0.8s						
MDP	**Montagnes des**	**28.51**	**78**	LR	LR	00 56 40.7	
	comp=Z,65nm,18.2s,baz=187,slow=37						
RCBR	**Riachuelo**	**44.95**	**98**	LR	LR	01 06 32.8	
	comp=Z,177nm,19.0s,baz=233,slow=37						
NVAR	**Mina Array Bea**	**51.96**	**322**	P	**P**	**00 48 30.2**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=132,slow=6.2,SNR=6.6						
	comp=Z,1.5nm,0.8s						
ULM	**Lac du Bonnet**	**52.22**	**348**	P	**P**	**00 48 28.6**	**-1.9**
	comp=Z,2.4nm,0.5s,baz=166,slow=4.2,SNR=3.2						
	comp=Z,2.4nm,0.5s						
YKA	**Yellowknife Ar**	**67.84**	**344**	P	**P**	**00 50 15.9**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=137,slow=5.9,SNR=18						
	comp=Z,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.64**	**77**	P	**P**	**00 51 43.5**	**-0.3**
	comp=Z,0.5nm,1.0s,baz=278,slow=5.2,SNR=4.7						
	comp=Z,0.5nm,1.0s						
DAVOX	**Davos/Dischmat**	**90.72**	**43**	LR	LR	01 27 44.8	
	comp=Z,19nm,20.3s,baz=258,slow=32						

JMA 05 01:31:09.8±0.0**,33°.06N**±0°.07×**131°.15E**±0°.08**,h10**km**,**
MV0.6/19**,NE KUMAMOTO PREF,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.24**	**286**	P	Pg	01 31 14.8	+0.1
JNU				S	Sg	01 31 18.1	+0.2

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*IDC **05** 01:31:28.9±0.5,32°.94N×131°.17E,h0km,mb4.1/22,*
mbtmp4.1/25,ML3.8/3,MS3.9/6,Error ellipse:
s-maj=14.8km s-min=5.5km az=34.0
*NIED **05** 01:31:30.5,33°.00N×131°.13E,h11km,MW4.6,Moment*
Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm;
M_{rr}-3.59; $M_{\theta\theta}$8.55; $M_{\phi\phi}$-4.96; $M_{r\theta}$-2.41; $M_{\theta\phi}$4.51; $M_{\phi r}$0.18;
Fault plane solution: $M_0$8.44000×10^{15} NP1:
ϕ_s208.00000°,δ71.00000°,λ-174.00000°.   NP2:
ϕ_s116.00000°,δ84.00000°,λ-19.00000°.
*JMA **05** 01:31:30.5±0.0,33°.00N±0°.09×131°.1E±0°.1,h11km,*
MD4.6/20,MW4.6/20,NE KUMAMOTO PREF
JMA Felt IV J1 at NE KUMAMOTO PREF .
*GCMT **05** 01:31:31.2±0.5,33°.00N±0°.03×131°.11E±0°.03,h22km±1km,*
MW4.7/72,Moment Tensor Solution.   s8,c9;   s72,c93;
Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}-0.75±.13;
$M_{\theta\theta}$1.41±.10; $M_{\phi\phi}$-0.66±.07; $M_{r\theta}$0.11±.11; $M_{\theta\phi}$0.70±.06;
$M_{\phi r}$-0.15±.12;   Best double couple: $M_0$1.31600×10^{16}
NP1:ϕ_s33.00000°,δ65.00000°,λ-155.00000°.   NP2:
ϕ_s292.00000°,δ67.00000°,λ-27.00000°.   Principal axes:
T 1.6280, Plg1.0000°, Azm343.0000°; N -0.6270,
Plg55.0000°, Azm75.0000°; P -1.0050, Plg34.0000°,
Azm252.0000°;   nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*NEIC **05** 01:31:32.1±1.9,32°.99N±0°.04×130°.98E±0°.06,h17km±4km,*
mb4.6/37 Error ellipse: s-maj=7.3km s-min=5.8km
az=75.0
ISC 05 01:31:31.0±1.0**,32°.99N**±0°.04×**131°.08E**±0°.04**,h12**km±6km**,**
n162,σ**1s.31**/116**,mb4.4**/53**,MS4.1**/9**,2C-4D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.22**	**309**	Pg	**Pg**	**01 31 35.3**	**-0.4**
	7μm,0.3s,baz=103,slow=5.5						
JNU				Lg	Lg	01 31 38.6	
	26μm,0.3s,baz=49,slow=20,SNR=78						
JNU	**Nakatsue**	**0.22**	**309**		**Pg**	**01 31 35.8**	**+0.1**
JNU				Sg	**Sg**	**01 31 39.2**	**+0.3**
JNU	**Nakatsue**	**0.22**	**309**	P	**Pg**	**01 31 35.6**	**-0.1**
JNU				*e*S	**Sg**	**01 31 39.2**	**+0.3**
JNU	**Nakatsue**	**0.22**	**309**	A	A	01 31 35.6	
	comp=E,248nm,0.8s,comp=E,492nm,1.0s						
JBEP	**Beppuamama**	**0.44**	**38**	A	A	01 31 38.5	
	comp=E,175nm,2.5s,comp=E,177nm,2.4s						
JTA	**Tamana**	**0.46**	**267**	⇓*i*P	**Pb**	**01 31 40.4**	**-0.6**
JTA				⇓S	**Sb**	**01 31 47.3**	**-0.5**
JTA	**Tamana**	**0.46**	**267**	A	A	01 31 40.4	
	comp=E,59nm,4.2s,comp=E,64nm,4.9s						
JKIT	**Kitakata**	**0.48**	**139**	A	A	01 31 39.5	
	comp=E,70nm,4.2s,comp=E,58nm,2.0s						
JIU3	**Izumi3**	**0.49**	**208**	⇓*i*P	**Pg**	**01 31 40.8**	**+0.2**
JIU3	**Izumi3**	**0.49**	**208**	A	A	01 31 40.8	
	comp=E,58nm,6.5s,comp=E,62nm,6.6s						
JUS	**Usuki**	**0.57**	**82**	⇓*i*P	**Pg**	**01 31 40.3**	**-1.8**
JUS	**Usuki**	**0.57**	**82**	A	A	01 31 40.3	
	comp=E,48nm,1.4s,comp=E,51nm,3.2s						
JHHC	**Hyugahichiya**	**0.71**	**139**	A	A	01 31 43.9	
	comp=E,48nm,3.5s,comp=E,33nm,3.9s						
JSKE	**Saikikamae**	**0.71**	**105**	A	A	01 31 43.5	
	comp=E,26nm,7.7s,comp=E,28nm,2.0s						
JFI	**Itaya**	**0.73**	**307**	A	A	01 31 45.0	
	comp=E,50nm,0.7s,comp=E,69nm,6.1s						
JFA	**Akaike**	**0.76**	**342**	A	A	01 31 45.1	
	comp=E,28nm,1.4s,comp=E,45nm,4.4s						
JKI	**Kunimi**	**0.76**	**32**	A	A	01 31 44.4	
	comp=E,35nm,3.2s,comp=E,55nm,3.3s						
JTSN	**Tsuno**	**0.82**	**154**	A	A	01 31 45.9	
	comp=E,42nm,8.0s,comp=E,30nm,3.7s						
JZO	**Okuchi**	**0.94**	**206**	A	A	01 31 48.7	

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         comp=E,54nm,3.4s,comp=E,38nm,1.0s
JHD   Hondo             0.95 237  A       A        01 31 49.2
         comp=E,32nm,2.7s,comp=E,41nm,2.4s
JUR   Ureshino          0.96 277  A       A        01 31 49.3
         comp=E,44nm,1.6s,comp=E,52nm,0.7s
JTZ   Takazaki          1.08 180  A       A        01 31 50.9
         comp=E,26nm,6.6s,comp=E,20nm,1.4s
NGSJ  Nagasakinomoza    1.14 252  A       A        01 31 52.4
         comp=E,14nm,7.9s,comp=E,17nm,4.6s
JKD   Kudamatsu         1.25  32  A       A        01 31 53.0
         comp=E,22nm,6.9s,comp=E,20nm,6.6s
JTY   Toyota            1.27 359  A       A        01 31 53.7
         comp=E,14nm,1.5s,comp=E,15nm,1.0s
JNA   Nagahama          1.30  64  A       A        01 31 53.6
         comp=E,11nm,2.9s,comp=E,11nm,6.6s
UWA2  Uwa jima 2        1.31  80  A       A        01 31 53.8
         comp=E,20nm,4.1s,comp=E,14nm,2.1s
JNKG  Nichinankitago    1.34 169  A       A        01 31 55.1
         comp=E,20nm,1.7s,comp=E,20nm,4.0s
JII   Iki               1.39 306  A       A        01 31 56.2
         comp=E,49nm,3.0s,comp=E,70nm,2.6s
JTO   Tosashimizu       1.45  94  A       A        01 31 56.0
         comp=E,18nm,5.9s,comp=E,30nm,2.9s
JNAR  Kushima--Naru     1.46 174  A       A        01 31 57.0
         comp=E,20nm,5.6s,comp=E,13nm,2.5s
JSU   Suzuyama          1.57 200  Pn      Pn       01 31 58.6  0.0
JSU                               Sn      Sn       01 32 17.8 -1.1
JSU   Suzuyama          1.57 200  A       A        01 31 58.9
         comp=E,14nm,6.1s,comp=E,8.0nm,7.4s
JHM   Kurahashi         1.67  46  A       A        01 31 59.4
         comp=E,14nm,7.0s,comp=E,14nm,6.9s
JKU   Kubokawa          1.69  78  A       A        01 31 59.7
         comp=E,19nm,5.5s,comp=E,16nm,5.5s
JHIK  Hikimi            1.70  24  A       A        01 31 60.0
         comp=E,20nm,6.2s,comp=E,9.0nm,8.4s
JSJ   Shimokoshiki      1.74 222  A       A        01 32 01.7
         comp=E,11nm,4.8s,comp=E,14nm,6.0s
JHGM  Hagimishima       1.79   2  A       A        01 32 01.6
         comp=E,20nm,2.4s,comp=E,16nm,1.7s
JTSR  Tashiro 2         1.82 184  A       A        01 32 02.5
         comp=E,10.0nm,4.7s,comp=E,5.0nm,5.5s
JET   Tanbara           1.83  64  A       A        01 32 01.7
         comp=E,6.0nm,0.8s,comp=E,8.0nm,2.7s
JTSM  Tsushimamitsus    1.96 314  A       A        01 32 04.6
         comp=E,16nm,4.8s,comp=E,21nm,1.7s
JFU   Fukue jima 2      1.99 261  A       A        01 32 05.5
         comp=E,8.0nm,5.8s,comp=E,9.0nm,8.1s
JHT   Toyohira          2.01  33  A       A        01 32 04.5
         comp=E,12nm,4.9s,comp=E,8.0nm,4.7s
JTU   Tsushima          2.08 318  Pn      Pn       01 32 05.0 -0.6
JTU   Tsushima          2.08 318  A       A        01 32 06.4
         comp=E,19nm,1.3s,comp=E,22nm,0.9s
JKHR  Kochiharuno       2.09  75  A       A        01 32 05.6
         comp=E,11nm,7.3s,comp=E,23nm,3.7s
JTN   Tanegashima 3     2.33 182  A       A        01 32 09.8
         comp=E,7.0nm,1.9s,comp=E,6.0nm,5.3s
JGT2  ShimaneMisato     2.39  29  A       A        01 32 10.0
         comp=E,11nm,8.3s,comp=E,12nm,3.6s
JMN   Monobe            2.46  72  Pn      Pn       01 32 12.8 +1.9
JMN   Monobe            2.46  72  A       A        01 32 10.8
         comp=E,9.0nm,6.7s,comp=E,14nm,4.5s
JMTN  Minamitane        2.58 183  A       A        01 32 13.6
         comp=E,5.0nm,4.7s,comp=E,5.0nm,3.0s
MRT2  Murotomisaki 2    2.60  80  A       A        01 32 12.8
         comp=E,6.0nm,7.2s,comp=E,7.0nm,4.6s
JHS   Saijyo            2.62  40  Pn      Pn       01 32 13.4 +0.2
JHS   Saijyo            2.62  40  A       A        01 32 13.4
         comp=E,8.0nm,4.7s,comp=E,8.0nm,3.7s
JISK  Izumosakaura      2.91  30  A       A        01 32 17.4
         comp=E,14nm,6.7s,comp=E,15nm,6.2s
JAI   Aioi              2.93  73  A       A        01 32 17.6
         comp=E,6.0nm,5.2s,comp=E,8.0nm,5.7s
JKR   Kurayoshi         3.29  43  A       A        01 32 22.9
         comp=E,9.0nm,7.7s,comp=E,9.0nm,5.8s
TJN   Taejon            4.56 319          Pn       01 32 40.5 +0.7
KSRS  Korea Array       5.15 331  Pn      Pn       01 32 48.9 +1.0
         1.8nm,0.3s,baz=146,slow=14,SNR=18
KSRS                              Sn      Sn       01 33 47.7 +0.4
         6.9nm,0.3s,baz=149,slow=26,SNR=6.0
KSRS                              Lg      Lg       01 34 14.9
         20nm,0.3s,baz=150,slow=31,SNR=11
KSRS                              LR      LR       01 34 53.5
         comp=Z,1µm,18.3s,baz=165,slow=39
         7.3nm,0.5s
KSAR  Wonju Array Be    5.16 330          Pn       01 32 48.9 +0.9
KS19  Wonju Array Si    5.22 331  Pn      Pn       01 32 48.8 -0.1
INU   Inuyama           5.46  63          Pn       01 32 53.2 +1.2
INCN  Inchon            5.78 322  Pn      Pn       01 32 57.1 +0.6
JGF   Kuroka            5.81  62  Pn      Pn       01 32 57.6 +0.6
JOW   Kunigami          6.60 202  Pn      Pn       01 33 11.1 +3.3
         3.8nm,0.3s,baz=70,slow=10,SNR=5.8
MJB9  Matsu-Tunnel      6.85  57          Pn       01 33 12.6 +1.3
MAJO  Matsushiro        6.85  57  Pn      Pn       01 33 12.6 +1.2
MJAR  Matsushiro Arr    6.86  57  Pn      Pn       01 33 12.5 +1.2
         1.3nm,0.3s,baz=243,slow=13,SNR=49
MJAR                              Lg      Lg       01 35 05.1
         baz=240,slow=39
         39nm,0.5s
MJAR  Matsushiro Arr    6.86  57          Pn       01 33 12.9 +1.6
JHJ   Hachijo jima 2    7.31  87  Pn      Pn       01 33 17.6 +0.1
         10nm,0.3s,baz=50,slow=18,SNR=1.1
         47nm,0.6s
USRK  Ussuriysk Ar.    11.22   3  Pn      Pn       01 34 17.1 +6.0
         0.2nm,0.3s,baz=184,slow=12,SNR=6.6
USRK                              LR      LR       01 38 02.0
         comp=Z,376nm,20.5s,baz=168,slow=35
CN2   Changchun        11.66 339 eP       Pn       01 34 22.4 +5.2
CN2                               pmax    pmax
         comp=Z,10.0nm,0.8s
CN2                               LR      LR
         comp=N,1µm,8.0s
CN2                               LR      LR
         comp=E,700nm,8.0s
CN2                               LR      LR
         comp=Z,1µm,9.0s
HNS   HongShan         14.09 293 ⇑P       P        01 34 54.2 -3.9
HNS                               S       Sn       01 37 27.5 +0.8
HNS                               pmax    pmax
         comp=Z,10.0nm,0.9s
HNS                               LR      LR
         comp=N,2µm,16.5s
HNS                               LR      LR
         comp=E,970nm,15.7s
HNS                               LR      LR
         comp=Z,950nm,13.3s
LYN   LuoYang          15.56 281 eP       P        01 35 12.9 -1.6
LYN                               pmax    pmax
         comp=Z,180nm,5.5s
LYN                               LR      LR
         comp=N,430nm,8.9s
LYN                               LR      LR
         comp=E,750nm,10.4s
LYN                               LR      LR
         comp=Z,920nm,10.0s
XAN   Xi'an            18.51 279  P       Pn       01 35 54.4 +7.1
XAN                               pP      sP       01 35 59.6 +7.2
XAN                               pmax    pmax
         comp=Z,8.0nm,1.3s
XAN                               LR      LR
         comp=N,1µm,20.9s
XAN                               LR      LR
         comp=E,380nm,20.4s
XAN                               LR      LR
         comp=Z,800nm,12.0s
LZH   Lanzhou          22.62 285 eP       P        01 36 35.9 +4.0
LZH                               pP      sP       01 36 44.2 +7.1
LZH                               sP      pP       01 36 48.4  +13
LZH                               pmax    pmax
         comp=Z,20nm,1.5s
LZH                               LR      LR
         comp=N,930nm,17.2s
LZH                               LR      LR
         comp=E,350nm,14.7s
LZH                               LR      LR
         comp=Z,400nm,16.5s
ULN   Ulaanbaatar      23.44 316  P       P        01 36 40.9 +0.7
ULN                               IAmb    IAmb     01 36 46.2
         comp=Z,25nm,1.1s
SONM  Songino Array    23.80 316  P       P        01 36 45.5 +1.8
         comp=Z,4.1nm,0.5s,baz=51,slow=12,SNR=5.0
         comp=Z,4.1nm,0.5s
SONM  Songino Array    23.80 316  P       P        01 36 44.5 +0.8
SONM                              IAmb    IAmb     01 36 49.9
         comp=Z,16nm,1.1s
GTA   Gaotai           25.95 293 ⇑P       P        01 37 04.2 +0.8
GTA                               sP      sP       01 37 14.0 +5.2
GTA                               pmax    pmax
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         comp=Z,7.0nm,1.0s
GTA                               pmax    pmax
         comp=Z,71nm,6.4s
GTA                               LR      LR
         comp=Z,2µm,15.9s
GTA                               LR      LR
         comp=Z,490nm,14.7s
GTA                               LR      LR
         comp=Z,560nm,15.5s
PZH   PanZhiHua        26.23 263  P       P        01 37 07.9 +1.9
PZH                               pmax    pmax
         comp=Z,10.0nm,1.0s
PZH                               pmax    pmax
         comp=Z,70nm,5.2s
PZH                               LR      LR
         comp=Z,420nm,11.0s
PZH                               LR      LR
         comp=Z,910nm,13.0s
PZH                               LR      LR
         comp=Z,700nm,14.7s
GOMU  GeErMu           29.92 286  P       P        01 37 40.6 +1.4
GOMU                              pP      pP       01 37 43.5 +0.4
GOMU                              sP      sP       01 37 46.8 +2.1
GOMU                              S       S        01 42 47.1  +10
GOMU                              pmax    pmax
         comp=Z,8.0nm,0.7s
GOMU                              pmax    pmax
         comp=Z,48nm,4.1s
GOMU                              LR      LR
         comp=Z,340nm,18.2s
GOMU                              LR      LR
         comp=Z,160nm,17.5s
GOMU                              LR      LR
         comp=Z,190nm,17.8s
CMAR  Chiang Mai Arr   32.22 251  P       P        01 38 00.3 +1.1
         comp=Z,1.3nm,0.4s,baz=56,slow=4.9,SNR=12
         comp=Z,1.3nm,0.4s
CMAR  Chiang Mai Arr   32.22 251  P       P        01 37 57.0 -2.1
FAKI  Fak Fak          35.73 178  P       P        01 38 29.5 -0.1
ODAN  Odare            38.15 273 eP       P        01 38 50.6 +0.1
ZALV  Zalesovo Beam    38.69 317  P       P        01 38 55.1 +0.7
         comp=Z,0.9nm,0.6s,baz=115,slow=6.7,SNR=3.7
         comp=Z,0.9nm,0.6s
ZALV  Zalesovo Beam    38.69 317  P       P        01 38 53.7 -0.8
JIRN  Jiri             38.89 274 eP       P        01 38 57.5 +0.6
GUN   Gumba            39.07 275 eP       P        01 38 59.4 +1.0
MK31  Makanchi Array   39.27 305  P       P        01 38 60.0 +0.5
MKAR  Makanchi Array   39.27 305  P       P        01 38 59.8 +0.4
         comp=Z,1.7nm,0.7s,baz=98,slow=9.1,SNR=9.7
MKAR                              PcP     PcP      01 41 06.2 -2.0
         comp=Z,2.1nm,1.0s,baz=66,slow=4.9,SNR=4.0
         comp=Z,1.7nm,0.7s
MAKZ  Makanchi         39.49 305  P       P        01 39 01.3  0.0
PKI   Pulchoki         39.57 275 eP       P        01 39 02.9 +0.3
BILL  Bilibino         40.50  19  P       P        01 39 08.4 -0.9
DANN  Dangsing         40.70 276 eP       P        01 39 12.3 +0.4
         comp=Z,23nm,0.7s
KOLN  Koldanda         41.02 276 eP       P        01 39 15.0 +0.6
         comp=Z,24nm,1.0s
PYUN  Piuthan          41.42 276 eP       P        01 39 18.7 +1.0
         comp=Z,40nm,0.9s
KURK  Kurchatov        41.94 311  P       P        01 39 20.8 -0.7
KURK                              IAmb    IAmb     01 39 31.2
         comp=Z,13nm,1.3s
KURBB Kurchatov Arra   41.99 311  P       P        01 39 21.9 +0.1
         comp=Z,3.5nm,0.9s,baz=97,slow=9.1,SNR=22
         comp=Z,3.5nm,0.9s
TARG  Taragay, Kyrgy   42.65 298  P       P        01 39 27.5 -0.3
KDJ   Kajisay          43.07 298  P       P        01 39 30.3 -0.6
NRIK  Noril'sk         43.71 339  P       P        01 39 35.2 -0.2
         comp=Z,4.3nm,0.7s,baz=116,slow=13,SNR=7.4
NRIK                              LR      LR       01 57 21.6
         comp=Z,112nm,18.9s,baz=134,slow=36
         comp=Z,4.3nm,0.7s
NRIK  Noril'sk         43.71 339  P       P        01 39 35.0 -0.4
NRIK                              IAmb    IAmb     01 39 59.0
         comp=Z,9.8nm,1.1s
KSH   Kashi            44.33 295  P       P        01 39 45.3 +4.2
KSH                               pP      sP       01 39 50.2 +3.6
KSH                               pmax    pmax
         comp=Z,6.0nm,1.2s
KSH                               LR      LR
         comp=Z,290nm,11.4s
KSH                               LR      LR
         comp=Z,280nm,12.4s
KSH                               LR      LR
         comp=Z,290nm,15.2s
PMG   Port Moresby     44.85 157  LR      LR       01 56 24.2
         comp=Z,59nm,20.2s,baz=330,slow=33
AAK   Ala-Archa        44.99 299  P       P        01 39 46.9 +0.5
MTN   Manton Dam       45.57 180  P       P        01 39 51.3 +0.4
BRVK  Borovoye         47.19 314  P       P        01 40 04.3 +1.0
BRVK                              IAmb    IAmb     01 40 13.9
         comp=Z,9.3nm,1.2s
KK31  Karatay Array    47.83 301  P       P        01 40 09.0 +0.6
KKAR  Karatay Array    47.83 301  P       P        01 40 09.2 +0.8
KKAR  Karatay Array    47.83 301  P       P        01 40 09.1 +0.7
GAR   Garm             48.74 295  P       P        01 40 15.3 -0.4
CHGR  Chuyangaron      49.70 295  P       P        01 40 22.6 -0.4
WRA   Warramunga Arr   52.72 176  P       P        01 40 44.5 -1.1
         comp=Z,2.8nm,0.9s,baz=356,slow=8.2,SNR=13
         comp=Z,2.8nm,0.9s
WB2   Warramunga Arr   52.72 176  P       P        01 40 45.1 -0.5
WB2                               IAmb    IAmb     01 41 10.0
         comp=Z,14nm,1.4s
WR0   Warramunga Arr   52.75 176  P       P        01 40 44.8 -1.0
WR0                               IAmb    IAmb     01 41 18.1
         comp=Z,7.0nm,1.1s
ARU   Arti             53.79 319  P       P        01 40 52.7 -0.4
ARU                               IAmb    IAmb     01 40 59.9
         comp=Z,7.6nm,0.9s
ABKAR Akbulak array    54.03 310  P       P        01 40 55.1 +0.1
ABKAR                             IAmb    IAmb     01 40 56.6
         comp=Z,7.4nm,0.8s
ABKAR Akbulak array    54.03 310  P       P        01 40 54.8 -0.2
ASAR  Alice Springs    56.40 177  P       P        01 41 12.1 -0.2
         comp=Z,2.5nm,0.8s,baz=9.1,slow=13,SNR=15
         comp=Z,2.5nm,0.8s
MDM   Murphy Dome      56.76  30  P       P        01 41 16.2 +1.8
MDM                               IAmb    IAmb     01 41 37.5
         comp=Z,6.4nm,1.0s
ILAR  Eielson Array    57.35  30  P       P        01 41 19.9 +1.2
         comp=Z,0.7nm,0.9s,baz=278,slow=7.9,SNR=6.2
         comp=Z,0.7nm,0.9s
INK   Inuvik           61.73  25  P       P        01 41 47.9 -0.8
         comp=Z,2.1nm,1.0s,baz=262,slow=7.1,SNR=2.4
         comp=Z,2.1nm,1.0s
C36M  Paulatuk         64.52  22  P       P        01 42 06.8 -0.4
ARCES ARCESS Array B   64.67 338  P       P        01 42 09.1 +0.9
         comp=Z,2.6nm,0.8s,baz=53,slow=8.1,SNR=4.3
ARCES                             LR      LR       02 14 51.7
         comp=Z,94nm,19.6s,baz=62,slow=40
         comp=Z,2.6nm,0.8s
STKA  Stephens Creek   65.27 170  P       P        01 42 12.8 +0.2
         comp=Z,2.1nm,0.8s,baz=320,slow=16,SNR=2.1
         comp=Z,2.1nm,0.8s
KBZ   Khabaz           66.89 308  P       P        01 42 23.5 +0.6
         comp=Z,7.7nm,0.8s,baz=114,slow=1.5,SNR=18
         comp=Z,7.7nm,0.8s
KIV   Kislovodsk       66.93 308  P       P        01 42 24.0 +0.6
ONI   Oni              66.98 307  P       P        01 42 22.7 -1.0
ONI                               IAmb    IAmb     01 42 29.4
         comp=Z,5.5nm,0.9s
FINES FINESS Array B   68.24 330  P       P        01 42 30.2 -0.9
         comp=Z,1.1nm,0.6s,baz=68,slow=6.1,SNR=16
FINES                             LR      LR       02 13 49.7
         comp=Z,173nm,18.3s,baz=68,slow=37
         comp=Z,1.1nm,0.6s
RES   Resolute Bay     68.46  12  P       P        01 42 33.0 +0.6
RES                               IAmb    IAmb     01 43 00.6
         comp=Z,4.1nm,1.1s
GURO  Guroymak-BITLI   69.68 303  P       P        01 42 39.6 -1.2
GURO                              IAmb    IAmb     01 42 48.8
         comp=Z,6.6nm,1.1s
YKA   Yellowknife Ar   71.38  27  P       P        01 42 50.8 +0.3
         comp=Z,1.6nm,0.8s,baz=303,slow=5.9,SNR=12
         comp=Z,1.6nm,0.8s
YKA   Yellowknife Ar   71.38  27  P       P        01 42 51.1 +0.6
AKASG Malin Array Be   72.04 319  P       P        01 42 53.5 -1.1
         comp=Z,1.0nm,0.4s,baz=56,slow=6.8,SNR=6.7
         comp=Z,1.0nm,0.4s
AKASG Malin Array Be   72.04 319  P       P        01 42 54.3 -0.3
RAYN  Ar Rayn          74.07 288  P       P        01 43 06.1 -1.1
RAYN                              IAmb    IAmb     01 43 12.6
         comp=Z,6.1nm,1.0s
NB2   NORSAR Subarra   74.36 334  P       P        01 43 09.1 +0.8
         comp=Z,4.3nm,1.4s,baz=50,slow=5.9
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NOA   NORSAR Array B   74.36 334  P       P        01 43 07.3 -1.0
         comp=Z,0.8nm,0.7s,baz=48,slow=5.7,SNR=4.2
         comp=Z,0.8nm,0.7s
BRTR  Keskin Array B   74.87 308  P       P        01 43 11.7 -0.1
         comp=Z,5.2nm,1.0s,baz=97,slow=3.6,SNR=9.3
         comp=Z,5.2nm,1.0s
BRTR  Keskin Array B   74.87 308  P       P        01 43 11.2 -0.6
BUR08 Bucovina Ar. S   75.90 318  P       P        01 43 16.9 -0.6
BORA  Eskisehir        76.89 309  P       P        01 43 22.4 -0.9
BORA                              IAmb    IAmb     01 43 27.0
         comp=Z,7.7nm,0.9s
CLL   Collm            80.01 326 eP       P        01 43 40.0 -0.1
CLL                               LmV              02 22 00.0
         comp=Z,200nm,19.4s
CONA  Conrad Observa   80.78 322 eP       P        01 43 50.6 +6.1
         comp=Z,2.4nm,0.9s
GERES GERESS Array B   81.29 324  P       P        01 43 47.2  0.0
         comp=Z,0.2nm,0.5s,baz=24,slow=7.5,SNR=2.1
         comp=Z,0.2nm,0.5s
GERES GERESS Array B   81.29 324  P       P        01 43 45.7 -1.4
SOKA  Soboth           82.02 321 eP       P        01 43 52.0 +0.9
         comp=Z,3.8nm,1.0s
KBA   Koelnbreinsper   82.63 322 eP       P        01 43 59.6 +5.2
         comp=Z,0.7nm,0.3s
WATA  Walderalm        83.36 323 eP       P        01 44 02.7 +4.6
         comp=Z,1.4nm,0.6s
MOTA  Moosalm          83.59 324 eP       P        01 44 02.6 +3.3
         comp=Z,3.2nm,1.0s
SQTA  Sankt Quirin     83.62 324 eP       P        01 44 01.9 +2.5
         comp=Z,2.7nm,0.7s
LHV   Little Huntoon   84.07  48  P       P        01 44 02.6 +0.9
LHV                               IAmb    IAmb     01 44 05.8
         comp=Z,8.3nm,1.3s
NVAR  Mina Array Bea   84.09  48  P       P        01 44 02.9 +0.8
         comp=Z,0.2nm,0.3s,baz=274,slow=6.1,SNR=1.8
         comp=Z,0.2nm,0.3s
DAVA  Damuels          84.23 324 eP       P        01 44 06.1 +3.6
         comp=Z,2.8nm,0.6s
PDAR  Pinedale Array   86.38  40  P       P        01 44 13.2 -0.4
         comp=Z,0.6nm,0.9s,baz=316,slow=4.1,SNR=4.5
         comp=Z,0.6nm,0.9s
PDAR  Pinedale Array   86.38  40  P       P        01 44 12.9 -0.6
P18A  Preston Nutter   88.12  43  P       P        01 44 21.4 -0.7
P18A                              IAmb    IAmb     01 44 30.3
         comp=Z,5.0nm,1.1s
SMCO  Snowmass         90.27  41  P       P        01 44 31.4 -0.9
SMCO                              IAmb    IAmb     01 44 36.8
         comp=Z,2.3nm,0.8s
ESDC  Sonseca Array    96.57 327  P       P        01 45 00.9 +0.1
         comp=Z,0.6nm,0.9s,baz=94,slow=6.2,SNR=6.6
         comp=Z,0.6nm,0.9s
ESDC  Sonseca Array    96.57 327  P       P        01 44 59.8 -1.0
ESDC                              IAmb    IAmb     01 45 08.4
         comp=Z,2.1nm,1.2s
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*BJI **05** 01:40:10.9±0.0, 32.°76N×131.°24E, h10^{km}, mb4.6/39, mB4.9/21, Ms4.7/40, Ms7 4.4/36*

*IDC **05** 01:40:11.8±0.5, 33.°08N×131.°22E, h0^{km}, mb4.2/24, mbtmp4.2/28, ML3.7/2, MS3.9/44, Error ellipse: s-maj=12.4km s-min=5.3km az=4.0*

*NIED **05** 01:40:12.8, 32.°99N×131.°12E, h11^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.21; M$_{θθ}$1.57; M$_{φφ}$-1.36; M$_{rθ}$-0.40; M$_{θφ}$-0.20; M$_{φr}$-0.05; Fault plane solution: M$_0$1.52000×10^{16} NP1: φ$_s$320.00000°, δ79.00000°, λ6.00000°. NP2: φ$_s$228.00000°, δ84.00000°, λ169.00000°.*

*JMA **05** 01:40:12.8±0.0, 33.°0N±0.°1×131.°1E±0.°1, h11^{km}, MD4.9/20, MW4.8/20, NE KUMAMOTO PREF*

JMA Felt IV J1 at NE KUMAMOTO PREF .

*NEIC **05** 01:40:14.3±1.6, 33.°00N±0.°04×131.°05E±0.°05, h14^{km}±3^{km}, mb4.8/55, Mwr4.6/15, Error ellipse: s-maj=6.4km s-min=5.9km az=55.0*

*NEIC **05** 01:40:14.2, 33.°00N×131.°06E, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.21; M$_{θθ}$1.03; M$_{φφ}$-1.24; M$_{rθ}$0.20; M$_{θφ}$0.02; M$_{φr}$-0.08; Fault plane solution: M$_0$1.17000×10^{16} NP1: φ$_s$43.94000°, δ78.75000°, λ173.07000°. NP2: φ$_s$135.30000°, δ83.20000°, λ11.33000°. Principal axes: T 1.0731, Plg13.0000°, Azm360.0000°; N 0.1715, Plg77.0000°, Azm166.0000°; P -1.2446, Plg3.0000°, Azm269.0000°;*

*GCMT **05** 01:40:17.4±0.4, 33.°02N±0.°02×130.°92E±0.°02, h24^{km}±1^{km}, MW4.9/82, Moment Tensor Solution. s16,c16; s82,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.05±.15; M$_{θθ}$2.51±.12; M$_{φφ}$-2.56±.13; M$_{rθ}$0.83±.26; M$_{θφ}$-0.30±.10; M$_{φr}$-1.20±.28; Best double couple: M$_0$2.93700×10^{16} NP1: φ$_s$49.00000°, δ60.00000°, λ-179.00000°. NP2: φ$_s$318.00000°, δ89.00000°, λ-30.00000°. Principal axes: T 2.8470, Plg19.0000°, Azm8.0000°; N 0.1820, Plg60.0000°, Azm136.0000°; P -3.0280, Plg21.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 01:40:13.7±0.3, **33.°01N**±0.°04×**131.°14E**±0.°03, **h12^{km}, n225, σ1.^{s}61**/158, **mb4.6**/61, **MS4.0**/45, **4C-6D, Kyushu**

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Code  Station Name      Δ°   AZ°   Phase ID          Time       Res
                                  Op      ISC       h  m  s    ISC
JNU   Nakatsue          0.24 297  Pg      Pg       01 40 17.4 -1.4
         7µm,0.3s,baz=109,slow=7.3,SNR=3840
JNU                               Lg      Lg       01 40 21.3
         17µm,0.3s,baz=75,slow=16,SNR=38
JNU   Nakatsue          0.24 297  Pg      Pg       01 40 17.9 -0.9
JNU                               Sg      Sg       01 40 21.7 -0.5
JNU   Nakatsue          0.24 297 ⇓P       Pg       01 40 17.8 -0.9
JNU                              ⇓eS      Sg       01 40 21.8 -0.5
JNU   Nakatsue          0.24 297  A       A        01 40 17.8
         comp=E,305nm,1.2s,comp=E,567nm,1.0s
JBEP  Beppuamama        0.40  35  A       A        01 40 21.1
         comp=E,262nm,5.7s,comp=E,287nm,4.8s
JKIT  Kitakata          0.47 145  A       A        01 40 21.8
         comp=E,154nm,4.4s,comp=E,139nm,0.9s
JTA   Tamana            0.51 265 ⇓iP      Pg       01 40 22.6 -1.1
JTA                              ⇓S       Sg       01 40 29.8 -0.7
JTA   Tamana            0.51 265  A       A        01 40 22.6
         comp=E,71nm,2.7s,comp=E,80nm,3.0s
JUS   Usuki             0.52  84 iP       Pg       01 40 22.9 -0.9
JUS                               S       Sg       01 40 30.3 -0.4
JUS   Usuki             0.52  84  A       A        01 40 22.9
         comp=E,84nm,2.7s,comp=E,117nm,2.7s
JIU3  Izumi3            0.54 211 iP       Pg       01 40 23.2 -1.0
JIU3  Izumi3            0.54 211  A       A        01 40 23.2
         comp=E,108nm,6.3s,comp=E,103nm,6.1s
JSKE  Saikikamae        0.68 108  A       A        01 40 25.9
         comp=E,25nm,3.8s,comp=E,44nm,4.1s
JHHC  Hyugahichiya      0.71 143  A       A        01 40 26.2
         comp=E,99nm,0.9s,comp=E,84nm,2.9s
JKI   Kunimi            0.72  30  A       A        01 40 27.0
         comp=E,66nm,4.5s,comp=E,88nm,4.8s
JFI   Itaya             0.75 304  A       A        01 40 27.2
         comp=E,44nm,1.1s,comp=E,85nm,5.7s
JFA   Akaike            0.75 338  A       A        01 40 27.5
         comp=E,86nm,4.4s,comp=E,77nm,1.0s
JTSN  Tsuno             0.83 158  A       A        01 40 28.2
         comp=E,113nm,7.7s,comp=E,50nm,3.5s
JZO   Okuchi            0.98 208  A       A        01 40 30.8
         comp=E,86nm,5.3s,comp=E,86nm,6.5s
JUR   Ureshino          1.00 275  A       A        01 40 31.5
         comp=E,48nm,1.6s,comp=E,34nm,2.4s
JHD   Hondo             1.00 237  A       A        01 40 31.3
         comp=E,46nm,2.6s,comp=E,93nm,4.8s
JTZ   Takazaki          1.11 182  A       A        01 40 33.1
         comp=E,98nm,4.4s,comp=E,28nm,3.0s
NGSJ  Nagasakinomoza    1.19 252  A       A        01 40 34.5
         comp=E,22nm,6.9s,comp=E,30nm,7.2s
JKD   Kudamatsu         1.21  30  A       A        01 40 35.5
         comp=E,37nm,4.4s,comp=E,32nm,7.0s
JTY   Toyota            1.25 357  A       A        01 40 36.2
         comp=E,37nm,2.1s,comp=E,23nm,2.8s
JNA   Nagahama          1.25  64  A       A        01 40 36.1
         comp=E,24nm,0.9s,comp=E,30nm,2.4s
UWA2  Uwa jima 2        1.27  80  A       A        01 40 36.3
         comp=E,27nm,3.0s,comp=E,53nm,1.3s
JNKG  Nichinankitago    1.36 171  A       A        01 40 37.3
         comp=E,67nm,5.4s,comp=E,34nm,3.7s
JTO   Tosashimizu       1.41  96  A       A        01 40 38.5
         comp=E,45nm,1.3s,comp=E,46nm,2.0s
JII   Iki               1.41 304  A       A        01 40 38.5
         comp=E,75nm,1.4s,comp=E,84nm,2.7s
JNAR  Kushima--Naru     1.49 176  A       A        01 40 39.2
         comp=E,71nm,5.7s,comp=E,37nm,3.3s
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JSU   Suzuyama          1.61 201  Pn    Pn     01 40 41.4  -0.6
JSU                               Sn    Sn     01 41 01.6  -1.0
JSU   Suzuyama          1.61 201  A     A      01 40 41.1
      comp=E,24nm,6.1s,comp=E,18nm,1.7s
JHM   Kurahashi         1.62  46  A     A      01 40 41.9
      comp=E,27nm,6.6s,comp=E,27nm,5.4s
JKU   Kubokawa          1.64  79  A     A      01 40 42.2
      comp=E,29nm,5.1s,comp=E,24nm,6.8s
JHIK  Hikimi            1.65  23  A     A      01 40 42.5
      comp=E,24nm,4.3s,comp=E,13nm,7.0s
JHGM  Hagimishima       1.77   0  A     A      01 40 44.1
      comp=E,38nm,3.0s,comp=E,23nm,4.1s
JET   Tanbara           1.77  64  A     A      01 40 44.2
      comp=E,19nm,0.8s,comp=E,23nm,1.3s
JSJ   Shimokoshiki      1.79 222  A     A      01 40 43.9
      comp=E,21nm,7.6s,comp=E,32nm,5.0s
JTSR  Tashiro 2         1.85 186  A     A      01 40 44.7
      comp=E,19nm,2.9s,comp=E,10.0nm,2.2s
JHT   Toyohira          1.96  33  A     A      01 40 47.0
      comp=E,20nm,5.5s,comp=E,13nm,6.6s
JTSM  Tsushimamitsus    1.97 313  A     A      01 40 46.9
      comp=E,31nm,2.2s,comp=E,35nm,1.5s
JFU   Fukue jima 2      2.04 261  A     A      01 40 47.6
      comp=E,14nm,5.6s,comp=E,12nm,3.8s
JKHR  Kochiharuno       2.04  75  A     A      01 40 48.1
      comp=E,21nm,4.9s,comp=E,30nm,6.5s
JTU   Tsushima          2.09 317  Pn    Pn     01 40 47.6  -0.9
JTU   Tsushima          2.09 317  A     A      01 40 48.7
      comp=E,34nm,1.1s,comp=E,33nm,1.2s
JJG   Jouge             2.34  45  A     A      01 40 52.4
      comp=E,14nm,6.6s,comp=E,23nm,6.4s
JGT2  ShimaneMisato     2.34  29  A     A      01 40 52.5
      comp=E,18nm,7.3s,comp=E,17nm,6.6s
JTN   Tanegashima 3     2.35 183  A     A      01 40 52.0
      comp=E,13nm,4.9s,comp=E,13nm,4.4s
JMN   Monobe            2.40  72  Pn    Pn     01 40 54.1  +1.3
JMN   Monobe            2.40  72  A     A      01 40 53.3
      comp=E,21nm,4.8s,comp=E,22nm,4.3s
MRT2  Murotomisaki 2    2.55  81  A     A      01 40 55.3
      comp=E,14nm,7.5s,comp=E,15nm,7.5s
JHS   Saijyo            2.58  39  Pn    Pn     01 40 56.0  +0.8
JHS   Saijyo            2.58  39  A     A      01 40 55.9
      comp=E,19nm,5.6s,comp=E,15nm,4.2s
JMTN  Minamitane        2.62 184  A     A      01 40 55.8
      comp=E,13nm,2.7s,comp=E,6.0nm,2.8s
JJS   Sakaide           2.70  59  A     A      01 40 57.6
      comp=E,8.0nm,2.7s,comp=E,19nm,8.3s
JMAF  Mimaanabuki       2.72  67  A     A      01 40 57.9
      comp=E,8.0nm,5.0s,comp=E,15nm,1.5s
JISK  Izumosakaura      2.86  29  A     A      01 40 59.9
      comp=E,24nm,5.2s,comp=E,27nm,4.4s
JAI   Aioi              2.88  73  A     A      01 41 00.1
      comp=E,10.0nm,4.3s,comp=E,14nm,5.1s
JNM   Ikuma             2.93  32  A     A      01 41 01.0
      comp=E,25nm,7.0s,comp=E,19nm,7.6s
JAD   Aida              3.17  52  A     A      01 41 04.3
      comp=E,11nm,9.7s,comp=E,15nm,8.0s
JKR   Kurayoshi         3.24  43  A     A      01 41 05.4
      comp=E,15nm,8.1s,comp=E,15nm,5.4s
JKSM  Kasumi            3.89  48  A     A      01 41 14.5
      comp=E,8.0nm,1.9s,comp=E,13nm,6.8s
JKY   Yasaka            4.19  50  A     A      01 41 18.8
      comp=E,11nm,6.3s,comp=E,14nm,6.3s
TJN   Taejon            4.57 318  Pn    Pn     01 41 22.6   0.0
KSRS  Korea Array       5.15 330  Pn    Pn     01 41 31.6  +1.0
      1.8nm,0.3s,baz=146,slow=14,SNR=9.6
KSRS                              Sn    Sn     01 42 28.9  -1.1
      9.2nm,0.3s,baz=143,slow=17,SNR=5.0
KSRS                              Lg    Lg     01 42 54.0
      12nm,0.3s,baz=150,slow=30,SNR=12
KSRS                              LR    LR     01 43 34.8
      comp=Z,1µm,19.3s,baz=150,slow=40
      5.1nm,0.4s
KS19  Wonju Array Si    5.22 330        Pn     01 41 32.1  +0.6
INU   Inuyama           5.40  63        Pn     01 41 36.0  +1.9
JGF   Kuroka            5.76  62  Pn    Pn     01 41 39.8  +0.8
INCN  Inchon            5.78 322  Pn    Pn     01 41 39.5  +0.2
JOW   Kunigami          6.64 203  Pn    Pn     01 41 52.6  +1.6
      3.9nm,0.3s,baz=79,slow=9.3,SNR=4.5
      22nm,0.4s
JOW   Kunigami          6.64 203  Pn    Pn     01 41 51.7  +0.6
MJB9  Matsu-Tunnel      6.80  57        Pn     01 41 55.0  +1.7
MAJO  Matsushiro        6.80  57  Pn    Pn     01 41 54.9  +1.6
MJAR  Matsushiro Arr    6.80  57  Pn    Pn     01 41 55.0  +1.7
      0.9nm,0.3s,baz=242,slow=13,SNR=48
MJAR                              Lg    Lg     01 43 45.0
      baz=242,slow=11
MJAR  Matsushiro Arr    6.80  57        Pn     01 41 54.5  +1.2
JHJ   Hachijo jima 2    7.26  87  Pn    Pn     01 42 00.3  +0.7
      70nm,0.3s,baz=218,slow=20,SNR=8.8
JHJ                               LR    LR     01 44 58.5
      comp=Z,1µm,18.6s,baz=296,slow=40
USRK  Ussuriysk Ar.    11.19   3  Pn    Pn     01 42 53.7  +0.3
      1.2nm,0.4s,baz=183,slow=13,SNR=1.7
USRK                              LR    LR     01 46 45.8
      comp=Z,559nm,20.2s,baz=157,slow=35
CN2   Changchun        11.65 339  eP    Pn     01 43 06.2  +6.4
CN2                               pmax  pmax
      comp=Z,20nm,1.1s
CN2                               LR    LR
      comp=N,3µm,12.0s
CN2                               LR    LR
      comp=E,7µm,12.0s
CN2                               LR    LR
      comp=Z,2µm,9.0s
TIA   Tai'an           11.98 289 ⇑P     Pn     01 43 08.1  +3.9
TIA                               pmax  pmax
      comp=Z,7.0nm,1.0s
TIA                               pmax  pmax
      comp=Z,270nm,4.8s
TIA                               LR    LR
      comp=N,4µm,15.7s
TIA                               LR    LR
      comp=E,1µm,12.3s
TIA                               LR    LR
      comp=Z,2µm,9.4s
BNX   BinXian          13.03 348 ⇓P     Pn     01 43 23.2  +4.7
BNX                               pmax  pmax
      comp=Z,30nm,1.2s
BNX                               pmax  pmax
      comp=Z,800nm,4.5s
HNS   HongShan         14.12 293 ⇑P     Pn     01 43 36.8  +3.3
HNS                               S     Sn     01 46 11.6  +1.4
HNS                               pmax  pmax
      comp=Z,21nm,1.3s
HNS                               LR    LR
      comp=N,3µm,15.7s
HNS                               LR    LR
      comp=E,1µm,16.7s
HNS                               LR    LR
      comp=Z,930nm,15.1s
ASAJ  Asahikawa        14.24  36  Pn    Pn     01 43 36.6  +1.6
      0.4nm,0.3s,baz=206,slow=9.3,SNR=5.7
ASAJ                              LR    LR     01 48 44.4
      comp=Z,311nm,19.0s,baz=162,slow=36
JKA   Kamikawa-asahi   14.24  36  Pn    Pn     01 43 36.6  +1.5
WHN   Wuhan            14.49 265 ⇑P     Pn     01 43 40.9  +2.3
WHN                               S     Sn     01 46 24.6  +5.4
WHN                               LR    LR
      comp=N,5µm,9.5s
WHN                               LR    LR
      comp=E,2µm,10.6s
WHN                               LR    LR
      comp=Z,5µm,12.3s
LYN   LuoYang          15.60 281 ⇓P     Pn     01 43 54.7  +1.3
LYN                               PP    sP     01 44 09.6  +6.7
LYN                               pmax  pmax
      comp=Z,20nm,1.1s
LYN                               pmax  pmax
      comp=Z,460nm,4.0s
LYN                               LR    LR
      comp=N,1µm,11.5s
LYN                               LR    LR
      comp=E,770nm,14.1s
LYN                               LR    LR
      comp=Z,2µm,10.6s
BTO   Baotou           18.50 300  eP    Pn     01 44 33.3  +3.4
XAN   Xi'an            18.55 279  P     Pn     01 44 32.0  +1.5
XAN                               pP    sP     01 44 40.7  +5.1
XAN                               pmax  pmax
      comp=Z,12nm,1.8s
XAN                               LR    LR
      comp=N,1µm,11.6s
XAN                               LR    LR
      comp=E,790nm,11.6s
XAN                               LR    LR
      comp=Z,1µm,12.6s
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ENH   Enshi            18.63 267  P     P      01 44 28.0  -3.2
LZH   Lanzhou          22.66 285  eP    P      01 45 25.7  +11
LZH                               pP    sP     01 45 31.3  +11
LZH                               sP    pP     01 45 35.0  +16
LZH                               pmax  pmax
      comp=Z,18nm,1.5s
LZH                               LR    LR
      comp=N,1µm,17.2s
LZH                               LR    LR
      comp=E,500nm,15.0s
LZH                               LR    LR
      comp=Z,790nm,14.7s
GUMO  Guam             23.04 144  LR    LR     01 52 27.3
      comp=Z,130nm,21.1s,baz=85,slow=32
ULN   Ulaanbaatar      23.45 316  P     P      01 45 22.1  -0.9
ULN                               IAmb  IAmb   01 45 29.7
      comp=Z,30nm,1.1s
SONM  Songino Array    23.82 316  P     P      01 45 27.0  +0.5
      comp=Z,8.4nm,0.8s,baz=120,slow=10,SNR=1.5
      comp=Z,8.4nm,0.8s
GTA   Gaotai           25.98 293 ⇑P     P      01 45 46.9  +0.5
GTA                               pP    sP     01 45 52.6  +0.7
GTA                               sP    pP     01 45 56.5  +6.3
GTA                               pmax  pmax
      comp=Z,8.0nm,1.0s
GTA                               pmax  pmax
      comp=Z,150nm,5.2s
GTA                               LR    LR
      comp=Z,2µm,15.9s
GTA                               LR    LR
      comp=Z,420nm,15.9s
GTA                               LR    LR
      comp=Z,630nm,14.7s
PZH   PanZhiHua        26.28 263  P     P      01 45 50.4  +1.2
PZH                               pP    sP     01 45 53.6  -1.1
PZH                               S     S      01 50 23.9  +2.2
PZH                               pmax  pmax
      comp=Z,10.0nm,0.9s
PZH                               pmax  pmax
      comp=Z,130nm,4.4s
PZH                               LR    LR
      comp=Z,570nm,13.0s
PZH                               LR    LR
      comp=Z,910nm,13.5s
PZH                               LR    LR
      comp=Z,710nm,14.0s
DAV   Davao City (W)   26.32 193  LR    LR     01 58 24.8
      comp=Z,213nm,18.2s,baz=336,slow=41
PETK  Petropavlovsk-   27.66  36  LR    LR     01 56 47.7
      comp=Z,238nm,21.3s,baz=192,slow=36
YAK   Yakutsk          29.05 359  LR    LR     01 57 14.8
      comp=Z,234nm,20.0s,baz=223,slow=35
MA2   Magadan          29.59  20  LR    LR     01 57 55.7
      comp=Z,136nm,18.7s,baz=227,slow=36
GOMU  GeErMu           29.95 286  P     P      01 46 23.3  +1.1
GOMU                              pmax  pmax
      comp=Z,14nm,0.8s
GOMU                              pmax  pmax
      comp=Z,67nm,4.5s
GOMU                              LR    LR
      comp=Z,370nm,12.4s
GOMU                              LR    LR
      comp=Z,260nm,12.9s
GOMU                              LR    LR
      comp=Z,230nm,12.1s
CMAR  Chiang Mai Arr   32.27 251  P     P      01 46 43.6  +1.3
      comp=Z,0.9nm,0.3s,baz=48,slow=6.3,SNR=8.2
CMAR                              LR    LR     02 02 08.8
      comp=Z,201nm,18.5s,baz=55,slow=41
      comp=Z,0.9nm,0.3s
CMAR  Chiang Mai Arr   32.27 251  P     P      01 46 41.3  -1.1
SIJI  Sorong           33.70 180  LR    LR     01 59 49.5
      comp=Z,124nm,20.6s,baz=328,slow=35
SANI  Sanana           35.21 189  P     P      01 47 04.6  -3.3
      comp=Z,8.8nm,0.8s
FAKI  Fak Fak          35.75 178  P     P      01 47 11.7  -0.8
FAKI                              IAmb  IAmb   01 47 16.1
      comp=Z,14nm,0.7s
SHEM  Shemya Is, Ala   36.45  44  LR    LR     02 02 32.5
      comp=Z,55nm,20.6s,baz=16,slow=37
TAPN  Taplejung        37.76 273  eP    P      01 47 30.5  +0.5
ODAN  Odare            38.19 273  eP    P      01 47 33.3  -0.3
ZALV  Zalesovo Beam    38.70 317  P     P      01 47 38.3  +1.0
      comp=Z,0.4nm,0.3s,baz=119,slow=12,SNR=2.4
ZALV                              PcP   PcP    01 49 48.6  -0.2
      comp=Z,0.8nm,0.5s,baz=157,slow=5.6,SNR=2.4
ZALV                              LR    LR     02 02 38.3
      comp=Z,211nm,19.6s,baz=109,slow=35
      comp=Z,0.4nm,0.3s
JIRN  Jiri             38.93 274  eP    P      01 47 40.6  +0.6
GUN   Gumba            39.11 275  eP    P      01 47 42.0  +0.6
      comp=Z,50nm,0.8s
MK31  Makanchi Array   39.29 305  P     P      01 47 42.6  +0.2
MKAR  Makanchi Array   39.29 305  P     P      01 47 42.1  -0.2
      comp=Z,2.0nm,0.8s,baz=91,slow=11,SNR=12
MKAR                              LR    LR     02 04 33.3
      comp=Z,266nm,18.3s,baz=91,slow=37
      comp=Z,2.0nm,0.8s
MKAR  Makanchi Array   39.29 305  P     P      01 47 42.5  +0.1
KAPI  Kappang          39.33 198  LR    LR     02 06 45.9
      comp=Z,102nm,18.1s,baz=9.5,slow=40
MAKZ  Makanchi         39.51 305  P     P      01 47 44.1   0.0
PKI   Pulchoki         39.62 275  eP    P      01 47 45.4  -0.2
BILL  Bilibino         40.46  19  P     P      01 47 52.1  +0.4
DANN  Dangsing         40.74 276  eP    P      01 47 55.4  +0.5
      comp=Z,41nm,0.8s
KOLN  Koldanda         41.06 276  eP    P      01 47 57.5   0.0
      comp=Z,20nm,0.8s
PYUN  Piuthan          41.47 276  eP    P      01 48 01.5  +0.7
      comp=Z,60nm,1.0s
KURK  Kurchatov        41.96 311  P     P      01 48 04.2  -0.1
KURK                              IAmb  IAmb   01 48 11.6
      comp=Z,12nm,1.1s
KURBB Kurchatov Arra   42.01 311  P     P      01 48 05.0  +0.3
      comp=Z,2.4nm,0.2s,baz=97,slow=8.9,SNR=27
      comp=Z,2.4nm,0.2s
PSI   Prapat           42.58 232  P     P      01 48 11.6  +1.8
      comp=Z,6.6nm,0.9s,baz=78,slow=5.7,SNR=6.0
      comp=Z,6.6nm,0.9s
TARG  Taragay, Kyrgy   42.68 298  P     P      01 48 10.6  -0.2
KDJ   Kajisay          43.10 298  P     P      01 48 14.1  +0.2
NRIK  Noril'sk         43.70 339  P     P      01 48 17.5  -0.6
      comp=Z,4.1nm,0.7s,baz=116,slow=9.5,SNR=6.7
      comp=Z,4.1nm,0.7s
NRIK  Noril'sk         43.70 339  P     P      01 48 18.0  -0.1
BOOM  Boomskoye usch   43.98 299  P     P      01 48 19.9  -1.0
AAK   Ala-Archa        45.02 299  P     P      01 48 28.1  -1.2
      comp=Z,0.9nm,0.3s,baz=137,slow=18,SNR=2.5
AAK                               LR    LR     02 06 52.0
      comp=Z,213nm,18.1s,baz=76,slow=36
      comp=Z,0.9nm,0.3s
BRVK  Borovoye         47.21 314  P     P      01 48 46.6  +0.5
BRVK                              IAmb  IAmb   01 48 54.5
      comp=Z,7.1nm,0.8s
KK31  Karatay Array    47.85 301  P     P      01 48 51.5  +0.2
KKAR  Karatay Array    47.85 301  P     P      01 48 51.8  +0.4
KKAR  Karatay Array    47.85 301  P     P      01 48 51.6  +0.3
KKAR                              IAmb  IAmb   01 48 58.2
      comp=Z,16nm,0.9s
BTK   Batken           48.17 297  P     P      01 48 53.5  -0.4
KNRA  Kununurra        48.47 183  P     P      01 48 56.6  +0.5
GAR   Garm             48.77 295  P     P      01 48 57.8  -0.9
ANM   Nome             49.38  31  P     P      01 49 03.7  +0.9
ANM                               IAmb  IAmb   01 49 06.1
      comp=Z,14nm,1.3s
CHGR  Chuyangaron      49.73 295  P     P      01 49 04.8  -1.1
FITZ  Fitzroy Crossi   51.09 187  LR    LR     02 12 23.3
      comp=Z,47nm,18.7s,baz=16,slow=38
WRA   Warramunga Arr   52.75 176  P     P      01 49 27.8  -0.7
      comp=Z,3.3nm,0.9s,baz=350,slow=7.9,SNR=17
      comp=Z,3.3nm,0.9s
WRA   Warramunga Arr   52.75 176  P     P      01 49 28.2  -0.3
WR0   Warramunga Arr   52.77 176  P     P      01 49 28.4  -0.2
WR0                               IAmb  IAmb   01 49 32.9
      comp=Z,11nm,1.0s
PALK  Pallekele        53.19 253  LR    LR     02 15 35.2
      comp=Z,114nm,18.4s,baz=152,slow=40
ARU   Arti             53.80 319  P     P      01 49 35.5  -0.3
ARU                               IAmb  IAmb   01 49 40.3
      comp=Z,6.4nm,0.8s
ABKAR Akbulak array    54.05 310  P     P      01 49 38.3  +0.5
ABKAR                             IAmb  IAmb   01 49 42.7
      comp=Z,13nm,0.8s
ABKAR Akbulak array    54.05 310  P     P      01 49 38.5  +0.7
J20K  Nowinta River    54.23  31  P     P      01 49 40.3  +1.4
J20K                              IAmb  IAmb   01 49 47.8
      comp=Z,8.3nm,0.9s
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K20K  Telida           54.31  32  P     P      01 49 40.1  +0.5
K20K                              IAmb  IAmb   01 49 48.6
      comp=Z,5.7nm,0.8s
AKTO  Aktyubinsk       55.05 312  LR    LR     02 12 21.5
      comp=Z,208nm,20.2s,baz=81,slow=35
KDAK  Kodiak Island    55.62  39  LR    LR     02 15 48.5
      comp=Z,94nm,18.7s,baz=257,slow=38
H23K  Yukon River      56.06  29  P     P      01 49 53.5  +1.3
H23K                              IAmb  IAmb   01 50 05.9
      comp=Z,11nm,1.1s
NEA2  Nenana           56.40  31  P     P      01 49 55.1  +0.6
NEA2                              IAmb  IAmb   01 50 03.1
      comp=Z,7.3nm,1.0s
AS31  Alice Springs    56.42 177  P     P      01 49 55.5  +0.3
ASAR  Alice Springs    56.42 177  P     P      01 49 55.6  +0.5
      comp=Z,4.0nm,0.8s,baz=358,slow=5.5,SNR=21
ASAR                              LR    LR     02 15 10.0
      comp=Z,43nm,18.3s,baz=3.0,slow=37
      comp=Z,4.0nm,0.8s
ASAR  Alice Springs    56.42 177  P     P      01 49 54.8  -0.4
MDM   Murphy Dome      56.71  30  P     P      01 49 57.5  +0.7
MDM                               IAmb  IAmb   01 50 05.4
      comp=Z,13nm,1.0s
ILAR  Eielson Array    57.30  30  P     P      01 50 00.8  -0.2
      comp=Z,0.6nm,0.8s,baz=274,slow=6.0,SNR=4.9
      comp=Z,0.6nm,0.8s
ILAR  Eielson Array    57.30  30  P     P      01 50 00.9  -0.1
BMAR  Burnt Mountain   57.82  27  P     P      01 50 05.2  +0.5
GEYT  Alibeck          58.27 297  P     P      01 50 09.0  +0.8
      comp=Z,1.5nm,0.8s,baz=73,slow=15,SNR=3.0
      comp=Z,1.5nm,0.8s
KIRV  Kirov            58.31 322  LR    LR     02 15 22.4
      comp=Z,260nm,18.5s,baz=81,slow=36
SCRK  Sand Creek       58.69  31  P     P      01 50 11.1  +0.3
SCRK                              IAmb  IAmb   01 50 18.5
      comp=Z,8.0nm,1.2s
M26K  Nabesna, AK      59.47  33  P     P      01 50 17.0  +0.8
M26K                              IAmb  IAmb   01 50 24.3
      comp=Z,16nm,1.4s
INK   Inuvik           61.69  25  P     P      01 50 29.9  -1.3
      comp=Z,1.6nm,0.8s,baz=308,slow=5.2,SNR=7.2
INK                               LR    LR     02 19 07.6
      comp=Z,86nm,18.3s,baz=298,slow=38
      comp=Z,1.6nm,0.8s
INK   Inuvik           61.69  25  P     P      01 50 31.1   0.0
INK                               IAmb  IAmb   01 51 03.4
      comp=Z,7.9nm,1.4s
HYT   Haines Junctio   62.42  34  P     P      01 50 37.2  +0.8
HYT                               IAmb  IAmb   01 50 46.0
      comp=Z,8.5nm,1.0s
KLMR  Klimovskoe       62.53 327  eP    P      01 50 34.9  -2.0
KLMR                              AMP          01 50 36.8
      comp=Z,15nm,1.5s
KLMR                              LQ    LQ     02 13 22.9
KLMR                              LQ    LQ     02 13 22.9
SPITS Spitsbergen Ar   62.74 348  LR    LR     02 19 40.6
      comp=Z,146nm,18.7s,baz=255,slow=38
WSAR  Wadi Sarin       63.57 282  LR    LR     02 21 04.6
      comp=Z,82nm,19.2s,baz=76,slow=39
C36M  Paulatuk         64.48  22  P     P      01 50 50.3  +0.7
C36M                              IAmb  IAmb   01 50 59.6
      comp=Z,6.6nm,0.8s
ARCES ARCESS Array B   64.66 338  P     P      01 50 49.5  -1.4
      comp=Z,9.1nm,1.1s,baz=45,slow=9.0,SNR=2.9
      comp=Z,9.1nm,1.1s
ARCES ARCESS Array B   64.66 338  P     P      01 50 50.3  -0.5
EUNU  Eureka           65.28   7  P     P      01 50 53.8  -1.0
EUNU                              IAmb  IAmb   01 51 33.8
      comp=Z,7.3nm,1.3s
STKA  Stephens Creek   65.29 170  P     P      01 50 56.0  +0.7
      comp=Z,3.5nm,0.8s,baz=22,slow=9.2,SNR=3.0
STKA                              LR    LR     02 19 57.1
      comp=Z,95nm,18.0s,baz=21,slow=36
      comp=Z,3.5nm,0.8s
KBZ   Khabaz           66.91 308  P     P      01 51 06.2  +0.5
      comp=Z,10nm,0.8s,baz=152,slow=2.4,SNR=18
      comp=Z,10nm,0.8s
KIV   Kislovodsk       66.95 308  P     P      01 51 06.6  +0.4
ONI   Oni              67.00 307  P     P      01 51 04.9  -1.6
ONI                               IAmb  IAmb   01 51 15.1
      comp=Z,10nm,1.1s
GNI   Garni            67.12 304  LR    LR     02 22 15.5
      comp=Z,143nm,20.1s,baz=74,slow=38
FINES FINESS Array B   68.24 330  P     P      01 51 12.9  -1.0
      comp=Z,1.3nm,0.6s,baz=62,slow=5.2,SNR=12
      comp=Z,1.3nm,0.6s
FINES FINESS Array B   68.24 330  P     P      01 51 13.3  -0.6
RES   Resolute Bay     68.42  12  LR    LR     02 25 46.0
      comp=Z,40nm,18.8s,baz=318,slow=40
RES   Resolute Bay     68.42  12  P     P      01 51 14.6  -0.3
RES                               IAmb  IAmb   01 51 22.4
      comp=Z,4.4nm,0.9s
BBB   Bella Bella      70.68  40  LR    LR     02 22 58.5
      comp=Z,45nm,18.8s,baz=234,slow=36
MNK   Minsk            70.84 323  i P   P      01 51 28.5  -1.6
      comp=E,1.0nm,1.1s
MNK                               i P   P      01 51 28.5  -1.6
      comp=N,6.0nm,1.1s
MNK                               i P   P      01 51 28.5  -1.6
      comp=Z,5.0nm,0.9s,baz=60
MNK                               i pP  sP     01 51 40.4  +4.6
MNK                               i PP  PP     01 54 04.5  -2.1
MNK                               i PPP PPP    01 55 47.5
MNK                               i S   S      02 00 41.7  -3.2
MNK                               i sS  SKiKP  02 01 02.3   -10
MNK                               i SS  SS     02 05 15.6  -0.8
MNK                               i SSS SSS    02 08 34.6
MNK                               i LQ  LQ     02 17 49.2
MNK                               i LR  LR     02 23 13.3
MNK                               i LRM MLR    02 25 26.1
      comp=N,203nm,16.8s
MNK                               i LRM MLR    02 25 35.1
      comp=Z,325nm,18.1s
MNK                               i LRM MLR    02 26 08.0
      comp=E,62nm,16.1s
YKA   Yellowknife Ar   71.34  27  P     P      01 51 33.7  +0.8
      comp=E,1.2nm,0.7s,baz=300,slow=5.8,SNR=14
YKA                               LR    LR     02 24 58.5
      comp=E,75nm,18.2s,baz=292,slow=38
      comp=E,1.2nm,0.7s
YKA   Yellowknife Ar   71.34  27  P     P      01 51 32.9   0.0
AKASG Malin Array Be   72.05 319  P     P      01 51 36.8  -0.6
      comp=E,0.8nm,0.4s,baz=54,slow=7.2,SNR=7.3
AKASG                             LR    LR     02 24 58.6
      comp=E,150nm,18.2s,baz=56,slow=37
      comp=E,0.8nm,0.4s
AKASG Malin Array Be   72.05 319  P     P      01 51 37.0  -0.4
AKBB  Malin Array Si   72.05 319  P     P      01 51 37.5  +0.1
AKBB                              IAmb  IAmb   01 51 59.0
      comp=Z,6.9nm,1.0s
JMIC  Jan Mayen        72.39 347  LR    LR     02 24 44.6
      comp=Z,61nm,18.8s,baz=66,slow=37
TOKA  Tokat            72.70 307  P     P      01 51 41.0  -0.6
TOKA                              IAmb  IAmb   01 51 48.8
      comp=Z,9.4nm,1.1s
SOCY  Socotra          72.75 274  P     P      01 51 39.7  -2.6
RAYN  Ar Rayn          74.10 288  P     P      01 51 49.6  -0.6
RAYN                              IAmb  IAmb   01 51 55.7
      comp=Z,9.1nm,1.1s
NB2   NORSAR Subarra   74.35 334  P     P      01 51 49.4  -1.5
      comp=Z,6.8nm,1.4s,baz=46,slow=5.9
NOA   NORSAR Array B   74.35 334  P     P      01 51 49.8  -1.2
      comp=Z,1.8nm,1.0s,baz=48,slow=5.8,SNR=4.6
      comp=Z,1.8nm,1.0s
BR131 Keskin Array S   74.89 308  P     P      01 51 54.8  +0.2
BR131                             IAmb  IAmb   01 52 02.6
      comp=Z,9.4nm,0.9s
BRTR  Keskin Array B   74.89 308  P     P      01 51 54.8  +0.2
      comp=Z,5.0nm,0.9s,baz=93,slow=5.4,SNR=18
BRTR                              LR    LR     02 29 34.6
      comp=Z,88nm,19.1s,baz=56,slow=40
      comp=Z,5.0nm,0.9s
BRTR  Keskin Array B   74.89 308  P     P      01 51 54.1  -0.5
BUR08 Bucovina Ar. S   75.91 318  P     P      01 52 00.1  -0.1
BUR08                             IAmb  IAmb   01 52 07.0
      comp=Z,8.6nm,1.2s
BURAR Bucovina Array   75.91 318  P     P      01 51 60.0  -0.3
KWP   Kalwaria Pacla   76.16 321  P     P      01 52 02.2  +0.7
BORA  Eskisehir        76.91 309  P     P      01 52 05.4  -0.7
BORA                              IAmb  IAmb   01 52 07.2
      comp=Z,7.5nm,0.9s
VRAC  Vranov           79.54 323  LR    LR     02 30 00.3
      comp=Z,164nm,19.1s,baz=52,slow=38
VTS   Vitosha          79.91 314  P     P      01 52 22.9  +0.3
VTS                               IAmb  IAmb   01 52 30.7
      comp=Z,8.8nm,1.3s
CLL   Collm            80.01 326  eP    P      01 52 22.0  -0.8
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BORG	Borgarnes	80.20	348	LR	LR	02 30 00.8	
	comp=Z,65nm,18.8s,baz=5.1,slow=37						
SFJD	Kangerlussuaq	80.30	1	LR	LR	02 30 55.9	
	comp=Z,65nm,18.7s,baz=344,slow=38						
GERES	GERESS Array B	81.29	324	P	P	01 52 29.3	-0.6
	comp=Z,0.3nm,0.6s,baz=46,slow=4.2,SNR=3.8						
	comp=Z,0.3nm,0.6s						
GERES	GERESS Array B	81.29	324	P	P	01 52 29.5	-0.4
FRB	Frobisher Bay	82.31	9	LR	LR	02 29 33.9	
	comp=Z,74nm,21.9s,baz=3.5,slow=36						
ATD	Arta Tunnel	82.40	279	LR	LR	02 32 37.3	
	comp=Z,60nm,18.7s,baz=164,slow=38						
IDI	Anoyia	83.13	308	LR	LR	02 35 15.4	
	comp=Z,71nm,18.9s,baz=90,slow=40						
KVN	Kaiserville	83.78	47	P	P	01 52 42.4	-0.8
KVN				IAmb	IAmb	01 52 52.0	
	comp=Z,4.7nm,1.1s						
NVAR	Mina Array Bea	84.04	48	P	P	01 52 44.4	-0.1
	comp=Z,1.0nm,0.8s,baz=220,slow=4.0,SNR=1.7						
	comp=Z,1.0nm,0.8s						
H17A	Grant Village	84.69	39	P	P	01 52 46.6	-1.2
TPH	Tonopah	84.92	47	P	P	01 52 48.1	-0.9
PDAR	Pinedale Array	86.33	40	P	P	01 52 56.0	0.0
	comp=Z,0.5nm,0.7s,baz=298,slow=6.2,SNR=4.7						
PDAR				LR	LR	02 31 27.6	
	comp=Z,27nm,22.0s,baz=340,slow=36						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	86.33	40	P	P	01 52 54.4	-1.6
ULM	Lac du Bonnet	87.25	28	LR	LR	02 33 23.2	
	comp=Z,66nm,20.4s,baz=304,slow=37						
PFO	Pinyon Flats O	88.19	51	LR	LR	02 24 09.4	
	comp=Z,68nm,20.9s,baz=277,slow=30						
SCHQ	Schefferville	91.15	10	LR	LR	02 37 15.9	
	comp=Z,85nm,18.2s,baz=30,slow=38						
SADO	Sadowa	97.83	21	LR	LR	02 41 24.5	
	comp=Z,54nm,20.5s,baz=337,slow=38						
TORD	Torodi Ar. Bea	113.42	305	PP	PP	01 59 42.1	-0.4
	comp=Z,0.5nm,1.0s,baz=38,slow=7.0,SNR=2.9						
DBIC	Dimbokro	122.53	305	PKP	PKiKP	01 59 12.7	+2.7
	comp=Z,4.6nm,0.9s,baz=72,slow=3.2,SNR=3.4						

SCB 05 01:46:51.5±2.2**,22°.57S**×**67°.73W,h119**^{km}±38^{km}**,ML2.5**/5**, MW3.6,Error ellipse: s-maj=10.8km s-min=7.7km az=0.0,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.10	267	P	Pn	01 47 17.5	+2.7
PB09	IPOC Station P	1.60	298	P	Pn	01 47 22.7	+2.5
PB09				IAML		01 48 23.8	
	14nm,2.9s						
PB06	IPOC Station P	1.71	265	P	Pn	01 47 23.5	+2.0
PB06				S	Sn	01 47 45.5	+1.1
PB06				IAML		01 47 53.6	
	12nm,0.4s						
PB15	IPOC Station P	1.73	248	P	Pn	01 47 23.6	+1.8
PB15				S	Sn	01 47 45.8	+0.9
PB15				IAML		01 47 53.8	
	108nm,0.2s						
YJA	Yavi	2.08	80	P	Pn	01 47 26.7	+0.3
PB07	IPOC Station P	2.17	292	P	Pn	01 47 28.7	+1.5
PB07				S	Sn	01 47 55.1	+0.5
PB07				IAML		01 47 58.5	
	48nm,0.2s						
PB01	IPOC Station P	2.23	312	P	Pn	01 47 29.3	+1.4
PB04	IPOC Station P	2.25	275	P	Pn	01 47 28.9	+0.6
MOCB	Mochara	2.34	56	P	Pn	01 47 29.6	0.0
PB02	IPOC Station P	2.37	301	P	Pn	01 47 30.9	+1.2
PB02				S	Sn	01 47 59.0	+0.1
PB02				IAML		01 48 05.2	
	34nm,0.2s						
PB08	IPOC Station P	2.75	331	P	Pn	01 47 36.4	+1.4
PB10	IPOC Station P	2.77	250	P	Pn	01 47 35.0	+0.2
PB11	IPOC Station P	3.32	327	P	Pn	01 47 42.7	+0.5
BBOE	La Paz, Chanca	5.73	358	P	Pn	01 48 15.5	+0.7
LPAZ	La Paz	6.26	356	P	Pn	01 48 21.7	-0.3

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*NEIC **05** 01:58:53.5±0.7, 36°.86N±0°.02×97°.34W±0°.03, h8^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=2.1km az=59.0*
*ANF **05** 01:58:53.7±0.3, 36°.88N×97°.32W, h8^{km}, ML3.7/7, Error ellipse: s-maj=3.9km s-min=2.8km az=18.0*
*TUL **05** 01:58:53.3±1.0, 36°.89N±0°.02×97°.32W±0°.03, h6^{km}±7^{km}, ML3.0, mb_Lg3.0/75(NEIC), Error ellipse: s-maj=4.1km s-min=2.2km az=224.0*
ISC 05 01:58:53.2±1.3**,36°.87N**±0°.03×**97°.33W**±0°.03**,h5**^{km}±14^{km}**, n67,σ0s.67**/42**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.66	86	Pg	Pg	01 59 06.1	+0.2
T35B	Sooner Cattle	0.66	86	P	Pg	01 59 05.9	+0.1
	baz=266						
T35B				S	Sg	01 59 14.8	+0.4
	baz=266						
U32A	Winter Ranch,	1.43	250		Pn	01 59 19.8	0.0
U32A	Winter Ranch,	1.43	250	P	Pn	01 59 20.0	+0.2
	baz=70						
U32A				S	Sg	01 59 39.6	+0.4
	baz=70						
OKCFA	Oklahoma City	1.46	184	Pn	Pn	01 59 19.9	-0.2
OKCFA	Oklahoma City	1.46	184	P	Pn	01 59 20.6	+0.5
	baz=4.0						
OKCFA				S	Sg	01 59 40.3	+0.4
	baz=4.0						
OKCSW	OKLAHOMA CITY	1.46	183		Pn	01 59 20.4	+0.1
TUL1	Leonard	1.57	127	Pn	Pn	01 59 21.6	-0.1
TUL1	Leonard	1.57	127	P	Pn	01 59 21.8	+0.1
	baz=308						
TUL1				S	Sb	01 59 42.9	+0.1
	baz=308						
FNO	Franklin	1.61	182		Pn	01 59 22.7	+0.4
R32A	Long Quarter,	1.90	325		Pn	01 59 27.1	+0.8
R32A	Long Quarter,	1.90	325	P	Pb	01 59 27.5	-0.8
	baz=144						
R32A				Sb	Sb	01 59 53.2	+0.8
	baz=144						
KSU1	Kansas State U	2.30	14		Pn	01 59 31.3	-0.5
X34A	Smith Ranch, M	2.30	190		Pb	01 59 34.3	-0.9
WMOK	Wichita Mounta	2.43	209		Pn	01 59 33.7	+0.1
WMOK	Wichita Mounta	2.43	209	P	Pb	01 59 35.8	-1.6
	baz=29						
CBKS	Cedar Bluff	2.72	316	Pn	Pn	01 59 37.4	-0.2
X37A	Clayton	2.78	144	Pn	Pn	01 59 38.2	-0.2
X37A				IAmb_Lg		02 00 25.4	
	comp=Z,58nm,0.9s						
X37A	Clayton	2.78	144	Sb	Sb	02 00 19.0	+1.3
	baz=326						
HHAR	Hobbs	2.79	101		Pn	01 59 38.3	-0.3
HHAR	Hobbs	2.79	101	P	Pn	01 59 39.8	+1.3
	baz=283						
S39A	Bolivar	3.30	74	Pn	Pn	01 59 45.5	0.0
W39A	Magazine	3.33	119	IAmb_Lg		02 00 41.4	
	comp=Z,63nm,0.8s						
W39A	Magazine	3.33	119	Sb	Sb	02 00 35.2	+1.8
	baz=301						
Z35A	Perchaven, San	3.53	179	Pn	Pn	01 59 48.9	+0.1
U40A	Yellville	3.64	97	Pn	Pn	01 59 50.6	+0.4
MIAR	Mount Ida	3.84	126	Pn	Pn	01 59 52.5	-0.4
MIAR				IAmb_Lg		02 00 56.4	
	comp=Z,50nm,1.0s						
AMTX	Amarillo	4.05	242	Pn	Pn	01 59 55.8	-0.2
AMTX				IAmb_Lg		02 01 04.0	
	comp=Z,55nm,0.8s						
MGMO	Mountain Grove	4.06	84	Pn	Pn	01 59 55.7	-0.3
MGMO				IAmb_Lg		02 01 00.3	
	comp=Z,31nm,0.9s						
P38A	Dawn	4.06	46	Pn	Pn	01 59 55.6	-0.4
P38A				IAmb_Lg		02 01 02.7	
	comp=Z,47nm,1.0s						
Z38A	Mt. Pleasant	4.08	151	Pn	Pn	01 59 55.7	-0.6
N35A	Tabor	4.20	18	Pn	Pn	01 59 58.2	+0.3
R40A	Maddies Statio	4.26	69	Pn	Pn	01 59 58.1	-0.7
R40A				IAmb_Lg		02 01 09.7	
	comp=Z,45nm,0.8s						
FCAR	Ozark Folk Cen	4.31	102	Pn	Pn	01 59 58.3	-1.2
X40A	Basin Creek Fa	4.37	122	Pn	Pn	01 59 59.5	-0.7
X40A				IAmb_Lg		02 01 13.5	
	comp=Z,31nm,0.8s						
WHAR	Wooly Hollow	4.38	110	Pn	Pn	02 00 00.7	+0.3
WHAR				IAmb_Lg		02 01 17.1	
	comp=Z,48nm,0.9s						
W41B	Gary Mavity, V	4.45	111		Pn	02 00 01.1	-0.2
W41B				IAmb_Lg		02 01 27.2	
	comp=Z,22nm,0.8s						
UALR	University of	4.56	116	IAmb_Lg		02 01 26.4	
	comp=Z,22nm,0.8s						
BGNE	Belgrade	4.58	352	IAmb_Lg		02 01 27.0	
	comp=Z,33nm,0.9s						
ABTX	Abilene, Hawle	4.64	205	Pn	Pn	02 00 04.4	+0.3
WLAR	White Oak Lake	4.69	131	IAmb_Lg		02 01 22.8	
	comp=Z,41nm,1.0s						
P40A	Paris	4.94	56	IAmb_Lg		02 01 39.1	
	comp=Z,40nm,0.9s						
CCM	Cathedral Cave	4.99	74	IAmb_Lg		02 01 37.7	
	comp=Z,28nm,0.7s						
Z41A	Richland Creek	5.17	133	IAmb_Lg		02 01 49.3	
	comp=Z,29nm,0.7s						
OGNE	Ogallala	5.48	319	IAmb_Lg		02 01 59.9	
	comp=Z,37nm,0.7s						
PBMO	Poplar Bluff	5.54	89	IAmb_Lg		02 01 59.5	
	comp=Z,19nm,0.7s						
NATX	Nacogdoches	5.55	156	IAmb_Lg		02 02 02.2	
	comp=Z,24nm,0.8s						
FVM	French Village	5.61	76	IAmb_Lg		02 01 51.9	
	comp=Z,35nm,1.0s						
T25A	Trinidad	5.67	275	IAmb_Lg		02 02 06.5	
	comp=Z,18nm,1.1s						
K31A	O'Neill	5.85	350	IAmb_Lg		02 02 06.7	
	comp=Z,37nm,0.8s						
SLM	Saint Louis	5.89	70	IAmb_Lg		02 02 05.1	
	comp=Z,32nm,1.0s						
435B	Jarrell	6.08	182	IAmb_Lg		02 02 14.1	
	comp=Z,16nm,0.8s						
PARMO	Parma	6.09	90	IAmb_Lg		02 02 10.1	
	comp=Z,32nm,0.8s						
143A	Socs Landing,	6.41	129	IAmb_Lg		02 02 22.8	
	comp=Z,16nm,0.8s						
S44A	Carbondale	6.49	80	IAmb_Lg		02 02 36.5	
	comp=Z,21nm,0.7s						
Q24A	Divide	6.52	291	IAmb_Lg		02 02 23.4	
	comp=Z,16nm,1.0s						
SIUC	Southern Illin	6.52	80	IAmb_Lg		02 02 19.3	
	comp=Z,33nm,1.0s						
JCT	Junction City	6.70	199	IAmb_Lg		02 02 35.6	
	comp=Z,26nm,0.9s						
W45A	Hickory Valley	6.82	102	IAmb_Lg		02 02 34.8	
	comp=Z,20nm,0.8s						
OXF	Oxford	6.86	108	IAmb_Lg		02 02 39.8	
	comp=Z,25nm,1.1s						
L40A	Anamosa	7.01	40	IAmb_Lg		02 02 35.7	
	comp=Z,22nm,0.8s						
ISCO	Idaho Springs	7.14	297	IAmb_Lg		02 02 39.9	
	comp=Z,13nm,0.8s						
PHWY	Pilot Hill	7.71	307	IAmb_Lg		02 03 11.3	
	comp=Z,12nm,1.0s						
I37A	Lemond, Waseca	7.74	22	IAmb_Lg		02 03 12.1	
	comp=Z,13nm,0.7s						
N23A	Red Feather La	7.83	304	IAmb_Lg		02 03 04.7	
	comp=Z,18nm,0.7s						
I40A	Norwalk	8.68	34	IAmb_Lg		02 03 31.2	
	comp=Z,20nm,1.1s						
RWWY	Rawlins	9.04	305	IAmb_Lg		02 03 46.5	
	comp=Z,9.4nm,0.8s						

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*IDC **05** 02:40:47.6±0.8, 21°.71S×170°.36E, h0^{km}, mb4.2/11, mbtmp4.2/12, ML4.0/1, MS4.1/37, Error ellipse: s-maj=22.2km s-min=21.4km az=5.0*
*GCMT **05** 02:40:49.6±0.2, 21°.79S±0°.02×170°.45E±0°.02, h13^{km}, MW4.9/99, Moment Tensor Solution.   s56,c68;   s99,c132; Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}-3.09±.14; $M_{\theta\theta}$2.19±.11; $M_{\phi\phi}$0.89±.09; $M_{r\theta}$0.06±.25; $M_{\theta\phi}$1.30±.06; $M_{\phi r}$0.18±.24;   Best double couple: $M_0$3.04800×10^{16} NP1:ϕ_s60.00000°,δ44.00000°,λ-87.00000°.   NP2: ϕ_s236.00000°,δ46.00000°,λ-93.00000°.   Principal axes: T 2.9980, Plg1.0000°, Azm328.0000°; N 0.0960, Plg2.0000°, Azm238.0000°; P -3.0980, Plg87.0000°, Azm90.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **05** 02:40:50.5, 21°.92S×170°.12E, h0^{km}, MLv4.7/16, Southeast of Loyalty Islands*
*NEIC **05** 02:40:54.6±1.3, 21°.78S±0°.08×170°.15E±0°.05, h39^{km}±8^{km}, mb4.8/22, Error ellipse: s-maj=12.5km s-min=3.8km az=155.0*
ISC 05 02:40:52.2±0.4**,21°.86S**±0°.06×**170°.17E**±0°.06**,h25**^{km}**,n134, σ1s.16**/109**,mb4.5**/21**,MS4.1**/36**,5C,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.03	280	Pn	Pn	02 41 23.7	-1.1
MARNC				Sn	Sn	02 41 49.1	-0.3
MARNC	Mare, Loyalty	2.03	280	P	Pn	02 41 24.3	-0.5
PINNC	Pines Island,	2.64	253		Pn	02 41 32.8	-0.3
PINNC	Pines Island,	2.64	253	P	Pn	02 41 33.4	+0.3
LIFNC	LIFOU	2.94	291	Pn	Pn	02 41 38.4	+1.1
LIFNC	LIFOU	2.94	291	P	Pn	02 41 38.1	+0.8
YATNC	Mamie plateau,	3.05	266	P	Pn	02 41 38.7	-0.2
OUENC	Ouen Island, N	3.14	259	Pn	Pn	02 41 39.9	-0.2
OUENC	Ouen Island, N	3.14	259	P	Pn	02 41 40.2	+0.1
DZM	Mont Dzumac	3.47	266	Pn	Pn	02 41 45.0	+0.3
	13nm,0.3s,baz=120,slow=6.3,SNR=160						
DZM				Sn	Sn	02 42 26.1	+1.1
	11nm,0.3s,baz=261,slow=18,SNR=3.6						
	116nm,0.7s						
DZM	Mont Dzumac	3.47	266	Pn	Pn	02 41 44.8	+0.1
DZM	Mont Dzumac	3.47	266	P	Pn	02 41 45.0	+0.3
ONTNC	Ouen Toro	3.48	262	Pn	Pn	02 41 44.8	+0.1
ONTNC	Ouen Toro	3.48	262	P	Pn	02 41 45.9	+1.2
NOUC	Port Laguerre	3.60	265	P	Pn	02 41 47.0	+0.6
RTV	Rentapao	4.37	338	P	Pn	02 41 57.7	+0.7
DVP	Devils Point	4.52	335	P	Pn	02 42 01.2	+2.2
KOUNC	Koumac, New Ca	5.65	282	Pn	Pn	02 42 15.5	+1.0
KOUNC	Koumac, New Ca	5.65	282	P	Pn	02 42 16.4	+1.9
NFK	Norfolk Island	7.43	195	P	Pn	02 42 39.1	0.0
MSVF	Nonsavu	8.47	62	Pn	Pn	02 42 55.5	+2.0
	0.4nm,0.3s,baz=224,slow=8.5,SNR=13						
MSVF				LR	LR	02 45 33.9	
	comp=Z,1µm,18.9s,baz=251,slow=35						
MSVF	Nonsavu	8.47	62	Pn	Pn	02 42 54.0	+0.5
MSVF	Nonsavu	8.47	62	P	Pn	02 42 55.8	+2.3
DGTI	Dogotuki	10.60	60	P	Pn	02 43 24.2	+1.7
	74nm,1.5s						
OUZ	Omahuta	13.64	168	Pn	P	02 44 10.0	-2.7
HNR	Honiara	15.79	320	LR	LR	02 49 37.7	
	comp=Z,835nm,21.4s,baz=151,slow=34						
URZ	Urewera	17.40	161	P	P	02 44 57.4	+3.1
	22nm,0.9s,baz=24,slow=6.6,SNR=7.1						
URZ	Urewera	17.40	161	P	P	02 44 56.1	+1.7
URZ				IAmb	IAmb	02 45 02.5	
	comp=Z,59nm,1.2s						
EIDS	Eidsvold	17.84	255	P	Pn	02 44 58.9	+0.1
BKZ	Black Stump Fm	18.08	164		P	02 45 04.1	+2.2
BKZ				IAmb	IAmb	02 45 10.6	
	comp=Z,95nm,1.4s						
ARMA	Armidale	18.69	239	P	Pn	02 45 09.6	+0.4
BFZ	Birch Farm	19.46	166	P	P	02 45 18.4	+1.4
BFZ				IAmb	IAmb	02 45 26.1	
	comp=Z,77nm,1.2s						
LTZ	Lake Taylor	20.94	176	P	P	02 45 34.1	+1.1
LTZ				IAmb	IAmb	02 45 41.0	
	comp=Z,47nm,1.1s						
OXZ	Oxford	21.46	176	P	P	02 45 40.5	+1.8
OXZ				IAmb	IAmb	02 45 48.6	
	comp=Z,38nm,0.8s						
RPZ	Rata Peaks	21.81	178	P	P	02 45 43.7	+1.4
	comp=Z,8.7nm,0.9s,baz=27,slow=6.8,SNR=2.6						
	comp=Z,8.7nm,0.9s						
RPZ	Rata Peaks	21.81	178	P	P	02 45 43.8	+1.4
CTA	Charters Tower	22.40	270	P	P	02 45 50.6	+1.6
	comp=Z,1.5nm,0.4s,baz=112,slow=15,SNR=2.1						
CTA				LR	LR	02 54 14.5	
	comp=Z,478nm,18.5s,baz=92,slow=36						
	comp=Z,1.5nm,0.4s						
PMG	Port Moresby	25.34	296	P	P	02 46 18.0	+0.7
	comp=Z,8.5nm,0.4s,baz=118,slow=8.5,SNR=3.7						
PMG				LR	LR	02 54 26.2	
	comp=Z,508nm,21.3s,baz=128,slow=32						
	comp=Z,8.5nm,0.4s						
PMG	Port Moresby	25.34	296	P	P	02 46 15.1	-2.3
COEN	Coen	26.84	282	P	P	02 46 33.1	+2.2
COEN				IAmb	IAmb	02 46 47.1	
	comp=Z,38nm,1.2s						
STKA	Stephens Creek	27.30	243	P	P	02 46 36.5	+1.5
	comp=Z,1.9nm,0.6s,baz=134,slow=14,SNR=3.8						
STKA				LR	LR	02 56 55.2	
	comp=Z,92nm,18.4s,baz=40,slow=35						
	comp=Z,1.9nm,0.6s						
STKA	Stephens Creek	27.30	243	P	P	02 46 36.1	+1.2
WR0	Warramunga Arr	33.30	267	P	P	02 47 27.3	-0.8
WR0				IAmb	IAmb	02 47 39.1	
	comp=Z,5.5nm,0.9s						
AS31	Alice Springs	33.44	260	P	P	02 47 28.7	-0.7
ASAR	Alice Springs	33.44	260	P	P	02 47 29.4	+0.1
	comp=Z,1.3nm,0.6s,baz=81,slow=8.5,SNR=21						
ASAR				LR	LR	03 01 18.9	
	comp=Z,249nm,18.3s,baz=107,slow=37						
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	33.44	260	P	P	02 47 29.2	-0.2
WB2	Warramunga Arr	33.48	267	P	P	02 47 29.3	-0.4
WB2				IAmb	IAmb	02 47 40.3	
	comp=Z,16nm,1.3s						
WRAB	Tennant Creek	33.48	267	P	P	02 47 29.4	-0.2
WRAB				pP	pP	02 47 35.5	-0.4
WRA	Warramunga Arr	33.49	267	P	P	02 47 29.2	-0.5
	comp=Z,2.5nm,0.4s,baz=99,slow=8.3,SNR=86						
WRA				LR	LR	03 01 21.2	
	comp=Z,491nm,18.2s,baz=48,slow=37						
	comp=Z,2.5nm,0.4s						
WRA	Warramunga Arr	33.49	267	P	P	02 47 29.2	-0.5
FAKI	Fak Fak	41.36	292	P	P	02 48 35.9	-0.6
FAKI				IAmb	IAmb	02 48 51.5	
	comp=Z,26nm,1.0s						
FITZ	Fitzroy Crossi	41.91	267	LR	LR	03 06 24.1	
	comp=Z,502nm,18.6s,baz=100,slow=36						
GUMO	Guam	43.10	323	LR	LR	03 05 09.4	
	comp=Z,204nm,21.1s,baz=138,slow=34						
SIJI	Sorong	43.25	294	LR	LR	03 06 44.9	
	comp=Z,339nm,20.7s,baz=108,slow=36						
SWI	Sorong	43.26	294	P	P	02 49 03.8	+12
BATI	Baumata	46.01	277	LR	LR	03 08 10.9	
	comp=Z,833nm,21.7s,baz=152,slow=36						
MBWA	Marble Bar	46.76	261	P	P	02 49 19.6	-0.1
MBWA				IAmb	IAmb	02 49 31.6	
	comp=Z,17nm,1.2s						
TOLI2	Tolitoli	53.32	289	P	P	02 50 09.1	-0.5
TOLI2				IAmb	IAmb	02 50 22.8	
	comp=Z,15nm,1.0s						
JCJ	Chichijima	55.70	330	LR	LR	03 11 12.2	
	comp=Z,231nm,21.8s,baz=142,slow=33						
VNDA	Vanda	55.86	182	P	P	02 50 27.4	+0.2
	comp=Z,0.5nm,0.5s,baz=347,slow=6.1,SNR=3.1						
VNDA				LR	LR	03 11 53.9	
	comp=Z,234nm,18.7s,baz=26,slow=33						
	comp=Z,0.5nm,0.5s						
SBA	Scott Base	56.07	181	P	P	02 50 30.1	+1.5
SBA	Scott Base	56.07	181	P	P	02 50 30.5	+1.9
SBA				pP	pP	02 50 35.9	+0.7
CCD	Concordia, Ant	58.54	193	P	P	02 50 46.2	-0.4
CCD				pP	pP	02 50 52.6	-0.4
LEM	Lembang	62.04	274	LR	LR	03 19 55.1	
	comp=Z,172nm,18.2s,baz=120,slow=38						
MJAR	Matsushiro Arr	65.47	332	LR	LR	03 20 02.4	
	comp=Z,48nm,19.3s,baz=130,slow=36						
MDSI	Maura Dua	66.08	275	P	P	02 51 47.5	+10
JNU	Nakatsue	66.30	325	LR	LR	03 17 00.6	
	comp=Z,90nm,21.9s,baz=136,slow=33						
QSPA	South Pole Qui	68.21	180	LR	LR	03 19 45.4	
	comp=Z,162nm,18.2s,baz=30,slow=34						
QSPA	South Pole Qui	68.21	180	P	P	02 51 50.6	+0.2
QSPA	South Pole Qui	68.21	180	P	P	02 51 50.6	+0.2
QSPA				pP	pP	02 51 55.8	-1.3
ASAJ	Asahikawa	70.35	339	LR	LR	03 17 48.3	
	comp=Z,171nm,21.8s,baz=162,slow=32						
KSRS	Korea Array	71.15	326	P	P	02 52 08.2	-0.4
	comp=Z,1.0nm,0.5s,baz=133,slow=7.1,SNR=4.8						
	comp=Z,1.0nm,0.5s						
RPN	Rapa Nui	72.26	113	LR	LR	03 16 49.5	
	comp=Z,126nm,18.4s,baz=234,slow=30						
PSI	Prapat	73.72	280	LR	LR	03 27 29.7	
	comp=Z,194nm,18.2s,baz=124,slow=38						
SHEM	Shemya Is, Ala	74.35	2	LR	LR	03 19 38.4	
	comp=Z,132nm,21.8s,baz=119,slow=31						
USRK	Ussuriysk Ar.	74.46	333	LR	LR	03 22 21.5	
	comp=Z,60nm,20.2s,baz=154,slow=34						
PETK	Petropavlovsk-	75.44	352	LR	LR	03 19 23.6	
	comp=Z,170nm,21.9s,baz=166,slow=31						
MAW	Mawson	76.35	202	P	P	02 52 40.1	+1.4
	comp=Z,2.4nm,0.7s,baz=109,slow=11,SNR=4.4						
MAW				LR	LR	03 23 29.8	
	comp=Z,47nm,18.4s,baz=114,slow=34						
	comp=Z,2.4nm,0.7s						
CN2	Changchun	77.14	328	*e*P	P	02 52 52.1	+8.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BELA	Belgrano 2	79.42	175	P	P	02 52 54.4	-1.4
BELA				IAmb	IAmb	02 53 01.1	
	comp=Z,19nm,1.3s						
CMAR	Chiang Mai Arr	80.38	294	P	P	02 53 03.3	+1.4
	comp=Z,2.3nm,0.7s,baz=138,slow=4.0,SNR=14						
CMAR				LR	LR	03 30 10.9	
	comp=Z,36nm,19.5s,baz=185,slow=37						
	comp=Z,2.3nm,0.7s						
SMAI	San Martin Ant	81.08	161	P	P	02 53 04.9	+0.2
PMSA	Palmer Station	84.16	160	LR	LR	03 24 03.2	
	comp=Z,135nm,20.5s,baz=241,slow=31						
KDAK	Kodiak Island	85.21	19	LR	LR	03 29 33.1	
	comp=Z,62nm,18.0s,baz=239,slow=34						
SNAA	Sanae	86.59	182	LR	LR	03 31 08.2	
	comp=Z,160nm,18.3s,baz=191,slow=35						
YAK	Yakutsk	89.62	342	LR	LR	03 29 27.9	
	comp=Z,85nm,21.8s,baz=89,slow=33						
LPIG	La Paz	89.76	64	LR	LR	03 28 21.5	
	comp=Z,40nm,18.1s,baz=214,slow=32						
NVAR	Mina Array Bea	89.88	48	P	P	02 53 48.7	-0.7
	comp=Z,0.7nm,0.9s,baz=220,slow=5.5,SNR=3.1						
NVAR				LR	LR	03 28 07.5	
	comp=Z,57nm,18.8s,baz=18,slow=32						
	comp=Z,0.7nm,0.9s						
BBB	Bella Bella	91.18	33	LR	LR	03 28 44.7	
	comp=Z,43nm,19.2s,baz=228,slow=32						
PALK	Pallekele	92.18	277	LR	LR	03 38 29.0	
	comp=Z,66nm,18.1s,baz=213,slow=38						
ILAR	Eielson Array	92.47	17	P	P	02 53 58.5	-1.9
	comp=Z,0.5nm,1.0s,baz=221,slow=6.8,SNR=2.2						
DLBC	Dease Lake	93.96	27	LR	LR	03 29 07.3	
	comp=Z,68nm,20.4s,baz=276,slow=31						
PLCA	Paso Flores	96.00	138	LR	LR	03 28 00.4	
	comp=Z,68nm,20.3s,baz=198,slow=30						
TXAR	Lajitas Array	97.24	61	LR	LR	03 31 28.9	
	comp=Z,53nm,18.4s,baz=269,slow=31						
INK	Inuvik	98.74	18	LR	LR	03 35 25.0	
	comp=Z,36nm,19.4s,baz=223,slow=33						
BDFB	Brasilia	127.17	132	PKP	PKPdf	02 59 53.0	-2.4
	comp=Z,0.7nm,0.3s,baz=333,slow=2.3,SNR=3.1						
ARCES	ARCESS Array B	127.81	345	PKP	PKPdf	02 59 52.9	-2.0
	comp=Z,1.1nm,0.7s,baz=35,slow=3.0,SNR=5.8						
DRGR		143.81	321	⇑P	PKPab	03 00 22.5	+0.3
GZR	Gura Zlata	144.50	319	⇑P	PKPbc	03 00 25.4	+0.3
MORC	Moravsky Berou	144.75	329	*e*PKP	PKPdf	03 00 26.8	0.0
OSTC	Ostas	144.84	331	*e*PKP	PKPab	03 00 24.7	-1.1
CHVC	Chvalec	144.88	331	*e*PKP	PKPab	03 00 25.2	-0.8
KRLC	Kraliky	144.91	330	*e*PKP	PKPab	03 00 25.2	-1.0
DPC	Dobruska-Polom	144.93	331	*e*PKP	PKPab	03 00 24.7	-1.5
VYHS	Vyhne	144.95	326	*e*PKP	PKPbc	03 00 26.9	+0.6
UPC	Upice	144.96	331	*e*PKP	PKPab	03 00 25.3	-1.0
HERR	Herculane	144.98	319	⇑P	PKPab	03 00 25.8	-0.7
BZS	Buzias	145.08	320	⇑P	PKPbc	03 00 26.4	-0.4
KOLL	Kolacno	145.12	327	*e*PKP	PKPdf	03 00 27.5	+0.2
JAVC	Velka Javorina	145.30	328	*e*PKP	PKPab	03 00 28.0	+0.3
MDVR	Moldovita	145.46	319	⇑P	PKPbc	03 00 25.9	-2.3
VRAC	Vranov	145.53	329	*e*PKP	PKPdf	03 00 27.7	-0.4
PVCC	Panska Ves	145.58	332	*e*PKP	PKPdf	03 00 27.9	-0.2
BRG	Berggiesshubel	145.59	333	*i* PKP	PKPdf	03 00 27.1	-1.0
BRG				Amp		03 00 29.2	
	comp=Z,29nm,1.1s						
BRG				*e*x	x	03 00 32.8	
BRG				Amp		03 00 42.5	
	comp=Z,16nm,1.1s						
CLL	Collm	145.65	334	*i* PKPbc	PKPdf	03 00 26.9	-1.3
	comp=Z,26nm,1.1s						
CLL				*i* PKiKP	PKiKP	03 00 32.6	+0.4
CLL				*i* pPKPdf	sPKPab	03 00 41.2	+2.9
CLL				Lm	MLR	04 04 00.0	
	comp=N,100nm,19.1s						
CLL				Lm	MLR	04 04 00.0	
	comp=E,100nm,19.2s						
CLL				Lm	MLR	04 04 00.0	
	comp=Z,200nm,18.8s						
KRUC	Moravsky	145.79	329	*e*PKP	PKPdf	03 00 28.1	-0.4
MODS	Modra-Piesok	145.82	327	*e*PKP	PKPdf	03 00 28.9	+0.3

PRU	Pruhonice	145.99	332	*e*PKP	PKPdf	03 00 28.7	-0.1
ZST	Bratislava	146.02	327	*e*PKP	PKPbc	03 00 30.2	+0.5
NKC	Novy Kostel	146.70	334	*e*PKP	PKPbc	03 00 31.3	-0.4
RONA	Rosalia, Austr	146.76	327	*e*P	PKPdf	03 00 31.2	+1.0
	comp=Z,11nm,1.3s						
CONA	Conrad Observa	146.82	328	*e*P	PKPdf	03 00 31.2	+0.8
	comp=Z,13nm,1.3s,SNR=5.8						
CKRC	Cesky Krumlov	146.94	330	*e*PKP	PKPdf	03 00 31.4	+0.9
KHC	Kasperske Hory	147.05	331	*e*PKP	PKPbc	03 00 32.4	-0.3
GERES	GERESS Array B	147.20	331	PKPbc	PKPdf	03 00 31.8	+0.8
	comp=Z,4.8nm,0.9s,baz=46,slow=3.9,SNR=34						
GERES	GERESS Array B	147.20	331		PKPdf	03 00 31.1	+0.1
ABTA	Abfaltersbach	149.28	329	*e*P	PKPdf	03 00 36.7	+2.2
	comp=Z,9.9nm,1.5s						
WATA	Walderalm	149.28	331	P	PKPbc	03 00 37.4	-1.4
	comp=Z,14nm,1.3s,SNR=5.3						
WTTA	Wattenberg	149.30	331	*e*P	PKPbc	03 00 37.6	-1.3
	comp=Z,15nm,1.3s						
MOTA	Moosalm	149.48	331	*e*P	PKPbc	03 00 38.3	-1.1
	comp=Z,14nm,1.2s						
SQTA	Sankt Quirin	149.53	331	*e*P	PKPbc	03 00 38.5	-1.0
	comp=Z,4.1nm,0.6s						
FETA	Feichten	149.89	331	*e*P	PKPbc	03 00 39.7	-0.7
	comp=Z,7.8nm,1.1s						
DAVA	Damuels	150.06	333	*e*P	PKPbc	03 00 40.9	+0.1
	comp=Z,20nm,2.2s						
TORD	Torodi Ar. Bea	166.01	234	PKP	PKPdf	03 00 55.8	-0.1
	comp=Z,1.0nm,1.1s,baz=204,slow=1.5,SNR=3.6						
TORD				PKPab	PKPab	03 01 56.2	+0.3
	comp=Z,0.7nm,0.9s,baz=111,slow=4.7,SNR=4.8						

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*IDC **05** 02:46:56.7±0.8, 21°.82S×170°.34E, h0^{km}, mb4.4/11, mbtmp4.4/12, ML4.0/1, Error ellipse: s-maj=24.8km s-min=19.9km az=146.0*

*NOU **05** 02:47:03.4, 21°.90S×169°.84E, h0^{km}, MLv4.3/12, Southeast of Loyalty Islands*

*NEIC **05** 02:47:04.3±1.5, 21°.88S±0°.09×170°.11E±0°.07, h45^{km}±7^{km}, mb4.7/21, Error ellipse: s-maj=13.7km s-min=8.6km az=195.0*

ISC 05 02:47:00.8±0.5**, 21°.88S**±0°.07×**170°.19E**±0°.07**, h25^{km}, n95, σ1^{s}01**/95**, mb4.7**/21**, 2C-1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.04	281	Pn	Pn	02 47 33.5	-0.1
MARNC				Sn	Sn	02 47 58.4	+0.1
MARNC	Mare, Loyalty	2.04	281	P	Pn	02 47 33.7	0.0
PINNC	Pines Island,	2.64	253		Pn	02 47 42.5	+0.6
PINNC	Pines Island,	2.64	253	P	Pn	02 47 42.4	+0.5
LIFNC	LIFOU	2.96	291	Pn	Pn	02 47 48.0	+1.7
LIFNC	LIFOU	2.96	291	P	Pn	02 47 48.2	+2.0
YATNC	Mamie plateau,	3.06	266	P	Pn	02 47 48.0	+0.3
OUENC	Ouen Island, N	3.15	260	Pn	Pn	02 47 50.0	+1.2
OUENC	Ouen Island, N	3.15	260	P	Pn	02 47 50.3	+1.4
DZM	Mont Dzumac	3.48	266	Pn	Pn	02 47 54.8	+1.2
	11nm,0.3s,baz=125,slow=20,SNR=52						
DZM				Sn	Sn	02 48 33.7	-0.3
	14nm,0.3s,baz=104,slow=19,SNR=3.0						
	26nm,0.3s						
DZM	Mont Dzumac	3.48	266	Pn	Pn	02 47 54.3	+0.8
DZM	Mont Dzumac	3.48	266	P	Pn	02 47 54.7	+1.2
ONTNC	Ouen Toro	3.49	262	Pn	Pn	02 47 54.9	+1.3
ONTNC	Ouen Toro	3.49	262	P	Pn	02 47 54.6	+1.1
NOUC	Port Laguerre	3.61	266	P	Pn	02 47 56.1	+0.9
RTV	Rentapao	4.39	337	P	Pb	02 48 09.9	-7.4
DVP	Devils Point	4.54	335	P	Pn	02 48 11.1	+3.1
KOUNC	Koumac, New Ca	5.66	282	Pn	Pn	02 48 24.9	+1.4
MSVF	Nonsavu	8.47	62	Pn	Pn	02 49 05.0	+2.9
	0.2nm,0.3s,baz=240,slow=20,SNR=5.3						
MSVF	Nonsavu	8.47	62		Pn	02 49 04.5	+2.4
URZ	Urewera	17.38	161	P	P	02 51 05.9	+3.0
	18nm,0.9s,baz=344,slow=14,SNR=5.2						
URZ	Urewera	17.38	161		P	02 51 03.7	+0.9
URZ				IAmb	IAmb	02 51 12.2	
	comp=Z,38nm,1.1s						
EIDS	Eidsvold	17.85	255	P	Pn	02 51 08.7	+1.1
CTA	Charters Tower	22.41	270	P	P	02 51 57.7	-0.2
	comp=Z,3.7nm,0.8s,baz=88,slow=11,SNR=4.3						
	comp=Z,3.7nm,0.8s						
PMG	Port Moresby	25.36	296	P	P	02 52 27.2	+1.0
	comp=Z,9.9nm,0.4s,baz=103,slow=5.6,SNR=5.0						
	comp=Z,9.9nm,0.4s						
PMG	Port Moresby	25.36	296	P	P	02 52 24.7	-1.4
PMG				IAmb	IAmb	02 52 28.5	
	comp=Z,28nm,1.0s						
STKA	Stephens Creek	27.31	243	P	P	02 52 45.4	+1.7
	comp=Z,3.1nm,0.8s,baz=99,slow=9.3,SNR=3.9						
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	27.31	243	P	P	02 52 44.3	+0.6
WR0	Warramunga Arr	33.31	267	P	P	02 53 37.3	+0.4
WR0				IAmb	IAmb	02 53 37.6	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	33.45	260	P	P	02 53 38.1	0.0
ASAR	Alice Springs	33.45	260	P	P	02 53 38.8	+0.7
	comp=Z,3.3nm,0.8s,baz=88,slow=9.0,SNR=32						
ASAR				PcP	PcP	02 56 19.2	+0.1
	comp=Z,0.9nm,0.8s,baz=123,slow=2.7,SNR=5.1						
	comp=Z,3.3nm,0.8s						
ASAR	Alice Springs	33.45	260	P	P	02 53 38.6	+0.5
WB0	Warramunga Arr	33.48	267	P	P	02 53 37.4	-1.0
WB0				IAmb	IAmb	02 53 39.7	
	comp=Z,8.9nm,1.0s						
WB2	Warramunga Arr	33.49	267	P	P	02 53 38.4	-0.1
WB2				IAmb	IAmb	02 53 41.4	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	33.50	267	P	P	02 53 38.7	+0.1
	comp=Z,5.8nm,1.0s,baz=100,slow=8.3,SNR=22						
	comp=Z,5.8nm,1.0s						
WRA	Warramunga Arr	33.50	267	P	P	02 53 37.1	-1.4
MTN	Manton Dam	38.25	277	P	P	02 54 19.2	0.0
KNRA	Kununurra	39.61	272	P	P	02 54 30.6	-0.1
KNRA				IAmb	IAmb	02 54 32.3	
	comp=Z,16nm,0.8s						
FAKI	Fak Fak	41.38	292	P	P	02 54 44.8	-0.5
MBWA	Marble Bar	46.77	261	P	P	02 55 28.8	+0.2
MBWA				IAmb	IAmb	02 55 36.5	
	comp=Z,12nm,0.8s						
KAPI	Kappang	51.57	281	P	P	02 56 05.0	-0.4
TOLI2	Tolitoli	53.33	289	P	P	02 56 18.2	-0.2
VNDA	Vanda	55.84	182	P	P	02 56 35.9	+0.1
	comp=Z,1.0nm,0.7s,baz=6.0,slow=5.1,SNR=5.2						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	55.84	182	P	P	02 56 35.8	+0.1
SBA	Scott Base	56.05	181	P	P	02 56 39.9	+2.7
SBA				IAmb	IAmb	02 56 40.0	
	comp=Z,10nm,1.0s						
SSLB	Suanglung	65.98	311	P	P	02 57 44.7	-0.7
QSPA	South Pole Qui	68.19	180	P	P	02 57 58.7	-0.3
QSPA				IAmb	IAmb	02 58 00.5	
	comp=Z,10nm,1.1s						
KSRS	Korea Array	71.17	326	P	P	02 58 17.0	-0.5
	comp=Z,2.5nm,0.8s,baz=141,slow=4.6,SNR=6.6						
	comp=Z,2.5nm,0.8s						
PETK	Petropavlovsk-	75.45	352	P	P	02 58 42.4	0.0
	comp=Z,6.6nm,0.9s,baz=155,slow=11,SNR=5.2						
	comp=Z,6.6nm,0.9s						
PETK	Petropavlovsk-	75.45	352	P	P	02 58 41.3	-1.1
MAW	Mawson	76.34	202	P	P	02 58 47.8	+0.5
	comp=Z,4.6nm,1.0s,baz=153,slow=5.4,SNR=4.8						
	comp=Z,4.6nm,1.0s						
BELA	Belgrano 2	79.41	175	P	P	02 59 03.1	-1.2
BELA				IAmb	IAmb	02 59 04.6	
	comp=Z,8.4nm,1.1s						
CMAR	Chiang Mai Arr	80.39	294	P	P	02 59 12.2	+1.5
	comp=Z,8.9nm,0.9s,baz=131,slow=4.0,SNR=27						
	comp=Z,8.9nm,0.9s						
SMAI	San Martin Ant	81.06	161	P	P	02 59 13.6	+0.3
SMAI				IAmb	IAmb	02 59 14.4	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	89.88	48	P	P	02 59 58.0	0.0
	comp=Z,1.0nm,0.9s,baz=222,slow=6.6,SNR=6.5						
	comp=Z,1.0nm,0.9s						
NVAR	Mina Array Bea	89.88	48	P	P	02 59 58.5	+0.4
ILAR	Eielson Array	92.48	17	P	P	03 00 07.9	-1.3
	comp=Z,0.6nm,0.9s,baz=215,slow=6.2,SNR=5.9						
ARCES	ARCESS Array B	127.83	345	PKP	PKPdf	03 06 02.0	-1.5
	comp=Z,4.0nm,1.1s,baz=55,slow=1.8,SNR=5.5						
DRGR		143.83	321	⇑P	PKPbc	03 06 31.7	0.0
MORC	Moravsky Berou	144.78	329	*e*PKP	PKPdf	03 06 34.4	-1.1
OSTC	Ostas	144.85	331	*e*PKP	PKPdf	03 06 34.6	-1.0
CHVC	Chvalec	144.91	331	*e*PKP	PKPdf	03 06 34.6	-1.0
KRLC	Kraliky	144.93	330	*e*PKP	PKPbc	03 06 34.3	-0.7
DPC	Dobruska-Polom	144.95	331	*e*PKP	PKPdf	03 06 34.9	-0.9
DPC				*e*x	x	03 06 41.5	
VYHS	Vyhne	144.97	326	*e*PKP	PKPdf	03 06 35.5	-0.3
UPC	Upice	144.98	331	*e*PKP	PKPdf	03 06 34.7	-1.1
KOLL	Kolacno	145.14	327	*e*PKP	PKPdf	03 06 36.1	0.0
JAVC	Velka Javorina	145.32	328	*e*PKP	PKPdf	03 06 37.6	+1.1
VRAC	Vranov	145.55	329	⇑P	PKPab	03 06 37.1	0.0
VRAC	Vranov	145.55	329	*e*PKP	PKPab	03 06 37.3	+0.1
CLL	Collm	145.67	334	⇓*i*PKPbc	PKPab	03 06 36.6	-0.9
CLL				*e*x	x	03 06 41.0	
CLL				*i* PKiKP	pPKPdf	03 06 42.7	-1.5
	comp=Z,20nm,0.8s						
KRUC	Moravsky	145.81	329	*e*PKP	PKPab	03 06 37.9	-0.2
MODS	Modra-Piesok	145.84	327	*e*PKP	PKPab	03 06 38.6	+0.3
PRU	Pruhonice	146.01	332	*e*PKP	PKPab	03 06 38.4	-0.5
PRU				*e*x	x	03 06 44.4	
ZST	Bratislava	146.04	327	*e*PKP	PKPab	03 06 38.8	-0.2
TREC	Trest	146.08	330	*e*PKP	PKPab	03 06 38.5	-0.7
TREC				*e*x	x	03 06 44.5	
NKC	Novy Kostel	146.72	334	*e*PKP	PKPbc	03 06 40.1	-0.3
NKC				*e*x	x	03 06 46.0	
RONA	Rosalia, Austr	146.78	327	*e*P	PKPab	03 06 40.6	-1.3
	comp=Z,4.9nm,0.7s						
CONA	Conrad Observa	146.84	328	*e*P	PKPbc	03 06 40.4	-0.6
	comp=Z,8.3nm,1.1s						
CKRC	Cesky Krumlov	146.96	330	*e*PKP	PKPbc	03 06 40.9	-0.3
CKRC				*e*x	x	03 06 46.4	
KHC	Kasperske Hory	147.07	331	*e*PKP	PKPbc	03 06 41.0	-0.5
KHC				*e*x	x	03 06 46.9	
GERES	GERESS Array B	147.22	331	PKPbc	PKPbc	03 06 41.9	-0.2
	comp=Z,6.6nm,0.9s,baz=56,slow=3.4,SNR=48						
MOA	Molln	147.67	329	*e*P	PKPbc	03 06 43.0	-0.2
	comp=Z,6.1nm,1.1s						
SOKA	Soboth	148.10	327	*e*P	PKPbc	03 06 43.9	-0.5
OBKA	Obir	148.46	327	*e*P	PKPbc	03 06 43.6	-1.8
	comp=Z,6.5nm,1.1s						
KBA	Koelnbreinsper	148.66	329	*e*P	PKPbc	03 06 44.8	-1.2
	comp=Z,6.2nm,1.0s						
ABTA	Abfaltersbach	149.30	329	*e*P	PKPbc	03 06 45.9	-1.6
	comp=Z,10nm,1.3s						
WATA	Walderalm	149.30	331	*e*P	PKPbc	03 06 47.1	-0.5
	comp=Z,6.7nm,0.9s						
WTTA	Wattenberg	149.32	331	*e*P	PKPbc	03 06 47.1	-0.6
	comp=Z,11nm,1.1s						
MOTA	Moosalm	149.50	331	*e*P	PKPbc	03 06 47.3	-0.8
	comp=Z,8.2nm,0.8s,SNR=5.3						
RETA	Reutte	149.54	332	*e*P	PKPbc	03 06 47.6	-0.5
	comp=Z,4.4nm,0.8s						
SQTA	Sankt Quirin	149.55	331	*e*P	PKPbc	03 06 47.8	-0.3
	comp=Z,16nm,1.1s,SNR=5.9						
FETA	Feichten	149.91	331	*e*P	PKPbc	03 06 48.7	-0.4
	comp=Z,8.7nm,1.0s,SNR=5.3						
DAVA	Damuels	150.08	333	*e*P	PKPbc	03 06 48.8	-0.7
	comp=Z,6.5nm,0.9s						
TORD	Torodi Ar. Bea	166.01	234	PKP	PKPdf	03 07 03.9	-0.7
	comp=Z,1.7nm,1.2s,baz=122,slow=1.9,SNR=3.7						
TORD				PKPab	PKPab	03 08 05.2	+0.5
	comp=Z,1.7nm,0.9s,baz=132,slow=5.7,SNR=7.5						

IDC 05 02:52:22.6±3.7**, 21°.64S**×**170°.20E, h0^{km}, mb3.7**/2**, mbtmp3.6**/3**, ML3.4**/1**, Error ellipse: s-maj=176.5km s-min=37.5km az=160.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.51	262	Pn	Pn	02 53 19.4	+0.9
	3.3nm,0.3s,baz=131,slow=22,SNR=20						
DZM				Sn	Sn	02 54 00.9	+0.1
	7.1nm,0.3s,baz=61,slow=22,SNR=5.7						
	17nm,0.6s						
ASAR	Alice Springs	33.50	260	P	P	02 59 04.0	0.0
	0.5nm,0.7s,baz=81,slow=9.2,SNR=5.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	33.52	266	P	P	02 59 03.7	-0.5
	0.6nm,0.5s,baz=99,slow=8.4,SNR=14						
	0.6nm,0.5s						
CLL	Collm	145.46	335	*i* PKPbc	P	03 12 01.7	-11
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	147.02	331	PKPbc	PKPbc	03 12 06.7	-0.7
	comp=Z,0.4nm,0.5s,baz=46,slow=3.9,SNR=8.0						

NOU 05 02:56:41.8, 15°.99S×**167°.59E, h18^{km}, MLv4.1**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.66	325	P	Pb	02 56 54.7	0.0
DVP	Devils Point	1.82	162	P	Pn	02 57 12.5	+0.3
KOUNC	Koumac, New Ca	5.52	214	P	Pn	02 58 02.7	-0.4

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*WEL **05** 02:57:56.3, 34°S±21°×17°8W±2°9, h55^{km}±55^{km}, M4.5/13, mB5.0/7, ML5.0/13, MLv4.7/13, Mw(mB)4.3/7, Error ellipse: s-maj=0.1km s-min=0.0km az=124.6*

*NEIC **05** 02:57:57.9±1.3, 34°.0S±0°.1×178°.7W±0°.2, h14^{km}±6^{km}, mb4.5/8, Error ellipse: s-maj=20.4km s-min=15.1km az=70.0*

*IDC **05** 02:58:01.8±1.0, 34°.02S×178°.60W, h56^{km}±6^{km}, mb4.1/4, mbtmp4.3/6, Error ellipse: s-maj=21.6km s-min=16.7km az=103.0*

ISC 05 02:57:59.2±0.8**, 33°.90S**±0°.07×**178°.5W**±0°.1**, h37^{km}, n46, σ1^{s}46**/66**, mb4.4**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.47	214	Pn	Pn	02 59 03.8	-0.6
MXZ				Sn	Sn	02 59 52.1	-2.9
MXZ	Matakaoa Point	4.47	214	P	Pn	02 59 03.8	-0.6
MXZ				S	Sn	02 59 54.6	-0.4
WMGZ	Waiomatatini S	4.63	212	P	Pn	02 59 04.9	-1.7
WMGZ				S	Sn	03 00 01.4	+2.3
PKGZ	Pakihiroa	4.84	214	P	Pn	02 59 08.7	-0.8
PKGZ				S	Sn	03 00 05.6	+1.3
HAZ	Te Kaha	4.87	217	P	Pn	02 59 09.2	-0.7
HAZ				S	Sn	03 00 09.0	+3.9
PUZ	Puketiti	4.91	211	P	Pn	02 59 00.5	-10
PUZ				S	Sn	03 00 06.4	+0.5
RUGZ	Raukumara Rang	5.09	216	P	Pn	02 59 11.6	-1.4
RUGZ				S	Sn	03 00 12.3	+1.8
TWGZ	Tauwhareparae	5.12	213	P	Pn	02 59 11.9	-1.5
TWGZ				S	Sn	03 00 12.3	+1.2
CNGZ	Carnagh Statio	5.28	209	P	Pn	02 59 13.2	-2.3
CNGZ				S	Sn	03 00 14.0	-1.0
TKGZ	Te Karaka	5.39	212	P	Pn	02 59 18.4	+1.3
TKGZ				S	Sn	03 00 19.1	+1.3
MWZ	Matawai	5.45	215	P	Pn	02 59 15.9	-2.1
MWZ				S	Sn	03 00 20.8	+1.4
URZ	Urewera	5.60	218	P	Pn	02 59 19.8	-0.1
	14nm,0.3s,baz=260,slow=3.1,SNR=56						
URZ				S	Sn	03 00 21.9	-1.0
	54nm,0.5s,baz=189,slow=20,SNR=11						
URZ	Urewera	5.60	218	Pn	Pn	02 59 18.4	-1.5
URZ	Urewera	5.60	218	P	Pn	02 59 18.2	-1.7
URZ				S	Sn	03 00 23.3	+0.4
RAGZ	Rawiri	5.63	214	P	Pn	02 59 20.9	+0.4
RAGZ				S	Sn	03 00 24.1	+0.2
RIGZ	Rimuhau	5.65	211	P	Pn	02 59 18.9	-1.7
RIGZ				S	Sn	03 00 25.0	+0.7
PRGZ	Paritu Road	5.78	209	P	Pn	02 59 21.5	-1.0
PRGZ				S	Sn	03 00 28.4	+0.8
SNGZ	Shannon Statio	5.90	213	P	Pn	02 59 23.7	-0.3
TARZ	Mount Tarawera	5.90	221	P	Pn	02 59 26.9	+2.7
RTZ	Ruatahuna	5.94	216	P	Pn	02 59 24.9	+0.2
MUGZ	Murupara	5.94	218	P	Pn	02 59 23.7	-0.9
MTHZ	Maungataniwha	6.19	216	P	Pn	02 59 29.3	+1.2
MRHZ	Matea Rd	6.39	218	P	Pn	02 59 30.4	-0.4
BKZ	Black Stump Fm	6.61	216	Pn	Pn	02 59 31.3	-2.5
BKZ	Black Stump Fm	6.61	216	P	Pn	02 59 32.9	-0.9
OUZ	Omahuta	6.63	256	Pn	Pn	02 59 31.6	-2.4
BFZ	Birch Farm	7.94	210	Pn	Pn	02 59 49.3	-2.7
LTZ	Lake Taylor	11.43	216	Pn	Pn	03 00 37.1	-2.7
DZM	Mont Dzumac	17.72	308	P	P	03 02 06.7	+2.9
	9.4nm,0.8s,baz=146,slow=12,SNR=7.5						
DZM	Mont Dzumac	17.72	308		Pn	03 02 02.2	-1.0
CTA	Charters Tower	34.08	285	P	P	03 04 41.9	+1.6
	3.1nm,0.7s,baz=117,slow=6.5,SNR=4.0						
CTA				pP	pwP	03 04 55.8	-0.6
	2.6nm,0.5s,baz=114,slow=10.0,SNR=2.2						
	3.1nm,0.7s						
ASAR	Alice Springs	42.59	271	P	P	03 05 52.1	+0.2
	3.2nm,0.7s,baz=111,slow=7.3,SNR=30						
ASAR				pP	pwP	03 06 06.7	-1.4
	3.3nm,0.7s,baz=115,slow=7.5,SNR=11						
	3.2nm,0.7s						
ASAR	Alice Springs	42.59	271	P	P	03 05 52.0	+0.1
WR0	Warramunga Arr	43.72	276	P	P	03 06 01.0	0.0
WR0				IAmb	IAmb	03 06 01.4	
	comp=Z,5.7nm,1.0s						
WB2	Warramunga Arr	43.89	276	P	P	03 06 02.5	+0.2
WB2				IAmb	IAmb	03 06 17.1	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	43.90	276	P	P	03 06 02.2	-0.3
	comp=Z,3.5nm,0.7s,baz=117,slow=7.4,SNR=26						
WRA				pP	sP	03 06 16.3	-0.2
	comp=Z,2.8nm,0.6s,baz=120,slow=7.4,SNR=9.9						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	43.90	276	P	P	03 06 02.2	-0.3
WB0	Warramunga Arr	43.94	276	P	P	03 06 02.9	+0.2
WB0				IAmb	IAmb	03 06 17.4	
	comp=Z,6.8nm,0.8s						
MBWA	Marble Bar	55.47	266	P	P	03 07 31.1	+0.6
MBWA				IAmb	IAmb	03 07 47.7	
	comp=Z,7.3nm,1.1s						
QSPA	South Pole Qui	56.22	180	P	P	03 07 35.4	+0.1
	comp=Z,3.8nm,0.9s,baz=13,slow=1.7,SNR=8.7						
QSPA				pP	pwP	03 07 51.1	-1.1
	comp=Z,4.2nm,0.7s,baz=3.1,slow=0.9,SNR=7.9						
	comp=Z,3.8nm,0.9s						
QSPA	South Pole Qui	56.22	180	P	P	03 07 35.6	+0.2
BO04	La Punta	84.47	127	P	P	03 10 30.5	+2.1
KBZ	Khabaz	146.56	299	PKPbc	PKPab	03 17 36.5	-1.0
	comp=Z,1.7nm,0.8s,baz=297,slow=2.3,SNR=2.5						
FINES	FINESS Array B	148.24	338	PKPbc	PKPbc	03 17 39.8	-0.7
	comp=Z,3.0nm,0.8s,baz=44,slow=5.8,SNR=8.7						
FINES				pPKPbc	sPKPab	03 17 56.1	-0.9
	comp=Z,4.3nm,0.7s,baz=27,slow=4.4,SNR=7.3						
NB2	NORSAR Subarra	152.12	350	PKP	PKPab	03 17 59.4	-0.2
	comp=Z,0.7nm,0.5s,baz=19,slow=2.6						
NOA	NORSAR Array B	152.12	350	PKPbc	PKiKP	03 17 49.2	-1.0
	comp=Z,0.8nm,0.9s,baz=13,slow=4.0,SNR=3.4						

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*IDC **05** 02:59:32.1±1.4, 20°.68N×122°.79E, h0^{km}, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=57.7km s-min=20.2km az=59.0*

*NEIC **05** 02:59:35±1.4, 20°.7N±0°.1×122°.9E±0°.2, h22^{km}±8^{km}, mb4.3/7, Error ellipse: s-maj=25.8km s-min=15.0km az=60.0*

*MAN **05** 02:59:37.3, 20°.09N×121°.85E, h1^{km}, mb4.7, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

*JMA **05** 02:59:39.2±0.3, 21°N±1°×12°2E±°, h118^{km}, MV3.6/9, PHILIPPINE ISL REGION*

ISC 05 02:59:38.5±0.7**, 20°.37N**±0°.03×**122°.04E**±0°.09**, h40^{km}, n38, σ1^{s}75**/40**, mb3.9**/11**, 4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Gonzaga	2.11	180	⇓*e*P	Pn	03 00 10.3	-1.1
SGCP				*e*S	Sn	03 00 35.1	-1.3
TWG	Pinlang	2.60	340		Pn	03 00 16.0	-2.1
APYP	Conner	2.60	197	⇓*e*P	Pn	03 00 16.9	-1.2
APYP				*e*S	Sn	03 00 47.7	-0.8
YULB	Yu-li	3.09	347	Pn	Pn	03 00 23.9	-0.8
TPUB	Ta-pu	3.20	336	Pn	Pn	03 00 26.5	+0.2
SAMP	Sagada Mountai	3.44	198	⇓*e*P	Pn	03 00 30.0	+0.4
SAMP				*e*S	Sn	03 01 11.4	+2.2
SSLB	Suanglung	3.55	344	Pn	Pn	03 00 29.0	-2.1
NACB	Ninganchiao	3.81	354	Pn	Pn	03 00 30.2	-4.5
HATJ	Hateruma jima	4.02	24	P	Pn	03 00 38.2	+0.7
HATJ				*e*S	Sn	03 01 23.6	+0.3
JYNG	Yonagunijimaku	4.15	11	*e*P	Pn	03 00 39.6	+0.3
JYNG				S	Sn	03 01 26.0	-0.5
IRIF	Iriomote-Funau	4.25	21	P	Pn	03 00 41.4	+0.8
IRIF				*e*S	Sn	03 01 29.5	+0.6
JKRS	Kuro-shima	4.26	25	P	Pn	03 00 42.1	+1.2
JKRS				*e*S	Sn	03 01 30.1	+0.8
JIJ	Ishigaki jima	4.43	26	P	Pn	03 00 43.8	+0.7
JIJ				S	Sn	03 01 33.2	-0.2
BALP	Baler	4.62	186	⇓*e*P	Pn	03 00 46.5	+0.7
JTJ	Tarama	4.91	30	*e*P	Pn	03 00 50.6	+0.9
JTJ				S	Sn	03 01 44.8	-0.6
TJN	Taejon	16.62	15	Pn	Pn	03 03 18.7	-10
CMAR	Chiang Mai Arr	21.87	269	P	P	03 04 34.6	+6.6
	1.4nm,0.3s,baz=108,slow=7.7,SNR=5.2						
	1.4nm,0.3s						
MK31	Makanchi Array	41.67	319	P	P	03 07 24.5	+1.4
MKAR	Makanchi Array	41.67	319	P	P	03 07 23.6	+0.5
	0.3nm,0.5s,baz=106,slow=11,SNR=3.8						
	0.3nm,0.5s						
MKAR	Makanchi Array	41.67	319	P	P	03 07 23.3	+0.2
WB0	Warramunga Arr	41.68	162	P	P	03 07 22.5	-0.9
WB0				IAmb	IAmb	03 07 22.9	
	comp=Z,4.6nm,0.9s						
WRA	Warramunga Arr	41.83	163	P	P	03 07 23.9	-0.7
	comp=Z,2.8nm,1.1s,baz=340,slow=8.2,SNR=7.2						
	comp=Z,2.8nm,1.1s						
WB2	Warramunga Arr	41.84	163	P	P	03 07 23.7	-1.0
WB2				IAmb	IAmb	03 07 25.8	
	comp=Z,7.6nm,1.2s						
WR0	Warramunga Arr	41.91	162	P	P	03 07 24.4	-0.8
WR0				IAmb	IAmb	03 07 40.8	
	comp=Z,12nm,1.4s						
H11N1	WAKE ISLAND Hy	42.04	83	T	T	03 52 32.8	
	baz=278,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	42.04	83	T	T	03 52 36.4	
	baz=278,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	42.05	85	T	T	03 52 29.6	
	baz=281,slow=74,SNR=54						
H11N3	WAKE ISLAND Hy	42.06	83	T	T	03 52 34.6	
	baz=278,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	42.06	85	T	T	03 52 30.3	
	baz=281,slow=74,SNR=54						
H11S2	WAKE ISLAND Hy	42.07	85	T	T	03 52 30.6	
	baz=281,slow=74,SNR=54						
ZALV	Zalesovo Beam	43.89	329	P	P	03 07 40.6	-0.3
	comp=Z,1.2nm,0.6s,baz=116,slow=7.5,SNR=1.8						
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	45.27	165	P	P	03 07 53.0	+0.7
	comp=Z,1.0nm,0.5s,baz=354,slow=7.7,SNR=16						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	45.27	165	P	P	03 07 51.2	-1.1
KURBB	Kurchatov Arra	45.56	322	P	P	03 07 55.9	+1.6
	comp=Z,0.3nm,0.3s,baz=115,slow=7.6,SNR=1.8						
	comp=Z,0.3nm,0.3s						
BBOO	Buckleboo	54.55	166	P	P	03 09 00.4	-2.2
BBOO				IAmb	IAmb	03 09 30.2	
	comp=Z,24nm,1.2s						
ABKAR	Akbulak array	56.70	316	P	P	03 09 18.8	+0.9
ABKAR	Akbulak array	56.70	316	P	P	03 09 18.6	+0.7
ABKAR				IAmb	IAmb	03 09 23.8	
	comp=Z,1.3nm,0.9s						
BRG	Berggiesshubel	85.24	323	*e*(P)	P	03 12 08.2	-2.7
BRG				Amp		03 12 08.8	
	comp=Z,5.2nm,1.1s						

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*NCEDC **05** 03:03:17.1±1.6, 36°.84N±0°.04×121°.57W±0°.07, h6^{km}±6^{km}, ML3.0/11, ML2.8/60(NEIC), Error ellipse: s-maj=9.3km s-min=2.1km az=57.0*

NEIC 05 03:03:17.2±1.2**, 36°.80N**±0°.02×**121°.59W**±0°.03**, h13^{km}**±4^{km}**, Error ellipse: s-maj=4.1km s-min=2.1km az=51.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSFM	Saint Francis	0.07	82		Pg	03 03 18.9	-1.0
SAO	San Andreas Ge	0.12	108		Pg	03 03 19.7	-0.7
SAO					Sg	03 03 21.8	-1.0
HCOM	Corn Cob Canyo	0.13	312		Pg	03 03 20.1	-0.5
HFEM	San Felipe	0.24	40		Pg	03 03 21.8	-0.5
SCZ	Santa Cruz	0.25	144		Pg	03 03 22.3	-0.2
SCZ					Sg	03 03 26.2	+0.1
BLRM	Lewis Ranch	0.29	118		Pg	03 03 23.0	-0.1
BJCM	Johnson Can.	0.30	148		Pg	03 03 23.3	0.0
PACP	Pacheco Peak	0.32	50		Pg	03 03 23.4	-0.3
HAST	Hastings Reser	0.41	176		Pg	03 03 25.8	+0.4
HAST					Sb	03 03 32.2	-0.3
BSMM	Soledad Missio	0.44	163		Pg	03 03 26.3	+0.4
MOBB	Monterey Bay O	0.48	257		Pb	03 03 27.6	+0.3
BBGB	Big Mountain B	0.49	117		Pb	03 03 27.6	-0.2
SCCB	Santa Clara Co	0.53	336		Pg	03 03 27.6	-0.1
MHC	Mount Hamilton	0.54	356		Pg	03 03 27.7	-0.1
COSM	Mount Oso	0.73	14		Pg	03 03 31.1	-0.2
JRSC	Jasper Ridge	0.79	319		Pg	03 03 31.5	-1.1
WENL	Wente Vineyard	0.83	351		Pb	03 03 33.4	-0.1
PMPB	Monarch Peak	0.86	132		Pg	03 03 33.6	-0.3
PAPM	Alder Peak	0.91	168		Pb	03 03 34.8	+0.1

PDRM	Domengine Ranc	1.09	115		Pb	03 03 37.7	-0.1
SMCB	Saint Mary's C	1.12	338		Pb	03 03 37.6	-0.7
BDM	Black Diamond	1.17	349		Pn	03 03 37.9	-1.3
BKS	Berkeley--Byer	1.19	335		Pn	03 03 37.6	-1.9
VAK	Adit at Lawren	1.20	334		Pn	03 03 38.1	-1.5
PKD	Bear Valley Ra	1.20	135		Pn	03 03 38.8	-0.9
TCHL	Shandon	1.47	139		Pn	03 03 43.3	0.0
PAGB	Antelope Grade	1.52	134		Pn	03 03 43.5	-0.6
PAGB				IAML		03 04 11.0	
	comp=E,133nm,0.7s						
PAGB				IAML		03 04 12.9	
	comp=N,98nm,0.6s						
THIS	South End of C	1.54	134		Pn	03 03 44.0	-0.3
TRAM	Private Proper	1.55	136		Pn	03 03 44.0	-0.4
CMB	Columbia Colle	1.56	38		Pn	03 03 42.9	-1.8
TSCN	Private Proper	1.61	141		Pn	03 03 45.2	-0.1
CVS	Carmenet Viney	1.69	336		Pn	03 03 44.5	-1.9
MCCM	Marconi Confer	1.69	323		Pn	03 03 44.5	-1.8
MCCM				IAML		03 04 13.5	
	comp=E,100nm,0.4s						
MCCM				IAML		03 04 16.5	
	comp=N,110nm,0.7s						
KCC	Kaiser Creek	1.89	73		Pn	03 03 49.4	+0.2
PMLM	Mount Lospe	2.06	157		Pn	03 03 50.9	-0.7
FTR	Fort Ross	2.12	324		Pn	03 03 51.1	-1.2
MDPB	Devils Postpil	2.17	67		Pn	03 03 53.5	+0.3
OMMB	Old Mammoth Mi	2.22	68		Pn	03 03 54.1	+0.2
OMMB				IAML		03 04 28.6	
	comp=N,54nm,0.7s						
OMMB				IAML		03 04 29.6	
	comp=E,51nm,0.7s						
MDCM	Deadman Creek	2.23	65		Pn	03 03 54.7	+0.7
EMB	Emerald Bay	2.47	28		Pn	03 03 56.8	-0.4
EMB				IAML		03 04 35.1	
	comp=N,65nm,0.8s						
EMB				IAML		03 04 44.8	
	comp=E,40nm,0.8s						
RUBR	Rubicon Trail	2.52	26		Pn	03 03 57.8	-0.1
RUBR				IAML		03 04 58.9	
	comp=E,58nm,1.0s						
BCW	Bitter Crk WRg	2.56	136		Pn	03 03 57.8	-0.6
BCW				IAML		03 04 56.9	
	comp=N,45nm,0.8s						
ORV	Oroville	2.75	1		Pn	03 04 01.1	+0.1
ISA	Isabella, Lake	2.76	113		Pn	03 04 01.3	+0.1
PNTR	Pine Nut	2.77	34		Pn	03 04 01.7	+0.3
PNTR				IAML		03 05 04.0	
	comp=N,43nm,1.1s						
PNTR				IAML		03 05 04.5	
	comp=E,43nm,1.1s						
MPK	Martis Peak	2.78	26		Pn	03 04 01.8	+0.3
LHV	Little Huntoon	2.85	59		Pn	03 04 03.0	+0.7
LHV				IAML		03 04 55.0	
	comp=E,46nm,0.8s						
LHV				IAML		03 05 06.8	
	comp=N,32nm,1.0s						
YERR	Yerington	2.86	40		Pn	03 04 02.2	-0.5
YERR				IAML		03 04 55.7	
	comp=N,30nm,0.6s						
VCNR	Virginia City	2.92	31		Pn	03 04 03.9	+0.4
VCNR				IAML		03 04 47.7	
	comp=N,35nm,0.8s						
VCNR				IAML		03 04 56.2	
	comp=E,29nm,0.8s						
RYN	Ryan	3.04	52		Pn	03 04 05.5	+0.5
NVAR	Mina Array Bea	3.07	57		Pn	03 04 06.3	+0.7
LCH	Last Change Ra	3.19	81		Pn	03 04 07.3	+0.2
LCH				IAML		03 05 02.0	
	comp=E,22nm,1.0s						
BEKR	Beckworth	3.21	17		Pn	03 04 07.5	+0.1
BEKR				IAML		03 04 59.6	
	comp=E,22nm,0.7s						
CCAC	Calif City Air	3.33	119	Pn	Pn	03 04 09.7	+0.7
CCAC				IAML		03 05 18.3	
	comp=E,28nm,1.3s						
CCAC				IAML		03 05 25.5	
	comp=N,25nm,0.8s						
PAHR	Pah Rah Range	3.38	30	Pn	Pn	03 04 09.7	0.0
GRAC	Grapevine Rang	3.39	85	Pn	Pn	03 04 09.9	+0.2
GRAC				IAML		03 05 24.5	
	comp=N,22nm,1.1s						
KVN	Kaiserville	3.56	50	Pn	Pn	03 04 12.2	0.0
GWY	Greenwater Val	4.01	97	Pn	Pn	03 04 18.9	+0.5
GWY				IAML		03 05 45.9	
	comp=N,10nm,4.7s						
GSC	Goldstone, Bar	4.16	110	Pn	Pn	03 04 20.9	+0.6
GSC				IAML		03 05 39.2	
	comp=N,11nm,1.3s						
GSC				IAML		03 06 03.5	
	comp=E,11nm,3.5s						
TPNV	Topopah Spring	4.28	86		Pn	03 04 22.3	+0.1
TPNV				IAML		03 05 38.8	
	comp=E,12nm,0.9s						
TPNV				IAML		03 05 40.8	
	comp=E,10nm,0.9s						
PSUT	Pine Spring	6.37	72	Pn	Pn	03 04 49.6	-1.3
GLA	Glamis	6.70	122		Pn	03 04 55.4	+0.2

IDC 05 03:09:32.2±3.3, 27°.04S×65°.39E, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=99.7km s-min=46.2km az=53.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	20.43	20	T	T	03 35 43.0	
	baz=198						
H08S2	Diego Garcia H	20.43	21	T	T	03 35 51.6	
	baz=198,slow=74,SNR=4.9						
H08S3	Diego Garcia H	20.45	21	T	T	03 35 54.2	
	baz=198,slow=74,SNR=4.4						
CMAR	Chiang Mai Arr	55.72	39	P	P	03 19 10.4	-0.4
	1.6nm,0.3s,baz=242,slow=6.9,SNR=4.9						
	1.6nm,0.3s						
ASAR	Alice Springs	61.31	103	P	P	03 19 50.0	+0.1
	0.4nm,0.6s,baz=245,slow=5.9,SNR=4.7						
	0.4nm,0.6s						
MKAR	Makanchi Array	75.06	12	P	P	03 21 15.5	-0.1
	0.4nm,0.7s,baz=178,slow=5.3,SNR=4.4						
	0.4nm,0.7s						
ZALV	Zalesovo Beam	82.39	11	P	P	03 21 56.3	+0.6
	0.6nm,0.3s,baz=180,slow=5.1,SNR=5.3						
	0.6nm,0.3s						
YKA	Yellowknife Ar	144.55	360	PKP	PKPbc	03 29 08.8	+0.1
	baz=349,slow=3.4						

IDC 05 03:50:50.8±2.3, 0°.53N×25°.10W, h0^{km}, mb3.7/3, mbtmp3.7/3, MS3.5/12, Error ellipse: s-maj=89.9km s-min=50.1km az=110.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	13.44	128	T	T	04 07 36.2	
	baz=307,slow=74,SNR=122						
H10N2	ASCENSION HYDR	13.44	128	T	T	04 07 36.9	
	baz=307,slow=74,SNR=192						
H10N1	ASCENSION HYDR	13.46	128	T	T	04 07 38.3	
	baz=307,slow=74,SNR=269						
H10S3	ASCENSION HYDR	14.02	132	T	T	04 08 23.4	
	baz=270,slow=74,SNR=32						
H10S2	ASCENSION HYDR	14.04	132	T	T	04 08 20.1	
	baz=310,slow=74,SNR=15						
DBIC	Dimbokro	21.09	73	LR	LR	04 02 04.3	
	comp=Z,56nm,18.5s,baz=264,slow=32						
MDP	Montagnes des	27.88	280	LR	LR	04 05 10.9	
	comp=Z,119nm,22.0s,baz=66,slow=31						
TORD	Torodi Ar. Bea	29.36	64	P	P	03 56 56.2	+0.4
	0.4nm,0.8s,baz=258,slow=9.8,SNR=2.7						
	0.4nm,0.8s						
CPUP	Villa Florida	40.97	227	LR	LR	04 14 03.0	
	comp=Z,44nm,20.1s,baz=57,slow=34						
SJG	San Juan	43.95	296	LR	LR	04 12 52.1	
	comp=Z,26nm,21.4s,baz=102,slow=30						
LPAZ	La Paz	45.62	246	LR	LR	04 18 00.2	
	comp=Z,154nm,18.8s,baz=77,slow=36						
TSUM	Tsumeb	46.23	117	LR	LR	04 14 29.2	
	comp=Z,76nm,19.0s,baz=325,slow=31						
LVC	Limon Verde	48.45	239	LR	LR	04 19 34.6	
	comp=Z,39nm,21.0s,baz=87,slow=36						
NNA	Nana	52.85	255	LR	LR	04 20 29.6	
	comp=Z,39nm,21.0s,baz=88,slow=34						
SUR	Sutherland	54.28	132	LR	LR	04 19 39.6	
	comp=Z,45nm,18.1s,baz=316,slow=32						
LBTB	Lobatse	55.19	121	LR	LR	04 19 12.7	
	comp=Z,37nm,20.2s,baz=339,slow=31						
PLCA	Paso Flores	58.19	220	LR	LR	04 23 43.2	
	comp=Z,36nm,18.0s,baz=69,slow=34						
AKASG	Malin Array Be	67.79	34	P	P	04 01 49.4	-1.1
	0.3nm,0.3s,baz=255,slow=6.7,SNR=2.6						
	0.3nm,0.3s						
FINES	FINESS Array B	71.98	23	P	P	04 02 17.4	+1.3
	0.8nm,0.7s,baz=240,slow=7.2,SNR=4.4						
	0.8nm,0.7s						
TXAR	Lajitas Array	79.78	300	LR	LR	04 33 33.8	
	comp=Z,28nm,21.4s,baz=322,slow=32						
ASAR	Alice Springs	149.27	140	PKPbc	PKPbc	04 10 42.0	-0.5
	1.4nm,0.8s,baz=208,slow=1.5,SNR=10						

IDC 05 04:08:42.0±1.4, 16°.06N×145°.67E, h243^{km}±16^{km}, mb3.5/8, mbtmp4.1/9, Error ellipse: s-maj=30.2km s-min=20.4km az=82.0

NEIC 05 04:08:43.5±1.9, 15°.9N±0°.1×145°.5E±0°.3, h262^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=34.9km s-min=14.7km az=94.0

ISC 05 04:08:42.0±0.8, 16°.01N±0°.08×145°.7E±0°.2, h250^{km}, n19, σ1^{s}.14/21, mb3.8/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.53	198	P	Pn	04 09 31.4	+1.7
	66nm,0.3s,baz=169,slow=15,SNR=5.1						
GUMO				S	S	04 10 07.2	-0.1
	160nm,0.3s,baz=161,slow=22,SNR=13						
GUMO	Guam	2.53	198		Pn	04 09 31.3	+1.7
GUMO				Sn	S	04 10 07.7	+0.4
KSRS	Korea Array	26.52	327	P	P	04 13 56.0	-0.7
	1.0nm,0.5s,baz=154,slow=11,SNR=5.5						
	1.0nm,0.5s						
WB2	Warramunga Arr	37.42	198	P	P	04 15 30.5	-1.0
WRA	Warramunga Arr	37.43	198	P	P	04 15 32.4	+0.8
	0.5nm,1.0s,baz=24,slow=8.2,SNR=6.9						
	0.5nm,1.0s						
WRA	Warramunga Arr	37.43	198	P	P	04 15 31.4	-0.2
SONM	Songino Array	45.25	323	P	P	04 16 34.9	0.0
	4.7nm,0.8s,baz=130,slow=4.6,SNR=4.6						
	4.7nm,0.8s						
SONM	Songino Array	45.25	323	P	P	04 16 34.1	-0.7
SONM				IAmb	IAmb	04 16 36.2	
	comp=Z,4.9nm,0.8s						
YAK	Yakutsk	47.35	350	P	P	04 16 51.3	+0.6
BBOO	Buckleboo	49.41	191	P	P	04 17 04.2	-2.6
BBOO				IAmb	IAmb	04 17 13.7	
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	60.15	323	P	P	04 18 23.8	+0.5
	comp=Z,0.7nm,0.3s,baz=86,slow=7.4,SNR=2.6						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	60.15	323	P	P	04 18 22.0	-1.3
MKAR	Makanchi Array	60.33	315	P	P	04 18 26.0	+1.2
	comp=Z,1.0nm,0.6s,baz=90,slow=8.3,SNR=12						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	63.27	319	P	P	04 18 44.9	+0.8
KURK				IAmb	IAmb	04 18 45.3	
	comp=Z,4.6nm,0.4s						
ILAR	Eielson Array	66.06	26	P	P	04 19 01.5	-0.4
	comp=Z,0.3nm,0.4s,baz=256,slow=5.5,SNR=3.4						
YKA	Yellowknife Ar	80.36	28	P	P	04 20 26.6	+1.3
	comp=Z,0.8nm,0.4s,baz=287,slow=5.0,SNR=20						
	comp=Z,0.8nm,0.4s						
YKA	Yellowknife Ar	80.36	28	P	P	04 20 26.4	+1.1
ARCES	ARCESS Array B	85.04	342	P	P	04 20 48.7	-0.5
	comp=Z,4.0nm,1.1s,baz=82,slow=7.4,SNR=7.5						
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	89.31	335	P	P	04 21 09.2	-0.6
	comp=Z,0.5nm,0.3s,baz=67,slow=4.0,SNR=13						
	comp=Z,0.5nm,0.3s						

WEL 05 04:25:56.4±1.4, 34°S±7°×17°.9E±1°.8, h33^{km}, M3.8/5, ML4.0/13, MLv3.8/5, Error ellipse: s-maj=0.0km s-min=0.0km az=82.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.37	183	P	Pn	04 26 47.6	+1.0
MXZ				S	Sn	04 27 25.3	-0.1
KUZ	Kuaotunu	3.42	221	P	Pn	04 26 49.5	+2.1
HAZ	Te Kaha	3.60	189	P	Pn	04 26 50.7	+0.8
HAZ				S	Sn	04 27 32.5	+1.3
WMGZ	Waiomatatini S	3.62	181	P	Pn	04 26 50.5	+0.4
WMGZ				S	Sn	04 27 33.5	+1.8
PKGZ	Pakihiroa	3.70	185	S	Sn	04 27 33.5	-0.3
RUGZ	Raukumara Rang	3.82	190	P	Pn	04 26 53.4	+0.4
RUGZ				S	Sn	04 27 37.8	+0.8
PUZ	Puketiti	3.88	183	P	Pn	04 26 53.8	+0.1
PUZ				S	Sn	04 27 37.8	-0.3
MWZ	Matawai	4.21	191	P	Pn	04 26 58.8	+0.5
MWZ				S	Sn	04 27 47.0	+0.7
URZ	Urewera	4.21	195	P	Pn	04 26 58.5	+0.2
URZ				S	Sn	04 27 47.8	+1.4
MUGZ	Murupara	4.50	198	P	Pn	04 27 02.4	+0.1
NMHZ	Naumai	5.08	195	P	Pn	04 27 09.1	-1.2
NTVZ	North Tongarir	5.40	204	P	Pn	04 27 14.3	-0.4
TMVZ	Te Maari	5.41	204	P	Pn	04 27 13.9	-0.9
ETVZ	East Tongariro	5.42	204	P	Pn	04 27 13.5	-1.6
OTVZ	Oturere	5.46	204	P	Pn	04 27 14.7	-0.9
SNVZ	South Ngauruho	5.49	204	P	Pn	04 27 15.0	-1.0

ECX 05 04:27:40.1±0.5, 30°.90N×114°.17W, h20^{km}±19^{km}, MD3.7, ML3.4

MEX 05 04:27:43.1±0.8, 30°.80N×114°.18W, h30^{km}±30^{km}, MD4.1

ISC 05 04:27:40.3±1.4, 30°.84N±0°.07×114°.21W±0°.04, h23^{km}±16^{km}, n14, σ0^{s}.97/22, 1C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.58	289	*e*P	Pb	04 27 51.4	-0.5
SFX				*e*S	Sb	04 27 59.1	-0.6
ECBX	El Chinero	0.95	311	*e*P	Pn	04 27 56.3	-1.9
SPIG	San Pedro Mart	1.10	281	*i* P	Pn	04 28 00.6	+0.1
SPIG				*i* S	Sb	04 28 15.1	+0.3
SPIG	San Pedro Mart	1.10	281	*e*P	Pn	04 27 59.6	-0.9
LAPR	La Primavera	1.67	101	*i* P	Pn	04 28 07.8	-0.2
LAPR				*i* S	Sn	04 28 26.8	-1.8
LAPR	La Primavera	1.67	101	*e*P	Pn	04 28 06.8	-1.2
LAPR				*e*S	Sn	04 28 29.3	+0.6
LAPR				IAML		04 28 41.2	
	comp=N,526nm,0.5s						
LAPR				⇑*e*		04 28 41.2	
LAPR				⇓*e*		04 28 41.7	
LAPR				IAML		04 28 41.7	
	comp=E,726nm,0.7s						
SVX	San Vicente	1.81	286	*e*P	Pn	04 28 10.3	+0.3
BAHB	Baha de los	1.98	163	*e*P	Pn	04 28 12.6	+0.4
CBX	Cerro Bola	2.56	306	*i* P	Pn	04 28 21.5	+1.1
CBX				*i* S	Sn	04 28 51.3	+0.5
CBX	Cerro Bola	2.56	306	*e*P	Pn	04 28 20.5	+0.1
TJIG	Tijuana	2.63	308	*i* P	Pn	04 28 21.5	+0.2
TJIG				*i* S	Sn	04 28 53.7	+1.2
TUC	Tucson	3.27	63	*e*P	Pb	04 28 38.7	+1.1
TUC				*e*S	Sn	04 29 08.0	-0.4
HSIG		3.37	122	*i* P	Pn	04 28 31.5	+0.1
HSIG				*i* S	Sn	04 29 09.4	-1.2
HSIG		3.37	122	*e*P	Pn	04 28 32.3	+0.9

IDC 05 04:36:01.3±9.3, 4°.50S×153°.02E, h33^{km}±64^{km}, mb3.2/2, mbtmp3.4/2, Error ellipse: s-maj=55.4km s-min=42.7km az=55.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.01	281	Pn	Pn	04 36 19.5	+0.4
	12nm,0.3s,baz=189,slow=14,SNR=7.3						
KRVT				Sn	Sn	04 36 31.9	-0.3
	99nm,0.3s,baz=211,slow=23,SNR=33						
WRA	Warramunga Arr	23.80	228	P	P	04 41 11.4	0.0
	0.9nm,0.5s,baz=53,slow=9.7,SNR=13						
	0.9nm,0.5s						
ASAR	Alice Springs	26.52	222	P	P	04 41 36.0	-0.1
	0.3nm,0.9s,baz=55,slow=8.3,SNR=2.2						
	0.3nm,0.9s						
TORD	Torodi Ar. Bea	150.42	289	PKPbc	PKPbc	04 55 49.9	-0.6
	0.1nm,0.4s,baz=59,slow=2.2,SNR=1.3						

IDC 05 04:46:15.9±3.6, 27°.82N×84°.78E, h0^{km}, mb3.7/6, mbtmp3.7/7, ML4.0/1, Error ellipse: s-maj=90.5km s-min=42.1km az=117.0

ISC 05 04:46:17.2±2.2, 27°.8N±0°.3×84°.9E±0°.3, h12^{km}, n8, σ0^{s}.58/8, mb3.7/6, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	13.87	330	P	Pn	04 49 34.2	+0.4
KSH				pP	P	04 49 37.5	-4.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	19.12	355	P	P	04 50 39.5	-0.5
	comp=Z,0.5nm,0.3s,baz=175,slow=12,SNR=29						
	comp=Z,2.4nm,0.6s						
KURBB	Kurchatov Arra	23.35	350	P	P	04 51 24.4	-0.8
	comp=Z,0.8nm,0.7s,baz=175,slow=10,SNR=11						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	26.17	360	P	P	04 51 50.9	-0.4
	comp=Z,1.0nm,0.4s,baz=179,slow=11,SNR=5.5						
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	51.19	328	P	P	04 55 19.9	-0.1
	comp=Z,1.3nm,0.5s,baz=113,slow=8.6,SNR=14						
	comp=Z,1.3nm,0.5s						
ARCES	ARCESS Array B	53.67	338	P	P	04 55 38.5	+0.1
	comp=Z,1.5nm,0.7s,baz=101,slow=7.3,SNR=11						
	comp=Z,1.5nm,0.7s						
TORD	Torodi Ar. Bea	78.05	279	P	P	04 58 16.1	-0.2
	comp=Z,0.7nm,1.1s,baz=65,slow=3.7,SNR=2.8						
	comp=Z,0.7nm,1.1s						
YKA	Yellowknife Ar	88.72	9	P	P	04 59 10.9	+0.5
	comp=Z,0.1nm,0.6s,baz=338,slow=4.5,SNR=2.3						
	comp=Z,0.1nm,0.6s						

MOS 05 04:52:47.4±1.1, 36°.86N×71°.57E, h178^{km}, mb4.6/27, Error ellipse: s-maj=5.8km s-min=3.2km az=85.9

BJI 05 04:52:47.1±0.0, 36°.92N×71°.49E, h160^{km}, mb4.8/25, mB4.6/12

NEIC 05 04:52:48.8±1.4, 36°.86N±0°.06×71°.41E±0°.07, h177^{km}±4^{km}, mb4.6/58, Error ellipse: s-maj=9.0km s-min=7.7km az=144.0

IDC 05 04:52:49.0±0.5, 36°.77N×71°.55E, h183^{km}±4^{km}, mb3.9/25, mbtmp4.5/30, MS3.3/4, Error ellipse: s-maj=10.3km s-min=8.0km az=45.0

NNC 05 04:52:51.0±4.0, 37°.27N×71°.23E, h168^{km}±64^{km}, mb4.5, mpv5.4, Error ellipse: s-maj=41.7km s-min=24.9km az=165.0

SOME 05 04:52:55.1, 37°.38N×71°.72E, h20^{km}

ISC 05 04:52:47.8±0.3, 36°.83N±0°.03×71°.42E±0°.03, h171^{km}±2^{km}, h171^{km}:pP-P, n395, σ1^{s}.96/478, mb4.4/92, 35C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.33	338		Pn	04 53 29.0	+0.8
CHGR	Chuyangaron	2.55	316	Pn	Pn	04 53 31.2	+0.5
DRK	Karamyk	2.66	6	Pn	Pn	04 53 33.3	+1.1
KBL	Kabul	2.99	221	PN	Pn	04 53 37.7	+1.5
KBL	Kabul	2.99	221	Pn	Pn	04 53 37.7	+1.5
KBL	Kabul	2.99	221	P	Pn	04 53 37.9	+1.7
	SNR=90						
KBL				S	Sn	04 54 14.7	+0.9
CEP	Cherat	3.03	172	P	Pn	04 53 38.1	+1.5
CEP				S	Sn	04 54 16.0	+1.5
BTK	Batken	3.25	352	PN	Pn	04 53 40.7	+1.5
BTK	Batken	3.25	352	Pn	Pn	04 53 40.7	+1.5
CHCP	Chirah Chowk	3.51	154	P	Pn	04 53 44.5	+2.0
NIL	Nilore	3.51	154	PN	Pn	04 53 44.1	+1.6
NIL	Nilore	3.51	154	Pn	Pn	04 53 44.1	+1.6
THW	Thamme Wali	4.04	176	P	Pn	04 53 50.2	+1.0
KSH	Kashi	4.48	52	P	Pn	04 53 51.1	-3.8
KSH				sP		04 54 24.6	
KSH				S	Sn	04 54 35.0	-12
KSH				smax	smax		
	comp=N,9μm,0.5s						
KSH				smax	smax		
	comp=E,6μm,0.4s						
TAS	Tashkent	4.78	340	PN	Pn	04 53 58.7	0.0
TAS	Tashkent	4.78	340	Pn	Pn	04 53 58.7	0.0
JMU	Jammu	5.01	144	*e*P	Pn	04 54 02.8	+1.2
JMU				*e*S	Sn	04 54 57.7	-1.8
SARP	Sargodha	5.01	168	P	Pn	04 54 02.0	+0.3
IUG	Iuzhnay	5.42	349	*c i*PN	Pn	04 54 07.6	+0.6
IUG	Iuzhnay	5.42	349	*e*P	Pn	04 54 07.7	+0.7
	9μm,0.6s						
IUG				*e*S	Sn	04 55 05.6	-3.7
	3μm,0.6s						
IUG	Iuzhnay	5.42	349	⇑*i*P	Pn	04 54 07.7	+0.7
	baz=347						
IUG				*e*S	Sn	04 55 07.3	-2.0
	baz=347						
AML	Almayashu	5.58	18	P	Pn	04 54 09.2	-0.2
	SNR=1652						
AML	Almayashu	5.58	18	PN	Pn	04 54 08.7	-0.7
AML	Almayashu	5.58	18	*i* P	Pn	04 54 09.2	-0.2
	SNR=2339						
THN	Thein Dam	5.64	140	*e*P	Pn	04 54 10.9	+1.0
THN				*e*S	Sn	04 55 13.1	-1.3
CHM	Chimkent	5.66	346	*e*P	Pn	04 54 11.0	+0.9
	5.6nm,0.2s						
CHM				*e*S	Sn	04 55 11.7	-3.2
	5μm,0.5s						
UCH	Uchtor	5.89	23	P	Pn	04 54 13.5	-0.2
	SNR=795						
UCH	Uchtor	5.89	23	PN	Pn	04 54 12.9	-0.8
DZA	Taraz	6.05	359	*ce*PN	Pn	04 54 15.9	+0.6
DZA	Taraz	6.05	359	*e*P	Pn	04 54 15.7	+0.4
	5μm,0.5s						
DZA				*e*S	Sn	04 55 20.1	-4.1
	9μm,0.4s						
DZA	Taraz	6.05	359	⇑*e*P	Pn	04 54 16.0	+0.6
	baz=358						
DZA				*e*S	Sn	04 55 21.7	-2.5
	baz=358						
MRKS	Merke	6.07	13	*e*P	Pn	04 54 19.1	+3.5
	579nm,0.6s						
MRKS				*e*S	Sn	04 55 26.3	+1.7
	1μm,0.5s						
EKS2	Erkin-Say	6.10	17	P	Pn	04 54 16.0	-0.1
	SNR=139						
EKS2	Erkin-Say	6.10	17	PN	Pn	04 54 15.6	-0.4
AAK	Ala-Archa	6.26	21	P	Pn	04 54 18.3	+0.1
	SNR=173						
AAK	Ala-Archa	6.26	21	P	Pn	04 54 18.3	+0.1
	278nm,0.5s,baz=181,slow=5.5,SNR=403						
AAK				S	Sn	04 55 24.2	-5.2
	147nm,0.4s,baz=149,slow=23,SNR=9.9						
AAK	Ala-Archa	6.26	21	*i* P	Pn	04 54 18.3	+0.1
	SNR=200						
KK31	Karatay Array	6.30	354	PN	Pn	04 54 18.8	+0.2
KK31	Karatay Array	6.30	354	Pn	Pn	04 54 18.8	+0.2
KK31	Karatay Array	6.30	354	⇑P	Pn	04 54 18.8	+0.2
	240nm,0.6s,baz=178,slow=13,SNR=2580						
KK31				⇓S	Sn	04 55 25.0	-5.1
	466nm,0.5s,baz=181,slow=23,SNR=4.7						
KKAR	Karatay Array	6.30	354	PN	Pn	04 54 18.9	+0.3
KKAR	Karatay Array	6.30	354	Pn	Pn	04 54 18.8	+0.1
KKAR	Karatay Array	6.30	354		Pn	04 54 18.9	+0.3
BRLS	Borolday	6.31	349	*e*PN	Pn	04 54 15.6	-3.1
BRLS	Borolday	6.31	349	*e*P	Pn	04 54 15.7	-3.0
	baz=346						
KBK	Karagaybulak	6.42	24	P	Pn	04 54 20.4	+0.1
	SNR=116						
KBK	Karagaybulak	6.42	24	PN	Pn	04 54 20.1	-0.2
FRU1	Bishkek	6.46	21	PN	Pn	04 54 21.3	+0.5
FRU1	Bishkek	6.46	21		Pn	04 54 21.2	+0.5
ULHL	Ulahol	6.57	33	P	Pn	04 54 21.6	-0.7
	SNR=148						
ULHL	Ulahol	6.57	33	PN	Pn	04 54 21.3	-1.0
BOOM	Boomskoye usch	6.64	30	PN	Pn	04 54 22.7	-0.5
BOOM	Boomskoye usch	6.64	30	Pn	Pn	04 54 22.6	-0.5
CHMS	Chumysh	6.67	22	P	Pn	04 54 23.1	-0.3
	SNR=232						
CHMS	Chumysh	6.67	22	PN	Pn	04 54 23.2	-0.3
CHMS	Chumysh	6.67	22	⇑P	Pn	04 54 23.2	-0.2
	196nm,0.3s						
CHMS				S	Sn	04 55 32.9	-6.0
BHK	Bhakra	6.81	141	*e*PN	Pn	04 54 26.0	+0.6
BHK				*e*P	Pn	04 54 26.5	+1.1
BHK				*e*SN	Sn	04 55 36.8	-5.5
BHK				*e*S	Sn	04 55 38.8	-3.5
USP	Ospenovka	6.85	19	P	Pn	04 54 24.9	-0.9
	SNR=58						
USP	Ospenovka	6.85	19	PN	Pn	04 54 24.5	-1.3
TKM2	Tokmak 2	6.88	27	P	Pn	04 54 26.0	-0.4

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          SNR=95
TKM2  Tokmak 2           6.88  27  PN    Pn    04 54 25.9 -0.5
TKM2  Tokmak 2           6.88  27 ⇑P     Pn    04 54 26.0 -0.4
          117nm,0.8s
TKM2                               S     Sn    04 55 40.9 -3.1
KDJ   Kajisay            6.92  38  PN    Pn    04 54 26.2 -0.7
KDJ   Kajisay            6.92  38  Pn    Pn    04 54 26.2 -0.7
TARG  Taragay, Kyrgy     6.96  43        Pn    04 54 27.4 -0.3
SGDS  Sogindy            7.05  19c iPN   Pn    04 54 27.6 -1.0
SGDS                              eS     Sn    04 55 45.7 -2.4
SGDS  Sogindy            7.05  19⇑iP     Pn    04 54 27.6 -1.0
          baz=18
SGDS                              eS     Sn    04 55 45.7 -2.4
          baz=18
KST   Kastek             7.12  28 eP     Pn    04 54 29.4 -0.1
          101nm,0.4s
KST                               eS     Sn    04 55 43.9 -5.8
          222nm,0.8s
SMLA  Simla              7.43 138 eP     Pn    04 54 33.4 -0.1
SMLA                              i x    x     04 54 35.5
SMLA                              eS     Sn    04 55 52.4 -4.5
TNSS  Tian-Shan          7.51  33 i PN   Pn    04 54 34.2 -0.7
TNSS  Tian-Shan          7.51  33 eP     Pn    04 54 34.3 -0.7
          68nm,0.5s
TNSS                              eS     Sn    04 55 53.5 -5.9
          63nm,0.8s
TNSS  Tian-Shan          7.51  33 i P    Pn    04 54 34.2 -0.7
          baz=32
KRBS  Karabastau         7.59  24 eP     Pn    04 54 34.6 -1.0
          68nm,0.7s
KRBS                              eS     Sn    04 55 53.4 -7.4
          53nm,0.5s
AAA   Alma-Ata           7.64  32 ePN    Pn    04 54 36.2 -0.1
AAA   Alma-Ata           7.64  32 eP     Pn    04 54 36.2 -0.1
          baz=31
MDOK  Medeo              7.66  33 i PN   Pn    04 54 36.1 -0.5
MDOK  Medeo              7.66  33 eP     Pn    04 54 36.2 -0.5
          50nm,0.7s
MDOK                              eS     Sn    04 55 57.5 -5.1
          78nm,0.9s
MDOK  Medeo              7.66  33 i P    Pn    04 54 36.1 -0.5
          baz=32
MDOK  Medeo              7.66  33 ⇓P     Pn    04 54 35.9 -0.8
          78nm,0.6s
MDOK                               S     Sn    04 55 55.6 -7.0
KNDC  Almaty             7.67  32  PN    Pn    04 54 37.6 +0.9
KNDC  Almaty             7.67  32 ⇑P     Pn    04 54 37.6 +0.9
          372nm,0.6s
KNDC                               S     Sn    04 55 50.2  -12
PRZ   Przheval'sk        7.80  42  PN    Pn    04 54 38.9 +0.4
PRZ   Przheval'sk        7.80  42        Pn    04 54 38.9 +0.4
HRA   Herat              7.86 255  Pn    Pn    04 54 40.2 +0.8
KUU   Kurty              7.99  27c iPN   Pn    04 54 39.3 -1.5
KUU                                pmax  pmax
          comp=Z,20nm,0.6s
KUU   Kurty              7.99  27⇑iP     Pn    04 54 39.4 -1.5
          comp=Z,20nm,0.6s,baz=26
CHKK  Chushkaly          8.20  29 i PN   Pn    04 54 42.9 -0.8
CHKK  Chushkaly          8.20  29 i P    Pn    04 54 42.9 -0.8
          baz=29
ZHN   Zhinishke          8.31  38 ePN    Pn    04 54 44.0 -1.2
ZHN                                pmax  pmax
          comp=Z,13nm,0.6s
ZHN   Zhinishke          8.31  38 eP     Pn    04 54 44.0 -1.2
          comp=Z,13nm,0.6s,baz=38
BTLS  Baital             8.44  13c iPN   Pn    04 54 45.8 -1.0
BTLS                               pmax  pmax
          comp=Z,20nm,0.5s
BTLS  Baital             8.44  13⇑iP     Pn    04 54 45.9 -0.9
          comp=Z,20nm,0.5s,baz=12
DDI   Dehra Dun          8.53 138 eP     Pn    04 54 47.3 -0.9
UZB   Uzynbulak          8.59  40c iPN   Pn    04 54 47.9 -1.0
UZB   Uzynbulak          8.59  40⇑iP     Pn    04 54 48.0 -1.0
          baz=40
KPKS  Kokpek             8.65  38c iPN   Pn    04 54 49.0 -0.7
KPKS  Kokpek             8.65  38⇑iP     Pn    04 54 49.0 -0.7
          baz=37
PDGK  Podgornoye         8.96  41  PN    Pn    04 54 52.5 -1.3
PDGK  Podgornoye         8.96  41 ⇑P     Pn    04 54 52.6 -1.3
          comp=Z,117nm,0.7s
NDI   New Delhi          9.48 147 ex     Pn    04 55 02.5 +1.9
NDI                               ex     Sn    04 56 36.5  -10
AYAN  Aya Nagar          9.61 148 eP     Pn    04 55 01.9 -0.5
KUDL  Kundal             9.66 152 eP     Pn    04 55 01.0 -2.1
KUDL                              eS     Sn    04 56 41.8 -8.7
SONA  Sohna              9.80 149 eP     Pn    04 55 04.0 -0.9
PTH   Pithoragarh       10.34 132 eP     Pn    04 55 10.1 -2.1
LGTI  Lohaghat          10.43 132 eP     Pn    04 55 10.8 -2.4
GEYT  Alibeck           10.64 280  P     Pn    04 55 14.2 -1.6
          comp=Z,62nm,0.8s,baz=122,slow=11,SNR=94
GEYT                               S     Sn    04 57 07.8 -6.2
          comp=Z,33nm,0.7s,baz=146,slow=8.0,SNR=2.6
GEYT  Alibeck           10.64 280  Pn    Pn    04 55 13.8 -2.1
GYA0  ALIBECK ARRAY     10.64 280  P     Pn    04 55 13.5 -2.4
GYA0B ALIBECK ARRAY     10.64 280  Pn    Pn    04 55 13.8 -2.1
GYA0B ALIBECK ARRAY     10.64 280 ⇑P     Pn    04 55 13.5 -2.3
AJM   Ajmer             10.68 164⇑iP     Pn    04 55 15.0 -1.5
AJM                               eP     P     04 55 15.9 -8.7
AJM                               i S    Sn    04 57 07.0 -8.1
OTUK  Ortayu            11.43   3  P     Pn    04 55 24.4 -1.5
OTUK  Ortayu            11.43   3 ⇑P     Pn    04 55 24.5 -1.5
          comp=Z,59nm,0.8s
MAKZ  Makanchi          12.69  35  P     Pn    04 55 40.3 -1.9
MAKZ  Makanchi          12.69  35  Pn    Pn    04 55 40.3 -1.9
MK31  Makanchi Array    12.82  36  P     Pn    04 55 42.5 -1.4
MK31  Makanchi Array    12.82  36        Pn    04 55 42.5 -1.4
MK31  Makanchi Array    12.82  36  P     Pn    04 55 42.3 -1.6
          comp=Z,15nm,0.6s,baz=225,slow=14,SNR=103
MKAR  Makanchi Array    12.82  36  P     Pn    04 55 41.9 -2.0
          comp=Z,14nm,0.7s,baz=228,slow=11,SNR=125
MKAR  Makanchi Array    12.82  36  P     Pn    04 55 42.0 -1.9
MKAR  Makanchi Array    12.82  36        Pn    04 55 42.0 -1.9
DANN  Dangsing          13.40 126 eP     Pn    04 55 49.8 -1.8
          comp=Z,422nm,0.4s
GKN   Gorkha            14.21 125 eP     Pn    04 56 00.1 -1.5
          comp=Z,296nm,0.3s
BHPL  Bhopal            14.50 157 eP     Pn    04 56 04.0 -1.2
BHPL                              eS     Sn    04 58 35.8  -11
BHPL                               IAML        04 58 47.8
          comp=N,164nm,0.3s
BHPL                               IAML        04 58 51.5
          comp=E,177nm,0.8s
ALBI  Allahabad         14.52 139 eP     Pn    04 56 03.2 -2.1
ZSN   Zaisan            14.54  39 eP     Pn    04 56 04.9 -0.5
ZSN   Zaisan            14.54  39 eP     Pn    04 56 04.9 -0.5
          baz=39
KURBB Kurchatov Arra    14.70  18  P     Pn    04 56 05.0 -2.4
          comp=E,14nm,0.8s,baz=208,slow=12,SNR=40
KURBB Kurchatov Arra    14.70  18  P     Pn    04 56 04.0 -3.4
KURBB Kurchatov Arra    14.70  18 ⇑P     Pn    04 56 04.0 -3.4
          comp=E,32nm,0.6s
KKN   Kakani            14.77 124 eP     Pn    04 56 06.7 -2.0
          comp=E,403nm,0.5s
DMN   Daman             14.78 125 eP     Pn    04 56 07.0 -1.8
          comp=E,294nm,0.4s
KURK  Kurchatov         14.81  18  P     Pn    04 56 06.1 -2.6
KURK  Kurchatov         14.81  18        Pn    04 56 06.1 -2.6
AB31  Akbulak array     14.96 330  P     Pn    04 56 09.5 -1.1
AB31                               S     Sn    04 58 48.9 -8.3
AB31  Akbulak array     14.96 330  P     Pn    04 56 09.5 -1.1
          comp=E,15nm,0.4s,baz=144,slow=11,SNR=516
AB31                              ⇓S     Sn    04 58 47.5  -10
          comp=E,24nm,0.4s,baz=125,slow=24,SNR=9.4
ABKAR Akbulak array     14.96 330        Pn    04 56 08.9 -1.7
ABKAR Akbulak array     14.96 330  P     Pn    04 56 09.6 -1.0
PKIN  Phulchoki         14.99 124 eP     Pn    04 56 10.5 -0.9
PKI   Pulchoki          15.00 124 eP     Pn    04 56 10.6 -1.1
          comp=E,366nm,0.5s
GUN   Gumba             15.10 122 eP     Pn    04 56 11.6 -1.3
          comp=E,481nm,0.6s
BVAR  Borovoye Array    16.21 358  P     Pn    04 56 26.2 +0.4
          comp=E,5.9nm,0.5s
BRVK  Borovoye          16.25 358ceP     P     04 56 25.8 -0.3
BRVK                               pmax  pmax
          comp=Z,26nm,0.7s
BRVK  Borovoye          16.25 358  P     P     04 56 25.4 -0.7
BRVK                               IAmb  IAmb  04 56 30.2
          comp=Z,27nm,0.7s
BRVK  Borovoye          16.25 358 ⇑P     P     04 56 25.7 -0.4
          comp=Z,20nm,0.6s
AKTO  Aktyubinsk        16.66 329  P     Pn    04 56 32.3 +1.0
          comp=Z,65nm,0.5s,baz=139,slow=10,SNR=138
AKTO                               S     S     04 59 26.3 -9.0
          comp=Z,11nm,0.6s,baz=127,slow=20,SNR=2.8
AKTO                               LR    LR    05 04 04.6

          comp=Z,35nm,18.2s,baz=133,slow=40
AKTO  Aktyubinsk        16.66 329 ⇓P     Pn    04 56 31.6 +0.3
          comp=Z,114nm,0.9s
AKL   Akola             16.80 162 eP     Pn    04 56 34.4 +1.2
BANOM Banah             16.86 234  P     Pn    04 56 33.6 -0.3
          SNR=9.3
BANOM                              S     S     04 59 38.3 -1.8
BANOM Banah             16.86 234 i P    P     04 56 33.3 +0.2
          SNR=33
SHME  Shamm             16.87 235  P     Pn    04 56 34.2 +0.2
          SNR=6.8
SHME                               S     S     04 59 37.4 -2.9
SHME  Shamm             16.87 235 i P    Pn    04 56 33.8 -0.3
          SNR=19
MASF  Masafi            17.33 233  P     Pn    04 56 39.6  0.0
          SNR=17
MASF                               S     S     04 59 50.3 +0.2
MSFE  Esma-Masafi       17.34 233 i P    Pn    04 56 39.8 +0.1
          SNR=18
WSAR  Wadi Sarin        17.47 223  P     Pn    04 56 40.8 -0.4
          comp=Z,20nm,0.8s,baz=64,slow=11,SNR=16
WSAR  Wadi Sarin        17.47 223  P     Pn    04 56 42.2 +1.0
          SNR=5.3
WSAR                               S     S     04 59 54.3 +1.4
UMQ   Umm Al-Quwin      17.55 234  P     Pn    04 56 43.3 +1.3
          SNR=6.1
UOSS  Minazif           17.61 232  P     P     04 56 40.3 -1.0
UOSS                               IAmb  IAmb  04 56 46.2
          comp=Z,41nm,0.8s
UOSS  Minazif           17.61 232  P     Pn    04 56 42.5 -0.2
UOSS                               S     S     04 59 58.1 +2.7
UOSS  Minazif           17.61 232 i P    P     04 56 41.5 +0.3
          SNR=7.4
HATD  Hatta, Dubai      17.74 232  P     Pn    04 56 45.0 +0.6
          SNR=14
HATD                               S     S     04 59 56.1 -1.9
HATD  Hatta, Dubai      17.74 232 i P    P     04 56 43.3 +0.6
          SNR=20
WBK   Wadi Bani Khal    17.80 221  P     Pn    04 56 46.7 +1.6
WBK                                S     Sn    05 00 03.9 -1.5
ASHO  Ashiyiah          17.88 232  P     Pn    04 56 46.0 -0.1
          SNR=36
ASHO                               S     S     04 59 59.0 -2.1
ASHO  Ashiyiah          17.88 232 i P    Pn    04 56 45.4 -0.7
          SNR=24
NAZ   Nazwa, Dubai      17.92 233  P     Pn    04 56 46.1 -0.4
          SNR=18
NAZ   Nazwa, Dubai      17.92 233 i P    Pn    04 56 45.9 -0.6
          SNR=13
SMDO  Samad             17.93 224  P     Pn    04 56 47.2 +0.4
HOQ   Hoqain            17.94 227  P     Pn    04 56 47.8 +1.1
LSA   Lhasa             17.95 108  P     P     04 56 45.8 +0.2
LSA                                pmax  pmax
          comp=Z,42nm,0.7s
LSA   Lhasa             17.95 108  P     P     04 56 45.8 +0.2
LSA   Lhasa             17.95 108  P     Pn    04 56 48.1 +0.8
LSA                                pmax  pmax
          comp=Z,49nm,1.0s
JLN   Jalan Bani Buh    17.95 219  P     Pn    04 56 47.7 +0.8
          SNR=8.6
SOHO  SOHO              17.99 229  P     Pn    04 56 47.3  0.0
BOK   Bokaro            18.00 132 eP     Pn    04 56 46.7 -0.7
BOK                                IAmb  IAmb  04 56 56.0
          comp=Z,33nm,0.7s
FAQ   Al Faqa, Dubai    18.14 233  P     Pn    04 56 48.2 -0.8
          SNR=13
FAQ                                S     S     05 00 07.9 +1.9
FAQ   Al Faqa, Dubai    18.14 233  P     P     04 56 47.9 +0.8
ASUD  Al Ashush, Dub    18.39 233  P     Pn    04 56 51.7 -0.3
          SNR=12
ASUD                               S     S     05 00 14.6 +3.7
ASUD  Al Ashush, Dub    18.39 233 i P    Pn    04 56 51.4 -0.5
          SNR=17
JMDO  Jabal Madar       18.46 222  P     Pn    04 56 53.4 +0.6
          SNR=6.7
JMDO                               S     Sn    05 00 16.9 -4.1
ALNE  Al Ain            18.53 231  P     Pn    04 56 53.0 -0.7
          SNR=19
ALNE                               S     S     05 00 17.2 +3.4
ALNE  Al Ain            18.53 231 i P    P     04 56 52.4 +1.0
          SNR=15
ARQ   Araqi             18.60 228  P     Pn    04 56 54.2 -0.2
ARQ                                S     Sn    05 00 21.2 -3.1
AJN   Ajban             18.65 234  P     P     04 56 53.4 +0.7
          SNR=16
AJN                                S     S     05 00 13.2 -3.0
AJN   Ajban             18.65 234 i P    P     04 56 53.3 +0.6
          SNR=9.6
BSY   Bisya             18.66 225  P     Pn    04 56 55.3 +0.2
GOMU  GeErMu            18.81  85  P     Pn    04 56 56.0 -1.2
GOMU                               pmax  pmax
          comp=Z,7.0nm,0.4s
GOMU                               pmax  pmax
          comp=Z,79nm,4.0s
ZAA0  Zalesovo Array    19.47  24  P     P     04 57 01.2 -0.1
ZALV  Zalesovo Beam     19.47  24  P     P     04 57 01.4 +0.1
          comp=Z,15nm,0.4s,baz=211,slow=10,SNR=78
GNBR  Gunib             19.61 294 i P    Pn    04 57 05.7 -0.6
MHTO  MHTO              19.66 220  P     Pn    04 57 05.9 -1.1
          SNR=8.1
JRN   Qarnain Island    19.82 238  P     P     04 57 05.3  0.0
          SNR=5.8
JRN                                S     S     05 00 33.7 -5.5
KHOR  Al-Khor Airpor    20.32 242  P     P     04 57 10.8 +0.1
KHOR                               S     S     05 00 43.6 -5.5
HYBB  Hyderabad (bro    20.34 160 eP     P     04 57 11.2 +0.2
HYBB                              eS     S     05 00 51.8 +2.2
HYB   Hyderabad         20.34 160 ex     P     04 57 13.9 +3.0
HYB                                IAmb  IAmb  04 57 16.6
          comp=Z,9.9nm,0.6s
SHMA  Al-Shehemyia      20.57 244  P     P     04 57 13.6 +0.3
SHMA                               S     S     05 00 54.8 +0.9
GROC  Groznyy           20.59 296 eP     P     04 57 15.3 +2.0
GROC                              e*PP   pP    04 57 41.1 -1.9
GROC                              e*SS   sS    05 01 42.3 -3.0
GROC                               pmax  pmax
          comp=Z,97nm,1.4s
SAKB  Bahrain           20.81 245  P     P     04 57 16.1 +0.3
SAKB                               S     S     05 00 56.7 -1.7
TRNA  Turayna           21.09 241  P     P     04 57 18.5 -0.3
TRNA                               S     S     05 00 58.2 -5.4
GNI   Garni             21.11 287  P     P     04 57 21.3 +2.1
          comp=Z,9.2nm,0.6s,baz=126,slow=5.4,SNR=7.5
          comp=Z,9.2nm,0.6s
GNI   Garni             21.11 287ceP     P     04 57 22.5 +3.3
GNI                                pmax  pmax
          comp=Z,96nm,1.7s
GNI   Garni             21.11 287  P     P     04 57 18.5 -0.6
SLWR  Sila              21.19 239  P     P     04 57 20.1 +0.2
SLWR                               S     S     05 01 00.5 -4.9
SVE   Sverdlovsk        21.27 344 eP     P     04 57 22.1 +1.7
SVE                               eS     Sn    05 01 20.3 -6.4
SVE                                pmax  pmax
          comp=Z,24nm,0.8s
SMRA  Abu-Samra         21.35 241  P     P     04 57 21.7  0.0
SMRA                               S     S     05 01 04.0 -4.3
ARU   Arti              21.43 340c iP    P     04 57 23.2 +1.0
ARU                                *PP   pP    04 57 52.2 -0.5
ARU                                S     S     05 01 12.5 +3.5
ARU                                pmax  pmax
          comp=Z,12nm,0.7s
ARU   Arti              21.43 340  P     P     04 57 22.9 +0.8
ARU                                IAmb  IAmb  04 58 19.5
          comp=Z,25nm,0.9s
ZEI   Tsey              21.91 294 eP     P     04 57 29.7 +2.2
ZEI                                pmax  pmax
          comp=Z,11nm,1.1s
ONI   Oni               22.21 294  P     P     04 57 31.9 +1.6
ONI                                pmax  pmax
          comp=Z,22nm,0.9s
ONI   Oni               22.21 294  P     P     04 57 31.9 +1.6
ONI                                IAmb  IAmb  04 58 13.4
          comp=Z,22nm,0.9s
NCK   Nalchik           22.22 296 i P    P     04 57 32.8 +2.5
NCK                                pmax  pmax
          comp=Z,14nm,0.4s
GTA   Gaotai            22.45  75 ⇑P     P     04 57 34.4 +1.7
GTA                                pmax  pmax
          comp=Z,8.0nm,1.0s
GEVA  Gevas             22.49 282  P     P     04 57 32.6 -0.6
KBZ   Khabaz            22.75 296  P     P     04 57 36.5 +1.4
          comp=Z,3.7nm,0.8s,baz=117,slow=8.7,SNR=9.4
          comp=Z,3.7nm,0.8s
KBZ   Khabaz            22.75 296ceP     P     04 57 36.7 +1.5
KBZ                                pmax  pmax

          comp=Z,6.0nm,1.3s
NEY   Neytrino          22.82 295 i P    P     04 57 40.4 +4.3
NEY                                pmax  pmax
          comp=Z,3.0nm,1.0s
BELG  Belogornoye       22.84 320  P     P     04 57 37.6 +1.7
          comp=Z,70nm,0.8s,baz=60,slow=1.3,SNR=21
          comp=Z,70nm,0.8s
GOF   Gofitskoye        22.87 300⇑eP     P     04 57 38.8 +2.5
GOF                                pmax  pmax
          comp=Z,36nm,0.6s
KIV   Kislovodsk        22.93 297 eP     P     04 57 41.0 +4.0
KIV                               eS     S     05 01 39.7 +5.7
KIV                                pmax  pmax
          comp=Z,6.0nm,0.9s
KIV                                MLR   MLR
          comp=Z,24nm,14.0s
WHFO  Wadi Hawf         24.43 224  P     P     04 57 51.3 +0.6
RBK   Rabkut            24.53 223  P     P     04 57 52.3 +0.6
ABTO  Aybut             25.15 224  P     P     04 57 58.1 +0.8
VRH   Novokhopyorsk     25.52 314 eP     P     04 58 02.1 +1.9
VRH                                pmax  pmax
          comp=Z,10.0nm,0.6s
MOY   Mondy             25.63  45 eP     P     04 58 07.3 +5.8
MOY                               e            04 58 43.7
MOY                                pmax  pmax
          comp=Z,40nm,2.0s
RAYN  Ar Rayn           25.94 247  P     P     04 58 03.4 -1.0
RAYN                               pmax  pmax
          comp=Z,24nm,0.6s
RAYN  Ar Rayn           25.94 247  P     P     04 58 03.4 -1.0
KIRV  Kirov             26.09 334 i P    P     04 58 06.9 +1.6
ZAK   Zakamensk         26.52  49 eP     P     04 58 09.9 +0.5
ZAK                                pmax  pmax
          comp=Z,5.0nm,1.1s
VSR   Storozhevoye      27.02 312 eP     P     04 58 14.1 +0.4
VSR                                pmax  pmax
          comp=Z,10.0nm,1.1s
VORR  Voronezh          27.16 313 eP     P     04 58 17.7 +2.8
VORR                               pmax  pmax
          comp=Z,70nm,0.5s
LPSR  Galich'ya Gora    27.65 315 eP     P     04 58 19.3  0.0
LPSR                               pmax  pmax
          comp=Z,10.0nm,0.9s
ULN   Ulaanbaatar       28.31  56ceP     P     04 58 26.3 +0.8
ULN                                pmax  pmax
          comp=Z,4.0nm,0.6s
ULN   Ulaanbaatar       28.31  56  P     P     04 58 25.6 +0.2
PRGR  Permogore         29.61 335 eP     P     04 58 37.8 +1.3
BR131 Keskin Array S    29.65 287  P     P     04 58 37.1 -0.3
BR131                              pmax  pmax
          comp=Z,9.0nm,0.7s
BR131 Keskin Array S    29.65 287  P     P     04 58 37.0 -0.3
BR131                              IAmb  IAmb  04 58 42.4
          comp=Z,8.9nm,0.7s
BRTR  Keskin Array B    29.65 287  P     P     04 58 39.7 +2.3
          comp=Z,3.9nm,0.6s,baz=104,slow=9.3,SNR=18
          comp=Z,3.9nm,0.6s
BRTR  Keskin Array B    29.65 287  P     P     04 58 36.9 -0.5
OBN   Obninsk           29.91 319 eP     P     04 58 40.8 +1.6
OBN                               e*SP   sP    04 59 36.4 +0.8
OBN                               e            04 59 46.4
OBN                                pmax  pmax
          comp=Z,31nm,1.3s
CMAR  Chiang Mai Arr    30.32 120  P     P     04 58 44.3 +1.0
          comp=Z,1.2nm,0.3s,baz=308,slow=8.4,SNR=7.1
          comp=Z,1.2nm,0.3s
CMAR  Chiang Mai Arr    30.32 120 i P    P     04 58 45.2 +1.9
CMAR                               pmax  pmax
          comp=Z,2.0nm,0.3s
CMAR  Chiang Mai Arr    30.32 120  P     P     04 58 41.9 -1.4
PALK  Pallekele         30.62 162  P     P     04 58 44.7 -1.2
          comp=Z,4.4nm,0.6s,baz=54,slow=7.4,SNR=4.1
          comp=Z,4.4nm,0.6s
KLMR  Klimovskoe        31.36 330 eP     P     04 58 52.0 +0.1
KLMR                              e*PP   pP    04 59 29.6 +1.0
KLMR                              e            05 01 41.7
KLMR                               pmax  pmax
          comp=Z,8.0nm,0.7s
KLMR  Klimovskoe        31.36 330 eP     P     04 58 52.0 +0.1
KLMR                               AMP         04 58 54.5
          comp=Z,8.0nm,0.7s
KLMR                              epP    pP    04 59 29.6 +1.0
KLMR                              ePcP   PcP   05 01 41.8 +0.5
AKASG Malin Array Be    33.00 308  P     P     04 59 07.0 +0.6
          comp=Z,3.5nm,0.6s,baz=79,slow=7.4,SNR=21
AKASG                              pP    pP    04 59 46.4 +3.7
          comp=Z,0.3nm,0.3s,baz=75,slow=5.6,SNR=4.1
          comp=Z,3.5nm,0.6s
AKASG Malin Array Be    33.00 308 i P    P     04 59 07.5 +1.1
AKASG                              pmax  pmax
          comp=Z,2.0nm,0.4s
AKASG Malin Array Be    33.00 308  P     P     04 59 06.0 -0.3
AKBB  Malin Array Si    33.00 308ceP     P     04 59 07.4 +1.0
AKBB  Malin Array Si    33.00 308  P     P     04 59 05.8 -0.6
AKBB                               IAmb  IAmb  04 59 09.2
          comp=Z,7.7nm,0.7s
NRIK  Noril'sk          33.74  10  P     P     04 59 13.9 +1.3
          comp=Z,5.1nm,0.5s,baz=215,slow=5.5,SNR=6.6
          comp=Z,5.1nm,0.5s
NRIK  Noril'sk          33.74  10  P     P     04 59 12.6 +0.1
NRIK                               IAmb  IAmb  04 59 14.8
          comp=Z,6.7nm,0.6s
MNK   Minsk             34.50 315 i P    P     04 59 18.7 -0.6
MNK                               i *PP  pP    04 59 54.8 -1.0
MNK                               i            05 00 41.1
MNK                               i            05 01 48.7
MNK                               i S    S     05 04 35.6 +0.7
MNK                               i *SS  sS    05 05 40.5 +0.1
MNK                               i            05 09 23.9
MNK                                pmax  pmax
          comp=N,15nm,1.1s
MNK                                pmax  pmax
          comp=Z,9.0nm,0.8s
MNK                                pmax  pmax
          comp=E,2.0nm,0.8s
MNK                                MLR   MLR
          comp=N,66nm,15.0s
MNK                                MLR   MLR
          comp=Z,172nm,17.0s
MNK   Minsk             34.50 315 i P    P     04 59 18.7 -0.6
          comp=E,2.0nm,0.8s
MNK                               i P    P     04 59 18.7 -0.6
          comp=N,15nm,1.1s
MNK                               i P    P     04 59 18.7 -0.6
          comp=Z,9.0nm,0.8s,baz=102
MNK                               i pP   pP    04 59 54.8 -1.0
MNK                               i PP   PP    05 00 41.2 +0.3
MNK                               i S    S     05 04 35.7 +0.7
MNK                               i sS   sS    05 05 40.5 +0.1
MNK                               i SS   SS    05 07 09.7 +0.2
MNK                               i LRM  MLR   05 16 23.6
          comp=N,66nm,15.3s
MNK                               i LRM  MLR   05 16 29.3
          comp=Z,172nm,17.2s
MLR   Muntele Rosu      34.91 299  P     P     04 59 23.2 +0.1
MLR                                pmax  pmax
          comp=Z,12nm,1.1s
MLR   Muntele Rosu      34.91 299  P     P     04 59 23.2 +0.1
MLR                                IAmb  IAmb  05 00 09.6
          comp=Z,12nm,1.1s
BURAR Bucovina Array    35.39 303  P     P     04 59 27.3 +0.2
BUR08 Bucovina Ar. S    35.40 303  P     P     04 59 26.1 -1.1
ATD   Arta Tunnel       35.99 233  P     P     04 59 34.3 +1.8
          comp=Z,6.3nm,0.3s,baz=32,slow=4.2,SNR=8.4
          comp=Z,6.3nm,0.3s
ATD   Arta Tunnel       35.99 233  P     P     04 59 32.8 +0.3
ATD                                IAmb  IAmb  04 59 35.8
          comp=Z,21nm,0.9s
KWP   Kalwaria Pacla    37.09 306  P     P     04 59 40.2 -1.2
KWP                                pmax  pmax
          comp=Z,92nm,0.8s
KWP   Kalwaria Pacla    37.09 306  P     P     04 59 40.2 -1.2
KOLS  Kolonicke sedl    37.36 305 eP     P     04 59 47.4 +3.7
KOLS                               pmax  pmax
          comp=Z,7.0nm,0.7s
KOLS  Kolonicke sedl    37.36 305 eP     P     04 59 47.4 +3.7
FINES FINESS Array B    37.40 326  P     P     04 59 45.0 +1.2
          comp=Z,1.9nm,0.4s,baz=119,slow=9.5,SNR=34
FINES                              pP    pP    05 00 24.1 +3.0
          comp=Z,1.8nm,0.5s,baz=121,slow=9.6,SNR=2.6
FINES                              sP    sP    05 00 43.2 +2.0
          comp=Z,8.1nm,0.8s,baz=101,slow=10,SNR=6.6
          comp=Z,1.9nm,0.4s
PSZ   Piszkesteto       38.97 303  P     P     04 59 59.9 +2.6
AAL   Aland             39.91 322 eP     P     05 00 05.0 +0.4
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MORC	**Moravsky Berou**	40.44	306	P	P	05 00 09.3	0.0
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MORC	**Moravsky Berou**	40.44	306	P	P	05 00 09.2	0.0
MORC	**Moravsky Berou**	40.44	306	*e*P	P	05 00 11.1	+1.8
KRLC	**Kraliky**	40.92	307	*e*P	P	05 00 15.0	+1.8
KRLC	**Kraliky**	40.92	307	*e*P	P	05 00 15.0	+1.8
ARA0	**ARCESS Array S**	40.97	337	*e*P	P	05 00 14.5	+1.3
ARCES	**ARCESS Array B**	40.97	337	P	P	05 00 14.7	+1.4
	comp=Z,2.3nm,0.5s,baz=111,slow=7.6,SNR=30						
ARCES				pP	pP	05 00 53.9	+2.4
	comp=Z,4.4nm,0.8s,baz=96,slow=8.7,SNR=3.6						
ARCES				sP	sP	05 01 13.0	+1.6
	comp=Z,3.1nm,0.5s,baz=110,slow=8.2,SNR=2.9						
ARCES				LR	LR	05 18 10.7	
	comp=Z,37nm,18.2s,baz=36,slow=37						
	comp=Z,2.3nm,0.5s						
ARCES	**ARCESS Array B**	40.97	337	P	P	05 00 14.7	+1.4
ARCES				pmax	pmax		
	comp=Z,148nm,2.0s						
ARCES	**ARCESS Array B**	40.97	337	P	P	05 00 14.7	+1.4
UPP	**Uppsala**	41.02	322	*e*P	P	05 00 14.4	+0.6
DPC	**Dobruska-Polom**	41.20	307	*e*P	P	05 00 17.6	+2.1
DPC	**Dobruska-Polom**	41.20	307	*e*P	P	05 00 17.6	+2.1
OSTC	**Ostas**	41.26	307	*e*P	P	05 00 18.5	+2.6
VIKU	**Vikbolandet**	41.30	320	*e*P	P	05 00 16.8	+0.8
CHVC	**Chvalec**	41.36	307	*e*P	P	05 00 18.4	+1.6
UPC	**Upice**	41.39	307	*e*P	P	05 00 20.1	+3.1
UPC	**Upice**	41.39	307	*e*P	P	05 00 20.1	+3.1
KTK1	**Kautokeino**	41.45	336	*e*P	P	05 00 18.1	+0.9
CONA	**Conrad Observa**	41.67	303	*e*P	P	05 00 21.5	+2.1
	comp=Z,2.3nm,0.6s						
HAMF	**Hammerfest**	42.04	338	*e*P	P	05 00 23.4	+1.4
PSI	**Prapat**	42.29	137	P	P	05 00 24.3	-0.5
	comp=Z,3.0nm,0.4s,baz=22,slow=5.5,SNR=4.4						
PSI				pP	pP	05 01 03.2	0.0
	comp=Z,2.4nm,0.4s,baz=305,slow=7.7,SNR=3.6						
	comp=Z,3.0nm,0.4s						
JETT	**Jettan, Norway**	42.59	336	*e*P	P	05 00 27.4	+0.9
DEL	**Delary**	42.65	316	*e*P	P	05 00 28.1	+1.0
BRG	**Berggiesshubel**	42.68	308	*e*P	P	05 00 29.4	+2.0
BRG				Amp		05 00 31.4	
	comp=Z,8.5nm,0.9s						
BRG	**Berggiesshubel**	42.68	308	*e*P	P	05 00 29.4	+2.0
BRG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MOA	**Molln**	42.75	304	*e*P	P	05 00 29.9	+1.8
	comp=Z,2.9nm,0.7s						
GERES	**GERESS Array B**	43.01	305	P	P	05 00 32.1	+1.9
	comp=Z,0.8nm,0.8s,baz=79,slow=9.7,SNR=6.7						
	comp=Z,0.8nm,0.8s						
KHC	**Kasperske Hory**	43.06	305	*e*P	P	05 00 32.6	+2.0
KHC				*e*		05 01 34.5	
KHC	**Kasperske Hory**	43.06	305	*e*P	P	05 00 32.6	+2.0
KHC				*e*x	x	05 01 34.5	
CUC	**Castrocucco**	43.09	292	P	P	05 00 31.2	+0.3
CUC				IAmb	IAmb	05 00 34.3	
	comp=Z,13nm,0.9s						
TRO	**Tromso**	43.10	336	*e*P	P	05 00 31.6	+1.2
CLL	**Collm**	43.24	309	*e*P	P	05 00 33.0	+1.1
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	**Collm**	43.24	309	P	P	05 00 32.6	+0.6
CLL	**Collm**	43.24	309	*e*P	P	05 00 33.0	+1.1
	comp=Z,4.0nm,0.7s						
CLL				*e*PP	PcP	05 02 18.0	+0.1
CLL				*e*PPP	PPP	05 02 58.0	
KBA	**Koelnbreinsper**	43.47	303	*e*P	P	05 00 35.0	+0.9
	comp=Z,1.7nm,0.6s						
FAUS	**Fauske**	43.66	332	*e*P	P	05 00 35.7	+0.6
MOR8	**Moi Rana**	43.69	330	*e*P	P	05 00 35.9	+0.6
STEI	**Steigen**	43.83	333	*e*P	P	05 00 37.2	+0.9
NC405	**NORSAR Array S**	44.08	323	P	P	05 00 39.2	+0.7
ABTA	**Abfaltersbach**	44.09	302	*e*P	P	05 00 40.5	+1.7
	comp=Z,2.5nm,0.6s						
NC602	**NORSAR Array S**	44.13	322	*e*P	P	05 00 39.2	+0.3
NC303	**NORSAR Array S**	44.26	323	P	P	05 00 40.5	+0.6
NC303				IAmb	IAmb	05 01 40.5	
	comp=Z,16nm,0.8s						
NB201	**NORSAR Array S**	44.28	323	P	P	05 00 40.7	+0.6
KONS	**Konsvik**	44.28	331	*e*P	P	05 00 40.9	+0.9
NB2	**NORSAR Subarra**	44.32	323	P	P	05 00 41.0	+0.6
	comp=Z,4.3nm,0.5s,baz=94,slow=7.9						
NB2	**NORSAR Subarra**	44.32	323	P	P	05 00 41.0	+0.6
	baz=94,slow=7.9						
NOA	**NORSAR Array B**	44.32	323	P	P	05 00 41.0	+0.6
	comp=Z,4.5nm,0.6s,baz=96,slow=7.8,SNR=38						
NOA				pP	pP	05 01 21.2	+2.3
	comp=Z,2.0nm,0.8s,baz=94,slow=8.0,SNR=2.2						
NOA				sP	sP	05 01 40.0	+1.4
	comp=Z,5.4nm,0.8s,baz=95,slow=8.0,SNR=5.7						
NOA				LR	LR	05 20 17.0	
	comp=Z,28nm,18.1s,baz=245,slow=37						
	comp=Z,4.5nm,0.6s						
KSRS	**Korea Array**	44.45	71	P	P	05 00 41.8	+0.1
	comp=Z,2.0nm,0.8s,baz=279,slow=6.9,SNR=5.1						
	comp=Z,2.0nm,0.8s						
NBO00	**NORSAR Array S**	44.53	323	P	P	05 00 42.7	+0.6
GRA1	**Grafenberg Arr**	44.53	307	P	P	05 00 41.6	-0.6
GRF	**Grafenberg Arr**	44.53	307	P	P	05 00 41.6	-0.6
GRF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GRFO	**Grafenberg**	44.53	307	P	P	05 00 41.7	-0.5
GRFO				pmax	pmax		
	comp=Z,28nm,1.7s						
GRFO	**Grafenberg**	44.53	307	P	P	05 00 41.7	-0.5
GRFO				IAmb	IAmb	05 00 47.1	
	comp=Z,28nm,1.7s						
NC204	**NORSAR Array S**	44.55	323	P	P	05 00 42.9	+0.6
WTTA	**Wattenberg**	44.60	303	*e*P	P	05 00 44.0	+1.0
	comp=Z,1.3nm,0.3s						
MURB	**Monte Urbino**	44.73	297	P	P	05 00 43.8	-0.2
SQTA	**Sankt Quirin**	44.89	303	*e*P	P	05 00 45.4	+0.1
	comp=Z,1.8nm,0.5s						
MOTA	**Moosalm**	44.94	303	*e*P	P	05 00 46.4	+0.7
	comp=Z,1.5nm,0.6s						
KONO	**Kongsberg**	45.04	321	*e*P	P	05 00 46.9	+0.8
FETA	**Feichten**	45.25	303	*e*P	P	05 00 48.8	+0.7
	comp=Z,1.4nm,0.5s						
TIXI	**Tiksi**	45.34	22	c*e*P	P	05 00 48.6	+0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TIXI	**Tiksi**	45.34	22	P	P	05 00 48.7	+0.4
TIXI				IAmb	IAmb	05 01 32.6	
	comp=Z,11nm,0.8s						
SKAR	**Skarslia**	45.72	322	*e*P	P	05 00 52.4	+0.9
DAVA	**Damuels**	45.77	303	*e*P	P	05 00 53.3	+1.1
	comp=Z,5.9nm,0.6s						
DAVOX	**Davos/Dischmat**	45.86	303	LR	LR	05 26 08.3	
	comp=Z,89nm,19.2s,baz=8.5,slow=44						
AKN	**Aaknes**	46.40	324	*e*P	P	05 00 53.4	-3.3
BLS5	**Blasjo**	46.64	320	*e*P	P	05 00 57.3	-1.3
LODK	**Lodwar**	46.93	234	P	P	05 01 01.6	+0.1
LODK				IAmb	IAmb	05 01 04.4	
	comp=Z,16nm,1.5s						
SPA0	**Spitsbergen Ar**	47.25	347	*e*P	P	05 01 04.7	+1.6
SENIN	**Lac Senin/Sane**	47.69	303	P	P	05 01 07.7	+0.5
WLF	**Walferdange**	47.79	307	P	P	05 01 08.1	+0.5
WLF				pmax	pmax		
	comp=Z,12nm,1.1s						
WLF	**Walferdange**	47.79	307	P	P	05 01 08.1	+0.5
WLF				IAmb	IAmb	05 01 11.6	
	comp=Z,12nm,1.1s						
KEST	**Kesra**	49.25	288	P	P	05 01 21.1	+2.0
	comp=Z,2.4nm,0.6s,baz=205,slow=7.7,SNR=4.0						
	comp=Z,2.4nm,0.6s						
KMBO	**Kilima Mbogo**	49.30	228	P	P	05 01 21.4	+1.5
	comp=Z,2.6nm,0.6s,baz=37,slow=12,SNR=7.3						
	comp=Z,2.6nm,0.6s						
KMBO	**Kilima Mbogo**	49.30	228	P	P	05 01 19.1	-0.8
KIBK	**Kibwezi**	49.81	226	P	P	05 01 23.9	+0.4
KIBK				IAmb	IAmb	05 01 26.0	
	comp=Z,12nm,0.8s						
MBAR	**Mbarara**	52.97	235	c*e*P	P	05 01 48.1	+1.0
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MA2	**Magadan**	53.90	38	c*e*P	P	05 01 53.7	+0.6
MA2				pmax	pmax		
	comp=Z,16nm,2.5s						
ESBB	**Sonseca Array**	57.60	298	P	P	05 02 19.8	0.0
ESBB				IAmb	IAmb	05 02 21.5	
	comp=Z,4.6nm,0.8s						
ESDC	**Sonseca Array**	57.60	298	P	P	05 02 20.7	+0.9
	comp=Z,4.3nm,0.8s,baz=61,slow=6.8,SNR=36						
ESDC				pP	pP	05 03 01.9	+2.3
	comp=Z,0.8nm,0.6s,baz=59,slow=7.6,SNR=2.0						
	comp=Z,4.3nm,0.8s						
ESDC	**Sonseca Array**	57.60	298	P	P	05 02 19.7	-0.1
BILL	**Bilibino**	58.16	26	*e*P	P	05 02 25.3	+2.1
BILL				*e**PP	pP	05 03 03.5	-0.4
BILL				*e*		05 03 14.2	
BILL				*e**SP	sP	05 03 22.3	-0.8
BILL				*e*		05 04 31.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MVO	**Moncorvo**	59.16	301	*e*P	P	05 02 32.2	+1.6
	comp=Z,22nm,1.7s						
PCAB	**Cabril**	59.62	301	*e*P	P	05 02 37.0	+3.3
	comp=Z,26nm,1.9s						
MTE	**Manteigas**	59.82	300	*e*P	P	05 02 36.8	+1.6
PVIS	**Viseu**	59.94	300	*e*P	P	05 02 38.1	+2.2
PMRV	**Marv??o**	60.12	299	*e*P	P	05 02 42.0	+4.9
PBAR	**Barrancos**	60.40	297	*e*P	P	05 02 40.5	+1.5
	comp=Z,30nm,1.8s						
PESTR	**Estremoz**	60.50	298	*e*P	P	05 02 40.8	+1.1
COI	**Coimbra**	60.51	300	*e*P	P	05 02 41.7	+2.0
EVO	**Evora**	60.94	298	*e*P	P	05 02 43.9	+1.2
PSBE	**So Bento**	61.07	299	*e*P	P	05 02 45.4	+1.8
	comp=Z,61nm,1.8s						
PBDV	**Barranco-do-Ve**	61.44	297	*e*P	P	05 02 48.3	+2.2
TORD	**Torodi Ar. Bea**	66.06	269	P	P	05 03 15.6	-0.9
	comp=Z,9.3nm,0.7s,baz=50,slow=5.8,SNR=83						
	comp=Z,9.3nm,0.7s						
KOWA	**Kowa**	69.89	273	P	P	05 03 40.0	-0.4
KOWA				IAmb	IAmb	05 03 40.7	
	comp=Z,7.9nm,0.8s						
TOLK	**Toolik Lake Re**	70.52	15	P	P	05 03 44.3	+0.8
TOLK				IAmb	IAmb	05 05 04.5	
	comp=Z,6.4nm,0.8s						
A36M	**Sachs Harbour**	70.84	5	P	P	05 03 46.1	+0.8
A36M				IAmb	IAmb	05 04 51.6	
	comp=Z,13nm,0.8s						
COLD	**Coldfoot**	71.56	16	P	P	05 03 49.8	+0.1
COLD				IAmb	IAmb	05 05 45.4	
	comp=Z,4.0nm,0.4s						
H23K	**Yukon River**	72.88	16	P	P	05 03 58.2	+0.6
H23K				IAmb	IAmb	05 04 43.8	
	comp=Z,19nm,1.8s						
J20K	**Nowinta River**	73.11	19	P	P	05 03 59.5	+0.6
C36M	**Paulatuk**	73.52	6	P	P	05 04 01.6	+0.4
C36M				IAmb	IAmb	05 04 02.0	
	comp=Z,11nm,0.6s						
INK	**Inuvik**	73.52	9	P	P	05 04 02.1	+0.8
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	**Inuvik**	73.52	9	P	P	05 04 02.1	+0.8
K20K	**Telida**	73.79	20	P	P	05 04 03.7	+0.7
K20K				IAmb	IAmb	05 05 10.3	
	comp=Z,9.7nm,1.2s						
MDM	**Murphy Dome**	73.91	16	P	P	05 04 04.1	+0.5
MDM				IAmb	IAmb	05 04 50.2	
	comp=Z,11nm,1.3s						
NEA2	**Nenana**	74.02	17	P	P	05 04 04.4	+0.1
NEA2				IAmb	IAmb	05 04 50.5	
	comp=Z,6.8nm,1.0s						
CAST	**Castle Rocks**	74.26	19	P	P	05 04 06.5	+0.8
CAST				IAmb	IAmb	05 04 52.3	
	comp=Z,19nm,1.4s						
ILAR	**Eielson Array**	74.37	16	P	P	05 04 05.7	-0.5
	comp=Z,1.1nm,0.9s,baz=305,slow=5.3,SNR=8.8						
DBIC	**Dimbokro**	75.05	267	P	P	05 04 10.0	-1.0
	comp=Z,3.2nm,0.7s,baz=32,slow=5.8,SNR=5.2						
	comp=Z,3.2nm,0.7s						
DBIC	**Dimbokro**	75.05	267	P	P	05 04 10.0	-1.0
DBIC				pmax	pmax		
	comp=Z,55nm,1.9s						
DBIC	**Dimbokro**	75.05	267	P	P	05 04 10.0	-1.0
KIC	**Kosan Boka**	75.14	267	*e*PKP1	P	05 04 09.7	-1.8
	comp=Z,7.6nm,0.7s						
TIC	**Toumodi**	75.20	267	*e*PKP1	P	05 04 10.6	-1.3
LIC	**Lamto**	75.45	267	*e*PKP1	P	05 04 09.4	-3.9
	comp=Z,12nm,1.3s						
DHY	**Denali Highway**	75.71	17	P	P	05 04 13.6	-0.6
SCM	**Sheep Creek Mo**	76.79	18	P	P	05 04 20.6	+0.4
SCM				pmax	pmax		
	comp=Z,58nm,1.5s						
SCM	**Sheep Creek Mo**	76.79	18	P	P	05 04 20.6	+0.4
BOSA	**Boshof**	78.22	220	P	P	05 04 27.2	-1.3
	comp=Z,1.9nm,0.7s,baz=13,slow=9.7,SNR=6.0						
	comp=Z,1.9nm,0.7s						
BOSA	**Boshof**	78.22	220	P	P	05 04 28.1	-0.4
BOSA				pmax	pmax		
	comp=Z,48nm,2.0s						
BOSA	**Boshof**	78.22	220	P	P	05 04 28.1	-0.4
BOSA				IAmb	IAmb	05 07 24.6	
	comp=Z,48nm,2.0s						
YKA	**Yellowknife Ar**	80.90	3	P	P	05 04 42.8	+0.4
	comp=Z,3.8nm,0.6s,baz=351,slow=5.4,SNR=116						
YKA				pP	pP	05 05 28.2	+2.8
	comp=Z,3.8nm,0.8s,baz=349,slow=5.2,SNR=6.4						
	comp=Z,3.8nm,0.6s						
WRA	**Warramunga Arr**	81.88	122	P	P	05 04 46.8	-1.4
	comp=Z,2.2nm,0.7s,baz=323,slow=5.0,SNR=24						
WRA				pP	pP	05 05 33.5	+1.6
	comp=Z,1.1nm,0.6s,baz=322,slow=5.3,SNR=3.2						
	comp=Z,2.2nm,0.7s						
WB2	**Warramunga Arr**	81.89	122	P	P	05 04 47.0	-1.3
WB2				IAmb	IAmb	05 06 10.2	
	comp=Z,26nm,1.6s						
SCHQ	**Schefferville**	81.92	337	P	P	05 04 48.2	+0.3
	comp=Z,1.9nm,0.7s,baz=334,slow=3.6,SNR=8.2						
	comp=Z,1.9nm,0.7s						
SCHQ	**Schefferville**	81.92	337	P	P	05 04 48.2	+0.3
SCHQ				IAmb	IAmb	05 05 43.7	
	comp=Z,9.1nm,1.3s						
ASAR	**Alice Springs**	84.17	125	P	P	05 04 58.6	-1.3
	comp=Z,2.3nm,0.7s,baz=314,slow=5.1,SNR=24						
ASAR				pP	pP	05 05 45.0	+1.2
	comp=Z,0.8nm,0.6s,baz=310,slow=5.4,SNR=3.2						
	comp=Z,2.3nm,0.7s						
TXAR	**Lajitas Array**	114.02	355	PKKPbc	PKKPbc	05 21 45.4	-2.6
	comp=Z,0.3nm,0.7s,baz=188,slow=4.4,SNR=3.8						
PLCA	**Paso Flores**	150.25	251	PKPbc	PKPbc	05 12 17.9	-0.6
	comp=Z,1.0nm,0.8s,baz=225,slow=1.4,SNR=3.1						

TIR ***05*** *04:56:53.0, 39°.94N×20°.00E, h12^{km}, Md2.5, Ml2.1*
ATH ***05*** *04:56:54.1, 39°.93N×20°.00E, h12^{km}±9^{km}, ML1.9/2, Error ellipse: s-maj=10.0km s-min=1.2km az=197.0*
ISC 05 04:56:53.9±0.9**, 39°.93N**±0°.03×**20°.02E**±0°.03**, h11**^{km}±6^{km}**, n15,** σ**0**^{s}**84**/27**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	**Sarande**	0.06	197	P	Pg	04 56 55.8	-0.2
	baz=178						
SRN				S	Sg	04 56 57.3	-0.3
	baz=178						
SRN				AMP			
	comp=N,9.8nm,0.1s,baz=178						
KASA	**Kassiopi**	0.20	199	P	Pg	04 56 57.8	-0.2
KASA				S	Sg	04 57 01.7	+0.8
KEK	**Kerkira**	0.28	218	P	Pg	04 56 59.3	-0.3
KEK				S	Sg	04 57 03.9	+0.6
KEK				AML	AML	04 57 04.8	
	comp=N,1216μm,0.2s						
KEK				AML	AML	04 57 05.5	
	comp=E,1977μm,0.2s						
IGT	**Igoumenitsa**	0.47	149	P	Pg	04 57 02.8	-0.2
IGT				S	Sb	04 57 10.5	-0.6
IGT				AML	AML	04 57 11.6	
	comp=E,206μm,0.2s						
IGT				AML	AML	04 57 16.7	
	comp=N,168μm,0.3s						
IGT	**Igoumenitsa**	0.47	149	P	Pg	04 57 02.8	-0.2
	baz=147						
IGT				S	Sb	04 57 10.4	-0.6
	baz=147						
LSK	**Leskovik**	0.49	64	P	Pg	04 57 02.9	-0.7
	baz=65						
LSK				S	Sb	04 57 11.4	-0.5
	baz=65						
LSK				AMP			
	comp=N,0.7nm,0.5s,baz=65						
JAN	**Janina**	0.70	113	P	Pb	04 57 08.6	+0.6
JAN				S	Sb	04 57 17.3	-0.3
KBN	**Korca**	0.91	40	P	Pb	04 57 11.3	-0.3
	baz=41						
KBN				S	Sn	04 57 24.5	-1.2
	baz=41						
KBN				AMP			
	comp=N,0.2nm,0.7s,baz=41						
NEST	**Nestorio**	0.92	58	P	Pg	04 57 11.7	+0.1
KPRO	**Kipourio**	1.03	88	P	Pb	04 57 13.4	-0.3
KPRO				S	Sn	04 57 29.0	+0.1
SCTE	**Santa Cesarea**	1.20	277	P	Pg	04 57 17.0	+0.1
SCTE	**Santa Cesarea**	1.20	277	P	Pg	04 57 17.0	+0.1
	baz=278						
SCTE				S	Sn	04 57 33.2	+0.3
	baz=278						
SCTE				AMP			
	comp=N,0.1nm,0.4s,baz=278						
FNA	**Florina**	1.34	50	P	Pb	04 57 19.0	0.0
FNA				S	Sg	04 57 39.9	+2.9
FNA	**Florina**	1.34	50	P	Pb	04 57 19.0	0.0
	baz=51						
FNA				S	Sg	04 57 38.2	+1.2
	baz=51						
PHP	**Peshkopia**	1.78	10	P	Pg	04 57 27.1	-0.9
	baz=10.0						

GUC 05 05:03:33.7±0.9**, 27°.27S**×**70°.93W, h52**^{km}±4^{km}**, ML3.8, 6C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC06	**Mina Casimiro**	0.52	100	⇓*i*P	Pn	05 03 45.8	+0.4
AC06				*i* S	Sn	05 03 53.2	-0.6
AC06				IAML		05 03 53.8	
	comp=E,8μm,0.3s						
GO03	**Copiap**	0.70	118	⇑*i*P	Pn	05 03 47.3	-0.3
GO03				*i* S	Sn	05 03 55.9	-1.9
GO03				IAML		05 03 56.5	
	comp=N,7μm,0.2s						
AC04	**Llanos de Chal**	0.94	188	⇑*i*P	Pn	05 03 51.3	+0.6
AC04				*i* S	Sn	05 04 03.8	+0.5
AC04				IAML		05 04 04.3	
	comp=N,5μm,0.1s						
AC04				IAML		05 04 04.3	
	comp=E,6μm,0.1s						
AC01	**Pan de Azucar**	1.15	15	⇑*i*P	Pn	05 03 56.7	+3.2
AC01				*i* S	Sn	05 04 09.5	+1.2
AC02	**Maricunga**	1.67	76	⇓*i*P	Pn	05 04 02.8	+1.9
AC02				*i* S	Sn	05 04 23.2	+1.7
LCO	**Las Campanas**	1.75	173	⇑*i*P	Pn	05 04 01.8	-0.2
GO02	**Mina Guanaco**	2.42	30	*i* P	Pn	05 04 13.8	+2.7
GO02				*e*S	Sn	05 04 42.7	+3.1
CO05	**La Serena**	2.66	186	*e*P	Pn	05 04 14.1	+0.1
CO05				IAML		05 05 01.1	
	comp=E,724nm,0.4s						
PB14	**IPOC Station P**	2.67	10	*e*P	Pn	05 04 15.9	+1.3
CO01	**Juntas del Tor**	2.80	165	⇓*e*P	Pn	05 04 17.2	+0.9
GO04	**Tololo Observa**	2.90	178	⇑*i*P	Pn	05 04 17.7	+0.1
CO06	**Fray Jorge**	3.45	190	*e*P	Pn	05 04 23.9	-1.1
PB10	**IPOC Station P**	3.75	5	⇑*i*P	Pn	05 04 30.0	+0.9
CO02	**Combarbal**	3.92	181	*e*P	Pn	05 04 30.9	-0.7
PB15	**IPOC Station P**	4.25	18	*e*P	Pn	05 04 38.7	+2.5

IDC ***05*** *05:15:04.0±0.8, 21°.74S×170°.42E, h0^{km}, mb4.3/13, mbtmp4.3/14, ML3.9/1, MS3.8/47, Error ellipse: s-maj=22.2km s-min=19.1km az=120.0*
GCMT ***05*** *05:15:07.7±0.4, 21°.98S±0°.03×170°.18E±0°.04, h20^{km}±1^{km}, MW4.9/82, Moment Tensor Solution. s22,c23; s82,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.59±.19; $M_{\theta\theta}$1.39±.13; $M_{\phi\phi}$1.20±.11; $M_{r\theta}$-1.29±.26; $M_{\theta\phi}$0.88±.06; $M_{\phi r}$0.65±.22; Best double couple: $M_0$2.70000×10^{16} NP1:ϕ_s212.00000°, δ41.00000°, λ-121.00000°. NP2: ϕ_s71.00000°, δ56.00000°, λ-66.00000°. Principal axes: T 2.2490, Plg8.0000°, Azm144.0000°; N 0.9020, Plg20.0000°, Azm237.0000°; P -3.1520, Plg69.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NOU ***05*** *05:15:07.8, 21°.79S×170°.03E, h0^{km}, MLv4.4/12, Southeast of Loyalty Islands*
NEIC ***05*** *05:15:10.7±2.1, 21°.84S±0°.05×170°.15E±0°.06, h35^{km}±5^{km}, mb4.8/22, Error ellipse: s-maj=9.2km s-min=5.7km az=60.0*
ISC 05 05:15:08.5±0.6**, 21°.85S**±0°.06×**170°.22E**±0°.06**, h26**^{km}±3^{km}**, h26**^{km}**:pP-P, n153,** σ**1**^{s}**10**/130**, mb4.7**/30**, MS3.9**/45**, 2C-16D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	2.07	280	Pn	Pn	05 15 41.2	-0.3
MARNC				Sn	Sn	05 16 05.7	-0.7
MARNC	**Mare, Loyalty**	2.07	280	P	Pn	05 15 40.8	-0.7
PINNC	**Pines Island,**	2.68	253		Pn	05 15 50.3	+0.4
PINNC	**Pines Island,**	2.68	253	P	Pn	05 15 49.7	-0.2
LIFNC	**LIFOU**	2.97	290		Pn	05 15 54.4	+0.4
YATNC	**Mamie plateau,**	3.09	266	P	Pn	05 15 54.7	-1.0
OUENC	**Ouen Island, N**	3.18	259	Pn	Pn	05 15 57.0	+0.2
OUENC	**Ouen Island, N**	3.18	259	P	Pn	05 15 56.6	-0.2
DZM	**Mont Dzumac**	3.51	266	*e*Pn	Pn	05 16 02.8	+1.4
DZM				*e*Sn	Sn	05 16 44.0	+1.8
	1μm,28.8s						
DZM	**Mont Dzumac**	3.51	266	Pn	Pn	05 16 01.4	0.0
	9.4nm,0.3s,baz=89,slow=5.9,SNR=147						
DZM				Sn	Sn	05 16 42.1	-0.1
	25nm,0.3s,baz=301,slow=23,SNR=16						
DZM				LR	LR	05 17 14.9	
	comp=Z,738nm,21.6s,baz=70,slow=35						
	29nm,0.4s						
DZM	**Mont Dzumac**	3.51	266	Pn	Pn	05 16 02.0	+0.6
DZM	**Mont Dzumac**	3.51	266	P	Pn	05 16 01.6	+0.2
ONTNC	**Ouen Toro**	3.52	262	Pn	Pn	05 16 02.2	+0.7
ONTNC	**Ouen Toro**	3.52	262	P	Pn	05 16 02.3	+0.8
NOUC	**Port Laguerre**	3.64	265	P	Pn	05 16 03.4	+0.2
RTV	**Rentapao**	4.37	337	P	Pn	05 16 14.0	+0.7
DVP	**Devils Point**	4.53	335	P	Pn	05 16 16.2	+0.9
KOUNC	**Koumac, New Ca**	5.68	282	Pn	Pn	05 16 32.1	+0.9
SANVU	**Saraoutou**	6.98	335	Pn	Pn	05 16 48.0	-1.1
MSVF	**Nonsavu**	8.43	62	Pn	Pn	05 17 11.5	+2.4
	1.4nm,0.3s,baz=216,slow=13,SNR=6.1						
MSVF				LR	LR	05 19 40.0	
	comp=Z,412nm,18.1s,baz=222,slow=34						
RAO	**Raoul Island**	12.99	127	LR	LR	05 22 10.9	
	comp=Z,643nm,18.9s,baz=67,slow=33						
LHI	**Lord Howe Isla**	13.85	224	Pn	Pn	05 18 20.6	-2.6
HNR	**Honiara**	15.81	320	LR	LR	05 23 54.0	
	comp=Z,435nm,21.3s,baz=146,slow=33						
URZ	**Urewera**	17.40	162	P	P	05 19 11.9	+1.4
	19nm,0.9s,baz=314,slow=21,SNR=7.0						
URZ				LR	LR	05 24 26.2	
	comp=Z,791nm,19.5s,baz=31,slow=32						
AFI	**Afiamalu**	18.86	68	LR	LR	05 26 16.9	
	comp=Z,24nm,19.6s,baz=230,slow=36						
LTZ	**Lake Taylor**	20.94	176	P	Pn	05 19 50.8	-1.2
RPZ	**Rata Peaks**	21.82	178	P	P	05 19 58.8	+0.1
	9.9nm,0.9s,baz=132,slow=9.1,SNR=3.5						
RPZ				LR	LR	05 28 01.1	
	comp=Z,444nm,18.2s,baz=356,slow=36						
	9.9nm,0.9s						
CTA	**Charters Tower**	22.44	270	P	P	05 20 06.9	+1.3
	2.3nm,0.5s,baz=104,slow=8.8,SNR=3.7						
CTA				LR	LR	05 27 32.7	
	comp=Z,142nm,20.0s,baz=91,slow=33						
	2.3nm,0.5s						
PMG	**Port Moresby**	25.37	296	P	P	05 20 34.9	+1.1
	22nm,0.7s,baz=118,slow=4.1,SNR=5.2						
PMG				LR	LR	05 29 42.6	
	comp=Z,317nm,18.3s,baz=131,slow=34						
	22nm,0.7s						
PMG	**Port Moresby**	25.37	296	P	P	05 20 31.1	-2.7
PMG				IAmb	IAmb	05 20 35.5	
	comp=Z,22nm,0.7s						
COEN	**Coen**	26.87	282	P	P	05 20 46.2	-1.1
STKA	**Stephens Creek**	27.34	243	P	P	05 20 53.6	+2.1
	comp=Z,3.6nm,0.9s,baz=97,slow=17,SNR=4.4						
	comp=Z,3.6nm,0.9s						
RAR	**Rarotonga**	27.91	94	LR	LR	05 30 46.9	
	comp=Z,46nm,20.7s,baz=263,slow=34						
WR0	**Warramunga Arr**	33.34	267	P	P	05 21 44.1	-0.5
WR0				IAmb	IAmb	05 21 51.5	
	comp=Z,7.3nm,0.9s						
ASAR	**Alice Springs**	33.48	260	P	P	05 21 46.3	+0.4
	comp=Z,2.1nm,0.8s,baz=88,slow=8.9,SNR=22						
ASAR				LR	LR	05 34 28.6	
	comp=Z,161nm,19.2s,baz=118,slow=35						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	33.48	260	P	P	05 21 45.0	-0.9

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WB0    Warramunga Arr     33.51 267 P         P        05 21 45.8 -0.3
WB0                                 IAmb      IAmb     05 21 46.6
       comp=Z,18nm,1.2s
WB2    Warramunga Arr     33.52 267 P         P        05 21 46.0 -0.2
WB2                                 IAmb      IAmb     05 21 46.9
       comp=Z,14nm,1.3s
WRAB   Tennant Creek      33.52 267 P         P        05 21 45.8 -0.4
WRAB                                pP        pwP      05 21 58.9 +1.4
WRA    Warramunga Arr     33.53 267 P         P        05 21 45.8 -0.6
       comp=Z,2.9nm,0.4s,baz=98,slow=8.4,SNR=110
WRA                                 LR        LR       05 34 05.0
       comp=Z,160nm,21.5s,baz=18,slow=34
       comp=Z,2.9nm,0.4s
WRA    Warramunga Arr     33.53 267 P         P        05 21 45.7 -0.6
TBI    Tubuai             37.17 100 eLR       LR       05 32 08.4
       comp=Z,274nm,29.0s
PPT2   Papeete2           38.01  91 eLR       LR       05 32 38.1
       comp=Z,320nm,29.2s
MTN    Manton Dam         38.27 277 P         P        05 22 27.5 +0.5
KNRA   Kununurra          39.64 272 P         P        05 22 38.5 +0.1
KNRA                                IAmb      IAmb     05 22 45.6
       comp=Z,15nm,0.8s
FAKI   Fak Fak            41.39 292 P         P        05 22 53.1 +0.2
FITZ   Fitzroy Crossi     41.95 267 P         P        05 22 57.4 -0.1
GUMO   Guam               43.12 322 LR        LR       05 37 39.5
       comp=Z,101nm,20.8s,baz=134,slow=31
SIJI   Sorong             43.28 294 LR        LR       05 40 15.5
       comp=Z,164nm,20.2s,baz=106,slow=35
BATI   Baumata            46.05 277 LR        LR       05 41 41.9
       comp=Z,432nm,21.9s,baz=182,slow=35
PSA00  Pilbara Seismi     46.62 261 P         P        05 23 34.5 -0.3
PSA00                               IAmb      IAmb     05 23 36.2
       comp=Z,13nm,1.1s
MBWA   Marble Bar         46.80 261 P         P        05 23 36.2  0.0
MBWA                                IAmb      IAmb     05 23 43.8
       comp=Z,9.4nm,0.7s
MBWA   Marble Bar         46.80 261 P         P        05 23 36.6 +0.3
MBWA                                pP        pP       05 23 43.2 +0.2
TAOE   Nuku Hiva Isla     49.37  83 eLR       LR       05 37 57.9
       comp=Z,200nm,28.2s
KAPI   Kappang            51.59 281 LR        LR       05 48 11.1
       comp=Z,63nm,18.3s,baz=121,slow=38
DAV    Davao City (W)     52.35 298 LR        LR       05 43 30.5
       comp=Z,57nm,21.6s,baz=148,slow=32
JCJ    Chichijima         55.71 330 LR        LR       05 45 39.7
       comp=Z,133nm,21.9s,baz=48,slow=33
VNDA   Vanda              55.87 182 P         P        05 24 45.3 +1.9
       comp=Z,1.0nm,0.9s,baz=329,slow=4.3,SNR=3.8
VNDA                                LR        LR       05 46 19.6
       comp=Z,153nm,18.1s,baz=16,slow=34
       comp=Z,1.0nm,0.9s
VNDA   Vanda              55.87 182 P         P        05 24 44.3 +1.0
SBA    Scott Base         56.08 181 P         P        05 24 46.7 +1.8
SBA                                 IAmb      IAmb     05 24 53.1
       comp=Z,15nm,1.4s
MYLDM  Lahad Datu         57.31 292 P         P        05 24 53.3 -1.2
CASY   Casey              58.12 204 P         P        05 24 59.1 -0.3
CCD    Concordia, Ant     58.56 193 P         P        05 25 03.0 +0.1
CCD                                 pP        sP       05 25 11.5 -0.8
JHJ    Hachijo jima 2     61.90 331 LR        LR       05 51 48.6
       comp=Z,99nm,19.2s,baz=91,slow=36
LEM    Lembang            62.08 274 LR        LR       05 53 40.7
       comp=Z,246nm,18.1s,baz=244,slow=37
MJAR   Matsushiro Arr     65.48 332 P         P        05 25 49.0 -0.3
       comp=Z,1.2nm,0.4s,baz=164,slow=8.3,SNR=4.7
MJAR                                LR        LR       05 54 48.0
       comp=Z,39nm,18.8s,baz=139,slow=36
       comp=Z,1.2nm,0.4s
QSPA   South Pole Qui     68.22 180 LR        LR       05 53 43.6
       comp=Z,115nm,18.3s,baz=30,slow=34
QSPA   South Pole Qui     68.22 180 P         P        05 26 06.9 +0.3
QSPA                                IAmb      IAmb     05 26 32.6
       comp=Z,12nm,1.4s
QSPA   South Pole Qui     68.22 180 P         P        05 26 06.7  0.0
QSPA                                sP        pwP      05 26 19.4 +0.3
ASAJ   Asahikawa          70.36 339 LR        LR       05 52 05.0
       comp=Z,90nm,21.7s,baz=182,slow=32
KSRS   Korea Array        71.17 326 P         P        05 26 25.6 +0.6
       comp=Z,2.0nm,0.7s,baz=154,slow=5.7,SNR=6.7
KSRS                                LR        LR       05 56 21.1
       comp=Z,53nm,19.3s,baz=185,slow=35
       comp=Z,2.0nm,0.7s
RPN    Rapa Nui           72.23 113 LR        LR       05 52 41.6
       comp=Z,31nm,20.0s,baz=227,slow=31
NJ2    Nanjing            72.71 316 eP        P        05 26 37.7 +3.4
NJ2                                 pmax      pmax
       comp=Z,9.0nm,0.5s
PSI    Prapat             73.76 280 LR        LR       06 03 13.0
       comp=Z,114nm,18.0s,baz=135,slow=39
SHEM   Shemya Is, Ala     74.34   2 LR        LR       05 53 32.3
       comp=Z,79nm,22.0s,baz=176,slow=31
USRK   Ussuriysk Ar.      74.47 332 LR        LR       05 57 07.3
       comp=Z,42nm,19.6s,baz=147,slow=34
PETK   Petropavlovsk-     75.43 352 P         P        05 26 49.9 +0.1
       comp=Z,9.2nm,1.0s,baz=178,slow=11,SNR=3.5
PETK                                LR        LR       05 55 49.8
       comp=Z,82nm,19.7s,baz=163,slow=32
       comp=Z,9.2nm,1.0s
MAW    Mawson             76.37 202 P         P        05 26 55.6 +0.6
       comp=Z,2.6nm,0.8s,baz=66,slow=10.0,SNR=3.2
       comp=Z,2.6nm,0.8s
MAW    Mawson             76.37 202 P         P        05 26 55.0 -0.1
CN2    Changchun          77.15 328 eP        P        05 26 59.3 -0.4
CN2                                 pmax      pmax
       comp=Z,10.0nm,0.6s
BELA   Belgrano 2         79.43 175 P         P        05 27 10.7 -1.3
BELA                                IAmb      IAmb     05 27 18.4
       comp=Z,5.7nm,1.1s
CMAR   Chiang Mai Arr     80.41 294 P         P        05 27 20.2 +2.0
       comp=Z,3.4nm,0.6s,baz=130,slow=4.1,SNR=25
       comp=Z,3.4nm,0.6s
CMAR   Chiang Mai Arr     80.41 294 P         P        05 27 19.5 +1.3
KMI    Kunming            80.42 302 ⇑P        P        05 27 20.2 +1.7
KMI                                 pmax      pmax
       comp=Z,17nm,1.1s
CHTO   Chiang Mai         80.57 295 P         P        05 27 20.0 +0.9
CHTO                                IAmb      IAmb     05 27 21.5
       comp=Z,11nm,0.9s
PZH    PanZhiHua          81.88 303 P         P        05 27 24.8 -1.3
PZH                                 pmax      pmax
       comp=Z,10.0nm,0.5s
PZH                                 pmax      pmax
       comp=Z,80nm,6.7s
MA2    Magadan            82.69 350 LR        LR       05 58 51.2
       comp=Z,138nm,21.8s,baz=136,slow=32
PMSA   Palmer Station     84.16 160 LR        LR       05 58 18.8
       comp=Z,83nm,19.2s,baz=244,slow=31
LZH    Lanzhou            85.15 312 eP        P        05 27 45.3 +2.6
LZH                                 pP        pwP      05 27 53.3 -0.7
LZH                                 sP        sP       05 27 57.6 +4.8
LZH                                 pmax      pmax
       comp=Z,12nm,1.5s
KDAK   Kodiak Island      85.18  19 LR        LR       06 01 30.9
       comp=Z,43nm,18.9s,baz=229,slow=33
SEY    Seymchan           85.67 352 LR        LR       05 59 55.2
       comp=Z,127nm,21.5s,baz=164,slow=31
SNAA   Sanae              86.60 182 LR        LR       06 06 01.5
       comp=Z,75nm,18.0s,baz=190,slow=35
YBH    Yreka Blue Hor     88.54  44 LR        LR       05 59 20.6
       comp=Z,28nm,21.1s,baz=276,slow=30
PFO    Pinyon Flats O     88.93  53 LR        LR       06 04 27.7
       comp=Z,24nm,18.2s,baz=230,slow=33
ULN    Ulaanbaatar        89.49 323 P         P        05 28 03.1 -0.3
ULN                                 IAmb      IAmb     05 28 04.2
       comp=Z,4.7nm,1.1s
YAK    Yakutsk            89.62 342 LR        LR       06 03 55.5
       comp=Z,46nm,22.0s,baz=275,slow=33
BILL   Bilibino           89.67 359 P         P        05 28 03.0 -0.5
LPIG   La Paz             89.72  64 LR        LR       05 59 38.8
       comp=Z,44nm,18.6s,baz=206,slow=30
NVAR   Mina Array Bea     89.84  48 P         P        05 28 03.5 -1.9
       comp=Z,0.6nm,0.8s,baz=228,slow=7.2,SNR=5.2
NVAR                                LR        LR       06 01 05.5
       comp=Z,31nm,20.5s,baz=332,slow=31
       comp=Z,0.6nm,0.8s
NVAR   Mina Array Bea     89.84  48 P         P        05 28 04.8 -0.6
PALK   Pallekele          92.22 277 LR        LR       06 13 04.4
       comp=Z,44nm,18.1s,baz=211,slow=38
ILAR   Eielson Array      92.44  17 P         P        05 28 13.7 -2.8
       comp=Z,0.4nm,0.7s,baz=226,slow=6.3,SNR=3.1
ILAR                                LR        LR       06 03 48.0
       comp=Z,346nm,21.1s,baz=351,slow=32
ELK    Elko               93.01  47 LR        LR       06 07 36.8
       comp=Z,34nm,18.7s,baz=246,slow=34
DLBC   Dease Lake         93.93  27 LR        LR       06 03 55.1
       comp=Z,34nm,19.5s,baz=194,slow=31
NEW    Newport            95.18  40 LR        LR       06 02 50.6
       comp=Z,20nm,20.4s,baz=262,slow=30
PLCA   Paso Flores        95.98 138 LR        LR       06 01 42.9
       comp=Z,41nm,21.5s,baz=190,slow=29
TXAR   Lajitas Array      97.20  61 LR        LR       06 03 35.7
       comp=Z,24nm,20.5s,baz=258,slow=30
INK    Inuvik             98.72  18 LR        LR       06 09 29.8
       comp=Z,41nm,18.4s,baz=88,slow=33
ARCES  ARCESS Array B    127.81 345 PKP       PKPdf    05 34 09.2 -1.8
       comp=Z,17nm,1.4s,baz=67,slow=1.9,SNR=9.9
ARCES  ARCESS Array B    127.81 345           PKPdf    05 34 08.7 -2.3
MORC   Moravsky Berou    144.77 329 ePKP      PKPab    05 34 40.8 -1.0
OSTC   Ostas             144.84 331 ePKP      PKPab    05 34 41.9 -0.1
CHVC   Chvalec           144.90 331 ePKP      PKPab    05 34 42.0 -0.2
KRLC   Kraliky           144.92 330 ePKP      PKPab    05 34 41.2 -1.2
DPC    Dobruska-Polom    144.94 331 ePKP      PKPab    05 34 41.9 -0.5
DPC                                 ex        x        05 34 46.5
VYHS   Vyhne             144.96 326 ePKP      PKPab    05 34 42.4 -0.1
UPC    Upice             144.97 331 ePKP      PKPab    05 34 42.0 -0.5
KOLL   Kolacno           145.13 327 ePKP      PKPdf    05 34 43.8 +0.3
JAVC   Velka Javorina    145.31 328 ePKP      PKPdf    05 34 44.6 +0.7
VRAC   Vranov            145.54 329 ePKP      PKPdf    05 34 44.1 -0.1
BRG    Berggiesshubel    145.60 333 ePKP      PKPdf    05 34 44.1 -0.1
BRG                                  Amp               05 34 44.9
       comp=Z,30nm,1.0s
BRG                                 ex        x        05 34 50.2
BRG                                  Amp               05 34 50.9
       comp=Z,20nm,0.8s
CLL    Collm             145.66 334 ⇑iPKPbc   PKPdf    05 34 44.0 -0.3
       comp=Z,25nm,1.0s
CLL                                 i PKiKP   PKiKP    05 34 49.7 +1.3
       comp=Z,19nm,0.8s
SMOL   Smolenice         145.66 327 ePKP      PKPab    05 34 45.1  0.0
KRUC   Moravsky          145.80 329 ePKP      PKPdf    05 34 44.7  0.0
MODS   Modra-Piesok      145.83 327 ePKP      PKPbc    05 34 45.5 +0.2
PRU    Pruhonice         146.00 332 ePKP      PKPbc    05 34 45.4 -0.3
RONA   Rosalia, Austr    146.77 327 eP        PKPbc    05 34 47.6 -0.6
       comp=Z,3.2nm,0.6s
CONA   Conrad Observa    146.84 328 eP        PKPbc    05 34 48.3 -0.1
       comp=Z,11nm,1.2s,SNR=5.9
CKRC   Cesky Krumlov     146.95 330 ePKP      PKPbc    05 34 47.7 -0.9
CKRC                                ex        x        05 34 53.6
KHC    Kasperske Hory    147.06 331 ePKP      PKPbc    05 34 48.0 -0.9
KHC                                 ex        x        05 34 54.0
GERES  GERESS Array B    147.21 331  PKPbc    PKPbc    05 34 49.0 -0.5
       comp=Z,4.7nm,0.8s,baz=46,slow=3.9,SNR=35
GERES  GERESS Array B    147.21 331           PKPbc    05 34 48.8 -0.6
MOA    Molln             147.66 329 eP        PKPbc    05 34 49.6 -1.0
       comp=Z,1.3nm,0.6s
SOKA   Soboth            148.10 327 eP        PKPbc    05 34 50.9 -1.1
       comp=Z,5.5nm,0.8s
KBA    Koelnbreinsper    148.65 329 eP        PKPdf    05 34 51.5 +1.8
       comp=Z,7.1nm,1.2s
BTNL   Ternell           148.72 340 dPKPbc    PKPbc    05 34 51.8 -1.5
MEM    Membach           148.74 340 dPKPbc    PKPbc    05 34 52.5 -0.8
MEM                                 dPKP      sPKPdf   05 34 58.5 -1.0
BHOU   Houvegnez         148.96 340 dPKPbc    PKPbc    05 34 53.1 -0.8
BHOU                                dPKPab    pPKPdf   05 34 57.2 -0.4
BHOU                                dpPKPdf   pPKPbc   05 35 00.8 -0.8
BCLA   Clavier           149.12 341 dPKPbc    PKPbc    05 34 53.1 -1.2
BCLA                                dPKP      PKPab    05 34 59.0 +0.4
BGES   Gesves            149.21 341 dPKPbc    PKPbc    05 34 52.5 -2.0
BGES                                dPKP      PKiKP    05 34 56.0 +0.3
ABTA   Abfaltersbach     149.29 329 eP        PKPbc    05 34 53.5 -1.4
       comp=Z,9.2nm,1.0s
WATA   Walderalm         149.29 331 eP        PKPbc    05 34 53.7 -1.3
       comp=Z,8.6nm,1.2s
WTTA   Wattenberg        149.31 331 eP        PKPbc    05 34 53.9 -1.2
       comp=Z,16nm,1.2s
RCHB   Rochefort         149.37 341 dPKPbc    PKPbc    05 34 54.4 -0.5
BMRD   Maredsous         149.38 342 dPKPbc    PKPbc    05 34 53.8 -1.1
MOTA   Moosalm           149.49 331 eP        PKPbc    05 34 54.1 -1.4
       comp=Z,9.4nm,1.0s
WLF    Walferdange       149.51 339 dPKPbc    PKPbc    05 34 54.0 -1.2
WLF                                 dPKPab    PKPab    05 34 59.5 -0.7
SQTA   Sankt Quirin      149.54 331 eP        PKPbc    05 34 54.4 -1.2
       comp=Z,11nm,1.0s
DOU    Dourbes           149.62 342 dPKPbc    PKPbc    05 34 54.5 -1.0
DOU                                 dPKPab    pPKPdf   05 34 59.3 +0.7
FETA   Feichten          149.90 331 eP        PKPbc    05 34 55.9 -0.7
       comp=Z,10.0nm,1.0s,SNR=5.7
DAVA   Damuels           150.07 333 eP        PKPbc    05 34 56.2 -0.8
       comp=Z,5.6nm,1.1s
ESDC   Sonseca Array     161.55 346  PKPab    PKPab    05 35 50.2 -1.6
       comp=Z,0.4nm,0.8s,baz=4.6,slow=6.4,SNR=1.7
TORD   Torodi Ar. Bea    166.05 234  PKPab    PKPab    05 36 11.9 -0.4
       comp=Z,0.9nm,0.8s,baz=103,slow=4.3,SNR=4.9
```

IDC 05 05:19:44.7±5.3**,21°.31S**×**170°.16E,h0^{km},mb3.6**/2**, mbtmp3.6**/2**,Error ellipse: s-maj=222.5km s-min=54.1km az=151.0,Southeast of Loyalty Islands**

```
Code   Station Name         Δ°  AZ°   Phase ID             Time     Res
                                    Op        ISC       h  m  s     ISC
WRA    Warramunga Arr     33.51 266 P         P        05 26 26.1 -0.2
       0.5nm,0.5s,baz=98,slow=8.4,SNR=9.3
       0.5nm,0.5s
ASAR   Alice Springs      33.53 259 P         P        05 26 26.4  0.0
       0.7nm,0.8s,baz=90,slow=10,SNR=5.0
       0.7nm,0.8s
GERES  GERESS Array B    146.72 331  PKPbc    PKPbc    05 39 27.9 -0.8
       0.7nm,0.7s,baz=72,slow=4.3,SNR=6.7
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*IDC **05** 05:54:26.5±0.7, 41°.18N×143°.41E, h0^{km}, mb3.7/10, mbtmp3.7/12, ML3.5/2, Error ellipse: s-maj=25.3km s-min=17.0km az=114.0*

*JMA **05** 05:54:30.7±0.2, 41°.3N±0°.8×14°3E±°, h33^{km}±4^{km}, MV4.0/33, E OFF AOMORI PREF*

*NIED **05** 05:54:30.7, 41°.33N×143°.05E, h33^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.06; $M_{\theta\theta}$5.48; $M_{\phi\phi}$-1.42; $M_{r\theta}$0.58; $M_{\theta\phi}$-0.08; $M_{\phi r}$5.46; Fault plane solution: $M_0$6.95000×10^{14} NP1: ϕ_s120.00000°, δ51.00000°, λ-39.00000°. NP2: ϕ_s237.00000°, δ61.00000°, λ-134.00000°.*

ISC 05 05:54:29.7±1.8**,41°.29N**±0°.05×**143°.10E**±0°.06**,h20**^{km}±12^{km}**, n36,σ0^{s}.90**/37**,mb3.8**/11**,4D,Hokkaido region**

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Code   Station Name         Δ°  AZ°   Phase ID             Time     Res
                                    Op        ISC       h  m  s     ISC
JEM    Erimo               0.73   3 P         Pb       05 54 43.8 +0.1
JEM                                 S         Sb       05 54 53.5 +0.3
JEM    Erimo               0.73   3 A         A        05 54 43.8
       comp=E,5.0nm,8.6s,comp=E,3.0nm,1.1s
JTHR   Tokachihiroo        1.01   8 P         Pb       05 54 48.4 -0.2
JTHR                                S         Sb       05 55 01.3  0.0
JNBK   Urakawa-nobuka      1.02 345 P         Pb       05 54 48.4 -0.3
JNBK                                S         Sb       05 55 01.3 -0.4
JNBK   Urakawa-nobuka      1.02 345 A         A        05 54 48.4
       comp=E,5.0nm,0.7s,comp=E,6.0nm,0.9s
JSHD   Hidakashinhida      1.22 337 P         Pn       05 54 51.6 +0.1
JAHD   Aomorihigashid      1.33 269 P         Pn       05 54 52.9 -0.2
JCH    Churui              1.34   8 P         Pn       05 54 52.6 -0.6
JANG   Nango               1.51 233 i P       Pn       05 54 56.0 +0.3
JOT    Ohata               1.55 274 ⇓P        Pn       05 54 56.0 -0.1
JOT                                 ⇓S        Sn       05 55 15.8 +0.1
JBT2   Biratori 2          1.58 340 P         Pb       05 54 57.8 -0.5
JBT2                                S         Sb       05 55 18.0 +0.1
JIAM   Iburiatsuma         1.60 327 P         Pb       05 54 58.2 -0.3
JIAM                                eS        Sb       05 55 19.5 +1.3
JTM    Tenmabayashi        1.62 253 P         Pb       05 54 58.1 -0.8
JTM                                 S         Sb       05 55 18.9 +0.1
JKB    Kayabe              1.66 292 ⇓P        Pn       05 54 57.4 -0.3
JKB                                 ⇓S        Sn       05 55 17.3 -1.2
JOB    Onbets              1.70  18 P         Pn       05 54 58.1 -0.2
JNB    Noboribetsu         1.94 308 P         Pn       05 55 01.3 -0.2
JNB                                 S         Sn       05 55 24.3 -1.0
JEW    Eniwo               1.98 322 P         Pn       05 55 02.6 +0.6
ASAJ   Asahikawa           2.85 353 Pn        Pn       05 55 15.9 +1.9
       10.0nm,0.3s,baz=200,slow=15,SNR=50
       25nm,0.3s
MJAR   Matsushiro Arr      6.09 220 Pn        Pn       05 55 59.9 +1.4
       0.1nm,0.3s,baz=27,slow=12,SNR=2.5
       2.2nm,0.5s
H11N2  WAKE ISLAND Hy     29.52 130 T         T        06 31 54.6
       baz=323,slow=75,SNR=96
H11N1  WAKE ISLAND Hy     29.54 130 T         T        06 31 54.4
       baz=323,slow=75,SNR=81
H11N3  WAKE ISLAND Hy     29.54 130 T         T        06 31 50.5
       baz=323,slow=75,SNR=54
H11S1  WAKE ISLAND Hy     30.38 131 T         T        06 32 56.3
       baz=324,slow=76,SNR=71
H11S3  WAKE ISLAND Hy     30.38 131 T         T        06 33 02.4
       baz=324,slow=76,SNR=76
H11S2  WAKE ISLAND Hy     30.40 131 T         T        06 33 01.5
       baz=324,slow=76,SNR=55
MKAR   Makanchi Array     43.10 299 P         P        06 02 30.6 +2.2
       0.3nm,0.5s,baz=90,slow=8.0,SNR=2.4
       0.3nm,0.5s
KURBB  Kurchatov Arra     44.53 305 P         P        06 02 42.5 +2.7
       0.7nm,0.4s,baz=79,slow=9.5,SNR=4.5
       0.7nm,0.4s
ILAR   Eielson Array      45.22  35 P         P        06 02 44.9 -0.2
       1.5nm,1.0s,baz=270,slow=6.7,SNR=7.5
INK    Inuvik             50.01  29 P         P        06 03 21.8 -0.4
       1.0nm,0.5s,baz=297,slow=7.3,SNR=11
       1.0nm,0.5s
YKA    Yellowknife Ar     59.49  32 P         P        06 04 30.0 -0.9
       0.2nm,0.6s,baz=298,slow=6.2,SNR=3.9
       0.2nm,0.6s
WRA    Warramunga Arr     61.46 189 P         P        06 04 43.9 -0.9
       0.6nm,0.6s,baz=6.2,slow=6.8,SNR=13
       0.6nm,0.6s
ASAR   Alice Springs      65.19 189 P         P        06 05 09.2 -0.3
       0.5nm,0.7s,baz=14,slow=6.7,SNR=5.8
       0.5nm,0.7s
FINES  FINESS Array B     65.67 332 P         P        06 05 11.6 -0.5
       0.4nm,0.4s,baz=345,slow=4.9,SNR=1.7
       0.4nm,0.4s
NVAR   Mina Array Bea     71.43  55 P         P        06 05 49.0 +0.1
       0.7nm,0.7s,baz=293,slow=6.4,SNR=7.8
       0.7nm,0.7s
PDAR   Pinedale Array     73.78  47 P         P        06 06 02.4 -0.4
       0.3nm,0.5s,baz=266,slow=3.3,SNR=4.5
       0.3nm,0.5s
TXAR   Lajitas Array      86.51  54 P         P        06 07 11.2 -0.3
       0.4nm,0.6s,baz=299,slow=3.4,SNR=6.1
       0.4nm,0.6s
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*TRN **05** 06:21:30.9, 18°.05N×63°.75W, h80^{km}, MD3.5*

*NEIC **05** 06:21:31.8±0.4, 18°.2N±0°.1×63°.67W±0°.06, h72^{km}±19^{km}, Error ellipse: s-maj=15.4km s-min=8.4km az=184.0*

*RSPR **05** 06:21:32.3, 18°.13N×63°.70W, h74^{km}±4^{km}, MD2.8/3*

ISC 05 06:21:32.2±1.6**,18°.1N**±0°.1×**63°.73W**±0°.04**,h76**^{km}±22^{km}**, n22,σ0^{s}.47**/34**,5C,Leeward Islands**

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Code   Station Name         Δ°  AZ°   Phase ID             Time     Res
                                    Op        ISC       h  m  s     ISC
SJVI   Gifft Hill Sch      1.01 282⇑eP        Pn       06 21 51.1 -0.1
SJVI   Gifft Hill Sch      1.01 282 eS        Sn       06 22 05.5 +0.1
SJVI   Gifft Hill Sch      1.01 282           Pn       06 21 51.1 -0.1
SJVI                                          Sn       06 22 05.5 +0.1
CDVI   St. Croix           1.05 250⇑eP        Pn       06 21 51.5 -0.1
CDVI   St. Croix           1.05 250           Pn       06 21 51.5 -0.1
CDVI                                          Sn       06 22 06.2 -0.1
CDVI                                IAML               06 22 13.5
       comp=N,62nm,0.7s
CDVI   St. Croix           1.05 250 eP        Pn       06 21 51.8 +0.2
CDVI                                eS        Sn       06 22 06.4 +0.2
CUPR   Culebra, Puert      1.49 278⇑eP        Pn       06 21 56.9 -0.3
CUPR   Culebra, Puert      1.49 278 eS        Sn       06 22 16.0 -0.2
CUPR   Culebra, Puert      1.49 278           Pn       06 21 57.0 -0.3
CUPR                                          Sn       06 22 16.0 -0.2
MTP    Monte Pirata        1.74 270⇑eP        Pn       06 22 00.2 -0.3
MTP    Monte Pirata        1.74 270           Pn       06 22 00.1 -0.3
MTP                                 IAML               06 22 17.7
       comp=N,18nm,1.4s
MTP                                 IAML               06 22 21.1
       comp=E,19nm,1.4s
MTP                                           Sn       06 22 22.3 +0.4
MTP    Monte Pirata        1.74 270⇑eP        Pn       06 22 00.2 -0.3
MTP                                 eS        Sn       06 22 22.6 +0.7
ANWB   Willy Bob           1.90 103  Pn       Pn       06 22 01.9 -0.8
ANWB   Willy Bob           1.90 103 eP        Pn       06 22 02.8 +0.1
ANWB                                eS        Sn       06 22 27.2 +1.3
HUMP   Col San Antoni      2.02 271  Pn       Pn       06 22 05.3 +1.0
CBYP   Canovanas           2.03 275  Pn       Pn       06 22 04.3 -0.1
CBYP                                IAML               06 22 30.0
       comp=E,38nm,0.2s
CBYP                                IAML               06 22 30.7
       comp=N,43nm,0.2s
ANDO   Antigua, Disas      2.07 119 eP        Pn       06 22 05.2 +0.3
ANDO                                eS        Sn       06 22 29.7 -0.2
BPA    Boggy Peak          2.08 121 eP        Pn       06 22 05.1  0.0
BPA                                 eS        Sn       06 22 29.8 -0.4
ANBD   Bethesda, Anti      2.15 119 eP        Pn       06 22 06.2 +0.2
ANBD                                eS        Sn       06 22 31.5 -0.4
PDPR   Patillas Dam,       2.19 268  Pn       Pn       06 22 06.4  0.0
PDPR                                IAML               06 23 04.2
       comp=E,39nm,2.2s
CBE    Ff, Capester        2.87 135 eP        Pn       06 22 16.0 +0.2
CBE                                 eS        Sn       06 22 48.9 -0.5
AOPR   Arecibo Observ      2.88 275 eP        Pn       06 22 16.4 +0.4
AOPR                                eS        Sn       06 22 48.7 -1.0
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*IDC **05** 06:34:17.4±1.7, 23°.01S×174°.34W, h0^{km}, mb3.9/4, mbtmp4.0/6, ML4.8/2, MS3.7/8, Error ellipse: s-maj=48.0km s-min=30.4km az=153.0*

ISC 05 06:34:22.6±1.5**,23°.1S**±0°.2×**174°.4W**±0°.2**,h36**^{km}**,n11, σ1^{s}.47**/6**,mb4.0**/4**,MS3.7**/5**,Tonga Islands region**

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Code   Station Name         Δ°  AZ°   Phase ID             Time     Res
                                    Op        ISC       h  m  s     ISC
MSVF   Nonsavu             8.81 306 Pn        Pn       06 36 26.4 -1.2
       1.3nm,0.3s,baz=142,slow=12,SNR=14
MSVF                                LR        LR       06 39 08.5
       comp=Z,1μm,19.3s,baz=92,slow=33
       17nm,0.8s
RAR    Rarotonga          13.72  85 LR        LR       06 41 34.1
       comp=Z,188nm,21.2s,baz=274,slow=32
URZ    Urewera            16.79 204 Pn        Pn       06 38 13.4 -1.5
       0.4nm,0.3s,baz=128,slow=19,SNR=2.9
       1.7nm,0.3s
DZM    Mont Dzumac        17.68 269 LR        LR       06 44 37.6
       comp=Z,309nm,18.1s,baz=150,slow=35
PPT    Papeete            23.93  81 LR        LR       06 48 39.1
       comp=Z,95nm,18.5s,baz=284,slow=36
CTA    Charters Tower     36.60 267 P         P        06 41 26.8 +1.3
       2.0nm,0.5s,baz=98,slow=9.8,SNR=2.0
       2.0nm,0.5s
PMG    Port Moresby       39.15 284 LR        LR       06 55 15.8
       comp=Z,150nm,19.8s,baz=116,slow=32
ASAR   Alice Springs      47.21 259 P         P        06 42 53.3 +1.1
       1.9nm,0.9s,baz=97,slow=8.3,SNR=6.5
ASAR                                LR        LR       07 02 29.5
       comp=Z,142nm,18.1s,baz=124,slow=36
       1.9nm,0.9s
WRA    Warramunga Arr     47.57 264 P         P        06 42 55.4 +0.4
       1.0nm,0.8s,baz=96,slow=8.2,SNR=5.7
WRA                                 LR        LR       07 02 07.6
       comp=Z,76nm,18.4s,baz=90,slow=35
       1.0nm,0.8s
RPN    Rapa Nui           58.52 109 LR        LR       07 06 00.3
       comp=Z,41nm,18.7s,baz=228,slow=33
NVAR   Mina Array Bea     80.67  41 P         P        06 46 32.1  0.0
       0.3nm,0.7s,baz=203,slow=7.2,SNR=5.0
       0.3nm,0.7s
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*IDC **05** 06:35:55.7±0.7, 7°.39S×154°.50E, h30^{km}±3^{km}, mb4.0/12, mbtmp4.2/14, ML2.2/1, MS3.5/3, Error ellipse: s-maj=21.4km s-min=14.7km az=113.0*

*NEIC **05** 06:35:57.0±1.2, 7°.47S±0°.07×154°.51E±0°.10, h37^{km}±7^{km}, mb4.6/42, Error ellipse: s-maj=16.7km s-min=5.4km az=124.0*

ISC 05 06:35:55.0±0.5**,7°.43S**±0°.06×**154°.52E**±0°.08**,h27**^{km}**,n60, σ0^{s}.88**/65**,mb4.6**/33**,Bougainville-Solomon Islands region**

```
Code   Station Name         Δ°  AZ°   Phase ID             Time     Res
                                    Op        ISC       h  m  s     ISC
KRVT   Keravat (AS076      3.97 321 Pn        Pn       06 36 54.8 +0.6
       110nm,0.3s,baz=276,slow=1.6,SNR=22
KRVT                                Sn        Sn       06 37 38.0 -1.9
       14nm,0.3s,baz=162,slow=20,SNR=1.2
RABL   Rabaul              3.98 324 Pn        Pn       06 36 55.0 +0.7
PMG    Port Moresby        7.54 254 Pn        Pn       06 37 41.5 -1.7
       1.9nm,0.3s,baz=192,slow=11,SNR=3.6
PMG                                 Sn        Sn       06 39 11.5 +3.7
       1.1nm,0.3s,baz=265,slow=18,SNR=1.4
PMG                                 LR        LR       06 40 35.6
       comp=Z,228nm,18.9s,baz=53,slow=37
       9.6nm,0.4s
PMG    Port Moresby        7.54 254           Pn       06 37 43.2 -0.1
COEN   Coen               12.89 239 Pn        Pn       06 38 55.7 -0.9
PATS   Pohnpei            14.67  15 Pn        Pn       06 39 21.4 +0.5
```

CTA	Charters Tower	14.92	212	Pn	P	06 39 28.4	-1.1
	0.2nm,0.3s,baz=61,slow=10,SNR=4.4						
CTA				LR	LR	06 44 41.3	
	comp=Z,134nm,18.6s,baz=76,slow=35						
FAKI	Fak Fak	22.62	280	P	P	06 40 53.2	-0.8
WR0	Warramunga Arr	23.02	235	P	P	06 40 58.4	+0.2
WR0				IAmb	IAmb	06 41 00.3	
	comp=Z,16nm,0.8s						
WB0	Warramunga Arr	23.05	236	P	P	06 40 58.7	+0.2
WRAB	Tennant Creek	23.17	236	P	P	06 40 59.4	-0.2
WRAB				IAmb	IAmb	06 41 01.1	
	comp=Z,10.0nm,0.7s						
WB2	Warramunga Arr	23.17	236	P	P	06 40 59.7	0.0
WB2				IAmb	IAmb	06 41 01.7	
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	23.18	236	P	P	06 40 59.9	0.0
	comp=Z,11nm,0.8s,baz=58,slow=9.1,SNR=67						
WRA				PcP	PcP	06 44 48.4	+0.6
	comp=Z,0.5nm,0.5s,baz=59,slow=2.3,SNR=5.3						
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	23.18	236	P	P	06 40 59.8	0.0
LHI	Lord Howe Isla	24.34	171	P	P	06 41 10.7	0.0
LHI				IAmb	IAmb	06 41 28.1	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	25.53	229	P	P	06 41 21.2	-0.4
ASAR	Alice Springs	25.53	229	P	P	06 41 21.6	0.0
	comp=Z,1.0nm,0.4s,baz=60,slow=9.3,SNR=26						
ASAR				pP	sP	06 41 31.1	0.0
	comp=Z,2.7nm,0.8s,baz=59,slow=9.8,SNR=13						
	comp=Z,1.0nm,0.4s						
KNRA	Kununurra	26.51	250	P	P	06 41 29.9	-0.6
KNRA				IAmb	IAmb	06 41 33.7	
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	27.14	205	P	P	06 41 36.3	+0.3
	comp=Z,1.3nm,0.4s,baz=30,slow=16,SNR=3.4						
STKA				LR	LR	06 51 19.0	
	comp=Z,223nm,18.6s,baz=42,slow=34						
	comp=Z,1.3nm,0.4s						
STKA	Stephens Creek	27.14	205	P	P	06 41 35.3	-0.7
BBOO	Buckleboo	30.52	212	P	P	06 42 05.3	-0.8
FORT	Forrest	33.95	223	P	P	06 42 35.7	-0.5
MBWA	Marble Bar	36.26	244	P	P	06 42 56.6	+0.3
PSA00	Pilbara Seismi	36.28	243	P	P	06 42 56.4	-0.1
KSRS	Korea Array	51.10	333	P	P	06 44 53.6	-1.7
	comp=Z,0.9nm,0.5s,baz=146,slow=7.2,SNR=5.4						
KSRS				pP	sP	06 45 04.5	-0.5
	comp=Z,2.1nm,0.8s,baz=145,slow=9.2,SNR=4.9						
	comp=Z,0.9nm,0.5s						
PEA0B	Petropavlovsk-	60.37	2	P	P	06 46 02.7	+1.1
PETK	Petropavlovsk-	60.37	2	P	P	06 46 01.1	-0.5
	comp=Z,3.4nm,0.9s,baz=154,slow=5.8,SNR=1.7						
PETK				pP	sP	06 46 11.0	0.0
	comp=Z,3.8nm,0.8s,baz=171,slow=10,SNR=2.6						
	comp=Z,3.4nm,0.9s						
CMAR	Chiang Mai Arr	60.55	296	P	P	06 46 05.3	+1.8
	comp=Z,1.9nm,0.4s,baz=120,slow=5.2,SNR=11						
	comp=Z,1.9nm,0.4s						
CMAR	Chiang Mai Arr	60.55	296	P	P	06 46 04.8	+1.4
CHTO	Chiang Mai	60.67	296	P	P	06 46 04.3	0.0
CHTO				IAmb	IAmb	06 46 05.8	
	comp=Z,3.6nm,0.8s						
SHL	Shillong	69.11	301	P	P	06 46 58.6	-0.8
ULN	Ulaanbaatar	69.12	328	P	P	06 46 59.3	+0.3
SONM	Songino Array	69.45	328	P	P	06 46 60.0	-1.0
SONM				IAmb	IAmb	06 47 02.8	
	comp=Z,4.3nm,1.0s						
VNDA	Vanda	70.16	178	P	P	06 47 05.4	+0.7
	comp=Z,0.9nm,0.9s,baz=328,slow=8.0,SNR=3.6						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	70.16	178	P	P	06 47 04.0	-0.7
M19K	Big River Lodg	79.53	22	P	P	06 48 00.2	+1.1
M19K				IAmb	IAmb	06 48 11.1	
	comp=Z,11nm,1.0s						
L19K	White Mountain	79.53	22	P	P	06 47 59.5	+0.4
L19K				IAmb	IAmb	06 48 10.3	
	comp=Z,7.0nm,0.9s						
TTA	Tatalina	79.60	21	P	P	06 47 59.6	+0.1
CAST	Castle Rocks	81.30	21	IAmb	IAmb	06 48 18.9	
	comp=Z,6.9nm,0.8s						
IMAR	Indian Mountai	82.29	19	P	P	06 48 13.6	-0.2
QSPA	South Pole Qui	82.55	180	P	P	06 48 15.9	+0.5
QSPA				IAmb	IAmb	06 48 16.3	
	comp=Z,4.6nm,0.7s						
DHY	Denali Highway	82.87	23	IAmb	IAmb	06 48 28.2	
	comp=Z,5.5nm,0.8s						
MK31	Makanchi Array	83.42	319	P	P	06 48 20.5	+0.4
MK31				IAmb	IAmb	06 48 21.4	
	comp=Z,3.5nm,0.9s						
MKAR	Makanchi Array	83.42	319	P	P	06 48 20.4	+0.4
	comp=Z,2.5nm,0.7s,baz=107,slow=5.4,SNR=28						
MKAR				pP	sP	06 48 30.8	+0.8
	comp=Z,2.7nm,0.8s,baz=102,slow=5.9,SNR=12						
	comp=Z,2.5nm,0.7s						
H23K	Yukon River	83.59	20	P	P	06 48 21.2	+0.7
H23K				IAmb	IAmb	06 48 31.1	
	comp=Z,4.9nm,0.9s						
MAKZ	Makanchi	83.63	319	P	P	06 48 21.4	+0.3
MAKZ				IAmb	IAmb	06 48 22.4	
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	84.28	326	P	P	06 48 23.5	-0.7
	comp=Z,1.8nm,0.5s,baz=114,slow=5.6,SNR=6.7						
ZALV				pP	pP	06 48 33.1	+1.6
	comp=Z,2.3nm,0.7s,baz=100,slow=3.3,SNR=3.3						
	comp=Z,1.8nm,0.5s						
J25K	Salcha River,	84.43	22	IAmb	IAmb	06 48 35.1	
	comp=Z,6.1nm,0.8s						
L26K	Log Cabin Wild	84.43	24	IAmb	IAmb	06 48 38.0	
	comp=Z,5.6nm,1.0s						
SCRK	Sand Creek	84.64	23	IAmb	IAmb	06 48 37.0	
	comp=Z,5.1nm,0.9s						
TOLK	Toolik Lake Re	85.18	18	IAmb	IAmb	06 48 39.0	
	comp=Z,5.1nm,0.8s						
K27K	Chicken	85.41	23	IAmb	IAmb	06 48 41.8	
	comp=Z,7.0nm,0.8s						
KDJ	Kajisay	85.65	313	P	P	06 48 31.7	0.0
KDJ				IAmb	IAmb	06 48 43.3	
	comp=Z,4.7nm,1.1s						
HYT	Haines Junctio	85.97	27	P	P	06 48 33.2	+0.4
EGAK	Eagle	86.10	23	P	P	06 48 33.1	0.0
NVAR	Mina Array Bea	92.36	52	P	P	06 49 04.6	+1.0
	comp=Z,0.6nm,0.7s,baz=249,slow=5.4,SNR=6.1						
NVAR				pP	sP	06 49 13.8	+0.4
	comp=Z,2.3nm,0.9s,baz=259,slow=5.8,SNR=11						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	96.94	28	P	P	06 49 23.6	-0.2
	comp=Z,0.4nm,0.7s,baz=269,slow=4.7,SNR=6.0						
YKA				pP	sP	06 49 33.1	-0.3
	comp=Z,0.7nm,0.7s,baz=266,slow=4.6,SNR=6.9						
	comp=Z,0.4nm,0.7s						
EDM	Edmonton	97.17	37	P	P	06 49 24.3	-0.7
PDAR	Pinedale Array	99.34	48	P	Pdif	06 49 34.8	-0.6
	comp=Z,0.3nm,0.7s,baz=242,slow=1.9,SNR=1.9						
PDAR				pP	sP	06 49 44.9	-0.2
	comp=Z,0.4nm,0.7s,baz=277,slow=2.5,SNR=3.2						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	152.68	284	PKPbc	PKPbc	06 55 50.0	-0.3
	comp=Z,2.4nm,0.6s,baz=66,slow=2.3,SNR=19						
TORD				pPKPbc	sPKPbc	06 56 00.0	-0.4
	comp=Z,1.7nm,0.7s,baz=70,slow=2.5,SNR=6.4						

IDC 05 06:55:28.0±3.8,**30°.58N×137°.59E,h0^{km},mb3.7**/4, **mbtmp3.7**/4,**Error ellipse: s-maj=325.6km s-min=25.3km az=82.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.32	184	P	P	07 04 26.8	+0.1
	0.3nm,0.3s,baz=2.4,slow=7.7,SNR=12						
	0.3nm,0.3s						
ASAR	Alice Springs	54.05	184	P	P	07 04 53.9	-0.5
	0.2nm,0.7s,baz=24,slow=9.2,SNR=1.9						
	0.2nm,0.7s						
ARCES	ARCESS Array B	68.92	340	P	P	07 06 34.9	+0.5
	0.8nm,0.4s,baz=60,slow=7.2,SNR=5.7						
	0.8nm,0.4s						
FINES	FINESS Array B	73.03	332	P	P	07 06 59.0	-0.5
	0.5nm,0.4s,baz=90,slow=6.9,SNR=5.3						
	0.5nm,0.4s						

MOS ***05*** *07:01:45.5±1.0,13°.77N×51°.69E,h10^{km},mb5.3/60, MS5.0/30,Error ellipse: s-maj=6.1km s-min=3.5km az=91.1*

IDC ***05*** *07:01:45.7±0.4,13°.73N×51°.73E,h0^{km},mb4.8/49, mbtmp4.8/50,ML5.4/1,MS4.9/74,Error ellipse: s-maj=10.4km s-min=9.5km az=59.0*

DSN ***05*** *07:01:45.7±0.6,14°.03N×51°.60E,h10^{km},mb5.8/3,ML5.5/1, Error ellipse: s-maj=13.3km s-min=5.9km az=128.0*

NEIC ***05*** *07:01:47.6,13°.74N×51°.80E,h5^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.28; $M_{\theta\theta}$1.76; $M_{\phi\phi}$-1.49; $M_{r\theta}$0.69; $M_{\theta\phi}$1.53; $M_{\phi r}$0.08; Fault plane solution: $M_0$2.35000×10^{17} NP1:ϕ_s113.89000°, δ84.59000°,λ13.75000°. NP2:ϕ_s22.56000°,δ76.31000°, λ174.43000°. Principal axes: T 2.5291, Plg14.0000°, Azm339.0000°; N -0.4195, Plg75.0000°, Azm135.0000°; P -2.1097, Plg6.0000°, Azm248.0000°;*

NEIC ***05*** *07:01:47.5±2.4,13°.77N±0°.07×51°.77E±0°.06,h10^{km}±1^{km}, mb5.3/101,Ms_20 5.1/270,Mwb5.5/41 Error ellipse: s-maj=12.3km s-min=10.3km az=198.0*

GCMT ***05*** *07:01:47.5±0.1,13°.93N±0°.01×51°.64E±0°.01,h21^{km}, MW5.6/143,Moment Tensor Solution. s126,c215; s143,c277; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.51±.04; $M_{\theta\theta}$2.50±.04; $M_{\phi\phi}$-1.99±.04; $M_{r\theta}$0.79±.08; $M_{\theta\phi}$2.18±.04; $M_{\phi r}$0.29±.08; Best double couple: $M_0$3.21700×10^{17} NP1:ϕ_s22.00000°,δ81.00000°, λ172.00000°. NP2:ϕ_s113.00000°,δ82.00000°,λ9.00000°. Principal axes: T 3.5590, Plg12.0000°, Azm338.0000°; N -0.6860, Plg78.0000°, Azm154.0000°; P -2.8750, Plg1.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

OMAN ***05*** *07:01:55.0±0.1,14°.50N×51°.63E,h73^{km}±2^{km},mb5.8/35, ml5.5/6,Mwp5.5/19 Error ellipse: s-maj=1.8km s-min=1.3km az=296.0*

SGS ***05*** *07:02:05.5,14°.28N×50°.60E,h24^{km},Ml5.3*

ISC 05 07:01:46.4±0.8,**14°.08N**±0°.03×**51°.76E**±0°.02,**h1**^{km}±4^{km}, **n789,**σ**2^{s}.29**/741,**mb5.1**/212,**MS5.1**/259,**29C-49D,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.88	131	Pn	Pn	07 02 26.2	-7.3
ABTO	Aybut	3.58	24	P	Pn	07 02 43.3	+0.1
	SNR=101						
ABTO				P	Pn	07 02 43.3	+0.1
	SNR=101						
RBK	Rabkut	4.14	34	P	Pn	07 02 51.4	+0.4
	SNR=76						
RBK				P	Pn	07 02 51.4	+0.4
	SNR=76						
RBK				S	Sn	07 03 40.8	+0.7
	SNR=18						
RBK				S	Sn	07 03 40.8	+0.7
	SNR=18						
WHFO	Wadi Hawf	4.28	27	P	Pn	07 02 53.2	+0.3
	SNR=141						
WHFO				S	Sn	07 03 40.6	-2.9
	SNR=8.1						
DMTO	DMTO	4.75	40	P	Pn	07 03 00.4	+1.2
	SNR=123						
DMTO				P	Pn	07 03 00.4	+1.2
	SNR=123						
DMTO				S	Sn	07 03 53.8	-1.1
	SNR=11						
DMTO				S	Sn	07 03 53.8	-1.1
	SNR=11						
DOK	Doka	5.06	26	P	Pn	07 03 03.8	+0.3
	SNR=41						
DOK				P	Pn	07 03 03.8	+0.3
	SNR=41						
DOK				S	Sn	07 03 59.4	-3.2
DOK				S	Sn	07 03 59.4	-3.2
SHAO	Shalim	5.41	43	P	Pn	07 03 09.8	+1.5
	SNR=20						
SHAO				P	Pn	07 03 09.8	+1.5
	SNR=20						
SHAO				S	Sn	07 04 09.8	-1.4
SHAO				S	Sn	07 04 09.8	-1.4
SHAO	Shalim	5.41	43	*i* P	Pn	07 03 08.5	+0.2
	SNR=20						
DQM	DQM	8.03	43	P	Pn	07 03 46.0	+1.7
	SNR=13						
DQM				P	Pn	07 03 46.0	+1.7
	SNR=13						
DQM				S	Sn	07 05 14.5	-1.3
	SNR=7.8						
DQM				S	Sn	07 05 14.5	-1.3
	SNR=7.8						
DJNS	Zahran al Janu	8.68	296	P	Pn	07 03 51.8	-1.8
DJNS	Zahran al Janu	8.68	296	S	Sn	07 05 12.5	-20
KNGHS	KNGHS	8.97	299	P	Pn	07 03 56.4	-1.0
MZR	Muzera	9.03	10	P	Pn	07 03 57.8	-0.2
	SNR=14						
MZR				S	Sn	07 05 35.7	-4.7
MZR	Muzera	9.03	10	*i* P	Pn	07 03 57.2	-0.7
	SNR=57						
ATD	Arta Tunnel	9.05	255	Pn	Pn	07 03 55.4	-3.0
	41nm,0.3s,baz=62,slow=7.4,SNR=48						
ATD				LR	LR	07 06 37.5	
	comp=Z,28µm,18.9s,baz=65,slow=33						
	177nm,0.9s						
ATD	Arta Tunnel	9.05	255		Pn	07 03 56.4	-2.0
ATD	Arta Tunnel	9.05	255	P	Pn	07 03 60.0	+1.6
	SNR=58						
ATD	Arta Tunnel	9.05	255	*e*P	Pn	07 04 00.7	+2.3
ATD				*e*S	Sn	07 06 02.2	+21
ATD	Arta Tunnel	9.05	255	*e*P	Pn	07 04 00.7	+2.3
ATD				*e*S	Sn	07 05 52.7	+12
MHTO	MHTO	9.07	40	P	Pn	07 03 58.3	-0.3
	SNR=39						
MHTO				S	Sn	07 05 39.5	-2.0
	SNR=12						
UMZA	Um Al Zommool	9.18	20	P	Pn	07 04 00.8	+0.7
UMZA				S	Sn	07 05 38.8	-5.2
MZWR	Madinat Zayed	9.84	11	P	Pn	07 04 08.4	-0.7
MZWR				P	Pn	07 04 08.4	-0.7
MZWR				S	Sn	07 05 55.6	-4.7
MZWR				S	Sn	07 05 55.6	-4.7
GHWR	Ruwais	9.89	6	P	Pn	07 04 08.7	-1.1
GHWR				P	Pn	07 04 08.7	-1.1
GHWR				S	Sn	07 05 57.2	-4.4
GHWR				S	Sn	07 05 57.2	-4.4
BSY	Bisya	10.05	30	P	Pn	07 04 13.0	+0.9
	SNR=13						
BSY				S	Sn	07 06 01.3	-4.3
JMDO	Jabal Madar	10.21	35	P	Pn	07 04 15.3	+1.0
	SNR=20						
JMDO				S	Sn	07 06 06.8	-2.8
	SNR=18						
ARQ	Araqi	10.26	25	P	Pn	07 04 15.1	+0.2
	SNR=17						
ARQ				S	Sn	07 06 06.6	-4.0
	SNR=5.8						
TRNA	Turayna	10.61	357	P	Pn	07 04 19.0	-0.8
TRNA				S	Sn	07 06 12.2	-7.1
ALNE	Al Ain	10.62	20	P	Pn	07 04 20.0	+0.1
	SNR=39						
ALNE				P	Pn	07 04 20.0	+0.1
	SNR=39						
ALNE				S	Sn	07 06 12.6	-6.9
	SNR=6.0						
ALNE				S	Sn	07 06 12.6	-6.9
	SNR=6.0						
ALNE	Al Ain	10.62	20	*i* P	Pn	07 04 20.2	+0.3
	SNR=9.0						
SMRA	Abu-Samra	10.65	355	P	Pn	07 04 19.4	-0.8
SMRA				S	Sn	07 06 14.7	-5.5
SMDO	Samad	10.74	33	P	Pn	07 04 22.5	+1.0
	SNR=8.2						
SMDO				P	Pn	07 04 22.5	+1.0
	SNR=8.2						
SMDO				S	Sn	07 06 17.3	-5.3
SMDO				S	Sn	07 06 17.3	-5.3
HOQ	Hoqain	10.82	28	P	Pn	07 04 23.9	+1.3
	SNR=20						
HOQ				P	Pn	07 04 23.9	+1.3
	SNR=20						
HOQ				S	Sn	07 06 22.2	-2.2
HOQ				S	Sn	07 06 22.2	-2.2
JLN	Jalan Bani Buh	10.83	41	P	Pn	07 04 23.7	+1.0
	SNR=14						
JLN				P	Pn	07 04 23.7	+1.0
	SNR=14						
JLN				S	Sn	07 06 22.9	-1.9
	SNR=7.3						
JLN				S	Sn	07 06 22.9	-1.9
	SNR=7.3						
JRN	Qarnain Island	10.86	5	P	Pn	07 04 22.3	-0.7
	SNR=13						
JRN				S	Sn	07 06 19.6	-5.7
AJN	Ajban	10.87	16	P	Pn	07 04 24.8	+1.7
	SNR=8.2						
AJN				S	Sn	07 06 18.8	-6.7
	SNR=8.5						
AJN	Ajban	10.87	16	*i* P	Pn	07 04 23.6	+0.4
	SNR=8.1						
WBK	Wadi Bani Khal	10.90	38	P	Pn	07 04 24.3	+0.5
	SNR=43						
WBK				S	Sn	07 06 21.9	-4.6
SOHO	SOHO	10.97	24	P	Pn	07 04 26.5	+1.9
SOHO	SOHO	10.97	24	*i* P	Pn	07 04 25.9	+1.2
	SNR=13						
ASUD	Al Ashush, Dub	11.02	17	P	Pn	07 04 26.3	+1.0
	SNR=64						
ASUD				P	Pn	07 04 26.3	+1.0
	SNR=64						
ASUD				S	Sn	07 06 22.9	-6.4
ASUD				S	Sn	07 06 22.9	-6.4
ASUD	Al Ashush, Dub	11.02	17	*i* P	Pn	07 04 26.0	+0.7
	SNR=116						
RAYN	Ar Rayn	11.10	329	P	Pn	07 04 25.3	-1.2
RAYN	Ar Rayn	11.10	329	Pn	Pn	07 04 25.3	-1.2
BIDO	Bidbid	11.16	32	P	Pn	07 04 27.2	-0.1
	SNR=21						
BIDO				S	Sn	07 06 30.2	-2.5
WSAR	Wadi Sarin	11.20	35	Pn	Pn	07 04 27.2	-0.6
	4.1nm,0.3s,baz=254,slow=9.5,SNR=27						
WSAR				Sn	Sn	07 06 28.0	-5.7
	20nm,0.3s,baz=210,slow=20,SNR=4.3						
WSAR				LR	LR	07 08 39.8	
	comp=Z,14µm,18.8s,baz=232,slow=36						
WSAR	Wadi Sarin	11.20	35	P	Pn	07 04 28.8	+1.0
	SNR=9.8						
WSAR				S	Sn	07 06 28.8	-4.9
FAQ	Al Faqa, Dubai	11.21	18	P	Pn	07 04 30.5	+2.5
	SNR=20						
FAQ				P	Pn	07 04 30.5	+2.5
	SNR=20						
FAQ	Al Faqa, Dubai	11.21	18	*i* P	Pn	07 04 29.3	+1.3
	SNR=30						
ASHO	Ashiyiah	11.30	20	P	Pn	07 04 29.9	+0.7
	SNR=28						
ASHO				S	Sn	07 06 30.2	-6.2
ASHO	Ashiyiah	11.30	20	*i* P	Pn	07 04 29.1	-0.1
	SNR=28						
HATD	Hatta, Dubai	11.46	20	P	Pn	07 04 34.0	+2.6
	SNR=15						
HATD				P	Pn	07 04 34.0	+2.6
	SNR=15						
HATD				S	Sn	07 06 33.8	-6.3
HATD				S	Sn	07 06 33.8	-6.3
HATD	Hatta, Dubai	11.46	20	*i* P	Pn	07 04 31.9	+0.6
	SNR=15						
NAZ	Nazwa, Dubai	11.46	18	P	Pn	07 04 32.3	+1.0
	SNR=47						
NAZ				P	Pn	07 04 32.3	+1.0
	SNR=47						
NAZ	Nazwa, Dubai	11.46	18	*i* P	Pn	07 04 31.9	+0.6
	SNR=19						
UOSS	Minazif	11.59	21	Pn	Pn	07 04 33.7	+0.6
UOSS	Minazif	11.59	21	P	Pn	07 04 34.6	+1.4
UOSS				P	Pn	07 04 34.6	+1.4
UOSS				S	Sn	07 06 36.5	-6.9
UOSS				S	Sn	07 06 36.5	-6.9
UOSS	Minazif	11.59	21	*i* P	Pn	07 04 33.2	+0.1
	SNR=16						
SHMA	Al-Shehemyia	11.74	356	P	Pn	07 04 34.8	-0.4
SHMA				S	Sn	07 06 39.5	-7.5
SAKB	Bahrain	11.89	355	P	Pn	07 04 35.3	-2.0
SAKB				S	Sn	07 06 43.8	-6.9
MSFE	Esma-Masafi	11.96	20	*i* P	Pn	07 04 37.4	-0.8
	SNR=60						
UMQ	Umm Al-Quwin	11.96	17	P	Pn	07 04 38.4	+0.2
	SNR=6.6						
UMQ				S	Sn	07 06 47.1	-5.3
UMQ	Umm Al-Quwin	11.96	17	*i* P	Pn	07 04 38.5	+0.2
	SNR=12						
MASF	Masafi	11.97	20	P	Pn	07 04 39.1	+0.7
	SNR=60						
MASF				S	Sn	07 06 46.8	-5.9
BANOM	Banah	12.53	19	P	Pn	07 04 46.3	+0.3
	SNR=34						
BANOM				S	Sn	07 07 01.0	-5.5
	SNR=5.9						
BANOM	Banah	12.53	19	*i* P	Pn	07 04 45.1	-1.0
	SNR=81						
SHME	Shamm	12.60	18	P	Pn	07 04 48.2	+1.3
	SNR=56						
SHME				S	Sn	07 07 00.6	-7.5
SHME	Shamm	12.60	18	*i* P	Pn	07 04 46.4	-0.6
	SNR=55						
AAE	Adis Abeba	13.68	250	*e*P	Pn	07 05 01.8	-0.2
AAE				*e*S	S	07 07 58.1	-0.1
AAE	Adis Abeba	13.68	250	*e*P	Pn	07 05 01.8	-0.2
AAE				*e*S	S	07 07 58.1	-0.1
FURI	Furi	13.81	250	*e*P	Pn	07 05 03.7	-0.1
FURI				*e*S	S	07 08 01.8	+0.8
FURI	Furi	13.81	250	*e*P	Pn	07 05 03.7	-0.1
FURI				*e*S	S	07 08 01.8	+0.8
KSLA	Kassala	14.88	277	*i* P	P	07 05 21.6	-2.5
KSLA				*i* S	S	07 08 26.8	+4.3
MQOL	MQOL	15.48	297	*i* P	P	07 05 28.1	-2.7
MQOL				*i* S	S	07 08 44.0	+9.3
JAWL	J.Aulia	18.67	276	*i* P	Pn	07 06 08.8	+2.4
JAWL				*i* S	S	07 09 56.2	+16
MSEY	Mahe Island	18.99	169	P	P	07 06 03.2	-6.5
MSEY				pmax	pmax		
	comp=Z,139nm,0.9s						
MSEY	Mahe Island	18.99	169	P	P	07 06 03.2	-6.5
MSEY				IAmb	IAmb	07 06 16.1	
	comp=Z,139nm,0.9s						
LODK	Lodwar	19.34	238	P	P	07 06 10.1	-3.4
LODK	Lodwar	19.34	238	P	Pn	07 06 14.4	-0.1
	SNR=53						
LODK	Lodwar	19.34	238	*e*P	Pn	07 06 12.5	-2.0
LODK				*e*S	S	07 09 55.4	+2.0
LODK	Lodwar	19.34	238	*e*P	Pn	07 06 12.5	-2.0
LODK				*e*S	S	07 10 02.7	+9.4
KMBO	Kilima Mbogo	20.85	225	P	P	07 06 27.4	-2.8
	comp=Z,44nm,0.9s,baz=41,slow=13,SNR=44						
KMBO				LR	LR	07 14 25.6	
	comp=Z,5µm,19.0s,baz=44,slow=37						
	comp=Z,44nm,0.9s						
KMBO	Kilima Mbogo	20.85	225	*d i*P	P	07 06 27.9	-2.3
KMBO	Kilima Mbogo	20.85	225	P	P	07 06 26.2	-4.0
KMBO	Kilima Mbogo	20.85	225	P	P	07 06 27.9	-2.3
KMBO	Kilima Mbogo	20.85	225	*e*P	P	07 06 26.1	-4.1
KMBO				*e*S	S	07 10 20.6	-3.3
KMBO	Kilima Mbogo	20.85	225	*e*P	P	07 06 26.1	-4.1
KMBO				*e*S	S	07 10 20.6	-3.3
KMBO	Kilima Mbogo	20.85	225	*i* P	P	07 06 27.1	-3.0
	SNR=37						
KIBK	Kibwezi	21.23	221	P	P	07 06 30.4	-3.7
KIBK	Kibwezi	21.23	221	P	P	07 06 31.5	-2.7
	SNR=13						
MNCY	Minicoy	21.65	103	*e*P	P	07 06 40.9	+2.3
MNCY				IAmb	IAmb	07 06 48.7	
	comp=Z,520nm,1.8s						
MNCI	Minicoy	21.67	103	P	P	07 06 36.7	-2.1
EIL	Elat	21.95	318	P	P	07 06 44.0	+2.3
	comp=Z,22nm,0.9s,baz=152,slow=8.8,SNR=12						
EIL				LR	LR	07 14 28.4	
	comp=Z,10µm,18.4s,baz=142,slow=34						
	comp=Z,22nm,0.9s						
HRA	Herat	22.34	23	P	P	07 06 47.4	+1.4
HRA				IAmb	IAmb	07 06 56.1	
	comp=Z,234nm,1.2s						
ASF	Jabal al Asfar	22.56	325	P	P	07 06 51.2	+2.9
	comp=Z,16nm,0.7s,baz=132,slow=6.5,SNR=18						
ASF				LR	LR	07 16 22.8	
	comp=Z,9µm,19.4s,baz=152,slow=38						
	comp=Z,16nm,0.7s						
GHAJ	Ghor Haditha	22.69	322	P	P	07 06 51.9	+2.4
MMAI	Mount Meron Ar	24.02	324	LR	LR	07 17 00.2	
	comp=Z,8µm,19.8s,baz=304,slow=38						
SHBL	Chebaa	24.08	326	*e*P	P	07 07 09.6	+5.9
PCHI	Peechi	24.28	96	*e*P	P	07 07 07.3	+1.8
PCHI				*e*S	S	07 11 26.2	+0.7
GEYT	Alibeck	24.42	12	P	P	07 07 07.8	+1.1
	comp=Z,39nm,0.9s,baz=214,slow=16,SNR=36						
GEYT				LR	LR	07 17 46.5	
	comp=Z,4µm,18.2s,baz=208,slow=39						

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      comp=Z,39nm,0.9s
GEYT  Alibeck           24.42  12   P        P         07 07 07.7 +1.1
GEYT                                IAmb     IAmb      07 07 41.5
      comp=Z,156nm,1.4s
GYA0  ALIBECK ARRAY     24.42  12   P        P         07 07 07.2 +0.5
GYA0B ALIBECK ARRAY     24.42  12   P        P         07 07 07.8 +1.2
BHL   Bhannes           24.55 326  eP        P         07 07 15.2 +7.2
GEVA  Gevas             25.34 344   P        P         07 07 18.2 +3.1
MBAR  Mbarara           25.41 237   P        P         07 07 14.4 -1.6
      comp=Z,28nm,0.2s,baz=43,slow=10,SNR=8.4
      comp=Z,28nm,0.2s
MBAR  Mbarara           25.41 237d iP        P         07 07 15.0 -1.0
MBAR                                pmax     pmax
      comp=Z,24nm,1.0s
MBAR  Mbarara           25.41 237   P        P         07 07 13.9 -2.1
MBAR  Mbarara           25.41 237   P        P         07 07 14.6 -1.5
MBAR                                P        P         07 07 14.6 -1.5
MBAR  Mbarara           25.41 237⇓ eP        P         07 07 16.5 +0.4
MBAR                               eS        S         07 11 45.9 +1.8
MBAR  Mbarara           25.41 237⇓ eP        P         07 07 16.5 +0.4
MBAR                               eS        S         07 11 45.9 +1.8
KBL   Kabul             25.68  34   P        P         07 07 20.7 +2.4
KBL                                 pmax     pmax
      comp=Z,100nm,1.1s
KBL   Kabul             25.68  34   P        P         07 07 20.7 +2.4
KBL                                 IAmb     IAmb      07 07 30.6
      comp=Z,100nm,1.1s
KBL   Kabul             25.68  34   P        P         07 07 19.1 +0.8
      SNR=71
GURO  Guroymak-BITLI    25.85 342   P        P         07 07 23.6 +3.8
GURO                                IAmb     IAmb      07 07 38.4
      comp=Z,120nm,1.5s
BHPL  Bhopal            25.93  66  eP        P         07 07 22.5 +1.9
BHPL                                IAmb     IAmb      07 07 30.8
      comp=Z,266nm,1.6s
HYBB  Hyderabad (bro    26.00  79  eP        P         07 07 21.0 -0.2
HYBB                               eS        S         07 11 52.6 -0.4
HYBB                                IVMs_BB  IVMs_BB   07 16 46.7
      comp=Z,1µm,13.0s
HYB   Hyderabad         26.00  79  eP        P         07 07 22.0 +0.8
HYB                                 IAMs_20  IAMs_20   07 15 33.6
      comp=Z,7µm,20.8s
CSS   Mathiatis         26.62 325   P        P         07 07 30.1 +3.5
CSS                                 IAMs_20  IAMs_20   07 18 14.1
      comp=Z,7µm,20.0s
GNI   Garni             26.69 348   P        P         07 07 31.7 +4.3
      comp=Z,60nm,0.7s,baz=323,slow=5.2,SNR=10
GNI                                 LR       LR        07 19 17.0
      comp=Z,7µm,18.4s,baz=174,slow=39
      comp=Z,60nm,0.7s
GNI   Garni             26.69 348  eP        P         07 07 30.4 +3.0
GNI                                 pmax     pmax
      comp=Z,67nm,1.1s
GNI   Garni             26.69 348   P        P         07 07 30.3 +3.0
SBV   Sambava           27.42 184   P        P         07 07 35.0 +1.1
KARS  Kars              27.52 346   P        P         07 07 38.0 +3.2
KARS                                pmax     pmax
      comp=Z,576nm,1.3s
KARS  Kars              27.52 346   P        P         07 07 38.0 +3.2
NIL   Nilore            27.57  41   P        P         07 07 37.0 +1.8
NIL                                 pmax     pmax
      comp=Z,51nm,1.1s
NIL   Nilore            27.57  41   P        P         07 07 37.0 +1.8
NIL                                 IAmb     IAmb      07 08 28.3
      comp=Z,51nm,1.1s
AKH   Akhalkalaki       28.16 347  ⇓P        P         07 07 44.5 +3.9
JBP   Jabalpur          28.19  67  ex        x         07 07 44.5
JBP                                eP        P         07 07 44.5 +3.7
JBP                                 IAmb     IAmb      07 07 49.7
      comp=Z,26nm,1.0s
JBP                                eS        S         07 12 27.1 -0.4
BNN   Bunyan            28.40 333   P        P         07 07 43.3 +0.7
BATM  Batumi            28.79 344  ⇑P        P         07 07 49.1 +3.2
SMLA  Simla             28.84  50  eP        P         07 07 49.9 +3.3
SMLA                                IAmb     IAmb      07 08 03.5
      comp=Z,38nm,0.4s
CHGR  Chuyangaron       28.92  29   P        P         07 07 49.5 +2.3
MAK   Makhachkala       29.01 354  eP        P         07 07 44.2 -3.7
MAK                                ePPP      PPP       07 08 47.1
MAK                                eS        S         07 12 35.1 -4.9
MAK                                 pmax     pmax
      comp=Z,448nm,1.5s
MAK                                 MLR      MLR
      comp=Z,4µm,14.0s
PALK  Pallekele         29.22 100   P        P         07 07 49.9 -0.2
      comp=Z,4.6nm,0.6s,baz=47,slow=11,SNR=4.2
PALK                                LR       LR        07 17 13.7
      comp=Z,2µm,20.3s,baz=26,slow=32
      comp=Z,4.6nm,0.6s
PALK  Pallekele         29.22 100⇑ iP        P         07 07 49.7 -0.4
PALK                                pmax     pmax
      comp=Z,11nm,0.9s
ONI   Oni               29.30 347   P        P         07 07 52.4 +1.9
ONI                                 pmax     pmax
      comp=Z,120nm,1.7s
ONI   Oni               29.30 347   P        P         07 07 52.4 +1.9
ONI                                 IAmb     IAmb      07 08 30.6
      comp=Z,120nm,1.7s
ZEI   Tsey              29.40 348  eP        P         07 07 54.8 +3.2
ZEI                                 pmax     pmax
      comp=Z,41nm,1.3s
GROC  Groznyy           29.47 351  eP        P         07 07 50.2 -1.8
GROC                               e                   07 08 45.9
GROC                               eS        S         07 12 52.3 +5.1
GROC                                pmax     pmax
      comp=Z,139nm,1.3s
GROC                                MLR      MLR
      comp=Z,933nm,11.0s
DGAR  Diego Garcia      29.63 135⇑ iP        P         07 07 52.2 -1.4
DGAR                                pmax     pmax
      comp=Z,139nm,1.3s
DGAR  Diego Garcia      29.63 135   P        P         07 07 51.8 -1.8
NEY   Neytrino          30.09 347  eP        P         07 08 00.5 +2.8
BR131 Keskin Array S    30.10 331  eP        P         07 08 00.9 +3.1
BRTR  Keskin Array B    30.10 331   P        P         07 08 01.5 +3.7
      comp=Z,6.0nm,1.0s,baz=150,slow=12,SNR=6.9
BRTR                                LR       LR        07 22 51.6
      comp=Z,4µm,18.2s,baz=154,slow=42
      comp=Z,6.0nm,1.0s
BRTR  Keskin Array B    30.10 331   P        P         07 07 58.9 +1.1
ISP   Isparta           30.25 325⇑ iP        P         07 08 01.5 +2.4
ISP                                 pmax     pmax
      comp=Z,14nm,0.8s
ISP   Isparta           30.25 325   IAMs_20  IAMs_20   07 20 33.8
      comp=Z,4µm,19.0s
KBZ   Khabaz            30.51 347   P        P         07 08 05.0 +3.9
      comp=Z,16nm,0.9s,baz=174,slow=5.0,SNR=25
KBZ                                 LR       LR        07 22 56.6
      comp=Z,10µm,18.4s,baz=146,slow=41
      comp=Z,16nm,0.9s
KBZ   Khabaz            30.51 347⇑ iP        P         07 08 04.4 +3.3
KBZ                                 pmax     pmax
      comp=Z,19nm,0.9s
SHA1  Shidzhatmaz       30.57 347d iP        P         07 08 05.7 +3.7
ANTO  Ankara            30.61 331   P        P         07 08 04.0 +1.8
ANTO                                pmax     pmax
      comp=Z,40nm,0.8s
ANTO                                MLR      MLR
      comp=Z,5µm,21.0s
ANTO  Ankara            30.61 331   P        P         07 08 04.0 +1.8
ANTO                                IAmb     IAmb      07 08 18.5
      comp=Z,40nm,0.8s
ANTO                                IAMs_20  IAMs_20   07 20 51.2
      comp=Z,5µm,21.0s
KIV   Kislovodsk        30.77 347  ⇑P        P         07 08 07.3 +3.7
KIV   Kislovodsk        30.77 347  eP        P         07 08 06.4 +2.8
KIV                                ePPP      PPP       07 09 16.6
KIV                                eS        S         07 13 12.7 +4.9
KIV                                 pmax     pmax
      comp=Z,51nm,1.1s
KIV                                 pmax     pmax
      comp=Z,19nm,3.3s
KIV                                 MLR      MLR
      comp=Z,5µm,15.0s
KIV   Kislovodsk        30.77 347   P        P         07 08 06.6 +3.0
KIV   Kislovodsk        30.77 347  i P       P         07 08 01.9 -1.6
      SNR=6.7
BTK   Batken            30.81  29   P        P         07 08 06.2 +2.2
BTK                                 pmax     pmax
      comp=Z,91nm,1.2s
BTK   Batken            30.81  29   P        P         07 08 06.2 +2.2
BTK                                 IAmb     IAmb      07 08 16.2
      comp=Z,91nm,1.2s
DIKM  Dikmen            30.98 336  ⇓P        P         07 08 08.6 +3.2
ILGA  Ilgaz             31.14 333   P        P         07 08 10.6 +3.6
SOC   Sochi             31.16 343  eP        P         07 08 03.6 -3.3
SOC                                ePPP      PPP       07 09 19.2
SOC                                eS        S         07 13 09.8 -4.0
SOC                                 MLR      MLR
      comp=Z,2µm,14.0s
GOF   Gofitskoye        31.75 348⇑ eP        P         07 08 19.1 +7.0
BZK   Bozkurt           31.76 334  ⇑P        P         07 08 14.8 +2.6
BORA  Eskisehir         31.78 328   P        P         07 08 14.2 +1.7
MANT  Manisa            31.82 324   P        P         07 08 14.6 +1.6
MANT                                IAmb     IAmb      07 08 32.8
      comp=Z,31nm,1.0s
MDUB  Mudurnu           31.85 329   P        P         07 08 15.6 +2.4
IDI   Anoyia            32.10 316   P        P         07 08 18.4 +3.1
      comp=Z,11nm,0.7s,baz=153,slow=9.9,SNR=5.2
IDI                                 LR       LR        07 23 30.6
      comp=Z,2µm,20.1s,baz=114,slow=40
      comp=Z,11nm,0.7s
IDI   Anoyia            32.10 316   IAmb     IAmb      07 08 52.7
      comp=Z,66nm,1.4s
IUG   Iuzhnay           32.13  26  eP        P         07 08 17.8 +2.2
IUG   Iuzhnay           32.13  26  eP        P         07 08 17.8 +2.2
      baz=26
KOLN  Koldanda          32.60  60  eP        P         07 08 25.1 +5.0
OPO   Ambohidratompo    32.75 188   P        P         07 08 19.5 -1.8
      comp=Z,8.5nm,0.8s,baz=3.0,slow=7.3,SNR=6.6
OPO                                 LR       LR        07 21 14.9
      comp=Z,2µm,18.2s,baz=178,slow=36
      comp=Z,8.5nm,0.8s
DANN  Dangsing          32.92  59  eP        P         07 08 27.1 +4.2
ANN   Anapa             32.95 341  eP        P         07 08 23.6 +1.0
ANN                                e*PP                07 08 26.8
ANN                                e                   07 09 33.5
ANN                                eS        S         07 13 45.4 +3.8
ANN                                eSS       SnSn      07 15 46.1 +7.6
ANN                                 pmax     pmax
      comp=Z,19nm,1.0s
KSH   Kashi             33.10  36   P        P         07 08 23.2 -1.0
KSH                                 pP                 07 08 29.5
KSH                                 sP                 07 08 32.6
KSH                                 PcP      PcP       07 11 08.8 +1.2
KSH                                 S        S         07 13 44.1 -0.3
KSH                                 ScS      ScS       07 18 51.2 -2.5
KSH                                 pmax     pmax
      comp=Z,13nm,1.0s
KSH                                 LR       LR
      comp=Z,2µm,22.8s
KSH                                 LR       LR
      comp=Z,1µm,23.5s
KSH                                 LR       LR
      comp=Z,2µm,25.1s
KK31  Karatay Array     33.12  26   P        P         07 08 26.9 +2.7
KK31  Karatay Array     33.12  26   P        P         07 08 26.8 +2.7
KKAR  Karatay Array     33.12  26   P        P         07 08 26.5 +2.3
KKAR  Karatay Array     33.12  26   P        P         07 08 26.4 +2.3
ABPO  Ambohimpanom      33.19 188   IAMs_20  IAMs_20   07 21 12.0
      comp=Z,3µm,18.0s
DZA   Taraz             33.30  27  eP        P         07 08 27.8 +2.1
DZA   Taraz             33.30  27  eP        P         07 08 27.9 +2.1
      baz=26
GKN   Gorkha            33.55  60  eP        P         07 08 32.7 +4.4
      comp=Z,478nm,1.2s
BOK   Bokaro            33.62  68  eP        P         07 08 31.3 +2.5
BOK                                 IAmb     IAmb      07 08 35.5
      comp=Z,30nm,1.1s
AML   Almayashu         33.79  30   P        P         07 08 34.6 +4.2
      SNR=10
AML   Almayashu         33.79  30   P        P         07 08 34.4 +3.9
AML   Almayashu         33.79  30  i P       P         07 08 29.3 -1.2
      SNR=8.1
DMN   Daman             33.83  61  eP        P         07 08 34.9 +4.1
      comp=Z,278nm,1.1s
KKN   Kakani            34.03  61  eP        P         07 08 36.9 +4.4
      comp=Z,402nm,1.0s
PKIN  Phulchoki         34.07  61  eP        P         07 08 38.0 +5.1
      comp=Z,109nm,0.6s
PKI   Pulchoki          34.08  61  eP        P         07 08 37.1 +4.0
      comp=Z,127nm,0.7s
UCH   Uchtor            34.27  31   P        P         07 08 38.0 +3.4
      SNR=16
AAK   Ala-Archa         34.56  30   P        P         07 08 41.7 +4.8
      SNR=11
AAK   Ala-Archa         34.56  30   P        P         07 08 40.6 +3.7
      comp=Z,6.4nm,0.6s,baz=233,slow=7.7,SNR=21
      comp=Z,6.4nm,0.6s
AAK   Ala-Archa         34.56  30c iP        P         07 08 41.0 +4.1
AAK                                 pmax     pmax
      comp=Z,25nm,1.3s
AAK   Ala-Archa         34.56  30   P        P         07 08 39.3 +2.4
AAK                                 IAmb     IAmb      07 08 52.4
      comp=Z,47nm,1.1s
AAK   Ala-Archa         34.56  30   P        P         07 08 41.4 +4.5
AAK   Ala-Archa         34.56  30  i P       P         07 08 36.7 -0.2
      SNR=12
GUN   Gumba             34.57  61  eP        P         07 08 40.8 +3.4
      comp=Z,555nm,1.0s
JIRN  Jiri              34.77  62  eP        P         07 08 42.6 +3.5
KBK   Karagaybulak      34.80  31   P        P         07 08 43.7 +4.7
      SNR=9.3
ALN   Alexandroupoli    34.88 325   P        P         07 08 41.3 +1.9
ALN                                 pmax     pmax
      comp=Z,47nm,1.3s
ALN   Alexandroupoli    34.88 325   P        P         07 08 41.3 +1.9
ALN                                 IAmb     IAmb      07 08 53.8
      comp=Z,47nm,1.3s
RAMN  Ramite            34.93  63  eP        P         07 08 44.2 +3.8
      comp=Z,40nm,0.5s
CHMS  Chumysh           34.96  30   P        P         07 08 42.7 +2.5
ULHL  Ulahol            35.16  32   P        P         07 08 46.0 +4.0
      SNR=7.1
BOOM  Boomskoye usch    35.17  32   P        P         07 08 43.1 +0.9
BOOM                                pmax     pmax
      comp=Z,91nm,1.4s
BOOM  Boomskoye usch    35.17  32   P        P         07 08 43.1 +0.9
BOOM                                IAmb     IAmb      07 08 54.4
      comp=Z,91nm,1.4s
SGDS  Sogindy           35.24  29  eP        P         07 08 44.5 +1.9
SGDS                                pmax     pmax
      comp=Z,18nm,1.7s
SGDS  Sogindy           35.24  29  eP        P         07 08 44.6 +1.9
      comp=Z,18nm,1.7s,baz=29
TKM2  Tokmak 2          35.32  31   P        P         07 08 49.6 +6.1
      SNR=6.0
ODAN  Odare             35.60  63  eP        P         07 08 49.0 +2.9
      comp=Z,67nm,0.8s
AB31  Akbulak array     35.72   9  i P       P         07 08 46.7 +0.1
ABKAR Akbulak array     35.72   9   P        P         07 08 47.7 +1.1
ABKAR Akbulak array     35.72   9   P        P         07 08 48.1 +1.6
TAPN  Taplejung         35.99  63  eP        P         07 08 52.0 +2.4
      comp=Z,300nm,1.2s
TNSS  Tian-Shan         36.08  32  eP        P         07 08 53.0 +2.7
TNSS  Tian-Shan         36.08  32  eP        P         07 08 53.0 +2.7
      baz=32
VOI   Vohitsoka         36.09 188   P        P         07 08 50.8 +0.6
AAA   Alma-Ata          36.19  32  eP        P         07 08 52.8 +2.0
AAA   Alma-Ata          36.19  32  eP        P         07 08 52.8 +2.0
      baz=32
BTLS  Baital            36.20  27  i P       P         07 08 52.3 +1.6
BTLS                                pmax     pmax
      comp=Z,20nm,1.5s
BTLS  Baital            36.20  27  i P       P         07 08 52.3 +1.6
      comp=Z,20nm,1.5s,baz=27
MDOK  Medeo             36.23  32  i P       P         07 08 53.1 +1.9
MDOK                               eS        S         07 14 35.6 +3.1
MDOK  Medeo             36.23  32  i P       P         07 08 53.2 +1.9
      baz=32
MDOK                               eS        S         07 14 35.6 +3.1
      baz=32
KUU   Kurty             36.40  30  i P       P         07 08 54.6 +2.1
KUU   Kurty             36.40  30  i P       P         07 08 54.6 +2.1
      baz=30
RAZG  Razgrad           36.49 329  ⇓P        P         07 08 55.5 +2.2
SZH   Strazhica         36.57 328   P        P         07 08 56.8 +2.8
AKTO  Aktyubinsk        36.62   7   P        P         07 08 57.3 +3.0
      comp=Z,43nm,1.1s,baz=190,slow=8.2,SNR=36
AKTO                                LR       LR        07 26 51.1
      comp=Z,1µm,18.3s,baz=170,slow=41
      comp=Z,43nm,1.1s
HARR  Harsova           36.62 331  ⇑P        P         07 08 55.7 +1.3
MMB   Musomiste         36.64 324   P        P         07 09 04.5  +10
CHKK  Chushkaly         36.69  31  eP        P         07 08 57.5 +2.5
CHKK  Chushkaly         36.69  31  eP        P         07 08 57.5 +2.5
      baz=31
SATY  Saty              36.86  33  eP        P         07 08 58.5 +1.9
SATY                                pmax     pmax
      comp=Z,31nm,1.3s
SATY  Saty              36.86  33  eP        P         07 08 58.5 +1.9
      comp=Z,31nm,1.3s,baz=33
ZHN   Zhinishke         36.95  33  eP        P         07 08 59.7 +2.3
ZHN   Zhinishke         36.95  33  eP        P         07 08 59.8 +2.3
      baz=33
KKB   Krupnik           37.19 324   P        P         07 09 07.4 +8.1
UZB   Uzynbulak         37.25  34  eP        P         07 09 01.5 +1.6
UZB                                 pmax     pmax
      comp=Z,24nm,1.5s
UZB   Uzynbulak         37.25  34  eP        P         07 09 01.6 +1.6
      comp=Z,24nm,1.5s,baz=33
KPKS  Kokpek            37.29  33  eP        P         07 09 02.0 +1.8
KPKS  Kokpek            37.29  33  eP        P         07 09 02.1 +1.8
      baz=33
LSZ   Lusaka            37.34 220   P        P         07 08 58.4 -2.5
LSZ                                 pmax     pmax
      comp=Z,20nm,1.0s
LSZ                                 MLR      MLR
      comp=Z,5µm,20.0s
LSZ   Lusaka            37.34 220   P        P         07 08 58.4 -2.5
FNA   Florina           37.54 321   P        P         07 09 03.2 +0.9
FNA                                 pmax     pmax
      comp=Z,31nm,0.9s
FNA   Florina           37.54 321   P        P         07 09 03.2 +0.9
FNA                                 IAmb     IAmb      07 09 20.5
      comp=Z,31nm,0.9s
COPA  Copaceanca        37.55 328  ⇓P        P         07 09 04.4 +2.2
VTS   Vitosha           37.59 325  ⇓P        P         07 09 04.8 +2.0
VTS   Vitosha           37.59 325   P        P         07 09 08.7 +5.9
ISR   Istrita           37.60 330  ⇑P        P         07 09 05.4 +2.6
PDGK  Podgornoye        37.63  34   P        P         07 09 04.9 +1.8
KBN   Korca             37.81 320   P        P         07 09 05.0 +0.4
KBN                                 pmax     pmax
      comp=Z,57nm,0.9s
KBN   Korca             37.81 320   P        P         07 09 05.0 +0.4
KBN                                 IAmb     IAmb      07 09 27.4
      comp=Z,57nm,0.9s
VRH   Novokhopyorsk     37.91 350  eP        P         07 09 06.4 +1.3
VRH                                e                   07 10 31.2
VRH                                 pmax     pmax
      comp=Z,110nm,1.0s
VRH                                 MLR      MLR
      comp=Z,5µm,18.0s
MILM  Milestii Mici     37.95 334  eP        P         07 09 07.0 +1.4
      comp=Z,480nm,6.8s
MILM  Milestii Mici     37.95 334  ePP       PP        07 10 35.0 +2.8
MILM  Milestii Mici     37.95 334  eP        P         07 09 07.0 +1.4
MILM                               e                   07 10 35.0
MILM                               ePPP      PPP       07 11 04.0
MILM                               eS        S         07 15 00.0 +1.6
MILM                                pmax     pmax
      comp=Z,500nm,6.8s
MILM                                smax     smax
      comp=E,800nm,6.7s
MILM                                MLR      MLR
      comp=Z,2µm,17.0s
KIS   Kishinev          38.01 334  eP        P         07 09 08.0 +1.9
KIS   Kishinev          38.01 334  ePP       PP        07 10 39.0 +6.1
KIS   Kishinev          38.01 334  eP        P         07 09 08.0 +1.9
KIS                                e                   07 10 39.0
KIS                                ePPP      PPP       07 11 04.0
KIS                                eS        S         07 15 02.0 +2.7
KIS                                 MLR      MLR
      comp=Z,700nm,15.0s
PLOR  Plostina          38.09 331  ⇑P        P         07 09 09.7 +2.9
OTUK  Ortayu            38.09  22   P        P         07 09 09.0 +2.1
VORD  Divnogorie        38.15 347  eP        P         07 09 09.4 +2.2
VORD                               e                   07 10 36.5
VORD                                pmax     pmax
      comp=Z,60nm,1.1s
MLR   Muntele Rosu      38.16 330  ⇑P        P         07 09 10.6 +3.1
MLR   Muntele Rosu      38.16 330   P        P         07 09 10.5 +2.9
      comp=Z,6.0nm,0.8s,baz=134,slow=2.3,SNR=6.0
MLR                                 LR       LR        07 26 53.4
      comp=Z,3µm,18.9s,baz=153,slow=39
      comp=Z,6.0nm,0.8s
MLR   Muntele Rosu      38.16 330   P        P         07 09 09.7 +2.1
MLR                                 pmax     pmax
      comp=Z,23nm,1.1s
MLR                                 MLR      MLR
      comp=Z,3µm,18.0s
MLR   Muntele Rosu      38.16 330   P        P         07 09 09.7 +2.1
MLR                                 IAMs_20  IAMs_20   07 26 43.0
      comp=Z,3µm,18.0s
TDK   Taldyqorghan      38.22  31  eP        P         07 09 09.5 +1.6
TDK   Taldyqorghan      38.22  31  eP        P         07 09 09.6 +1.6
      baz=31
COVR  Voineasa-Covas    38.30 331  ⇓P        P         07 09 10.9 +2.3
BELG  Belogornoye       38.36 356   P        P         07 09 10.6 +1.7
      comp=Z,65nm,0.9s,baz=78,slow=0.8,SNR=11
BELG                                PP       PP        07 10 37.2 +0.6
      comp=Z,170nm,0.9s,baz=182,slow=4.4,SNR=3.6
BELG                                LR       LR        07 29 50.7
      comp=Z,3µm,18.1s,baz=170,slow=44
      comp=Z,65nm,0.9s
BELG  Belogornoye       38.36 356d iP        P         07 09 10.5 +1.5
BELG                                pmax     pmax
      comp=Z,12nm,0.8s
VSR   Storozhevoye      38.41 347  eP        P         07 09 10.6 +1.2
VSR                                e                   07 10 37.9
VSR                                 pmax     pmax
      comp=Z,120nm,1.2s
VSR                                 MLR      MLR
      comp=Z,4µm,15.0s
VOIR                    38.56 329  ⇓P        P         07 09 12.2 +1.3
TESR  Tescani           38.59 332  ⇑P        P         07 09 12.9 +1.9
ARR   Arges             38.72 329  ⇓P        P         07 09 13.2 +1.0
DOPR  Dopca             38.77 330  ⇓P        P         07 09 13.7 +1.0
VORR  Voronezh          38.83 348  eP        P         07 09 14.6 +1.6
VORR                               e                   07 10 41.6
VORR                                pmax     pmax
      comp=Z,50nm,0.4s
SORM  Soroca            39.10 335  ⇑P        P         07 09 16.8 +1.5
SHL   Shillong          39.30  67   P        P         07 09 16.8 -0.7
SHL                                 pmax     pmax
      comp=Z,168nm,1.5s
SHL   Shillong          39.30  67   P        P         07 09 16.8 -0.7
SHL                                 IAmb     IAmb      07 09 26.8
      comp=Z,168nm,1.5s
SHL   Shillong          39.30  67  eP        P         07 09 21.5 +4.0
LSA   Lhasa             39.50  60   P        P         07 09 20.8 +1.3
HERR  Herculane         39.52 327  ⇓P        P         07 09 20.7 +1.8
GZR   Gura Zlata        39.68 328  ⇓P        P         07 09 22.2 +2.0
LPSR  Galich'ya Gora    39.77 348  eP        P         07 09 22.5 +1.7
LPSR                                pmax     pmax
      comp=Z,90nm,1.2s
LPSR                                MLR      MLR
      comp=Z,3µm,15.0s
MDVR  Moldovita         39.84 326  ⇑P        P         07 09 22.3 +0.8
BURAR Bucovina Array    40.06 332  ⇓P        P         07 09 25.3 +1.9
BURAR Bucovina Array    40.06 332   P        P         07 09 25.6 +2.1
ARCR  ARCALIA           40.08 331  ⇑P        P         07 09 24.7 +1.3
BUR08 Bucovina Ar. S    40.09 332   P        P         07 09 25.6 +1.9
DIVS  Divibare          40.36 324   P        P         07 09 27.0 +1.1
BZS   Buzias            40.43 327  ⇓P        P         07 09 28.1 +1.7
VAE   Valguarnera       40.52 312   LR       LR        07 26 32.7
      comp=Z,780nm,19.3s,baz=135,slow=36
DRGR                    40.67 329  ⇓P        P         07 09 29.6 +1.2
CUC   Castrocucco       40.69 316   P        P         07 09 30.1 +1.4
AKASG Malin Array Be    40.84 338   P        P         07 09 30.6 +0.9
      comp=Z,7.4nm,0.8s,baz=140,slow=7.2,SNR=21
AKASG                               PP       PnPn      07 11 09.1 +1.2
      comp=Z,8.4nm,0.7s,baz=134,slow=9.5,SNR=5.1
AKASG                               LR       LR        07 30 15.3
      comp=Z,2µm,18.2s,baz=140,slow=42
      comp=Z,7.4nm,0.8s
AKASG Malin Array Be    40.84 338   P        P         07 09 30.3 +0.6
AKBB  Malin Array Si    40.84 338   P        P         07 09 30.2 +0.5
AKBB                                pmax     pmax
      comp=Z,49nm,1.1s
AKBB  Malin Array Si    40.84 338   P        P         07 09 30.2 +0.5
AKBB                                IAmb     IAmb      07 09 42.9
      comp=Z,49nm,1.1s
SIRR  Siria             40.84 328  ⇑P        P         07 09 31.3 +1.5
BLWY  Bulawayo          40.92 214  i P       P         07 09 28.8 -2.1
BLWY  Bulawayo          40.92 214  i P       P         07 09 28.8 -2.1
MATP  Matopo            41.21 214   LR       LR        07 27 57.9
      comp=Z,2µm,18.1s,baz=57,slow=38
MATP  Matopo            41.21 214  i P       P         07 09 30.8 -2.4
MATP  Matopo            41.21 214  i P       P         07 09 30.8 -2.4
MAKZ  Makanchi          41.27  32   P        P         07 09 33.7 +0.3
MK31  Makanchi Array    41.42  32⇓ iP        P         07 09 36.2 +1.6
MK31  Makanchi Array    41.42  32   P        P         07 09 36.7 +2.1
MK31                                IAmb     IAmb      07 09 45.4
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           comp=Z,79nm,1.3s
MKAR  Makanchi Array    41.42  32   P         P          07 09 36.5 +1.9
           comp=Z,8.0nm,0.5s,baz=219,slow=8.0,SNR=25
MKAR                                LR        LR         07 29 11.0
           comp=Z,1µm,18.3s,baz=237,slow=39
           comp=Z,8.0nm,0.5s
MKAR  Makanchi Array    41.42  32   P         P          07 09 35.9 +1.3
MKAR  Makanchi Array    41.42  32   P         P          07 09 35.9 +1.3
CLTB  Caltabellotta     41.43 312   IAMs_20   IAMs_20    07 29 45.3
           comp=Z,3µm,20.0s
BRVK  Borovoye          41.58  17⇑ iP         P          07 09 38.8 +3.1
BRVK                                pmax      pmax
           comp=Z,37nm,1.7s
BRVK  Borovoye          41.58  17   P         P          07 09 38.0 +2.2
BRVK  Borovoye          41.58  17   P         P          07 09 38.3 +2.6
BRVK                                P         P          07 09 38.3 +2.6
BVAR  Borovoye Array    41.58  17   P         P          07 09 39.2 +3.5
           comp=Z,2.7nm,0.7s
           comp=Z,2.7nm,0.7s
MSNA  Messina           42.00 211  i P        P          07 09 37.6  -2.0
MSNA  Messina           42.00 211  i P        P          07 09 37.6  -2.0
UZH   Uzhgorod          42.15 331  eP         P          07 09 39.2  -1.3
UZH                                e                     07 09 46.6
UZH                                e                     07 11 30.8
UZH                                eS         S          07 15 58.2  -3.0
UZH                                 MLR       MLR
           comp=N,470nm,18.0s
UZH                                 MLR       MLR
           comp=E,400nm,18.0s
UZH                                 MLR       MLR
           comp=Z,180nm,18.0s
LVV   L'vov             42.22 333  eP         P          07 09 41.8 +0.7
LVV                                e                     07 11 26.7
LVV                                eS         S          07 16 05.4 +3.1
LVV                                 MLR       MLR
           comp=N,1µm,18.0s
LVV                                 MLR       MLR
           comp=E,1µm,18.0s
LVV                                 MLR       MLR
           comp=Z,2µm,20.0s
MOPA  Mopani            42.34 208  i P        P          07 09 41.1  -1.2
MOPA  Mopani            42.34 208  i P        P          07 09 41.1  -1.2
KOLS  Kolonicke sedl    42.38 331  eP         P          07 09 45.3 +3.0
KOLS                                pmax      pmax
           comp=Z,18nm,0.9s
KOLS  Kolonicke sedl    42.38 331  eP         P          07 09 45.3 +3.0
MORH  Mrgy, Hungar      42.41 326   P         P          07 09 43.7 +1.1
KURBB Kurchatov Arra    42.43  25   P         P          07 09 44.6 +2.0
           comp=Z,9.3nm,0.9s,baz=224,slow=8.2,SNR=31
KURBB                               LR        LR         07 30 03.8
           comp=Z,2µm,18.2s,baz=204,slow=40
           comp=Z,9.3nm,0.9s
KURBB Kurchatov Arra    42.43  25   P         P          07 09 44.1 +1.4
KURK  Kurchatov         42.53  25c iP         P          07 09 46.3 +2.7
KURK                                pmax      pmax
           comp=Z,50nm,1.2s
KURK  Kurchatov         42.53  25   P         P          07 09 46.0 +2.4
KURK                                IAmb      IAmb       07 09 57.3
           comp=Z,37nm,0.9s
KURK  Kurchatov         42.53  25   IAMs_20   IAMs_20    07 29 54.3
           comp=Z,2µm,18.0s
KURK  Kurchatov         42.53  25   P         P          07 09 46.2 +2.6
ARU   Arti              42.59   6   P         P          07 09 46.5 +2.6
           comp=Z,2.2nm,0.3s,baz=222,slow=19,SNR=1.3
           comp=Z,2.2nm,0.3s
ARU   Arti              42.59   6c iP         P          07 09 46.7 +2.8
ARU                                                      07 11 26.4
ARU                                 PPP       PPP        07 11 59.1
ARU                                 S         S          07 16 11.7 +4.3
ARU                                 SS        SS         07 19 22.1 +5.0
ARU                                 pmax      pmax
           comp=Z,26nm,1.0s
ARU                                 MLR       MLR
           comp=Z,2µm,15.0s
ARU   Arti              42.59   6   P         P          07 09 45.9 +2.0
ARU                                 IAmb      IAmb       07 09 54.9
           comp=Z,35nm,0.8s
ARU                                 IAMs_20   IAMs_20    07 28 33.5
           comp=Z,3µm,18.0s
OBN   Obninsk           42.62 347   P         P          07 09 46.2 +2.0
           comp=Z,7.8nm,0.3s,baz=161,slow=16,SNR=12
OBN                                 LR        LR         07 30 31.1
           comp=Z,858nm,19.0s,baz=154,slow=40
           comp=Z,7.8nm,0.3s
OBN   Obninsk           42.62 347  eP         P          07 09 45.3 +1.2
OBN                                e                     07 09 53.8
OBN                                e                     07 11 27.2
OBN                                 pmax      pmax
           comp=Z,64nm,1.1s
KOVH  Kovagotottos      42.63 325   P         P          07 09 45.1 +0.7
WMQ   Urumqi            42.66  39  ⇓P         P          07 09 49.0 +4.2
WMQ                                 pP                   07 09 52.4
WMQ                                 PcP       PcP        07 11 37.3 +0.4
WMQ                                 S         S          07 16 14.0 +5.0
WMQ                                 pmax      pmax
           comp=Z,120nm,1.5s
WMQ                                 pmax      pmax
           comp=Z,360nm,5.5s
WMQ                                 LR        LR
           comp=Z,1µm,16.7s
WMQ                                 LR        LR
           comp=Z,2µm,16.7s
WMQ                                 LR        LR
           comp=Z,1µm,21.9s
CRVS  Cervenica-Dubn    42.74 331  eP         P          07 09 47.7 +2.4
CRVS                                pmax      pmax
           comp=Z,89nm,1.4s
CRVS  Cervenica-Dubn    42.74 331  eP         P          07 09 47.7 +2.4
PSZ   Piszkesteto       42.84 329   P         P          07 09 47.5 +1.3
PSZ                                 pmax      pmax
           comp=Z,15nm,1.0s
PSZ                                 MLR       MLR
           comp=Z,2µm,18.0s
PSZ   Piszkesteto       42.84 329   P         P          07 09 47.5 +1.3
PSZ   Piszkesteto       42.84 329   P         P          07 09 47.2 +0.9
MOS   Moscow            42.98 348  eP         P          07 09 49.1 +2.0
MOS                                e                     07 11 31.1
MOS                                 pmax      pmax
           comp=Z,113nm,1.2s
MOS                                 MLR       MLR
           comp=Z,4µm,18.0s
SEM   Semipalatinsk     42.99  27  eP         P          07 09 48.7 +1.1
SEM   Semipalatinsk     42.99  27  eP         P          07 09 48.8 +1.1
           baz=26
ZSN   Zaisan            43.19  33  eP         P          07 09 51.0 +2.0
ZSN   Zaisan            43.19  33  eP         P          07 09 50.1 +1.1
           baz=33
SVE   Sverdlovsk        43.20   7  eP         P          07 09 52.0 +3.1
SVE                                eS         S          07 16 20.7 +4.3
SVE                                 pmax      pmax
           comp=Z,43nm,1.0s
SVE                                 MLR       MLR
           comp=Z,1µm,17.0s
CSKK  Cskako            43.33 327   P         P          07 09 51.9 +1.8
SRO   Srobarova         43.59 327  eP         P          07 09 54.0 +1.9
SRO                                 pmax      pmax
           comp=Z,16nm,0.6s
SRO   Srobarova         43.59 327  eP         P          07 09 54.0 +1.9
MPLH  Magyarpolny       43.60 326   P         P          07 09 53.9 +1.6
NIE   Niedzica          43.65 330  eP         P          07 09 53.5 +0.8
KEST  Kesra             43.66 307   P         P          07 09 54.5 +1.5
           comp=Z,6.9nm,0.9s,baz=358,slow=1.2,SNR=5.9
KEST                                LR        LR         07 28 39.8
           comp=Z,3µm,18.9s,baz=49,slow=37
           comp=Z,6.9nm,0.9s
VYHS  Vyhne             43.75 328  eP         P          07 09 55.1 +1.6
VYHS                                pmax      pmax
           comp=Z,6.0nm,1.1s
VYHS  Vyhne             43.75 328  eP         P          07 09 55.1 +1.6
LANS  Liptovska Anna    43.87 330  eP         P          07 09 57.3 +2.8
LANS                                pmax      pmax
           comp=Z,10.0nm,0.8s
LANS  Liptovska Anna    43.87 330  eP         P          07 09 57.3 +2.8
GOLS  Golise            43.98 324  eP         P          07 09 57.4 +1.9
GOMU  GeErMu            44.31  52   P         P          07 10 02.5 +3.9
GOMU                                pP                   07 10 04.4
GOMU                                S         S          07 16 33.7  -0.3
GOMU                                ScS       ScS        07 19 57.2  -1.9
GOMU                                pmax      pmax
           comp=Z,8.0nm,0.9s
GOMU                                pmax      pmax
           comp=Z,300nm,3.7s
GOMU                                LR        LR
           comp=Z,560nm,17.2s
GOMU                                LR        LR
           comp=Z,860nm,17.7s
GOMU                                LR        LR
           comp=Z,1µm,17.3s
OJC   Ojcow             44.43 331  eP         P          07 09 57.6  -1.3
OJC   Ojcow             44.43 331   P         P          07 09 59.6 +0.7
OJC                                 pmax      pmax
           comp=Z,14nm,0.9s
OJC                                 MLR       MLR
           comp=Z,2µm,22.0s
OJC   Ojcow             44.43 331   P         P          07 09 59.6 +0.7
SOP   Sopron            44.44 326   P         P          07 09 60.0 +1.0
MNK   Minsk             44.45 340  i P        P          07 09 58.2  -0.7
MNK                                i                     07 11 40.2
MNK                                i                     07 11 43.3
MNK                                i PPP      PPP        07 12 19.4
MNK                                i S        S          07 16 35.8 +1.1
MNK                                i                     07 19 54.6
MNK                                i SSS      SSS        07 20 39.9
MNK                                 pmax      pmax
           comp=N,14nm,0.7s
MNK                                 pmax      pmax
           comp=Z,21nm,0.8s
MNK                                 pmax      pmax
           comp=E,2.0nm,0.9s
MNK                                 MLR       MLR
           comp=E,208nm,16.0s
MNK                                 MLR       MLR
           comp=Z,2µm,18.0s
MNK                                 MLR       MLR
           comp=N,1µm,13.0s
MNK   Minsk             44.45 340  i P        P          07 09 58.2  -0.7
           comp=E,2.0nm,0.9s
MNK                                i P        P          07 09 58.2  -0.7
           comp=N,14nm,0.7s
MNK                                i P        P          07 09 58.2  -0.7
           comp=Z,21nm,0.8s,baz=146
MNK                                i PcP      PcP        07 11 40.2  -2.4
MNK                                i PP       PP         07 11 43.3 +0.8
MNK                                i PPP      PPP        07 12 19.5
MNK                                i S        S          07 16 35.8 +1.1
MNK                                i SS       ScS        07 19 57.8  -0.6
MNK                                i SSS      SSS        07 20 40.0
MNK                                i LQ       LQ         07 25 26.0
MNK                                i LR       LR         07 29 02.6
MNK                                i LRM      MLR        07 32 00.5
           comp=E,208nm,16.3s
MNK                                i LRM      MLR        07 32 07.9
           comp=Z,2µm,17.6s
MNK                                i LRM      MLR        07 32 13.0
           comp=N,1µm,13.4s
KIRV  Kirov             44.46 358   P         P          07 10 01.6 +2.7
           comp=N,14nm,0.6s,baz=188,slow=15,SNR=8.1
KIRV                                LR        LR         07 32 47.3
           comp=N,1µm,19.2s,baz=165,slow=42
           comp=N,14nm,0.6s
KIRV  Kirov             44.46 358d iP         P          07 10 01.8 +2.9
ZST   Bratislava        44.46 327  eP         P          07 10 02.6 +3.4
ZST   Bratislava        44.46 327  eP         P          07 10 02.6 +3.4
MODS  Modra-Piesok      44.48 327  eP         P          07 10 04.7 +5.3
MODS  Modra-Piesok      44.48 327  eP         P          07 10 04.7 +5.3
JAVC  Velka Javorina    44.58 328  eP         P          07 10 00.9 +0.7
RONA  Rosalia, Austr    44.59 326  eP         P          07 10 01.0 +0.7
           comp=N,25nm,1.5s,SNR=6.3
LJU   Ljubljana         44.63 323  eP         P          07 10 01.6 +1.0
ARSA  Arzberg           44.75 325  eP         P          07 10 02.4 +0.8
           comp=N,13nm,1.2s
OBKA  Obir              44.88 324  eP         P          07 10 04.5 +1.8
           comp=N,25nm,1.3s,SNR=5.9
VSL   Villasalto        44.95 312   P         P          07 10 03.4 +0.2
VSL                                 IAmb      IAmb       07 10 21.2
           comp=Z,63nm,1.3s
CONA  Conrad Observa    44.96 326  eP         P          07 10 04.3 +1.0
           comp=Z,16nm,1.2s,SNR=9.8
OKC   Ostrava-Krasne    44.97 330  eS         S          07 16 34.2  -8.3
OKC                                 AMS       AMS        07 33 20.0
           comp=Z,2µm,15.8s
NACGM Naroch            45.14 340⇓eP          P          07 10 06.1 +1.6
           baz=145
MORC  Moravsky Berou    45.23 329   P         P          07 10 05.7 +0.3
MORC                                pmax      pmax
           comp=Z,27nm,1.0s
MORC  Moravsky Berou    45.23 329   P         P          07 10 05.7 +0.3
MORC                                IAmb      IAmb       07 10 15.5
           comp=Z,27nm,1.0s
MORC  Moravsky Berou    45.23 329  eP         P          07 10 05.6 +0.2
LHMI  Lhok Sumawe       45.34  97   IAMs_20   IAMs_20    07 26 08.7
           comp=Z,2µm,20.0s
KRUC  Moravsky          45.37 328  eP         P          07 10 07.0 +0.6
CHTO  Chiang Mai        45.40  77   P         P          07 10 06.1  -1.0
CHTO                                pmax      pmax
           comp=Z,42nm,1.1s
CHTO                                MLR       MLR
           comp=Z,1µm,19.0s
CHTO  Chiang Mai        45.40  77   P         P          07 10 06.1  -1.0
CHTO                                IAmb      IAmb       07 10 21.2
           comp=Z,42nm,1.1s
CMAR  Chiang Mai Arr    45.41  78   P         P          07 10 07.8 +0.6
           comp=Z,56nm,1.0s,baz=275,slow=8.6,SNR=52
           comp=Z,56nm,1.0s
CMAR  Chiang Mai Arr    45.41  78   P         P          07 10 07.0  -0.2
VRAC  Vranov            45.41 328   P         P          07 10 07.5 +0.7
           comp=Z,5.1nm,0.9s,baz=124,slow=5.6,SNR=6.6
VRAC                                LR        LR         07 31 52.2
           comp=Z,898nm,18.5s,baz=130,slow=40
           comp=Z,5.1nm,0.9s
VRAC  Vranov            45.41 328  eP         P          07 10 07.6 +0.8
MYKA  Terra Mystica     45.47 323  eP         P          07 10 08.2 +0.9
           comp=Z,16nm,0.7s
IDID  Didziasalis       45.49 340  eP         P          07 10 09.5 +2.2
IIGN  Ignalina          45.69 340  eP         P          07 10 11.1 +2.2
SUW   Suwalki           45.73 337  eP         P          07 10 04.6  -4.5
SUW   Suwalki           45.73 337  eP         P          07 10 10.2 +1.1
MOA   Molln             45.79 325  eP         P          07 10 09.5  -0.3
           comp=Z,13nm,1.2s,SNR=8.8
KRLC  Kraliky           45.80 329  eP         P          07 10 10.3 +0.4
KRLC                               e                     07 10 17.9
KRLC                               eS         S          07 16 51.7  -2.9
KRLC                                MLR       MLR
           comp=Z,1µm,16.5s
KRLC  Kraliky           45.80 329  eP         P          07 10 10.3 +0.4
KRLC                               ex         x          07 10 17.9
KRLC                               eS         S          07 16 51.7  -2.9
KRLC                                AMS       AMS        07 34 00.0
           comp=Z,1µm,16.5s
STAL  STALIGIAL         45.82 322   P         P          07 10 09.9  -0.1
STAL                                IAmb      IAmb       07 10 31.1
           comp=Z,41nm,1.0s
KBA   Koelnbreinsper    45.88 324  eP         P          07 10 11.1 +0.3
           comp=Z,15nm,1.2s,SNR=7.4
ISAL  Salakas           45.91 340  eP         P          07 10 13.1 +2.6
TREC  Trest             45.98 327   AMS       AMS        07 36 40.0
           comp=Z,1µm,17.2s
BIOA  Bad Ischl, Aus    46.05 325  eP         P          07 10 12.3 +0.5
           comp=Z,14nm,1.2s,SNR=5.3
ABTA  Abfaltersbach     46.19 323  eP         P          07 10 13.6 +0.5
           comp=Z,8.0nm,0.8s
DPC   Dobruska-Polom    46.20 329  eP         P          07 10 13.6 +0.6
DPC                                e                     07 10 22.1
DPC                                eS         S          07 16 56.7  -3.7
DPC                                 MLR       MLR
           comp=Z,2µm,22.9s
DPC   Dobruska-Polom    46.20 329  eP         P          07 10 13.6 +0.6
DPC                                ex         x          07 10 22.1
DPC                                eS         S          07 16 56.7  -3.7
DPC                                 AMS       AMS        07 31 20.0
           comp=Z,2µm,22.9s
CKRC  Cesky Krumlov     46.33 326  eP         P          07 10 13.9  -0.1
CKRC                               eS         S          07 16 55.9  -6.2
CTI   Castel Tesino     46.34 322   P         P          07 10 15.9 +1.6
CTI                                 pmax      pmax
           comp=Z,15nm,0.9s
CTI   Castel Tesino     46.34 322   P         P          07 10 15.9 +1.6
OSTC  Ostas             46.38 329  eP         P          07 10 15.0 +0.6
OSTC                               ex         x          07 10 24.0
OSTC                               eS         S          07 16 55.6  -7.3
OSTC                                AMS       AMS        07 31 40.0
           comp=Z,2µm,21.4s
UPC   Upice             46.46 329  eP         P          07 10 15.2 +0.2
UPC                                e                     07 10 23.9
UPC                                eS         S          07 17 01.4  -2.5
UPC                                 MLR       MLR
           comp=Z,2µm,20.4s
UPC   Upice             46.46 329  eP         P          07 10 15.2 +0.2
UPC                                ex         x          07 10 23.9
UPC                                eS         S          07 17 01.4  -2.5
UPC                                 AMS       AMS        07 31 40.0
           comp=Z,2µm,20.4s
LBTB  Lobatse           46.48 213   LR        LR         07 31 11.3
           comp=Z,2µm,18.2s,baz=43,slow=38
LBTB  Lobatse           46.48 213   P         P          07 10 12.6  -3.0
LBTB                                pmax      pmax
           comp=Z,47nm,0.7s
LBTB  Lobatse           46.48 213   P         P          07 10 12.6  -3.0
LBTB  Lobatse           46.48 213  i P        P          07 10 15.3  -0.3
LBTB  Lobatse           46.48 213  i P        P          07 10 15.3  -0.3
CHVC  Chvalec           46.48 329  eP         P          07 10 15.6 +0.4
CHVC                               ex         x          07 10 23.7
CHVC                                AMS       AMS        07 31 40.0
           comp=Z,2µm,18.4s
KSP   Ksiaz             46.53 330  eP         P          07 10 16.5 +1.0
PABE  Paberze           46.59 339   P         P          07 10 16.1 +0.2
PABE                                IAmb      IAmb       07 10 26.9
           comp=Z,50nm,1.0s
PABE                                IAMs_20   IAMs_20    07 33 13.3
           comp=Z,2µm,21.0s
PABE  Paberze           46.59 339  eP         P          07 10 17.5 +1.6
GEC2  GERESS Array S    46.67 326   P         P          07 10 16.9 +0.1
GERES GERESS Array B    46.67 326   P         P          07 10 16.7  -0.1
           comp=Z,1.9nm,0.5s,baz=134,slow=9.4,SNR=19
GERES                               LR        LR         07 33 00.2
           comp=Z,828nm,18.7s,baz=132,slow=40
           comp=Z,1.9nm,0.5s
GERES GERESS Array B    46.67 326   P         P          07 10 16.0  -0.8
PRU   Pruhonice         46.89 328  eP         P          07 10 19.2 +0.8
PRU                                 MLR       MLR
           comp=Z,2µm,25.2s
PRU   Pruhonice         46.89 328  eP         P          07 10 19.2 +0.8
PRU                                eS         S          07 16 57.2   -13
PRU                                 AMS       AMS        07 26 30.0
           comp=Z,2µm,25.2s
KHC   Kasperske Hory    46.90 326  eP         P          07 10 18.0  -0.5
KHC                                e                     07 10 26.6
KHC                                eS         S          07 17 05.5  -4.9
KHC                                 MLR       MLR
           comp=Z,2µm,34.5s
KHC   Kasperske Hory    46.90 326   P         P          07 10 18.0  -0.5
KHC                                 IAmb      IAmb       07 10 30.9
           comp=Z,34nm,1.8s
KHC   Kasperske Hory    46.90 326  eP         P          07 10 18.0  -0.5
KHC                                ex         x          07 10 26.6
KHC                                eS         S          07 17 05.5  -4.9
KHC                                 AMS       AMS        07 27 10.0
           comp=Z,2µm,34.5s
WTTA  Wattenberg        46.97 323  eP         P          07 10 19.6 +0.3
           comp=Z,25nm,1.2s,SNR=7.4
WATA  Walderalm         47.04 323  eP         P          07 10 19.0  -0.8
           comp=Z,9.1nm,0.6s,SNR=8.6
SRIT  Nakonsritamara    47.17  91   P         P          07 10 19.4  -1.7
SRIT                                IAmb      IAmb       07 10 34.9
           comp=Z,44nm,1.0s
TSUM  Tsumeb            47.18 226   LR        LR         07 31 35.8
           comp=Z,4µm,18.7s,baz=52,slow=38
TSUM  Tsumeb            47.18 226   P         P          07 10 16.7  -4.5
TSUM                                IAmb      IAmb       07 10 22.3
           comp=Z,18nm,0.9s
PVCC  Panska Ves        47.20 328  eP         P          07 10 21.9 +1.1
PVCC                                MLR       MLR
           comp=Z,1µm,23.1s
PVCC  Panska Ves        47.20 328  eP         P          07 10 21.9 +1.1
PVCC                                AMS       AMS        07 34 00.0
           comp=Z,1µm,23.1s
SQTA  Sankt Quirin      47.20 323  eP         P          07 10 21.0   0.0
           comp=Z,7.2nm,0.6s,SNR=7.7
MOTA  Moosalm           47.32 323  eP         P          07 10 20.7  -1.3
           comp=Z,11nm,1.1s,SNR=6.4
FETA  Feichten          47.38 322  eP         P          07 10 22.4  -0.1
           comp=Z,11nm,1.3s
ZAA0  Zalesovo Array    47.49  26   P         P          07 10 24.3 +1.3
ZAA0                                IAmb      IAmb       07 10 32.6
           comp=Z,35nm,0.8s
ZALV  Zalesovo Beam     47.49  26   P         P          07 10 23.6 +0.6
           comp=Z,8.3nm,0.7s,baz=231,slow=8.2,SNR=22
ZALV                                LR        LR         07 33 14.2
           comp=Z,2µm,18.6s,baz=228,slow=40
           comp=Z,8.3nm,0.7s
KLMR  Klimovskoe        47.55 352  eP         P          07 10 23.5 +0.2
KLMR                               e                     07 11 51.6
KLMR                               e                     07 12 14.8
KLMR                               eS         S          07 17 20.2 +1.1
KLMR                                pmax      pmax
           comp=Z,330nm,1.2s
KLMR                                MLR       MLR
           comp=Z,2µm,13.0s
KLMR  Klimovskoe        47.55 352  eP         P          07 10 23.5 +0.2
KLMR                                AMP                  07 10 37.3
           comp=Z,330nm,1.2s
KLMR                               ePcP       PcP        07 11 51.6  -1.7
KLMR                               ePP        PP         07 12 14.8 +0.2
KLMR                               eS         S          07 17 20.2 +1.1
KLMR                               eS         S          07 17 20.2 +1.1
KLMR                                LQ        LQ         07 26 31.4
KLMR                                LQ        LQ         07 26 31.4
KLMR                                LR        LR         07 30 10.1
KLMR                                AMP                  07 34 47.6
           comp=Z,2µm,13.1s
RETA  Reutte            47.59 323  eP         P          07 10 23.4  -0.7
           comp=Z,19nm,1.3s,SNR=5.6
PRGR  Permogore         47.69 356  eP         P          07 10 25.8 +1.4
BRG   Berggiesshubel    47.72 328  eP         P          07 10 25.1 +0.2
BRG                                 Amp                  07 10 27.2
           comp=Z,10nm,1.2s
BRG                                ex         x          07 10 34.1
BRG                                 Amp                  07 10 35.1
           comp=Z,7.5nm,0.9s
BRG                                ex         x          07 10 45.2
BRG                                 Amp                  07 10 47.2
           comp=Z,27nm,1.8s
BRG   Berggiesshubel    47.72 328   SS        SS         07 21 05.0   +15
BRG                                 Amp                  07 27 08.0
           comp=Z,1.9nm,31.7s
BRG                                 Amp                  07 27 13.0
           comp=E,1.1nm,16.6s
BRG                                 Amp                  07 27 36.0
           comp=N,1.0nm,23.9s
BRG   Berggiesshubel    47.72 328  eP         P          07 10 25.0 +0.2
BRG                                e                     07 10 34.1
BRG                                 S         S          07 17 25.0 +3.0
BRG                                 pmax      pmax
           comp=Z,10.0nm,1.2s
BRG                                 pmax      pmax
           comp=Z,8.0nm,0.9s
BRG                                 pmax      pmax
           comp=Z,27nm,1.8s
BRG                                 pmax      pmax
           comp=Z,2µm,31.7s
DAVOX Davos/Dischmat    47.77 322   P         P          07 10 26.7 +1.2
           comp=Z,5.8nm,0.7s,baz=176,slow=6.7,SNR=6.8
DAVOX                               LR        LR         07 32 33.1
           comp=Z,1µm,21.8s,baz=114,slow=38
           comp=Z,5.8nm,0.7s
PSI   Prapat            47.88  99   LR        LR         07 27 44.2
           comp=Z,1µm,20.1s,baz=269,slow=32
DAVA  Damuels           48.02 322  eP         P          07 10 26.5  -0.9
           comp=Z,6.6nm,0.5s,SNR=7.1
VSU   Vasula            48.10 343  eP         P          07 10 29.4 +1.8
NKC   Novy Kostel       48.13 327  eS         S          07 17 21.4  -6.4
NKC                                 AMS       AMS        07 35 50.0
           comp=Z,2µm,16.4s
PZH   PanZhiHua         48.21  67   P         P          07 10 31.9 +2.7
PZH                                 PcP       PcP        07 12 01.8 +5.2
PZH                                 S         S          07 17 28.2  -1.7
PZH                                 ScS       ScS        07 20 21.5  -2.8
PZH                                 pmax      pmax
           comp=Z,10.0nm,1.0s
PZH                                 pmax      pmax
           comp=Z,210nm,4.3s
PZH                                 LR        LR
           comp=Z,650nm,19.2s
PZH                                 LR        LR
           comp=Z,730nm,18.1s
PZH                                 LR        LR
           comp=Z,1µm,19.6s
CLL   Collm             48.46 328  i P        P          07 10 30.7 +0.2
CLL                                i                     07 10 39.5
CLL                                eS         S          07 17 36.0 +3.7
CLL                                 pmax      pmax
           comp=Z,31nm,2.0s
CLL   Collm             48.46 328   P         P          07 10 30.4  -0.2
CLL   Collm             48.46 328  i P        P          07 10 30.7 +0.2
           comp=Z,31nm,2.0s
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CLL				*i* x	x	07 10 39.5	
CLL				*e*PP	**PP**	**07 12 24.0**	**+0.9**
CLL				*e*PPP	PPP	07 13 15.0	
CLL				*e*S	**S**	**07 17 36.0**	**+3.7**
CLL				*e*SS	SS	07 21 18.0	+16
CLL				*e*SSS	SSS	07 22 24.0	
TOA0	**Torodi Ar. Sit**	**48.59**	**275**	P	**P**	**07 10 31.7**	**-0.4**
	SNR=21						
TORD	**Torodi Ar. Bea**	**48.59**	**275**	P	**P**	**07 10 30.7**	**-1.4**
	comp=Z,22nm,0.7s,baz=89,slow=6.7,SNR=64						
TORD				PcP	**PcP**	**07 11 57.5**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=81,slow=4.7,SNR=1.3						
TORD				LR	LR	07 30 14.7	
	comp=Z,1µm,19.4s,baz=50,slow=35						
	comp=Z,22nm,0.7s						
RUE	**Ruedersdorf**	**48.77**	**330**	*e*P	**P**	**07 10 33.9**	**+1.0**
SLIT	**Slitere, Latvi**	**48.83**	**339**	*e*P	**P**	**07 10 34.4**	**+1.1**
KULM	**Kulim**	**48.90**	**95**	P	**P**	**07 10 32.8**	**-1.7**
KULM				IAmb	IAmb	07 10 41.9	
	comp=Z,64nm,1.4s						
KMI	**Kunming**	**49.02**	**69**	⇓P	**P**	**07 10 37.1**	**+1.5**
KMI				sP		07 10 41.6	
KMI				S	**S**	**07 17 41.6**	**+0.1**
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,19.4s						
KMI				LR	LR		
	comp=Z,2µm,19.0s						
KMI				LR	LR		
	comp=Z,3µm,19.0s						
GTA	**Gaotai**	**49.06**	**50**	*e*P	**P**	**07 10 37.1**	**+1.6**
GTA				pP		07 10 41.2	
GTA				sP		07 10 44.1	
GTA				S	**S**	**07 17 44.0**	**+2.5**
GTA				sS		07 17 49.9	
GTA				SS	**SS**	**07 21 07.8**	**-4.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,130nm,5.2s						
GTA				LR	LR		
	comp=Z,500nm,15.1s						
GTA				LR	LR		
	comp=Z,1µm,24.7s						
GTA				LR	LR		
	comp=Z,2µm,23.1s						
SENIN	**Lac Senin/Sane**	**49.15**	**320**	P	**P**	**07 10 35.8**	**-0.5**
SENIN				IAmb	IAmb	07 10 59.8	
	comp=Z,21nm,1.0s						
MTSE	**Matsula**	**49.19**	**341**	*e*P	**P**	**07 10 37.5**	**+1.6**
BFO	**Black Forest**	**49.44**	**323**	P	**P**	**07 10 37.7**	**-0.4**
BFO	**Black Forest**	**49.44**	**323**	P	**P**	**07 10 37.7**	**-0.4**
BFO				IAmb	IAmb	07 10 48.2	
	comp=Z,36nm,1.0s						
VALR	**Valaam**	**49.56**	**347***c*	*i*P	**P**	**07 10 39.8**	**+1.0**
VALR				pmax	pmax		
	comp=Z,30nm,0.9s						
BOSA	**Boshof**	**49.58**	**211**	P	**P**	**07 10 36.7**	**-2.9**
	comp=Z,12nm,0.7s,baz=36,slow=7.5,SNR=26						
BOSA				LR	LR	07 32 14.9	
	comp=Z,2µm,18.5s,baz=38,slow=37						
	comp=Z,12nm,0.7s						
BOSA	**Boshof**	**49.58**	**211**	P	**P**	**07 10 36.4**	**-3.2**
BOSA				IAmb	IAmb	07 11 02.6	
	comp=Z,30nm,1.1s						
ECH	**Echery**	**50.07**	**322**	P	**P**	**07 10 43.0**	**0.0**
ECH				pmax	pmax		
	comp=Z,18nm,1.1s						
ECH	**Echery**	**50.07**	**322**	P	**P**	**07 10 43.0**	**0.0**
MEF	**Metsahovi**	**50.23**	**343**	*e*P	**P**	**07 10 45.2**	**+1.3**
CD2	**Chengdu**	**50.43**	**61**	P	P	07 10 52.7	+6.7
CD2				S	**S**	**07 17 59.6**	**-1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,19.0s						
CD2				LR	LR		
	comp=Z,1µm,16.0s						
FIA1	**FINESS Array S**	**50.79**	**344**	P	**P**	**07 10 48.7**	**+0.6**
FIA1				IAmb	IAmb	07 11 01.3	
	comp=Z,67nm,0.9s						
FINES	**FINESS Array B**	**50.79**	**344**	P	**P**	**07 10 49.5**	**+1.4**
	comp=Z,12nm,0.7s,baz=143,slow=9.8,SNR=42						
FINES				LR	LR	07 36 38.2	
	comp=Z,2µm,18.5s,baz=138,slow=41						
	comp=Z,12nm,0.7s						
FINES	**FINESS Array B**	**50.79**	**344**	P	**P**	**07 10 48.5**	**+0.4**
WLF	**Walferdange**	**51.33**	**324**	P	**P**	**07 10 52.7**	**+0.3**
WLF				pmax	pmax		
	comp=Z,37nm,0.9s						
WLF				MLR	MLR		
	comp=Z,1µm,22.0s						
WLF	**Walferdange**	**51.33**	**324**	P	**P**	**07 10 52.7**	**+0.3**
WLF				IAmb	IAmb	07 11 02.7	
	comp=Z,37nm,0.9s						
WLF	**Walferdange**	**51.33**	**324**	*d*P	**P**	**07 10 52.4**	**0.0**
	comp=Z,25nm,1.1s						
WLF				*d*x	x	07 11 01.5	
LZH	**Lanzhou**	**51.34**	**55**	*e*P	P	07 10 58.3	+5.4
LZH				sP		07 11 04.5	
LZH				S	**S**	**07 18 14.0**	**+0.5**
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZH				pmax	pmax		
	comp=Z,130nm,6.0s						
LZH				LR	LR		
	comp=Z,870nm,19.5s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
VIKU	**Vikbolandet**	**51.48**	**337**	*e*P	**P**	**07 10 54.7**	**+1.3**
AAL	**Aland**	**51.56**	**340**	*e*P	**P**	**07 10 54.0**	**+0.1**
RAF	**Rauma**	**51.66**	**342**	*e*P	**P**	**07 10 55.4**	**+0.8**
BHOU	**Houvegnez**	**51.73**	**324**	*d*P	**P**	**07 10 56.8**	**+1.4**
	comp=Z,15nm,1.1s						
BTNL	**Ternell**	**51.77**	**325**	*d*P	**P**	**07 10 56.2**	**+0.5**
	comp=Z,9.4nm,1.1s						
BTNL				*d*x	x	07 11 05.9	
MEM	**Membach**	**51.85**	**325**	*d*P	**P**	**07 10 55.6**	**-0.6**
	comp=Z,11nm,0.0s						
RCHB	**Rochefort**	**52.08**	**324**	*d*P	**P**	**07 10 58.3**	**+0.3**
	comp=Z,15nm,1.0s						
RCHB				*d*x	x	07 11 07.4	
BSTI	**Sart Tilman**	**52.09**	**324**	*d*P	**P**	**07 10 56.5**	**-1.5**
	comp=Z,2.9nm,0.9s						
BSTI				*d*x	x	07 11 08.1	
UPP	**Uppsala**	**52.12**	**339**	*e*P	**P**	**07 10 59.2**	**+1.1**
BCLA	**Clavier**	**52.16**	**324**	*d*P	**P**	**07 10 58.8**	**+0.2**
	comp=Z,7.1nm,1.5s						
BGES	**Gesves**	**52.27**	**324**	*d*P	**P**	**07 10 59.6**	**+0.2**
	comp=Z,11nm,0.9s						
BGES				*d*x	x	07 11 08.7	
BMRD	**Maredsous**	**52.41**	**324**	*d*P	**P**	**07 11 00.8**	**+0.3**
	comp=Z,12nm,1.0s						
BMRD				*d*x	x	07 11 09.9	
DOU	**Dourbes**	**52.42**	**323**	*d*P	**P**	**07 11 00.0**	**-0.5**
	comp=Z,26nm,0.9s						
DOU				*d*x	x	07 11 09.8	
GYA	**Guiyang**	**52.61**	**67**	⇓P	**P**	**07 11 03.2**	**+0.7**
GYA				sP		07 11 09.7	
GYA				PP	**PP**	**07 13 06.2**	**+4.6**
GYA				S	**S**	**07 18 29.3**	**-1.9**
GYA				SS	**SS**	**07 22 08.8**	**-0.7**
GYA				pmax	pmax		
	comp=Z,25nm,1.1s						
GYA				pmax	pmax		
	comp=Z,300nm,3.5s						
GYA				LR	LR		
	comp=Z,1µm,18.1s						
GYA				LR	LR		
	comp=Z,2µm,21.3s						
GYA				LR	LR		
	comp=Z,2µm,21.0s						
SNF	**Seneffe**	**52.78**	**324**	*d*P	**P**	**07 11 03.8**	**+0.6**
	comp=Z,23nm,0.8s						
SNF				*d*x	x	07 11 12.8	
CLF	**Chambon-Foret**	**52.97**	**320**	P	**P**	**07 11 05.3**	**+0.7**
CLF				IAmb	IAmb	07 11 20.9	
	comp=Z,83nm,1.5s						
HFS	**Hagfors**	**53.73**	**337**	P	**P**	**07 11 10.3**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=294,slow=11,SNR=8.0						
HFS				LR	LR	07 37 41.6	
	comp=Z,2µm,18.1s,baz=138,slow=40						
	comp=Z,4.7nm,0.9s						
KOWA	**Kowa**	**53.93**	**278**	P	**P**	**07 11 11.0**	**-1.2**
KOWA				IAmb	IAmb	07 11 13.9	
	comp=Z,96nm,1.8s						
MOY	**Mondy**	**54.29**	**36**	*e*P	**P**	**07 11 17.5**	**+3.1**
MOY				pmax	pmax		
	comp=Z,69nm,1.8s						
MDT	**Midelt**	**54.34**	**300**	LR	LR	07 35 21.8	
	comp=Z,3µm,19.1s,baz=104,slow=37						
OSL	**Oslo**	**54.73**	**336**	*e*P	**P**	**07 11 18.5**	**+1.2**
APA	**Apatity**	**54.78**	**351**	⇓*i*P	P	07 11 27.2	+10
APA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,2µm,13.0s						
ESBB	**Sonseca Array**	**54.86**	**309**	P	**P**	**07 11 17.9**	**-0.8**
ESBB				IAmb	IAmb	07 11 28.8	
	comp=Z,19nm,0.9s						
ESDC	**Sonseca Array**	**54.86**	**309**	P	**P**	**07 11 18.3**	**-0.4**
	comp=Z,9.6nm,0.7s,baz=90,slow=6.4,SNR=38						
ESDC				LR	LR	07 33 56.1	
	comp=Z,946nm,21.6s,baz=94,slow=35						
	comp=Z,9.6nm,0.7s						
ESDC	**Sonseca Array**	**54.86**	**309**	P	**P**	**07 11 17.4**	**-1.3**
SUR	**Sutherland**	**54.88**	**212**	LR	LR	07 36 30.0	
	comp=Z,2µm,18.2s,baz=38,slow=38						
LVZ	**Lovozero**	**54.92**	**352**	IAMs_20	IAMs_20	07 37 28.6	
	comp=Z,2µm,21.0s						
NC602	**NORSAR Array S**	**54.93**	**337**	*e*P	**P**	**07 11 18.4**	**-0.3**
KONO	**Kongsberg**	**55.00**	**335**	IAMs_20	IAMs_20	07 38 53.6	
	comp=Z,2µm,18.0s						
ZAK	**Zakamensk**	**55.10**	**38**	*e*P	**P**	**07 11 22.7**	**+2.4**
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
PAB	**San Pablo**	**55.13**	**309**	P	**P**	**07 11 19.8**	**-0.9**
PAB				pmax	pmax		
	comp=Z,38nm,1.4s						
PAB	**San Pablo**	**55.13**	**309**	P	**P**	**07 11 19.8**	**-0.9**
PAB				IAmb	IAmb	07 11 48.2	
	comp=Z,38nm,1.4s						
XAN	**Xi'an**	**55.14**	**58**	P	**P**	**07 11 21.5**	**+0.7**
XAN				pP		07 11 28.6	
XAN				PP	**PP**	**07 13 29.8**	**+5.7**
XAN				S	**S**	**07 19 05.8**	**+0.8**
XAN				SS	**SS**	**07 22 49.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,3.5s						
XAN				LR	LR		
	comp=Z,580nm,17.9s						
XAN				LR	LR		
	comp=Z,790nm,20.1s						
XAN				LR	LR		
	comp=Z,920nm,19.2s						
NB2	**NORSAR Subarra**	**55.25**	**337**	P	**P**	**07 11 20.7**	**-0.4**
	comp=Z,19nm,1.1s,baz=124,slow=7.9						
NB2	**NORSAR Subarra**	**55.25**	**337**	P	**P**	**07 11 20.7**	**-0.4**
	baz=124,slow=7.9						
NOA	**NORSAR Array B**	**55.25**	**337**	P	**P**	**07 11 21.9**	**+0.8**
	comp=Z,5.8nm,1.1s,baz=122,slow=7.6,SNR=8.4						
NOA				LR	LR	07 38 46.0	
	comp=Z,1µm,18.6s,baz=140,slow=40						
	comp=Z,5.8nm,1.1s						
QIZ	**Qiongzhong**	**55.70**	**76**	P	**P**	**07 11 23.5**	**-1.5**
QIZ				S	**S**	**07 19 10.0**	**-2.7**
QIZ				SS	**SS**	**07 22 57.2**	**-0.9**
QIZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
QIZ				LR	LR		
	comp=Z,780nm,25.3s						
QIZ				LR	LR		
	comp=Z,500nm,19.6s						
QIZ				LR	LR		
	comp=Z,700nm,19.0s						
KIC	**Kosan Boka**	**56.02**	**268**	*e*P	**P**	**07 11 26.5**	**-0.8**
	comp=Z,12nm,0.5s						
DBIC	**Dimbokro**	**56.06**	**269**	P	**P**	**07 11 26.1**	**-1.5**
	comp=Z,12nm,0.7s,baz=88,slow=9.0,SNR=14						
DBIC				LR	LR	07 34 51.8	
	comp=Z,663nm,18.5s,baz=79,slow=36						
	comp=Z,12nm,0.7s						
DBIC	**Dimbokro**	**56.06**	**269**	P	**P**	**07 11 26.6**	**-1.1**
DBIC				pmax	pmax		
	comp=Z,37nm,1.2s						
DBIC	**Dimbokro**	**56.06**	**269**	P	**P**	**07 11 26.6**	**-1.1**
DBIC				IAmb	IAmb	07 11 28.4	
	comp=Z,37nm,1.2s						
SKAR	**Skarslia**	**56.14**	**336**	*e*P	**P**	**07 11 28.1**	**+0.5**
SONM	**Songino Array**	**56.15**	**41**	P	**P**	**07 11 29.8**	**+1.8**
	comp=Z,3.2nm,0.6s,baz=260,slow=8.3,SNR=6.0						
SONM				LR	LR	07 40 28.3	
	comp=Z,583nm,18.6s,baz=273,slow=41						
	comp=Z,3.2nm,0.6s						
SONM	**Songino Array**	**56.15**	**41**	P	**P**	**07 11 29.1**	**+1.1**
SONM				IAmb	IAmb	07 11 38.9	
	comp=Z,48nm,1.4s						
BLS5	**Blasjo**	**56.17**	**334**	*e*P	**P**	**07 11 29.3**	**+1.6**
TIC	**Toumodi**	**56.22**	**269**	*e*P	**P**	**07 11 28.0**	**-0.9**
LIC	**Lamto**	**56.32**	**268**	*e*P	**P**	**07 11 29.4**	**-0.1**
	comp=Z,64nm,0.9s						
IRK	**Irkutsk**	**56.38**	**36**	*e*P	P	07 11 33.7	+4.4
IRK				pmax	pmax		
	comp=Z,58nm,2.3s						
KMY	**Karmoy**	**56.58**	**333**	*e*P	**P**	**07 11 32.0**	**+1.5**
ULN	**Ulaanbaatar**	**56.59**	**42***c*	*i*P	**P**	**07 11 33.5**	**+2.4**
ULN				pmax	pmax		
	comp=Z,15nm,1.8s						
DOMB	**Dombas**	**56.68**	**338**	*e*P	**P**	**07 11 32.4**	**+1.1**
PBAR	**Barrancos**	**56.97**	**306**	*e*P	**P**	**07 11 33.7**	**-0.1**
	comp=Z,30nm,1.5s						
NSS	**Namsos**	**57.29**	**341**	*e*P	**P**	**07 11 36.2**	**+0.7**
PBRG	**Braganca**	**57.34**	**311**	*e*P	**P**	**07 11 36.4**	**0.0**
	comp=Z,28nm,1.5s						
PVAQ	**Vaqueiros**	**57.40**	**305**	*e*LR	LR	07 29 43.5	
	comp=Z,974nm,18.0s						
PMRV	**Marv??o**	**57.43**	**308**	*e*P	**P**	**07 11 36.1**	**-1.0**
	comp=Z,38nm,1.4s						
PMRV	**Marv??o**	**57.43**	**308**	*e*LR	LR	07 29 45.1	
	comp=Z,587nm,16.0s						
MVO	**Moncorvo**	**57.44**	**310**	*e*P	**P**	**07 11 37.6**	**+0.4**
	comp=Z,30nm,1.4s						
MVO				*e*S	**S**	**07 19 38.3**	**+2.9**
MVO				*e*LQ	LQ	07 26 12.4	
MVO				*e*LR	LR	07 30 33.4	
	comp=Z,853nm,18.0s						
AKN	**Aaknes**	**57.54**	**337**	*e*P	**P**	**07 11 38.7**	**+1.3**
PCBR	**Castelo Branco**	**57.56**	**308**	*e*P	**P**	**07 11 40.0**	**+2.1**
PCVE	**Castro Verde**	**57.69**	**306**	*e*P	**P**	**07 11 39.8**	**+0.9**
MTE	**Manteigas**	**57.70**	**309**	*e*P	**P**	**07 11 40.2**	**+1.2**
	comp=Z,28nm,2.0s						
MTE				*e*S	**S**	**07 19 45.1**	**+6.3**
MTE				*e*LQ	LQ	07 26 17.4	
MTE				*e*LR	LR	07 30 37.6	
	comp=Z,678nm,18.0s						
KTK1	**Kautokeino**	**57.81**	**348**	*e*P	**P**	**07 11 40.7**	**+1.4**
ARA0	**ARCESS Array S**	**57.84**	**349**	*e*P	**P**	**07 11 40.9**	**+1.6**
ARCES	**ARCESS Array B**	**57.84**	**349**	P	**P**	**07 11 42.2**	**+2.9**
	comp=Z,9.5nm,0.7s,baz=122,slow=4.4,SNR=18						
ARCES				LR	LR	07 40 00.7	
	comp=Z,3µm,18.4s,baz=136,slow=40						
	comp=Z,9.5nm,0.7s						
ARCES	**ARCESS Array B**	**57.84**	**349**	P	**P**	**07 11 40.3**	**+0.9**
ARCES				IAmb	IAmb	07 11 52.2	
	comp=Z,73nm,1.4s						
MESJ	**Messejana**	**57.85**	**306**	*e*P	**P**	**07 11 40.7**	**+0.6**
MESJ				*e*S	**S**	**07 19 42.8**	**+2.0**
MESJ				IAMs_20	IAMs_20	07 33 28.9	
	comp=N,2µm,30.2s						
MESJ	**Messejana**	**57.85**	**306**	*e*P	**P**	**07 11 40.6**	**+0.6**
MESJ				*e*S	**S**	**07 19 42.8**	**+2.0**
PVIS	**Viseu**	**58.01**	**309**	*e*P	**P**	**07 11 42.0**	**+0.8**
	comp=N,29nm,1.6s						
PMTG	**Montargil**	**58.02**	**307**	*e*P	**P**	**07 11 41.7**	**+0.5**
	comp=N,32nm,1.5s						
POLO	**Lamas de Olo**	**58.04**	**310**	*e*P	**P**	**07 11 41.2**	**-0.2**
	comp=N,20nm,1.6s						
LYN	**LuoYang**	**58.11**	**58**	*e*P	**P**	**07 11 42.5**	**+0.6**
LYN				S	**S**	**07 19 45.2**	**+0.9**
LYN				pmax	pmax		
	comp=N,230nm,12.8s						
LYN				LR	LR		
	comp=N,1µm,19.8s						
LYN				LR	LR		
	comp=N,630nm,19.8s						
LYN				LR	LR		
	comp=N,870nm,27.5s						
STOK	**Stokkvaagen**	**58.22**	**343**	*e*P	**P**	**07 11 43.4**	**+1.4**
CNSH	**ChangSha**	**58.23**	**65**	⇓P	**P**	**07 11 43.3**	**+0.5**
CNSH				S	**S**	**07 19 48.4**	**+2.4**
CNSH				LR	LR		
	comp=N,910nm,18.5s						
CNSH				LR	LR		
	comp=N,1µm,22.6s						
CNSH				LR	LR		
	comp=N,1µm,21.0s						
PFVI	**Vila Bisbo**	**58.25**	**305**	*e*P	**P**	**07 11 45.4**	**+2.6**
PCAB	**Cabril**	**58.27**	**310**	*e*P	**P**	**07 11 43.9**	**+1.0**
	comp=N,40nm,1.6s						
KONS	**Konsvik**	**58.31**	**343**	*e*P	**P**	**07 11 43.9**	**+1.3**
COI	**Coimbra**	**58.32**	**309**	IAMs_20	IAMs_20	07 40 26.3	
	comp=Z,1µm,18.0s						
FAUS	**Fauske**	**58.35**	**344**	*e*P	**P**	**07 11 43.2**	**+0.2**
TIY	**Taiyuan**	**58.39**	**54**	P	P	07 11 52.2	+8.3
TIY				S	**S**	**07 19 52.2**	**+4.2**
TIY				ScS	**ScS**	**07 21 33.8**	**-1.5**
TIY	**Taiyuan**	**58.39**	**54**	SS	SS	07 23 47.2	+7.1
TIY				pmax	pmax		
	comp=Z,32nm,0.8s						
TIY				LR	LR		
	comp=N,1µm,21.3s						
TIY				LR	LR		
	comp=E,2µm,19.9s						
TIY				LR	LR		
	comp=Z,2µm,21.3s						
PGAV	**Gavieira, Arco**	**58.49**	**311**	*e*P	**P**	**07 11 46.1**	**+1.5**
	comp=Z,39nm,1.6s						
PGAV				*e*S	**S**	**07 19 56.3**	**+7.1**
PGAV				*e*LQ	LQ	07 26 36.6	
PGAV				*e*LR	LR	07 29 25.3	
	comp=Z,1µm,18.0s						
STEI	**Steigen**	**58.77**	**345**	*e*P	**P**	**07 11 46.6**	**+0.7**
JETT	**Jettan, Norway**	**58.84**	**348**	*e*P	**P**	**07 11 48.1**	**+1.7**
EKA	**Eskdalemuir Ar**	**58.86**	**327**	LR	LR	07 42 47.3	
	comp=Z,774nm,19.4s,baz=102,slow=42						
HAMF	**Hammerfest**	**59.11**	**349**	*e*P	**P**	**07 11 49.6**	**+1.4**
LEM	**Lembang**	**59.19**	**107**	P	**P**	**07 11 49.8**	**-0.1**
	comp=Z,16nm,0.4s,baz=205,slow=3.0,SNR=5.1						
	comp=Z,16nm,0.4s						
TRO	**Tromso**	**59.21**	**347**	*e*P	**P**	**07 11 48.7**	**-0.2**
WHN	**Wuhan**	**59.50**	**63**	⇑P	P	07 11 56.9	+5.3
WHN				S	**S**	**07 20 04.4**	**+2.0**
WHN				LR	LR		
	comp=Z,2µm,15.1s						
WHN				LR	LR		
	comp=Z,2µm,17.1s						
WHN				LR	LR		
	comp=Z,3µm,19.7s						
NRIK	**Noril'sk**	**59.65**	**14**	P	**P**	**07 11 53.0**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=209,slow=6.6,SNR=14						
NRIK				LR	LR	07 39 36.4	
	comp=Z,954nm,19.6s,baz=212,slow=38						
	comp=Z,3.7nm,0.6s						
NRIK	**Noril'sk**	**59.65**	**14***c*	*i*P	**P**	**07 11 53.9**	**+1.9**
NRIK				pmax	pmax		
	comp=Z,18nm,1.2s						
NRIK	**Noril'sk**	**59.65**	**14**	P	**P**	**07 11 53.4**	**+1.4**
NRIK				IAmb	IAmb	07 12 04.9	
	comp=Z,29nm,1.1s						
HNS	**HongShan**	**60.16**	**55**	⇑P	P	07 12 00.1	+4.1
HNS				S	**S**	**07 20 13.7**	**+3.0**
HNS				ScS	**ScS**	**07 21 47.5**	**-0.7**
HNS				pmax	pmax		
	comp=Z,18nm,1.5s						
HNS				LR	LR		
	comp=Z,650nm,15.6s						
HNS				LR	LR		
	comp=Z,940nm,18.0s						
HNS				LR	LR		
	comp=Z,1µm,18.4s						
SBUM	**Sibu**	**60.78**	**95**	P	**P**	**07 11 59.3**	**-1.4**
SBUM				IAmb	IAmb	07 12 09.6	
	comp=Z,62nm,1.5s						
BJT	**Baijiatuau**	**61.53**	**52**	IAMs_20	IAMs_20	07 40 30.3	
	comp=Z,1µm,18.0s						
BJI	**Beijing**	**61.54**	**52**	P	**P**	**07 12 07.7**	**+2.3**
BJI				S	**S**	**07 20 32.1**	**+3.8**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				LR	LR		
	comp=Z,840nm,17.7s						
BJI				LR	LR		
	comp=Z,1µm,17.1s						
BJI				LR	LR		
	comp=Z,2µm,17.7s						
XLT	**XiLinHaoTe**	**61.91**	**48**	*e*P	P	07 12 16.5	+8.6
XLT				pP		07 12 20.6	
XLT				sP		07 12 23.1	
XLT				pmax	pmax		
	comp=Z,23nm,1.2s						
XLT				pmax	pmax		
	comp=Z,170nm,4.5s						
TIA	**Tai'an**	**62.02**	**56**	⇓P	**P**	**07 12 10.3**	**+1.6**
TIA				S	**S**	**07 20 38.8**	**+4.3**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TIA				pmax	pmax		
	comp=Z,190nm,4.2s						
TIA				LR	LR		
	comp=Z,370nm,15.8s						
TIA				LR	LR		
	comp=Z,440nm,19.2s						
TIA				LR	LR		
	comp=Z,500nm,21.9s						
NJ2	**Nanjing**	**63.37**	**61**	*e*P	**P**	**07 12 16.4**	**-1.3**
NJ2				S	**S**	**07 20 51.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,230nm,3.5s						
NJ2				LR	LR		
	comp=Z,530nm,16.1s						
NJ2				LR	LR		
	comp=Z,810nm,19.4s						
NJ2				LR	LR		
	comp=Z,1µm,19.6s						
QZH	**Quanzhou**	**63.39**	**69**	P	**P**	**07 12 19.1**	**+1.1**
QZH				S	**S**	**07 20 55.4**	**+3.3**
QZH				SS	**SS**	**07 24 59.4**	**+0.7**
QZH				LR	LR		
	comp=Z,760nm,18.0s						
QZH				LR	LR		
	comp=Z,640nm,17.1s						
BOD	**Bodaibo**	**63.51**	**32**	*e*P	P	07 12 22.1	+3.8
BOD				pmax	pmax		
	comp=Z,29nm,1.6s						
PMOZ	**Porto Moniz, M**	**64.92**	**300**	*e*LR	LR	07 34 02.8	
	comp=Z,1µm,20.0s						
JAGI	**Jajag, Banyuwa**	**65.83**	**106**	P	**P**	**07 12 31.1**	**-3.1**
MYLDM	**Lahad Datu**	**66.22**	**91**	IAMs_20	IAMs_20	07 41 21.7	
	comp=Z,2µm,20.0s						
MBO	**M'Bour**	**66.35**	**280**	P	**P**	**07 12 37.2**	**-0.3**
SPA0	**Spitsbergen Ar**	**66.44**	**353**	*e*P	**P**	**07 12 35.4**	**-1.7**
SPITS	**Spitsbergen Ar**	**66.44**	**353**	LR	LR	07 44 11.0	
	comp=Z,1µm,20.4s,baz=156,slow=38						
TGY	**Tagaytay City**	**66.85**	**81**	LR	LR	07 43 04.5	
	comp=Z,384nm,18.8s,baz=295,slow=37						
JMIC	**Jan Mayen**	**67.29**	**342**	LR	LR	07 43 55.6	
	comp=Z,891nm,21.0s,baz=86,slow=37						
KBS	**Kingsbay**	**67.59**	**352**	IAMs_20	IAMs_20	07 45 33.2	
	comp=Z,1µm,19.0s						
CN2	**Changchun**	**68.65**	**48**	*e*P	**P**	**07 12 52.1**	**+0.5**
CN2				*e*S	**S**	**07 21 55.1**	**-0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,900nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
KAPI	**Kappang**	**70.05**	**101**	P	**P**	**07 12 58.6**	**-2.1**
	comp=Z,5.2nm,0.3s,baz=266,slow=5.7,SNR=11						
KAPI				LR	LR	07 40 45.0	
	comp=Z,516nm,20.7s,baz=282,slow=33						
	comp=Z,5.2nm,0.3s						
KAPI	**Kappang**	**70.05**	**101***c*	*i*P	**P**	**07 12 59.3**	**-1.4**
KAPI				pmax	pmax		
	comp=Z,23nm,0.9s						
KAPI	**Kappang**	**70.05**	**101**	P	**P**	**07 12 57.8**	**-3.0**

BORG	**Borgarnes**	**70.16**	**334**	LR	LR	07 46 03.2	
	comp=Z,853nm,20.9s,baz=109,slow=38						
ZEA	**Zeya**	**70.19**	**38**	*e*P	P	07 13 10.2	+9.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,500nm,19.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,13.0s						
KSRS	**Korea Array**	**70.67**	**55**	P	**P**	**07 13 04.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=286,slow=9.0,SNR=5.0						
KSRS				LR	LR	07 45 45.1	
	comp=Z,516nm,19.6s,baz=300,slow=37						
	comp=Z,0.9nm,0.5s						
SCO	**Scoresbysund**	**71.39**	**340**	IAMs_20	IAMs_20	07 47 22.7	
	comp=Z,1µm,20.0s						
SCO	**Scoresbysund**	**71.39**	**340**	*i* P	P	07 13 14.7	+6.9
SCO				IAmb	IAmb	07 13 21.5	
	comp=Z,13nm,0.9s						
MDJ	**Mudanjiang**	**71.63**	**47**	P	P	07 13 18.4	+8.6
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.5s						
DBG	**Daneborg**	**71.68**	**344**	*i* P	**P**	**07 13 09.6**	**0.0**
DBG				IAmb	IAmb	07 13 23.2	
	comp=Z,10nm,0.9s						
JOW	**Kunigami**	**71.90**	**66**	LR	LR	07 44 32.2	
	comp=Z,900nm,21.4s,baz=305,slow=36						
DAG	**Danmarks Havn**	**71.93**	**347**	*i* P	**P**	**07 13 09.0**	**-2.0**
DAG				IAmb	IAmb	07 13 19.7	
	comp=Z,11nm,0.9s						
YAK	**Yakutsk**	**72.01**	**29**	LR	LR	07 47 34.8	
	comp=Z,690nm,20.7s,baz=274,slow=38						
YAK	**Yakutsk**	**72.01**	**29**	*d i*P	P	07 13 19.9	+8.2
YAK				e*PP		07 13 22.3	
YAK				*e*		07 15 51.5	
YAK				e*SS	SKiKP	07 22 58.8	+8.4
YAK				pmax	pmax		
	comp=Z,52nm,0.8s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,285nm,4.1s						
YAK				pmax	pmax		
	comp=N,254nm,3.7s						
YAK				pmax	pmax		
	comp=E,158nm,3.1s						
DAV	**Davao City (W)**	**72.67**	**87**	LR	LR	07 45 48.3	
	comp=E,332nm,19.6s,baz=301,slow=36						
TIXI	**Tiksi**	**72.67**	**19⇑**	*i*P	**P**	**07 13 16.2**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,38nm,1.4s						
TIXI	**Tiksi**	**72.67**	**19**	P	**P**	**07 13 15.8**	**+0.2**
TIXI				IAmb	IAmb	07 13 25.3	
	comp=Z,26nm,1.1s						
TIXI				IAMs_20	IAMs_20	07 47 41.3	
	comp=Z,1µm,21.0s						
KLR	**Kul'dur**	**72.96**	**42**	*ce*P	**P**	**07 13 18.5**	**+0.8**
KLR				pmax	pmax		
	comp=Z,22nm,1.4s						
USRK	**Ussuriysk Ar.**	**73.36**	**48**	P	**P**	**07 13 20.4**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=240,slow=7.3,SNR=2.4						
USRK				LR	LR	07 49 21.9	
	comp=Z,606nm,18.5s,baz=285,slow=39						
	comp=Z,2.6nm,0.9s						
JNU	**Nakatsue**	**73.44**	**59**	LR	LR	07 47 53.7	
	comp=Z,696nm,20.1s,baz=276,slow=38						
JNU	**Nakatsue**	**73.44**	**59**	P	**P**	**07 13 20.6**	**-0.3**
JNU				IAmb	IAmb	07 13 30.1	
	comp=Z,62nm,1.2s						
ROSA	**Rosais**	**73.59**	**307**	P	**P**	**07 13 21.9**	**+0.2**
BATI	**Baumata**	**75.28**	**105**	P	**P**	**07 13 30.7**	**-1.2**
	comp=Z,37nm,0.5s,baz=272,slow=6.1,SNR=5.6						
	comp=Z,37nm,0.5s						
MBWA	**Marble Bar**	**75.35**	**117**	P	**P**	**07 13 28.7**	**-3.4**
MBWA				IAmb	IAmb	07 13 39.7	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**75.60**	**117**	P	**P**	**07 13 31.3**	**-2.2**
PSA00				IAmb	IAmb	07 13 41.2	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**75.60**	**117**	P	**P**	**07 13 30.6**	**-3.0**
PSA00				IAmb	IAmb	07 13 52.9	
	comp=Z,12nm,1.1s						
ICESG	**Greenland Ices**	**77.46**	**338**	*i* P	**P**	**07 13 46.4**	**+2.7**
ICESG				IAmb	IAmb	07 13 54.0	
	comp=Z,10.0nm,1.0s						
MAJO	**Matsushiro**	**78.95**	**55**	IAMs_20	IAMs_20	07 52 11.1	
	comp=Z,917nm,20.0s						
MJAR	**Matsushiro Arr**	**78.95**	**55**	P	**P**	**07 13 53.5**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=266,slow=5.0,SNR=3.1						
MJAR				LR	LR	07 52 23.7	
	comp=Z,694nm,19.4s,baz=278,slow=38						
	comp=Z,1.3nm,0.4s						
ALE	**Alert**	**79.19**	**353**	IAMs_20	IAMs_20	07 56 03.8	
	comp=Z,946nm,18.0s						
SIJI	**Sorong**	**80.04**	**93**	P	**P**	**07 13 58.0**	**-0.5**
	comp=Z,7.6nm,0.5s,baz=341,slow=6.6,SNR=5.6						
	comp=Z,7.6nm,0.5s						
DY2G	**Dye2**	**80.38**	**336**	*i* P	**P**	**07 14 00.1**	**+0.5**
DY2G				IAmb	IAmb	07 14 12.5	
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**80.53**	**44**	*e*P	**P**	**07 13 59.4**	**-1.1**
YSS				*e*		07 14 07.2	
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,16.0s						
JHJ	**Hachijo jima 2**	**80.82**	**58**	LR	LR	07 49 37.2	
	comp=E,489nm,21.9s,baz=356,slow=35						
ASAJ	**Asahikawa**	**80.94**	**47**	LR	LR	07 51 33.1	
	comp=E,669nm,20.8s,baz=346,slow=37						
NRS	**Narsarsuaq**	**81.22**	**331**	*i* P	P	07 14 10.8	+6.9
NRS				IAmb	IAmb	07 14 17.5	
	comp=Z,9.3nm,0.8s						
MAW	**Mawson**	**81.86**	**176**	P	**P**	**07 14 06.0**	**-1.0**
	comp=Z,6.1nm,0.8s,baz=319,slow=9.0,SNR=8.5						
MAW				LR	LR	07 45 36.2	
	comp=Z,827nm,18.7s,baz=345,slow=32						
	comp=Z,6.1nm,0.8s						
MAW	**Mawson**	**81.86**	**176**	P	**P**	**07 14 06.0**	**-1.0**
MAW	**Mawson**	**81.86**	**176**	P	**P**	**07 14 05.2**	**-1.7**
SFJD	**Kangerlussuaq**	**81.92**	**337**	LR	LR	07 53 13.3	
	comp=Z,550nm,21.6s,baz=66,slow=38						
SFJD	**Kangerlussuaq**	**81.92**	**337**	*i* P	**P**	**07 14 07.7**	**+0.2**
SFJD				IAmb	IAmb	07 14 19.6	
	comp=Z,12nm,0.9s						
SEY	**Seymchan**	**82.35**	**27**	LR	LR	07 55 44.2	
	comp=Z,2µm,18.2s,baz=292,slow=39						
SEY	**Seymchan**	**82.35**	**27**	*e*P	**P**	**07 14 09.9**	**0.0**
SEY				pmax	pmax		
	comp=Z,25nm,1.5s						
MA2	**Magadan**	**82.49**	**30**	IAMs_20	IAMs_20	07 56 19.6	
	comp=Z,933nm,18.0s						
IVI	**Ivigtut**	**82.50**	**331**	*i* P	**P**	**07 14 12.3**	**+1.7**
EUNU	**Eureka**	**83.55**	**353**	P	**P**	**07 14 16.4**	**+0.5**
JCJ	**Chichijima**	**84.09**	**64**	LR	LR	07 51 05.8	
	comp=Z,274nm,21.6s,baz=270,slow=35						
FORT	**Forrest**	**85.72**	**123**	P	**P**	**07 14 24.9**	**-2.7**
BILL	**Bilibino**	**85.84**	**20**	*e*P	**P**	**07 14 28.4**	**+0.8**
BILL				e*PP		07 14 32.9	
BILL				*e*		07 17 56.0	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BILL	**Bilibino**	**85.84**	**20**	P	**P**	**07 14 28.3**	**+0.7**
BILL				IAmb	IAmb	07 14 37.5	
	comp=Z,18nm,1.1s						
BILL				IAMs_20	IAMs_20	07 55 38.6	
	comp=Z,704nm,20.0s						
WRA	**Warramunga Arr**	**87.94**	**111**	P	**P**	**07 14 36.9**	**-1.9**
	comp=Z,4.5nm,0.7s,baz=297,slow=4.1,SNR=37						
WRA				PKKP	**PKKPbc**	**07 32 20.9**	**-4.0**
	comp=Z,0.3nm,0.7s,baz=106,slow=2.7,SNR=4.9						
	comp=Z,4.5nm,0.7s						
WRAB	**Tennant Creek**	**87.95**	**111**	P	**P**	**07 14 35.4**	**-3.4**
WRAB				pmax	pmax		
	comp=Z,48nm,1.6s						
WRAB	**Tennant Creek**	**87.95**	**111**	P	**P**	**07 14 35.4**	**-3.4**
PETK	**Petropavlovsk-**	**88.16**	**35**	LR	LR	07 59 16.4	
	comp=Z,878nm,18.5s,baz=292,slow=39						
ASAR	**Alice Springs**	**88.56**	**115**	P	**P**	**07 14 39.6**	**-2.0**
	comp=Z,3.6nm,0.6s,baz=287,slow=4.7,SNR=35						
ASAR				PKKPbc	**PKKPbc**	**07 32 21.5**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=114,slow=2.8,SNR=4.8						
ASAR				LR	LR	07 48 37.1	
	comp=Z,364nm,21.2s,baz=299,slow=32						
	comp=Z,3.6nm,0.6s						
ASAR	**Alice Springs**	**88.56**	**115**	P	**P**	**07 14 38.6**	**-3.0**
AS31	**Alice Springs**	**88.57**	**115**	P	**P**	**07 14 38.5**	**-3.2**
RES	**Resolute Bay**	**88.99**	**352**	LR	LR	07 58 18.5	
	comp=Z,918nm,20.1s,baz=52,slow=38						
RCBR	**Riachuelo**	**89.14**	**264**	*e*P	**P**	**07 14 44.9**	**+0.4**
GUMO	**Guam**	**89.70**	**76**	LR	LR	07 52 23.8	
	comp=Z,145nm,21.8s,baz=272,slow=34						
FRB	**Frobisher Bay**	**90.07**	**337**	LR	LR	07 57 54.8	
	comp=Z,521nm,20.5s,baz=42,slow=37						
NBAN	**Anadia - AL**	**90.43**	**260**	*e*P	**P**	**07 14 50.2**	**-0.3**
NBMA	**Muriti-CE**	**92.26**	**263**	*e*P	**P**	**07 15 00.0**	**+0.9**
NBMO	**Morrinhos-CE**	**92.53**	**267**	*e*P	**P**	**07 14 59.9**	**-0.4**
A21K	**Barrow**	**92.65**	**9**	IAMs_20	IAMs_20	07 58 34.3	
	comp=Z,721nm,22.0s						
SNAA	**Sanae**	**92.95**	**195**	LR	LR	07 49 01.2	
	comp=Z,534nm,21.8s,baz=10.0,slow=31						
SCHQ	**Schefferville**	**94.10**	**329**	P	**P**	**07 15 05.4**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=43,slow=3.7,SNR=7.9						
SCHQ				LR	LR	08 00 18.4	
	comp=Z,249nm,18.3s,baz=44,slow=37						
	comp=Z,0.9nm,0.4s						
A36M	**Sachs Harbour**	**94.11**	**359**	IAMs_20	IAMs_20	08 03 35.1	
	comp=Z,785nm,20.0s						
NBPS	**Pedro II - PI**	**94.15**	**267**	*e*P	**P**	**07 15 08.1**	**+0.2**
RDOG	**Red Dog Mine**	**94.36**	**12**	IAMs_20	IAMs_20	07 59 41.5	
	comp=Z,798nm,20.0s						
CMC01	**Camacan, BA**	**94.84**	**255**	*e*P	**P**	**07 15 11.7**	**+0.8**
GUA01	**Guaratinga, BA**	**95.39**	**254**	*e*P	**P**	**07 15 14.4**	**+1.1**
GAMB	**Gambell**	**95.53**	**18**	IAMs_20	IAMs_20	08 04 55.4	
	comp=Z,620nm,18.0s						
TOLK	**Toolik Lake Re**	**96.10**	**8**	IAMs_20	IAMs_20	08 01 11.4	
	comp=Z,692nm,21.0s						
ANM	**Nome**	**96.67**	**15**	IAMs_20	IAMs_20	08 01 09.4	
	comp=Z,592nm,18.0s						
SHEM	**Shemya Is, Ala**	**97.11**	**31**	LR	LR	08 03 08.2	
	comp=Z,514nm,21.8s,baz=300,slow=38						
STKA	**Stephens Creek**	**97.17**	**121**	LR	LR	07 54 17.5	
	comp=Z,803nm,20.7s,baz=276,slow=32						
PMG	**Port Moresby**	**97.44**	**98**	LR	LR	08 03 56.0	
	comp=Z,91nm,18.2s,baz=280,slow=38						
INK	**Inuvik**	**97.75**	**2**	LR	LR	08 04 59.4	
	comp=Z,790nm,21.9s,baz=356,slow=39						
H21K	**Melozitna Rive**	**98.39**	**10**	IAMs_20	IAMs_20	08 06 36.9	
	comp=Z,631nm,20.0s						
CTA	**Charters Tower**	**98.86**	**108**	LR	LR	07 57 12.6	
	comp=Z,314nm,20.2s,baz=266,slow=34						
H24K	**Noodor Dome**	**98.97**	**8**	IAMs_20	IAMs_20	08 05 10.3	
	comp=Z,541nm,18.0s						
I23K	**Minto, Yukon-K**	**99.41**	**9**	IAMs_20	IAMs_20	08 07 40.9	
	comp=Z,578nm,20.0s						
POKR	**Poker Plat Res**	**99.71**	**8**	IAMs_20	IAMs_20	08 09 11.0	
	comp=Z,672nm,19.0s						
MDM	**Murphy Dome**	**99.75**	**8**	IAMs_20	IAMs_20	08 07 31.9	
	comp=Z,458nm,18.0s						
TCOL	**CIGO, UAF Yank**	**99.89**	**8**	IAMs_20	IAMs_20	08 09 02.5	
	comp=Z,594nm,21.0s						
COLA	**College**	**99.89**	**8**	IAMs_20	IAMs_20	08 08 52.5	
	comp=Z,551nm,21.0s						
NEA2	**Nenana**	**99.97**	**9**	IAMs_20	IAMs_20	08 07 11.8	
	comp=Z,594nm,20.0s						
CCB	**Clear Creek Bu**	**100.11**	**8**	IAMs_20	IAMs_20	08 08 15.4	
	comp=Z,560nm,20.0s						
BPAW	**Bear Paw Mtn.**	**100.13**	**10**	IAMs_20	IAMs_20	08 06 54.0	
	comp=Z,483nm,19.0s						
WRH	**Wood River Hil**	**100.23**	**9**	IAMs_20	IAMs_20	08 08 16.7	
	comp=Z,585nm,21.0s						
K20K	**Telida**	**100.25**	**12**	IAMs_20	IAMs_20	08 05 55.3	
	comp=Z,578nm,21.0s						
BWN	**Browne**	**100.31**	**9**	IAMs_20	IAMs_20	08 07 52.3	
	comp=Z,586nm,19.0s						
KTH	**Kantishna Hill**	**100.65**	**10**	IAMs_20	IAMs_20	08 02 09.7	
	comp=Z,530nm,21.0s						
EGAK	**Eagle**	**100.77**	**6**	IAMs_20	IAMs_20	08 06 08.9	
	comp=Z,568nm,22.0s						
RND	**Reindeer**	**101.12**	**9**	IAMs_20	IAMs_20	08 08 16.2	
	comp=Z,772nm,20.0s						
L19K	**White Mountain**	**101.16**	**12**	IAMs_20	IAMs_20	08 06 24.2	
	comp=Z,566nm,22.0s						
SCRK	**Sand Creek**	**101.25**	**7**	IAMs_20	IAMs_20	08 06 29.5	
	comp=Z,677nm,20.0s						
RIDG	**Independent Ri**	**101.37**	**7**	IAMs_20	IAMs_20	08 05 55.8	
	comp=Z,594nm,20.0s						
K27K	**Chicken**	**101.41**	**6**	IAMs_20	IAMs_20	08 06 01.8	
	comp=Z,502nm,20.0s						
M19K	**Big River Lodg**	**101.50**	**12**	IAMs_20	IAMs_20	08 07 09.3	
	comp=Z,725nm,20.0s						
DHY	**Denali Highway**	**101.66**	**9**	IAMs_20	IAMs_20	08 04 13.5	
	comp=Z,588nm,21.0s						
CUT	**Chulitna**	**101.83**	**10**	IAMs_20	IAMs_20	08 11 19.9	
	comp=Z,503nm,18.0s						
L26K	**Log Cabin Wild**	**102.25**	**7**	IAMs_20	IAMs_20	08 05 49.9	
	comp=Z,605nm,22.0s						
N18K	**Kilae Creek**	**102.28**	**14**	IAMs_20	IAMs_20	08 03 22.8	
	comp=Z,741nm,21.0s						
L27K	**Beaver Creek,**	**102.38**	**6**	IAMs_20	IAMs_20	08 07 26.5	
	comp=Z,597nm,22.0s						
N19K	**Bonanza Creek**	**102.47**	**13**	IAMs_20	IAMs_20	08 07 17.8	
	comp=Z,569nm,20.0s						
GHO	**Glory Hole Cre**	**102.65**	**10**	IAMs_20	IAMs_20	08 12 07.6	
	comp=Z,532nm,18.0s						
SML	**Sawmill**	**102.71**	**10**	IAMs_20	IAMs_20	08 05 03.3	
	comp=Z,494nm,21.0s						
SCM	**Sheep Creek Mo**	**102.85**	**9**	IAMs_20	IAMs_20	08 02 03.8	
	comp=Z,452nm,19.0s						
M26K	**Nabesna, AK**	**102.89**	**7**	IAMs_20	IAMs_20	08 05 59.0	
	comp=Z,682nm,21.0s						
YKA	**Yellowknife Ar**	**102.93**	**354**	PP	PP	07 19 52.1	-7.4
	comp=Z,1.4nm,1.1s,baz=6.1,slow=6.0,SNR=6.0						
YKA				PKKP	**PKKPdf**	**07 31 53.3**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=186,slow=3.7,SNR=6.2						
M27K	**Edge Creek, AK**	**103.06**	**6**	IAMs_20	IAMs_20	08 07 35.5	
	comp=Z,553nm,20.0s						
O19K	**Port Alsworth**	**103.06**	**13**	IAMs_20	IAMs_20	08 04 21.5	
	comp=Z,728nm,21.0s						
KNK	**Knik Glacier**	**103.06**	**10**	IAMs_20	IAMs_20	08 07 03.5	
	comp=Z,647nm,22.0s						
O18K	**Koktuh Hills**	**103.17**	**14**	IAMs_20	IAMs_20	08 09 08.4	
	comp=Z,673nm,19.0s						
M30M	**Minto, Yukon**	**103.30**	**4**	IAMs_20	IAMs_20	08 07 08.8	
	comp=Z,616nm,22.0s						
KLU	**Klutina**	**103.38**	**9**	IAMs_20	IAMs_20	08 04 43.0	
	comp=Z,709nm,22.0s						
N25K	**Chitina, Valde**	**103.46**	**8**	IAMs_20	IAMs_20	08 10 09.0	
	comp=Z,648nm,20.0s						
P18K	**Big Mountain,**	**103.58**	**14**	IAMs_20	IAMs_20	08 07 21.2	
	comp=Z,581nm,21.0s						
GLB	**Gilahina Butte**	**103.72**	**8**	IAMs_20	IAMs_20	08 09 20.9	
	comp=Z,495nm,20.0s						
GLI	**Glacier Island**	**103.79**	**9**	IAMs_20	IAMs_20	08 02 44.7	
	comp=Z,463nm,18.0s						
M31M	**Drury Creek, Y**	**103.81**	**3**	IAMs_20	IAMs_20	08 08 59.4	
	comp=Z,674nm,20.0s						
LONY	**Lake Ozonia**	**103.97**	**324**	IAMs_20	IAMs_20	08 06 11.3	
	comp=Z,653nm,20.0s						
VRDI	**Verde Repeater**	**103.97**	**8**	IAMs_20	IAMs_20	08 07 08.6	
	comp=Z,544nm,21.0s						
BMRM	**Bremner River**	**104.07**	**8**	IAMs_20	IAMs_20	08 05 49.2	
	comp=Z,652nm,20.0s						
BARN	**Barnard Glacie**	**104.35**	**7**	IAMs_20	IAMs_20	08 11 02.6	
	comp=Z,645nm,20.0s						
Q19K	**Cape Douglas,**	**104.36**	**13**	IAMs_20	IAMs_20	08 05 44.7	
	comp=Z,636nm,20.0s						
N31M	**Braeburn, Yuko**	**104.45**	**4**	IAMs_20	IAMs_20	08 07 52.2	
	comp=Z,612nm,19.0s						
ISLE	**Juniper Island**	**104.72**	**7**	IAMs_20	IAMs_20	08 04 52.3	
	comp=Z,635nm,20.0s						
GDSD	**La Dsirade Is**	**107.09**	**292**	IAMs_20	IAMs_20	08 01 24.7	
	comp=Z,563nm,20.0s						
ANWB	**Willy Bob**	**107.25**	**294**	IAMs_20	IAMs_20	08 04 01.9	
	comp=Z,580nm,19.0s						
FDF	**Fort de France**	**107.72**	**291**	IAMs_20	IAMs_20	08 10 38.1	
	comp=Z,566nm,18.0s						
BIM	**Bigot**	**107.72**	**290**	IAMs_20	IAMs_20	08 06 53.2	
	comp=Z,414nm,19.0s						
TDBA	**Terre de Bas,**	**107.77**	**292**	IAMs_20	IAMs_20	08 01 55.5	
	comp=Z,616nm,19.0s						
SSPA	**Standing Stone**	**108.32**	**322**	IAMs_20	IAMs_20	08 07 47.5	
	comp=Z,592nm,22.0s						
ERPA	**Erie**	**108.61**	**324**	IAMs_20	IAMs_20	08 05 49.2	
	comp=Z,445nm,20.0s						
GRGR	**Grenville**	**109.06**	**288**	IAMs_20	IAMs_20	08 04 34.8	
	comp=Z,491nm,20.0s						
M53A	**WI Miller and**	**109.44**	**324**	IAMs_20	IAMs_20	08 05 30.1	
	comp=Z,450nm,20.0s						
WRAK	**Wrangell Islan**	**109.69**	**2**	IAMs_20	IAMs_20	08 14 53.6	
	comp=Z,598nm,21.0s						
COWI	**Conover**	**110.51**	**332**	IAMs_20	IAMs_20	08 08 41.0	
	comp=Z,651nm,21.0s						
AAM	**Ann Arbor**	**110.52**	**326**	IAMs_20	IAMs_20	08 07 01.7	
	comp=Z,539nm,20.0s						
O53A	**New Philadelph**	**110.53**	**323**	IAMs_20	IAMs_20	08 12 31.9	
	comp=Z,561nm,20.0s						
SJG	**San Juan**	**110.93**	**296**	IAMs_20	IAMs_20	08 06 40.3	
	comp=Z,560nm,21.0s						
P52A	**Corning**	**111.46**	**323**	IAMs_20	IAMs_20	08 08 48.7	
	comp=Z,539nm,18.0s						
AGMN	**Agassiz Nation**	**111.55**	**337**	IAMs_20	IAMs_20	08 10 33.4	
	comp=Z,658nm,20.0s						
ACSO	**Alum Creek Sta**	**111.55**	**324**	IAMs_20	IAMs_20	08 10 53.0	
	comp=Z,582nm,21.0s						
CNNC	**Cliffs of the**	**111.59**	**317**	IAMs_20	IAMs_20	08 11 21.1	
	comp=Z,723nm,21.0s						
P49A	**Miami Univ. Ec**	**113.00**	**325**	IAMs_20	IAMs_20	08 12 04.4	
	comp=Z,639nm,21.0s						
DGMT	**Dagmar**	**114.16**	**343**	IAMs_20	IAMs_20	08 11 12.4	
	comp=Z,558nm,21.0s						
TZTN	**Tazewell**	**114.34**	**322**	IAMs_20	IAMs_20	08 15 08.9	
	comp=Z,590nm,21.0s						
HDIL	**Hopedale**	**114.73**	**328**	IAMs_20	IAMs_20	08 19 11.1	
	comp=Z,601nm,19.0s						
SDDR	**Presa de Saban**	**114.99**	**299**	IAMs_20	IAMs_20	08 11 34.9	
	comp=Z,632nm,20.0s						
ECSD	**EROS Data Cent**	**115.62**	**335**	IAMs_20	IAMs_20	08 11 42.2	
	comp=Z,482nm,20.0s						
EGMT	**Eagleton**	**116.02**	**346**	IAMs_20	IAMs_20	08 14 36.3	
	comp=Z,491nm,20.0s						
GOGA	**Godfrey**	**116.34**	**319**	IAMs_20	IAMs_20	08 15 07.8	
	comp=Z,576nm,20.0s						
RSSD	**Black Hills**	**118.01**	**340**	IAMs_20	IAMs_20	08 12 58.4	
	comp=Z,572nm,20.0s						
PLAL	**Pickwick Lake**	**118.09**	**323**	IAMs_20	IAMs_20	08 15 26.1	
	comp=Z,570nm,19.0s						
SDV	**Santo Domingo**	**118.46**	**288**	IAMs_20	IAMs_20	08 07 59.9	
	comp=Z,476nm,20.0s						
BOZ	**Bozeman (W)**	**118.73**	**347**	IAMs_20	IAMs_20	08 16 06.2	
	comp=Z,460nm,20.0s						
LRAL	**Lakeview Retre**	**118.80**	**321**	IAMs_20	IAMs_20	08 19 45.8	
	comp=Z,412nm,20.0s						
OXF	**Oxford**	**119.20**	**324**	IAMs_20	IAMs_20	08 16 20.4	
	comp=Z,554nm,20.0s						
E04D	**Cinebar**	**119.43**	**356**	IAMs_20	IAMs_20	08 07 22.5	
	comp=Z,610nm,22.0s						
FLWY	**Flagg Ranch**	**119.95**	**345**	IAMs_20	IAMs_20	08 15 53.4	
	comp=Z,594nm,20.0s						
PLID	**Pearl Lake**	**120.08**	**350**	IAMs_20	IAMs_20	08 15 08.7	
	comp=Z,610nm,20.0s						
OGNE	**Ogallala**	**120.11**	**337**	IAMs_20	IAMs_20	08 14 33.0	
	comp=Z,596nm,22.0s						
BMO	**Blue Mountains**	**120.51**	**351**	IAMs_20	IAMs_20	08 18 28.2	
	comp=Z,514nm,20.0s						
MTDJ	**Mount Denham**	**120.59**	**301**	IAMs_20	IAMs_20	08 11 56.1	
	comp=Z,615nm,21.0s						
PDAR	**Pinedale Array**	**120.89**	**344**	PKP	**PKiKP**	**07 20 40.0**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=70,slow=3.3,SNR=20						
PHWY	**Pilot Hill**	**121.00**	**340**	IAMs_20	IAMs_20	08 18 44.5	
	comp=Z,481nm,20.0s						
AHID	**Auburn Hatcher**	**121.28**	**345**	IAMs_20	IAMs_20	08 16 45.8	
	comp=Z,541nm,21.0s						
VBMS	**Vicksburg**	**121.49**	**323**	IAMs_20	IAMs_20	08 15 26.0	
	comp=Z,521nm,21.0s						
TBTG	**Tabatinga, AM**	**121.71**	**274**	*e*P	**PKiKP**	**07 20 43.4**	**0.0**
WVOR	**Wild Horse Val**	**123.08**	**352**	IAMs_20	IAMs_20	08 20 09.1	
	comp=Z,632nm,22.0s						
SMCO	**Snowmass**	**123.42**	**340**	IAMs_20	IAMs_20	08 21 03.4	
	comp=Z,585nm,20.0s						
PLCA	**Paso Flores**	**123.45**	**230**	PKP	**PKiKP**	**07 20 44.5**	**-1.7**
	comp=Z,1.0nm,0.7s,baz=45,slow=6.3,SNR=6.6						
WMOK	**Wichita Mounta**	**123.96**	**331**	IAMs_20	IAMs_20	08 24 59.8	
	comp=Z,425nm,20.0s						
ELK	**Elko**	**124.14**	**348**	IAMs_20	IAMs_20	08 16 46.2	
	comp=Z,569nm,21.0s						
NATX	**Nacogdoches**	**124.19**	**325**	IAMs_20	IAMs_20	08 20 40.6	
	comp=Z,529nm,20.0s						
MVCO	**Mesa Verde**	**125.70**	**341**	IAMs_20	IAMs_20	08 16 27.1	
	comp=Z,559nm,22.0s						
NVAR	**Mina Array Bea**	**126.94**	**350**	PKP	**PKiKP**	**07 20 53.5**	**0.0**
	comp=Z,3.4nm,0.7s,baz=10,slow=1.3,SNR=26						
ANMO	**Albuquerque**	**127.04**	**338**	IAMs_20	IAMs_20	08 20 15.4	
	comp=Z,474nm,20.0s						
OTAV	**Otavalo**	**128.71**	**282**	IAMs_20	IAMs_20	08 14 58.5	
	comp=Z,481nm,21.0s						
ESPN	**Las Esperanzas**	**129.22**	**299**	IAMs_20	IAMs_20	08 14 20.0	
	comp=Z,477nm,22.0s						
MNTX	**Cornudas Mount**	**129.47**	**335**	IAMs_20	IAMs_20	08 22 48.0	
	comp=Z,488nm,19.0s						
TXAR	**Lajitas Array**	**130.75**	**331**	PKP	**PKPdf**	**07 20 59.0**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=112,slow=1.3,SNR=13						
CNGN	**Cerro Negro**	**131.09**	**301**	IAMs_20	IAMs_20	08 28 52.4	
	comp=Z,376nm,21.0s						
CRIN	**San Cristobal**	**131.28**	**301**	IAMs_20	IAMs_20	08 01 02.4	
	comp=Z,301nm,18.0s						
PPT2	**Papeete2**	**159.19**	**102**	*e*LR	LR	08 15 40.1	
	comp=Z,933nm,28.5s						
TAOE	**Nuku Hiva Isla**	**167.23**	**67**	*e*SS	SS	07 48 02.6	+27
TAOE	**Nuku Hiva Isla**	**167.23**	**67**	*e*LR	LR	08 19 37.4	
	comp=Z,638nm,28.4s						

IDC 05 07:04:36.3±9.0, 23°.14S×120°.81E, h0^{km}, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=85.1km s-min=54.6km az=70.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**6.75**	**43**	Pn	Pn	07 06 17.6	+0.8
	baz=270,slow=20						
FITZ				Sn	Sn	07 07 36.1	+1.6
	baz=266,slow=11						
ASAR	**Alice Springs**	**12.04**	**95**	Pn	Pn	07 07 27.9	-1.4
	0.1nm,0.3s,baz=273,slow=12,SNR=3.0						
ASAR				Sn	Sn	07 09 48.0	+3.6
	0.1nm,0.3s,baz=274,slow=23,SNR=4.3						
	0.3nm,0.5s						
I07AU	**WARRAMUNGA INF**	**12.98**	**78**	*i*		08 24 25.0	
	baz=252,slow=308,SNR=4.3						
WRA	**Warramunga Arr**	**12.99**	**78**	Pn	Pn	07 07 42.0	-0.3
	0.1nm,0.3s,baz=257,slow=12,SNR=6.7						
WRA				Sn	Sn	07 10 08.4	+0.8
	0.1nm,0.3s,baz=268,slow=22,SNR=0.9						
	0.3nm,0.6s						

OMAN 05 07:31:53.4±0.7, 14°.18N×51°.50E, h37^{km}±182^{km}, ml3.5/2, Error ellipse: s-maj=31.9km s-min=10.9km az=240.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTO	**Aybut**	**3.60**	**28**	P	Pn	07 32 46.6	-0.2
	SNR=8.5						
ABTO				S	Sn	07 33 28.8	+0.7
RBK	**Rabkut**	**4.21**	**38**	P	Pn	07 32 55.5	+0.5
	SNR=14						
RBK				S	Sn	07 33 43.9	+0.9
WHFO	**Wadi Hawf**	**4.31**	**30**	P	Pn	07 32 56.7	+0.2
WHFO				S	Sn	07 33 46.7	+1.1
DMTO	**DMTO**	**4.83**	**43**	P	Pn	07 33 03.8	+0.1
	SNR=8.9						
DMTO				S	Sn	07 33 59.3	+0.9
DOK	**Doka**	**5.08**	**29**	P	Pn	07 33 07.4	+0.3
	SNR=5.5						
DOK				S	Sn	07 34 05.5	+1.0

DDA ***05*** *07:34:08.0±0.0, 36°.71N×26°.54E, h4^{km}±5^{km}, MW4.1*

IDC ***05*** *07:34:09.1±1.0, 36°.90N×26°.42E, h0^{km}, mb4.0/6, mbtmp3.9/8, ML3.4/2, Error ellipse: s-maj=35.2km s-min=15.0km az=145.0*

ISK ***05*** *07:34:09.6, 36°.85N×26°.53E, h9^{km}, ML3.8/19*

ATH ***05*** *07:34:10.1, 36°.80N×26°.67E, h31^{km}±1^{km}, ML3.8/8, Error ellipse: s-maj=2.1km s-min=0.9km az=98.0*

THE ***05*** *07:34:11.1, 36°.84N×26°.65E, h13^{km}, ML3.8/8, Error ellipse: s-maj=1.0km s-min=0.3km az=76.0*

ISC 05 07:34:10.1±1.0, 36°.81N±0°.02×26°.56E±0°.02, h10^{km}±7^{km}, n84, σ1°.01/124, mb4.0/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	**Kos Island**	**0.34**	**100**	P	**Pg**	**07 34 17.0**	**+0.2**
KOSK				S	**Sg**	**07 34 21.8**	**+0.5**
KOSK	**Kos Island**	**0.34**	**100**	P	**Pg**	**07 34 16.9**	**+0.1**
KOSK				S	**Sg**	**07 34 21.3**	**-0.1**
	27µm,0.4s						

NISR	Nisiros	0.50	113	P	Pg	07 34 20.1	+0.4
NISR				AML	AML	07 34 26.7	
	comp=N,16413µm,0.5s						
NISR				S	Sg	07 34 26.8	+0.5
NISR				AML	AML	07 34 28.6	
	comp=E,56298µm,0.5s						
NISR	Nisiros	0.50	113	P	Pg	07 34 20.1	+0.4
NISR				S	Sg	07 34 26.8	+0.5
	comp=E,18µm,0.5s						
BODT	Bodrum	0.65	67	P	Pg	07 34 22.6	-0.1
BODT				S	Sg	07 34 30.8	-0.5
BODT	Bodrum	0.65	67	PG	Pg	07 34 22.6	-0.1
BODT				SG	Sb	07 34 31.9	-0.9
YKAV	Yalikavak-Bodr	0.66	61	PG	Pb	07 34 23.2	-0.5
YKAV				SG	Sb	07 34 32.2	-0.7
BDRM	Kayabasi	0.75	70	P	Pg	07 34 24.2	-0.4
BDRM				S	Sg	07 34 34.6	+0.2
DIDI	Didim-Aydin	0.79	44	PG	Pb	07 34 25.6	-0.2
DAT	Datca	0.82	95	P	Pg	07 34 25.8	-0.1
DAT				S	Sg	07 34 36.0	-0.6
DAT	Datca	0.82	95	PG	Pb	07 34 26.4	-0.1
DAT	Datca	0.82	95	P	Pg	07 34 25.7	-0.3
DAT				S	Sg	07 34 36.3	-0.3
DAT				*i* AML	AML	07 34 39.0	
	comp=E,2µm,0.3s						
DDIM	Aydin, Didim	0.84	40	P	Pb	07 34 26.0	-0.9
DDIM				S	Sn	07 34 40.0	-0.6
DDIM				*i* AML	AML	07 34 47.0	
	comp=E,7µm,0.6s						
APE	Apeiranthos	0.86	288	P	Pn	07 34 28.4	-0.1
APE				S	Sn	07 34 41.6	+0.5
APE	Apeiranthos	0.86	288	P	Pn	07 34 28.3	-0.1
APE				S	Sn	07 34 41.4	+0.3
SMG	Samos	0.93	14	P	Pn	07 34 28.2	-1.0
SMG				S	Sn	07 34 40.8	-1.7
SMG				AML	AML	07 34 44.4	
	comp=E,9458µm,0.3s						
SMG				AML	AML	07 34 44.7	
	comp=N,18354µm,0.2s						
SMG	Samos	0.93	14	P	Pb	07 34 27.6	-0.7
SMG				S	Sb	07 34 39.9	-0.7
	comp=N,8µm,0.3s						
THR8	Santorini-Mono	0.96	246	P	Pn	07 34 29.4	-0.2
CMBO	Columbo, Santo	0.99	250	P	Pn	07 34 30.1	+0.1
CMBO				S	Sn	07 34 45.0	+0.9
CMBO				AML	AML	07 34 50.7	
	comp=N,22434µm,0.6s						
CMBO				AML	AML	07 34 55.1	
	comp=E,12910µm,0.6s						
CMBO	Columbo, Santo	0.99	250	P	Pn	07 34 30.2	+0.1
SFIR	Foira Santorin	0.99	247	P	Pn	07 34 30.3	+0.2
THT2	Imerovigli	0.99	248	P	Pn	07 34 30.3	+0.2
SAP4	Santorini-Oia	1.01	251	P	Pn	07 34 31.3	+1.0
SAP4				S	Sn	07 34 46.4	+1.8
SAP4	Santorini-Oia	1.01	251	P	Pn	07 34 30.9	+0.5
SAP4				S	Sn	07 34 46.6	+1.9
	comp=E,11µm,0.4s						
THR3	Thira Island,	1.01	247	P	Pn	07 34 30.5	+0.1
SNT5	Nea Kammeni, S	1.02	247	P	Pn	07 34 30.6	+0.1
SNT5				S	Sn	07 34 46.5	+1.6
GCAM	G?zelcaml?	1.04	31	PG	Pb	07 34 29.7	-0.5
GCAM				SG	Sn	07 34 45.1	-0.2
GCAM	G?zelcaml?	1.04	31	P	Pb	07 34 29.6	-0.6
GCAM				S	Sn	07 34 45.0	-0.4
THR6	Thira Island,	1.04	245	P	Pn	07 34 30.7	0.0
SAP3	Santorini-Thir	1.05	250	P	Pn	07 34 31.1	+0.3
SAP3				S	Sn	07 34 47.5	+1.9
SAP3	Santorini-Thir	1.05	250	P	Pn	07 34 31.1	+0.3
THR5	Thira Island,	1.05	249	P	Pn	07 34 30.9	0.0
MLSB	Milas	1.09	63	PN	Pg	07 34 30.4	-0.6
DGB	zmir	1.27	12	P	Pn	07 34 33.1	-0.7
DGB				S	Sn	07 34 53.9	+3.0
DGB				*i* AML	AML	07 34 55.0	
	comp=E,1µm,0.3s						
TNSA	Tinos	1.33	304	P	Pg	07 34 35.2	-0.5
TNSA				S	Sg	07 34 54.6	+1.6
TNSA				AML	AML	07 34 57.3	
	comp=E,7448µm,0.8s						
TNSA				AML	AML	07 34 59.7	
	comp=N,5476µm,0.3s						
KARP	Karpathos	1.35	159	P	Pn	07 34 34.5	-0.5
KARP				S	Sb	07 34 50.9	-2.0
KARP				AML	AML	07 34 55.5	
	comp=E,8415µm,0.5s						
KARP				AML	AML	07 34 55.7	
	comp=N,5678µm,0.6s						
KARP	Karpathos	1.35	159	P	Pn	07 34 34.4	-0.6
KARP				S	Sb	07 34 52.8	0.0
	comp=N,4µm,0.6s						
TURN	Turunc	1.35	91	PN	Pb	07 34 35.3	-0.2
TURN	Turunc	1.35	91	P	Pn	07 34 34.3	-0.7
TURN				S	Sb	07 34 52.4	-0.5
AYDN	Tasoluk	1.35	51	P	Pn	07 34 34.6	-0.5
AYDN				S	Sg	07 34 56.3	+2.7
ARG	Arkhangelos	1.39	115	P	Pn	07 34 35.0	-0.6
ARG	Arkhangelos	1.39	115	P	Pn	07 34 34.5	-1.1
ARG				S	Sn	07 34 51.9	-2.2
	comp=N,1µm,0.7s						
YER	Yerkesik	1.42	76	PN	Pb	07 34 36.6	-0.1
ZEYE	Izmir, Urla-Ze	1.43	358	P	Pn	07 34 35.4	-0.7
ZEYE				S	Sg	07 34 58.9	+2.9
MULA	Mugla, Merkez-	1.48	72	P	Pb	07 34 37.3	-0.4
MULA				S	Sg	07 34 57.4	-0.2
MULA				*i* AML	AML	07 35 09.0	
	comp=N,309nm,1.0s						
URLA	Izmir	1.55	1	PN	Pn	07 34 37.4	-0.4
URLA	Izmir	1.55	1	P	Pn	07 34 36.7	-1.1
URLA				S	Sg	07 35 03.0	+3.1
AYDB	Zeytinkoy-Aydi	1.55	43	PN	Pb	07 34 38.0	-1.0
BLCB	Balcova	1.62	14	P	Pn	07 34 37.8	-0.9
BLCB	Balcova	1.62	14	PN	Pn	07 34 38.3	-0.4
CHOS	Chios island	1.63	346	P	Pn	07 34 38.6	-0.3
CHOS				S	Sb	07 34 59.5	-1.3
CHOS				AML	AML	07 35 08.4	
	comp=N,2784µm,0.5s						
CHOS				AML	AML	07 35 11.4	
	comp=E,3166µm,0.6s						
CHOS	Chios island	1.63	346	P	Pn	07 34 38.0	-0.9
CHOS				S	Sn	07 34 58.6	-1.4
	comp=E,1µm,0.6s						
DALY	Dalyan (Mula)	1.68	89	PN	Pb	07 34 40.5	-0.6
ZKR	Zakros	1.71	189	P	Pn	07 34 40.2	+0.1
ZKR				S	Sn	07 35 01.2	-0.8
ZKR				AML	AML	07 35 08.0	
	comp=E,4067µm,0.5s						
ZKR				AML	AML	07 35 09.0	
	comp=N,1561µm,0.6s						
ZKR	Zakros	1.71	189	P	Pn	07 34 40.1	+0.1
ZKR				S	Sn	07 35 02.3	+0.3
	comp=N,2µm,0.6s						
MHLO	Agia Marina, M	1.74	267	P	Pb	07 34 42.0	-0.1
MHLO				S	Sg	07 35 04.2	-1.7
MHLO				AML	AML	07 35 16.4	
	comp=E,5495µm,0.9s						
MHLO				AML	AML	07 35 17.7	
	comp=N,5812µm,0.8s						
MHLO	Agia Marina, M	1.74	267	P	Pb	07 34 40.9	-1.2
FRMA	Ierapetra Chan	1.91	201	P	Pn	07 34 42.7	0.0
TAVA	DENIZLI_Tavas	1.99	70	P	Pn	07 34 44.8	+0.8
TAVA				S	Sg	07 35 16.0	+2.0
TAVA				*i* AML	AML	07 35 29.0	
	comp=N,159nm,1.0s						
FETY	Fethiye	2.03	94	PN	Pb	07 34 46.0	-1.2
IDI	Anoyia	2.03	222	Pn	Pn	07 34 44.6	+0.1
	comp=N,11nm,0.3s,baz=49,slow=14,SNR=48						
IDI				Sn	Sn	07 35 10.3	+0.3
	comp=N,29nm,0.3s,baz=309,slow=22,SNR=7.2						
	comp=N,40nm,0.5s						
IDI	Anoyia	2.03	222	P	Pn	07 34 44.6	+0.1
IDI	Anoyia	2.03	222	P	Pn	07 34 44.4	-0.1
KARY	Karystos	2.08	306	P	Pb	07 34 45.9	-2.1
KARY				S	Sb	07 35 11.8	-2.2
DKL	Dikili	2.27	7	PN	Pn	07 34 47.8	+0.1
KULA	Kula-Manisa	2.38	44	PN	Pn	07 34 50.2	+0.9
VLY	Voula,Athens	2.44	296	P	Pn	07 34 50.4	+0.4
SIGR	SIGRI	2.46	347	P	Pn	07 34 50.3	0.0
IMMV	Iera Moni Meta	2.48	238	P	Pn	07 34 51.3	+0.7
IMMV	Iera Moni Meta	2.48	238	P	Pn	07 34 51.1	+0.5
AKAS	Kas	2.52	102	PN	Pn	07 34 52.3	+1.1
KYMI	Kymi, Euboea I	2.67	314	P	Pn	07 34 53.5	+0.3
ELL	Elmali	2.69	90	PN	Pn	07 34 55.3	+1.8
EZN	Ezine	3.02	357	PN	Pn	07 34 57.9	0.0
KORT	Korkueli	3.04	85	PN	Pn	07 34 59.9	+1.5
BOZC	Bozcaada	3.06	353	PN	Pn	07 34 57.9	-0.6
TVSB	Tavsanli	3.49	40	PN	Pn	07 35 05.8	+1.2
BRTR	Keskin Array B	6.28	60	Pn	Pn	07 35 44.7	+1.7
	comp=N,0.8nm,0.3s,baz=242,slow=15,SNR=11						
	comp=N,2.5nm,0.5s						
ESDC	Sonseca Array	24.09	286	P	P	07 39 25.1	-0.7
	comp=N,2.0nm,0.7s,baz=81,slow=9.6,SNR=15						
	comp=N,2.0nm,0.7s						
TORD	Torodi Ar. Bea	32.42	230	P	P	07 40 40.9	+0.5
	comp=N,1.5nm,0.5s,baz=34,slow=8.7,SNR=29						
	comp=N,1.5nm,0.5s						
KURBB	Kurchatov Arra	39.21	53	P	P	07 41 39.5	+1.3
	comp=N,1.4nm,0.6s,baz=279,slow=8.9,SNR=4.7						
	comp=N,1.4nm,0.6s						
MKAR	Makanchi Array	41.93	58	P	P	07 42 01.8	+0.9
	comp=N,3.0nm,0.8s,baz=293,slow=5.8,SNR=14						
	comp=N,3.0nm,0.8s						
ZALV	Zalesovo Beam	43.05	47	P	P	07 42 10.6	+0.8
	comp=N,1.4nm,0.5s,baz=266,slow=7.5,SNR=5.7						
	comp=N,1.4nm,0.5s						
SCHQ	Schefferville	62.67	319	P	P	07 44 34.1	-0.7
	comp=N,0.8nm,0.6s,baz=79,slow=5.2,SNR=4.1						
	comp=N,0.8nm,0.6s						

IDC 05 07:35:24.1±3.0**,54°.38N×87°.25E,h0^{km},mbtmp3.0**/2**,ML2.5**/2**,Error ellipse: s-maj=25.1km s-min=19.6km az=43.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.49	254	*i*		07 43 55.5	
	baz=73,slow=321,SNR=4.5						
ZALV	Zalesovo Beam	1.49	254	Pg	Pn	07 35 49.6	-2.5
	1.1nm,0.3s,baz=70,slow=16,SNR=21						
ZALV				Lg	Lg	07 36 13.2	
	2.5nm,0.3s,baz=74,slow=25,SNR=14						
KURBB	Kurchatov Arra	6.51	238	Pn	Pn	07 37 01.6	+0.5
	0.1nm,0.3s,baz=56,slow=14,SNR=10						
KURBB				Sn	Sn	07 38 14.2	-1.9
	baz=28,slow=18,SNR=1.6						
KURBB				Lg	Lg	07 38 49.8	
	0.1nm,0.3s,baz=57,slow=36,SNR=3.3						
	1.7nm,0.8s						
MKAR	Makanchi Array	8.22	205	Pn	Pn	07 37 26.4	+1.9
	0.1nm,0.3s,baz=19,slow=9.4,SNR=3.4						
	0.5nm,0.7s						

IDC 05 07:58:55.8±2.3**,54°.07N×86°.46E,h0^{km},mbtmp3.5**/2**,ML3.3**/2**,Error ellipse: s-maj=19.3km s-min=12.1km az=59.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.97	264	*i*		08 05 33.4	
	baz=80,slow=317,SNR=4.0						
ZALV	Zalesovo Beam	0.97	264	Pg	Pg	07 59 12.7	-1.7
	2.8nm,0.3s,baz=84,slow=17,SNR=15						
ZALV				Lg	Lg	07 59 28.9	
	3.6nm,0.3s,baz=84,slow=28,SNR=16						
KURBB	Kurchatov Arra	5.96	238	Pn	Pn	08 00 26.3	+1.1
	0.4nm,0.3s,baz=54,slow=13,SNR=21						
KURBB				Lg	Lg	08 02 03.4	
	0.1nm,0.3s,baz=52,slow=28,SNR=4.2						
	2.3nm,0.4s						
MKAR	Makanchi Array	7.75	202	Pn	Pn	08 00 50.9	+1.0
	0.8nm,0.3s,baz=24,slow=13,SNR=24						
MKAR				Lg	Lg	08 03 00.5	
	0.1nm,0.3s,baz=24,slow=16,SNR=9.5						
	0.9nm,0.3s						

IDC 05 07:59:42.4±3.5**,53°.54N×87°.94E,h0^{km},mbtmp3.3**/2**,ML2.8**/2**,Error ellipse: s-maj=36.6km s-min=23.7km az=78.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	284	*i*		08 11 46.9	
	0.2nm,0.8s,baz=99,slow=322,SNR=9.4						
ZALV	Zalesovo Beam	1.90	284	Pn	Pn	08 00 15.4	-0.6
	1.8nm,0.3s,baz=103,slow=14,SNR=5.7						
ZALV				Sn	Sn	08 00 40.6	0.0
	2.7nm,0.3s,baz=106,slow=26,SNR=3.9						
KURBB	Kurchatov Arra	6.49	247	Pn	Pn	08 01 19.9	+0.8
	0.2nm,0.3s,baz=61,slow=14,SNR=11						
KURBB				Lg	Lg	08 03 07.8	
	0.1nm,0.3s,baz=62,slow=30,SNR=2.2						
	2.7nm,0.5s						
MKAR	Makanchi Array	7.66	210	Pn	Pn	08 01 36.1	+0.9
	0.1nm,0.3s,baz=32,slow=14,SNR=4.4						
	0.8nm,0.7s						

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*IDC **05** 08:05:07.8±1.4,7°.13S×104°.86E,h0^{km},mb3.7/4,mbtmp3.7/5,ML3.7/1,MS2.7/1,Error ellipse: s-maj=45.1km s-min=23.7km az=39.0*

*DJA **05** 08:05:14.4±0.8,7°S±7°×10°5E±°,h10^{km},M3.9/8,MLv3.9/8*

ISC 05 08:05:12.7±1.0**,7°.09S**±0°.08×**105°.19E**±0°.06**,h23^{km},n24,σ1^{s}41**/21**,mb3.6**/4**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	1.36	87	P	Pb	08 05 37.3	-0.2
DBJI	Dramaga	1.64	71	P	Pb	08 05 41.3	-1.0
DBJI				S	Sb	08 06 02.0	-0.5
KASI	Kota Agung	1.70	336	P	Pb	08 05 42.8	-0.5
KASI				S	Sb	08 06 05.0	+0.8
BLSI	Bandar Lampung	1.71	2	P	Pb	08 05 42.3	-1.2
CBJI	Citeko	1.78	68	P	Pb	08 05 44.2	-0.4
CNJI	Cibinong	1.94	97	P	Pn	08 05 45.8	+1.5
KLI	Kotabumi	2.23	351	P	Pb	08 05 50.8	-1.6
LWLI	Liwa	2.34	331	P	Pb	08 05 53.6	-0.7
LEM	Lembang	2.43	84	Pn	Pb	08 05 54.6	-1.2
	12nm,0.3s,baz=147,slow=23,SNR=11						
LEM				Sn	Sb	08 06 26.9	+1.6
	15nm,0.3s,baz=304,slow=23,SNR=3.5						
LEM				LR	LR	08 06 31.5	
	comp=Z,136nm,20.2s,baz=310,slow=30						
	115nm,0.7s						
MDSI	Maura Dua	2.77	339	P	Pn	08 05 58.3	+2.6
TPI	Tanjungpandan	4.95	30	P	Pn	08 06 26.3	+0.5
PPBI	Pangkal Pinang	4.98	11	P	Pn	08 06 29.2	+3.0
ABJI	Asem Bagus	9.00	95	P	Pn	08 07 28.3	+7.0
H01W3	Cape Leeuwin H	28.86	165	T	T	08 41 31.9	
	baz=345,slow=76,SNR=14						
H01W1	Cape Leeuwin H	28.88	165	T	T	08 41 32.5	
	baz=345,slow=76,SNR=12						
H01W2	Cape Leeuwin H	28.88	165	T	T	08 41 33.1	
	baz=345,slow=76,SNR=21						
WRA	Warramunga Arr	31.02	117	P	P	08 11 29.3	+0.3
	1.0nm,0.8s,baz=290,slow=11,SNR=14						
WRA				PcP	PcP	08 14 24.4	-0.4
	0.2nm,0.6s,baz=305,slow=2.0,SNR=5.4						
	1.0nm,0.8s						
ASAR	Alice Springs	32.12	124	P	P	08 11 39.2	+0.6
	0.6nm,0.8s,baz=302,slow=7.5,SNR=4.5						
	0.6nm,0.8s						
H08S2	Diego Garcia H	32.43	267	T	T	08 45 57.4	
	baz=91,slow=76,SNR=31						
H08S3	Diego Garcia H	32.44	267	T	T	08 45 54.9	
	baz=91,slow=76,SNR=61						
H08S1	Diego Carcia H	32.45	267	T	T	08 45 58.8	
	baz=91,slow=76,SNR=24						
STKA	Stephens Creek	41.93	131	P	P	08 13 01.7	-0.2
	2.0nm,0.7s,baz=293,slow=9.1,SNR=3.9						
	2.0nm,0.7s						
MKAR	Makanchi Array	57.38	341	P	P	08 14 56.9	-2.4
	0.2nm,0.3s,baz=152,slow=8.3,SNR=7.4						
	0.2nm,0.3s						
TXAR	Lajitas Array	144.96	47	PKPbc	PKPab	08 24 48.1	-0.1
	0.2nm,0.5s,baz=336,slow=2.0,SNR=7.4						

IDC 05 08:09:03.3±5.1**,30°.24S×177°.99W,h0^{km},mb4.1**/3**,mbtmp4.1**/3**,Error ellipse: s-maj=188.7km s-min=50.9km az=150.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.52	257	P	P	08 15 55.1	+1.7
	4.1nm,0.8s,baz=87,slow=8.7,SNR=4.7						
	4.1nm,0.8s						
ASAR	Alice Springs	43.13	267	P	P	08 17 05.8	+0.1
	0.7nm,0.5s,baz=105,slow=7.6,SNR=13						
	0.7nm,0.5s						
WRA	Warramunga Arr	44.10	272	P	P	08 17 13.2	-0.4
	1.6nm,0.5s,baz=111,slow=7.9,SNR=41						
	1.6nm,0.5s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	08 28 38.7	-2.4
	1.1nm,0.6s,baz=42,slow=3.5,SNR=7.3						

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*NEIC **05** 08:21:38.6±2.0,20°.28N±0°.09×121°.84E±0°.09,h10^{km}±1^{km},mb4.5/28,Error ellipse: s-maj=14.7km s-min=14.2km az=161.0*

*NIED **05** 08:21:39.4,20°.63N×121°.94E,h0^{km},MW4.7,Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.83; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-0.87; M$_{r\theta}$0.11; M$_{\theta\phi}$-0.52; M$_{\phi r}$-0.46; Fault plane solution: M$_0$1.09000×10^{16} NP1:ϕ_s46.00000°, δ38.00000°,λ124.00000°. NP2:ϕ_s185.00000°,δ59.00000°, λ66.00000°.*

*JMA **05** 08:21:39.4±0.7,21°N±3°×12°2E±°,h0^{km},MV4.9/14, PHILIPPINE ISL REGION*

*MAN **05** 08:21:42.0,20°.06N×121°.81E,h1^{km},mb5.3,ML4.3,MS4.5, Hypocentre not reviewed by the ISC*

MAN INTENSITY IV- SABTANG BATANES; INTENSITY III - MAHATAO IVANA UYUGAN AND BASCO BATANES.

*IDC **05** 08:21:43.1±3.2,20°.28N×122°.00E,h45^{km}±31^{km},mb3.9/20, mbtmp4.2/22,ML4.3/2,MS3.7/16,Error ellipse: s-maj=20.3km s-min=13.1km az=69.0*

*BJI **05** 08:21:48.0±0.0,20°.78N×121°.30E,h30^{km},mb4.3/30, mB4.5/14,ML3.9/2,Ms4.1/14,Ms7 3.7/12*

ISC 05 08:21:38.6±0.4**,20°.34N**±0°.03×**121°.90E**±0°.05**,h10^{km},n136,σ1^{s}76**/133**,mb4.4**/39**,MS3.8**/15**,5C-8D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Gonzaga	2.09	176	⇓*e*P	Pb	08 22 16.1	-0.5
APYP	Conner	2.54	194	⇑*e*P	Pn	08 22 20.3	+0.4
APYP				*e*S	Sg	08 22 56.1	-4.1
TWG	Pinlang	2.59	343		Pn	08 22 17.6	-3.0
SIPP	Brgy, Tapao	2.76	210	⇓*i*P	Pb	08 22 24.5	-3.6
SIPP				*e*S	Sg	08 23 07.2	-0.1
YULB	Yu-li	3.09	350		Pn	08 22 27.0	-0.5
TPUB	Ta-pu	3.18	338		Pn	08 22 28.0	-0.7
SAMP	Sagada Mountai	3.37	196	⇓*e*P	Pn	08 22 33.6	+2.2
SAMP				*e*S	Sn	08 23 12.6	+1.1
CAUP	Cauayan	3.37	181	⇓*e*P	Pb	08 22 34.2	-4.3
CAUP				*e*S	Sg	08 23 25.0	-2.1
SSLB	Suanglung	3.54	346		Pn	08 22 33.9	+0.1
NACB	Ninganchiao	3.83	356		Pn	08 22 36.5	-1.2
HATJ	Hateruma jima	4.10	25	P	Pn	08 22 41.4	0.0
HATJ				*e*S	Sn	08 23 26.8	-2.7
JYNG	Yonagunijimaku	4.21	13	*e*P	Pn	08 22 43.2	+0.3
JYNG				*e*S	Sn	08 23 29.9	-2.3
YOJ	Yonaguni jima	4.23	14	Pn	Pn	08 22 43.7	+0.5
YOJ	Yonaguni jima	4.23	14	*e*P	Pn	08 22 43.8	+0.5
YOJ				*e*S	Sn	08 23 30.9	-1.9
SMPP	San Manuel, Pa	4.32	196	⇓*e*P	Pn	08 22 46.1	+1.6
SMPP				*e*S	Sn	08 23 36.2	+1.3
IRIF	Iriomote-Funau	4.33	23	P	Pn	08 22 44.6	+0.1
IRIF				S	Sn	08 23 31.7	-3.3
YHNB	Yeheng	4.34	354		Pn	08 22 45.8	+1.0
JKRS	Kuro-shima	4.35	26	P	Pn	08 22 44.9	+0.1
JKRS				*e*S	Sn	08 23 33.6	-1.9
BOLP	Bolinao	4.36	206	⇓*e*P	Pn	08 22 47.9	+3.0
BOLP				*e*S	Sb	08 23 43.0	-5.0
JIJ	Ishigaki jima	4.52	27	P	Pn	08 22 46.5	-0.6
JIJ				S	Sn	08 23 37.5	-2.2
BALP	Baler	4.58	184	⇓*e*P	Pn	08 22 49.5	+1.5
BALP				*e*S	Sn	08 23 40.9	-0.4
TATO	Taipei	4.63	355		Pn	08 22 49.8	+1.1
JTJ	Tarama	5.01	31	*e*P	Pn	08 22 53.7	-0.2
JTJ				*e*S	Sn	08 23 49.0	-2.9
KNMB	Chin-men Tao	5.24	322		Pn	08 22 54.5	-2.5
JIRB	Irabujima	5.40	33	*e*P	Pn	08 22 59.9	+0.6
JIRB				*e*S	Sn	08 23 59.8	-1.6
JMJ2	Miyako jima3	5.41	35	*e*P	Pn	08 23 01.1	+1.7
JMJ2				*e*S	Sn	08 24 01.3	-0.5
JOGS	Gusukube	5.47	36	*e*P	Pn	08 23 01.1	+0.9
JOGS				*e*S	Sn	08 24 02.4	-0.8
JIKM	Ikemajima	5.52	34	*e*S	Sn	08 24 03.5	-0.8
JCNP	Jose Panganiba	6.06	173	⇑*e*P	Pn	08 23 11.1	+2.7
LQP	Lukban	6.20	183	*e*P	Pn	08 23 12.4	+2.0
GQP	Guinayangan	6.42	175	⇑*e*P	Pn	08 23 16.2	+3.0
JOW	Kunigami	8.72	41	P	Pn	08 23 44.9	0.0
	12nm,0.3s,baz=295,slow=27,SNR=16						
JOW				LR	LR	08 26 34.6	
	comp=Z,336nm,21.7s,baz=205,slow=34						
	26nm,0.3s						
JOW	Kunigami	8.72	41	Pn	Pn	08 23 44.5	-0.3
QIZ	Qiongzhong	11.43	266	P	Pn	08 24 22.1	+0.1
QIZ				S	Sn	08 26 29.3	-0.6
QIZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QIZ				LR	LR		
	comp=N,500nm,11.8s						
QIZ				LR	LR		
	comp=E,310nm,12.4s						
QIZ				LR	LR		
	comp=Z,340nm,12.4s						
NJ2	Nanjing	11.98	347	*e*P	Pn	08 24 32.3	+2.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=N,190nm,12.6s						
NJ2				LR	LR		
	comp=E,740nm,13.0s						
NJ2				LR	LR		
	comp=Z,310nm,15.2s						
DAV	Davao City (W)	13.66	164	LR	LR	08 30 26.8	
	comp=Z,228nm,21.0s,baz=348,slow=39						
JNU	Nakatsue	15.04	30	LR	LR	08 30 51.6	
	comp=Z,159nm,19.9s,baz=202,slow=36						
TIA	Tai'an	16.36	346	⇑P	P	08 25 32.4	+1.1
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
KSAR	Wonju Array Be	17.82	16	P	P	08 25 49.1	+1.6
KSRS	Korea Array	17.85	16	P	P	08 25 48.5	+0.8
	0.4nm,0.3s,baz=198,slow=13,SNR=18						
	5.8nm,0.8s						
HNS	HongShan	18.12	341	⇓P	P	08 25 53.2	+2.5
HNS				*e*S	Sn	08 29 10.9	-1.7
HNS				pmax	pmax		
	comp=Z,18nm,1.0s						
HNS				LR	LR		
	comp=N,230nm,15.6s						
HNS				LR	LR		
	comp=E,470nm,17.7s						
HNS				LR	LR		
	comp=Z,270nm,12.5s						
PZH	PanZhiHua	19.48	292	P	Pn	08 26 08.5	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,60nm,5.3s						
SBUM	Sibu	20.13	209	P	Pn	08 26 13.7	-1.1
SBUM				IAmb	IAmb	08 26 15.3	
	comp=Z,34nm,0.9s						
BJI	Beijing	20.24	347	P	Pn	08 26 16.1	+0.2
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
JGF	Kuroka	20.40	39	P	Pn	08 26 18.4	+0.5
MJAR	Matsushiro Arr	21.55	38	P	P	08 26 28.6	+0.4
	comp=Z,1.5nm,0.7s,baz=194,slow=9.4,SNR=4.7						
	comp=Z,1.5nm,0.7s						
CHTO	Chiang Mai	21.68	270	P	P	08 26 30.2	+0.5
CMAR	Chiang Mai Arr	21.73	269	P	P	08 26 31.9	+1.7
	comp=Z,1.8nm,0.4s,baz=68,slow=9.1,SNR=16						
CMAR				LR	LR	08 34 48.7	
	comp=Z,84nm,20.4s,baz=80,slow=36						
	comp=Z,1.8nm,0.4s						
CMAR	Chiang Mai Arr	21.73	269	P	P	08 26 30.3	0.0
KSM	Kuching	21.90	213	P	P	08 26 30.7	-1.4
KSM				IAmb	IAmb	08 26 39.3	
	comp=Z,18nm,1.1s						
MTKI	Muara Teweh, K	22.23	199	P	P	08 26 39.3	+3.7
LZH	Lanzhou	22.29	319	⇑P	P	08 26 43.0	+6.7
LZH				pP	sP	08 26 51.0	+11
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
LZH				LR	LR		
	comp=N,330nm,13.6s						
LZH				LR	LR		
	comp=E,410nm,14.6s						
LZH				LR	LR		

	comp=Z,280nm,14.6s						
GUMO	**Guam**	**22.96**	**103**	LR	LR	08 33 35.0	
	comp=Z,77nm,20.5s,baz=244,slow=31						
TTSI	**Tana Toraja**	**23.32**	**185**	P	P	08 27 00.6	+14
XLT	**XiLinHaoTe**	**23.99**	**350**	*e*P	**P**	**08 26 51.5**	**-2.0**
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,220nm,4.9s						
BBKI	**Banjar Baru**	**24.64**	**197**	P	**P**	**08 27 02.1**	**+2.5**
KAPI	**Kappang**	**25.28**	**185**	P	**P**	**08 27 08.2**	**+2.9**
	comp=Z,7.8nm,0.6s,baz=84,slow=7.0,SNR=4.6						
BKSI	**Bulukumba**	**25.56**	**184**	P	**P**	**08 27 04.4**	**-3.4**
IPM	**Ipoh**	**25.71**	**235**	P	**P**	**08 27 08.3**	**-1.0**
IPM				IAmb	IAmb	08 27 10.9	
	comp=Z,9.9nm,0.8s						
PSI	**Prapat**	**28.39**	**235**	LR	LR	08 39 40.4	
	comp=Z,179nm,18.4s,baz=18,slow=38						
GOMU	**GeErMu**	**28.48**	**309**	P	P	08 27 40.7	+6.2
GOMU				pP	sP	08 27 42.1	+3.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	**Ulaanbaatar**	**29.98**	**340**	P	**P**	**08 27 47.2**	**-0.2**
WMQ	**Urumqi**	**36.85**	**317**	*e*P	**P**	**08 28 48.7**	**+1.5**
WMQ				pP	sP	08 28 54.5	+3.0
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
MK31	**Makanchi Array**	**41.60**	**319**	P	**P**	**08 29 26.4**	**-0.4**
MKAR	**Makanchi Array**	**41.60**	**319**	P	**P**	**08 29 28.6**	**+1.8**
	comp=Z,2.5nm,0.6s,baz=110,slow=9.1,SNR=28						
MKAR				LR	LR	08 48 26.8	
	comp=Z,74nm,18.0s,baz=74,slow=38						
	comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array**	**41.60**	**319**	P	**P**	**08 29 26.7**	**-0.1**
WB0	**Warramunga Arr**	**41.69**	**162**	P	**P**	**08 29 25.5**	**-2.2**
WB0				IAmb	IAmb	08 29 30.9	
	comp=Z,10nm,0.7s						
MAKZ	**Makanchi**	**41.80**	**319**	P	**P**	**08 29 28.6**	**+0.1**
WRAB	**Tennant Creek**	**41.84**	**162**	P	**P**	**08 29 27.1**	**-1.8**
WRA	**Warramunga Arr**	**41.84**	**162**	P	**P**	**08 29 27.6**	**-1.4**
	comp=Z,9.1nm,0.8s,baz=343,slow=9.0,SNR=39						
	comp=Z,9.1nm,0.8s						
WRA	**Warramunga Arr**	**41.84**	**162**	P	**P**	**08 29 27.4**	**-1.5**
WB2	**Warramunga Arr**	**41.85**	**162**	P	**P**	**08 29 27.5**	**-1.5**
YAK	**Yakutsk**	**42.01**	**5**	LR	LR	08 47 03.5	
	comp=Z,52nm,19.1s,baz=64,slow=36						
H11N1	**WAKE ISLAND Hy**	**42.18**	**83**	T	T	09 14 33.3	
	baz=278,slow=74,SNR=88						
H11N2	**WAKE ISLAND Hy**	**42.18**	**83**	T	T	09 14 39.1	
	baz=278,slow=74,SNR=99						
H11S3	**WAKE ISLAND Hy**	**42.19**	**85**	T	T	09 14 38.5	
	baz=281,slow=74,SNR=178						
H11N3	**WAKE ISLAND Hy**	**42.20**	**83**	T	T	09 14 40.6	
	baz=278,slow=74,SNR=82						
H11S1	**WAKE ISLAND Hy**	**42.20**	**85**	T	T	09 14 33.7	
	baz=281,slow=74,SNR=180						
H11S2	**WAKE ISLAND Hy**	**42.20**	**85**	T	T	09 14 35.0	
	baz=281,slow=74,SNR=162						
PETK	**Petropavlovsk-**	**42.74**	**31**	LR	LR	08 47 11.7	
	comp=Z,65nm,19.4s,baz=188,slow=36						
KSH	**Kashi**	**43.62**	**306**	P	P	08 29 49.7	+6.2
KSH				pP	sP	08 29 57.2	+9.4
KSH				PP	**PcP**	**08 31 35.1**	**+4.2**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH				LR	LR		
	comp=Z,1µm,23.3s						
KSH				LR	LR		
	comp=Z,790nm,22.7s						
ZAA0	**Zalesovo Array**	**43.85**	**329**	P	**P**	**08 29 43.8**	**-1.1**
ZAA0				IAmb	IAmb	08 29 49.2	
	comp=Z,5.6nm,0.7s						
ZALV	**Zalesovo Beam**	**43.85**	**329**	P	**P**	**08 29 45.2**	**+0.4**
	comp=Z,7.8nm,0.7s,baz=124,slow=8.5,SNR=14						
	comp=Z,7.8nm,0.7s						
ZALV	**Zalesovo Beam**	**43.85**	**329**	P	**P**	**08 29 44.2**	**-0.6**
AS31	**Alice Springs**	**45.27**	**164**	P	**P**	**08 29 55.8**	**-0.8**
ASAR	**Alice Springs**	**45.27**	**164**	P	**P**	**08 29 56.4**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=354,slow=7.1,SNR=37						
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**45.27**	**164**	P	**P**	**08 29 55.1**	**-1.5**
AAK	**Ala-Archa**	**45.42**	**310**	LR	LR	08 51 37.1	
	comp=Z,116nm,19.4s,baz=96,slow=39						
KURK	**Kurchatov**	**45.49**	**322**	P	**P**	**08 29 57.8**	**-0.2**
KURK				IAmb	IAmb	08 30 06.1	
	comp=Z,4.2nm,0.7s						
KURBB	**Kurchatov Arra**	**45.50**	**322**	P	**P**	**08 29 58.9**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=118,slow=7.4,SNR=12						
	comp=Z,2.7nm,0.6s						
SEY	**Seymchan**	**47.38**	**18**	P	**P**	**08 30 14.0**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=193,slow=8.4,SNR=3.7						
	comp=Z,0.5nm,0.3s						
GAR	**Garm**	**47.86**	**305**	P	**P**	**08 30 18.9**	**+1.9**
BVAR	**Borovoye Array**	**51.09**	**323**	P	**P**	**08 30 42.0**	**+0.8**
	comp=Z,0.4nm,0.4s						
	comp=Z,0.4nm,0.4s						
BRVK	**Borovoye**	**51.16**	**323**	P	**P**	**08 30 42.2**	**+0.5**
BRVK				IAmb	IAmb	08 30 50.6	
	comp=Z,5.9nm,0.8s						
TIXI	**Tiksi**	**51.48**	**3**	P	**P**	**08 30 43.0**	**-0.9**
NRIK	**Noril'sk**	**53.27**	**346**	P	**P**	**08 30 57.5**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=84,slow=5.3,SNR=5.7						
	comp=Z,2.1nm,0.4s						
NRIK	**Noril'sk**	**53.27**	**346**	P	**P**	**08 30 56.9**	**-0.4**
NRIK				IAmb	IAmb	08 31 00.8	
	comp=Z,4.1nm,0.8s						
STKA	**Stephens Creek**	**55.24**	**160**	P	**P**	**08 31 10.9**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=327,slow=7.1,SNR=6.0						
	comp=Z,1.3nm,0.6s						
ABKAR	**Akbulak array**	**56.63**	**316**	P	**P**	**08 31 21.3**	**-0.6**
ABKAR				IAmb	IAmb	08 31 28.9	
	comp=Z,8.8nm,1.4s						
AKTO	**Aktyubinsk**	**58.01**	**317**	P	**P**	**08 31 35.5**	**+3.9**
	comp=Z,2.0nm,0.5s,baz=103,slow=5.4,SNR=6.0						
ARU	**Arti**	**58.59**	**324**	P	**P**	**08 31 35.2**	**-0.3**
	comp=Z,1.6nm,0.2s,baz=150,slow=9.2,SNR=5.1						
ARU				LR	LR	08 59 25.8	
	comp=Z,64nm,18.8s,baz=106,slow=39						
	comp=Z,1.6nm,0.2s						
KBZ	**Khabaz**	**68.42**	**310**	P	**P**	**08 32 41.1**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=25,slow=7.7,SNR=4.1						
	comp=Z,1.8nm,0.9s						
J20K	**Nowinta River**	**69.28**	**28**	P	**P**	**08 32 46.9**	**+1.1**
J20K				IAmb	IAmb	08 32 54.5	
	comp=Z,3.1nm,0.6s						
H21K	**Melozitna Rive**	**69.74**	**26**	P	**P**	**08 32 50.4**	**+1.8**
H21K				IAmb	IAmb	08 32 54.4	
	comp=Z,4.6nm,0.9s						
P19K	**Oil Pt**	**70.11**	**33**	P	**P**	**08 32 49.9**	**-1.1**
RAYN	**Ar Rayn**	**70.14**	**288**	P	**P**	**08 32 50.4**	**-1.5**
RAYN				IAmb	IAmb	08 32 57.4	
	comp=Z,3.5nm,0.9s						
ILAR	**Eielson Array**	**72.33**	**27**	P	**P**	**08 33 04.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=277,slow=4.8,SNR=7.9						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**73.34**	**339**	P	**P**	**08 33 10.8**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=70,slow=8.7,SNR=1.7						
	comp=Z,1.2nm,0.7s						
BCAR	**Beaver Creek A**	**74.90**	**28**	P	**P**	**08 33 20.0**	**+0.5**
M27K	**Edge Creek, AK**	**75.04**	**29**	P	**P**	**08 33 20.1**	**-0.3**
FINES	**FINESS Array B**	**75.09**	**330**	P	**P**	**08 33 19.6**	**-0.9**
	comp=Z,3.8nm,0.8s,baz=72,slow=6.2,SNR=11						
	comp=Z,3.8nm,0.8s						
VSU	**Vasula**	**75.55**	**327**	*e*P	**P**	**08 33 22.0**	**-1.2**
AKASG	**Malin Array Be**	**76.19**	**319**	P	**P**	**08 33 26.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=57,slow=7.1,SNR=8.2						
	comp=Z,0.4nm,0.3s						
MEF	**Metsahovi**	**76.22**	**329**	*e*P	**P**	**08 33 26.9**	**-0.1**
NACGM	**Naroch**	**76.48**	**324**	*i* P	**P**	**08 33 28.5**	**-0.2**
MTSE	**Matsula**	**76.95**	**328**	*e*P	**P**	**08 33 30.8**	**-0.3**
PABE	**Paberze**	**77.85**	**325**	*e*P	**P**	**08 33 35.9**	**-0.4**
UPP	**Uppsala**	**79.54**	**330**	*e*P	**P**	**08 33 44.6**	**-0.9**
BURAR	**Bucovina Array**	**79.60**	**317**	P	**P**	**08 33 45.7**	**-0.6**
BURAR				IAmb	IAmb	08 33 54.2	
	comp=Z,4.4nm,0.9s						
BUR08	**Bucovina Ar. S**	**79.60**	**317**	P	**P**	**08 33 45.7**	**-0.6**
BUR08				IAmb	IAmb	08 33 53.9	
	comp=Z,7.2nm,1.1s						
VIKU	**Vikbolandet**	**80.51**	**329**	*e*P	**P**	**08 33 50.6**	**-0.2**
KOLS	**Kolonicke sedl**	**81.01**	**319**	*e*P	P	08 33 59.6	+5.9
DLBC	**Dease Lake**	**81.91**	**30**	LR	LR	09 11 50.8	
	comp=Z,62nm,19.2s,baz=212,slow=37						
NB2	**NORSAR Subarra**	**81.92**	**333**	P	**P**	**08 33 56.6**	**-1.8**
	comp=Z,4.8nm,1.0s,baz=61,slow=5.6						
NOA	**NORSAR Array B**	**81.92**	**333**	P	**P**	**08 33 57.5**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=62,slow=5.1,SNR=3.8						
NOA				LR	LR	09 12 42.1	
	comp=Z,48nm,19.0s,baz=310,slow=37						
	comp=Z,1.5nm,0.7s						
VTS	**Vitosha**	**82.60**	**313**	P	**P**	**08 34 01.5**	**-1.0**
LANS	**Liptovska Anna**	**82.65**	**320**	*e*P	**P**	**08 34 04.0**	**+1.6**
VYHS	**Vyhne**	**83.29**	**319**	*e*P	**P**	**08 34 05.6**	**-0.1**
JAVC	**Velka Javorina**	**83.85**	**320**	*e*P	**P**	**08 34 09.0**	**+0.4**
VRAC	**Vranov**	**84.31**	**321**	*e*P	**P**	**08 34 10.9**	**0.0**
RUE	**Ruedersdorf**	**84.56**	**324**	*e*P	**P**	**08 34 12.5**	**+0.5**
CLL	**Collm**	**85.52**	**323**	*e*P	**P**	**08 34 18.0**	**+1.1**
CLL				*i* Pmax		08 34 21.2	
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**86.23**	**321**	P	**P**	**08 34 21.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=37,slow=6.7,SNR=3.4						
	comp=Z,0.3nm,0.3s						
YKA	**Yellowknife Ar**	**86.24**	**23**	P	**P**	**08 34 19.8**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=309,slow=4.6,SNR=20						
YKA				LR	LR	09 16 40.7	
	comp=Z,89nm,18.5s,baz=308,slow=38						
	comp=Z,1.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**91.40**	**332**	LR	LR	09 20 44.3	
	comp=Z,260nm,19.0s,baz=352,slow=39						
FRB	**Frobisher Bay**	**95.80**	**5**	LR	LR	09 22 43.4	
	comp=Z,68nm,19.0s,baz=201,slow=38						

IDC 05 08:25:47.5±3.4**,53°.45N**×**87°.55E,h0^{km},mbtmp2.8**/2**,**
ML2.2/2**,Error ellipse: s-maj=33.3km s-min=16.5km**
az=57.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**288**	*i*		08 36 31.7	
	baz=106,slow=323,SNR=5.7						
ZALV	**Zalesovo Beam**	**1.70**	**288**	Pg	Pn	08 26 18.8	+0.3
	0.6nm,0.3s,baz=107,slow=14,SNR=9.5						
ZALV				Lg	Lg	08 26 40.7	
	0.8nm,0.3s,baz=105,slow=24,SNR=7.1						
KURBB	**Kurchatov Arra**	**6.25**	**247**	Pn	Pn	08 27 21.9	+1.1
	baz=60,slow=14,SNR=3.3						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.47**	**209**	Pn	Pn	08 27 38.5	+0.8
	0.1nm,0.3s,baz=28,slow=13,SNR=4.4						
	0.2nm,0.4s						

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*NOU **05** 08:26:12.8,21°.70S×174°.11W,h60^{km},MLv4.6/8,Tonga Islands*
*IDC **05** 08:26:19.4±6.8,22°.02S×174°.96W,h114^{km}±52^{km},mb3.6/8, mbtmp4.0/9,MS3.9/4,Error ellipse: s-maj=67.1km s-min=21.1km az=143.0*
ISC 05 08:26:09.5±0.6**,22°.0S**±0°.1×**174°.30W**±0°.09**,h27^{km},n18,**
σ**2^{s}62**/15**,mb3.9**/8**,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.03**	**55**	P	**Pn**	**08 27 20.9**	**-2.3**
MSVF	**Nonsavu**	**8.37**	**299**	P	**Pn**	**08 28 11.4**	**+2.3**
	16nm,0.7s,baz=122,slow=17,SNR=9.7						
MSVF				LR	LR	08 30 54.2	
	comp=Z,1µm,18.8s,baz=86,slow=35						
MSVF	**Nonsavu**	**8.37**	**299**	P	**Pn**	**08 28 12.1**	**+3.0**
RAR	**Rarotonga**	**13.53**	**89**	LR	LR	08 33 18.8	
	comp=Z,303nm,20.1s,baz=255,slow=30						
RAR	**Rarotonga**	**13.53**	**89**	P	**Pn**	**08 29 20.4**	**+0.6**
DZM	**Mont Dzumac**	**17.86**	**266**	LR	LR	08 35 52.9	
	comp=Z,336nm,19.8s,baz=74,slow=33						
BKZ	**Black Stump Fm**	**18.82**	**203**	P	**Pn**	**08 30 31.1**	**+3.3**
HIZ	**Hauiti**	**18.90**	**207**	P	**Pn**	**08 30 32.3**	**+3.6**
STKA	**Stephens Creek**	**40.29**	**246**	P	**P**	**08 33 42.7**	**-1.9**
	1.8nm,0.8s,baz=94,slow=15,SNR=1.7						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**47.55**	**258**	P	**P**	**08 34 38.6**	**-4.4**
	2.1nm,0.7s,baz=102,slow=7.6,SNR=20						
ASAR				LR	LR	08 53 49.9	
	comp=Z,119nm,18.2s,baz=110,slow=35						
	2.1nm,0.7s						
WRA	**Warramunga Arr**	**47.82**	**263**	P	P	08 34 39.8	-5.4
	1.4nm,0.6s,baz=96,slow=8.0,SNR=26						
	1.4nm,0.6s						
PETK	**Petropavlovsk-**	**78.66**	**343**	P	**P**	**08 38 08.1**	**-0.7**
	2.9nm,0.6s,baz=107,slow=9.4,SNR=5.3						
	2.9nm,0.6s						
NVAR	**Mina Array Bea**	**79.81**	**41**	P	**P**	**08 38 17.6**	**+1.9**
	0.6nm,0.8s,baz=223,slow=9.4,SNR=5.8						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**85.00**	**56**	P	**P**	**08 38 45.6**	**+2.7**
	0.3nm,0.8s,baz=192,slow=8.0,SNR=2.6						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**89.06**	**11**	P	**P**	**08 39 01.0**	**-0.6**
	0.9nm,1.1s,baz=206,slow=8.0,SNR=3.6						
	0.9nm,1.1s						
YKA	**Yellowknife Ar**	**96.47**	**24**	P	**P**	**08 39 34.5**	**-1.3**
	0.2nm,0.7s,baz=245,slow=5.8,SNR=4.0						
	0.2nm,0.7s						
AKASG	**Malin Array Be**	**145.97**	**333**	PKPbc	**PKPdf**	**08 45 45.2**	**-0.5**
	0.4nm,0.3s,baz=40,slow=4.5,SNR=8.4						
BRTR	**Keskin Array B**	**150.40**	**313**	PKPbc	**PKPbc**	**08 45 57.6**	**-1.2**
	0.8nm,0.6s,baz=177,slow=5.8,SNR=2.6						

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*NNC **05** 08:33:08.0±1.5,51°.70N×75°.48E,h0^{km},mb3.2,mpv2.7, Error ellipse: s-maj=20.1km s-min=8.6km az=17.0, Suspected Mining explosion.*
*IDC **05** 08:33:10.7±1.1,51°.71N×75°.46E,h0^{km},mbtmp2.7/4, ML2.1/3,Error ellipse: s-maj=36.8km s-min=9.2km az=31.0*
ISC 05 08:33:10.1±1.4**,51°.7N**±0°.1×**75°.46E**±0°.07**,h0^{km},n10,**
σ**0^{s}94**/8**,5C-3D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.19**	**117**	Pn	**Pn**	**08 33 48.6**	**+0.9**
	0.2nm,0.3s,baz=301,slow=19,SNR=4.0						
KURBB				Lg	Lg	08 34 19.9	
	0.5nm,0.3s,baz=310,slow=34,SNR=11						
	2.6nm,0.5s						
KURBB	**Kurchatov Arra**	**2.19**	**117**	⇑Pg	**Pb**	**08 33 49.3**	**-1.3**
	3.4nm,0.5s						
KURBB				⇓Lg	Lg	08 34 17.5	
	34nm,0.7s						
KURK	**Kurchatov**	**2.20**	**114**	⇑Pg	**Pn**	**08 33 48.4**	**+0.6**
	2.7nm,0.5s						
KURK				⇑Lg	Lg	08 34 16.6	
	16nm,0.7s						
BVA4	**Borovoye Array**	**3.40**	**296**	⇓Lg	Lg	08 34 54.3	
	18nm,0.8s						
BVAR	**Borovoye Array**	**3.40**	**296**	Pn	**Pn**	**08 34 04.9**	**+0.5**
	0.6nm,0.4s						
BVAR				Lg	Lg	08 34 55.1	
OTUK	**Ortayu**	**3.96**	**212**	⇑Lg	Lg	08 35 15.4	
	5.8nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.13**	**64**	*i*		09 11 30.0	
	baz=252,slow=324,SNR=1.9						
ZALV	**Zalesovo Beam**	**6.13**	**64**	Pn	**Pn**	**08 34 42.3**	**+0.5**
	0.4nm,0.3s,baz=259,slow=13,SNR=6.4						
	1.6nm,0.4s						
MK31	**Makanchi Array**	**6.60**	**135**	⇑Sn	**Sn**	**08 36 04.5**	**+0.1**
	0.4nm,0.5s,baz=322,slow=22,SNR=4.0						
MK31				⇓Lg	Lg	08 36 37.8	
	3.4nm,0.7s,baz=328,slow=29,SNR=8.5						
MKAR	**Makanchi Array**	**6.60**	**135**	Pn	**Pn**	**08 34 48.7**	**+0.3**
	0.1nm,0.3s,baz=318,slow=12,SNR=5.1						
MKAR				Sn	**Sn**	**08 36 05.4**	**+1.0**
	0.1nm,0.3s,baz=318,slow=22,SNR=5.5						
MKAR				Lg	Lg	08 36 36.9	
	0.1nm,0.3s,baz=335,slow=20,SNR=3.9						
	0.4nm,0.6s						

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*DJA **05** 08:38:29.9±0.5,2°N±4°×12°7E±°,h94^{km}±8^{km},M4.4/12, mB4.8/6,mb4.6/5,MLv4.6/12,Mw(mB)4.1/6*
*NEIC **05** 08:38:30.0±1.5,1°.56N±0°.09×127°.12E±0°.10,h119^{km}±8^{km}, mb4.5/29,Error ellipse: s-maj=15.5km s-min=11.8km az=55.0*
*IDC **05** 08:38:30.1±2.2,1°.56N×127°.33E,h124^{km}±19^{km},mb4.1/13, mbtmp4.4/14,MS3.7/2,Error ellipse: s-maj=28.4km s-min=11.0km az=76.0*
*MAN **05** 08:38:41.8,2°.68N×126°.75E,h26^{km},mb5.3,ML4.3,MS4.4, Hypocentre not reviewed by the ISC*
ISC 05 08:38:27.9±0.4**,1°.61N**±0°.05×**127°.24E**±0°.08**,h103^{km},n88,**
σ**1^{s}41**/90**,mb4.6**/31**,6D,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.84**	**172**	Pn	**Pn**	**08 38 49.8**	**+2.9**
TNTI	**Ternate**	**0.84**	**172**	P	**Pn**	**08 38 50.0**	**+3.1**
LBMI	**Labuha**	**2.24**	**173**	P	**Pn**	**08 39 07.0**	**+3.2**
SGSI	**Sangihe**	**2.68**	**320**	P	**Pn**	**08 39 10.5**	**+0.9**
KMSI	**Cibinong**	**3.42**	**253**	P	**Pn**	**08 39 21.7**	**+2.3**
SANI	**Sanana**	**3.84**	**199**	P	**Pn**	**08 39 25.9**	**+0.8**
GTOI	**Gorontalo**	**4.34**	**257**	P	**Pn**	**08 39 35.3**	**+3.5**
DDMP	**Don Marcelino,**	**4.72**	**341**	⇓*e*P	**Pn**	**08 39 36.9**	**-0.1**
DDMP				*e*S	Sn	08 40 18.4	-12
LUWI	**Luwuk**	**5.19**	**240**	Pn	**Pn**	**08 39 43.4**	**+0.1**
AAI	**Ambon**	**5.34**	**170**	P	**Pn**	**08 39 47.8**	**+2.4**
MATI	**Mati**	**5.39**	**350**	⇓*e*P	**Pn**	**08 39 49.2**	**+3.2**
MATI				*e*S	**Sn**	**08 40 47.7**	**+0.8**
MRSI	**Marisa**	**5.42**	**258**	P	**Pn**	**08 39 47.4**	**+1.0**
	0.3nm1µm59nm,0.9s						
KCP	**Kidapawan**	**5.78**	**338**	⇓*i*P	**Pn**	**08 39 52.1**	**+0.8**
KCP				*i* S	**Sn**	**08 40 57.7**	**+1.3**
CTBH	**Cotabato--PC H**	**6.33**	**332**	*e*P	**Pn**	**08 39 59.7**	**+1.0**
CTBH				*i* S	**Sn**	**08 41 06.0**	**-3.6**
TOLI2	**Tolitoli**	**6.48**	**266**	Pn	**Pn**	**08 40 00.9**	**+0.1**
CGP	**Cagayan de Oro**	**7.26**	**340**	⇓*e*P	**Pn**	**08 40 11.8**	**+0.4**
PAGZ	**Pagadian**	**7.30**	**328**	⇓*e*P	**Pn**	**08 40 12.6**	**+0.6**
MPSI	**Mapaga**	**7.45**	**260**	P	**Pn**	**08 40 16.4**	**+2.4**
	0.1nm566nm12nm,0.6s						
GLSP	**General Luna,**	**8.20**	**352**	⇓*e*P	**Pn**	**08 40 25.7**	**+1.5**
SPSI	**Sidrap Palu**	**9.30**	**233**	P	**Pn**	**08 40 40.9**	**+1.8**
KAPI	**Kappang**	**9.96**	**229**	P	**Pn**	**08 40 51.4**	**+3.2**
	4.5nm,0.5s,baz=218,slow=20,SNR=3.9						
MTN	**Manton Dam**	**14.87**	**165**	Pn	**Pn**	**08 41 52.1**	**-0.8**
MTN	**Manton Dam**	**14.87**	**165**	P	**Pn**	**08 41 52.1**	**-0.8**
SBUM	**Sibu**	**15.04**	**273**		**Pn**	**08 41 53.2**	**-1.9**
KDU	**Kakadu**	**15.12**	**160**	P	**Pn**	**08 41 54.4**	**-1.7**
JAGI	**Jajag, Banyuwa**	**16.45**	**232**	Pn	**Pn**	**08 42 10.8**	**-1.9**
JAGI				IAmb	IAmb	08 42 16.6	
	comp=Z,41nm,1.3s						
KNRA	**Kununurra**	**17.24**	**175**		**P**	**08 42 21.9**	**-0.5**
KNRA				IAmb	IAmb	08 42 24.2	
	comp=Z,30nm,1.1s						
KNRA	**Kununurra**	**17.24**	**175**	P	**Pn**	**08 42 22.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.64**	**185**	P	**P**	**08 42 48.9**	**+0.2**
COEN	**Coen**	**22.10**	**135**	P	**P**	**08 43 15.2**	**+0.2**
WB0	**Warramunga Arr**	**22.37**	**162**	P	**P**	**08 43 17.2**	**-0.6**
YULB	**Yu-li**	**22.41**	**346**	P	**P**	**08 43 17.6**	**-0.6**
YULB				IAmb	IAmb	08 43 27.6	
	comp=Z,13nm,1.0s						
TPUB	**Ta-pu**	**22.50**	**344**	P	**P**	**08 43 18.7**	**-0.5**
WRA	**Warramunga Arr**	**22.52**	**162**	P	**P**	**08 43 18.7**	**-0.6**
	comp=Z,28nm,0.5s,baz=340,slow=11,SNR=301						
WRA				ScP	**ScP**	**08 50 35.2**	**-2.9**
	comp=Z,0.4nm,0.6s,baz=344,slow=3.2,SNR=5.1						
WRA				LR	LR	08 52 54.0	
	comp=Z,211nm,18.1s,baz=44,slow=38						
	comp=Z,28nm,0.5s						
WRA	**Warramunga Arr**	**22.52**	**162**	P	**P**	**08 43 17.0**	**-2.3**
SSLB	**Suanglung**	**22.88**	**345**	P	**P**	**08 43 22.9**	**0.0**
SSLB				IAmb	IAmb	08 43 25.7	
	comp=Z,26nm,1.3s						
YHNB	**Yeheng**	**23.62**	**347**	P	**P**	**08 43 30.0**	**+0.1**
YHNB				IAmb	IAmb	08 43 31.4	
	comp=Z,18nm,0.6s						
MBWA	**Marble Bar**	**23.79**	**198**	P	**P**	**08 43 30.6**	**-0.7**
PSA00	**Pilbara Seismi**	**24.14**	**197**	P	**P**	**08 43 33.6**	**-0.9**
QIS	**Mount Isa**	**25.14**	**152**	P	**P**	**08 43 44.0**	**+0.4**
MTSU	**Mount Surprise**	**25.83**	**140**	P	**P**	**08 43 51.8**	**+1.9**
AS31	**Alice Springs**	**25.94**	**166**	P	**P**	**08 43 50.6**	**-0.2**
AS31				IAmb	IAmb	08 43 55.4	
	comp=Z,5.9nm,0.3s						
ASAR	**Alice Springs**	**25.94**	**166**	P	**P**	**08 43 50.4**	**-0.5**
	comp=Z,7.0nm,0.5s,baz=350,slow=7.4,SNR=150						
ASAR				ScP	**ScP**	**08 50 45.0**	**-2.6**
	comp=Z,0.7nm,0.7s,baz=348,slow=4.0,SNR=4.7						
	comp=Z,7.0nm,0.5s						
WRKA	**Warakurna**	**26.50**	**178**	P	**P**	**08 43 55.8**	**-0.1**
NJ2	**Nanjing**	**31.30**	**346**	*e*P	**P**	**08 44 41.0**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
INKA	**Innaminka**	**31.94**	**157**	P	**P**	**08 44 44.2**	**+0.2**
FORT	**Forrest**	**32.21**	**179**	P	**P**	**08 44 45.8**	**-0.6**
MORW	**Morawa**	**32.33**	**199**	P	**P**	**08 44 47.4**	**0.0**
MORW				IAmb	IAmb	08 44 50.4	
	comp=Z,14nm,1.4s						
CMAR	**Chiang Mai Arr**	**32.42**	**303**	P	**P**	**08 44 49.5**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=139,slow=7.0,SNR=4.2						
	comp=Z,1.4nm,0.3s						
PZH	**PanZhiHua**	**34.83**	**318**	P	**P**	**08 45 10.4**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,6.5s						
BBOO	**Buckleboo**	**35.23**	**167**	P	**P**	**08 45 11.9**	**-0.7**
EIDS	**Eidsvold**	**35.38**	**141**	P	**P**	**08 45 13.9**	**-0.1**
EIDS				IAmb	IAmb	08 45 14.3	
	comp=Z,5.7nm,1.0s						
KSRS	**Korea Array**	**35.68**	**1**	P	**P**	**08 45 16.6**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=176,slow=9.7,SNR=8.0						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**08 45 18.8**	**-0.1**
	comp=Z,11nm,0.6s,baz=326,slow=8.7,SNR=28						
	comp=Z,11nm,0.6s						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**08 45 18.4**	**-0.5**
STKA				IAmb	IAmb	08 45 20.1	
	comp=Z,3.7nm,0.8s						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**08 45 19.1**	**+0.2**
MJAR	**Matsushiro Arr**	**36.21**	**15**	P	**P**	**08 45 20.9**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=178,slow=9.9,SNR=4.3						
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**36.21**	**15**	IAmb	IAmb	08 45 26.4	
	comp=Z,3.9nm,1.2s						
XAN	**Xi'an**	**36.53**	**334**	P	**P**	**08 45 24.1**	**+0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMSA	**Cobar Meteorol**	**37.33**	**154**	P	**P**	**08 45 31.1**	**+0.7**
ARMA	**Armidale**	**39.43**	**146**	P	**P**	**08 45 48.7**	**+0.5**
ARMA				IAmb	IAmb	08 45 50.1	
	comp=Z,9.0nm,0.9s						
ARMA	**Armidale**	**39.43**	**146**	P	**P**	**08 45 49.3**	**+1.1**
BJI	**Beijing**	**39.56**	**347**	P	**P**	**08 45 49.5**	**+0.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LZH	**Lanzhou**	**40.59**	**330**	*e*P	**P**	**08 45 56.7**	**-1.1**
LZH				sP	sP	08 46 41.7	+9.4
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
CAN	**Canberra**	**42.00**	**153**	P	**P**	**08 46 09.6**	**+0.5**
CAN				IAmb	IAmb	08 46 10.8	
	comp=Z,8.1nm,0.7s						
TOO	**Toolangi**	**42.49**	**158**	P	**P**	**08 46 14.2**	**+1.1**
TOO				IAmb	IAmb	08 46 34.3	
	comp=Z,12nm,1.4s						
ASAJ	**Asahikawa**	**44.47**	**16**	LR	LR	09 03 52.5	
	comp=Z,72nm,21.3s,baz=96,slow=34						
GTA	**Gaotai**	**45.17**	**330**	*e*P	**P**	**08 46 36.0**	**+1.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**49.28**	**342**	P	**P**	**08 47 07.0**	**+0.6**
WMQ	**Urumqi**	**54.75**	**326**	*e*P	**P**	**08 47 49.3**	**+2.3**
MK31	**Makanchi Array**	**59.59**	**326**	P	**P**	**08 48 21.2**	**+0.3**
MK31				IAmb	IAmb	08 48 22.3	
	comp=Z,3.8nm,0.8s						
MKAR	**Makanchi Array**	**59.59**	**326**	P	**P**	**08 48 21.6**	**+0.6**
	comp=Z,4.2nm,0.4s,baz=119,slow=8.5,SNR=78						
	comp=Z,4.2nm,0.4s						
MKAR	**Makanchi Array**	**59.59**	**326**	P	**P**	**08 48 21.2**	**+0.3**
MAKZ	**Makanchi**	**59.77**	**326**	P	**P**	**08 48 22.2**	**0.0**
GAR	**Garm**	**63.74**	**313**	P	**P**	**08 48 48.9**	**-0.3**
KURBB	**Kurchatov Arra**	**63.80**	**328**	P	**P**	**08 48 49.4**	**+0.3**
	comp=Z,3.8nm,0.5s,baz=125,slow=6.2,SNR=44						
	comp=Z,3.8nm,0.5s						
KURK	**Kurchatov**	**63.80**	**328**	P	**P**	**08 48 48.8**	**-0.3**
SEY	**Seymchan**	**63.98**	**12**	P	**P**	**08 48 51.2**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=173,slow=2.7,SNR=3.6						
	comp=Z,0.6nm,0.3s						
KK31	**Karatay Array**	**65.13**	**318**	P	**P**	**08 48 57.8**	**-0.2**
KK31				IAmb	IAmb	08 48 59.1	
	comp=Z,2.7nm,0.8s						
KKAR	**Karatay Array**	**65.13**	**318**	P	**P**	**08 48 57.8**	**-0.2**
KKAR	**Karatay Array**	**65.13**	**318**	P	**P**	**08 48 57.5**	**-0.5**
KKAR				IAmb	IAmb	08 48 59.1	
	comp=Z,2.7nm,0.8s						
NRIK	**Noril'sk**	**72.60**	**346**	P	**P**	**08 49 43.2**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=104,slow=3.1,SNR=3.7						
	comp=Z,2.4nm,0.7s						
NRIK	**Noril'sk**	**72.60**	**346**	IAmb	IAmb	08 49 44.1	
	comp=Z,2.4nm,0.7s						
ABKAR	**Akbulak array**	**74.11**	**321**	P	**P**	**08 49 52.5**	**-0.5**
VNDA	**Vanda**	**81.27**	**173**	P	**P**	**08 50 31.0**	**-1.2**

	comp=Z,0.8nm,0.5s,baz=317,slow=6.7,SNR=5.3						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	92.61	340	P	P	08 51 26.6	-1.0
	comp=Z,3.0nm,1.0s,baz=82,slow=6.5,SNR=1.7						
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	93.93	332	P	P	08 51 32.6	-1.3
	comp=Z,1.4nm,0.9s,baz=54,slow=7.1,SNR=3.4						
	comp=Z,1.4nm,0.9s						
TORD	Torodi Ar. Bea	124.05	287	PKP	PKPdf	08 57 14.7	-0.6
	comp=Z,0.3nm,0.7s,baz=346,slow=0.6,SNR=1.9						

MOS ***05*** *09:05:32.9±1.0, 7°.61S×158°.32E, h46^{km}, mb4.9/16, Error ellipse: s-maj=10.5km s-min=8.5km az=108.4*

BJI ***05*** *09:05:33.0±0.0, 7°.50S×158°.70E, h55^{km}, mb4.8/39, mB5.1/23, Ms4.9/8, Ms7 4.4/7*

IDC ***05*** *09:05:33.3±0.5, 7°.70S×158°.34E, h38^{km}±4^{km}, mb4.4/23, mbtmp4.7/24, ML5.4/1, MS3.9/45, Error ellipse: s-maj=14.0km s-min=10.7km az=83.0*

NEIC ***05*** *09:05:34.3±2.5, 7°.59S±0°.08×158°.42E±0°.07, h41^{km}±5^{km}, mb5.0/207, Error ellipse: s-maj=12.6km s-min=8.8km az=222.0*

GCMT ***05*** *09:05:36.3±0.3, 7°.65S±0°.02×158°.32E±0°.02, h40^{km}, MW4.9/83, Moment Tensor Solution. s34,c40; s83,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.16±.19; $M_{\theta\theta}$2.65±.11; $M_{\phi\phi}$-0.48±.12; $M_{r\theta}$-0.64±.09; $M_{\theta\phi}$1.46±.11; $M_{\phi r}$1.33±.09; Best double couple: $M_0$3.20600×10^{16} NP1:ϕ_s219.00000°, δ53.00000°, λ-135.00000°. NP2: ϕ_s98.00000°, δ56.00000°, λ-46.00000°. Principal axes: T 3.2270, Plg1.0000°, Azm159.0000°; N -0.0390, Plg35.0000°, Azm250.0000°; P -3.1850, Plg55.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 09:05:33.8±0.3**, 7°.61S**±0°.04×**158°.39E**±0°.05**, h43^{km}**±3^{km}**, h43^{km}:pP-P, n429,** σ**1^{s}03**/369**, mb4.9**/107**, MS4.0**/45**, 13C-8D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.38	140	Pn	Pn	09 06 11.4	+1.2
	937nm,0.3s,baz=237,slow=2.5,SNR=62						
HNR				Sn	Sn	09 06 43.7	+5.5
	802nm,0.3s,baz=191,slow=13,SNR=6.0						
HNR				LR	LR	09 06 47.9	
	comp=Z,2μm,20.8s,baz=314,slow=32						
	10μm,0.6s						
HNR	Honiara	2.38	140	P	Pn	09 06 11.3	+1.0
HNR	Honiara	2.38	140		Pn	09 06 11.3	+1.0
RABL	Rabaul	7.06	298		Pn	09 07 16.8	+2.1
KRVT	Keravat (AS076	7.13	297	Pn	Pn	09 07 17.5	+1.9
	72nm,0.3s,baz=130,slow=0.4,SNR=19						
KRVT				Sn	Sn	09 08 40.0	+4.6
	23nm,0.3s,baz=137,slow=19,SNR=2.8						
PMG	Port Moresby	11.25	260	Pn	Pn	09 08 18.5	+6.4
	1.0nm,0.3s,baz=274,slow=18,SNR=2.2						
PMG				Sn	Sn	09 10 29.0	+12
	1.3nm,0.3s,baz=82,slow=14,SNR=1.1						
PMG				LR	LR	09 11 23.1	
	comp=Z,159nm,21.6s,baz=83,slow=31						
PMG	Port Moresby	11.25	260	*e*P	Pn	09 08 13.6	+1.5
PMG				pmax	pmax		
	comp=Z,79nm,1.3s						
SANVU	Saraoutou	11.63	133	Pn	Pn	09 08 19.2	+2.0
KOUNC	Koumac, New Ca	14.07	157	Pn	Pn	09 08 52.4	+1.8
PATS	Pohnpei	14.35	360	P	Pn	09 08 52.3	-2.0
	baz=14,SNR=5.6						
PATS	Pohnpei	14.35	360	Pn	Pn	09 08 52.3	-2.0
LIFNC	LIFOU	15.64	148		P	09 09 14.3	-0.6
COEN	Coen	16.22	246	P	P	09 09 21.7	+0.3
	baz=16,SNR=4.6						
COEN	Coen	16.22	246	P	Pn	09 09 16.9	-1.9
DZM	Mont Dzumac	16.34	152	*e*S	Sn	09 12 21.7	+0.9
DZM				*e*LR	LR	09 13 21.8	
	comp=Z,1μm,27.4s						
DZM	Mont Dzumac	16.34	152	Pn	P	09 09 23.6	+0.8
	comp=Z,1.7nm,0.3s,baz=28,slow=13,SNR=16						
DZM				LR	LR	09 15 14.2	
	comp=Z,608nm,19.7s,baz=344,slow=36						
DZM	Mont Dzumac	16.34	152	P	P	09 09 23.4	+0.7
ONTNC	Ouen Toro	16.55	153	P	P	09 09 25.5	+0.5
OUENC	Ouen Island, N	16.82	152	P	P	09 09 28.2	+0.2
TARA	Tarawa	17.01	59	P	P	09 09 30.7	+0.6
CTA	Charters Tower	17.09	222	Pn	P	09 09 33.8	+2.7
	comp=Z,0.4nm,0.3s,baz=44,slow=11,SNR=8.0						
CTA				LR	LR	09 15 26.1	
	comp=Z,603nm,20.3s,baz=52,slow=35						
CTAO	Charters Tower	17.09	222	P	P	09 09 31.2	+0.1
CTAO				pmax	pmax		
	comp=Z,33nm,1.0s						
CTAO	Charters Tower	17.09	222	P	P	09 09 31.1	+0.1
MTSU	Mount Surprise	17.24	231	P	P	09 09 33.6	+1.0
	baz=17,SNR=6.5						
PINNC	Pines Island,	17.28	151	P	P	09 09 33.9	+0.9
PINNC				IAmb	IAmb	09 09 57.8	
	comp=Z,116nm,1.3s						
EIDS	Eidsvold	18.99	201	P	Pn	09 09 54.0	+1.1
	baz=19,SNR=6.6						
EIDS	Eidsvold	18.99	201	P	Pn	09 09 53.6	+0.8
SMPI	Sarmi	20.38	285	P	P	09 10 07.6	+0.5
	comp=Z,1μmcomp=Z,112nm,0.8s						
FUNA	Funafuti	20.62	94	P	P	09 10 06.8	-2.9
RMQ	Roma	20.89	205	P	Pn	09 10 14.4	-1.0
	baz=21,SNR=11						
MSVF	Nonsavu	21.64	120	P	P	09 10 22.2	+1.5
	comp=Z,19nm,0.6s,baz=280,slow=15,SNR=14						
MSVF				LR	LR	09 17 59.0	
	comp=Z,839nm,20.5s,baz=290,slow=34						
	comp=Z,19nm,0.6s						
MSVF	Nonsavu	21.64	120	*c i*P	P	09 10 21.6	+0.9
MSVF	Nonsavu	21.64	120	P	P	09 10 21.5	+0.9
QIS	Mount Isa	22.27	233	P	P	09 10 28.2	+0.7
	baz=22,SNR=24						
QLP	Quilpie	23.18	214	P	P	09 10 36.9	+0.1
	baz=23,SNR=12						
ARMA	Armidale	23.56	195	P	P	09 10 41.0	+0.4
	baz=24,SNR=13						
ARMA	Armidale	23.56	195	P	P	09 10 41.0	+0.4
ARMA				IAmb	IAmb	09 10 56.5	
	comp=Z,34nm,0.9s						
KDU	Kakadu	26.00	257	P	P	09 11 02.6	-0.3
	baz=26,SNR=5.6						
WR0	Warramunga Arr	26.17	240	P	P	09 11 04.3	-0.2
WR0				IAmb	IAmb	09 11 22.3	
	comp=Z,38nm,0.8s						
WB0	Warramunga Arr	26.22	240	P	P	09 11 04.5	-0.4
WB0				IAmb	IAmb	09 11 22.7	
	comp=Z,29nm,0.9s						
WRAB	Tennant Creek	26.32	240	P	P	09 11 05.1	-0.7
WRAB				pmax	pmax		
	comp=Z,31nm,0.8s						
WRAB	Tennant Creek	26.32	240	P	P	09 11 05.1	-0.7
WRAB				IAmb	IAmb	09 11 34.7	
	comp=Z,31nm,0.8s						
WB2	Warramunga Arr	26.32	240	P	P	09 11 05.5	-0.3
WB2				IAmb	IAmb	09 11 30.2	
	comp=Z,28nm,0.7s						
WRA	Warramunga Arr	26.34	240	P	P	09 11 05.2	-0.7
	comp=Z,6.9nm,0.6s,baz=65,slow=9.1,SNR=65						
WRA				LR	LR	09 20 55.0	
	comp=Z,677nm,21.4s,baz=44,slow=35						
	comp=Z,6.9nm,0.6s						
WRA	Warramunga Arr	26.34	240	P	P	09 11 04.4	-1.6
CMSA	Cobar Meteorol	26.59	205	P	P	09 11 07.8	-0.4
	baz=27,SNR=14						
H11S3	WAKE ISLAND Hy	27.20	17	T	T	09 39 41.7	
	baz=198,slow=76						
H11S2	WAKE ISLAND Hy	27.20	17	T	T	09 39 41.7	
	baz=198,slow=76						
H11S1	WAKE ISLAND Hy	27.21	17	T	T	09 39 42.9	
	baz=198,slow=76,SNR=3523						
MTN	Manton Dam	27.31	257	P	P	09 11 13.6	-1.2
	baz=27,SNR=3.9						
SIJI	Sorong	27.85	283	LR	LR	09 25 19.0	
	comp=Z,211nm,18.3s,baz=200,slow=43						
AS31	Alice Springs	28.40	233	P	P	09 11 22.8	-1.7
ASAR	Alice Springs	28.40	233	P	P	09 11 22.9	-1.5
	comp=Z,3.2nm,0.8s,baz=63,slow=9.2,SNR=29						
ASAR				pP	pP	09 11 34.0	-1.4
	comp=Z,7.7nm,0.8s,baz=63,slow=8.9,SNR=24						
ASAR				LR	LR	09 22 09.7	
	comp=Z,452nm,21.8s,baz=68,slow=35						
	comp=Z,3.2nm,0.8s						
H11N1	WAKE ISLAND Hy	28.41	17	T	T	09 41 19.3	
	baz=196,SNR=293						
H11N3	WAKE ISLAND Hy	28.42	17	T	T	09 41 24.4	
	baz=196,slow=74,SNR=1524						
H11N2	WAKE ISLAND Hy	28.43	17	T	T	09 41 22.1	
	baz=196,slow=74,SNR=251						
STKA	Stephens Creek	28.77	211	P	P	09 11 27.3	-0.3
	comp=Z,4.7nm,0.8s,baz=43,slow=14,SNR=12						
STKA				pP	pP	09 11 38.7	0.0
	comp=Z,14nm,0.8s,baz=35,slow=13,SNR=9.7						
STKA				LR	LR	09 22 32.4	
	comp=Z,290nm,20.2s,baz=32,slow=36						
	comp=Z,4.7nm,0.8s						
STKA	Stephens Creek	28.77	211	P	P	09 11 27.8	+0.1
	baz=29,SNR=8.4						
STKA	Stephens Creek	28.77	211	*d i*P	P	09 11 28.1	+0.5
STKA	Stephens Creek	28.77	211	P	P	09 11 27.6	0.0
AFI	Afiamalu	29.95	105	LR	LR	09 21 09.9	
	comp=Z,188nm,21.9s,baz=266,slow=31						
KNRA	Kununurra	30.07	252	P	P	09 11 38.9	-0.4
	baz=30,SNR=3.7						
KNRA	Kununurra	30.07	252	P	P	09 11 38.9	-0.4
KNRA				pP	pP	09 11 51.0	+0.4
KNRA				IAmb	IAmb	09 11 58.0	
	comp=Z,26nm,0.9s						
BBOO	Buckleboo	32.53	217	P	P	09 12 00.2	-0.6
	baz=33,SNR=12						
BBOO	Buckleboo	32.53	217	P	P	09 11 60.0	-0.8
BBOO				pP	pP	09 12 11.3	-0.6
FITZ	Fitzroy Crossi	33.53	249	P	P	09 12 08.6	-1.1
	baz=90,slow=8.2						
FITZ				pP	pP	09 12 20.3	-0.6
	baz=90,slow=8.0						
FITZ				LR	LR	09 25 29.2	
	comp=Z,291nm,18.3s,baz=70,slow=36						
WRKA	Warakurna	33.55	235	P	P	09 12 08.4	-1.5
	baz=34,SNR=35						
BATI	Baumata	34.40	263	LR	LR	09 27 50.1	
	comp=Z,602nm,18.6s,baz=158,slow=39						
URZ	Urewera	34.89	154	P	P	09 12 19.9	-1.3
	comp=Z,6.1nm,0.7s,baz=128,slow=20,SNR=2.7						
URZ				LR	LR	09 24 05.1	
	comp=Z,613nm,21.4s,baz=31,slow=32						
	comp=Z,6.1nm,0.7s						
BKZ	Black Stump Fm	35.39	155	P	P	09 12 24.2	-1.4
BKZ				IAmb	IAmb	09 12 50.5	
	comp=Z,21nm,0.9s						
TUWZ	Tuamarina	36.41	160	P	P	09 12 33.6	-0.6
FORT	Forrest	36.55	227	P	P	09 12 35.2	-0.3
OXZ	Oxford	37.54	164	P	P	09 12 42.9	-0.9
RPZ	Rata Peaks	37.64	165	P	P	09 12 43.5	-1.1
	comp=Z,11nm,0.8s,baz=297,slow=2.7,SNR=11						
RPZ				LR	LR	09 26 41.4	
	comp=Z,232nm,19.1s,baz=328,slow=34						
	comp=Z,11nm,0.8s						
JCJ	Chichijima	37.90	336	LR	LR	09 27 48.6	
	comp=Z,93nm,18.4s,baz=106,slow=35						
KAPI	Kappang	38.48	271	LR	LR	09 30 37.4	
	comp=Z,115nm,18.1s,baz=100,slow=39						
MBWA	Marble Bar	39.67	246	pP	pP	09 13 13.3	-0.1
MEEK	Meekatharra	42.22	238	P	P	09 13 22.2	-0.8
	baz=42,SNR=6.4						
RAR	Rarotonga	42.57	113	LR	LR	09 27 51.0	
	comp=Z,270nm,19.5s,baz=292,slow=31						
MORW	Morawa	45.18	236	P	P	09 13 45.7	-1.0
	baz=45,SNR=3.5						
MJAR	Matsushiro Arr	47.83	338	P	P	09 14 06.3	-1.0
	comp=Z,3.2nm,0.8s,baz=161,slow=9.7,SNR=5.9						
MJAR				LR	LR	09 31 59.3	
	comp=Z,131nm,22.0s,baz=158,slow=33						
	comp=Z,3.2nm,0.8s						
LEM	Lembang	50.35	267	LR	LR	09 37 46.3	
	comp=Z,110nm,20.9s,baz=125,slow=38						
PPT	Papeete	51.59	106	LR	LR	09 32 39.3	
	comp=Z,79nm,21.5s,baz=303,slow=32						
PPT2	Papeete2	51.59	106	*e*LR	LR	09 28 57.4	
	comp=Z,301nm,28.8s						
KSRS	Korea Array	53.11	330	P	P	09 14 48.5	+1.3
	comp=Z,5.4nm,1.1s,baz=146,slow=8.2,SNR=11						
KSRS				LR	LR	09 36 43.4	
	comp=Z,49nm,19.6s,baz=160,slow=35						
	comp=Z,5.4nm,1.1s						
ASAJ	Asahikawa	53.43	346	LR	LR	09 37 18.5	
	comp=Z,144nm,19.6s,baz=184,slow=36						
USRK	Ussuriysk Ar.	56.82	338	P	P	09 15 14.8	+0.9
	comp=Z,12nm,1.1s,baz=155,slow=6.6,SNR=7.6						
	comp=Z,12nm,1.1s						
CN2	Changchun	59.23	333	*e*P	P	09 15 31.4	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ENH	Enshi	60.15	311	P	P	09 15 37.4	0.0
ENH					pP	09 15 49.8	+0.1
PETK	Petropavlovsk-	60.48	360	P	P	09 15 40.9	+1.7
	comp=Z,12nm,1.1s,baz=127,slow=9.4,SNR=3.6						
PETK				pP	pP	09 15 50.0	-1.5
	comp=Z,4.2nm,0.9s,baz=159,slow=7.5,SNR=2.3						
PETK				LR	LR	09 38 28.6	
	comp=Z,167nm,21.4s,baz=167,slow=33						
	comp=Z,12nm,1.1s						
GYA	Guiyang	60.52	306	⇓P	P	09 15 41.6	+1.5
GYA				pP	pP	09 15 54.8	+2.4
GYA				pmax	pmax		
	comp=Z,22nm,1.1s						
GYA				pmax	pmax		
	comp=Z,150nm,4.6s						
HNS	HongShan	60.57	321	⇑P	P	09 15 50.1	+10
HNS				pmax	pmax		
	comp=Z,19nm,1.1s						
TAOE	Nuku Hiva Isla	60.78	96	*e*LR	LR	09 33 07.5	
	comp=Z,182nm,31.0s						
KLR	Kul'dur	61.21	340	⇑*i*P	P	09 15 44.9	+0.7
KLR				pmax	pmax		
	comp=Z,23nm,1.3s						
SHEM	Shemya Is, Ala	61.58	11	LR	LR	09 38 43.6	
	comp=Z,167nm,20.8s,baz=148,slow=32						
XAN	Xi'an	62.51	315	P	P	09 15 53.8	+0.5
XAN				pP	pP	09 16 06.4	+0.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	63.16	303	⇑P	P	09 16 01.1	+3.1
KMI				pP	sP	09 16 13.3	-2.1
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	64.09	295	P	P	09 16 04.8	+0.8
	comp=Z,1.9nm,0.3s,baz=123,slow=5.2,SNR=13						
CMAR				LR	LR	09 43 22.6	
	comp=Z,30nm,20.1s,baz=115,slow=35						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	64.09	295	*ce*P	P	09 16 05.4	+1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PZH	PanZhiHua	64.53	304	P	P	09 16 10.0	+3.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2	Chengdu	64.79	309	*e*P	P	09 16 09.4	+1.0
NIKH	Nikolski High	66.46	21	P	P	09 16 18.6	0.0
	baz=216						
ZEA	Zeya	66.53	340	*e*P	P	09 16 20.4	+1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
CASY	Casey	67.08	199	P	P	09 16 21.1	-1.4
CASY				IAmb	IAmb	09 16 22.0	
	comp=Z,10nm,0.8s						
CASY				pP	pwP	09 16 37.2	+0.6
CASY	Casey	67.08	199	P	P	09 16 21.3	-1.2
CASY				pP	pP	09 16 33.5	-0.9
LZH	Lanzhou	67.13	314	⇓P	P	09 16 25.9	+2.4
LZH				pP	pP	09 16 38.2	+2.2
LZH				sP	PcP	09 16 48.1	-3.3
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZH				LR	LR		
	comp=Z,380nm,17.4s						
LZH				LR	LR		
	comp=Z,210nm,15.7s						
LZH				LR	LR		
	comp=Z,140nm,15.7s						
MA2	Magadan	67.24	356	*d i*P	P	09 16 23.1	-0.4
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MA2	Magadan	67.24	356	P	P	09 16 22.6	-0.9
MA2				IAmb	IAmb	09 16 25.2	
	comp=Z,7.9nm,0.8s						
UNV	Unalaska Valle	68.00	22	P	P	09 16 28.0	-0.4
	baz=218						
VNDA	Vanda	69.90	179	P	P	09 16 39.4	-0.5
	comp=Z,3.1nm,0.7s,baz=339,slow=6.5,SNR=16						
VNDA				pP	pP	09 16 51.2	-0.7
	comp=Z,4.1nm,0.8s,baz=324,slow=5.6,SNR=8.9						
VNDA				LR	LR	09 41 28.8	
	comp=Z,128nm,21.1s,baz=355,slow=31						
	comp=Z,3.1nm,0.7s						
VNDA	Vanda	69.90	179	P	P	09 16 39.0	-0.9
VNDA	Vanda	69.90	179	P	P	09 16 39.4	-0.5
VNDA				pP	pP	09 16 52.6	+0.7
CCD	Concordia, Ant	70.31	189	P	P	09 16 42.2	-0.8
CCD				pP	pwP	09 16 57.2	0.0
SEY	Seymchan	70.49	357	LR	LR	09 43 38.6	
	comp=Z,89nm,21.7s,baz=144,slow=32						
SEY	Seymchan	70.49	357	⇑*i*P	P	09 16 43.6	0.0
SEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	Ulaanbaatar	71.35	326	⇑*i*P	P	09 16 51.0	+1.6
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	71.35	326	P	P	09 16 48.9	-0.5
ULN	Ulaanbaatar	71.35	326	P	P	09 16 51.3	+1.9
SDPT	Sand Point	71.43	23	P	P	09 16 49.4	0.0
	baz=223						
GTA	Gaotai	71.50	316	⇑P	P	09 16 52.1	+1.6
GTA				pP	pP	09 17 04.8	+1.7
GTA				sP	PcP	09 17 11.4	+1.6
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,84nm,6.9s						
GTA				LR	LR		
	comp=Z,140nm,15.6s						
GTA				LR	LR		
	comp=Z,370nm,16.4s						
GTA				LR	LR		
	comp=Z,120nm,15.3s						
SONM	Songino Array	71.70	326	P	P	09 16 52.5	+1.1
	comp=Z,5.5nm,0.8s,baz=134,slow=6.0,SNR=8.9						
	comp=Z,5.5nm,0.8s						
SONM	Songino Array	71.70	326	pP	pP	09 17 01.9	-2.1
YAK	Yakutsk	72.91	346	⇑*i*P	P	09 16 59.1	+0.9
YAK				pmax	pmax		
	comp=Z,40nm,0.9s						
CHIR	Chirikof Islan	73.73	25	P	P	09 17 03.8	+0.7
	baz=228						
BOD	Bodaibo	74.45	337	*e*P	P	09 17 07.2	-0.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GAMB	Gambell	74.70	13	P	P	09 17 09.0	+0.4
	baz=211						
ZAK	Zakamensk	74.81	327	*e*P	P	09 17 10.5	+0.8
ZAK				pmax	pmax		
	comp=Z,11nm,1.2s						
SII	Sitkinak Islan	74.82	25	P	P	09 17 09.8	+0.2
	baz=229						
OHAK	Old Harbor	75.63	25	P	P	09 17 14.4	+0.3
	baz=230						
BILL	Bilibino	75.67	3	*e*P	P	09 17 14.0	-0.2
BILL				*i*		09 17 24.0	
BILL				*i*		09 17 33.2	
BILL				*e*		09 20 03.0	
BILL				pmax	pmax		
	comp=Z,35nm,1.0s						
BILL	Bilibino	75.67	3	P	P	09 17 14.3	+0.1
KDAK	Kodiak Island	76.28	25	LR	LR	09 45 38.6	
	comp=Z,41nm,21.9s,baz=240,slow=32						
KDAK	Kodiak Island	76.28	25	P	P	09 17 18.3	+0.5
	baz=230						
P18K	Big Mountain,	76.29	22	P	P	09 17 18.4	+0.5
	baz=228						
Q19K	Cape Douglas,	76.60	23	P	P	09 17 19.7	0.0
	baz=229						
O18K	Koktuh Hills	76.61	22	P	P	09 17 19.9	+0.2
	baz=227						
ANM	Nome	76.90	15	P	P	09 17 22.0	+0.8
	baz=217,SNR=7.4						
N18K	Kilae Creek	76.93	21	P	P	09 17 21.5	0.0
N18K	Kilae Creek	76.93	21	P	P	09 17 22.2	+0.7
	baz=227,SNR=6.6						
O19K	Port Alsworth	77.17	22	P	P	09 17 23.1	+0.3
	baz=228						
P19K	Oil Pt	77.23	23	P	P	09 17 23.1	-0.1
	baz=229						
N19K	Bonanza Creek	77.53	22	P	P	09 17 24.8	-0.1
	baz=228						
O20K	Slope Mountain	77.74	23	P	P	09 17 25.9	-0.2
	baz=230						
HOM	Homer	77.85	23	P	P	09 17 27.1	+0.5
	baz=231						
CNPM	China Poot	77.93	24	P	P	09 17 26.7	-0.4
RSO	Redoubt South	77.94	22	P	P	09 17 29.9	+2.6
BRSE	Bradley Lake S	78.26	24	P	P	09 17 29.3	+0.4
	baz=232						
M19K	Big River Lodg	78.29	21	P	P	09 17 29.1	0.0
	baz=228						
L19K	White Mountain	78.32	20	P	P	09 17 30.2	+1.0
	baz=227,SNR=22						
TTA	Tatalina	78.44	19	IAmb	IAmb	09 17 31.8	
	comp=Z,20nm,0.9s						
TTA	Tatalina	78.44	19	P	P	09 17 30.7	+0.8
	baz=226,SNR=13						
SPCR	Spurr Chakacha	78.62	22	P	P	09 17 31.2	+0.2
	baz=230						
L20K	Farewell, AK	78.86	21	P	P	09 17 33.2	+1.1
	baz=228,SNR=16						
PALK	Pallekele	78.86	279	LR	LR	09 55 58.9	
	comp=Z,48nm,18.8s,baz=206,slow=38						
SEW	Seward	79.00	24	P	P	09 17 33.0	+0.1
SEW	Seward	79.00	24	P	P	09 17 32.7	-0.2
	baz=233						
O22K	Cooper Landing	79.12	23	P	P	09 17 33.2	-0.4
	baz=232						
K20K	Telida	79.38	20	P	P	09 17 35.9	+0.9
	baz=228,SNR=14						
GCSA	Galena City Sc	79.44	18	P	P	09 17 35.8	+0.6
	baz=225						
RC01	Rabbit Creek A	79.49	23	P	P	09 17 35.6	0.0
	baz=232						
PPLA	Purkeypile	79.72	21	P	P	09 17 36.8	-0.2
	baz=230						
M22K	Willow	79.75	22	P	P	09 17 36.9	-0.1
	baz=232						
Q23K	Middleton Isla	79.88	25	P	P	09 17 37.4	-0.3
	baz=236						
J20K	Nowinta River	79.90	19	IAmb	IAmb	09 17 39.9	
	comp=Z,20nm,0.8s						
J20K	Nowinta River	79.90	19	P	P	09 17 38.7	+0.9
	baz=228,SNR=20						
PMR	Palmer	80.02	23	P	P	09 17 38.6	+0.1
	baz=233,SNR=7.3						
CAST	Castle Rocks	80.09	20	P	P	09 17 38.5	-0.4
	baz=230,SNR=22						
CUT	Chulitna	80.10	22	P	P	09 17 37.9	-1.0
	baz=232						
RDOG	Red Dog Mine	80.27	14	P	P	09 17 39.2	-0.5
	baz=219						
CHUM	Lake Minchumin	80.32	20	P	P	09 17 40.2	+0.2
	baz=230,SNR=17						
GLI	Glacier Island	80.40	24	P	P	09 17 40.6	+0.1
	baz=235						
SML	Sawmill	80.46	23	P	P	09 17 41.3	+0.4
	baz=234,SNR=11						
M23K	Glacier View	80.68	23	P	P	09 17 42.4	+0.3
	baz=234,SNR=5.3						
EYAK	Cordova Ski Ar	80.76	24	P	P	09 17 42.5	0.0
	baz=236						
SCM	Sheep Creek Mo	80.86	23	P	P	09 17 43.7	+0.6
	baz=234,SNR=7.8						
BPAW	Bear Paw Mtn.	80.91	20	P	P	09 17 42.6	-0.6
	baz=231,SNR=5.2						
KAIM	Kayak Island	80.97	25	P	P	09 17 42.7	-0.9
	baz=237						
DIV	Divide	81.07	24	IAmb	IAmb	09 17 46.1	
	comp=Z,19nm,1.0s						
WAT6	Susitna Watana	81.14	22	P	P	09 17 44.7	0.0
	baz=234,SNR=7.0						
KLU	Klutina	81.22	24	IAmb	IAmb	09 17 46.7	
	comp=Z,20nm,1.0s						
KLU	Klutina	81.22	24	P	P	09 17 45.7	+0.6
	baz=236,SNR=7.0						
I21K	Tanana	81.27	19	P	P	09 17 45.8	+0.7
	baz=230,SNR=7.3						
H21K	Melozitna Rive	81.32	18	IAmb	IAmb	09 17 47.3	
	comp=Z,14nm,0.9s						
H21K	Melozitna Rive	81.32	18	P	P	09 17 46.1	+0.8
	baz=229,SNR=13						

BMRM	Bremner River	81.46	24	P	P	09 17 46.5	+0.2
	baz=237						
TIXI	Tiksi	81.46	351	⇑ eP	P	09 17 45.2	-0.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TIXI	Tiksi	81.46	351	P	P	09 17 44.7	-1.3
M24K	Tolsona, Glenn	81.46	23	P	P	09 17 47.1	+0.8
	baz=236,SNR=7.5						
BGLC	Bering Glacier	81.56	26	P	P	09 17 46.8	+0.1
	baz=238						
DHY	Denali Highway	81.57	22	IAmb	IAmb	09 17 53.5	
	comp=Z,9.8nm,0.8s						
DHY	Denali Highway	81.57	22	P	P	09 17 47.0	+0.1
	baz=234,SNR=7.3						
WMQ	Urumqi	81.58	316	eP	P	09 17 47.5	+0.2
WMQ				pP	sP	09 18 02.6	-2.3
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
N25K	Chitina, Valde	81.81	24	IAmb	IAmb	09 17 49.4	
	comp=Z,16nm,1.0s						
N25K	Chitina, Valde	81.81	24	P	P	09 17 48.6	+0.5
	baz=237						
NEA2	Nenana	81.87	20	P	P	09 17 47.6	-0.7
	baz=232,SNR=19						
HARP	HAARP	82.02	23	P	P	09 17 48.9	-0.3
	baz=236						
I23K	Minto, Yukon-K	82.11	20	P	P	09 17 49.3	-0.2
	baz=232,SNR=9.7						
PAX	Paxson	82.22	23	P	P	09 17 50.3	0.0
	baz=236						
CCB	Clear Creek Bu	82.34	21	IAmb	IAmb	09 17 51.1	
	comp=Z,18nm,0.9s						
QSPA	South Pole Qui	82.37	180	P	P	09 17 49.9	-1.2
	comp=Z,2.8nm,0.7s,baz=334,slow=1.9,SNR=12						
QSPA				LR	LR	09 52 07.8	
	comp=Z,76nm,18.1s,baz=16,slow=34						
	comp=Z,2.8nm,0.7s						
QSPA	South Pole Qui	82.37	180	pP	pP	09 18 02.0	-1.7
QSPA				IAmb	IAmb	09 18 07.8	
	comp=Z,13nm,1.1s						
TCOL	CIGO, UAF Yank	82.45	20	P	P	09 17 50.7	-0.6
	baz=234,SNR=20						
COLA	College	82.46	20	d iP	P	09 17 50.7	-0.6
COLA				pmax	pmax		
	comp=Z,50nm,1.0s						
COLA	College	82.46	20	P	P	09 17 51.3	0.0
COLA	College	82.46	20	P	P	09 17 50.6	-0.7
	baz=234						
H23K	Yukon River	82.47	19	P	P	09 17 52.0	+0.6
	baz=232,SNR=26						
K24K	Donnelly Dome	82.57	22	P	P	09 17 52.5	+0.4
	baz=236						
ILAR	Eielson Array	82.73	21	P	P	09 17 52.0	-0.8
	comp=Z,16nm,1.0s,baz=258,slow=4.5,SNR=78						
	comp=Z,16nm,1.0s						
ILAR	Eielson Array	82.73	21	P	P	09 17 52.0	-0.8
POKR	Poker Plat Res	82.74	20	P	P	09 17 52.1	-0.8
POKR				IAmb	IAmb	09 17 53.2	
	comp=Z,19nm,1.1s						
POKR	Poker Plat Res	82.74	20	P	P	09 17 52.1	-0.8
	baz=234,SNR=5.6						
PINM	Pinnacle	82.86	26	P	P	09 17 54.1	+0.4
	baz=241						
M26K	Nabesna, AK	82.87	24	IAmb	IAmb	09 17 55.3	
	comp=Z,17nm,0.9s						
M26K	Nabesna, AK	82.87	24	P	P	09 17 54.3	+0.6
	baz=238,SNR=8.8						
MENT	Mentasta	82.87	23	P	P	09 17 53.1	-0.6
MENT				IAmb	IAmb	09 17 54.9	
	comp=Z,9.0nm,0.7s						
RIDG	Independent Ri	82.88	22	P	P	09 17 53.9	+0.3
	baz=237,SNR=12						
H24K	Noodor Dome	83.02	20	IAmb	IAmb	09 17 56.1	
	comp=Z,9.8nm,0.9s						
H24K	Noodor Dome	83.02	20	P	P	09 17 55.0	+0.7
	baz=234,SNR=10						
L26K	Log Cabin Wild	83.06	23	IAmb	IAmb	09 17 56.4	
	comp=Z,14nm,0.8s						
L26K	Log Cabin Wild	83.06	23	P	P	09 17 55.4	+0.8
	baz=238,SNR=11						
DOT	Dot Lake	83.13	22	P	P	09 17 54.5	-0.4
COLD	Coldfoot	83.13	18	P	P	09 17 55.8	+0.9
COLD				IAmb	IAmb	09 17 56.9	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	83.13	18	P	P	09 17 55.7	+0.9
	baz=231,SNR=9.1						
J25K	Salcha River,	83.18	21	P	P	09 17 55.3	+0.1
	baz=236,SNR=29						
M27K	Edge Creek, AK	83.30	24	P	P	09 17 57.0	+1.0
	baz=239,SNR=17						
SCRK	Sand Creek	83.33	22	P	P	09 17 56.5	+0.4
	baz=237,SNR=20						
YUK3	Moose Creek	83.59	25	P	P	09 17 58.3	+0.7
	baz=241,SNR=5.2						
L27K	Beaver Creek,	83.68	23	P	P	09 17 58.7	+1.0
	baz=239,SNR=17						
BVCY	Beaver Creek	83.74	24	P	P	09 17 59.0	+0.9
	baz=240,SNR=8.1						
J26L	Joseph Creek	83.77	22	P	P	09 17 58.9	+0.7
	baz=238,SNR=12						
K27K	Chicken	84.08	22	P	P	09 18 01.0	+1.3
	baz=239						
YUK6	Outpost Mounta	84.08	26	P	P	09 18 01.0	+0.9
	baz=243						
YUK4	Talbot Arm	84.15	26	P	P	09 18 02.0	+1.6
	baz=243,SNR=11						
A21K	Barrow	84.18	13	P	P	09 18 00.4	+0.4
	baz=225						
TOLK	Toolik Lake Re	84.20	17	P	P	09 18 01.1	+0.7
	baz=232						
HYT	Haines Junctio	84.41	26	P	P	09 18 02.8	+1.1
	baz=244,SNR=9.0						
SKAG	Skagway	84.80	28	P	P	09 18 04.2	+0.8
	baz=246						
WRAK	Wrangell Islan	85.08	31	P	P	09 18 05.3	+0.4
	baz=248						
DAWY	Dawson	85.12	23	IAmb	IAmb	09 18 07.3	
	comp=Z,15nm,1.1s						
DAWY	Dawson	85.12	23	P	P	09 18 06.1	+1.1
	baz=242,SNR=10						
MAW	Mawson	85.13	203	P	P	09 18 03.0	-2.0
	comp=Z,1.9nm,0.6s,baz=290,slow=5.0,SNR=1.8						
MAW				pP	pP	09 18 14.7	-3.0
	comp=Z,5.5nm,0.7s,baz=115,slow=4.7,SNR=5.3						
MAW				LR	LR	09 51 38.0	
	comp=Z,72nm,21.3s,baz=113,slow=32						
	comp=Z,1.9nm,0.6s						
MAW	Mawson	85.13	203	P	P	09 18 03.3	-1.7
	baz=85,SNR=5.6						
MAW	Mawson	85.13	203	P	P	09 18 13.9	+8.9
N31M	Braeburn, Yuko	85.45	26	P	P	09 18 07.9	+1.2
	baz=245,SNR=5.3						
GRNB	Grenville Isla	85.47	34	P	P	09 18 07.7	+0.7
M30M	Minto, Yukon	85.48	25	IAmb	IAmb	09 18 09.1	
	comp=Z,11nm,1.1s						
M30M	Minto, Yukon	85.48	25	P	P	09 18 07.7	+0.8
	baz=244						
WHY	Whitehorse	85.50	27	P	P	09 18 07.6	+0.5
	baz=246						
J29M	Klondike Camp	85.76	23	P	P	09 18 09.1	+0.9
	baz=243						
BBB	Bella Bella	86.00	36	LR	LR	09 48 37.1	
	comp=Z,91nm,21.6s,baz=276,slow=30						
MK31	Makanchi Array	86.10	318	d iP	P	09 18 10.2	-0.1
MK31	Makanchi Array	86.10	318	IAmb	IAmb	09 18 24.8	
	comp=Z,10nm,0.9s						
MKAR	Makanchi Array	86.10	318	P	P	09 18 10.7	+0.4
	comp=Z,4.1nm,0.6s,baz=101,slow=6.0,SNR=41						
	comp=Z,4.1nm,0.6s						
I29M	Ogilvie Camp,	86.14	22	P	P	09 18 10.7	+0.6
	baz=242,SNR=25						
J01E	Myrtle Point	86.26	46	P	P	09 18 12.4	+1.2
	baz=256						
MAKZ	Makanchi	86.31	318	P	P	09 18 11.0	-0.3
MAKZ				pmax	pmax		
	comp=Z,13nm,1.0s						
MAKZ	Makanchi	86.31	318	P	P	09 18 11.0	-0.3
M31M	Drury Creek, Y	86.34	26	P	P	09 18 11.4	+0.3
	baz=246,SNR=8.8						
I02E	Swisshome, OR	86.55	45	P	P	09 18 12.1	-0.4
	baz=256						
ZALV	Zalesovo Beam	86.58	325	P	P	09 18 11.7	-0.8
	comp=Z,1.0nm,0.4s,baz=113,slow=6.4,SNR=5.8						
	comp=Z,1.0nm,0.4s						
FARO	Faro, Yukon	86.80	26	P	P	09 18 13.7	+0.3
	baz=247,SNR=13						
YBH	Yreka Blue Hor	86.81	47	LR	LR	09 49 14.2	
	comp=Z,58nm,21.9s,baz=255,slow=30						
DLBC	Dease Lake	86.97	30	LR	LR	09 50 07.4	
	comp=Z,150nm,21.0s,baz=270,slow=31						
DLBC	Dease Lake	86.97	30	IAmb	IAmb	09 18 16.5	
	comp=Z,15nm,1.1s						
EPYK	Eagle Plains	87.18	21	P	P	09 18 16.0	+0.8
	baz=244						
ORV	Oroville	87.23	50	IAmb	IAmb	09 18 17.6	
	comp=Z,11nm,1.2s						
H04D	Lebanon	87.42	45	P	P	09 18 17.1	+0.4
	baz=257						
I04A	Tendick Farm,	87.49	45	P	P	09 18 17.8	+0.7
	baz=257						
SNCC	San Nicolas Is	87.56	56	P	P	09 18 17.5	-0.2
	baz=259						
SMMC	Simmler	87.56	54	P	P	09 18 17.7	0.0
	baz=259						
J04D	Umpqua Nationa	87.58	46	P	P	09 18 18.1	+0.3
	baz=257,SNR=6.1						
PKM	Mcpherson Peak	87.63	55	P	P	09 18 18.2	0.0
	baz=259						
CMB	Columbia Colle	87.78	51	P	P	09 18 18.7	0.0
CMB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CMB	Columbia Colle	87.78	51	P	P	09 18 18.7	0.0
MMPY	Sheldon Lake,	87.85	26	P	P	09 18 19.5	+1.1
	baz=249,SNR=5.9						
J05D	Fort Rock, OR	88.21	46	P	P	09 18 20.6	-0.2
	baz=258,SNR=7.9						
SCI2	San Clemente I	88.32	57	P	P	09 18 22.2	+0.9
	baz=260						
K05A	Summer Lake	88.34	47	P	P	09 18 22.9	+1.4
I05D	Terrebonne, OR	88.36	45	P	P	09 18 22.5	+1.2
	baz=258						
A04D	Lummi Island	88.41	41	P	P	09 18 22.7	+1.4
	baz=257						
ARVC	Arvin	88.46	54	P	P	09 18 22.4	+0.5
	baz=260						
CIS	Catalina Islan	88.50	56	P	P	09 18 23.4	+1.2
	baz=260						
PNTR	Pine Nut	88.59	50	IAmb	IAmb	09 18 25.3	
	comp=Z,11nm,1.0s						
VCNR	Virginia City	88.59	50	IAmb	IAmb	09 18 25.2	
	comp=Z,6.7nm,1.0s						
RPN	Rapa Nui	88.59	117	LR	LR	09 50 39.3	
	comp=Z,72nm,21.0s,baz=279,slow=30						
MOD	Modoc Plateau	88.61	48	IAmb	IAmb	09 18 25.1	
	comp=Z,5.9nm,0.9s						
B05A	Bryant	88.70	41	P	P	09 18 22.8	+0.1
	baz=257						
MDPB	Devils Postpil	88.72	52	IAmb	IAmb	09 18 25.7	
	comp=Z,6.8nm,0.8s						
OMMB	Old Mammoth Mi	88.78	52	IAmb	IAmb	09 18 27.3	
	comp=Z,7.6nm,1.3s						
TGTN	Hyland Airport	88.81	27	P	P	09 18 24.1	+1.0
	baz=252						
ISA	Isabella, Lake	88.84	54	P	P	09 18 23.2	-0.7
	baz=260						
PAHR	Pah Rah Range	88.87	50	IAmb	IAmb	09 18 26.4	
	comp=Z,12nm,1.1s						
KSH	Kashi	88.98	310	P	P	09 18 27.1	+2.7
KSH				pP	sP	09 18 40.4	-1.8
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EDW2	Edwards Air Fo	89.10	55	P	P	09 18 26.5	+1.5
	baz=260,SNR=7.5						
INK	Inuvik	89.11	20	LR	LR	09 54 15.9	
	comp=Z,68nm,20.1s,baz=226,slow=33						
INK	Inuvik	89.11	20	P	P	09 18 24.6	+0.4
	baz=247						
BFSC	Mount Baldy Ra	89.26	55	P	P	09 18 26.0	+0.1
	baz=260,SNR=12						
CWC	Cottonwood Cre	89.30	53	P	P	09 18 26.2	+0.1
	baz=260						
RYN	Ryan	89.33	51	IAmb	IAmb	09 18 29.7	
	comp=Z,7.4nm,0.9s						
ELS	Elsinore Mount	89.35	56	IAmb	IAmb	09 18 28.8	
	comp=Z,16nm,1.4s						
KURK	Kurchatov	89.41	321	c eP	P	09 18 26.3	+0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KURBB	Kurchatov Arra	89.44	321	LR	LR	10 01 23.7	
	comp=Z,66nm,18.4s,baz=57,slow=37						
LRMC	Laurel Mtn Rad	89.45	54	P	P	09 18 26.6	-0.2
	baz=260						
NVAR	Mina Array Bea	89.46	51	P	P	09 18 28.5	+1.6
	comp=Z,5.7nm,0.8s,baz=243,slow=6.7,SNR=53						
NVAR				LR	LR	09 52 24.9	
	comp=Z,65nm,20.2s,baz=280,slow=31						
	comp=Z,5.7nm,0.8s						
109C	Camp Elliot, M	89.50	57	P	P	09 18 26.6	-0.2
	baz=261						
MURC	Murrieta	89.54	56	P	P	09 18 27.6	+0.5
	baz=260						
BOOM	Boomskoye usch	89.55	313	P	P	09 18 26.9	-0.2
BOOM				*PP	pP	09 18 41.1	+1.1
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOOM	Boomskoye usch	89.55	313	P	P	09 18 26.9	-0.2
BOOM					pP	09 18 41.1	+1.1
BOOM				IAmb	IAmb	09 18 43.4	
	comp=Z,9.9nm,1.0s						
I07A	Izee	89.60	46	P	P	09 18 28.7	+1.5
I07A				IAmb	IAmb	09 18 29.3	
	comp=Z,6.1nm,0.9s						
I07A				pP	pP	09 18 40.9	+0.7
MPMC	Manual Prospec	89.70	54	P	P	09 18 29.5	+1.5
	baz=260,SNR=16						
LCH	Last Change Ra	89.77	53	IAmb	IAmb	09 18 31.4	
	comp=Z,9.7nm,1.4s						
BAR	Barrett	89.82	57	IAmb	IAmb	09 18 31.0	
	comp=Z,11nm,1.1s						
BBRC	Big Bear Solar	89.87	56	P	P	09 18 30.1	+1.2
	baz=261,SNR=5.8						
RRX	Edison Barstow	89.91	55	P	P	09 18 28.4	-0.4
	baz=261						
WVOR	Wild Horse Val	89.92	47	IAmb	IAmb	09 18 31.2	
	comp=Z,8.1nm,1.1s						
GRAC	Grapevine Rang	89.95	53	P	P	09 18 29.7	+0.8
	baz=260						
MONP2	Monument Peak	90.06	57	P	P	09 18 30.7	+0.9
	baz=261,SNR=9.2						
GSC	Goldstone, Bar	90.13	55	IAmb	IAmb	09 18 32.4	
	comp=Z,9.0nm,1.1s						
GSC	Goldstone, Bar	90.13	55	P	P	09 18 30.5	+0.6
	baz=261,SNR=7.3						
PFO	Pinyon Flats O	90.14	56	LR	LR	09 50 45.1	
	comp=Z,96nm,21.4s,baz=265,slow=30						
PFO	Pinyon Flats O	90.14	56	d iP	P	09 18 31.5	+1.5
PFO				pmax	pmax		
	comp=Z,24nm,1.1s						
PFO	Pinyon Flats O	90.14	56	P	P	09 18 30.9	+0.9
PFO	Pinyon Flats O	90.14	56	P	P	09 18 29.8	-0.2
	baz=261,SNR=9.9						
TPFO	Pinon Flats	90.15	56	P	P	09 18 29.8	-0.2
	baz=261,SNR=10.0						
G08A	Pilot Rock	90.21	44	IAmb	IAmb	09 18 31.7	
	comp=Z,11nm,1.4s						
FURC	Furnace Creek,	90.27	53	P	P	09 18 30.1	-0.2
	baz=261,SNR=22						
IKP	In-Ko-Pah, Jac	90.29	57	P	P	09 18 30.9	+0.3
	baz=261						
NRIK	Noril'sk	90.43	340	P	P	09 18 29.5	-0.9
	comp=Z,1.1nm,0.3s,baz=108,slow=5.3,SNR=4.6						
	comp=Z,1.1nm,0.3s						
NRIK	Noril'sk	90.43	340	IAmb	IAmb	09 18 49.1	
	comp=Z,10nm,1.4s						
HEC	Hector,Ludlow	90.44	55	P	P	09 18 32.5	+1.2
	baz=261,SNR=5.4						
BELC	Belle Mtn. Jos	90.58	56	P	P	09 18 33.6	+1.5
	baz=261,SNR=24						
SWSC	Sam W. Stewart	90.59	57	P	P	09 18 33.3	+1.4
	baz=261,SNR=5.4						
AAK	Ala-Archa	90.63	313	P	P	09 18 32.5	+0.4
	comp=Z,1.9nm,0.6s,baz=286,slow=7.4,SNR=2.9						
	comp=Z,1.9nm,0.6s						
AAK	Ala-Archa	90.63	313	c iP	P	09 18 32.6	+0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	90.63	313	P	P	09 18 32.9	+0.7
SHOC	Shoshone, Teco	90.65	54	P	P	09 18 32.6	+0.4
	baz=261,SNR=9.0						
TPNV	Topopah Spring	90.83	53	P	P	09 18 34.6	+1.4
	baz=261,SNR=23						
TUQ	Turquoise Moun	90.86	55	P	P	09 18 33.6	+0.3
	baz=261,SNR=14						
GMRC	Granite Mounta	90.98	55	P	P	09 18 35.1	+1.2
	baz=261						
BC3	Big Chuckawall	90.98	56	P	P	09 18 33.7	-0.2
	baz=262,SNR=8.3						
BMO	Blue Mountains	91.29	45	IAmb	IAmb	09 18 37.5	
	comp=Z,9.0nm,1.2s						
IRM	Iron Mountain	91.31	56	P	P	09 18 37.0	+1.7
	baz=262,SNR=22						
GLA	Glamis	91.41	57	P	P	09 18 36.9	+1.1
	baz=262						
R11A	Troy Canyon, C	91.56	52	P	P	09 18 37.8	+1.2
	baz=262,SNR=23						
NEE2	Needles Airpor	91.82	55	P	P	09 18 38.3	+0.7
	baz=262						
NEW	Newport	91.96	42	LR	LR	09 55 29.8	
	comp=Z,81nm,18.9s,baz=258,slow=32						
NEW	Newport	91.96	42	P	P	09 18 38.5	+0.5
	baz=261						
PDMCI	Parker Dam,Lak	92.15	56	P	P	09 18 40.5	+1.3
	baz=262						
ELK	Elko	92.17	49	LR	LR	09 52 47.6	
	comp=Z,29nm,21.9s,baz=261,slow=31						
ELK	Elko	92.17	49	IAmb	IAmb	09 18 42.8	
	comp=Z,9.3nm,1.4s						
PLID	Pearl Lake	92.24	45	P	P	09 18 39.7	0.0
PLID				IAmb	IAmb	09 18 40.5	
	comp=Z,4.2nm,0.8s						
113A	Mohawk Valley,	92.26	57	IAmb	IAmb	09 18 42.5	
	comp=Z,6.6nm,1.2s						
C36M	Paulatuk	92.70	20	P	P	09 18 40.7	-0.2
	baz=256						
214A	Organ Pipe Nat	92.96	58	P	P	09 18 42.4	-0.6
	baz=263						
A36M	Sachs Harbour	93.00	18	P	P	09 18 42.4	+0.2
	baz=255						
HLID	Hailey	93.16	47	P	P	09 18 42.9	-1.0
	baz=262,SNR=14						
KKAR	Karatay Array	93.59	313	P	P	09 18 45.9	+0.3
KKAR				pP	pP	09 18 58.1	-0.5
BGU	Big Grassy Mou	93.85	49	IAmb	IAmb	09 18 49.6	
	comp=Z,9.6nm,1.4s						
MSO	Missoula	93.89	43	P	P	09 18 46.9	-0.2
	baz=263						
DUG	Dugway, Tooele	93.93	50	P	P	09 18 46.8	-0.6
	baz=263						
CHGR	Chuyangaron	94.10	308	P	P	09 18 48.9	+0.7
CHGR	Chuyangaron	94.10	308	P	P	09 18 48.3	+0.2
HSIG		94.21	61	IAmb	IAmb	09 18 52.7	
	comp=Z,5.2nm,1.1s						
NLU	North Lily Min	94.47	50	P	P	09 18 50.5	+0.5
NLU				IAmb	IAmb	09 18 52.5	
	comp=Z,7.7nm,1.0s						
NLU				pP	pP	09 19 04.3	+1.4
DLMT	Dillon	94.66	45	IAmb	IAmb	09 18 54.3	
	comp=Z,6.7nm,1.4s						
BRVK	Borovoye	94.88	323	⇓ iP	P	09 18 50.0	-1.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
JLU	Jordanelle	95.01	50	IAmb	IAmb	09 18 54.8	
	comp=Z,5.4nm,1.1s						
TMUT	Trail Mountain	95.07	51	IAmb	IAmb	09 18 55.6	
	comp=Z,6.8nm,0.9s						
YKA	Yellowknife Ar	95.30	28	P	P	09 18 53.2	+0.3
	comp=Z,13nm,0.8s,baz=259,slow=4.5,SNR=140						
YKA				LR	LR	09 56 43.2	
	comp=Z,70nm,19.2s,baz=299,slow=32						
	comp=Z,13nm,0.8s						
BOZ	Bozeman (W)	95.36	45	P	P	09 18 53.2	-0.7
	baz=265						
P17A	Butcher Ranch,	95.45	51	IAmb	IAmb	09 18 56.4	
	comp=Z,4.0nm,0.9s						
YMR	Madison River	95.75	46	IAmb	IAmb	09 18 59.8	
	comp=Z,2.8nm,0.7s						
P18A	Preston Nutter	95.84	51	IAmb	IAmb	09 18 58.8	
	comp=Z,5.6nm,1.0s						
H17A	Grant Village	96.00	46	P	P	09 18 56.4	-0.6
	baz=265						
RDMU	Red Mountain	96.44	50	IAmb	IAmb	09 19 01.1	
	comp=Z,7.0nm,1.0s						
BW06	Boulder Array	96.61	48	IAmb	IAmb	09 19 00.9	
	comp=Z,4.7nm,1.2s						
BW06	Boulder Array	96.61	48	P	P	09 18 59.4	-0.3
	baz=266						
PDAR	Pinedale Array	96.61	48	P	P	09 19 00.1	+0.4
	comp=Z,4.3nm,1.1s,baz=224,slow=2.4,SNR=13						
PDAR				LR	LR	09 55 49.7	
	comp=Z,39nm,21.2s,baz=286,slow=31						
	comp=Z,4.3nm,1.1s						
PV11	David Mesa, Pa	96.80	52	IAmb	IAmb	09 19 13.6	
	comp=Z,4.3nm,0.8s						
RLMT	Red Lodge	96.98	45	P	P	09 19 01.3	-0.1
	baz=266						
121A	Cookes Peak, D	97.25	58	P	P	09 19 01.6	-1.2
	baz=266						
O20A	White River Ci	97.42	51	P	P	09 19 02.7	-0.7
	baz=266						
S22A	4UR Ranch, Cre	98.38	53	P	P	09 19 07.4	-0.5
	baz=267						
ANMO	Albuquerque	98.52	56	LR	LR	09 55 41.0	
	comp=Z,67nm,22.0s,baz=290,slow=30						
ANMO	Albuquerque	98.52	56	P	P	09 19 07.6	-0.9
	baz=267						
K22A	Casper	98.84	48	P	P	09 19 08.1	-1.6
	baz=268						
LAO	LASA Array	99.17	44	P	Pdif	09 19 10.8	-0.1
	baz=269						
N23A	Red Feather La	99.20	50	P	Pdif	09 19 09.7	-1.8
	baz=268						
MNTX	Cornudas Mount	99.23	59	P	Pdif	09 19 10.4	-1.1
	baz=267						
ISCO	Idaho Springs	99.42	51	P	Pdif	09 19 10.3	-2.2
	baz=268						
SNAA	Sanae	99.92	186	LR	LR	10 00 01.5	
	comp=Z,122nm,19.9s,baz=9.0,slow=33						
DGMT	Dagmar	100.56	42	P	Pdif	09 19 16.4	-0.7
	baz=270						
TXAR	Lajitas Array	100.59	62	P	Pdif	09 19 21.6	+3.9
	comp=Z,0.4nm,0.8s,baz=235,slow=4.4,SNR=5.1						
OBN	Obninsk	114.08	328	ePKIKP	PKiKP	09 24 09.0	+0.8
OBN				e		09 24 23.0	
OBN				e		09 25 04.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TGUH	Tegucigalpa,Un	115.35	78		PKPdf	09 24 10.6	-1.4
FINES	FINESS Array B	115.85	337	PKP	PKiKP	09 24 10.5	-1.0
	comp=Z,1.0nm,0.8s,baz=128,slow=3.1,SNR=5.3						
FINES				pPKP	PKPdf	09 24 23.7	+12
	comp=Z,1.3nm,0.7s,baz=91,slow=8.4,SNR=4.0						
FINES	FINESS Array B	115.85	337	c iPKIKP	PKPdf	09 24 12.1	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	119.98	325	PKP	PKPdf	09 24 19.7	0.0
	comp=Z,0.3nm,0.4s,baz=72,slow=2.1,SNR=4.2						
AKASG				pPKP	pPKPdf	09 24 32.0	-1.1
	comp=Z,0.5nm,0.3s,baz=67,slow=3.0,SNR=8.0						
NB2	NORSAR Subarra	121.35	342	PKPdf	PKPdf	09 24 21.4	-0.8
	comp=Z,1.0nm,0.6s,baz=38,slow=1.7						
NOA	NORSAR Array B	121.35	342	PKP	PKPdf	09 24 21.7	-0.5
	comp=Z,1.7nm,0.8s,baz=41,slow=1.8,SNR=7.2						
NOA				pPKP	pPKPdf	09 24 34.4	-1.1
	comp=Z,1.4nm,0.8s,baz=39,slow=1.8,SNR=4.4						
SJCC	San Jacinto, C	127.05	83		PKPdf	09 24 32.8	-1.6
ROSC	El Rosal	127.55	90	PKP	PKPdf	09 24 35.0	-0.8
	comp=Z,5.8nm,0.5s,baz=178,slow=16,SNR=4.6						
CLL	Collm	127.92	333	ePKIKP	PKPdf	09 24 35.0	+0.1
CLL				e		09 24 48.0	
CLL	Collm	127.92	333	ePKPdf	PKPdf	09 24 35.0	+0.1
CLL				epPKPdf	pPKPdf	09 24 48.0	-0.3
LPAZ	La Paz	128.20	118	PKP	PKPdf	09 24 37.0	-0.3
	comp=Z,1.9nm,0.7s,baz=245,slow=2.8,SNR=10						
LPAZ	La Paz	128.20	118	PKIKP	PKPdf	09 24 37.0	-0.3
LPAZ	La Paz	128.20	118		PKPdf	09 24 36.8	-0.5
GERES	GERESS Array B	129.28	330	PKP	PKiKP	09 24 38.9	+0.4
	comp=Z,0.8nm,0.6s,baz=104,slow=1.7,SNR=4.5						
GERES				pPKP	pPKPdf	09 24 50.8	-0.3
MVO	Moncorvo	144.15	341	ePKPdf	PKPdf	09 25 04.5	-0.9
POLO	Lamas de Olo	144.20	342	ePKPdf	PKPbc	09 25 04.1	+0.4
POLO				i LQ	LQ	09 25 21.6	
ESDC	Sonseca Array	144.36	336	PKP	PKPbc	09 25 04.5	+0.3
	comp=Z,3.5nm,0.9s,baz=17,slow=3.6,SNR=19						
ESDC	Sonseca Array	144.36	336	PKPdf	PKPbc	09 25 04.3	+0.1
PVIS	Viseu	144.83	342	ePKPdf	PKPdf	09 25 06.3	-0.3
MTE	Manteigas	145.01	341	ePKPdf	PKPdf	09 25 07.0	+0.1
BDFB	Brasilia	145.10	132	PKPbc	PKPbc	09 25 06.6	-0.7
	comp=Z,8.5nm,0.6s,baz=208,slow=2.6,SNR=20						
BDFB	Brasilia	145.10	132		PKPbc	09 25 06.4	-0.8
COI	Coimbra	145.46	342	ePKPab	PKPab	09 25 09.0	+1.2
PCBR	Castelo Branco	145.50	341	ePKPab	PKPab	09 25 08.3	+0.4
PCBR				i LQ	LQ	09 25 22.3	

PCAS	Casmilo, Conde	145.63	342	*e*PKPab	PKPab	09 25 08.7	+0.3
PMRV	Marv??o	145.84	340	*e*PKPab	PKPab	09 25 09.4	+0.1
PSBE	So Bento	146.21	342	*e*PKPab	PKPab	09 25 11.3	+0.6
PESTR	Estremoz	146.41	340	*e*PKPab	PKPab	09 25 11.1	-0.4
PMTG	Montargil	146.44	341	*e*PKPab	PKPbc	09 25 10.8	+0.2
PMTG				*i* LQ	LQ	09 25 24.2	
PBAR	Barrancos	146.84	339	*e*PKPab	PKPab	09 25 12.8	-0.3
PBAR				*i* LQ	LQ	09 25 26.7	
EVO	Evora	146.85	340	*e*PKPab	PKPab	09 25 12.6	-0.6
EVO				*i* LQ	LQ	09 25 26.6	
PNCL	Nicolau / Gran	147.41	341	*e*PKPab	PKPbc	09 25 14.2	+0.8
PNCL				*i* LQ	LQ	09 25 27.5	
PCVE	Castro Verde	147.68	340	*e*PKPab	PKPbc	09 25 15.1	+0.9
PCVE				*i* LQ	LQ	09 25 26.4	
PTEO	Sao Teotonio	147.99	340	*e*PKPab	PKPbc	09 25 15.9	+0.9
TORD	Torodi Ar. Bea	156.44	285	PKP	PKPdf	09 25 24.1	-1.0
	comp=Z,1.6nm,0.7s,baz=0.3,slow=1.5,SNR=13						
TORD				PKPab	PKPab	09 25 53.5	-0.2
	comp=Z,2.7nm,0.8s,baz=88,slow=4.3,SNR=11						

NNC 05 09:22:08.8±4.0, 37°.57N×72°.43E, h0^{km}, mb4.3, mpv3.8, 2D, Error ellipse: s-maj=28.1km s-min=20.0km az=178.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	4.93	339	Pg	Pb	09 23 37.1	+1.0
	403nm,0.6s						
IUG				Lg	Lg	09 24 43.0	
	40nm,0.9s						
MRKS	Merke	5.21	7	Pg	Pg	09 23 44.7	-3.8
	6.7nm,0.5s						
MRKS				Lg	Lg	09 24 56.2	
	6.5nm,0.7s						
KK31	Karatay Array	5.72	346	⇓Pn	Pn	09 23 35.9	+0.9
	1.2nm,0.3s,baz=162,slow=12,SNR=16						
KK31				⇓Sn	Sn	09 24 43.4	+2.0
	2.8nm,0.5s,baz=168,slow=22						
BRLS	Borolday	5.80	341	Pg	Pb	09 23 52.0	+1.1
	7.5nm,0.6s						
BRLS				Lg	Lg	09 25 09.2	
	5.3nm,0.7s						
KST	Kastek	6.10	25	Pg	Pb	09 23 59.2	+3.2
	3.4nm,0.6s						
KST				Lg	Lg	09 25 20.4	
	5.6nm,0.6s						
KRBS	Karabastau	6.60	21	Pg	Pb	09 24 07.7	+3.2
	1.3nm,0.8s						
KRBS				Lg	Lg	09 25 35.1	
	1.9nm,0.8s						
KTBS	Karatobe	6.94	26	Pg	Pb	09 24 15.8	+5.6
	1.5nm,0.6s						
KTBS				Lg	Lg	09 25 48.7	
	4.4nm,0.5s						

IDC 05 09:47:34.1±2.6, 53°.66N×87°.03E, h0^{km}, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=23.8km s-min=15.1km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.34	283	*i*		09 56 05.5	
	baz=103,slow=321,SNR=4.1						
ZALV	Zalesovo Beam	1.34	283	Pg	Pg	09 47 58.3	-1.5
	1.0nm,0.3s,baz=103,slow=19,SNR=17						
ZALV				Lg	Lg	09 48 16.5	
	1.5nm,0.3s,baz=102,slow=27,SNR=17						
KURBB	Kurchatov Arra	6.05	243	Pn	Pn	09 49 06.0	+1.2
	0.1nm,0.3s,baz=60,slow=14,SNR=6.4						
KURBB				Lg	Lg	09 50 48.6	
	baz=56,slow=32,SNR=5.4						
	1.7nm,0.9s						
MKAR	Makanchi Array	7.51	206	Pn	Pn	09 49 26.0	+1.2
	0.1nm,0.3s,baz=30,slow=12,SNR=5.6						
MKAR				Lg	Lg	09 51 30.8	
	0.1nm,0.3s,baz=26,slow=28,SNR=7.8						
	0.2nm,0.4s						

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*MAN **05** 09:49:58.5, 9°.67N×123°.52E, h3^{km}, mb4.2, ML3.0, MS2.7, Hypocentre not reviewed by the ISC*

ISC 05 09:49:60.0±1.0, 9°.70N±0°.06×123°.58E±0°.04, h16^{km}±11^{km}, n7, σ0^s.82/13, 2C-5D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.28	93	⇓*i*P	Pg	09 50 05.8	-0.3
TBP				*i* S	Sg	09 50 10.7	+0.5
SNPH	Sibulan	0.49	223	⇑*i*P	Pg	09 50 09.5	-0.3
SNPH				*i* S	Sg	09 50 16.9	+0.5
LLP	Lapu-Lapu	0.72	32	⇑*i*P	Pb	09 50 13.3	-0.9
LLP				*i* S	Sb	09 50 23.8	-0.1
CNOP	Candoni, Negro	0.93	278	⇓*e*P	Pb	09 50 16.4	-1.4
CNOP				*e*S	Sb	09 50 30.3	+0.4
MSLP	Maasin	1.33	71	⇓*e*P	Pn	09 50 23.9	-0.2
MSLP				*e*S	Sg	09 50 44.1	+0.9
PAGZ	Pagadian	1.85	186	⇓*e*P	Pb	09 50 33.3	-0.2
RCP	Roxas	2.02	336	⇓*e*P	Pn	09 50 34.6	+1.2
RCP				*e*S	Sb	09 51 01.7	+0.4

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*UPP **05** 09:57:31.0±3.0, 64°.46N×31°.24E, h0^{km}, ML1.8, Suspected explosion*

*HEL **05** 09:57:34.3±0.2, 64°.77N×30°.79E, h0^{km}, ML1.8, Explosion*

*IDC **05** 09:57:37.1±1.7, 64°.75N×30°.23E, h0^{km}, mbtmp3.0/3, ML2.2/3, Error ellipse: s-maj=24.8km s-min=8.5km az=108.0*

*KOLA **05** 09:57:38.4, 65°.05N×29°.98E, h0^{km}, ML2.5*

ISC 05 09:57:33.8±1.0, 64°.79N±0°.03×30°.69E±0°.05, h0^{km}, n38, σ1^s.88/53, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.66	210	*e*P	Pg	09 57 46.6	+0.2
RMF				*e*S	Sg	09 57 54.8	-0.2
KU6	Riekki	1.28	345	*e*P	Pg	09 57 57.9	-0.5
KU6				*e*S	Sg	09 58 15.3	+0.3
KU6				MSG		09 58 20.6	
	comp=Z,8.8nm,0.1s						
MSF	Maaselka	1.32	329	*e*P	Pg	09 57 58.5	-0.6
MSF				*e*S	Sg	09 58 16.1	0.0
OLKF	Oulanka, Finla	1.63	341	*e*P	Pn	09 58 03.7	0.0
OLKF				*e*S	Sn	09 58 24.3	-1.0
OLKF				MSG		09 58 30.1	
	comp=Z,8.5nm,0.1s						
JOF	Joensuu	1.90	171	*e*P	Pn	09 58 07.0	-0.4
JOF				*e*S	Sn	09 58 31.8	-0.1
OUL	Oulu	2.06	280	*e*P	Pb	09 58 11.1	-0.9
OUL				*e*S	Sn	09 58 36.7	+0.7
RNF	Rovaniemi	2.66	315	*e*P	Pn	09 58 18.7	+0.9
RNF				*e*S	Sn	09 58 52.3	+1.6
APA0	Apatity Array	2.98	17	P	Pn	09 58 24.0	+1.8
APA0				S	Sn	09 59 00.1	+1.5
APA	Apatity	3.00	20	P	Pn	09 58 24.7	+2.2
KALU	Kalix	3.26	293	P	Pn	09 58 27.8	+1.7
KALU				S	Sb	09 59 10.4	-2.0
KALU	Kalix	3.26	293	P	Pn	09 58 27.3	+1.3
KALU				S	Sn	09 59 09.1	+3.7
LVZ	Lovozero	3.51	25	P	Pn	09 58 31.6	+2.1
LVZ				S	Sn	09 59 12.3	+0.7
PAJU	Pajala	3.83	309	P	Pn	09 58 36.0	+2.1
PAJU	Pajala	3.83	309	P	Pn	09 58 35.0	+1.0
SJUU	Sjulsmark	3.90	285	P	Pn	09 58 35.5	+0.6
SJUU	Sjulsmark	3.90	285	P	Pn	09 58 35.7	+0.9
SJUU				S	Sn	09 59 24.1	+2.8
ERTU	Ertsjaerv	3.94	301	P	Pn	09 58 37.5	+2.2
ERTU	Ertsjaerv	3.94	301	P	Pn	09 58 36.8	+1.5
ERTU				S	Sn	09 59 26.4	+4.3
FINES	FINESS Array B	3.96	214	Pn	Pn	09 58 36.8	+1.2
	comp=Z,0.2nm,0.3s,baz=37,slow=13,SNR=7.2						
FINES				Lg	Lg	09 59 36.3	
	comp=Z,2.1nm,0.3s,baz=25,slow=29,SNR=15						
	comp=Z,0.5nm,0.4s						
HARU	Harads	4.28	293	P	Pn	09 58 42.1	+2.1
HARU	Harads	4.28	293	P	Pn	09 58 40.6	+0.6
ODEU	Stanfors	4.31	269	P	Pn	09 58 40.2	-0.3
ODEU	Stanfors	4.31	269	P	Pn	09 58 40.4	-0.1
MASU	Masugnsbyn	4.43	311	P	Pn	09 58 44.7	+2.5
UMAU	Umeaa	4.45	263	P	Pn	09 58 42.0	-0.4
LILU	Lilltraesk	4.62	281	P	Pn	09 58 45.9	+1.1
LILU	Lilltraesk	4.62	281	P	Pn	09 58 45.8	+1.1
DUNU	Dundret	4.75	304	P	Pn	09 58 48.2	+1.6
TERR	Teriberka	4.76	19	P	Pn	09 58 48.4	+1.8
TERR				S	Sn	09 59 40.8	-1.5
LANU	Lannavaara	4.78	317	P	Pn	09 58 48.1	+1.1
SVAU	Svanoeiden	4.79	271	P	Pn	09 58 47.4	+0.3
SVAU	Svanoeiden	4.79	271	P	Pn	09 58 47.2	+0.2
ARCES	ARCESS Array B	5.17	339	Pn	Pn	09 58 52.6	+0.3
	comp=Z,0.6nm,0.3s,baz=156,slow=13,SNR=76						
ARCES				Sn	Sn	09 59 51.5	-1.1
	comp=Z,0.3nm,0.3s,baz=154,slow=25,SNR=6.6						
ARCES				Lg	Lg	10 00 12.4	
	comp=Z,0.9nm,0.3s,baz=154,slow=31,SNR=16						
	comp=Z,1.2nm,0.2s						
ARCES	ARCESS Array B	5.17	339	P	Pn	09 58 52.6	+0.3
ARCES				S	Sn	09 59 44.7	-7.9
SALU	Saltoluokta	5.59	303	P	Pn	09 58 59.3	+1.2
SALU	Saltoluokta	5.59	303	P	Pn	09 58 59.3	+1.2
I37NO	I37NO	6.40	318	*i*		10 34 50.0	
	comp=Z,0.1nm,0.9s,baz=128,slow=321,SNR=6.7						
NOA	NORSAR Array B	9.63	256	Pn	Pn	09 59 52.1	-1.4
	baz=58,slow=13,SNR=1.4						
	comp=Z,0.8nm,0.9s						

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*IDC **05** 10:46:36.7±1.3, 32°.83N×130°.90E, h0^{km}, mb3.2/2, mbtmp3.3/4, ML2.9/2, MS2.7/2, Error ellipse: s-maj=35.9km s-min=8.0km az=85.0*

*JMA **05** 10:46:38.0±0.0, 33°.0N±0°.1×131°.1E±0°.1, h11^{km}, MV3.9/20, NE KUMAMOTO PREF*

JMA Felt IV J1 at NE KUMAMOTO PREF .

*NIED **05** 10:46:38.0, 32°.99N×131°.11E, h11^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.51; $M_{\theta\theta}$4.03; $M_{\phi\phi}$-3.51; $M_{r\theta}$-2.13; $M_{\theta\phi}$3.18; $M_{\phi r}$0.17; Fault plane solution: $M_0$5.33000×10^{14} NP1: ϕ_s204.00000°, δ69.00000°, λ177.00000°. NP2: ϕ_s295.00000°, δ87.00000°, λ21.00000°.*

ISC 05 10:46:37.9±0.9, 32°.87N±0°.06×131°.05E±0°.05, h12^{km}, n9, σ1^s.91/12, 4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	Nakatsue	0.29	331	Pg	Pg	10 46 42.6	-1.3
	1μm,0.3s,baz=97,slow=6.7						
JNU				Lg	Lg	10 46 46.1	
	3μm,0.3s,baz=210,slow=20,SNR=59						
JNU	Nakatsue	0.29	331	*i* P	Pg	10 46 43.0	-0.9
JNU				S	Sg	10 46 46.5	-1.4
JIU3	Izumi3	0.37	212	⇓*i*P	Pb	10 46 47.9	+1.4
JTA	Tamana	0.44	283	⇓*i*P	Pb	10 46 47.5	-0.1
JUS	Usuki	0.62	71	⇓*i*P	Pg	10 46 48.2	-1.9
JUS				⇓S	Sg	10 46 56.2	-2.1
KSRS	Korea Array	5.24	332	Pn	Pn	10 47 54.8	-1.2
	0.3nm,0.3s,baz=148,slow=14,SNR=3.7						
KSRS				Pg	Pb	10 48 13.1	+3.6
	1.1nm,0.3s,baz=147,slow=17,SNR=8.2						
KSRS				Lg	Lg	10 49 22.3	
	1.5nm,0.3s,baz=153,slow=31,SNR=5.2						
KSRS				LR	LR	10 50 01.2	
	comp=Z,67nm,19.9s,baz=170,slow=39						
	0.9nm,0.4s						
MJAR	Matsushiro Arr	6.95	56	Pn	Pn	10 48 21.4	+2.0
	0.2nm,0.3s,baz=242,slow=13,SNR=12						
MJAR				LR	LR	10 51 09.0	
	comp=Z,68nm,19.8s,baz=233,slow=39						
	4.5nm,0.5s						
WRA	Warramunga Arr	52.60	176	P	P	10 55 52.1	+0.4
	0.3nm,0.8s,baz=356,slow=8.2,SNR=1.6						
	0.3nm,0.8s						
ASAR	Alice Springs	56.28	177	P	P	10 56 18.4	0.0
	0.3nm,0.8s,baz=9.6,slow=14,SNR=2.4						
	0.3nm,0.8s						

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*ANF **05** 10:55:56.0±0.3, 36°.67N×98°.24W, h7^{km}, ML4.0/13, Error ellipse: s-maj=3.9km s-min=3.3km az=172.0*

*TUL **05** 10:55:55.3±0.9, 36°.69N±0°.02×98°.26W±0°.02, h6^{km}±7^{km}, ML3.5, mb_Lg3.2/97(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=141.0*

*NEIC **05** 10:55:55.5±0.7, 36°.67N±0°.02×98°.24W±0°.02, h7^{km}±7^{km}, Error ellipse: s-maj=3.1km s-min=1.7km az=141.0*

ISC 05 10:55:55.5±1.4, 36°.66N±0°.03×98°.20W±0°.03, h1^{km}±13^{km}, n84, σ1^s.02/59, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.71	247	Pg	Pg	10 56 08.3	-0.7
U32A	Winter Ranch,	0.71	247	P	Pg	10 56 08.3	-0.7
	baz=63,SNR=62						
U32A				S	Sg	10 56 17.8	-0.3
	baz=63						
ADOK	Arcadia Dam	1.21	146	Pn	Pb	10 56 18.9	-0.3
T35A	Sooner Cattle	1.38	79	Pn	Pn	10 56 21.6	-0.2
T35B	Sooner Cattle	1.38	79	P	Pn	10 56 21.6	-0.2
	baz=261,SNR=90						
T35B				S	Sg	10 56 40.7	+0.9
	baz=261						
OKCFA	Oklahoma City	1.38	154	S	Sg	10 56 41.0	+1.1
	baz=333						
OKCSW	OKLAHOMA CITY	1.40	154		Pn	10 56 21.6	-0.5
FNO	Franklin	1.54	155	Pn	Pn	10 56 24.1	0.0
R32A	Long Quarter,	1.81	347	Pn	Pn	10 56 27.6	-0.2
R32A	Long Quarter,	1.81	347	P	Pn	10 56 27.7	-0.1
	baz=168,SNR=52						
R32A				S	Sb	10 56 51.5	-1.0
	baz=168						
WMOK	Wichita Mounta	1.98	194		Pn	10 56 30.4	+0.3
WMOK				IAmb_Lg		10 57 01.7	
	comp=Z,103nm,1.0s						
WMOK	Wichita Mounta	1.98	194	P	Pn	10 56 30.2	+0.1
	baz=12,SNR=137						
WMOK	Wichita Mounta	1.98	194	P	Pn	10 56 30.2	+0.1
	baz=12						
WMOK				S	Sb	10 56 57.6	+0.2
	baz=12						
X34A	Smith Ranch, M	2.08	172		Pb	10 56 32.6	-1.3
TUL1	Leonard	2.08	110	Pn	Pn	10 56 32.1	+0.6
TUL1				IAmb_Lg		10 57 07.4	
	comp=Z,58nm,0.8s						
TUL1	Leonard	2.08	110	P	Pb	10 56 33.0	-1.1
	baz=292,SNR=28						
TUL1				Sb	Sb	10 57 02.1	+1.7
	baz=292						
TUL1	Leonard	2.08	110	P	Pb	10 56 33.0	-1.1
	baz=292						
TUL1				S	Sb	10 57 02.1	+1.7
	baz=292						
CBKS	Cedar Bluff	2.47	331		Pn	10 56 36.5	-0.4
CBKS	Cedar Bluff	2.47	331	P	Pn	10 56 37.5	+0.5
	baz=151,SNR=24						
CBKS	Cedar Bluff	2.47	331	S	Sb	10 57 10.6	-1.1
	baz=151						
KSU1	Kansas State U	2.74	27	Pn	Pn	10 56 41.0	+0.4
KSU1				IAmb_Lg		10 57 24.0	
	comp=Z,84nm,0.9s						
KSU1	Kansas State U	2.74	27	P	Pn	10 56 41.2	+0.6
	baz=209						
KSU1				S	Sb	10 57 21.2	+1.8
	baz=209						
X37A	Clayton	3.09	131	Pn	Pn	10 56 45.9	+0.5
X37A	Clayton	3.09	131	P	Pn	10 56 46.1	+0.7
	baz=313,SNR=7.1						
AMTX	Amarillo	3.34	239	IAmb_Lg		10 57 49.2	
	comp=Z,84nm,0.8s						
AMTX	Amarillo	3.34	239	P	Pb	10 56 55.6	0.0
	baz=56						
AMTX	Amarillo	3.34	239	P	Pb	10 56 55.6	0.0
	baz=56						
W39A	Magazine	3.87	111	IAmb_Lg		10 58 08.9	
	comp=Z,39nm,0.9s						
S39A	Bolivar	4.03	74		Pn	10 56 58.0	-0.2
S39A				IAmb_Lg		10 58 07.3	
	comp=Z,64nm,0.8s						
S39A	Bolivar	4.03	74	P	Pn	10 56 58.5	+0.3
	baz=257,SNR=12						
S39A				S	Sn	10 57 45.9	-0.1
	baz=257						
N33B	J Bar K, Exete	4.11	8	S	Sn	10 57 46.2	-2.0
	baz=189						
N33A	J Bar K, Exete	4.11	8	Pn	Pn	10 56 58.6	-0.9
N33A				IAmb_Lg		10 58 13.9	
	comp=Z,44nm,0.8s						
ABTX	Abilene, Hawle	4.20	197	IAmb_Lg		10 58 16.8	
	comp=Z,32nm,0.8s						
KSCO	Kaye Shedlock'	4.22	305	IAmb_Lg		10 58 13.0	
	comp=Z,34nm,0.8s						
KSCO	Kaye Shedlock'	4.22	305	P	Pb	10 57 12.2	+1.6
	baz=123						
Z38A	Mt. Pleasant	4.30	141	Pn	Pn	10 57 01.5	-0.5
Z38A				IAmb_Lg		10 58 21.8	
	comp=Z,47nm,0.7s						
MIAR	Mount Ida	4.32	118	P	Pn	10 57 03.6	+1.4
	baz=301,SNR=18						
U40A	Yellville	4.32	92	IAmb_Lg		10 58 12.4	
	comp=Z,74nm,0.8s						
U40A	Yellville	4.32	92	P	Pn	10 57 02.5	+0.2
	baz=276						
U40A				P	Pb	10 57 12.6	+0.5
	baz=276						
MSTX	Muleshoe	4.60	236	Pn	Pn	10 57 05.9	-0.4
MSTX				IAmb_Lg		10 58 27.0	
	comp=Z,29nm,0.9s						
N35A	Tabor	4.65	25		Pn	10 57 05.9	-0.8
WHTX	Lake Whitney,	4.70	172	Pn	Pn	10 57 07.0	-0.4
WHTX	Lake Whitney,	4.70	172	P	Pn	10 57 08.0	+0.5
	baz=352,SNR=13						
WHTX	Lake Whitney,	4.70	172	P	Pn	10 57 08.0	+0.5
	baz=352						
P38A	Dawn	4.72	50	IAmb_Lg		10 58 33.5	
	comp=Z,55nm,0.7s						
BGNE	Belgrade	4.74	0	P	Pn	10 57 07.6	-0.6
	baz=181						
MGMO	Mountain Grove	4.78	82	IAmb_Lg		10 58 36.8	
	comp=Z,51nm,0.8s						
WHAR	Wooly Hollow	4.98	104		Pn	10 57 12.2	+0.8
WHAR				IAmb_Lg		10 58 46.9	
	comp=Z,52nm,1.2s						
R40A	Maddies Statio	4.99	69		Pn	10 57 11.6	+0.2
R40A				IAmb_Lg		10 58 35.3	
	comp=Z,55nm,0.8s						
T25A	Trinidad	5.00	277		Pn	10 57 11.6	-0.3
T25A				IAmb_Lg		10 58 42.6	
	comp=Z,28nm,0.8s						
T25A	Trinidad	5.00	277	S	Sb	10 58 28.8	+4.1
	baz=94						
237A	Washetta, Mont	5.05	156		Pn	10 57 11.4	-0.9
237A				IAmb_Lg		10 58 46.4	
	comp=Z,29nm,0.8s						
W41B	Gary Mavity, V	5.05	105	IAmb_Lg		10 58 48.1	
	comp=Z,48nm,1.1s						
WLAR	White Oak Lake	5.11	124	IAmb_Lg		10 58 53.9	
	comp=Z,27nm,0.8s						
OGNE	Ogallala	5.22	326	Pn	Pn	10 57 15.3	+0.6
OGNE				IAmb_Lg		10 58 45.1	
	comp=Z,81nm,0.7s						
OGNE	Ogallala	5.22	326	P	Pn	10 57 15.4	+0.6
	baz=144,SNR=15						
OGNE	Ogallala	5.22	326	P	Pn	10 57 15.4	+0.6
	baz=144						
L34A	Svendsen Farm,	5.49	14	IAmb_Lg		10 58 58.6	
	comp=Z,57nm,0.8s						
Z41A	Richland Creek	5.58	126	IAmb_Lg		10 59 01.7	
	comp=Z,27nm,0.9s						
N38A	Joes South For	5.66	42	IAmb_Lg		10 58 59.4	
	comp=Z,68nm,0.8s						
CCM	Cathedral Cave	5.71	74	Pn	Pn	10 57 22.3	+0.9
LCAR	Lake Charles	5.71	94	IAmb_Lg		10 58 58.2	
	comp=Z,37nm,0.9s						
435B	Jarrell	5.88	175	IAmb_Lg		10 59 11.9	
	comp=Z,35nm,0.8s						
K31A	O'Neill	5.97	356	IAmb_Lg		10 59 10.8	
	comp=Z,58nm,0.7s						
PBMO	Poplar Bluff	6.24	87	IAmb_Lg		10 59 24.8	
	comp=Z,48nm,0.9s						
SCIA	State Center	6.51	35	IAmb_Lg		10 59 39.2	
	comp=Z,41nm,0.7s						
N41A	Harden Midland	7.02	53	IAmb_Lg		10 59 48.8	
	comp=Z,54nm,0.8s						
ECSD	EROS Data Cent	7.17	9		Pn	10 57 39.5	-1.9
SIUC	Southern Illin	7.25	79	IAmb_Lg		10 59 52.1	
	comp=Z,50nm,0.7s						
N23A	Red Feather La	7.38	307	IAmb_Lg		11 00 06.3	
	comp=Z,26nm,0.9s						
W45A	Hickory Valley	7.46	99	IAmb_Lg		10 59 56.2	
	comp=Z,29nm,0.7s						
OXF	Oxford	7.47	104	IAmb_Lg		11 00 08.9	
	comp=Z,24nm,0.9s						
Y22D	IRIS PASSCAL I	7.58	253	IAmb_Lg		11 00 15.0	
	comp=Z,37nm,1.0s						
L40A	Anamosa	7.63	43	IAmb_Lg		11 00 05.7	
	comp=Z,34nm,0.8s						
MNTX	Cornudas Mount	7.74	232	IAmb_Lg		11 00 08.1	
	comp=Z,18nm,1.1s						
SUSD	Miller	7.80	356	IAmb_Lg		11 00 09.2	
	comp=Z,38nm,0.9s						
I37A	Lemond, Waseca	8.21	25	IAmb_Lg		11 00 24.4	
	comp=Z,26nm,0.9s						
833A	Chaparral WMA,	8.37	187	IAmb_Lg		11 00 31.8	
	comp=Z,14nm,1.0s						
O44A	Mansfield	8.40	63	IAmb_Lg		11 00 39.4	
	comp=Z,40nm,0.8s						
RSSD	Black Hills	8.68	331	IAmb_Lg		11 00 37.8	
	comp=Z,16nm,0.9s						
JFWS	Jewell Farm	8.74	42	IAmb_Lg		11 00 51.5	
	comp=Z,22nm,0.7s						
K22A	Casper	8.77	316	IAmb_Lg		11 00 56.7	
	comp=Z,26nm,1.0s						
I40A	Norwalk	9.26	36	IAmb_Lg		11 01 03.5	
	comp=Z,14nm,0.8s						
F33A	5 Mile Ranch,	9.28	8	IAmb_Lg		11 00 52.3	
	comp=Z,17nm,1.1s						

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*IDC **05** 11:01:43.7±0.6, 8°.83S×108°.22W, h0^{km}, mb4.6/20, mbtmp4.6/20, MS5.1/49, Error ellipse: s-maj=23.8km s-min=12.1km az=59.0*

*MOS **05** 11:01:45.0±1.6, 8°.77S×108°.17W, h10^{km}, mb5.3/24, MS5.1/7, Error ellipse: s-maj=11.9km s-min=8.6km az=93.2*

*NEIC **05** 11:01:46.8±2.3, 8°.9S±0°.1×108°.2W±0°.1, h10^{km}±1^{km}, mb5.3/498, Ms_20 5.3/335, Mwb5.6/42, Error ellipse: s-maj=24.4km s-min=18.3km az=261.0*

*GCMT **05** 11:01:47.8±0.1, 8°.94S±0°.01×108°.28W±0°.01, h17^{km}, MW5.7/153, Moment Tensor Solution. s141,c248; s153,c317; Duration: 1^s.7 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.03±.04; $M_{\theta\theta}$-0.90±.04; $M_{\phi\phi}$0.92±.04; $M_{r\theta}$-0.68±.09; $M_{\theta\phi}$3.79±.03; $M_{\phi r}$0.02±.09; Best double couple: $M_0$3.95700×10^{17} NP1:ϕ_s173.00000°, δ80.00000°, λ-179.00000°. NP2:ϕ_s83.00000°, δ89.00000°, λ-10.00000°. Principal axes: T 3.9550, Plg6.0000°, Azm129.0000°; N 0.0040, Plg80.0000°, Azm255.0000°; P -3.9590, Plg8.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **05** 11:01:47.0±0.0, 8°.90S×108°.30W, h10^{km}, mB5.4/12, Ms5.8/35, Ms7 5.6/34*

*NEIC **05** 11:01:47.8, 8°.87S×108°.19W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.24; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$0.70; $M_{r\theta}$-0.32; $M_{\theta\phi}$2.94; $M_{\phi r}$0.03; Fault plane solution: $M_0$3.02000×10^{17} NP1:ϕ_s174.47000°, δ83.73000°, λ-178.11000°. NP2:ϕ_s84.26000°, δ88.12000°, λ-6.28000°. Principal axes: T 3.1258, Plg3.0000°, Azm130.0000°; N -0.2244, Plg83.0000°, Azm248.0000°; P -2.9015, Plg6.0000°, Azm39.0000°;*

ISC 05 11:01:46.2±0.3, 9°.10S±0°.05×108°.27W±0°.06, h15^{km}, n927, σ2^s.00/771, mb5.3/247, MS5.3/216, 4C-5D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	17.96	183	LR	LR	11 09 58.3	
	comp=Z,2μm,18.2s,baz=1.0,slow=27						
PAYG	Puerto Ayora	19.76	66	P	Pn	11 06 17.7	+0.2
H06E1	SOCORRO T-PHAS	27.83	355	T	T	11 36 45.4	
	SNR=6.2						
TLIG	Tlapa	28.18	20	P	P	11 07 38.8	+0.3
TLIG				IAmb	IAmb	11 07 57.8	
	comp=Z,69nm,1.6s						
RKT	Rikitea	29.12	238	*e*T	T	11 38 04.8	
	comp=Z,4.3nm,0.3s						
CMIG	Matias Romero	29.20	27	P	P	11 07 46.6	-0.8
	comp=Z,8.2nm,0.9s,baz=214,slow=5.8,SNR=6.7						
CMIG				LR	LR	11 16 57.8	
	comp=Z,9μm,18.5s,baz=206,slow=32						
	comp=Z,8.2nm,0.9s						
SNET	Serv Nac Est T	29.49	40	IAMs_20	IAMs_20	11 16 38.7	
	comp=Z,6μm,20.0s						

DUNO	Dulce Nombre,	29.61	50	P	P	11 07 51.3	+0.2
CAO2	Cobano, Puntar	29.67	52	P	P	11 07 45.9	-5.8
ORTG	Ortega, Santa	29.82	50	P	P	11 07 53.0	-0.1
ORTG				IAmb	IAmb	11 07 55.0	
	comp=Z,54nm,1.2s						
CCIG	Comitan	29.85	32	P	P	11 07 52.8	-0.7
CCIG				IAmb	IAmb	11 08 28.5	
	comp=Z,72nm,1.4s						
MTO3	Montecristo	29.95	39	P	P	11 07 53.8	-0.5
MTO3				IAmb	IAmb	11 08 05.3	
	comp=Z,90nm,1.4s						
MTO3				IAMs_20	IAMs_20	11 16 53.8	
	comp=Z,10µm,20.0s						
ESQI	Esquipulas	30.09	39	P	P	11 07 54.9	-0.6
JTS	Las Juntas de	30.16	51	d iP	P	11 07 57.3	+1.3
JTS				pmax	pmax		
	comp=Z,108nm,2.5s						
JTS	Las Juntas de	30.16	51	P	P	11 07 55.6	-0.4
JTS				IAmb	IAmb	11 08 02.6	
	comp=Z,69nm,1.3s						
JTS	Las Juntas de	30.16	51	IAMs_20	IAMs_20	11 16 35.9	
	comp=Z,9µm,19.0s						
CRIN	San Cristobal	30.23	45	IAMs_20	IAMs_20	11 17 14.2	
	comp=Z,4µm,18.0s						
HDC	Heredia	30.63	52	IAMs_20	IAMs_20	11 16 55.5	
	comp=Z,8µm,20.0s						
RIMA	Rio Macho	30.69	53	P	P	11 08 00.9	0.0
SRBA	San Rafael, Bu	30.77	54	P	P	11 08 00.7	-0.9
CDITO	Canoas	30.79	56	P	P	11 08 00.9	-0.7
CDITO				IAmb	IAmb	11 08 07.5	
	comp=Z,74nm,1.4s						
NNA	Nana	31.02	98	LR	LR	11 17 02.8	
	comp=Z,5µm,21.9s,baz=268,slow=30						
NNA	Nana	31.02	98	⇑iP	P	11 08 06.9	+3.2
NNA				pmax	pmax		
	comp=Z,42nm,1.3s						
NNA	Nana	31.02	98	IAMs_20	IAMs_20	11 16 36.0	
	comp=Z,8µm,22.0s						
BOAB	BOACO BROADBAN	31.03	47	P	P	11 08 03.3	-0.4
TGUH	Tegucigalpa,Un	31.04	42	P	P	11 08 04.5	+0.6
TGUH				IAMs_20	IAMs_20	11 17 24.8	
	comp=Z,4µm,21.0s						
BRU2	Volcan	31.07	56	P	P	11 08 05.2	+1.0
ACON	Acoyapa	31.07	48	P	P	11 08 03.2	-0.8
OTAV	Otavalo	31.11	74	P	P	11 08 07.0	+2.0
OTAV				pmax	pmax		
	comp=Z,71nm,1.7s						
OTAV	Otavalo	31.11	74	P	P	11 08 07.0	+2.0
OTAV				IAmb	IAmb	11 08 21.7	
	comp=Z,71nm,1.6s						
OTAV	Otavalo	31.11	74	IAMs_20	IAMs_20	11 17 09.6	
	comp=Z,4µm,20.0s						
MATN	Matagalpa	31.17	46	P	P	11 08 05.5	+0.5
MATN				IAmb	IAmb	11 08 07.4	
	comp=Z,30nm,1.0s						
TAOE	Nuku Hiva Isla	31.48	268	eP	P	11 07 59.2	-8.7
TAOE				eS	S	11 13 12.7	-3.1
TAOE				eLR	LR	11 15 29.7	
	comp=Z,2µm,24.2s						
ZAIG	Zacatecas	32.16	10	P	P	11 08 13.8	-0.1
ZAIG				IAmb	IAmb	11 08 28.7	
	comp=Z,36nm,1.2s						
SLBS	Sierra La Lagu	32.63	357	P	P	11 08 16.1	-1.6
SLBS				IAmb	IAmb	11 08 32.0	
	comp=Z,56nm,1.4s						
BCIP	Isla Barro Col	33.63	58	P	P	11 08 27.0	+0.5
BCIP				pmax	pmax		
	comp=Z,66nm,1.5s						
BCIP	Isla Barro Col	33.63	58	P	P	11 08 27.0	+0.5
BCIP				IAmb	IAmb	11 08 32.4	
	comp=Z,66nm,1.5s						
BCIP				IAMs_20	IAMs_20	11 18 32.2	
	comp=Z,8µm,22.0s						
CZSB	Cruzeiro do Su	35.20	91	eP	P	11 08 39.9	-0.3
H03N2	Juan Fernandez	36.29	136	T	T	11 47 19.5	
	baz=309,slow=77,SNR=526						
H03N1	Juan Fernandez	36.30	136	T	T	11 47 25.7	
	baz=309,slow=77,SNR=748						
H03N3	Juan Fernandez	36.30	136	T	T	11 47 29.5	
	baz=309,slow=77,SNR=647						
H03S2	Juan Fernandez	36.52	137	T	T	11 47 53.4	
	baz=190,SNR=20						
H03S3	Juan Fernandez	36.52	137	T	T	11 47 52.8	
	baz=190,SNR=22						
H03S1	Juan Fernandez	36.54	137	T	T	11 47 54.7	
	baz=190,SNR=20						
ROSC	El Rosal	36.57	69	P	P	11 08 55.7	+3.4
	comp=Z,6.9nm,0.4s,baz=292,slow=10,SNR=5.0						
ROSC				LR	LR	11 20 22.2	
	comp=Z,2µm,21.9s,baz=262,slow=31						
KVTX	Kingsville	37.79	15	IAMs_20	IAMs_20	11 18 56.0	
	comp=Z,4µm,18.0s						
PB12	IPOC Station P	37.96	109	P	P	11 09 03.6	-0.2
SJCC	San Jacinto, C	37.96	61	IAmb	IAmb	11 09 19.7	
	comp=Z,87nm,1.9s						
HSIG		37.99	356	P	P	11 09 02.2	-1.5
HSIG				IAmb	IAmb	11 09 18.0	
	comp=Z,49nm,1.1s						
833A	Chaparral WMA,	38.18	13	IAmb	IAmb	11 09 20.2	
	comp=Z,60nm,1.1s						
833A	Chaparral WMA,	38.18	13	P	P	11 09 05.1	-0.2
	baz=194,SNR=13						
833A				S	S	11 14 59.0	+0.7
	baz=194						
833A	Chaparral WMA,	38.18	13	P	P	11 09 03.7	-1.7
	baz=194,SNR=13						
833A				S	S	11 14 59.7	+1.3
	baz=194						
TBTG	Tabatinga, AM	38.40	85	eP	P	11 09 07.4	-0.1
TA01	Diego Aracena	38.44	112	IAmb	IAmb	11 09 10.1	
	comp=Z,55nm,1.1s						
TX31	Lajitas Ar. Si	38.47	6	IAmb	IAmb	11 09 30.3	
	comp=Z,107nm,1.4s						
TX31	Lajitas Ar. Si	38.47	6	P	P	11 09 07.4	-0.4
	baz=187,SNR=17						
TXAR	Lajitas Array	38.47	6	P	P	11 09 07.2	-0.7
	comp=Z,6.6nm,1.0s,baz=184,slow=9.1,SNR=18						
TXAR				PcP	PcP	11 11 21.1	+0.2
	comp=Z,1.4nm,0.8s,baz=170,slow=7.1,SNR=4.5						
	comp=Z,6.6nm,1.0s						
PATCX	Punta Patache	38.52	112	IAmb	IAmb	11 09 10.9	
	comp=Z,70nm,1.0s						
PB04	IPOC Station P	38.86	114	IAmb	IAmb	11 09 14.1	
	comp=Z,78nm,1.1s						
PB07	IPOC Station P	38.96	113	IAmb	IAmb	11 09 14.9	
	comp=Z,62nm,1.2s						
PB01	IPOC Station P	39.17	112	IAmb	IAmb	11 09 16.9	
	comp=Z,91nm,1.2s						
AC01	Pan de Azucar	39.51	120	P	P	11 09 16.5	-0.1
LPAZ	La Paz	39.75	104	P	P	11 09 19.7	+0.3
	comp=Z,15nm,0.9s,baz=283,slow=5.5,SNR=44						
LPAZ				LR	LR	11 22 05.9	
	comp=Z,5µm,20.5s,baz=260,slow=31						
	comp=Z,15nm,0.9s						
LPAZ	La Paz	39.75	104	eP	P	11 09 18.1	-1.3
AC04	Llanos de Chal	39.81	124	P	P	11 09 18.9	-0.2
LVC	Limon Verde	40.03	114	P	P	11 09 22.8	+1.3
	comp=Z,13nm,1.0s,baz=283,slow=6.4,SNR=23						
LVC				LR	LR	11 21 32.0	
	comp=Z,7µm,20.2s,baz=292,slow=30						
	comp=Z,13nm,1.0s						
LVC	Limon Verde	40.03	114	P	P	11 09 21.9	+0.4
LVC				pmax	pmax		
	comp=Z,57nm,1.4s						
LVC	Limon Verde	40.03	114	P	P	11 09 21.9	+0.4
LVC	Limon Verde	40.03	114	eP	P	11 09 20.7	-0.8
GO02	Mina Guanaco	40.09	118	P	P	11 09 22.1	+0.4
AC06	Mina Casimiro	40.11	122	P	P	11 09 22.2	+0.6
AC06				IAmb	IAmb	11 09 24.5	
	comp=Z,112nm,1.7s						
JCT	Junction City	40.19	11	P	P	11 09 21.1	-1.1
JCT				pmax	pmax		
	comp=Z,64nm,1.6s						
JCT	Junction City	40.19	11	P	P	11 09 21.1	-1.1
JCT				IAMs_20	IAMs_20	11 23 25.4	
	comp=Z,3µm,20.0s						
JCT	Junction City	40.19	11	P	P	11 09 23.9	+1.7
	baz=193						
JCT				S	S	11 15 27.4	-1.2
	baz=193						
JCT	Junction City	40.19	11	P	P	11 09 20.7	-1.5
	baz=193						
JCT				S	S	11 15 27.3	-1.3
	baz=193						
319A	Douglas	40.26	359	IAmb	IAmb	11 09 40.7	
	comp=Z,81nm,1.4s						
CO05	La Serena	40.32	126	IAmb	IAmb	11 09 25.7	
	comp=Z,56nm,0.9s						
LCO	Las Campanas	40.41	125	P	P	11 09 24.2	-0.1
LCO				pmax	pmax		
	comp=Z,28nm,1.2s						
LCO	Las Campanas	40.41	125	P	P	11 09 24.2	-0.1
HKT	Hockley	40.63	17	d iP	P	11 09 25.7	0.0
HKT				pmax	pmax		
	comp=Z,29nm,2.0s						
HKT	Hockley	40.63	17	P	P	11 09 26.1	+0.5
HKT	Hockley	40.63	17	P	P	11 09 26.0	+0.3
	baz=199						
HKT				S	S	11 15 35.4	+0.4
	baz=199						
MNTX	Cornudas Mount	40.66	4	P	P	11 09 23.8	-2.3
MNTX	Cornudas Mount	40.66	4	P	P	11 09 23.8	-2.3
	baz=184,SNR=30						
MNTX				S	S	11 15 36.4	+0.7
	baz=184						
MNTX	Cornudas Mount	40.66	4	P	P	11 09 24.5	-1.5
	baz=184,SNR=30						
MNTX				S	S	11 15 36.5	+0.9
	baz=184						
MTDJ	Mount Denham	40.72	48	P	P	11 09 27.1	+0.3
435B	Jarrell	40.96	14	S	S	11 15 41.6	+1.6
	baz=196						
435B	Jarrell	40.96	14	P	P	11 09 27.1	-1.4
	baz=196						
435B				S	S	11 15 42.5	+2.4
	baz=196						
AC02	Maricunga	40.98	121	P	P	11 09 30.1	+0.7
PPT	Papeete	40.99	254	LR	LR	11 21 48.0	
	comp=Z,3µm,18.3s,baz=82,slow=29						
PPT2	Papeete2	40.99	254	eP	P	11 09 18.5	-11
PPT2				eS	S	11 15 23.4	-18
PPT2				eLR	LR	11 20 09.9	
	comp=Z,6µm,25.5s						
214A	Organ Pipe Nat	41.06	354	P	P	11 09 28.1	-1.2
	baz=173						
214A				S	S	11 15 41.2	-0.3
	baz=173						
TUC	Tucson	41.25	357	P	P	11 09 30.2	-0.7
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUC	Tucson	41.25	357	P	P	11 09 30.2	-0.7
TUC	Tucson	41.25	357	P	P	11 09 29.5	-1.4
	baz=176						
TUC				S	S	11 15 47.5	+3.0
	baz=176						
VA01	Torpederas	41.31	131	IAmb	IAmb	11 09 33.8	
	comp=Z,67nm,1.3s						
121A	Cookes Peak, D	41.40	1	IAmb	IAmb	11 10 08.8	
	comp=Z,103nm,1.6s						
121A	Cookes Peak, D	41.40	1	P	P	11 09 31.2	-1.1
	baz=181,SNR=8.4						
121A				S	S	11 15 51.0	+4.1
	baz=181						
121A	Cookes Peak, D	41.40	1	P	P	11 09 31.6	-0.7
	baz=181,SNR=8.4						
121A				S	S	11 15 50.1	+3.1
	baz=181						
ETMB	Extrema	41.47	95	eP	P	11 09 31.1	-1.9
SDV	Santo Domingo	41.52	66	P	P	11 09 35.1	+1.5
	comp=Z,5.7nm,0.3s,baz=247,slow=8.3,SNR=8.6						
SDV				LR	LR	11 24 43.1	
	comp=Z,1µm,19.8s,baz=238,slow=33						
SDV	Santo Domingo	41.52	66	eP	P	11 09 35.1	+1.5
MT02	Curacav	41.80	131	IAmb	IAmb	11 09 38.0	
	comp=Z,75nm,1.4s						
MT09	Talagante	42.14	131	IAmb	IAmb	11 09 40.4	
	comp=Z,113nm,1.9s						
WHTX	Lake Whitney,	42.15	14	P	P	11 09 37.5	-0.7
	baz=196						
WHTX	Lake Whitney,	42.15	14	P	P	11 09 36.5	-1.7
	baz=196						
WHTX				S	S	11 15 56.2	-1.4
	baz=196						
441A	DeRidder	42.19	19	S	S	11 16 00.5	+2.3
	baz=202						
IKP	In-Ko-Pah, Jac	42.19	350	P	P	11 09 38.1	-0.6
	baz=168,SNR=6.3						
IKP				S	S	11 16 03.0	+4.7
	baz=168						
ABTX	Abilene, Hawle	42.30	11	IAmb	IAmb	11 09 53.4	
	comp=Z,58nm,1.1s						
ABTX	Abilene, Hawle	42.30	11	P	P	11 09 37.0	-2.5
	baz=193,SNR=13						
ABTX	Abilene, Hawle	42.30	11	P	P	11 09 38.0	-1.5
	baz=193,SNR=13						
ABTX				S	S	11 15 59.7	-0.3
	baz=193						
MT03	Universidad Ad	42.37	131	IAmb	IAmb	11 09 43.3	
	comp=Z,97nm,1.5s						
GLA	Glamis	42.38	352	P	P	11 09 39.3	-0.8
	baz=170						
GLA				S	S	11 16 01.1	0.0
	baz=170						
SWSC	Sam W. Stewart	42.42	351	P	P	11 09 39.5	-0.9
	baz=169						
SWSC				S	S	11 16 05.2	+3.5
	baz=169						
MONP2	Monument Peak	42.48	350	P	P	11 09 40.0	-1.2
	baz=168,SNR=11						
237A	Washetta, Mont	42.57	16	IAmb	IAmb	11 10 05.1	
	comp=Z,145nm,1.8s						
109C	Camp Elliot, M	42.60	349	P	P	11 09 40.7	-1.1
	baz=167						
109C				S	S	11 16 08.8	+4.6
	baz=167						
NATX	Nacogdoches	42.67	17	P	P	11 09 39.8	-2.6
	baz=200						
NATX				S	S	11 16 06.6	+1.3
	baz=200						
LMEL	Las Melosas	42.76	131	IAmb	IAmb	11 09 52.2	
	comp=Z,120nm,1.5s						
Y22A	Socorro	42.82	2	P	P	11 09 43.6	-0.3
	baz=182,SNR=21						
Y22D	IRIS PASSCAL I	42.96	2	P	P	11 09 44.3	-0.6
	baz=182						
Y22D				S	S	11 16 13.6	+3.8
	baz=182						
SCI2	San Clemente I	42.98	347	P	P	11 09 44.2	-0.7
	baz=165						
BC3	Big Chuckawall	43.07	351	P	P	11 09 44.4	-1.4
	baz=170,SNR=9.1						
BC3				S	S	11 16 14.8	+3.5
	baz=170						
MSTX	Muleshoe	43.15	7	P	P	11 09 45.3	-1.2
	baz=188,SNR=8.3						
MSTX	Muleshoe	43.15	7	P	P	11 09 44.3	-2.2
	baz=188,SNR=8.3						
MSTX				S	S	11 16 12.5	-0.1
	baz=188						
TPFO	Pinon Flats	43.18	350	P	P	11 09 45.4	-1.3
	baz=168						
TPFO				S	S	11 16 15.9	+2.9
	baz=168						
PFO	Pinyon Flats O	43.19	350	P	P	11 09 45.7	-1.1
	comp=Z,2.7nm,0.9s,baz=182,slow=7.4,SNR=6.5						
PFO				LR	LR	11 23 16.0	
	comp=Z,2µm,20.3s,baz=171,slow=30						
	comp=Z,2.7nm,0.9s						
PFO	Pinyon Flats O	43.19	350	P	P	11 09 45.6	-1.1
PFO				pmax	pmax		
	comp=Z,59nm,1.9s						
PFO	Pinyon Flats O	43.19	350	P	P	11 09 45.6	-1.1
PFO	Pinyon Flats O	43.19	350	P	P	11 09 45.8	-0.9
	baz=168						
PFO				S	S	11 16 16.4	+3.3
	baz=168						
MURC	Murrieta	43.31	349	P	P	11 09 46.2	-1.4
	baz=167						
MURC				S	S	11 16 17.8	+3.1
	baz=167						
CIS	Catalina Islan	43.36	348	P	P	11 09 47.9	-0.2
	baz=165						
X18A	Snowflake	43.42	358	IAmb	IAmb	11 10 07.8	
	comp=Z,65nm,1.5s						
SNCC	San Nicolas Is	43.46	346	P	P	11 09 47.4	-1.4
	baz=164						
BELC	Belle Mtn. Jos	43.49	351	P	P	11 09 48.5	-0.7
	baz=169,SNR=9.3						
BELC				S	S	11 16 22.0	+4.4
	baz=169						
IRM	Iron Mountain	43.51	352	P	P	11 09 48.3	-1.0
	baz=170,SNR=8.3						
PDMCI	Parker Dam,Lak	43.52	353	P	P	11 09 48.4	-0.9
	baz=172						
PDMCI				S	S	11 16 21.6	+3.9
	baz=172						
FMP	Fort Macarthur	43.63	348	P	P	11 09 48.5	-1.7
	baz=166						
344A	Westbrook Farm	43.68	22	S	S	11 16 24.2	+4.0
	baz=206						
ANMO	Albuquerque	43.84	2	P	P	11 09 50.9	-1.2
ANMO				pmax	pmax		
	comp=Z,29nm,1.4s						
ANMO	Albuquerque	43.84	2	P	P	11 09 50.9	-1.2
ANMO	Albuquerque	43.84	2	P	P	11 09 51.1	-1.1
	baz=183,SNR=20						
ANMO	Albuquerque	43.84	2	P	P	11 09 51.0	-1.1
	baz=183						
ANMO				S	S	11 16 25.6	+2.8
	baz=183						
BAUV	El Baul	43.89	67	P	P	11 09 50.1	-2.5
BBRC	Big Bear Solar	43.90	350	P	P	11 09 52.1	-0.6
	baz=168						
BBRC				S	S	11 16 29.5	+5.7
	baz=168						
Z38A	Mt. Pleasant	43.98	16	IAmb	IAmb	11 10 23.6	
	comp=Z,97nm,1.5s						
W18A	Petrified Fore	44.00	358	IAmb	IAmb	11 10 07.9	
	comp=Z,45nm,1.1s						
W18A	Petrified Fore	44.00	358	P	P	11 09 52.3	-1.1
	baz=178,SNR=7.1						
W18A				S	S	11 16 29.3	+4.1
	baz=178						
BFSC	Mount Baldy Ra	44.01	349	P	P	11 09 52.1	-1.4
	baz=167,SNR=8.7						
BFSC				S	S	11 16 28.6	+3.4
	baz=167						
NEE2	Needles Airpor	44.04	352	P	P	11 09 52.7	-0.8
	baz=171						
NEE2				S	S	11 16 27.6	+2.2
	baz=171						
PASC	Pasadena Art C	44.05	348	IAMs_20	IAMs_20	11 23 30.7	
	comp=Z,2µm,19.0s						
LC01	Cunco	44.06	138	IAmb	IAmb	11 09 56.9	
	comp=Z,73nm,1.6s						
346A	Big Creek Wild	44.11	23	S	S	11 16 29.6	+3.2
	baz=207						
DECC	Green Verdugo	44.16	348	P	P	11 09 53.7	-0.8
	baz=166						
DECC				S	S	11 16 29.8	+2.6
	baz=166						
AMTX	Amarillo	44.19	8	IAmb	IAmb	11 09 57.2	
	comp=Z,94nm,1.9s						
AMTX	Amarillo	44.19	8	P	P	11 09 53.7	-1.1
	baz=189						
AMTX	Amarillo	44.19	8	P	P	11 09 52.9	-1.9
	baz=189						
AMTX				S	S	11 16 27.5	-0.2
	baz=189						
GMRC	Granite Mounta	44.20	351	P	P	11 09 54.2	-0.8
	baz=170,SNR=11						
GMRC				S	S	11 16 30.8	+2.8
	baz=170						
HEC	Hector,Ludlow	44.35	350	P	P	11 09 55.1	-1.0
	baz=169						
HEC				S	S	11 16 36.0	+6.0
	baz=169						
VBMS	Vicksburg	44.45	22	P	P	11 09 56.1	-0.7
	baz=206						
VBMS				S	S	11 16 35.7	+4.3
	baz=206						
WUAZ	Wupatki	44.47	356	P	P	11 09 56.6	-0.5
	baz=176						
WUAZ				S	S	11 16 39.5	+7.5
	baz=176						
RRX	Edison Barstow	44.51	350	P	P	11 09 56.6	-0.7
	baz=168						
RRX				S	S	11 16 35.5	+3.3
	baz=168						
WMOK	Wichita Mounta	44.52	11	IAMs_20	IAMs_20	11 26 11.0	
	comp=Z,2µm,19.0s						
WMOK	Wichita Mounta	44.52	11	P	P	11 09 56.0	-1.3
	baz=194						
WMOK				S	S	11 16 31.3	-1.0
	baz=194						
WMOK	Wichita Mounta	44.52	11	P	P	11 09 57.6	+0.3
	baz=194						
WMOK				S	S	11 16 32.1	-0.3
	baz=194						
OSI	Osito Audit: C	44.59	348	P	P	11 09 57.1	-0.8
	baz=165						
OSI				S	S	11 16 37.9	+4.4
	baz=165						
Z41A	Richland Creek	44.62	19	P	P	11 09 57.2	-1.0
	baz=202						
Z41A				S	S	11 16 34.1	+0.3
	baz=202						
SBC	Santa Barbara	44.64	347	P	P	11 09 55.1	-3.2
	baz=164						
SBC				S	S	11 16 35.3	+1.2
	baz=164						
EDW2	Edwards Air Fo	44.70	349	P	P	11 09 57.1	-1.7
	baz=166						
EDW2				S	S	11 16 38.8	+3.7
	baz=166						
TUQ	Turquoise Moun	44.88	351	P	P	11 09 59.5	-0.9
	baz=169						
TUQ				S	S	11 16 43.3	+5.4
	baz=169						
GSC	Goldstone, Bar	44.89	350	P	P	11 09 59.7	-0.7
	baz=168,SNR=14						
GSC				S	S	11 16 40.9	+3.0
	baz=168						
BRAL	Brewton	44.91	26	P	P	11 09 59.3	-1.2
	baz=210						
BCW	Bitter Crk WRg	45.05	347	IAmb	IAmb	11 10 22.0	
	comp=Z,76nm,1.5s						
PKM	Mcpherson Peak	45.09	347	P	P	11 10 00.9	-1.2
	baz=164,SNR=6.6						
PKM				S	S	11 16 43.1	+2.1
	baz=164						
ARVC	Arvin	45.11	348	P	P	11 10 00.6	-1.4
	baz=165						
ARVC				S	S	11 16 45.0	+4.2
	baz=165						
X37A	Clayton	45.14	15	IAmb	IAmb	11 10 12.7	
	comp=Z,103nm,1.8s						
X37A	Clayton	45.14	15	S	S	11 16 46.5	+5.2
	baz=198						
DWPF	Disney Wildern	45.19	34	IAMs_20	IAMs_20	11 26 51.4	
	comp=Z,4µm,20.0s						
DWPF	Disney Wildern	45.19	34	P	P	11 10 00.9	-1.9
	baz=219						
LRMC	Laurel Mtn Rad	45.22	349	P	P	11 10 01.5	-1.6
	baz=167						
SHOC	Shoshone, Teco	45.39	351	P	P	11 10 03.5	-0.7
	baz=169,SNR=6.8						
SHOC				S	S	11 16 49.1	+4.1
	baz=169						
SMMC	Simmler	45.54	347	P	P	11 10 04.5	-1.0
	baz=164						
SMMC				S	S	11 16 49.1	+1.8
	baz=164						
QSM	Queen of Sheba	45.55	350	IAmb	IAmb	11 10 13.0	
	comp=Z,52nm,1.5s						
ISA	Isabella, Lake	45.55	348	P	P	11 10 04.6	-1.1
	baz=166						
ISA				S	S	11 16 50.9	+3.5
	baz=166						
MIAR	Mount Ida	45.59	17	IAmb	IAmb	11 10 24.4	
	comp=Z,61nm,1.2s						
MIAR	Mount Ida	45.59	17	P	P	11 10 04.1	-1.7
	baz=201,SNR=12						
MIAR				S	S	11 16 47.8	+0.1
	baz=201						
MIAR	Mount Ida	45.59	17	P	P	11 10 04.5	-1.3
	baz=201,SNR=12						
MIAR				S	S	11 16 49.0	+1.2
	baz=201						
GWY	Greenwater Val	45.73	351	IAmb	IAmb	11 10 14.7	
	comp=Z,48nm,1.5s						
MPMC	Manual Prospec	45.75	350	P	P	11 10 06.3	-1.1
	baz=167,SNR=7.7						
MPMC				S	S	11 16 53.1	+2.6
	baz=167						
X40A	Basin Creek Fa	45.75	18	IAmb	IAmb	11 10 37.3	
	comp=Z,75nm,1.8s						
X40A	Basin Creek Fa	45.75	18	S	S	11 16 51.0	+0.8
	baz=202						
X40A				S	S	11 16 51.0	+0.8
	baz=202						
X40A	Basin Creek Fa	45.75	18	P	P	11 10 05.6	-1.5

	baz=202						
X40A				S	**S**	**11 16 50.9**	**+0.8**
	baz=202						
SHPR	**Sheep Range**	**45.83**	**352**	IAmb	IAmb	11 10 15.8	
	comp=Z,82nm,1.7s						
VES	**Vestal, Richgr**	**45.85**	**348**	P	**P**	**11 10 06.5**	**-1.4**
	baz=165						
PLCA	**Paso Flores**	**45.91**	**140**	P	**P**	**11 10 09.2**	**+0.8**
	comp=Z,16nm,1.0s,baz=300,slow=9.8,SNR=25						
PLCA				LR	LR	11 24 51.1	
	comp=Z,6µm,18.9s,baz=304,slow=30						
	comp=Z,16nm,1.0s						
PLCA	**Paso Flores**	**45.91**	**140**	IAmb	IAmb	11 10 11.5	
	comp=Z,44nm,1.2s						
PLCA	**Paso Flores**	**45.91**	**140**	*e*P	**P**	**11 10 08.9**	**+0.4**
SDDR	**Presa de Saban**	**45.92**	**52**	IAmb	IAmb	11 10 12.2	
	comp=Z,34nm,1.0s						
FURC	**Furnace Creek,**	**46.04**	**350**	P	**P**	**11 10 08.5**	**-0.9**
	baz=168						
FURC				S	**S**	**11 16 57.8**	**+3.6**
	baz=168						
MVCO	**Mesa Verde**	**46.07**	**360**	IAmb	IAmb	11 10 19.8	
	comp=Z,52nm,1.1s						
MVCO	**Mesa Verde**	**46.07**	**360**	P	**P**	**11 10 09.0**	**-0.9**
	baz=180,SNR=16						
MVCO				S	**S**	**11 16 55.0**	**-0.1**
	baz=180						
LCMT	**Little Creek M**	**46.11**	**354**	IAmb	IAmb	11 10 29.3	
	comp=Z,48nm,1.9s						
W39A	**Magazine**	**46.14**	**17**	IAmb	IAmb	11 10 25.9	
	comp=Z,32nm,1.1s						
W39A	**Magazine**	**46.14**	**17**	P	**P**	**11 10 08.8**	**-1.4**
	baz=200						
W39A				S	**S**	**11 16 55.2**	**-0.5**
	baz=200						
W39A	**Magazine**	**46.14**	**17**	P	**P**	**11 10 08.6**	**-1.5**
	baz=200						
W39A				S	**S**	**11 16 55.7**	**0.0**
	baz=200						
T25A	**Trinidad**	**46.14**	**4**	IAmb	IAmb	11 10 16.3	
	comp=Z,49nm,1.6s						
T25A	**Trinidad**	**46.14**	**4**	P	**P**	**11 10 08.0**	**-2.4**
	baz=185						
T25A				S	**S**	**11 16 57.5**	**+1.4**
	baz=185						
UALR	**University of**	**46.17**	**18**	IAmb	IAmb	11 10 29.2	
	comp=Z,44nm,1.2s						
CWC	**Cottonwood Cre**	**46.23**	**349**	P	**P**	**11 10 09.5**	**-1.6**
	baz=167						
CWC				S	**S**	**11 16 59.3**	**+2.0**
	baz=167						
Z47A	**Carrollton**	**46.26**	**24**	S	**S**	**11 16 58.3**	**+0.9**
	baz=208						
TUL1	**Leonard**	**46.29**	**14**	P	**P**	**11 10 09.4**	**-2.0**
	baz=197						
VOG	**Valley Oaks Go**	**46.38**	**348**	P	**P**	**11 10 09.2**	**-2.7**
	baz=165						
VOG				S	**S**	**11 17 01.6**	**+2.6**
	baz=165						
TPNV	**Topopah Spring**	**46.41**	**351**	P	**P**	**11 10 12.6**	**0.0**
	baz=169,SNR=21						
TPNV				S	**S**	**11 17 03.8**	**+3.8**
	baz=169						
PKCU	**Pink Cliffs**	**46.45**	**356**	IAmb	IAmb	11 10 23.9	
	comp=Z,54nm,1.2s						
SIV	**San Ignacio**	**46.49**	**103**	P	**P**	**11 10 12.9**	**-0.5**
	comp=Z,5.2nm,1.0s,baz=280,slow=13,SNR=8.4						
	comp=Z,5.2nm,1.0s						
LRAL	**Lakeview Retre**	**46.55**	**25**	IAmb	IAmb	11 10 27.2	
	comp=Z,85nm,1.8s						
LRAL	**Lakeview Retre**	**46.55**	**25**	P	**P**	**11 10 13.6**	**+0.2**
	baz=210						
LRAL				S	**S**	**11 17 02.2**	**+0.6**
	baz=210						
LRAL	**Lakeview Retre**	**46.55**	**25**	P	**P**	**11 10 13.1**	**-0.3**
	baz=210						
LRAL				S	**S**	**11 17 03.1**	**+1.5**
	baz=210						
W41B	**Gary Mavity, V**	**46.57**	**18**	IAmb	IAmb	11 10 32.4	
	comp=Z,43nm,1.1s						
W41B	**Gary Mavity, V**	**46.57**	**18**	P	**P**	**11 10 12.7**	**-0.8**
	baz=202,SNR=8.5						
W41B				S	**S**	**11 17 04.8**	**+2.9**
	baz=202						
W41B	**Gary Mavity, V**	**46.57**	**18**	P	**P**	**11 10 12.5**	**-1.0**
	baz=202,SNR=8.5						
W41B				S	**S**	**11 17 05.1**	**+3.2**
	baz=202						
S22A	**4UR Ranch, Cre**	**46.62**	**2**	IAmb	IAmb	11 10 36.3	
	comp=Z,34nm,1.2s						
S22A	**4UR Ranch, Cre**	**46.62**	**2**	P	**P**	**11 10 13.5**	**-0.8**
	baz=182,SNR=20						
S22A				S	**S**	**11 17 07.3**	**+4.1**
	baz=182						
GRAC	**Grapevine Rang**	**46.64**	**350**	P	**P**	**11 10 13.2**	**-1.0**
	baz=168						
GRAC				S	**S**	**11 17 08.5**	**+5.5**
	baz=168						
SDCO	**Great Sand Dun**	**46.67**	**3**	IAmb	IAmb	11 10 36.7	
	comp=Z,34nm,1.4s						
SDCO	**Great Sand Dun**	**46.67**	**3**	P	**P**	**11 10 12.8**	**-1.9**
	baz=184,SNR=21						
SDCO	**Great Sand Dun**	**46.67**	**3**	P	**P**	**11 10 13.8**	**-0.9**
	baz=184,SNR=21						
SDCO				S	**S**	**11 17 02.9**	**-1.0**
	baz=184						
PRN	**Pahroc Range**	**46.70**	**353**	IAmb	IAmb	11 10 26.5	
	comp=Z,45nm,1.3s						
AY01	**Puyuhuapi**	**46.77**	**145**	IAmb	IAmb	11 10 24.1	
	comp=Z,27nm,0.9s						
TIN	**Tinemaha, Big**	**46.85**	**349**	P	**P**	**11 10 13.2**	**-2.7**
	baz=166						
OXF	**Oxford**	**46.91**	**21**	P	**P**	**11 10 13.8**	**-2.4**
	baz=206						
PV13	**Radium Mtn., P**	**47.02**	**359**	IAmb	IAmb	11 10 29.3	
	comp=Z,29nm,1.3s						
MTPU	**Mount Pierson**	**47.04**	**356**	IAmb	IAmb	11 10 41.5	
	comp=Z,44nm,1.8s						
T35B	**Sooner Cattle**	**47.09**	**13**	P	**P**	**11 10 16.3**	**-1.4**
	baz=196						
HHAR	**Hobbs**	**47.11**	**16**	IAmb	IAmb	11 10 26.5	
	comp=Z,27nm,1.1s						
HHAR	**Hobbs**	**47.11**	**16**	P	**P**	**11 10 16.1**	**-1.7**
	baz=200						
PV11	**David Mesa, Pa**	**47.16**	**359**	IAmb	IAmb	11 10 31.6	
	comp=Z,38nm,1.3s						
PV15	**Paradox Valley**	**47.20**	**360**	IAmb	IAmb	11 10 29.3	
	comp=Z,28nm,1.2s						
152A	**Waverly Hall**	**47.22**	**27**	P	**P**	**11 10 18.2**	**-0.5**
	baz=213,SNR=7.1						
152A				S	**S**	**11 17 11.0**	**-0.3**
	baz=213						
SAO	**San Andreas Ge**	**47.27**	**346**	IAMs_20	IAMs_20	11 25 29.1	
	comp=Z,4µm,18.0s						
VILB	**Vilhena**	**47.28**	**99**	*e*P	**P**	**11 10 19.4**	**-0.2**
GRTK	**Grand Turk**	**47.48**	**50**	IAMs_20	IAMs_20	11 26 29.8	
	comp=Z,3µm,22.0s						
U40A	**Yellville**	**47.49**	**17**	IAmb	IAmb	11 10 36.0	
	comp=Z,34nm,1.0s						
U40A	**Yellville**	**47.49**	**17**	P	**P**	**11 10 19.1**	**-1.6**
	baz=201,SNR=12						
U40A				P	**P**	**11 10 19.1**	**-1.6**
	baz=201,SNR=12						
U40A	**Yellville**	**47.49**	**17**	P	**P**	**11 10 18.8**	**-2.0**
	baz=201,SNR=12						
U40A				S	**S**	**11 17 13.4**	**-1.6**
	baz=201						
Y49A	**Blount Mountai**	**47.50**	**25**	S	**S**	**11 17 14.8**	**-0.5**
	baz=210						
MLAC	**Mammoth, Mammo**	**47.53**	**349**	P	**P**	**11 10 18.5**	**-2.8**
	baz=166						
TCRU	**Three Creeks R**	**47.62**	**356**	IAmb	IAmb	11 10 44.6	
	comp=Z,71nm,1.9s						
MACA	**Manacapuru-AM**	**47.65**	**86**	*e*P	**P**	**11 10 21.7**	**-0.7**
R11A	**Troy Canyon, C**	**47.70**	**352**	IAmb	IAmb	11 10 50.3	
	comp=Z,48nm,1.9s						
R11A	**Troy Canyon, C**	**47.70**	**352**	P	**P**	**11 10 21.7**	**-0.9**
	baz=170,SNR=10						
R11A				S	**S**	**11 17 19.2**	**+0.9**
	baz=170						
LCAR	**Lake Charles**	**47.74**	**19**	P	**P**	**11 10 21.2**	**-1.4**
	baz=203,SNR=8.8						
X48A	**Hartselle**	**47.76**	**24**	IAmb	IAmb	11 10 36.1	
	comp=Z,48nm,1.4s						
X48A	**Hartselle**	**47.76**	**24**	P	**P**	**11 10 22.7**	**-0.2**
	baz=209						
X48A				S	**S**	**11 17 18.0**	**-0.9**
	baz=209						
Q16A	**Castle Valley**	**47.85**	**357**	IAmb	IAmb	11 10 55.5	
	comp=Z,33nm,1.4s						
Q24A	**Divide**	**47.91**	**3**	P	**P**	**11 10 22.4**	**-1.9**
	baz=184						
Q24A				S	**S**	**11 17 23.3**	**+1.8**
	baz=184						
SRU	**San Rafael Swe**	**48.01**	**358**	IAmb	IAmb	11 10 31.1	
	comp=Z,25nm,1.2s						
R32A	**Long Quarter,**	**48.11**	**10**	IAmb	IAmb	11 10 34.6	
	comp=Z,42nm,1.1s						
KSCO	**Kaye Shedlock’**	**48.15**	**6**	IAmb	IAmb	11 10 35.4	
	comp=Z,41nm,1.1s						
KSCO	**Kaye Shedlock’**	**48.15**	**6**	P	**P**	**11 10 25.4**	**-0.6**
	baz=188						
KSCO	**Kaye Shedlock’**	**48.15**	**6**	P	**P**	**11 10 23.7**	**-2.3**
	baz=188						
KSCO				S	**S**	**11 17 23.4**	**-1.2**
	baz=188						
NV11	**Mina Array Sit**	**48.18**	**350**	IAmb	IAmb	11 10 34.0	
	comp=Z,62nm,1.8s						
NVAR	**Mina Array Bea**	**48.20**	**349**	P	**P**	**11 10 24.7**	**-1.8**
	comp=Z,5.9nm,1.1s,baz=173,slow=8.7,SNR=33						
NVAR				LR	LR	11 26 22.4	
	comp=Z,2µm,19.1s,baz=175,slow=31						
	comp=Z,5.9nm,1.1s						
TMUT	**Trail Mountain**	**48.23**	**357**	IAmb	IAmb	11 11 12.1	
	comp=Z,52nm,1.7s						
CMB	**Columbia Colle**	**48.24**	**347**	IAmb	IAmb	11 10 46.8	
	comp=Z,35nm,1.7s						
CMB				IAMs_20	IAMs_20	11 25 50.6	
	comp=Z,4µm,20.0s						
CBKS	**Cedar Bluff**	**48.33**	**9**	P	**P**	**11 10 25.5**	**-1.8**
	baz=191,SNR=8.1						
CBKS				S	**S**	**11 17 30.7**	**+3.8**
	baz=191						
CBKS	**Cedar Bluff**	**48.33**	**9**	P	**P**	**11 10 24.8**	**-2.4**
	baz=191,SNR=8.1						
CBKS				S	**S**	**11 17 24.7**	**-2.2**
	baz=191						
PTLB	**Pontes e Lacer**	**48.34**	**103**	*e*P	**P**	**11 10 26.0**	**-1.7**
P17A	**Butcher Ranch,**	**48.38**	**357**	IAmb	IAmb	11 10 38.4	
	comp=Z,44nm,1.1s						
GOGA	**Godfrey**	**48.42**	**28**	IAmb	IAmb	11 10 43.9	
	comp=Z,32nm,1.1s						
GOGA	**Godfrey**	**48.42**	**28**	IAMs_20	IAMs_20	11 30 02.6	
	comp=Z,3µm,19.0s						
GOGA	**Godfrey**	**48.42**	**28**	P	**P**	**11 10 27.7**	**-0.3**
	baz=214,SNR=6.1						
GOGA	**Godfrey**	**48.42**	**28**	P	**P**	**11 10 27.0**	**-0.9**
	baz=214,SNR=6.1						
GOGA				S	**S**	**11 17 25.4**	**-2.9**
	baz=214						
FPAL	**Fort Paine**	**48.42**	**25**	IAmb	IAmb	11 10 37.1	
	comp=Z,54nm,1.3s						
RYN	**Ryan**	**48.44**	**349**	IAmb	IAmb	11 10 38.8	
	comp=Z,41nm,1.3s						
P18A	**Preston Nutter**	**48.52**	**358**	IAmb	IAmb	11 10 43.2	
	comp=Z,34nm,1.1s						
Y52A	**Lilburn**	**48.52**	**27**	IAmb	IAmb	11 10 44.9	
	comp=Z,44nm,1.2s						
Y52A	**Lilburn**	**48.52**	**27**	P	**P**	**11 10 28.7**	**-0.1**
	baz=213						
Y52A				P	**P**	**11 10 28.7**	**-0.1**
	baz=213						
S39A	**Bolivar**	**48.60**	**16**	IAmb	IAmb	11 10 38.2	
	comp=Z,34nm,1.1s						
S39A	**Bolivar**	**48.60**	**16**	P	**P**	**11 10 27.8**	**-1.5**
	baz=200,SNR=6.7						
PBMO	**Poplar Bluff**	**48.62**	**19**	IAmb	IAmb	11 10 47.9	
	comp=Z,44nm,1.3s						
PBMO	**Poplar Bluff**	**48.62**	**19**	P	**P**	**11 10 28.0**	**-1.4**
	baz=204						
ISCO	**Idaho Springs**	**48.72**	**3**	IAmb	IAmb	11 10 40.1	
	comp=Z,28nm,1.0s						
ISCO	**Idaho Springs**	**48.72**	**3**	P	**P**	**11 10 29.0**	**-1.5**
	baz=184,SNR=38						
ISCO	**Idaho Springs**	**48.72**	**3**	P	**P**	**11 10 29.1**	**-1.5**
	baz=184,SNR=38						
ISCO				S	**S**	**11 17 30.1**	**-2.8**
	baz=184						
X51A	**Calhoun**	**48.77**	**26**	P	**P**	**11 10 30.4**	**-0.2**
	baz=212						
X51A				P	**P**	**11 10 30.4**	**-0.2**
	baz=212						
MLPR	**Magueyes Islan**	**48.79**	**56**	P	**P**	**11 10 30.5**	**-0.6**
YERR	**Yerington**	**48.92**	**349**	IAmb	IAmb	11 10 42.7	
	comp=Z,38nm,1.2s						
BOAV	**Boa Vista**	**48.93**	**79**	*e*P	**P**	**11 10 33.5**	**+1.2**
WVT	**Waverly**	**48.94**	**22**	P	**P**	**11 10 29.8**	**-2.1**
WVT				pmax	pmax		
	comp=Z,87nm,2.0s						
WVT				MLR	MLR		
	comp=Z,1µm,20.0s						
WVT	**Waverly**	**48.94**	**22**	P	**P**	**11 10 29.8**	**-2.1**
WVT				IAmb	IAmb	11 10 39.2	
	comp=Z,87nm,2.0s						
WVT	**Waverly**	**48.94**	**22**	P	**P**	**11 10 31.7**	**-0.2**
	baz=207						
WVT				S	**S**	**11 17 39.7**	**+4.3**
	baz=207						
WVT	**Waverly**	**48.94**	**22**	P	**P**	**11 10 29.7**	**-2.1**
	baz=207						
WVT				S	**S**	**11 17 34.2**	**-1.3**
	baz=207						
MCCM	**Marconi Confer**	**48.94**	**345**	IAMs_20	IAMs_20	11 25 44.4	
	comp=Z,2µm,20.0s						
V48A	**Smith Brothers**	**48.98**	**23**	IAmb	IAmb	11 10 44.1	
	comp=Z,28nm,1.1s						
V48A	**Smith Brothers**	**48.98**	**23**	P	**P**	**11 10 31.8**	**-0.5**
	baz=209						
O20A	**White River Ci**	**48.99**	**0**	IAmb	IAmb	11 10 57.6	
	comp=Z,48nm,1.1s						
O20A	**White River Ci**	**48.99**	**0**	P	**P**	**11 10 31.5**	**-1.0**
	baz=180,SNR=17						
O20A				S	**S**	**11 17 39.4**	**+2.9**
	baz=180						
EMB	**Emerald Bay**	**49.08**	**348**	IAmb	IAmb	11 10 51.9	
	comp=Z,50nm,1.3s						
W50A	**Signal Mountai**	**49.12**	**25**	IAmb	IAmb	11 10 35.4	
	comp=Z,41nm,1.4s						
W50A	**Signal Mountai**	**49.12**	**25**	P	**P**	**11 10 33.0**	**-0.4**
	baz=211						
W50A				S	**S**	**11 17 37.7**	**-0.5**
	baz=211						
RUBR	**Rubicon Trail**	**49.17**	**348**	IAmb	IAmb	11 10 39.3	
	comp=Z,67nm,1.4s						
KSU1	**Kansas State U**	**49.17**	**12**	IAMs_20	IAMs_20	11 29 16.1	
	comp=Z,2µm,18.0s						
KSU1	**Kansas State U**	**49.17**	**12**	P	**P**	**11 10 31.6**	**-2.0**
	baz=195						
KSU1				S	**S**	**11 17 35.4**	**-3.3**
	baz=195						
CELP	**Cerrillos**	**49.23**	**57**	IAmb	IAmb	11 10 35.0	
	comp=Z,42nm,1.1s						
DUG	**Dugway, Tooele**	**49.23**	**355**	IAmb	IAmb	11 10 44.6	
	comp=Z,32nm,1.2s						
DUG	**Dugway, Tooele**	**49.23**	**355**	P	**P**	**11 10 33.5**	**-0.7**
	baz=174,SNR=14						
DUG				S	**S**	**11 17 44.8**	**+5.0**
	baz=174						
HAW	**Hawthorne Fire**	**49.26**	**30**	P	**P**	**11 10 33.4**	**-1.1**
	baz=216						
VCNR	**Virginia City**	**49.30**	**348**	IAmb	IAmb	11 10 42.8	
	comp=Z,57nm,1.7s						
MPK	**Martis Peak**	**49.38**	**348**	IAmb	IAmb	11 10 54.3	
	comp=Z,47nm,1.3s						
GO08	**Villa O’Higgin**	**49.38**	**149**	IAmb	IAmb	11 10 44.1	
	comp=Z,20nm,0.8s						
RDMU	**Red Mountain**	**49.44**	**359**	IAmb	IAmb	11 10 58.5	
	comp=Z,27nm,1.1s						
CLTN	**Cedars of Leba**	**49.47**	**23**	IAmb	IAmb	11 10 51.2	
	comp=Z,28nm,1.2s						
CCM	**Cathedral Cave**	**49.54**	**18**	P	**P**	**11 10 33.8**	**-2.7**
CCM				pmax	pmax		
	comp=Z,41nm,1.2s						
CCM	**Cathedral Cave**	**49.54**	**18**	P	**P**	**11 10 33.8**	**-2.7**
CCM				IAmb	IAmb	11 10 54.4	
	comp=Z,41nm,1.1s						
CCM	**Cathedral Cave**	**49.54**	**18**	S	**S**	**11 17 41.6**	**-2.3**
	baz=202						
CCM	**Cathedral Cave**	**49.54**	**18**	P	**P**	**11 10 34.3**	**-2.1**
	baz=202						
CCM				S	**S**	**11 17 42.4**	**-1.5**
	baz=202						
SJG	**San Juan**	**49.60**	**57**	LR	LR	11 27 48.4	
	comp=Z,1µm,20.8s,baz=224,slow=32						
HODGE	**Hodges**	**49.66**	**28**	IAmb	IAmb	11 10 55.0	
	comp=Z,66nm,1.6s						
CPCT	**Cooper Cave**	**49.66**	**26**	IAmb	IAmb	11 10 50.8	
	comp=Z,58nm,1.3s						
FVM	**French Village**	**49.72**	**19**	IAmb	IAmb	11 10 44.0	
	comp=Z,99nm,1.9s						
FVM	**French Village**	**49.72**	**19**	S	**S**	**11 17 49.9**	**+3.5**
	baz=203						
GCPR	**Guaynabo City**	**49.75**	**57**	IAmb	IAmb	11 10 42.2	
	comp=Z,54nm,1.1s						
NHSC	**New Hope**	**49.77**	**31**	P	**P**	**11 10 37.9**	**-0.5**
	baz=218						
HOPS	**Hopland Field**	**49.79**	**345**	IAMs_20	IAMs_20	11 26 10.8	
	comp=Z,2µm,20.0s						
N23A	**Red Feather La**	**49.79**	**2**	IAmb	IAmb	11 11 00.3	
	comp=Z,46nm,1.4s						
N23A	**Red Feather La**	**49.79**	**2**	P	**P**	**11 10 37.4**	**-1.3**
	baz=183,SNR=6.6						
N23A				S	**S**	**11 17 49.7**	**+1.8**
	baz=183						
S44A	**Carbondale**	**49.84**	**20**	IAmb	IAmb	11 10 57.0	
	comp=Z,40nm,1.1s						
S44A	**Carbondale**	**49.84**	**20**	S	**S**	**11 17 47.2**	**-0.8**
	baz=205						
ORV	**Oroville**	**49.94**	**347**	IAmb	IAmb	11 10 50.1	
	comp=Z,44nm,1.6s						
ORV				IAMs_20	IAMs_20	11 26 17.7	
	comp=Z,3µm,20.0s						
T47A	**Sharon Grove**	**49.97**	**22**	IAmb	IAmb	11 10 57.8	
	comp=Z,83nm,1.7s						
T47A	**Sharon Grove**	**49.97**	**22**	S	**S**	**11 17 48.4**	**-1.5**
	baz=208						
CASEE	**Lake Jocassee**	**49.98**	**27**	P	**P**	**11 10 39.9**	**0.0**
	baz=214,SNR=6.2						
BEKR	**Beckworth**	**49.99**	**348**	IAmb	IAmb	11 10 48.0	
	comp=Z,54nm,1.9s						
ELK	**Elko**	**50.01**	**353**	LR	LR	11 27 43.6	
	comp=Z,1µm,19.9s,baz=179,slow=31						
V51A	**Loudon**	**50.04**	**25**	IAmb	IAmb	11 10 52.5	
	comp=Z,34nm,1.1s						
V51A	**Loudon**	**50.04**	**25**	P	**P**	**11 10 39.7**	**-0.6**
	baz=212						
U49A	**Red Boiling Sp**	**50.06**	**24**	IAmb	IAmb	11 10 53.5	
	comp=Z,43nm,1.4s						
U49A	**Red Boiling Sp**	**50.06**	**24**	P	**P**	**11 10 40.0**	**-0.4**
	baz=210						
OGNE	**Ogallala**	**50.13**	**6**	P	**P**	**11 10 40.4**	**-0.7**
	baz=188						
OGNE	**Ogallala**	**50.13**	**6**	P	**P**	**11 10 39.9**	**-1.2**
	baz=188						
TKL	**Tuckaleechee C**	**50.16**	**26**	LR	LR	11 31 37.2	
	comp=Z,1µm,18.5s,baz=205,slow=36						
TKL	**Tuckaleechee C**	**50.16**	**26**	IAmb	IAmb	11 10 58.5	
	comp=Z,60nm,1.4s						
TKL	**Tuckaleechee C**	**50.16**	**26**	P	**P**	**11 10 40.0**	**-1.3**
	baz=212						
TKL				S	**S**	**11 17 52.0**	**-0.6**
	baz=212						
JSC	**Jenkinsville**	**50.18**	**29**	IAmb	IAmb	11 10 57.0	
	comp=Z,37nm,1.2s						
JSC	**Jenkinsville**	**50.18**	**29**	P	**P**	**11 10 40.2**	**-1.2**
	baz=216						
PHWY	**Pilot Hill**	**50.22**	**3**	IAmb	IAmb	11 10 52.1	
	comp=Z,48nm,1.4s						
PAULI	**Pauline**	**50.35**	**28**	P	**P**	**11 10 41.4**	**-1.3**
	baz=215						
P38A	**Dawn**	**50.37**	**15**	IAmb	IAmb	11 10 56.0	
	comp=Z,35nm,1.2s						
P38A	**Dawn**	**50.37**	**15**	P	**P**	**11 10 40.1**	**-2.7**
	baz=199						
V52A	**Sevierville**	**50.39**	**26**	S	**S**	**11 17 56.0**	**+0.1**
	baz=212						
RWWY	**Rawlins**	**50.55**	**1**	IAmb	IAmb	11 10 52.7	
	comp=Z,30nm,0.9s						
V53A	**Saluda**	**50.59**	**27**	IAmb	IAmb	11 10 50.1	
	comp=Z,32nm,1.0s						
V53A	**Saluda**	**50.59**	**27**	P	**P**	**11 10 43.4**	**-1.3**
	baz=213,SNR=8.7						
V53A				P	**P**	**11 10 43.4**	**-1.3**
	baz=213,SNR=8.7						
P40A	**Paris**	**50.67**	**16**	P	**P**	**11 10 42.8**	**-2.3**
	baz=201						
PDRB	**Porto dos Gac**	**50.71**	**98**	*e*P	**P**	**11 10 44.2**	**-1.7**
KMSC	**Kings Mountain**	**50.84**	**29**	P	**P**	**11 10 45.9**	**-0.5**
	baz=215						
KMSC	**Kings Mountain**	**50.84**	**29**	P	**P**	**11 10 44.7**	**-1.7**
	baz=215						
BIRD	**Birdtown, Kers**	**50.86**	**30**	IAmb	IAmb	11 10 46.9	
	comp=Z,49nm,1.3s						
BIRD	**Birdtown, Kers**	**50.86**	**30**	P	**P**	**11 10 45.7**	**-0.9**
	baz=216						
T50A	**Nancy**	**50.88**	**24**	P	**P**	**11 10 46.1**	**-0.6**
	baz=210						
T50A				P	**P**	**11 10 46.1**	**-0.6**
	baz=210						
RAR	**Rarotonga**	**50.94**	**250**	LR	LR	11 26 56.5	
	comp=Z,727nm,19.5s,baz=90,slow=30						
TZTN	**Tazewell**	**51.01**	**26**	P	**P**	**11 10 47.1**	**-0.6**
	baz=212						
TZTN				S	**S**	**11 18 04.2**	**-0.2**
	baz=212						
TZTN	**Tazewell**	**51.01**	**26**	P	**P**	**11 10 46.0**	**-1.7**
	baz=212						
TZTN				S	**S**	**11 18 04.2**	**-0.2**
	baz=212						
Q44A	**Meyer Farm, Va**	**51.01**	**19**	P	**P**	**11 10 46.9**	**-0.8**
	baz=205						
Q44A				S	**S**	**11 18 07.1**	**+2.8**
	baz=205						
N35A	**Tabor**	**51.06**	**12**	P	**P**	**11 10 46.4**	**-1.5**
	baz=196						
CPUP	**Villa Florida**	**51.11**	**116**	P	**P**	**11 10 48.3**	**-0.4**
	comp=Z,15nm,0.9s,baz=283,slow=8.4,SNR=30						
CPUP				LR	LR	11 28 29.1	
	comp=Z,5µm,21.8s,baz=292,slow=31						
	comp=Z,15nm,0.9s						
CPUP	**Villa Florida**	**51.11**	**116**	IAmb	IAmb	11 10 50.4	
	comp=Z,30nm,1.1s						
CPUP	**Villa Florida**	**51.11**	**116**	*e*P	**P**	**11 10 47.2**	**-1.5**
BGNE	**Belgrade**	**51.12**	**10**	P	**P**	**11 10 46.4**	**-2.0**
	baz=193						
OLIL	**Olney**	**51.16**	**20**	IAmb	IAmb	11 11 02.5	
	comp=Z,65nm,1.4s						
V55A	**Taylorsville**	**51.48**	**28**	IAmb	IAmb	11 10 52.1	
	comp=Z,35nm,1.1s						
V55A	**Taylorsville**	**51.48**	**28**	P	**P**	**11 10 49.9**	**-1.3**
	baz=215,SNR=7.1						
V55A				P	**P**	**11 10 49.9**	**-1.3**
	baz=215,SNR=7.1						
K22A	**Casper**	**51.53**	**2**	IAmb	IAmb	11 11 01.4	
	comp=Z,52nm,1.1s						
K22A	**Casper**	**51.53**	**2**	P	**P**	**11 10 49.4**	**-2.2**
	baz=182,SNR=13						
K22A	**Casper**	**51.53**	**2**	P	**P**	**11 10 49.5**	**-2.2**
	baz=182,SNR=13						
K22A				S	**S**	**11 18 14.2**	**+2.4**
	baz=182						
NBRS	**Nobres**	**51.58**	**101**	*e*P	**P**	**11 10 51.4**	**-0.9**
BW06	**Boulder Array**	**51.63**	**359**	P	**P**	**11 10 49.9**	**-2.6**
	baz=178,SNR=9.6						
BW06				S	**S**	**11 18 10.1**	**-3.2**
	baz=178						
PDAR	**Pinedale Array**	**51.63**	**359**	P	**P**	**11 10 49.1**	**-3.4**
	comp=Z,4.2nm,0.9s,baz=168,slow=7.6,SNR=28						
PDAR				LR	LR	11 29 19.0	
	comp=Z,439nm,18.9s,baz=188,slow=32						
	comp=Z,4.2nm,0.9s						
CLDB	**Colider**	**51.66**	**97**	*e*P	**P**	**11 10 51.9**	**-1.1**
SALV	**Santo Antonio**	**51.66**	**103**	*e*P	**P**	**11 10 52.1**	**-0.9**
JCC	**Jacoby Creek,**	**51.76**	**345**	IAMs_20	IAMs_20	11 27 06.8	
	comp=Z,2µm,19.0s						
R49A	**Shelbyville**	**51.84**	**23**	IAmb	IAmb	11 11 07.2	
	comp=Z,80nm,1.4s						
R49A	**Shelbyville**	**51.84**	**23**	S	**S**	**11 18 13.9**	**-2.0**
	baz=210						
R49A				S	**S**	**11 18 13.9**	**-2.0**
	baz=210						
AQDB	**Aquidauana**	**51.87**	**109**	IAmb	IAmb	11 10 58.3	
	comp=Z,55nm,1.8s						
AQDB	**Aquidauana**	**51.87**	**109**	*e*P	**P**	**11 10 54.7**	**+0.3**
MOD	**Modoc Plateau**	**51.94**	**349**	IAmb	IAmb	11 11 01.5	
	comp=Z,54nm,1.5s						
MOD				IAMs_20	IAMs_20	11 28 06.5	
	comp=Z,2µm,20.0s						
R50A	**Paris**	**52.17**	**24**	IAmb	IAmb	11 11 11.4	
	comp=Z,32nm,1.1s						
R50A	**Paris**	**52.17**	**24**	P	**P**	**11 10 54.4**	**-1.9**
	baz=210						
R50A				P	**P**	**11 10 54.4**	**-1.9**
	baz=210						

K31A	O'Neill	52.20	9	P	P	11 10 55.3	-1.2
	baz=192						
P46A	Rosedale	52.26	21	IAmb	IAmb	11 11 08.7	
	comp=Z,59nm,1.1s						
REDW	Red Top Meadow	52.27	358	IAmb	IAmb	11 11 26.3	
	comp=Z,44nm,1.3s						
U56A	King	52.27	29	IAmb	IAmb	11 10 57.9	
	comp=Z,32nm,1.1s						
YBH	Yreka Blue Hor	52.30	346	P	P	11 10 55.3	-2.0
	comp=Z,4.9nm,0.9s,baz=248,slow=1.3,SNR=4.6						
YBH				LR	LR	11 28 05.8	
	comp=Z,2µm,20.3s,baz=171,slow=30						
	comp=Z,4.9nm,0.9s						
YBH	Yreka Blue Hor	52.30	346	IAMs_20	IAMs_20	11 27 55.0	
	comp=Z,2µm,20.0s						
ITTB	Itaituba	52.35	89	eP	P	11 10 57.2	-0.9
ITQB	Itaqui	52.36	120	eP	P	11 10 58.6	+0.7
SNOW	Snow King Moun	52.36	358	IAmb	IAmb	11 11 03.3	
	comp=Z,62nm,1.6s						
TPAW	Teton Pass	52.40	358	IAmb	IAmb	11 11 20.1	
	comp=Z,39nm,1.1s						
HDIL	Hopedale	52.43	18	IAmb	IAmb	11 11 09.7	
	comp=Z,71nm,1.2s						
HDIL	Hopedale	52.43	18	P	P	11 10 55.9	-2.3
	baz=204						
HDIL				S	S	11 18 21.5	-2.3
	baz=204						
PP1B	Ponte de Pedra	52.49	105	eP	P	11 10 59.4	+0.3
SCIA	State Center	52.61	14	IAMs_20	IAMs_20	11 31 05.2	
	comp=Z,2µm,21.0s						
CNNC	Cliffs of the	52.62	31	P	P	11 10 57.8	-1.9
	baz=219						
L04D	Klamath Falls	52.66	347	P	P	11 10 58.4	-1.7
	baz=162						
HLID	Hailey	52.71	354	P	P	11 10 59.0	-1.4
	baz=172,SNR=34						
HLID				S	S	11 18 30.7	+2.7
	baz=172						
MFID	Camas Ranch	52.72	353	IAmb	IAmb	11 11 10.8	
	comp=Z,45nm,1.0s						
P48A	Milroy	52.77	22	IAmb	IAmb	11 11 12.6	
	comp=Z,59nm,1.4s						
K05A	Summer Lake	52.85	348	IAmb	IAmb	11 11 24.1	
	comp=Z,90nm,1.5s						
L02F	Cave Junction	52.87	346	P	P	11 11 00.0	-1.4
	baz=161						
K04D	Chiloquin, OR	52.93	348	P	P	11 11 00.8	-1.2
	baz=163						
FLWY	Flagg Ranch	52.98	358	IAmb	IAmb	11 11 12.5	
	comp=Z,65nm,1.1s						
SFIN	Lafayette	52.98	20	P	P	11 11 01.0	-1.3
	baz=207						
SFIN				S	S	11 18 30.3	-1.0
	baz=207						
J08A	Circle Bar Ran	53.03	351	IAmb	IAmb	11 11 13.2	
	comp=Z,34nm,1.1s						
S54A	Dingess, Beckl	53.03	27	IAmb	IAmb	11 11 08.8	
	comp=Z,30nm,1.1s						
S54A	Dingess, Beckl	53.03	27	P	P	11 11 01.3	-1.4
	baz=214						
S54A				P	P	11 11 01.3	-1.4
	baz=214						
P49A	Miami Univ. Ec	53.10	23	IAmb	IAmb	11 11 15.2	
	comp=Z,72nm,1.4s						
P49A	Miami Univ. Ec	53.10	23	P	P	11 11 01.3	-1.8
	baz=210						
P49A				S	S	11 18 30.8	-2.2
	baz=210						
P49A	Miami Univ. Ec	53.10	23	P	P	11 11 01.4	-1.8
	baz=210						
P49A				S	S	11 18 30.6	-2.4
	baz=210						
RSSD	Black Hills	53.11	4	P	P	11 11 02.2	-1.2
RSSD				pmax	pmax		
	comp=Z,44nm,1.2s						
RSSD	Black Hills	53.11	4	P	P	11 11 02.2	-1.2
RSSD				IAmb	IAmb	11 11 13.2	
	comp=Z,44nm,1.1s						
RSSD	Black Hills	53.11	4	P	P	11 11 02.3	-1.2
	baz=185,SNR=8.2						
RSSD	Black Hills	53.11	4	P	P	11 11 01.9	-1.5
	baz=185						
YPP	Pitchstone Pla	53.17	358	IAmb	IAmb	11 11 26.5	
	comp=Z,53nm,1.7s						
HUMO	Hull Mountain	53.18	346	IAMs_20	IAMs_20	11 28 12.5	
	comp=Z,4µm,22.0s						
R53A	Hurricane	53.19	26	IAmb	IAmb	11 11 06.0	
	comp=Z,33nm,1.1s						
R53A	Hurricane	53.19	26	S	S	11 18 33.5	-0.9
	baz=213						
R53A				S	S	11 18 33.5	-0.9
	baz=213						
H17A	Grant Village	53.29	358	P	P	11 11 03.9	-0.9
	baz=177						
H17A				S	S	11 18 37.4	+1.4
	baz=177						
T57A	Hurt	53.33	29	P	P	11 11 03.5	-1.4
	baz=217						
T57A				P	P	11 11 03.5	-1.4
	baz=217						
K02D	Willamette Mer	53.43	346	P	P	11 11 04.3	-1.4
	baz=161						
J05D	Fort Rock, OR	53.46	348	P	P	11 11 05.2	-0.8
	baz=164,SNR=8.5						
O48B	Farmland	53.56	22	P	P	11 11 05.5	-1.1
	baz=209						
O48B				S	S	11 18 36.2	-3.1
	baz=209						
YMR	Madison River	53.57	358	IAmb	IAmb	11 11 16.6	
	comp=Z,30nm,1.0s						
Q52A	Bidwell	53.59	25	P	P	11 11 05.5	-1.3
	baz=213						
Q52A				P	P	11 11 05.5	-1.3
	baz=213						
J04D	Umpqua Nationa	53.60	347	IAmb	IAmb	11 11 17.2	
	comp=Z,39nm,1.1s						
J04D				IAMs_20	IAMs_20	11 29 47.4	
	comp=Z,2µm,18.0s						
J04D	Umpqua Nationa	53.60	347	P	P	11 11 06.0	-1.1
	baz=163						
ECSD	EROS Data Cent	53.64	10	P	P	11 11 05.1	-2.0
	baz=194						
ECSD				S	S	11 18 37.0	-3.3
	baz=194						
L42A	Oliver, Polo	53.64	17	IAmb	IAmb	11 11 21.4	
	comp=Z,39nm,0.9s						
YHL	Hebgen Lake	53.77	357	IAmb	IAmb	11 11 18.9	
	comp=Z,48nm,1.2s						
MCR1	Marechal Candi	53.79	114	eP	P	11 11 08.2	-0.4
I07A	Izee	53.91	350	IAmb	IAmb	11 11 16.0	
	comp=Z,33nm,1.2s						
J01E	Myrtle Point	53.94	346	P	P	11 11 07.2	-2.0
	baz=161						
SUSD	Miller	53.96	8	IAmb	IAmb	11 11 14.3	
	comp=Z,36nm,0.9s						
SUSD	Miller	53.96	8	P	P	11 11 06.8	-2.6
	baz=191						
T59A	Double "B" Far	54.14	30	P	P	11 11 10.0	-0.8
	baz=218						
T59A				P	P	11 11 10.0	-0.8
	baz=218						
MALB	Monte Alegre	54.19	86	eP	P	11 11 11.3	-0.4
I04A	Tendick Farm,	54.19	347	P	P	11 11 09.4	-1.8
	baz=163						
P52A	Corning	54.21	25	IAMs_20	IAMs_20	11 34 03.9	
	comp=Z,2µm,18.0s						
P52A	Corning	54.21	25	P	P	11 11 09.3	-2.0
	baz=212						
Q54A	Coxs Mills	54.22	26	IAmb	IAmb	11 11 11.7	
	comp=Z,33nm,1.1s						
I03D	Drain, OR	54.31	347	P	P	11 11 09.1	-2.8
	baz=162						
JFWS	Jewell Farm	54.32	16	IAmb	IAmb	11 11 20.6	
	comp=Z,38nm,0.9s						
JFWS	Jewell Farm	54.32	16	P	P	11 11 09.2	-2.9
	baz=202						
JFWS				S	S	11 18 48.1	-1.4
	baz=202						
L44A	Lake County Fo	54.33	19	P	P	11 11 09.4	-2.7
	baz=205						
DLMT	Dillon	54.35	356	IAmb	IAmb	11 11 22.4	
	comp=Z,36nm,1.4s						
P53A	Whipple	54.40	25	P	P	11 11 11.3	-1.5
	baz=213,SNR=8.2						
P53A				P	P	11 11 11.3	-1.5
	baz=213,SNR=8.2						
C2SB	Chapadao do Su	54.47	107	eP	P	11 11 14.7	+1.0
I05D	Terrebonne, OR	54.49	349	P	P	11 11 11.7	-1.6
	baz=164						
BOZ	Bozeman (W)	54.53	357	IAmb	IAmb	11 11 34.9	
	comp=Z,47nm,1.9s						
BOZ	Bozeman (W)	54.53	357	P	P	11 11 11.5	-2.2
	baz=176,SNR=6.3						
I37B	Waseca	54.56	13	P	P	11 11 12.1	-1.7
	baz=198,SNR=7.1						
O52A	Adamsville	54.74	25	IAmb	IAmb	11 11 27.6	
	comp=Z,48nm,1.1s						
O52A	Adamsville	54.74	25	P	P	11 11 14.0	-1.2
	baz=213						
O52A				P	P	11 11 14.0	-1.2
	baz=213						
FRBT	Francisco Belt	54.85	115	eP	P	11 11 16.6	+0.2
TRCB	Terra Rica	54.90	111	eP	P	11 11 16.9	+0.1
H04D	Lebanon	54.96	347	IAMs_20	IAMs_20	11 29 23.3	
	comp=Z,2µm,21.0s						
G08A	Pilot Rock	54.99	351	IAmb	IAmb	11 11 27.1	
	comp=Z,28nm,1.1s						
H04A	Detroit Lake	54.99	348	P	P	11 11 16.4	-0.5
H04A				IAmb	IAmb	11 11 27.2	
	comp=Z,43nm,1.2s						
DVLD	Doverlandia	55.06	104	eP	P	11 11 18.0	0.0
O53A	New Philadelph	55.11	25	IAmb	IAmb	11 11 32.8	
	comp=Z,28nm,0.9s						
O53A				IAMs_20	IAMs_20	11 34 30.7	
	comp=Z,2µm,19.0s						
O53A	New Philadelph	55.11	25	P	P	11 11 16.0	-1.8
	baz=213						
O53A				S	S	11 18 58.7	-1.5
	baz=213						
I40A	Norwalk	55.12	16	IAmb	IAmb	11 11 44.0	
	comp=Z,36nm,1.2s						
COR	Corvallis	55.14	347	IAMs_20	IAMs_20	11 29 14.2	
	comp=Z,3µm,22.0s						
CBN	Corbin Frederi	55.19	30	P	P	11 11 16.4	-2.1
	baz=218						
CPSB	Cacapava Do Su	55.21	121	eP	P	11 11 17.6	-1.2
PLTB	Pedras Altas	55.33	122	eP	P	11 11 19.3	-0.5
G05D	Wamic, OR	55.36	349	P	P	11 11 18.5	-1.0
	baz=164						
F10A	Beach Ranch, E	55.41	352	IAmb	IAmb	11 11 38.7	
	comp=Z,26nm,1.1s						
USHA	Ushuaia	55.46	153	LR	LR	11 29 37.8	
	comp=Z,3µm,19.2s,baz=305,slow=30						
LAO	LASA Array	55.57	2	IAmb	IAmb	11 11 26.3	
	comp=Z,39nm,1.1s						
LAO	LASA Array	55.57	2	P	P	11 11 19.3	-1.8
	baz=182,SNR=22						
LAO	LASA Array	55.57	2	P	P	11 11 19.2	-2.0
	baz=182,SNR=22						
LAO				S	S	11 19 05.4	-0.8
	baz=182						
PTGB	Pitanga	55.60	114	eP	P	11 11 21.8	-0.1
G03D	McMinnville, O	55.73	347	IAMs_20	IAMs_20	11 29 56.7	
	comp=Z,2µm,20.0s						
N53A	Lisbon	55.73	25	IAmb	IAmb	11 11 35.2	
	comp=Z,59nm,1.3s						
F07A	Phinny Hill Vi	55.74	350	IAmb	IAmb	11 11 32.5	
	comp=Z,40nm,1.4s						
ITAB	Concordia	55.84	117	eP	P	11 11 23.8	+0.4
SPMN	Marine on St.	55.84	13	IAmb	IAmb	11 11 31.7	
	comp=Z,33nm,1.1s						
SPMN	Marine on St.	55.84	13	P	P	11 11 21.0	-2.0
	baz=199						
SPMN				S	S	11 19 09.4	-0.4
	baz=199						
AAM	Ann Arbor	55.90	22	P	P	11 11 22.3	-1.2
	baz=210						
MSO	Missoula	55.91	355	P	P	11 11 23.0	-0.6
	baz=173						
MSO				S	S	11 19 11.0	+0.1
	baz=173						
F05D	White Salmon	56.00	349	IAMs_20	IAMs_20	11 30 46.9	
	comp=Z,1µm,20.0s						
F05D	White Salmon	56.00	349	S	S	11 19 15.8	+3.8
	baz=164						
SNDB	Serra Nova Dou	56.01	98	eP	P	11 11 24.4	-0.5
PCMB	Pacaembu	56.09	110	eP	P	11 11 25.1	-0.2
HAWA	Hanford	56.16	351	IAmb	IAmb	11 11 29.2	
	comp=Z,52nm,1.9s						
HAWA				IAMs_20	IAMs_20	11 31 20.9	
	comp=Z,3µm,18.0s						
F04A	Amboy	56.24	348	IAmb	IAmb	11 11 30.2	
	comp=Z,68nm,1.6s						
F36A	Milaca	56.29	12	IAmb	IAmb	11 11 35.1	
	comp=Z,51nm,1.1s						
F36A	Milaca	56.29	12	P	P	11 11 24.6	-1.6
	baz=198,SNR=7.8						
M53A	WI Miller and	56.33	25	IAMs_20	IAMs_20	11 35 26.9	
	comp=Z,2µm,18.0s						
M53A	WI Miller and	56.33	25	P	P	11 11 25.4	-1.2
	baz=213						
F04D	Rainier, OR	56.50	348	P	P	11 11 26.7	-1.0
	baz=162						
F04D				S	S	11 19 23.3	+4.7
	baz=162						
G40A	Rib Lake	56.52	15	IAmb	IAmb	11 11 45.9	
	comp=Z,47nm,1.3s						
MCPB	Macapa, AP	56.62	84	eP	P	11 11 28.2	-1.0
D08A	Wollman Farm,	56.71	351	IAmb	IAmb	11 11 33.4	
	comp=Z,44nm,1.5s						
ITRB	Iturama	56.84	108	eP	P	11 11 31.0	+0.3
JTMT	Jette	56.85	355	IAmb	IAmb	11 11 39.2	
	comp=Z,25nm,1.0s						
E04D	Cinebar	56.86	348	IAmb	IAmb	11 11 36.9	
	comp=Z,57nm,1.2s						
E04D				IAMs_20	IAMs_20	11 30 28.7	
	comp=Z,2µm,22.0s						
E04D	Cinebar	56.86	348	P	P	11 11 29.3	-0.9
	baz=163						
E04D				S	S	11 19 27.3	+4.0
	baz=163						
SSPA	Standing Stone	56.88	27	IAMs_20	IAMs_20	11 34 24.6	
	comp=Z,3µm,19.0s						
SSPA	Standing Stone	56.88	27	P	P	11 11 28.7	-1.8
	baz=217						
EGMT	Eagleton	56.89	359	IAmb	IAmb	11 11 40.6	
	comp=Z,56nm,1.4s						
EGMT	Eagleton	56.89	359	P	P	11 11 28.7	-1.9
	baz=178,SNR=15						
EGMT				S	S	11 19 23.4	-0.4
	baz=178						
ERPA	Erie	57.18	25	IAMs_20	IAMs_20	11 35 45.4	
	comp=Z,1µm,18.0s						
ERPA	Erie	57.18	25	P	P	11 11 30.2	-2.4
	baz=214						
MDP	Montagnes des	57.22	78	LR	LR	11 33 52.3	
	comp=Z,1µm,20.9s,baz=270,slow=34						
MDND	Maddock	57.22	7	P	P	11 11 30.2	-2.5
	baz=190						
MDND				S	S	11 19 29.0	+1.0
	baz=190						
CNLB	Canela	57.25	119	eP	P	11 11 33.6	+0.1
C09A	Chrisman Ranch	57.34	352	IAmb	IAmb	11 11 43.9	
	comp=Z,44nm,1.4s						
DGMT	Dagmar	57.43	3	P	P	11 11 32.5	-1.9
	baz=185						
DGMT	Dagmar	57.43	3	P	P	11 11 32.2	-2.1
	baz=185						
DGMT				S	S	11 19 32.2	+1.3
	baz=185						
D04E	Lakebay	57.50	348	P	P	11 11 32.8	-1.9
	baz=163						
COWI	Conover	57.57	16	IAmb	IAmb	11 11 50.5	
	comp=Z,26nm,1.0s						
N58A	Sunbury	57.58	28	IAmb	IAmb	11 11 52.8	
	comp=Z,35nm,1.1s						
NEW	Newport	57.65	353	P	P	11 11 34.8	-1.1
	comp=Z,10nm,1.1s,baz=143,slow=4.3,SNR=12						
NEW				LR	LR	11 32 02.0	
	comp=Z,920nm,20.5s,baz=182,slow=32						
	comp=Z,10nm,1.1s						
NEW	Newport	57.65	353	P	P	11 11 33.7	-2.2
	baz=170,SNR=9.7						
NEW				S	S	11 19 35.1	+1.4
	baz=170						
GLMI	Grayling	57.77	20	P	P	11 11 35.4	-1.4
	baz=208						
C06D	Leavenworth	57.87	350	P	P	11 11 35.8	-1.5
	baz=165						
D03D	Eldon	57.90	348	P	P	11 11 36.3	-1.3
	baz=163,SNR=6.8						
NLWA	Neilton Lookou	57.93	348	IAmb	IAmb	11 11 48.7	
	comp=Z,52nm,1.2s						
NLWA				IAMs_20	IAMs_20	11 30 57.0	
	comp=Z,2µm,22.0s						
PRPB	Parauapebas	57.96	92	eP	P	11 11 38.2	-0.6
WVNY	West Valley, N	58.00	26	P	P	11 11 37.3	-1.1
	baz=215						
WALA	Waterton Lakes	58.12	356	IAmb	IAmb	11 11 48.5	
	comp=Z,30nm,1.1s						
AGMN	Agassiz Nation	58.19	10	IAmb	IAmb	11 11 48.3	
	comp=Z,29nm,1.2s						
AGMN	Agassiz Nation	58.19	10	P	P	11 11 38.2	-1.5
	baz=194						
AGMN	Agassiz Nation	58.19	10	P	P	11 11 38.0	-1.6
	baz=194						
AGMN				S	S	11 19 38.7	-2.0
	baz=194						
L56A	Greenwood	58.23	27	P	P	11 11 39.2	-0.9
	baz=216,SNR=6.8						
L56A				P	P	11 11 39.2	-0.9
	baz=216,SNR=6.8						
B05A	Bryant	58.41	349	P	P	11 11 39.6	-1.5
	baz=164,SNR=7.9						
B05A				S	S	11 19 45.3	+1.8
	baz=164						
TIJ01	Guaruva-PR	58.42	114	eP	P	11 11 42.7	+0.8
BBSR	BB Station	58.55	43	IAMs_20	IAMs_20	11 32 23.6	
	comp=Z,1µm,20.0s						
BB19B	Bebedouro	58.60	109	eP	P	11 11 43.7	+0.5
B35A	Bob, Littlefor	58.64	11	IAmb	IAmb	11 11 51.3	
	comp=Z,28nm,1.4s						
B35A	Bob, Littlefor	58.64	11	P	P	11 11 41.1	-1.6
	baz=197						
TER01	Tubaro-SC	58.64	118	eP	P	11 11 43.1	-0.1
EYMN	Ely	58.71	13	IAmb	IAmb	11 11 52.5	
	comp=Z,28nm,1.0s						
EYMN	Ely	58.71	13	IAMs_20	IAMs_20	11 34 56.7	
	comp=Z,3µm,20.0s						
EYMN	Ely	58.71	13	P	P	11 11 41.2	-2.1
	baz=200,SNR=6.4						
EYMN	Ely	58.71	13	P	P	11 11 40.8	-2.4
	baz=200,SNR=6.4						
EYMN				S	S	11 19 45.3	-2.2
	baz=200						
IPMB	Ipameri, GO	58.84	105	eP	P	11 11 46.3	+1.4
PEXB	Peixe	58.93	99	eP	P	11 11 45.6	+0.2
BINY	Binghamton	58.99	28	IAMs_20	IAMs_20	11 35 28.4	
	comp=Z,3µm,20.0s						
BINY	Binghamton	58.99	28	P	P	11 11 43.4	-2.0
	baz=218						
BINY				S	S	11 19 51.6	+0.2
	baz=218						
PGC	Sidney	59.04	348	IAmb	IAmb	11 11 45.7	
	comp=Z,49nm,1.3s						
PAL	Palisades	59.05	30	P	P	11 11 43.7	-2.0
	baz=221						
BDFB	Brasilia	59.06	103	P	P	11 11 45.2	-1.2
	comp=Z,3.3nm,0.7s,baz=256,slow=9.8,SNR=4.8						
BDFB				LR	LR	11 34 40.3	
	comp=Z,3µm,19.3s,baz=269,slow=34						
	comp=Z,3.3nm,0.7s						
BDFB	Brasilia	59.06	103	IAmb	IAmb	11 11 47.6	
	comp=Z,41nm,1.7s						
RCLB	Rio Claro- Sao	59.59	111	eP	P	11 11 49.6	-0.3
SADO	Sadowa	59.72	24	LR	LR	11 37 03.4	
	comp=Z,854nm,18.5s,baz=218,slow=36						
YLE	Yale	59.77	30	IAMs_20	IAMs_20	11 35 39.4	
	comp=Z,3µm,20.0s						
SMTB	Santa Maria do	59.87	95	eP	P	11 11 52.5	+0.5
PET01	Itanhaem-SP	59.92	113	eP	P	11 11 52.8	+0.7
ULM	Lac du Bonnet	60.09	9	P	P	11 11 49.1	-3.6
	comp=Z,14nm,1.2s,baz=194,slow=7.2,SNR=5.5						
ULM				LR	LR	11 36 04.7	
	comp=Z,839nm,18.3s,baz=198,slow=34						
	comp=Z,14nm,1.2s						
ULM	Lac du Bonnet	60.09	9	diP	P	11 11 50.6	-2.1
ULM	Lac du Bonnet	60.09	9	IAmb	IAmb	11 12 01.1	
	comp=Z,34nm,1.1s						
VAO	Valinhos	60.13	111	eP	P	11 11 53.6	-0.1
TMAB	Tom-Au,PA,Br	60.18	88	eP	P	11 11 55.4	+1.3
J58A	Remsen	60.22	27	IAmb	IAmb	11 12 11.3	
	comp=Z,32nm,1.1s						
WCNY	West Carthage	60.55	27	P	P	11 11 54.5	-1.4
	baz=218						
LLLB	Lillooet	60.63	350	P	P	11 11 55.3	-1.2
LLLB				IAmb	IAmb	11 12 19.9	
	comp=Z,22nm,1.2s						
QUA2	Belchertown	60.78	30	IAMs_20	IAMs_20	11 36 48.8	
	comp=Z,3µm,19.0s						
ACCN	Adirondack Com	60.98	28	P	P	11 11 58.2	-0.8
HRV	Adam Dziewonsk	61.34	30	IAMs_20	IAMs_20	11 36 27.3	
	comp=Z,3µm,20.0s						
LONY	Lake Ozonia	61.52	27	IAMs_20	IAMs_20	11 36 49.4	
	comp=Z,3µm,20.0s						
LONY	Lake Ozonia	61.52	27	P	P	11 12 00.0	-2.6
	baz=219						
SLP01	Ubatuba-SP	61.81	112	eP	P	11 12 07.1	+1.9
FFD	Franklin Falls	62.01	29	IAMs_20	IAMs_20	11 37 53.4	
	comp=Z,2µm,18.0s						
BSCB	Bom Sucesso	62.11	109	eP	P	11 12 07.4	+0.2
FRNY	Flat Rock	62.14	27	P	P	11 12 06.3	-0.5
SDBA	SAO DESIDERIO	62.22	99	eP	P	11 12 06.7	-1.3
EDM	Edmonton	62.23	357	P	P	11 12 05.7	-1.5
EDM				pmax	pmax		
	comp=Z,100nm,1.2s						
EDM	Edmonton	62.23	357	P	P	11 12 05.7	-1.5
AFI	Afiamalu	62.27	259	LR	LR	11 33 03.7	
	comp=Z,702nm,18.3s,baz=91,slow=30						
JANB	Januaria	62.65	102	eP	P	11 12 10.7	-0.2
MAN01	Angra dos Reis	62.89	111	eP	P	11 12 11.9	-0.4
VLDQ	Val d'Or	63.15	23	IAmb	IAmb	11 12 28.5	
	comp=Z,52nm,1.9s						
DIAM	Diamantina, MG	63.16	106	eP	P	11 12 14.3	0.0
BBB	Bella Bella	63.38	346	LR	LR	11 34 47.8	
	comp=Z,602nm,20.2s,baz=168,slow=31						
PMSA	Palmer Station	63.56	161	LR	LR	11 33 03.8	
	comp=Z,656nm,20.0s,baz=312,slow=30						
WVL	Waterville	63.79	30	IAMs_20	IAMs_20	11 37 30.5	
	comp=Z,3µm,21.0s						
ROSB	Rosrio	64.02	89	eP	P	11 12 22.4	+2.5
DUB01	Friburgo-RJ	64.35	110	eP	P	11 12 21.6	-0.4
PKME	Peaks-Kenny Pk	64.47	29	IAMs_20	IAMs_20	11 37 41.7	
	comp=Z,3µm,21.0s						
PKME	Peaks-Kenny Pk	64.47	29	P	P	11 12 20.2	-2.0
	baz=224						
PKME				S	S	11 21 04.5	+3.8
	baz=224						
SMAI	San Martin Ant	64.90	164	P	P	11 12 26.7	+2.1
SMAI				IAmb	IAmb	11 12 34.0	
	comp=Z,20nm,0.9s						
SJMB	Sao Joao De Ma	65.51	106	eP	P	11 12 31.8	+2.2
BSFB	Barra de Sao F	65.83	107	eP	P	11 12 34.8	+3.2
PQI	Presque Isle	66.11	29	IAMs_20	IAMs_20	11 38 08.8	
	comp=Z,3µm,22.0s						
NBPS	Pedro II - PI	66.45	91	eP	P	11 12 39.0	+3.1
GUA01	Guaratinga, BA	66.91	104	eP	P	11 12 40.1	+1.5
NBPN	Ponto Novo - B	66.94	98	eP	P	11 12 41.0	+2.2
CMC01	Camacan, BA	67.25	103	eP	P	11 12 43.1	+2.3
GDU01	Guandu, BA	67.31	101	eP	P	11 12 41.9	+0.7
BATG	Bathurst New B	67.48	30	P	P	11 12 40.4	-1.2
BATG				IAmb	IAmb	11 12 59.2	
	comp=Z,32nm,1.0s						
CRAG	Craig	67.60	345	P	P	11 12 40.0	-2.0
	baz=153						
RAO	Raoul Island	67.88	242	LR	LR	11 34 58.7	
	comp=Z,1µm,21.5s,baz=118,slow=29						
WRAK	Wrangell Islan	68.26	346	P	P	11 12 44.6	-1.6
	baz=154						
WRAK				S	S	11 21 52.0	+5.8
	baz=154						
FCC	Fort Churchill	68.60	8	IAmb	IAmb	11 12 53.2	
	comp=Z,19nm,1.0s						
SIT	Sitka	69.58	345	S	S	11 22 09.0	+7.2
	baz=151						
DLBC	Dease Lake	69.59	348	P	P	11 12 53.0	-1.6
	comp=Z,7.5nm,0.8s,baz=182,slow=6.2,SNR=15						
DLBC				LR	LR	11 40 04.7	
	comp=Z,1µm,18.8s,baz=153,slow=33						
	comp=Z,7.5nm,0.8s						
DLBC	Dease Lake	69.59	348	IAmb	IAmb	11 13 08.5	
	comp=Z,22nm,1.1s						
JIS	Juneau Island	70.42	346	IAMs_20	IAMs_20	11 37 22.5	
	comp=Z,1µm,18.0s						
YKA	Yellowknife Ar	71.55	357	P	P	11 13 03.1	-3.2
	comp=Z,5.8nm,0.8s,baz=167,slow=5.8,SNR=87						
YKA				LR	LR	11 40 29.2	
	comp=Z,717nm,21.6s,baz=173,slow=33						
	comp=Z,5.8nm,0.8s						
SKAG	Skagway	71.70	346	S	S	11 22 31.9	+5.5
	baz=152						
RCBR	Riachuelo	71.73	93	LR	LR	11 42 22.2	
	comp=Z,2µm,19.9s,baz=50,slow=34						

RCBR	**Riachuelo**	**71.73**	**93**	IAMs_20	IAMs_20	11 42 11.5	
	comp=Z,2µm,19.0s						
MSVF	**Nonsavu**	**71.82**	**254**	LR	LR	11 37 03.0	
	comp=Z,1µm,21.5s,baz=98,slow=30						
MSVF	**Nonsavu**	**71.82**	**254**	*e*P	**P**	**11 13 12.3**	**+3.3**
MSVF				pmax	pmax		
	comp=Z,21nm,1.2s						
TGTN	**Hyland Airport**	**72.14**	**350**	P	**P**	**11 13 09.5**	**-0.5**
	baz=159,SNR=10.0						
TGTN				S	**S**	**11 22 35.1**	**+3.5**
	baz=159						
URZ	**Urewera**	**72.36**	**233**	LR	LR	11 39 38.4	
	comp=Z,2µm,18.5s,baz=31,slow=31						
URZ	**Urewera**	**72.36**	**233**	IAMs_20	IAMs_20	11 39 18.3	
	comp=Z,2µm,20.0s						
SCHQ	**Schefferville**	**72.53**	**24**	P	**P**	**11 13 09.2**	**-3.3**
	comp=Z,6.0nm,1.0s,baz=262,slow=2.5,SNR=7.1						
SCHQ				LR	LR	11 43 59.4	
	comp=Z,2µm,19.1s,baz=223,slow=35						
	comp=Z,6.0nm,1.0s						
WHY	**Whitehorse**	**72.66**	**347**	IAmb	IAmb	11 13 19.7	
	comp=Z,34nm,1.6s						
WHY	**Whitehorse**	**72.66**	**347**	P	**P**	**11 13 11.8**	**-1.4**
	baz=152						
WHY				S	**SKiKP**	**11 22 42.3**	**-5.0**
	baz=152						
PNL	**Peninsula**	**72.92**	**344**	P	**P**	**11 13 13.2**	**-1.4**
	baz=148						
BCPM	**Bancas Point**	**73.23**	**344**	IAMs_20	IAMs_20	11 38 03.9	
	comp=Z,2µm,19.0s						
HYT	**Haines Junctio**	**73.43**	**346**	P	**P**	**11 13 17.4**	**-0.3**
HYT				IAmb	IAmb	11 13 32.3	
	comp=Z,36nm,1.2s						
HYT	**Haines Junctio**	**73.43**	**346**	P	**P**	**11 13 16.5**	**-1.2**
	baz=150						
HYT				S	**SKiKP**	**11 22 51.0**	**+2.5**
	baz=150						
PINM	**Pinnacle**	**73.52**	**344**	P	**P**	**11 13 17.6**	**-0.6**
	baz=147						
N31M	**Braeburn, Yuko**	**73.60**	**347**	IAmb	IAmb	11 13 29.2	
	comp=Z,29nm,1.1s						
N31M				IAMs_20	IAMs_20	11 39 50.4	
	comp=Z,1µm,18.0s						
N31M	**Braeburn, Yuko**	**73.60**	**347**	P	**P**	**11 13 18.2**	**-0.4**
	baz=152						
MMPY	**Sheldon Lake,**	**73.68**	**349**	P	**P**	**11 13 18.3**	**-0.8**
	baz=156,SNR=13						
MMPY				S	**S**	**11 22 52.5**	**+3.4**
	baz=156						
FARO	**Faro, Yukon**	**73.73**	**348**	P	**P**	**11 13 18.4**	**-1.0**
	baz=154						
FARO				S	**S**	**11 22 54.5**	**+4.8**
	baz=154						
YUK6	**Outpost Mounta**	**73.74**	**345**	P	**P**	**11 13 19.3**	**-0.4**
	baz=149						
YUK6				S	**S**	**11 22 56.5**	**+6.2**
	baz=149						
M31M	**Drury Creek, Y**	**73.93**	**348**	IAmb	IAmb	11 13 27.3	
	comp=Z,36nm,1.4s						
M31M	**Drury Creek, Y**	**73.93**	**348**	P	**P**	**11 13 19.6**	**-0.9**
	baz=153,SNR=6.2						
M31M				S	**S**	**11 22 54.4**	**+2.6**
	baz=153						
TABL	**Table Mountain**	**74.05**	**344**	IAMs_20	IAMs_20	11 37 58.6	
	comp=Z,2µm,20.0s						
YUK4	**Talbot Arm**	**74.16**	**345**	P	**P**	**11 13 21.7**	**-0.4**
	baz=149						
BGLC	**Bering Glacier**	**74.40**	**343**	P	**P**	**11 13 22.5**	**-0.7**
	baz=144						
ISLE	**Juniper Island**	**74.52**	**343**	IAMs_20	IAMs_20	11 39 21.1	
	comp=Z,2µm,18.0s						
WAX	**Waxell Ridge**	**74.54**	**343**	IAMs_20	IAMs_20	11 39 18.6	
	comp=Z,2µm,18.0s						
BARN	**Barnard Glacie**	**74.71**	**344**	IAMs_20	IAMs_20	11 38 19.0	
	comp=Z,2µm,20.0s						
BERG	**Berg Lake**	**74.74**	**343**	IAMs_20	IAMs_20	11 38 08.0	
	comp=Z,2µm,21.0s						
M30M	**Minto, Yukon**	**74.78**	**347**	IAmb	IAmb	11 13 32.0	
	comp=Z,37nm,1.4s						
M30M				IAMs_20	IAMs_20	11 39 06.8	
	comp=Z,1µm,20.0s						
M30M	**Minto, Yukon**	**74.78**	**347**	P	**P**	**11 13 24.6**	**-1.0**
	baz=151,SNR=7.5						
M30M				S	**S**	**11 23 06.5**	**+5.0**
	baz=151						
HMT	**Hamilton**	**74.86**	**342**	IAMs_20	IAMs_20	11 38 00.2	
	comp=Z,2µm,22.0s						
YUK3	**Moose Creek**	**74.99**	**345**	P	**P**	**11 13 25.5**	**-1.4**
	baz=147						
YUK3				S	**S**	**11 23 05.9**	**+1.8**
	baz=147						
VRDI	**Verde Repeater**	**75.35**	**343**	IAmb	IAmb	11 13 47.7	
	comp=Z,41nm,1.2s						
VRDI				IAMs_20	IAMs_20	11 39 45.9	
	comp=Z,1µm,18.0s						
BMRM	**Bremner River**	**75.47**	**343**	IAmb	IAmb	11 13 43.4	
	comp=Z,41nm,1.1s						
BMRM				IAMs_20	IAMs_20	11 38 31.3	
	comp=Z,2µm,21.0s						
BMRM	**Bremner River**	**75.47**	**343**	P	**P**	**11 13 28.3**	**-1.3**
	baz=143						
GLB	**Gilahina Butte**	**75.62**	**343**	IAMs_20	IAMs_20	11 40 03.2	
	comp=Z,1µm,19.0s						
BVCY	**Beaver Creek**	**75.63**	**345**	P	**P**	**11 13 28.9**	**-1.4**
	baz=147						
OHAK	**Old Harbor**	**75.65**	**337**	P	**P**	**11 13 29.2**	**-1.3**
	baz=134						
KDAK	**Kodiak Island**	**75.77**	**337**	LR	LR	11 38 43.9	
	comp=Z,3µm,20.7s,baz=151,slow=29						
KDAK	**Kodiak Island**	**75.77**	**337**	*e*P	**P**	**11 13 30.1**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,120nm,2.9s						
KDAK	**Kodiak Island**	**75.77**	**337**	P	**P**	**11 13 29.9**	**-1.3**
	baz=135						
M27K	**Edge Creek, AK**	**75.84**	**345**	IAmb	IAmb	11 13 38.2	
	comp=Z,37nm,1.2s						
M27K				IAMs_20	IAMs_20	11 39 58.9	
	comp=Z,2µm,19.0s						
M27K	**Edge Creek, AK**	**75.84**	**345**	P	**P**	**11 13 30.7**	**-1.0**
	baz=146						
M27K				S	**S**	**11 23 17.7**	**+4.2**
	baz=146						
FID	**Port Fidalgo**	**75.86**	**342**	IAMs_20	IAMs_20	11 38 57.3	
	comp=Z,1µm,20.0s						
N25K	**Chitina, Valde**	**75.98**	**343**	IAMs_20	IAMs_20	11 39 08.7	
	comp=Z,1µm,20.0s						
N25K	**Chitina, Valde**	**75.98**	**343**	P	**P**	**11 13 31.8**	**-0.6**
	baz=143						
GLI	**Glacier Island**	**76.16**	**342**	IAMs_20	IAMs_20	11 39 03.5	
	comp=Z,1µm,20.0s						
GLI	**Glacier Island**	**76.16**	**342**	P	**P**	**11 13 33.0**	**-0.4**
	baz=140						
M26K	**Nabesna, AK**	**76.18**	**344**	IAMs_20	IAMs_20	11 40 39.8	
	comp=Z,1µm,18.0s						
M26K	**Nabesna, AK**	**76.18**	**344**	P	**P**	**11 13 32.4**	**-1.2**
	baz=145						
M26K				S	**S**	**11 23 21.8**	**+4.8**
	baz=145						
KLU	**Klutina**	**76.28**	**342**	IAMs_20	IAMs_20	11 39 26.6	
	comp=Z,2µm,21.0s						
KLU	**Klutina**	**76.28**	**342**	P	**P**	**11 13 32.7**	**-1.4**
	baz=142						
L27K	**Beaver Creek,**	**76.41**	**345**	IAmb	IAmb	11 13 45.3	
	comp=Z,20nm,1.1s						
L27K				IAMs_20	IAMs_20	11 39 23.0	
	comp=Z,2µm,21.0s						
L27K	**Beaver Creek,**	**76.41**	**345**	P	**P**	**11 13 33.6**	**-1.2**
	baz=146,SNR=11						
L27K				S	**S**	**11 23 23.3**	**+3.8**
	baz=146						
BRSE	**Bradley Lake S**	**76.50**	**339**	P	**P**	**11 13 34.0**	**-1.4**
	baz=137						
DAWY	**Dawson**	**76.67**	**346**	IAmb	IAmb	11 13 46.3	
	comp=Z,41nm,1.2s						
DAWY	**Dawson**	**76.67**	**346**	P	**P**	**11 13 35.3**	**-1.0**
	baz=148,SNR=11						
DAWY				S	**S**	**11 23 26.3**	**+4.0**
	baz=148						
O22K	**Cooper Landing**	**76.70**	**340**	IAMs_20	IAMs_20	11 38 45.0	
	comp=Z,2µm,20.0s						
J29M	**Klondike Camp**	**76.74**	**347**	S	**S**	**11 23 25.9**	**+2.9**
	baz=150						
HARP	**HAARP**	**76.77**	**343**	P	**P**	**11 13 35.8**	**-1.1**
	baz=142						
L26K	**Log Cabin Wild**	**76.78**	**344**	IAMs_20	IAMs_20	11 39 29.7	
	comp=Z,1µm,21.0s						
L26K	**Log Cabin Wild**	**76.78**	**344**	P	**P**	**11 13 35.5**	**-1.5**
	baz=144						
M24K	**Tolsona, Glenn**	**76.83**	**343**	IAMs_20	IAMs_20	11 39 26.3	
	comp=Z,1µm,21.0s						
M24K	**Tolsona, Glenn**	**76.83**	**343**	P	**P**	**11 13 36.1**	**-1.2**
	baz=142						
SCM	**Sheep Creek Mo**	**76.97**	**342**	IAMs_20	IAMs_20	11 39 44.8	
	comp=Z,1µm,21.0s						
SCM	**Sheep Creek Mo**	**76.97**	**342**	P	**P**	**11 13 37.2**	**-0.9**
	baz=140						
Q19K	**Cape Douglas,**	**76.97**	**338**	P	**P**	**11 13 37.1**	**-1.0**
	baz=134						
KNK	**Knik Glacier**	**76.99**	**341**	IAMs_20	IAMs_20	11 40 08.6	
	comp=Z,1µm,19.0s						
KNK	**Knik Glacier**	**76.99**	**341**	P	**P**	**11 13 37.1**	**-1.1**
	baz=139						
RPZ	**Rata Peaks**	**77.04**	**227**	LR	LR	11 42 30.1	
	comp=Z,2µm,18.3s,baz=74,slow=32						
M23K	**Glacier View**	**77.06**	**342**	P	**P**	**11 13 37.5**	**-1.0**
	baz=140						
RC01	**Rabbit Creek A**	**77.16**	**341**	IAMs_20	IAMs_20	11 40 44.1	
	comp=Z,1µm,19.0s						
RC01	**Rabbit Creek A**	**77.16**	**341**	P	**P**	**11 13 37.3**	**-1.7**
	baz=138						
RC01				S	**S**	**11 23 30.0**	**+2.3**
	baz=138						
SML	**Sawmill**	**77.25**	**342**	IAMs_20	IAMs_20	11 41 29.5	
	comp=Z,1µm,18.0s						
SML	**Sawmill**	**77.25**	**342**	P	**P**	**11 13 38.7**	**-1.0**
	baz=139						
K27K	**Chicken**	**77.28**	**345**	IAmb	IAmb	11 13 50.5	
	comp=Z,26nm,1.1s						
K27K				IAMs_20	IAMs_20	11 40 04.5	
	comp=Z,2µm,21.0s						
K27K	**Chicken**	**77.28**	**345**	P	**P**	**11 13 38.5**	**-1.2**
	baz=146						
PAX	**Paxson**	**77.31**	**344**	IAmb	IAmb	11 13 39.6	
	comp=Z,44nm,1.5s						
PAX	**Paxson**	**77.31**	**344**	P	**P**	**11 13 38.2**	**-1.8**
	baz=142,SNR=7.0						
PAX				S	**S**	**11 23 30.3**	**+0.9**
	baz=142						
P19K	**Oil Pt**	**77.33**	**338**	P	**P**	**11 13 36.9**	**-3.2**
	baz=134						
P19K				S	**S**	**11 23 30.9**	**+1.3**
	baz=134						
PMR	**Palmer**	**77.34**	**341**	IAmb	IAmb	11 13 52.7	
	comp=Z,40nm,1.2s						
PMR	**Palmer**	**77.34**	**341**	P	**P**	**11 13 37.2**	**-2.8**
	baz=139						
FIS	**Fire Island**	**77.36**	**341**	IAMs_20	IAMs_20	11 39 18.3	
	comp=Z,1µm,19.0s						
O20K	**Slope Mountain**	**77.41**	**339**	P	**P**	**11 13 37.2**	**-3.3**
	baz=135						
O20K				S	**S**	**11 23 33.0**	**+2.5**
	baz=135						
GHO	**Glory Hole Cre**	**77.41**	**341**	IAmb	IAmb	11 13 55.6	
	comp=Z,32nm,1.1s						
GHO				IAMs_20	IAMs_20	11 39 16.7	
	comp=Z,963nm,20.0s						
DOT	**Dot Lake**	**77.48**	**344**	IAmb	IAmb	11 13 50.3	
	comp=Z,28nm,1.1s						
SDPT	**Sand Point**	**77.49**	**332**	P	**P**	**11 13 37.4**	**-3.6**
	baz=127						
I29M	**Ogilvie Camp,**	**77.54**	**348**	IAMs_20	IAMs_20	11 40 57.6	
	comp=Z,1µm,21.0s						
I29M	**Ogilvie Camp,**	**77.54**	**348**	P	**P**	**11 13 39.4**	**-1.7**
	baz=150,SNR=7.8						
I29M				S	**S**	**11 23 32.9**	**+1.2**
	baz=150						
WAT6	**Susitna Watana**	**77.67**	**342**	P	**P**	**11 13 40.4**	**-1.7**
	baz=140,SNR=7.3						
WAT6				S	**S**	**11 23 36.0**	**+2.5**
	baz=140						
EGAK	**Eagle**	**77.68**	**346**	IAMs_20	IAMs_20	11 40 20.4	
	comp=Z,2µm,21.0s						
SCRK	**Sand Creek**	**77.72**	**345**	IAmb	IAmb	11 13 51.9	
	comp=Z,35nm,1.2s						
SCRK				IAMs_20	IAMs_20	11 40 10.6	
	comp=Z,2µm,21.0s						
SCRK	**Sand Creek**	**77.72**	**345**	P	**P**	**11 13 40.8**	**-1.5**
	baz=144,SNR=11						
SCRK				S	**S**	**11 23 35.1**	**+1.2**
	baz=144						
RIDG	**Independent Ri**	**77.76**	**344**	IAMs_20	IAMs_20	11 41 39.6	
	comp=Z,2µm,18.0s						
RIDG	**Independent Ri**	**77.76**	**344**	P	**P**	**11 13 40.6**	**-1.8**
	baz=143,SNR=16						
RIDG				S	**S**	**11 23 37.2**	**+3.1**
	baz=143						
M22K	**Willow**	**77.78**	**341**	IAMs_20	IAMs_20	11 41 25.4	
	comp=Z,1µm,18.0s						
M22K	**Willow**	**77.78**	**341**	P	**P**	**11 13 40.7**	**-1.8**
	baz=138						
P18K	**Big Mountain,**	**77.89**	**338**	P	**P**	**11 13 41.1**	**-2.1**
	baz=132						
P18K				S	**S**	**11 23 36.7**	**+1.0**
	baz=132						
DHY	**Denali Highway**	**77.94**	**343**	IAMs_20	IAMs_20	11 40 31.5	
	comp=Z,2µm,20.0s						
DHY	**Denali Highway**	**77.94**	**343**	P	**P**	**11 13 41.1**	**-2.5**
	baz=140						
DHY				S	**S**	**11 23 38.5**	**+2.1**
	baz=140						
J26L	**Joseph Creek**	**78.04**	**345**	P	**P**	**11 13 42.5**	**-1.5**
	baz=144,SNR=11						
J26L				S	**S**	**11 23 39.0**	**+1.8**
	baz=144						
SPCR	**Spurr Chakacha**	**78.06**	**340**	P	**P**	**11 13 42.0**	**-2.2**
	baz=136						
SPCR				S	**S**	**11 23 38.1**	**+0.6**
	baz=136						
O19K	**Port Alsworth**	**78.10**	**338**	P	**P**	**11 13 42.2**	**-2.1**
	baz=133						
O19K				S	**S**	**11 23 38.6**	**+0.8**
	baz=133						
WAT1	**Susitna Watana**	**78.10**	**342**	P	**P**	**11 13 42.3**	**-2.0**
	baz=139						
WAT1				S	**S**	**11 23 38.4**	**+0.5**
	baz=139						
EPYK	**Eagle Plains**	**78.10**	**349**	IAMs_20	IAMs_20	11 45 29.3	
	comp=Z,858nm,18.0s						
EPYK	**Eagle Plains**	**78.10**	**349**	P	**P**	**11 13 42.2**	**-2.1**
	baz=151						
EPYK				S	**S**	**11 23 38.9**	**+1.2**
	baz=151						
O18K	**Koktuh Hills**	**78.19**	**338**	IAmb	IAmb	11 13 58.6	
	comp=Z,52nm,1.3s						
O18K	**Koktuh Hills**	**78.19**	**338**	P	**P**	**11 13 43.2**	**-1.7**
	baz=132						
O18K				S	**S**	**11 23 38.8**	**0.0**
	baz=132						
CUT	**Chulitna**	**78.31**	**341**	IAMs_20	IAMs_20	11 39 54.3	
	comp=Z,901nm,21.0s						
CUT	**Chulitna**	**78.31**	**341**	P	**P**	**11 13 43.7**	**-1.7**
	baz=138						
N19K	**Bonanza Creek**	**78.58**	**339**	P	**P**	**11 13 45.0**	**-2.1**
	baz=133						
N19K				S	**S**	**11 23 43.9**	**+0.7**
	baz=133						
J25K	**Salcha River,**	**78.59**	**345**	IAmb	IAmb	11 14 01.1	
	comp=Z,22nm,1.0s						
J25K				IAMs_20	IAMs_20	11 40 24.7	
	comp=Z,2µm,22.0s						
J25K	**Salcha River,**	**78.59**	**345**	P	**P**	**11 13 44.6**	**-2.4**
	baz=143,SNR=8.5						
J25K				S	**S**	**11 23 44.5**	**+1.4**
	baz=143						
RND	**Reindeer**	**78.63**	**343**	IAMs_20	IAMs_20	11 40 49.7	
	comp=Z,2µm,20.0s						
FRB	**Frobisher Bay**	**78.64**	**17**	LR	LR	11 47 26.0	
	comp=Z,1µm,18.7s,baz=222,slow=35						
N18K	**Kilae Creek**	**79.00**	**338**	P	**P**	**11 13 47.1**	**-2.2**
	baz=132						
C36M	**Paulatuk**	**79.04**	**354**	P	**P**	**11 13 46.8**	**-2.5**
	baz=164						
C36M				S	**S**	**11 23 47.7**	**+0.3**
	baz=164						
ILAR	**Eielson Array**	**79.12**	**344**	P	**P**	**11 13 47.4**	**-2.5**
	comp=Z,3.7nm,0.9s,baz=160,slow=5.1,SNR=28						
ILAR				LR	LR	11 43 57.4	
	comp=Z,376nm,18.3s,baz=156,slow=32						
	comp=Z,3.7nm,0.9s						
SVW2	**Sparrevohn**	**79.17**	**339**	IAmb	IAmb	11 14 03.1	
	comp=Z,53nm,1.5s						
WRH	**Wood River Hil**	**79.22**	**344**	IAmb	IAmb	11 14 02.8	
	comp=Z,40nm,1.0s						
WRH				IAMs_20	IAMs_20	11 41 17.3	
	comp=Z,1µm,20.0s						
INK	**Inuvik**	**79.27**	**351**	P	**P**	**11 13 49.1**	**-1.5**
	comp=Z,10nm,1.0s,baz=142,slow=8.3,SNR=20						
INK				LR	LR	11 45 14.4	
	comp=Z,1µm,20.8s,baz=149,slow=33						
	comp=Z,10nm,1.0s						
INK	**Inuvik**	**79.27**	**351**	IAmb	IAmb	11 14 00.3	
	comp=Z,36nm,1.2s						
INK	**Inuvik**	**79.27**	**351**	P	**P**	**11 13 49.3**	**-1.3**
	baz=155,SNR=18						
INK				S	**S**	**11 23 50.5**	**+0.5**
	baz=155						
PPLA	**Purkeypile**	**79.27**	**341**	P	**P**	**11 13 48.8**	**-2.2**
	baz=136,SNR=5.8						
PPLA				S	**S**	**11 23 51.1**	**+0.5**
	baz=136						
CCB	**Clear Creek Bu**	**79.28**	**344**	IAMs_20	IAMs_20	11 41 20.7	
	comp=Z,1µm,20.0s						
M19K	**Big River Lodg**	**79.30**	**340**	IAmb	IAmb	11 14 00.5	
	comp=Z,43nm,1.3s						
M19K	**Big River Lodg**	**79.30**	**340**	P	**P**	**11 13 48.5**	**-2.5**
	baz=134						
M19K				S	**S**	**11 23 53.0**	**+2.3**
	baz=134						
KTH	**Kantishna Hill**	**79.36**	**342**	IAmb	IAmb	11 14 01.4	
	comp=Z,50nm,1.1s						
KTH				IAMs_20	IAMs_20	11 42 46.0	
	comp=Z,1µm,18.0s						
BWN	**Browne**	**79.38**	**343**	IAMs_20	IAMs_20	11 41 43.4	
	comp=Z,1µm,19.0s						
COLA	**College**	**79.46**	**344**	*di*P	**P**	**11 13 50.7**	**-1.0**
COLA				pmax	pmax		
	comp=Z,17nm,1.7s						
COLA	**College**	**79.46**	**344**	P	**P**	**11 13 51.0**	**-0.7**
COLA	**College**	**79.46**	**344**	IAMs_20	IAMs_20	11 41 16.8	
	comp=Z,1µm,21.0s						
COLA	**College**	**79.46**	**344**	P	**P**	**11 13 49.5**	**-2.2**
	baz=140						
COLA				S	**S**	**11 23 52.0**	**-0.2**
	baz=140						
TCOL	**CIGO, UAF Yank**	**79.47**	**344**	IAMs_20	IAMs_20	11 41 16.8	
	comp=Z,1µm,21.0s						
TCOL	**CIGO, UAF Yank**	**79.47**	**344**	P	**P**	**11 13 50.0**	**-1.8**
	baz=140						
TCOL				S	**S**	**11 23 52.7**	**+0.5**
	baz=140						
L20K	**Farewell, AK**	**79.53**	**340**	P	**P**	**11 13 49.9**	**-2.3**
	baz=134,SNR=7.7						
L20K				S	**S**	**11 23 55.0**	**+1.9**
	baz=134						
POKR	**Poker Plat Res**	**79.54**	**344**	IAMs_20	IAMs_20	11 41 32.7	
	comp=Z,999nm,20.0s						
POKR	**Poker Plat Res**	**79.54**	**344**	P	**P**	**11 13 50.9**	**-1.2**
	baz=141						
POKR				S	**S**	**11 23 52.9**	**-0.2**
	baz=141						
UNV	**Unalaska Valle**	**79.55**	**329**	P	**P**	**11 13 50.2**	**-2.2**
	baz=121						
UNV				S	**S**	**11 23 53.5**	**+0.1**
	baz=121						
NEA2	**Nenana**	**79.59**	**343**	IAmb	IAmb	11 14 01.9	
	comp=Z,34nm,1.2s						
NEA2				IAMs_20	IAMs_20	11 43 03.0	
	comp=Z,1µm,18.0s						
NEA2	**Nenana**	**79.59**	**343**	P	**P**	**11 13 50.9**	**-1.5**
	baz=139,SNR=7.2						
CAST	**Castle Rocks**	**79.62**	**342**	IAmb	IAmb	11 14 05.7	
	comp=Z,40nm,1.2s						
CAST				IAMs_20	IAMs_20	11 40 35.0	
	comp=Z,1µm,22.0s						
CAST	**Castle Rocks**	**79.62**	**342**	P	**P**	**11 13 50.5**	**-2.1**
	baz=136,SNR=12						
MDM	**Murphy Dome**	**79.63**	**344**	IAmb	IAmb	11 14 02.4	
	comp=Z,28nm,1.2s						
MDM				IAMs_20	IAMs_20	11 41 32.2	
	comp=Z,1µm,21.0s						
L19K	**White Mountain**	**79.65**	**340**	IAmb	IAmb	11 14 06.5	
	comp=Z,30nm,1.1s						
L19K				IAMs_20	IAMs_20	11 40 41.1	
	comp=Z,2µm,21.0s						
L19K	**White Mountain**	**79.65**	**340**	P	**P**	**11 13 50.6**	**-2.3**
	baz=133,SNR=12						
L19K				S	**S**	**11 23 56.4**	**+2.0**
	baz=133						
BPAW	**Bear Paw Mtn.**	**79.78**	**342**	IAMs_20	IAMs_20	11 41 14.1	
	comp=Z,1µm,20.0s						
BPAW	**Bear Paw Mtn.**	**79.78**	**342**	P	**P**	**11 13 51.1**	**-2.4**
	baz=137,SNR=12						
BPAW				S	**S**	**11 23 55.4**	**-0.3**
	baz=137						
CHUM	**Lake Minchumin**	**80.02**	**342**	P	**P**	**11 13 52.7**	**-2.0**
	baz=136						
CHUM				S	**S**	**11 23 58.6**	**+0.5**
	baz=136						
I23K	**Minto, Yukon-K**	**80.09**	**344**	IAmb	IAmb	11 14 07.9	
	comp=Z,29nm,1.1s						
I23K				IAMs_20	IAMs_20	11 41 43.3	
	comp=Z,1µm,20.0s						
I23K	**Minto, Yukon-K**	**80.09**	**344**	P	**P**	**11 13 53.8**	**-1.3**
	baz=139,SNR=12						
I23K				S	**S**	**11 24 00.7**	**+1.9**
	baz=139						
SBA	**Scott Base**	**80.10**	**192**	P	**P**	**11 13 57.5**	**+2.4**
SBA				pmax	pmax		
	comp=Z,31nm,1.4s						
SBA	**Scott Base**	**80.10**	**192**	P	**P**	**11 13 57.5**	**+2.4**
K20K	**Telida**	**80.20**	**341**	IAMs_20	IAMs_20	11 43 58.6	
	comp=Z,1µm,18.0s						
K20K	**Telida**	**80.20**	**341**	P	**P**	**11 13 53.7**	**-2.1**
	baz=134,SNR=14						
K20K				S	**S**	**11 24 00.6**	**+0.4**
	baz=134						
H24K	**Noodor Dome**	**80.22**	**345**	IAMs_20	IAMs_20	11 41 54.5	
	comp=Z,1µm,21.0s						
H24K	**Noodor Dome**	**80.22**	**345**	P	**P**	**11 13 54.4**	**-1.4**
	baz=140,SNR=9.5						
TTA	**Tatalina**	**80.56**	**340**	P	**P**	**11 13 56.1**	**-1.7**
	baz=132						
H23K	**Yukon River**	**80.65**	**344**	IAMs_20	IAMs_20	11 43 26.1	
	comp=Z,1µm,18.0s						
H23K	**Yukon River**	**80.65**	**344**	P	**P**	**11 13 56.4**	**-1.7**
	baz=139						
J20K	**Nowinta River**	**80.80**	**341**	IAmb	IAmb	11 14 08.3	
	comp=Z,37nm,1.1s						
J20K				IAMs_20	IAMs_20	11 43 56.3	
	comp=Z,1µm,18.0s						
J20K	**Nowinta River**	**80.80**	**341**	P	**P**	**11 13 57.2**	**-1.7**
	baz=134,SNR=12						
J20K				S	**S**	**11 24 07.9**	**+1.6**
	baz=134						
I21K	**Tanana**	**80.86**	**343**	IAmb	IAmb	11 14 13.4	
	comp=Z,25nm,1.1s						
I21K				IAMs_20	IAMs_20	11 41 59.7	
	comp=Z,1µm,20.0s						
I21K	**Tanana**	**80.86**	**343**	P	**P**	**11 13 57.0**	**-2.3**
	baz=136						
QSPA	**South Pole Qui**	**80.98**	**180**	LR	LR	11 42 25.3	
	comp=Z,728nm,21.7s,baz=110,slow=30						
QSPA	**South Pole Qui**	**80.98**	**180**	P	**P**	**11 14 00.4**	**+0.2**
QSPA				IAmb	IAmb	11 14 09.3	
	comp=Z,39nm,0.9s						
QSPA	**South Pole Qui**	**80.98**	**180**	IAMs_20	IAMs_20	11 42 36.9	
	comp=Z,1µm,21.0s						
VNDA	**Vanda**	**81.15**	**193**	P	**P**	**11 14 03.1**	**+2.4**
	comp=Z,1.9nm,0.9s,baz=96,slow=3.6,SNR=7.2						
VNDA				LR	LR	11 43 26.4	
	comp=Z,404nm,18.3s,baz=98,slow=31						
	comp=Z,1.9nm,0.9s						
VNDA	**Vanda**	**81.15**	**193**	P	**P**	**11 14 03.6**	**+2.9**
H21K	**Melozitna Rive**	**81.44**	**343**	IAmb	IAmb	11 14 12.5	
	comp=Z,36nm,1.1s						
H21K				IAMs_20	IAMs_20	11 43 17.2	
	comp=Z,1µm,20.0s						
H21K	**Melozitna Rive**	**81.44**	**343**	P	**P**	**11 14 00.9**	**-1.5**
	baz=136,SNR=18						
A36M	**Sachs Harbour**	**81.69**	**355**	IAmb	IAmb	11 14 13.0	
	comp=Z,34nm,1.1s						
A36M				IAMs_20	IAMs_20	11 45 14.8	
	comp=Z,934nm,20.0s						
A36M	**Sachs Harbour**	**81.69**	**355**	P	**P**	**11 14 02.1**	**-1.4**
	baz=163,SNR=8.0						
A36M				S	**S**	**11 24 16.8**	**+1.6**
	baz=163						
COLD	**Coldfoot**	**81.88**	**345**	IAmb	IAmb	11 14 15.4	
	comp=Z,42nm,1.1s						
COLD	**Coldfoot**	**81.88**	**345**	P	**P**	**11 14 04.1**	**-0.6**
	baz=138,SNR=17						
COLD				S	**S**	**11 24 21.2**	**+3.8**
	baz=138						
GCSA	**Galena City Sc**	**82.06**	**341**	P	**P**	**11 14 04.3**	**-1.3**
	baz=132						

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GCSA                                 S         S         11 24 20.9 +1.6
      baz=132
DZM   Mont Dzumac        82.30 249  eLR        LR        11 39 35.2
DZM   Mont Dzumac        82.30 249   LR        LR        11 43 12.7
      comp=Z,224nm,21.4s,baz=106,slow=30
TOLK  Toolik Lake Re     82.79 346   IAmb      IAmb      11 14 20.4
      comp=Z,30nm,1.1s
TOLK                                 IAMs_20   IAMs_20   11 43 57.4
      comp=Z,1µm,20.0s
TOLK  Toolik Lake Re     82.79 346   P         P         11 14 08.7 -0.8
      baz=139,SNR=10
TOLK                                 S         S         11 24 29.6 +2.8
      baz=139
RES   Resolute Bay       84.04   4   LR        LR        11 49 45.7
      comp=Z,565nm,20.5s,baz=192,slow=34
VNA3  Neumayer Olymp     84.21 161   P         P         11 14 18.0 +1.2
ANM   Nome               84.84 339   P         P         11 14 19.0 -1.0
      baz=124,SNR=7.5
ANM                                  S         S         11 24 50.8 +3.2
      baz=124
VNA2  Neumayer--Watz     85.00 161   P         P         11 14 23.1 +2.4
      baz=260,slow=5.0
RDOG  Red Dog Mine       86.03 342   P         P         11 14 23.9 -1.9
RDOG                                           pP        11 14 29.4 -0.4
RDOG                                 IAmb      IAmb      11 14 35.7
      comp=Z,31nm,1.0s
RDOG                                 IAMs_20   IAMs_20   11 44 40.5
      comp=Z,1µm,22.0s
RDOG  Red Dog Mine       86.03 342   P         P         11 14 23.5 -2.3
      baz=126
RDOG                                 S         S         11 25 01.6 +2.4
      baz=126
SNAA  Sanae              86.22 162   LR        LR        11 47 22.1
      comp=Z,992nm,18.4s,baz=191,slow=32
SNAA  Sanae              86.22 162  eP         P         11 14 31.5 +4.6
SNAA                                 pmax      pmax
      comp=Z,42nm,2.5s
TNA   Tin City           86.29 339   P         P         11 14 25.8 -1.3
      baz=121
TNA                                  S         S         11 25 05.3 +3.6
      baz=121
SFJD  Kangerlussuaq      86.38  19   LR        LR        11 52 01.4
      comp=Z,1µm,19.7s,baz=237,slow=35
SFJD  Kangerlussuaq      86.38  19   IAMs_20   IAMs_20   11 51 50.4
      comp=Z,1µm,20.0s
A21K  Barrow             86.41 346   IAMs_20   IAMs_20   11 46 22.0
      comp=Z,1µm,20.0s
A21K  Barrow             86.41 346   S         S         11 25 05.1 +2.5
      baz=132
GAMB  Gambell            86.82 337   S         S         11 25 10.3 +3.4
      baz=118
ILULI Ilulissat          87.46  17   IAMs_20   IAMs_20   11 53 32.9
      comp=Z,1µm,20.0s
H11S2 WAKE ISLAND Hy     88.18 289   T         T         12 52 08.1
      baz=100,slow=74,SNR=2080
H11S1 WAKE ISLAND Hy     88.19 289   T         T         12 52 10.6
      baz=100,slow=74,SNR=1043
H11S3 WAKE ISLAND Hy     88.20 289   T         T         12 52 11.4
      baz=100,slow=74,SNR=1116
H11N3 WAKE ISLAND Hy     88.21 290   T         T         12 52 10.8
      baz=100,slow=74,SNR=187
H11N2 WAKE ISLAND Hy     88.22 290   T         T         12 52 10.6
      baz=100,slow=74,SNR=244
H11N1 WAKE ISLAND Hy     88.22 290   T         T         12 52 12.1
      baz=100,slow=74,SNR=83
TULEG Thule              88.52   9   IAMs_20   IAMs_20   11 47 48.6
      comp=Z,775nm,19.0s
SHEM  Shemya Is, Ala     89.78 324   LR        LR        11 46 35.2
      comp=Z,2µm,21.4s,baz=126,slow=30
ALE   Alert              93.76   5   IAMs_20   IAMs_20   11 56 55.2
      comp=Z,1µm,19.0s
BILL  Bilibino           96.67 338  eP         P         11 15 17.4 +1.9
BILL                                ePPP       PPP       11 21 11.4
BILL                                 pmax      pmax
      comp=Z,2.0nm,1.1s
BORG  Borgarnes          96.86  26   LR        LR        11 58 01.4
      comp=Z,551nm,18.5s,baz=268,slow=35
KRVT  Keravat (AS076     98.88 264   LR        LR        11 52 39.9
      comp=Z,334nm,19.4s,baz=190,slow=31
PET   Petropavlovsk      99.05 322  eP         Pdif      11 15 28.8 +2.3
PET                                 e                    11 19 32.6
PET                                 e                    11 26 03.5
PET                                 eS         S         11 26 52.4 -4.5
PET                                 ePS        PS        11 28 27.4 +2.5
PET                                 ePPS       PPS       11 29 15.8
PETK  Petropavlovsk-     99.63 322   LR        LR        11 51 07.4
      comp=Z,2µm,21.6s,baz=95,slow=30
CTAO  Charters Tower    101.19 247   IAMs_20   IAMs_20   11 54 27.0
      comp=Z,672nm,20.0s
COI   Coimbra           103.33  51   IAMs_20   IAMs_20   11 54 11.5
      comp=Z,865nm,22.0s
MA2   Magadan           103.35 329   IAMs_20   IAMs_20   11 55 33.7
      comp=Z,744nm,20.0s
KBS   Kingsbay          104.49  10   IAMs_20   IAMs_20   12 04 32.8
      comp=Z,1µm,19.0s
SFS   San Fernando      105.03  55   IAMs_20   IAMs_20   12 00 23.2
      comp=Z,541nm,20.0s
KOWA  Kowa              105.94  77   IAMs_20   IAMs_20   12 00 48.4
      comp=Z,1µm,20.0s
PAB   San Pablo         106.46  51   IAMs_20   IAMs_20   11 56 37.5
      comp=Z,661nm,20.0s
GUMO  Guam              108.38 281   IAMs_20   IAMs_20   12 11 18.7
      comp=Z,1µm,19.0s
TIXI  Tiksi             108.59 344   IAMs_20   IAMs_20   12 04 12.6
      comp=Z,706nm,19.0s
WRA   Warramunga Arr    111.97 244   PKiKP     PKiKP     11 20 21.9  0.0
      comp=Z,1.0nm,1.1s,baz=284,slow=3.9,SNR=4.8
YAK   Yakutsk           112.69 334   IAMs_20   IAMs_20   11 59 43.8
      comp=Z,787nm,22.0s
MAJO  Matsushiro        114.24 306   IAMs_20   IAMs_20   11 58 22.8
      comp=Z,901nm,21.0s
GRA1  Grafenberg Arr    115.80  39   IAMs_20   IAMs_20   12 02 59.0
      comp=Z,1µm,22.0s
GRFO  Grafenberg        115.80  39   IAMs_20   IAMs_20   12 02 60.0
      comp=Z,1µm,22.0s
CLL   Collm             116.37  37  ePKIKP     PKiKP     11 20 36.0 +6.7
CLL                                  MLR       MLR
      comp=Z,500nm,20.8s
CLL   Collm             116.37  37  e(sPKPdf)            11 20 36.0
CLL                                 ePP        PP        11 21 40.0 +4.6
CLL                                 ePS        PS        11 31 17.0 -0.9
CLL                                 ex         x         11 32 07.0
CLL                                 ePPS       PPS       11 32 36.0
CLL                                 eSS        SS        11 37 36.0 -3.0
CLL                                 eSSS       SSS       11 42 00.0
CLL                                 eSSSS                11 45 42.0
CLL                                  Lm        MLR       12 08 00.0
      comp=N,300nm,21.4s
CLL                                  Lm        MLR       12 08 00.0
      comp=E,400nm,20.5s
CLL                                  Lm        MLR       12 08 00.0
      comp=Z,500nm,20.8s
VSL   Villasalto        117.01  50   IAMs_20   IAMs_20   12 01 58.6
      comp=Z,681nm,22.0s
PABE  Paberze           120.46  29   IAMs_20   IAMs_20   12 10 35.0
      comp=Z,737nm,21.0s
OJC   Ojcow             120.77  36   IAMs_20   IAMs_20   12 13 36.1
      comp=Z,732nm,18.0s
PSZ   Piszkesteto       121.79  38   IAMs_20   IAMs_20   12 06 25.3
      comp=Z,443nm,21.0s
KSAR  Wonju Array Be    122.20 309   PKIKP     PKiKP     11 20 40.7 -0.4
KSAR  Wonju Array Be    122.20 309             PKiKP     11 20 40.7 -0.4
CEL   Celeste           122.24  50   IAMs_20   IAMs_20   12 04 52.1
      comp=Z,421nm,20.0s
TIP   Timpagrande       122.65  49   IAMs_20   IAMs_20   12 07 28.6
      comp=Z,726nm,22.0s
MNK   Minsk             122.89  29  i PKIKP    PKPdf     11 20 40.5 -1.2
MNK                                 i                    11 22 17.5
MNK                                 i PPP      PPP       11 24 52.8
MNK                                 i                    11 27 52.3
MNK                                 i SS       SS        11 38 59.6 -2.9
MNK                                 i SSS      SSS       11 43 31.1
MNK                                  pmax      pmax
      comp=N,25nm,0.8s
MNK                                  pmax      pmax
      comp=E,6.0nm,1.1s
MNK                                  pmax      pmax
      comp=Z,13nm,0.6s
MNK                                  MLR       MLR
      comp=N,188nm,20.0s
MNK                                  MLR       MLR
      comp=Z,413nm,22.0s
MNK                                  MLR       MLR
      comp=E,34nm,19.0s
MNK   Minsk             122.89  29  i PKP      PKPdf     11 20 40.5 -1.2
      comp=E,6.0nm,1.1s
MNK                                 i PKP      PKPdf     11 20 40.5 -1.2
      comp=N,25nm,0.8s
MNK                                 i PKP      PKPdf     11 20 40.5 -1.2
      comp=Z,13nm,0.6s,baz=306
MNK                                 i PP       PP        11 22 17.6 -2.4
MNK                                 i PPP      PPP       11 24 52.8
MNK                                 i SKS      SKSdf     11 27 52.3 -0.9
MNK                                 i SKKS     SKKSdf    11 38 22.7 -3.2
MNK                                 i SS       SS        11 38 59.6 -2.9
MNK                                 i SSS      SSS       11 43 31.1
MNK                                 i LQ       LQ        12 06 40.5
MNK                                 i LR       LR        12 11 08.7
MNK                                 i LRM      MLR       12 12 24.1
      comp=N,188nm,20.4s
MNK                                 i LRM      MLR       12 12 57.3
      comp=Z,413nm,21.7s
MNK                                 i LRM      MLR       12 13 07.5
      comp=E,34nm,19.2s
KLMR  Klimovskoe        123.10  18  ePKIKP     PKPdf     11 20 39.6 -2.4
KLMR                                e                    11 22 18.7
KLMR                                 pmax      pmax
      comp=Z,8.0nm,1.3s
KLMR  Klimovskoe        123.10  18  ePKPdf     PKPdf     11 20 39.7 -2.2
KLMR                                 AMP                 11 20 50.3
      comp=Z,8.0nm,1.3s
KLMR                                ePP        PP        11 22 18.8 -2.2
INCN  Inchon            123.16 309   IAMs_20   IAMs_20   12 02 24.4
      comp=Z,582nm,20.0s
PDG   Podgorica         123.44  45   IAMs_20   IAMs_20   12 12 55.9
      comp=Z,531nm,20.0s
HIA   Hailar            123.47 324   IAMs_20   IAMs_20   12 04 31.7
      comp=Z,925nm,22.0s
AKASG Malin Array Be    125.75  32   PKP       PKPdf     11 20 46.8 -0.6
      comp=Z,0.4nm,0.3s,baz=300,slow=2.1,SNR=4.7
OBN   Obninsk           126.33  24  ePKIKP     PKiKP     11 20 48.8 +0.1
OBN                                 ePPP       PPP       11 25 24.6
OBN                                  pmax      pmax
      comp=Z,6.0nm,0.9s
MLR   Muntele Rosu      126.59  39   IAMs_20   IAMs_20   12 18 59.5
      comp=Z,672nm,18.0s
XLT   XiLinHaoTe        128.25 320  ePKP       PKPdf     11 20 49.3 -3.2
XLT                                  sPKP                11 21 02.9
XLT                                  PP        PP        11 23 03.0 +6.8
XLT                                  PKS       PKSdf     11 24 32.1 +3.0
XLT                                  AMB       AMB
      comp=Z,250nm,5.0s
XLT                                  LR        LR
      comp=Z,990nm,21.5s
XLT                                  LR        LR
      comp=Z,1µm,24.0s
BJT   Baijiatuau        129.95 315   IAMs_20   IAMs_20   12 12 14.4
      comp=Z,835nm,20.0s
VSR   Storozhevoye      130.22  26  ePKIKP     PKPdf     11 20 53.2 -2.6
VSR                                  pmax      pmax
      comp=Z,10.0nm,1.2s
TOLI2 Tolitoli          130.55 264   IAMs_20   IAMs_20   12 13 41.1
      comp=Z,641nm,20.0s
NJ2   Nanjing           130.81 305  ePKP       PKiKP     11 20 57.8 -0.7
ZAK   Zakamensk         131.26 334  ePKIKP     PKPdf     11 20 53.2 -4.8
ZAK                                 e                    11 23 17.6
ZAK                                  pmax      pmax
      comp=Z,6.0nm,1.7s
ZAK                                  pmax      pmax
      comp=Z,5.0nm,1.7s
SONM  Songino Array     131.56 329   PKP       PKPdf     11 20 56.5 -2.2
      comp=Z,2.2nm,0.9s,baz=48,slow=2.1,SNR=6.5
ARU   Arti              131.67  10  i PKIKP    PKPdf     11 20 56.2 -2.3
ARU                                  MLR       MLR
      comp=Z,566nm,20.0s
HNS   HongShan          132.10 313  ePKP       PKiKP     11 21 00.9  0.0
HNS                                 ePP        PP        11 23 25.8 +4.4
HNS                                  LR        LR
      comp=Z,290nm,16.1s
HNS                                  LR        LR
      comp=Z,750nm,15.9s
HNS                                  LR        LR
      comp=Z,720nm,18.4s
ZAA0  Zalesovo Array    134.06 349   PKPdf     PKPdf     11 21 01.4 -1.6
ZALV  Zalesovo Beam     134.06 349   PKP       PKPdf     11 21 01.9 -1.1
      comp=Z,1.6nm,0.7s,baz=329,slow=1.7,SNR=5.3
ZALV  Zalesovo Beam     134.06 349   PKIKP     PKPdf     11 21 01.2 -1.8
ZALV  Zalesovo Beam     134.06 349   PKPdf     PKPdf     11 21 01.1 -1.8
BRTR  Keskin Array B    134.38  42   PKP       PKiKP     11 21 05.3 -0.4
      comp=Z,0.8nm,0.5s,baz=186,slow=1.4,SNR=1.5
WHN   Wuhan             134.94 304  ⇓PKP       PKiKP     11 21 11.8 +4.9
WHN                                  LR        LR
      comp=Z,1µm,19.5s
WHN                                  LR        LR
      comp=Z,450nm,11.3s
WHN                                  LR        LR
      comp=Z,3µm,35.7s
BRVK  Borovoye          136.15   1   PKIKP     PKPdf     11 21 06.2 -0.8
BRVK                                 MLR       MLR
      comp=Z,800nm,20.0s
BRVK  Borovoye          136.15   1   PKPdf     PKPdf     11 21 06.2 -0.8
BVAR  Borovoye Array    136.19   1   PKP       PKPdf     11 21 06.9 -0.2
KIV   Kislovodsk        137.07  31  i PKIKP    PKiKP     11 21 10.9  0.0
KIV                                  pmax      pmax
      comp=Z,5.0nm,1.1s
KIV   Kislovodsk        137.07  31   IAMs_20   IAMs_20   12 24 07.8
      comp=Z,416nm,18.0s
AKTO  Aktyubinsk        137.25  13   PKhKP     PKPpre    11 21 05.3
      comp=Z,1.1nm,0.8s,baz=217,slow=5.1,SNR=2.2
HKPS  Hong Kong Po S    137.27 293   IAMs_20   IAMs_20   12 16 36.3
      comp=Z,681nm,21.0s
KBZ   Khabaz            137.34  31   PKP       PKiKP     11 21 10.9 -0.4
      comp=Z,3.3nm,1.1s,baz=301,slow=5.9,SNR=3.0
KBZ   Khabaz            137.34  31c iPKIKP     PKiKP     11 21 11.2 -0.1
KBZ                                 i                    11 21 14.3
KURK  Kurchatov         138.12 353c iPKIKP     PKiKP     11 21 11.7 -1.0
KURK                                i                    11 21 14.7
KURK                                 pmax      pmax
      comp=Z,16nm,2.5s
KURK  Kurchatov         138.12 353             PKPdf     11 21 09.3 -1.3
KURBB Kurchatov Arra    138.23 353   PKhKP     PKPpre    11 21 00.2
      comp=Z,0.2nm,0.3s,baz=356,slow=3.7,SNR=2.1
KURBB                                PKP       PKPdf     11 21 09.3 -1.5
      comp=Z,1.7nm,0.6s,baz=357,slow=3.2,SNR=10
ABKAR Akbulak array     138.78  12             PKPdf     11 21 09.8 -2.2
ABKAR Akbulak array     138.78  12             PKPpre    11 21 05.6
ENH   Enshi             138.96 306   IAMs_20   IAMs_20   12 14 21.6
      comp=Z,752nm,21.0s
SBUM  Sibu              139.21 263   IAMs_20   IAMs_20   12 21 39.6
      comp=Z,579nm,20.0s
LZH   Lanzhou           140.33 318  ePKP       PKiKP     11 21 20.9 +3.0
LZH                                  LR        LR
      comp=Z,790nm,16.3s
LZH                                  LR        LR
      comp=Z,740nm,17.4s
LZH                                  LR        LR
      comp=Z,1µm,16.3s
GTA   Gaotai            140.75 325   PKP       PKiKP     11 21 19.0 +0.4
GTA                                  SS        SS        11 42 44.9 +4.0
GTA                                  LR        LR
      comp=Z,630nm,18.5s
GTA                                  LR        LR
      comp=Z,770nm,18.5s
GTA                                  LR        LR
      comp=Z,1µm,18.5s
GNI   Garni             140.85  33   IAMs_20   IAMs_20   12 23 22.0
      comp=Z,339nm,21.0s
MKAR  Makanchi Array    141.37 348   PKhKP     PKPpre    11 21 09.5
      comp=Z,0.3nm,0.4s,baz=349,slow=1.5,SNR=1.6
MKAR                                 PKP       PKPdf     11 21 15.2 -1.6
      comp=Z,1.6nm,0.8s,baz=356,slow=1.7,SNR=8.4
MKAR  Makanchi Array    141.37 348   PKPdf     PKPdf     11 21 15.3 -1.5
MAKZ  Makanchi          141.42 349   PKIKP     PKPdf     11 21 14.1 -2.8
MAKZ                                 MLR       MLR
      comp=Z,600nm,21.0s
MAKZ  Makanchi          141.42 349             PKPdf     11 21 14.1 -2.8
MAKZ                                 IAMs_20   IAMs_20   12 20 43.8
      comp=Z,594nm,21.0s
QIZ   Qiongzhong        141.81 289   IAMs_20   IAMs_20   12 19 22.6
      comp=Z,517nm,19.0s
QIZ   Qiongzhong        141.81 289   PKP       PKiKP     11 21 20.7 -0.5
QIZ                                  PP        PP        11 24 22.6 -0.4
QIZ                                  SS        SS        11 42 56.0 +0.4
QIZ                                  LR        LR
      comp=Z,240nm,19.1s
QIZ                                  LR        LR
      comp=Z,370nm,17.5s
QIZ                                  LR        LR
      comp=Z,500nm,17.5s
WMQ   Urumqi            142.72 341  ePKP       PKiKP     11 21 21.7 -0.8
WMQ                                  LR        LR
      comp=Z,520nm,17.5s
WMQ                                  LR        LR
      comp=Z,630nm,20.1s
WMQ                                  LR        LR
      comp=Z,1µm,20.1s
CD2   Chengdu           143.12 311   PKP       PKPdf     11 21 19.3 -1.1
CD2                                  PP        PP        11 24 34.9 +4.7
CD2                                  AMB       AMB
      comp=Z,80nm,5.5s
CD2                                  LR        LR
      comp=Z,560nm,20.6s
CD2                                  LR        LR
      comp=Z,670nm,19.6s
LODK  Lodwar            143.43  97             PKPdf     11 21 20.1 -1.4
KMBO  Kilima Mbogo      144.18 105   PKP       PKPdf     11 21 22.5 -0.5
      comp=Z,6.9nm,0.9s,baz=219,slow=7.0,SNR=12
KMBO  Kilima Mbogo      144.18 105   PKPdf     PKPdf     11 21 22.7 -0.3
GOMU  GeErMu            145.82 326   PKPbc     PKPdf     11 21 24.6 -0.8
GOMU                                 sPKP                11 21 27.3
GOMU                                 SKS       SKSdf     11 28 27.1 -7.5
GOMU                                 AMB       AMB
      comp=Z,320nm,4.8s
GOMU                                 LR        LR
      comp=Z,830nm,19.2s
GOMU                                 LR        LR
      comp=Z,830nm,19.4s
GOMU                                 LR        LR
      comp=Z,1µm,19.0s
KK31  Karatay Array     146.11   2   PKP2      PKPab     11 21 26.4 -0.3
KK31  Karatay Array     146.11   2             PKPab     11 21 26.4 -0.3
KKAR  Karatay Array     146.11   2   PKP2      PKPdf     11 21 25.2  0.0
KKAR  Karatay Array     146.11   2   PKPdf     PKPdf     11 21 25.2  0.0
KKAR  Karatay Array     146.11   2   PKPdf     PKPdf     11 21 24.4 -0.8
KMI   Kunming           146.47 302  ⇑PKPbc     PKPab     11 21 29.1 +0.2
KMI                                  LR        LR
      comp=Z,210nm,20.7s
KMI                                  LR        LR
      comp=Z,950nm,20.7s
KMI                                  LR        LR
      comp=Z,1µm,22.4s
AAK   Ala-Archa         146.51 356   PKPbc     PKPbc     11 21 27.2 -0.2
      comp=Z,2.5nm,0.6s,baz=125,slow=2.2,SNR=14
AAK   Ala-Archa         146.51 356   PKP2      PKPbc     11 21 26.9 -0.6
AAK                                  MLR       MLR
      comp=Z,800nm,18.0s
AAK   Ala-Archa         146.51 356             PKPbc     11 21 26.9 -0.6
PZH   PanZhiHua         146.73 305   PKPbc     PKPdf     11 21 26.9  0.0
PZH                                  PKPab     pPKPdf    11 21 30.3 -0.6
PZH                                  PP        PP        11 24 51.0 -1.1
PZH                                  AMB       AMB
      comp=Z,140nm,6.4s
PZH                                  LR        LR
      comp=Z,210nm,24.1s
PZH                                  LR        LR
      comp=Z,390nm,23.3s
PZH                                  LR        LR
      comp=Z,520nm,20.0s
GEYT  Alibeck           148.78  21   PKPbc     PKPdf     11 21 30.5 +0.7
      comp=Z,1.3nm,0.4s,baz=56,slow=11,SNR=3.0
KSH   Kashi             149.48 354   PKPbc     PKPbc     11 21 34.2 -1.3
KSH                                  LR        LR
      comp=Z,620nm,20.6s
KSH                                  LR        LR
      comp=Z,720nm,19.2s
KSH                                  LR        LR
      comp=Z,1µm,23.9s
IPM   Ipoh              150.56 263             PKPbc     11 21 38.3 -0.4
KULM  Kulim             151.07 264             PKPbc     11 21 37.7 -2.2
RAYN  Ar Rayn           151.11  57   PKIKP     PKPdf     11 21 36.1 +2.2
RAYN  Ar Rayn           151.11  57             PKPdf     11 21 36.1 +2.2
RAYN  Ar Rayn           151.11  57   IAMs_20   IAMs_20   12 32 43.7
      comp=Z,607nm,20.0s
ATD   Arta Tunnel       151.49  83  eP         PKPbc     11 21 38.1 -2.8
CHTO  Chiang Mai        151.92 293   IAMs_20   IAMs_20   12 40 11.3
      comp=Z,452nm,20.0s
CMAR  Chiang Mai Arr    152.02 292   PKP       PKPdf     11 21 35.4  0.0
      comp=Z,1.3nm,0.3s,baz=349,slow=0.9,SNR=7.1
CMAR                                 PKPbc     PKiKP     11 21 42.2  0.0
      comp=Z,6.8nm,0.9s,baz=67,slow=0.7,SNR=21
CMAR  Chiang Mai Arr    152.02 292             PKPdf     11 21 35.6 +0.2
PSI   Prapat            152.25 259   PKPbc     PKPbc     11 21 42.0 -0.7
      comp=Z,3.5nm,0.5s,baz=99,slow=3.7,SNR=4.1
NIL   Nilore            155.53 357   PKIKP     PKPdf     11 21 41.3 +1.3
NIL   Nilore            155.53 357   PKPdf     PKPdf     11 21 41.3 +1.3
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*IDC **05** 11:09:16.9±2.5, 55°.54S×25°.18W, h0^{km}, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=88.7km s-min=35.2km az=177.0*

*NEIC **05** 11:09:19±3.0, 55°.48S±0°.10×25°.4W±0°.2, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=19.9km s-min=10.1km az=141.0*

ISC 05 11:09:18.9±0.8**, 55°.5S**±0°.1×**25°.4W**±0°.1**, h10^{km}, n23, σ0^{s}.83**/21**, mb4.4**/9**, South Sandwich Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
HOPE  Hope Point          6.49 276   Pn        Pn        11 10 54.6 +0.2
ESPZ  Base Esperanza     17.71 231             P         11 13 27.2 +1.1
BELA  Belgrano 2         22.70 185   P         P         11 14 19.3 -0.9
BELA                                 IAmb      IAmb      11 14 20.1
      comp=Z,12nm,1.2s
DSPA  Despedida          24.49 256   P         P         11 14 36.9 -1.1
GO10  Punta Arenas       26.33 256   P         P         11 14 53.5 -1.1
QSPA  South Pole Qui     34.74 180   P         P         11 16 08.5 -0.4
CPUP  Villa Florida      37.22 308   P         P         11 16 30.2 -0.1
      comp=Z,2.9nm,0.9s,baz=139,slow=7.6,SNR=3.8
      comp=Z,2.9nm,0.9s
CPUP  Villa Florida      37.22 308   IAmb      IAmb      11 16 30.6
      comp=Z,3.3nm,1.0s
MT02  Curacav            38.57 286   P         P         11 16 41.1 -0.5
MT02                                 IAmb      IAmb      11 16 42.3
      comp=Z,4.1nm,0.7s
GO02  Mina Guanaco       44.14 295   P         P         11 17 28.6 +0.8
BOSA  Boshof             44.88  75   P         P         11 17 34.2 +0.7
BOSA                                 IAmb      IAmb      11 17 44.7
      comp=Z,8.3nm,1.4s
LVC   Limon Verde        45.90 298   P         P         11 17 42.9 +1.0
      comp=Z,3.7nm,0.6s,baz=249,slow=5.5,SNR=3.9
      comp=Z,3.7nm,0.6s
LVC   Limon Verde        45.90 298   IAmb      IAmb      11 17 44.6
      comp=Z,4.4nm,0.8s
VNDA  Vanda              47.16 182   P         P         11 17 51.9 +1.2
PB01  IPOC Station P     47.50 298   P         P         11 17 54.9 +0.8
PB01                                 IAmb      IAmb      11 17 55.6
      comp=Z,2.6nm,0.7s
PB11  IPOC Station P     48.67 299   P         P         11 18 04.0 +0.7
PB11                                 IAmb      IAmb      11 18 18.4
      comp=Z,4.3nm,1.0s
LPAZ  La Paz             50.89 303   P         P         11 18 21.4 +0.7
      comp=Z,2.7nm,0.7s,baz=144,slow=5.1,SNR=12
      comp=Z,2.7nm,0.7s
LPAZ  La Paz             50.89 303   P         P         11 18 21.4 +0.6
LPAZ                                 IAmb      IAmb      11 18 22.1
      comp=Z,3.6nm,0.8s
TORD  Torodi Ar. Bea     72.11  28   P         P         11 20 42.8 -0.5
      comp=Z,2.6nm,0.7s,baz=202,slow=6.3,SNR=15
      comp=Z,2.6nm,0.7s
YKA   Yellowknife Ar    136.43 318   PKP       PKPdf     11 28 38.3 -1.0
      comp=Z,0.1nm,0.5s,baz=115,slow=2.9,SNR=4.5
INK   Inuvik            146.01 321   PKPbc     PKPbc     11 28 57.0 -0.2
      comp=Z,2.4nm,0.8s,baz=88,slow=4.4,SNR=7.7
INK   Inuvik            146.01 321             PKPbc     11 28 56.8 -0.4
ILAR  Eielson Array     150.49 312   PKPbc     PKPbc     11 29 08.5 -0.7
      comp=Z,1.4nm,0.9s,baz=112,slow=1.7,SNR=12
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*DJA **05** 12:09:47.5±0.4, 2°N±3°×12°7E±°, h43^{km}±4^{km}, M4.5/19, mb4.8/19, mB5.0/4, MLv4.5/13, Mw(mB)4.3/4*

*IDC **05** 12:09:48.3±1.8, 2°.08N×127°.01E, h44^{km}±17^{km}, mb4.3/21, mbtmp4.5/23, ML4.0/2, MS4.2/3, Error ellipse: s-maj=18.8km s-min=9.6km az=71.0*

*NEIC **05** 12:09:49.3±2.2, 2°.08N±0°.06×127°.08E±0°.07, h52^{km}±6^{km}, mb4.6/44, Error ellipse: s-maj=11.8km s-min=7.1km az=56.0*

ISC 05 12:09:50.1±0.3**, 2°.10N**±0°.04×**127°.14E**±0°.06**, h63^{km}, n178, σ1^{s}.25**/170**, mb4.6**/52**, 1D, Northern Molucca Sea**

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Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                     Op        ISC       h  m  s   ISC
TNTI  Ternate             1.34 170   Pn        Pn        12 10 10.7 -2.1
TNTI  Ternate             1.34 170   P         Pn        12 10 10.8 -1.9
TNTI                                 S         Sn        12 10 28.8 -0.9
TNTI  Ternate             1.34 170   P         Pn        12 10 11.1 -1.6
SGSI  Sangihe             2.25 314   P         Pn        12 10 21.3 -3.7
LBMI  Labuha              2.75 172   P         Pn        12 10 30.9 -0.9
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KMSI	Cibinong	3.50	244	P	Pn	12 10 42.2	+0.1
SANI	Sanana	4.28	196	P	Pn	12 10 51.8	-1.0
SANI	Sanana	4.28	196	P	Pn	12 10 52.1	-0.7
GTOI	Gorontalo	4.38	251	P	Pn	12 10 54.2	+0.1
SWI	Sorong	5.06	126	P	Pn	12 11 04.5	+1.0
SIJI	Sorong	5.07	126	P	Pn	12 11 04.6	+0.9
	6.4nm,0.3s,baz=169,slow=19,SNR=18						
SIJI				S	Sn	12 12 02.1	+1.1
	6.0nm,0.4s,baz=0.0,slow=20,SNR=2.8						
SIJI				LR	LR	12 13 23.3	
	comp=Z,2µm,19.3s,baz=297,slow=42						
	11nm,0.3s						
KCP	Kidapawan	5.29	337	⇓*i*P	Pn	12 11 04.5	-2.1
KCP				*i*S	Sn	12 12 09.6	+3.3
LUWI	Luwuk	5.37	234	Pn	Pn	12 11 06.6	-1.1
LUWI	Luwuk	5.37	234	P	Pn	12 11 13.1	+5.4
LUWI	Luwuk	5.37	234	P	Pn	12 11 12.8	+5.1
MRSI	Marisa	5.44	253	P	Pn	12 11 09.5	+0.8
	0.4nm1µm98nm,0.5s						
MSAI	Masohi	5.70	162	P	Pn	12 11 15.3	+3.1
AAI	Ambon	5.85	170	P	Pn	12 11 16.3	+2.1
	0.3nm997nm57nm,0.5s						
APSI	Ampana	6.25	241	P	Pn	12 11 29.8	+10
TOLI2	Tolitoli	6.43	261	Pn	Pn	12 11 20.9	-1.4
MPSI	Mapaga	7.45	256	P	Pn	12 11 37.5	+1.3
	0.1nm28nm,0.8s						
BBSI	Bau Bau	8.81	211	P	Pn	12 11 55.7	+0.8
	4.6nm,0.8s						
TTSI	Tana Toraja	8.93	235	P	Pn	12 11 55.8	-0.6
	32nm,0.7s						
MYLDM	Lahad Datu	9.15	290	Pn	Pn	12 11 59.3	-0.1
SPSI	Sidrap Palu	9.52	231	P	Pn	12 12 03.4	-1.1
	21nm,1.0s						
BAKI	Biak	9.54	110	P	Pn	12 12 12.4	+7.5
BNSI	Bone	9.54	227	P	Pn	12 12 04.6	-0.3
	28nm,0.8s						
BKSI	Bulukumba	10.17	224	P	Pn	12 12 12.8	-0.7
	745nm29nm,0.6s						
KAPI	Kappang	10.22	226	P	Pn	12 12 12.4	-1.7
	0.9nm,0.3s,baz=238,slow=7.3,SNR=4.1						
	7.0nm,0.6s						
KAPI	Kappang	10.22	226		Pn	12 12 14.0	-0.1
PLAI	Plampang	14.32	221	P	P	12 13 12.7	-2.3
PLAI	Plampang	14.32	221	P	P	12 13 13.2	-1.8
SBUM	Sibu	14.91	272	Pn	Pn	12 13 17.6	+0.2
MTN	Manton Dam	15.37	165	P	Pn	12 13 21.3	-1.9
	baz=15,SNR=23						
MTN	Manton Dam	15.37	165	P	Pn	12 13 24.3	+1.1
MTN				IAmb	IAmb	12 13 31.7	
	comp=Z,20nm,0.5s						
KDU	Kakadu	15.62	160	P	Pn	12 13 25.4	-1.0
	baz=16,SNR=6.4						
SRBI	Singaraja	15.62	229	P	P	12 13 31.5	+2.0
KMMI	Kalianget	15.98	235	P	P	12 13 33.9	+0.3
	comp=Z,97nm,1.2s						
ABJI	Asem Bagus	16.20	232	P	P	12 13 39.3	+3.4
JAGI	Jajag, Banyuwa	16.67	231	P	P	12 13 42.8	+1.6
JAGI	Jajag, Banyuwa	16.67	231	P	P	12 13 44.0	+2.8
JAGI	Jajag, Banyuwa	16.67	231	P	P	12 13 44.2	+3.0
BLJI	Banyuglugur	16.68	234	P	P	12 13 41.3	0.0
	comp=Z,73nm,0.9s						
KNRA	Kununurra	17.74	175	P	Pn	12 13 52.2	-0.6
	baz=18,SNR=38						
KNRA	Kununurra	17.74	175	P	Pn	12 13 51.8	-1.1
KNRA				IAmb	IAmb	12 13 54.6	
	comp=Z,39nm,0.7s						
KNRA	Kununurra	17.74	175	P	P	12 13 53.7	+0.8
KNRA	Kununurra	17.74	175	P	P	12 13 52.9	0.0
PWJI	Pagerwojo	18.31	237	P	Pn	12 14 00.1	+0.3
	comp=Z,65nm,0.9s						
FITZ	Fitzroy Crossi	20.13	184	P	P	12 14 18.9	-0.2
	baz=6.7,slow=13						
KPJI	Karang Pucung	20.44	243	P	P	12 14 20.9	-1.7
	comp=Z,40nm,0.9s						
TPUB	Ta-pu	22.00	344	P	P	12 14 36.0	-3.2
TPUB	Ta-pu	22.00	344	P	P	12 14 39.7	+0.5
	comp=Z,22nm,0.8s						
SSLB	Suanglung	22.38	345	P	P	12 14 42.3	-1.0
SSLB				IAmb	IAmb	12 15 00.9	
	comp=Z,19nm,0.8s						
COEN	Coen	22.52	136	P	P	12 14 42.8	-2.1
WB0	Warramunga Arr	22.87	162	P	P	12 14 47.4	-1.1
WB0				IAmb	IAmb	12 14 49.5	
	comp=Z,19nm,0.7s						
PMG	Port Moresby	22.99	120	LR	LR	12 25 11.3	
	comp=Z,436nm,18.4s,baz=324,slow=40						
WRAB	Tennant Creek	23.01	162	P	P	12 14 48.9	-1.0
WRAB				IAmb	IAmb	12 14 55.8	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	23.01	162	P	P	12 14 49.3	-0.7
WRAB	Tennant Creek	23.01	162	P	P	12 14 49.2	-0.7
WRA	Warramunga Arr	23.02	162	P	P	12 14 48.9	-1.1
	comp=Z,10nm,0.4s,baz=342,slow=11,SNR=101						
WRA				PcP	PcP	12 18 38.5	+0.6
	comp=Z,1.3nm,0.6s,baz=327,slow=2.2,SNR=5.8						
	comp=Z,10nm,0.4s						
WRA	Warramunga Arr	23.02	162	P	P	12 14 47.9	-2.1
WB2	Warramunga Arr	23.02	162	P	P	12 14 49.1	-0.9
WB2				IAmb	IAmb	12 14 51.1	
	comp=Z,20nm,0.8s						
WR0	Warramunga Arr	23.10	162	P	P	12 14 49.9	-0.8
YHNB	Yeheng	23.12	347	P	P	12 14 49.1	-1.9
KASI	Kota Agung	23.85	251	P	P	12 14 59.5	+1.7
	comp=Z,76nm,0.9s						
MDSI	Maura Dua	23.86	254	P	P	12 14 56.9	-1.0
	comp=Z,6.0nm,1.1s						
MBWA	Marble Bar	24.23	197	P	P	12 15 00.7	-0.4
MBWA				IAmb	IAmb	12 15 02.6	
	comp=Z,16nm,0.9s						
MBWA	Marble Bar	24.23	197	P	P	12 15 01.5	+0.3
MBWA	Marble Bar	24.23	197	P	P	12 15 01.0	-0.2
PSA00	Pilbara Seismi	24.59	196	P	P	12 15 04.6	+0.2
PSA00				IAmb	IAmb	12 15 06.1	
	comp=Z,32nm,1.2s						
PSA00	Pilbara Seismi	24.59	196	IAmb	IAmb	12 15 05.3	
	comp=Z,20nm,1.4s						
PSA00	Pilbara Seismi	24.59	196	P	P	12 15 05.1	+0.7
PSA00	Pilbara Seismi	24.59	196	P	P	12 15 04.9	+0.5
QIS	Mount Isa	25.62	152	P	P	12 15 13.2	-0.7
	baz=26,SNR=28						
QIS	Mount Isa	25.62	152	P	P	12 15 14.2	+0.3
ASAR	Alice Springs	26.45	166	P	P	12 15 21.1	-0.3
	comp=Z,4.5nm,0.5s,baz=350,slow=7.6,SNR=153						
ASAR				PcP	PcP	12 18 46.0	+0.6
	comp=Z,2.7nm,0.6s,baz=343,slow=2.2,SNR=12						
ASAR				ScP	ScP	12 22 23.1	+3.1
	comp=Z,0.7nm,0.7s,baz=346,slow=3.4,SNR=5.8						
	comp=Z,4.5nm,0.5s						
WRKA	Warakurna	27.00	178	P	P	12 15 26.0	-0.3
	baz=27,SNR=37						
WRKA	Warakurna	27.00	178	P	P	12 15 26.1	-0.2
WRKA	Warakurna	27.00	178	P	P	12 15 27.7	+1.4
GIRL	Giralia	27.63	206	P	P	12 15 32.9	+1.0
	baz=28,SNR=5.1						
MEEK	Meekatharra	29.73	196	P	P	12 15 50.2	-0.4
	baz=30,SNR=7.3						
MEEK	Meekatharra	29.73	196	P	P	12 15 50.8	+0.2
MEEK	Meekatharra	29.73	196	P	P	12 15 50.5	-0.1
NJ2	Nanjing	30.80	346	*e*P	P	12 16 01.9	+2.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OOD	Oodnadatta	30.84	165	P	P	12 15 59.7	-0.6
JNU	Nakatsue	31.06	6	P	P	12 16 03.4	+1.1
	comp=Z,9.6nm,0.8s,baz=189,slow=13,SNR=4.3						
	comp=Z,9.6nm,0.8s						
CMAR	Chiang Mai Arr	32.06	302	P	P	12 16 09.6	-1.7
	comp=Z,2.2nm,0.7s,baz=121,slow=7.3,SNR=14						
	comp=Z,2.2nm,0.7s						
CMAR	Chiang Mai Arr	32.06	302	P	P	12 16 09.8	-1.5
CHTO	Chiang Mai	32.23	303	P	P	12 16 11.0	-1.7
CHTO				IAmb	IAmb	12 16 11.8	
	comp=Z,5.8nm,0.7s						
INKA	Innaminka	32.43	157	P	P	12 16 14.6	+0.3
FORT	Forrest	32.71	179	P	P	12 16 16.2	-0.5
MORW	Morawa	32.77	198	P	P	12 16 17.2	-0.1
	baz=33,SNR=8.2						
MORW	Morawa	32.77	198	P	P	12 16 17.6	+0.3
MULG	Mulgathing	32.87	169	P	P	12 16 17.9	-0.2
BLDU	Ballidu	34.02	196	P	P	12 16 28.2	0.0
	baz=34,SNR=4.8						
BLDU	Ballidu	34.02	196	P	P	12 16 28.3	+0.2
BLDU	Ballidu	34.02	196	P	P	12 16 27.6	-0.5
LCRK	Leigh Creek	34.05	163	P	P	12 16 29.0	+0.6
PZH	PanZhiHua	34.40	317	P	P	12 16 30.2	-1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLBR	Kellerberrin	34.67	194	P	P	12 16 34.0	+0.3
	baz=35,SNR=7.0						
KLBR	Kellerberrin	34.67	194	P	P	12 16 33.9	+0.1
KLBR	Kellerberrin	34.67	194	P	P	12 16 34.1	+0.3
KSAR	Wonju Array Be	35.18	1	P	P	12 16 38.3	+0.3
KSRS	Korea Array	35.19	1	P	P	12 16 39.2	+1.1
	comp=Z,8.7nm,1.1s,baz=180,slow=10,SNR=18						
	comp=Z,8.7nm,1.1s						
MUN	Mundaring	35.45	196	P	P	12 16 41.2	+0.8
	baz=36,SNR=6.1						
MUN	Mundaring	35.45	196	P	P	12 16 41.4	+1.0
BBOO	Buckleboo	35.73	167	P	P	12 16 42.6	-0.3
	baz=36,SNR=20						
BBOO	Buckleboo	35.73	167	P	P	12 16 43.0	+0.1
MJAR	Matsushiro Arr	35.77	15	P	P	12 16 41.7	-1.5
	comp=Z,2.1nm,0.8s,baz=176,slow=9.4,SNR=5.5						
	comp=Z,2.1nm,0.8s						
MJAR	Matsushiro Arr	35.77	15	IAmb	IAmb	12 16 47.2	
	comp=Z,6.0nm,1.2s						
NWAO	Narrogin (SRO)	36.08	194	P	P	12 16 46.5	+0.7
STKA	Stephens Creek	36.47	159	P	P	12 16 49.1	-0.1
	comp=Z,6.4nm,0.5s,baz=334,slow=9.3,SNR=18						
	comp=Z,6.4nm,0.5s						
STKA	Stephens Creek	36.47	159	P	P	12 16 49.3	+0.1
	baz=36,SNR=9.6						
STKA	Stephens Creek	36.47	159	P	P	12 16 49.0	-0.1
STKA	Stephens Creek	36.47	159	P	P	12 16 49.5	+0.3
HTT	Hallett	37.05	164	P	P	12 16 54.4	+0.2
	baz=37,SNR=3.3						
HTT	Hallett	37.05	164	P	P	12 16 54.8	+0.6
RKGY	Rocky Gully	37.74	194	P	P	12 17 01.3	+1.4
	baz=38,SNR=6.5						
RKGY	Rocky Gully	37.74	194	P	P	12 17 01.2	+1.3
CMSA	Cobar Meteorol	37.81	154	P	P	12 17 00.3	-0.3
	baz=38,SNR=18						
TWOA	Tennyson Woods	38.47	165	P	P	12 17 06.4	+0.4
BJI	Beijing	39.05	347	P	P	12 17 10.6	-0.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARMA	Armidale	39.89	146	P	P	12 17 17.4	-0.7
	baz=40,SNR=6.9						
ARMA	Armidale	39.89	146	P	P	12 17 19.9	+1.7
ARMA				IAmb	IAmb	12 17 21.2	
	comp=Z,6.2nm,0.7s						
LZH	Lanzhou	40.11	330	*e*P	P	12 17 14.2	-5.7
LZH				sP	pP	12 17 34.4	-0.6
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
SHL	Shillong	41.18	308	P	P	12 17 27.5	-1.4
SHL				IAmb	IAmb	12 17 28.9	
	comp=Z,7.7nm,0.5s						
USRK	Ussuriysk Ar.	42.14	5	P	P	12 17 37.1	+0.9
	comp=Z,14nm,1.0s,baz=190,slow=7.3,SNR=11						
	comp=Z,14nm,1.0s						
MDJ	Mudanjiang	42.39	3	P	P	12 17 38.9	+0.6
XLT	XiLinHaoTe	42.77	348	*e*P	P	12 17 41.8	+0.3
XLT				pmax	pmax		
	comp=Z,16nm,1.3s						
GTA	Gaotai	44.70	330	*e*P	P	12 17 57.6	+0.5
GTA				pP	pP	12 18 09.7	-2.7
GTA				sP	pwP	12 18 14.6	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TAPN	Taplejung	45.31	307	*e*P	P	12 18 00.9	-1.5
ODAN	Odare	45.35	307	*e*P	P	12 18 01.3	-1.4
	comp=Z,8.4nm,0.5s						
RAMN	Ramite	46.03	306	*e*P	P	12 18 06.7	-1.3
	comp=Z,7.6nm,0.5s						
JIRN	Jiri	46.66	307	*e*P	P	12 18 11.7	-1.4
GUN	Gumba	47.02	307	*e*P	P	12 18 14.5	-1.4
ULN	Ulaanbaatar	48.78	342	P	P	12 18 28.9	-0.1
KOLN	Koldanda	48.79	306	*e*P	P	12 18 28.2	-1.2
	comp=Z,10nm,0.5s						
DANN	Dangsing	48.90	307	*e*P	P	12 18 28.4	-1.9
	comp=Z,13nm,0.6s						
SONM	Songino Array	48.96	342	P	P	12 18 30.1	-0.2
	comp=Z,3.2nm,0.7s,baz=159,slow=9.6,SNR=14						
	comp=Z,3.2nm,0.7s						
SONM	Songino Array	48.96	342	P	P	12 18 29.8	-0.5
SONM				IAmb	IAmb	12 18 36.8	
	comp=Z,4.5nm,0.9s						
PYUN	Piuthan	49.42	306	*e*P	P	12 18 33.0	-1.2
WMQ	Urumqi	54.29	326	*e*P	P	12 19 09.2	-0.8
WMQ				sP	pwP	12 19 29.8	+0.9
WMQ				PP	PP	12 21 16.1	+3.6
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
PETK	Petropavlovsk-	56.78	21	P	P	12 19 27.9	+0.2
	comp=Z,2.5nm,0.9s,baz=193,slow=2.7,SNR=1.6						
	comp=Z,2.5nm,0.9s						
MK31	Makanchi Array	59.12	326	P	P	12 19 43.6	-0.5
MKAR	Makanchi Array	59.12	326	P	P	12 19 43.3	-0.9
	comp=Z,2.8nm,0.4s,baz=118,slow=7.6,SNR=23						
	comp=Z,2.8nm,0.4s						
ZALV	Zalesovo Beam	62.22	333	P	P	12 20 04.7	-0.4
	comp=Z,1.0nm,0.4s,baz=108,slow=8.6,SNR=5.1						
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	63.32	328	P	P	12 20 12.4	-0.1
	comp=Z,2.7nm,0.5s,baz=129,slow=5.9,SNR=27						
	comp=Z,2.7nm,0.5s						
KURK	Kurchatov	63.33	328	P	P	12 20 12.4	-0.1
KURK				IAmb	IAmb	12 20 30.4	
	comp=Z,22nm,0.9s						
KKAR	Karatay Array	64.70	317	P	P	12 20 21.8	0.0
BVAR	Borovoye Array	68.90	327	P	P	12 20 49.2	+0.9
	comp=Z,3.9nm,0.9s						
	comp=Z,3.9nm,0.9s						
BRVK	Borovoye	68.97	327	P	P	12 20 48.6	0.0
BRVK				IAmb	IAmb	12 20 51.3	
	comp=Z,9.5nm,1.0s						
TIXI	Tiksi	69.45	1	P	P	12 20 50.5	-0.7
NRIK	Noril'sk	72.10	346	P	P	12 21 08.3	+0.9
	comp=Z,4.0nm,0.8s,baz=123,slow=6.8,SNR=5.4						
	comp=Z,4.0nm,0.8s						
NRIK	Noril'sk	72.10	346	IAmb	IAmb	12 21 23.8	
	comp=Z,8.8nm,1.2s						
ABKAR	Akbulak array	73.66	321	IAmb	IAmb	12 21 18.7	
	comp=Z,4.9nm,0.8s						
AKTO	Aktyubinsk	75.18	322	P	P	12 21 25.5	-0.3
	comp=Z,6.3nm,0.8s,baz=98,slow=6.7,SNR=15						
	comp=Z,6.3nm,0.8s						
ARU	Arti	76.52	328	P	P	12 21 33.5	+0.2
	comp=Z,1.2nm,0.3s,baz=116,slow=5.5,SNR=5.2						
	comp=Z,1.2nm,0.3s						
ARU	Arti	76.52	328	P	P	12 21 32.3	-1.0
ARU				IAmb	IAmb	12 21 36.7	
	comp=Z,4.6nm,0.7s						
RAYN	Ar Rayn	81.50	293	P	P	12 22 00.3	-1.1
RAYN				IAmb	IAmb	12 22 02.3	
	comp=Z,5.4nm,0.8s						
VNDA	Vanda	81.77	173	P	P	12 22 01.6	0.0
	comp=Z,2.0nm,0.6s,baz=310,slow=5.9,SNR=14						
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	81.77	173	P	P	12 22 01.0	-0.6
MAW	Mawson	82.38	200	P	P	12 22 05.3	+0.4
	comp=Z,4.3nm,0.5s,baz=82,slow=14,SNR=15						
	comp=Z,4.3nm,0.5s						
MAW	Mawson	82.38	200	P	P	12 22 05.7	+0.8
	baz=82,SNR=7.1						
MAW	Mawson	82.38	200	P	P	12 22 05.6	+0.8
L19K	White Mountain	82.55	28	P	P	12 22 07.5	+1.5
L19K				IAmb	IAmb	12 22 09.3	
	comp=Z,8.8nm,1.2s						
J20K	Nowinta River	83.20	26	P	P	12 22 09.8	+0.5
H21K	Melozitna Rive	83.99	24	IAmb	IAmb	12 22 17.1	
	comp=Z,5.3nm,1.1s						
CAST	Castle Rocks	84.00	27	IAmb	IAmb	12 22 31.5	
	comp=Z,4.3nm,0.8s						
KBZ	Khabaz	84.39	314	P	P	12 22 16.4	+0.7
	comp=Z,2.6nm,1.0s,baz=135,slow=4.3,SNR=3.2						
	comp=Z,2.6nm,1.0s						
COLD	Coldfoot	85.22	23	IAmb	IAmb	12 22 24.4	
	comp=Z,5.9nm,1.2s						
TOLK	Toolik Lake Re	85.60	21	IAmb	IAmb	12 22 40.9	
	comp=Z,6.4nm,1.2s						
KLMR	Klimovskoe	87.02	331	*e*P	P	12 22 25.6	-2.8
KLMR				AMP		12 22 35.2	
	comp=Z,11nm,1.3s						
ARCES	ARCESS Array B	92.11	340	P	P	12 22 51.4	-0.8
	comp=Z,3.6nm,1.0s,baz=72,slow=4.0,SNR=5.1						
	comp=Z,3.6nm,1.0s						
HFS	Hagfors	99.64	332	LR	LR	13 11 07.6	
	comp=Z,156nm,18.6s,baz=113,slow=37						
YKA	Yellowknife Ar	100.80	25	P	Pdif	12 23 31.3	-0.4
	comp=Z,0.3nm,0.8s,baz=302,slow=5.0,SNR=3.5						
TXAR	Lajitas Array	122.25	53	PKP	PKiKP	12 28 39.4	+0.4
	comp=Z,0.4nm,0.7s,baz=249,slow=1.9,SNR=6.1						
TORD	Torodi Ar. Bea	123.80	287	PKP	PKPdf	12 28 42.1	+0.1
	comp=Z,1.2nm,0.8s,baz=59,slow=2.4,SNR=6.3						
PLCA	Paso Flores	138.35	160	PKP	PKPdf	12 29 09.7	+0.8
	comp=Z,1.7nm,0.8s,baz=236,slow=1.6,SNR=5.1						

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*NEIC **05** 12:18:44.9±2.8, 4°.18S±0°.09×142°.76E±0°.09, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=16.3km s-min=14.5km az=128.0*

*IDC **05** 12:18:54.5±0.8, 4°.37S×142°.76E, h99^{km}±5^{km}, mb3.9/12, mbtmp4.3/14, MS4.0/3, Error ellipse: s-maj=24.0km s-min=13.5km az=112.0*

*DJA **05** 12:18:56.6±0.4, 5°S±4°×14°3E±°, h74^{km}±6^{km}, M4.5/17, mb4.5/17, MLv4.5/4*

ISC 05 12:18:55.0±0.5, **4°.39S**±0°.07×**142°.74E**±0°.08, **h100**^{km}**, n69,** σ**1^{s}.77**/65, **mb4.2**/15, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPI	Merauke	4.68	210	P	Pn	12 20 01.5	-1.9
SMPI	Sarmi	4.68	301	P	Pn	12 20 05.3	+1.8
MANU	Manus Island	5.17	63	Pn	Pn	12 20 00.5	-10
PMG	Port Moresby	6.63	139	P	Pn	12 20 33.1	+3.1
	12nm,0.6s,baz=344,slow=20,SNR=1.9						
PMG	Port Moresby	6.63	139	Pn	Pn	12 20 25.7	-4.3
RABL	Rabaul	9.40	89	Pn	Pn	12 21 01.0	-6.6
SAUI	Saumlaki	11.92	252	P	Pn	12 21 40.2	-1.6
	201nm,1.1s						
KDU	Kakadu	13.07	230	P	Pn	12 21 55.5	-1.5
MTN	Manton Dam	14.21	233		Pn	12 22 09.1	-2.8
MTN	Manton Dam	14.21	233	P	Pn	12 22 10.4	-1.4
CTA	Charters Tower	15.97	168	LR	LR	12 27 47.2	
	comp=Z,333nm,21.5s,baz=323,slow=33						
QIS	Mount Isa	16.36	190	P	P	12 22 41.7	+1.8
WB0	Warramunga Arr	17.31	207	P	P	12 22 47.9	-2.7
WB0				IAmb	IAmb	12 23 16.8	
	comp=Z,24nm,1.0s						
WR0	Warramunga Arr	17.42	207	P	P	12 22 50.6	-1.0
WR0				IAmb	IAmb	12 22 56.0	
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	17.48	207	P	P	12 22 50.9	-1.4
WRAB				IAmb	IAmb	12 22 57.4	
	comp=Z,48nm,1.4s						
WRAB	Tennant Creek	17.48	207	P	P	12 22 51.9	-0.4
WB2	Warramunga Arr	17.49	207	P	P	12 22 50.9	-1.5
WB2				IAmb	IAmb	12 22 57.2	
	comp=Z,18nm,0.6s						
WRA	Warramunga Arr	17.49	207	P	P	12 22 51.5	-0.9
	comp=Z,7.3nm,0.5s,baz=26,slow=12,SNR=54						
WRA	Warramunga Arr	17.49	207	P	P	12 22 50.4	-2.1
KNRA	Kununurra	17.74	230	P	P	12 22 54.0	-1.2
KNRA				IAmb	IAmb	12 22 57.8	
	comp=Z,32nm,0.7s						
BATI	Baumata	19.78	252	P	Pn	12 23 19.1	-0.9
	comp=Z,52nm,0.6s,baz=211,slow=1.6,SNR=11						
BATI	Baumata	19.78	252	P	Pn	12 23 19.8	-0.2
	comp=Z,54nm,0.7s						
BBSI	Bau Bau	20.13	266	P	Pn	12 23 25.3	+1.3
GTOI	Gorontalo	20.34	284	P	Pn	12 23 30.5	+4.0
	comp=Z,19nm,1.0s						
AS31	Alice Springs	20.97	203	P	P	12 23 30.4	+0.1
ASAR	Alice Springs	20.98	203	P	P	12 23 29.9	-0.5
	comp=Z,2.0nm,0.5s,baz=32,slow=11,SNR=55						
ASAR				LR	LR	12 31 05.7	
	comp=Z,301nm,19.0s,baz=6.5,slow=35						
	comp=Z,2.0nm,0.5s						
MRSI	Marisa	21.34	283	P	P	12 23 39.8	+5.5
	comp=Z,43nm,0.7s						
FITZ	Fitzroy Crossi	21.58	230	P	P	12 23 35.4	-1.4
	comp=Z,7.7nm,0.8s,baz=67,slow=13						
	comp=Z,7.7nm,0.8s						
BSSI	Bau Bau, Buton	22.23	265	P	P	12 23 46.5	+2.8
	comp=Z,27nm,0.9s						
BKSI	Bulukumba	22.56	267	P	P	12 23 51.4	+4.2
	comp=Z,39nm,0.7s						
RMQ	Roma	22.71	166	P	P	12 23 53.0	+4.4
KAPI	Kappang	22.92	268	P	P	12 23 50.2	-0.6
	comp=Z,4.3nm,0.7s,baz=131,slow=9.3,SNR=2.5						
	comp=Z,4.3nm,0.7s						
KAPI	Kappang	22.92	268	IAmb	IAmb	12 23 57.2	
	comp=Z,9.9nm,0.7s						
INKA	Innaminka	23.30	184	P	P	12 23 55.3	+1.1
WBSI	Waikabubak, Su	23.75	256	P	P	12 23 56.6	-1.9
OOD	Oodnadatta	24.22	195	P	P	12 24 02.8	+0.2
WRKA	Warakurna	24.78	213	P	P	12 24 06.3	-1.5
STKA	Stephens Creek	27.36	182	P	P	12 24 31.5	+0.6
	comp=Z,3.5nm,0.7s,baz=350,slow=8.8,SNR=7.3						
	comp=Z,3.5nm,0.7s						
STKA	Stephens Creek	27.36	182	IAmb	IAmb	12 24 32.4	
	comp=Z,1.0nm,0.8s						
MBWA	Marble Bar	27.88	231	P	P	12 24 35.1	-0.5
PSA00	Pilbara Seismi	28.02	230	P	P	12 24 37.7	+0.8
PSA00				IAmb	IAmb	12 24 47.9	
	comp=Z,14nm,1.2s						
DZM	Mont Dzumac	28.92	130	P	P	12 24 47.1	+2.1
DZM				IAmb	IAmb	12 25 13.2	
	comp=Z,10nm,1.1s						
BBOO	Buckleboo	28.95	192	P	P	12 24 43.3	-1.7
FORT	Forrest	29.67	206	P	P	12 24 51.8	+0.4
CAN	Canberra	31.32	170	P	P	12 25 07.7	+1.8
TOO	Toolangi	33.12	176	P	P	12 25 23.1	+1.4
MORW	Morawa	35.26	223	P	P	12 25 40.8	+0.5
NWAO	Narrogin (SRO)	37.06	217	P	P	12 25 55.3	-0.3
KSRS	Korea Array	43.86	343	P	P	12 26 51.9	+0.4
	comp=Z,1.4nm,0.6s,baz=166,slow=8.8,SNR=5.4						
	comp=Z,1.4nm,0.6s						
PSI	Prapat	44.37	278	LR	LR	12 50 17.3	
	comp=Z,461nm,18.5s,baz=272,slow=42						
PETK	Petropavlovsk-	58.66	10	P	P	12 28 41.5	-0.2
	comp=Z,1.4nm,0.5s,baz=154,slow=6.0,SNR=8.2						
PETK				pP	pP	12 29 05.7	-0.7
	comp=Z,1.4nm,0.6s,baz=151,slow=6.8,SNR=1.4						
	comp=Z,1.4nm,0.5s						
MKAR	Makanchi Array	73.59	321	P	P	12 30 16.9	-0.5
	comp=Z,1.5nm,0.6s,baz=106,slow=7.5,SNR=16						
MKAR				pP	pP	12 30 42.8	-0.2
	comp=Z,1.7nm,0.8s,baz=108,slow=7.1,SNR=6.0						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	75.43	329	P	P	12 30 26.4	-1.5
	comp=Z,1.3nm,0.6s,baz=97,slow=4.1,SNR=5.5						
ZALV				pP	pP	12 30 52.7	-0.8
	comp=Z,1.2nm,0.6s,baz=90,slow=5.9,SNR=2.5						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	75.43	329	P	P	12 30 26.6	-1.2
KURBB	Kurchatov Arra	77.43	324	P	P	12 30 38.9	-0.3
	comp=Z,0.6nm,0.2s,baz=115,slow=4.2,SNR=3.1						
	comp=Z,0.6nm,0.2s						
NRIK	Noril'sk	82.48	343	P	P	12 31 06.0	0.0
	comp=Z,1.6nm,0.5s,baz=117,slow=7.5,SNR=4.0						
	comp=Z,1.6nm,0.5s						
NRIK	Noril'sk	82.48	343	IAmb	IAmb	12 31 06.5	
	comp=Z,4.3nm,0.9s						
ILAR	Eielson Array	85.71	24	P	P	12 31 20.8	-1.8
	comp=Z,3.1nm,0.5s,baz=259,slow=4.6,SNR=63						
ILAR				pP	pP	12 31 49.0	+0.3
	comp=Z,1.5nm,0.6s,baz=256,slow=4.8,SNR=5.6						
	comp=Z,3.1nm,0.5s						
ILAR	Eielson Array	85.71	24	P	P	12 31 20.9	-1.7
YKA	Yellowknife Ar	99.72	27	P	Pdif	12 32 24.8	-2.6
	comp=Z,0.1nm,0.6s,baz=283,slow=4.9,SNR=4.8						
	comp=Z,0.1nm,0.6s						
GERES	GERESS Array B	118.17	324	PKP	PKPdf	12 37 29.2	-1.4
	comp=Z,0.1nm,0.2s,baz=116,slow=9.1,SNR=3.9						
TORD	Torodi Ar. Bea	140.58	285	PKP	PKPdf	12 38 14.0	+0.1
	comp=Z,0.6nm,0.7s,baz=41,slow=2.0,SNR=3.5						
LPAZ	La Paz	143.20	125	PKP	PKPdf	12 38 20.2	+0.9
	comp=Z,0.8nm,0.5s,baz=163,slow=3.1,SNR=4.7						
SDV	Santo Domingo	146.56	81	PKPbc	PKiKP	12 38 28.4	-0.6
	baz=358,slow=7.3						
KIC	Kosan Boka	147.57	275	*e*PKP2	PKPbc	12 38 28.5	-0.4
	comp=Z,3.5nm,0.5s						
DBIC	Dimbokro	147.68	276	PKPbc	PKPbc	12 38 29.2	+0.1
	comp=Z,4.7nm,0.6s,baz=128,slow=2.9,SNR=9.8						
DBIC				pPKPbc	pPKPdf	12 38 53.5	-0.3
	comp=Z,1.4nm,0.4s,baz=231,slow=1.6,SNR=4.7						
TIC	Toumodi	147.84	275	*e*PKP2	PKPbc	12 38 29.3	-0.3
LIC	Lamto	147.86	275	*e*PKP2	PKPbc	12 38 29.7	+0.1
	comp=Z,6.5nm,0.6s						
SJG	San Juan	148.62	62	PKPbc	PKPbc	12 38 31.0	-0.5
	comp=Z,5.8nm,0.3s,baz=236,slow=12,SNR=4.3						

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*NEIC **05** 12:43:25.9±2.5, 0°.04N±0°.03×123°.74E±0°.05, h108^{km}±5^{km}, mb4.9/118, Error ellipse: s-maj=8.8km s-min=2.7km*

az=117.0

*IDC **05** 12:43:26.5±1.3, 0°.11N×123°.65E, h122^{km}±11^{km}, mb4.5/30, mbtmp4.9/33, MS3.5/2, Error ellipse: s-maj=11.8km s-min=7.6km az=78.0*

*DJA **05** 12:43:27.1±0.1, 0°S±2°×12°4E±°, h116^{km}±2^{km}, M5.0/55, mb5.0/55, mB5.4/18, MLv5.3/27, Mw(mB)4.8/18, MwMwp5.0/1, Mwp5.3/1*

ISC 05 12:43:26.8±0.5**, 0°.01S**±0°.04×**123°.70E**±0°.04**, h126**^{km}±4^{km}**, n511, σ1^{s}17**/494**, mb4.9**/106**, 6C-5D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.64	26	P	Pn	12 43 46.7	+0.3
LUWI	Luwuk	1.39	222		Pn	12 43 52.6	-0.8
LUWI	Luwuk	1.39	222	P	Pn	12 43 52.7	-0.7
LUWI				S	Sn	12 44 11.5	-2.1
MRSI	Marisa	1.83	285	P	Pn	12 43 58.2	-0.3
APSI	Ampana	2.24	246	P	Pn	12 44 04.0	+0.4
SANI	Sanana	3.06	132	P	Pn	12 44 10.8	-3.3
SANI	Sanana	3.06	132	P	Pn	12 44 11.1	-3.0
TOLI2	Tolitoli	3.12	291		Pn	12 44 15.7	+0.8
TOLI2	Tolitoli	3.12	291	P	Pn	12 44 16.1	+1.2
TNTI	Ternate	3.75	78		Pn	12 44 21.6	-1.6
TNTI	Ternate	3.75	78	P	Pn	12 44 21.5	-1.6
TNTI	Ternate	3.75	78	P	Pn	12 44 21.9	-1.2
MPSI	Mapaga	3.82	275	P	Pn	12 44 25.5	+1.4
LBMI	Labuha	3.85	99	P	Pn	12 44 22.2	-2.3
SGSI	Sangihe	4.10	26	P	Pn	12 44 28.9	+1.1
TTSI	Tana Toraja	4.92	232	P	Pn	12 44 39.6	+0.9
SPSI	Sidrap Palu	5.56	225	P	Pn	12 44 48.0	+0.6
	1.9nm5µm443nm,0.7s						
BBSI	Bau Bau	5.56	192	P	Pn	12 44 47.9	+0.5
	0.2nm340nm35nm,0.6s						
BNSI	Bone	5.65	219	P	Pn	12 44 49.2	+0.6
	1.7nm5µm416nm,0.9s						
AAI	Ambon	5.79	129	P	Pn	12 44 50.2	-0.3
	4.4nm13µm1µm,0.6s						
SGKI	Sangatta, Kali	6.12	265	P	Pn	12 44 56.8	+1.8
	2.2nm7µm658nm,0.8s						
MSAI	Masohi	6.19	122	P	Pn	12 44 55.7	-0.2
	0.8nm3µm241nm,0.8s						
KAPI	Kappang	6.35	218	P	Pn	12 44 58.6	+0.6
	101nm,0.4s,baz=329,slow=3.5,SNR=110						
KAPI				S	Sn	12 46 07.6	-1.7
	179nm,0.5s,baz=212,slow=22,SNR=10						
KAPI				LR	LR	12 47 53.2	
	comp=Z,461nm,18.7s,baz=60,slow=42						
KAPI	Kappang	6.35	218	Pn	Pn	12 44 58.2	+0.2
KAPI	Kappang	6.35	218	P	Pn	12 44 59.3	+1.3
BKSI	Bulukumba	6.38	214	P	Pn	12 44 58.7	+0.3
	1.0nm2µm187nm,0.7s						
SMKI	Samarinda	6.51	266	P	Pn	12 45 01.7	+1.5
	1.7nm10µm525nm,0.9s						
BSSI	Bau Bau, Buton	6.88	208	P	Pn	12 45 05.6	+0.3
	1.0nm2µm206nm,0.6s						
KCP	Kidapawan	7.11	11	⇑*i*P	Pn	12 45 11.7	+3.4
DAV	Davao City (W)	7.28	15	LR	LR	12 48 15.0	
	comp=Z,272nm,18.4s,baz=232,slow=40						
MYLDM	Lahad Datu	7.32	315	Pn	Pn	12 45 13.3	+2.2
SWI	Sorong	7.61	96	P	Pn	12 45 14.3	-0.7
	2.3nm5µm743nm,0.7s						
SIJI	Sorong	7.61	96	P	Pn	12 45 14.5	-0.6
	294nm,0.6s,baz=287,slow=8.3,SNR=172						
PAGZ	Pagadian	7.81	358	⇑*e*P	Pn	12 45 22.4	+4.6
MTKI	Muara Teweh, K	8.85	264	P	Pn	12 45 33.3	+1.4
	72nm,0.5s						
BBKI	Banjar Baru	9.50	249	P	Pn	12 45 42.0	+1.5
	5µm123nm,0.8s						
BATI	Baumata	10.13	180	P	Pn	12 45 51.9	+2.8
	21nm,0.7s,baz=126,slow=19,SNR=2.4						
WBSI	Waikabubak, Su	10.49	204	P	Pn	12 45 54.2	+0.3
	46nm,0.8s						
SRBI	Singaraja	11.66	226	P	Pn	12 46 09.2	-0.2
	46nm,0.9s						
SBUM	Sibu	11.73	282	Pn	Pn	12 46 10.3	-0.1
KMMI	Kalianget	11.97	234	P	Pn	12 46 15.5	+2.0
	106nm,1.1s						
ABJI	Asem Bagus	12.20	230	P	Pn	12 46 18.3	+1.7
	43nm,0.9s						
STKI	Sintang	12.22	270	P	Pn	12 46 17.7	+0.8
	52nm,1.2s						
PBKI	Pangkalan Bun	12.32	257	P	Pn	12 46 18.5	+0.4
	131nm,1.2s						
BAKI	Biak	12.46	95	P	Pn	12 46 18.9	-1.0
	951nm120nm,1.4s						
BLJI	Banyuglugur	12.67	232	P	Pn	12 46 24.8	+2.1
	44nm,0.5s						
JAGI	Jajag, Banyuwa	12.70	228	Pn	Pn	12 46 25.2	+2.2
JAGI	Jajag, Banyuwa	12.70	228	P	Pn	12 46 25.4	+2.4
	61nm,1.1s						
JAGI	Jajag, Banyuwa	12.70	228	P	Pn	12 46 24.6	+1.6
GMJI	Gumukmas	13.11	231	P	Pn	12 46 28.3	-0.1
	71nm,1.0s						
KSM	Kuching	13.47	276		Pn	12 46 34.0	+1.0
LQP	Lukban	14.19	351	⇓*e*P	P	12 46 46.1	+0.1
PWJI	Pagerwojo	14.28	236	P	P	12 46 45.9	-0.9
	84nm,0.7s						
MTN	Manton Dam	14.73	150	P	Pn	12 46 46.9	-2.2
	baz=15,SNR=9.5						
MTN	Manton Dam	14.73	150	Pn	Pn	12 46 46.8	-2.2
MTN	Manton Dam	14.73	150	P	Pn	12 46 48.8	-0.2
PCJI	Pacitan	14.90	237	P	P	12 46 55.2	+1.6
	183nm,0.6s						
SMPI	Sarmi	15.13	98	P	Pn	12 46 54.6	+0.5
	2µm168nm,1.1s						
KDU	Kakadu	15.31	146	P	Pn	12 46 55.3	-1.0
	baz=15,SNR=19						
KNRA	Kununurra	16.35	162	P	Pn	12 47 08.9	-0.2
	baz=16,SNR=18						
KNRA	Kununurra	16.35	162		Pn	12 47 09.2	0.0
KNRA				IAmb	IAmb	12 47 13.9	
	comp=Z,42nm,0.6s						
KPJI	Karang Pucung	16.43	243	P	P	12 47 12.4	+1.8
	comp=Z,141nm,0.8s						
CMJI	Cimerak	17.06	243	P	Pn	12 47 18.3	+0.5
	comp=Z,54nm,0.9s						
LEM	Lembang	17.42	247	P	Pn	12 47 24.7	+2.4
	comp=Z,36nm,0.6s,baz=81,slow=11,SNR=11						
LEM	Lembang	17.42	247	P	Pn	12 47 23.4	+1.1
	comp=Z,43nm,1.0s						
PPBI	Pangkal Pinang	17.69	263	P	Pn	12 47 26.2	+0.7
	comp=Z,40nm,0.6s						
APYP	Conner	17.92	352	⇓*e*P	Pn	12 47 28.7	+0.5
CBJI	Citeko	17.98	249	P	Pn	12 47 29.2	+0.3
	comp=Z,13µmcomp=Z,112nm,0.6s						
DSRI	Dabo	19.13	269	P	Pn	12 47 41.7	-0.8
DLV	T Lat	19.21	309		Pn	12 47 43.9	+0.2
DLV				IAmb	IAmb	12 47 45.7	
	comp=Z,45nm,0.8s						
MYKOM	Kota Tinggi	19.93	275	P	P	12 47 48.6	-0.3
MDSI	Maura Dua	20.00	257	P	Pn	12 47 51.5	-1.2
	comp=Z,12nm,0.7s						
MNAI	Manna	21.17	258	P	P	12 48 04.2	+1.9
MBWA	Marble Bar	21.38	190	P	P	12 48 03.6	-0.8
MBWA	Marble Bar	21.38	190	P	P	12 48 04.6	+0.2
PSA00	Pilbara Seismi	21.76	190	P	P	12 48 07.0	-1.5
PSA00	Pilbara Seismi	21.76	190	P	P	12 48 07.4	-1.1
PSA00				IAmb	IAmb	12 48 36.4	
	comp=Z,13nm,0.7s						
PSA00	Pilbara Seismi	21.76	190	P	P	12 48 09.3	+0.8
WB0	Warramunga Arr	22.26	153	P	P	12 48 12.2	-1.5
WB0				IAmb	IAmb	12 48 15.9	
	comp=Z,50nm,0.9s						
WRAB	Tennant Creek	22.38	153	P	P	12 48 13.8	-1.1
WRAB				IAmb	IAmb	12 48 17.2	
	comp=Z,38nm,0.8s						
WRAB	Tennant Creek	22.38	153	P	P	12 48 14.0	-0.9
WRA	Warramunga Arr	22.39	153	P	P	12 48 14.4	-0.5
	comp=Z,29nm,0.5s,baz=335,slow=9.9,SNR=145						
WRA				PcP	PcP	12 52 05.8	+0.4
	comp=Z,3.1nm,0.5s,baz=331,slow=2.2,SNR=8.1						
WRA				ScP	ScP	12 55 31.4	-0.1
	comp=Z,1.3nm,0.6s,baz=331,slow=2.6,SNR=7.7						
WRA				PKiKP	PKiKP	12 59 49.9	-1.3
	comp=Z,0.4nm,0.5s,baz=308,slow=1.2,SNR=7.0						
	comp=Z,29nm,0.5s						
WB2	Warramunga Arr	22.39	153	IAmb	IAmb	12 48 17.2	
	comp=Z,36nm,0.7s						
WR0	Warramunga Arr	22.49	152	IAmb	IAmb	12 48 18.2	
	comp=Z,29nm,0.8s						
IPM	Ipoh	23.09	281	P	P	12 48 22.8	+1.0
IPM				IAmb	IAmb	12 48 24.6	
	comp=Z,28nm,0.7s						
IPM	Ipoh	23.09	281	P	P	12 48 24.7	+2.9
TPUB	Ta-pu	23.36	353	P	P	12 48 23.5	-0.7
TPUB				IAmb	IAmb	12 48 29.8	
	comp=Z,94nm,1.1s						
TPUB	Ta-pu	23.36	353	P	P	12 48 24.6	+0.4
YULB	Yu-li	23.38	354	P	P	12 48 23.1	-1.2
COEN	Coen	23.74	127	P	P	12 48 27.3	-0.4
	baz=24,SNR=7.6						
COEN	Coen	23.74	127	P	P	12 48 27.5	-0.2
SSLB	Suanglung	23.80	354	P	P	12 48 27.0	-1.2
SSLB	Suanglung	23.80	354	P	P	12 48 27.7	-0.5
YOJ	Yonaguni jima	24.33	358	P	P	12 48 35.0	+2.1
	comp=Z,77nm,1.3s						
YHNB	Yeheng	24.64	355	P	P	12 48 36.1	+0.4
YHNB				IAmb	IAmb	12 48 53.1	
	comp=Z,28nm,1.0s						
YHNB	Yeheng	24.64	355	P	P	12 48 37.1	+1.3
RPSI	Rantau Prapat	24.91	276	P	P	12 48 38.6	+0.2
PSI	Prapat	24.93	277	P	P	12 48 38.6	0.0
	comp=Z,9.0nm,0.7s,baz=117,slow=7.9,SNR=12						
	comp=Z,9.0nm,0.7s						
PMG	Port Moresby	25.15	112	P	P	12 48 41.0	+0.5
	comp=Z,22nm,0.8s,baz=336,slow=9.5,SNR=5.2						
	comp=Z,22nm,0.8s						
PMG	Port Moresby	25.15	112	P	P	12 48 41.0	+0.5
PMG				IAmb	IAmb	12 48 41.8	
	comp=Z,23nm,0.8s						
WRKA	Warakurna	25.28	170	P	P	12 48 41.8	+0.3
	baz=26,SNR=56						
WRKA	Warakurna	25.28	170	P	P	12 48 42.1	+0.5
ASAR	Alice Springs	25.52	158	P	P	12 48 43.9	+0.1
	comp=Z,5.3nm,0.4s,baz=334,slow=8.1,SNR=67						
ASAR				PcP	PcP	12 52 12.8	+0.5
	comp=Z,8.1nm,0.5s,baz=346,slow=2.3,SNR=20						
ASAR				ScP	ScP	12 55 39.8	-0.3
	comp=Z,2.0nm,0.6s,baz=340,slow=2.3,SNR=9.0						
ASAR				PKiKP	PKiKP	12 59 51.0	-1.7
	comp=Z,0.4nm,0.5s,baz=329,slow=0.6,SNR=5.9						
	comp=Z,5.3nm,0.4s						
ASAR	Alice Springs	25.52	158		PcP	12 52 12.5	+0.2
QIS	Mount Isa	25.67	144	P	P	12 48 45.8	+0.6
	baz=26,SNR=38						
QIS	Mount Isa	25.67	144	P	P	12 48 46.2	+1.0
MEEK	Meekatharra	26.93	190	P	P	12 48 56.2	-0.2
	baz=27,SNR=7.8						
MEEK	Meekatharra	26.93	190	P	P	12 48 56.2	-0.2
KRVT	Keravat (AS076	28.62	99	P	P	12 49 12.9	+1.3
	comp=Z,51nm,0.8s,baz=173,slow=1.2,SNR=6.5						
	comp=Z,51nm,0.8s						
RABL	Rabaul	28.74	99	P	P	12 49 13.7	+1.0
CTA	Charters Tower	29.76	133	P	P	12 49 22.8	+1.1
	comp=Z,4.1nm,0.8s,baz=299,slow=9.0,SNR=4.1						
	comp=Z,4.1nm,0.8s						
OOD	Oodnadatta	29.93	158	P	P	12 49 23.3	+0.3
CMAR	Chiang Mai Arr	30.47	308	P	P	12 49 28.9	+0.9
	comp=Z,7.0nm,0.9s,baz=138,slow=7.4,SNR=41						
CMAR				PcP	PcP	12 52 25.3	+0.9
	comp=Z,5.0nm,0.7s,baz=161,slow=1.8,SNR=17						
CMAR				ScP	ScP	12 55 55.1	-0.3
	comp=Z,1.1nm,0.3s,baz=155,slow=2.0,SNR=4.3						
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	30.47	308	P	P	12 49 29.0	+1.1
CMAR					PcP	12 52 24.6	+0.2
CHTO	Chiang Mai	30.67	309	P	P	12 49 29.6	-0.1
CHTO				IAmb	IAmb	12 49 32.9	
	comp=Z,19nm,0.9s						
CHTO					PcP	12 52 25.9	+0.9
FORT	Forrest	30.88	173	P	P	12 49 31.6	+0.3
	baz=31,SNR=31						
FORT	Forrest	30.88	173	P	P	12 49 30.7	-0.6
FORT	Forrest	30.88	173	P	P	12 49 31.5	+0.2
BLDU	Ballidu	31.16	192	P	P	12 49 33.5	-0.3
	baz=31,SNR=7.7						
BLDU	Ballidu	31.16	192	P	P	12 49 33.6	-0.2
WHN	Wuhan	31.66	345	⇑P	P	12 49 40.4	+2.2
MULG	Mulgathing	31.68	163	P	P	12 49 38.9	+0.5
KLBR	Kellerberrin	31.91	190	P	P	12 49 39.9	-0.5
INKA	Innaminka	32.06	151	P	P	12 49 42.8	+1.1
NJ2	Nanjing	32.22	352	*e*P	P	12 49 45.0	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
JCJ	Chichijima	32.28	32	P	P	12 49 42.8	-0.9
	comp=Z,144nm,0.4s,baz=208,slow=1.5,SNR=60						
JCJ	Chichijima	32.28	32	P	P	12 49 42.9	-0.9
JCJ	Chichijima	32.28	32	P	P	12 49 42.8	-0.9
ENH	Enshi	33.01	337	IAmb	IAmb	12 49 52.6	
	comp=Z,16nm,0.8s						
LCRK	Leigh Creek	33.27	157	P	P	12 49 52.5	+0.2
NWAO	Narrogin (SRO)	33.31	190	P	P	12 49 52.8	+0.2
JNU	Nakatsue	33.64	11	P	P	12 49 54.1	-1.4
	comp=Z,6.9nm,0.8s,baz=228,slow=5.6,SNR=6.7						
	comp=Z,6.9nm,0.8s						
JNU	Nakatsue	33.64	11	IAmb	IAmb	12 49 57.4	
	comp=Z,23nm,1.4s						
PZH	PanZhiHua	33.80	323	P	P	12 49 58.6	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,50nm,4.1s						
BBOO	Buckleboo	34.65	162	P	P	12 50 04.6	+0.5
	baz=35,SNR=10						
BBOO	Buckleboo	34.65	162	P	P	12 50 04.2	+0.1
NAPP	Napperby	35.69	159	P	P	12 50 13.5	+0.4
RMQ	Roma	35.71	139	P	P	12 50 13.9	+0.5
	baz=36,SNR=5.3						
JHS	Saijyo	35.92	13	IAmb	IAmb	12 50 16.2	
	comp=Z,21nm,0.8s						
STKA	Stephens Creek	35.93	154	P	P	12 50 15.8	+0.6
	comp=Z,21nm,0.5s,baz=331,slow=8.6,SNR=83						
STKA				PcP	PcP	12 52 40.0	+0.5
	comp=Z,8.9nm,0.6s,baz=356,slow=2.8,SNR=6.3						
STKA				ScP	ScP	12 56 13.9	-0.3
	comp=Z,6.2nm,1.1s,baz=336,slow=10.0,SNR=3.7						
	comp=Z,21nm,0.5s						
STKA	Stephens Creek	35.93	154	P	P	12 50 15.8	+0.6
	baz=36,SNR=43						
STKA	Stephens Creek	35.93	154	P	P	12 50 15.5	+0.4
STKA	Stephens Creek	35.93	154	P	P	12 50 15.6	+0.4
LYN	LuoYang	35.95	344	*e*P	P	12 50 16.6	+1.3
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
HTT	Hallett	36.20	158	P	P	12 50 18.2	+0.8
	baz=36,SNR=6.2						
HTT	Hallett	36.20	158	P	P	12 50 18.3	+0.8
JHJ2	Mitsune	36.27	23	P	P	12 50 16.7	-1.3
TIA	Tai'an	36.55	351	⇑P	P	12 50 21.4	+1.0
TIA				pmax	pmax		
	comp=Z,17nm,0.8s						
XAN	Xi'an	36.60	339	P	P	12 50 19.5	-1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INU	Inuyama	37.31	18	P	P	12 50 26.5	-0.3
KSAR	Wonju Array Be	37.47	5		PcP	12 52 43.9	-0.1
KSRS	Korea Array	37.48	6	P	P	12 50 27.1	-1.1
	comp=Z,2.7nm,0.5s,baz=181,slow=9.3,SNR=12						
KSRS				PcP	PcP	12 52 44.8	+0.8
	comp=Z,3.8nm,0.9s,baz=172,slow=3.0,SNR=6.7						
	comp=Z,2.7nm,0.5s						
TWOA	Tennyson Woods	37.51	160	P	P	12 50 30.1	+1.6
JGF	Kuroka	37.64	18	P	P	12 50 28.7	-1.0
JGF				IAmb	IAmb	12 50 30.5	
	comp=Z,24nm,0.7s						
CMSA	Cobar Meteorol	37.65	148	P	P	12 50 31.0	+1.3
	baz=38,SNR=58						
CMSA	Cobar Meteorol	37.65	148	P	P	12 50 30.9	+1.2
HNS	HongShan	38.14	348	⇑P	P	12 50 32.9	-0.8
HNS				pmax	pmax		
	comp=Z,14nm,1.1s						
MAJO	Matsushiro	38.78	19	P	P	12 50 37.3	-1.9
MAJO				IAmb	IAmb	12 50 38.9	
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	38.78	19	P	P	12 50 38.1	-1.0
MJAR	Matsushiro Arr	38.78	19	P	P	12 50 37.4	-1.7
	comp=Z,34nm,0.8s,baz=190,slow=9.0,SNR=80						
MJAR				PcP	PcP	12 52 48.3	+0.2
	comp=Z,4.0nm,0.7s,baz=171,slow=3.2,SNR=4.6						
	comp=Z,34nm,0.8s						
MJAR	Matsushiro Arr	38.78	19	IAmb	IAmb	12 50 38.9	
	comp=Z,32nm,0.8s						
MJB9	Matsu-Tunnel	38.78	19	IAmb	IAmb	12 50 38.8	
	comp=Z,31nm,0.8s						
JYT	Yasato	39.18	21	IAmb	IAmb	12 50 42.4	
	comp=Z,24nm,0.9s						
JSD	Sado	40.17	18	P	P	12 50 50.3	-0.3
ARMA	Armidale	40.24	141	P	P	12 50 51.2	-0.3
	baz=40,SNR=13						
ARMA	Armidale	40.24	141	P	P	12 50 53.2	+1.7
ARMA				IAmb	IAmb	12 50 54.0	
	comp=Z,18nm,0.8s						
ARMA	Armidale	40.24	141	P	P	12 50 52.9	+1.4
ARPS	Mount Arapiles	40.26	157	P	P	12 50 52.5	+1.1
	baz=40,SNR=10						
ARPS	Mount Arapiles	40.26	157	P	P	12 50 52.5	+1.1
LZH	Lanzhou	40.38	335	⇓P	P	12 50 54.1	+1.5
LZH				sP	sP	12 51 39.4	+3.7
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				LR	LR		
	comp=Z,400nm,16.4s						
LZH				LR	LR		
	comp=Z,200nm,16.7s						
LZH				LR	LR		
	comp=Z,320nm,15.3s						
BJI	Beijing	40.45	351	P	P	12 50 53.4	+0.6
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MGCD	Mangrove Creek	41.90	145	P	P	12 51 05.1	+0.2
	baz=42,SNR=12						
MGCD	Mangrove Creek	41.90	145	P	P	12 51 07.3	+2.4
CAN	Canberra	42.32	149	P	P	12 51 10.2	+1.8
CAN				IAmb	IAmb	12 51 11.1	
	comp=Z,32nm,1.1s						
CAN	Canberra	42.32	149	P	P	12 51 10.1	+1.8
MLBS	Spotswood, Mel	42.41	155	P	P	12 51 11.7	+2.8
TOO	Toolangi	42.45	154	P	P	12 51 09.6	+0.3
	baz=43,SNR=9.5						
TOO	Toolangi	42.45	154	P	P	12 51 10.3	+1.0
TOO				IAmb	IAmb	12 51 11.8	
	comp=Z,20nm,0.8s						
TOO	Toolangi	42.45	154	P	P	12 51 11.3	+2.0
	comp=Z,26nm,1.1s						
CNB	Canberra Magne	42.50	148	P	P	12 51 10.1	+0.3
	baz=43,SNR=9.2						
CNB	Canberra Magne	42.50	148	P	P	12 51 11.7	+1.9
JTM	Tenmabayashi	43.56	19	P	P	12 51 18.6	+0.4
CN2	Changchun	43.65	2	*e*P	P	12 51 19.6	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ODAN	Odare	43.96	310	*e*P	P	12 51 22.5	+0.6
	comp=Z,36nm,0.8s						
TAPN	Taplejung	43.98	311	*e*P	P	12 51 22.6	+0.5
	comp=Z,26nm,0.7s						
XLT	XiLinHaoTe	44.24	352	⇓*i*P	P	12 51 25.8	+2.1
XLT				pP	pP	12 51 51.6	-0.9
XLT				sP	sP	12 52 06.9	+0.1
XLT				PcP	PP	12 53 07.8	-1.6
XLT				PcS	PcS	12 57 03.3	+3.9
XLT				pmax	pmax		
	comp=Z,17nm,1.2s						
XLT				pmax	pmax		
	comp=Z,210nm,5.0s						
RAMN	Ramite	44.61	310	*e*P	P	12 51 28.1	+1.0
	comp=Z,58nm,0.5s						
USA0B	Ussuriysk Arra	44.63	8	IAmb	IAmb	12 51 28.0	
	comp=Z,60nm,1.4s						
USRK	Ussuriysk Ar.	44.63	8	P	P	12 51 26.3	-0.3
	comp=Z,19nm,0.7s,baz=198,slow=6.2,SNR=29						
	comp=Z,19nm,0.7s						
USRK	Ussuriysk Ar.	44.63	8	P	P	12 51 26.6	0.0
MDJ	Mudanjiang	44.74	6	IAmb	IAmb	12 51 31.0	
	comp=Z,23nm,1.0s						
MDJ	Mudanjiang	44.74	6	P	P	12 51 27.8	+0.3
	comp=Z,24nm,0.9s						
GTA	Gaotai	44.91	334	*e*P	P	12 51 29.8	+0.7
GTA				pP	pP	12 51 55.6	-2.5
GTA				PcP	PcP	12 53 08.7	+0.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,140nm,6.9s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
GTA				LR	LR		
	comp=Z,210nm,16.7s						
GTA				LR	LR		
	comp=Z,170nm,15.3s						
GOMU	GeErMu	44.92	326	P	P	12 51 30.1	+0.6
GOMU				PcP	PcP	12 53 08.4	-0.5
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,110nm,6.7s						
JIRN	Jiri	45.29	311	*e*P	P	12 51 33.2	+0.6
	comp=Z,5.3nm,0.8s						
GUN	Gumba	45.65	311	*e*P	P	12 51 35.9	+0.5
	comp=Z,45nm,0.6s						
BNX	BinXian	45.67	4	⇑P	P	12 51 35.5	+0.7
BNX				pmax	pmax		
	comp=Z,790nm,5.0s						
PKI	Pulchoki	45.84	310	*e*P	P	12 51 36.9	0.0
PKIN	Phulchoki	45.85	310	*e*P	P	12 51 37.0	+0.1
	comp=Z,13nm,0.4s						
KKN	Kakani	46.05	310	*e*P	P	12 51 38.8	+0.4
DMN	Daman	46.09	310	*e*P	P	12 51 39.1	+0.3
GKN	Gorkha	46.65	310	*e*P	P	12 51 43.2	+0.2
ASAJ	Asahikawa	47.05	19	P	P	12 51 46.0	+0.4
	comp=Z,39nm,0.7s,baz=226,slow=9.2,SNR=27						
	comp=Z,39nm,0.7s						
JKA	Kamikawa-asahi	47.05	19	P	P	12 51 45.6	0.0
KOLN	Koldanda	47.33	309	*e*P	P	12 51 48.9	+0.5
	comp=Z,55nm,0.7s						
DANN	Dangsing	47.49	310	*e*P	P	12 51 49.7	0.0
	comp=Z,92nm,0.8s						
PYUN	Piuthan	47.97	309	*e*P	P	12 51 53.7	+0.4
	comp=Z,96nm,0.9s						
ULN	Ulaanbaatar	49.83	345	P	P	12 52 05.6	-1.5
ULN				IAmb	IAmb	12 52 10.9	
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	49.83	345	P	P	12 52 06.8	-0.3
ULN				pP	pP	12 52 39.7	+3.1
WMQ	Urumqi	54.17	328	⇓P	P	12 52 39.4	+0.2
WMQ				pP	pP	12 53 10.3	+1.2
WMQ				sP	sP	12 53 20.7	-2.5
WMQ				PcP	PcP	12 53 39.2	-3.0
WMQ				S	S	13 00 07.2	+0.7
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.9s						
DGTI	Dogotuki	57.55	109	P	P	12 53 05.0	+1.3
NIL	Nilore	57.92	311	P	P	12 53 05.1	-1.0
OUZ	Omahuta	58.16	133	P	P	12 53 09.5	+1.9
KSH	Kashi	58.65	318	P	P	12 53 12.0	+0.8
KSH				pP	pP	12 53 43.3	+1.7
KSH				PcP	PcP	12 54 00.8	+0.9
KSH				PP	PP	12 55 23.7	+1.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	Makanchi Array	58.99	328	IAmb	IAmb	12 53 14.2	
	comp=Z,10.0nm,0.7s						
MKAR	Makanchi Array	58.99	328	P	P	12 53 12.8	-0.4
	comp=Z,13nm,0.5s,baz=122,slow=8.4,SNR=115						
MKAR				PcP	PcP	12 54 00.4	-0.6
	comp=Z,9.2nm,0.5s,baz=165,slow=3.0,SNR=16						
	comp=Z,13nm,0.5s						
MAKZ	Makanchi	59.17	328	P	P	12 53 13.8	-0.6
MAKZ				IAmb	IAmb	12 53 15.3	
	comp=Z,8.7nm,0.6s						
MAKZ	Makanchi	59.17	328	P	P	12 53 13.8	-0.6
MAKZ				pP	PcP	12 54 00.6	-1.0
KDJ	Kajisay	59.22	321	IAmb	IAmb	12 53 17.3	
	comp=Z,7.1nm,0.7s						
PETK	Petropavlovsk-	60.02	23	P	P	12 53 20.4	+0.2
	comp=Z,14nm,0.7s,baz=198,slow=3.4,SNR=41						
PETK				PcP	sP	12 54 03.4	-1.0
	comp=Z,2.2nm,0.5s,baz=240,slow=2.8,SNR=4.2						
	comp=Z,14nm,0.7s						
QRZ	Quartz Range	60.02	139	P	P	12 53 22.2	+1.8
PET	Petropavlovsk	60.33	23	P	P	12 53 22.7	+0.5
PET	Petropavlovsk	60.33	23	P	P	12 53 22.9	+0.7
	comp=Z,186nm,1.1s						
HIZ	Hauiti	60.52	135	P	P	12 53 34.0	+10
RPZ	Rata Peaks	60.57	142	P	P	12 53 25.3	+1.2
RPZ	Rata Peaks	60.57	142	P	P	12 53 25.4	+1.3
VRZ	Vera Road	60.73	136	P	P	12 53 35.9	+11
TLZ	Tolley Road	60.92	135	P	P	12 53 31.8	+5.3
WAZ	Wanganui	61.17	137	P	P	12 53 39.0	+11
AAK	Ala-Archa	61.18	320	P	P	12 53 28.5	+0.1
PKVZ	Pokaka	61.21	136	P	P	12 53 34.4	+5.9
WATZ	Wairara	61.22	135	P	P	12 53 31.7	+3.1
WTVZ	West Tongariro	61.30	136	P	P	12 53 31.5	+2.3
KATZ	Kakaramea	61.31	136	P	P	12 53 32.3	+3.0

NNVZ	North Ngauruho	61.32	136	P	P	12 53 31.3	+1.9
NGZ	Ngauruhoe	61.33	136	P	P	12 53 31.3	+1.8
MTVZ	Mangateitei	61.34	136	P	P	12 53 34.7	+5.3
NTVZ	North Tongarir	61.35	136	P	P	12 53 32.1	+2.5
SNVZ	South Ngauruho	61.37	136	P	P	12 53 33.5	+3.7
OTVZ	Oturere	61.37	136	P	P	12 53 32.7	+2.9
TMVZ	Te Maari	61.38	136	P	P	12 53 32.6	+2.9
ETVZ	East Tongariro	61.39	136	P	P	12 53 33.0	+3.1
WNVZ	Wahianoa	61.40	136	P	P	12 53 34.3	+4.4
TUVZ	Tukino	61.41	136	P	P	12 53 33.9	+3.9
KHZ	Kahutara	61.47	140	P	P	12 53 30.5	+0.4
KBL	Kabul	61.48	310	P	P	12 53 29.7	-0.9
KBL				IAmb	IAmb	12 53 30.4	
	comp=Z,17nm,0.7s						
MOVZ	Moawhango	61.54	136	P	P	12 53 34.4	+3.6
SNZO	South Karori	61.70	138	P	P	12 53 31.7	+0.1
MRHZ	Matea Rd	61.76	135	P	P	12 53 32.3	+0.1
OGWZ	Otaki Gorge	61.78	138	P	P	12 53 48.6	+16
BHHZ	Black Hill Sta	61.79	136	P	P	12 53 32.9	+0.5
BKZ	Black Stump Fm	61.95	135	P	P	12 53 34.3	+0.7
BKZ	Black Stump Fm	61.95	135	P	P	12 53 34.2	+0.6
BKZ	Black Stump Fm	61.95	135	P	P	12 53 34.1	+0.6
MRZ	Mangatainoka R	61.98	137	P	P	12 53 46.1	+12
POWZ	Post Office Ro	61.99	137	P	P	12 53 43.3	+10
URZ	Urewera	62.01	134	P	P	12 53 34.1	+0.3
URZ	Urewera	62.01	134	P	P	12 53 34.1	+0.3
URZ	Urewera	62.01	134	P	P	12 53 34.1	+0.3
KWHZ	Kaweka Forest	62.02	136	P	P	12 53 35.0	+1.0
YAK	Yakutsk	62.05	3	P	P	12 53 33.1	-0.5
	comp=Z,54nm,0.6s,baz=202,slow=1.0						
	comp=Z,54nm,0.6s						
YAK	Yakutsk	62.05	3	P	P	12 53 33.3	-0.3
YAK	Yakutsk	62.05	3	P	P	12 53 33.2	-0.3
YAK				pP	PcP	12 54 11.4	-1.4
RTZ	Ruatahuna	62.06	135	P	P	12 53 35.1	+0.8
MTHZ	Maungataniwha	62.06	135	P	P	12 53 34.7	+0.5
KRHZ	Kereru	62.07	136	P	P	12 53 35.3	+1.0
PNHZ	Pukenui	62.07	136	P	P	12 53 39.1	+4.8
NMHZ	Naumai	62.14	135	P	P	12 53 36.3	+1.5
MCHZ	McNeill Hill	62.22	136	P	P	12 53 36.5	+1.3
TIWZ	Tintock	62.24	137	P	P	12 53 47.5	+12
RAHZ	Arahi	62.27	135	P	P	12 53 36.9	+1.4
WPHZ	Waipukurau	62.31	136	P	P	12 53 41.1	+5.3
GAR	Garm	62.31	315	IAmb	IAmb	12 53 37.6	
	comp=Z,12nm,0.7s						
MWZ	Matawai	62.34	134	P	P	12 53 36.7	+0.7
ARHZ	Aropaoanui	62.35	135	P	P	12 53 37.2	+1.1
KAHZ	Kahuranaki	62.49	136	P	P	12 53 38.0	+0.9
ANWZ	Angora Road	62.50	137	P	P	12 53 45.2	+8.2
CPWZ	Castlepoint	62.52	137	P	P	12 53 49.7	+13
PRHZ	Porangahau	62.53	137	P	P	12 53 43.6	+6.3
PKGZ	Pakihiroa	62.55	134	P	P	12 53 44.9	+7.3
CKHZ	Cape Kidnapper	62.57	136	P	P	12 53 40.6	+3.1
TWGZ	Tauwhareparae	62.60	134	P	P	12 53 39.3	+1.4
TKGZ	Te Karaka	62.61	134	P	P	12 53 39.0	+1.2
ZALV	Zalesovo Beam	62.61	335	P	P	12 53 35.4	-2.1
	comp=Z,2.8nm,0.4s,baz=120,slow=6.5,SNR=17						
ZALV				PcP	PcP	12 54 13.4	-1.9
	comp=Z,2.3nm,0.4s,baz=139,slow=2.4,SNR=6.1						
	comp=Z,2.8nm,0.4s						
RIGZ	Rimuhau	62.66	135	P	P	12 53 39.0	+0.8
KNZ	Kokohu	62.73	135	P	P	12 53 39.2	+0.6
PRGZ	Paritu Road	62.83	135	P	P	12 53 42.6	+3.2
CNGZ	Carnagh Statio	62.89	134	P	P	12 53 40.8	+1.2
MHGZ	Mahia Peninsul	62.94	135	P	P	12 53 41.1	+1.0
MA2	Magadan	63.06	15	P	P	12 53 41.1	+0.7
MA2	Magadan	63.06	15	P	P	12 53 41.3	+0.9
KURK	Kurchatov	63.34	330	P	P	12 53 41.6	-0.7
KURK	Kurchatov	63.34	330	P	P	12 53 41.3	-1.1
KURK				pP	PcP	12 54 17.4	-0.9
SEY	Seymchan	66.35	14	P	P	12 54 02.2	+0.5
	comp=Z,14nm,0.8s,baz=212,slow=6.9						
	comp=Z,14nm,0.8s						
CASY	Casey	66.79	186	P	P	12 54 03.7	-0.7
CASY				IAmb	IAmb	12 54 06.0	
	comp=Z,20nm,0.8s						
CASY	Casey	66.79	186	P	P	12 54 02.7	-1.7
DRV	Dumont d’Urvil	67.51	173	P	P	12 54 09.4	+0.5
DRV				pP	pP	12 54 37.1	-1.6
GEYT	Alibeck	70.93	310	P	P	12 54 29.5	-1.2
	comp=Z,2.0nm,0.5s,baz=218,slow=1.7,SNR=4.3						
	comp=Z,2.0nm,0.5s						
TIXI	Tiksi	71.62	2	P	P	12 54 33.1	-1.0
TIXI	Tiksi	71.62	2	P	P	12 54 32.9	-1.1
ATKA	Atka Island	73.27	35	P	P	12 54 44.8	+0.6
NRIK	Noril'sk	73.35	347	P	P	12 54 43.5	-1.0
	comp=Z,6.4nm,0.6s,baz=134,slow=5.2,SNR=12						
	comp=Z,6.4nm,0.6s						
BILL	Bilibino	73.93	15	P	P	12 54 47.0	-0.8
ARU	Arti	76.50	329	P	P	12 55 01.1	-1.7
ARU				IAmb	IAmb	12 55 01.6	
	comp=Z,14nm,0.8s						
NIKH	Nikolski High	76.59	35	P	P	12 55 03.3	0.0
	baz=252						
SPIA	Saint Paul Isl	77.23	31	P	P	12 55 07.3	+0.5
	baz=250						
UNV	Unalaska Valle	78.20	35	P	P	12 55 12.5	+0.3
	baz=253						
GAMB	Gambell	79.02	24	P	P	12 55 17.2	+0.7
	baz=247						
RAYN	Ar Rayn	79.18	294	P	P	12 55 16.8	-1.6
MAW	Mawson	79.23	200	P	P	12 55 18.8	+1.2
	comp=Z,7.8nm,0.6s,baz=73,slow=5.9,SNR=16						
	comp=Z,7.8nm,0.6s						
MAW	Mawson	79.23	200	P	P	12 55 18.7	+1.1
	baz=79,SNR=10						
VNDA	Vanda	80.14	172	P	P	12 55 23.1	+0.7
	comp=Z,8.5nm,0.6s,baz=316,slow=6.1,SNR=50						
	comp=Z,8.5nm,0.6s						
VNDA	Vanda	80.14	172	P	P	12 55 23.3	+0.9
VNDA				IAmb	IAmb	12 55 24.0	
	comp=Z,10nm,0.8s						
SBA	Scott Base	81.09	172	P	P	12 55 28.9	+1.5
TNA	Tin City	81.19	23	P	P	12 55 28.6	+0.5
	baz=250						
ANM	Nome	81.89	24	P	P	12 55 32.8	+0.9
	baz=253						
SDPT	Sand Point	81.97	34	P	P	12 55 32.5	+0.1
	baz=258						
GEVA	Gevas	82.66	308	IAmb	IAmb	12 55 36.9	
	comp=Z,22nm,0.7s						
KBZ	Khabaz	83.35	314	P	P	12 55 38.8	-1.1
	comp=Z,3.5nm,0.8s,baz=108,slow=4.1,SNR=7.4						
	comp=Z,3.5nm,0.8s						
RDOG	Red Dog Mine	83.84	21	IAmb	IAmb	12 55 42.4	
	comp=Z,25nm,0.8s						
RDOG	Red Dog Mine	83.84	21	P	P	12 55 41.3	-0.6
	baz=254						
N18K	Kilae Creek	85.30	29	P	P	12 55 49.6	+0.2
	baz=262						
P18K	Big Mountain,	85.45	30	P	P	12 55 50.4	+0.2
	baz=262						
GCSA	Galena City Sc	85.49	25	P	P	12 55 50.7	+0.5
	baz=260						
O18K	Koktuh Hills	85.52	30	P	P	12 55 50.8	+0.2
	baz=262						
TTA	Tatalina	85.58	27	P	P	12 55 50.8	0.0
	baz=261						
SII	Sitkinak Islan	85.65	33	P	P	12 55 51.1	-0.2
	baz=263						
L19K	White Mountain	86.00	28	P	P	12 55 53.1	+0.2
	baz=262						
N19K	Bonanza Creek	86.00	29	IAmb	IAmb	12 55 54.6	
	comp=Z,11nm,0.8s						
N19K	Bonanza Creek	86.00	29	P	P	12 55 52.8	-0.2
	baz=263						
O19K	Port Alsworth	86.01	30	P	P	12 55 53.0	+0.1
	baz=263						
M19K	Big River Lodg	86.19	28	P	P	12 55 54.3	+0.5
	baz=263						
OHAK	Old Harbor	86.21	33	P	P	12 55 54.3	+0.4
	baz=264						
L20K	Farewell, AK	86.49	27	P	P	12 55 55.7	+0.4
	baz=263						
K20K	Telida	86.51	27	P	P	12 55 55.5	+0.1
	baz=263						
J20K	Nowinta River	86.58	26	P	P	12 55 55.8	+0.2
	baz=263,SNR=5.1						
KDAK	Kodiak Island	86.64	32	P	P	12 55 56.6	+0.6
	comp=Z,7.5nm,0.6s,baz=122,slow=2.5,SNR=11						
	comp=Z,7.5nm,0.6s						
KDAK	Kodiak Island	86.64	32	P	P	12 55 56.2	+0.1
	baz=265						
A21K	Barrow	86.70	19	P	P	12 55 56.9	+0.9
	baz=260						
SPCR	Spurr Chakacha	87.15	29	P	P	12 55 58.6	+0.1
	baz=265						
KLMR	Klimovskoe	87.16	331	*e*P	P	12 55 55.3	-3.2
KLMR				AMP		12 55 57.9	
	comp=Z,18nm,0.5s						
HOM	Homer	87.30	30	P	P	12 55 59.4	+0.3
	baz=265						
PPLA	Purkeypile	87.31	27	P	P	12 55 59.7	+0.3
	baz=265						
H21K	Melozitna Rive	87.31	24	IAmb	IAmb	12 56 00.6	
	comp=Z,11nm,1.2s						
H21K	Melozitna Rive	87.31	24	P	P	12 55 59.5	+0.3
	baz=264,SNR=6.0						
CHUM	Lake Minchumin	87.35	26	P	P	12 55 59.7	+0.4
	baz=264						
CAST	Castle Rocks	87.41	27	P	P	12 55 59.9	+0.2
	baz=265						
I21K	Tanana	87.61	25	P	P	12 56 01.0	+0.5
	baz=265						
BRSE	Bradley Lake S	87.76	30	P	P	12 56 01.7	+0.3
	baz=266						
BPAW	Bear Paw Mtn.	87.95	26	IAmb	IAmb	12 56 02.9	
	comp=Z,6.3nm,0.8s						
BPAW	Bear Paw Mtn.	87.95	26	P	P	12 56 02.3	+0.1
	baz=266						
CUT	Chulitna	88.16	28	P	P	12 56 03.2	0.0
	baz=266						
O22K	Cooper Landing	88.31	30	P	P	12 56 03.7	-0.3
	baz=267						
SEW	Seward	88.43	30	P	P	12 56 04.4	-0.1
	baz=267						
COLD	Coldfoot	88.49	23	IAmb	IAmb	12 56 06.1	
	comp=Z,9.7nm,0.6s						
COLD	Coldfoot	88.49	23	P	P	12 56 04.9	+0.3
	baz=266						
PMR	Palmer	88.65	29	P	P	12 56 05.2	-0.3
	baz=267						
H23K	Yukon River	88.67	24	IAmb	IAmb	12 56 06.9	
	comp=Z,8.4nm,0.8s						
H23K	Yukon River	88.67	24	P	P	12 56 05.9	+0.3
	baz=267,SNR=12						
I23K	Minto, Yukon-K	88.71	25	IAmb	IAmb	12 56 06.8	
	comp=Z,29nm,1.5s						
I23K	Minto, Yukon-K	88.71	25	P	P	12 56 05.8	+0.1
	baz=267,SNR=9.5						
TOLK	Toolik Lake Re	88.81	21	P	P	12 56 06.0	-0.2
	baz=267						
NEA2	Nenana	88.81	26	P	P	12 56 06.2	-0.1
	baz=267						
RND	Reindeer	88.86	27	IAmb	IAmb	12 56 06.3	
	comp=Z,8.8nm,0.8s						
KNK	Knik Glacier	88.97	29	P	P	12 56 06.7	-0.4
	baz=268						
WAT1	Susitna Watana	88.97	27	P	P	12 56 06.8	-0.3
	baz=268						
SML	Sawmill	89.04	28	P	P	12 56 06.9	-0.6
	baz=268						
M23K	Glacier View	89.33	28	P	P	12 56 08.2	-0.6
	baz=269						
WAT6	Susitna Watana	89.34	28	P	P	12 56 08.2	-0.7
	baz=269						
H24K	Noodor Dome	89.36	24	IAmb	IAmb	12 56 11.2	
	comp=Z,11nm,1.4s						
H24K	Noodor Dome	89.36	24	P	P	12 56 08.8	0.0
	baz=268						
CCB	Clear Creek Bu	89.36	25	IAmb	IAmb	12 56 08.5	
	comp=Z,5.6nm,0.7s						
DHY	Denali Highway	89.52	27	IAmb	IAmb	12 56 10.3	
	comp=Z,6.3nm,0.7s						
DHY	Denali Highway	89.52	27	P	P	12 56 09.2	-0.5
	baz=269						
SCM	Sheep Creek Mo	89.52	28	P	P	12 56 09.5	-0.2
	baz=269						
ILAR	Eielson Array	89.75	25	P	P	12 56 09.2	-1.5
	comp=Z,1.7nm,0.6s,baz=246,slow=5.0,SNR=38						
ILAR				PKKPbc	PKKPdf	13 13 43.6	+2.7
	comp=Z,0.6nm,0.7s,baz=75,slow=1.8,SNR=7.2						
	comp=Z,1.7nm,0.6s						
QSPA	South Pole Qui	89.92	180	P	P	12 56 12.5	+0.9
QSPA				IAmb	IAmb	12 56 14.1	
	comp=Z,8.9nm,0.8s						
BRTR	Keskin Array B	90.05	310	P	P	12 56 10.9	-1.9
	comp=Z,2.0nm,0.8s,baz=61,slow=12,SNR=5.2						
	comp=Z,2.0nm,0.8s						
M24K	Tolsona, Glenn	90.06	28	P	P	12 56 12.1	-0.2
	baz=270						
KLU	Klutina	90.19	29	P	P	12 56 12.6	-0.3
	baz=270						
K24K	Donnelly Dome	90.24	26	P	P	12 56 12.6	-0.4
	baz=270						
PAX	Paxson	90.39	27	P	P	12 56 13.6	-0.2
	baz=271						
J25K	Salcha River,	90.41	26	P	P	12 56 12.4	-1.4
	baz=271						
RIDG	Independent Ri	90.65	26	IAmb	IAmb	12 56 15.3	
	comp=Z,7.8nm,0.8s						
RIDG	Independent Ri	90.65	26	P	P	12 56 14.3	-0.6
	baz=271,SNR=5.1						
N25K	Chitina, Valde	90.82	29	P	P	12 56 15.6	-0.1
	baz=271						
BMRM	Bremner River	90.83	29	P	P	12 56 15.6	-0.2
	baz=271						
SCRK	Sand Creek	91.03	26	P	P	12 56 16.3	-0.5
	baz=272						
MENT	Mentasta	91.19	27	IAmb	IAmb	12 56 18.3	
	comp=Z,6.3nm,0.7s						
J26L	Joseph Creek	91.19	26	P	P	12 56 17.1	-0.3
	baz=272,SNR=6.3						
L26K	Log Cabin Wild	91.35	27	P	P	12 56 18.3	+0.1
	baz=273						
M26K	Nabesna, AK	91.54	28	P	P	12 56 19.0	-0.1
	baz=273						
K27K	Chicken	91.86	26	IAmb	IAmb	12 56 23.3	
	comp=Z,10nm,1.1s						
K27K	Chicken	91.86	26	P	P	12 56 20.6	+0.1
	baz=274,SNR=7.3						
L27K	Beaver Creek,	92.04	27	IAmb	IAmb	12 56 22.6	
	comp=Z,5.2nm,0.7s						
L27K	Beaver Creek,	92.04	27	P	P	12 56 21.6	+0.3
	baz=274,SNR=7.8						
EGAK	Eagle	92.21	25	IAmb	IAmb	12 56 23.0	
	comp=Z,6.7nm,1.2s						
YUK3	Moose Creek	92.78	28	P	P	12 56 25.0	0.0
	baz=275						
ARCES	ARCESS Array B	92.88	340	P	P	12 56 22.7	-2.3
	comp=Z,4.3nm,0.5s,baz=87,slow=5.6,SNR=34						
ARCES				PKKP	PKKPdf	13 13 34.9	-0.6
	comp=Z,1.9nm,0.8s,baz=267,slow=3.6,SNR=5.6						
	comp=Z,4.3nm,0.5s						
PINM	Pinnacle	93.03	30	P	P	12 56 25.7	-0.3
	baz=275						
DAWY	Dawson	93.04	26	IAmb	IAmb	12 56 27.3	
	comp=Z,7.9nm,1.1s						
DAWY	Dawson	93.04	26	P	P	12 56 26.0	0.0
	baz=276						
I29M	Ogilvie Camp,	93.35	25	P	P	12 56 27.2	-0.1
	baz=277						
FINES	FINESS Array B	93.66	331	P	P	12 56 26.8	-2.0
	comp=Z,2.3nm,0.5s,baz=69,slow=4.6,SNR=31						
FINES				PKiKP	PKiKP	13 01 13.2	-0.3
	comp=Z,0.7nm,0.5s,baz=349,slow=2.8,SNR=4.6						
	comp=Z,2.3nm,0.5s						
YUK4	Talbot Arm	93.69	29	P	P	12 56 29.0	-0.2
	baz=277						
EPYK	Eagle Plains	93.85	23	P	P	12 56 29.5	-0.2
	baz=279						
HYT	Haines Junctio	94.30	29	IAmb	IAmb	12 56 33.5	
	comp=Z,11nm,1.0s						
HYT	Haines Junctio	94.30	29	P	P	12 56 32.2	+0.2
	baz=278						
M30M	Minto, Yukon	94.39	27	P	P	12 56 32.2	0.0
	baz=278,SNR=8.9						
INK	Inuvik	94.72	21	P	P	12 56 32.9	-0.5
	comp=Z,4.0nm,0.5s,baz=295,slow=3.7,SNR=34						
	comp=Z,4.0nm,0.5s						
INK	Inuvik	94.72	21	IAmb	IAmb	12 56 33.4	
	comp=Z,5.1nm,0.6s						
INK	Inuvik	94.72	21	P	P	12 56 33.0	-0.5
	baz=282						
N31M	Braeburn, Yuko	95.03	28	P	P	12 56 34.8	-0.4
	baz=279,SNR=5.3						
LSZ	Lusaka	95.32	255	P	P	12 56 37.4	-0.2
M31M	Drury Creek, Y	95.56	27	IAmb	IAmb	12 56 38.2	
	comp=Z,4.4nm,0.6s						
M31M	Drury Creek, Y	95.56	27	P	P	12 56 37.4	-0.1
	baz=280						
SKAG	Skagway	95.58	30	P	P	12 56 37.8	+0.2
	baz=279						
WHY	Whitehorse	95.60	29	P	P	12 56 37.8	0.0
	baz=280,SNR=8.5						
BURAR	Bucovina Array	95.73	318	IAmb	IAmb	12 56 38.6	
	comp=Z,4.6nm,0.7s						
BUR08	Bucovina Ar. S	95.74	318	P	P	12 56 37.8	-1.0
BUR08				IAmb	IAmb	12 56 38.0	
	comp=Z,4.6nm,0.8s						
FARO	Faro, Yukon	96.03	27	P	P	12 56 39.9	+0.2
	baz=281,SNR=23						
A36M	Sachs Harbour	96.42	17	P	P	12 56 41.3	+0.2
	baz=290						
MMPY	Sheldon Lake,	96.90	27	P	P	12 56 43.9	+0.3
	baz=283,SNR=5.7						
C36M	Paulatuk	97.72	19	P	P	12 56 46.8	-0.2
	baz=291						
DLBC	Dease Lake	98.48	31	P	Pdif	12 56 51.0	+0.1
	comp=Z,1.2nm,0.6s,baz=220,slow=2.6,SNR=6.0						
	comp=Z,1.2nm,0.6s						
DLBC	Dease Lake	98.48	31	IAmb	IAmb	12 56 58.4	
	comp=Z,4.5nm,1.2s						
TGTN	Hyland Airport	98.53	27	P	P	12 56 50.8	-0.2
	baz=286						
NB2	NORSAR Subarra	100.73	333	P	Pdif	12 56 58.0	-2.8
	comp=Z,2.3nm,0.8s,baz=72,slow=4.4						
NB2	NORSAR Subarra	100.73	333	P	Pdif	12 56 58.0	-2.8
	baz=72,slow=4.4						
NOA	NORSAR Array B	100.73	333	P	Pdif	12 56 58.4	-2.4
	comp=Z,0.8nm,0.5s,baz=72,slow=4.4,SNR=5.8						
RES	Resolute Bay	102.00	10	P	Pdif	12 57 04.5	-1.5
	comp=Z,1.6nm,0.7s,baz=292,slow=7.0,SNR=9.8						
GERES	GERESS Array B	103.06	320	P	Pdif	12 57 08.4	-3.1
	comp=Z,0.3nm,0.5s,baz=91,slow=4.9,SNR=3.6						
YKA	Yellowknife Ar	104.13	24	Pdiff	Pdif	12 57 16.0	+0.2
	comp=Z,0.3nm,0.6s,baz=297,slow=4.4,SNR=6.8						
YKA				PKiKP	PKiKP	13 01 31.7	-0.4
	comp=Z,0.3nm,0.5s,baz=302,slow=1.8,SNR=11						
YKA				PKKPbc	PKKPbc	13 13 03.3	-3.2
	comp=Z,0.8nm,0.7s,baz=112,slow=2.3,SNR=12						
J04D	Umpqua Nationa	107.43	44	P	PKiKP	13 01 39.3	+0.1
	baz=287						
L04D	Klamath Falls	107.59	45	P	PKiKP	13 01 39.8	+0.4
	baz=287						
I05D	Terrebonne, OR	107.63	43	P	PKiKP	13 01 39.8	+0.5
	baz=288						
K04D	Chiloquin, OR	107.86	45	P	PKiKP	13 01 39.8	0.0
	baz=287						
J05D	Fort Rock, OR	108.03	44	P	PKiKP	13 01 40.9	+0.7
	baz=288						
NVAR	Mina Array Bea	111.64	48	PKiKP	PKiKP	13 01 47.9	+0.7
	comp=Z,0.7nm,0.6s,baz=272,slow=2.3,SNR=9.6						
ARVC	Arvin	112.22	52	P	PKiKP	13 01 49.1	+1.0
	baz=287						
HLID	Hailey	112.59	42	P	PKiKP	13 01 50.0	+1.2
	baz=293						
DECC	Green Verdugo	112.86	53	P	PKiKP	13 01 49.8	+0.4
	baz=287						
EDW2	Edwards Air Fo	112.95	52	P	PKiKP	13 01 50.1	+0.5
	baz=287						
MPMC	Manual Prospec	112.99	50	P	PKiKP	13 01 50.5	+0.6
	baz=288						
CIS	Catalina Islan	113.03	53	P	PKiKP	13 01 51.0	+1.2
	baz=286						
BOZ	Bozeman (W)	113.55	39	P	PKiKP	13 01 51.2	+0.6
	baz=296						
EGMT	Eagleton	113.57	36	P	PKiKP	13 01 51.2	+0.8
	baz=299						
TPNV	Topopah Spring	113.66	49	P	PKiKP	13 01 51.5	+0.5
	baz=289						
R11A	Troy Canyon, C	113.68	48	P	PKiKP	13 01 51.6	+0.6
	baz=290						
TPFO	Pinon Flats	114.54	53	P	PKiKP	13 01 53.8	+1.0
	baz=288						
MONP2	Monument Peak	114.78	53	P	PKPdf	13 01 54.5	+1.1
	baz=287						
BELC	Belle Mtn. Jos	114.79	52	P	PKPdf	13 01 54.1	+0.8
	baz=288						
GMRC	Granite Mounta	114.81	51	P	PKPdf	13 01 54.0	+0.8
	baz=289						
DUG	Dugway, Tooele	115.00	45	P	PKiKP	13 01 53.2	-0.3
	baz=293						
SWSC	Sam W. Stewart	115.27	53	P	PKiKP	13 01 54.0	0.0
	baz=288						
BW06	Boulder Array	116.14	41	P	PKiKP	13 01 56.0	+0.2
	baz=297						
PDAR	Pinedale Array	116.14	41	PKP	PKPdf	13 01 54.6	-1.1
	comp=Z,0.4nm,0.4s,baz=139,slow=2.0,SNR=5.2						
PDAR				PKKPab	PKKPab	13 12 30.4	-1.0
	comp=Z,0.8nm,0.5s,baz=115,slow=6.5,SNR=11						
LAO	LASA Array	116.31	36	P	PKiKP	13 01 56.3	+0.6
	baz=301						
WUAZ	Wupatki	117.85	49	P	PKiKP	13 01 59.5	+0.4
	baz=292						
K22A	Casper	118.17	40	P	PKPdf	13 01 59.5	-0.1
	baz=299						
RWWY	Rawlins	118.19	41	PKPdf	PKPdf	13 01 59.0	-0.7
O20A	White River Ci	118.21	43	P	PKiKP	13 01 60.0	+0.2
	baz=297						
MVCO	Mesa Verde	119.30	46	P	PKPdf	13 02 02.0	0.0
	baz=295						
TUC	Tucson	119.47	52	P	PKiKP	13 02 02.9	+0.5
	baz=291						
ULM	Lac du Bonnet	119.67	28	PKP	PKPdf	13 02 00.2	-1.7
	comp=Z,3.5nm,0.5s,baz=209,slow=2.3,SNR=4.5						
ISCO	Idaho Springs	120.15	43	P	PKiKP	13 02 04.1	+0.4
	baz=299						
S22A	4UR Ranch, Cre	120.26	45	P	PKiKP	13 02 04.4	+0.4
	baz=297						
Q24A	Divide	120.87	43	P	PKPdf	13 02 05.1	0.0
	baz=299						
TORD	Torodi Ar. Bea	121.09	285	PKP	PKPdf	13 02 05.0	-0.6
	comp=Z,5.6nm,0.7s,baz=66,slow=1.7,SNR=40						
SDCO	Great Sand Dun	121.20	45	P	PKiKP	13 02 06.0	+0.2
	baz=298						
MDT	Midelt	121.47	309	PKP	PKiKP	13 02 06.5	+0.3
	comp=Z,2.3nm,0.5s,baz=46,slow=2.0,SNR=12						
121A	Cookes Peak, D	121.74	51	P	PKiKP	13 02 07.4	+0.6
	baz=293						
ANMO	Albuquerque	121.76	48	P	PKiKP	13 02 07.0	+0.1
	baz=296						
T25A	Trinidad	122.25	45	P	PKPdf	13 02 07.6	0.0
	baz=298						
EYMN	Ely	123.33	28	P	PKPdf	13 02 08.9	-0.2
	baz=316						
ECSD	EROS Data Cent	123.56	34	P	PKPdf	13 02 09.8	+0.1
	baz=309						
MNTX	Cornudas Mount	123.94	51	P	PKPdf	13 02 10.4	-0.4
	baz=294						
SCHQ	Schefferville	124.67	7	PKP	PKPdf	13 02 11.8	+0.3
	comp=Z,6.1nm,0.5s,baz=346,slow=1.8,SNR=26						
AMTX	Amarillo	125.28	46	P	PKPdf	13 02 12.9	-0.4
	baz=299						
TXAR	Lajitas Array	126.26	53	PKP	PKiKP	13 02 15.8	0.0
	comp=Z,0.9nm,0.7s,baz=212,slow=1.3,SNR=14						
KSU1	Kansas State U	126.40	39	P	PKPdf	13 02 15.2	0.0
	baz=307						
JFWS	Jewell Farm	127.55	31	P	PKPdf	13 02 17.2	-0.1
	baz=315						
KIC	Kosan Boka	128.17	278	*e*PKP1	PKPdf	13 02 19.1	-0.2
	comp=Z,5.8nm,0.8s						
DBIC	Dimbokro	128.25	278	PKP	PKPdf	13 02 19.4	-0.1
	comp=Z,3.6nm,0.7s,baz=168,slow=2.8,SNR=4.9						
TIC	Toumodi	128.42	278	*e*PKP1	PKPdf	13 02 19.7	-0.1
LIC	Lamto	128.46	278	*e*PKP1	PKPdf	13 02 20.2	+0.4
	comp=Z,16nm,1.3s						
JCT	Junction City	128.77	50	P	PKPdf	13 02 19.8	-0.3
	baz=298						
CCM	Cathedral Cave	130.33	36	P	PKPdf	13 02 22.9	+0.1
	baz=311						
U40A	Yellville	130.43	39	P	PKPdf	13 02 22.7	-0.3
	baz=309						
W39A	Magazine	130.54	41	P	PKPdf	13 02 23.0	-0.3
	baz=307						
MIAR	Mount Ida	131.06	42	P	PKPdf	13 02 24.4	+0.1
	baz=307						
ACSO	Alum Creek Sta	133.17	28	P	PKPdf	13 02 28.0	-0.1
	baz=322						
M53A	WI Miller and	133.23	25	P	PKPdf	13 02 28.5	+0.3
	baz=326						
WVT	Waverly	133.64	36	P	PKPdf	13 02 29.7	+0.6
	baz=314						
P52A	Corning	134.04	28	P	PKPdf	13 02 30.1	+0.4
	baz=323						
BINY	Binghamton	134.40	21	P	PKPdf	13 02 31.1	+0.8
	baz=332						
SSPA	Standing Stone	135.05	23	P	PKiKP	13 02 32.6	-0.5
	baz=329						
L61B	Northampton	135.25	17	P	PKPdf	13 02 32.2	+0.3
	baz=336						
TZTN	Tazewell	135.73	32	P	PKPdf	13 02 33.1	+0.2

	baz=319						
PAL	Palisades	136.17	19	P	PKiKP	13 02 34.7	-0.6
	baz=334						
LRAL	Lakeview Retre	136.25	38	P	PKiKP	13 02 35.4	-0.3
	baz=312						
PLCA	Paso Flores	137.43	164	PKP	PKiKP	13 02 37.5	-0.5
	comp=Z,2.5nm,0.8s,baz=209,slow=6.5,SNR=6.9						
KMSC	Kings Mountain	137.96	31	P	PKiKP	13 02 39.0	-0.2
	baz=321						
GOGA	Godfrey	138.09	35	P	PKiKP	13 02 39.1	-0.4
	baz=317						
CPUP	Villa Florida	153.79	178	PKP	PKPdf	13 03 03.9	0.0
	comp=Z,13nm,1.4s,baz=139,slow=2.6,SNR=5.3						
CPUP				PKPbc	PKiKP	13 03 12.7	+0.8
	comp=Z,3.3nm,0.7s,baz=82,slow=3.1,SNR=7.0						
CPUP				PKPab	PKPab	13 03 25.3	+0.3
	comp=Z,4.2nm,0.8s,baz=204,slow=5.4,SNR=6.5						
LVC	Limon Verde	154.38	152	PKPbc	PKiKP	13 03 15.5	+1.7
	comp=Z,5.4nm,0.7s,baz=271,slow=5.3,SNR=5.2						
LPAZ	La Paz	160.04	145	PKP	PKPdf	13 03 14.5	+1.6
	comp=Z,3.1nm,0.8s,baz=78,slow=3.2,SNR=11						
LPAZ				PKPab	PKPab	13 03 55.4	+2.4
	comp=Z,4.2nm,0.5s,baz=186,slow=2.5,SNR=10						
LPAZ	La Paz	160.04	145		PKPdf	13 03 14.1	+1.2
BDFB	Brasilia	162.43	207	PKPab	PKPab	13 04 03.2	+0.4
	comp=Z,2.9nm,0.5s,baz=186,slow=6.4,SNR=4.2						
SDV	Santo Domingo	163.22	58	PKPab	PKPab	13 04 07.7	+1.1
	comp=Z,5.4nm,0.3s,baz=289,slow=3.1,SNR=3.3						
SIV	San Ignacio	163.42	164	PKP	PKPdf	13 03 16.4	+0.7
	comp=Z,4.5nm,0.8s,baz=254,slow=1.1,SNR=16						
SIV				PKPab	PKPab	13 04 07.8	+0.8
	comp=Z,2.6nm,0.5s,baz=189,slow=3.0,SNR=9.6						

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*ISU **05** 12:52:41, 41°.06N×69°.53E, h30^{km}*
*SOME **05** 12:52:41.5, 40°.87N×70°.03E, h15^{km}*
*KRNET **05** 12:52:42.5±0.1, 41°.15N×69°.63E, h19^{km}, mb2.7*
ISC 05 12:52:42.7±1.3, **41°.07N**±0°.03×**69°.64E**±0°.05, **h2**^{km}±12^{km}, **n16**, σ**1^{s}.93**/27, **15C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBZ	Yangibazar	0.23	349	S	Sg	12 52 53.9	+3.7
TAS	Tashkent	0.36	314	⇑eP	Pg	12 52 49.1	-0.6
	baz=6.0						
TAS				⇑eS	Sg	12 52 53.5	-0.9
	baz=6.0						
CHRV	Charvak	0.61	22	P	Pb	12 52 54.8	-1.4
IUG	Iuzhnay	1.11	15	eP	Pn	12 53 07.5	+2.2
	809nm,0.3s						
IUG				eS	Sn	12 53 26.0	+4.7
	133nm,0.3s						
TRKS	Terek-Say	1.22	67	⇑iP	Pn	12 53 04.4	-2.5
	baz=75						
TRKS				⇑iS	Sb	12 53 21.2	-1.6
	baz=75						
BTK	Batken	1.35	138	⇑iP	Pb	12 53 08.3	-0.5
	baz=40						
BTK				⇑iS	Sg	12 53 28.2	+2.1
	baz=40						
BTK	Batken	1.35	138	P	Pb	12 53 08.1	-0.7
CHMI	Chimion	1.64	119	P	Pb	12 53 13.2	-0.4
FRG	Fergana	1.77	113	S	Sg	12 53 40.8	+1.2
ARK	Arkit	1.89	67	⇑iP	Pn	12 53 15.9	-0.2
	baz=69						
ARK				⇑iS	Sb	12 53 41.1	-0.9
	baz=69						
BRLS	Borolday	1.96	4	eP	Pn	12 53 16.5	-0.5
	3.8nm,0.4s						
BRLS				eS	Sb	12 53 41.1	-2.9
	18nm,0.4s						
KK31	Karatay Array	2.13	17	P	Pg	12 53 22.9	-0.6
	1.8nm,0.4s,baz=197,slow=15,SNR=31						
KK31				⇑S	Sg	12 53 53.9	+2.8
	6.6nm,0.4s,baz=203,slow=26,SNR=19						
GAR	Garm	2.13	166	⇑iP	Pb	12 53 20.5	-1.6
	baz=66						
GAR				⇑iS	Sb	12 53 49.4	+0.3
	baz=66						
OHH	Osh	2.45	102	⇑iP	Pn	12 53 24.4	+0.7
	baz=4.0						
OHH				⇑iS	Sn	12 53 54.9	+0.7
	baz=4.0						
MRKS	Merke	3.15	57	eP	Pb	12 53 37.4	-2.0
	13nm,0.5s						
MRKS				eS	Sb	12 54 17.4	-1.1
	2.7nm,0.3s						
ARLS	Aral	3.60	76	⇑iP	Pn	12 53 40.7	+1.0
	baz=77						
ARLS				⇑iS	Sn	12 54 22.5	-0.4
	baz=77						

NNC 05 13:17:51.1±0.3, **50°.03N**×**78°.75E, h0**^{km}, **mb3.5, mpv3.2, 19C-8D, Error ellipse: s-maj=2.9km s-min=1.6km az=67.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.57	345	⇑P	Pg	13 18 02.0	0.0
KUR07				⇑S	Sg	13 18 10.8	+1.4
KUR06	Kurchatov Arra	0.59	346	⇑P	Pg	13 18 02.4	0.0
KUR06				⇓S	Sg	13 18 11.4	+1.4
KUR14	Kurchatov Arra	0.59	350	⇑P	Pg	13 18 02.3	-0.1
KUR14				⇓S	Sg	13 18 11.1	+1.0
KUR15	Kurchatov Arra	0.60	348	⇑P	Pg	13 18 02.6	0.0
KUR15				⇓S	Sg	13 18 11.6	+1.3
KURBB	Kurchatov Arra	0.61	347	⇑P	Pg	13 18 02.7	0.0
	30nm,0.4s						
KURBB				⇑S	Sg	13 18 11.8	+1.2
	74nm,0.5s						
KUR16	Kurchatov Arra	0.61	345	⇑P	Pg	13 18 02.8	-0.1
KUR16				⇑S	Sg	13 18 12.0	+1.1
KUR05	Kurchatov Arra	0.62	347	⇑P	Pg	13 18 03.0	-0.1
KUR05				⇑S	Sg	13 18 12.1	+0.8
KUR17	Kurchatov Arra	0.62	343	⇑P	Pg	13 18 03.3	+0.2
KUR17				⇓S	Sg	13 18 12.6	+1.4
KUR04	Kurchatov Arra	0.64	348	⇑P	Pg	13 18 03.5	0.0
KUR04				⇓S	Sg	13 18 12.8	+1.0
KURK	Kurchatov	0.69	353	⇑P	Pg	13 18 04.0	-0.3
	13nm,0.4s						
KURK				⇑S	Sg	13 18 14.3	+1.1
	6.1nm,0.4s						
SEM	Semipalatinsk	1.03	68	P	Pg	13 18 10.6	-0.4
	4.9nm,0.1s						
SEM				S	Sb	13 18 26.1	-0.2
	27nm,0.1s						
MAKZ	Makanchi	3.88	145	⇓Pg	Pb	13 19 00.9	+0.5
	1.3nm,0.5s						
MAKZ				⇓Lg	Lg	13 19 52.7	
	6.1nm,0.6s						
MK31	Makanchi Array	4.01	143	⇑Pg	Pb	13 19 03.9	+1.3
	1.4nm,0.4s,baz=328,slow=14,SNR=13						
MK31				⇑Lg	Lg	13 19 59.3	
	7.6nm,0.6s,baz=346,slow=28,SNR=18						
OTUK	Ortayu	4.57	249	⇓Pn	Pn	13 19 02.0	+0.4
	1.9nm,0.5s						
OTUK				⇑Pg	Pb	13 19 14.5	+2.2
	0.9nm,0.5s						
OTUK				⇑Lg	Lg	13 20 16.0	
	4.1nm,0.6s						
KAPS	Kapalarasan	4.77	175	Pg	Pg	13 19 19.1	-3.4
	1.2nm,0.3s						
KAPS				Lg	Lg	13 20 22.9	
	11nm,0.5s						
BTLS	Baital	5.92	214	Pg	Pg	13 19 40.7	-3.8
BTLS				Lg	Lg	13 21 00.0	
CHKK	Chushkaly	6.30	192	Pg	Pg	13 19 47.8	-3.9
CHKK				Lg	Lg	13 21 12.3	
KURS	Kuram	6.56	184	Pg	Pg	13 19 52.4	-4.4
	1.4nm,0.3s						
KURS				Lg	Lg	13 21 19.5	
	3.1nm,0.6s						
KST	Kastek	7.25	196	Pg	Pg	13 20 06.1	-3.9
	1.3nm,0.6s						

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*IDC **05** 13:20:21.1±0.7, 28°.22S×175°.63W, h0^{km}, mb4.0/7, mbtmp4.1/9, ML4.5/2, Error ellipse: s-maj=29.7km s-min=19.6km az=144.0*
*NEIC **05** 13:20:21.6±1.8, 28°.1S±0°.2×175°.7W±0°.1, h10^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=42.1km s-min=10.9km az=332.0*
ISC 05 13:20:25.6±0.7, **28°.4S**±0°.1×**175°.7W**±0°.1, **h35**^{km}, **n31**, σ**1^{s}.78**/32, **mb4.2**/14, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.14	246	Pn	Pn	13 21 01.7	+2.8
	268nm,0.3s,baz=68,slow=12,SNR=13						
RAO				Sn	Sn	13 21 28.0	+3.8
	2µm,0.3s,baz=94,slow=20,SNR=12						
	763nm,0.2s						
RAO	Raoul Island	2.14	246		Pn	13 20 59.0	+0.1
URZ	Urewera	11.54	210	Pn	Pn	13 23 04.5	-3.2
	0.4nm,0.3s,baz=287,slow=24,SNR=1.6						
URZ				Sn	Sn	13 25 07.0	-8.2
	0.9nm,0.3s,baz=241,slow=4.3,SNR=3.8						
URZ	Urewera	11.54	210		Pn	13 23 05.0	-2.7
RPZ	Rata Peaks	18.64	211	P	Pn	13 24 41.9	+1.2
	0.8nm,0.3s,baz=92,slow=0.3,SNR=5.9						
	4.5nm,0.5s						
EIDS	Eidsvold	29.75	268	P	P	13 26 26.9	-2.0
EIDS				IAmb	IAmb	13 26 55.3	
	comp=Z,7.6nm,1.2s						
CAN	Canberra	30.67	248	P	P	13 26 34.2	-2.7
CAN				IAmb	IAmb	13 27 02.2	
	comp=Z,20nm,1.4s						
TAU	Tasmania Unive	33.09	234	P	P	13 26 56.1	-1.9
STKA	Stephens Creek	36.94	254	P	P	13 27 32.8	+1.4
	comp=Z,2.1nm,0.8s,baz=286,slow=24,SNR=2.6						
	comp=Z,2.1nm,0.8s						
STKA	Stephens Creek	36.94	254	P	P	13 27 30.6	-0.8
AS31	Alice Springs	45.29	264	P	P	13 28 37.8	-2.4
AS31				IAmb	IAmb	13 29 00.0	
	comp=Z,2.0nm,1.4s						
ASAR	Alice Springs	45.29	264	P	P	13 28 41.0	+0.8
	comp=Z,0.4nm,0.5s,baz=106,slow=6.8,SNR=12						
	comp=Z,0.4nm,0.5s						
ASAR	Alice Springs	45.29	264	P	P	13 28 38.8	-1.4
WR0	Warramunga Arr	45.92	269	P	P	13 28 42.9	-2.3
WR0				IAmb	IAmb	13 28 59.7	
	comp=Z,8.9nm,1.4s						
WB2	Warramunga Arr	46.09	269	P	P	13 28 46.8	+0.3
WB2				IAmb	IAmb	13 28 57.1	
	comp=Z,5.8nm,1.1s						
WRAB	Tennant Creek	46.10	269	P	P	13 28 44.6	-1.9
WRAB				IAmb	IAmb	13 28 57.2	
	comp=Z,6.5nm,1.1s						
WRA	Warramunga Arr	46.10	269	P	P	13 28 47.3	+0.7
	comp=Z,0.9nm,0.8s,baz=108,slow=6.5,SNR=12						
	comp=Z,0.9nm,0.8s						
WRA	Warramunga Arr	46.10	269	P	P	13 28 46.6	0.0
WB0	Warramunga Arr	46.12	269	P	P	13 28 46.9	+0.1
WB0				IAmb	IAmb	13 29 02.2	
	comp=Z,5.3nm,1.4s						
QSPA	South Pole Qui	61.71	180	P	P	13 30 42.4	+2.3
	comp=Z,5.1nm,0.9s,baz=12,slow=0.8,SNR=17						
	comp=Z,5.1nm,0.9s						
QSPA	South Pole Qui	61.71	180	P	P	13 30 42.1	+2.0
H03N2	Juan Fernandez	80.04	123	T	T	15 02 42.0	
	SNR=5.1						
NVAR	Mina Array Bea	85.40	42	P	P	13 33 00.8	+1.2
	comp=Z,0.9nm,0.8s,baz=224,slow=8.6,SNR=7.9						
	comp=Z,0.9nm,0.8s						
TXAR	Lajitas Array	89.60	56	P	P	13 33 21.0	+1.1
	comp=Z,1.4nm,1.2s,baz=201,slow=6.7,SNR=4.4						
	comp=Z,1.4nm,1.2s						
ILAR	Eielson Array	95.54	12	P	P	13 33 46.7	+0.4
	comp=Z,0.5nm,0.7s,baz=218,slow=5.2,SNR=5.1						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	118.03	310	PKP	PKPdf	13 39 08.0	-0.5
	comp=Z,0.7nm,0.8s,baz=73,slow=4.1,SNR=5.1						
ARCES	ARCESS Array B	137.03	349	PKP	PKiKP	13 39 44.8	-0.9
	comp=Z,1.7nm,0.9s,baz=224,slow=3.3,SNR=3.6						
FINES	FINESS Array B	143.90	342	PKP	PKPdf	13 39 55.1	-1.4
	comp=Z,1.1nm,0.5s,baz=65,slow=1.6,SNR=11						
NOA	NORSAR Array B	147.03	354	PKPbc	PKPbc	13 40 04.1	+0.1
	comp=Z,1.2nm,0.8s,baz=15,slow=3.0,SNR=4.2						
AKASG	Malin Array Be	150.84	327	PKPbc	PKiKP	13 40 14.3	-0.3
	comp=Z,0.3nm,0.3s,baz=52,slow=4.6,SNR=4.7						
TORD	Torodi Ar. Bea	164.64	170	PKP	PKPdf	13 40 26.3	-0.1
	comp=Z,0.3nm,0.8s,baz=232,slow=3.6,SNR=3.8						
TORD				PKPab	PKPab	13 41 21.9	+0.4
	comp=Z,1.1nm,1.0s,baz=194,slow=4.2,SNR=5.0						

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*IDC **05** 13:23:22.4±2.9, 21°.92S×170°.29E, h0^{km}, mb4.2/5, mbtmp4.2/6, ML3.8/1, Error ellipse: s-maj=95.4km s-min=33.3km az=146.0*
ISC 05 13:23:31.8±1.1, **21°.1S**±0°.4×**169°.6E**±0°.2, **h35**^{km}, **n20**, σ**2^{s}.52**/21, **mb4.1**/5, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.07	251	Pn	Pn	13 24 19.4	+1.4
	9.2nm,0.3s,baz=294,slow=21,SNR=402						
DZM				Sn	Sn	13 24 41.1	-12
	15nm,0.3s,baz=132,slow=17,SNR=10						
	50nm,0.8s						
DZM	Mont Dzumac	3.07	251	ePn	Pn	13 24 19.9	+1.9
DZM	Mont Dzumac	3.07	251	Sn	Sn	13 25 00.6	+7.1
	8.1nm,0.3s,baz=118,slow=22,SNR=3.3						
MSVF	Nonsavu	8.67	69	Pn	Pn	13 25 36.4	+1.5
	0.6nm,0.3s,baz=298,slow=23,SNR=4.0						
STKA	Stephens Creek	27.17	241	P	P	13 29 09.8	-2.3
	3.1nm,0.7s,baz=152,slow=7.0,SNR=5.5						
	3.1nm,0.7s						
WRA	Warramunga Arr	32.98	266	P	P	13 30 03.8	+0.1
	2.1nm,0.6s,baz=98,slow=8.2,SNR=16						
	2.1nm,0.6s						
ASAR	Alice Springs	33.03	259	P	P	13 30 03.7	-0.4
	2.1nm,0.8s,baz=86,slow=9.0,SNR=17						
	2.1nm,0.8s						
FITZ	Fitzroy Crossi	41.41	266	P	P	13 31 15.8	+0.7
	baz=123,slow=8.4						
CMAR	Chiang Mai Arr	79.56	294	P	P	13 35 37.6	+2.0
	2.3nm,0.8s,baz=136,slow=3.8,SNR=14						
	2.3nm,0.8s						
SONM	Songino Array	88.89	323	P	P	13 36 23.2	+0.6
	0.8nm,0.8s,baz=141,slow=5.2,SNR=4.6						
	0.8nm,0.8s						
JAVC	Velka Javorina	144.37	328	ePKP	PKPdf	13 43 02.9	-1.4
VRAC	Vranov	144.59	329	ePKP	PKPbc	13 43 02.0	-1.3
CLL	Collm	144.73	334	i PKPbc	PKPab	13 43 01.5	-2.0
	comp=Z,8.0nm,0.8s						
CLL				i PKPab	PKiKP	13 43 08.1	-0.4
CLL				i PKPbc	sPKPdf	13 43 17.4	-1.7
	comp=Z,15nm,0.9s						
CLL				i x	x	13 43 21.3	
CLL				e(PKPab)	pPKPdf	13 43 23.0	+7.6
KRUC	Moravsky	144.86	329	ePKP	PKPab	13 43 02.6	-1.5
RONA	Rosalia, Austr	145.82	327	eP	PKiKP	13 43 08.0	-2.9
	comp=Z,5.5nm,1.2s						
CONA	Conrad Observa	145.89	328	eP	PKPab	13 43 06.8	-1.3
	comp=Z,4.3nm,1.0s						
GERES	GERESS Array B	146.27	331	PKPbc	PKPbc	13 43 06.9	-1.9
	comp=Z,2.1nm,0.8s,baz=70,slow=4.4,SNR=17						
ARSA	Arzberg	146.51	327	eP	PKPdf	13 43 07.0	-0.9
	comp=Z,4.1nm,1.6s						
WATA	Walderalm	148.35	331	eP	PKPbc	13 43 12.0	-2.6
	comp=Z,6.2nm,1.3s						
MOTA	Moosalm	148.55	331	eP	PKPbc	13 43 12.6	-2.5
	comp=Z,5.7nm,1.0s						

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*IDC **05** 13:23:37.5±2.1, 21°.84S×170°.46E, h0^{km}, mb4.2/7, mbtmp4.2/8, ML3.8/1, Error ellipse: s-maj=85.7km s-min=25.9km az=159.0*
*GCMT **05** 13:23:37.0±0.3, 21°.70S±0°.03×170°.55E±0°.03, h14^{km}±1^{km}, MW4.8/85, Moment Tensor Solution. s18,c21; s85,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.07±.16; $M_{\theta\theta}$1.22±.11; $M_{\phi\phi}$0.85±.09; $M_{r\theta}$0.83±.28; $M_{\theta\phi}$0.97±.06; $M_{\phi r}$-0.53±.25; Best double couple: $M_0$2.24400×10^{16} NP1:ϕ_s32.00000°, δ44.00000°, λ-120.00000°. NP2: ϕ_s250.00000°, δ53.00000°, λ-64.00000°. Principal axes: T 2.0480, Plg5.0000°, Azm323.0000°; N 0.3960, Plg20.0000°, Azm54.0000°; P -2.4400, Plg69.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 05 13:23:38.0±1.8, **22°.0S**±0°.5×**170°.5E**±0°.2, **h10**^{km}, **n22**, σ**1^{s}.44**/19, **mb4.2**/7, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.80	268	eLR	LR	13 25 00.0	
DZM	Mont Dzumac	3.80	268	Pn	Pn	13 24 36.5	-0.2
	7.0nm,0.3s,baz=113,slow=21,SNR=6.3						
	28nm,0.3s						
ASAR	Alice Springs	33.75	260	P	P	13 30 20.8	+0.7
	2.5nm,1.0s,baz=105,slow=3.4,SNR=5.4						
	2.5nm,1.0s						
WRA	Warramunga Arr	33.82	267	P	P	13 30 20.1	-0.5
	2.1nm,0.5s,baz=98,slow=8.2,SNR=10						
	2.1nm,0.5s						
PPT2	Papeete2	37.71	91	eLR	LR	13 40 48.0	
TAOE	Nuku Hiva Isla	49.09	83	eLR	LR	13 46 50.8	
	comp=Z,202nm,27.6s						
KSRS	Korea Array	71.47	325	P	P	13 34 59.0	+0.3
	2.1nm,0.9s,baz=150,slow=7.6,SNR=4.3						
	2.1nm,0.9s						
CMAR	Chiang Mai Arr	80.75	294	P	P	13 35 53.5	+1.5
	3.7nm,0.8s,baz=138,slow=3.9,SNR=13						
	3.7nm,0.8s						
NVAR	Mina Array Bea	89.72	48	P	P	13 36 38.4	+1.6
	0.9nm,1.0s,baz=234,slow=8.4,SNR=4.1						
	0.9nm,1.0s						
SONM	Songino Array	90.15	323	P	P	13 36 38.6	+0.1
	1.5nm,0.8s,baz=144,slow=5.2,SNR=5.7						
	1.5nm,0.8s						
ILAR	Eielson Array	92.51	17	P	P	13 36 47.8	-1.0
	0.3nm,0.6s,baz=228,slow=5.1,SNR=4.2						
	0.3nm,0.6s						
ARCES	ARCESS Array B	128.04	345	PKP	PKiKP	13 42 43.9	-0.2
	1.6nm,0.8s,baz=65,slow=3.1,SNR=5.7						
MORC	Moravsky Berou	145.06	329	ePKP	PKiKP	13 43 17.4	-2.0
JAVC	Velka Javorina	145.61	328	ePKP	PKiKP	13 43 18.8	-1.8
VRAC	Vranov	145.83	329	ePKP	PKiKP	13 43 18.1	-2.8
KRUC	Moravsky	146.09	329	ePKP	PKiKP	13 43 19.0	-2.5
CONA	Conrad Observa	147.13	328	eP	PKiKP	13 43 22.9	-0.9
	8.2nm,1.2s						
GERES	GERESS Array B	147.50	331	PKPbc	PKiKP	13 43 22.7	-1.8
	3.8nm,0.8s,baz=48,slow=4.0,SNR=13						
WATA	Walderalm	149.57	331	eP	PKiKP	13 43 28.6	-0.3
	5.5nm,1.0s						
WTTA	Wattenberg	149.60	331	eP	PKiKP	13 43 28.8	-0.2
	7.6nm,1.2s						
MOTA	Moosalm	149.77	332	eP	PKiKP	13 43 28.4	-1.0
	8.1nm,0.9s						
FETA	Feichten	150.19	332	eP	PKiKP	13 43 29.9	-0.3
	6.4nm,1.0s						

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*IGQ **05** 13:34:14±2.4, 0°S±9°×8°1W±1°5, h5^{km}*
*IDC **05** 13:34:32.5±3.5, 0°.29S×80°.51W, h152^{km}±34^{km}, mb3.2/7, mbtmp3.9/10, MS3.4/1, Error ellipse: s-maj=32.8km s-min=14.9km az=67.0*
ISC 05 13:34:16.5±0.8, **0°.11S**±0°.05×**80°.69W**±0°.08, **h9**^{km}, **n38**, σ**1^{s}.97**/32, **mb3.7**/6, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CABP	Cabo Pasado	0.38	136	P	Pb	13 34 25.0	-0.4
JAMA	Jama	0.51	107	P	Pb	13 34 28.0	+0.3
FLF1	Flavio Alfaro-	0.88	106	P	Pn	13 34 36.0	+0.8
MAG1	Magdalena	0.92	88	P	Pn	13 34 37.0	+1.3
GGPT	Toaza - Volcan	2.07	93	P	Pn	13 34 52.0	+0.1
PINO	Pino	2.08	91	P	Pn	13 34 53.0	+0.8
YANA	Yana	2.12	90	P	Pn	13 34 53.0	+0.4
PAST	Pastocalle	2.13	106	P	Pn	13 34 53.0	+0.3
CHSH	Refugio Sur-Vo	2.28	127	P	Pb	13 34 56.0	-2.2
URCU	Urcuqui	2.49	77	P	Pb	13 35 00.0	-1.8
ANTM	Antisana-La Mi	2.50	100	P	Pb	13 35 01.0	-1.0
TUMC	Tumaco	2.75	46	eP	Pn	13 34 57.7	-3.1
CMBC	Cumbal	3.05	70	eP	Pn	13 35 07.9	+2.6
CCUFI	Cufio, Nario	3.60	68	eP	Pb	13 35 20.0	-0.7
GCUF	Volcan Galeras	3.60	68	eP	Pn	13 35 14.7	+1.7
CPAS1	Pasto	3.61	69	eP	Pn	13 35 14.7	+1.6
GR1C	Gorgona, Isla	3.99	39	eP	Pg	13 35 33.0	-0.1
CRUC	La Cruz	4.09	66	eP	Pn	13 35 22.3	+2.6
SOTA	Rioblanco	4.65	61	eP	Pn	13 35 30.0	+2.5
PCON	Cinco Dias	4.93	61	eP	Pn	13 35 33.6	+2.3
MALC	Bahia Malaga	5.29	39	eP	Pn	13 35 37.6	+1.8
MARP	Paez Belalcaza	5.57	58	eP	Pn	13 35 44.3	+4.4
YOTC	Yotoco, Valle	5.95	47	eP	Pb	13 35 55.2	-5.3
PLMC	San Jos del P	6.65	41	eP	Pb	13 36 08.8	-3.7
ORTC	Ortega, Tolima	6.75	54	eP	Pn	13 36 04.5	+8.6
PRAC	Prado	6.93	57	eP	Pn	13 36 04.9	+6.5
ROSC	El Rosal	8.04	52	P	Pb	13 36 26.4	-10
	18nm,0.6s,baz=91,slow=20,SNR=6.0						
NNA	Nana	12.40	162	P	Pn	13 37 21.2	+7.8
	5.2nm,0.4s,baz=338,slow=11,SNR=3.6						
SDV	Santo Domingo	13.43	48	P	P	13 37 38.3	+1.2
	7.0nm,0.4s,baz=185,slow=7.1,SNR=6.7						
LPAZ	La Paz	20.29	143	P	Pn	13 38 54.1	-1.3
	4.2nm,0.8s,baz=320,slow=11,SNR=14						
LPAZ				LR	LR	13 48 27.6	
	comp=Z,101nm,18.7s,baz=3.5,slow=42						
	4.2nm,0.8s						
SIV	San Ignacio	24.98	130	P	P	13 39 40.0	-0.8
	1.1nm,0.5s,baz=301,slow=10,SNR=8.5						
	1.1nm,0.5s						
TXAR	Lajitas Array	36.59	325	P	P	13 41 25.2	+1.9
	0.1nm,0.4s,baz=310,slow=15,SNR=2.8						
	0.1nm,0.4s						
PLCA	Paso Flores	41.47	168	P	P	13 42 02.9	-1.0
	0.9nm,0.9s,baz=14,slow=12,SNR=3.0						
	0.9nm,0.9s						
NVAR	Mina Array Bea	51.61	322	P	P	13 43 26.2	+2.4
	1.3nm,0.9s,baz=138,slow=7.4,SNR=8.4						
	1.3nm,0.9s						
YKA	Yellowknife Ar	67.44	344	P	P	13 45 12.4	+0.1
	0.3nm,0.7s,baz=134,slow=5.8,SNR=7.0						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	82.61	77	P	P	13 46 38.6	-2.3
	0.4nm,0.7s,baz=278,slow=4.3,SNR=2.6						
	0.4nm,0.7s						
ASAR	Alice Springs	138.94	232	PKP	PKPdf	13 53 42.9	-1.5
	0.4nm,0.9s,baz=118,slow=2.5,SNR=2.8						
WRA	Warramunga Arr	140.33	238	PKP	PKPdf	13 53 45.7	-1.4
	0.8nm,1.0s,baz=106,slow=2.1,SNR=4.6						

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*NEIC **05** 13:49:30.5±1.3, 36°.46N±0°.03×114°.03W±0°.03, h5^{km}±6^{km}, ML3.8/10, Mwr3.8/99, ML3.8/16(REN), Error ellipse: s-maj=4.8km s-min=3.2km az=219.0*
*REN **05** 13:49:30.9±1.6, 36°.48N±0°.02×113°.99W±0°.03, h11^{km}±8^{km}, Error ellipse: s-maj=3.8km s-min=2.8km az=75.0*
*IDC **05** 13:49:31.3±0.7, 36°.47N×114°.00W, h0^{km}, mb3.3/3, mbtmp3.5/11, ML3.4/8, MS3.3/4, Error ellipse: s-maj=9.6km s-min=7.9km az=49.0*
*ANF **05** 13:49:32.5±1.1, 36°.47N×114°.06W, h12^{km}±9^{km}, ML4.0/31, Error ellipse: s-maj=2.9km s-min=2.3km az=88.0*
*NEIC **05** 13:49:32, 36°.52N×114°.05W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.49; $M_{\theta\theta}$0.16; $M_{\phi\phi}$4.33; $M_{r\theta}$1.82; $M_{\theta\phi}$0.48; $M_{\phi r}$3.75; Fault plane solution: $M_0$6.09000×10^{14} NP1:ϕ_s199.24000°, δ66.82000°, λ-80.15000°. NP2:ϕ_s355.44000°, δ25.08000°, λ-111.78000°. Principal axes: T 5.9211, Plg21.0000°, Azm282.0000°; N 0.3298, Plg9.0000°, Azm15.0000°; P -6.2509, Plg67.0000°, Azm127.0000°;*
ISC 05 13:49:31.6±0.6, **36°.46N**±0°.02×**113°.99W**±0°.02, **h10**^{km}, **n97**, σ**1^{s}.70**/119, **mb3.4**/3, **Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ICU	Indian Springs	0.69	5		Pg	13 49 44.1	-0.9
ICU					Sg	13 49 53.5	-0.6
LCMT	Little Creek M	0.82	47		Pg	13 49 46.3	-1.1
LCMT				Sg	Sg	13 49 56.2	-1.8
LCMT				IAML		13 49 56.8	
	comp=E,4µm,0.2s						
LCMT				IAML		13 49 57.9	
	comp=N,4µm,0.1s						
SHPR	Sheep Range	0.94	273	Pg	Pb	13 49 48.6	-1.5
CCUT	Cedar City	1.20	25		Pb	13 49 53.4	-1.1
CCUT					Sb	13 50 08.2	-2.1
CCUT				IAML		13 50 13.0	
	comp=N,945nm,0.7s						
CCUT				IAML		13 50 14.3	
	comp=E,1µm,0.4s						
PRN	Pahroc Range	1.27	318		Pg	13 49 54.6	-1.4
PRN				Sg	Sb	13 50 10.4	-1.8
SZCU	Shurtz Canyon	1.34	32		Pn	13 49 55.9	-0.8
W13A	Hualapai Mount	1.36	176	Pn	Pg	13 49 57.1	-0.6
U15A	North Rim	1.37	91		Pg	13 49 57.2	-0.8
U15A				Sg	Sb	13 50 14.4	-0.9
PKCU	Pink Cliffs	1.67	53		Pb	13 50 02.0	-0.6
NEE2	Needles Airpor	1.77	197	P	Pb	13 50 02.0	-2.1
	baz=16						
NEE2				Sb	Sg	13 50 28.9	+0.5
	baz=16						

S11A	Rachel	1.83	311		Pb	13 50 03.0	-2.3
TUQ	Turquoise Moun	1.87	237	P	Pb	13 50 03.8	-2.1
	baz=56,SNR=256						
TUQ				S	Sb	13 50 27.9	-1.5
	baz=56						
TPNV	Topopah Spring	1.88	286		Pb	13 50 04.1	-2.0
TPNV	Topopah Spring	1.88	286	P	Pb	13 50 04.1	-2.0
	baz=104,SNR=1000						
TPNV				S	Sb	13 50 28.1	-1.6
	baz=104						
SHOC	Shoshone, Teco	1.93	254	P	Pb	13 50 04.8	-2.1
	baz=72,SNR=102						
SHOC				Sb	Sg	13 50 32.0	-1.6
	baz=72						
PSUT	Pine Spring	2.07	3		Pb	13 50 07.3	-2.2
MTPU	Mount Pierson	2.14	42		Pb	13 50 09.6	-1.1
GMRC	Granite Mounta	2.15	220	P	Pn	13 50 07.7	0.0
	baz=38,SNR=48						
GMRC				Sb	Sg	13 50 39.3	-1.5
	baz=38						
PDMCI	Parker Dam,Lak	2.16	183	P	Pn	13 50 07.7	+0.1
	baz=3.2,SNR=18						
PDMCI				Sb	Sg	13 50 40.8	-0.1
	baz=3.2						
R11A	Troy Canyon, C	2.27	327	Pn	Pn	13 50 08.7	-0.6
R11A	Troy Canyon, C	2.27	327	P	Pn	13 50 08.7	-0.6
	baz=145,SNR=668						
R11A				Sb	Sb	13 50 41.2	+0.2
	baz=145						
FURC	Furnace Creek,	2.31	271	P	Pb	13 50 10.1	-3.3
	baz=89,SNR=262						
WUAZ	Wupatki	2.32	113		Pb	13 50 12.0	-1.7
WUAZ	Wupatki	2.32	113	P	Pb	13 50 11.8	-2.0
	baz=295,SNR=307						
QSM	Queen of Sheba	2.38	259	Pn	Pn	13 50 10.8	+0.2
TCRU	Three Creeks R	2.47	29		Pb	13 50 13.5	-2.8
IRM	Iron Mountain	2.48	203	P	Pn	13 50 12.7	+0.5
	baz=22,SNR=16						
IRM				Sb	Sg	13 50 50.1	-1.3
	baz=22						
MSU	Marysvale	2.51	35		Pb	13 50 14.2	-2.7
HEC	Hector,Ludlow	2.51	230	P	Pn	13 50 12.4	-0.1
	baz=48,SNR=20						
GSC	Goldstone, Bar	2.56	244	Pn	Pn	13 50 13.5	+0.2
GSC	Goldstone, Bar	2.56	244	P	Pn	13 50 13.3	0.0
	baz=62,SNR=36						
GSC				Sb	Sg	13 50 52.0	-1.9
	baz=62						
Y14A	Wickenburg	2.64	162	Pn	Pn	13 50 15.2	+0.8
BLYC	Blythe	2.74	189		Pb	13 50 17.1	-3.5
GRAC	Grapevine Rang	2.76	282		Pn	13 50 16.8	+0.8
GRAC	Grapevine Rang	2.76	282	P	Pn	13 50 16.7	+0.8
	baz=100,SNR=93						
MPMC	Manual Prospec	2.85	263	P	Pn	13 50 17.5	+0.1
	baz=80,SNR=171						
RRX	Edison Barstow	2.91	238	P	Pn	13 50 18.2	+0.1
	baz=56						
BELC	Belle Mtn. Jos	2.95	214	P	Pn	13 50 19.0	+0.3
	baz=33,SNR=18						
BELC				Sb	Sg	13 51 04.2	-2.3
	baz=33						
LCH	Last Change Ra	3.03	286		Pn	13 50 19.8	+0.1
TPH	Tonopah	3.04	303		Pn	13 50 19.8	-0.2
BC3	Big Chuckawall	3.04	204	P	Pn	13 50 20.4	+0.4
	baz=23,SNR=14						
BBRC	Big Bear Solar	3.25	228	P	Pn	13 50 23.1	+0.3
	baz=46,SNR=11						
BBRC				S	Sn	13 51 02.3	+0.7
	baz=46						
TIN	Tinemaha, Big	3.45	281	P	Pn	13 50 26.2	+0.6
	baz=98,SNR=7.2						
GLA	Glamis	3.47	192		Pn	13 50 26.0	+0.3
GLA	Glamis	3.47	192	P	Pn	13 50 26.0	+0.3
	baz=11,SNR=6.9						
GLA				Sb	Sg	13 51 19.8	-3.3
	baz=11						
PFO	Pinyon Flats O	3.49	216	Pn	Pn	13 50 26.5	+0.5
	comp=E,1.5nm,0.3s,baz=33,slow=12,SNR=12						
PFO				Pg	Pg	13 50 38.6	+0.1
	comp=E,2.2nm,0.3s,baz=109,slow=5.6,SNR=7.3						
PFO				Lg	Lg	13 51 21.8	
	comp=E,5.6nm,0.3s,baz=9.5,slow=0.9,SNR=9.4						
	comp=E,4.5nm,0.3s						
PFO	Pinyon Flats O	3.49	216	Pn	Pn	13 50 26.3	+0.3
PFO	Pinyon Flats O	3.49	216	P	Pn	13 50 26.4	+0.3
	baz=34						
PFO				Sb	Sg	13 51 19.8	-3.9
	baz=34						
CCAC	Calif City Air	3.52	249		Pn	13 50 27.0	+0.5
EDW2	Edwards Air Fo	3.62	245	P	Pn	13 50 27.9	+0.1
	baz=63,SNR=15						
113A	Mohawk Valley,	3.69	177	Pn	Pn	13 50 29.2	+0.6
W18A	Petrified Fore	3.71	110	Pb	Pg	13 50 39.5	-3.2
	baz=293,SNR=14						
ISA	Isabella, Lake	3.72	259	P	Pn	13 50 29.8	+0.6
	baz=76						
BFSC	Mount Baldy Ra	3.73	235	P	Pn	13 50 30.0	+0.7
	baz=52						
DUG	Dugway, Tooele	3.84	14	Pb	Pb	13 50 41.2	+1.6
	baz=194,SNR=16						
DUG				Sb	Sg	13 51 30.7	-4.3
	baz=194						
NV11	Mina Array Sit	3.85	302		Pn	13 50 29.9	-1.1
MURC	Murrieta	3.88	224	P	Pn	13 50 32.3	+0.9
	baz=42						
MURC				S	Sn	13 51 18.8	+1.8
	baz=42						
NVAR	Mina Array Bea	3.95	301	Pn	Pn	13 50 32.6	0.0
	comp=E,11nm,0.3s,baz=138,slow=26,SNR=174						
NVAR				Pg	Pb	13 50 42.1	+0.6
	comp=E,16nm,0.3s,baz=122,slow=15,SNR=24						
NVAR				Lg	Lg	13 51 34.9	
	comp=E,20nm,0.3s,baz=35,slow=31,SNR=6.4						
	comp=E,12nm,0.4s						
NVAR	Mina Array Bea	3.95	301		Pn	13 50 32.5	-0.1
ELS	Elsinore Mount	3.98	226	Pn	Pn	13 50 33.6	+0.9
LHV	Little Huntoon	4.01	298		Pn	13 50 33.4	+0.3
MLAC	Mammoth, Mammo	4.05	288	Pg	Pg	13 50 49.2	+0.1
	baz=105						
MONP2	Monument Peak	4.08	210	P	Pn	13 50 34.9	+0.6
	baz=28						
YUH	Yuha Desert	4.12	203	Pn	Pn	13 50 34.9	+0.2
ARVC	Arvin	4.15	253	P	Pn	13 50 35.6	+0.5
	baz=70						
KVN	Kaiserville	4.16	310	Pn	Pn	13 50 35.2	-0.1
OMMB	Old Mammoth Mi	4.17	288	Pn	Pn	13 50 35.8	+0.2
RYN	Ryan	4.20	302		Pn	13 50 36.1	+0.2
MDPB	Devils Postpil	4.23	288		Pn	13 50 36.8	+0.4
BAR	Barrett	4.37	211	Pn	Pn	13 50 39.0	+0.9
ELK	Elko	4.39	348	Pn	Pn	13 50 38.5	0.0
	comp=E,2.0nm,0.3s,baz=174,slow=9.2,SNR=40						
ELK				Pg	Pg	13 50 51.1	-4.5
	comp=E,5.6nm,0.3s,baz=189,slow=9.0,SNR=21						
ELK				Lg	Lg	13 51 46.6	
	comp=E,25nm,0.3s,baz=68,slow=19,SNR=16						
ELK				LR	LR	13 52 09.1	
	comp=E,71nm,21.4s,baz=338,slow=36						
	comp=E,4.8nm,0.3s						
MVCO	Mesa Verde	4.47	79		Pn	13 50 41.8	+2.1
MVCO	Mesa Verde	4.47	79	P	Pn	13 50 42.2	+2.6
	baz=262,SNR=27						
214A	Organ Pipe Nat	4.60	167	Pn	Pn	13 50 42.9	+1.7
CBX	Cerro Bola	4.69	209	Pn	Pn	13 50 44.3	+1.7
YERR	Yerington	4.86	303	Pn	Pn	13 50 44.9	-0.1
TUC	Tucson	4.92	146		Pn	13 50 47.4	+1.7
PNTR	Pine Nut	5.16	302		Pn	13 50 49.2	+0.2
EMB	Emerald Bay	5.45	299	Pn	Pn	13 50 53.8	+0.6
O20A	White River Ci	5.82	49	Pn	Pn	13 51 01.7	+3.5
S22A	4UR Ranch, Cre	5.87	75	Pn	Pn	13 51 01.5	+2.6
S22A	4UR Ranch, Cre	5.87	75	P	Pn	13 51 01.1	+2.2
	baz=260,SNR=12						
BEKR	Beckworth	6.06	306		Pn	13 51 02.8	+1.4
SMCO	Snowmass	6.18	62	Pn	Pn	13 51 04.5	+1.2
ANMO	Albuquerque	6.32	102	Pn	Pn	13 51 07.4	+2.5
	comp=E,1.4nm,0.3s,baz=288,slow=14,SNR=17						
ANMO				Pg	Pg	13 51 28.6	-4.0
	comp=E,0.9nm,0.3s,baz=281,slow=14,SNR=7.2						
ANMO				Lg	Lg	13 52 45.2	
	comp=E,3.4nm,0.3s,baz=150,slow=15,SNR=9.6						
ANMO				LR	LR	13 52 59.4	
	comp=E,70nm,21.1s,baz=346,slow=33						
	comp=E,3.6nm,0.4s						
ANMO	Albuquerque	6.32	102	Pn	Pn	13 51 07.6	+2.6
319A	Douglas	6.41	141	Pn	Pn	13 51 07.9	+1.7
SDCO	Great Sand Dun	6.91	77	P	Pn	13 51 15.2	+2.0
	baz=262,SNR=7.3						
PDAR	Pinedale Array	7.17	27	Pn	Pn	13 51 19.8	+3.1
	comp=E,0.2nm,0.3s,baz=183,slow=13,SNR=9.2						
	comp=E,0.4nm,0.4s						
Q24A	Divide	7.44	68	P	Pn	13 51 22.7	+2.2
	baz=253,SNR=7.4						
YBH	Yreka Blue Hor	8.58	310	Pn	Pn	13 51 40.3	+4.4
	comp=E,0.1nm,0.3s,baz=149,slow=4.9,SNR=4.0						
	comp=E,2.2nm,0.8s						
TXAR	Lajitas Array	11.21	126	Pn	Pn	13 52 15.7	+3.6
	baz=293,slow=12,SNR=3.4						
TXAR				Pg		13 52 57.4	
	comp=E,0.1nm,0.3s,baz=310,slow=13,SNR=2.7						
TXAR				Lg	Lg	13 55 22.0	
	comp=E,0.1nm,0.3s,baz=312,slow=30,SNR=5.4						
	comp=E,0.4nm,0.8s						
ULM	Lac du Bonnet	19.00	38	P	Pn	13 53 54.1	+0.2
	comp=E,0.5nm,0.3s,baz=236,slow=7.9,SNR=3.2						
	comp=E,3.5nm,0.7s						
DLBC	Dease Lake	24.39	339	P	P	13 54 51.1	+1.2
	comp=E,1.6nm,1.0s,baz=71,slow=17,SNR=2.2						
	comp=E,1.6nm,1.0s						
YKA	Yellowknife Ar	26.06	359	P	P	13 55 06.2	+1.4
	comp=E,0.2nm,0.5s,baz=248,slow=22,SNR=4.0						
	comp=E,0.2nm,0.5s						
ILAR	Eielson Array	34.44	336	P	P	13 56 21.9	+2.9
	comp=E,0.5nm,0.9s,baz=133,slow=8.2,SNR=4.4						
ILAR				LR	LR	14 10 59.2	
	comp=E,421nm,20.5s,baz=7.5,slow=37						
	comp=E,0.5nm,0.9s						
PPT	Papeete	63.39	218	LR	LR	14 22 43.4	
	comp=E,46nm,18.6s,baz=309,slow=31						

IDC 05 15:00:55.5±1.7**, 6°.33S**×**129°.33E, h0^{km}, mb3.8**/1**,**
mbtmp3.7/4**, ML3.7**/3**, Error ellipse: s-maj=61.8km**
s-min=28.0km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.76	20	Pn	Pn	15 02 22.6	+0.3
	2.4nm,0.3s,baz=158,slow=23,SNR=30						
SIJI				Sn	Sn	15 03 19.1	-10
	5.2nm,0.3s,baz=282,slow=23,SNR=19						
	6.8nm,0.3s						
WRA	Warramunga Arr	14.38	161	Pn	Pn	15 04 19.5	-1.0
	0.3nm,0.3s,baz=340,slow=12,SNR=25						
WRA				Sn	Sn	15 06 44.4	-16
	0.2nm,0.3s,baz=252,slow=38,SNR=3.2						
	0.5nm,0.5s						
ASAR	Alice Springs	17.79	166	P	P	15 05 05.3	-0.2
	0.2nm,0.3s,baz=347,slow=10,SNR=29						
ASAR				S	Sn	15 08 10.5	-13
	0.4nm,1.1s,baz=351,slow=32,SNR=1.8						
	0.4nm,0.3s						
MKAR	Makanchi Array	67.31	327	P	P	15 11 52.2	-0.1
	0.3nm,0.3s,baz=111,slow=7.8,SNR=8.2						
	0.3nm,0.3s						

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*INET **05** 15:01:01.8±0.5, 12°.33N×88°.03W, h27^{km}, MW3.2*
*SNET **05** 15:01:06.1±0.7, 12°.57N×87°.95W, h33^{km}±3^{km}, ML3.2*
ISC 05 15:01:01.2±2.0**, 12°.34N**±0°.09×**87°.94W**±0°.05**, h23**^{km}±16^{km}**,**
n12, σ1^s.10/19**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.74	30	eP	Pb	15 01 16.3	+0.9
CRIN	San Cristobal	0.94	67	eP	Pn	15 01 19.9	+0.9
CNCH	Conchagua	0.94	6	eP	Pn	15 01 19.5	+0.4
CNCH				eS	Sn	15 01 31.2	-0.7
JUCU	Jucuar¡n	0.96	342	eP	Pb	15 01 20.5	+1.2
JUCU				eS	Sn	15 01 31.3	-1.1
JUCU				IAML		15 01 35.5	
	comp=Z,557nm,0.2s						
LCND	La Caada	0.97	3	eP	Pn	15 01 20.1	+0.7
LCND				eS	Sb	15 01 31.2	-0.5
LCND				IAML		15 01 36.6	
	comp=Z,778nm,0.2s						
PACA	Pacayal	1.19	342	eP	Pb	15 01 24.0	+0.9
PACA				eS	Sb	15 01 37.4	-0.8
PACA				IAML		15 01 39.0	
	comp=Z,4μm,0.2s						
CNGN	Cerro Negro	1.22	82	eP	Pn	15 01 22.1	-0.7
APYN	Apoyeque	1.56	94	eP	Pn	15 01 27.9	+0.5
SJTE	Alcalda de S	1.64	321	eP	Pb	15 01 30.8	-0.1
SJTE				eS	Sb	15 01 49.5	-1.8
SJTE				IAML		15 01 52.2	
	comp=Z,76nm,0.3s						
LFRS	El Faro	1.69	320	eP	Pb	15 01 31.3	-0.3
LFRS				eS	Sb	15 01 50.6	-1.8
TGUH	Tegucigalpa,Un	1.83	21	eP	Pn	15 01 31.9	+0.6
JAYA	Jayaque - finc	1.97	312	eP	Pn	15 01 35.1	+1.8
JAYA				eS	Sn	15 01 57.5	+0.1
JAYA				IAML		15 01 58.8	
	comp=Z,176nm,0.1s						

KRSC 05 15:23:15.4±1.7**, 52°.80N**×**162°.66E, h49**^{km}±34^{km}**, ML3.5,**
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.62	282	eP	Pn	15 23 43.7	+2.1
SPN				eS	Sn	15 24 03.7	+2.3
MKZ	Mys Kozlova	1.84	343	eP	Pn	15 23 46.2	+1.6
MKZ				eS	Sn	15 24 07.3	+0.6
NLC	Nalytchevo	2.04	282	eP	Pn	15 23 49.0	+1.7
NLC				eS	Sn	15 24 13.9	+2.4
KII	Karymskiy	2.29	304	eP	Pn	15 23 53.5	+2.7
KII				eS	Sn	15 24 19.6	+1.9
SDLR	Sedlovina	2.33	283	eP	Pn	15 23 54.5	+3.1
SDLR				eS	Sn	15 24 22.5	+3.6
UGLR	Uglovaya	2.36	282	eP	Pn	15 23 55.1	+3.4
UGLR				eS	Sn	15 24 23.8	+4.3
SMAR	Somma	2.38	283	eP	Pn	15 23 55.2	+3.1
SMAR				eS	Sn	15 24 23.9	+3.8
DALK	Dalny	2.38	277	eP	Pn	15 23 54.6	+2.7
DALK				eS	Sn	15 24 22.6	+2.8
AVH	Avacha	2.42	283	eP	Pn	15 23 55.9	+3.4
AVH				eS	Sn	15 24 25.3	+4.4
KRER	Koryakskii	2.42	284	eP	Pn	15 23 56.2	+3.6
KRER				eS	Sn	15 24 25.3	+4.2
PET	Petropavlovsk	2.44	277	eP	Pn	15 23 55.6	+2.9
KOK	Koryaka	2.48	283	eP	Pn	15 23 56.7	+3.3
KOK				eS	Sn	15 24 27.0	+4.5
KRX	Arik	2.49	285	eP	Pn	15 23 56.6	+3.1
KRX				eS	Sn	15 24 25.9	+3.2
RUS	Russkaya	2.56	263	eP	Pn	15 23 57.2	+2.9
RUS				eS	Sn	15 24 26.5	+2.3
MTVR	Mutnovka	2.75	265	eP	Pn	15 24 00.1	+3.0
MTVR				eS	Sn	15 24 32.3	+3.2
KRMR	Karymshinskiy	2.75	272	eP	Pn	15 24 00.0	+3.0
KRMR				eS	Sn	15 24 32.3	+3.3
TUMD	Tumrok D	2.75	332	eP	Pn	15 23 59.4	+2.3
TUMD				eS	Sn	15 24 30.8	+1.7
GRL	Gorelyy	2.81	267	eP	Pn	15 24 01.4	+3.5
GRL				eS	Sn	15 24 34.5	+4.0
TUMR	Tumrok	2.90	330	eP	Pn	15 24 02.4	+3.3
ASAK	Asacha	2.94	264	eP	Pn	15 24 03.1	+3.5
ASAK				eS	Sn	15 24 36.9	+3.2
GNL	Ganaly	2.98	289	eP	Pn	15 24 03.8	+3.6
KDTR	Khodutka, Kamc	2.99	252	eP	Pn	15 24 02.6	+2.4
KDTR				eS	Sn	15 24 35.5	+0.8
KMNR	Kamenistaya	3.29	335	eP	Pn	15 24 09.4	+5.0
APC	Apacha	3.34	274	eP	Pn	15 24 09.4	+4.3
APC				eS	Sn	15 24 49.3	+5.9
ESO	Esso	3.90	325	eP	Pn	15 24 16.4	+3.7
ESO				eS	Sn	15 25 00.4	+3.2
SKR	Severo-Kuril's	4.59	245	eP	Pn	15 24 24.8	+2.6

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*DDA **05** 15:24:01.6±0.0, 35°.40N×32°.20E, h38^{km}±1^{km}, ML2.8*
*ISK **05** 15:24:01.1, 35°.36N×32°.40E, h18^{km}, ML3.2/21*
*NIC **05** 15:24:02.0±0.0, 35°.27N×32°.39E, h57^{km}±1^{km}, Ml3.0/6*
*GII **05** 15:24:03.0±0.1, 35°.05N×32°.22E, h31^{km}, MD2.1/1,*
Mm2.7/8
ISC 05 15:24:00.2±1.1**, 35°.21N**±0°.02×**32°.29E**±0°.03**, h71**^{km}±6^{km}**,**
n75, σ1^s.23/129**, 4C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	0.20	168⇓	eP	Pn	15 24 11.6	+0.6
AKMS				S	Sn	15 24 19.0	+0.2
AKMS				AML	AML	15 24 19.4	
	4.2nm,0.3s						
AKMS				AML	AML	15 24 19.4	
	4.2nm,0.3s						
AKMS				AML	AML	15 24 19.4	
	7.8nm,0.3s						
AKMS				AML	AML	15 24 19.4	
	7.8nm,0.3s						
ALFC	Alefka	0.26	102	P	Pn	15 24 11.3	-0.1
ALFC				S	Sn	15 24 18.4	-1.1
ALFC				AML	AML	15 24 19.0	
	21nm,0.2s						
ALFC				AML	AML	15 24 19.0	
	21nm,0.2s						
ALFC				AML	AML	15 24 19.0	
	19nm,0.1s						
ALFC				AML	AML	15 24 19.0	
	19nm,0.1s						
NATA	Nata	0.49	151⇑	eP	Pn	15 24 14.3	+1.3
NATA				S	Sn	15 24 23.1	+0.6
NATA				AML	AML	15 24 24.6	
	5.9nm,0.4s						
NATA				AML	AML	15 24 24.6	
	5.9nm,0.4s						
NATA				AML	AML	15 24 25.1	
	3.7nm,0.2s						
NATA				AML	AML	15 24 25.1	
	3.7nm,0.2s						
LEF	Lefka	0.50	100	P	Pn	15 24 14.2	+1.1
LEF				S	Sn	15 24 23.8	+1.2
SZAC	Souni	0.67	133⇑	eP	Pn	15 24 15.7	+0.8
SZAC				AML	AML	15 24 29.2	
	2.0nm,0.2s						
SZAC				AML	AML	15 24 31.6	
	2.5nm,0.5s						
CSS	Mathiatis	0.89	106	PG	Pn	15 24 17.8	+0.3
CSS				SG	Sn	15 24 30.7	+0.4
CSS	Mathiatis	0.89	106⇑	eP	Pn	15 24 17.7	+0.3
CSS				S	Sn	15 24 30.4	+0.2
CSS	Mathiatis	0.89	106	Pg	Pn	15 24 17.2	-0.3
CSS				Sg	Sn	15 24 29.0	-1.3
ASGA	Asgata	0.90	118⇑	eP	Pn	15 24 17.8	+0.3
ASGA				S	Sn	15 24 31.1	+0.8
ASGA				AML	AML	15 24 31.6	
	1.8nm,0.2s						
ASGA				AML	AML	15 24 31.6	
	1.8nm,0.2s						
ASGA				AML	AML	15 24 34.1	
	1.1nm,0.4s						
ASGA				AML	AML	15 24 34.1	
	1.1nm,0.4s						
ATHAL	Athalassa	0.91	94	P	Pn	15 24 18.8	+1.1
ATHAL				S	Sn	15 24 30.4	-0.3
GAZI	Gazipasa	1.02	1	PG	Pn	15 24 18.7	-0.4
GAZI				SG	Sn	15 24 30.9	-2.2
GAZI	Gazipasa	1.02	1	P	Pn	15 24 18.8	-0.4
GAZI				S	Sn	15 24 30.4	-2.8
GAZI				i AML	AML	15 24 31.0	
	comp=N,503nm,0.5s						
GAZI				i AML	AML	15 24 33.0	
	comp=E,204nm,0.2s						
LFK	Lefkose	1.02	86	PG	Pn	15 24 19.8	+0.7
LFK				SG	Sn	15 24 33.4	+0.2
BOZY	Bozyazi-Mersin	1.06	32	PG	Pn	15 24 18.5	-1.0
BOZY				SG	Sn	15 24 31.4	-2.4
MVOU	Mavrovouni	1.12	100	P	Pn	15 24 20.8	+0.5
MVOU				S	Sn	15 24 35.2	0.0
MVOU				AML	AML	15 24 35.5	
	0.7nm,0.3s						
MVOU				AML	AML	15 24 35.5	
	0.7nm,0.3s						
MVOU				AML	AML	15 24 35.6	
	0.7nm,0.3s						
MVOU				AML	AML	15 24 35.6	
	0.7nm,0.3s						
TEKE	Tekeli-Mersin	1.15	36	PG	Pn	15 24 20.4	-0.3
TEKE				SG	Sn	15 24 34.2	-1.7
BERE	Bereket-Mersin	1.37	34	PN	Pn	15 24 23.5	-0.1
BERE				SN	Sn	15 24 39.7	-1.5
OREN	Orenkoy-Mersin	1.38	43	PN	Pn	15 24 23.3	-0.3
OREN				SN	Sn	15 24 39.9	-1.3
AKK1	Akkuyu-Mersin	1.38	47	PN	Pn	15 24 23.6	0.0
AKK1				SN	Sn	15 24 39.8	-1.5
AKK2	Akkuyu-Mersin	1.38	48	PN	Pn	15 24 22.9	-0.8
AKK2				SN	Sn	15 24 39.9	-1.4
AKKU	Akkuyu-Mersin	1.40	47	PN	Pn	15 24 23.6	-0.3
AKKU				SN	Sn	15 24 40.2	-1.5
GULN	MERSIN_Gulnar	1.41	46	P	Pn	15 24 23.2	-0.8
GULN				S	Sn	15 24 40.0	-2.0
PARAL	Paralimni	1.45	98	P	Pn	15 24 26.0	+1.4
YESI	Yesilovacik-Me	1.48	48	PN	Pn	15 24 24.8	-0.1
YESI				SN	Sn	15 24 43.2	-0.3
TISA	Tisan-Mersin	1.48	50	PN	Pn	15 24 24.6	-0.3
TISA				SN	Sn	15 24 42.9	-0.7
ERMK	Ermenek	1.52	19	P	Pn	15 24 26.9	+1.2
ERMK				S	Sn	15 24 45.8	+1.0
ERMK				i AML	AML	15 24 47.0	
	comp=N,180nm,0.7s						
ERMK				i AML	AML	15 24 50.0	
	comp=E,136nm,0.7s						
KARG	Kargicak-Mersi	1.52	49	PN	Pn	15 24 25.6	+0.1
IKL	Isikli	1.53	48	PN	Pn	15 24 25.2	-0.4
IKL				SN	Sn	15 24 44.1	-0.7
TEVE	Tevekalti-Mers	1.54	37	PN	Pn	15 24 26.3	+0.4
EREN	Erenkoy	1.57	78	PN	Pn	15 24 27.4	+1.2
EREN				SN	Sn	15 24 46.7	+0.9
EREN	Erenkoy	1.57	78	P	Pn	15 24 26.9	+0.8
EREN				S	Sn	15 24 45.6	-0.2
EREN				i AML	AML	15 24 48.0	
	comp=N,122nm,0.4s						
EREN				i AML	AML	15 24 49.0	
	comp=E,100nm,1.1s						
KEBE	Keben-Mersin	1.69	43	PN	Pn	15 24 28.5	+0.6
HDMB	Hadim	1.76	5	PN	Pn	15 24 29.6	+0.7
SILI	Silifke-Mersin	1.76	49	PN	Pn	15 24 29.7	+1.0
KEPZ	Antalya-Kepez	1.78	342	P	Pn	15 24 29.1	+0.1
KEPZ				S	Sn	15 24 49.6	-1.1
AKUM	Antalya-Kumluc	1.93	306	P	Pn	15 24 31.7	+0.8
KRMN	Karaman	2.11	22	PN	Pn	15 24 34.3	+0.8
SEYD	Seydisehir-KON	2.22	351	PN	Pn	15 24 36.9	+1.9
SEDI	Konya, Seydise	2.28	349	P	Pn	15 24 36.7	+0.9
SEDI				S	Sn	15 25 04.9	+2.0
SEDI				i AML	AML	15 25 08.0	
	comp=E,44nm,0.5s						
KORT	Korkueli	2.38	319	P	Pn	15 24 39.0	+1.9
AKAS	Kas	2.41	296	P	Pn	15 24 37.3	-0.2
AKAS				S	Sn	15 25 00.7	-5.3
AKAS				i AML	AML	15 25 07.0	
	comp=N,63nm,0.9s						
MERS	Mersin	2.45	47	PN	Pn	15 24 39.6	+1.5
KERG	Konya-Eregli	2.66	33	P	Pn	15 24 42.1	+1.2
KERG				S	Sn	15 25 12.7	+0.6
GULE	Gulek	2.89	43	P	Pn	15 24 45.2	+1.2
GULE				S	Sn	15 25 17.7	-0.1
GULE				i AML	AML	15 25 30.0	
	comp=N,27nm,0.9s						
FETY	Fethiye	2.96	300	P	Pn	15 24 47.8	+2.9
FETY				S	Sn	15 25 19.0	-0.4
GOLH	Golhisar	2.99	313	P	Pn	15 24 47.4	+2.0
GOLH				S	Sn	15 25 23.4	+3.2
BRDR	BURDUR-Merkez	3.06	325	P	Pn	15 24 47.2	+0.9
CAEL	Denizli, Camel	3.07	309	P	Pn	15 24 48.1	+1.6
CAEL				S	Sn	15 25 24.2	+2.1
CAEL				i AML	AML	15 25 27.0	
	comp=N,46nm,1.5s						
CAEL				i AML	AML	15 25 32.0	
	comp=E,21nm,0.8s						
HNTI	Hanita	3.20	131	Pn	Pn	15 24 48.5	+0.3
HNTI				Sn	Sn	15 25 24.3	-0.9
MMA0B	Mount Meron ar	3.39	129	Pn	Pn	15 24 51.3	+0.5
MMA0B				Sn	Sn	15 25 29.5	-0.4
OFRI	`Ofer	3.42	138	Pn	Pn	15 24 51.4	+0.2
OFRI				Sn	Sn	15 25 29.1	-1.5
GEM	Giv'at Ha'Em	3.44	125	Pn	Pn	15 24 51.6	+0.2
GEM				Sn	Sn	15 25 29.9	-1.0
BLGI	Bet Lehem HaGe	3.45	135	Pn	Pn	15 24 52.3	+0.7
BLGI				Sn	Sn	15 25 30.2	-1.2
NATI	Neve Ativ	3.46	123	Pn	Pn	15 24 51.7	+0.1
TAVA	DENIZLI_Tavas	3.53	311	P	Pn	15 24 53.7	+0.9
TAVA				S	Sn	15 25 33.3	-0.1
TURN	Turunc	3.63	297	P	Pn	15 24 54.4	+0.4
TURN				S	Sn	15 25 34.0	-1.6
KSHT	Keshet	3.67	126	Pn	Pn	15 24 55.5	+0.8
SLTI	Sal'it	3.75	141	Pn	Pn	15 24 55.9	+0.3

SLTI				Sn	**Sn**	**15 25 36.5**	**-2.0**
MULA	**Mugla, Merkez-**	**3.80**	**304**	P	**Pn**	**15 24 57.2**	**+0.8**
MULA				*i* AML	AML	15 25 41.0	
	comp=E,27nm,0.5s						
MULA				*i* AML	AML	15 25 43.0	
	comp=N,24nm,0.7s						
MMLI	**Mount Malkishu**	**3.80**	**136**	Pn	**Pn**	**15 24 57.1**	**+0.7**
MMLI				Sn	**Sn**	**15 25 39.0**	**-0.9**
PASA	**Karahalli, USA**	**3.85**	**325**	P	**Pn**	**15 24 58.0**	**+0.8**
PASA				S	**Sn**	**15 25 39.5**	**-1.8**
HMDT	**Nahal Hemdat**	**4.00**	**137**	Pn	**Pn**	**15 25 00.1**	**+1.1**
HMDT				Sn	**Sn**	**15 25 44.1**	**-0.6**
DAT	**Datca**	**4.11**	**293**	P	**Pn**	**15 25 01.0**	**+0.4**
DAT				*i* AML	AML	15 25 48.0	
	comp=N,25nm,0.6s						
DAT				*i* AML	AML	15 25 49.0	
	comp=E,14nm,0.2s						
UJAP	**Al Uja**	**4.19**	**140**	Pn	**Pn**	**15 25 02.6**	**+0.9**
AYDN	**Tasoluk**	**4.31**	**306**	P	**Pn**	**15 25 03.7**	**+0.3**
AYDN				S	**Sn**	**15 25 50.3**	**-2.1**
AYDN				*i* AML	AML	15 25 53.0	
	comp=E,14nm,0.7s						
BDRM	**Kayabasi**	**4.33**	**297**	P	**Pn**	**15 25 03.9**	**+0.3**
BDRM				S	**Sn**	**15 25 50.0**	**-2.9**
BDRM				*i* AML	AML	15 25 53.0	
	comp=N,29nm,0.6s						
BDRM				*i* AML	AML	15 25 56.0	
	comp=E,10nm,0.5s						
DSI	**Dead Sea**	**4.46**	**144**	Pn	**Pn**	**15 25 06.3**	**+1.0**
DSI				Sn	**Sn**	**15 25 55.1**	**-0.8**
YTIR	**Yattir**	**4.51**	**147**	Pn	**Pn**	**15 25 05.7**	**-0.4**
YTIR				Sn	**Sn**	**15 25 56.2**	**-1.1**
KZIT	**Kziot**	**4.64**	**157**	Pn	**Pn**	**15 25 07.6**	**-0.3**
KZIT				Sn	**Sn**	**15 25 58.2**	**-2.3**
MDBI	**Mazsada**	**4.66**	**146**	Pn	**Pn**	**15 25 09.1**	**+1.1**
MDBI				Sn	**Sn**	**15 25 59.7**	**-1.1**
GHAJ	**Ghor Haditha**	**4.77**	**144**	Sn	**Sn**	**15 26 03.0**	**-0.5**
PRNI	**Paran**	**5.36**	**154**	Pn	**Pn**	**15 25 17.9**	**+0.2**
PRNI				Sn	**Sn**	**15 26 16.9**	**-1.1**
KRMI	**Paran Flat**	**5.48**	**157**	Pn	**Pn**	**15 25 19.7**	**+0.4**
HRFI	**Mount Harif**	**5.66**	**155**	Pn	**Pn**	**15 25 22.2**	**+0.5**
MBRI	**Mt Berech**	**5.84**	**157**	Pn	**Pn**	**15 25 24.1**	**-0.2**
MBRI				Sn	**Sn**	**15 26 28.9**	**-1.0**

IDC 05 15:34:58.0±1.6, 22°.51S×163°.16E, h0^{km}, mb3.5/3, mbtmp3.5/4, ML1.9/1, MS3.5/2, Error ellipse: s-maj=98.1km s-min=22.4km az=171.0, New Caledonia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.08**	**82**	Pn	Pn	15 35 47.5	-0.5
	0.2nm,0.3s,baz=121,slow=14,SNR=7.4						
DZM				Sn	Sn	15 36 28.5	+2.9
	0.1nm,0.3s,baz=81,slow=22,SNR=1.0						
	11nm,1.2s						
STKA	**Stephens Creek**	**21.30**	**239**	P	P	15 39 45.4	-1.0
	0.7nm,0.4s,baz=90,slow=9.8,SNR=4.2						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.91**	**262**	P	P	15 40 41.2	+0.1
	0.6nm,0.7s,baz=90,slow=8.5,SNR=14						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**26.97**	**270**	P	P	15 40 42.0	+0.4
	0.7nm,0.8s,baz=95,slow=8.0,SNR=13						
	0.7nm,0.8s						
KAPI	**Kappang**	**45.39**	**286**	LR	LR	16 05 58.0	
	comp=Z,58nm,18.7s,baz=230,slow=41						
DAV	**Davao City (W)**	**47.09**	**304**	LR	LR	16 04 56.6	
	comp=Z,38nm,18.1s,baz=260,slow=38						

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*LDG **05** 15:44:31.9±0.2, 51°.66N×16°.32E, h1^{km}, Ml3.7/7, Error ellipse: s-maj=6.1km s-min=3.5km az=18.0, Suspected Mining induced.*

*DNK **05** 15:44:32.8±1.3, 51°.59N×15°.96E, h0^{km}±106^{km}, ML2.9*

*IPEC **05** 15:44:33.9±0.3, 51°.58N×16°.24E, h1^{km}, ML3.4/3, Error ellipse: s-maj=2.7km s-min=1.5km az=48.0*

*IDC **05** 15:44:34.6±0.6, 51°.56N×16°.06E, h0^{km}, mb3.6/1, mbtmp3.5/9, ML3.1/7, MS3.6/1, Error ellipse: s-maj=10.4km s-min=6.0km az=108.0*

*PRU **05** 15:44:34.9±0.0, 51°.56N×16°.11E, h0^{km}*

*MCSM **05** 15:44:34.1±0.0, 52°N±2°×1°6E±°, h5^{km}±3^{km}, ML3.6*

*BGR **05** 15:44:35.4±0.3, 51°.55N×16°.17E, h1^{km}, ML3.7/12, Error ellipse: s-maj=3.3km s-min=2.2km az=36.0*

ISC 05 15:44:32.5±0.6, 51°.58N±0°.02×16°.17E±0°.02, h0^{km}, n168, σ1^{s}84/262, 8C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**174**	*i* Pg	**Pb**	**15 44 48.6**	**+0.4**
KSP				*e*Sg	**Sg**	**15 44 58.0**	**+1.8**
KSP	**Ksiaz**	**0.74**	**174**	*e*Pg	**Pb**	**15 44 48.7**	**+0.4**
	SNR=138						
KSP				*e*Sg	**Sg**	**15 44 57.8**	**+1.5**
	SNR=3.8						
KSP	**Ksiaz**	**0.74**	**174**	Pg	**Pb**	**15 44 48.3**	**0.0**
KSP				Sg	**Sb**	**15 44 58.4**	**-0.5**
CHVC	**Chvalec**	**0.99**	**184**	*e*PG	**Pb**	**15 44 53.1**	**+0.5**
CHVC				*e*SG	**Sb**	**15 45 06.1**	**-0.2**
	comp=Z,286nm,0.5s						
CHVC	**Chvalec**	**0.99**	**184**	Pg	**Pb**	**15 44 53.5**	**+0.9**
OSTC	**Ostas**	**1.02**	**178**	*e*PG	**Pb**	**15 44 53.7**	**+0.6**
OSTC				*e*SG	**Sg**	**15 45 06.9**	**+1.5**
	comp=Z,385nm,0.8s						
OSTC	**Ostas**	**1.02**	**178**	Pg	**Pb**	**15 44 54.0**	**+0.9**
UPC	**Upice**	**1.08**	**185**	*e*PG	**Pb**	**15 44 54.6**	**+0.6**
UPC				*e*SG	**Sb**	**15 45 09.0**	**+0.4**
	comp=Z,539nm,0.6s						
UPC	**Upice**	**1.08**	**185**	Pg	**Pb**	**15 44 54.7**	**+0.7**
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG	**Pb**	**15 44 57.2**	**+0.5**
DPC				*e*SG	**Sg**	**15 45 13.2**	**+1.1**
	comp=Z,161nm,0.4s						
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*Pg	**Pn**	**15 44 57.6**	**+0.5**
	SNR=226						
DPC				*e*Sg	**Sg**	**15 45 13.3**	**+1.1**
	SNR=4.1						
DPC	**Dobruska-Polom**	**1.23**	**176**	Pg	**Pn**	**15 44 57.4**	**+0.3**
PVCC	**Panska Ves**	**1.46**	**224**	*e*PG	**Pb**	**15 45 01.3**	**+0.8**
PVCC				*e*SG	**Sn**	**15 45 21.5**	**+1.6**
	comp=Z,658nm,0.5s						
PVCC	**Panska Ves**	**1.46**	**224**	*e*Pn	**Pb**	**15 45 01.5**	**+1.0**
	SNR=11						
PVCC				*e*Pg	**Pg**	**15 45 02.2**	**+1.8**
	SNR=172						
PVCC				*e*Sg	**Sn**	**15 45 22.0**	**+2.1**
	SNR=4.1						
KRLC	**Kraliky**	**1.56**	**165**	*e*PG	**Pb**	**15 45 02.5**	**+0.3**
KRLC				*e*SG	**Sg**	**15 45 23.1**	**+0.7**
	comp=Z,236nm,0.6s						
KRLC	**Kraliky**	**1.56**	**165**	Pn	**Pb**	**15 45 02.5**	**+0.3**
BRG	**Berggiesshubel**	**1.57**	**244**	Pn	**Pn**	**15 45 02.2**	**+0.6**
BRG				Pg	**Pg**	**15 45 03.8**	**+1.3**
BRG				Sg	**Sg**	**15 45 24.9**	**+2.0**
BRG				Amp		15 45 25.5	
	comp=Z,613nm,0.4s						
BRG	**Berggiesshubel**	**1.57**	**244**	*e*Pn	**Pn**	**15 45 02.3**	**+0.6**
	SNR=1.5						
BRG				*e*Sg	**Sg**	**15 45 24.9**	**+2.0**
	SNR=3.7						
RUE	**Ruedersdorf**	**1.73**	**302**	*e*P	**Pn**	**15 45 04.3**	**+0.5**
RUE	**Ruedersdorf**	**1.73**	**302**	*e*Sg	**Sg**	**15 45 30.9**	**+2.8**
	SNR=3.3						
RUE	**Ruedersdorf**	**1.73**	**302**	Pn	**Pb**	**15 45 05.0**	**-0.1**
GKP	**Gorka Klasztor**	**1.81**	**21**	*e*P	Pg	15 45 13.0	+5.7
GKP				*e*S	**Sg**	**15 45 37.2**	**+6.4**
FBE	**Freiberg**	**1.89**	**251**	*e*Sg	**Sg**	**15 45 34.6**	**+1.4**
	SNR=2.9						
PRU	**Pruhonice**	**1.90**	**214**	*e*PN	**Pn**	**15 45 07.3**	**+1.1**
PRU				*e*PG	**Pg**	**15 45 09.0**	**+0.1**
PRU				*e*SG	**Sg**	**15 45 34.0**	**+0.5**
	comp=Z,181nm,0.3s						
PRU	**Pruhonice**	**1.90**	**214**	*e*Pn	**Pn**	**15 45 07.1**	**+1.0**
	SNR=8.0						
PRU	**Pruhonice**	**1.90**	**214**	Pn	**Pn**	**15 45 07.0**	**+0.8**
RAC	**Raciborz**	**1.97**	**139**	*e*PG	**Pg**	**15 45 11.0**	**+0.7**
RAC				*e*SG	**Sg**	**15 45 37.7**	**+1.9**
CLL	**Collm**	**2.00**	**263**	*e*Pn	**Pn**	**15 45 08.0**	**+0.4**
CLL				*e*Pg	**Pg**	**15 45 12.0**	**+1.1**
CLL				*i* x	x	15 45 15.3	
CLL				*e*Sg	**Sg**	**15 45 37.0**	**+0.2**
	comp=Z,145nm,0.5s						
CLL	**Collm**	**2.00**	**263**	*e*Pn	**Pn**	**15 45 08.2**	**+0.6**
	SNR=28						
MORC	**Moravsky Berou**	**2.00**	**154**	⇑P	**Pn**	**15 45 09.1**	**+1.4**
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**15 45 08.5**	**+0.9**
	baz=336						
MORC				*e*Sg	**Sb**	**15 45 36.3**	**+1.0**
	comp=Z,244nm,0.9s,baz=336						
MORC	**Moravsky Berou**	**2.00**	**154**	*e*PN	**Pn**	**15 45 08.5**	**+0.9**
MORC				*e*SG	**Sb**	**15 45 36.3**	**+1.0**
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**15 45 08.6**	**+0.9**
	SNR=44						
MORC	**Moravsky Berou**	**2.00**	**154**	Pn	**Pn**	**15 45 08.6**	**+0.9**
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*PG	**Pb**	**15 45 12.8**	**+0.5**
OKC				*e*SG	**Sg**	**15 45 41.4**	**-0.1**
	comp=Z,185nm,0.6s						
VRAC	**Vranov**	**2.29**	**173**	⇑P	**Pn**	**15 45 13.2**	**+1.6**
VRAC				⇑S	**Sn**	**15 45 38.8**	**-1.6**
VRAC	**Vranov**	**2.29**	**173**	Pn	**Pn**	**15 45 13.1**	**+1.6**
	comp=Z,12nm,0.3s,baz=351,slow=13,SNR=56						
VRAC				Pg	**Pg**	**15 45 16.9**	**+0.5**
	comp=Z,15nm,0.3s,baz=5.5,slow=16,SNR=21						
VRAC				Lg	Lg	15 45 45.8	
	comp=Z,34nm,0.3s,baz=232,slow=17,SNR=10						
	comp=Z,33nm,0.4s						
VRAC	**Vranov**	**2.29**	**173**	*e*Pn	**Pn**	**15 45 12.9**	**+1.4**
	baz=354						
VRAC				*e*Sg	**Sg**	**15 45 45.5**	**-0.5**
	comp=Z,169nm,0.8s,baz=354						
VRAC	**Vranov**	**2.29**	**173**	*e*PN	**Pn**	**15 45 13.0**	**+1.4**
VRAC				*e*SG	**Sg**	**15 45 45.5**	**-0.5**
VRAC	**Vranov**	**2.29**	**173**	*e*Pn	**Pn**	**15 45 13.0**	**+1.5**
	SNR=24						
TREC	**Trest**	**2.33**	**191**	*e*PN	**Pn**	**15 45 13.4**	**+1.3**
TREC				*e*PG	**Pg**	**15 45 17.0**	**-0.1**
TREC				*e*SG	**Sg**	**15 45 48.2**	**+0.9**
	comp=Z,139nm,0.5s						
MAUC	**Maruska**	**2.46**	**154**	*e*PN	**Pn**	**15 45 15.5**	**+1.7**
MAUC				*e*PG	**Pg**	**15 45 19.1**	**-0.5**
MAUC				*e*SG	**Sg**	**15 45 52.5**	**+1.1**
	comp=Z,293nm,0.5s						
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn	**Pn**	**15 45 16.0**	**+1.3**
	baz=358						
KRUC				*e*Sg	**Sg**	**15 45 53.0**	**-0.5**
	comp=Z,164nm,1.1s,baz=358						
KRUC	**Moravsky**	**2.52**	**177**	*e*PN	**Pn**	**15 45 16.0**	**+1.3**
KRUC				*e*SG	**Sg**	**15 45 53.1**	**-0.5**
TANN	**Tannenbergstha**	**2.62**	**245**	*e*Pn	**Pn**	**15 45 17.3**	**+1.2**
	SNR=18						
TANN				*e*Sg	**Sg**	**15 45 57.7**	**+1.1**
	SNR=4.1						
OJC	**Ojcow**	**2.67**	**119**	*e*Pn	**Pn**	**15 45 16.4**	**-0.3**
OJC				*e*Pg	**Pg**	**15 45 24.8**	**+1.1**
OJC				*e*Sg	**Sg**	**15 46 00.4**	**+2.2**
WERD	**Werda**	**2.69**	**247**	*e*Pn	**Pn**	**15 45 18.3**	**+1.3**
	SNR=6.6						
GUNZ	**Gunzen**	**2.71**	**245**	*e*Pn	**Pn**	**15 45 18.6**	**+1.2**
	SNR=12						
GUNZ				*e*Pg	**Pg**	**15 45 26.0**	**+1.4**
	SNR=8.8						
NKC	**Novy Kostel**	**2.71**	**242**	*e*PN	**Pn**	**15 45 18.7**	**+1.3**
NKC				*e*PG	**Pg**	**15 45 23.8**	**-0.7**
NKC				*e*SG	**Sg**	**15 46 01.8**	**+2.1**
	comp=Z,314nm,0.5s						
NKC	**Novy Kostel**	**2.71**	**242**	*e*Pn	**Pn**	**15 45 18.9**	**+1.5**
	SNR=23						
NKC				*e*Pg	**Pg**	**15 45 25.8**	**+1.3**
	SNR=4.1						
NKC				*e*Sg	**Sg**	**15 46 03.0**	**+3.3**
	SNR=7.6						
NKC	**Novy Kostel**	**2.71**	**242**	Pn	**Pn**	**15 45 18.7**	**+1.3**
WERN	**Wernitzgruen**	**2.73**	**243**	*e*Pn	**Pn**	**15 45 19.0**	**+1.4**
	SNR=17						
PLN	**Plauen**	**2.76**	**248**	*e*Pn	**Pn**	**15 45 19.0**	**+1.0**
	SNR=7.0						
PLN				*e*Pg	**Pg**	**15 45 27.5**	**+2.1**
	SNR=8.9						
PLN				*e*Sg	**Sg**	**15 46 02.0**	**+0.9**
	SNR=4.6						
NEUB	**Neuenburg**	**2.78**	**264**	*e*Pg	**Pg**	**15 45 26.9**	**+1.2**
	SNR=8.3						
NEUB				*e*Sg	**Sg**	**15 46 03.5**	**+1.8**
	SNR=4.0						
JAVC	**Velka Javorina**	**2.89**	**160**	*e*Pn	**Pn**	**15 45 21.0**	**+1.2**
	baz=342						
JAVC	**Velka Javorina**	**2.89**	**160**	*e*PN	**Pn**	**15 45 21.0**	**+1.2**
JAVC	**Velka Javorina**	**2.89**	**160**	*e*Pn	**Pn**	**15 45 22.4**	**+2.6**
	SNR=37						
JAVC				*e*Pg	**Pg**	**15 45 29.7**	**+1.9**
	SNR=5.9						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**15 45 22.1**	**+1.3**
KHC				*e*PG	**Pg**	**15 45 28.1**	**-1.1**
KHC				*e*SG	**Sg**	**15 46 08.2**	**+0.6**
	comp=Z,97nm,0.6s						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*Pn	**Pn**	**15 45 21.8**	**+0.9**
	SNR=11						
KHC				*e*Pg	**Pg**	**15 45 28.5**	**-0.7**
	SNR=4.0						
KHC	**Kasperske Hory**	**2.96**	**215**	Pn	**Pn**	**15 45 21.7**	**+0.9**
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN	**Pn**	**15 45 23.0**	**+1.5**
CKRC				*e*PG	**Pg**	**15 45 29.0**	**-1.2**
CKRC				*e*SG	**Sg**	**15 46 09.4**	**+0.2**
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*Pn	**Pn**	**15 45 23.4**	**+2.0**
	SNR=11						
CKRC	**Cesky Krumlov**	**3.01**	**204**	Pn	**Pn**	**15 45 23.4**	**+2.0**
MOX	**Moxa**	**3.02**	**254**	*e*Pn	**Pn**	**15 45 22.6**	**+1.0**
	SNR=8.5						
MOX				*e*Pg	**Pg**	**15 45 31.4**	**+1.1**
	SNR=9.5						
MOX				*e*Sg	**Sg**	**15 46 11.5**	**+2.0**
	SNR=6.4						
GEC2	**GERESS Array S**	**3.16**	**211**	*e*Pn	**Pn**	**15 45 24.8**	**+1.2**
	SNR=35						
GERES	**GERESS Array B**	**3.16**	**211**	Pn	**Pn**	**15 45 24.8**	**+1.2**
	comp=Z,7.3nm,0.3s,baz=30,slow=12,SNR=163						
GERES				Pg	**Pg**	**15 45 32.3**	**-0.8**
	comp=Z,14nm,0.3s,baz=30,slow=16,SNR=31						
GERES				Sn	**Sn**	**15 46 02.5**	**+0.4**
	comp=Z,7.9nm,0.3s,baz=31,slow=22,SNR=7.1						
GERES				Lg	Lg	15 46 08.1	
	comp=Z,11nm,0.3s,baz=36,slow=28,SNR=5.4						
	comp=Z,13nm,0.3s						
SMOL	**Smolenice**	**3.17**	**165**	*e*PN	**Pn**	**15 45 26.4**	**+2.7**
SMOL				*e*PG	**Pg**	**15 45 34.1**	**+0.8**
SMOL				*e*SG	**Sg**	**15 46 17.3**	**+2.9**
LANS	**Liptovska Anna**	**3.22**	**138**	*e*PN	**Pn**	**15 45 25.9**	**+1.6**
LANS				*e*PG	**Pg**	**15 45 35.3**	**+1.1**
LANS				*e*SG	**Sg**	**15 46 18.0**	**+2.1**
WET	**Wettzell**	**3.22**	**222**	*e*Pn	**Pn**	**15 45 25.8**	**+1.4**
	SNR=25						
MODS	**Modra-Piesok**	**3.29**	**167**	*e*PN	**Pn**	**15 45 27.5**	**+2.2**
MODS				*e*PG	**Pg**	**15 45 36.3**	**+0.8**
MODS				*e*SG	**Sg**	**15 46 21.8**	**+3.7**
KOLL	**Kolacno**	**3.33**	**154**	*e*PN	**Pn**	**15 45 27.2**	**+1.4**
NIE	**Niedzica**	**3.41**	**128**	*e*Pn	**Pn**	**15 45 29.2**	**+2.3**
NIE				*e*Pg	**Pg**	**15 45 39.6**	**+1.8**
NIE				*e*Sg	**Sg**	**15 46 24.2**	**+2.2**
ZST	**Bratislava**	**3.44**	**170**	*e*PN	**Pn**	**15 45 29.7**	**+2.4**
ZST				*e*PG	**Pg**	**15 45 38.1**	**-0.3**
ZST				*e*SG	**Sg**	**15 46 23.9**	**+0.9**
VYHS	**Vyhne**	**3.53**	**150**	*e*PN	**Pn**	**15 45 29.8**	**+1.2**
VYHS				*e*PG	**Pg**	**15 45 42.6**	**+2.4**
VYHS				*e*SG	**Sg**	**15 46 30.0**	**+4.0**
VYHS	**Vyhne**	**3.53**	**150**	Pn	**Pn**	**15 45 29.9**	**+1.3**
CLZ	**Clausthal**	**3.62**	**276**	*e*Pn	**Pn**	**15 45 32.0**	**+2.2**
	SNR=8.0						
BSD	**Bornholm Skovb**	**3.62**	**348**	*e*P	**Pn**	**15 45 31.2**	**+1.4**
BSD	**Bornholm Skovb**	**3.62**	**348**	*i* P	**Pn**	**15 45 28.8**	**-1.0**
BSD				*e*S	**Sn**	**15 46 12.2**	**-0.9**
BSD				IAML		15 46 52.9	
	comp=Z,16nm,0.6s						
CONA	**Conrad Observa**	**3.66**	**183**	Pn	**Pn**	**15 45 32.3**	**+1.8**
	comp=Z,7.1nm,0.3s,SNR=8.5						
CONA				*e*Sg	**Sg**	**15 46 30.4**	**+0.4**
	comp=Z,59nm,0.4s						
GRF	**Grafenberg Arr**	**3.67**	**241**	*e*Pn	**Pn**	**15 45 32.2**	**+1.6**
	SNR=4.7						
GRF				*e*Pg	**Pg**	**15 45 45.6**	**+2.8**
	SNR=3.2						
NRDL	**Niedersach Rie**	**3.85**	**286**	*e*Pn	**Pn**	**15 45 35.4**	**+2.4**
	SNR=4.7						
RONA	**Rosalia, Austr**	**3.88**	**179**	*e*Pn	**Pn**	**15 45 35.3**	**+1.9**
	comp=Z,4.2nm,0.4s						
RONA				*e*Sg	**Sg**	**15 46 36.6**	**-0.7**
	comp=Z,50nm,0.5s						
SOP	**Sopron**	**3.91**	**176**	P	**Pn**	**15 45 35.7**	**+1.9**
MOA	**Molln**	**3.93**	**199**	Pn	**Pn**	**15 45 35.8**	**+1.7**
	comp=Z,20nm,0.3s,SNR=30						
MOA				*e*Sg	**Sg**	**15 46 39.5**	**+0.7**
	comp=Z,26nm,0.3s						
UBBA	**Unterbreizbach**	**3.96**	**261**	*e*Pn	**Pn**	**15 45 35.7**	**+1.4**
	SNR=3.8						
BIOA	**Bad Ischl, Aus**	**4.22**	**204**	Pn	**Pn**	**15 45 39.8**	**+1.7**
	comp=Z,21nm,0.4s,SNR=25						
BIOA				*e*Sg	**Sg**	**15 46 50.0**	**+1.8**
	comp=Z,73nm,0.5s						
BSEG	**Bad Segeberg**	**4.27**	**306**	*e*Pn	**Pn**	**15 45 39.9**	**+1.3**
	SNR=5.6						
CRVS	**Cervenica-Dubn**	**4.33**	**126**	*e*PN	**Pn**	**15 45 41.6**	**+2.1**
CRVS				*e*PG	**Pg**	**15 45 56.2**	**+0.8**
CRVS				*e*SG	**Sg**	**15 46 57.8**	**+6.4**
ARSA	**Arzberg**	**4.35**	**186**	Pn	**Pn**	**15 45 42.8**	**+2.9**
	comp=Z,8.7nm,0.3s,SNR=17						
ARSA				*e*Sg	**Sg**	**15 46 50.9**	**-1.3**
	comp=Z,73nm,0.8s						
PSZ	**Piszkesteto**	**4.39**	**145**	⇑P	**Pn**	**15 45 42.1**	**+1.6**
PSZ	**Piszkesteto**	**4.39**	**145**	P	**Pn**	**15 45 42.5**	**+2.1**
RJOB	**Jochberg**	**4.43**	**211**	*e*Pn	**Pn**	**15 45 43.2**	**+2.2**
	SNR=8.4						
LLD	**Lille Linde**	**4.44**	**329**	*e*P	**Pn**	**15 45 40.8**	**-0.3**
KOLS	**Kolonicke sedl**	**4.73**	**122**	*e*PN	**Pn**	**15 45 46.7**	**+1.7**
KOLS				*e*PG	**Pg**	**15 46 04.8**	**+1.8**
BLEU	**Blekinge**	**4.74**	**358**	*e*S	**Sn**	**15 46 38.4**	**-2.4**
BLEU				*i* P	**Pn**	**15 45 45.8**	**+0.7**
BLEU				*i* P	**Pn**	**15 45 46.1**	**+1.0**
KBA	**Koelnbreinsper**	**4.87**	**203**	Pn	**Pn**	**15 45 49.2**	**+2.0**
	comp=Z,17nm,0.5s,SNR=11						
KBA				*e*Sg	**Sg**	**15 47 08.3**	**-0.5**
	comp=Z,93nm,0.8s						
KASTN	**Kahler Asten**	**4.87**	**269**	*e*Pn	**Pn**	**15 45 48.1**	**+1.1**
	SNR=8.4						
BJUU	**Bjuv**	**4.87**	**339**	*i* P	**Pn**	**15 45 46.8**	**-0.2**
BJUU				*e*S	**Sn**	**15 46 40.5**	**-3.6**
SOKA	**Soboth**	**4.96**	**189**	*e*Sg	**Sg**	**15 47 08.5**	**-3.4**
	comp=Z,8.1nm,0.4s						
TNS	**Taunus Mts**	**5.07**	**257**	*e*Pn	**Pn**	**15 45 51.2**	**+1.4**
	SNR=6.1						
DEL	**Delary**	**5.08**	**345**	*e*P	**Pn**	**15 45 49.9**	**0.0**
DEL				*e*S	**Sn**	**15 46 45.3**	**-4.0**
DEL	**Delary**	**5.08**	**345**	*i* P	**Pn**	**15 45 50.0**	**+0.1**
DEL				*e*S	**Sn**	**15 46 46.2**	**-3.1**
OBKA	**Obir**	**5.18**	**192**	*e*Pn	**Pn**	**15 45 53.1**	**+1.7**
	comp=Z,2.1nm,0.3s						
OBKA				*e*Sg	**Sg**	**15 47 21.3**	**+2.3**
	comp=Z,37nm,0.7s						
WATA	**Walderalm**	**5.20**	**217**	Pn	**Pn**	**15 45 53.9**	**+2.3**
	comp=Z,16nm,0.6s,SNR=17						
WATA				*e*Sg	**Sg**	**15 47 22.8**	**+3.4**
	comp=Z,22nm,0.5s						
MYKA	**Terra Mystica**	**5.22**	**200**	*e*Pn	**Pn**	**15 45 53.7**	**+1.8**
	comp=Z,2.2nm,0.4s						
MYKA				*e*Sg	**Sg**	**15 47 21.6**	**+1.4**
	comp=Z,24nm,0.5s						
WTTA	**Wattenberg**	**5.24**	**216**	Pn	**Pn**	**15 45 54.4**	**+2.2**
	comp=Z,5.4nm,0.4s,SNR=9.9						
WTTA				*e*Sg	**Sg**	**15 47 21.9**	**+1.2**
	comp=Z,20nm,0.5s						
MOTA	**Moosalm**	**5.37**	**220**	*e*Pn	**Pn**	**15 45 55.5**	**+1.4**
	comp=Z,3.9nm,0.3s						
MOTA				*e*Sg	**Sg**	**15 47 28.5**	**+3.5**
	comp=Z,20nm,0.5s						
ABTA	**Abfaltersbach**	**5.40**	**208**	Pn	**Pn**	**15 45 56.6**	**+2.3**
	comp=Z,4.8nm,0.5s,SNR=7.1						
ABTA				*e*Sg	**Sg**	**15 47 24.4**	**-1.4**
	comp=Z,37nm,0.6s						
RETA	**Reutte**	**5.40**	**223**	*e*Pn	**Pn**	**15 45 55.6**	**+1.2**
	comp=Z,1.0nm,0.2s						
RETA				*e*Sg	**Sg**	**15 47 30.7**	**+4.8**
	comp=Z,26nm,0.5s						
SQTA	**Sankt Quirin**	**5.43**	**219**	*i* Pn	**Pn**	**15 45 57.7**	**+2.8**
	comp=Z,7.5nm,0.2s,SNR=17						
SQTA				*e*Sg	**Sg**	**15 47 27.7**	**+0.7**
	comp=Z,20nm,0.5s						
MORH	**Mrgy, Hungar**	**5.61**	**162**	⇓P	**Pn**	**15 45 58.1**	**+1.0**
MORH	**Mrgy, Hungar**	**5.61**	**162**	P	**Pn**	**15 45 59.2**	**+2.1**
KOVH	**Kovagotottos**	**5.64**	**166**	P	**Pn**	**15 45 59.0**	**+1.5**
FETA	**Feichten**	**5.79**	**220**	*e*Pn	**Pn**	**15 46 01.8**	**+2.1**
	comp=Z,1.6nm,0.3s						
FETA				*e*Sg	**Sg**	**15 47 38.7**	**+0.5**
	comp=Z,7.8nm,0.5s						
FABU	**Falkenberg**	**5.80**	**341**	*i* P	**Pn**	**15 45 59.7**	**0.0**
DAVA	**Damuels**	**5.94**	**226**	*e*Pn	**Pn**	**15 46 02.8**	**+1.0**
	comp=Z,1.5nm,0.2s						
DAVA				*e*Sg	**Sg**	**15 47 46.7**	**+3.5**
	comp=Z,16nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.33**	**223**	Pn	**Pn**	**15 46 08.8**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=346,slow=6.7,SNR=9.1						
DAVOX				Sn	**Sn**	**15 47 21.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=343,slow=21,SNR=1.5						
DAVOX				Lg	Lg	15 47 48.5	
	comp=Z,0.5nm,0.3s,baz=209,slow=19,SNR=3.6						
	comp=Z,2.7nm,0.3s						
DRGR		**6.43**	**136**	⇑P	**Pn**	**15 46 10.9**	**+2.5**
CDF	**Champ du Feu**	**6.55**	**245**	*e*Pn	**Pn**	**15 46 08.8**	**-1.4**
CDF	**Champ du Feu**	**6.55**	**245**	*e*Pg	**Pg**	**15 46 37.1**	**-0.9**
CDF				*e*Sn	**Sn**	**15 47 18.5**	**-7.1**
CDF				*e*Sg	**Sg**	**15 48 02.5**	**-0.3**
	comp=Z,55nm,0.8s						
VIKU	**Vikbolandet**	**6.95**	**2**	*e*P	**Pn**	**15 46 16.0**	**+0.6**
HINF	**Hinteralfeld**	**7.12**	**242**	*e*Pn	**Pn**	**15 46 16.1**	**-1.8**
HINF	**Hinteralfeld**	**7.12**	**242**	*e*P	**Pn**	**15 46 20.4**	**+2.5**
HINF	**Hinteralfeld**	**7.12**	**242**	*e*Pg	**Pg**	**15 46 49.9**	**+1.1**
HINF				*e*Sg	**Sg**	**15 48 19.8**	**-1.2**
	comp=Z,19nm,0.6s						
NACGM	**Naroch**	**7.18**	**58**	⇑*e*P	**Pn**	**15 46 19.3**	**+0.6**
	baz=245						
KMPD	**K-Podol'skiy**	**7.28**	**110**	Pn	**Pn**	**15 46 20.3**	**+0.3**
HAU	**Haudompre**	**7.29**	**244**	*e*Pn	**Pn**	**15 46 18.1**	**-2.2**
HAU	**Haudompre**	**7.29**	**244**	*e*P	**Pn**	**15 46 23.9**	**+3.6**
HAU				*e*Sg	**Sg**	**15 48 25.4**	**-1.2**
	comp=Z,24nm,0.6s						
LUBAR	**Lubar, Ukraine**	**7.54**	**98**	Pn	**Pn**	**15 46 23.2**	**-0.4**
GZR	**Gura Zlata**	**7.58**	**142**	⇑P	**Pn**	**15 46 26.4**	**+2.1**
MI30	**MI30,Zelenitsa**	**7.60**	**92**	Pn	**Pn**	**15 46 25.5**	**+1.0**
SAVF	**Savonnieres en**	**7.70**	**252**	*e*Sg	**Sg**	**15 48 37.4**	**-2.2**
LOT	**Lotru**	**7.94**	**138**	⇑P	**Pn**	**15 46 31.4**	**+2.1**
SFTF	**Sexfontaines**	**7.94**	**249**	*e*Sg	**Sg**	**15 48 44.9**	**-2.5**
	comp=Z,13nm,0.6s						
AK20	**Malin Array Si**	**8.12**	**91**	Pn	**Pn**	**15 46 31.8**	**+0.3**
AK21	**Malin Array Si**	**8.13**	**91**	Pn	**Pn**	**15 46 32.0**	**+0.3**
AK22	**Malin Array Si**	**8.15**	**91**	Pn	**Pn**	**15 46 32.2**	**+0.2**
AK18	**Malin Array Si**	**8.16**	**91**	Pn	**Pn**	**15 46 33.0**	**+0.9**
AK23	**Malin Array Si**	**8.19**	**91**	Pn	**Pn**	**15 46 32.8**	**+0.4**
AK16	**Malin Array Si**	**8.19**	**91**	Pn	**Pn**	**15 46 32.7**	**+0.2**
AK14	**Malin Array Si**	**8.20**	**92**	Pn	**Pn**	**15 46 33.0**	**+0.4**
AK04	**Malin Array Si**	**8.22**	**91**	Pn	**Pn**	**15 46 33.9**	**+1.0**
AK03	**Malin Array Si**	**8.25**	**91**	Pn	**Pn**	**15 46 34.1**	**+0.7**
AK01	**Malin Array Si**	**8.25**	**91**	Pn	**Pn**	**15 46 33.3**	**-0.1**
AK02	**Malin Array Si**	**8.26**	**91**	Pn	**Pn**	**15 46 33.4**	**0.0**
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**15 46 33.3**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=284,slow=12,SNR=15						
AKASG				Sn	**Sn**	**15 48 02.8**	**-4.6**
	comp=Z,1.4nm,0.3s,baz=292,slow=27,SNR=3.9						
AKASG				Lg	Lg	15 49 02.8	
	baz=216,slow=49						
AKBB	**Malin Array Si**	**8.26**	**91**	Pn	**Pn**	**15 46 33.7**	**+0.3**
CABF	**La Chapelle**	**8.27**	**237**	*e*Sg	**Sg**	**15 48 55.9**	**-2.1**
AK07	**Malin Array Si**	**8.28**	**92**	Pn	**Pn**	**15 46 33.5**	**-0.2**
AK08	**Malin Array Si**	**8.29**	**91**	Pn	**Pn**	**15 46 34.0**	**+0.1**
MTSE	**Matsula**	**8.38**	**28**	*e*P	**Pn**	**15 46 36.5**	**+1.5**
MTSE				*e*S		15 47 02.5	
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**15 46 37.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=264,slow=40,SNR=2.0						
HFS				Sn	**Sn**	**15 48 15.4**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=6.3,slow=28,SNR=1.6						
HFS				Lg	Lg	15 49 06.5	
	comp=Z,0.2nm,0.3s,baz=209,slow=42,SNR=1.7						
	comp=Z,0.2nm,0.3s						
LOR	**Lormes**	**9.11**	**247**	*e*Pn	**Pn**	**15 46 43.8**	**-1.3**
	baz=80						
LOR	**Lormes**	**9.11**	**247**	*e*P	**Pn**	**15 46 48.6**	**+3.5**
	baz=79						
LOR	**Lormes**	**9.11**	**247**	*e*Pg	Pn	15 47 24.2	+39
	baz=66						
VSU	**Vasula**	**9.18**	**37**	*e*S	**Pn**	**15 46 48.6**	**+2.6**
SSF	**Saint Saulge**	**9.42**	**246**	*e*P	**Pn**	**15 46 51.1**	**+1.7**
SSF	**Saint Saulge**	**9.42**	**246**	*e*Pg	Pn	15 47 30.8	+41
SSF				*e*Sg	Sn	15 49 30.0	+54
SMF	**Signal de Mont**	**9.47**	**243**	*e*Pg	Pn	15 47 30.9	+41
SMF				*e*Sg	Sn	15 49 32.8	+56
	comp=Z,7.0nm,0.6s						
AVF	**Avril sur Loir**	**9.66**	**245**	*e*Sg	Sn	15 49 37.8	+56
	comp=Z,0.4nm,0.3s						

MEF	Metsahovi	9.80	25	*e*P	Pn	15 46 56.3	+1.7
MEF				AML	AML	15 46 59.8	
	comp=Z,4.9nm,0.7s						
NOA	NORSAR Array B	9.87	346	Pn	Pn	15 46 55.3	-0.2
	baz=154,slow=13,SNR=1.3						
NOA				Lg	Lg	15 49 37.3	
	baz=247,slow=20,SNR=1.6						
	comp=Z,0.9nm,0.9s						
BGF	Bois d'Agland	10.08	245	*e*Sg	Sn	15 49 51.9	+60
	comp=Z,2.3nm,0.3s						
FINES	FINESS Array B	11.28	25	Pn	Pn	15 47 14.4	-0.4
	comp=Z,0.2nm,0.3s,baz=214,slow=11,SNR=8.3						
FINES				Sn	Sn	15 49 13.5	-8.0
	comp=Z,0.5nm,0.3s,baz=217,slow=19,SNR=5.1						
	comp=Z,0.8nm,0.4s						
EKA	Eskdalemuir Ar	12.11	296	Pn	Pn	15 47 23.4	-2.8
	baz=100,slow=14						
ARCES	ARCESS Array B	18.55	10	Pn	P	15 48 48.1	-2.3
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=6.2						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	54.84	55	LR	LR	16 17 59.7	
	comp=Z,49nm,18.5s,baz=184,slow=36						
YKA	Yellowknife Ar	59.81	336	P	P	15 54 40.2	+1.3
	comp=Z,0.5nm,0.6s,baz=29,slow=6.8,SNR=5.8						
	comp=Z,0.5nm,0.6s						

*IDC **05** 15:52:22.1±0.5, 17°.51N×145°.62E, h225^{km}±5^{km}, mb4.0/26, mbtmp4.6/28, Error ellipse: s-maj=11.8km s-min=6.5km az=98.0*

*NEIC **05** 15:52:22.0±1.6, 17°.62N±0°.07×145°.49E±0°.09, h219^{km}±6^{km}, mb4.7/178, Error ellipse: s-maj=12.3km s-min=9.4km az=78.0*

ISC 05 15:52:20.2±0.3**, 17°.60N**±0°.04×**145°.55E**±0°.06**, h200**^{km}**,**
n408, σ1s.14/415**, mb4.7**/150**, 2C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.04	189	P	Pn	15 53 24.8	+2.1
	166nm,0.5s,baz=56,slow=1.5,SNR=32						
GUMO				S	Sn	15 54 13.6	+1.9
	238nm,0.3s,baz=143,slow=23,SNR=7.7						
GUMO	Guam	4.04	189	Pn	Pn	15 53 24.6	+1.9
GUMO				Sn	Sn	15 54 12.5	+0.9
GUMO	Guam	4.04	189	P	Pn	15 53 25.6	+3.0
JCJ	Chichijima	9.94	342	Pn	Pn	15 54 36.9	-1.8
JMZ	Minamidaito 2	15.61	304		Pn	15 55 46.7	-3.2
JMZ				IAmb	IAmb	15 56 23.1	
	comp=Z,24nm,0.7s						
JHJ2	Mitsune	16.28	343	P	P	15 55 57.3	+0.1
JHJ2	Mitsune	16.28	343	P	Pn	15 56 01.8	+3.9
	comp=Z,178nm,1.3s						
PATS	Pohnpei	16.43	129	Pn	Pn	15 56 02.3	+2.5
PATS	Pohnpei	16.43	129	P	Pn	15 56 02.6	+2.8
JOW	Kunigami	18.42	303	P	Pn	15 56 23.5	+0.3
	comp=Z,62nm,0.6s,baz=126,slow=8.4,SNR=13						
JOW	Kunigami	18.42	303	P	P	15 56 20.4	-0.3
JOW	Kunigami	18.42	303	P	Pn	15 56 23.8	+0.5
	comp=Z,104nm,0.9s						
JYT	Yasato	19.15	347	P	P	15 56 28.2	-0.2
JYT				IAmb	IAmb	15 56 35.1	
	comp=Z,42nm,1.3s						
JMN	Monobe	19.17	329	P	P	15 56 30.7	+2.0
INU	Inuyama	19.23	338	P	P	15 56 29.0	-0.4
INU				IAmb	IAmb	15 57 13.5	
	comp=Z,40nm,1.7s						
JGF	Kuroka	19.35	339	P	P	15 56 30.1	-0.6
JSU	Suzuyama	19.46	318	P	P	15 56 32.2	+0.4
MANU	Manus Island	19.61	175	P	P	15 56 33.7	+0.2
MANU				IAmb	IAmb	15 56 37.4	
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	19.95	342	P	P	15 56 34.6	-2.5
	comp=Z,1.6nm,0.4s,baz=169,slow=9.9,SNR=4.3						
MJAR	Matsushiro Arr	19.95	342	P	P	15 56 34.1	-2.9
MAJO	Matsushiro	19.95	342	P	P	15 56 35.2	-1.9
MJB9	Matsu-Tunnel	19.95	342	P	P	15 56 35.5	-1.6
WAKE	Wake Island	20.09	82	P	P	15 56 38.0	-0.8
JNU	Nakatsue	20.32	322	P	P	15 56 40.9	-0.2
JNU				IAmb	IAmb	15 57 08.0	
	comp=Z,24nm,1.4s						
H11N1	WAKE ISLAND Hy	20.33	81	T	T	16 18 25.2	
	baz=264,slow=74,SNR=19						
H11N2	WAKE ISLAND Hy	20.34	81	T	T	16 18 26.5	
	baz=264,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	20.35	81	T	T	16 18 26.6	
	baz=264,slow=74,SNR=20						
JHS	Saijyo	20.56	330	P	P	15 56 43.3	-0.3
JHS				IAmb	IAmb	15 56 44.0	
	comp=Z,52nm,1.8s						
JMM	Marumori	20.61	349	P	P	15 56 43.7	-0.4
JMM				IAmb	IAmb	15 56 58.1	
	comp=Z,28nm,0.6s						
BAKI	Biak	20.86	207	P	P	15 56 48.0	+1.0
	comp=Z,28nm,1.2s						
JSD	Sado	21.34	344	P	P	15 56 49.3	-2.4
YOJ	Yonaguni jima	22.10	292	P	P	15 56 58.3	-1.1
RABL	Rabaul	22.62	163	P	P	15 57 03.6	-0.8
KRVT	Keravat (AS076	22.69	163	P	P	15 57 04.0	-1.0
	comp=Z,37nm,0.6s,baz=92,slow=2.9,SNR=6.1						
	comp=Z,37nm,0.6s						
SWI	Sorong	23.12	219	P	P	15 57 09.4	+0.5
	comp=Z,54nm,1.0s						
SIJI	Sorong	23.12	219	P	P	15 57 07.5	-1.3
	comp=Z,26nm,0.7s,baz=36,slow=8.8,SNR=16						
	comp=Z,26nm,0.7s						
NACB	Ninganchiao	23.29	290	P	P	15 57 09.5	-0.8
NACB				IAmb	IAmb	15 57 47.1	
	comp=Z,18nm,0.8s						
YULB	Yu-li	23.42	288	P	P	15 57 09.1	-2.4
YULB				IAmb	IAmb	15 57 40.2	
	comp=Z,22nm,1.1s						
JTM	Tenmabayashi	23.42	351	P	P	15 57 12.0	+0.7
TWG	Pinlang	23.53	287	P	P	15 57 10.8	-1.7
TWG				IAmb	IAmb	15 57 14.8	
	comp=Z,22nm,0.6s						
YHNB	Yeheng	23.59	291	P	P	15 57 12.8	-0.3
YHNB	Yeheng	23.59	291	P	P	15 57 15.9	+2.7
SSLB	Suanglung	23.80	289	P	P	15 57 15.1	+0.1
SSLB				IAmb	IAmb	15 57 17.9	
	comp=Z,27nm,0.8s						
SSLB	Suanglung	23.80	289	P	P	15 57 16.5	+1.5
TPUB	Ta-pu	24.01	288	P	P	15 57 16.0	-0.9
TPUB				IAmb	IAmb	15 57 43.7	
	comp=Z,54nm,1.5s						
TPUB	Ta-pu	24.01	288	P	P	15 57 18.8	+1.9
KSRS	Korea Array	25.12	325	P	P	15 57 26.9	+0.1
	comp=Z,2.9nm,0.8s,baz=141,slow=9.2,SNR=8.0						
KSRS				pP	pwP	15 58 14.1	+3.9
	comp=Z,5.9nm,1.1s,baz=154,slow=8.4,SNR=2.7						
	comp=Z,2.9nm,0.8s						
ASAJ	Asahikawa	26.55	355	P	P	15 57 39.9	+0.4
	comp=Z,3.3nm,0.4s,baz=238,slow=12,SNR=11						
	comp=Z,3.3nm,0.4s						
JKA	Kamikawa-asahi	26.55	355	P	P	15 57 38.9	-0.6
PMG	Port Moresby	26.88	176	P	P	15 57 40.8	-1.9
PMG				IAmb	IAmb	15 57 54.5	
	comp=Z,53nm,1.5s						
PMG	Port Moresby	26.88	176	P	P	15 57 43.3	+0.5
PMG	Port Moresby	26.88	176	P	P	15 57 43.5	+0.7
AAI	Ambon	27.21	221	P	P	15 57 44.9	-0.9
	comp=Z,27nm,0.8s						
SANI	Sanana	27.44	227	P	P	15 57 46.5	-1.3
	comp=Z,9.8nm,0.7s						
NJ2	Nanjing	28.07	306	*e*P	P	15 57 52.8	-0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LUWI	Luwuk	29.09	233	P	P	15 58 00.7	-1.8
LUWI	Luwuk	29.09	233	P	P	15 58 01.3	-1.1
	comp=Z,60nm,0.8s						
MYLDM	Lahad Datu	29.19	248	P	P	15 58 04.8	+1.5
MYLDM				IAmb	IAmb	15 58 06.0	
	comp=Z,16nm,1.1s						
TOLI2	Tolitoli	29.34	239	P	P	15 58 04.2	-0.5
TOLI2				IAmb	IAmb	15 58 05.2	
	comp=Z,17nm,0.7s						
TOLI2	Tolitoli	29.34	239	P	P	15 58 04.6	-0.1
YSS	Yuzh-Sakhalins	29.36	356	P	P	15 58 04.0	-0.4
HNR	Honiara	30.40	151	P	P	15 58 12.9	-1.0
WHN	Wuhan	31.15	300	⇑P	P	15 58 22.3	+1.9
COEN	Coen	31.45	184	P	P	15 58 22.1	-1.0
COEN				IAmb	IAmb	15 58 23.4	
	comp=Z,18nm,0.8s						
COEN	Coen	31.45	184	P	P	15 58 22.6	-0.5
TTSI	Tana Toraja	32.63	234	P	P	15 58 34.5	+1.0
	comp=Z,486nmcomp=Z,49nm,0.7s						
KDU	Kakadu	32.75	204	P	P	15 58 33.6	-0.8
SPSI	Sidrap Palu	33.26	232	P	P	15 58 38.5	-0.4
	comp=Z,407nmcomp=Z,34nm,0.9s						
BNSI	Bone	33.29	231	P	P	15 58 38.9	-0.3
	comp=Z,36nm,0.9s						
MTN	Manton Dam	33.43	206	P	P	15 58 39.2	-1.1
MTN	Manton Dam	33.43	206	P	P	15 58 40.1	-0.3
BJI	Beijing	33.83	317	P	P	15 58 45.0	+1.5
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BKSI	Bulukumba	33.90	230	P	P	15 58 43.9	-0.5
	comp=Z,19nm,0.9s						
BSSI	Bau Bau, Buton	34.19	229	P	P	15 58 46.6	-0.4
	comp=Z,32nm,1.5s						
ENH	Enshi	35.13	298	P	P	15 58 55.8	+0.8
ENH				IAmb	IAmb	15 58 56.8	
	comp=Z,16nm,0.5s						
MTKI	Muara Teweh, K	35.36	242	P	P	15 58 55.8	-1.2
MTSU	Mount Surprise	35.53	182	P	P	15 58 58.0	-0.4
SBUM	Sibu	36.01	249	P	P	15 59 02.9	+0.4
SBUM				IAmb	IAmb	15 59 03.5	
	comp=Z,20nm,0.5s						
XLT	XiLinHaoTe	36.10	323	*e*P	P	15 59 04.2	+1.1
XLT				pP	pwP	15 59 48.6	-0.2
XLT				sP	sP	16 00 09.0	+3.2
XLT				PcP	PcP	16 01 21.9	-2.6
XLT				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,270nm,4.9s						
DLV	T Lat	36.23	266	P	P	15 59 06.2	+1.6
DLV				IAmb	IAmb	15 59 21.2	
	comp=Z,47nm,1.7s						
PEA0B	Petropavlovsk-	36.69	12	P	P	15 59 07.7	-0.1
PETK	Petropavlovsk-	36.69	12	P	P	15 59 08.3	+0.6
	comp=Z,2.2nm,0.8s,baz=148,slow=8.6,SNR=13						
	comp=Z,2.2nm,0.8s						
PETK	Petropavlovsk-	36.69	12	P	P	15 59 08.9	+1.1
KNRA	Kununurra	36.98	208	P	P	15 59 10.1	-0.5
KNRA	Kununurra	36.98	208	P	P	15 59 10.2	-0.4
WBSI	Waikabubak, Su	37.42	226	P	P	15 59 12.0	-2.5
	comp=Z,34nm,0.7s						
CTA	Charters Tower	37.46	179	P	P	15 59 13.6	-1.1
	comp=Z,2.4nm,0.6s,baz=1.5,slow=9.4,SNR=7.1						
	comp=Z,2.4nm,0.6s						
CTA	Charters Tower	37.46	179	P	P	15 59 15.1	+0.4
CTAO	Charters Tower	37.46	179	P	P	15 59 13.9	-0.7
CTAO				IAmb	IAmb	15 59 14.2	
	comp=Z,22nm,1.6s						
CTAO	Charters Tower	37.46	179	P	P	15 59 14.5	-0.2
STKI	Sintang	37.78	246	P	P	15 59 17.4	0.0
	comp=Z,18nm,0.8s						
PLAI	Plampang	37.98	228	P	P	15 59 18.5	-0.6
	comp=Z,40nm,0.9s						
PLAI	Plampang	37.98	228	P	P	15 59 18.8	-0.3
KSM	Kuching	38.15	249	P	P	15 59 19.6	-0.9
KSM				IAmb	IAmb	15 59 20.9	
	comp=Z,21nm,0.8s						
KSM	Kuching	38.15	249	P	P	15 59 20.1	-0.4
	comp=Z,29nm,0.8s						
QIS	Mount Isa	38.37	189	P	P	15 59 23.3	+1.0
WB0	Warramunga Arr	38.72	197	P	P	15 59 24.2	-0.9
WR0	Warramunga Arr	38.86	197	P	P	15 59 25.1	-1.3
WR0				IAmb	IAmb	15 59 27.5	
	comp=Z,21nm,0.8s						
WRAB	Tennant Creek	38.89	197	P	P	15 59 25.8	-0.7
WRAB	Tennant Creek	38.89	197	P	P	15 59 26.7	+0.1
WB2	Warramunga Arr	38.90	197	P	P	15 59 25.8	-0.9
WB2				IAmb	IAmb	15 59 27.5	
	comp=Z,49nm,1.1s						
WRA	Warramunga Arr	38.90	197	P	P	15 59 25.6	-1.1
	comp=Z,42nm,1.0s,baz=18,slow=8.9,SNR=83						
WRA	Warramunga Arr	38.90	197	P	P	15 59 24.8	-1.9
PBKI	Pangkalan Bun	39.02	242	P	P	15 59 27.4	-0.4
	comp=Z,92nm,0.8s						
SANVU	Saraoutou	39.17	146	P	P	15 59 28.7	-0.3
SRBI	Singaraja	39.37	232	P	P	15 59 30.3	-0.3
	comp=Z,27nm,0.8s						
KMMI	Kalianget	39.66	235	P	P	15 59 32.6	-0.5
	comp=Z,34nm,0.8s						
JAGI	Jajag, Banyuwa	40.41	233	P	P	15 59 37.3	-2.0
JAGI				IAmb	IAmb	15 59 53.6	
	comp=Z,46nm,1.5s						
JAGI	Jajag, Banyuwa	40.41	233	P	P	15 59 38.3	-1.0
	comp=Z,12nm,1.0s						
RK1H	Rockhampton Ha	41.03	173	P	P	15 59 44.1	0.0
	comp=Z,24nm,0.8s						
LZH	Lanzhou	41.14	305	⇑P	P	15 59 49.3	+4.1
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
PZH	PanZhiHua	41.39	290	P	P	15 59 48.6	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,6.7s						
SHEM	Shemya Is, Ala	41.58	26	P	P	15 59 49.0	+0.8
	comp=Z,16nm,0.4s,baz=61,slow=5.2,SNR=4.6						
	comp=Z,16nm,0.4s						
SMY	Shemya	41.58	26	P	P	15 59 49.9	+1.7
UWJI	Ujung Watu	41.68	238	P	P	15 59 49.7	+0.1
	comp=Z,51nm,1.4s						
PWJI	Pagerwojo	41.95	235	P	P	15 59 50.4	-1.3
	comp=Z,70nm,0.7s						
MA2	Magadan	42.09	4	P	P	15 59 53.0	+0.7
	comp=Z,5.7nm,0.6s,baz=191,slow=9.1,SNR=11						
	comp=Z,5.7nm,0.6s						
MA2	Magadan	42.09	4	P	P	15 59 50.6	-1.7
MA2				IAmb	IAmb	15 59 53.2	
	comp=Z,46nm,1.8s						
KOUNC	Koumac, New Ca	42.14	153	P	P	15 59 52.5	-0.6
KOUNC				IAmb	IAmb	15 59 53.9	
	comp=Z,14nm,0.7s						
KOUNC	Koumac, New Ca	42.14	153	P	P	15 59 53.6	+0.5
TPI	Tanjungpandan	42.48	245	P	P	15 59 56.0	-0.1
	comp=Z,15nm,0.9s						
PCJI	Pacitan	42.54	236	P	P	15 59 55.6	-0.9
	comp=Z,48nm,0.6s						
AS31	Alice Springs	42.56	196	P	P	15 59 55.5	-1.1
ASAR	Alice Springs	42.56	196	P	P	15 59 55.6	-1.0
	comp=Z,4.5nm,0.5s,baz=20,slow=6.4,SNR=150						
	comp=Z,4.5nm,0.5s						
ASAR	Alice Springs	42.56	196	P	P	15 59 55.0	-1.6
UGM	Wanagama	42.89	237	P	P	15 59 58.4	-1.1
UGM	Wanagama	42.89	237	P	P	15 59 59.8	+0.4
	comp=Z,156nm,1.8s						
EIDS	Eidsvold	43.05	173	P	P	16 00 00.5	0.0
ULN	Ulaanbaatar	43.54	323	P	P	16 00 03.0	-1.3
KPJI	Karang Pucung	43.84	239	P	P	16 00 05.2	-1.7
MYKOM	Kota Tinggi	43.85	254	P	P	16 00 07.2	+0.1
MYKOM				IAmb	IAmb	16 00 08.8	
	comp=Z,16nm,0.8s						
SONM	Songino Array	43.91	322	P	P	16 00 07.5	+0.2
	comp=Z,2.9nm,0.6s,baz=132,slow=9.3,SNR=17						
SONM				pP	pwP	16 00 59.9	+5.3
	comp=Z,1.0nm,0.7s,baz=142,slow=7.5,SNR=1.6						
	comp=Z,2.9nm,0.6s						
SONM	Songino Array	43.91	322	P	P	16 00 07.8	+0.5
RMQ	Roma	43.94	176	P	P	16 00 06.7	-0.8
CHTO	Chiang Mai	44.19	279	P	P	16 00 09.7	-0.1
CM31	Chiang Mai Arr	44.23	279	P	P	16 00 11.4	+1.4
CMAR	Chiang Mai Arr	44.23	279	P	P	16 00 11.6	+1.5
	comp=Z,6.9nm,0.8s,baz=74,slow=6.8,SNR=42						
CMAR				pP	pwP	16 00 59.5	+2.1
	comp=Z,0.6nm,0.7s,baz=80,slow=5.2,SNR=1.4						
	comp=Z,6.9nm,0.8s						
CMAR	Chiang Mai Arr	44.23	279	P	P	16 00 10.7	+0.7
NOUC	Port Laguerre	44.38	152	P	P	16 00 12.2	+1.1
DZM	Mont Dzumac	44.42	152	P	P	16 00 11.2	-0.3
DZM				IAmb	IAmb	16 00 12.6	
	comp=Z,62nm,1.4s						
DZM	Mont Dzumac	44.42	152	P	P	16 00 12.1	+0.6
YATNC	Mamie plateau,	44.62	151	P	P	16 00 13.9	+1.0
ONTNC	Ouen Toro	44.63	152	P	P	16 00 12.9	-0.2
ONTNC				IAmb	IAmb	16 00 13.6	
	comp=Z,19nm,0.8s						
OUENC	Ouen Island, N	44.90	152	P	P	16 00 14.7	-0.5
OUENC				IAmb	IAmb	16 00 16.4	
	comp=Z,15nm,0.7s						
OUENC	Ouen Island, N	44.90	152	P	P	16 00 16.3	+1.1
INKA	Innaminka	45.31	186	P	P	16 00 19.0	+0.7
PINNC	Pines Island,	45.35	151	P	P	16 00 18.8	+0.1
IPM	Ipoh	45.47	259	P	P	16 00 20.4	+0.5
SRIT	Nakonsritamara	45.53	265	P	P	16 00 19.3	-1.0
SRIT				IAmb	IAmb	16 00 23.2	
	comp=Z,20nm,1.0s						
KULM	Kulim	45.55	260	P	P	16 00 19.2	-1.3
WRKA	Warakurna	45.59	202	P	P	16 00 20.5	-0.1
MBWA	Marble Bar	46.09	214	P	P	16 00 23.1	-1.4
MBWA				IAmb	IAmb	16 00 24.8	
	comp=Z,20nm,0.9s						
MBWA	Marble Bar	46.09	214	P	P	16 00 24.6	+0.1
OOD	Oodnadatta	46.13	192	P	P	16 00 24.1	-0.6
PSA00	Pilbara Seismi	46.37	214	P	P	16 00 24.5	-2.2
PSA00	Pilbara Seismi	46.37	214	P	P	16 00 25.2	-1.5
PSA00				IAmb	IAmb	16 00 27.1	
	comp=Z,8.3nm,0.9s						
MSVF	Nonsavu	47.50	136	P	P	16 00 36.8	+1.2
ARMA	Armidale	48.10	173	P	P	16 00 40.4	+0.4
ARMA	Armidale	48.10	173	P	P	16 00 41.2	+1.1
LCRK	Leigh Creek	48.29	188	P	P	16 00 41.0	-0.3
GOMU	GeErMu	48.31	303	P	P	16 00 44.5	+2.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,60nm,5.3s						
CMSA	Cobar Meteorol	48.86	180	P	P	16 00 45.8	+0.1
MULG	Mulgathing	48.88	193	P	P	16 00 45.9	+0.1
STKA	Stephens Creek	49.34	184	P	P	16 00 47.9	-1.5
	comp=Z,5.2nm,0.5s,baz=359,slow=7.5,SNR=21						
	comp=Z,5.2nm,0.5s						
STKA	Stephens Creek	49.34	184	P	P	16 00 48.1	-1.2
STKA	Stephens Creek	49.34	184	P	P	16 00 49.0	-0.3
SISI	Saibi	49.46	252	P	P	16 00 48.4	-2.2
	comp=Z,23nm,0.7s						
GSI	Gunungsitoli	49.82	256	P	P	16 00 53.6	+0.2
GSI	Gunungsitoli	49.82	256	P	P	16 00 53.5	+0.2
	comp=Z,52nm,0.7s						
GSI	Gunungsitoli	49.82	256	P	P	16 00 53.9	+0.6
SHL	Shillong	50.25	289	P	P	16 00 55.4	-1.2
SHL				IAmb	IAmb	16 00 57.4	
	comp=Z,10nm,0.5s						
GIRL	Giralia	50.38	219	P	P	16 00 56.8	-0.5
LSA	Lhasa	50.85	294	P	P	16 01 01.5	0.0
LSA				IAmb	IAmb	16 01 04.5	
	comp=Z,12nm,0.6s						
BBOO	Buckleboo	50.94	190	P	P	16 01 00.2	-1.1
BBOO				IAmb	IAmb	16 01 27.2	
	comp=Z,68nm,1.7s						
BBOO	Buckleboo	50.94	190	P	P	16 01 02.3	+1.0
FORT	Forrest	50.96	199	P	P	16 01 00.5	-1.0
FORT				IAmb	IAmb	16 01 03.2	
	comp=Z,21nm,0.8s						
FORT	Forrest	50.96	199	P	P	16 01 02.1	+0.6
HTT	Hallett	51.14	187	P	P	16 01 03.1	+0.2
MEEK	Meekatharra	51.17	211	P	P	16 01 02.6	-0.6
SPIA	Saint Paul Isl	51.36	29	P	P	16 01 04.4	+0.3
	baz=238						
UNV	Unalaska Valle	51.64	34	P	P	16 01 06.3	0.0
UNV	Unalaska Valle	51.64	34	P	P	16 01 06.0	-0.2
	baz=245						
BILL	Bilibino	52.12	10	P	P	16 01 09.5	-0.1
BILL				IAmb	IAmb	16 01 10.4	
	comp=Z,8.5nm,0.6s						
AKUT	Akutan	52.15	34	P	P	16 01 10.4	+0.3
CAN	Canberra	52.73	176	P	P	16 01 13.8	-0.7
CAN				IAmb	IAmb	16 01 48.7	
	comp=Z,17nm,1.3s						
TAPN	Taplejung	53.91	291	*e*P	P	16 01 24.6	+0.8
	comp=Z,6.7nm,0.4s						
ARPS	Mount Arapiles	54.19	184	P	P	16 01 25.7	+0.6
	comp=Z,15nm,1.1s						
ODAN	Odare	54.22	291	*e*P	P	16 01 26.5	+0.6
	comp=Z,5.7nm,0.4s						
MORW	Morawa	54.45	212	P	P	16 01 26.2	-1.0
MORW	Morawa	54.45	212	P	P	16 01 26.3	-0.8
GAMB	Gambell	54.52	22	P	P	16 01 27.7	+0.7
GAMB				IAmb	IAmb	16 02 09.8	
	comp=Z,24nm,1.3s						
WMQ	Urumqi	54.92	312	*e*P	P	16 01 33.6	+3.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
RAMN	Ramite	54.92	291	*e*P	P	16 01 31.8	+0.8
	comp=Z,8.2nm,0.4s						
TIXI	Tiksi	54.94	354	P	P	16 01 28.3	-1.7
JIRN	Jiri	55.25	292	*e*P	P	16 01 34.4	+0.9
	comp=Z,2.5nm,0.6s						
BLDU	Ballidu	55.39	210	P	P	16 01 33.0	-0.8
GUN	Gumba	55.51	292	*e*P	P	16 01 36.1	+0.8
	comp=Z,19nm,0.4s						
KLBR	Kellerberrin	55.71	209	P	P	16 01 35.5	-0.6
PKI	Pulchoki	55.95	292	*e*P	P	16 01 38.5	+0.1
	comp=Z,20nm,0.4s						
PKIN	Phulchoki	55.96	292	*e*P	P	16 01 38.4	0.0
	comp=Z,24nm,0.4s						
DMN	Daman	56.21	292	*e*P	P	16 01 40.5	+0.3
	comp=Z,21nm,0.4s						
GKN	Gorkha	56.60	292	*e*P	P	16 01 43.2	+0.4
	comp=Z,16nm,0.4s						
MUN	Mundaring	56.76	210	P	P	16 01 42.7	-0.8
TNA	Tin City	56.88	21	P	P	16 01 42.9	-1.0
NWAO	Narrogin (SRO)	57.07	208	P	P	16 01 44.9	-0.8
NWAO	Narrogin (SRO)	57.07	208	P	P	16 01 45.1	-0.6
ANM	Nome	57.26	23	P	P	16 01 47.3	+0.7
ANM				IAmb	IAmb	16 01 47.7	
	comp=Z,6.4nm,0.6s						
ANM	Nome	57.26	23	P	P	16 01 47.2	+0.7
	baz=239						
DANN	Dangsing	57.36	293	*e*P	P	16 01 48.8	+0.6
	comp=Z,36nm,0.5s						
KOLN	Koldanda	57.53	292	*e*P	P	16 01 49.6	+0.2
	comp=Z,6.5nm,0.4s						
PYUN	Piuthan	58.05	292	*e*P	P	16 01 53.1	+0.1
	comp=Z,5.7nm,0.4s						
ZAA0	Zalesovo Array	58.79	323	P	P	16 01 56.4	-1.0
ZALV	Zalesovo Beam	58.79	323	P	P	16 01 56.7	-0.7
	comp=Z,4.3nm,0.7s,baz=104,slow=7.4,SNR=16						
	comp=Z,4.3nm,0.7s						
ZALV	Zalesovo Beam	58.79	323	P	P	16 01 56.1	-1.3
MK31	Makanchi Array	59.12	314	P	P	16 01 58.9	-0.9
MKAR	Makanchi Array	59.12	314	P	P	16 01 59.4	-0.4
	comp=Z,11nm,0.4s,baz=90,slow=8.0,SNR=0.5						
	comp=Z,11nm,0.4s						
MAKZ	Makanchi	59.33	314	P	P	16 02 00.8	-0.5
MAKZ				IAmb	IAmb	16 02 03.2	
	comp=Z,5.9nm,0.6s						
N18K	Kilae Creek	59.57	29	P	P	16 02 03.4	+0.8
N18K				IAmb	IAmb	16 02 41.1	
	comp=Z,33nm,1.7s						
N18K	Kilae Creek	59.57	29	P	P	16 02 03.0	+0.4
	baz=251						
O18K	Koktuh Hills	59.63	30	P	P	16 02 03.5	+0.5
O18K				IAmb	IAmb	16 02 04.7	
	comp=Z,11nm,0.7s						
O18K	Koktuh Hills	59.63	30	P	P	16 02 03.6	+0.6
	baz=252						
OHAK	Old Harbor	59.84	33	P	P	16 02 04.3	-0.1
SVW2	Sparrevohn	59.85	29	P	P	16 02 04.4	-0.2
RDOG	Red Dog Mine	59.90	20	P	P	16 02 03.3	-1.4
RDOG				IAmb	IAmb	16 02 04.5	
	comp=Z,8.2nm,0.8s						
RDOG	Red Dog Mine	59.90	20	P	P	16 02 04.0	-0.8
	baz=240						
Q19K	Cape Douglas,	60.12	31	P	P	16 02 05.8	-0.6
O19K	Port Alsworth	60.16	30	P	P	16 02 07.3	+0.8
	baz=252						
N19K	Bonanza Creek	60.27	29	P	P	16 02 08.0	+0.5
N19K				IAmb	IAmb	16 02 09.7	
	comp=Z,9.6nm,0.7s						
N19K	Bonanza Creek	60.27	29	P	P	16 02 08.4	+0.9
	baz=252						
TTA	Tatalina	60.29	27	P	P	16 02 07.9	+0.3
TTA				IAmb	IAmb	16 02 13.9	
	comp=Z,20nm,1.8s						
TTA	Tatalina	60.29	27	P	P	16 02 07.7	+0.1
	baz=249						
KDAK	Kodiak Island	60.35	33	P	P	16 02 08.2	+0.3
	comp=Z,6.7nm,0.5s,baz=360,slow=1.7,SNR=4.2						
	comp=Z,6.7nm,0.5s						
KDAK	Kodiak Island	60.35	33	P	P	16 02 07.3	-0.6
L19K	White Mountain	60.54	28	P	P	16 02 09.4	+0.2
L19K				IAmb	IAmb	16 02 11.9	
	comp=Z,17nm,1.6s						
L19K	White Mountain	60.54	28	P	P	16 02 09.3	+0.1
	baz=251						
M19K	Big River Lodg	60.65	28	P	P	16 02 11.2	+1.3
M19K	Big River Lodg	60.65	28	P	P	16 02 10.3	+0.4
	baz=252						
K20K	Telida	61.26	27	P	P	16 02 14.9	+0.8
K20K				IAmb	IAmb	16 02 15.9	
	comp=Z,7.4nm,0.7s						

K20K	Telida	61.26	27	P	P	16 02 15.1	+1.0
	baz=251,SNR=5.6						
CNPM	China Poot	61.47	31	P	P	16 02 14.7	-0.8
J20K	Nowinta River	61.50	26	P	P	16 02 15.5	-0.1
J20K				IAmb	IAmb	16 02 17.1	
	comp=Z,7.5nm,0.6s						
J20K	Nowinta River	61.50	26	P	P	16 02 16.6	+1.0
	baz=251,SNR=6.5						
BRLK	Bradley Lake	61.70	31	P	P	16 02 16.3	-0.8
BRSE	Bradley Lake S	61.77	31	P	P	16 02 17.0	-0.5
	baz=256						
CAPN	Captain Cook N	61.82	30	P	P	16 02 17.2	-0.5
	baz=255						
PPLA	Purkeypile	61.93	27	P	P	16 02 17.8	-0.9
PPLA				IAmb	IAmb	16 02 50.9	
	comp=Z,35nm,1.7s						
PPLA	Purkeypile	61.93	27	P	P	16 02 18.8	+0.1
	baz=253						
KURK	Kurchatov	61.99	319	P	P	16 02 17.8	-1.2
KURK				IAmb	IAmb	16 02 19.7	
	comp=Z,7.5nm,0.8s						
CAST	Castle Rocks	62.13	27	P	P	16 02 19.6	-0.2
CAST				IAmb	IAmb	16 02 21.1	
	comp=Z,13nm,0.6s						
CAST	Castle Rocks	62.13	27	P	P	16 02 20.3	+0.4
	baz=253,SNR=13						
CHUM	Lake Minchumin	62.17	26	P	P	16 02 20.8	+0.7
	baz=252,SNR=5.4						
IMAR	Indian Mountai	62.27	24	P	P	16 02 20.5	-0.2
KDJ	Kajisay	62.45	309	P	P	16 02 21.2	-1.4
SEW	Seward	62.48	31	P	P	16 02 20.7	-1.5
H21K	Melozitna Rive	62.53	24	P	P	16 02 22.6	+0.2
H21K				IAmb	IAmb	16 02 23.9	
	comp=Z,6.2nm,0.7s						
H21K	Melozitna Rive	62.53	24	P	P	16 02 23.0	+0.6
	baz=251,SNR=8.9						
M22K	Willow	62.55	29	P	P	16 02 21.7	-0.8
	baz=256						
RC01	Rabbit Creek A	62.57	30	P	P	16 02 21.5	-1.3
RC01				IAmb	IAmb	16 03 04.0	
	comp=Z,15nm,1.0s						
RC01	Rabbit Creek A	62.57	30	P	P	16 02 22.3	-0.5
	baz=256						
CUT	Chulitna	62.65	28	P	P	16 02 22.5	-0.8
CUT				IAmb	IAmb	16 02 45.3	
	comp=Z,44nm,1.6s						
CUT	Chulitna	62.65	28	P	P	16 02 22.4	-0.9
	baz=255						
KTH	Kantishna Hill	62.67	27	P	P	16 02 22.7	-0.8
KTH				IAmb	IAmb	16 02 24.9	
	comp=Z,14nm,1.2s						
I21K	Tanana	62.71	25	P	P	16 02 22.4	-1.2
I21K				IAmb	IAmb	16 02 25.1	
	comp=Z,7.6nm,0.7s						
I21K	Tanana	62.71	25	P	P	16 02 23.9	+0.3
	baz=252						
BPAW	Bear Paw Mtn.	62.80	26	P	P	16 02 24.0	-0.3
BPAW				IAmb	IAmb	16 02 25.3	
	comp=Z,13nm,1.2s						
BPAW	Bear Paw Mtn.	62.80	26	P	P	16 02 24.5	+0.2
	baz=254,SNR=5.7						
URZ	Urewera	62.98	152	P	P	16 02 23.3	-2.3
	comp=Z,3.2nm,0.6s,baz=299,slow=23,SNR=7.2						
	comp=Z,3.2nm,0.6s						
URZ	Urewera	62.98	152	P	P	16 02 24.2	-1.5
URZ				IAmb	IAmb	16 03 01.6	
	comp=Z,15nm,1.3s						
GHO	Glory Hole Cre	63.11	29	P	P	16 02 26.2	-0.2
KNK	Knik Glacier	63.25	29	P	P	16 02 27.2	-0.1
KNK	Knik Glacier	63.25	29	P	P	16 02 27.3	0.0
	baz=257						
QRZ	Quartz Range	63.31	157	P	P	16 02 26.8	-1.0
A21K	Barrow	63.38	18	P	P	16 02 26.9	-1.0
A21K				IAmb	IAmb	16 03 09.0	
	comp=Z,20nm,0.9s						
KSH	Kashi	63.38	306	P	P	16 02 27.9	-0.8
KSH				sS	sS	16 12 16.4	+13
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SML	Sawmill	63.39	29	P	P	16 02 27.4	-0.9
SML				IAmb	IAmb	16 02 30.0	
	comp=Z,20nm,0.9s						
SML	Sawmill	63.39	29	P	P	16 02 28.0	-0.3
	baz=257,SNR=5.5						
BWN	Browne	63.46	26	P	P	16 02 27.6	-1.0
BWN				IAmb	IAmb	16 02 30.1	
	comp=Z,20nm,1.1s						
BKZ	Black Stump Fm	63.46	153	P	P	16 02 26.7	-2.2
BKZ				IAmb	IAmb	16 02 53.2	
	comp=Z,25nm,1.5s						
WAT1	Susitna Watana	63.53	28	P	P	16 02 27.9	-1.2
	baz=257						
RND	Reindeer	63.53	27	P	P	16 02 27.6	-1.6
RND				IAmb	IAmb	16 02 52.0	
	comp=Z,15nm,1.4s						
M23K	Glacier View	63.67	29	P	P	16 02 29.9	-0.1
	baz=258						
NEA2	Nenana	63.73	26	P	P	16 02 29.2	-1.1
NEA2	Nenana	63.73	26	P	P	16 02 30.7	+0.3
	baz=255						
I23K	Minto, Yukon-K	63.76	25	P	P	16 02 30.6	+0.2
I23K				IAmb	IAmb	16 02 31.8	
	comp=Z,8.1nm,0.6s						
I23K	Minto, Yukon-K	63.76	25	P	P	16 02 30.7	+0.2
	baz=255,SNR=10						
GLI	Glacier Island	63.78	30	P	P	16 02 30.7	0.0
GLI				IAmb	IAmb	16 02 46.1	
	comp=Z,29nm,1.1s						
WAT6	Susitna Watana	63.83	28	P	P	16 02 30.8	-0.5
	baz=258						
SCM	Sheep Creek Mo	63.86	29	P	P	16 02 31.5	+0.2
SCM				IAmb	IAmb	16 02 32.9	
	comp=Z,14nm,0.9s						
SCM	Sheep Creek Mo	63.86	29	P	P	16 02 31.0	-0.4
	baz=258						
H23K	Yukon River	63.87	25	P	P	16 02 30.9	-0.3
H23K				IAmb	IAmb	16 02 32.6	
	comp=Z,6.9nm,0.8s						
H23K	Yukon River	63.87	25	P	P	16 02 31.8	+0.6
	baz=254,SNR=6.6						
NNZ	Nelson	63.96	157	P	P	16 02 30.3	-1.7
COLD	Coldfoot	64.01	23	P	P	16 02 31.2	-1.0
COLD	Coldfoot	64.01	23	P	P	16 02 32.4	+0.3
	baz=253						
FID	Port Fidalgo	64.06	30	P	P	16 02 31.4	-1.1
DHY	Denali Highway	64.11	28	P	P	16 02 33.0	0.0
	baz=258						
WRH	Wood River Hil	64.11	26	P	P	16 02 32.0	-0.8
WRH				IAmb	IAmb	16 02 32.5	
	comp=Z,27nm,1.7s						
MDM	Murphy Dome	64.17	26	P	P	16 02 33.0	-0.3
MDM				IAmb	IAmb	16 02 34.8	
	comp=Z,7.1nm,0.6s						
FRU1	Bishkek	64.34	310	P	P	16 02 32.8	-2.0
TUWZ	Tuamarina	64.36	157	P	P	16 02 32.4	-2.2
EYAK	Cordova Ski Ar	64.37	31	P	P	16 02 34.7	+0.2
	baz=260						
KLU	Klutina	64.46	30	P	P	16 02 35.3	+0.1
KLU				IAmb	IAmb	16 02 36.5	
	comp=Z,10nm,0.8s						
KLU	Klutina	64.46	30	P	P	16 02 36.0	+0.8
	baz=260						
H24K	Noodor Dome	64.53	25	P	P	16 02 35.2	-0.3
H24K				IAmb	IAmb	16 02 36.6	
	comp=Z,15nm,1.6s						
H24K	Noodor Dome	64.53	25	P	P	16 02 36.1	+0.5
	baz=256						
SNZO	South Karori	64.55	156	P	P	16 02 33.1	-2.8
BFZ	Birch Farm	64.63	155	P	P	16 02 35.3	-1.1
TOLK	Toolik Lake Re	64.66	22	P	P	16 02 37.0	+0.6
TOLK				IAmb	IAmb	16 02 37.8	
	comp=Z,7.2nm,0.7s						
TOLK	Toolik Lake Re	64.66	22	P	P	16 02 37.2	+0.8
	baz=253						
ILAR	Eielson Array	64.69	26	P	P	16 02 35.1	-1.4
	comp=Z,3.3nm,0.5s,baz=247,slow=6.1,SNR=74						
ILAR				pP	pwP	16 03 26.9	+0.9
	comp=Z,2.3nm,0.9s,baz=258,slow=5.3,SNR=5.1						
	comp=Z,3.3nm,0.5s						
ILAR	Eielson Array	64.69	26	P	P	16 02 34.5	-2.0
PAX	Paxson	64.94	28	P	P	16 02 37.9	-0.4
PAX				IAmb	IAmb	16 02 39.1	
	comp=Z,7.0nm,0.6s						
PAX	Paxson	64.94	28	P	P	16 02 38.2	-0.1
	baz=259,SNR=5.5						
K24K	Donnelly Dome	64.96	27	P	P	16 02 38.5	+0.1
	baz=259						
HARP	HAARP	64.97	29	P	P	16 02 38.8	+0.3
	baz=260						
PLWZ	Palliser	64.98	156	P	P	16 02 36.4	-2.4
BMRM	Bremner River	65.00	30	P	P	16 02 39.1	+0.4
BMRM				IAmb	IAmb	16 02 50.5	
	comp=Z,19nm,1.1s						
BMRM	Bremner River	65.00	30	P	P	16 02 39.3	+0.6
	baz=261						
N25K	Chitina, Valde	65.10	30	P	P	16 02 39.7	+0.4
	baz=261						
J25K	Salcha River,	65.29	26	P	P	16 02 39.4	-1.1
J25K	Salcha River,	65.29	26	P	P	16 02 39.7	-0.8
	baz=259,SNR=7.0						
RPZ	Rata Peaks	65.34	160	P	P	16 02 38.9	-2.1
RPZ				IAmb	IAmb	16 02 41.7	
	comp=Z,32nm,1.4s						
RIDG	Independent Ri	65.35	27	P	P	16 02 40.1	-0.8
RIDG				IAmb	IAmb	16 02 41.5	
	comp=Z,7.1nm,0.6s						
RIDG	Independent Ri	65.35	27	P	P	16 02 40.7	-0.2
	baz=260,SNR=5.4						
VRDI	Verde Repeater	65.59	30	P	P	16 02 42.6	0.0
VRDI				IAmb	IAmb	16 03 06.2	
	comp=Z,20nm,1.4s						
DOT	Dot Lake	65.68	27	P	P	16 02 42.6	-0.4
DOT				IAmb	IAmb	16 02 43.5	
	comp=Z,6.8nm,0.7s						
SCRK	Sand Creek	65.77	27	P	P	16 02 43.2	-0.4
SCRK				IAmb	IAmb	16 02 44.4	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	65.77	27	P	P	16 02 43.3	-0.4
	baz=260,SNR=5.6						
L26K	Log Cabin Wild	65.90	28	P	P	16 02 43.8	-0.6
L26K	Log Cabin Wild	65.90	28	P	P	16 02 44.4	0.0
	baz=261						
NIL	Nilore	65.94	300	P	P	16 02 42.8	-2.4
NIL				IAmb	IAmb	16 02 51.1	
	comp=Z,10nm,0.9s						
M26K	Nabesna, AK	65.97	29	P	P	16 02 44.9	+0.1
	baz=262						
J26L	Joseph Creek	66.04	27	P	P	16 02 44.9	-0.4
	baz=260,SNR=8.0						
BMAR	Burnt Mountain	66.17	23	P	P	16 02 46.7	+0.6
M27K	Edge Creek, AK	66.48	29	P	P	16 02 48.1	-0.2
	baz=263						
L27K	Beaver Creek,	66.59	28	P	P	16 02 49.0	+0.2
L27K	Beaver Creek,	66.59	28	P	P	16 02 48.8	0.0
	baz=263						
YUK3	Moose Creek	67.08	30	P	P	16 02 53.1	+1.0
	baz=265						
EGAK	Eagle	67.11	26	P	P	16 02 52.2	+0.3
EGAK	Eagle	67.11	26	P	P	16 02 52.4	+0.5
	baz=263						
BRVK	Borovoye	67.29	321	P	P	16 02 52.0	-1.3
KK31	Karatay Array	67.35	310	P	P	16 02 52.9	-1.0
KKAR	Karatay Array	67.35	310	P	P	16 02 53.4	-0.6
KKAR	Karatay Array	67.35	310	P	P	16 02 53.4	-0.6
KKAR				IAmb	IAmb	16 02 55.7	
	comp=Z,2.4nm,0.8s						
DAWY	Dawson	67.79	27	P	P	16 02 56.9	+0.6
	baz=265						
GAR	Garm	67.80	306	P	P	16 02 56.2	-0.7
GAR				IAmb	IAmb	16 02 57.1	
	comp=Z,7.5nm,0.4s						
YUK4	Talbot Arm	67.91	30	P	P	16 02 58.8	+1.5
	baz=266						
YUK6	Outpost Mounta	68.02	31	P	P	16 02 58.6	+0.5
	baz=267						
I29M	Ogilvie Camp,	68.37	26	P	P	16 02 59.8	-0.1
	baz=265						
HYT	Haines Junctio	68.44	31	P	P	16 03 01.4	+0.9
HYT				IAmb	IAmb	16 03 02.9	
	comp=Z,13nm,1.1s						
HYT	Haines Junctio	68.44	31	P	P	16 03 01.9	+1.4
	baz=268						
CHGR	Chuyangaron	68.73	305	P	P	16 03 01.4	-1.3
CHGR				IAmb	IAmb	16 03 02.9	
	comp=Z,11nm,0.6s						
M30M	Minto, Yukon	68.85	29	P	P	16 03 03.5	+0.6
	baz=268						
EPYK	Eagle Plains	69.10	25	P	P	16 03 03.8	-0.6
EPYK	Eagle Plains	69.10	25	P	P	16 03 04.3	-0.1
	baz=266						
N31M	Braeburn, Yuko	69.29	30	P	P	16 03 07.0	+1.4
	baz=269						
SIT	Sitka	69.51	35	P	P	16 03 07.6	+0.6
	baz=271						
WHY	Whitehorse	69.72	31	P	P	16 03 08.4	0.0
	baz=270						
M31M	Drury Creek, Y	69.96	29	P	P	16 03 10.3	+0.6
	baz=270						
INK	Inuvik	70.43	23	P	P	16 03 11.7	-0.7
	comp=Z,2.0nm,0.5s,baz=296,slow=3.7,SNR=16						
INK				pP	pwP	16 04 03.4	+0.8
	comp=Z,1.6nm,1.0s,baz=201,slow=5.0,SNR=1.7						
	comp=Z,2.0nm,0.5s						
INK	Inuvik	70.43	23	P	P	16 03 11.7	-0.7
INK	Inuvik	70.43	23	P	P	16 03 11.8	-0.5
	baz=268						
MMPY	Sheldon Lake,	71.41	29	P	P	16 03 18.3	-0.2
	baz=272						
A36M	Sachs Harbour	73.16	19	P	P	16 03 28.0	-0.6
A36M	Sachs Harbour	73.16	19	P	P	16 03 27.8	-0.7
	baz=275						
C36M	Paulatuk	73.81	22	P	P	16 03 31.6	-0.7
	baz=277						
ABKAR	Akbulak array	74.04	317	P	P	16 03 32.8	-1.3
ABKAR	Akbulak array	74.04	317	P	P	16 03 32.8	-1.3
ABKAR				IAmb	IAmb	16 03 33.2	
	comp=Z,1.6nm,0.5s						
NLWA	Neilton Lookou	77.65	44	P	P	16 03 55.5	+0.8
NLWA				IAmb	IAmb	16 04 15.2	
	comp=Z,47nm,1.7s						
D03D	Eldon	78.13	44	P	P	16 03 57.5	+0.3
	baz=283						
I02E	Swisshome, OR	78.39	47	P	P	16 03 59.2	+0.4
B05A	Bryant	78.61	43	P	P	16 04 00.3	+0.4
	baz=284						
E04D	Cinebar	78.70	45	P	P	16 04 00.9	+0.5
	baz=284						
EUNU	Eureka	78.82	8	P	P	16 03 59.2	-1.3
I03D	Drain, OR	78.84	48	P	P	16 04 02.0	+0.8
	baz=284						
K02D	Willamette Mer	78.85	49	P	P	16 04 01.8	+0.5
	baz=284						
YKA	Yellowknife Ar	79.02	28	P	P	16 04 00.9	-0.9
	comp=Z,0.9nm,0.6s,baz=289,slow=5.4,SNR=9.1						
YKA				pP	pwP	16 04 53.0	+0.3
	comp=Z,0.9nm,0.6s,baz=289,slow=5.5,SNR=2.9						
	comp=Z,0.9nm,0.6s						
HUMO	Hull Mountain	79.38	49	P	P	16 04 03.9	-0.3
HUMO				IAmb	IAmb	16 04 07.8	
	comp=Z,31nm,1.8s						
I04A	Tendick Farm,	79.47	47	P	P	16 04 04.6	-0.1
	baz=284						
YBH	Yreka Blue Hor	79.77	49	P	P	16 04 06.7	+0.3
	comp=Z,2.7nm,0.7s,baz=266,slow=3.2,SNR=4.5						
	comp=Z,2.7nm,0.7s						
J04D	Umpqua Nationa	79.83	48	P	P	16 04 07.1	+0.3
	baz=285						
L04D	Klamath Falls	79.94	49	P	P	16 04 07.8	+0.5
	baz=285						
K04D	Chiloquin, OR	80.23	48	P	P	16 04 09.3	+0.4
	baz=285						
J05D	Fort Rock, OR	80.43	48	P	P	16 04 10.5	+0.5
	baz=285						
PINE	Pine Mountain	80.51	47	P	P	16 04 10.9	+0.5
PINE				IAmb	IAmb	16 04 12.2	
	comp=Z,10nm,0.8s						
BEKR	Beckworth	81.98	51	P	P	16 04 18.0	-0.2
UOSS	Minazif	82.18	294	P	P	16 04 17.3	-2.0
PNTR	Pine Nut	82.77	51	P	P	16 04 23.3	+0.9
PNTR				IAmb	IAmb	16 04 24.5	
	comp=Z,6.3nm,0.7s						
ARCES	ARCESS Array B	83.48	342	P	P	16 04 23.6	-1.6
	comp=Z,1.0nm,0.5s,baz=57,slow=4.5,SNR=9.9						
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	83.48	342	P	P	16 04 23.4	-1.7
ARCES				IAmb	IAmb	16 04 44.1	
	comp=Z,17nm,1.4s						
PKM	Mcpherson Peak	83.82	56	P	P	16 04 27.7	-0.1
	baz=287						
KVN	Kaiserville	83.89	51	P	P	16 04 27.3	-0.8
NVAR	Mina Array Bea	83.93	52	P	P	16 04 28.7	+0.4
	comp=Z,3.5nm,0.7s,baz=267,slow=5.8,SNR=30						
NVAR				pP	pwP	16 05 23.0	+3.0
	comp=Z,1.4nm,0.7s,baz=269,slow=5.9,SNR=4.5						
	comp=Z,3.5nm,0.7s						
NVAR	Mina Array Bea	83.93	52	P	P	16 04 27.9	-0.4
NV11	Mina Array Sit	84.04	52	P	P	16 04 28.5	-0.3
MFID	Camas Ranch	84.17	46	P	P	16 04 28.4	-1.0
HLID	Hailey	85.09	46	P	P	16 04 33.7	-0.3
	baz=290						
MPMC	Manual Prospec	85.27	54	P	P	16 04 34.9	-0.2
	baz=288						
ELK	Elko	85.45	49	P	P	16 04 35.9	0.0
	comp=Z,2.6nm,0.9s,baz=331,slow=2.2,SNR=6.8						
ELK				pP	pwP	16 05 30.8	+3.1
	comp=Z,1.7nm,0.8s,baz=264,slow=8.3,SNR=3.0						
	comp=Z,2.6nm,0.9s						
ELK	Elko	85.45	49	P	P	16 04 35.7	-0.2
TPNV	Topopah Spring	85.94	53	P	P	16 04 38.2	-0.1
	baz=289						
KBZ	Khabaz	86.81	315	P	P	16 04 41.7	-0.4
	comp=Z,2.0nm,0.9s,baz=213,slow=3.7,SNR=4.2						
	comp=Z,2.0nm,0.9s						
DUG	Dugway, Tooele	87.37	49	P	P	16 04 45.1	-0.1
	baz=291						
FINES	FINESS Array B	87.81	335	P	P	16 04 43.8	-2.8
	comp=Z,0.7nm,0.3s,baz=61,slow=4.4,SNR=18						
PDAR	Pinedale Array	88.69	45	P	P	16 04 49.8	-1.6
	comp=Z,0.5nm,0.3s,baz=18,slow=24,SNR=3.7						
	comp=Z,0.5nm,0.3s						
BRTR	Keskin Array B	94.77	314	P	P	16 05 17.5	-2.0
	comp=Z,0.7nm,0.5s,baz=106,slow=2.8,SNR=2.4						
	comp=Z,0.7nm,0.5s						
TORD	Torodi Ar. Bea	133.02	308	PKP	PKPdf	16 11 11.1	-1.7
	comp=Z,0.6nm,0.9s,baz=8.8,slow=0.8,SNR=2.6						
SIV	San Ignacio	154.47	90	PKPbc	PKPbc	16 11 36.1	-22
	comp=Z,2.8nm,0.8s,baz=287,slow=9.2,SNR=8.8						

JMA 05 15:54:05.5±0.0**,34°.84N**±0°.08×**135°.47E**±0°.09**,h7**^{km}**,
MV0.7**/32**,KYOTO OSAKA BORDER REG,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHE	Heguri	0.26	136	*i* P	Pg	15 54 10.7	+0.1
JHE				S	Sg	15 54 14.3	+0.3
JWT	Wachi	0.45	353	P	Pg	15 54 14.4	+0.2
JWT				S	Sg	15 54 20.2	+0.1
JKS	Kasai	0.53	286	*i* P	Pg	15 54 16.0	+0.2
JWY	Kouya	0.63	171	*e*P	Pg	15 54 17.4	-0.1
JWY				*e*S	Sg	15 54 25.9	+0.2

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*IDC **05** 16:05:18.1±1.4,28°.42N×104°.99E,h0^{km},mb3.5/5,
mbtmp3.4/6,ML3.4/1,Error ellipse: s-maj=38.3km
s-min=24.8km az=72.0*

ISC 05 16:05:20.9±1.5**,28°.5N**±0°.2×**105°.0E**±0°.3**,h19**^{km}**,n6,
σ0^{s}91**/6**,mb3.4**/5**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.36	3	P	Pn	16 09 46.0	-0.7
	0.1nm,0.3s,baz=187,slow=13,SNR=1.6						
	0.2nm,0.6s						
KSRS	Korea Array	21.18	59	P	P	16 10 06.2	+1.0
	1.4nm,0.7s,baz=238,slow=11,SNR=6.1						
	1.4nm,0.7s						
MKAR	Makanchi Array	25.50	322	P	P	16 10 48.7	+0.7
	0.5nm,0.6s,baz=125,slow=11,SNR=5.0						
	0.5nm,0.6s						
USRK	Ussuriysk Ar.	26.66	47	P	P	16 10 57.9	-0.6
	1.5nm,0.6s,baz=242,slow=9.2,SNR=2.9						
	1.5nm,0.6s						
WRA	Warramunga Arr	55.87	146	P	P	16 14 57.1	-0.4
	0.2nm,0.6s,baz=335,slow=8.3,SNR=2.3						
	0.2nm,0.6s						
ASAR	Alice Springs	58.85	149	P	P	16 15 18.6	0.0
	0.2nm,0.7s,baz=332,slow=6.5,SNR=4.2						
	0.2nm,0.7s						

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*IGQ **05** 16:06:39±1.3,0°S±5°×8°1W±°,h4^{km}*

*NEIC **05** 16:06:41.6±2.9,0°.01N±0°.08×80°.56W±0°.07,h10^{km}±1^{km},
mb4.4/32,Error ellipse: s-maj=12.9km s-min=11.2km
az=199.0*

*IDC **05** 16:06:55.8±4.4,0°.13S×80°.19W,h135^{km}±43^{km},mb3.3/7,
mbtmp3.8/9,MS3.6/17,Error ellipse: s-maj=42.2km
s-min=15.6km az=67.0*

ISC 05 16:06:40.3±0.5**,0°.11S**±0°.03×**80°.72W**±0°.04**,h9**^{km}**,n106,
σ1^{s}73**/82**,mb4.4**/18**,MS3.5**/15**,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CABP	Cabo Pasado	0.40	134	P	Pb	16 06 50.0	+0.4
JAMA	Jama	0.54	107	P	Pn	16 06 53.0	-1.2
JAMA				S	Sb	16 07 04.0	+4.2
AMNT	Manta-Manabi	0.83	181	P	Pg	16 06 55.0	-1.3
AMNT				S	Sg	16 07 06.0	-1.1
FLF1	Flavio Alfaro-	0.91	106	P	Pn	16 07 01.0	+1.7
CHIS	Cerro-Chispas-	0.94	180	P	Pg	16 06 55.0	-3.4
CHIS				S	Sg	16 07 09.0	-1.6
MAG1	Magdalena	0.94	88	P	Pn	16 07 02.0	+2.2
AV18	Acelerografo,	1.31	71	P	Pg	16 07 08.0	+2.5
PPLP	Puerto Lpez	1.43	182	P	Pn	16 07 03.0	-3.5
BV15	Puerto Quito-O	1.52	80	P	Pg	16 07 10.0	+0.5
PAC1	Pacto, Paraso	1.96	79	P	Pg	16 07 16.0	-2.0
ILLI	Illinizas Sur	2.08	107	P	Pb	16 07 17.0	-1.5
GGPT	Toaza - Volcan	2.10	93	P	Pb	16 07 18.0	-0.8
PINO	Pino	2.11	91	P	Pb	16 07 18.0	-1.1
GGPC	Guagua Pichinc	2.12	92	P	Pg	16 07 19.0	-2.1
YANA	Yana	2.15	90	P	Pb	16 07 19.0	-0.7
PAST	Pastocalle	2.16	106	P	Pb	16 07 18.0	-1.8
CAMI	Rancho Maria	2.28	104	P	Pb	16 07 21.0	-1.0
OTAV	Otavalo	2.29	81		Pb	16 07 20.2	-1.9
CHSH	Refugio Sur-Vo	2.31	127	P	Pb	16 07 21.0	-1.4
SLOR	San Lorenzo -	2.31	106	P	Pb	16 07 21.0	-1.4
AMIL	Milagro (Trans	2.31	151	P	Pn	16 07 19.0	+0.5
NAS2	Nasa	2.31	103	P	Pb	16 07 21.0	-1.5
VC1	Cotopaxi 1	2.38	103	P	Pb	16 07 22.0	-1.6
CUIC	Cuicocha-Domo	2.39	80	P	Pb	16 07 23.0	-0.8
TAMH	Tambohuasha Ch	2.41	126	P	Pn	16 07 21.0	+0.7
TAMB	Tambo	2.42	104	P	Pb	16 07 23.0	-1.4
URCU	Urcuqui	2.52	78	P	Pb	16 07 25.0	-1.0
TUMC	Tumaco	2.76	46		Pn	16 07 24.4	-0.4
TUMC	Tumaco	2.76	46	*e*P	Pb	16 07 29.9	-0.1
GCUF	Volcan Galeras	3.62	69	*e*P	Pb	16 07 41.7	-3.1
GR1C	Gorgona, Isla	4.00	40	*e*P	Pg	16 07 53.4	-3.7
SOTA	Rioblanco	4.67	62	*e*P	Pn	16 07 55.2	+3.7
PCON	Cinco Dias	4.95	61	*e*P	Pb	16 08 01.7	-5.9
MARP	Paez Belalcaza	5.59	58	*e*P	Pb	16 08 13.6	-4.7
MARP				*e*P	Pg	16 08 17.0	-11
GARC	Garzon, Huila	5.70	66	*e*P	Pn	16 08 10.0	+4.6
YOTC	Yotoco, Valle	5.97	47	*e*P	Pn	16 08 15.3	+6.3
ORTC	Ortega, Tolima	6.77	54	*e*P	Pb	16 08 30.7	-7.6
PRAC	Prado	6.96	57	*e*P	Pb	16 08 31.8	-10
MACC	Macarena, Meta	7.22	72	*e*P	Pn	16 08 32.8	+6.6
ROSC	El Rosal	8.06	52	P	Pn	16 08 44.9	+6.9
	8.7nm,0.4s,baz=5.0,slow=21,SNR=1.6						
ROSC	El Rosal	8.06	52		Pn	16 08 36.3	-1.8
DBBC	Dabeiba	8.38	32	*e*P	Pn	16 08 51.2	+9.0
CHIC	Chingaza	8.42	56	*e*P	Pn	16 08 52.9	+10
PTBC	PUERTO BERRIO,	9.09	43	*e*P	Pn	16 09 05.0	+13
BCIP	Isla Barro Col	9.25	5		Pn	16 08 51.4	-2.6
ZARC	Zaragoza, Cauc	9.55	38	Pn	Pn	16 08 57.6	-0.5
PAYG	Puerto Ayora	9.58	267	Pn	Pn	16 09 00.7	+2.1
DRK0	Durika	9.64	345	Pn	Pn	16 09 00.3	+0.8
SRBA	San Rafael, Bu	9.64	344	Pn	Pn	16 09 00.9	+1.4
JTS	Las Juntas de	11.15	338	Pn	Pn	16 09 22.8	+2.7
SJCC	San Jacinto, C	11.36	29	Pn	Pn	16 09 22.7	-0.3
NNA	Nana	12.41	162	LR	LR	16 14 59.1	
	comp=Z,169nm,19.4s,baz=340,slow=40						
BOAB	BOACO BROADBAN	13.41	339	Pn	Pn	16 09 49.3	-1.6
SDV	Santo Domingo	13.44	48	LR	LR	16 15 49.3	
	comp=Z,337nm,19.6s,baz=218,slow=41						
URIC	Uribia, Colomb	14.59	36	P	P	16 10 10.7	-2.8
TGUH	Tegucigalpa,Un	15.50	336	P	P	16 10 24.1	+0.2
TGUH				IAmb	IAmb	16 10 37.4	
	comp=Z,32nm,1.1s						
BAUV	El Baul	15.50	54	P	Pn	16 10 19.3	0.0
BAUV				IAmb	IAmb	16 10 45.5	
	comp=Z,23nm,1.4s						
MTO3	Montecristo	16.76	330	P	P	16 10 38.0	+0.1
ESQI	Esquipulas	16.89	330	P	P	16 10 39.0	-0.2
PETF	Flores	19.17	332	P	P	16 11 04.2	-0.1
PETF				IAmb	IAmb	16 11 19.9	
	comp=Z,36nm,1.6s						

LPAZ	La Paz	20.32	143	P	P	16 11 18.4	+0.9
	comp=Z,2.0nm,0.6s,baz=295,slow=9.8,SNR=7.0						
LPAZ				LR	LR	16 21 03.0	
	comp=Z,183nm,21.4s,baz=314,slow=42						
LPAZ	La Paz	20.32	143	P	P	16 11 18.0	+0.5
SDDR	Presa de Saban	21.11	26	P	P	16 11 23.6	-1.9
SDDR				IAmb	IAmb	16 11 52.1	
	comp=Z,36nm,1.6s						
PB11	IPOC Station P	22.34	152	P	P	16 11 37.6	-1.2
PB11				IAmb	IAmb	16 12 06.5	
	comp=Z,15nm,0.9s						
OBIP	Obispado Ponce	22.76	37	P	P	16 11 42.0	-1.1
OBIP				IAmb	IAmb	16 11 49.0	
	comp=Z,33nm,1.4s						
TA01	Diego Aracena	22.80	154	P	P	16 11 43.4	-0.1
TA01				IAmb	IAmb	16 11 55.6	
	comp=Z,14nm,1.1s						
PB08	IPOC Station P	22.91	151	P	P	16 11 44.3	-0.8
PB08				IAmb	IAmb	16 12 01.6	
	comp=Z,18nm,1.2s						
PATCX	Punta Patache	23.03	154	P	P	16 11 45.6	-0.4
PATCX				IAmb	IAmb	16 12 09.7	
	comp=Z,17nm,1.1s						
SJG	San Juan	23.09	38	LR	LR	16 21 40.6	
	comp=Z,40nm,19.0s,baz=225,slow=39						
PDPR	Patillas Dam,	23.09	38	P	P	16 11 45.5	-1.1
EMPR	Esperanza - Ma	23.14	36	P	P	16 11 44.4	-2.6
HUMP	Col San Antoni	23.29	38	P	P	16 11 47.8	-0.8
PB01	IPOC Station P	23.52	153	P	P	16 11 51.0	-0.1
PB02	IPOC Station P	23.58	154	P	P	16 11 51.9	+0.3
PB02				IAmb	IAmb	16 12 17.8	
	comp=Z,9.3nm,0.8s						
PB07	IPOC Station P	23.95	155		P	16 11 54.3	-1.0
LVC	Limon Verde	25.15	154	P	P	16 12 06.5	+0.1
	comp=Z,1.6nm,0.3s,baz=54,slow=19,SNR=1.2						
LVC				LR	LR	16 23 18.6	
	comp=Z,107nm,18.5s,baz=325,slow=40						
	comp=Z,1.6nm,0.3s						
LVC	Limon Verde	25.15	154	IAmb	IAmb	16 12 32.1	
	comp=Z,10nm,1.1s						
MDP	Montagnes des	28.51	79	LR	LR	16 23 27.2	
	comp=Z,68nm,19.9s,baz=263,slow=35						
CO06	Fray Jorge	31.60	165	P	P	16 13 05.4	+1.8
AQDB	Aquidauana	31.76	131	P	P	16 13 05.2	+0.1
AQDB				IAmb	IAmb	16 13 30.6	
	comp=Z,7.2nm,1.1s						
LRAL	Lakeview Retre	33.49	350	P	P	16 13 20.3	+0.2
CPUP	Villa Florida	34.46	141	LR	LR	16 30 29.1	
	comp=Z,167nm,18.0s,baz=333,slow=41						
TKL	Tuckaleechee C	35.70	356	LR	LR	16 27 56.9	
	comp=Z,144nm,20.2s,baz=170,slow=35						
BDFB	Brasilia	35.79	117	LR	LR	16 29 27.4	
	comp=Z,299nm,20.1s,baz=263,slow=38						
TXAR	Lajitas Array	36.57	325	P	P	16 13 53.0	+6.2
	comp=Z,0.4nm,0.6s,baz=137,slow=9.4,SNR=4.7						
	comp=Z,0.4nm,0.6s						
LCAR	Lake Charles	37.28	346	P	P	16 13 54.2	+1.5
LCAR				IAmb	IAmb	16 13 55.3	
	comp=Z,5.5nm,0.9s						
RPN	Rapa Nui	38.45	223	LR	LR	16 25 31.3	
	comp=Z,69nm,19.0s,baz=189,slow=29						
PLCA	Paso Flores	41.48	168	P	P	16 14 28.6	+0.8
	comp=Z,1.9nm,0.8s,baz=338,slow=9.2,SNR=5.2						
PLCA				LR	LR	16 30 24.3	
	comp=Z,57nm,18.5s,baz=7.5,slow=34						
	comp=Z,1.9nm,0.8s						
PLCA	Paso Flores	41.48	168	IAmb	IAmb	16 14 57.8	
	comp=Z,7.9nm,1.3s						
ANMO	Albuquerque	42.36	328	P	P	16 14 36.3	+1.0
SDCO	Great Sand Dun	44.06	331	P	P	16 14 50.2	+1.1
SDCO				IAmb	IAmb	16 15 05.6	
	comp=Z,9.1nm,1.6s						
SADO	Sadowa	44.70	2	LR	LR	16 32 55.4	
	comp=Z,68nm,21.8s,baz=184,slow=35						
RCBR	Riachuelo	45.09	98	LR	LR	16 33 21.5	
	comp=Z,124nm,19.3s,baz=66,slow=36						
PV13	Radium Mtn., P	46.03	329	P	P	16 15 05.0	+0.3
PV13				IAmb	IAmb	16 15 20.7	
	comp=Z,7.9nm,1.2s						
PFO	Pinyon Flats O	47.44	319	LR	LR	16 33 15.3	
	comp=Z,60nm,18.8s,baz=86,slow=33						
NVAR	Mina Array Bea	51.59	322	P	P	16 15 49.4	+2.0
	comp=Z,1.0nm,0.8s,baz=136,slow=7.6,SNR=6.1						
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	51.59	322	P	P	16 15 47.8	+0.4
SCHQ	Schefferville	55.93	10	LR	LR	16 39 29.7	
	comp=Z,40nm,21.3s,baz=168,slow=35						
YBH	Yreka Blue Hor	56.28	323	LR	LR	16 40 28.1	
	comp=Z,38nm,19.7s,baz=139,slow=36						
FRB	Frobisher Bay	64.34	6	LR	LR	16 47 12.9	
	comp=Z,32nm,18.7s,baz=206,slow=38						
YKA	Yellowknife Ar	67.43	344	P	P	16 17 37.7	+1.6
	comp=Z,1.1nm,0.9s,baz=137,slow=6.3,SNR=11						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	67.43	344	P	P	16 17 37.3	+1.3
ILAR	Eielson Array	80.12	337	P	P	16 18 51.9	+1.4
	comp=Z,0.3nm,0.9s,baz=131,slow=2.7,SNR=2.1						
	comp=Z,0.3nm,0.9s						
TORD	Torodi Ar. Bea	82.63	77	P	P	16 19 02.1	-2.7
	comp=Z,0.4nm,0.8s,baz=254,slow=4.2,SNR=2.4						
	comp=Z,0.4nm,0.8s						
ASAR	Alice Springs	138.92	232	PKP	PKPdf	16 26 07.5	-0.8
	comp=Z,0.3nm,0.8s,baz=125,slow=3.8,SNR=2.2						
WRA	Warramunga Arr	140.31	238	PKP	PKPdf	16 26 09.8	-0.9
	comp=Z,0.6nm,0.8s,baz=121,slow=1.9,SNR=3.5						

TAP 05 16:25:34.4, 23°.02N×120°.68E, h4^{km}±1^{km}, ML2.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	Jiashian	0.11	303	*i* P	Pg	16 25 36.3	-0.4
	baz=304						
SGST				*i* S	Sg	16 25 38.0	-0.2
	baz=304						
STYT	Tauyuan	0.16	26	P	Pg	16 25 38.6	+1.1
	baz=29						
STYT				*e*S	Sg	16 25 41.8	+2.1
	baz=29						
STYH	Taoyuan	0.17	30	*i* P	Pg	16 25 39.0	+1.2
	baz=30						
STYH				S	Sg	16 25 41.8	+1.8
	baz=30						
CHN1	Nanshi	0.21	319	P	Pg	16 25 39.6	+1.0
	baz=318						
CHN1				*e*S	Sg	16 25 43.7	+2.2
	baz=318						
SCST	Cishan	0.22	232	*e*P	Pg	16 25 40.5	+1.8
	baz=231						
SCST				*e*S	Sg	16 25 46.1	+4.5
	baz=231						
WTP	Ta-pu	0.23	344	P	Pg	16 25 39.9	+0.9
	baz=346						
WTP				S	Sg	16 25 43.9	+1.9
	baz=346						
SNST	Tainan City	0.26	319	P	Pb	16 25 40.9	-0.7
	baz=319						
SNST				*e*S	Sb	16 25 45.4	-1.1
	baz=319						
SSD	Sandimen	0.28	190	*i* P	Pb	16 25 41.5	-0.5
	baz=187						
SSD				S	Sb	16 25 45.6	-1.5
	baz=187						
TPUB	Ta-pu	0.28	350	*e*P	Pg	16 25 40.9	+1.0
	baz=350						
TPUB				*e*S	Sb	16 25 46.0	-1.2
	baz=350						
TWK	Hsinying	0.30	324	P	Pb	16 25 41.6	-0.8
	baz=325						
TWK				*e*S	Sb	16 25 46.5	-1.3
	baz=325						
SHHT	Tainan City	0.31	270	*e*P	Pb	16 25 43.2	+0.8
	baz=269						
SHHT				*e*S	Sb	16 25 49.0	+1.1
	baz=269						
TSMG	Majia	0.32	186	P	Pb	16 25 42.1	-0.6
	baz=186						
TSMG				*e*S	Sb	16 25 46.7	-1.5
	baz=186						
CHN4	Tsaushan	0.34	346	*e*P	Pb	16 25 42.3	-0.7
	baz=346						
CHN4				*e*S	Sb	16 25 48.6	-0.1
	baz=346						
ELDTW	Lidau	0.35	62	P	Pb	16 25 42.8	-0.5
	baz=62						
ELDTW				S	Sb	16 25 48.0	-1.3
	baz=62						
MASBT	Mashibuluo	0.41	186	*i* P	Pb	16 25 43.9	-0.4
	baz=186						
MASBT				S	Sb	16 25 49.6	-1.3
	baz=186						
ALS	Alishan	0.50	13	P	Pb	16 25 45.3	-0.6
	baz=14						
ALS				*e*S	Sb	16 25 53.5	-0.2
	baz=14						
CHN5	Tsauling	0.57	360	P	Pb	16 25 47.0	0.0
	baz=359						
CHN5				*e*S	Sb	16 25 57.0	+1.4
	baz=359						
TWF1	Yuli	0.65	60	*e*P	Pb	16 25 48.9	+0.5
	baz=60						
TWF1				S	Sb	16 25 59.4	+1.5
	baz=60						
SMLT	Sun Moon Lake	0.88	13	*e*P	Pn	16 25 53.1	-0.6
	baz=13						

GII ***05*** *16:36:49.8±0.0, 33°.64N×35°.64E, h1^{km}±1^{km}, MD1.2/2, Mm1.7/4*
GRAL ***05*** *16:36:50.2±0.3, 33°.63N×35°.57E, h10^{km}±1^{km}, MD2.7*
ISC 05 16:36:50.3±0.9**, 33°.65N**±0°.03×**35°.62E**±0°.05**, h8**^{km}±7^{km}**, n14, σ0^{s}.66**/24**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.07	321	*e*P	Pg	16 36 52.4	0.0
DQRL				*e*S	Sg	16 36 54.0	+0.1
QRWL	Qaraoun	0.12	154	*e*P	Pg	16 36 53.0	0.0
RCY	Rachaya	0.24	131	*e*P	Pg	16 36 55.3	+0.2
RCY				*e*S	Sg	16 36 58.9	+0.5
BEYL	Beirut	0.24	334	*e*P	Pg	16 36 55.2	0.0
BHL	Bhannes	0.25	6	*e*P	Pg	16 36 55.5	+0.1
BHL				*e*S	Sg	16 36 59.4	+0.6
NATI	Neve Ativ	0.40	166	Pg	Pg	16 36 58.2	+0.1
NATI				Sg	Sb	16 37 05.1	-0.7
GEM	Giv'at Ha'Em	0.44	175	Pg	Pb	16 36 59.4	-0.9
GEM				Sg	Sb	16 37 06.4	-0.7
MMC7	Mount Meron ar	0.66	197	Pg	Pb	16 37 03.2	-0.8
MMA0B	Mount Meron ar	0.66	196	Pg	Pb	16 37 03.4	-0.7
MMA0B				Sg	Sb	16 37 14.1	+0.7
HWQ	Hawqa	0.68	23	*e*P	Pg	16 37 03.0	-0.4
OFRI	`Ofer	1.16	208	Pg	Pb	16 37 12.3	-0.2
OFRI				Sg	Sn	16 37 29.1	+0.3
MMLI	Mount Malkishu	1.22	188	Pg	Pn	16 37 13.7	0.0
MMLI				Sg	Sn	16 37 31.0	+0.6
HMDT	Nahal Hemdat	1.40	183	Pn	Pg	16 37 16.7	-0.4
HMDT				Sn	Sn	16 37 36.5	+1.9
SLTI	Sal'it	1.49	199	Pn	Pb	16 37 17.7	-0.5
SLTI				Sn	Sg	16 37 38.3	+0.1

GII ***05*** *16:38:35.6±0.1, 33°.21N×36°.23E, h17^{km}, MD0.3/1*
GRAL ***05*** *16:38:36.1±0.3, 33°.62N×35°.55E, h9^{km}±2^{km}, MD2.5*
ISC 05 16:38:35.8±1.2**, 33°.64N**±0°.04×**35°.56E**±0°.10**, h10**^{km}**, n7, σ0^{s}.41**/11**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.07	4	*e*P	Pg	16 38 38.4	+0.3
DQRL				*e*S	Sg	16 38 40.0	+0.1
QRWL	Qaraoun	0.13	132	*e*P	Pg	16 38 39.0	+0.1
RCY	Rachaya	0.27	122	*e*P	Pg	16 38 41.3	0.0
RCY				*e*S	Sg	16 38 45.1	+0.2
BHL	Bhannes	0.28	16	*e*P	Pg	16 38 41.6	+0.1
NATI	Neve Ativ	0.40	159	Pg	Pg	16 38 44.3	+0.6
NATI				Sg	Sb	16 38 51.1	0.0
GEM	Giv'at Ha'Em	0.43	169	Pg	Pb	16 38 45.4	-0.1
GEM				Sg	Sb	16 38 52.4	+0.3
MMA0B	Mount Meron ar	0.63	192	Sg	Sn	16 39 00.3	-0.8

IDC ***05*** *16:41:53.1±2.5, 24°.04S×66°.78W, h184^{km}±22^{km}, mb3.2/2, mbtmp3.7/5, Error ellipse: s-maj=36.0km s-min=27.6km az=160.0*
ISC 05 16:41:53.7±1.2**, 24°.1S**±0°.1×**66°.9W**±0°.1**, h200**^{km}**, n7, σ0^{s}.55**/9**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.33	307	P	Pn	16 42 36.0	-0.1
	21nm,0.3s,baz=118,slow=8.5,SNR=109						
LVC				S	Sn	16 43 08.5	-0.6
	34nm,0.3s,baz=268,slow=22,SNR=7.5						
LPAZ	La Paz	7.80	351	P	Pn	16 43 45.2	+0.1
	2.0nm,0.4s,baz=155,slow=5.9,SNR=9.3						
LPAZ				S	Sn	16 45 13.4	-0.1
	0.6nm,0.5s,baz=297,slow=22,SNR=1.6						
BDFB	Brasilia	19.62	68	P	P	16 46 06.9	-0.4
	2.5nm,0.5s,baz=261,slow=13,SNR=4.4						
TORD	Torodi Ar. Bea	76.50	69	P	P	16 53 21.7	-0.3
	0.2nm,0.4s,baz=248,slow=6.3,SNR=4.7						
	0.2nm,0.4s						
YKA	Yellowknife Ar	94.20	340	P	P	16 54 50.3	+1.0
	0.2nm,0.5s,baz=131,slow=4.6,SNR=3.5						
	0.2nm,0.5s						
WRA	Warramunga Arr	131.62	207	PKP	PKiKP	17 00 44.5	+0.1
	0.4nm,0.9s,baz=154,slow=1.8,SNR=2.0						
MKAR	Makanchi Array	146.51	40	PKPbc	PKPab	17 01 12.3	-0.3
	0.5nm,0.5s,baz=301,slow=3.4,SNR=6.5						

IDC ***05*** *16:59:19.9±1.0, 13°.90N×51°.71E, h0^{km}, mb3.8/14, mbtmp3.8/15, ML3.5/1, MS3.1/7, Error ellipse: s-maj=27.2km s-min=19.6km az=14.0*
NEIC ***05*** *16:59:21.1±2.0, 13°.83N±0°.08×51°.78E±0°.09, h10^{km}±1^{km}, mb4.1/24, Error ellipse: s-maj=16.8km s-min=11.3km az=226.0*
OMAN ***05*** *16:59:25.1±0.1, 13°.97N×52°.01E, h49^{km}±6^{km}, mb4.7/3, ml3.9/5, Error ellipse: s-maj=3.2km s-min=1.4km az=271.0*
ISC 05 16:59:20.7±0.6**, 13°.95N**±0°.07×**51°.79E**±0°.08**, h10**^{km}**, n63, σ1^{s}.71**/65**, mb4.0**/23**, MS3.0**/7**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.76	129		Pn	17 00 00.8	-4.4
SOCY				Sn	Sn	17 00 27.2	-12
SOCY	Socotra	2.76	129	P	Pn	17 00 01.0	-4.2
	SNR=499						
ABTO	Aybut	3.69	23	P	Pn	17 00 17.4	-0.5
	SNR=7.7						
ABTO				S	Sn	17 00 58.6	-2.9
RBK	Rabkut	4.23	33	P	Pn	17 00 26.4	+1.0
	SNR=44						
RBK				S	Sn	17 01 14.2	-0.7
WHFO	Wadi Hawf	4.39	25	P	Pn	17 00 27.3	-0.2
	SNR=10						
WHFO				S	Sn	17 01 16.0	-2.7
DMTO	DMTO	4.83	39	P	Pn	17 00 34.0	+0.5
	SNR=49						
DMTO				S	Sn	17 01 29.7	+0.2
DOK	Doka	5.16	25	P	Pn	17 00 38.1	0.0
	SNR=5.9						
DOK				S	Sn	17 01 35.5	-2.2
MHTO	MHTO	9.15	39	P	Pn	17 01 33.4	+0.5
MHTO				S	Sn	17 03 13.3	-2.8
SMDO	Samad	10.83	32	P	Pn	17 01 56.4	+0.4
SMDO				S	Sn	17 03 54.8	-2.7
WBK	Wadi Bani Khal	10.99	37	P	Pn	17 01 58.3	+0.2
WBK				S	Sn	17 03 56.0	-5.1
ASUD	Al Ashush, Dub	11.14	17	P	Pn	17 02 00.1	0.0
	SNR=5.5						
RAYN	Ar Rayn	11.23	329	Pn	Pn	17 01 58.8	-2.7
WSAR	Wadi Sarin	11.29	34	Pn	Pn	17 02 02.1	-0.1
	0.3nm,0.3s,baz=255,slow=6.8,SNR=8.3						
WSAR				Sn	Sn	17 04 03.6	-4.9
	0.5nm,0.3s,baz=35,slow=17,SNR=1.8						
	2.6nm,0.5s						
UOSS	Minazif	11.71	20	Pn	Pn	17 02 08.1	+0.2
SHME	Shamm	12.72	18	P	Pn	17 02 22.7	+1.0
SHME				S	Sn	17 04 36.6	-6.8
MSEY	Mahe Island	18.86	169	P	Pn	17 03 40.6	-1.1
LODK	Lodwar	19.30	239	P	P	17 03 43.1	-3.0
KMBO	Kilima Mbogo	20.78	225	P	P	17 04 00.8	-1.6
KMBO				IAmb	IAmb	17 04 11.3	
	comp=Z,9.7nm,1.5s						
EIL	Elat	22.07	318	LR	LR	17 12 40.9	
	comp=Z,60nm,21.7s,baz=246,slow=36						
HRA	Herat	22.45	23	P	P	17 04 20.3	+0.1
HRA				IAmb	IAmb	17 04 33.8	
	comp=Z,7.3nm,1.1s						
MMAI	Mount Meron Ar	24.15	325	LR	LR	17 15 33.7	
	comp=Z,40nm,21.4s,baz=30,slow=40						
GEYT	Alibeck	24.54	12	LR	LR	17 16 22.0	
	comp=Z,44nm,18.3s,baz=17,slow=42						
GNI	Garni	26.83	348	LR	LR	17 17 13.2	
	comp=Z,23nm,21.2s,baz=335,slow=40						
GNI	Garni	26.83	348	P	P	17 05 03.0	+1.5
KBZ	Khabaz	30.64	347	P	P	17 05 36.6	+1.4
	comp=Z,2.3nm,0.7s,baz=170,slow=8.2,SNR=6.4						
KBZ				LR	LR	17 18 38.5	
	comp=Z,30nm,18.2s,baz=202,slow=38						
	comp=Z,2.3nm,0.7s						
BTK	Batken	30.91	29	P	P	17 05 38.2	+0.5
BTK				IAmb	IAmb	17 05 51.3	
	comp=Z,7.0nm,1.3s						
DRK	Karamyk	30.94	31	P	P	17 05 38.3	0.0
KK31	Karatay Array	33.23	25	P	P	17 05 57.9	-0.1
KKAR	Karatay Array	33.23	25	P	P	17 05 57.9	-0.1
KKAR	Karatay Array	33.23	25	P	P	17 05 57.5	-0.5
KKAR				IAmb	IAmb	17 06 02.5	
	comp=Z,1.3nm,0.8s						
KDJ	Kajisay	35.66	33	P	P	17 06 19.8	+0.5
KDJ				IAmb	IAmb	17 06 33.0	
	comp=Z,5.7nm,1.4s						
TARG	Taragay, Kyrgy	35.72	34	P	P	17 06 20.8	+0.7
TARG				IAmb	IAmb	17 06 24.0	
	comp=Z,2.4nm,0.8s						
ABKAR	Akbulak array	35.84	9	P	P	17 06 21.7	+1.2
ABKAR				IAmb	IAmb	17 06 32.1	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	35.84	9	P	P	17 06 21.4	+0.9
MLR	Muntele Rosu	38.29	330	LR	LR	17 24 03.1	
	comp=Z,39nm,19.9s,baz=244,slow=39						
BUR08	Bucovina Ar. S	40.23	332	P	P	17 06 57.0	-0.7
BUR08				IAmb	IAmb	17 07 11.0	
	comp=Z,14nm,2.0s						
AKASG	Malin Array Be	40.98	338	P	P	17 07 04.2	+0.6
	comp=Z,0.2nm,0.3s,baz=140,slow=7.3,SNR=5.0						
	comp=Z,0.2nm,0.3s						
MAKZ	Makanchi	41.37	32	P	P	17 07 08.7	+1.8
MAKZ				IAmb	IAmb	17 07 10.1	
	comp=Z,3.5nm,1.2s						
MK31	Makanchi Array	41.52	32	P	P	17 07 09.6	+1.3
MK31				IAmb	IAmb	17 07 20.1	
	comp=Z,3.9nm,1.4s						
MKAR	Makanchi Array	41.52	32	P	P	17 07 10.2	+1.9
	comp=Z,1.6nm,0.5s,baz=218,slow=8.9,SNR=28						
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	41.52	32	P	P	17 07 09.7	+1.5
KURK	Kurchatov	42.64	25	P	P	17 07 18.5	+1.2
KURK				IAmb	IAmb	17 07 28.9	
	comp=Z,3.3nm,1.1s						
TRI	Trieste	45.03	322	P	P	17 07 37.0	+0.4
CMAR	Chiang Mai Arr	45.41	78	P	P	17 07 41.6	+1.6
	comp=Z,1.8nm,0.9s,baz=270,slow=9.2,SNR=10.0						
	comp=Z,1.8nm,0.9s						
ZAA0	Zalesovo Array	47.60	26	P	P	17 07 56.6	-0.1
ZALV	Zalesovo Beam	47.60	26	P	P	17 07 57.5	+0.8
	comp=Z,2.3nm,0.6s,baz=237,slow=7.5,SNR=12						
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	47.60	26	P	P	17 07 57.4	+0.7
TORD	Torodi Ar. Bea	48.63	275	P	P	17 08 05.6	+0.3
	comp=Z,0.8nm,0.8s,baz=94,slow=6.0,SNR=5.8						
	comp=Z,0.8nm,0.8s						
FINES	FINESS Array B	50.92	344	P	P	17 08 23.2	+1.2
	comp=Z,1.9nm,0.7s,baz=126,slow=9.8,SNR=9.5						
	comp=Z,1.9nm,0.7s						
FINES	FINESS Array B	50.92	344	P	P	17 08 22.8	+0.9
ESDC	Sonseca Array	54.97	309	P	P	17 08 52.9	+0.6
	comp=Z,1.2nm,0.8s,baz=91,slow=6.5,SNR=12						
	comp=Z,1.2nm,0.8s						
ESDC	Sonseca Array	54.97	309	IAmb	IAmb	17 08 57.1	
	comp=Z,2.2nm,1.5s						
NOA	NORSAR Array B	55.38	337	P	P	17 08 55.3	+0.4
	comp=Z,0.9nm,0.8s,baz=125,slow=7.6,SNR=3.1						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	56.23	41	P	P	17 09 03.5	+2.1
	comp=Z,0.2nm,0.4s,baz=172,slow=40,SNR=2.5						
	comp=Z,0.2nm,0.4s						
ARCES	ARCESS Array B	57.97	349	P	P	17 09 13.5	+0.4
	comp=Z,0.9nm,0.7s,baz=191,slow=3.7,SNR=4.3						
	comp=Z,0.9nm,0.7s						
EKA	Eskdalemuir Ar	58.99	327	P	P	17 09 20.4	-0.1
	comp=Z,0.4nm,0.5s,baz=119,slow=5.8,SNR=1.5						
	comp=Z,0.4nm,0.5s						
KSRS	Korea Array	70.72	55	LR	LR	17 43 02.7	
	comp=Z,22nm,18.9s,baz=50,slow=37						
TIXI	Tiksi	72.79	19	P	P	17 10 49.4	+0.3
WRA	Warramunga Arr	87.87	111	P	P	17 12 11.8	+0.7
	comp=Z,0.3nm,0.9s,baz=300,slow=3.7,SNR=2.6						
	comp=Z,0.3nm,0.9s						
ASAR	Alice Springs	88.48	115	P	P	17 12 14.5	+0.5
	comp=Z,0.5nm,1.0s,baz=293,slow=5.0,SNR=4.1						
	comp=Z,0.5nm,1.0s						
PDAR	Pinedale Array	121.02	344	PKP	PKiKP	17 18 15.0	+0.6
	comp=Z,0.4nm,0.7s,baz=69,slow=5.4,SNR=4.6						
NVAR	Mina Array Bea	127.08	350	PKP	PKiKP	17 18 27.4	+0.9
	comp=Z,0.6nm,0.7s,baz=220,slow=0.5,SNR=4.7						
NVAR	Mina Array Bea	127.08	350		PKPdf	17 18 24.5	-1.5

MOS ***05*** *17:21:21.8±1.0, 51°.67N×177°.84E, h68^{km}, mb5.1/24, Error ellipse: s-maj=6.5km s-min=4.8km az=100.2*
AEIC ***05*** *17:21:22.5±2.3, 51°.78N±0°.09×177°.82E±0°.08, h41^{km}±5^{km}, Error ellipse: s-maj=13.2km s-min=7.0km az=180.0*
BJI ***05*** *17:21:23.1±0.0, 51°.91N×177°.56E, h73^{km}, mb4.8/43, mB5.0/23, Ms4.7/7, Ms7 4.3/8*
GCMT ***05*** *17:21:23.2±0.4, 51°.66N±0°.03×178°.01E±0°.04, h49^{km}±2^{km}, MW4.9/81, Moment Tensor Solution. s27,c32; s81,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.06±.22; M$_{\theta\theta}$-2.46±.15; M$_{\phi\phi}$2.52±.14; M$_{r\theta}$-1.37±.15; M$_{\theta\phi}$0.87±.14; M$_{\phi r}$-1.04±.10; Best double couple: M$_0$3.15000×10^{16} NP1:φ$_s$145.00000°, δ57.00000°, λ-180.00000°. NP2: φ$_s$54.00000°, δ90.00000°, λ-33.00000°. Principal axes: T 3.1920, Plg23.0000°, Azm105.0000°; N -0.0830, Plg57.0000°, Azm234.0000°; P -3.1070, Plg23.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***05*** *17:21:23.2±1.8, 51°.71N±0°.06×177°.79E±0°.08, h64^{km}±5^{km}, mb4.8/331, ML5.0/20(AEIC) Error ellipse: s-maj=9.3km s-min=6.4km az=210.0*
IDC ***05*** *17:21:24.1±1.2, 51°.75N×177°.83E, h70^{km}±9^{km}, mb4.3/37, mbtmp4.6/40, MS3.6/59, Error ellipse: s-maj=13.9km s-min=7.2km az=177.0*
ISC 05 17:21:21.7±0.5**, 51°.60N**±0°.07×**177°.80E**±0°.03**, h55**^{km}±2^{km}**, h54**^{km}**:pP-P, n935, σ1^{s}.07**/930**, mb4.8**/263**, MS3.6**/59**, 31C-10D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	2.54	298	P	Pn	17 22 01.4	+1.0
	3μm,0.3s,baz=58,slow=3.4,SNR=185						
SHEM				S	Sn	17 22 32.2	+2.1
	7μm,0.4s,baz=304,slow=22,SNR=12						
SHEM				LR	LR	17 23 06.5	
	comp=Z,2μm,18.6s,baz=116,slow=41						
SMY	Shemya	2.54	298		Pn	17 22 00.4	0.0
SMY	Shemya	2.54	298		Sn	17 22 32.2	+2.1
ADK	Adak	3.44	83	P	Pn	17 22 14.2	+1.4
ADK						17 22 53.6	
ADK	Adak	3.44	83		Pn	17 22 14.2	+1.4
ADK					Sn	17 22 53.6	+1.4
ATKA	Atka Island	5.00	80		Pn	17 22 35.6	+1.6
ATKA					Sn	17 23 31.2	+0.9
KOKL	Mount Kliuchef	5.00	79		Pn	17 22 35.9	+1.7
KOKL					Sn	17 23 31.6	+1.0
KOFP	Korovin Flat P	5.06	79		Pn	17 22 37.1	+2.1
NIKH	Nikolski High	8.30	75	Pn	Pn	17 23 22.7	+3.4
NIKH	Nikolski High	8.30	75	P	Pn	17 23 21.0	+1.7
	baz=268,SNR=6.4						
OKFG	Magazine Ridge	8.91	73		Pn	17 23 30.5	+3.0
SPIA	Saint Paul Isl	8.93	47	Pn	Pn	17 23 30.2	+2.3
SPIA	Saint Paul Isl	8.93	47		Sn	17 25 07.6	+0.7
SPIA	Saint Paul Isl	8.93	47	P	Pn	17 23 29.2	+1.4
	baz=238						
MGOD	Makushin Gods	9.57	71		Pn	17 23 39.5	+2.9
MSW	Makushin Switc	9.63	70		Pn	17 23 40.2	+2.6
MTBL	Makushin Table	9.70	70		Pn	17 23 40.9	+2.4
UNV	Unalaska Valle	9.79	71	Pn	Pn	17 23 42.4	+2.8
UNV	Unalaska Valle	9.79	71	P	Pn	17 23 41.4	+1.9
	baz=265,SNR=13						
AKUT	Akutan	10.26	69	Pn	Pn	17 23 49.3	+3.4

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FALS  False Pass         11.72  66  Pn      Pn      17 24 08.6 +2.7
FALS  False Pass         11.72  66  P       Pn      17 24 09.0 +3.2
      baz=263
PET   Petropavlovsk      11.80 284  eP      Pn      17 24 10.3 +3.2
PET                                 eS      Sn      17 26 12.7 -4.4
PET                                 pmax    pmax
      comp=Z,18nm,0.6s
PET                                 MLR     MLR
      comp=Z,100nm,14.0s
PET   Petropavlovsk      11.80 284          Pn      17 24 08.1 +1.0
PEA0B Petropavlovsk-     12.38 285  i P     Pn      17 24 17.6 +2.7
PEA0B Petropavlovsk-     12.38 285  Pn      Pn      17 24 17.3 +2.3
PETK  Petropavlovsk-     12.38 285  P       Pn      17 24 17.9 +2.9
      comp=Z,5.8nm,0.5s,baz=92,slow=18,SNR=37
PETK                                S       Sn      17 26 25.2 -6.0
      comp=Z,4.2nm,0.5s,baz=74,slow=16,SNR=1.5
PETK                                LR      LR      17 28 53.2
      comp=Z,353nm,21.7s,baz=98,slow=36
PETK  Petropavlovsk-     12.38 285  P       Pn      17 24 17.9 +2.9
PETK  Petropavlovsk-     12.38 285  Pn      Pn      17 24 16.0 +1.1
GAMB  Gambell            13.41  20  Pn      Pn      17 24 30.1 +1.2
GAMB  Gambell            13.41  20  P       Pn      17 24 29.7 +0.7
      baz=210,SNR=5.2
SDPT  Sand Point         13.46  65  Pn      Pn      17 24 29.0 -0.6
SDPT  Sand Point         13.46  65  P       Pn      17 24 29.5 -0.1
      baz=264
SKR   Severo-Kuril’s     13.64 275  i P     Pn      17 24 31.3 -0.8
CNBA  Chernabura Isl     13.91  68  Pn      Pn      17 24 34.5 -1.3
CHNA  Chernabura Isl     13.91  68  P       Pn      17 24 35.5 -0.3
      baz=267
ANM   Nome               15.68  28  P       P       17 25 00.6 -1.2
ANM                                 pmax    pmax
      comp=Z,21nm,1.0s
ANM   Nome               15.68  28  P       P       17 25 00.6 -1.2
ANM   Nome               15.68  28  P       Pn      17 24 57.8 -0.9
      baz=222
TNA   Tin City           15.79  22  P       Pn      17 24 59.1 -1.1
      baz=215
CHIR  Chirikof Islan     16.25  65  P       Pn      17 25 06.0  0.0
      baz=267
P18K  Big Mountain,      17.06  52  P       Pn      17 25 16.5 +0.4
      baz=255
SII   Sitkinak Islan     17.11  62  P       P       17 25 17.3 -0.4
      baz=266
MA2   Magadan            17.14 308  P       P       17 25 18.7 +0.7
      comp=Z,5.1nm,0.6s,baz=91,slow=11,SNR=6.7
MA2                                 LR      LR      17 31 44.7
      comp=Z,168nm,21.1s,baz=107,slow=36
MA2   Magadan            17.14 308  i P     P       17 25 18.6 +0.6
MA2                                 pmax    pmax
      comp=Z,30nm,1.9s
N18K  Kilae Creek        17.14  48  P       P       17 25 19.2 +1.1
N18K  Kilae Creek        17.14  48  P       P       17 25 18.2 +0.1
      baz=250,SNR=13
O18K  Koktuh Hills       17.20  51          P       17 25 19.7 +1.0
O18K                                IAmb    IAmb    17 25 22.9
      comp=Z,46nm,0.9s
O18K  Koktuh Hills       17.20  51  P       P       17 25 19.8 +1.0
      baz=254
BILL  Bilibino           17.42 345 ceP      P       17 25 21.8 +0.7
BILL                                pmax    pmax
      comp=Z,92nm,1.7s
BILL  Bilibino           17.42 345  P       P       17 25 21.6 +0.5
SVW2  Sparrevohn         17.43  47  P       P       17 25 23.4 +2.2
OHAK  Old Harbor         17.66  60  P       Pn      17 25 22.5 -1.0
      baz=264
SEY   Seymchan           17.68 320  P       P       17 25 25.7 +1.7
      comp=Z,8.1nm,0.6s,baz=124,slow=10,SNR=42
SEY                                 LR      LR      17 31 22.5
      comp=Z,268nm,21.1s,baz=97,slow=34
SEY                                 ScP     ScP     17 33 28.6 -0.7
      comp=Z,3.0nm,0.9s,baz=121,slow=7.1,SNR=8.1
SEY   Seymchan           17.68 320 ceP      P       17 25 24.4 +0.4
SEY                                 pmax    pmax
      comp=Z,16nm,1.3s
O19K  Port Alsworth      17.73  50  P       P       17 25 25.3 +0.9
O19K                                IAmb    IAmb    17 25 28.9
      comp=Z,65nm,0.8s
O19K  Port Alsworth      17.73  50  P       P       17 25 24.9 +0.5
      baz=254,SNR=8.6
Q19K  Cape Douglas,      17.75  54  P       P       17 25 25.4 +0.7
Q19K                                IAmb    IAmb    17 25 45.8
      comp=Z,101nm,1.3s
Q19K  Cape Douglas,      17.75  54  P       P       17 25 25.0 +0.3
      baz=259
N19K  Bonanza Creek      17.84  48  P       P       17 25 27.7 +1.9
N19K                                IAmb    IAmb    17 25 31.4
      comp=Z,88nm,1.2s
N19K  Bonanza Creek      17.84  48  P       P       17 25 26.3 +0.5
      baz=252,SNR=16
TTA   Tatalina           17.99  41  P       Pn      17 25 28.3 +0.7
TTA                                 pmax    pmax
      comp=Z,27nm,1.1s
TTA   Tatalina           17.99  41          Pn      17 25 28.3 +0.7
TTA   Tatalina           17.99  41  P       Pn      17 25 28.0 +0.4
      baz=244,SNR=14
KDAK  Kodiak Island      18.11  58  P       P       17 25 26.4 -2.2
      comp=Z,18nm,0.3s,baz=300,slow=5.6,SNR=48
KDAK                                LR      LR      17 32 50.4
      comp=Z,188nm,19.5s,baz=259,slow=38
KDAK  Kodiak Island      18.11  58  i P     P       17 25 27.0 -1.7
KDAK                                pmax    pmax
      comp=Z,35nm,1.1s
KDAK  Kodiak Island      18.11  58  P       P       17 25 26.6 -2.1
KDAK  Kodiak Island      18.11  58  P       P       17 25 27.7 -1.0
      baz=264
P19K  Oil Pt             18.11  52  P       Pn      17 25 30.3 +1.2
P19K                                IAmb    IAmb    17 25 48.4
      comp=Z,120nm,1.2s
P19K  Oil Pt             18.11  52  P       Pn      17 25 29.9 +0.9
      baz=257
L19K  White Mountain     18.16  44  P       Pn      17 25 30.2 +0.5
L19K  White Mountain     18.16  44  P       Pn      17 25 29.8 +0.2
      baz=247,SNR=14
M19K  Big River Lodg     18.26  45  P       Pn      17 25 32.5 +1.7
M19K                                IAmb    IAmb    17 25 35.8
      comp=Z,76nm,1.4s
M19K  Big River Lodg     18.26  45  P       P       17 25 30.5 +0.1
      baz=249
O20K  Slope Mountain     18.51  51  P       P       17 25 33.5 +0.3
      baz=256
RSO   Redoubt South      18.55  50  P       Pn      17 25 35.6 +1.1
GCSA  Galena City Sc     18.57  35  P       P       17 25 33.0 -0.7
      baz=237
L20K  Farewell, AK       18.70  43  P       P       17 25 35.4 +0.2
      baz=248,SNR=8.7
K20K  Telida             18.97  41  P       Pn      17 25 39.2 -0.1
K20K  Telida             18.97  41  P       P       17 25 38.7 +0.5
      baz=245,SNR=12
RDOG  Red Dog Mine       18.99  22  P       P       17 25 38.5 +0.2
RDOG  Red Dog Mine       18.99  22  P       P       17 25 38.3  0.0
      baz=220,SNR=7.9
SPCR  Spurr Chakacha     19.01  48  P       P       17 25 38.8 +0.1
      baz=254,SNR=19
CNPM  China Poot         19.08  53  P       P       17 25 39.0 -0.4
CNPM                                IAmb    IAmb    17 25 41.6
      comp=Z,52nm,1.1s
BRLK  Bradley Lake       19.30  53  P       P       17 25 41.4 -0.4
BRLK                                IAmb    IAmb    17 26 04.9
      comp=Z,48nm,1.1s
J20K  Nowinta River      19.31  39  P       Pn      17 25 42.8 -0.5
J20K  Nowinta River      19.31  39  P       P       17 25 42.4 +0.6
      baz=243,SNR=28
BRSE  Bradley Lake S     19.36  53  P       P       17 25 42.6  0.0
      baz=260,SNR=5.7
PPLA  Purkeypile         19.58  43  P       Pn      17 25 45.9 -0.8
PPLA  Purkeypile         19.58  43  P       P       17 25 44.5 -0.4
      baz=249,SNR=11
CAST  Castle Rocks       19.82  42  P       Pn      17 25 48.9 -0.5
CAST  Castle Rocks       19.82  42  P       P       17 25 47.3 -0.1
      baz=248,SNR=11
CHUM  Lake Minchumin     19.91  40  P       P       17 25 48.7 +0.4
      baz=246,SNR=26
O22K  Cooper Landing     20.01  51  P       Pn      17 25 50.6 -1.0
O22K  Cooper Landing     20.01  51  P       P       17 25 48.3 -1.1
      baz=259,SNR=12
SEW   Seward             20.07  52  P       P       17 25 49.4 -0.7
SEW                                 IAmb    IAmb    17 25 52.3
      comp=Z,118nm,1.5s
SEW   Seward             20.07  52  P       P       17 25 48.9 -1.2
      baz=260
M22K  Willow             20.13  47  P       P       17 25 51.4 +0.7
M22K  Willow             20.13  47  P       P       17 25 50.1 -0.6
      baz=255,SNR=6.7
RC01  Rabbit Creek A     20.14  49  P       P       17 25 51.5 +0.6
RC01                                IAmb    IAmb    17 25 55.4
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      comp=Z,49nm,1.2s
RC01  Rabbit Creek A     20.14  49  P       P       17 25 50.8 -0.1
      baz=257
CUT   Chulitna           20.25  45  P       P       17 25 53.0 +1.0
CUT                                 IAmb    IAmb    17 26 20.7
      comp=Z,40nm,0.8s
CUT   Chulitna           20.25  45  P       P       17 25 52.6 +0.5
      baz=253
IMAR  Indian Mountai     20.35  34  P       P       17 25 53.6 +0.6
KTH   Kantishna Hill     20.35  42  P       P       17 25 54.5 +1.3
KTH                                 IAmb    IAmb    17 25 56.5
      comp=Z,72nm,1.2s
H21K  Melozitna Rive     20.52  35  P       P       17 25 56.1 +1.1
H21K                                IAmb    IAmb    17 26 02.8
      comp=Z,38nm,1.1s
H21K  Melozitna Rive     20.52  35  P       P       17 25 54.7 -0.3
      baz=241,SNR=27
BPAW  Bear Paw Mtn.      20.53  40  P       P       17 25 56.0 +0.9
BPAW  Bear Paw Mtn.      20.53  40  P       P       17 25 55.1  0.0
      baz=248,SNR=19
PMR   Palmer             20.54  48  P       P       17 25 55.6 +0.4
PMR                                 pmax    pmax
      comp=Z,23nm,1.2s
PMR   Palmer             20.54  48  P       P       17 25 55.6 +0.4
PMR   Palmer             20.54  48  P       P       17 25 55.8 +0.6
      baz=256
I21K  Tanana             20.60  37  P       P       17 25 56.5 +0.7
I21K  Tanana             20.60  37  P       P       17 25 54.8 -1.0
      baz=244,SNR=9.8
GHO   Glory Hole Cre     20.68  48  P       P       17 25 57.9 +1.0
KNK   Knik Glacier       20.81  49  P       P       17 25 58.0 -0.2
KNK                                 IAmb    IAmb    17 26 02.9
      comp=Z,34nm,0.8s
KNK   Knik Glacier       20.81  49  P       P       17 25 57.5 -0.7
      baz=258,SNR=9.7
SML   Sawmill            20.96  48  P       P       17 26 00.2 +0.4
SML                                 IAmb    IAmb    17 26 18.6
      comp=Z,85nm,1.4s
SML   Sawmill            20.96  48  P       P       17 25 59.2 -0.6
      baz=257,SNR=7.5
WAT1  Susitna Watana     21.13  45  P       P       17 26 01.4 -0.2
      baz=254
RND   Reindeer           21.17  43  P       P       17 26 02.2 +0.1
RND                                 pmax    pmax
      comp=Z,24nm,1.0s
RND   Reindeer           21.17  43  P       P       17 26 02.2 +0.1
BWN   Browne             21.18  41  P       P       17 26 03.3 +1.2
M23K  Glacier View       21.24  48  P       P       17 26 02.6 -0.2
      baz=258,SNR=13
GLI   Glacier Island     21.36  51  P       P       17 26 03.6 -0.4
GLI   Glacier Island     21.36  51  P       P       17 26 02.3 -1.7
      baz=261
WAT6  Susitna Watana     21.42  46  P       P       17 26 04.0 -0.9
      baz=256,SNR=28
SCM   Sheep Creek Mo     21.43  48  P       P       17 26 04.7 -0.2
SCM                                 pmax    pmax
      comp=Z,42nm,0.6s
SCM   Sheep Creek Mo     21.43  48  P       P       17 26 04.7 -0.2
SCM                                 IAmb    IAmb    17 26 06.7
      comp=Z,42nm,0.6s
SCM   Sheep Creek Mo     21.43  48  P       P       17 26 04.7 -0.2
      baz=258,SNR=14
NEA2  Nenana             21.49  40  P       P       17 26 05.3 -0.1
NEA2                                IAmb    IAmb    17 26 07.0
      comp=Z,92nm,1.4s
NEA2  Nenana             21.49  40  P       P       17 26 05.5 +0.1
      baz=249,SNR=8.6
Q23K  Middleton Isla     21.53  55  P       P       17 26 05.5 -0.4
      baz=265
I23K  Minto, Yukon-K     21.59  39  P       P       17 26 06.8 +0.5
I23K  Minto, Yukon-K     21.59  39  P       P       17 26 05.8 -0.5
      baz=247,SNR=17
FID   Port Fidalgo       21.63  51  P       P       17 26 06.3 -0.6
FID                                 IAmb    IAmb    17 26 13.3
      comp=Z,66nm,1.1s
DHY   Denali Highway     21.72  45  P       P       17 26 07.9 -0.1
DHY                                 IAmb    IAmb    17 26 10.3
      comp=Z,62nm,1.2s
DHY   Denali Highway     21.72  45  P       P       17 26 08.1 +0.1
      baz=255,SNR=46
H23K  Yukon River        21.79  37  P       P       17 26 09.3 +0.6
H23K                                IAmb    IAmb    17 26 12.7
      comp=Z,45nm,1.4s
H23K  Yukon River        21.79  37  P       P       17 26 08.4 -0.3
      baz=245,SNR=22
WRH   Wood River Hil     21.84  41  P       P       17 26 09.0 -0.2
TYV   Tymovskoe          21.89 282  eP      P       17 26 22.2  +12
TYV                                 pmax    pmax
      comp=Z,28nm,1.5s
TYV                                 pmax    pmax
      comp=Z,1µm,4.4s
MDM   Murphy Dome        21.96  39  P       P       17 26 10.8 +0.4
MDM                                 IAmb    IAmb    17 26 14.1
      comp=Z,27nm,0.8s
EYAK  Cordova Ski Ar     21.96  52  P       P       17 26 09.8 -0.6
      baz=263
CCB   Clear Creek Bu     22.02  40  P       P       17 26 11.1 +0.1
CCB                                 IAmb    IAmb    17 26 13.3
      comp=Z,43nm,1.4s
KLU   Klutina            22.02  49  P       P       17 26 11.2  0.0
KLU                                 IAmb    IAmb    17 26 14.3
      comp=Z,40nm,1.1s
KLU   Klutina            22.02  49  P       P       17 26 10.0 -1.3
      baz=260,SNR=13
M24K  Tolsona, Glenn     22.02  48  P       P       17 26 11.8 +0.6
M24K  Tolsona, Glenn     22.02  48  P       P       17 26 11.1 -0.1
      baz=258,SNR=13
DIV   Divide             22.03  50  P       P       17 26 10.8 -0.5
DIV                                 IAmb    IAmb    17 26 13.7
      comp=Z,29nm,1.0s
TCOL  CIGO, UAF Yank     22.07  40  P       P       17 26 12.5 +0.9
TCOL  CIGO, UAF Yank     22.07  40  P       P       17 26 11.4 -0.2
      baz=250
COLA  College            22.08  40  P       P       17 26 12.8 +1.1
COLA                                pmax    pmax
      comp=Z,22nm,0.9s
COLA  College            22.08  40  P       P       17 26 12.8 +1.1
COLA  College            22.08  40  P       P       17 26 11.9 +0.2
      baz=250
COLD  Coldfoot           22.20  33  P       P       17 26 13.6 +0.6
COLD  Coldfoot           22.20  33  P       P       17 26 11.4 -1.5
      baz=241,SNR=9.3
POKR  Poker Plat Res     22.33  39  P       P       17 26 14.9 +0.5
POKR  Poker Plat Res     22.33  39  P       P       17 26 14.3 -0.1
      baz=250
H24K  Noodor Dome        22.43  37  P       P       17 26 15.2 -0.3
H24K                                IAmb    IAmb    17 26 19.3
      comp=Z,27nm,0.9s
H24K  Noodor Dome        22.43  37  P       P       17 26 14.4 -1.1
      baz=248,SNR=43
ILAR  Eielson Array      22.43  40  P       P       17 26 13.7 -1.8
      comp=Z,2.1nm,0.4s,baz=241,slow=8.4,SNR=42
ILAR                                ScP     ScP     17 33 37.8 -2.7
      comp=Z,1.4nm,0.8s,baz=270,slow=3.5,SNR=7.8
      comp=Z,2.1nm,0.4s
ILAR  Eielson Array      22.43  40  P       P       17 26 14.9 -0.6
ILAR  Eielson Array      22.43  40  P       P       17 26 14.9 -0.6
RAGM  Ragged Mountai     22.47  52  P       P       17 26 16.4 +0.5
PAX   Paxson             22.53  45  P       P       17 26 16.2 -0.5
PAX                                 pmax    pmax
      comp=Z,51nm,1.3s
PAX   Paxson             22.53  45  P       P       17 26 16.2 -0.5
PAX                                 IAmb    IAmb    17 26 21.7
      comp=Z,51nm,1.3s
PAX   Paxson             22.53  45  P       P       17 26 15.4 -1.3
      baz=257,SNR=22
HARP  HAARP              22.55  47  P       P       17 26 16.6 -0.2
      baz=259,SNR=6.8
BMRM  Bremner River      22.57  51  P       P       17 26 16.9 -0.2
BMRM                                IAmb    IAmb    17 26 19.1
      comp=Z,55nm,1.0s
BMRM  Bremner River      22.57  51  P       P       17 26 15.8 -1.3
      baz=263,SNR=11
K24K  Donnelly Dome      22.61  43  P       P       17 26 16.1 -1.3
      baz=255,SNR=9.3
HMT   Hamilton           22.67  53  P       P       17 26 18.3 +0.2
N25K  Chitina, Valde     22.67  49  P       P       17 26 18.4 +0.3
N25K  Chitina, Valde     22.67  49  P       P       17 26 16.8 -1.4
      baz=262,SNR=9.5
SUCK  Suckling Hills     22.89  53  P       P       17 26 20.7 +0.4
A21K  Barrow             22.90  21  P       P       17 26 19.8 -0.5
A21K                                IAmb    IAmb    17 26 21.9
      comp=Z,36nm,0.7s
A21K  Barrow             22.90  21  P       P       17 26 18.2 -2.1
      baz=224
BERG  Berg Lake          22.95  52  P       P       17 26 20.3 -0.6
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RIDG  Independent Ri     22.99  44  P       P       17 26 20.9 -0.5
RIDG  Independent Ri     22.99  44  P       P       17 26 20.3 -1.1
      baz=256,SNR=19
J25K  Salcha River,      23.00  41  P       P       17 26 20.0 -1.5
J25K  Salcha River,      23.00  41  P       P       17 26 20.1 -1.5
      baz=254,SNR=8.0
GLB   Gilahina Butte     23.02  50  P       P       17 26 21.4 -0.3
GLB                                 IAmb    IAmb    17 26 22.6
      comp=Z,39nm,1.2s
TOLK  Toolik Lake Re     23.11  30  P       P       17 26 22.4 -0.1
TOLK                                IAmb    IAmb    17 26 25.0
      comp=Z,26nm,0.9s
TOLK  Toolik Lake Re     23.11  30  P       P       17 26 22.0 -0.5
      baz=239,SNR=25
BGLC  Bering Glacier     23.14  53  P       P       17 26 22.1 -0.7
      baz=266
VRDI  Verde Repeater     23.16  50  P       P       17 26 22.6 -0.7
VRDI                                IAmb    IAmb    17 26 25.9
      comp=Z,30nm,0.9s
YSS   Yuzh-Sakhalins     23.18 272  i P     P       17 26 25.0 +1.7
YSS                                 pmax    pmax
      comp=Z,5.0nm,0.4s
DOT   Dot Lake           23.31  44  P       P       17 26 23.8 -0.6
DOT                                 IAmb    IAmb    17 26 26.0
      comp=Z,28nm,1.1s
MENT  Mentasta           23.31  46  P       P       17 26 25.4 +1.0
MENT                                IAmb    IAmb    17 26 27.7
      comp=Z,32nm,1.2s
WAX   Waxell Ridge       23.38  52  P       P       17 26 23.9 -1.3
SCRK  Sand Creek         23.42  43  P       P       17 26 24.0 -1.7
SCRK                                IAmb    IAmb    17 26 25.8
      comp=Z,13nm,0.5s
SCRK  Sand Creek         23.42  43  P       P       17 26 23.9 -1.7
      baz=257,SNR=29
L26K  Log Cabin Wild     23.49  46  P       P       17 26 25.4 -0.8
L26K  Log Cabin Wild     23.49  46  P       P       17 26 27.1 +0.9
      baz=260
M26K  Nabesna, AK        23.54  47  P       P       17 26 25.1 -1.6
M26K  Nabesna, AK        23.54  47  P       P       17 26 27.1 +0.4
      baz=261
ISLE  Juniper Island     23.64  52  P       P       17 26 27.2 -0.6
ISLE                                IAmb    IAmb    17 26 30.3
      comp=Z,71nm,1.3s
J26L  Joseph Creek       23.72  42  P       P       17 26 26.9 -1.5
      baz=256,SNR=35
BARN  Barnard Glacie     24.01  51  P       P       17 26 30.3 -0.8
M27K  Edge Creek, AK     24.05  48  P       P       17 26 31.5  0.0
M27K                                IAmb    IAmb    17 26 33.9
      comp=Z,33nm,1.0s
M27K  Edge Creek, AK     24.05  48  P       P       17 26 31.4  0.0
      baz=262,SNR=15
L27K  Beaver Creek,      24.18  46  P       P       17 26 31.8 -0.7
L27K  Beaver Creek,      24.18  46  P       P       17 26 32.5 -0.1
      baz=261,SNR=64
BCAR  Beaver Creek A     24.20  46  P       P       17 26 32.4 -0.3
TABL  Table Mountain     24.22  53  P       P       17 26 32.6 -0.5
K27K  Chicken            24.25  44  P       P       17 26 32.9 -0.2
      baz=259
BMAR  Burnt Mountain     24.25  35  P       P       17 26 32.6 -0.6
BVCY  Beaver Creek       24.53  48  P       P       17 26 36.1 +0.4
      baz=263,SNR=11
JKA   Kamikawa-asahi     24.59 266  P       P       17 26 36.4 +0.1
JKA                                 IAmb    IAmb    17 27 04.0
      comp=Z,50nm,1.2s
ASAJ  Asahikawa          24.59 266  P       P       17 26 38.2 +1.9
      comp=Z,13nm,0.9s,baz=68,slow=14,SNR=5.9
ASAJ                                LR      LR      17 34 41.3
      comp=Z,93nm,20.9s,baz=28,slow=32
      comp=Z,13nm,0.9s
ASAJ  Asahikawa          24.59 266  P       P       17 26 38.2 +1.9
YUK3  Moose Creek        24.65  49  P       P       17 26 36.9 -0.1
      baz=265,SNR=31
PCA   Pinnacle           24.65  53  P       P       17 26 36.8 -0.1
PCA                                 IAmb    IAmb    17 26 54.8
      comp=Z,33nm,0.9s
PINM  Pinnacle           24.65  53  P       P       17 26 36.4 -0.4
      baz=269
EGAK  Eagle              24.80  42  P       P       17 26 37.4 -0.6
EGAK  Eagle              24.80  42  P       P       17 26 37.6 -0.4
      baz=258
BCPM  Bancas Point       24.96  54  P       P       17 26 39.1 -0.5
BCPM                                IAmb    IAmb    17 26 44.7
      comp=Z,31nm,0.7s
PNL   Peninsula          25.08  54  P       P       17 26 39.9 -0.8
      baz=271
DAWY  Dawson             25.42  44  P       P       17 26 43.4 -0.3
DAWY                                IAmb    IAmb    17 26 47.5
      comp=Z,35nm,0.9s
DAWY  Dawson             25.42  44  P       P       17 26 43.7 -0.1
      baz=261,SNR=36
YUK4  Talbot Arm         25.48  51  P       P       17 26 44.9 +0.3
      baz=268,SNR=24
YUK6  Outpost Mounta     25.61  51  P       P       17 26 45.6 -0.1
      baz=269,SNR=5.9
HYT   Haines Junctio     26.02  52  P       P       17 26 49.6 +0.3
HYT                                 IAmb    IAmb    17 26 55.4
      comp=Z,28nm,0.9s
HYT   Haines Junctio     26.02  52  P       P       17 26 49.2 -0.2
      baz=270,SNR=14
I29M  Ogilvie Camp,      26.10  41  P       P       17 26 48.8 -1.1
I29M                                IAmb    IAmb    17 26 53.1
      comp=Z,23nm,1.1s
I29M  Ogilvie Camp,      26.10  41  P       P       17 26 49.5 -0.3
      baz=260
M30M  Minto, Yukon       26.42  48  P       P       17 26 52.2 -0.7
M30M  Minto, Yukon       26.42  48  P       P       17 26 52.8 -0.1
      baz=267,SNR=11
N31M  Braeburn, Yuko     26.86  50  P       P       17 26 56.2 -0.6
N31M                                IAmb    IAmb    17 27 03.7
      comp=Z,19nm,1.0s
N31M  Braeburn, Yuko     26.86  50  P       P       17 26 56.2 -0.6
      baz=270
EPYK  Eagle Plains       26.93  39  P       P       17 26 56.9 -0.5
EPYK                                IAmb    IAmb    17 27 01.3
      comp=Z,28nm,1.2s
EPYK  Eagle Plains       26.93  39  P       P       17 26 56.8 -0.5
      baz=260,SNR=9.5
WHY   Whitehorse         27.32  52  P       P       17 26 59.7 -1.3
      baz=273
SIT   Sitka              27.43  60  P       P       17 27 01.0 -0.9
      baz=279
M31M  Drury Creek, Y     27.53  49  P       P       17 27 03.5 +0.8
M31M  Drury Creek, Y     27.53  49  P       P       17 27 03.8 +1.0
      baz=270
YAK   Yakutsk            27.67 311  P       P       17 27 03.1 -0.9
      comp=Z,6.9nm,0.3s,baz=264,slow=2.7,SNR=19
YAK                                 LR      LR      17 37 58.5
      comp=Z,133nm,20.5s,baz=92,slow=36
      comp=Z,6.9nm,0.3s
YAK   Yakutsk            27.67 311  eP      P       17 27 02.7 -1.2
YAK                                 e*PP    sP      17 27 23.0 -1.1
YAK                                 e               17 27 52.5
YAK                                 eS      S       17 31 39.5 -2.2
YAK                                 e*SS    sS      17 32 08.4 +3.7
YAK                                 eSS     SnSn    17 32 57.9 +0.3
YAK                                 e               17 37 47.0
YAK                                 pmax    pmax
      comp=E,10.0nm,1.0s
YAK                                 pmax    pmax
      comp=Z,40nm,1.0s
YAK                                 pmax    pmax
      comp=N,3.0nm,0.9s
YAK                                 pmax    pmax
      comp=Z,16nm,0.6s
YAK                                 pmax    pmax
      comp=E,15nm,0.9s
YAK                                 pmax    pmax
      comp=N,38nm,1.7s
YAK                                 smax    smax
      comp=E,334nm,4.1s
YAK                                 smax    smax
      comp=N,186nm,3.3s
YAK                                 MLR     MLR
      comp=Z,115nm,18.0s
YAK                                 MLR     MLR
      comp=N,53nm,14.0s
YAK                                 MLR     MLR
      comp=E,78nm,15.0s
YAK   Yakutsk            27.67 311  P       P       17 27 03.0 -0.9
YAK                                 IAmb    IAmb    17 27 05.6
      comp=Z,32nm,0.8s
INK   Inuvik             28.51  36  P       P       17 27 11.7 +0.3
      comp=Z,3.8nm,0.4s,baz=250,slow=7.5,SNR=40
INK                                 ScP     ScP     17 33 55.1 -2.6
      comp=Z,3.2nm,0.9s,baz=142,slow=33,SNR=5.7
      comp=Z,3.8nm,0.4s
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INK   Inuvik            28.51  36  P      P      17 27 11.7 +0.3
INK                                pmax   pmax
            comp=Z,6.0nm,0.8s
INK   Inuvik            28.51  36  P      P      17 27 11.7 +0.3
INK   Inuvik            28.51  36  P      P      17 27 11.4  0.0
            baz=259,SNR=9.1
CRAG  Craig             28.93  63  P      P      17 27 14.6 -0.6
            baz=284
MMPY  Sheldon Lake,     28.98  48  P      P      17 27 16.5 +0.8
            baz=272,SNR=6.5
KLR   Kul'dur           29.07 284ceP      P      17 27 17.8 +1.3
KLR                                pmax   pmax
            comp=Z,9.0nm,1.0s
WRAK  Wrangell Islan    29.16  61  P      P      17 27 17.9 +0.6
            baz=282
TIXI  Tiksi             29.40 331ceP      P      17 27 19.6 +0.3
TIXI                               pmax   pmax
            comp=Z,3.0nm,0.8s
TIXI  Tiksi             29.40 331  P      P      17 27 16.6 -2.6
TIXI  Tiksi             29.40 331  P      P      17 27 19.1 -0.2
DLBC  Dease Lake        30.01  56  P      P      17 27 25.2 +0.4
            comp=Z,2.9nm,0.5s,baz=252,slow=5.5,SNR=11
DLBC                               LR     LR     17 40 07.2
            comp=Z,235nm,18.6s,baz=277,slow=38
            comp=Z,2.9nm,0.5s
DLBC  Dease Lake        30.01  56  P      P      17 27 25.4 +0.6
ZEA   Zeya              30.21 294 eP      P      17 27 26.5 -0.1
ZEA                                pmax   pmax
            comp=Z,10.0nm,0.9s
TGTN  Hyland Airport    30.46  50  P      P      17 27 28.8  0.0
            baz=276
USRK  Ussuriysk Ar.     31.16 275  P      P      17 27 36.0 +1.0
            comp=Z,3.1nm,0.7s,baz=59,slow=7.9,SNR=4.1
USRK                               LR     LR     17 38 55.5
            comp=Z,81nm,20.1s,baz=58,slow=34
            comp=Z,3.1nm,0.7s
USRK  Ussuriysk Ar.     31.16 275  P      P      17 27 36.0 +1.0
MJAR  Matsushiro Arr    31.73 257  P      P      17 27 42.5 +2.3
            comp=Z,0.4nm,0.3s,baz=45,slow=7.0,SNR=1.8
            comp=Z,0.4nm,0.3s
MJAR  Matsushiro Arr    31.73 257  P      P      17 27 42.5 +2.3
MJAR                               pmax   pmax
            comp=Z,2.0nm,1.1s
A36M  Sachs Harbour     31.93  30  P      P      17 27 42.4 +0.9
A36M  Sachs Harbour     31.93  30  P      P      17 27 41.5  0.0
            baz=262,SNR=20
C36M  Paulatuk          32.05  35  P      P      17 27 43.1 +0.6
C36M                               IAmb   IAmb   17 27 47.8
            comp=Z,14nm,1.0s
C36M  Paulatuk          32.05  35  P      P      17 27 42.8 +0.2
            baz=267
BBB   Bella Bella       32.74  67  LR     LR     17 39 03.1
            comp=Z,101nm,21.2s,baz=316,slow=32
H11N2 WAKE ISLAND Hy    32.94 199  T      T      18 03 14.5
            baz=11,slow=76,SNR=278
H11N3 WAKE ISLAND Hy    32.95 199  T      T      18 03 12.7
            baz=11,slow=76,SNR=357
H11N1 WAKE ISLAND Hy    32.95 199  T      T      18 03 14.0
            baz=11,slow=76,SNR=357
BNX   BinXian           33.23 280 ⇑P      P      17 27 53.1 -0.1
BNX                                pmax   pmax
            comp=Z,19nm,0.7s
BNX                                pmax   pmax
            comp=Z,620nm,3.9s
H11S1 WAKE ISLAND Hy    34.16 199  T      T      18 04 50.6
            baz=11,slow=76,SNR=286
H11S2 WAKE ISLAND Hy    34.18 199  T      T      18 04 49.4
            baz=11,slow=76,SNR=175
H11S3 WAKE ISLAND Hy    34.18 199  T      T      18 04 45.3
            baz=11,slow=76,SNR=252
OZB   Mount Ozzard      35.56  71  P      P      17 28 11.9 -1.5
BOD   Bodaibo           36.13 305 eP      P      17 28 17.5 -0.5
BOD                                pmax   pmax
            comp=Z,22nm,0.8s
JCJ   Chichijima        36.27 241  LR     LR     17 40 53.8
            comp=Z,38nm,21.6s,baz=96,slow=32
YKA   Yellowknife Ar    36.62  46  P      P      17 28 22.2 +0.1
            comp=Z,2.5nm,0.4s,baz=286,slow=8.8,SNR=26
YKA                                ScP    ScP    17 34 23.5 -2.2
            comp=Z,3.7nm,1.1s,baz=292,slow=3.5,SNR=9.1
            comp=Z,2.5nm,0.4s
YKA   Yellowknife Ar    36.62  46  P      P      17 28 22.2 +0.1
YKA   Yellowknife Ar    36.62  46  P      P      17 28 21.8 -0.3
NLWA  Neilton Lookou    37.25  73  P      P      17 28 28.0 +0.2
NLWA                               IAmb   IAmb   17 28 39.3
            comp=Z,31nm,1.4s
A04D  Lummi Island      37.31  70  P      P      17 28 27.9 -0.3
            baz=298
KSRS  Korea Array       37.51 268  P      P      17 28 31.0 +1.0
            comp=Z,1.0nm,0.6s,baz=50,slow=8.2,SNR=5.5
            comp=Z,1.0nm,0.6s
KSRS  Korea Array       37.51 268  P      P      17 28 31.0 +1.0
D03D  Eldon             37.65  72  P      P      17 28 30.9 -0.2
            baz=299,SNR=5.8
B05A  Bryant            37.89  71  P      P      17 28 32.7 -0.3
            baz=299
E04D  Cinebar           38.44  73  P      P      17 28 38.3 +0.5
            baz=301
G03D  McMinnville, O    38.71  76  P      P      17 28 39.8 -0.2
            baz=302
H04D  Lebanon           39.39  76  P      P      17 28 44.8 -0.9
            baz=303
B08A  Colville Reser    39.46  69  P      P      17 28 45.0 -1.3
I03D  Drain, OR         39.46  78  P      P      17 28 46.0 -0.2
            baz=303
HOOD  Mount Hood Mea    39.62  74  P      P      17 28 47.3 -0.5
HOOD                               IAmb   IAmb   17 28 57.9
            comp=Z,7.4nm,0.8s
H04A  Detroit Lake      39.63  76  P      P      17 28 48.7 +0.9
H04A                               IAmb   IAmb   17 28 50.1
            comp=Z,11nm,0.8s
K02D  Willamette Mer    39.82  79  P      P      17 28 49.4  0.0
            baz=304
G05D  Wamic, OR         39.86  74  P      P      17 28 49.8 +0.1
            baz=302
I04A  Tendick Farm,     39.98  77  P      P      17 28 50.6 -0.1
            baz=304
L02F  Cave Junction     40.20  80  P      P      17 28 52.0 -0.5
            baz=305
HAWA  Hanford           40.33  72  P      P      17 28 53.2 -0.2
HAWA                               IAmb   IAmb   17 28 54.3
            comp=Z,9.1nm,0.8s
I05D  Terrebonne, OR    40.33  76  P      P      17 28 52.9 -0.7
            baz=303
D08A  Wollman Farm,     40.35  71  P      P      17 28 52.5 -1.1
C09A  Chrisman Ranch    40.35  69  P      P      17 28 52.4 -1.3
C09A                               IAmb   IAmb   17 28 56.8
            comp=Z,7.0nm,0.7s
RES   Resolute Bay      40.42  24  P      P      17 28 55.2 +1.4
            comp=Z,9.8nm,0.8s,baz=258,slow=5.6,SNR=53
RES                                ScP    ScP    17 34 37.5 -2.5
            comp=Z,3.7nm,1.0s,baz=333,slow=7.1,SNR=7.1
RES                                LR     LR     17 48 05.6
            comp=Z,50nm,19.6s,baz=244,slow=40
            comp=Z,9.8nm,0.8s
RES   Resolute Bay      40.42  24  P      P      17 28 55.2 +1.4
RES   Resolute Bay      40.42  24  P      P      17 28 53.3 -0.5
RES                                IAmb   IAmb   17 28 56.3
            comp=Z,14nm,0.9s
J04D  Umpqua Nationa    40.47  77  P      P      17 28 55.0 +0.1
J04D                               IAmb   IAmb   17 28 58.1
            comp=Z,14nm,0.8s
J04D  Umpqua Nationa    40.47  77  P      P      17 28 54.1 -0.8
            baz=304
EDM   Edmonton          40.55  60  P      P      17 28 54.2 -1.1
EDM                                pmax   pmax
            comp=Z,23nm,0.5s
EDM   Edmonton          40.55  60  P      P      17 28 54.2 -1.1
E08A  Dider Farm, El    40.56  71  P      P      17 28 54.0 -1.3
E08A                               IAmb   IAmb   17 28 55.9
            comp=Z,6.0nm,0.6s
EUNU  Eureka            40.64  15  P      P      17 28 54.2 -1.5
NEW   Newport           40.79  68  P      P      17 28 56.9 -0.4
            comp=Z,6.2nm,0.5s,baz=295,slow=9.6,SNR=13
NEW                                LR     LR     17 43 17.2
            comp=Z,99nm,21.8s,baz=307,slow=32
            comp=Z,6.2nm,0.5s
NEW   Newport           40.79  68  P      P      17 28 56.9 -0.4
NEW   Newport           40.79  68  P      P      17 28 55.9 -1.5
NEW                                IAmb   IAmb   17 28 57.4
            comp=Z,8.0nm,0.6s
NEW   Newport           40.79  68  P      P      17 28 56.4 -0.9
            baz=300,SNR=8.0
KHMM  Horse Mountain    40.81  81  P      P      17 28 59.8 +2.0
KHMM                               IAmb   IAmb   17 29 06.9
            comp=Z,27nm,1.2s
L04D  Klamath Falls     40.92  79  P      P      17 28 59.1 +0.5
L04D                               IAmb   IAmb   17 29 00.6
            comp=Z,14nm,0.9s
L04D  Klamath Falls     40.92  79  P      P      17 28 57.5 -1.0
            baz=305
YBH   Yreka Blue Hor    40.95  80  P      P      17 28 59.6 +0.9
            comp=Z,7.6nm,0.8s,baz=32,slow=13,SNR=13
YBH                                LR     LR     17 42 47.7
            comp=Z,95nm,21.7s,baz=297,slow=31
            comp=Z,7.6nm,0.8s
YBH   Yreka Blue Hor    40.95  80  P      P      17 29 00.4 +1.7
YBH                                pmax   pmax
            comp=Z,14nm,1.0s
YBH   Yreka Blue Hor    40.95  80  P      P      17 29 00.4 +1.7
YBH                                IAmb   IAmb   17 29 01.4
            comp=Z,14nm,1.0s
J05D  Fort Rock, OR     40.97  77  P      P      17 28 57.8 -1.2
            baz=304
K04D  Chiloquin, OR     41.02  78  P      P      17 28 58.5 -1.0
            baz=305
XLT   XiLinHaoTe        41.08 284 eP      P      17 29 01.3 +1.5
XLT                                pP     sP     17 29 17.0 -3.3
XLT                                sP     pwP    17 29 22.3 +8.3
XLT                                pmax   pmax
            comp=Z,14nm,0.9s
XLT                                pmax   pmax
            comp=Z,98nm,4.6s
KMRM  Mail Ridge        41.21  82  P      P      17 29 02.7 +1.8
G08A  Pilot Rock        41.25  73  P      P      17 29 00.8 -0.4
K05A  Summer Lake       41.49  77  P      P      17 29 04.4 +1.1
K05A                               IAmb   IAmb   17 29 05.0
            comp=Z,17nm,1.2s
I07A  Izee              41.58  75  P      P      17 29 04.1 +0.2
KCPM  Cahto Peak        41.60  83  P      P      17 29 04.6 +0.4
KCPM                               IAmb   IAmb   17 29 14.7
            comp=Z,23nm,1.0s
WALA  Waterton Lakes    42.23  65  P      P      17 29 08.1 -1.0
WALA                               IAmb   IAmb   17 29 13.6
            comp=Z,12nm,0.9s
MOD   Modoc Plateau     42.32  78  P      P      17 29 10.4 +0.3
MOD                                IAmb   IAmb   17 29 12.9
            comp=Z,7.6nm,0.6s
BMO   Blue Mountains    42.47  73  P      P      17 29 10.6 -0.6
BMO                                pmax   pmax
            comp=Z,8.0nm,1.2s
BMO   Blue Mountains    42.47  73  P      P      17 29 10.6 -0.6
J08A  Circle Bar Ran    42.60  75  P      P      17 29 11.2 -1.1
GDXM  Geysers           42.62  83  P      P      17 29 15.0 +2.6
GDXM                               IAmb   IAmb   17 29 16.0
            comp=Z,23nm,1.2s
JTMT  Jette             42.69  67  P      P      17 29 11.8 -1.2
ORV   Oroville          42.97  82  P      P      17 29 14.3 -0.9
ORV                                pmax   pmax
            comp=Z,20nm,1.4s
ORV   Oroville          42.97  82  P      P      17 29 14.3 -0.9
ORV                                IAmb   IAmb   17 29 16.6
            comp=Z,20nm,1.4s
WVOR  Wild Horse Val    43.03  76  P      P      17 29 15.4 -0.4
WVOR                               pmax   pmax
            comp=Z,6.0nm,0.6s
WVOR  Wild Horse Val    43.03  76  P      P      17 29 15.4 -0.4
PLID  Pearl Lake        43.12  72  P      P      17 29 15.8 -0.8
NRIK  Noril'sk          43.13 329  P      P      17 29 16.8 +0.7
            comp=Z,6.1nm,0.6s,baz=75,slow=9.8,SNR=16
NRIK                               ScP    ScP    17 34 50.2 -0.7
            comp=Z,0.7nm,0.3s,baz=98,slow=2.7,SNR=4.8
NRIK                               LR     LR     17 48 40.7
            comp=Z,69nm,19.8s,baz=106,slow=38
            comp=Z,6.1nm,0.6s
NRIK  Noril'sk          43.13 329ceP      P      17 29 15.8 -0.2
NRIK                               pmax   pmax
            comp=Z,6.0nm,0.7s
NRIK  Noril'sk          43.13 329  P      P      17 29 15.1 -0.9
MSO   Missoula          43.38  68  P      P      17 29 16.9 -1.6
MSO                                IAmb   IAmb   17 29 19.2
            comp=Z,7.3nm,0.6s
MSO   Missoula          43.38  68  P      P      17 29 17.2 -1.3
            baz=303,SNR=6.2
BEKR  Beckworth         43.48  80  P      P      17 29 19.1 -0.4
MPK   Martis Peak       44.03  81  P      P      17 29 23.0 -1.0
MPK                                IAmb   IAmb   17 29 26.8
            comp=Z,41nm,1.5s
MFID  Camas Ranch       44.16  73  P      P      17 29 24.4 -0.4
PAHR  Pah Rah Range     44.18  80  P      P      17 29 25.6 +0.6
ULN   Ulaanbaatar       44.24 294  P      P      17 29 25.2 -0.3
ULN                                pmax   pmax
            comp=Z,16nm,1.0s
ULN   Ulaanbaatar       44.24 294  P      P      17 29 25.2 -0.3
ULN                                IAmb   IAmb   17 29 27.2
            comp=Z,16nm,1.0s
ULN   Ulaanbaatar       44.24 294  P      P      17 29 26.4 +1.0
ULN                                pP     sP     17 29 43.2 -2.6
VCNR  Virginia City     44.27  81  P      P      17 29 27.2 +1.4
VCNR                               IAmb   IAmb   17 29 30.4
            comp=Z,10nm,0.6s
PNTR  Pine Nut          44.42  81  P      P      17 29 28.3 +1.2
CMB   Columbia Colle    44.59  83  P      P      17 29 29.2 +1.0
CMB                                pmax   pmax
            comp=Z,18nm,1.5s
CMB   Columbia Colle    44.59  83  P      P      17 29 29.2 +1.0
CMB                                IAmb   IAmb   17 29 30.5
            comp=Z,18nm,1.4s
SONM  Songino Array     44.63 295  P      P      17 29 29.6 +1.1
            comp=Z,12nm,0.5s,baz=64,slow=7.9,SNR=93
SONM                               LR     LR     17 48 34.6
            comp=Z,122nm,21.7s,baz=52,slow=37
            comp=Z,12nm,0.5s
SONM  Songino Array     44.63 295  P      P      17 29 29.6 +1.1
SONM  Songino Array     44.63 295  P      P      17 29 29.5 +0.9
SONM                               IAmb   IAmb   17 29 30.4
            comp=Z,14nm,0.5s
HRY   Holter Researc    44.66  67  P      P      17 29 27.6 -1.2
YERR  Yerington         44.71  81  P      P      17 29 30.0 +0.7
LRM   Limekiln Ridge    44.79  69  P      P      17 29 28.1 -1.9
HLID  Hailey            44.92  72  P      P      17 29 30.4 -0.5
HLID  Hailey            44.92  72  P      P      17 29 30.2 -0.7
            baz=306,SNR=9.3
DLMT  Dillon            44.96  69  P      P      17 29 28.8 -2.5
ZAK   Zakamensk         45.00 299 eP      P      17 29 30.7 -0.7
ZAK                                pmax   pmax
            comp=Z,9.0nm,1.3s
BCYI  Bear Canyon       45.08  71  P      P      17 29 31.0 -1.3
BBGB  Big Mountain B    45.10  85  P      P      17 29 33.0 +0.7
MCMT  McKenzie Canyo    45.12  70  P      P      17 29 31.8 -0.8
EGMT  Eagleton          45.12  65  P      P      17 29 31.4 -1.0
EGMT  Eagleton          45.12  65  P      P      17 29 30.9 -1.4
            baz=303
KVN   Kaiserville       45.37  80  P      P      17 29 35.0 +0.4
KVN                                pmax   pmax
            comp=Z,5.0nm,0.7s
KVN   Kaiserville       45.37  80  P      P      17 29 35.0 +0.4
RYN   Ryan              45.37  81  P      P      17 29 35.7 +1.1
BOZ   Bozeman (W)       45.39  68  P      P      17 29 33.4 -1.2
BOZ                                pmax   pmax
            comp=Z,7.0nm,0.7s
BOZ   Bozeman (W)       45.39  68  P      P      17 29 33.4 -1.2
BOZ                                IAmb   IAmb   17 29 35.8
            comp=Z,7.3nm,0.7s
BOZ   Bozeman (W)       45.39  68  P      P      17 29 33.1 -1.6
            baz=305,SNR=19
MOY   Mondy             45.55 302 eP      P      17 29 36.2 +0.4
MOY                                pmax   pmax
            comp=Z,9.0nm,1.1s
LHV   Little Huntoon    45.61  81  P      P      17 29 36.2  0.0
LHV                                IAmb   IAmb   17 30 04.2
            comp=Z,14nm,1.2s
NVAR  Mina Array Bea    45.63  81  P      P      17 29 37.7 +1.1
            comp=Z,4.2nm,0.5s,baz=298,slow=7.2,SNR=18
NVAR                               ScP    ScP    17 34 59.6 -2.4
            comp=Z,0.4nm,0.5s,baz=280,slow=5.4,SNR=2.7
NVAR                               LR     LR     17 45 15.7
            comp=Z,56nm,21.6s,baz=307,slow=31
            comp=Z,4.2nm,0.5s
NVAR  Mina Array Bea    45.63  81  P      P      17 29 37.0 +0.3
MDPB  Devils Postpil    45.65  82  P      P      17 29 38.1 +1.3
MDPB                               IAmb   IAmb   17 29 39.2
            comp=Z,11nm,1.0s
OMMB  Old Mammoth Mi    45.71  82  P      P      17 29 38.4 +0.9
OMMB                               IAmb   IAmb   17 29 39.8
            comp=Z,12nm,1.2s
NV11  Mina Array Sit    45.72  81  P      P      17 29 37.8 +0.6
QLMT  Earthquake Lak    45.95  69  P      P      17 29 38.4 -0.7
YHL   Hebgen Lake       46.08  69  P      P      17 29 38.8 -1.4
YHL                                IAmb   IAmb   17 29 43.7
            comp=Z,17nm,1.2s
ELK   Elko              46.08  76  P      P      17 29 41.0 +0.7
            comp=Z,3.8nm,0.7s,baz=312,slow=11,SNR=13
ELK                                LR     LR     17 46 22.7
            comp=Z,70nm,20.1s,baz=308,slow=33
            comp=Z,3.8nm,0.7s
ELK   Elko              46.08  76  P      P      17 29 41.1 +0.8
ELK                                pmax   pmax
            comp=Z,4.0nm,0.8s
ELK   Elko              46.08  76  P      P      17 29 41.1 +0.8
PAGB  Antelope Grade    46.13  85  P      P      17 29 41.4 +1.0
PAGB                               IAmb   IAmb   17 29 42.8
            comp=Z,21nm,1.1s
GUMO  Guam              46.25 227  LR     LR     17 46 35.9
            comp=Z,30nm,19.7s,baz=61,slow=33
YHH   Holmes Hill       46.31  69  P      P      17 29 40.6 -1.4
YHH                                IAmb   IAmb   17 29 44.8
            comp=Z,7.4nm,0.7s
YMR   Madison River     46.31  69  P      P      17 29 40.8 -1.2
YMR                                IAmb   IAmb   17 29 43.4
            comp=Z,8.8nm,1.0s
GCMT  Greycliff         46.42  67  P      P      17 29 41.9 -0.8
YNR   Norris Junctio    46.45  69  P      P      17 29 43.3 +0.2
YNR                                IAmb   IAmb   17 29 44.4
            comp=Z,17nm,1.4s
YFT   Old Faithful      46.51  69  P      P      17 29 44.2 +0.6
YFT                                IAmb   IAmb   17 29 46.4
            comp=Z,9.5nm,0.8s
TPH   Tonopah           46.51  80  P      P      17 29 44.0 +0.4
TPH                                pmax   pmax
            comp=Z,31nm,0.9s
TPH   Tonopah           46.51  80  P      P      17 29 44.0 +0.4
YPP   Pitchstone Pla    46.63  69  P      P      17 29 44.7 +0.1
NJ2   Nanjing           46.68 269 eP      P      17 29 44.1 -0.6
NJ2                                pmax   pmax
            comp=Z,10.0nm,0.5s
H17A  Grant Village     46.70  69  P      P      17 29 45.3 +0.3
H17A                               IAmb   IAmb   17 29 47.8
            comp=Z,7.6nm,0.6s
H17A  Grant Village     46.70  69  P      P      17 29 45.8 +0.7
            baz=306
LKWY  Lake              46.70  69  P      P      17 29 45.5 +0.4
LKWY                               pmax   pmax
            comp=Z,6.0nm,1.0s
LKWY  Lake              46.70  69  P      P      17 29 45.5 +0.4
LCH   Last Change Ra    46.78  81  P      P      17 29 45.9 +0.3
FLWY  Flagg Ranch       46.80  70  P      P      17 29 46.1 +0.2
FLWY                               IAmb   IAmb   17 29 48.3
            comp=Z,5.9nm,0.7s
HVU   Hansel Valley     46.94  73  P      P      17 29 45.8 -1.1
HVU                                pmax   pmax
            comp=Z,6.0nm,0.6s
HVU   Hansel Valley     46.94  73  P      P      17 29 45.8 -1.1
HVU                                IAmb   IAmb   17 29 48.0
            comp=Z,6.1nm,0.6s
PKM   Mcpherson Peak    46.95  85  P      P      17 29 46.9 -0.1
            baz=311,SNR=6.0
MOOW  Moose Ponds       46.97  70  P      P      17 29 46.7 -0.5
CWC   Cottonwood Cre    47.02  83  P      P      17 29 48.2 +0.7
            baz=310
RLMT  Red Lodge         47.03  68  P      P      17 29 47.2 -0.4
            baz=306
GRAC  Grapevine Rang    47.10  82  P      P      17 29 48.2 +0.1
GRAC                               IAmb   IAmb   17 30 02.3
            comp=Z,8.9nm,0.6s
LOHW  Long Hollow       47.14  70  P      P      17 29 47.5 -0.9
REDW  Red Top Meadow    47.14  71  P      P      17 29 47.6 -0.9
BCW   Bitter Crk WRg    47.16  85  P      P      17 29 49.4 +0.8
BCW                                IAmb   IAmb   17 29 51.2
            comp=Z,18nm,1.1s
ISA   Isabella, Lake    47.27  84  P      P      17 29 49.7 +0.3
ISA                                pmax   pmax
            comp=Z,8.0nm,1.2s
ISA   Isabella, Lake    47.27  84  P      P      17 29 49.7 +0.3
ISA   Isabella, Lake    47.27  84  P      P      17 29 49.5  0.0
            baz=311
BGU   Big Grassy Mou    47.30  74  P      P      17 29 50.2 +0.5
FCC   Fort Churchill    47.33  45  P      P      17 29 48.8 -0.6
FCC                                pmax   pmax
            comp=Z,10.0nm,1.2s
FCC   Fort Churchill    47.33  45  P      P      17 29 48.8 -0.6
FCC                                IAmb   IAmb   17 29 50.7
            comp=Z,10nm,1.2s
R11A  Troy Canyon, C    47.34  79  P      P      17 29 50.1 +0.1
R11A  Troy Canyon, C    47.34  79  P      P      17 29 49.9 -0.1
            baz=309,SNR=8.4
MPMC  Manual Prospec    47.63  83  P      P      17 29 52.8 +0.4
            baz=311,SNR=8.3
FURC  Furnace Creek,    47.75  82  P      P      17 29 53.6 +0.6
            baz=310
HWUT  Hardware Ranch    47.77  73  P      P      17 29 53.6 +0.3
TPNV  Topopah Spring    47.82  81  P      P      17 29 54.1 +0.3
TPNV                               pmax   pmax
            comp=Z,14nm,0.9s
TPNV  Topopah Spring    47.82  81  P      P      17 29 54.1 +0.3
TPNV                               IAmb   IAmb   17 30 22.6
            comp=Z,14nm,0.8s
TPNV  Topopah Spring    47.82  81  P      P      17 29 54.1 +0.3
            baz=310,SNR=13
LAO   LASA Array        47.86  64  P      P      17 29 53.5 -0.3
LAO                                IAmb   IAmb   17 29 57.8
            comp=Z,8.4nm,1.1s
LAO   LASA Array        47.86  64  P      P      17 29 52.9 -0.9
            baz=306
DUG   Dugway, Tooele    47.88  75  P      P      17 29 54.5 +0.3
DUG                                pmax   pmax
            comp=Z,6.0nm,0.8s
DUG   Dugway, Tooele    47.88  75  P      P      17 29 54.5 +0.3
DUG                                IAmb   IAmb   17 30 22.2
            comp=Z,6.3nm,0.8s
DUG   Dugway, Tooele    47.88  75  P      P      17 29 54.0 -0.1
            baz=309,SNR=8.8
LRMC  Laurel Mtn Rad    47.88  83  P      P      17 29 54.4 +0.2
            baz=311
GWY   Greenwater Val    48.05  82  P      P      17 29 56.0 +0.4
GWY                                IAmb   IAmb   17 30 01.3
            comp=Z,9.1nm,1.0s
QSM   Queen of Sheba    48.07  82  P      P      17 29 55.8 +0.2
QSM                                IAmb   IAmb   17 29 57.3
            comp=Z,6.4nm,0.7s
EDW2  Edwards Air Fo    48.08  84  P      P      17 29 56.0 +0.3
            baz=312
SNCC  San Nicolas Is    48.21  87  P      P      17 29 57.6 +1.1
            baz=312
BW06  Boulder Array     48.26  70  P      P      17 29 56.5 -0.6
BW06                               IAmb   IAmb   17 29 58.5
            comp=Z,6.2nm,0.8s
BW06  Boulder Array     48.26  70  P      P      17 29 56.1 -1.0
            baz=308,SNR=11
PD31  Pinedale Array    48.26  70  P      P      17 29 56.5 -0.7
PDAR  Pinedale Array    48.26  70  P      P      17 29 56.7 -0.4
            comp=Z,3.4nm,0.5s,baz=326,slow=2.4,SNR=46
PDAR                               ScP    ScP    17 35 10.9 -2.1
            comp=Z,1.5nm,1.1s,baz=343,slow=1.5,SNR=4.4
PDAR                               LR     LR     17 47 56.1
            comp=Z,59nm,21.9s,baz=306,slow=33
            comp=Z,3.4nm,0.5s
PDAR  Pinedale Array    48.26  70  P      P      17 29 56.2 -0.9
PRN   Pahroc Range      48.27  80  P      P      17 29 57.4 +0.3
PRN                                IAmb   IAmb   17 30 24.5
            comp=Z,12nm,0.9s
DECC  Green Verdugo     48.28  85  P      P      17 29 58.4 +1.2
            baz=312
PSUT  Pine Spring       48.29  78  P      P      17 29 57.3 -0.1
PSUT                               IAmb   IAmb   17 30 03.6
            comp=Z,6.1nm,0.6s
SHOC  Shoshone, Teco    48.48  82  P      P      17 29 59.7 +1.0
            baz=311
GSC   Goldstone, Bar    48.54  83  P      P      17 29 59.6 +0.3
GSC                                pmax   pmax
            comp=Z,31nm,1.2s
GSC   Goldstone, Bar    48.54  83  P      P      17 29 59.5 +0.3
GSC   Goldstone, Bar    48.54  83  P      P      17 29 59.5 +0.3
            baz=311,SNR=13
BFSC  Mount Baldy Ra    48.71  85  P      P      17 30 00.9 +0.3
            baz=312,SNR=5.9
CIS   Catalina Islan    48.80  86  P      P      17 30 01.3 +0.2
            baz=312
SCI2  San Clemente I    49.00  86  P      P      17 30 03.0 +0.3
            baz=313
TUQ   Turquoise Moun    49.00  82  P      P      17 30 02.8  0.0
            baz=311
HEC   Hector,Ludlow     49.14  83  P      P      17 30 03.8 -0.1
            baz=312,SNR=8.2
ELS   Elsinore Mount    49.25  85  P      P      17 30 05.6 +0.9
ELS                                IAmb   IAmb   17 30 05.7
            comp=Z,16nm,1.2s
MSU   Marysvale         49.32  76  P      P      17 30 05.2 -0.1
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MSU	Marysvale	49.32	76	P	P	17 30 05.2	-0.1
TMUT	Trail Mountain	49.41	75	P	P	17 30 06.0	-0.1
TMUT				IAmb	IAmb	17 30 33.5	
	comp=Z,8.9nm,1.1s						
MURC	Murrieta	49.42	85	P	P	17 30 05.8	-0.1
	baz=312						
KBS	Kingsbay	49.46	356	P	P	17 30 05.7	+0.1
KBS				pmax	pmax		
	comp=Z,31nm,0.6s						
KBS	Kingsbay	49.46	356	P	P	17 30 05.7	+0.1
KBS	Kingsbay	49.46	356	eP	P	17 30 06.2	+0.6
P17A	Butcher Ranch,	49.58	75	P	P	17 30 07.7	+0.4
GMRC	Granite Mounta	49.59	83	P	P	17 30 07.2	-0.1
	baz=312,SNR=8.8						
RDMU	Red Mountain	49.59	73	P	P	17 30 07.7	+0.3
RDMU				IAmb	IAmb	17 30 10.0	
	comp=Z,8.9nm,0.6s						
Q16A	Castle Valley	49.67	75	P	P	17 30 08.2	+0.2
Q16A				IAmb	IAmb	17 30 10.4	
	comp=Z,5.2nm,0.7s						
P18A	Preston Nutter	49.78	74	P	P	17 30 08.9	0.0
P18A				IAmb	IAmb	17 30 12.6	
	comp=Z,4.6nm,0.6s						
PFO	Pinyon Flats O	49.87	84	P	P	17 30 09.3	-0.1
	comp=Z,1.8nm,0.4s,baz=326,slow=9.2,SNR=5.2						
PFO				LR	LR	17 47 03.5	
	comp=Z,74nm,22.0s,baz=264,slow=31						
	comp=Z,1.8nm,0.4s						
PFO	Pinyon Flats O	49.87	84	P	P	17 30 09.3	-0.1
PFO	Pinyon Flats O	49.87	84	P	P	17 30 09.3	-0.1
	baz=312						
TPFO	Pinon Flats	49.88	84	P	P	17 30 09.6	+0.1
	baz=312						
BELC	Belle Mtn. Jos	49.90	84	P	P	17 30 09.6	-0.1
	baz=312,SNR=7.7						
SRU	San Rafael Swe	49.94	75	P	P	17 30 10.4	+0.4
SRU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SRU	San Rafael Swe	49.94	75	P	P	17 30 10.3	+0.4
SRU				IAmb	IAmb	17 30 21.9	
	comp=Z,6.4nm,0.7s						
SPA0	Spitsbergen Ar	49.99	355	eP	P	17 30 09.3	-0.3
SPITS	Spitsbergen Ar	49.99	355	P	P	17 30 08.4	-1.3
	comp=Z,66nm,0.5s,baz=31,slow=8.7,SNR=37						
SPITS	Spitsbergen Ar	49.99	355	P	P	17 30 08.4	-1.3
SPB2	Spitsbergen Ar	49.99	355	P	P	17 30 09.4	-0.3
K22A	Casper	50.10	69	P	P	17 30 10.4	-0.7
K22A				IAmb	IAmb	17 30 13.7	
	comp=Z,10nm,1.2s						
K22A	Casper	50.10	69	P	P	17 30 10.6	-0.5
	baz=308						
IRM	Iron Mountain	50.32	83	P	P	17 30 12.8	0.0
	baz=312						
BAR	Barrett	50.36	85	P	P	17 30 13.1	0.0
MONP2	Monument Peak	50.38	85	P	P	17 30 14.1	+0.8
	baz=313,SNR=5.9						
BC3	Big Chuckawall	50.47	84	P	P	17 30 13.6	-0.3
	baz=312						
U15A	North Rim	50.59	79	P	P	17 30 15.6	+0.6
U15A				IAmb	IAmb	17 30 17.3	
	comp=Z,6.8nm,0.6s						
CBX	Cerro Bola	50.62	86	P	P	17 30 15.7	+0.6
CBX				IAmb	IAmb	17 30 17.4	
	comp=Z,8.6nm,0.8s						
RSSD	Black Hills	50.63	66	P	P	17 30 14.5	-0.7
	baz=308						
O20A	White River Ci	50.66	72	P	P	17 30 14.7	-0.8
O20A				IAmb	IAmb	17 30 17.4	
	comp=Z,7.9nm,0.6s						
O20A	White River Ci	50.66	72	P	P	17 30 14.8	-0.6
	baz=310						
IKP	In-Ko-Pah, Jac	50.73	85	P	P	17 30 17.3	+1.4
	baz=313						
PDMCI	Parker Dam,Lak	50.85	82	P	P	17 30 17.7	+1.1
	baz=312						
YUH	Yuha Desert	50.85	85	P	P	17 30 16.7	0.0
YUH				IAmb	IAmb	17 30 18.2	
	comp=Z,9.6nm,1.1s						
BLYC	Blythe	50.98	83	P	P	17 30 17.8	+0.1
BLYC				IAmb	IAmb	17 30 19.2	
	comp=Z,11nm,0.9s						
HOPEN	Hopen	50.98	352	eP	P	17 30 17.0	-0.1
HSPB	Hornsund (broa	51.18	355	eP	P	17 30 18.1	-0.5
GLA	Glamis	51.26	84	P	P	17 30 20.1	+0.3
GLA	Glamis	51.26	84	P	P	17 30 20.1	+0.3
GLA	Glamis	51.26	84	P	P	17 30 21.2	+1.3
	baz=313						
PV23	Carpenter Ridg	51.27	74	P	P	17 30 19.1	-1.0
PV23				IAmb	IAmb	17 30 26.3	
	comp=Z,7.1nm,0.7s						
PV10	Paradox Valley	51.30	75	P	P	17 30 19.1	-1.2
PV10				IAmb	IAmb	17 30 47.6	
	comp=Z,10nm,0.8s						
PV14	Lion Creek, Pa	51.31	75	P	P	17 30 19.9	-0.5
PV14				IAmb	IAmb	17 30 22.8	
	comp=Z,6.1nm,0.6s						
ULM	Lac du Bonnet	51.32	55	P	P	17 30 18.5	-1.5
	comp=Z,3.4nm,0.4s,baz=303,slow=8.2,SNR=3.5						
ULM				LR	LR	17 53 07.5	
	comp=Z,61nm,20.1s,baz=303,slow=37						
	comp=Z,3.4nm,0.4s						
ULM	Lac du Bonnet	51.32	55	P	P	17 30 18.5	-1.5
PV20	West Nyswonger	51.37	75	P	P	17 30 19.6	-1.2
PV20				IAmb	IAmb	17 30 24.6	
	comp=Z,7.0nm,0.5s						
PV04	Paradox Valley	51.37	74	P	P	17 30 20.1	-0.7
PV04				IAmb	IAmb	17 30 22.6	
	comp=Z,7.5nm,1.0s						
PV19	Morning Glory	51.38	75	P	P	17 30 20.2	-0.6
PV19				IAmb	IAmb	17 30 22.6	
	comp=Z,7.4nm,0.9s						
PV17	East Wray Mesa	51.41	75	P	P	17 30 19.8	-1.3
PV16	Nyswonger Mesa	51.42	75	P	P	17 30 20.4	-0.8
PV16				IAmb	IAmb	17 30 23.3	
	comp=Z,7.9nm,0.5s						
PV11	David Mesa, Pa	51.45	75	P	P	17 30 21.1	-0.3
PV05	Paradox Valley	51.46	75	P	P	17 30 20.2	-1.2
PV05				IAmb	IAmb	17 30 30.7	
	comp=Z,4.7nm,0.6s						
PV18	Skein Mesa, Pa	51.46	75	P	P	17 30 19.9	-1.6
PV18				IAmb	IAmb	17 30 27.4	
	comp=Z,8.1nm,0.7s						
PV12	Saucer Basin,	51.48	74	P	P	17 30 19.6	-2.0
PV12				IAmb	IAmb	17 30 23.7	
	comp=Z,11nm,1.1s						
PV03	Paradox Valley	51.49	75	P	P	17 30 20.6	-1.2
N23A	Red Feather La	51.53	70	P	P	17 30 21.2	-0.9
	baz=310						
PV13	Radium Mtn., P	51.57	75	P	P	17 30 21.7	-0.6
WUAZ	Wupatki	51.75	79	P	P	17 30 24.5	+1.0
	baz=312						
SMCO	Snowmass	52.02	72	P	P	17 30 26.2	+0.4
ZAA0	Zalesovo Array	52.32	312	P	P	17 30 26.4	-0.9
ZALV	Zalesovo Beam	52.32	312	P	P	17 30 26.6	-0.7
	comp=Z,3.3nm,0.5s,baz=45,slow=7.0,SNR=13						
ZALV				LR	LR	17 54 10.2	
	comp=Z,93nm,18.1s,baz=52,slow=38						
	comp=Z,3.3nm,0.5s						
ZALV	Zalesovo Beam	52.32	312	P	P	17 30 26.6	-0.7
ZALV	Zalesovo Beam	52.32	312	P	P	17 30 26.0	-1.3
ISCO	Idaho Springs	52.43	71	P	P	17 30 28.5	-0.2
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ISCO	Idaho Springs	52.43	71	P	P	17 30 28.5	-0.2
ISCO	Idaho Springs	52.43	71	P	P	17 30 28.7	-0.1
	baz=310						
W18A	Petrified Fore	53.01	78	P	P	17 30 32.7	-0.3
W18A				IAmb	IAmb	17 30 36.5	
	comp=Z,7.9nm,0.9s						
W18A	Petrified Fore	53.01	78	P	P	17 30 33.1	+0.1
	baz=312						
S22A	4UR Ranch, Cre	53.03	74	P	P	17 30 32.9	-0.3
S22A	4UR Ranch, Cre	53.03	74	P	P	17 30 32.5	-0.7
	baz=311						
Q24A	Divide	53.24	72	P	P	17 30 33.8	-1.0
	baz=311						
214A	Organ Pipe Nat	53.25	83	P	P	17 30 34.3	-0.3
	baz=314						
LZH	Lanzhou	53.27	284	eP	P	17 30 36.9	+2.1
LZH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BJO1	Bjornoya	53.38	353	eP	P	17 30 34.7	-0.2
GTA	Gaotai	53.50	290	⇓P	P	17 30 37.4	+1.0
GTA				pP	pwP	17 30 52.2	+1.2
GTA				pmax	pmax		
	comp=Z,18nm,0.6s						
SDCO	Great Sand Dun	53.83	73	P	P	17 30 38.2	-0.9
SDCO	Great Sand Dun	53.83	73	P	P	17 30 37.9	-1.2
	baz=312						
FRB	Frobisher Bay	53.93	30	P	P	17 30 39.2	+0.2
	comp=Z,20nm,0.3s,baz=320,slow=7.6,SNR=42						
	comp=Z,20nm,0.3s						
FRB	Frobisher Bay	53.93	30	P	P	17 30 39.2	+0.2
TUC	Tucson	54.26	81	P	P	17 30 42.1	+0.1
TUC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TUC	Tucson	54.26	81	P	P	17 30 42.1	+0.1
TUC				IAmb	IAmb	17 30 43.9	
	comp=Z,8.3nm,1.1s						
TUC	Tucson	54.26	81	P	P	17 30 41.7	-0.3
	baz=314						
ILULI	Ilulissat	54.29	19	P	P	17 30 41.6	+0.1
ILULI				pmax	pmax		
	comp=Z,25nm,0.7s						
ILULI	Ilulissat	54.29	19	P	P	17 30 41.6	+0.1
T25A	Trinidad	54.88	73	P	P	17 30 46.2	-0.4
T25A				IAmb	IAmb	17 30 53.7	
	comp=Z,11nm,1.2s						
T25A	Trinidad	54.88	73	P	P	17 30 45.6	-1.1
	baz=312						
EYMN	Ely	55.01	55	P	P	17 30 46.5	-0.7
EYMN				IAmb	IAmb	17 30 49.2	
	comp=Z,7.1nm,1.1s						
EYMN	Ely	55.01	55	P	P	17 30 45.6	-1.5
	baz=311						
ECSD	EROS Data Cent	55.02	62	P	P	17 30 45.5	-1.8
	baz=311						
ANMO	Albuquerque	55.12	76	LR	LR	17 53 42.4	
	comp=Z,42nm,18.5s,baz=310,slow=35						
ANMO	Albuquerque	55.12	76	ceP	P	17 30 47.3	-1.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	55.12	76	P	P	17 30 47.9	-0.5
ANMO	Albuquerque	55.12	76	P	P	17 30 47.1	-1.2
	baz=313						
319A	Douglas	55.83	81	P	P	17 30 53.0	-0.4
E38A	The Farm, Brul	55.85	56	P	P	17 30 52.4	-0.8
121A	Cookes Peak, D	55.95	79	P	P	17 30 55.0	+0.6
121A	Cookes Peak, D	55.95	79	P	P	17 30 53.9	-0.4
	baz=314						
SFJD	Kangerlussuaq	56.22	21	LR	LR	17 56 23.2	
	comp=Z,24nm,21.9s,baz=316,slow=37						
SFJD	Kangerlussuaq	56.22	21	P	P	17 30 55.5	0.0
SFJD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SFJD	Kangerlussuaq	56.22	21	P	P	17 30 55.5	0.0
HSIG		56.44	84	P	P	17 30 57.5	-0.1
HSIG				IAmb	IAmb	17 30 59.1	
	comp=Z,17nm,1.1s						
CBKS	Cedar Bluff	56.51	68	P	P	17 30 57.4	-0.7
CBKS				pmax	pmax		
	comp=Z,13nm,0.8s						
CBKS	Cedar Bluff	56.51	68	P	P	17 30 57.4	-0.7
CBKS	Cedar Bluff	56.51	68	P	P	17 30 57.2	-0.8
	baz=313						
HAMF	Hammerfest	56.65	350	eP	P	17 30 57.5	-1.0
KURK	Kurchatov	57.31	312	ceP	P	17 31 03.7	+0.2
KURK				pmax	pmax		
	comp=Z,34nm,1.0s						
KURK	Kurchatov	57.31	312	P	P	17 31 03.2	-0.2
KURK	Kurchatov	57.31	312	P	P	17 31 03.6	+0.2
KURK				pP	sP	17 31 26.0	+1.5
KURBB	Kurchatov Arra	57.41	312	LR	LR	17 57 31.3	
	comp=Z,119nm,19.5s,baz=47,slow=38						
KURBB	Kurchatov Arra	57.41	312	P	P	17 31 03.9	-0.3
WMQ	Urumqi	57.42	301	⇑P	P	17 31 05.6	+1.2
WMQ				pP	sP	17 31 22.0	-3.1
WMQ				sP	pP	17 31 31.6	+13
WMQ				PcP	PcP	17 31 59.4	+1.7
WMQ				S	S	17 38 54.0	-3.1
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				LR	LR		
	comp=Z,210nm,17.7s						
WMQ				LR	LR		
	comp=Z,230nm,15.5s						
WMQ				LR	LR		
	comp=Z,210nm,19.9s						
ARA0	ARCESS Array S	57.49	349	eP	P	17 31 03.9	-0.5
ARCES	ARCESS Array B	57.49	349	P	P	17 31 03.7	-0.8
	comp=Z,20nm,0.7s,baz=35,slow=7.8,SNR=84						
ARCES				LR	LR	17 58 20.1	
	comp=Z,49nm,18.2s,baz=30,slow=39						
	comp=Z,20nm,0.7s						
ARCES	ARCESS Array B	57.49	349	P	P	17 31 03.7	-0.8
ARCES	ARCESS Array B	57.49	349	P	P	17 31 03.1	-1.3
JMIC	Jan Mayen	57.64	2	LR	LR	17 54 55.8	
	comp=Z,23nm,21.0s,baz=300,slow=35						
LVZ	Lovozero	57.68	344	ceP	P	17 31 06.3	+0.4
LVZ				pmax	pmax		
	comp=Z,42nm,1.0s						
LVZ	Lovozero	57.68	344	P	P	17 31 04.6	-1.3
MNTX	Cornudas Mount	58.00	78	P	P	17 31 08.4	-0.2
MNTX				IAmb	IAmb	17 31 35.5	
	comp=Z,6.9nm,1.1s						
MNTX	Cornudas Mount	58.00	78	P	P	17 31 09.2	+0.5
	baz=315,SNR=8.2						
MSTX	Muleshoe	58.01	74	P	P	17 31 07.9	-0.9
MSTX	Muleshoe	58.01	74	P	P	17 31 08.4	-0.4
	baz=314,SNR=5.2						
JETT	Jettan, Norway	58.03	351	eP	P	17 31 08.0	-0.3
AMTX	Amarillo	58.03	73	P	P	17 31 08.5	-0.5
AMTX				IAmb	IAmb	17 31 11.3	
	comp=Z,6.8nm,0.6s						
AMTX	Amarillo	58.03	73	P	P	17 31 08.2	-0.7
	baz=314						
TRO	Tromso	58.10	351	eP	P	17 31 08.4	-0.3
SCIA	State Center	58.11	62	P	P	17 31 08.0	-1.2
	baz=313						
KSU1	Kansas State U	58.11	66	P	P	17 31 08.1	-1.2
	baz=313						
MK31	Makanchi Array	58.21	306	P	P	17 31 09.2	-0.7
MK31	Makanchi Array	58.21	306	P	P	17 31 09.0	-0.9
MK31				IAmb	IAmb	17 31 11.9	
	comp=Z,5.7nm,0.7s						
MKAR	Makanchi Array	58.21	306	P	P	17 31 09.5	-0.4
	comp=Z,4.6nm,0.4s,baz=53,slow=5.7,SNR=91						
MKAR				LR	LR	17 57 29.2	
	comp=Z,93nm,20.5s,baz=41,slow=37						
	comp=Z,4.6nm,0.4s						
MKAR	Makanchi Array	58.21	306	P	P	17 31 09.5	-0.4
MKAR	Makanchi Array	58.21	306	P	P	17 31 09.1	-0.8
KTK1	Kautokeino	58.25	350	eP	P	17 31 09.0	-0.8
MAKZ	Makanchi	58.36	307	P	P	17 31 10.2	-0.7
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAKZ	Makanchi	58.36	307	P	P	17 31 10.2	-0.7
GOMU	GeErMu	58.58	290	P	P	17 31 13.5	+0.4
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,71nm,5.2s						
I42A	Draeger Farm,	59.06	57	P	P	17 31 15.1	-0.7
BRVK	Borovoye	59.34	318	ceP	P	17 31 17.9	+0.3
BRVK				pmax	pmax		
	comp=Z,19nm,0.8s						
BRVK	Borovoye	59.34	318	P	P	17 31 16.9	-0.7
BRVK	Borovoye	59.34	318	P	P	17 31 18.0	+0.3
BRVK				pP	sP	17 31 44.9	+6.2
P38A	Dawn	59.49	64	P	P	17 31 19.0	+0.2
P38A				IAmb	IAmb	17 31 20.1	
	comp=Z,9.9nm,0.8s						
E46A	Sault Ste Mari	59.70	53	P	P	17 31 20.8	+0.7
WMOK	Wichita Mounta	59.85	71	P	P	17 31 21.2	-0.3
WMOK				pmax	pmax		
	comp=Z,11nm,1.5s						
WMOK	Wichita Mounta	59.85	71	P	P	17 31 21.2	-0.3
WMOK				IAmb	IAmb	17 31 23.4	
	comp=Z,11nm,1.5s						
WMOK	Wichita Mounta	59.85	71	P	P	17 31 20.6	-0.8
	baz=315						
STEI	Steigen	60.08	352	eP	P	17 31 21.6	-0.8
SVE	Sverdlovsk	60.24	326	eP	P	17 31 25.0	+1.3
LPIG	La Paz	60.36	88	LR	LR	17 52 43.3	
	comp=Z,35nm,19.9s,baz=226,slow=31						
P40A	Paris	60.38	63	P	P	17 31 24.0	-1.0
FAUS	Fauske	60.61	352	eP	P	17 31 26.3	+0.2
TX31	Lajitas Ar. Si	60.71	79	P	P	17 31 27.4	0.0
TX32	Lajitas Array	60.71	79	P	P	17 31 27.3	-0.2
TX32				IAmb	IAmb	17 31 30.6	
	comp=Z,7.9nm,1.1s						
TXAR	Lajitas Array	60.71	79	P	P	17 31 27.8	+0.3
	comp=Z,2.0nm,0.3s,baz=304,slow=5.5,SNR=53						
TXAR				LR	LR	17 57 28.3	
	comp=Z,28nm,19.1s,baz=306,slow=36						
	comp=Z,2.0nm,0.3s						
TXAR	Lajitas Array	60.71	79	P	P	17 31 27.8	+0.3
TXAR	Lajitas Array	60.71	79	P	P	17 31 27.1	-0.3
TUL1	Leonard	60.78	68	P	P	17 31 26.4	-1.4
ABTX	Abilene, Hawle	60.82	73	P	P	17 31 27.8	-0.3
ABTX	Abilene, Hawle	60.82	73	P	P	17 31 28.2	+0.1
	baz=315						
PRGR	Permogore	60.87	336	eP	P	17 31 28.5	+0.6
PRGR				e*SP	sP	17 31 48.8	-0.1
SCHQ	Schefferville	61.12	37	P	P	17 31 30.8	+1.0
	comp=Z,5.4nm,0.4s,baz=332,slow=7.0,SNR=29						
SCHQ				LR	LR	17 59 58.0	
	comp=Z,49nm,18.4s,baz=44,slow=38						
	comp=Z,5.4nm,0.4s						
SCHQ	Schefferville	61.12	37	P	P	17 31 30.4	+0.6
PZH	PanZhiHua	61.21	277	P	P	17 31 31.7	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,50nm,5.3s						
ARU	Arti	61.27	326	d iP	P	17 31 31.1	+0.4
ARU				*PP	sP	17 31 47.4	-4.4
ARU						17 32 09.1	
ARU				S	S	17 39 49.6	+3.3
ARU				SS	SS	17 43 46.0	-0.3
ARU				pmax	pmax		
	comp=Z,19nm,0.7s						
ARU	Arti	61.27	326	P	P	17 31 31.3	+0.6
ARU	Arti	61.27	326	P	P	17 31 31.3	+0.6
HHAR	Hobbs	61.59	67	P	P	17 31 32.2	-1.0
HHAR				IAmb	IAmb	17 32 01.2	
	comp=Z,6.5nm,1.1s						
DAV	Davao City (W)	61.65	243	LR	LR	17 54 32.4	
	comp=Z,28nm,19.8s,baz=87,slow=32						
KONS	Konsvik	61.65	353	eP	P	17 31 33.1	0.0
VLDQ	Val d'Or	61.72	47	P	P	17 31 31.8	-2.1
VLDQ				IAmb	IAmb	17 31 33.2	
	comp=Z,10nm,0.8s						
CCM	Cathedral Cave	61.86	64	P	P	17 31 33.4	-1.6
	baz=315						
MOR8	Moi Rana	61.87	352	eP	P	17 31 33.2	-1.4
OTUK	Ortayu	61.95	313	P	P	17 31 35.6	+0.1
PDGK	Podgornoye	62.05	305	P	P	17 31 36.2	-0.2
U40A	Yellville	62.16	66	P	P	17 31 36.1	-1.0
	baz=316						
JCT	Junction City	62.24	75	P	P	17 31 37.0	-0.7
JCT				pmax	pmax		
	comp=Z,15nm,1.3s						
JCT	Junction City	62.24	75	P	P	17 31 37.0	-0.7
JCT				IAmb	IAmb	17 31 39.7	
	comp=Z,15nm,1.3s						
JCT	Junction City	62.24	75	P	P	17 31 37.9	+0.2
	baz=316						
KIRV	Kirov	62.42	332	LR	LR	18 00 39.2	
	comp=Z,70nm,21.4s,baz=26,slow=38						
KIRV	Kirov	62.42	332	ceP	P	17 31 39.5	+1.2
W39A	Magazine	62.45	67	P	P	17 31 38.2	-0.8
	baz=316						
SFIN	Lafayette	62.48	59	P	P	17 31 39.2	+0.1
	baz=316						
WHTX	Lake Whitney,	62.57	72	P	P	17 31 39.1	-0.8
	baz=316						
FCAR	Ozark Folk Cen	62.90	66	P	P	17 31 40.6	-1.4
FCAR				IAmb	IAmb	17 31 49.2	
	comp=Z,8.8nm,1.0s						
KLMR	Klimovskoe	63.02	339	eP	P	17 31 41.5	-0.8
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	Klimovskoe	63.02	339	eP	P	17 31 41.6	-0.8
KLMR				AMP		17 31 45.2	
	comp=Z,11nm,1.1s						
MIAR	Mount Ida	63.03	68	P	P	17 31 42.8	-0.1
	baz=316						
BORG	Borgarnes	63.05	9	LR	LR	17 58 38.3	
	comp=Z,27nm,21.3s,baz=329,slow=36						
PRZ	Przheval'sk	63.22	305	P	P	17 31 44.1	-0.1
PRZ				pmax	pmax		
	comp=Z,14nm,0.5s						
PRZ	Przheval'sk	63.22	305	P	P	17 31 44.1	-0.1
W41B	Gary Mavity, V	63.34	66	P	P	17 31 44.0	-0.9
	baz=316						
435B	Jarrell	63.36	73	P	P	17 31 44.7	-0.4
435B				IAmb	IAmb	17 31 47.9	
	comp=Z,12nm,0.8s						
SADO	Sadowa	63.37	51	P	P	17 31 44.1	-0.8
	comp=Z,4.7nm,0.7s,baz=324,slow=8.7,SNR=3.5						
SADO				LR	LR	17 58 51.9	
	comp=Z,67nm,21.2s,baz=326,slow=36						
	comp=Z,4.7nm,0.7s						
MDOK	Medeo	63.41	306	P	P	17 31 45.1	-0.3
NSS	Namsos	63.69	353	eP	P	17 31 46.5	-0.2
KDJ	Kajisay	64.09	306	P	P	17 31 50.1	+0.1
KDJ				pmax	pmax		
	comp=Z,13nm,0.7s						
KDJ	Kajisay	64.09	306	P	P	17 31 50.1	+0.1
KDJ				IAmb	IAmb	17 31 53.2	
	comp=Z,13nm,0.7s						
TKM2	Tokmak 2	64.31	307	P	P	17 31 52.1	+0.8
	SNR=20						
TKM2	Tokmak 2	64.31	307	P	P	17 31 51.8	+0.4
LATQ	La Tuque	64.38	45	P	P	17 31 51.6	+0.2
BOOM	Boomskoye usch	64.45	307	P	P	17 31 52.6	+0.3
BOOM				pmax	pmax		
	comp=Z,11nm,0.6s						
BOOM	Boomskoye usch	64.45	307	P	P	17 31 52.6	+0.3
BOOM				IAmb	IAmb	17 31 55.7	
	comp=Z,11nm,0.6s						
ULHL	Ulahol	64.48	306	P	P	17 31 53.4	+0.9
	SNR=6.8						
USP	Ospenovka	64.59	308	P	P	17 31 54.1	+1.0
	SNR=20						
ACSO	Alum Creek Sta	64.77	57	P	P	17 31 53.9	-0.2
ACSO				IAmb	IAmb	17 31 54.8	
	comp=Z,27nm,1.4s						
KBK	Karagaybulak	64.83	307	P	P	17 31 55.7	+1.0
	SNR=13						
FRU1	Bishkek	64.87	308	P	P	17 31 55.3	+0.4
FRU1				pmax	pmax		
	comp=Z,21nm,0.6s						
FRU1	Bishkek	64.87	308	P	P	17 31 55.3	+0.4
AAK	Ala-Archa	65.06	308	P	P	17 31 56.6	+0.4
	SNR=13						
AAK	Ala-Archa	65.06	308	LR	LR	18 01 17.3	
	comp=Z,94nm,21.0s,baz=37,slow=37						
AAK	Ala-Archa	65.06	308	ceP	P	17 31 57.1	+0.9
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAK	Ala-Archa	65.06	308	P	P	17 31 56.5	+0.2
AAK				IAmb	IAmb	17 31 57.8	
	comp=Z,9.8nm,0.7s						
AAK	Ala-Archa	65.06	308	P	P	17 31 57.1	+0.9
AAK				pP	sP	17 32 13.3	-3.9
FIA1	FINESS Array S	65.07	345	P	P	17 31 55.0	-0.7
FIA1				IAmb	IAmb	17 31 57.1	
	comp=Z,18nm,0.9s						
FINES	FINESS Array B	65.07	345	P	P	17 31 54.8	-0.9
	comp=Z,5.5nm,0.3s,baz=15,slow=7.2,SNR=51						
FINES				LR	LR	18 04 11.4	
	comp=Z,38nm,19.6s,baz=16,slow=40						
	comp=Z,5.5nm,0.3s						
FINES	FINESS Array B	65.07	345	P	P	17 31 54.8	-0.9
FINES	FINESS Array B	65.07	345	P	P	17 31 54.5	-1.2
WVT	Waverly	65.14	63	P	P	17 31 13.6	-43
WVT				pP	pP	17 31 47.9	-24
SIJI	Sorong	65.34	233	LR	LR	17 55 10.3	
	comp=Z,38nm,21.1s,baz=120,slow=31						
LSA	Lhasa	65.35	287	P	P	17 31 59.2	+0.5
LSA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LSA	Lhasa	65.35	287	P	P	17 31 59.2	+0.5
EKS2	Erkin-Say	65.40	308	P	P	17 31 59.4	+1.0
	SNR=7.1						
MMNY	Mt. Morris Dam	65.48	52	P	P	17 31 59.1	+0.3
MMNY				IAmb	IAmb	17 32 02.6	
	comp=Z,12nm,0.7s						
J56A	Wolcott	65.58	51	P	P	17 31 58.9	-0.5
AML	Almayashu	65.84	308	P	P	17 32 02.9	+1.3
	SNR=11						
L56A	Greenwood	66.10	52	P	P	17 32 03.5	+0.7
RAF	Rauma	66.10	348	eP	P	17 32 02.0	-0.3
T50A	Nancy	66.13	60	P	P	17 32 00.4	-2.6

T50A				IAmb	IAmb	17 32 02.1	
	comp=Z,11nm,0.8s						
ZAIG	Zacatecas	66.15	83	P	P	17 32 03.5	-0.2
ZAIG				IAmb	IAmb	17 32 05.6	
	comp=Z,8.8nm,0.9s						
AKTO	Aktyubinsk	66.25	323	LR	LR	18 03 43.3	
	comp=Z,91nm,18.8s,baz=32,slow=38						
AKTO	Aktyubinsk	66.25	323	P	P	17 32 03.8	+0.3
DOMB	Dombas	66.35	354	*e*P	P	17 32 04.0	-0.1
AB31	Akbulak array	66.45	321	*i* P	P	17 32 05.2	+0.4
ABKAR	Akbulak array	66.45	321	P	P	17 32 04.9	+0.1
ABKAR	Akbulak array	66.45	321	P	P	17 32 05.1	+0.2
ABKAR				IAmb	IAmb	17 32 07.0	
	comp=Z,17nm,1.4s						
MEF	Metsahovi	66.50	346	*e*P	P	17 32 04.3	-0.6
KSH	Kashi	66.64	304	P	P	17 32 10.9	+4.5
KSH				pP	sP	17 32 26.0	-1.4
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KK31	Karatay Array	66.64	310	P	P	17 32 06.3	+0.1
KK31				pmax	pmax		
	comp=Z,13nm,0.6s						
KK31	Karatay Array	66.64	310	P	P	17 32 06.3	+0.1
KKAR	Karatay Array	66.64	310	P	P	17 32 06.3	+0.1
KKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
KKAR	Karatay Array	66.64	310	P	P	17 32 06.3	+0.1
KKAR	Karatay Array	66.64	310	P	P	17 32 06.2	0.0
KKAR				IAmb	IAmb	17 32 07.3	
	comp=Z,13nm,0.6s						
BINY	Binghamton	66.82	51	P	P	17 32 07.1	-0.2
	baz=320						
NC300	NORSAR Array S	66.96	353	P	P	17 32 07.8	-0.1
NC204	NORSAR Array S	67.00	353	P	P	17 32 07.8	-0.5
NC303	NORSAR Array S	67.00	353	P	P	17 32 07.9	-0.3
SSPA	Standing Stone	67.06	53	P	P	17 32 08.5	-0.4
	baz=319						
NC405	NORSAR Array S	67.09	353	P	P	17 32 09.0	+0.3
AAL	Aland	67.15	348	*e*P	P	17 32 07.9	-1.2
LBNH	Lisbon	67.17	47	P	P	17 32 08.7	-0.9
	baz=321						
NB201	NORSAR Array S	67.18	353	P	P	17 32 08.8	-0.6
NB2	NORSAR Subarra	67.20	353	P	P	17 32 09.2	-0.3
	comp=Z,12nm,0.7s,baz=8.8,slow=6.5						
NB2	NORSAR Subarra	67.20	353	P	P	17 32 09.2	-0.3
	baz=8.8,slow=6.5						
NOA	NORSAR Array B	67.20	353	P	P	17 32 09.4	-0.1
	comp=Z,10nm,0.7s,baz=9.7,slow=6.4,SNR=40						
	comp=Z,10nm,0.7s						
NOA	NORSAR Array B	67.20	353	P	P	17 32 09.4	-0.1
H62A	Milan	67.26	46	P	P	17 32 10.6	+0.5
NC602	NORSAR Array S	67.48	353	P	P	17 32 11.2	0.0
SUE	Sulen	67.56	356	*e*P	P	17 32 11.5	-0.2
TKL	Tuckaleechee C	67.72	61	LR	LR	18 03 08.4	
	comp=Z,77nm,18.2s,baz=329,slow=37						
UPP	Uppsala	67.75	349	*e*P	P	17 32 12.6	-0.2
VSU	Vasula	67.79	344	*i* P	P	17 32 12.4	-0.7
VSU				pmax	pmax		
	comp=Z,29nm,0.7s						
VSU	Vasula	67.79	344	*e*P	P	17 32 12.4	-0.7
HFS	Hagfors	67.89	351	LR	LR	18 01 25.0	
	comp=Z,32nm,21.1s,baz=354,slow=35						
SHL	Shillong	67.94	284	P	P	17 32 14.8	-0.1
SHL				pmax	pmax		
	comp=Z,18nm,1.0s						
SHL	Shillong	67.94	284	P	P	17 32 14.8	-0.1
SHL				IAmb	IAmb	17 32 32.6	
	comp=Z,18nm,1.0s						
MTSE	Matsula	68.02	346	*e*P	P	17 32 14.6	0.0
ASK	Askoy	68.11	356	*e*P	P	17 32 15.7	+0.6
BER	Bergen	68.21	356	*e*P	P	17 32 16.1	+0.4
CHTO	Chiang Mai	68.61	273	P	P	17 32 19.3	+0.4
CHTO				pmax	pmax		
	comp=Z,17nm,1.5s						
CHTO	Chiang Mai	68.61	273	P	P	17 32 19.2	+0.4
CHTO				IAmb	IAmb	17 32 38.0	
	comp=Z,17nm,1.4s						
KONO	Kongsberg	68.70	354	*ce*P	P	17 32 21.2	+2.4
KONO				pmax	pmax		
	comp=Z,51nm,2.5s						
KONO	Kongsberg	68.70	354	P	P	17 32 19.0	+0.2
KONO				IAmb	IAmb	17 32 21.5	
	comp=Z,14nm,0.8s						
DRK	Karamyk	68.78	307	P	P	17 32 17.9	-2.1
DRK				IAmb	IAmb	17 32 21.9	
	comp=Z,7.9nm,0.8s						
BTK	Batken	68.82	308	P	P	17 32 20.6	+0.5
BTK				pmax	pmax		
	comp=Z,16nm,0.7s						
BTK	Batken	68.82	308	P	P	17 32 20.6	+0.5
CMAR	Chiang Mai Arr	68.87	273	P	P	17 32 21.1	+0.5
	comp=Z,2.4nm,0.7s,baz=25,slow=7.0,SNR=10						
CMAR				LR	LR	18 07 04.7	
	comp=Z,11nm,18.0s,baz=180,slow=40						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	68.87	273	P	P	17 32 21.9	+1.3
CMAR	Chiang Mai Arr	68.87	273	P	P	17 32 21.9	+1.3
OBN	Obninsk	68.88	337	*ce*P	P	17 32 19.2	-0.8
OBN				*e**PP	pP	17 32 35.7	+0.6
OBN				*e**SP	sP	17 32 41.1	-0.1
OBN				*e*		17 32 46.6	
OBN				*e*		17 34 52.0	
OBN				*e*PPP	PPP	17 36 35.8	
OBN				pmax	pmax		
	comp=Z,30nm,1.7s						
OBN	Obninsk	68.88	337	P	P	17 32 20.1	+0.1
OBN				IAmb	IAmb	17 32 22.4	
	comp=Z,16nm,0.9s						
MSVF	Nonsavu	69.03	180	LR	LR	17 54 35.5	
	comp=Z,79nm,21.7s,baz=9.9,slow=29						
TAPN	Taplejung	69.12	288	*e*P	P	17 32 23.4	+1.0
	comp=Z,10nm,0.3s						
VIKU	Vikbolandet	69.18	350	*e*P	P	17 32 21.4	-0.4
SLIT	Slitere, Latvi	69.30	346	*e*P	P	17 32 22.0	-0.5
KMSC	Kings Mountain	69.42	59	P	P	17 32 22.9	-0.9
	baz=320						
ODAN	Odare	69.68	288	*e*P	P	17 32 27.0	+1.3
	comp=Z,11nm,0.4s						
GUN	Gumba	69.79	290	*e*P	P	17 32 28.1	+1.6
	comp=Z,68nm,0.4s						
JIRN	Jiri	69.79	289	*e*P	P	17 32 28.3	+1.7
	comp=Z,3.4nm,0.6s						
GAR	Garm	69.88	308	P	P	17 32 27.2	+0.5
RAMN	Ramite	70.08	288	*e*P	P	17 32 29.5	+1.3
	comp=Z,52nm,0.4s						
KKN	Kakani	70.23	290	*e*P	P	17 32 30.5	+1.4
	comp=Z,23nm,0.5s						
TAOE	Nuku Hiva Isla	70.24	135	*e*LR	LR	17 53 33.4	
	comp=Z,130nm,24.4s						
TAOE	Nuku Hiva Isla	70.24	135	*e*T	T	18 48 44.7	
	comp=Z,34nm,0.2s						
PKI	Pulchoki	70.32	290	*e*P	P	17 32 31.0	+1.2
	comp=Z,21nm,0.5s						
PKIN	Phulchoki	70.32	290	*e*P	P	17 32 31.0	+1.3
	comp=Z,23nm,0.4s						
BORU	Boraas	70.44	352	*e*P	P	17 32 29.2	-0.4
GKN	Gorkha	70.45	290	*e*P	P	17 32 31.6	+1.3
	comp=Z,22nm,0.5s						
DMN	Daman	70.47	290	*e*P	P	17 32 32.1	+1.5
	comp=Z,12nm,0.4s						
DANN	Dangsing	70.70	291	*e*P	P	17 32 33.4	+1.4
	comp=Z,49nm,0.7s						
CHGR	Chuyangaron	70.72	308	P	P	17 32 32.0	+0.2
CHGR				pmax	pmax		
	comp=Z,42nm,0.6s						
CHGR	Chuyangaron	70.72	308	P	P	17 32 32.0	+0.2
ONAU	Onsala	70.75	352	*e*P	P	17 32 29.8	-1.6
IDID	Didziasalis	70.77	343	*e*P	P	17 32 32.7	+1.1
IIGN	Ignalina	70.83	343	*e*P	P	17 32 32.4	+0.3
FABU	Falkenberg	71.07	351	*e*P	P	17 32 32.2	-1.2
PABE	Paberze	71.08	345	*e*P	P	17 32 33.4	0.0
NACGM	Naroch	71.16	343	*e*P	P	17 32 33.8	-0.2
	baz=18						
KOLN	Koldanda	71.23	291	*e*P	P	17 32 36.3	+1.2
	comp=Z,14nm,0.5s						
VORR	Voronezh	71.32	334	*e*P	P	17 32 37.8	+2.8
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
MNK	Minsk	71.33	342	*i* P	P	17 32 34.2	-0.8
MNK				*i* *PP	pP	17 32 50.0	-0.2
MNK				*i*		17 35 10.0	
MNK				*i* PPP	PPP	17 36 54.2	
MNK				*i* S	S	17 41 48.6	+0.4
MNK				*i* *SS	sS	17 42 15.2	+1.4
MNK				*i* SS	SS	17 46 26.3	+4.3
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				pmax	pmax		
	comp=N,14nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,84nm,16.0s						
MNK				MLR	MLR		
	comp=N,44nm,12.0s						
MNK				MLR	MLR		
	comp=E,9.0nm,16.0s						
MNK	Minsk	71.33	342	*i* P	P	17 32 34.2	-0.8
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	17 32 34.2	-0.8
	comp=N,14nm,1.0s						
MNK				*i* P	P	17 32 34.2	-0.8
	comp=Z,22nm,0.9s,baz=19						
MNK				*i* pP	pP	17 32 50.0	-0.2
MNK				*i* PP	PP	17 35 10.1	-2.9
MNK				*i* PPP	PPP	17 36 54.2	
MNK				*i* S	S	17 41 48.6	+0.4
MNK				*i* sS	sS	17 42 15.3	+1.4
MNK				*i* SS	SS	17 46 26.3	+4.3
MNK				*i* SSS	SSS	17 49 46.0	
MNK				*i* LQ	LQ	17 59 05.0	
MNK				*i* LR	LR	18 04 30.7	
MNK				*i* LRM	MLR	18 06 49.5	
	comp=Z,84nm,16.0s						
MNK				*i* LRM	MLR	18 06 55.2	
	comp=N,44nm,12.2s						
MNK				*i* LRM	MLR	18 06 57.1	
	comp=E,9.0nm,16.0s						
PYUN	Piuthan	71.33	292	*e*P	P	17 32 37.0	+1.2
	comp=E,44nm,0.9s						
BLEU	Blekinge	71.44	350	*e*P	P	17 32 34.6	-1.0
DEL	Delary	71.48	351	*e*P	P	17 32 35.2	-0.7
DEL	Delary	71.48	351	*i* P	P	17 32 35.0	-0.9
BJUU	Bjuv	71.96	351	*e*P	P	17 32 39.4	+0.6
NIL	Nilore	72.52	302	P	P	17 32 43.3	+0.7
NIL				pmax	pmax		
	comp=Z,46nm,1.2s						
NIL	Nilore	72.52	302	P	P	17 32 43.2	+0.7
BSD	Bornholm Skovb	72.71	350	*e*P	P	17 32 43.0	-0.3
BSD	Bornholm Skovb	72.71	350	*e*P	P	17 32 42.4	-0.9
BSD				IAmb	IAmb	17 32 43.9	
	comp=Z,6.7nm,0.9s						
PMOR	Pomariorio Ree	72.73	145	*e*T	T	18 51 51.7	
	comp=Z,15nm,0.3s						
KBL	Kabul	74.00	306	P	P	17 32 51.1	-0.4
KBL				pmax	pmax		
	comp=Z,16nm,0.6s						
KBL	Kabul	74.00	306	P	P	17 32 51.1	-0.4
DZM	Mont Dzumac	74.02	191	*e*LR	LR	17 56 01.4	
DZM	Mont Dzumac	74.02	191	LR	LR	17 58 30.3	
	comp=Z,146nm,19.9s,baz=26,slow=30						
PPT	Papeete	74.54	148	LR	LR	18 00 32.6	
	comp=Z,71nm,20.0s,baz=353,slow=31						
PPT2	Papeete2	74.56	148	*e*LR	LR	17 55 10.4	
	comp=Z,166nm,25.5s						
PPT2	Papeete2	74.56	148	*e*T	T	18 54 04.7	
	comp=Z,6.6nm,0.3s						
AKASG	Malin Array Be	74.65	340	P	P	17 32 54.5	-0.2
	comp=Z,3.3nm,0.3s,baz=24,slow=6.8,SNR=30						
AKASG				LR	LR	18 08 31.7	
	comp=Z,34nm,22.0s,baz=354,slow=38						
	comp=Z,3.3nm,0.3s						
AKASG	Malin Array Be	74.65	340	P	P	17 32 54.5	-0.2
AKBB	Malin Array Si	74.65	340	P	P	17 32 54.3	-0.4
AKBB				pmax	pmax		
	comp=Z,17nm,0.8s						
AKBB	Malin Array Si	74.65	340	P	P	17 32 54.2	-0.4
AKBB				IAmb	IAmb	17 32 56.7	
	comp=Z,17nm,0.8s						
RAR	Rarotonga	75.12	158	LR	LR	18 00 25.5	
	comp=Z,107nm,20.7s,baz=312,slow=31						
BEL	Belsk	75.13	345	*e*P	P	17 32 59.1	+1.7
CMIG	Matias Romero	75.16	81	LR	LR	18 05 07.4	
	comp=Z,42nm,18.5s,baz=8.0,slow=35						
GOF	Gofitskoye	76.11	329	⇑*e*P	P	17 33 04.1	+0.9
GEYT	Alibeck	76.45	315	P	P	17 33 06.3	+0.9
	comp=Z,2.3nm,0.5s,baz=259,slow=0.8,SNR=4.7						
GEYT				LR	LR	18 09 35.2	
	comp=Z,84nm,20.1s,baz=39,slow=38						
	comp=Z,2.3nm,0.5s						
LVV	L'vov	76.52	343	*e*P	P	17 33 06.5	+1.0
CLL	Collm	76.66	350	*e*P	P	17 33 05.0	-1.2
CLL	Collm	76.66	350	*e*P	P	17 33 05.0	-1.2
CLL				*e*PP	PP	17 35 59.0	+0.7
KSP	Ksiaz	76.74	348	*e*P	P	17 33 06.6	0.0
OJC	Ojcow	76.85	346	*e*P	P	17 33 07.9	+0.5
OJC	Ojcow	76.85	346	P	P	17 33 07.7	+0.4
OJC				pmax	pmax		
	comp=Z,11nm,0.8s						
OJC	Ojcow	76.85	346	P	P	17 33 07.7	+0.4
OJC				IAmb	IAmb	17 33 09.7	
	comp=Z,11nm,0.8s						
KWP	Kalwaria Pacla	76.94	344	*e*P	P	17 33 08.8	+1.0
KWP	Kalwaria Pacla	76.94	344	P	P	17 33 08.5	+0.7
KWP				pmax	pmax		
	comp=Z,306nm,0.7s						
KWP	Kalwaria Pacla	76.94	344	P	P	17 33 08.5	+0.7
BRG	Berggiesshubel	76.99	350	*e*P	P	17 33 08.0	-0.2
BRG				Amp		17 33 09.7	
	comp=Z,2.3nm,0.7s						
BRG	Berggiesshubel	76.99	350	*e*P	P	17 33 07.9	-0.2
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHVC	Chvalec	77.02	348	*e*P	P	17 33 08.5	+0.2
UPC	Upice	77.10	348	*e*P	P	17 33 08.6	-0.1
UPC	Upice	77.10	348	*e*P	P	17 33 08.6	-0.1
KIV	Kislovodsk	77.20	328	*e*P	P	17 33 11.1	+1.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35nm,18.0s						
DPC	Dobruska-Polom	77.22	348	*e*P	P	17 33 09.1	-0.3
DPC	Dobruska-Polom	77.22	348	*e*P	P	17 33 09.1	-0.3
SORM	Soroca	77.26	340	⇑P	P	17 33 09.4	-0.2
KBZ	Khabaz	77.34	328	P	P	17 33 11.5	+1.3
	comp=Z,5.8nm,0.9s,baz=37,slow=0.7,SNR=9.9						
KBZ				LR	LR	18 12 29.9	
	comp=Z,50nm,18.0s,baz=14,slow=40						
	comp=Z,5.8nm,0.9s						
KBZ	Khabaz	77.34	328	*ce*P	P	17 33 11.4	+1.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KRLC	Kraliky	77.42	348	*e*P	P	17 33 10.5	-0.1
KRLC	Kraliky	77.42	348	*e*P	P	17 33 10.5	-0.1
HRA	Herat	77.47	310	P	P	17 33 11.0	-0.4
HRA				IAmb	IAmb	17 33 13.3	
	comp=Z,12nm,1.0s						
NIE	Niedzica	77.55	345	*e*P	P	17 33 12.8	+1.5
MORC	Moravsky Berou	77.61	347	⇑P	P	17 33 11.5	-0.1
MORC	Moravsky Berou	77.61	347	P	P	17 33 10.8	-0.9
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MORC	Moravsky Berou	77.61	347	P	P	17 33 10.8	-0.9
MORC	Moravsky Berou	77.61	347	*e*P	P	17 33 11.8	+0.1
KOLS	Kolonicke sedl	77.69	344	*e*P	P	17 33 12.9	+0.9
KOLS				pmax	pmax		
	comp=Z,19nm,0.6s						
KOLS	Kolonicke sedl	77.69	344	*e*P	P	17 33 12.9	+0.9
NKC	Novy Kostel	77.78	350	*e*P	P	17 33 12.9	+0.3
NKC	Novy Kostel	77.78	350	*e*P	P	17 33 12.9	+0.3
ZEI	Tsey	77.84	327	*e*P	P	17 33 13.2	0.0
ZEI				pmax	pmax		
	comp=Z,14nm,1.0s						
CRVS	Cervenica-Dubn	77.86	344	*e*P	P	17 33 13.9	+0.9
CRVS				pmax	pmax		
	comp=Z,11nm,0.8s						
CRVS	Cervenica-Dubn	77.86	344	*e*P	P	17 33 13.9	+0.9
LANS	Liptovska Anna	77.94	346	*e*P	P	17 33 14.9	+1.4
LANS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LANS	Liptovska Anna	77.94	346	*e*P	P	17 33 14.8	+1.3
VRAC	Vranov	78.20	348	⇑P	P	17 33 15.7	+0.8
VRAC	Vranov	78.20	348	LR	LR	18 11 00.3	
	comp=Z,29nm,20.2s,baz=16,slow=38						
VRAC	Vranov	78.20	348	*e*P	P	17 33 15.2	+0.3
BUR08	Bucovina Ar. S	78.38	341	P	P	17 33 16.6	+0.5
BUR01	Bucovina Ar. S	78.41	341	⇑P	P	17 33 16.8	+0.6
BURAR	Bucovina Array	78.41	341	P	P	17 33 16.4	+0.2
KRUC	Moravsky	78.47	348	*e*P	P	17 33 16.5	+0.2
JAVC	Velka Javorina	78.49	347	*e*P	P	17 33 17.7	+1.1
VYHS	Vyhne	78.67	346	*e*P	P	17 33 18.2	+0.7
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VYHS	Vyhne	78.67	346	*e*P	P	17 33 18.2	+0.7
KHC	Kasperske Hory	78.75	350	*e*P	P	17 33 18.4	+0.5
KHC	Kasperske Hory	78.75	350	P	P	17 33 17.8	-0.2
KHC	Kasperske Hory	78.75	350	*e*P	P	17 33 18.4	+0.5
CKRC	Cesky Krumlov	78.97	349	*e*P	P	17 33 18.8	-0.3
GEC2	GERESS Array S	79.02	349	P	P	17 33 17.5	-1.9
GERES	GERESS Array B	79.02	349	P	P	17 33 19.2	-0.3
	comp=Z,0.9nm,0.6s,baz=18,slow=4.6,SNR=9.3						
	comp=Z,0.9nm,0.6s						
GERES	GERESS Array B	79.02	349	P	P	17 33 19.2	-0.3
GERES	GERESS Array B	79.02	349	P	P	17 33 18.8	-0.7
MODS	Modra-Piesok	79.02	347	*e*P	P	17 33 20.5	+1.1
MODS	Modra-Piesok	79.02	347	*e*P	P	17 33 20.5	+1.1
TESR	Tescani	79.17	340	⇑P	P	17 33 20.9	+0.7
ZST	Bratislava	79.22	347	*e*P	P	17 33 23.0	+2.5
ZST	Bratislava	79.22	347	*e*P	P	17 33 23.0	+2.5
KNRA	Kununurra	79.40	228	P	P	17 33 22.9	+1.2
KNRA				IAmb	IAmb	17 33 50.1	
	comp=Z,9.2nm,0.9s						
CONA	Conrad Observa	79.65	348	*e*P	P	17 33 23.7	+0.7
	comp=Z,4.8nm,0.7s						
DRGR		79.67	343	⇓P	P	17 33 23.0	-0.1
VRI	Vrincioaia	79.76	340	⇑P	P	17 33 24.2	+0.7
PLOR	Plostina	79.79	340	⇑P	P	17 33 24.4	+0.7
RONA	Rosalia, Austr	79.82	347	*e*P	P	17 33 24.6	+0.8
	comp=Z,2.3nm,0.6s						
GNI	Garni	79.89	325	LR	LR	18 12 39.4	
	comp=Z,64nm,20.2s,baz=38,slow=39						
COVR	Voineasa-Covas	79.89	340	⇑P	P	17 33 25.7	+1.5
MOA	Molln	79.93	349	*e*P	P	17 33 28.8	+4.5
	comp=Z,3.4nm,1.1s						
TLCR		79.94	338	⇑P	P	17 33 24.8	+0.4
BFO	Black Forest	80.04	353	P	P	17 33 25.1	+0.1
BFO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BFO	Black Forest	80.04	353	P	P	17 33 25.1	+0.1
CFR	Carcaliu	80.11	339	⇓P	P	17 33 25.5	+0.2
BIOA	Bad Ischl, Aus	80.16	349	*e*P	P	17 33 27.9	+2.3
	comp=Z,5.6nm,1.0s						
MLR	Muntele Rosu	80.29	340	⇑P	P	17 33 27.9	+1.5
MLR	Muntele Rosu	80.29	340	LR	LR	18 12 31.2	
	comp=Z,35nm,19.8s,baz=28,slow=38						
MLR	Muntele Rosu	80.29	340	P	P	17 33 26.8	+0.3
MLR				pmax	pmax		
	comp=Z,14nm,0.9s						
MLR	Muntele Rosu	80.29	340	P	P	17 33 26.8	+0.3
MLR				IAmb	IAmb	17 33 30.3	
	comp=Z,14nm,0.9s						
ARSA	Arzberg	80.36	348	*e*P	P	17 33 27.7	+1.0
	comp=Z,2.7nm,0.6s						
VOIR		80.52	341	⇓P	P	17 33 28.9	+1.2
RETA	Reutte	80.67	351	*e*P	P	17 33 30.2	+1.7
	comp=Z,5.9nm,1.2s						
ARR	Arges	80.67	341	⇓P	P	17 33 29.7	+1.2
WATA	Walderalm	80.74	351	*i* P	P	17 33 29.5	+0.6
	comp=Z,4.6nm,0.4s,SNR=5.0						
WRA	Warramunga Arr	80.74	221	P	P	17 33 29.8	+0.9
	comp=Z,0.8nm,0.4s,baz=31,slow=5.7,SNR=17						
	comp=Z,0.8nm,0.4s						
WRA	Warramunga Arr	80.74	221	P	P	17 33 29.8	+0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MOTA	Moosalm	80.78	351	*e*P	P	17 33 29.5	+0.4
	comp=Z,7.3nm,1.1s						
KBA	Koelnbreinsper	80.80	349	*i* P	P	17 33 30.4	+1.1
	comp=Z,12nm,0.5s,SNR=13						
WTTA	Wattenberg	80.80	350	*e*P	P	17 33 29.7	+0.5
	comp=Z,6.2nm,0.5s						
SQTA	Sankt Quirin	80.89	351	*e*P	P	17 33 30.4	+0.7
	comp=Z,5.2nm,0.8s						
SOKA	Soboth	80.99	348	*i* P	P	17 33 30.7	+0.5
	comp=Z,5.0nm,0.5s,SNR=6.3						
BZS	Buzias	81.01	343	⇓P	P	17 33 30.4	+0.3
GZR	Gura Zlata	81.01	342	⇓P	P	17 33 31.0	+0.7
FETA	Feichten	81.13	351	*e*P	P	17 33 31.2	+0.2
	comp=Z,4.2nm,0.6s						
GROS	Grobnik	81.14	348	*i* P	P	17 33 31.1	+0.2
MYKA	Terra Mystica	81.21	349	*e*P	P	17 33 32.9	+1.6
	comp=Z,1.6nm,0.5s						
OBKA	Obir	81.21	348	*i* P	P	17 33 31.8	+0.5
	comp=Z,6.1nm,0.5s,SNR=5.8						
ABTA	Abfaltersbach	81.22	350	*e*P	P	17 33 31.8	+0.4
	comp=Z,10nm,1.2s						
DAVOX	Davos/Dischmat	81.45	352	LR	LR	18 14 16.6	
	comp=Z,14nm,18.3s,baz=68,slow=39						
HERR	Herculane	81.57	343	⇓P	P	17 33 33.3	+0.2
DIKM	Dikmen	81.58	333	⇑P	P	17 33 34.2	+0.9
FRGS	Fruska Gora	81.77	344	⇓P	P	17 33 33.8	-0.4
MDVR	Moldovita	81.80	343	⇑P	P	17 33 34.6	+0.2
TUE	Stuetta	81.81	352	P	P	17 33 34.6	0.0
GBRS	Gornja Briga	82.14	348	*i* P	P	17 33 36.3	+0.1
TEOL	Teolo	82.68	350	P	P	17 33 38.6	-0.3
DIVS	Divibare	82.76	344	P	P	17 33 39.8	+0.3
DIVS				IAmb	IAmb	17 33 42.1	
	comp=Z,7.7nm,0.7s						
FITZ	Fitzroy Crossi	82.96	229	P	P	17 33 42.1	+1.5
	comp=Z,2.9nm,0.7s,baz=158,slow=15,SNR=1.8						
	comp=Z,2.9nm,0.7s						
BNI	Bardonecchia	83.42	354	P	P	17 33 42.6	-0.4
BNI				pmax	pmax		
	comp=Z,12nm,1.3s						
BNI	Bardonecchia	83.42	354	P	P	17 33 42.6	-0.4
BNI				IAmb	IAmb	17 33 46.1	
	comp=Z,12nm,1.3s						
VTS	Vitosha	83.59	341	⇑P	P	17 33 44.5	+0.6
VTS	Vitosha	83.59	341	P	P	17 33 41.8	-2.1
VTS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VTS	Vitosha	83.59	341	P	P	17 33 41.8	-2.1
MARD	Mardin	83.80	327	P	P	17 33 46.5	+1.4
MARD				IAmb	IAmb	17 33 47.3	
	comp=Z,14nm,1.0s						
BR131	Keskin Array S	83.82	333	P	P	17 33 45.3	+0.2
BR131				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BR131	Keskin Array S	83.82	333	P	P	17 33 45.3	+0.2
BR131				IAmb	IAmb	17 33 46.9	
	comp=Z,6.1nm,0.7s						
BRTR	Keskin Array B	83.82	333	P	P	17 33 45.8	+0.6
	comp=Z,3.7nm,0.6s,baz=68,slow=2.3,SNR=21						
	comp=Z,3.7nm,0.6s						
BRTR	Keskin Array B	83.82	333	P	P	17 33 45.8	+0.6
BRTR	Keskin Array B	83.82	333	P	P	17 33 44.9	-0.2
BNN	Bunyan	83.98	331	P	P	17 33 46.7	+0.8
ASAR	Alice Springs	84.25	220	P	P	17 33 48.7	+1.5
	comp=Z,0.9nm,0.7s,baz=28,slow=5.2,SNR=11						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	84.25	220	P	P	17 33 48.7	+1.5
PDG	Podgorica	84.51	344	⇑P	P	17 33 48.5	+0.1
MURB	Monte Urbino	84.66	349	P	P	17 33 48.9	-0.3
NRCA	Norcia	85.01	349	P	P	17 33 51.9	+0.9
STKA	Stephens Creek	89.00	210	LR	LR	18 08 15.2	
	comp=Z,60nm,21.6s,baz=27,slow=32						
SJG	San Juan	91.09	59	LR	LR	18 14 39.4	
	comp=Z,30nm,22.0s,baz=256,slow=35						
RPZ	Rata Peaks	95.11	185	LR	LR	18 13 05.8	
	comp=Z,98nm,18.9s,baz=262,slow=33						
MDT	Midelt	95.92	2	LR	LR	18 20 38.4	
	comp=Z,20nm,18.7s,baz=20,slow=37						
TORD	Torodi Ar. Bea	115.44	356	PKP	PKiKP	17 39 56.2	-1.2
	comp=Z,0.3nm,0.4s,baz=350,slow=2.9,SNR=2.7						
TORD				PP	PP	17 40 56.4	-1.8
	comp=Z,0.7nm,0.7s,baz=3.1,slow=7.1,SNR=4.2						
DBIC	Dimbokro	121.92	3	PKP	PKiKP	17 40 10.8	+0.7
	comp=Z,1.3nm,0.4s,baz=23,slow=2.7,SNR=5.2						
DBIC	Dimbokro	121.92	3	PKIKP	PKiKP	17 40 10.8	+0.7
H03N2	Juan Fernandez	123.26	103	T	T	19 55 09.0	
	baz=316,slow=77,SNR=16						
H03N1	Juan Fernandez	123.27	103	T	T	19 55 10.5	
	baz=316,slow=77,SNR=13						
H03N3	Juan Fernandez	123.28	103	T	T	19 55 01.7	
	baz=316,slow=77,SNR=13						
PLCA	Paso Flores	133.08	105	PKP	PKiKP	17 40 32.3	+0.7
	comp=Z,1.4nm,0.7s,baz=213,slow=3.5,SNR=6.7						
PLCA	Paso Flores	133.08	105	PKIKP	PKiKP	17 40 32.3	+0.7
BOSA	Boshof	149.21	308	PKPbc	PKPbc	17 41 04.5	+0.6
	comp=Z,4.3nm,0.6s,baz=9.6,slow=3.2,SNR=13						
BOSA	Boshof	149.21	308	PKP2	PKPbc	17 41 04.5	+0.6

*IDC **05** 17:57:55.5±1.0, 28°.16N×127°.43E, h194km±10km, mb3.3/10, mbtmp3.8/13, Error ellipse: s-maj=20.7km*

s-min=10.1km az=85.0

*NEIC **05** 17:57:55.8±1.6, 28°.15N±0°.08×127°.5E±0°.1, h192^{km}±8^{km}, mb4.2/36, Error ellipse: s-maj=15.1km s-min=10.3km az=116.0*

*JMA **05** 17:57:56.3±0.2, 28°N±1°×12°7E±°, h167^{km}±4^{km}, MD4.0/37, MV4.2/37, NW OFF OKINAWAJIMA IS*

ISC 05 17:57:54.6±0.7**, 28°.09N**±0°.05×**127°.40E**±0°.06**, h188**^{km}±6^{km}**, n95, σ1^{s}.19**/116**, mb4.1**/28**, Northwest of Ryukyu Islands**

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Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                    Op        ISC       h  m  s    ISC
JIH   Iheya              1.17 154  i P        Pn       17 58 25.0 +0.7
JIH                                eS         Sn       17 58 47.0 -0.5
JOKE  Okinoerabujima     1.27 125  i P        Pn       17 58 25.8 +0.6
JOKE                               eS         Sn       17 58 47.9 -0.9
JTK   Tokunoshima        1.40 102  i P        Pn       17 58 26.5 +0.2
JTK                                 S         Sn       17 58 49.7 -1.2
JYRO  Yoronjima          1.41 139  i P        Pn       17 58 27.0 +0.6
JYRO                                S         Sn       17 58 49.8 -1.3
JOW   Kunigami           1.48 148   P         Pn       17 58 27.9 +0.8
      685nm,0.3s,baz=108,slow=6.8,SNR=416
JOW                                 S         Sn       17 58 51.6 -0.6
      2µm,0.3s,baz=315,slow=27,SNR=27
JOW   Kunigami           1.48 148  i P        Pn       17 58 27.8 +0.8
JOW                                 S         Sn       17 58 51.5 -0.6
JOW   Kunigami           1.48 148   A         A        17 58 27.8
      comp=E,5.0nm,0.3s,comp=E,5.0nm,0.3s
JAGN  Aguni-jima         1.50 185   P         Pn       17 58 28.0 +0.7
JAGN                                S         Sn       17 58 52.1 -0.5
JAGN  Aguni-jima         1.50 185   A         A        17 58 28.0
      comp=E,3.0nm,0.5s,comp=E,3.0nm,1.4s
JAMN  Amaminishikomi     1.57  84  i P        Pn       17 58 28.0 +0.1
JAMN                                S         Sn       17 58 52.7 -0.9
JNTH  Nagotoyohara       1.66 160  i P        Pn       17 58 29.9 +1.1
JNTH                                S         Sn       17 58 54.5 -0.8
JKE   Kume jima 2        1.84 197  i P        Pn       17 58 31.3 +0.7
JKE                                 S         Sn       17 58 58.0 -0.6
JTAJ  Takarajima         1.90  56  eP         Pn       17 58 31.7 +0.6
JAM   Amami Oshima       1.97  80   P         Pn       17 58 32.5 +0.6
JAM                                 S         Sn       17 58 59.5 -1.3
JJT3  Tamagusuku3        1.97 170  i P        Pn       17 58 33.7 +1.7
JJT3                                S         Sn       17 59 01.4 +0.5
JZK   Kikaishima         2.28  84  eP         Pn       17 58 36.7 +1.4
JZK                                 S         Sn       17 59 07.5 +0.7
JNN   Nakanoshima        2.78  51  eS         Sn       17 59 18.0 +0.7
JKC   Kuchinoerabu       3.40  45  eP         Pn       17 58 50.4 +2.0
JYAK  Yakushimahirau     3.46  51  eP         Pn       17 58 50.3 +1.1
JYAK                               eS         Sn       17 59 29.1 -2.7
JIKM  Ikemajima          3.70 212  eS         Sn       17 59 35.9 -1.4
JIRB  Irabujima          3.82 212  eP         Pn       17 58 53.1 -0.6
JIRB                               eS         Sn       17 59 37.7 -2.2
JMJ2  Miyako jima3       3.82 210   P         Pn       17 58 53.5 -0.2
JMJ2                               eS         Sn       17 59 38.7 -1.3
JMTN  Minamitane         3.82  52   P         Pn       17 58 54.2 +0.5
JMTN                               eS         Sn       17 59 36.8 -3.3
JTN   Tanegashima 3      4.03  50  eP         Pn       17 58 56.4 +0.1
JTN                                eS         Sn       17 59 42.5 -2.3
JKDJ  Kitadaitoujima     4.08 121  i P        Pn       17 58 57.6 +0.7
JKDJ                                S         Sn       17 59 44.6 -1.2
JMZ   Minamidaito 2      4.09 123   P         Pn       17 58 57.5 +0.4
JMZ                                 S         Sn       17 59 44.0 -2.1
JSJ   Shimokoshiki       4.10  29  eP         Pn       17 58 58.1 +0.9
JTJ   Tarama             4.21 216   S         Sn       17 59 45.9 -2.9
JSU   Suzuyama           4.31  37             Pn       17 59 00.0 +0.1
JSU                                           Sn       17 59 51.6 +0.3
JSU   Suzuyama           4.31  37  eP         Pn       17 59 00.7 +0.8
YOJ   Yonaguni jima      5.35 228   Pn        Pn       17 59 13.3 +0.1
JNU   Nakatsue           5.84  30   P         Pn       17 59 20.7 +1.1
      15nm,0.5s,baz=208,slow=10.0,SNR=30
JNU                                 S         Sn       18 00 28.3 +1.7
      10.0nm,1.0s,baz=7.8,slow=23,SNR=1.6
JNU   Nakatsue           5.84  30             Pn       17 59 20.9 +1.3
TATO  Taipei             6.14 241   Pn        Pn       17 59 27.0 +3.5
YHNB  Yeheng             6.39 239   Pn        Pn       17 59 28.6 +1.7
NACB  Ninganchiao        6.52 235   Pn        Pn       17 59 26.1 -2.4
SSLB  Suanglung          7.21 235             Pn       17 59 36.5 -1.2
YULB  Yu-li              7.22 231   Pn        Pn       17 59 34.6 -3.2
TPUB  Ta-pu              7.75 234   Pn        Pn       17 59 42.3 -2.4
JHS   Saijyo             8.44  34   Pn        Pn       17 59 49.9 -3.7
KSRS  Korea Array        9.35   3   P         Pn       18 00 05.6 +0.3
      2.3nm,0.7s,baz=183,slow=12,SNR=6.8
INU   Inuyama           10.92  46   Pn        Pn       18 00 26.7 +0.9
JGF   Kuroka            11.29  46   Pn        Pn       18 00 29.4 -1.3
MJB9  Matsu-Tunnel      12.42  45   Pn        Pn       18 00 43.4 -1.7
MJAR  Matsushiro Arr    12.42  45   P         Pn       18 00 44.4 -0.7
      1.0nm,0.6s,baz=240,slow=14,SNR=4.6
JYT   Yasato            13.53  50   Pn        Pn       18 00 59.1 +0.1
JMM   Marumori          14.86  46   Pn        Pn       18 01 14.5 -1.0
SONM  Songino Array     25.60 326   P         P        18 03 07.8 +1.3
      1.0nm,0.5s,baz=142,slow=10,SNR=7.4
      1.0nm,0.5s
SONM  Songino Array     25.60 326   IAmb      IAmb     18 03 10.5
      comp=Z,1.9nm,1.2s
MKAR  Makanchi Array    39.76 310   P         P        18 05 09.2 +0.3
      comp=Z,0.7nm,0.6s,baz=112,slow=10.0,SNR=1.9
MKAR                                ScP       ScP      18 10 42.5 +0.2
      comp=Z,0.4nm,0.7s,baz=90,slow=5.8,SNR=3.7
      comp=Z,0.7nm,0.6s
ZALV  Zalesovo Beam     40.33 322   P         P        18 05 12.5 -1.0
      comp=Z,0.5nm,0.4s,baz=98,slow=10,SNR=2.4
ZALV                                ScP       ScP      18 10 42.5 -1.9
      comp=Z,0.5nm,0.4s,baz=114,slow=5.2,SNR=2.5
      comp=Z,0.5nm,0.4s
KURK  Kurchatov         42.97 315   P         P        18 05 35.1 +0.2
KURBB Kurchatov Arra    43.01 315   P         P        18 05 35.1 -0.1
      comp=Z,0.4nm,0.5s,baz=100,slow=6.8,SNR=4.2
      comp=Z,0.4nm,0.5s
FITZ  Fitzroy Crossi    45.95 182   P         P        18 06 00.1 +1.3
WB0   Warramunga Arr    48.06 171   P         P        18 06 15.9 +0.8
WRA   Warramunga Arr    48.22 171   P         P        18 06 17.3 +0.9
      comp=Z,0.8nm,0.4s,baz=352,slow=8.2,SNR=11
      comp=Z,0.8nm,0.4s
WRA   Warramunga Arr    48.22 171   P         P        18 06 15.8 -0.6
WB2   Warramunga Arr    48.22 171   P         P        18 06 17.5 +1.1
WR0   Warramunga Arr    48.27 171   P         P        18 06 17.8 +1.1
ASAR  Alice Springs     51.84 172   P         P        18 06 44.9 +1.3
      comp=Z,0.5nm,0.6s,baz=356,slow=6.7,SNR=23
ASAR                                PcP       PcP      18 07 54.5 +0.6
      comp=Z,0.4nm,0.8s,baz=350,slow=2.9,SNR=4.4
      comp=Z,0.5nm,0.6s
TTA   Tatalina          59.32  31   P         P        18 07 36.9 +0.4
TTA                                 IAmb      IAmb     18 07 56.1
      comp=Z,7.5nm,1.4s
J20K  Nowinta River     60.09  30   P         P        18 07 42.4 +0.8
J20K                                IAmb      IAmb     18 07 59.4
      comp=Z,7.1nm,1.4s
K20K  Telida            60.17  31   P         P        18 07 43.0 +0.8
K20K                                IAmb      IAmb     18 07 44.4
      comp=Z,3.3nm,1.0s
CAST  Castle Rocks      61.06  30   P         P        18 07 48.7 +0.5
CAST                                IAmb      IAmb     18 07 50.5
      comp=Z,7.5nm,1.4s
PPLA  Purkeypile        61.06  31   P         P        18 07 48.5 +0.2
STKA  Stephens Creek    61.15 166   P         P        18 07 50.1 +1.0
      comp=Z,0.9nm,0.5s,baz=18,slow=7.1,SNR=3.9
      comp=Z,0.9nm,0.5s
STKA  Stephens Creek    61.15 166   P         P        18 07 50.3 +1.2
BPAW  Bear Paw Mtn.     61.48  30   P         P        18 07 51.7 +0.7
BPAW                                IAmb      IAmb     18 08 13.5
      comp=Z,7.1nm,1.4s
H23K  Yukon River       61.91  28   P         P        18 07 54.4 +0.6
H23K                                IAmb      IAmb     18 07 55.7
      comp=Z,2.2nm,0.8s
I23K  Minto, Yukon-K    62.06  28   P         P        18 07 55.1 +0.3
I23K                                IAmb      IAmb     18 08 04.0
      comp=Z,4.3nm,1.4s
NEA2  Nenana            62.25  29   P         P        18 07 56.5 +0.4
NEA2                                IAmb      IAmb     18 07 57.1
      comp=Z,3.9nm,0.9s
RND   Reindeer          62.51  30   P         P        18 07 57.7 -0.2
MDM   Murphy Dome       62.56  29   P         P        18 07 58.5 +0.4
MDM                                 IAmb      IAmb     18 07 59.3
      comp=Z,3.1nm,0.7s
CCB   Clear Creek Bu    62.79  29   P         P        18 07 59.4 -0.2
CCB                                 IAmb      IAmb     18 08 11.3
      comp=Z,6.3nm,1.5s
SML   Sawmill           62.99  32   P         P        18 08 00.5 -0.6
ILAR  Eielson Array     63.16  29   P         P        18 08 00.6 -1.5
      comp=Z,0.3nm,0.6s,baz=247,slow=5.8,SNR=5.7
      comp=Z,0.3nm,0.6s
DHY   Denali Highway    63.22  31   P         P        18 08 01.7 -1.0
DHY                                 IAmb      IAmb     18 08 20.9
      comp=Z,4.6nm,1.1s
SCM   Sheep Creek Mo    63.45  32   P         P        18 08 04.3 +0.2
BMAR  Burnt Mountain    63.65  26   P         P        18 08 06.5 +1.2
RIDG  Independent Ri    64.22  30   P         P        18 08 08.3 -0.8
SCRK  Sand Creek        64.54  29   P         P        18 08 10.6 -0.7
SCRK                                IAmb      IAmb     18 08 11.5
      comp=Z,1.5nm,0.7s
MENT  Mentasta          64.88  30   P         P        18 08 12.6 -0.8
MENT                                IAmb      IAmb     18 08 14.4
      comp=Z,3.2nm,0.6s
BMRM  Bremner River     64.91  33   P         P        18 08 13.6  0.0
GLB   Gilahina Butte    65.18  32   P         P        18 08 15.4 +0.1
M26K  Nabesna, AK       65.33  31   P         P        18 08 16.7 +0.4
M26K                                IAmb      IAmb     18 08 17.7
      comp=Z,5.5nm,1.1s
K27K  Chicken           65.35  29   P         P        18 08 16.9 +0.5
K27K                                IAmb      IAmb     18 08 17.5
      comp=Z,5.6nm,1.2s
VRDI  Verde Repeater    65.40  32   P         P        18 08 16.5 -0.4
L27K  Beaver Creek,     65.69  30   P         P        18 08 19.0 +0.4
BCAR  Beaver Creek A    65.71  30   P         P        18 08 19.2 +0.5
M27K  Edge Creek, AK    65.85  31   P         P        18 08 20.1 +0.4
M27K                                IAmb      IAmb     18 08 42.8
      comp=Z,8.3nm,1.5s
EPYK  Eagle Plains      66.91  26   P         P        18 08 26.3 +0.1
INK   Inuvik            67.48  23   P         P        18 08 29.9 +0.2
INK                                 IAmb      IAmb     18 08 45.3
      comp=Z,6.3nm,1.5s
M31M  Drury Creek, Y    69.23  30   P         P        18 08 41.1 +0.4
M31M                                IAmb      IAmb     18 08 41.8
      comp=Z,1.9nm,0.8s
FINES FINESS Array B    70.89 330   P         P        18 08 49.5 -1.3
      comp=Z,0.3nm,0.3s,baz=62,slow=4.9,SNR=3.6
      comp=Z,0.3nm,0.3s
YKA   Yellowknife Ar    77.15  25   P         P        18 09 27.0 -0.1
      comp=Z,0.7nm,0.4s,baz=305,slow=5.7,SNR=11
      comp=Z,0.7nm,0.4s
```

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*ISK **05** 18:00:05.2, 37°.62N×23°.54E, h2^{km}, ML3.2/10*

*DDA **05** 18:00:06.2±0.0, 37°.13N×23°.68E, h7^{km}±4^{km}, ML2.8*

*ATH **05** 18:00:06.9, 37°.55N×23°.57E, h14^{km}±1^{km}, ML3.3/13, Error ellipse: s-maj=1.5km s-min=0.6km az=300.0*

*THE **05** 18:00:07.2, 37°.57N×23°.55E, h2^{km}±1^{km}, ML3.3/15, Error ellipse: s-maj=1.4km s-min=0.4km az=43.0*

*IDC **05** 18:00:13.8±4.4, 37°.38N×23°.70E, h64^{km}±51^{km}, mb3.3/5, mbtmp3.5/6, ML2.9/1, MS3.3/1, Error ellipse: s-maj=35.9km s-min=20.8km az=168.0*

ISC 05 18:00:07.2±0.9**, 37°.56N**±0°.02×**23°.57E**±0°.02**, h10**^{km}±7^{km}**, n76, σ1^{s}.00**/111**, mb3.6**/5**, Southern Greece**

```
Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                    Op        ISC       h  m  s    ISC
YDRA  Hydra              0.23 201   P         Pg       18 00 11.3 -0.6
YDRA                                S         Sg       18 00 15.2 +0.2
YDRA                                AML       AML      18 00 16.2
      comp=N,36796µm,0.3s
YDRA                                AML       AML      18 00 17.7
      comp=E,43925µm,0.3s
VLY   Voula,Athens       0.34  32   P         Pg       18 00 13.8 -0.3
VLY                                 S         Sg       18 00 19.5 +0.8
VLY                                 AML       AML      18 00 20.7
      comp=E,8930µm,0.3s
VLY                                 AML       AML      18 00 21.1
      comp=N,12735µm,0.4s
VLY   Voula,Athens       0.34  32   P         Pg       18 00 13.8 -0.3
VLY                                 S         Sg       18 00 19.6 +0.9
      comp=N,6µm,0.5s
EPID  Epidavros          0.36 279   P         Pg       18 00 13.8 -0.6
EPID                                S         Sg       18 00 19.6 +0.4
EPID  Epidavros          0.36 279   P         Pg       18 00 14.0 -0.4
EPID                                S         Sg       18 00 19.4 +0.2
      comp=N,6µm,0.3s
KRND  KRANIDI            0.38 242   P         Pg       18 00 13.7 -1.0
KRND                                S         Sg       18 00 19.7  0.0
KRND                                AML       AML      18 00 20.4
      comp=E,16450µm,0.4s
KRND                                AML       AML      18 00 22.3
      comp=N,10940µm,0.4s
KRND  KRANIDI            0.38 242   P         Pg       18 00 13.7 -1.0
KRND                                S         Sg       18 00 20.0 +0.4
      comp=N,7µm,0.4s
ATH   Athens Observa     0.43  16   P         Pg       18 00 15.3 -0.3
ATH                                 S         Sg       18 00 22.1 +0.8
ATH                                 AML       AML      18 00 23.2
      comp=E,13174µm,0.5s
ATH                                 AML       AML      18 00 23.4
      comp=N,17570µm,0.5s
ATH   Athens Observa     0.43  16   P         Pg       18 00 15.5 -0.1
ATH                                 S         Sb       18 00 22.4 -1.0
      comp=N,8µm,0.5s
ATHU  Athens Univers     0.44  23   P         Pg       18 00 15.5 -0.4
ATHU                                S         Sg       18 00 21.8 +0.1
ATHU                                AML       AML      18 00 23.6
      comp=E,1997µm,0.4s
ATHU                                AML       AML      18 00 28.6
      comp=N,1549µm,0.6s
ATHU  Athens Univers     0.44  23   P         Pg       18 00 15.5 -0.4
ATHU                                S         Sg       18 00 21.9 +0.1
      comp=N,848nm,0.3s
PTL   Penteli            0.54  26   P         Pg       18 00 17.4 -0.5
PTL                                 S         Sg       18 00 24.8 -0.1
PTL                                 AML       AML      18 00 26.4
      comp=N,5647µm,0.5s
PTL                                 AML       AML      18 00 30.3
      comp=E,4549µm,0.6s
PTL   Penteli            0.54  26   P         Pg       18 00 17.3 -0.5
PTL                                 S         Sg       18 00 25.7 +0.7
      comp=E,3µm,0.5s
DION  Dionisos Attik     0.59  29   P         Pg       18 00 18.3 -0.5
DION                                S         Sg       18 00 26.4 -0.1
DION                                AML       AML      18 00 28.5
      comp=N,5577µm,0.4s
DION                                AML       AML      18 00 28.5
      comp=E,5305µm,0.6s
DION  Dionisos Attik     0.59  29   P         Pg       18 00 18.3 -0.5
DION                                S         Sb       18 00 27.4 -0.8
      comp=E,4µm,0.4s
VILL  Villia             0.64 342   P         Pg       18 00 19.1 -0.5
VILL                                S         Sg       18 00 28.6 +0.7
      comp=E,5µm,0.3s
VIL2  Platees            0.69 340   P         Pg       18 00 19.1 -1.5
VIL2                                S         Sg       18 00 28.3 -1.4
VIL2                                AML       AML      18 00 33.0
      comp=N,5890µm,0.3s
VIL2                                AML       AML      18 00 33.4
      comp=E,10619µm,0.3s
KARY  Karystos           0.83  55   P         Pg       18 00 22.8 -0.6
KARY  Karystos           0.83  55   P         Pg       18 00 22.9 -0.4
KARY                                S         Sb       18 00 34.7 -0.4
THAL  Thalero            0.86 304   P         Pg       18 00 22.9 -0.9
GUR   Goura              1.04 291   P         Pg       18 00 25.8 -1.4
GUR                                 AML       AML      18 00 45.0
      comp=E,5138µm,0.4s
GUR                                 AML       AML      18 00 46.5
      comp=N,3125µm,0.3s
GUR   Goura              1.04 291   P         Pg       18 00 26.2 -1.1
GUR                                 S         Sb       18 00 41.1 -0.1
      comp=N,2µm,0.3s
MHLO  Agia Marina, M     1.10 142   P         Pb       18 00 28.0 -0.3
MHLO  Agia Marina, M     1.10 142   P         Pb       18 00 28.0 -0.3
MHLO                                S         Sn       18 00 44.6 +0.7
      comp=N,3µm,0.4s
KYMI  Kymi, Euboea I     1.15  21   P         Pg       18 00 28.5 -0.8
KYMI                                AML       AML      18 00 47.9
      comp=N,3778µm,0.6s
KYMI                                AML       AML      18 00 50.2
      comp=E,3756µm,0.6s
KYMI  Kymi, Euboea I     1.15  21   P         Pg       18 00 28.6 -0.8
KYMI                                S         Sn       18 00 45.2  0.0
      comp=E,2µm,0.6s
ATAL  Atalanti           1.21 339   P         Pg       18 00 29.1 -1.3
ATAL  Atalanti           1.21 339   P         Pg       18 00 29.2 -1.3
KLV   Kalavryta, Ach     1.22 294   P         Pg       18 00 29.4 -1.3
KLV   Kalavryta, Ach     1.22 294   P         Pg       18 00 29.6 -1.1
KLV                                 S         Sn       18 00 47.2 +0.1
      comp=E,292nm,0.5s
TNSA  Tinos              1.27  90   P         Pn       18 00 30.1 -0.9
TNSA                                S         Sb       18 00 47.0 -0.7
TNSA                                AML       AML      18 00 48.4
      comp=E,4465µm,0.4s
TNSA                                AML       AML      18 00 50.6
      comp=N,3410µm,0.2s
ITM   Ithomi             1.36 254   P         Pn       18 00 31.5 -0.8
ITM   Ithomi             1.36 254   P         Pn       18 00 31.7 -0.6
ITM                                 S         Sn       18 00 52.0 +1.6
      comp=N,490nm,0.5s
ITM   Ithomi             1.36 254   PN        Pn       18 00 32.1 -0.2
ITM                                 SN        Sn       18 00 51.3 +0.9
KTHR  Kythira            1.37 199   P         Pn       18 00 31.9 -0.6
KTHR  Kythira            1.37 199   P         Pn       18 00 31.8 -0.7
LAKA  Lakka              1.43 299   P         Pn       18 00 32.4 -0.9
LAKA  Lakka              1.43 299   P         Pn       18 00 32.8 -0.5
LAKA                                S         Sn       18 00 52.4 +0.3
      comp=N,882nm,0.9s
DRO   Drossia            1.52 285   P         Pn       18 00 34.8 +0.3
DRO   Drossia            1.52 285   P         Pn       18 00 34.7 +0.1
SKY   Skiros Island      1.53  30   P         Pn       18 00 33.8 -0.8
SKY                                 AML       AML      18 00 59.2
      comp=N,1859µm,0.2s
SKY                                 AML       AML      18 01 00.5
      comp=E,2376µm,0.2s
EFP   Efpalio            1.57 304   P         Pn       18 00 35.5 +0.4
EFP   Efpalio            1.57 304   P         Pn       18 00 35.6 +0.4
PYL   PYLOS              1.60 246   P         Pn       18 00 35.7 +0.1
PYL                                 AML       AML      18 01 01.4
      comp=E,1180µm,0.5s
PYL                                 AML       AML      18 01 03.1
      comp=N,790µm,0.7s
PYL   PYLOS              1.60 246   P         Pn       18 00 36.1 +0.5
PYL                                 S         Sg       18 00 58.4 -0.3
      comp=N,492nm,0.6s
ANX   Ano Chora          1.66 309   P         Pn       18 00 36.4 -0.1
ANKY  Antikythira Is     1.70 187   P         Pn       18 00 36.4 -0.6
AGG   Agios Georgios     1.75 327   P         Pn       18 00 37.9 +0.1
AGG   Agios Georgios     1.75 327   PN        Pn       18 00 36.6 -1.2
XOR   Xorichti           1.83 351   P         Pn       18 00 38.2 -0.5
XOR   Xorichti           1.83 351   P         Pn       18 00 38.2 -0.5
MAKR  Makrakomi, Fth     1.84 323   P         Pn       18 00 39.3 +0.4
CHOS  Chios island       2.13  66   P         Pn       18 00 42.7 -0.3
CHOS  Chios island       2.13  66   PN        Pn       18 00 43.3 +0.3
ZEYE  Izmir, Urla-Ze     2.42  73   P         Pg       18 00 54.5 +0.8
ZEYE                                S         Sb       18 01 22.2 +1.4
IDI   Anoyia             2.51 154   P         Pn       18 00 48.6 +0.4
      comp=N,3.2nm,0.3s,baz=322,slow=13,SNR=19
IDI                                 S         Sn       18 01 17.6 -1.2
      comp=N,20nm,0.6s,baz=317,slow=18,SNR=3.8
      comp=N,8.9nm,0.4s
URLA  Izmir              2.52  71   PN        Pn       18 00 48.1 -0.2
URLA  Izmir              2.52  71   P         Pb       18 00 51.2 -1.4
URLA                                S         Sn       18 01 18.4 -0.8
URLA                               i AML      AML      18 01 34.0
      comp=N,161nm,1.1s
DGB   zmir               2.67  78   P         Pn       18 00 49.7 -0.6
DGB                                 S         Sn       18 01 20.3 -2.5
OUR   Ouranopolis        2.79   7   PN        Pn       18 00 51.4 -0.5
OUR                                 SN        Sn       18 01 25.7 +0.1
KOCA  Canakkale, Ayv     2.80  45   P         Pb       18 00 58.6 +1.2
KOCA                                S         Sb       18 01 33.6 +2.0
KOCA                               i AML      AML      18 01 43.0
      comp=N,83nm,1.2s
KOCA                               i AML      AML      18 01 54.0
      comp=N,53nm,1.0s
BLCB  Balcova            2.87  72   PN        Pn       18 00 54.2 +1.2
HORT  Hortiatis          3.05 353   PN        Pn       18 00 55.6 -0.1
ZEDA  zmir-Bergama       3.10  62   P         Pg       18 01 07.0 +0.3
ZEDA                                S         Sn       18 01 29.5 -3.8
EZN   Ezine              3.13  43   PN        Pn       18 00 57.0 +0.4
BDRM  Kayabasi           3.13  98   P         Pn       18 00 57.7 +1.1
BDRM                                S         Sn       18 01 29.6 -4.5
BDRM                               i AML      AML      18 01 59.0
      comp=N,26nm,1.1s
BDRM                               i AML      AML      18 02 11.0
      comp=N,33nm,2.0s
AYDN  Tasoluk            3.43  87   P         Pn       18 01 01.9 +1.1
AYDN                               i AML      AML      18 02 07.0
      comp=N,20nm,1.0s
AYDN                               i AML      AML      18 02 11.0
      comp=N,26nm,2.2s
GRG   Griva              3.51 345   PN        Pn       18 01 01.8 -0.1
GELI  Tayfur-Gelibol     3.63  38   PN        Pn       18 01 03.3 -0.2
FNA   Florina            3.64 333   PN        Pn       18 01 03.7  0.0
ALN   Alexandroupoli     3.85  29   PN        Pn       18 01 06.1 -0.4
ESDC  Sonseca Array     21.58 284   P         P        18 05 00.4 +3.3
      comp=N,0.7nm,0.8s,baz=78,slow=10,SNR=6.3
      comp=N,0.7nm,0.8s
TORD  Torodi Ar. Bea    31.18 225   P         P        18 06 26.5  0.0
      comp=N,0.4nm,0.7s,baz=37,slow=8.1,SNR=2.5
TORD                                LR        LR       18 20 09.0
      comp=N,53nm,18.5s,baz=212,slow=38
      comp=N,0.4nm,0.7s
KURBB Kurchatov Arra    40.66  53   P         P        18 07 47.5 +0.1
      comp=N,0.7nm,0.6s,baz=279,slow=8.7,SNR=6.1
      comp=N,0.7nm,0.6s
MKAR  Makanchi Array    43.57  58   P         P        18 08 10.8 -0.5
      comp=N,0.6nm,0.5s,baz=267,slow=8.9,SNR=6.5
      comp=N,0.6nm,0.5s
ZALV  Zalesovo Beam     44.31  48   P         P        18 08 17.3 +0.2
      comp=N,0.6nm,0.5s,baz=270,slow=7.2,SNR=2.4
      comp=N,0.6nm,0.5s
```

MEX 05 18:00:07.7±0.9**, 17°.35N**×**95°.63W, h102**^{km}±13^{km}**, MD3.8, Oaxaca**

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Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                    Op        ISC       h  m  s    ISC
NEUV  Arroyo Zacate      0.40 336  eP         Pn       18 00 21.4 -1.6
NEUV                               eS         Sn       18 00 32.9 -1.6
CMIG  Matias Romero      0.76 110  eP         Pn       18 00 24.7 -1.1
CMIG                               eS         Sn       18 00 37.5 -2.0
VHO   Vista Hermosa      1.09 256  eP         Pn       18 00 28.4 -1.1
VHO                                i S        Sn       18 00 44.3 -1.6
UXUV  UXUV               1.42  91  eP         Pn       18 00 32.7 -0.3
UXUV                               i S        Sn       18 00 50.4 -1.9
TOIG  Toxpalan           1.56 299  eP         Pn       18 00 32.6 -2.2
TOIG                               eS         Sn       18 00 54.5 -1.0
HUIG  Huatulco           1.64 196  eP         Pn       18 00 32.3 -3.5
HUIG                               i S        Sn       18 00 52.5 -4.7
YOIG  Yosondua           1.90 255  eP         Pn       18 00 37.4 -1.9
YOIG                               eS         Sn       18 00 59.4 -3.9
PEIG  Puerto Escondi     1.98 227  eP         Pn       18 00 36.5 -3.7
JAUV  Jalcomulco         2.29 331  eP         Pn       18 00 42.1 -2.1
JAUV                               eS         Sn       18 01 11.2 -1.0
PNIG  Pinotepa           2.57 249  eP         Pn       18 00 44.1 -3.8
PNIG                               eS         Sn       18 01 07.8  -11
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*IDC **05** 18:00:28.5±0.9, 29°.97N×79°.88E, h0^{km}, mb3.7/11, mbtmp3.8/13, ML3.8/2, Error ellipse: s-maj=30.6km s-min=14.8km az=56.0*

*NDI **05** 18:00:32.1±3.4, 30°.07N×79°.94E, h13^{km}±9^{km}, ML4.0*

ISC 05 18:00:32.0±1.3**, 30°.09N**±0°.05×**80°.09E**±0°.05**, h25**^{km}±11^{km}**, n29, σ2^{s}.20**/44**, mb3.7**/9**, 1D, Western Xizang-India border region**

```
Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                    Op        ISC       h  m  s    ISC
PTH   Pithoragarh        0.55 169  eP         Pb       18 00 41.8 -1.4
PTH                                eS         Sb       18 00 49.9 -1.0
LGTI  Lohaghat           0.65 168  eP         Pb       18 00 44.7 -0.1
LGTI                               ePG        Pn       18 00 48.1 +2.5
LGTI                               eS         Sb       18 00 54.0 +0.5
LGTI                               eSG        Sn       18 00 58.9 +3.8
DDI   Dehra Dun          1.78 278  eP         Pn       18 01 01.4 +0.2
DDI                                eS         Sn       18 01 21.9 -1.1
DDI                                 IAML               18 01 24.9
      comp=E,5µm,0.6s
DDI                                 IAML               18 01 26.0
      comp=N,5µm,0.4s
SMLA  Simla              2.73 293  eP         Pn       18 01 14.3 +0.2
SMLA                               eS         Sn       18 01 46.7 +0.4
SMLA                                IAML               18 01 50.7
      comp=E,884nm,0.4s
SMLA                                IAML               18 01 52.7
      comp=N,1µm,0.7s
NDI   New Delhi          2.88 241  ex         Pb       18 01 21.0 -1.6
NDI                                ex         Sb       18 01 56.0 -1.4
SONA  Sohna              3.21 236  ex         Pb       18 01 27.8 -0.5
BHK   Bhakra             3.43 294  eP         Pn       18 01 24.0 +0.2
BHK                                ex         Pn       18 01 25.8 +2.0
BHK                                ex         Sb       18 02 14.8 +1.5
VLK   Valmikinagar       4.32 129  eP         Pb       18 01 57.9  +11
THN   Thein Dam          4.41 303  eP         Pn       18 01 38.0 +0.7
AJM   Ajmer              6.00 234  eP         Pn       18 01 59.0 -0.3
AJM                                eP         Pb       18 02 18.7 +2.7
AJM                                ex         Sb       18 03 31.0 +3.6
CHCP  Chirah Chowk       6.81 303   P         Pn       18 02 09.3 -1.0
JBP   Jabalpur           6.90 181  ex         Pn       18 02 10.8 -0.7
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JBP				*e*P	Pn	18 02 10.8	-0.7
JBP				⇓*e*S	Sn	18 03 27.3	-1.9
BHPL	Bhopal	7.23	200	*e*P	Pn	18 02 15.6	-0.5
BHPL				*e*S	Sn	18 03 30.8	-6.6
BHPL				IAML		18 03 33.7	
	comp=E,78nm,0.2s						
BHPL				IAML		18 03 34.6	
	comp=N,69nm,0.4s						
THW	Thamme Wali	7.63	293	P	Pn	18 02 19.6	-1.9
CEP	Cherat	7.88	300	P	Pn	18 02 24.4	-0.8
BOK	Bokaro	8.13	139	*e*P	Pn	18 02 29.9	+1.5
BOK				*e*S	Sn	18 03 57.4	-2.1
AAK	Ala-Archa	13.30	342	Pn	Pn	18 03 39.0	-0.3
	comp=N,0.5nm,0.3s,baz=216,slow=7.1,SNR=4.0						
AAK				Sn	Sn	18 06 03.6	-2.9
	comp=N,0.2nm,0.3s,baz=288,slow=13,SNR=1.7						
	comp=N,1.1nm,0.3s						
MKAR	Makanchi Array	16.76	5	Pn	Pn	18 04 22.8	-2.2
	comp=N,0.4nm,0.3s,baz=184,slow=13,SNR=15						
MKAR				Sn	Sn	18 07 23.5	-6.9
	comp=N,0.2nm,0.3s,baz=183,slow=21,SNR=5.0						
	comp=N,0.8nm,0.4s						
KURBB	Kurchatov Arra	20.54	357	P	P	18 05 09.1	+0.7
	comp=N,0.6nm,0.6s,baz=184,slow=11,SNR=9.4						
	comp=N,0.6nm,0.6s						
CMAR	Chiang Mai Arr	20.69	120	P	Pn	18 05 12.8	0.0
	comp=N,2.0nm,0.5s,baz=312,slow=12,SNR=16						
	comp=N,2.0nm,0.5s						
ZALV	Zalesovo Beam	24.08	7	P	P	18 05 46.3	+1.1
	comp=N,1.2nm,0.6s,baz=203,slow=9.7,SNR=5.5						
	comp=N,1.2nm,0.6s						
AKTO	Aktyubinsk	26.22	327	P	P	18 06 05.2	+0.6
	comp=N,2.2nm,0.7s,baz=153,slow=7.8,SNR=7.5						
	comp=N,2.2nm,0.7s						
SONM	Songino Array	26.86	41	P	P	18 06 13.7	+3.0
	comp=N,0.6nm,0.5s,baz=225,slow=10,SNR=5.1						
	comp=N,0.6nm,0.5s						
FINES	FINESS Array B	46.98	328	P	P	18 09 01.2	+0.6
	comp=N,1.4nm,0.5s,baz=121,slow=10,SNR=8.3						
	comp=N,1.4nm,0.5s						
ARCES	ARCESS Array B	49.94	338	P	P	18 09 24.4	+1.1
	comp=N,1.5nm,0.5s,baz=118,slow=9.8,SNR=15						
	comp=N,1.5nm,0.5s						
NOA	NORSAR Array B	54.00	326	P	P	18 09 54.5	+0.8
	comp=N,0.5nm,0.7s,baz=73,slow=7.0,SNR=3.3						
	comp=N,0.5nm,0.7s						
WRA	Warramunga Arr	72.11	127	P	P	18 11 55.1	+0.7
	comp=N,0.5nm,0.7s,baz=321,slow=6.0,SNR=14						
	comp=N,0.5nm,0.7s						
TORD	Torodi Ar. Bea	73.59	276	P	P	18 12 02.9	-0.6
	comp=N,0.3nm,0.6s,baz=55,slow=5.7,SNR=1.7						
	comp=N,0.3nm,0.6s						
ASAR	Alice Springs	74.33	130	P	P	18 12 08.1	+0.5
	comp=N,0.5nm,0.7s,baz=315,slow=6.0,SNR=20						
	comp=N,0.5nm,0.7s						

MEX 05 18:00:57.1±0.8, 16°.21N×98°.43W, h20km±314km, MD3.4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.34	58	*e*P	Pb	18 01 03.2	-1.3
CRIG	Cruz Grande	0.85	308	*i* P	Pb	18 01 10.6	-2.7
CRIG				*i* S	Sb	18 01 20.3	-4.0
MGIG	Malinaltepec	1.03	349	*e*P	Pb	18 01 13.1	-3.4
MGIG				*i* S	Sb	18 01 24.4	-5.3
TLIG	Tlapa	1.35	354	*e*P	Pn	18 01 18.2	-2.7
TLIG				*e*S	Sn	18 01 34.1	-4.3

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*IDC **05** 18:21:55.2±1.4, 13°.71N×51°.72E, h0km, mb3.7/13, mbtmp3.7/14, ML4.2/1, MS3.5/32, Error ellipse: s-maj=31.2km s-min=21.4km az=3.0*

*NEIC **05** 18:21:58.1±2.0, 13°.71N±0°.10×51°.93E±0°.07, h10km±1km, mb4.4/28, Error ellipse: s-maj=16.9km s-min=11.5km az=192.0*

*OMAN **05** 18:22:01.1±0.1, 13°.96N×52°.07E, h60km±3km, mb5.1/9, ml4.3/6, Error ellipse: s-maj=2.3km s-min=1.2km az=257.0*

*SGS **05** 18:22:03.9, 14°.55N×51°.82E, h15km, Ml3.6*

ISC 05 18:21:57.2±0.6, 13°.77N±0°.06×51°.94E±0°.06, h10km, n105, σ2^s.09/84, mb4.2/27, MS3.5/30, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.54	128	Pn	Pn	18 22 35.6	-2.9
SOCY	Socotra	2.54	128	P	Pn	18 22 36.4	-2.2
	SNR=297						
SOCY				S	Sn	18 23 05.1	-4.5
ABTO	Aybut	3.80	20	P	Pn	18 22 53.9	-1.9
	SNR=28						
ABTO				P	Pn	18 22 54.0	-1.9
	SNR=19						
ABTO				S	Sn	18 23 35.5	-5.2
RBK	Rabkut	4.31	30	P	Pn	18 23 02.7	-0.1
	SNR=65						
RBK				S	Sn	18 23 52.1	-1.1
	SNR=5.3						
WHFO	Wadi Hawf	4.49	23	P	Pn	18 23 03.8	-1.6
	SNR=41						
WHFO				S	Sn	18 23 53.3	-4.5
DMTO	DMTO	4.88	36	P	Pn	18 23 10.1	-0.5
	SNR=100						
DMTO				S	Sn	18 24 05.5	-1.8
	SNR=6.9						
DOK	Doka	5.26	23	P	Pn	18 23 14.5	-1.5
	SNR=15						
DOK				S	Sn	18 24 12.2	-4.5
SHAO	Shalim	5.52	39	P	Pn	18 23 19.1	-0.4
	SNR=8.9						
ATD	Arta Tunnel	9.15	257	LR	LR	18 26 45.7	
	comp=Z,630nm,18.9s,baz=114,slow=32						
ATD	Arta Tunnel	9.15	257		Pn	18 24 08.8	-0.7
MHTO	MHTO	9.20	38	P	Pn	18 24 09.6	-0.4
	SNR=9.9						
MHTO				S	Sn	18 25 49.7	-3.9
TATS	Tathlith	9.94	306	P	Pn	18 24 16.1	-4.2
JMDO	Jabal Madar	10.37	34	P	Pn	18 24 25.2	-0.9
JMDO				S	Sn	18 26 17.6	-4.9
SMDO	Samad	10.91	31	P	Pn	18 24 31.4	-2.1
SMDO				S	Sn	18 26 27.7	-8.1
HOQ	Hoqain	11.01	27	P	Pn	18 24 36.7	+1.8
HOQ				S	Sn	18 26 31.3	-6.8
WBK	Wadi Bani Khal	11.04	36	P	Pn	18 24 34.3	-1.0
	SNR=12						
WBK				S	Sn	18 26 31.7	-7.3
ASUD	Al Ashush, Dub	11.27	16	P	Pn	18 24 36.9	-1.5
	SNR=32						
ASUD				S	Sn	18 26 36.7	-7.7
ASUD	Al Ashush, Dub	11.27	16	Pn	Pn	18 24 35.8	-2.5
ASUD				Sn	Sn	18 26 30.8	-14
WSAR	Wadi Sarin	11.36	33	Pn	Pn	18 24 38.9	-0.7
	1.5nm,0.3s,baz=249,slow=14,SNR=13						
WSAR				Sn	Sn	18 26 38.6	-8.0
	1.7nm,0.3s,baz=359,slow=9.3,SNR=8.3						
WSAR				LR	LR	18 28 49.2	
	comp=Z,222nm,18.8s,baz=230,slow=36						
	3.8nm,0.4s						
FAQ	Al Faqa, Dubai	11.45	17	Pn	Pn	18 24 37.8	-3.1
ASHO	Ashiyiah	11.53	19	Pn	Pn	18 24 39.4	-2.6
HATD	Hatta, Dubai	11.69	19	P	Pn	18 24 43.6	-0.6
HATD				S	Sn	18 26 47.2	-7.6
HATD	Hatta, Dubai	11.69	19	Pn	Pn	18 24 41.7	-2.5
NAZ	Nazwa, Dubai	11.70	17	Pn	Pn	18 24 38.7	-5.7
UOSS	Minazif	11.82	19	Pn	Pn	18 24 45.0	-1.0
UOSS	Minazif	11.82	19	P	Pn	18 24 45.0	-1.0
UOSS				S	Sn	18 26 50.9	-7.2
UOSS	Minazif	11.82	19	Pn	Pn	18 24 43.5	-2.5
SHMA	Al-Shehemyia	12.06	356	P	Pn	18 24 45.1	-4.2
MSFE	Esma-Masafi	12.20	18	Pn	Pn	18 24 48.3	-2.8
MASF	Masafi	12.21	18	P	Pn	18 24 49.4	-1.9
BANOM	Banah	12.77	18	P	Pn	18 24 56.2	-2.8
	SNR=6.3						
BANOM	Banah	12.77	18	Pn	Pn	18 24 54.8	-4.2
SHME	Shamm	12.84	17	Pn	Pn	18 24 55.7	-4.2
FURI	Furi	13.88	251	Pn	Pn	18 25 12.0	-2.4
LODK	Lodwar	19.33	239	P	P	18 26 23.0	+0.1
HRA	Herat	22.55	23	P	P	18 26 57.0	-0.8
HRA				IAmb	IAmb	18 27 10.5	
	comp=Z,13nm,1.1s						
MMAI	Mount Meron Ar	24.38	325	LR	LR	18 37 08.9	
	comp=Z,160nm,19.9s,baz=306,slow=38						
GEYT	Alibeck	24.68	12	P	P	18 27 18.7	+0.3
	comp=Z,2.4nm,0.7s,baz=128,slow=43,SNR=3.0						
GEYT				LR	LR	18 38 17.5	
	comp=Z,54nm,21.3s,baz=214,slow=40						
	comp=Z,2.4nm,0.7s						
GEYT	Alibeck	24.68	12	P	P	18 27 18.7	+0.3
GEYT				IAmb	IAmb	18 27 29.1	
	comp=Z,6.2nm,0.8s						
GYA0B	ALIBECK ARRAY	24.68	12		P	18 27 18.9	+0.5
GYA0B				IAmb	IAmb	18 27 29.1	
	comp=Z,8.1nm,0.8s						
MARD	Mardin	25.48	339	P	P	18 27 25.6	-0.2
MARD				IAmb	IAmb	18 27 37.8	
	comp=Z,7.6nm,0.9s						
KBL	Kabul	25.83	34	P	P	18 27 29.8	+0.7
KBL				IAmb	IAmb	18 27 42.0	
	comp=Z,6.7nm,0.9s						
GNI	Garni	27.03	348	LR	LR	18 39 26.9	
	comp=Z,151nm,18.4s,baz=184,slow=39						
GNI	Garni	27.03	348	P	P	18 27 41.7	+1.9
GAR	Garm	29.92	29	P	P	18 28 03.7	-1.9
BRTR	Keskin Array B	30.46	331	LR	LR	18 41 14.2	
	comp=Z,71nm,19.2s,baz=150,slow=38						
KBZ	Khabaz	30.85	347	P	P	18 28 14.6	+1.1
	comp=Z,1.3nm,0.7s,baz=210,slow=13,SNR=2.8						
KBZ				LR	LR	18 43 05.0	
	comp=Z,235nm,18.3s,baz=156,slow=41						
	comp=Z,1.3nm,0.7s						
BTK	Batken	30.99	29	P	P	18 28 16.8	+1.8
BTK				IAmb	IAmb	18 28 27.9	
	comp=Z,5.1nm,1.1s						
KIV	Kislovodsk	31.11	347	P	P	18 28 16.6	+0.7
IDI	Anoyia	32.45	316	LR	LR	18 43 39.7	
	comp=Z,55nm,19.6s,baz=96,slow=40						
OPO	Ambohidratompo	32.47	188	LR	LR	18 39 35.5	
	comp=Z,44nm,19.9s,baz=183,slow=33						
KK31	Karatay Array	33.32	25	P	P	18 28 35.9	+0.6
KKAR	Karatay Array	33.32	25	P	P	18 28 36.4	+1.1
KKAR	Karatay Array	33.32	25	P	P	18 28 36.2	+0.9
KKAR				IAmb	IAmb	18 28 48.0	
	comp=Z,2.9nm,0.9s						
AAK	Ala-Archa	34.74	30	LR	LR	18 43 50.2	
	comp=Z,55nm,20.1s,baz=225,slow=38						
AAK	Ala-Archa	34.74	30	P	P	18 28 46.4	-1.4
AAK				IAmb	IAmb	18 29 00.7	
	comp=Z,4.0nm,0.8s						
BOOM	Boomskoye usch	35.34	31	P	P	18 28 54.9	+1.9
BOOM				IAmb	IAmb	18 29 08.0	
	comp=Z,7.0nm,1.2s						
KDJ	Kajisay	35.73	33	P	P	18 28 56.9	+0.5
KDJ				IAmb	IAmb	18 29 15.9	
	comp=Z,4.0nm,0.9s						
ABKAR	Akbulak array	36.00	9	P	P	18 28 58.2	-0.1
ABKAR	Akbulak array	36.00	9	P	P	18 28 58.4	+0.1
ABKAR				IAmb	IAmb	18 29 09.2	
	comp=Z,13nm,1.1s						
AKTO	Aktyubinsk	36.90	6	LR	LR	18 47 18.9	
	comp=Z,50nm,18.3s,baz=171,slow=41						
VTS	Vitosha	37.95	325	P	P	18 29 17.3	+2.1
MLR	Muntele Rosu	38.52	330	LR	LR	18 45 07.0	
	comp=Z,72nm,20.7s,baz=142,slow=36						
BELG	Belogornoye	38.69	356	LR	LR	18 50 09.2	
	comp=Z,78nm,18.6s,baz=174,slow=44						
AKASG	Malin Array Be	41.20	338	P	P	18 29 41.0	-1.0
	comp=Z,0.2nm,0.3s,baz=51,slow=30,SNR=1.5						
AKASG				LR	LR	18 48 45.2	
	comp=Z,55nm,19.1s,baz=173,slow=39						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	41.20	338	P	P	18 29 46.0	+4.1
AKBB				IAmb	IAmb	18 29 51.2	
	comp=Z,12nm,1.4s						
MAKZ	Makanchi	41.44	31	P	P	18 29 44.8	+0.7
MK31	Makanchi Array	41.59	32	P	P	18 29 46.1	+0.8
MKAR	Makanchi Array	41.59	32	P	P	18 29 46.9	+1.6
	comp=Z,0.8nm,0.5s,baz=215,slow=9.0,SNR=14						
MKAR				LR	LR	18 48 40.0	
	comp=Z,30nm,18.5s,baz=238,slow=38						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	41.59	32	P	P	18 29 45.3	0.0
BRVK	Borovoye	41.82	17	P	P	18 29 47.8	+0.8
WMQ	Urumqi	42.78	39	*e*P	P	18 29 58.4	+3.2
ARU	Arti	42.88	5	P	P	18 29 59.8	+4.2
ARU				IAmb	IAmb	18 30 06.1	
	comp=Z,5.9nm,0.8s						
GOMU	GeErMu	44.35	52	P	P	18 30 15.2	+6.9
GOMU				pP	pwP	18 30 18.0	+4.3
GOMU				sP	sP	18 30 25.3	+14
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,35nm,3.9s						
KIRV	Kirov	44.78	358	LR	LR	18 56 03.5	
	comp=Z,58nm,18.4s,baz=190,slow=46						
CM31	Chiang Mai Arr	45.30	78	P	P	18 30 15.4	-0.2
CMAR	Chiang Mai Arr	45.30	78	P	P	18 30 17.3	+1.7
	comp=Z,1.1nm,0.8s,baz=275,slow=8.2,SNR=7.8						
CMAR				LR	LR	18 50 24.9	
	comp=Z,39nm,18.1s,baz=275,slow=38						
	comp=Z,1.1nm,0.8s						
CMAR	Chiang Mai Arr	45.30	78	P	P	18 30 17.7	+2.0
VRAC	Vranov	45.77	328	LR	LR	18 52 38.2	
	comp=Z,35nm,18.1s,baz=134,slow=40						
LBTB	Lobatse	46.33	214	LR	LR	18 48 50.9	
	comp=Z,65nm,21.7s,baz=41,slow=35						
GERES	GERESS Array B	47.03	326	P	P	18 30 27.7	-1.2
	comp=Z,0.1nm,0.3s,baz=248,slow=41,SNR=1.7						
	comp=Z,0.1nm,0.3s						
TSUM	Tsumeb	47.10	227	LR	LR	18 51 35.6	
	comp=Z,97nm,18.3s,baz=84,slow=38						
ZAA0	Zalesovo Array	47.70	26	P	P	18 30 36.7	+2.8
ZAA0				IAmb	IAmb	18 30 40.8	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	47.70	26	P	P	18 30 33.9	0.0
	comp=Z,0.9nm,0.5s,baz=224,slow=8.1,SNR=5.3						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	47.70	26	P	P	18 30 33.8	-0.1
KLMR	Klimovskoe	47.88	352	*e*P	P	18 30 41.5	+6.3
KLMR				AMP		18 30 44.4	
	comp=Z,21nm,0.9s						
PZH	PanZhiHua	48.17	67	P	P	18 30 39.8	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.2s						
TORD	Torodi Ar. Bea	48.80	276	P	P	18 30 41.1	-1.9
	comp=Z,1.3nm,0.9s,baz=94,slow=7.9,SNR=6.6						
	comp=Z,1.3nm,0.9s						
BOSA	Boshof	49.41	211	LR	LR	18 51 34.2	
	comp=Z,43nm,18.7s,baz=20,slow=36						
FINES	FINESS Array B	51.14	344	P	P	18 30 59.4	-0.7
	comp=Z,0.8nm,0.6s,baz=126,slow=9.7,SNR=7.1						
FINES				LR	LR	18 54 56.5	
	comp=Z,48nm,18.8s,baz=145,slow=39						
	comp=Z,0.8nm,0.6s						
FINES	FINESS Array B	51.14	344	P	P	18 31 02.3	+2.3
HFS	Hagfors	54.08	338	LR	LR	18 55 56.8	
	comp=Z,84nm,19.0s,baz=142,slow=38						
MDT	Midelt	54.65	301	LR	LR	18 54 14.5	
	comp=Z,49nm,18.4s,baz=141,slow=36						
ESDC	Sonseca Array	55.20	309	P	P	18 31 29.0	-1.5
	comp=Z,1.0nm,1.1s,baz=62,slow=26,SNR=4.3						
ESDC				LR	LR	18 54 04.3	
	comp=Z,29nm,21.2s,baz=104,slow=35						
	comp=Z,1.0nm,1.1s						
ESDC	Sonseca Array	55.20	309	P	P	18 31 28.8	-1.6
NOA	NORSAR Array B	55.60	337	LR	LR	18 57 01.2	
	comp=Z,51nm,18.3s,baz=140,slow=38						
SONM	Songino Array	56.27	41	P	P	18 31 39.5	+1.4
	comp=Z,0.2nm,0.6s,baz=284,slow=37,SNR=1.9						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	58.17	349	P	P	18 31 49.7	-1.3
	comp=Z,1.5nm,0.9s,baz=353,slow=8.6,SNR=2.0						
ARCES				LR	LR	18 59 53.0	
	comp=Z,47nm,21.7s,baz=148,slow=39						
	comp=Z,1.5nm,0.9s						
SPITS	Spitsbergen Ar	66.78	352	LR	LR	19 04 42.2	
	comp=Z,20nm,18.2s,baz=142,slow=38						
JMIC	Jan Mayen	67.64	342	LR	LR	19 03 52.7	
	comp=Z,17nm,21.0s,baz=78,slow=37						
YAK	Yakutsk	72.19	29	LR	LR	19 07 21.4	
	comp=Z,50nm,18.5s,baz=267,slow=38						
TIXI	Tiksi	72.91	19	P	P	18 33 29.2	+3.0
TIXI				IAmb	IAmb	18 33 36.2	
	comp=Z,3.4nm,1.1s						
SFJD	Kangerlussuaq	82.28	337	LR	LR	19 14 29.1	
	comp=Z,20nm,18.9s,baz=83,slow=38						
ASAR	Alice Springs	88.27	115	P	P	18 34 49.3	-0.2
	comp=Z,0.2nm,0.7s,baz=296,slow=4.0,SNR=4.2						
	comp=Z,0.2nm,0.7s						
PETK	Petropavlovsk-	88.31	35	LR	LR	19 18 19.2	
	comp=Z,29nm,19.6s,baz=96,slow=38						

TAP 05 18:28:56.9, 24°.97N×122°.31E, h38km, ML2.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.29	278	*e*P	Pn	18 29 04.4	-0.7
	baz=278						
SXI1	Grass Mountain	0.41	288	*e*P	Pn	18 29 06.6	+0.4
	baz=288						
SXI1				*e*S	Sn	18 29 13.2	+0.1
	baz=288						
TIPB	Shuangxi	0.44	270	P	Pn	18 29 06.8	+0.2
	baz=271						
TIPB				S	Sn	18 29 13.5	-0.1
	baz=271						
NWF	Wu-fen Shan	0.49	282	*e*P	Pn	18 29 08.1	+0.7
	baz=282						
NWF				*e*S	Sn	18 29 15.5	+0.7
	baz=282						
WFSB	Wu-fen Shan	0.49	282	*e*P	Pn	18 29 08.1	+0.8
	baz=282						
WFSB				S	Sn	18 29 15.6	+1.0
	baz=282						
TWC	Suao	0.55	229	P	Pn	18 29 08.0	-0.3
	baz=217						
TWC				*e*S	Sn	18 29 16.1	-0.1
	baz=217						
TWE	Neicheng	0.63	247	P	Pn	18 29 09.6	+0.2
	baz=239						
NDS	Dongshan	0.63	238	P	Pn	18 29 09.5	+0.1
	baz=237						
FUSB	Fushanzhiwuyua	0.69	252	*e*P	Pn	18 29 11.1	+0.9
	baz=252						
FUSB				*e*S	Sn	18 29 20.9	+1.2
	baz=252						
YM08	YM08	0.69	289	*e*P	Pn	18 29 12.1	+1.9
	baz=289						
PCYT	Pengchaiyu	0.69	342	*e*P	Pn	18 29 12.7	+2.5
	baz=342						
YM01	YM01	0.69	285	P	Pn	18 29 11.7	+1.5
	baz=285						
TWY	Chenhua	0.71	296	*e*P	Pn	18 29 13.0	+2.5
	baz=296						
ENA	Nanau	0.74	224	P	Pn	18 29 11.1	+0.2
	baz=213						
ENTT	Nioudou	0.75	244	*e*P	Pn	18 29 11.7	+0.8
	baz=239						
NWLT	Wulai	0.76	256	*e*P	Pn	18 29 12.2	+1.2
	baz=255						
NDT	Datong Townshi	0.81	243	*e*P	Pn	18 29 13.4	+1.6
	baz=241						
YOJ	Yonaguni jima	0.81	128	*e*P	Pn	18 29 12.0	+0.2
	baz=122						
YOJ				S	Sn	18 29 22.6	-0.1
	baz=122						
LATG	Datong	0.83	239	*e*P	Pn	18 29 13.1	+1.0
	baz=228						
LATG				S	Sn	18 29 24.1	+0.8
	baz=228						
NSK	Sanguang	0.91	252	*e*P	Pn	18 29 15.0	+1.8
	baz=256						
NNSB	Datong	1.00	238	*e*P	Pn	18 29 16.1	+1.7
	baz=228						

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*IDC **05** 18:47:55.0±4.5, 9°.57S×125°.59E, h77km±50km, mb3.4/1, mbtmp3.8/5, ML3.6/4, MS2.9/1, Error ellipse: s-maj=48.2km s-min=15.4km az=35.0*

ISC 05 18:47:51.9±1.3, 9°.4S±0°.1×125°.69E±0°.09, h35km, n13, σ2^s.04/14, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.15	248	P	Pn	18 48 25.7	+0.4
	11nm,0.3s,baz=145,slow=3.7,SNR=29						
BATI				S	Sn	18 48 51.8	+1.0
	49nm,0.4s,baz=211,slow=22,SNR=15						
	30nm,0.4s						
MMRI	Maumere	3.49	282	P	Pn	18 48 43.6	-0.2
MTN	Manton Dam	6.34	123	P	Pn	18 49 29.1	+6.1
KNRA	Kununurra	6.92	155	P	Pn	18 49 34.8	+3.9
KDU	Kakadu	7.42	117	P	Pn	18 49 43.6	+5.9
PLAI	Plampang	7.83	274	P	Pn	18 49 42.7	-0.7
FITZ	Fitzroy Crossi	8.64	180	P	Pn	18 49 56.1	+1.6
	1.0nm,0.3s,baz=7.4,slow=9.9,SNR=40						
FITZ				S	Sn	18 51 28.2	-2.6
	9.4nm,0.6s,baz=275,slow=8.1,SNR=12						
	3.0nm,0.4s						
WRA	Warramunga Arr	13.40	142	P	Pn	18 50 59.9	+0.2
	0.3nm,0.3s,baz=322,slow=13,SNR=12						
WRA				S	Sn	18 53 24.8	-2.8
	0.7nm,0.5s,baz=316,slow=24,SNR=8.6						
	1.1nm,0.6s						
WRAB	Tennant Creek	13.40	142	P	Pn	18 51 02.5	+2.8
WRKA	Warakurna	15.74	171	P	Pn	18 51 31.7	+0.5
ASAR	Alice Springs	16.21	152	P	Pn	18 51 38.7	+1.5
	0.4nm,0.3s,baz=320,slow=11,SNR=73						
ASAR				S	Sn	18 54 36.1	+0.1
	0.2nm,0.5s,baz=315,slow=21,SNR=4.3						
	1.5nm,0.5s						
JCJ	Chichijima	39.66	23	LR	LR	19 09 50.7	
	comp=Z,16nm,18.6s,baz=148,slow=33						
MKAR	Makanchi Array	68.00	329	P	P	18 58 46.5	-1.0
	0.5nm,0.5s,baz=128,slow=7.7,SNR=6.4						
	0.5nm,0.5s						

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*FUNV **05** 18:56:58.6, 11°.22N×61°.85W, h32km, MW3.5*

*TRN **05** 18:56:58.2, 11°.22N×61°.87W, h49km, MD3.1*

ISC 05 18:56:57.1±1.4, 11°.20N±0°.04×61°.91W±0°.05, h65km±19km, n16, σ1^s.24/27, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.74	138	*e*P	Pn	18 57 12.5	+0.4
TRN				*e*S	Sn	18 57 22.8	-0.4
GRFF	Grenada Fort F	0.86	11	*e*P	Pn	18 57 13.8	+0.1
GRFF				*e*S	Sn	18 57 25.5	-0.4
GRGR	Grenville	0.96	15	*e*P	Pn	18 57 14.9	0.0
GRGR				*e*S	Sn	18 57 27.3	-0.7
GRHS	Sauteurs	1.05	14	*e*P	Pn	18 57 16.9	+0.8
TOSP	Speyside	1.35	86	*e*P	Pn	18 57 20.1	+0.2
TOSP				*e*S	Sn	18 57 36.7	-0.3
GCMP	Grenada, Carri	1.36	20	*e*P	Pn	18 57 20.1	0.0
GCMP				*e*S	Sn	18 57 36.7	-0.7
CRUV	Carupano	1.41	248	*e*P	Pn	18 57 21.7	+1.0
CRUV				*e*S	Sn	18 57 39.1	+0.7
SVB	Belmont	2.16	17	*e*P	Pn	18 57 32.8	+2.0
SVB				*e*S	Sn	18 57 56.1	-0.5
MCLT	Moule a Chique	2.67	21	*e*S	Sn	18 58 08.1	-0.8
PCRV	Puerto La Cruz	2.87	249	*e*P	Pn	18 57 41.7	+1.2
PCRV				*e*S	Sn	18 58 13.2	-0.7
PRGV	PARIAGUAN	3.63	228	*e*P	Pn	18 57 52.3	+1.5
PRGV				*e*S	Sn	18 58 31.2	-1.3
BIRV	Birongo	4.34	261	*e*P	Pn	18 58 01.5	+0.8
BIRV				*e*S	Sn	18 58 49.1	-1.0
MERV	Las Mercedes	4.73	246	*e*P	Pn	18 58 07.5	+1.5
MERV				*e*S	Sn	18 58 57.9	-1.7
CACV	CAICARA DEL OR	5.83	232	*e*P	Pn	18 58 16.9	-4.0
CACV				*e*S	Sn	18 59 14.1	-12
BAUV	El Baul	6.44	250	*e*S	Sn	18 59 40.5	-1.1
BAUV	El Baul	6.44	250	*e*P	Pn	18 58 30.0	+0.6
BAUV				*e*S	Sn	18 59 38.1	-3.5

IDC 05 19:10:51.0±10.0, 9°.37S×108°.97W, h0km, mb3.6/4, mbtmp3.6/4, MS3.5/21, Error ellipse: s-maj=269.3km s-min=172.2km az=128.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	17.66	181	LR	LR	19 19 14.5	
	comp=Z,61nm,21.3s,baz=123,slow=28						
CMIG	Matias Romero	29.75	28	LR	LR	19 26 07.4	
	comp=Z,152nm,19.2s,baz=201,slow=31						
NNA	Nana	31.66	98	LR	LR	19 26 24.3	
	comp=Z,73nm,19.5s,baz=250,slow=30						
H03N2	Juan Fernandez	36.57	135	T	T	19 56 31.4	
	baz=308,slow=77,SNR=23						
H03N1	Juan Fernandez	36.59	135	T	T	19 56 32.9	
	baz=308,slow=77,SNR=16						
H03N3	Juan Fernandez	36.59	135	T	T	19 56 34.8	
	baz=308,slow=77,SNR=15						

TXAR	**Lajitas Array**	**38.82**	**7**	P	P	19 18 18.3	+0.4
	1.1nm,1.1s,baz=184,slow=9.9,SNR=5.8						
	1.1nm,1.1s						
PPT	**Papeete**	**40.25**	**254**	LR	LR	19 30 07.4	
	comp=Z,27nm,19.1s,baz=145,slow=29						
LPAZ	**La Paz**	**40.35**	**104**	LR	LR	19 31 07.1	
	comp=Z,137nm,21.9s,baz=242,slow=30						
LVC	**Limon Verde**	**40.55**	**114**	LR	LR	19 30 43.5	
	comp=Z,158nm,19.8s,baz=254,slow=29						
PLCA	**Paso Flores**	**46.15**	**139**	LR	LR	19 33 34.0	
	comp=Z,135nm,20.4s,baz=298,slow=30						
SIV	**San Ignacio**	**47.10**	**103**	LR	LR	19 36 16.8	
	comp=Z,62nm,18.3s,baz=7.0,slow=32						
NVAR	**Mina Array Bea**	**48.35**	**350**	P	P	19 19 34.7	-0.1
	0.2nm,0.4s,baz=165,slow=7.4,SNR=1.9						
	0.2nm,0.4s						
ELK	**Elko**	**50.20**	**354**	LR	LR	19 36 43.1	
	comp=Z,38nm,19.4s,baz=238,slow=31						
SJG	**San Juan**	**50.33**	**57**	LR	LR	19 40 08.5	
	comp=Z,24nm,18.1s,baz=218,slow=35						
TKL	**Tuckaleechee C**	**50.71**	**27**	LR	LR	19 38 29.6	
	comp=Z,9.5nm,21.6s,baz=182,slow=33						
CPUP	**Villa Florida**	**51.61**	**116**	LR	LR	19 37 51.2	
	comp=Z,110nm,20.8s,baz=272,slow=31						
PDAR	**Pinedale Array**	**51.89**	**359**	P	P	19 20 00.9	-0.7
	0.6nm,0.8s,baz=172,slow=7.0,SNR=4.3						
	0.6nm,0.8s						
YBH	**Yreka Blue Hor**	**52.40**	**347**	LR	LR	19 37 17.2	
	comp=Z,63nm,19.1s,baz=158,slow=30						
SADO	**Sadowa**	**60.25**	**24**	LR	LR	19 45 24.8	
	comp=Z,19nm,19.7s,baz=320,slow=34						
PMSA	**Palmer Station**	**63.53**	**160**	LR	LR	19 42 32.1	
	comp=Z,52nm,18.6s,baz=218,slow=30						
YKA	**Yellowknife Ar**	**71.78**	**357**	P	P	19 22 15.1	+0.1
	0.9nm,0.9s,baz=165,slow=6.4,SNR=5.9						
	0.9nm,0.9s						
RCBR	**Riachuelo**	**72.41**	**93**	LR	LR	19 51 22.6	
	comp=Z,42nm,19.9s,baz=328,slow=34						
SCHQ	**Schefferville**	**73.06**	**24**	LR	LR	19 52 30.4	
	comp=Z,33nm,21.3s,baz=248,slow=34						
KDAK	**Kodiak Island**	**75.75**	**338**	LR	LR	19 48 32.6	
	comp=Z,93nm,18.4s,baz=83,slow=30						
FRB	**Frobisher Bay**	**79.09**	**17**	LR	LR	19 55 02.6	
	comp=Z,34nm,21.0s,baz=231,slow=34						
INK	**Inuvik**	**79.43**	**351**	LR	LR	19 55 22.8	
	comp=Z,31nm,18.5s,baz=114,slow=34						
SFJD	**Kangerlussuaq**	**86.86**	**20**	LR	LR	20 00 50.4	
	comp=Z,38nm,19.3s,baz=218,slow=34						
H11S2	**WAKE ISLAND Hy**	**87.62**	**289**	T	T	21 01 18.1	
	baz=100,slow=75						
H11S1	**WAKE ISLAND Hy**	**87.63**	**289**	T	T	21 01 19.8	
	baz=100,slow=75						
H11S3	**WAKE ISLAND Hy**	**87.64**	**289**	T	T	21 01 21.4	
	baz=100,slow=75						
H11N3	**WAKE ISLAND Hy**	**87.65**	**290**	T	T	21 01 23.3	
	baz=101,slow=74						
H11N2	**WAKE ISLAND Hy**	**87.67**	**290**	T	T	21 01 17.9	
	baz=101,slow=74						
H11N1	**WAKE ISLAND Hy**	**87.67**	**290**	T	T	21 01 24.9	
	baz=101,slow=74						

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*NEIC **05** 19:20:44.2±1.5, 6°.2S±0°.1×150°.4E±0°.1, h38^{km}±7^{km}, mb4.4/18, Error ellipse: s-maj=25.2km s-min=10.2km az=136.0*

*IDC **05** 19:20:45.6±1.2, 6°.13S×150°.30E, h63^{km}±14^{km}, mb4.0/7, mbtmp4.3/9, MS3.0/6, Error ellipse: s-maj=29.3km s-min=8.6km az=133.0*

ISC 05 19:20:44.4±0.7, **6°.2S**±0°.1×**150°.3E**±0°.1, **h50^{km}, n52, σ0^{s}.92**/52, **mb4.3**/10, **MS2.9**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.52**	**43**	P	**Pn**	**19 21 23.1**	**+0.2**
	63nm,0.4s,baz=304,slow=1.1,SNR=18						
KRVT				S	**Sn**	**19 21 54.3**	**+1.9**
	209nm,0.6s,baz=322,slow=12,SNR=5.0						
KRVT				LR	LR	19 22 30.4	
	comp=Z,301nm,20.1s,baz=25,slow=42						
RABL	**Rabaul**	**2.70**	**44**	Pn	**Pn**	**19 21 24.4**	**-1.0**
RABL	**Rabaul**	**2.70**	**44**	P	**Pn**	**19 21 25.7**	**+0.3**
PMG	**Port Moresby**	**4.48**	**224**	P	**Pn**	**19 21 51.3**	**+1.4**
	53nm,0.4s,baz=26,slow=7.3,SNR=89						
PMG				S	**Sn**	**19 22 42.9**	**+2.2**
	194nm,0.5s,baz=77,slow=20,SNR=16						
PMG				LR	LR	19 23 27.4	
	comp=Z,134nm,18.4s,baz=344,slow=36						
PMG	**Port Moresby**	**4.48**	**224**		**Pn**	**19 21 49.5**	**-0.3**
PMG				Sn	**Sn**	**19 22 39.3**	**-1.4**
PMG	**Port Moresby**	**4.48**	**224**	P	**Pn**	**19 21 51.1**	**+1.3**
PMG	**Port Moresby**	**4.48**	**224**	P	**Pn**	**19 21 51.2**	**+1.4**
COEN	**Coen**	**10.45**	**222**	Pn	**Pn**	**19 23 11.0**	**-0.7**
COEN	**Coen**	**10.45**	**222**	P	**Pn**	**19 23 11.6**	**-0.1**
QIS	**Mount Isa**	**17.68**	**215**	P	**Pn**	**19 24 47.4**	**+0.2**
EIDS	**Eidsvold**	**19.11**	**178**	P	**P**	**19 25 02.8**	**-0.5**
MTN	**Manton Dam**	**20.03**	**249**	P	**P**	**19 25 13.6**	**+0.3**
MTN				IAmb	IAmb	19 25 40.6	
	comp=Z,13nm,1.1s						
RMQ	**Roma**	**20.26**	**184**	P	Pn	19 25 17.4	-0.8
GUMO	**Guam**	**20.35**	**345**	LR	LR	19 31 40.2	
	comp=Z,18nm,20.4s,baz=140,slow=32						
WB0	**Warramunga Arr**	**20.54**	**227**	P	**P**	**19 25 18.3**	**-0.7**
WB0				IAmb	IAmb	19 25 20.2	
	comp=Z,13nm,0.7s						
WR0	**Warramunga Arr**	**20.56**	**227**	P	**P**	**19 25 19.7**	**+0.6**
WR0				IAmb	IAmb	19 25 20.4	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**20.68**	**227**	P	**P**	**19 25 21.1**	**+0.7**
WRAB				IAmb	IAmb	19 25 21.6	
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**20.68**	**227**	P	**P**	**19 25 20.8**	**+0.4**
WB2	**Warramunga Arr**	**20.68**	**227**	P	**P**	**19 25 20.9**	**+0.5**
WB2				IAmb	IAmb	19 25 21.7	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**20.69**	**227**	P	**P**	**19 25 20.8**	**+0.2**
	comp=Z,7.4nm,0.4s,baz=51,slow=10,SNR=66						
WRA				PcP	**PcP**	**19 29 29.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=48,slow=2.4,SNR=1.9						
	comp=Z,7.4nm,0.4s						
WRA	**Warramunga Arr**	**20.69**	**227**	P	**P**	**19 25 20.1**	**-0.5**
QLP	**Quilpie**	**21.11**	**195**	P	**P**	**19 25 26.4**	**+1.4**
DZM	**Mont Dzumac**	**22.21**	**137**	P	**P**	**19 25 38.0**	**+1.1**
	comp=Z,4.4nm,1.0s,baz=288,slow=19,SNR=2.0						
	comp=Z,4.4nm,1.0s						
DZM	**Mont Dzumac**	**22.21**	**137**	IAmb	IAmb	19 25 59.1	
	comp=Z,12nm,1.2s						
KNRA	**Kununurra**	**23.14**	**244**	P	**P**	**19 25 46.5**	**-0.1**
KNRA				IAmb	IAmb	19 26 12.9	
	comp=Z,29nm,1.4s						
KNRA	**Kununurra**	**23.14**	**244**	P	**P**	**19 25 46.2**	**-0.4**
INKA	**Innaminka**	**23.30**	**202**	P	**P**	**19 25 48.7**	**+0.7**
AS31	**Alice Springs**	**23.49**	**220**	P	**P**	**19 25 50.3**	**+0.4**
ASAR	**Alice Springs**	**23.49**	**220**	P	**P**	**19 25 50.6**	**+0.7**
	comp=Z,4.7nm,0.4s,baz=54,slow=9.1,SNR=219						
ASAR				LR	LR	19 34 40.1	
	comp=Z,45nm,18.7s,baz=150,slow=36						
	comp=Z,4.7nm,0.4s						
ASAR	**Alice Springs**	**23.49**	**220**	P	**P**	**19 25 50.3**	**+0.4**
ARMA	**Armidale**	**24.16**	**177**	P	**P**	**19 25 55.5**	**-0.7**
ARMA				IAmb	IAmb	19 25 58.6	
	comp=Z,12nm,1.2s						
OOD	**Oodnadatta**	**25.60**	**211**	P	**P**	**19 26 09.3**	**+0.2**
BATI	**Baumata**	**26.66**	**260**	P	**P**	**19 26 20.7**	**+1.8**
	comp=Z,5.9nm,0.6s,baz=45,slow=4.3,SNR=1.7						
	comp=Z,5.9nm,0.6s						
LCRK	**Leigh Creek**	**26.70**	**204**	P	**P**	**19 26 18.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**26.83**	**242**	P	**P**	**19 26 20.1**	**-0.2**
	comp=Z,5.3nm,0.5s,baz=52,slow=7.7,SNR=53						
	comp=Z,5.3nm,0.5s						
STKA	**Stephens Creek**	**26.85**	**197**	P	**P**	**19 26 19.8**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=25,slow=14,SNR=13						
STKA				LR	LR	19 36 23.8	
	comp=Z,53nm,18.4s,baz=25,slow=35						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**26.85**	**197**	P	**P**	**19 26 19.8**	**-0.6**
STKA	**Stephens Creek**	**26.85**	**197**	P	**P**	**19 26 20.1**	**-0.3**
WRKA	**Warakurna**	**28.22**	**226**	P	**P**	**19 26 32.5**	**-0.3**
MULG	**Mulgathing**	**28.45**	**211**	P	**P**	**19 26 34.3**	**-0.4**
HTT	**Hallett**	**29.12**	**200**	P	**P**	**19 26 41.6**	**+0.9**
BBOO	**Buckleboo**	**29.65**	**205**	P	**P**	**19 26 44.8**	**-0.5**
FORT	**Forrest**	**32.18**	**218**	P	**P**	**19 27 07.5**	**-0.2**
FORT	**Forrest**	**32.18**	**218**	P	**P**	**19 27 07.9**	**+0.2**
MBWA	**Marble Bar**	**33.14**	**240**	P	**P**	**19 27 15.1**	**-1.2**
MBWA	**Marble Bar**	**33.14**	**240**	P	**P**	**19 27 15.7**	**-0.5**
JCJ	**Chichijima**	**33.98**	**347**	LR	LR	19 39 44.0	
	comp=Z,20nm,20.8s,baz=129,slow=34						
GIRL	**Giralia**	**38.43**	**241**	P	**P**	**19 28 03.7**	**+2.1**
CASY	**Casey**	**66.00**	**196**	P	**P**	**19 31 25.0**	**-0.4**
CASY				IAmb	IAmb	19 31 35.0	
	comp=Z,8.3nm,1.4s						
VNDA	**Vanda**	**71.58**	**177**	P	**P**	**19 32 00.1**	**+0.1**
VNDA				IAmb	IAmb	19 32 23.6	
	comp=Z,4.2nm,1.4s						
ILAR	**Eielson Array**	**84.36**	**23**	P	**P**	**19 33 08.8**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=267,slow=4.5,SNR=2.5						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**148.31**	**285**	PKPbc	**PKPbc**	**19 40 25.3**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=100,slow=2.3,SNR=10						

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*IDC **05** 19:22:39.0±2.9, 30°.17N×80°.24E, h0^{km}, mb3.1/3, mbtmp3.2/4, ML2.7/1, Error ellipse: s-maj=90.9km s-min=31.0km az=51.0*

*NDI **05** 19:22:39.8±1.5, 30°.02N×79°.92E, h10^{km}, ML3.6*

ISC 05 19:22:39.9±0.8, **29°.98N**±0°.07×**79°.96E**±0°.09, **h16^{km}, n10, σ1^{s}.53**/14, **Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**0.48**	**152**	*e*P	**Pg**	**19 22 49.6**	**0.0**
PTH				*e*S	**Sg**	**19 22 57.0**	**+0.9**
LGTI	**Lohaghat**	**0.58**	**154**	*e*P	**Pg**	**19 22 51.9**	**+0.5**
LGTI				*e*S	**Sg**	**19 23 01.1**	**+1.9**
DDI	**Dehra Dun**	**1.68**	**282**	*e*P	**Pn**	**19 23 09.2**	**+0.5**
DDI				*e*S	**Sn**	**19 23 29.3**	**-0.7**
DDI				IAML		19 23 32.6	
	comp=N,1µm,0.4s						
DDI				IAML		19 23 33.8	
	comp=E,1µm,0.3s						
SMLA	**Simla**	**2.67**	**296**	*e*P	**Pn**	**19 23 22.5**	**+0.3**
SMLA				*e*S	**Sn**	**19 23 55.3**	**+1.1**
SMLA				IAML		19 23 58.8	
	comp=E,179nm,0.4s						
SMLA				IAML		19 23 59.4	
	comp=N,310nm,0.3s						
CHCP	**Chirah Chowk**	**6.78**	**305**	P	**Pn**	**19 24 19.2**	**+0.5**
BHPL	**Bhopal**	**7.08**	**199**	*e*S	**Sn**	**19 25 39.9**	**-3.2**
MKAR	**Makanchi Array**	**16.89**	**6**	Pn	**Pn**	**19 26 33.4**	**-2.2**
	baz=186,slow=11,SNR=2.2						
	comp=N,0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**20.65**	**357**	P	**P**	**19 27 17.3**	**-1.4**
	comp=N,0.2nm,0.7s,baz=184,slow=11,SNR=2.4						
	comp=N,0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.73**	**119**	P	**P**	**19 27 20.0**	**+0.1**
	comp=N,0.6nm,0.6s,baz=313,slow=12,SNR=5.1						
	comp=N,0.6nm,0.6s						
FINES	**FINESS Array B**	**47.02**	**328**	P	**P**	**19 31 11.5**	**+1.3**
	comp=N,1.5nm,1.1s,baz=117,slow=8.4,SNR=4.0						
	comp=N,1.5nm,1.1s						

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*IDC **05** 19:39:06.8±2.2, 7°.11S×130°.04E, h125^{km}±25^{km}, mb3.2/2, mbtmp3.5/7, Error ellipse: s-maj=39.0km s-min=20.7km az=95.0*

ISC 05 19:39:04.8±0.9, **7°.16S**±0°.07×**130°.1E**±0°.1, **h100^{km}, n7, σ3^{s}.19**/10, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.36**	**11**	P	**Pn**	**19 40 37.5**	**+1.4**
	2.0nm,0.4s,baz=164,slow=23,SNR=16						
SIJI				S	**Sn**	**19 41 44.3**	**-3.0**
	3.0nm,0.2s,baz=278,slow=24,SNR=8.8						
BATI	**Baumata**	**7.04**	**244**	P	**Pn**	**19 40 48.0**	**+2.7**
	6.9nm,0.4s,baz=82,slow=3.7,SNR=5.6						
BATI				S	**Sn**	**19 42 01.3**	**-2.6**
	7.9nm,0.4s,baz=225,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**11.71**	**201**	P	**Pn**	**19 41 48.9**	**+0.3**
	0.7nm,0.2s,baz=31,slow=12,SNR=29						
FITZ				S	Sn	19 43 48.0	-9.3
	1.0nm,0.4s,baz=240,slow=8.8,SNR=1.7						
WRA	**Warramunga Arr**	**13.35**	**162**	P	**Pn**	**19 42 11.7**	**+1.3**
	0.2nm,0.3s,baz=344,slow=13,SNR=8.0						
WRA				S	Sn	19 44 32.0	-5.3
	1.0nm,0.6s,baz=334,slow=22,SNR=4.0						
ASAR	**Alice Springs**	**16.81**	**168**	P	**P**	**19 42 57.5**	**+2.8**
	0.1nm,0.5s,baz=340,slow=10,SNR=4.5						
ASAR				S	**Sn**	**19 45 55.3**	**-5.7**
	0.3nm,0.5s,baz=321,slow=20,SNR=6.2						
MKAR	**Makanchi Array**	**68.42**	**327**	P	**P**	**19 49 55.0**	**-0.9**
	0.4nm,0.5s,baz=121,slow=7.7,SNR=6.2						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.70**	**328**	P	**P**	**19 50 20.0**	**-1.8**
	0.2nm,0.5s,baz=127,slow=4.8,SNR=2.2						
	0.2nm,0.5s						

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*NEIC **05** 19:44:05.1±0.9, 21°.49S±0°.09×173°.81W±0°.09, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=15.8km s-min=12.8km az=325.0*

*IDC **05** 19:44:08.1±1.3, 21°.03S×174°.61W, h0^{km}, mb4.1/8, mbtmp4.1/10, ML4.1/2, MS3.3/6, Error ellipse: s-maj=49.8km s-min=20.9km az=133.0*

ISC 05 19:44:05.3±0.6, **21°.48S**±0°.10×**173°.68W**±0°.07, **h10^{km}, n36, σ2^{s}.12**/31, **mb4.4**/13, **MS3.6**/4, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.25**	**57**	Pn	**Pn**	**19 45 11.3**	**+1.1**
NIUE				Sn	**Sn**	**19 45 55.7**	**-4.2**
AFI	**Afiamalu**	**7.74**	**14**	Pn	**Pn**	**19 45 58.3**	**+0.1**
	3.7nm,0.3s,baz=225,slow=10,SNR=1.9						
AFI				Sn	Sn	19 47 16.0	-10
	2.8nm,0.3s,baz=30,slow=23,SNR=1.4						
	10nm,0.3s						
MSVF	**Nonsavu**	**8.64**	**294**	Pn	**Pn**	**19 46 13.1**	**+2.6**
	0.8nm,0.3s,baz=124,slow=14,SNR=23						
MSVF				LR	LR	19 48 49.9	
	comp=Z,108nm,21.6s,baz=98,slow=37						
MSVF	**Nonsavu**	**8.64**	**294**		Pn	19 46 13.9	+3.4
RAR	**Rarotonga**	**12.96**	**91**	Pn	**Pn**	**19 47 10.9**	**+1.3**
	6.7nm,0.3s,baz=234,slow=5.8,SNR=12						
RAR				LR	LR	19 52 09.2	
	comp=Z,86nm,19.0s,baz=236,slow=35						
DZM	**Mont Dzumac**	**18.47**	**264**	P	**P**	**19 48 22.1**	**+0.6**
	4.0nm,0.7s,baz=107,slow=20,SNR=2.7						
DZM	**Mont Dzumac**	**18.47**	**264**	P	**Pn**	**19 48 19.7**	**-2.0**
DZM				IAmb	IAmb	19 48 29.9	
	comp=Z,18nm,1.4s						
URZ	**Urewera**	**18.52**	**203**	P	**Pn**	**19 48 26.7**	**+4.7**
	comp=Z,0.5nm,0.3s,baz=128,slow=24,SNR=3.8						
	comp=Z,4.2nm,0.7s						
BKZ	**Black Stump Fm**	**19.54**	**203**		**Pn**	**19 48 33.2**	**-1.2**
BFZ	**Birch Farm**	**20.97**	**202**		Pn	19 48 49.8	-1.4
BFZ				IAmb	IAmb	19 49 01.0	
	comp=Z,11nm,0.9s						
PPT	**Papeete**	**23.04**	**85**	LR	LR	19 56 37.4	
	comp=Z,81nm,19.1s,baz=186,slow=31						
LTZ	**Lake Taylor**	**24.28**	**206**	P	**P**	**19 49 21.1**	**-1.7**
LTZ				IAmb	IAmb	19 49 37.0	
	comp=Z,9.2nm,0.9s						
STKA	**Stephens Creek**	**41.04**	**246**	P	**P**	**19 51 47.7**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=94,slow=16,SNR=3.8						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**41.04**	**246**	P	**P**	**19 51 46.3**	**-2.7**
ASAR	**Alice Springs**	**48.23**	**257**	P	**P**	**19 52 44.6**	**-2.0**
	comp=Z,2.7nm,0.8s,baz=100,slow=7.6,SNR=31						
ASAR				PcP	**PcP**	**19 54 15.6**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=110,slow=3.8,SNR=2.1						
	comp=Z,2.7nm,0.8s						
WR0	**Warramunga Arr**	**48.27**	**262**	P	**P**	**19 52 44.8**	**-2.2**
WR0				IAmb	IAmb	19 53 01.2	
	comp=Z,5.5nm,1.2s						
WB0	**Warramunga Arr**	**48.45**	**262**	P	**P**	**19 52 46.2**	**-2.1**
WB0				IAmb	IAmb	19 53 03.2	
	comp=Z,3.9nm,1.1s						
WB2	**Warramunga Arr**	**48.45**	**262**	P	**P**	**19 52 46.1**	**-2.3**
WB2				IAmb	IAmb	19 53 04.9	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**48.46**	**262**	P	**P**	**19 52 46.0**	**-2.5**
	comp=Z,1.1nm,0.6s,baz=100,slow=7.3,SNR=29						
WRA				PcP	**PcP**	**19 54 16.4**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=98,slow=2.8,SNR=2.8						
	comp=Z,1.1nm,0.6s						
MJAR	**Matsushiro Arr**	**73.44**	**321**	P	**P**	**19 55 36.6**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=152,slow=7.1,SNR=4.6						
	comp=Z,1.3nm,0.8s						
MJAR	**Matsushiro Arr**	**73.44**	**321**	IAmb	IAmb	19 55 48.0	
	comp=Z,3.3nm,1.3s						
YBH	**Yreka Blue Hor**	**78.60**	**36**	LR	LR	20 25 47.9	
	comp=Z,29nm,18.7s,baz=308,slow=32						
NVAR	**Mina Array Bea**	**79.03**	**41**	P	P	19 56 15.3	+5.4
	comp=Z,0.5nm,0.5s,baz=228,slow=9.4,SNR=4.0						
	comp=Z,0.5nm,0.5s						
NVAR	**Mina Array Bea**	**79.03**	**41**	P	**P**	**19 56 10.6**	**+0.7**
KLU	**Klutina**	**85.64**	**13**	P	**P**	**19 56 43.7**	**0.0**
BARN	**Barnard Glacie**	**86.21**	**15**	P	**P**	**19 56 47.4**	**+0.6**
PDAR	**Pinedale Array**	**86.95**	**42**	LR	LR	20 29 56.3	
	comp=Z,22nm,18.8s,baz=352,slow=32						
SEY	**Seymchan**	**88.29**	**345**	P	**P**	**19 56 58.5**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=100,slow=19,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**88.42**	**11**	P	**P**	**19 57 00.2**	**+3.1**
	comp=Z,1.6nm,1.1s,baz=210,slow=5.9,SNR=6.0						
	comp=Z,1.6nm,1.1s						
ILAR	**Eielson Array**	**88.42**	**11**	P	**P**	**19 56 55.9**	**-1.2**
CO06	**Fray Jorge**	**89.01**	**123**	P	**P**	**19 57 00.2**	**-0.7**
CO06				IAmb	IAmb	19 57 27.4	
	comp=Z,4.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**94.25**	**288**	P	**P**	**19 57 27.2**	**+1.9**
	comp=Z,1.0nm,0.8s,baz=111,slow=1.6,SNR=7.5						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**94.25**	**288**	P	**P**	**19 57 24.4**	**-0.9**
LPAZ	**La Paz**	**97.95**	**111**	LR	LR	20 33 16.6	
	comp=Z,16nm,19.9s,baz=102,slow=30						
AKASG	**Malin Array Be**	**145.74**	**334**	PKP	**PKiKP**	**20 03 46.4**	**-1.6**
	comp=Z,1.2nm,0.2s,baz=43,slow=1.8,SNR=5.3						
CLL	**Collm**	**149.77**	**352**	*e*PKPbc	**PKPdf**	**20 03 52.0**	**+1.4**
CLL				*e*x	x	20 04 02.0	
	comp=Z,7.0nm,1.3s						

IDC 05 19:47:03.1±2.4, **13°.74N**×**51°.69E, h0^{km}, mb3.4**/4, **mbtmp3.4**/4, **MS3.4**/1, **Error ellipse: s-maj=69.0km s-min=33.7km az=173.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**41.74**	**32**	P	P	19 54 54.2	+0.1
	0.2nm,0.6s,baz=224,slow=10,SNR=2.1						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**45.55**	**78**	P	P	19 55 24.9	-0.2
	0.2nm,0.3s,baz=268,slow=9.0,SNR=1.1						
	0.2nm,0.3s						
LBTB	**Lobatse**	**46.16**	**214**	LR	LR	20 16 00.6	
	comp=Z,42nm,19.4s,baz=204,slow=38						
TORD	**Torodi Ar. Bea**	**48.55**	**276**	P	P	19 55 48.6	0.0
	0.2nm,0.6s,baz=88,slow=7.8,SNR=2.0						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**51.10**	**345**	P	P	19 56 06.9	-0.3
	0.9nm,0.8s,baz=142,slow=7.0,SNR=2.2						
	0.9nm,0.8s						

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*IDC **05** 19:52:32.3±3.0, 23°.84S×179°.68E, h466^{km}±89^{km}, mb3.6/4, mbtmp4.5/5, Error ellipse: s-maj=115.2km s-min=30.1km az=70.0*

*NEIC **05** 19:52:36.4±2.5, 24°.1S±0°.1×180°.0E±0°.1, h539^{km}±9^{km}, mb4.6/33, Error ellipse: s-maj=21.6km s-min=14.1km az=49.0*

ISC 05 19:52:35.2±0.9, **23°.98S**±0°.08×**179°.96E**±0°.10, **h526^{km}, n59, σ1^{s}.54**/65, **mb4.6**/18, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.60**	**161**	P	P	19 54 02.5	-6.3
GLKZ				S	**S**	**19 55 24.8**	**-0.6**
NIUE	**Niue**	**10.60**	**65**	P	**P**	**19 55 00.3**	**+1.1**
MARNC	**Mare, Loyalty**	**11.28**	**280**	P	**P**	**19 55 06.9**	**+0.7**
PINNC	**Pines Island,**	**11.58**	**274**	P	**P**	**19 55 10.8**	**+1.5**
OUZ	**Omahuta**	**12.49**	**205**	P	**P**	**19 55 22.2**	**+3.5**
WIAZ	**Waiheke Island**	**13.43**	**197**	P	**P**	**19 55 31.0**	**+2.5**
MKAZ	**Moumakai**	**13.72**	**196**	P	**P**	**19 55 34.1**	**+2.6**
HAZ	**Te Kaha**	**13.86**	**187**	P	**P**	**19 55 33.9**	**+1.0**
HAZ				S	**S**	**19 58 00.2**	**+0.8**
RUGZ	**Raukumara Rang**	**14.08**	**187**	P	**P**	**19 55 37.3**	**+2.0**
RUGZ				S	**S**	**19 58 05.8**	**+1.9**
TWGZ	**Tauwhareparae**	**14.26**	**186**	P	**P**	**19 55 40.2**	**+3.1**
TWGZ				S	**S**	**19 58 12.2**	**+5.1**
URZ	**Urewera**	**14.44**	**189**	P	**P**	**19 55 38.3**	**-0.7**
	10.0nm,0.5s,baz=225,slow=1.1,SNR=15						
URZ				S	**S**	**19 58 09.6**	**-1.0**
	3.6nm,0.5s,baz=129,slow=17,SNR=2.1						
URZ	**Urewera**	**14.44**	**189**	P	**P**	**19 55 38.1**	**-0.9**
URZ	**Urewera**	**14.44**	**189**	P	P	19 55 34.1	-4.9
URZ				S	**S**	**19 58 08.3**	**-2.4**
MWZ	**Matawai**	**14.46**	**188**	P	P	19 55 34.0	-5.2
MWZ				S	**S**	**19 58 10.3**	**-0.7**
RTZ	**Ruatahuna**	**14.81**	**189**	P	**P**	**19 55 43.5**	**+0.5**
RTZ				S	**S**	**19 58 18.0**	**+0.2**
BKZ	**Black Stump Fm**	**15.42**	**190**	P	**P**	**19 55 47.6**	**-1.7**
BKZ				IAmb	IAmb	19 55 53.4	
	comp=Z,15nm,1.3s						
TMVZ	**Te Maari**	**15.52**	**192**	P	**P**	**19 55 50.0**	**-0.4**
ETVZ	**East Tongariro**	**15.54**	**192**	P	**P**	**19 55 50.2**	**-0.4**
BFZ	**Birch Farm**	**16.95**	**190**	P	**P**	**19 56 02.7**	**-1.7**
BFZ				IAmb	IAmb	19 56 04.8	
	comp=Z,17nm,0.6s						
BHW	**Baring Head**	**17.89**	**193**	P	**P**	**19 56 12.3**	**-0.7**
QRZ	**Quartz Range**	**17.92**	**199**	P	**P**	**19 56 14.5**	**+1.2**
PLWZ	**Palliser**	**17.98**	**191**	P	**P**	**19 56 12.3**	**-1.6**
NNZ	**Nelson**	**18.05**	**196**	P	**P**	**19 56 14.0**	**-0.5**
NNZ				IAmb	IAmb	19 56 18.2	
	comp=Z,17nm,0.8s						
TUWZ	**Tuamarina**	**18.11**	**195**	P	**P**	**19 56 15.1**	**0.0**
BSWZ	**Blackbirch Sta**	**18.40**	**195**	P	**P**	**19 56 17.8**	**+0.1**
THZ	**Tophouse**	**18.68**	**197**	P	**P**	**19 56 20.5**	**+0.1**
KHZ	**Kahutara**	**19.14**	**195**	P	**P**	**19 56 24.2**	**-0.2**
LTZ	**Lake Taylor**	**19.80**	**197**	P	**P**	**19 56 30.1**	**-0.4**
OXZ	**Oxford**	**20.37**	**197**	P	**P**	**19 56 35.3**	**-0.3**
MQZ	**McQueen’s Vall**	**20.57**	**195**	P	**P**	**19 56 38.5**	**+1.0**
RPZ	**Rata Peaks**	**21.00**	**198**	P	**P**	**19 56 42.2**	**+0.9**
	comp=Z,14nm,0.6s,baz=39,slow=6.5,SNR=14						
	comp=Z,14nm,0.6s						
RPZ	**Rata Peaks**	**21.00**	**198**	P	**P**	**19 56 40.5**	**-0.8**
FOZ	**Fox Glacier**	**21.22**	**201**	P	**P**	**19 56 43.2**	**-0.1**
FOZ				IAmb	IAmb	19 56 46.0	
	comp=Z,24nm,0.9s						
LBZ	**Lake Benmore**	**21.87**	**199**	P	**P**	**19 56 47.9**	**-1.3**
LBZ				IAmb	IAmb	19 56 54.0	
	comp=Z,29nm,1.4s						
WKZ	**Wanaka**	**22.63**	**201**	P	**P**	**19 56 56.0**	**+0.1**
WKZ				IAmb	IAmb	19 57 12.2	
	comp=Z,33nm,1.1s						
MLZ	**Mavora Lakes**	**23.40**	**201**	P	**P**	**19 57 03.0**	**+0.2**
MLZ				IAmb	IAmb	19 57 04.9	
	comp=Z,24nm,1.2s						
DCZ	**Deep Cove**	**23.82**	**203**	P	**P**	**19 57 06.5**	**+0.1**
DCZ				IAmb	IAmb	19 57 26.1	
	comp=Z,38nm,1.3s						
WHZ	**Wether Hill Ro**	**23.92**	**201**	P	**P**	**19 57 08.7**	**+1.2**
CTAO	**Charters Tower**	**31.43**	**270**	P	**P**	**19 58 12.8**	**-0.7**
CTAO				IAmb	IAmb	19 58 13.9	
	comp=Z,12nm,0.7s						
TOO	**Toolangi**	**32.37**	**237**	P	**P**	**19 58 22.3**	**+1.0**
TOO				IAmb	IAmb	19 58 23.1	
	comp=Z,19nm,1.4s						
PMG	**Port Moresby**	**34.48**	**289**	P	**P**	**19 58 37.3**	**-2.0**
PMG				IAmb	IAmb	19 58 38.0	
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**34.66**	**248**	P	**P**	**19 58 40.9**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=100,slow=11,SNR=5.9						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**34.66**	**248**	IAmb	IAmb	19 58 42.1	
	comp=Z,0.9nm,0.8s						
COEN	**Coen**	**36.09**	**279**	P	**P**	**19 58 51.1**	**-1.7**
COEN				IAmb	IAmb	19 58 51.7	
	comp=Z,9.7nm,1.1s						
BBOO	**Buckleboo**	**39.38**	**247**	P	**P**	**19 59 18.6**	**-0.8**
BBOO				IAmb	IAmb	19 59 34.6	
	comp=Z,28nm,1.4s						
AS31	**Alice Springs**	**41.98**	**261**	P	**P**	**19 59 39.5**	**-0.9**
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**19 59 39.5**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=94,slow=7.3,SNR=45						
ASAR				S	**S**	**20 05 21.1**	**0.0**
	comp=Z,0.4nm,0.9s,baz=101,slow=14,SNR=4.7						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**19 59 39.3**	**-1.0**
WR0	**Warramunga Arr**	**42.17**	**266**	P	**P**	**19 59 39.9**	**-1.9**
WB2	**Warramunga Arr**	**42.35**	**266**	P	**P**	**19 59 41.5**	**-1.8**
WB0	**Warramunga Arr**	**42.35**	**267**	P	**P**	**19 59 41.6**	**-1.6**
WB0				IAmb	IAmb	19 59 42.3	
	comp=Z,7.4nm,0.7s						
WRA	**Warramunga Arr**	**42.36**	**266**	P	**P**	**19 59 41.7**	**-1.6**
	comp=Z,5.8nm,0.7s,baz=103,slow=8.2,SNR=88						
WRA				S	**S**	**20 05 30.1**	**+3.6**
	comp=Z,0.8nm,0.9s,baz=104,slow=16,SNR=4.9						

	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**42.36**	**266**		**P**	**19 59 41.8**	**-1.6**
FORT	**Forrest**	**46.24**	**250**	P	**P**	**20 00 12.5**	**-0.6**
FORT				IAmb	IAmb	20 00 13.0	
	comp=Z,17nm,0.7s						
KNRA	**Kununurra**	**48.65**	**270**	P	**P**	**20 00 29.6**	**-1.7**
FITZ	**Fitzroy Crossi**	**50.78**	**266**	P	**P**	**20 00 46.4**	**-0.6**
FITZ				IAmb	IAmb	20 00 46.8	
	comp=Z,15nm,1.2s						
QSPA	**South Pole Qui**	**66.11**	**180**	P	**P**	**20 02 29.3**	**-0.6**
NACB	**Ninganchiao**	**74.12**	**306**	P	**P**	**20 03 19.7**	**+1.8**
NACB				IAmb	IAmb	20 03 22.2	
	comp=Z,39nm,1.1s						
MAW	**Mawson**	**77.66**	**200**	P	**P**	**20 03 35.8**	**-1.1**

*IDC **05** 19:54:47.1±0.9, 40°.96N×75°.62E, h0^{km}, mb3.8/12, mbtmp3.7/19, ML2.8/6, MS3.3/11, Error ellipse: s-maj=14.8km s-min=13.3km az=24.0*

*BJI **05** 19:54:48.8±0.0, 41°.45N×75°.99E, h5^{km}, mb4.0/8, mB4.4/3, ML3.9/4, Ms3.9/2, Ms7 3.6/2*

*KRNET **05** 19:54:48.8±0.1, 41°.31N×75°.82E, h20^{km}, mb4.5*

*SOME **05** 19:54:48.5, 41°.28N×75°.83E, h15^{km}, MS3.7*

*MOS **05** 19:54:49.7±1.7, 41°.20N×75°.67E, h18^{km}, mb4.5/6, Error ellipse: s-maj=5.9km s-min=3.8km az=90.0*

MOS Felt (III-IV) at Birdik, (III) at Naryn, Dzhan-Bulak, Tash-Bulak, At-Bashy, Dostuk, Ak-Dzhar, Dyykan, Ak-Talaa, Acha-Kaindy, Bash-Kaindy, Emgek-Talaa, (II-III) at Kara-Suu, Kara-Bulun, Kalinina, Taldy-Suu, Ozgeryush, Ak-Kyya, Ak-Muz, Orto-Saz, Kenesh, Min-Bulak, Kuybysheva, Kulanak.

*NNC **05** 19:54:50.4±1.2, 41°.34N×75°.77E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=8.7km s-min=5.9km az=177.0*

*KNET **05** 19:54:51.1±0.8, 41°.45N×75°.70E, h6^{km}±4^{km}, ml3.9, Error ellipse: s-maj=6.1km s-min=3.3km az=154.0*

ISC 05 19:54:48.8±0.9**, 41°.30N**±0°.03×**75°.77E**±0°.02**, h3**^{km}±5^{km}**, n192, σ1^{s}39**/261**, mb3.8**/20**, MS3.4**/8**, 46C-34D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.01**	**20**	P	**Pg**	**19 55 07.5**	**-0.6**
	287nm,0.2s,SNR=1765						
ULHL				⇑S	**Sg**	**19 55 20.5**	**-0.7**
	1µm,0.3s						
ULHL	**Ulahol**	**1.01**	**20**	*i* PG	**Pg**	**19 55 07.4**	**-0.7**
ULHL	**Ulahol**	**1.01**	**20**	⇑*i*P	**Pg**	**19 55 07.4**	**-0.7**
	baz=18						
ULHL				⇑*i*S	**Sg**	**19 55 20.6**	**-0.7**
	baz=18						
BOOM	**Boomskoye usch**	**1.20**	**6**	*i* PG	**Pg**	**19 55 10.7**	**-1.0**
BOOM	**Boomskoye usch**	**1.20**	**6**	⇓*i*P	**Pg**	**19 55 10.7**	**-1.0**
	baz=4.0						
BOOM				⇓*i*S	**Sg**	**19 55 26.7**	**-0.6**
	baz=4.0						
ARLS	**Aral**	**1.22**	**298**	*i* PG	**Pg**	**19 55 11.7**	**-0.5**
ARLS				*i* S	**Sg**	**19 55 28.2**	**+0.1**
ARLS	**Aral**	**1.22**	**298**	⇓*i*P	**Pg**	**19 55 11.7**	**-0.5**
	baz=96						
ARLS				⇓*i*S	**Sg**	**19 55 28.2**	**+0.1**
	baz=96						
UCH	**Uchtor**	**1.32**	**315**	P	**Pg**	**19 55 13.7**	**-0.4**
	172nm,0.2s,SNR=394						
UCH				⇓S	**Sg**	**19 55 31.3**	**0.0**
	1µm,0.2s						
UCH	**Uchtor**	**1.32**	**315**	*i* PG	**Pg**	**19 55 13.7**	**-0.4**
UCH				*i* S	**Sb**	**19 55 31.7**	**-0.3**
UCH	**Uchtor**	**1.32**	**315**	⇓*i*P	**Pg**	**19 55 13.7**	**-0.4**
	baz=14						
UCH				⇓*i*S	**Sb**	**19 55 31.7**	**-0.3**
	baz=14						
KDJ	**Kajisay**	**1.34**	**51**	*i* PG	**Pn**	**19 55 13.1**	**-1.5**
KDJ	**Kajisay**	**1.34**	**51**	⇓*i*P	**Pn**	**19 55 13.1**	**-1.5**
	baz=51						
KDJ				⇓*i*S	**Sg**	**19 55 30.6**	**-1.3**
	baz=51						
KBK	**Karagaybulak**	**1.49**	**336**	⇓P	**Pb**	**19 55 17.0**	**-0.2**
	351nm,0.1s,SNR=268						
KBK				⇑S	**Sg**	**19 55 37.0**	**+0.4**
	2µm,0.2s						
KBK	**Karagaybulak**	**1.49**	**336**	*i* P*	**Pn**	**19 55 16.3**	**-0.3**
KBK				*i* S	**Sb**	**19 55 36.1**	**-0.5**
KBK	**Karagaybulak**	**1.49**	**336**	⇑*i*P	**Pn**	**19 55 16.3**	**-0.3**
	baz=34						
KBK				⇑*i*S	**Sb**	**19 55 36.1**	**-0.5**
	baz=34						
TKM2	**Tokmak 2**	**1.63**	**355**	P	**Pb**	**19 55 19.1**	**-0.5**
	157nm,0.2s,SNR=541						
TKM2				⇓S	**Sg**	**19 55 40.8**	**-0.3**
	897nm,0.3s						
TKM2	**Tokmak 2**	**1.63**	**355**	*i* PN	**Pb**	**19 55 18.9**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,138nm,0.5s						
TKM2	**Tokmak 2**	**1.63**	**355**	⇑P	**Pb**	**19 55 19.0**	**-0.6**
	comp=Z,138nm,0.5s						
TKM2				⇑S	**Sb**	**19 55 40.2**	**-0.4**
	comp=Z,764nm,0.5s						
TKM2	**Tokmak 2**	**1.63**	**355**	⇑*i*P	**Pn**	**19 55 18.6**	**+0.1**
	baz=54						
TKM2				⇑*i*S	**Sb**	**19 55 40.0**	**-0.6**
	baz=54						
AAK	**Ala-Archa**	**1.64**	**325**	P	**Pb**	**19 55 19.6**	**-0.2**
	comp=Z,274nm,0.2s,SNR=290						
AAK				⇑S	**Sg**	**19 55 41.3**	**-0.3**
	comp=Z,580nm,0.2s						
AAK	**Ala-Archa**	**1.64**	**325**	Pg	**Pb**	**19 55 19.3**	**-0.5**
	comp=Z,125nm,0.3s,baz=151,slow=13,SNR=640						
AAK				Lg	Lg	19 55 41.1	
	comp=Z,173nm,0.3s,baz=347,slow=22,SNR=16						
AAK	**Ala-Archa**	**1.64**	**325**	⇑*i*P	**Pb**	**19 55 19.1**	**-0.7**
	baz=24						
AAK				⇑*i*S	**Sb**	**19 55 40.9**	**-0.1**
	baz=24						
FRU1	**Bishkek**	**1.73**	**331**	*i* PN	**Pb**	**19 55 20.9**	**-0.4**
FRU1				*i* S	**Sg**	**19 55 44.3**	**-0.2**
FRU1	**Bishkek**	**1.73**	**331**	⇓*i*P	**Pb**	**19 55 20.9**	**-0.4**
	baz=30						
FRU1				⇓*i*S	**Sg**	**19 55 44.3**	**-0.2**
	baz=30						
KST	**Kastek**	**1.75**	**5**	*e*P	**Pb**	**19 55 21.3**	**-0.3**
	comp=Z,119nm,0.4s						
KST				*e*S	**Sg**	**19 55 45.2**	**+0.2**
	comp=Z,702nm,0.5s						
KST	**Kastek**	**1.75**	**5**	P	**Pb**	**19 55 21.3**	**-0.3**
	comp=Z,119nm,0.4s						
KST				S	**Sg**	**19 55 45.2**	**+0.2**
	comp=Z,702nm,0.5s						
AML	**Almayashu**	**1.76**	**299**	⇑P	**Pb**	**19 55 21.7**	**-0.3**
	comp=Z,314nm,0.2s,SNR=780						
AML				⇑S	**Sg**	**19 55 45.8**	**+0.3**
	comp=Z,1µm,0.3s						
AML	**Almayashu**	**1.76**	**299**	*i* PN	**Pb**	**19 55 21.5**	**-0.5**
AML				*i* S	**Sg**	**19 55 45.2**	**-0.2**
KSH	**Kashi**	**1.79**	**175**	Pg	Pg	19 55 29.6	+6.6
KSH				Sg	Sg	19 55 57.9	+12
KSH				smax	smax		
	comp=Z,4µm,0.8s						
KSH				smax	smax		
	comp=Z,4µm,0.6s						
CHMS	**Chumysh**	**1.86**	**336**	⇓P	**Pb**	**19 55 23.3**	**-0.1**
	comp=Z,270nm,0.2s,SNR=309						
CHMS				⇑S	**Sg**	**19 55 48.0**	**-0.5**
	comp=Z,826nm,0.2s						
CHMS	**Chumysh**	**1.86**	**336**	*i* PN	**Pb**	**19 55 23.3**	**-0.1**
CHMS				pmax	pmax		
	comp=Z,221nm,0.4s						
CHMS	**Chumysh**	**1.86**	**336**	⇑P	**Pb**	**19 55 23.3**	**-0.1**
	comp=Z,221nm,0.5s						
CHMS				⇑S	**Sg**	**19 55 48.1**	**-0.5**
	comp=Z,1µm,0.6s						
CHMS	**Chumysh**	**1.86**	**336**	⇑*i*P	**Pb**	**19 55 22.4**	**-1.0**
	baz=35						
CHMS				⇑*i*S	**Sb**	**19 55 46.6**	**-0.5**
	baz=35						
MTBS	**Maitube**	**1.89**	**15**	*e*P	**Pb**	**19 55 23.8**	**-0.3**
	comp=Z,135nm,0.2s						
MTBS				*e*S	**Sg**	**19 55 49.7**	**+0.1**
	comp=Z,411nm,0.3s						
MTBS	**Maitube**	**1.89**	**15**	Pg	**Pb**	**19 55 23.8**	**-0.3**
	comp=Z,135nm,0.2s						
MTBS				Lg	Lg	19 55 49.7	
	comp=Z,411nm,0.3s						
TNSS	**Tian-Shan**	**1.94**	**26**	*i* PN	**Pb**	**19 55 24.5**	**-0.6**
TNSS				*e*		19 55 51.0	
TNSS	**Tian-Shan**	**1.94**	**26**	*e*P	**Pb**	**19 55 24.6**	**-0.4**
	comp=Z,368nm,0.3s						
TNSS				*e*S	**Sg**	**19 55 51.1**	**-0.2**
	comp=Z,374nm,0.5s						
TNSS	**Tian-Shan**	**1.94**	**26**	*i* Pg	**Pb**	**19 55 24.6**	**-0.6**
	baz=28						
TNSS				*e*Lg	Lg	19 55 51.1	
	baz=28						
TNSS	**Tian-Shan**	**1.94**	**26**	Pg	**Pb**	**19 55 24.7**	**-0.4**
	comp=Z,368nm,0.3s						
TNSS				Lg	Lg	19 55 51.1	
	comp=Z,374nm,0.5s						
EKS2	**Erkin-Say**	**2.02**	**313**	⇓P	**Pb**	**19 55 26.2**	**0.0**
	comp=Z,413nm,0.5s,SNR=884						
EKS2				⇑S	**Sg**	**19 55 53.8**	**+0.3**
	comp=Z,875nm,0.5s						
EKS2	**Erkin-Say**	**2.02**	**313**	*i* PN	**Pb**	**19 55 24.8**	**-1.3**
EKS2				*i* S	**Sb**	**19 55 50.9**	**-0.8**
EKS2	**Erkin-Say**	**2.02**	**313**	⇓*i*P	**Pb**	**19 55 24.8**	**-1.3**
	baz=12						
EKS2				⇓*i*S	**Sb**	**19 55 50.9**	**-0.8**
	baz=12						
ANVS	**Anan'yevo**	**2.05**	**43**	⇑*i*P	**Pn**	**19 55 24.4**	**+0.1**
	baz=42						
ANVS				⇑*i*S	**Sn**	**19 55 49.9**	**-0.6**
	baz=42						
AAA	**Alma-Ata**	**2.09**	**24**	*i* PN	**Pb**	**19 55 27.7**	**+0.4**
AAA				*e*		19 55 56.1	
AAA	**Alma-Ata**	**2.09**	**24**	*e*P	**Pb**	**19 55 27.8**	**+0.4**
	comp=Z,504nm,0.2s						
AAA				*e*S	**Sg**	**19 55 56.6**	**+0.8**
	comp=Z,1µm,0.3s						
AAA	**Alma-Ata**	**2.09**	**24**	*i* Pg	**Pb**	**19 55 27.8**	**+0.4**
	baz=25						
AAA				*e*Lg	Lg	19 55 56.1	
	baz=25						
AAA	**Alma-Ata**	**2.09**	**24**	Pg	**Pb**	**19 55 27.8**	**+0.4**
	comp=Z,504nm,0.2s						
AAA				Lg	Lg	19 55 56.6	
	comp=Z,1µm,0.3s						
MDOK	**Medeo**	**2.09**	**27**	*i* PN	**Pb**	**19 55 27.1**	**-0.3**
MDOK				*e*		19 55 55.3	
MDOK	**Medeo**	**2.09**	**27**	*e*P	**Pb**	**19 55 27.2**	**-0.3**
	comp=Z,208nm,0.2s						
MDOK				*e*S	**Sg**	**19 55 55.6**	**-0.4**
	comp=Z,704nm,0.7s						
MDOK	**Medeo**	**2.09**	**27**	*i* Pg	**Pb**	**19 55 27.1**	**-0.3**
	baz=28						
MDOK				*e*Lg	Lg	19 55 55.4	
	baz=28						
MDOK	**Medeo**	**2.09**	**27**	⇑Pn	**Pb**	**19 55 26.9**	**-0.6**
	comp=Z,241nm,0.6s						
MDOK				⇑Sn	**Sg**	**19 55 54.8**	**-1.1**
	comp=Z,2µm,1.3s						
MDOK	**Medeo**	**2.09**	**27**	Pg	**Pb**	**19 55 27.2**	**-0.3**
	comp=Z,208nm,0.2s						
MDOK				Lg	Lg	19 55 55.6	
	comp=Z,704nm,0.7s						
KNDC	**Almaty**	**2.11**	**24**	PN	**Pg**	**19 55 28.7**	**-0.5**
KNDC				S	**Sg**	**19 55 56.5**	**-0.1**
KNDC	**Almaty**	**2.11**	**24**	⇓Pn	**Pb**	**19 55 28.1**	**+0.3**
	comp=Z,418nm,0.3s						
KNDC				⇓Sn	**Sg**	**19 55 56.5**	**-0.1**
	comp=Z,38nm,0.2s						
USP	**Ospenovka**	**2.18**	**335**	⇓P	**Pb**	**19 55 28.3**	**-0.6**
	comp=Z,854nm,0.4s,SNR=1520						
USP				⇓S	**Sg**	**19 55 57.8**	**-1.0**
	comp=Z,820nm,0.3s						
USP	**Ospenovka**	**2.18**	**335**	*i* PN	**Pn**	**19 55 26.8**	**+0.8**
USP				*i* S	**Sn**	**19 55 54.4**	**+0.8**
USP	**Ospenovka**	**2.18**	**335**	⇑*i*P	**Pn**	**19 55 26.8**	**+0.8**
	baz=34						
USP				⇑*i*S	**Sn**	**19 55 54.4**	**+0.8**
	baz=34						
PRZ	**Przheval'sk**	**2.29**	**58**	*i* PN	**Pn**	**19 55 27.9**	**+0.2**
PRZ				*i* S	**Sn**	**19 55 56.5**	**0.0**
PRZ	**Przheval'sk**	**2.29**	**58**	⇑*i*P	**Pn**	**19 55 27.9**	**+0.2**
	baz=57						
PRZ				⇑*i*S	**Sn**	**19 55 56.5**	**0.0**
	baz=57						
SGDS	**Sogindy**	**2.31**	**339**	*e*PN	**Pb**	**19 55 31.0**	**-0.1**
SGDS				*e*		19 56 02.2	
SGDS	**Sogindy**	**2.31**	**339**	*e*P	**Pb**	**19 55 31.1**	**0.0**
	comp=Z,1µm,0.4s						
SGDS				*e*S	**Sg**	**19 56 02.3**	**-0.7**
	comp=Z,428nm,0.4s						
SGDS	**Sogindy**	**2.31**	**339**	*e*Pg	**Pb**	**19 55 31.0**	**-0.1**
	baz=340						
SGDS				*e*Lg	Lg	19 56 02.3	
	baz=340						
SGDS	**Sogindy**	**2.31**	**339**	Pg	**Pb**	**19 55 31.1**	**0.0**
	comp=Z,1µm,0.4s						
SGDS				Lg	Lg	19 56 02.3	
	comp=Z,428nm,0.4s						
MRKS	**Merke**	**2.38**	**308**	*e*P	**Pg**	**19 55 35.0**	**+0.6**
	comp=Z,363nm,0.3s						
MRKS				*e*S	**Sg**	**19 56 08.0**	**+2.7**
	comp=Z,3µm,0.4s						
OHH	**Osh**	**2.39**	**252**	*i* PN	**Pn**	**19 55 30.1**	**+1.2**
OHH				*i* S	**Sn**	**19 56 00.1**	**+1.3**
OHH	**Osh**	**2.39**	**252**	⇓*i*P	**Pn**	**19 55 30.1**	**+1.2**
	baz=52						
OHH				⇓*i*S	**Sn**	**19 56 00.1**	**+1.3**
	baz=52						
KRBS	**Karabastau**	**2.40**	**358**	*e*P	**Pb**	**19 55 33.0**	**+0.4**
	comp=Z,732nm,0.6s						
KRBS				*e*S	**Sg**	**19 56 05.2**	**-0.6**
	comp=Z,1µm,0.4s						
KTBS	**Karatobe**	**2.50**	**15**	*e*P	**Pb**	**19 55 34.7**	**+0.3**
	comp=Z,274nm,0.1s						
KTBS				*e*S	**Sg**	**19 56 08.3**	**-0.9**
	comp=Z,1µm,0.6s						
KTBS	**Karatobe**	**2.50**	**15**	Pg	**Pb**	**19 55 34.7**	**+0.3**
	comp=Z,274nm,0.1s						
KTBS				Lg	Lg	19 56 08.3	
	comp=Z,1µm,0.6s						
KUU	**Kurty**	**2.63**	**9**	*i* PN	**Pb**	**19 55 36.2**	**-0.2**
KUU				*e*		19 56 11.5	
KUU	**Kurty**	**2.63**	**9**	*e*P	**Pb**	**19 55 36.4**	**-0.1**
	comp=Z,148nm,0.5s						
KUU				*e*S	**Sg**	**19 56 11.3**	**-1.8**
	comp=Z,2µm,0.6s						
KUU	**Kurty**	**2.63**	**9**	*i* Pg	**Pb**	**19 55 36.3**	**-0.2**
	baz=9.9						
KUU				*e*Lg	Lg	19 56 11.5	
	baz=9.9						
KUU	**Kurty**	**2.63**	**9**	Pg	**Pb**	**19 55 36.4**	**-0.1**
	comp=Z,148nm,0.5s						
KUU				Lg	Lg	19 56 11.3	
	comp=Z,2µm,0.6s						
SATY	**Saty**	**2.63**	**47**	*i* PN	**Pb**	**19 55 35.8**	**-0.8**
SATY				*e*		19 56 11.4	
SATY	**Saty**	**2.63**	**47**	*e*P	**Pb**	**19 55 36.1**	**-0.5**
	comp=Z,86nm,0.7s						
SATY				*e*S	**Sg**	**19 56 11.1**	**-2.2**
	comp=Z,953nm,1.1s						
SATY	**Saty**	**2.63**	**47**	*i* Pg	**Pb**	**19 55 35.9**	**-0.8**
	baz=48						
SATY				*e*Lg	Lg	19 56 11.5	
	baz=48						
SATY	**Saty**	**2.63**	**47**	Pg	**Pb**	**19 55 36.1**	**-0.5**
	comp=Z,86nm,0.7s						
SATY				Lg	Lg	19 56 11.1	
	comp=Z,953nm,1.1s						
CHKK	**Chushkaly**	**2.71**	**19**	*i* PN	**Pb**	**19 55 38.0**	**+0.2**
CHKK				*e*		19 56 14.6	
CHKK	**Chushkaly**	**2.71**	**19**	*e*P	**Pb**	**19 55 38.0**	**+0.2**
	comp=Z,181nm,0.8s						
CHKK				*e*S	**Sg**	**19 56 14.6**	**-1.1**
	comp=Z,740nm,0.4s						
CHKK	**Chushkaly**	**2.71**	**19**	*i* Pg	**Pb**	**19 55 38.1**	**+0.2**
	baz=20						
CHKK				*e*Lg	Lg	19 56 14.7	
	baz=20						
CHKK	**Chushkaly**	**2.71**	**19**	Pg	**Pb**	**19 55 38.0**	**+0.2**
	comp=Z,181nm,0.8s						
CHKK				Lg	Lg	19 56 14.6	
	comp=Z,740nm,0.4s						
ZHN	**Zhinishke**	**2.72**	**46**	*e*PN	**Pb**	**19 55 37.7**	**-0.4**
ZHN				*e*		19 56 14.1	
ZHN	**Zhinishke**	**2.72**	**46**	*e*P	**Pb**	**19 55 37.6**	**-0.6**
	comp=Z,80nm,0.3s						
ZHN				*e*S	**Sb**	**19 56 13.4**	**+1.5**
	comp=Z,520nm,0.3s						
ZHN	**Zhinishke**	**2.72**	**46**	*e*Pg	**Pb**	**19 55 37.8**	**-0.4**
	baz=47						
ZHN				*e*Lg	Lg	19 56 14.2	
	baz=47						
ZHN	**Zhinishke**	**2.72**	**46**	Pg	**Pb**	**19 55 37.6**	**-0.6**
	comp=Z,80nm,0.3s						
ZHN				Lg	Lg	19 56 13.5	
	comp=Z,520nm,0.3s						
KURS	**Kuram**	**2.82**	**38**	*e*P	**Pb**	**19 55 39.8**	**+0.1**
	comp=Z,69nm,0.7s						
KURS				*e*S	**Sg**	**19 56 17.4**	**-1.9**
	comp=Z,454nm,0.7s						
KURS	**Kuram**	**2.82**	**38**	Pg	**Pb**	**19 55 39.8**	**+0.1**
	comp=Z,69nm,0.7s						
KURS				Lg	Lg	19 56 17.4	
	comp=Z,454nm,0.7s						
ARK	**Arkit**	**2.90**	**281**	*i* PN	**Pn**	**19 55 37.3**	**+1.3**
ARK				*i* S	**Sn**	**19 56 12.5**	**+1.1**
ARK	**Arkit**	**2.90**	**281**	⇑*i*P	**Pn**	**19 55 37.3**	**+1.3**
	baz=81						
ARK				⇑*i*S	**Sn**	**19 56 12.5**	**+1.1**
	baz=81						
UZB	**Uzynbulak**	**3.04**	**52**	*i* PN	**Pb**	**19 55 43.6**	**0.0**
UZB	**Uzynbulak**	**3.04**	**52**	*e*P	**Pb**	**19 55 43.2**	**-0.4**
	comp=Z,34nm,0.3s						
UZB				*e*S	**Sb**	**19 56 23.0**	**+1.8**
	comp=Z,273nm,0.4s						
UZB	**Uzynbulak**	**3.04**	**52**	*i* Pg	**Pb**	**19 55 43.6**	**0.0**
	baz=52						
UZB	**Uzynbulak**	**3.04**	**52**	Pg	**Pb**	**19 55 43.2**	**-0.4**
	comp=Z,34nm,0.3s						
UZB				Lg	Lg	19 56 23.0	
	comp=Z,273nm,0.4s						
KPKS	**Kokpek**	**3.06**	**44**	*e*PN	**Pb**	**19 55 44.4**	**+0.6**
KPKS				*e*		19 56 24.8	
KPKS	**Kokpek**	**3.06**	**44**	*e*P	**Pb**	**19 55 43.2**	**-0.7**
	comp=Z,63nm,0.6s						
KPKS				*e*S	**Sb**	**19 56 23.3**	**+1.7**
	comp=Z,973nm,0.6s						
KPKS	**Kokpek**	**3.06**	**44**	*e*Pg	**Pb**	**19 55 44.5**	**+0.6**
	baz=45						
KPKS				*e*Lg	Lg	19 56 24.9	
	baz=45						
PDGK	**Podgornoye**	**3.42**	**52**	PN	**Pn**	**19 55 45.9**	**+2.7**
PDGK	**Podgornoye**	**3.42**	**52**	Pg	**Pb**	**19 55 49.6**	**-0.5**
	comp=Z,8.4nm,0.4s						
PDGK				Lg	Lg	19 56 34.1	
	comp=Z,117nm,0.8s						
PDGK	**Podgornoye**	**3.42**	**52**	⇑Pn	**Pn**	**19 55 45.1**	**+1.9**
	comp=Z,32nm,0.8s						
PDGK				⇓Pg	**Pg**	**19 55 57.7**	**+3.3**
	comp=Z,83nm,0.9s						
PDGK				⇓Lg	Lg	19 56 33.9	
	comp=Z,371nm,0.8s						
TRKS	**Terek-Say**	**3.49**	**275**	*i* PN	**Pn**	**19 55 45.2**	**+1.1**
TRKS				*i* S	**Sn**	**19 56 26.1**	**+0.1**
TRKS	**Terek-Say**	**3.49**	**275**	⇑*i*P	**Pn**	**19 55 45.2**	**+1.1**
	baz=74						
TRKS				⇑*i*S	**Sn**	**19 56 26.1**	**+0.1**
	baz=74						
DRK	**Karamyk**	**3.54**	**240**	⇑*i*P	**Pn**	**19 55 45.7**	**+0.9**
	baz=41						
DRK				⇑*i*S	**Sn**	**19 56 27.5**	**+0.2**
	baz=41						
DZA	**Taraz**	**3.67**	**297**	*e*PN	**Pb**	**19 55 55.0**	**+0.8**
DZA	**Taraz**	**3.67**	**297**	*e*P	**Pb**	**19 55 56.3**	**+2.1**
DZA				*e*S	**Sg**	**19 56 45.2**	**-1.4**
DZA	**Taraz**	**3.67**	**297**	*e*Pg	**Pb**	**19 55 55.1**	**+0.8**
	baz=297						
DZA	**Taraz**	**3.67**	**297**	Pg	**Pb**	**19 55 56.3**	**+2.1**
DZA				Lg	Lg	19 56 45.2	
BTLS	**Baital**	**3.95**	**342**	*i* PN	**Pb**	**19 56 00.4**	**+1.5**
BTLS				*e*		19 56 51.7	
BTLS	**Baital**	**3.95**	**342**	*e*P	**Pb**	**19 56 00.5**	**+1.5**
	comp=Z,39nm,0.4s						
BTLS				*e*S	**Sg**	**19 56 52.6**	**-2.9**
	comp=Z,378nm,0.7s						
BTLS	**Baital**	**3.95**	**342**	*i* Pg	**Pb**	**19 56 00.5**	**+1.5**
	baz=342						
BTLS				*e*Lg	Lg	19 56 51.8	
	baz=342						
BTLS	**Baital**	**3.95**	**342**	Pg	**Pb**	**19 56 00.5**	**+1.5**
	comp=Z,39nm,0.4s						
BTLS				Lg	Lg	19 56 52.6	
	comp=Z,378nm,0.7s						
BTK	**Batken**	**3.96**	**253**	*i* PN	**Pn**	**19 55 52.0**	**+1.4**
BTK				*i* S	**Sn**	**19 56 38.1**	**+0.5**
BTK	**Batken**	**3.96**	**253**	⇑*i*P	**Pn**	**19 55 52.0**	**+1.4**
	baz=53						
BTK				⇑*i*S	**Sn**	**19 56 38.1**	**+0.5**
	baz=53						
KTMS	**Ketmen**	**4.01**	**56**	*e*P	**Pb**	**19 56 00.1**	**-0.1**
KTMS				*e*S	**Sb**	**19 56 51.7**	**+2.5**
KTMS	**Ketmen**	**4.01**	**56**	Pg	**Pb**	**19 56 00.1**	**-0.1**
KTMS				Lg	Lg	19 56 51.7	
TDK	**Taldyqorghan**	**4.17**	**27**	*i* PN	**Pb**	**19 56 04.4**	**+1.6**
TDK				*e*		19 57 00.6	
TDK	**Taldyqorghan**	**4.17**	**27**	*e*P	**Pb**	**19 56 04.4**	**+1.6**
	comp=Z,86nm,0.5s						
TDK				*e*S	**Sg**	**19 56 59.2**	**-3.5**
	comp=Z,313nm,0.6s						
TDK	**Taldyqorghan**	**4.17**	**27**	*i* Pg	**Pb**	**19 56 04.4**	**+1.6**
	baz=27						
TDK				*e*Lg	Lg	19 57 00.6	
	baz=27						
TDK	**Taldyqorghan**	**4.17**	**27**	Pg	**Pb**	**19 56 04.4**	**+1.6**
	comp=Z,86nm,0.5s						
TDK				Lg	Lg	19 56 59.3	
	comp=Z,313nm,0.6s						
KK31	**Karatay Array**	**4.30**	**297**	PN	**Pn**	**19 55 57.5**	**+2.3**
KK31	**Karatay Array**	**4.30**	**297**	⇓Pn	**Pn**	**19 55 57.5**	**+2.3**
	comp=Z,0.3nm,0.2s,baz=127,slow=13,SNR=906						
KK31				⇓Pg	**Pg**	**19 56 10.1**	**-1.1**
	comp=Z,18nm,0.3s,baz=118,slow=15,SNR=232						
KK31				⇑Lg	Lg	19 57 03.6	
	comp=Z,51nm,0.3s,baz=113,slow=28,SNR=6.5						
KKAR	**Karatay Array**	**4.30**	**297**	*i* PN	**Pn**	**19 55 56.5**	**+1.4**
KKAR				*i* S	**Sn**	**19 56 45.9**	**0.0**
KKAR	**Karatay Array**	**4.30**	**297**	⇓*i*P	**Pn**	**19 55 56.5**	**+1.4**
	baz=96						
KKAR				⇓*i*S	**Sn**	**19 56 45.9**	**0.0**
	baz=96						
IUG	**Iuzhnay**	**4.38**	**283**	*e*PN	**Pb**	**19 56 08.0**	**+1.6**
IUG	**Iuzhnay**	**4.38**	**283**	*e*P	**Pb**	**19 56 09.3**	**+2.9**
	comp=Z,594nm,0.3s						
IUG				*e*S	**Sg**	**19 57 07.8**	**-1.6**
	comp=Z,5µm,1.9s						
IUG	**Iuzhnay**	**4.38**	**283**	*e*Pg	**Pb**	**19 56 08.1**	**+1.6**
	baz=283						
IUG				*e*Lg	Lg	19 57 06.8	
	baz=283						
IUG	**Iuzhnay**	**4.38**	**283**	Pg	**Pb**	**19 56 09.3**	**+2.9**
	comp=Z,594nm,0.3s						
IUG				Lg	Lg	19 57 07.8	
	comp=Z,231nm,0.5s						
CHM	**Chimkent**	**4.72**	**285**	*e*P	**Pg**	**19 56 16.2**	**-3.1**
CHM				*e*S	**Sg**	**19 57 19.2**	**-1.1**
BRLS	**Borolday**	**4.74**	**293**	*e*PN	**Pb**	**19 56 15.4**	**+2.9**
BRLS	**Borolday**	**4.74**	**293**	*e*P	**Pg**	**19 56 16.3**	**-3.2**
	comp=Z,12nm,0.5s						
BRLS				*e*S	**Sg**	**19 57 19.5**	**-1.4**
	comp=Z,121nm,0.8s						
BRLS	**Borolday**	**4.74**	**293**	*e*Pg	**Pb**	**19 56 15.4**	**+2.9**
	baz=290						
BRLS				*e*Lg	Lg	19 57 19.1	
	baz=290						
BRLS	**Borolday**	**4.74**	**293**	Pg	**Pg**	**19 56 16.3**	**-3.2**
	comp=Z,12nm,0.5s						
BRLS				Lg	Lg	19 57 19.5	
	comp=Z,121nm,0.8s						
KAPS	**Kapalarasan**	**4.77**	**32**	*e*P	**Pb**	**19 56 16.0**	**+3.0**
	comp=Z,28nm,0.5s						
KAPS				*e*S	**Sg**	**19 57 18.8**	**-3.0**
	comp=Z,76nm,0.5s						
KAPS	**Kapalarasan**	**4.77**	**32**	Pg	**Pb**	**19 56 16.0**	**+3.0**
	comp=Z,28nm,0.5s						
KAPS				Lg	Lg	19 57 18.8	
	comp=Z,76nm,0.5s						
MAKZ	**Makanchi**	**7.09**	**37**	P	Pn	19 56 40.6	+7.2
MAKZ	**Makanchi**	**7.09**	**37**	⇑Pn	Pn	19 56 40.6	+7.2
	comp=Z,7.0nm,1.1s						
MAKZ				⇓Pg	**Pg**	**19 57 05.7**	**+1.2**
	comp=Z,12nm,1.1s						
MAKZ				⇓Lg	Lg	19 58 30.8	
	comp=Z,41nm,0.8s						
MK31	**Makanchi Array**	**7.22**	**38**	*i* P	**Pn**	**19 56 37.5**	**+2.2**
MK31	**Makanchi Array**	**7.22**	**38**	⇑Pn	Pn	19 56 41.0	+5.7
	comp=Z,2.6nm,0.5s,baz=214,slow=14,SNR=25						
MK31				⇑Pg	**Pg**	**19 57 06.2**	**-0.9**
	comp=Z,11nm,0.7s,baz=224,slow=14,SNR=6.1						
MK31				⇑Lg	Lg	19 58 35.1	

	comp=Z,14nm,0.8s,baz=223,slow=33,SNR=5.6						
MKAR	Makanchi Array	7.22	38	Pn	Pn	19 56 40.0	+4.7
	comp=Z,0.3nm,0.3s,baz=216,slow=15,SNR=14						
MKAR				Lg	Lg	19 58 32.0	
	comp=Z,1.3nm,0.3s,baz=221,slow=28,SNR=4.3						
MKAR				LR	LR	19 59 45.5	
	comp=Z,115nm,21.3s,baz=216,slow=39						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	7.22	38	P	Pn	19 56 40.0	+4.7
OTUK	Ortayu	7.36	342	P	Pn	19 56 39.4	+2.3
OTUK	Ortayu	7.36	342	⇓Pn	Pn	19 56 39.4	+2.3
	comp=Z,9.7nm,0.9s						
OTUK				⇑Pg	Pg	19 57 04.3	-5.4
	comp=Z,8.1nm,0.6s						
OTUK				⇓Lg	Lg	19 58 39.7	
	comp=Z,171nm,0.7s						
ZSN	Zaisan	8.95	44	*e*Pg	Pg	19 57 32.7	-7.4
	baz=44						
KURBB	Kurchatov Arra	9.52	11	Pn	Pn	19 57 10.1	+3.5
	baz=200,slow=13,SNR=4.2						
KURBB				Lg	Lg	19 59 46.6	
	comp=Z,0.5nm,0.3s,baz=211,slow=29,SNR=6.3						
KURBB				LR	LR	20 01 05.1	
	comp=Z,162nm,20.1s,baz=170,slow=38						
	comp=Z,0.2nm,0.3s						
KURBB	Kurchatov Arra	9.52	11	⇓Lg	Lg	19 59 50.3	
	comp=Z,234nm,1.0s						
KURK	Kurchatov	9.62	11	P	Pn	19 57 10.1	+2.0
KURK	Kurchatov	9.62	11	Lg	Lg	19 59 49.1	
BVAR	Borovoye Array	12.29	345	Pn	Pn	19 57 44.0	-0.5
	comp=Z,0.3nm,0.4s						
BVAR				Lg	Lg	20 01 13.4	
BVAR	Borovoye Array	12.29	345	P	Pn	19 57 44.0	-0.5
BRVK	Borovoye	12.34	344	*i* P	Pn	19 57 45.6	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AB31	Akbulak array	13.68	311	P	Pn	19 58 05.3	+1.8
AB31	Akbulak array	13.68	311	Pn	Pn	19 58 05.3	+1.8
	comp=Z,10nm,0.8s,baz=119,slow=13,SNR=86						
GEYT	Alibeck	14.02	262	Pn	Pn	19 58 05.5	-2.8
	comp=Z,0.2nm,0.3s,baz=133,slow=8.3,SNR=1.8						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	14.03	23	Pn	Pn	19 58 10.2	+1.9
	comp=Z,0.1nm,0.3s,baz=219,slow=11,SNR=2.6						
ZALV				Sn	Sn	20 00 53.3	+8.8
	comp=Z,0.1nm,0.3s,baz=207,slow=19,SNR=3.9						
ZALV				Lg	Lg	20 02 15.7	
	comp=Z,0.1nm,0.3s,baz=203,slow=26,SNR=3.6						
ZALV				LR	LR	20 04 11.4	
	comp=Z,31nm,22.0s,baz=189,slow=39						
	comp=Z,0.3nm,0.4s						
AKTO	Aktyubinsk	15.34	313	Pn	Pn	19 58 24.4	-1.8
	baz=124,slow=17,SNR=2.6						
AKTO				Sn	Sn	20 01 22.4	+5.9
	comp=Z,0.2nm,0.3s,baz=189,slow=22,SNR=2.9						
AKTO				Lg	Lg	20 02 55.7	
	comp=Z,0.2nm,0.3s,baz=186,slow=23,SNR=1.7						
AKTO				LR	LR	20 04 42.9	
	comp=Z,127nm,18.4s,baz=145,slow=38						
	comp=Z,1.0nm,0.7s						
AKTO	Aktyubinsk	15.34	313	⇑Pn	P	19 58 30.6	-0.4
	comp=Z,30nm,1.3s						
GOMU	GeErMu	15.70	103	P	Pn	19 58 31.7	+0.5
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,86nm,4.7s						
KNGR	Kungurtug, Tuv	17.70	51	*i* P	P	19 58 57.4	+0.2
SVE	Sverdlovsk	18.37	333	*e*P	P	19 59 08.8	+4.4
GTA	Gaotai	18.41	88	*e*P	Pn	19 59 03.0	-2.1
GTA				pP	pP	19 59 07.1	+0.5
GTA				sP	sP	19 59 10.7	+3.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	Arti	18.82	329	P	Pn	19 59 10.6	+0.8
	baz=257,slow=23,SNR=2.3						
ARU				S	S	20 02 47.1	+3.3
	comp=Z,1.0nm,0.5s,baz=336,slow=22,SNR=2.6						
ARU				Lg	Lg	20 04 38.8	
	baz=332,slow=14,SNR=3.0						
ARU				LR	LR	20 06 46.1	
	comp=Z,57nm,19.6s,baz=217,slow=38						
	comp=Z,0.4nm,0.3s						
ARU	Arti	18.82	329*c*	*i*P	P	19 59 09.2	-0.2
ARU				S	Sn	20 02 41.6	+0.9
ARU				pmax	pmax		
	comp=Z,8.0nm,2.0s						
MAK	Makhachkala	20.99	284	*e*P	P	19 59 29.1	-4.0
MAK				*e*S	S	20 03 22.7	-4.8
MAK				pmax	pmax		
	comp=Z,227nm,2.1s						
MAK				MLR	MLR		
	comp=Z,85nm,16.0s						
ZAK	Zakamensk	21.11	55	*e*P	P	19 59 33.9	-0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BELG	Belogornoye	22.08	310	P	P	19 59 45.2	+0.5
	comp=Z,18nm,0.9s,baz=144,slow=7.5,SNR=5.1						
	comp=Z,18nm,0.9s						
BELG	Belogornoye	22.08	310	*i* P	P	19 59 45.5	+0.8
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	22.68	63	P	P	19 59 54.1	+2.8
	comp=Z,0.4nm,0.6s,baz=282,slow=11,SNR=4.0						
	comp=Z,0.4nm,0.6s						
ULN	Ulaanbaatar	23.12	63	*i* P	P	19 59 57.2	+1.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.6s						
GNI	Garni	23.49	278	*i* P	P	19 59 58.7	-1.1
GNI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KIV	Kislovodsk	24.40	287	*e*P	P	20 00 08.8	+0.4
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,25nm,15.0s						
VORR	Voronezh	26.96	305	*e*P	P	20 00 30.5	-0.8
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
ANN	Anapa	28.06	290	*e*P	P	20 00 40.0	-1.2
ANN				*e**PP	pP	20 00 43.2	+0.4
ANN				*e*S	S	20 05 24.9	-1.5
ANN				pmax	pmax		
	comp=Z,15nm,1.2s						
NRIK	Noril'sk	28.78	9	*i* P	P	20 00 47.4	0.0
NRIK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
OBN	Obninsk	29.12	312	*e*P	P	20 00 48.5	-2.1
OBN				*e*PPP	PPP	20 01 51.3	
OBN				*e*		20 03 59.1	
OBN				pmax	pmax		
	comp=Z,44nm,3.5s						
OBN				MLR	MLR		
	comp=Z,94nm,6.0s						
KLMR	Klimovskoe	29.45	324	*e*P	P	20 00 52.8	-0.7
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
KLMR	Klimovskoe	29.45	324	*e*P	P	20 00 52.9	-0.6
KLMR				AMP		20 01 06.3	
	comp=Z,20nm,1.5s						
BRTR	Keskin Array B	31.85	281	*i* P	P	20 01 18.3	+3.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	33.18	302	LR	LR	20 16 20.4	
	comp=Z,75nm,20.2s,baz=320,slow=39						
FINES	FINESS Array B	35.83	321	P	P	20 01 48.0	-1.1
	comp=Z,1.1nm,0.7s,baz=101,slow=8.7,SNR=6.3						
	comp=Z,1.1nm,0.7s						
MLR	Muntele Rosu	35.98	294	P	P	20 01 51.4	+0.6
	comp=Z,2.5nm,0.9s,baz=79,slow=10						
	comp=Z,2.5nm,0.9s						
ARCES	ARCESS Array B	38.29	334	P	P	20 02 10.2	+0.2
	comp=Z,1.8nm,0.7s,baz=98,slow=10,SNR=6.5						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	38.29	334	*e*P	P	20 02 10.6	+0.5
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	42.95	320	P	P	20 02 48.5	-0.2
	comp=Z,0.9nm,0.9s,baz=76,slow=7.3,SNR=1.4						
NOA				LR	LR	20 21 22.6	
	comp=Z,55nm,20.9s,baz=270,slow=37						
	comp=Z,0.9nm,0.9s						
GERES	GERESS Array B	43.39	302	P	P	20 02 52.5	0.0
	comp=Z,0.4nm,0.6s,baz=64,slow=6.7,SNR=2.7						
GERES				LR	LR	20 25 03.7	
	comp=Z,38nm,19.4s,baz=54,slow=42						
	comp=Z,0.4nm,0.6s						
DAVOX	Davos/Dischmat	46.44	300	LR	LR	20 26 11.4	
	comp=Z,40nm,19.1s,baz=76,slow=40						
MA2	Magadan	48.30	41	LR	LR	20 24 38.7	
	comp=Z,43nm,18.6s,baz=172,slow=37						
BILL	Bilibino	52.65	28	*e*P	P	20 04 04.0	+0.3
BILL				*e*		20 05 16.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	58.55	297	LR	LR	20 35 26.0	
	comp=Z,40nm,19.6s,baz=28,slow=42						
ILAR	Eielson Array	69.11	18	P	P	20 05 55.2	-0.5
	comp=Z,0.6nm,0.9s,baz=313,slow=5.0,SNR=5.2						
	comp=Z,0.6nm,0.9s						
TORD	Torodi Ar. Bea	69.52	270	P	P	20 05 57.5	-1.5
	comp=Z,1.3nm,0.6s,baz=49,slow=5.4,SNR=15						
	comp=Z,1.3nm,0.6s						
YKA	Yellowknife Ar	76.22	5	P	P	20 06 37.9	-0.1
	comp=Z,0.9nm,0.7s,baz=349,slow=5.5,SNR=8.5						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	81.56	126	P	P	20 07 05.9	-2.0
	comp=Z,0.6nm,1.0s,baz=317,slow=5.7,SNR=2.3						
	comp=Z,0.6nm,1.0s						
ASAR	Alice Springs	84.13	128	P	P	20 07 20.0	-1.2
	comp=Z,0.3nm,0.9s,baz=332,slow=5.3,SNR=2.8						
	comp=Z,0.3nm,0.9s						

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*IDC **05** 19:56:43.7±1.1, 34°.90N×25°.72E, h0^{km}, mb3.9/6, mbtmp3.8/11, ML3.5/4, MS2.9/3, Error ellipse: s-maj=23.7km s-min=9.4km az=19.0*
*ISK **05** 19:56:43.4, 34°.89N×25°.73E, h5^{km}, ML3.6/17*
*THE **05** 19:56:44.0, 34°.91N×25°.70E, h8^{km}±3^{km}, ML3.2/5, Error ellipse: s-maj=3.9km s-min=0.5km az=30.0*
*ATH **05** 19:56:45.3, 34°.97N×25°.72E, h13^{km}±2^{km}, ML3.4/8, Error ellipse: s-maj=3.2km s-min=1.0km az=176.0*
*DDA **05** 19:56:48.4±0.0, 35°.16N×25°.64E, h6^{km}±4^{km}, MW3.8*
ISC 05 19:56:46.0±0.7, **35°.02N**±0°.04×**25°.70E**±0°.02, **h14**^{km}±4^{km}, **n98**, σ**2**^{s}**24**/126, **mb3.9**/6, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.03	104	P	Pg	19 56 47.9	-0.6
FRMA				S	Sg	19 56 50.9	+0.6
FRMA				AML	AML	19 56 51.6	
	comp=N,41665µm,0.1s						
FRMA				AML	AML	19 56 55.5	
	comp=E,44656µm,0.3s						
FRMA	Ierapetra Chan	0.03	104	P	Pg	19 56 48.0	-0.6
FRMA				S	Sg	19 56 50.8	+0.5
	comp=E,6µm,0.2s						
ZKR	Zakros	0.44	78	P	Pg	19 56 53.3	-1.4
ZKR				S	Sb	19 57 00.9	-0.9
ZKR				AML	AML	19 57 01.0	
	comp=N,11247µm,0.3s						
ZKR				AML	AML	19 57 01.4	
	comp=E,26717µm,0.5s						
ZKR	Zakros	0.44	78	P	Pg	19 56 53.3	-1.4
ZKR				S	Sb	19 57 00.7	-1.1
	comp=E,10µm,0.4s						
ZKR	Zakros	0.44	78	PG	Pg	19 56 53.3	-1.4
ZKR				SG	Sb	19 57 01.1	-0.7
HRKL	Herakleio	0.57	301	P	Pb	19 56 56.8	-0.9
HRKL				S	Sb	19 57 06.0	+0.4
HRKL				AML	AML	19 57 21.8	
	comp=E,40898µm,0.6s						
HRKL				AML	AML	19 57 24.9	
	comp=N,26425µm,0.8s						
HRKL	Herakleio	0.57	301	P	Pg	19 56 56.4	-0.7
HRKL				S	Sb	19 57 06.4	+0.8
	comp=N,6µm,0.6s						
HRKL	Herakleio	0.57	301	PG	Pb	19 56 56.9	-0.7
HRKL				SG	Sn	19 57 07.9	-0.8
KSTL	Kastelli Herak	0.58	299	P	Pg	19 56 52.5	-5.0
KSTL				AML	AML	19 56 59.9	
	comp=E,3725µm,0.4s						
KSTL				AML	AML	19 57 02.9	
	comp=N,10822µm,0.6s						
KSTL	Kastelli Herak	0.58	299	P	Pg	19 56 52.3	-5.2
KSTL				S	Sg	19 56 58.6	-6.7
	comp=N,1µm,0.4s						
IACM	Heraklion	0.59	299	P	Pb	19 56 57.2	-0.8
IACM				S	Sb	19 57 06.7	+0.6
IDI	Anoyia	0.71	292	Pg	Pg	19 56 58.4	-1.5
	comp=N,19nm,0.3s,baz=162,slow=9.3,SNR=139						
IDI				Lg	Lg	19 57 09.8	
	comp=N,139nm,0.3s,baz=190,slow=20,SNR=27						
IDI				LR	LR	19 57 16.5	
	comp=N,97nm,21.1s,baz=210,slow=42						
IDI	Anoyia	0.71	292	P	Pb	19 56 59.2	-1.0
IDI				S	Sb	19 57 09.6	-0.2
IDI				AML	AML	19 57 16.5	
	comp=E,1908µm,0.4s						
IDI				AML	AML	19 57 17.8	
	comp=N,2763µm,0.4s						
IDI	Anoyia	0.71	292	P	Pg	19 56 58.3	-1.5
IDI				S	Sb	19 57 09.7	-0.2
	comp=N,1µm,0.5s						
SIVA	Sivas	0.73	270	P	Pb	19 56 58.6	-1.7
SIVA				S	Sb	19 57 10.5	+0.3
SIVA	Sivas	0.73	270	P	Pg	19 56 58.3	-1.8
SIVA				S	Sb	19 57 09.0	-1.2
TMBK	Timbaki Herakl	0.77	274	P	Pb	19 56 59.8	-1.2
TMBK				S	Sb	19 57 10.9	-0.4
TMBK				AML	AML	19 57 20.8	
	comp=N,7377µm,0.4s						
TMBK				AML	AML	19 57 25.2	
	comp=E,6416µm,0.7s						
KARP	Karpathos	1.31	66	P	Pg	19 57 09.9	-1.2
KARP				AML	AML	19 57 39.6	
	comp=N,2673µm,0.5s						
KARP				AML	AML	19 57 42.3	
	comp=E,2883µm,0.5s						
KARP	Karpathos	1.31	66	PN	Pg	19 57 10.4	-0.7
KARP				SN	Sg	19 57 30.0	+1.8
GVD	Gavdhos	1.33	263	P	Pg	19 57 10.3	-1.4
GVD	Gavdhos	1.33	263	PN	Pg	19 57 10.3	-1.4
GVD				SN	Sg	19 57 29.9	+0.9
THR6	Thira Island,	1.35	350	P	Pb	19 57 11.5	+0.4
SNT5	Nea Kammeni, S	1.40	350	P	Pn	19 57 11.0	0.0
THR3	Thira Island,	1.41	350	P	Pn	19 57 10.9	-0.2
THR5	Thira Island,	1.42	349	P	Pn	19 57 11.2	-0.2
SAP3	Santorini-Thir	1.44	349	P	Pn	19 57 11.5	-0.1
CHAN	Chania	1.44	291	P	Pg	19 57 12.5	-1.2
CHAN				AML	AML	19 57 47.6	
	comp=N,1791µm,1.3s						
CHAN				AML	AML	19 57 49.5	
	comp=E,2350µm,0.8s						
CMBO	Columbo, Santo	1.47	351	P	Pg	19 57 13.8	-0.3
IMMV	Iera Moni Meta	1.47	288	P	Pg	19 57 13.2	-1.0
IMMV				S	Sg	19 57 32.6	-0.8
IMMV	Iera Moni Meta	1.47	288	PN	Pg	19 57 13.1	-1.2
IMMV				SN	Sg	19 57 34.8	+1.4
KNDR	Palaiochora Ch	1.66	278	PN	Pg	19 57 16.4	-1.5
KOSK	Kos Island	2.02	31	PN	Pb	19 57 21.7	-0.6
APE	Apeiranthos	2.05	356	P	Pn	19 57 21.8	+1.8
APE	Apeiranthos	2.05	356	PN	Pb	19 57 21.9	-1.0
APE	Apeiranthos	2.05	356	P	Pn	19 57 20.8	+0.8
APE				S	Sn	19 57 46.4	+1.0
ANKY	Antikythira Is	2.13	294	P	Pb	19 57 23.6	-0.7
DAT	Datca	2.29	41	PN	Pn	19 57 24.2	+0.8
DAT	Datca	2.29	41	P	Pn	19 57 24.1	+0.7
DAT				S	Sn	19 57 47.7	-3.7
ARG	Arkhangelos	2.31	58	PN	Pb	19 57 25.1	-2.3
BODT	Bodrum	2.42	32	PN	Pn	19 57 27.0	+1.9
BODT	Bodrum	2.42	32	P	Pn	19 57 26.1	+1.0
BODT				S	Sn	19 57 53.9	-0.6
BDRM	Kayabasi	2.48	34	P	Pn	19 57 25.8	-0.1
BDRM				S	Sn	19 57 58.1	+2.0
KTHR	Kythira	2.52	300	P	Pb	19 57 29.3	-1.6
TURN	Turunc	2.71	49	PN	Pn	19 57 30.2	+1.2
TURN	Turunc	2.71	49	P	Pn	19 57 30.3	+1.2
DDIM	Aydin, Didim	2.73	27	P	Pb	19 57 33.6	-1.0
DDIM				S	Sn	19 58 03.3	+1.2
MLSB	Milas	2.83	36	PN	Pn	19 57 32.8	+2.1
MLSB	Milas	2.83	36	P	Pn	19 57 32.8	+2.1
GCAM	G?zelcaml?	2.95	24	P	Pb	19 57 35.8	-2.4
GCAM				S	Sn	19 58 01.7	-5.7
YER	Yerkesik	2.97	44	PN	Pn	19 57 34.7	+2.0
YER	Yerkesik	2.97	44	P	Pn	19 57 34.7	+2.0
YER				S	Sn	19 58 02.8	-5.4
DALY	Dalyan (Mula)	3.00	52	PN	Pn	19 57 34.7	+1.8
MULA	Mugla, Merkez-	3.08	43	P	Pn	19 57 36.7	+2.4
AYDN	Tasoluk	3.17	33	P	Pb	19 57 38.9	-3.2
AYDN				S	Sn	19 58 06.7	-6.3
DGB	zmir	3.17	17	P	Pn	19 57 35.8	+0.4
FETY	Fethiye	3.19	59	PN	Pn	19 57 37.3	+1.7
FETY	Fethiye	3.19	59	P	Pn	19 57 37.7	+2.1
CHOS	Chios island	3.37	5	PN	Pn	19 57 41.1	+2.9
AKAS	Kas	3.41	68	PN	Pn	19 57 40.1	+1.4
AKAS	Kas	3.41	68	P	Pn	19 57 40.0	+1.3
AKAS				S	Sn	19 58 21.4	+2.5
URLA	Izmir	3.41	12	PN	Pn	19 57 41.7	+3.0
URLA	Izmir	3.41	12	P	Pn	19 57 41.4	+2.7
AYDB	Zeytinkoy-Aydi	3.41	31	PN	Pn	19 57 41.5	+2.7
CAME	Cameli-Denizli	3.50	56	PN	Pn	19 57 42.3	+2.3
BLCB	Balcova	3.53	17	PN	Pn	19 57 42.9	+2.6
BLCB	Balcova	3.53	17	P	Pn	19 57 41.9	+1.7
TAVA	DENIZLI_Tavas	3.56	46	P	Pn	19 57 44.4	+3.5
TAVA				S	Sn	19 58 24.8	+1.9
CAEL	Denizli, Camel	3.61	53	P	Pb	19 57 45.3	-4.3
ELL	Elmali	3.83	62	PN	Pn	19 57 46.3	+1.7
GOLH	Golhisar	3.83	54	P	Pn	19 57 47.2	+2.7
GOLH				S	Sn	19 58 35.3	+5.9
ZEDA	zmir-Bergama	4.09	15	P	Pn	19 57 48.6	+0.6
ZEDA				S	Sn	19 58 30.0	-5.6
MANT	Manisa	4.16	33	P	Pn	19 57 52.2	+3.1
KULA	Kula-Manisa	4.22	33	P	Pn	19 57 52.2	+2.3
KORT	Korkueli	4.26	61	P	Pn	19 57 52.8	+2.3
KORT				S	Sn	19 58 43.1	+3.1
KOCA	Canakkale, Ayv	4.49	4	P	Pn	19 57 53.9	+0.4
PASA	Karahalli, USA	4.50	41	P	Pn	19 57 56.2	+2.4
USAK	Uak-Merkez	4.55	35	P	Pn	19 57 57.5	+3.2
BUHA	Balikesir, Bur	4.61	13	P	Pn	19 57 59.2	+4.1
BAYC	CANAKKALE_Bayr	4.76	8	P	Pn	19 57 56.4	-0.8
BAYC				S	Sn	19 58 48.1	-4.1
AGG	Agios Georgios	4.82	327	P	Pn	19 58 00.0	+2.0
SIMA	Simav-Kutahya	4.83	32	P	Pn	19 58 01.4	+3.1
BRTR	Keskin Array B	7.87	51	Pn	Pn	19 58 42.9	+2.8
	comp=E,1.1nm,0.7s,baz=245,slow=14,SNR=2.7						
VAE	Valguarnera	9.44	288	Pn	Pn	19 59 04.3	+2.8
	comp=E,1.7nm,0.3s,baz=355,slow=8.2,SNR=8.1						
	comp=E,5.6nm,0.6s						
EIL	Elat	9.47	122	Pn	Pn	19 58 59.3	-2.6
	comp=E,0.6nm,0.3s,baz=178,slow=9.4,SNR=5.0						
EIL				Sn	Sn	20 00 42.6	-5.6
	comp=E,0.4nm,0.3s,baz=99,slow=17,SNR=2.0						
	comp=E,1.9nm,0.4s						
ASF	Jabal al Asfar	9.76	104	Pn	Pn	19 59 05.5	-0.6
	comp=E,0.1nm,0.3s,baz=311,slow=11,SNR=1.2						
	comp=E,1.2nm,0.6s						
MLR	Muntele Rosu	10.46	1	Pn	Pn	19 59 23.3	+7.8
	comp=E,0.1nm,0.3s,baz=168,slow=12,SNR=2.1						
KBZ	Khabaz	15.87	52	Pn	P	20 00 35.4	+2.9
	comp=E,0.2nm,0.3s,baz=254,slow=7.4,SNR=6.3						
AKASG	Malin Array Be	15.88	8	Pn	P	20 00 33.1	+0.6
	comp=E,1.5nm,0.3s,baz=199,slow=11,SNR=12						
GNI	Garni	15.93	66	LR	LR	20 07 49.6	
	comp=E,52nm,19.5s,baz=266,slow=42						
GERES	GERESS Array B	16.41	331	Pn	P	20 00 39.6	+1.0
	comp=E,0.1nm,0.3s,baz=152,slow=11,SNR=3.4						
	comp=E,0.4nm,0.6s						
DAVOX	Davos/Dischmat	16.73	319	LR	LR	20 08 57.8	
	comp=E,12nm,20.8s,baz=65,slow=44						
ESDC	Sonseca Array	23.98	290	P	P	20 02 00.4	+0.4
	comp=E,0.8nm,0.9s,baz=77,slow=9.8,SNR=5.8						
	comp=E,0.8nm,0.9s						
EKA	Eskdalemuir Ar	28.41	325	P	P	20 02 40.5	+0.7
	comp=E,0.4nm,0.5s,baz=114,slow=10,SNR=1.6						
	comp=E,0.4nm,0.5s						
TORD	Torodi Ar. Bea	30.74	231	P	P	20 03 00.2	-0.5
	comp=E,0.9nm,0.6s,baz=36,slow=8.7,SNR=14						
	comp=E,0.9nm,0.6s						
KURBB	Kurchatov Arra	40.87	51	P	P	20 04 27.3	+0.2
	comp=E,2.1nm,0.2s,baz=273,slow=8.7,SNR=3.4						
	comp=E,2.1nm,0.2s						
MKAR	Makanchi Array	43.48	56	P	P	20 04 49.5	+0.9
	comp=E,1.6nm,0.6s,baz=270,slow=5.8,SNR=4.7						
	comp=E,1.6nm,0.6s						
ZALV	Zalesovo Beam	44.78	46	P	P	20 04 58.3	-0.6
	comp=E,0.7nm,0.4s,baz=262,slow=10.0,SNR=1.9						
	comp=E,0.7nm,0.4s						
TSUM	Tsumeb	54.47	189	LR	LR	20 33 33.6	
	comp=E,39nm,19.8s,baz=111,slow=41						

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*ISK **05** 20:01:50.7, 35°.53N×32°.16E, h25^{km}, ML3.3/31*
*DDA **05** 20:01:51.0±0.0, 35°.49N×32°.19E, h32^{km}±4^{km}, MW3.5*
*NIC **05** 20:01:51.8±0.0, 35°.57N×32°.22E, h28^{km}±1^{km}, Ml3.4/5*
*GII **05** 20:01:53.6±0.5, 35°.32N×32°.30E, h60^{km}, MD2.2/7, Mm2.9/8*
ISC 05 20:01:50.6±1.1, **35°.49N**±0°.02×**32°.16E**±0°.03, **h32**^{km}±11^{km}, **n100**, σ**1**^{s}**37**/158, **6C-1D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALFC	Alefka	0.49	133	⇑*i*P	Pn	20 02 03.5	+2.0
ALFC				S	Sn	20 02 11.9	+3.0
ALFC				AML	AML	20 02 12.6	
	24nm,0.3s						
ALFC				AML	AML	20 02 12.6	
	24nm,0.3s						
ALFC				AML	AML	20 02 12.6	
	15nm,0.2s						
ALFC				AML	AML	20 02 12.6	
	15nm,0.2s						
AKMS	Akamas	0.50	163	⇑*i*P	Pn	20 02 03.8	+2.3
AKMS				S	Sn	20 02 12.2	+3.3
AKMS				AML	AML	20 02 14.1	
	6.2nm,0.2s						
AKMS				AML	AML	20 02 14.1	
	6.2nm,0.2s						
AKMS				AML	AML	20 02 14.5	
	12nm,0.2s						
AKMS				AML	AML	20 02 14.5	
	12nm,0.2s						
LEF	Lefka	0.71	122	PG	Pn	20 02 05.4	+1.1
LEF				SG	Sn	20 02 15.5	+1.4
LEF	Lefka	0.71	122	P	Pn	20 02 06.6	+2.3
LEF				S	Sn	20 02 16.2	+2.1
GAZI	Gazipasa	0.75	10	PG	Pn	20 02 05.6	+0.6
GAZI				SG	Sn	20 02 16.0	+0.7
GAZI	Gazipasa	0.75	10	P	Pn	20 02 05.4	+0.4
GAZI				S	Sn	20 02 15.4	+0.1
NATA	Nata	0.79	155	⇑*i*P	Pn	20 02 07.4	+1.8
NATA				AML	AML	20 02 27.2	
	6.2nm,0.6s						
NATA				AML	AML	20 02 31.5	
	5.3nm,0.6s						
BOZY	Bozyazi-Mersin	0.90	47	PG	Pb	20 02 07.3	-0.5
BOZY				SG	Sn	20 02 19.5	+0.5
SZAC	Souni	0.95	141	⇑*i*P	Pb	20 02 09.3	+0.8
SZAC				S	Sn	20 02 23.2	+3.1
SZAC				AML	AML	20 02 24.5	
	3.2nm,0.2s						
SZAC				AML	AML	20 02 24.5	
	3.2nm,0.2s						
SZAC				AML	AML	20 02 25.0	
	3.0nm,0.3s						
SZAC				AML	AML	20 02 25.0	
	3.0nm,0.3s						
TEKE	Tekeli-Mersin	1.01	50	PG	Pb	20 02 09.2	-0.4
TEKE				SG	Sn	20 02 22.4	+0.7
ATHAL	Athalassa	1.07	109	P	Pn	20 02 10.5	+1.1
ATHAL				S	Sn	20 02 24.8	+1.6
CSS	Mathiatis	1.10	119	PN	Pb	20 02 11.3	+0.2
CSS				SN	Sb	20 02 25.8	+0.8
CSS	Mathiatis	1.10	119	⇓*e*P	Pn	20 02 10.4	+0.7
CSS				S	Sb	20 02 25.9	+0.9
CSS	Mathiatis	1.10	119	Pg	Pn	20 02 10.1	+0.4
CSS				Sg	Sn	20 02 23.8	0.0
ASGA	Asgata	1.14	128	⇑*e*P	Pn	20 02 11.4	+1.1
ASGA				S	Sb	20 02 27.3	+1.1
ASGA				AML	AML	20 02 28.6	
	2.2nm,0.4s						
ASGA				AML	AML	20 02 28.6	
	2.2nm,0.4s						
ASGA				AML	AML	20 02 28.9	
	2.3nm,0.3s						
ASGA				AML	AML	20 02 28.9	
	2.3nm,0.3s						
LFK	Lefkose	1.14	100	PN	Pn	20 02 11.3	+0.9
LFK				SN	Sb	20 02 26.9	+0.5
AKIN	Akıncılar- Kıb	1.17	114	PN	Pb	20 02 12.7	+0.4
BERE	Bereket-Mersin	1.21	45	PN	Pb	20 02 12.6	-0.5
BERE				SN	Sb	20 02 27.9	-0.6
OREN	Orenkoy-Mersin	1.27	56	PN	Pb	20 02 13.1	-0.9
AKK1	Akkuyu-Mersin	1.30	60	PN	Pb	20 02 13.5	-0.9

AKK1				SN	Sb	20 02 30.2	-0.5
MVOU	Mavrovouni	1.30	111	⇑eP	Pn	20 02 12.9	+0.4
ERMK	Ermenek	1.30	28	P	Pb	20 02 14.8	+0.2
ERMK				S	Sb	20 02 31.6	+0.7
AKK2	Akkuyu-Mersin	1.30	60	PN	Pn	20 02 12.9	+0.4
AKK2				SN	Sb	20 02 30.5	-0.3
AKKU	Akkuyu-Mersin	1.31	59	PN	Pb	20 02 13.8	-0.9
AKKU				SN	Sb	20 02 30.6	-0.5
GULN	MERSIN_Gulnar	1.32	58	P	Pn	20 02 13.4	+0.6
GULN				S	Sn	20 02 29.7	+0.4
YESI	Yesilovacik-Me	1.39	59	PN	Pn	20 02 14.5	+0.7
YESI				SN	Sb	20 02 32.4	-1.1
TEVE	Tevekalti-Mers	1.40	48	PN	Pb	20 02 15.2	-1.1
TEVE				SN	Sb	20 02 32.8	-1.1
TISA	Tisan-Mersin	1.40	61	PN	Pn	20 02 14.8	+0.9
TISA				SN	Sb	20 02 32.8	-1.0
KARG	Kargicak-Mersi	1.45	60	PN	Pn	20 02 15.4	+0.9
IKL	Isikli	1.45	59	PN	Pn	20 02 15.5	+1.0
HDMB	Hadim	1.49	10	PN	Pb	20 02 16.8	-1.0
KEBE	Keben-Mersin	1.58	53	PN	Pb	20 02 18.3	-0.9
KEBE				SN	Sn	20 02 36.9	+1.1
PARAL	Paralimni	1.62	107	P	Pn	20 02 18.6	+1.7
PARAL				S	Sn	20 02 39.0	+2.3
EREN	Erenkoy	1.64	88	PN	Pn	20 02 17.9	+0.7
EREN	Erenkoy	1.64	88	P	Pn	20 02 17.5	+0.3
EREN				S	Sn	20 02 37.1	-0.1
SILI	Silifke-Mersin	1.68	58	PN	Pn	20 02 19.1	+1.4
AKUM	Antalya-Kumluc	1.69	300	P	Pn	20 02 19.2	+1.3
AKUM				S	Sn	20 02 39.6	+1.2
KKBE	Karaman, Kazim	1.83	20	P	Pn	20 02 21.6	+1.6
KKBE				S	Sn	20 02 43.5	+1.4
KRMN	Karaman	1.90	28	PN	Pn	20 02 22.6	+1.7
KRMN				SN	Sn	20 02 44.7	+0.9
SEDI	Konya, Seydise	1.98	351	P	Pb	20 02 24.2	-1.9
SEDI				S	Sb	20 02 49.0	-1.4
KORT	Korkueli	2.10	316	PN	Pn	20 02 25.5	+1.9
KORT	Korkueli	2.10	316	P	Pn	20 02 23.8	+0.2
ELL	Elmali	2.21	305	P	Pn	20 02 26.4	+1.2
ELL				S	Sn	20 02 54.0	+2.6
BUCA	Burdur, Bucak-	2.24	325	P	Pn	20 02 27.1	+1.6
KMER	Konya-Meram	2.28	4	P	Pn	20 02 27.4	+1.3
KMER				S	Sn	20 02 55.2	+2.1
MERS	Mersin	2.35	54	PN	Pn	20 02 27.7	+0.6
KONT	Konya--Tatoy	2.45	4	PN	Pn	20 02 30.1	+1.7
KONT	Konya--Tatoy	2.45	4	P	Pn	20 02 29.8	+1.4
KERG	Konya-Eregli	2.49	39	P	Pn	20 02 31.2	+2.2
KERG				S	Sn	20 02 59.4	+1.1
DED	Mersin	2.59	55	P	Pn	20 02 31.4	+1.1
DED				S	Sn	20 02 59.9	-0.8
YESY	Yesilyurt	2.62	29	PN	Pn	20 02 32.7	+2.0
DOGA	KONYA_Doganhis	2.64	352	P	Pn	20 02 32.6	+1.6
LADK	Ladik-KONYA	2.71	3	PN	Pn	20 02 32.7	+0.7
BAGO	Egridir - ISPA	2.72	337	P	Pn	20 02 33.8	+1.6
GOLH	Golhisar	2.72	310	P	Pn	20 02 34.2	+2.0
GOLH				S	Sn	20 03 05.1	+1.0
CAME	Cameli-Denizli	2.73	303	PN	Pn	20 02 33.0	+0.7
FETY	Fethiye	2.74	295	P	Pn	20 02 32.9	+0.6
FETY				S	Sn	20 03 03.5	-0.9
GULE	Gulek	2.77	49	P	Pn	20 02 34.9	+2.0
GULE				S	Sn	20 03 06.7	+1.5
BRDR	BURDUR-Merkez	2.77	323	P	Pn	20 02 34.6	+1.7
CAEL	Denizli, Camel	2.81	306	P	Pn	20 02 34.2	+0.7
CAEL				S	Sn	20 03 05.8	-0.5
YVAC	Isparta, Yalva	2.87	345	P	Pn	20 02 35.1	+0.9
KARA	Karaisali	2.93	52	PN	Pn	20 02 36.6	+1.7
BASM	Basmaki-Afyon	2.96	326	PN	Pn	20 02 36.9	+1.5
KDHN	Kadinhani	3.02	359	P	Pn	20 02 36.7	+0.4
CHBY	Cihanbeyli	3.14	11	PN	Pn	20 02 38.8	+0.9
CMRD	Camardi-Nigde	3.14	46	PN	Pn	20 02 40.5	+2.5
KZIL	AFYON_Kizioren	3.20	330	P	Pn	20 02 39.3	+0.6
KZIL				S	Sn	20 03 16.2	+0.4
YAYL	Yayladag	3.26	79	P	Pn	20 02 39.8	+0.3
NIDE	Nigde/Merkez-G	3.27	39	P	Pn	20 02 41.8	+2.0
TAVA	DENIZLI_Tavas	3.27	308	P	Pn	20 02 40.7	+0.9
TAVA				S	Sn	20 03 15.6	-2.0
BHL	Bhannes	3.29	118	eP	Pn	20 02 39.8	-0.2
AKO	Adana	3.30	52	P	Pn	20 02 40.9	+0.9
DQRL	Deir Qamar	3.33	121	eP	Pn	20 02 40.9	+0.3
HWQ	Hawqa	3.34	110	eP	Pn	20 02 42.0	+1.2
TURN	Turunc	3.42	293	P	Pn	20 02 41.3	-0.3
HNTI	Hanita	3.47	133	Pn	Pn	20 02 42.4	+0.1
HNTI				Sn	Sn	20 03 20.3	-2.0
RCY	Rachaya	3.63	122	eP	Pn	20 02 45.0	+0.2
MMA0B	Mount Meron ar	3.65	132	Sn	Sn	20 03 25.6	-1.3
YAHY	KAYSERI_Yahyal	3.65	44	P	Pn	20 02 48.6	+3.6
SHBL	Chebaa	3.66	125	eP	Pn	20 02 45.3	+0.2
GEM	Giv'at Ha'Em	3.69	127	Pn	Pn	20 02 45.6	+0.2
GEM				Sn	Sn	20 03 25.5	-2.2
NATI	Neve Ativ	3.70	126	Pn	Pn	20 02 45.8	+0.3
NATI				Sn	Sn	20 03 25.9	-2.2
OFRI	`Ofer	3.70	140	Pn	Pn	20 02 45.7	+0.1
OFRI				Sn	Sn	20 03 25.6	-2.6
BLGI	Bet Lehem HaGe	3.73	137	Pn	Pn	20 02 46.3	+0.4
BLGI				Sn	Sn	20 03 27.3	-1.5
KSHT	Keshet	3.93	129	Pn	Pn	20 02 49.5	+0.8
SLTI	Sal'it	4.04	143	Pn	Pn	20 02 50.2	+0.1
SLTI				Sn	Sn	20 03 33.7	-2.6
MMLI	Mount Malkishu	4.08	137	Pn	Pn	20 02 51.1	+0.3
MMLI				Sn	Sn	20 03 35.8	-1.7
HCB	Kahramanmara	4.25	63	P	Pn	20 02 53.8	+0.7
HCB				S	Sn	20 03 38.5	-3.1
HMDT	Nahal Hemdat	4.28	138	Pn	Pn	20 02 54.1	+0.6
HMDT				Sn	Sn	20 03 40.9	-1.4
UJAP	Al Uja	4.48	141	Pn	Pn	20 02 57.0	+0.8
UJAP				Sn	Sn	20 03 45.4	-1.8
AMAZ	Amatzia	4.57	149	Pn	Pn	20 02 58.0	+0.4
AMAZ				Sn	Sn	20 03 47.8	-1.8
DSI	Dead Sea	4.75	145	Pn	Pn	20 03 00.9	+0.9
DSI				Sn	Sn	20 03 52.1	-1.8
YTIR	Yattir	4.80	148	Pn	Pn	20 03 01.3	+0.5
YTIR				Sn	Sn	20 03 53.6	-1.8
KZIT	Kziot	4.95	157	Pn	Pn	20 03 02.7	0.0
KZIT				Sn	Sn	20 03 57.1	-1.7
MDBI	Mazsada	4.96	146	Pn	Pn	20 03 03.5	+0.8
MDBI				Sn	Sn	20 03 56.8	-2.1
PRNI	Paran	5.66	154	Pn	Pn	20 03 12.7	+0.2
KRMI	Paran Flat	5.78	157	Pn	Pn	20 03 13.6	-0.6
HRFI	Mount Harif	5.96	155	Pn	Pn	20 03 16.7	+0.1
HRFI				Sn	Sn	20 04 21.4	-2.4
MBRI	Mt Berech	6.14	157	Pn	Pn	20 03 19.1	-0.1
MBRI				Sn	Sn	20 04 26.2	-2.1
EIL	Elat	6.27	157	Pn	Pn	20 03 21.0	+0.2

IDC ***05*** *20:23:32.7±1.8, 1°.98N×126°.59E, h0^{km}, mb3.7/3, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=121.5km s-min=22.4km az=68.0*

DJA ***05*** *20:23:37.0±0.3, 2°N±4°×12°6E±°, h10^{km}, M3.8/9, mb3.8/1, MLv3.7/9*

ISC 05 20:23:39.7±1.1**, 1°.82N**±0°.07×**126°.39E**±0°.08**, h47^{km}, n11, σ0^{s}63**/12**, mb3.5**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.43	137	P	Pn	20 24 02.7	-0.4
TNTI				S	Sn	20 24 22.1	+1.4
SGSI	Sangihe	2.05	335	P	Pn	20 24 11.7	0.0
LBMI	Labuha	2.68	156	P	Pn	20 24 20.0	-0.4
KMSI	Cibinong	2.71	243	P	Pn	20 24 20.5	-0.2
GTOI	Gorontalo	3.58	251	P	Pn	20 24 33.2	+0.5
SANI	Sanana	3.86	186	P	Pn	20 24 36.3	-0.3
LUWI	Luwuk	4.60	232	P	Pn	20 24 46.1	-0.6
FITZ	Fitzroy Crossi	19.80	182	P	P	20 28 06.6	+0.3
	0.1nm,0.3s,baz=12,slow=13,SNR=1.5						
	2.4nm,1.1s						
WRA	Warramunga Arr	22.99	161	P	P	20 28 40.4	-0.1
	1.0nm,0.5s,baz=340,slow=11,SNR=38						
	1.0nm,0.5s						
ASAR	Alice Springs	26.36	164	P	P	20 29 11.9	+0.2
	0.7nm,0.5s,baz=344,slow=8.0,SNR=18						
	0.7nm,0.5s						
MKAR	Makanchi Array	58.93	326	P	P	20 33 33.5	-0.6
	0.7nm,0.5s,baz=120,slow=8.0,SNR=12						
	0.7nm,0.5s						

IDC ***05*** *20:27:28.7±1.0, 11°.80N×143°.31E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.9/1, Error ellipse: s-maj=38.2km s-min=20.2km az=116.0*

ISC 05 20:27:32.6±1.0**, 11°.8N**±0°.2×**143°.3E**±0°.2**, h25^{km}, n12, σ0^{s}42**/10**, mb3.7**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.37	40	Pn	Pn	20 28 09.7	-0.1
	31nm,0.3s,baz=141,slow=15,SNR=9.6						
GUMO				Sn	Sn	20 28 38.6	+0.5
	30nm,0.3s,baz=286,slow=22,SNR=3.0						
	77nm,0.3s						
H11N1	WAKE ISLAND Hy	24.02	68	T	T	20 57 51.5	
	baz=252,slow=75,SNR=3.5						
H11N2	WAKE ISLAND Hy	24.03	68	T	T	20 58 00.6	
	baz=252						
H11N3	WAKE ISLAND Hy	24.04	68	T	T	20 57 55.1	
	baz=252,slow=75,SNR=3.2						
WRA	Warramunga Arr	32.73	196	P	P	20 34 03.7	+0.2
	0.7nm,0.9s,baz=21,slow=9.7,SNR=1.8						
	0.7nm,0.9s						
ASAR	Alice Springs	36.40	195	P	P	20 34 35.3	0.0
	0.2nm,0.8s,baz=23,slow=12,SNR=1.5						
	0.2nm,0.8s						
MKAR	Makanchi Array	61.74	317	P	P	20 37 49.2	+0.1
	0.2nm,0.7s,baz=114,slow=8.0,SNR=1.9						
	0.2nm,0.7s						
KURBB	Kurchatov Arra	65.03	321	P	P	20 38 10.6	0.0
	0.4nm,0.7s,baz=106,slow=7.3,SNR=4.0						
	0.4nm,0.7s						
ILAR	Eielson Array	70.85	25	P	P	20 38 46.2	-0.9
	1.1nm,0.5s,baz=253,slow=5.8,SNR=14						
	1.1nm,0.5s						
YKA	Yellowknife Ar	85.16	27	P	P	20 40 06.7	+0.2
	0.3nm,0.6s,baz=289,slow=5.1,SNR=3.2						
	0.3nm,0.6s						
ARCES	ARCESS Array B	88.33	342	P	P	20 40 21.9	+0.1
	2.8nm,1.1s,baz=77,slow=5.4,SNR=5.4						
	2.8nm,1.1s						
FINES	FINESS Array B	92.14	335	P	P	20 40 40.1	+0.4
	0.9nm,0.9s,baz=57,slow=5.0,SNR=6.3						
	0.9nm,0.9s						

IDC ***05*** *20:30:45.4±2.3, 37°.46N×142°.22E, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.1/2, MS2.2/2, Error ellipse: s-maj=43.7km s-min=30.8km az=77.0*

JMA ***05*** *20:30:51.8±0.1, 37°.4N±0°.3×141°.8E±0°.7, h43^{km}±2^{km}, MV3.7/40, E OFF FUKUSHIMA PREF*

ISC 05 20:30:50.0±3.3**, 37°.39N**±0°.04×**141°.88E**±0°.08**, h25^{km}**±24^{km}**, n24, σ1^{s}01**/31**, mb3.5**/3**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.80	269	⇓iP	Pn	20 31 05.8	+0.1
JFK				⇓S	Sn	20 31 15.6	-1.3
JMST	Minamisoumatoc	0.85	293	i P	Pn	20 31 06.3	-0.1
JMST				S	Sn	20 31 16.5	-1.6
ONAJ	Iwakimizuishiy	0.91	252	⇓iP	Pn	20 31 07.5	+0.3
ONAJ				⇓S	Sn	20 31 18.5	-1.1
JIKH	Ishinomakikobu	0.97	341	i P	Pn	20 31 08.3	+0.2
JIKH				S	Sn	20 31 19.9	-1.3
JMM	Marumori	0.98	299	i P	Pn	20 31 08.3	+0.1
JMM				S	Sn	20 31 19.9	-1.5
JIO	Ouri	1.14	339	i P	Pn	20 31 10.7	+0.3
JIO				S	Sn	20 31 23.8	-1.5
JFT	Otama	1.23	276	⇓iP	Pn	20 31 12.6	+1.0
JFT				⇓S	Sn	20 31 27.4	-0.1
JOU	Okura	1.37	316	P	Pn	20 31 14.3	+0.7
JOU				S	Sn	20 31 30.8	-0.1
JMK	Ichinoseki	1.64	342	i P	Pn	20 31 18.2	+0.9
JMK				eS	Sn	20 31 37.0	-0.7
JYS	Shirataka	1.66	301	P	Pn	20 31 18.9	+1.4
JYS				eS	Sn	20 31 38.4	+0.3
JFY	Yanaizu	1.73	271	P	Pn	20 31 19.8	+1.2
JFY				eS	Sn	20 31 40.0	+0.2
JYK	Kaneyama	1.94	322	P	Pn	20 31 22.6	+1.2
JYK				eS	Sn	20 31 45.0	0.0
MJAR	Matsushiro Arr	3.06	255	Pn	Pn	20 31 38.4	+1.6
	0.9nm,0.3s,baz=343,slow=12,SNR=26						
MJAR				Sn	Sb	20 32 19.7	-0.9
	0.8nm,0.3s,baz=40,slow=21,SNR=5.0						
MJAR				LR	LR	20 33 08.5	
	comp=Z,47nm,19.7s,baz=138,slow=43						
	3.6nm,0.4s						
JHJ	Hachijo jima 2	4.59	202	Pn	Pn	20 31 59.0	+1.1
	6.1nm,0.3s,baz=65,slow=18,SNR=9.7						
JHJ				Sn	Sn	20 32 48.8	-1.6
	14nm,0.3s,baz=142,slow=23,SNR=6.3						
	19nm,0.3s						
KSRS	Korea Array	11.10	275	LR	LR	20 37 26.5	
	comp=Z,9.6nm,19.5s,baz=230,slow=35						
H11N2	WAKE ISLAND Hy	28.02	122	T	T	21 06 12.0	
	baz=315,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	28.03	122	T	T	21 06 13.2	
	baz=315,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	28.04	122	T	T	21 06 14.6	
	baz=315,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	28.75	124	T	T	21 07 09.7	
	baz=316,slow=76,SNR=5.7						
H11S3	WAKE ISLAND Hy	28.75	124	T	T	21 07 11.5	
	baz=316,slow=76,SNR=3.9						
H11S2	WAKE ISLAND Hy	28.76	124	T	T	21 07 10.4	
	baz=316,slow=76,SNR=3.6						
MKAR	Makanchi Array	44.24	302	P	P	20 38 57.7	+0.4
	0.2nm,0.8s,baz=86,slow=7.4,SNR=2.1						
	0.2nm,0.8s						
KURBB	Kurchatov Arra	46.07	308	P	P	20 39 12.3	+0.6
	0.4nm,0.6s,baz=82,slow=8.7,SNR=4.4						
	0.4nm,0.6s						
WRA	Warramunga Arr	57.46	188	P	P	20 40 36.5	-0.4
	0.4nm,0.7s,baz=5.1,slow=7.2,SNR=2.4						
	0.4nm,0.7s						

BJI ***05*** *20:39:11.4±0.0, 0°.90N×126°.49E, h51^{km}, mb4.9/67, mB4.9/34, Ms4.4/22, Ms7 4.1/21*

MOS ***05*** *20:39:14.3±0.9, 1°.51N×126°.34E, h40^{km}, mb5.3/39, Error ellipse: s-maj=8.8km s-min=4.7km az=113.2*

IDC ***05*** *20:39:16.9±1.4, 1°.43N×126°.40E, h49^{km}±13^{km}, mb4.7/37, mbtmp4.9/40, ML4.6/3, MS3.7/39, Error ellipse: s-maj=12.6km s-min=6.4km az=66.0*

NEIC ***05*** *20:39:16.3±2.0, 1°.45N±0°.06×126°.44E±0°.06, h39^{km}±4^{km}, mb5.1/160, Error ellipse: s-maj=9.9km s-min=7.7km az=219.0*

GCMT ***05*** *20:39:17.3±0.3, 1°.66N±0°.02×126°.47E±0°.02, h33^{km}, MW5.0/74, Moment Tensor Solution. s70,c93; s74,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.77±.15; $M_{\theta\theta}$-1.86±.09; $M_{\phi\phi}$-1.91±.11; $M_{r\theta}$-0.87±.14; $M_{\theta\phi}$-1.57±.06; $M_{\phi r}$-0.37±.16; Best double couple: $M_0$3.73200×10^{16} NP1:ϕ_s40.00000°, δ38.00000°, λ82.00000°. NP2: ϕ_s230.00000°, δ52.00000°, λ96.00000°. Principal axes: T 3.9040, Plg82.0000°, Azm170.0000°; N -0.3440, Plg5.0000°, Azm46.0000°; P -3.5600, Plg7.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***05*** *20:39:17.0±0.2, 2°N±2°×12°7E±°, h63^{km}±3^{km}, M4.7/38, mb5.0/38, mB5.2/19, MLv4.9/12, Mw(mB)4.7/19, MwMwp4.6/5, Mwp5.0/5*

ISC 05 20:39:16.7±0.4**, 1°.45N**±0°.03×**126°.45E**±0°.04**, h47^{km}**±3^{km}**, h47^{km}:pP-P, n605, σ1^{s}29**/608**, mb5.0**/173**, MS3.8**/45**, 54C-10D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.14	126	Pn	Pn	20 39 35.5	-0.7
TNTI				Sn	Sn	20 39 49.2	-1.5
TNTI	Ternate	1.14	126	P	Pn	20 39 35.6	-0.7
TNTI	Ternate	1.14	126	P	Pn	20 39 35.8	-0.4
LBMI	Labuha	2.33	153	P	Pn	20 39 53.3	+0.8
SGSI	Sangihe	2.40	337	P	Pn	20 39 52.5	-1.1
SANI	Sanana	3.51	188	P	Pn	20 40 09.6	+0.9
SANI	Sanana	3.51	188	P	Pn	20 40 10.0	+1.3
GTOI	Gorontalo	3.53	257	P	Pn	20 40 11.5	+2.4
LUWI	Luwuk	4.43	236		Pn	20 40 22.4	+0.9
LUWI	Luwuk	4.43	236	P	Pn	20 40 23.7	+2.2
LUWI	Luwuk	4.43	236	P	Pn	20 40 25.5	+4.0
GSPH	General Santos	4.84	342	⇑eP	Pn	20 40 26.5	-0.8
GSPH				i S	Sn	20 41 23.7	+1.6
SWI	Sorong	5.33	116	P	Pn	20 40 34.0	+0.2
	0.6nm3μm2μm160nm,0.9s						
SIJI	Sorong	5.34	116	P	Pn	20 40 34.6	+0.7
	4.6nm,0.3s,baz=324,slow=9.1,SNR=28						
SIJI				S	Sn	20 41 35.8	+1.6
	15nm,0.5s,baz=282,slow=22,SNR=0.9						
SIJI				LR	LR	20 43 04.5	
	comp=Z,2μm,18.5s,baz=334,slow=42						
	95nm,0.8s						
MSAI	Masohi	5.37	153	P	Pn	20 40 36.5	+2.2
	0.2nm551nm42nm,0.6s						
AAI	Ambon	5.39	161	P	Pn	20 40 36.6	+2.0
	1.1nm4μm281nm,0.7s						
DAV	Davao City (W)	5.65	351	P	Pn	20 40 39.0	+0.8
	58nm,0.3s,baz=82,slow=15,SNR=2.5						
DAV				S	Sn	20 41 43.3	+1.5
	181nm,0.4s,baz=247,slow=22,SNR=3.6						
DAV				LR	LR	20 43 10.6	
	comp=Z,1μm,21.9s,baz=162,slow=41						
	142nm,0.3s						
TOLI2	Tolitoli	5.68	267	Pn	Pn	20 40 37.6	-1.0
TOLI2	Tolitoli	5.68	267	P	Pn	20 40 38.9	+0.3
KCP	Kidapawan	5.69	346	⇓eP	Pn	20 40 38.9	+0.2
KCP				i S	Sn	20 41 44.6	+1.8
CTBH	Cotabato--PC H	6.14	339	eP	Pn	20 40 45.2	+0.3
CTBH				i S	Sn	20 41 53.6	-0.2
ZCP	Zamboanga City	6.98	321	⇑eP	Pn	20 40 55.6	-0.8
PAGZ	Pagadian	7.05	334	⇓eP	Pn	20 40 56.7	-0.7
TBP	Tagbilaran	8.58	343	eP	Pn	20 41 19.6	+1.2
MYLDM	Lahad Datu	8.76	295	Pn	Pn	20 41 22.3	+1.5
LLP	Lapu-Lapu	9.15	344	eP	Pn	20 41 28.3	+2.1
KAPI	Kappang	9.28	226	P	Pn	20 41 30.5	+2.6
	34nm,0.4s,baz=7.4,slow=6.7,SNR=21						
KAPI	Kappang	9.28	226	P	Pn	20 41 29.2	+1.3
KAPI	Kappang	9.28	226	Pn	Pn	20 41 29.2	+1.3
KAPI	Kappang	9.28	226	P	Pn	20 41 31.4	+3.5
RCP	Roxas	10.70	340	⇓eP	Pn	20 41 48.8	+1.5
MMRI	Maumere	10.86	203	Pn	Pn	20 41 49.4	-0.2
PPR	Puerto Princes	11.29	317	⇓iP	Pn	20 41 57.7	+2.3
MTKI	Muara Teweh, K	11.80	258	P	Pn	20 42 03.1	+0.7
	10.0nm,1.9s						
BATI	Baumata	11.91	193	P	Pn	20 42 09.4	+5.4
	49nm,0.8s,baz=206,slow=1.3,SNR=9.2						
BATI	Baumata	11.91	193	P	Pn	20 42 05.7	+1.7
	46nm,1.1s						
SMPI	Sarmi	12.72	106	P	Pn	20 42 15.4	+0.3
	44nm,1.3s						
PLAI	Plampang	13.38	220	P	Pn	20 42 26.9	+2.9
	896nm75nm,0.9s						
LQP	Lukban	13.48	339	⇓eP	Pn	20 42 25.3	-0.4
SBUM	Sibu	14.26	274	Pn	Pn	20 42 36.4	+0.5
SRBI	Singaraja	14.67	230	P	Pn	20 42 44.2	+2.7
	1μm62nm,0.9s						
MTN	Manton Dam	14.94	162	P	Pn	20 42 44.7	-0.3
	baz=15,SNR=58						
MTN	Manton Dam	14.94	162	Pn	Pn	20 42 44.5	-0.5
MTN	Manton Dam	14.94	162	P	Pn	20 42 44.1	-0.9
STKI	Sintang	15.04	265	P	Pn	20 42 46.8	+0.5
	4μm18nm,1.5s						
KMMI	Kalianget	15.05	236	P	Pn	20 42 48.1	+1.7
	80nm,0.8s						
DNP	Denpasar	15.06	228	P	P	20 42 49.8	-1.2
	580nm,0.9s						
KDU	Kakadu	15.27	157	P	Pn	20 42 47.4	-1.8
	baz=15,SNR=60						
KDU	Kakadu	15.27	157	P	Pn	20 42 47.6	-1.6
JAGI	Jajag, Banyuwa	15.73	231		Pn	20 42 55.0	-0.3
JAGI	Jajag, Banyuwa	15.73	231	P	Pn	20 42 56.4	+1.1
	88nm,0.9s						
JAGI	Jajag, Banyuwa	15.73	231	P	Pn	20 42 56.1	+0.8
KSM	Kuching	16.14	270	P	P	20 43 03.6	+0.6
KSM	Kuching	16.14	270	P	P	20 43 04.1	+1.1
KNRA	Kununurra	17.17	172	P	Pn	20 43 12.3	-1.0
	baz=17,SNR=30						
KNRA	Kununurra	17.17	172		Pn	20 43 13.7	+0.3
KNRA				IAmb	IAmb	20 43 28.2	
	comp=Z,87nm,0.8s						
KNRA	Kununurra	17.17	172	P	Pn	20 43 13.7	+0.3
UWJI	Ujung Watu	17.34	243	P	P	20 43 16.5	+0.2
	comp=Z,41nm,0.7s						
UGM	Wanagama	18.41	239	P	P	20 43 28.0	-0.1
UGM				IAmb	IAmb	20 43 42.1	
	comp=Z,188nm,1.4s						
UGM	Wanagama	18.41	239	P	Pn	20 43 31.1	+2.5
TPI	Tanjungpandan	19.25	257	P	P	20 43 37.7	+0.3
	comp=Z,9.4nm,0.8s						
FITZ	Fitzroy Crossi	19.44	182	P	P	20 43 39.3	-0.1
	comp=Z,2.1nm,0.3s,baz=18,slow=10,SNR=30						
	comp=Z,9.8nm,0.5s						
LEM	Lembang	20.52	246	P	P	20 43 50.8	-0.5
	comp=Z,13nm,0.5s,baz=36,slow=10,SNR=4.4						
LEM				LR	LR	20 53 24.5	
	comp=Z,211nm,18.2s,baz=132,slow=41						
	comp=Z,13nm,0.5s						
PPBI	Pangkal Pinang	20.62	260	P	P	20 43 51.9	-0.5
GUMO	Guam	21.85	56	LR	LR	20 51 54.1	
	comp=Z,43nm,21.2s,baz=246,slow=35						
TWG	Pinlang	21.88	347	P	P	20 44 00.5	-5.2
TWG				IAmb	IAmb	20 44 06.2	
	comp=Z,72nm,0.7s						
DSRI	Dabo	21.95	265	P	P	20 44 07.1	+0.4
	comp=Z,19nm,1.2s						
YULB	Yu-li	22.38	347	P	P	20 44 07.3	-3.7
YULB				IAmb	IAmb	20 44 12.1	
	comp=Z,35nm,0.6s						
TPUB	Ta-pu	22.44	346	P	P	20 44 08.9	-2.9
TPUB	Ta-pu	22.44	346	P	P	20 44 09.5	-2.3
WB0	Warramunga Arr	22.48	160	P	P	20 44 11.5	-0.7
COEN	Coen	22.56	133	P	P	20 44 12.2	-0.9
	baz=23,SNR=64						
COEN	Coen	22.56	133	P	P	20 44 11.7	-1.4
COEN				IAmb	IAmb	20 44 15.1	
	comp=Z,29nm,0.5s						
COEN	Coen	22.56	133	P	P	20 44 12.5	-0.7
MYKOM	Kota Tinggi	22.59	271	P	P	20 44 13.2	-0.3
WRAB	Tennant Creek	22.62	160	ceP	P	20 44 13.6	-0.1
WRAB				pmax	pmax		
	comp=Z,121nm,1.0s						
WRAB	Tennant Creek	22.62	160	P	P	20 44 13.3	-0.4
WRAB	Tennant Creek	22.62	160	P	P	20 44 13.8	+0.1
WRA	Warramunga Arr	22.62	160	P	P	20 44 13.5	-0.2
	comp=Z,76nm,0.5s,baz=340,slow=10,SNR=273						
WRA				S	S	20 48 16.4	-2.1
	comp=Z,3.5nm,0.9s,baz=337,slow=19,SNR=4.1						
	comp=Z,76nm,0.5s						
WRA	Warramunga Arr	22.62	160	ceP	P	20 44 11.5	-2.3
WRA				pmax	pmax		
	comp=Z,76nm,0.5s						
WRA	Warramunga Arr	22.62	160	P	P	20 44 12.8	-1.0
WB2	Warramunga Arr	22.63	160	P	P	20 44 13.5	-0.3
WR0	Warramunga Arr	22.71	160	P	P	20 44 13.6	-1.0
SSLB	Suanglung	22.84	347	P	P	20 44 13.9	-2.1
SSLB				IAmb	IAmb	20 44 19.0	
	comp=Z,52nm,0.6s						
KASI	Kota Agung	23.00	252	P	P	20 44 16.5	-1.2
JMBI	JAMBI	23.01	262	P	P	20 44 19.2	+1.4
	comp=Z,60nm,0.5s						
YOJ	Yonaguni jima	23.12	352	P	P	20 44 19.2	+0.5
JMJ	Miyako jima 2	23.25	357	P	P	20 44 20.7	+0.6
LWLI	Liwa	23.27	254	P	P	20 44 18.9	-1.7
	comp=Z,113nm,0.8s						
PMG	Port Moresby	23.28	118	P	P	20 44 21.0	+0.5
	comp=Z,21nm,0.8s,baz=198,slow=2.6,SNR=6.6						
PMG				LR	LR	20 55 55.7	
	comp=Z,280nm,19.5s,baz=280,slow=43						
	comp=Z,21nm,0.8s						
PMG	Port Moresby	23.28	118	P	P	20 44 21.0	+0.5
PMG	Port Moresby	23.28	118	P	P	20 44 19.5	-0.9
MBWA	Marble Bar	23.41	196	P	P	20 44 20.9	-0.7
MBWA				IAmb	IAmb	20 44 21.9	
	comp=Z,33nm,0.5s						
MBWA	Marble Bar	23.41	196	P	P	20 44 21.2	-0.5
YHNB	Yeheng	23.60	348	P	P	20 44 21.5	-2.0
YHNB				IAmb	IAmb	20 44 26.8	
	comp=Z,38nm,0.8s						
YHNB	Yeheng	23.60	348	P	P	20 44 21.5	-2.0
PSA00	Pilbara Seismi	23.78	195	P	P	20 44 24.8	-0.3
PSA00				IAmb	IAmb	20 44 27.3	
	comp=Z,28nm,0.6s						
PSA00	Pilbara Seismi	23.78	195	P	P	20 44 24.8	-0.3
PSA00				IAmb	IAmb	20 44 27.3	
	comp=Z,9.1nm,0.6s						
PSA00	Pilbara Seismi	23.78	195	P	P	20 44 25.1	0.0
XMIS	Christmas Isla	23.85	240	P	P	20 44 25.1	-0.8
XMIS				IAmb	IAmb	20 44 26.5	
	comp=Z,59nm,0.8s						
QIZ	Qiongzhong	23.88	318	P	P	20 44 26.5	+0.4
QIZ	Qiongzhong	23.88	318	P	P	20 44 26.7	+0.6

QIZ				S	S	20 48 43.6	+4.5
QIZ				pmax	pmax		
	comp=Z,30nm,0.8s						
QIZ				LR	LR		
	comp=Z,340nm,19.2s						
QIZ				LR	LR		
	comp=Z,200nm,21.8s						
QIZ				LR	LR		
	comp=Z,290nm,26.1s						
QIZ	Qiongzhong	23.88	318	P	P	20 44 26.6	+0.5
KRJI	Kerinci	25.23	262	P	P	20 44 39.1	+0.5
	comp=Z,106nm,0.9s						
JOW	Kunigami	25.30	4	P	P	20 44 39.3	+0.4
	comp=Z,74nm,0.8s,baz=195,slow=9.2,SNR=11						
	comp=Z,74nm,0.8s						
JOW	Kunigami	25.30	4	P	P	20 44 39.4	+0.5
QIS	Mount Isa	25.39	150	P	P	20 44 40.4	+0.6
	baz=26,SNR=89						
QIS	Mount Isa	25.39	150	P	P	20 44 40.6	+0.8
IPM	Ipoh	25.57	277	P	P	20 44 41.1	-0.4
IPM	Ipoh	25.57	277	P	P	20 44 42.1	+0.5
AS31	Alice Springs	26.00	164	P	P	20 44 46.0	+0.7
ASAR	Alice Springs	26.00	164	P	P	20 44 45.4	+0.1
	comp=Z,17nm,0.4s,baz=348,slow=7.8,SNR=348						
ASAR				PcP	PcP	20 48 13.5	+0.6
	comp=Z,2.9nm,0.5s,baz=348,slow=2.5,SNR=5.4						
ASAR				S	S	20 49 13.8	+0.8
	comp=Z,3.6nm,0.8s,baz=349,slow=18,SNR=5.3						
	comp=Z,17nm,0.4s						
ASAR	Alice Springs	26.00	164	P	P	20 44 45.6	+0.3
KULM	Kulim	26.03	279	P	P	20 44 45.4	-0.3
KULM				IAmb	IAmb	20 45 10.9	
	comp=Z,51nm,1.5s						
KRVT	Keravat (AS076	26.19	103	P	P	20 44 47.6	+0.4
	comp=Z,49nm,0.5s,baz=57,slow=1.2,SNR=7.6						
KRVT				LR	LR	20 53 34.7	
	comp=Z,192nm,20.6s,baz=43,slow=33						
	comp=Z,49nm,0.5s						
MTSU	Mount Surprise	26.23	139	P	P	20 44 48.2	+0.7
	baz=26,SNR=32						
MTSU	Mount Surprise	26.23	139	P	P	20 44 48.2	+0.7
RABL	Rabaul	26.30	102	P	P	20 44 48.5	+0.3
WRKA	Warakurna	26.39	176	P	P	20 44 49.7	+0.8
	baz=27,SNR=103						
WRKA	Warakurna	26.39	176	P	P	20 44 49.6	+0.7
GIRL	Giralia	26.75	206	P	P	20 44 52.2	+0.1
	baz=27,SNR=7.0						
GIRL	Giralia	26.75	206	P	P	20 44 52.4	+0.4
GIRL	Giralia	26.75	206	P	P	20 44 53.7	+1.6
PSI	Prapat	27.54	273	P	P	20 44 58.6	-0.9
	comp=Z,16nm,0.8s,baz=157,slow=4.2,SNR=11						
PSI				LR	LR	20 58 14.5	
	comp=Z,243nm,18.7s,baz=90,slow=41						
	comp=Z,16nm,0.8s						
GSI	Gunungsitoli	28.87	270	P	P	20 45 10.0	-1.2
CTA	Charters Tower	28.90	139	P	P	20 45 12.6	+1.2
	comp=Z,12nm,0.9s,baz=326,slow=11,SNR=21						
CTA				LR	LR	20 57 33.1	
	comp=Z,183nm,20.8s,baz=326,slow=38						
	comp=Z,12nm,0.9s						
CTA	Charters Tower	28.90	139	P	P	20 45 13.1	+1.7
CTAO	Charters Tower	28.90	139	P	P	20 45 08.5	-2.9
CTAO				pmax	pmax		
	comp=Z,33nm,1.3s						
CTAO	Charters Tower	28.90	139	P	P	20 45 08.5	-2.9
CTAO	Charters Tower	28.90	139	P	P	20 45 13.0	+1.7
MEEK	Meekatharra	28.93	195	P	P	20 45 11.6	+0.1
	baz=29,SNR=30						
MEEK	Meekatharra	28.93	195	P	P	20 45 11.8	+0.2
JCJ	Chichijima	29.63	29	P	P	20 45 18.9	+1.1
	comp=Z,35nm,0.5s,baz=83,slow=20,SNR=5.7						
	comp=Z,35nm,0.5s						
JCJ	Chichijima	29.63	29	P	P	20 45 17.8	0.0
JCJ	Chichijima	29.63	29	P	P	20 45 17.4	-0.4
JSU	Suzuyama	30.13	7	P	P	20 45 22.4	+0.3
JSU				IAmb	IAmb	20 45 40.6	
	comp=Z,55nm,1.3s						
OOD	Oodnadatta	30.40	164	P	P	20 45 25.2	+0.6
NJ2	Nanjing	31.27	348	*e*P	P	20 45 33.9	+1.7
NJ2				pmax	pmax		
	comp=Z,23nm,0.6s						
GYA	Guiyang	31.31	324	⇑*i*P	P	20 45 33.1	+0.4
GYA				S	S	20 50 34.8	-1.8
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,4.0s						
JNU	Nakatsue	31.78	7	P	P	20 45 36.6	-0.1
	comp=Z,28nm,0.8s,baz=139,slow=6.2						
	comp=Z,28nm,0.8s						
JNU	Nakatsue	31.78	7	P	P	20 45 37.1	+0.4
CM31	Chiang Mai Arr	31.84	304	P	P	20 45 37.2	-0.2
CMAR	Chiang Mai Arr	31.84	304	P	P	20 45 36.9	-0.4
	comp=Z,6.9nm,0.8s,baz=123,slow=7.0,SNR=23						
CMAR				PcP	PcP	20 48 28.9	+1.3
	comp=Z,2.7nm,0.9s,baz=163,slow=2.4,SNR=8.9						
CMAR				LR	LR	20 59 32.8	
	comp=Z,98nm,19.4s,baz=120,slow=38						
	comp=Z,6.9nm,0.8s						
CMAR	Chiang Mai Arr	31.84	304	P	P	20 45 37.0	-0.4
CMAR	Chiang Mai Arr	31.84	304	P	P	20 45 37.0	-0.4
MORW	Morawa	31.94	197	P	P	20 45 38.6	+0.5
	baz=32,SNR=9.7						
MORW	Morawa	31.94	197	P	P	20 45 38.6	+0.5
MORW				IAmb	IAmb	20 45 38.9	
	comp=Z,17nm,0.6s						
MORW	Morawa	31.94	197	P	P	20 45 38.6	+0.5
CHTO	Chiang Mai	32.01	304	P	P	20 45 38.3	-0.6
CHTO				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	32.01	304	P	P	20 45 38.3	-0.6
CHTO				IAmb	IAmb	20 45 42.3	
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	32.01	304	P	P	20 45 38.3	-0.6
CHTO	Chiang Mai	32.01	304	⇑P	P	20 45 38.1	-0.8
FORT	Forrest	32.09	177	P	P	20 45 39.7	+0.4
	baz=32,SNR=19						
FORT	Forrest	32.09	177	P	P	20 45 39.0	-0.4
FORT	Forrest	32.09	177	P	P	20 45 39.9	+0.5
MULG	Mulgathing	32.38	168	P	P	20 45 42.6	+0.7
KMI	Kunming	32.83	318	⇑P	P	20 45 45.8	-0.4
KMI				LR	LR		
	comp=Z,180nm,16.8s						
KMI				LR	LR		
	comp=Z,220nm,20.2s						
KMI				LR	LR		
	comp=Z,350nm,22.2s						
ENH	Enshi	32.88	332	P	P	20 45 45.0	-1.4
ENH	Enshi	32.88	332	⇑P	P	20 45 44.8	-1.6
ENH				pP	pP	20 45 55.4	-3.0
BLDU	Ballidu	33.21	195	P	P	20 45 49.6	+0.4
	baz=33,SNR=16						
BLDU	Ballidu	33.21	195	P	P	20 45 49.5	+0.3
LCRK	Leigh Creek	33.65	161	P	P	20 45 53.7	+0.7
KLBR	Kellerberrin	33.88	193	P	P	20 45 55.6	+0.5
	baz=34,SNR=21						
KLBR	Kellerberrin	33.88	193	P	P	20 45 55.8	+0.7
JHJ	Hachijo jima 2	33.90	20	LR	LR	20 57 56.9	
	comp=Z,96nm,21.6s,baz=333,slow=33						
JHS	Saijyo	33.95	10	P	P	20 45 55.7	+0.1
JHS				IAmb	IAmb	20 46 13.6	
	comp=Z,21nm,1.0s						
RK1H	Rockhampton Ha	34.01	138	P	P	20 45 57.5	+1.2
PZH	PanZhiHua	34.41	318	P	P	20 45 58.2	-1.7
PZH				S	S	20 51 27.8	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
PZH				LR	LR		
	comp=Z,420nm,22.7s						
PZH				LR	LR		
	comp=Z,400nm,23.7s						
PZH				LR	LR		
	comp=Z,950nm,23.1s						
MUN	Mundaring	34.64	195	P	P	20 46 02.2	+0.6
	baz=35,SNR=9.4						
MUN	Mundaring	34.64	195	P	P	20 46 02.1	+0.6
INU	Inuyama	35.13	15	P	P	20 46 05.1	-0.7
INU				IAmb	IAmb	20 46 17.7	
	comp=Z,19nm,0.8s						
RMQ	Roma	35.14	144	P	P	20 46 06.4	+0.3
	baz=35,SNR=5.1						
RMQ	Roma	35.14	144	P	P	20 46 06.5	+0.5
BBOO	Buckleboo	35.27	166	P	P	20 46 07.3	+0.3
	baz=36,SNR=88						
BBOO	Buckleboo	35.27	166	P	P	20 46 07.6	+0.6
BBOO	Buckleboo	35.27	166	P	P	20 46 07.5	+0.6
NWAO	Narrogin (SRO)	35.28	193	P	P	20 46 07.7	+0.6
NWAO				pmax	pmax		
	comp=Z,39nm,1.2s						
NWAO	Narrogin (SRO)	35.28	193	P	P	20 46 07.7	+0.6
NWAO				IAmb	IAmb	20 46 11.3	
	comp=Z,39nm,1.2s						
NWAO	Narrogin (SRO)	35.28	193	P	P	20 46 07.8	+0.6
LYN	LuoYang	35.42	340	*e*P	P	20 46 08.9	+0.6
JGF	Kuroka	35.46	15	P	P	20 46 08.3	-0.4
EIDS	Eidsvold	35.77	140	P	P	20 46 12.0	+0.5
	baz=36,SNR=5.8						
EIDS	Eidsvold	35.77	140	P	P	20 46 10.8	-0.6
EIDS				IAmb	IAmb	20 46 14.2	
	comp=Z,18nm,1.0s						
KSRS	Korea Array	35.85	2	P	P	20 46 12.5	+0.5
	comp=Z,6.1nm,0.7s,baz=181,slow=9.9,SNR=15						
	comp=Z,6.1nm,0.7s						
WHYH	Whyalla	35.87	164	P	P	20 46 13.3	+1.1
KS19	Wonju Array Si	35.90	2	P	P	20 46 13.1	+0.7
KS19				IAmb	IAmb	20 46 38.4	
	comp=Z,28nm,1.3s						
PTPS	Port Pirie	36.12	163	P	P	20 46 16.1	+1.8
STKA	Stephens Creek	36.12	158	P	P	20 46 14.7	+0.3
	comp=Z,26nm,0.7s,baz=331,slow=8.3,SNR=46						
	comp=Z,26nm,0.7s						
STKA	Stephens Creek	36.12	158	P	P	20 46 14.8	+0.3
	baz=36,SNR=32						
STKA	Stephens Creek	36.12	158	P	P	20 46 14.7	+0.3
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	36.12	158	P	P	20 46 14.7	+0.3
STKA	Stephens Creek	36.12	158	P	P	20 46 14.9	+0.5
NAPP	Napperby	36.17	163	P	P	20 46 16.0	+1.2
XAN	Xi'an	36.33	335	P	P	20 46 15.0	-1.2
XAN				pP	sP	20 46 34.4	+0.6
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
CD2	Chengdu	36.34	326	P	P	20 46 15.7	-0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
MAJO	Matsushiro	36.57	16	P	P	20 46 17.0	-1.2
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s						
MAJO	Matsushiro	36.57	16	P	P	20 46 17.0	-1.2
MAJO				IAmb	IAmb	20 46 21.0	
	comp=Z,18nm,0.9s						
MAJO	Matsushiro	36.57	16	P	P	20 46 18.8	+0.6
MJAR	Matsushiro Arr	36.57	16	P	P	20 46 17.0	-1.2
	comp=Z,11nm,0.8s,baz=174,slow=9.8,SNR=23						
MJAR				LR	LR	21 01 37.2	
	comp=Z,44nm,20.7s,baz=226,slow=37						
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	36.57	16	P	P	20 46 16.9	-1.3
MJB9	Matsu-Tunnel	36.58	16	P	P	20 46 17.4	-0.8
MJB9				IAmb	IAmb	20 46 20.9	
	comp=Z,19nm,0.9s						
HTT	Hallett	36.63	162	P	P	20 46 19.8	+1.1
	baz=37,SNR=24						
HTT	Hallett	36.63	162	P	P	20 46 20.0	+1.2
RKGY	Rocky Gully	36.96	193	P	P	20 46 22.4	+1.0
	baz=37,SNR=5.1						
RKGY	Rocky Gully	36.96	193	P	P	20 46 23.6	+2.2
HNS	HongShan	37.38	345	⇑P	P	20 46 25.0	+0.1
HNS				*e*S	S	20 52 12.2	+2.5
HNS				pmax	pmax		
	comp=Z,19nm,0.7s						
HNS				LR	LR		
	comp=Z,150nm,11.4s						
HNS				LR	LR		
	comp=Z,220nm,22.9s						
DL2	Dalian	37.54	354	P	P	20 46 26.9	+0.6
DL2				pmax	pmax		
	comp=Z,54nm,0.7s						
CMSA	Cobar Meteorol	37.55	153	P	P	20 46 27.1	+0.6
	baz=38,SNR=18						
CMSA	Cobar Meteorol	37.55	153	P	P	20 46 27.5	+1.0
JSD	Sado	37.99	15	P	P	20 46 30.5	+0.4
TWOA	Tennyson Woods	38.03	164	P	P	20 46 32.3	+1.8
JMM	Marumori	38.56	18	P	P	20 46 35.2	+0.2
BJT	Baijiatuau	39.51	348	P	P	20 46 42.7	-0.2
BJT				pmax	pmax		
	comp=Z,20nm,0.6s						
BJT	Baijiatuau	39.51	348	P	P	20 46 42.7	-0.2
BJT				IAmb	IAmb	20 46 47.3	
	comp=Z,20nm,0.6s						
BJT	Baijiatuau	39.51	348	P	P	20 46 44.2	+1.4
BJT				pP	pP	20 46 56.6	+1.5
BJI	Beijing	39.53	348	P	P	20 46 42.6	-0.4
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARMA	Armidale	39.75	145	P	P	20 46 45.1	0.0
	baz=40,SNR=16						
ARMA	Armidale	39.75	145	P	P	20 46 46.3	+1.2
ARMA				IAmb	IAmb	20 46 49.2	
	comp=Z,30nm,0.9s						
ARMA	Armidale	39.75	145	P	P	20 46 46.6	+1.5
LZH	Lanzhou	40.34	331	*e*P	P	20 46 50.9	+0.9
LZH				pP	pP	20 47 01.1	-1.1
LZH				sP	sP	20 47 08.3	+0.7
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
LZH				LR	LR		
	comp=Z,230nm,15.2s						
LZH				LR	LR		
	comp=Z,210nm,15.2s						
LZH				LR	LR		
	comp=Z,240nm,14.1s						
ARPS	Mount Arapiles	40.63	161	P	P	20 46 53.3	+1.1
	baz=41,SNR=33						
ARPS	Mount Arapiles	40.63	161	P	P	20 46 53.7	+1.6
SHL	Shillong	41.03	309	P	P	20 46 54.5	-1.4
SHL				pmax	pmax		
	comp=Z,19nm,0.7s						
SHL	Shillong	41.03	309	P	P	20 46 54.5	-1.4
SHL				IAmb	IAmb	20 46 56.9	
	comp=Z,19nm,0.7s						
JTM	Tenmabayashi	41.34	17	P	P	20 46 57.0	-0.9
MGCD	Mangrove Creek	41.59	148	P	P	20 47 00.4	+0.3
	baz=42,SNR=4.5						
MGCD	Mangrove Creek	41.59	148	P	P	20 47 02.2	+2.1
BRAT	Ballarat	42.05	159	P	P	20 47 05.0	+1.2
CN2	Changchun	42.18	359	*e*P	P	20 46 52.6	-12
CAN	Canberra	42.22	152	P	P	20 47 06.5	+1.2
CAN				pmax	pmax		
	comp=Z,19nm,0.6s						
CAN	Canberra	42.22	152	P	P	20 47 06.5	+1.2
CAN				IAmb	IAmb	20 47 07.7	
	comp=Z,19nm,0.6s						
CAN	Canberra	42.22	152	P	P	20 47 06.8	+1.5
CAN	Canberra	42.22	152	P	P	20 47 06.7	+1.3
CNB	Canberra Magne	42.39	152	P	P	20 47 07.1	+0.4
	baz=43,SNR=7.7						
CNB	Canberra Magne	42.39	152	P	P	20 47 08.3	+1.6
TOO	Toolangi	42.64	158	P	P	20 47 09.5	+0.9
	baz=43,SNR=12						
TOO	Toolangi	42.64	158	P	P	20 47 08.2	-0.5
TOO				pmax	pmax		
	comp=Z,40nm,1.4s						
TOO	Toolangi	42.64	158	P	P	20 47 08.2	-0.5
TOO				IAmb	IAmb	20 47 18.6	
	comp=Z,40nm,1.4s						
TOO	Toolangi	42.64	158	P	P	20 47 10.6	+1.9
USA0B	Ussuriysk Arra	42.85	6	P	P	20 47 08.4	-1.8
USA0B				pmax	pmax		
	comp=Z,18nm,0.9s						
USA0B	Ussuriysk Arra	42.85	6	P	P	20 47 08.4	-1.8
USRK	Ussuriysk Ar.	42.85	6	P	P	20 47 10.6	+0.4
	comp=Z,12nm,0.7s,baz=211,slow=8.0,SNR=17						
	comp=Z,12nm,0.7s						
USRK	Ussuriysk Ar.	42.85	6	P	P	20 47 08.6	-1.6
H11S3	WAKE ISLAND Hy	42.93	64	T	T	21 34 36.4	
	baz=253,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	42.95	64	T	T	21 34 34.0	
	baz=253,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	42.95	64	T	T	21 34 53.9	
	baz=253,slow=75,SNR=8.7						
KOUNC	Koumac, New Ca	43.02	123	P	P	20 47 11.0	-0.9
MDJ	Mudanjiang	43.07	3	P	P	20 47 12.0	0.0
MDJ				IAmb	IAmb	20 47 16.1	
	comp=Z,26nm,0.9s						
XLT	XiLinHaoTe	43.26	349	*e*P	P	20 47 13.7	0.0
XLT				PcP	PcP	20 48 58.8	-3.4
XLT				pmax	pmax		
	comp=Z,20nm,1.1s						
XLT				pmax	pmax		
	comp=Z,140nm,4.1s						
H11N1	WAKE ISLAND Hy	43.51	63	T	T	21 35 28.8	
	baz=246						
H11N2	WAKE ISLAND Hy	43.52	63	T	T	21 35 30.4	
	baz=246						
H11N3	WAKE ISLAND Hy	43.53	63	T	T	21 35 24.3	
	baz=246						
SANVU	Saraoutou	43.65	114	P	P	20 47 17.2	+0.1
LSA	Lhasa	43.76	313	P	P	20 47 18.0	-0.4
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA	Lhasa	43.76	313	P	P	20 47 18.0	-0.4
LSA				IAmb	IAmb	20 47 25.6	
	comp=Z,13nm,0.6s						
LSA	Lhasa	43.76	313	P	P	20 47 17.7	-0.7
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
LSA	Lhasa	43.76	313	P	P	20 47 18.7	+0.3
LSA				sP	pP	20 47 31.8	+1.1
BNX	BinXian	44.11	1	⇑P	P	20 47 20.4	0.0
BNX				pmax	pmax		
	comp=Z,24nm,1.0s						
BNX				pmax	pmax		
	comp=Z,630nm,4.7s						
ASAJ	Asahikawa	44.84	17	P	P	20 47 26.5	+0.3
	comp=Z,12nm,0.7s,baz=241,slow=9.7,SNR=12						
ASAJ				LR	LR	21 05 28.3	
	comp=Z,59nm,21.9s,baz=165,slow=35						
	comp=Z,12nm,0.7s						
ASAJ	Asahikawa	44.84	17	P	P	20 47 26.6	+0.4
ASAJ				pmax	pmax		
	comp=Z,33nm,1.2s						
JKA	Kamikawa-asahi	44.84	17	P	P	20 47 26.6	+0.4
JKA				IAmb	IAmb	20 47 31.4	
	comp=Z,33nm,1.2s						
GTA	Gaotai	44.91	331	⇓P	P	20 47 26.3	-0.7
GTA				PcP	PcP	20 49 08.9	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,55nm,5.2s						
GTA				LR	LR		
	comp=Z,150nm,15.5s						
GTA				LR	LR		
	comp=Z,110nm,15.5s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
TAPN	Taplejung	45.17	308	*e*P	P	20 47 29.5	0.0
	comp=Z,14nm,0.5s						
ODAN	Odare	45.19	307	*e*P	P	20 47 30.1	+0.5
GOMU	GeErMu	45.31	323	P	P	20 47 30.5	-0.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,68nm,3.9s						
DZM	Mont Dzumac	45.49	123	P	P	20 47 32.2	+0.3
	comp=Z,14nm,0.8s,baz=323,slow=7.5,SNR=4.0						
	comp=Z,14nm,0.8s						
DZM	Mont Dzumac	45.49	123	P	P	20 47 31.9	+0.1
DZM				IAmb	IAmb	20 47 34.9	
	comp=Z,14nm,0.8s						
DZM	Mont Dzumac	45.49	123	P	P	20 47 32.7	+0.9
YATNC	Mamie plateau,	45.86	123	P	P	20 47 38.0	+3.4
RAMN	Ramite	45.86	307	*e*P	P	20 47 34.7	-0.2
	comp=Z,21nm,0.5s						
OUENC	Ouen Island, N	45.97	123	P	P	20 47 36.6	+1.1
JIRN	Jiri	46.51	308	*e*P	P	20 47 39.7	-0.4
	comp=Z,3.8nm,0.6s						
GUN	Gumba	46.87	308	*e*P	P	20 47 41.9	-1.0
	comp=Z,90nm,0.5s						
PKI	Pulchoki	47.09	307	*e*P	P	20 47 43.9	-0.7
	comp=Z,15nm,0.5s						
KKN	Kakani	47.28	307	*e*P	P	20 47 45.1	-0.9
	comp=Z,17nm,0.4s						
DMN	Daman	47.34	307	*e*P	P	20 47 45.8	-0.7
	comp=Z,42nm,0.9s						
YSS	Yuzh-Sakhalins	47.50	15	*e*P	P	20 47 48.3	+1.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	47.82	5	*ce*P	P	20 47 49.7	+0.2
KLR				pmax	pmax		
	comp=Z,31nm,1.7s						
GKN	Gorkha	47.89	307	*e*P	P	20 47 49.8	-0.8
	comp=Z,20nm,0.5s						
HIA	Hailar	47.98	354	*i* P	P	20 47 50.3	-0.5
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
KOLN	Koldanda	48.62	307	*e*P	P	20 47 55.4	-0.9
	comp=Z,98nm,0.7s						
DANN	Dangsing	48.74	307	*e*P	P	20 47 56.1	-1.2
	comp=Z,92nm,0.7s						
ULN	Ulaanbaatar	49.19	343	*ce*P	P	20 48 00.5	+0.2
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	49.19	343	P	P	20 47 59.5	-0.8
PYUN	Piuthan	49.25	307	*e*P	P	20 48 00.0	-1.1
	comp=Z,81nm,0.7s						
SONM	Songino Array	49.36	342	P	P	20 48 01.1	-0.5
	comp=Z,6.5nm,0.6s,baz=158,slow=8.5,SNR=34						
SONM				PcP	PcP	20 49 23.7	+0.2
	comp=Z,3.5nm,1.0s,baz=152,slow=4.4,SNR=2.1						
SONM				ScP	ScP	20 53 16.0	+0.8
	comp=Z,0.9nm,0.9s,baz=186,slow=1.2,SNR=3.6						
SONM				LR	LR	21 11 25.6	
	comp=Z,79nm,20.1s,baz=156,slow=39						
	comp=Z,6.5nm,0.6s						
SONM	Songino Array	49.36	342	P	P	20 48 00.5	-1.1
HYBB	Hyderabad (bro	49.66	292	*e*P	P	20 48 02.2	-2.0
GRNR	Gornyy	49.86	8	⇑*i*P	P	20 48 05.8	+0.6
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,100nm,17.0s						
GRNR				MLR	MLR		
	comp=N,320nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,290nm,17.0s						
PCHI	Peechi	50.57	282	*e*P	P	20 48 09.9	-1.3
TYV	Tymovskoe	51.11	13	*e*P	P	20 48 30.0	+15
TYV				pmax	pmax		
	comp=Z,21nm,1.8s						
CIT	Chita	51.54	350	*e*P	P	20 48 18.2	+0.3
CIT				*e*		20 48 31.0	
CIT				pmax	pmax		
	comp=Z,78nm,1.3s						
ZEA	Zeya	52.12	1	*e*P	P	20 48 22.1	+0.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MSVF	Nonsavu	54.25	113	P	P	20 48 38.8	+0.3
	comp=Z,14nm,0.7s,baz=244,slow=5.2,SNR=16						
MSVF				LR	LR	21 11 33.1	
	comp=Z,114nm,18.2s,baz=229,slow=36						
	comp=Z,14nm,0.7s						
MSVF	Nonsavu	54.25	113	P	P	20 48 38.7	+0.3
MSVF				IAmb	IAmb	20 48 42.5	
	comp=Z,31nm,1.1s						
MSVF	Nonsavu	54.25	113	P	P	20 48 40.6	+2.1
MSVF	Nonsavu	54.25	113	P	P	20 48 39.8	+1.4
MSVF				pP	pP	20 48 49.1	-1.8
MOY	Mondy	54.42	341	*e*P	P	20 48 39.2	0.0
MOY				pmax	pmax		
	comp=Z,17nm,2.4s						
WMQ	Urumqi	54.44	326	⇑P	P	20 48 39.5	+0.1
WMQ				pP	pP	20 48 49.7	-2.4
WMQ				sP	sP	20 48 59.0	+1.7
WMQ				PcP	PcP	20 49 45.7	+3.1
WMQ				S	S	20 56 15.9	+1.2
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,6.3s						
WMQ				LR	LR		
	comp=Z,210nm,14.9s						
WMQ				LR	LR		
	comp=Z,300nm,16.1s						
WMQ				LR	LR		
	comp=Z,100nm,20.3s						
KNGR	Kungurtug, Tuv	54.77	338	*i* P	P	20 48 41.3	-0.4
BOD	Bodaibo	57.07	352	*e*P	P	20 48 58.1	+0.3
BOD				pmax	pmax		
	comp=Z,21nm,1.0s						
PEA0B	Petropavlovsk-	57.63	22	P	P	20 49 02.9	+0.9

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PEA0B                                    pmax    pmax
       comp=Z,42nm,1.2s
PEA0B  Petropavlovsk-     57.63  22      P       P        20 49 02.9 +0.9
PETK   Petropavlovsk-     57.63  22      P       P        20 49 02.3 +0.4
       comp=Z,4.7nm,0.4s,baz=185,slow=5.1,SNR=25
       comp=Z,4.7nm,0.4s
NIL    Nilore             59.11 309      P       P        20 49 10.1 -2.6
NIL                                      pmax    pmax
       comp=Z,12nm,0.6s
NIL    Nilore             59.11 309      P       P        20 49 10.1 -2.6
NIL                                      IAmb    IAmb     20 49 15.3
       comp=Z,12nm,0.6s
PRZ    Przheval'sk        59.25 320      P       P        20 49 13.6 -0.1
PRZ                                      pmax    pmax
       comp=Z,15nm,0.7s
PRZ    Przheval'sk        59.25 320      P       P        20 49 13.6 -0.1
PRZ                                      IAmb    IAmb     20 49 21.7
       comp=Z,15nm,0.7s
MK31   Makanchi Array     59.27 326    i P       P        20 49 12.3 -1.2
MK31                                     pmax    pmax
       comp=Z,25nm,0.7s
MK31   Makanchi Array     59.27 326      P       P        20 49 12.1 -1.5
MK31                                     IAmb    IAmb     20 49 16.1
       comp=Z,21nm,0.8s
MKAR   Makanchi Array     59.27 326      P       P        20 49 12.9 -0.6
       comp=Z,22nm,0.7s,baz=120,slow=7.6,SNR=115
MKAR                                     LR      LR       21 16 13.4
       comp=Z,146nm,19.5s,baz=114,slow=37
MKAR                                     PKP2bc           21 18 56.4
       comp=Z,0.4nm,0.9s,baz=278,slow=9.7,SNR=3.6
       comp=Z,22nm,0.7s
MKAR   Makanchi Array     59.27 326      P       P        20 49 12.2 -1.3
MAKZ   Makanchi           59.45 326      P       P        20 49 13.3 -1.5
MAKZ                                     pmax    pmax
       comp=Z,26nm,0.9s
MAKZ   Makanchi           59.45 326      P       P        20 49 13.3 -1.5
MAKZ   Makanchi           59.45 326    ⇓P       P        20 49 14.0 -0.7
MAKZ                                     sP      pwP      20 49 30.6 +3.0
KSH    Kashi              59.47 316      P       P        20 49 15.1 -0.1
KSH                                      PcP     PcP      20 50 03.9 +1.5
KSH                                      pmax    pmax
       comp=Z,7.0nm,0.6s
KDJ    Kajisay            59.87 319      P       P        20 49 17.0 -0.9
KDJ                                      pmax    pmax
       comp=Z,13nm,0.9s
KDJ    Kajisay            59.87 319      P       P        20 49 17.0 -0.9
KDJ                                      IAmb    IAmb     20 49 22.5
       comp=Z,13nm,0.8s
LBZ    Lake Benmore       59.98 145      P       P        20 49 18.4  0.0
RPZ    Rata Peaks         60.08 144      P       P        20 49 19.0 -0.2
       comp=Z,6.0nm,0.5s,baz=307,slow=3.2,SNR=6.3
       comp=Z,6.0nm,0.5s
RPZ    Rata Peaks         60.08 144      IAmb    IAmb     20 49 27.2
       comp=Z,41nm,1.5s
RPZ    Rata Peaks         60.08 144      P       P        20 49 19.8 +0.7
THZ    Tophouse           60.09 141      P       P        20 49 19.5 +0.1
YAK    Yakutsk            60.48   2      LR      LR       21 16 40.1
       comp=Z,48nm,21.4s,baz=267,slow=37
YAK    Yakutsk            60.48   2     eP       P        20 49 22.1 +0.7
YAK                                     e                 20 51 39.6
YAK                                     eS       S        20 57 37.0 +3.8
YAK                                      pmax    pmax
       comp=Z,41nm,0.8s
YAK                                      pmax    pmax
       comp=N,7.0nm,0.9s
YAK                                      pmax    pmax
       comp=E,2.0nm,0.7s
YAK                                      pmax    pmax
       comp=Z,8.0nm,0.4s
YAK                                      smax    smax
       comp=E,114nm,2.9s
YAK                                      smax    smax
       comp=N,67nm,2.5s
YAK    Yakutsk            60.48   2      P       P        20 49 21.2 -0.3
TUWZ   Tuamarina          60.57 140      P       P        20 49 21.6 -0.9
BOOM   Boomskoye usch     60.85 319      P       P        20 49 24.3 -0.3
BOOM                                     pmax    pmax
       comp=Z,6.0nm,0.9s
BOOM   Boomskoye usch     60.85 319      P       P        20 49 24.3 -0.3
KHZ    Kahutara           60.85 142      P       P        20 49 23.8 -0.6
KHZ                                      IAmb    IAmb     20 49 25.5
       comp=Z,14nm,0.7s
KHZ    Kahutara           60.85 142      P       P        20 49 24.1 -0.2
MA2    Magadan            60.97  14      P       P        20 49 25.5 +0.7
       comp=Z,17nm,0.7s,baz=198,slow=8.5,SNR=9.8
MA2                                      LR      LR       21 21 03.0
       comp=Z,14nm,18.0s,baz=204,slow=41
       comp=Z,17nm,0.7s
MA2    Magadan            60.97  14ceP          P        20 49 26.4 +1.6
MA2                                      pmax    pmax
       comp=Z,25nm,1.0s
MA2    Magadan            60.97  14      P       P        20 49 25.6 +0.7
MA2                                      IAmb    IAmb     20 49 26.9
       comp=Z,20nm,0.8s
MA2    Magadan            60.97  14      P       P        20 49 26.5 +1.6
MA2                                      pP      pP       20 49 34.8 -2.9
MA2                                      sP      sP       20 49 43.0  0.0
URZ    Urewera            61.09 136      P       P        20 49 25.5 -0.6
       comp=Z,4.6nm,0.4s,baz=7.4,slow=0.2,SNR=6.7
URZ                                      LR      LR       21 17 19.7
       comp=Z,126nm,18.2s,baz=27,slow=37
       comp=Z,4.6nm,0.4s
URZ    Urewera            61.09 136      P       P        20 49 24.9 -1.2
URZ                                      IAmb    IAmb     20 49 48.5
       comp=Z,24nm,1.2s
URZ    Urewera            61.09 136      P       P        20 49 25.9 -0.2
BKZ    Black Stump Fm     61.10 137      P       P        20 49 25.2 -1.0
BKZ                                      IAmb    IAmb     20 49 26.6
       comp=Z,12nm,0.6s
BKZ    Black Stump Fm     61.10 137      P       P        20 49 26.1 -0.1
BHW    Baring Head        61.15 140      P       P        20 49 25.0 -1.4
TKM2   Tokmak 2           61.27 319      P       P        20 49 26.8 -0.7
       SNR=19
TKM2   Tokmak 2           61.27 319    i P       P        20 49 26.0 -1.5
TKM2                                     pmax    pmax
       comp=Z,10.0nm,0.8s
PLWZ   Palliser           61.48 140      P       P        20 49 27.9 -0.8
KBK    Karagaybulak       61.57 319      P       P        20 49 32.2 +2.6
       SNR=5.1
UCH    Uchtor             61.67 318      P       P        20 49 30.6 +0.1
       SNR=14
BFZ    Birch Farm         61.68 139      P       P        20 49 30.1 +0.1
FRU1   Bishkek            61.85 319      P       P        20 49 29.8 -1.5
FRU1                                     pmax    pmax
       comp=Z,6.0nm,0.6s
FRU1   Bishkek            61.85 319      P       P        20 49 29.8 -1.5
FRU1                                     IAmb    IAmb     20 49 48.8
       comp=Z,6.0nm,0.6s
AAK    Ala-Archa          61.86 319ceP          P        20 49 31.6 +0.1
AAK                                      pmax    pmax
       comp=Z,7.0nm,1.0s
AAK    Ala-Archa          61.86 319      P       P        20 49 30.5 -1.0
AAK                                      IAmb    IAmb     20 49 44.7
       comp=Z,16nm,1.5s
USP    Ospenovka          62.15 319      P       P        20 49 32.4 -0.8
       SNR=17
AML    Almayashu          62.17 318      P       P        20 49 33.5 -0.3
       SNR=21
EKS2   Erkin-Say          62.35 319      P       P        20 49 34.2 -0.5
       SNR=23
DRK    Karamyk            62.38 315      P       P        20 49 34.2 -0.9
DRK                                      IAmb    IAmb     20 49 43.9
       comp=Z,12nm,0.6s
ZAA0   Zalesovo Array     62.49 334      P       P        20 49 34.3 -0.9
ZAA0                                     IAmb    IAmb     20 49 37.6
       comp=Z,11nm,1.1s
ZALV   Zalesovo Beam      62.49 334      P       P        20 49 33.9 -1.3
       comp=Z,3.9nm,0.4s,baz=120,slow=6.1,SNR=19
ZALV                                     LR      LR       21 18 32.2
       comp=Z,44nm,18.5s,baz=130,slow=38
       comp=Z,3.9nm,0.4s
ZALV   Zalesovo Beam      62.49 334    i P       P        20 49 33.7 -1.5
ZALV                                     pmax    pmax
       comp=Z,3.0nm,0.4s
ZALV   Zalesovo Beam      62.49 334      P       P        20 49 33.2 -2.0
KBL    Kabul              62.70 308      P       P        20 49 35.9 -1.3
KBL                                      pmax    pmax
       comp=Z,18nm,0.9s
KBL    Kabul              62.70 308      P       P        20 49 35.9 -1.3
KBL                                      IAmb    IAmb     20 49 39.2
       comp=Z,18nm,0.9s
GAR    Garm               63.27 314      P       P        20 49 39.4 -1.4
BTK    Batken             63.30 315      P       P        20 49 39.8 -1.2
BTK                                      pmax    pmax
       comp=Z,13nm,0.9s
BTK    Batken             63.30 315      P       P        20 49 39.8 -1.2
BTK                                      IAmb    IAmb     20 50 01.0
       comp=Z,13nm,0.8s
KURK   Kurchatov          63.51 328ceP          P        20 49 41.3 -0.7
KURK                                     pmax    pmax
       comp=Z,36nm,0.8s
KURK   Kurchatov          63.51 328      P       P        20 49 40.8 -1.2
KURK   Kurchatov          63.51 328      P       P        20 49 41.3 -0.7
KURK                                     pP      pP       20 49 52.6 -2.4
CHGR   Chuyangaron        63.99 313      P       P        20 49 44.5 -1.1
SEY    Seymchan           64.30  13ceP          P        20 49 47.8 +0.8
SEY                                      pmax    pmax
       comp=Z,23nm,1.7s
KK31   Karatay Array      64.71 318      P       P        20 49 49.3 -0.8
KK31                                     pmax    pmax
       comp=Z,8.0nm,0.9s
KK31   Karatay Array      64.71 318      P       P        20 49 49.3 -0.8
KKAR   Karatay Array      64.71 318      P       P        20 49 48.9 -1.2
KKAR                                     pmax    pmax
       comp=Z,8.0nm,0.9s
KKAR   Karatay Array      64.71 318      P       P        20 49 48.9 -1.2
HRA    Herat              68.05 307      P       P        20 50 10.3 -1.6
CASY   Casey              68.53 187      P       P        20 50 14.1 +0.1
DRV    Dumont d'Urvil     68.65 174    ⇓P       P        20 50 15.4 +0.7
DRV                                      pP      pP       20 50 23.6 -4.2
WSAR   Wadi Sarin         69.08 294      LR      LR       21 21 45.0
       comp=Z,44nm,20.9s,baz=102,slow=37
BRVK   Borovoye           69.15 328ceP          P        20 50 18.0 -0.1
BRVK                                     pmax    pmax
       comp=Z,23nm,1.0s
BRVK   Borovoye           69.15 328      P       P        20 50 16.4 -1.7
BRVK                                     IAmb    IAmb     20 50 21.3
       comp=Z,19nm,0.8s
TIXI   Tiksi              70.11   1    ⇑P       P        20 50 23.4 -0.2
TIXI   Tiksi              70.11   1      P       P        20 50 22.5 -1.2
TIXI                                     IAmb    IAmb     20 50 26.3
       comp=Z,9.2nm,0.7s
BILL   Bilibino           71.81  15     eP       P        20 50 34.3 +0.2
BILL                                    e                 20 50 44.2
BILL                                    e                 20 50 51.7
BILL                                    e*PP     sP       20 50 55.6 +3.2
BILL                                    e                 20 53 16.3
BILL                                    ePPP     PPP      20 54 59.2
BILL                                     pmax    pmax
       comp=Z,3.0nm,0.5s
BILL   Bilibino           71.81  15      P       P        20 50 33.8 -0.3
GEYT   Alibeck            72.11 309      P       P        20 50 36.7 +0.2
       comp=Z,9.7nm,0.8s,baz=156,slow=7.5,SNR=15
       comp=Z,9.7nm,0.8s
GEYT   Alibeck            72.11 309      P       P        20 50 36.0 -0.5
GEYT                                     IAmb    IAmb     20 50 39.6
       comp=Z,11nm,0.8s
GYA0B  ALIBECK ARRAY      72.11 309      P       P        20 50 36.1 -0.4
GYA0B                                    IAmb    IAmb     20 50 39.6
       comp=Z,14nm,0.8s
SOCY   Socotra            72.56 282      P       P        20 50 38.1 -1.5
SOCY                                     IAmb    IAmb     20 50 41.9
       comp=Z,18nm,0.8s
NRIK   Noril'sk           72.56 346      P       P        20 50 38.9 +0.4
       comp=Z,29nm,0.8s,baz=133,slow=6.3,SNR=21
       comp=Z,29nm,0.8s
NRIK   Noril'sk           72.56 346      P       P        20 50 38.4 -0.1
NRIK                                     IAmb    IAmb     20 50 41.8
       comp=Z,38nm,1.0s
ABKAR  Akbulak array      73.73 321      P       P        20 50 44.9 -0.9
AKTO   Aktyubinsk         75.27 322      LR      LR       21 26 17.3
       comp=Z,71nm,20.2s,baz=108,slow=38
SVE    Sverdlovsk         75.75 329deP          P        20 50 57.1 -0.2
SVE                                      pmax    pmax
       comp=Z,44nm,0.9s
ARU    Arti               76.71 328c iP         P        20 51 02.0 -0.8
ARU                                                       20 51 12.0
ARU                                      S       S        21 00 47.5 +1.5
ARU                                      SS      SS       21 05 37.2 -5.3
ARU                                      pmax    pmax
       comp=Z,24nm,0.7s
ARU    Arti               76.71 328      P       P        20 51 01.8 -1.0
ARU                                      IAmb    IAmb     20 51 02.8
       comp=Z,23nm,0.7s
VNDA   Vanda              81.22 173      P       P        20 51 27.6 +0.6
       comp=Z,10nm,0.7s,baz=320,slow=5.9,SNR=30
VNDA                                     LR      LR       21 28 47.2
       comp=Z,43nm,19.0s,baz=349,slow=37
       comp=Z,10nm,0.7s
VNDA   Vanda              81.22 173      P       P        20 51 27.3 +0.3
VNDA                                     IAmb    IAmb     20 51 32.2
       comp=Z,17nm,1.1s
RDOG   Red Dog Mine       81.50  21      P       P        20 51 28.6 -0.1
RDOG                                     IAmb    IAmb     20 51 29.7
       comp=Z,23nm,1.3s
RDOG   Red Dog Mine       81.50  21      P       P        20 51 29.3 +0.5
       baz=252
MAW    Mawson             81.53 200      P       P        20 51 29.6 +0.7
       comp=Z,2.3nm,0.5s,baz=92,slow=6.1,SNR=10
MAW                                      LR      LR       21 23 47.1
       comp=Z,28nm,20.5s,baz=48,slow=33
       comp=Z,2.3nm,0.5s
MAW    Mawson             81.53 200      P       P        20 51 29.7 +0.8
MAW                                      pmax    pmax
       comp=Z,4.0nm,1.5s
MAW    Mawson             81.53 200      P       P        20 51 29.7 +0.8
KIRV   Kirov              82.02 329ceP          P        20 51 31.5 -0.1
BELG   Belogornoye        82.03 323      LR      LR       21 30 21.7
       comp=Z,44nm,21.6s,baz=185,slow=37
BELG   Belogornoye        82.03 323    i P       P        20 51 30.7 -1.1
BELG                                     pmax    pmax
       comp=Z,6.0nm,0.9s
SBA    Scott Base         82.13 172      P       P        20 51 33.1 +1.2
SBA                                      pmax    pmax
       comp=Z,7.0nm,0.9s
SBA    Scott Base         82.13 172      P       P        20 51 33.1 +1.2
GROC   Groznyy            82.19 313     eP       P        20 51 32.4 -0.5
GROC                                    e*PP     pP       20 51 48.3 +2.0
GROC                                    e                 20 54 41.6
GROC                                     pmax    pmax
       comp=Z,26nm,0.9s
GNI    Garni              82.72 310      P       P        20 51 36.7 +0.7
GNI                                      pmax    pmax
       comp=Z,16nm,0.8s
GNI    Garni              82.72 310      P       P        20 51 36.7 +0.7
GNI                                      IAmb    IAmb     20 51 56.8
       comp=Z,16nm,0.8s
TTA    Tatalina           83.05  27      P       P        20 51 38.1 +1.1
TTA                                      pmax    pmax
       comp=Z,17nm,1.1s
TTA    Tatalina           83.05  27      P       P        20 51 38.1 +1.1
TTA                                      IAmb    IAmb     20 51 39.6
       comp=Z,17nm,1.1s
TTA    Tatalina           83.05  27      P       P        20 51 38.6 +1.6
       baz=260
N19K   Bonanza Creek      83.40  29      P       P        20 51 39.5 +0.6
N19K                                     IAmb    IAmb     20 51 41.7
       comp=Z,28nm,1.1s
N19K   Bonanza Creek      83.40  29      P       P        20 51 41.3 +2.4
       baz=261
ATD    Arta Tunnel        83.45 281      LR      LR       21 30 50.3
       comp=Z,17nm,18.0s,baz=123,slow=37
ATD    Arta Tunnel        83.45 281      P       P        20 51 40.8 +0.7
L19K   White Mountain     83.45  28      P       P        20 51 39.7 +0.7
L19K                                     IAmb    IAmb     20 51 42.3
       comp=Z,25nm,1.2s
L19K   White Mountain     83.45  28      P       P        20 51 40.9 +1.8
       baz=261
ZEI    Tsey               83.54 313     eP       P        20 51 39.8 -0.4
ZEI                                      pmax    pmax
       comp=Z,38nm,1.0s
M19K   Big River Lodg     83.62  28      P       P        20 51 41.2 +1.3
M19K                                     IAmb    IAmb     20 51 52.7
       comp=Z,14nm,0.9s
M19K   Big River Lodg     83.62  28      P       P        20 51 41.9 +2.0
       baz=261
AKH    Akhalkalaki        83.76 311    ⇑P       P        20 51 41.5 +0.2
ONI    Oni                83.86 313      P       P        20 51 42.0 +0.3
ONI                                      pmax    pmax
       comp=Z,17nm,0.8s
ONI    Oni                83.86 313      P       P        20 51 42.0 +0.3
ONI                                      IAmb    IAmb     20 51 50.7
       comp=Z,17nm,0.8s
GEVA   Gevas              83.91 308      P       P        20 51 43.0 +0.8
K20K   Telida             83.99  26      P       P        20 51 42.9 +1.1
K20K   Telida             83.99  26      P       P        20 51 44.1 +2.3
       baz=261
KARS   Kars               84.02 311      P       P        20 51 43.3 +0.7
KARS                                     pmax    pmax
       comp=Z,103nm,0.9s
KARS   Kars               84.02 311      P       P        20 51 43.3 +0.7
J20K   Nowinta River      84.08  26      P       P        20 51 43.6 +1.3
J20K                                     IAmb    IAmb     20 51 45.1
       comp=Z,15nm,1.1s
J20K   Nowinta River      84.08  26      P       P        20 51 44.3 +2.1
       baz=261
RSO    Redoubt South      84.20  29      P       P        20 51 43.3 +0.1
M20K   Styx River         84.20  28      P       P        20 51 43.8 +0.7
M20K                                     IAmb    IAmb     20 52 10.2
       comp=Z,17nm,0.9s
M20K   Styx River         84.20  28      P       P        20 51 45.1 +2.1
       baz=262
GOF    Gofitskoye         84.31 315⇑eP      P        20 51 42.1 -1.7
GOF                                      pmax    pmax
       comp=Z,22nm,0.9s
KBZ    Khabaz             84.34 314      P       P        20 51 44.0  0.0
       comp=Z,12nm,0.8s,baz=95,slow=3.6,SNR=26
KBZ                                      LR      LR       21 33 27.3
       comp=Z,40nm,19.8s,baz=80,slow=39
       comp=Z,12nm,0.8s
KBZ    Khabaz             84.34 314ceP          P        20 51 44.2 +0.3
KBZ                                      pmax    pmax
       comp=Z,11nm,0.9s
PRGR   Permogore          84.36 332     eP       P        20 51 42.6 -1.1
A21K   Barrow             84.45  18      P       P        20 51 44.9 +1.0
A21K   Barrow             84.45  18      P       P        20 51 45.8 +1.9
       baz=258
KIV    Kislovodsk         84.50 314    ⇑P       P        20 51 45.6 +0.6
KIV    Kislovodsk         84.50 314     eP       P        20 51 44.6 -0.3
KIV                                      pmax    pmax
       comp=Z,16nm,1.0s
KIV    Kislovodsk         84.50 314      P       P        20 51 44.4 -0.5
KIV                                      IAmb    IAmb     20 51 49.0
       comp=Z,13nm,0.7s
IMAR   Indian Mountai     84.53  24      P       P        20 51 45.8 +1.4
GURO   Guroymak-BITLI     84.73 308      P       P        20 51 46.7 +0.4
H21K   Melozitna Rive     84.86  24      P       P        20 51 47.1 +0.9
CHVG   Ch'k'valeri        84.88 313    ⇑P       P        20 51 47.5 +0.8
CHVG   Ch'k'valeri        84.88 313    ⇑P       P        20 51 47.5 +0.8
CAST   Castle Rocks       84.88  27      P       P        20 51 47.6 +1.3
VRH    Novokhopyorsk      85.57 321     eP       P        20 51 49.0 -0.9
VRH                                      pmax    pmax
       comp=Z,70nm,1.1s
M22K   Willow             85.61  28      P       P        20 51 50.4 +0.5
MARD   Mardin             85.68 307      P       P        20 51 50.5 -0.5
RC01   Rabbit Creek A     85.74  29      P       P        20 51 52.1 +1.5
       baz=265
KOPT   Kop Dagi           85.97 310      P       P        20 51 52.6  0.0
COLD   Coldfoot           86.09  23      P       P        20 51 52.5 +0.2
COLD                                     IAmb    IAmb     20 51 55.7
       comp=Z,8.4nm,1.0s
COLD   Coldfoot           86.09  23      P       P        20 51 54.0 +1.8
       baz=264
H23K   Yukon River        86.22  24      P       P        20 51 54.1 +1.2
H23K   Yukon River        86.22  24      P       P        20 51 54.5 +1.5
       baz=265
I23K   Minto, Yukon-K     86.24  25      P       P        20 51 53.4 +0.4
I23K   Minto, Yukon-K     86.24  25      P       P        20 51 54.3 +1.3
       baz=265
NEA2   Nenana             86.32  25      P       P        20 51 55.0 +1.6
       baz=266
RND    Reindeer           86.33  27      P       P        20 51 54.8 +1.2
RND                                      pmax    pmax
       comp=Z,6.0nm,0.8s
RND    Reindeer           86.33  27      P       P        20 51 54.8 +1.2
RND                                      IAmb    IAmb     20 52 00.4
       comp=Z,5.9nm,0.8s
TOLK   Toolik Lake Re     86.46  21      P       P        20 51 54.6 +0.5
TOLK   Toolik Lake Re     86.46  21      P       P        20 51 55.7 +1.6
       baz=265
SML    Sawmill            86.46  28      P       P        20 51 55.0 +0.8
SML                                      IAmb    IAmb     20 51 60.0
       comp=Z,16nm,0.8s
KTUT   Trabzon            86.55 311    ⇑P       P        20 51 55.3 +0.3
SOC    Sochi              86.64 313     eP       P        20 51 52.9 -2.5
SOC                                     e                 20 55 13.5
SOC                                     ePPP     PPP      20 57 08.7
SOC                                     eS       SKSac    21 02 16.2 -2.3
SOC                                     eSS      SS       21 08 06.8 -4.0
SOC                                     eSSS     SSS      21 11 45.7
SOC                                      pmax    pmax
       comp=Z,11nm,0.6s
CCB    Clear Creek Bu     86.87  25      P       P        20 51 56.1  0.0
H24K   Noodor Dome        86.91  24      P       P        20 51 57.1 +0.8
VORD   Divnogorie         87.09 321     eP       P        20 51 56.5 -0.9
VORD                                     pmax    pmax
       comp=Z,10.0nm,0.6s
VORR   Voronezh           87.16 321     eP       P        20 51 59.0 +1.3
VORR                                     pmax    pmax
       comp=Z,24nm,1.3s
VSR    Storozhevoye       87.17 321     eP       P        20 51 56.6 -1.2
VSR                                      pmax    pmax
       comp=Z,20nm,0.8s
KLMR   Klimovskoe         87.24 331     eP       P        20 51 55.3 -2.7
KLMR                                    e                 20 55 20.9
KLMR                                     pmax    pmax
       comp=Z,18nm,0.7s
KLMR   Klimovskoe         87.24 331     eP       P        20 51 55.4 -2.6
KLMR                                     AMP              20 52 02.3
       comp=Z,18nm,0.7s
KLMR                                    ePP      PP       20 55 21.0 -1.2
ILAR   Eielson Array      87.27  25      P       P        20 51 57.3 -0.8
       comp=Z,0.9nm,0.6s,baz=248,slow=4.4,SNR=11
       comp=Z,0.9nm,0.6s
LPSR   Galich'ya Gora     87.35 322     eP       P        20 51 57.5 -1.1
LPSR                                     pmax    pmax
       comp=Z,30nm,0.9s
J25K   Salcha River,      87.92  26      P       P        20 52 01.6 +0.3
       baz=269
RIDG   Independent Ri     88.13  26      P       P        20 52 02.9 +0.6
RIDG                                     IAmb    IAmb     20 52 03.6
       comp=Z,14nm,1.2s
RIDG   Independent Ri     88.13  26      P       P        20 52 03.2 +0.9
       baz=270
MOS    Moscow             88.15 326     eP       P        20 52 00.9 -1.5
BMAR   Burnt Mountain     88.27  23      P       P        20 52 04.0 +1.2
ANN    Anapa              88.29 315     eP       P        20 52 00.0 -3.3
ANN                                     e*PP     PcP      20 52 10.5 +5.5
ANN                                     eS       SKSac    21 02 25.4 -3.0
ANN                                      pmax    pmax
       comp=Z,42nm,0.8s
KIBK   Kibwezi            88.47 268      P       P        20 52 04.6 -0.3
KIBK                                     IAmb    IAmb     20 52 14.4
       comp=Z,7.7nm,0.9s
J26L   Joseph Creek       88.69  26      P       P        20 52 05.6 +0.7
       baz=271
OBN    Obninsk            88.75 325    ⇑P       P        20 52 04.6 -0.6
OBN    Obninsk            88.75 325     eP       P        20 52 04.1 -1.1
OBN                                     e                 20 55 35.5
OBN                                      pmax    pmax
       comp=Z,42nm,1.7s
OBN    Obninsk            88.75 325      P       P        20 52 04.4 -0.8
TOKA   Tokat              89.05 310      P       P        20 52 06.4 -0.7
TOKA                                     IAmb    IAmb     20 52 10.3
       comp=Z,5.8nm,0.6s
KMBO   Kilima Mbogo       89.23 269      P       P        20 52 09.7 +1.0
       comp=Z,6.1nm,0.9s,baz=52,slow=8.2,SNR=6.7
KMBO                                     LR      LR       21 29 03.0
       comp=Z,50nm,20.0s,baz=96,slow=34
       comp=Z,6.1nm,0.9s
KMBO   Kilima Mbogo       89.23 269      P       P        20 52 10.1 +1.4
KMBO                                     pmax    pmax
       comp=Z,7.0nm,0.9s
KMBO   Kilima Mbogo       89.23 269      P       P        20 52 10.1 +1.4
KMBO                                     IAmb    IAmb     20 52 14.5
       comp=Z,6.7nm,0.9s
K27K   Chicken            89.36  26      P       P        20 52 09.7 +1.8
       baz=272
L27K   Beaver Creek,      89.50  27      P       P        20 52 09.8 +1.1
L27K   Beaver Creek,      89.50  27      P       P        20 52 10.1 +1.4
       baz=272
BCAR   Beaver Creek A     89.52  27      P       P        20 52 08.9 +0.1
BNN    Bunyan             89.57 309      P       P        20 52 08.5 -1.2
DIKM   Dikmen             89.94 311    ⇑P       P        20 52 09.1 -2.1
MMAI   Mount Meron Ar     90.10 303      LR      LR       21 37 31.2
       comp=Z,24nm,21.2s,baz=236,slow=39
EIL    Elat               90.59 300      LR      LR       21 39 40.9
       comp=Z,23nm,18.2s,baz=62,slow=40
SIM    Simferopol'        90.64 315     eP       P        20 52 12.8 -1.6
SIM                                      pmax    pmax
       comp=Z,12nm,0.8s
BZK    Bozkurt            90.86 312    ⇑P       P        20 52 14.7 -0.7
ILGA   Ilgaz              91.12 311      P       P        20 52 16.4 -0.6
BRTR   Keskin Array B     91.25 310      P       P        20 52 16.4 -1.1
       comp=Z,2.7nm,0.8s,baz=134,slow=5.3,SNR=10.0
BRTR                                     LR      LR       21 38 24.2
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	comp=Z,27nm,21.4s,baz=118,slow=39						
	comp=Z,2.7nm,0.8s						
BRTR	Keskin Array B	91.25	310	ceP	P	20 52 16.2	-1.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	91.25	310	P	P	20 52 16.0	-1.5
QSPA	South Pole Qui	91.37	180	P	P	20 52 17.5	+0.1
	comp=Z,2.5nm,0.6s,baz=278,slow=2.4,SNR=15						
QSPA				LR	LR	21 35 13.0	
	comp=Z,38nm,18.0s,baz=8.5,slow=37						
	comp=Z,2.5nm,0.6s						
QSPA	South Pole Qui	91.37	180	P	P	20 52 18.1	+0.7
QSPA				IAmb	IAmb	20 52 33.5	
	comp=Z,5.5nm,0.8s						
VALR	Valaam	91.42	331	i P	P	20 52 16.0	-1.5
VALR				pmax	pmax		
	comp=Z,11nm,0.8s						
EPYK	Eagle Plains	91.43	24	P	P	20 52 18.3	+0.7
	baz=277						
CSS	Mathiatis	91.74	305	P	P	20 52 18.8	-0.9
M30M	Minto, Yukon	91.84	27	P	P	20 52 19.7	+0.1
M30M	Minto, Yukon	91.84	27	P	P	20 52 20.9	+1.2
	baz=277						
ARCES	ARCESS Array B	92.48	340	P	P	20 52 21.0	-1.3
	comp=Z,10.0nm,0.9s,baz=78,slow=5.8,SNR=15						
ARCES				PKKPbc	PKKPdf	21 09 36.5	+0.7
	comp=Z,2.3nm,1.0s,baz=278,slow=3.3,SNR=5.7						
ARCES				LR	LR	21 37 57.6	
	comp=Z,47nm,18.3s,baz=121,slow=38						
	comp=Z,10.0nm,0.9s						
ARCES	ARCESS Array B	92.48	340	P	P	20 52 21.3	-1.1
ARCES				pmax	pmax		
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	92.48	340	P	P	20 52 21.3	-1.1
ARCES				IAmb	IAmb	20 52 24.9	
	comp=Z,12nm,0.9s						
SPITS	Spitsbergen Ar	92.65	349	LR	LR	21 38 32.1	
	comp=Z,37nm,20.6s,baz=213,slow=38						
WHY	Whitehorse	93.00	29	P	P	20 52 26.3	+1.2
WHY				IAmb	IAmb	20 52 27.1	
	comp=Z,13nm,1.2s						
WHY	Whitehorse	93.00	29	P	P	20 52 26.7	+1.6
	baz=278						
AKASG	Malin Array Be	93.47	321	P	P	20 52 26.6	-0.7
	comp=Z,2.9nm,0.8s,baz=73,slow=3.8,SNR=2.5						
	comp=Z,2.9nm,0.8s						
AKASG	Malin Array Be	93.47	321	P	P	20 52 26.6	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	Malin Array Be	93.47	321	IAmb	IAmb	20 52 31.1	
	comp=Z,2.4nm,0.8s						
PURM	Purcari	93.49	317	⇑P	P	20 52 27.2	-0.2
BORA	Eskisehir	93.69	310	P	P	20 52 27.4	-1.3
BORA				IAmb	IAmb	20 52 28.6	
	comp=Z,6.3nm,1.0s						
FIA1	FINESS Array S	93.69	332	P	P	20 52 26.5	-1.5
FIA1				IAmb	IAmb	20 52 33.9	
	comp=Z,6.5nm,0.8s						
FINES	FINESS Array B	93.69	332	P	P	20 52 26.8	-1.3
	comp=Z,3.4nm,0.8s,baz=56,slow=5.0,SNR=13						
FINES				LR	LR	21 37 12.8	
	comp=Z,60nm,20.5s,baz=74,slow=37						
	comp=Z,3.4nm,0.8s						
FINES	FINESS Array B	93.69	332	ceP	P	20 52 26.3	-1.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSU	Vasula	93.86	329	eP	P	20 52 28.6	-0.3
SORM	Soroca	94.34	318	⇑P	P	20 52 30.0	-1.4
SORM	Soroca	94.34	318	⇑P	P	20 52 30.0	-1.4
NACGM	Naroch	94.38	325	⇑eP	P	20 52 31.1	-0.3
	baz=81						
MEF	Metsahovi	94.73	331	eP	P	20 52 32.0	-0.9
CFR	Carcaliu	94.85	315	⇑P	P	20 52 32.4	-1.3
CFR	Carcaliu	94.85	315	⇑P	P	20 52 32.4	-1.3
MTSE	Matsula	95.32	329	eP	P	20 52 34.4	-1.1
TESR	Tescani	95.70	317	⇑P	P	20 52 37.1	-0.6
MBAR	Mbarara	95.73	270	LR	LR	21 34 54.7	
	comp=Z,24nm,18.6s,baz=4.5,slow=35						
VRI	Vrincioaia	95.74	316	⇑P	P	20 52 36.9	-0.9
VRI	Vrincioaia	95.74	316	⇑P	P	20 52 36.9	-0.9
PLOR	Plostina	95.79	316	⇑P	P	20 52 37.2	-1.0
PLOR	Plostina	95.79	316	⇑P	P	20 52 37.2	-1.0
RAF	Rauma	95.82	332	eP	P	20 52 36.0	-1.8
PABE	Paberze	95.87	326	eP	P	20 52 37.5	-0.6
MLR	Muntele Rosu	96.33	316	⇑P	P	20 52 38.8	-1.9
MLR	Muntele Rosu	96.33	316	LR	LR	21 43 07.4	
	comp=Z,46nm,20.3s,baz=66,slow=40						
MLR	Muntele Rosu	96.33	316	⇑P	P	20 52 38.8	-1.9
MLR	Muntele Rosu	96.33	316	P	P	20 52 37.8	-2.9
MLR				IAmb	IAmb	20 52 43.4	
	comp=Z,5.4nm,0.8s						
BURAR	Bucovina Array	96.50	318	⇑P	P	20 52 40.4	-1.0
BURAR	Bucovina Array	96.50	318	⇑P	P	20 52 40.4	-1.0
BUR08	Bucovina Ar. S	96.51	318	P	P	20 52 40.3	-1.2
BUR08				IAmb	IAmb	20 52 46.7	
	comp=Z,7.9nm,0.8s						
SUW	Suwalki	96.61	325	P	P	20 52 40.6	-1.0
SUW				pmax	pmax		
	comp=Z,13nm,0.7s						
SUW	Suwalki	96.61	325	P	P	20 52 40.6	-1.0
SUW	Suwalki	96.61	325	eP	P	20 52 40.6	-1.0
DOPR	Dopca	96.65	316	⇓P	P	20 52 39.9	-2.1
VOIR		96.97	316	⇑P	P	20 52 38.2	-5.4
VOIR		96.97	316	⇑P	P	20 52 38.2	-5.3
KWP	Kalwaria Pacla	97.78	320	P	P	20 52 46.9	-0.1
KWP				pmax	pmax		
	comp=Z,83nm,1.0s						
KWP	Kalwaria Pacla	97.78	320	P	P	20 52 46.9	-0.1
KOLS	Kolonicke sedl	98.20	320	eP	Pdif	20 52 51.9	+3.0
KOLS	Kolonicke sedl	98.20	320	ePDIFF	Pdif	20 52 51.9	+3.0
UZH	Uzhgorod	98.25	319	eP	Pdif	20 52 49.2	+0.1
UZH				e		20 53 03.2	
DRGR		98.33	318	⇑P	P	20 52 48.7	-0.9
DRGR		98.33	318	⇑P	P	20 52 48.7	-0.9
LSZ	Lusaka	98.35	255	LR	LR	21 31 09.2	
	comp=Z,67nm,21.7s,baz=128,slow=32						
IDI	Anoyia	98.59	306	LR	LR	21 45 54.4	
	comp=Z,13nm,19.0s,baz=86,slow=41						
CRVS	Cervenica-Dubn	98.73	320	eP	Pdif	20 52 54.0	+2.7
CRVS	Cervenica-Dubn	98.73	320	ePDIFF	Pdif	20 52 54.0	+2.7
HERR	Herculane	98.90	316	⇑P	P	20 52 50.8	-1.3
DAG	Danmarks Havn	99.46	352	i P	Pdif	20 52 53.0	-0.9
HFS	Hagfors	99.89	332	LR	LR	21 42 00.2	
	comp=Z,78nm,19.5s,baz=64,slow=38						
NB2	NORSAR Subarra	100.69	333	P	Pdif	20 52 58.0	-1.8
	comp=Z,7.4nm,1.2s,baz=69,slow=4.4						
NB2	NORSAR Subarra	100.69	333	P	Pdif	20 52 58.0	-1.8
	baz=69,slow=4.4						
NOA	NORSAR Array B	100.69	333	P	Pdif	20 52 58.4	-1.3
	comp=Z,1.5nm,0.9s,baz=78,slow=4.3,SNR=5.0						
YKA	Yellowknife Ar	101.67	25	P	Pdif	20 53 04.9	+0.8
	comp=Z,0.8nm,0.7s,baz=298,slow=4.5,SNR=6.0						
GERES	GERESS Array B	103.68	321	Pdiff	Pdif	20 53 12.8	-0.7
	comp=Z,0.3nm,0.6s,baz=70,slow=6.7,SNR=2.7						
KEST	Kesra	110.85	309	PKKPbc	PKKPbc	21 08 44.3	+0.2
	comp=Z,1.7nm,0.8s,baz=230,slow=2.2,SNR=4.3						
ESDC	Sonseca Array	118.96	318	PKKPbc	PKKPbc	21 08 16.4	+0.1
	comp=Z,0.4nm,0.6s,baz=223,slow=4.9,SNR=4.7						
MNTX	Cornudas Mount	120.89	51	P	PKiKP	20 58 05.2	+0.6
	baz=294						
F36A	Milaca	121.16	32		PKPdf	20 58 04.0	-0.6
SCHQ	Schefferville	122.85	9	PKP	PKiKP	20 58 07.8	0.0
	comp=Z,3.1nm,0.5s,baz=322,slow=1.7,SNR=14						
SCHQ	Schefferville	122.85	9	PKPdf	PKPdf	20 58 07.1	-0.5
TXAR	Lajitas Array	123.19	53	PKP	PKiKP	20 58 09.6	+0.2
	comp=Z,0.9nm,0.7s,baz=319,slow=0.4,SNR=11						
TORD	Torodi Ar. Bea	123.33	287	PKP	PKPdf	20 58 09.4	-0.2
	comp=Z,2.5nm,0.8s,baz=58,slow=1.9,SNR=10						
TORD				PKKPbc	PKKPab	21 07 59.8	+0.4
	comp=Z,1.5nm,0.8s,baz=258,slow=2.6,SNR=7.6						
JCT	Junction City	125.74	50	P	PKiKP	20 58 15.1	+0.8
	baz=297						
S39A	Bolivar	126.46	39		PKPdf	20 58 14.8	-0.2
U40A	Yellville	127.56	40	P	PKiKP	20 58 17.8	0.0
	baz=307						
DBIC	Dimbokro	130.74	280	PKP	PKiKP	20 58 24.2	-0.5
	comp=Z,4.0nm,0.9s,baz=118,slow=0.7,SNR=2.7						
WVT	Waverly	130.84	37	P	PKiKP	20 58 25.0	+0.7
	baz=312						
PLCA	Paso Flores	137.97	161	PKP	PKPdf	20 58 36.4	-0.3
	comp=Z,2.9nm,0.8s,baz=293,slow=2.8,SNR=6.2						
BO01	Tunca	143.36	155	PKPdf	PKPbc	20 58 44.6	+0.9
BO04	La Punta	143.91	156		PKPbc	20 58 45.8	+0.5
MT09	Talagante	143.93	155		PKPbc	20 58 45.6	+0.1
MT02	Curacav	144.31	154		PKPbc	20 58 47.0	+0.4
PEL	Peldehue	144.60	155	PKIKP	PKPab	20 58 47.2	-0.2
PEL	Peldehue	144.60	155		PKPab	20 58 47.2	-0.2
ROC1	El Roble	144.60	154		PKPab	20 58 46.2	-1.4
GO04	Tololo Observa	147.07	152		PKPdf	20 58 50.6	-2.8
LCO	Las Campanas	148.08	151	PKP2	PKPbc	20 58 58.5	+0.2
LCO	Las Campanas	148.08	151		PKPbc	20 58 58.5	+0.2
SRBA	San Rafael, Bu	148.46	70		PKPbc	20 58 57.9	-1.6
AC04	Llanos de Chal	148.56	149		PKPdf	20 58 53.7	-1.8
GO03	Copiap	149.48	150		PKiKP	20 59 02.5	-0.3
LVC	Limon Verde	154.21	146	PKPbc	PKPbc	20 59 12.9	-0.1
	comp=Z,2.3nm,0.5s,baz=246,slow=0.6,SNR=2.8						
CPUP	Villa Florida	155.00	172	PKPbc	PKPbc	20 59 13.7	-0.3
	comp=Z,1.3nm,0.5s,baz=46,slow=2.9,SNR=5.2						
LPAZ	La Paz	159.41	137	PKP	PKPdf	20 59 11.2	-0.7
	comp=Z,1.4nm,0.6s,baz=294,slow=1.6,SNR=6.0						

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*DSN **05** 20:47:50.8±1.6, 28°.03N×57°.63E, h10^{km}, ML3.4/9, Error ellipse: s-maj=55.6km s-min=13.7km az=125.0*

*TEH **05** 20:47:53.7, 27°.80N×57°.60E, h16^{km}, ML3.4*

*OMAN **05** 20:47:56.5±2.0, 27°.50N×57°.96E, h3^{km}±34^{km}, mb4.4/1, ml3.3/10, Error ellipse: s-maj=37.9km s-min=8.7km az=18.0*

ISC 05 20:47:54.2±1.0, **27°.78N**±0°.04×**57°.67E**±0°.05, **h14**^{km}±8^{km}, **n56**, σ**1^{s}.53**/69, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.17	10	ePg	Pg	20 47 58.1	-0.3
KHNJ				eSg	Sg	20 48 01.7	+0.5
IBND	Bandar-abas	1.06	252	ePg	Pb	20 48 12.8	-1.5
IBND				eSg	Sb	20 48 27.9	-0.1
IBND				e		20 48 45.7	
	comp=Z,14µm,0.6s						
GENO	Geno	1.38	254	ePg	Pn	20 48 18.6	-0.7
GENO				eSg	Sn	20 48 37.4	0.0
GENO				e		20 48 39.7	
	comp=Z,8µm,0.5s						
KBAM	BAM	1.51	27	ePn	Pn	20 48 20.4	-0.6
KBAM				e		20 48 51.6	
	comp=Z,4µm,0.7s						
JASK	Jask - Hormozg	1.92	175	ePn	Pn	20 48 27.4	+1.0
NGRK	Negar Kerman	2.03	336	ePn	Pn	20 48 29.1	+0.7
NGRK				e		20 49 06.9	
	comp=Z,3µm,0.3s						
CHMN	Cheshme madani	2.08	357	ePn	Pn	20 48 29.9	+1.0
CHMN				e		20 49 04.5	
	comp=Z,3µm,0.5s						
SHME	Shamm	2.20	219	ePn	Pn	20 48 31.1	+0.8
SHME	Shamm	2.20	219	P	Pn	20 48 32.6	+2.3
	SNR=13						
SHME				S	Sb	20 49 02.2	+1.3
SHME	Shamm	2.20	219	P	Pn	20 48 30.4	0.0
SHME				S	Sb	20 49 01.0	+0.1
BANOM	Banah	2.22	214	ePn	Pn	20 48 31.2	+0.6
BANOM	Banah	2.22	214	P	Pn	20 48 31.0	+0.3
	SNR=58						
BANOM				S	Sb	20 49 01.8	+0.3
BANOM	Banah	2.22	214	P	Pn	20 48 30.8	+0.1
BANOM				S	Sn	20 49 00.2	+2.4
KRBR	Kerman	2.33	340	ePn	Pn	20 48 34.1	+1.6
TVBK	TV Kerman	2.34	340	ePn	Pn	20 48 33.8	+1.3
TVBK				e		20 49 10.4	
	comp=Z,3µm,0.3s						
MSFE	Esma-Masafi	2.77	210	ePn	Pn	20 48 39.4	+1.2
MSFE	Esma-Masafi	2.77	210	P	Pn	20 48 39.1	+0.9
KHGB	Koh Gabri	2.79	338	ePn	Pn	20 48 39.3	+0.7
KHGB				e		20 49 21.5	
	comp=Z,1µm,0.4s						
UMQ	Umm Al-Quwin	2.88	219	ePn	Pn	20 48 40.5	+0.9
UOSS	Minazif	3.12	205	ePn	Pn	20 48 44.9	+1.9
ZHDN	Zahedan	3.20	59	ePn	Pn	20 48 45.8	+1.6
HATD	Hatta, Dubai	3.25	205	ePn	Pn	20 48 47.2	+2.4
NAZ	Nazwa, Dubai	3.31	213	ePn	Pn	20 48 47.3	+1.6
NAZ	Nazwa, Dubai	3.31	213	P	Pn	20 48 46.5	+0.8
CHBR	Chabahar	3.33	130	ePn	Pn	20 48 48.0	+2.2
ASHO	Ashiyiah	3.41	206	ePn	Pn	20 48 48.6	+1.6
ASHO	Ashiyiah	3.41	206	P	Pn	20 48 48.4	+1.4
	SNR=13						
ASHO	Ashiyiah	3.41	206	P	Pn	20 48 47.5	+0.5
FAQ	Al Faqa, Dubai	3.55	212	ePn	Pn	20 48 49.6	+0.6
FAQ	Al Faqa, Dubai	3.55	212	P	Pn	20 48 49.0	+0.1
ASUD	Al Ashush, Dub	3.78	214	ePn	Pn	20 48 53.6	+1.5
ASUD	Al Ashush, Dub	3.78	214	P	Pn	20 48 53.3	+1.2
	SNR=9.0						
ASUD	Al Ashush, Dub	3.78	214	P	Pn	20 48 51.9	-0.1
AJN	Ajban	4.01	218	ePn	Pn	20 48 56.4	+1.2
ALNE	Al Ain	4.09	205	ePn	Pn	20 48 58.2	+1.8
HOQ	Hoqain	4.19	185	P	Pn	20 48 56.6	-1.2
HOQ				S	Sn	20 49 43.8	-2.8
SRVN	Saravan	4.21	94	ePn	Pn	20 49 00.7	+2.6
IBAF	Bafgh	4.21	335	ePn	Pn	20 48 59.2	+1.0
BIDO	Bidbid	4.26	174	ePn	Pn	20 49 03.3	+4.6
BIDO	Bidbid	4.26	174	P	Pn	20 48 58.5	-0.2
BIDO				S	Sn	20 49 46.6	-1.6
BSRN	Basiran	4.36	17	ePn	Pn	20 49 01.8	+1.7
ARQ	Araqi	4.55	193	P	Pn	20 49 03.9	+1.3
	SNR=9.0						
ARQ				S	Sn	20 49 56.9	+1.5
WSAR	Wadi Sarin	4.61	169	P	Pn	20 49 04.0	+0.6
WSAR				S	Sn	20 49 55.8	-1.0
BSY	Bisya	5.03	185	P	Pn	20 49 10.7	+1.3
	SNR=14						
BSY				S	Sn	20 50 09.0	+1.7
TPRV	Parvadeh(Tabas	5.30	351	ePn	Pn	20 49 15.0	+2.0
YZKH	Yazd	5.31	331	ePn	Pn	20 49 15.3	+2.1
JMDO	Jabal Madar	5.40	176	P	Pn	20 49 13.7	-0.7
UMZA	Um Al Zommool	5.53	205	ePn	Pn	20 49 16.6	+0.4
AFRZ	Afriz	5.74	11	ePn	Pn	20 49 21.0	+1.8
GHWR	Ruwais	5.75	230	ePn	Pn	20 49 17.3	-1.9
JLN	Jalan Bani Buh	5.83	164	P	Pn	20 49 20.3	+0.1
JLN				S	Sn	20 50 22.9	-3.9
TABS	Tabas	5.87	355	ePn	Pn	20 49 22.0	+1.1
MZR	Muzera	6.08	219	ePn	Pn	20 49 22.6	-1.2
MZR	Muzera	6.08	219	P	Pn	20 49 21.6	-2.1
IRAM	Ramesheh	6.10	312	ePn	Pn	20 49 24.2	0.0
KLNJ	Kolanjah	6.20	303	ePn	Pn	20 49 25.8	+0.1

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*NEIC **05** 20:49:53.9±1.7, 19°.5S±0°.2×177°.6W±0°.2, h558^{km}±9^{km}, mb4.3/16, Error ellipse: s-maj=31.0km s-min=25.9km az=114.0*

*IDC **05** 20:49:55.4±3.9, 19°.33S×177°.84W, h567^{km}±28^{km}, mb2.9/6, mbtmp3.9/7, Error ellipse: s-maj=113.5km s-min=19.7km az=151.0*

ISC 05 20:49:52.5±0.6, **19°.7S**±0°.1×**177°.5W**±0°.1, **h550**^{km}, **n33**, σ**1^{s}.04**/33, **mb4.0**/11, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.61	294	P	P	20 51 20.3	+1.1
	16nm,0.5s,baz=124,slow=10,SNR=19						
MSVF	Nonsavu	4.61	294	P	P	20 51 19.7	+0.4
AFI	Afiamalu	7.95	45	P	P	20 51 48.1	-1.8
URZ	Urewera	19.10	193	P	P	20 53 38.0	-2.1
URZ				IAmb	IAmb	20 53 54.7	
	comp=Z,16nm,1.4s						
BKZ	Black Stump Fm	20.10	194	P	P	20 53 47.0	-2.4
BKZ				IAmb	IAmb	20 53 56.7	
	comp=Z,16nm,1.5s						
QRZ	Quartz Range	22.73	200	P	P	20 54 12.0	-0.9
THZ	Tophouse	23.47	198	P	P	20 54 18.5	-1.1
THZ				IAmb	IAmb	20 54 27.7	
	comp=Z,16nm,1.1s						
KHZ	Kahutara	23.90	196	P	P	20 54 23.1	-0.2
KHZ				IAmb	IAmb	20 54 25.7	
	comp=Z,14nm,1.2s						
CTA	Charters Tower	34.02	263	P	P	20 55 51.5	+0.2
	comp=Z,5.1nm,1.1s,baz=73,slow=11,SNR=1.6						
	comp=Z,5.1nm,1.1s						
CTAO	Charters Tower	34.02	263	P	P	20 55 51.3	0.0
CTAO				IAmb	IAmb	20 56 14.1	
	comp=Z,17nm,1.4s						
BBOO	Buckleboo	43.31	243	P	P	20 57 06.3	0.0
WR0	Warramunga Arr	44.97	261	P	P	20 57 19.0	-0.3
WB0	Warramunga Arr	45.13	261	P	P	20 57 20.2	-0.3
WB0				IAmb	IAmb	20 57 44.3	
	comp=Z,5.5nm,1.2s						
AS31	Alice Springs	45.14	256	P	P	20 57 21.4	+0.8
ASAR	Alice Springs	45.14	256	P	P	20 57 20.5	-0.1
	comp=Z,1.3nm,0.8s,baz=80,slow=8.5,SNR=11						
	comp=Z,1.3nm,0.8s						
WB2	Warramunga Arr	45.15	261	P	P	20 57 20.5	-0.1
WB2				IAmb	IAmb	20 57 45.8	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	45.16	261	P	P	20 57 20.2	-0.5
	comp=Z,0.5nm,0.4s,baz=97,slow=7.6,SNR=14						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	45.16	261	P	P	20 57 20.3	-0.4
JMM	Marumori	69.36	326	P	P	21 00 03.2	-2.1
QSPA	South Pole Qui	70.39	180	P	P	21 00 12.1	+0.9
NVAR	Mina Array Bea	80.12	43	P	P	21 01 06.6	+0.7
	comp=Z,0.3nm,0.3s,baz=219,slow=7.0,SNR=1.9						
	comp=Z,0.3nm,0.3s						
SCM	Sheep Creek Mo	84.73	14	P	P	21 01 28.6	+0.2
TXAR	Lajitas Array	86.24	57	P	P	21 01 38.3	+1.9
	comp=Z,0.4nm,0.6s,baz=227,slow=5.3,SNR=4.9						
	comp=Z,0.4nm,0.6s						
CCB	Clear Creek Bu	87.12	12	P	P	21 01 39.2	-0.3
CCB				IAmb	IAmb	21 01 48.7	
	comp=Z,4.6nm,1.4s						
I23K	Minto, Yukon-K	87.26	12	P	P	21 01 40.1	-0.2
IMAR	Indian Mountai	87.27	10	P	P	21 01 40.1	-0.2
ILAR	Eielson Array	87.41	13	P	P	21 01 40.5	-0.5
	comp=Z,0.4nm,0.6s,baz=228,slow=5.1,SNR=4.5						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	90.20	12	P	P	21 01 53.5	-0.5
ARCES	ARCESS Array B	128.19	350	PKP	PKPdf	21 07 56.1	+0.3
	comp=Z,1.8nm,0.9s,baz=343,slow=2.8,SNR=4.3						
BUR08	Bucovina Ar. S	146.54	332		PKPdf	21 08 32.1	+2.1
BURAR	Bucovina Array	146.56	332		PKPbc	21 08 32.5	-0.1
CLL	Collm	147.36	348	i PKPbc	PKPbc	21 08 34.8	+0.4
GERES	GERESS Array B	149.52	345	PKPbc	PKPbc	21 08 40.5	+0.4
	comp=Z,0.6nm,0.6s,baz=31,slow=3.1,SNR=8.6						

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*NORS **05** 21:38:43.5±0.0, 41°.77N×45°.13E, h2^{km}, MPVA3.1*

*MOS **05** 21:38:43.2±0.0, 41°.87N×45°.29E, h21^{km}, MPVA3.1*

*TIF **05** 21:38:43.1, 41°.81N×45°.23E, h22^{km}±1^{km}*

*DRS **05** 21:38:45.5±0.0, 41°.83N×45°.08E, h20^{km}*

ISC 05 21:38:43.4±1.1, **41°.79N**±0°.03×**45°.24E**±0°.02, **h12**^{km}±10^{km}, **n36**, σ**0^{s}.70**/71, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEAG	Tbilisi Sea	0.33	266	P	Pb	21 38 51.1	0.0
SEAG				S	Sb	21 38 56.6	+0.2
BTNK	Botanikuri	0.35	252	P	Pg	21 38 45.6	-4.7
BTNK				S	Sg	21 38 51.6	-3.5
KZRT	Kazreti	0.75	238	P	Pg	21 38 58.3	+0.4
KZRT				S	Sg	21 39 08.9	+1.2
LGD	Lagodekhi	0.75	86	P	Pb	21 38 58.2	-0.1
LGD				S	Sg	21 39 09.0	+1.3
GUDG	Gudauri	0.88	320	P	Pb	21 38 59.6	-1.2
GUDG				S	Sb	21 39 11.8	-0.8
TRLG	Trialeti	0.89	254	P	Pb	21 39 00.8	-0.1
TRLG				S	Sg	21 39 12.9	+0.7
DMNI	Dmanisi	0.91	240	P	Pb	21 39 00.8	-0.4
DMNI				S	Sg	21 39 13.6	+0.7
BTLR	Botlikh	1.14	40	ePg	Pn	21 39 04.2	-0.9
BTLR				eSg	Sb	21 39 18.9	-0.9
LACR	Lac	1.25	326	i Pg	Pn	21 39 06.3	-0.5
LACR				eSg	Sn	21 39 22.8	-0.8
LACR	Lac	1.25	326	i Pg	Pn	21 39 06.3	-0.5
LACR				eSg	Sn	21 39 22.8	-0.8
BKRG	Bakuriani	1.28	269	P	Pn	21 39 07.1	-0.2
BKRG				S	Sg	21 39 25.2	+0.4
XNZR	Khunzakh	1.32	55	ePg	Pb	21 39 08.5	+0.3
XNZR				eSg	Sb	21 39 25.5	+0.3
BGD	Bogdanovka	1.34	247	P	Pb	21 39 08.6	+0.1
BGD				S	Sg	21 39 26.9	+0.4
ZEI	Tsey	1.41	316	ePg	Pb	21 39 09.6	-0.1
ZEI				eSg	Sb	21 39 28.1	+0.4
ZEI	Tsey	1.41	316	ePg	Pb	21 39 09.6	-0.1
ZEI				eSg	Sb	21 39 28.1	+0.4
GNBR	Gunib	1.42	64	ePg	Pb	21 39 09.6	-0.2
GNBR				eSg	Sb	21 39 27.3	-0.5
KMKR	Kumukh	1.43	76	ePg	Pb	21 39 09.8	-0.2
KMKR				eSg	Sb	21 39 28.4	+0.2
UNCR	Uncukul	1.48	51	ePg	Pb	21 39 10.7	-0.1
UNCR				eSg	Sb	21 39 29.6	+0.1
ARKR	Arakani	1.54	57	ePg	Pb	21 39 12.1	+0.3
ARKR				eSg	Sb	21 39 32.1	+0.9
ONI	Oni	1.55	302	ePg	Pn	21 39 11.4	+0.5
ONI				eSg	Sb	21 39 32.4	+0.8
ONI	Oni	1.55	302	ePg	Pn	21 39 11.4	+0.5
ONI				eSg	Sb	21 39 32.4	+0.8
ARNR	Ardon	1.56	333	ePg	Pb	21 39 12.8	+0.7
ARNR				eSg	Sg	21 39 34.5	+0.9
ARNR	Ardon	1.56	333	ePg	Pb	21 39 12.8	+0.7
ARNR				eSg	Sg	21 39 34.5	+0.9
KORR	Kora	1.56	327	ePg	Pb	21 39 12.6	+0.4
KORR				eSg	Sg	21 39 33.8	+0.2
KORR	Kora	1.56	327	ePg	Pb	21 39 12.6	+0.4
KORR				eSg	Sg	21 39 33.8	+0.2
KRNR	Karanay	1.61	49	ePg	Pb	21 39 13.1	-0.1
KRNR				eSg	Sb	21 39 33.8	+0.3
DLMR	Dylym	1.64	38	ePg	Pb	21 39 13.3	-0.2
DLMR				eSg	Sb	21 39 34.7	+0.4
DIGR	Digorskoe uzhe	1.66	313	ePg	Pb	21 39 14.2	+0.3
DIGR				eSg	Sg	21 39 36.9	+0.2
DIGR	Digorskoe uzhe	1.66	313	ePg	Pb	21 39 14.2	+0.3
DIGR				eSg	Sg	21 39 36.9	+0.2
DBC	Dubki	1.70	43	ePg	Pb	21 39 14.1	-0.6
DBC				eSg	Sb	21 39 35.7	-0.3
BUJR	Buynaksk	1.73	53	ePg	Pb	21 39 14.7	-0.4
BUJR				eSg	Sb	21 39 36.7	0.0
ABS	Abastumani	1.82	270	P	Pb	21 39 15.5	-1.2
ABS				S	Sb	21 39 40.0	+0.7
LSNR	Lesken	1.82	325	ePg	Pb	21 39 16.8	+0.2
LSNR				eSg	Sg	21 39 41.7	-0.1
LSNR	Lesken	1.82	325	ePg	Pb	21 39 16.8	+0.2
LSNR				eSg	Sg	21 39 41.7	-0.1
URKR	Urkarakh	1.82	77	ePg	Pb	21 39 16.1	-0.6
URKR				eSg	Sb	21 39 39.7	+0.2
AKT	Akhty	1.89	99	ePg	Pb	21 39 17.9	0.0
AKT				eSg	Sb	21 39 42.3	+0.8

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*IDC **05** 21:53:25.9±2.3, 6°.92S×130°.39E, h69^{km}±21^{km}, mb4.0/17, mbtmp4.4/20, MS3.3/4, Error ellipse: s-maj=20.7km s-min=13.1km az=71.0*

*DJA **05** 21:53:28.6±0.2, 7°S±2°×13°1E±°, h122^{km}±4^{km}, M4.8/24, mB5.3/14, mb4.7/24, MLv5.0/13, Mw(mB)4.7/14*

*NEIC **05** 21:53:28.7±1.6, 6°.99S±0°.07×130°.47E±0°.04, h107^{km}±7^{km}, mb4.4/40, Error ellipse: s-maj=11.8km s-min=4.3km az=205.0*

ISC 05 21:53:25.9±0.3, **6°.97S**±0°.04×**130°.45E**±0°.04, **h78**^{km}, **n147**, σ**2^{s}.15**/143, **mb4.5**/34, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.31	140	Pn	Pn	21 53 54.7	+6.1
SAUI				Sn	Sn	21 54 11.6	+5.8
SAUI	Saumlaki	1.31	140	P	Pn	21 53 55.1	+6.5
SAUI				S	Sn	21 54 11.9	+6.1
SAUI	Saumlaki	1.31	140	P	Pn	21 53 55.6	+7.0
MSAI	Masohi	3.91	337	P	Pn	21 54 28.5	+4.9
AAI	Ambon	3.96	325	P	Pn	21 54 28.7	+4.4
NLAI	Namlea	4.99	318	P	Pn	21 54 43.5	+5.2
	1.3nm3µm342nm,0.7s						
MTN	Manton Dam	5.87	174		Pn	21 54 54.2	+3.9
MTN				Sn	Sn	21 55 58.8	+2.5
MTN	Manton Dam	5.87	174	P	Pn	21 54 54.8	+4.5
KDU	Kakadu	6.02	161	P	Pn	21 54 55.9	+3.6
SIJI	Sorong	6.12	8	P	Pn	21 54 53.9	+0.1
	126nm,0.3s,baz=226,slow=22,SNR=170						
SIJI				S	Sn	21 55 56.5	-5.9
	243nm,0.2s,baz=79,slow=23,SNR=26						
SWI	Sorong	6.12	8	P	Pn	21 54 54.0	+0.2
	3.0nm8µm166nm,0.7s						
SANI	Sanana	6.61	318	P	Pn	21 55 05.3	+4.8
	0.2nm579nm44nm,0.6s						
SANI	Sanana	6.61	318	P	Pn	21 55 07.1	+6.6
LBMI	Labuha	6.95	335	P	Pn	21 55 08.2	+3.1
	0.6nm2µm84nm,1.0s						
BATI	Baumata	7.44	244	P	Pn	21 55 16.8	+5.0
	88nm,0.4s,baz=136,slow=3.9,SNR=30						
BATI				S	Sn	21 56 35.6	+0.8
	240nm,0.4s,baz=292,slow=24,SNR=12						
BATI	Baumata	7.44	244	P	Pn	21 55 16.4	+4.6
	0.8nm1µm112nm,0.8s						
BBSI	Bau Bau	7.97	280	P	Pn	21 55 22.0	+2.9

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       4.9nm,1.0s
BAKI   Biak               8.05  45 P      Pn     21 55 21.8 +1.7
       1.0nm4µm371nm,0.9s
TNTI   Ternate            8.29 338        Pn     21 55 24.3 +0.9
TNTI   Ternate            8.29 338 P      Pn     21 55 26.1 +2.7
       53nm,0.8s
MMRI   Maumere            8.31 258 Pn     Pn     21 55 25.7 +2.1
MMRI   Maumere            8.31 258 P      Pn     21 55 26.6 +3.0
       33nm,0.9s
WAMI   Wamena             8.78  70 P      Pn     21 55 32.8 +2.8
       10µm227nm,0.8s
KNRA   Kununurra          8.81 191 Pn     Pn     21 55 32.8 +2.3
KNRA                               Sn     Sn     21 57 05.9 -2.2
KNRA   Kununurra          8.81 191 P      Pn     21 55 33.6 +3.2
SMPI   Sarmi              9.60  59 P      Pn     21 55 43.0 +1.7
       658nm36nm,0.8s
LUWI   Luwuk              9.66 307 Pn     Pn     21 55 45.4 +3.2
LUWI   Luwuk              9.66 307 P      Pn     21 55 46.3 +4.1
       2µm75nm,0.9s
LUWI   Luwuk              9.66 307 P      Pn     21 55 48.6 +6.4
WBSI   Waikabubak, Su    11.26 256 P      Pn     21 56 07.6 +3.6
       60nm,0.7s
MRSI   Marisa            11.27 311 P      Pn     21 56 09.3 +5.3
       2µm203nm,1.0s
FITZ   Fitzroy Crossi    12.01 203 P      Pn     21 56 14.7 +0.6
       20nm,0.4s,baz=360,slow=11
FITZ                               S      Sn     21 58 18.5 -7.8
       21nm,0.6s,baz=66,slow=13,SNR=3.5
TOLI2  Tolitoli          12.55 309 Pn     Pn     21 56 23.3 +1.7
TOLI2  Tolitoli          12.55 309 P      P      21 56 27.4 -2.7
PLAI   Plampang          12.69 261 P      Pn     21 56 25.6 +2.2
       30nm,0.8s
PLAI   Plampang          12.69 261 P      Pn     21 56 27.3 +3.9
MPSI   Mapaga            12.79 304 P      P      21 56 29.3 -3.4
       20nm,1.1s
WB0    Warramunga Arr    13.28 164        Pn     21 56 30.7 -0.6
WRAB   Tennant Creek     13.43 164        Pn     21 56 32.6 -0.6
WRAB   Tennant Creek     13.43 164 P      Pn     21 56 34.6 +1.4
WRA    Warramunga Arr    13.43 164 P      Pn     21 56 32.5 -0.7
       16nm,0.6s,baz=355,slow=13,SNR=67
WRA                                S      Sn     21 58 53.3 -7.6
       56nm,0.9s,baz=334,slow=26,SNR=7.5
WRA    Warramunga Arr    13.43 164 Pn     Pn     21 56 31.9 -1.4
WB2    Warramunga Arr    13.44 164        Pn     21 56 32.4 -0.9
WR0    Warramunga Arr    13.51 163 Pn     Pn     21 56 33.3 -1.0
COEN   Coen              14.30 120 Pn     Pn     21 56 44.4 -0.3
COEN   Coen              14.30 120 P      P      21 56 47.0 -2.5
DAV    Davao City (W)    14.77 341 LR     LR     22 03 15.7
       comp=Z,64nm,18.7s,baz=128,slow=40
QIS    Mount Isa         16.16 148 P      P      21 57 09.4 -0.7
JAGI   Jajag, Banyuwa    16.22 264 P      P      21 57 10.6 -0.3
       17nm,1.4s
AS31   Alice Springs     16.93 169 P      P      21 57 18.6 -0.1
ASAR   Alice Springs     16.93 169 P      P      21 57 19.1 +0.5
       3.5nm,0.5s,baz=332,slow=9.3,SNR=80
ASAR                               S      Sn     22 00 16.6 -9.0
       5.4nm,0.5s,baz=351,slow=22,SNR=9.8
ASAR   Alice Springs     16.93 169 P      P      21 57 19.0 +0.3
MYLDM  Lahad Datu        16.97 315        P      21 57 19.2  0.0
MYLDM                              IAmb   IAmb   21 57 32.5
       comp=Z,20nm,0.9s
MTSU   Mount Surprise    17.48 131 P      P      21 57 25.9 +1.1
MBWA   Marble Bar        17.51 215 P      P      21 57 25.1 +0.1
MBWA                               IAmb   IAmb   21 57 30.7
       comp=Z,14nm,0.7s
PSA00  Pilbara Seismi    17.77 214 P      Pn     21 57 28.1  0.0
PSA00                              IAmb   IAmb   21 57 34.3
       comp=Z,29nm,0.9s
PSA00  Pilbara Seismi    17.77 214 P      Pn     21 57 28.4 +0.3
PSA00                              IAmb   IAmb   21 57 32.7
       comp=Z,12nm,0.9s
PSA00  Pilbara Seismi    17.77 214 P      Pn     21 57 29.6 +1.5
WRKA   Warakurna         18.08 186 P      Pn     21 57 32.9 +1.0
CTA    Charters Tower    20.12 132 P      Pn     21 57 55.3 -0.9
       comp=Z,4.1nm,0.7s,baz=312,slow=13,SNR=1.7
       comp=Z,4.1nm,0.7s
KSM    Kuching           21.78 292 P      P      21 58 10.6 -1.0
LEM    Lembang           22.67 269 P      P      21 58 21.9 +0.6
       comp=Z,12nm,0.6s,baz=142,slow=12,SNR=4.3
       comp=Z,12nm,0.6s
STKA   Stephens Creek    26.87 159 P      P      21 59 01.1 +1.7
       comp=Z,0.5nm,0.3s,baz=337,slow=15,SNR=1.5
       comp=Z,0.5nm,0.3s
MYKOM  Kota Tinggi       27.94 287 P      P      21 59 09.5 +0.4
MYKOM                              IAmb   IAmb   21 59 13.4
       comp=Z,9.6nm,0.7s
HNR    Honiara           29.29  97 LR     LR     22 13 05.2
       comp=Z,164nm,18.4s,baz=176,slow=40
KULM   Kulim             32.14 292 P      P      21 59 46.1 -0.2
KULM                               IAmb   IAmb   21 59 49.7
       comp=Z,6.7nm,0.9s
YHNB   Yeheng            32.67 345 P      P      21 59 51.2 +0.4
YHNB                               IAmb   IAmb   21 59 54.1
       comp=Z,9.0nm,0.8s
YHNB   Yeheng            32.67 345 eP     P      21 59 51.0 +0.2
       baz=345
PSI    Prapat            32.93 286 P      P      21 59 53.1 -0.3
       comp=Z,8.5nm,0.8s,baz=98,slow=7.1,SNR=9.9
       comp=Z,8.5nm,0.8s
GSI    Gunungsitoli      33.82 283 P      P      21 59 59.7 -1.3
JSU    Suzuyama          38.26   0 P      P      22 00 37.2 -1.4
CMAR   Chiang Mai Arr    40.06 310 P      P      22 00 54.1 +0.2
       comp=Z,3.9nm,0.7s,baz=136,slow=7.3,SNR=23
CMAR                               PcP    PcP    22 02 59.0 +1.6
       comp=Z,0.7nm,0.4s,baz=168,slow=2.6,SNR=6.1
       comp=Z,3.9nm,0.7s
CMAR   Chiang Mai Arr    40.06 310 P      P      22 00 52.8 -1.0
CHTO   Chiang Mai        40.27 310 P      P      22 00 55.0 -0.6
CHTO                               IAmb   IAmb   22 00 56.8
       comp=Z,7.0nm,0.8s
JHJ    Hachijo jima 2    40.85  12 LR     LR     22 16 39.7
       comp=Z,20nm,18.6s,baz=80,slow=34
JHS    Saijyo            41.82   3 P      P      22 01 06.9 -1.2
JHS                                IAmb   IAmb   22 01 20.9
       comp=Z,7.1nm,1.0s
MJAR   Matsushiro Arr    43.89   9 P      P      22 01 25.1 +0.4
       comp=Z,0.7nm,0.3s,baz=185,slow=9.9,SNR=5.3
       comp=Z,0.7nm,0.3s
MSVF   Nonsavu           47.58 108 LR     LR     22 18 45.5
       comp=Z,27nm,21.0s,baz=219,slow=32
BJT    Baijiatuau        48.58 345 P      P      22 02 00.9 -0.6
SHL    Shillong          49.52 312 P      P      22 02 08.0 -1.1
USRK   Ussuriysk Ar.     50.95   1 P      P      22 02 19.8 +0.4
       comp=Z,1.6nm,0.5s,baz=202,slow=7.4,SNR=3.5
       comp=Z,1.6nm,0.5s
USRK   Ussuriysk Ar.     50.95   1 P      P      22 02 18.7 -0.7
CMWZ   Cape Campbell     51.94 139 P      P      22 02 25.8 -1.1
JKA    Kamikawa-asahi    52.02  11 P      P      22 02 25.7 -1.7
XLT    XiLinHaoTe        52.28 347 eP     P      22 02 32.6 +3.2
XLT                                pP     sP     22 02 59.1 +3.9
XLT                                sP     pwP    22 03 12.1  +17
XLT                                PcP    PcP    22 03 40.4 +0.6
XLT                                ScP    ScP    22 07 28.7 -1.4
XLT                                pmax   pmax
       comp=Z,8.0nm,1.1s
XLT                                pmax   pmax
       comp=Z,190nm,4.5s
LSA    Lhasa             52.49 316 P      P      22 02 30.4 -1.3
ODAN   Odare             53.58 311 eP     P      22 02 39.6 +0.1
       comp=Z,31nm,0.6s
TAPN   Taplejung         53.60 311 eP     P      22 02 39.7 -0.1
RAMN   Ramite            54.22 310 eP     P      22 02 44.6 +0.4
       comp=Z,75nm,0.5s
JIRN   Jiri              54.91 311 eP     P      22 02 49.3  0.0
GUN    Gumba             55.27 311 eP     P      22 02 51.9  0.0
       comp=Z,63nm,0.7s
PKI    Pulchoki          55.45 310 eP     P      22 02 52.9 -0.3
       comp=Z,15nm,0.6s
PKIN   Phulchoki         55.46 310 eP     P      22 02 52.9 -0.3
       comp=Z,14nm,0.6s
KKN    Kakani            55.66 310 eP     P      22 02 54.4 -0.1
DMN    Daman             55.70 310 eP     P      22 02 54.9  0.0
GKN    Gorkha            56.26 310 eP     P      22 02 58.7  0.0
KOLN   Koldanda          56.93 310 eP     P      22 03 03.6  0.0
DANN   Dangsing          57.10 310 eP     P      22 03 04.8 -0.1
PYUN   Piuthan           57.56 310 eP     P      22 03 08.2 +0.2
ULN    Ulaanbaatar       58.38 342 P      P      22 03 14.0 +0.7
SONM   Songino Array     58.56 341 P      P      22 03 15.3 +0.8
       comp=Z,2.7nm,0.7s,baz=160,slow=7.0,SNR=29
SONM                               PcP    PcP    22 04 04.0 -0.1
       comp=Z,1.1nm,0.6s,baz=160,slow=5.0,SNR=4.5
       comp=Z,2.7nm,0.7s
SONM   Songino Array     58.56 341 P      P      22 03 15.0 +0.5
SONM                               IAmb   IAmb   22 03 15.7
       comp=Z,1.9nm,0.7s
WMQ    Urumqi            63.62 327 eP     P      22 03 50.8 +2.1
PEA0B  Petropavlovsk-    64.16  18 P      P      22 03 52.7 +0.7
PETK   Petropavlovsk-    64.16  18 P      P      22 03 52.8 +0.8
       comp=Z,3.7nm,0.6s,baz=150,slow=1.6,SNR=7.0
       comp=Z,3.7nm,0.6s
MK31   Makanchi Array    68.45 327 P      P      22 04 20.1 +0.4
MK31                               IAmb   IAmb   22 04 20.6
       comp=Z,2.7nm,0.7s
MKAR   Makanchi Array    68.45 327 P      P      22 04 20.2 +0.6
       comp=Z,3.4nm,0.5s,baz=119,slow=7.8,SNR=59
       comp=Z,3.4nm,0.5s
MKAR   Makanchi Array    68.45 327 P      P      22 04 20.4 +0.8
MAKZ   Makanchi          68.63 326 P      P      22 04 21.6 +0.9
MAKZ                               IAmb   IAmb   22 04 22.7
       comp=Z,3.0nm,0.7s
KDJ    Kajisay           68.84 320 P      P      22 04 23.2 +0.9
BOOM   Boomskoye usch    69.81 320 P      P      22 04 27.9 -0.4
AAK    Ala-Archa         70.81 320 P      P      22 04 35.8 +1.4
       comp=Z,1.6nm,0.5s,baz=163,slow=4.1,SNR=5.2
       comp=Z,1.6nm,0.5s
AAK    Ala-Archa         70.81 320 P      P      22 04 33.8 -0.6
AAK                                IAmb   IAmb   22 04 36.6
       comp=Z,5.3nm,1.1s
KBL    Kabul             71.09 310 P      P      22 04 35.2 -1.1
KBL                                IAmb   IAmb   22 04 37.8
       comp=Z,3.6nm,0.6s
DRK    Karamyk           71.14 316 P      P      22 04 36.0 -0.7
DRK                                IAmb   IAmb   22 04 39.2
       comp=Z,3.5nm,0.8s
ZAA0   Zalesovo Array    71.76 334 P      P      22 04 38.9 -0.8
ZAA0                               IAmb   IAmb   22 04 40.5
       comp=Z,4.0nm,1.1s
ZALV   Zalesovo Beam     71.76 334 P      P      22 04 39.6 -0.1
       comp=Z,1.2nm,0.4s,baz=137,slow=5.5,SNR=7.3
       comp=Z,1.2nm,0.4s
ZALV   Zalesovo Beam     71.76 334 P      P      22 04 39.0 -0.7
GAR    Garm              71.97 315 P      P      22 04 40.1 -1.3
BTK    Batken            72.07 316 P      P      22 04 41.1 -0.9
CHGR   Chuyangaron       72.65 314 P      P      22 04 43.8 -1.6
KURBB  Kurchatov Arra    72.72 328 P      P      22 04 45.8 +0.3
       comp=Z,1.2nm,0.5s,baz=128,slow=5.1,SNR=20
       comp=Z,1.2nm,0.5s
KURK   Kurchatov         72.73 328 P      P      22 04 44.8 -0.7
KK31   Karatay Array     73.62 319 P      P      22 04 49.8 -1.1
KKAR   Karatay Array     73.62 319 P      P      22 04 50.0 -1.0
KKAR   Karatay Array     73.62 319 P      P      22 04 49.4 -1.6
KKAR                               IAmb   IAmb   22 04 52.5
       comp=Z,1.6nm,0.9s
BRVK   Borovoye          78.35 328 P      P      22 05 17.2 -0.4
SOCY   Socotra           78.36 284 P      P      22 05 18.5  0.0
SOCY                               IAmb   IAmb   22 05 19.2
       comp=Z,10.0nm,1.0s
TIXI   Tiksi             78.47 359 P      P      22 05 16.9 -1.0
VOI    Vohitsoka         81.57 249 P      P      22 05 36.9 +1.0
VOI                                IAmb   IAmb   22 05 38.4
       comp=Z,7.3nm,0.8s
NRIK   Noril'sk          81.64 346 P      P      22 05 35.7 +0.7
       comp=Z,5.1nm,0.6s,baz=127,slow=3.8,SNR=7.1
       comp=Z,5.1nm,0.6s
NRIK   Noril'sk          81.64 346 P      P      22 05 35.1 +0.1
NRIK                               IAmb   IAmb   22 05 37.8
       comp=Z,6.8nm,0.8s
ABKAR  Akbulak array     82.77 321 P      P      22 05 41.2 -0.1
QSPA   South Pole Qui    83.00 180 P      P      22 05 43.6 +1.2
       comp=Z,0.8nm,0.4s,baz=264,slow=0.7,SNR=7.1
       comp=Z,0.8nm,0.4s
AKTO   Aktyubinsk        84.33 322 P      P      22 05 49.9 +0.6
       comp=Z,1.0nm,0.6s,baz=12,slow=1.1,SNR=4.0
       comp=Z,1.0nm,0.6s
ARU    Arti              85.92 328 P      P      22 05 56.6 -0.5
       comp=Z,0.6nm,0.5s,baz=108,slow=6.4,SNR=5.6
       comp=Z,0.6nm,0.5s
ARCES  ARCESS Array B   101.71 340 P      Pdif   22 07 10.3 +0.8
       comp=Z,1.0nm,0.6s,baz=79,slow=6.5,SNR=6.8
FINES  FINESS Array B   102.96 331 PKiKP  PKiKP  22 11 35.7 +0.8
       comp=Z,0.9nm,0.8s,baz=104,slow=4.4,SNR=4.2
YKA    Yellowknife Ar   107.53  26 PKiKP  PKiKP  22 11 44.2 +0.9
       comp=Z,0.3nm,0.5s,baz=64,slow=4.3,SNR=4.2
NOA    NORSAR Array B   109.96 333 PKiKP  PKiKP  22 11 49.5 +1.4
       comp=Z,1.4nm,1.0s,baz=7.4,slow=2.4,SNR=3.3
GERES  GERESS Array B   112.69 320 PKiKP  PKiKP  22 11 53.7 +0.1
       comp=Z,0.6nm,0.6s,baz=85,slow=3.1,SNR=6.0
ABTA   Abfaltersbach    114.04 318 eP     PKPdf  22 11 55.7 -0.6
       comp=Z,0.6nm,0.2s
WTTA   Wattenberg       114.47 319 eP     PKPdf  22 11 57.0 -0.3
       comp=Z,2.9nm,0.4s
MOTA   Moosalm          114.79 319 eP     PKiKP  22 11 57.7 -0.1
       comp=Z,0.9nm,0.4s
TXAR   Lajitas Array    124.53  59 PKP    PKiKP  22 12 18.0 +0.7
       comp=Z,0.2nm,0.6s,baz=316,slow=2.5,SNR=2.6
TORD   Torodi Ar. Bea   129.25 281 PKP    PKiKP  22 12 26.9  0.0
       comp=Z,1.4nm,0.7s,baz=54,slow=1.8,SNR=9.2
LPAZ   La Paz           150.46 142 PKPbc  PKiKP  22 13 12.1 +1.1
       comp=Z,1.3nm,0.4s,baz=42,slow=2.7,SNR=8.8
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*IDC **05** 21:57:04.5±2.0, 13.°81N×51.°71E, h0km, mb3.9/7, mbtmp3.9/7, MS3.1/9, Error ellipse: s-maj=50.2km s-min=26.8km az=2.0*

*NEIC **05** 21:57:05.9±2.9, 13.°8N±0.°1×51.°78E±0.°06, h10km±1km, mb4.2/5, Error ellipse: s-maj=20.4km s-min=7.7km az=196.0*

*OMAN **05** 21:57:07.5±0.2, 13.°92N×51.°86E, h38km±64km, ml3.6/4, Error ellipse: s-maj=9.5km s-min=1.8km az=238.0*

ISC 05 21:57:05.0±0.7**, 13.°77N**±0.°05×**51.°83E**±0.°07**, h16km, n30, σ2.s23**/28**, mb4.1**/9**, MS3.1**/9**, Eastern Gulf of Aden**

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Code   Station Name        Δ°  AZ°  Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
SOCY   Socotra            2.63 126        Pn     21 57 44.4 -2.5
SOCY                               Sn     Sn     21 58 15.9 -2.6
SOCY   Socotra            2.63 126 P      Pn     21 57 45.4 -1.5
       SNR=29
SOCY                               S      Sn     21 58 15.9 -2.6
ABTO   Aybut              3.84  21 P      Pn     21 58 02.4 -1.2
       SNR=6.5
ABTO                               S      Sn     21 58 44.4 -4.0
RBK    Rabkut             4.37  31 P      Pn     21 58 10.8  0.0
       SNR=11
RBK                                S      Sn     21 58 58.8 -2.6
WHFO   Wadi Hawf          4.53  24 P      Pn     21 58 12.0 -1.1
       SNR=13
DMTO   DMTO               4.95  37 P      Pn     21 58 18.6 -0.1
       SNR=10.0
DMTO                               S      Sn     21 59 12.8 -2.8
DOK    Doka               5.31  24 P      Pn     21 58 22.6 -1.1
DOK                                S      Sn     21 59 20.5 -4.1
ATD    Arta Tunnel        9.04 257 Pn     Pn     21 59 13.3 -1.7
RAYN   Ar Rayn           11.40 329 Pn     Pn     21 59 43.1 -4.3
EIL    Elat              22.23 318 LR     LR     22 09 59.2
       comp=Z,23nm,20.8s,baz=112,slow=35
HRA    Herat             22.60  23 P      P      22 02 07.0 +1.7
ASF    Jabal al Asfar    22.86 326 LR     LR     22 11 58.6
       comp=Z,115nm,20.9s,baz=288,slow=39
GEYT   Alibeck           24.71  12 LR     LR     22 13 07.5
       comp=Z,16nm,18.6s,baz=160,slow=39
GNI    Garni             27.01 348 LR     LR     22 15 13.0
       comp=Z,40nm,20.3s,baz=188,slow=40
BRTR   Keskin Array B    30.41 332 LR     LR     22 15 23.2
       comp=Z,41nm,18.3s,baz=136,slow=36
KBZ    Khabaz            30.83 347 P      P      22 03 22.9 +2.7
       1.7nm,0.8s,baz=194,slow=9.2,SNR=4.9
KBZ                                LR     LR     22 17 53.6
       comp=Z,44nm,21.0s,baz=180,slow=41
       1.7nm,0.8s
ILGA   Ilgaz             31.45 333 P      P      22 03 26.1 +0.1
ABKAR  Akbulak array     36.02   9 P      P      22 04 06.6 +1.2
ABKAR  Akbulak array     36.02   9 P      P      22 04 06.3 +0.9
ABKAR                              IAmb   IAmb   22 04 08.0
       comp=Z,4.3nm,1.2s
ARU    Arti              42.89   5 LR     LR     22 27 23.9
       comp=Z,26nm,18.1s,baz=168,slow=42
CMAR   Chiang Mai Arr    45.41  78 P      P      22 05 26.4 +3.0
       comp=Z,2.0nm,0.3s,baz=278,slow=8.9,SNR=6.7
       comp=Z,2.0nm,0.3s
LBTB   Lobatse           46.26 214 LR     LR     22 27 11.7
       comp=Z,30nm,18.8s,baz=112,slow=39
GERES  GERESS Array B    46.97 326 P      P      22 05 36.0 +0.7
       comp=Z,0.2nm,0.5s,baz=144,slow=8.5,SNR=1.9
       comp=Z,0.2nm,0.5s
ZALV   Zalesovo Beam     47.74  26 P      P      22 05 42.5 +1.4
       comp=Z,1.0nm,0.5s,baz=227,slow=7.6,SNR=4.9
       comp=Z,1.0nm,0.5s
ZALV   Zalesovo Beam     47.74  26 P      P      22 05 42.4 +1.2
TORD   Torodi Ar. Bea    48.69 275 P      P      22 05 50.2 +1.2
       comp=Z,0.5nm,0.7s,baz=95,slow=6.5,SNR=4.1
       comp=Z,0.5nm,0.7s
FINES  FINESS Array B    51.11 344 P      P      22 06 07.8 +1.1
       comp=Z,1.9nm,0.8s,baz=151,slow=6.0,SNR=8.0
       comp=Z,1.9nm,0.8s
KOWA   Kowa              54.04 278 P      P      22 06 28.5 -0.7
KOWA                               IAmb   IAmb   22 06 45.6
       comp=Z,5.1nm,1.3s
ESDC   Sonseca Array     55.11 309 P      P      22 06 37.6 +0.9
       comp=Z,1.0nm,0.8s,baz=93,slow=5.7,SNR=9.5
       comp=Z,1.0nm,0.8s
NOA    NORSAR Array B    55.56 337 LR     LR     22 36 20.9
       comp=Z,21nm,18.4s,baz=295,slow=42
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TAP 05 21:59:36.0, 23.°96N×121.°58E, h10km, ML1.7, 1D, A, Taiwan

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Code   Station Name        Δ°  AZ°  Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
HWA    Hwalien            0.03  61 P      Pg     21 59 38.6 +0.8
       baz=70
HWA                                eS     Sg     21 59 40.0 +0.9
       baz=70
ETM    Tongmen            0.08 273 i P    Pg     21 59 39.1 +0.8
       baz=272
ETM                                S      Sg     21 59 40.6 +0.7
       baz=272
TEYL   Yanliau Villag     0.10 168 eP     Pg     21 59 38.9 +0.4
       baz=157
TEYL                               eS     Sg     21 59 40.4 +0.1
       baz=157
TWD    Chiawan            0.12   9 i P    Pg     21 59 39.7 +0.9
       baz=12
TWD                                S      Sg     21 59 41.9 +1.0
       baz=12
ESL    Shilin             0.20 222 P      Pg     21 59 40.7 +0.6
       baz=219
ETL    Fush Village       0.20  12 P      Pg     21 59 41.0 +0.7
       baz=12
ETL                                eS     Sg     21 59 44.3 +1.2
       baz=12
NACB   Ninganchiao        0.21   5⇓iP     Pg     21 59 41.1 +0.7
       baz=4.0
NACB                               i S    Sg     21 59 44.3 +0.9
       baz=4.0
TEGC   Jichi Village      0.25 187 eP     Pb     21 59 42.8  0.0
       baz=185
ETLH   Xiulin Townshi     0.26 341 eP     Pb     21 59 42.2 -0.6
       baz=340
ETLH                               eS     Sb     21 59 46.6 -0.8
       baz=340
EGFH   Guangfu            0.32 205 eP     Pg     21 59 43.0 +0.6
       baz=204
WHF    Hehuan Shan        0.34 303 P      Pb     21 59 43.9 -0.5
       baz=303
WHF                                S      Sb     21 59 48.8 -1.2
       baz=303
OWD    Renai              0.37 269 eP     Pb     21 59 44.6 -0.1
       baz=268
CHGB   Renai              0.38 285 P      Pb     21 59 44.9 -0.1
       baz=284
CHGB                               eS     Sb     21 59 50.5 -0.6
       baz=284
FUSS   Fushou             0.42 313 eP     Pb     21 59 45.8 +0.2
       baz=313
FUSS                               eS     Sb     21 59 52.3 +0.1
       baz=313
WUSB   Renai              0.42 274 eP     Pb     21 59 45.8 +0.2
       baz=273
WUSB                               S      Sb     21 59 52.0 -0.1
       baz=273
VWDT   VWDT               0.45 243 eP     Pb     21 59 46.0 -0.1
       baz=242
VWDT                               eS     Sb     21 59 52.5 -0.3
       baz=242
TDCB   Techi              0.48 307 eP     Pg     21 59 44.3 -1.1
       baz=307
ENA    Nanau              0.49  18 eP     Pb     21 59 46.8 +0.1
       baz=18
HGSD   Ruisui             0.49 197 eP     Pb     21 59 46.5 -0.3
       baz=196
NNSB   Datong             0.50 339 P      Pb     21 59 46.9 -0.1
       baz=339
EHY    Hungye             0.51 207 eP     Pg     21 59 46.5 +0.6
       baz=206
EHY                                eS     Sb     21 59 54.4 -0.1
       baz=206
NNS    Nan Shan           0.51 339 eP     Pb     21 59 47.6 +0.4
       baz=339
EWUT   Wuta               0.52  21 eP     Pb     21 59 46.9 -0.3
       baz=21
WPL    Puli Township      0.57 275 eP     Pb     21 59 48.8 +0.7
       baz=275
LATG   Datong             0.57 355 eP     Pb     21 59 48.8 +0.5
       baz=355
SSLB   Suanglung          0.59 253 P      Pb     21 59 48.8 +0.2
       baz=252
SSLB                               S      Sb     21 59 56.6 -0.4
       baz=252
WCS    Beigang Elemen     0.61 279 eP     Pb     21 59 49.5 +0.7
       baz=278
YULB   Yu-li              0.62 204 eP     Pb     21 59 48.7 -0.3
       baz=204
YULB                               S      Sb     21 59 57.9  0.0
       baz=204
SMLT   Sun Moon Lake      0.62 263 eP     Pb     21 59 49.9 +0.8
       baz=262
WHP    Taichung City      0.66 299 eP     Pb     21 59 50.3 +0.6
       baz=298
TWF1   Yuli               0.66 203 eP     Pb     21 59 49.9 +0.3
       baz=202
ENTT   Nioudou            0.68 359 eP     Pb     21 59 50.2 +0.3
       baz=359
ENTT                               eS     Sb     21 59 59.9 +0.5
       baz=359
NDS    Dongshan           0.68  11 eP     Pg     21 59 49.5 +0.3
       baz=10.0
NSK    Sanguang           0.74 344 eP     Pb     21 59 51.6 +0.6
       baz=344
FUSB   Fushanzhiwuyua     0.79   1 eP     Pb     21 59 52.5 +0.5
NWLT   Wulai              0.81 355 eP     Pn     21 59 53.1 -0.5
       baz=355
ALS    Alishan            0.84 238 eP     Pn     21 59 53.7 -0.5
       baz=237
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*IDC **05** 22:02:44.0±2.4, 0.°87N×99.°81E, h184km±11km, mb3.2/6, mbtmp3.6/7, Error ellipse: s-maj=85.9km s-min=19.5km az=53.0*

ISC 05 22:02:45.5±2.1**, 1.°0N**±0.°4×**99.°7E**±0.°5**, h200km, n7, σ1.s74**/8**, mb3.4**/6**, Northern Sumatera**

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Code   Station Name        Δ°  AZ°  Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
PSI    Prapat             1.95 336 P      Pn     22 03 22.1 -1.5
       3.2nm,0.5s,baz=168,slow=11,SNR=4.6
PSI                                S      Sn     22 03 51.3 -2.1
       8.5nm,0.7s,baz=8.9,slow=18,SNR=8.3
WRA    Warramunga Arr    39.81 123 P      P      22 09 58.1 -1.5
       0.5nm,0.7s,baz=309,slow=8.9,SNR=6.9
       0.5nm,0.7s
SONM   Songino Array     47.00   6 P      P      22 10 57.9 +1.2
       0.3nm,0.6s,baz=183,slow=9.3,SNR=1.7
       0.3nm,0.6s
MKAR   Makanchi Array    48.08 344 P      P      22 11 06.0 +1.1
       0.8nm,0.5s,baz=153,slow=8.8,SNR=12
       0.8nm,0.5s
ZALV   Zalesovo Beam     54.18 349 P      P      22 11 50.8 +0.7
       1.0nm,0.6s,baz=162,slow=6.1,SNR=4.6
       1.0nm,0.6s
FINES  FINESS Array B    81.34 332 P      P      22 14 40.5 +1.1
       0.4nm,0.4s,baz=114,slow=3.5,SNR=5.5
       0.4nm,0.4s
ARCES  ARCESS Array B    83.57 340 P      P      22 14 52.1 +1.2
       1.3nm,0.9s,baz=112,slow=4.4,SNR=5.0
       1.3nm,0.9s
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*MOS **05** 22:27:03.9±1.1, 18.°62N×107.°14W, h12km, mb5.3/9, Error ellipse: s-maj=8.6km s-min=5.0km az=92.1*

*IDC **05** 22:27:03.6±0.8, 18.°59N×107.°17W, h0km, mb4.5/20, mbtmp4.5/23, ML4.5/4, MS4.6/59, Error ellipse: s-maj=27.5km s-min=12.1km az=61.0*

*NEIC **05** 22:27:06.8, 18.°67N×107.°12W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$0.91; $M_{r\theta}$-0.00; $M_{\theta\phi}$-1.34; $M_{\phi r}$-0.48; Fault plane solution: $M_0$1.69000×10^{17} NP1:ϕ_s106.45000°, δ74.28000°, λ175.79000°. NP2:ϕ_s197.59000°, δ85.95000°,* *λ15.76000°. Principal axes: T 1.7277, Plg14.0000°, Azm63.0000°; N -0.0689, Plg74.0000°, Azm212.0000°; P -1.6589, Plg8.0000°, Azm331.0000°;*

*NEIC **05** 22:27:07.1±1.9, 18.°70N±0.°07×107.°09W±0.°07, h10km±1km, mb5.1/557, Mwb5.4/20, Md5.5/140(MEX) Error ellipse: s-maj=12.9km s-min=8.9km az=223.0*

*MEX **05** 22:27:07.4±1.3, 18.°71N×106.°87W, h5km, MD5.5*

*GCMT **05** 22:27:08.1±0.1, 18.°86N±0.°01×107.°05W±0.°01, h23km, MW5.5/142, Moment Tensor Solution. s128,c221; s142,c276; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.18±.02; $M_{\theta\theta}$-1.23±.02; $M_{\phi\phi}$1.42±.03; $M_{r\theta}$-0.14±.03; $M_{\theta\phi}$-1.69±.02; $M_{\phi r}$0.09±.04; Best double couple: $M_0$2.15400×10^{17} NP1:ϕ_s19.00000°,δ86.00000°, λ0.00000°. NP2:ϕ_s289.00000°,δ90.00000°,λ176.00000°. Principal axes: T 2.2510, Plg3.0000°, Azm244.0000°; N -0.1870, Plg86.0000°, Azm104.0000°; P -2.0570, Plg3.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 22:27:09.3±0.3**, 18.°64N**±0.°03×**106.°95W**±0.°04**, h30km, n1038, σ1^{s}99**/986**, mb5.0**/265**, MS4.8**/78**, 2C-1D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUVA	Puert Vallarta	2.57	39		Pn	22 27 45.4	-3.5
PUVA					Sn	22 28 14.7	-4.3
R15V		2.86	79		Pn	22 27 49.9	-3.1
EZ5V		3.28	75		Pn	22 27 57.2	-1.7
ANIG	Ahuacatlan	3.32	43		Pn	22 27 56.8	-2.6
ANIG					Sn	22 28 34.4	-3.5
MMIG	Aquila	3.44	95		Pn	22 27 57.9	-3.0
MMIG					Sn	22 28 38.9	-1.8
H06E1	SOCORRO T-PHAS	3.77	273	T	T	22 31 40.6	
	SNR=4484						
H06N1	SOCORRO T-PHAS	3.83	274	T	T	22 31 44.6	
	SNR=294						
MAIG	Mazatlaan	4.56	6		Pn	22 28 12.1	-4.1
MAIG					Sn	22 29 00.2	-7.9
ZIIG	Zihuatanejo	5.32	100		Pn	22 28 23.4	-3.3
ZIIG					Sn	22 29 23.5	-3.5
MOIG	Morelia	5.55	78		Pn	22 28 28.9	-1.1
MOIG					Sn	22 29 34.2	+1.2
IGIG	Irapuato, Guan	5.70	67		Pn	22 28 32.1	0.0
IGIG					Sn	22 29 40.4	+3.6
SLBS	Sierra La Lagu	5.75	331	Pn	Pn	22 28 30.9	-1.8
ZAIG	Zacatecas	5.81	44	Pn	Pn	22 28 32.9	-0.8
LPIG	La Paz	6.27	331	Pn	Pn	22 28 38.5	-1.3
	3.8nm,0.3s,baz=140,slow=0.5,SNR=5.6						
	49nm,0.6s						
CAIG	El Cayaco	6.56	103		Pn	22 28 42.9	-0.9
CAIG					Sn	22 29 51.6	-6.0
TOVM	TOLUCA	6.92	83		Pn	22 28 49.1	+0.2
MEIG	Mezcala	7.00	95		Pn	22 28 48.4	-1.5
MEIG					Sn	22 30 06.2	-2.5
MAVM	Malinalco, Edo	7.07	86		Pn	22 28 51.2	+0.2
PLIG	Platanillo	7.08	91		Pn	22 28 50.4	-0.5
PLIG					Sn	22 30 10.2	-0.2
DAIG	Los Arroyos	7.14	102		Pn	22 28 51.5	-0.2
DAIG					Sn	22 30 17.1	+5.2
AZVM	Cuida Lopez Ma	7.31	81		Pn	22 28 55.0	+0.6
UNM	Universidad Na	7.39	83	P	Pn	22 28 56.4	+1.0
UNM	Universidad Na	7.39	83		Pn	22 28 56.4	+1.0
PTVM	Pico Tres Padr	7.47	81		Pn	22 28 56.7	+0.1
YAIG	Yautepec	7.48	87		Pn	22 28 56.7	+0.2
YAIG					Sn	22 30 19.1	-1.3
PBVM	Pinon	7.49	83		Pn	22 28 54.9	-1.6
ZUVM	ZUMPANGO	7.54	80		Pn	22 28 57.0	-0.4
CRIG	Cruz Grande	7.69	103		Pn	22 29 00.1	+0.8
CRIG					Sn	22 30 24.1	-1.3
AMVM	AMECAMECA	7.75	85		Pn	22 28 58.9	-1.5
VTVM	Tizayuca	7.81	80		Pn	22 29 01.9	+0.7
TLIG	Tlapa	8.05	96	Pn	Pn	22 29 05.4	+1.1
HPIG		8.35	8	Pn	Pn	22 29 07.9	-0.6
PNIG	Pinotepa	8.71	103		Pn	22 29 10.9	-2.4
PNIG					Sn	22 30 51.7	+1.1
TPIG	Tehuac#an	9.10	90		Pn	22 29 18.9	+0.1
TPIG					Sn	22 30 56.0	-4.4
SRIG	Santa Rosalia	9.92	332		Pn	22 29 28.6	-1.2
HUIG	Huatulco	10.75	104		Pn	22 29 43.2	+2.0
HUIG					Sn	22 31 33.1	-7.5
HSIG		10.96	341		Sn	22 31 50.2	+4.4
HSIG		10.96	341	Pn	Pn	22 29 43.3	-0.8
TX31	Lajitas Ar. Si	11.06	15	Pn	Pn	22 29 46.2	+0.6
TX32	Lajitas Array	11.06	15	Pn	Pn	22 29 46.0	+0.4
TXAR	Lajitas Array	11.06	15	Pn	Pn	22 29 46.3	+0.7
	1.2nm,0.3s,baz=195,slow=15,SNR=22						
TXAR				LR	LR	22 34 03.2	
	comp=Z,4µm,18.2s,baz=196,slow=38						
	9.8nm,0.8s						
CMIG	Matias Romero	11.60	96	Pn	Pn	22 29 54.2	+1.4
	10nm,0.3s,baz=294,slow=11,SNR=80						
CMIG				LR	LR	22 34 16.6	
	comp=Z,4µm,18.1s,baz=282,slow=37						
CMIG	Matias Romero	11.60	96		Pn	22 29 52.9	0.0
CMIG					Sn	22 31 59.7	-1.7
CGIG		11.71	356		Pn	22 29 50.5	-4.0
CGIG					Sn	22 32 03.6	-0.8
833A	Chaparral WMA,	11.87	34	Pn	Pn	22 29 58.5	+1.9
833A	Chaparral WMA,	11.87	34	P	Pn	22 29 59.3	+2.7
	baz=218,SNR=36						
833A				S	Sn	22 32 10.7	+2.6
	baz=218						
833A	Chaparral WMA,	11.87	34	P	Pn	22 29 58.4	+1.8
	baz=218,SNR=36						
833A				S	Sn	22 32 08.1	0.0
	baz=218						
KVTX	Kingsville	12.17	42	Pn	Pn	22 30 02.5	+1.9
KVTX	Kingsville	12.17	42	S	Sn	22 32 32.4	+17
	baz=226						
319A	Douglas	12.86	351		Pn	22 30 09.6	-0.5
MNTX	Cornudas Mount	13.09	6	Pn	Pn	22 30 12.5	-0.6
MNTX	Cornudas Mount	13.09	6	P	Pn	22 30 13.3	+0.2
	baz=187,SNR=13						
MNTX				S	Sn	22 32 34.4	-3.3
	baz=187						
MNTX	Cornudas Mount	13.09	6	P	Pn	22 30 13.4	+0.2
	baz=187,SNR=13						
MNTX				S	Sn	22 32 37.7	0.0
	baz=187						
735A	Kenedy	13.17	38		Pn	22 30 16.0	+1.7
735A	Kenedy	13.17	38	P	Pn	22 30 17.0	+2.7
	baz=222,SNR=15						
735A				S	Sn	22 32 40.4	+0.6
	baz=222						
TGIG		13.31	96		Pn	22 30 15.0	-1.3
PCIG		13.45	100		Pn	22 30 18.3	+0.2
JCT	Junction City	13.46	27	P	Pn	22 30 19.4	+1.1
JCT	Junction City	13.46	27	Pn	Pn	22 30 19.4	+1.1
JCT	Junction City	13.46	27	P	Pn	22 30 20.6	+2.3
	baz=211,SNR=30						
JCT				S	S	22 33 00.8	-9.2
	baz=211						
JCT	Junction City	13.46	27	P	Pn	22 30 20.6	+2.3
	baz=211,SNR=30						
JCT				S	Sn	22 32 49.0	+2.0
	baz=211						
121A	Cookes Peak, D	13.86	357	Pn	Pn	22 30 23.3	-0.6
121A	Cookes Peak, D	13.86	357	P	Pn	22 30 24.7	+0.8
	baz=177,SNR=26						
121A				S	Sn	22 33 03.4	+6.6
	baz=177						
121A	Cookes Peak, D	13.86	357	P	Pn	22 30 24.7	+0.8
	baz=177,SNR=26						
121A				S	Sn	22 32 57.8	+1.0
	baz=177						
TUC	Tucson	14.05	347	P	Pn	22 30 25.4	-0.9
TUC	Tucson	14.05	347	Pn	Pn	22 30 25.4	-0.9
TUC	Tucson	14.05	347	P	Pn	22 30 26.1	-0.2
	baz=166						
TUC				S	Sn	22 33 02.0	+0.7
	baz=166						
SFX	San Felipe	14.27	331	Pn	Pn	22 30 27.6	-1.6
214A	Organ Pipe Nat	14.28	339	Pn	Pn	22 30 28.9	-0.5
214A	Organ Pipe Nat	14.28	339	P	Pn	22 30 29.6	+0.1
	baz=158,SNR=19						
214A				S	Sn	22 33 08.4	+1.5
	baz=158						
CCIG	Comitan	14.33	97		Pn	22 30 31.3	+0.9
SPIG	San Pedro Mart	14.56	330		Pn	22 30 31.3	-2.3
435B	Jarrell	14.78	33		Pn	22 30 36.2	0.0
435B	Jarrell	14.78	33	S	S	22 33 40.4	+3.6
	baz=218						
435B	Jarrell	14.78	33	P	Pn	22 30 36.0	-0.2
	baz=218						
435B				S	Sn	22 33 17.9	-1.1
	baz=218						
SCIG	Sabancuy	14.94	86	P	Pn	22 30 31.2	-7.2
HKT	Hockley	15.14	40c	iP	Pn	22 30 40.1	-0.9
HKT				pmax	pmax		
	comp=Z,233nm,1.9s						
HKT	Hockley	15.14	40	Pn	Pn	22 30 40.1	-0.9
HKT	Hockley	15.14	40	P	Pn	22 30 41.6	+0.6
	baz=225						
HKT				S	S	22 33 49.7	+5.5
	baz=225						
HUEH	Huehuetenango	15.14	100		Pn	22 30 43.8	+2.4
RTAL	Retalhuleu	15.19	103		P	22 30 44.3	-2.2
Y22A	Socorro	15.24	360	S	S	22 33 39.9	-6.7
	baz=181						
113A	Mohawk Valley,	15.35	338		Pn	22 30 41.9	-1.8
113A				IAmb	IAmb	22 30 49.5	
	comp=Z,64nm,1.0s						
Y22D	IRIS PASSCAL I	15.38	0	P	Pn	22 30 44.1	-0.1
	baz=181						
ABTX	Abilene, Hawle	15.40	24	Pn	Pn	22 30 44.6	+0.1
ABTX	Abilene, Hawle	15.40	24	P	Pn	22 30 44.4	-0.1
	baz=208						
ABTX				S	S	22 33 52.8	+3.1
	baz=208						
ABTX	Abilene, Hawle	15.40	24	P	Pn	22 30 43.8	-0.7
	baz=208						
ABTX				S	Sn	22 33 34.7	+0.5
	baz=208						
BNM	Barren Site	15.46	1	Pn	Pn	22 30 45.8	+0.4
LENM	Lemitar	15.47	360		Pn	22 30 44.6	-0.9
MBIG	Mexicali	15.59	333		Pn	22 30 44.7	-2.2
CPBX	Cerro Prieto	15.65	333	Pn	Pn	22 30 45.5	-2.1
MSTX	Muleshoe	15.72	13	Pn	Pn	22 30 48.4	-0.4
MSTX				IAmb	IAmb	22 31 06.0	
	comp=Z,124nm,1.0s						
MSTX	Muleshoe	15.72	13	P	P	22 30 52.2	-0.3
	baz=195,SNR=16						
MSTX	Muleshoe	15.72	13	P	Pn	22 30 47.6	-1.2
	baz=195,SNR=16						
MSTX				S	Sn	22 33 43.5	+1.4
	baz=195						
WHTX	Lake Whitney,	15.82	31	Pn	Pn	22 30 49.5	-0.4
WHTX				IAmb	IAmb	22 30 52.4	
	comp=Z,277nm,1.6s						
WHTX	Lake Whitney,	15.82	31	P	Pn	22 30 49.9	0.0
	baz=215,SNR=10.0						
WHTX				S	S	22 34 00.2	+2.1
	baz=215						
WHTX	Lake Whitney,	15.82	31	P	Pn	22 30 49.2	-0.6
	baz=215,SNR=10.0						
WHTX				S	Sn	22 33 44.3	0.0
	baz=215						
CCX	Cicese	15.82	328	Pn	Pn	22 30 47.2	-2.7
GLA	Glamis	16.00	335	P	Pn	22 30 50.4	-1.9
GLA				pmax	pmax		
	comp=Z,165nm,1.6s						
GLA	Glamis	16.00	335		Pn	22 30 50.4	-1.9
GLA				IAmb	IAmb	22 31 00.1	
	comp=Z,165nm,1.6s						
GLA	Glamis	16.00	335	P	Pn	22 30 52.0	-0.2
	baz=152,SNR=12						
X18A	Snowflake	16.05	351		Pn	22 30 52.6	-0.4
YUH	Yuha Desert	16.11	332		Pn	22 30 52.4	-1.3
YUH				IAmb	IAmb	22 30 54.1	
	comp=Z,206nm,2.0s						
Y14A	Wickenburg	16.17	342		Pn	22 30 53.2	-1.3
Y14A				IAmb	IAmb	22 30 57.5	
	comp=Z,229nm,1.7s						
CBX	Cerro Bola	16.18	329	P	Pn	22 30 53.6	-1.1
IKP	In-Ko-Pah, Jac	16.20	331	P	Pn	22 30 54.3	-0.6
	baz=148,SNR=10						
ANMO	Albuquerque	16.25	1	Pn	Pn	22 30 55.3	-0.3
	comp=Z,0.6nm,0.3s,baz=184,slow=12,SNR=15						
ANMO				LR	LR	22 36 50.2	
	comp=Z,3µm,19.8s,baz=186,slow=36						
	comp=Z,4.3nm,0.9s						
ANMO	Albuquerque	16.25	1d	eP	Pn	22 30 55.5	-0.1
ANMO				pmax	pmax		
	comp=Z,87nm,2.5s						
ANMO	Albuquerque	16.25	1	Pn	Pn	22 30 55.2	-0.4
ANMO	Albuquerque	16.25	1	P	Pn	22 30 56.2	+0.6
	baz=182,SNR=10						
ANMO				S	S	22 34 05.0	-2.3
	baz=182						
ANMO	Albuquerque	16.25	1	P	Pn	22 30 55.4	-0.3
	baz=182						
ANMO				S	Sn	22 33 59.1	+4.0
	baz=182						
TJIG	Tijuana	16.29	329		Pn	22 30 53.7	-2.2
SWSC	Sam W. Stewart	16.31	333	P	Pn	22 30 55.6	-0.6
	baz=149						
PETF	Flores	16.36	93	P	Pn	22 30 57.7	+0.7
PETF				IAmb	IAmb	22 31 07.7	
	comp=Z,114nm,0.7s						
TKX	Tecate	16.36	330	Pn	Pn	22 30 55.8	-1.1
BAR	Barrett	16.49	330	P	Pn	22 30 57.0	-1.4
BLYC	Blythe	16.50	337		Pn	22 30 57.3	-1.3
TJX	Tijuana	16.53	329	Pn	Pn	22 30 57.4	-1.6
TJX				IAmb	IAmb	22 31 00.6	
	comp=Z,245nm,1.1s						
MONP2	Monument Peak	16.55	331	P	Pn	22 30 59.4	+0.1
	baz=147,SNR=8.8						
W18A	Petrified Fore	16.60	352	Pn	Pn	22 30 58.7	-1.3
W18A	Petrified Fore	16.60	352	P	Pn	22 30 59.7	-0.3
	baz=171						
W18A				S	S	22 34 10.0	-4.4
	baz=171						
237A	Washetta, Mont	16.68	35		Pn	22 30 60.0	-0.8
237A	Washetta, Mont	16.68	35	P	Pn	22 31 00.9	+0.1
	baz=220,SNR=8.4						
237A				S	S	22 34 18.0	+2.4
	baz=220						
BC3	Big Chuckawall	16.78	335	P	Pn	22 31 01.6	-0.6
	baz=152,SNR=7.7						
AMTX	Amarillo	16.85	15		Pn	22 31 03.0	0.0
AMTX	Amarillo	16.85	15	P	Pn	22 31 02.6	-0.5
	baz=198,SNR=13						
AMTX	Amarillo	16.85	15	P	Pn	22 31 02.4	-0.6
	baz=198						
AMTX				S	Sn	22 34 10.8	+1.4
	baz=198						
109C	Camp Elliot, M	16.87	329		Pn	22 31 02.2	-1.0
109C	Camp Elliot, M	16.87	329	P	Pn	22 31 02.3	-0.9
	baz=145						
PDMCI	Parker Dam,Lak	16.87	339	P	Pn	22 31 02.9	-0.2
	baz=156						
Z35A	Perchaven, San	17.02	29		Pn	22 31 04.6	-0.5
Z35A				IAmb	IAmb	22 31 12.3	
	comp=Z,77nm,0.8s						
Z35A	Perchaven, San	17.02	29	P	Pn	22 31 05.6	+0.5
	baz=214,SNR=8.2						
Z35A				S	S	22 34 25.8	+3.1
	baz=214						
IRM	Iron Mountain	17.10	336	P	Pn	22 31 05.9	-0.2
	baz=153,SNR=5.1						
IRM				S	S	22 34 23.0	-1.4
	baz=153						
NATX	Nacogdoches	17.14	38		Pn	22 31 06.1	-0.6
NATX	Nacogdoches	17.14	38	P	Pn	22 31 07.0	+0.4
	baz=224,SNR=23						
NATX				S	S	22 34 29.1	+3.9
	baz=224						
NATX	Nacogdoches	17.14	38	P	Pn	22 31 06.1	-0.6
	baz=224,SNR=23						
NATX				S	S	22 34 22.5	-2.7
	baz=224						
TPFO	Pinon Flats	17.16	332	P	Pn	22 31 07.0	0.0
	baz=148,SNR=11						
PFO	Pinyon Flats O	17.17	332	P	Pn	22 31 06.1	-1.0
PFO				pmax	pmax		
	comp=Z,121nm,1.3s						
PFO	Pinyon Flats O	17.17	332		Pn	22 31 06.1	-1.0
PFO				IAmb	IAmb	22 31 08.2	
	comp=Z,121nm,1.3s						
PFO	Pinyon Flats O	17.17	332	P	Pn	22 31 07.2	+0.1
	baz=148,SNR=7.0						
WUAZ	Wupatki	17.27	348	P	Pn	22 31 06.3	-2.0
WUAZ	Wupatki	17.27	348	P	Pn	22 31 08.3	0.0
	baz=166,SNR=13						
WUAZ				S	Sn	22 34 23.2	+3.6
	baz=166						
BELC	Belle Mtn. Jos	17.30	334	P	Pn	22 31 09.2	+0.4
	baz=150,SNR=21						
BELC				S	S	22 34 28.8	+0.1
	baz=150						
441A	DeRidder	17.35	43	P	Pn	22 31 08.7	-0.5
441A	DeRidder	17.35	43	P	P	22 31 10.0	-0.5
	baz=230						
441A				S	S	22 34 32.7	+3.2
	baz=230						
ESQI	Esquipulas	17.36	101	P	P	22 31 11.9	+1.2
MTO3	Montecristo	17.39	101	P	P	22 31 11.2	+0.1
MTO3				IAmb	IAmb	22 31 27.7	
	comp=Z,240nm,1.4s						
NEE2	Needles Airpor	17.45	339	P	Pn	22 31 10.2	-0.3
	baz=156						
NEE2				S	S	22 34 32.2	+0.7
	baz=156						
MURC	Murrieta	17.49	330	P	Pn	22 31 10.8	-0.2
	baz=146						
W13A	Hualapai Mount	17.52	341	Pn	Pn	22 31 09.8	-1.6
WMOK	Wichita Mounta	17.61	23	P	Pn	22 31 12.1	-0.4
WMOK				pmax	pmax		
	comp=Z,47nm,1.1s						
WMOK	Wichita Mounta	17.61	23	P	Pn	22 31 12.1	-0.4
WMOK	Wichita Mounta	17.61	23	P	Pn	22 31 12.8	+0.3
	baz=207,SNR=24						
WMOK				S	S	22 34 35.1	+0.4
	baz=207						
WMOK	Wichita Mounta	17.61	23	P	Pn	22 31 10.8	-1.6
	baz=207,SNR=24						
WMOK				S	Sn	22 34 29.4	+1.7
	baz=207						
ELS	Elsinore Mount	17.64	330	P	Pn	22 31 11.2	-1.7
SCI2	San Clemente I	17.67	326	P	Pn	22 31 13.0	-0.2
	baz=142						
SNET	Serv Nac Est T	17.72	104		P	22 31 16.6	+2.0
SNET				IAmb	IAmb	22 31 26.2	
	comp=Z,167nm,0.8s						
GMRC	Granite Mounta	17.85	336	P	Pn	22 31 15.4	-0.2
	baz=153,SNR=23						
X34A	Smith Ranch, M	17.85	25	P	P	22 31 15.9	-0.1
BBRC	Big Bear Solar	17.92	332	P	Pn	22 31 16.6	0.0
	baz=148						
CIS	Catalina Islan	17.93	327	P	Pn	22 31 15.6	-0.8
	baz=143,SNR=9.7						
Z38A	Mt. Pleasant	18.09	34	P	Pn	22 31 17.3	-0.9
Z38A				IAmb	IAmb	22 31 22.7	
	comp=Z,236nm,1.2s						
Z38A	Mt. Pleasant	18.09	34	P	P	22 31 18.9	+0.5
	baz=220,SNR=5.1						
Z38A				S	S	22 34 47.5	+3.2
	baz=220						
FMP	Fort Macarthur	18.12	328	P	Pn	22 31 17.8	-0.9
	baz=144						
HEC	Hector,Ludlow	18.16	335	P	Pn	22 31 19.0	-0.3
	baz=151						
BFSC	Mount Baldy Ra	18.24	331	P	Pn	22 31 20.0	-0.3
	baz=146,SNR=14						
342A	Flagon Creek P	18.32	43	P	P	22 31 20.8	-0.3
342B	Flagon Creek P	18.32	43	P	Pn	22 31 21.1	0.0
	baz=230,SNR=27						
U15A	North Rim	18.34	346		P	22 31 21.2	-0.4
SNCC	San Nicolas Is	18.40	325		P	22 31 19.2	-2.7
SNCC	San Nicolas Is	18.40	325	P	P	22 31 21.3	-0.6
	baz=140						
PASC	Pasadena Art C	18.43	329		P	22 31 19.9	-2.4
PASC				IAmb	IAmb	22 31 24.7	
	comp=Z,269nm,2.0s						
RRX	Edison Barstow	18.47	333	P	P	22 31 22.2	-0.6
	baz=149						
TUQ	Turquoise Moun	18.53	336	P	P	22 31 23.5	0.0
	baz=153						
MVCO	Mesa Verde	18.55	356		P	22 31 22.6	-1.3
MVCO	Mesa Verde	18.55	356	P	P	22 31 23.3	-0.6
	baz=176,SNR=9.0						
MVCO				S	S	22 34 58.6	+4.6
	baz=176						
T25A	Trinidad	18.57	6	P	P	22 31 22.9	-1.1
T25A	Trinidad	18.57	6	P	P	22 31 23.4	-0.6
	baz=188						
T25A				S	S	22 34 58.1	+3.8
	baz=188						
DECC	Green Verdugo	18.57	329	P	P	22 31 23.2	-0.7
	baz=144						
FNO	Franklin	18.60	25	P	P	22 31 23.1	-1.0
FNO				IAmb	IAmb	22 31 40.7	
	comp=Z,142nm,1.7s						
OKCFA	Oklahoma City	18.72	25	P	P	22 31 25.1	-0.3
OKCFA				IAmb	IAmb	22 31 42.5	
	comp=Z,185nm,1.6s						
GSC	Goldstone, Bar	18.76	334	P	P	22 31 24.6	-1.4
GSC				pmax	pmax		
	comp=Z,39nm,1.4s						
GSC	Goldstone, Bar	18.76	334		P	22 31 24.6	-1.4
GSC	Goldstone, Bar	18.76	334	P	P	22 31 25.4	-0.6
	baz=150,SNR=10						
GSC				S	S	22 35 06.1	+8.2
	baz=150						
545A	Edgard	18.79	50	P	Pn	22 31 27.1	+0.2
EDW2	Edwards Air Fo	18.92	331	P	P	22 31 26.6	-1.2
	baz=146						
X37A	Clayton	18.94	31	P	P	22 31 27.8	-0.1
X37A	Clayton	18.94	31	P	Pn	22 31 28.5	-0.2
	baz=216,SNR=8.1						
X37A				S	S	22 35 00.8	-0.5
	baz=216						
U32A	Winter Ranch,	19.02	20		P	22 31 28.2	-0.5
U32A				IAmb	IAmb	22 31 45.0	
	comp=Z,82nm,0.9s						
U32A	Winter Ranch,	19.02	20	S	S	22 35 06.2	+3.3
	baz=204						
S22A	4UR Ranch, Cre	19.04	0	P	P	22 31 27.9	-1.4
	baz=181						
S22A				S	S	22 35 09.8	+6.0
	baz=181						
OSI	Osito Audit: C	19.05	329	P	P	22 31 28.6	-0.6
	baz=144						
OSI				S	S	22 35 11.8	+8.2
	baz=144						
SHOC	Shoshone, Teco	19.07	336	P	P	22 31 28.9	-0.4
	baz=152,SNR=6.3						
SHOC				S	S	22 35 14.4	+10
	baz=152						
SDCO	Great Sand Dun	19.08	4	P	P	22 31 29.9	+0.1
	baz=185,SNR=19						
SDCO				S	S	22 35 11.7	+7.1
	baz=185						
SDCO	Great Sand Dun	19.08	4	P	P	22 31 29.8	0.0
	baz=185,SNR=19						
SDCO				S	S	22 35 10.3	+5.7
	baz=185						
LCMT	Little Creek M	19.12	344	P	P	22 31 27.9	-2.1
CCAC	Calif City Air	19.16	331	P	P	22 31 27.2	-3.1
SHPR	Sheep Range	19.21	340		P	22 31 29.3	-1.7
LRMC	Laurel Mtn Rad	19.28	333	P	P	22 31 31.0	-0.7
	baz=148						
Z41A	Richland Creek	19.31	38	P	Pn	22 31 32.8	-0.3
	baz=225,SNR=13						
Z41A				P	Pn	22 31 32.8	-0.3
	baz=225,SNR=13						
Z41A				S	S	22 35 14.8	+6.0
	baz=225						
Z41A				S	S	22 35 14.8	+6.0
	baz=225						
Z41A	Richland Creek	19.31	38	P	P	22 31 32.3	+0.4
	baz=225,SNR=13						
PKCU	Pink Cliffs	19.32	347	P	P	22 31 31.4	-0.9
PKCU				IAmb	IAmb	22 31 35.5	
	comp=Z,74nm,1.0s						
QSM	Queen of Sheba	19.36	335	P	P	22 31 30.6	-1.8
QSM				IAmb	IAmb	22 31 34.7	
	comp=Z,162nm,2.0s						
SBC	Santa Barbara	19.41	327	P	P	22 31 31.8	-1.2
	baz=141						
TGUH	Tegucigalpa,Un	19.42	101		Pn	22 31 36.2	+1.5
TGUH	Tegucigalpa,Un	19.42	101	eP	Pn	22 31 34.6	-0.1
344A	Westbrook Farm	19.43	46	P	Pn	22 31 34.0	-0.6
344A	Westbrook Farm	19.43	46	P	Pn	22 31 34.2	-0.4
	baz=233,SNR=14						
344A				S	Sn	22 35 17.2	+5.3
	baz=233						
GWY	Greenwater Val	19.47	336	P	P	22 31 31.9	-2.0
ARVC	Arvin	19.52	330	P	P	22 31 32.9	-1.3
	baz=145						
PV13	Radium Mtn., P	19.52	356	P	P	22 31 33.2	-1.2
SZCU	Shurtz Canyon	19.64	345	P	P	22 31 34.6	-1.1

BCW	Bitter Crk WRg	19.65	328	P	P	22 31 34.5	-1.3
BCW				IAmb	IAmb	22 31 38.4	
	comp=Z,82nm,1.2s						
CCUT	Cedar City	19.66	345		P	22 31 34.6	-1.5
CCUT				IAmb	IAmb	22 31 39.4	
	comp=Z,132nm,1.9s						
PV11	David Mesa, Pa	19.66	356	P	P	22 31 34.3	-1.7
PV15	Paradox Valley	19.68	356	P	P	22 31 35.9	-0.4
MPMC	Manual Prospec	19.69	334	P	P	22 31 35.7	-0.6
	baz=150,SNR=21						
MPMC				S	Sn	22 35 21.2	+2.9
	baz=150						
PV10	Paradox Valley	19.75	355	P	P	22 31 33.4	-3.6
ISA	Isabella, Lake	19.79	331	P	P	22 31 36.2	-1.1
ISA				pmax	pmax		
	comp=Z,22nm,0.9s						
ISA	Isabella, Lake	19.79	331	P	P	22 31 36.2	-1.1
ISA	Isabella, Lake	19.79	331	P	P	22 31 36.1	-1.1
	baz=146,SNR=11						
FURC	Furnace Creek,	19.79	336	P	P	22 31 36.2	-0.9
	baz=152						
PKM	Mcpherson Peak	19.81	327	P	P	22 31 35.2	-2.4
	baz=142,SNR=9.8						
MIAR	Mount Ida	19.82	34	IAmb	IAmb	22 31 46.3	
	comp=Z,56nm,0.9s						
MIAR	Mount Ida	19.82	34	P	P	22 31 37.2	-0.4
	baz=221,SNR=18						
MIAR				S	Sn	22 35 22.5	+1.3
	baz=221						
MIAR	Mount Ida	19.82	34	P	P	22 31 37.1	-0.4
	baz=221,SNR=18						
MIAR				S	S	22 35 17.2	-2.0
	baz=221						
PV23	Carpenter Ridg	19.83	355	P	P	22 31 37.3	-0.6
TUL1	Leonard	19.84	28	IAmb	IAmb	22 31 49.4	
	comp=Z,133nm,1.1s						
TUL1	Leonard	19.84	28	P	P	22 31 37.8	+0.1
	baz=213,SNR=14						
TUL1				S	S	22 35 19.2	-0.3
	baz=213						
TUL1	Leonard	19.84	28	P	P	22 31 37.0	-0.7
	baz=213,SNR=14						
TUL1				S	S	22 35 17.2	-2.3
	baz=213						
MTPU	Mount Pierson	19.87	348	P	P	22 31 38.0	-0.4
TPNV	Topopah Spring	19.99	338	P	P	22 31 38.5	-1.0
TPNV				pmax	pmax		
	comp=Z,38nm,0.9s						
TPNV	Topopah Spring	19.99	338	P	P	22 31 38.5	-1.0
TPNV	Topopah Spring	19.99	338	P	P	22 31 39.4	-0.1
	baz=154,SNR=46						
PRN	Pahroc Range	20.00	341	P	P	22 31 38.8	-0.8
CRIN	San Cristobal	20.05	104	P	Pn	22 31 42.6	+0.5
CRIN				IAmb	IAmb	22 31 56.6	
	comp=Z,134nm,1.0s						
VBMS	Vicksburg	20.05	44	P	P	22 31 40.1	+0.1
VBMS	Vicksburg	20.05	44	P	Pn	22 31 41.3	-0.5
	baz=232						
VBMS	Vicksburg	20.05	44	P	P	22 31 40.1	+0.1
	baz=232						
VBMS				S	S	22 35 23.3	-0.5
	baz=232						
X40A	Basin Creek Fa	20.18	36	P	P	22 31 41.3	-0.1
	baz=222,SNR=29						
X40A				P	P	22 31 41.3	-0.1
	baz=222,SNR=29						
X40A				S	S	22 35 25.5	-1.0
	baz=222						
X40A				S	S	22 35 25.5	-1.0
	baz=222						
X40A	Basin Creek Fa	20.18	36	P	P	22 31 40.5	-1.0
	baz=222,SNR=29						
X40A				S	S	22 35 27.0	+0.5
	baz=222						
W39A	Magazine	20.21	33	P	P	22 31 41.9	+0.1
	baz=219,SNR=19						
W39A				S	Sn	22 35 29.5	-1.1
	baz=219						
W39A	Magazine	20.21	33	P	P	22 31 41.5	-0.2
	baz=219,SNR=19						
W39A				S	S	22 35 26.4	-0.7
	baz=219						
VES	Vestal, Richgr	20.22	330	P	P	22 31 40.5	-1.3
	baz=145						
SMMC	Simmler	20.24	328	P	P	22 31 41.2	-0.9
	baz=142						
CWC	Cottonwood Cre	20.27	333	P	P	22 31 41.7	-0.8
	baz=149						
346A	Big Creek Wild	20.27	48	P	P	22 31 43.1	+0.7
	baz=236						
Q24A	Divide	20.32	4	P	P	22 31 41.7	-1.5
Q24A	Divide	20.32	4	P	P	22 31 41.5	-1.8
	baz=185						
Q24A				S	Sn	22 35 35.3	+1.8
	baz=185						
CCAR	Cane Creek	20.38	39	P	P	22 31 44.2	+0.6
T35A	Sooner Cattle	20.39	25	P	P	22 31 43.0	-0.7
T35A				IAmb	IAmb	22 31 54.7	
	comp=Z,68nm,1.1s						
T35B	Sooner Cattle	20.39	25	P	P	22 31 43.4	-0.4
	baz=210,SNR=8.2						
T35B				S	S	22 35 30.2	-0.5
	baz=210						
CNGN	Cerro Negro	20.43	104	P	Pn	22 31 46.4	-0.2
CNGN				IAmb	IAmb	22 31 58.5	
	comp=Z,134nm,1.4s						
S11A	Rachel	20.44	340	P	P	22 31 43.5	-1.0
S11A				IAmb	IAmb	22 31 47.3	
	comp=Z,104nm,1.1s						
GRAC	Grapevine Rang	20.45	336	P	P	22 31 43.9	-0.5
GRAC	Grapevine Rang	20.45	336	P	P	22 31 43.7	-0.7
	baz=151						
TCRU	Three Creeks R	20.47	348	P	P	22 31 44.1	-0.7
SMCO	Snowmass	20.47	360	P	P	22 31 43.9	-1.1
Q16A	Castle Valley	20.54	351	P	P	22 31 44.1	-1.4
KSCO	Kaye Shedlock’	20.65	10	IAmb	IAmb	22 32 02.2	
	comp=Z,74nm,1.1s						
KSCO	Kaye Shedlock’	20.65	10	S	Sn	22 35 40.6	-0.6
	baz=192						
KSCO	Kaye Shedlock’	20.65	10	P	P	22 31 45.2	-1.4
	baz=192						
KSCO				S	S	22 35 36.4	+0.5
	baz=192						
PAGB	Antelope Grade	20.70	328	P	P	22 31 45.4	-1.6
PSUT	Pine Spring	20.72	345	P	P	22 31 47.0	-0.5
PSUT				IAmb	IAmb	22 31 51.8	
	comp=Z,77nm,1.0s						
VOG	Valley Oaks Go	20.75	331	P	P	22 31 46.4	-1.1
	baz=145						
LCH	Last Change Ra	20.77	335	P	P	22 31 47.4	-0.5
TIN	Tinemaha, Big	20.85	334	P	P	22 31 48.6	-0.2
	baz=149						
TMUT	Trail Mountain	20.92	351	P	P	22 31 49.0	-0.7
R32A	Long Quarter,	20.98	18	IAmb	IAmb	22 31 58.2	
	comp=Z,88nm,1.2s						
R32A	Long Quarter,	20.98	18	S	S	22 35 44.4	+2.1
	baz=203						
HHAR	Hobbs	20.99	31	IAmb	IAmb	22 31 56.5	
	comp=Z,53nm,0.9s						
HHAR	Hobbs	20.99	31	P	P	22 31 49.6	-0.7
	baz=217						
HHAR				S	S	22 35 41.9	-0.7
	baz=217						
MATN	Matagalpa	21.01	103	P	P	22 31 51.8	+1.1
W41B	Gary Mavity, V	21.01	35	IAmb	IAmb	22 31 59.7	
	comp=Z,71nm,1.1s						
W41B	Gary Mavity, V	21.01	35	P	P	22 31 49.8	-0.6
	baz=222,SNR=14						
W41B				S	S	22 35 46.2	+3.2
	baz=222						
W41B	Gary Mavity, V	21.01	35	P	P	22 31 49.8	-0.6
	baz=222,SNR=14						
W41B				S	S	22 35 41.7	-1.2
	baz=222						
R11A	Troy Canyon, C	21.03	341	P	P	22 31 50.0	-0.8
R11A	Troy Canyon, C	21.03	341	P	P	22 31 50.3	-0.5
	baz=157,SNR=72						
R11A				S	Sn	22 35 50.5	-0.1
	baz=157						
CBKS	Cedar Bluff	21.06	16	IAmb	IAmb	22 32 04.5	
	comp=Z,99nm,1.1s						
CBKS	Cedar Bluff	21.06	16	S	S	22 35 47.4	+3.4
	baz=200						
CBKS	Cedar Bluff	21.06	16	P	P	22 31 49.1	-1.9
	baz=200						
CBKS				S	S	22 35 46.8	+2.8
	baz=200						
WHAR	Wooly Hollow	21.08	35	IAmb	IAmb	22 32 05.9	
	comp=Z,88nm,0.9s						
ISCO	Idaho Springs	21.12	3	P	P	22 31 51.5	-0.4
ISCO				pmax	pmax		
	comp=Z,18nm,1.0s						
ISCO	Idaho Springs	21.12	3	P	P	22 31 51.5	-0.4
ISCO	Idaho Springs	21.12	3	P	P	22 31 51.6	-0.4
	baz=184,SNR=21						
ISCO				S	Sn	22 35 52.1	-0.7
	baz=184						
ISCO	Idaho Springs	21.12	3	P	P	22 31 50.1	-1.8
	baz=184,SNR=21						
ISCO				S	Sn	22 35 50.6	-2.3
	baz=184						
146A	Union	21.28	46	P	P	22 31 53.4	+0.1
	baz=234,SNR=8.3						
146A				S	Sn	22 35 55.9	-0.4
	baz=234						
TPH	Tonopah	21.34	337	P	P	22 31 53.1	-1.1
TPH				pmax	pmax		
	comp=Z,194nm,1.0s						
TPH	Tonopah	21.34	337	P	P	22 31 53.1	-1.1
PMPB	Monarch Peak	21.35	328	P	P	22 31 52.4	-1.8
PMPB				IAmb	IAmb	22 32 21.9	
	comp=Z,92nm,1.3s						
O20A	White River Ci	21.45	357	P	P	22 31 55.0	-0.4
O20A				IAmb	IAmb	22 31 56.6	
	comp=Z,58nm,1.0s						
O20A	White River Ci	21.45	357	P	P	22 31 54.7	-0.7
	baz=177,SNR=32						
U40A	Yellville	21.59	32	IAmb	IAmb	22 32 04.6	
	comp=Z,54nm,0.9s						
U40A	Yellville	21.59	32	P	P	22 31 56.5	-0.2
	baz=219,SNR=22						
U40A				P	P	22 31 56.5	-0.2
	baz=219,SNR=22						
U40A				S	S	22 35 56.8	+2.4
	baz=219						
U40A				S	S	22 35 56.8	+2.4
	baz=219						
U40A	Yellville	21.59	32	P	P	22 31 56.3	-0.3
	baz=219,SNR=22						
U40A				S	S	22 35 55.2	+0.8
	baz=219						
MLAC	Mammoth, Mammo	21.59	334	P	P	22 31 55.9	-1.0
	baz=148						
MLAC				S	Sn	22 36 00.7	-3.4
	baz=148						
MDPB	Devils Postpil	21.70	333	P	P	22 31 57.0	-1.1
NLU	North Lily Min	21.70	349	P	P	22 31 57.4	-0.7
Y45A	Yeager Farm, C	21.72	42	P	P	22 31 58.5	+0.5
BBGB	Big Mountain B	21.75	328	P	P	22 31 55.7	-2.8
BBGB				IAmb	IAmb	22 32 18.7	
	comp=Z,69nm,1.0s						
BRAL	Brewton	21.90	51	P	P	22 32 01.0	+1.0
	baz=240,SNR=12						
BRAL	Brewton	21.90	51	P	P	22 32 00.5	+0.5
	baz=240,SNR=12						
LHV	Little Huntoon	21.99	335	P	P	22 31 60.0	-0.9
LHV				IAmb	IAmb	22 32 02.4	
	comp=Z,151nm,1.8s						
Q09A	Carvers	22.00	338	P	P	22 32 00.2	-1.0
Q09A				IAmb	IAmb	22 32 17.5	
	comp=Z,82nm,1.1s						
NV11	Mina Array Sit	22.01	336	P	P	22 31 59.4	-1.9
NVAR	Mina Array Bea	22.06	336	P	P	22 32 01.6	-0.4
	comp=Z,15nm,0.9s,baz=156,slow=12,SNR=42						
NVAR				LR	LR	22 39 54.8	
	comp=Z,2µm,18.4s,baz=151,slow=35						
	comp=Z,15nm,0.9s						
DUG	Dugway, Tooele	22.07	348	IAmb	IAmb	22 32 03.4	
	comp=Z,140nm,1.7s						
DUG	Dugway, Tooele	22.07	348	P	P	22 32 01.5	-0.4
	baz=166,SNR=27						
DUG				S	Sn	22 36 09.8	-5.6
	baz=166						
HZTE	Horizontes, Gu	22.09	108	P	P	22 32 04.8	+2.5
SAO	San Andreas Ge	22.10	328	P	P	22 31 59.6	-2.6
SAO				pmax	pmax		
	comp=Z,43nm,1.6s						
SAO	San Andreas Ge	22.10	328	P	P	22 31 59.6	-2.6
N23A	Red Feather La	22.20	2	IAmb	IAmb	22 32 26.7	
	comp=Z,70nm,1.3s						
N23A	Red Feather La	22.20	2	P	P	22 32 03.0	-0.5
	baz=183,SNR=17						
N23A				S	S	22 36 09.5	+3.0
	baz=183						
OXF	Oxford	22.22	41	P	P	22 32 03.7	+0.3
OXF				pmax	pmax		
	comp=Z,140nm,1.0s						
OXF	Oxford	22.22	41	P	P	22 32 03.7	+0.3
OXF	Oxford	22.22	41	P	P	22 32 03.4	0.0
	baz=229						
JLU	Jordanelle	22.23	351	IAmb	IAmb	22 32 10.0	
	comp=Z,136nm,2.0s						
LCAR	Lake Charles	22.27	36	P	P	22 32 04.2	+0.2
	baz=223,SNR=31						
Z47A	Carrollton	22.28	46	IAmb	IAmb	22 32 11.5	
	comp=Z,117nm,0.9s						
Z47A	Carrollton	22.28	46	P	P	22 32 04.3	+0.2
	baz=234,SNR=11						
Z47A				S	S	22 36 12.9	+5.4
	baz=234						
KSU1	Kansas State U	22.28	22	P	P	22 32 04.2	+0.1
KSU1				IAmb	IAmb	22 32 19.2	
	comp=Z,78nm,1.2s						
KSU1	Kansas State U	22.28	22	P	P	22 32 03.4	-0.6
	baz=207						
KSU1				S	S	22 36 09.8	+2.3
	baz=207						
MET	Memphis--Engin	22.31	39	P	P	22 32 04.9	+0.6
RYN	Ryan	22.32	336	P	P	22 32 04.0	-0.7
ORTG	Ortega, Santa	22.36	109	P	P	22 32 07.0	+1.9
ORTG				IAmb	IAmb	22 32 30.2	
	comp=Z,79nm,1.0s						
CTU	Camp Tracy	22.37	350	P	P	22 32 04.1	-1.0
S39A	Bolivar	22.42	29	IAmb	IAmb	22 32 14.4	
	comp=Z,96nm,1.4s						
S39A	Bolivar	22.42	29	P	P	22 32 04.1	-1.4
	baz=216,SNR=13						
S39A				S	S	22 36 11.9	+1.9
	baz=216						
DUNO	Dulce Nombre,	22.44	109	P	P	22 32 08.9	+2.9
MGMO	Mountain Grove	22.50	32	IAmb	IAmb	22 32 16.1	
	comp=Z,69nm,1.0s						
KVN	Kaiserville	22.53	337	IAmb	IAmb	22 32 08.7	
	comp=Z,52nm,1.0s						
451A	Vernon	22.62	54	P	P	22 32 08.9	+1.2
OGNE	Ogallala	22.63	10	P	P	22 32 08.2	+0.3
OGNE				IAmb	IAmb	22 32 36.9	
	comp=Z,36nm,0.9s						
OGNE	Ogallala	22.63	10	P	P	22 32 05.3	-2.6
	baz=193						
ESPN	Las Esperanzas	22.75	103	P	P	22 32 10.9	+1.7
ESPN				IAmb	IAmb	22 32 30.7	
	comp=Z,36nm,0.9s						
SOR	Soroa	22.77	75	P	P	22 32 09.4	0.0
SOR				pmax	pmax		
	comp=Z,61nm,0.8s						
SOR	Soroa	22.77	75	P	P	22 32 09.4	0.0
SOR				IAmb	IAmb	22 32 11.2	
	comp=Z,61nm,0.8s						
W45A	Hickory Valley	22.78	40	P	P	22 32 10.2	+0.8
GNAR	Gosnell	22.84	38	P	P	22 32 10.1	+0.1
JTS	Las Juntas de	22.84	108	*c i*P	P	22 32 12.1	+1.9
JTS				pmax	pmax		
	comp=Z,82nm,1.5s						
JTS	Las Juntas de	22.84	108	P	P	22 32 12.2	+1.9
JTS				IAmb	IAmb	22 32 27.8	
	comp=Z,58nm,0.9s						
JTS	Las Juntas de	22.84	108	*e*P	P	22 32 10.8	+0.5
250A	Grady	22.89	51	P	P	22 32 10.8	+0.3
	baz=240,SNR=33						
250A				S	S	22 36 22.9	+4.5
	baz=240						
YERR	Yerington	22.91	335	P	P	22 32 10.1	-0.9
YERR				IAmb	IAmb	22 32 12.4	
	comp=Z,63nm,1.2s						
LRAL	Lakeview Retre	22.93	47	IAmb	IAmb	22 32 13.0	
	comp=Z,135nm,1.4s						
LRAL	Lakeview Retre	22.93	47	P	P	22 32 11.1	+0.1
	baz=236,SNR=17						
LRAL				S	S	22 36 24.0	+5.0
	baz=236						
LRAL	Lakeview Retre	22.93	47	P	P	22 32 10.1	-0.8
	baz=236,SNR=17						
LRAL				S	S	22 36 22.2	+3.2
	baz=236						
CAO2	Cobano, Puntar	22.95	110	P	P	22 32 13.0	+1.7
RWWY	Rawlins	22.98	360	P	P	22 32 10.5	-1.2
RWWY				IAmb	IAmb	22 32 13.3	
	comp=Z,185nm,2.0s						
PEBM	Pemiscott Bayo	23.03	37	P	P	22 32 12.8	+0.8
ELK	Elko	23.16	344	P	P	22 32 12.3	-1.2
	comp=Z,15nm,0.9s,baz=170,slow=7.9,SNR=38						
ELK				LR	LR	22 40 28.4	
	comp=Z,2µm,20.1s,baz=168,slow=35						
	comp=Z,15nm,0.9s						
PBMO	Poplar Bluff	23.19	35	IAmb	IAmb	22 32 50.5	
	comp=Z,31nm,0.9s						
HALT	Halls	23.20	39	P	P	22 32 13.9	+0.2
HWUT	Hardware Ranch	23.23	351	P	P	22 32 12.9	-1.3
LNXT	Lenox	23.24	38	P	P	22 32 14.0	-0.1
JACO	JACO, Garabito	23.36	109	P	P	22 32 16.6	+1.2
JACO				IAmb	IAmb	22 32 50.0	
	comp=Z,67nm,1.2s						
PLAL	Pickwick Lake	23.36	42	P	P	22 32 14.9	-0.4
PLAL				IAmb	IAmb	22 32 17.2	
	comp=Z,61nm,1.1s						
R40A	Maddies Statio	23.40	30	IAmb	IAmb	22 32 22.5	
	comp=Z,32nm,0.9s						
R40A	Maddies Statio	23.40	30	P	P	22 32 14.8	-0.8
	baz=218,SNR=17						
553A	Crawfordville	23.47	56	P	P	22 32 16.9	+0.6
GLAT	Glass	23.48	38	P	P	22 32 16.7	+0.3
PARMO	Parma	23.48	37	P	P	22 32 16.3	-0.1
PAHR	Pah Rah Range	23.59	335	P	P	22 32 16.3	-1.3
PAHR				IAmb	IAmb	22 32 18.0	
	comp=Z,40nm,1.1s						
HVU	Hansel Valley	23.60	349	IAmb	IAmb	22 32 19.0	
	comp=Z,65nm,1.3s						
352A	Blakely	23.64	53	P	P	22 32 18.3	+0.2
352A	Blakely	23.64	53	P	P	22 32 18.2	+0.2
	baz=243,SNR=7.5						
352A				S	S	22 36 37.1	+6.3
	baz=243						
HICK	Hickman	23.70	38	P	P	22 32 18.0	-0.5
X48A	Hartselle	23.71	44	IAmb	IAmb	22 32 28.1	
	comp=Z,47nm,0.9s						
X48A	Hartselle	23.71	44	P	P	22 32 17.4	-1.3
	baz=234,SNR=8.2						
X48A				S	S	22 36 38.1	+6.3
	baz=234						
CCM	Cathedral Cave	23.72	32	P	P	22 32 17.1	-1.6
CCM				pmax	pmax		
	comp=Z,225nm,1.8s						
CCM	Cathedral Cave	23.72	32	P	P	22 32 17.1	-1.6
CCM	Cathedral Cave	23.72	32	P	P	22 32 18.3	-0.4
	baz=220,SNR=22						
CCM				S	S	22 36 37.7	+5.8
	baz=220						
CCM	Cathedral Cave	23.72	32	P	P	22 32 17.0	-1.7
	baz=220						
CCM				S	S	22 36 31.0	-0.9
	baz=220						
UTMT	University of	23.77	38	P	P	22 32 19.1	-0.2
Y49A	Blount Mountai	23.79	46	IAmb	IAmb	22 32 24.1	
	comp=Z,53nm,1.0s						
Y49A	Blount Mountai	23.79	46	P	P	22 32 18.8	-0.7
	baz=236,SNR=7.0						
Y49A				S	S	22 36 38.9	+5.7
	baz=236						
BGNE	Belgrade	23.91	16	P	P	22 32 20.4	-0.2
BGNE				IAmb	IAmb	22 32 58.2	
	comp=Z,43nm,0.5s						
BGNE	Belgrade	23.91	16	P	P	22 32 19.2	-1.4
	baz=201						
P38A	Dawn	23.92	26	IAmb	IAmb	22 32 29.9	
	comp=Z,52nm,0.9s						
P38A	Dawn	23.92	26	P	P	22 32 20.0	-0.6
	baz=213,SNR=23						
P38A				S	S	22 36 38.3	+3.1
	baz=213						
K22A	Casper	23.94	1	IAmb	IAmb	22 32 21.0	
	comp=Z,48nm,1.2s						
K22A	Casper	23.94	1	P	P	22 32 20.1	-0.8
	baz=181,SNR=10						
K22A				S	S	22 36 39.0	+3.2
	baz=181						
K22A	Casper	23.94	1	P	P	22 32 19.9	-1.1
	baz=181,SNR=10						
RIMA	Rio Macho	24.03	108	P	P	22 32 24.3	+2.2
RIMA				IAmb	IAmb	22 32 38.7	
	comp=Z,72nm,1.2s						
FVM	French Village	24.08	33	IAmb	IAmb	22 32 34.4	
	comp=Z,75nm,1.1s						
FVM	French Village	24.08	33	P	P	22 32 21.8	-0.3
	baz=222,SNR=12						
FVM				S	S	22 36 44.3	+6.5
	baz=222						
BEKR	Beckworth	24.12	334	P	P	22 32 21.7	-1.0
BW06	Boulder Array	24.16	355	P	P	22 32 21.6	-1.5
	baz=174,SNR=11						
BW06				S	S	22 36 38.8	-0.6
	baz=174						
PDAR	Pinedale Array	24.16	355	P	P	22 32 21.4	-1.6
	comp=Z,6.2nm,0.9s,baz=163,slow=9.6,SNR=44						
PDAR				LR	LR	22 41 16.8	
	comp=Z,2µm,21.0s,baz=187,slow=35						
	comp=Z,6.2nm,0.9s						
N35A	Tabor	24.19	21	P	P	22 32 24.8	+1.8
WVT	Waverly	24.25	40	P	P	22 32 23.3	-0.4
WVT				pmax	pmax		
	comp=Z,37nm,1.0s						
WVT	Waverly	24.25	40	P	P	22 32 23.3	-0.4
WVT				IAmb	IAmb	22 32 41.4	
	comp=Z,37nm,1.0s						
WVT	Waverly	24.25	40	P	P	22 32 23.4	-0.4
	baz=229,SNR=9.5						
WVT				S	S	22 36 43.8	+3.2
	baz=229						
WVT	Waverly	24.25	40	P	P	22 32 22.5	-1.2
	baz=229						
WVT				S	S	22 36 44.4	+3.8
	baz=229						
BATAN	Batan	24.34	107	P	P	22 32 27.3	+2.6
ORV	Oroville	24.35	332	IAmb	IAmb	22 32 26.3	
	comp=Z,64nm,1.4s						
PEZE	Perez Zeledon,	24.36	109	P	P	22 32 27.6	+2.6
PEZE				IAmb	IAmb	22 32 33.6	
	comp=Z,56nm,1.1s						
Z51A	Franklin	24.36	49	P	P	22 32 25.3	+0.5
	baz=239						
152A	Waverly Hall	24.37	51	IAmb	IAmb	22 32 29.4	
	comp=Z,63nm,1.1s						
152A	Waverly Hall	24.37	51	P	P	22 32 24.8	+0.1
	baz=241,SNR=11						
T45A	Paducah	24.37	38	P	P	22 32 24.9	+0.2
P40A	Paris	24.49	29	IAmb	IAmb	22 32 36.3	
	comp=Z,56nm,1.1s						
P40A	Paris	24.49	29	P	P	22 32 25.5	-0.3
	baz=216,SNR=13						
S44A	Carbondale	24.50	36	IAmb	IAmb	22 32 39.5	
	comp=Z,72nm,1.3s						
S44A	Carbondale	24.50	36	P	P	22 32 26.1	+0.2
	baz=224						
SIUC	Southern Illin	24.53	36	IAmb	IAmb	22 32 58.0	
	comp=Z,54nm,1.1s						
V48A	Smith Brothers	24.64	42	IAmb	IAmb	22 32 45.8	
	comp=Z,67nm,1.2s						
V48A	Smith Brothers	24.64	42	P	P	22 32 26.8	-0.4
	baz=232,SNR=7.8						
TIGA	Tifton	24.65	54	P	P	22 32 28.2	+0.8
	baz=245,SNR=7.3						
TIGA	Tifton	24.65	54	P	P	22 32 27.0	-0.3
	baz=245,SNR=7.3						
TIGA				S	S	22 36 55.8	+8.8
	baz=245						
SLM	Saint Louis	24.67	33	P	P	22 32 27.8	+0.4
	baz=221						
SRBA	San Rafael, Bu	24.71	109	IAmb	IAmb	22 32 36.2	
	comp=Z,28nm,1.1s						
FPAL	Fort Paine	24.72	46	P	P	22 32 27.7	-0.4
DRK0	Durika	24.80	109	P	P	22 32 30.4	+1.4
REDW	Red Top Meadow	24.87	353	IAmb	IAmb	22 32 29.9	
	comp=Z,26nm,0.9s						
SWET	Sewanee	24.90	44	IAmb	IAmb	22 32 43.7	
	comp=Z,49nm,1.1s						
SNOW	Snow King Moun	24.96	353	IAmb	IAmb	22 32 49.5	
	comp=Z,55nm,1.1s						
TPAW	Teton Pass	25.01	353	IAmb	IAmb	22 32 32.1	
	comp=Z,29nm,0.9s						
N38A	Joes South For	25.03	25	P	P	22 32 32.2	+1.5

N38A				IAmb	IAmb	22 32 40.2	
	comp=Z,55nm,0.8s						
LOHW	Long Hollow	25.09	354	IAmb	IAmb	22 32 34.5	
	comp=Z,44nm,0.9s						
061Z	Ochoppi	25.13	69	P	P	22 32 33.4	+1.7
CLTN	Cedars of Leba	25.16	42	IAmb	IAmb	22 32 42.5	
	comp=Z,44nm,0.9s						
DWPF	Disney Wildern	25.21	63	P	P	22 32 32.8	+0.3
DWPF	Disney Wildern	25.21	63	P	P	22 32 33.4	+1.0
	baz=254,SNR=12						
DWPF	Disney Wildern	25.21	63	P	P	22 32 31.2	-1.3
	baz=254						
X51A	Calhoun	25.25	47	IAmb	IAmb	22 32 39.8	
	comp=Z,51nm,0.9s						
T47A	Sharon Grove	25.26	40	P	P	22 32 32.5	-0.4
	baz=229,SNR=14						
T47A				S	S	22 37 00.2	+3.5
	baz=229						
W50A	Signal Mountai	25.30	45	IAmb	IAmb	22 32 44.5	
	comp=Z,71nm,1.0s						
W50A	Signal Mountai	25.30	45	P	P	22 32 32.9	-0.4
	baz=235,SNR=13						
W50A				S	S	22 37 02.5	+5.0
	baz=235						
KCPM	Cahto Peak	25.43	329	P	P	22 32 33.1	-1.4
KCPM				IAmb	IAmb	22 32 36.7	
	comp=Z,40nm,1.2s						
Y52A	Lilburn	25.44	49	IAmb	IAmb	22 32 41.0	
	comp=Z,56nm,0.8s						
Y52A	Lilburn	25.44	49	P	P	22 32 34.9	+0.4
	baz=239,SNR=9.1						
Y52A				P	P	22 32 34.9	+0.4
	baz=239,SNR=9.1						
Y52A				S	S	22 37 08.2	+8.5
	baz=239						
Y52A				S	S	22 37 08.2	+8.5
	baz=239						
BRU2	Volcan	25.49	109	P	P	22 32 37.0	+1.7
BRU2				IAmb	IAmb	22 33 32.8	
	comp=Z,48nm,1.2s						
Q44A	Meyer Farm, Va	25.50	34	P	P	22 32 35.0	0.0
	baz=223,SNR=18						
RSSD	Black Hills	25.53	5	P	P	22 32 34.7	-0.7
RSSD				pmax	pmax		
	comp=Z,12nm,1.2s						
RSSD	Black Hills	25.53	5	P	P	22 32 34.7	-0.7
RSSD	Black Hills	25.53	5	S	S	22 37 07.8	+6.6
	baz=187						
RSSD	Black Hills	25.53	5	P	P	22 32 34.0	-1.4
	baz=187						
RSSD				S	S	22 37 00.3	-0.9
	baz=187						
154A	Montrose	25.54	52	P	P	22 32 35.6	+0.2
	baz=243,SNR=14						
FLWY	Flagg Ranch	25.57	354	P	P	22 32 34.7	-1.1
FLWY				IAmb	IAmb	22 32 37.5	
	comp=Z,38nm,1.2s						
456A	Hilliard	25.59	57	P	P	22 32 38.4	+2.5
HLID	Hailey	25.64	347	P	P	22 32 35.7	-0.7
	baz=164,SNR=15						
HLID				S	S	22 37 07.9	+5.0
	baz=164						
GOGA	Godfrey	25.65	50	IAmb	IAmb	22 32 42.4	
	comp=Z,37nm,0.8s						
GOGA	Godfrey	25.65	50	P	P	22 32 36.1	-0.3
	baz=241,SNR=9.9						
GOGA				S	S	22 37 10.8	+7.9
	baz=241						
GOGA	Godfrey	25.65	50	P	P	22 32 34.9	-1.5
	baz=241,SNR=9.9						
GOGA				S	S	22 37 06.4	+3.5
	baz=241						
CBCY	The Bluff, Cay	25.70	83	P	P	22 32 36.1	-0.9
WVOR	Wild Horse Val	25.72	340	P	P	22 32 36.5	-0.6
WVOR				pmax	pmax		
	comp=Z,44nm,1.0s						
WVOR	Wild Horse Val	25.72	340	P	P	22 32 36.5	-0.6
WVOR				IAmb	IAmb	22 32 39.4	
	comp=Z,44nm,1.0s						
U49A	Red Boiling Sp	25.78	42	IAmb	IAmb	22 33 04.0	
	comp=Z,87nm,1.8s						
U49A	Red Boiling Sp	25.78	42	P	P	22 32 37.4	-0.1
	baz=232						
MOD	Modoc Plateau	25.83	337	IAmb	IAmb	22 32 41.1	
	comp=Z,29nm,1.1s						
060A	Indiantown	25.86	66	P	P	22 32 40.0	+1.7
H17A	Grant Village	25.86	354	P	P	22 32 38.1	-0.4
	baz=172,SNR=10						
H17A				S	S	22 37 12.4	+5.8
	baz=172						
OLIL	Olney	25.88	35	P	P	22 32 38.2	-0.2
	baz=225						
YFT	Old Faithful	25.94	354	P	P	22 32 39.3	0.0
YFT				IAmb	IAmb	22 32 49.0	
	comp=Z,48nm,1.7s						
CPCT	Cooper Cave	25.97	45	IAmb	IAmb	22 33 06.5	
	comp=Z,30nm,1.1s						
SCIA	State Center	25.98	24	P	P	22 32 40.6	+1.2
SCIA				IAmb	IAmb	22 32 55.6	
	comp=Z,36nm,1.1s						
SCIA	State Center	25.98	24	P	P	22 32 38.0	-1.4
	baz=211						
LKWY	Lake	26.01	354	P	P	22 32 40.0	+0.1
LKWY				pmax	pmax		
	comp=Z,11nm,0.9s						
LKWY	Lake	26.01	354	P	P	22 32 40.0	+0.1
YMR	Madison River	26.17	354	P	P	22 32 40.6	-0.7
YMR				IAmb	IAmb	22 32 42.3	
	comp=Z,28nm,0.4s						
W52A	Murphy	26.18	47	IAmb	IAmb	22 32 42.0	
	comp=Z,43nm,1.1s						
W52A	Murphy	26.18	47	P	P	22 32 41.0	-0.3
	baz=237						
YNR	Norris Junctio	26.19	354	P	P	22 32 40.9	-0.6
YHH	Holmes Hill	26.28	354	P	P	22 32 41.7	-0.7
YHL	Hebgen Lake	26.38	353	P	P	22 32 42.5	-0.7
QLMT	Earthquake Lak	26.39	353	P	P	22 32 42.8	-0.5
RLMT	Red Lodge	26.48	356	P	P	22 32 42.2	-1.9
	baz=175						
ECSD	EROS Data Cent	26.49	17	P	P	22 32 43.6	-0.3
	baz=203						
MCMT	McKenzie Canyo	26.58	351	P	P	22 32 44.9	-0.1
TKL	Tuckaleechee C	26.60	46	P	P	22 32 45.0	0.0
	comp=Z,6.8nm,0.9s,baz=195,slow=8.8,SNR=5.1						
TKL				LR	LR	22 45 31.0	
	comp=Z,1µm,18.3s,baz=244,slow=41						
	comp=Z,6.8nm,0.9s						
TKL	Tuckaleechee C	26.60	46	P	P	22 32 45.0	0.0
HDIL	Hopedale	26.60	31	IAmb	IAmb	22 32 54.9	
	comp=Z,42nm,0.8s						
HDIL	Hopedale	26.60	31	P	P	22 32 43.5	-1.5
	baz=220						
YBH	Yreka Blue Hor	26.66	333	P	P	22 32 43.2	-2.4
	comp=Z,2.9nm,0.8s,baz=148,slow=13,SNR=5.6						
YBH				LR	LR	22 42 55.2	
	comp=Z,1µm,20.9s,baz=156,slow=36						
	comp=Z,2.9nm,0.8s						
T50A	Nancy	26.68	42	IAmb	IAmb	22 32 56.2	
	comp=Z,24nm,0.7s						
T50A	Nancy	26.68	42	P	P	22 32 45.3	-0.5
	baz=233						
T50A				P	P	22 32 45.3	-0.5
	baz=233						
O44A	Mansfield	26.71	33	P	P	22 32 45.0	-0.9
O44A				IAmb	IAmb	22 32 46.5	
	comp=Z,121nm,1.9s						
K05A	Summer Lake	26.76	337	P	P	22 32 46.1	-0.5
K05A				IAmb	IAmb	22 32 46.9	
	comp=Z,31nm,1.2s						
V52A	Sevierville	26.82	46	IAmb	IAmb	22 33 01.5	
	comp=Z,23nm,0.9s						
BG3	Lake Jocassee	26.82	48	P	P	22 32 47.0	0.0
BG3				IAmb	IAmb	22 32 54.1	
	comp=Z,55nm,1.1s						
L04D	Klamath Falls	26.89	334	P	P	22 32 46.3	-1.4
L04D				IAmb	IAmb	22 32 47.4	
	comp=Z,24nm,0.9s						
L04D	Klamath Falls	26.89	334	P	P	22 32 45.5	-2.2
	baz=147						
L40A	Anamosa	26.92	26	P	P	22 32 49.0	+1.2
L40A				IAmb	IAmb	22 32 57.5	
	comp=Z,92nm,1.6s						
HODGE	Hodges	26.92	50	IAmb	IAmb	22 32 55.5	
	comp=Z,36nm,1.0s						
P46A	Rosedale	26.99	35	IAmb	IAmb	22 32 52.9	
	comp=Z,39nm,1.1s						
K04D	Chiloquin, OR	27.01	335	P	P	22 32 47.3	-1.4
	baz=148						
BLO	Bloomington	27.06	37	P	P	22 32 48.5	-0.6
BLO				pmax	pmax		
	comp=Z,98nm,1.8s						
BLO	Bloomington	27.06	37	P	P	22 32 48.5	-0.6
BLO				IAmb	IAmb	22 32 50.4	
	comp=Z,98nm,1.8s						
DLMT	Dillon	27.06	351	P	P	22 32 48.2	-1.0
BOZ	Bozeman (W)	27.16	353	P	P	22 32 48.9	-1.2
	baz=171,SNR=16						
BOZ				S	S	22 37 29.1	+2.1
	baz=171						
KSXB	Camp Six Broad	27.25	332	IAmb	IAmb	22 32 51.2	
	comp=Z,32nm,1.0s						
V53A	Saluda	27.26	47	IAmb	IAmb	22 33 00.4	
	comp=Z,70nm,1.6s						
R49A	Shelbyville	27.27	40	IAmb	IAmb	22 33 25.4	
	comp=Z,43nm,1.5s						
R49A	Shelbyville	27.27	40	S	S	22 37 31.7	+3.2
	baz=230						
R49A				S	S	22 37 31.7	+3.2
	baz=230						
L02F	Cave Junction	27.35	332	P	P	22 32 50.0	-1.7
	baz=144						
J05D	Fort Rock, OR	27.37	337	P	P	22 32 51.2	-0.9
	baz=150,SNR=9.8						
PLID	Pearl Lake	27.43	346	P	P	22 32 50.7	-2.0
L42A	Oliver, Polo	27.55	29	IAmb	IAmb	22 33 01.8	
	comp=Z,48nm,0.9s						
SFIN	Lafayette	27.59	34	P	P	22 32 55.0	+1.2
SFIN				IAmb	IAmb	22 33 09.1	
	comp=Z,23nm,0.8s						
SFIN	Lafayette	27.59	34	P	P	22 32 53.7	-0.2
	baz=224						
J04D	Umpqua Nationa	27.67	336	P	P	22 32 53.4	-1.3
J04D	Umpqua Nationa	27.67	336	P	P	22 32 53.0	-1.8
	baz=148,SNR=7.6						
JSC	Jenkinsville	27.67	51	P	P	22 32 54.9	+0.2
JSC				pmax	pmax		
	comp=Z,51nm,1.3s						
JSC	Jenkinsville	27.67	51	P	P	22 32 54.9	+0.2
JSC				IAmb	IAmb	22 33 01.4	
	comp=Z,51nm,1.3s						
I37A	Lemond, Waseca	27.75	21	P	P	22 32 55.6	+0.3
I37A				IAmb	IAmb	22 33 05.0	
	comp=Z,25nm,0.8s						
R50A	Paris	27.78	41	IAmb	IAmb	22 32 56.3	
	comp=Z,101nm,1.7s						
R50A	Paris	27.78	41	P	P	22 32 55.0	-0.5
	baz=232						
R50A				P	P	22 32 55.0	-0.5
	baz=232						
S51A	Beattyville	27.85	42	IAmb	IAmb	22 33 11.6	
	comp=Z,19nm,0.9s						
K02D	Willamette Mer	27.86	333	P	P	22 32 54.9	-1.4
	baz=145						
MTDJ	Mount Denham	27.90	86	P	P	22 32 57.6	+0.6
NHSC	New Hope	27.97	54		P	22 32 59.0	+1.7
LAO	LASA Array	27.98	1	P	P	22 32 56.3	-1.1
	baz=182,SNR=7.7						
LAO	LASA Array	27.98	1	P	P	22 32 56.0	-1.3
	baz=182,SNR=7.7						
CSU	Charleston Sou	28.00	54	P	P	22 32 59.7	+2.1
KMSC	Kings Mountain	28.03	49	P	P	22 32 59.4	+1.6
KMSC				IAmb	IAmb	22 33 04.6	
	comp=Z,68nm,1.5s						
KMSC	Kings Mountain	28.03	49	P	P	22 32 56.2	-1.6
	baz=241						
JFWS	Jewell Farm	28.03	27	IAmb	IAmb	22 33 06.8	
	comp=Z,60nm,1.1s						
JFWS	Jewell Farm	28.03	27	P	P	22 32 56.5	-1.2
	baz=216						
Y57A	Sumter	28.20	52	P	P	22 32 59.8	+0.5
Y57A				IAmb	IAmb	22 33 14.3	
	comp=Z,75nm,1.4s						
I04A	Tendick Farm,	28.25	336	P	P	22 32 57.3	-2.5
	baz=148						
I05D	Terrebonne, OR	28.32	338	P	P	22 32 58.4	-2.0
	baz=151						
P49A	Miami Univ. Ec	28.34	38	P	P	22 33 00.3	-0.3
	baz=229,SNR=11						
P49A	Miami Univ. Ec	28.34	38	P	P	22 32 59.2	-1.4
	baz=229,SNR=11						
J01E	Myrtle Point	28.35	333	P	P	22 32 57.4	-3.2
	baz=145						
U54A	Nelsons Funny	28.39	46	IAmb	IAmb	22 33 03.4	
	comp=Z,61nm,1.4s						
L44A	Lake County Fo	28.51	31	P	P	22 33 00.5	-1.5
	baz=221						
I03D	Drain, OR	28.54	335	P	P	22 33 01.1	-1.2
	baz=146						
O48B	Farmland	28.57	36	P	P	22 33 00.6	-2.0
	baz=228						
I40A	Norwalk	28.68	25	P	P	22 33 03.6	0.0
I40A				IAmb	IAmb	22 33 12.7	
	comp=Z,23nm,0.8s						
MSO	Missoula	28.70	350	IAmb	IAmb	22 33 04.1	
	comp=Z,31nm,1.1s						
MSO	Missoula	28.70	350	P	P	22 33 01.7	-2.1
	baz=166,SNR=20						
MSO				S	S	22 37 51.8	+0.8
	baz=166						
Q51A	Peebles	28.84	40	IAmb	IAmb	22 33 05.6	
	comp=Z,45nm,1.2s						
Q51A	Peebles	28.84	40	P	P	22 33 04.6	-0.4
	baz=232,SNR=5.4						
Q51A				P	P	22 33 04.6	-0.4
	baz=232,SNR=5.4						
H04A	Detroit Lake	28.93	337	P	P	22 33 04.3	-1.5
H04A				IAmb	IAmb	22 33 05.0	
	comp=Z,30nm,1.1s						
O49A	Covington	28.99	37	IAmb	IAmb	22 33 15.2	
	comp=Z,37nm,0.9s						
O49A	Covington	28.99	37	P	P	22 33 06.0	-0.4
	baz=229,SNR=7.5						
O49A				P	P	22 33 06.0	-0.4
	baz=229,SNR=7.5						
H04D	Lebanon	29.00	336	P	P	22 33 05.9	-0.4
H04D				IAmb	IAmb	22 33 08.6	
	comp=Z,107nm,1.9s						
H04D	Lebanon	29.00	336	P	P	22 33 04.1	-2.2
	baz=148						
I02E	Swisshome, OR	29.09	334	P	P	22 33 05.1	-2.0
	baz=146						
G05D	Wamic, OR	29.10	339	P	P	22 33 05.9	-1.4
	baz=151						
L46A	Eue Claire	29.19	33	P	P	22 33 07.5	-0.6
L46A				IAmb	IAmb	22 33 16.4	
	comp=Z,45nm,1.1s						
HOOD	Mount Hood Mea	29.29	339	P	P	22 33 07.5	-1.6
HOOD				IAmb	IAmb	22 33 09.4	
	comp=Z,29nm,1.2s						
U56A	King	29.30	48	P	P	22 33 10.0	+0.9
P51A	Williamsport	29.30	40	P	P	22 33 09.0	-0.1
	baz=232,SNR=5.4						
P51A				P	P	22 33 09.0	-0.1
	baz=232,SNR=5.4						
R53A	Hurricane	29.30	43	P	P	22 33 08.8	-0.4
	baz=235,SNR=6.1						
R53A				P	P	22 33 08.8	-0.4
	baz=235,SNR=6.1						
Y59A	Loris	29.32	53	P	P	22 33 08.9	-0.4
I42A	Draeger Farm,	29.39	27	P	P	22 33 10.2	+0.4
I42A				IAmb	IAmb	22 33 18.9	
	comp=Z,37nm,0.9s						
EGMT	Eagleton	29.40	356	IAmb	IAmb	22 33 11.7	
	comp=Z,18nm,0.8s						
EGMT	Eagleton	29.40	356	P	P	22 33 07.8	-2.2
	baz=175,SNR=13						
EGMT				S	S	22 38 01.4	-0.6
	baz=175						
Q52A	Bidwell	29.47	41	IAmb	IAmb	22 33 55.4	
	comp=Z,43nm,1.4s						
N49A	Columbus Grove	29.57	36	IAmb	IAmb	22 33 16.2	
	comp=Z,28nm,0.9s						
F05D	White Salmon	29.71	339	P	P	22 33 11.7	-1.0
F05D				IAmb	IAmb	22 33 12.8	
	comp=Z,67nm,1.8s						
F05D	White Salmon	29.71	339	P	P	22 33 10.4	-2.3
	baz=152						
F05D				S	S	22 38 08.3	+1.5
	baz=152						
G03D	McMinnville, O	29.78	336	P	P	22 33 11.2	-2.0
	baz=148						
ACSO	Alum Creek Sta	29.81	39	P	P	22 33 12.7	-1.0
ACSO				IAmb	IAmb	22 33 14.4	
	comp=Z,78nm,1.6s						
ACSO	Alum Creek Sta	29.81	39	P	P	22 33 12.3	-1.3
	baz=231						
DGMT	Dagmar	29.84	4	P	P	22 33 11.9	-1.9
	baz=186						
P52A	Corning	29.96	40		P	22 33 13.8	-1.1
P52A				IAmb	IAmb	22 33 15.2	
	comp=Z,51nm,1.3s						
P52A	Corning	29.96	40	P	P	22 33 14.0	-1.0
	baz=233						
G40A	Rib Lake	30.00	24	P	P	22 33 15.3	+0.2
D08A	Wollman Farm,	30.00	344	P	P	22 33 13.6	-1.6
F04A	Amboy	30.08	338	P	P	22 33 14.1	-1.8
F04A				IAmb	IAmb	22 33 15.2	
	comp=Z,26nm,1.3s						
P53A	Whipple	30.33	41	IAmb	IAmb	22 33 18.8	
	comp=Z,55nm,1.2s						
P53A	Whipple	30.33	41	P	P	22 33 17.4	-0.8
	baz=234,SNR=5.0						
P53A				P	P	22 33 17.4	-0.8
	baz=234,SNR=5.0						
H43A	Windswept, Lux	30.35	28	P	P	22 33 18.2	-0.1
H43A				IAmb	IAmb	22 33 27.4	
	comp=Z,33nm,1.1s						
Q54A	Coxs Mills	30.39	43	IAmb	IAmb	22 33 19.4	
	comp=Z,30nm,1.1s						
Q54A	Coxs Mills	30.39	43	P	P	22 33 18.3	-0.5
	baz=236						
Q54A				P	P	22 33 18.3	-0.5
	baz=236						
T57A	Hurt	30.41	47	IAmb	IAmb	22 33 22.6	
	comp=Z,26nm,1.0s						
O52A	Adamsville	30.43	40	IAmb	IAmb	22 33 19.1	
	comp=Z,58nm,1.3s						
R55A	Marlinton	30.48	44	P	P	22 33 19.2	-0.4
	baz=238						
R55A				P	P	22 33 19.2	-0.4
	baz=238						
M50A	Fremont	30.53	37	P	P	22 33 19.9	0.0
	baz=229						
M50A				P	P	22 33 19.9	0.0
	baz=229						
CNNC	Cliffs of the	30.58	51	P	P	22 33 19.3	-1.2
	baz=245						
N51A	Ashland	30.61	38	P	P	22 33 20.1	-0.6
	baz=231,SNR=6.0						
N51A				P	P	22 33 20.1	-0.6
	baz=231,SNR=6.0						
E04D	Cinebar	30.68	339	P	P	22 33 19.8	-1.4
E04D				IAmb	IAmb	22 33 21.2	
	comp=Z,25nm,1.1s						
E04D	Cinebar	30.68	339	P	P	22 33 19.1	-2.0
	baz=150						
LTY	Liberty	30.68	342	P	P	22 33 19.6	-1.7
NEW	Newport	30.69	347	LR	LR	22 45 00.6	
	comp=Z,2µm,19.0s,baz=166,slow=35						
NEW	Newport	30.69	347	P	P	22 33 19.5	-1.8
NEW				pmax	pmax		
	comp=Z,16nm,1.0s						
NEW	Newport	30.69	347	P	P	22 33 19.5	-1.8
NEW				IAmb	IAmb	22 33 21.8	
	comp=Z,16nm,1.0s						
NEW	Newport	30.69	347	P	P	22 33 19.5	-1.8
	baz=161						
NEW				S	S	22 38 21.0	-1.1
	baz=161						
I45A	Fountain	30.72	30	P	P	22 33 20.5	-1.1
AAM	Ann Arbor	30.79	35	P	P	22 33 21.3	-0.9
AAM				pmax	pmax		
	comp=Z,24nm,0.8s						
AAM	Ann Arbor	30.79	35	P	P	22 33 21.3	-0.9
AAM				IAmb	IAmb	22 33 31.5	
	comp=Z,24nm,0.8s						
AAM	Ann Arbor	30.79	35	P	P	22 33 20.9	-1.3
	baz=227						
WALA	Waterton Lakes	30.87	351	P	P	22 33 22.3	-0.7
O53A	New Philadelph	30.89	40	IAmb	IAmb	22 33 23.5	
	comp=Z,42nm,1.2s						
O53A	New Philadelph	30.89	40	P	P	22 33 21.7	-1.4
	baz=234						
AGMN	Agassiz Nation	30.93	14	P	P	22 33 23.4	0.0
S57A	Dark Hollow, R	30.99	46	P	P	22 33 23.9	-0.2
S57A				IAmb	IAmb	22 33 44.0	
	comp=Z,31nm,1.2s						
E03A	Lebam	31.02	337	P	P	22 33 22.9	-1.2
D05A	Enumclaw	31.03	340	P	P	22 33 22.8	-1.5
D05A				IAmb	IAmb	22 33 25.2	
	comp=Z,67nm,1.7s						
COWI	Conover	31.10	24	P	P	22 33 24.5	-0.4
COWI				IAmb	IAmb	22 33 41.9	
	comp=Z,15nm,0.8s						
B08A	Colville Reser	31.31	344	P	P	22 33 25.6	-1.2
B08A				IAmb	IAmb	22 33 26.6	
	comp=Z,24nm,1.2s						
O54A	Avella	31.37	41	P	P	22 33 26.5	-0.9
MCWV	Mont Chateau	31.41	42	P	P	22 33 26.8	-0.9
	baz=236						
N53A	Lisbon	31.45	40	IAmb	IAmb	22 34 27.1	
	comp=Z,60nm,1.6s						
Q56A	Snyder Ridge,	31.50	44	IAmb	IAmb	22 33 36.8	
	comp=Z,22nm,0.9s						
B35A	Bob, Littlefor	31.54	17	P	P	22 33 28.8	0.0
D03D	Eldon	31.70	339	P	P	22 33 28.0	-2.2
	baz=150						
D03D				S	S	22 38 40.6	+2.8
	baz=150						
EYMN	Ely	31.84	20	P	P	22 33 31.0	-0.4
EYMN				IAmb	IAmb	22 33 40.8	
	comp=Z,12nm,0.8s						
EYMN	Ely	31.84	20	P	P	22 33 30.4	-1.0
	baz=209						
M53A	WI Miller and	31.93	39	P	P	22 33 31.2	-1.1
	baz=233						
SJCC	San Jacinto, C	31.95	101	P	P	22 33 33.4	+0.5
SJCC	San Jacinto, C	31.95	101	*e*P	P	22 33 32.7	-0.1
B05A	Bryant	32.02	341	P	P	22 33 31.3	-1.6
	baz=152						
B05A				S	S	22 38 43.3	+0.6
	baz=152						
B06A	Marblemount	32.06	342	P	P	22 33 31.2	-2.0
DBBC	Dabeiba	32.06	107	*e*P	P	22 33 35.3	+1.4
GLMI	Grayling	32.08	31	P	P	22 33 34.3	+0.7
GLMI	Grayling	32.08	31	P	P	22 33 32.2	-1.4
	baz=223						
D41A	Chassel	32.12	24	P	P	22 33 34.7	+0.9
D41A				IAmb	IAmb	22 33 47.3	
	comp=Z,23nm,1.1s						
E43A	Lone Tree Farm	32.19	26	IAmb	IAmb	22 33 43.4	
	comp=Z,18nm,0.9s						
B04A	Port Angeles	32.29	339	P	P	22 33 35.2	-0.2
B04A				IAmb	IAmb	22 33 40.2	
	comp=Z,27nm,1.1s						
CBN	Corbin Frederi	32.30	47	P	P	22 33 34.8	-0.7
CBN	Corbin Frederi	32.30	47	P	P	22 33 34.4	-1.1
	baz=241						
ALLY	Alegheny Colle	32.38	39	P	P	22 33 36.3	+0.1
UREC	San Jos de Ur	32.39	105	*e*P	P	22 33 37.0	+0.3
A04D	Lummi Island	32.61	341	P	P	22 33 35.8	-2.3
	baz=152						
CBOC	Ciudad Bolivar	32.72	109	*e*P	P	22 33 40.7	+1.0
ERPA	Erie	32.75	39	P	P	22 33 37.8	-1.7
ERPA	Erie	32.75	39	P	P	22 33 38.6	-0.9
	baz=233						
ULM	Lac du Bonnet	32.76	13	P	P	22 33 38.1	-1.4
	comp=Z,8.3nm,0.9s,baz=204,slow=12,SNR=4.1						
ULM				LR	LR	22 46 45.6	
	comp=Z,2µm,19.5s,baz=200,slow=36						
	comp=Z,8.3nm,0.9s						
ULM	Lac du Bonnet	32.76	13	*i* P	P	22 33 37.6	-1.9
ULM	Lac du Bonnet	32.76	13	IAmb	IAmb	22 33 46.4	
	comp=Z,17nm,1.1s						
HELC	Santa Helena	33.02	108	*e*P	P	22 33 43.7	+1.2
ZARC	Zaragoza, Cauc	33.11	105	IAmb	IAmb	22 33 45.7	
	comp=Z,16nm,1.0s						
ZARC	Zaragoza, Cauc	33.11	105	*e*P	P	22 33 43.5	+0.7
CLRS	Cowichan Lake	33.16	339	P	P	22 33 40.6	-2.3
CLRS				IAmb	IAmb	22 33 42.7	
	comp=Z,18nm,1.2s						
SSPA	Standing Stone	33.20	42	P	P	22 33 42.7	-0.7
SSPA				IAmb	IAmb	22 33 43.9	
	comp=Z,43nm,1.3s						
SSPA	Standing Stone	33.20	42	P	P	22 33 41.1	-2.3
	baz=237						
CRJC	Cerrejon, Guaj	33.75	98	*e*P	P	22 33 40.2	-8.4
GCUF	Volcan Galeras	33.80	117	*e*P	P	22 33 50.6	+1.1
PTBC	PUERTO BERRIO,	33.85	107	*e*P	P	22 33 50.6	+1.2
ANIL	Santa Ana	33.87	111	*e*P	P	22 33 53.6	+3.7

SOTA	Rioblanco	33.95	115	*e*P	P	22 33 51.5	+0.6
PCON	Cinco Dias	34.04	115	*e*P	P	22 33 53.4	+1.7
LLLB	Lillooet	34.05	343	P	P	22 33 49.6	-1.1
LLLB				IAmb	IAmb	22 33 50.1	
	comp=Z,29nm,1.9s						
N58A	Sunbury	34.06	43	P	P	22 33 49.7	-1.2
N58A				IAmb	IAmb	22 33 51.2	
	comp=Z,48nm,1.4s						
SC01	Santiago de lo	34.22	83	P	P	22 33 54.0	+1.4
J54A	Appleton	34.24	38	P	P	22 33 51.6	-0.9
J54A				IAmb	IAmb	22 34 01.1	
	comp=Z,33nm,0.8s						
OCAC	Ocana	34.24	103	P	P	22 33 53.9	+0.9
ORTC	Ortega, Tolima	34.28	111	*e*P	P	22 33 57.7	+4.5
MEDO	Medina	34.29	38	P	P	22 33 51.5	-1.3
MEDO				IAmb	IAmb	22 33 56.8	
	comp=Z,41nm,1.0s						
MMNY	Mt. Morris Dam	34.36	39	IAmb	IAmb	22 33 58.1	
	comp=Z,45nm,1.1s						
URIC	Uribia, Colomb	34.40	96	IAmb	IAmb	22 34 03.7	
	comp=Z,25nm,1.1s						
CBB	Campbell River	34.62	339	P	P	22 33 54.8	-0.8
CBB				IAmb	IAmb	22 33 56.3	
	comp=Z,15nm,1.0s						
BANI	BANI	34.66	84	P	P	22 33 58.4	+1.8
J55A	Hilton	34.72	39	IAmb	IAmb	22 34 04.8	
	comp=Z,24nm,0.8s						
SADO	Sadowa	34.88	36	LR	LR	22 47 08.1	
	comp=Z,697nm,20.8s,baz=244,slow=34						
SADO	Sadowa	34.88	36	IAmb	IAmb	22 33 58.2	
	comp=Z,64nm,1.6s						
BARC	Barichara	34.99	106	*e*P	P	22 34 01.2	+1.7
PAMC	Pamplona, Colo	35.14	104	*e*P	P	22 34 02.6	+1.5
BINY	Binghamton	35.24	41	IAmb	IAmb	22 34 09.9	
	comp=Z,49nm,1.1s						
BINY	Binghamton	35.24	41	P	P	22 33 58.9	-2.3
	baz=238						
CHIC	Chingaza	35.30	109	*e*P	P	22 34 03.1	+0.7
RUSC	La Rusia	35.35	107	*e*P	P	22 34 02.2	-0.8
DELO	Deloro Mine	35.58	37	IAmb	IAmb	22 34 13.4	
	comp=Z,17nm,1.0s						
PECO	Prince Edward	35.60	38	IAmb	IAmb	22 34 08.4	
	comp=Z,40nm,1.1s						
L59A	Walton	35.84	42	P	P	22 34 06.2	-0.1
L59A				IAmb	IAmb	22 34 10.5	
	comp=Z,38nm,1.1s						
J57A	Williamstown	35.90	40	IAmb	IAmb	22 34 10.8	
	comp=Z,38nm,0.9s						
PAL	Palisades	35.99	45	P	P	22 34 05.6	-1.9
	baz=242						
TAMC	Tame, Arauca	36.32	105	*e*P	P	22 34 12.6	+1.9
SDV	Santo Domingo	36.52	100	LR	LR	22 49 54.2	
	comp=Z,834nm,20.4s,baz=292,slow=37						
SDV	Santo Domingo	36.52	100	P	P	22 34 13.6	+1.0
SDV	Santo Domingo	36.52	100	*e*P	P	22 34 13.8	+1.3
SDV	Santo Domingo	36.52	100	*e*P	P	22 34 13.8	+1.3
ACCN	Adirondack Com	37.32	41	IAmb	IAmb	22 35 04.6	
	comp=Z,97nm,1.9s						
BBB	Bella Bella	37.37	339	LR	LR	22 49 29.1	
	comp=Z,914nm,19.9s,baz=170,slow=36						
LONY	Lake Ozonia	37.41	39	P	P	22 34 17.8	-1.9
	baz=237						
L61B	Northampton	37.48	43	P	P	22 34 18.5	-1.7
	baz=242						
VLDQ	Val d'Or	37.92	32	P	P	22 34 23.7	-0.2
VLDQ				IAmb	IAmb	22 34 32.3	
	comp=Z,27nm,1.3s						
OBIP	Obispado Ponce	38.25	84	P	P	22 34 28.6	+1.6
OBIP				IAmb	IAmb	22 34 33.6	
	comp=Z,55nm,0.9s						
CELP	Cerrillos	38.27	84	IAmb	IAmb	22 34 33.8	
	comp=Z,60nm,0.9s						
TRQ	Mont Tremblant	38.33	37	IAmb	IAmb	22 34 36.2	
	comp=Z,53nm,1.3s						
M65A	Busby, Falmout	38.43	46	P	P	22 34 26.7	-1.5
	baz=245						
SJG	San Juan	38.67	84	LR	LR	22 51 16.3	
	comp=Z,424nm,20.9s,baz=266,slow=37						
SJG	San Juan	38.67	84	*e*P	P	22 34 30.1	-0.4
GCPR	Guaynabo City	38.71	84	P	P	22 34 32.1	+1.3
GCPR				IAmb	IAmb	22 34 37.8	
	comp=Z,57nm,1.1s						
PDPR	Patillas Dam,	38.80	84	IAmb	IAmb	22 34 37.6	
	comp=Z,39nm,0.9s						
LBNH	Lisbon	38.84	41	P	P	22 34 32.0	+0.4
LBNH				pmax	pmax		
	comp=Z,78nm,1.4s						
LBNH	Lisbon	38.84	41	P	P	22 34 32.0	+0.4
LBNH				IAmb	IAmb	22 34 39.8	
	comp=Z,78nm,1.4s						
LBNH	Lisbon	38.84	41	P	P	22 34 30.1	-1.6
	baz=240						
CBYP	Canovanas	38.92	84	P	P	22 34 33.5	+0.8
CBYP				IAmb	IAmb	22 35 37.6	
	comp=Z,67nm,1.1s						
HUMP	Col San Antoni	38.95	84	P	P	22 34 34.0	+1.1
MTP	Monte Pirata	39.23	84	P	P	22 34 35.0	-0.3
GRNB	Grenville Isla	39.37	339	P	P	22 34 35.1	-0.8
GRNB				IAmb	IAmb	22 34 38.6	
	comp=Z,62nm,2.0s						
PKME	Peaks-Kenny Pk	40.98	41	P	P	22 34 47.9	-1.4
	baz=242						
FCC	Fort Churchill	41.16	10	P	P	22 34 48.3	-2.4
FCC				pmax	pmax		
	comp=Z,14nm,0.9s						
FCC	Fort Churchill	41.16	10	P	P	22 34 48.3	-2.4
CRAG	Craig	41.78	338	P	P	22 34 53.1	-2.6
	baz=141						
D62A	Allapoint, All	42.00	39	P	P	22 34 58.1	+0.4
D62A				IAmb	IAmb	22 35 07.4	
	comp=Z,28nm,1.1s						
WRAK	Wrangell Islan	42.26	339	P	P	22 34 57.4	-2.3
	baz=143						
NNA	Nana	42.52	133	LR	LR	22 49 03.5	
	comp=Z,529nm,18.3s,baz=320,slow=31						
NNA	Nana	42.52	133	*i* P	P	22 35 02.9	+0.5
NNA				pmax	pmax		
	comp=Z,51nm,1.1s						
NNA	Nana	42.52	133	P	P	22 35 03.0	+0.7
NNA				IAmb	IAmb	22 35 08.3	
	comp=Z,70nm,1.4s						
TAOE	Nuku Hiva Isla	42.64	233	*e*P	P	22 35 06.0	+2.5
TAOE				*e*S	S	22 41 30.5	+5.5
TAOE				*e*LR	LR	22 46 43.3	
	comp=Z,4µm,26.8s						
TAOE	Nuku Hiva Isla	42.64	233	*e*T	T	23 20 07.1	
	comp=Z,133nm,0.2s						
CZSB	Cruzeiro do Su	42.75	125	*e*P	P	22 35 05.7	+1.5
ANWB	Willy Bob	42.85	84	P	P	22 35 06.1	+1.1
TBTG	Tabatinga, AM	42.96	118	*e*P	P	22 35 07.0	+1.0
DLBC	Dease Lake	43.20	342	LR	LR	22 53 47.5	
	comp=Z,2µm,18.5s,baz=136,slow=37						
DLBC	Dease Lake	43.20	342	P	P	22 35 07.0	-0.5
CBE	Ff, Capester	43.27	86	P	P	22 35 10.1	+1.6
GDSD	La Dsirade Is	43.74	86	P	P	22 35 14.6	+2.3
YKA	Yellowknife Ar	44.14	355	P	P	22 35 12.8	-2.0
	comp=Z,3.3nm,0.9s,baz=167,slow=7.2,SNR=27						
YKA				LR	LR	22 53 51.3	
	comp=Z,1µm,19.8s,baz=168,slow=36						
	comp=Z,3.3nm,0.9s						
TGTN	Hyland Airport	45.41	346	P	P	22 35 23.1	-1.9
	baz=151						
SKAG	Skagway	45.64	340	P	P	22 35 24.2	-2.6
	baz=141						
WHY	Whitehorse	46.45	341	P	P	22 35 30.7	-2.6
	baz=142						
MMPY	Sheldon Lake,	47.06	345	P	P	22 35 36.5	-1.5
	baz=148,SNR=13						
PNL	Peninsula	47.17	338	P	P	22 35 36.9	-2.0
	baz=136						
SCHQ	Schefferville	47.27	31	P	P	22 35 39.9	+0.2
	comp=Z,10nm,1.2s,baz=225,slow=7.1,SNR=6.9						
	comp=Z,10nm,1.2s						
SCHQ	Schefferville	47.27	31	P	P	22 35 41.4	+1.7
N31M	Braeburn, Yuko	47.37	342	P	P	22 35 38.9	-1.5
	baz=142						
HYT	Haines Junctio	47.39	340	P	P	22 35 39.0	-1.7
	baz=139						
M31M	Drury Creek, Y	47.54	343	IAmb	IAmb	22 35 46.4	
	comp=Z,26nm,1.8s						
M31M	Drury Creek, Y	47.54	343	P	P	22 35 40.1	-1.6
	baz=144						
YUK6	Outpost Mounta	47.76	340	P	P	22 35 41.0	-2.7
	baz=138						
PINM	Pinnacle	47.78	338	P	P	22 35 41.7	-2.0
	baz=136						
YUK4	Talbot Arm	48.15	340	P	P	22 35 45.0	-1.6
	baz=138						
BOAV	Boa Vista	48.23	104	*e*P	P	22 35 47.8	+0.1
M30M	Minto, Yukon	48.52	342	P	P	22 35 47.9	-1.4
	baz=141						
BGLC	Bering Glacier	48.90	337	P	P	22 35 49.7	-2.4
	baz=132						
YUK3	Moose Creek	49.06	340	P	P	22 35 51.6	-2.1
	baz=136						
ETMB	Extrema	49.14	122	*e*P	P	22 35 53.8	-0.8
Q23K	Middleton Isla	49.64	335	P	P	22 35 55.0	-2.9
	baz=128						
BVCY	Beaver Creek	49.65	340	P	P	22 35 55.1	-2.8
	baz=136						
RKT	Rikitea	49.71	215	*e*T	T	23 29 01.0	
	comp=Z,36nm,0.3s						
M27K	Edge Creek, AK	49.94	340	IAmb	IAmb	22 36 07.4	
	comp=Z,20nm,1.2s						
M27K	Edge Creek, AK	49.94	340	P	P	22 35 58.2	-2.1
	baz=135						
BMRM	Bremner River	49.95	337	P	P	22 35 59.1	-1.1
BMRM	Bremner River	49.95	337	P	P	22 35 58.2	-2.1
	baz=131						
GLB	Gilahina Butte	49.97	338	P	P	22 35 59.4	-1.1
GLB				IAmb	IAmb	22 36 01.4	
	comp=Z,20nm,1.0s						
EYAK	Cordova Ski Ar	50.11	336	P	P	22 36 00.5	-0.9
EYAK				IAmb	IAmb	22 36 02.0	
	comp=Z,43nm,1.1s						
EYAK	Cordova Ski Ar	50.11	336	P	P	22 35 59.8	-1.5
	baz=130						
M26K	Nabesna, AK	50.35	339	P	P	22 36 01.3	-2.0
	baz=134						
N25K	Chitina, Valde	50.37	338	P	P	22 36 03.2	-0.3
N25K				IAmb	IAmb	22 36 04.6	
	comp=Z,15nm,0.9s						
N25K	Chitina, Valde	50.37	338	P	P	22 36 01.7	-1.8
	baz=131						
DAWY	Dawson	50.42	342	P	P	22 36 02.4	-1.4
DAWY	Dawson	50.42	342	P	P	22 36 02.4	-1.4
	baz=139						
L27K	Beaver Creek,	50.43	340	P	P	22 36 03.2	-0.6
L27K	Beaver Creek,	50.43	340	P	P	22 36 02.0	-1.9
	baz=136						
MACA	Manacapuru-AM	50.43	111	*e*P	P	22 36 04.2	-0.3
KLU	Klutina	50.77	337	P	P	22 36 04.3	-2.2
	baz=130						
GLI	Glacier Island	50.83	336	P	P	22 36 04.4	-2.5
	baz=128						
L26K	Log Cabin Wild	50.90	340	P	P	22 36 06.9	-0.4
L26K	Log Cabin Wild	50.90	340	P	P	22 36 05.6	-1.7
	baz=134						
HARP	HAARP	51.09	338	P	P	22 36 07.1	-1.7
	baz=131						
I29M	Ogilvie Camp,	51.11	344	P	P	22 36 07.1	-1.8
	baz=141						
K27K	Chicken	51.20	341	P	P	22 36 08.3	-1.3
	baz=136						
M24K	Tolsona, Glenn	51.26	338	P	P	22 36 08.5	-1.7
	baz=130						
SEW	Seward	51.31	334	P	P	22 36 08.5	-1.9
	baz=125						
KDAK	Kodiak Island	51.43	331	P	P	22 36 10.8	-0.6
	comp=Z,36nm,1.1s,baz=102,slow=14,SNR=2.1						
KDAK				LR	LR	22 54 59.2	
	comp=Z,679nm,21.6s,baz=152,slow=33						
	comp=Z,36nm,1.1s						
KDAK	Kodiak Island	51.43	331	*i* P	P	22 36 09.8	-1.6
KDAK				pmax	pmax		
	comp=Z,40nm,1.0s						
KDAK	Kodiak Island	51.43	331	P	P	22 36 11.1	-0.3
EGAK	Eagle	51.46	342	P	P	22 36 09.6	-1.9
	baz=137						
OHAK	Old Harbor	51.49	330	P	P	22 36 09.8	-2.0
	baz=119						
EPYK	Eagle Plains	51.50	345	P	P	22 36 10.0	-1.9
	baz=143						
SCM	Sheep Creek Mo	51.51	337	P	P	22 36 09.7	-2.4
	baz=128						
DOT	Dot Lake	51.56	340	P	P	22 36 11.2	-1.1
DOT				IAmb	IAmb	22 36 13.0	
	comp=Z,54nm,1.9s						
PAX	Paxson	51.57	339	P	P	22 36 11.0	-1.5
	baz=131						
LPAZ	La Paz	51.62	130	P	P	22 36 13.8	-0.2
	comp=Z,7.0nm,0.8s,baz=328,slow=6.4,SNR=26						
LPAZ				LR	LR	22 56 41.4	
	comp=Z,376nm,18.9s,baz=312,slow=34						
	comp=Z,7.0nm,0.8s						
LPAZ	La Paz	51.62	130	IAmb	IAmb	22 36 15.3	
	comp=Z,33nm,1.6s						
LPAZ	La Paz	51.62	130	*e*P	P	22 36 14.0	-0.1
PB12	IPOC Station P	51.62	134	P	P	22 36 13.8	+0.4
PB12				IAmb	IAmb	22 36 18.9	
	comp=Z,46nm,1.7s						
BRSE	Bradley Lake S	51.64	333	P	P	22 36 11.5	-1.5
	baz=123						
KNK	Knik Glacier	51.68	336	P	P	22 36 11.4	-1.9
	baz=127						
SCRK	Sand Creek	51.76	340	IAmb	IAmb	22 36 15.7	
	comp=Z,43nm,1.9s						
SCRK	Sand Creek	51.76	340	P	P	22 36 12.2	-1.7
	baz=134						
C36M	Paulatuk	51.80	352	P	P	22 36 12.3	-1.6
	baz=159						
SML	Sawmill	51.87	336	P	P	22 36 12.6	-2.1
	baz=127						
RIDG	Independent Ri	51.88	340	P	P	22 36 13.7	-1.0
RIDG				IAmb	IAmb	22 36 15.1	
	comp=Z,26nm,0.9s						
RIDG	Independent Ri	51.88	340	P	P	22 36 12.8	-2.0
	baz=132,SNR=10.0						
HOM	Homer	51.98	333	P	P	22 36 13.4	-2.0
	baz=122						
J26L	Joseph Creek	51.99	341	P	P	22 36 14.2	-1.5
	baz=134,SNR=11						
RC01	Rabbit Creek A	51.99	335	P	P	22 36 13.6	-1.9
	baz=125						
PB16	IPOC Station P	51.99	133	IAmb	IAmb	22 36 23.1	
	comp=Z,71nm,1.8s						
PMR	Palmer	52.05	336	P	P	22 36 16.2	+0.3
PMR				pmax	pmax		
	comp=Z,38nm,1.5s						
PMR	Palmer	52.05	336	P	P	22 36 16.2	+0.3
PMR				IAmb	IAmb	22 36 24.8	
	comp=Z,38nm,1.5s						
FRB	Frobisher Bay	52.05	21	LR	LR	22 58 26.9	
	comp=Z,2µm,18.6s,baz=230,slow=36						
WAT6	Susitna Watana	52.13	337	P	P	22 36 14.9	-1.8
	baz=128						
K24K	Donnelly Dome	52.23	339	P	P	22 36 15.2	-2.1
	baz=131						
INK	Inuvik	52.40	348	IAmb	IAmb	22 36 18.3	
	comp=Z,16nm,0.9s						
INK	Inuvik	52.40	348	P	P	22 36 15.9	-2.5
	baz=148,SNR=14						
Q19K	Cape Douglas,	52.49	332	P	P	22 36 17.0	-2.3
	baz=120						
M22K	Willow	52.53	336	P	P	22 36 17.7	-1.8
	baz=125						
WAT1	Susitna Watana	52.58	337	P	P	22 36 18.1	-1.8
	baz=128						
O20K	Slope Mountain	52.63	333	P	P	22 36 19.1	-1.2
	baz=122						
J25K	Salcha River,	52.64	340	IAmb	IAmb	22 37 44.7	
	comp=Z,25nm,1.6s						
J25K	Salcha River,	52.64	340	P	P	22 36 18.4	-1.9
	baz=132						
P19K	Oil Pt	52.67	333	P	P	22 36 19.2	-1.4
	baz=121						
PB11	IPOC Station P	52.87	134	IAmb	IAmb	22 36 29.3	
	comp=Z,48nm,1.6s						
TA02	Huaiquique	52.90	135	P	P	22 36 24.0	+1.2
CUT	Chulitna	52.96	336	P	P	22 36 20.9	-1.8
	baz=126						
RND	Reindeer	53.04	338	IAmb	IAmb	22 36 28.8	
	comp=Z,20nm,1.1s						
SPCR	Spurr Chakacha	53.05	335	P	P	22 36 21.7	-1.8
	baz=123						
TA01	Diego Aracena	53.07	135	P	P	22 36 24.3	+0.2
TA01				IAmb	IAmb	22 36 29.8	
	comp=Z,57nm,1.6s						
ILAR	Eielson Array	53.23	340	P	P	22 36 23.1	-1.6
	comp=Z,4.1nm,0.9s,baz=152,slow=6.4,SNR=32						
ILAR				LR	LR	22 59 50.2	
	comp=Z,225nm,18.8s,baz=164,slow=37						
	comp=Z,4.1nm,0.9s						
PATCX	Punta Patache	53.27	136	P	P	22 36 25.6	0.0
PATCX				IAmb	IAmb	22 36 31.5	
	comp=Z,58nm,1.8s						
O19K	Port Alsworth	53.42	333	P	P	22 36 24.1	-2.0
	baz=120						
PB08	IPOC Station P	53.47	134	IAmb	IAmb	22 36 29.0	
	comp=Z,14nm,0.9s						
COLA	College	53.61	340	*i* P	P	22 36 24.3	-3.1
COLA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
POKR	Poker Plat Res	53.63	340	P	P	22 36 26.1	-1.5
	baz=130						
O18K	Koktuh Hills	53.64	332	P	P	22 36 25.6	-2.2
	baz=119						
CHNA	Chernabura Isl	53.70	325	P	P	22 36 26.1	-2.1
	baz=111						
BWN	Browne	53.72	338	P	P	22 36 26.3	-2.0
M20K	Styx River	53.79	335	IAmb	IAmb	22 36 28.1	
	comp=Z,15nm,0.8s						
M20K	Styx River	53.79	335	P	P	22 36 27.3	-1.6
	baz=122,SNR=6.3						
PB02	IPOC Station P	53.79	136	IAmb	IAmb	22 36 31.0	
	comp=Z,20nm,0.8s						
MDM	Murphy Dome	53.79	340	IAmb	IAmb	22 37 54.3	
	comp=Z,31nm,2.0s						
N19K	Bonanza Creek	53.80	333	P	P	22 36 26.5	-2.5
N19K				IAmb	IAmb	22 36 28.0	
	comp=Z,21nm,0.9s						
N19K	Bonanza Creek	53.80	333	P	P	22 36 26.7	-2.3
	baz=120						
NEA2	Nenana	53.84	339	P	P	22 36 27.6	-1.6
	baz=128,SNR=8.8						
PB01	IPOC Station P	53.87	135	IAmb	IAmb	22 36 36.1	
	comp=Z,60nm,1.8s						
PPLA	Purkeypile	53.97	336	P	P	22 36 28.8	-1.5
	baz=124						
PB07	IPOC Station P	54.08	136	IAmb	IAmb	22 36 33.8	
	comp=Z,50nm,1.6s						
BPAW	Bear Paw Mtn.	54.22	338	P	P	22 36 30.0	-1.9
	baz=126						
CAST	Castle Rocks	54.22	337	IAmb	IAmb	22 36 30.7	
	comp=Z,14nm,1.0s						
CAST	Castle Rocks	54.22	337	P	P	22 36 30.1	-1.9
	baz=124,SNR=7.7						
H24K	Noodor Dome	54.24	341	IAmb	IAmb	22 36 31.6	
	comp=Z,13nm,1.1s						
H24K	Noodor Dome	54.24	341	P	P	22 36 30.7	-1.4
	baz=130,SNR=6.4						
I23K	Minto, Yukon-K	54.28	339	IAmb	IAmb	22 36 37.0	
	comp=Z,24nm,1.2s						
I23K	Minto, Yukon-K	54.28	339	P	P	22 36 30.8	-1.6
	baz=128,SNR=12						
M19K	Big River Lodg	54.31	335	P	P	22 36 30.9	-1.7
	baz=121						
N18K	Kilae Creek	54.33	333	P	P	22 36 30.9	-2.0
N18K				IAmb	IAmb	22 36 32.4	
	comp=Z,22nm,0.9s						
N18K	Kilae Creek	54.33	333	P	P	22 36 31.1	-1.8
	baz=118						
PB04	IPOC Station P	54.34	137	P	P	22 36 33.6	0.0
PB04				IAmb	IAmb	22 36 40.7	
	comp=Z,21nm,1.1s						
SDPT	Sand Point	54.36	326	P	P	22 36 30.1	-2.9
	baz=110						
L20K	Farewell, AK	54.40	335	P	P	22 36 30.8	-2.5
	baz=122						
A36M	Sachs Harbour	54.41	353	IAmb	IAmb	22 36 39.1	
	comp=Z,19nm,0.9s						
A36M	Sachs Harbour	54.41	353	P	P	22 36 31.0	-2.1
	baz=159						
CHUM	Lake Minchumin	54.57	337	P	P	22 36 32.0	-2.4
	baz=124						
MDP	Montagnes des	54.62	97	LR	LR	23 03 13.1	
	comp=Z,201nm,19.4s,baz=291,slow=40						
L19K	White Mountain	54.64	335	IAmb	IAmb	22 36 34.0	
	comp=Z,18nm,1.0s						
L19K	White Mountain	54.64	335	P	P	22 36 33.2	-1.8
	baz=121						
H23K	Yukon River	54.77	340	P	P	22 36 34.2	-1.6
	baz=128,SNR=5.8						
K20K	Telida	54.94	336	IAmb	IAmb	22 36 41.2	
	comp=Z,26nm,1.3s						
K20K	Telida	54.94	336	P	P	22 36 35.1	-2.1
	baz=122,SNR=7.5						
PB06	IPOC Station P	54.98	137	P	P	22 36 38.9	+0.7
PB06				IAmb	IAmb	22 36 40.2	
	comp=Z,54nm,1.7s						
I21K	Tanana	55.19	339	IAmb	IAmb	22 36 38.0	
	comp=Z,9.8nm,0.8s						
I21K	Tanana	55.19	339	P	P	22 36 36.5	-2.4
	baz=125						
PPT	Papeete	55.23	232	LR	LR	22 53 24.7	
	comp=Z,751nm,21.4s,baz=4.5,slow=29						
PPT2	Papeete2	55.24	232	*e*P	P	22 36 41.8	+1.8
PPT2				*e*S	S	22 44 27.3	+5.3
	comp=Z,951nm,26.8s						
PPT2				*e*LR	LR	22 52 33.7	
	comp=Z,4µm,27.5s,baz=222						
LVC	Limon Verde	55.35	136	P	P	22 36 41.7	+0.7
LVC				pmax	pmax		
	comp=Z,38nm,1.5s						
LVC	Limon Verde	55.35	136	P	P	22 36 41.7	+0.7
LVC				IAmb	IAmb	22 36 43.8	
	comp=Z,38nm,1.4s						
LVC	Limon Verde	55.35	136	*e*P	P	22 36 42.4	+1.4
ITTB	Itaituba	55.38	109	*e*P	P	22 36 40.4	-0.6
PB15	IPOC Station P	55.40	137	P	P	22 36 42.4	+1.1
PB15				IAmb	IAmb	22 36 47.4	
	comp=Z,20nm,1.4s						
J20K	Nowinta River	55.41	337	P	P	22 36 38.1	-2.4
	baz=122,SNR=10						
TTA	Tatalina	55.48	335	P	P	22 36 38.2	-3.0
TTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TTA	Tatalina	55.48	335	P	P	22 36 38.2	-3.0
TTA	Tatalina	55.48	335	P	P	22 36 38.7	-2.4
	baz=120,SNR=6.7						
MALB	Monte Alegre	55.65	106	*e*P	P	22 36 43.3	+0.3
H21K	Melozitna Rive	55.75	339	IAmb	IAmb	22 36 41.9	
	comp=Z,20nm,1.0s						
H21K	Melozitna Rive	55.75	339	P	P	22 36 41.0	-2.0
	baz=125,SNR=17						
VILB	Vilhena	55.77	121	*e*P	P	22 36 43.2	-0.6
FALS	False Pass	55.80	324	P	P	22 36 41.8	-1.7
	baz=107						
PB14	IPOC Station P	55.83	139	P	P	22 36 45.7	+1.2
COLD	Coldfoot	55.84	341	P	P	22 36 41.0	-2.6
	baz=128						
AF01	San Pedro de A	56.06	136	P	P	22 36 46.7	+0.6
RES	Resolute Bay	56.45	4	LR	LR	23 01 29.3	
	comp=Z,2µm,20.3s,baz=180,slow=36						
RES	Resolute Bay	56.45	4	P	P	22 36 45.2	-2.6
RES				pmax	pmax		
	comp=Z,13nm,1.7s						
RES	Resolute Bay	56.45	4	P	P	22 36 45.2	-2.6
TOLK	Toolik Lake Re	56.55	343	P	P	22 36 46.8	-1.9
	baz=130,SNR=7.2						
GO02	Mina Guanaco	56.73	139	P	P	22 36 51.5	+0.7
AC01	Pan de Azucar	56.83	140	P	P	22 36 52.4	+1.2
AC01				IAmb	IAmb	22 38 42.8	
	comp=Z,15nm,1.1s						
AKUT	Akutan	56.93	323	P	P	22 36 51.4	-0.1
MCPB	Macapa, AP	57.09	103	*e*P	P	22 36 52.9	-0.4
AC06	Mina Casimiro	57.87	141	P	P	22 36 59.2	+0.7
AC06				IAmb	IAmb	22 37 06.3	
	comp=Z,61nm,2.0s						
PTLB	Pontes e Lacer	58.00	123	*e*P	P	22 36 58.8	-0.8
AC04	Llanos de Chal	58.08	142	P	P	22 37 01.1	+1.2
AC04				IAmb	IAmb	22 38 31.5	
	comp=Z,13nm,1.1s						
GO03	Copiap	58.11	141	P	P	22 37 01.6	+1.3
AC02	Maricunga	58.22	140	IAmb	IAmb	22 37 09.8	
	comp=Z,42nm,1.9s						
H03N2	Juan Fernandez	58.28	152	T	T	23 40 06.3	
	baz=330,slow=78,SNR=271						
H03N1	Juan Fernandez	58.30	152	T	T	23 40 16.9	
	baz=330,slow=78,SNR=316						
H03N3	Juan Fernandez	58.30	152	T	T	23 40 09.6	
	baz=330,slow=78,SNR=204						
CLDB	Colider	58.36	116	*e*P	P	22 37 01.6	-0.6
NIKH	Nikolski High	58.46	321	P	P	22 36 59.8	-2.5
	baz=101						
TBI	Tubuai	58.85	227	*e*P	P	22 37 09.3	+3.9
TBI				*e*S	S	22 45 16.2	+6.9
	comp=Z,542nm,28.0s						
TBI				*e*LR	LR	22 54 01.9	
	comp=Z,3µm,29.0s,baz=223						

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TBI   Tubuai             58.85 227 eT      T        23 40 24.7
           comp=Z,5.9nm,0.2s
CO06  Fray Jorge         59.64 145  P      P        22 37 11.2 +0.5
GO04  Tololo Observa     59.72 144  P      P        22 37 12.2 +0.6
GO04                                IAmb   IAmb     22 37 17.5
           comp=Z,38nm,1.4s
ANM   Nome               59.94 335  P      P        22 37 10.7 -1.7
           baz=111
CO01  Juntas del Tor     59.98 143  P      P        22 37 13.9 +0.5
CO01                                IAmb   IAmb     22 37 30.4
           comp=Z,17nm,1.6s
CO02  Combarbal          60.40 145  P      P        22 37 16.8 +0.7
CO02                                IAmb   IAmb     22 37 31.9
           comp=Z,37nm,1.7s
RDOG  Red Dog Mine       60.40 339  P      P        22 37 12.0 -3.5
RDOG  Red Dog Mine       60.40 339  P      P        22 37 12.7 -2.9
           baz=116
SALV  Santo Antonio      61.02 121 eP      P        22 37 19.7 -0.8
TNA   Tin City           61.30 335  P      P        22 37 18.4 -3.2
           baz=109
PRPB  Parauapebas        61.47 108 eP      P        22 37 23.0 -0.6
ROC1  El Roble           61.75 146  P      P        22 37 24.0 -1.4
ROC1                                IAmb   IAmb     22 38 45.9
           comp=Z,10.0nm,1.0s
VA03  San Esteban        61.84 145  P      P        22 37 25.9 +0.1
VA03                                IAmb   IAmb     22 37 31.7
           comp=Z,26nm,1.2s
EUNU  Eureka             62.15   4  P      P        22 37 25.0 -2.2
EUNU                                IAmb   IAmb     22 37 42.5
           comp=Z,24nm,1.6s
MT05  Renca              62.22 146  P      P        22 37 29.5 +1.2
MT01  Popeta             62.32 147  IAmb   IAmb     22 38 25.2
           comp=Z,8.0nm,0.7s
GAMB  Gambell            62.34 333  P      P        22 37 25.4 -3.2
           baz=105
MT09  Talagante          62.39 146  P      P        22 37 29.8 +0.3
MT03  Universidad Ad     62.42 146  P      P        22 37 30.7 +1.0
PP1B  Ponte de Pedra     62.59 122 eP      P        22 37 31.3 +0.3
SNDB  Serra Nova Dou     62.75 115 eP      P        22 37 32.3 +0.2
BO04  La Punta           62.75 146  IAmb   IAmb     22 38 26.5
           comp=Z,8.6nm,0.8s
AQDB  Aquidauana         63.52 125  IAmb   IAmb     22 37 38.0
           comp=Z,22nm,1.2s
AQDB  Aquidauana         63.52 125 eP      P        22 37 36.8 -0.3
SMTB  Santa Maria do     64.60 110 eP      P        22 37 44.6 +0.2
ANGG  Ammassalik, Gr     64.66  25  P      P        22 37 44.7 +0.8
ANGG                                IAmb   IAmb     22 37 53.6
           comp=Z,16nm,1.0s
ICESG Greenland Ices     64.67  21 i P     P        22 37 40.8 -3.6
ICESG                               IAmb   IAmb     22 37 55.3
           comp=Z,21nm,1.1s
RAR   Rarotonga          65.14 235  LR     LR       22 58 24.3
           comp=Z,829nm,20.9s,baz=52,slow=29
ROSB  Rosrio             65.39 102 eP      P        22 37 49.9 +0.4
PEXB  Peixe              65.40 113 eP      P        22 37 49.8 +0.2
CPUP  Villa Florida      65.72 131  P      P        22 37 51.0 -0.4
           comp=Z,7.0nm,1.0s,baz=328,slow=4.7,SNR=9.3
CPUP                                LR     LR       23 04 56.6
           comp=Z,478nm,21.0s,baz=326,slow=34
           comp=Z,7.0nm,1.0s
CPUP  Villa Florida      65.72 131  IAmb   IAmb     22 37 52.9
           comp=Z,16nm,1.2s
CPUP  Villa Florida      65.72 131 eP      P        22 37 51.9 +0.5
LC01  Cunco              65.99 151  IAmb   IAmb     22 38 02.9
           comp=Z,13nm,1.2s
TRCB  Terra Rica         67.17 126 eP      P        22 38 01.8 +1.0
BDFB  Brasilia           67.28 117  P      P        22 38 01.8  0.0
           comp=Z,11nm,0.9s,baz=288,slow=5.4,SNR=14
           comp=Z,11nm,0.9s
BDFB  Brasilia           67.28 117  P      P        22 38 00.9 -0.8
BDFB                                IAmb   IAmb     22 38 03.4
           comp=Z,13nm,0.9s
ITRB  Iturama            67.33 122 eP      P        22 38 02.5 +0.7
LL04  Puerto Octay       67.37 152  IAmb   IAmb     22 38 11.8
           comp=Z,28nm,1.6s
PCMB  Pacaembu           67.60 124 eP      P        22 38 03.9 +0.4
PLCA  Paso Flores        68.07 151  P      P        22 38 05.9 -0.2
           comp=Z,3.1nm,0.8s,baz=316,slow=8.9,SNR=11
PLCA                                LR     LR       23 01 42.7
           comp=Z,555nm,18.2s,baz=341,slow=30
           comp=Z,3.1nm,0.8s
PLCA  Paso Flores        68.07 151  IAmb   IAmb     22 38 16.7
           comp=Z,20nm,1.4s
PLCA  Paso Flores        68.07 151 eP      P        22 38 07.4 +1.3
IPMB  Ipameri, GO        68.23 119 eP      P        22 38 07.8 +0.2
ITQB  Itaqui             68.26 134 eP      P        22 38 08.1 +0.6
NBPS  Pedro II - PI      68.42 103 eP      P        22 38 09.6 +0.6
SDBA  SAO DESIDERIO      68.51 112 eP      P        22 38 09.4  0.0
PTGB  Pitanga            68.66 127 eP      P        22 38 11.1 +0.9
SHEM  Shemya Is, Ala     68.73 320  LR     LR       23 01 17.3
           comp=Z,369nm,21.9s,baz=118,slow=30
LL02  Futaleuf           69.47 153  P      P        22 38 15.6 +0.9
LL02                                IAmb   IAmb     22 38 26.1
           comp=Z,12nm,1.0s
BB19B Bebedouro          69.50 122 eP      P        22 38 16.4 +0.9
FRTB  Fartura            69.85 124 eP      P        22 38 16.2 -1.3
ITAB  Concordia          70.01 129 eP      P        22 38 18.1 -0.3
AY01  Puyuhuapi          70.14 155  P      P        22 38 19.2 +0.4
AY01                                IAmb   IAmb     22 38 26.3
           comp=Z,22nm,1.3s
JANB  Januaria           70.19 114 eP      P        22 38 19.6 -0.1
RCLB  Rio Claro- Sao     70.98 123 eP      P        22 38 26.1 +1.6
COYC  Coyhaique          71.32 155  P      P        22 38 26.9 +1.0
COYC                                IAmb   IAmb     22 38 34.1
           comp=Z,35nm,1.6s
AFI   Afiamalu           71.59 248  LR     LR       23 01 43.2
           comp=Z,485nm,20.6s,baz=82,slow=29
DAG   Danmarks Havn      71.61  14 i P     P        22 38 25.0 -2.3
DAG                                 IAmb   IAmb     22 38 26.3
           comp=Z,44nm,2.0s
BILL  Bilibino           71.68 337 eP      P        22 38 26.1 -1.8
BILL                               e                22 38 44.5
BILL                               ePPP    PPP      22 42 52.6
BILL                                pmax   pmax
           comp=Z,9.0nm,0.8s
VAO   Valinhos           71.72 123 eP      P        22 38 30.0 +1.0
NOR   Nord               71.73   9 eP      P        22 38 26.4 -1.6
NOR                                 IAmb   IAmb     22 38 30.9
           comp=Z,4.7nm,1.0s
NBMA  Muriti-CE          72.00 104 eP      P        22 38 31.2 +0.4
DIAM  Diamantina, MG     72.19 117 eP      P        22 38 32.0 +0.1
GDU01 Guandu, BA         73.77 111 eP      P        22 38 41.2  0.0
RCBR  Riachuelo          74.08 102  LR     LR       23 13 30.5
           comp=Z,234nm,18.8s,baz=84,slow=38
RCBR  Riachuelo          74.08 102  P      P        22 38 43.2  0.0
RCBR                                pmax   pmax
           comp=Z,14nm,1.0s
RCBR  Riachuelo          74.08 102  P      P        22 38 43.2  0.0
RCBR                                IAmb   IAmb     22 38 44.7
           comp=Z,14nm,1.0s
NBLA  Lagarto - SE       74.28 108 eP      P        22 38 44.2  0.0
PET   Petropavlovsk      77.92 322 eP      P        22 39 14.3 +10
PET                                eS      S        22 49 02.3 +6.8
PET                                ePPS    PPS      22 49 54.8
PET                                eSS     SS       22 54 04.0 +7.9
PET                                 pmax   pmax
           comp=Z,41nm,1.3s
PET                                 pmax   pmax
           comp=Z,100nm,12.1s
PET                                 MLR    MLR
           comp=Z,200nm,18.0s
SPITS Spitsbergen Ar     78.27  10  LR     LR       23 13 02.5
           comp=Z,913nm,20.1s,baz=353,slow=35
SEY   Seymchan           78.34 333  P      P        22 39 05.2 -1.2
           comp=Z,8.2nm,0.8s,baz=110,slow=5.2,SNR=7.8
SEY                                 LR     LR       23 12 15.7
           comp=Z,187nm,18.2s,baz=72,slow=35
           comp=Z,8.2nm,0.8s
SEY   Seymchan           78.34 333 i P     P        22 39 05.0 -1.4
SEY                                 pmax   pmax
           comp=Z,8.0nm,0.8s
PETK  Petropavlovsk-     78.45 322  LR     LR       23 06 50.7
           comp=Z,215nm,21.6s,baz=79,slow=30
PMOZ  Porto Moniz, M     79.94  59 eLR     LR       23 05 33.7
           comp=Z,231nm,20.0s
MA2   Magadan            80.17 330  LR     LR       23 12 46.6
           comp=Z,175nm,20.4s,baz=76,slow=34
MA2   Magadan            80.17 330 i P     P        22 39 15.3 -1.2
MA2                                 pmax   pmax
           comp=Z,14nm,1.3s
USHA  Ushuaia            80.20 159  LR     LR       23 07 34.6
           comp=Z,585nm,21.7s,baz=346,slow=30
MSVF  Nonsavu            82.08 248  LR     LR       23 08 06.2
           comp=Z,430nm,19.1s,baz=83,slow=30
EKA   Eskdalemuir Ar     82.44  34  P      P        22 39 28.9 +0.3
           comp=Z,0.9nm,0.7s,baz=289,slow=4.4,SNR=2.9
EKA                                 LR     LR       23 15 19.5
           comp=Z,583nm,18.6s,baz=296,slow=35
           comp=Z,0.9nm,0.7s
RAO   Raoul Island       83.35 236  LR     LR       23 11 34.7
           comp=Z,208nm,18.2s,baz=126,slow=32
PGAV  Gavieira, Arco     83.98  48 eLR     LR       23 07 28.7
           comp=Z,345nm,18.0s
PCAB  Cabril             84.24  48 eP      P        22 39 39.0 +0.8
PCAS  Casmilo, Conde     84.46  50 eP      P        22 39 40.1 +0.7
           comp=Z,56nm,1.7s
POLO  Lamas de Olo       84.52  48 eP      P        22 39 39.8 +0.1
PVIS  Viseu              84.67  49 eP      P        22 39 40.5  0.0
PMTG  Montargil          84.99  51 eP      P        22 39 42.6 +0.6
MTE   Manteigas          85.03  49 eP      P        22 39 42.2 -0.1
           comp=Z,27nm,1.2s
MTE   Manteigas          85.03  49 eLR     LR       23 07 53.7
           comp=Z,368nm,18.0s
MTE   Manteigas          85.03  49  P      P        22 39 41.4 -0.9
MTE                                 IAmb   IAmb     22 39 42.9
           comp=Z,17nm,0.9s
PBRG  Braganca           85.11  48 eP      P        22 39 45.6 +2.9
MVO   Moncorvo           85.13  48 eP      P        22 39 43.5 +0.7
           comp=Z,28nm,1.4s
MVO   Moncorvo           85.13  48 eLR     LR       23 07 57.8
           comp=Z,316nm,18.0s
PCBR  Castelo Branco     85.27  50 eP      P        22 39 43.5 +0.1
PMRV  Marv??o            85.47  50 eP      P        22 39 44.5  0.0
PMRV  Marv??o            85.47  50 eLR     LR       23 08 04.7
           comp=Z,313nm,18.0s
PCVE  Castro Verde       85.61  52 eP      P        22 39 45.8 +0.6
ARCES ARCESS Array B     85.86  15  P      P        22 39 45.8 +0.1
           comp=Z,1.4nm,0.8s,baz=332,slow=5.1,SNR=1.7
ARCES                               LR     LR       23 18 24.5
           comp=Z,640nm,21.1s,baz=308,slow=36
           comp=Z,1.4nm,0.8s
PBAR  Barrancos          86.17  51 eP      P        22 39 48.1 +0.2
           comp=Z,32nm,1.9s
NOA   NORSAR Array B     86.58  25  LR     LR       23 20 13.9
           comp=Z,297nm,18.3s,baz=300,slow=37
ESDC  Sonseca Array      87.85  49  P      P        22 39 56.3 +0.2
           comp=Z,1.2nm,0.8s,baz=308,slow=5.8,SNR=11
ESDC                                LR     LR       23 19 11.0
           comp=Z,134nm,19.2s,baz=296,slow=36
           comp=Z,1.2nm,0.8s
ESDC  Sonseca Array      87.85  49  P      P        22 39 55.6 -0.6
YAK   Yakutsk            88.04 337  LR     LR       23 23 18.1
           comp=Z,216nm,18.5s,baz=85,slow=38
YAK   Yakutsk            88.04 337 i P     P        22 39 55.5 -0.9
YAK                                 pmax   pmax
           comp=Z,18nm,0.9s
HFS   Hagfors            88.11  26  LR     LR       23 22 01.6
           comp=Z,293nm,19.1s,baz=304,slow=37
PMSA  Palmer Station     89.39 163  LR     LR       23 12 41.5
           comp=Z,88nm,18.9s,baz=320,slow=31
MDT   Midelt             89.97  55  LR     LR       23 16 01.3
           comp=Z,169nm,21.8s,baz=315,slow=33
URZ   Urewera            90.83 230  LR     LR       23 10 56.3
           comp=Z,567nm,21.6s,baz=31,slow=29
ASAJ  Asahikawa          91.05 318  LR     LR       23 13 57.1
           comp=Z,178nm,21.2s,baz=84,slow=31
NRIK  Noril'sk           91.65 355  P      P        22 40 11.9 -1.3
           comp=Z,2.6nm,0.8s,baz=15,slow=6.3,SNR=5.1
NRIK                                LR     LR       23 21 08.6
           comp=Z,415nm,21.9s,baz=8.0,slow=35
           comp=Z,2.6nm,0.8s
NRIK  Noril'sk           91.65 355 i P     P        22 40 10.6 -2.6
NRIK                                pmax   pmax
           comp=Z,3.0nm,0.9s
FINES FINESS Array B     91.85  21  P      P        22 40 14.7 +0.4
           comp=Z,2.4nm,1.1s,baz=319,slow=9.5,SNR=1.9
           comp=Z,2.4nm,1.1s
CLL   Collm              92.86  33 eP      P        22 40 27.0 +7.8
CLL                                 MLR    MLR
           comp=Z,400nm,19.0s
CLL   Collm              92.86  33 eS      S        22 51 24.0 +1.2
CLL                                eSS     SS       22 57 42.0 +6.5
CLL                                 LmH             23 21 00.0
           comp=N,400nm,18.3s
CLL                                 LmH             23 21 00.0
           comp=E,500nm,20.7s
CLL                                 LmV             23 25 00.0
           comp=Z,400nm,19.0s
NKC   Novy Kostel        93.18  34  AMS    AMS      23 25 30.0
           comp=Z,700nm,18.6s
DAVOX Davos/Dischmat     93.64  38  LR     LR       23 21 10.0
           comp=Z,566nm,20.9s,baz=302,slow=35
DZM   Mont Dzumac        93.81 248 eLR     LR       23 10 34.8
           comp=Z,2μm,30.1s
DZM   Mont Dzumac        93.81 248  LR     LR       23 12 58.2
           comp=Z,514nm,21.7s,baz=74,slow=29
FETA  Feichten           94.00  37 eP      P        22 40 25.0 +0.3
           comp=Z,1.4nm,0.7s
MOTA  Moosalm            94.04  37 eP      P        22 40 25.5 +0.6
           comp=Z,2.7nm,0.7s
PVCC  Panska Ves         94.12  33  AMS    AMS      23 21 20.0
           comp=Z,500nm,22.2s
SQTA  Sankt Quirin       94.17  37 eP      P        22 40 24.7 -0.7
           comp=Z,0.7nm,0.4s
VSU   Vasula             94.25  22 i P     P        22 40 26.5 +1.1
KLNR  Kaliningrad        94.30  28 i P     P        22 40 24.9 -0.8
KLNR                                pmax   pmax
           comp=Z,25nm,1.0s
WATA  Walderalm          94.31  37 eP      P        22 40 26.1  0.0
           comp=Z,1.2nm,0.5s
WTTA  Wattenberg         94.39  37 eP      P        22 40 26.6 +0.1
           comp=Z,2.3nm,0.7s
KHC   Kasperske Hory     94.41  35 i P     P        22 40 25.7 -0.7
KHC                                 pmax   pmax
           comp=Z,2.0nm,1.0s
KHC   Kasperske Hory     94.41  35  AMS    AMS      23 24 00.0
           comp=Z,500nm,17.9s
PRU   Pruhonice          94.43  34  AMS    AMS      23 23 10.0
           comp=Z,600nm,15.9s
CHVC  Chvalec            94.85  32  AMS    AMS      23 22 20.0
           comp=Z,600nm,21.0s
UPC   Upice              94.88  33  AMS    AMS      23 25 30.0
           comp=Z,500nm,17.2s
OSTC  Ostas              94.95  32  AMS    AMS      23 22 40.0
           comp=Z,500nm,17.4s
DPC   Dobruska-Polom     95.13  33  AMS    AMS      23 22 40.0
           comp=Z,600nm,17.7s
ABTA  Abfaltersbach      95.17  37 eP      P        22 40 30.7 +0.7
           comp=Z,2.7nm,0.6s
TREC  Trest              95.33  34  AMS    AMS      23 23 50.0
           comp=Z,600nm,15.4s
KRLC  Kraliky            95.53  33  AMS    AMS      23 23 00.0
           comp=Z,600nm,16.3s
STAL  STALIGIAL          95.56  37  P      P        22 40 31.5 -0.3
STAL                                IAmb   IAmb     22 40 39.2
           comp=Z,15nm,1.2s
HNR   Honiara            95.87 262  LR     LR       23 14 13.9
           comp=Z,375nm,21.8s,baz=67,slow=30
VRAC  Vranov             95.90  33  LR     LR       23 22 54.1
           comp=Z,308nm,20.0s,baz=307,slow=35
OKC   Ostrava-Krasne     96.37  32  AMS    AMS      23 23 00.0
           comp=Z,400nm,16.8s
MAUC  Maruska            96.50  33  AMS    AMS      23 26 40.0
           comp=Z,1μm,15.9s
NACGM Naroch             96.85  25 eP      P        22 40 42.6 +5.2
           baz=317
RPZ   Rata Peaks         97.06 226  LR     LR       23 17 33.4
           comp=Z,289nm,18.5s,baz=60,slow=31
USRK  Ussuriysk Ar.      97.54 322  LR     LR       23 18 30.2
           comp=Z,180nm,21.9s,baz=44,slow=32
MJAR  Matsushiro Arr     97.61 312  LR     LR       23 14 45.2
           comp=Z,278nm,21.7s,baz=68,slow=29
JHJ   Hachijo jima 2     98.14 309  LR     LR       23 19 03.6
           comp=Z,343nm,19.3s,baz=104,slow=32
JCJ   Chichijima         99.04 302  LR     LR       23 16 41.3
           comp=Z,124nm,20.9s,baz=95,slow=30
KEST  Kesra              99.04  48  LR     LR       23 25 40.6
           comp=Z,222nm,20.1s,baz=258,slow=35
DBIC  Dimbokro           99.25  80  LR     LR       23 19 50.4
           comp=Z,130nm,21.7s,baz=298,slow=32
OBN   Obninsk           100.26  20 eP      Pdif     22 40 50.3 -2.3
OBN                                e                22 44 56.8
OBN                                 pmax   pmax
           comp=Z,3.0nm,0.7s
KIV   Kislovodsk        111.79  23 i PKIKP PKiKP    22 45 38.8 -2.7
KIV                                 pmax   pmax
           comp=Z,3.0nm,1.0s
KIV                                 MLR    MLR
           comp=Z,355nm,21.0s
WMQ   Urumqi            116.42 348  PKP    PKiKP    22 45 47.8 -2.6
WMQ                                 sPKP            22 46 02.9
WMQ                                 PP     PP       22 47 01.4 +5.8
WMQ                                 SKS    SKSdf    22 52 52.9 -7.7
WMQ                                 AMB    AMB
           comp=Z,77nm,4.7s
WMQ                                 LR     LR
           comp=N,400nm,17.7s
WMQ                                 LR     LR
           comp=E,450nm,19.9s
WMQ                                 LR     LR
           comp=Z,240nm,21.9s
LZH   Lanzhou           118.26 332 ePKP    PKPdf    22 45 45.5 -8.8
LZH                                 pPKP   PKiKP    22 45 50.3 -4.0
LZH                                 LR     LR
           comp=N,220nm,17.4s
LZH                                 LR     LR
           comp=E,230nm,17.9s
LZH                                 LR     LR
           comp=Z,430nm,17.4s
WRA   Warramunga Arr    122.42 258  PKP    PKPdf    22 46 00.6 -1.8
           comp=Z,1.2nm,0.8s,baz=78,slow=2.0,SNR=5.9
WRA   Warramunga Arr    122.42 258  PKIKP  PKPdf    22 45 59.7 -2.7
WRA   Warramunga Arr    122.42 258         PKPdf    22 45 59.7 -2.7
CD2   Chengdu           122.57 329  PKP    PKPdf    22 46 00.9 -1.6
PZH   PanZhiHua         127.18 327  PKP    PKPdf    22 46 09.6 -2.0
PZH                                 PP     PP       22 48 07.8 -1.7
PZH                                 AMB    AMB
           comp=Z,120nm,7.1s
PZH                                 LR     LR
           comp=N,310nm,20.4s
PZH                                 LR     LR
           comp=E,440nm,23.1s
PZH                                 LR     LR
           comp=Z,600nm,25.0s
QIZ   Qiongzhong        127.98 314  PKP    PKPdf    22 46 10.9 -2.2
QIZ                                 PP     PP       22 48 11.3 -3.8
QIZ   Qiongzhong        127.98 314  SS     SS       23 05 21.5 -5.0
QIZ                                 LR     LR
           comp=N,200nm,17.1s
QIZ                                 LR     LR
           comp=E,140nm,17.5s
QIZ                                 LR     LR
           comp=Z,170nm,15.9s
```

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*NIED **05** 22:27:33.0, 32°.83N×130°.83E, h9^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.91; $M_{\theta\theta}$1.88; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.16; $M_{\theta\phi}$0.43; $M_{\phi r}$-0.92; Fault plane solution: $M_0$2.15000×10^{14} NP1: ϕ_s277.00000°, δ43.00000°, λ-59.00000°. NP2: ϕ_s57.00000°, δ54.00000°, λ-116.00000°.*

JMA 05 22:27:33.0±0.0, **32°.83N**±0°.08×**130°.83E**±0°.09, **h9**^{km}, **MV3.5**/20, **NW KUMAMOTO PREF, Kyushu**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time     Res
                                    Op     ISC        h  m  s    ISC
JIU3  Izumi3             0.28 183   P      Pg       22 27 38.8 +0.2
JTA   Tamana             0.28 298   P      Pg       22 27 38.8 +0.1
JTA                                 S      Sg       22 27 43.0 +0.5
JZO   Okuchi             0.72 196   P      Pg       22 27 46.6 -0.2
JZO                                 S      Sg       22 27 56.2  0.0
```

MEX 05 22:31:35.6±0.4, **15°.09N**×**93°.75W**, **h15**^{km}±148^{km}, **MD3.8**, **Near coast of Chiapas**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time     Res
                                    Op     ISC        h  m  s    ISC
PCIG                     0.80  40  i P     Pg       22 31 48.1 -3.0
PCIG                     0.80  40  i S     Sg       22 31 58.3 -3.3
PATR  El Naranjo         1.46  89  eP      Pn       22 31 57.9 -3.8
PATR  El Naranjo         1.46  89  eS      Sn       22 32 15.6 -5.2
PAVE  Pavencul           1.52  86  eP      Pn       22 31 59.2 -3.4
PAVE  Pavencul           1.52  86  eS      Sn       22 32 16.9 -5.3
CHUJ  Union Juarez       1.59  90  eP      Pn       22 31 60.0 -3.4
CHUJ  Union Juarez       1.59  90  eS      Sn       22 32 19.2 -4.6
```

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*KRSC **05** 22:33:57.4±2.1, 49°.53N×157°.04E, h16^{km}±32^{km}, ML5.4*

*MOS **05** 22:34:00.9±0.9, 49°.72N×156°.03E, h64^{km}, mb4.5/13, Error ellipse: s-maj=9.8km s-min=3.2km az=76.3*

MOS Felt (III) at Severo-Kuril'sk.

*NEIC **05** 22:34:02.6±1.2, 49°.76N±0°.09×156°.1E±0°.1, h61^{km}±6^{km}, mb4.7/145, Error ellipse: s-maj=15.4km s-min=10.0km az=141.0*

*IDC **05** 22:34:04.6±1.7, 49°.80N×155°.92E, h79^{km}±14^{km}, mb4.0/36, mbtmp4.3/43, MS3.4/12, Error ellipse: s-maj=12.9km s-min=8.4km az=145.0*

ISC 05 22:34:00.8±0.4, **49°.64N**±0°.05×**156°.25E**±0°.05, **h50**^{km}, **n474**, σ**1^{s}24**/494, **mb4.6**/139, **MS3.6**/8, **9C-3D**, **Kuril Islands**

```
Code  Station Name        Δ°  AZ°    Phase ID           Time     Res
                                    Op     ISC        h  m  s    ISC
SKR   Severo-Kuril's     1.05 356⇓ iPN     Pn       22 34 19.4 +0.3
SKR                                eS      Sn       22 34 33.6 +0.9
SKR                                 pmax   pmax
           comp=Z,2μm,0.5s
SKR                                 smax   smax
           comp=N,7μm,0.5s
SKR                                 smax   smax
           comp=E,7μm,0.2s
SKR   Severo-Kuril's     1.05 356  eP      Pn       22 34 19.3 +0.2
SKR                                eS      Sn       22 34 33.5 +0.9
PAU   Pauzhetka          1.86  11   PN     Pn       22 34 30.9 +0.6
PAU                                 S      Sn       22 34 54.2 +1.6
PAU   Pauzhetka          1.86  11  eP      Pn       22 34 30.9 +0.6
PAU                                eS      Sn       22 34 54.2 +1.6
KDTR  Khodutka, Kamc     2.46  28   PN     Pn       22 34 38.6 +0.1
KDTR                                S      Sn       22 35 07.5 +0.2
KDTR  Khodutka, Kamc     2.46  28  eP      Pn       22 34 38.6 +0.1
KDTR                               eS      Sn       22 35 07.5 +0.2
MIPR  Malaya Ipel'ka     2.66   7   PN     Pn       22 34 42.2 +1.0
MIPR  Malaya Ipel'ka     2.66   7  eP      Pn       22 34 42.2 +1.0
ASAK  Asacha             2.94  20   PN     Pn       22 34 46.9 +1.8
ASAK  Asacha             2.94  20  eP      Pn       22 34 46.9 +1.8
MTVR  Mutnovka           3.10  23   PN     Pn       22 34 48.4 +1.1
MTVR                                S      Sn       22 35 24.5 +1.4
MTVR  Mutnovka           3.10  23  eP      Pn       22 34 48.4 +1.1
MTVR                               eS      Sn       22 35 24.5 +1.4
GRL   Gorelyy            3.13  21   PN     Pn       22 34 49.4 +1.6
GRL                                 S      Sn       22 35 26.4 +2.4
GRL   Gorelyy            3.13  21  eP      Pn       22 34 49.4 +1.6
GRL                                eS      Sn       22 35 26.4 +2.4
RUS   Russkaya           3.14  26   PN     Pn       22 34 48.4 +0.7
RUS                                 S      Sn       22 35 23.4 -0.5
RUS   Russkaya           3.14  26  eP      Pn       22 34 48.4 +0.7
RUS                                eS      Sn       22 35 23.4 -0.5
APC   Apacha             3.34  10   PN     Pn       22 34 52.8 +2.4
APC   Apacha             3.34  10  eP      Pn       22 34 52.8 +2.4
KRMR  Karymshinskiy      3.41  20   PN     Pn       22 34 53.1 +1.7
KRMR  Karymshinskiy      3.41  20  eP      Pn       22 34 53.1 +1.7
PEA0B Petropavlovsk-     3.59  14 cePN     Pn       22 34 55.8 +1.9
PEA0B Petropavlovsk-     3.59  14   Pn     Pn       22 34 54.8 +0.9
PETK  Petropavlovsk-     3.59  14   P      Pn       22 34 55.6 +1.7
           comp=E,40nm,0.4s,baz=110,slow=26,SNR=135
PETK                                S      Sn       22 35 37.7 +2.6
           comp=E,59nm,0.6s,baz=180,slow=18,SNR=3.9
PETK                                LR     LR       22 36 31.3
           comp=E,1μm,20.3s,baz=191,slow=42
PETK  Petropavlovsk-     3.59  14          Pn       22 34 54.7 +0.8
PET   Petropavlovsk      3.71  23⇑ iPN     Pn       22 34 57.0 +1.5
PET                                eS      Sn       22 35 39.3 +1.4
PET                                 smax   smax
           comp=N,2μm,0.5s
PET                                 smax   smax
           comp=E,2μm,0.7s
PET                                 MLR    MLR
           comp=Z,500nm,16.0s
PET   Petropavlovsk      3.71  23   Pn     Pn       22 34 56.0 +0.5
PET   Petropavlovsk      3.71  23  eP      Pn       22 34 57.1 +1.5
PET                                eS      Sn       22 35 40.1 +2.2
DALK  Dalny              3.74  24   PN     Pn       22 34 57.2 +1.2
DALK                                S      Sn       22 35 41.2 +2.5
DALK  Dalny              3.74  24  eP      Pn       22 34 57.2 +1.2
DALK                               eS      Sn       22 35 41.2 +2.5
UGLR  Uglovaya           3.92  23   PN     Pn       22 35 00.6 +2.1
UGLR                                S      Sn       22 35 45.4 +2.1
UGLR  Uglovaya           3.92  23  eP      Pn       22 35 00.6 +2.1
UGLR                               eS      Sn       22 35 45.4 +2.1
AVH   Avacha             3.95  22   PN     Pn       22 35 01.6 +2.7
AVH   Avacha             3.95  22  eP      Pn       22 35 01.6 +2.7
KOK   Koryaka            3.95  21   PN     Pn       22 35 01.8 +2.9
KOK   Koryaka            3.95  21  eP      Pn       22 35 01.8 +2.9
SMAR  Somma              3.96  23   PN     Pn       22 35 01.1 +1.9
```

SMAR				S	**Sn**	**22 35 46.8**	**+2.3**
SMAR	**Somma**	**3.96**	**23**	*e*P	**Pn**	**22 35 01.1**	**+1.9**
SMAR				*e*S	**Sn**	**22 35 46.8**	**+2.3**
KRER	**Koryakskii**	**3.99**	**22**	PN	**Pn**	**22 35 02.0**	**+2.4**
KRER	**Koryakskii**	**3.99**	**22**	*e*P	**Pn**	**22 35 02.0**	**+2.4**
SDLR	**Sedlovina**	**4.00**	**23**	PN	**Pn**	**22 35 01.1**	**+1.5**
SDLR	**Sedlovina**	**4.00**	**23**	*e*P	**Pn**	**22 35 01.1**	**+1.5**
KRX	**Arik**	**4.01**	**21**	PN	**Pn**	**22 35 02.5**	**+2.6**
KRX				S	**Sn**	**22 35 49.6**	**+3.9**
KRX	**Arik**	**4.01**	**21**	*e*P	**Pn**	**22 35 02.5**	**+2.6**
KRX				*e*S	**Sn**	**22 35 49.6**	**+3.9**
NLC	**Nalytchevo**	**4.03**	**28**	PN	**Pn**	**22 34 59.7**	**-0.2**
NLC	**Nalytchevo**	**4.03**	**28**	*e*P	**Pn**	**22 34 59.7**	**-0.2**
SPN	**Mys Shipunski**	**4.19**	**33**	PN	**Pn**	**22 35 02.9**	**+0.7**
SPN				S	**Sn**	**22 35 50.0**	**+0.2**
SPN	**Mys Shipunski**	**4.19**	**33**	*e*P	**Pn**	**22 35 02.9**	**+0.7**
SPN				*e*S	**Sn**	**22 35 50.0**	**+0.2**
GNL	**Ganaly**	**4.20**	**14**	PN	**Pn**	**22 35 05.0**	**+2.7**
GNL	**Ganaly**	**4.20**	**14**	*e*P	**Pn**	**22 35 05.0**	**+2.7**
KII	**Karymskiy**	**4.83**	**23**	PN	**Pn**	**22 35 13.5**	**+2.5**
KII				S	**Sn**	**22 36 08.4**	**+2.8**
KII	**Karymskiy**	**4.83**	**23**	*e*P	**Pn**	**22 35 13.5**	**+2.5**
KII				*e*S	**Sn**	**22 36 08.4**	**+2.8**
MKZ	**Mys Kozlova**	**5.97**	**32**	PN	**Pn**	**22 35 26.0**	**-0.5**
MKZ	**Mys Kozlova**	**5.97**	**32**	*e*P	**Pn**	**22 35 26.0**	**-0.5**
TUMD	**Tumrok D**	**6.12**	**23**	*e*P	**Pn**	**22 35 30.2**	**+1.6**
TUMR	**Tumrok**	**6.13**	**21**	PN	**Pn**	**22 35 30.2**	**+1.3**
TUMR	**Tumrok**	**6.13**	**21**	*e*P	**Pn**	**22 35 31.5**	**+2.6**
ESO	**Esso**	**6.47**	**12**	PN	**Pn**	**22 35 36.6**	**+3.2**
ESO	**Esso**	**6.47**	**12**	*e*P	**Pn**	**22 35 36.6**	**+3.2**
KMNR	**Kamenistaya**	**6.59**	**20**	PN	**Pn**	**22 35 38.1**	**+3.0**
KMNR	**Kamenistaya**	**6.59**	**20**	*e*P	**Pn**	**22 35 38.1**	**+3.0**
KPT	**Kopyto**	**6.78**	**19**	PN	**Pn**	**22 35 41.0**	**+3.3**
KPT	**Kopyto**	**6.78**	**19**	*e*P	**Pn**	**22 35 41.0**	**+3.3**
KOZ	**Kozyrevsk**	**6.79**	**17**	PN	**Pn**	**22 35 40.2**	**+2.4**
KOZ	**Kozyrevsk**	**6.79**	**17**	*e*P	**Pn**	**22 35 40.2**	**+2.4**
BDR	**Baidarnaya**	**7.55**	**21**	PN	**Pn**	**22 35 50.7**	**+2.4**
BDR	**Baidarnaya**	**7.55**	**21**	*e*P	**Pn**	**22 35 50.7**	**+2.4**
SRKR	**Sorokina**	**7.62**	**21**	PN	**Pn**	**22 35 51.0**	**+1.8**
SRKR	**Sorokina**	**7.62**	**21**	*e*P	**Pn**	**22 35 51.0**	**+1.8**
SMKR	**Semkarok**	**7.63**	**22**	PN	**Pn**	**22 35 50.9**	**+1.6**
SMKR	**Semkarok**	**7.63**	**22**	*e*P	**Pn**	**22 35 50.9**	**+1.6**
KBTR	**Krutoberegovo**	**7.68**	**29**	PN	**Pn**	**22 35 50.2**	**+0.3**
KBTR	**Krutoberegovo**	**7.68**	**29**	*e*P	**Pn**	**22 35 50.2**	**+0.3**
BKI	**Bering**	**8.14**	**43**	PN	**Pn**	**22 35 55.6**	**-0.6**
BKI	**Bering**	**8.14**	**43**	*e*P	**Pn**	**22 35 55.6**	**-0.6**
YSS	**Yuzh-Sakhalins**	**9.39**	**258**	*e*PN	Pn	22 36 18.3	+5.0
YSS				*e*S	**Sn**	**22 38 02.5**	**+5.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
MA2	**Magadan**	**10.45**	**344**	P	**Pn**	**22 36 28.6**	**+0.8**
	comp=Z,47nm,0.5s,baz=155,slow=11,SNR=35						
MA2				LR	LR	22 40 31.7	
	comp=Z,229nm,21.9s,baz=156,slow=38						
MA2	**Magadan**	**10.45**	**344**	*de*PN	**Pn**	**22 36 29.0**	**+1.3**
MA2				pmax	pmax		
	comp=Z,29nm,0.6s						
MA2	**Magadan**	**10.45**	**344**	Pn	**Pn**	**22 36 27.7**	**0.0**
JKA	**Kamikawa-asahi**	**10.85**	**245**	Pn	**Pn**	**22 36 34.2**	**+1.0**
ASAJ	**Asahikawa**	**10.85**	**245**	P	**Pn**	**22 36 35.3**	**+2.0**
	comp=Z,22nm,0.7s,baz=90,slow=13,SNR=13						
ASAJ				LR	LR	22 40 20.9	
	comp=Z,172nm,18.9s,baz=34,slow=35						
SHEM	**Shemya Is, Ala**	**11.62**	**68**	P	**Pn**	**22 36 43.6**	**-0.2**
	comp=Z,38nm,0.5s,baz=218,slow=4.7,SNR=4.9						
SHEM				S	Sn	22 38 41.7	-10
	comp=Z,82nm,0.4s,baz=188,slow=20,SNR=12						
SHEM				LR	LR	22 40 41.9	
	comp=Z,97nm,21.6s,baz=280,slow=34						
SMY	**Shemya**	**11.62**	**68**	PN	**Pn**	**22 36 42.8**	**-1.0**
SMY	**Shemya**	**11.62**	**68**	Pn	**Pn**	**22 36 42.8**	**-1.0**
ERM	**Erimo**	**11.88**	**235**	Pn	**Pn**	**22 36 47.5**	**+0.1**
SEY	**Seymchan**	**13.49**	**352**	P	**Pn**	**22 37 11.1**	**+1.8**
	comp=Z,2.3nm,0.4s,baz=167,slow=5.9,SNR=10						
SEY				LR	LR	22 43 28.7	
	comp=Z,250nm,18.5s,baz=116,slow=42						
SEY	**Seymchan**	**13.49**	**352**	*i* PN	**Pn**	**22 37 10.4**	**+1.1**
SEY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLR	**Kul'dur**	**15.93**	**278**	*ce*P	**P**	**22 37 43.8**	**-0.4**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLR				MLR	MLR		
	comp=Z,178nm,15.0s						
KIWB	**Kanaga Island**	**16.95**	**72**	Pn	**Pn**	**22 37 53.9**	**-0.4**
USRK	**Ussuriysk Ar.**	**17.41**	**261**	P	**Pn**	**22 37 59.8**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=66,slow=10,SNR=5.0						
USRK				LR	LR	22 44 22.7	
	comp=Z,76nm,21.8s,baz=30,slow=36						
USRK	**Ussuriysk Ar.**	**17.41**	**261**	Pn	**Pn**	**22 37 58.3**	**-1.6**
ZEA	**Zeya**	**18.37**	**294**	*e*P	Pn	22 38 25.8	+14
MAJO	**Matsushiro**	**18.51**	**232**	*i* P	**P**	**22 38 13.2**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MAJO	**Matsushiro**	**18.51**	**232**	P	**P**	**22 38 12.7**	**-0.1**
MJAR	**Matsushiro Arr**	**18.51**	**232**	P	**P**	**22 38 12.7**	**-0.1**
	comp=Z,4.9nm,0.7s,baz=38,slow=12,SNR=12						
MJAR				LR	LR	22 45 47.8	
	comp=Z,121nm,19.2s,baz=58,slow=38						
MJAR	**Matsushiro Arr**	**18.51**	**232**	P	**P**	**22 38 13.0**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**18.51**	**232**	P	**P**	**22 38 13.0**	**+0.1**
MJB9	**Matsu-Tunnel**	**18.51**	**232**	P	**P**	**22 38 13.0**	**+0.1**
MDJ	**Mudanjiang**	**18.77**	**265**	P	**P**	**22 38 16.4**	**+0.8**
BILL	**Bilibino**	**19.12**	**12**	*e*P	**P**	**22 38 18.1**	**-1.2**
BILL				pmax	pmax		
	comp=Z,12nm,0.4s						
BILL				MLR	MLR		
	comp=Z,238nm,15.0s						
BILL	**Bilibino**	**19.12**	**12**	P	**P**	**22 38 18.8**	**-0.5**
BILL				IAmb	IAmb	22 38 21.8	
	comp=Z,18nm,0.5s						
YAK	**Yakutsk**	**19.22**	**320**	P	**P**	**22 38 19.6**	**-0.8**
	comp=Z,15nm,0.5s,baz=95,slow=0.5,SNR=7.1						
YAK	**Yakutsk**	**19.22**	**320**	*e*P	**P**	**22 38 19.4**	**-1.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK	**Yakutsk**	**19.22**	**320**		**P**	**22 38 19.5**	**-0.8**
YAK				IAmb	IAmb	22 38 23.2	
	comp=Z,38nm,0.7s						
JGF	**Kuroka**	**19.67**	**232**		**P**	**22 38 26.6**	**+1.1**
INU	**Inuyama**	**20.04**	**232**	P	**P**	**22 38 29.8**	**+0.2**
JHJ	**Hachijo jima 2**	**20.54**	**223**	LR	LR	22 50 26.2	
	comp=Z,25nm,18.1s,baz=123,slow=48						
JHS	**Saijyo**	**22.38**	**238**	P	**P**	**22 38 54.6**	**-0.2**
JHS				IAmb	IAmb	22 38 58.7	
	comp=Z,28nm,1.2s						
UNV	**Unalaska Valle**	**23.26**	**65**	P	**P**	**22 39 04.6**	**+1.0**
	baz=275						
KSRS	**Korea Array**	**23.72**	**250**	P	**P**	**22 39 08.5**	**+0.5**
	comp=Z,7.7nm,0.8s,baz=46,slow=10,SNR=19						
	comp=Z,7.7nm,0.8s						
KS19	**Wonju Array Si**	**23.72**	**250**	P	**P**	**22 39 08.0**	**-0.1**
TNA	**Tin City**	**24.46**	**36**	P	**P**	**22 39 15.0**	**+0.4**
TNA	**Tin City**	**24.46**	**36**	P	**P**	**22 39 15.8**	**+1.2**
	baz=247						
JCJ	**Chichijima**	**24.98**	**211**	LR	LR	22 47 48.3	
	comp=Z,35nm,22.0s,baz=106,slow=33						
JNU	**Nakatsue**	**25.02**	**238**	P	**P**	**22 39 19.9**	**0.0**
	comp=Z,12nm,0.9s,baz=28,slow=8.9,SNR=5.9						
	comp=Z,12nm,0.9s						
JNU	**Nakatsue**	**25.02**	**238**	P	**P**	**22 39 19.6**	**-0.4**
JNU				IAmb	IAmb	22 39 21.4	
	comp=Z,20nm,1.0s						
ANM	**Nome**	**25.12**	**39**	P	**P**	**22 39 20.7**	**+0.1**
ANM				pmax	pmax		
	comp=Z,17nm,0.9s						
ANM	**Nome**	**25.12**	**39**	P	**P**	**22 39 20.7**	**+0.1**
ANM				IAmb	IAmb	22 39 24.4	
	comp=Z,17nm,0.9s						
ANM	**Nome**	**25.12**	**39**	P	**P**	**22 39 21.1**	**+0.5**
	baz=252						
TIXI	**Tiksi**	**25.37**	**340**	*ce*P	**P**	**22 39 20.7**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,18nm,0.7s						
TIXI	**Tiksi**	**25.37**	**340**	P	**P**	**22 39 20.9**	**-1.9**
TIXI				IAmb	IAmb	22 39 22.9	
	comp=Z,19nm,0.7s						
RDOG	**Red Dog Mine**	**27.25**	**32**	P	**P**	**22 39 38.6**	**-1.2**
RDOG				IAmb	IAmb	22 39 39.9	
	comp=Z,14nm,0.8s						
RDOG	**Red Dog Mine**	**27.25**	**32**	P	**P**	**22 39 38.3**	**-1.5**
	baz=248,SNR=5.0						
XLT	**XiLinHaoTe**	**27.85**	**274**	⇓*i*P	**P**	**22 39 44.0**	**-1.5**
XLT				pP	pP	22 39 56.8	-1.5
XLT				sP	sP	22 40 05.0	+0.7
XLT				pmax	pmax		
	comp=Z,15nm,1.0s						
XLT				pmax	pmax		
	comp=Z,100nm,3.9s						
TTA	**Tatalina**	**28.88**	**45**	P	**P**	**22 39 55.0**	**+0.5**
TTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TTA	**Tatalina**	**28.88**	**45**	P	**P**	**22 39 55.0**	**+0.5**
TTA	**Tatalina**	**28.88**	**45**	P	**P**	**22 39 54.9**	**+0.5**
	baz=265						
SVW2	**Sparrevohn**	**28.98**	**48**	P	**P**	**22 39 56.3**	**+1.0**
SVW2				IAmb	IAmb	22 40 11.0	
	comp=Z,16nm,1.2s						
L19K	**White Mountain**	**29.36**	**46**	P	**P**	**22 39 59.5**	**+0.8**
	baz=268						
N19K	**Bonanza Creek**	**29.52**	**49**	P	**P**	**22 40 01.2**	**+1.0**
	baz=271						
K20K	**Telida**	**29.79**	**44**	P	**P**	**22 40 03.2**	**+0.8**
K20K	**Telida**	**29.79**	**44**	P	**P**	**22 40 02.8**	**+0.4**
	baz=266						
J20K	**Nowinta River**	**29.82**	**42**	P	**P**	**22 40 03.2**	**+0.5**
J20K	**Nowinta River**	**29.82**	**42**	P	**P**	**22 40 03.7**	**+1.0**
	baz=265,SNR=5.6						
L20K	**Farewell, AK**	**29.83**	**46**	P	**P**	**22 40 04.0**	**+1.1**
	baz=268						
M20K	**Styx River**	**30.17**	**47**	P	**P**	**22 40 07.0**	**+1.2**
	baz=270						
IMAR	**Indian Mountai**	**30.20**	**39**	P	**P**	**22 40 06.2**	**+0.2**
A21K	**Barrow**	**30.48**	**28**	P	**P**	**22 40 08.4**	**0.0**
	baz=250						
H21K	**Melozitna Rive**	**30.54**	**39**	P	**P**	**22 40 09.4**	**+0.3**
H21K	**Melozitna Rive**	**30.54**	**39**	P	**P**	**22 40 09.3**	**+0.3**
	baz=264,SNR=7.1						
CHUM	**Lake Minchumin**	**30.60**	**43**	P	**P**	**22 40 10.4**	**+0.8**
	baz=267						
PPLA	**Purkeypile**	**30.62**	**45**	P	**P**	**22 40 11.1**	**+1.2**
PPLA	**Purkeypile**	**30.62**	**45**	P	**P**	**22 40 10.7**	**+0.8**
	baz=269						
CAST	**Castle Rocks**	**30.68**	**44**	P	**P**	**22 40 11.4**	**+1.0**
CAST	**Castle Rocks**	**30.68**	**44**	P	**P**	**22 40 11.4**	**+1.0**
	baz=268						
I21K	**Tanana**	**30.84**	**40**	P	**P**	**22 40 12.1**	**+0.5**
I21K	**Tanana**	**30.84**	**40**	P	**P**	**22 40 12.2**	**+0.6**
	baz=265						
H11N2	**WAKE ISLAND Hy**	**31.04**	**160**	T	T	23 14 07.9	
	baz=348,slow=76,SNR=224						
H11N1	**WAKE ISLAND Hy**	**31.05**	**160**	T	T	23 14 10.3	
	baz=348,slow=76,SNR=191						
H11N3	**WAKE ISLAND Hy**	**31.05**	**160**	T	T	23 14 08.4	
	baz=348,slow=76,SNR=534						
BPAW	**Bear Paw Mtn.**	**31.20**	**42**	P	**P**	**22 40 15.5**	**+0.6**
BPAW				IAmb	IAmb	22 40 19.8	
	comp=Z,8.4nm,0.9s						
BPAW	**Bear Paw Mtn.**	**31.20**	**42**	P	**P**	**22 40 15.1**	**+0.3**
	baz=268						
KTH	**Kantishna Hill**	**31.21**	**44**	P	**P**	**22 40 16.0**	**+0.9**
KTH				IAmb	IAmb	22 40 17.4	
	comp=Z,15nm,1.1s						
COLD	**Coldfoot**	**31.76**	**37**	P	**P**	**22 40 20.3**	**+0.6**
COLD				IAmb	IAmb	22 40 22.0	
	comp=Z,8.0nm,0.8s						
COLD	**Coldfoot**	**31.76**	**37**	P	**P**	**22 40 20.6**	**+0.8**
	baz=264,SNR=7.9						
H23K	**Yukon River**	**31.90**	**39**	P	**P**	**22 40 21.5**	**+0.5**
H23K	**Yukon River**	**31.90**	**39**	P	**P**	**22 40 22.0**	**+0.9**
	baz=267,SNR=5.9						
I23K	**Minto, Yukon-K**	**31.94**	**41**	P	**P**	**22 40 21.6**	**+0.2**
	baz=268						
NEA2	**Nenana**	**32.05**	**42**	P	**P**	**22 40 23.1**	**+0.8**
NEA2	**Nenana**	**32.05**	**42**	P	**P**	**22 40 22.3**	**0.0**
	baz=269,SNR=13						
RND	**Reindeer**	**32.14**	**44**	P	**P**	**22 40 23.2**	**0.0**
RND				pmax	pmax		
	comp=Z,14nm,0.8s						
RND	**Reindeer**	**32.14**	**44**	P	**P**	**22 40 23.2**	**0.0**
RND				IAmb	IAmb	22 40 24.9	
	comp=Z,14nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**32.18**	**161**	T	T	23 14 36.2	
	baz=347,slow=76,SNR=713						
TOLK	**Toolik Lake Re**	**32.18**	**34**	P	**P**	**22 40 23.7**	**+0.3**
TOLK				IAmb	IAmb	22 40 25.2	
	comp=Z,10nm,0.7s						
TOLK	**Toolik Lake Re**	**32.18**	**34**	P	**P**	**22 40 24.0**	**+0.5**
	baz=262,SNR=14						
H11S3	**WAKE ISLAND Hy**	**32.19**	**161**	T	T	23 14 37.0	
	baz=347,slow=76,SNR=2029						
H11S2	**WAKE ISLAND Hy**	**32.20**	**161**	T	T	23 14 38.0	
	baz=347,slow=76,SNR=860						
WAT1	**Susitna Watana**	**32.29**	**45**	P	**P**	**22 40 24.5**	**0.0**
	baz=272						
KNK	**Knik Glacier**	**32.41**	**48**	P	**P**	**22 40 25.8**	**+0.2**
	baz=275						
MDM	**Murphy Dome**	**32.41**	**41**	P	**P**	**22 40 26.3**	**+0.8**
MDM				IAmb	IAmb	22 40 28.1	
	comp=Z,6.5nm,0.7s						
SONM	**Songino Array**	**32.44**	**286**	P	**P**	**22 40 25.1**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=85,slow=8.0,SNR=2.4						
SONM				PcP	**PcP**	**22 43 12.1**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=108,slow=2.1,SNR=9.4						
SML	**Sawmill**	**32.45**	**47**	P	**P**	**22 40 25.9**	**+0.1**
SML	**Sawmill**	**32.45**	**47**	P	**P**	**22 40 25.8**	**-0.1**
	baz=274,SNR=5.3						
WRH	**Wood River Hil**	**32.47**	**42**	P	**P**	**22 40 26.7**	**+0.7**
WRH				IAmb	IAmb	22 40 30.8	
	comp=Z,9.6nm,1.0s						
TCOL	**CIGO, UAF Yank**	**32.57**	**41**	P	**P**	**22 40 27.4**	**+0.5**
TCOL	**CIGO, UAF Yank**	**32.57**	**41**	P	**P**	**22 40 27.3**	**+0.5**
	baz=270						
COLA	**College**	**32.57**	**41**	*i* P	**P**	**22 40 27.2**	**+0.3**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
COLA	**College**	**32.57**	**41**	P	**P**	**22 40 27.6**	**+0.8**
COLA	**College**	**32.57**	**41**	P	**P**	**22 40 27.4**	**+0.5**
	baz=270						
H24K	**Noodor Dome**	**32.58**	**39**	P	**P**	**22 40 28.1**	**+1.0**
H24K	**Noodor Dome**	**32.58**	**39**	P	**P**	**22 40 27.7**	**+0.6**
	baz=268						
CCB	**Clear Creek Bu**	**32.59**	**41**	P	**P**	**22 40 27.4**	**+0.3**
CCB				IAmb	IAmb	22 40 28.9	
	comp=Z,7.9nm,0.8s						
WAT6	**Susitna Watana**	**32.67**	**45**	P	**P**	**22 40 28.0**	**0.0**
	baz=273						
M23K	**Glacier View**	**32.73**	**47**	P	**P**	**22 40 29.0**	**+0.7**
	baz=275						
POKR	**Poker Plat Res**	**32.75**	**41**	P	**P**	**22 40 29.3**	**+0.8**
POKR				IAmb	IAmb	22 40 30.9	
	comp=Z,12nm,0.7s						
POKR	**Poker Plat Res**	**32.75**	**41**	P	**P**	**22 40 28.8**	**+0.3**
	baz=270,SNR=6.5						
DHY	**Denali Highway**	**32.82**	**44**	P	**P**	**22 40 29.4**	**+0.2**
DHY				IAmb	IAmb	22 40 30.6	
	comp=Z,9.7nm,1.1s						
DHY	**Denali Highway**	**32.82**	**44**	P	**P**	**22 40 29.6**	**+0.4**
	baz=273						
NJ2	**Nanjing**	**32.87**	**252**	*e*P	**P**	**22 40 30.1**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SCM	**Sheep Creek Mo**	**32.92**	**47**	P	**P**	**22 40 29.5**	**-0.5**
SCM				pmax	pmax		
	comp=Z,30nm,1.1s						
SCM	**Sheep Creek Mo**	**32.92**	**47**	P	**P**	**22 40 29.5**	**-0.5**
SCM	**Sheep Creek Mo**	**32.92**	**47**	P	**P**	**22 40 30.6**	**+0.6**
	baz=275						
ILAR	**Eielson Array**	**32.99**	**41**	P	**P**	**22 40 31.0**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=252,slow=6.1,SNR=46						
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**32.99**	**41**	P	**P**	**22 40 30.4**	**-0.1**
M24K	**Tolsona, Glenn**	**33.44**	**46**	P	**P**	**22 40 35.3**	**+0.8**
	baz=276						
K24K	**Donnelly Dome**	**33.50**	**43**	P	**P**	**22 40 35.3**	**+0.3**
	baz=273						
J25K	**Salcha River,**	**33.64**	**42**	P	**P**	**22 40 35.8**	**-0.5**
J25K				IAmb	IAmb	22 40 36.8	
	comp=Z,7.6nm,0.8s						
J25K	**Salcha River,**	**33.64**	**42**	P	**P**	**22 40 35.7**	**-0.6**
	baz=272,SNR=7.3						
Q23K	**Middleton Isla**	**33.69**	**51**	P	**P**	**22 40 36.6**	**0.0**
	baz=279						
PAX	**Paxson**	**33.69**	**44**	P	**P**	**22 40 37.0**	**+0.2**
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PAX	**Paxson**	**33.69**	**44**	P	**P**	**22 40 37.0**	**+0.2**
EYAK	**Cordova Ski Ar**	**33.82**	**49**	P	**P**	**22 40 37.8**	**0.0**
	baz=278						
HARP	**HAARP**	**33.88**	**45**	P	**P**	**22 40 38.6**	**+0.2**
	baz=276						
RIDG	**Independent Ri**	**33.91**	**43**	P	**P**	**22 40 38.7**	**0.0**
RIDG				IAmb	IAmb	22 40 39.7	
	comp=Z,11nm,0.8s						
RIDG	**Independent Ri**	**33.91**	**43**	P	**P**	**22 40 38.4**	**-0.2**
	baz=274						
N25K	**Chitina, Valde**	**34.23**	**47**	P	**P**	**22 40 42.4**	**+0.9**
N25K				IAmb	IAmb	22 40 43.9	
	comp=Z,9.3nm,0.7s						
N25K	**Chitina, Valde**	**34.23**	**47**	P	**P**	**22 40 41.9**	**+0.4**
	baz=278						
DOT	**Dot Lake**	**34.27**	**43**	P	**P**	**22 40 41.8**	**+0.1**
DOT				IAmb	IAmb	22 40 42.8	
	comp=Z,8.1nm,0.6s						
SCRK	**Sand Creek**	**34.28**	**43**	IAmb	IAmb	22 40 43.0	
	comp=Z,8.4nm,1.0s						
SCRK	**Sand Creek**	**34.28**	**43**	P	**P**	**22 40 41.9**	**0.0**
	baz=274,SNR=5.8						
BMRM	**Bremner River**	**34.32**	**48**	P	**P**	**22 40 42.6**	**+0.4**
BMRM	**Bremner River**	**34.32**	**48**	P	**P**	**22 40 42.9**	**+0.7**
	baz=278						
J26L	**Joseph Creek**	**34.43**	**42**	P	**P**	**22 40 43.1**	**0.0**
	baz=274						
MENT	**Mentasta**	**34.49**	**44**	P	**P**	**22 40 44.7**	**+1.0**
MENT				IAmb	IAmb	22 41 00.5	
	comp=Z,8.1nm,1.0s						
HMT	**Hamilton**	**34.58**	**49**	P	**P**	**22 40 46.3**	**+1.9**
GLB	**Gilahina Butte**	**34.63**	**47**	P	**P**	**22 40 45.3**	**+0.4**
L26K	**Log Cabin Wild**	**34.65**	**44**	P	**P**	**22 40 45.4**	**+0.3**
L26K				IAmb	IAmb	22 40 51.6	
	comp=Z,6.4nm,0.6s						
M26K	**Nabesna, AK**	**34.88**	**45**	P	**P**	**22 40 48.4**	**+1.3**
M26K	**Nabesna, AK**	**34.88**	**45**	P	**P**	**22 40 47.7**	**+0.7**
	baz=278,SNR=7.7						
K27K	**Chicken**	**35.11**	**42**	P	**P**	**22 40 50.0**	**+1.0**
K27K	**Chicken**	**35.11**	**42**	P	**P**	**22 40 49.7**	**+0.8**
	baz=276						
L27K	**Beaver Creek,**	**35.33**	**44**	P	**P**	**22 40 52.1**	**+1.2**
L27K	**Beaver Creek,**	**35.33**	**44**	P	**P**	**22 40 52.2**	**+1.3**
	baz=278,SNR=27						
BCAR	**Beaver Creek A**	**35.35**	**44**	P	**P**	**22 40 52.7**	**+1.6**
M27K	**Edge Creek, AK**	**35.41**	**45**	P	**P**	**22 40 52.6**	**+0.9**
M27K	**Edge Creek, AK**	**35.41**	**45**	P	**P**	**22 40 52.5**	**+0.9**
	baz=279,SNR=7.0						
EGAK	**Eagle**	**35.44**	**41**	P	**P**	**22 40 51.4**	**-0.3**
	baz=276						
BARN	**Barnard Glacie**	**35.72**	**47**	P	**P**	**22 40 55.6**	**+1.2**
BVCY	**Beaver Creek**	**35.87**	**45**	P	**P**	**22 40 56.4**	**+0.9**
	baz=279						
YUK3	**Moose Creek**	**36.16**	**46**	P	**P**	**22 40 59.0**	**+0.8**
	baz=280,SNR=6.8						
I29M	**Ogilvie Camp,**	**36.57**	**40**	P	**P**	**22 41 02.5**	**+1.1**
I29M				IAmb	IAmb	22 41 03.6	
	comp=Z,9.4nm,0.9s						
I29M	**Ogilvie Camp,**	**36.57**	**40**	P	**P**	**22 41 02.2**	**+0.7**
	baz=277						
YUK4	**Talbot Arm**	**37.09**	**46**	P	**P**	**22 41 07.3**	**+1.1**
	baz=282						
EPYK	**Eagle Plains**	**37.10**	**38**	P	**P**	**22 41 06.9**	**+1.0**
EPYK				IAmb	IAmb	22 41 08.4	
	comp=Z,14nm,1.1s						
EPYK	**Eagle Plains**	**37.10**	**38**	P	**P**	**22 41 06.9**	**+1.0**
	baz=277						
GUMO	**Guam**	**37.14**	**199**	LR	LR	22 54 51.6	
	comp=Z,37nm,21.7s,baz=87,slow=34						
NRIK	**Noril'sk**	**37.42**	**327**	LR	LR	22 57 47.1	
	comp=Z,69nm,20.6s,baz=68,slow=38						
NRIK	**Noril'sk**	**37.42**	**327**	*i* P	**P**	**22 41 06.5**	**-2.0**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,118nm,13.0s						
M30M	**Minto, Yukon**	**37.69**	**44**	P	**P**	**22 41 12.2**	**+1.2**
	baz=282						
HYT	**Haines Junctio**	**37.75**	**47**	P	**P**	**22 41 12.9**	**+1.3**
HYT				IAmb	IAmb	22 41 14.6	
	comp=Z,9.4nm,0.8s						
HYT	**Haines Junctio**	**37.75**	**47**	P	**P**	**22 41 13.3**	**+1.7**
	baz=284,SNR=6.2						
INK	**Inuvik**	**38.08**	**35**	P	**P**	**22 41 15.5**	**+1.4**
	comp=Z,9.1nm,0.5s,baz=276,slow=6.0,SNR=59						
INK				PcP	**PcP**	**22 43 28.6**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=267,slow=5.1,SNR=2.0						
	comp=Z,9.1nm,0.5s						
INK	**Inuvik**	**38.08**	**35**	P	**P**	**22 41 15.2**	**+1.1**
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK	**Inuvik**	**38.08**	**35**	P	**P**	**22 41 15.2**	**+1.1**
INK				IAmb	IAmb	22 41 16.6	
	comp=Z,9.8nm,0.7s						
INK	**Inuvik**	**38.08**	**35**	P	**P**	**22 41 14.7**	**+0.6**
	baz=278,SNR=12						
N31M	**Braeburn, Yuko**	**38.41**	**46**	P	**P**	**22 41 18.2**	**+1.2**
N31M				IAmb	IAmb	22 41 21.3	
	comp=Z,11nm,0.9s						
N31M	**Braeburn, Yuko**	**38.41**	**46**	P	**P**	**22 41 18.5**	**+1.5**
	baz=284						
M31M	**Drury Creek, Y**	**38.87**	**44**	P	**P**	**22 41 21.6**	**+0.8**
M31M				IAmb	IAmb	22 41 24.1	
	comp=Z,13nm,1.1s						
M31M	**Drury Creek, Y**	**38.87**	**44**	P	**P**	**22 41 22.0**	**+1.1**
	baz=284,SNR=5.2						
WHY	**Whitehorse**	**39.04**	**47**	P	**P**	**22 41 23.9**	**+1.4**
WHY				IAmb	IAmb	22 41 25.7	
	comp=Z,10.0nm,0.9s						
WHY	**Whitehorse**	**39.04**	**47**	P	**P**	**22 41 23.0**	**+0.6**
	baz=286						
SKAG	**Skagway**	**39.16**	**49**	P	**P**	**22 41 23.9**	**+0.7**
SKAG	**Skagway**	**39.16**	**49**	P	**P**	**22 41 24.4**	**+1.2**
	baz=287						
LZH	**Lanzhou**	**39.92**	**271**	⇑P	**P**	**22 41 31.4**	**+1.3**
LZH				sP	sP	22 41 52.8	+3.7
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
LZH				pmax	pmax		
	comp=Z,98nm,5.4s						
LZH				LR	LR		
	comp=N,160nm,15.2s						
LZH				LR	LR		
	comp=E,130nm,15.2s						
LZH				LR	LR		
	comp=Z,140nm,15.2s						
MMPY	**Sheldon Lake,**	**40.17**	**43**	P	**P**	**22 41 32.4**	**+0.8**
	baz=286						
A36M	**Sachs Harbour**	**40.32**	**28**	P	**P**	**22 41 33.2**	**+0.5**
A36M	**Sachs Harbour**	**40.32**	**28**	P	**P**	**22 41 33.3**	**+0.6**
	baz=280						
C36M	**Paulatuk**	**41.26**	**32**	P	**P**	**22 41 41.1**	**+0.6**
C36M				IAmb	IAmb	22 41 42.7	
	comp=Z,16nm,0.8s						
C36M	**Paulatuk**	**41.26**	**32**	P	**P**	**22 41 41.0**	**+0.6**
	baz=284						
ZALV	**Zalesovo Beam**	**42.67**	**304**	P	**P**	**22 41 50.7**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=70,slow=8.5,SNR=5.1						
ZALV				PcP	**PcP**	**22 43 42.6**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=54,slow=2.8,SNR=5.6						
	comp=Z,0.8nm,0.4s						
HKPS	**Hong Kong Po S**	**42.85**	**246**	P	**P**	**22 41 54.7**	**+0.7**
EUNU	**Eureka**	**45.86**	**12**	P	**P**	**22 42 17.6**	**+0.2**
WMQ	**Urumqi**	**45.86**	**290**	*e*P	**P**	**22 42 21.1**	**+3.1**
WMQ				pP	pP	22 42 34.1	+2.8
WMQ				sP	sP	22 42 39.8	+2.7
WMQ				S	**S**	**22 49 00.2**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				LR	LR		
	comp=Z,57nm,19.3s						
YKA	**Yellowknife Ar**	**47.35**	**39**	P	**P**	**22 42 30.4**	**+1.2**
	comp=Z,6.8nm,0.7s,baz=298,slow=7.6,SNR=38						
YKA				PcP	**PcP**	**22 43 59.9**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=301,slow=3.2,SNR=4.8						
	comp=Z,6.8nm,0.7s						
YKA	**Yellowknife Ar**	**47.35**	**39**	P	**P**	**22 42 29.4**	**+0.2**
RES	**Resolute Bay**	**47.41**	**20**	P	**P**	**22 42 29.7**	**+0.1**
RES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RES	**Resolute Bay**	**47.41**	**20**	P	**P**	**22 42 29.7**	**+0.1**
RES				IAmb	IAmb	22 42 31.1	
	comp=Z,6.9nm,0.6s						
MK31	**Makanchi Array**	**47.50**	**296**	*i* P	**P**	**22 42 29.8**	**-0.9**

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MKAR   Makanchi Array     47.50 296   P      P        22 42 29.3  -1.4
       comp=Z,1.6nm,0.7s,baz=61,slow=8.2,SNR=17
MKAR                                  LR     LR       23 03 25.1
       comp=Z,217nm,19.7s,baz=52,slow=37
       comp=Z,1.6nm,0.7s
MKAR   Makanchi Array     47.50 296 i P      P        22 42 29.8  -0.9
MKAR                                  pmax   pmax
       comp=Z,2.0nm,0.7s
PZH    PanZhiHua          47.50 262   P      P        22 42 32.9  +1.9
PZH                                   pmax   pmax
       comp=Z,10.0nm,0.5s
PZH                                   pmax   pmax
       comp=Z,90nm,6.3s
KURK   Kurchatov          47.54 303ceP      P        22 42 30.1  -0.7
KURK                                  pmax   pmax
       comp=Z,9.0nm,1.3s
KURK   Kurchatov          47.54 303   P      P        22 42 29.9  -0.9
KURK                                  IAmb   IAmb     22 42 30.8
       comp=Z,8.0nm,0.9s
KURBB  Kurchatov Arra     47.63 303   P      P        22 42 30.4  -1.2
       comp=Z,4.1nm,0.5s,baz=64,slow=7.9,SNR=19
KURBB                                 PcP    PcP      22 43 59.9  -0.6
       comp=Z,2.4nm,0.6s,baz=64,slow=3.2,SNR=11
       comp=Z,4.1nm,0.5s
MAKZ   Makanchi           47.68 297   P      P        22 42 30.1  -1.9
MAKZ                                  pmax   pmax
       comp=Z,2.0nm,0.8s
MAKZ   Makanchi           47.68 297   P      P        22 42 30.1  -1.9
BRVK   Borovoye           50.69 309ceP      P        22 42 54.2  -0.7
BRVK                                  pmax   pmax
       comp=Z,3.0nm,0.7s
EDM    Edmonton           52.82  49   P      P        22 43 12.3  +1.5
EDM                                   pmax   pmax
       comp=Z,16nm,0.7s
EDM    Edmonton           52.82  49   P      P        22 43 12.3  +1.5
DAG    Danmarks Havn      53.82 359 i P      P        22 43 16.0  -1.8
DAG                                   IAmb   IAmb     22 43 17.6
       comp=Z,3.7nm,0.7s
J04D   Umpqua Nationa     54.01  63   P      P        22 43 21.1  +1.2
       baz=308
ARU    Arti               54.30 317   P      P        22 43 19.5  -2.0
       comp=Z,1.6nm,0.3s,baz=9.8,slow=4.0,SNR=12
ARU                                   PcP    PcP      22 44 24.3  -0.7
       comp=Z,0.7nm,0.5s,baz=188,slow=3.3,SNR=3.3
       comp=Z,1.6nm,0.3s
ARU    Arti               54.30 317c iP      P        22 43 19.4  -2.2
ARU                                   *PP    pP       22 43 36.1  +0.9
ARU                                                   22 44 21.5
ARU                                                   22 45 20.9
ARU                                   S      S        22 50 55.2  -0.1
ARU                                   SS     SKiKP    22 54 27.3  +0.2
ARU                                   pmax   pmax
       comp=Z,3.0nm,0.5s
ARU    Arti               54.30 317   P      P        22 43 19.1  -2.5
ARU                                   IAmb   IAmb     22 43 20.7
       comp=Z,4.6nm,0.7s
AAK    Ala-Archa          54.43 296   P      P        22 43 21.9  -1.0
       comp=Z,0.8nm,0.3s,baz=143,slow=4.5,SNR=7.9
       comp=Z,0.8nm,0.3s
AAK    Ala-Archa          54.43 296ceP      P        22 43 21.7  -1.2
AAK                                   pmax   pmax
       comp=Z,1.0nm,0.7s
J05D   Fort Rock, OR      54.48  63   P      P        22 43 25.2  +1.9
       baz=308
L04D   Klamath Falls      54.52  64   P      P        22 43 24.6  +1.1
       baz=308
MYLDM  Lahad Datu         54.54 228   P      P        22 43 23.3  -0.5
MYLDM                                 IAmb   IAmb     22 43 36.8
       comp=Z,11nm,1.0s
YBH    Yreka Blue Hor     54.58  65   P      P        22 43 26.1  +2.2
       comp=Z,1.5nm,0.6s,baz=39,slow=6.5,SNR=2.6
       comp=Z,1.5nm,0.6s
CHTO   Chiang Mai         54.81 257   P      P        22 43 25.8   0.0
CHTO                                  pmax   pmax
       comp=Z,8.0nm,0.8s
CHTO   Chiang Mai         54.81 257   P      P        22 43 25.8   0.0
CHTO                                  IAmb   IAmb     22 43 27.2
       comp=Z,7.9nm,0.8s
WALA   Waterton Lakes     55.01  53   P      P        22 43 27.3  +0.3
WALA                                  IAmb   IAmb     22 43 29.4
       comp=Z,5.0nm,0.8s
CMAR   Chiang Mai Arr     55.08 257   P      P        22 43 28.2  +0.5
       comp=Z,4.6nm,0.8s,baz=31,slow=6.8,SNR=24
CMAR                                  PcP    PcP      22 44 29.2  +0.6
       comp=Z,1.0nm,0.4s,baz=22,slow=3.7,SNR=5.6
       comp=Z,4.6nm,0.8s
CMAR   Chiang Mai Arr     55.08 257 i P      P        22 43 28.8  +1.1
CMAR                                  pmax   pmax
       comp=Z,5.0nm,0.8s
CMAR   Chiang Mai Arr     55.08 257   P      P        22 43 27.7   0.0
BMO    Blue Mountains     55.76  59   P      P        22 43 32.9  +0.6
BMO                                   pmax   pmax
       comp=Z,5.0nm,1.4s
BMO    Blue Mountains     55.76  59   P      P        22 43 32.9  +0.6
ARCES  ARCESS Array B     55.80 341   P      P        22 43 30.0  -2.2
       comp=Z,1.1nm,0.6s,baz=39,slow=7.3,SNR=9.4
ARCES                                 PcP    PcP      22 44 29.8  -0.8
       comp=Z,1.7nm,0.6s,baz=25,slow=4.0,SNR=5.7
       comp=Z,1.1nm,0.6s
MOD    Modoc Plateau      55.88  64   P      P        22 43 34.4  +1.0
MOD                                   IAmb   IAmb     22 43 36.1
       comp=Z,4.0nm,0.8s
DBG    Daneborg           56.32 359 eP      P        22 43 35.1  -0.7
DBG                                   IAmb   IAmb     22 43 46.5
       comp=Z,16nm,1.2s
PLID   Pearl Lake         56.33  58   P      P        22 43 37.5  +0.8
PLID                                  IAmb   IAmb     22 43 38.9
       comp=Z,5.3nm,1.1s
MSO    Missoula           56.37  56   P      P        22 43 37.1  +0.4
MSO    Missoula           56.37  56   P      P        22 43 37.4  +0.7
       baz=309
KKAR   Karatay Array      56.44 299   P      P        22 43 35.4  -1.8
KKAR   Karatay Array      56.44 299   P      P        22 43 35.4  -1.8
KKAR   Karatay Array      56.44 299   IAmb   IAmb     22 43 37.0
       comp=Z,1.3nm,0.7s
FCC    Fort Churchill     57.69  35   P      P        22 43 46.0  +0.3
FCC                                   pmax   pmax
       comp=Z,8.0nm,0.9s
FCC    Fort Churchill     57.69  35   P      P        22 43 46.0  +0.3
FCC                                   IAmb   IAmb     22 43 47.2
       comp=Z,8.1nm,0.9s
EGMT   Eagleton           57.81  52   P      P        22 43 47.6  +0.7
       baz=310
ABKAR  Akbulak array      58.18 310   P      P        22 43 47.3  -2.0
ABKAR  Akbulak array      58.18 310   IAmb   IAmb     22 43 48.5
       comp=Z,2.5nm,0.5s
HLID   Hailey             58.18  59   P      P        22 43 50.0  +0.3
HLID   Hailey             58.18  59   P      P        22 43 51.0  +1.4
       baz=310
MCMT   McKenzie Canyo     58.23  57   P      P        22 43 50.5  +0.5
BOZ    Bozeman (W)        58.39  55   P      P        22 43 51.8  +0.7
BOZ                                   pmax   pmax
       comp=Z,4.0nm,0.9s
BOZ    Bozeman (W)        58.39  55   P      P        22 43 51.8  +0.7
BOZ                                   IAmb   IAmb     22 43 53.6
       comp=Z,3.7nm,0.8s
BOZ    Bozeman (W)        58.39  55   P      P        22 43 52.4  +1.4
       baz=311
KVN    Kaiserville        58.99  65   P      P        22 43 55.8  +0.4
KVN                                   pmax   pmax
       comp=Z,3.0nm,0.7s
KVN    Kaiserville        58.99  65   P      P        22 43 55.8  +0.4
KVN                                   IAmb   IAmb     22 43 57.4
       comp=Z,2.7nm,0.7s
YHL    Hebgen Lake        59.11  56   P      P        22 43 57.4  +1.1
YHL                                   IAmb   IAmb     22 44 02.8
       comp=Z,6.2nm,1.4s
GAR    Garm               59.19 295   IAmb   IAmb     22 43 56.7
       comp=Z,6.8nm,0.7s
NVAR   Mina Array Bea     59.28  66   P      P        22 43 59.0  +1.6
       comp=Z,1.1nm,0.4s,baz=291,slow=7.5,SNR=7.0
       comp=Z,1.1nm,0.4s
NVAR   Mina Array Bea     59.28  66   P      P        22 43 57.5  +0.1
YHH    Holmes Hill        59.33  56   P      P        22 43 58.9  +1.1
YHH                                   IAmb   IAmb     22 44 00.4
       comp=Z,3.4nm,0.7s
H17A   Grant Village      59.74  56   P      P        22 44 02.5  +2.0
H17A                                  IAmb   IAmb     22 44 04.8
       comp=Z,5.7nm,0.9s
H17A   Grant Village      59.74  56   P      P        22 44 01.7  +1.2
       baz=312
ILULI  Ilulissat          59.76  11   P      P        22 43 58.9  -1.0
ILULI                                 pmax   pmax
       comp=Z,14nm,0.8s
ILULI  Ilulissat          59.76  11   P      P        22 43 58.9  -1.0
FLWY   Flagg Ranch        59.88  56   P      P        22 44 01.7  +0.2
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RLMT   Red Lodge          59.96  55   P      P        22 44 03.1  +1.1
       baz=312
CHGR   Chuyangaron        60.09 296   P      P        22 44 02.0  -0.8
LAO    LASA Array         60.50  52   P      P        22 44 04.9  -0.5
LAO    LASA Array         60.50  52   P      P        22 44 06.5  +1.0
       baz=312
ICESG  Greenland Ices     61.01   6 i P      P        22 44 08.9  +0.1
ICESG                                 IAmb   IAmb     22 44 09.1
       comp=Z,14nm,0.7s
ICESG                               eP      pP       22 44 09.8   -13
DUG    Dugway, Tooele     61.30  61   P      P        22 44 11.8  +0.7
       baz=312
MPMC   Manual Prospec     61.34  67   P      P        22 44 12.4  +0.9
       baz=313
BW06   Boulder Array      61.38  57   P      P        22 44 13.1  +1.4
BW06                                  IAmb   IAmb     22 44 14.2
       comp=Z,6.3nm,1.1s
BW06   Boulder Array      61.38  57   P      P        22 44 12.8  +1.1
       baz=313
PD31   Pinedale Array     61.38  57   P      P        22 44 12.3  +0.6
PD31                                  IAmb   IAmb     22 44 14.1
       comp=Z,4.6nm,0.9s
PDAR   Pinedale Array     61.38  57   P      P        22 44 13.2  +1.6
       comp=Z,3.0nm,0.8s,baz=319,slow=2.5,SNR=25
       comp=Z,3.0nm,0.8s
FURC   Furnace Creek,     61.44  66   P      P        22 44 13.5  +1.6
       baz=313
TPNV   Topopah Spring     61.48  66   P      P        22 44 13.1  +0.8
       baz=313
GWY    Greenwater Val     61.74  67   P      P        22 44 14.3  +0.1
GWY                                   IAmb   IAmb     22 44 16.1
       comp=Z,3.3nm,0.8s
EDW2   Edwards Air Fo     61.83  68   P      P        22 44 15.6  +1.0
       baz=313
SFJD   Kangerlussuaq      61.91  12   P      P        22 44 14.0  -0.5
       comp=Z,6.7nm,0.4s,baz=2.6,slow=7.7,SNR=10
       comp=Z,6.7nm,0.4s
SFJD   Kangerlussuaq      61.91  12   P      P        22 44 14.2  -0.4
SFJD                                  pmax   pmax
       comp=Z,12nm,0.9s
SFJD   Kangerlussuaq      61.91  12   P      P        22 44 14.2  -0.4
GSC    Goldstone, Bar     62.26  67   P      P        22 44 18.2  +0.7
       baz=313
FINES  FINESS Array B     62.30 335   P      P        22 44 15.5  -1.7
       comp=Z,1.1nm,0.5s,baz=41,slow=7.3,SNR=11
FINES                                 PcP    PcP      22 44 55.9  -0.7
       comp=Z,1.0nm,0.8s,baz=99,slow=4.8,SNR=4.1
       comp=Z,1.1nm,0.5s
FINES  FINESS Array B     62.30 335 i P      P        22 44 15.6  -1.6
FINES                                 pmax   pmax
       comp=Z,1.0nm,0.5s
BFSC   Mount Baldy Ra     62.47  69   P      P        22 44 20.2  +1.2
       baz=313
HEC    Hector,Ludlow      62.87  67   P      P        22 44 22.3  +0.7
       baz=313
DY2G   Dye2               62.95  10 eP      P        22 44 21.9  +0.1
DY2G                                  IAmb   IAmb     22 44 23.5
       comp=Z,8.2nm,0.6s
GMRC   Granite Mounta     63.30  67   P      P        22 44 25.5  +1.0
       baz=314
SRU    San Rafael Swe     63.33  60   P      P        22 44 25.4  +0.7
SRU                                   pmax   pmax
       comp=Z,5.0nm,0.8s
SRU    San Rafael Swe     63.33  60   P      P        22 44 25.4  +0.7
SRU                                   IAmb   IAmb     22 44 27.0
       comp=Z,5.0nm,0.8s
RSSD   Black Hills        63.38  53   P      P        22 44 25.6  +0.6
RSSD                                  pmax   pmax
       comp=Z,8.0nm,0.7s
RSSD   Black Hills        63.38  53   P      P        22 44 25.6  +0.6
RSSD   Black Hills        63.38  53   P      P        22 44 25.7  +0.6
       baz=314
BELC   Belle Mtn. Jos     63.63  68   P      P        22 44 27.2  +0.4
       baz=314
O20A   White River Ci     63.90  58   P      P        22 44 29.1  +0.7
       baz=314
OBN    Obninsk            64.09 326 eP      P        22 44 25.6  -3.5
OBN                                 e*PP    pP       22 44 44.5  +1.4
OBN                                 e                22 45 03.0
OBN                                 e                22 46 47.5
OBN                                 ePPP    PPP      22 48 20.4
OBN                                   pmax   pmax
       comp=Z,3.0nm,0.9s
OBN                                   MLR    MLR
       comp=Z,81nm,18.0s
PDMCI  Parker Dam,Lak     64.54  66   P      P        22 44 34.1  +1.6
       baz=314
N23A   Red Feather La     64.62  56   P      P        22 44 34.0  +0.7
       baz=315
SMCO   Snowmass           65.27  58   P      P        22 44 38.1  +0.5
B35A   Bob, Littlefor     65.31  44   P      P        22 44 38.0  +0.7
B35A                                  IAmb   IAmb     22 44 38.6
       comp=Z,4.4nm,0.8s
ISCO   Idaho Springs      65.57  57   P      P        22 44 40.4  +0.9
ISCO                                  pmax   pmax
       comp=Z,5.0nm,0.9s
ISCO   Idaho Springs      65.57  57   P      P        22 44 40.4  +0.9
ISCO   Idaho Springs      65.57  57   P      P        22 44 40.0  +0.5
       baz=315
MVCO   Mesa Verde         65.80  61   P      P        22 44 42.0  +1.1
       baz=315
NB2    NORSAR Subarra     66.14 342   P      P        22 44 41.9  -0.6
       comp=Z,0.6nm,0.5s,baz=25,slow=6.5
NOA    NORSAR Array B     66.14 342   P      P        22 44 41.5  -0.9
       comp=Z,0.4nm,0.5s,baz=226,slow=6.9,SNR=5.9
       comp=Z,0.4nm,0.5s
EYMN   Ely                66.61  43   P      P        22 44 46.1  +0.4
       baz=319
GEYT   Alibeck            66.89 302   P      P        22 44 46.9  -0.7
       comp=Z,2.5nm,0.7s,baz=32,slow=14,SNR=4.7
       comp=Z,2.5nm,0.7s
214A   Organ Pipe Nat     66.98  67   P      P        22 44 49.1  +0.8
       baz=315
SDCO   Great Sand Dun     67.09  58   P      P        22 44 50.5  +1.3
       baz=316
ECSD   EROS Data Cent     67.38  49   P      P        22 44 50.8  +0.1
ECSD                                  IAmb   IAmb     22 44 51.7
       comp=Z,5.7nm,0.8s
ECSD   EROS Data Cent     67.38  49   P      P        22 44 51.1  +0.5
       baz=318
IVI    Ivigtut            67.77  12   P      P        22 44 52.7   0.0
T25A   Trinidad           68.13  58   P      P        22 44 55.9  +0.2
       baz=317
ANMO   Albuquerque        68.57  61   P      P        22 44 59.7  +1.3
       comp=Z,0.7nm,0.5s,baz=315,slow=11,SNR=2.4
       comp=Z,0.7nm,0.5s
ANMO   Albuquerque        68.57  61   P      P        22 44 59.1  +0.7
       baz=316
319A   Douglas            69.50  66   P      P        22 45 04.3  +0.1
319A                                  IAmb   IAmb     22 45 06.9
       comp=Z,7.4nm,0.8s
SCHQ   Schefferville      69.82  25   P      P        22 45 05.7  +0.1
       comp=Z,3.3nm,0.4s,baz=344,slow=6.6,SNR=7.5
       comp=Z,3.3nm,0.4s
SCHQ   Schefferville      69.82  25   P      P        22 45 05.1  -0.5
SCHQ                                  IAmb   IAmb     22 45 07.0
       comp=Z,9.9nm,1.1s
AKASG  Malin Array Be     70.28 327   P      P        22 45 07.0  -1.4
       comp=Z,1.5nm,0.5s,baz=34,slow=6.5,SNR=4.6
       comp=Z,1.5nm,0.5s
AKASG  Malin Array Be     70.28 327 i P      P        22 45 06.9  -1.5
AKASG                                 pmax   pmax
       comp=Z,1.0nm,0.4s
KBZ    Khabaz             70.33 315   P      P        22 45 08.2  -0.6
       comp=Z,2.7nm,0.6s,baz=51,slow=5.1,SNR=8.3
       comp=Z,2.7nm,0.6s
MSTX   Muleshoe           71.36  59   P      P        22 45 16.0  +0.5
       baz=318
MNTX   Cornudas Mount     71.54  63   P      P        22 45 17.4  +0.9
       baz=318
WRA    Warramunga Arr     71.95 202   P      P        22 45 18.8   0.0
       comp=Z,2.6nm,1.0s,baz=20,slow=6.5,SNR=9.9
       comp=Z,2.6nm,1.0s
WRA    Warramunga Arr     71.95 202 i P      P        22 45 19.2  +0.3
WRA                                   pmax   pmax
       comp=Z,3.0nm,1.0s
P38A   Dawn               72.00  50   IAmb   IAmb     22 45 20.1
       comp=Z,8.7nm,0.8s
WMOK   Wichita Mounta     72.98  56   IAmb   IAmb     22 45 26.6
       comp=Z,5.3nm,0.9s
WMOK   Wichita Mounta     72.98  56   P      P        22 45 25.8  +0.8
       baz=319
TUL1   Leonard            73.68  54   P      P        22 45 29.4  +0.2
       baz=320
EKA    Eskdalemuir Ar     73.99 348   P      P        22 45 29.2  -1.4
       comp=Z,0.5nm,0.4s,baz=23,slow=5.7,SNR=12
       comp=Z,0.5nm,0.4s
```

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ABTX   Abilene, Hawle     74.10  58   P      P        22 45 32.6  +1.0
       baz=319
TX32   Lajitas Array      74.28  63   IAmb   IAmb     22 45 34.8
       comp=Z,4.1nm,0.7s
TXAR   Lajitas Array      74.28  63   P      P        22 45 33.9  +1.1
       comp=Z,2.9nm,0.6s,baz=300,slow=4.6,SNR=44
       comp=Z,2.9nm,0.6s
TXAR   Lajitas Array      74.28  63          pP       22 45 47.3  +0.4
CCM    Cathedral Cave     74.34  49   P      P        22 45 32.4  -0.5
CCM                                   pmax   pmax
       comp=Z,9.0nm,1.0s
CCM    Cathedral Cave     74.34  49   P      P        22 45 32.4  -0.5
CCM                                   IAmb   IAmb     22 45 33.9
       comp=Z,8.8nm,0.9s
CCM    Cathedral Cave     74.34  49   P      P        22 45 33.2  +0.3
       baz=322
SFIN   Lafayette          74.48  45   P      P        22 45 33.6  -0.1
       baz=323
DPC    Dobruska-Polom     74.65 335 eP      P        22 45 34.7  +0.2
DPC    Dobruska-Polom     74.65 335 eP      P        22 45 34.7  +0.2
CLL    Collm              74.66 337 eP      P        22 45 34.0  -0.5
CLL    Collm              74.66 337 eP      P        22 45 34.0  -0.5
KRLC   Kraliky            74.77 334 eP      P        22 45 34.5  -0.7
KRLC   Kraliky            74.77 334 eP      P        22 45 34.5  -0.7
FVM    French Village     74.80  49   P      P        22 45 36.2  +0.6
FVM                                   pmax   pmax
       comp=Z,7.0nm,0.8s
FVM    French Village     74.80  49   P      P        22 45 36.2  +0.6
FVM                                   IAmb   IAmb     22 45 36.6
       comp=Z,7.3nm,0.8s
U40A   Yellville          74.86  51   IAmb   IAmb     22 45 36.8
       comp=Z,10nm,0.8s
U40A   Yellville          74.86  51   P      P        22 45 35.9  -0.1
       baz=321
W39A   Magazine           75.28  53   P      P        22 45 38.8  +0.5
       baz=321
O48B   Farmland           75.47  44   P      P        22 45 39.0  -0.4
       baz=324
VRAC   Vranov             75.51 334   P      P        22 45 39.3  -0.1
       comp=Z,1.2nm,0.5s,baz=87,slow=6.8,SNR=3.2
       comp=Z,1.2nm,0.5s
FCAR   Ozark Folk Cen     75.59  51   IAmb   IAmb     22 45 40.4
       comp=Z,6.0nm,0.7s
JCT    Junction City      75.63  60   P      P        22 45 40.9  +0.3
       baz=320
ASAR   Alice Springs      75.64 201   P      P        22 45 41.3  +0.9
       comp=Z,1.2nm,0.8s,baz=15,slow=5.6,SNR=9.3
       comp=Z,1.2nm,0.8s
ASAR   Alice Springs      75.64 201   P      P        22 45 40.8  +0.4
J54A   Appleton           75.77  38   P      P        22 45 40.9  -0.1
WHTX   Lake Whitney,      75.78  57   P      P        22 45 42.3  +1.0
       baz=320
MLR    Muntele Rosu       75.86 326   P      P        22 45 41.2  -0.5
       comp=Z,2.5nm,0.6s,baz=233,slow=12,SNR=5.5
       comp=Z,2.5nm,0.6s
MIAR   Mount Ida          75.89  53   P      P        22 45 42.4  +0.5
       baz=321
W41B   Gary Mavity, V     76.08  52   P      P        22 45 43.4  +0.5
       baz=322
KHC    Kasperske Hory     76.50 336 eP      P        22 45 45.3  +0.1
KHC                                 e                22 45 50.5
KHC    Kasperske Hory     76.50 336 eP      P        22 45 45.3  +0.1
KHC                                 ex      x        22 45 50.5
CKRC   Cesky Krumlov      76.59 335 eP      P        22 45 44.1  -1.5
GERES  GERESS Array B     76.73 336   P      P        22 45 45.6  -0.9
       comp=Z,0.4nm,0.4s,baz=28,slow=6.0,SNR=7.4
       comp=Z,0.4nm,0.4s
CONA   Conrad Observa     76.97 334 eP      P        22 45 49.0  +1.1
       comp=Z,2.7nm,0.7s
RONA   Rosalia, Austr     77.05 334 eP      P        22 45 49.4  +1.2
       comp=Z,3.1nm,1.0s
BNN    Bunyan             77.42 316   P      P        22 45 51.2  +0.5
BNN                                   IAmb   IAmb     22 45 52.2
       comp=Z,10nm,0.8s
MOA    Molln              77.49 335 eP      P        22 45 51.2  +0.5
       comp=Z,3.2nm,1.1s
WVT    Waverly            77.53  48   P      P        22 45 51.4  +0.3
       baz=324
UOSS   Minazif            77.54 294   P      P        22 45 50.7  -0.7
UOSS                                  IAmb   IAmb     22 45 51.3
       comp=Z,11nm,0.9s
BRTR   Keskin Array B     77.67 318   P      P        22 45 51.3  -0.7
       comp=Z,1.2nm,0.7s,baz=64,slow=2.3,SNR=2.8
       comp=Z,1.2nm,0.7s
BIOA   Bad Ischl, Aus     77.80 335 eP      P        22 45 53.1  +0.6
       comp=Z,1.2nm,0.4s
OXF    Oxford             78.04  50   P      P        22 45 54.3  +0.3
       baz=323
SOKA   Soboth             78.34 334 eP      P        22 45 56.1  +0.6
       comp=Z,4.3nm,0.7s
KBA    Koelnbreinsper     78.44 335 eP      P        22 45 56.7  +0.5
       comp=Z,8.0nm,0.5s
OBKA   Obir               78.63 334 eP      P        22 45 57.5  +0.3
       comp=Z,4.6nm,0.9s
WATA   Walderalm          78.68 336 eP      P        22 45 58.2  +0.7
       comp=Z,7.6nm,1.3s
WTTA   Wattenberg         78.73 336 eP      P        22 45 58.5  +0.7
       comp=Z,9.3nm,0.8s
RETA   Reutte             78.75 337 eP      P        22 45 58.3  +0.6
       comp=Z,0.9nm,0.5s
MOTA   Moosalm            78.79 337 eP      P        22 45 58.7  +0.5
       comp=Z,3.9nm,0.7s
SQTA   Sankt Quirin       78.88 337 eP      P        22 45 59.2  +0.6
       comp=Z,6.8nm,0.9s
ABTA   Abfaltersbach      78.97 336 eP      P        22 45 59.2  +0.1
       comp=Z,4.5nm,1.1s
DAVA   Damuels            79.16 337 eP      P        22 46 00.5  +0.4
       comp=Z,5.5nm,0.9s
FETA   Feichten           79.19 337 eP      P        22 46 00.4  +0.1
       comp=Z,1.8nm,0.6s
VTS    Vitosha            79.32 327   P      P        22 46 00.8  -0.3
VTS                                   pmax   pmax
       comp=Z,3.0nm,0.7s
VTS    Vitosha            79.32 327   P      P        22 46 00.8  -0.3
DAVOX  Davos/Dischmat     79.63 337   P      P        22 46 02.3  -0.5
       comp=Z,3.6nm,0.6s,baz=358,slow=9.2,SNR=12
       comp=Z,3.6nm,0.6s
TUE    Stuetta            80.05 337   P      P        22 46 04.9  -0.1
TUE                                   IAmb   IAmb     22 46 06.5
       comp=Z,9.4nm,0.7s
KMSC   Kings Mountain     81.39  44   P      P        22 46 12.3  +0.2
       baz=327
STKA   Stephens Creek     82.20 193   P      P        22 46 16.3  +0.3
       comp=Z,2.4nm,0.7s,baz=112,slow=23,SNR=3.1
       comp=Z,2.4nm,0.7s
OSSC   Osservatorio P     82.30 335   P      P        22 46 16.1  -0.7
OSSC                                  IAmb   IAmb     22 46 17.0
       comp=Z,6.3nm,0.6s
SSB    Saint Sauveur      82.30 340   P      P        22 46 16.4  -0.4
SSB                                   pmax   pmax
       comp=Z,5.0nm,0.7s
SSB    Saint Sauveur      82.30 340   P      P        22 46 16.4  -0.4
SSB                                   IAmb   IAmb     22 46 17.9
       comp=Z,4.7nm,0.7s
NRCA   Norcia             82.41 334   P      P        22 46 17.2  -0.3
SGRT   San Giovanni R     82.60 331   P      P        22 46 16.6  -1.9
SCTE   Santa Cesarea      83.23 329   P      P        22 46 19.4  -2.3
GHAJ   Ghor Haditha       83.75 312   P      P        22 46 24.4  -0.1
FORT   Forrest            83.90 204   P      P        22 46 25.2  +0.3
ITM    Ithomi             84.58 325   P      P        22 46 26.3  -2.3
ITM                                   IAmb   IAmb     22 46 27.5
       comp=Z,7.6nm,0.7s
TIP    Timpagrande        84.61 330   P      P        22 46 28.1  -0.7
TIP                                   IAmb   IAmb     22 46 30.0
       comp=Z,6.2nm,0.9s
IDI    Anoyia             85.09 322   P      P        22 46 28.7  -2.6
       comp=Z,6.0nm,0.6s,baz=37,slow=7.6,SNR=5.3
       comp=Z,6.0nm,0.6s
IDI    Anoyia             85.09 322   P      P        22 46 29.0  -2.3
ESDC   Sonseca Array      89.37 345   P      P        22 46 50.9  -0.9
       comp=Z,1.0nm,0.7s,baz=357,slow=3.5,SNR=10.0
       comp=Z,1.0nm,0.7s
KEST   Kesra              90.08 334   P      P        22 46 54.4  -0.9
       comp=Z,4.3nm,0.9s,baz=69,slow=0.4,SNR=5.7
       comp=Z,4.3nm,0.9s
BOSA   Boshof            137.47 281   PKP    PKPdf    22 53 18.5  -0.4
       comp=Z,1.3nm,0.7s,baz=130,slow=6.1,SNR=3.2
CPUP   Villa Florida     145.22  60   PKPbc  PKPbc    22 53 31.9  -0.4
       comp=Z,4.4nm,0.9s,baz=315,slow=3.1,SNR=9.2
PLCA   Paso Flores       146.32  93   PKPbc  PKPdf    22 53 35.2  +1.0
       comp=Z,1.8nm,0.9s,baz=240,slow=4.0,SNR=4.3
```

TUL ***05*** *22:35:27±1.3, 36.°69N±0.°01×98.°26W±0.°01,* $h5^{km}\pm4^{km}$*,*
ML2.7, ML2.3/52(NEIC), Error ellipse: s-maj=1.8km
s-min=1.3km az=145.0

*NEIC **05** 22:35:27.4±1.2, 36.°68N±0.°01×98.°24W±0.°01, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=339.0*

ISC 05 22:35:27.6±1.5**, 36.°69N**±0.°05×**98.°21W**±0.°08**, h10km, n10, σ0.s66**/11**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.38	80	Pn	Pn	22 35 53.5	+0.5
OKCSW	OKLAHOMA CITY	1.43	154	Pn	Pn	22 35 53.4	-0.3
FNO	Franklin	1.58	155	Pn	Pn	22 35 55.0	-0.7
R32A	Long Quarter,	1.77	347	Pn	Pn	22 35 58.8	+0.4
WMOK	Wichita Mounta	2.01	194	Pn	Pn	22 36 01.8	+0.2
WMOK					Sb	22 36 28.8	-0.5
TUL1	Leonard	2.10	111	Pn	Pn	22 36 02.9	0.0
X34A	Smith Ranch, M	2.11	172	Pn	Pn	22 36 04.5	+1.4
CBKS	Cedar Bluff	2.44	331	Pn	Pn	22 36 07.3	-0.3
KSU1	Kansas State U	2.71	27	Pn	Pn	22 36 11.2	-0.2
KSU1	Kansas State U	2.71	27	S	Pn	22 36 11.5	+0.2
	baz=207						

NOU 05 22:45:47.4, 14.°74S×167.°21E, h90km, MLv4.5/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.70	181	P	Pn	22 46 04.9	+0.9
DVP	Devils Point	3.11	163	P	Pn	22 46 35.4	+0.9
YATNC	Mamie plateau,	7.29	182	P	Pn	22 47 29.5	-1.7
NOUC	Port Laguerre	7.37	187	P	Pn	22 47 32.1	-0.3
ONTNC	Ouen Toro	7.56	185	P	Pn	22 47 36.0	+1.1
OUENC	Ouen Island, N	7.64	183	P	Pn	22 47 36.5	+0.4

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*SKO **05** 22:53:57.4, 40.°76N×21.°64E, h1km*

*ATH **05** 22:53:57.3, 40.°77N×21.°63E, h12km±4km, ML1.9/4, Error ellipse: s-maj=4.8km s-min=1.5km az=306.0*

*TIR **05** 22:53:59.1, 40.°81N×21.°49E, h20km±2km, Md2.8, Ml1.9*

ISC 05 22:53:57.2±0.9**, 40.°77N**±0.°03×**21.°63E**±0.°02**, h10km**±8km**, n20, σ0.s89**/32**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.20	274	P	Pg	22 54 01.2	-0.2
FNA				S	Sg	22 54 04.1	-0.1
FNA				AML	AML	22 54 05.1	
	comp=E,1429µm,0.4s						
FNA				AML	AML	22 54 06.7	
	comp=N,608µm,0.1s						
FNA	Florina	0.20	274	*i* Pg	Pg	22 54 01.2	-0.2
FNA				*i* Sg	Sg	22 54 04.5	+0.3
FNA	Florina	0.20	274	P	Pg	22 54 01.2	-0.2
	baz=251						
FNA				S	Sg	22 54 04.3	+0.1
	baz=251						
KZN	Kozani	0.48	167	P	Pg	22 54 06.1	-0.4
KZN				S	Sg	22 54 13.5	+0.7
KZN				AML	AML	22 54 16.0	
	comp=N,381µm,0.2s						
KZN				AML	AML	22 54 17.3	
	comp=E,392µm,0.2s						
NEST	Nestorio	0.57	232	P	Pg	22 54 08.0	-0.3
NEST				S	Sg	22 54 16.6	+0.8
NEST				AML	AML	22 54 19.6	
	comp=E,249µm,0.3s						
NEST				AML	AML	22 54 21.9	
	comp=N,271µm,0.2s						
GRG	Griva	0.61	72	P	Pg	22 54 09.3	+0.3
GRG	Griva	0.61	72	*i* Pg	Pg	22 54 09.3	+0.3
GRG				*i* Sg	Sb	22 54 18.3	-0.4
KBN	Korca	0.66	257	P	Pg	22 54 10.3	+0.3
	baz=251						
KBN				S	Sb	22 54 19.6	-0.5
	baz=251						
KBN				AMP			
	comp=N,0.4nm,0.5s,baz=251						
PENT	Pentalofos	0.69	213	P	Pg	22 54 10.4	-0.1
OHR	Ohrid	0.72	298	*i* Pg	Pb	22 54 11.7	-0.2
OHR				*i* Sg	Sn	22 54 23.5	-1.0
OHR				*e*Lg	Lg	22 54 24.6	
	comp=N,30nm,0.6s						
KPRO	Kipourio	0.84	194	P	Pg	22 54 12.9	-0.5
VAY	Valandovo	0.90	52	*i* Pg	Pg	22 54 14.8	+0.3
VAY				*i* Sg	Sg	22 54 26.4	+0.3
VAY				*e*Lg	Lg	22 54 31.1	
	comp=N,9.9nm,0.4s						
LIT	Litokhoron	0.94	135	P	Pg	22 54 14.1	-1.1
LIT				AML	AML	22 54 32.8	
	comp=E,135µm,0.4s						
LIT				AML	AML	22 54 33.2	
	comp=N,134µm,0.5s						
LIT	Litokhoron	0.94	135	*i* Pg	Pg	22 54 15.5	+0.3
LIT				*i* Sg	Sg	22 54 27.0	-0.4
TYRN	Tyrnavos	1.15	156	P	Pn	22 54 19.3	0.0
THL	Klokotos Trika	1.24	166	P	Pn	22 54 20.0	-0.6
PHP	Peshkopia	1.28	316	P	Pg	22 54 21.8	0.0
	baz=319						
SOH	Sokhos	1.31	87	*i* Pg	Pg	22 54 22.5	+0.2
SOH				*i* Sg	Sg	22 54 41.6	+2.4
SRN	Sarande	1.53	235	P	Pg	22 54 29.0	+2.4
	baz=232						
IGT	Igoumenitsa	1.59	219	P	Pg	22 54 28.1	+0.5
	baz=216						
IGT				S	Sg	22 54 50.4	+2.1
	baz=216						

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*NIED **05** 23:04:19.8, 45.°58N×142.°65E, h314km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.62; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$-0.85; $M_{r\theta}$-1.75; $M_{\theta\phi}$0.23; $M_{\phi r}$-0.83; Fault plane solution: $M_0$2.24000×10^{16} NP1:ϕ_s88.00000°, δ16.00000°, λ107.00000°. NP2:ϕ_s250.00000°, δ75.00000°, λ85.00000°.*

*JMA **05** 23:04:19.8±0.2, 46°N±1°×14°3E±°, h314km±1km, MV4.2/40, NE OFF HOKKAIDO*

*IDC **05** 23:04:20.4±0.4, 45.°65N×142.°57E, h305km±5km, mb3.7/27, mbtmp4.4/33, Error ellipse: s-maj=11.7km s-min=8.1km az=154.0*

*NEIC **05** 23:04:20.4±1.4, 45.°49N±0.°07×142.°6E±0.°1, h312km±6km, mb4.2/187, Error ellipse: s-maj=12.5km s-min=9.4km az=107.0*

*SKHL **05** 23:04:20.4±0.5, 45.°50N×142.°90E, h316km±1km, mb4.9/11, msha5.5/10*

ISC 05 23:04:20.2±0.5**, 45.°46N**±0.°05×**142.°66E**±0.°04**, h311km**±4km**, n419, σ0.s98**/438**, mb4.2**/132**, 4C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.50	187	*e*P	Pn	23 05 00.1	0.0
JSE				*e*S	S	23 05 31.6	-0.4
JWK2	Keihoku	0.56	256	*e*P	Pn	23 05 00.5	+0.3
JWK2				*e*S	S	23 05 31.5	-0.6
JRR	Rishiri	1.01	252	*e*P	Pn	23 05 02.0	+0.2
JRR				*e*S	S	23 05 35.7	+0.7
JRBN	Rebuntou	1.13	269	*e*P	Pn	23 05 01.7	-0.6
JRBN				*e*S	S	23 05 34.0	-1.9
JSS	Shosan	1.20	209	*e*P	Pn	23 05 03.5	+0.6
JSS				*e*S	S	23 05 37.9	+1.2
ASAJ	Asahikawa	1.34	182	P	Pn	23 05 04.5	+0.9
	570nm,0.7s,baz=337,slow=6.1,SNR=293						
ASAJ				S	S	23 05 39.5	+1.4
	66nm,0.7s,baz=68,slow=32,SNR=21						
ASAJ	Asahikawa	1.34	182	*e*P	Pn	23 05 04.4	+0.8
ASAJ				*e*S	S	23 05 39.7	+1.5
JKA	Kamikawa-asahi	1.34	182		Pn	23 05 04.2	+0.5
JKA				Sn	S	23 05 39.0	+0.8
JYG	Yagishiri	1.35	221	*e*P	Pn	23 05 04.1	+0.5
JYG				*e*S	S	23 05 38.6	+0.4
YSS	Yuzh-Sakhalins	1.50	2		Pn	23 05 03.6	-0.8
YSS	Yuzh-Sakhalins	1.50	2	*e*P	Pn	23 05 03.9	-0.4
YSS				AMB	AMB	23 05 04.3	
	330nm,0.4s						
YSS				*e*S	S	23 05 37.5	-2.1
YSS				A	A	23 05 38.3	
	800nm,0.6s						
YSS				A	A	23 05 38.3	
	300nm,0.6s						
JMP	Maruseppu	1.53	161	*e*P	Pn	23 05 05.5	+0.7
JMP				*e*S	S	23 05 41.1	+0.8
JKK2	Kamakawa 2	1.58	178	*e*P	Pn	23 05 05.9	+0.8
JKK2				*e*S	S	23 05 42.1	+1.2
JTKR	Abashiri--Toko	1.73	149	*e*P	Pn	23 05 06.9	+0.9
JTKR				*e*S	S	23 05 43.3	+0.7
JHR	Hokuryu	1.84	202	*e*P	Pn	23 05 07.9	+1.1
JHR				*e*S	S	23 05 46.0	+2.0
JAB	Ashibetsu	1.98	189	*e*P	Pn	23 05 08.8	+1.0
JAR	Ashorobuto	2.30	159	⇓*e*P	Pn	23 05 11.7	+1.2
JAR				⇓*e*S	S	23 05 51.2	+0.6
JRA	Rausu	2.32	130	*e*P	Pn	23 05 12.0	+1.5
JEW	Eniwo	2.76	199	Pn	Pn	23 05 15.1	+0.6
JEW	Eniwo	2.76	199	*e*P	Pn	23 05 15.9	+1.4
JEW				*e*S	S	23 05 58.3	+0.4
JAK	Akkeshi	2.86	149	*e*P	Pn	23 05 15.6	+0.1
JAK				*e*S	S	23 05 58.0	-1.6
JCH	Churui	2.88	170	*e*P	Pn	23 05 15.1	-0.6
JCH				*e*S	S	23 05 56.9	-3.1
AKK	Akkeshi	2.90	147	*e*P	Pn	23 05 15.3	-0.5
AKK				AMB	AMB	23 05 16.1	
	70nm,0.3s						
AKK				*e*S	S	23 05 58.7	-1.5
AKK				A	A	23 06 00.0	
	1µm,0.4s						
AKK				A	A	23 06 00.0	
	2µm,0.4s						
NMR	Nemuro--Hokkai	3.03	132	*e*P	Pn	23 05 16.7	-0.3
NMR				AMB	AMB	23 05 18.7	
	50nm,0.3s						
NMR				*e*S	S	23 06 00.2	-2.2
NMR				A	A	23 06 01.1	
	200nm,0.4s						
NMR				A	A	23 06 01.1	
	200nm,0.4s						
NEM2	Nemuro 2	3.04	132	*e*P	Pn	23 05 16.4	-0.7
NEM2				*e*S	S	23 05 60.0	-2.7
JNBK	Urakawa-nobuka	3.17	179	*e*P	Pn	23 05 18.7	+0.2
JNBK				*e*S	S	23 06 04.6	-0.5
ERM	Erimo	3.46	174	Pn	Pn	23 05 21.5	+0.1
ERM				Sn	S	23 06 08.0	-2.3
JTM	Tenmabayashi	4.81	195	Pn	Pn	23 05 35.6	-0.5
JTM				Sn	S	23 06 32.1	-4.9
USA0B	Ussuriysk Arra	7.69	264		Pn	23 06 09.3	-0.8
USRK	Ussuriysk Ar.	7.69	264	P	Pn	23 06 10.5	+0.4
	41nm,0.7s,baz=70,slow=12,SNR=81						
USRK				S	S	23 07 38.4	-0.8
	2.5nm,0.7s,baz=67,slow=21,SNR=5.0						
USRK	Ussuriysk Ar.	7.69	264		Pn	23 06 09.8	-0.2
JMM	Marumori	7.71	191		Pn	23 06 10.2	-0.2
JMM				Sn	S	23 07 34.5	-5.3
JSD	Sado	8.11	205		Pn	23 06 14.6	-0.6
MDJ	Mudanjiang	9.30	269		Pn	23 06 28.3	-1.3
MDJ	Mudanjiang	9.30	269	P	Pn	23 06 29.9	+0.3
MDJ				pmax	pmax		
	comp=Z,43nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.4s						
JYT	Yasato	9.40	192	Pn	Pn	23 06 30.2	-0.9
MJB9	Matsu-Tunnel	9.52	202		Pn	23 06 32.6	+0.2
MAJO	Matsushiro	9.52	202	Pn	Pn	23 06 32.1	-0.4
MJAR	Matsushiro Arr	9.52	202	P	Pn	23 06 33.0	+0.6
	comp=Z,17nm,0.9s,baz=7.4,slow=12,SNR=26						
MJAR	Matsushiro Arr	9.52	202		Pn	23 06 31.7	-0.8
JGF	Kuroka	10.64	204		Pn	23 06 45.6	-0.5
BNX	BinXian	10.70	277	⇑P	Pn	23 06 46.0	-0.7
BNX				pmax	pmax		
	comp=Z,57nm,0.9s						
BNX				pmax	pmax		
	comp=Z,340nm,5.1s						
INU	Inuyama	10.97	205		Pn	23 06 49.3	-0.8
CN2	Changchun	12.38	268	*e*P	Pn	23 07 06.7	-0.3
CN2				pmax	pmax		
	comp=Z,50nm,0.7s						
PEA0B	Petropavlovsk-	12.43	47		Pn	23 07 07.5	0.0
PETK	Petropavlovsk-	12.43	47	P	Pn	23 07 06.9	-0.6
	comp=Z,11nm,0.8s,baz=225,slow=8.4,SNR=22						
PETK	Petropavlovsk-	12.43	47	P	Pn	23 07 07.7	+0.1
JHJ2	Mitsune	12.52	191		Pn	23 07 09.1	+0.2
JHS	Saijyo	12.73	218		Pn	23 07 11.3	0.0
KSRS	Korea Array	13.63	239	P	Pn	23 07 24.0	+2.0
	comp=Z,2.8nm,0.5s,baz=52,slow=11,SNR=10						
MA2	Magadan	14.96	16	P	P	23 07 35.2	-0.7
	comp=Z,26nm,0.8s,baz=194,slow=8.9,SNR=23						
MA2	Magadan	14.96	16	P	P	23 07 36.0	0.0
HIA	Hailar	15.98	292	P	P	23 07 46.4	-0.9
SEY	Seymchan	18.37	14	P	P	23 08 11.9	-0.9
	comp=Z,16nm,0.4s,baz=202,slow=8.5,SNR=46						
XLT	XiLinHaoTe	18.94	275	⇑*i*P	P	23 08 18.3	-0.9
XLT				sP	sP	23 09 42.5	-3.5
XLT				S	S	23 11 33.5	-4.1
XLT				pmax	pmax		
	comp=Z,29nm,0.9s						
XLT				pmax	pmax		
	comp=Z,120nm,4.2s						
BJT	Baijiatuau	20.16	264		P	23 08 31.6	-0.3
BJT				IAmb	IAmb	23 08 32.0	
	comp=Z,16nm,0.9s						
TIA	Tai'an	21.34	253	⇑P	P	23 08 44.0	+0.7
TIA				pmax	pmax		
	comp=Z,13nm,0.6s						
SMY	Shemya	21.70	59	P	P	23 08 47.0	+0.7
HNS	HongShan	22.37	259	⇓P	P	23 08 53.8	+1.2
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
ULN	Ulaanbaatar	24.43	289	P	P	23 09 11.4	+0.1
SONM	Songino Array	24.87	289	P	P	23 09 15.2	0.0
	comp=Z,19nm,0.5s,baz=80,slow=8.8,SNR=159						
SONM				ScP	ScP	23 15 51.5	+1.2
	comp=Z,1.3nm,0.8s,baz=99,slow=2.3,SNR=9.5						
	comp=Z,19nm,0.5s						
SONM	Songino Array	24.87	289	P	P	23 09 15.3	0.0
NACB	Ninganchiao	27.23	226	P	P	23 09 37.0	+0.7
NACB				IAmb	IAmb	23 09 40.4	
	comp=Z,17nm,1.1s						
XAN	Xi'an	28.14	258	P	P	23 09 45.1	+0.8
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN				LR	LR		
	comp=N,290nm,19.4s						
XAN				LR	LR		
	comp=E,210nm,19.5s						
XAN				LR	LR		
	comp=Z,370nm,19.5s						
LZH	Lanzhou	30.60	266	⇑P	P	23 10 07.6	+1.5
LZH				pmax	pmax		
	comp=Z,40nm,1.5s						
GTA	Gaotai	31.90	275	*e*P	P	23 10 18.2	+0.8
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
ANM	Nome	34.11	37	P	P	23 10 34.5	-1.3
	baz=261						
GOMU	GeErMu	36.90	273	P	P	23 11 00.5	+0.3
GOMU				pmax	pmax		
	comp=Z,12nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,61nm,5.3s						
CNBA	Chernabura Isl	37.19	54	P	P	23 11 01.1	-0.8
ZAA0	Zalesovo Array	37.40	305	P	P	23 11 02.1	-1.6
ZALV	Zalesovo Beam	37.40	305	P	P	23 11 02.7	-1.0
	comp=Z,1.7nm,0.4s,baz=81,slow=5.5,SNR=8.2						
ZALV				ScP	ScP	23 16 32.8	+0.9
	comp=Z,0.3nm,0.3s,baz=106,slow=4.7,SNR=2.0						
	comp=Z,1.7nm,0.4s						
ZALV	Zalesovo Beam	37.40	305	P	P	23 11 02.2	-1.5
PZH	PanZhiHua	37.64	254	P	P	23 11 06.9	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.2s						
TTA	Tatalina	38.17	41	P	P	23 11 09.4	-0.7
TTA	Tatalina	38.17	41	P	P	23 11 09.8	-0.3
	baz=272						
N18K	Kilae Creek	38.38	44	P	P	23 11 11.7	-0.1
N18K	Kilae Creek	38.38	44	P	P	23 11 11.5	-0.3
	baz=275						
A21K	Barrow	38.43	27	P	P	23 11 10.8	-1.2
A21K	Barrow	38.43	27	P	P	23 11 10.6	-1.4
	baz=261						
WMQ	Urumqi	38.50	288	*e*P	P	23 11 13.6	+0.5
WMQ				pP	pP	23 12 14.5	+0.4
WMQ				sP	sP	23 12 50.0	+0.5
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				LR	LR		
	comp=N,400nm,17.5s						
WMQ				LR	LR		
	comp=E,430nm,18.7s						
WMQ				LR	LR		
	comp=Z,300nm,21.5s						
L19K	White Mountain	38.75	42	P	P	23 11 15.0	+0.2
L19K	White Mountain	38.75	42	P	P	23 11 15.3	+0.5
	baz=274						
O18K	Koktuh Hills	38.80	45	P	P	23 11 16.5	+1.2
O18K				IAmb	IAmb	23 11 30.4	
	comp=Z,10.0nm,1.1s						
J20K	Nowinta River	38.96	38	P	P	23 11 16.1	-0.3
J20K				IAmb	IAmb	23 11 18.9	
	comp=Z,11nm,0.8s						
J20K	Nowinta River	38.96	38	P	P	23 11 16.5	0.0
	baz=272,SNR=10						
M19K	Big River Lodg	38.99	42	P	P	23 11 16.8	0.0
	baz=275						
K20K	Telida	39.03	40	P	P	23 11 16.9	-0.2
K20K	Telida	39.03	40	P	P	23 11 16.7	-0.4
	baz=274						
N19K	Bonanza Creek	39.05	44	P	P	23 11 18.1	+0.6
N19K				IAmb	IAmb	23 11 19.5	
	comp=Z,9.7nm,1.1s						
N19K	Bonanza Creek	39.05	44	P	P	23 11 17.8	+0.4
	baz=276						
IMAR	Indian Mountai	39.08	36	P	P	23 11 16.2	-1.3
L20K	Farewell, AK	39.18	41	P	P	23 11 17.5	-0.9
	baz=275						
CHIR	Chirikof Islan	39.23	52	P	P	23 11 18.4	-0.4
H21K	Melozitna Rive	39.48	36	P	P	23 11 19.8	-0.9
H21K	Melozitna Rive	39.48	36	P	P	23 11 19.6	-1.2
	baz=272,SNR=5.8						
M20K	Styx River	39.59	42	P	P	23 11 22.0	+0.2
M20K	Styx River	39.59	42	P	P	23 11 21.3	-0.5
	baz=276						
Q19K	Cape Douglas,	39.73	47	P	P	23 11 22.8	-0.1
Q19K	Cape Douglas,	39.73	47	P	P	23 11 23.1	+0.2
	baz=279						
CHUM	Lake Minchumin	39.78	39	P	P	23 11 23.3	+0.1
	baz=274						
I21K	Tanana	39.84	37	P	P	23 11 23.2	-0.5
	baz=273						
CAST	Castle Rocks	39.92	40	P	P	23 11 24.7	+0.3
CAST				IAmb	IAmb	23 11 25.6	
	comp=Z,6.2nm,0.7s						
CAST	Castle Rocks	39.92	40	P	P	23 11 23.7	-0.7
	baz=275						
PPLA	Purkeypile	39.92	40	P	P	23 11 25.0	+0.5
SPCR	Spurr Chakacha	40.11	43	P	P	23 11 25.4	-0.6
	baz=278						
OHAK	Old Harbor	40.22	49	P	P	23 11 26.4	-0.5
OHAK				IAmb	IAmb	23 11 31.5	
	comp=Z,21nm,1.0s						
OHAK	Old Harbor	40.22	49	P	P	23 11 26.6	-0.2
	baz=282						
BPAW	Bear Paw Mtn.	40.34	38	P	P	23 11 26.9	-0.9
BPAW	Bear Paw Mtn.	40.34	38	P	P	23 11 27.1	-0.8
	baz=275						
KTH	Kantishna Hill	40.42	39	P	P	23 11 28.3	-0.3
COLD	Coldfoot	40.47	34	P	P	23 11 27.8	-1.0
COLD				IAmb	IAmb	23 11 29.7	
	comp=Z,7.5nm,0.9s						
COLD	Coldfoot	40.47	34	P	P	23 11 27.6	-1.2
	baz=272,SNR=7.2						
KDAK	Kodiak Island	40.48	48	P	P	23 11 29.0	0.0
KDAK				IAmb	IAmb	23 11 33.4	
	comp=Z,19nm,0.9s						
TOLK	Toolik Lake Re	40.66	31	P	P	23 11 29.4	-1.0
TOLK	Toolik Lake Re	40.66	31	P	P	23 11 28.7	-1.7
	baz=271,SNR=5.7						
H23K	Yukon River	40.81	36	P	P	23 11 31.4	-0.2
H23K				IAmb	IAmb	23 11 33.0	
	comp=Z,7.2nm,0.7s						
H23K	Yukon River	40.81	36	P	P	23 11 30.7	-0.9
	baz=274,SNR=12						
CNPM	China Poot	40.84	45	P	P	23 11 31.2	-0.7
CNPM				IAmb	IAmb	23 11 45.1	
	comp=Z,28nm,1.2s						
CUT	Chulitna	40.86	41	P	P	23 11 31.1	-0.8
CUT				IAmb	IAmb	23 11 44.2	
	comp=Z,20nm,1.2s						
CUT	Chulitna	40.86	41	P	P	23 11 31.3	-0.7
	baz=278						
I23K	Minto, Yukon-K	40.95	37	P	P	23 11 31.7	-1.0
	baz=275,SNR=6.5						
MKAR	Makanchi Array	40.96	294	P	P	23 11 32.6	-0.4
	comp=Z,2.9nm,0.7s,baz=53,slow=5.9,SNR=30						
MKAR				ScP	ScP	23 16 46.5	+0.7
	comp=Z,1.3nm,0.7s,baz=67,slow=4.9,SNR=11						
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	40.96	294	P	P	23 11 32.8	-0.3
BRLK	Bradley Lake	40.98	45	P	P	23 11 32.3	-0.7
BWN	Browne	41.00	38	P	P	23 11 33.1	0.0
M22K	Willow	41.02	42	P	P	23 11 31.9	-1.4
	baz=279						
BRSE	Bradley Lake S	41.05	45	P	P	23 11 33.0	-0.7
	baz=280						
NEA2	Nenana	41.12	38	IAmb	IAmb	23 11 35.1	
	comp=Z,8.2nm,0.9s						
NEA2	Nenana	41.12	38	P	P	23 11 32.5	-1.6
	baz=276,SNR=5.9						
MAKZ	Makanchi	41.15	294	P	P	23 11 34.4	-0.3
RC01	Rabbit Creek A	41.31	43	P	P	23 11 35.9	+0.2
RC01				IAmb	IAmb	23 11 36.0	
	comp=Z,12nm,0.9s						
RC01	Rabbit Creek A	41.31	43	P	P	23 11 35.0	-0.7
	baz=280						
RND	Reindeer	41.37	39	P	P	23 11 35.3	-0.9
H24K	Noodor Dome	41.49	36	P	P	23 11 37.0	-0.2
H24K	Noodor Dome	41.49	36	P	P	23 11 36.1	-1.1
	baz=276						
PMR	Palmer	41.51	42	P	P	23 11 37.7	+0.4
PMR				IAmb	IAmb	23 11 39.0	
	comp=Z,5.9nm,0.5s						
WRH	Wood River Hil	41.56	38	P	P	23 11 37.0	-0.7
GHO	Glory Hole Cre	41.58	42	P	P	23 11 37.5	-0.4
GHO				IAmb	IAmb	23 11 40.2	
	comp=Z,21nm,1.0s						
WAT1	Susitna Watana	41.58	40	P	P	23 11 36.1	-1.8
	baz=279						
TCOL	CIGO, UAF Yank	41.61	37	P	P	23 11 37.3	-0.7
TCOL				IAmb	IAmb	23 11 38.1	
	comp=Z,13nm,0.9s						
TCOL	CIGO, UAF Yank	41.61	37	P	P	23 11 35.9	-2.1
	baz=277						
COLA	College	41.61	37	P	P	23 11 37.4	-0.6
COLA				IAmb	IAmb	23 11 39.2	
	comp=Z,12nm,0.8s						
COLA	College	41.61	37	P	P	23 11 35.9	-2.1
	baz=277						
POKR	Poker Plat Res	41.76	37	P	P	23 11 38.5	-0.8
POKR				IAmb	IAmb	23 11 39.9	
	comp=Z,6.9nm,0.4s						
POKR	Poker Plat Res	41.76	37	P	P	23 11 38.5	-0.8
	baz=277						
SML	Sawmill	41.85	42	P	P	23 11 40.0	-0.1
SML				IAmb	IAmb	23 11 40.2	
	comp=Z,17nm,1.2s						
SML	Sawmill	41.85	42	P	P	23 11 39.3	-0.8
	baz=280						
KNK	Knik Glacier	41.86	42	P	P	23 11 39.9	-0.3
KNK				IAmb	IAmb	23 11 42.8	
	comp=Z,9.1nm,0.8s						
KNK	Knik Glacier	41.86	42	P	P	23 11 39.5	-0.7
	baz=280						
KURK	Kurchatov	41.91	301	P	P	23 11 39.8	-0.9
KURK				IAmb	IAmb	23 11 40.2	
	comp=Z,7.9nm,0.6s						
WAT6	Susitna Watana	41.99	40	P	P	23 11 40.1	-1.3
	baz=280						
ILAR	Eielson Array	42.03	37	P	P	23 11 40.2	-1.2
	comp=Z,3.6nm,0.7s,baz=280,slow=7.7,SNR=32						
ILAR				PcP	PcP	23 13 29.3	-0.5
	comp=Z,0.7nm,0.6s,baz=287,slow=3.1,SNR=5.2						
	comp=Z,3.6nm,0.7s						
ILAR	Eielson Array	42.03	37	P	P	23 11 40.6	-0.9
DHY	Denali Highway	42.08	40	P	P	23 11 41.0	-1.0
DHY				IAmb	IAmb	23 11 41.2	
	comp=Z,9.1nm,0.9s						
DHY	Denali Highway	42.08	40	P	P	23 11 40.5	-1.5
	baz=279,SNR=5.6						
M23K	Glacier View	42.14	42	P	P	23 11 42.0	-0.4
	baz=280						
SCM	Sheep Creek Mo	42.31	41	P	P	23 11 43.8	-0.1
SCM				IAmb	IAmb	23 11 54.1	
	comp=Z,11nm,0.9s						
SCM	Sheep Creek Mo	42.31	41	P	P	23 11 43.2	-0.7
	baz=281						
BMAR	Burnt Mountain	42.62	33	P	P	23 11 45.8	-0.4

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K24K  Donnelly Dome    42.66  38  P     P     23 11 45.2 -1.3
      baz=280
J25K  Salcha River,    42.70  37  P     P     23 11 44.7 -2.2
J25K  Salcha River,    42.70  37  P     P     23 11 44.8 -2.1
      baz=279
M24K  Tolsona, Glenn   42.80  41  P     P     23 11 47.8 +0.1
M24K                              IAmb  IAmb  23 11 56.9
      comp=Z,27nm,1.1s
M24K  Tolsona, Glenn   42.80  41  P     P     23 11 46.3 -1.3
      baz=281
FID   Port Fidalgo     42.94  43  P     P     23 11 48.3 -0.4
FID                               IAmb  IAmb  23 12 04.7
      comp=Z,17nm,1.0s
PAX   Paxson           42.95  40  P     P     23 11 48.6 -0.3
PAX   Paxson           42.95  40  P     P     23 11 46.0 -2.9
      baz=281
KLU   Klutina          43.04  42  P     P     23 11 49.4 -0.2
KLU                               IAmb  IAmb  23 11 52.1
      comp=Z,6.5nm,0.6s
KLU   Klutina          43.04  42  P     P     23 11 48.8 -0.8
      baz=282
RIDG  Independent Ri   43.08  38  P     P     23 11 48.6 -1.3
RIDG  Independent Ri   43.08  38  P     P     23 11 48.3 -1.6
      baz=281
HARP  HAARP            43.20  40  P     P     23 11 50.1 -0.8
      baz=282
SCRK  Sand Creek       43.41  38  P     P     23 11 51.1 -1.5
SCRK                              IAmb  IAmb  23 11 51.8
      comp=Z,9.8nm,0.9s
SCRK  Sand Creek       43.41  38  P     P     23 11 51.0 -1.6
      baz=281,SNR=16
J26L  Joseph Creek     43.49  37  P     P     23 11 51.6 -1.5
      baz=281
N25K  Chitina, Valde   43.63  41  P     P     23 11 54.4  0.0
N25K  Chitina, Valde   43.63  41  P     P     23 11 53.8 -0.5
      baz=283
MENT  Mentasta         43.74  39  P     P     23 11 55.4 +0.3
BMRM  Bremner River    43.78  42  P     P     23 11 55.7 +0.2
BMRM                              IAmb  IAmb  23 11 57.6
      comp=Z,15nm,1.0s
L26K  Log Cabin Wild   43.89  39  P     P     23 11 56.5 +0.2
L26K  Log Cabin Wild   43.89  39  P     P     23 11 55.9 -0.4
      baz=283
GLB   Gilahina Butte   44.04  42  P     P     23 11 57.7 +0.2
GLB                               IAmb  IAmb  23 12 01.3
      comp=Z,11nm,1.2s
M26K  Nabesna, AK      44.19  40  P     P     23 11 59.0 +0.3
M26K  Nabesna, AK      44.19  40  P     P     23 11 58.1 -0.5
      baz=284
K27K  Chicken          44.22  38  IAmb  IAmb  23 11 59.1
      comp=Z,7.4nm,0.8s
K27K  Chicken          44.22  38  P     P     23 11 58.4 -0.4
      baz=283
VRDI  Verde Repeater   44.26  42  P     P     23 11 59.4  0.0
VRDI                              IAmb  IAmb  23 12 01.4
      comp=Z,4.4nm,0.5s
EGAK  Eagle            44.45  36  P     P     23 11 60.0 -0.6
EGAK                              IAmb  IAmb  23 12 00.2
      comp=Z,11nm,0.8s
EGAK  Eagle            44.45  36  P     P     23 11 59.6 -1.0
      baz=283,SNR=6.9
L27K  Beaver Creek,    44.55  39  P     P     23 12 01.7 +0.2
L27K  Beaver Creek,    44.55  39  P     P     23 12 01.7 +0.2
      baz=284
BCAR  Beaver Creek A   44.57  39  P     P     23 12 01.7 +0.1
M27K  Edge Creek, AK   44.70  40  P     P     23 12 03.1 +0.3
M27K                              IAmb  IAmb  23 12 03.5
      comp=Z,4.9nm,0.7s
M27K  Edge Creek, AK   44.70  40  P     P     23 12 02.3 -0.5
      baz=284
WAX   Waxell Ridge     44.74  43  P     P     23 12 03.5 +0.4
CHTO  Chiang Mai       44.80 248  P     P     23 12 04.0 +0.1
SNH   Sunshine Point   44.82  43  P     P     23 12 04.5 +0.8
ISLE  Juniper Island   44.95  42  P     P     23 12 04.8  0.0
ISLE                              IAmb  IAmb  23 12 11.7
      comp=Z,17nm,1.0s
CMAR  Chiang Mai Arr   45.06 248  P     P     23 12 06.9 +0.9
      comp=Z,1.4nm,0.3s,baz=36,slow=7.7,SNR=5.7
      comp=Z,1.4nm,0.3s
BARN  Barnard Glacie   45.14  42  P     P     23 12 06.7 +0.4
PRZ   Przheval'sk      45.24 290  P     P     23 12 08.3 +0.9
PRZ                               IAmb  IAmb  23 12 09.2
      comp=Z,8.0nm,0.7s
I29M  Ogilvie Camp,    45.49  35  P     P     23 12 08.3 -0.4
I29M  Ogilvie Camp,    45.49  35  P     P     23 12 07.8 -1.0
      baz=284
YUK3  Moose Creek      45.50  40  P     P     23 12 08.8 -0.3
      baz=286
TABL  Table Mountain   45.56  42  P     P     23 12 09.7 +0.1
TABL                              IAmb  IAmb  23 12 19.1
      comp=Z,19nm,1.1s
EPYK  Eagle Plains     45.87  34  P     P     23 12 10.2 -1.4
BRVK  Borovoye         45.98 307  P     P     23 12 11.9 -0.8
KDJ   Kajisay          46.21 290  IAmb  IAmb  23 12 16.1
      comp=Z,13nm,0.8s
BCPM  Bancas Point     46.43  43  P     P     23 12 16.0  0.0
YUK4  Talbot Arm       46.46  41  P     P     23 12 16.7 +0.2
      baz=288
INK   Inuvik           46.56  31  P     P     23 12 16.1 -0.8
      comp=Z,7.0nm,0.4s,baz=285,slow=6.4,SNR=95
      comp=Z,7.0nm,0.4s
INK   Inuvik           46.56  31  P     P     23 12 16.0 -0.8
INK                               IAmb  IAmb  23 12 16.6
      comp=Z,7.8nm,0.5s
INK   Inuvik           46.56  31  P     P     23 12 15.8 -1.1
      baz=286,SNR=15
ULHL  Ulahol           46.78 291  P     P     23 12 20.0 +0.7
      SNR=5.3
TAPN  Taplejung        46.83 267  eP    P     23 12 21.1 +1.1
      comp=Z,13nm,0.4s
BOOM  Boomskoye usch   46.86 291  P     P     23 12 20.0 +0.2
BOOM                              IAmb  IAmb  23 12 21.4
      comp=Z,13nm,0.7s
TKM2  Tokmak 2         46.89 292  P     P     23 12 20.6 +0.5
      SNR=16
M30M  Minto, Yukon     46.91  39  P     P     23 12 20.2 +0.4
M30M  Minto, Yukon     46.91  39  P     P     23 12 19.5 -0.3
      baz=288
HYT   Haines Junctio   47.15  41  P     P     23 12 22.1 +0.4
HYT                               IAmb  IAmb  23 12 23.7
      comp=Z,13nm,0.9s
HYT   Haines Junctio   47.15  41  P     P     23 12 21.8  0.0
      baz=289,SNR=8.1
ODAN  Odare            47.36 266  eP    P     23 12 25.0 +1.0
      comp=Z,4.5nm,0.4s
KBK   Karagaybulak     47.43 292  P     P     23 12 25.0 +0.8
      SNR=17
USP   Ospenovka        47.44 293  P     P     23 12 24.3 +0.2
      SNR=12
JIRN  Jiri             47.71 268  eP    P     23 12 28.0 +1.2
      comp=Z,1.9nm,0.6s
N31M  Braeburn, Yuko   47.72  40  P     P     23 12 26.3 +0.3
N31M                              IAmb  IAmb  23 12 27.9
      comp=Z,9.5nm,0.8s
N31M  Braeburn, Yuko   47.72  40  P     P     23 12 26.7 +0.7
      baz=290
AAK   Ala-Archa        47.74 292  P     P     23 12 27.1 +0.5
      SNR=6.1
AAK   Ala-Archa        47.74 292  P     P     23 12 26.6  0.0
GUN   Gumba            47.78 269  eP    P     23 12 28.2 +0.9
      comp=Z,20nm,0.4s
RAMN  Ramite           47.86 267  eP    P     23 12 28.6 +0.8
      comp=Z,21nm,0.3s
M31M  Drury Creek, Y   48.09  39  P     P     23 12 28.5 -0.3
M31M  Drury Creek, Y   48.09  39  P     P     23 12 29.2 +0.4
      baz=290
A36M  Sachs Harbour    48.16  25  IAmb  IAmb  23 12 29.8
      comp=Z,7.4nm,0.7s
A36M  Sachs Harbour    48.16  25  P     P     23 12 28.6 -0.5
      baz=289
EKS2  Erkin-Say        48.19 293  P     P     23 12 30.4 +0.4
      SNR=5.9
KSH   Kashi            48.27 288  P     P     23 12 35.0 +4.4
KSH                               pmax  pmax
      comp=Z,4.0nm,1.0s
KSH                               LR    LR
      comp=N,240nm,18.4s
KSH                               LR    LR
      comp=E,550nm,19.6s
KSH                               LR    LR
      comp=Z,820nm,22.2s
PKI   Pulchoki         48.32 269  eP    P     23 12 32.1 +0.7
      comp=Z,12nm,0.6s
PKIN  Phulchoki        48.32 269  eP    P     23 12 32.0 +0.7
      comp=Z,6.7nm,0.5s
WHY   Whitehorse       48.41  41  P     P     23 12 31.9 +0.5
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WHY   Whitehorse       48.41  41  P     P     23 12 31.4 +0.1
      baz=291
AML   Almayashu        48.50 292  P     P     23 12 33.2 +0.5
      SNR=9.7
GKN   Gorkha           48.60 270  eP    P     23 12 34.0 +0.7
      comp=Z,13nm,0.3s
DANN  Dangsing         49.01 271  eP    P     23 12 37.1 +0.6
      comp=Z,26nm,0.5s
BESE  Bessie Mountai   49.21  43  P     P     23 12 37.8 +0.5
BESE                              IAmb  IAmb  23 12 45.4
      comp=Z,8.5nm,0.8s
MMPY  Sheldon Lake,    49.30  37  P     P     23 12 37.5 -0.4
      baz=292
C36M  Paulatuk         49.47  28  IAmb  IAmb  23 12 38.8
      comp=Z,8.9nm,0.6s
C36M  Paulatuk         49.47  28  P     P     23 12 37.9 -1.1
      baz=292
KOLN  Koldanda         49.47 270  eP    P     23 12 41.0 +1.1
      comp=Z,6.4nm,0.2s
JIS   Juneau Island    49.56  44  P     P     23 12 40.2 +0.4
JIS                               IAmb  IAmb  23 12 52.8
      comp=Z,10nm,1.0s
SIT   Sitka            49.58  45  P     P     23 12 41.6 +1.6
SIT                               IAmb  IAmb  23 12 59.5
      comp=Z,21nm,1.1s
PYUN  Piuthan          49.70 271  eP    P     23 12 42.6 +1.0
      comp=Z,7.8nm,0.2s
KK31  Karatay Array    50.09 295  IAmb  IAmb  23 12 44.6
      comp=Z,8.2nm,0.8s
KKAR  Karatay Array    50.09 295  IAmb  IAmb  23 12 44.6
      comp=Z,8.2nm,0.8s
ARU   Arti             50.89 315  P     P     23 12 48.4 -1.3
TGTN  Hyland Airport   51.03  38  P     P     23 12 51.2 +0.4
      baz=295
CRAG  Craig            51.37  46  P     P     23 12 55.1 +1.8
CRAG                              IAmb  IAmb  23 12 57.6
      comp=Z,18nm,1.1s
CRAG  Craig            51.37  46  P     P     23 12 53.1 -0.2
      baz=296
BTK   Batken           51.42 291  IAmb  IAmb  23 12 54.9
      comp=Z,10nm,1.1s
DLBC  Dease Lake       51.57  42  P     P     23 12 56.2 +1.3
      comp=Z,7.2nm,0.8s,baz=282,slow=8.6,SNR=10
      comp=Z,7.2nm,0.8s
DLBC  Dease Lake       51.57  42  P     P     23 12 56.7 +1.8
DLBC                              IAmb  IAmb  23 12 57.6
      comp=Z,7.7nm,0.8s
DIB   Dawson Inlet,    52.74  49  P     P     23 13 04.6 +1.2
DIB                               IAmb  IAmb  23 13 05.5
      comp=Z,12nm,1.0s
MOBC  Moresby Island   53.04  49  P     P     23 13 06.2 +0.6
MOBC                              IAmb  IAmb  23 13 18.6
      comp=Z,10.0nm,1.0s
ABKAR Akbulak array    53.48 306  P     P     23 13 08.1 -0.7
GRNB  Grenville Isla   53.75  47  P     P     23 13 11.8 +1.0
GRNB                              IAmb  IAmb  23 13 12.7
      comp=Z,5.8nm,0.6s
KULM  Kulim            54.14 235  P     P     23 13 15.2 +1.2
KULM                              IAmb  IAmb  23 13 16.6
      comp=Z,5.2nm,0.7s
RES   Resolute Bay     54.23  16  P     P     23 13 12.8 -1.0
      comp=Z,7.5nm,0.5s,baz=298,slow=6.1,SNR=88
      comp=Z,7.5nm,0.5s
RES   Resolute Bay     54.23  16  IAmb  IAmb  23 13 13.3
      comp=Z,9.4nm,0.7s
KBL   Kabul            55.61 286  P     P     23 13 23.8 -0.7
KBL                               IAmb  IAmb  23 13 24.3
      comp=Z,5.3nm,0.7s
YKA   Yellowknife Ar   56.14  33  P     P     23 13 27.5  0.0
      comp=Z,7.2nm,0.7s,baz=304,slow=6.7,SNR=64
      comp=Z,7.2nm,0.7s
HOLB  Holberg          56.36  50  P     P     23 13 30.3 +1.0
HOLB                              IAmb  IAmb  23 13 37.6
      comp=Z,6.7nm,1.1s
ARCES ARCESS Array B   56.50 338  P     P     23 13 30.2 +0.2
      comp=Z,2.2nm,0.9s,baz=36,slow=8.1,SNR=2.0
      comp=Z,2.2nm,0.9s
ARCES ARCESS Array B   56.50 338  P     P     23 13 31.3 +1.3
C03A  Quillayute Air   59.80  51  P     P     23 13 53.3 +0.4
PGC   Sidney           60.00  50  P     P     23 13 55.1 +0.9
PGC                               IAmb  IAmb  23 13 55.9
      comp=Z,8.4nm,0.8s
NLWA  Neilton Lookou   60.51  51  P     P     23 13 58.9 +1.1
NLWA                              IAmb  IAmb  23 14 00.9
      comp=Z,9.6nm,0.9s
GEYT  Alibeck          60.81 296  P     P     23 13 59.7 -0.3
      comp=Z,1.9nm,0.4s,baz=5.7,slow=1.5,SNR=5.6
      comp=Z,1.9nm,0.4s
GEYT  Alibeck          60.81 296  P     P     23 14 00.2 +0.2
D03D  Eldon            60.85  51  P     P     23 14 00.3 +0.2
      baz=307
B05A  Bryant           60.95  50  P     P     23 14 01.0 +0.3
      baz=307
E04D  Cinebar          61.72  51  P     P     23 14 06.5 +0.7
      baz=307
FIA1  FINESS Array S   61.86 331  P     P     23 14 06.2 -0.4
FINES FINESS Array B   61.86 331  P     P     23 14 05.2 -1.3
      comp=Z,0.9nm,0.4s,baz=35,slow=11,SNR=15
      comp=Z,0.9nm,0.4s
FINES FINESS Array B   61.86 331  P     P     23 14 05.8 -0.8
F04A  Amboy            62.18  52  P     P     23 14 10.6 +1.6
EDM   Edmonton         62.27  41  P     P     23 14 10.6 +1.1
LTY   Liberty          62.33  50  P     P     23 14 10.6 +0.6
B08A  Colville Reser   62.36  48  P     P     23 14 10.7 +0.6
H04D  Lebanon          62.87  53  P     P     23 14 14.4 +0.9
      baz=308
I03D  Drain, OR        63.03  54  P     P     23 14 15.1 +0.6
      baz=308
D08A  Wollman Farm,    63.39  49  P     P     23 14 16.3 -0.5
D08A                              IAmb  IAmb  23 14 18.0
      comp=Z,4.2nm,0.7s
I04A  Tendick Farm,    63.51  54  P     P     23 14 18.8 +1.1
      baz=309
NEW   Newport          63.57  47  P     P     23 14 18.9 +0.9
      comp=Z,3.4nm,0.7s,baz=9.2,slow=4.0,SNR=5.3
      comp=Z,3.4nm,0.7s
NEW   Newport          63.57  47  IAmb  IAmb  23 14 19.6
      comp=Z,4.0nm,0.8s
NEW   Newport          63.57  47  P     P     23 14 19.2 +1.2
      baz=310
JTMT  Jette            65.36  46  P     P     23 14 30.9 +1.2
JTMT                              IAmb  IAmb  23 14 31.8
      comp=Z,7.1nm,1.2s
WRA   Warramunga Arr   65.52 189  P     P     23 14 32.0 +1.3
      comp=Z,0.4nm,0.8s,baz=6.3,slow=6.7,SNR=6.6
      comp=Z,0.4nm,0.8s
FCC   Fort Churchill   66.10  28  P     P     23 14 33.6 -0.3
MSO   Missoula         66.14  47  P     P     23 14 35.3 +0.7
      baz=312
KIV   Kislovodsk       66.22 309  P     P     23 14 35.8 +0.7
KBZ   Khabaz           66.25 309  P     P     23 14 35.5 +0.4
      comp=Z,7.1nm,0.9s,baz=41,slow=3.6,SNR=16
      comp=Z,7.1nm,0.9s
NC405 NORSAR Array S   66.61 336  P     P     23 14 36.2 -1.0
NB201 NORSAR Array S   66.78 337  P     P     23 14 36.0 -2.3
NB201                             IAmb  IAmb  23 14 37.3
      comp=Z,7.3nm,0.9s
NB2   NORSAR Subarra   66.81 337  P     P     23 14 37.4 -1.1
      comp=Z,0.4nm,0.4s,baz=32,slow=6.9
NOA   NORSAR Array B   66.81 337  P     P     23 14 37.6 -0.9
      comp=Z,0.4nm,0.5s,baz=35,slow=6.4,SNR=2.0
      comp=Z,0.4nm,0.5s
NBO00 NORSAR Array S   66.94 337  P     P     23 14 38.5 -0.8
EGMT  Eagleton         67.43  44  P     P     23 14 43.4 +0.7
EGMT  Eagleton         67.43  44  P     P     23 14 43.6 +1.0
      baz=314
LRM   Limekiln Ridge   67.58  47  P     P     23 14 44.2 +0.3
BOZ   Bozeman (W)      68.16  47  IAmb  IAmb  23 14 49.0
      comp=Z,5.0nm,0.8s
BOZ   Bozeman (W)      68.16  47  P     P     23 14 48.5 +1.2
      baz=313
KARS  Kars             68.19 306  P     P     23 14 47.4 -0.1
AKASG Malin Array Be   68.27 321  P     P     23 14 47.3 -0.4
      comp=Z,0.4nm,0.3s,baz=39,slow=8.0,SNR=2.0
      comp=Z,0.4nm,0.3s
FRB   Frobisher Bay    68.38  14  P     P     23 14 47.2 -0.9
      comp=Z,5.7nm,0.3s,baz=335,slow=7.0,SNR=22
      comp=Z,5.7nm,0.3s
YHH   Holmes Hill      69.11  47  P     P     23 14 54.3 +0.9
YHH                               IAmb  IAmb  23 14 55.3
      comp=Z,5.1nm,1.1s
ASAR  Alice Springs    69.25 189  P     P     23 14 56.1 +2.2
      comp=Z,0.8nm,0.8s,baz=1.8,slow=5.4,SNR=7.4
      comp=Z,0.8nm,0.8s
NVAR  Mina Array Bea   69.33  56  P     P     23 14 55.6 +0.9
      comp=Z,3.9nm,0.6s,baz=294,slow=6.7,SNR=1.9
      comp=Z,3.9nm,0.6s
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H17A  Grant Village    69.53  47  P     P     23 14 56.9 +1.1
      baz=314
RLMT  Red Lodge        69.69  46  P     P     23 14 57.5 +0.8
      baz=315
GEVA  Gevas            69.75 304  P     P     23 14 56.4 -0.8
LAO   LASA Array       70.08  43  P     P     23 14 59.2 +0.3
      baz=316
GURO  Guroymak-BITLI   70.18 305  P     P     23 14 60.0 +0.3
GURO                              IAmb  IAmb  23 15 02.1
      comp=Z,6.2nm,0.9s
MARNC Mare, Loyalty    70.50 155  P     P     23 14 59.7 -1.8
BW06  Boulder Array    71.20  48  P     P     23 15 05.8 -0.1
BW06                              IAmb  IAmb  23 15 07.3
      comp=Z,4.8nm,0.7s
BW06  Boulder Array    71.20  48  P     P     23 15 06.6 +0.8
      baz=315
PD31  Pinedale Array   71.20  48  P     P     23 15 05.8 -0.1
PD31                              IAmb  IAmb  23 15 07.3
      comp=Z,3.9nm,0.8s
PDAR  Pinedale Array   71.20  48  P     P     23 15 06.5 +0.7
      comp=Z,3.7nm,0.7s,baz=299,slow=2.0,SNR=21
      comp=Z,3.7nm,0.7s
PDAR  Pinedale Array   71.20  48  P     P     23 15 05.9  0.0
FURC  Furnace Creek,   71.50  57  P     P     23 15 08.6 +1.2
      baz=313
TPNV  Topopah Spring   71.53  56  P     P     23 15 09.2 +1.3
      baz=313
JLU   Jordanelle       71.71  50  P     P     23 15 07.2 -1.8
ULM   Lac du Bonnet    72.01  35  P     P     23 15 09.7 -0.6
      comp=Z,5.1nm,0.6s,baz=303,slow=8.1,SNR=5.1
      comp=Z,5.1nm,0.6s
ULM   Lac du Bonnet    72.01  35  P     P     23 15 10.2  0.0
ULM                               IAmb  IAmb  23 15 12.3
      comp=Z,3.4nm,0.6s
BURAR Bucovina Array   72.33 321  P     P     23 15 12.2 -0.1
GSC   Goldstone, Bar   72.34  58  P     P     23 15 13.6 +1.1
      baz=314
RDMU  Red Mountain     72.75  49  P     P     23 15 15.2 +0.2
P17A  Butcher Ranch,   72.89  51  P     P     23 15 16.5 +0.6
RSSD  Black Hills      73.00  44  P     P     23 15 16.4 -0.1
RSSD                              IAmb  IAmb  23 15 17.2
      comp=Z,3.4nm,0.7s
RSSD  Black Hills      73.00  44  P     P     23 15 16.7 +0.2
      baz=318
ILGA  Ilgaz            73.03 312  P     P     23 15 16.7  0.0
P18A  Preston Nutter   73.05  51  P     P     23 15 16.8 -0.1
P18A                              IAmb  IAmb  23 15 32.2
      comp=Z,5.8nm,0.9s
IVI   Ivigtut          73.33   5  P     P     23 15 17.1 -0.6
TPFO  Pinon Flats      73.71  59  P     P     23 15 21.0 +0.4
      baz=314
O20A  White River Ci   73.77  49  P     P     23 15 21.3 +0.4
      baz=316
DPC   Dobruska-Polom   73.85 328  eP    P     23 15 26.3 +5.3
KRLC  Kraliky          73.89 327  eP    P     23 15 21.1 -0.2
BRTR  Keskin Array B   74.03 311  P     P     23 15 22.8 +0.5
      comp=Z,1.7nm,0.8s,baz=113,slow=3.2,SNR=7.6
      comp=Z,1.7nm,0.8s
BRTR  Keskin Array B   74.03 311  P     P     23 15 21.7 -0.7
U15A  North Rim        74.18  54  P     P     23 15 23.1 -0.4
U15A                              IAmb  IAmb  23 15 26.0
      comp=Z,6.7nm,0.8s
BAR   Barrett          74.22  59  P     P     23 15 23.4 -0.1
BAR                               IAmb  IAmb  23 15 25.0
      comp=Z,4.6nm,1.1s
CLL   Collm            74.28 330  eP    P     23 15 23.0 -0.4
B35A  Bob, Littlefor   74.37  35  P     P     23 15 23.9 -0.1
B35A                              IAmb  IAmb  23 15 24.4
      comp=Z,6.0nm,0.8s
N23A  Red Feather La   74.42  47  P     P     23 15 25.7 +1.0
      baz=317
PV23  Carpenter Ridg   74.56  51  P     P     23 15 25.7 +0.1
PDMCI Parker Dam,Lak   74.60  57  P     P     23 15 26.5 +1.0
      baz=315
PV10  Paradox Valley   74.60  51  P     P     23 15 26.6 +0.7
PV14  Lion Creek, Pa   74.61  51  P     P     23 15 25.6 -0.3
PV20  West Nyswonger   74.67  51  P     P     23 15 24.5 -1.7
PV20                              IAmb  IAmb  23 15 28.1
      comp=Z,8.4nm,1.1s
PV19  Morning Glory    74.68  51  P     P     23 15 26.1 -0.2
PV17  East Wray Mesa   74.72  51  P     P     23 15 26.0 -0.4
PV18  Skein Mesa, Pa   74.77  51  P     P     23 15 26.4 -0.3
PV18                              IAmb  IAmb  23 15 28.7
      comp=Z,5.8nm,0.8s
PV07  Paradox Valley   74.77  50  P     P     23 15 25.8 -1.0
PV07                              IAmb  IAmb  23 15 28.5
      comp=Z,3.7nm,0.8s
PV05  Paradox Valley   74.78  51  P     P     23 15 26.0 -0.9
PV03  Paradox Valley   74.80  51  P     P     23 15 27.0 +0.1
PV03                              IAmb  IAmb  23 15 28.8
      comp=Z,3.3nm,0.7s
PV13  Radium Mtn., P   74.88  51  P     P     23 15 27.2 -0.2
PV13                              IAmb  IAmb  23 15 29.4
      comp=Z,3.9nm,0.7s
PV15  Paradox Valley   74.93  50  P     P     23 15 27.5 -0.2
PV15                              IAmb  IAmb  23 15 29.5
      comp=Z,7.1nm,1.0s
PV01  Paradox Valley   75.03  51  P     P     23 15 27.7 -0.6
PV01                              IAmb  IAmb  23 15 29.7
      comp=Z,3.0nm,0.7s
SMCO  Snowmass         75.13  49  P     P     23 15 28.9 -0.1
SMCO                              IAmb  IAmb  23 15 30.8
      comp=Z,3.3nm,0.7s
SUSD  Miller           75.17  41  P     P     23 15 28.7 +0.1
      baz=320
WUAZ  Wupatki          75.35  54  P     P     23 15 31.0 +1.0
      baz=316
ISCO  Idaho Springs    75.39  48  P     P     23 15 30.8 +0.4
      baz=318
EYMN  Ely              75.60  34  P     P     23 15 30.9  0.0
EYMN                              IAmb  IAmb  23 15 31.4
      comp=Z,3.9nm,0.6s
EYMN  Ely              75.60  34  P     P     23 15 30.5 -0.5
      baz=324
MVCO  Mesa Verde       75.74  51  P     P     23 15 31.7 -0.5
MVCO                              IAmb  IAmb  23 15 34.1
      comp=Z,3.8nm,0.8s
MVCO  Mesa Verde       75.74  51  P     P     23 15 33.0 +0.8
      baz=317
KHC   Kasperske Hory   75.87 328  eP    P     23 15 31.2 -1.3
Q24A  Divide           76.25  48  P     P     23 15 35.7 +0.4
      baz=318
S22A  4UR Ranch, Cre   76.26  50  P     P     23 15 35.6 +0.3
      baz=317
OGNE  Ogallala         76.36  45  P     P     23 15 35.8 +0.3
      baz=319
ECSD  EROS Data Cent   76.78  40  P     P     23 15 38.0 +0.3
ECSD                              IAmb  IAmb  23 15 39.0
      comp=Z,2.7nm,0.6s
ECSD  EROS Data Cent   76.78  40  P     P     23 15 37.8 +0.2
      baz=322
SDCO  Great Sand Dun   76.97  49  P     P     23 15 39.8 +0.7
      baz=318
SCHQ  Schefferville    77.00  17  P     P     23 15 38.4 -0.3
      comp=Z,1.6nm,0.3s,baz=17,slow=5.9,SNR=14
      comp=Z,1.6nm,0.3s
SCHQ  Schefferville    77.00  17  P     P     23 15 38.5 -0.1
214A  Organ Pipe Nat   77.05  58  P     P     23 15 40.2 +0.7
      baz=316
T25A  Trinidad         78.00  49  P     P     23 15 44.4 -0.3
T25A                              IAmb  IAmb  23 15 46.3
      comp=Z,4.8nm,0.7s
T25A  Trinidad         78.00  49  P     P     23 15 45.4 +0.6
      baz=319
ANMO  Albuquerque      78.52  52  P     P     23 15 48.5 +0.9
      comp=Z,1.5nm,0.6s,baz=323,slow=6.9,SNR=4.2
      comp=Z,1.5nm,0.6s
ANMO  Albuquerque      78.52  52  P     P     23 15 48.7 +1.1
ANMO  Albuquerque      78.52  52  P     P     23 15 48.8 +1.2
      baz=318
E43A  Lone Tree Farm   78.63  33  P     P     23 15 47.5 -0.3
E43A                              IAmb  IAmb  23 15 48.0
      comp=Z,2.8nm,0.8s
121A  Cookes Peak, D   79.56  54  P     P     23 15 54.5 +1.2
      baz=318
VLDQ  Val d'Or         80.42  26  P     P     23 15 56.4 -0.9
AMTX  Amarillo         81.15  49  P     P     23 16 02.4 +0.9
AMTX  Amarillo         81.15  49  P     P     23 16 02.1 +0.6
      baz=320
P38A  Dawn             81.44  40  P     P     23 16 03.1 +0.3
MNTX  Cornudas Mount   81.54  53  P     P     23 16 04.7 +1.2
      baz=319
T35A  Sooner Cattle    82.20  44  P     P     23 16 07.1 +0.3
WMOK  Wichita Mounta   82.77  47  P     P     23 16 10.4 +0.6
WMOK                              IAmb  IAmb  23 16 11.2
      comp=Z,3.2nm,0.9s
```

WMOK	Wichita Mounta	82.77	47	P	P	23 16 10.7	+0.9
	baz=322						
TRQ	Mont Tremblant	82.99	25	P	P	23 16 10.5	-0.2
TRQ				IAmb	IAmb	23 16 11.9	
	comp=Z,5.3nm,0.9s						
R40A	Maddies Statio	83.10	40	P	P	23 16 11.1	-0.3
TUL1	Leonard	83.35	44	P	P	23 16 13.4	+0.7
	baz=323						
SFIN	Lafayette	83.62	36	P	P	23 16 14.1	+0.1
	baz=327						
CCM	Cathedral Cave	83.76	40	P	P	23 16 14.9	+0.2
CCM				IAmb	IAmb	23 16 15.6	
	comp=Z,3.3nm,0.6s						
CCM	Cathedral Cave	83.76	40	P	P	23 16 15.2	+0.5
	baz=325						
TXAR	Lajitas Array	84.29	53	P	P	23 16 18.7	+1.0
	comp=Z,1.6nm,0.5s,baz=291,slow=3.8,SNR=32						
	comp=Z,1.6nm,0.5s						
U40A	Yellville	84.40	42	P	P	23 16 18.0	0.0
U40A	Yellville	84.40	42	P	P	23 16 18.2	+0.3
	baz=324						
SIUC	Southern Illin	84.94	39	P	P	23 16 20.7	+0.1
S44A	Carbondale	84.94	39	P	P	23 16 20.8	+0.2
MIAR	Mount Ida	85.52	44	P	P	23 16 24.1	+0.6
	baz=324						
LBNH	Lisbon	85.56	24	P	P	23 16 23.3	-0.3
	baz=336						
W41B	Gary Mavity, V	85.65	42	P	P	23 16 24.6	+0.5
	baz=325						
X40A	Basin Creek Fa	85.93	43	P	P	23 16 26.0	+0.5
	baz=325						
WVT	Waverly	86.88	39	P	P	23 16 30.4	+0.3
	baz=327						
TKL	Tuckaleechee C	89.01	36	P	P	23 16 40.7	+0.6
	comp=Z,3.3nm,0.7s,baz=130,slow=1.4,SNR=5.0						
	comp=Z,3.3nm,0.7s						
BKZ	Black Stump Fm	89.56	154	P	P	23 16 42.7	+0.4
BDFB	Brasilia	148.95	20	PKPbc	PKPbc	23 23 32.2	+0.4
	comp=Z,3.5nm,0.3s,baz=235,slow=2.9,SNR=8.7						

*REN **05** 23:11:45.0±2.8, 40°.65N±0°.03×119°.51W±0°.05, h0^{km}±7^{km}, Mwr3.5, ML3.4/97(NEIC), Error ellipse: s-maj=6.2km s-min=4.0km az=111.0*

*NEIC **05** 23:11:45.8±2.8, 40°.63N±0°.03×119°.53W±0°.04, h10^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=2.2km az=128.0*

*NEIC **05** 23:11:48, 40°.65N×119°.56W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.50; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$1.48; $M_{r\theta}$-0.95; $M_{\theta\phi}$1.68; $M_{\phi r}$0.18; Fault plane solution: $M_0$2.34000×10^{14} NP1:ϕ_s69.00000°, δ75.00000°, λ-24.00000°. NP2:ϕ_s165.00000°, δ67.00000°, λ-164.00000°. Principal axes: T 2.3595, Plg6.0000°, Azm118.0000°; N -0.0473, Plg62.0000°, Azm219.0000°; P -2.3122, Plg27.0000°, Azm25.0000°;*

ISC 05 23:11:44.7±0.8**, 40°.66N**±0°.02×**119°.50W**±0°.03**, h9**^{km}**, n72, σ1^{s}44**/83**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAHR	Pah Rah Range	0.96	175	Pg	Pg	23 12 02.7	-0.4
PAHR					Sg	23 12 15.7	0.0
PAHR				IAML		23 12 18.4	
	comp=E,1μm,0.6s						
PAHR				IAML		23 12 19.2	
	comp=N,768nm,0.8s						
BEKR	Beckworth	1.03	220		Pg	23 12 04.3	-0.3
BEKR					Sb	23 12 18.6	-0.1
BEKR				IAML		23 12 21.5	
	comp=N,981nm,0.3s						
BEKR				IAML		23 12 22.1	
	comp=E,699nm,0.6s						
MOD	Modoc Plateau	1.38	334		Pb	23 12 10.8	0.0
YERR	Yerington	1.69	173		Pn	23 12 14.3	-0.3
WVOR	Wild Horse Val	1.88	20		Pn	23 12 17.2	0.0
WVOR				IAML		23 12 48.2	
	comp=E,193nm,0.7s						
ORV	Oroville	1.89	235		Pn	23 12 18.0	+0.8
KVN	Kaiserville	1.94	146		Pn	23 12 17.6	-0.3
KVN				IAML		23 12 46.4	
	comp=E,274nm,1.1s						
KVN				IAML		23 12 48.4	
	comp=N,242nm,0.5s						
RYN	Ryan	2.17	159		Pn	23 12 20.9	-0.3
RYN				IAML		23 12 55.4	
	comp=N,397nm,0.4s						
K05A	Summer Lake	2.31	334	Pg	Pb	23 12 27.3	+0.5
NVAR	Mina Array Bea	2.41	157		Pn	23 12 25.0	+0.4
NV11	Mina Array Sit	2.46	155		Pn	23 12 24.3	-0.9
NV11				IAML		23 13 03.7	
	comp=E,169nm,0.5s						
NV11				IAML		23 13 04.1	
	comp=N,146nm,0.4s						
LHV	Little Huntoon	2.53	162		Pn	23 12 27.2	+1.3
Q09A	Carvers	2.55	135		Pn	23 12 27.1	+0.6
K04D	Chiloquin, OR	2.59	320	Sb	Sg	23 13 08.4	+0.5
	baz=140						
L04D	Klamath Falls	2.62	307		Pb	23 12 31.5	-0.4
L04D				IAML		23 13 20.3	
	comp=E,222nm,0.8s						
L04D				IAML		23 13 22.3	
	comp=N,123nm,1.1s						
L04D	Klamath Falls	2.62	307	Pb	Pb	23 12 31.6	-0.4
	baz=126						
L04D				Sb	Sg	23 13 08.8	-0.2
	baz=126						
YBH	Yreka Blue Hor	2.65	295		Pb	23 12 31.6	-0.9
CMB	Columbia Colle	2.71	195		Pb	23 12 34.4	+0.9
CMB				IAML		23 13 14.5	
	comp=N,79nm,0.4s						
J08A	Circle Bar Ran	2.80	15		Pn	23 12 30.0	+0.1
J08A				IAML		23 13 15.7	
	comp=E,134nm,0.7s						
J08A				IAML		23 13 17.3	
	comp=N,184nm,0.7s						
J05D	Fort Rock, OR	2.92	334	Pb	Pb	23 12 38.5	+1.4
	baz=154						
J05D				Sb	Sg	23 13 19.2	+0.5
	baz=154						
MDPB	Devils Postpil	3.04	174	Pn	Pn	23 12 33.5	+0.2
MDPB					Pb	23 12 41.0	+1.8
MDPB				IAML		23 13 21.7	
	comp=E,61nm,0.7s						
OMMB	Old Mammoth Mi	3.07	173	Pn	Pn	23 12 33.2	-0.5
OMMB				Pg	Pb	23 12 41.7	+2.0
TPH	Tonopah	3.13	145		Pn	23 12 35.0	+0.6
KHMM	Horse Mountain	3.22	275		Pg	23 12 44.9	-1.6
J04D	Umpqua Nationa	3.23	324		Pg	23 12 46.5	-0.2
J04D	Umpqua Nationa	3.23	324	Pg	Pg	23 12 46.6	0.0
	baz=143						
ELK	Elko	3.24	87		Pn	23 12 36.4	+0.4
ELK				IAML		23 13 29.4	
	comp=E,55nm,0.3s						
ELK				IAML		23 13 31.2	
	comp=E,64nm,0.4s						
HUMO	Hull Mountain	3.24	308		Pb	23 12 41.1	-1.3
KMRM	Mail Ridge	3.25	264		Pg	23 12 47.2	+0.3
KMRM				IAML		23 13 00.9	
	comp=N,74nm,4.2s						
KMRM				IAML		23 13 10.5	
	comp=E,56nm,4.3s						
KCPM	Cahto Peak	3.28	254	Pn	Pn	23 12 36.4	0.0
KCPM				Pg	Pg	23 12 45.6	-2.0
PINE	Pine Mountain	3.31	342		Pn	23 12 38.0	+1.1
PINE				Pg	Pg	23 12 46.0	-2.1
PINE				IAML		23 13 34.6	
	comp=E,89nm,0.8s						
PINE				IAML		23 13 47.2	
	comp=N,63nm,1.3s						
I07A	Izee	3.42	360		Pn	23 12 42.0	+3.7
JCC	Jacoby Creek,	3.45	274	Pg	Pg	23 12 48.4	-2.4
JCC				IAML		23 13 43.8	
	comp=N,52nm,3.5s						
JCC				IAML		23 13 43.8	
	comp=E,58nm,4.0s						
KRPM	Rodgers	3.47	280	Pn	Pn	23 12 39.3	+0.4
KRPM				Pg	Pg	23 12 49.6	-1.5
KRPM				IAML		23 13 47.5	
	comp=E,106nm,2.2s						
KRPM				IAML		23 14 02.5	
	comp=N,127nm,1.8s						
KSXB	Camp Six Broad	3.50	291	Pn	Pn	23 12 41.2	+1.7
KSXB					Pg	23 12 50.8	-1.1
KSXB				IAML		23 14 05.4	
	comp=N,44nm,3.2s						
KMPM	Mount Pierce	3.53	268	Pn	Pn	23 12 40.4	+0.5
KMPM				IAML		23 14 03.5	
	comp=E,91nm,2.2s						
KMPM				IAML		23 14 29.6	
	comp=N,79nm,4.6s						
MCCM	Marconi Confer	3.63	227	Pn	Pn	23 12 41.6	+0.5
MCCM				IAML		23 13 45.7	
	comp=E,56nm,2.5s						
MCCM				IAML		23 13 54.3	
	comp=N,59nm,2.7s						
LCH	Last Change Ra	3.72	157		Pn	23 12 43.6	+1.1
R11A	Troy Canyon, C	3.81	126		Pn	23 12 43.5	-0.2
R11A				Pg	Pg	23 12 56.4	-1.3
R11A	Troy Canyon, C	3.81	126	Sb	Sg	23 13 44.8	-2.2
	baz=308						
MFID	Camas Ranch	3.88	44	Pn	Pn	23 12 44.9	+0.2
MFID				IAML		23 13 51.7	
	comp=N,85nm,0.7s						
MFID				IAML		23 13 57.4	
	comp=N,77nm,0.4s						
KBO	Bosley Butte	3.88	295	Pg	Pg	23 12 56.3	-2.8
J01E	Myrtle Point	4.15	308	Pg	Pg	23 13 02.0	-2.2
J01E				IAML		23 13 28.9	
	comp=N,42nm,1.9s						
J01E				IAML		23 13 49.3	
	comp=E,47nm,2.7s						
SAO	San Andreas Ge	4.18	202		Pb	23 13 01.5	+3.0
S11A	Rachel	4.19	135		Pn	23 12 49.9	+1.0
KEBM	Edson Butte	4.24	303		Pn	23 12 50.1	+0.6
BBGB	Big Mountain B	4.25	197		Pg	23 13 03.5	-2.7
BUCK	Buck Mountain	4.38	325	Pg	Pg	23 13 06.1	-2.4
BUCK				IAML		23 14 12.0	
	comp=N,50nm,2.5s						
BUCK				IAML		23 15 38.3	
	comp=E,64nm,3.4s						
H04A	Detroit Lake	4.48	335	Pg	Pg	23 13 09.2	-1.3
BMO	Blue Mountains	4.49	20		Pn	23 12 53.9	+0.9
TPNV	Topopah Spring	4.49	145		Pn	23 12 54.3	+1.2
TPNV				IAML		23 14 19.4	
	comp=E,39nm,1.0s						
TPNV				IAML		23 14 22.5	
	comp=E,50nm,1.1s						
H04D	Lebanon	4.54	329	IAML		23 14 04.5	
	comp=N,35nm,3.3s						
H04D				IAML		23 14 29.7	
	comp=E,39nm,2.9s						
PMPB	Monarch Peak	4.56	193	Pg	Pg	23 13 10.8	-1.2
G08A	Pilot Rock	4.64	5	Pg	Pg	23 13 10.5	-3.2
I02E	Swisshome, OR	4.72	318		Pb	23 13 11.0	+3.5
PRN	Pahroc Range	4.75	132		Pn	23 12 56.9	+0.3
HLID	Hailey	4.76	51		Pn	23 12 56.7	-0.1
HLID				IAML		23 14 18.2	
	comp=E,42nm,0.7s						
HLID				IAML		23 14 19.1	
	comp=E,23nm,0.8s						
PSUT	Pine Spring	4.85	114		Pn	23 12 59.4	+1.3
BGU	Big Grassy Mou	4.92	85		Pn	23 12 57.9	-1.1
GWY	Greenwater Val	4.99	153		Pn	23 13 00.5	+0.5
ISA	Isabella, Lake	5.06	171	IAML		23 14 24.1	
	comp=E,21nm,0.5s						
ISA				IAML		23 14 29.0	
	comp=N,17nm,0.8s						
PLID	Pearl Lake	5.11	29	Pn	Pn	23 13 04.5	+2.7
PLID				Pg	Pg	23 13 21.7	-1.0
DUG	Dugway, Tooele	5.12	93	Pn	Pn	23 13 03.5	+1.8
DUG				IAML		23 14 36.1	
	comp=N,32nm,1.0s						
DUG				IAML		23 14 39.5	
	comp=N,29nm,0.9s						
QSM	Queen of Sheba	5.12	155	Pn	Pn	23 13 01.2	-0.4
HVU	Hansel Valley	5.19	75	Pn	Pn	23 13 04.9	+2.2
SHPR	Sheep Range	5.36	139		Pn	23 13 06.8	+1.7
CCUT	Cedar City	5.69	121		Pn	23 13 10.3	+0.6
CCUT					Pg	23 13 31.2	-2.6
SZCU	Shurtz Canyon	5.85	120	Pn	Pn	23 13 12.8	+1.0
MSU	Marysvale	6.05	108	Pn	Pn	23 13 15.7	+1.1
MTPU	Mount Pierson	6.24	112	Pn	Pn	23 13 19.2	+1.9
LRM	Limekiln Ridge	7.28	43	Pn	Pn	23 13 32.6	+1.1
MSO	Missoula	7.36	31	Pn	Pn	23 13 33.9	+1.5

IDC 05 23:13:05.2±1.6**, 3°.28S**×**130°.63E, h0**^{km}**, mb3.5**/2**, mbtmp3.5**/4**, ML3.5**/2**, Error ellipse: s-maj=60.5km s-min=21.8km az=90.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.48	15	Pn	Pn	23 13 46.8	-0.1
	8.5nm,0.3s,baz=175,slow=17,SNR=28						
SIJI				Sn	Sn	23 14 18.3	+0.3
	5.1nm,0.3s,baz=233,slow=22,SNR=7.6						
	17nm,0.3s						
WRA	Warramunga Arr	16.95	168	Pn	Pn	23 17 04.7	+0.8
	0.2nm,0.3s,baz=348,slow=11,SNR=12						
	0.6nm,0.6s						
ASAR	Alice Springs	20.51	171	P	P	23 17 44.6	-0.5
	3.3nm,0.6s,baz=352,slow=11,SNR=31						
	3.3nm,0.6s						
MKAR	Makanchi Array	65.50	326	P	P	23 23 50.7	+0.3
	0.1nm,0.5s,baz=135,slow=5.4,SNR=1.7						
	0.1nm,0.5s						

*IDC **05** 23:29:09.1±9.0, 38°.07N×142°.74E, h0^{km}, mb3.7/2, mbtmp3.5/3, ML2.4/1, MS3.0/1, Error ellipse: s-maj=188.9km s-min=41.7km az=2.0*

*JMA **05** 23:29:12.0±0.1, 38°.4N±0°.4×142°.3E±0°.7, h33^{km}±1^{km}, MV3.5/39, E OFF MIYAGI PREF*

ISC 05 23:29:08.3±2.1**, 38°.32N**±0°.05×**142°.35E**±0°.09**, h13**^{km}±10^{km}**, n22, σ1^{s}25**/25**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.69	270	i P	Pn	23 29 24.2	+0.5
JIKH				S	Sg	23 29 32.7	+1.8
JIO	Ouri	0.80	280	i P	Pn	23 29 25.8	+0.6
JIO				S	Sg	23 29 35.3	+1.1
JKMT	Kesennumamotoy	0.84	306	i P	Pn	23 29 26.1	+0.3
JKMT				S	Sg	23 29 35.8	+0.1
OFUJ	Ofunato	0.93	325	i P	Pn	23 29 27.1	+0.1
OFUJ				S	Sg	23 29 37.6	-0.8
JMK	Ichinoseki	1.09	306	i P	Pg	23 29 29.7	+0.5
JMM	Marumori	1.30	250	i P	Pg	23 29 33.3	-0.1
JMM				S	Sn	23 29 49.1	-0.3
JOU	Okura	1.32	273	i P	Pg	23 29 34.1	+0.4
JOU				S	Sn	23 29 50.0	0.0
JOM	Ohasama	1.42	325	P	Pg	23 29 34.6	-1.0
JOM				S	Sn	23 29 51.2	-1.0
JFK	Kawauchi	1.50	231	P	Pb	23 29 36.0	-0.1
JFK				S	Sn	23 29 53.4	-1.0
JYK	Kaneyama	1.67	292	P	Pb	23 29 38.6	-0.3
JRG	Rokugo	1.72	309	P	Pb	23 29 39.6	0.0
JYS	Shirataka	1.80	268	P	Pb	23 29 41.0	0.0
JYS				S	Sn	23 30 02.9	+1.2
MJAR	Matsushiro Arr	3.74	243	Pn	Pb	23 30 11.0	-3.2
	0.3nm,0.3s,baz=62,slow=13,SNR=7.3						
MJAR				Sn	Sb	23 30 56.6	-2.8
	0.2nm,0.3s,baz=312,slow=17,SNR=4.3						
	2.6nm,0.5s						
JHJ	Hachijo jima 2	5.59	203	LR	LR	23 32 44.9	
	comp=Z,141nm,18.4s,baz=92,slow=39						
H11N2	WAKE ISLAND Hy	28.21	124	T	T	00 04 51.5	
	baz=316,slow=75,SNR=52						
H11N1	WAKE ISLAND Hy	28.22	124	T	T	00 05 20.2	
	baz=316,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	28.23	124	T	T	00 05 09.1	
	baz=316,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	28.98	126	T	T	00 05 47.0	
	baz=318,SNR=6.3						
H11S3	WAKE ISLAND Hy	28.98	126	T	T	00 05 51.4	
	baz=318,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	28.99	126	T	T	00 06 14.6	
	baz=318,slow=74,SNR=7.6						
WRA	Warramunga Arr	58.44	189	P	P	23 39 05.2	+1.4
	0.5nm,0.5s,baz=6.1,slow=7.1,SNR=9.3						
	0.5nm,0.5s						
ASAR	Alice Springs	62.16	189	P	P	23 39 30.7	+1.5
	0.4nm,0.5s,baz=17,slow=6.9,SNR=5.4						
	0.4nm,0.5s						

DJA 05 23:33:06.7±2.8**, 12°S**±27°×**11°8E**±°**, h10**^{km}**, M3.6**/6**, MLv3.6**/6**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.62	36	P	Pn	23 33 48.9	-0.2
PLAI	Plampang	2.92	359	P	Pn	23 33 52.6	-0.7
SRBI	Singaraja	4.47	325	P	Pn	23 34 14.7	+0.1
JAGI	Jajag, Banyuwa	4.88	312	P	Pn	23 34 19.9	-0.3
GMJI	Gumukmas	5.54	308	P	Pn	23 34 29.3	+0.1

*ISK **05** 23:43:15.5, 37°.20N×30°.66E, h103^{km}±1^{km}, ML2.9/34*

*NIC **05** 23:43:16.1±0.0, 37°.14N×30°.94E, h100^{km}±9^{km}, Ml3.5/4*

*DDA **05** 23:43:16.0±0.0, 37°.20N×30°.66E, h95^{km}±3^{km}, ML3.0*

ISC 05 23:43:15.3±1.3**, 37°.19N**±0°.03×**30°.69E**±0°.03**, h108**^{km}±7^{km}**, n78, σ0^{s}93**/105**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUCA	Burdur, Bucak-	0.17	323	P	Pn	23 43 30.3	-0.1
BUCA				S	Sn	23 43 39.8	-1.9
BUCA				i AML	AML	23 43 41.0	
	comp=E,509nm,0.3s						
BCK	Bucak	0.28	344	PG	Pn	23 43 30.7	-0.1
BCK				SG	Sn	23 43 41.5	-0.9
ANTB	Antalya	0.29	185	PG	Pn	23 43 30.5	-0.2
KORT	Korkueli	0.33	234	PG	Pn	23 43 31.2	+0.1
KORT	Korkueli	0.33	234	P	Pn	23 43 31.1	+0.1
KORT				S	Sn	23 43 42.5	-0.4
KEMT	Kemer-ANTALYA	0.60	190	PG	Pn	23 43 32.5	-0.1
ISP	Isparta	0.64	348	PG	Pn	23 43 33.1	+0.1
ISP				SG	Sn	23 43 46.2	-0.2
BRDR	BURDUR-Merkez	0.71	315	P	Pn	23 43 33.3	-0.3
BRDR				S	Sn	23 43 46.3	-1.0
ELL	Elmali	0.77	235	PG	Pn	23 43 34.5	+0.4
ELL	Elmali	0.77	235	⇑i P	Pn	23 43 35.5	+1.3
ELL				S	Sn	23 43 51.5	+3.2
BAGO	Egridir - ISPA	0.80	6	P	Pn	23 43 34.7	+0.3
BAGO				S	Sn	23 43 48.8	0.0
BASM	Basmaki-Afyon	0.88	325	PG	Pn	23 43 35.1	-0.1
BASM				SG	Sn	23 43 50.3	+0.1
SEDI	Konya, Seydise	0.89	73	P	Pn	23 43 35.5	+0.2
SEDI				S	Sn	23 43 49.5	-0.8
GOLH	Golhisar	0.90	273	P	Pn	23 43 35.8	+0.5
GOLH				S	Sn	23 43 50.3	-0.2
AKUM	Antalya-Kumluc	0.91	198	P	Pn	23 43 36.0	+0.6
AKUM				S	Sn	23 43 52.1	+1.6
SEYD	Seydisehir-KON	0.94	77	PG	Pn	23 43 36.4	+0.6
CAEL	Denizli, Camel	1.09	267	P	Pn	23 43 38.4	+1.0
CAEL				S	Sn	23 43 55.2	+1.1
CAEL				i AML	AML	23 43 57.0	
	comp=N,352nm,0.4s						
CAEL				i AML	AML	23 43 58.0	
	comp=E,314nm,0.5s						
CAME	Cameli-Denizli	1.14	258	PN	Pn	23 43 38.7	+0.8
DEMR	Demre-Antalya	1.14	214	PN	Pn	23 43 38.6	+0.8
KZIL	AFYON_Kizioren	1.15	338	P	Pn	23 43 38.2	+0.3
YVAC	Isparta, Yalva	1.16	22	P	Pn	23 43 38.7	+0.6
YVAC				S	Sn	23 43 55.1	-0.3
DOGA	KONYA_Doganhis	1.20	40	P	Pn	23 43 39.4	+0.8
AKAS	Kas	1.29	223	PN	Pn	23 43 40.2	+0.5
AKAS	Kas	1.29	223	P	Pn	23 43 40.0	+0.3
AKAS				i AML	AML	23 44 01.0	
	comp=E,204nm,0.6s						
AKAS				i AML	AML	23 44 04.0	
	comp=N,210nm,0.7s						
SHUT	Suhut-Afyon	1.36	355	PN	Pn	23 43 41.1	+0.7
FETY	Fethiye	1.40	247	PN	Pn	23 43 41.3	+0.5
FETY	Fethiye	1.40	247	P	Pn	23 43 43.0	+2.2
FETY				S	Sn	23 43 59.7	-0.4
TAVA	DENIZLI_Tavas	1.44	281	P	Pn	23 43 41.9	+0.6
TAVA				S	Sn	23 44 00.3	-0.8
KMER	Konya-Meram	1.46	66	P	Pn	23 43 42.7	+1.2
KMER				S	Sn	23 44 00.7	-0.7
KHL	Karahalli	1.46	321	PN	Pn	23 43 42.5	+1.0
HDMB	Hadim	1.46	99	PN	Pn	23 43 42.4	+0.8
PASA	Karahalli, USA	1.49	321	P	Pn	23 43 42.1	+0.1
PASA				S	Sn	23 44 00.8	-1.4
KONT	Konya--Tatoy	1.53	60	PN	Pn	23 43 43.4	+1.1
KONT	Konya--Tatoy	1.53	60	P	Pn	23 43 43.4	+1.1
KONT				S	Sn	23 44 03.3	+0.5
AFYO	Afyonkarahisar	1.62	349	P	Pn	23 43 44.4	+0.9
GAZI	Gazipasa	1.62	126	PN	Pn	23 43 44.3	+0.9
GAZI	Gazipasa	1.62	126	P	Pn	23 43 44.0	+0.6
GAZI				S	Sn	23 44 05.3	+0.4
GAZI				i AML	AML	23 44 10.0	
	comp=E,151nm,0.4s						
GAZI				i AML	AML	23 44 12.0	
	comp=N,124nm,0.5s						
LADK	Ladik-KONYA	1.67	52	PN	Pn	23 43 44.5	+0.4
DALY	Dalyan (Mula)	1.67	258	PN	Pn	23 43 44.6	+0.6
KDHN	Kadinhani	1.74	40	P	Pn	23 43 45.2	+0.2
KDHN				S	Sn	23 44 07.1	-0.6
KKBE	Karaman, Kazim	1.80	89	P	Pn	23 43 46.6	+0.9
ERMK	Ermenek	1.87	107	P	Pn	23 43 48.1	+1.5
ERMK				S	Sn	23 44 10.4	-0.1
ERMK				i AML	AML	23 44 18.0	
	comp=E,85nm,0.6s						
MULA	Mugla, Merkez-	1.89	273	P	Pn	23 43 47.2	+0.4
YER	Yerkesik	1.92	269	PN	Pn	23 43 47.9	+0.7
TURN	Turunc	2.00	259	PN	Pn	23 43 48.7	+0.6
TURN	Turunc	2.00	259	P	Pn	23 43 48.5	+0.4
TURN				i AML	AML	23 44 13.0	
	comp=N,101nm,0.2s						
USAK	Uak-Merkez	2.01	320	P	Pn	23 43 48.8	+0.5
ALIN	Konya, Altinte	2.06	57	P	Pn	23 43 49.8	+0.8
ALIN				S	Sn	23 44 13.8	-0.9
KRMN	Karaman	2.06	90	PN	Pn	23 43 50.5	+1.5
KULA	Kula-Manisa	2.08	310	PN	Pn	23 43 49.7	+0.5
GEDZ	Gediz	2.10	332	PN	Pn	23 43 50.5	+1.0
GDZ	Gediz	2.12	334	P	Pn	23 43 50.3	+0.5
GDZ				S	Sn	23 44 14.4	-1.7
MANT	Manisa	2.12	308	P	Pn	23 43 50.3	+0.3
MANT				S	Sn	23 44 16.2	-0.3
BERE	Bereket-Mersin	2.20	112	PN	Pn	23 43 52.5	+1.6
TEKE	Tekeli-Mersin	2.21	118	PN	Pn	23 43 52.2	+1.3
ARG	Arkhangelos	2.28	245	PN	Pn	23 43 52.3	+0.6
AYDN	Tasoluk	2.28	283	P	Pn	23 43 52.1	+0.2
AYDN				S	Sn	23 44 18.2	-1.6
SIMA	Simav-Kutahya	2.32	325	PN	Pn	23 43 53.0	+0.7
MLSB	Milas	2.33	273	PN	Pn	23 43 52.7	+0.4
TEVE	Tevekalti-Mers	2.34	108	PN	Pn	23 43 53.9	+1.3
AYDB	Zeytinkoy-Aydi	2.34	290	PN	Pn	23 43 52.7	0.0
DEMI	Demirci	2.41	320	P	Pn	23 43 54.1	+0.5
TVSB	Tavsanli	2.45	337	PN	Pn	23 43 54.9	+0.9
YESY	Yesilyurt	2.50	75	PN	Pn	23 43 56.3	+1.6
DAT	Datca	2.53	260	PN	Pn	23 43 55.7	+0.5
DAT	Datca	2.53	260	P	Pn	23 43 55.6	+0.5
DAT				i AML	AML	23 44 28.0	
	comp=E,55nm,0.4s						
DAT				i AML	AML	23 44 28.0	
	comp=N,54nm,0.3s						
KEBE	Keben-Mersin	2.54	106	PN	Pn	23 43 56.7	+1.5
AKMS	Akamas	2.55	148	P	Pn	23 43 54.9	-0.4
AKMS				S	Sn	23 44 24.3	-1.7
AKMS				AML	AML	23 44 30.1	
	0.5nm,0.4s						
AKMS				AML	AML	23 44 30.1	
	0.5nm,0.4s						
AKMS				AML	AML	23 44 37.1	
	0.4nm,0.3s						
AKMS				AML	AML	23 44 37.1	
	0.4nm,0.3s						
ALFC	Alefka	2.56	142	P	Pn	23 43 54.5	-0.9
ALFC				S	Sn	23 44 24.5	-1.7
ALFC				AML	AML	23 44 26.3	
	0.5nm,0.3s						
ALFC				AML	AML	23 44 26.3	
	0.5nm,0.3s						
ALFC				AML	AML	23 44 27.2	
	0.5nm,0.2s						
ALFC				AML	AML	23 44 27.2	
	0.5nm,0.2s						
BDRM	Kayabasi	2.59	268	P	Pn	23 43 55.8	-0.1
BORA	Eskisehir	2.69	356	PN	Pn	23 43 57.5	+0.4
BODT	Bodrum	2.70	268	PN	Pn	23 43 57.7	+0.4
GCAM	G?zelcaml?	2.79	281	PN	Pn	23 43 59.0	+0.6
NATA	Nata	2.85	147	P	Pn	23 43 58.9	-0.4
NATA				AML	AML	23 44 44.6	
	0.9nm,0.5s						
NATA				AML	AML	23 44 47.4	
	0.8nm,0.6s						
SZAC	Souni	3.02	143	P	Pn	23 44 00.5	-0.9
SZAC				AML	AML	23 44 40.2	

	0.2nm,0.2s						
SZAC				AML	AML	23 44 46.8	
	0.3nm,0.2s						
CSS	Mathiatis	3.09	135	P	Pn	23 44 01.5	-1.0
ASGA	Asgata	3.18	138	P	Pn	23 44 02.9	-0.7
MVOU	Mavrovouni	3.23	131	P	Pn	23 44 02.5	-1.7

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*NOU **05** 23:44:28.6, 33°.93S×177°.23W, h0^{km}, mb4.7/8, South of Kermadec Islands*

*IDC **05** 23:44:32.8±0.6, 33°.60S×177°.96W, h0^{km}, mb4.6/10, mbtmp4.5/13, ML3.8/2, MS3.6/9, Error ellipse: s-maj=20.9km s-min=17.0km az=57.0*

*WEL **05** 23:44:34.2±1.0, 34°S±7°×17°8W±2°0, h33^{km}, M4.9/14, mB5.3/11, ML5.5/14, MLv5.2/14, Mw(mB)4.7/11, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5*

*NEIC **05** 23:44:35.8±1.6, 33°.97S±0°.03×178°.0W±0°.1, h10^{km}±1^{km}, mb4.6/34, Error ellipse: s-maj=18.2km s-min=3.1km az=106.0*

ISC 05 23:44:34.5±0.4**, 33°.86S**±0°.05×**177°.92W**±0°.07**, h10^{km}, n142,** σ**1^{s}.65**/149**, mb4.7**/25**, MS3.5**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.58	0	P	Pn	23 45 37.1	-6.8
GLKZ				S	Sn	23 46 24.9	-12
RAO	Raoul Island	4.59	0	Pn	Pn	23 45 42.4	-1.6
	141nm,0.3s,baz=66,slow=19,SNR=2.8						
RAO				Sn	Sn	23 46 27.8	-10
	246nm,0.3s,baz=45,slow=20,SNR=3.0						
RAO	Raoul Island	4.59	0	Pn	Pn	23 45 46.2	+2.2
RIZ	Raoul Island	4.60	360	S	Sn	23 46 27.7	-10
MXZ	Matakaoa Point	4.80	219	Pn	Pn	23 45 46.1	-0.8
MXZ					Sn	23 46 40.2	-2.4
MXZ	Matakaoa Point	4.80	219	P	Pn	23 45 45.2	-1.7
MXZ				S	Sn	23 46 41.2	-1.5
MXZ				S	T	23 50 30.6	
WMGZ	Waiomatatini S	4.95	216	P	Pn	23 45 48.7	-0.2
WMGZ				S	Sn	23 46 44.1	-2.1
PKGZ	Pakihiroa	5.17	218	P	Pn	23 45 52.5	+0.5
PKGZ				S	Sn	23 46 51.2	-0.6
PUZ	Puketiti	5.22	215	P	Pn	23 45 51.6	-1.1
PUZ				S	Sn	23 46 52.5	-0.6
HAZ	Te Kaha	5.23	221	P	Pn	23 45 53.4	+0.7
HAZ				S	Sn	23 46 54.4	+1.4
RUGZ	Raukumara Rang	5.44	220	P	Pn	23 45 55.8	+0.1
RUGZ				S	Sn	23 46 59.3	+0.9
TWGZ	Tauwhareparae	5.44	216	P	Pn	23 45 55.7	-0.1
TWGZ				S	Sn	23 46 58.6	+0.2
CNGZ	Carnagh Statio	5.58	213	P	Pn	23 45 57.0	-0.5
TKGZ	Te Karaka	5.71	216	P	Pn	23 45 58.7	-0.7
TKGZ				S	Sn	23 47 04.2	-0.8
MWZ	Matawai	5.79	218	P	Pn	23 45 59.0	-1.5
URZ	Urewera	5.96	221	Pn	Pn	23 46 04.2	+1.5
	9.8nm,0.3s,baz=258,slow=3.1,SNR=61						
URZ				Sn	Sn	23 47 10.2	-0.8
	19nm,0.3s,baz=181,slow=23,SNR=3.9						
	22nm,0.3s						
URZ	Urewera	5.96	221	Pn	Pn	23 46 02.2	-0.5
URZ	Urewera	5.96	221	P	Pn	23 46 02.6	-0.2
URZ				S	Sn	23 47 09.6	-1.5
URZ	Urewera	5.96	221	P	Pn	23 46 02.5	-0.2
RIGZ	Rimuhau	5.96	215	P	Pn	23 46 01.5	-1.4
RAGZ	Rawiri	5.97	218	P	Pn	23 46 02.2	-0.8
PRGZ	Paritu Road	6.08	213	P	Pn	23 46 02.9	-1.6
SNGZ	Shannon Statio	6.23	217	P	Pn	23 46 05.8	-0.7
SNGZ				S	Sn	23 47 16.9	-0.9
KNZ	Kokohu	6.26	213	P	Pn	23 46 04.0	-2.9
KNZ				S	Sn	23 47 18.1	-0.3
RAHZ	Arahi	6.46	217	P	Pn	23 46 09.6	-0.1
RAHZ				S	Sn	23 47 22.8	-0.6
BKZ	Black Stump Fm	6.95	219	Pn	Pn	23 46 15.8	-0.7
BKZ	Black Stump Fm	6.95	219	P	Pn	23 46 15.3	-1.1
OUZ	Omahuta	7.13	257	Pn	Pn	23 46 19.0	+0.2
OUZ	Omahuta	7.13	257	P	Pn	23 46 21.5	+2.6
HIZ	Hauiti	7.46	229	Pn	Pn	23 46 23.2	-0.2
BFZ	Birch Farm	8.25	213	Pn	Pn	23 46 32.9	-1.3
BFZ					Sn	23 48 01.2	-6.2
BFZ	Birch Farm	8.25	213	P	Pn	23 46 32.3	-1.9
MSWZ	Moikau Station	9.29	214	Pn	Pn	23 46 47.3	-1.2
PLWZ	Palliser	9.40	213	Pn	Pn	23 46 50.5	+0.4
BHW	Baring Head	9.46	215	Pn	Pn	23 46 50.1	-0.7
SNZO	South Karori	9.46	216	Pn	Pn	23 46 51.1	+0.3
TUWZ	Tuamarina	9.93	218	Pn	Pn	23 46 57.3	0.0
CMWZ	Cape Campbell	10.04	216	Pn	Pn	23 47 00.0	+1.3
NNZ	Nelson	10.08	221	Pn	Pn	23 47 00.3	+1.0
BSWZ	Blackbirch Sta	10.18	217	Pn	Pn	23 47 01.4	+0.7
QRZ	Quartz Range	10.30	225	Pn	Pn	23 47 01.9	-0.4
QRZ	Quartz Range	10.30	225	P	Pn	23 47 02.4	+0.1
THZ	Tophouse	10.71	220	Pn	Pn	23 47 07.3	-0.8
KHZ	Kahutara	10.87	216	Pn	Pn	23 47 09.4	-0.7
KHZ	Kahutara	10.87	216	P	Pn	23 47 10.1	0.0
LTZ	Lake Taylor	11.77	218	Pn	Pn	23 47 20.4	-2.1
MQZ	McQueen's Vall	12.27	214	Pn	Pn	23 47 26.7	-2.6
OXZ	Oxford	12.28	217	Pn	Pn	23 47 28.7	-0.8
RPZ	Rata Peaks	13.06	218	Pn	Pn	23 47 38.3	-1.7
	1.0nm,0.3s,baz=255,slow=19,SNR=2.0						
RPZ				Sn	Sn	23 49 52.3	-13
	4.9nm,0.3s,baz=127,slow=23,SNR=17						
RPZ	Rata Peaks	13.06	218	Pn	Pn	23 47 38.6	-1.5
RPZ	Rata Peaks	13.06	218	P	Pn	23 47 40.1	0.0
FOZ	Fox Glacier	13.59	221	Pn	Pn	23 47 46.3	-0.9
LBZ	Lake Benmore	13.98	218	Pn	Pn	23 47 49.9	-2.7
ODZ	Otahua Downs	14.22	215	Pn	Pn	23 47 56.4	+0.4
ODZ	Otahua Downs	14.22	215	P	Pn	23 47 54.5	-1.5
WKZ	Wanaka	14.88	219	Pn	Pn	23 48 04.6	-0.3
MLZ	Mavora Lakes	15.72	219	Pn	Pn	23 48 16.1	+0.1
WHZ	Wether Hill Ro	16.16	218	Pn	Pn	23 48 22.1	+0.4
WHZ				IAmb	IAmb	23 48 32.1	
	comp=Z,36nm,1.2s						
DCZ	Deep Cove	16.29	220	P	Pn	23 48 22.8	-0.5
MSVF	Nonsavu	16.46	346	Pn	Pn	23 48 22.2	-3.5
	comp=Z,3.7nm,0.4s,baz=148,slow=15,SNR=7.9						
MSVF				LR	LR	23 54 04.5	
	comp=Z,200nm,18.9s,baz=154,slow=35						
OUENC	Ouen Island, N	17.59	306		Pn	23 48 41.8	+2.0
ONTNC	Ouen Toro	17.93	306	P	Pn	23 48 44.1	+0.1
ONTNC				IAmb	IAmb	23 49 03.6	
	comp=Z,32nm,1.0s						
DZM	Mont Dzumac	18.10	306	*e*LR	LR	23 52 50.6	
DZM	Mont Dzumac	18.10	306	P	Pn	23 48 43.5	-2.7
	comp=Z,0.1nm,0.3s,baz=42,slow=21,SNR=1.3						
DZM				LR	LR	23 54 41.6	
	comp=Z,111nm,19.6s,baz=81,slow=34						
	comp=Z,4.1nm,0.8s						
DZM	Mont Dzumac	18.10	306	P	P	23 48 48.1	+1.6
DZM				IAmb	IAmb	23 49 03.4	
	comp=Z,34nm,1.0s						
RAR	Rarotonga	20.40	57	LR	LR	23 56 35.1	
	comp=Z,130nm,18.7s,baz=268,slow=36						
KOUNC	Koumac, New Ca	20.60	306	P	P	23 49 15.2	+1.4
AFI	Afiamalu	20.63	17	P	P	23 49 11.5	-2.7
	comp=Z,17nm,0.4s,baz=173,slow=17,SNR=1.6						
	comp=Z,17nm,0.4s						
AFI	Afiamalu	20.63	17	P	P	23 49 15.7	+1.4
AFI				IAmb	IAmb	23 49 17.2	
	comp=Z,51nm,1.1s						
TBI	Tubuai	27.01	75	*e*LR	LR	23 56 47.2	
	comp=Z,130nm,31.2s						
TBI	Tubuai	27.01	75	*e*T	T	00 18 25.0	
	comp=Z,4.9nm,0.3s						
EIDS	Eidsvold	28.16	279	P	P	23 50 27.2	+0.1
PAE	Paea	30.06	65	*e*T	T	00 22 15.6	
	comp=Z,2.1nm,0.2s						
PPT2	Papeete2	30.10	65	*e*LR	LR	23 58 28.0	
	comp=Z,82nm,21.5s						
PPT	Papeete	30.12	65	LR	LR	00 00 59.8	
	comp=Z,84nm,18.9s,baz=272,slow=33						
STKA	Stephens Creek	33.91	262	P	P	23 51 19.9	+2.2
	comp=Z,0.9nm,0.3s,baz=285,slow=18,SNR=1.9						
STKA				PcP	PcP	23 53 55.8	-0.4
	comp=Z,2.9nm,0.7s,baz=92,slow=6.5,SNR=5.1						
STKA				LR	LR	00 05 11.7	
	comp=Z,235nm,18.1s,baz=57,slow=36						
CTA	Charters Tower	34.56	284	P	P	23 51 23.8	+0.3
	comp=Z,8.2nm,0.6s,baz=118,slow=10,SNR=18						
CTA				LR	LR	00 04 43.4	
	comp=Z,87nm,18.1s,baz=80,slow=35						
	comp=Z,8.2nm,0.6s						
CTAO	Charters Tower	34.56	284	P	P	23 51 24.1	+0.6
BBOO	Buckleboo	38.22	258	P	P	23 51 55.1	+0.5
BBOO				IAmb	IAmb	23 51 55.7	
	comp=Z,12nm,1.1s						
PMG	Port Moresby	40.24	299	LR	LR	00 06 49.7	
	comp=Z,136nm,18.3s,baz=122,slow=33						
COEN	Coen	40.39	290	P	P	23 52 13.0	0.0
COEN				IAmb	IAmb	23 52 16.7	
	comp=Z,17nm,1.2s						
KRVT	Keravat (AS076	40.56	310	P	P	23 52 12.1	-2.3
	comp=Z,15nm,0.3s,baz=334,slow=22,SNR=1.9						
	comp=Z,15nm,0.3s						
AS31	Alice Springs	43.10	271	P	P	23 52 34.5	-0.6
ASAR	Alice Springs	43.10	271	P	P	23 52 34.4	-0.8
	comp=Z,4.6nm,0.6s,baz=111,slow=6.9,SNR=24						
ASAR				PcP	PcP	23 54 24.2	-0.7
	comp=Z,2.3nm,0.7s,baz=115,slow=4.5,SNR=6.6						
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	43.10	271	P	P	23 52 34.6	-0.5
WR0	Warramunga Arr	44.22	276	P	P	23 52 43.2	-0.9
WR0				IAmb	IAmb	23 52 49.6	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	44.39	276	P	P	23 52 44.5	-0.9
WB2				IAmb	IAmb	23 52 50.8	
	comp=Z,18nm,1.2s						
WRA	Warramunga Arr	44.40	276	P	P	23 52 44.5	-1.1
	comp=Z,3.2nm,0.3s,baz=116,slow=7.7,SNR=150						
	comp=Z,3.2nm,0.3s						
WRA	Warramunga Arr	44.40	276	P	P	23 52 44.2	-1.4
WB0	Warramunga Arr	44.44	276	P	P	23 52 44.7	-1.2
SBA	Scott Base	44.61	185	P	P	23 52 46.9	+0.4
SBA				IAmb	IAmb	23 52 51.7	
	comp=Z,6.7nm,1.1s						
VNDA	Vanda	44.67	186	P	P	23 52 49.0	+2.0
	comp=Z,1.1nm,0.7s,baz=21,slow=4.4,SNR=6.5						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	44.67	186	P	P	23 52 47.8	+0.8
FORT	Forrest	45.32	258	P	P	23 52 52.8	0.0
MTN	Manton Dam	50.66	282	P	P	23 53 33.8	-0.5
MTN				IAmb	IAmb	23 53 43.1	
	comp=Z,11nm,0.9s						
KNRA	Kununurra	51.11	277	P	P	23 53 37.1	-0.6
KNRA				IAmb	IAmb	23 53 39.8	
	comp=Z,15nm,1.3s						
CASY	Casey	52.14	209	P	P	23 53 45.3	+0.7
CASY				IAmb	IAmb	23 53 55.7	
	comp=Z,6.9nm,0.9s						
PSA00	Pilbara Seismi	55.70	266	P	P	23 54 11.6	+0.2
PSA00				IAmb	IAmb	23 54 25.8	
	comp=Z,9.4nm,1.1s						
MBWA	Marble Bar	55.98	266	P	P	23 54 13.2	-0.1
QSPA	South Pole Qui	56.27	180	P	P	23 54 17.2	+2.2
	comp=Z,12nm,1.0s,baz=20,slow=1.1,SNR=30						
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	56.27	180	P	P	23 54 17.1	+2.2
RPN	Rapa Nui	58.52	103	LR	LR	00 14 58.9	
	comp=Z,53nm,19.9s,baz=234,slow=31						
KAPI	Kappang	64.33	282	LR	LR	00 23 52.8	
	comp=Z,62nm,18.6s,baz=264,slow=37						
SMAI	San Martin Ant	66.21	157	P	P	23 55 23.1	+1.1
SMAI				IAmb	IAmb	23 55 23.8	
	comp=Z,3.4nm,0.7s						
TROLL	Troll, Antarti	74.43	180	P	P	23 56 12.4	-0.1
SNAA	Sanae	74.71	178	P	P	23 56 14.1	0.0
SNAA	Sanae	74.71	178	P	P	23 56 14.8	+0.7
SNAA				IAmb	IAmb	23 56 15.8	
	comp=Z,8.6nm,1.0s						
VNA3	Neumayer Olymp	74.86	176	P	P	23 56 15.0	+0.1
VNA2	Neumayer--Watz	75.30	177	P	P	23 56 17.9	+0.6
	baz=179,slow=6.0						
VNA1	Neumayer--Stat	75.53	176	P	P	23 56 18.3	-0.3
PLCA	Paso Flores	80.12	133	P	P	23 56 45.6	+0.7
	comp=Z,1.4nm,0.7s,baz=194,slow=11,SNR=4.7						
	comp=Z,1.4nm,0.7s						
LC01	Cunco	80.37	130	P	P	23 56 46.4	+0.2
LC01				IAmb	IAmb	23 56 47.4	
	comp=Z,5.0nm,0.9s						
MT01	Popeta	83.75	127	P	P	23 57 04.2	+0.1
MT09	Talagante	83.97	127	P	P	23 57 05.3	0.0
MT09				IAmb	IAmb	23 57 07.5	
	comp=Z,3.8nm,0.8s						
MT02	Curacav	84.18	126	P	P	23 57 06.3	+0.1
CO02	Combarbal	85.51	125	P	P	23 57 13.3	+0.2
NVAR	Mina Array Bea	90.73	43	P	P	23 57 37.7	-0.1
	comp=Z,1.9nm,0.7s,baz=226,slow=8.5,SNR=7.1						
	comp=Z,1.9nm,0.7s						
LPAZ	La Paz	96.66	115	P	P	23 58 06.5	+0.3
	comp=Z,0.9nm,0.7s,baz=207,slow=6.5,SNR=5.5						
	comp=Z,0.9nm,0.7s						
PZH	PanZhiHua	96.95	297	P	P	23 58 08.9	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.7s						
XLT	XiLinHaoTe	97.96	318	*e*P	Pdif	23 58 13.9	+3.2
XLT				pP	sP	23 58 17.6	+6.0
XLT				sP	pwP	23 58 21.0	-0.9
XLT				pmax	pmax		
	comp=Z,12nm,1.2s						
XLT				pmax	pmax		
	comp=Z,160nm,4.2s						
LZH	Lanzhou	100.82	306	*e*P	Pdif	23 58 35.3	+12
LZH				pP	pwP	23 58 41.5	+6.5
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
LZH				pmax	pmax		
	comp=Z,13nm,1.4s						
MKAR	Makanchi Array	120.01	309	PKP	PKPdf	00 03 23.6	-1.4
	comp=Z,0.4nm,0.8s,baz=220,slow=3.4,SNR=3.1						
ZALV	Zalesovo Beam	120.62	317	PKP	PKPdf	00 03 25.8	-0.2
	comp=Z,0.2nm,0.3s,baz=114,slow=1.7,SNR=1.3						
ARCES	ARCESS Array B	141.97	347	PKP	PKPdf	00 04 06.1	+0.4
	comp=Z,2.1nm,0.9s,baz=64,slow=2.8,SNR=7.0						
KBZ	Khabaz	146.98	300	PKPbc	PKPdf	00 04 16.8	+1.6
	comp=Z,4.8nm,1.0s,baz=184,slow=5.1,SNR=9.7						
FINES	FINESS Array B	148.39	338	PKPbc	PKPdf	00 04 19.5	+2.6
	comp=Z,8.5nm,0.8s,baz=40,slow=3.4,SNR=35						
MEF	Metsahovi	149.86	338	*e*P	PKPbc	00 04 23.4	-0.7
MEF				IAmb	IAmb	00 04 24.1	
	comp=Z,17nm,1.0s						
RAF	Rauma	149.98	341	*e*P	PKPbc	00 04 23.9	-0.5
VSU	Vasula	150.37	334	*e*P	PKPbc	00 04 25.2	-0.1
VSU				IAmb	IAmb	00 04 29.7	
	comp=Z,53nm,1.3s						
AAL	Aland	151.17	341	*e*P	PKPbc	00 04 26.5	-0.8
MTSE	Matsula	151.21	336	*e*P	PKPbc	00 04 26.7	-0.7
NB2	NORSAR Subarra	152.16	350	PKP	PKPbc	00 04 28.9	-0.7
	comp=Z,1.7nm,0.6s,baz=15,slow=2.5						
NOA	NORSAR Array B	152.16	350	PKPbc	PKPbc	00 04 28.8	-0.7
	comp=Z,2.4nm,0.7s,baz=14,slow=4.1,SNR=13						
DBIC	Dimbokro	152.20	165	PKPbc	PKPbc	00 04 30.9	-0.2
	comp=Z,5.8nm,1.0s,baz=232,slow=2.7,SNR=4.9						
IDID	Didziasalis	152.54	329	*e*P	PKPbc	00 04 31.3	+0.8
IIGN	Ignalina	152.73	329	*e*P	PKPbc	00 04 31.5	+0.5
VIKU	Vikbolandet	153.47	343	*e*P	PKPbc	00 04 31.7	-0.8
PABE	Paberze	153.55	332	*e*P	PKPbc	00 04 32.5	-0.2
AKASG	Malin Array Be	154.01	319	PKPbc	PKPbc	00 04 33.2	-0.7
	comp=Z,0.9nm,0.5s,baz=151,slow=1.8,SNR=1.7						
AKASG				PKPab	PKPab	00 04 44.4	-2.9
	comp=Z,1.5nm,0.5s,baz=59,slow=2.8,SNR=6.0						
BRTR	Keskin Array B	154.14	292	PKPbc	PKPbc	00 04 34.6	-0.1
	comp=Z,0.8nm,0.5s,baz=124,slow=4.0,SNR=2.1						
BRTR				PKPab	PKPab	00 04 44.7	-3.8
	comp=Z,3.2nm,0.9s,baz=132,slow=1.8,SNR=8.7						
TORD	Torodi Ar. Bea	159.38	179	PKP	PKPdf	00 04 33.9	0.0
	comp=Z,0.8nm,1.0s,baz=232,slow=1.3,SNR=2.9						
TORD				PKPab	PKPab	00 05 11.3	+0.1
	comp=Z,2.3nm,0.8s,baz=176,slow=3.4,SNR=16						
CLL	Collm	160.83	339	*i* PKPab	PKPab	00 05 15.5	-1.2
	comp=Z,7.0nm,1.3s						

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*IDC **05** 23:50:00.2±0.7, 2°.03S×118°.87E, h0^{km}, mb4.1/10, mbtmp4.1/11, ML3.7/1, MS3.5/2, Error ellipse: s-maj=44.2km s-min=13.7km az=63.0*

*DJA **05** 23:50:03.7±0.6, 2°S±2°×11°9E±°, h19^{km}±5^{km}, M4.3/18, mb4.4/4, mB5.1/1, MLv4.2/18, Mw(mB)4.5/1*

*NEIC **05** 23:50:06.6±2.1, 2°.12S±0°.07×118°.77E±0°.07, h43^{km}±6^{km}, mb4.3/24, Error ellipse: s-maj=11.5km s-min=8.8km az=55.0*

ISC 05 23:50:05.4±0.5**, 2°.10S**±0°.05×**118°.76E**±0°.06**, h35^{km}, n65,** σ**0^{s}.94**/68**, mb4.3**/21**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.42	132	P	Pn	23 50 28.8	0.0
SPSI	Sidrap Palu	2.12	151	P	Pn	23 50 38.8	+0.5
SPSI				S	Sn	23 51 04.9	+1.5
BNSI	Bone	2.66	150	P	Pn	23 50 46.6	+0.8
MPSI	Mapaga	2.67	25	P	Pn	23 50 45.0	-1.0
KAPI	Kappang	3.07	161	Pn	Pn	23 50 51.8	+0.4
	9.0nm,0.3s,baz=322,slow=10,SNR=29						
KAPI				Sn	Sn	23 51 27.1	+0.2
	20nm,0.3s,baz=72,slow=16,SNR=12						
KAPI				LR	LR	23 52 18.7	
	comp=Z,406nm,18.1s,baz=62,slow=45						
	32nm,0.5s						
KAPI	Kappang	3.07	161	Pn	Pn	23 50 51.2	-0.3
KAPI				Sn	Sn	23 51 27.1	+0.2
APSI	Ampana	3.12	68	P	Pn	23 50 52.7	+0.5
APSI				S	Sn	23 51 28.6	+0.3
BKSI	Bulukumba	3.48	157	P	Pn	23 50 58.1	+0.9
TOLI2	Tolitoli	3.77	32	Pn	Pn	23 51 00.9	-0.3
MTKI	Muara Teweh, K	4.02	286	P	Pn	23 51 03.7	-0.9
MRSI	Marisa	4.08	51	P	Pn	23 51 05.6	+0.2
BBKI	Banjar Baru	4.14	251	P	Pn	23 51 06.3	+0.1
LUWI	Luwuk	4.15	75		Pn	23 51 05.8	-0.5
LUWI	Luwuk	4.15	75	P	Pn	23 51 06.5	+0.2
BSSI	Bau Bau, Buton	4.38	157	P	Pn	23 51 08.7	-0.8
GTOI	Gorontalo	5.05	58	P	Pn	23 51 17.8	-0.9
KMSI	Cibinong	5.86	63	P	Pn	23 51 29.5	-0.3
	0.7nm151nm,0.5s						
KMMI	Kalianget	6.86	224	P	Pn	23 51 44.0	+0.5
	0.3nm1μm33nm,1.2s						
MYLDM	Lahad Datu	7.23	358	Pn	Pn	23 51 48.7	0.0
KSM	Kuching	9.16	293	Pn	Pn	23 52 14.8	-0.3
IPM	Ipoh	18.88	290	P	P	23 54 23.3	+0.3
IPM				IAmb	IAmb	23 54 27.7	
	comp=Z,12nm,0.8s						
KULM	Kulim	19.52	292	P	P	23 54 29.0	-0.9
PSI	Prapat	20.41	284	P	P	23 54 40.6	+0.8
	comp=Z,9.7nm,0.8s,baz=113,slow=8.1,SNR=9.0						
	comp=Z,9.7nm,0.8s						
WB0	Warramunga Arr	23.29	140	P	P	23 55 09.2	-1.0
WRA	Warramunga Arr	23.38	140	P	P	23 55 10.4	-0.8
	comp=Z,2.6nm,0.7s,baz=317,slow=10,SNR=10						
	comp=Z,2.6nm,0.7s						
WRA	Warramunga Arr	23.38	140	P	P	23 55 10.9	-0.3
WRAB	Tennant Creek	23.38	140		S	23 59 22.6	+0.6
WB2	Warramunga Arr	23.39	140	P	P	23 55 10.6	-0.7
WB2				IAmb	IAmb	23 55 11.9	
	comp=Z,6.5nm,0.9s						
WR0	Warramunga Arr	23.52	140	P	P	23 55 11.9	-0.7
ASAR	Alice Springs	25.98	147	P	P	23 55 34.9	-0.3
	comp=Z,0.8nm,0.6s,baz=335,slow=12,SNR=5.2						
ASAR				PcP	PcP	23 59 02.8	-0.3
	comp=Z,0.6nm,0.5s,baz=321,slow=1.9,SNR=6.5						
	comp=Z,0.8nm,0.6s						
PZH	PanZhiHua	32.84	331	P	P	23 56 38.8	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,6.0s						
STKA	Stephens Creek	36.62	146	P	P	23 57 09.1	+0.5
	comp=Z,1.8nm,0.6s,baz=322,slow=9.7,SNR=4.3						
	comp=Z,1.8nm,0.6s						
STKA	Stephens Creek	36.62	146	P	P	23 57 08.9	+0.4
LZH	Lanzhou	40.45	341	*e*P	P	23 57 41.0	+0.1
LZH				pP	pP	23 57 49.3	-1.3
KAAM	Kaadhehdhoo	45.82	273	P	P	23 58 26.0	+1.5
ULN	Ulaanbaatar	50.80	350	P	P	23 59 03.1	+0.7
ULN				IAmb	IAmb	23 59 04.7	
	comp=Z,3.4nm,0.8s						
SONM	Songino Array	50.89	349	P	P	23 59 03.3	+0.2
	comp=Z,1.1nm,0.5s,baz=156,slow=7.8,SNR=12						
	comp=Z,1.1nm,0.5s						
SONM	Songino Array	50.89	349	P	P	23 59 03.6	+0.5
SONM				IAmb	IAmb	23 59 04.7	
	comp=Z,1.8nm,0.9s						
WMQ	Urumqi	53.52	332	*e*P	P	23 59 25.7	+3.0
WMQ				pP	pP	23 59 32.3	-0.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH	Kashi	57.02	321	P	P	23 59 49.3	+1.2
KSH	Kashi	57.02	321	pP	pP	23 59 58.7	+0.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KDJ	Kajisay	57.87	324	P	P	23 59 54.4	+0.3
KDJ				IAmb	IAmb	00 00 07.6	
	comp=Z,2.8nm,1.0s						
MK31	Makanchi Array	58.28	331	P	P	23 59 57.2	+0.5
MK31				IAmb	IAmb	00 00 09.6	
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	58.28	331	P	P	23 59 57.5	+0.8
	comp=Z,1.4nm,0.6s,baz=139,slow=7.2,SNR=19						
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	58.28	331	P	P	23 59 57.2	+0.5
KBL	Kabul	59.14	313	P	P	00 00 01.7	-1.4
AAK	Ala-Archa	59.76	323	P	P	00 00 08.0	+0.7
AAK				IAmb	IAmb	00 00 20.6	
	comp=Z,3.5nm,0.7s						
GAR	Garm	60.41	318	P	P	00 00 11.6	-0.1
RPZ	Rata Peaks	62.09	140	P	P	00 00 23.0	+0.1
KK31	Karatay Array	62.44	322	P	P	00 00 25.4	+0.2
KK31				IAmb	IAmb	00 00 28.6	
	comp=Z,1.5nm,1.1s						
KKAR	Karatay Array	62.44	322	P	P	00 00 25.8	+0.6
THZ	Tophouse	62.49	137	P	P	00 00 25.9	+0.3
ZALV	Zalesovo Beam	62.56	338	P	P	00 00 25.2	-0.6
	comp=Z,2.1nm,0.9s,baz=117,slow=5.2,SNR=5.7						
	comp=Z,2.1nm,0.9s						
ZALV	Zalesovo Beam	62.56	338	P	P	00 00 25.5	-0.2
KURK	Kurchatov	62.76	333	P	P	00 00 26.6	-0.5
KURK				IAmb	IAmb	00 00 28.3	
	comp=Z,4.7nm,1.1s						
CASY	Casey	64.32	184	P	P	00 00 33.4	-3.8
ABKAR	Akbulak array	71.84	324	P	P	00 01 24.4	-0.3
TIXI	Tiksi	73.91	3	P	P	00 01 35.0	-1.4
TIXI				IAmb	IAmb	00 01 35.7	
	comp=Z,4.4nm,0.8s						
NRIK	Noril'sk	74.37	349	P	P	00 01 38.9	-0.3
	comp=Z,1.9nm,0.5s,baz=126,slow=4.9,SNR=4.9						
	comp=Z,1.9nm,0.5s						
NRIK	Noril'sk	74.37	349	P	P	00 01 38.4	-0.8
NRIK				IAmb	IAmb	00 01 51.3	
	comp=Z,6.5nm,1.2s						
VNDA	Vanda	78.80	171	P	P	00 02 04.2	0.0
	comp=Z,0.8nm,0.6s,baz=311,slow=5.1,SNR=7.3						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	78.80	171	P	P	00 02 04.2	0.0
GURO	Guroymak-BITLI	80.94	309	P	P	00 02 16.5	-0.3
GURO				IAmb	IAmb	00 02 19.0	
	comp=Z,5.6nm,1.3s						
KBZ	Khabaz	81.26	315	P	P	00 02 18.1	0.0
	comp=Z,2.9nm,1.0s,baz=108,slow=6.3,SNR=4.0						
	comp=Z,2.9nm,1.0s						
FINES	FINESS Array B	93.11	331	LR	LR	00 51 06.1	
	comp=Z,42nm,19.2s,baz=128,slow=39						

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*IDC **06** 00:00:15.1±1.3, 0°.84S×131°.74E, h0^{km}, mb4.0/3, mbtmp4.0/4, ML3.8/1, MS3.1/1, Error ellipse: s-maj=25.2km s-min=9.8km az=7.0*

*DJA **06** 00:00:21.6±0.3, 1°S±4°×13°1E±°, h11^{km}±6^{km}, M4.3/11, mb4.7/2, MLv4.0/11*

*NEIC **06** 00:00:46.2±2.1, 3°.45S±0°.08×131°.1E±0°.1, h10^{km}±1^{km}, mb4.1/14, Error ellipse: s-maj=22.3km s-min=11.8km az=245.0*

ISC 06 00:00:20.4±1.0**, 0°.80S**±0°.09×**131°.23E**±0°.08**, h31^{km}**±6^{km}**, n23,** σ**2^{s}.53**/21**, mb3.9**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.07	153	P	Pb	00 00 25.6	-0.1
SWI				S	Sn	00 00 30.1	+0.7
SIJI	Sorong	0.08	151	Pg	Pb	00 00 24.9	-0.9
	2μm,0.3s,baz=74,slow=19,SNR=4667						
SIJI				Lg	Lg	00 00 30.0	
	baz=150,slow=20						
MSAI	Masohi	3.42	222	P	Pn	00 01 14.2	+2.7
MSAI				S	Sn	00 01 52.9	+1.9
LBMI	Labuha	3.73	272	P	Pn	00 01 17.5	+1.7
KMPI	Kaimana, Papua	3.77	139	P	Pn	00 01 20.6	+4.2
TNTI	Ternate	4.16	292	P	Pn	00 01 23.9	+2.1
AAI	Ambon	4.17	227	P	Pn	00 01 23.9	+2.0
SAUI	Saumlaki	7.14	179	Pn	Pn	00 01 53.6	-9.1
MTN	Manton Dam	11.97	180	Pn	Pn	00 03 03.8	-5.1
KNRA	Kununurra	14.98	189	Pn	Pn	00 03 42.0	-8.0
WB0	Warramunga Arr	19.11	171		P	00 04 37.6	-3.2
WRAB	Tennant Creek	19.26	171	Pn	P	00 04 38.8	-3.7
WRAB				IAmb	IAmb	00 04 49.4	

	comp=Z,6.0nm,1.1s						
WRA	**Warramunga Arr**	**19.27**	**171**	P	**P**	**00 04 40.1**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=354,slow=11,SNR=18						
WRA				S	Sn	00 08 02.4	-17
	comp=Z,0.6nm,0.8s,baz=350,slow=24,SNR=3.1						
	comp=Z,1.9nm,0.6s						
WRA	**Warramunga Arr**	**19.27**	**171**		**P**	**00 04 39.5**	**-3.0**
WB2	**Warramunga Arr**	**19.27**	**171**		**P**	**00 04 39.6**	**-3.0**
WB2				IAmb	IAmb	00 04 42.5	
	comp=Z,4.9nm,0.8s						
WR0	**Warramunga Arr**	**19.32**	**171**		**P**	**00 04 40.7**	**-2.4**
GUMO	**Guam**	**19.68**	**43**	LR	LR	00 10 49.4	
	comp=Z,57nm,21.9s,baz=113,slow=33						
AS31	**Alice Springs**	**22.88**	**174**	P	**P**	**00 05 21.6**	**0.0**
AS31				IAmb	IAmb	00 05 21.8	
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**22.88**	**174**	P	**P**	**00 05 19.5**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=352,slow=10,SNR=23						
ASAR				PcP	**PcP**	**00 09 10.7**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=341,slow=2.3,SNR=1.7						
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**22.88**	**174**	P	**P**	**00 05 20.4**	**-1.1**
BBOO	**Buckleboo**	**32.16**	**172**	P	P	00 06 51.2	+5.8
BBOO				IAmb	IAmb	00 06 59.1	
	comp=Z,6.7nm,1.1s						
STKA	**Stephens Creek**	**32.43**	**163**	P	**P**	**00 06 45.5**	**-2.2**
	comp=Z,2.8nm,0.5s,baz=338,slow=9.3,SNR=6.6						
	comp=Z,2.8nm,0.5s						
MKAR	**Makanchi Array**	**63.82**	**325**	P	**P**	**00 10 51.3**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=115,slow=8.2,SNR=8.5						
	comp=Z,0.6nm,0.5s						

ANF ***06*** *00:02:49.9±0.3, 35°.87N×97°.37W, h6^{km}, ML3.1/10, Error ellipse: s-maj=3.3km s-min=2.4km az=132.0*
TUL ***06*** *00:02:50.2±1.3, 35°.84N±0°.01×97°.38W±0°.01, h6^{km}±4^{km}, ML2.7, mb_Lg2.5/25(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=139.0*
NEIC ***06*** *00:02:50.1±0.9, 35°.861N±0°.009×97°.39W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.1km az=141.0*
ISC 06 00:02:49.6±1.3**, 35°.89N**±0°.03×**97°.39W**±0°.03**, h1**^{km}±13^{km}**, n44, σ0^{s}60**/47**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.30**	**185**	Pg	**Pg**	**00 02 54.4**	**-1.0**
OK009				Sg	**Sg**	**00 02 59.8**	**+0.4**
OKCFA	**Oklahoma City**	**0.47**	**186**	Pg	**Pg**	**00 02 58.7**	**0.0**
OKCFA				Sg	**Sg**	**00 03 05.0**	**+0.3**
OKCFA	**Oklahoma City**	**0.47**	**186**	P	**Pg**	**00 02 58.8**	**+0.2**
	baz=7.7						
OKCFA				S	**Sg**	**00 03 05.2**	**+0.4**
	baz=7.7						
OKCSW	**OKLAHOMA CITY**	**0.48**	**185**		**Pg**	**00 02 58.9**	**+0.1**
OKCSW				Sg	**Sg**	**00 03 05.4**	**+0.4**
FNO	**Franklin**	**0.63**	**181**	Pg	**Pg**	**00 03 01.6**	**0.0**
FNO				Sg	**Sg**	**00 03 09.9**	**+0.2**
T35A	**Sooner Cattle**	**1.25**	**34**		**Pg**	**00 03 13.9**	**+0.4**
T35B	**Sooner Cattle**	**1.25**	**34**	P	**Pg**	**00 03 13.8**	**+0.3**
	baz=213						
T35B				S	**Sb**	**00 03 31.1**	**+0.5**
	baz=213						
TUL1	**Leonard**	**1.30**	**88**		**Pn**	**00 03 13.4**	**-1.4**
TUL1	**Leonard**	**1.30**	**88**	P	**Pn**	**00 03 13.5**	**-1.4**
	baz=268						
TUL1				S	**Sg**	**00 03 31.6**	**+0.4**
	baz=268						
X34A	**Smith Ranch, M**	**1.33**	**196**	Pn	**Pn**	**00 03 14.6**	**-0.7**
U32A	**Winter Ranch,**	**1.40**	**291**	Pn	**Pn**	**00 03 15.9**	**-0.3**
U32A	**Winter Ranch,**	**1.40**	**291**	S	**Sn**	**00 03 35.7**	**+0.4**
	baz=112						
WMOK	**Wichita Mounta**	**1.61**	**225**		**Pn**	**00 03 19.0**	**-0.2**
WMOK	**Wichita Mounta**	**1.61**	**225**	P	**Pn**	**00 03 19.0**	**-0.2**
	baz=46						
X37A	**Clayton**	**2.10**	**127**	Pn	**Pn**	**00 03 25.8**	**0.0**
X37A				IAmb_Lg		00 03 57.4	
	comp=Z,28nm,0.7s						
X37A	**Clayton**	**2.10**	**127**	Sb	**Sb**	**00 03 55.5**	**+0.6**
	baz=308						
Z35A	**Perchaven, San**	**2.55**	**177**	Pn	**Pn**	**00 03 31.9**	**-0.1**
R32A	**Long Quarter,**	**2.74**	**338**		**Pn**	**00 03 34.7**	**-0.1**
R32A	**Long Quarter,**	**2.74**	**338**	P	**Pb**	**00 03 38.7**	**-0.8**
	baz=157						
HHAR	**Hobbs**	**2.82**	**81**		**Pn**	**00 03 34.4**	**-1.4**
W39A	**Magazine**	**3.02**	**102**		**Pn**	**00 03 38.5**	**0.0**
W39A	**Magazine**	**3.02**	**102**	P	**Pn**	**00 03 38.9**	**+0.4**
	baz=284						
Z38A	**Mt. Pleasant**	**3.29**	**142**	Pn	**Pn**	**00 03 42.3**	**+0.2**
MIAR	**Mount Ida**	**3.40**	**112**	Pn	**Pn**	**00 03 44.2**	**+0.5**
MIAR				IAmb_Lg		00 04 44.0	
	comp=Z,11nm,0.7s						
MIAR	**Mount Ida**	**3.40**	**112**	P	**Pn**	**00 03 44.6**	**+0.9**
	baz=294						
CBKS	**Cedar Bluff**	**3.47**	**328**		**Pn**	**00 03 43.6**	**-1.2**
CBKS				IAmb_Lg		00 04 49.2	
	comp=Z,21nm,0.9s						
AMTX	**Amarillo**	**3.65**	**255**		**Pn**	**00 03 48.1**	**+0.9**
AMTX				IAmb_Lg		00 04 50.2	
	comp=Z,12nm,0.9s						
AMTX	**Amarillo**	**3.65**	**255**	Pb	**Pb**	**00 03 54.5**	**-0.4**
	baz=74						
U40A	**Yellville**	**3.70**	**81**	Pn	**Pn**	**00 03 47.9**	**0.0**
S39A	**Bolivar**	**3.73**	**60**		**Pn**	**00 03 48.4**	**+0.1**
S39A				IAmb_Lg		00 04 48.4	
	comp=Z,13nm,0.8s						
S39A	**Bolivar**	**3.73**	**60**	P	**Pn**	**00 03 48.9**	**+0.6**
	baz=242						
ABTX	**Abilene, Hawle**	**3.75**	**210**	Pn	**Pn**	**00 03 48.7**	**+0.1**
WHTX	**Lake Whitney,**	**3.88**	**181**	Pn	**Pn**	**00 03 49.8**	**-0.6**
X40A	**Basin Creek Fa**	**3.98**	**109**		**Pn**	**00 03 52.0**	**+0.2**
X40A				IAmb_Lg		00 04 58.7	
	comp=Z,11nm,0.7s						
WLAR	**White Oak Lake**	**4.15**	**121**	IAmb_Lg		00 05 02.8	
	comp=Z,13nm,0.8s						
WHAR	**Wooly Hollow**	**4.20**	**97**		**Pn**	**00 03 54.5**	**-0.2**
WHAR				IAmb_Lg		00 05 10.3	
	comp=Z,10nm,1.1s						
W41B	**Gary Mavity, V**	**4.25**	**98**		**Pn**	**00 03 54.7**	**-0.8**
W41B				IAmb_Lg		00 05 14.4	
	comp=Z,14nm,1.1s						
UALR	**University of**	**4.27**	**104**	Pn	**Pn**	**00 03 55.3**	**-0.4**
FCAR	**Ozark Folk Cen**	**4.28**	**88**		**Pn**	**00 03 55.2**	**-0.6**
FCAR				IAmb_Lg		00 05 14.6	
	comp=Z,7.6nm,0.9s						
R40A	**Maddies Statio**	**4.75**	**58**	Pn	**Pn**	**00 04 02.7**	**+0.5**
MSTX	**Muleshoe**	**4.82**	**248**	Pn	**Pn**	**00 04 03.1**	**-0.3**
JCT	**Junction City**	**5.76**	**201**	IAmb_Lg		00 06 03.3	
	comp=Z,8.9nm,0.8s						
T25A	**Trinidad**	**5.79**	**285**	IAmb_Lg		00 06 05.8	
	comp=Z,5.2nm,0.8s						
N23A	**Red Feather La**	**8.37**	**309**	IAmb_Lg		00 07 24.3	
	comp=Z,4.8nm,0.8s						

IDC ***06*** *00:16:00.5±1.7, 19°.31S×168°.87E, h62^{km}±13^{km}, mb4.2/18, mbtmp4.6/19, MS3.6/18, Error ellipse: s-maj=17.7km s-min=11.6km az=102.0*
NEIC ***06*** *00:16:01.4±2.0, 19°.38S±0°.06×168°.78E±0°.08, h65^{km}±4^{km}, mb4.8/58, Error ellipse: s-maj=10.6km s-min=8.2km az=89.0*
NOU ***06*** *00:16:02.1, 19°.37S×168°.81E, h44^{km}, MLv5.6/27, Vanuatu Islands*
ISC 06 00:16:01.5±0.4**, 19°.38S**±0°.04×**168°.83E**±0°.06**, h73**^{km}±3^{km}**, h73**^{km}**:pP-P, n238, σ1^{s}24**/235**, mb4.7**/46**, 6C-19D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.62**	**346**	P	**Pn**	**00 16 28.3**	**+0.1**
DVP	**Devils Point**	**1.75**	**340**	P	**Pn**	**00 16 30.4**	**+0.4**
LIFNC	**LIFOU**	**2.04**	**227**		**Pn**	**00 16 32.4**	**-1.4**
LIFNC				Sn	**Sn**	**00 16 55.5**	**-2.8**
LIFNC	**LIFOU**	**2.04**	**227**	P	**Pn**	**00 16 33.0**	**-0.8**
MARNC	**Mare, Loyalty**	**2.22**	**200**	Pn	**Pn**	**00 16 35.4**	**-0.8**
MARNC				Sn	**Sn**	**00 16 59.9**	**-2.8**
MARNC	**Mare, Loyalty**	**2.22**	**200**	P	**Pn**	**00 16 35.6**	**-0.6**
YATNC	**Mamie plateau,**	**3.22**	**214**	P	**Pn**	**00 16 49.0**	**-0.8**
PINNC	**Pines Island,**	**3.47**	**202**		**Pn**	**00 16 52.7**	**-0.4**
PINNC				Sn	**Sn**	**00 17 32.3**	**-0.7**
PINNC	**Pines Island,**	**3.47**	**202**	P	**Pn**	**00 16 53.3**	**+0.2**
DZM	**Mont Dzumac**	**3.49**	**219**	P	**Pn**	**00 16 53.3**	**-0.2**
	1μm,0.4s,baz=56,slow=17,SNR=1458						
DZM				S	**Sn**	**00 17 33.3**	**-0.4**
	555nm,0.4s,baz=325,slow=23,SNR=6.6						
DZM	**Mont Dzumac**	**3.49**	**219**		**Pn**	**00 16 53.1**	**-0.4**
DZM	**Mont Dzumac**	**3.49**	**219**	P	**Pn**	**00 16 54.3**	**+0.8**
OUENC	**Ouen Island, N**	**3.55**	**211**		**Pn**	**00 16 54.2**	**-0.1**
OUENC	**Ouen Island, N**	**3.55**	**211**	P	**Pn**	**00 16 55.1**	**+0.9**
NOUC	**Port Laguerre**	**3.59**	**221**	P	**Pn**	**00 16 55.7**	**+0.8**
ONTNC	**Ouen Toro**	**3.66**	**217**		**Pn**	**00 16 56.3**	**+0.5**
ONTNC	**Ouen Toro**	**3.66**	**217**	P	**Pn**	**00 16 56.8**	**+1.0**
SANVU	**Saraoutou**	**4.21**	**338**	Pn	**Pn**	**00 17 01.4**	**-1.9**
SANVU	**Saraoutou**	**4.21**	**338**	P	**Pn**	**00 17 02.9**	**-0.4**
KOUNC	**Koumac, New Ca**	**4.43**	**254**		**Pn**	**00 17 06.2**	**-0.1**
KOUNC	**Koumac, New Ca**	**4.43**	**254**	P	**Pn**	**00 17 07.3**	**+1.1**
MSVF	**Nonsavu**	**8.90**	**81**	P	Pn	00 18 12.3	+4.8
	20nm,0.9s,baz=253,slow=12,SNR=15						
MSVF	**Nonsavu**	**8.90**	**81**	Pn	**Pn**	**00 18 10.1**	**+2.6**
MSVF	**Nonsavu**	**8.90**	**81**	P	**Pn**	**00 18 09.5**	**+2.0**
DGTI	**Dogotuki**	**10.83**	**75**	P	**Pn**	**00 18 34.4**	**+0.6**
HNR	**Honiara**	**13.10**	**318**	P	**Pn**	**00 19 03.5**	**-1.2**
	133nm,0.5s,baz=186,slow=5.4,SNR=2.0						
HNR	**Honiara**	**13.10**	**318**	Pn	**Pn**	**00 19 05.3**	**+0.6**
RAO	**Raoul Island**	**15.56**	**132**	Pn	**Pn**	**00 19 36.6**	**-0.1**
OUZ	**Omahuta**	**16.33**	**166**	P	**Pn**	**00 19 45.7**	**-0.6**
EIDS	**Eidsvold**	**17.45**	**247**	Pn	**Pn**	**00 19 57.7**	**-2.6**
EIDS	**Eidsvold**	**17.45**	**247**	P	**P**	**00 20 01.6**	**+1.1**
GRZ	**Great Barrier**	**17.79**	**162**	P	**Pn**	**00 20 06.5**	**+2.2**
MKAZ	**Moumakai**	**18.51**	**164**	P	**Pn**	**00 20 14.5**	**+1.6**
ARMA	**Armidale**	**19.06**	**231**		**P**	**00 20 18.0**	**-0.2**
ARMA	**Armidale**	**19.06**	**231**	P	**Pn**	**00 20 21.9**	**+2.2**
AFI	**Afiamalu**	**19.36**	**77**	LR	LR	00 26 14.6	
	comp=Z,74nm,19.4s,baz=244,slow=32						
RMQ	**Roma**	**19.78**	**245**	P	**Pn**	**00 20 28.7**	**+0.6**
HAZ	**Te Kaha**	**19.91**	**159**	P	**Pn**	**00 20 29.7**	**+0.2**
MXZ	**Matakaoa Point**	**19.92**	**157**	P	**Pn**	**00 20 30.9**	**+1.3**
RUGZ	**Raukumara Rang**	**20.06**	**159**	P	Pn	00 20 32.1	+0.7
PKGZ	**Pakihiroa**	**20.13**	**158**	P	Pn	00 20 31.7	-0.4
URZ	**Urewera**	**20.14**	**161**	P	Pn	00 20 31.5	-0.8
	94nm,1.1s,baz=249,slow=0.8,SNR=31						
URZ				LR	LR	00 25 56.4	
	comp=Z,118nm,22.0s,baz=31,slow=30						
	94nm,1.1s						
URZ	**Urewera**	**20.14**	**161**	P	**P**	**00 20 31.1**	**+1.3**
URZ				IAmb	IAmb	00 20 38.1	
	comp=Z,50nm,0.7s						
TWGZ	**Tauwhareparae**	**20.35**	**159**	P	Pn	00 20 34.6	-0.1
PUZ	**Puketiti**	**20.35**	**158**	P	Pn	00 20 34.4	-0.4
MRHZ	**Matea Rd**	**20.47**	**163**	P	Pn	00 20 37.2	+1.0
BKZ	**Black Stump Fm**	**20.80**	**163**	P	**P**	**00 20 38.2**	**+1.2**
BKZ				IAmb	IAmb	00 20 40.5	
	comp=Z,34nm,0.8s						
BKZ	**Black Stump Fm**	**20.80**	**163**	P	Pn	00 20 39.0	-1.1
CTA	**Charters Tower**	**21.26**	**264**	P	**P**	**00 20 44.2**	**+2.2**
	comp=Z,3.7nm,0.4s,baz=88,slow=11,SNR=9.2						
	comp=Z,3.7nm,0.4s						
BFZ	**Birch Farm**	**22.16**	**165**	P	**P**	**00 20 50.9**	**-0.6**
BFZ				IAmb	IAmb	00 21 02.0	
	comp=Z,17nm,0.7s						
TUWZ	**Tuamarina**	**22.41**	**170**	P	**P**	**00 20 53.3**	**-0.8**
BHW	**Baring Head**	**22.55**	**168**	P	**P**	**00 20 56.7**	**+1.0**
THZ	**Tophouse**	**22.58**	**172**	P	**P**	**00 20 56.9**	**+0.9**
MSWZ	**Moikau Station**	**22.64**	**167**	P	**P**	**00 20 56.7**	**+0.2**
PLWZ	**Palliser**	**22.79**	**167**	P	**P**	**00 20 58.6**	**+0.4**
PMG	**Port Moresby**	**23.19**	**292**	P	**P**	**00 21 01.5**	**-0.8**
PMG				IAmb	IAmb	00 21 06.9	
	comp=Z,17nm,0.6s						
MTSU	**Mount Surprise**	**23.24**	**269**	P	**P**	**00 21 04.9**	**+2.1**
KHZ	**Kahutara**	**23.31**	**171**	P	**P**	**00 21 02.9**	**-0.2**
KHZ				IAmb	IAmb	00 21 04.8	
	comp=Z,32nm,1.0s						
CNB	**Canberra Magne**	**23.40**	**223**	P	**P**	**00 21 07.3**	**+3.1**
LTZ	**Lake Taylor**	**23.51**	**174**	P	**P**	**00 21 05.3**	**+0.2**
LTZ				IAmb	IAmb	00 21 09.7	
	comp=Z,25nm,0.6s						
CAN	**Canberra**	**23.64**	**224**	P	**P**	**00 21 06.8**	**+0.4**
OXZ	**Oxford**	**24.03**	**174**	P	**P**	**00 21 09.8**	**+0.1**
OXZ				IAmb	IAmb	00 21 11.0	
	comp=Z,18nm,0.6s						
FOZ	**Fox Glacier**	**24.09**	**178**	P	**P**	**00 21 10.7**	**+0.5**
FOZ				IAmb	IAmb	00 21 13.8	
	comp=Z,41nm,0.9s						
RPZ	**Rata Peaks**	**24.34**	**176**	P	**P**	**00 21 13.4**	**+0.9**
	comp=Z,16nm,0.8s,baz=308,slow=4.3,SNR=13						
RPZ				LR	LR	00 30 02.1	
	comp=Z,240nm,18.7s,baz=344,slow=34						
	comp=Z,16nm,0.8s						
RPZ	**Rata Peaks**	**24.34**	**176**	P	**P**	**00 21 13.1**	**+0.7**
RPZ				IAmb	IAmb	00 21 15.0	
	comp=Z,23nm,0.9s						
MQZ	**McQueen's Vall**	**24.47**	**173**	P	**P**	**00 21 13.5**	**-0.1**
ODZ	**Otahua Downs**	**25.64**	**177**	P	**P**	**00 21 23.9**	**-0.3**
STKA	**Stephens Creek**	**27.44**	**238**	P	**P**	**00 21 42.9**	**+2.2**
	comp=Z,1.9nm,0.7s,baz=68,slow=11,SNR=4.9						
	comp=Z,1.9nm,0.7s						
BBOO	**Buckleboo**	**32.18**	**239**	P	**P**	**00 22 23.4**	**+0.7**
WR0	**Warramunga Arr**	**32.26**	**263**	P	**P**	**00 22 23.5**	**0.0**
WB0	**Warramunga Arr**	**32.42**	**263**	P	**P**	**00 22 24.6**	**-0.3**
WB2	**Warramunga Arr**	**32.44**	**263**	P	**P**	**00 22 24.8**	**-0.3**
WRA	**Warramunga Arr**	**32.45**	**263**	P	**P**	**00 22 24.9**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=90,slow=7.8,SNR=23						
	comp=Z,1.5nm,0.9s						
WRA	**Warramunga Arr**	**32.45**	**263**	P	**P**	**00 22 24.6**	**-0.6**
AS31	**Alice Springs**	**32.72**	**256**	P	**P**	**00 22 27.8**	**+0.3**
ASAR	**Alice Springs**	**32.72**	**256**	P	**P**	**00 22 27.9**	**+0.4**
	comp=Z,6.1nm,0.6s,baz=84,slow=8.9,SNR=77						
ASAR				ScP	**ScP**	**00 28 51.5**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=108,slow=4.1,SNR=4.4						
	comp=Z,6.1nm,0.6s						
ASAR	**Alice Springs**	**32.72**	**256**	P	**P**	**00 22 27.2**	**-0.3**
MTN	**Manton Dam**	**36.74**	**274**	P	**P**	**00 23 01.5**	**-0.7**
MTN				IAmb	IAmb	00 23 03.4	
	comp=Z,16nm,1.1s						
GUMO	**Guam**	**40.37**	**322**	LR	LR	00 39 21.8	
	comp=Z,61nm,19.9s,baz=116,slow=35						
PSA00	**Pilbara Seismi**	**45.79**	**258**	P	**P**	**00 24 17.1**	**+0.7**
PSA00	**Pilbara Seismi**	**45.79**	**258**	P	**P**	**00 24 16.9**	**+0.6**
PSA00				IAmb	IAmb	00 24 34.8	
	comp=Z,14nm,0.9s						
MBWA	**Marble Bar**	**45.95**	**259**	P	**P**	**00 24 18.1**	**+0.6**
MBWA				IAmb	IAmb	00 24 30.8	
	comp=Z,16nm,1.1s						
DRV	**Dumont d'Urvil**	**50.80**	**194**	P	**P**	**00 24 50.7**	**-3.4**
DRV				pP	**pP**	**00 25 11.6**	**+0.2**
DRV				sP	**sP**	**00 25 19.3**	**0.0**
JCJ	**Chichijima**	**52.93**	**330**	P	**P**	**00 25 09.6**	**-0.9**
	comp=Z,37nm,0.4s,baz=256,slow=19,SNR=8.4						
VNDA	**Vanda**	**58.28**	**182**	P	**P**	**00 25 48.5**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=359,slow=8.4,SNR=19						
VNDA				LR	LR	00 47 23.1	
	comp=Z,66nm,21.0s,baz=297,slow=32						
	comp=Z,1.9nm,0.6s						
VNDA	**Vanda**	**58.28**	**182**	P	**P**	**00 25 48.7**	**+0.5**
VNDA				IAmb	IAmb	00 25 49.2	
	comp=Z,2.8nm,0.7s						
VNDA	**Vanda**	**58.28**	**182**	P	**P**	**00 25 48.7**	**+0.5**
VNDA				pP	**pP**	**00 26 02.8**	**-3.2**
SBA	**Scott Base**	**58.52**	**181**	P	**P**	**00 25 50.9**	**+1.0**
SBA	**Scott Base**	**58.52**	**181**	P	**P**	**00 25 51.5**	**+1.7**
SBA				pP	**pwP**	**00 26 09.4**	**-1.7**
SBA				sP	**sP**	**00 26 18.8**	**+3.2**
JHJ	**Hachijo jima 2**	**59.12**	**332**	LR	LR	00 47 36.9	
	comp=Z,19nm,21.3s,baz=124,slow=32						
CASY	**Casey**	**59.84**	**203**	P	**P**	**00 25 59.7**	**+0.6**
CCD	**Concordia, Ant**	**60.68**	**192**	P	**P**	**00 26 05.2**	**0.0**
CCD				pP	**pwP**	**00 26 23.4**	**-3.0**
CCD				sP	**sP**	**00 26 32.7**	**+1.6**
JGF	**Kuroka**	**62.29**	**331**	P	**P**	**00 26 15.5**	**-0.7**
JGF				IAmb	IAmb	00 26 16.6	
	comp=Z,8.4nm,0.6s						
MJAR	**Matsushiro Arr**	**62.70**	**333**	P	**P**	**00 26 17.5**	**-1.4**
	comp=Z,2.6nm,0.4s,baz=165,slow=6.0,SNR=9.4						
	comp=Z,2.6nm,0.4s						
MJAR	**Matsushiro Arr**	**62.70**	**333**	P	**P**	**00 26 18.0**	**-0.8**
MJAR				IAmb	IAmb	00 26 19.6	
	comp=Z,3.6nm,0.6s						
MAJO	**Matsushiro**	**62.70**	**333**	P	**P**	**00 26 18.1**	**-0.8**
MJB9	**Matsu-Tunnel**	**62.70**	**333**	P	**P**	**00 26 18.2**	**-0.6**
MJB9				IAmb	IAmb	00 26 19.8	
	comp=Z,9.4nm,0.6s						
SSLB	**Suanglung**	**63.40**	**311**	P	**P**	**00 26 23.7**	**0.0**
SSLB				IAmb	IAmb	00 26 24.5	
	comp=Z,13nm,0.9s						
JNU	**Nakatsue**	**63.56**	**325**	P	**P**	**00 26 24.6**	**-0.1**
JNU				IAmb	IAmb	00 26 27.5	
	comp=Z,9.2nm,0.8s						
YHNB	**Yeheng**	**63.65**	**312**	P	**P**	**00 26 25.0**	**-0.5**
JHS	**Saijyo**	**63.84**	**328**	P	**P**	**00 26 27.2**	**+0.8**
JHS				IAmb	IAmb	00 26 33.2	
	comp=Z,7.0nm,0.8s						
JSD	**Sado**	**63.93**	**333**	P	**P**	**00 26 26.5**	**-0.4**
JTM	**Tenmabayashi**	**65.19**	**337**	P	**P**	**00 26 35.1**	**+0.1**
ERM	**Erimo**	**65.54**	**339**	P	**P**	**00 26 38.5**	**+1.2**
ASAJ	**Asahikawa**	**67.60**	**340**	P	**P**	**00 26 51.3**	**+0.9**
	comp=Z,25nm,0.7s,baz=181,slow=13,SNR=13						
ASAJ				LR	LR	00 53 37.6	
	comp=Z,37nm,19.6s,baz=166,slow=33						
	comp=Z,25nm,0.7s						
NJ2	**Nanjing**	**70.04**	**316**	*e*P	**P**	**00 27 09.3**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
QSPA	**South Pole Qui**	**70.67**	**180**	LR	LR	00 52 58.4	
	comp=Z,72nm,21.6s,baz=328,slow=31						
QSPA	**South Pole Qui**	**70.67**	**180**	P	**P**	**00 27 09.8**	**+0.5**
QSPA				IAmb	IAmb	00 27 10.8	
	comp=Z,16nm,0.8s						
QSPA	**South Pole Qui**	**70.67**	**180**	P	**P**	**00 27 09.9**	**+0.5**
QSPA				pP	**pwP**	**00 27 28.2**	**-2.2**
QSPA				sP	**sP**	**00 27 37.9**	**+2.1**
USRK	**Ussuriysk Ar.**	**71.69**	**333**	P	**P**	**00 27 16.0**	**+0.5**
	comp=Z,6.9nm,0.8s,baz=116,slow=4.7,SNR=8.1						
	comp=Z,6.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**71.69**	**333**	P	**P**	**00 27 16.3**	**+0.8**
SHEM	**Shemya Is, Ala**	**71.95**	**3**	LR	LR	00 54 35.8	
	comp=Z,39nm,20.9s,baz=270,slow=32						
PEA0B	**Petropavlovsk-**	**72.83**	**353**	P	**P**	**00 27 22.9**	**+0.8**
PEA0B				IAmb	IAmb	00 27 23.5	
	comp=Z,23nm,1.0s						
PETK	**Petropavlovsk-**	**72.83**	**353**	P	**P**	**00 27 22.2**	**+0.1**
	comp=Z,9.1nm,0.8s,baz=142,slow=7.3,SNR=6.5						
PETK				LR	LR	00 53 54.4	
	comp=Z,35nm,20.0s,baz=178,slow=31						
	comp=Z,9.1nm,0.8s						
CN2	**Changchun**	**74.38**	**329**	*e*P	**P**	**00 27 31.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,20nm,7.0s						
BNX	**BinXian**	**74.91**	**331**	⇑P	**P**	**00 27 34.3**	**-0.2**
BNX				pmax	pmax		
	comp=Z,30nm,0.6s						
BNX				pmax	pmax		
	comp=Z,440nm,4.5s						
KMI	**Kunming**	**78.02**	**302**	⇑P	**P**	**00 27 54.6**	**+1.8**
KMI				pmax	pmax		
	comp=Z,10μm,3.5s						
MAW	**Mawson**	**78.16**	**202**	LR	LR	01 00 57.2	
	comp=Z,24nm,18.2s,baz=126,slow=34						
CMAR	**Chiang Mai Arr**	**78.21**	**294**	P	**P**	**00 27 55.1**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=126,slow=4.7,SNR=5.5						
	comp=Z,1.1nm,0.4s						
SDPT	**Sand Point**	**78.88**	**17**	P	**P**	**00 27 54.5**	**-2.0**
PZH	**PanZhiHua**	**79.46**	**303**	P	**P**	**00 28 02.9**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,8.3s						
MA2	**Magadan**	**80.05**	**351**	P	**P**	**00 28 01.7**	**-1.1**
	comp=Z,5.5nm,0.7s,baz=122,slow=6.0,SNR=4.5						
	comp=Z,5.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**80.08**	**320**	*e*P	**P**	**00 28 05.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,48nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.7s						
OHAK	**Old Harbor**	**82.62**	**20**	P	**P**	**00 28 16.9**	**+0.5**
SEY	**Seymchan**	**83.06**	**353**	P	**P**	**00 28 16.9**	**-1.7**
	comp=Z,3.0nm,0.8s,baz=177,slow=7.4,SNR=6.9						
	comp=Z,3.0nm,0.8s						
KDAK	**Kodiak Island**	**83.30**	**20**	P	**P**	**00 28 20.2**	**+0.2**
KDAK				IAmb	IAmb	00 28 29.0	
	comp=Z,20nm,1.1s						
SMAI	**San Martin Ant**	**83.82**	**162**	P	**P**	**00 28 22.7**	**0.0**
SMAI				IAmb	IAmb	00 28 23.4	
	comp=Z,6.3nm,0.7s						
P18K	**Big Mountain,**	**83.82**	**18**	P	**P**	**00 28 22.2**	**-0.5**
Q19K	**Cape Douglas,**	**83.90**	**19**	P	**P**	**00 28 23.0**	**-0.1**
O18K	**Koktuh Hills**	**84.21**	**17**	P	**P**	**00 28 24.0**	**-0.6**
GAMB	**Gambell**	**84.27**	**9**	P	**P**	**00 28 24.7**	**-0.1**
GAMB				IAmb	IAmb	00 28 25.3	
	comp=Z,10.0nm,0.8s						
N18K	**Kilae Creek**	**84.71**	**17**	P	**P**	**00 28 26.4**	**-0.7**
N18K				IAmb	IAmb	00 28 28.9	
	comp=Z,6.2nm,0.8s						
ULN	**Ulaanbaatar**	**86.75**	**324**		**P**	**00 28 37.8**	**+0.1**
ULN				IAmb	IAmb	00 28 39.0	
	comp=Z,9.0nm,1.1s						
SONM	**Songino Array**	**87.10**	**323**	P	**P**	**00 28 39.4**	**0.0**
	comp=Z,2.8nm,0.8s,baz=165,slow=8.4,SNR=18						
	comp=Z,2.8nm,0.8s						
BILL	**Bilibino**	**87.19**	**359**	P	**P**	**00 28 38.3**	**-0.9**
BILL				IAmb	IAmb	00 28 39.5	
	comp=Z,5.3nm,0.8s						
YBH	**Yreka Blue Hor**	**87.67**	**44**	LR	LR	00 58 59.6	
	comp=Z,33nm,21.0s,baz=262,slow=29						
CAST	**Castle Rocks**	**87.99**	**16**	P	**P**	**00 28 41.1**	**-2.1**
CAST				IAmb	IAmb	00 28 41.4	
	comp=Z,3.6nm,0.6s						
TROLL	**Troll, Antarti**	**88.37**	**184**	P	**P**	**00 28 46.3**	**+1.1**
SNAA	**Sanae**	**89.00**	**183**	P	**P**	**00 28 47.7**	**-0.4**
SNAA	**Sanae**	**89.00**	**183**	P	**P**	**00 28 47.9**	**-0.2**
NVAR	**Mina Array Bea**	**89.18**	**49**	P	**P**	**00 28 48.8**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=208,slow=1.7,SNR=2.8						
NVAR				LR	LR	01 00 01.3	
	comp=Z,31nm,20.6s,baz=277,slow=30						
	comp=Z,1.2nm,0.8s						
VNA3	**Neumayer Olymp**	**89.61**	**180**	P	**P**	**00 28 50.4**	**-0.5**
BBB	**Bella Bella**	**89.80**	**33**	LR	LR	01 02 34.4	
	comp=Z,26nm,18.9s,baz=285,slow=31						
LPIG	**La Paz**	**89.83**	**64**	LR	LR	00 59 31.1	
	comp=Z,32nm,20.3s,baz=204,slow=29						
VNA2	**Neumayer--Watz**	**89.90**	**181**	P	**P**	**00 28 52.0**	**-0.2**
	baz=182,slow=5.0						
VNA1	**Neumayer--Stat**	**90.19**	**181**	P	**P**	**00 28 53.0**	**-0.5**
ILAR	**Eielson Array**	**90.48**	**17**	P	**P**	**00 28 52.6**	**-2.1**
	comp=Z,1.3nm,0.4s,baz=238,slow=4.8,SNR=18						
ILAR				LR	LR	01 03 26.3	
	comp=Z,25nm,19.2s,baz=1.0,slow=32						
	comp=Z,1.3nm,0.4s						
J25K	**Salcha River,**	**90.80**	**18**	P	**P**	**00 28 54.8**	**-1.5**
J25K				IAmb	IAmb	00 28 58.0	
	comp=Z,1.8nm,0.7s						
J08A	**Circle Bar Ran**	**91.20**	**44**	P	**P**	**00 28 59.2**	**+0.4**
J08A				IAmb	IAmb	00 28 59.6	
	comp=Z,3.2nm,0.6s						
ELK	**Elko**	**92.30**	**48**	LR	LR	01 11 46.6	
	comp=Z,16nm,18.0s,baz=26,slow=36						
DLBC	**Dease Lake**	**92.34**	**27**	LR	LR	01 00 57.3	
	comp=Z,50nm,21.6s,baz=26,slow=29						
WMQ	**Urumqi**	**97.02**	**314**	*e*P	Pdif	00 29 27.1	+1.6
WMQ				LR	LR		
	comp=N,530nm,20.3s						
WMQ				LR	LR		
	comp=E,460nm,20.3s						
WMQ				LR	LR		
	comp=Z,120nm,19.1s						
TXAR	**Lajitas Array**	**97.17**	**62**	P	Pdif	00 29 27.4	+0.8
	comp=Z,0.2nm,0.6s,baz=213,slow=4.3,SNR=4.2						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**100.97**	**27**	P	**Pdif**	**00 29 42.6**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=254,slow=4.6,SNR=13						
MKAR	**Makanchi Array**	**101.57**	**316**	P	**Pdif**	**00 29 46.9**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=84,slow=5.6,SNR=6.8						
HAMF	**Hammerfest**	**124.70**	**347**	*e*PKPdf	**PKPdf**	**00 34 51.0**	**-1.1**
ARA0	**ARCESS Array S**	**125.10**	**345**	*e*PKPdf	**PKPdf**	**00 34 52.4**	**-0.6**
ARCES	**ARCESS Array B**	**125.10**	**345**	PKP	**PKPdf**	**00 34 52.3**	**-0.6**
	comp=Z,3.5nm,0.3s,baz=70,slow=2.3,SNR=89						
KLMR	**Klimovskoe**	**125.48**	**332**	*e*PKPdf	**PKPdf**	**00 34 51.9**	**-1.9**
KLMR				AMP		00 35 04.9	
	comp=Z,9.0nm,1.3s						
KTK1	**Kautokeino**	**126.04**	**345**	*e*PKPdf	**PKPdf**	**00 34 53.8**	**-0.9**
JETT	**Jettan, Norway**	**126.26**	**347**	*e*PKPdf	**PKPdf**	**00 34 54.2**	**-1.0**
TRO	**Tromso**	**126.51**	**347**	*e*PKPdf	**PKPdf**	**00 34 54.8**	**-0.7**
JMIC	**Jan Mayen**	**128.37**	**359**	*e*PKPdf	**PKPdf**	**00 34 58.6**	**-0.5**
STEI	**Steigen**	**128.68**	**348**	*e*PKPdf	**PKPdf**	**00 34 58.9**	**-0.8**
FAUS	**Fauske**	**129.13**	**347**	*e*PKPdf	**PKPdf**	**00 35 00.4**	**-0.2**
KONS	**Konsvik**	**130.33**	**348**	*e*PKPdf	**PKPdf**	**00 35 01.9**	**-1.0**
MOR8	**Moi Rana**	**130.34**	**347**	*e*PKPdf	**PKPdf**	**00 35 02.2**	**-0.8**
FINES	**FINESS Array B**	**130.57**	**337**	PKP	**PKPdf**	**00 35 03.1**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=48,slow=2.1,SNR=22						
FINES				SKPbc	**SKPbc**	**00 38 19.7**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=94,slow=4.2,SNR=9.8						
NSS	**Namsos**	**132.28**	**347**	*e*PKPdf	**PKPdf**	**00 35 06.6**	**-0.1**
DOMB	**Dombas**	**135.10**	**347**	*e*PKPdf	**PKPdf**	**00 35 12.4**	**+0.3**
AKN	**Aaknes**	**135.41**	**348**	*e*PKPdf	**PKPdf**	**00 35 12.6**	**-0.1**

NB2	NORSAR Subarra	135.48	345	PKPdf	PKPdf	00 35 13.2	+0.3
	comp=Z,1.5nm,0.7s,baz=31,slow=1.9						
NB2	NORSAR Subarra	135.48	345	PKPdf	PKPdf	00 35 13.2	+0.3
	baz=31,slow=1.9						
NOA	NORSAR Array B	135.48	345	PKP	PKPdf	00 35 13.2	+0.3
	comp=Z,0.7nm,0.5s,baz=32,slow=2.1,SNR=6.4						
NC602	NORSAR Array S	135.66	344	ePKPdf	PKPdf	00 35 13.6	+0.4
SKAR	Skarslia	136.48	346	ePKPdf	PKPdf	00 35 12.0	-2.8
BER	Bergen	137.38	348	ePKPdf	PKPdf	00 35 15.8	-0.5
OSTC	Ostas	142.06	331	ePKP	PKPdf	00 35 20.8	-4.4
CHVC	Chvalec	142.12	332	ePKP	PKPdf	00 35 20.0	-5.3
KRLC	Kraliky	142.14	331	ePKP	PKPdf	00 35 21.2	-4.2
DPC	Dobruska-Polom	142.16	331	ePKP	PKPdf	00 35 19.9	-5.5
CLL	Collm	142.88	335	ePKPdf	PKiKP	00 35 29.0	-0.8
CLL				epPKPdf	pPKPdf	00 35 47.0	-0.1
PRU	Pruhonice	143.22	332	ePKP	PKPbc	00 35 24.1	-0.3
NKC	Novy Kostel	143.93	334	ePKP	PKPbc	00 35 26.6	+0.1
RONA	Rosalia, Austr	144.00	328	i P	PKPbc	00 35 27.7	+0.9
	comp=Z,5.2nm,0.5s,SNR=5.4						
CONA	Conrad Observa	144.06	329	eP	PKPbc	00 35 27.7	+0.6
	comp=Z,5.2nm,0.7s						
CKRC	Cesky Krumlov	144.17	331	ePKP	PKPab	00 35 27.3	+0.5
KHC	Kasperske Hory	144.28	332	ePKP	PKPab	00 35 27.7	+0.5
GERES	GERESS Array B	144.43	331	PKP	PKPab	00 35 28.2	+0.3
	comp=Z,5.8nm,0.8s,baz=31,slow=3.1,SNR=56						
GERES				SKPbc	SKPbc	00 39 02.5	+0.1
	comp=Z,0.7nm,0.7s,baz=54,slow=2.3,SNR=4.1						
ARSA	Arzberg	144.69	328	eP	PKPab	00 35 29.1	+0.2
	comp=Z,6.0nm,1.0s						
IOMK	Kirk Michael	144.81	353	eP	PKPab	00 35 28.2	-0.8
KOGS	Kog	144.85	326	ePKPbc	PKPab	00 35 29.5	+0.1
MOA	Molln	144.89	330	i P	PKPbc	00 35 30.0	+0.4
	comp=Z,21nm,0.6s,SNR=13						
LBWR	Ladybower, Pea	145.26	350	eP	PKPbc	00 35 30.0	-0.5
BIOA	Bad Ischl, Aus	145.30	330	i P	PKPbc	00 35 30.8	0.0
	comp=Z,8.0nm,0.7s,SNR=7.5						
PERS	Pernice	145.31	328	ePKPbc	PKPbc	00 35 31.1	+0.1
SOKA	Soboth	145.33	328	i P	PKPbc	00 35 30.9	-0.2
	comp=Z,7.5nm,0.5s,SNR=7.0						
STNC	Stoke	145.64	350⇑	eP	PKPdf	00 35 31.6	+0.3
WPS	Cemaes, Angles	145.65	353⇑	eP	PKPdf	00 35 30.9	-0.5
OBKA	Obir	145.69	328	eP	PKPdf	00 35 32.2	+0.4
	comp=Z,8.1nm,0.8s						
WLF1	Llynfaes	145.75	353	eP	PKPdf	00 35 31.1	-0.4
YRC	Rhoscolyn	145.81	353⇑	eP	PKPdf	00 35 31.4	-0.1
CWF	Charnwood Fore	145.83	349	eP	PKPdf	00 35 31.5	-0.1
KBA	Koelnbreinsper	145.88	330	i P	PKPdf	00 35 32.6	+0.4
	comp=Z,5.1nm,0.6s,SNR=5.0						
BEBN	Eben Emael	145.93	341	dPKPbc	PKPdf	00 35 32.3	+0.4
BEBN				dPKP	PKPab	00 35 33.5	+0.3
BTNL	Ternell	145.97	340	dPKPab	PKPbc	00 35 33.1	+0.2
BTNL				dPKP	PKPab	00 35 34.0	+0.5
FOEL	Foel Wylfa	145.99	351	eP	PKPdf	00 35 32.3	+0.3
MEM	Membach	145.99	340	dPKPab	PKPbc	00 35 32.8	0.0
MEM				dPKP	PKPab	00 35 33.8	+0.4
MEM				dPKiKP	PKiKP	00 35 36.4	+0.2
ELMS	Elmsett, Ipswi	145.99	347	eP	PKPdf	00 35 32.0	+0.1
MYKA	Terra Mystica	146.05	329	eP	PKPdf	00 35 32.8	+0.4
	comp=Z,3.4nm,0.4s						
BSTI	Sart Tilman	146.15	341	dPKPbc	PKPdf	00 35 33.0	+0.7
BHOU	Houvegnez	146.21	340	dPKPbc	PKPbc	00 35 33.4	-0.1
BHOU				dPKiKP	PKiKP	00 35 36.4	-0.3
HLM1	Long Mynd	146.30	351	eP	PKPdf	00 35 32.7	+0.2
JAVS	Javornik	146.35	327	i PKPbc	PKPdf	00 35 33.6	+0.6
BCLA	Clavier	146.37	341	dPKPbc	PKPdf	00 35 33.6	+1.0
BGES	Gesves	146.47	341	dPKPbc	PKPbc	00 35 33.9	-0.4
WATA	Walderalm	146.51	332	eP	PKPbc	00 35 34.4	-0.3
	comp=Z,6.4nm,0.7s						
ABTA	Abfaltersbach	146.51	330	i P	PKPdf	00 35 34.2	+1.0
	comp=Z,6.3nm,0.6s,SNR=5.9						
WTTA	Wattenberg	146.53	331	i P	PKPbc	00 35 34.8	-0.1
	comp=Z,13nm,1.0s,SNR=6.0						
SNF	Seneffe	146.60	342	dPKPbc	PKPbc	00 35 34.5	-0.2
SNF				dPKPab	PKPab	00 35 35.5	-0.3
RCHB	Rochefort	146.62	341	dPKPbc	PKPbc	00 35 34.3	-0.5
BMRD	Maredsous	146.64	341	dPKPbc	PKPbc	00 35 34.5	-0.3
MOTA	Moosalm	146.71	332	i P	PKPbc	00 35 35.1	-0.2
	comp=Z,18nm,0.9s,SNR=8.3						
RETA	Reutte	146.75	332	eP	PKPbc	00 35 35.3	0.0
	comp=Z,5.8nm,0.5s						
WLF	Walferdange	146.75	339	dPKP	PKPbc	00 35 35.5	+0.4
WLF				dpPKP	pPKPab	00 35 55.3	-1.1
SQTA	Sankt Quirin	146.76	332	i P	PKPbc	00 35 35.4	0.0
	comp=Z,16nm,0.6s,SNR=15						
MCH1	Michaelchurch	146.82	351	eP	PKPdf	00 35 34.4	+1.0
DOU	Dourbes	146.87	341	dPKPbc	PKPbc	00 35 35.5	0.0
STRD	Stroud	146.90	350	eP	PKPbc	00 35 36.2	+0.7
MONM	Monmouth	146.95	350	eP	PKPdf	00 35 34.4	+0.8
SWN1	Swindon	147.09	349⇑	eP	PKPbc	00 35 35.6	-0.5
RSBS	Rosebush, Pemb	147.10	353	eP	PKPdf	00 35 34.6	+0.7
FETA	Feichten	147.12	332	i P	PKPbc	00 35 36.6	+0.1
	comp=Z,13nm,0.6s,SNR=9.5						
DAVA	Damuels	147.29	333	i P	PKPbc	00 35 36.8	-0.2
	comp=Z,8.8nm,0.6s,SNR=5.4						
DAVOX	Davos/Dischmat	147.68	333	PKPbc	PKPbc	00 35 38.3	+0.2
	comp=Z,32nm,0.5s,baz=244,slow=1.7,SNR=123						
DYA	Yadsworthy	148.48	351	eP	PKPbc	00 35 39.1	-0.7
ESDC	Sonseca Array	158.84	344	PKPab	PKPab	00 36 27.0	-0.4
	comp=Z,0.6nm,0.5s,baz=11,slow=3.9,SNR=10.0						
TORD	Torodi Ar. Bea	166.18	245	PKPab	PKPab	00 37 00.4	+0.1
	comp=Z,0.6nm,0.8s,baz=130,slow=2.2,SNR=3.9						

DJA 06 00:25:43.5±0.9**, 0°N**±7°×**12°5E**±°**, h120^{km}**±17^{km}**, M3.7**/8**, MLv3.7**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.81	302	P	Pn	00 26 02.2	-1.5
GTOI	Gorontalo	1.72	287	P	Pn	00 26 17.1	+3.6
LUWI	Luwuk	2.22	238	P	Pn	00 26 21.2	+1.4
SANI	Sanana	2.55	149	P	Pn	00 26 24.4	+0.5
MRSI	Marisa	2.74	277	P	Pn	00 26 24.4	-2.0
LBMI	Labuha	2.94	105	P	Pn	00 26 28.7	-0.4
APSI	Ampana	3.19	251	P	Pn	00 26 33.2	+0.9

IDC 06 00:53:30.6±2.4**, 6°.49S**×**130°.88E, h0^{km}, mb3.5**/1**, mbtmp3.5**/3**, ML3.5**/2**, Error ellipse: s-maj=76.0km s-min=29.0km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.62	203	Pn	Pn	00 56 33.3	+1.8
	baz=37,slow=13						
FITZ				Sn	Sn	00 58 52.2	-0.6
	baz=112,slow=19						
WRA	Warramunga Arr	13.79	166	Pn	Pn	00 56 46.1	-1.3
	0.2nm,0.3s,baz=348,slow=14,SNR=6.6						
WRA				Sn	Sn	00 59 12.3	-9.2
	0.1nm,0.3s,baz=348,slow=19,SNR=1.4 0.3nm,0.3s						
ASAR	Alice Springs	17.32	171	Pn	Pn	00 57 34.2	+0.2
	0.2nm,0.3s,baz=349,slow=9.7,SNR=11 0.9nm,0.6s						
MKAR	Makanchi Array	68.29	326	P	P	01 04 33.4	-0.1
	0.3nm,0.7s,baz=111,slow=7.9,SNR=2.5 0.3nm,0.7s						

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*DJA **06** 00:54:12.6±0.3, 6°S±3°×10°5E±°, h10^{km}, M4.2/14, mb4.7/1, MLv4.0/14*

*NEIC **06** 00:54:21.1±2.1, 5°.7S±0°.1×105°.6E±0°.1, h82^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=21.8km s-min=5.1km az=220.0*

*IDC **06** 00:54:21.2±3.4, 5°.74S×105°.64E, h90^{km}±29^{km}, mb3.7/10, mbtmp4.1/11, MS3.5/3, Error ellipse: s-maj=57.0km s-min=15.3km az=52.0*

ISC 06 00:54:14.2±0.5**, 5°.95S**±0°.06×**105°.39E**±0°.05**, h26^{km}, n48, σ1^s.11**/52**, mb4.1**/16**, MS3.4**/3**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLSI	Bandar Lampung	0.60	347	P	Pb	00 54 26.0	-0.2
BLSI				S	Sb	00 54 36.2	+1.9
KASI	Kota Agung	0.98	296	P	Pn	00 54 31.5	-0.8
KASI				S	Sn	00 54 46.4	+1.0
KLI	Kotabumi	1.20	334	P	Pb	00 54 37.0	+0.6
TNG	Tangerang	1.27	100	P	Pn	00 54 35.7	-0.7
TNG				P	Pn	00 54 36.7	+0.3
TNG				S	Sb	00 54 54.8	+1.3
TNG				S	Sb	00 54 54.8	+1.3
DBJI	Dramaga	1.48	114	P	Pn	00 54 38.5	-0.8
CBJI	Citeko	1.53	108	P	Pb	00 54 42.3	+0.4
SKJI	Sukabumi	1.56	132	P	Pn	00 54 39.0	-1.4
LWLI	Liwa	1.61	305	P	Pn	00 54 41.8	+0.6
CNJI	Cibinong	2.19	128	P	Pn	00 54 47.6	-1.5
LEM	Lembang	2.38	111	P	Pb	00 54 57.2	+0.6
	97nm,0.5s,baz=224,slow=4.4,SNR=21						
LEM				S	Sb	00 55 26.6	+1.0
	93nm,0.8s,baz=212,slow=23,SNR=1.5						
LEM	Lembang	2.38	111	P	Pn	00 54 52.0	+0.2
MNAI	Manna	2.89	303	Pn	Pb	00 55 05.8	+0.6
MNAI	Manna	2.89	303	P	Pn	00 54 59.6	+1.0
JCJI	Jatiwangi	2.92	101	P	Pn	00 54 59.8	+0.8
PMBI	Palembang	3.07	348	Pn	Pb	00 55 06.0	-2.2
CMJI	Cimerak	3.54	121	P	Pn	00 55 07.6	0.0
KPJI	Karang Pucung	3.78	111	P	Pn	00 55 11.1	+0.2
PPBI	Pangkal Pinang	3.84	11	P	Pn	00 55 13.1	+1.4
YOGI	Yogyakarta	5.21	111	P	Pn	00 55 30.2	-0.4
KNRA	Kununurra	24.89	115	P	P	00 59 35.1	-0.1
KNRA				IAmb	IAmb	00 59 36.2	
	comp=Z,9.8nm,0.8s						
CMAR	Chiang Mai Arr	25.07	345	P	P	00 59 35.9	-0.9
	comp=Z,1.5nm,0.3s,baz=178,slow=8.8,SNR=2.3 comp=Z,1.5nm,0.3s						
MORW	Morawa	25.10	158	P	P	00 59 38.3	+1.3
MORW				IAmb	IAmb	00 59 49.6	
	comp=Z,4.9nm,1.1s						
PALK	Pallekele	27.91	298		S	01 04 42.9	-2.1
WB0	Warramunga Arr	31.36	119	P	P	01 00 31.9	-1.2
WB0				IAmb	IAmb	01 00 42.7	
	comp=Z,5.9nm,1.1s						
WRA	Warramunga Arr	31.38	119	P	P	01 00 32.4	-0.9
	comp=Z,1.0nm,0.4s,baz=297,slow=9.5,SNR=13						
WRA				PcP	PcP	01 03 25.9	-0.9
	comp=Z,0.4nm,0.6s,baz=313,slow=2.0,SNR=1.9 comp=Z,1.0nm,0.4s						
WRAB	Tennant Creek	31.39	119	P	P	01 00 33.8	+0.4
WRAB				IAmb	IAmb	01 00 51.3	
	comp=Z,4.3nm,1.1s						
WB2	Warramunga Arr	31.39	119	P	P	01 00 32.5	-0.8
WB2				IAmb	IAmb	01 00 45.5	
	comp=Z,3.8nm,1.1s						
WR0	Warramunga Arr	31.56	119	P	P	01 00 34.3	-0.5
WR0				IAmb	IAmb	01 00 38.4	
	comp=Z,4.0nm,1.0s						
ASAR	Alice Springs	32.60	126	P	P	01 00 43.2	-0.7
	comp=Z,0.8nm,0.5s,baz=299,slow=8.0,SNR=12 comp=Z,0.8nm,0.5s						
STKA	Stephens Creek	42.53	132	P	P	01 02 08.0	+0.1
	comp=Z,4.1nm,0.5s,baz=302,slow=8.8,SNR=10 comp=Z,4.1nm,0.5s						
STKA	Stephens Creek	42.53	132	P	P	01 02 07.8	0.0
GUMO	Guam	43.74	63	LR	LR	01 23 10.5	
	comp=Z,24nm,18.7s,baz=95,slow=40						
JNU	Nakatsue	45.78	30	LR	LR	01 22 38.8	
	comp=Z,136nm,19.8s,baz=222,slow=37						
SONM	Songino Array	53.56	1	P	P	01 03 33.1	0.0
	comp=Z,0.8nm,0.7s,baz=193,slow=8.3,SNR=4.5 comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	56.37	341	P	P	01 03 51.0	-2.2
	comp=Z,0.7nm,1.0s,baz=109,slow=10,SNR=3.7 comp=Z,0.7nm,1.0s						
OPO	Ambohidratompo	58.00	252	LR	LR	01 23 55.8	
	comp=Z,27nm,18.4s,baz=147,slow=30						
ZALV	Zalesovo Beam	62.13	346	P	P	01 04 31.1	-1.8
	comp=Z,1.0nm,0.7s,baz=111,slow=8.4,SNR=4.9 comp=Z,1.0nm,0.7s						
ABKAR	Akbulak array	67.70	330	P	P	01 05 07.9	-1.4
THZ	Tophouse	69.34	132	P	P	01 05 20.4	+0.6
BKZ	Black Stump Fm	71.63	129	P	P	01 05 33.2	-0.6
KBZ	Khabaz	74.80	318	P	P	01 05 51.6	-0.7
	comp=Z,1.6nm,0.8s,baz=117,slow=10,SNR=3.9 comp=Z,1.6nm,0.8s						
ASF	Jabal al Asfar	75.24	305	P	P	01 05 56.0	+0.7
	comp=Z,1.9nm,0.8s,baz=161,slow=2.3,SNR=4.3 comp=Z,1.9nm,0.8s						
VNDA	Vanda	77.29	169	P	P	01 06 06.0	+0.1
QSPA	South Pole Qui	84.03	180	P	P	01 06 45.7	+3.3
MLR	Muntele Rosu	86.85	316	P	P	01 06 56.8	0.0
	comp=Z,2.1nm,0.7s,baz=167,slow=4.4,SNR=4.3 comp=Z,2.1nm,0.7s						
BURAR	Bucovina Array	87.76	318	P	P	01 07 01.5	+0.3
BUR08	Bucovina Ar. S	87.78	318	P	P	01 07 01.8	+0.6
TXAR	Lajitas Array	144.04	46	PKP	PKPab	01 13 46.4	+0.6
	comp=Z,0.4nm,0.8s,baz=307,slow=1.9,SNR=3.4						

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*DDA **06** 01:18:58.5±0.0, 34°.89N×31°.37E, h7^{km}±2^{km}, ML2.6*

*NIC **06** 01:18:60.0±0.0, 35°.23N×31°.48E, h23^{km}±1^{km}, Ml2.9/5*

*ISK **06** 01:19:02.8, 35°.26N×31°.84E, h4^{km}, ML2.7/18*

ISC 06 01:18:60.0±1.3**, 35°.08N**±0°.04×**31°.56E**±0°.04**, h13^{km}**±12^{km}**, n47, σ1^s.54**/60**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	Akamas	0.64	95	P	Pn	01 19 14.3	-0.5
AKMS				S	Sn	01 19 25.7	+0.8
AKMS				AML	AML	01 19 28.6	
	2.0nm,0.5s						
AKMS				AML	AML	01 19 28.6	
	2.0nm,0.5s						
AKMS				AML	AML	01 19 31.1	
	2.3nm,0.6s						
AKMS				AML	AML	01 19 31.1	
	2.3nm,0.6s						
ALFC	Alefka	0.86	85	P	Pn	01 19 17.7	-0.1
ALFC				S	Sn	01 19 31.1	+0.8
ALFC				AML	AML	01 19 35.3	
	1.0nm,0.5s						
ALFC				AML	AML	01 19 35.3	
	1.0nm,0.5s						
ALFC				AML	AML	01 19 36.0	
	1.4nm,0.5s						
ALFC				AML	AML	01 19 36.0	
	1.4nm,0.5s						
NATA	Nata	0.89	109	P	Pn	01 19 18.0	-0.2
NATA				S	Sn	01 19 32.6	+1.8
NATA				AML	AML	01 19 35.2	
	2.3nm,0.7s						
NATA				AML	AML	01 19 35.2	
	2.3nm,0.7s						
NATA				AML	AML	01 19 39.9	
	2.7nm,0.4s						
NATA				AML	AML	01 19 39.9	
	2.7nm,0.4s						
LEF	Lefka	1.10	87	PG	Pb	01 19 19.6	-1.2
LEF	Lefka	1.10	87	P	Pb	01 19 19.9	-0.9
LEF				S	Sn	01 19 39.5	+3.5
SZAC	Souni	1.14	106	P	Pn	01 19 21.6	-0.1
SZAC				AML	AML	01 19 46.0	
	0.5nm,0.5s						
SZAC				AML	AML	01 19 48.9	
	0.6nm,0.6s						
GAZI	Gazipasa	1.31	28	PG	Pn	01 19 23.0	-1.0
GAZI				SG	Sb	01 19 38.3	-2.9
GAZI	Gazipasa	1.31	28	P	Pn	01 19 22.8	-1.2
GAZI				S	Sb	01 19 40.0	-1.1
ASGA	Asgata	1.42	101	P	Pb	01 19 25.2	-1.2
ASGA				AML	AML	01 20 00.8	
	0.5nm,0.6s						
ASGA				AML	AML	01 20 01.4	
	0.6nm,0.6s						
CSS	Mathiatis	1.46	94	PN	Pb	01 19 26.3	-0.8
CSS	Mathiatis	1.46	94	P	Pb	01 19 26.2	-0.8
AKUM	Antalya-Kumluc	1.59	322	P	Pg	01 19 31.4	+0.9
AKUM				S	Sg	01 19 54.5	+3.4
OSC1	CSNet OBS 1	1.59	188	S	Sg	01 19 51.3	+0.1
LFK	Lefkose	1.63	82	PN	Pb	01 19 29.7	-0.3
TEKE	Tekeli-Mersin	1.66	50	PN	Pn	01 19 27.9	-0.8
TEKE				SN	Sn	01 19 48.3	-1.6
MVOU	Mavrovouni	1.71	91	P	Pb	01 19 29.7	-1.5
BERE	Bereket-Mersin	1.86	46	PN	Pn	01 19 31.5	-0.1
ERMK	Ermenek	1.91	35	P	Pb	01 19 33.5	-1.3
ERMK				i AML	AML	01 20 07.0	
	comp=N,56nm,0.4s						
ERMK				i AML	AML	01 20 13.0	
	comp=E,41nm,0.5s						
AKKU	Akkuyu-Mersin	1.95	56	PN	Pb	01 19 33.6	-1.8
HDMB	Hadim	2.03	22	PN	Pb	01 19 35.2	-1.6
TEVE	Tevekalti-Mers	2.05	48	PN	Pn	01 19 34.5	+0.3
IKL	Isikli	2.09	56	PN	Pn	01 19 35.1	+0.5
KORT	Korkueli	2.15	333	PN	Pg	01 19 39.7	-1.6
KORT	Korkueli	2.15	333	P	Pg	01 19 41.7	+0.4
KEBE	Keben-Mersin	2.22	51	PN	Pn	01 19 37.7	+1.1
SEYD	Seydisehir-KON	2.33	6	PN	Pb	01 19 40.6	-1.4
SEDI	Konya, Seydise	2.37	4	P	Pb	01 19 41.5	-1.2
SEDI				S	Sb	01 20 11.6	-0.3
SEDI				i AML	AML	01 20 22.0	
	comp=E,26nm,0.5s						
BUCA	Burdur, Bucak-	2.38	341	P	Pg	01 19 46.3	+0.5
KKBE	Karaman, Kazim	2.41	27	P	Pb	01 19 41.7	-1.7
KKBE				S	Sb	01 20 14.3	+1.3
KKBE				i AML	AML	01 20 22.0	
	comp=E,20nm,0.6s						
KRMN	Karaman	2.51	33	PN	Pn	01 19 41.8	+1.3
FETY	Fethiye	2.54	308	P	Pn	01 19 41.7	+0.8
GOLH	Golhisar	2.69	324	P	Pn	01 19 43.5	+0.4
CAEL	Denizli, Camel	2.73	319	P	Pn	01 19 43.8	+0.2
CAEL				i AML	AML	01 20 45.0	
	comp=N,30nm,1.6s						
CAEL				i AML	AML	01 20 49.0	
	comp=E,26nm,1.8s						
MERS	Mersin	3.00	53	PN	Pn	01 19 47.9	+0.7
DOGA	KONYA_Doganhis	3.02	2	P	Pb	01 19 50.3	-3.4
DOGA				S	Sb	01 20 30.7	+0.1
KERG	Konya-Eregli	3.12	41	P	Pb	01 19 51.8	-3.6
KERG				S	Sb	01 20 31.1	-2.4
KERG				i AML	AML	01 20 43.0	
	comp=N,15nm,0.6s						
KERG				i AML	AML	01 20 46.0	
	comp=E,16nm,0.7s						
TURN	Turunc	3.18	303	P	Pn	01 19 48.8	-0.8
TURN				i AML	AML	01 20 27.0	
	comp=E,14nm,0.6s						
YVAC	Isparta, Yalva	3.20	356	P	Pn	01 19 51.9	+1.8
YVAC				S	Sn	01 20 31.7	+3.6
TAVA	DENIZLI_Tavas	3.20	319	P	Pn	01 19 49.7	-0.3
YESY	Yesilyurt	3.23	33	PN	Pn	01 19 51.9	+1.5
KZIL	AFYON_Kizioren	3.37	341	P	Pn	01 19 52.9	+0.5
MULA	Mugla, Merkez-	3.40	311	P	Pn	01 19 52.6	-0.3
MULA				i AML	AML	01 20 35.0	
	comp=E,12nm,0.6s						
KARA	Karaisali	3.57	51	PN	Pn	01 19 56.5	+1.4
DAT	Datca	3.62	298	P	Pn	01 19 54.4	-1.5
DAT				i AML	AML	01 20 38.0	
	comp=N,13nm,0.6s						
DAT				i AML	AML	01 20 39.0	
	comp=E,12nm,0.8s						
PASA	Karahalli, USA	3.66	334	P	Pn	01 19 55.6	-0.8
CMRD	Camardi-Nigde	3.79	46	PN	Pn	01 19 59.6	+1.5
KOZT	Kozan	4.20	54	PN	Pn	01 20 04.6	+0.8

LJU 06 01:57:29.5, 46°.39N×15°.07E, h0^{km}, Confirmed Rockburst, Northwestern Balkan Peninsula

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ATH 06 01:58:15.4, 37°.53N×23°.58E, h26^{km}±7^{km}**, ML1.1**/1**, Error ellipse: s-maj=7.6km s-min=1.7km az=178.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YDRA	Hydra	0.20	208	P	Pb	01 58 21.0	0.0
YDRA				S	Sb	01 58 25.0	+0.2
VLY	Voula,Athens	0.37	27	P	Pb	01 58 23.0	-0.5
KRND	KRANIDI	0.37	248	P	Pb	01 58 23.1	-0.4
KRND				S	Sb	01 58 29.2	+0.1
KRND				AML	AML	01 58 30.4	
	comp=N,57µm,0.2s						
KRND				AML	AML	01 58 30.7	
	comp=E,73µm,0.3s						
EPID	Epidavros	0.38	284	P	Pb	01 58 23.1	-0.6
EPID				S	Sb	01 58 29.3	-0.1
VIL2	Platees	0.73	340	P	Pb	01 58 28.7	-0.8

TIR 06 01:58:42.9, 40°.39N×19°.38E, h13^{km}±3^{km}**, Md2.1, Ml2.1, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.12	47	P	Pb	01 58 46.6	-0.4
	baz=46						
VLO				S	Sb	01 58 49.3	-0.5
	baz=46						
VLO				AMP			
	comp=N,1.3nm,0.1s,baz=46						
SRN	Sarande	0.69	137	P	Pb	01 58 56.7	-0.1
	baz=136						
SRN				S	Sb	01 59 07.2	+0.9
	baz=136						
SCTE	Santa Cesarea	0.77	246	P	Pb	01 58 58.0	-0.1
	baz=247						
SCTE				S	Sb	01 59 09.3	+0.9
	baz=247						
IGT	Igoumenitsa	1.12	139	P	Pg	01 59 04.5	0.0
	baz=139						
IGT				S	Sn	01 59 20.4	+0.8
	baz=139						

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*MOS **06** 02:04:07.2±1.1, 6°.14S×104°.53E, h34^{km}, mb5.2/53, Error ellipse: s-maj=9.8km s-min=4.2km az=114.7*

*NEIC **06** 02:04:08.3±2.7, 6°.47S±0°.06×104°.27E±0°.06, h29^{km}±3^{km}, mb5.2/111, Error ellipse: s-maj=10.0km s-min=7.2km az=223.0*

*BJI **06** 02:04:09.4±0.0, 6°.50S×104°.30E, h49^{km}, mb4.9/54, mB4.9/30, Ms4.4/25, Ms7 4.1/27*

*DJA **06** 02:04:10.1±0.2, 6°S±2°×10°4E±°, h44^{km}±2^{km}, M5.1/77, mB5.6/35, mb5.2/77, MLv5.3/29, Mw(mB)5.0/35, MwMwp6.3/1, Mwp6.2/1*

*IDC **06** 02:04:11.7±1.4, 6°.25S×104°.38E, h60^{km}±12^{km}, mb4.6/32, mbtmp4.9/34, MS3.8/53, Error ellipse: s-maj=12.1km s-min=8.6km az=40.0*

*KLM **06** 02:04:12, 6°.64S×104°.31E, h49^{km}, mb5.2*

ISC 06 02:04:09.5±0.4**, 6°.43S**±0°.04×**104°.29E**±0°.04**, h45^{km}**±3^{km}**, h45^{km}:pP-P, n720, σ1^s.31**/724**, mb5.0**/157**, MS4.0**/65**, 123C-34D, Fault plane solution: NP1:**ϕ_s263.17200°, δ28.01666°, λ93.68823°. **NP2:**ϕ_s78.99580°, δ62.04646°, λ88.03968°. **Principal axes:** T Plg72.8822°, Azm344.2820°; N Plg1.7315°, Azm79.9150°; P Plg17.0246°, Azm170.4454°; **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	0.93	13	P	Pn	02 04 26.1	0.0
KASI				S	Sn	02 04 37.2	-1.1
BLSI	Bandar Lampung	1.42	42	P	Pn	02 04 33.4	+0.5
BLSI				S	Sn	02 04 50.2	-0.3
LWLI	Liwa	1.42	351	P	Pn	02 04 34.0	+1.0
KLI	Kotabumi	1.66	20	P	Pn	02 04 37.6	+1.5
SKJI	Sukabumi	2.33	104	P	Pn	02 04 46.0	+0.7
TNG	Tangerang	2.36	84	P	Pn	02 04 46.3	+0.5
TNG				P	Pn	02 04 48.5	+2.7
MNAI	Manna	2.45	327		Pn	02 04 48.9	+1.9
MNAI	Manna	2.45	327	P	Pn	02 04 48.9	+1.9
MNAI	Manna	2.45	327	P	Pn	02 04 49.0	+2.0
DBJI	Dramaga	2.45	93	P	Pn	02 04 47.9	+0.9
CBJI	Citeko	2.55	90	P	Pn	02 04 51.2	+2.9
CNJI	Cibinong	2.95	107	P	Pn	02 04 53.5	-0.4
LEM	Lembang	3.33	97	P	Pn	02 05 01.7	+2.4
	1µm,0.4s,baz=250,slow=4.2,SNR=158						
LEM				S	Sn	02 05 39.7	+2.0
	2µm,0.9s,baz=103,slow=6.7,SNR=4.3						
LEM				LR	LR	02 06 37.1	
	comp=Z,3µm,20.8s,baz=276,slow=44						
LEM	Lembang	3.33	97	P	Pn	02 05 01.7	+2.4
PMBI	Palembang	3.52	8	Pn	Pn	02 05 02.9	+1.2
PMBI	Palembang	3.52	8	P	Pn	02 05 03.6	+1.9
PMBI	Palembang	3.52	8	P	Pn	02 05 05.0	+3.3
JCJI	Jatiwangi	3.96	91	P	Pn	02 05 10.3	+2.6
XMI	Christmas Isla	4.23	161	P	Pn	02 05 07.3	-4.2
XMIS	Christmas Isla	4.24	162	Pn	Pn	02 05 06.9	-4.8
XMIS	Christmas Isla	4.24	162	P	Pn	02 05 07.3	-4.4
CMJI	Cimerak	4.34	108	P	Pn	02 05 13.5	+0.5
PPBI	Pangkal Pinang	4.62	24	P	Pn	02 05 18.7	+1.8
KPJI	Karang Pucung	4.70	101	P	Pn	02 05 20.3	+2.4
TPI	Tanjungpandan	4.96	43	P	Pn	02 05 22.0	+0.5
KRJI	Kerinci	5.15	327	P	Pn	02 05 24.7	+0.5
	9.0nm18µm1µm,0.7s						
PPSI	Pulau Pagai	5.61	310	P	Pn	02 05 31.1	+0.7
	7.2nm8µm890nm,0.7s						
DSRI	Dabo	5.92	3	P	Pn	02 05 36.9	+2.2
	0.4nm954nm115nm,0.8s						
YOGI	Yogyakarta	6.12	103	P	Pn	02 05 37.0	-0.4
	1.6nm373nm,0.9s						
SMRI	Semarang	6.14	96	Pn	Pn	02 05 39.1	+1.3

SMRI	Semarang	6.14	96	P	Pn	02 05 39.8	+2.0
	1.4nm444nm,0.9s						
SMRI	Semarang	6.14	96	P	Pn	02 05 40.4	+2.6
UGM	Wanagama	6.36	104	Pn	Pn	02 05 40.5	-0.3
UGM	Wanagama	6.36	104	P	Pn	02 05 42.1	+1.3
	2.0nm6μm473nm,0.9s						
UGM	Wanagama	6.36	104	P	Pn	02 05 42.3	+1.5
UWJI	Ujung Watu	6.62	90	P	Pn	02 05 45.3	+1.0
	1.2nm251nm,0.7s						
PCJI	Pacitan	7.06	105	P	Pn	02 05 51.5	+1.2
	1.8nm4μm256nm,0.4s						
SISI	Saibi	7.25	314	P	Pn	02 05 52.5	-0.5
	0.6nm2μm149nm,1.0s						
TPRI	Tanjung Pinang	7.30	2	P	Pn	02 05 56.1	+2.4
	0.6nm6μm111nm,0.5s						
BKNI	Bangkinang	7.45	334	Pn	Pn	02 05 55.9	+0.1
BKNI	Bangkinang	7.45	334	P	Pn	02 05 56.4	+0.6
	1.1nm2μm150nm,0.8s						
BKNI	Bangkinang	7.45	334	P	Pn	02 05 56.6	+0.8
TBJI	Tambak Boyo	7.52	93	P	Pn	02 05 59.5	+2.8
	0.4nm100nm,0.8s						
PWJI	Pagerwojo	7.62	102	P	Pn	02 05 59.6	+1.5
	1.8nm4μm317nm,1.0s						
GRJI	Gresik	8.15	94	P	Pn	02 06 08.0	+2.7
	6μm612nm,0.7s						
MYKOM	Kota Tinggi	8.18	357	Pn	Pn	02 06 07.7	+2.0
MYKOM	Kota Tinggi	8.18	357	P	Pn	02 06 13.0	+7.3
GMJI	Gumukmas	9.27	102	P	Pn	02 06 22.2	+1.6
	3μm211nm,0.8s						
BLJI	Banyuglugur	9.33	99	P	Pn	02 06 24.1	+2.6
	4μm217nm,0.5s						
KMMI	Kalianget	9.63	94	P	Pn	02 06 27.1	+1.5
	4μm124nm,0.9s						
STKI	Sintang	9.65	48	P	Pn	02 06 27.8	+1.9
	75nm,0.9s						
KSM	Kuching	9.89	38	Pn	Pn	02 06 30.6	+1.5
KSM	Kuching	9.89	38	P	Pn	02 06 32.0	+2.8
KSM	Kuching	9.89	38	P	Pn	02 06 31.9	+2.8
ABJI	Asem Bagus	9.96	98	P	Pn	02 06 33.0	+2.8
	18μm2μm,0.8s						
JAGI	Jajag, Banyuwa	9.99	102	Pn	Pn	02 06 30.2	-0.3
JAGI	Jajag, Banyuwa	9.99	102	P	Pn	02 06 31.0	+0.5
	9μm822nm,1.0s						
JAGI	Jajag, Banyuwa	9.99	102	P	Pn	02 06 31.3	+0.8
GSI	Gunungsitoli	10.19	319	Pn	Pn	02 06 30.7	-2.6
GSI	Gunungsitoli	10.19	319	P	Pn	02 06 31.7	-1.6
	55nm,0.5s						
GSI	Gunungsitoli	10.19	319	P	Pn	02 06 33.4	+0.1
JRMM	Jerantut	10.41	350	P	Pn	02 06 38.0	+1.7
PSI	Prapat	10.62	330	P	Pn	02 06 38.8	-0.5
	2.3nm,0.3s,baz=130,slow=16,SNR=2.6						
BBKI	Banjar Baru	10.92	75	P	Pn	02 06 45.7	+2.4
	6μm41nm,0.6s						
SRBI	Singaraja	10.96	99	P	Pn	02 06 44.3	+0.5
	4μm246nm,0.5s						
IGBI	Denpasar	11.02	103	P	Pn	02 06 44.3	-0.3
	4μm227nm,0.9s						
DNP	Denpasar	11.06	102	P	Pn	02 06 45.6	+0.5
MTKI	Muara Teweh, K	11.91	63	P	Pn	02 06 59.9	+3.1
KULM	Kulim	12.20	343	Pn	Pn	02 07 02.5	+1.7
PLAI	Plampang	13.58	101	P	Pn	02 07 17.5	-2.2
	2μm178nm,0.9s						
PLAI	Plampang	13.58	101	P	Pn	02 07 19.1	-0.6
KAPI	Kappang	15.45	86	P	Pn	02 07 44.6	0.0
	7.3nm,0.5s,baz=252,slow=11,SNR=5.0						
KAPI				LR	LR	02 14 19.4	
	comp=Z,829nm,19.4s,baz=246,slow=40						
KAPI	Kappang	15.45	86	P	Pn	02 07 45.7	+1.1
KAPI				pmax	pmax		
	comp=Z,28nm,1.0s						
KAPI	Kappang	15.45	86	Pn	Pn	02 07 45.7	+1.1
KAPI	Kappang	15.45	86	P	P	02 07 47.4	-1.0
SPSI	Sidrap Palu	15.61	82	P	P	02 07 49.1	-1.1
	comp=Z,22nm,0.6s						
BKSI	Bulukumba	15.79	87	P	Pn	02 07 49.7	+0.8
	comp=Z,974nmcomp=Z,125nm,0.7s						
TTSI	Tana Toraja	15.84	78	P	P	02 07 52.7	0.0
	comp=Z,46nm,0.9s						
BNSI	Bone	15.88	83	P	P	02 07 51.7	-1.4
	comp=Z,1μmcomp=Z,118nm,1.4s						
BSSI	Bau Bau, Buton	16.11	90	P	Pn	02 07 54.0	+1.0
	comp=Z,701nmcomp=Z,54nm,1.0s						
SPMM	Sapulut	16.44	48	P	P	02 08 03.0	+3.6
BASI	Baing, Sumba	16.55	104	P	Pn	02 07 57.4	-1.2
	comp=Z,3μmcomp=Z,280nm,0.7s						
MPSI	Mapaga	16.97	67	P	P	02 08 05.6	+0.4
	comp=Z,898nmcomp=Z,112nm,0.8s						
MMRI	Maumere	17.93	98	Pn	Pn	02 08 13.6	-2.1
MMRI	Maumere	17.93	98	P	Pn	02 08 15.2	-0.5
	comp=Z,4μmcomp=Z,212nm,0.6s						
MMRI	Maumere	17.93	98	P	P	02 08 17.0	+1.1
	comp=Z,220nm,0.8s						
TOLI2	Tolitoli	18.09	66		P	02 08 17.4	-0.3
TOLI2	Tolitoli	18.09	66	P	Pn	02 08 20.2	+2.5
APSI	Ampana	18.17	73	P	Pn	02 08 20.1	+1.5
	comp=Z,1μmcomp=Z,188nm,0.9s						
MYLDM	Lahad Datu	18.29	51	P	Pn	02 08 21.1	+1.0
GIRL	Giralia	18.76	150	P	P	02 08 25.2	+0.3
	baz=19,SNR=21						
MRSI	Marisa	18.91	69	P	Pn	02 08 28.4	+0.8
	comp=Z,1μmcomp=Z,100nm,0.6s						
LUWI	Luwuk	19.20	75	P	P	02 08 30.4	+0.5
LUWI				IAmb	IAmb	02 09 02.4	
	comp=Z,114nm,1.0s						
LUWI	Luwuk	19.20	75	P	P	02 08 30.5	+0.7
	comp=Z,108nm,0.8s						
LUWI	Luwuk	19.20	75	P	Pn	02 08 34.2	+3.1
BATI	Baumata	19.53	102	P	P	02 08 34.2	+0.6
	comp=Z,499nm,0.6s,baz=272,slow=4.2,SNR=35						
BATI				S	S	02 12 05.3	-6.6
	comp=Z,68nm,0.4s,baz=101,slow=10,SNR=4.4						
BATI	Baumata	19.53	102	P	P	02 08 34.1	+0.6
	comp=Z,6μmcomp=Z,346nm,0.9s						
GTOI	Gorontalo	19.96	70	P	P	02 08 38.2	0.0
	comp=Z,339nmcomp=Z,36nm,0.7s						
MBWA	Marble Bar	20.93	136	P	P	02 08 47.0	-1.6
MBWA				IAmb	IAmb	02 08 56.5	
	comp=Z,51nm,0.6s						
MBWA	Marble Bar	20.93	136	P	P	02 08 49.6	+1.0
PSA00	Pilbara Seismi	21.29	137	P	P	02 08 52.2	-0.2
PSA00				IAmb	IAmb	02 08 54.3	
	comp=Z,56nm,0.8s						
PSA00	Pilbara Seismi	21.29	137	P	P	02 08 53.4	+1.0
SANI	Sanana	22.07	80	P	P	02 09 02.2	+1.3
	comp=Z,528nmcomp=Z,45nm,0.9s						
SANI	Sanana	22.07	80	P	P	02 09 03.4	+2.5
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	23.84	121	P	P	02 09 19.0	+0.3
	baz=314,slow=7.7						
LBMI	Labuha	23.86	77	P	P	02 09 20.4	+1.3
	comp=Z,883nmcomp=Z,97nm,0.8s						
TNTI	Ternate	24.12	74	P	P	02 09 22.3	+0.8
TNTI				IAmb	IAmb	02 09 25.1	
	comp=Z,117nm,1.2s						
MEEK	Meekatharra	24.29	147	P	P	02 09 23.7	+0.8
	baz=24,SNR=3.2						
MORW	Morawa	25.11	155	P	P	02 09 30.6	+0.4
	baz=25,SNR=4.3						
DAV	Davao City (W)	25.12	58	LR	LR	02 19 46.4	
	comp=Z,172nm,21.0s,baz=210,slow=38						
CM31	Chiang Mai Arr	25.29	348	P	P	02 09 30.6	-1.3
CMAR	Chiang Mai Arr	25.29	348	P	P	02 09 30.8	-1.1
	comp=Z,7.9nm,0.6s,baz=181,slow=9.1,SNR=28						
CMAR				PcP	PcP	02 13 05.0	+0.6
	comp=Z,1.5nm,0.3s,baz=193,slow=3.7,SNR=2.2						
CMAR				LR	LR	02 20 39.9	
	comp=Z,266nm,19.1s,baz=175,slow=39						
	comp=Z,7.9nm,0.6s						
CMAR	Chiang Mai Arr	25.29	348	*ce*P	P	02 09 30.1	-1.8
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	Chiang Mai Arr	25.29	348	P	P	02 09 29.6	-2.4
CHTO	Chiang Mai	25.63	348	P	P	02 09 32.6	-2.5
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	Chiang Mai	25.63	348	P	P	02 09 32.5	-2.5
KNRA	Kununurra	25.69	113	P	P	02 09 34.7	-1.0
	baz=26,SNR=17						
KNRA	Kununurra	25.69	113	P	P	02 09 34.2	-1.4
KNRA				IAmb	IAmb	02 09 47.1	
	comp=Z,68nm,0.7s						
KNRA	Kununurra	25.69	113	P	P	02 09 35.5	-0.2
QIZ	Qiongzhong	25.89	12	P	P	02 09 39.6	+2.2
QIZ				S	S	02 14 11.4	+7.0
QIZ				LR	LR		
	comp=Z,490nm,19.3s						
QIZ				LR	LR		
	comp=Z,280nm,17.5s						
QIZ				LR	LR		
	comp=Z,460nm,15.9s						
MTN	Manton Dam	27.21	106	P	P	02 09 49.7	+0.3
	baz=27,SNR=32						
MTN	Manton Dam	27.21	106	P	P	02 09 48.5	-0.9
MTN	Manton Dam	27.21	106	P	P	02 09 50.2	+0.8
SIJI	Sorong	27.48	79	P	P	02 09 53.0	+1.2
	comp=Z,27nm,0.8s,baz=281,slow=6.7,SNR=13						
	comp=Z,27nm,0.8s						
FAKI	Fak Fak	28.08	84	P	P	02 09 57.7	+0.5
FAKI	Fak Fak	28.08	84	P	P	02 09 59.5	+2.3
	comp=Z,23nm,1.0s						
KDU	Kakadu	28.46	105	P	P	02 09 59.3	-1.4
	baz=28,SNR=7.8						
KDU	Kakadu	28.46	105	P	P	02 10 01.7	+1.1
WRKA	Warakurna	29.50	131	P	P	02 10 09.9	+0.1
	baz=30,SNR=16						
H01W3	Cape Leeuwin H	29.74	164	T	T	02 41 31.7	
	baz=342,slow=76						
H01W2	Cape Leeuwin H	29.75	164	T	T	02 41 30.6	
	baz=342,slow=76						
H01W1	Cape Leeuwin H	29.75	164	T	T	02 41 33.1	
	baz=342,slow=76						
KMI	Kunming	31.40	357	⇓P	P	02 10 28.4	+1.7
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
KMI				LR	LR		
	comp=Z,490nm,18.2s						
KMI				LR	LR		
	comp=Z,210nm,18.2s						
KMI				LR	LR		
	comp=Z,490nm,13.1s						
H08S2	Diego Garcia H	31.57	266	T	T	02 44 04.9	
	baz=89,slow=76						
H08S3	Diego Garcia H	31.58	266	T	T	02 44 05.5	
	baz=89,slow=76						
H08S1	Diego Carcia H	31.59	266	T	T	02 44 06.3	
	baz=89,slow=76						
WB0	Warramunga Arr	32.10	117	P	P	02 10 31.4	-1.4
WRA	Warramunga Arr	32.12	118	P	P	02 10 32.6	-0.3
	comp=Z,11nm,0.6s,baz=284,slow=12,SNR=80						
WRA				PcP	PcP	02 13 22.1	+0.6
	comp=Z,2.8nm,0.5s,baz=298,slow=2.1,SNR=5.2						
WRA				LR	LR	02 25 47.0	
	comp=Z,174nm,19.6s,baz=256,slow=40						
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	32.12	118	*ce*P	P	02 10 32.4	-0.5
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	32.12	118	P	P	02 10 32.1	-0.9
WRAB				IAmb	IAmb	02 10 51.8	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	32.12	118	P	P	02 10 33.0	+0.1
WB2	Warramunga Arr	32.13	118	P	P	02 10 32.6	-0.4
	baz=32						
WB2	Warramunga Arr	32.13	118	P	P	02 10 32.2	-0.8
WB2				IAmb	IAmb	02 10 33.5	
	comp=Z,19nm,0.6s						
WR0	Warramunga Arr	32.30	118	IAmb	IAmb	02 10 35.2	
	comp=Z,22nm,0.6s						
PCHI	Peechi	32.53	301	⇓*e*P	P	02 10 39.9	+3.4
PCHI				*e*S	S	02 15 04.6	-44
GYA	Guiyang	32.77	4	⇓P	P	02 10 39.4	+0.8
GYA				pP	pP	02 10 50.9	+0.8
GYA				pmax	pmax		
	comp=Z,17nm,1.1s						
GYA				LR	LR		
	comp=Z,230nm,18.2s						
PZH	PanZhiHua	32.83	356	P	P	02 10 42.6	+3.5
PZH				S	S	02 16 03.1	+10
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,6.8s						
PZH				LR	LR		
	comp=Z,830nm,16.9s						
PZH				LR	LR		
	comp=Z,340nm,18.2s						
PZH				LR	LR		
	comp=Z,900nm,16.1s						
FORT	Forrest	32.92	140	P	P	02 10 40.2	+0.4
	baz=33,SNR=8.5						
ASAR	Alice Springs	33.22	124	P	P	02 10 42.0	-0.5
	comp=Z,3.0nm,0.7s,baz=296,slow=8.4,SNR=24						
ASAR				PcP	PcP	02 13 25.4	+0.8
	comp=Z,3.6nm,0.7s,baz=307,slow=3.0,SNR=7.3						
ASAR				LR	LR	02 24 10.1	
	comp=Z,216nm,21.9s,baz=312,slow=36						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	33.22	124	P	P	02 10 42.6	0.0
ASAR						02 13 24.3	
ASAR	Alice Springs	33.22	124	P	P	02 10 42.6	0.0
ASAR					PcP	02 13 24.3	-0.3
SHL	Shillong	34.02	340	P	P	02 10 46.9	-2.6
SHL				pmax	pmax		
	comp=Z,11nm,0.6s						
SHL	Shillong	34.02	340	P	P	02 10 46.9	-2.6
SHL				IAmb	IAmb	02 11 31.8	
	comp=Z,11nm,0.6s						
HYBB	Hyderabad (bro	34.76	313	*e*P	P	02 10 56.4	+0.5
OOD	Oodnadatta	36.58	129	P	P	02 11 12.5	+1.1
MULG	Mulgathing	36.68	134	P	P	02 11 12.9	+0.7
ENH	Enshi	36.83	8	P	P	02 11 13.5	0.0
ODAN	Odare	36.92	334	*e*P	P	02 11 14.1	-0.5
	comp=Z,22nm,0.6s						
QIS	Mount Isa	36.99	116	P	P	02 11 14.9	-0.1
	baz=37,SNR=8.0						
QIS	Mount Isa	36.99	116	P	P	02 11 15.1	0.0
CD2	Chengdu	37.13	359	P	P	02 11 17.7	+1.6
CD2				S	S	02 17 04.4	+4.9
CD2				LR	LR		
	comp=Z,260nm,17.6s						
CD2				LR	LR		
	comp=Z,270nm,13.7s						
TAPN	Taplejung	37.22	335	*e*P	P	02 11 16.7	-0.4
	comp=Z,46nm,0.8s						
RAMN	Ramite	37.34	333	*e*P	P	02 11 18.1	-0.1
	comp=Z,11nm,0.3s						
LSA	Lhasa	38.08	341	P	P	02 11 24.7	+0.1
LSA				pmax	pmax		
	comp=Z,13nm,0.5s						
LSA	Lhasa	38.08	341	P	P	02 11 24.7	+0.1
LSA				IAmb	IAmb	02 11 51.5	
	comp=Z,13nm,0.5s						
JIRN	Jiri	38.14	334	*e*P	P	02 11 25.0	0.0
	comp=Z,13nm,0.8s						
PKI	Pulchoki	38.42	332	*e*P	P	02 11 26.6	-0.7
	comp=Z,10nm,0.6s						
GUN	Gumba	38.49	333	*e*P	P	02 11 27.2	-0.8
	comp=Z,55nm,0.7s						
COEN	Coen	38.95	104	P	P	02 11 30.6	-1.1
	baz=39,SNR=24						
COEN	Coen	38.95	104	P	P	02 11 30.5	-1.1
COEN				IAmb	IAmb	02 11 37.3	
	comp=Z,34nm,0.6s						
COEN	Coen	38.95	104	P	P	02 11 34.1	+2.5
GKN	Gorkha	39.14	332	*e*P	P	02 11 32.3	-0.9
	comp=Z,10nm,0.3s						
KOLN	Koldanda	39.44	330	*e*P	P	02 11 35.5	-0.2
	comp=Z,66nm,0.7s						
BBOO	Buckleboo	39.51	136	P	P	02 11 36.1	0.0
	baz=40,SNR=14						
BBOO	Buckleboo	39.51	136	P	P	02 11 35.9	-0.2
BBOO				IAmb	IAmb	02 12 04.1	
	comp=Z,78nm,1.6s						
LCRK	Leigh Creek	39.81	131	P	P	02 11 39.9	+1.3
DANN	Dangsing	39.85	331	*e*P	P	02 11 38.4	-0.8
	comp=Z,64nm,0.6s						
PYUN	Piuthan	40.02	330	*e*P	P	02 11 40.0	-0.5
	comp=Z,38nm,0.6s						
JOW	Kunigami	40.42	34	LR	LR	02 28 37.7	
	comp=Z,186nm,20.8s,baz=282,slow=36						
XAN	Xi'an	40.49	6	P	P	02 11 43.7	-0.4
XAN				pP	pwP	02 11 59.0	+0.9
XAN				S	S	02 17 50.7	+0.7
XAN				pmax	pmax		
	comp=Z,31nm,0.7s						
XAN				LR	LR		
	comp=Z,150nm,12.7s						
XAN				LR	LR		
	comp=Z,230nm,18.8s						
XAN				LR	LR		
	comp=Z,360nm,17.8s						
INKA	Innaminka	40.54	126	P	P	02 11 46.1	+1.5
	comp=Z,50nm,0.6s						
MTSU	Mount Surprise	40.71	110	P	P	02 11 46.4	+0.2
	baz=41,SNR=17						
MTSU	Mount Surprise	40.71	110	P	P	02 11 46.5	+0.2
NJ2	Nanjing	40.71	19	*e*P	P	02 11 48.4	+2.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LYN	LuoYang	41.49	10	*e*P	P	02 11 53.1	+0.8
LYN				S	S	02 18 07.4	+2.7
LYN				LR	LR		
	comp=Z,240nm,23.9s						
LYN				LR	LR		
	comp=Z,270nm,20.2s						
LYN				LR	LR		
	comp=Z,260nm,20.0s						
HTT	Hallett	41.86	135	P	P	02 11 56.2	+0.7
	baz=42,SNR=5.2						
HTT	Hallett	41.86	135	P	P	02 11 57.4	+1.9
LZH	Lanzhou	42.29	359	⇓P	P	02 11 59.5	+0.4
LZH				pP	pP	02 12 08.9	-1.9
LZH				PcP	PcP	02 13 53.5	+1.3
LZH				pmax	pmax		
	comp=Z,26nm,1.5s						
LZH				LR	LR		
	comp=Z,230nm,14.1s						
LZH				LR	LR		
	comp=Z,240nm,13.0s						
LZH				LR	LR		
	comp=Z,200nm,15.7s						
PMG	Port Moresby	42.55	97	LR	LR	02 31 43.0	
	comp=Z,122nm,19.8s,baz=314,slow=39						
PMG	Port Moresby	42.55	97	*ce*P	P	02 11 59.8	-1.5
PMG				pmax	pmax		
	comp=Z,60nm,1.0s						
PMG	Port Moresby	42.55	97	P	P	02 12 00.8	-0.5
PMG				IAmb	IAmb	02 12 05.8	
	comp=Z,47nm,0.8s						
PMG	Port Moresby	42.55	97	P	P	02 12 01.8	+0.5
PMG	Port Moresby	42.55	97	⇓P	P	02 12 00.8	-0.5
PMG				pP	pP	02 12 14.4	+1.2
CTA	Charters Tower	42.90	113	LR	LR	02 31 11.3	
	comp=Z,119nm,19.6s,baz=265,slow=38						
CTA	Charters Tower	42.90	113	P	P	02 12 04.4	+0.3
	baz=43						
CTAO	Charters Tower	42.90	113	P	P	02 12 03.4	-0.7
CTAO				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	Charters Tower	42.90	113	P	P	02 12 03.4	-0.7
CTAO	Charters Tower	42.90	113	P	P	02 12 04.4	+0.3
CTAO				pP	pP	02 12 12.2	-3.6
QLP	Quilpie	42.97	122	P	P	02 12 05.9	+1.3
	baz=43,SNR=15						
QLP	Quilpie	42.97	122	P	P	02 12 06.8	+2.3
STKA	Stephens Creek	43.03	131	P	P	02 12 05.7	+0.7
	comp=Z,39nm,0.5s,baz=304,slow=8.6,SNR=99						
STKA				LR	LR	02 30 29.3	
	comp=Z,184nm,20.6s,baz=305,slow=37						
	comp=Z,39nm,0.5s						
STKA	Stephens Creek	43.03	131	P	P	02 12 06.1	+1.1
	baz=43,SNR=49						
STKA	Stephens Creek	43.03	131	P	P	02 12 05.7	+0.7
STKA	Stephens Creek	43.03	131	P	P	02 12 06.4	+1.4
MANU	Manus Island	43.17	86	P	P	02 12 04.6	-1.7
GOMU	GeErMu	43.33	349	P	P	02 12 08.0	+0.3
GOMU				S	S	02 18 26.0	-6.5
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,48nm,4.0s						
GOMU				LR	LR		
	comp=Z,86nm,15.3s						
GOMU				LR	LR		
	comp=Z,54nm,15.5s						
GOMU				LR	LR		
	comp=Z,86nm,15.4s						
HNS	HongShan	44.68	12	⇑P	P	02 12 18.7	+0.7
HNS				*e*S	S	02 18 53.5	+2.1
HNS				pmax	pmax		
	comp=Z,13nm,0.7s						
HNS				LR	LR		
	comp=Z,160nm,15.2s						
HNS				LR	LR		
	comp=Z,200nm,15.5s						
HNS				LR	LR		
	comp=Z,220nm,17.3s						
ARPS	Mount Arapiles	45.66	137	P	P	02 12 27.5	+1.6
	baz=46						
GTA	Gaotai	45.80	355	*e*P	P	02 12 27.2	+0.1
GTA				PcP	PcP	02 14 04.6	+0.5
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,33nm,5.2s						
GTA				LR	LR		
	comp=Z,190nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,17.5s						
CMSA	Cobar Meteorol	46.02	128	P	P	02 12 30.2	+1.3
	baz=46,SNR=41						
CMSA	Cobar Meteorol	46.02	128	P	P	02 12 30.7	+1.8
JNU	Nakatsue	46.74	31	LR	LR	02 32 47.3	
	comp=Z,84nm,20.9s,baz=208,slow=37						
RMQ	Roma	46.77	120	P	P	02 12 36.1	+1.3
	baz=47,SNR=5.5						
RMQ	Roma	46.77	120	P	P	02 12 36.4	+1.6
	comp=Z,11nm,0.8s						
BJT	Baijiatuau	47.50	12	P	P	02 12 40.4	+0.2
BJT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJT	Baijiatuau	47.50	12	P	P	02 12 40.4	+0.2
HHC	Hu-ho-hao-te	47.52	7	*e*P	P	02 12 43.9	+3.4
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
HHC				LR	LR		
	comp=Z,600nm,19.2s						
HHC				LR	LR		
	comp=Z,260nm,15.5s						
HHC				LR	LR		
	comp=Z,470nm,18.1s						
BJI	Beijing	47.52	12	P	P	02 12 40.0	-0.4
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EIDS	Eidsvold	48.48	118	P	P	02 12 49.0	+0.9
	baz=48,SNR=3.5						
EIDS	Eidsvold	48.48	118	P	P	02 12 47.5	-0.6
EIDS				IAmb	IAmb	02 12 50.4	
	comp=Z,30nm,1.6s						
EIDS	Eidsvold	48.48	118	P	P	02 12 49.3	+1.2
TOO	Toolangi	48.57	136	P	P	02 12 51.2	+2.5
	baz=49,SNR=5.7						
KSAR	Wonju Array Be	48.89	25	P	P	02 12 51.6	+0.6
KSAR	Wonju Array Be	48.89	25	P	P	02 12 51.6	+0.6
KSRS	Korea Array	48.92	25	P	P	02 12 50.6	-0.5
	comp=Z,5.6nm,0.6s,baz=221,slow=7.0,SNR=16						
	comp=Z,5.6nm,0.6s						
JHS	Saijyo	49.37	31	P	P	02 12 54.2	-0.6
JHS				IAmb	IAmb	02 12 59.2	
	comp=Z,24nm,0.7s						
NIL	Nilore	49.54	326	P	P	02 12 55.0	-1.1
NIL				pmax	pmax		
	comp=Z,52nm,0.7s						
NIL	Nilore	49.54	326	P	P	02 12 55.0	-1.1
JCJ	Chichijima	49.56	46	LR	LR	02 32 44.8	
	comp=Z,26nm,21.6s,baz=155,slow=35						
CAN	Canberra	50.09	131	P	P	02 13 00.2	-0.2
CAN				pmax	pmax		
	comp=Z,44nm,0.6s						
CAN	Canberra	50.09	131	P	P	02 13 00.2	-0.2
CAN	Canberra	50.09	131	⇑P	P	02 13 02.0	+1.7
CAN				pP	pwP	02 13 14.6	+0.1
CNB	Canberra Magne	50.36	131	P	P	02 13 03.6	+1.2
ARMA	Armidale	50.38	124	P	P	02 13 03.5	+0.9
MGCD	Mangrove Creek	50.90	128	P	P	02 13 08.3	+1.9
	baz=51,SNR=8.8						
XLT	XiLinHaoTe	51.22	11	⇑*i*P	P	02 13 08.4	-0.3
XLT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,160nm,4.4s						
JHJ	Hachijo jima 2	51.79	38	LR	LR	02 35 34.5	
	comp=Z,54nm,20.3s,baz=252,slow=36						
WMQ	Urumqi	52.22	345	⇑P	P	02 13 17.0	+0.9

WMQ				sP	sP	02 13 32.8	-0.2
WMQ				PcP	**PcP**	**02 14 30.4**	**+3.2**
WMQ				pmax	pmax		
	comp=Z,50nm,1.1s						
KBL	**Kabul**	**52.61**	**323**	P	**P**	**02 13 19.7**	**+0.3**
KBL				pmax	pmax		
	comp=Z,12nm,0.8s						
KBL	**Kabul**	**52.61**	**323**	P	**P**	**02 13 19.7**	**+0.3**
KSH	**Kashi**	**52.68**	**333**	P	**P**	**02 13 18.4**	**-1.3**
KSH				pP	pP	02 13 29.0	-2.6
KSH				S	**S**	**02 20 39.5**	**-4.9**
KSH				pmax	pmax		
	comp=Z,23nm,0.8s						
MJAR	**Matsushiro Arr**	**53.26**	**34**	P	**P**	**02 13 21.4**	**-2.5**
	comp=Z,4.5nm,0.5s,baz=205,slow=7.9,SNR=8.4						
MJAR				LR	LR	02 38 01.5	
	comp=Z,46nm,19.2s,baz=204,slow=38						
	comp=Z,4.5nm,0.5s						
SOCY	**Socotra**	**53.32**	**290**	P	**P**	**02 13 25.1**	**+0.3**
WSAR	**Wadi Sarin**	**53.47**	**305**	P	**P**	**02 13 26.4**	**+0.7**
	comp=Z,7.6nm,0.8s,baz=121,slow=5.9,SNR=1.9						
WSAR				LR	LR	02 34 24.6	
	comp=Z,215nm,19.7s,baz=151,slow=34						
	comp=Z,7.6nm,0.8s						
CN2	**Changchun**	**53.54**	**19**	*e*P	**P**	**02 13 24.3**	**-1.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
TARG	**Taragay, Kyrgy**	**53.70**	**336**	P	**P**	**02 13 27.3**	**-0.2**
SONM	**Songino Array**	**54.06**	**2**	P	**P**	**02 13 29.2**	**-0.5**
	comp=Z,11nm,0.9s,baz=184,slow=8.4,SNR=56						
SONM				PcP	**PcP**	**02 14 33.6**	**-0.5**
	comp=Z,8.7nm,0.5s,baz=180,slow=4.3,SNR=18						
SONM				ScP	**ScP**	**02 18 28.2**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=184,slow=4.3,SNR=2.3						
SONM				LR	LR	02 38 53.6	
	comp=Z,129nm,18.1s,baz=162,slow=39						
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**54.06**	**2**	P	**P**	**02 13 29.6**	**-0.1**
SONM				pmax	pmax		
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**54.06**	**2**	P	**P**	**02 13 29.6**	**-0.1**
SONM				IAmb	IAmb	02 13 31.1	
	comp=Z,20nm,1.1s						
ULN	**Ulaanbaatar**	**54.12**	**2**	*i* P	**P**	**02 13 29.9**	**-0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**54.12**	**2**	P	**P**	**02 13 29.1**	**-1.0**
ULN				IAmb	IAmb	02 14 35.0	
	comp=Z,9.7nm,0.7s						
KDJ	**Kajisay**	**54.29**	**335**	IAmb	IAmb	02 13 32.5	
	comp=Z,30nm,0.8s						
PDGK	**Podgornoye**	**54.39**	**338**	P	**P**	**02 13 31.6**	**-0.6**
UZB	**Uzynbulak**	**54.41**	**337**	*c i*P	**P**	**02 13 32.0**	**-0.3**
UZB				pmax	pmax		
	comp=Z,11nm,0.6s						
UZB	**Uzynbulak**	**54.41**	**337**	⇑*i*P	**P**	**02 13 32.1**	**-0.3**
	comp=Z,11nm,0.6s,baz=337						
SATY	**Saty**	**54.58**	**337**	*c i*P	**P**	**02 13 33.2**	**-0.2**
SATY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SATY	**Saty**	**54.58**	**337**	⇑*i*P	**P**	**02 13 33.3**	**-0.2**
	comp=Z,5.8nm,0.6s,baz=337						
ULHL	**Ulahol**	**54.78**	**335**	P	**P**	**02 13 34.9**	**-0.2**
	SNR=18						
KPKS	**Kokpek**	**54.81**	**337**	*e*P	**P**	**02 13 34.8**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KPKS	**Kokpek**	**54.81**	**337**	*e*P	**P**	**02 13 34.8**	**-0.4**
	comp=Z,9.5nm,0.9s,baz=337						
GAR	**Garm**	**55.08**	**328**	IAmb	IAmb	02 13 37.9	
	comp=Z,28nm,0.9s						
BOOM	**Boomskoye usch**	**55.11**	**335**	P	**P**	**02 13 36.5**	**-0.9**
BOOM				pmax	pmax		
	comp=Z,12nm,0.9s						
BOOM	**Boomskoye usch**	**55.11**	**335**	P	**P**	**02 13 36.5**	**-0.9**
TNSS	**Tian-Shan**	**55.14**	**336**	*e*P	**P**	**02 13 37.2**	**-0.7**
TNSS	**Tian-Shan**	**55.14**	**336**	*e*P	**P**	**02 13 37.2**	**-0.7**
	baz=336						
MDOK	**Medeo**	**55.20**	**336**	*i* P	**P**	**02 13 37.7**	**-0.3**
MDOK	**Medeo**	**55.20**	**336**	*i* P	**P**	**02 13 37.8**	**-0.3**
	baz=336						
AAA	**Alma-Ata**	**55.30**	**336**	*e*P	**P**	**02 13 37.9**	**-0.7**
AAA	**Alma-Ata**	**55.30**	**336**	*e*P	**P**	**02 13 38.0**	**-0.7**
	baz=336						
MTBS	**Maitube**	**55.43**	**335**	*c i*P	**P**	**02 13 38.9**	**-0.7**
MTBS	**Maitube**	**55.43**	**335**	⇑*i*P	**P**	**02 13 39.0**	**-0.7**
	baz=335						
UCH	**Uchtor**	**55.52**	**333**	P	**P**	**02 13 40.5**	**-0.2**
	SNR=11						
BTK	**Batken**	**55.60**	**329**	IAmb	IAmb	02 13 41.9	
	comp=Z,18nm,1.1s						
TKM2	**Tokmak 2**	**55.61**	**335**	P	**P**	**02 13 40.5**	**-0.5**
	SNR=36						
TKM2	**Tokmak 2**	**55.61**	**335**	P	**P**	**02 13 40.3**	**-0.7**
KBK	**Karagaybulak**	**55.67**	**334**	P	**P**	**02 13 41.6**	**+0.1**
	SNR=9.4						
CHKK	**Chushkaly**	**55.80**	**336**	*e*P	**P**	**02 13 40.5**	**-1.7**
CHKK	**Chushkaly**	**55.80**	**336**	*e*P	**P**	**02 13 40.5**	**-1.7**
	baz=336						
AML	**Almayashu**	**55.81**	**333**	P	**P**	**02 13 42.5**	**-0.2**
	SNR=21						
AML	**Almayashu**	**55.81**	**333**	*i* P	**P**	**02 13 42.5**	**-0.2**
	SNR=21						
AAK	**Ala-Archa**	**55.85**	**334**	P	**P**	**02 13 42.9**	**+0.2**
	SNR=7.0						
AAK	**Ala-Archa**	**55.85**	**334**	LR	LR	02 42 16.7	
	comp=Z,75nm,18.9s,baz=144,slow=41						
AAK	**Ala-Archa**	**55.85**	**334**	P	**P**	**02 13 42.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**55.85**	**334**	P	**P**	**02 13 42.4**	**-0.4**
AAK	**Ala-Archa**	**55.85**	**334**	*i* P	**P**	**02 13 42.5**	**-0.2**
	SNR=8.9						
BNX	**BinXian**	**55.90**	**19**	⇓P	**P**	**02 13 42.3**	**-0.5**
BNX				pmax	pmax		
	comp=Z,50nm,0.7s						
BNX				pmax	pmax		
	comp=Z,360nm,3.8s						
KUU	**Kurty**	**56.10**	**336**	*e*P	**P**	**02 13 43.2**	**-1.1**
KUU				pmax	pmax		
	comp=Z,18nm,0.8s						
KUU	**Kurty**	**56.10**	**336**	*e*P	**P**	**02 13 43.2**	**-1.1**
	comp=Z,18nm,0.8s,baz=336						
ALNE	**Al Ain**	**56.19**	**304**	P	**P**	**02 13 47.2**	**+1.9**
EKS2	**Erkin-Say**	**56.19**	**333**	P	**P**	**02 13 45.2**	**+0.1**
	SNR=28						
ASHO	**Ashiyiah**	**56.22**	**305**	*i* P	**P**	**02 13 46.8**	**+1.3**
	SNR=7.1						
UOSS	**Minazif**	**56.22**	**306**	P	**P**	**02 13 45.9**	**+0.4**
UOSS				IAmb	IAmb	02 13 48.5	
	comp=Z,27nm,1.4s						
UOSS	**Minazif**	**56.22**	**306**	P	**P**	**02 13 47.0**	**+1.5**
UOSS	**Minazif**	**56.22**	**306**	P	**P**	**02 13 47.1**	**+1.6**
HATD	**Hatta, Dubai**	**56.22**	**305**	*i* P	**P**	**02 13 47.4**	**+1.8**
	SNR=6.5						
TDK	**Taldyqorghan**	**56.23**	**338**	*e*P	**P**	**02 13 44.4**	**-0.8**
TDK				pmax	pmax		
	comp=Z,15nm,0.7s						
TDK	**Taldyqorghan**	**56.23**	**338**	*e*P	**P**	**02 13 44.4**	**-0.8**
	comp=Z,15nm,0.7s,baz=338						
USA0B	**Ussuriysk Arra**	**56.25**	**24**	P	**P**	**02 13 44.5**	**-0.8**
USA0B				pmax	pmax		
	comp=Z,27nm,1.0s						
USA0B	**Ussuriysk Arra**	**56.25**	**24**	P	**P**	**02 13 44.5**	**-0.8**
USA0B				IAmb	IAmb	02 13 47.7	
	comp=Z,27nm,1.0s						
USRK	**Ussuriysk Ar.**	**56.25**	**24**	P	**P**	**02 13 44.2**	**-1.1**
	comp=Z,14nm,0.5s,baz=202,slow=5.7,SNR=43						
	comp=Z,14nm,0.5s						
ZSN	**Zaisan**	**56.33**	**344**	*e*P	**P**	**02 13 45.5**	**-0.4**
ZSN				pmax	pmax		
	comp=Z,13nm,0.8s						
ZSN	**Zaisan**	**56.33**	**344**	*e*P	**P**	**02 13 45.5**	**-0.4**
	comp=Z,13nm,0.8s,baz=344						
USP	**Ospenovka**	**56.36**	**334**	P	**P**	**02 13 45.9**	**-0.3**
	SNR=6.4						
MSFE	**Esma-Masafi**	**56.44**	**306**	*i* P	**P**	**02 13 48.9**	**+1.8**
	SNR=8.4						
SGDS	**Sogindy**	**56.45**	**334**	*i* P	**P**	**02 13 45.8**	**-1.1**
SGDS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SGDS	**Sogindy**	**56.45**	**334**	*i* P	**P**	**02 13 45.9**	**-1.1**
	comp=Z,6.0nm,1.1s,baz=334						
MK31	**Makanchi Array**	**56.48**	**342**	*i* P	**P**	**02 13 46.1**	**-0.9**
MK31	**Makanchi Array**	**56.48**	**342**	IAmb	IAmb	02 13 46.9	
	comp=Z,16nm,0.7s						
MKAR	**Makanchi Array**	**56.48**	**342**	P	**P**	**02 13 46.2**	**-0.8**
	comp=Z,21nm,0.6s,baz=144,slow=7.8,SNR=199						
MKAR				LR	LR	02 41 38.2	
	comp=Z,48nm,18.2s,baz=148,slow=40						
	comp=Z,21nm,0.6s						
MKAR	**Makanchi Array**	**56.48**	**342**	P	**P**	**02 13 46.3**	**-0.6**
MAKZ	**Makanchi**	**56.59**	**342**	P	**P**	**02 13 47.2**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	**Makanchi**	**56.59**	**342**	P	**P**	**02 13 47.2**	**-0.5**
ZAK	**Zakamensk**	**56.59**	**359**	*e*P	**P**	**02 13 46.9**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
FAQ	**Al Faqa, Dubai**	**56.62**	**305**	*i* P	**P**	**02 13 50.3**	**+1.9**
	SNR=15						
NAZ	**Nazwa, Dubai**	**56.68**	**305**	*i* P	**P**	**02 13 50.1**	**+1.3**
	SNR=12						
SHME	**Shamm**	**56.78**	**307**	P	**P**	**02 13 50.8**	**+1.3**
ASUD	**Al Ashush, Dub**	**56.79**	**305**	*i* P	**P**	**02 13 51.9**	**+2.4**
	SNR=6.6						
OPO	**Ambohidratompo**	**56.82**	**252**	P	**P**	**02 13 52.2**	**+2.1**
	comp=Z,6.2nm,0.9s,baz=58,slow=12,SNR=4.1						
	comp=Z,6.2nm,0.9s						
HIA	**Hailar**	**57.09**	**12**	*i* P	**P**	**02 13 50.3**	**-0.9**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	**Hailar**	**57.09**	**12**	P	**P**	**02 13 50.1**	**-1.1**
HIA				IAmb	IAmb	02 13 53.2	
	comp=Z,6.8nm,0.5s						
TAS	**Tashkent**	**57.32**	**329**	P	**P**	**02 13 51.7**	**-1.3**
TAS				pmax	pmax		
	comp=Z,63nm,0.4s						
TAS	**Tashkent**	**57.32**	**329**	P	**P**	**02 13 51.7**	**-1.3**
IUG	**Iuzhnay**	**57.56**	**330**	*i* P	**P**	**02 13 54.4**	**-0.4**
IUG	**Iuzhnay**	**57.56**	**330**	*i* P	**P**	**02 13 54.5**	**-0.4**
	baz=330						
MZR	**Muzera**	**57.63**	**302**	*i* P	**P**	**02 13 57.7**	**+2.2**
	SNR=14						
JTM	**Tenmabayashi**	**57.86**	**32**	P	**P**	**02 13 55.4**	**-1.4**
JTM				IAmb	IAmb	02 15 34.0	
	comp=Z,36nm,1.2s						
MOY	**Mondy**	**57.94**	**358**	*e*P	**P**	**02 13 56.0**	**-1.3**
MOY				pmax	pmax		
	comp=Z,14nm,1.6s						
BTLS	**Baital**	**57.98**	**335**	*c i*P	**P**	**02 13 56.0**	**-1.5**
BTLS	**Baital**	**57.98**	**335**	⇑*i*P	**P**	**02 13 56.0**	**-1.5**
	baz=335						
KK31	**Karatay Array**	**58.05**	**331**	*i* P	**P**	**02 13 57.0**	**-1.1**
KKAR	**Karatay Array**	**58.05**	**331**	P	**P**	**02 13 57.2**	**-0.9**
KKAR	**Karatay Array**	**58.05**	**331**	P	**P**	**02 13 57.2**	**-0.9**
CASY	**Casey**	**59.91**	**177**	P	**P**	**02 14 10.6**	**0.0**
CASY				IAmb	IAmb	02 14 12.9	
	comp=Z,25nm,1.4s						
SEM	**Semipalatinsk**	**60.31**	**343**	*c i*P	**P**	**02 14 12.4**	**-1.5**
SEM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SEM	**Semipalatinsk**	**60.31**	**343**	⇑*i*P	**P**	**02 14 12.5**	**-1.5**
	comp=Z,6.1nm,0.7s,baz=342						
KLR	**Kul'dur**	**60.40**	**20**	*ce*P	**P**	**02 14 12.8**	**-1.4**
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
ASAJ	**Asahikawa**	**61.02**	**31**	LR	LR	02 40 00.5	
	comp=Z,30nm,21.8s,baz=42,slow=35						
KURBB	**Kurchatov Arra**	**61.03**	**342**	P	**P**	**02 14 17.2**	**-1.3**
KURK	**Kurchatov**	**61.08**	**342**	*ce*P	**P**	**02 14 18.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,38nm,1.3s						
KURK	**Kurchatov**	**61.08**	**342**	P	**P**	**02 14 17.8**	**-1.1**
KURK				IAmb	IAmb	02 14 19.1	
	comp=Z,22nm,0.8s						
KURK	**Kurchatov**	**61.08**	**342**	P	**P**	**02 14 18.4**	**-0.4**
KURK				pP	**pP**	**02 14 30.7**	**-0.2**
OTUK	**Ortayu**	**61.26**	**336**	P	**P**	**02 14 18.9**	**-1.2**
GEYT	**Alibeck**	**61.57**	**320**	P	**P**	**02 14 22.4**	**0.0**
	comp=Z,13nm,0.7s,baz=176,slow=10,SNR=26						
GEYT				LR	LR	02 42 39.9	
	comp=Z,72nm,21.8s,baz=154,slow=38						
	comp=Z,13nm,0.7s						
GEYT	**Alibeck**	**61.57**	**320**	IAmb	IAmb	02 14 23.7	
	comp=Z,18nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**61.57**	**320**	P	**P**	**02 14 22.8**	**+0.4**
GYA0B				IAmb	IAmb	02 14 23.7	
	comp=Z,25nm,1.1s						
DZM	**Mont Dzumac**	**61.83**	**111**	LR	LR	02 41 42.6	
	comp=Z,131nm,19.7s,baz=258,slow=36						
ZAA0	**Zalesovo Array**	**62.35**	**347**	P	**P**	**02 14 25.8**	**-1.5**
ZALV	**Zalesovo Beam**	**62.35**	**347**	P	**P**	**02 14 26.0**	**-1.3**
	comp=Z,26nm,0.6s,baz=152,slow=4.8,SNR=93						
ZALV				LR	LR	02 44 03.2	
	comp=Z,95nm,19.4s,baz=153,slow=38						
	comp=Z,26nm,0.6s						
ZALV	**Zalesovo Beam**	**62.35**	**347**	P	**P**	**02 14 26.0**	**-1.3**
ZEA	**Zeya**	**62.99**	**15**	*e*P	**P**	**02 14 31.0**	**-0.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**63.13**	**29**	*e*P	**P**	**02 14 31.5**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**63.13**	**29**	P	**P**	**02 14 32.8**	**+0.2**
GRNR	**Gornyy**	**63.36**	**22**	⇑*i*P	**P**	**02 14 32.9**	**-1.2**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,180nm,11.0s						
GRNR				MLR	MLR		
	comp=N,110nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,120nm,14.0s						
BOD	**Bodaibo**	**64.52**	**6**	*e*P	**P**	**02 14 40.1**	**-1.4**
BOD				pmax	pmax		
	comp=Z,16nm,1.8s						
RAYN	**Ar Rayn**	**64.62**	**300**	⇑P	**P**	**02 14 44.3**	**+1.3**
RAYN				pP	**pP**	**02 14 53.5**	**-1.7**
RAYN				sP	**sP**	**02 14 59.7**	**-0.3**
BRVK	**Borovoye**	**65.89**	**338**	*ce*P	**P**	**02 14 49.8**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,21nm,1.7s						
BRVK	**Borovoye**	**65.89**	**338**	P	**P**	**02 14 49.2**	**-1.4**
BRVK				IAmb	IAmb	02 14 50.6	
	comp=Z,18nm,1.2s						
BRVK	**Borovoye**	**65.89**	**338**	P	**P**	**02 14 50.0**	**-0.5**
BRVK				pP	**pP**	**02 15 01.9**	**-0.8**
KMBO	**Kilima Mbogo**	**67.05**	**271**	P	**P**	**02 15 00.6**	**+1.5**
	comp=Z,1.9nm,0.4s,baz=66,slow=6.7,SNR=5.9						
KMBO				LR	LR	02 39 03.0	
	comp=Z,100nm,21.3s,baz=94,slow=31						
	comp=Z,1.9nm,0.4s						
KMBO	**Kilima Mbogo**	**67.05**	**271**	P	**P**	**02 15 01.2**	**+2.0**
MAW	**Mawson**	**67.15**	**196**	P	**P**	**02 15 00.2**	**+1.9**
	comp=Z,6.2nm,0.8s,baz=26,slow=6.8,SNR=5.6						
MAW				LR	LR	02 39 09.9	
	comp=Z,115nm,18.9s,baz=24,slow=31						
	comp=Z,6.2nm,0.8s						
AB31	**Akbulak array**	**67.57**	**330**	*i* P	**P**	**02 15 00.7**	**-0.6**
ABKAR	**Akbulak array**	**67.57**	**330**	P	**P**	**02 15 00.5**	**-0.8**
RPZ	**Rata Peaks**	**68.85**	**134**	LR	LR	02 46 42.7	
	comp=Z,152nm,18.6s,baz=272,slow=37						
AKTO	**Aktyubinsk**	**69.28**	**330**	LR	LR	02 50 10.2	
	comp=Z,52nm,18.1s,baz=124,slow=40						
AKTO	**Aktyubinsk**	**69.28**	**330**	P	**P**	**02 15 11.3**	**-0.7**
LTZ	**Lake Taylor**	**69.54**	**133**	P	**P**	**02 15 13.5**	**-0.4**
LTZ				IAmb	IAmb	02 15 14.2	
	comp=Z,47nm,1.5s						
THZ	**Tophouse**	**69.83**	**132**	P	**P**	**02 15 15.8**	**+0.1**
THZ				IAmb	IAmb	02 15 17.1	
	comp=Z,20nm,0.8s						
YAK	**Yakutsk**	**71.03**	**12**	LR	LR	02 48 18.2	
	comp=Z,42nm,19.1s,baz=265,slow=37						
YAK	**Yakutsk**	**71.03**	**12**	*e*P	**P**	**02 15 20.5**	**-1.9**
YAK				*e**PP	**pP**	**02 15 31.4**	**-3.4**
YAK				*e*		02 15 43.3	
YAK				*e*		02 17 57.8	
YAK				*e*S	**S**	**02 24 32.6**	**-2.5**
YAK				*e**SS	**pS**	**02 24 54.2**	**+3.5**
YAK				*e*		02 25 19.0	
YAK				*e*SS	**SS**	**02 29 06.5**	**-2.6**
YAK				pmax	pmax		
	comp=Z,47nm,0.8s						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,120nm,2.5s						
YAK				pmax	pmax		
	comp=N,50nm,2.5s						
YAK				pmax	pmax		
	comp=E,58nm,2.5s						
YAK				smax	smax		
	comp=N,49nm,2.5s						
YAK				smax	smax		
	comp=E,37nm,2.0s						
GNI	**Garni**	**71.66**	**316**	LR	LR	02 48 08.8	
	comp=E,34nm,21.3s,baz=124,slow=37						
GNI	**Garni**	**71.66**	**316**	*ce*P	**P**	**02 15 28.7**	**+1.7**
GNI				pmax	pmax		
	comp=Z,17nm,1.3s						
GNI	**Garni**	**71.66**	**316**	P	**P**	**02 15 26.5**	**-0.5**
GNI	**Garni**	**71.66**	**316**	P	**P**	**02 15 28.2**	**+1.2**
BKZ	**Black Stump Fm**	**72.18**	**129**	P	**P**	**02 15 29.6**	**-0.4**
BKZ				IAmb	IAmb	02 15 31.1	
	comp=Z,22nm,0.7s						
GROC	**Groznyy**	**72.31**	**319**	*e*P	**P**	**02 15 31.1**	**+0.5**
GROC				*e**PP	**pwP**	**02 15 46.6**	**+0.9**
GROC				*e*		02 15 49.3	
GROC				*e*		02 18 14.2	
GROC				pmax	pmax		
	comp=Z,19nm,0.6s						
SVE	**Sverdlovsk**	**72.40**	**337**	*de*P	**P**	**02 15 30.9**	**+0.1**
SVE				pmax	pmax		
	comp=Z,34nm,1.3s						
URZ	**Urewera**	**72.56**	**128**	P	**P**	**02 15 33.2**	**+1.0**
	comp=Z,1.9nm,0.4s,baz=285,slow=12,SNR=2.2						
URZ				LR	LR	02 48 22.7	
	comp=Z,80nm,19.9s,baz=211,slow=36						
	comp=Z,1.9nm,0.4s						
MSVF	**Nonsavu**	**72.63**	**107**	LR	LR	02 49 05.5	
	comp=Z,42nm,18.1s,baz=208,slow=37						
GURO	**Guroymak-BITLI**	**72.92**	**313**	IAmb	IAmb	02 15 36.8	
	comp=Z,15nm,1.0s						
ARU	**Arti**	**72.97**	**335**	P	**P**	**02 15 33.9**	**-0.3**
	baz=121,slow=5.1						
ARU				LR	LR	02 52 09.7	
	comp=Z,52nm,18.5s,baz=140,slow=40						
ARU	**Arti**	**72.97**	**335**	*c i*P	**P**	**02 15 33.9**	**-0.3**
ARU						02 18 11.5	
ARU				S	**SKiKP**	**02 25 01.1**	**-2.4**
ARU				SS	**SS**	**02 29 42.0**	**+2.9**
ARU				pmax	pmax		
	comp=Z,30nm,1.2s						
ARU	**Arti**	**72.97**	**335**	P	**P**	**02 15 33.3**	**-0.9**
ARU				IAmb	IAmb	02 15 35.0	
	comp=Z,33nm,1.2s						
AKH	**Akhalkalaki**	**73.06**	**317**	⇓P	**P**	**02 15 36.3**	**+1.0**
ONI	**Oni**	**73.58**	**318**	P	**P**	**02 15 39.0**	**+0.8**
ONI				pmax	pmax		
	comp=Z,23nm,1.5s						
ONI	**Oni**	**73.58**	**318**	P	**P**	**02 15 39.0**	**+0.8**
ONI				IAmb	IAmb	02 15 49.5	
	comp=Z,23nm,1.5s						
MBAR	**Mbarara**	**73.58**	**271**	LR	LR	02 43 01.2	
	comp=Z,78nm,20.8s,baz=130,slow=32						
KBZ	**Khabaz**	**74.43**	**319**	P	**P**	**02 15 43.2**	**+0.1**
	comp=Z,11nm,0.9s,baz=114,slow=6.8,SNR=17						
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**74.43**	**319**	*ce*P	**P**	**02 15 43.6**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,23nm,1.2s						
PETK	**Petropavlovsk-**	**74.43**	**30**	P	**P**	**02 15 42.2**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=226,slow=4.3,SNR=6.8						
PETK				LR	LR	02 50 03.3	
	comp=Z,28nm,18.9s,baz=244,slow=37						
	comp=Z,2.9nm,0.6s						
MATP	**Matopo**	**74.49**	**251**	P	**P**	**02 15 45.2**	**+1.2**
	comp=Z,15nm,0.6s,baz=94,slow=5.8,SNR=53						
	comp=Z,15nm,0.6s						
SHA1	**Shidzhatmaz**	**74.60**	**319**	*i* P	**P**	**02 15 43.9**	**-0.4**
ASF	**Jabal al Asfar**	**74.63**	**306**	LR	LR	02 48 04.9	
	comp=Z,176nm,22.0s,baz=107,slow=35						
KIV	**Kislovodsk**	**74.67**	**319**	*e*P	**P**	**02 15 45.3**	**+0.7**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	**Kislovodsk**	**74.67**	**319**	P	**P**	**02 15 44.5**	**-0.1**
KIV				IAmb	IAmb	02 15 46.9	
	comp=Z,32nm,1.5s						
KIV	**Kislovodsk**	**74.67**	**319**	P	**P**	**02 15 45.5**	**+0.9**
PET	**Petropavlovsk**	**74.87**	**31**	*e*P	**P**	**02 15 46.3**	**+1.0**
PET				pmax	pmax		
	comp=Z,48nm,0.6s						
GOF	**Gofitskoye**	**74.91**	**320**	⇑*e*P	**P**	**02 15 46.8**	**+1.0**
GOF				pmax	pmax		
	comp=Z,45nm,1.5s						
LSZ	**Lusaka**	**74.96**	**256**	LR	LR	02 43 25.8	
	comp=Z,156nm,22.0s,baz=132,slow=31						
MA2	**Magadan**	**75.38**	**22**	LR	LR	02 50 58.3	
	comp=Z,40nm,18.3s,baz=242,slow=37						
MA2	**Magadan**	**75.38**	**22**	*i* P	**P**	**02 15 49.8**	**+1.6**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GHAJ	**Ghor Haditha**	**75.45**	**305**	IAmb	IAmb	02 15 51.9	
	comp=Z,26nm,0.7s						
EIL	**Elat**	**75.50**	**303**	LR	LR	02 49 26.3	
	comp=Z,64nm,18.8s,baz=88,slow=36						
BELG	**Belogornoye**	**75.71**	**328**	*i* P	**P**	**02 15 49.2**	**-1.0**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MMAI	**Mount Meron Ar**	**76.09**	**306**	LR	LR	02 49 44.2	
	comp=Z,114nm,20.1s,baz=242,slow=36						
NRIK	**Noril'sk**	**76.48**	**354**	P	**P**	**02 15 52.6**	**-1.7**
	comp=Z,6.8nm,0.3s,baz=153,slow=4.3,SNR=13						
	comp=Z,6.8nm,0.3s						
NRIK	**Noril'sk**	**76.48**	**354**	*ce*P	**P**	**02 15 53.1**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,22nm,1.3s						
NRIK	**Noril'sk**	**76.48**	**354**	IAmb	IAmb	02 15 56.4	
	comp=Z,25nm,1.3s						
SOC	**Sochi**	**76.49**	**318**	*e*P	**P**	**02 15 52.2**	**-2.7**
SOC				*e*		02 18 47.5	
SOC				*e*PPP	PPP	02 20 29.7	
SOC				*e*S	**S**	**02 25 36.3**	**-1.1**
SOC				*e*SS	**SS**	**02 30 34.7**	**+1.6**
SOC				pmax	pmax		
	comp=Z,21nm,1.1s						
VNDA	**Vanda**	**77.02**	**169**	P	**P**	**02 15 57.9**	**+0.6**
	comp=Z,8.0nm,1.0s,baz=304,slow=5.3,SNR=38						
VNDA				LR	LR	02 44 35.4	
	comp=Z,70nm,21.4s,baz=324,slow=31						
	comp=Z,8.0nm,1.0s						
VNDA	**Vanda**	**77.02**	**169**	P	**P**	**02 15 58.2**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNDA	**Vanda**	**77.02**	**169**	P	**P**	**02 15 58.1**	**+0.9**
LBTB	**Lobatse**	**77.08**	**246**	LR	LR	02 43 55.1	
	comp=Z,87nm,19.2s,baz=96,slow=31						
LBTB	**Lobatse**	**77.08**	**246**	P	**P**	**02 15 59.9**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LBTB	**Lobatse**	**77.08**	**246**	P	**P**	**02 15 59.9**	**+1.1**
BOSA	**Boshof**	**77.33**	**242**	P	**P**	**02 16 01.4**	**+1.2**
	comp=Z,8.5nm,0.7s,baz=102,slow=4.0,SNR=25						
BOSA				LR	LR	02 42 58.7	
	comp=Z,81nm,19.8s,baz=74,slow=30						
	comp=Z,8.5nm,0.7s						
BOSA	**Boshof**	**77.33**	**242**	P	**P**	**02 16 01.2**	**+1.0**
BOSA				IAmb	IAmb	02 16 02.4	
	comp=Z,10nm,0.8s						
BNN	**Bunyan**	**77.55**	**312**	P	**P**	**02 16 01.2**	**+0.1**
BNN				IAmb	IAmb	02 16 02.8	
	comp=Z,27nm,0.8s						
TOKA	**Tokat**	**77.57**	**314**	IAmb	IAmb	02 16 03.1	
	comp=Z,13nm,0.7s						
SBA	**Scott Base**	**78.11**	**169**	P	**P**	**02 16 05.5**	**+2.2**
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SBA	**Scott Base**	**78.11**	**169**	P	**P**	**02 16 05.5**	**+2.2**
KIRV	**Kirov**	**78.19**	**334**	P	**P**	**02 16 04.2**	**+0.2**
	comp=Z,33nm,0.7s,baz=138,slow=1.5,SNR=13						
	comp=Z,33nm,0.7s						
KIRV	**Kirov**	**78.19**	**334**	*ce*P	**P**	**02 16 04.6**	**+0.6**
SEY	**Seymchan**	**78.19**	**20**	LR	LR	02 52 46.5	
	comp=Z,36nm,18.1s,baz=15,slow=37						
SEY	**Seymchan**	**78.19**	**20**	*i* P	**P**	**02 16 04.7**	**+0.8**
SEY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VRH	**Novokhopyorsk**	**78.37**	**325**	*e*P	**P**	**02 16 03.8**	**-1.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DIKM	**Dikmen**	**78.88**	**315**	⇓P	**P**	**02 16 09.2**	**+0.9**

BR131	Keskin Array S	79.45	312	*i* P	P	02 16 11.1	-0.5
BRTR	Keskin Array B	79.45	312	P	P	02 16 11.8	+0.2
	comp=Z,22nm,0.8s,baz=135,slow=6.8,SNR=64						
BRTR				LR	LR	02 53 18.2	
	comp=Z,94nm,19.4s,baz=128,slow=37						
	comp=Z,22nm,0.8s						
BRTR	Keskin Array B	79.45	312	P	P	02 16 11.6	0.0
TIXI	Tiksi	79.59	8	*ce*P	P	02 16 09.5	-1.9
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
TIXI	Tiksi	79.59	8	P	P	02 16 10.6	-0.8
TIXI				IAmb	IAmb	02 16 13.0	
	comp=Z,8.9nm,0.5s						
VORD	Divnogorie	79.66	324	*e*P	P	02 16 10.9	-1.4
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VSR	Storozhevoye	79.84	325	*e*P	P	02 16 12.7	-0.5
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
BZK	Bozkurt	79.87	315	⇓P	P	02 16 14.5	+0.9
VORR	Voronezh	80.00	325	*e*P	P	02 16 14.5	+0.4
VORR				pmax	pmax		
	comp=Z,23nm,1.3s						
ANTO	Ankara	80.11	312	P	P	02 16 15.0	-0.1
ANTO				pmax	pmax		
	comp=Z,25nm,1.0s						
ANTO	Ankara	80.11	312	P	P	02 16 15.0	-0.1
ANTO				IAmb	IAmb	02 16 16.8	
	comp=Z,25nm,1.0s						
BR231	Keskin MP Arra	80.12	312	IAmb	IAmb	02 16 16.9	
	comp=Z,21nm,0.8s						
LPSR	Galich'ya Gora	80.53	326	*e*P	P	02 16 16.7	-0.2
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
SIM	Simferopol'	80.73	317	*ce*P	P	02 16 19.2	+1.0
SIM				*PP	sP	02 16 36.0	+0.4
SIM				pmax	pmax		
	comp=Z,55nm,0.8s						
SUR	Sutherland	81.09	238	LR	LR	02 46 18.9	
	comp=Z,103nm,18.5s,baz=132,slow=31						
PRGR	Permogore	81.43	336	*e*P	P	02 16 20.8	-0.7
PRGR				*e**SP	pP	02 16 32.8	-1.2
PRGR				*e*S	S	02 26 27.5	-1.7
MOS	Moscow	82.48	328	*e*P	P	02 16 26.7	-0.4
MOS				pmax	pmax		
	comp=Z,38nm,0.8s						
OBN	Obninsk	82.80	328	⇑P	P	02 16 29.6	+0.8
OBN	Obninsk	82.80	328	P	P	02 16 29.2	+0.4
	comp=Z,6.2nm,0.8s,baz=80,slow=13,SNR=9.1						
	comp=Z,6.2nm,0.8s						
OBN	Obninsk	82.80	328	*c i*P	P	02 16 29.2	+0.4
OBN				*e*		02 19 43.5	
OBN				pmax	pmax		
	comp=Z,63nm,1.7s						
OBN	Obninsk	82.80	328	P	P	02 16 28.9	+0.1
MANT	Manisa	82.92	310	IAmb	IAmb	02 16 32.1	
	comp=Z,13nm,0.8s						
QSPA	South Pole Qui	83.56	180	LR	LR	02 51 21.7	
	comp=Z,86nm,18.1s,baz=338,slow=34						
QSPA	South Pole Qui	83.56	180	P	P	02 16 32.2	-0.6
QSPA				IAmb	IAmb	02 16 35.0	
	comp=Z,27nm,1.3s						
KLMR	Klimovskoe	83.66	334	*e*P	P	02 16 31.9	-1.2
KLMR				pmax	pmax		
	comp=Z,27nm,1.1s						
KLMR	Klimovskoe	83.66	334	*e*P	P	02 16 32.0	-1.2
KLMR				AMP		02 16 34.4	
	comp=Z,27nm,1.1s						
PURM	Purcari	84.04	318	⇑P	P	02 16 37.2	+1.8
TLCR		84.40	317	⇑P	P	02 16 38.7	+1.5
TLCR		84.40	317	⇑P	P	02 16 38.7	+1.5
PSN	Preselentsi	84.46	315	*i* P	P	02 16 38.7	+1.1
TIRR	Tirgusor	84.49	316	⇑P	P	02 16 38.9	+1.2
TIRR	Tirgusor	84.49	316	⇑P	P	02 16 38.9	+1.2
TPGR	Topolog	84.58	316	⇑P	P	02 16 39.3	+1.0
TLBR	Topalu	84.77	316	⇑P	P	02 16 40.8	+1.7
TSUM	Tsumeb	84.81	251	LR	LR	02 49 35.1	
	comp=Z,141nm,21.0s,baz=146,slow=32						
ICOR	Ion Corvin	84.83	315	⇑P	P	02 16 40.7	+1.2
MILM	Milestii Mici	84.84	318	⇑*i*P	P	02 16 40.0	+0.5
	comp=Z,70nm,0.6s						
MILM	Milestii Mici	84.84	318	⇑P	P	02 16 40.4	+0.9
MILM	Milestii Mici	84.84	318	*c i*P	P	02 16 40.0	+0.5
MILM				pmax	pmax		
	comp=Z,90nm,0.8s						
CFR	Carcaliu	84.86	316	⇓P	P	02 16 40.9	+1.3
CFR	Carcaliu	84.86	316	⇓P	P	02 16 40.9	+1.3
HARR	Harsova	84.88	316	⇑P	P	02 16 41.0	+1.3
HARR	Harsova	84.88	316	⇑P	P	02 16 41.0	+1.3
PRD	Provadia	84.89	314	*i* P	P	02 16 41.2	+1.4
VLDR	Vladesti	85.06	317	⇑P	P	02 16 42.1	+1.5
IDI	Anoyia	85.09	306	LR	LR	02 55 12.4	
	comp=Z,41nm,21.9s,baz=100,slow=36						
LEOM	Leova	85.11	318	⇑P	P	02 16 42.7	+1.9
LEOM	Leova	85.11	318	⇑P	P	02 16 42.7	+1.9
VASR	Vaslui	85.45	318	⇑P	P	02 16 44.0	+1.5
AKASG	Malin Array Be	85.58	322	P	P	02 16 42.9	-0.1
	comp=Z,6.8nm,0.7s,baz=81,slow=5.1,SNR=24						
	comp=Z,6.8nm,0.7s						
AKASG	Malin Array Be	85.58	322	*ce*P	P	02 16 43.0	-0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	85.58	322	*ce*P	P	02 16 43.3	+0.2
AKBB	Malin Array Si	85.58	322	IAmb	IAmb	02 16 44.0	
	comp=Z,12nm,0.7s						
RAZG	Razgrad	85.61	315	⇑P	P	02 16 44.6	+1.2
BILL	Bilibino	85.84	19	⇑*e*P	P	02 16 42.5	-1.5
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BILL	Bilibino	85.84	19	P	P	02 16 46.1	+2.1
BILL				IAmb	IAmb	02 16 46.8	
	comp=Z,5.7nm,0.7s						
SZH	Strazhica	85.95	314	*i* P	P	02 16 45.6	+0.5
VRI	Vrincioaia	85.99	317	⇑P	P	02 16 47.1	+1.9
VRI	Vrincioaia	85.99	317	⇑P	P	02 16 47.1	+1.9
PLOR	Plostina	86.04	317	⇑P	P	02 16 46.2	+0.7
PLOR	Plostina	86.04	317	⇑P	P	02 16 46.2	+0.7
TESR	Tescani	86.19	317	⇑P	P	02 16 47.9	+1.6
COVR	Voineasa-Covas	86.34	317	⇑P	P	02 16 47.8	+0.8
MLR	Muntele Rosu	86.44	316	⇑P	P	02 16 49.4	+1.8
MLR	Muntele Rosu	86.44	316	⇑P	P	02 16 49.4	+1.8
RZN	Rozhen	86.50	312	*i* P	P	02 16 49.0	+0.9
COPA	Copaceanca	86.65	315	⇑P	P	02 16 49.3	+0.8
DOPR	Dopca	86.92	317	⇑P	P	02 16 51.7	+1.8
VOIR		87.04	316	⇑P	P	02 16 51.2	+0.7
VOIR		87.04	316	⇑P	P	02 16 51.2	+0.7
ARR	Arges	87.31	316	⇑P	P	02 16 52.9	+1.1
MNK	Minsk	87.37	325	*e*P	P	02 16 52.0	+0.3
MNK	Minsk	87.37	325	*i* P	P	02 16 52.1	+0.3
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	02 16 52.1	+0.3
	comp=N,7.0nm,0.8s						
MNK				*i* P	P	02 16 52.1	+0.3
	comp=Z,27nm,0.8s,baz=285						
MNK				*i* PP	PP	02 20 18.0	+1.4
MNK				*i* PPP	PPP	02 22 08.7	
MNK				*i* S	SKSac	02 27 16.1	+0.4
MNK				*i* SS	SS	02 32 59.4	-15
MNK				*i* SSS	SSS	02 36 44.5	
MNK				*i* LQ	LQ	02 48 51.3	
MNK				*i* LR	LR	02 53 14.9	
MNK				*i* LRM	MLR	02 58 23.9	
	comp=N,56nm,16.1s						
MNK				*i* LRM	MLR	02 58 29.0	
	comp=Z,102nm,16.1s						
MNK				*i* LRM	MLR	02 58 34.2	
	comp=E,12nm,16.1s						
BURAR	Bucovina Array	87.39	318	⇑P	P	02 16 54.3	+2.1
BURAR	Bucovina Array	87.39	318	⇑P	P	02 16 54.3	+2.1
BURAR	Bucovina Array	87.39	318	P	P	02 16 53.3	+1.1
MPEP	Malo Peshtene	87.54	314	*i* P	P	02 16 54.1	+1.2
KKB	Krupnik	87.73	312	*i* P	P	02 16 54.3	+0.4
VTS	Vitosha	87.76	313	⇑P	P	02 16 55.2	+1.1
VTS	Vitosha	87.76	313	⇑P	P	02 16 55.2	+1.1
VTS	Vitosha	87.76	313	*i* P	P	02 16 54.9	+0.7
ARCR	ARCALIA	87.85	318	⇓P	P	02 16 56.0	+1.7
LOT	Lotru	87.92	316	⇓P	P	02 16 55.6	+0.7
VAY	Valandovo	88.01	312	*i* P	P	02 16 56.0	+0.8
NACGM	Naroch	88.09	326	⇓*e*P	P	02 16 56.3	+1.2
	baz=104						
IDID	Didziasalis	88.21	326	*e*P	P	02 16 56.4	+0.6
CJR	Cluj-Napoca	88.29	317	⇓P	P	02 16 58.4	+2.0
CJR	Cluj-Napoca	88.29	317	⇓P	P	02 16 58.4	+2.0
LVZ	Lovozero	88.40	339	*ce*P	P	02 16 57.1	+0.6
LVZ				pmax	pmax		
	comp=Z,36nm,1.7s						
IIGN	Ignalina	88.51	326	*e*P	P	02 16 58.1	+0.9
BMR	Baia Mare	88.54	318	⇑P	P	02 16 59.3	+1.8
BMR	Baia Mare	88.54	318	⇑P	P	02 16 59.3	+1.8
GZR	Gura Zlata	88.60	316	⇓P	P	02 16 59.5	+1.5
GZR	Gura Zlata	88.60	316	⇓P	P	02 16 59.5	+1.5
DEV	Deva	88.60	316	⇑P	P	02 16 58.9	+1.0
DEV	Deva	88.60	316	⇑P	P	02 16 58.9	+1.0
LVV	L'vov	88.61	320	*e*P	P	02 16 58.9	+1.1
HERR	Herculane	88.76	315	⇑P	P	02 17 00.1	+1.5
MESR	Meseseni	88.81	318	⇑P	P	02 17 00.1	+1.3
DRGR		88.90	317	⇑P	P	02 17 00.8	+1.4
DRGR		88.90	317	⇑P	P	02 17 00.8	+1.4
SKO	Skopje	88.96	312	*i* P	P	02 17 00.2	+0.5
VSU	Vasula	88.97	329	*e*P	P	02 16 59.1	-0.2
MDVR	Moldovita	89.23	315	⇑P	P	02 17 02.4	+1.5
SNAA	Sanae	89.26	198	PcP	PcP	02 17 03.0	+1.0
SNAA	Sanae	89.26	198	*ce*P	P	02 16 58.5	-2.1
SNAA				pmax	pmax		
	comp=Z,17nm,2.5s						
SNAA	Sanae	89.26	198	IAmb	IAmb	02 17 04.3	
	comp=Z,21nm,1.3s						
OHR	Ohrid	89.30	311	*i* P	P	02 17 02.1	+0.8
KWP	Kalwaria Pacla	89.42	320	*e*P	P	02 17 02.7	+1.0
BZS	Buzias	89.44	316	⇑P	P	02 17 02.9	+1.1
BZS	Buzias	89.44	316	⇑P	P	02 17 02.9	+1.1
UZH	Uzhgorod	89.51	319	*e*P	P	02 17 04.2	+2.2
UZH				*i*		02 17 13.0	
UZH				*i*		02 17 20.6	
SIRR	Siria	89.52	317	⇑P	P	02 17 03.3	+1.1
KOLS	Kolonicke sedl	89.58	319	*e*P	P	02 17 04.5	+2.1
KOLS				pmax	pmax		
	comp=Z,34nm,0.8s						
KOLS	Kolonicke sedl	89.58	319	*e*P	P	02 17 04.5	+2.1
SUW	Suwalki	89.95	324	*e*P	P	02 17 04.2	+0.2
FIA1	FINESS Array S	90.00	332	P	P	02 17 03.6	-0.4
FIA1				IAmb	IAmb	02 17 05.3	
	comp=Z,11nm,0.8s						
FINES	FINESS Array B	90.00	332	P	P	02 17 04.3	+0.3
	comp=Z,6.5nm,0.7s,baz=104,slow=8.0,SNR=32						
	comp=Z,6.5nm,0.7s						
DIVS	Divibare	90.34	314	IAmb	IAmb	02 17 08.5	
	comp=Z,12nm,0.9s						
MTSE	Matsula	90.52	329	*e*P	P	02 17 06.9	+0.5
MEF	Metsahovi	90.53	331	*e*P	P	02 17 06.8	+0.3
VNA2	Neumayer--Watz	90.89	198	PcP	PcP	02 17 10.5	+1.4
	baz=110,slow=4.0						
VNA1	Neumayer--Stat	91.27	198	PcP	PcP	02 17 12.3	+1.5
VNA3	Neumayer Olymp	91.45	197	PcP	PcP	02 17 13.4	+1.8
MORH	Mrgy, Hungar	91.58	316	P	P	02 17 12.2	+0.4
KOVH	Kovagotottos	91.94	316	P	P	02 17 13.8	+0.4
RAF	Rauma	91.96	331	*e*P	P	02 17 13.4	+0.3
CSKK	Cskako	91.99	317	P	P	02 17 14.3	+0.6
ARCES	ARCESS Array B	92.07	340	P	P	02 17 13.1	-0.5
	comp=Z,2.9nm,0.6s,baz=89,slow=4.9,SNR=30						
ARCES				LR	LR	03 02 23.4	
	comp=Z,53nm,18.1s,baz=112,slow=38						
	comp=Z,2.9nm,0.6s						
OKC	Ostrava-Krasne	92.38	320	*e*P	P	02 17 16.7	+1.4
OKC	Ostrava-Krasne	92.38	320	*e*P	P	02 17 16.7	+1.4
MPLH	Magyarpolny	92.46	317	P	P	02 17 16.6	+0.8
MAUC	Maruska	92.53	319	*e*P	P	02 17 16.9	+0.8
JAVC	Velka Javorina	92.57	319	*e*P	P	02 17 17.6	+1.3
AAL	Aland	92.69	330	*e*P	P	02 17 16.2	-0.4
MORC	Moravsky Berou	92.76	320	P	P	02 17 17.2	0.0
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MORC	Moravsky Berou	92.76	320	P	P	02 17 17.2	0.0
MORC				IAmb	IAmb	02 17 19.1	
	comp=Z,4.6nm,0.8s						
MORC	Moravsky Berou	92.76	320	*e*P	P	02 17 17.9	+0.7
MODS	Modra-Piesok	92.77	318	*e*P	P	02 17 18.0	+0.8
MODS	Modra-Piesok	92.77	318	*e*P	P	02 17 18.0	+0.8
BELA	Belgrano 2	92.84	188	P	P	02 17 16.8	-0.2
RAR	Rarotonga	93.21	112	LR	LR	02 57 23.2	
	comp=Z,25nm,21.5s,baz=236,slow=34						
KRLC	Kraliky	93.28	320	*e*P	P	02 17 20.9	+1.3
KRLC	Kraliky	93.28	320	*e*P	P	02 17 20.9	+1.3
VRAC	Vranov	93.32	319	LR	LR	03 04 31.4	
	comp=Z,14nm,18.2s,baz=68,slow=39						
VRAC	Vranov	93.32	319	*e*P	P	02 17 20.2	+0.4
KRUC	Moravsky	93.43	319	*e*P	P	02 17 20.4	+0.2
DPC	Dobruska-Polom	93.60	320	*e*P	P	02 17 22.5	+1.4
DPC	Dobruska-Polom	93.60	320	*e*P	P	02 17 22.5	+1.4
OSTC	Ostas	93.69	320	*e*P	P	02 17 22.2	+0.8
CHVC	Chvalec	93.80	320	*e*P	P	02 17 23.0	+1.1
VIKU	Vikbolandet	94.17	328	*e*P	P	02 17 23.5	+0.2
CKRC	Cesky Krumlov	94.78	318	*e*P	P	02 17 27.1	+0.6
GEC2	GERESS Array S	95.18	318	IAmb	IAmb	02 17 29.9	
	comp=Z,11nm,1.6s						
GERES	GERESS Array B	95.18	318	P	P	02 17 28.6	+0.2
	comp=Z,1.0nm,0.6s,baz=92,slow=4.0,SNR=11						
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	95.18	318	P	P	02 17 28.4	0.0
KHC	Kasperske Hory	95.28	319	*e*P	P	02 17 29.0	+0.2
KHC	Kasperske Hory	95.28	319	*e*P	P	02 17 29.0	+0.2
CLL	Collm	95.77	321	*e*P	P	02 17 31.0	+0.1
CLL	Collm	95.77	321	*e*P	P	02 17 31.0	+0.1
SPITS	Spitsbergen Ar	95.82	348	P	P	02 17 29.2	-1.5
	comp=Z,18nm,1.0s,baz=60,slow=8.9,SNR=5.1						
SPITS				LR	LR	03 07 22.3	
	comp=Z,68nm,19.5s,baz=205,slow=40						
	comp=Z,18nm,1.0s						
HFS	Hagfors	95.82	330	LR	LR	03 04 31.6	
	comp=Z,32nm,18.4s,baz=28,slow=38						
NOA	NORSAR Array B	97.07	331	LR	LR	03 07 04.0	
	comp=Z,27nm,18.8s,baz=285,slow=39						
DAVOX	Davos/Dischmat	97.66	316	P	Pdif	02 17 40.1	+0.2
	comp=Z,1.3nm,0.5s,baz=280,slow=8.4,SNR=6.4						
	comp=Z,1.3nm,0.5s						
A21K	Barrow	98.97	19	P	Pdif	02 17 46.1	+1.3
A21K				IAmb	IAmb	02 17 48.0	
	comp=Z,8.5nm,0.8s						
TORD	Torodi Ar. Bea	103.66	282	PKiKP	PKiKP	02 22 24.8	-0.6
	comp=Z,0.4nm,0.8s,baz=90,slow=1.1,SNR=2.5						
ILAR	Eielson Array	103.77	25	PKKPbc	PKKPbc	02 33 58.8	-1.4
	comp=Z,0.7nm,0.6s,baz=115,slow=1.9,SNR=11						
YKA	Yellowknife Ar	117.24	19	PKP	PKPdf	02 22 48.4	-1.2
	comp=Z,0.5nm,0.7s,baz=314,slow=1.7,SNR=5.9						
YKA				PKKPbc	PKKPbc	02 33 15.2	-0.9
	comp=Z,0.8nm,0.6s,baz=124,slow=4.6,SNR=16						
YKA	Yellowknife Ar	117.24	19	*c i*PKIKP	PKPdf	02 22 48.9	-0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
J05D	Fort Rock, OR	125.77	40	P	PKiKP	02 23 08.4	+1.2
	baz=299						
MFID	Camas Ranch	129.05	37	PKPdf	PKiKP	02 23 15.5	+1.7
AY01	Puyuhuapi	129.31	183	PKPdf	PKiKP	02 23 14.2	+0.1
NVAR	Mina Array Bea	130.05	44	PKP	PKiKP	02 23 16.3	+0.3
	comp=Z,0.6nm,0.6s,baz=319,slow=3.6,SNR=3.9						
BOZ	Bozeman (W)	130.11	33	P	PKiKP	02 23 16.8	+1.0
	baz=310						
LCH	Last Change Ra	131.08	45		PKPdf	02 23 15.3	-1.8
MPMC	Manual Prospec	131.74	46	P	PKiKP	02 23 20.8	+1.4
	baz=298						
PLCA	Paso Flores	132.83	185	PKP	PKiKP	02 23 22.2	+0.8
	comp=Z,1.9nm,0.7s,baz=294,slow=3.2,SNR=6.8						
PDAR	Pinedale Array	133.09	34	PKP	PKPdf	02 23 21.3	+0.4
	comp=Z,0.7nm,0.6s,baz=248,slow=0.8,SNR=8.0						
PDAR				SKP		02 26 50.2	
	comp=Z,1.5nm,0.7s,baz=309,slow=0.6,SNR=8.8						
O20A	White River Ci	135.55	36		PKPdf	02 23 24.3	-1.2
ABR01	Abrolhos, BA	136.15	236	*e*P	PKPdf	02 23 25.6	-1.3
RCBR	Riachuelo	138.44	254	*e*P	PKiKP	02 23 33.2	-0.3
ITQB	Itaqui	139.69	206	*e*P	PKPdf	02 23 32.6	-0.6
ANMO	Albuquerque	139.92	41	*c i*PKIKP	PKPdf	02 23 31.0	-2.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
NBMA	Muriti-CE	140.68	250	*e*P	PKPdf	02 23 34.5	-0.9
ZON	Zonda	141.64	190	PKIKP	PKPdf	02 23 35.1	-1.7
ZON	Zonda	141.64	190		PKPdf	02 23 35.0	-1.7
CPUP	Villa Florida	142.87	208	PKhKP	PKPpre	02 23 36.8	
	comp=Z,2.5nm,0.6s,baz=131,slow=2.3,SNR=8.1						
P40A	Paris	143.91	22	P	PKPab	02 23 37.7	+0.1
	baz=332,SNR=6.3						
T35B	Sooner Cattle	144.21	29	P	PKPbc	02 23 39.1	-0.1
	baz=323,SNR=6.7						
ERPA	Erie	144.26	5	P	PKPab	02 23 38.8	0.0
	baz=353,SNR=5.9						
ERPA	Erie	144.26	5	P	PKPab	02 23 38.7	-0.2
	baz=353						
BINY	Binghamton	144.38	0	P	PKPab	02 23 39.4	+0.1
	baz=360						
LCO	Las Campanas	144.43	188	PKIKP	PKPbc	02 23 41.0	+0.5
LCO	Las Campanas	144.43	188	PKPdf	PKPbc	02 23 41.0	+0.5
N47A	Urbana	144.56	13	P	PKPab	02 23 39.3	-0.7
	baz=343						
N47A				P	PKPab	02 23 39.3	-0.7
	baz=343						
P43A	Skaggs, Pawnee	144.68	19	P	PKPab	02 23 39.8	-0.7
	baz=336						
M52A	Chesterland	144.68	7	P	PKPab	02 23 40.2	-0.2
	baz=350,SNR=11						
M52A				P	PKPab	02 23 40.2	-0.2
	baz=350,SNR=11						
SFIN	Lafayette	144.69	15	PKPdf	PKPab	02 23 39.8	-0.7
SFIN	Lafayette	144.69	15	P	PKPab	02 23 40.3	-0.2
	baz=340,SNR=6.1						
SFIN	Lafayette	144.69	15	P	PKPab	02 23 40.4	-0.1
	baz=340						
WMOK	Wichita Mounta	144.70	34	P	PKPab	02 23 40.3	-0.5
	baz=318						
WMOK	Wichita Mounta	144.70	34	P	PKPab	02 23 40.2	-0.5
	baz=318						
ALLY	Alegheny Colle	144.71	6	P	PKPab	02 23 39.9	-0.6
	baz=352						
N49A	Columbus Grove	144.83	11	P	PKPab	02 23 40.5	-0.5
	baz=345,SNR=9.0						
N49A				P	PKPab	02 23 40.5	-0.5
	baz=345,SNR=9.0						
M53A	WI Miller and	144.86	6	P	PKPab	02 23 40.7	-0.4
	baz=352						
BDFB	Brasilia	144.88	231	PKPbc	PKPdf	02 23 43.7	+0.8
	comp=Z,7.5nm,0.5s,baz=124,slow=3.5,SNR=18						
R40A	Maddies Statio	144.91	23	P	PKPab	02 23 40.8	-0.6
	baz=331,SNR=38						
S39A	Bolivar	145.00	25	P	PKPab	02 23 40.7	-1.1
	baz=328,SNR=21						
M55A	Ridgway	145.00	4	P	PKPab	02 23 41.3	-0.4
	baz=355,SNR=7.4						
M55A				P	PKPab	02 23 41.3	-0.4
	baz=355,SNR=7.4						
KSPA	Keystone Colle	145.02	0		PKPbc	02 23 40.9	-0.8
KSPA	Keystone Colle	145.02	0	P	PKPbc	02 23 41.4	-0.3
	baz=360,SNR=8.9						
N51A	Ashland	145.15	9	P	PKPbc	02 23 41.4	-0.7
	baz=348,SNR=16						
N51A				P	PKPbc	02 23 41.4	-0.7
	baz=348,SNR=16						
TX31	Lajitas Ar. Si	145.16	46	P	PKPdf	02 23 43.1	0.0
	baz=305						
TXAR	Lajitas Array	145.16	46	PKP	PKPdf	02 23 43.1	+0.1
	comp=Z,8.0nm,0.8s,baz=281,slow=1.3,SNR=74						
M57A	Sunshine Farm,	145.22	2	P	PKPbc	02 23 42.1	-0.1
	baz=358,SNR=14						
M57A				P	PKPbc	02 23 42.1	-0.1
	baz=358,SNR=14						
O48B	Farmland	145.27	13	P	PKPbc	02 23 41.8	-0.7
	baz=343,SNR=16						
O48B	Farmland	145.27	13	P	PKPbc	02 23 41.7	-0.7
	baz=343						
TUL1	Leonard	145.36	29	PKPbc	PKPbc	02 23 42.8	-0.2
TUL1	Leonard	145.36	29	P	PKPbc	02 23 42.9	0.0
	baz=323,SNR=6.0						
TUL1	Leonard	145.36	29	P	PKPbc	02 23 42.9	0.0
	baz=323						
P46A	Rosedale	145.38	16	P	PKPbc	02 23 42.6	-0.2
	baz=340,SNR=6.2						
N53A	Lisbon	145.47	7	P	PKPdf	02 23 42.8	-0.3
	baz=351,SNR=16						
N53A				P	PKPdf	02 23 42.8	-0.3
	baz=351,SNR=16						
ODNJ	Ogdensburg	145.48	359	PKPbc	PKPab	02 23 43.5	+0.1
ODNJ	Ogdensburg	145.48	359	P	PKPdf	02 23 42.8	-0.3
	baz=2.0,SNR=9.0						
CCM	Cathedral Cave	145.50	22	PKIKP	PKPbc	02 23 43.3	0.0
CCM	Cathedral Cave	145.50	22	PKPbc	PKPbc	02 23 43.3	0.0
CCM	Cathedral Cave	145.50	22	P	PKPdf	02 23 42.5	-0.7
	baz=332,SNR=22						
CCM	Cathedral Cave	145.50	22	P	PKPdf	02 23 42.6	-0.7
	baz=332						
Q44A	Meyer Farm, Va	145.51	18	P	PKPdf	02 23 42.8	-0.4
	baz=336,SNR=5.2						
O49A	Covington	145.51	12	P	PKPdf	02 23 42.5	-0.6
	baz=345,SNR=16						
O49A				P	PKPdf	02 23 42.5	-0.6
	baz=345,SNR=16						
PAL	Palisades	145.54	358	P	PKPdf	02 23 43.0	-0.2
	baz=3.2,SNR=5.2						
PAL	Palisades	145.54	358	P	PKPdf	02 23 43.0	-0.2
	baz=3.2						
ABTX	Abilene, Hawle	145.72	37	P	PKPab	02 23 44.5	-0.1
	baz=314						
ABTX	Abilene, Hawle	145.72	37	P	PKPab	02 23 44.5	-0.1
	baz=314						
ACSO	Alum Creek Sta	145.72	10	P	PKPdf	02 23 43.2	-0.3
	baz=347,SNR=20						
ACSO	Alum Creek Sta	145.72	10	P	PKPdf	02 23 43.3	-0.3
	baz=347						
N58A	Sunbury	145.73	1	P	PKPbc	02 23 43.7	-0.2
	baz=358,SNR=19						
N58A				P	PKPbc	02 23 43.7	-0.2
	baz=358,SNR=19						
FVM	French Village	145.87	21	P	PKPdf	02 23 43.1	-0.8
	baz=333,SNR=5.4						
SSPA	Standing Stone	145.89	3	PKPbc	PKPbc	02 23 44.2	-0.3
SSPA	Standing Stone	145.89	3	P	PKPdf	02 23 44.0	+0.2
	baz=356,SNR=8.4						
SSPA	Standing Stone	145.89	3	P	PKPbc	02 23 44.2	-0.3
	baz=356						
HHAR	Hobbs	145.92	27	P	PKPdf	02 23 43.4	-0.6
	baz=326						
OLIL	Olney	145.94	17	P	PKPbc	02 23 44.4	-0.3
	baz=338,SNR=7.5						
O53A	New Philadelph	145.97	8	P	PKPdf	02 23 44.2	+0.2
	baz=350						
P48A	Milroy	145.97	13	PKPbc	PKPdf	02 23 43.9	-0.1
P48A	Milroy	145.97	13	P	PKPdf	02 23 44.0	0.0
	baz=343,SNR=20						
P48A				P	PKPdf	02 23 44.0	0.0
	baz=343,SNR=20						
O52A	Adamsville	146.01	8	P	PKPdf	02 23 44.3	+0.2
	baz=349,SNR=8.7						
O52A				P	PKPdf	02 23 44.3	+0.2
	baz=349,SNR=8.7						
P49A	Miami Univ. Ec	146.06	13	P	PKPdf	02 23 44.3	+0.1
	baz=344,SNR=13						
P49A	Miami Univ. Ec	146.06	13	P	PKPdf	02 23 44.2	0.0
	baz=344						
O54A	Avella	146.14	6	P	PKPdf	02 23 44.4	+0.2
	baz=352,SNR=6.0						
O54A				P	PKPdf	02 23 44.4	+0.2
	baz=352,SNR=6.0						
PANJ	Princeton	146.19	359	P	PKPdf	02 23 44.0	-0.3
	baz=1.9						
U40A	Yellville	146.33	25	P	PKPdf	02 23 44.9	+0.2
	baz=328,SNR=28						
U40A				P	PKPdf	02 23 44.9	+0.2
	baz=328,SNR=28						
U40A	Yellville	146.33	25	P	PKPdf	02 23 45.1	+0.4
	baz=328						
TUPA	Temple Univers	146.41	359	P	PKPdf	02 23 45.2	+0.5
	baz=1.0						
P51A	Williamsport	146.44	10	P	PKPdf	02 23 45.3	+0.5
	baz=347,SNR=5.8						
P51A				P	PKPdf	02 23 45.3	+0.5
	baz=347,SNR=5.8						
P52A	Corning	146.44	9		PKPdf	02 23 44.5	-0.3
P52A	Corning	146.44	9	P	PKPbc	02 23 45.6	-0.6
	baz=348						
S44A	Carbondale	146.53	20	P	PKPdf	02 23 45.6	+0.6
	baz=335						
Z35A	Perchaven, San	146.59	34	P	PKPbc	02 23 46.4	-0.4
	baz=319						
P53A	Whipple	146.69	8	P	PKPbc	02 23 46.6	-0.3
	baz=350,SNR=6.6						
P53A				P	PKPbc	02 23 46.6	-0.3
	baz=350,SNR=6.6						
MCWV	Mont Chateau	146.71	6	P	PKPbc	02 23 46.9	0.0
	baz=353						
GEDE	Greenville	146.77	360	P	PKPbc	02 23 46.9	-0.1
	baz=0.2,SNR=5.3						
Q51A	Peebles	146.83	11	P	PKPdf	02 23 45.9	+0.4
	baz=346,SNR=11						
Q51A				P	PKPdf	02 23 45.9	+0.4
	baz=346,SNR=11						
P57A	Homestead Farm	147.03	3	P	PKPbc	02 23 47.4	-0.4
	baz=356,SNR=7.1						
P57A				P	PKPbc	02 23 47.4	-0.4
	baz=356,SNR=7.1						
JCT	Junction City	147.07	40	PKP2	PKPbc	02 23 47.5	-0.8

JCT	Junction City	147.07	40		PKPbc	02 23 47.5	-0.8
JCT	Junction City	147.07	40	P	PKPbc	02 23 48.5	+0.2
	baz=312						
Q52A	Bidwell	147.08	9	P	PKPbc	02 23 47.1	-0.9
	baz=348,SNR=10						
Q52A				P	PKPbc	02 23 47.1	-0.9
	baz=348,SNR=10						
R49A	Shelbyville	147.14	14	P	PKPbc	02 23 47.5	-0.7
	baz=343,SNR=6.4						
R49A				P	PKPbc	02 23 47.5	-0.7
	baz=343,SNR=6.4						
Q54A	Coxs Mills	147.26	7	P	PKPbc	02 23 47.9	-0.6
	baz=351,SNR=8.9						
Q54A				P	PKPbc	02 23 47.9	-0.6
	baz=351,SNR=8.9						
LCAR	Lake Charles	147.28	24	P	PKPbc	02 23 48.1	-0.5
	baz=331,SNR=10						
MIAR	Mount Ida	147.52	28	PKP2	PKPdf	02 23 47.9	+1.1
MIAR	Mount Ida	147.52	28		PKPdf	02 23 47.9	+1.1
MIAR	Mount Ida	147.52	28	P	PKPbc	02 23 49.2	-0.2
	baz=326						
R53A	Hurricane	147.75	9	P	PKPbc	02 23 49.4	-0.4
	baz=348,SNR=12						
R53A				P	PKPbc	02 23 49.4	-0.4
	baz=348,SNR=12						
T47A	Sharon Grove	147.85	17	P	PKPbc	02 23 48.7	-1.5
	baz=338,SNR=5.0						
WVT	Waverly	148.42	19	PKP2	PKPbc	02 23 51.1	-0.6
WVT	Waverly	148.42	19		PKPbc	02 23 51.1	-0.6
WVT	Waverly	148.42	19	P	PKPbc	02 23 51.5	-0.2
	baz=337,SNR=19						
WVT	Waverly	148.42	19	P	PKPbc	02 23 51.5	-0.2
	baz=337						
833A	Chaparral WMA,	148.75	43	PKPbc	PKPbc	02 23 53.2	+0.4
V48A	Smith Brothers	149.10	18	P	PKPbc	02 23 53.1	-0.3
	baz=338,SNR=6.7						
TZTN	Tazewell	149.18	12	P	PKPbc	02 23 53.7	+0.1
	baz=345						
PB10	IPOC Station P	149.81	189	PKPbc	PKiKP	02 23 57.4	+0.8
V52A	Sevierville	149.85	13	P	PKPbc	02 23 55.2	-0.1
	baz=344,SNR=7.8						
TKL	Tuckaleechee C	149.98	13	P	PKPbc	02 23 55.7	0.0
	baz=344						
V53A	Saluda	150.18	12	P	PKPbc	02 23 55.8	-0.4
	baz=346,SNR=5.9						
V53A				P	PKPbc	02 23 55.8	-0.4
	baz=346,SNR=5.9						
LVC	Limon Verde	150.38	193	PKIKP	PKiKP	02 23 59.1	+0.9
LVC	Limon Verde	150.38	193	PKPbc	PKiKP	02 23 59.1	+0.9
KMSC	Kings Mountain	150.96	10	P	PKPbc	02 23 57.4	-0.6
	baz=348						
Y49A	Blount Mountai	150.96	19	P	PKPbc	02 23 57.7	-0.3
	baz=338						
Z47A	Carrollton	151.00	22		PKPbc	02 23 57.0	-1.1
Z47A	Carrollton	151.00	22	P	PKPbc	02 23 58.0	-0.1
	baz=334						

*TUL **06** 02:10:54.3±0.7, 36°.65N±0°.01×97°.71W±0°.01, h8^{km}±6^{km}, ML2.7, mb_Lg2.1/6(NEIC) Error ellipse: s-maj=1.7km s-min=1.2km az=162.0*

NEIC 06 02:10:54.1±0.8**, 36°.63N**±0°.01×**97°.70W**±0°.01**, h4**^{km}±7^{km}**, Error ellipse: s-maj=1.9km s-min=0.8km az=145.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.99	73	Pg	Pg	02 11 12.7	-0.5
U32A	Winter Ranch,	1.08	257	Pg	Pg	02 11 14.0	-0.8
OKCSW	OKLAHOMA CITY	1.24	170	Pn	Pg	02 11 17.2	-0.7
FNO	Franklin	1.39	170	Pn	Pn	02 11 19.9	-0.5
TUL1	Leonard	1.70	115	Pn	Pn	02 11 24.5	-0.1
TUL1				IAmb_Lg		02 11 50.0	
	comp=Z,11nm,1.0s						
R32A	Long Quarter,	1.96	336	Pn	Pn	02 11 28.4	+0.2
X34A	Smith Ranch, M	2.03	183	Pn	Pb	02 11 30.4	-1.1
WMOK	Wichita Mounta	2.09	205		Pn	02 11 29.8	-0.1
X37A	Clayton	2.78	136	IAmb_Lg		02 12 25.8	
	comp=Z,9.1nm,0.9s						
HHAR	Hobbs	3.05	95	IAmb_Lg		02 12 34.0	
	comp=Z,2.6nm,0.7s						
S39A	Bolivar	3.65	72	Pn	Pn	02 11 51.2	-0.2
U40A	Yellville	3.91	93	Pn	Pn	02 11 55.1	+0.1
MIAR	Mount Ida	3.95	121	Pn	Pn	02 11 57.1	+1.6
MGMO	Mountain Grove	4.38	82	Pn	Pn	02 12 01.8	+0.3
MGMO				IAmb_Lg		02 13 16.1	
	comp=Z,3.6nm,0.8s						

*SOF **06** 02:46:49.6, 41°.78N×22°.78E, h12^{km}, MD3.3*
*SKO **06** 02:46:50.5, 41°.78N×22°.88E, h25^{km}*
*ATH **06** 02:46:51.4, 41°.78N×22°.87E, h11^{km}±3^{km}, ML2.6/5, Error ellipse: s-maj=7.2km s-min=1.8km az=155.0*
*DDA **06** 02:46:52.2±0.0, 41°.54N×22°.97E, h24^{km}±3^{km}, ML3.0*
*BEO **06** 02:46:52.1±0.4, 41°.79N×22°.71E, h5^{km}±3^{km}, ML2.8/12*
*THE **06** 02:46:53.3, 41°.68N×22°.93E, h7^{km}, ML2.7/9, Error ellipse: s-maj=1.3km s-min=0.6km az=172.0*

ISC 06 02:46:50.8±1.1**, 41°.76N**±0°.02×**22°.86E**±0°.02**, h7**^{km}±9^{km}**, n95, σ0^{s}.86**/131**, 10C-11D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	Krupnik	0.20	56	*i* Pg	Pg	02 46 55.8	+1.0
VAY	Valandovo	0.49	207	*e*Pg	Pb	02 47 01.8	+0.1
VAY				*e*Sg	Sb	02 47 08.0	-1.1
VAY	Valandovo	0.49	207	*i* Pg	Pb	02 47 01.8	+0.1
VAY				*i* Sg	Sb	02 47 09.0	-0.1
VAY				*e*Lg	Lg	02 47 10.2	
	comp=N,280nm,0.3s						
MMB	Musomiste	0.67	104	*i* Pg	Pb	02 47 04.7	-0.2
BOSS	Bosilegrad	0.79	339	*e*Pg	Pg	02 47 05.5	-0.6
BOSS				*e*Sg	Sg	02 47 15.0	-1.3
SRS	Serrai	0.84	139	P	Pb	02 47 07.5	-0.3
SRS				AML	AML	02 47 22.4	
	comp=N,1494µm,0.3s						
SRS				AML	AML	02 47 23.8	
	comp=E,1003µm,0.3s						
SRS	Serrai	0.84	139	P	Pb	02 47 07.4	-0.3
SRS				S	Sb	02 47 19.1	-0.2
	comp=E,628nm,0.2s						
SRS	Serrai	0.84	139	*i* Pg	Pb	02 47 07.5	-0.3
SRS				*i* Sg	Sb	02 47 18.8	-0.5
NVR	Nevrokopi	0.85	118	P	Pg	02 47 07.5	+0.3
NVR				AML	AML	02 47 22.8	
	comp=N,1288µm,0.2s						
NVR				AML	AML	02 47 23.7	
	comp=E,1307µm,0.3s						
NVR	Nevrokopi	0.85	118	P	Pg	02 47 07.6	+0.3
NVR				S	Sb	02 47 19.5	-0.1
	comp=E,655nm,0.2s						
GRG	Griva	0.87	204	P	Pb	02 47 08.3	0.0
GRG				S	Sb	02 47 20.5	+0.3
GRG				AML	AML	02 47 21.6	
	comp=E,594µm,0.2s						
GRG				AML	AML	02 47 21.8	
	comp=N,754µm,0.2s						
GRG	Griva	0.87	204	P	Pb	02 47 08.3	0.0
GRG				S	Sb	02 47 20.6	+0.4
	comp=N,378nm,0.3s						
GRG	Griva	0.87	204	*i* Pg	Pb	02 47 08.3	0.0
GRG				*i* Sg	Sb	02 47 20.6	+0.4
VTS	Vitosha	0.90	18	⇑P	Pg	02 47 08.2	-0.1
VTS				⇑S	Sg	02 47 19.0	-1.0
VTS	Vitosha	0.90	18	*e*Pg	Pg	02 47 07.8	-0.5
VTS	Vitosha	0.90	18	*i* Pg	Pg	02 47 07.5	-0.7
VTS				*i* Sg	Sg	02 47 19.1	-0.9
VTS	Vitosha	0.90	18	*i* Pg	Pg	02 47 07.7	-0.5
SOF	Sofiya	0.99	21	Pg	Pg	02 47 09.5	-0.4
SOH	Sokhos	1.01	158	P	Pb	02 47 10.8	+0.2
SOH	Sokhos	1.01	158	P	Pb	02 47 10.7	+0.2
SOH				S	Sb	02 47 23.9	-0.1
	comp=N,880nm,0.5s						
SOH	Sokhos	1.01	158	*i* Pg	Pb	02 47 10.8	+0.2
SOH				*i* Sg	Sb	02 47 24.9	+0.9
SKO	Skopje	1.08	282	*i* Pg	Pg	02 47 11.5	-0.1
SKO				*i* Sg	Sn	02 47 28.1	+0.4
SKO				*e*Lg	Lg	02 47 31.6	
	comp=E,7.9nm,0.7s						
THE	Thessaloniki	1.13	176	P	Pn	02 47 12.8	-0.1
THE				AML	AML	02 47 28.2	
	comp=E,502µm,0.2s						
THE				AML	AML	02 47 28.6	
	comp=N,314µm,0.2s						
THE	Thessaloniki	1.13	176	P	Pn	02 47 12.9	-0.1
THE				S	Sb	02 47 27.9	+0.4
	comp=N,208nm,0.2s						
THE	Thessaloniki	1.13	176	*i* Pg	Pn	02 47 12.9	-0.1
THE				*i* Sg	Sb	02 47 27.9	+0.4
HORT	Hortiatis	1.17	171	P	Pn	02 47 13.8	+0.2
HORT				AML	AML	02 47 32.3	
	comp=N,325µm,0.2s						
HORT				AML	AML	02 47 32.8	
	comp=E,440µm,0.2s						
HORT	Hortiatis	1.17	171	P	Pn	02 47 13.9	+0.2
HORT				S	Sg	02 47 28.7	+0.2
	comp=E,208nm,0.4s						
KOKK	Kokkinochori,	1.27	137	P	Pb	02 47 15.1	0.0
KOKK	Kokkinochori,	1.27	137	P	Pb	02 47 15.1	0.0
KOKK				S	Sb	02 47 31.9	+0.3
	comp=E,592nm,0.6s						
BARS	Barje	1.31	324	*e*Pg	Pb	02 47 15.8	0.0
BARS	Barje	1.31	324	*e*Pn	Sn	02 47 31.5	-1.9
BARS				*e*Sg	Sg	02 47 33.0	-0.1
BARS	Barje	1.31	324	*i* Pg	Pg	02 47 16.0	0.0
BARS				*i* Sg	Sn	02 47 33.2	-0.2
RZN	Rozhen	1.39	92	*i* P	Pg	02 47 17.4	-0.1
KVLA	Kavala	1.41	125	P	Pb	02 47 17.4	-0.1
PLD	Plovdiv	1.42	75	*i* P	Pg	02 47 18.1	+0.1
PLG	Polygyros	1.45	162	P	Pb	02 47 18.0	-0.2
PLG	Polygyros	1.45	162	P	Pb	02 47 18.0	-0.2
KAVA	Kavala	1.46	121	P	Pb	02 47 18.0	-0.2
KAVA	Kavala	1.46	121	P	Pb	02 47 18.0	-0.2
KAVA				S	Sg	02 47 37.7	+0.1
	comp=E,325nm,0.3s						
FNA	Florina	1.48	230	P	Pg	02 47 19.2	-0.1
FNA				S	Sg	02 47 40.2	+1.7
	comp=E,55nm,0.8s						
FNA	Florina	1.48	230	P	Pg	02 47 19.0	-0.3
FNA				S	Sg	02 47 38.5	-0.1
OUR	Ouranopolis	1.66	149	P	Pn	02 47 20.4	+0.2
OUR	Ouranopolis	1.66	149	P	Pn	02 47 20.7	+0.5
KZN	Kozani	1.67	210	P	Pb	02 47 21.6	-0.3
LIT	Litokhoron	1.68	190	P	Pn	02 47 21.1	+0.5
LIT				S	Sn	02 47 39.9	-2.5
OHR	Ohrid	1.68	248	*e*Pn	Pn	02 47 19.8	-0.9
OHR				*e*Sg	Sn	02 47 41.5	-1.0
MPEP	Malo Peshtene	1.72	22	P	Pg	02 47 23.4	-0.5
THAS	Thassos island	1.81	129	P	Pn	02 47 22.4	0.0
PHP	Peshkopia	1.81	268	P	Pg	02 47 24.9	-0.7
BLKB	Belogradchik	1.87	356	⇓S	Sn	02 47 47.7	+0.6
KDZ	Kurdzhali	1.92	92	P	Pb	02 47 25.5	-0.6
PAIG	Paliouri	1.93	161	P	Pn	02 47 24.3	+0.2
SELS	Selova	1.95	319	*e*Pn	Pn	02 47 24.2	-0.2
SELS				*e*Sg	Sb	02 47 50.5	-0.7
DIM	Dimitrovgrad	2.02	81	*i* P	Pg	02 47 29.4	0.0
BOVS	Bovan	2.06	336	⇑S	Sn	02 47 51.8	0.0
BOVS	Bovan	2.06	336	*e*Pg	Pn	02 47 27.1	+1.2
BOVS				*e*Sg	Sb	02 47 54.7	+0.3
RDO	Rodhopi	2.10	106	P	Pn	02 47 27.0	+0.6
ZAGS	Zajecar	2.10	347	*e*Pn	Pn	02 47 27.2	+0.7
PUNG	Punghina	2.52	1	⇓P	Pn	02 47 31.6	-0.6
ALN	Alexandroupoli	2.55	109	P	Pn	02 47 33.2	+0.7
ALN				S	Sg	02 48 12.9	+0.3
SJES	Sjenica	2.61	306	*e*Pn	Pn	02 47 34.5	+1.0
GRUS	Gruza	2.65	324	*e*Pn	Pn	02 47 34.5	+0.5
CAVK	Edirne/Enez-Ca	2.71	112	P	Pn	02 47 35.5	+0.8
CAVK				S	Sg	02 48 17.2	-0.7
CAVK				*i* AML	AML	02 48 24.0	
	comp=E,90nm,0.8s						
CAVK				*i* AML	AML	02 48 32.0	
	comp=E,78nm,1.2s						
AGG	Agios Georgios	2.76	189	P	Pn	02 47 36.2	+0.7
AGG				S	Sn	02 48 08.0	-1.2
KUBS	Kucevo	2.79	342	*e*Pn	Pn	02 47 35.2	-0.7
EDRB	Edirne	2.90	87	P	Pn	02 47 37.7	+0.3
EDRB	Edirne	2.90	87	P	Pn	02 47 36.2	-1.2
DJES	Djerdap	2.92	355	⇑P	Pn	02 47 37.3	-0.3
COPA	Copaceanca	2.94	35	⇓P	Pn	02 47 38.5	+0.6
ERIK	Erikli-Kesan	2.96	110	P	Pn	02 47 38.2	0.0
ERIK				S	Sg	02 48 25.1	-0.8
KESN	Edirne-Kesan	3.02	107	P	Pn	02 47 39.5	+0.1
KESN				S	Sg	02 48 26.4	-1.5
KESN				*i* AML	AML	02 48 31.0	
	comp=E,56nm,0.3s						
TRUS	Trudelj	3.05	325	*e*Pn	Pn	02 47 39.7	+0.2
MDVR	Moldovita	3.14	345	⇓P	Pn	02 47 40.6	-0.1
HERR	Herculane	3.14	354	⇑P	Pn	02 47 40.3	-0.4
DIVS	Divibare	3.15	319	*e*Pn	Pn	02 47 41.0	+0.1
KIRK	Kırklareli	3.17	88	P	Pn	02 47 42.8	+1.7
HUMR	Humele	3.17	29	⇓P	Pn	02 47 42.2	+1.0
BBLS	Lazići	3.30	311	*e*Pn	Pn	02 47 43.4	+0.4
BAYC	CANAKKALE_Bayr	3.45	125	P	Pn	02 47 44.5	-0.5
DBRK	Dubrovnik	3.62	286	*e*Pn	Pn	02 47 48.1	+0.8
DBRK				Sn	Sn	02 48 31.9	+1.6
GZR	Gura Zlata	3.63	359	⇓P	Pn	02 47 47.0	-0.5
LOT	Lotru	3.75	10	⇓P	Pn	02 47 50.8	+1.6
ARR	Arges	3.83	19	⇑P	Pn	02 47 50.3	0.0
BUHA	Balikesir, Bur	3.92	124	P	Pn	02 47 51.4	0.0
BZS	Buzias	3.96	347	⇓P	Pn	02 47 51.6	-0.4
STON	Ston	3.99	288	*e*Pn	Pn	02 47 53.1	+0.8
STON				Sn	Sn	02 48 39.0	-0.3
VOIR		4.01	23	⇓P	Pn	02 47 54.3	+1.6
FRGS	Fruska Gora	4.06	328	⇓P	Pn	02 47 52.8	-0.6
DEV	Deva	4.12	0	⇓P	Pn	02 47 54.7	+0.4
ICOR	Ion Corvin	4.32	55	⇑P	Pn	02 47 59.9	+2.9
RICI	Ricice	4.57	294	*e*Pn	Pn	02 48 03.2	+2.9
RICI				Sn	Sn	02 48 56.9	+3.2
MAKA	Makarska	4.58	291	*e*Pn	Pn	02 48 01.7	+1.2
MAKA				Sn	Sn	02 48 52.9	-1.0
VRI	Vrincioaia	4.97	33	⇑P	Pn	02 48 07.8	+1.9
DRGR		5.03	359	⇑P	Pn	02 48 06.9	+0.1
CFR	Carcaliu	5.14	47	⇑P	Pn	02 48 10.6	+2.5

*IDC **06** 03:06:44.5±2.9, 23°.45N×94°.31E, h32^{km}±20^{km}, mb3.6/11, mbtmp3.8/12, ML4.0/1, MS3.0/3, Error ellipse: s-maj=34.9km s-min=14.3km az=59.0*
*NDI **06** 03:06:44.7±3.1, 23°.74N×94°.28E, h4^{km}±74^{km}, ML3.1*
*NEIC **06** 03:06:44.2±1.5, 23°.4N±0°.1×94°.3E±0°.1, h27^{km}±7^{km}, mb4.1/17, Error ellipse: s-maj=22.7km s-min=9.7km az=46.0*

ISC 06 03:06:45.0±0.6**, 23°.52N**±0°.08×**94°.37E**±0°.07**, h35**^{km}**, n38, σ1^{s}.00**/41**, mb3.9**/17**, MS3.2**/3**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZL	Aizawl	1.56	278	*e*P	Pn	03 07 11.6	+1.4
AZL				*e*S	Sn	03 07 31.4	+2.1
KOHI	KOHIMA	2.21	354	*e*P	Pn	03 07 20.7	+1.4
SHL	Shillong	3.05	313		Pn	03 07 30.8	0.0
SHL	Shillong	3.05	313	*e*P	Pn	03 07 31.8	+0.9
SHL				*e*S	Sn	03 08 04.2	-2.0
SHL				IAML		03 08 10.6	
	comp=E,88nm,0.2s						
SHL				IAML		03 08 16.3	
	comp=N,148nm,0.4s						
GUWA	GUWAHATI	3.61	318	*e*P	Pn	03 07 38.3	-0.1
TURI	Tura	4.20	300	*e*P	Pn	03 07 48.0	+1.5
CHTO	Chiang Mai	6.33	137	Pn	Pn	03 08 16.4	+0.4
CMAR	Chiang Mai Arr	6.60	139	Pn	Pn	03 08 18.4	-1.2
	comp=N,0.7nm,0.3s,baz=315,slow=14,SNR=17						
CMAR				Lg	Lg	03 10 14.1	
	comp=N,1.0nm,0.3s,baz=10,slow=27,SNR=1.4						
	comp=N,1.5nm,0.3s						
LSA	Lhasa	6.80	336	Pn	Pn	03 08 22.2	-0.4
BOK	Bokaro	7.78	274	*e*P	Pn	03 08 35.3	-0.4
ENH	Enshi	15.07	60	Pn	Pn	03 10 16.2	+0.9
ENH				IAmb	IAmb	03 10 27.1	
	comp=Z,17nm,1.2s						
NIL	Nilore	21.08	303	P	P	03 11 23.8	-2.5
KDJ	Kajisay	23.44	326	P	P	03 11 51.4	+0.2
KDJ				IAmb	IAmb	03 12 19.1	
	comp=Z,5.3nm,1.2s						
BOOM	Boomskoye usch	24.34	325	P	P	03 12 00.2	+0.6
BOOM				IAmb	IAmb	03 12 05.6	
	comp=Z,6.5nm,1.4s						
MK31	Makanchi Array	25.18	340	P	P	03 12 07.4	+0.4
MKAR	Makanchi Array	25.18	340	P	P	03 12 07.6	+0.6
	comp=Z,1.5nm,0.5s,baz=149,slow=8.5,SNR=23						
MKAR				PcP	PcP	03 15 40.9	+0.6
	comp=Z,0.2nm,0.5s,baz=169,slow=3.9,SNR=2.4						
MKAR				ScP	ScP	03 19 16.4	-0.4
	comp=Z,0.2nm,0.6s,baz=124,slow=2.6,SNR=2.3						
	comp=Z,1.5nm,0.5s						
MAKZ	Makanchi	25.29	340	P	P	03 12 08.4	+0.4
MAKZ				IAmb	IAmb	03 12 10.5	
	comp=Z,1.8nm,0.6s						
GAR	Garm	25.60	313	P	P	03 12 11.7	+0.6
BTK	Batken	25.82	315	P	P	03 12 14.1	+1.1
BTK				IAmb	IAmb	03 12 27.3	
	comp=Z,10nm,1.2s						
SONM	Songino Array	26.09	19	P	P	03 12 16.8	+1.3
	comp=Z,0.5nm,0.6s,baz=213,slow=13,SNR=1.8						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	29.73	339	P	P	03 12 47.6	-0.2
	comp=Z,0.8nm,0.7s,baz=150,slow=8.3,SNR=4.8						
KURBB				PcP	PcP	03 15 52.0	+0.9
	comp=Z,0.3nm,0.5s,baz=176,slow=2.2,SNR=5.0						
KURBB				ScP	ScP	03 19 30.3	-0.2
	comp=Z,0.6nm,0.8s,baz=157,slow=2.6,SNR=4.6						
	comp=Z,0.8nm,0.7s						
KURK	Kurchatov	29.78	340	P	P	03 12 47.6	-0.6
KURK	Kurchatov	29.78	340	IAmb	IAmb	03 12 52.6	
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	31.23	349	P	P	03 13 01.4	+0.5
	comp=Z,0.7nm,0.3s,baz=158,slow=8.4,SNR=3.2						
ZALV				LR	LR	03 25 23.8	
	comp=Z,12nm,18.6s,baz=75,slow=36						
	comp=Z,0.7nm,0.3s						
ABKAR	Akbulak array	37.27	322	P	P	03 13 53.3	0.0
AKTO	Aktyubinsk	38.94	323	LR	LR	03 33 20.6	
	comp=Z,35nm,19.1s,baz=172,slow=41						
CSS	Mathiatis	53.74	297	P	P	03 16 03.1	-0.8
WRA	Warramunga Arr	58.18	135	P	P	03 16 35.4	-0.4
	comp=Z,1.2nm,0.6s,baz=323,slow=7.3,SNR=22						
	comp=Z,1.2nm,0.6s						
WB2	Warramunga Arr	58.19	135	P	P	03 16 33.6	-2.2
IDI	Anoyia	60.56	298	LR	LR	03 51 03.9	
	comp=Z,14nm,18.2s,baz=238,slow=44						
AS31	Alice Springs	60.61	138	P	P	03 16 51.9	-0.6
AS31				IAmb	IAmb	03 16 54.1	
	comp=Z,1.9nm,1.3s						
ASAR	Alice Springs	60.61	138	P	P	03 16 52.5	-0.1
	comp=Z,1.1nm,0.5s,baz=320,slow=6.8,SNR=15						
	comp=Z,1.1nm,0.5s						
NOA	NORSAR Array B	66.43	328	P	P	03 17 29.7	-0.8
	comp=Z,0.9nm,0.9s,baz=112,slow=6.6,SNR=2.4						
	comp=Z,0.9nm,0.9s						
GERES	GERESS Array B	66.66	315	P	P	03 17 31.9	-0.3
	comp=Z,0.3nm,0.6s,baz=65,slow=6.9,SNR=3.5						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	80.25	22	P	P	03 18 52.3	+0.5
	comp=Z,0.2nm,0.6s,baz=294,slow=4.3,SNR=1.8						
	comp=Z,0.2nm,0.6s						
BOSA	Boshof	84.33	236	P	P	03 19 13.8	0.0
	comp=Z,2.1nm,0.8s,baz=7.5,slow=4.5,SNR=4.0						
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	87.25	283	P	P	03 19 28.6	+0.1
	comp=Z,0.3nm,0.8s,baz=122,slow=3.7,SNR=2.0						
	comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	124.66	19	PKP	PKPdf	03 25 41.2	-0.3
	comp=Z,0.2nm,0.6s,baz=14,slow=1.9,SNR=1.9						

TAP 06 03:19:38.5, 23°.09N×120°.81E, h6^{km}±1^{km}**, ML2.0, 1D, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYH	Taoyuan	0.08	340	*e*P	Pg	03 19 41.2	+0.8
	baz=344						
STYH				S	Sg	03 19 43.0	+1.3
	baz=344						
STYT	Tauyuan	0.08	327	*i* P	Pg	03 19 40.9	+0.5
	baz=330						
STYT				*i* S	Sg	03 19 42.6	+0.8
	baz=330						
SLGT	Liugui	0.18	236	P	Pg	03 19 42.8	+0.8
	baz=236						
WTP	Ta-pu	0.23	311	⇓*i*P	Pg	03 19 44.1	+1.0
	baz=311						
TPUB	Ta-pu	0.26	322	*i* P	Pb	03 19 44.9	-0.8
	baz=321						
CHN1	Nanshi	0.27	290	*e*P	Pb	03 19 45.1	-0.7
	baz=289						
SNST	Tainan City	0.31	294	*e*P	Pb	03 19 46.1	-0.4
	baz=293						
CHN4	Tsaushan	0.32	323	*e*P	Pb	03 19 46.1	-0.6
	baz=322						
TWK	Hsinying	0.34	301	*e*P	Pb	03 19 46.5	-0.5
	baz=301						
ALS	Alishan	0.41	360	*e*P	Pb	03 19 47.6	-0.8
YUS	Yu-Shan	0.42	19	*e*P	Pb	03 19 47.7	-0.9
	baz=19						
FULB	Fuli	0.46	77	*e*P	Pb	03 19 49.0	0.0
	baz=76						
MASBT	Mashibuluo	0.51	199	*e*P	Pg	03 19 48.2	0.0
	baz=198						
CHN5	Tsauling	0.52	347	*e*P	Pb	03 19 49.5	-0.5
	baz=346						
YULB	Yu-li	0.54	56	*e*P	Pg	03 19 49.6	+0.7
	baz=56						
HGSD	Ruisui	0.69	55	*e*P	Pb	03 19 53.4	+0.5
	baz=54						

*PRU **06** 03:34:00.2±0.0, 51°.40N×16°.05E, h0^{km}*

ISC 06 03:33:59.5±1.7**, 51°.42N**±0°.08×**16°.07E**±0°.05**, h0**^{km}**, n19, σ0^{s}.88**/32**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.59	166	*e*Pg	Pg	03 34 11.2	+0.3
KSP				*e*Sg	Sg	03 34 19.8	+1.4
CHVC	Chvalec	0.83	181	*e*PG	Pg	03 34 16.1	+0.7
CHVC				*e*SG	Sb	03 34 27.9	-0.6
	comp=Z,9.2nm,0.5s						
OSTC	Ostas	0.86	174	*e*PG	Pg	03 34 16.8	+0.7
OSTC				*e*SG	Sb	03 34 28.7	-0.8
	comp=Z,14nm,0.5s						
UPC	Upice	0.91	182	*e*PG	Pg	03 34 17.3	+0.4
UPC				*e*SG	Sb	03 34 30.1	-0.7
DPC	Dobruska-Polom	1.08	171	*e*PG	Pg	03 34 20.1	-0.1
DPC				*e*SG	Sg	03 34 34.5	+0.4
	comp=Z,9.4nm,0.2s						
PVCC	Panska Ves	1.30	227	*e*PG	Pg	03 34 24.5	+0.1
PVCC				*e*SG	Sn	03 34 43.2	+0.2
	comp=Z,50nm,0.2s						
KRLC	Kraliky	1.42	161	*e*PG	Pn	03 34 26.2	-0.4
KRLC				*e*SG	Sg	03 34 44.9	-0.1
	comp=Z,8.3nm,0.3s						
BRG	Berggiesshubel	1.45	249	Amp		03 34 48.4	
	comp=Z,21nm,0.3s						
BRG	Berggiesshubel	1.45	249	Pg	Pg	03 34 27.5	+0.3
BRG	Berggiesshubel	1.45	249	Sg	Sn	03 34 47.1	+0.5
PRU	Pruhonice	1.73	215	*e*PG	Pb	03 34 32.0	-0.1
PRU				*e*SG	Sg	03 34 55.2	+0.2
	comp=Z,5.4nm,0.5s						
MORC	Moravsky Berou	1.89	150	*e*PN	Pn	03 34 31.9	-1.2
MORC				*e*SG	Sn	03 34 58.1	+0.5
CLL	Collm	1.93	268	*e*Sg	Sg	03 35 01.0	-0.4
	comp=Z,6.0nm,0.4s						
CLL	Collm	1.93	268	*e*Pg	Pb	03 34 35.0	-0.5
VRAC	Vranov	2.14	171	*e*SG	Sg	03 35 08.7	+0.6
KRUC	Moravsky	2.37	175	*e*SG	Sg	03 35 15.5	0.0
NKC	Novy Kostel	2.58	244	*e*PN	Pn	03 34 42.7	+0.1
NKC				*e*PG	Pb	03 34 48.2	+1.5
NKC				*e*SG	Sg	03 35 23.2	+0.7
	comp=Z,8.7nm,0.3s						
KHC	Kasperske Hory	2.79	216	*e*PN	Pn	03 34 46.5	+1.0
KHC				*e*PG	Pb	03 34 51.2	+0.9
KHC				*e*SN	Sn	03 35 17.0	-2.8
KHC				*e*SG	Sg	03 35 28.5	-0.6
CKRC	Cesky Krumlov	2.83	204	*e*SG	Sg	03 35 29.3	-1.2
	comp=Z,2.7nm,0.3s						

*IDC **06** 03:35:06.2±2.9, 54°.49N×86°.84E, h0^{km}, mbtmp3.2/2, ML2.7/2, Error ellipse: s-maj=25.6km s-min=19.0km az=39.0*

NNC 06 03:34:58.3±2.3**, 54°.81N×87°.38E, h0**^{km}**, mb3.1, mpv2.8, 6C-3D, Error ellipse: s-maj=14.3km s-min=11.6km az=47.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.73	241	*i*		03 43 11.2	
	baz=66,slow=320,SNR=8.9						

ZAA0	**Zalesovo Array**	**1.73**	**241**	⇑P	Pn	03 35 29.1	-0.5
	0.3nm,0.5s,baz=55,slow=15						
ZAA0				⇓S	Sb	03 35 52.8	-0.3
	5.1nm,1.1s,baz=59,slow=27						
ZALV	**Zalesovo Beam**	**1.73**	**241**	Pg	Pn	03 35 29.3	-0.2
	1.0nm,0.3s,baz=58,slow=15,SNR=10						
ZALV				Lg	Lg	03 35 47.9	
	0.8nm,0.3s,baz=65,slow=27,SNR=4.0						
KURK	**Kurchatov**	**6.71**	**236**	⇑Pn	Pn	03 36 38.8	+0.8
	3.1nm,1.0s						
KURK				⇑Lg	Lg	03 38 31.3	
	8.2nm,1.3s						
KURBB	**Kurchatov Arra**	**6.81**	**236**	Pn	Pn	03 36 42.2	+2.8
	0.1nm,0.3s,baz=53,slow=14,SNR=15						
KURBB				Sn	Sn	03 37 54.2	-3.4
	baz=63,slow=41						
KURBB				Lg	Lg	03 38 30.2	
	baz=52,slow=32,SNR=1.6						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**6.81**	**236**	⇑Pn	Pn	03 36 39.7	+0.3
	3.3nm,0.8s						
KURBB				⇑Lg	Lg	03 38 35.4	
	3.9nm,0.8s						
MK31	**Makanchi Array**	**8.64**	**204**	⇑Pn	Pn	03 37 05.9	+1.3
	0.1nm,0.3s,baz=24,slow=12,SNR=9.1						
MK31				⇓Sn	Sn	03 38 40.5	-2.2
	1.2nm,0.9s						
MK31				⇓Lg	Lg	03 39 30.5	
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**8.64**	**204**	Pn	Pn	03 37 08.0	+3.5
	0.2nm,0.3s,baz=24,slow=14,SNR=9.4						
MKAR				Sn	Sn	03 38 36.9	-5.8
	baz=23,slow=30,SNR=3.3						
MKAR				Lg	Lg	03 39 23.7	
	baz=20,slow=40,SNR=2.7						
	0.5nm,0.4s						

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*JMA **06** 03:49:03.6±0.2, 24°N±1°×122°.6E±0°.4, h29^{km}±3^{km}, MV2.7/9, NW OFF ISHIGAKIJIMA IS*
*TAP **06** 03:49:03.1, 23°.98N×122°.72E, h37^{km}±1^{km}, ML3.3, D*
ISC 06 03:49:01.2±1.1**, 23°.91N**±0°.03×**122°.63E**±0°.02**, h8**^{km}±9^{km}**, n67, σ0^{s}.71**/112**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.61**	**28**	P	**Pb**	**03 49 13.9**	**-0.2**
JYNG				S	**Sg**	**03 49 21.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.65**	**32**	P	**Pb**	**03 49 14.7**	**-0.1**
	baz=27						
YOJ				S	**Sg**	**03 49 22.7**	**+0.4**
	baz=27						
YOJ	**Yonaguni jima**	**0.65**	**32**	P	**Pb**	**03 49 14.7**	**-0.1**
YOJ				S	**Sg**	**03 49 22.3**	**0.0**
EWUT	**Wuta**	**0.94**	**305**	*e*P	**Pn**	**03 49 21.4**	**+0.7**
	baz=299						
EWUT				*e*S	**Sn**	**03 49 34.4**	**-0.1**
	baz=299						
TEYL	**Yanliau Villag**	**0.95**	**268**	*e*S	**Sn**	**03 49 34.7**	**+0.2**
	baz=257						
TWD	**Chiawan**	**0.96**	**280**	S	**Sb**	**03 49 33.5**	**+0.5**
	baz=277						
ENA	**Nanau**	**0.96**	**303**	P	**Pn**	**03 49 21.0**	**0.0**
	baz=298						
ENA				S	**Sn**	**03 49 35.3**	**+0.4**
	baz=298						
NACB	**Ninganchiao**	**0.98**	**286**	P	**Pn**	**03 49 21.1**	**-0.2**
	baz=270						
NACB				S	**Sn**	**03 49 34.6**	**-0.9**
	baz=270						
TWC	**Suao**	**1.00**	**314**	⇓*i*P	**Pb**	**03 49 21.0**	**+0.3**
	baz=309						
TWC				*i* S	**Sb**	**03 49 33.4**	**-0.6**
	baz=309						
TEGC	**Jichi Village**	**1.02**	**259**	P	**Pn**	**03 49 23.0**	**+1.2**
	baz=257						
TEGC				*e*S	**Sn**	**03 49 36.9**	**+0.6**
	baz=257						
ETM	**Tongmen**	**1.04**	**273**	P	**Pb**	**03 49 21.7**	**+0.2**
	baz=263						
ETM				S	**Sb**	**03 49 35.5**	**+0.1**
	baz=263						
HATJ	**Hateruma jima**	**1.08**	**82**	P	**Pg**	**03 49 22.8**	**+0.7**
HATJ				S	**Sg**	**03 49 36.7**	**+0.6**
IRIF	**Iriomote-Funau**	**1.09**	**67**	P	**Pg**	**03 49 22.6**	**+0.4**
IRIF				S	**Sg**	**03 49 35.9**	**-0.4**
ETLH	**Xiulin Townshi**	**1.09**	**286**	P	**Pn**	**03 49 22.9**	**0.0**
	baz=273						
ETLH				*e*S	**Sb**	**03 49 36.8**	**0.0**
	baz=273						
ESL	**Shilin**	**1.10**	**265**	*e*S	**Sn**	**03 49 38.0**	**-0.3**
	baz=254						
NDS	**Dongshan**	**1.10**	**311**	*e*P	**Pn**	**03 49 23.2**	**+0.3**
	baz=307						
NDS				*e*S	**Sn**	**03 49 38.1**	**-0.3**
	baz=307						
EGS		**1.13**	**326**	P	**Pn**	**03 49 24.1**	**+0.8**
	baz=331						
ILA	**Ilan**	**1.17**	**317**	P	**Pn**	**03 49 24.0**	**+0.1**
	baz=313						
ILA				S	**Sn**	**03 49 41.7**	**+1.7**
	baz=313						
HGSD	**Ruisui**	**1.18**	**250**	P	**Pg**	**03 49 23.8**	**-0.1**
	baz=249						
HGSD				*e*S	**Sg**	**03 49 38.4**	**-1.0**
	baz=249						
LATG	**Datong**	**1.19**	**302**	P	**Pn**	**03 49 24.4**	**+0.2**
	baz=298						
LATG				S	**Sn**	**03 49 42.6**	**+2.0**
	baz=298						
NTC	**Toucheng**	**1.19**	**322**	*e*P	**Pb**	**03 49 24.0**	**-0.1**
	baz=332						
NTC				*e*S	**Sb**	**03 49 39.4**	**-0.2**
	baz=332						
TWE	**Neicheng**	**1.19**	**313**	*i* P	**Pn**	**03 49 25.1**	**+0.9**
	baz=309						
TWE				*i* S	**Sn**	**03 49 41.7**	**+1.1**
	baz=309						
ENTT	**Nioudou**	**1.21**	**307**	*i* P	**Pn**	**03 49 25.4**	**+0.9**
	baz=303						
ENTT				S	**Sn**	**03 49 43.3**	**+2.1**
	baz=303						
TWB1	**Santiao Chiao**	**1.24**	**332**	*i* P	**Pg**	**03 49 24.3**	**-0.7**
	baz=328						
TWB1				S	**Sg**	**03 49 39.5**	**-1.7**
	baz=328						
NNSB	**Datong**	**1.25**	**295**	P	**Pn**	**03 49 25.5**	**+0.4**
	baz=291						
NNSB				*e*S	**Sn**	**03 49 41.6**	**-0.6**
	baz=291						
NNS	**Nan Shan**	**1.27**	**295**	P	**Pn**	**03 49 26.1**	**+0.8**
	baz=292						
NNS				*e*S	**Sb**	**03 49 41.5**	**-0.3**
	baz=292						
WHF	**Hehuan Shan**	**1.27**	**281**	*i* P	**Pn**	**03 49 25.9**	**+0.3**
	baz=278						
WHF				S	**Sg**	**03 49 41.8**	**-0.4**
	baz=278						
FUSB	**Fushanzhiwuyua**	**1.27**	**312**	P	**Pn**	**03 49 25.8**	**+0.5**
	baz=296						
FUSB				S	**Sn**	**03 49 44.4**	**+1.7**
	baz=296						
TIPB	**Shuangxi**	**1.29**	**325**	*e*P	**Pn**	**03 49 25.8**	**+0.3**
	baz=334						
TIPB				*e*S	**Sn**	**03 49 43.2**	**+0.2**
	baz=334						
JKRS	**Kuro-shima**	**1.30**	**75**	P	**Pn**	**03 49 26.1**	**+0.4**
JKRS				S	**Sb**	**03 49 42.4**	**-0.4**
FUSS	**Fushou**	**1.31**	**285**	*e*P	**Pb**	**03 49 27.1**	**+0.8**
	baz=282						
FUSS				*e*S	**Sg**	**03 49 42.7**	**-0.8**
	baz=282						
EYUL	**Yuli**	**1.33**	**245**	*e*P	**Pn**	**03 49 25.3**	**-0.7**
	baz=236						
YULB	**Yu-li**	**1.33**	**247**	P	**Pn**	**03 49 26.2**	**+0.2**
	baz=237						
YULB				S	**Sg**	**03 49 44.3**	**+0.3**
	baz=237						
OWD	**Renai**	**1.33**	**272**	P	**Pn**	**03 49 26.7**	**+0.4**
	baz=270						
OWD				S	**Sb**	**03 49 43.1**	**-0.8**
	baz=270						
CHGB	**Renai**	**1.34**	**277**	P	**Pg**	**03 49 27.0**	**0.0**
	baz=275						
CHGB				S	**Sg**	**03 49 43.2**	**-1.3**
	baz=275						
NWLT	**Wulai**	**1.34**	**310**	*e*P	**Pg**	**03 49 27.9**	**+0.9**
	baz=320						
SXI1	**Grass Mountain**	**1.36**	**330**	P	**Pn**	**03 49 26.4**	**-0.3**
	baz=338						
SXI1				*e*S	**Sb**	**03 49 43.6**	**-1.1**
	baz=338						
YHNB	**Yeheng**	**1.37**	**304**	P	**Pg**	**03 49 27.2**	**-0.4**
	baz=301						
YHNB				*e*S	**Sn**	**03 49 45.9**	**+0.8**
	baz=301						
VWDT	**VWDT**	**1.37**	**264**	P	**Pb**	**03 49 27.6**	**+0.4**
	baz=262						
VWDT				S	**Sb**	**03 49 44.7**	**-0.2**
	baz=262						
WUSB	**Renai**	**1.39**	**274**	P	**Pb**	**03 49 27.7**	**+0.2**
	baz=272						
WUSB				*e*S	**Sb**	**03 49 44.6**	**-0.8**
	baz=272						
NSK	**Sanguang**	**1.39**	**304**	*i* P	**Pn**	**03 49 27.2**	**+0.2**
	baz=301						
NSK				S	**Sn**	**03 49 45.3**	**-0.2**
	baz=301						
NWF	**Wu-fen Shan**	**1.39**	**326**	*i* P	**Pn**	**03 49 27.1**	**+0.1**
	baz=323						
NWF				S	**Sn**	**03 49 45.6**	**0.0**
	baz=323						
FULB	**Fuli**	**1.42**	**240**	*e*P	**Pn**	**03 49 27.1**	**-0.2**
	baz=231						
FULB				*e*S	**Sb**	**03 49 45.4**	**-0.7**
	baz=231						
TWA	**Mucha**	**1.43**	**318**	P	**Pg**	**03 49 28.6**	**-0.1**
	baz=315						
JIJ	**Ishigaki jima**	**1.45**	**72**	P	**Pn**	**03 49 27.5**	**-0.2**
JIJ				S	**Sn**	**03 49 45.7**	**-1.3**
EDH	**Donghe**	**1.54**	**233**	*e*P	**Pn**	**03 49 28.9**	**0.0**
	baz=225						
EDH				*e*S	**Sn**	**03 49 47.2**	**-1.9**
	baz=225						
SSLB	**Suanglung**	**1.54**	**266**	*e*P	**Pn**	**03 49 29.8**	**+0.8**
	baz=264						
SSLB				*e*S	**Sn**	**03 49 48.0**	**-1.3**
	baz=264						
NFF	**Wufeng Townshi**	**1.56**	**298**	*e*P	**Pg**	**03 49 30.9**	**-0.2**
	baz=286						
YM01	**YM01**	**1.56**	**322**	*e*P	**Pn**	**03 49 29.3**	**0.0**
	baz=320						
YM01				S	**Sb**	**03 49 49.8**	**-0.6**
	baz=320						
WCS	**Beigang Elemen**	**1.58**	**276**	*e*P	**Pb**	**03 49 31.1**	**+0.4**
	baz=274						
WHP	**Taichung City**	**1.58**	**284**	P	**Pg**	**03 49 32.1**	**+0.5**
	baz=282						
WHP				*e*S	**Sg**	**03 49 52.0**	**-0.2**
	baz=282						
SMLT	**Sun Moon Lake**	**1.58**	**269**	*e*P	**Pn**	**03 49 30.6**	**+0.9**
	baz=268						
SMLT				*e*S	**Sb**	**03 49 50.9**	**-0.2**
	baz=268						
YUS	**Yu-Shan**	**1.60**	**255**	*e*P	**Pn**	**03 49 30.8**	**+0.6**
	baz=254						
TYC	**Yuchr**	**1.62**	**270**	*e*P	**Pg**	**03 49 32.8**	**+0.4**
	baz=269						
LDUT	**Ludao**	**1.63**	**221**	*e*P	**Pn**	**03 49 29.2**	**-1.0**
	baz=222						
LIOB	**Emei**	**1.65**	**297**	P	**Pb**	**03 49 31.9**	**+0.1**
	baz=294						
ELDTW	**Lidau**	**1.65**	**244**	*e*P	**Pn**	**03 49 30.9**	**+0.3**
	baz=244						
NSTT	**Nanjuang**	**1.65**	**296**	*e*P	**Pb**	**03 49 31.8**	**-0.1**
	baz=294						
LONT	**Longtian**	**1.70**	**234**	*e*P	**Pn**	**03 49 32.2**	**+1.0**
	baz=228						
ALS	**Alishan**	**1.72**	**257**	*e*P	**Pb**	**03 49 33.4**	**+0.2**
	baz=256						
ALS				*e*S	**Sn**	**03 49 54.6**	**+0.5**
	baz=256						
PCYT	**Pengchaiyu**	**1.79**	**344**	*e*P	**Pn**	**03 49 31.8**	**-0.6**
	baz=341						
CHN5	**Tsauling**	**1.82**	**260**	*e*P	**Pb**	**03 49 35.7**	**+0.9**
	baz=251						
STYH	**Taoyuan**	**1.86**	**247**	*e*P	**Pb**	**03 49 35.4**	**0.0**
	baz=238						
TPUB	**Ta-pu**	**1.93**	**252**	*e*P	**Pb**	**03 49 36.8**	**+0.1**
	baz=242						
CHN4	**Tsaushan**	**1.95**	**254**	*e*P	**Pb**	**03 49 37.7**	**+0.7**
	baz=244						
CHN4				*e*S	**Sb**	**03 50 02.7**	**+1.1**
	baz=244						
WTP	**Ta-pu**	**1.97**	**251**	*e*P	**Pb**	**03 49 37.8**	**+0.5**
	baz=240						
CHN1	**Nanshi**	**2.06**	**250**	*e*P	**Pb**	**03 49 39.0**	**+0.1**
	baz=249						

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*DJA **06** 03:57:16.9±0.3, 8°S±4°×12°0E±°, h149^{km}±5^{km}, M3.8/13, mb4.1/3, MLv3.7/13*
*IDC **06** 03:57:20.2±1.5, 7°.89S×120°.19E, h202^{km}±18^{km}, mb3.6/3, mbtmp3.9/6, Error ellipse: s-maj=45.5km s-min=11.7km az=51.0*
ISC 06 03:57:16.2±0.8**, 8°.35S**±0°.05×**119°.60E**±0°.06**, h150**^{km}**, n32, σ1^{s}.45**/37**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.30**	**189**	P	**Pn**	**03 57 44.9**	**+1.1**
WBSI				S	**Sn**	**03 58 06.0**	**+1.0**
PLAI	**Plampang**	**1.87**	**255**	P	**Pn**	**03 57 50.4**	**+0.6**
PLAI	**Plampang**	**1.87**	**255**	P	**Pn**	**03 57 50.7**	**+0.9**
BASI	**Baing, Sumba**	**2.10**	**153**	P	**Pn**	**03 57 53.9**	**+1.5**
BSSI	**Bau Bau, Buton**	**2.36**	**22**	P	**Pn**	**03 57 56.4**	**+0.8**
BKSI	**Bulukumba**	**3.05**	**10**	P	**Pn**	**03 58 05.2**	**+1.0**
KAPI	**Kappang**	**3.31**	**3**	P	**Pn**	**03 58 08.4**	**+0.8**
	3.8nm,0.4s,baz=182,slow=8.6,SNR=5.2						
KAPI				S	**Sn**	**03 58 47.1**	**-0.3**
	4.9nm,0.5s,baz=163,slow=7.3,SNR=3.6						
KAPI	**Kappang**	**3.31**	**3**	P	Pn	03 58 17.2	+10
SRBI	**Singaraja**	**4.35**	**273**	P	**Pn**	**03 58 21.5**	**+0.5**
BATI	**Baumata**	**4.41**	**115**	P	**Pn**	**03 58 23.8**	**+1.9**
	15nm,0.4s,baz=310,slow=2.7,SNR=1.6						
BATI				S	**Sn**	**03 59 14.8**	**+1.8**
	16nm,0.3s,baz=131,slow=20,SNR=1.9						
BATI	**Baumata**	**4.41**	**115**	P	**Pn**	**03 58 24.0**	**+2.1**
IGBI	**Denpasar**	**4.43**	**264**	P	**Pn**	**03 58 22.3**	**+0.2**
JAGI	**Jajag, Banyuwa**	**5.39**	**268**	P	**Pn**	**03 58 35.3**	**+0.5**
	0.3nm17nm,0.6s						
JAGI	**Jajag, Banyuwa**	**5.39**	**268**	P	**Pn**	**03 58 35.7**	**+0.9**
PWJI	**Pagerwojo**	**7.73**	**272**	P	**Pn**	**03 59 06.2**	**+0.2**
	0.2nm27nm,1.6s						
PCJI	**Pacitan**	**8.34**	**270**	P	**Pn**	**03 59 14.1**	**0.0**
FITZ	**Fitzroy Crossi**	**11.33**	**149**	P	**Pn**	**03 59 56.2**	**+2.5**
	baz=326,slow=11						
FITZ				S	**Sn**	**04 01 55.7**	**-3.4**
	baz=11,slow=1.9						
KNRA	**Kununurra**	**11.54**	**130**	P	**Pn**	**03 59 56.6**	**0.0**
MTN	**Manton Dam**	**12.18**	**113**	P	**Pn**	**04 00 05.1**	**+0.2**
KDU	**Kakadu**	**13.37**	**110**	P	**Pn**	**04 00 21.4**	**+1.3**
MEEK	**Meekatharra**	**18.22**	**183**	P	**P**	**04 01 16.8**	**-1.1**
WRA	**Warramunga Arr**	**18.34**	**130**	P	**P**	**04 01 18.8**	**-0.5**
	0.5nm,0.4s,baz=303,slow=12,SNR=26						
WRA				S	**S**	**04 04 37.1**	**-4.1**
	0.7nm,0.7s,baz=324,slow=24,SNR=2.2						
WRAB	**Tennant Creek**	**18.34**	**130**	P	**P**	**04 01 20.0**	**+0.7**
ASAR	**Alice Springs**	**20.49**	**140**	P	**P**	**04 01 42.2**	**-0.3**
	2.8nm,0.4s,baz=314,slow=9.1,SNR=45						
ASAR				S	**S**	**04 05 20.7**	**-3.1**
	1.0nm,0.8s,baz=312,slow=18,SNR=7.9						
	2.8nm,0.4s						
QIS	**Mount Isa**	**22.82**	**124**	P	**P**	**04 02 07.0**	**+0.5**
FORT	**Forrest**	**23.68**	**162**	P	**P**	**04 02 14.0**	**-0.1**
OOD	**Oodnadatta**	**24.60**	**144**	P	**P**	**04 02 23.4**	**+0.8**
MULG	**Mulgathing**	**25.68**	**150**	P	**P**	**04 02 33.2**	**+0.9**
LCRK	**Leigh Creek**	**28.05**	**144**	P	**P**	**04 02 54.2**	**+0.7**
BBOO	**Buckleboo**	**28.72**	**150**	P	**P**	**04 02 59.9**	**+0.4**
STKA	**Stephens Creek**	**31.09**	**142**	P	**P**	**04 03 20.4**	**+0.1**
	3.0nm,0.3s,baz=320,slow=9.7,SNR=20						
	3.0nm,0.3s						
VNDA	**Vanda**	**72.54**	**171**	P	**P**	**04 08 26.7**	**+0.5**
	0.4nm,0.5s,baz=311,slow=6.0,SNR=6.8						
	0.4nm,0.5s						

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*IDC **06** 04:07:10.6±1.7, 22°.74S×170°.66E, h0^{km}, mb4.2/4, mbtmp4.1/6, ML4.2/2, MS3.6/23, Error ellipse: s-maj=72.3km s-min=26.6km az=160.0*
*NEIC **06** 04:07:16.3±1.0, 21°.69S±0°.07×170°.20E±0°.06, h10^{km}±1^{km}, mb4.5/6, Error ellipse: s-maj=14.6km s-min=5.1km az=31.0*
*NOU **06** 04:07:39.8, 21°.96S×168°.37E, h0^{km}, ML3.0/7, Loyalty Islands*
ISC 06 04:07:18.9±0.7**, 21°.7S**±0°.1×**170°.23E**±0°.08**, h36**^{km}**, n63, σ1^{s}.21**/43**, mb4.4**/7**, MS3.6**/19**, 1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.05**	**275**	Pn	**Pn**	**04 07 50.3**	**-0.5**
MARNC	**Mare, Loyalty**	**2.05**	**275**	P	**Pn**	**04 07 50.7**	**-0.1**
PINNC	**Pines Island,**	**2.74**	**250**		**Pn**	**04 07 60.0**	**-0.3**
PINNC	**Pines Island,**	**2.74**	**250**	P	**Pn**	**04 08 00.1**	**-0.2**
LIFNC	**LIFOU**	**2.93**	**287**	Pn	**Pn**	**04 08 02.5**	**-0.4**
LIFNC	**LIFOU**	**2.93**	**287**	P	Pn	04 08 08.5	+5.7
YATNC	**Mamie plateau,**	**3.12**	**262**	P	**Pn**	**04 08 05.1**	**-0.5**
OUENC	**Ouen Island, N**	**3.23**	**256**	Pn	**Pn**	**04 08 06.5**	**-0.5**
OUENC	**Ouen Island, N**	**3.23**	**256**	P	**Pn**	**04 08 07.5**	**+0.5**
DZM	**Mont Dzumac**	**3.54**	**263**	Pn	**Pn**	**04 08 11.4**	**+0.1**
	3.9nm,0.3s,baz=136,slow=22,SNR=103						
DZM				Sn	**Sn**	**04 08 51.9**	**0.0**
	10nm,0.3s,baz=118,slow=22,SNR=10						
	33nm,0.5s						
DZM	**Mont Dzumac**	**3.54**	**263**	Pn	**Pn**	**04 08 10.9**	**-0.5**
ONTNC	**Ouen Toro**	**3.56**	**259**	Pn	**Pn**	**04 08 10.4**	**-1.1**
ONTNC	**Ouen Toro**	**3.56**	**259**	P	**Pn**	**04 08 11.8**	**+0.3**
NOUC	**Port Laguerre**	**3.67**	**263**	P	**Pn**	**04 08 13.2**	**+0.1**
KOUNC	**Koumac, New Ca**	**5.66**	**280**	Pn	**Pn**	**04 08 40.1**	**-0.3**
MSVF	**Nonsavu**	**8.35**	**63**	Pn	**Pn**	**04 09 16.8**	**-0.6**
	0.2nm,0.3s,baz=188,slow=23,SNR=1.2						
MSVF				LR	LR	04 11 59.9	
	comp=Z,195nm,21.8s,baz=259,slow=34						
	0.5nm,0.3s						
HNR	**Honiara**	**15.68**	**319**	LR	LR	04 16 04.2	
	comp=Z,215nm,20.4s,baz=131,slow=32						
URZ	**Urewera**	**17.56**	**162**	LR	LR	04 16 45.4	
	comp=Z,380nm,18.1s,baz=31,slow=35						
URZ	**Urewera**	**17.56**	**162**	P	**P**	**04 11 21.5**	**0.0**
URZ				IAmb	IAmb	04 11 29.8	
	comp=Z,21nm,1.2s						
AFI	**Afiamalu**	**18.79**	**69**	LR	LR	04 17 21.1	
	comp=Z,110nm,19.1s,baz=218,slow=32						
RPZ	**Rata Peaks**	**21.99**	**178**	LR	LR	04 19 11.4	
	comp=Z,208nm,19.4s,baz=346,slow=34						
CTA	**Charters Tower**	**22.45**	**270**	LR	LR	04 20 58.2	
	comp=Z,157nm,18.5s,baz=88,slow=36						
PMG	**Port Moresby**	**25.31**	**295**	LR	LR	04 20 52.5	
	comp=Z,136nm,19.9s,baz=139,slow=32						
RAR	**Rarotonga**	**27.91**	**95**	LR	LR	04 24 22.2	
	comp=Z,12nm,18.1s,baz=274,slow=38						
ASAR	**Alice Springs**	**33.52**	**260**	P	**P**	**04 13 55.0**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=84,slow=8.7,SNR=14						
ASAR				LR	LR	04 26 36.9	
	comp=Z,74nm,18.5s,baz=126,slow=35						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**33.52**	**260**	P	**P**	**04 13 55.0**	**-0.3**
WB2	**Warramunga Arr**	**33.53**	**266**	P	**P**	**04 13 55.1**	**-0.3**
WB2				IAmb	IAmb	04 13 57.9	
	comp=Z,5.5nm,0.9s						
WRAB	**Tennant Creek**	**33.54**	**266**	P	**P**	**04 13 54.0**	**-1.4**
WRAB				IAmb	IAmb	04 13 57.9	
	comp=Z,9.7nm,1.2s						
WRA	**Warramunga Arr**	**33.55**	**266**	P	**P**	**04 13 55.1**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=99,slow=8.3,SNR=22						
WRA				LR	LR	04 27 46.0	
	comp=Z,75nm,18.2s,baz=46,slow=36						
	comp=Z,1.7nm,0.8s						
PPT	**Papeete**	**38.01**	**91**	LR	LR	04 25 25.1	
	comp=Z,80nm,21.7s,baz=308,slow=29						
MTN	**Manton Dam**	**38.26**	**277**	P	**P**	**04 14 37.1**	**+1.2**
MTN				IAmb	IAmb	04 14 49.6	
	comp=Z,20nm,1.4s						
BATI	**Baumata**	**46.04**	**277**	LR	LR	04 34 37.4	
	comp=Z,264nm,20.1s,baz=174,slow=35						
VNDA	**Vanda**	**56.04**	**182**	LR	LR	04 37 00.8	
	comp=Z,78nm,20.1s,baz=9.0,slow=33						
JHJ	**Hachijo jima 2**	**61.76**	**331**	LR	LR	04 44 05.9	
	comp=Z,45nm,19.1s,baz=88,slow=35						
QSPA	**South Pole Qui**	**68.39**	**180**	LR	LR	04 45 05.6	
	comp=Z,56nm,18.9s,baz=44,slow=34						
ASAJ	**Asahikawa**	**70.20**	**339**	LR	LR	04 43 40.1	
	comp=Z,60nm,19.4s,baz=156,slow=31						
PSI	**Prapat**	**73.74**	**280**	LR	LR	04 55 37.2	
	comp=Z,56nm,20.2s,baz=110,slow=39						
PETK	**Petropavlovsk-**	**75.26**	**352**	LR	LR	04 45 27.0	
	comp=Z,57nm,21.0s,baz=139,slow=30						
MAW	**Mawson**	**76.53**	**202**	LR	LR	04 49 54.6	
	comp=Z,25nm,18.9s,baz=164,slow=34						
CMAR	**Chiang Mai Arr**	**80.34**	**294**	P	**P**	**04 19 29.8**	**+2.9**
	comp=Z,2.7nm,0.3s,baz=129,slow=4.6,SNR=9.2						
	comp=Z,2.7nm,0.3s						
MA2	**Magadan**	**82.52**	**350**	LR	LR	04 51 32.9	
	comp=Z,51nm,20.0s,baz=146,slow=32						
SNAA	**Sanae**	**86.78**	**182**	LR	LR	04 55 58.0	
	comp=Z,31nm,18.0s,baz=192,slow=34						
SNAA	**Sanae**	**86.78**	**182**	P	**P**	**04 20 01.4**	**+2.3**
YBH	**Yreka Blue Hor**	**88.41**	**44**	LR	LR	04 51 43.2	
	comp=Z,18nm,21.7s,baz=298,slow=30						
SONM	**Songino Array**	**89.71**	**323**	P	**P**	**04 20 13.9**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=132,slow=5.0,SNR=4.9						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**89.71**	**323**	IAmb	IAmb	04 20 15.0	
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**92.28**	**17**	LR	LR	04 55 57.3	
	comp=Z,20nm,20.2s,baz=15,slow=31						
ARCES	**ARCESS Array B**	**127.65**	**345**	PKP	**PKPdf**	**04 26 18.9**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=57,slow=3.3,SNR=1.9						
DPC	**Dobruska-Polom**	**144.80**	**331**	*e*PKP	**PKPdf**	**04 26 51.7**	**-0.1**
UPC	**Upice**	**144.82**	**331**	*e*PKP	**PKPdf**	**04 26 51.5**	**-0.3**
JAVC	**Velka Javorina**	**145.18**	**328**	*e*PKP	**PKPdf**	**04 26 54.1**	**+1.5**
VRAC	**Vranov**	**145.40**	**329**	*e*PKP	**PKPab**	**04 26 53.5**	**+0.5**
CLL	**Collm**	**145.51**	**335**		**PKPab**	**04 26 53.1**	**-0.3**
CLL	**Collm**	**145.51**	**335**	⇓*i*PKPbc	**PKPab**	**04 26 53.0**	**-0.3**
	comp=Z,7.0nm,0.9s						
CLL				*i* pPKPdf	**PKiKP**	**04 26 56.6**	**-0.3**
	comp=Z,4.0nm,0.9s						
KRUC	**Moravsky**	**145.66**	**329**	*e*PKP	**PKPab**	**04 26 54.1**	**+0.1**
CKRC	**Cesky Krumlov**	**146.81**	**330**	*e*PKP	**PKPab**	**04 26 57.5**	**-0.9**
KHC	**Kasperske Hory**	**146.91**	**332**		**PKPbc**	**04 26 56.8**	**-0.6**
KHC	**Kasperske Hory**	**146.91**	**332**	*e*PKP	**PKPbc**	**04 26 57.4**	**0.0**
GEC2	**GERESS Array S**	**147.06**	**331**		**PKPbc**	**04 26 58.3**	**+0.4**
GERES	**GERESS Array B**	**147.06**	**331**	PKPbc	**PKPbc**	**04 26 57.8**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=56,slow=3.4,SNR=13						
GERES	**GERESS Array B**	**147.06**	**331**		**PKPbc**	**04 26 57.9**	**0.0**
TUE	**Stuetta**	**150.78**	**332**		**PKiKP**	**04 27 08.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**166.16**	**234**	PKPab	**PKPab**	**04 28 16.0**	**-5.7**
	comp=Z,0.6nm,1.0s,baz=159,slow=5.4,SNR=2.1						

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*IDC **06** 04:10:19.4±1.3, 4°.90N×127°.41E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.3/1, Error ellipse: s-maj=62.4km s-min=25.6km az=77.0*
*DJA **06** 04:10:38.3±2.4, 5°N±19°×12°7E±1°3, h128^{km}±9^{km}, M4.3/6, mb4.4/4, mB4.6/3, MLv4.3/6, Mw(mB)3.9/3*
ISC 06 04:10:32.8±0.9**, 4°.99N**±0°.09×**127°.6E**±0°.1**, h108**^{km}**, n12, σ1^{s}.89**/12**, mb3.8**/5**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.41**	**238**	P	**Pn**	**04 11 12.8**	**+1.8**
KCP	**Kidapawan**	**3.19**	**309**	⇓*e*P	**Pn**	**04 11 24.8**	**+3.6**
KCP				*e*S	**Sn**	**04 11 57.4**	**-1.3**
TNTI	**Ternate**	**4.19**	**183**	P	**Pn**	**04 11 37.6**	**+2.9**
GTOI	**Gorontalo**	**6.28**	**227**	P	**Pn**	**04 12 03.9**	**+0.9**
	0.1nm416nm23nm,0.5s						
SANI	**Sanana**	**7.17**	**193**	P	**Pn**	**04 12 14.9**	**-0.1**
MRSI	**Marisa**	**7.19**	**232**	P	**Pn**	**04 12 16.4**	**+1.1**
	0.6nm3µm119nm,0.4s						
LEM	**Lembang**	**23.12**	**240**	LR	LR	04 25 14.7	
	comp=Z,68nm,18.5s,baz=244,slow=39						
WRA	**Warramunga Arr**	**25.65**	**165**	P	**P**	**04 15 50.8**	**-1.8**
	0.3nm,0.6s,baz=344,slow=10,SNR=5.8						
	0.3nm,0.6s						
KSRS	**Korea Array**	**32.32**	**1**	P	**P**	**04 16 51.8**	**+0.2**
	0.9nm,0.5s,baz=166,slow=7.0,SNR=2.2						
	0.9nm,0.5s						
SONM	**Songino Array**	**46.40**	**340**	P	**P**	**04 18 47.8**	**-0.7**
	0.4nm,0.4s,baz=146,slow=8.7,SNR=1.9						
	0.4nm,0.4s						
PETK	**Petropavlovsk-**	**53.96**	**22**	P	**P**	**04 19 45.2**	**-0.1**
	2.2nm,0.6s,baz=160,slow=4.6,SNR=4.3						
	2.2nm,0.6s						
MKAR	**Makanchi Array**	**57.02**	**324**	P	**P**	**04 20 06.7**	**-0.7**
	0.8nm,0.5s,baz=114,slow=7.5,SNR=9.7						
	0.8nm,0.5s						

*MAN **06** 04:23:07.7, 4.°83N×127.°44E, h33^{km}, mb5.0, ML3.9, MS3.9, Hypocentre not reviewed by the ISC*

*DJA **06** 04:23:10.9±0.6, 5.°N±4.°×12.°7E±.°, h68^{km}±6^{km}, M4.5/12, mB4.8/7, mb4.6/12, MLv4.7/9, Mw(mB)4.1/7*

*NEIC **06** 04:23:10.8±0.8, 4.°94N±0.°08×127.°4E±0.°1, h76^{km}±9^{km}, mb4.4/18, Error ellipse: s-maj=19.0km s-min=10.3km az=68.0*

*IDC **06** 04:23:10.0±1.6, 4.°94N×127.°44E, h74^{km}±15^{km}, mb4.0/9, mbtmp4.3/11, MS3.4/3, Error ellipse: s-maj=39.5km s-min=9.1km az=61.0*

ISC 06 04:23:10.2±0.5**, 4.°91N**±0.°05×**127.°39E**±0.°07**, h76^{km}, n52, σ1^{s}.82**/60**, mb4.4**/17**, 2C-3D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	2.22	237	P	Pn	04 23 45.7	+0.8
SGSI				S	Sn	04 24 11.7	+0.2
GSPH	General Santos	2.70	296	⇑iP	Pn	04 23 47.6	-3.9
GSPH				i S	Sn	04 24 19.6	-3.5
DAV	Davao City (W)	2.80	320	P	Pn	04 23 52.9	+0.2
	225nm,0.4s,baz=104,slow=3.1,SNR=5.5						
DAV				S	Sn	04 24 26.2	+0.7
	242nm,0.4s,baz=52,slow=18,SNR=11						
KCP	Kidapawan	3.09	312	⇓eP	Pn	04 23 55.4	-1.4
KCP				i S	Sn	04 24 40.9	+8.1
BIPH	Bislig	3.41	343	⇑eP	Pn	04 23 57.8	-3.3
BIPH				i S	Sn	04 24 42.8	+2.5
BUKP	Musuan	3.75	322	⇓eP	Pn	04 24 06.6	+0.9
BUKP				eS	Sn	04 24 53.8	+5.1
CTBH	Cotabato--PC H	3.88	306	eP	Pn	04 24 08.5	+1.1
CTBH				i S	Sn	04 24 48.5	-3.3
TNTI	Ternate	4.11	180	Pn	Pn	04 24 11.5	+0.9
TNTI	Ternate	4.11	180	P	Pn	04 24 11.5	+0.9
CGP	Cagayan de Oro	4.42	323	⇓eP	Pn	04 24 15.6	+0.7
CGP				eS	Sn	04 25 06.0	+0.8
LBMI	Labuha	5.51	179	P	Pn	04 24 31.0	+1.2
	0.6nm1µm114nm,0.7s						
GTOI	Gorontalo	6.10	226	P	Pn	04 24 37.2	-0.5
	0.1nm181nm19nm,0.7s						
SIJI	Sorong	6.93	146	P	Pn	04 24 49.8	+0.7
	15nm,0.3s,baz=326,slow=18,SNR=12						
SIJI				S	Sn	04 26 04.9	-1.6
	7.3nm,0.2s,baz=229,slow=19,SNR=1.7						
MRSI	Marisa	7.00	231	P	Pn	04 24 50.3	+0.2
	0.2nm713nm58nm,0.5s						
SANI	Sanana	7.06	191	P	Pn	04 24 49.3	-1.5
	0.3nm1µm24nm,0.5s						
LUWI	Luwuk	7.50	218	Pn	Pn	04 24 59.0	+2.1
APSI	Ampana	8.15	225	P	Pn	04 25 07.8	+2.1
	441nm42nm,0.7s						
MYLDM	Lahad Datu	8.86	272	Pn	Pn	04 25 15.4	-0.1
KSM	Kuching	17.39	259		Pn	04 27 08.1	0.0
KSM				IAmb	IAmb	04 27 10.2	
	comp=Z,20nm,1.0s						
KNRA	Kununurra	20.50	176	P	P	04 27 40.3	-1.9
KNRA				IAmb	IAmb	04 27 45.0	
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	25.47	165	P	P	04 28 31.6	+0.2
WRA	Warramunga Arr	25.63	165	P	P	04 28 32.4	-0.4
	comp=Z,14nm,0.8s,baz=343,slow=10,SNR=42						
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	25.63	165	P	P	04 28 32.5	-0.3
WB2	Warramunga Arr	25.63	165	P	P	04 28 33.0	+0.2
WB2				IAmb	IAmb	04 28 36.9	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	29.11	168	P	P	04 29 03.6	-0.3
ASAR	Alice Springs	29.11	168	P	P	04 29 03.5	-0.5
	comp=Z,0.7nm,0.4s,baz=345,slow=6.3,SNR=12						
ASAR				PcP	PcP	04 32 10.6	+0.3
	comp=Z,0.2nm,0.3s,baz=335,slow=2.6,SNR=1.4						
	comp=Z,0.7nm,0.4s						
FORT	Forrest	35.50	179	P	P	04 29 59.6	0.0
BBOO	Buckleboo	38.41	168	P	P	04 30 25.2	+0.8
STKA	Stephens Creek	39.01	161	P	P	04 30 31.1	+1.7
	comp=Z,8.4nm,0.6s,baz=337,slow=8.3,SNR=36						
STKA				LR	LR	04 48 22.4	
	comp=Z,65nm,19.4s,baz=25,slow=39						
	comp=Z,8.4nm,0.6s						
STKA	Stephens Creek	39.01	161	P	P	04 30 29.7	+0.4
KLR	Kul'dur	44.31	4	LR	LR	04 52 28.4	
	comp=Z,37nm,19.3s,baz=74,slow=40						
ULN	Ulaanbaatar	46.21	341	P	P	04 31 28.6	+0.9
ULN				IAmb	IAmb	04 31 41.5	
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	46.40	341	P	P	04 31 30.3	+1.1
	comp=Z,0.4nm,0.4s,baz=179,slow=8.6,SNR=2.6						
	comp=Z,0.4nm,0.4s						
PETK	Petropavlovsk-	54.09	22	P	P	04 32 26.9	-0.2
	comp=Z,2.4nm,0.7s,baz=162,slow=1.4,SNR=5.3						
	comp=Z,2.4nm,0.7s						
MK31	Makanchi Array	56.97	325	P	P	04 32 47.8	-0.1
MK31				IAmb	IAmb	04 32 49.5	
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	56.97	325	P	P	04 32 48.1	+0.2
	comp=Z,3.3nm,0.6s,baz=120,slow=8.4,SNR=36						
	comp=Z,3.3nm,0.6s						
MKAR	Makanchi Array	56.97	325	P	P	04 32 47.8	-0.1
MAKZ	Makanchi	57.16	324	P	P	04 32 48.3	-0.9
MAKZ				IAmb	IAmb	04 32 50.8	
	comp=Z,2.8nm,0.8s						
ZAA0	Zalesovo Array	59.84	332	P	P	04 33 08.8	+1.2
ZAA0				IAmb	IAmb	04 33 13.2	
	comp=Z,2.4nm,1.0s						
ZALV	Zalesovo Beam	59.84	332	P	P	04 33 08.1	+0.4
	comp=Z,1.1nm,0.5s,baz=98,slow=9.1,SNR=4.4						
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	61.11	327	P	P	04 33 16.8	+0.5
KURK				IAmb	IAmb	04 33 17.3	
	comp=Z,5.2nm,0.8s						
KKAR	Karatay Array	62.83	316	P	P	04 33 27.5	-0.5
BRVK	Borovoye	66.77	327	P	P	04 33 53.6	+0.2
BRVK				IAmb	IAmb	04 33 55.0	
	comp=Z,5.2nm,0.9s						
ABKAR	Akbulak array	71.66	320	P	P	04 34 23.9	+0.1
I23K	Minto, Yukon-K	82.73	25	P	P	04 35 25.6	+0.2
I23K				IAmb	IAmb	04 35 26.7	
	comp=Z,12nm,1.5s						
BMAR	Burnt Mountain	84.74	23	P	P	04 35 35.9	+0.2
M27K	Edge Creek, AK	86.03	28	P	P	04 35 42.8	+0.5
ARCES	ARCESS Array B	89.57	340	P	P	04 35 57.4	-1.5
	comp=Z,2.4nm,1.1s,baz=67,slow=3.2,SNR=1.3						
	comp=Z,2.4nm,1.1s						
KMBO	Kilima Mbogo	90.23	269	LR	LR	05 14 44.2	
	comp=Z,16nm,18.3s,baz=102,slow=34						
FINES	FINESS Array B	91.11	332	P	P	04 36 04.7	-1.5
	comp=Z,0.9nm,0.9s,baz=62,slow=3.3,SNR=1.6						
	comp=Z,0.9nm,0.9s						
TXAR	Lajitas Array	120.36	52	PKP	PKPdf	04 41 53.1	-0.5
	comp=Z,0.1nm,0.6s,baz=213,slow=4.3,SNR=1.5						
TORD	Torodi Ar. Bea	123.17	289	PKP	PKPdf	04 41 58.8	-0.4
	comp=Z,0.2nm,0.6s,baz=56,slow=2.4,SNR=1.7						

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*IDC **06** 04:36:01.7±5.6, 24.°63N×121.°84E, h78^{km}±53^{km}, mb3.2/5, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=50.9km s-min=20.9km az=72.0*

*JMA **06** 04:36:02.4±0.2, 24.°6N±0.°5×121.°8E±0.°9, h74^{km}±2^{km}, MV3.8/9, TAIWAN REGION*

*TAP **06** 04:36:02.5, 24.°65N×121.°75E, h75^{km}, ML4.2, B*

ISC 06 04:36:01.9±0.8**, 24.°69N**±0.°03×**121.°77E**±0.°02**, h80^{km}**±4^{km}**, n137, σ0^{s}.82**/222**, mb3.6**/5**, 12C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDS	Dongshan	0.07	221	⇑iP	Pn	04 36 13.8	+0.4
	baz=255						
NDS				S	Sn	04 36 21.7	-0.1
	baz=255						
ILA	Ilan	0.08	348	eP	Pn	04 36 14.2	+0.8
	baz=354						
ILA				eS	Sn	04 36 23.0	+1.1
	baz=354						
TWE	Neicheng	0.10	291	⇑iP	Pn	04 36 14.0	+0.6
	baz=301						
TWE				i S	Sn	04 36 22.0	+0.1
	baz=301						
TWC	Suao	0.11	136	⇑iP	Pn	04 36 14.0	+0.6
	baz=114						
TWC				S	Sn	04 36 22.7	+0.8
	baz=114						
NTC	Toucheng	0.18	19	P	Pn	04 36 14.3	+0.6
	baz=15						
NTC				S	Sn	04 36 23.7	+1.4
	baz=15						
FUSB	Fushanzhiwuyua	0.18	294	⇑iP	Pn	04 36 13.9	+0.2
	baz=306						
FUSB				i S	Sn	04 36 21.7	-0.8
	baz=306						
ENTT	Nioudou	0.19	256	⇑iP	Pn	04 36 14.1	+0.3
	baz=264						
ENTT				i S	Sn	04 36 22.2	-0.2
	baz=264						
EGS		0.22	44	P	Pn	04 36 14.8	+1.0
	baz=43						
EGS				eS	Sn	04 36 24.3	+1.7
	baz=43						
EWUT	Wuta	0.24	177	eP	Pn	04 36 14.2	+0.3
	baz=178						
EWUT				S	Sn	04 36 22.9	+0.2
	baz=178						
NWLT	Wulai	0.26	291	P	Pn	04 36 14.1	+0.1
	baz=299						
NWLT				S	Sn	04 36 22.0	-1.0
	baz=299						
ENA	Nanau	0.26	185	eP	Pn	04 36 14.4	+0.3
	baz=189						
ENA				eS	Sn	04 36 22.8	-0.1
	baz=189						
LATG	Datong	0.27	235	⇑iP	Pn	04 36 14.5	+0.3
	baz=248						
LATG				i S	Sn	04 36 22.9	-0.3
	baz=248						
TIPB	Shuangxi	0.29	11	⇑iP	Pn	04 36 14.9	+0.7
	baz=5.0						
TIPB				i S	Sn	04 36 23.8	+0.5
	baz=5.0						
TWA	Mucha	0.34	330	P	Pn	04 36 14.8	+0.3
	baz=329						
TWA				i S	Sn	04 36 23.9	+0.1
	baz=329						
NHDH	Xindian Distri	0.35	321	P	Pn	04 36 14.9	+0.3
	baz=320						
NHDH				S	Sn	04 36 23.8	-0.1
	baz=320						
YHNB	Yeheng	0.36	267	i P	Pn	04 36 14.6	-0.1
	baz=280						
YHNB				i S	Sn	04 36 22.8	-1.3
	baz=280						
NSK	Sanguang	0.37	268	⇓iP	Pn	04 36 14.7	-0.1
	baz=280						
NSK				i S	Sn	04 36 23.2	-1.1
	baz=280						
EHP	Heping Village	0.38	184	eP	Pn	04 36 14.8	+0.1
	baz=187						
TWB1	Santiao Chiao	0.38	32	⇑iP	Pn	04 36 15.4	+0.6
	baz=41						
TWB1				i S	Sn	04 36 24.1	-0.1
	baz=41						
NWF	Wu-fen Shan	0.38	2	⇑iP	Pn	04 36 15.6	+0.7
	baz=358						
NWF				S	Sn	04 36 24.8	+0.3
	baz=358						
SXI1	Grass Mountain	0.42	14	⇑iP	Pn	04 36 15.6	+0.5
	baz=7.0						
SXI1				i S	Sn	04 36 25.4	+0.5
	baz=7.0						
NNSB	Datong	0.43	234	⇓iP	Pn	04 36 15.6	+0.2
	baz=239						
NNSB				S	Sn	04 36 24.5	-0.7
	baz=239						
NNS	Nan Shan	0.43	236	i P	Pn	04 36 15.6	+0.3
	baz=241						
NNS				eS	Sn	04 36 24.7	-0.5
	baz=241						
YM01	YM01	0.49	339	⇑iP	Pn	04 36 16.1	+0.4
	baz=334						
YM01				S	Sn	04 36 24.7	-1.2
	baz=334						
TWS1	Kuangyinshan	0.52	323	⇑iP	Pn	04 36 16.5	+0.6
	baz=315						
TWS1				S	Sn	04 36 26.7	+0.5
	baz=315						
NACB	Ninganchiao	0.53	197	P	Pn	04 36 15.3	-0.7
	baz=204						
NACB				S	Sn	04 36 25.7	-0.7
	baz=204						
ETL	Fush Village	0.54	194	P	Pn	04 36 15.4	-0.8
	baz=202						
ETLH	Xiulin Townshi	0.54	209	⇓P	Pn	04 36 15.9	-0.3
	baz=216						
ETLH				eS	Sn	04 36 26.5	-0.3
	baz=216						
ANP	Anpu	0.55	336	eP	Pn	04 36 16.6	+0.4
	baz=338						
ANP				eS	Sn	04 36 26.0	-0.8
	baz=338						
NTST	Danshui	0.56	329	P	Pn	04 36 17.0	+0.9
	baz=337						
NTST				eS	Sn	04 36 28.0	+1.2
	baz=337						
NFF	Wufeng Townshi	0.59	265	⇓P	Pn	04 36 16.7	+0.1
	baz=275						
NFF				S	Sn	04 36 26.7	-0.8
	baz=275						
NCU	National Centr	0.60	298	P	Pn	04 36 16.9	+0.3
	baz=293						
NCU				S	Sn	04 36 27.8	+0.3
	baz=293						
NCUH	Zhongli	0.60	298	P	Pn	04 36 16.9	+0.3
	baz=300						
NCUH				S	Sn	04 36 27.4	-0.1
	baz=300						
TWD	Chiawan	0.62	194	eP	Pn	04 36 16.4	-0.5
	baz=201						
TWD				eS	Sn	04 36 26.4	-1.5
	baz=201						
FUSS	Fushou	0.65	228	⇓iP	Pn	04 36 18.0	+0.7
	baz=229						
FUSS				S	Sn	04 36 28.2	-0.5
	baz=229						
LIOB	Emei	0.68	267	⇓iP	Pn	04 36 17.8	+0.3
	baz=269						
LIOB				S	Sn	04 36 29.0	0.0
	baz=269						
NSTT	Nanjuang	0.70	266	⇓iP	Pn	04 36 17.8	+0.2
	baz=267						
NSTT				S	Sn	04 36 28.8	-0.4
	baz=267						
TDCB	Techi	0.70	232	⇓iP	Pn	04 36 18.6	+0.8
	baz=229						
TDCB				S	Sn	04 36 28.6	-0.9
	baz=229						
WHF	Hehuan Shan	0.71	220	⇓iP	Pn	04 36 18.4	+0.2
	baz=214						
WHF				eS	Sn	04 36 30.0	-0.1
	baz=214						
SBCB	Hsinchu	0.72	279	i P	Pn	04 36 18.3	+0.5
	baz=281						
SBCB				eS	Sn	04 36 28.2	-1.4
	baz=281						
HWA	Hwalien	0.72	192	eP	Pn	04 36 17.3	-0.5
	baz=199						
HSN	Hsinchu	0.73	279	eP	Pn	04 36 18.1	+0.2
	baz=284						
HSN				S	Sn	04 36 29.4	-0.5
	baz=284						
CHGB	Renai	0.82	221	⇓iP	Pn	04 36 19.8	+0.6
	baz=214						
CHGB				S	Sn	04 36 31.8	-0.3
	baz=214						
WHP	Taichung City	0.85	242	⇓iP	Pn	04 36 20.3	+0.9
	baz=252						
WHP				i S	Sn	04 36 32.4	+0.1
	baz=252						
NMLH	Miaoli	0.90	261	P	Pn	04 36 20.3	+0.5
	baz=262						
NMLH				S	Sn	04 36 33.1	-0.1
	baz=262						
OWD	Renai	0.91	217	⇓P	Pn	04 36 20.6	+0.5
	baz=211						
OWD				eS	Sn	04 36 32.8	-0.8
	baz=211						
WUSB	Renai	0.91	221	eP	Pn	04 36 20.8	+0.7
	baz=216						
WUSB				eS	Sn	04 36 31.9	-1.7
	baz=216						
ESL	Shilin	0.92	199	eP	Pn	04 36 19.2	-0.9
	baz=192						
ESL				eS	Sn	04 36 32.0	-1.5
	baz=192						
TWQ1	Liyutan	0.97	250	⇓iP	Pn	04 36 21.0	+0.4
	baz=252						
TWQ1				eS	Sn	04 36 34.3	-0.2
	baz=252						
PCYT	Pengchaiyu	0.98	16	eP	Pn	04 36 21.4	+0.7
	baz=17						
WCS	Beigang Elemen	1.00	231	⇓P	Pn	04 36 21.9	+0.9
	baz=240						
WCS				eS	Sn	04 36 35.5	+0.2
	baz=240						
EGFH	Guangfu	1.06	197	eP	Pn	04 36 22.4	+0.7
	baz=196						
EGFH				eS	Sn	04 36 35.8	-0.7
	baz=196						
WDJ	Dajia District	1.08	252	P	Pn	04 36 22.7	+0.7
	baz=254						
WDJ				i S	Sn	04 36 37.4	+0.5
	baz=254						
VWDT	VWDT	1.09	212	⇓iP	Pn	04 36 22.7	+0.6
	baz=207						
VWDT				eS	Sn	04 36 37.4	+0.2
	baz=207						
JYNG	Yonagunijimaku	1.10	102	P	Pn	04 36 22.5	+0.3
JYNG				S	Sn	04 36 36.9	-0.4
SMLT	Sun Moon Lake	1.12	225	⇓iP	Pn	04 36 23.3	+0.7
	baz=234						
SMLT				eS	Sn	04 36 39.5	+1.4
	baz=234						
TCU	Taichung	1.13	242	eP	Pn	04 36 23.1	+0.6
	baz=252						
TCU				eS	Sn	04 36 38.7	+0.7
	baz=252						
TYC	Yuchr	1.14	227	P	Pn	04 36 23.3	+0.7
	baz=235						
TYC				eS	Sn	04 36 38.2	0.0
	baz=235						
YOJ	Yonaguni jima	1.16	101	P	Pn	04 36 22.7	-0.2
	baz=100						
YOJ				eS	Sn	04 36 37.8	-0.8
	baz=100						
YOJ	Yonaguni jima	1.16	101	P	Pn	04 36 23.2	+0.3
YOJ				S	Sn	04 36 38.4	-0.2
SSLB	Suanglung	1.16	220	⇓iP	Pn	04 36 23.8	+0.8
	baz=232						
SSLB				S	Sn	04 36 39.1	+0.3
	baz=232						
HGSD	Ruisui	1.23	195	eP	Pn	04 36 24.0	+0.2
	baz=201						
HGSD				S	Sn	04 36 40.9	+0.6
	baz=201						
EHY	Hungye	1.24	199	eP	Pn	04 36 24.5	+0.5
	baz=191						
EHY				eS	Sn	04 36 39.3	-1.2
	baz=191						
WCHH	Zhanghua	1.26	241	P	Pn	04 36 24.5	+0.4
	baz=251						
WCHH				S	Sn	04 36 41.5	+0.7
	baz=251						
WNT	Mingjian	1.27	231	eP	Pn	04 36 24.9	+0.5
	baz=243						
WNT				eS	Sn	04 36 41.9	+0.6
	baz=243						
WJS	Zhushan	1.28	228	eP	Pn	04 36 25.1	+0.7
	baz=240						
WJS				eS	Sn	04 36 41.1	-0.3
	baz=240						
YULB	Yu-li	1.36	199	eP	Pn	04 36 25.2	-0.3
	baz=194						
EYUL	Yuli	1.40	197	eP	Pn	04 36 27.0	+1.1
	baz=197						
YUS	Yu-Shan	1.41	212	eP	Pn	04 36 27.6	+1.1
	baz=204						
YUS				eS	Sn	04 36 46.5	+1.6
	baz=204						
ALS	Alishan	1.46	217	eP	Pn	04 36 28.1	+1.0
	baz=228						
ALS				eS	Sn	04 36 46.8	+0.8
	baz=228						
CHN5	Tsauling	1.47	223	P	Pn	04 36 27.8	+0.9
	baz=231						
WRL	Guolierlin Hig	1.49	239	P	Pn	04 36 27.0	-0.1
	baz=241						
WRL				S	Sn	04 36 45.5	-0.7
	baz=241						
WDLH	Douliu	1.50	229	P	Pn	04 36 27.8	+0.5
	baz=241						
WDLH				eS	Sn	04 36 46.6	+0.3
	baz=241						
FULB	Fuli	1.54	196	eP	Pn	04 36 27.9	+0.1
	baz=195						
FULB				eS	Sn	04 36 48.5	+1.0
	baz=195						
WTK	Tuku	1.60	232	P	Pn	04 36 28.6	0.0
	baz=234						
WTK				S	Sn	04 36 48.5	-0.3
	baz=234						
CHKT	Chengkung	1.62	193	eP	Pn	04 36 29.0	+0.2
	baz=193						
ELDTW	Lidau	1.64	205	eP	Pn	04 36 29.7	+0.5
	baz=199						
ELDTW				eS	Sn	04 36 50.5	+0.7
	baz=199						
CHN2	Minshiung	1.65	226	eP	Pn	04 36 30.1	+0.9
	baz=237						
CHN2				eS	Sn	04 36 51.4	+1.6
	baz=237						
CHY	Chiayi	1.71	226	P	Pn	04 36 30.1	+0.1
	baz=237						
CHY				eS	Sn	04 36 50.9	-0.3
	baz=237						
CHN4	Tsaushan	1.71	219	eP	Pn	04 36 31.1	+1.1
	baz=221						
CHN4				eS	Sn	04 36 52.8	+1.5
	baz=221						
TPUB	Ta-pu	1.73	217	P	Pn	04 36 30.6	+0.3
	baz=218						
TPUB				eS	Sn	04 36 53.2	+1.4
	baz=218						
WSF	Szhu	1.75	234	eP	Pn	04 36 31.1	+0.6
	baz=236						
WSF				S	Sn	04 36 52.6	+0.3
	baz=236						
EDH	Donghe	1.76	194	eP	Pn	04 36 31.1	+0.4
	baz=193						
EDH				eS	Sn	04 36 51.8	-0.6
	baz=193						
STYH	Taoyuan	1.76	211	P	Pn	04 36 31.8	+1.1
	baz=223						
STYH				S	Sn	04 36 53.8	+1.4
	baz=223						
WTP	Ta-pu	1.78	217	P	Pn	04 36 31.9	+0.9
	baz=227						
WSL	Shuilin Townsh	1.82	231	P	Pn	04 36 31.7	+0.2
	baz=240						
WSL				S	Sn	04 36 53.6	-0.3
	baz=240						
IRIF	Iriomote-Funau	1.82	101	P	Pn	04 36 31.8	+0.3
IRIF				S	Sn	04 36 53.1	-0.8
TWK	Hsinying	1.83	220	P	Pn	04 36 33.7	+2.0
	baz=221						
TWK				eS	Sn	04 36 56.0	+1.7
	baz=221						
LONT	Longtian	1.87	198	eP	Pn	04 36 32.1	0.0
	baz=191						
LONT				eS	Sn	04 36 52.8	-2.2
	baz=191						
SNST	Tainan City	1.87	219	eP	Pn	04 36 32.7	+0.6
	baz=220						
CHN1	Nanshi	1.88	217	P	Pn	04 36 33.3	+1.1
	baz=219						
CHN1				S	Sn	04 36 56.3	+1.1
	baz=219						
ICHU	Yijhu	1.90	226	eP	Pn	04 36 32.5	+0.1
	baz=228						
SGST	Jiashian	1.93	214	P	Pn	04 36 33.6	+0.7
	baz=226						
HATJ	Hateruma jima	1.96	108	P	Pn	04 36 34.5	+1.2
TWG	Pinlang	1.96	199	P	Pn	04 36 33.3	-0.1
	baz=193						
TWG				eS	Sn	04 36 55.9	-1.4
	baz=193						
TWGBT	Beinan	1.96	199	eP	Pn	04 36 32.7	-0.7
	baz=193						
TWGBT				eS	Sn	04 36 56.2	-1.1
	baz=193						
LDUT	Ludao	2.02	188	eP	Pn	04 36 33.4	-0.8
	baz=195						
JKRS	Kuro-shima	2.09	102	P	Pn	04 36 35.8	+0.8
JKRS				S	Sn	04 37 01.0	+0.7
VWUC	VWUC	2.13	279	eP	Pn	04 36 35.2	-0.3
	baz=278						
SCST	Cishan	2.14	213	eP	Pn	04 36 36.6	+0.9

	baz=226						
JIJ	Ishigaki jima	2.19	98	P	Pn	04 36 36.5	+0.2
JIJ				S	Sn	04 37 02.3	-0.3
SSD	Sandimen	2.19	209	*e*P	Pn	04 36 37.6	+1.2
	baz=220						
MATB	Ma-tsu	2.20	312	*e*P	Pn	04 36 36.1	-0.3
	baz=309						
ECL	Taimali	2.21	200	*e*P	Pn	04 36 37.0	+0.3
	baz=192						
TSMG	Majia	2.22	208	*e*P	Pn	04 36 39.3	+2.4
	baz=220						
PNG	Penghu	2.31	242	*e*P	Pn	04 36 37.5	-0.4
	baz=243						
MASBT	Mashibuluo	2.31	207	*e*P	Pn	04 36 38.4	+0.4
	baz=220						
PHUB	P'eng-hu	2.32	240	*e*P	Pn	04 36 37.0	-1.1
	baz=241						
WDGT	Dungji	2.39	234	*e*P	Pn	04 36 39.1	0.0
	baz=235						
PTMZ	Houxiangcun	2.43	279	*e*P	Pn	04 36 39.4	-0.2
	baz=278						
EAST	Anshuo	2.44	200	*e*P	Pn	04 36 40.9	+1.1
	baz=192						
TAW	Tawu	2.45	199	*e*P	Pn	04 36 40.4	+0.5
	baz=192						
SSPT	Xinbi	2.45	207	*e*P	Pn	04 36 41.9	+2.0
	baz=207						
TAWH	Dawu Township	2.47	199	*e*P	Pn	04 36 42.6	+2.4
	baz=192						
SCZT	Fangliau	2.53	205	*e*P	Pn	04 36 42.7	+1.7
	baz=217						
LYJJ	Jianjiangzhen	2.59	316	*e*P	Pn	04 36 41.8	0.0
	baz=314						
VCHM	Qimei	2.60	236	*e*P	Pn	04 36 41.2	-0.6
	baz=237						
SLIU	Shizi	2.62	200	*e*P	Pn	04 36 43.1	+1.0
	baz=200						
LAY	Lan-yu	2.64	184	*e*P	Pn	04 36 43.0	+0.5
	baz=178						
XPSS	Dashiqiu	2.65	328	*e*P	Pn	04 36 42.2	-0.3
	baz=324						
WLCH	Liuqiu	2.65	209	*e*P	Pn	04 36 44.8	+2.2
	baz=222						
LYUB	Lan-yu	2.68	184	*e*P	Pn	04 36 41.4	-1.5
	baz=178						
MHZQ	Yeshan	2.85	300	*e*P	Pn	04 36 44.9	-0.3
	baz=298						
TWK1	Hengchun	2.87	198	*e*P	Pn	04 36 47.9	+2.4
	baz=198						
TWKBT	Hengchun	2.87	198	*e*P	Pn	04 36 46.7	+1.2
	baz=198						
KNM	Kinmen	3.05	266	*e*P	Pn	04 36 48.8	+0.9
	baz=266						
KNMB	Chin-men Tao	3.08	267	*e*P	Pn	04 36 47.9	-0.4
	baz=266						
AXDP	Jialang	3.46	274	*e*P	Pn	04 36 53.4	-0.1
	baz=273						
ZPLA	Ao Xicun	3.74	259	*e*P	Pn	04 36 57.0	-0.3
	baz=259						
SXFK	Yanhouchang	4.09	295	*e*P	Pn	04 37 01.6	-0.6
	baz=292						
JOW	Kunigami	6.24	69	P	Pn	04 37 30.8	-0.7
	4.5nm,0.3s,baz=241,slow=18,SNR=7.7						
JOW				S	Sn	04 38 25.2	-16
	13nm,0.5s,baz=43,slow=23,SNR=2.0						
	11nm,0.3s						
KSRS	Korea Array	13.77	21	P	P	04 39 18.4	-0.9
	2.1nm,0.8s,baz=203,slow=11,SNR=4.0						
MKAR	Makanchi Array	38.35	315	P	P	04 43 16.0	+0.9
	0.1nm,0.4s,baz=117,slow=9.0,SNR=2.3						
	0.1nm,0.4s						
WRA	Warramunga Arr	46.02	163	P	P	04 44 16.6	-0.9
	0.7nm,0.6s,baz=347,slow=8.7,SNR=7.8						
	0.7nm,0.6s						
ASAR	Alice Springs	49.49	165	P	P	04 44 43.9	-0.5
	0.6nm,0.7s,baz=344,slow=6.8,SNR=6.4						
	0.6nm,0.7s						
FINES	FINESS Array B	71.28	330	P	P	04 47 12.7	+0.2
	0.5nm,0.5s,baz=82,slow=4.2,SNR=6.1						
	0.5nm,0.5s						
YKA	Yellowknife Ar	82.30	23	P	P	04 48 14.8	+0.4
	0.1nm,0.5s,baz=310,slow=4.9,SNR=4.9						
	0.1nm,0.5s						

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*IDC **06** 04:39:21.1±1.7, 17°.95S×178°.56W, h616^{km}±13^{km}, mb3.2/10, mbtmp4.2/12, Error ellipse: s-maj=60.7km s-min=14.8km az=151.0*

ISC 06 04:39:18.0±1.3**, 18°.1S**±0°.4×**178°.4W**±0°.2**, h579**^{km}**, n12,** σ**1ṣ40**/13**, mb3.7**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.44	275	P	P	04 40 41.9	+3.6
	32nm,0.6s,baz=127,slow=5.7,SNR=44						
MSVF				S	S	04 41 50.8	+7.3
	0.9nm,0.3s,baz=180,slow=8.1,SNR=0.7						
DZM	Mont Dzumac	14.83	252	P	P	04 42 25.6	+0.2
	3.3nm,0.8s,baz=90,slow=20,SNR=6.2						
DZM				S	S	04 44 46.2	-13
	2.3nm,0.7s,baz=48,slow=13,SNR=7.6						
CTA	Charters Tower	33.48	261	P	P	04 45 09.8	-0.8
	2.5nm,0.3s,baz=104,slow=10.0,SNR=6.4						
	2.5nm,0.3s						
STKA	Stephens Creek	38.61	241	P	P	04 45 51.9	-0.8
	1.9nm,0.5s,baz=91,slow=11,SNR=5.8						
	1.9nm,0.5s						
WRA	Warramunga Arr	44.66	260	P	P	04 46 39.5	-0.9
	3.0nm,0.5s,baz=95,slow=7.2,SNR=99						
	3.0nm,0.5s						
ASAR	Alice Springs	44.80	254	P	P	04 46 41.5	0.0
	16nm,0.6s,baz=87,slow=8.6,SNR=218						
ASAR				PcP	PcP	04 48 10.4	-0.5
	0.4nm,0.6s,baz=106,slow=3.5,SNR=1.3						
	16nm,0.6s						
SIJI	Sorong	52.32	283	P	P	04 47 36.5	-0.7
	7.9nm,0.5s,baz=57,slow=17,SNR=2.8						
	7.9nm,0.5s						
NVAR	Mina Array Bea	79.49	44	P	P	04 50 25.8	+0.1
	0.5nm,0.7s,baz=223,slow=8.4,SNR=6.0						
	0.5nm,0.7s						
ILAR	Eielson Array	86.02	13	P	P	04 50 56.6	-0.8
	0.3nm,0.4s,baz=225,slow=5.3,SNR=1.5						
	0.3nm,0.4s						
TXAR	Lajitas Array	86.03	58	P	P	04 50 59.5	+1.0
	0.7nm,0.8s,baz=216,slow=6.1,SNR=10						
	0.7nm,0.8s						
PDAR	Pinedale Array	87.42	43	P	P	04 51 05.3	+0.5
	0.5nm,0.6s,baz=236,slow=3.7,SNR=6.1						
	0.5nm,0.6s						
YKA	Yellowknife Ar	94.44	25	P	P	04 51 35.1	-1.3
	0.2nm,0.6s,baz=236,slow=4.9,SNR=2.7						
	0.2nm,0.6s						

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*JMA **06** 05:11:19.3±0.2, 31°.1N±0°.4×129°.0E±0°.9, h11^{km}±2^{km}, MD5.0/38, MW4.9/38, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*IDC **06** 05:11:19.7±0.4, 31°.04N×129°.21E, h0^{km}, mb4.5/39, mbtmp4.5/44, ML3.6/5, MS4.2/74, Error ellipse: s-maj=11.8km s-min=8.9km az=109.0*

*NIED **06** 05:11:19.3, 31°.09N×129°.03E, h11^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57; $M_{\theta\theta}$1.37; $M_{\phi\phi}$-0.80; $M_{r\theta}$0.28; $M_{\theta\phi}$2.34; $M_{\phi r}$0.80; Fault plane solution: $M_0$2.72000×10^{16} NP1: ϕ_s102.00000°, δ71.00000°, λ-4.00000°. NP2: ϕ_s194.00000°, δ86.00000°, λ-161.00000°.*

*MOS **06** 05:11:20.2±0.9, 31°.08N×129°.24E, h14^{km}, mb5.1/43, MS4.6/12 Error ellipse: s-maj=7.5km s-min=4.5km az=101.5*

*BJI **06** 05:11:21.9±0.0, 31°.13N×129°.04E, h11^{km}, mb4.6/63, mB4.9/41, ML5.0/4, Ms5.0/73, Ms7 4.7/67*

*NEIC **06** 05:11:22.8±1.4, 31°.10N±0°.05×129°.30E±0°.07, h14^{km}±3^{km}, mb4.9/95, Error ellipse: s-maj=9.8km s-min=7.1km az=121.0*

*GCMT **06** 05:11:22.8±0.2, 31°.15N±0°.01×129°.09E±0°.01, h14^{km}±1^{km}, MW5.0/122, Moment Tensor Solution. s49,c57; s122,c192; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.90±.10; $M_{\theta\theta}$2.02±.10; $M_{\phi\phi}$-1.12±.09; $M_{r\theta}$0.57±.19; $M_{\theta\phi}$3.30±.09; $M_{\phi r}$0.97±.21; Best double couple: $M_0$3.81000×10^{16} NP1: ϕ_s103.00000°, δ73.00000°, λ-1.00000°. NP2: ϕ_s193.00000°, δ89.00000°, λ-163.00000°. Principal axes: T 4.3000, Plg11.0000°, Azm327.0000°; N -0.9780, Plg73.0000°, Azm197.0000°; P -3.3200, Plg13.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 05:11:23.3±0.5**, 31°.08N**±0°.03×**129°.28E**±0°.03**, h18**^{km}±2^{km}**, h19**^{km}**:pP-P, n411,** σ**1ṣ79**/391**, mb4.8**/142**, MS4.4**/91**, 20C-21D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.70	32	⇓*e*P	Pb	05 11 34.4	-2.7
JSJ				⇓*e*S	Sb	05 11 45.6	-0.8
JSJ	Shimokoshiki	0.70	32	A	A	05 11 34.4	
	comp=E,142nm,1.3s,comp=E,116nm,2.1s						
JKC	Kuchinoerabu	1.00	128	*e*P	Pb	05 11 41.1	-1.0
JKC				*e*S	Sg	05 11 55.8	-0.2
JKC	Kuchinoerabu	1.00	128	A	A	05 11 41.1	
	comp=E,87nm,1.3s,comp=E,121nm,1.6s						
JSU	Suzuyama	1.09	67		Pb	05 11 43.2	-0.5
JSU	Suzuyama	1.09	67	⇓*e*P	Pb	05 11 43.1	-0.6
JSU				⇓S	Sg	05 12 00.5	+1.6
JSU	Suzuyama	1.09	67	A	A	05 11 43.1	
	comp=E,67nm,1.5s,comp=E,160nm,2.7s						
JNN	Nakanoshima	1.34	157	*e*P	Pn	05 11 45.2	-1.9
JNN				*e*S	Sn	05 12 03.8	-0.6
JNN	Nakanoshima	1.34	157	A	A	05 11 45.2	
	comp=E,68nm,1.6s,comp=E,68nm,1.3s						
JYAK	Yakushimahirau	1.35	128	*e*P	Pn	05 11 45.8	-1.4
JYAK				*e*S	Sb	05 12 05.8	+0.7
JYAK	Yakushimahirau	1.35	128	A	A	05 11 45.8	
	comp=E,24nm,5.6s,comp=E,28nm,4.3s						
JTSR	Tashiro 2	1.41	86	A	A	05 11 48.1	
	comp=E,22nm,2.8s,comp=E,47nm,4.2s						
JTN	Tanegashima 3	1.52	106	*e*P	Pn	05 11 49.2	-0.4
JTN	Tanegashima 3	1.52	106	A	A	05 11 49.2	
	comp=E,26nm,3.9s,comp=E,36nm,4.3s						
JZO	Okuchi	1.54	47	A	A	05 11 49.2	
	comp=E,38nm,4.0s,comp=E,40nm,1.2s						
JMTN	Minamitane	1.55	116	*e*P	Pn	05 11 49.6	-0.4
JMTN				S	Sb	05 12 10.6	-0.3
JMTN	Minamitane	1.55	116	A	A	05 11 49.6	
	comp=E,26nm,1.8s,comp=E,37nm,2.5s						
JHD	Hondo	1.56	28	A	A	05 11 48.8	
	comp=E,35nm,1.9s,comp=E,24nm,2.4s						
NGSJ	Nagasakinomoza	1.61	16	A	A	05 11 48.9	
	comp=E,36nm,5.8s,comp=E,20nm,2.5s						
JFU	Fukue jima 2	1.63	344	*e*P	Pn	05 11 47.6	-3.6
JFU				*e*S	Sn	05 12 07.7	-4.0
JFU	Fukue jima 2	1.63	344	A	A	05 11 47.6	
	comp=E,21nm,2.6s,comp=E,23nm,2.2s						
JTZ	Takazaki	1.75	62	*e*P	Pn	05 11 52.4	-0.3
JTZ	Takazaki	1.75	62	A	A	05 11 52.4	
	comp=E,23nm,6.8s,comp=E,30nm,5.6s						
JNAR	Kushima--Naru	1.76	75	A	A	05 11 53.3	
	comp=E,34nm,1.5s,comp=E,47nm,1.7s						
JNKG	Nichinankitago	1.89	72	A	A	05 11 55.0	
	comp=E,53nm,1.7s,comp=E,58nm,2.0s						
JTAJ	Takarajima	1.92	182	*e*P	Pn	05 11 53.5	-1.6
JTAJ	Takarajima	1.92	182	A	A	05 11 53.5	
	comp=E,29nm,8.9s,comp=E,30nm,4.3s						
JIU3	Izumi3	1.96	41	⇓*e*P	Pn	05 11 55.2	-0.5
JIU3	Izumi3	1.96	41	A	A	05 11 55.2	
	comp=E,20nm,4.9s,comp=E,16nm,2.9s						
JUR	Ureshino	2.09	16	A	A	05 11 55.8	
	comp=E,37nm,2.1s,comp=E,27nm,1.9s						
JTSN	Tsuno	2.23	58	A	A	05 11 59.5	
	comp=E,12nm,2.7s,comp=E,14nm,3.5s						
JNU	Nakatsue	2.45	33	Pn	Pn	05 12 01.8	-0.6
	6.7nm,0.3s,baz=242,slow=6.6,SNR=35						
JNU				Pg	Pb	05 12 06.4	-0.4
	103nm,0.3s,baz=220,slow=9.5,SNR=80						
JNU				Lg	Lg	05 12 39.6	
	208nm,0.3s,baz=274,slow=19,SNR=7.8						
	60nm,0.4s						
JNU	Nakatsue	2.45	33		Pn	05 12 02.5	+0.1
JNU	Nakatsue	2.45	33	A	A	05 12 01.9	
	comp=E,14nm,4.3s,comp=E,13nm,4.7s						
JFI	Itaya	2.52	22	A	A	05 12 02.4	
	comp=E,16nm,3.5s,comp=E,11nm,5.3s						
JII	Iki	2.73	8	A	A	05 12 04.7	
	comp=E,21nm,2.3s,comp=E,18nm,1.6s						
JBEP	Beppuamama	2.88	38	A	A	05 12 08.2	
	comp=E,18nm,5.9s,comp=E,19nm,2.0s						
JUS	Usuki	2.89	46	A	A	05 12 08.6	
	comp=E,8.0nm,2.9s,comp=E,13nm,5.8s						
JKI	Kunimi	3.20	37	A	A	05 12 12.7	
	comp=E,9.0nm,4.3s,comp=E,12nm,5.5s						
JTU	Tsushima	3.44	2		Pn	05 12 16.6	+0.6
JTO	Tosashimizu	3.48	58	A	A	05 12 17.5	
	comp=E,5.0nm,3.7s,comp=E,6.0nm,4.9s						
JOW	Kunigami	4.32	192	Pn	Pn	05 12 28.9	+0.8
	12nm,0.3s,baz=38,slow=13,SNR=8.9						
JOW				LR	LR	05 14 10.9	
	comp=Z,3µm,21.4s,baz=113,slow=40						
JOW	Kunigami	4.32	192	Pn	Pn	05 12 29.1	+1.0
JMN	Monobe	4.70	55	Pn	Pn	05 12 34.7	+1.3
JHS	Saijyo	5.07	39	Pn	Pn	05 12 38.7	+0.4
TJN	Taejon	5.52	344	*d i*P	Pn	05 12 43.9	-0.6
TJN	Taejon	5.52	344	Pn	Pn	05 12 43.8	-0.8
KSAR	Wonju Array Be	6.45	350	P	Pn	05 12 56.7	-0.6
KSAR	Wonju Array Be	6.45	350		Pn	05 12 56.7	-0.6
KSRS	Korea Array	6.46	350	Pn	Pn	05 12 56.6	-0.7
	2.6nm,0.3s,baz=176,slow=14,SNR=72						
KSRS				Sn	Sn	05 14 08.2	-2.4
	7.3nm,0.3s,baz=171,slow=25,SNR=7.3						
KSRS				Lg	Lg	05 14 42.9	
	7.0nm,0.3s,baz=172,slow=29,SNR=7.5						
	27nm,0.7s						
KS19	Wonju Array Si	6.51	350		Pn	05 12 56.4	-1.8
INCN	Inchon	6.75	342	P	Pn	05 12 59.9	-1.6
INCN	Inchon	6.75	342	Pn	Pn	05 12 59.9	-1.6
SSE	Sheshan	6.94	272	Pn	Pn	05 13 02.2	-1.9
SSE				Sn	Sn	05 14 20.3	-2.2
SSE				smax	smax		
	comp=N,320nm,1.2s						
SSE				smax	smax		
	comp=E,190nm,1.5s						
SSE				LR	LR		
	comp=N,7µm,14.4s						
SSE				LR	LR		
	comp=E,2µm,14.7s						
INU	Inuyama	7.76	55		Pn	05 13 16.2	+1.0
JGF	Kuroka	8.12	54	Pn	Pn	05 13 20.7	+0.4
YOJ	Yonaguni jima	8.62	222	P	Pn	05 13 30.0	+2.9
YOJ	Yonaguni jima	8.62	222	Pn	Pn	05 13 30.0	+2.9
NJ2	Nanjing	8.95	279	*e*P	Pn	05 13 29.6	-2.0
NJ2				pP		05 13 33.5	
NJ2				sP		05 13 38.6	
NJ2				S	Sn	05 15 14.0	+2.1
NJ2				pmax	pmax		
	comp=Z,24nm,0.6s						
NJ2				smax	smax		
	comp=N,400nm,0.9s						
NJ2				smax	smax		
	comp=E,260nm,0.9s						
NJ2				LR	LR		
	comp=N,4µm,10.4s						
NJ2				LR	LR		
	comp=E,3µm,9.5s						
NJ2				LR	LR		
	comp=Z,4µm,9.8s						
JHJ	Hachijo jima 2	9.14	74	LR	LR	05 17 14.5	
	comp=Z,664nm,19.0s,baz=293,slow=38						
MAJO	Matsushiro	9.21	51	*e*P	Pn	05 13 36.3	+1.1
MAJO	Matsushiro	9.21	51	Pn	Pn	05 13 35.2	0.0
MJB9	Matsu-Tunnel	9.21	51		Pn	05 13 34.4	-0.9
MJAR	Matsushiro Arr	9.21	51	Pn	Pn	05 13 36.7	+1.5
	0.2nm,0.3s,baz=237,slow=13,SNR=15						
MJAR				LR	LR	05 17 34.0	
	comp=Z,2µm,18.8s,baz=233,slow=40						
	7.3nm,0.7s						
MJAR	Matsushiro Arr	9.21	51	P	Pn	05 13 36.0	+0.7
MJAR	Matsushiro Arr	9.21	51		Pn	05 13 36.0	+0.7
NACB	Ninganchiao	9.68	227		Pn	05 13 44.1	+2.4
DL2	Dalian	10.01	323	P	Pn	05 13 54.2	+8.0
DL2				pmax	pmax		
	comp=Z,26nm,0.9s						
DL2				LR	LR		
	comp=N,3µm,9.7s						
DL2				LR	LR		
	comp=E,2µm,9.9s						
DL2				LR	LR		
	comp=Z,3µm,13.0s						
SSLB	Suanglung	10.36	228		Pn	05 13 53.5	+2.4
YULB	Yu-li	10.44	225		Pn	05 13 52.5	+0.4
JYT	Yasato	10.44	58		Pn	05 13 50.9	-1.2
TPUB	Ta-pu	10.92	227	Pn	Pn	05 14 00.8	+2.1
TWG	Pinlang	11.01	224		Pn	05 14 00.5	+0.6
QZH	Quanzhou	11.24	240	⇓*i*P	Pn	05 14 02.7	-0.4
QZH				*e*S	Sn	05 16 08.8	+0.5
QZH				SS	SnSn	05 16 24.6	+4.4
QZH				LR	LR		
	comp=Z,2µm,10.2s						
QZH				LR	LR		
	comp=Z,2µm,9.4s						
QZH				LR	LR		
	comp=Z,2µm,10.7s						
TIA	Tai'an	11.35	300	P	Pn	05 14 02.8	-1.7
TIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,100nm,3.7s						
TIA				LR	LR		
	comp=Z,4µm,10.0s						
TIA				LR	LR		
	comp=Z,3µm,8.5s						
SNY	Shenyang	11.66	338	⇑P	Pn	05 14 06.0	-2.7
SNY				S	Sn	05 16 36.6	+18
SNY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SNY				pmax	pmax		
	comp=Z,200nm,3.5s						
SNY				LR	LR		
	comp=N,5µm,11.5s						
SNY				LR	LR		
	comp=E,11µm,12.0s						
SNY				LR	LR		
	comp=Z,6µm,11.0s						
WHN	Wuhan	12.85	271	*e*P	P	05 14 30.8	-5.0
WHN				S	Sn	05 16 54.5	+7.0
WHN				LR	LR		
	comp=N,7µm,9.9s						
WHN				LR	LR		
	comp=E,6µm,10.0s						
WHN				LR	LR		
	comp=Z,7µm,11.3s						
CN2	Changchun	13.05	348	*e*P	Pn	05 14 29.3	+1.5
CN2				*e*S	Sn	05 16 54.6	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,9µm,13.0s						
CN2				LR	LR		
	comp=Z,4µm,12.4s						
USRK	Ussuriysk Ar.	13.27	9	Pn	Pn	05 14 34.5	+3.8
	comp=Z,0.2nm,0.3s,baz=206,slow=13,SNR=6.0						
USRK				LR	LR	05 19 10.5	
	comp=Z,620nm,19.6s,baz=178,slow=35						
MDJ	Mudanjiang	13.52	1	P	Pn	05 14 34.5	+0.4
MDJ				S	Sn	05 17 06.5	+2.8
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,270nm,6.0s						
MDJ				LR	LR		
	comp=Z,2µm,15.5s						
MDJ				LR	LR		
	comp=Z,3µm,11.9s						
MDJ				LR	LR		
	comp=Z,3µm,15.2s						
HNS	HongShan	13.60	302	⇑P	Pn	05 14 38.6	+3.4
HNS				pmax	pmax		
	comp=Z,13nm,0.9s						
HNS				LR	LR		
	comp=Z,940nm,11.0s						
HNS				LR	LR		
	comp=Z,2µm,11.6s						
HNS				LR	LR		
	comp=Z,2µm,10.2s						
BJT	Baijiatuau	13.89	314	P	Pn	05 14 38.9	-0.4
BJT	Baijiatuau	13.89	314		Pn	05 14 38.9	-0.4
BJI	Beijing	13.90	314	P	Pn	05 14 39.8	+0.4
BJI				S	Sn	05 17 14.8	+1.6
BJI				pmax	pmax		
	comp=Z,18nm,1.9s						
BJI				LR	LR		
	comp=Z,3µm,17.2s						
BJI				LR	LR		
	comp=Z,2µm,16.0s						
BJI				LR	LR		
	comp=Z,3µm,15.8s						
LYN	LuoYang	14.55	288	*e*P	Pn	05 14 47.5	-0.8
LYN				pP	P	05 14 56.3	+1.6
LYN				PP	PnPn	05 14 59.7	+3.5
LYN				pmax	pmax		
	comp=Z,130nm,5.3s						
LYN				LR	LR		
	comp=Z,11µm,15.3s						
LYN				LR	LR		
	comp=Z,4µm,14.5s						
LYN				LR	LR		
	comp=Z,2µm,16.4s						
BNX	BinXian	14.71	355	⇑P	Pn	05 14 53.0	+2.6
BNX				pP	P	05 14 57.2	+0.8
BNX				sP		05 15 00.9	
BNX				PP	PnPn	05 15 06.8	+8.4
BNX				S	Sn	05 17 37.3	+4.5
BNX				sS	S	05 17 45.4	-6.1
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
BNX				pmax	pmax		
	comp=Z,720nm,4.3s						
BNX				LR	LR		
	comp=Z,5µm,15.3s						
BNX				LR	LR		
	comp=Z,22µm,15.1s						
BNX				LR	LR		
	comp=Z,4µm,28.1s						
ERM	Erimo	15.58	42	*e*P	Pn	05 15 00.8	-1.2
XLT	XiLinHaoTe	16.51	324	⇑*i*P	Pn	05 15 14.1	+0.2
XLT				pP	pP	05 15 19.8	-1.6
XLT				sP	sP	05 15 25.2	+1.5
XLT				S	Sn	05 18 14.8	-1.9
XLT				sS	S	05 18 26.2	-2.2
XLT				SS	SnSn	05 18 37.0	+7.1
XLT				pmax	pmax		
	comp=Z,30nm,1.0s						
XLT				pmax	pmax		
	comp=Z,330nm,4.5s						
XLT				LR	LR		
	comp=Z,2µm,13.9s						
XLT				LR	LR		
	comp=Z,2µm,15.2s						
ASAJ	Asahikawa	16.73	35	Pn	Pn	05 15 16.2	-0.4
	comp=Z,0.6nm,0.3s,baz=232,slow=20,SNR=9.9						
	comp=Z,14nm,0.7s						
ASAJ	Asahikawa	16.73	35	P	Pn	05 15 15.4	-1.2
ASAJ				pmax	pmax		
	comp=Z,40nm,1.0s						
JKA	Kamikawa-asahi	16.73	35	Pn	Pn	05 15 15.4	-1.2
ENH	Enshi	17.05	272	P	Pn	05 15 21.0	+0.2
HHC	Hu-ho-hao-te	17.31	309	*e*P	Pn	05 15 24.2	+0.1
HHC				sP	sP	05 15 35.4	+2.6
HHC				S	Sn	05 18 38.1	+1.8
HHC				SS	SnSn	05 18 55.3	+5.6
HHC				pmax	pmax		
	comp=Z,57nm,1.2s						
HHC				pmax	pmax		
	comp=Z,740nm,6.5s						
HHC				LR	LR		
	comp=Z,5µm,12.9s						
HHC				LR	LR		
	comp=Z,4µm,12.9s						
HHC				LR	LR		
	comp=Z,5µm,15.3s						
XAN	Xi'an	17.41	285	P	Pn	05 15 24.7	-0.6
XAN				pP	pP	05 15 30.1	-1.4
XAN				S	Sn	05 18 39.4	+0.7
XAN				pmax	pmax		
	comp=Z,43nm,1.3s						
XAN				pmax	pmax		
	comp=Z,240nm,3.8s						
XAN				LR	LR		
	comp=Z,8µm,12.4s						
XAN				LR	LR		
	comp=Z,4µm,12.6s						
XAN				LR	LR		
	comp=Z,2µm,10.4s						

GULI	**GuiLin**	**17.63**	**256**	eP	**Pn**	**05 15 26.6**	**-1.5**
GULI				LR	LR		
	comp=Z,4µm,15.7s						
GULI				LR	LR		
	comp=Z,2µm,14.6s						
GULI				LR	LR		
	comp=Z,4µm,10.8s						
KLR	**Kul'dur**	**18.23**	**5**	P	**Pn**	**05 15 35.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=187,slow=8.6,SNR=50						
KLR				LR	LR	05 21 55.4	
	comp=Z,304nm,21.0s,baz=180,slow=35						
	comp=Z,18nm,0.9s						
KLR	**Kul'dur**	**18.23**	**5**	c iP	**P**	**05 15 38.2**	**+2.9**
KLR				pmax	pmax		
	comp=Z,52nm,1.4s						
BTO	**Baotou**	**18.25**	**307**	eP	**P**	**05 15 38.1**	**+2.4**
BTO				LR	LR		
	comp=Z,11µm,14.8s						
BTO				LR	LR		
	comp=Z,7µm,16.9s						
YSS	**Yuzh-Sakhalins**	**18.95**	**29**	c iP	**Pn**	**05 15 44.4**	**+0.4**
YSS				pmax	pmax		
	comp=Z,69nm,1.5s						
YSS	**Yuzh-Sakhalins**	**18.95**	**29**	P	**P**	**05 15 42.7**	**-0.7**
YSS				IAmb	IAmb	05 16 01.4	
	comp=Z,69nm,1.2s						
HIA	**Hailar**	**19.54**	**341**	P	**P**	**05 15 50.1**	**+0.3**
HIA				pmax	pmax		
	comp=Z,101nm,1.5s						
HIA	**Hailar**	**19.54**	**341**	P	**P**	**05 15 50.1**	**+0.3**
HIA				IAmb	IAmb	05 16 00.2	
	comp=Z,101nm,1.5s						
GYA	**Guiyang**	**20.34**	**263**	⇑P	**P**	**05 15 58.5**	**-0.3**
GYA				pP	sP	05 16 07.3	+1.2
GYA				S	**S**	**05 19 44.2**	**-2.0**
GYA				pmax	pmax		
	comp=Z,32nm,1.2s						
GYA				LR	LR		
	comp=Z,1µm,10.2s						
GYA				LR	LR		
	comp=Z,1µm,12.1s						
GYA				LR	LR		
	comp=Z,2µm,13.4s						
GRNR	**Gornyy**	**20.38**	**13**	⇑iP	**P**	**05 15 58.0**	**-0.9**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,720nm,13.0s						
GRNR				MLR	MLR		
	comp=E,2µm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
QIZ	**Qiongzhong**	**21.27**	**240**	P	**P**	**05 16 12.1**	**+3.4**
QIZ				pP	**sP**	**05 16 16.0**	**-0.1**
QIZ				S	Sn	05 20 08.7	-3.1
QIZ				pmax	pmax		
	comp=Z,31nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,340nm,2.9s						
QIZ				LR	LR		
	comp=Z,2µm,9.6s						
QIZ				LR	LR		
	comp=Z,1µm,12.0s						
QIZ				LR	LR		
	comp=Z,990nm,12.7s						
LZH	**Lanzhou**	**21.74**	**290**	⇑P	**P**	**05 16 16.0**	**+2.1**
LZH				pP	sP	05 16 22.5	+1.2
LZH				PP	**PnPn**	**05 16 38.3**	**+3.3**
LZH				S	**S**	**05 20 11.7**	**-2.2**
LZH				ScP	**ScP**	**05 23 49.1**	**-1.4**
LZH				pmax	pmax		
	comp=Z,53nm,1.6s						
LZH				LR	LR		
	comp=Z,6µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,15.2s						
LZH				LR	LR		
	comp=Z,3µm,15.2s						
CD2	**Chengdu**	**21.87**	**276**	P	**P**	**05 16 17.2**	**+2.0**
CD2				S	**S**	**05 20 18.2**	**+2.0**
CD2				pmax	pmax		
	comp=Z,100nm,0.9s						
CD2				pmax	pmax		
	comp=Z,150nm,2.6s						
CD2				LR	LR		
	comp=Z,4µm,12.7s						
CD2				LR	LR		
	comp=Z,4µm,11.4s						
TYV	**Tymovskoe**	**22.13**	**23**	eP	**P**	**05 16 24.3**	**+6.6**
TYV				pmax	pmax		
	comp=Z,31nm,1.2s						
TYV				pmax	pmax		
	comp=Z,800nm,4.4s						
GUMO	**Guam**	**22.56**	**137**	LR	LR	05 24 27.8	
	comp=Z,417nm,18.2s,baz=358,slow=35						
ZEA	**Zeya**	**22.69**	**357**	eP	**P**	**05 16 24.6**	**+0.9**
ZEA				eS	**S**	**05 20 23.5**	**-7.5**
ZEA				pmax	pmax		
	comp=N,20nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.4s						
ZEA				smax	smax		
	comp=N,400nm,5.9s						
ZEA				MLR	MLR		
	comp=E,1µm,13.0s						
ZEA				MLR	MLR		
	comp=N,800nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,13.0s						
ULN	**Ulaanbaatar**	**23.85**	**321**	c iP	**P**	**05 16 33.6**	**-2.0**
ULN				pmax	pmax		
	comp=Z,34nm,1.7s						
ULN	**Ulaanbaatar**	**23.85**	**321**	P	**P**	**05 16 35.2**	**-0.4**
KMI	**Kunming**	**24.12**	**262**	⇑P	**P**	**05 16 36.8**	**-1.6**
KMI				pP	sP	05 16 44.9	-1.2
KMI				S	**S**	**05 20 49.8**	**-5.8**
KMI				sS	pS	05 21 02.3	+0.6
KMI				pmax	pmax		
	comp=Z,39nm,1.1s						
KMI				pmax	pmax		
	comp=Z,180nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,10.8s						
KMI				LR	LR		
	comp=Z,2µm,11.2s						
KMI				LR	LR		
	comp=Z,2µm,12.2s						
DAV	**Davao City (W)**	**24.14**	**189**	LR	LR	05 28 17.4	
	comp=Z,576nm,18.2s,baz=342,slow=42						
SONM	**Songino Array**	**24.19**	**320**	P	**P**	**05 16 37.2**	**-1.6**
	comp=Z,21nm,1.1s,baz=134,slow=9.4,SNR=34						
SONM				LR	LR	05 26 22.1	
	comp=Z,1µm,21.1s,baz=133,slow=37						
	comp=Z,21nm,1.1s						
SONM	**Songino Array**	**24.19**	**320**	P	**P**	**05 16 38.5**	**-0.3**
PZH	**PanZhiHua**	**24.53**	**266**	P	**P**	**05 16 40.4**	**-1.6**
PZH				pP	**pP**	**05 16 44.5**	**-2.9**
PZH				S	**S**	**05 20 57.5**	**-4.5**
PZH				sS	**sS**	**05 21 11.9**	**+1.0**
PZH				SS	**SnSn**	**05 21 53.5**	**+6.6**
PZH				pmax	pmax		
	comp=Z,60nm,1.5s						
PZH				pmax	pmax		
	comp=Z,70nm,3.5s						
PZH				LR	LR		
	comp=Z,2µm,12.7s						
PZH				LR	LR		
	comp=Z,1µm,12.1s						
PZH				LR	LR		
	comp=Z,910nm,12.2s						
GTA	**Gaotai**	**25.37**	**297**	⇓P	**P**	**05 16 48.5**	**-1.1**
GTA				pP	pP	05 16 51.6	-3.3
GTA				sP	sP	05 16 56.8	-0.4
GTA				S	**S**	**05 21 14.7**	**-0.6**
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,4.4s						
GTA				LR	LR		
	comp=Z,3µm,14.7s						
GTA				LR	LR		
	comp=Z,2µm,15.1s						
GTA				LR	LR		
	comp=Z,2µm,11.6s						
ZAK	**Zakamensk**	**27.34**	**322**	eP	**P**	**05 17 05.6**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,28nm,1.3s						
IRK	**Irkutsk**	**27.97**	**326**	eP	**P**	**05 17 12.2**	**-0.5**
IRK				pmax	pmax		
	comp=Z,50nm,1.6s						
BOD	**Bodaibo**	**28.73**	**343**	eP	**P**	**05 17 18.4**	**-1.0**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
GOMU	**GeErMu**	**29.05**	**289**	P	**P**	**05 17 22.9**	**0.0**
GOMU				pP	pP	05 17 26.1	-2.1
GOMU				sP	sP	05 17 30.3	-0.2
GOMU				S	**S**	**05 22 14.2**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,72nm,4.1s						
GOMU				LR	LR		
	comp=Z,640nm,15.5s						
GOMU				LR	LR		
	comp=Z,660nm,15.7s						
GOMU				LR	LR		
	comp=Z,630nm,16.1s						
MOY	**Mondy**	**29.25**	**323**	eP	**P**	**05 17 24.6**	**+0.3**
MOY				pmax	pmax		
	comp=Z,23nm,1.8s						
CHTO	**Chiang Mai**	**29.99**	**253**	P	**P**	**05 17 31.3**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,19nm,0.8s						
CHTO	**Chiang Mai**	**29.99**	**253**	P	**P**	**05 17 31.3**	**+0.3**
CHTO				IAmb	IAmb	05 17 36.5	
	comp=Z,19nm,0.8s						
PETK	**Petropavlovsk-**	**30.14**	**35**	LR	LR	05 28 50.0	
	comp=Z,386nm,20.5s,baz=190,slow=35						
CMAR	**Chiang Mai Arr**	**30.17**	**253**	P	**P**	**05 17 31.9**	**-0.7**
	comp=Z,3.8nm,0.3s,baz=50,slow=7.7,SNR=12						
CMAR				LR	LR	05 29 54.1	
	comp=Z,315nm,19.4s,baz=60,slow=37						
	comp=Z,3.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.17**	**253**	i P	**P**	**05 17 32.2**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.17**	**253**	P	**P**	**05 17 33.2**	**+0.6**
PET	**Petropavlovsk**	**30.57**	**36**	eP	**P**	**05 17 36.5**	**+0.8**
PET				e		05 18 35.2	
PET				eS	**S**	**05 22 34.3**	**-2.2**
PET				pmax	pmax		
	comp=Z,85nm,1.2s						
PET				MLR	MLR		
	comp=Z,900nm,12.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET	**Petropavlovsk**	**30.57**	**36**	P	**P**	**05 17 35.4**	**-0.3**
KNGR	**Kungurtug, Tuv**	**30.60**	**319**	i P	**P**	**05 17 35.5**	**-0.7**
SIJI	**Sorong**	**31.83**	**176**	LR	LR	05 30 41.0	
	comp=Z,502nm,18.4s,baz=58,slow=36						
MA2	**Magadan**	**31.95**	**21**	P	**P**	**05 17 48.2**	**+0.4**
	comp=Z,12nm,0.9s,baz=199,slow=10,SNR=5.8						
	comp=Z,12nm,0.9s						
MA2	**Magadan**	**31.95**	**21**	P	**P**	**05 17 47.4**	**-0.4**
MA2				pmax	pmax		
	comp=Z,11nm,0.8s						
MA2	**Magadan**	**31.95**	**21**	P	**P**	**05 17 47.4**	**-0.4**
MA2				IAmb	IAmb	05 18 12.8	
	comp=Z,11nm,0.8s						
SHL	**Shillong**	**33.27**	**270**	P	**P**	**05 17 57.8**	**-2.1**
SHL				pmax	pmax		
	comp=Z,28nm,1.0s						
SHL	**Shillong**	**33.27**	**270**	P	**P**	**05 17 57.8**	**-2.1**
SHL				IAmb	IAmb	05 18 02.2	
	comp=Z,28nm,1.0s						
KSM	**Kuching**	**34.49**	**215**	P	**P**	**05 18 09.9**	**-0.5**
KSM				IAmb	IAmb	05 18 15.4	
	comp=Z,24nm,1.1s						
WMQ	**Urumqi**	**35.02**	**303**	eP	**P**	**05 18 18.3**	**+3.5**
WMQ				sP	sP	05 18 29.8	+7.3
WMQ				pmax	pmax		
	comp=Z,39nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
WMQ				LR	LR		
	comp=Z,1µm,14.3s						
WMQ				LR	LR		
	comp=Z,910nm,18.5s						
SEY	**Seymchan**	**35.13**	**18**	P	**P**	**05 18 16.5**	**+1.1**
	comp=Z,3.6nm,0.7s,baz=234,slow=7.6,SNR=7.3						
SEY				LR	LR	05 31 07.8	
	comp=Z,200nm,20.1s,baz=200,slow=34						
	comp=Z,3.6nm,0.7s						
SEY	**Seymchan**	**35.13**	**18**	⇑iP	**P**	**05 18 16.3**	**+0.8**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SRIT	**Nakonsritamara**	**35.56**	**237**	P	**P**	**05 18 20.8**	**+1.1**
SRIT				IAmb	IAmb	05 18 26.6	
	comp=Z,24nm,1.2s						
TAPN	**Taplejung**	**36.32**	**275**	eP	**P**	**05 18 27.2**	**+0.7**
	comp=Z,49nm,1.1s						
BBKI	**Banjar Baru**	**37.01**	**204**	P	**P**	**05 18 33.0**	**+1.0**
	comp=Z,18nm,0.9s						
KAPI	**Kappang**	**37.03**	**196**	LR	LR	05 34 28.1	
	comp=Z,160nm,18.8s,baz=6.5,slow=38						
IPM	**Ipoh**	**37.50**	**231**	P	**P**	**05 18 34.3**	**-2.0**
IPM				IAmb	IAmb	05 18 40.6	
	comp=Z,21nm,1.1s						
GUN	**Gumba**	**37.73**	**276**	eP	**P**	**05 18 38.0**	**-0.5**
	comp=Z,151nm,1.2s						
PKI	**Pulchoki**	**38.22**	**276**	eP	**P**	**05 18 43.8**	**+1.1**
	comp=Z,118nm,1.3s						
PKIN	**Phulchoki**	**38.23**	**276**	eP	**P**	**05 18 43.8**	**+1.1**
	comp=Z,72nm,0.9s						
KKN	**Kakani**	**38.27**	**277**	eP	**P**	**05 18 43.3**	**+0.3**
	comp=Z,92nm,1.0s						
DMN	**Daman**	**38.47**	**276**	eP	**P**	**05 18 46.1**	**+1.4**
	comp=Z,107nm,1.2s						
GKN	**Gorkha**	**38.77**	**277**	eP	**P**	**05 18 46.9**	**-0.1**
SHEM	**Shemya Is, Ala**	**38.93**	**43**	LR	LR	05 38 18.3	
	comp=Z,53nm,18.1s,baz=265,slow=42						
ZAA0	**Zalesovo Array**	**39.08**	**319**	P	**P**	**05 18 48.1**	**-0.9**
ZALV	**Zalesovo Beam**	**39.08**	**319**	P	**P**	**05 18 48.0**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=101,slow=7.7,SNR=7.5						
ZALV				PcP	**PcP**	**05 20 57.9**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=142,slow=4.9,SNR=2.5						
ZALV				LR	LR	05 36 08.2	
	comp=Z,601nm,18.4s,baz=102,slow=38						
	comp=Z,3.3nm,0.7s						
ZALV	**Zalesovo Beam**	**39.08**	**319**	i P	**P**	**05 18 48.4**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.08**	**319**	P	**P**	**05 18 48.0**	**-1.0**
MK31	**Makanchi Array**	**39.16**	**307**	c iP	**P**	**05 18 48.4**	**-1.5**
MK31	**Makanchi Array**	**39.16**	**307**	P	**P**	**05 18 48.7**	**-1.2**
MKAR	**Makanchi Array**	**39.16**	**307**	P	**P**	**05 18 49.1**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=96,slow=11,SNR=19						
MKAR				PcP	**PcP**	**05 20 58.1**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=85,slow=4.6,SNR=2.8						
MKAR				LR	LR	05 35 58.1	
	comp=Z,526nm,18.0s,baz=94,slow=38						
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**39.16**	**307**	P	**P**	**05 18 49.3**	**-0.6**
MAKZ	**Makanchi**	**39.38**	**307**	P	**P**	**05 18 51.4**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**39.38**	**307**	P	**P**	**05 18 51.4**	**-0.3**
DANN	**Dangsing**	**39.42**	**278**	eP	**P**	**05 18 52.2**	**-0.4**
	comp=Z,25nm,0.7s						
KOLN	**Koldanda**	**39.71**	**277**	eP	**P**	**05 18 56.3**	**+1.3**
	comp=Z,13nm,0.6s						
PYUN	**Piuthan**	**40.14**	**278**	eP	**P**	**05 18 58.9**	**+0.4**
	comp=Z,44nm,0.9s						
PSI	**Prapat**	**40.14**	**232**	P	**P**	**05 18 58.0**	**-0.5**
	comp=Z,3.1nm,0.4s,baz=117,slow=16,SNR=2.5						
PSI				LR	LR	05 36 17.0	
	comp=Z,405nm,19.5s,baz=46,slow=37						
	comp=Z,3.1nm,0.4s						
RPSI	**Rantau Prapat**	**40.22**	**231**	P	**P**	**05 18 58.0**	**-1.0**
TIXI	**Tiksi**	**40.62**	**360**	⇑iP	**P**	**05 19 02.6**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,31nm,1.5s						
TIXI	**Tiksi**	**40.62**	**360**	P	**P**	**05 19 01.8**	**+0.2**
TIXI				IAmb	IAmb	05 19 15.1	
	comp=Z,26nm,1.2s						
KMMI	**Kalianget**	**40.65**	**204**	P	**P**	**05 19 02.7**	**+0.2**
	comp=Z,23nm,1.0s						
PLAI	**Plampang**	**41.18**	**197**	P	**P**	**05 19 07.2**	**+0.3**
	comp=Z,43nm,0.9s						
KRVT	**Keravat (AS076**	**41.35**	**144**	LR	LR	05 35 49.0	
	comp=Z,143nm,18.2s,baz=141,slow=36						
BATI	**Baumata**	**41.40**	**188**	P	**P**	**05 19 06.0**	**-2.7**
	comp=Z,30nm,0.5s,baz=294,slow=20,SNR=3.9						
	comp=Z,30nm,0.5s						
KURK	**Kurchatov**	**42.07**	**313**	⇑iP	**P**	**05 19 11.7**	**-2.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**42.07**	**313**	P	**P**	**05 19 13.7**	**-0.2**
KURBB	**Kurchatov Arra**	**42.12**	**313**	P	**P**	**05 19 12.9**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=100,slow=9.1,SNR=17						
KURBB				PcP	**PcP**	**05 21 07.8**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=112,slow=3.4,SNR=2.2						
KURBB				LR	LR	05 37 55.7	
	comp=Z,1µm,19.0s,baz=81,slow=38						
	comp=Z,2.7nm,0.6s						
TARG	**Taragay, Kyrgy**	**42.21**	**299**	P	**P**	**05 19 14.6**	**-1.1**
PWJI	**Pagerwojo**	**42.33**	**206**	P	**P**	**05 19 16.2**	**-0.1**
	comp=Z,33nm,0.9s						
MDSI	**Maura Dua**	**42.72**	**219**	P	**P**	**05 19 19.5**	**0.0**
	comp=Z,757nmcomp=Z,30nm,1.4s						
BILL	**Bilibino**	**42.80**	**19**	⇓eP	**P**	**05 19 19.8**	**+0.2**
BILL				e		05 21 03.5	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,703nm,15.0s						
BILL	**Bilibino**	**42.80**	**19**	P	**P**	**05 19 19.5**	**-0.1**
KPJI	**Karang Pucung**	**42.88**	**210**	P	**P**	**05 19 21.1**	**+0.4**
	comp=Z,33nm,0.8s						
LEM	**Lembang**	**43.02**	**212**	P	**P**	**05 19 20.0**	**-2.1**
	comp=Z,18nm,0.6s,baz=300,slow=20,SNR=4.6						
	comp=Z,18nm,0.6s						
LEM	**Lembang**	**43.02**	**212**	P	**P**	**05 19 23.1**	**+1.0**
	comp=Z,17nm,0.9s						
DBJI	**Dramaga**	**43.19**	**214**	P	**P**	**05 19 23.4**	**+0.1**
MTN	**Manton Dam**	**43.71**	**177**	P	**P**	**05 19 25.5**	**-1.9**
MTN				IAmb	IAmb	05 19 32.2	
	comp=Z,27nm,0.9s						
AAK	**Ala-Archa**	**44.62**	**301**	P	**P**	**05 19 34.5**	**-0.4**
	comp=Z,4.5nm,0.7s,baz=136,slow=5.1,SNR=11						
AAK				LR	LR	05 40 10.3	
	comp=Z,694nm,19.1s,baz=98,slow=39						
	comp=Z,4.5nm,0.7s						
AAK	**Ala-Archa**	**44.62**	**301**	⇑iP	**P**	**05 19 33.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**44.62**	**301**	P	**P**	**05 19 34.4**	**-0.4**
NRIK	**Noril'sk**	**44.97**	**340**	P	**P**	**05 19 36.4**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=82,slow=11,SNR=4.2						
NRIK				LR	LR	05 39 35.3	
	comp=Z,279nm,19.7s,baz=118,slow=38						
	comp=Z,5.0nm,0.8s						
NRIK	**Noril'sk**	**44.97**	**340**	c iP	**P**	**05 19 36.2**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,17nm,1.8s						
NRIK	**Noril'sk**	**44.97**	**340**	P	**P**	**05 19 36.6**	**-0.3**
NRIK				IAmb	IAmb	05 20 03.1	
	comp=Z,16nm,1.1s						
BVAR	**Borovoye Array**	**47.38**	**315**	P	**P**	**05 19 54.8**	**-1.4**
	comp=Z,3.4nm,0.7s						
	comp=Z,3.4nm,0.7s						
BRVK	**Borovoye**	**47.44**	**315**	P	**P**	**05 19 55.8**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,23nm,0.6s						
BRVK	**Borovoye**	**47.44**	**315**	P	**P**	**05 19 55.8**	**-0.9**
KK31	**Karatay Array**	**47.50**	**302**	P	**P**	**05 19 56.8**	**-0.5**
KK31				pmax	pmax		
	comp=Z,14nm,0.9s						
KK31	**Karatay Array**	**47.50**	**302**	P	**P**	**05 19 56.8**	**-0.5**
KK31				IAmb	IAmb	05 20 02.0	
	comp=Z,14nm,0.9s						
KK31	**Karatay Array**	**47.50**	**302**	⇓Pn	**P**	**05 19 56.3**	**-1.0**
	comp=Z,16nm,0.8s,baz=174,slow=13,SNR=111						
KKAR	**Karatay Array**	**47.50**	**302**	P	**P**	**05 19 56.3**	**-1.0**
KKAR	**Karatay Array**	**47.50**	**302**	P	**P**	**05 19 56.6**	**-0.7**
KKAR				IAmb	IAmb	05 20 02.0	
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**47.50**	**302**	P	**P**	**05 19 56.3**	**-1.0**
WB0	**Warramunga Arr**	**50.79**	**174**	P	**P**	**05 20 21.5**	**-1.1**
WB0				IAmb	IAmb	05 20 28.1	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**50.95**	**174**	⇓iP	**P**	**05 20 23.1**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRAB	**Tennant Creek**	**50.95**	**174**	P	**P**	**05 20 23.0**	**-0.7**
WRAB				IAmb	IAmb	05 20 29.3	
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**50.96**	**174**	P	**P**	**05 20 23.1**	**-0.8**
	comp=Z,3.9nm,0.9s,baz=353,slow=8.0,SNR=17						
WRA				LR	LR	05 40 37.8	
	comp=Z,125nm,21.7s,baz=32,slow=34						
	comp=Z,3.9nm,0.9s						
WB2	**Warramunga Arr**	**50.96**	**174**	P	**P**	**05 20 23.0**	**-0.9**
WB2				IAmb	IAmb	05 20 29.4	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**51.00**	**174**	P	**P**	**05 20 22.8**	**-1.3**
WR0				IAmb	IAmb	05 20 29.7	
	comp=Z,16nm,1.1s						
PALK	**Pallekele**	**51.12**	**253**	P	**P**	**05 20 23.4**	**-1.9**
	comp=Z,9.1nm,0.9s,baz=169,slow=8.6,SNR=4.2						
PALK				LR	LR	05 43 01.0	
	comp=Z,261nm,20.6s,baz=153,slow=37						
	comp=Z,9.1nm,0.9s						
PALK	**Pallekele**	**51.12**	**253**	⇑iP	**P**	**05 20 23.5**	**-1.8**
PALK				pmax	pmax		
	comp=Z,18nm,1.1s						
PCHI	**Peechi**	**53.00**	**259**	eP	**P**	**05 20 42.5**	**+3.3**
PCHI				eS	**S**	**05 28 00.3**	**-8.0**
SVE	**Sverdlovsk**	**53.07**	**320**	eP	**P**	**05 20 40.0**	**+0.8**
SVE				pmax	pmax		
	comp=Z,36nm,1.4s						
SVE				MLR	MLR		
	comp=Z,1µm,17.0s						
PSA00	**Pilbara Seismi**	**53.13**	**191**	P	**P**	**05 20 39.5**	**-0.5**
CTA	**Charters Tower**	**53.42**	**160**	P	**P**	**05 20 41.3**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=351,slow=9.4,SNR=6.1						
CTA				LR	LR	05 42 11.3	
	comp=Z,115nm,21.0s,baz=340,slow=35						
	comp=Z,4.7nm,0.7s						
CTAO	**Charters Tower**	**53.42**	**160**	P	**P**	**05 20 41.2**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**53.42**	**160**	P	**P**	**05 20 41.2**	**-1.0**
CTAO				IAmb	IAmb	05 20 48.8	
	comp=Z,13nm,0.9s						
ABKAR	**Akbulak array**	**54.09**	**311**	P	**P**	**05 20 45.8**	**-1.1**
ABKAR				IAmb	IAmb	05 20 50.9	
	comp=Z,9.2nm,0.7s						
ABKAR	**Akbulak array**	**54.09**	**311**	P	**P**	**05 20 45.9**	**-0.9**
ARU	**Arti**	**54.23**	**320**	P	**P**	**05 20 47.6**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=87,slow=6.5,SNR=8.6						
ARU				LR	LR	05 46 34.1	
	comp=Z,737nm,18.1s,baz=80,slow=39						
	comp=Z,1.3nm,0.3s						
ARU	**Arti**	**54.23**	**320**	d iP	**P**	**05 20 47.4**	**-0.3**
ARU				S	**S**	**05 28 25.5**	**+1.5**
ARU				SS	**SKiKP**	**05 32 01.5**	**+3.5**
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
ARU				MLR	MLR		
	comp=Z,763nm,16.0s						
ARU	**Arti**	**54.23**	**320**	P	**P**	**05 20 47.4**	**-0.3**
AS31	**Alice Springs**	**54.62**	**175**	P	**P**	**05 20 50.1**	**-0.7**
ASAR	**Alice Springs**	**54.62**	**175**	P	**P**	**05 20 50.3**	**-0.6**
	comp=Z,4.1nm,0.9s,baz=358,slow=6.3,SNR=26						
ASAR				LR	LR	05 43 33.7	
	comp=Z,83nm,21.2s,baz=0.5,slow=35						
	comp=Z,4.1nm,0.9s						
AKTO	**Aktyubinsk**	**55.17**	**312**	P	**P**	**05 20 54.5**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=81,slow=9.0,SNR=14						
AKTO				LR	LR	05 46 11.2	
	comp=Z,1µm,18.1s,baz=87,slow=38						
	comp=Z,4.8nm,0.9s						
HRA	**Herat**	**55.55**	**293**	P	**P**	**05 20 57.7**	**-0.2**
A21K	**Barrow**	**55.80**	**22**	P	**P**	**05 20 58.8**	**-0.1**
A21K				IAmb	IAmb	05 21 04.3	
	comp=Z,13nm,0.8s						
J20K	**Nowinta River**	**56.70**	**31**	P	**P**	**05 21 06.0**	**+0.7**
J20K				IAmb	IAmb	05 21 11.9	
	comp=Z,14nm,1.0s						
IMAR	**Indian Mountai**	**56.78**	**28**	P	**P**	**05 21 06.2**	**+0.3**
H21K	**Melozitna Rive**	**57.19**	**29**	P	**P**	**05 21 09.5**	**+0.7**
P19K	**Oil Pt**	**57.53**	**36**	P	**P**	**05 21 11.1**	**-0.2**
CAST	**Castle Rocks**	**57.67**	**31**	P	**P**	**05 21 13.8**	**+1.5**
CAST				IAmb	IAmb	05 21 18.5	
	comp=Z,9.4nm,1.0s						
PPLA	**Purkeypile**	**57.67**	**32**	P	**P**	**05 21 13.1**	**+0.6**

GEYT	**Alibeck**	**57.76**	**298**	P	**P**	**05 21 13.4**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=159,slow=5.7,SNR=2.9						
GEYT				LR	LR	05 49 31.6	
	comp=Z,440nm,18.4s,baz=106,slow=40						
	comp=Z,5.8nm,0.8s						
KDAK	**Kodiak Island**	**58.11**	**38**	P	**P**	**05 21 14.7**	**-0.7**
	comp=Z,6.3nm,0.7s,baz=302,slow=9.5,SNR=1.3						
KDAK				LR	LR	05 46 54.9	
	comp=Z,236nm,20.9s,baz=259,slow=37						
	comp=Z,6.3nm,0.7s						
KTH	**Kantishna Hill**	**58.17**	**31**	P	**P**	**05 21 15.3**	**-0.6**
KTH				IAmb	IAmb	05 21 35.6	
	comp=Z,14nm,1.1s						
TOLK	**Toolik Lake Re**	**58.24**	**25**	P	**P**	**05 21 16.7**	**+0.5**
H23K	**Yukon River**	**58.51**	**29**	P	**P**	**05 21 18.9**	**+0.7**
H23K				IAmb	IAmb	05 21 24.9	
	comp=Z,15nm,0.8s						
NEA2	**Nenana**	**58.86**	**30**	P	**P**	**05 21 20.4**	**-0.2**
NEA2				IAmb	IAmb	05 21 26.6	
	comp=Z,15nm,1.0s						
KIRV	**Kirov**	**58.89**	**323**	LR	LR	05 50 56.8	
	comp=Z,321nm,18.1s,baz=83,slow=40						
KIRV	**Kirov**	**58.89**	**323**	*ce*P	**P**	**05 21 20.6**	**-0.2**
MDM	**Murphy Dome**	**59.17**	**29**	P	**P**	**05 21 22.5**	**-0.2**
H24K	**Noodor Dome**	**59.19**	**28**	P	**P**	**05 21 23.3**	**+0.4**
H24K				IAmb	IAmb	05 21 43.5	
	comp=Z,8.8nm,1.0s						
COLA	**College**	**59.34**	**30**	⇓*i*P	**P**	**05 21 23.7**	**-0.1**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
POKR	**Poker Plat Res**	**59.48**	**29**	P	**P**	**05 21 24.3**	**-0.6**
IL31		**59.76**	**30**	P	**P**	**05 21 26.2**	**-0.5**
IL31				IAmb	IAmb	05 21 30.3	
	comp=Z,10nm,1.1s						
ILAR	**Eielson Array**	**59.76**	**30**	P	**P**	**05 21 26.0**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=284,slow=7.3,SNR=15						
ILAR				LR	LR	05 49 59.2	
	comp=Z,116nm,19.1s,baz=352,slow=39						
	comp=Z,1.8nm,0.8s						
HDA	**Harding Lake**	**59.79**	**30**	P	**P**	**05 21 26.3**	**-0.7**
HDA				IAmb	IAmb	05 21 31.8	
	comp=Z,12nm,1.0s						
PRGR	**Permogore**	**60.22**	**327**	*e*P	**P**	**05 21 28.7**	**-1.2**
BMAR	**Burnt Mountain**	**60.25**	**26**	P	**P**	**05 21 30.9**	**+0.7**
SCRK	**Sand Creek**	**61.15**	**30**	P	**P**	**05 21 36.0**	**-0.5**
SCRK				IAmb	IAmb	05 21 55.7	
	comp=Z,13nm,1.2s						
BELG	**Belogornoye**	**61.17**	**316**	P	**P**	**05 21 34.2**	**-2.3**
	comp=Z,10nm,0.7s,baz=114,slow=20,SNR=3.6						
BELG				LR	LR	05 49 56.8	
	comp=Z,586nm,18.8s,baz=23,slow=38						
	comp=Z,10nm,0.7s						
MENT	**Mentasta**	**61.49**	**31**	P	**P**	**05 21 39.0**	**+0.3**
M26K	**Nabesna, AK**	**61.94**	**32**	P	**P**	**05 21 41.6**	**-0.1**
K27K	**Chicken**	**61.96**	**30**	P	**P**	**05 21 42.0**	**+0.3**
K27K				IAmb	IAmb	05 21 47.8	
	comp=Z,11nm,1.1s						
BCAR	**Beaver Creek A**	**62.32**	**31**	P	**P**	**05 21 44.1**	**-0.1**
WSAR	**Wadi Sarin**	**62.41**	**282**	LR	LR	05 52 00.6	
	comp=Z,146nm,18.8s,baz=95,slow=39						
KLMR	**Klimovskoe**	**63.27**	**327**	*e*P	**P**	**05 21 51.5**	**+1.0**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	**Klimovskoe**	**63.27**	**327**	*e*P	**P**	**05 21 51.6**	**+1.0**
KLMR				AMP		05 21 55.1	
	comp=Z,24nm,1.5s						
KLMR				LQ	LQ	05 44 01.7	
KLMR				LQ	LQ	05 44 01.7	
KLMR				LR	LR	05 48 09.2	
LVZ	**Lovozero**	**63.30**	**335**	*e*P	**P**	**05 21 50.3**	**-0.4**
LVZ				pmax	pmax		
	comp=Z,21nm,1.4s						
STKA	**Stephens Creek**	**63.69**	**168**	P	**P**	**05 21 53.2**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=351,slow=7.5,SNR=7.0						
STKA				LR	LR	05 49 34.8	
	comp=Z,98nm,21.8s,baz=8.2,slow=36						
	comp=Z,3.2nm,0.6s						
STKA	**Stephens Creek**	**63.69**	**168**	P	**P**	**05 21 53.5**	**-0.1**
DZM	**Mont Dzumac**	**63.75**	**141**	LR	LR	05 48 42.2	
	comp=Z,117nm,18.1s,baz=26,slow=35						
MAK	**Makhachkala**	**63.96**	**306**	*e*P	**P**	**05 21 52.0**	**-3.4**
MAK				*e*S	**S**	**05 30 26.5**	**-4.0**
MAK				pmax	pmax		
	comp=Z,24nm,0.3s						
MAK				MLR	MLR		
	comp=Z,292nm,12.0s						
INK	**Inuvik**	**64.09**	**24**	P	**P**	**05 21 55.2**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=283,slow=5.9,SNR=7.9						
INK				LR	LR	05 53 20.1	
	comp=Z,250nm,18.4s,baz=284,slow=39						
	comp=Z,2.7nm,0.9s						
INK	**Inuvik**	**64.09**	**24**	P	**P**	**05 21 55.3**	**-0.5**
VRH	**Novokhopyorsk**	**65.02**	**316**	*e*P	**P**	**05 22 00.8**	**-1.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KEV	**Kevo**	**65.28**	**338**	P	**P**	**05 22 03.8**	**+0.2**
KEV				pmax	pmax		
	comp=Z,17nm,1.1s						
KEV	**Kevo**	**65.28**	**338**	P	**P**	**05 22 03.8**	**+0.2**
KEV				IAmb	IAmb	05 22 18.8	
	comp=Z,17nm,1.1s						
A36M	**Sachs Harbour**	**65.36**	**19**	P	**P**	**05 22 03.9**	**-0.1**
MOS	**Moscow**	**65.82**	**322**	*e*P	**P**	**05 22 11.5**	**+4.3**
MOS				*e*		05 24 38.2	
ARCES	**ARCESS Array B**	**65.86**	**338**	P	**P**	**05 22 05.2**	**-2.1**
	comp=Z,3.0nm,0.9s,baz=41,slow=2.4,SNR=4.7						
ARCES				LR	LR	05 54 54.7	
	comp=Z,433nm,18.2s,baz=44,slow=40						
	comp=Z,3.0nm,0.9s						
LPSR	**Galich'ya Gora**	**66.18**	**318**	*e*P	**P**	**05 22 12.4**	**+2.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NOR	**Nord**	**66.20**	**355**	*i* P	**P**	**05 22 10.5**	**+1.2**
NOR				IAmb	IAmb	05 22 14.5	
	comp=Z,3.1nm,0.7s						
GOF	**Gofitskoye**	**66.28**	**309**	⇑*e*P	**P**	**05 22 13.9**	**+3.5**
VORR	**Voronezh**	**66.34**	**317**	*e*P	**P**	**05 22 11.5**	**+0.8**
VORR				pmax	pmax		
	comp=Z,70nm,0.4s						
ZEI	**Tsey**	**66.51**	**307**	*e*P	**P**	**05 22 10.8**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
VSR	**Storozhevoye**	**66.53**	**317**	*e*P	**P**	**05 22 12.1**	**+0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	**Obninsk**	**66.60**	**321**	LR	LR	05 54 01.7	
	comp=Z,114nm,19.0s,baz=46,slow=38						
OBN	**Obninsk**	**66.60**	**321**	*e*P	**P**	**05 22 12.3**	**+0.1**
OBN				*e*		05 24 39.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,473nm,16.0s						
KBZ	**Khabaz**	**66.85**	**308**	P	**P**	**05 22 14.3**	**+0.3**
	comp=Z,22nm,0.9s,baz=58,slow=2.4,SNR=21						
KBZ				LR	LR	05 52 44.8	
	comp=Z,275nm,18.1s,baz=88,slow=37						
	comp=Z,22nm,0.9s						
KBZ	**Khabaz**	**66.85**	**308**	⇓*i*P	**P**	**05 22 14.6**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,26nm,1.0s						
C36M	**Paulatuk**	**66.86**	**22**	P	**P**	**05 22 13.3**	**-0.3**
C36M				IAmb	IAmb	05 22 18.9	
	comp=Z,11nm,0.8s						
GNI	**Garni**	**66.89**	**304**	LR	LR	05 53 23.8	
	comp=Z,169nm,20.9s,baz=83,slow=38						
ONI	**Oni**	**66.89**	**307**	P	**P**	**05 22 15.4**	**+0.9**
ONI				pmax	pmax		
	comp=Z,12nm,1.0s						
ONI	**Oni**	**66.89**	**307**	P	**P**	**05 22 15.4**	**+0.9**
ONI				IAmb	IAmb	05 22 20.0	
	comp=Z,12nm,1.0s						
KIV	**Kislovodsk**	**66.91**	**308**	*e*P	**P**	**05 22 15.6**	**+1.0**
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV				MLR	MLR		
	comp=Z,234nm,17.0s						
KIV	**Kislovodsk**	**66.91**	**308**	P	**P**	**05 22 15.4**	**+0.8**
SHA1	**Shidzhatmaz**	**67.01**	**308**	*d i*P	**P**	**05 22 16.1**	**+0.7**
VALR	**Valaam**	**67.06**	**329**	*e*P	**P**	**05 22 15.7**	**+0.6**
VALR				pmax	pmax		
	comp=Z,11nm,0.8s						
EUNU	**Eureka**	**67.37**	**6**	P	**P**	**05 22 16.9**	**0.0**
EUNU				IAmb	IAmb	05 22 23.0	
	comp=Z,13nm,0.8s						
GEVA	**Gevas**	**68.80**	**303**	P	**P**	**05 22 26.7**	**0.0**
SOC	**Sochi**	**69.04**	**309**	*e*P	**P**	**05 22 25.8**	**-2.1**
SOC				*e*		05 24 59.9	
SOC				*e*S	**S**	**05 31 30.0**	**-2.1**
SOC				*e*		05 32 25.9	
SOC				*e*SS	**SS**	**05 35 57.2**	**-0.2**
SOC				MLR	MLR		
	comp=Z,267nm,18.0s						
FIA1	**FINESS Array S**	**69.12**	**330**	P	**P**	**05 22 29.8**	**+1.7**
FIA1				IAmb	IAmb	05 22 44.2	
	comp=Z,12nm,0.9s						
FINES	**FINESS Array B**	**69.12**	**330**	P	**P**	**05 22 26.9**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=71,slow=5.8,SNR=8.9						
FINES				LR	LR	05 55 27.3	
	comp=Z,284nm,21.8s,baz=50,slow=38						
	comp=Z,1.2nm,0.5s						
DLBC	**Dease Lake**	**69.32**	**34**	LR	LR	05 53 01.5	
	comp=Z,132nm,20.1s,baz=308,slow=36						
ANN	**Anapa**	**70.06**	**311**	*e*P	**P**	**05 22 34.0**	**-0.1**
ANN				*e**PP	**sP**	**05 22 41.2**	**-0.7**
ANN				*e*S	**S**	**05 31 46.5**	**+2.6**
ANN				pmax	pmax		
	comp=Z,41nm,1.2s						
ANN				MLR	MLR		
	comp=Z,650nm,22.0s						
VSU	**Vasula**	**70.18**	**327**	*e*P	**P**	**05 22 35.2**	**+0.6**
MEF	**Metsahovi**	**70.42**	**329**	*e*P	**P**	**05 22 36.3**	**+0.3**
DAG	**Danmarks Havn**	**70.58**	**353**	*i* P	**P**	**05 22 39.8**	**+3.0**
DAG				IAmb	IAmb	05 22 49.2	
	comp=Z,2.9nm,0.9s						
RES	**Resolute Bay**	**70.63**	**11**	P	**P**	**05 22 36.3**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=309,slow=6.7,SNR=12						
RES				LR	LR	05 56 50.4	
	comp=Z,108nm,18.3s,baz=315,slow=39						
	comp=Z,3.4nm,0.8s						
RES	**Resolute Bay**	**70.63**	**11**	P	**P**	**05 22 36.8**	**-0.2**
RES				IAmb	IAmb	05 22 43.4	
	comp=Z,24nm,1.4s						
RAF	**Rauma**	**71.16**	**331**	*e*P	**P**	**05 22 41.0**	**+0.5**
SOCY	**Socotra**	**71.29**	**273**	P	**P**	**05 22 40.3**	**-1.9**
MTSE	**Matsula**	**71.41**	**328**	*e*P	**P**	**05 22 42.8**	**+0.7**
NACGM	**Naroch**	**71.81**	**324**	*i* P	P	05 22 53.1	+8.6
	baz=62						
AFI	**Afiamalu**	**72.12**	**119**	LR	LR	05 46 40.3	
	comp=Z,125nm,20.0s,baz=292,slow=29						
AKASG	**Malin Array Be**	**72.47**	**319**	P	**P**	**05 22 47.5**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=54,slow=6.7,SNR=10						
AKASG				LR	LR	05 56 23.3	
	comp=Z,559nm,18.9s,baz=118,slow=37						
	comp=Z,1.1nm,0.6s						
AKBB	**Malin Array Si**	**72.47**	**319**	P	**P**	**05 22 49.5**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKBB	**Malin Array Si**	**72.47**	**319**	P	**P**	**05 22 49.5**	**+0.9**
AKBB				IAmb	IAmb	05 23 01.8	
	comp=Z,8.5nm,0.8s						
PABE	**Paberze**	**72.93**	**325**	*e*P	**P**	**05 22 51.6**	**+0.4**
BBB	**Bella Bella**	**73.17**	**39**	LR	LR	05 54 05.8	
	comp=Z,77nm,20.5s,baz=320,slow=35						
RAYN	**Ar Rayn**	**73.19**	**288**	P	**P**	**05 22 52.0**	**-1.4**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	**73.19**	**288**	P	**P**	**05 22 52.0**	**-1.4**
UPP	**Uppsala**	**73.52**	**331**	*e*P	**P**	**05 22 55.2**	**+0.6**
YKA	**Yellowknife Ar**	**73.76**	**26**	P	**P**	**05 22 55.4**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=308,slow=5.7,SNR=32						
YKA				LR	LR	05 58 47.5	
	comp=Z,108nm,18.1s,baz=332,slow=38						
	comp=Z,3.6nm,0.9s						
YKA	**Yellowknife Ar**	**73.76**	**26**	P	**P**	**05 22 55.7**	**-0.3**
JMIC	**Jan Mayen**	**73.92**	**347**	LR	LR	05 56 56.2	
	comp=Z,80nm,20.4s,baz=74,slow=37						
SUW	**Suwalki**	**74.08**	**324**	*e*P	**P**	**05 22 58.5**	**+0.5**
VIKU	**Vikbolandet**	**74.68**	**330**	*e*P	**P**	**05 23 00.7**	**-0.7**
BRTR	**Keskin Array B**	**74.81**	**307**	P	**P**	**05 23 01.8**	**-1.0**
	comp=Z,9.1nm,1.1s,baz=68,slow=7.2,SNR=15						
BRTR				LR	LR	06 02 52.1	
	comp=Z,184nm,18.0s,baz=65,slow=41						
	comp=Z,9.1nm,1.1s						
BRTR	**Keskin Array B**	**74.81**	**307**	P	**P**	**05 23 02.7**	**-0.1**
HFS	**Hagfors**	**74.97**	**332**	LR	LR	05 57 23.1	
	comp=Z,318nm,18.8s,baz=39,slow=37						
NB2	**NORSAR Subarra**	**75.39**	**334**	P	**P**	**05 23 04.4**	**-1.2**
	comp=Z,12nm,1.2s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**75.39**	**334**	P	**P**	**05 23 04.2**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=50,slow=5.7,SNR=9.7						
NOA				LR	LR	05 58 54.8	
	comp=Z,181nm,18.7s,baz=65,slow=38						
	comp=Z,2.0nm,0.7s						
BURAR	**Bucovina Array**	**76.28**	**318**	P	**P**	**05 23 10.2**	**-0.7**
MMAI	**Mount Meron Ar**	**76.71**	**301**	LR	LR	06 01 23.3	
	comp=Z,105nm,18.7s,baz=239,slow=39						
BORA	**Eskisehir**	**76.89**	**309**	P	**P**	**05 23 14.1**	**-0.5**
BORA				IAmb	IAmb	05 23 28.3	
	comp=Z,9.6nm,0.8s						
MLR	**Muntele Rosu**	**76.94**	**315**	LR	LR	06 00 13.2	
	comp=Z,372nm,18.2s,baz=53,slow=38						
BSD	**Bornholm Skovb**	**77.46**	**328**	*e*P	**P**	**05 23 16.8**	**-0.5**
EIL	**Elat**	**78.66**	**298**	LR	LR	06 03 11.3	
	comp=Z,193nm,19.2s,baz=90,slow=40						
LANS	**Liptovska Anna**	**78.67**	**321**	*e*P	**P**	**05 23 27.1**	**+2.9**
MORC	**Moravsky Berou**	**79.33**	**322**	*e*P	**P**	**05 23 28.9**	**+1.0**
DPC	**Dobruska-Polom**	**79.63**	**323**	*e*P	P	05 23 43.5	+14
ICESG	**Greenland Ices**	**79.80**	**356**	*i* P	**P**	**05 23 32.2**	**+1.8**
ICESG				IAmb	IAmb	05 23 41.7	
	comp=Z,4.0nm,0.7s						
JAVC	**Velka Javorina**	**79.80**	**321**	*e*P	**P**	**05 23 31.9**	**+1.4**
VRAC	**Vranov**	**80.11**	**322**	LR	LR	06 02 18.0	
	comp=Z,425nm,18.4s,baz=62,slow=38						
VRAC	**Vranov**	**80.11**	**322**	*e*P	**P**	**05 23 31.9**	**-0.1**
MODS	**Modra-Piesok**	**80.30**	**321**	*e*P	**P**	**05 23 36.4**	**+3.3**
KRUC	**Moravsky**	**80.36**	**322**	*e*P	**P**	**05 23 32.4**	**-1.0**
BRG	**Berggiesshubel**	**80.51**	**325**	*e*P	P	05 23 41.6	+7.4
BRG				Amp		05 23 50.1	
	comp=Z,6.1nm,1.1s						
BRG				Amp		06 03 03.0	
	comp=N,0.3nm,16.9s						
BRG				Amp		06 03 05.0	
	comp=E,0.6nm,14.8s						
BRG				Amp		06 03 08.0	
	comp=Z,0.6nm,13.9s						
CLL	**Collm**	**80.71**	**325**	*e*P	**P**	**05 23 35.0**	**-0.2**
CLL				*e*		05 23 39.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CLL				MLR	MLR		
	comp=Z,600nm,18.9s						
CLL	**Collm**	**80.71**	**325**	*e*P	**P**	**05 23 35.0**	**-0.2**
	comp=Z,6.0nm,1.2s						
CLL				*e*pP	**pP**	**05 23 39.0**	**-2.0**
CLL				*i* sPcP		05 23 48.5	
	comp=Z,20nm,1.5s						
CLL				*e*SS	SS	05 39 00.0	+6.1
CLL				*e*x	x	05 43 06.0	
CLL				LmH		06 00 00.0	
	comp=N,500nm,18.6s						
CLL				LmH		06 00 00.0	
	comp=E,600nm,20.4s						
CLL				LmV		06 02 00.0	
	comp=Z,600nm,18.9s						
PRU	**Pruhonice**	**80.76**	**324**	*e*P	P	05 23 49.6	+14
ATD	**Arta Tunnel**	**81.12**	**278**	LR	LR	06 00 28.9	
	comp=Z,81nm,20.2s,baz=352,slow=36						
NEW	**Newport**	**81.22**	**38**	LR	LR	06 00 49.4	
	comp=Z,131nm,19.5s,baz=327,slow=36						
BORG	**Borgarnes**	**81.76**	**348**	LR	LR	06 00 16.4	
	comp=Z,82nm,21.6s,baz=32,slow=36						
KHC	**Kasperske Hory**	**81.78**	**323**	*e*P	P	05 23 54.7	+14
YBH	**Yreka Blue Hor**	**81.83**	**46**	LR	LR	05 55 18.8	
	comp=Z,24nm,20.6s,baz=306,slow=32						
GERES	**GERESS Array B**	**81.90**	**323**	P	**P**	**05 23 42.5**	**+0.8**
	comp=Z,0.3nm,0.2s,baz=60,slow=5.8,SNR=1.3						
GERES				LR	LR	06 02 43.5	
	comp=Z,320nm,18.3s,baz=70,slow=38						
	comp=Z,0.3nm,0.2s						
SFJD	**Kangerlussuaq**	**82.23**	**360**	P	**P**	**05 23 43.2**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=14,slow=5.8,SNR=2.4						
	comp=Z,4.3nm,0.7s						
SFJD	**Kangerlussuaq**	**82.23**	**360**	IAmb	IAmb	05 23 59.0	
	comp=Z,12nm,1.1s						
SFJD	**Kangerlussuaq**	**82.23**	**360**	*i* P	**P**	**05 23 47.5**	**+4.5**
OBKA	**Obir**	**82.90**	**321**	*e*P	**P**	**05 23 51.8**	**+4.8**
	comp=Z,0.9nm,0.3s						
IDI	**Anoyia**	**83.05**	**307**	LR	LR	06 06 25.2	
	comp=Z,137nm,20.7s,baz=72,slow=40						
KBA	**Koelnbreinsper**	**83.19**	**322**	*e*P	P	05 23 55.1	+6.5
	comp=Z,1.0nm,0.4s						
J08A	**Circle Bar Ran**	**83.43**	**43**	P	**P**	**05 23 49.8**	**0.0**
J08A				IAmb	IAmb	05 24 15.8	
	comp=Z,5.9nm,0.9s						
FCC	**Fort Churchill**	**83.49**	**21**	P	**P**	**05 23 49.3**	**-0.3**
FCC				pmax	pmax		
	comp=Z,21nm,1.0s						
FCC	**Fort Churchill**	**83.49**	**21**	P	**P**	**05 23 49.3**	**-0.3**
ABTA	**Abfaltersbach**	**83.84**	**322**	*e*P	**P**	**05 23 51.6**	**-0.3**
	comp=Z,1.4nm,0.5s						
STAL	**STALIGIAL**	**84.05**	**321**	P	**P**	**05 23 52.2**	**-0.6**
STAL				IAmb	IAmb	05 23 56.4	
	comp=Z,16nm,1.2s						
BEKR	**Beckworth**	**84.36**	**46**	P	**P**	**05 23 53.7**	**-1.1**
BEKR				IAmb	IAmb	05 24 14.7	
	comp=Z,7.7nm,1.2s						
FRB	**Frobisher Bay**	**84.44**	**8**	P	**P**	**05 23 54.2**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=344,slow=8.5,SNR=1.6						
FRB				LR	LR	06 05 28.4	
	comp=Z,145nm,18.2s,baz=358,slow=38						
	comp=Z,4.7nm,0.7s						
BTNL	**Ternell**	**84.45**	**328**	*d*PcP	**PcP**	**05 23 58.7**	**+0.3**
BTNL				*d*x	x	05 24 06.9	
FETA	**Feichten**	**84.60**	**323**	*e*P	**P**	**05 23 56.0**	**+0.2**
	comp=Z,2.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**84.79**	**335**	LR	LR	06 07 10.9	
	comp=Z,330nm,18.4s,baz=24,slow=40						
BCLA	**Clavier**	**84.94**	**328**	*d*PcP	**P**	**05 23 58.4**	**+1.2**
PAHR	**Pah Rah Range**	**85.06**	**46**	P	**P**	**05 23 55.9**	**-2.3**
PAHR				IAmb	IAmb	05 24 19.4	
	comp=Z,10nm,1.3s						
WLF	**Walferdange**	**85.08**	**327**	P	**P**	**05 23 57.4**	**-0.5**
WLF				pmax	pmax		
	comp=Z,21nm,1.0s						
WLF	**Walferdange**	**85.08**	**327**	P	**P**	**05 23 57.4**	**-0.5**
WLF	**Walferdange**	**85.08**	**327**	*d*P	**P**	**05 23 57.8**	**-0.1**
WLF				*d*x	x	05 24 09.0	
DAVOX	**Davos/Dischmat**	**85.20**	**323**	LR	LR	06 03 47.5	
	comp=Z,352nm,18.7s,baz=64,slow=37						
BMRD	**Maredsous**	**85.27**	**328**	*d*x	P	05 24 12.6	+14
CMB	**Columbia Colle**	**85.43**	**48**	P	**P**	**05 23 59.9**	**-0.1**
CMB				pmax	pmax		
	comp=Z,13nm,1.4s						
CMB	**Columbia Colle**	**85.43**	**48**	P	**P**	**05 23 59.9**	**-0.1**
CMB				IAmb	IAmb	05 24 18.5	
	comp=Z,13nm,1.4s						
DLMT	**Dillon**	**85.46**	**39**	P	**P**	**05 23 59.6**	**-0.5**
DLMT				IAmb	IAmb	05 24 06.4	
	comp=Z,11nm,1.1s						
RAR	**Rarotonga**	**85.61**	**118**	LR	LR	05 55 28.5	
	comp=Z,69nm,21.9s,baz=240,slow=31						
HLID	**Hailey**	**85.62**	**41**	P	**P**	**05 24 01.4**	**+0.4**
NVAR	**Mina Array Bea**	**86.50**	**47**	P	**P**	**05 24 05.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=306,slow=4.1,SNR=12						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**86.50**	**47**	P	**P**	**05 24 04.4**	**-1.1**
GCMT	**Greycliff**	**86.71**	**37**	P	**P**	**05 24 05.8**	**-0.5**
RLMT	**Red Lodge**	**87.37**	**37**	P	**P**	**05 24 09.8**	**+0.1**
RLMT				IAmb	IAmb	05 24 15.6	
	comp=Z,6.9nm,1.1s						
TPH	**Tonopah**	**87.39**	**46**	P	**P**	**05 24 08.3**	**-1.5**
TPH				pmax	pmax		
	comp=Z,19nm,1.0s						
TPH	**Tonopah**	**87.39**	**46**	P	**P**	**05 24 08.3**	**-1.5**
DGMT	**Dagmar**	**87.50**	**32**	P	**P**	**05 24 10.1**	**+0.2**
CLF	**Chambon-Foret**	**88.05**	**328**	P	**P**	**05 24 11.9**	**-0.6**
VAE	**Valguarnera**	**88.61**	**314**	LR	LR	06 07 30.9	
	comp=Z,135nm,19.2s,baz=64,slow=38						
PD31	**Pinedale Array**	**88.82**	**39**	P	**P**	**05 24 15.8**	**-0.8**
PDAR	**Pinedale Array**	**88.82**	**39**	P	**P**	**05 24 16.4**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=11,slow=1.0,SNR=10						
PDAR				LR	LR	06 05 31.6	
	comp=Z,59nm,19.3s,baz=347,slow=37						
	comp=Z,1.3nm,0.9s						
PDAR	**Pinedale Array**	**88.82**	**39**	P	**P**	**05 24 15.9**	**-0.7**
ULM	**Lac du Bonnet**	**89.69**	**27**	P	**P**	**05 24 19.4**	**-0.8**
	comp=Z,7.4nm,0.6s,baz=318,slow=4.8,SNR=9.6						
ULM				LR	LR	06 07 37.1	
	comp=Z,101nm,18.2s,baz=330,slow=38						
	comp=Z,7.4nm,0.6s						
ULM	**Lac du Bonnet**	**89.69**	**27**	P	**P**	**05 24 19.6**	**-0.6**
P17A	**Butcher Ranch,**	**90.38**	**42**	P	**P**	**05 24 22.5**	**-1.3**
P17A				IAmb	IAmb	05 24 33.0	
	comp=Z,5.4nm,0.9s						
P18A	**Preston Nutter**	**90.56**	**42**	P	**P**	**05 24 24.1**	**-0.8**
P18A				IAmb	IAmb	05 24 34.0	
	comp=Z,7.3nm,1.0s						
PFO	**Pinyon Flats O**	**90.64**	**50**	LR	LR	05 57 53.3	
	comp=Z,139nm,21.0s,baz=276,slow=31						
SRU	**San Rafael Swe**	**90.75**	**42**	P	**P**	**05 24 25.6**	**0.0**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SRU	**San Rafael Swe**	**90.75**	**42**	P	**P**	**05 24 25.6**	**0.0**
PPT2	**Papeete2**	**91.62**	**109**	*e*LR	LR	05 53 38.6	
	comp=Z,135nm,26.8s						
B35A	**Bob, Littlefor**	**92.05**	**27**	P	**P**	**05 24 31.0**	**-0.2**
PV23	**Carpenter Ridg**	**92.06**	**42**	P	**P**	**05 24 32.0**	**+0.2**
KMBO	**Kilima Mbogo**	**92.31**	**270**	LR	LR	06 07 44.9	
	comp=Z,76nm,18.0s,baz=80,slow=37						
KEST	**Kesra**	**92.84**	**315**	LR	LR	06 10 05.5	
	comp=Z,256nm,18.0s,baz=319,slow=38						
TBI	**Tubuai**	**94.74**	**114**	*e*LR	LR	05 55 08.7	
	comp=Z,100nm,33.0s						
TAOE	**Nuku Hiva Isla**	**94.99**	**97**	*e*LR	LR	05 55 45.5	
	comp=Z,161nm,23.5s						
ANMO	**Albuquerque**	**95.96**	**43**	LR	LR	06 05 50.0	
	comp=Z,34nm,21.1s,baz=339,slow=34						
ESDC	**Sonseca Array**	**97.30**	**325**	PP	**PP**	**05 28 52.5**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=40,slow=8.4,SNR=2.2						
ESDC				LR	LR	06 11 45.6	
	comp=Z,280nm,20.6s,baz=16,slow=37						
MBAR	**Mbarara**	**97.63**	**274**	LR	LR	06 12 14.2	
	comp=Z,100nm,18.1s,baz=30,slow=38						
TXAR	**Lajitas Array**	**101.60**	**45**	P	**Pdif**	**05 25 15.2**	**+0.3**
	comp=Z,0.1nm,0.7s,baz=263,slow=2.3,SNR=1.6						
TXAR				PP	**PP**	**05 29 27.5**	**+3.1**
	comp=Z,0.7nm,1.1s,baz=116,slow=2.9,SNR=3.9						
QSPA	**South Pole Qui**	**120.84**	**180**	PKP	**PKPdf**	**05 30 12.3**	**-1.3**
	baz=284,slow=2.1						
NNA	**Nana**	**149.29**	**58**	PKPbc	**PKPbc**	**05 31 10.2**	**-1.4**
	comp=Z,2.4nm,0.4s,baz=317,slow=18,SNR=1.9						
LPAZ	**La Paz**	**158.34**	**51**	PKPab	**PKPab**	**05 31 54.5**	**-0.6**
	comp=Z,2.9nm,1.0s,baz=162,slow=13,SNR=4.8						

IDC 06 05:12:05.5±2.7**, 6°.07S×130°.40E, h0^{km}, mb3.8**/1**, mbtmp3.4**/3**, ML2.9**/2**, Error ellipse: s-maj=172.9km s-min=33.3km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.31**	**165**	Pn	Pn	05 15 29.9	+0.3
	baz=348,slow=13,SNR=2.5						
WRA				Sn	Sn	05 17 57.2	-12
	0.2nm,0.3s,baz=341,slow=22,SNR=2.7						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**17.82**	**169**	P	Pn	05 16 14.8	-0.2
	0.1nm,0.3s,baz=347,slow=12,SNR=2.4						
ASAR				S	Sn	05 19 23.7	-11
	0.2nm,0.4s,baz=339,slow=27,SNR=2.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**67.67**	**326**	P	P	05 23 04.5	0.0
	0.4nm,0.4s,baz=125,slow=8.1,SNR=4.3						
	0.4nm,0.4s						

IDC ***06*** *05:18:25.9±2.6, 36°.72N×71°.70E, h0^{km}, mb3.7/5, mbtmp3.8/9, ML3.5/4, MS4.4/1, Error ellipse: s-maj=54.9km s-min=26.3km az=149.0*

NNC ***06*** *05:18:31.2±4.3, 37°.44N×71°.07E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=32.8km s-min=22.5km az=178.0*

ISC 06 05:18:36.5±0.8**, 37°.46N**±0°.06×**71°.51E**±0°.07**, h109^{km}, n24,** σ**4^{s}.07**/21**, mb3.6**/5**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.64**	**175**	P	**Pn**	**05 19 30.5**	**-0.7**
CEP				S	**Sn**	**05 20 18.0**	**+4.6**
CHCP	**Chirah Chowk**	**4.05**	**159**	P	**Pn**	**05 19 33.9**	**-2.7**
KSH	**Kashi**	**4.06**	**58**	P	**Pn**	**05 19 32.3**	**-4.4**
KSH				S	**Sn**	**05 20 15.4**	**-7.9**
KSH				pmax	pmax		
	comp=Z,40nm,0.6s						
KSH				smax	smax		
	comp=N,200nm,1.0s						
KSH				smax	smax		

	comp=E,350nm,0.9s						
KSH				LR	LR		
	comp=N,580nm,5.8s						
KSH				LR	LR		
	comp=E,710nm,9.0s						
KSH	**Kashi**	**4.06**	**58**	P	**Pn**	**05 19 32.4**	**-4.3**
KSH	**Kashi**	**4.06**	**58**	LR	LR		
	comp=E,480nm,13.7s						
KSH	**Kashi**	**4.06**	**58**	LR	LR		
	comp=E,980nm,13.0s						
KSH	**Kashi**	**4.06**	**58**	pmax	pmax		
	comp=E,41nm,0.6s						
KSH	**Kashi**	**4.06**	**58**	LR	LR		
	comp=E,980nm,15.9s						
THW	**Thamme Wali**	**4.66**	**178**	P	**Pn**	**05 19 41.0**	**-3.7**
AAK	**Ala-Archa**	**5.66**	**23**	Pn	**Pn**	**05 20 00.8**	**+2.6**
	comp=E,0.6nm,0.3s,baz=108,slow=7.2,SNR=2.5						
AAK				LR	LR	05 22 25.7	
	comp=E,82nm,18.4s,baz=186,slow=38						
KK31	**Karatay Array**	**5.69**	**353**	⇓Sn	**Sn**	**05 21 05.6**	**+3.1**
	comp=E,8.5nm,0.5s,baz=173,slow=22,SNR=4.6						
KK31				⇓Lg	Lg	05 21 29.9	
	comp=E,5.6nm,0.4s						
TKM2	**Tokmak 2**	**6.29**	**29**	⇓Pn	**Pn**	**05 20 09.4**	**+2.6**
	comp=E,3.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**05 21 22.8**	**+5.5**
	comp=E,3.9nm,0.8s						
GEYT	**Alibeck**	**10.63**	**277**	Pn	**Pn**	**05 21 02.0**	**-3.5**
	comp=E,0.7nm,0.3s,baz=106,slow=15,SNR=2.4						
GEYT				Sn	**Sn**	**05 22 60.0**	**-2.6**
	comp=E,1.9nm,0.3s,baz=110,slow=25,SNR=3.5						
	comp=E,1.4nm,0.3s						
MKAR	**Makanchi Array**	**12.28**	**37**	Pn	**Pn**	**05 21 31.0**	**+3.5**
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=1.7						
	comp=E,0.6nm,0.6s						
AB31	**Akbulak array**	**14.46**	**328**	⇑Pn	**Pn**	**05 21 53.2**	**-2.6**
	comp=E,0.8nm,0.4s,baz=97,slow=8.6,SNR=17						
AB31				Sn	**Sn**	**05 24 31.1**	**-4.0**
	comp=E,1.9nm,0.5s,baz=150,slow=23,SNR=7.1						
AKTO	**Aktyubinsk**	**16.17**	**328**	Pn	**P**	**05 22 22.2**	**+3.9**
	comp=E,0.3nm,0.3s,baz=142,slow=12,SNR=2.1						
	comp=E,2.6nm,0.6s						
AKTO	**Aktyubinsk**	**16.17**	**328**	⇑P	**P**	**05 22 17.8**	**-0.6**
	comp=E,4.0nm,0.8s						
AKTO				⇑S	**Sn**	**05 25 15.4**	**-0.9**
	comp=E,4.8nm,0.9s						
ZALV	**Zalesovo Beam**	**18.87**	**25**	P	**Pn**	**05 22 53.5**	**+3.8**
	comp=E,0.5nm,0.3s,baz=215,slow=11,SNR=7.0						
	comp=E,2.2nm,0.5s						
FINES	**FINESS Array B**	**36.92**	**325**	P	P	05 25 40.8	+6.4
	comp=E,0.8nm,0.7s,baz=120,slow=8.2,SNR=2.0						
	comp=E,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**40.42**	**337**	P	P	05 26 11.2	+7.7
	comp=E,2.2nm,0.9s,baz=123,slow=6.7,SNR=3.5						
	comp=E,2.2nm,0.9s						
SPITS	**Spitsbergen Ar**	**46.66**	**347**	LR	LR	05 50 29.7	
	comp=E,419nm,18.8s,baz=262,slow=41						
ESDC	**Sonseca Array**	**57.38**	**297**	P	P	05 28 19.4	+6.0
	comp=E,0.5nm,0.8s,baz=69,slow=7.0,SNR=2.4						
	comp=E,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.15**	**269**	P	**P**	**05 29 16.8**	**+4.2**
	comp=E,0.5nm,0.8s,baz=48,slow=4.4,SNR=1.7						
	comp=E,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**80.27**	**3**	P	P	05 30 42.1	+7.4
	comp=E,0.4nm,0.8s,baz=350,slow=5.5,SNR=8.1						
	comp=E,0.4nm,0.8s						

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*IDC **06** 05:21:39.2±1.8, 2°.50S×77°.97W, h0^{km}, mb3.0/2, mbtmp3.2/4, ML3.5/2, MS2.8/1, Error ellipse: s-maj=92.2km s-min=28.2km az=74.0*

*IGQ **06** 05:21:44±0.5, 3°S±3°×7°8W±°, h5^{km}*

ISC 06 05:21:41.6±0.8**, 2°.81S**±0°.03×**77°.94W**±0°.05**, h4**^{km}**, n60,** σ**1ˢ.15**/60**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSC	**San Juan Bosco**	**0.65**	**238**	P	**Pg**	**05 21 54.0**	**-0.2**
BOSC				S	**Sg**	**05 22 03.0**	**+0.3**
SANGA	**Volcan Sangay**	**0.86**	**330**	P	**Pb**	**05 22 00.0**	**+0.5**
LOJ1	**Universidad t**	**1.25**	**200**	P	Pn	05 22 13.0	+7.0
PUYO	**Puyo, Santa Ro**	**1.31**	**356**	P	**Pg**	**05 22 07.0**	**+0.3**
APUY	**Puyo**	**1.34**	**358**	P	**Pn**	**05 22 08.0**	**+0.8**
BPAT	**Tungurahua Vol**	**1.39**	**339**	P	**Pg**	**05 22 08.0**	**-0.2**
ARRY	**Arrayan**	**1.39**	**338**	P	**Pg**	**05 22 08.0**	**-0.3**
BMAS	**Trigal station**	**1.40**	**337**	P	**Pg**	**05 22 08.0**	**-0.5**
RETU	**Refugio**	**1.44**	**339**	P	**Pg**	**05 22 09.0**	**-0.2**
BBIL	**Ulba Tungurahu**	**1.45**	**338**	P	**Pn**	**05 22 09.0**	**0.0**
BBIL				S	**Sn**	**05 22 29.0**	**+0.3**
BIL2	**Estacion Bilba**	**1.46**	**337**	P	**Pb**	**05 22 10.0**	**+0.6**
POND	**Pondoa**	**1.47**	**340**	P	**Pn**	**05 22 09.0**	**-0.2**
JUI6	**Juive**	**1.47**	**339**	P	**Pn**	**05 22 09.0**	**-0.2**
IGUA	**Igualata**	**1.48**	**332**	P	**Pb**	**05 22 11.0**	**+0.9**
TAMH	**Tambohuasha Ch**	**1.51**	**326**	P	**Pb**	**05 22 11.0**	**+0.5**
PORT	**Chimborazo Vol**	**1.57**	**328**	P	**Pb**	**05 22 12.0**	**+0.4**
CHSH	**Refugio Sur-Vo**	**1.60**	**324**	P	**Pb**	**05 22 12.0**	**-0.1**
AMIL	**Milagro (Trans**	**1.78**	**292**	P	**Pn**	**05 22 14.0**	**+0.8**
PIAT	**Ana Tenorio**	**1.82**	**350**	P	**Pn**	**05 22 15.0**	**+0.9**
GONZ	**Gonzanam**	**2.03**	**226**	P	**Pn**	**05 22 19.0**	**+2.0**
VCES	**Cotopaxi**	**2.04**	**347**	P	**Pb**	**05 22 19.0**	**-0.6**
BRRN	**Barrancas-Volc**	**2.08**	**345**	P	**Pb**	**05 22 20.0**	**-0.2**
BMOR	**Cotopaxi Volca**	**2.12**	**346**	P	**Pb**	**05 22 21.0**	**0.0**
SLOR	**San Lorenzo -**	**2.14**	**345**	P	**Pb**	**05 22 21.0**	**-0.2**
SRAM	**San Ramn-Vol**	**2.14**	**343**	P	**Pb**	**05 22 21.0**	**-0.1**
TAMB	**Tambo**	**2.14**	**348**	P	**Pb**	**05 22 21.0**	**-0.3**
BTAM	**Cotopaxi Volca**	**2.17**	**348**	P	**Pb**	**05 22 21.0**	**-0.7**
BREF	**Cotopaxi Volca**	**2.18**	**347**	P	**Pb**	**05 22 22.0**	**0.0**
BVC2	**Cotopaxi Volca**	**2.19**	**347**	P	**Pb**	**05 22 22.0**	**-0.1**
BNAS	**Cotopaxi Volca**	**2.19**	**346**	P	**Pb**	**05 22 22.0**	**-0.1**
CAMI	**Rancho Maria**	**2.19**	**345**	P	**Pb**	**05 22 22.0**	**-0.1**
NAS2	**Nasa**	**2.21**	**346**	P	**Pb**	**05 22 23.0**	**+0.5**
PAST	**Pastocalle**	**2.21**	**341**	P	**Pb**	**05 22 23.0**	**+0.6**
SUCR	**Mariscal Sucre**	**2.22**	**346**	P	**Pb**	**05 22 23.0**	**+0.4**
ISPG	**Isla Puna-Puer**	**2.23**	**266**	P	**Pb**	**05 22 22.0**	**-0.6**
ARNL	**Arenillas**	**2.25**	**251**	P	**Pn**	**05 22 21.0**	**+1.4**
ANTM	**Antisana-La Mi**	**2.27**	**353**	P	**Pn**	**05 22 22.0**	**+1.6**
ANTS	**Antisana-Sarah**	**2.30**	**354**	P	**Pn**	**05 22 23.0**	**+2.1**
ANTG	**Antisana-Guama**	**2.31**	**352**	P	**Pn**	**05 22 23.0**	**+2.1**
ANTI	**Antisana**	**2.35**	**355**	P	**Pn**	**05 22 23.0**	**+1.4**
ZUMB	**Zumba**	**2.37**	**210**	P	**Pn**	**05 22 22.0**	**+0.5**
GGPT	**Toaza - Volcan**	**2.65**	**345**	P	**Pb**	**05 22 30.0**	**+0.1**
PINO	**Pino**	**2.71**	**346**	P	**Pb**	**05 22 32.0**	**+0.9**
FLF1	**Flavio Alfaro-**	**3.09**	**322**	P	**Pn**	**05 22 34.0**	**+2.8**
CMBC	**Cumbal**	**3.72**	**2**	*e*P	**Pb**	**05 22 49.6**	**+1.4**
GCUF	**Volcan Galeras**	**4.05**	**8**	*e*P	**Pb**	**05 22 53.8**	**0.0**
GCUF				*e*S	**Sg**	**05 23 50.8**	**-1.0**
CCUFI	**Cufio, Nario**	**4.05**	**8**	*e*P	**Pg**	**05 22 57.4**	**-1.9**
ATAH	**Atahualpa**	**4.33**	**186**	Pn	**Pn**	**05 22 50.9**	**+2.3**
	2.0nm,0.3s,baz=3.8,slow=7.3,SNR=22						
ATAH				Sn	**Sn**	**05 23 40.5**	**+0.8**
	3.2nm,0.3s,baz=135,slow=21,SNR=8.9						
	7.8nm,0.4s						
CRUC	**La Cruz**	**4.46**	**13**	*e*P	**Pg**	**05 23 08.3**	**+1.3**
SOTA	**Rioblanco**	**5.08**	**15**	*e*P	**Pn**	**05 23 00.2**	**+1.1**
PCON	**Cinco Dias**	**5.33**	**17**	*e*P	**Pn**	**05 23 05.1**	**+2.6**
GARC	**Garzon, Huila**	**5.53**	**26**	*e*P	**Pn**	**05 23 05.2**	**+0.2**
BETC	**Betania**	**6.00**	**25**	*e*P	Pb	05 23 21.5	-5.3
BETC				*e*S	**Sn**	**05 24 22.1**	**+1.7**
MACC	**Macarena, Meta**	**6.40**	**40**	*e*P	**Pn**	**05 23 16.0**	**-0.7**
ORTC	**Ortega, Tolima**	**7.19**	**22**	*e*P	Pn	05 23 37.6	+10
TBTG	**Tabatinga, AM**	**8.13**	**100**	*e*P	**Pn**	**05 23 39.7**	**-0.9**
SDV	**Santo Domingo**	**13.71**	**32**	LR	LR	05 31 08.2	
	comp=Z,38nm,19.8s,baz=246,slow=42						
LPAZ	**La Paz**	**16.51**	**145**	Pn	**Pn**	**05 25 36.4**	**+1.5**
	0.1nm,0.3s,baz=318,slow=15,SNR=1.7						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**40.36**	**324**	P	P	05 29 16.7	-4.1
	0.1nm,0.7s,baz=138,slow=9.6,SNR=1.9						
	0.1nm,0.7s						
YKA	**Yellowknife Ar**	**70.80**	**343**	P	**P**	**05 32 55.5**	**-3.5**
	0.1nm,0.5s,baz=140,slow=6.3,SNR=6.0						
	0.1nm,0.5s						

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*IDC **06** 05:22:47.2±1.4, 12°.61N×142°.35E, h0^{km}, mb3.6/4, mbtmp3.7/5, ML4.3/1, Error ellipse: s-maj=63.3km s-min=29.8km az=121.0*

ISC 06 05:22:52.2±1.1**, 12°.4N**±0°.3×**143°.0E**±0°.2**, h28**^{km}**, n6,** σ**0ˢ.57**/7**, mb3.6**/4**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.21**	**57**	Pn	**Pb**	**05 23 31.7**	**+0.2**
	60nm,0.3s,baz=177,slow=10,SNR=14						
GUMO				Sn	**Sb**	**05 23 58.1**	**-0.4**

	25nm,0.3s,baz=342,slow=19,SNR=5.7						
	201nm,0.4s						
WRA	**Warramunga Arr**	**33.22**	**195**	P	**P**	**05 29 26.8**	**-0.2**
	0.4nm,0.7s,baz=19,slow=9.6,SNR=2.8						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**70.45**	**25**	P	**P**	**05 34 03.2**	**-0.5**
	0.5nm,0.7s,baz=245,slow=6.1,SNR=6.9						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**84.78**	**27**	P	**P**	**05 35 23.7**	**0.0**
	0.2nm,0.7s,baz=285,slow=4.8,SNR=5.3						
	0.2nm,0.7s						
NVAR	**Mina Array Bea**	**89.12**	**51**	P	**P**	**05 35 46.5**	**+0.9**
	0.4nm,0.5s,baz=264,slow=5.7,SNR=5.5						
	0.4nm,0.5s						
LPAZ	**La Paz**	**149.63**	**101**	PKPbc	**PKiKP**	**05 42 41.9**	**-0.2**
	0.8nm,0.8s,baz=244,slow=2.7,SNR=3.9						

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*IDC **06** 05:25:50.3±2.2, 30°.61S×177°.39W, h0^{km}, mb4.3/5, mbtmp4.2/6, ML3.2/1, Error ellipse: s-maj=47.8km s-min=24.1km az=110.0*

ISC 06 05:25:55.4±2.2**, 30°.49S**±0°.08×**177°.5W**±0°.3**, h33**^{km}**, n15,** σ**1ˢ.39**/11**, mb4.4**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.28**	**344**	Pn	**Pn**	**05 26 17.8**	**+0.9**
	218nm,0.3s,baz=152,slow=17,SNR=9.6						
RAO				Sn	**Sn**	**05 26 30.0**	**-3.0**
	418nm,0.3s,baz=180,slow=20,SNR=8.5						
URZ	**Urewera**	**8.93**	**208**	Pn	**Pn**	**05 28 00.5**	**-1.5**
	0.2nm,0.3s,baz=345,slow=20,SNR=1.6						
URZ				Sn	**Sn**	**05 29 40.5**	**-0.9**
	1.2nm,0.3s,baz=108,slow=18,SNR=6.7						
	0.9nm,0.3s						
CTA	**Charters Tower**	**34.22**	**279**	P	**P**	**05 32 38.8**	**+0.6**
	3.9nm,0.4s,baz=95,slow=9.7,SNR=8.5						
	3.9nm,0.4s						
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**05 32 45.0**	**+1.4**
	3.2nm,0.7s,baz=105,slow=11,SNR=7.8						
	3.2nm,0.7s						
ASAR	**Alice Springs**	**43.52**	**267**	P	**P**	**05 33 56.3**	**+0.3**
	0.7nm,0.3s,baz=106,slow=7.6,SNR=12						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**44.52**	**272**	P	**P**	**05 34 04.3**	**+0.3**
	1.7nm,0.3s,baz=110,slow=8.0,SNR=71						
	1.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.78**	**270**	P	**P**	**05 35 08.1**	**+0.5**
	1.4nm,0.8s,baz=180,slow=4.6						
	1.4nm,0.8s						
H03S2	**Juan Fernandez**	**80.07**	**123**	T	T	07 07 16.8	
	baz=238						
H03S1	**Juan Fernandez**	**80.08**	**123**	T	T	07 07 14.7	
	baz=238						
H03S3	**Juan Fernandez**	**80.09**	**123**	T	T	07 07 17.4	
	baz=238						
H03N3	**Juan Fernandez**	**80.26**	**123**	T	T	07 07 27.2	
	baz=232,slow=77,SNR=5.9						
H03N2	**Juan Fernandez**	**80.26**	**123**	T	T	07 07 27.2	
	baz=232,slow=77,SNR=6.2						
H03N1	**Juan Fernandez**	**80.28**	**123**	T	T	07 07 30.3	
	baz=232,slow=77,SNR=8.8						
FINES	**FINESS Array B**	**145.37**	**340**	PKPbc	**PKPab**	**05 45 29.5**	**+0.3**
	1.6nm,0.5s,baz=54,slow=4.7,SNR=16						
AKASG	**Malin Array Be**	**151.62**	**323**	PKPbc	**PKPbc**	**05 45 45.3**	**-0.5**
	0.5nm,0.4s,baz=29,slow=2.4,SNR=1.8						

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*IDC **06** 05:41:00.5±2.0, 63°.12N×150°.74W, h137^{km}±26^{km}, mb2.8/2, mbtmp3.3/6, Error ellipse: s-maj=43.0km s-min=22.0km az=122.0*

*NEIC **06** 05:41:02.2±1.0, 63°.16N±0°.04×150°.46W±0°.08, h126^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=5.1km az=53.0*

*AEIC **06** 05:41:03±1.0, 63°.15N±0°.03×150°.44W±0°.08, h116^{km}±4^{km}, ML2.9, ML3.0/112(NEIC), Error ellipse: s-maj=5.0km s-min=3.9km az=98.0*

ISC 06 05:41:00.9±0.9**, 63°.14N**±0°.03×**150°.47W**±0°.03**, h134**^{km}±6^{km}**, n125,** σ**1ˢ.12**/110**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.46**	**334**		**Pn**	**05 41 20.8**	**+0.5**
KTH	**Kantishna Hill**	**0.46**	**334**		**Sn**	**05 41 33.9**	**-1.1**
KTH	**Kantishna Hill**	**0.46**	**334**	IAML		05 41 21.2	
	comp=E,25nm,0.1s						
CUT	**Chulitna**	**0.74**	**173**		**Pn**	**05 41 22.7**	**+0.7**
CUT					**Sn**	**05 41 38.0**	**0.0**
RND	**Reindeer**	**0.78**	**69**		**Pn**	**05 41 22.8**	**+0.4**
RND					**Sn**	**05 41 37.8**	**-0.8**
RND	**Reindeer**	**0.78**	**69**	IAML		05 41 38.6	
	comp=N,438nm,0.7s						
CAST	**Castle Rocks**	**0.78**	**292**		**Pn**	**05 41 22.8**	**+0.4**
CAST					**Sn**	**05 41 37.6**	**-1.0**
PPLA	**Purkeypile**	**0.82**	**253**		**Pn**	**05 41 23.7**	**+0.9**
WAT1	**Susitna Watana**	**0.93**	**109**		**Pn**	**05 41 24.1**	**+0.6**
WAT1					**Sn**	**05 41 40.3**	**-0.4**
BPAW	**Bear Paw Mtn.**	**0.99**	**347**		**Pn**	**05 41 24.6**	**+0.5**
BPAW					**Sn**	**05 41 40.7**	**-1.0**
CHUM	**Lake Minchumin**	**1.11**	**313**		**Pn**	**05 41 26.2**	**+1.0**
CHUM					**Sn**	**05 41 43.1**	**-0.6**
BWN	**Browne**	**1.13**	**23**		**Pn**	**05 41 26.5**	**+1.2**
BWN					**Sn**	**05 41 44.1**	**+0.2**
BWN	**Browne**	**1.13**	**23**	IAML		05 41 44.6	
	comp=N,377nm,0.7s						
BWN				IAML		05 41 46.6	
	comp=E,216nm,0.9s						
WAT6	**Susitna Watana**	**1.37**	**113**		**Pn**	**05 41 28.4**	**+0.4**
M22K	**Willow**	**1.40**	**173**		**Pn**	**05 41 29.0**	**+0.8**
M22K					**Sn**	**05 41 49.6**	**+0.7**
DHY	**Denali Highway**	**1.41**	**91**		**Pn**	**05 41 29.1**	**+0.7**
DHY					**Sn**	**05 41 49.1**	**-0.1**
DHY	**Denali Highway**	**1.41**	**91**	IAML		05 41 51.2	
	comp=E,349nm,0.7s						
GHO	**Glory Hole Cre**	**1.55**	**152**		**Pn**	**05 41 30.9**	**+1.0**
GHO	**Glory Hole Cre**	**1.55**	**152**	IAML		05 41 55.2	
	comp=E,342nm,0.4s						
NEA2	**Nenana**	**1.58**	**22**		**Pn**	**05 41 30.6**	**+0.4**
NEA2					**Sn**	**05 41 51.2**	**-1.3**
NEA2	**Nenana**	**1.58**	**22**	IAML		05 41 51.3	
	comp=E,92nm,0.8s						
NEA2				IAML		05 41 51.9	
	comp=N,82nm,0.4s						
K20K	**Telida**	**1.65**	**279**		**Pn**	**05 41 32.0**	**+1.1**
K20K					**Sn**	**05 41 53.2**	**-0.6**
K20K	**Telida**	**1.65**	**279**	IAML		05 41 53.8	
	comp=E,127nm,0.7s						
K20K				IAML		05 41 54.1	
	comp=N,152nm,0.7s						
SML	**Sawmill**	**1.67**	**143**		**Pn**	**05 41 31.8**	**+0.6**
PMR	**Palmer**	**1.67**	**158**		**Pn**	**05 41 31.9**	**+0.7**
PMR					**Sn**	**05 41 54.1**	**-0.2**
PMR	**Palmer**	**1.67**	**158**	IAML		05 41 55.0	
	comp=N,131nm,0.4s						
WRH	**Wood River Hil**	**1.70**	**37**		**Pn**	**05 41 32.2**	**+0.7**
L20K	**Farewell, AK**	**1.70**	**249**		**Pn**	**05 41 32.7**	**+1.1**
L20K					**Sn**	**05 41 55.2**	**+0.2**
M20K	**Styx River**	**1.77**	**226**		**Pn**	**05 41 33.0**	**+0.6**
M20K	**Styx River**	**1.77**	**226**	IAML		05 41 59.8	
	comp=N,62nm,0.5s						
M20K				IAML		05 42 01.1	
	comp=E,100nm,0.3s						
STLK	**Strandline Lak**	**1.77**	**202**		**Pn**	**05 41 33.3**	**+0.9**
CCB	**Clear Creek Bu**	**1.92**	**37**		**Pn**	**05 41 34.4**	**+0.4**
J20K	**Nowinta River**	**1.94**	**304**		**Pn**	**05 41 35.5**	**+1.2**
SCM	**Sheep Creek Mo**	**1.96**	**131**		**Pn**	**05 41 35.1**	**+0.5**
SCM	**Sheep Creek Mo**	**1.96**	**131**	IAML		05 42 09.2	
	comp=N,97nm,0.7s						
SCM				IAML		05 42 12.1	
	comp=E,111nm,0.7s						
KNK	**Knik Glacier**	**1.97**	**151**		**Pn**	**05 41 35.7**	**+0.9**
KNK	**Knik Glacier**	**1.97**	**151**	IAML		05 42 08.7	
	comp=N,152nm,0.5s						
SPCG	**Spurr Capps Gl**	**1.99**	**202**		**Pn**	**05 41 36.7**	**+1.5**
HDA	**Harding Lake**	**2.02**	**49**		**Pn**	**05 41 36.1**	**+0.9**
HDA	**Harding Lake**	**2.02**	**49**	IAML		05 42 03.9	
	comp=E,204nm,0.4s						
HDA				IAML		05 42 05.7	
	comp=N,148nm,0.5s						
I23K	**Minto, Yukon-K**	**2.07**	**13**		**Pn**	**05 41 36.8**	**+0.9**
MDM	**Murphy Dome**	**2.07**	**27**		**Pn**	**05 41 36.8**	**+0.8**
TCOL	**CIGO, UAF Yank**	**2.08**	**32**		**Pn**	**05 41 36.9**	**+0.9**
TCOL	**CIGO, UAF Yank**	**2.08**	**32**	IAML		05 42 21.2	
	comp=E,95nm,0.5s						
TCOL				IAML		05 42 24.4	
	comp=N,114nm,0.6s						
CKN	**Chakachatna No**	**2.09**	**203**		**Pn**	**05 41 38.7**	**+2.6**
COLA	**College**	**2.09**	**32**		**Pn**	**05 41 36.9**	**+0.8**
COLA	**College**	**2.09**	**32**	IAML		05 42 24.2	
	comp=N,129nm,0.5s						
COLA				IAML		05 42 24.3	
	comp=N,110nm,0.5s						
RC01	**Rabbit Creek A**	**2.09**	**170**		**Pn**	**05 41 37.2**	**+1.1**
RC01	**Rabbit Creek A**	**2.09**	**170**	IAML		05 42 03.3	
	comp=N,175nm,0.5s						
RC01				IAML		05 42 04.2	
	comp=E,148nm,0.3s						
SPBG	**Spurr Blockage**	**2.09**	**206**		**Pn**	**05 41 38.4**	**+2.1**
SPU	**Mount Spurr**	**2.10**	**201**		**Pn**	**05 41 37.4**	**+1.0**
PS10	**TAPS Pump St10**	**2.14**	**80**		**Pn**	**05 41 38.2**	**+1.4**
I21K	**Tanana**	**2.15**	**343**		**Pn**	**05 41 37.8**	**+0.9**
M19K	**Big River Lodg**	**2.20**	**237**		**Pn**	**05 41 38.5**	**+0.9**
M19K	**Big River Lodg**	**2.20**	**237**	IAML		05 42 30.7	
	comp=E,35nm,2.9s						
M24K	**Tolsona, Glenn**	**2.24**	**116**		**Pn**	**05 41 39.4**	**+1.4**
M24K	**Tolsona, Glenn**	**2.24**	**116**	IAML		05 42 09.8	
	comp=N,97nm,1.0s						
M24K				IAML		05 42 21.0	
	comp=E,126nm,2.4s						
L19K	**White Mountain**	**2.24**	**247**		**Pn**	**05 41 39.1**	**+1.1**
IL31		**2.27**	**42**		**Pn**	**05 41 39.0**	**+0.7**
ILAR	**Eielson Array**	**2.27**	**42**	P	**Pn**	**05 41 39.0**	**+0.7**
	comp=E,12nm,0.3s,baz=226,slow=13,SNR=143						
ILAR				S	**Sn**	**05 42 05.7**	**-1.5**
	comp=E,7.5nm,0.7s,baz=221,slow=16,SNR=4.7						
ILAR	**Eielson Array**	**2.27**	**42**		**Pn**	**05 41 38.7**	**+0.3**
PAX	**Paxson**	**2.28**	**92**		**Pn**	**05 41 39.9**	**+1.3**
POKR	**Poker Plat Res**	**2.39**	**32**		**Pn**	**05 41 40.9**	**+1.1**
PS11	**TAPS Pump St11**	**2.54**	**113**		**Pn**	**05 41 43.4**	**+1.6**
TT01	**Tatalina**	**2.54**	**267**		**Pn**	**05 41 43.0**	**+1.2**
HARP	**HAARP**	**2.55**	**105**		**Pn**	**05 41 43.0**	**+1.1**
RIDG	**Independent Ri**	**2.59**	**74**		**Pn**	**05 41 43.8**	**+1.4**
SLKM	**Skilak Lake**	**2.65**	**177**		**Pn**	**05 41 44.5**	**+1.3**
KLU	**Klutina**	**2.69**	**126**		**Pn**	**05 41 44.0**	**+0.3**
KLU	**Klutina**	**2.69**	**126**	IAML		05 42 16.8	
	comp=E,58nm,0.7s						
KLU				IAML		05 42 19.5	
	comp=N,64nm,0.4s						
J25K	**Salcha River,**	**2.69**	**54**		**Pn**	**05 41 44.5**	**+0.8**
J25K	**Salcha River,**	**2.69**	**54**	IAML		05 42 18.1	
	comp=E,101nm,0.4s						
J25K				IAML		05 42 18.4	
	comp=N,76nm,0.3s						
H21K	**Melozitna Rive**	**2.72**	**339**		**Pn**	**05 41 45.2**	**+1.1**
H23K	**Yukon River**	**2.73**	**8**		**Pn**	**05 41 45.2**	**+1.2**
DFR	**Drift River**	**2.77**	**203**		**Pn**	**05 41 46.5**	**+1.8**
GLI	**Glacier Island**	**2.77**	**144**		**Pn**	**05 41 45.0**	**+0.3**
DOT	**Dot Lake**	**2.93**	**77**		**Pn**	**05 41 47.6**	**+0.9**
H24K	**Noodor Dome**	**2.93**	**21**		**Pn**	**05 41 47.6**	**+0.9**
DIV	**Divide**	**2.99**	**130**		**Pn**	**05 41 47.6**	**0.0**
N19K	**Bonanza Creek**	**3.01**	**221**		**Pn**	**05 41 49.4**	**+1.6**
N19K	**Bonanza Creek**	**3.01**	**221**	IAML		05 42 48.0	
	comp=N,37nm,3.3s						
N19K				IAML		05 43 03.1	
	comp=E,28nm,3.4s						
SCRK	**Sand Creek**	**3.02**	**71**		**Pn**	**05 41 48.8**	**+0.9**
SCRK	**Sand Creek**	**3.02**	**71**	IAML		05 42 22.9	
	comp=N,45nm,0.7s						
SCRK				IAML		05 42 25.8	
	comp=E,32nm,0.8s						
FID	**Port Fidalgo**	**3.05**	**140**		**Pn**	**05 41 48.7**	**+0.4**
SEW	**Seward**	**3.09**	**171**		**Pn**	**05 41 49.6**	**+0.9**
N25K	**Chitina, Valde**	**3.14**	**117**		**Pn**	**05 41 50.5**	**+1.0**
N25K	**Chitina, Valde**	**3.14**	**117**	IAML		05 42 30.2	
	comp=E,37nm,0.5s						
N25K				IAML		05 42 30.2	
	comp=N,61nm,0.7s						
SVW2	**Sparrevohn**	**3.16**	**232**		**Pn**	**05 41 50.7**	**+1.0**
SVW2				IAML		05 42 31.0	
	comp=N,27nm,1.0s						
SVW2				IAML		05 43 09.3	
	comp=E,30nm,3.0s						
IM03		**3.19**	**335**		**Pn**	**05 41 51.2**	**+1.3**
IMAR	**Indian Mountai**	**3.19**	**335**	Pn	**Pn**	**05 41 50.8**	**+0.9**
L26K	**Log Cabin Wild**	**3.24**	**89**		**Pn**	**05 41 52.5**	**+1.8**
BRLK	**Bradley Lake**	**3.40**	**184**		**Pn**	**05 41 54.4**	**+1.6**
BRSE	**Bradley Lake S**	**3.41**	**182**		**Pn**	**05 41 54.4**	**+1.4**
M26K	**Nabesna, AK**	**3.51**	**99**		**Pn**	**05 41 55.3**	**+0.9**
M26K	**Nabesna, AK**	**3.51**	**99**	IAML		05 42 26.0	
	comp=E,25nm,4.5s						
M26K				IAML		05 42 54.6	
	comp=N,41nm,0.9s						
BMRM	**Bremner River**	**3.52**	**126**		**Pn**	**05 41 54.4**	**+0.1**
BMRM	**Bremner River**	**3.52**	**126**	IAML		05 42 32.6	
	comp=E,40nm,4.1s						
BMRM				IAML		05 43 03.0	
	comp=N,48nm,3.3s						
GLB	**Gilahina Butte**	**3.54**	**116**		**Pn**	**05 41 55.8**	**+1.0**
GLB	**Gilahina Butte**	**3.54**	**116**	IAML		05 42 39.0	
	comp=E,48nm,0.7s						
N18K	**Kilae Creek**	**3.56**	**229**	Pn	**Pn**	**05 41 56.2**	**+1.2**
N18K				IAML		05 42 38.5	
	comp=E,33nm,3.5s						
N18K				IAML		05 43 26.9	
	comp=N,29nm,3.6s						
CNPM	**China Poot**	**3.65**	**186**		**Pn**	**05 41 57.7**	**+1.6**
VRDI	**Verde Repeater**	**3.81**	**117**		**Pn**	**05 41 59.0**	**+0.7**
VRDI	**Verde Repeater**	**3.81**	**117**	IAML		05 42 44.9	
	comp=E,28nm,0.8s						
VRDI				IAML		05 44 08.5	
	comp=N,30nm,4.2s						
K27K	**Chicken**	**3.85**	**73**		**Pn**	**05 41 59.5**	**+0.8**
K27K				IAML		05 42 43.2	
	comp=N,37nm,0.5s						
L27K	**Beaver Creek,**	**3.93**	**87**		**Pn**	**05 42 00.3**	**+0.6**
L27K	**Beaver Creek,**	**3.93**	**87**	IAML		05 43 14.6	
	comp=N,17nm,4.1s						
L27K				IAML		05 43 22.7	
	comp=E,14nm,3.4s						
BC03		**3.94**	**87**		**Pn**	**05 42 00.5**	**+0.6**
BCAR	**Beaver Creek A**	**3.94**	**87**		**Pn**	**05 42 00.2**	**+0.2**
M27K	**Edge Creek, AK**	**4.03**	**97**		**Pn**	**05 42 03.0**	**+1.8**
M27K	**Edge Creek, AK**	**4.03**	**97**	IAML		05 43 40.7	
	comp=E,24nm,3.7s						
M27K				IAML		05 44 32.4	
	comp=N,28nm,3.6s						
BALM	**Baldy**	**4.36**	**115**		**Pn**	**05 42 06.2**	**+0.6**
EGAK	**Eagle**	**4.42**	**64**		**Pn**	**05 42 07.4**	**+1.2**
EGAK				IAML		05 43 10.6	
	comp=N,24nm,0.8s						
YUK2	**White River**	**4.67**	**103**		**Pn**	**05 42 11.5**	**+1.8**
BM03	**Burnt Mountain**	**4.95**	**27**		**Pn**	**05 42 14.4**	**+1.1**
BMAR	**Burnt Mountain**	**4.96**	**27**	Pn	**Pn**	**05 42 14.4**	**+1.0**
DAWY	**Dawson**	**5.03**	**74**		**Pn**	**05 42 15.6**	**+1.2**
DAWY	**Dawson**	**5.03**	**74**	IAML		05 43 22.8	
	comp=N,16nm,0.7s						
DAWY				IAML		05 43 26.3	
	comp=E,12nm,1.8s						
KDAK	**Kodiak Island**	**5.48**	**192**	P	**Pn**	**05 42 20.0**	**-0.4**
	comp=E,3.9nm,0.3s,baz=12,slow=12,SNR=12						
KDAK				S	**Sn**	**05 43 18.0**	**-4.3**
	comp=E,5.6nm,0.4s,baz=166,slow=22,SNR=9.4						
I29M	**Ogilvie Camp,**	**5.75**	**62**		**Pn**	**05 42 24.8**	**+0.9**
EPYK	**Eagle Plains**	**6.71**	**55**		**Pn**	**05 42 37.5**	**+0.6**
INK	**Inuvik**	**8.67**	**46**	P	**Pn**	**05 43 03.4**	**+0.4**
	comp=E,1.7nm,0.9s,baz=236,slow=12,SNR=4.8						
DLBC	**Dease Lake**	**11.02**	**106**	S	Sn	05 45 26.9	-9.0
	comp=E,2.2nm,0.9s,baz=213,slow=8.5,SNR=2.7						
YKA	**Yellowknife Ar**	**16.27**	**76**	P	**Pn**	**05 44 41.5**	**+0.1**
	comp=E,0.1nm,0.4s,baz=288,slow=10,SNR=11						
RES	**Resolute Bay**	**22.01**	**36**	P	**P**	**05 45 45.2**	**+1.3**
	comp=E,0.5nm,0.6s,baz=263,slow=6.9,SNR=1.5						
	comp=E,0.5nm,0.6s						
MKAR	**Makanchi Array**	**62.71**	**322**	P	**P**	**05 51 09.5**	**-1.6**
	comp=E,0.1nm,0.4s,baz=32,slow=6.1,SNR=1.6						
	comp=E,0.1nm,0.4s						

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*HEL **06** 05:55:21.6±0.4, 67°.60N×34°.00E, h0^{km}, ML1.9, Explosion*

*IDC **06** 05:55:26.3±2.2, 67°.59N×32°.87E, h0^{km}, mbtmp2.8/2, ML2.0/2, Error ellipse: s-maj=20.9km s-min=9.5km az=92.0*

ISC 06 05:55:20.4±2.5**, 67°.61N**±0°.06×**34°.1E**±0°.1**, h0**^{km}**, n16,** σ**1ˢ.25**/26**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.73**	**277**	PG	**Pn**	**05 55 51.7**	**0.0**
VRF				MSG		05 56 11.9	
	comp=Z,11nm,0.2s						

VRF				SN	Sn	05 56 12.8	-1.5
OLKF	Oulanka, Finla	2.26	237	PG	Pb	05 56 01.3	-0.7
OLKF				SG	Sb	05 56 30.5	+0.1
KU6	Riekki	2.31	228	PG	Pb	05 56 02.2	-0.6
KU6				MSG		05 56 28.7	
	comp=Z,4.1nm,0.2s						
KU6				SG	Sb	05 56 31.2	-0.5
MSF	Maaselka	2.63	232	PG	Pb	05 56 07.7	-0.7
MSF				SG	Sb	05 56 40.5	-0.8
RNF	Rovaniemi	3.32	256	PN	Pn	05 56 14.3	+0.8
RNF				SN	Sn	05 56 54.0	+0.5
KEV	Kevo	3.37	313	PN	Pn	05 56 15.3	+1.0
KEV				SN	Sn	05 56 54.1	-0.8
ARA0	ARCESS Array S	3.70	305	PN	Pn	05 56 18.8	0.0
	baz=120						
ARA0				SN	Sn	05 57 01.4	-1.7
ARCES	ARCESS Array B	3.70	305	Pn	Pn	05 56 19.0	+0.2
	comp=Z,0.8nm,0.3s,baz=122,slow=15,SNR=70						
ARCES				Sn	Sn	05 57 00.0	-3.0
	comp=Z,0.3nm,0.3s,baz=122,slow=24,SNR=2.6						
ARCES				Lg	Lg	05 57 10.8	
	comp=Z,1.0nm,0.3s,baz=127,slow=33,SNR=8.2						
	comp=Z,1.7nm,0.3s						
HEF	Hetta	4.01	286	PN	Pn	05 56 23.5	+0.5
HEF				SN	Sn	05 57 09.1	-1.6
TOF	Tornio	4.16	253	PG	Pb	05 56 35.7	+1.4
PAJU	Pajala	4.30	267	PG	Pb	05 56 37.6	+0.9
	baz=78						
PAJU				SN	Sn	05 57 17.2	-0.6
KALU	Kalix	4.61	253	PG	Pb	05 56 42.8	+0.8
KALU				SN	Sn	05 57 24.2	-1.1
LANU	Lannavaara	4.62	281	SG	Sb	05 57 40.4	+2.2
ERTU	Ertsjaerv	4.78	263	SN	Sn	05 57 28.1	-1.4
I37NO	I37NO	5.92	291	i		06 29 30.0	
	comp=Z,0.1nm,0.7s,baz=99,slow=324,SNR=13						
FINES	FINESS Array B	7.08	213	Pn	Pn	05 57 06.6	+1.4
	baz=28,slow=16,SNR=1.6						
FINES				Lg	Lg	05 58 56.3	
	comp=Z,0.2nm,0.3s,baz=29,slow=21,SNR=2.4						
	comp=Z,0.7nm,0.8s						

TAP 06 06:12:28.9, 24°.42N×121°.84E, h7^{km}, ML2.3, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.07	297	P	Pg	06 12 31.9	+1.1
	baz=296						
EWUT				S	Sg	06 12 33.2	+1.1
	baz=296						
ENA	Nanau	0.09	277	⇑iP	Pg	06 12 32.0	+0.8
	baz=276						
ENA				i S	Sg	06 12 33.2	+0.5
	baz=276						
EHP	Heping Village	0.14	221	P	Pg	06 12 32.6	+0.7
	baz=218						
EHP				eS	Sg	06 12 35.1	+1.1
	baz=218						
TWC	Suao	0.19	2	i P	Pg	06 12 33.1	+0.2
	baz=4.0						
TWC				i S	Sg	06 12 37.4	+1.8
	baz=4.0						
NDS	Dongshan	0.24	332	P	Pg	06 12 35.2	+1.3
	baz=332						
LATG	Datong	0.31	293	P	Pg	06 12 35.9	+0.8
	baz=292						
LATG				eS	Sb	06 12 41.4	-0.8
	baz=292						
ETL	Fush Village	0.33	218	eP	Pb	06 12 36.5	-0.6
	baz=217						
ETL				eS	Sb	06 12 42.0	-0.5
	baz=217						
NACB	Ninganchiao	0.33	223	eP	Pb	06 12 36.4	-0.8
	baz=223						
NACB				eS	Sb	06 12 42.1	-0.5
	baz=223						
ENTT	Nioudou	0.34	312	eP	Pb	06 12 36.7	-0.6
	baz=312						
ENTT				eS	Sb	06 12 42.7	-0.2
	baz=312						
TWE	Neicheng	0.34	332	eP	Pg	06 12 36.4	+0.7
	baz=334						
ETLH	Xiulin Townshi	0.39	238	eS	Sb	06 12 44.2	-0.2
	baz=237						
FUSB	Fushanzhiwuyua	0.41	326	P	Pb	06 12 38.1	-0.5
	baz=325						
FUSB				eS	Sb	06 12 44.8	-0.3
	baz=325						
EGS		0.43	11	eP	Pb	06 12 38.8	-0.2
	baz=12						

IDC 06 06:14:12.8±3.4**, 54°.14N×86°.54E, h0^{km}, mbtmp3.0**/1**, ML3.0**/1**, Error ellipse: s-maj=24.4km s-min=13.8km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	260	i		06 21 10.0	
	baz=81,slow=326,SNR=1.0						
ZALV	Zalesovo Beam	1.03	260	Pg	Pg	06 14 31.4	-1.1
	1.2nm,0.3s,baz=81,slow=18,SNR=12						
ZALV				Lg	Lg	06 14 47.8	
	1.5nm,0.3s,baz=75,slow=31,SNR=12						
MKAR	Makanchi Array	7.84	202	Pn	Pn	06 16 09.6	+1.6
	0.2nm,0.3s,baz=23,slow=14,SNR=4.3						
MKAR				Lg	Lg	06 18 21.1	
	baz=19,slow=29,SNR=5.0						
	0.3nm,0.3s						

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*IDC **06** 06:17:47.2±2.1, 1°.25N×125°.91E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=173.9km s-min=27.1km az=65.0*

*DJA **06** 06:17:53.1±0.9, 1°N±26°×12°6E±°, h10^{km}, M3.5/4, MLv3.5/4*

ISC 06 06:17:54.3±1.4**, 1°.3N**±0°.2×**126°.20E**±0°.08**, h54^{km}, n6,** σ**1^{s}.49**/6**, mb3.4**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.29	115	P	Pn	06 18 16.7	+0.7
KMSI	Cibinong	2.34	252	P	Pn	06 18 29.5	-0.9
GTOI	Gorontalo	3.26	258	P	Pn	06 18 45.0	+2.0
WRA	Warramunga Arr	22.59	160	P	P	06 22 49.5	-0.9
	0.9nm,0.6s,baz=337,slow=12,SNR=17						
	0.9nm,0.6s						
ASAR	Alice Springs	25.94	164	P	P	06 23 22.2	+0.4
	0.3nm,0.4s,baz=347,slow=12,SNR=3.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	59.24	326	P	P	06 27 49.6	-0.7
	0.2nm,0.4s,baz=113,slow=8.5,SNR=4.1						
	0.2nm,0.4s						

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*TIF **06** 06:34:13.4, 40°.87N×41°.88E, h14^{km}±1^{km}*

*DDA **06** 06:34:13.6±0.0, 40°.86N×41°.86E, h11^{km}±1^{km}, ML2.1*

*ISK **06** 06:34:13.3, 40°.90N×41°.90E, h16^{km}, ML2.7/7*

ISC 06 06:34:13.3±1.1**, 40°.82N**±0°.03×**41°.90E**±0°.03**, h7^{km}**±9^{km}**, n21,** σ**0^{s}.82**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDEM	Demirkent	0.13	301	P	Pg	06 34 16.6	+0.4
DDEM				i AML	AML	06 34 18.0	
	comp=N,7µm,0.3s						
DDEM				S	Sg	06 34 18.4	+0.2
DDEM				i AML	AML	06 34 19.0	
	comp=E,5µm,0.5s						
DBAD	Bademkaya	0.25	321	P	Pg	06 34 18.6	+0.3
DBAD				S	Sg	06 34 21.8	+0.1
DBAD				i AML	AML	06 34 22.0	
	comp=N,592nm,0.2s						
DBAD				i AML	AML	06 34 23.0	
	comp=E,841nm,0.4s						
DAGI	Agillar	0.25	2	P	Pg	06 34 18.6	+0.2
DAGI				S	Sg	06 34 22.0	+0.2
DAGI				i AML	AML	06 34 22.0	
	comp=N,318nm,0.3s						
DAGI				i AML	AML	06 34 22.0	
	comp=E,293nm,0.3s						
SENK	Senkaya-Erzuru	0.43	127	PG	Pb	06 34 23.6	+0.1
SENK				SG	Sb	06 34 30.2	0.0
DBOC	Borcka	0.55	341	P	Pg	06 34 23.8	-0.2
DBOC				S	Sg	06 34 30.6	-0.6
DBOC				i AML	AML	06 34 31.0	
	comp=E,240nm,0.2s						
HOPA	Hopa-Artvin	0.66	329	PG	Pg	06 34 25.4	-0.6
HOPA				SG	Sg	06 34 34.2	-0.4
BATM	Batumi	0.80	349	P	Pg	06 34 28.2	-0.4
BATM				S	Sg	06 34 38.3	-0.6
BATM	Batumi	0.80	349	PG	Pg	06 34 27.9	-0.7
BATM				SG	Sg	06 34 38.4	-0.6
KOPR	Koprukoy-ERZUR	0.83	182	PG	Pb	06 34 31.0	+0.7
KOPR				SG	Sn	06 34 44.3	0.0
KRIK	Erzurum-spir	0.89	237	P	Pg	06 34 28.3	-2.0
KRIK				S	Sg	06 34 40.6	-1.2
CHOM	Cayeli-Rize	0.90	288	PG	Pg	06 34 30.8	+0.1
CHAY	Cayeli-Rize	0.93	287	PG	Pg	06 34 31.0	-0.1
ERZM	Erzurum	1.00	204	PG	Pn	06 34 34.1	-0.1
ERZM	Erzurum	1.00	204	P	Pb	06 34 33.8	+0.5
ERZM				S	Sn	06 34 51.8	+3.1
ABS	Abastumani	1.16	36	P	Pb	06 34 35.6	-0.3
ABS				S	Sb	06 34 51.0	-0.1
BAYB	BAYBURT	1.37	246	P	Pb	06 34 39.6	+0.1
BAYB				S	Sn	06 34 57.5	-0.2
BAYB				i AML	AML	06 35 00.0	
	comp=N,19nm,0.3s						
BAYB				i AML	AML	06 35 00.0	
	comp=E,19nm,0.6s						
BAYT	Aydıntepe-Bayb	1.41	253	PN	Pn	06 34 39.1	-0.5
MACK	Trabzon	1.62	275	P	Pg	06 34 44.0	-0.5
MACK				S	Sg	06 35 05.9	+0.5
MACK				i AML	AML	06 35 06.0	
	comp=E,106nm,0.2s						
MACK				i AML	AML	06 35 07.0	
	comp=N,117nm,0.1s						
KTUT	Trabzon	1.62	276	PN	Pn	06 34 41.6	-0.8
DMNI	Dmanisi	1.80	73	P	Pb	06 34 47.4	+0.5
KELT	Kelkit	2.13	252	P	Pb	06 34 52.6	+0.3
KELT				S	Sb	06 35 20.0	+0.9
KELT				i AML	AML	06 35 21.0	
	comp=N,11nm,0.2s						
KELT				i AML	AML	06 35 21.0	
	comp=E,15nm,0.2s						

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*IDC **06** 06:40:49.0±0.4, 19°.58N×120°.09E, h0^{km}, mb4.3/31, mbtmp4.3/32, ML3.8/1, MS3.7/53, Error ellipse: s-maj=15.6km s-min=10.4km az=74.0*

*NEIC **06** 06:40:51.8±1.8, 19°.72N±0°.07×120°.09E±0°.09, h10^{km}±1^{km}, mb4.8/55, Error ellipse: s-maj=14.0km s-min=10.9km az=248.0*

*MAN **06** 06:40:52.7, 19°.53N×119°.99E, h34^{km}, mb5.2, ML4.2, MS4.3, Hypocentre not reviewed by the ISC*

*GCMT **06** 06:40:52.8±0.3, 19°.64N±0°.03×119°.91E±0°.03, h17^{km}±1^{km}, MW4.8/85, Moment Tensor Solution. s21,c23; s85,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.07±.15; $M_{\theta\theta}$0.73±.08; $M_{\phi\phi}$1.33±.10; $M_{r\theta}$0.30±.25; $M_{\theta\phi}$0.69±.05; $M_{\phi r}$0.85±.24; Best double couple: $M_0$2.12800×10^{16} NP1:ϕ_s38.00000°,δ33.00000°,λ-82.00000°. NP2: ϕ_s208.00000°,δ57.00000°,λ-95.00000°. Principal axes: T 1.9790, Plg12.0000°, Azm302.0000°; N 0.2910, Plg4.0000°, Azm211.0000°; P -2.2780, Plg77.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **06** 06:40:58.8±0.0, 20°.19N×119°.82E, h30^{km}, mb4.4/50, mB4.6/36, Ms4.2/46, Ms7 4.0/45*

ISC 06 06:40:52.9±0.3**, 19°.65N**±0°.03×**120°.07E**±0°.05**, h24^{km}, n222,** σ**1^{s}.61**/200**, mb4.7**/66**, MS3.9**/62**, 7C-7D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	2.09	148	⇑eP	Pn	06 41 25.4	-1.1
APYP				eS	Sn	06 41 51.3	-0.6
SGCP	Gonzaga	2.33	127	⇓eP	Pn	06 41 29.1	-0.8
SGCP				eS	Sn	06 41 57.5	-0.3
SAMP	Sagada Mountai	2.67	163	⇓eP	Pn	06 41 33.3	-1.2
SAMP				eS	Sn	06 42 03.3	-2.9
BOLP	Bolinao	3.25	183	⇓eP	Pn	06 41 45.3	+2.8
BOLP				eS	Sn	06 42 15.7	-4.9
TWG	Pinlang	3.29	16		Pn	06 41 42.0	-1.1
SMPP	San Manuel, Pa	3.53	170	⇓eP	Pn	06 41 44.6	-1.7
SMPP				eS	Sn	06 42 24.4	-2.9
TPUB	Ta-pu	3.67	8	Pn	Pn	06 41 46.4	-1.9
YULB	Yu-li	3.90	17		Pn	06 41 50.3	-1.0
PCPH	Palayan	4.18	166	⇓eP	Pn	06 41 55.2	0.0
PCPH				eS	Sn	06 42 44.0	+0.6
SSLB	Suanglung	4.20	11		Pn	06 41 53.9	-1.6
NACB	Ninganchiao	4.72	17		Pn	06 42 02.3	-0.3
KNMB	Chin-men Tao	5.04	342		Pn	06 42 03.6	-3.4
YHNB	Yeheng	5.14	13		Pn	06 42 08.1	-0.4
QZH	Quanzhou	5.44	346	Pn	Pn	06 42 10.1	-2.5
QZH				Sn	Sn	06 43 09.6	-4.9
QZH				LR	LR		
	comp=N,680nm,14.0s						
QZH				LR	LR		
	comp=E,640nm,8.8s						
QZH				LR	LR		
	comp=Z,830nm,11.9s						
YOJ	Yonaguni jima	5.51	29	Pn	Pn	06 42 13.6	+0.1
LQP	Lukban	5.68	165	⇑eP	Pn	06 42 08.7	-7.4
JCNP	Jose Panganiba	5.89	154	⇑eP	Pn	06 42 18.5	-0.3
QIZ	Qiongzhong	9.68	268	P	Pn	06 43 08.1	-2.7
QIZ				S	Sn	06 45 01.9	+3.1
QIZ				LR	LR		
	comp=N,1µm,17.2s						
QIZ				LR	LR		
	comp=E,370nm,18.5s						
QIZ				LR	LR		
	comp=Z,440nm,18.2s						
SSE	Sheshan	11.44	5	P	Pn	06 43 35.2	+0.3
SSE				S	Sn	06 45 44.7	+2.7
SSE				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,70nm,3.6s						
SSE				LR	LR		
	comp=Z,200nm,14.3s						
SSE				LR	LR		
	comp=Z,270nm,14.9s						
NJ2	Nanjing	12.40	355	eP	Pn	06 43 49.3	+1.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,970nm,9.5s						
NJ2				LR	LR		
	comp=Z,950nm,9.5s						
NJ2				LR	LR		
	comp=Z,520nm,12.3s						
DAV	Davao City (W)	13.60	156	LR	LR	06 50 13.0	
	comp=Z,718nm,20.7s,baz=340,slow=42						
MYLDM	Lahad Datu	14.46	186	Pn	Pn	06 44 17.0	+0.7
LYN	LuoYang	16.30	337	⇑P	P	06 44 42.1	-1.1
LYN				PP	pwP	06 44 53.5	-0.4
LYN				S	Sn	06 47 41.1	+0.5
LYN				pmax	pmax		
	comp=Z,20nm,1.0s						
LYN				pmax	pmax		
	comp=Z,190nm,3.9s						
LYN				LR	LR		
	comp=Z,530nm,16.9s						
LYN				LR	LR		
	comp=Z,890nm,20.0s						
LYN				LR	LR		
	comp=Z,540nm,11.1s						
KMI	Kunming	16.93	292	⇑P	P	06 44 53.5	+3.1
KMI				sP	pwP	06 45 00.6	-0.3
KMI				PP	sP	06 45 06.8	+8.4
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				pmax	pmax		
	comp=Z,53nm,4.6s						
KMI				LR	LR		
	comp=Z,1µm,11.2s						
KMI				LR	LR		
	comp=Z,770nm,12.5s						
KMI				LR	LR		
	comp=Z,520nm,16.4s						
XAN	Xi'an	17.43	328	P	Pn	06 44 53.0	-1.6
XAN				pP	pP	06 44 59.0	-2.2
XAN				S	Sn	06 48 03.7	-4.3
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN				LR	LR		
	comp=Z,480nm,12.2s						
XAN				LR	LR		
	comp=Z,350nm,10.8s						
XAN				LR	LR		
	comp=Z,680nm,11.2s						
PZH	PanZhiHua	18.18	295	P	P	06 45 04.7	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,130nm,5.4s						
PZH				LR	LR		
	comp=Z,810nm,12.9s						
PZH				LR	LR		
	comp=Z,1µm,15.4s						
PZH				LR	LR		
	comp=Z,1µm,16.9s						
HNS	HongShan	18.30	346	⇑P	Pn	06 45 07.5	+2.4
HNS				pmax	pmax		
	comp=Z,41nm,1.6s						
HNS				pmax	pmax		
	comp=Z,410nm,4.3s						
HNS				LR	LR		
	comp=Z,420nm,12.7s						
HNS				LR	LR		
	comp=Z,260nm,11.7s						
HNS				LR	LR		
	comp=Z,480nm,13.1s						
TOLI2	Tolitoli	18.44	178	P	Pn	06 45 07.0	0.0
CD2	Chengdu	18.51	310	P	P	06 45 07.7	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,150nm,4.3s						
CD2				LR	LR		
	comp=Z,500nm,10.0s						
CD2				LR	LR		
	comp=Z,620nm,12.2s						
KSRS	Korea Array	19.02	19	P	Pn	06 45 13.6	-0.3
	comp=Z,0.3nm,0.3s,baz=202,slow=12,SNR=9.9						
KSRS				LR	LR	06 51 50.1	
	comp=Z,55nm,20.6s,baz=205,slow=35						
	comp=Z,4.7nm,0.9s						
GTOI	Gorontalo	19.11	171	P	Pn	06 45 15.5	+0.3
	comp=Z,13nm,0.9s						
MRSI	Marisa	19.14	174	P	Pn	06 45 17.5	+2.0
	comp=Z,34nm,0.9s						
CHTO	Chiang Mai	19.97	271	P	P	06 45 25.1	+1.4
CMAR	Chiang Mai Arr	20.01	270	P	P	06 45 24.9	+0.7
	comp=Z,4.0nm,0.9s,baz=74,slow=9.2,SNR=15						
CMAR				PcP	PcP	06 49 39.4	-0.6
	comp=Z,1.0nm,0.4s,baz=82,slow=0.6,SNR=7.2						
CMAR				LR	LR	06 52 39.7	
	comp=Z,140nm,20.5s,baz=85,slow=36						
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	20.01	270	P	Pn	06 45 26.0	0.0
KSM	Kuching	20.44	209	P	P	06 45 28.5	-0.3
APSI	Ampana	20.49	175	P	Pn	06 45 35.9	+4.4
	comp=Z,46nm,1.1s						
BJI	Beijing	20.60	351	P	Pn	06 45 31.7	-0.9
BJI				sP	pwP	06 45 40.0	-1.0
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,90nm,3.5s						
BJI				LR	LR		
	comp=Z,260nm,12.7s						
BJI				LR	LR		
	comp=Z,160nm,11.6s						
BJI				LR	LR		
	comp=Z,300nm,12.1s						
JCJ	Chichijima	21.59	66	LR	LR	06 52 21.9	
	comp=Z,44nm,20.8s,baz=239,slow=32						
INU	Inuyama	21.64	40	P	P	06 45 40.8	-0.8
INU				IAmb	IAmb	06 45 45.3	
	comp=Z,46nm,1.3s						
LZH	Lanzhou	21.72	322	⇓P	P	06 45 44.3	+1.7
LZH				pP	pP	06 45 49.8	+1.6
LZH				sP	pwP	06 45 53.0	-0.2
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				LR	LR		
	comp=Z,530nm,14.6s						
LZH				LR	LR		
	comp=Z,510nm,13.6s						
LZH				LR	LR		
	comp=Z,490nm,14.1s						
JHJ	Hachijo jima 2	22.12	49	LR	LR	06 54 12.5	
	comp=Z,29nm,18.1s,baz=88,slow=36						
SANI	Sanana	22.33	164	P	P	06 45 45.9	-3.2
HHC	Hu-ho-hao-te	22.35	343	eP	P	06 45 51.1	+1.8
HHC				sP	pwP	06 46 00.8	+0.7
HHC				sS	sS	06 50 03.2	+0.3
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.6s						
HHC				LR	LR		
	comp=Z,660nm,13.6s						
HHC				LR	LR		
	comp=Z,520nm,12.3s						
HHC				LR	LR		
	comp=Z,570nm,12.7s						
TTSI	Tana Toraja	22.55	181	P	P	06 45 58.2	+6.7
	comp=Z,1µmcomp=Z,26nm,0.7s						
BTO	Baotou	22.59	340	eP	P	06 45 54.3	+2.4
BTO				LR	LR		
	comp=Z,1µm,16.3s						
BTO				LR	LR		
	comp=Z,2µm,17.8s						
SRIT	Nakonsritamara	22.66	244	P	P	06 45 52.9	+0.2
MJAR	Matsushiro Arr	23.15	40	P	P	06 45 57.6	0.0
	comp=Z,7.7nm,1.0s,baz=224,slow=8.7,SNR=8.7						
	comp=Z,7.7nm,1.0s						
MJAR	Matsushiro Arr	23.15	40	P	P	06 45 56.0	-1.7
SIJI	Sorong	23.16	150	P	P	06 45 56.6	-1.2
	comp=Z,15nm,0.7s,baz=17,slow=2.6,SNR=5.7						
SIJI				LR	LR	06 56 34.1	
	comp=Z,102nm,18.5s,baz=82,slow=41						
	comp=Z,15nm,0.7s						
SPSI	Sidrap Palu	23.47	181	P	P	06 46 05.4	+4.5
	comp=Z,1µmcomp=Z,19nm,1.0s						
BBKI	Banjar Baru	23.54	193	P	P	06 46 05.8	+4.2
XLT	XiLinHaoTe	24.41	353	⇑iP	P	06 46 10.8	+1.2
XLT				sP	sP	06 46 19.0	+1.0
XLT				sS	sS	06 50 38.2	+0.2
XLT				pmax	pmax		
	comp=Z,15nm,1.4s						
XLT				pmax	pmax		
	comp=Z,160nm,4.0s						
XLT				LR	LR		
	comp=Z,510nm,16.9s						
XLT				LR	LR		
	comp=Z,300nm,11.8s						
GUMO	Guam	24.50	100	LR	LR	06 53 32.5	
	comp=Z,142nm,21.1s,baz=86,slow=31						
KAPI	Kappang	24.51	181	P	P	06 46 10.9	+0.2
	comp=Z,11nm,0.8s,baz=316,slow=7.9,SNR=7.2						
KAPI				LR	LR	06 58 36.6	
	comp=Z,73nm,18.6s,baz=34,slow=44						
	comp=Z,11nm,0.8s						
KAPI	Kappang	24.51	181	P	P	06 46 11.4	+0.8
KAPI				IAmb	IAmb	06 46 25.1	
	comp=Z,16nm,0.8s						
BKSI	Bulukumba	24.81	180	P	P	06 46 18.3	+4.9
	comp=Z,16nm,1.1s						
GTA	Gaotai	26.32	323	eP	P	06 46 30.5	+3.4
GTA				pP	sP	06 46 36.8	+1.4
GTA				sP	pwP	06 46 40.4	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,65nm,6.8s						
GTA				LR	LR		
	comp=Z,200nm,11.2s						
GTA				LR	LR		
	comp=Z,230nm,12.3s						
GTA				LR	LR		
	comp=Z,310nm,13.1s						
PSI	Prapat	26.60	234	P	P	06 46 29.5	-0.3
	comp=Z,3.9nm,0.7s,baz=28,slow=10.0,SNR=4.5						
PSI				PcP	PcP	06 49 52.9	-1.0
	comp=Z,1.3nm,0.4s,baz=50,slow=11,SNR=3.9						
	comp=Z,3.9nm,0.7s						
RPSI	Rantau Prapat	26.66	233	P	P	06 46 29.5	-0.8
BKNI	Bangkinang	26.77	226	P	P	06 46 30.5	-0.7
GOMU	GeErMu	27.63	312	P	P	06 46 41.7	+2.6

GOMU				pP	pP	06 46 45.6	+0.5
GOMU				sP	sP	06 46 49.3	+1.7
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,98nm,4.9s						
GOMU				LR	LR		
	comp=Z,200nm,16.8s						
GOMU				LR	LR		
	comp=Z,230nm,16.9s						
GOMU				LR	LR		
	comp=Z,310nm,16.7s						
LSA	**Lhasa**	**28.05**	**297**	P	**P**	**06 46 42.0**	**-1.1**
LSA				IAmb	IAmb	06 46 53.9	
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**30.23**	**342**	P	**P**	**06 47 02.7**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=152,slow=9.9,SNR=3.7						
SONM				PcP	**PcP**	**06 50 02.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=204,slow=3.2,SNR=3.5						
SONM				LR	LR	06 59 39.2	
	comp=Z,206nm,19.9s,baz=161,slow=37						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**30.23**	**342**	P	**P**	**06 47 01.2**	**-0.7**
ASAJ	**Asahikawa**	**30.80**	**33**	LR	LR	07 00 45.0	
	comp=Z,55nm,19.3s,baz=208,slow=39						
KLR	**Kul'dur**	**30.97**	**15**	P	**P**	**06 47 09.0**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=254,slow=6.5,SNR=9.6						
KLR				PcP	**PcP**	**06 50 03.9**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=198,slow=9.6,SNR=3.2						
KLR				LR	LR	07 00 34.5	
	comp=Z,98nm,18.4s,baz=234,slow=38						
	comp=Z,3.1nm,0.9s						
KNRA	**Kununurra**	**36.13**	**166**	P	**P**	**06 47 52.5**	**-0.8**
KNRA				IAmb	IAmb	06 47 54.4	
	comp=Z,14nm,0.8s						
WMQ	**Urumqi**	**36.22**	**319**	*e*P	**P**	**06 47 56.2**	**+2.1**
WMQ				pP	sP	06 48 02.7	+0.2
WMQ				sP	pwP	06 48 05.3	0.0
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
WMQ				LR	LR		
	comp=Z,350nm,19.1s						
WMQ				LR	LR		
	comp=Z,420nm,16.5s						
WMQ				LR	LR		
	comp=Z,160nm,20.5s						
KRVT	**Keravat (AS076**	**39.42**	**124**	LR	LR	07 01 28.9	
	comp=Z,233nm,19.2s,baz=61,slow=32						
PALK	**Pallekele**	**40.11**	**258**	LR	LR	07 04 19.0	
	comp=Z,71nm,19.1s,baz=170,slow=35						
COEN	**Coen**	**40.40**	**144**	P	**P**	**06 48 28.4**	**-1.1**
COEN				IAmb	IAmb	06 48 39.1	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**40.97**	**180**	P	**P**	**06 48 33.0**	**-1.0**
PSA00				IAmb	IAmb	06 48 35.1	
	comp=Z,25nm,1.2s						
MK31	**Makanchi Array**	**41.01**	**320**	P	**P**	**06 48 34.3**	**+0.1**
MKAR	**Makanchi Array**	**41.01**	**320**	P	**P**	**06 48 35.2**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=116,slow=8.5,SNR=23						
MKAR				LR	LR	07 06 31.5	
	comp=Z,87nm,19.4s,baz=98,slow=38						
	comp=Z,4.2nm,0.9s						
MKAR	**Makanchi Array**	**41.01**	**320**	P	**P**	**06 48 35.0**	**+0.8**
MAKZ	**Makanchi**	**41.20**	**320**	P	**P**	**06 48 36.0**	**+0.3**
MAKZ				IAmb	IAmb	06 48 47.1	
	comp=Z,18nm,1.1s						
UZB	**Uzynbulak**	**41.59**	**314**	*e*P	**P**	**06 48 39.7**	**+0.6**
	baz=314						
WB0	**Warramunga Arr**	**41.61**	**159**	P	**P**	**06 48 38.0**	**-1.3**
WB0				IAmb	IAmb	06 48 39.5	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**41.75**	**160**	P	**P**	**06 48 39.2**	**-1.3**
WRAB				IAmb	IAmb	06 48 40.8	
	comp=Z,23nm,0.9s						
WRA	**Warramunga Arr**	**41.76**	**160**	P	**P**	**06 48 39.2**	**-1.3**
	comp=Z,15nm,1.0s,baz=346,slow=8.8,SNR=52						
WRA				PcP	**PcP**	**06 50 36.1**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=340,slow=3.4,SNR=6.4						
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**41.76**	**160**	P	**P**	**06 48 38.9**	**-1.6**
KPKS	**Kokpek**	**41.93**	**314**	*e*P	**P**	**06 48 42.6**	**+0.8**
	baz=314						
TARG	**Taragay, Kyrgy**	**41.95**	**311**	P	**P**	**06 48 42.3**	**-0.1**
TARG				IAmb	IAmb	06 48 54.1	
	comp=Z,29nm,1.5s						
SATY	**Saty**	**41.98**	**313**	*e*P	**P**	**06 48 43.0**	**+0.7**
	baz=313						
KDJ	**Kajisay**	**42.52**	**311**	P	**P**	**06 48 46.8**	**-0.1**
KSH	**Kashi**	**42.66**	**307**	P	P	06 49 00.8	+13
KSH				pmax	pmax		
	comp=Z,11nm,1.0s						
KSH	**Kashi**	**42.66**	**307**	P	**P**	**06 48 51.7**	**+3.8**
TDK	**Taldyqorghan**	**42.69**	**316**	*e*P	**P**	**06 48 49.0**	**+1.1**
	baz=316						
YAK	**Yakutsk**	**42.87**	**7**	LR	LR	07 07 49.5	
	comp=Z,64nm,18.4s,baz=265,slow=38						
MDOK	**Medeo**	**42.95**	**313**	*e*P	**P**	**06 48 51.1**	**+0.9**
	baz=313						
TNSS	**Tian-Shan**	**42.98**	**313**	*e*P	**P**	**06 48 52.0**	**+1.3**
	baz=313						
CHKK	**Chushkaly**	**43.22**	**314**	*e*P	**P**	**06 48 52.8**	**+0.5**
	baz=314						
ZAA0	**Zalesovo Array**	**43.57**	**330**	P	**P**	**06 48 55.0**	**+0.2**
ZAA0				IAmb	IAmb	06 49 04.7	
	comp=Z,12nm,0.9s						
ZALV	**Zalesovo Beam**	**43.57**	**330**	P	**P**	**06 48 55.1**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=120,slow=8.7,SNR=8.7						
	comp=Z,3.3nm,0.7s						
ZALV	**Zalesovo Beam**	**43.57**	**330**	P	**P**	**06 48 54.8**	**-0.1**
KUU	**Kurty**	**43.68**	**314**	*e*P	**P**	**06 48 56.6**	**+0.6**
	comp=Z,16nm,1.1s,baz=314						
NIL	**Nilore**	**43.76**	**298**	P	**P**	**06 48 56.8**	**+0.1**
NIL				IAmb	IAmb	06 49 10.1	
	comp=Z,17nm,0.8s						
SEM	**Semipalatinsk**	**43.94**	**324**	*e*P	**P**	**06 48 57.8**	**-0.5**
	baz=324						
H11N1	**WAKE ISLAND Hy**	**43.97**	**82**	T	T	07 34 55.9	
	baz=278,slow=75,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**43.97**	**82**	T	T	07 34 55.9	
	baz=278,slow=75,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**43.99**	**82**	T	T	07 34 56.5	
	baz=278,slow=75,SNR=4.3						
PETK	**Petropavlovsk-**	**44.22**	**32**	P	**P**	**06 49 00.5**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=222,slow=6.0,SNR=2.5						
PETK				LR	LR	07 09 53.8	
	comp=Z,34nm,18.1s,baz=236,slow=39						
	comp=Z,3.3nm,1.0s						
AAK	**Ala-Archa**	**44.57**	**311**	P	**P**	**06 49 04.9**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=79,slow=5.2,SNR=2.0						
AAK				LR	LR	07 10 07.0	
	comp=Z,140nm,18.4s,baz=106,slow=39						
	comp=Z,0.7nm,0.3s						
SGDS	**Sogindy**	**44.71**	**312**	*e*P	**P**	**06 49 03.1**	**-1.2**
	baz=312						
KURK	**Kurchatov**	**45.00**	**323**	P	**P**	**06 49 06.8**	**+0.4**
AS31	**Alice Springs**	**45.12**	**162**	P	**P**	**06 49 06.8**	**-0.8**
ASAR	**Alice Springs**	**45.12**	**162**	P	**P**	**06 49 07.0**	**-0.6**
	comp=Z,5.0nm,0.6s,baz=341,slow=6.6,SNR=55						
ASAR				PcP	**PcP**	**06 50 47.6**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=335,slow=4.1,SNR=2.5						
ASAR				LR	LR	07 10 23.6	
	comp=Z,54nm,18.6s,baz=334,slow=39						
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**45.12**	**162**	P	**P**	**06 49 06.6**	**-1.0**
MA2	**Magadan**	**45.56**	**21**	P	**P**	**06 49 10.9**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=140,slow=8.4,SNR=2.5						
MA2				LR	LR	07 10 54.7	
	comp=Z,50nm,18.4s,baz=219,slow=40						
	comp=Z,3.2nm,0.6s						
MA2	**Magadan**	**45.56**	**21**	IAmb	IAmb	06 49 14.1	
	comp=Z,16nm,1.2s						
BTLS	**Baital**	**45.60**	**314**	*e*P	**P**	**06 49 10.5**	**-0.8**
	baz=314						
GAR	**Garm**	**46.85**	**305**	P	**P**	**06 49 22.1**	**+0.8**
DZA	**Taraz**	**46.89**	**311**	*e*P	**P**	**06 49 21.7**	**+0.2**
	baz=311						
CTA	**Charters Tower**	**47.09**	**146**	LR	LR	07 09 37.5	
	comp=Z,48nm,21.1s,baz=282,slow=37						
KK31	**Karatay Array**	**47.52**	**311**	P	**P**	**06 49 27.1**	**+0.8**
KK31				IAmb	IAmb	06 49 37.6	
	comp=Z,14nm,1.1s						
KKAR	**Karatay Array**	**47.52**	**311**	P	**P**	**06 49 27.4**	**+1.0**
IUG	**Iuzhnay**	**47.66**	**310**	*e*P	**P**	**06 49 28.5**	**+1.0**
	baz=310						
CHGR	**Chuyangaron**	**47.69**	**305**	P	**P**	**06 49 28.2**	**+0.4**
CHGR				IAmb	IAmb	06 49 37.9	
	comp=Z,15nm,0.9s						
SEY	**Seymchan**	**48.58**	**19**	P	**P**	**06 49 35.2**	**+1.1**
	comp=Z,2.4nm,0.9s,baz=157,slow=6.7,SNR=4.8						
	comp=Z,2.4nm,0.9s						
BRVK	**Borovoye**	**50.67**	**323**	P	**P**	**06 49 50.8**	**+0.5**
BRVK				IAmb	IAmb	06 50 00.9	
	comp=Z,14nm,0.9s						
TIXI	**Tiksi**	**52.26**	**4**	P	**P**	**06 50 00.9**	**-0.9**
TIXI				IAmb	IAmb	06 50 18.8	
	comp=Z,12nm,1.3s						
HRA	**Herat**	**52.92**	**299**	P	**P**	**06 50 08.2**	**+0.5**
HRA				IAmb	IAmb	06 50 17.8	
	comp=Z,15nm,1.4s						
NRIK	**Noril'sk**	**53.52**	**346**	P	**P**	**06 50 10.8**	**-0.4**
	comp=Z,4.6nm,0.8s,baz=139,slow=8.4,SNR=8.8						
NRIK				LR	LR	07 14 29.3	
	comp=Z,134nm,20.1s,baz=150,slow=38						
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**55.23**	**158**	P	**P**	**06 50 23.2**	**-0.9**
	comp=Z,12nm,0.8s,baz=340,slow=7.8,SNR=26						
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**55.23**	**158**	P	**P**	**06 50 25.1**	**+0.9**
ABKAR	**Akbulak array**	**55.94**	**317**	P	**P**	**06 50 29.6**	**+0.5**
ABKAR	**Akbulak array**	**55.94**	**317**	P	**P**	**06 50 29.9**	**+0.8**
ABKAR				IAmb	IAmb	06 50 39.5	
	comp=Z,6.8nm,1.1s						
GEYT	**Alibeck**	**56.29**	**303**	P	**P**	**06 50 31.9**	**0.0**
	comp=Z,2.8nm,0.5s,baz=119,slow=5.6,SNR=4.2						
GEYT				LR	LR	07 18 15.1	
	comp=Z,128nm,20.3s,baz=132,slow=40						
	comp=Z,2.8nm,0.5s						
GEYT	**Alibeck**	**56.29**	**303**	IAmb	IAmb	06 50 43.8	
	comp=Z,19nm,1.1s						
WSAR	**Wadi Sarin**	**56.94**	**285**	LR	LR	07 16 03.5	
	comp=Z,52nm,21.7s,baz=106,slow=37						
AKTO	**Aktyubinsk**	**57.36**	**318**	LR	LR	07 16 50.8	
	comp=Z,87nm,18.2s,baz=96,slow=38						
ARU	**Arti**	**58.15**	**325**	LR	LR	07 17 27.7	
	comp=Z,122nm,18.3s,baz=95,slow=38						
ARU	**Arti**	**58.15**	**325**		**P**	**06 50 44.8**	**+0.2**
ARU				IAmb	IAmb	06 50 54.6	
	comp=Z,15nm,1.0s						
DZM	**Mont Dzumac**	**61.42**	**130**	*e*LR	LR	07 09 20.4	
	comp=Z,206nm,21.1s						
DZM	**Mont Dzumac**	**61.42**	**130**	LR	LR	07 16 23.9	
	comp=Z,200nm,18.6s,baz=24,slow=35						
KIRV	**Kirov**	**63.37**	**326**	LR	LR	07 19 51.2	
	comp=Z,98nm,18.7s,baz=94,slow=37						
GNI	**Garni**	**66.57**	**306**	LR	LR	07 24 04.8	
	comp=Z,53nm,19.9s,baz=122,slow=39						
ONI	**Oni**	**67.27**	**309**	P	**P**	**06 51 47.4**	**+1.6**
KBZ	**Khabaz**	**67.55**	**310**	P	**P**	**06 51 48.1**	**+0.7**
	comp=Z,7.7nm,1.0s,baz=100,slow=3.2,SNR=12						
KBZ				LR	LR	07 24 21.6	
	comp=Z,69nm,18.7s,baz=62,slow=39						
	comp=Z,7.7nm,1.0s						
KIV	**Kislovodsk**	**67.68**	**310**	P	**P**	**06 51 49.2**	**+0.8**
MSVF	**Nonsavu**	**67.97**	**119**	P	**P**	**06 51 49.7**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=222,slow=23,SNR=1.8						
MSVF				LR	LR	07 16 22.3	
	comp=Z,94nm,21.8s,baz=300,slow=31						
	comp=Z,1.7nm,0.5s						
MSVF	**Nonsavu**	**67.97**	**119**	IAmb	IAmb	06 51 57.6	
	comp=Z,24nm,1.4s						
KLMR	**Klimovskoe**	**68.46**	**329**	*e*P	**P**	**06 51 50.9**	**-1.9**
KLMR				AMP		06 52 02.4	
	comp=Z,12nm,0.9s						
RAYN	**Ar Rayn**	**68.73**	**288**	P	**P**	**06 51 54.7**	**-0.6**
GURO	**Guroymak-BITLI**	**68.86**	**305**	P	**P**	**06 51 57.1**	**+1.2**
A21K	**Barrow**	**69.40**	**20**	P	**P**	**06 51 58.9**	**+0.4**
IMAR	**Indian Mountai**	**70.69**	**26**	P	**P**	**06 52 07.0**	**+0.5**
NEA2	**Nenana**	**72.81**	**27**	P	**P**	**06 52 19.5**	**+0.2**
NEA2				IAmb	IAmb	06 52 21.0	
	comp=Z,7.3nm,0.9s						
RND	**Reindeer**	**73.11**	**28**	P	**P**	**06 52 20.8**	**-0.4**
RND				IAmb	IAmb	06 52 22.1	
	comp=Z,12nm,1.0s						
ARCES	**ARCESS Array B**	**73.35**	**339**	P	**P**	**06 52 22.8**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=63,slow=4.2,SNR=2.6						
ARCES				LR	LR	07 27 19.4	
	comp=Z,52nm,18.9s,baz=97,slow=38						
	comp=Z,1.9nm,0.8s						
ARCES	**ARCESS Array B**	**73.35**	**339**	P	**P**	**06 52 23.1**	**+0.7**
SPITS	**Spitsbergen Ar**	**73.68**	**348**	LR	LR	07 29 30.8	
	comp=Z,68nm,18.3s,baz=232,slow=40						
ILAR	**Eielson Array**	**73.70**	**26**	P	**P**	**06 52 24.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=261,slow=3.9,SNR=13						
	comp=Z,1.2nm,0.7s						
BMAR	**Burnt Mountain**	**74.07**	**24**	P	**P**	**06 52 28.1**	**+1.3**
FIA1	**FINESS Array S**	**74.83**	**330**	P	**P**	**06 52 31.5**	**+0.4**
FIA1				IAmb	IAmb	06 52 41.9	
	comp=Z,13nm,0.8s						
FINES	**FINESS Array B**	**74.84**	**330**	P	**P**	**06 52 31.6**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=101,slow=9.9,SNR=19						
FINES				LR	LR	07 27 57.2	
	comp=Z,104nm,18.8s,baz=55,slow=38						
	comp=Z,5.6nm,0.8s						
AFI	**Afiamalu**	**74.88**	**111**	LR	LR	07 23 48.8	
	comp=Z,54nm,19.1s,baz=276,slow=34						
BRTR	**Keskin Array B**	**75.05**	**307**	P	**P**	**06 52 32.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=268,slow=32,SNR=4.8						
BRTR				LR	LR	07 28 41.3	
	comp=Z,58nm,21.2s,baz=100,slow=38						
	comp=Z,0.9nm,0.7s						
VSU	**Vasula**	**75.20**	**327**	*e*P	**P**	**06 52 34.4**	**+1.0**
MMAI	**Mount Meron Ar**	**75.24**	**300**	LR	LR	07 30 44.8	
	comp=Z,42nm,19.0s,baz=210,slow=40						
MNK	**Minsk**	**75.49**	**323**	*i* P	**P**	**06 52 33.2**	**-1.9**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**06 52 33.2**	**-1.9**
	comp=N,9.0nm,0.7s						
MNK				*i* P	**P**	**06 52 33.2**	**-1.9**
	comp=Z,15nm,0.7s,baz=76						
MNK				*i* PcP	**sP**	**06 52 45.3**	**+1.4**
MNK				*i* PP	**PP**	**06 55 20.9**	**-3.2**
MNK				*i* PPP	PPP	06 57 07.4	
MNK				*i* S	**S**	**07 02 12.0**	**-2.0**
MNK				*i* SS	**SS**	**07 07 10.1**	**+5.7**
MNK				*i* SSS	SSS	07 10 26.0	
MNK				*i* LQ	LQ	07 19 15.3	
MNK				*i* LR	LR	07 24 11.4	
MNK				*i* LRM	MLR	07 28 07.6	
	comp=E,74nm,18.1s						
MNK				*i* LRM	MLR	07 28 39.6	
	comp=N,666nm,13.8s						
MNK				*i* LRM	MLR	07 29 05.2	
	comp=Z,114nm,13.3s						
AKASG	**Malin Array Be**	**75.58**	**319**	P	**P**	**06 52 35.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=58,slow=8.0,SNR=14						
AKASG				LR	LR	07 28 43.5	
	comp=Z,42nm,19.2s,baz=337,slow=38						
	comp=Z,1.1nm,0.5s						
AKASG	**Malin Array Be**	**75.58**	**319**	P	**P**	**06 52 34.9**	**-0.8**
AKBB	**Malin Array Si**	**75.58**	**319**	P	**P**	**06 52 35.0**	**-0.6**
AKBB				IAmb	IAmb	06 52 45.3	
	comp=Z,14nm,1.0s						
MEF	**Metsahovi**	**75.93**	**329**	*e*P	**P**	**06 52 38.0**	**+0.5**
IDID	**Didziasalis**	**75.94**	**324**	*e*P	**P**	**06 52 39.0**	**+1.3**
NACGM	**Naroch**	**76.02**	**324**⇓	*e*P	**P**	**06 52 38.4**	**+0.3**
	baz=76						
IIGN	**Ignalina**	**76.22**	**324**	*e*P	**P**	**06 52 39.7**	**+0.4**
BCAR	**Beaver Creek A**	**76.30**	**28**	P	**P**	**06 52 40.3**	**+0.6**
EIL	**Elat**	**76.45**	**297**	LR	LR	07 30 43.1	
	comp=Z,67nm,19.1s,baz=356,slow=39						
MTSE	**Matsula**	**76.61**	**328**	*e*P	**P**	**06 52 42.1**	**+0.7**
NOR	**Nord**	**76.72**	**354**	*i* P	**P**	**06 52 40.8**	**-0.9**
RAF	**Rauma**	**76.96**	**330**	*e*P	**P**	**06 52 43.6**	**+0.3**
PABE	**Paberze**	**77.42**	**325**	*e*P	**P**	**06 52 46.5**	**+0.6**
SLIT	**Slitere, Latvi**	**77.70**	**327**	*e*P	**P**	**06 52 47.4**	**-0.1**
INK	**Inuvik**	**77.80**	**21**	P	**P**	**06 52 47.8**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=292,slow=7.1,SNR=7.9						
	comp=Z,2.1nm,0.8s						
INK	**Inuvik**	**77.80**	**21**	IAmb	IAmb	06 53 06.2	
	comp=Z,9.7nm,1.5s						
SUW	**Suwalki**	**78.28**	**323**	*e*P	**P**	**06 52 51.2**	**+0.3**
URZ	**Urewera**	**78.61**	**138**	LR	LR	07 30 28.7	
	comp=Z,59nm,18.5s,baz=210,slow=38						
A36M	**Sachs Harbour**	**78.74**	**17**	P	**P**	**06 52 53.3**	**+0.2**
A36M				IAmb	IAmb	06 52 54.2	
	comp=Z,15nm,0.9s						
MLR	**Muntele Rosu**	**79.06**	**314**	LR	LR	07 31 36.0	
	comp=Z,169nm,19.4s,baz=82,slow=38						
UPP	**Uppsala**	**79.28**	**330**	*e*P	**P**	**06 52 56.5**	**+0.3**
EUNU	**Eureka**	**79.48**	**5**	P	**P**	**06 52 57.5**	**+0.4**
VIKU	**Vikbolandet**	**80.21**	**329**	*e*P	**P**	**06 53 01.8**	**+0.5**
DAG	**Danmarks Havn**	**80.67**	**351**	*i* P	**P**	**06 53 02.0**	**-1.4**
CRVS	**Cervenica-Dubn**	**80.91**	**319**	*e*P	**P**	**06 53 07.4**	**+2.1**
HFS	**Hagfors**	**81.00**	**331**	LR	LR	07 31 41.4	
	comp=Z,82nm,18.3s,baz=30,slow=38						
NB2	**NORSAR Subarra**	**81.74**	**332**	P	**P**	**06 53 08.7**	**-0.8**
	comp=Z,15nm,1.2s,baz=65,slow=5.3						
NOA	**NORSAR Array B**	**81.74**	**332**	P	**P**	**06 53 09.1**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=63,slow=5.3,SNR=8.0						
NOA				LR	LR	07 32 19.6	
	comp=Z,103nm,18.6s,baz=75,slow=38						
	comp=Z,2.9nm,0.8s						
DEL	**Delary**	**82.41**	**327**	*e*P	**P**	**06 53 14.2**	**+1.2**
BSD	**Bornholm Skovb**	**82.42**	**326**	*e*P	**P**	**06 53 13.5**	**+0.4**
JMIC	**Jan Mayen**	**82.92**	**345**	LR	LR	07 34 11.2	
	comp=Z,20nm,18.0s,baz=91,slow=39						
IDI	**Anoyia**	**82.96**	**305**	LR	LR	07 36 28.7	
	comp=Z,23nm,18.6s,baz=94,slow=40						
MORC	**Moravsky Berou**	**83.00**	**320**	*e*P	**P**	**06 53 18.8**	**+2.5**
JAVC	**Velka Javorina**	**83.26**	**319**	*e*P	**P**	**06 53 19.6**	**+1.9**
RES	**Resolute Bay**	**83.28**	**9**	P	**P**	**06 53 17.3**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=314,slow=4.8,SNR=12						
RES				LR	LR	07 32 33.5	
	comp=Z,20nm,21.2s,baz=84,slow=37						
	comp=Z,3.6nm,0.9s						
DLBC	**Dease Lake**	**83.36**	**30**	P	**P**	**06 53 18.4**	**+0.4**
	comp=Z,4.3nm,1.1s,baz=330,slow=6.5,SNR=3.6						
	comp=Z,4.3nm,1.1s						
DLBC	**Dease Lake**	**83.36**	**30**	IAmb	IAmb	06 53 20.5	
	comp=Z,22nm,1.4s						
KMBO	**Kilima Mbogo**	**83.61**	**267**	LR	LR	07 28 44.6	
	comp=Z,26nm,21.0s,baz=73,slow=34						
VRAC	**Vranov**	**83.75**	**320**	LR	LR	07 32 34.6	
	comp=Z,39nm,18.6s,baz=67,slow=37						
VRAC	**Vranov**	**83.75**	**320**	*e*P	**P**	**06 53 21.2**	**+1.1**
KRUC	**Moravsky**	**83.96**	**320**	*e*P	**P**	**06 53 21.7**	**+0.5**
BRG	**Berggiesshubel**	**84.68**	**322**	*e*P	**P**	**06 53 25.5**	**+0.7**
BRG				Amp		06 53 27.0	
	comp=Z,15nm,1.3s						
BRG				*e*x	x	06 53 34.7	
BRG				Amp		06 53 36.2	
	comp=Z,9.2nm,1.1s						
CLL	**Collm**	**85.04**	**323**	*i* P	**P**	**06 53 26.6**	**0.0**
	comp=Z,12nm,1.1s						
CLL				*i* x	x	06 53 35.6	
CLL				*e*x	x	06 53 39.0	
GERES	**GERESS Array B**	**85.67**	**321**	P	**P**	**06 53 30.1**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=64,slow=6.1,SNR=11						
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**85.67**	**321**	P	**P**	**06 53 29.8**	**-0.2**
YKA	**Yellowknife Ar**	**87.53**	**22**	P	**P**	**06 53 39.0**	**+0.4**
	comp=Z,4.7nm,0.8s,baz=316,slow=4.6,SNR=85						
YKA				PKKPbc	**PKKPbc**	**07 11 30.6**	**+1.6**
	comp=Z,0.2nm,0.8s,baz=127,slow=2.0,SNR=5.6						
	comp=Z,4.7nm,0.8s						
YKA	**Yellowknife Ar**	**87.53**	**22**	P	**P**	**06 53 38.2**	**-0.4**
RAR	**Rarotonga**	**88.27**	**113**	P	**P**	**06 53 43.9**	**+1.0**
	comp=Z,26nm,0.9s,baz=59,slow=2.1,SNR=3.5						
DAVOX	**Davos/Dischmat**	**88.90**	**320**	LR	LR	07 36 40.6	
	comp=Z,58nm,18.2s,baz=81,slow=38						
MBAR	**Mbarara**	**89.57**	**269**	LR	LR	07 34 05.2	
	comp=Z,18nm,18.5s,baz=58,slow=36						
BORG	**Borgarnes**	**90.80**	**344**	LR	LR	07 37 48.1	
	comp=Z,36nm,18.3s,baz=21,slow=38						
EKA	**Eskdalemuir Ar**	**91.19**	**331**	LR	LR	07 41 36.7	
	comp=Z,64nm,18.1s,baz=0.0,slow=40						
PPT	**Papeete**	**96.07**	**106**	LR	LR	07 28 24.7	
	comp=Z,23nm,19.9s,baz=302,slow=30						
PPT2	**Papeete2**	**96.08**	**106**	*e*LR	LR	07 25 15.6	
	comp=Z,84nm,25.5s						
LSZ	**Lusaka**	**96.75**	**256**	LR	LR	07 36 37.4	
	comp=Z,27nm,18.3s,baz=184,slow=35						
TAOE	**Nuku Hiva Isla**	**102.08**	**95**	*e*LR	LR	07 28 33.3	
	comp=Z,108nm,30.8s						
TXAR	**Lajitas Array**	**115.57**	**42**	PKP	**PKiKP**	**06 59 33.4**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=263,slow=3.5,SNR=2.7						
ROSC	**El Rosal**	**151.84**	**32**	PKP	**PKPdf**	**07 00 40.3**	**-0.5**
	comp=Z,3.7nm,0.4s,baz=17,slow=20,SNR=2.0						
ROSC				PKPbc	**PKiKP**	**07 00 47.7**	**+0.1**
	comp=Z,4.6nm,0.4s,baz=340,slow=4.8,SNR=5.4						
LPAZ	**La Paz**	**171.51**	**68**	PKP	**PKPdf**	**07 00 58.6**	**-2.5**
	comp=Z,1.5nm,1.0s,baz=49,slow=0.6,SNR=4.4						
CPUP	**Villa Florida**	**172.93**	**199**	PKP	**PKPdf**	**07 00 59.1**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=119,slow=1.0,SNR=3.6						

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*NEIC **06** 06:46:29±2.4, 15°.75S±0°.09×173°.72W±0°.06, h71^{km}±7^{km}, mb4.5/12, Error ellipse: s-maj=13.4km s-min=6.5km az=153.0*

*IDC **06** 06:46:29.6±2.3, 15°.73S×173°.72W, h85^{km}±21^{km}, mb3.7/9, mbtmp4.1/12, Error ellipse: s-maj=26.4km s-min=13.3km az=134.0*

*NOU **06** 06:46:33.4, 15°.69S×173°.35W, h87^{km}, MLv5.0/14, Tonga Islands*

ISC 06 06:46:30.9±0.5**, 15°.67S**±0°.07×**173°.61W**±0°.08**, h100**^{km}**, n39,** σ1^{s}**89**/33**, mb4.2**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.48**	**46**	P	**Pn**	**06 47 09.3**	**-0.7**
	298nm,0.4s,baz=184,slow=2.0,SNR=64						
AFI				S	**Sn**	**06 47 36.1**	**-3.7**
	1µm,0.3s,baz=127,slow=20,SNR=15						
AFI	**Afiamalu**	**2.48**	**46**		**Pn**	**06 47 08.8**	**-1.2**
AFI	**Afiamalu**	**2.48**	**46**	P	**Pn**	**06 47 09.6**	**-0.3**
NIUE	**Niue**	**4.88**	**135**		**Pn**	**06 47 40.9**	**-1.2**
NIUE	**Niue**	**4.88**	**135**	P	**Pn**	**06 47 41.7**	**-0.4**
DGTI	**Dogotuki**	**6.43**	**263**	P	Pn	06 48 09.1	+5.9
MSVF	**Nonsavu**	**8.26**	**254**	P	Pn	06 48 34.5	+6.5
	20nm,0.9s,baz=100,slow=11,SNR=17						
KNTN	**Kanton**	**12.94**	**8**	Pn	**Pn**	**06 49 32.9**	**+1.7**
RAR	**Rarotonga**	**14.23**	**115**	P	**Pn**	**06 49 47.8**	**-0.1**
	20nm,0.6s,baz=202,slow=1.4,SNR=6.3						
RAR	**Rarotonga**	**14.23**	**115**	Pn	**Pn**	**06 49 45.9**	**-2.0**
RAR	**Rarotonga**	**14.23**	**115**	P	**Pn**	**06 49 48.8**	**+0.9**
LIFNC	**LIFOU**	**18.89**	**252**	P	**Pn**	**06 50 41.5**	**-3.8**
YATNC	**Mamie plateau,**	**19.51**	**248**	P	Pn	06 50 56.9	+4.2
OUENC	**Ouen Island, N**	**19.66**	**247**	P	**Pn**	**06 50 57.7**	**+3.4**
DZM	**Mont Dzumac**	**19.91**	**248**	P	**Pn**	**06 50 54.0**	**-3.5**
	1.6nm,0.6s,baz=6.3,slow=23,SNR=1.1						
DZM	**Mont Dzumac**	**19.91**	**248**	IAmb	IAmb	06 51 02.5	
	comp=Z,18nm,1.0s						
DZM	**Mont Dzumac**	**19.91**	**248**	P	Pn	06 51 01.3	+3.8
URZ	**Urewera**	**23.95**	**198**	P	**P**	**06 51 35.8**	**0.0**
	comp=Z,3.6nm,0.3s,baz=37,slow=15,SNR=15						
URZ				S	**S**	**06 55 45.0**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=59,slow=19,SNR=1.6						
	comp=Z,3.6nm,0.3s						
BKZ	**Black Stump Fm**	**24.97**	**198**	P	**P**	**06 51 45.2**	**0.0**
QRZ	**Quartz Range**	**27.81**	**203**	P	**P**	**06 52 13.9**	**+3.2**
KHZ	**Kahutara**	**28.86**	**200**	P	P	06 52 23.6	+3.7
CTAO	**Charters Tower**	**38.39**	**257**	P	**P**	**06 53 43.0**	**+0.1**
CTAO				IAmb	IAmb	06 54 09.1	
	comp=Z,18nm,1.4s						
COEN	**Coen**	**41.77**	**266**	P	**P**	**06 54 11.6**	**+0.8**
COEN				IAmb	IAmb	06 54 12.4	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**43.73**	**240**	P	**P**	**06 54 25.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=90,slow=9.0,SNR=5.0						
	comp=Z,3.8nm,0.8s						
STKA	**Stephens Creek**	**43.73**	**240**	IAmb	IAmb	06 54 26.7	
	comp=Z,0.9nm,0.9s						
BBOO	**Buckleboo**	**48.51**	**240**	P	**P**	**06 55 01.9**	**-2.1**
WB0	**Warramunga Arr**	**49.55**	**257**	P	**P**	**06 55 10.8**	**-1.3**
WB0				IAmb	IAmb	06 55 15.4	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**49.59**	**257**	P	**P**	**06 55 11.1**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=96,slow=7.7,SNR=26						
	comp=Z,1.6nm,0.7s						
WRA	**Warramunga Arr**	**49.59**	**257**	IAmb	IAmb	06 55 12.8	
	comp=Z,0.2nm,0.9s						
AS31	**Alice Springs**	**49.84**	**252**	P	**P**	**06 55 12.8**	**-1.5**
AS31				IAmb	IAmb	06 55 14.6	
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**49.84**	**252**	P	**P**	**06 55 13.2**	**-1.0**
	comp=Z,12nm,0.7s,baz=88,slow=7.9,SNR=111						
	comp=Z,12nm,0.7s						
CASY	**Casey**	**70.08**	**205**	P	**P**	**06 57 34.0**	**+2.0**
QSPA	**South Pole Qui**	**74.38**	**180**	P	**P**	**06 57 58.5**	**+0.8**
QSPA				IAmb	IAmb	06 58 03.5	
	comp=Z,3.1nm,1.2s						
NVAR	**Mina Array Bea**	**74.66**	**42**	P	**P**	**06 58 01.1**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=230,slow=11,SNR=7.1						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**80.92**	**56**	P	**P**	**06 58 36.1**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=214,slow=7.6,SNR=6.4						
	comp=Z,0.9nm,0.9s						
PDAR	**Pinedale Array**	**82.59**	**42**	P	**P**	**06 58 43.4**	**+0.1**

	comp=Z,0.4nm,0.7s,baz=172,slow=3.0,SNR=4.0						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**82.74**	**11**	P	**P**	**06 58 43.6**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=222,slow=5.1,SNR=6.2						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**90.42**	**23**	P	**P**	**06 59 22.7**	**+2.0**
	comp=Z,0.7nm,1.1s,baz=242,slow=4.6,SNR=4.4						
	comp=Z,0.7nm,1.1s						
BRTR	**Keskin Array B**	**146.24**	**321**	PKPbc	**PKiKP**	**07 06 00.5**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=102,slow=3.8,SNR=5.7						

IDC 06 06:58:40.5±3.0**,54°.21N**×**87°.25E,h0^{km},mbtmp3.0**/2**,ML2.7**/2**,Error ellipse: s-maj=26.1km s-min=16.9km az=65.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	*i*		07 07 30.0	
	0.1nm,1.0s,baz=78,slow=324,SNR=6.0						
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg	Pn	06 59 06.0	-2.1
	1.2nm,0.3s,baz=78,slow=18,SNR=14						
ZALV				Lg	Lg	06 59 27.0	
	0.8nm,0.3s,baz=75,slow=28,SNR=3.6						
KURBB	**Kurchatov Arra**	**6.43**	**240**	Pn	Pn	07 00 17.3	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=12						
KURBB				Lg	Lg	07 02 04.1	
	baz=59,slow=31,SNR=5.1						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**8.07**	**205**	Pn	Pn	07 00 40.4	+1.5
	0.2nm,0.3s,baz=23,slow=13,SNR=5.0						
MKAR				Sn	Sn	07 02 09.3	-1.6
	0.1nm,0.3s,baz=25,slow=27,SNR=7.0						
MKAR				Lg	Lg	07 02 58.7	
	0.1nm,0.3s,baz=27,slow=32,SNR=7.6						
	0.3nm,0.4s						

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*IDC **06** 06:59:36.2±3.6,53°.74N×88°.13E,h0^{km},mbtmp2.8/2,ML2.7/2,Error ellipse: s-maj=32.6km s-min=19.6km az=45.0*

ISC 06 06:59:37.1±5.8**,53°.9N**±0°.3×**88°.6E**±0°.3**,h35^{km},n6,**σ**1^{s}41**/6**,2C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.23**	**273**	*i*		07 12 32.6	
	0.2nm,1.1s,baz=91,slow=333,SNR=3.5						
ZAA0	**Zalesovo Array**	**2.23**	**273**	⇑Pn	**Pn**	**07 00 11.4**	**-0.2**
	0.8nm,0.5s,baz=98,slow=11						
ZAA0				⇓Sn	**Sn**	**07 00 39.0**	**+1.1**
	6.2nm,0.7s,baz=93,slow=23						
ZALV	**Zalesovo Beam**	**2.23**	**273**	Pg	**Pn**	**07 00 11.7**	**+0.1**
	1.6nm,0.3s,baz=96,slow=13,SNR=7.5						
ZALV				Lg	Lg	07 00 39.5	
	3.8nm,0.3s,baz=98,slow=20,SNR=16						
KURBB	**Kurchatov Arra**	**6.98**	**246**	Pn	**Pn**	**07 01 16.0**	**-0.8**
	0.1nm,0.3s,baz=64,slow=14,SNR=4.3						
KURBB				Lg	Lg	07 03 06.1	
	0.1nm,0.3s,baz=61,slow=30,SNR=4.9						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**6.98**	**246**	⇑Pn	**Pn**	**07 01 14.9**	**-1.9**
	0.9nm,0.5s						
KURBB				⇓Lg	Lg	07 03 10.7	
	9.0nm,1.3s						
MKAR	**Makanchi Array**	**8.16**	**212**	Pn	**Pn**	**07 01 33.5**	**+0.5**
	0.1nm,0.3s,baz=23,slow=13,SNR=1.4						
	0.2nm,0.3s						

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*NNC **06** 07:04:11.2±2.3,54°.36N×87°.66E,h0^{km},mb3.3,mpv3.0,Error ellipse: s-maj=15.1km s-min=10.7km az=53.0,Suspected Mining explosion.*

*IDC **06** 07:04:18.0±2.8,54°.19N×87°.09E,h0^{km},mbtmp3.0/2,ML2.5/2,Error ellipse: s-maj=24.3km s-min=16.1km az=63.0*

ISC 06 07:04:12.1±1.9**,52°.80N**±0°.05×**86°.9E**±0°.1**,h0^{km},n9,**σ**2^{s}88**/15**,10C-4D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**314**	*i*		07 13 20.0	
	baz=79,slow=321,SNR=2.1						
ZAA0	**Zalesovo Array**	**1.69**	**314**	⇓P	**Pn**	**07 04 42.0**	**-0.9**
	0.4nm,0.4s,baz=80,slow=17						
ZAA0				⇓S	**Sg**	**07 05 05.4**	**-0.8**
	3.3nm,0.7s,baz=71,slow=26						
ZALV	**Zalesovo Beam**	**1.69**	**314**	Pg	**Pn**	**07 04 42.4**	**-0.5**
	1.3nm,0.3s,baz=78,slow=13,SNR=13						
ZALV				Lg	Lg	07 05 02.0	
	1.7nm,0.3s,baz=75,slow=29,SNR=5.8						
KURK	**Kurchatov**	**5.54**	**251**	⇑Pn	**Pb**	**07 05 51.3**	**+1.6**
	2.5nm,1.0s						
KURK				⇑Sn	**Sg**	**07 07 08.8**	**-1.2**
	1.6nm,0.6s						
KURK				⇑Lg	Lg	07 07 41.0	
	17nm,1.2s						
KURBB	**Kurchatov Arra**	**5.63**	**251**	Pn	**Pb**	**07 05 53.7**	**+2.5**
	0.1nm,0.3s,baz=55,slow=14,SNR=6.1						
KURBB				Sn	**Sb**	**07 07 04.7**	**+5.5**
	baz=58,slow=23,SNR=1.8						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**5.63**	**251**	⇑Pn	**Pb**	**07 05 51.6**	**+0.4**
	3.8nm,0.7s						
KURBB				⇑Sn	**Sg**	**07 07 09.1**	**-3.7**
	5.4nm,0.6s						
KURBB				⇑Lg	Lg	07 07 43.4	
	18nm,0.9s						
MK31	**Makanchi Array**	**6.71**	**208**	⇑Pn	**Pb**	**07 06 13.3**	**+3.7**
	0.1nm,0.2s,baz=27,slow=13,SNR=15						
MK31				⇓Sn	**Sg**	**07 07 45.8**	**-1.6**
	1.8nm,0.8s,baz=26,slow=26,SNR=7.8						
MK31				⇑Lg	Lg	07 08 35.9	
	8.3nm,1.0s,baz=22,slow=25,SNR=6.0						
MKAR	**Makanchi Array**	**6.71**	**208**	Pn	**Pg**	**07 06 17.0**	**-3.6**
	0.1nm,0.3s,baz=25,slow=14,SNR=8.3						
MKAR				Sn	**Sg**	**07 07 45.6**	**-1.8**
	0.2nm,0.3s,baz=22,slow=23,SNR=12						
MKAR				Lg	Lg	07 08 31.0	
	baz=19,slow=35						
	0.2nm,0.3s						
MAKZ	**Makanchi**	**6.79**	**210**	⇑Pn	**Pb**	**07 06 14.0**	**+3.1**
	1.4nm,0.8s						
MAKZ				⇑Sn	**Sg**	**07 07 48.8**	**-1.2**
	2.3nm,0.7s						
MAKZ				⇓Lg	Lg	07 08 35.8	
	9.1nm,1.2s						

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*IDC **06** 07:14:36.2±2.9,8°.61S×118°.31E,h131^{km}±22^{km},mb3.4/6,mbtmp3.8/9,Error ellipse: s-maj=37.2km s-min=12.0km az=61.0*

*DJA **06** 07:14:37.6±0.3,9°S±4°×11°8E±°,h117^{km}±4^{km},M4.0/10,mb4.4/5,mB5.2/1,MLv3.8/10,Mw(mB)4.5/1*

ISC 06 07:14:38.0±0.6**,8°.64S**±0°.06×**118°.35E**±0°.05**,h152^{km},n30,**σ**1^{s}91**/35**,mb3.8**/6**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.59**	**252**	P	**Pn**	**07 14 57.6**	**-2.5**
PLAI				S	**Sn**	**07 15 10.9**	**-5.9**
PLAI	**Plampang**	**0.59**	**252**	P	**Pn**	**07 14 57.5**	**-2.5**
WBSI	**Waikabubak, Su**	**1.43**	**134**	P	**Pn**	**07 15 04.2**	**-2.8**
BASI	**Baing, Sumba**	**2.70**	**126**	P	**Pn**	**07 15 20.2**	**-1.5**
SRBI	**Singaraja**	**3.15**	**280**	P	**Pn**	**07 15 26.3**	**-1.0**
IGBI	**Denpasar**	**3.17**	**267**	P	**Pn**	**07 15 27.6**	**0.0**
BKSI	**Bulukumba**	**3.74**	**28**	P	**Pn**	**07 15 34.2**	**-0.7**
KAPI	**Kappang**	**3.87**	**21**	P	**Pn**	**07 15 35.0**	**-1.5**
	12nm,0.6s,baz=201,slow=6.9,SNR=9.1						
KAPI				S	**Sn**	**07 16 20.2**	**-1.8**
	8.8nm,0.6s,baz=180,slow=8.1,SNR=1.8						
JAGI	**Jajag, Banyuwa**	**4.15**	**272**	P	**Pn**	**07 15 38.3**	**-2.0**
JAGI	**Jajag, Banyuwa**	**4.15**	**272**	P	**Pn**	**07 15 39.7**	**-0.6**
BATI	**Baumata**	**5.47**	**107**	P	**Pn**	**07 15 56.5**	**-1.3**
	39nm,0.4s,baz=287,slow=8.3						
BATI				S	**Sn**	**07 16 57.1**	**-2.9**
	51nm,0.5s,baz=323,slow=21,SNR=2.2						
BATI	**Baumata**	**5.47**	**107**	P	**Pn**	**07 15 57.0**	**-0.7**
	0.2nm32nm,0.6s						
PCJI	**Pacitan**	**7.11**	**273**	P	**Pn**	**07 16 19.4**	**-0.1**
	26nm,1.0s						
LBMI	**Labuha**	**12.10**	**49**	P	**Pn**	**07 17 26.4**	**+0.8**
	889nm19nm,0.5s						
MBWA	**Marble Bar**	**12.52**	**174**	P	**Pn**	**07 17 30.7**	**-0.2**
KDU	**Kakadu**	**14.45**	**107**	P	**Pn**	**07 17 54.3**	**-1.3**
GIRL	**Giralia**	**14.47**	**195**	P	**P**	**07 17 57.6**	**-0.6**
MNAI	**Manna**	**15.87**	**285**	P	**Pn**	**07 18 12.6**	**-0.6**
MEEK	**Meekatharra**	**17.90**	**179**	P	**Pn**	**07 18 38.6**	**+1.0**
WRKA	**Warakurna**	**18.86**	**151**	P	**Pn**	**07 18 49.5**	**+0.6**
WRA	**Warramunga Arr**	**19.12**	**128**	P	**P**	**07 18 49.6**	**+0.2**
	1.7nm,0.6s,baz=302,slow=12,SNR=32						
WRA				ScP	**ScP**	**07 26 31.7**	**+2.6**
	0.3nm,0.8s,baz=357,slow=3.3,SNR=1.6						
MORW	**Morawa**	**20.43**	**186**	P	**P**	**07 19 05.6**	**+2.1**
ASAR	**Alice Springs**	**21.10**	**137**	P	**P**	**07 19 11.4**	**+0.8**
	2.4nm,0.5s,baz=309,slow=9.1,SNR=86						
ASAR				ScP	**ScP**	**07 26 37.1**	**+3.3**
	0.5nm,0.8s,baz=335,slow=1.9,SNR=2.6						
	2.4nm,0.5s						
QIS	**Mount Isa**	**23.70**	**122**	P	**P**	**07 19 38.0**	**+1.9**
STKA	**Stephens Creek**	**31.64**	**140**	P	**P**	**07 20 48.7**	**+1.9**
	1.3nm,0.4s,baz=320,slow=12,SNR=3.4						
	1.3nm,0.4s						
SONM	**Songino Array**	**57.22**	**350**	P	**P**	**07 24 09.5**	**+0.2**
	0.6nm,0.4s,baz=172,slow=4.4,SNR=2.3						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**63.85**	**333**	P	**P**	**07 24 54.0**	**-0.2**
	0.3nm,0.5s,baz=151,slow=5.7,SNR=5.3						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**68.36**	**334**	P	**P**	**07 25 22.9**	**0.0**
	0.1nm,0.4s,baz=145,slow=5.7,SNR=2.3						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**68.48**	**339**	P	**P**	**07 25 22.4**	**-1.1**
	0.4nm,0.3s,baz=163,slow=5.6,SNR=1.7						
	0.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**117.76**	**280**	PKP	**PKiKP**	**07 33 08.4**	**+1.1**
	0.3nm,0.5s,baz=40,slow=1.8,SNR=2.5						

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*IDC **06** 07:18:16.4±5.4,5°.10S×145°.06E,h111^{km}±57^{km},mb3.5/5,mbtmp3.9/8,MS2.4/1,Error ellipse: s-maj=40.7km s-min=28.1km az=163.0*

ISC 06 07:18:10.8±0.9**,4°.83S**±0°.10×**144°.9E**±0°.2**,h54^{km},n9,**σ**1^{s}89**/10**,mb3.9**/5**,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.07**	**154**	P	**Pn**	**07 19 25.9**	**+1.6**
	13nm,0.4s,baz=303,slow=10,SNR=3.1						
PMG				S	**Sn**	**07 20 20.5**	**-1.1**
	9.8nm,0.3s,baz=303,slow=22,SNR=1.3						
PMG				LR	LR	07 21 24.0	
	comp=Z,46nm,19.6s,baz=148,slow=39						
CTA	**Charters Tower**	**15.23**	**175**	P	**Pn**	**07 21 43.6**	**+1.0**
	1.2nm,0.3s,baz=3.5,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**18.21**	**214**	P	**Pn**	**07 22 18.9**	**-1.0**
	1.9nm,0.6s,baz=38,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**21.53**	**208**	P	**P**	**07 22 55.0**	**-0.6**
	1.0nm,0.8s,baz=35,slow=11,SNR=6.6						
	1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.86**	**298**	P	**P**	**07 27 08.7**	**+2.0**
	1.8nm,0.3s,baz=127,slow=5.5,SNR=7.6						
	1.8nm,0.3s						
MKAR	**Makanchi Array**	**75.27**	**321**	P	**P**	**07 29 48.4**	**+0.2**
	0.4nm,0.6s,baz=111,slow=6.8,SNR=4.6						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**85.24**	**24**	P	**P**	**07 30 40.9**	**-0.4**
	0.6nm,0.7s,baz=253,slow=5.0,SNR=9.0						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**98.30**	**52**	P	**P**	**07 31 43.2**	**0.0**
	0.3nm,0.8s,baz=258,slow=5.4,SNR=1.9						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**142.78**	**285**	PKP	**PKPdf**	**07 37 35.4**	**-3.8**
	0.3nm,0.4s,baz=60,slow=2.9,SNR=2.2						

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*NIED **06** 07:18:44.5,32°.63N×130°.68E,h9^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.16; M$_{\theta\theta}$6.58; M$_{\phi\phi}$-6.42; M$_{r\theta}$-0.28; M$_{\theta\phi}$1.83; M$_{\phi r}$-1.11; Fault plane solution: M$_0$6.85000×10^{14} NP1: φ$_s$307.00000°,δ81.00000°,λ-4.00000°. NP2:φ$_s$37.00000°,δ86.00000°,λ-171.00000°.*

JMA 06 07:18:44.5±0.0**,32°.6N**±0°.1×**130°.7E**±0°.2**,h9^{km},MV3.8**/20**,2D,SOUTHERN KUMAMOTO PREF,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.14**	**127**	⇓*i*P	Pg	07 18 47.6	+0.2
JIU3				⇓S	Sg	07 18 49.9	+0.3
JTA	**Tamana**	**0.35**	**339**	*i* P	Pg	07 18 51.7	+0.2
JTA				*e*S	Sg	07 18 56.7	+0.5
JZO	**Okuchi**	**0.49**	**188**	P	Pg	07 18 54.2	+0.1
JTZ	**Takazaki**	**0.80**	**155**	*i* P	Pb	07 19 00.6	-0.1
JTZ				S	Sb	07 19 11.6	0.0

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*NNC **06** 07:49:14.7±2.4,54°.27N×87°.58E,h0^{km},mb3.2,mpv3.0,Error ellipse: s-maj=17.2km s-min=13.8km az=20.0,Suspected Mining explosion.*

*IDC **06** 07:49:18.4±2.5,54°.20N×87°.37E,h0^{km},mbtmp3.1/3,ML2.8/2,Error ellipse: s-maj=22.5km s-min=15.0km az=68.0*

ISC 06 07:49:15.3±3.6**,54°.3N**±0°.2×**87°.5E**±0°.2**,h0^{km},n9,**σ**1^{s}50**/12**,5C-3D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.62**	**257**	*i*		07 58 20.0	
	baz=78,slow=325,SNR=2.8						
ZAA0	**Zalesovo Array**	**1.62**	**257**	⇑P	**Pb**	**07 49 44.4**	**-1.6**
	0.3nm,0.2s,baz=86,slow=11						
ZAA0				⇓S	**Sb**	**07 50 07.3**	**+0.4**
	1.1nm,0.3s,baz=75,slow=22						
ZALV	**Zalesovo Beam**	**1.62**	**257**	Pg	**Pn**	**07 49 44.3**	**-0.7**
	2.6nm,0.3s,baz=76,slow=16,SNR=19						
ZALV				Lg	Lg	07 50 06.4	
	2.7nm,0.3s,baz=78,slow=28,SNR=6.1						
KURK	**Kurchatov**	**6.51**	**240**	⇑Pn	**Pn**	**07 50 53.4**	**+1.2**
	2.0nm,0.7s						
KURK				⇑Lg	Lg	07 52 41.7	
	3.7nm,1.1s						
KURBB	**Kurchatov Arra**	**6.61**	**239**	Pn	**Pn**	**07 50 54.8**	**+1.1**
	0.2nm,0.3s,baz=56,slow=14,SNR=18						
KURBB				Sn	**Sn**	**07 52 08.8**	**-0.8**
	baz=54,slow=23,SNR=1.6						
KURBB				Lg	Lg	07 52 46.4	
	baz=52,slow=42,SNR=1.7						
	2.1nm,0.5s						
KURBB	**Kurchatov Arra**	**6.61**	**239**	⇓Pn	**Pn**	**07 50 54.0**	**+0.4**
	2.3nm,0.6s						
KURBB				⇓Sn	**Sn**	**07 52 09.9**	**+0.3**
	3.2nm,0.7s						
KURBB				⇑Lg	Lg	07 52 43.8	
	2.5nm,0.7s						
MK31	**Makanchi Array**	**8.24**	**206**	⇑Pn	**Pn**	**07 51 14.8**	**-1.2**
	0.3nm,0.5s,baz=30,slow=14,SNR=5.9						
MKAR	**Makanchi Array**	**8.24**	**206**	Pn	**Pn**	**07 51 17.7**	**+1.7**
	0.1nm,0.3s,baz=21,slow=12,SNR=5.5						
MKAR				Sn	**Sn**	**07 52 50.4**	**+0.7**
	0.1nm,0.3s,baz=21,slow=28,SNR=4.2						
MKAR				Lg	Lg	07 53 32.2	
	0.1nm,0.3s,baz=27,slow=26,SNR=2.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**10.23**	**270**	Pn	**Pn**	**07 51 46.1**	**+2.9**
	0.3nm,0.3s						

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*JMA **06** 07:53:22.4±0.2,23°.5N±0°.6×12°2E±°,h11^{km}±2^{km},MD4.3/12,MV4.5/12,TAIWAN REGION*

*NIED **06** 07:53:22.4,23°.45N×121°.57E,h11^{km},MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.91; M$_{\theta\theta}$1.07; M$_{\phi\phi}$-0.16; M$_{r\theta}$2.37; M$_{\theta\phi}$-0.90; M$_{\phi r}$3.51; Fault plane solution: M$_0$4.25000×10^{15} NP1: φ$_s$112.00000°,δ5.00000°,λ-15.00000°. NP2:φ$_s$217.00000°,δ89.00000°,λ-94.00000°.*

*TAP **06** 07:53:23.9,23°.47N×121°.49E,h30^{km},ML4.9,B*

*NEIC **06** 07:53:23.6,23°.46N×121°.54E,h31^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.94; M$_{\theta\theta}$-0.73; M$_{\phi\phi}$-2.21; M$_{r\theta}$-0.06; M$_{\theta\phi}$-2.59; M$_{\phi r}$3.05; Fault plane solution: M$_0$4.80000×10^{15} NP1:φ$_s$11.42000°,δ67.46000°,λ62.77000°. NP2:φ$_s$244.74000°,δ34.79000°,λ137.79000°. Principal axes: T 4.6359, Plg58.0000°, Azm243.0000°; N 0.3141, Plg25.0000°, Azm23.0000°; P -4.9500, Plg18.0000°, Azm121.0000°;*

*ASIES **06** 07:53:24.4,23°.47N×121°.50E,h21^{km},MW4.3*

*NEIC **06** 07:53:24.3±1.5,23°.47N±0°.04×121°.50E±0°.04,h26^{km}±5^{km},mb4.6/30,Mwr4.4/24,ML4.7(TAP),Error ellipse: s-maj=6.7km s-min=4.2km az=131.0*

*BJI **06** 07:53:24.0±0.0,23°.54N×121°.41E,h9^{km},mb4.3/36,mB4.4/25,ML4.3/8,Ms4.2/32,Ms7 4.1/35*

*IDC **06** 07:53:28.4±4.4,23°.51N×121°.64E,h76^{km}±41^{km},mb3.9/22,mbtmp4.2/24,ML3.3/2,MS3.6/28,Error ellipse: s-maj=16.3km s-min=10.9km az=73.0*

ISC 06 07:53:24.4±0.6**,23°.46N**±0°.01×**121°.55E**±0°.02**,h29^{km}**±4^{km}**,n286,**σ**1^{s}37**/375**,mb4.5**/44**,MS3.6**/28**,32C-65D,Fault plane solution: NP1:**φ$_s$24.91422°,δ71.26599°,λ84.16190°. **NP2:**φ$_s$222.57343°,δ19.59139°,λ106.69536°. **Principal axes:** T Plg63.2878°, Azm285.7068°; N Plg5.5278°, Azm26.7951°; P Plg26.0443°, Azm119.5059°; **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.12**	**285**	⇑*i*P	**Pb**	**07 53 29.0**	**-0.7**
	baz=287						
HGSD				S	**Sb**	**07 53 34.1**	**+0.7**
	baz=287						
ECBN	**Changbin**	**0.17**	**212**	⇑*i*P	**Pb**	**07 53 30.0**	**-0.2**
	baz=194						
ECBN				*i* S	**Sb**	**07 53 34.5**	**+0.4**
	baz=194						
EHY	**Hungye**	**0.21**	**282**	⇓*i*P	**Pb**	**07 53 29.5**	**-1.1**
	baz=282						
EHY				*i* S	**Sb**	**07 53 33.6**	**-1.3**
	baz=282						
EGFH	**Guangfu**	**0.23**	**332**	⇓*i*P	**Pb**	**07 53 30.1**	**-0.8**
	baz=343						
EGFH				*i* S	**Sb**	**07 53 34.8**	**-0.6**
	baz=343						
EYUL	**Yuli**	**0.24**	**242**	⇓*i*P	**Pb**	**07 53 30.4**	**-0.6**
	baz=232						
EYUL				*i* S	**Sb**	**07 53 35.0**	**-0.4**
	baz=232						
YULB	**Yu-li**	**0.24**	**253**		**Pb**	**07 53 29.9**	**-1.1**
YULB				Sg	**Sb**	**07 53 33.8**	**-1.6**
YULB	**Yu-li**	**0.24**	**253**	⇓*i*P	**Pb**	**07 53 30.1**	**-0.9**
	baz=246						
YULB				*i* S	**Sb**	**07 53 34.2**	**-1.3**
	baz=246						
TEGC	**Jichi Village**	**0.25**	**358**	⇑*i*P	**Pb**	**07 53 30.8**	**-0.3**
	baz=12						
TEGC				*i* S	**Sb**	**07 53 36.3**	**+0.7**
	baz=12						
TWF1	**Yuli**	**0.26**	**245**	⇓*i*P	**Pb**	**07 53 30.4**	**-0.8**
	baz=235						
TWF1				S	**Sb**	**07 53 35.0**	**-0.7**
	baz=235						
FULB	**Fuli**	**0.35**	**222**	⇓*i*P	**Pb**	**07 53 32.2**	**-0.3**
	baz=214						
FULB				S	**Sn**	**07 53 39.2**	**-0.4**
	baz=214						
ESL	**Shilin**	**0.37**	**343**	⇓*i*P	**Pb**	**07 53 31.6**	**-1.1**
	baz=352						
ESL				*e*S	**Sb**	**07 53 37.1**	**-1.3**
	baz=352						
CHKT	**Chengkung**	**0.40**	**205**	⇓*i*P	**Pb**	**07 53 33.0**	**-0.2**
	baz=196						
CHKT				*i* S	**Sn**	**07 53 39.7**	**-0.9**
	baz=196						
TEYL	**Yanliau Villag**	**0.41**	**6**	⇑*i*P	**Pn**	**07 53 33.7**	**-0.6**
	baz=13						
TEYL				*e*S	**Sn**	**07 53 41.4**	**+0.4**
	baz=13						
VWDT	**VWDT**	**0.47**	**308**	⇓*i*P	**Pb**	**07 53 33.5**	**-0.8**
	baz=311						
VWDT				*e*S	**Sb**	**07 53 40.1**	**-1.0**
	baz=311						
ECS	**Chishang**	**0.47**	**220**	*e*P	**Pb**	**07 53 33.6**	**-0.8**
	baz=214						
ECS				*e*S	**Sn**	**07 53 41.9**	**-0.7**
	baz=214						
ETM	**Tongmen**	**0.50**	**354**	⇓*i*P	**Pb**	**07 53 33.7**	**-1.1**
ETM				*e*S	**Sb**	**07 53 41.6**	**-0.3**
HWA	**Hwalien**	**0.52**	**6**	*e*P	**Pb**	**07 53 34.8**	**-0.2**
	baz=13						
HWA				*e*S	**Sn**	**07 53 43.8**	**+0.2**
	baz=13						
EDH	**Donghe**	**0.54**	**205**	⇑*i*P	**Pb**	**07 53 34.9**	**-0.5**
	baz=199						
EDH				*i* S	**Sn**	**07 53 43.2**	**-0.9**
	baz=199						
YUS	**Yu-Shan**	**0.55**	**273**	⇓*i*P	**Pb**	**07 53 34.8**	**-1.1**
	baz=272						
YUS				S	**Sb**	**07 53 41.9**	**-1.8**
	baz=272						
ELDTW	**Lidau**	**0.56**	**241**	⇓*i*P	**Pb**	**07 53 34.2**	**-1.5**
	baz=237						
ELDTW				*e*S	**Sb**	**07 53 41.3**	**-2.3**
	baz=237						
OWD	**Renai**	**0.60**	**325**	⇓*i*P	**Pb**	**07 53 35.2**	**-1.2**
	baz=329						
OWD				S	**Sb**	**07 53 42.4**	**-2.3**
	baz=329						
TWD	**Chiawan**	**0.62**	**4**	⇓P	**Pb**	**07 53 35.7**	**-1.0**
	baz=10.0						
TWD				*e*S	**Sn**	**07 53 45.5**	**-0.6**
	baz=10.0						
SSLB	**Suanglung**	**0.63**	**301**		**Pb**	**07 53 35.4**	**-1.6**
SSLB				Sg	**Sb**	**07 53 43.4**	**-2.2**
SSLB	**Suanglung**	**0.63**	**301**	P	**Pb**	**07 53 35.6**	**-1.4**
SSLB	**Suanglung**	**0.63**	**301**	⇓*i*P	**Pb**	**07 53 35.5**	**-1.4**
	baz=302						
SSLB				*e*S	**Sb**	**07 53 43.7**	**-1.9**
	baz=302						
WUSB	**Renai**	**0.66**	**323**	⇓*i*P	**Pb**	**07 53 36.4**	**-1.1**
	baz=326						
WUSB				S	**Sb**	**07 53 44.2**	**-2.2**
	baz=326						
LONT	**Longtian**	**0.67**	**215**	⇑P	**Pb**	**07 53 36.0**	**-1.7**
	baz=211						
LONT				*e*S	**Sn**	**07 53 47.9**	**+0.4**
	baz=211						
ALS	**Alishan**	**0.68**	**274**	⇓*i*P	**Pn**	**07 53 37.1**	**-1.2**
	baz=273						
ALS				*e*S	**Sb**	**07 53 45.9**	**-1.3**
	baz=273						
CHGB	**Renai**	**0.69**	**330**	⇓*i*P	**Pb**	**07 53 36.9**	**-1.1**
	baz=333						
CHGB				*e*S	**Sb**	**07 53 45.3**	**-2.0**
	baz=333						
ETL	**Fush Village**	**0.70**	**6**	*e*P	**Pb**	**07 53 37.1**	**-0.9**
	baz=10.0						
ETL				*e*S	**Sb**	**07 53 46.1**	**-1.2**
	baz=10.0						
NACB	**Ninganchiao**	**0.71**	**3**		**Pb**	**07 53 36.7**	**-1.6**
NACB	**Ninganchiao**	**0.71**	**3**	⇓*i*P	**Pb**	**07 53 36.7**	**-1.6**
	baz=8.0						
NACB				*e*S	**Sb**	**07 53 46.0**	**-1.7**
	baz=8.0						
SMLT	**Sun Moon Lake**	**0.73**	**305**	⇓*i*P	**Pb**	**07 53 37.4**	**-1.2**
	baz=307						
SMLT				*e*S	**Sn**	**07 53 47.5**	**-1.5**
	baz=307						
WHF	**Hehuan Shan**	**0.73**	**339**	⇓P	**Pb**	**07 53 37.2**	**-1.6**
	baz=343						
WHF				*e*S	**Sb**	**07 53 46.5**	**-2.1**
	baz=343						
ETLH	**Xiulin Townshi**	**0.74**	**355**	⇓*i*P	**Pb**	**07 53 37.2**	**-1.7**
	baz=359						
ETLH				*e*S	**Sb**	**07 53 46.6**	**-2.2**
	baz=359						
STYH	**Taoyuan**	**0.77**	**248**	⇓*i*P	**Pn**	**07 53 38.2**	**-1.0**
	baz=246						
STYH				*e*S	**Sb**	**07 53 47.8**	**-1.4**
	baz=246						
WPL	**Puli Township**	**0.77**	**315**	⇓P	**Pb**	**07 53 38.0**	**-1.2**
	baz=317						
TYC	**Yuchr**	**0.77**	**305**	⇓*i*P	**Pb**	**07 53 38.1**	**-1.1**
	baz=307						
TYC				*e*S	**Sn**	**07 53 48.6**	**-1.3**
	baz=307						
TWGBT	**Beinan**	**0.77**	**214**	⇑*i*P	**Pb**	**07 53 37.2**	**-2.1**
	baz=210						
TWGBT				*e*S	**Sb**	**07 53 47.5**	**-2.0**
	baz=210						
TWG	**Pinlang**	**0.77**	**215**		**Pb**	**07 53 37.1**	**-2.2**
TWG	**Pinlang**	**0.77**	**215**	⇑P	**Pb**	**07 53 37.2**	**-2.2**
	baz=210						
TWG				*e*S	**Sb**	**07 53 47.3**	**-2.2**
	baz=210						
STYT	**Tauyuan**	**0.79**	**248**	P	**Pn**	**07 53 38.5**	**-1.0**
	baz=245						
STYT				*e*S	**Sb**	**07 53 48.3**	**-1.6**
	baz=245						
LDUT	**Ludao**	**0.79**	**185**	⇓*i*P	**Pn**	**07 53 37.8**	**-1.7**

	baz=182						
LDUT				eS	Sb	07 53 48.3	-1.5
	baz=182						
TTN	**Taitung**	**0.80**	**208**	⇑eP	**Pn**	**07 53 38.5**	**-1.1**
	baz=203						
TTN				eS	Sn	07 53 49.9	-0.6
	baz=203						
DPDB	**Guoxing**	**0.81**	**315**	⇓iP	**Pb**	**07 53 38.8**	**-1.1**
	baz=317						
DPDB				eS	Sn	07 53 49.4	-1.5
	baz=317						
CHN5	**Tsauling**	**0.81**	**280**	⇓iP	**Pn**	**07 53 39.4**	**-0.5**
	baz=279						
CHN5				eS	Sn	07 53 51.0	0.0
	baz=279						
FUSS	**Fushou**	**0.83**	**340**	⇓iP	**Pn**	**07 53 39.2**	**-1.2**
	baz=344						
FUSS				eS	Sb	07 53 49.2	-2.1
	baz=344						
WCS	**Beigang Elemen**	**0.83**	**316**	⇓iP	**Pb**	**07 53 39.1**	**-1.1**
	baz=318						
WCS				eS	Sb	07 53 49.2	-2.0
	baz=318						
WJS	**Zhushan**	**0.83**	**296**	⇓iP	**Pb**	**07 53 40.0**	**-0.3**
	baz=296						
WJS				eS	Sn	07 53 51.4	-0.1
	baz=296						
TWT	**Tachien**	**0.86**	**337**	⇓P	**Pb**	**07 53 40.0**	**-0.9**
	baz=339						
TWT				eS	Sb	07 53 50.0	-2.0
	baz=339						
TPUB	**Ta-pu**	**0.86**	**259**		**Pb**	**07 53 39.8**	**-1.0**
TPUB				Sn	Sn	07 53 50.9	-1.2
TPUB	**Ta-pu**	**0.86**	**259**	P	**Pb**	**07 53 40.7**	**0.0**
TPUB	**Ta-pu**	**0.86**	**259**	⇓P	**Pb**	**07 53 40.0**	**-0.7**
	baz=258						
TPUB				eS	Sn	07 53 51.1	-1.0
	baz=258						
EHP	**Heping Village**	**0.86**	**12**	eP	**Pb**	**07 53 41.2**	**+0.4**
	baz=16						
EHP				eS	Sb	07 53 51.5	-0.5
	baz=16						
TDCB	**Techi**	**0.86**	**336**	⇓P	**Pb**	**07 53 40.0**	**-1.0**
	baz=338						
TDCB				eS	Sb	07 53 49.9	-2.3
	baz=338						
CHN4	**Tsaushan**	**0.88**	**263**	⇓eP	**Pb**	**07 53 40.5**	**-0.7**
	baz=262						
CHN4				eS	Sn	07 53 53.1	+0.4
	baz=262						
WTP	**Ta-pu**	**0.89**	**256**	⇓eP	**Pb**	**07 53 40.5**	**-0.7**
	baz=254						
WTP				eS	Sn	07 53 51.9	-0.9
	baz=254						
WNT	**Mingjian**	**0.89**	**298**	⇓eP	**Pb**	**07 53 41.0**	**-0.3**
	baz=299						
WNT				eS	Sn	07 53 53.2	+0.3
	baz=299						
WNT1	**Nantou City**	**0.91**	**299**	eP	**Pb**	**07 53 41.2**	**-0.4**
	baz=300						
WNT1				eS	Sn	07 53 54.0	+0.6
	baz=300						
WGK	**Gukeng**	**0.93**	**284**	eP	**Pb**	**07 53 41.4**	**-0.5**
	baz=284						
WGK				eS	Sb	07 53 54.0	0.0
	baz=284						
WDLH	**Douliu**	**0.95**	**284**	⇓eP	**Pb**	**07 53 41.8**	**-0.5**
	baz=284						
WDLH				eS	Sb	07 53 54.2	-0.4
	baz=284						
SGST	**Jiashian**	**0.96**	**247**	eP	**Pb**	**07 53 41.2**	**-1.3**
	baz=245						
SGST				eS	Sb	07 53 54.5	-0.5
	baz=245						
WWF	**Wufeng**	**0.97**	**307**	⇓eP	**Pb**	**07 53 42.6**	**0.0**
	baz=308						
WWF				eS	Sb	07 53 55.9	+0.8
	baz=308						
NNSB	**Datong**	**0.97**	**351**	⇓P	**Pn**	**07 53 41.2**	**-1.0**
	baz=354						
NNSB				eS	Sn	07 53 52.8	-2.4
	baz=354						
CHN1	**Nanshi**	**0.98**	**254**	eP	**Pb**	**07 53 42.2**	**-0.5**
	baz=252						
CHN1				eS	Sb	07 53 55.7	+0.4
	baz=252						
ENA	**Nanau**	**0.98**	**10**	eP	**Pn**	**07 53 41.1**	**-1.1**
	baz=14						
ENA				eS	Sn	07 53 53.5	-1.6
	baz=14						
WHP	**Taichung City**	**0.98**	**326**	⇓P	**Pb**	**07 53 41.8**	**-1.1**
	baz=328						
WHP				eS	Sb	07 53 54.5	-1.0
	baz=328						
CHN2	**Minshiung**	**0.99**	**274**	eP	**Pb**	**07 53 42.8**	**-0.1**
	baz=274						
CHN2				eS	Sb	07 53 56.4	+0.8
	baz=274						
NNS	**Nan Shan**	**0.99**	**351**	eP	**Pn**	**07 53 41.4**	**-1.0**
	baz=354						
NNS				eS	Sn	07 53 53.5	-1.9
	baz=354						
TWK	**Hsinying**	**0.99**	**259**	⇓P	**Pb**	**07 53 42.3**	**-0.7**
	baz=257						
TWK				eS	Sb	07 53 56.0	+0.3
	baz=257						
SNST	**Tainan City**	**0.99**	**256**	eP	**Pb**	**07 53 42.4**	**-0.6**
	baz=255						
SNST				eS	Sb	07 53 55.7	0.0
	baz=255						
EWUT	**Wuta**	**1.00**	**12**	eP	**Pn**	**07 53 41.4**	**-1.0**
	baz=15						
EWUT				eS	Sn	07 53 53.9	-1.7
	baz=15						
WYL	**Yuanlin Townsh**	**1.02**	**299**	eP	**Pb**	**07 53 43.0**	**-0.4**
	baz=300						
ECL	**Taimali**	**1.02**	**213**	eP	**Pn**	**07 53 40.4**	**-2.3**
	baz=209						
ECL				eS	Sn	07 53 54.9	-1.1
	baz=209						
CHY	**Chiayi**	**1.03**	**272**	⇓eP	**Pb**	**07 53 43.2**	**-0.4**
	baz=271						
CHY				eS	Sb	07 53 56.8	-0.1
	baz=271						
TCU	**Taichung**	**1.05**	**311**	⇓eP	**Pb**	**07 53 43.8**	**-0.2**
	baz=312						
TCU				eS	Sb	07 53 58.0	+0.6
	baz=312						
LATG	**Datong**	**1.07**	**359**	⇓eP	**Pn**	**07 53 42.3**	**-1.2**
	baz=2.0						
LATG				eS	Sn	07 53 55.5	-1.9
	baz=2.0						
WTK	**Tuku**	**1.09**	**282**	⇓eP	**Pb**	**07 53 43.7**	**-0.9**
	baz=282						
WTK				eS	Sb	07 53 57.4	-1.0
	baz=282						
WCHH	**Zhanghua**	**1.09**	**304**	⇓eP	**Pb**	**07 53 44.0**	**-0.6**
	baz=305						
WCHH				eS	Sb	07 53 58.8	+0.2
	baz=305						
SSD	**Sandimen**	**1.10**	**230**	eP	**Pn**	**07 53 42.9**	**-1.0**
	baz=227						
SSD				eS	Sb	07 53 58.8	0.0
	baz=227						
TSMG	**Majia**	**1.12**	**228**	eP	**Pn**	**07 53 43.0**	**-1.1**
	baz=226						
TSMG				eS	Sb	07 53 59.4	0.0
	baz=226						
SCST	**Cishan**	**1.13**	**240**	⇑eP	**Pb**	**07 53 45.1**	**-0.1**
	baz=238						
SCST				eS	Sb	07 54 00.7	+1.2
	baz=238						
TWQ1	**Liyutan**	**1.13**	**321**	⇓eP	**Pb**	**07 53 45.1**	**-0.2**
	baz=323						
TWQ1				eS	Sb	07 54 00.3	+0.6
	baz=323						
NDT	**Datong Townshi**	**1.14**	**358**	eP	**Pn**	**07 53 43.5**	**-0.8**
	baz=1.0						
NDT				eS	Sn	07 53 57.8	-1.2
	baz=1.0						
CHN3	**Shinhua**	**1.15**	**251**	eP	**Pb**	**07 53 46.2**	**+0.5**
	baz=249						
CHN3				eS	Sb	07 54 03.3	+3.0
	baz=249						
WRL	**Guolierlin Hig**	**1.16**	**292**	⇓eP	**Pb**	**07 53 44.5**	**-1.3**
	baz=293						
WRL				eS	Sb	07 53 59.7	-0.7
	baz=293						
ICHU	**Yijhu**	**1.17**	**265**	eP	**Pb**	**07 53 45.2**	**-0.8**
	baz=264						
ICHU				eS	Sb	07 54 00.0	-0.7
	baz=264						
ENTT	**Nioudou**	**1.17**	**1**	eP	**Pn**	**07 53 44.0**	**-0.8**
	baz=4.0						
ENTT				eS	Sn	07 53 58.0	-1.9
	baz=4.0						
TWC	**Suao**	**1.18**	**13**	eP	**Pn**	**07 53 44.2**	**-0.6**
	baz=17						
NDS	**Dongshan**	**1.18**	**7**	eP	**Pn**	**07 53 44.2**	**-0.7**
	baz=10.0						
NDS				eS	Sn	07 53 59.0	-0.9
	baz=10.0						
SHHT	**Tainan City**	**1.19**	**249**	⇑eP	**Pb**	**07 53 46.8**	**+0.5**
	baz=247						
SHHT				eS	Sb	07 54 03.4	+2.2
	baz=247						
NSY	**Sanyi**	**1.19**	**323**	⇓eP	**Pb**	**07 53 46.4**	**0.0**
	baz=325						
NSY				eS	Sb	07 54 02.3	+0.9
	baz=325						
MASBT	**Mashibuluo**	**1.19**	**225**	eP	**Pn**	**07 53 44.1**	**-1.0**
	baz=223						
MASBT				eS	Sb	07 54 01.1	-0.3
	baz=223						
WDJ	**Dajia District**	**1.21**	**317**	⇓eP	**Pb**	**07 53 46.4**	**-0.3**
	baz=318						
WDJ				eS	Sb	07 54 02.4	+0.5
	baz=318						
WSL	**Shuilin Townsh**	**1.21**	**273**	eP	**Pb**	**07 53 45.5**	**-1.2**
	baz=272						
YHNB	**Yeheng**	**1.21**	**353**		**Pn**	**07 53 44.9**	**-0.5**
YHNB	**Yeheng**	**1.21**	**353**	P	**Pb**	**07 53 45.7**	**-1.1**
YHNB	**Yeheng**	**1.21**	**353**	⇓eP	**Pn**	**07 53 45.1**	**-0.3**
	baz=355						
YHNB				eS	Sn	07 53 60.0	-1.0
	baz=355						
TWM1	**Shoushan**	**1.22**	**239**	eP	**Pb**	**07 53 47.2**	**+0.5**
	baz=236						
SGLT	**Jiouru**	**1.22**	**233**	eP	**Pb**	**07 53 47.5**	**+0.7**
	baz=231						
NSK	**Sanguang**	**1.22**	**352**	eP	**Pn**	**07 53 45.0**	**-0.6**
	baz=354						
NSK				eS	Sn	07 53 59.9	-1.2
	baz=354						
WSF	**Szhu**	**1.23**	**278**	eP	**Pb**	**07 53 45.4**	**-1.5**
	baz=278						
WTCT	**Ta-ch'eng**	**1.23**	**289**	eP	**Pb**	**07 53 45.7**	**-1.3**
	baz=289						
WTCT				eS	Sb	07 54 02.0	-0.4
	baz=289						
NFF	**Wufeng Townshi**	**1.23**	**341**	⇓eP	**Pb**	**07 53 45.8**	**-1.2**
	baz=343						
NFF				eS	Sn	07 53 59.9	-1.4
	baz=343						
CHN8	**Yiju**	**1.23**	**265**	eP	**Pb**	**07 53 46.0**	**-1.0**
	baz=264						
CHN8				eS	Sb	07 54 02.9	+0.4
	baz=264						
TAW	**Tawu**	**1.25**	**209**	eP	**Pn**	**07 53 44.2**	**-1.7**
	baz=206						
EAST	**Anshuo**	**1.25**	**211**	eP	**Pn**	**07 53 44.2**	**-1.8**
	baz=208						
EAST				eS	Sb	07 54 05.8	+2.7
	baz=208						
TWE	**Neicheng**	**1.26**	**5**	eP	**Pn**	**07 53 45.1**	**-0.9**
	baz=8.0						
NSTT	**Nanjuang**	**1.27**	**337**	⇓eP	**Pb**	**07 53 47.0**	**-0.6**
	baz=339						
NSTT				eS	Sb	07 54 01.9	-1.7
	baz=339						
TAWH	**Dawu Township**	**1.27**	**209**	⇑eP	**Pn**	**07 53 44.3**	**-1.8**
	baz=206						
LIOB	**Emei**	**1.27**	**338**	⇓eP	**Pb**	**07 53 47.2**	**-0.6**
	baz=340						
NMLH	**Miaoli**	**1.27**	**327**	eP	**Pb**	**07 53 47.2**	**-0.5**
	baz=329						
NMLH				eS	Sb	07 54 04.2	+0.4
	baz=329						
SCLT	**Jiali**	**1.28**	**257**	eP	**Pb**	**07 53 47.2**	**-0.6**
	baz=256						
TAI1	**Yung-k'ang**	**1.28**	**251**	eP	**Pb**	**07 53 47.7**	**-0.2**
	baz=249						
FUSB	**Fushanzhiwuyua**	**1.29**	**2**	eP	**Pn**	**07 53 46.0**	**-0.5**
	baz=4.0						
NWLT	**Wulai**	**1.31**	**358**	eP	**Pn**	**07 53 46.2**	**-0.5**
SSPT	**Xinbi**	**1.33**	**223**	eP	**Pb**	**07 53 47.4**	**-1.3**
	baz=221						
SCZT	**Fangliau**	**1.38**	**218**	eP	**Pn**	**07 53 46.4**	**-1.3**
	baz=216						
HSN1	**Hsinchu**	**1.40**	**340**	eP	**Pb**	**07 53 49.0**	**-0.9**
	baz=342						
NTC	**Toucheng**	**1.41**	**10**	eP	**Pn**	**07 53 47.4**	**-0.7**
	baz=13						
LAY	**Lan-yu**	**1.42**	**180**	eP	**Pn**	**07 53 46.6**	**-1.6**
	baz=178						
LAY				eS	Sn	07 54 03.1	-2.8
	baz=178						
SLIU	**Shizi**	**1.42**	**209**	eP	**Pn**	**07 53 46.6**	**-1.6**
	baz=207						
EGS		**1.42**	**14**	eP	**Pb**	**07 53 50.8**	**+0.6**
	baz=17						
SBCB	**Hsinchu**	**1.42**	**339**	eP	**Pb**	**07 53 50.1**	**-0.2**
	baz=341						
HSN	**Hsinchu**	**1.44**	**339**	eP	**Pb**	**07 53 50.0**	**-0.5**
	baz=342						
LYUB	**Lan-yu**	**1.45**	**179**	eP	**Pn**	**07 53 46.3**	**-2.3**
	baz=177						
LYUB				eS	Sn	07 54 03.1	-3.6
	baz=177						
NHDH	**Xindian Distri**	**1.50**	**359**	eP	**Pb**	**07 53 50.0**	**-1.4**
	baz=1.0						
TATO	**Taipei**	**1.51**	**358**		**Pn**	**07 53 49.8**	**+0.4**
TATO				Sn	Sn	07 54 07.5	-0.6
TATO	**Taipei**	**1.51**	**358**	eP	**Pn**	**07 53 48.2**	**-1.2**
TWA	**Mucha**	**1.51**	**1**	eP	**Pn**	**07 53 49.7**	**+0.2**
	baz=3.0						
TIPB	**Shuangxi**	**1.52**	**10**	eP	**Pn**	**07 53 49.8**	**+0.1**
	baz=12						
NCUH	**Zhongli**	**1.54**	**348**	eP	**Pn**	**07 53 49.1**	**-0.7**
	baz=349						
NCU	**National Centr**	**1.54**	**348**	eP	**Pb**	**07 53 51.4**	**-0.8**
	baz=350						
WLCH	**Liuqiu**	**1.54**	**224**	eP	**Pb**	**07 53 52.3**	**0.0**
	baz=223						
TWP	**Hsiaoliuchiu**	**1.56**	**225**	eP	**Pb**	**07 53 52.7**	**+0.2**
	baz=223						
TWB1	**Santiao Chiao**	**1.59**	**15**	eP	**Pb**	**07 53 51.9**	**-1.2**
	baz=17						
JYNG	**Yonagunijimaku**	**1.61**	**52**	P	**Pn**	**07 53 51.2**	**+0.4**
JYNG				S	Sn	07 54 11.5	+0.8
JYNG	**Yonagunijimaku**	**1.61**	**52**	A	A	07 53 51.2	
	comp=E,8.0nm,2.2s,comp=E,8.0nm,1.4s						
NWF	**Wu-fen Shan**	**1.62**	**8**	eP	**Pn**	**07 53 51.4**	**+0.4**
	baz=9.0						
WFSB	**Wu-fen Shan**	**1.62**	**8**	eP	**Pn**	**07 53 51.4**	**+0.5**
	baz=9.0						
HEN	**Hengchun**	**1.63**	**207**	eP	**Pb**	**07 53 52.8**	**-0.9**
	baz=205						
TWS1	**Kuangyinshan**	**1.64**	**356**	eP	**Pn**	**07 53 51.7**	**+0.5**
	baz=358						
SXI1	**Grass Mountain**	**1.65**	**10**	eP	**Pn**	**07 53 51.9**	**+0.4**
	baz=12						
TWK1	**Hengchun**	**1.66**	**205**	eP	**Pn**	**07 53 51.6**	**+0.1**
	baz=202						
TWKBT	**Hengchun**	**1.66**	**204**	eP	**Pn**	**07 53 51.7**	**+0.2**
	baz=202						
TSEB	**Hengchuen, Pin**	**1.67**	**201**	eP	**Pn**	**07 53 51.8**	**+0.2**
	baz=201						
YOJ	**Yonaguni jima**	**1.67**	**53**	Pn	**Pn**	**07 53 52.0**	**+0.5**
YOJ	**Yonaguni jima**	**1.67**	**53**	P	**Pn**	**07 53 52.6**	**+1.0**
YOJ	**Yonaguni jima**	**1.67**	**53**	⇓iP	**Pn**	**07 53 52.1**	**+0.5**
	baz=54						
YOJ				S	Sn	07 54 12.5	+0.5
	baz=54						
YOJ	**Yonaguni jima**	**1.67**	**53**	P	**Pn**	**07 53 52.2**	**+0.6**
YOJ				S	Sn	07 54 12.7	+0.6
YOJ	**Yonaguni jima**	**1.67**	**53**	A	A	07 53 52.2	
	comp=E,8.0nm,3.4s,comp=E,7.0nm,2.0s						
YM01	**YM01**	**1.68**	**1**	eP	**Pn**	**07 53 52.0**	**+0.2**
	baz=2.0						
NTST	**Danshui**	**1.70**	**357**	eP	**Pn**	**07 53 52.5**	**+0.5**
	baz=359						
ANP	**Anpu**	**1.72**	**359**	eP	**Pb**	**07 53 54.0**	**-1.3**
	baz=1.0						
YM08	**YM08**	**1.72**	**1**	eP	**Pn**	**07 53 52.1**	**-0.3**
	baz=3.0						
WDGT	**Dungji**	**1.75**	**264**	⇑eP	**Pn**	**07 53 52.5**	**-0.2**
	baz=263						
WDGT				eS	Sn	07 54 13.0	-1.0
	baz=263						
TWY	**Chenhua**	**1.81**	**1**	eP	**Pb**	**07 53 54.8**	**-2.0**
	baz=3.0						
PHUB	**P'eng-hu**	**1.81**	**272**	eP	**Pn**	**07 53 53.5**	**-0.1**
	baz=271						
PNG	**Penghu**	**1.83**	**274**	eP	**Pn**	**07 53 53.8**	**0.0**
	baz=273						
VCHM	**Qimei**	**1.96**	**263**	⇑eP	**Pn**	**07 53 55.4**	**-0.3**
	baz=262						
HATJ	**Hateruma jima**	**2.15**	**74**	P	**Pn**	**07 53 58.6**	**+0.3**
HATJ				eS	Sn	07 54 24.2	+0.2
HATJ	**Hateruma jima**	**2.15**	**74**	A	A	07 53 58.6	
	comp=E,8.0nm,1.8s,comp=E,4.0nm,2.2s						
IRIF	**Iriomote-Funau**	**2.18**	**66**	P	**Pn**	**07 53 59.3**	**+0.7**
IRIF				S	Sn	07 54 25.5	+0.9
IRIF	**Iriomote-Funau**	**2.18**	**66**	A	A	07 53 59.3	
	comp=E,4.0nm,1.6s,comp=E,8.0nm,1.6s						
PCYT	**Pengchaiyu**	**2.21**	**12**	eP	**Pn**	**07 53 59.2**	**+0.1**
	baz=14						
JKRS	**Kuro-shima**	**2.38**	**71**	P	**Pn**	**07 54 02.1**	**+0.7**
JKRS				S	Sn	07 54 30.6	+0.9
VWUC	**VWUC**	**2.45**	**309**	eP	**Pn**	**07 54 01.7**	**-0.6**
	baz=309						
VWUC				eS	Sn	07 54 29.4	-1.8
	baz=309						
JIJ	**Ishigaki jima**	**2.54**	**69**	P	**Pn**	**07 54 03.8**	**+0.2**
JIJ				eS	Sn	07 54 33.1	-0.5
PTMZ	**Houxiangcun**	**2.72**	**306**	eP	**Pn**	**07 54 05.7**	**-0.3**
	baz=306						
PTMZ				eS	Sn	07 54 35.9	-2.1
	baz=306						
JISG	**Ishigakijimahi**	**2.76**	**66**	P	**Pn**	**07 54 06.7**	**0.0**
KNM	**Kinmen**	**3.00**	**289**	eP	**Pn**	**07 54 10.9**	**+0.9**
	baz=288						
MATB	**Ma-tsu**	**3.05**	**332**	eP	**Pn**	**07 54 10.0**	**-0.6**
	baz=332						
MATB				eS	Sn	07 54 44.1	-2.0
	baz=332						
KNMB	**Chin-men Tao**	**3.06**	**290**		**Pn**	**07 54 10.1**	**-0.7**
KNMB	**Chin-men Tao**	**3.06**	**290**	eP	**Pn**	**07 54 09.6**	**-1.1**
	baz=289						
QZH	**Quanzhou**	**3.08**	**299**	⇓iPn	**Pn**	**07 54 10.8**	**-0.2**
QZH				Sn	Sn	07 54 44.6	-2.2
QZH				smax	smax		
	comp=N,1µm,0.5s						
QZH				smax	smax		
	comp=E,740nm,0.6s						
JTJ	**Tarama**	**3.11**	**67**	P	**Pn**	**07 54 12.2**	**+0.7**
JTJ				S	Sn	07 54 47.6	-0.1
JMJ2	**Miyako jima3**	**3.68**	**69**	P	**Pn**	**07 54 20.3**	**+1.0**
JMJ2				eS	Sn	07 55 01.7	0.0
APYP	**Conner**	**5.58**	**183**	⇑eP	**Pn**	**07 54 47.5**	**+2.1**
HKPS	**Hong Kong Po S**	**6.93**	**262**		**Pn**	**07 55 04.2**	**+0.2**
NJ2	**Nanjing**	**8.88**	**345**	eP	**Pn**	**07 55 28.7**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
NJ2				smax	smax		
	comp=N,93nm,1.0s						
NJ2				smax	smax		
	comp=E,62nm,0.7s						
NJ2				LR	LR		
	comp=N,730nm,8.5s						
NJ2				LR	LR		
	comp=E,500nm,4.5s						
NJ2				LR	LR		
	comp=Z,950nm,10.8s						
WHN	**Wuhan**	**9.53**	**319**	eP	**Pn**	**07 55 40.7**	**+1.0**
WHN				S	Sn	07 57 31.1	+5.3
WHN				LR	LR		
	comp=N,670nm,9.4s						
WHN				LR	LR		
	comp=E,1µm,8.7s						
WHN				LR	LR		
	comp=Z,2µm,14.5s						
QIZ	**Qiongzhong**	**11.77**	**250**	P	**Pn**	**07 56 13.3**	**+2.9**
QIZ				S	Sn	07 58 28.4	+7.6
QIZ				pmax	pmax		
	comp=Z,14nm,1.7s						
QIZ				LR	LR		
	comp=N,510nm,13.1s						
QIZ				LR	LR		
	comp=E,350nm,13.1s						
QIZ				LR	LR		
	comp=Z,370nm,15.5s						
LYN	**LuoYang**	**13.60**	**326**	eP	**P**	**07 56 46.3**	**+2.4**
LYN				S	Sn	07 59 13.2	+7.8
LYN				SS	S	07 59 39.2	+11
LYN				pmax	pmax		
	comp=Z,20nm,0.7s						
LYN				LR	LR		
	comp=N,960nm,14.9s						
LYN				LR	LR		
	comp=E,440nm,12.2s						
LYN				LR	LR		
	comp=Z,830nm,12.7s						
KSRS	**Korea Array**	**14.98**	**20**	P	**Pn**	**07 56 56.0**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=233,slow=10,SNR=6.3						
KSRS				LR	LR	08 03 32.1	
	comp=Z,134nm,20.4s,baz=205,slow=41						
	comp=Z,3.0nm,0.9s						
HNS	**HongShan**	**15.08**	**339**	⇓P	**P**	**07 57 02.2**	**+1.8**
HNS				eS	**S**	**07 59 52.8**	**-5.4**
HNS				LR	LR		
	comp=Z,400nm,15.1s						
HNS				LR	LR		
	comp=Z,310nm,12.4s						
HNS				LR	LR		
	comp=Z,440nm,15.3s						
XAN	**Xi'an**	**15.27**	**316**	P	**Pn**	**07 56 59.1**	**+1.1**
XAN				pP	P	07 57 04.5	+1.9
XAN				S	**Sn**	**07 59 50.1**	**+3.9**
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,5.3s						
XAN				LR	LR		
	comp=Z,340nm,15.7s						
XAN				LR	LR		
	comp=Z,600nm,15.1s						
XAN				LR	LR		
	comp=Z,980nm,15.0s						
KMI	**Kunming**	**17.23**	**279**	⇑P	**P**	**07 57 27.1**	**+2.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				LR	LR		
	comp=Z,170nm,21.9s						
KMI				LR	LR		
	comp=Z,610nm,14.2s						
KMI				LR	LR		
	comp=Z,610nm,13.5s						
PZH	**PanZhiHua**	**18.21**	**284**	P	**Pn**	**07 57 33.8**	**-1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,4.2s						
JHJ	**Hachijo jima 2**	**18.70**	**55**	LR	LR	08 04 47.8	
	comp=Z,80nm,18.6s,baz=244,slow=36						
HHC	**Hu-ho-hao-te**	**19.26**	**337**	eP	**Pn**	**07 57 50.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,43nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.8s						
HHC				LR	LR		
	comp=Z,370nm,13.7s						
HHC				LR	LR		
	comp=Z,210nm,11.7s						
HHC				LR	LR		
	comp=Z,480nm,15.8s						
MJAR	**Matsushiro Arr**	**19.41**	**44**	P	**P**	**07 57 46.1**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=230,slow=9.7,SNR=4.7						
MJAR				LR	LR	08 06 42.7	
	comp=Z,49nm,20.1s,baz=220,slow=41						
	comp=Z,1.3nm,0.3s						
LZH	**Lanzhou**	**19.82**	**313**	⇓P	**Pn**	**07 57 57.6**	**+3.0**
LZH				pP	sP	07 58 03.1	-1.6
LZH				sP	pP	07 58 09.0	+8.0
LZH				pmax	pmax		
	comp=Z,41nm,1.5s						
LZH				LR	LR		
	comp=Z,330nm,11.9s						
LZH				LR	LR		
	comp=Z,520nm,11.9s						
LZH				LR	LR		

	comp=Z,810nm,11.4s						
CHTO	Chiang Mai	21.58	262	P	P	07 58 11.6	-0.2
CHTO				IAmb	IAmb	07 58 19.6	
	comp=Z,18nm,0.8s						
CHTO	Chiang Mai	21.58	262	P	P	07 58 12.9	+1.1
CMAR	Chiang Mai Arr	21.68	261	P	P	07 58 12.8	-0.1
	comp=Z,4.4nm,0.3s,baz=68,slow=8.9,SNR=20						
CMAR				LR	LR	08 07 28.6	
	comp=Z,238nm,18.3s,baz=75,slow=39						
	comp=Z,4.4nm,0.3s						
CMAR	Chiang Mai Arr	21.68	261	P	P	07 58 12.0	-0.9
TOLI2	Tolitoli	22.23	182	P	P	07 58 18.3	-0.5
TOLI2				IAmb	IAmb	07 58 20.6	
	comp=Z,13nm,0.7s						
TOLI2	Tolitoli	22.23	182	P	P	07 58 20.7	+1.9
GTOI	Gorontalo	22.73	176	P	P	07 58 24.2	0.0
	comp=Z,12nm,0.9s						
SBUM	Sibu	22.76	205	P	P	07 58 23.8	-0.6
SBUM				IAmb	IAmb	07 58 26.7	
	comp=Z,28nm,0.8s						
MRSI	Marisa	22.85	179	P	P	07 58 30.6	+5.2
APSI	Ampana	24.23	180	P	P	07 58 41.1	+2.3
	comp=Z,20nm,0.9s						
GTA	Gaotai	24.33	316	*e*P	P	07 58 42.0	+2.2
GTA				pP	pP	07 58 49.4	+1.1
GTA				sP	sP	07 58 52.3	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,50nm,4.8s						
GTA				LR	LR		
	comp=Z,230nm,13.9s						
GTA				LR	LR		
	comp=Z,370nm,14.7s						
GTA				LR	LR		
	comp=Z,490nm,13.9s						
KSM	Kuching	24.43	208	P	P	07 58 39.6	-1.0
KSM				IAmb	IAmb	07 58 42.3	
	comp=Z,28nm,1.1s						
KSM	Kuching	24.43	208	P	P	07 58 41.3	+0.7
SANI	Sanana	25.72	170	P	P	07 58 55.7	+3.3
	comp=Z,641nmcomp=Z,14nm,0.9s						
SANI	Sanana	25.72	170	P	P	07 58 54.0	+1.6
GOMU	GeErMu	26.34	305	P	P	07 59 01.6	+3.3
GOMU				pP	pP	07 59 04.9	-1.9
GOMU				sP	sP	07 59 09.2	-1.2
GOMU				S	S	08 03 38.0	+8.2
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,60nm,4.0s						
GOMU				LR	LR		
	comp=Z,110nm,13.3s						
GOMU				LR	LR		
	comp=Z,240nm,13.7s						
GOMU				LR	LR		
	comp=Z,270nm,13.7s						
ASAJ	Asahikawa	26.89	35	LR	LR	08 11 15.7	
	comp=Z,146nm,18.0s,baz=162,slow=40						
KLR	Kul'dur	26.95	15	P	P	07 59 02.2	-0.9
	comp=Z,2.0nm,0.7s,baz=312,slow=1.3,SNR=5.0						
KLR				LR	LR	08 10 19.4	
	comp=Z,117nm,19.1s,baz=200,slow=38						
	comp=Z,2.0nm,0.7s						
ULN	Ulaanbaatar	26.96	338	P	P	07 59 02.9	-0.6
SONM	Songino Array	27.16	337	P	P	07 59 04.6	-0.6
	comp=Z,1.3nm,0.7s,baz=161,slow=9.5,SNR=8.4						
	comp=Z,1.3nm,0.7s						
SONM	Songino Array	27.16	337	P	P	07 59 04.3	-1.0
TPI	Tanjungpandan	29.37	209	P	P	07 59 26.6	+1.6
PSI	Prapat	30.02	230	LR	LR	08 12 30.7	
	comp=Z,127nm,18.1s,baz=49,slow=38						
LEM	Lembang	33.04	206	P	P	07 59 58.5	+1.0
	comp=Z,28nm,0.5s,baz=61,slow=7.6,SNR=5.2						
WMQ	Urumqi	34.40	314	*e*P	P	08 00 09.6	+0.5
WMQ				pP	pP	08 00 16.8	-0.9
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				LR	LR		
	comp=Z,570nm,15.3s						
WMQ				LR	LR		
	comp=Z,490nm,17.7s						
WMQ				LR	LR		
	comp=Z,170nm,11.9s						
YAK	Yakutsk	38.95	6	LR	LR	08 17 02.0	
	comp=Z,47nm,20.0s,baz=263,slow=36						
MK31	Makanchi Array	39.09	316	P	P	08 00 49.1	+0.2
MK31				IAmb	IAmb	08 00 50.2	
	comp=Z,7.2nm,0.8s						
MKAR	Makanchi Array	39.09	316	P	P	08 00 49.2	+0.3
	comp=Z,8.0nm,0.7s,baz=110,slow=10.0,SNR=84						
	comp=Z,8.0nm,0.7s						
MKAR	Makanchi Array	39.09	316	P	P	08 00 49.4	+0.5
MAKZ	Makanchi	39.29	316	P	P	08 00 50.9	+0.2
MAKZ				IAmb	IAmb	08 00 52.0	
	comp=Z,9.9nm,0.8s						
PETK	Petropavlovsk-	40.28	33	P	P	08 00 57.0	-1.7
	comp=Z,1.3nm,0.7s,baz=244,slow=13,SNR=1.5						
PETK				LR	LR	08 17 14.1	
	comp=Z,68nm,20.8s,baz=189,slow=36						
	comp=Z,1.3nm,0.7s						
ZAA0	Zalesovo Array	41.03	327	P	P	08 01 04.7	-0.1
ZAA0				IAmb	IAmb	08 01 09.5	
	comp=Z,8.0nm,0.8s						
ZALV	Zalesovo Beam	41.03	327	P	P	08 01 04.1	-0.8
	comp=Z,9.1nm,0.7s,baz=110,slow=11,SNR=6.0						
ZALV				LR	LR	08 19 18.8	
	comp=Z,92nm,18.7s,baz=84,slow=38						
	comp=Z,9.1nm,0.7s						
KDJ	Kajisay	41.16	308	P	P	08 01 05.9	-0.5
MA2	Magadan	41.52	22	P	P	08 01 08.0	-0.9
	comp=Z,4.6nm,0.7s,baz=151,slow=8.8,SNR=4.1						
MA2				LR	LR	08 19 54.9	
	comp=Z,72nm,18.2s,baz=220,slow=38						
	comp=Z,4.6nm,0.7s						
MA2	Magadan	41.52	22	P	P	08 01 08.7	-0.1
MA2				IAmb	IAmb	08 01 10.1	
	comp=Z,12nm,1.1s						
H11N1	WAKE ISLAND Hy	42.20	86	T	T	08 46 17.8	
	baz=283,slow=74,SNR=178						
H11N2	WAKE ISLAND Hy	42.20	86	T	T	08 46 16.5	
	baz=283,slow=74,SNR=302						
H11N3	WAKE ISLAND Hy	42.22	86	T	T	08 46 17.7	
	baz=283,slow=74,SNR=296						
H11S3	WAKE ISLAND Hy	42.31	88	T	T	08 46 27.2	
	baz=284,slow=74,SNR=224						
H11S1	WAKE ISLAND Hy	42.32	88	T	T	08 46 27.0	
	baz=284,slow=74,SNR=96						
H11S2	WAKE ISLAND Hy	42.33	88	T	T	08 46 27.0	
	baz=284,slow=74,SNR=112						
PALK	Pallekele	42.36	254	LR	LR	08 19 45.8	
	comp=Z,73nm,18.3s,baz=177,slow=37						
COEN	Coen	42.79	148	P	P	08 01 19.9	+0.2
KURK	Kurchatov	42.86	320	P	P	08 01 19.5	-0.4
KURK				IAmb	IAmb	08 01 20.7	
	comp=Z,4.6nm,0.8s						
AAK	Ala-Archa	43.21	308	P	P	08 01 22.2	-0.8
	comp=Z,1.7nm,0.2s,baz=101,slow=7.0,SNR=4.6						
AAK				LR	LR	08 21 29.2	
	comp=Z,82nm,19.5s,baz=100,slow=39						
	comp=Z,1.7nm,0.2s						
SEY	Seymchan	44.54	20	LR	LR	08 21 57.4	
	comp=Z,53nm,18.1s,baz=322,slow=38						
WRA	Warramunga Arr	44.91	163	P	P	08 01 34.8	-1.8
	comp=Z,6.5nm,0.6s,baz=344,slow=8.8,SNR=25						
	comp=Z,6.5nm,0.6s						
WRA	Warramunga Arr	44.91	163	IAmb	IAmb	08 01 36.0	
	comp=Z,0.2nm,0.7s						
WB2	Warramunga Arr	44.91	163	P	P	08 01 35.0	-1.7
GAR	Garm	45.88	302	P	P	08 01 44.5	+0.1
GAR				IAmb	IAmb	08 01 46.1	
	comp=Z,8.6nm,0.9s						
KK31	Karatay Array	46.17	308	P	P	08 01 46.5	0.0
KKAR	Karatay Array	46.17	308	P	P	08 01 47.0	+0.4
KKAR	Karatay Array	46.17	308	P	P	08 01 46.7	+0.2
KKAR				IAmb	IAmb	08 01 48.5	
	comp=Z,2.8nm,0.9s						
CHGR	Chuyangaron	46.76	302	P	P	08 01 51.4	+0.1
CHGR				IAmb	IAmb	08 02 03.2	
	comp=Z,12nm,1.1s						
KBL	Kabul	46.77	296	P	P	08 01 52.5	+0.9
ASAR	Alice Springs	48.36	165	P	P	08 02 02.6	-1.0
	comp=Z,1.9nm,0.5s,baz=355,slow=9.3,SNR=19						
ASAR				PcP	PcP	08 03 28.0	-2.0
	comp=Z,0.6nm,0.6s,baz=319,slow=2.7,SNR=2.5						
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	48.36	165	P	P	08 02 02.5	-1.1
BRVK	Borovoye	48.51	321	P	P	08 02 04.3	-0.2
BRVK				IAmb	IAmb	08 02 10.1	
	comp=Z,6.5nm,0.9s						
SHEM	Shemya Is, Ala	49.17	40	LR	LR	08 22 16.6	
	comp=Z,43nm,21.8s,baz=289,slow=35						
CTA	Charters Tower	49.54	149	P	P	08 02 12.8	+0.1
	comp=Z,5.3nm,1.0s,baz=38,slow=2.0,SNR=3.3						
	comp=Z,5.3nm,1.0s						
NRIK	Noril'sk	50.18	345	LR	LR	08 26 27.4	
	comp=Z,39nm,19.7s,baz=154,slow=40						
HRA	Herat	52.39	296	P	P	08 02 34.1	-0.3
HRA				IAmb	IAmb	08 02 36.0	
	comp=Z,5.5nm,1.3s						
ABKAR	Akbulak array	54.18	315	P	P	08 02 47.3	+0.2
ABKAR				IAmb	IAmb	08 02 48.3	
	comp=Z,4.6nm,0.8s						
ABKAR	Akbulak array	54.18	315	P	P	08 02 46.7	-0.4
GEYT	Alibeck	55.45	301	P	P	08 02 56.2	-0.3
	comp=Z,1.6nm,0.5s,baz=64,slow=9.8,SNR=1.7						
GEYT				LR	LR	08 30 58.5	
	comp=Z,126nm,19.2s,baz=102,slow=40						
	comp=Z,1.6nm,0.5s						
AKTO	Aktyubinsk	55.52	316	P	P	08 02 56.3	-0.4
	comp=Z,2.3nm,0.9s,baz=102,slow=8.3,SNR=7.9						
	comp=Z,2.3nm,0.9s						
ARU	Arti	55.88	323	P	P	08 02 58.3	-0.9
	comp=Z,1.9nm,0.4s,baz=134,slow=3.6,SNR=6.0						
ARU				LR	LR	08 27 27.5	
	comp=Z,72nm,19.0s,baz=93,slow=36						
	comp=Z,1.9nm,0.4s						
ARU	Arti	55.88	323	P	P	08 02 58.4	-0.9
WSAR	Wadi Sarin	57.32	283	LR	LR	08 33 04.6	
	comp=Z,39nm,18.1s,baz=102,slow=41						
STKA	Stephens Creek	58.27	160	P	P	08 03 15.8	-0.5
	comp=Z,4.7nm,0.6s,baz=334,slow=7.1,SNR=11						
	comp=Z,4.7nm,0.6s						
KIRV	Kirov	61.00	325	LR	LR	08 32 36.9	
	comp=Z,96nm,18.1s,baz=100,slow=38						
GNI	Garni	65.49	305	LR	LR	08 36 23.1	
	comp=Z,48nm,19.2s,baz=147,slow=39						
KLMR	Klimovskoe	65.95	328	*e*P	P	08 04 01.5	-6.0
KLMR				AMP		08 04 07.4	
	comp=Z,11nm,1.1s						
KBZ	Khabaz	66.19	309	P	P	08 04 08.2	-1.2
	comp=Z,1.2nm,0.8s,baz=82,slow=8.7,SNR=2.5						
	comp=Z,1.2nm,0.8s						
IMAR	Indian Mountai	66.68	26	P	P	08 04 12.6	+0.5
H21K	Melozitna Rive	67.10	27	P	P	08 04 15.5	+0.6
H21K				IAmb	IAmb	08 04 25.7	
	comp=Z,6.3nm,0.8s						
H23K	Yukon River	68.41	26	P	P	08 04 23.9	+0.8
MDM	Murphy Dome	69.10	27	P	P	08 04 28.0	+0.6
ILAR	Eielson Array	69.70	27	P	P	08 04 30.1	-1.1
	comp=Z,0.3nm,0.5s,baz=270,slow=4.7,SNR=5.5						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	70.05	24	P	P	08 04 34.6	+1.3
SPITS	Spitsbergen Ar	70.26	348	LR	LR	08 39 40.7	
	comp=Z,74nm,18.1s,baz=228,slow=40						
FINES	FINESS Array B	72.23	330	P	P	08 04 45.2	-1.3
	comp=Z,1.7nm,0.7s,baz=64,slow=8.7,SNR=9.0						
FINES				LR	LR	08 41 53.8	
	comp=Z,111nm,18.4s,baz=108,slow=40						
	comp=Z,1.7nm,0.7s						
BRTR	Keskin Array B	73.87	307	P	P	08 04 54.9	-1.9
	comp=Z,1.0nm,0.5s,baz=108,slow=7.9,SNR=5.0						
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	78.36	331	LR	LR	08 43 33.1	
	comp=Z,117nm,18.8s,baz=60,slow=38						
NB2	NORSAR Subarra	79.02	332	P	P	08 05 23.9	-1.5
	comp=Z,0.7nm,0.7s,baz=62,slow=5.3						
NOA	NORSAR Array B	79.02	332	P	P	08 05 22.9	-2.5
	comp=Z,1.0nm,0.7s,baz=59,slow=5.5,SNR=5.1						
NOA				LR	LR	08 44 19.7	
	comp=Z,91nm,18.1s,baz=70,slow=39						
	comp=Z,1.0nm,0.7s						
VTS	Vitosha	80.27	312	P	P	08 05 32.5	-0.3
VTS				IAmb	IAmb	08 05 33.7	
	comp=Z,7.2nm,0.8s						
IDI	Anoyia	81.92	305	LR	LR	08 46 53.8	
	comp=Z,15nm,18.3s,baz=287,slow=39						
CLL	Collm	82.83	323	*e*P	P	08 05 45.0	-0.9
YKA	Yellowknife Ar	83.50	23	P	P	08 05 46.0	-3.2
	comp=Z,0.3nm,0.5s,baz=309,slow=4.8,SNR=16						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	83.61	321	P	P	08 05 48.2	-1.9
	comp=Z,0.5nm,0.3s,baz=60,slow=6.3,SNR=8.5						
	comp=Z,0.5nm,0.3s						
KMBO	Kilima Mbogo	85.21	267	LR	LR	08 47 00.1	
	comp=Z,22nm,18.1s,baz=96,slow=38						
FRB	Frobisher Bay	92.72	4	LR	LR	08 52 53.8	
	comp=Z,20nm,18.1s,baz=346,slow=38						

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*IDC **06** 07:56:36.2±3.4, 5°.72S×146°.25E, h100^{km}±30^{km}, mb3.7/10, mbtmp4.0/12, MS2.8/1 Error ellipse: s-maj=27.0km s-min=18.8km az=92.0*

ISC 06 07:56:36.2±0.7, **5°.70S**±0°.07×**146°.3E**±0°.2, **h100**^{km}, **n26**, σ**1^{s}.06**/26, **mb3.8**/9, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.77	167	P	Pn	07 57 32.8	+0.4
	66nm,0.3s,baz=329,slow=6.7,SNR=30						
PMG				S	Sn	07 58 13.7	-2.1
	141nm,0.4s,baz=204,slow=20,SNR=21						
PMG				LR	LR	07 59 06.5	
	comp=Z,130nm,18.7s,baz=114,slow=40						
PMG	Port Moresby	3.77	167	P	Pn	07 57 32.9	+0.6
COEN	Coen	8.77	200	P	Pn	07 58 41.4	+1.1
MTSU	Mount Surprise	12.51	189	P	Pn	07 59 32.6	+1.8
CTA	Charters Tower	14.30	180	P	P	07 59 58.5	+0.3
	15nm,0.3s,baz=358,slow=14,SNR=46						
CTA	Charters Tower	14.30	180	P	P	07 59 58.7	+0.5
CTAO	Charters Tower	14.30	180	P	P	07 59 58.8	+0.5
QIS	Mount Isa	16.14	203	P	P	08 00 20.1	+1.3
WRA	Warramunga Arr	18.34	218	P	P	08 00 41.3	-1.6
	0.5nm,0.3s,baz=31,slow=11,SNR=24						
ASAR	Alice Springs	21.50	213	P	P	08 01 15.9	-1.2
	0.9nm,0.7s,baz=54,slow=8.7,SNR=17						
	0.9nm,0.7s						
FITZ	Fitzroy Crossi	23.66	237	P	P	08 01 36.9	-1.9
	baz=45,slow=9.2						
STKA	Stephens Creek	26.41	189	P	P	08 02 03.6	0.0
	1.5nm,0.5s,baz=349,slow=11,SNR=5.6						
	1.5nm,0.5s						
USRK	Ussuriysk Ar.	51.33	347	P	P	08 05 31.5	+1.1
	2.4nm,0.8s,baz=94,slow=12,SNR=1.3						
	2.4nm,0.8s						
CMAR	Chiang Mai Arr	52.52	298	P	P	08 05 40.3	+0.6
	1.8nm,0.3s,baz=122,slow=6.0,SNR=12						
	1.8nm,0.3s						
VNDA	Vanda	72.25	176	P	P	08 07 50.6	+0.5
	0.5nm,0.6s,baz=346,slow=6.2,SNR=5.4						
	0.5nm,0.6s						
MKAR	Makanchi Array	76.84	321	P	P	08 08 17.0	-0.4
	0.3nm,0.4s,baz=99,slow=8.3,SNR=4.3						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	78.41	328	P	P	08 08 24.5	-1.3
	0.8nm,0.5s,baz=91,slow=9.2,SNR=2.0						
	0.8nm,0.5s						
NRIK	Noril'sk	84.79	342	P	P	08 08 58.8	-0.3
	1.5nm,0.5s,baz=132,slow=5.8,SNR=3.9						
	1.5nm,0.5s						
ILAR	Eielson Array	85.47	23	P	P	08 09 01.9	-0.6
	1.4nm,0.6s,baz=252,slow=4.9,SNR=21						
	1.4nm,0.6s						
YKA	Yellowknife Ar	99.22	28	P	Pdif	08 10 05.2	-1.2
	0.2nm,1.0s,baz=275,slow=4.3,SNR=1.6						
	0.2nm,1.0s						
PLCA	Paso Flores	122.73	147	PKP	PKiKP	08 15 21.7	+0.6
	0.8nm,0.6s,baz=320,slow=2.7,SNR=5.9						
TORD	Torodi Ar. Bea	144.37	285	PKP	PKPbc	08 16 00.2	-0.2
	1.7nm,0.5s,baz=66,slow=3.4,SNR=23						
KIC	Kosan Boka	151.22	273	*e*PKP1	PKiKP	08 16 19.7	+0.1
	3.3nm,0.3s						
DBIC	Dimbokro	151.34	273	PKPbc	PKiKP	08 16 19.4	-0.4
	5.1nm,0.7s,baz=119,slow=2.2,SNR=5.6						
TIC	Toumodi	151.50	273	*e*PKP1	PKiKP	08 16 20.2	0.0
LIC	Lamto	151.51	273	*e*PKP1	PKiKP	08 16 20.8	+0.6
	26nm,1.3s						

IDC 06 07:59:12.7±5.5, **2°.90S**×**128°.10E**, **h49**^{km}±62^{km}, **mb3.4**/3, **mbtmp3.6**/5, **ML3.5**/2, **Error ellipse: s-maj=48.3km s-min=22.0km az=84.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.75	57	P	Pn	08 00 08.2	+0.1
	11nm,0.3s,baz=235,slow=12,SNR=19						
SIJI				S	Sn	08 00 51.5	+0.4
	11nm,0.5s,baz=233,slow=20,SNR=1.7						
	19nm,0.3s						
WRA	Warramunga Arr	18.00	161	P	P	08 03 17.5	-1.9
	0.1nm,0.3s,baz=340,slow=12,SNR=2.0						
	0.7nm,0.9s						
ASAR	Alice Springs	21.39	165	P	P	08 03 55.8	-0.6
	1.2nm,0.8s,baz=344,slow=11,SNR=5.1						
	1.2nm,0.8s						
CTA	Charters Tower	24.61	135	P	P	08 04 29.7	+1.1
	0.9nm,0.2s,baz=319,slow=9.3,SNR=1.4						
	0.9nm,0.2s						
MKAR	Makanchi Array	63.79	327	P	P	08 09 39.9	+0.2
	0.3nm,0.6s,baz=130,slow=6.0,SNR=2.8						
	0.3nm,0.6s						

IDC 06 07:59:36.6±9.0, **12°.01N**×**88°.82E**, **h0**^{km}, **mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=425.1km s-min=31.7km az=62.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	35.11	352	P	P	08 06 31.6	-0.1
	0.5nm,0.6s,baz=163,slow=10,SNR=4.3						
	0.5nm,0.6s						
WRA	Warramunga Arr	54.91	125	P	P	08 09 09.1	-0.5
	0.3nm,0.7s,baz=300,slow=10.0,SNR=5.0						
	0.3nm,0.7s						
ASAR	Alice Springs	56.57	129	P	P	08 09 22.0	+0.5
	0.3nm,0.8s,baz=316,slow=6.5,SNR=2.3						
	0.3nm,0.8s						

IDC 06 08:04:58.4±418.0, **54°.57N**×**0°.10E**, **h0**^{km}, **Error ellipse: s-maj=192.8km s-min=54.9km az=24.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	10.20	119	*i*		09 02 20.0	
	baz=310,slow=334,SNR=0.8						
I37NO	I37NO	16.85	23	*i*		09 46 10.0	
	baz=220,slow=322,SNR=1.1						
I43RU	DUBNA INFRASON	20.89	69	*i*		10 16 05.2	
	baz=279,slow=321,SNR=0.6						

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*JMA **06** 08:11:00.5±0.3, 23°.3N±1°.0×12°2E±°, h16^{km}±4^{km}, MV3.2/13, TAIWAN REGION*

*TAP **06** 08:11:01.1, 23°.26N×121°.53E, h38^{km}, ML3.9, B*

ISC 06 08:11:00.3±1.0, **23°.26N**±0°.02×**121°.61E**±0°.02, **h34**^{km}±2^{km}, **n118**, σ**0^{s}.92**/197, **26C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	Changbin	0.16	292	⇑*i*P	Pb	08 11 07.6	+1.0
	baz=306						
ECBN				*i* S	Sb	08 11 12.2	+1.2
	baz=306						
CHKT	Chengkung	0.28	236	⇑*i*P	Pn	08 11 08.2	+0.5
	baz=222						
CHKT				*i* S	Sb	08 11 13.5	+0.6
	baz=222						
EYUL	Yuli	0.28	289	⇑*i*P	Pn	08 11 08.7	+0.8
	baz=293						
EYUL				*e*S	Sb	08 11 14.5	+1.3
	baz=293						
HGSD	Ruisui	0.29	324	⇑*i*P	Pn	08 11 08.3	+0.2
	baz=336						
HGSD				*e*S	Sb	08 11 17.0	+3.6
	baz=336						
FULB	Fuli	0.30	259	⇑*i*P	Pn	08 11 08.4	+0.3
	baz=254						
FULB				S	Sb	08 11 14.4	+0.9
	baz=254						
TWF1	Yuli	0.31	289	⇑*i*P	Pn	08 11 08.6	+0.3
	baz=293						
TWF1				*i* S	Sb	08 11 14.4	+0.7
	baz=293						
YULB	Yu-li	0.32	295	⇑*i*P	Pn	08 11 08.7	+0.1
	baz=301						
YULB				*i* S	Sb	08 11 14.2	+0.3
	baz=301						
EHY	Hungye	0.37	313	⇑*i*P	Pn	08 11 09.2	-0.1
	baz=322						
EHY				S	Sb	08 11 14.9	-0.1
	baz=322						
ECS	Chishang	0.40	246	*i* P	Pn	08 11 10.2	+0.5
	baz=240						
ECS				*e*S	Sn	08 11 17.3	+1.5
	baz=240						
EDH	Donghe	0.40	225	⇑*i*P	Pn	08 11 09.7	-0.1
	baz=216						
EDH				S	Sn	08 11 16.2	+0.3
	baz=216						
EGFH	Guangfu	0.45	338	⇑*i*P	Pn	08 11 10.3	-0.1
	baz=347						
EGFH				*i* S	Sn	08 11 17.0	-0.2
	baz=347						
TEGC	Jichi Village	0.46	352	*e*P	Pn	08 11 10.7	+0.1
	baz=2.0						
TEGC				*e*S	Sn	08 11 18.0	+0.6
	baz=2.0						
ELDTW	Lidau	0.55	263	⇑*i*P	Pb	08 11 11.3	-0.5
	baz=261						
ELDTW				*e*S	Sb	08 11 18.4	-1.4
	baz=261						
LONT	Longtian	0.56	232	⇑*i*P	Pb	08 11 11.8	-0.2
	baz=226						
LONT				*e*S	Sb	08 11 19.7	-0.3
	baz=226						
ESL	Shilin	0.58	344	⇑*i*P	Pn	08 11 11.7	-0.4
	baz=351						
ESL				*e*S	Sb	08 11 19.4	-1.0
	baz=351						
LDUT	Ludao	0.59	193	⇓*i*P	Pb	08 11 12.0	-0.4
	baz=186						
LDUT				*e*S	Sn	08 11 20.4	-0.4
	baz=186						
TEYL	Yanliau Villag	0.61	359	*i* P	Pb	08 11 13.2	+0.5
	baz=6.0						
TEYL				*e*S	Sn	08 11 22.6	+1.4
	baz=6.0						
TWGBT	Beinan	0.66	229	⇑*i*P	Pn	08 11 12.8	-0.3
	baz=223						
TWGBT				*e*S	Sn	08 11 21.9	-0.4
	baz=223						
TTN	Taitung	0.66	221	*e*P	Pb	08 11 13.8	+0.4
	baz=214						
TWG	Pinlang	0.66	229	*i* P	Pn	08 11 12.8	-0.4
	baz=223						
TWG				*e*S	Sn	08 11 21.9	-0.5
	baz=223						
VWDT	VWDT	0.66	319	⇑*i*P	Pb	08 11 13.4	-0.1
	baz=324						
VWDT				*e*S	Sn	08 11 21.9	-0.5
	baz=324						
HWA	Hwalien	0.72	359	P	Pb	08 11 14.3	-0.2
	baz=6.0						
HWA				*e*S	Sb	08 11 25.1	+1.0
	baz=6.0						
STYH	Taoyuan	0.78	264	⇑*i*P	Pb	08 11 15.0	-0.4
	baz=263						
STYH				*e*S	Sn	08 11 25.0	-0.3
	baz=263						
ALS	Alishan	0.79	289	⇑*i*P	Pb	08 11 15.8	0.0
	baz=290						
ALS				*e*S	Sn	08 11 25.9	-0.1
	baz=290						
STYT	Tauyuan	0.79	264	⇑*i*P	Pb	08 11 15.3	-0.4
	baz=262						
STYT				*e*S	Sn	08 11 25.6	-0.2
	baz=262						
OWD	Renai	0.80	330	*e*P	Pn	08 11 15.2	-0.2
	baz=335						
OWD				*e*S	Sn	08 11 24.9	-1.4
	baz=335						
SSLB	Suanglung	0.81	311	⇑*e*P	Pn	08 11 15.2	-0.1
	baz=315						
SSLB				*e*S	Sn	08 11 25.1	-1.0
	baz=315						
TWD	Chiawan	0.82	359	*e*P	Pn	08 11 15.4	0.0
	baz=5.0						
TWD				*e*S	Sn	08 11 26.4	-0.1
	baz=5.0						
WUSB	Renai	0.86	328	⇑*e*P	Pn	08 11 16.4	+0.2
	baz=332						

WUSB	baz=332			eS	Sn	08 11 27.0	-0.6
ECL	Taimali baz=218	0.89	223	eP	Pn	08 11 15.8	-0.6
ECL	baz=218			eS	Sn	08 11 26.8	-1.4
ETL	Fush Village baz=5.0	0.90	1	eP	Pn	08 11 16.6	0.0
SMLT	Sun Moon Lake baz=317	0.91	314	⇑P	Pb	08 11 17.3	-0.4
SMLT	baz=317			eS	Sn	08 11 28.4	-0.3
TPUB	Ta-pu baz=273	0.91	273	⇓P	Pb	08 11 17.6	0.0
TPUB	baz=273			eS	Sb	08 11 29.7	+0.3
NACB	Ninganchiao baz=4.0	0.92	359	P	Pn	08 11 16.3	-0.4
NACB	baz=4.0			eS	Sn	08 11 27.8	-1.0
WTP	Ta-pu baz=269	0.92	270	eP	Pb	08 11 17.8	-0.1
WTP	baz=269			eS	Sb	08 11 30.6	+0.8
CHN5	Tsauling baz=293	0.92	292	eP	Pb	08 11 18.1	+0.2
CHN5	baz=293			eS	Sb	08 11 30.4	+0.4
WHF	Hehuan Shan baz=345	0.94	340	⇑P	Pn	08 11 17.2	-0.3
WHF	baz=345			eS	Sn	08 11 28.7	-1.3
CHN4	Tsaushan baz=276	0.94	276	eP	Pb	08 11 18.3	+0.1
CHN4	baz=276			eS	Sb	08 11 31.0	+0.6
TYC	Yuchr baz=316	0.95	313	eP	Pb	08 11 17.9	-0.4
ETLH	Xiulin Townshi baz=357	0.96	353	⇑P	Pn	08 11 16.9	-0.5
ETLH	baz=357			eS	Sn	08 11 28.6	-1.3
SGST	Jiashian baz=258	0.96	260	eP	Pn	08 11 17.7	+0.3
WJS	Zhushan baz=307	0.99	305	eP	Pb	08 11 19.0	0.0
DPDB	Guoxing baz=324	1.00	321	eP	Pb	08 11 18.9	-0.3
CHN1	Nanshi baz=265	1.00	266	eP	Pb	08 11 19.3	+0.1
CHN1	baz=265			eS	Sb	08 11 33.4	+1.3
WCS	Beigang Elemen baz=324	1.03	321	⇑eP	Pb	08 11 19.1	-0.5
WCS	baz=324			eS	Sb	08 11 32.5	-0.3
SNST	Tainan City baz=267	1.03	268	eP	Pb	08 11 19.5	-0.1
SNST	baz=267			eS	Sb	08 11 33.2	+0.4
TWK	Hsinying baz=270	1.03	271	eP	Pb	08 11 19.7	-0.1
TWK	baz=270			eS	Sb	08 11 33.7	+0.6
SSD	Sandimen baz=238	1.04	241	eP	Pn	08 11 18.9	+0.4
SSD	baz=238			eS	Sb	08 11 32.7	-0.4
FUSS	Fushou baz=345	1.04	341	⇑eP	Pn	08 11 19.1	+0.3
FUSS	baz=345			eS	Sn	08 11 31.4	-0.9
TSMG	Majia baz=236	1.05	239	eP	Pb	08 11 19.4	-0.6
WNT	Mingjian baz=308	1.05	306	eP	Pb	08 11 20.1	0.0
WGK	Gukeng baz=295	1.06	294	eP	Pb	08 11 20.5	+0.3
WGK	baz=295			eS	Sb	08 11 34.8	+1.1
TWT	Tachien baz=341	1.07	338	eP	Pb	08 11 19.8	-0.7
WDLH	Douliu baz=295	1.08	294	⇓eP	Pb	08 11 20.8	+0.3
WDLH	baz=295			eS	Sb	08 11 34.9	+0.6
TDCB	Techi baz=341	1.08	337	eP	Pb	08 11 19.8	-0.8
TDCB	baz=341			eS	Sn	08 11 32.2	-0.8
CHN2	Minshiung baz=285	1.08	285	eP	Pb	08 11 21.0	+0.4
SCST	Cishan baz=249	1.09	251	eP	Pb	08 11 21.2	+0.4
SCST	baz=249			eS	Sb	08 11 36.4	+1.6
MASBT	Mashibuluo baz=232	1.11	235	eP	Pn	08 11 19.8	+0.4
EAST	Anshuo baz=215	1.12	219	eP	Pn	08 11 19.4	-0.2
CHY	Chiayi baz=283	1.12	283	eP	Pb	08 11 20.9	-0.3
TAWH	Dawu Township baz=213	1.13	216	P	Pn	08 11 19.8	+0.1
TAWH	baz=213			eS	Sn	08 11 33.4	-0.6
WWF	Wufeng baz=315	1.15	313	eP	Pb	08 11 21.8	+0.1
ENA	Nanau baz=10.0	1.17	6	eP	Pn	08 11 20.7	+0.3
TWM1	Shoushan baz=247	1.18	249	eP	Pb	08 11 23.0	+0.8
NNSB	Datong baz=353	1.19	350	eP	Pn	08 11 21.0	+0.3
SHHT	Tainan City baz=258	1.19	259	eP	Pb	08 11 23.1	+0.8
WHP	Taichung City baz=332	1.19	329	eP	Pb	08 11 21.4	-1.0
WHP	baz=332			eS	Sb	08 11 37.1	-0.5
EWUT	Wuta baz=11	1.20	7	eP	Pn	08 11 21.0	+0.4
EWUT	baz=11			eS	Sn	08 11 36.2	+0.6
NNS	Nan Shan baz=353	1.20	350	eP	Pn	08 11 21.5	+0.6
WTK	Tuku baz=292	1.20	291	eP	Pn	08 11 21.4	+0.6
LAY	Lan-yu baz=179	1.21	183	eP	Pn	08 11 20.7	-0.2
LAY	baz=179			eS	Sn	08 11 35.8	-0.3
ICHU	Yijhu baz=275	1.23	275	eP	Pb	08 11 22.4	-0.6
SSPT	Xinbi baz=229	1.23	232	eP	Pb	08 11 22.8	-0.3
TCU	Taichung baz=319	1.24	316	eP	Pb	08 11 23.2	+0.1
LYUB	Lan-yu baz=178	1.25	181	eP	Pn	08 11 20.4	-0.9
LYUB	baz=178			eS	Sn	08 11 34.0	-2.9
SCZT	Fangliau baz=223	1.27	226	eP	Pb	08 11 22.5	-1.2
WCHH	Zhanghua baz=312	1.27	311	eP	Pb	08 11 23.1	-0.5
LATG	Datong baz=360	1.28	356	eP	Pn	08 11 22.3	+0.4
SLIU	Shizi baz=213	1.28	216	eP	Pn	08 11 21.6	-0.1
SLIU	baz=213			eS	Sn	08 11 36.2	-1.5
CHN8	Yiju baz=274	1.29	274	eP	Pb	08 11 23.3	-0.8
CHN8	baz=274			eS	Sb	08 11 40.2	-0.2
WSL	Shuilin Townsh baz=282	1.30	282	eP	Pn	08 11 23.0	+0.9
WRL	Guolierlin Hig baz=301	1.30	300	⇓eP	Pb	08 11 23.3	-1.0
WRL	baz=301			eS	Sb	08 11 39.8	-0.9
TWQ1	Liyutan baz=327	1.33	325	⇓eP	Pb	08 11 24.6	-0.1
TWQ1	baz=327			eS	Sb	08 11 41.7	+0.1
NDT	Datong Townshi baz=359	1.34	356	eP	Pn	08 11 23.1	+0.4
WTCT	Ta-ch'eng baz=298	1.36	297	eP	Pb	08 11 24.1	-1.2
TWC	Suao baz=13	1.37	9	eP	Pn	08 11 23.8	+0.9
TWC	baz=13			eS	Sn	08 11 40.6	+0.8
NDS	Dongshan baz=7.0	1.38	4	eP	Pb	08 11 24.2	-1.3
ENTT	Nioudou baz=2.0	1.38	358	eP	Pn	08 11 23.7	+0.5
NSY	Sanyi baz=329	1.40	326	eP	Pb	08 11 25.5	-0.3
NSY	baz=329			eS	Sb	08 11 44.0	+0.7
WDJ	Dajia District baz=323	1.41	321	eP	Pb	08 11 25.3	-0.7
YHNB	Yeheng baz=354	1.43	351	eP	Pn	08 11 24.9	+1.0
YHNB	baz=354			eS	Sn	08 11 41.6	+0.1
NSK	Sanguang baz=354	1.43	351	eP	Pn	08 11 24.9	+0.9
NSK	baz=354			eS	Sn	08 11 41.9	+0.2
NFF	Wufeng Townshi baz=344	1.44	342	eP	Pb	08 11 25.6	-1.1
NSTT	Nanjuang baz=341	1.48	338	eP	Pb	08 11 26.4	-0.8
NSTT	baz=341			eS	Sn	08 11 43.7	+1.0
NMLH	Miaoli baz=332	1.48	330	eP	Pb	08 11 26.5	-0.8
LIOB	Emei baz=341	1.49	339	eP	Pb	08 11 26.6	-0.8
LIOB	baz=341			eS	Sb	08 11 44.9	-1.1
FUSB	Fushanzhiwuyua baz=2.0	1.50	359	eP	Pn	08 11 25.6	+0.7
NWLT	Wulai baz=359	1.52	356	eP	Pn	08 11 26.2	+1.0
NWLT	baz=359			eS	Sn	08 11 44.1	+0.3
JYNG	Yonagunijimaku	1.71	45	P	Pb	08 11 29.3	-1.7
JYNG				S	Sn	08 11 49.6	+1.3
TIPB	Shuangxi baz=9.0	1.72	6	eP	Pb	08 11 29.4	-1.9
YOJ	Yonaguni jima baz=48	1.76	47	⇑iP	Pb	08 11 30.0	-1.9
YOJ	baz=48			S	Sb	08 11 51.1	-2.5
YOJ	Yonaguni jima	1.76	47	P	Pb	08 11 30.0	-1.9
YOJ				eS	Sb	08 11 51.1	-2.5
WDGT	Dungji baz=270	1.80	271	⇓eP	Pn	08 11 29.4	+0.5
WDGT	baz=270			eS	Sn	08 11 49.8	-0.7
SXI1	Grass Mountain baz=10.0	1.85	7	eP	Pb	08 11 31.9	-1.7
PHUB	P'eng-hu baz=278	1.89	278	⇓eP	Pn	08 11 30.7	+0.5
PHUB	baz=278			eS	Sn	08 11 52.1	-0.8
PNG	Penghu baz=279	1.92	280	eP	Pn	08 11 31.2	+0.7
VCHM	Qimei baz=268	2.01	269	⇓eP	Pn	08 11 32.3	+0.5
VCHM	baz=268			eS	Sn	08 11 55.7	0.0
HATJ	Hateruma jima	2.16	68	P	Pn	08 11 35.2	+1.3
HATJ				eS	Sn	08 12 00.8	+1.2
IRIF	Iriomote-Funau	2.22	61	P	Pn	08 11 36.2	+1.5
IRIF				S	Sn	08 12 02.6	+1.7
JKRS	Kuro-shima	2.40	66	P	Pn	08 11 38.9	+1.7
JKRS				eS	Sn	08 12 07.4	+1.9
JIJ	Ishigaki jima	2.57	64	P	Pn	08 11 40.5	+1.1
JIJ				S	Sn	08 12 09.9	+0.4
VWUC	VWUC baz=312	2.63	312	eP	Pn	08 11 40.7	+0.4
VWUC	baz=312			eS	Sn	08 12 09.9	-1.1
PTMZ	Houxiangcun baz=309	2.89	308	eP	Pn	08 11 44.1	+0.2
PTMZ	baz=309			eS	Sn	08 12 16.1	-1.3
JTJ	Tarama	3.15	63	P	Pn	08 11 48.7	+1.3
JTJ				eS	Sn	08 12 24.9	+1.0
MATB	Ma-tsu baz=333	3.26	333	eP	Pn	08 11 49.2	+0.2
MATB	baz=333			eS	Sn	08 12 25.3	-1.3
JIRB	Irabujima	3.61	64	eP	Pn	08 11 54.9	+1.0
JMJ2	Miyako jima3	3.71	66	P	Pn	08 11 56.8	+1.7
JMJ2				eS	Sn	08 12 38.9	+1.3
JOGS	Gusukube	3.78	66	eP	Pn	08 11 58.2	+2.0
JOGS				eS	Sn	08 12 41.5	+2.0

KRSC 06 08:15:07.6±1.0,52°.25N×159°.86E,h41^{km}±16^{km},ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.85	283	eP	Pn	08 15 23.2	+0.2
RUS				eS	Sn	08 15 34.4	+0.2
SPN	Mys Shipunski	0.86	7	eP	Pn	08 15 24.5	+1.3
SPN				eS	Sn	08 15 36.6	+2.1
NLC	Nalytchevo	0.97	342	eP	Pn	08 15 25.9	+1.1
DALK	Dalny	1.03	320	eP	Pn	08 15 26.3	+0.7
DALK				eS	Sn	08 15 39.7	+0.9
MTVR	Mutnovka	1.05	284	eP	Pn	08 15 26.9	+0.9
MTVR				eS	Sn	08 15 40.8	+1.2
PET	Petropavlovsk	1.07	317	eP	Pn	08 15 27.1	+1.0
PET				eS	Sn	08 15 41.1	+1.4
GRL	Gorelyy	1.14	286	eP	Pn	08 15 28.4	+1.3
GRL				eS	Sn	08 15 43.5	+1.9
UGLR	Uglovaya	1.15	327	eP	Pn	08 15 28.8	+1.5
UGLR				eS	Sn	08 15 44.1	+2.2
KDTR	Khodutka, Kamc	1.19	249	eP	Pn	08 15 28.4	+0.7
KDTR				eS	Sn	08 15 43.5	+0.9
SDLR	Sedlovina	1.19	331	eP	Pn	08 15 29.0	+1.1
SMAR	Somma	1.20	328	eP	Pn	08 15 28.9	+0.8
KRMR	Karymshinskiy	1.21	300	eP	Pn	08 15 28.7	+0.7
KRMR				eS	Sn	08 15 43.9	+0.8
ASAK	Asacha	1.21	277	eP	Pn	08 15 29.4	+1.3
AVH	Avacha	1.23	327	eP	Pn	08 15 30.1	+1.8
KRER	Koryakskii	1.25	328	eP	Pn	08 15 30.7	+1.9
KOK	Koryaka	1.28	325	eP	Pn	08 15 31.3	+2.2
KRX	Arik	1.33	327	eP	Pn	08 15 31.3	+1.4
APC	Apacha	1.78	293	eP	Pn	08 15 38.6	+2.8
KII	Karymskiy	1.81	352	eP	Pn	08 15 38.8	+2.5
GNL	Ganaly	1.85	322	eP	Pn	08 15 39.4	+2.4
MIPR	Malaya Ipel'ka	1.91	272	eP	Pn	08 15 40.6	+3.0
PAU	Pauzhetka	2.05	249	eP	Pn	08 15 42.5	+3.0
MKZ	Mys Kozlova	2.57	25	eP	Pn	08 15 48.3	+1.7
TUMD	Tumrok D	2.98	6	eP	Pn	08 15 56.0	+3.7
TUMD				eS	Sn	08 16 30.9	+4.2
TUMR	Tumrok	3.04	3	eP	Pn	08 15 57.5	+4.2
KBTR	Krutoberegovo	4.33	22	eP	Pn	08 16 13.6	+2.8

ANF **06** 08:30:58.5±0.2,36°.49N×113°.95W,h0^{km},ML3.6/28,Error ellipse: s-maj=2.3km s-min=2.0km az=1.0

NEIC **06** 08:30:59,36°.48N×113°.99W,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.12; $M_{\theta\theta}$0.01; $M_{\phi\phi}$1.11; $M_{r\theta}$0.21; $M_{\theta\phi}$0.13; $M_{\phi r}$0.87; Fault plane solution: $M_0$1.44000×10^{14} NP1:ϕ_s191.00000°,δ64.00000°,λ-86.00000°. NP2:ϕ_s2.00000°,δ26.00000°,λ-98.00000°. Principal axes: T 1.4351, Plg19.0000°, Azm278.0000°; N 0.0012, Plg3.0000°, Azm9.0000°; P -1.4363, Plg70.0000°, Azm109.0000°;

REN **06** 08:30:59.7±1.2,36°.48N±0°.03×113°.99W±0°.05,h10^{km}±7^{km} Error ellipse: s-maj=6.2km s-min=4.5km az=93.0

IDC **06** 08:31:00.1±1.2,36°.61N×113°.96W,h0^{km},mb2.7/1, mbtmp2.9/6,ML3.4/5,Error ellipse: s-maj=15.9km s-min=9.9km az=24.0

NEIC **06** 08:31:00.2±1.4,36°.51N±0°.03×114°.02W±0°.05,h4^{km}±9^{km}, ML3.3/86,Mwr3.4(REN),Error ellipse: s-maj=6.0km s-min=4.6km az=111.0

ISC 06 08:31:00.2±0.7,36°.50N±0°.02×113°.99W±0°.02,h10^{km},n87, σ1^{s}.34/102,Western Arizona

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ICU	Indian Springs	0.65	5		Pg	08 31 12.9	0.0
ICU					Sb	08 31 22.3	-0.8
LCMT	Little Creek M	0.79	49		Pg	08 31 15.1	-0.4
LCMT				Sg	Sg	08 31 24.9	-0.8
LCMT	comp=N,2µm,0.1s			IAML		08 31 26.6	
SHPR	Sheep Range	0.94	271		Pg	08 31 17.4	-1.1
SHPR	comp=E,675nm,0.4s			IAML		08 31 32.8	
CCUT	Cedar City	1.16	25	Pg	Pb	08 31 22.0	-0.6
CCUT				Sg	Sg	08 31 36.1	-1.6
CCUT	comp=E,563nm,0.3s			IAML		08 31 37.6	
PRN	Pahroc Range	1.24	317		Pn	08 31 23.3	-0.5
SZCU	Shurtz Canyon	1.31	33		Pb	08 31 24.6	-0.5
U15A	North Rim	1.37	92		Pg	08 31 26.1	-0.4
W13A	Hualapai Mount	1.40	177		Pb	08 31 26.0	-0.6
W13A	comp=N,265nm,0.4s			IAML		08 31 48.8	
PKCU	Pink Cliffs	1.64	54		Pg	08 31 30.6	-1.1
NEE2	Needles Airpor baz=16	1.80	197	Sb	Sg	08 31 57.4	-0.8
S11A	Rachel	1.81	310		Pn	08 31 31.8	+0.1
TPNV	Topopah Spring	1.87	285		Pn	08 31 32.8	+0.3
TPNV	comp=N,385nm,0.3s			IAML		08 32 02.8	
TPNV	comp=N,408nm,0.7s			IAML		08 32 06.6	
TPNV	Topopah Spring baz=104,SNR=518	1.87	285	P	Pn	08 31 32.8	+0.3
TPNV	baz=104			Sb	Sg	08 31 59.6	-0.8
TUQ	Turquoise Moun baz=56,SNR=51	1.90	237	P	Pn	08 31 32.6	-0.1
TUQ	baz=56			Sb	Sg	08 32 00.1	-1.1
SHOC	Shoshone, Teco baz=72,SNR=160	1.94	253	P	Pn	08 31 33.5	+0.2
SHOC	baz=72			S	Sb	08 31 60.0	-0.1
PSUT	Pine Spring	2.03	3		Pn	08 31 35.6	+0.8
PSUT	comp=N,183nm,0.6s			IAML		08 32 10.5	
PSUT	comp=E,239nm,0.5s			IAML		08 32 10.9	
GMRC	Granite Mounta baz=38,SNR=25	2.19	219	P	Pn	08 31 36.4	-0.3
GMRC	baz=38			Sg	Sg	08 32 10.7	+0.2
GWY	Greenwater Val	2.19	263		Pn	08 31 37.1	+0.3
GWY	comp=E,276nm,0.6s			IAML		08 31 49.6	
GWY	comp=N,287nm,0.6s			IAML		08 31 52.4	
PDMCI	Parker Dam,Lak baz=3.3	2.19	183	Sg	Sg	08 32 10.4	-0.3
R11A	Troy Canyon, C	2.24	326		Pn	08 31 37.8	+0.2
R11A	comp=N,165nm,0.3s			IAML		08 32 13.6	
R11A	comp=E,203nm,0.5s			IAML		08 32 13.8	
R11A	Troy Canyon, C baz=145,SNR=301	2.24	326	P	Pn	08 31 37.4	-0.2
R11A	baz=145			Sb	Sb	08 32 10.1	+1.3
FURC	Furnace Creek, baz=89	2.32	270	Pb	Pb	08 31 40.8	-1.3
FURC	baz=89			Sb	Sg	08 32 13.3	-1.4
WUAZ	Wupatki	2.34	114		Pb	08 31 41.0	-1.5
WUAZ	Wupatki baz=295	2.34	114	Pb	Pb	08 31 40.8	-1.8
WUAZ	baz=295			Sb	Sb	08 32 12.1	+0.6
QSM	Queen of Sheba	2.39	258		Pn	08 31 40.0	+0.6
QSM	comp=E,126nm,1.1s			IAML		08 32 21.6	
QSM	comp=N,122nm,0.6s			IAML		08 32 27.3	
TCRU	Three Creeks R	2.44	30		Pb	08 31 41.9	-2.4
TCRU	comp=E,228nm,0.8s			IAML		08 32 18.1	
TCRU	comp=N,178nm,0.7s			IAML		08 32 22.9	
MSU	Marysvale	2.47	35		Pb	08 31 42.6	-2.3
IRM	Iron Mountain baz=22	2.52	202	P	Pn	08 31 40.8	-0.5
IRM	baz=22			Sb	Sg	08 32 19.1	-2.1
HEC	Hector,Ludlow baz=48,SNR=11	2.54	230	P	Pn	08 31 41.2	-0.3
GSC	Goldstone, Bar	2.58	243		Pn	08 31 42.0	-0.2
GSC	comp=E,164nm,0.5s			IAML		08 32 25.9	
GSC	comp=N,131nm,0.7s			IAML		08 32 27.3	
GSC	Goldstone, Bar baz=62,SNR=52	2.58	243	P	Pn	08 31 42.1	0.0
Y14A	Wickenburg	2.68	162		Pn	08 31 44.2	+0.8
Y14A	comp=N,120nm,0.6s			IAML		08 32 28.1	
Y14A	comp=E,126nm,0.5s			IAML		08 32 29.2	
GRAC	Grapevine Rang	2.76	281		Pn	08 31 45.2	+0.6
GRAC	comp=N,215nm,0.7s			IAML		08 32 37.3	
MPMC	Manual Prospec baz=80,SNR=79	2.86	262	P	Pn	08 31 46.3	+0.2
RRX	Edison Barstow baz=56	2.94	237	P	Pn	08 31 47.2	+0.2
RRX	baz=56			S	Sn	08 32 23.1	+0.8
BELC	Belle Mtn. Jos baz=33	2.99	214	P	Pn	08 31 47.8	0.0
TPH	Tonopah	3.02	302		Pn	08 31 48.5	+0.2
LCH	Last Change Ra	3.02	285		Pn	08 31 48.5	+0.3
LCH	comp=E,71nm,0.5s			IAML		08 32 43.5	
BC3	Big Chuckawall baz=23	3.08	203	P	Pn	08 31 49.2	+0.2
BBRC	Big Bear Solar baz=46	3.27	228	P	Pn	08 31 52.0	+0.2
BBRC	baz=46			S	Sn	08 32 31.6	+0.6
TIN	Tinemaha, Big baz=98	3.45	281	Pg	Pg	08 32 04.3	-2.0
PFO	Pinyon Flats O comp=E,1.4nm,0.3s,baz=38,slow=15,SNR=8.3	3.52	216	Pn	Pn	08 31 55.1	-0.1
PFO	comp=E,6.4nm,0.3s,baz=14,slow=4.2,SNR=8.1			Lg	Lg	08 32 51.4	
PFO	Pinyon Flats O	3.52	216		Pn	08 31 54.7	-0.4
PFO	Pinyon Flats O baz=34	3.52	216	P	Pn	08 31 55.1	-0.1
CCAC	Calif City Air	3.54	249		Pn	08 31 55.4	+0.1
CCAC	comp=N,58nm,0.8s			IAML		08 32 57.1	
CCAC	comp=E,73nm,1.0s			IAML		08 33 06.3	
EDW2	Edwards Air Fo baz=63,SNR=7.6	3.64	245	P	Pn	08 31 56.7	+0.1
W18A	Petrified Fore baz=293	3.72	110	Pg	Pg	08 32 09.0	-2.5
113A	Mohawk Valley,	3.73	177		Pn	08 31 57.9	+0.1
113A	comp=E,48nm,0.9s			IAML		08 33 09.3	
113A	comp=N,32nm,1.3s			IAML		08 33 11.0	
ISA	Isabella, Lake	3.73	258		Pn	08 31 59.0	+1.1
ISA	Isabella, Lake baz=76	3.73	258	Pg	Pg	08 32 09.1	-2.6
BFSC	Mount Baldy Ra baz=52,SNR=5.8	3.75	234	P	Pn	08 31 58.9	+0.6
DUG	Dugway, Tooele baz=194	3.80	14	Pg	Pg	08 32 11.6	-1.5
NV11	Mina Array Sit	3.83	301		Pn	08 31 60.0	+0.5
NV11	comp=N,34nm,0.8s			IAML		08 33 03.5	
NV11	comp=E,28nm,1.5s			IAML		08 33 10.9	
MURC	Murrieta baz=41,SNR=8.4	3.91	223	P	Pn	08 32 00.6	+0.2
NVAR	Mina Array Bea comp=E,7.8nm,0.3s,baz=126,slow=15,SNR=53	3.94	301	Pn	Pn	08 32 01.0	+0.1
NVAR	comp=E,7.7nm,0.3s,baz=121,slow=15,SNR=16			Pg	Pb	08 32 09.7	-0.2

NVAR				Lg	Lg	08 33 01.4	
	baz=122,slow=19						
	comp=E,4.2nm,0.3s						
NVAR	Mina Array Bea	3.94	301		Pn	08 32 00.5	-0.4
LHV	Little Huntoon	4.00	297		Pn	08 32 01.8	+0.3
LHV				IAML		08 33 13.3	
	comp=N,68nm,0.7s						
LHV				IAML		08 33 14.5	
	comp=E,71nm,0.8s						
ELS	Elsinore Mount	4.00	226		Pn	08 32 02.1	+0.4
ELS				IAML		08 33 07.4	
	comp=E,28nm,0.8s						
ELS				IAML		08 33 08.8	
	comp=N,27nm,1.0s						
OMMB	Old Mammoth Mi	4.16	287		Pn	08 32 04.5	+0.4
YUH	Yuha Desert	4.16	203	Pn	Pn	08 32 03.7	-0.1
ARVC	Arvin	4.17	252	P	Pn	08 32 04.5	+0.7
	baz=70						
RYN	Ryan	4.18	302		Pn	08 32 04.7	+0.5
RYN				IAML		08 33 14.8	
	comp=E,48nm,0.9s						
RYN				IAML		08 33 21.6	
	comp=N,46nm,0.7s						
MDPB	Devils Postpil	4.22	287		Pn	08 32 05.5	+0.6
P18A	Preston Nutter	4.30	42		Pn	08 32 05.2	-0.7
P18A				IAML		08 33 38.5	
	comp=N,41nm,0.7s						
ELK	Elko	4.35	347	Pn	Pn	08 32 07.2	+0.6
	comp=N,0.7nm,0.3s,baz=169,slow=12,SNR=10						
ELK				Lg	Lg	08 33 13.2	
	comp=N,1.9nm,0.3s,baz=60,slow=14,SNR=3.7						
	comp=N,1.6nm,0.3s						
ELK	Elko	4.35	347		Pn	08 32 07.0	+0.4
ELK				IAML		08 33 19.9	
	comp=N,19nm,0.6s						
BAR	Barrett	4.41	211		Pn	08 32 07.4	+0.2
MVCO	Mesa Verde	4.46	79		Pn	08 32 11.2	+3.1
MVCO	Mesa Verde	4.46	79	P	Pn	08 32 09.9	+1.8
	baz=262,SNR=13						
CIS	Catalina Islan	4.77	231	P	Pn	08 32 12.6	+0.4
	baz=48						
YERR	Yerington	4.85	302		Pn	08 32 13.5	+0.1
YERR				IAML		08 33 37.3	
	comp=N,23nm,0.6s						
YERR				IAML		08 33 45.4	
	comp=E,40nm,0.7s						
TUC	Tucson	4.95	147		Pn	08 32 16.0	+1.3
TUC	Tucson	4.95	147	P	Pn	08 32 16.0	+1.3
	baz=328						
O20A	White River Ci	5.80	49		Pn	08 32 30.3	+3.9
O20A	White River Ci	5.80	49	Pg	Pg	08 32 48.9	-2.3
	baz=233						
S22A	4UR Ranch, Cre	5.86	76		Pn	08 32 30.0	+2.7
S22A	4UR Ranch, Cre	5.86	76	Pg	Pg	08 32 49.9	-2.5
	baz=260						
BEKR	Beckworth	6.04	306		Pn	08 32 31.0	+1.2
SMCO	Snowmass	6.16	62		Pn	08 32 34.3	+2.6
ANMO	Albuquerque	6.32	102	Pn	Pn	08 32 35.5	+1.9
	comp=E,0.6nm,0.3s,baz=281,slow=13,SNR=14						
ANMO				Lg	Lg	08 34 12.8	
	comp=E,1.4nm,0.3s,baz=165,slow=15,SNR=8.2						
	comp=E,1.6nm,0.4s						
ANMO	Albuquerque	6.32	102		Pn	08 32 36.0	+2.3
ANMO	Albuquerque	6.32	102	P	Pn	08 32 35.7	+2.1
	baz=286						
121A	Cookes Peak, D	6.47	126	Pg	Pg	08 33 00.8	-3.3
	baz=309						
SDCO	Great Sand Dun	6.89	77		Pn	08 32 44.0	+2.4
PDAR	Pinedale Array	7.13	27	Pn	Pn	08 32 45.4	+0.6
	comp=E,0.1nm,0.3s,baz=195,slow=14,SNR=1.6						
PDAR				Pg	Pb	08 33 02.0	-2.2
	comp=E,0.1nm,0.3s,baz=200,slow=12,SNR=5.2						
	comp=E,0.2nm,0.4s						
TXAR	Lajitas Array	11.23	127	Pn	Pn	08 33 44.9	+4.0
	baz=314,slow=15,SNR=2.1						
TXAR				Lg	Lg	08 36 49.6	
	baz=315,slow=47,SNR=4.9						
	comp=E,0.1nm,0.3s						
YKA	Yellowknife Ar	26.02	359	P	P	08 36 35.2	+2.0
	comp=E,0.1nm,0.5s,baz=179,slow=9.7,SNR=5.1						
	comp=E,0.1nm,0.5s						

*IDC **06** 08:36:04.0±1.8,28°.42N×91°.75E,h0^{km},mb3.5/4, mbtmp3.5/5,ML3.4/1,MS3.0/1,Error ellipse: s-maj=75.1km s-min=23.4km az=67.0*

*NDI **06** 08:36:08.7±2.9,28°.70N×92°.18E,h10^{km},ML3.5*

ISC 06 08:36:11.7±1.0,**28°.68N**±0°.07×**92°.02E**±0°.05,**h35^{km},n15,** σ**2^{s}97**/22,**mb3.5**/4,**Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITAN	ITANAGAR	2.15	135	*e*P	Pn	08 36 45.0	0.0
ITAN				*e*S	Sn	08 37 11.1	+0.7
ITAN				IAML		08 37 17.6	
	comp=E,462nm,0.4s						
ITAN				IAML		08 37 18.8	
	comp=N,557nm,0.1s						
TEZP	TEZPUR	2.17	161	*e*P	Pn	08 36 43.6	-1.7
TEZP				*e*S	Sn	08 37 11.9	+1.0
GUWA	GUWAHATI	2.49	187	*e*P	Pn	08 36 47.6	-2.2
GUWA				*e*S	Sn	08 37 18.6	-0.4
GUWA				IAML		08 37 20.5	
	comp=E,334nm,0.3s						
GUWA				IAML		08 37 22.0	
	comp=N,316nm,0.3s						
JORH	JORHAT	2.76	134	*e*x	Pn	08 36 55.7	+2.2
JORH				*e*x	Sn	08 37 31.9	+6.3
SHL	Shillong	3.10	182	*i* x	Pn	08 36 58.5	+0.2
SHL				*e*P	Pn	08 36 58.6	+0.2
SHL				*e*S	Sn	08 37 35.9	+1.6
SHL				IAML		08 37 38.0	
	comp=N,138nm,0.1s						
SHL				IAML		08 37 38.4	
	comp=E,130nm,0.3s						
MOKO	MOKOCHONG	3.23	136	*e*P	Pn	08 36 58.6	-1.4
MOKO				*e*x	Sn	08 37 44.7	+7.3
MOKO				IAML		08 37 47.8	
	comp=N,319nm,0.6s						
MOKO				IAML		08 37 48.2	
	comp=E,238nm,0.3s						
GTK	Tadong	3.31	247	*e*P	Pn	08 37 02.7	+1.5
GTK				*e*S	Sn	08 37 43.8	+4.3
GTK				IAML		08 37 49.2	
	comp=N,137nm,0.4s						
GTK				IAML		08 37 50.3	
	comp=E,186nm,0.6s						
TURI	Tura	3.46	206	*e*S	Sn	08 37 46.7	+3.8
TURI				IAML		08 37 50.6	
	comp=E,560nm,0.4s						
TURI				IAML		08 37 52.0	
	comp=N,252nm,0.5s						
KOHI	KOHIMA	3.48	147	*e*P	Pn	08 37 01.6	-1.9
MKAR	Makanchi Array	19.62	340	P	P	08 40 35.8	-1.3
	comp=N,0.1nm,0.3s,baz=161,slow=9.3,SNR=7.0						
	comp=N,1.0nm,0.8s						
SONM	Songino Array	22.14	26	P	P	08 41 05.0	+0.6
	comp=N,0.5nm,0.5s,baz=206,slow=9.6,SNR=1.9						
	comp=N,0.5nm,0.5s						
KURBB	Kurchatov Arra	24.18	339	P	P	08 41 23.5	-1.1
	comp=N,0.3nm,0.4s,baz=159,slow=8.7,SNR=1.6						
	comp=N,0.3nm,0.4s						
MA2	Magadan	49.98	35	LR	LR	09 06 05.3	
	comp=N,16nm,18.5s,baz=154,slow=36						
WRA	Warramunga Arr	63.30	135	P	P	08 46 35.3	-2.0
	comp=N,0.6nm,0.7s,baz=316,slow=6.7,SNR=5.3						
	comp=N,0.6nm,0.7s						
ASAR	Alice Springs	65.84	138	P	P	08 46 50.9	-2.9
	comp=N,1.0nm,1.1s,baz=327,slow=6.6,SNR=4.7						
	comp=N,1.0nm,1.1s						

*IGQ **06** 08:37:41±1.8,0°S±4°×8°1W±1°2,h5^{km}*

*IDC **06** 08:37:41.5±1.0,0°.21S×81°.02W,h0^{km},mb3.7/6, mbtmp3.8/9,ML2.8/3,MS3.1/8,Error ellipse: s-maj=36.4km s-min=17.8km az=61.0*

*NEIC **06** 08:37:44.7±1.4,0°.1S±0°.1×80°.78W±0°.05,h10^{km}±2^{km}, mb4.1/11,Error ellipse: s-maj=17.0km s-min=9.2km az=183.0*

*VAO **06** 08:38:06.9±0.9,0°.76S×79°.50W,h72^{km},mb4.1*

ISC 06 08:37:44.3±0.6,**0°.24S**±0°.06×**80°.92W**±0°.07,**h10^{km},n108,** σ**1^{s}78**/101,**mb3.9**/9,**MS3.1**/6,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CABP	Cabo Pasado	0.52	106	P	Pg	08 37 54.0	-0.3
JAMA	Jama	0.72	92	P	Pg	08 37 57.0	-1.2
FLF1	Flavio Alfaro-	1.09	96	P	Pg	08 38 05.0	-0.2
MAG1	Magdalena	1.16	82	P	Pb	08 38 05.0	-1.5
BV15	Puerto Quito-O	1.75	77	P	Pn	08 38 12.0	-2.7
PAC1	Pacto, Paraso	2.19	77	P	Pn	08 38 18.0	-2.9
ILLI	Illinizas Sur	2.25	102	P	Pn	08 38 20.0	-2.0
HPAL	Hacienda Las P	2.27	89	P	Pn	08 38 20.0	-2.2
AMIL	Milagro (Trans	2.30	145	P	Pn	08 38 21.0	-1.3
GGPT	Toaza - Volcan	2.30	90	P	Pn	08 38 20.0	-2.7
PINO	Pino	2.32	88	P	Pn	08 38 21.0	-2.1
TERV	Terraza Guagua	2.32	88	P	Pn	08 38 21.0	-2.1
PAST	Pastocalle	2.33	101	P	Pn	08 38 21.0	-2.0
YANA	Yana	2.36	87	P	Pn	08 38 22.0	-1.5
CHSH	Refugio Sur-Vo	2.40	121	P	Pn	08 38 23.0	-1.2
SRAM	San Ramn-Vol	2.41	102	P	Pn	08 38 23.0	-1.2
CAMI	Rancho Maria	2.46	100	P	Pn	08 38 24.0	-0.9
SUCR	Mariscal Sucre	2.46	99	P	Pn	08 38 24.0	-0.9
PORT	Chimborazo Vol	2.47	119	P	Pn	08 38 24.0	-1.1
SLOR	San Lorenzo -	2.48	101	P	Pn	08 38 24.0	-1.1
BNAS	Cotopaxi Volca	2.48	100	P	Pn	08 38 24.0	-1.2
NAS2	Nasa	2.49	99	P	Pn	08 38 25.0	-0.3
TAMH	Tambohuasha Ch	2.50	121	P	Pn	08 38 25.0	-0.5
BRRN	Barrancas-Volc	2.51	102	P	Pn	08 38 25.0	-0.6
BMOR	Cotopaxi Volca	2.51	101	P	Pn	08 38 25.0	-0.7
OTAV	Otavalo	2.52	79		Pn	08 38 23.5	-2.2
BREF	Cotopaxi Volca	2.52	100	P	Pn	08 38 26.0	+0.1
BVC2	Cotopaxi Volca	2.54	99	P	Pn	08 38 26.0	-0.2
BTAM	Cotopaxi Volca	2.56	100	P	Pn	08 38 26.0	-0.4
VCES	Cotopaxi	2.59	102	P	Pn	08 38 26.0	-0.7
TAMB	Tambo	2.59	100	P	Pn	08 38 27.0	+0.2
CUIC	Cuicocha-Domo	2.62	78	P	Pn	08 38 25.0	-2.1
ANTG	Antisana-Guama	2.68	96	P	Pn	08 38 27.0	-1.0
POND	Pondoa	2.73	115	P	Pn	08 38 29.0	+0.4
BMAS	Trigal station	2.75	117	P	Pn	08 38 29.0	+0.2
URCU	Urcuqui	2.75	76	P	Pn	08 38 28.0	-0.9
RETU	Refugio	2.75	116	P	Pn	08 38 29.0	0.0
ANTS	Antisana-Sarah	2.77	95	P	Pn	08 38 29.0	-0.2
PIAT	Ana Tenorio	2.77	106	P	Pn	08 38 29.0	-0.1
ARRY	Arrayan	2.77	117	P	Pn	08 38 29.0	-0.1
ANTI	Antisana	2.77	94	P	Pn	08 38 29.0	-0.3
BPAT	Tungurahua Vol	2.79	117	P	Pn	08 38 29.0	-0.4
YAHU	Yahuarcocha	2.92	78	P	Pn	08 38 31.0	-0.1
CAYR	Refugio Cayamb	2.93	85	P	Pn	08 38 31.0	-0.5
CHMA	Chilma	3.06	69	P	Pn	08 38 30.0	-3.1
ECEN	Cerro Negro	3.14	70	P	Pn	08 38 33.0	-1.3
CHL1	Volc¡n Chiles	3.15	71	P	Pn	08 38 33.0	-1.5
CHL2	Volc¡n Chiles	3.18	71	P	Pn	08 38 33.0	-1.9
CMBC	Cumbal	3.31	69	*e*P	Pn	08 38 37.2	+0.6
ARNL	Arenillas	3.39	165	P	Pn	08 38 34.0	-3.3
GCUF	Volcan Galeras	3.86	68	*e*P	Pn	08 38 45.2	+0.9
SOTA	Rioblanco	4.92	61	*e*P	Pn	08 38 57.5	-1.2
ZUMB	Zumba	4.92	159	P	Pn	08 38 58.0	-0.5
PCON	Cinco Dias	5.20	61	*e*P	Pn	08 39 02.7	0.0
MARP	Paez Belalcaza	5.84	58	*e*P	Pn	08 39 15.8	+4.6
GARC	Garzon, Huila	5.94	66	*e*P	Pn	08 39 10.9	-1.7
YOTC	Yotoco, Valle	6.21	47	*e*P	Pn	08 39 17.9	+1.7
ORTC	Ortega, Tolima	7.01	54	*e*P	Pn	08 39 27.4	+0.2
PRAC	Prado	7.20	57	*e*P	Pn	08 39 30.8	+1.0
ATAH	Atahualpa	7.30	160	Pn	Pn	08 39 32.6	+1.2
	0.3nm,0.3s,baz=26,slow=11,SNR=2.4						
ATAH				Sn	Sn	08 40 55.1	+0.6
	0.6nm,0.3s,baz=293,slow=18,SNR=1.9						
ATAH				LR	LR	08 42 35.2	
	comp=Z,159nm,20.8s,baz=336,slow=40						
	3.4nm,0.7s						
MACC	Macarena, Meta	7.46	71	*e*P	Pn	08 39 32.1	-1.2
CBOC	Ciudad Bolivar	7.80	39	*e*P	Pn	08 39 42.1	+4.0
ROSC	El Rosal	8.31	52	Pn	Pn	08 39 46.1	+0.8
	1.5nm,0.3s,baz=142,slow=19,SNR=1.6						
	4.9nm,0.4s						
CHIC	Chingaza	8.66	56	*e*P	Pn	08 39 54.4	+4.2
SPBC	San Pablo de B	9.00	49	*e*P	Pn	08 39 57.8	+3.2
CZSB	Cruzeiro do Su	11.07	132	*e*P	Pn	08 40 24.3	+1.6
TBTG	Tabatinga, AM	11.68	110	*e*P	Pn	08 40 29.9	-1.3
NNA	Nana	12.35	161	LR	LR	08 44 57.8	
	comp=Z,45nm,18.3s,baz=332,slow=35						
SDV	Santo Domingo	13.69	48	Pn	Pn	08 40 58.7	-0.1
	0.5nm,0.3s,baz=330,slow=9.5,SNR=1.3						
	3.4nm,0.2s						
SDV	Santo Domingo	13.69	48	*e*P	P	08 41 07.9	+0.3
MTO3	Montecristo	16.77	330	P	Pn	08 41 41.2	+1.5
ETMB	Extrema	17.46	123	*e*P	Pn	08 41 45.4	-2.6
LPAZ	La Paz	20.33	142	P	P	08 42 21.1	-0.4
	4.1nm,0.9s,baz=317,slow=9.0,SNR=11						
	4.1nm,0.9s						
LPAZ	La Paz	20.33	142	P	P	08 42 20.8	-0.7
LPAZ				IAmb	IAmb	08 42 25.9	
	comp=Z,4.5nm,0.9s						
LPAZ	La Paz	20.33	142	*e*P	P	08 42 22.0	+0.5
MACA	Manacapuru-AM	20.44	98	*e*P	P	08 42 21.9	-0.2
BOAV	Boa Vista	20.56	83	*e*P	P	08 42 24.4	+1.0
PB16	IPOC Station P	21.19	149	P	P	08 42 30.6	-0.2
PB16				IAmb	IAmb	08 42 34.6	
	comp=Z,4.7nm,0.8s						
CMIG	Matias Romero	22.04	322	LR	LR	08 48 58.4	
	comp=Z,31nm,18.5s,baz=148,slow=31						
PB11	IPOC Station P	22.32	151	P	P	08 42 41.6	-0.9
PB11				IAmb	IAmb	08 42 45.8	
	comp=Z,10nm,1.0s						
BIM	Bigot	24.51	52	P	P	08 43 01.9	-2.3
SIV	San Ignacio	25.07	130	LR	LR	08 53 06.2	
	comp=Z,52nm,18.2s,baz=294,slow=37						
LVC	Limon Verde	25.12	153	P	P	08 43 09.0	-1.0
	comp=Z,2.0nm,0.7s,baz=242,slow=17,SNR=1.6						
	comp=Z,2.0nm,0.7s						
LVC	Limon Verde	25.12	153	*e*P	P	08 43 15.3	+5.3
PTLB	Pontes e Lacer	26.29	126	*e*P	P	08 43 20.7	+0.4
PDRB	Porto dos Gac	26.55	116	*e*P	P	08 43 22.9	+0.2
MALB	Monte Alegre	26.70	94	*e*P	P	08 43 25.8	+1.8
CLDB	Colider	27.11	114	*e*P	P	08 43 27.5	-0.2
MDP	Montagnes des	28.74	79	LR	LR	08 56 47.6	
	comp=Z,26nm,18.2s,baz=291,slow=40						
PRPB	Parauapebas	31.60	101	*e*P	P	08 44 10.0	+2.3
AQDB	Aquidauana	31.83	131	*e*P	P	08 44 12.9	+3.3
SMTB	Santa Maria do	34.28	105	*e*P	P	08 44 34.1	+3.0
PEXB	Peixe	34.45	111	*e*P	P	08 44 34.3	+1.8
CPUP	Villa Florida	34.49	141	LR	LR	08 59 57.9	
	comp=Z,35nm,18.2s,baz=254,slow=39						
TKL	Tuckaleechee C	35.81	356	LR	LR	08 59 28.9	
	comp=Z,34nm,18.2s,baz=322,slow=36						
TXAR	Lajitas Array	36.56	325	P	P	08 44 47.6	-3.0
	comp=Z,0.4nm,0.8s,baz=129,slow=9.4,SNR=1.7						
	comp=Z,0.4nm,0.8s						
IPMB	Ipameri, GO	36.67	121	*e*P	P	08 44 53.3	+1.6
ROSB	Rosrio	36.88	94	*e*P	P	08 44 56.1	+2.7
RPN	Rapa Nui	38.21	223	LR	LR	08 56 58.5	
	comp=Z,54nm,20.5s,baz=340,slow=30						
S39A	Bolivar	39.45	344	P	P	08 45 15.2	+0.5
S39A				IAmb	IAmb	08 45 18.0	
	comp=Z,4.1nm,0.7s						
PLCA	Paso Flores	41.39	168	*e*P	P	08 45 39.4	+8.5
ESAR	Angra dos Reis	42.06	125	*e*P	P	08 45 39.6	+3.1
ANMO	Albuquerque	42.37	328	P	P	08 45 38.8	-0.3
ANMO				IAmb	IAmb	08 45 40.5	
	comp=Z,4.3nm,1.1s						
NBMA	Muriti-CE	42.63	101	*e*P	P	08 45 43.8	+2.4
NVAR	Mina Array Bea	51.57	323	P	P	08 46 50.1	-0.9
	comp=Z,0.9nm,0.8s,baz=138,slow=6.2,SNR=7.9						
	comp=Z,0.9nm,0.8s						
YKA	Yellowknife Ar	67.50	344	P	P	08 48 38.6	-1.7
	comp=Z,0.6nm,0.8s,baz=138,slow=6.1,SNR=11						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	82.86	77	P	P	08 50 07.8	-2.1
	comp=Z,0.4nm,0.7s,baz=260,slow=8.6,SNR=2.1						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	140.06	238	PKhKP	PKPpre	08 57 06.1	
	comp=Z,0.4nm,0.9s,baz=109,slow=1.7,SNR=2.2						
WRA				PKP	PKPdf	08 57 13.4	-0.8
	comp=Z,0.4nm,0.9s,baz=110,slow=2.3,SNR=2.8						

*SJA **06** 08:51:30.1±1.4,30°.34S×71°.42W,h50^{km},ML4.0,MW4.0*

*IDC **06** 08:51:31.3±3.0,30°.51S×71°.19W,h48^{km}±25^{km},mb3.5/1, mbtmp3.5/5,ML3.4/4,Error ellipse: s-maj=43.9km s-min=28.1km az=110.0*

*NEIC **06** 08:51:32.9±1.9,30°.41S±0°.06×71°.4W±0°.1,h50^{km}±10^{km}, mb4.4/2,ML4.3(GUC),Error ellipse: s-maj=17.4km s-min=7.7km az=100.0*

*GUC **06** 08:51:32.6±0.6,30°.40S×71°.24W,h59^{km}±2^{km},ML4.3*

ISC 06 08:51:31.8±0.8,**30°.38S**±0°.02×**71°.39W**±0°.04,**h54^{km}**±7^{km}, **n81,**σ**1^{s}74**/124,**5C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.36	216		Pn	08 51 43.6	+1.8
CO06	Fray Jorge	0.36	216	⇑*i*P	Pn	08 51 43.7	+1.8
CO06				*i* S	Sn	08 51 51.9	+2.8
CO05	La Serena	0.47	16		Pn	08 51 43.6	+0.6
CO05	La Serena	0.47	16	⇑*i*P	Pn	08 51 44.1	+1.1
CO05				*i* S	Sn	08 51 52.6	+1.5
CO05				IAML		08 51 53.4	
	comp=E,19μm,0.4s						
GO04	Tololo Observa	0.55	68		Pn	08 51 43.8	-0.3
GO04	Tololo Observa	0.55	68	*e*P	Pn	08 51 44.0	-0.2
GO04				*i* S	Sn	08 51 52.4	-0.6
GO04	Tololo Observa	0.55	68	*e*P	Pn	08 51 44.7	+0.6
GO04				*e*S	Sn	08 51 52.7	-0.3
CO02	Combarbal	0.89	158		Pn	08 51 47.9	-0.4
CO02	Combarbal	0.89	158	*e*P	Pn	08 51 48.0	-0.3
CO02				*i* S	Sn	08 51 58.8	-1.5
CO02				IAML		08 52 01.1	
	comp=E,11μm,0.1s						
CO02	Combarbal	0.89	158	*e*P	Pn	08 51 44.7	-3.6
CO02				*e*P	Pn	08 51 47.7	-0.6
CO02				*e*P	Pn	08 51 48.0	-0.3
CO02				*e*S	Sn	08 51 59.8	-0.6
CO02				IAML		08 52 01.4	
	comp=Z,2μm,0.1s						
CO01	Juntas del Tor	1.19	71		Pn	08 51 52.3	-0.1
CO01	Juntas del Tor	1.19	71	⇓*i*P	Pn	08 51 52.4	0.0
CO01				*i* S	Sn	08 52 06.9	-0.7
CO01	Juntas del Tor	1.19	71	*e*P	Pn	08 51 52.4	0.0
CO01				*e*S	Sn	08 52 07.3	-0.4
CO01				IAML		08 52 07.3	
	comp=Z,2μm,0.3s						
LCO	Las Campanas	1.49	24		Pn	08 51 57.0	+0.6
LCO	Las Campanas	1.49	24	⇑*i*P	Pn	08 51 57.0	+0.6
LCO				*i* S	Sn	08 52 15.4	+0.5
LCO	Las Campanas	1.49	24	*e*P	Pn	08 51 57.0	+0.6
AROD	Rodeo	1.67	83	*e*P	Pn	08 52 00.0	+1.0
AROD				*e*S	Sn	08 52 21.1	+1.6
ACDV	Cuesta del Vie	1.97	85	*e*P	Pn	08 52 04.0	+1.0
ACCO	Cerro Coronel	2.02	97	*e*P	Pn	08 52 05.0	+1.3
ACCO				*e*S	Sn	08 52 33.7	+5.8
AC04	Llanos de Chal	2.18	7		Pn	08 52 07.3	+1.6
AC04	Llanos de Chal	2.18	7	*e*P	Pn	08 52 07.1	+1.4
AC04				IAML		08 52 41.5	
	comp=E,1μm,0.6s						
AC04	Llanos de Chal	2.18	7	*e*P	Pn	08 52 07.0	+1.3
AC04				*e*P	Pn	08 52 07.3	+1.6
AC04				*e*S	Sn	08 52 31.7	+0.2
AC04				IAML		08 52 41.6	
	comp=Z,632nm,0.5s						
RTLS	Leoncito	2.29	129	*e*P	Pn	08 52 08.8	+1.5
RTLS				*e*S	Sn	08 52 38.0	+3.5
RTLS				IAML		08 52 42.0	
	comp=Z,625nm,0.4s						
VA03	San Esteban	2.48	164		Pn	08 52 11.3	+1.4
VA03	San Esteban	2.48	164	*e*P	Pn	08 52 10.8	+0.9
VA03				*i* S	Sn	08 52 39.4	+0.3
VA03				IAML		08 52 47.9	
	comp=E,3μm,0.2s						
VA03	San Esteban	2.48	164	*e*P	Pn	08 52 10.8	+0.9
VA03				*e*S	Sn	08 52 42.9	+3.8
VA03				IAML		08 52 48.1	
	comp=Z,972nm,0.6s						
AUSP	Uspallata	2.51	138	*e*P	Pn	08 52 12.0	+1.5
AUSP				*e*S	Sn	08 52 29.2	-11
ZON	Zonda	2.60	117		Pn	08 52 12.3	+0.8
ZON	Zonda	2.60	117	*e*P	Pn	08 52 12.8	+1.3
ZON				*e*S	Sn	08 52 45.0	+3.0
ZON				IAML		08 52 53.6	
	comp=Z,262nm,0.4s						
ROCH	El Roble	2.61	173	*e*P	Pn	08 52 12.7	+1.0
ROCH				*e*P	Pn	08 52 09.9	-1.8
ROCH				*i* S	Sn	08 52 42.8	+0.5
ROCH				IAML		08 52 50.1	
	comp=N,1μm,0.3s						
ROC1	El Roble	2.61	173		Pn	08 52 10.1	-1.6
ROC1	El Roble	2.61	173	*e*P	Pn	08 52 10.2	-1.6
ROC1				*e*S	Sn	08 52 45.0	+2.6
VA01	Torpederas	2.65	185		Pn	08 52 12.6	+0.6
PEL	Peldehue	2.82	168		Pn	08 52 15.6	+1.1
PEL	Peldehue	2.82	168	*e*P	Pn	08 52 15.5	+1.0
PEL				*e*P	Pn	08 52 16.0	+1.5
PEL				*e*S	Sn	08 52 47.7	+0.4
MT02	Curacav	2.88	176		Pn	08 52 15.9	+0.7
MT02	Curacav	2.88	176	*e*P	Pn	08 52 16.0	+0.7
MT02				IAML		08 52 59.8	
	comp=E,632nm,0.2s						
MT02	Curacav	2.88	176	*e*P	Pn	08 52 16.0	+0.7
MT02				*e*S	Sn	08 52 48.2	-0.5
MT02				IAML		08 52 57.1	
	comp=Z,473nm,0.5s						
MT05	Renca	3.06	170		Pn	08 52 19.1	+1.4
MT05	Renca	3.06	170	*e*P	Pn	08 52 19.0	+1.3
MT05				*i* S	Sn	08 52 55.9	+2.8
MT05	Renca	3.06	170	*e*P	Pn	08 52 19.0	+1.3
MT05				*e*S	Sn	08 52 54.2	+1.1
MT05				IAML		08 53 14.1	
	comp=Z,492nm,0.5s						
ASAL	Salagasta	3.10	136	*e*P	Pn	08 52 20.0	+1.6
ASAL				*e*S	Sn	08 52 56.7	+2.5
AC06	Mina Casimiro	3.14	17		Pn	08 52 20.1	+1.2
AC06	Mina Casimiro	3.14	17	*e*P	Pn	08 52 20.1	+1.2
AC06				*i* S	Sn	08 52 57.8	+2.6
MT03	Universidad Ad	3.19	167		Pn	08 52 20.7	+1.0
MT03	Universidad Ad	3.19	167	*e*P	Pn	08 52 21.3	+1.7
MT03	Universidad Ad	3.19	167	*e*P	Pn	08 52 21.0	+1.3
MT03				*e*S	Sn	08 52 58.7	+2.2
MT03				IAML		08 53 15.9	
	comp=Z,579nm,0.5s						
ARCO	CERRO ARCO	3.23	140	*e*P	Pn	08 52 22.2	+2.1
ARCO				*e*P	Pn	08 52 23.0	+2.8
ARCO				*e*S	Sn	08 53 06.9	+9.5
ARCO				IAML		08 53 11.6	
	comp=Z,394nm,0.3s						
VA05	Santo Domingo	3.28	183	Pn	Pn	08 52 21.1	+0.5
AVFE	Valle Fertil	3.40	96	*e*P	Pn	08 52 17.2	-5.3
AVFE				*e*P	Pn	08 52 23.0	+0.5
AVFE				*e*S	Sn	08 53 02.7	+1.0
AVFE				IAML		08 53 09.5	
	comp=Z,260nm,0.6s						
MT09	Talagante	3.41	174		Pn	08 52 22.9	+0.4
MT09	Talagante	3.41	174	*e*P	Pn	08 52 23.5	+0.9
MT09				*i* S	Sn	08 53 02.5	+0.8
MT09				IAML		08 53 12.7	
	comp=E,920nm,0.3s						
AAGR	Agrelo	3.47	142	*e*P	Pn	08 52 26.0	+2.6
AAGR				*e*S	Sn	08 53 08.7	+5.4
AAGR				*e*S	Sn	08 53 10.2	+6.9
MT01	Popeta	3.48	178		Pn	08 52 24.3	+0.9
MT01	Popeta	3.48	178	*e*P	Pn	08 52 23.8	+0.3
MT01				*i* S	Sn	08 53 02.9	-0.5
MT01				IAML		08 53 20.0	
	comp=N,720nm,0.1s						
MT01	Popeta	3.48	178	*e*P	Pn	08 52 24.1	+0.7
MT01				*e*S	Sn	08 53 03.7	+0.3
MT01				IAML		08 53 16.0	
	comp=Z,555nm,0.4s						
BO04	La Punta	3.66	170		Pn	08 52 26.8	+0.8
BO04	La Punta	3.66	170	⇑*i*P	Pn	08 52 26.9	+1.0
BO04				*i* S	Sn	08 53 07.6	-0.3
ACLC	CERRO LA CRUZ	3.97	77	*e*P	Pn	08 52 31.0	+0.7
ACLC				*e*S	Sn	08 53 16.2	+0.6
ACLC				IAML		08 53 24.8	
	comp=Z,432nm,0.4s						
BO01	Tunca	4.01	176		Pn	08 52 32.4	+1.7
BO01	Tunca	4.01	176	⇑*e*P	Pn	08 52 31.1	+0.3
BO01				*i* S	Sn	08 53 17.5	+1.1
BO01	Tunca	4.01	176	*e*S	Sn	08 53 17.2	+0.8
BO01				IAML		08 53 32.4	
	comp=Z,221nm,0.7s						
AC02	Maricunga	4.05	30		Pn	08 52 33.8	+2.0
AC02	Maricunga	4.05	30	*e*P	Pn	08 52 28.2	-3.5
AC02				*e*P	Pn	08 52 33.0	+1.3
AC02				*e*S	Sn	08 53 17.2	-0.9
AC02				IAML		08 53 39.4	
	comp=Z,190nm,0.6s						
BO03	Pichilemu	4.13	187	*e*P	Pn	08 52 31.8	-0.6
BO03				IAML		08 53 43.6	
	comp=E,195nm,0.7s						
GO05	Huala	4.64	186		Pn	08 52 38.9	-0.5
RFA	San Rafael	5.03	151	*e*S	Sn	08 53 40.7	-0.8

RFA				IAML		08 54 23.5	
	comp=Z,43nm,1.1s						
ML02	Panimavida	5.37	180		Pn	08 52 49.8	+0.4
LVC	Limon Verde	8.05	17	P	Pn	08 53 25.9	-0.6
	comp=Z,0.2nm,0.3s,baz=122,slow=23,SNR=2.2						
	comp=Z,2.1nm,0.7s						
LC01	Cunco	8.51	183		Pn	08 53 30.9	-1.5
PLCA	Paso Flores	10.36	176	P	Pn	08 53 55.6	-2.1
	comp=Z,0.1nm,0.3s,baz=342,slow=10,SNR=6.3						
	comp=Z,1.7nm,1.0s						
PLCA	Paso Flores	10.36	176	Pn	Pn	08 53 57.3	-0.4
TRQA	Tornquist	10.92	137		Pn	08 54 03.5	-1.8
CPUP	Villa Florida	13.02	75	P	Pn	08 54 31.6	-2.4
	comp=Z,0.1nm,0.3s,baz=231,slow=16,SNR=1.7						
CPUP				S	Sn	08 56 53.8	-3.5
	comp=Z,2.2nm,0.8s,baz=233,slow=12,SNR=2.3						
	comp=Z,0.6nm,0.5s						
LPAZ	La Paz	14.34	13	P	Pn	08 54 55.1	+2.6
	baz=187,slow=12,SNR=1.5						
	comp=Z,0.3nm,0.5s						
DSPA	Despedida	23.67	175	P	P	08 56 39.3	+1.0
DSPA				IAmb	IAmb	08 56 39.4	
	comp=Z,217nm,1.5s						
QSPA	South Pole Qui	59.85	180	P	P	09 01 32.0	+0.4
TORD	Torodi Ar. Bea	82.46	70	P	P	09 03 48.5	-0.3
	comp=Z,0.7nm,0.7s,baz=258,slow=4.0,SNR=5.9						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	124.18	210	PKP	PKPdf	09 10 24.2	-0.9
	comp=Z,0.3nm,0.9s,baz=158,slow=1.9,SNR=1.7						
ZALV	Zalesovo Beam	150.84	29	PKPbc	PKPbc	09 11 17.6	-0.2
	comp=Z,1.1nm,0.6s,baz=270,slow=1.4,SNR=4.2						
MKAR	Makanchi Array	153.87	44	PKPbc	PKiKP	09 11 25.6	+0.6
	comp=Z,0.1nm,0.4s,baz=33,slow=3.4,SNR=2.1						

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*ISK **06** 09:00:09.8, 40°.16N×41°.46E, h8km, ML2.4/9*
*DDA **06** 09:00:10.8±0.0, 40°.14N×41°.49E, h7km±6km, ML2.6*
ISC 06 09:00:10.8±1.1, **40°.16N**±0°.03×**41°.44E**±0°.03, **h10**km±10km, **n21**, σ**0s.79**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	Erzurum	0.26	193	PG	Pg	09 00 15.6	-0.5
ERZM	Erzurum	0.26	193	P	Pg	09 00 15.6	-0.5
ERZM				S	Sb	09 00 22.0	-0.3
KOPR	Koprukoy-ERZUR	0.35	117	PG	Pg	09 00 17.3	-0.6
HOMI	Horasan	0.37	107	P	Pg	09 00 17.5	-0.7
HOMI				S	Sb	09 00 27.3	+1.8
HOMI				*i* AML	AML	09 00 30.0	
	comp=E,761nm,0.4s						
EMRE	Erzurum,Aziziy	0.38	251	P	Pg	09 00 18.1	-0.2
EMRE				S	Sb	09 00 26.2	+0.5
EMRE				*i* AML	AML	09 00 32.0	
	comp=N,771nm,0.6s						
DDEM	Demirkent	0.77	18	P	Pg	09 00 25.1	-0.6
DDEM				S	Sb	09 00 38.1	+1.2
DDEM				*i* AML	AML	09 00 44.0	
	comp=N,272nm,0.4s						
SENK	Senkaya-Erzuru	0.80	59	PG	Pg	09 00 25.6	-0.7
DBAD	Bademkaya	0.88	12	P	Pg	09 00 26.9	-0.9
DBAD				S	Sn	09 00 41.6	-0.7
BAYB	BAYBURT	0.91	277	P	Pg	09 00 28.2	-0.1
BAYB				S	Sn	09 00 43.0	-0.2
BAYB				*i* AML	AML	09 00 46.0	
	comp=N,160nm,0.4s						
DAGI	Agillar	0.99	21	P	Pg	09 00 28.9	-0.9
DAGI				S	Sn	09 00 45.0	+0.1
YEDI	Yedisu-Bingol	1.00	224	PG	Pg	09 00 28.9	-1.1
YEDI				SG	Sb	09 00 43.9	+0.5
BAYT	Aydıntepe-Bayb	1.02	284	PG	Pg	09 00 30.0	-0.5
CHOM	Cayeli-Rize	1.07	331	PG	Pg	09 00 30.7	-0.7
CHOM				SG	Sb	09 00 46.4	+0.9
HOPA	Hopa-Artvin	1.23	0	PN	Pn	09 00 33.8	-0.2
BNGB	Bingl	1.30	207	PN	Pn	09 00 34.3	-0.8
MUSM	Mu-Merkez	1.43	178	P	Pn	09 00 36.6	-0.3
MUSM				S	Sg	09 00 58.8	+2.0
ERZN	Erzincan	1.44	247	PN	Pn	09 00 36.9	-0.1
BATM	Batumi	1.46	7	PN	Pn	09 00 37.0	-0.2
KTUT	Trabzon	1.52	304	PN	Pn	09 00 38.2	+0.2
KELT	Kelkit	1.68	270	P	Pb	09 00 41.4	-0.4
KELT				S	Sg	09 01 05.3	+0.6
ESPY	Espiye-Giresun	2.21	291	PN	Pn	09 00 47.9	+0.5

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*SKHL **06** 09:10:12.4±0.2, 47°.90N×153°.30E, h141km±8km, mb4.6/6, mbv4.9/2, msh4.8/2, msha5.4/3*
*MOS **06** 09:10:12.4±1.2, 48°.01N×153°.06E, h141km, mb3.9/10, Error ellipse: s-maj=10.2km s-min=7.6km az=77.7*
*NEIC **06** 09:10:13.8±2.0, 48°.0N±0°.1×152°.9E±0°.2, h132km±9km, mb4.1/15, Error ellipse: s-maj=21.6km s-min=12.3km az=142.0*
*IDC **06** 09:10:15.0±2.3, 48°.04N×152°.97E, h146km±21km, mb3.4/20, mbtmp3.9/22, Error ellipse: s-maj=21.3km s-min=11.8km az=156.0*
ISC 06 09:10:12.8±0.7, **47°.98N**±0°.08×**153°.07E**±0°.08, **h128**km, **n98**, σ**1s.34**/97, **mb3.9**/37, **6C-2D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.36	35	*i* PN	Pn	09 11 04.5	+0.6
SKR				*i* S	Sn	09 11 40.9	-2.6
SKR	Severo-Kuril's	3.36	35	*e*P	Pn	09 11 04.2	+0.3
SKR				AMB	AMB	09 11 05.6	
	30nm,0.4s						
SKR				AMB	AMB	09 11 05.7	
	300nm,2.0s						
SKR				*e*S	Sn	09 11 42.9	-0.6
SKR				A	A	09 11 46.8	
	50nm,0.4s						
SKR				A	A	09 11 46.8	
	100nm,0.4s						
SKR				A	A	09 11 47.4	
	400nm,3.0s						
SKR				A	A	09 11 47.4	
	400nm,3.0s						
PAU	Pauzhetka	4.25	33	*e*P	Pn	09 11 16.0	+0.3
PAU				AMB	AMB	09 11 17.5	
	20nm,0.4s						
PAU				AMB	AMB	09 11 21.1	
	400nm,4.0s						
PAU				*e*S	Sn	09 12 03.8	-0.8
PAU				A	A	09 12 06.8	
	60nm,0.2s						
PAU				A	A	09 12 06.8	
	60nm,0.2s						
PAU				A	A	09 12 07.1	
	700nm,3.0s						
PAU				A	A	09 12 07.1	
	800nm,3.0s						
PEA0B	Petropavlovsk-	5.92	28	PN	Pn	09 11 39.4	+1.3
PEA0B	Petropavlovsk-	5.92	28	Pn	Pn	09 11 39.4	+1.3
PETK	Petropavlovsk-	5.92	28	P	Pn	09 11 39.3	+1.2
	1.6nm,0.5s,baz=198,slow=14,SNR=5.4						
PETK	Petropavlovsk-	5.92	28		Pn	09 11 38.4	+0.4
SHO	Shikotan	5.99	229	*e*PN	Pn	09 11 36.2	-2.8
SHO	Shikotan	5.99	229	*e*P	Pn	09 11 36.6	-2.4
SHO				AMB	AMB	09 11 38.0	
	30nm,0.5s						
SHO				*e*S	Sn	09 12 42.7	-3.6
SHO				A	A	09 12 45.0	
	30nm,0.3s						
SHO				A	A	09 12 45.0	
	50nm,0.3s						
PET	Petropavlovsk	6.18	33	*e*P	Pn	09 11 41.4	-0.1
YUK	Yuzh-Kuril'sk	6.39	235	*e*P	Pn	09 11 44.5	+0.1
YUK				AMB	AMB	09 11 46.0	
	20nm,0.3s						
YSS	Yuzh-Sakhalins	7.07	265	*i* PN	Pn	09 11 56.0	+2.4
YSS	Yuzh-Sakhalins	7.07	265	*e*P	Pn	09 11 56.0	+2.4
YSS				AMB	AMB	09 12 00.2	
	10.0nm,0.4s						
JKA	Kamikawa-asahi	8.24	246		Pn	09 12 11.6	+2.2
ASAJ	Asahikawa	8.25	246	P	Pn	09 12 11.6	+2.2
	9.8nm,0.5s,baz=73,slow=14,SNR=21						
ERM	Erimo	9.21	233	PN	Pn	09 12 22.1	-0.3
ERM	Erimo	9.21	233	Pn	Pn	09 12 22.1	-0.3
KLR	Kul'dur	14.16	283	P	P	09 13 34.0	+3.0
	1.2nm,0.5s,baz=90,slow=7.1,SNR=6.2						
KLR	Kul'dur	14.16	283	*i* P	Pn	09 13 28.5	+1.1
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	Kul'dur	14.16	283	*e*P	Pn	09 13 27.5	+0.1
SEY	Seymchan	14.99	359	P	P	09 13 40.9	+0.8
	comp=Z,0.6nm,0.6s,baz=100,slow=20,SNR=4.7						
SEY	Seymchan	14.99	359	*i* P	Pn	09 13 35.0	-2.8
SEY	Seymchan	14.99	359	*e*P	Pn	09 13 35.0	-2.8
USRK	Ussuriysk Ar.	15.10	263	P	P	09 13 40.6	-0.9
	comp=Z,1.6nm,0.6s,baz=82,slow=10,SNR=2.3						
USA0B	Ussuriysk Arra	15.10	263	*e*P	Pn	09 13 40.1	+0.8
USA0B	Ussuriysk Arra	15.10	263	Pn	Pn	09 13 37.2	-2.1
USA0B				IAmb	IAmb	09 13 46.2	
	comp=Z,20nm,1.4s						
KSRS	Korea Array	21.17	249	P	P	09 14 48.0	+0.3
	comp=Z,1.4nm,0.6s,baz=52,slow=9.9,SNR=5.6						
	comp=Z,1.4nm,0.6s						
KSRS	Korea Array	21.17	249	P	P	09 14 48.0	+0.3
BILL	Bilibino	21.20	14	⇑*e*P	P	09 14 48.2	+0.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	Bilibino	21.20	14	*e*P	P	09 14 48.2	+0.4
TIXI	Tiksi	26.28	343	⇑*i*P	P	09 15 34.8	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TIXI	Tiksi	26.28	343	*e*P	P	09 15 34.8	-0.9
H11N2	WAKE ISLAND Hy	30.33	154	T	T	09 48 14.7	
	baz=341,slow=76,SNR=47						
H11N1	WAKE ISLAND Hy	30.34	154	T	T	09 48 15.8	
	baz=341,slow=76,SNR=57						
H11N3	WAKE ISLAND Hy	30.34	154	T	T	09 48 14.7	
	baz=341,slow=76,SNR=45						
ULN	Ulaanbaatar	30.49	287	⇑*i*P	P	09 16 13.7	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	Ulaanbaatar	30.49	287	*e*P	P	09 16 13.7	+0.2
SONM	Songino Array	30.92	287	P	P	09 16 17.2	-0.1
	comp=Z,0.4nm,0.3s,baz=79,slow=7.5,SNR=2.7						
	comp=Z,0.4nm,0.3s						
H11S1	WAKE ISLAND Hy	31.43	155	T	T	09 49 46.7	
	baz=342,slow=76,SNR=87						
H11S3	WAKE ISLAND Hy	31.44	155	T	T	09 49 47.8	
	baz=342,slow=76,SNR=122						
H11S2	WAKE ISLAND Hy	31.45	155	T	T	09 49 47.8	
	baz=342,slow=76,SNR=76						
IMAR	Indian Mountai	32.80	37	P	P	09 16 34.6	+1.2
H23K	Yukon River	34.50	38	P	P	09 16 50.5	+2.3
H23K				IAmb	IAmb	09 16 57.7	
	comp=Z,2.8nm,1.1s						
NEA2	Nenana	34.67	40	P	P	09 16 49.9	+0.3
TOLK	Toolik Lake Re	34.72	33	P	P	09 16 51.7	+1.7
TOLK				IAmb	IAmb	09 16 58.9	
	comp=Z,2.4nm,1.1s						
WRH	Wood River Hil	35.10	40	P	P	09 16 54.9	+1.7
H24K	Noodor Dome	35.19	38	P	P	09 16 56.2	+2.2
H24K				IAmb	IAmb	09 17 06.7	
	comp=Z,7.5nm,1.4s						
CCB	Clear Creek Bu	35.22	40	P	P	09 16 55.9	+1.7
CCB				IAmb	IAmb	09 17 05.8	
	comp=Z,4.9nm,1.4s						
HDA	Harding Lake	35.59	40	P	P	09 16 58.8	+1.3
ILAR	Eielson Array	35.61	40	P	P	09 16 58.0	+0.4
	comp=Z,0.3nm,0.6s,baz=258,slow=8.2,SNR=5.1						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	35.61	40	*e*P	P	09 16 58.3	+0.7
NRIK	Noril'sk	37.70	328	*e*P	P	09 17 14.3	-0.9
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
L27K	Beaver Creek,	37.98	42	P	P	09 17 19.9	+2.2
L27K				IAmb	IAmb	09 17 30.5	
	comp=Z,3.4nm,1.4s						
BCAR	Beaver Creek A	38.00	42	P	P	09 17 20.5	+2.6
EGAK	Eagle	38.06	39	P	P	09 17 19.3	+1.0
INK	Inuvik	40.63	33	P	P	09 17 40.9	+1.3
	comp=Z,2.6nm,1.1s,baz=276,slow=8.9,SNR=8.2						
	comp=Z,2.6nm,1.1s						
ZALV	Zalesovo Beam	41.88	305	P	P	09 17 49.1	-0.8
	comp=Z,1.5nm,0.6s,baz=71,slow=6.4,SNR=5.1						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	41.88	305	*e*P	P	09 17 49.8	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
A36M	Sachs Harbour	42.76	27	P	P	09 17 58.5	+1.7
A36M				IAmb	IAmb	09 17 59.7	
	comp=Z,6.8nm,0.8s						
MK31	Makanchi Array	46.36	296	*c i*P	P	09 18 25.1	-0.7
MK31	Makanchi Array	46.36	296	P	P	09 18 25.3	-0.5
MK31				IAmb	IAmb	09 18 38.7	
	comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	46.36	296	P	P	09 18 25.4	-0.4
	comp=Z,1.3nm,0.7s,baz=62,slow=8.1,SNR=14						
	comp=Z,1.3nm,0.7s						
KURK	Kurchatov	46.67	303	*d i*P	P	09 18 28.0	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	46.67	303	P	P	09 18 27.9	-0.1
KURK				IAmb	IAmb	09 18 28.8	
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	46.67	303	*e*P	P	09 18 28.0	-0.1
KURBB	Kurchatov Arra	46.76	303	P	P	09 18 28.8	-0.1
	comp=Z,4.7nm,0.7s,baz=68,slow=8.4,SNR=23						
	comp=Z,4.7nm,0.7s						
YKA	Yellowknife Ar	49.96	37	P	P	09 18 54.1	+1.0
	comp=Z,0.2nm,0.4s,baz=299,slow=7.0,SNR=11						
	comp=Z,0.2nm,0.4s						
YKA	Yellowknife Ar	49.96	37	*e*P	P	09 18 53.2	+0.1
BVAR	Borovoye Array	50.06	309	P	P	09 18 53.0	-1.1
	comp=Z,0.9nm,0.3s						
	comp=Z,0.9nm,0.3s						
BRVK	Borovoye	50.10	309	⇑*i*P	P	09 18 54.1	-0.3
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	Borovoye	50.10	309	*e*P	P	09 18 54.1	-0.3
CMAR	Chiang Mai Arr	52.65	255	P	P	09 19 15.1	+1.4
	comp=Z,1.0nm,0.3s,baz=25,slow=11,SNR=1.7						
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	53.27	296	⇑*e*P	P	09 19 18.3	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	53.27	296	*e*P	P	09 19 18.3	0.0
ARU	Arti	54.09	317	*d i*P	P	09 19 23.1	-0.7
ARU						09 20 23.8	
ARU				S	S	09 26 48.5	-1.5
ARU				SS	SKiKP	09 30 25.1	+3.6
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	Arti	54.09	317	*e*P	P	09 19 23.1	-0.7
ARCES	ARCESS Array B	56.68	341	P	P	09 19 41.5	-0.7
	comp=Z,2.9nm,1.0s,baz=38,slow=8.0,SNR=6.4						
	comp=Z,2.9nm,1.0s						
ARCES	ARCESS Array B	56.68	341	*e*P	P	09 19 40.6	-1.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	56.68	341	IAmb	IAmb	09 19 46.4	
	comp=Z,7.8nm,1.4s						
ABKAR	Akbulak array	57.62	309	P	P	09 19 49.0	-0.1
BELG	Belogornoye	61.60	318	*e*P	P	09 20 15.1	-1.1
BELG				pmax	pmax		
	comp=Z,2.0nm,1.5s						
NVAR	Mina Array Bea	61.89	63	P	P	09 20 19.2	+0.5
	comp=Z,0.2nm,0.5s,baz=289,slow=8.5,SNR=2.7						
	comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	62.92	334	P	P	09 20 24.4	-0.5
	comp=Z,1.8nm,0.3s,baz=33,slow=7.4,SNR=33						
	comp=Z,1.8nm,0.3s						
FINES	FINESS Array B	62.92	334	*e*P	P	09 20 24.8	-0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NB2	NORSAR Subarra	67.06	341	P	P	09 20 51.5	-0.2
	comp=Z,0.3nm,0.3s,baz=29,slow=6.5						
NOA	NORSAR Array B	67.06	341	P	P	09 20 49.9	-1.8
	comp=Z,0.4nm,0.5s,baz=27,slow=6.4,SNR=4.6						
	comp=Z,0.4nm,0.5s						
NOA	NORSAR Array B	67.06	341	*e*P	P	09 20 52.3	+0.6
KBZ	Khabaz	69.99	314	P	P	09 21 10.2	+0.1
	comp=Z,1.5nm,0.6s,baz=37,slow=5.1,SNR=4.1						
	comp=Z,1.5nm,0.6s						
KBZ	Khabaz	69.99	314	*e*P	P	09 21 10.7	+0.6
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	69.99	314	*e*P	P	09 21 10.7	+0.6
AKASG	Malin Array Be	70.51	326	P	P	09 21 12.7	-0.5
	comp=Z,0.5nm,0.3s,baz=42,slow=5.9,SNR=2.5						
	comp=Z,0.5nm,0.3s						
PALK	Pallekele	72.84	262	*i* P	P	09 21 28.6	+0.9
ASAR	Alice Springs	73.37	198	P	P	09 21 30.1	-0.4
	comp=Z,0.3nm,0.6s,baz=17,slow=5.7,SNR=4.2						
	comp=Z,0.3nm,0.6s						
CLL	Collm	75.33	335	*i* P	P	09 21 41.7	+0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	Collm	75.33	335	*i* P	P	09 21 41.7	+0.1
	comp=Z,5.0nm,0.7s						
TXAR	Lajitas Array	76.91	61	P	P	09 21 50.5	-0.6
	comp=Z,0.3nm,0.7s,baz=297,slow=3.8,SNR=4.8						
	comp=Z,0.3nm,0.7s						
GERES	GERESS Array B	77.34	334	P	P	09 21 53.3	+0.2
	comp=Z,0.5nm,0.3s,baz=61,slow=8.0,SNR=3.6						
	comp=Z,0.5nm,0.3s						
BRTR	Keskin Array B	77.48	317	P	P	09 21 54.8	+0.7
	comp=Z,0.5nm,0.7s,baz=0.0,slow=0.1,SNR=2.6						
	comp=Z,0.5nm,0.7s						

IDC 06 09:12:45.3±2.1, **1°.40N**×**125°.40E**, **h0**km, **mb3.3**/3, **mbtmp3.3**/3, **Error ellipse: s-maj=187.1km s-min=28.3km az=64.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.95	158	P	P	09 17 51.1	-0.3
	0.4nm,0.3s,baz=336,slow=10,SNR=6.1						
	0.4nm,0.3s						
ASAR	Alice Springs	26.25	162	P	P	09 18 22.5	+0.1
	0.1nm,0.3s,baz=344,slow=9.4,SNR=5.1						
	0.1nm,0.3s						
MKAR	Makanchi Array	58.73	327	P	P	09 22 45.1	+0.1
	0.3nm,0.6s,baz=122,slow=8.9,SNR=2.3						
	0.3nm,0.6s						

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*INET **06** 09:14:03.8±1.1, 12°.72N×88°.18W, h15km±16km, MW3.2*
*SNET **06** 09:14:03.1±1.0, 12°.67N×88°.33W, h22km±6km, ML3.2*
ISC 06 09:14:01.7±1.3, **12°.64N**±0°.07×**88°.26W**±0°.05, **h22**km±12km, **n21**, σ**0s.52**/28, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.76	33	*e*P	Pn	09 14 17.4	+0.2
LCND	La Caada	0.76	28	*e*P	Pn	09 14 17.1	-0.1
LCND				*e*S	Sn	09 14 28.1	+0.2
LCND				IAML		09 14 30.8	
	comp=Z,1μm,0.2s						
CSGN	Cosiguina Volc	0.76	64	*e*P	Pn	09 14 17.3	+0.1
PACA	Pacayal	0.82	356	*e*P	Pn	09 14 18.2	+0.1
PACA				*e*S	Sn	09 14 30.0	+0.2
PACA				IAML		09 14 32.0	
	comp=Z,8μm,0.3s						
PACA	Pacayal	0.82	356	*e*P	Pn	09 14 18.3	+0.1
COEB	Comit de Eme	0.89	343	*e*P	Pn	09 14 19.1	0.0
COEB				*e*S	Sn	09 14 30.9	-0.4
COEB				IAML		09 14 35.7	
	comp=Z,366nm,0.3s						
PQSS	Presa 15 de Se	1.02	343	*e*P	Pb	09 14 20.9	+0.1
PQSS				*e*S	Sn	09 14 34.8	+0.4
PQSS				IAML		09 14 35.4	
	comp=Z,160nm,0.2s						
COEG	Centro de Oper	1.15	328	*e*P	Pn	09 14 22.5	-0.1
COEG				*e*S	Sb	09 14 37.9	+0.5
COEG				IAML		09 14 40.9	
	comp=Z,257nm,0.3s						
COEG	Centro de Oper	1.15	328	*e*P	Pn	09 14 22.2	-0.3
SCLA	Alcaldia de Sa	1.15	337	*e*P	Pb	09 14 22.7	-0.3
CRIN	San Cristobal	1.18	87	*e*P	Pb	09 14 24.0	+0.4
LFRS	El Faro	1.25	321	*e*P	Pb	09 14 24.1	-0.6
CNGN	Cerro Negro	1.53	95	*e*P	Pn	09 14 27.8	0.0
JAYA	Jayaque - finc	1.53	311	*e*P	Pn	09 14 28.2	+0.2
JAYA				*e*S	Sn	09 14 46.7	-0.6
JAYA				IAML		09 14 49.6	
	comp=Z,432nm,0.2s						
COPN	Copaltepe	1.69	106	*e*P	Pn	09 14 30.5	+0.5
MOMN	Momotombo	1.70	98	*e*P	Pb	09 14 31.4	-0.9
APYN	Apoyeque	1.91	102	*e*P	Pn	09 14 33.7	+0.7
NUBE	Las Nubes	1.94	310	*e*P	Pn	09 14 34.5	+0.9
NUBE				*e*S	Sn	09 14 57.3	0.0
HUEN		2.06	98	*e*P	Pn	09 14 35.9	+0.8
MATN	Matagalpa	2.30	83	*e*P	Pn	09 14 38.3	-0.1
BOAB	BOACO BROADBAN	2.54	94	*e*P	Pn	09 14 40.5	-1.2

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*NNC **06** 09:17:45.7±0.7, 44°.59N×81°.08E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=14.5km s-min=3.4km az=122.0*
*SOME **06** 09:17:49.5, 44°.43N×80°.72E, h0km*
ISC 06 09:17:49.6±1.9, **44°.45N**±0°.05×**81°.07E**±0°.08, **h30**km±17km, **n17**, σ**1s.07**/32, **4C-2D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.93	263	*e*P	Pn	09 18 06.0	-0.7
	5.6nm,0.1s						
DJR				*e*S	Sb	09 18 18.1	-1.1
	62nm,0.2s						
KTMS	Ketmen	1.13	208	*e*P	Pn	09 18 09.0	-0.6
	2.4nm,0.1s						
KTMS				*e*S	Sn	09 18 23.4	-0.7
	14nm,0.2s						
KAPS	Kapalarasan	1.48	305	*e*P	Pn	09 18 14.3	0.0
	18nm,0.1s						
KAPS				*e*S	Sn	09 18 32.1	-0.6
	33nm,0.2s						
PDGK	Podgornoye	1.60	226	⇑P	Pn	09 18 17.0	+0.9
	7.1nm,0.6s						
PDGK				⇑S	Sb	09 18 39.7	+1.2
	11nm,0.4s						
KPKS	Kokpek	1.98	241	*e*P	Pb	09 18 23.9	-1.3
	6.8nm,0.1s						
KPKS				*e*S	Sb	09 18 48.9	-0.6
	37nm,0.5s						
ZHN	Zhinishke	2.30	237	*e*P	Pb	09 18 30.1	-0.4
	11nm,0.0s						
ZHN				*e*S	Sb	09 18 59.4	+0.9
	74nm,0.1s						
SATY	Saty	2.38	235	*e*P	Pb	09 18 30.9	-1.0
	2.6nm,0.2s						
SATY				*e*S	Sb	09 19 00.6	-0.2
	18nm,0.2s						
MAKZ	Makanchi	2.44	15	⇓Pg	Pn	09 18 28.4	+0.8
	0.9nm,0.7s						
MAKZ				⇑Lg	Lg	09 18 59.0	
	1.8nm,0.2s						
MK31	Makanchi Array	2.50	20	⇑Pg	Pn	09 18 28.2	-0.1
	0.2nm,0.3s,baz=200,slow=15,SNR=35						
MK31				⇓Lg	Lg	09 18 59.9	
	0.8nm,0.3s,baz=202,slow=28,SNR=6.8						
MDOK	Medeo	3.18	248	*e*P	Pb	09 18 45.0	-0.6
	0.6nm,0.2s						
MDOK				*e*S	Sb	09 19 24.9	+0.9
	5.4nm,0.4s						
KTBS	Karatobe	3.25	258	*e*P	Pb	09 18 45.9	-0.7
	1.4nm,0.2s						
KTBS				*e*S	Sb	09 19 26.5	+0.8
	23nm,0.1s						
TNSS	Tian-Shan	3.31	246	*e*P	Pb	09 18 48.0	+0.2
	2.4nm,0.3s						
TNSS				*e*S	Sb	09 19 29.8	+2.0
	1.7nm,0.2s						
KUU	Kurty	3.45	262	*e*P	Pb	09 18 49.1	-0.9
	0.9nm,0.1s						
KUU				*e*S	Sb	09 19 31.8	+0.3
	7.8nm,0.4s						
IZV	Izvestkoviy	3.53	248	*e*P	Pb	09 18 51.5	0.0
	23nm,0.1s						
IZV				*e*S	Sb	09 19 35.7	+1.8
	4.5nm,0.4s						
MTBS	Maitube	3.61	250	*e*P	Pb	09 18 52.4	-0.4
	1.3nm,0.2s						
MTBS				*e*S	Sb	09 19 37.5	+1.3
	11nm,0.1s						
KST	Kastek	3.96	251	*e*P	Pb	09 18 59.0	+0.2
	1.3nm,0.3s						
KST				*e*S	Sb	09 19 48.8	+2.6
	4.5nm,0.7s						
KRBS	Karabastau	3.96	261	*e*P	Pb	09 18 58.3	-0.5
	0.8nm,0.4s						
KRBS				*e*S	Sb	09 19 48.0	+1.7
	1.7nm,0.3s						

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*IDC **06** 09:20:53.1±2.9, 53°.65N×87°.96E, h0km, mbtmp3.4/2, ML2.9/2, Error ellipse: s-maj=24.2km s-min=15.7km az=59.0*
*NNC **06** 09:20:55.2±2.2, 53°.59N×87°.84E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=16.1km s-min=10.5km az=80.0, Suspected Mining explosion.*
ISC 06 09:20:54.5±3.6, **53°.7N**±0°.1×**87°.8E**±0°.2, **h0**km, **n9**, σ**1s.15**/13, **6C-6D**, **Southwestern Siberia**

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

I46RU	ZALESOVO INFRA	1.81	279	*i*		09 33 10.0	
	0.3nm,0.9s,baz=97,slow=328,SNR=5.0						
ZAA0	Zalesovo Array	1.81	279	⇓Pn	Pn	09 21 26.6	-0.3
	2.2nm,0.6s,baz=100,slow=15						
ZAA0				⇓Sn	Sg	09 21 53.2	+0.6
	9.4nm,0.6s,baz=101,slow=25						
ZALV	Zalesovo Beam	1.81	279	Pg	Pn	09 21 26.6	-0.3
	3.9nm,0.3s,baz=101,slow=14,SNR=39						
ZALV				Lg	Lg	09 21 53.9	
	6.2nm,0.3s,baz=100,slow=26,SNR=31						
KURK	Kurchatov	6.41	246	⇑Pn	Pn	09 22 31.9	+1.8
	2.7nm,0.9s						
KURK				⇑Sn	Sn	09 23 44.0	+0.1
	2.9nm,0.8s						
KURK				⇓Lg	Lg	09 24 15.7	
	12nm,1.0s						
KURBB	Kurchatov Arra	6.51	245	Pn	Pn	09 22 31.1	-0.4
	0.2nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Sn	Sn	09 23 44.6	-1.8
	0.1nm,0.3s,baz=62,slow=24,SNR=1.6						
KURBB				Lg	Lg	09 24 19.6	
	baz=64,slow=33						
	2.8nm,0.5s						
KURBB	Kurchatov Arra	6.51	245	⇓Pn	Pn	09 22 32.7	+1.2
	3.7nm,0.6s						
KURBB				⇑Sn	Sn	09 23 45.7	-0.7
	9.8nm,0.7s						
KURBB				⇑Lg	Lg	09 24 21.7	
	10nm,0.6s						
MK31	Makanchi Array	7.78	209	⇓Pn	Pn	09 22 48.6	-0.3
	0.1nm,0.2s,baz=29,slow=14,SNR=12						
MK31				⇑Lg	Lg	09 25 00.0	
	3.3nm,0.8s,baz=36,slow=31,SNR=3.6						
MKAR	Makanchi Array	7.78	209	Pn	Pn	09 22 48.4	-0.5
	0.3nm,0.3s,baz=27,slow=13,SNR=5.8						
MKAR				Sn	Sn	09 24 16.8	-1.0
	0.2nm,0.3s,baz=32,slow=12,SNR=2.3						
MKAR				Lg	Lg	09 24 58.8	
	0.2nm,0.3s,baz=36,slow=31,SNR=6.3						
	0.5nm,0.2s						
MAKZ	Makanchi	7.87	211	⇓Pn	Pn	09 22 51.8	+1.7
	1.5nm,0.7s						
MAKZ				⇑Lg	Lg	09 25 00.3	
	4.2nm,0.9s						

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*IDC **06** 09:21:30.8±1.6, 32°.61N×130°.60E, h0^{km}, mb3.8/2, mbtmp3.6/3, ML2.0/1, Error ellipse: s-maj=28.3km s-min=11.3km az=113.0*

*NIED **06** 09:21:33.6, 32°.69N×130°.71E, h10^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.12; $M_{\theta\theta}$2.02; $M_{\phi\phi}$0.10; $M_{r\theta}$0.04; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.23; Fault plane solution: $M_0$2.22000×10^{14} NP1: ϕ_s104.00000°, δ44.00000°, λ-99.00000°. NP2: ϕ_s295.00000°, δ47.00000°, λ-82.00000°.*

*JMA **06** 09:21:33.6±0.0, 32°.7N±0°.1×130°.7E±0°.1, h10^{km}, MV3.5/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

ISC 06 09:21:33.4±0.8, **32°.61N**±0°.05×**130°.62E**±0°.07, **h11**^{km}, **n9**, σ**1^s.80**/12, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.17	110	P	Pg	09 21 37.3	+0.1
JIU3				S	Sg	09 21 40.0	+0.2
JTA	Tamana	0.36	348	*i* P	Pg	09 21 40.2	-0.5
JTA				S	Sg	09 21 44.6	-1.0
JZO	Okuchi	0.47	183	*i* P	Pn	09 21 44.4	-1.7
JZO				S	Sb	09 21 51.9	+1.3
JNU	Nakatsue	0.56	23	Pg	Pg	09 21 42.4	-1.9
	263nm,0.3s,baz=187,slow=6.9,SNR=2415						
JNU				Lg	Lg	09 21 48.8	
	611nm,0.3s,baz=283,slow=17,SNR=25						
JNU				LR	LR	09 22 12.4	
	comp=Z,245nm,21.6s,baz=256,slow=73						
KSRS	Korea Array	5.32	336	Pg	Pb	09 23 09.2	+2.9
	0.5nm,0.3s,baz=152,slow=17,SNR=4.6						
KSRS				Lg	Lg	09 24 18.6	
	0.9nm,0.3s,baz=159,slow=29,SNR=1.6						
MJAR	Matsushiro Arr	7.38	56	Pn	Pn	09 23 20.5	-0.7
	baz=240,slow=12,SNR=1.6						
	0.7nm,0.5s						
KLR	Kul'dur	16.63	3	Pn	P	09 25 31.5	+2.7
	0.1nm,0.3s,baz=164,slow=15,SNR=2.5						
WRA	Warramunga Arr	52.37	176	P	P	09 30 44.0	-1.7
	0.3nm,0.9s,baz=355,slow=8.2,SNR=1.5						
	0.3nm,0.9s						
FINES	FINESS Array B	68.38	330	P	P	09 32 33.9	-0.8
	3.5nm,1.1s,baz=90,slow=9.7,SNR=2.6						
	3.5nm,1.1s						

IDC 06 09:24:17.7±3.9, **54°.33N**×**87°.30E**, **h0**^{km}, **mbtmp2.8**/2, **ML2.5**/2, **Error ellipse: s-maj=35.4km s-min=22.5km az=42.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.51	256	*i*		09 34 33.4	
	baz=75,slow=323,SNR=2.8						
ZALV	Zalesovo Beam	1.51	256	Pg	Pn	09 24 44.5	-1.4
	1.3nm,0.3s,baz=71,slow=17,SNR=5.4						
ZALV				Lg	Lg	09 25 05.3	
	0.6nm,0.3s,baz=63,slow=26,SNR=1.8						
KURBB	Kurchatov Arra	6.52	239	Pn	Pn	09 25 55.9	+1.2
	0.1nm,0.3s,baz=55,slow=14,SNR=1.8						
	0.5nm,0.4s						
MKAR	Makanchi Array	8.19	205	Pn	Pn	09 26 18.6	+0.9
	0.1nm,0.3s,baz=28,slow=14,SNR=1.3						
	0.2nm,0.4s						

IDC 06 09:25:02.9±49.0, **16°.67S**×**176°.30W**, **h598**^{km}±50^{km}, **mb3.1**/3, **mbtmp4.2**/4, **Error ellipse: s-maj=818.5km s-min=119.0km az=78.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.50	258	P	P	09 26 39.8	0.0
	26nm,0.6s,baz=121,slow=4.9,SNR=37						
STKA	Stephens Creek	40.99	240	P	P	09 31 55.2	-0.1
	1.4nm,0.7s,baz=89,slow=9.0,SNR=5.6						
	1.4nm,0.7s						
WRA	Warramunga Arr	46.85	258	P	P	09 32 40.2	-0.5
	0.6nm,0.5s,baz=94,slow=6.9,SNR=34						
	0.6nm,0.5s						
ASAR	Alice Springs	47.07	253	P	P	09 32 42.6	+0.3
	6.1nm,0.5s,baz=88,slow=8.2,SNR=154						
	6.1nm,0.5s						

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*IDC **06** 09:25:43.7±0.7, 49°.02S×31°.04E, h0^{km}, mb4.1/11, mbtmp4.1/12, ML4.4/1, MS3.4/12, Error ellipse: s-maj=28.1km s-min=15.7km az=67.0*

*NEIC **06** 09:25:45.4±1.2, 48°.91S±0°.04×31°.1E±0°.2, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=22.4km s-min=7.2km az=88.0*

ISC 06 09:25:45.3±0.6, **48°.95S**±0°.09×**31°.0E**±0°.1, **h10**^{km}, **n40**, σ**0^s.84**/28, **mb4.3**/13, **MS3.4**/11, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	Crozet Islands	14.25	88	Pn	Pn	09 29 07.2	+0.3
SUR	Sutherland	18.25	331	P	Pn	09 29 58.8	0.0
	1.5nm,0.3s,baz=140,slow=6.2,SNR=17						
SUR				LR	LR	09 35 37.0	
	comp=Z,127nm,20.4s,baz=138,slow=32						
	4.9nm,0.5s						
SUR	Sutherland	18.25	331	IAmb	IAmb	09 30 50.3	
	comp=Z,162nm,1.9s						
BOSA	Boshof	20.79	346	P	P	09 30 26.6	0.0
	comp=Z,3.2nm,0.7s,baz=170,slow=10,SNR=7.0						
BOSA				LR	LR	09 37 08.2	
	comp=Z,45nm,21.7s,baz=188,slow=33						
	comp=Z,3.2nm,0.7s						
BOSA	Boshof	20.79	346	P	P	09 30 24.9	-1.7
BOSA				IAmb	IAmb	09 30 30.4	
	comp=Z,54nm,1.9s						
LBTB	Lobatse	24.27	348	LR	LR	09 39 21.3	
	comp=Z,18nm,20.4s,baz=170,slow=34						
MAW	Mawson	24.61	151	P	P	09 31 05.6	+0.3
	comp=Z,12nm,0.8s,baz=299,slow=12,SNR=16						
MAW				LR	LR	09 38 17.2	
	comp=Z,85nm,21.8s,baz=308,slow=31						
	comp=Z,12nm,0.8s						
MAW	Mawson	24.61	151	P	P	09 31 05.9	+0.6
SNAA	Sanae	27.57	202	P	P	09 31 31.5	-0.5
	comp=Z,1.1nm,0.9s,baz=172,slow=19,SNR=1.3						
	comp=Z,1.1nm,0.9s						
SNAA	Sanae	27.57	202	P	P	09 31 33.1	+1.0
TSUM	Tsumeb	31.60	335	LR	LR	09 43 38.1	
	comp=Z,84nm,21.8s,baz=150,slow=34						
LSZ	Lusaka	33.66	355	P	P	09 32 26.1	-0.2
	comp=Z,1.5nm,0.3s,baz=90,slow=11,SNR=1.5						
LSZ				LR	LR	09 45 37.8	
	comp=Z,63nm,18.0s,baz=304,slow=35						
	comp=Z,1.5nm,0.3s						
QSPA	South Pole Qui	41.27	180	P	P	09 33 29.1	-1.3
	comp=Z,4.6nm,0.9s,baz=263,slow=1.8,SNR=18						
	comp=Z,4.6nm,0.9s						
QSPA	South Pole Qui	41.27	180	P	P	09 33 29.8	-0.7
QSPA				IAmb	IAmb	09 33 32.8	
	comp=Z,15nm,1.4s						
KMBO	Kilima Mbogo	47.94	8	LR	LR	09 52 02.6	
	comp=Z,33nm,20.6s,baz=217,slow=33						
SMAI	San Martin Ant	48.54	210	P	P	09 34 29.0	+1.0
SMAI				IAmb	IAmb	09 35 53.1	
	comp=Z,20nm,1.7s						
VNDA	Vanda	50.20	168	P	P	09 34 40.1	-0.4
	comp=Z,0.7nm,0.5s,baz=244,slow=7.5,SNR=8.2						
VNDA				LR	LR	09 55 33.4	
	comp=Z,60nm,18.9s,baz=236,slow=36						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	50.20	168	P	P	09 34 40.7	+0.2
VNDA				IAmb	IAmb	09 35 10.0	
	comp=Z,8.0nm,1.7s						
SBA	Scott Base	50.59	169	P	P	09 34 44.4	+0.9
H10S2	ASCENSION HYDR	55.16	301	T	T	10 34 54.9	
	baz=143,slow=74,SNR=4.9						
H10S3	ASCENSION HYDR	55.17	301	T	T	10 34 58.8	
	baz=77,slow=74,SNR=14						
PLTB	Pedras Altas	63.49	251	P	P	09 36 15.1	-0.4
TRQA	Tornquist	64.27	241	P	P	09 36 20.6	+0.1
TORD	Torodi Ar. Bea	67.05	329	P	P	09 36 40.8	+2.2
	comp=Z,1.2nm,1.0s,baz=164,slow=6.6,SNR=4.1						
	comp=Z,1.2nm,1.0s						
PLCA	Paso Flores	67.16	234	P	P	09 36 39.2	-0.1
PLCA				IAmb	IAmb	09 36 50.5	
	comp=Z,18nm,1.8s						
CPUP	Villa Florida	69.60	253	P	P	09 36 53.8	-0.8
	comp=Z,2.9nm,0.8s,baz=123,slow=5.3,SNR=8.4						
	comp=Z,2.9nm,0.8s						
CPUP	Villa Florida	69.60	253	IAmb	IAmb	09 37 54.2	
	comp=Z,17nm,1.8s						
PALK	Pallekele	70.81	53	LR	LR	10 01 01.4	
	comp=Z,61nm,18.4s,baz=197,slow=30						
ROC1	El Roble	73.05	239	P	P	09 37 14.9	-0.8
CO01	Juntas del Tor	74.73	242	P	P	09 37 25.7	+0.1
CO01				IAmb	IAmb	09 40 09.9	
	comp=Z,14nm,1.7s						
STKA	Stephens Creek	78.57	126	P	P	09 37 46.9	-0.1
	comp=Z,1.8nm,0.7s,baz=202,slow=5.8,SNR=4.9						
	comp=Z,1.8nm,0.7s						
STKA	Stephens Creek	78.57	126	IAmb	IAmb	09 39 26.3	
	comp=Z,4.1nm,1.6s						
ASAR	Alice Springs	80.47	115	P	P	09 37 57.1	-0.4
	comp=Z,1.4nm,0.7s,baz=221,slow=4.2,SNR=24						
	comp=Z,1.4nm,0.7s						
AS31	Alice Springs	80.47	115	P	P	09 37 56.8	-0.7
WRA	Warramunga Arr	83.56	113	P	P	09 38 13.1	-0.7
	comp=Z,0.5nm,0.6s,baz=210,slow=3.8,SNR=5.6						
	comp=Z,0.5nm,0.6s						
MDT	Midelt	87.39	331	LR	LR	10 18 14.5	
	comp=Z,23nm,18.5s,baz=19,slow=36						
ESDC	Sonseca Array	93.52	334	LR	LR	10 21 27.6	
	comp=Z,19nm,18.8s,baz=109,slow=36						
VRAC	Vranov	98.66	350	LR	LR	10 26 50.6	
	comp=Z,24nm,18.0s,baz=74,slow=37						
PDAR	Pinedale Array	152.11	272	PKPbc	PKiKP	09 45 41.7	+0.8
	comp=Z,0.7nm,0.7s,baz=108,slow=2.9,SNR=5.7						
YKA	Yellowknife Ar	156.73	318	PKPab	PKPab	09 46 08.1	-0.8
	comp=Z,0.2nm,0.8s,baz=58,slow=2.1,SNR=2.8						

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*IDC **06** 09:28:02.2±1.8, 0°.49N×129°.17E, h0^{km}, mb3.5/3, mbtmp3.5/4, ML3.2/1, MS1.9/1, Error ellipse: s-maj=62.8km s-min=26.9km az=59.0*

*DJA **06** 09:28:06.2±2.4, 0°N±7°×12°9E±°, h20^{km}±24^{km}, M3.4/7, MLv3.4/7*

ISC 06 09:28:06.9±1.3, **0°.5N**±0°.1×**129°.29E**±0°.06, **h35**^{km}, **n8**, σ**0^s.86**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.94	278	P	Pn	09 28 36.9	-0.5
LBMI	Labuha	2.12	238	P	Pn	09 28 40.0	+0.1
LBMI				S	Sn	09 29 04.3	-0.7
SWI	Sorong	2.39	125	P	Pn	09 28 43.7	+0.1
SIJI	Sorong	2.40	125	Pn	Pn	09 28 42.3	-1.4
	4.7nm,0.3s,baz=332,slow=21,SNR=4.5						
SIJI				Sn	Sn	09 29 12.3	+0.4
	2.1nm,0.3s,baz=7.4,slow=3.8,SNR=4.4						
	9.3nm,0.3s						
DAV	Davao City (W)	7.50	330	LR	LR	09 31 46.9	
	comp=Z,10nm,21.9s,baz=172,slow=30						
WRA	Warramunga Arr	20.91	167	P	P	09 32 46.4	-0.2
	1.2nm,0.7s,baz=343,slow=11,SNR=5.9						
	1.2nm,0.7s						
ASAR	Alice Springs	24.44	170	P	P	09 33 23.7	+1.1
	2.3nm,0.9s,baz=346,slow=10.0,SNR=17						
	2.3nm,0.9s						
MKAR	Makanchi Array	61.65	325	P	P	09 38 21.5	+0.3
	0.2nm,0.5s,baz=112,slow=8.0,SNR=2.7						
	0.2nm,0.5s						

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*IDC **06** 09:33:21.9±1.7, 2°.75S×127°.47E, h0^{km}, mb3.5/2, mbtmp3.7/4, ML3.6/2, MS2.9/2, Error ellipse: s-maj=44.0km s-min=27.6km az=75.0*

*DJA **06** 09:33:29.1±0.7, 3°S±4°×12°8E±°, h16^{km}±9^{km}, M3.6/9, mb4.0/1, MLv3.4/9*

ISC 06 09:33:29.3±1.0, **2°.97S**±0°.07×**127°.91E**±0°.05, **h38**^{km}, **n12**, σ**2^s.36**/12, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.77	158	P	Pn	09 33 44.9	+1.3
NLAI	Namlea	0.85	252	P	Pn	09 33 45.4	+0.7
MSAI	Masohi	1.08	110	P	Pn	09 33 51.0	+3.1
SANI	Sanana	2.12	295	P	Pn	09 34 04.6	+2.4
SANI				S	Sn	09 34 29.4	+2.0
LBMI	Labuha	2.35	350	P	Pn	09 34 07.9	+2.5
SWI	Sorong	3.95	58	P	Pn	09 34 28.3	+1.0
SIJI	Sorong	3.95	58	Pn	Pn	09 34 28.3	+0.9
	7.3nm,0.3s,baz=27,slow=23,SNR=14						
SIJI				Sn	Sn	09 35 12.1	-0.5
	7.8nm,0.3s,baz=54,slow=20,SNR=22						
	19nm,0.3s						
GTOI	Gorontalo	6.07	306	P	Pn	09 35 01.7	+5.2
WRA	Warramunga Arr	18.00	160	P	P	09 37 37.7	+0.8
	0.2nm,0.3s,baz=339,slow=12,SNR=11						
	0.8nm,0.6s						
ASAR	Alice Springs	21.38	165	P	P	09 38 14.4	+0.7
	3.6nm,0.8s,baz=346,slow=11,SNR=34						
ASAR				LR	LR	09 47 04.6	
	comp=Z,42nm,18.9s,baz=121,slow=38						
	3.6nm,0.8s						
JOW	Kunigami	29.63	1	LR	LR	09 54 34.3	
	comp=Z,14nm,18.6s,baz=181,slow=43						
MKAR	Makanchi Array	63.73	327	P	P	09 43 52.8	-4.4
	0.1nm,0.5s,baz=129,slow=5.2,SNR=2.3						
	0.1nm,0.5s						

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*HEL **06** 09:58:35.4±0.0, 64°.72N×30°.69E, h0^{km}, ML1.7, Explosion*

*IDC **06** 09:58:38.8±1.5, 64°.76N×30°.32E, h0^{km}, mbtmp2.5/2, ML1.7/2, Error ellipse: s-maj=22.9km s-min=7.8km az=110.0*

ISC 06 09:58:34.1±1.2, **64°.84N**±0°.03×**31°.16E**±0°.06, **h0**^{km}, **n19**, σ**1^s.53**/30, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.30	337	PG	Pn	09 58 59.8	+0.2
KU6				MSG		09 59 16.4	
	comp=Z,4.2nm,0.2s						
KU6				SG	Sn	09 59 17.2	-0.3
MSF	Maaselka	1.39	321	PG	Pn	09 59 00.2	-0.6
	baz=151						
MSF				SG	Sg	09 59 18.2	-0.6
OLKF	Oulanka, Finla	1.66	335	PG	Pg	09 59 05.8	0.0
OLKF				SN	Sg	09 59 28.1	+0.9
JOF	Joensuu	1.93	178	PG	Pn	09 59 08.1	0.0
JOF				SG	Sn	09 59 33.4	+0.3
OUL	Oulu	2.25	279	PG	Pn	09 59 12.6	0.0
	baz=94						
OUL				SG	Sn	09 59 39.4	-1.6
RNF	Rovaniemi	2.77	312	PB	Pn	09 59 21.7	+2.0
	baz=131						
RNF				SB	Sb	09 59 56.9	-1.9
OUF	Merijarvi	2.81	263	PG	Pn	09 59 20.9	+0.6
	baz=80						
OUF				MSG		09 59 51.8	
	comp=Z,9.1nm,0.2s						
OUF				SG	Sn	09 59 54.8	0.0
VRF	Varrio	2.98	349	PB	Pb	09 59 26.8	-1.3
VRF				MSG		10 00 05.8	
	comp=Z,1.2nm,0.2s						
VRF				SG	Sg	10 00 08.6	-1.3
OBF0	Syolatti, Pyha	3.00	267	PG	Pb	09 59 25.9	-2.3
OBF0				SG	Sn	10 00 01.5	+2.1
SUF	Sumiainen	3.08	228	PG	Pn	09 59 25.4	+1.5
SUF				MSG		09 59 59.1	
	comp=Z,2.5nm,0.2s						
SUF				SG	Sn	10 00 02.1	+0.7
KALU	Kalix	3.43	291	SG	Sb	10 00 16.2	-1.5
KEF	Keuruu	3.89	229	PB	Pn	09 59 36.0	+0.9
PAJU	Pajala	3.96	307	SG	Sb	10 00 34.3	+1.3
ERTU	Ertsjaerv	4.09	299	PB	Pn	09 59 40.1	+2.4
FINES	FINESS Array B	4.12	216	Pn	Pn	09 59 38.4	+0.3
	comp=Z,0.1nm,0.3s,baz=41,slow=13,SNR=1.1						
FINES				Pg	Pb	09 59 47.0	-0.3
	comp=Z,0.2nm,0.3s,baz=28,slow=16,SNR=6.4						
FINES				Lg	Lg	10 00 38.4	
	comp=Z,0.7nm,0.3s,baz=36,slow=26,SNR=12						
	comp=Z,0.4nm,0.6s						
VAF	Ylistaro	4.16	248	SG	Sb	10 00 38.7	0.0
HEF	Hetta	4.66	324	SG	Sb	10 00 57.8	+4.5
ARCES	ARCESS Array B	5.20	338	Pn	Pn	09 59 54.7	+1.7
	comp=Z,0.1nm,0.3s,baz=158,slow=15,SNR=17						
ARCES				Sn	Sn	10 00 53.1	-0.5
	comp=Z,0.1nm,0.3s,baz=158,slow=22,SNR=5.5						
	comp=Z,0.4nm,0.3s						
I37NO	I37NO	6.50	316	*i*		10 38 00.0	
	baz=128,slow=322,SNR=2.5						

NOU 06 10:10:38.0, **16°.28S**×**167°.44E**, **h31**^{km}, **MLv3.0**/4, **Vanuatu Islands**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.86	345	P	Pn	10 10 54.1	+0.1

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*IDC **06** 10:13:27.3±1.1, 11°.09S×163°.39E, h0^{km}, mb3.8/7, mbtmp3.9/8, ML4.0/1, MS3.3/1, Error ellipse: s-maj=38.7km s-min=22.1km az=130.0*

*NEIC **06** 10:13:28.9±1.2, 11°.2S±0°.1×163°.6E±0°.1, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=23.7km s-min=14.0km az=37.0*

ISC 06 10:13:31.4±0.8, **11°.2S**±0°.1×**163°.6E**±0°.1, **h31**^{km}, **n29**, σ**1^s.70**/22, **mb3.9**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.97	296	Pn	Pn	10 14 28.1	-2.1
SANVU	Saraoutou	5.50	140		Pn	10 14 50.9	-0.3
LIFNC	LIFOU	10.14	160	Pn	Pn	10 15 51.0	-3.8
MARNC	Mare, Loyalty	11.06	158	Pn	Pn	10 16 04.8	-2.8
DZM	Mont Dzumac	11.13	166	Pn	Pn	10 16 08.2	-0.5
	1.1nm,0.3s,baz=304,slow=15,SNR=34						
	3.8nm,0.4s						
ONTNC	Ouen Toro	11.37	166	Pn	Pn	10 16 12.4	+0.7
OUENC	Ouen Island, N	11.57	165	Pn	Pn	10 16 11.7	-2.8
PINNC	Pines Island,	11.92	162	Pn	Pn	10 16 18.3	-1.0
CTA	Charters Tower	18.83	240	P	Pn	10 17 52.4	+2.9
	2.5nm,0.9s,baz=41,slow=6.5,SNR=4.3						
CTA				LR	LR	10 24 07.8	
	comp=Z,76nm,18.3s,baz=86,slow=34						
STKA	Stephens Creek	28.86	221	P	P	10 19 29.0	+1.7
	1.5nm,0.7s,baz=20,slow=8.7,SNR=4.1						
	1.5nm,0.7s						
STKA	Stephens Creek	28.86	221	IAmb	IAmb	10 19 30.7	
	comp=Z,1.4nm,1.2s						
WR0	Warramunga Arr	29.22	249	P	P	10 19 30.6	0.0
WR0				IAmb	IAmb	10 19 37.1	
	comp=Z,8.8nm,1.4s						
WB0	Warramunga Arr	29.32	250	P	P	10 19 31.4	-0.1
WB0				IAmb	IAmb	10 19 51.8	
	comp=Z,4.5nm,1.1s						
WRAB	Tennant Creek	29.39	249	P	P	10 19 31.9	-0.3
WRAB				IAmb	IAmb	10 19 50.9	
	comp=Z,5.4nm,1.2s						
WB2	Warramunga Arr	29.39	249	P	P	10 19 32.0	-0.2
WB2				IAmb	IAmb	10 19 35.3	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	29.40	249	P	P	10 19 31.9	-0.4
	comp=Z,0.8nm,0.5s,baz=80,slow=8.9,SNR=11						
	comp=Z,0.8nm,0.5s						
H11S2	WAKE ISLAND Hy	29.69	6	T	T	10 51 12.8	
	baz=188,slow=76,SNR=9.2						
H11S3	WAKE ISLAND Hy	29.69	6	T	T	10 51 12.4	
	baz=188,slow=76,SNR=7.7						
H11S1	WAKE ISLAND Hy	29.71	6	T	T	10 51 11.1	
	baz=188,slow=76,SNR=5.3						
ASAR	Alice Springs	30.80	242	P	P	10 19 43.9	-0.8
	comp=Z,1.0nm,1.0s,baz=64,slow=10,SNR=10						
	comp=Z,1.0nm,1.0s						
H11N1	WAKE ISLAND Hy	30.92	6	T	T	10 52 42.7	
	baz=188,slow=76,SNR=4.9						
H11N3	WAKE ISLAND Hy	30.93	6	T	T	10 52 47.5	
	baz=188,slow=76,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.94	6	T	T	10 52 43.9	
	baz=188,slow=76,SNR=4.3						
KNRA	Kununurra	34.10	259	P	P	10 20 13.5	-0.1
PSA00	Pilbara Seismi	43.04	250	P	P	10 21 28.7	+0.1
KSRS	Korea Array	58.84	327	P	P	10 23 25.7	-1.4
	comp=Z,1.0nm,0.8s,baz=138,slow=7.7,SNR=2.7						
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	84.38	19	P	P	10 26 00.7	+0.4
	comp=Z,0.4nm,0.7s,baz=251,slow=5.6,SNR=4.9						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	87.79	50	P	P	10 26 20.2	+2.1
	comp=Z,0.3nm,0.5s,baz=235,slow=5.2,SNR=4.1						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	96.12	28	P	P	10 26 55.9	+0.1
	comp=Z,0.4nm,0.9s,baz=260,slow=3.7,SNR=4.8						
	comp=Z,0.4nm,0.9s						

GUC 06 10:26:32.5±0.7, **30°.69S**×**71°.72W**, **h37**^{km}±2^{km}, **ML3.7**, **1C-3D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.08	78	⇓*i*P	Pn	10 26 38.1	-0.6
CO06				*i* S	Sn	10 26 41.6	-1.3
CO02	Combarbal	0.80	130	⇓*i*P	Pn	10 26 47.7	+0.3
CO02				*i* S	Sn	10 26 58.6	+0.3
CO02				IAML		10 26 59.7	
	comp=N,6µm,0.5s						
CO05	La Serena	0.88	29	*i* Pg	Pn	10 26 48.5	+0.2
CO05				IAML		10 27 05.9	
	comp=E,2µm,0.6s						
GO04	Tololo Observa	0.95	57	⇓*i*P	Pn	10 26 49.9	+0.4
GO04				*i* S	Sn	10 27 02.9	+1.0
CO01	Juntas del Tor	1.58	64	⇑*i*P	Pn	10 27 00.3	+2.1
CO01				*i* S	Sn	10 27 19.6	+2.3
CO01				IAML		10 27 23.5	
	comp=N,582nm,0.3s						
LCO	Las Campanas	1.89	28	*e*P	Pn	10 27 04.0	+1.5
VA03	San Esteban	2.29	155	*e*P	Pn	10 27 10.5	+2.6
VA03				IAML		10 27 47.1	
	comp=E,844nm,0.4s						
ROCH	El Roble	2.35	165	*i* S	Sn	10 27 38.9	+2.3
ROCH				*e*P	Pn	10 27 10.2	+1.4
AC04	Llanos de Chal	2.54	13	*e*P	Pn	10 27 11.8	+0.6
AC04				IAML		10 27 59.3	
	comp=E,108nm,0.3s						
PEL	Peldehue	2.60	160	*e*P	Pn	10 27 13.7	+1.7
PEL				*e*S	Sn	10 27 45.4	+3.0
PEL				IAML		10 27 59.9	
	comp=N,386nm,0.4s						
MT02	Curacav	2.61	169	*e*P	Pn	10 27 13.1	+1.0
MT05	Renca	2.82	163	*e*P	Pn	10 27 17.0	+1.9

MT05				eS	Sn	10 27 50.9	+3.1
MT05				IAML		10 28 02.9	
	comp=E,574nm,0.4s						
FCH	Farellones	2.90	156	eP	Pn	10 27 20.2	+3.9
VA05	Santo Domingo	2.96	178	eP	Pn	10 27 17.4	+0.5
VA05				IAML		10 28 10.6	
	comp=E,283nm,0.3s						
MT03	Universidad Ad	2.98	160	eP	Pn	10 27 19.1	+1.8
MT03				IAML		10 28 09.8	
	comp=E,410nm,0.5s						
MT09	Talagante	3.14	169	eP	Pn	10 27 21.5	+2.0
MT09				eS	Sn	10 27 57.1	+1.3
MT09				IAML		10 28 12.2	
	comp=E,201nm,0.4s						
MT01	Popeta	3.19	173	eP	Pn	10 27 21.4	+1.3
MT01				IAML		10 28 14.3	
	comp=E,148nm,0.4s						
BO04	La Punta	3.42	164	eP	Pn	10 27 25.6	+2.2
BO04				IAML		10 28 20.8	
	comp=E,154nm,0.6s						
AC06	Mina Casimiro	3.53	20	eP	Pn	10 27 26.9	+2.0
AC06				IAML		10 28 26.4	
	comp=N,65nm,0.4s						
BO01	Tunca	3.73	172	eP	Pn	10 27 29.2	+1.7
BO03	Pichilemu	3.80	183	eP	Pn	10 27 28.4	0.0
AC02	Maricunga	4.46	31	eP	Pn	10 27 39.9	+1.8
AC01	Pan de Azucar	4.63	13	eP	Pn	10 27 39.0	-0.9

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*TUL **06** 10:35:10.6±1.4, 36°.72N±0°.01×97°.57W±0°.01, h5^{km}±7^{km}, ML2.7, mb_Lg2.6/27(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=55.0*

NEIC 06 10:35:10.7±0.7**, 36°.70N**±0°.01×**97°.58W**±0°.02**, h6**^{km}±7^{km}**, Error ellipse: s-maj=2.1km s-min=1.5km az=113.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.88	75	Pg	Pg	10 35 27.2	-0.4
U32A	Winter Ranch,	1.19	255	Pg	Pg	10 35 32.7	-0.8
OKCFA	Oklahoma City	1.29	175	Pn	Pn	10 35 34.8	-0.3
OKCSW	OKLAHOMA CITY	1.30	175		Pn	10 35 35.0	-0.4
FNO	Franklin	1.45	174	Pn	Pn	10 35 37.5	+0.1
FNO				IAmb_Lg		10 35 58.1	
	comp=Z,28nm,1.0s						
TUL1	Leonard	1.64	118	Pn	Pn	10 35 40.6	+0.5
TUL1				IAmb_Lg		10 36 05.0	
	comp=Z,41nm,0.8s						
R32A	Long Quarter,	1.94	333	Pn	Pn	10 35 44.8	+0.6
X34A	Smith Ranch, M	2.10	186		Pn	10 35 45.6	-0.8
X34A				IAmb_Lg		10 36 20.3	
	comp=Z,35nm,0.7s						
WMOK	Wichita Mounta	2.19	207		Pn	10 35 48.1	+0.5
X37A	Clayton	2.77	139	IAmb_Lg		10 36 44.0	
	comp=Z,25nm,1.0s						
HHAR	Hobbs	2.96	97	Pn	Pn	10 35 57.7	-0.5
HHAR				IAmb_Lg		10 36 50.3	
	comp=Z,15nm,1.1s						
AMTX	Amarillo	3.80	243	IAmb_Lg		10 37 18.6	
	comp=Z,18nm,0.8s						
U40A	Yellville	3.82	94	IAmb_Lg		10 37 12.9	
	comp=Z,13nm,0.8s						
MGMO	Mountain Grove	4.28	82	IAmb_Lg		10 37 27.5	
	comp=Z,8.5nm,0.8s						
P38A	Dawn	4.32	46	IAmb_Lg		10 37 29.4	
	comp=Z,17nm,0.8s						
ABTX	Abilene, Hawle	4.41	203	IAmb_Lg		10 37 32.8	
	comp=Z,10nm,1.2s						
X40A	Basin Creek Fa	4.45	118	IAmb_Lg		10 37 41.5	
	comp=Z,9.8nm,1.1s						
KSCO	Kaye Shedlock’	4.62	302	IAmb_Lg		10 37 49.0	
	comp=Z,14nm,1.0s						
P40A	Paris	5.19	55	IAmb_Lg		10 37 59.2	
	comp=Z,11nm,0.8s						
T25A	Trinidad	5.49	277	IAmb_Lg		10 38 14.2	
	comp=Z,9.8nm,1.1s						
JCT	Junction City	6.48	197	IAmb_Lg		10 38 51.1	
	comp=Z,6.2nm,1.0s						

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*GUC **06** 10:50:14.7±0.3, 16°.68S×71°.11W, h119^{km}±2^{km}, ML3.8*

*IDC **06** 10:50:16.7±3.1, 16°.90S×70°.75W, h147^{km}±25^{km}, mb3.4/3, mbtmp3.9/5, Error ellipse: s-maj=41.5km s-min=14.2km az=111.0*

*VAO **06** 10:50:17.0±0.6, 16°.94S×70°.74W, h162^{km}, mb4.1*

ISC 06 10:50:13.6±1.0**, 16°.76S**±0°.07×**71°.1W**±0°.1**, h130**^{km}±8^{km}**, n23,** σ1^{s}.**32**/29**, mb3.6**/3**, 3C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	1.75	156	⇑iP	Pn	10 50 45.6	+1.1
AP01				iS	Sn	10 51 09.3	+1.0
AP01				IAML		10 51 11.2	
	comp=E,2μm,0.3s						
PB12	IPOC Station P	1.98	159	⇑iP	Pn	10 50 48.2	+0.8
PB12				iS	Sn	10 51 13.5	+0.2
PB12				IAML		10 51 15.7	
	comp=N,826nm,0.3s						
PB16	IPOC Station P	2.17	137	⇓iP	Pn	10 50 52.0	+1.8
PB16				iS	Sn	10 51 20.8	+2.6
PB16				IAML		10 51 23.6	
	comp=N,138nm,0.3s						
LPAZ	La Paz	2.87	81	P	Pn	10 51 00.4	+1.4
	comp=N,26nm,0.3s,baz=260,slow=12,SNR=229						
LPAZ				S	Sn	10 51 32.8	-1.2
	comp=N,26nm,0.6s,baz=169,slow=23,SNR=13						
LPAZ	La Paz	2.87	81	eP	Pn	10 51 00.5	+1.4
LPAZ				eS	Sn	10 51 33.2	-0.8
PB11	IPOC Station P	3.28	156	eP	Pn	10 51 04.3	+0.3
PB11				IAML		10 51 45.4	
	comp=E,171nm,0.1s						
TA02	Huaiquique	3.61	166	eP	Pn	10 51 09.3	+1.1
PB08	IPOC Station P	3.83	152	⇑iP	Pn	10 51 12.8	+1.4
PB08				iS	Sn	10 51 56.2	-0.1
LVC	Limon Verde	6.17	161	P	Pn	10 51 42.5	-0.2
	comp=E,9.0nm,0.2s,baz=335,slow=10,SNR=118						
LVC				S	Sn	10 52 49.5	-2.8
	comp=E,29nm,0.4s,baz=185,slow=22,SNR=16						
LVC	Limon Verde	6.17	161	eP	Pn	10 51 42.3	-0.4
CLDB	Colider	15.95	70	eP	Pn	10 53 49.6	-1.2
H03N1	Juan Fernandez	18.05	202	T	T	11 12 25.0	
	baz=25,slow=73,SNR=21						
H03N2	Juan Fernandez	18.06	202	T	T	11 12 19.2	
	baz=25,slow=73,SNR=17						
H03N3	Juan Fernandez	18.07	202	T	T	11 12 17.7	
	baz=25,slow=73,SNR=16						
ITTB	Itaituba	19.45	52	eP	P	10 54 29.8	-0.4
BOAV	Boa Vista	21.70	30	eP	P	10 54 54.7	+0.4
MALB	Monte Alegre	22.20	50	eP	P	10 54 59.5	-0.1
PLCA	Paso Flores	23.90	179	P	P	10 55 16.9	+1.6
	comp=E,2.1nm,1.0s,baz=1.5,slow=8.9,SNR=4.4						
	comp=E,2.1nm,1.0s						
MCPB	Macapa, AP	24.84	51	eP	P	10 55 23.5	-0.5
PMSA	Palmer Station	48.21	176	eP	P	10 58 39.3	-1.3
TORD	Torodi Ar. Bea	77.78	72	P	P	11 01 56.5	-0.4
	comp=E,1.5nm,0.6s,baz=262,slow=4.5,SNR=11						
TORD				pP	pP	11 02 29.5	-1.4
	comp=E,0.3nm,0.6s,baz=253,slow=3.9,SNR=1.6						
	comp=E,1.5nm,0.6s						
YKA	Yellowknife Ar	86.06	341	P	P	11 02 40.8	+1.6
	comp=E,0.3nm,0.7s,baz=136,slow=5.2,SNR=7.7						
YKA				pP	pP	11 03 12.6	-1.3
	comp=E,0.1nm,0.5s,baz=140,slow=5.5,SNR=3.0						
	comp=E,0.3nm,0.7s						
WRA	Warramunga Arr	135.80	215	PKP	PKiKP	11 09 22.3	+1.0
	comp=E,0.3nm,0.8s,baz=134,slow=1.9,SNR=1.7						

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*NOU **06** 10:53:02.4, 34°.26S×175°.51W, h0^{km}, mb5.2/7, South of Kermadec Islands*

*NEIC **06** 10:53:35.0±1.2, 35°.01S±0°.07×178°.6W±0°.1, h10^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=20.0km s-min=12.6km az=96.0*

*IDC **06** 10:53:39.3±4.2, 34°.91S×178°.70W, h44^{km}±35^{km}, mb4.4/7, mbtmp4.5/9, ML5.0/2, MS3.4/18, Error ellipse: s-maj=29.5km s-min=19.9km az=55.0*

ISC 06 10:53:39.1±0.5**, 35°.05S**±0°.06×**178°.61W**±0°.09**, h46**^{km}**, n89,** σ1^{s}.**21**/79**, mb4.7**/17**, MS3.5**/16**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.53	224		Pn	10 54 31.6	+0.2
URZ	Urewera	4.70	226	P	Pn	10 54 47.9	+0.5
	14nm,0.3s,baz=121,slow=23,SNR=117						
URZ				S	Sn	10 55 38.3	-2.2
	190nm,0.3s,baz=349,slow=22,SNR=16						
	32nm,0.3s						
URZ	Urewera	4.70	226	Pn	Pn	10 54 48.0	+0.6
URZ	Urewera	4.70	226	P	Pn	10 54 48.0	+0.6
BKZ	Black Stump Fm	5.67	222	Pn	Pn	10 55 00.4	-0.4
BKZ	Black Stump Fm	5.67	222	P	Pn	10 55 01.6	+0.8
RAO	Raoul Island	5.82	6	S	Sn	10 56 05.1	-3.1
	451nm,0.5s,baz=88,slow=21,SNR=3.6						
HIZ	Hauiti	6.28	235	P	Pn	10 55 11.6	+2.5
OUZ	Omahuta	6.39	266	P	Pn	10 55 13.7	+3.1
PLWZ	Palliser	8.09	215	Pn	Pn	10 55 32.5	-1.5
BHW	Baring Head	8.15	217	Pn	Pn	10 55 33.5	-1.3
SNZO	South Karori	8.16	218	Pn	Pn	10 55 33.1	-1.8
TUWZ	Tuamarina	8.65	220	Pn	Pn	10 55 40.7	-0.9
NNZ	Nelson	8.81	223	Pn	Pn	10 55 43.0	-0.7
BSWZ	Blackbirch Sta	8.88	219	Pn	Pn	10 55 43.0	-1.9
QRZ	Quartz Range	9.06	228	Pn	Pn	10 55 45.9	-1.3
KHZ	Kahutara	9.57	217	P	Pn	10 55 52.1	-2.0
RPZ	Rata Peaks	11.77	220	P	Pn	10 56 21.2	-3.1
	12nm,0.4s,baz=58,slow=1.7,SNR=24						
RPZ				S	Sn	10 58 19.4	-15
	12nm,0.4s,baz=319,slow=23,SNR=12						
RPZ	Rata Peaks	11.77	220	Pn	Pn	10 56 22.8	-1.4
RPZ	Rata Peaks	11.77	220	P	Pn	10 56 22.0	-2.3
ODZ	Otahua Downs	12.92	216	P	Pn	10 56 37.7	-2.3
MLZ	Mavora Lakes	14.43	220	Pn	Pn	10 57 00.9	+0.4
MSVF	Nonsavu	17.51	349	P	Pn	10 57 37.5	-2.4
	0.6nm,0.3s,baz=119,slow=16,SNR=2.6						
MSVF				LR	LR	11 03 06.8	
	comp=Z,124nm,18.6s,baz=193,slow=33						
	5.3nm,0.8s						
MSVF	Nonsavu	17.51	349		Pn	10 57 38.4	-1.5
DZM	Mont Dzumac	18.40	311	P	Pn	10 57 52.8	+1.9
	4.0nm,0.7s,baz=9.0,slow=16,SNR=2.3						
DZM				LR	LR	11 03 45.9	
	comp=Z,302nm,19.5s,baz=198,slow=33						
RAR	Rarotonga	21.54	55	LR	LR	11 04 38.7	
	comp=Z,49nm,20.8s,baz=254,slow=31						
SANVU	Saraoutou	23.31	323	P	P	10 58 43.8	+0.7
SANVU				IAmb	IAmb	10 59 05.4	
	comp=Z,14nm,0.7s						
EIDS	Eidsvold	27.82	282	P	P	10 59 23.4	-0.7
TOO	Toolangi	28.93	254	P	P	10 59 34.5	+0.6
TOO				IAmb	IAmb	10 59 38.0	
	comp=Z,6.2nm,0.8s						
PPT	Papeete	31.15	64	LR	LR	11 12 03.6	
	comp=Z,18nm,18.7s,baz=243,slow=36						
STKA	Stephens Creek	33.20	264	P	P	11 00 11.6	+0.1
	comp=Z,5.9nm,0.9s,baz=91,slow=7.6,SNR=9.9						
STKA				LR	LR	11 12 47.8	
	comp=Z,48nm,19.7s,baz=40,slow=35						
	comp=Z,5.9nm,0.9s						
STKA	Stephens Creek	33.20	264	P	P	11 00 11.8	+0.3
CTAO	Charters Tower	34.33	286	P	P	11 00 21.8	+0.4
CTAO				IAmb	IAmb	11 00 23.9	
	comp=Z,22nm,1.2s						
COEN	Coen	40.28	292	P	P	11 01 11.2	-0.7
COEN				IAmb	IAmb	11 01 14.1	
	comp=Z,12nm,0.9s						
PMG	Port Moresby	40.35	301	LR	LR	11 15 10.6	
	comp=Z,86nm,21.4s,baz=147,slow=32						
AS31	Alice Springs	42.56	272	P	P	11 01 30.6	0.0
ASAR	Alice Springs	42.56	272	P	P	11 01 30.4	-0.2
	comp=Z,11nm,0.8s,baz=115,slow=7.3,SNR=119						
ASAR				PcP	PcP	11 03 22.1	-0.4
	comp=Z,0.6nm,0.4s,baz=123,slow=4.5,SNR=2.0						
ASAR				LR	LR	11 18 38.2	
	comp=Z,73nm,20.7s,baz=134,slow=35						
	comp=Z,11nm,0.8s						
VNDA	Vanda	43.42	186	LR	LR	11 15 16.0	
	comp=Z,38nm,20.5s,baz=338,slow=30						
WR0	Warramunga Arr	43.79	277	P	P	11 01 40.2	-0.3
WR0				IAmb	IAmb	11 01 40.9	
	comp=Z,6.4nm,0.8s						
WB2	Warramunga Arr	43.96	277	P	P	11 01 41.4	-0.4
WRAB	Tennant Creek	43.96	277	P	P	11 01 41.3	-0.6
WRA	Warramunga Arr	43.97	277	P	P	11 01 41.5	-0.4
	comp=Z,10nm,0.5s,baz=118,slow=7.7,SNR=222						
WRA				LR	LR	11 19 18.9	
	comp=Z,76nm,18.5s,baz=358,slow=35						
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	43.97	277	P	P	11 01 41.6	-0.3
WB0	Warramunga Arr	44.01	278	P	P	11 01 42.0	-0.3
WB0				IAmb	IAmb	11 01 42.6	
	comp=Z,12nm,0.6s						
FORT	Forrest	44.53	260	P	P	11 01 46.3	-0.1
KNRA	Kununurra	50.71	278	P	P	11 02 32.5	-1.8
KNRA				IAmb	IAmb	11 02 46.6	
	comp=Z,27nm,1.4s						
MORW	Morawa	54.84	257	P	P	11 03 04.7	0.0
PSA00	Pilbara Seismi	55.05	267	P	P	11 03 05.7	-0.7
PSA00				IAmb	IAmb	11 03 26.0	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	55.07	180	P	P	11 03 08.0	+2.0
	comp=Z,7.8nm,0.9s,baz=20,slow=0.7,SNR=26						
QSPA				LR	LR	11 25 06.4	
	comp=Z,23nm,18.1s,baz=12,slow=34						
	comp=Z,7.8nm,0.9s						
QSPA	South Pole Qui	55.07	180	P	P	11 03 08.2	+2.1
QSPA				IAmb	IAmb	11 03 28.7	
	comp=Z,4.7nm,0.6s						
MBWA	Marble Bar	55.34	267	P	P	11 03 07.8	-0.6
KAPI	Kappang	64.03	283	P	P	11 04 08.2	-0.1
	comp=Z,3.6nm,0.5s,baz=73,slow=17,SNR=4.2						
KAPI				LR	LR	11 32 35.0	
	comp=Z,58nm,18.2s,baz=346,slow=36						
	comp=Z,3.6nm,0.5s						
KAPI	Kappang	64.03	283	IAmb	IAmb	11 04 08.6	
	comp=Z,4.8nm,0.7s						
BELA	Belgrano 2	65.26	172	P	P	11 04 15.8	+0.4
BELA				IAmb	IAmb	11 04 29.0	
	comp=Z,4.4nm,1.2s						
SNAA	Sanae	73.53	179	P	P	11 05 07.5	+0.9
SNAA	Sanae	73.53	179	P	P	11 05 07.5	+0.9
SNAA				IAmb	IAmb	11 05 09.1	
	comp=Z,12nm,1.4s						
VNA3	Neumayer Olymp	73.71	176	P	P	11 05 08.3	+0.7
VNA2	Neumayer--Watz	74.13	177	P	P	11 05 11.1	+1.0
	baz=179,slow=6.0						
VNA1	Neumayer--Stat	74.37	177	P	P	11 05 11.6	+0.2
PLCA	Paso Flores	79.72	133	P	P	11 05 43.2	+1.0
	comp=Z,1.2nm,0.8s,baz=255,slow=6.8,SNR=4.8						
	comp=Z,1.2nm,0.8s						
PLCA	Paso Flores	79.72	133	IAmb	IAmb	11 05 58.9	
	comp=Z,8.1nm,1.5s						
PETK	Petropavlovsk-	90.19	346	P	P	11 06 34.5	+0.6
	comp=Z,4.1nm,0.8s,baz=151,slow=4.5,SNR=4.1						
	comp=Z,4.1nm,0.8s						
NNA	Nana	92.62	106	LR	LR	11 38 25.7	
	comp=Z,18nm,21.9s,baz=238,slow=29						
CMIG	Matias Romero	94.66	73	LR	LR	11 38 58.9	
	comp=Z,23nm,20.9s,baz=232,slow=29						
ELK	Elko	95.30	43	LR	LR	11 42 40.9	
	comp=Z,12nm,20.3s,baz=262,slow=31						
ANMO	Albuquerque	96.86	52	LR	LR	11 45 39.6	
	comp=Z,14nm,19.4s,baz=210,slow=32						
CPUP	Villa Florida	97.47	129	LR	LR	11 42 34.1	
	comp=Z,21nm,21.5s,baz=206,slow=30						
MA2	Magadan	97.64	345	LR	LR	11 45 11.5	
	comp=Z,14nm,20.7s,baz=140,slow=32						
NEW	Newport	99.42	37	LR	LR	11 42 46.8	
	comp=Z,22nm,21.8s,baz=224,slow=30						
MKAR	Makanchi Array	120.30	308	PKP	PKPdf	11 12 24.8	0.0
	comp=Z,1.1nm,0.5s,baz=128,slow=0.9,SNR=13						
MKAR	Makanchi Array	120.30	308		PKiKP	11 12 25.1	+0.2
ZALV	Zalesovo Beam	121.11	317	PKP	PKPdf	11 12 25.6	-0.4
	comp=Z,1.3nm,0.5s,baz=114,slow=2.8,SNR=5.3						
ZALV	Zalesovo Beam	121.11	317		PKiKP	11 12 26.7	+0.6
AKTO	Aktyubinsk	136.73	309	PKP	PKPdf	11 12 55.9	0.0
	comp=Z,1.2nm,0.7s,baz=55,slow=4.9,SNR=5.5						
ARCES	ARCESS Array B	143.00	346	PKhKP	PKPpre	11 13 03.6	
	comp=Z,1.9nm,0.7s,baz=54,slow=3.1,SNR=7.9						
BELG	Belogornoye	143.09	313	PKhKP	PKPpre	11 13 03.0	
	comp=Z,8.7nm,0.5s,baz=117,slow=2.3,SNR=3.7						
KBZ	Khabaz	147.06	298	PKPbc	PKPdf	11 13 15.3	+0.9
	comp=Z,4.4nm,0.9s,baz=165,slow=5.3,SNR=6.6						
FINES	FINESS Array B	149.27	337	PKPbc	PKiKP	11 13 22.8	-0.2
	comp=Z,13nm,0.7s,baz=95,slow=4.0,SNR=50						
FINES	FINESS Array B	149.27	337		PKPbc	11 13 22.1	+0.3
LIC	Lamto	150.71	167	ePKP1	PKiKP	11 13 28.2	+0.7
	comp=Z,33nm,1.3s						
KIC	Kosan Boka	150.89	167	ePKP1	PKiKP	11 13 27.7	-0.1
	comp=Z,9.0nm,0.6s						
TIC	Toumodi	151.12	167	ePKP1	PKiKP	11 13 28.5	+0.2
DBIC	Dimbokro	151.17	167	PKPbc	PKPbc	11 13 28.1	+0.2
	comp=Z,4.6nm,0.8s,baz=115,slow=4.8,SNR=3.1						
NB2	NORSAR Subarra	153.24	349	PKP	PKiKP	11 13 31.5	+0.2
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	153.24	349	PKPbc	PKPbc	11 13 29.9	-1.2
	comp=Z,1.1nm,0.9s,baz=16,slow=4.6,SNR=4.1						
NOA				PKPab	PKPab	11 13 43.4	+0.2
	comp=Z,0.7nm,0.7s,baz=23,slow=3.4,SNR=3.8						
BRTR	Keskin Array B	154.04	290	PKPbc	PKiKP	11 13 33.9	+0.1
	comp=Z,1.2nm,0.5s,baz=85,slow=4.3,SNR=4.7						
BRTR				PKPab	pPKPbc	11 13 46.0	+0.4
	comp=Z,3.1nm,0.8s,baz=142,slow=4.6,SNR=10						
AKASG	Malin Array Be	154.50	316	PKPbc	PKiKP	11 13 34.4	+0.2
	comp=Z,0.3nm,0.2s,baz=60,slow=3.5,SNR=5.4						
AKASG				PKPab	PKPab	11 13 47.6	-1.1
	comp=Z,0.4nm,0.3s,baz=70,slow=5.6,SNR=4.5						
AKASG	Malin Array Be	154.50	316		PKiKP	11 13 34.9	+0.8
TORD	Torodi Ar. Bea	158.19	181	PKPbc	PKPbc	11 13 45.5	
	comp=Z,0.5nm,0.5s,baz=153,slow=2.8,SNR=5.0						
TORD				PKPab	PKPab	11 14 05.7	+0.4
	comp=Z,2.8nm,0.8s,baz=168,slow=3.7,SNR=12						

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*NNC **06** 10:58:02.8±3.1, 53°.70N×90°.78E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=23.0km s-min=15.4km az=85.0, Suspected Mining explosion.*

*IDC **06** 10:58:10.0±3.3, 53°.48N×90°.04E, h0^{km}, mbtmp3.4/3, ML2.5/3, Error ellipse: s-maj=29.0km s-min=20.0km az=63.0*

ISC 06 10:58:03.5±4.1**, 53°.7N**±0°.1×**90°.8E**±0°.2**, h0**^{km}**, n8,** σ1^{s}.**38**/11**, 4C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.54	276	i		11 20 36.4	
	0.1nm,1.1s,baz=91,slow=331,SNR=5.9						
ZAA0	Zalesovo Array	3.54	276	⇑Pg	Pb	10 59 06.1	-0.9
	4.7nm,0.8s,baz=97,slow=15						
ZAA0				⇓Lg	Lg	10 59 55.8	
	20nm,0.8s,baz=91,slow=27						
ZALV	Zalesovo Beam	3.54	276	Pn	Pn	10 59 01.3	+1.6
	0.4nm,0.3s,baz=95,slow=15,SNR=3.7						
ZALV				Pg	Pb	10 59 06.1	-0.9
	1.9nm,0.3s,baz=95,slow=14,SNR=22						
ZALV				Lg	Lg	10 59 50.5	
	1.0nm,0.3s,baz=100,slow=33,SNR=5.2						
	10nm,0.6s						
KURK	Kurchatov	8.05	253	⇑Pn	Pn	11 00 01.1	-0.5
	4.0nm,0.8s						
KURK				⇑Sn	Sn	11 01 35.7	+2.4
	7.6nm,0.8s						
KURK				⇓Lg	Lg	11 02 18.1	
	48nm,1.1s						
KURBB	Kurchatov Arra	8.15	253	Pn	Pn	11 00 03.0	+0.2
	0.2nm,0.3s,baz=64,slow=14,SNR=13						
KURBB				Sn	Sn	11 01 27.7	-7.9
	baz=68,slow=27						
KURBB				Lg	Lg	11 02 16.4	
	0.1nm,0.3s,baz=72,slow=32,SNR=0.8						
	3.8nm,0.6s						
KURBB	Kurchatov Arra	8.15	253	⇓Pn	Pn	11 00 01.0	-1.8
	6.8nm,0.7s						
KURBB				⇓Sn	Sn	11 01 34.9	-0.7
	27nm,0.7s						
KURBB				⇓Lg	Lg	11 02 22.1	
	58nm,0.8s						
MK31	Makanchi Array	8.81	222	Pn	Pn	11 00 12.2	+0.2
	0.6nm,0.6s,baz=38,slow=12,SNR=10						
MK31				⇑Sn	Sn	11 01 52.2	+0.3
	3.4nm,0.8s,baz=47,slow=20,SNR=4.6						
MK31				⇓Lg	Lg	11 02 41.2	
	20nm,0.9s,baz=35,slow=27,SNR=4.3						
MKAR	Makanchi Array	8.81	222	Pn	Pn	11 00 12.9	+0.9
	0.2nm,0.3s,baz=36,slow=13,SNR=12						
MKAR				Sn	Sn	11 01 45.7	-6.2
	baz=32,slow=20						
MKAR				Lg	Lg	11 02 34.0	
	0.1nm,0.3s,baz=35,slow=31,SNR=2.4						
	1.0nm,0.6s						

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*IDC **06** 11:28:40.5±13.0, 37°.00N×71°.99E, h190^{km}±70^{km}, mb2.9/3, mbtmp3.8/7, Error ellipse: s-maj=146.7km s-min=42.1km az=178.0*

*SOME **06** 11:28:42.4, 38°.27N×71°.77E, h15^{km}*

*NEIC **06** 11:28:43.3±1.1, 37°.27N±0°.08×71°.91E±0°.07, h203^{km}±8^{km}, mb4.1/2, Error ellipse: s-maj=11.5km s-min=7.5km az=162.0*

*NNC **06** 11:28:50.7±5.2, 37°.94N×71°.92E, h231^{km}±61^{km}, mb2.6, mpv3.8, Error ellipse: s-maj=54.8km s-min=28.8km az=13.0*

ISC 06 11:28:42.2±0.8**, 37°.23N**±0°.06×**72°.02E**±0°.07**, h200**^{km}**, n42,** σ1^{s}.**86**/46**, mb3.1**/3**, 4C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.22	323		Pn	11 29 23.5	+0.4
DRK	Karamyk	2.25	356	Pn	Pn	11 29 24.7	+1.1
CHGR	Chuyangaron	2.67	303	Pn	Pn	11 29 28.1	0.0
BTK	Batken	2.98	342	Pn	Pn	11 29 33.0	+1.4
KBL	Kabul	3.61	223	Pn	Pn	11 29 40.8	+1.4
NIL	Nilore	3.71	164	Pn	Pn	11 29 42.5	+2.0
AML	Almayashu	5.06	14	P	Pn	11 29 58.2	+0.5
	SNR=184						
IUG	Iuzhnay	5.14	343	eP	Pn	11 29 59.1	+0.7
	336nm,0.2s						
IUG				eS	Sn	11 30 54.0	-4.7
	86nm,0.1s						
UCH	Uchtor	5.35	20	P	Pn	11 30 02.2	+0.8
	SNR=59						
MRKS	Merke	5.58	9	eP	Pn	11 30 08.2	+4.1
	34nm,0.5s						
MRKS				eS	Sn	11 31 09.7	+0.8
	44nm,0.2s						
EKS2	Erkin-Say	5.59	13	P	Pn	11 30 05.0	+0.8
	SNR=17						
THN	Thein Dam	5.67	146	eS	Sn	11 31 10.3	-0.4
AAK	Ala-Archa	5.73	19	P	Pn	11 30 07.1	+1.1
	SNR=28						
AAK	Ala-Archa	5.73	19	P	Pn	11 30 07.0	+1.1
	25nm,0.3s,baz=185,slow=9.7,SNR=56						
AAK				S	Sn	11 31 10.5	-1.8
	7.0nm,0.6s,baz=322,slow=22,SNR=12						
AAK	Ala-Archa	5.73	19	Pn	Pn	11 30 06.8	+0.9
KBK	Karagaybulak	5.87	22	P	Pn	11 30 09.6	+1.8
	SNR=11						
FRU1	Bishkek	5.92	19	Pn	Pn	11 30 10.5	+2.1
ULHL	Ulahol	5.97	32	P	Pn	11 30 09.6	+0.3
	SNR=16						
KK31	Karatay Array	5.98	349	Pn	Pn	11 30 09.0	0.0
KK31	Karatay Array	5.98	349	P	Pn	11 30 08.9	-0.2
	2.4nm,0.3s,baz=159,slow=10,SNR=28						
KK31				⇑S	Sn	11 31 12.3	-5.6
	17nm,0.6s,baz=169,slow=25,SNR=4.9						
KKAR	Karatay Array	5.98	349		Pn	11 30 09.1	0.0
BRLS	Borolday	6.03	345	eP	Pn	11 30 07.5	-2.3
	9.0nm,0.7s						
BRLS				eS	Sn	11 31 08.2	-11
	37nm,0.4s						
CHMS	Chumysh	6.13	19	P	Pn	11 30 12.3	+1.2
	SNR=6.8						
CHMS	Chumysh	6.13	19	⇓P	Pn	11 30 11.8	+0.7
	3.7nm,0.3s						
KDJ	Kajisay	6.31	38		Pn	11 30 14.5	+1.0
TKM2	Tokmak 2	6.31	25	P	Pn	11 30 14.3	+0.7
	SNR=18						
TKM2	Tokmak 2	6.31	25	⇑P	Pn	11 30 14.3	+0.7
	8.0nm,0.5s						
TKM2				⇓S	Sn	11 31 22.6	-3.4
	2.5nm,0.6s						
USP	Ospenovka	6.32	17	P	Pn	11 30 14.7	+1.1
	SNR=7.6						
BHK	Bhakra	6.85	147	eS	Sn	11 31 33.4	-5.0
MKAR	Makanchi Array	12.22	35	P	P	11 31 34.4	+0.3
	0.3nm,0.6s,baz=219,slow=12,SNR=2.1						
KURBB	Kurchatov Arra	14.18	17	P	P	11 31 56.1	+0.3
	0.2nm,0.3s,baz=207,slow=11,SNR=5.2						
KURK	Kurchatov	14.29	17	P	Pn	11 31 56.1	+0.7
AB31	Akbulak array	14.87	328	P	P	11 32 04.6	+1.2
	0.3nm,0.5s,baz=134,slow=12,SNR=7.6						
AB31				⇑S	S	11 34 36.9	-11
	0.5nm,0.5s,baz=152,slow=22,SNR=3.3						
ABKAR	Akbulak array	14.87	328		Pn	11 32 02.1	-0.5
AKTO	Aktyubinsk	16.58	327	P	P	11 32 22.9	+0.6
	1.9nm,0.3s,baz=133,slow=12,SNR=4.9						
AKTO	Aktyubinsk	16.58	327	⇑P	Pn	11 32 23.0	-0.2

	1.7nm,0.5s						
ZAA0	**Zalesovo Array**	**18.92**	**24**	P	**P**	**11 32 48.3**	**+0.6**
ZAA0				IAmb	IAmb	11 32 49.3	
	comp=Z,3.2nm,0.5s						
ZALV	**Zalesovo Beam**	**18.92**	**24**	P	**P**	**11 32 48.9**	**+1.2**
	comp=Z,3.1nm,0.4s,baz=210,slow=9.6,SNR=11						
ARCES	**ARCESS Array B**	**40.79**	**337**	P	**P**	**11 36 04.5**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=102,slow=8.4,SNR=7.1						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**40.79**	**337**	IAmb	IAmb	11 36 10.7	
	comp=Z,10nm,1.5s						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**11 36 32.1**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=114,slow=5.4,SNR=1.5						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**80.47**	**3**	P	**P**	**11 40 32.0**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=350,slow=5.6,SNR=7.7						
	comp=Z,0.3nm,0.8s						

*MIRAS **06** 11:48:24.1±0.0, 54°.36N×60°.33E, h0km, ML2.5/6*

ISC 06 11:48:24.8±1.1**, 54°.25N**±0°.04×**60°.4E**±0°.1**, h10km, n5, σ0s.80**/17**, 5C, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAUR	**Kamensk Uralsk**	**2.27**	**16**	*i* P	**Pn**	**11 49 02.2**	**-0.1**
	65nm,0.3s,baz=17						
KAUR				*i* S	**Sn**	**11 49 30.7**	**+0.4**
	baz=17						
KAUR				*i* S	**Sn**	**11 49 30.7**	**+0.4**
	52nm,0.5s,baz=17						
KAUR				*i* S	**Sn**	**11 49 30.7**	**+0.4**
	161nm,0.6s,baz=17						
KAUR				*i* AML	AML	11 49 31.1	
	139nm,0.6s						
ARU	**Arti**	**2.42**	**335**	*i* P	**Pn**	**11 49 03.8**	**-0.6**
	17nm,0.5s,baz=335						
ARU				*i* S	**Sn**	**11 49 34.2**	**+0.2**
	baz=335						
ARU				*i* S	**Sn**	**11 49 34.2**	**+0.2**
	22nm,0.4s,baz=335						
ARU				*i* S	**Sn**	**11 49 34.2**	**+0.2**
	baz=335						
ARU				*i* AML	AML	11 49 36.4	
	46nm,0.4s						
SVE	**Sverdlovsk**	**2.58**	**3**	*e*P	**Pn**	**11 49 06.5**	**-0.1**
	15nm,0.2s,baz=3.8						
SVE				*e*S	**Sn**	**11 49 38.4**	**+0.4**
	baz=3.8						
SVE				*e*S	**Sn**	**11 49 38.4**	**+0.4**
	baz=3.8						
SVE				*e*S	**Sn**	**11 49 38.4**	**+0.4**
	32nm,0.4s,baz=3.8						
SVE				*i* AML	AML	11 49 49.9	
	38nm,0.3s						
AKTO	**Aktyubinsk**	**4.09**	**202**	⇑Pn	**Pn**	**11 49 26.7**	**-0.6**
	0.6nm,0.6s						
AKTO				⇑Pg	**Pb**	**11 49 37.0**	**+0.1**
	1.4nm,0.7s						
AKTO				⇑Sn	**Sn**	**11 50 17.4**	**+2.1**
	2.5nm,0.5s						
AKTO				⇑Lg	Lg	11 50 35.1	
	5.8nm,0.6s						
AB31	**Akbulak array**	**5.01**	**183**	Pn	**Pn**	**11 49 38.3**	**-1.6**
	0.2nm,0.5s,baz=344,slow=12,SNR=6.2						
AB31				⇑Pg	**Pb**	**11 49 52.8**	**+0.3**
	0.4nm,0.3s,baz=13,slow=14,SNR=4.8						
AB31				Lg	Lg	11 50 57.8	
	2.3nm,0.4s,baz=13,slow=27,SNR=6.5						

*JMA **06** 12:00:07.9±0.1, 24°.0N±0°.6×121°.6E±0°.8, h25km, MV2.8/9, TAIWAN REGION*

*TAP **06** 12:00:10.0, 24°.21N×121°.73E, h13km, ML3.5, B*

ISC 06 12:00:10.2±0.8**, 24°.19N**±0°.01×**121°.76E**±0°.02**, h13km**±5km**, n113, σ1s.04**/195**, 4C-29D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**350**	⇓*i*P	**Pg**	**12 00 12.9**	**-0.5**
	baz=10.0						
EHP				*i* S	**Sg**	**12 00 15.5**	**-0.3**
	baz=10.0						
ETL	**Fush Village**	**0.13**	**256**	⇓*i*P	**Pg**	**12 00 13.3**	**-0.3**
	baz=241						
ETL				*i* S	**Sg**	**12 00 15.9**	**-0.2**
	baz=241						
NACB	**Ninganchiao**	**0.15**	**264**	⇓*i*P	**Pg**	**12 00 13.5**	**-0.4**
	baz=252						
NACB				*i* S	**Sg**	**12 00 16.3**	**-0.2**
	baz=252						
TWD	**Chiawan**	**0.19**	**234**	⇓*i*P	**Pg**	**12 00 14.1**	**-0.3**
	baz=221						
TWD				S	**Sg**	**12 00 17.5**	**+0.2**
	baz=221						
ENA	**Nanau**	**0.24**	**355**	⇓*i*P	**Pg**	**12 00 14.8**	**-0.5**
	baz=4.0						
ENA				*i* S	**Sg**	**12 00 18.4**	**-0.3**
	baz=4.0						
EWUT	**Wuta**	**0.25**	**3**	⇓*i*P	**Pg**	**12 00 15.1**	**-0.5**
	baz=11						
EWUT				*i* S	**Sg**	**12 00 18.7**	**-0.5**
	baz=11						
ETLH	**Xiulin Townshi**	**0.26**	**274**	⇓*i*P	**Pg**	**12 00 15.3**	**-0.4**
	baz=268						
ETLH				*i* S	**Sg**	**12 00 19.3**	**-0.1**
	baz=268						
HWA	**Hwalien**	**0.26**	**214**	*i* P	**Pg**	**12 00 16.1**	**+0.5**
	baz=204						
HWA				*e*S	**Sg**	**12 00 21.5**	**+2.2**
	baz=204						
ETM	**Tongmen**	**0.33**	**228**	P	**Pg**	**12 00 16.7**	**-0.3**
	baz=221						
ETM				*e*S	**Sb**	**12 00 21.6**	**-1.8**
	baz=221						
TEYL	**Yanliau Villag**	**0.35**	**205**	*e*P	**Pb**	**12 00 17.9**	**-0.5**
	baz=201						
TEYL				*e*S	**Sb**	**12 00 25.6**	**+1.7**
	baz=201						
LATG	**Datong**	**0.41**	**328**	⇓*i*P	**Pg**	**12 00 18.1**	**-0.3**
	baz=330						
LATG				S	**Sg**	**12 00 24.0**	**+0.2**
	baz=330						
NNSB	**Datong**	**0.42**	**304**	⇓*i*P	**Pg**	**12 00 18.4**	**-0.2**
	baz=304						
NNSB				S	**Sb**	**12 00 24.3**	**-1.6**
	baz=304						
TWC	**Suao**	**0.42**	**11**	⇓*i*P	**Pg**	**12 00 18.2**	**-0.4**
	baz=17						
TWC				*e*S	**Sg**	**12 00 24.2**	**-0.1**
	baz=17						
NNS	**Nan Shan**	**0.43**	**305**	⇓*i*P	**Pg**	**12 00 18.6**	**-0.2**
	baz=305						
NNS				*e*S	**Sb**	**12 00 24.6**	**-1.7**
	baz=305						
NDS	**Dongshan**	**0.44**	**354**	⇓*i*P	**Pg**	**12 00 18.7**	**-0.3**
	baz=358						
NDS				S	**Sg**	**12 00 24.6**	**-0.3**
	baz=358						
WHF	**Hehuan Shan**	**0.46**	**264**	⇓*i*P	**Pb**	**12 00 19.1**	**-1.3**
	baz=260						
WHF				*e*S	**Sb**	**12 00 25.8**	**-1.6**
	baz=260						
NDT	**Datong Townshi**	**0.47**	**331**	⇓*i*P	**Pg**	**12 00 19.5**	**0.0**
	baz=333						
NDT				*i* S	**Sb**	**12 00 26.4**	**-0.9**
	baz=333						
FUSS	**Fushou**	**0.48**	**277**	⇓*i*P	**Pb**	**12 00 19.6**	**-1.0**
	baz=274						
FUSS				*e*S	**Sb**	**12 00 25.8**	**-1.9**
	baz=274						
ENTT	**Nioudou**	**0.48**	**338**	⇓*i*P	**Pg**	**12 00 19.6**	**-0.2**
	baz=341						
ENTT				S	**Sg**	**12 00 26.4**	**+0.2**
	baz=341						
ESL	**Shilin**	**0.48**	**219**	⇓*e*P	**Pg**	**12 00 19.3**	**-0.4**
	baz=213						
ESL				*e*S	**Sb**	**12 00 26.8**	**-0.8**
	baz=213						
TEGC	**Jichi Village**	**0.52**	**203**	*e*P	**Pb**	**12 00 21.0**	**-0.3**
	baz=198						
TEGC				*e*S	**Sb**	**12 00 31.3**	**+2.6**
	baz=198						
TWE	**Neicheng**	**0.54**	**351**	⇓*i*P	**Pg**	**12 00 20.5**	**-0.2**
	baz=355						
TWE				*e*S	**Sg**	**12 00 27.9**	**0.0**
	baz=355						
TWT	**Tachien**	**0.54**	**277**	*e*P	**Pb**	**12 00 21.2**	**-0.5**
	baz=274						
TWT				*e*S	**Sb**	**12 00 28.6**	**-0.8**
	baz=274						
CHGB	**Renai**	**0.55**	**257**	⇓P	**Pb**	**12 00 21.1**	**-0.9**
	baz=253						
CHGB				*e*S	**Sb**	**12 00 28.9**	**-0.9**
	baz=253						
TDCB	**Techi**	**0.56**	**277**	⇓*i*P	**Pb**	**12 00 21.2**	**-0.7**
	baz=274						
TDCB				*e*S	**Sb**	**12 00 28.6**	**-1.3**
	baz=274						
ILA	**Ilan**	**0.57**	**359**	*e*P	**Pg**	**12 00 21.4**	**0.0**
	baz=2.0						
ILA				*e*S	**Sg**	**12 00 29.6**	**+0.6**
	baz=2.0						
OWD	**Renai**	**0.59**	**246**	⇓*e*P	**Pb**	**12 00 21.4**	**-1.1**
	baz=243						
OWD				*e*S	**Sb**	**12 00 29.5**	**-1.2**
	baz=243						
FUSB	**Fushanzhiwuyua**	**0.59**	**344**	⇓*i*P	**Pg**	**12 00 21.5**	**-0.2**
	baz=346						
FUSB				*e*S	**Sg**	**12 00 29.6**	**0.0**
	baz=346						
YHNB	**Yeheng**	**0.59**	**323**	P	**Pg**	**12 00 21.9**	**+0.1**
YHNB	**Yeheng**	**0.59**	**323**	⇓P	**Pg**	**12 00 21.8**	**-0.1**
	baz=324						
YHNB				*e*S	**Sb**	**12 00 30.0**	**-0.9**
	baz=324						
EGFH	**Guangfu**	**0.60**	**211**	*e*P	**Pg**	**12 00 21.9**	**-0.2**
	baz=207						
EGFH				*e*S	**Sb**	**12 00 31.7**	**+0.6**
	baz=207						
NSK	**Sanguang**	**0.61**	**323**	⇓*i*P	**Pg**	**12 00 22.0**	**-0.2**
	baz=324						
NSK				*e*S	**Sb**	**12 00 30.6**	**-0.7**
	baz=324						
WUSB	**Renai**	**0.62**	**252**	⇓P	**Pb**	**12 00 22.3**	**-0.8**
	baz=248						
WUSB				*e*S	**Sb**	**12 00 31.0**	**-0.8**
	baz=248						
NWLT	**Wulai**	**0.63**	**338**	⇓P	**Pg**	**12 00 22.2**	**-0.3**
	baz=340						
NWLT				*e*S	**Sg**	**12 00 30.7**	**-0.2**
	baz=340						
NTC	**Toucheng**	**0.66**	**5**	⇓P	**Pg**	**12 00 21.8**	**-1.3**
	baz=8.0						
NTC				*e*S	**Sg**	**12 00 30.3**	**-1.6**
	baz=8.0						
EGS		**0.67**	**13**	*e*P	**Pg**	**12 00 23.0**	**-0.2**
	baz=17						
VWDT	**VWDT**	**0.72**	**233**	*e*P	**Pb**	**12 00 23.9**	**-0.7**
	baz=230						
VWDT				*e*S	**Sb**	**12 00 34.9**	**+0.6**
	baz=230						
NFF	**Wufeng Townshi**	**0.73**	**307**	P	**Pb**	**12 00 24.4**	**-0.5**
	baz=307						
NFF				*e*S	**Sb**	**12 00 34.2**	**-0.8**
	baz=307						
WHP	**Taichung City**	**0.75**	**277**	*e*P	**Pb**	**12 00 25.0**	**-0.3**
	baz=275						
WHP				*e*S	**Sb**	**12 00 35.1**	**-0.4**
	baz=275						
WPL	**Puli Township**	**0.76**	**257**	*e*P	**Pb**	**12 00 25.0**	**-0.3**
	baz=254						
WPL				*e*S	**Sb**	**12 00 35.1**	**-0.5**
	baz=254						
HGSD	**Ruisui**	**0.76**	**204**	*e*P	**Pb**	**12 00 25.1**	**-0.2**
	baz=201						
HGSD				*e*S	**Sn**	**12 00 38.1**	**0.0**
	baz=201						
TIPB	**Shuangxi**	**0.78**	**4**	⇓*i*P	**Pg**	**12 00 25.0**	**-0.4**
	baz=7.0						
TIPB				*e*S	**Sg**	**12 00 34.9**	**-0.7**
	baz=7.0						
DPDB	**Guoxing**	**0.78**	**259**	*e*P	**Pb**	**12 00 25.5**	**-0.2**
	baz=256						
DPDB				*e*S	**Sb**	**12 00 36.0**	**-0.2**
	baz=256						
WCS	**Beigang Elemen**	**0.79**	**260**	*e*P	**Pb**	**12 00 25.6**	**-0.3**
	baz=258						
WCS				*e*S	**Sb**	**12 00 36.2**	**-0.2**
	baz=258						
EHY	**Hungye**	**0.79**	**211**	*e*P	**Pg**	**12 00 24.4**	**-1.2**
	baz=207						
EHY				*e*S	**Sb**	**12 00 37.5**	**+0.9**
	baz=207						
NHDH	**Xindian Distri**	**0.80**	**344**	*e*P	**Pg**	**12 00 25.8**	**+0.1**
	baz=346						
NHDH				*e*S	**Sg**	**12 00 36.0**	**-0.2**
	baz=346						
TWA	**Mucha**	**0.80**	**348**	⇑P	**Pg**	**12 00 25.9**	**+0.1**
	baz=351						
TWA				*e*S	**Sg**	**12 00 36.3**	**0.0**
	baz=351						
LIOB	**Emei**	**0.82**	**304**	*e*P	**Pb**	**12 00 26.4**	**0.0**
	baz=303						
LIOB				*e*S	**Sb**	**12 00 37.5**	**+0.1**
	baz=303						
TATO	**Taipei**	**0.82**	**342**	*e*P	**Pg**	**12 00 25.8**	**-0.3**
	baz=344						
TATO				*e*S	**Sg**	**12 00 36.7**	**-0.2**
	baz=344						
NSTT	**Nanjuang**	**0.82**	**302**	*e*P	**Pb**	**12 00 26.1**	**-0.3**
	baz=302						
NSTT				*e*S	**Sb**	**12 00 37.2**	**-0.2**
	baz=302						
TWB1	**Santiao Chiao**	**0.84**	**14**	*e*P	**Pg**	**12 00 25.8**	**-0.7**
	baz=17						
SSLB	**Suanglung**	**0.84**	**242**	P	**Pb**	**12 00 26.4**	**-0.3**
SSLB	**Suanglung**	**0.84**	**242**	⇑*e*P	**Pb**	**12 00 26.2**	**-0.6**
	baz=239						
SSLB				*e*S	**Sb**	**12 00 37.3**	**-0.7**
	baz=239						
SMLT	**Sun Moon Lake**	**0.85**	**249**	*e*P	**Pb**	**12 00 26.6**	**-0.3**
	baz=246						
SMLT				*e*S	**Sb**	**12 00 38.6**	**+0.4**
	baz=246						
NWF	**Wu-fen Shan**	**0.88**	**1**	*e*P	**Pg**	**12 00 27.1**	**-0.1**
	baz=3.0						
NWF				*e*S	**Sg**	**12 00 38.4**	**-0.3**
	baz=3.0						
WFSB	**Wu-fen Shan**	**0.88**	**1**	*e*P	**Pg**	**12 00 27.1**	**-0.1**
	baz=3.0						
WFSB				*e*S	**Sg**	**12 00 38.4**	**-0.3**
	baz=3.0						
TYC	**Yuchr**	**0.88**	**251**	*e*P	**Pb**	**12 00 27.1**	**-0.2**
	baz=249						
TYC				*e*S	**Sb**	**12 00 39.5**	**+0.6**
	baz=249						
YULB	**Yu-li**	**0.90**	**208**	⇑*e*P	**Pg**	**12 00 25.8**	**-1.9**
	baz=206						
YULB				*e*S	**Sb**	**12 00 40.3**	**+0.6**
	baz=206						
SXI1	**Grass Mountain**	**0.91**	**6**	⇓P	**Pg**	**12 00 27.5**	**-0.3**
	baz=9.0						
SXI1				*e*S	**Sg**	**12 00 39.0**	**-0.6**
	baz=9.0						
ECBN	**Changbin**	**0.92**	**198**	*e*P	**Pg**	**12 00 26.9**	**-1.0**
	baz=196						
TWQ1	**Liyutan**	**0.92**	**280**	*e*P	**Pn**	**12 00 29.0**	**+0.1**
	baz=279						
TWQ1				*e*S	**Sn**	**12 00 41.7**	**-0.2**
	baz=279						
SBCB	**Hsinchu**	**0.93**	**310**	*e*P	**Pn**	**12 00 29.1**	**+0.1**
	baz=310						
SBCB				*e*S	**Sn**	**12 00 43.0**	**+0.8**
	baz=310						
EYUL	**Yuli**	**0.93**	**206**	*e*P	**Pg**	**12 00 27.8**	**-0.5**
	baz=204						
NCUH	**Zhongli**	**0.94**	**326**	*e*P	**Pb**	**12 00 28.9**	**+0.6**
	baz=326						
NCU	**National Centr**	**0.94**	**326**	*e*P	**Pb**	**12 00 29.1**	**+0.8**
	baz=327						
NCU				*e*S	**Sn**	**12 00 43.6**	**+1.1**
	baz=327						
TWF1	**Yuli**	**0.94**	**207**	*e*P	**Pg**	**12 00 26.4**	**-2.0**
	baz=204						
NSY	**Sanyi**	**0.94**	**284**	*e*P	**Pn**	**12 00 29.3**	**+0.1**
	baz=283						
HSN	**Hsinchu**	**0.95**	**310**	*e*P	**Pn**	**12 00 29.3**	**+0.1**
	baz=313						
NMLH	**Miaoli**	**0.95**	**291**	*e*P	**Pn**	**12 00 29.6**	**+0.3**
	baz=291						
NMLH				*e*S	**Sn**	**12 00 42.0**	**-0.8**
	baz=291						
TNOU	**National Taiwa**	**0.95**	**0**	*e*P	**Pg**	**12 00 28.5**	**-0.1**
	baz=2.0						
TNOU				*e*S	**Sg**	**12 00 39.4**	**-1.8**
	baz=2.0						
TWS1	**Kuangyinshan**	**0.96**	**341**	*e*P	**Pb**	**12 00 29.3**	**+0.6**
	baz=342						
TWS1				*e*S	**Sb**	**12 00 42.8**	**+1.4**
	baz=342						
YM01	**YM01**	**0.97**	**350**	*e*P	**Pg**	**12 00 28.9**	**0.0**
	baz=351						
YM01				*e*S	**Sb**	**12 00 42.4**	**+0.8**
	baz=351						
WWF	**Wufeng**	**0.98**	**262**	*e*P	**Pn**	**12 00 30.6**	**+0.8**
	baz=260						
WWF				*e*S	**Sn**	**12 00 45.4**	**+1.8**
	baz=260						
TCU	**Taichung**	**0.99**	**268**	*e*P	**Pn**	**12 00 30.4**	**+0.5**
	baz=266						
YM08	**YM08**	**1.00**	**351**	*e*P	**Pg**	**12 00 29.2**	**-0.4**
	baz=352						
ANP	**Anpu**	**1.02**	**347**	*e*P	**Pg**	**12 00 29.8**	**0.0**
	baz=349						
WJS	**Zhushan**	**1.02**	**249**	*e*P	**Pn**	**12 00 30.4**	**+0.2**
	baz=247						
WJS				*e*S	**Sn**	**12 00 45.1**	**+0.7**
	baz=247						
YUS	**Yu-Shan**	**1.02**	**227**	*e*P	**Pb**	**12 00 29.4**	**-0.6**
	baz=224						
WNT1	**Nantou City**	**1.03**	**254**	*e*P	**Pn**	**12 00 30.8**	**+0.4**
	baz=252						
WNT	**Mingjian**	**1.03**	**253**	*e*P	**Pn**	**12 00 30.9**	**+0.5**
	baz=251						
WDJ	**Dajia District**	**1.04**	**279**	*e*P	**Pn**	**12 00 31.1**	**+0.7**
	baz=278						
WDJ				*e*S	**Sn**	**12 00 45.1**	**+0.2**
	baz=278						
FULB	**Fuli**	**1.08**	**204**	*e*P	**Pg**	**12 00 29.6**	**-1.4**
	baz=202						
TWY	**Chenhua**	**1.09**	**352**	*e*P	**Pb**	**12 00 31.7**	**+0.7**
	baz=354						
WCHH	**Zhanghua**	**1.11**	**264**	*e*P	**Pn**	**12 00 31.9**	**+0.5**
	baz=263						
JYNG	**Yonagunijimaku**	**1.11**	**76**	*e*P	**Pg**	**12 00 30.7**	**-0.9**
JYNG				*e*S	**Sg**	**12 00 47.5**	**+1.5**
ALS	**Alishan**	**1.11**	**233**	⇑*e*P	**Pb**	**12 00 31.2**	**-0.3**
	baz=230						
ALS				*e*S	**Sn**	**12 00 47.0**	**-0.1**
	baz=230						
CHKT	**Chengkung**	**1.15**	**199**	*e*P	**Pg**	**12 00 30.0**	**-2.3**
	baz=196						
CHN5	**Tsauling**	**1.16**	**239**	*e*P	**Pn**	**12 00 32.6**	**+0.4**
	baz=238						
CHN5				*e*S	**Sn**	**12 00 50.2**	**+2.2**
	baz=238						
YOJ	**Yonaguni jima**	**1.17**	**76**	*i* P	**Pg**	**12 00 31.9**	**-0.8**
	baz=78						
YOJ				*e*S	**Sg**	**12 00 48.0**	**0.0**
	baz=78						
YOJ	**Yonaguni jima**	**1.17**	**76**	P	**Pg**	**12 00 31.9**	**-0.8**
YOJ				S	**Sg**	**12 00 48.9**	**+0.9**
ELDTW	**Lidau**	**1.21**	**215**	*e*P	**Pg**	**12 00 30.1**	**-3.4**
	baz=212						
WDLH	**Douliu**	**1.23**	**246**	*e*P	**Pn**	**12 00 33.8**	**+0.7**
	baz=244						
WDLH				*e*S	**Sn**	**12 00 52.0**	**+2.5**
	baz=244						
EDH	**Donghe**	**1.28**	**199**	*e*P	**Pg**	**12 00 31.5**	**-3.4**
	baz=198						
WRL	**Guolierlin Hig**	**1.30**	**257**	*e*P	**Pn**	**12 00 34.6**	**+0.5**
	baz=256						
WTK	**Tuku**	**1.35**	**249**	*e*P	**Pn**	**12 00 35.5**	**+0.7**
	baz=247						
WTK				*e*S	**Sn**	**12 00 55.2**	**+2.5**
	baz=247						
CHN4	**Tsaushan**	**1.36**	**232**	*e*P	**Pb**	**12 00 35.6**	**0.0**
	baz=230						
CHN4				*e*S	**Sn**	**12 00 56.7**	**+3.8**
	baz=230						
STYH	**Taoyuan**	**1.36**	**222**	*e*P	**Pg**	**12 00 34.5**	**-1.8**
	baz=220						
TPUB	**Ta-pu**	**1.37**	**230**	P	**Pb**	**12 00 35.9**	**+0.2**
TPUB	**Ta-pu**	**1.37**	**230**	*e*P	**Pg**	**12 00 35.4**	**-1.1**
	baz=228						
TPUB				*e*S	**Sn**	**12 00 55.0**	**+2.0**
	baz=228						
STYT	**Tauyuan**	**1.38**	**222**	*e*P	**Pg**	**12 00 35.0**	**-1.7**
	baz=220						
WTP	**Ta-pu**	**1.41**	**228**	*e*P	**Pb**	**12 00 36.5**	**+0.1**
	baz=226						
WTP				*e*S	**Sn**	**12 00 57.5**	**+3.2**
	baz=226						
TWK	**Hsinying**	**1.49**	**232**	*e*P	**Pb**	**12 00 37.4**	**-0.3**
	baz=230						
SNST	**Tainan City**	**1.51**	**230**	*e*P	**Pg**	**12 00 38.3**	**-0.9**
	baz=229						
SNST				*e*S	**Sn**	**12 00 59.2**	**+2.7**
	baz=229						
CHN1	**Nanshi**	**1.51**	**229**	*e*P	**Pg**	**12 00 38.1**	**-1.1**
	baz=227						
CHN1				*e*S	**Sn**	**12 00 59.4**	**+2.7**
	baz=227						
WSL	**Shuilin Townsh**	**1.56**	**245**	*e*P	**Pb**	**12 00 38.6**	**-0.2**
	baz=243						
ICHU	**Yijhu**	**1.59**	**239**	*e*P	**Pg**	**12 00 39.4**	**-1.4**
	baz=237						
SSD	**Sandimen**	**1.77**	**216**	*e*P	**Pn**	**12 00 41.6**	**+1.0**
	baz=214						
SSD				*e*S	**Sg**	**12 01 05.9**	**-1.5**
	baz=214						
IRIF	**Iriomote-Funau**	**1.80**	**85**	*e*P	**Pn**	**12 00 40.2**	**-0.8**
IRIF				*e*S	**Sn**	**12 01 04.3**	**+0.6**
TSMG	**Majia**	**1.80**	**215**	*e*P	**Pn**	**12 00 42.0**	**+1.0**
	baz=214						
HATJ	**Hateruma jima**	**1.87**	**94**	S	**Sn**	**12 01 04.5**	**-1.0**
MASBT	**Mashibuluo**	**1.88**	**214**	*e*P	**Pn**	**12 00 42.2**	**+0.1**
	baz=212						
MASBT				*e*S	**Sb**	**12 01 08.2**	**+0.2**
	baz=212						
JKRS	**Kuro-shima**	**2.05**	**88**	P	**Pn**	**12 00 44.9**	**+0.5**
JKRS				*e*S	**Sn**	**12 01 11.6**	**+1.7**
JIJ	**Ishigaki jima**	**2.18**	**85**	P	**Pn**	**12 00 45.7**	**-0.5**
JIJ				S	**Sn**	**12 01 12.3**	**-0.7**

*LVSN **06** 12:01:48.5±1.8, 54°.25N×22°.43E, h0km±843km, ML2.2*

*HEL **06** 12:02:16.2±0.2, 56°.31N×23°.00E, h0km, ML1.9, Explosion*

*EST **06** 12:02:16.2±0.2, 56°.32N×23°.00E, h0km, ML1.8(HEL), Explosion*

ISC 06 12:02:15.5±0.9**, 56°.35N**±0°.03×**23°.00E**±0°.04**, h0km, n16, σ1s.18**/24**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBUR	**Paburge**	**0.69**	**242**	*e*S	**Sb**	**12 02 41.3**	**+1.0**
PBUR	**Paburge**	**0.69**	**242**	*e*P	**Pg**	**12 02 28.2**	**-0.3**
PABE	**Paberze**	**1.01**	**147**	AML	AML	12 03 04.2	
	comp=N,76nm,0.7s						
PABE				*e*S	**Pg**	**12 02 34.8**	**0.0**
PABE				AML	AML	12 03 04.5	
	comp=E,48nm,0.6s						
PABE				AML	AML	12 03 38.9	
	comp=Z,23nm,0.7s						
PABE	**Paberze**	**1.01**	**147**	*e*P	**Pg**	**12 02 34.1**	**-0.6**
PABE				*e*S	**Sg**	**12 02 45.7**	**-2.1**
SLIT	**Slitere, Latvi**	**1.34**	**343**	*e*P	**Pg**	**12 02 39.9**	**-1.3**
SLIT	**Slitere, Latvi**	**1.34**	**343**	*e*P	**Pg**	**12 02 39.8**	**-1.3**
SLIT				*e*S	**Sg**	**12 02 57.7**	**-0.7**
SLIT				*e*SB	**Sn**	**12 02 59.6**	**-0.2**
MTSE	**Matsula**	**2.41**	**10**	*e*P	**Pn**	**12 02 57.1**	**+1.1**
MTSE	**Matsula**	**2.41**	**10**	*e*P	**Pn**	**12 02 56.9**	**+0.8**
MTSE				*e*SG	**Sg**	**12 03 32.1**	**-0.7**
GOTU	**Gotland**	**2.77**	**301**	*e*P	**Pn**	**12 03 02.5**	**+1.5**
GOTU				*e*SB	**Sb**	**12 03 40.4**	**+0.2**
EE01	**Perakula, Nova**	**2.88**	**6**	*e*P	**Pn**	**12 03 04.0**	**+1.5**
EE01				*e*PB	**Pb**	**12 03 06.2**	**-1.5**
EE01				*e*SG	**Sb**	**12 03 45.3**	**+1.9**
EE03	**Tooma soojaam,**	**3.08**	**33**	*e*PB	**Pb**	**12 03 10.5**	**-0.5**
MEF	**Metsahovi**	**3.94**	**10**	*e*P	**Pn**	**12 03 19.0**	**+1.8**
MEF				*e*S	**Sn**	**12 04 05.1**	**+1.0**
MEF				MSG		12 04 22.1	
	comp=Z,1.9nm,0.2s						
AAL	**Aland**	**4.15**	**339**	*e*P	**Pn**	**12 03 20.2**	**+0.1**
AAL				*e*S	**Sn**	**12 04 09.6**	**+0.4**
PVF	**Pernaja**	**4.46**	**18**	*e*S	**Sn**	**12 04 18.0**	**+1.1**
PVF				MSG		12 04 38.9	
	comp=Z,1.2nm,0.2s						
RAF	**Rauma**	**4.73**	**353**	MSG		12 04 49.3	
	comp=Z,1.2nm,0.2s						
FIA1	**FINESS Array S**	**5.35**	**16**	*e*P	**Pn**	**12 03 37.3**	**+0.9**

*KRNET **06** 12:09:50.7±0.1, 43°.65N×76°.99E, h26km, mb3.6*
*NNC **06** 12:09:50.5±0.2, 43°.65N×77°.00E, h6km±2km, mb3.6, mpv3.6, Error ellipse: s-maj=2.0km s-min=1.8km az=1.0*
*KNET **06** 12:09:51.6±0.5, 43°.60N×76°.82E, h10km±3km, ml3.0, Error ellipse: s-maj=4.9km s-min=3.4km az=47.0*
*SOME **06** 12:09:51.0, 43°.65N×76°.95E, h20km*
ISC 06 12:09:51.2±0.9**, 43°.64N**±0°.01×**77°.00E**±0°.01**, h18**km±2km**, n92, σ0ˢ.70**/172**, 41C-23D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKK	Chushkaly	0.21	358	eP	Pb	12 09 56.3	0.0
	2μm,0.1s						
CHKK				eS	Sg	12 09 60.0	0.0
	7μm,0.2s						
CHKK	Chushkaly	0.21	358	P	Pb	12 09 56.3	0.0
	2μm,0.1s						
CHKK				S	Sg	12 09 60.0	0.0
	7μm,0.2s						
CHKK	Chushkaly	0.21	358	eP	Pb	12 09 56.3	0.0
	baz=1.0						
CHKK				eS	Sg	12 10 00.0	0.0
	baz=1.0						
KTBS	Karatobe	0.24	287	eP	Pg	12 09 56.8	0.0
	357nm,0.1s						
KTBS				eS	Sg	12 10 00.9	+0.2
	2μm,0.2s						
KTBS	Karatobe	0.24	287	P	Pg	12 09 56.8	0.0
	357nm,0.1s						
KTBS				S	Sg	12 10 00.9	+0.2
	2μm,0.2s						
KTBS	Karatobe	0.24	287	eP	Pg	12 09 56.8	0.0
	baz=85						
KTBS				eS	Sg	12 10 00.9	+0.2
	baz=85						
KNDC	Almaty	0.42	183	⇓P	Pg	12 09 60.0	0.0
	96nm,0.2s						
KNDC				⇑S	Sb	12 10 06.6	+0.3
	708nm,0.3s						
AAA	Alma-Ata	0.44	188	eP	Pg	12 10 00.4	+0.2
	367nm,0.1s						
AAA				eS	Sb	12 10 07.0	+0.3
	1μm,0.2s						
AAA	Alma-Ata	0.44	188	P	Pg	12 10 00.4	+0.2
	367nm,0.1s						
AAA				S	Sb	12 10 07.0	+0.3
	1μm,0.2s						
AAA	Alma-Ata	0.44	188	eP	Pg	12 10 00.4	+0.2
	baz=87						
AAA				eS	Sb	12 10 07.0	+0.3
	baz=87						
MDOK	Medeo	0.48	176	eP	Pg	12 10 00.7	-0.3
	120nm,0.3s						
MDOK				eS	Sg	12 10 07.6	0.0
	600nm,0.4s						
MDOK	Medeo	0.48	176	⇑P	Pg	12 10 00.6	-0.4
	43nm,0.4s						
MDOK				⇑S	Sg	12 10 07.5	0.0
	134nm,0.4s						
MDOK	Medeo	0.48	176	Pg	Pg	12 10 00.7	-0.3
	120nm,0.3s						
MDOK				Lg	Lg	12 10 07.6	
	600nm,0.4s						
MDOK	Medeo	0.48	176	eP	Pg	12 10 00.7	-0.3
	baz=75						
MDOK				eS	Sg	12 10 07.5	0.0
	baz=75						
KUU	Kurty	0.54	298	eP	Pg	12 10 01.5	-0.5
	18nm,0.1s						
KUU				eS	Sg	12 10 08.9	-0.4
	680nm,0.2s						
KUU	Kurty	0.54	298	P	Pg	12 10 01.5	-0.5
	18nm,0.1s						
KUU				S	Sg	12 10 08.9	-0.4
	680nm,0.2s						
KUU	Kurty	0.54	298	eP	Pg	12 10 01.5	-0.5
	baz=97						
KUU				eS	Sg	12 10 08.9	-0.4
	baz=97						
TNSS	Tian-Shan	0.60	184	eP	Pg	12 10 03.1	-0.3
	87nm,0.2s						
TNSS				eS	Sg	12 10 11.7	+0.1
	168nm,0.1s						
TNSS	Tian-Shan	0.60	184	P	Pg	12 10 03.1	-0.3
	87nm,0.2s						
TNSS				S	Sg	12 10 11.7	+0.1
	168nm,0.3s						
TNSS	Tian-Shan	0.60	184	eP	Pg	12 10 03.1	-0.3
	baz=83						
TNSS				eS	Sg	12 10 11.6	+0.1
	baz=83						
MTBS	Maitube	0.66	219	eP	Pb	12 10 03.8	-0.4
	132nm,0.2s						
MTBS				eS	Sb	12 10 13.0	+0.1
	488nm,0.3s						
MTBS	Maitube	0.66	219	P	Pb	12 10 03.8	-0.4
	132nm,0.2s						
MTBS				S	Sb	12 10 13.0	+0.1
	488nm,0.3s						
MTBS	Maitube	0.66	219	eP	Pb	12 10 03.8	-0.4
	baz=18						
MTBS				eS	Sb	12 10 13.1	+0.1
	baz=18						
IZV	Izvestkoviy	0.67	205	eP	Pb	12 10 03.1	-1.3
	49nm,0.1s						
IZV				eS	Sb	12 10 12.2	-1.1
	467nm,0.2s						
IZV	Izvestkoviy	0.67	205	P	Pb	12 10 03.1	-1.3
	49nm,0.1s						
IZV				S	Sb	12 10 12.2	-1.1
	467nm,0.2s						
IZV	Izvestkoviy	0.67	205	eP	Pb	12 10 03.1	-1.3
	baz=4.0						
IZV				eS	Sb	12 10 12.3	-1.1
	baz=4.0						
KURS	Kuram	0.87	100	eP	Pb	12 10 07.3	-0.4
	5.6nm,0.3s						
KURS				eS	Sb	12 10 18.9	-0.1
	58nm,0.2s						
KURS	Kuram	0.87	100	P	Pb	12 10 07.3	-0.4
	5.6nm,0.3s						
KURS				S	Sb	12 10 18.9	-0.1
	58nm,0.2s						
KURS	Kuram	0.87	100	eP	Pb	12 10 07.3	-0.4
	baz=0.0						
KURS				eS	Sb	12 10 18.9	-0.1
	baz=0.0						
KRBS	Karabastau	0.96	274	eP	Pb	12 10 08.8	-0.5
	42nm,0.2s						
KRBS				eS	Sb	12 10 21.8	0.0
	326nm,0.2s						
KRBS	Karabastau	0.96	274	P	Pb	12 10 08.9	-0.5
	42nm,0.2s						
KRBS				S	Sb	12 10 21.8	0.0
	326nm,0.2s						
KRBS	Karabastau	0.96	274	eP	Pb	12 10 08.9	-0.5
	baz=73						
KRBS				eS	Sb	12 10 21.8	0.0
	baz=73						
KST	Kastek	0.96	232	eP	Pb	12 10 09.1	-0.4
	140nm,0.2s						
KST				eS	Sb	12 10 21.9	+0.1
	213nm,0.2s						
KST	Kastek	0.96	232	P	Pb	12 10 09.1	-0.4
	140nm,0.2s						
KST				S	Sb	12 10 21.9	+0.1
	213nm,0.2s						
KST	Kastek	0.96	232	eP	Pb	12 10 09.1	-0.4
	baz=31						
KST				eS	Sb	12 10 22.0	+0.1
	baz=31						
ANVS	Anan'yevo	0.99	150	⇑iP	Pb	12 10 09.5	-0.4
	baz=50						
ANVS				⇑iS	Sb	12 10 22.5	-0.1
	baz=50						
ZHN	Zhinishke	1.15	114	eP	Pn	12 10 12.2	-0.3
	31nm,0.2s						
ZHN				eS	Sb	12 10 27.2	-0.1
	232nm,0.3s						
ZHN	Zhinishke	1.15	114	P	Pn	12 10 12.2	-0.3
	31nm,0.2s						
ZHN				S	Sb	12 10 27.2	-0.1
	232nm,0.3s						
ZHN	Zhinishke	1.15	114	eP	Pn	12 10 12.2	-0.3
	baz=14						
ZHN				eS	Sb	12 10 27.2	-0.1
	baz=14						
SATY	Saty	1.18	119	eP	Pb	12 10 13.2	+0.1
	24nm,0.2s						
SATY				eS	Sn	12 10 29.1	+0.5
	162nm,0.2s						
SATY	Saty	1.18	119	P	Pb	12 10 13.3	+0.1
	24nm,0.2s						
SATY				S	Sn	12 10 29.1	+0.5
	162nm,0.2s						
SATY	Saty	1.18	119	eP	Pb	12 10 13.2	+0.1
	baz=19						
SATY				eS	Sn	12 10 29.1	+0.5
	baz=19						
KPKS	Kokpek	1.24	98	eP	Pn	12 10 13.7	0.0
	22nm,0.2s						
KPKS				eS	Sn	12 10 30.2	+0.2
	457nm,0.3s						
KPKS	Kokpek	1.24	98	eP	Pn	12 10 13.7	0.0
	baz=98						
KPKS				eS	Sn	12 10 30.2	+0.2
	baz=98						
TKM2	Tokmak 2	1.25	235	⇓P	Pn	12 10 13.8	-0.2
	37nm,0.1s,SNR=243						
TKM2				⇓S	Sn	12 10 30.7	+0.3
	442nm,0.1s						
TKM2	Tokmak 2	1.25	235	⇑P	Pn	12 10 13.8	-0.2
	5.1nm,0.2s						
TKM2				⇓S	Sn	12 10 30.9	+0.5
	83nm,0.2s						
TKM2	Tokmak 2	1.25	235	⇓iP	Pn	12 10 13.8	-0.2
	baz=35						
TKM2				⇓eS	Sn	12 10 31.1	+0.6
	baz=35						
BOOM	Boomskoye usch	1.39	214	⇓iP	Pb	12 10 16.4	-0.3
	baz=14						
BOOM				⇓iS	Sb	12 10 35.0	+0.9
	baz=14						
ULHL	Ulahol	1.50	202	P	Pb	12 10 18.7	0.0
	42nm,0.2s,SNR=221						
ULHL				⇓S	Sb	12 10 38.7	+1.2
	50nm,0.2s						
ULHL	Ulahol	1.50	202	⇑iP	Pn	12 10 18.0	+0.6
	baz=2.0						
ULHL				⇑iS	Sb	12 10 37.9	+0.5
	baz=2.0						
KDJ	Kajisay	1.52	175	⇑iP	Pb	12 10 18.4	-0.5
	baz=74						
KDJ				⇑iS	Sb	12 10 38.3	+0.5
	baz=74						
PRZ	Przheval'sk	1.55	138	⇑iP	Pb	12 10 19.2	-0.2
	baz=38						
PRZ				⇑iS	Sb	12 10 39.8	+1.0
	baz=38						
UZB	Uzynbulak	1.56	108	eP	Pb	12 10 19.4	-0.2
	14nm,0.2s						
UZB				eS	Sb	12 10 39.3	+0.3
	96nm,0.4s						
UZB	Uzynbulak	1.56	108	P	Pb	12 10 19.2	-0.4
	14nm,0.2s						
UZB				S	Sb	12 10 39.1	+0.2
	96nm,0.4s						
UZB	Uzynbulak	1.56	108	eP	Pb	12 10 19.4	-0.2
	baz=8.0						
UZB				eS	Sb	12 10 39.3	+0.3
	baz=8.0						
TDK	Taldyqorghan	1.69	36	eP	Pb	12 10 21.6	-0.3
	73nm,0.2s						
TDK				eS	Sb	12 10 43.3	+0.5
	324nm,0.5s						
TDK	Taldyqorghan	1.69	36	P	Pb	12 10 21.6	-0.3
	73nm,0.2s						
TDK				S	Sb	12 10 43.3	+0.5
	324nm,0.5s						
SGDS	Sogindy	1.73	265	eP	Pb	12 10 22.4	-0.1
	12nm,0.1s						
SGDS				eS	Sb	12 10 44.7	+0.8
	159nm,0.3s						
SGDS	Sogindy	1.73	265	P	Pb	12 10 22.5	-0.1
	12nm,0.1s						
SGDS				S	Sb	12 10 44.7	+0.8
	159nm,0.3s						
CHMS	Chumysh	1.76	249	⇑P	Pn	12 10 21.9	+1.1
	19nm,0.2s,SNR=8.0						
CHMS				⇑S	Sb	12 10 45.5	+0.7
	146nm,0.2s						
CHMS	Chumysh	1.76	249	⇑P	Pn	12 10 21.9	+1.1
	3.6nm,0.2s						
CHMS				⇓S	Sb	12 10 45.3	+0.6
	48nm,0.2s						
CHMS	Chumysh	1.76	249	⇑iP	Pn	12 10 22.0	+1.2
	baz=49						
CHMS				⇑iS	Sb	12 10 44.6	-0.1
	baz=49						
KBK	Karagaybulak	1.79	237	⇓P	Pb	12 10 23.2	-0.5
	43nm,0.2s,SNR=34						
KBK				⇑S	Sb	12 10 47.6	+1.7
	322nm,0.3s						
KBK	Karagaybulak	1.79	237	⇑iP	Pn	12 10 22.4	+1.0
	baz=37						
KBK				⇑eS	Sb	12 10 45.6	-0.2
	baz=37						
PDGK	Podgornoye	1.84	99	P	Pb	12 10 24.4	0.0
	12nm,0.5s						
PDGK				S	Sb	12 10 48.2	+1.0
	15nm,0.3s						
PDGK	Podgornoye	1.84	99	⇑P	Pn	12 10 23.3	+1.2
	13nm,0.5s						
PDGK				⇑S	Sb	12 10 47.9	+0.7
	10nm,0.3s						
USP	Ospenovka	1.86	259	⇓P	Pn	12 10 23.2	+1.0
	7.8nm,0.1s,SNR=8.9						
USP	Ospenovka	1.86	259	⇓iP	Pn	12 10 23.2	+1.0
	baz=59						
USP				⇓iS	Sb	12 10 47.1	-0.4
	baz=59						
FRU1	Bishkek	1.92	245	⇓eP	Pn	12 10 24.0	+0.9
	baz=45						
FRU1				⇓eS	Sb	12 10 48.4	-1.0
	baz=45						
AAK	Ala-Archa	2.09	242	⇓P	Pb	12 10 28.0	-0.7
	8.6nm,0.2s,SNR=13						
AAK				⇓S	Sb	12 10 54.9	+0.6
	76nm,0.4s						
AAK	Ala-Archa	2.09	242	⇑iP	Pn	12 10 26.5	+1.0
	baz=42						
AAK				⇑eS	Sn	12 10 52.8	+1.7
	baz=42						
DJR	Jarkent	2.13	70	eP	Pb	12 10 29.2	-0.1
	8.3nm,0.3s						
DJR				eS	Sb	12 10 56.5	+1.0
	47nm,0.3s						
DJR	Jarkent	2.13	70	Pg	Pb	12 10 29.3	-0.1
	8.3nm,0.3s						
DJR				Lg	Lg	12 10 56.5	
	47nm,0.3s						
UCH	Uchtor	2.31	233	⇑P	Pb	12 10 31.9	-0.7
	6.7nm,0.1s,SNR=16						
UCH				⇓S	Sb	12 11 02.4	+1.5
	98nm,0.6s						
UCH	Uchtor	2.31	233	⇑eP	Pn	12 10 29.7	+1.0
	baz=33						
UCH				⇑iS	Sn	12 10 58.2	+1.3
	baz=33						
KAPS	Kapalarasan	2.36	45	eP	Pb	12 10 32.8	-0.3
	16nm,0.3s						
KAPS				eS	Sb	12 11 02.8	+0.8
	114nm,0.3s						
KAPS	Kapalarasan	2.36	45	Pg	Pb	12 10 32.8	-0.3
	16nm,0.3s						
KAPS				Lg	Lg	12 11 02.8	
	114nm,0.3s						
KTMS	Ketmen	2.45	93	eP	Pb	12 10 34.1	-0.7
	4.3nm,0.3s						
KTMS				eS	Sb	12 11 04.5	-0.1
	16nm,0.4s						
KTMS	Ketmen	2.45	93	Pg	Pb	12 10 33.8	-0.9
	4.3nm,0.3s						
KTMS				Lg	Lg	12 11 04.4	
	16nm,0.4s						
BTLS	Baital	2.54	304	eP	Pb	12 10 36.0	-0.2
	2.3nm,0.2s						
BTLS				eS	Sb	12 11 08.1	+1.0
	8.2nm,0.3s						
BTLS	Baital	2.54	304	Pg	Pb	12 10 36.0	-0.2
	2.3nm,0.2s						
BTLS				Lg	Lg	12 11 08.1	
	8.2nm,0.3s						
EKS2	Erkin-Say	2.55	249	⇑iP	Pn	12 10 32.8	+1.0
	baz=48						
EKS2				⇑iS	Sn	12 11 04.0	+1.5
	baz=48						
ARLS	Aral	2.65	229	⇑iP	Pn	12 10 34.6	+1.4
	baz=28						
ARLS				⇑iS	Sn	12 11 06.6	+1.6
	baz=28						
MRKS	Merke	2.90	253	eP	Pg	12 10 44.9	-1.9
	6.2nm,0.4s						
MRKS				eS	Sg	12 11 23.7	-0.7
	30nm,0.1s						
MRKS	Merke	2.90	253	Pg	Pg	12 10 45.2	-1.6
	6.2nm,0.4s						
MRKS				Lg	Lg	12 11 23.7	
	30nm,0.3s						
MAKZ	Makanchi	4.73	46	⇑Pn	Pn	12 11 03.0	+1.3
	1.3nm,0.8s						
MAKZ				⇑Lg	Lg	12 12 16.3	
	7.0nm,0.8s						
KK31	Karatay Array	4.76	266	⇓Pg	Pb	12 11 15.8	+1.7
	0.7nm,0.4s,baz=78,slow=15,SNR=4.8						
KK31				⇑Lg	Lg	12 12 17.5	
	2.5nm,0.3s,baz=78,slow=28,SNR=6.7						
KKAR	Karatay Array	4.76	266	⇑iP	Pn	12 11 03.4	+1.4
	baz=66						
KKAR				⇑iS	Sn	12 11 56.7	0.0
	baz=66						
MK31	Makanchi Array	4.89	48	Pn	Pn	12 11 05.2	+1.3
	0.6nm,0.3s,baz=224,slow=14,SNR=13						
MK31				⇓Lg	Lg	12 12 22.1	
	0.9nm,0.3s,baz=227,slow=32,SNR=7.4						
OTUK	Ortayu	5.63	326	⇑Pn	Pn	12 11 13.7	-0.4
	0.8nm,0.3s						
OTUK				⇓Sn	Sn	12 12 16.8	-1.5
	2.2nm,0.4s						
OTUK				⇑Lg	Lg	12 12 44.1	
	5.7nm,0.4s						
KURBB	Kurchatov Arra	7.06	8	⇑Pn	Pn	12 11 32.8	-0.8
	1.5nm,0.8s						
KURBB				⇑Lg	Lg	12 13 31.9	
	21nm,0.7s						
KURK	Kurchatov	7.16	8	⇑Pn	Pn	12 11 32.9	-2.0
	0.7nm,0.6s						
KURK				⇓Lg	Lg	12 13 32.5	
	12nm,1.0s						

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*IDC **06** 12:10:37.5±2.9, 2°.88N×93°.34E, h0km, mb3.5/2, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=73.9km s-min=31.3km az=54.0*
*NEIC **06** 12:10:39.2±0.5, 2°.32N±0°.07×92°.80E±0°.10, h10km±2km, mb4.4/6, Error ellipse: s-maj=16.5km s-min=11.1km az=286.0*
ISC 06 12:10:38.1±1.1**, 2°.3N**±0°.2×**92°.8E**±0°.1**, h10**km**, n19, σ1ˢ.29**/14**, mb4.2**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	4.90	102		Pn	12 11 52.5	+0.6
LHMI	Lhok Sumawe	5.05	55	Pn	Pn	12 11 55.0	+1.0
PSI	Prapat	6.15	86	Pn	Pn	12 12 01.6	-7.7
	0.5nm,0.3s,baz=172,slow=20,SNR=1.5						
PSI				Sn	Sn	12 13 00.5	-19
	1.4nm,0.3s,baz=286,slow=12,SNR=1.7						
	1.8nm,0.4s						
KULM	Kulim	8.38	69	Pn	Pn	12 12 40.4	+0.6
IPM	Ipoh	8.50	75	Pn	Pn	12 12 42.7	+1.3
MNAI	Manna	12.15	123	Pn	Pn	12 13 31.6	+0.2
PALK	Pallekele	12.99	293	Pn	Pn	12 13 44.4	+1.4
	0.5nm,0.3s,baz=230,slow=12,SNR=1.9						
PALK				Sn	Sn	12 15 56.7	-11
	2.0nm,0.3s,baz=313,slow=23,SNR=13						
CMAR	Chiang Mai Arr	17.12	20	Pn	Pn	12 14 31.0	-6.7
	0.4nm,0.3s,baz=212,slow=12,SNR=2.5						
	0.4nm,0.3s						
H08S2	Diego Garcia H	22.54	244	T	T	12 41 21.5	
	baz=62,slow=75,SNR=12						
H08S3	Diego Garcia H	22.54	244	T	T	12 41 24.4	
	baz=62,slow=75,SNR=27						
H08S1	Diego Carcia H	22.56	244	T	T	12 41 20.4	
	baz=62,slow=75,SNR=11						
MK31	Makanchi Array	45.21	350	P	P	12 18 53.8	-1.6
MK31				IAmb	IAmb	12 19 10.5	
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	45.21	350	P	P	12 18 52.7	-2.7
	comp=Z,0.4nm,0.7s,baz=147,slow=7.9,SNR=2.7						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	45.21	350	P	P	12 18 54.0	-1.4
WB0	Warramunga Arr	46.37	120	P	P	12 19 04.6	-0.4
WB0				IAmb	IAmb	12 19 15.4	
	comp=Z,8.7nm,1.5s						
WRA	Warramunga Arr	46.40	120	P	P	12 19 04.5	-0.7
	comp=Z,0.9nm,0.8s,baz=302,slow=8.8,SNR=10.0						
	comp=Z,0.9nm,0.8s						
WRAB	Tennant Creek	46.40	120	P	P	12 19 05.1	-0.1
WRAB				IAmb	IAmb	12 19 32.3	
	comp=Z,7.0nm,1.3s						
WB2	Warramunga Arr	46.41	120	P	P	12 19 05.1	-0.2
WR0	Warramunga Arr	46.58	120	P	P	12 19 06.6	0.0
WR0				IAmb	IAmb	12 19 14.0	
	comp=Z,7.0nm,1.3s						

WEL 06 12:21:39.1±1.2**, 33°S**±7°×**17°9E**±2°6**, h33**km**, M3.9**/14**, mB4.6**/12**, ML4.3**/23**, MLv4.0**/14**, Mw(mB)3.9**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=93.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	5.25	186	P	Pn	12 22 57.0	+1.8
WMGZ				S	Sn	12 23 56.2	+1.6
HAZ	Te Kaha	5.27	192	P	Pn	12 22 57.7	+2.2
HAZ				S	Sn	12 23 57.5	+2.4
PKGZ	Pakihiroa	5.36	189	P	Pn	12 22 58.7	+1.9
PKGZ				S	Sn	12 23 58.8	+1.4
RUGZ	Raukumara Rang	5.49	192	P	Pn	12 22 59.5	+0.8
RUGZ				S	Sn	12 24 02.2	+1.4
PUZ	Puketiti	5.52	187	P	Pn	12 22 59.3	+0.4
PUZ				S	Sn	12 24 00.0	-1.2
TWGZ	Tauwhareparae	5.65	189	P	Pn	12 23 02.4	+1.5
TWGZ				S	Sn	12 24 05.1	+0.4
MWZ	Matawai	5.88	192	P	Pn	12 23 04.0	+0.1
MWZ				S	Sn	12 24 09.6	-0.6
URZ	Urewera	5.89	196	P	Pn	12 23 05.2	+1.1
URZ				S	Sn	12 24 10.7	+0.3
TKGZ	Te Karaka	5.93	190	P	Pn	12 23 05.1	+0.5
CNGZ	Carnagh Statio	5.93	187	P	Pn	12 23 04.8	+0.2
MKRZ	Makatiti	5.95	201	P	Pn	12 23 07.6	+2.7
MUGZ	Murupara	6.18	197	P	Pn	12 23 09.2	+1.2
RIGZ	Rimuhau	6.20	190	P	Pn	12 23 08.5	+0.1
RTZ	Ruatahuna	6.26	196	P	Pn	12 23 08.6	-0.6
MTHZ	Maungataniwha	6.52	196	P	Pn	12 23 12.6	-0.2
KNZ	Kokohu	6.53	190	P	Pn	12 23 11.4	-1.4
MRHZ	Matea Rd	6.61	199	P	Pn	12 23 14.1	+0.1
NMHZ	Naumai	6.76	195	P	Pn	12 23 15.9	-0.2
ARHZ	Aropaoanui	6.88	194	P	Pn	12 23 17.1	-0.5
BKZ	Black Stump Fm	6.90	197	P	Pn	12 23 17.5	-0.5
NTVZ	North Tongarir	7.07	202	P	Pn	12 23 21.1	+0.7
TMVZ	Te Maari	7.08	202	P	Pn	12 23 20.9	+0.4
ETVZ	East Tongariro	7.09	202	P	Pn	12 23 21.0	+0.3
OTVZ	Oturere	7.13	202	P	Pn	12 23 21.7	+0.4
SNVZ	South Ngauruho	7.16	202	P	Pn	12 23 22.1	+0.4
CKHZ	Cape Kidnapper	7.25	193	P	Pn	12 23 20.7	-1.9
BHHZ	Black Hill Sta	7.32	199	P	Pn	12 23 22.1	-1.6
KRHZ	Kereru	7.38	197	P	Pn	12 23 22.3	-2.3
PXZ	Pawanui	7.65	193	P	Pn	12 23 24.7	-3.4
PNHZ	Pukenui	7.68	197	P	Pn	12 23 25.9	-2.8

NOU 06 12:22:38.8, 16°.35S×167°.47E, h12km**, ML3.5**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.93	344	P	Pg	12 22 56.6	-0.2
DVP	Devils Point	1.53	153	P	Pn	12 23 06.2	+0.2
MARNC	Mare, Loyalty	5.13	174	P	Pn	12 23 55.8	+0.3
DZM	Mont Dzumac	5.77	190	P	Pn	12 24 03.6	-0.8
	13nm,1.1s						

IDC 06 12:22:51.1±3.3**, 22°.67N×11°.70W, h0**km**, mb3.5**/1**, mbtmp3.6**/3**, ML3.5**/2**, Error ellipse: s-maj=109.4km s-min=40.0km az=84.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**15.87**	**124**	Pn	Pn	12 26 37.3	+1.3
	0.1nm,0.3s,baz=310,slow=12,SNR=3.0						
TORD				Sn	Sn	12 29 28.3	-4.4
	baz=327,slow=22,SNR=1.6						
	0.4nm,0.6s						
DBIC	**Dimbokro**	**17.22**	**156**	Pn	Pn	12 26 51.1	-2.1
	0.3nm,0.3s,baz=338,slow=12,SNR=1.3						
DBIC				Sn	Sn	12 29 51.9	-14
	0.2nm,0.3s,baz=76,slow=1.9,SNR=3.6						
	2.1nm,0.5s						
GERES	**GERESS Array B**	**32.98**	**31**	P	P	12 29 27.1	-0.7
	0.4nm,0.6s,baz=204,slow=9.5,SNR=2.4						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**148.28**	**92**	PKPbc	PKPbc	12 42 39.7	-0.4
	0.5nm,1.0s,baz=292,slow=2.5,SNR=1.8						
ASAR	**Alice Springs**	**148.41**	**99**	PKPbc	PKPbc	12 42 40.1	-0.2
	0.3nm,0.6s,baz=285,slow=2.3,SNR=5.5						

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*BJI **06** 12:46:29.9±0.0, 59°.67N×146°.62E, h14^{km}, mb4.4/38, mB4.7/23, Ms4.5/32, Ms7 4.3/32*

*MOS **06** 12:46:30.4±0.8, 59°.61N×146°.34E, h9^{km}, mb4.8/53, MS3.9/16, Error ellipse: s-maj=9.5km s-min=4.9km az=84.0*

MOS Felt (III) at Magadan.

*IDC **06** 12:46:30.5±0.4, 59°.56N×146°.40E, h0^{km}, mb4.0/33, mbtmp4.1/38, ML4.5/5, MS3.7/60, Error ellipse: s-maj=12.3km s-min=6.9km az=1.0*

*NERS **06** 12:46:31.4±0.0, 59°.70N×146°.50E, h10^{km}*

*NEIC **06** 12:46:32.2±1.4, 59°.55N±0°.07×146°.3E±0°.1, h10^{km}±1^{km}, mb4.7/176, Error ellipse: s-maj=12.2km s-min=10.1km az=181.0*

ISC 06 12:46:32.6±0.3, **59°.55N**±0°.03×**146°.45E**±0°.03, **h10^{km}, n475,** σ**1^s.61**/469, **mb4.7**/148, **MS3.9**/70, **11C-4D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MA2	**Magadan**	**2.20**	**88**	Pn	**Pn**	**12 47 08.3**	**-0.8**
	86nm,0.3s,baz=248,slow=14,SNR=140						
MA2				Pg	**Pb**	**12 47 11.6**	**-0.9**
	316nm,0.3s,baz=276,slow=17,SNR=112						
MA2				Lg	Lg	12 47 40.3	
	2µm,0.3s,baz=137,slow=20,SNR=24						
	343nm,0.3s						
MA2	**Magadan**	**2.20**	**88**	*e*P	**Pn**	**12 47 08.4**	**-0.8**
MA2				*e*Pg	**Pb**	**12 47 12.1**	**-0.3**
MA2				Pgmax		12 47 12.5	
	310nm,0.2s						
MA2				*e*Sg	**Sb**	**12 47 40.6**	**+0.9**
MA2				Sgmax		12 47 42.4	
	6µm,0.3s						
MGD	**Magadan 1**	**2.22**	**75**	*e*P	**Pn**	**12 47 07.7**	**-1.8**
MGD				*e*Pg	**Pb**	**12 47 10.6**	**-2.2**
MGD				Pgmax		12 47 11.5	
	900nm,0.2s						
MGD				*e*Sg	**Sb**	**12 47 39.7**	**-0.6**
MGD				Sgmax		12 47 41.5	
	7µm,0.3s						
MGD				Sgmax		12 47 41.5	
	3µm,0.3s						
OCHR	**Omchak**	**2.23**	**18**	*e*P	**Pn**	**12 47 07.6**	**-2.1**
OCHR				*e*Pg	**Pb**	**12 47 09.9**	**-3.1**
OCHR				*e*		12 47 13.2	
OCHR				Pgmax		12 47 13.8	
	1µm,0.4s						
OCHR				*e*Sg	**Sn**	**12 47 37.8**	**+0.5**
OCHR				Sgmax		12 47 39.2	
	2µm,0.4s						
OCHR				Sgmax		12 47 39.2	
	2µm,0.4s						
SUUS	**Susuman**	**3.34**	**14**	*e*P	**Pn**	**12 47 22.0**	**-2.9**
SUUS				*e*		12 48 11.8	
SUUS				pmax	pmax		
	comp=Z,180nm,0.3s						
SUUS				smax	smax		
	comp=E,3µm,0.5s						
SUUS	**Susuman**	**3.34**	**14**	*e*P	**Pn**	**12 47 22.0**	**-2.9**
SUUS				*e*		12 47 26.9	
SUUS				*e*Pg	**Pb**	**12 47 32.2**	**+0.3**
SUUS				Pgmax		12 47 32.7	
	comp=E,180nm,0.3s						
SUUS				*e*Sg	**Sb**	**12 48 11.8**	**-0.8**
SUUS				Sgmax		12 48 15.2	
	comp=E,4µm,0.5s						
TLAR	**Talaya**	**3.35**	**59**	*e*P	**Pn**	**12 47 24.2**	**-0.9**
TLAR				*e*Pg	**Pb**	**12 47 31.8**	**-0.3**
TLAR				Pgmax		12 47 34.8	
	comp=E,450nm,0.3s						
TLAR				*e*Sg	**Sb**	**12 48 14.4**	**+1.5**
TLAR				Sgmax		12 48 16.5	
	comp=E,7µm,0.3s						
TLAR				Sgmax		12 48 16.5	
	comp=E,2µm,0.3s						
SEY	**Seymchan**	**4.44**	**38**	Pn	**Pn**	**12 47 38.5**	**-1.4**
	comp=E,8.2nm,0.3s,baz=261,slow=23,SNR=106						
SEY				Pg	**Pb**	**12 47 52.2**	**+1.6**
	comp=E,30nm,0.3s,baz=246,slow=14,SNR=12						
SEY				Sn	**Sn**	**12 48 27.2**	**-4.3**
	comp=E,53nm,0.3s,baz=221,slow=23,SNR=3.0						
SEY				Lg	Lg	12 48 47.4	
	comp=E,77nm,0.3s,baz=244,slow=16,SNR=7.5						
SEY				LR	LR	12 49 37.1	
	comp=E,515nm,19.0s,baz=246,slow=42						
	comp=E,24nm,0.3s						
SEY	**Seymchan**	**4.44**	**38**	*e*P	**Pn**	**12 47 38.5**	**-1.4**
SEY				*e*		12 47 42.9	
SEY				*e*Pg	**Pb**	**12 47 52.4**	**+1.8**
SEY				Pgmax		12 47 59.1	
	comp=E,150nm,0.3s						
SEY				*e*Sg	**Sb**	**12 48 47.9**	**+3.8**
SEY				Sgmax		12 48 53.9	
	comp=E,680nm,0.3s						
SEY				Sgmax		12 48 53.9	
	comp=E,1µm,0.4s						
OMS	**Omsukchan**	**5.42**	**53**	*e*P	**Pn**	**12 47 51.9**	**-1.5**
OMS				*e*Pg	**Pb**	**12 48 08.9**	**+1.6**
OMS				Pgmax		12 48 09.4	
	comp=E,30nm,0.3s						
OMS				*e*Sg	**Sb**	**12 49 18.1**	**+5.8**
OMS				Sgmax		12 49 24.0	
	comp=E,190nm,0.3s						
OMS				Sgmax		12 49 24.0	
	comp=E,320nm,0.3s						
OKH	**Okha**	**6.33**	**199**⇓	*e*P	**Pn**	**12 48 07.0**	**+1.2**
OKH				*i* S	**Sn**	**12 49 15.9**	**-2.1**
OKH				pmax	pmax		
	comp=Z,224nm,0.5s						
OKH				smax	smax		
	comp=N,902nm,1.0s						
OKH				smax	smax		
	comp=E,1µm,0.4s						
EVEN	**Evensk**	**6.70**	**64**	*e*P	**Pn**	**12 48 10.5**	**-0.4**
EVEN				*e*Pg	Pb	12 48 34.7	+5.7
EVEN				Pgmax		12 48 35.7	
	comp=E,80nm,0.4s						
EVEN				*e*Sg	**Sg**	**12 50 03.9**	**-3.5**
EVEN				Sgmax		12 50 16.8	
	comp=E,1µm,0.6s						
EVEN				Sgmax		12 50 16.8	
	comp=E,910nm,0.8s						
YAK	**Yakutsk**	**8.56**	**294**	*e*P	**Pn**	**12 48 37.0**	**+0.5**
YAK				*e*		12 50 10.8	
YAK				pmax	pmax		
	comp=Z,17nm,0.4s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.5s						
YAK				smax	smax		
	comp=E,14nm,0.8s						
YAK				smax	smax		
	comp=N,8.0nm,0.4s						
YAK				smax	smax		
	comp=E,673nm,1.3s						
YAK				smax	smax		
	comp=N,375nm,1.0s						
YAK				MLR	MLR		
	comp=Z,1µm,10.6s						
YAK	**Yakutsk**	**8.56**	**294**	Pn	**Pn**	**12 48 34.8**	**-1.7**
TYV	**Tymovskoe**	**8.97**	**196**	*e*P	Pn	12 48 48.9	+6.7
TYV				pmax	pmax		
	comp=Z,14nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,2.8s						
PEA0B	**Petropavlovsk-**	**8.98**	**131**⇓	*i*P	**Pn**	**12 48 44.1**	**+1.9**
PEA0B	**Petropavlovsk-**	**8.98**	**131**	Pn	**Pn**	**12 48 44.2**	**+2.0**
PETK	**Petropavlovsk-**	**8.98**	**131**	Pn	**Pn**	**12 48 43.3**	**+1.0**
	comp=Z,10nm,0.3s,baz=320,slow=7.8,SNR=205						
PETK				Sn	**Sn**	**12 50 22.2**	**-1.1**
	baz=44,slow=8.9						
PETK				LR	LR	12 52 55.6	
	comp=Z,396nm,18.3s,baz=312,slow=43						
	comp=Z,14nm,0.4s						
PETK	**Petropavlovsk-**	**8.98**	**131**	P	**Pn**	**12 48 43.4**	**+1.2**
PET	**Petropavlovsk**	**9.42**	**129**	*e*P	**Pn**	**12 48 49.6**	**+1.4**
PET				*e*S	**Sn**	**12 50 33.8**	**-0.2**
PET				MLR	MLR		
	comp=Z,800nm,12.0s						
PET				MLR	MLR		
	comp=Z,1µm,11.0s						
PET	**Petropavlovsk**	**9.42**	**129**	Pn	**Pn**	**12 48 48.5**	**+0.3**
SKR	**Severo-Kuril's**	**10.46**	**144**	*e*P	Pn	12 48 53.2	-9.3
SKR				*e*S	**Sn**	**12 51 04.8**	**+5.2**
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
GRNR	**Gornyy**	**10.49**	**217**⇓	*i*P	**Pn**	**12 49 05.2**	**+2.2**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GRNR				MLR	MLR		
	comp=E,180nm,17.0s						
GRNR				MLR	MLR		
	comp=N,420nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,460nm,14.0s						
ZEA	**Zeya**	**12.04**	**249**	*e*P	**Pn**	**12 49 26.9**	**+2.8**
ZEA				pmax	pmax		
	comp=Z,100nm,1.7s						
ZEA				pmax	pmax		
	comp=E,20nm,1.6s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.4s						
ZEA				MLR	MLR		
	comp=E,600nm,14.0s						
ZEA				MLR	MLR		
	comp=N,600nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,12.0s						
BILL	**Bilibino**	**12.14**	**37**⇑	*e*P	**Pn**	**12 49 26.9**	**+1.4**
BILL				*e*S	**Sn**	**12 51 39.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
BILL				MLR	MLR		
	comp=Z,387nm,12.0s						
BILL	**Bilibino**	**12.14**	**37**		**Pn**	**12 49 27.3**	**+1.9**
YSS	**Yuzh-Sakhalins**	**12.81**	**191**	*e*P	**Pn**	**12 49 36.5**	**+1.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
KLR	**Kul'dur**	**13.39**	**226**	Pn	**Pn**	**12 49 45.5**	**+3.0**
	comp=N,0.8nm,0.3s,baz=27,slow=9.1,SNR=12						
KLR				LR	LR	12 54 38.6	
	comp=N,158nm,20.1s,baz=37,slow=36						
KLR	**Kul'dur**	**13.39**	**226***c*	*i*P	**Pn**	**12 49 46.3**	**+3.8**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLR				MLR	MLR		
	comp=Z,914nm,14.0s						
TIXI	**Tiksi**	**14.05**	**337**	Pn	**Pn**	**12 49 50.4**	**-1.0**
	comp=Z,35nm,0.3s,baz=91,slow=23,SNR=13						
TIXI				LR	LR	12 55 53.8	
	comp=Z,143nm,19.4s,baz=181,slow=40						
	comp=Z,1.6nm,0.4s						
TIXI	**Tiksi**	**14.05**	**337**	P	**Pn**	**12 49 50.8**	**-0.6**
TIXI	**Tiksi**	**14.05**	**337**	Pn	**Pn**	**12 49 50.8**	**-0.6**
ASAJ	**Asahikawa**	**15.64**	**190**	Pn	**Pn**	**12 50 13.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=355,slow=15,SNR=6.0						
	comp=Z,11nm,0.9s						
JKA	**Kamikawa-asahi**	**15.64**	**190**		**Pn**	**12 50 11.9**	**-1.0**
SHO	**Shikotan**	**15.71**	**179**	*e*P	**Pn**	**12 50 16.5**	**+2.7**
BOD	**Bodaibo**	**16.86**	**278**	*e*P	**Pn**	**12 50 25.7**	**-2.8**
BOD				pmax	pmax		
	comp=Z,36nm,1.2s						
JEW	**Eniwo**	**17.02**	**193**	Pn	**Pn**	**12 50 29.6**	**-1.0**
JEW				IAmb	IAmb	12 50 49.2	
	comp=Z,99nm,1.0s						
ERM	**Erimo**	**17.68**	**188***c*	*e*P	**Pn**	**12 50 39.9**	**+1.1**
ERM				pmax	pmax		
	comp=Z,71nm,1.0s						
ERM				MLR	MLR		
	comp=Z,255nm,16.0s						
ERM	**Erimo**	**17.68**	**188**		**Pn**	**12 50 38.2**	**-0.6**
ERM				IAmb	IAmb	12 50 42.7	
	comp=Z,58nm,0.9s						
USA0B	**Ussuriysk Arra**	**17.71**	**216**	P	**Pn**	**12 50 38.4**	**-0.8**
USA0B				pmax	pmax		
	comp=Z,27nm,1.0s						
USA0B	**Ussuriysk Arra**	**17.71**	**216**		**Pn**	**12 50 38.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**17.71**	**216**	P	**P**	**12 50 41.8**	**+1.8**
	comp=Z,3.9nm,0.9s,baz=42,slow=7.6,SNR=3.1						
USRK				LR	LR	12 57 23.4	
	comp=Z,132nm,19.9s,baz=22,slow=37						
USRK	**Ussuriysk Ar.**	**17.71**	**216**	P	**Pn**	**12 50 38.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**17.71**	**216**		**Pn**	**12 50 38.4**	**-0.7**
VLA	**Vladivostok**	**18.73**	**215**	*e*P	**Pn**	**12 50 54.1**	**+2.5**
VLA				pmax	pmax		
	comp=Z,27nm,1.0s						
VLA				MLR	MLR		
	comp=Z,3µm,17.0s						
GAMB	**Gambell**	**20.02**	**60**	P	**P**	**12 51 05.5**	**+0.3**
GAMB	**Gambell**	**20.02**	**60**	P	**P**	**12 51 05.3**	**+0.1**
	baz=277						
CN2	**Changchun**	**20.31**	**228**	*e*P	Pn	12 51 10.8	+0.3
CN2				*e*S	**S**	**12 54 52.0**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
TNA	**Tin City**	**21.45**	**54**	P	**P**	**12 51 20.6**	**0.0**
TNA				IAmb	IAmb	12 51 26.9	
	comp=Z,32nm,0.8s						
TNA	**Tin City**	**21.45**	**54**	P	**P**	**12 51 20.7**	**+0.2**
	baz=275						
KIWB	**Kanaga Island**	**21.67**	**95**	P	**P**	**12 51 24.6**	**+1.5**
JMM	**Marumori**	**22.01**	**192**	P	**P**	**12 51 25.1**	**-1.7**
JMM				IAmb	IAmb	12 51 40.6	
	comp=Z,27nm,0.9s						
SPIA	**Saint Paul Isl**	**22.54**	**77**	P	**P**	**12 51 32.6**	**+0.3**
	baz=294						
ANM	**Nome**	**22.65**	**57**	P	**P**	**12 51 33.4**	**-0.1**
ANM				pmax	pmax		
	comp=Z,29nm,1.0s						
ANM	**Nome**	**22.65**	**57**	P	**P**	**12 51 33.4**	**-0.1**
ANM				IAmb	IAmb	12 51 41.2	
	comp=Z,29nm,1.0s						
ANM	**Nome**	**22.65**	**57**	P	**P**	**12 51 34.3**	**+0.8**
	baz=280,SNR=6.5						
RDOG	**Red Dog Mine**	**23.23**	**47**	P	**P**	**12 51 38.9**	**-0.6**
RDOG				IAmb	IAmb	12 51 44.3	
	comp=Z,16nm,0.7s						
RDOG	**Red Dog Mine**	**23.23**	**47**	P	**P**	**12 51 39.9**	**+0.3**
	baz=274,SNR=8.4						
MJB9	**Matsu-Tunnel**	**23.64**	**197**	P	**P**	**12 51 42.2**	**-1.6**
MAJO	**Matsushiro**	**23.64**	**197**	*i* P	**P**	**12 51 43.7**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAJO	**Matsushiro**	**23.64**	**197**	P	**P**	**12 51 42.3**	**-1.5**
MJAR	**Matsushiro Arr**	**23.64**	**197**	P	**P**	**12 51 43.0**	**-0.8**
	comp=Z,4.8nm,0.8s,baz=182,slow=23,SNR=5.9						
MJAR				LR	LR	13 01 21.4	
	comp=Z,139nm,20.3s,baz=18,slow=38						
	comp=Z,4.8nm,0.8s						
MJAR	**Matsushiro Arr**	**23.64**	**197**	P	**P**	**12 51 43.0**	**-0.8**
MJAR	**Matsushiro Arr**	**23.64**	**197**	P	**P**	**12 51 42.0**	**-1.8**
XLT	**XiLinHaoTe**	**24.18**	**243**⇑	*i*P	**P**	**12 51 49.8**	**+0.8**
XLT				S	**S**	**12 56 10.1**	**+3.2**
XLT				sS	sS	12 56 14.3	+2.2
XLT				SS	**SnSn**	**12 56 53.5**	**+5.3**
XLT				pmax	pmax		
	comp=Z,22nm,1.3s						
XLT				pmax	pmax		
	comp=Z,74nm,4.5s						
XLT				LR	LR		
	comp=Z,410nm,7.7s						
XLT				LR	LR		
	comp=Z,460nm,8.8s						
KS19	**Wonju Array Si**	**25.09**	**217**	P	**P**	**12 51 55.9**	**-1.3**
KS19				IAmb	IAmb	12 52 00.6	
	comp=Z,22nm,1.2s						
KSRS	**Korea Array**	**25.12**	**217**	P	**P**	**12 51 56.6**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=20,slow=8.4,SNR=2.8						
KSRS				LR	LR	13 02 33.0	
	comp=Z,62nm,19.4s,baz=35,slow=38						
	comp=Z,1.3nm,0.9s						
KSAR	**Wonju Array Be**	**25.14**	**217**	P	**P**	**12 51 55.8**	**-1.8**
KSAR	**Wonju Array Be**	**25.14**	**217**	P	**P**	**12 51 55.8**	**-1.8**
NIKH	**Nikolski High**	**25.27**	**85**	P	**P**	**12 51 59.7**	**+1.0**
	baz=303						
A21K	**Barrow**	**25.28**	**39**	P	**P**	**12 51 57.4**	**-1.1**
A21K	**Barrow**	**25.28**	**39**	P	**P**	**12 51 58.4**	**-0.2**
	baz=272						
INCN	**Inchon**	**25.50**	**219**	P	**P**	**12 51 59.6**	**-1.3**
INCN				pmax	pmax		
	comp=Z,61nm,1.5s						
INCN	**Inchon**	**25.50**	**219**	P	**P**	**12 51 59.6**	**-1.3**
ULN	**Ulaanbaatar**	**25.68**	**261**⇑	*e*P	**P**	**12 52 01.9**	**-0.7**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ULN	**Ulaanbaatar**	**25.68**	**261**	P	**P**	**12 51 59.5**	**-3.1**
ZAK	**Zakamensk**	**25.98**	**269**	*e*P	**P**	**12 52 04.3**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	**26.03**	**261**	P	**P**	**12 52 04.3**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=52,slow=9.5,SNR=13						
SONM				LR	LR	13 02 41.2	
	comp=Z,434nm,18.5s,baz=46,slow=37						
	comp=Z,2.9nm,0.9s						
SONM	**Songino Array**	**26.03**	**261**	P	**P**	**12 52 02.4**	**-3.4**
NRIK	**Noril'sk**	**26.11**	**316**	P	**P**	**12 52 04.2**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=76,slow=12,SNR=2.1						
NRIK				LR	LR	13 02 55.1	
	comp=Z,377nm,19.9s,baz=78,slow=38						
	comp=Z,0.6nm,0.3s						
NRIK	**Noril'sk**	**26.11**	**316***c*	*e*P	**P**	**12 52 07.1**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,13nm,1.6s						
NRIK				MLR	MLR		
	comp=Z,437nm,16.0s						
NRIK	**Noril'sk**	**26.11**	**316**	P	**P**	**12 52 05.5**	**-0.7**
MOY	**Mondy**	**26.39**	**273**	*e*P	**P**	**12 52 08.0**	**-1.0**
MOY				pmax	pmax		
	comp=Z,16nm,1.9s						
JHJ	**Hachijo jima 2**	**26.81**	**192**	LR	LR	13 03 22.9	
	comp=Z,90nm,19.7s,baz=84,slow=38						
TTA	**Tatalina**	**27.09**	**58**	P	**P**	**12 52 15.3**	**+0.2**
TTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TTA	**Tatalina**	**27.09**	**58**	P	**P**	**12 52 15.3**	**+0.2**
IMAR	**Indian Mountai**	**27.12**	**51**	P	**P**	**12 52 15.5**	**+0.2**
J20K	**Nowinta River**	**27.48**	**55**	P	**P**	**12 52 19.2**	**+0.7**
J20K	**Nowinta River**	**27.48**	**55**	P	**P**	**12 52 19.0**	**+0.5**
	baz=288						
H21K	**Melozitna Rive**	**27.58**	**51**	P	**P**	**12 52 19.0**	**-0.5**
H21K	**Melozitna Rive**	**27.58**	**51**	P	**P**	**12 52 19.6**	**+0.1**
	baz=286,SNR=5.9						
K20K	**Telida**	**27.77**	**56**	P	**P**	**12 52 21.4**	**+0.2**
	baz=290						
L19K	**White Mountain**	**27.85**	**59**	P	**P**	**12 52 21.7**	**-0.2**
L19K	**White Mountain**	**27.85**	**59**	P	**P**	**12 52 21.5**	**-0.4**
	baz=291						
N18K	**Kilae Creek**	**27.96**	**62**	P	**P**	**12 52 22.9**	**0.0**
	baz=293						
TOLK	**Toolik Lake Re**	**28.04**	**44**	P	**P**	**12 52 23.6**	**+0.1**
TOLK				IAmb	IAmb	12 52 36.2	
	comp=Z,9.7nm,1.1s						
TOLK	**Toolik Lake Re**	**28.04**	**44**	P	**P**	**12 52 23.0**	**-0.5**
	baz=283						
I21K	**Tanana**	**28.05**	**52**	P	**P**	**12 52 23.6**	**0.0**
I21K	**Tanana**	**28.05**	**52**	P	**P**	**12 52 23.3**	**-0.3**
	baz=288						
M19K	**Big River Lodg**	**28.16**	**59**	P	**P**	**12 52 24.9**	**+0.2**
M19K				IAmb	IAmb	12 52 31.4	
	comp=Z,22nm,1.4s						
COLD	**Coldfoot**	**28.16**	**48**	P	**P**	**12 52 23.9**	**-0.7**
COLD				IAmb	IAmb	12 52 31.4	
	comp=Z,11nm,0.8s						
COLD	**Coldfoot**	**28.16**	**48**	P	**P**	**12 52 23.5**	**-1.0**
	baz=285,SNR=9.9						
JNU	**Nakatsue**	**28.39**	**208**	LR	LR	13 04 27.4	
	comp=Z,152nm,18.2s,baz=37,slow=38						
CAST	**Castle Rocks**	**28.59**	**56**	P	**P**	**12 52 29.1**	**+0.6**
O18K	**Koktuh Hills**	**28.61**	**64**	P	**P**	**12 52 28.4**	**-0.3**
O18K				IAmb	IAmb	12 52 46.3	
	comp=Z,26nm,1.4s						
HHC	**Hu-ho-hao-te**	**28.64**	**245**	*e*P	**P**	**12 52 27.9**	**-1.3**
HHC				pmax	pmax		
	comp=Z,45nm,1.2s						
HHC				pmax	pmax		
	comp=Z,230nm,4.7s						
HHC				LR	LR		
	comp=Z,750nm,8.7s						
HHC				LR	LR		
	comp=Z,900nm,8.3s						
HHC				LR	LR		
	comp=Z,1µm,10.4s						
PPLA	**Purkeypile**	**28.74**	**57**	P	**P**	**12 52 30.3**	**+0.3**
PPLA				IAmb	IAmb	12 52 37.5	
	comp=Z,12nm,1.0s						
BPAW	**Bear Paw Mtn.**	**28.81**	**54**	P	**P**	**12 52 30.1**	**-0.3**
H23K	**Yukon River**	**28.82**	**50**	P	**P**	**12 52 30.9**	**+0.4**
H23K				IAmb	IAmb	12 52 36.9	
	comp=Z,11nm,1.0s						
H23K	**Yukon River**	**28.82**	**50**	P	**P**	**12 52 29.6**	**-0.9**
	baz=288,SNR=5.2						
I23K	**Minto, Yukon-K**	**29.11**	**51**	P	**P**	**12 52 32.2**	**-0.8**
	baz=290						
NEA2	**Nenana**	**29.42**	**52**	P	**P**	**12 52 35.6**	**-0.2**
NEA2	**Nenana**	**29.42**	**52**	P	**P**	**12 52 35.3**	**-0.5**
	baz=291						
H24K	**Noodor Dome**	**29.46**	**50**	P	**P**	**12 52 36.2**	**-0.1**
H24K				IAmb	IAmb	12 52 44.4	
	comp=Z,11nm,1.1s						
H24K	**Noodor Dome**	**29.46**	**50**	P	**P**	**12 52 36.0**	**-0.2**
	baz=289,SNR=6.8						
P19K	**Oil Pt**	**29.60**	**63**	P	**P**	**12 52 37.8**	**+0.3**
MDM	**Murphy Dome**	**29.62**	**51**	P	**P**	**12 52 37.2**	**-0.5**
Q19K	**Cape Douglas,**	**29.74**	**65**	P	**P**	**12 52 37.4**	**-1.3**
POKR	**Poker Plat Res**	**29.89**	**51**	P	**P**	**12 52 39.7**	**-0.2**
	baz=291						
CCB	**Clear Creek Bu**	**29.91**	**52**	P	**P**	**12 52 40.0**	**-0.1**
JSU	**Suzuyama**	**30.04**	**208**	P	**P**	**12 52 40.5**	**-1.1**
BMAR	**Burnt Mountain**	**30.18**	**46**	P	**P**	**12 52 42.4**	**-0.1**
IL31		**30.23**	**51**	P	**P**	**12 52 42.9**	**0.0**
IL31				IAmb	IAmb	12 52 50.0	
	comp=Z,9.0nm,0.9s						
ILAR	**Eielson Array**	**30.23**	**51**	P	**P**	**12 52 43.1**	**+0.2**
	comp=Z,2.3nm,1.0s,baz=285,slow=8.7,SNR=6.7						
	comp=Z,2.3nm,1.0s						
ILAR	**Eielson Array**	**30.23**	**51**	P	**P**	**12 52 42.5**	**-0.4**
HDA	**Harding Lake**	**30.34**	**52**	P	**P**	**12 52 44.1**	**+0.1**
	baz=292						
DHY	**Denali Highway**	**30.69**	**55**	P	**P**	**12 52 47.9**	**+0.7**
KDAK	**Kodiak Island**	**30.78**	**66**	P	**P**	**12 52 47.5**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=348,slow=12,SNR=1.1						
KDAK				LR	LR	13 05 34.7	
	comp=Z,245nm,21.3s,baz=314,slow=37						
	comp=Z,5.5nm,0.9s						
KDAK	**Kodiak Island**	**30.78**	**66**	*e*P	**P**	**12 52 48.4**	**+0.5**
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KDAK				MLR	MLR		
	comp=Z,325nm,19.0s						
J25K	**Salcha River,**	**30.89**	**51**	P	**P**	**12 52 47.2**	**-1.6**
J25K	**Salcha River,**	**30.89**	**51**	P	**P**	**12 52 48.5**	**-0.4**
	baz=293						
KNK	**Knik Glacier**	**30.94**	**58**	P	**P**	**12 52 50.6**	**+1.3**
KNK	**Knik Glacier**	**30.94**	**58**	P	**P**	**12 52 49.3**	**0.0**
	baz=296						
M23K	**Glacier View**	**31.09**	**57**	P	**P**	**12 52 50.3**	**-0.3**
	baz=296						
SCM	**Sheep Creek Mo**	**31.24**	**57**	P	**P**	**12 52 51.5**	**-0.5**
SCM				pmax	pmax		
	comp=Z,35nm,1.4s						
SCM	**Sheep Creek Mo**	**31.24**	**57**	P	**P**	**12 52 51.5**	**-0.5**
RIDG	**Independent Ri**	**31.45**	**53**	P	**P**	**12 52 53.6**	**-0.2**
RIDG				IAmb	IAmb	12 53 21.4	

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      comp=Z,11nm,1.2s
PAX   Paxson             31.53  54  P      P      12 52 54.9 +0.4
PAX                                 pmax   pmax
      comp=Z,10.0nm,1.4s
PAX   Paxson             31.53  54  P      P      12 52 54.9 +0.4
PAX                                 IAmb   IAmb   12 53 21.6
      comp=Z,10.0nm,1.4s
J26L  Joseph Creek       31.65  51  P      P      12 52 55.1 -0.5
      baz=294
SCRK  Sand Creek         31.70  52  P      P      12 52 56.1 +0.1
SCRK  Sand Creek         31.70  52  P      P      12 52 55.2 -0.9
      baz=295
HARP  HAARP              31.91  55  P      P      12 52 56.5 -1.3
      baz=296
K27K  Chicken            32.44  51  P      P      12 53 02.8 +0.4
K27K  Chicken            32.44  51  P      P      12 53 01.0 -1.5
      baz=296
EGAK  Eagle              32.48  50  P      P      12 53 02.9 +0.2
EGAK                                IAmb   IAmb   12 53 10.5
      comp=Z,16nm,0.9s
N25K  Chitina, Valde     32.50  56  P      P      12 53 02.4 -0.7
N25K                                IAmb   IAmb   12 53 27.3
      comp=Z,19nm,1.2s
N25K  Chitina, Valde     32.50  56  P      P      12 53 01.8 -1.3
      baz=298
JCJ   Chichijima         32.58 187  LR     LR     13 06 28.6
      comp=Z,38nm,21.8s,baz=79,slow=37
L27K  Beaver Creek,      32.98  53  P      P      12 53 07.7 +0.5
L27K  Beaver Creek,      32.98  53  P      P      12 53 05.2 -2.0
      baz=297
BCAR  Beaver Creek A     32.99  53  P      P      12 53 07.5 +0.2
NJ2   Nanjing            33.10 226 eP      P      12 53 08.0 -0.4
NJ2                                 pmax   pmax
      comp=Z,6.0nm,0.7s
ZAA0  Zalesovo Array     33.15 288  P      P      12 53 05.6 -3.2
ZALV  Zalesovo Beam      33.15 288  P      P      12 53 07.0 -1.8
      comp=Z,0.6nm,0.5s,baz=39,slow=9.3,SNR=2.4
ZALV                                LR     LR     13 06 14.0
      comp=Z,63nm,19.0s,baz=46,slow=36
      comp=Z,0.6nm,0.5s
ZALV  Zalesovo Beam      33.15 288  P      P      12 53 07.0 -1.8
ZALV  Zalesovo Beam      33.15 288  P      P      12 53 06.5 -2.2
HMT   Hamilton           33.26  58  P      P      12 53 09.1 -0.6
I29M  Ogilvie Camp,      33.31  48  P      P      12 53 09.9 -0.1
DAWY  Dawson             33.48  50  P      P      12 53 12.7 +1.1
DAWY  Dawson             33.48  50  P      P      12 53 09.3 -2.3
      baz=297
INK   Inuvik             33.72  41  P      P      12 53 12.8 -0.7
      comp=Z,1.3nm,1.0s,baz=306,slow=15,SNR=2.4
INK                                 LR     LR     13 07 18.9
      comp=Z,139nm,20.3s,baz=250,slow=37
      comp=Z,1.3nm,1.0s
INK   Inuvik             33.72  41  P      P      12 53 13.8 +0.3
INK                                 pmax   pmax
      comp=Z,19nm,1.5s
INK   Inuvik             33.72  41  P      P      12 53 13.8 +0.3
INK                                 IAmb   IAmb   12 53 34.7
      comp=Z,19nm,1.4s
INK   Inuvik             33.72  41  P      P      12 53 12.0 -1.5
      baz=296
BARN  Barnard Glacie     34.01  56  P      P      12 53 16.4  0.0
BARN                                IAmb   IAmb   12 53 31.5
      comp=Z,27nm,1.4s
A36M  Sachs Harbour      34.65  33  P      P      12 53 21.4 -0.2
A36M                                IAmb   IAmb   12 53 28.7
      comp=Z,7.5nm,0.8s
JOW   Kunigami           35.04 209  LR     LR     13 07 21.6
      comp=Z,188nm,21.1s,baz=292,slow=36
GTA   Gaotai             35.40 256 eP      P      12 53 28.6  0.0
GTA                                 pP     pP     12 53 32.2 +0.5
GTA                                 sP     sP     12 53 34.5 +1.6
GTA                                 pmax   pmax
      comp=Z,4.0nm,1.4s
GTA                                 pmax   pmax
      comp=Z,97nm,6.0s
GTA                                 LR     LR
      comp=Z,310nm,12.7s
GTA                                 LR     LR
      comp=Z,280nm,11.1s
GTA                                 LR     LR
      comp=Z,400nm,11.1s
XAN   Xi'an              35.42 241  P      P      12 53 31.6 +2.9
XAN                                 pP     sP     12 53 35.6 +2.6
XAN                                 pmax   pmax
      comp=Z,5.0nm,1.0s
XAN                                 LR     LR
      comp=Z,330nm,13.4s
XAN                                 LR     LR
      comp=Z,370nm,16.1s
XAN                                 LR     LR
      comp=Z,250nm,12.0s
LZH   Lanzhou            36.07 249 eP      P      12 53 37.2 +2.9
LZH                                 pP     sP     12 53 40.9 +2.2
LZH                                 pmax   pmax
      comp=Z,18nm,1.4s
LZH                                 LR     LR
      comp=Z,480nm,14.6s
LZH                                 LR     LR
      comp=Z,390nm,13.6s
LZH                                 LR     LR
      comp=Z,550nm,13.6s
C36M  Paulatuk           36.27  37  P      P      12 53 35.4  0.0
C36M                                IAmb   IAmb   12 53 40.2
      comp=Z,15nm,1.1s
C36M  Paulatuk           36.27  37  P      P      12 53 32.7 -2.7
      baz=301
MMPY  Sheldon Lake,      37.37  49  P      P      12 53 44.4 -0.6
      baz=304
EUNU  Eureka             37.43  13  P      P      12 53 44.8 -0.5
SKAG  Skagway            37.53  55  P      P      12 53 46.0 -0.3
SKAG                                IAmb   IAmb   12 54 08.8
      comp=Z,14nm,1.1s
KURK  Kurchatov          38.14 288d iP     P      12 53 50.2 -1.3
KURK                                pmax   pmax
      comp=Z,13nm,1.1s
KURK                                MLR    MLR
      comp=Z,285nm,14.0s
KURK  Kurchatov          38.14 288  P      P      12 53 48.8 -2.7
KURK                                IAmb   IAmb   12 53 51.4
      comp=Z,12nm,1.1s
KURBB Kurchatov Arra     38.24 288  P      P      12 53 50.8 -1.7
      comp=Z,4.0nm,0.7s,baz=53,slow=8.5,SNR=3.4
KURBB                               LR     LR     13 09 25.1
      comp=Z,133nm,18.2s,baz=25,slow=36
      comp=Z,4.0nm,0.7s
WMQ   Urumqi             38.28 273 eP      P      12 53 54.6 +1.7
WMQ                                 LR     LR
      comp=Z,290nm,12.3s
WMQ                                 LR     LR
      comp=Z,530nm,13.5s
WMQ                                 LR     LR
      comp=Z,220nm,14.3s
YOJ   Yonaguni jima      38.72 215  P      P      12 53 54.7 -2.0
YOJ   Yonaguni jima      38.72 215  P      P      12 53 54.6 -2.0
MK31  Makanchi Array     38.94 280  P      P      12 53 57.0 -1.4
MK31                                pmax   pmax
      comp=Z,3.0nm,1.0s
MK31  Makanchi Array     38.94 280  P      P      12 53 57.0 -1.4
MKAR  Makanchi Array     38.94 280  P      P      12 53 57.1 -1.2
      comp=Z,1.6nm,0.8s,baz=52,slow=7.9,SNR=13
MKAR                                LR     LR     13 10 25.7
      comp=Z,366nm,18.1s,baz=34,slow=37
      comp=Z,1.6nm,0.8s
MAKZ  Makanchi           39.09 281  P      P      12 53 58.3 -1.3
MAKZ                                pmax   pmax
      comp=Z,4.0nm,1.1s
MAKZ  Makanchi           39.09 281  P      P      12 53 58.3 -1.3
SPITS Spitsbergen Ar     39.24 346  P      P      12 54 00.9 +0.4
      comp=Z,12nm,1.1s,baz=38,slow=2.6,SNR=9.7
      comp=Z,12nm,1.1s
RES   Resolute Bay       40.11  21  P      P      12 54 07.1 -0.7
      comp=Z,1.6nm,0.8s,baz=318,slow=7.1,SNR=7.3
RES                                 LR     LR     13 13 12.9
      comp=Z,55nm,18.5s,baz=356,slow=40
      comp=Z,1.6nm,0.8s
RES   Resolute Bay       40.11  21  P      P      12 54 07.1 -0.7
DLBC  Dease Lake         40.34  54  LR     LR     13 12 34.6
      comp=Z,156nm,19.5s,baz=302,slow=39
DLBC  Dease Lake         40.34  54  P      P      12 54 11.4 +1.4
GOMU  GeErMu             40.38 258  P      P      12 54 10.5 -0.4
GOMU                                pP     pP     12 54 14.3 +0.2
GOMU                                sP     sP     12 54 18.2 +2.9
GOMU                                S      S      13 00 16.0 -3.1
GOMU                                pmax   pmax
      comp=Z,6.0nm,1.0s
GOMU                                pmax   pmax
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      comp=Z,25nm,4.3s
GOMU                                LR     LR
      comp=Z,290nm,12.2s
GOMU                                LR     LR
      comp=Z,140nm,12.5s
GOMU                                LR     LR
      comp=Z,350nm,12.2s
BVAR  Borovoye Array     40.54 296  P      P      12 54 10.8 -0.8
      comp=Z,1.0nm,0.6s
      comp=Z,1.0nm,0.6s
BRVK  Borovoye           40.57 296⇑iP      P      12 54 10.2 -1.6
BRVK                                pmax   pmax
      comp=Z,5.0nm,1.0s
BRVK                                MLR    MLR
      comp=Z,272nm,17.0s
BRVK  Borovoye           40.57 296  P      P      12 54 09.4 -2.3
SVE   Sverdlovsk         42.32 305 eP      P      12 54 30.7 +4.6
ARU   Arti               43.45 306  P      P      12 54 33.1 -2.1
      comp=Z,0.7nm,0.4s,baz=18,slow=6.4,SNR=1.7
ARU                                 LR     LR     13 14 40.6
      comp=Z,336nm,18.1s,baz=44,slow=39
      comp=Z,0.7nm,0.4s
ARU   Arti               43.45 306c iP     P      12 54 38.1 +2.9
ARU                                               12 56 18.6
ARU                                 S      S      13 01 10.0 +6.9
ARU                                 pmax   pmax
      comp=Z,6.0nm,0.8s
ARU                                 MLR    MLR
      comp=Z,292nm,13.0s
ARU   Arti               43.45 306  P      P      12 54 33.7 -1.5
YKA   Yellowknife Ar     43.49  42  P      P      12 54 34.6 -0.9
      comp=Z,1.2nm,0.9s,baz=312,slow=7.7,SNR=16
YKA                                 PP     PP     12 56 17.0 +0.7
      comp=Z,0.4nm,0.8s,baz=347,slow=32,SNR=2.0
      comp=Z,1.2nm,0.9s
YKA   Yellowknife Ar     43.49  42 i P     P      12 54 35.4 -0.1
YKA                                 pmax   pmax
      comp=Z,3.0nm,1.1s
YKA   Yellowknife Ar     43.49  42  P      P      12 54 37.0 +1.5
ARCES ARCESS Array B     44.48 334  P      P      12 54 41.1 -2.2
      comp=Z,1.7nm,1.0s,baz=41,slow=8.4,SNR=1.1
ARCES                               LR     LR     13 15 53.3
      comp=Z,86nm,19.9s,baz=22,slow=40
      comp=Z,1.7nm,1.0s
ARCES ARCESS Array B     44.48 334  P      P      12 54 43.7 +0.4
ARCES                               pmax   pmax
      comp=Z,11nm,1.3s
ARCES ARCESS Array B     44.48 334  P      P      12 54 43.7 +0.4
ARCES                               IAmb   IAmb   12 54 49.0
      comp=Z,11nm,1.2s
PRGR  Permogore          44.73 318 eP      P      12 54 48.9 +3.5
PZH   PanZhiHua          45.06 243  P      P      12 54 48.9 +0.2
PZH                                 S      S      13 01 28.7 +1.2
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.5s
PZH                                 pmax   pmax
      comp=Z,60nm,5.0s
PZH                                 LR     LR
      comp=Z,370nm,15.5s
PZH                                 LR     LR
      comp=Z,490nm,16.7s
PZH                                 LR     LR
      comp=Z,290nm,11.4s
BBB   Bella Bella        45.32  60  LR     LR     13 14 50.4
      comp=Z,110nm,18.2s,baz=327,slow=38
KIRV  Kirov              45.54 313  LR     LR     13 15 47.4
      comp=Z,145nm,18.5s,baz=42,slow=39
AAK   Ala-Archa          45.80 282  LR     LR     13 14 49.9
      comp=Z,88nm,20.1s,baz=31,slow=37
AAK   Ala-Archa          45.80 282c iP     P      12 54 53.8 -0.6
AAK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
AAK                                 MLR    MLR
      comp=Z,150nm,17.0s
AAK   Ala-Archa          45.80 282  P      P      12 54 52.6 -1.7
AAK                                 IAmb   IAmb   12 55 02.0
      comp=Z,7.2nm,1.2s
KLMR  Klimovskoe         47.33 320 eP      P      12 55 07.6 +1.7
KLMR                               e              12 56 58.8
KLMR                                pmax   pmax
      comp=Z,12nm,1.1s
KLMR  Klimovskoe         47.33 320 eP      P      12 55 07.7 +1.8
KLMR                                AMP           12 55 11.8
      comp=Z,12nm,1.1s
KLMR                               ePP     PP     12 56 58.9 +2.3
KK31  Karatay Array      47.42 285  P      P      12 55 05.9 -1.1
KK31                                pmax   pmax
      comp=Z,9.0nm,1.1s
KK31  Karatay Array      47.42 285  P      P      12 55 05.8 -1.1
KK31                                IAmb   IAmb   12 55 12.3
      comp=Z,8.8nm,1.1s
KKAR  Karatay Array      47.42 285  P      P      12 55 05.8 -1.1
KKAR  Karatay Array      47.42 285  P      P      12 55 05.8 -1.1
LSA   Lhasa              47.43 256  P      P      12 55 06.3 -1.4
LSA                                 pmax   pmax
      comp=Z,5.0nm,0.6s
LSA   Lhasa              47.43 256  P      P      12 55 06.3 -1.4
LSA                                 IAmb   IAmb   12 55 22.0
      comp=Z,4.5nm,0.6s
AKTO  Aktyubinsk         47.89 300  P      P      12 55 09.1 -1.3
      comp=Z,1.4nm,0.8s,baz=52,slow=8.8,SNR=1.7
AKTO                                LR     LR     13 15 37.1
      comp=Z,78nm,18.2s,baz=31,slow=36
      comp=Z,1.4nm,0.8s
ABKAR Akbulak array      47.90 298  P      P      12 55 09.1 -1.4
CBB   Campbell River     48.08  60  P      P      12 55 10.9 -0.9
CBB                                 IAmb   IAmb   12 55 15.5
      comp=Z,14nm,1.4s
QIZ   Qiongzhong         48.27 229  P      P      12 55 13.6 -0.1
QIZ                                 S      S      13 02 11.3 -1.9
QIZ                                 LR     LR
      comp=Z,190nm,14.8s
QIZ                                 LR     LR
      comp=Z,330nm,18.5s
QIZ                                 LR     LR
      comp=Z,220nm,13.6s
BTK   Batken             49.56 282  P      P      12 55 23.1 -0.4
BTK                                 pmax   pmax
      comp=Z,10.0nm,0.9s
BTK   Batken             49.56 282  P      P      12 55 23.1 -0.4
BTK                                 IAmb   IAmb   12 55 29.7
      comp=Z,9.8nm,0.8s
VALR  Valaam             49.59 325⇑iP      P      12 55 23.1 -0.2
VALR                                pmax   pmax
      comp=Z,11nm,1.3s
GAR   Garm               50.62 282  P      P      12 55 30.7 -0.9
EDM   Edmonton           50.70  50  P      P      12 55 32.3 +0.4
EDM                                 pmax   pmax
      comp=Z,13nm,0.8s
EDM   Edmonton           50.70  50  P      P      12 55 32.3 +0.4
EDM                                 IAmb   IAmb   12 55 38.1
      comp=Z,13nm,0.8s
NLWA  Neilton Lookou     50.70  61  P      P      12 55 33.3 +1.3
NLWA                                IAmb   IAmb   12 55 40.4
      comp=Z,13nm,1.1s
BELG  Belogornoye        50.79 309  P      P      12 55 30.9 -1.5
      comp=Z,9.2nm,0.7s,baz=346,slow=2.2
BELG                                LR     LR     13 19 18.5
      comp=Z,200nm,19.0s,baz=20,slow=39
      comp=Z,9.2nm,0.7s
BELG  Belogornoye        50.79 309 i P     P      12 55 32.9 +0.4
BELG                                pmax   pmax
      comp=Z,3.0nm,0.7s
BELG                                MLR    MLR
      comp=Z,32nm,18.0s
FIA1  FINESS Array S     50.87 328  P      P      12 55 33.7 +0.7
FIA1                                IAmb   IAmb   12 55 39.5
      comp=Z,8.3nm,0.9s
FIA0  FINESS Array S     50.87 328  P      P      12 55 32.9 -0.1
FIA0  FINESS Array S     50.87 328  P      P      12 55 32.9 -0.1
FINES FINESS Array B     50.87 328  P      P      12 55 31.4 -1.6
      comp=Z,0.7nm,0.4s,baz=27,slow=9.1,SNR=13
FINES                               LR     LR     13 19 43.3
      comp=Z,241nm,18.8s,baz=20,slow=39
      comp=Z,0.7nm,0.4s
FINES FINESS Array B     50.87 328 i P     P      12 55 31.3 -1.7
FINES                               pmax   pmax
      comp=Z,1.0nm,0.4s
FINES FINESS Array B     50.87 328  P      P      12 55 31.9 -1.1
CHGR  Chuyangaron        51.46 282  P      P      12 55 35.9 -1.9
RAF   Rauma              52.37 330 eP      P      12 55 48.2 +4.0
OBN   Obninsk            52.78 317  LR     LR     13 20 43.1
      comp=Z,39nm,19.4s,baz=4.5,slow=39
OBN   Obninsk            52.78 317⇑eP      P      12 55 47.1 -0.2
OBN                                i              12 57 40.7
OBN                                 pmax   pmax
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      comp=Z,4.0nm,0.5s
OBN                                 MLR    MLR
      comp=Z,105nm,17.0s
FCC   Fort Churchill     52.84  35  P      P      12 55 48.6 +0.9
FCC                                 pmax   pmax
      comp=Z,4.0nm,1.0s
FCC   Fort Churchill     52.84  35  P      P      12 55 48.6 +0.9
NEW   Newport            52.97  56  LR     LR     13 19 52.1
      comp=Z,54nm,19.6s,baz=328,slow=38
SFJD  Kangerlussuaq      53.13   8  LR     LR     13 19 31.0
      comp=Z,63nm,18.9s,baz=344,slow=37
VSU   Vasula             53.17 325 eP      P      12 55 53.5 +3.4
NIL   Nilore             53.31 275  P      P      12 55 51.0 -0.6
NIL                                 pmax   pmax
      comp=Z,7.0nm,0.8s
NIL   Nilore             53.31 275  P      P      12 55 51.0 -0.6
NIL                                 IAmb   IAmb   12 56 01.8
      comp=Z,7.2nm,0.8s
CMAR  Chiang Mai Arr     53.32 241  P      P      12 55 51.1 -0.7
      comp=Z,0.4nm,0.3s,baz=27,slow=8.6,SNR=5.0
CMAR                                LR     LR     13 21 24.6
      comp=Z,55nm,18.1s,baz=55,slow=39
      comp=Z,0.4nm,0.3s
CMAR  Chiang Mai Arr     53.32 241 i P     P      12 55 51.4 -0.4
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.3s
AAL   Aland              53.55 330 eP      P      12 55 56.2 +3.3
WALA  Waterton Lakes     53.69  54  P      P      12 55 54.9 +0.6
WALA                                IAmb   IAmb   12 56 00.6
      comp=Z,11nm,0.8s
MTSE  Matsula            53.78 327 eP      P      12 55 57.6 +3.0
I04A  Tendick Farm,      54.11  63  P      P      12 55 56.7 -0.7
      baz=321
I05D  Terrebonne, OR     54.17  62  P      P      12 55 57.5 -0.3
      baz=321
FRB   Frobisher Bay      54.18  18  LR     LR     13 20 34.7
      comp=Z,58nm,19.2s,baz=306,slow=38
UPP   Uppsala            54.42 331 eP      P      12 56 02.8 +3.5
NC405 NORSAR Array S     54.67 335  P      P      12 55 60.0 -1.1
J04D  Umpqua Nationa     54.68  64  P      P      12 56 01.2 -0.5
J04D                                IAmb   IAmb   12 56 10.8
      comp=Z,12nm,0.8s
NC204 NORSAR Array S     54.72 336  P      P      12 56 01.2 -0.4
DAV   Davao City (W)     54.73 206  LR     LR     13 19 09.8
      comp=Z,33nm,20.4s,baz=312,slow=36
NB2   NORSAR Subarra     54.84 335  P      P      12 56 01.1 -1.3
      comp=Z,6.2nm,0.8s,baz=26,slow=7.4
NOA   NORSAR Array B     54.84 335  P      P      12 56 00.8 -1.6
      comp=Z,3.8nm,1.1s,baz=27,slow=7.3,SNR=4.7
NOA                                 LR     LR     13 21 34.8
      comp=Z,38nm,19.1s,baz=345,slow=38
      comp=Z,3.8nm,1.1s
NBO00 NORSAR Array S     54.94 335  P      P      12 56 02.6 -0.5
NC602 NORSAR Array S     55.05 335  P      P      12 56 03.4 -0.4
NAO01 NORSAR Array S     55.09 335  P      P      12 56 04.0 -0.2
HFS   Hagfors            55.11 333  LR     LR     13 21 46.4
      comp=Z,99nm,18.2s,baz=6.0,slow=38
SLIT  Slitere, Latvi     55.13 327 eP      P      12 56 08.3 +3.8
MSO   Missoula           55.44  55  P      P      12 56 06.7 -0.3
MSO   Missoula           55.44  55  P      P      12 56 06.6 -0.4
      baz=322
BMO   Blue Mountains     55.56  59  P      P      12 56 08.5 +0.6
BMO                                 pmax   pmax
      comp=Z,4.0nm,1.1s
BMO   Blue Mountains     55.56  59  P      P      12 56 08.5 +0.6
YBH   Yreka Blue Hor     55.59  65  LR     LR     13 19 34.1
      comp=Z,57nm,18.3s,baz=314,slow=36
VIKU  Vikbolandet        55.84 331 eP      P      12 56 13.1 +3.5
PLID  Pearl Lake         55.94  58  P      P      12 56 11.0 +0.2
PLID                                IAmb   IAmb   12 56 17.3
      comp=Z,4.8nm,0.8s
NACGM Naroch             56.15 323 eP      P      12 56 15.9 +4.1
EGMT  Eagleton           56.20  52  P      P      12 56 12.3 -0.1
EGMT                                IAmb   IAmb   12 56 18.9
      comp=Z,7.4nm,0.9s
EGMT  Eagleton           56.20  52  P      P      12 56 11.5 -0.9
      baz=324
KONO  Kongsberg          56.45 335 eP      P      12 56 13.5 -0.4
KONO                                pmax   pmax
      comp=Z,17nm,2.3s
PABE  Paberze            56.48 325 eP      P      12 56 18.3 +4.1
MFID  Camas Ranch        57.35  59  P      P      12 56 20.6 -0.1
MFID                                IAmb   IAmb   12 56 27.7
      comp=Z,4.5nm,0.8s
BOZ   Bozeman (W)        57.39  55  P      P      12 56 21.4 +0.4
BOZ                                 pmax   pmax
      comp=Z,4.0nm,1.0s
BOZ   Bozeman (W)        57.39  55  P      P      12 56 21.4 +0.4
BOZ   Bozeman (W)        57.39  55  P      P      12 56 20.8 -0.2
      baz=324
GEYT  Alibeck            57.42 290  P      P      12 56 20.5 -0.7
      comp=Z,1.5nm,0.5s,baz=40,slow=7.9,SNR=1.5
GEYT                                LR     LR     13 22 55.9
      comp=Z,95nm,21.0s,baz=74,slow=38
      comp=Z,1.5nm,0.5s
BCYI  Bear Canyon        57.67  57  P      P      12 56 22.6 -0.5
HLID  Hailey             57.84  58  P      P      12 56 24.6 +0.3
HLID                                IAmb   IAmb   12 56 31.2
      comp=Z,6.5nm,0.8s
HLID  Hailey             57.84  58  P      P      12 56 24.2  0.0
      baz=324,SNR=15
SUW   Suwalki            58.00 324 eP      P      12 56 28.2 +3.2
YHL   Hebgen Lake        58.17  55  P      P      12 56 26.9 +0.2
YHL                                 IAmb   IAmb   12 56 36.3
      comp=Z,4.6nm,0.7s
YHH   Holmes Hill        58.36  55  P      P      12 56 27.4 -0.6
PAHR  Pah Rah Range      58.73  64  P      P      12 56 30.6 +0.2
PAHR                                IAmb   IAmb   12 56 38.8
      comp=Z,14nm,1.5s
LKWY  Lake               58.73  55  P      P      12 56 29.4 -1.1
LKWY                                pmax   pmax
      comp=Z,10.0nm,0.8s
LKWY  Lake               58.73  55  P      P      12 56 29.4 -1.1
RLMT  Red Lodge          58.74  53  P      P      12 56 30.9 +0.3
RLMT  Red Lodge          58.74  53  P      P      12 56 30.5  0.0
      baz=325,SNR=33
H17A  Grant Village      58.80  55  P      P      12 56 30.8 -0.2
H17A                                IAmb   IAmb   12 56 41.4
      comp=Z,11nm,1.1s
YPP   Pitchstone Pla     58.80  55  P      P      12 56 31.8 +0.7
YPP                                 IAmb   IAmb   12 56 39.2
      comp=Z,4.2nm,0.9s
AKASG Malin Array Be     58.93 319  P      P      12 56 29.8 -1.7
      comp=Z,0.3nm,0.2s,baz=33,slow=8.1,SNR=1.9
AKASG                               LR     LR     13 23 56.0
      comp=Z,117nm,18.6s,baz=36,slow=38
      comp=Z,0.3nm,0.2s
AKASG Malin Array Be     58.93 319 i P     P      12 56 34.7 +3.2
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.3s
AKBB  Malin Array Si     58.93 319  P      P      12 56 31.8 +0.3
AKBB                                pmax   pmax
      comp=Z,8.0nm,1.1s
AKBB  Malin Array Si     58.93 319  P      P      12 56 31.8 +0.3
AKBB                                IAmb   IAmb   12 56 37.8
      comp=Z,8.2nm,1.1s
FLWY  Flagg Ranch        59.00  55  P      P      12 56 32.4  0.0
MOOW  Moose Ponds        59.25  55  P      P      12 56 34.5 +0.4
TPAW  Teton Pass         59.38  56  P      P      12 56 34.7 -0.3
TPAW                                IAmb   IAmb   12 56 44.6
      comp=Z,8.6nm,1.0s
LOHW  Long Hollow        59.42  55  P      P      12 56 35.0 -0.3
LOHW                                IAmb   IAmb   12 56 42.8
      comp=Z,8.8nm,0.9s
KIV   Kislovodsk         59.48 305 eP      P      12 56 35.0 -0.6
KIV                                 pmax   pmax
      comp=Z,14nm,1.1s
KIV                                 MLR    MLR
      comp=Z,82nm,17.0s
KIV   Kislovodsk         59.48 305  P      P      12 56 33.9 -1.6
REDW  Red Top Meadow     59.52  56  P      P      12 56 36.4 +0.4
KBZ   Khabaz             59.58 305  P      P      12 56 36.6 +0.5
      comp=Z,3.8nm,0.7s,baz=32,slow=9.8,SNR=5.9
KBZ                                 LR     LR     13 26 08.3
      comp=Z,157nm,18.5s,baz=32,slow=40
      comp=Z,3.8nm,0.7s
KBZ   Khabaz             59.58 305 i P     P      12 56 39.1 +3.0
KBZ                                 pmax   pmax
      comp=Z,5.0nm,0.9s
KBZ                                 MLR    MLR
      comp=Z,143nm,18.0s
ELK   Elko               59.76  60  LR     LR     13 23 26.1
      comp=Z,34nm,18.7s,baz=336,slow=37
ELK   Elko               59.76  60  P      P      12 56 39.1 +1.4
ELK                                 pmax   pmax
      comp=Z,7.0nm,0.9s
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ELK	Elko	59.76	60	P	P	12 56 39.1	+1.4
ELK				IAmb	IAmb	12 56 45.3	
	comp=Z,7.3nm,0.8s						
KVN	Kaiserville	59.84	64	P	P	12 56 38.7	+0.4
KVN	Kaiserville	59.84	64	P	P	12 56 38.7	+0.4
KVN				IAmb	IAmb	12 56 45.8	
	comp=Z,7.4nm,1.2s						
ZEI	Tsey	59.93	304	*e*P	P	12 56 41.7	+2.9
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HVU	Hansel Valley	60.00	58	P	P	12 56 39.5	+0.3
HVU				pmax	pmax		
	comp=Z,13nm,0.7s						
HVU	Hansel Valley	60.00	58	P	P	12 56 39.5	+0.3
NVAR	Mina Array Bea	60.26	64	P	P	12 56 41.9	+0.8
	comp=Z,1.1nm,0.8s,baz=301,slow=6.8,SNR=9.9						
NVAR				LR	LR	13 21 16.4	
	comp=Z,65nm,18.6s,baz=333,slow=35						
	comp=Z,1.1nm,0.8s						
BW06	Boulder Array	60.56	55	P	P	12 56 43.1	0.0
BW06				IAmb	IAmb	12 56 49.5	
	comp=Z,9.6nm,1.2s						
BW06	Boulder Array	60.56	55	P	P	12 56 43.0	-0.1
	baz=326,SNR=5.3						
PD31	Pinedale Array	60.56	55	P	P	12 56 42.5	-0.6
PD31				IAmb	IAmb	12 56 49.5	
	comp=Z,8.7nm,1.2s						
PDAR	Pinedale Array	60.56	55	P	P	12 56 43.1	0.0
	comp=Z,2.1nm,0.8s,baz=8.5,slow=1.8,SNR=12						
PDAR				LR	LR	13 24 47.9	
	comp=Z,60nm,18.9s,baz=344,slow=38						
	comp=Z,2.1nm,0.8s						
PDAR	Pinedale Array	60.56	55	P	P	12 56 43.3	+0.2
BGU	Big Grassy Mou	60.58	59	P	P	12 56 43.7	+0.5
BGU				IAmb	IAmb	12 56 50.5	
	comp=Z,4.8nm,0.7s						
HWUT	Hardware Ranch	60.66	57	P	P	12 56 44.6	+0.8
TPH	Tonopah	61.04	64	P	P	12 56 45.3	-1.1
TPH				pmax	pmax		
	comp=Z,21nm,0.9s						
TPH	Tonopah	61.04	64	P	P	12 56 45.3	-1.1
DUG	Dugway, Tooele	61.28	59	P	P	12 56 48.8	+0.9
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DUG	Dugway, Tooele	61.28	59	P	P	12 56 48.8	+0.9
DUG				IAmb	IAmb	12 56 58.0	
	comp=Z,7.0nm,0.9s						
DUG	Dugway, Tooele	61.28	59	P	P	12 56 48.2	+0.3
	baz=325,SNR=8.4						
LCH	Last Change Ra	61.53	65	P	P	12 56 49.7	0.0
LCH				IAmb	IAmb	12 56 58.5	
	comp=Z,4.5nm,1.0s						
JLU	Jordanelle	61.53	58	P	P	12 56 49.5	-0.3
JLU				IAmb	IAmb	12 56 56.9	
	comp=Z,5.9nm,0.9s						
R11A	Troy Canyon, C	61.56	62	P	P	12 56 50.5	+0.6
	baz=325						
RSSD	Black Hills	61.67	50	P	P	12 56 50.9	+0.3
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RSSD	Black Hills	61.67	50	P	P	12 56 50.9	+0.3
RSSD	Black Hills	61.67	50	P	P	12 56 50.3	-0.3
	baz=327						
GNI	Garni	61.74	302	LR	LR	13 28 54.3	
	comp=Z,99nm,18.1s,baz=22,slow=41						
NLU	North Lily Min	61.80	59	P	P	12 56 50.9	-0.6
NLU				IAmb	IAmb	12 56 58.8	
	comp=Z,8.3nm,0.8s						
K22A	Casper	61.90	53	P	P	12 56 51.5	-0.6
K22A	Casper	61.90	53	P	P	12 56 51.6	-0.5
	baz=327,SNR=5.6						
CWC	Cottonwood Cre	61.98	65	P	P	12 56 52.4	-0.3
	baz=325						
PSUT	Pine Spring	62.18	61	P	P	12 56 53.4	-0.8
PSUT				IAmb	IAmb	12 57 01.6	
	comp=Z,6.0nm,0.8s						
OJC	Ojcow	62.34	324	P	P	12 56 53.5	-1.2
OJC				pmax	pmax		
	comp=Z,11nm,0.7s						
OJC	Ojcow	62.34	324	P	P	12 56 53.5	-1.2
RDMU	Red Mountain	62.37	57	P	P	12 56 55.0	-0.3
TPNV	Topopah Spring	62.40	64	P	P	12 56 55.0	-0.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TPNV	Topopah Spring	62.40	64	P	P	12 56 55.0	-0.6
TPNV				IAmb	IAmb	12 57 05.7	
	comp=Z,4.1nm,0.9s						
TPNV	Topopah Spring	62.40	64	P	P	12 56 55.9	+0.3
	baz=325						
PKM	Mcpherson Peak	62.44	68	P	P	12 56 55.8	-0.1
	baz=325						
MPMC	Manual Prospec	62.56	65	P	P	12 56 56.3	-0.4
	baz=325						
PRN	Pahroc Range	62.57	63	P	P	12 56 57.5	+0.9
PRN				IAmb	IAmb	12 57 05.5	
	comp=Z,6.7nm,1.1s						
TMUT	Trail Mountain	62.72	59	P	P	12 56 57.6	-0.2
TMUT				IAmb	IAmb	12 57 05.0	
	comp=Z,8.0nm,0.9s						
KOLS	Kolonicke sedl	62.72	322	*e*P	P	12 57 01.6	+4.3
KOLS	Kolonicke sedl	62.72	322	*e*P	P	12 57 01.6	+4.3
P17A	Butcher Ranch,	62.77	58	P	P	12 56 57.6	-0.4
P17A				IAmb	IAmb	12 57 05.2	
	comp=Z,5.0nm,0.8s						
GWY	Greenwater Val	62.84	65	P	P	12 56 58.2	-0.3
P18A	Preston Nutter	62.86	58	P	P	12 56 58.0	-0.7
SCHQ	Schefferville	62.89	21	P	P	12 56 58.5	+0.1
	comp=Z,0.8nm,0.4s,baz=343,slow=5.6,SNR=5.4						
SCHQ				LR	LR	13 26 00.8	
	comp=Z,49nm,19.2s,baz=86,slow=38						
	comp=Z,0.8nm,0.4s						
SCHQ	Schefferville	62.89	21	P	P	12 56 58.5	+0.1
SCHQ				IAmb	IAmb	12 57 23.6	
	comp=Z,4.4nm,1.1s						
BUR08	Bucovina Ar. S	62.91	320	P	P	12 56 56.6	-2.1
BUR08				IAmb	IAmb	12 57 03.4	
	comp=Z,4.5nm,1.0s						
BURAR	Bucovina Array	62.93	319	P	P	12 56 57.3	-1.6
BURAR				IAmb	IAmb	12 57 03.8	
	comp=Z,4.4nm,0.9s						
MSU	Marysvale	62.94	60	P	P	12 57 00.1	+0.9
MSU	Marysvale	62.94	60	P	P	12 57 00.1	+0.9
CRVS	Cervenica-Dubn	63.00	323	*e*P	P	12 57 03.5	+4.3
CRVS	Cervenica-Dubn	63.00	323	*e*P	P	12 57 03.5	+4.3
UPC	Upice	63.16	327	AMS	AMS	13 27 10.0	
	comp=Z,200nm,17.8s						
SRU	San Rafael Swe	63.17	58	P	P	12 57 00.0	-0.7
SRU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SRU	San Rafael Swe	63.17	58	P	P	12 56 60.0	-0.7
CCUT	Cedar City	63.21	61	P	P	12 57 01.6	+0.6
CCUT				IAmb	IAmb	12 57 08.9	
	comp=Z,4.7nm,0.9s						
DPC	Dobruska-Polom	63.22	327	*e*P	P	12 57 05.0	+4.3
DPC	Dobruska-Polom	63.22	327	*e*P	P	12 57 05.0	+4.3
CLL	Collm	63.25	329	P	P	12 56 59.5	-1.3
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	63.25	329	P	P	12 56 59.5	-1.3
CLL				IAmb	IAmb	12 57 05.5	
	comp=Z,5.6nm,0.8s						
CLL	Collm	63.25	329	*e*P	P	12 57 04.0	+3.3
	comp=Z,6.0nm,0.8s						
O20A	White River Ci	63.29	56	P	P	12 57 01.0	-0.5
O20A	White River Ci	63.29	56	P	P	12 57 01.7	+0.2
	baz=327,SNR=5.5						
EDW2	Edwards Air Fo	63.30	66	P	P	12 57 01.9	+0.5
	baz=326						
SZCU	Shurtz Canyon	63.30	61	P	P	12 57 01.6	+0.1
SZCU				IAmb	IAmb	12 57 08.8	
	comp=Z,5.5nm,0.9s						
MTPU	Mount Pierson	63.33	60	P	P	12 57 01.7	-0.3
MTPU				IAmb	IAmb	12 57 09.3	
	comp=Z,6.5nm,0.8s						
KRLC	Kraliky	63.34	326	*e*P	P	12 57 05.9	+4.4
KRLC	Kraliky	63.34	326	*e*P	P	12 57 05.9	+4.4
LANS	Liptovska Anna	63.39	324	*e*P	P	12 57 06.8	+5.0
LANS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LANS	Liptovska Anna	63.39	324	*e*P	P	12 57 06.8	+5.0
MORC	Moravsky Berou	63.39	326	P	P	12 57 02.2	+0.4
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MORC	Moravsky Berou	63.39	326	P	P	12 57 02.2	+0.4
MORC				IAmb	IAmb	12 57 06.9	
	comp=Z,5.8nm,0.8s						
MORC	Moravsky Berou	63.39	326	*e*P	P	12 57 05.9	+4.1
N23A	Red Feather La	63.61	54	P	P	12 57 02.7	-1.0
	baz=327						
LCMT	Little Creek M	63.71	61	P	P	12 57 04.9	+0.7
LCMT				IAmb	IAmb	12 57 12.0	
	comp=Z,3.6nm,0.7s						
PRU	Pruhonice	64.04	328	AMS	AMS	13 27 50.0	
	comp=Z,200nm,14.6s						
VRAC	Vranov	64.08	326	LR	LR	13 28 42.8	
	comp=Z,85nm,19.0s,baz=20,slow=40						
VRAC	Vranov	64.08	326	*e*P	P	12 57 10.7	+4.4
VYHS	Vyhne	64.16	324	*e*P	P	12 57 11.6	+4.7
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VYHS	Vyhne	64.16	324	*e*P	P	12 57 11.6	+4.7
JAVC	Velka Javorina	64.18	325	*e*P	P	12 57 12.0	+5.0
CIS	Catalina Islan	64.31	68	P	P	12 57 06.0	-2.1
	baz=326						
KRUC	Moravsky	64.36	326	*e*P	P	12 57 12.3	+4.2
U15A	North Rim	64.62	61	P	P	12 57 08.8	-1.5
SMCO	Snowmass	64.62	56	P	P	12 57 08.8	-1.7
ISCO	Idaho Springs	64.67	54	P	P	12 57 10.1	-0.6
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISCO	Idaho Springs	64.67	54	P	P	12 57 10.1	-0.6
ISCO				IAmb	IAmb	12 57 17.7	
	comp=Z,5.9nm,1.1s						
ISCO	Idaho Springs	64.67	54	P	P	12 57 09.7	-1.0
	baz=328						
ECSD	EROS Data Cent	64.81	46	P	P	12 57 10.1	-1.0
ECSD	EROS Data Cent	64.81	46	P	P	12 57 10.5	-0.6
	baz=330,SNR=6.4						
PFO	Pinyon Flats O	65.06	66	LR	LR	13 24 24.8	
	comp=Z,34nm,18.3s,baz=44,slow=35						
KHC	Kasperske Hory	65.08	328	*e*P	P	12 57 17.3	+4.4
KHC				MLR	MLR		
	comp=Z,300nm,15.5s						
KHC	Kasperske Hory	65.08	328	*e*P	P	12 57 17.3	+4.4
KHC				AMS	AMS	13 28 30.0	
	comp=Z,300nm,15.5s						
CKRC	Cesky Krumlov	65.16	327	*e*P	P	12 57 17.8	+4.4
IRM	Iron Mountain	65.21	65	P	P	12 57 14.4	+0.4
	baz=326						
GERES	GERESS Array B	65.31	328	P	P	12 57 14.9	+0.5
	comp=Z,1.1nm,0.8s,baz=53,slow=5.2,SNR=7.6						
GERES				LR	LR	13 28 11.4	
	comp=Z,41nm,18.7s,baz=65,slow=38						
	comp=Z,1.1nm,0.8s						
PDMCI	Parker Dam,Lak	65.55	64	P	P	12 57 15.7	-0.4
	baz=327						
Q24A	Divide	65.56	54	P	P	12 57 16.5	-0.1
Q24A				IAmb	IAmb	12 57 23.0	
	comp=Z,3.6nm,0.8s						
Q24A	Divide	65.56	54	P	P	12 57 15.9	-0.7
	baz=328						
MVCO	Mesa Verde	65.63	58	P	P	12 57 16.5	-0.3
MVCO				IAmb	IAmb	12 57 25.6	
	comp=Z,11nm,1.2s						
MVCO	Mesa Verde	65.63	58	P	P	12 57 16.8	-0.1
	baz=327						
MONP2	Monument Peak	65.67	66	P	P	12 57 17.5	+0.4
	baz=326						
G40A	Rib Lake	65.69	40	P	P	12 57 16.3	-0.6
G40A				IAmb	IAmb	12 57 24.3	
	comp=Z,3.5nm,0.8s						
WUAZ	Wupatki	65.79	61	P	P	12 57 17.0	-0.9
WUAZ	Wupatki	65.79	61	P	P	12 57 18.2	+0.3
	baz=327						
S22A	4UR Ranch, Cre	65.89	56	P	P	12 57 19.0	+0.4
S22A				IAmb	IAmb	12 57 28.6	
	comp=Z,7.4nm,1.1s						
S22A	4UR Ranch, Cre	65.89	56	P	P	12 57 18.6	0.0
	baz=328						
SDCO	Great Sand Dun	66.45	55	P	P	12 57 23.0	+0.7
SDCO				IAmb	IAmb	12 57 28.8	
	comp=Z,4.2nm,0.8s						
SDCO	Great Sand Dun	66.45	55	P	P	12 57 22.2	0.0
	baz=328						
BRTR	Keskin Array B	66.70	309	P	P	12 57 24.4	+0.9
	comp=Z,1.3nm,1.0s,baz=19,slow=12,SNR=6.0						
BRTR				LR	LR	13 29 15.6	
	comp=Z,90nm,18.9s,baz=28,slow=38						
	comp=Z,1.3nm,1.0s						
BRTR	Keskin Array B	66.70	309	*i* P	P	12 57 26.6	+3.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	66.70	309	P	P	12 57 22.6	-1.0
X18A	Snowflake	67.25	60	P	P	12 57 27.4	+0.2
KAPI	Kappang	67.76	209	LR	LR	13 27 31.5	
	comp=Z,28nm,18.7s,baz=95,slow=36						
VTS	Vitosha	67.99	318	P	P	12 57 32.1	+0.3
VTS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VTS	Vitosha	67.99	318	P	P	12 57 32.1	+0.3
VTS				IAmb	IAmb	12 57 38.2	
	comp=Z,5.8nm,1.0s						
DAVOX	Davos/Dischmat	68.22	329	LR	LR	13 30 33.4	
	comp=Z,95nm,18.1s,baz=80,slow=39						
ANMO	Albuquerque	68.42	58	LR	LR	13 31 58.4	
	comp=Z,68nm,18.8s,baz=323,slow=40						
ANMO	Albuquerque	68.42	58	P	P	12 57 33.7	-0.9
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ANMO	Albuquerque	68.42	58	P	P	12 57 33.7	-0.9
ANMO				IAmb	IAmb	12 57 42.7	
	comp=Z,9.0nm,1.4s						
ANMO	Albuquerque	68.42	58	P	P	12 57 34.6	0.0
	baz=329						
WSAR	Wadi Sarin	69.18	280	LR	LR	13 31 48.0	
	comp=Z,64nm,18.0s,baz=72,slow=39						
SADO	Sadowa	69.50	33	LR	LR	13 30 52.7	
	comp=Z,70nm,19.0s,baz=10,slow=38						
121A	Cookes Peak, D	69.90	60	P	P	12 57 43.3	-0.5
	baz=329						
319A	Douglas	70.21	62	P	P	12 57 45.3	-0.4
MNTX	Cornudas Mount	71.66	59	P	P	12 57 54.9	+0.6
MNTX				IAmb	IAmb	12 58 01.1	
	comp=Z,6.2nm,1.0s						
MNTX	Cornudas Mount	71.66	59	P	P	12 57 54.2	-0.1
	baz=330,SNR=6.1						
ERPA	Erie	71.70	35	P	P	12 57 54.9	+0.5
ERPA				IAmb	IAmb	12 58 13.8	
	comp=Z,13nm,1.1s						
MMAI	Mount Meron Ar	71.76	304	LR	LR	13 32 24.1	
	comp=Z,50nm,18.6s,baz=195,slow=38						
WMOK	Wichita Mounta	71.79	52	P	P	12 57 54.3	-0.8
WMOK				pmax	pmax		
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	71.79	52	P	P	12 57 54.3	-0.8
WMOK	Wichita Mounta	71.79	52	P	P	12 57 54.7	-0.4
	baz=331,SNR=7.4						
U40A	Yellville	72.66	47	P	P	12 57 59.8	-0.4
	baz=333						
BINY	Binghamton	72.74	32	P	P	12 57 59.4	-1.2
	baz=339						
O53A	New Philadelph	73.06	36	P	P	12 58 01.0	-1.5
	baz=337						
ABTX	Abilene, Hawle	73.28	54	P	P	12 58 03.5	-0.5
ABTX				IAmb	IAmb	12 58 10.0	
	comp=Z,14nm,1.2s						
IDI	Anoyia	73.92	313	LR	LR	13 35 35.8	
	comp=Z,40nm,18.1s,baz=88,slow=40						
W41B	Gary Mavity, V	73.93	47	P	P	12 58 07.1	-0.6
W41B				IAmb	IAmb	12 58 19.7	
	comp=Z,12nm,0.9s						
W41B	Gary Mavity, V	73.93	47	P	P	12 58 07.4	-0.3
	baz=333						
TX31	Lajitas Ar. Si	74.44	58	P	P	12 58 11.1	+0.2
TX32	Lajitas Array	74.44	58	P	P	12 58 10.8	-0.1
TX32				IAmb	IAmb	12 58 19.1	
	comp=Z,11nm,1.4s						
TXAR	Lajitas Array	74.44	58	P	P	12 58 10.7	-0.2
	comp=Z,0.2nm,0.7s,baz=323,slow=1.4,SNR=2.4						
TXAR				LR	LR	13 31 56.3	
	comp=Z,57nm,19.8s,baz=343,slow=37						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	74.44	58	P	P	12 58 10.2	-0.7
JCT	Junction City	75.09	55	P	P	12 58 13.4	-1.1
JCT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JCT	Junction City	75.09	55	P	P	12 58 13.4	-1.1
JCT				IAmb	IAmb	12 58 21.1	
	comp=Z,8.2nm,0.8s						
TKL	Tuckaleechee C	76.46	40	LR	LR	13 34 42.1	
	comp=Z,79nm,18.3s,baz=348,slow=38						
ESDC	Sonseca Array	78.14	337	P	P	12 58 31.6	-0.1
	comp=Z,1.9nm,0.9s,baz=12,slow=6.1,SNR=3.3						
	comp=Z,1.9nm,0.9s						
ESDC	Sonseca Array	78.14	337	P	P	12 58 31.1	-0.7
WRA	Warramunga Arr	79.83	192	P	P	12 58 40.6	-0.3
	comp=Z,2.1nm,0.9s,baz=4.1,slow=5.9,SNR=20						
	comp=Z,2.1nm,0.9s						
WRA	Warramunga Arr	79.83	192	*i* P	P	12 58 40.5	-0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	79.83	192	P	P	12 58 40.4	-0.5
ASAR	Alice Springs	83.55	192	P	P	12 59 00.1	-0.4
	comp=Z,1.3nm,0.8s,baz=2.4,slow=5.5,SNR=16						
	comp=Z,1.3nm,0.8s						
ATD	Arta Tunnel	86.93	287	LR	LR	13 42 42.6	
	comp=Z,92nm,18.3s,baz=30,slow=39						
PPT	Papeete	92.58	121	LR	LR	13 40 38.2	
	comp=Z,34nm,18.6s,baz=304,slow=35						
TORD	Torodi Ar. Bea	102.16	325	PP	PP	13 04 40.4	+1.8
	comp=Z,0.6nm,0.9s,baz=2.8,slow=7.2,SNR=4.1						
PLCA	Paso Flores	150.28	67	PKPbc	PKPbc	13 06 22.5	-0.7
	comp=Z,2.5nm,0.7s,baz=334,slow=1.5,SNR=7.0						
PLCA	Paso Flores	150.28	67		PKPbc	13 06 23.2	0.0
PLCA				PKPab	PKPab	13 06 28.9	-0.6

IDC ***06*** *12:55:30.4±16.0, 14°.18S×170°.48E, h619^{km}±58^{km}, mb2.9/3, mbtmp4.0/4, Error ellipse: s-maj=235.0km s-min=64.0km az=49.0*

NEIC ***06*** *12:55:32.1±0.8, 14°.4S±0°.2×170°.1E±0°.1, h572^{km}±17^{km}, mb4.1/12, Error ellipse: s-maj=34.0km s-min=6.8km az=149.0*

ISC 06 12:55:30.8±2.4, **14°.0S**±0°.3×**170°.2E**±0°.2, **h600^{km}, n19, σ1^{s}.77**/20, **mb4.0**/9, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.25	244	P	P	12 56 48.2	-3.2
LIFNC	LIFOU	7.28	203	P	P	12 57 19.8	-3.6
MARNC	Mare, Loyalty	7.69	196	P	P	12 57 23.8	-3.3
DZM	Mont Dzumac	8.76	204	P	P	12 57 37.1	-0.3
	1.7nm,0.4s,baz=74,slow=21,SNR=1.0						
STKA	Stephens Creek	31.64	231	P	P	13 01 06.0	-0.5
	1.9nm,0.4s,baz=52,slow=8.7,SNR=8.4						
	1.9nm,0.4s						
STKA	Stephens Creek	31.64	231	P	P	13 01 06.1	-0.5
TOO	Toolangi	32.14	219	P	P	13 01 09.6	-1.1
TOO				IAmb	IAmb	13 01 35.4	
	comp=Z,12nm,1.3s						
WR0	Warramunga Arr	34.59	255	P	P	13 01 31.4	-0.1
WR0				IAmb	IAmb	13 01 50.7	
	comp=Z,5.7nm,1.2s						
WB0	Warramunga Arr	34.72	256	P	P	13 01 32.9	+0.3
WB0				IAmb	IAmb	13 01 32.9	
	comp=Z,3.8nm,0.8s						
WB2	Warramunga Arr	34.77	255	P	P	13 01 33.2	+0.2
WB2				IAmb	IAmb	13 02 00.6	
	comp=Z,4.5nm,1.1s						
WRAB	Tennant Creek	34.77	255	P	P	13 01 32.6	-0.4
WRAB				IAmb	IAmb	13 01 45.5	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	34.78	255	P	P	13 01 33.2	+0.1
	comp=Z,0.6nm,0.5s,baz=84,slow=7.4,SNR=12						
	comp=Z,0.6nm,0.5s						
AS31	Alice Springs	35.60	249	P	P	13 01 39.6	-0.2
ASAR	Alice Springs	35.60	249	P	P	13 01 39.6	-0.2
	comp=Z,1.1nm,0.4s,baz=77,slow=9.2,SNR=47						
ASAR				ScP	S	13 06 37.6	+2.8
	comp=Z,0.4nm,0.8s,baz=77,slow=3.1,SNR=5.5						
	comp=Z,1.1nm,0.4s						
ASAR	Alice Springs	35.60	249	P	P	13 01 39.2	-0.7
BBOO	Buckleboo	36.28	233	P	P	13 01 44.4	-0.8
KNRA	Kununurra	40.08	262	P	P	13 02 17.3	+1.2
SBA	Scott Base	63.84	181	P	P	13 05 06.9	+1.9
SBA				IAmb	IAmb	13 05 32.8	
	comp=Z,10nm,1.2s						
QSPA	South Pole Qui	75.98	180	P	P	13 06 19.1	+1.8

SFS ***06*** *12:59:40.0, 35°.33N×3°.75W, h17^{km}, ML2.6, ALHUCEMAS (MARRUECOS)*

MDD ***06*** *12:59:41.0±0.4, 35°.34N×3°.76W, h17^{km}±6^{km}, mb_Lg2.5/16, Error ellipse: s-maj=7.7km s-min=2.4km az=168.0*

IGIL ***06*** *12:59:41.0, 35°.34N×3°.76W, h8^{km}, ML1.7*

INMG ***06*** *12:59:41.7±1.5, 35°.41N×3°.75W, h18^{km}±7^{km}, ML2.2, Error ellipse: s-maj=6.6km s-min=3.3km az=157.0*

CNRM ***06*** *12:59:42.8, 35°.43N×3°.97W, h26^{km}, ml2.6*

ISC 06 12:59:40.2±1.0, **35°.47N**±0°.02×**3°.79W**±0°.02, **h15^{km}**±9^{km}, **n47, σ1^{s}.41**/82, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.28	205	P	Pb	12 59 47.6	+0.7
PALE				S	Sb	12 59 52.3	+0.9
PVLZ	Peæn de	0.51	235	P	Pg	12 59 51.6	+1.3
PVLZ				S	Sg	12 59 58.3	+1.2
WMELI	Melilla	0.70	102	P	Pb	12 59 54.2	+0.1
WMELI				S	Sg	13 00 03.1	-0.1
EMEL	Melilla	0.70	104	Pg	Pb	12 59 54.4	+0.3
EMEL				Sg	Sg	13 00 02.9	-0.4
EALB	Alboran	0.78	53	Pg	Pb	12 59 56.0	+0.6
EALB				Sg	Sb	13 00 06.3	+0.6
EALB				*i* Vmb_Lg		13 00 07.4	
AKLM	AKL	0.96	183	P	Pg	12 59 59.2	+0.3
AKLM				S	Sg	13 00 10.7	-0.7
CHAS	Isla Isabel II	1.15	104	P	Pg	13 00 00.6	-1.8
CHAS				S	Sg	13 00 14.4	-3.0
TAF	Taforalt	1.31	120	P	Pb	13 00 05.0	+0.6
CHEFC	Chefchaouen	1.32	254	P	Pn	13 00 04.2	+0.1
EMIJ	Mijas	1.35	324	Pn	Pn	13 00 04.4	-0.1
EMIJ				Sn	Sg	13 00 24.0	+0.3
EMIJ				*i* Vmb_Lg		13 00 28.2	
CEU	Ceuta	1.35	289	P	Pn	13 00 03.8	-0.7
CEU				S	Sb	13 00 16.6	-5.7
ECEU	Ceuta	1.36	289	Pn	Pn	13 00 04.0	-0.6
ECEU				Sg	Sb	13 00 19.7	-2.7
ECEU				*i* Vmb_Lg		13 00 21.7	
ELGU	Los Guajares,	1.40	5	Pn	Pn	13 00 05.0	-0.3
ELGU				Sn	Sb	13 00 24.1	+0.3
ELGU				*i* Vmb_Lg		13 00 31.0	
JBK	JBK	1.52	138	P	Pg	13 00 09.4	0.0
JBK				S	Sn	13 00 27.6	+1.1
EBER	Berja	1.60	27	Pn	Pn	13 00 08.9	+0.8
EBER				Sn	Sn	13 00 29.0	+0.5
EBER				*i* Vmb_Lg		13 00 32.5	
EGOR	Sierra Gorda,	1.66	351	Pn	Pn	13 00 09.9	+1.1
EGOR				Sn	Sn	13 00 31.2	+1.3
EGOR				*i* Vmb_Lg		13 00 45.0	
EQUE	Quentar	1.75	9	Pn	Pb	13 00 11.9	-0.2
EQUE				Sn	Sn	13 00 32.8	+0.6
EQUE				*i* Vmb_Lg		13 00 36.4	
ENIJ	Nijar	1.97	40	Pn	Pn	13 00 13.4	+0.4
ENIJ				Sn	Sn	13 00 36.5	-1.0
ENIJ				*i* Vmb_Lg		13 00 38.1	
LCRM	LCR	1.99	207	P	Pb	13 00 16.8	+0.7
ESPR	Espera	2.17	310	Pn	Pn	13 00 17.2	+1.4
ESPR				Sn	Sn	13 00 44.0	+1.5
IFR	Ifrane	2.24	210	S	Sn	13 00 41.7	-2.6
EQES	Quesada	2.40	14	Pn	Pb	13 00 22.1	-1.0
EQES				Sn	Sb	13 00 51.1	-1.4
EQES				*i* Vmb_Lg		13 00 53.3	
MD31	MD31	2.72	197	P	Pn	13 00 24.9	+1.5
MD31				S	Sn	13 00 56.2	+0.2
EADA	Adamuz	2.76	347	Pn	Pn	13 00 25.5	+1.5
EADA				Sn	Sn	13 00 58.4	+1.3
EADA				*i* Vmb_Lg		13 01 04.0	
TDRA	Tendrara	2.83	148	P	Pb	13 00 28.9	-1.7
ECAB	El Cabril	2.91	334	Pn	Pn	13 00 27.3	+1.3
ECAB				Sn	Sn	13 01 02.6	+1.9
ECAB				*i* Vmb_Lg		13 01 26.4	
EZAR	Zarzadilla de	2.93	35	Pn	Pn	13 00 28.2	+1.8
EZAR				Sn	Sn	13 01 01.5	+0.1
ZHG	ZHG	3.10	230	P	Pn	13 00 30.9	+2.2
ZHG				S	Sn	13 01 04.5	-1.0
EMUR	La Murta	3.13	40	Sn	Sn	13 01 06.0	-0.2
EMIN	Mina Concepcio	3.26	316	Pn	Pn	13 00 30.7	-0.1
EMIN				Sn	Sn	13 01 08.3	-1.0
EMIN				*i* Vmb_Lg		13 02 55.5	
EGRO	El Granado	3.62	306	Pn	Pn	13 00 36.4	+0.7
EGRO				Sn	Sn	13 01 17.1	-0.9
EGRO				*i* Vmb_Lg		13 01 20.5	

ETOB	**Tobarra**	**3.64**	**29**	Pn	**Pn**	**13 00 38.3**	**+2.3**
ETOB				Sn	**Sn**	**13 01 19.1**	**+0.3**
PBAR	**Barrancos**	**3.75**	**317**	*e*Pn	**Pn**	**13 00 38.9**	**+1.4**
PBAR				*e*Sn	**Sn**	**13 01 21.8**	**+0.5**
PBAR				A	A	13 01 28.9	
	1.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.78**	**299**	*e*Pn	**Pn**	**13 00 39.1**	**+1.2**
PBDV				*e*Sn	**Sn**	**13 01 21.5**	**-0.6**
PBDV				A	A	13 01 26.9	
	3.6nm,0.6s						
PAB	**San Pablo**	**4.09**	**354**	Pn	**Pn**	**13 00 43.7**	**+1.4**
PAB				Sn	**Sn**	**13 01 30.9**	**+1.0**
PAB				*i* Vmb_Lg		13 01 53.4	
EBAD	**Badajoz**	**4.17**	**323**	Pn	**Pn**	**13 00 44.7**	**+1.5**
EBAD				Sn	**Sn**	**13 01 32.3**	**+0.7**
EBAD				*i* Vmb_Lg		13 01 38.1	
ESDC	**Sonseca Array**	**4.20**	**358**	Pn	**Pn**	**13 00 45.8**	**+2.1**
MESJ	**Messejana**	**4.27**	**305**	*e*P	**Pn**	**13 00 46.0**	**+1.3**
MESJ				*e*S	**Sn**	**13 01 33.2**	**-1.0**
MESJ				IAML		13 01 35.2	
	comp=E,1.4nm,0.2s						
MESJ	**Messejana**	**4.27**	**305**	*e*Pn	**Pn**	**13 00 46.3**	**+1.6**
MESJ				*e*Sn	**Sn**	**13 01 33.7**	**-0.5**
MESJ				A	A	13 01 37.0	
	comp=E,2.6nm,0.4s						
MORF	**Marmelete**	**4.33**	**296**	*e*P	**Pn**	**13 00 46.4**	**+0.9**
MORF	**Marmelete**	**4.33**	**296**	*e*Pn	**Pn**	**13 00 46.4**	**+0.9**
MORF				*e*Sn	**Sn**	**13 01 35.5**	**-0.1**
MORF				A	A	13 01 36.7	
	comp=E,4.8nm,0.7s						
PFVI	**Vila Bisbo**	**4.39**	**294**	*e*Sn	**Sn**	**13 01 36.1**	**-1.0**
PESTR	**Estremoz**	**4.55**	**319**	*e*Pn	**Pn**	**13 00 50.2**	**+1.7**
PESTR				*e*Sn	**Sn**	**13 01 41.0**	**0.0**
PNCL	**Nicolau / Gran**	**4.62**	**306**	*e*Pn	**Pn**	**13 00 50.6**	**+1.1**
PNCL				*e*Sn	**Sn**	**13 01 42.3**	**-0.6**
PNCL				A	A	13 01 44.0	
	comp=E,2.1nm,0.9s						
PMTG	**Montargil**	**5.04**	**317**	*e*Pn	**Pn**	**13 00 57.6**	**+2.4**
OUZM	**OUZ**	**5.18**	**209**	P	**Pn**	**13 00 58.8**	**+1.5**
PACT	**Alcochete**	**5.20**	**311**	*e*Pn	**Pn**	**13 00 59.9**	**+2.5**

NNC ***06*** *13:06:52.2±0.4, 50°.02N×78°.78E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=5.8km s-min=1.8km az=74.0, Suspected Mining explosion.*

IDC ***06*** *13:06:53.0±1.0, 50°.08N×78°.78E, h0^{km}, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=18.4km s-min=6.0km az=66.0*

ISC 06 13:06:51.9±0.9**, 50°.05N**±0°.04×**78°.60E**±0°.06**, h0^{km}, n18,** σ**0^s.94**/34**, 9C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.54**	**354**	P	**Pb**	**13 07 03.6**	**-0.6**
KUR07				S	**Sb**	**13 07 12.3**	**-0.2**
KUR06	**Kurchatov Arra**	**0.56**	**355**	P	**Pb**	**13 07 03.8**	**-0.7**
KUR06				S	**Sb**	**13 07 13.0**	**0.0**
KUR14	**Kurchatov Arra**	**0.56**	**360**	P	**Pb**	**13 07 03.8**	**-0.9**
KUR14				S	**Sb**	**13 07 12.5**	**-0.9**
KUR15	**Kurchatov Arra**	**0.57**	**358**	P	**Pb**	**13 07 03.9**	**-0.8**
KUR15				S	**Sb**	**13 07 13.4**	**0.0**
KURBB	**Kurchatov Arra**	**0.57**	**356**	Pg	**Pb**	**13 07 04.2**	**-0.6**
	3.4nm,0.3s,baz=164,slow=19,SNR=310						
KURBB				Lg	Lg	13 07 12.2	
	3.6nm,0.3s,baz=176,slow=31,SNR=32						
KURBB	**Kurchatov Arra**	**0.57**	**356**	⇑P	**Pb**	**13 07 04.2**	**-0.6**
	31nm,0.3s						
KURBB				⇑S	**Sb**	**13 07 13.4**	**-0.2**
	138nm,0.6s						
KUR16	**Kurchatov Arra**	**0.58**	**354**	P	**Pb**	**13 07 04.4**	**-0.6**
KUR16				S	**Sb**	**13 07 13.4**	**-0.4**
KUR17	**Kurchatov Arra**	**0.59**	**352**	P	**Pb**	**13 07 04.4**	**-0.7**
KUR17				S	**Sb**	**13 07 13.7**	**-0.2**
KUR05	**Kurchatov Arra**	**0.59**	**356**	P	**Pb**	**13 07 04.5**	**-0.7**
KUR05				S	**Sb**	**13 07 13.9**	**-0.3**
KUR04	**Kurchatov Arra**	**0.61**	**357**	P	**Pb**	**13 07 04.8**	**-0.7**
KUR04				S	**Sb**	**13 07 14.3**	**-0.4**
KURK	**Kurchatov**	**0.67**	**1**	⇑P	**Pb**	**13 07 05.5**	**-0.9**
	9.7nm,0.3s						
KURK				⇑S	**Sb**	**13 07 15.7**	**-0.5**
	13nm,0.5s						
MAKZ	**Makanchi**	**3.95**	**144**	⇑Pn	**Pn**	**13 07 54.5**	**+0.8**
	0.3nm,0.3s						
MAKZ				⇑Pg	**Pb**	**13 08 02.1**	**-0.2**
	1.8nm,0.5s						
MAKZ				⇑Lg	Lg	13 08 54.6	
	6.2nm,0.5s						
MK31	**Makanchi Array**	**4.08**	**142**	⇑Pn	**Pn**	**13 07 56.4**	**+0.8**
	0.1nm,0.1s,baz=325,slow=10,SNR=65						
MK31				Pg	**Pb**	**13 08 03.6**	**-1.0**
	2.4nm,0.5s,baz=328,slow=13,SNR=22						
MK31				Lg	Lg	13 09 00.5	
	7.2nm,0.5s,baz=338,slow=30,SNR=20						
MKAR	**Makanchi Array**	**4.08**	**142**	Pn	**Pn**	**13 07 56.5**	**+0.9**
	0.4nm,0.3s,baz=322,slow=10,SNR=59						
MKAR				Pg	**Pb**	**13 08 02.4**	**-2.2**
	1.0nm,0.3s,baz=330,slow=14,SNR=27						
MKAR				Sn	**Sn**	**13 08 46.2**	**+2.2**
	0.6nm,0.3s,baz=318,slow=21,SNR=4.6						
MKAR				Lg	Lg	13 08 58.7	
	2.3nm,0.3s,baz=333,slow=34,SNR=12						
	0.5nm,0.3s						
OTUK	**Ortayu**	**4.49**	**249**	⇓Pn	**Pn**	**13 08 02.8**	**+1.7**
	2.1nm,0.5s						
OTUK				⇑Pg	**Pg**	**13 08 16.4**	**-1.5**
	1.3nm,0.5s						
OTUK				⇓Lg	Lg	13 09 18.1	
	5.7nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.48**	**42**	*i*		13 40 10.0	
	baz=226,slow=320,SNR=2.6						
ZAA0	**Zalesovo Array**	**5.48**	**42**	⇓Pn	**Pn**	**13 08 14.6**	**-0.1**
	0.4nm,0.7s						
ZAA0				⇓Sn	**Sn**	**13 09 18.8**	**+0.5**
	0.2nm,0.5s						
ZAA0				⇓Lg	Lg	13 09 42.6	
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**5.48**	**42**	Pn	**Pn**	**13 08 16.1**	**+1.4**
	0.7nm,0.3s,baz=232,slow=14,SNR=11						
ZALV				Sn	**Sn**	**13 09 18.2**	**-0.1**
	0.2nm,0.3s,baz=230,slow=22,SNR=2.0						
ZALV				Lg	Lg	13 09 42.4	
	0.5nm,0.3s,baz=227,slow=27,SNR=4.1						
	1.5nm,0.3s						

NEIC ***06*** *13:15:40.2±0.6, 17°.5N±0°.1×145°.7E±0°.2, h235^{km}±7^{km}, mb4.2/16, Error ellipse: s-maj=29.5km s-min=11.8km az=109.0*

IDC ***06*** *13:15:44.6±8.4, 17°.42N×145°.69E, h287^{km}±86^{km}, mb3.0/9, mbtmp3.6/9, Error ellipse: s-maj=27.0km s-min=15.9km az=86.0*

ISC 06 13:15:41.0±0.6**, 17°.40N**±0°.08×**145°.7E**±0°.1**, h250^{km}, n30,** σ**0^s.76**/32**, mb3.8**/17**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.87**	**192**	S	**S**	**13 17 32.4**	**-0.5**
	36nm,0.4s,baz=20,slow=19,SNR=1.9						
GUMO	**Guam**	**3.87**	**192**		**Pn**	**13 16 41.7**	**-1.6**
RABL	**Rabaul**	**22.39**	**163**	P	**P**	**13 20 19.0**	**+0.3**
KNRA	**Kununurra**	**36.86**	**208**	P	**P**	**13 22 26.0**	**+0.2**
WB0	**Warramunga Arr**	**38.57**	**197**	P	**P**	**13 22 40.0**	**0.0**
WB0				IAmb	IAmb	13 22 40.7	
	comp=Z,5.3nm,1.1s						
WR0	**Warramunga Arr**	**38.71**	**197**	P	**P**	**13 22 41.2**	**0.0**
WR0				IAmb	IAmb	13 22 45.4	
	comp=Z,9.2nm,1.4s						
WRAB	**Tennant Creek**	**38.74**	**197**	P	**P**	**13 22 42.3**	**+0.8**
WRAB				IAmb	IAmb	13 22 49.8	
	comp=Z,6.9nm,1.3s						
WB2	**Warramunga Arr**	**38.75**	**197**	P	**P**	**13 22 42.8**	**+1.3**
WB2				IAmb	IAmb	13 22 55.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**38.75**	**197**	P	**P**	**13 22 42.2**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=21,slow=7.7,SNR=16						
WRA				PcP	**PcP**	**13 24 47.3**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=21,slow=4.1,SNR=1.4						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**38.75**	**197**	P	**P**	**13 22 42.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**40.42**	**210**	P	**P**	**13 22 55.3**	**0.0**
FITZ				IAmb	IAmb	13 23 17.9	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**42.41**	**196**	P	**P**	**13 23 11.8**	**+0.4**
ASAR	**Alice Springs**	**42.41**	**196**	P	**P**	**13 23 11.5**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=12,slow=6.8,SNR=28						
ASAR				PcP	**PP**	**13 24 57.9**	**+2.4**
	comp=Z,0.7nm,1.1s,baz=27,slow=4.2,SNR=2.2						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**42.41**	**196**	P	**P**	**13 23 11.8**	**+0.4**
SONM	**Songino Array**	**44.15**	**322**	P	**P**	**13 23 24.2**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=133,slow=6.1,SNR=1.7						
	comp=Z,0.2nm,0.4s						
DZM	**Mont Dzumac**	**44.18**	**152**	P	**P**	**13 23 25.3**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=290,slow=12,SNR=1.4						
	comp=Z,4.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**44.39**	**279**	P	**P**	**13 23 27.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=90,slow=6.6,SNR=1.0						
	comp=Z,0.5nm,0.5s						
FORT	**Forrest**	**50.82**	**200**	P	**P**	**13 24 16.9**	**+0.6**
MORW	**Morawa**	**54.36**	**212**	P	**P**	**13 24 42.1**	**-0.1**
MORW				IAmb	IAmb	13 24 44.3	
	comp=Z,10nm,1.1s						
MKAR	**Makanchi Array**	**59.35**	**314**	P	**P**	**13 25 17.4**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=96,slow=8.2,SNR=2.6						
	comp=Z,0.2nm,0.4s						
CAST	**Castle Rocks**	**62.25**	**27**	P	**P**	**13 25 36.5**	**+0.3**
CAST				IAmb	IAmb	13 25 58.1	
	comp=Z,7.5nm,1.5s						
BKZ	**Black Stump Fm**	**63.22**	**154**	P	**P**	**13 25 43.0**	**0.0**
IL31		**64.81**	**26**	P	**P**	**13 25 52.8**	**0.0**
ILAR	**Eielson Array**	**64.81**	**26**	P	**P**	**13 25 52.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=255,slow=5.9,SNR=8.4						
	comp=Z,0.4nm,0.5s						
BMAR	**Burnt Mountain**	**66.30**	**23**	P	**P**	**13 26 03.6**	**+1.2**
BCAR	**Beaver Creek A**	**66.72**	**28**	P	**P**	**13 26 05.5**	**+0.3**
ABKAR	**Akbulak array**	**74.28**	**317**	P	**P**	**13 26 50.7**	**-0.2**
YKA	**Yellowknife Ar**	**79.13**	**28**	P	**P**	**13 27 17.8**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=287,slow=5.2,SNR=2.4						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**83.94**	**52**	P	**P**	**13 27 43.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=270,slow=5.4,SNR=4.5						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**95.20**	**177**	P	**P**	**13 28 35.7**	**+0.3**
VNDA				IAmb	IAmb	13 28 59.3	
	comp=Z,3.2nm,1.4s						

NEIC ***06*** *13:24:45.0±1.6, 7°.67S±0°.08×158°.3E±0°.1, h65^{km}±7^{km}, mb4.1/19, Error ellipse: s-maj=15.8km s-min=9.9km az=64.0*

IDC ***06*** *13:24:46.5±1.5, 7°.78S×158°.28E, h82^{km}±16^{km}, mb3.5/10, mbtmp3.9/13, MS3.2/10, Error ellipse: s-maj=19.5km s-min=12.0km az=31.0*

ISC 06 13:24:44.9±0.6**, 7°.72S**±0°.09×**158°.31E**±0°.08**, h65^{km}, n51,** σ**1^s.16**/40**, mb4.0**/20**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.34**	**137**	P	**Pn**	**13 25 21.3**	**+0.3**
	660nm,0.6s,baz=270,slow=3.0,SNR=17						
HNR				S	**Sn**	**13 25 51.6**	**+2.8**
	3μm,0.6s,baz=151,slow=22,SNR=9.5						
HNR				LR	LR	13 26 31.7	
	comp=Z,187nm,20.1s,baz=333,slow=45						
RABL	**Rabaul**	**7.05**	**300**	Pn	**Pn**	**13 26 24.7**	**-0.8**
KRVT	**Keravat (AS076**	**7.11**	**298**	P	**Pn**	**13 26 28.1**	**+1.8**
	7.6nm,0.4s,baz=154,slow=6.0,SNR=4.9						
KRVT				S	**Sn**	**13 27 49.0**	**+3.2**
	44nm,0.7s,baz=307,slow=18,SNR=1.8						
PMG	**Port Moresby**	**11.16**	**261**	LR	LR	13 31 28.4	
	comp=Z,57nm,20.7s,baz=110,slow=36						
DZM	**Mont Dzumac**	**16.27**	**152**	P	**Pn**	**13 28 30.5**	**+1.0**
	4.0nm,0.9s,baz=318,slow=18,SNR=1.3						
CTA	**Charters Tower**	**16.96**	**222**	LR	LR	13 34 42.1	
	comp=Z,89nm,18.3s,baz=74,slow=35						
EIDS	**Eidsvold**	**18.86**	**201**	P	**P**	**13 29 00.1**	**+0.3**
MSVF	**Nonsavu**	**21.65**	**119**	P	**P**	**13 29 30.1**	**0.0**
MSVF				IAmb	IAmb	13 29 57.3	
	comp=Z,9.4nm,1.1s						
ARMA	**Armidale**	**23.43**	**195**	P	**P**	**13 29 48.7**	**+0.1**
ARMA				IAmb	IAmb	13 30 01.6	
	comp=Z,4.0nm,0.8s						
WR0	**Warramunga Arr**	**26.05**	**240**	P	**P**	**13 30 12.9**	**+0.5**
WR0				IAmb	IAmb	13 30 37.3	
	comp=Z,8.8nm,1.2s						
WB0	**Warramunga Arr**	**26.09**	**240**	P	**P**	**13 30 13.5**	**+0.8**
WB0				IAmb	IAmb	13 30 37.2	
	comp=Z,5.0nm,0.9s						
WRAB	**Tennant Creek**	**26.20**	**240**	P	**P**	**13 30 14.0**	**+0.3**
WRAB				IAmb	IAmb	13 30 42.8	
	comp=Z,5.0nm,0.9s						
WB2	**Warramunga Arr**	**26.20**	**240**	P	**P**	**13 30 13.6**	**-0.1**
WB2				IAmb	IAmb	13 30 41.8	
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**26.21**	**240**	P	**P**	**13 30 13.8**	**0.0**
	comp=Z,1.3nm,0.6s,baz=65,slow=9.3,SNR=13						
WRA				LR	LR	13 40 12.9	
	comp=Z,82nm,20.0s,baz=308,slow=35						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**26.21**	**240**	P	**P**	**13 30 12.9**	**-1.0**
H11S3	**WAKE ISLAND Hy**	**27.33**	**18**	T	T	13 58 35.2	
	baz=198,slow=76,SNR=1094						
H11S2	**WAKE ISLAND Hy**	**27.33**	**18**	T	T	13 58 48.0	
	baz=198,slow=76,SNR=1309						
H11S1	**WAKE ISLAND Hy**	**27.35**	**18**	T	T	13 58 35.9	
	baz=198,slow=76,SNR=885						
SIJI	**Sorong**	**27.80**	**283**	LR	LR	13 43 27.7	
	comp=Z,46nm,18.6s,baz=120,slow=40						
AS31	**Alice Springs**	**28.27**	**233**	P	**P**	**13 30 32.0**	**-0.3**
ASAR	**Alice Springs**	**28.27**	**233**	P	**P**	**13 30 31.3**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=63,slow=9.8,SNR=14						
ASAR				LR	LR	13 41 17.2	
	comp=Z,56nm,21.6s,baz=102,slow=35						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**28.27**	**233**	P	**P**	**13 30 30.7**	**-1.6**
H11N1	**WAKE ISLAND Hy**	**28.54**	**17**	T	T	14 00 03.2	
	baz=198,slow=76,SNR=185						
H11N3	**WAKE ISLAND Hy**	**28.55**	**17**	T	T	14 00 04.0	
	baz=198,slow=76,SNR=140						
H11N2	**WAKE ISLAND Hy**	**28.56**	**17**	T	T	14 00 19.0	
	baz=198,slow=76,SNR=118						
STKA	**Stephens Creek**	**28.64**	**211**	P	**P**	**13 30 33.0**	**-2.4**
	comp=Z,1.7nm,0.8s,baz=82,slow=7.1,SNR=2.3						
	comp=Z,1.7nm,0.8s						
STKA	**Stephens Creek**	**28.64**	**211**	P	**P**	**13 30 35.6**	**+0.2**
KNRA	**Kununurra**	**29.97**	**252**	P	**P**	**13 30 47.7**	**+0.4**
KNRA				IAmb	IAmb	13 30 59.9	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**32.39**	**217**	P	**P**	**13 31 07.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**33.42**	**249**	LR	LR	13 43 27.6	
	comp=Z,44nm,21.5s,baz=96,slow=34						
FITZ	**Fitzroy Crossi**	**33.42**	**249**	P	**P**	**13 31 17.0**	**-0.7**
FITZ				IAmb	IAmb	13 31 43.3	
	comp=Z,14nm,1.4s						
BATI	**Baumata**	**34.30**	**263**	LR	LR	13 48 27.8	
	comp=Z,183nm,18.7s,baz=236,slow=42						
BKZ	**Black Stump Fm**	**35.32**	**155**	P	**P**	**13 31 33.2**	**-0.7**
LTZ	**Lake Taylor**	**37.02**	**163**	P	**P**	**13 31 48.2**	**-0.2**
RPZ	**Rata Peaks**	**37.55**	**165**	P	**P**	**13 31 53.9**	**+1.2**
	comp=Z,4.1nm,0.9s,baz=342,slow=6.4,SNR=1.3						
	comp=Z,4.1nm,0.9s						
NWAO	**Narrogin (SRO)**	**45.53**	**231**	P	**P**	**13 32 57.2**	**-1.1**
SHEM	**Shemya Is, Ala**	**61.71**	**11**	LR	LR	13 57 10.4	
	comp=Z,22nm,21.3s,baz=158,slow=32						
CMAR	**Chiang Mai Arr**	**64.07**	**295**	P	**P**	**13 35 12.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=133,slow=4.0,SNR=2.2						
	comp=Z,0.3nm,0.4s						
MA2	**Magadan**	**67.35**	**356**	LR	LR	13 59 55.9	
	comp=Z,12nm,21.9s,baz=162,slow=31						
VNDA	**Vanda**	**69.79**	**179**	P	**P**	**13 35 47.1**	**-0.7**
VNDA				IAmb	IAmb	13 36 00.3	
	comp=Z,2.1nm,1.2s						
SONM	**Songino Array**	**71.75**	**326**	P	**P**	**13 36 00.8**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=140,slow=5.3,SNR=3.1						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**71.75**	**326**	P	**P**	**13 36 00.2**	**-0.2**
SONM				IAmb	IAmb	13 36 12.5	
	comp=Z,2.5nm,1.3s						
IMAR	**Indian Mountai**	**81.38**	**18**	P	**P**	**13 36 54.1**	**-0.1**
QSPA	**South Pole Qui**	**82.26**	**180**	P	**P**	**13 36 57.3**	**-1.7**
ILAR	**Eielson Array**	**82.87**	**21**	P	**P**	**13 37 01.4**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=239,slow=5.1,SNR=6.2						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**82.87**	**21**	P	**P**	**13 37 01.1**	**-0.9**
MAW	**Mawson**	**84.99**	**203**	P	**P**	**13 37 14.5**	**+1.7**
MAW				IAmb	IAmb	13 37 18.3	
	comp=Z,2.5nm,1.4s						
MKAR	**Makanchi Array**	**86.13**	**318**	P	**P**	**13 37 18.8**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=79,slow=6.4,SNR=4.1						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**86.13**	**318**	P	**P**	**13 37 18.1**	**-0.9**
NVAR	**Mina Array Bea**	**89.60**	**51**	P	**P**	**13 37 36.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=240,slow=7.8,SNR=4.0						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**95.44**	**28**	P	**P**	**13 38 01.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=258,slow=4.7,SNR=14						
	comp=Z,0.9nm,0.8s						

IDC 06 13:42:18.7±1.9**, 44°.91N**×**27°.56W, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=61.6km s-min=31.8km az=54.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GERES	**GERESS Array B**	**28.23**	**67**	P	P	13 48 14.3	+1.1
	0.2nm,0.3s,baz=279,slow=7.8,SNR=3.7						
	0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**40.27**	**133**	P	P	13 49 57.7	+0.3
	2.3nm,1.0s,baz=318,slow=9.8,SNR=9.0						
	2.3nm,1.0s						
ILAR	**Eielson Array**	**60.89**	**335**	P	P	13 52 34.1	+1.5
	0.3nm,0.6s,baz=42,slow=7.3,SNR=2.8						
	0.3nm,0.6s						
SONM	**Songino Array**	**79.19**	**30**	P	P	13 54 24.3	-1.1
	0.6nm,0.8s,baz=312,slow=4.3,SNR=4.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**153.98**	**42**	PKPbc	PKPbc	14 02 18.5	-1.7
	0.3nm,0.8s,baz=339,slow=4.0,SNR=2.8						

IDC ***06*** *13:42:54.8±1.1, 44°.93N×27°.92W, h0^{km}, mb3.6/8, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=34.6km s-min=22.8km az=19.0*

ISC 06 13:42:56.9±1.0**, 44°.9N**±0°.2×**27°.9W**±0°.1**, h14^{km}, n11,** σ**0^s.78**/11**, mb3.7**/8**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.88**	**48**	P	**Pn**	**13 47 17.7**	**+0.5**
	baz=233,slow=12						
	0.8nm,0.7s						
AKASG	**Malin Array Be**	**37.97**	**60**	P	**P**	**13 50 14.2**	**+0.2**
	0.5nm,0.2s,baz=273,slow=6.3,SNR=1.8						
	0.5nm,0.2s						
TORD	**Torodi Ar. Bea**	**40.46**	**132**	P	**P**	**13 50 35.6**	**+0.5**
	2.9nm,1.0s,baz=332,slow=5.7,SNR=8.4						
	2.9nm,1.0s						
BRTR	**Keskin Array B**	**44.84**	**74**	P	**P**	**13 51 10.2**	**-0.5**
	0.7nm,0.8s,baz=284,slow=5.8,SNR=4.4						
	0.7nm,0.8s						
YKA	**Yellowknife Ar**	**50.04**	**323**	P	**P**	**13 51 51.2**	**+0.6**
	0.3nm,0.8s,baz=69,slow=7.7,SNR=1.7						
	0.3nm,0.8s						
TXAR	**Lajitas Array**	**60.29**	**283**	P	**P**	**13 53 05.3**	**+0.1**
	0.6nm,0.9s,baz=61,slow=7.8,SNR=3.9						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**60.78**	**335**	P	**P**	**13 53 07.3**	**-0.6**
	0.3nm,0.6s,baz=49,slow=5.8,SNR=4.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**69.96**	**43**	P	**P**	**13 54 06.7**	**-0.9**
	0.3nm,0.6s,baz=353,slow=4.6,SNR=2.7						
	0.3nm,0.6s						
SONM	**Songino Array**	**79.30**	**29**	P	**P**	**13 55 03.1**	**+1.1**
	0.7nm,0.7s,baz=5.7,slow=3.0,SNR=4.7						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**151.07**	**36**	PKPbc	**PKiKP**	**14 02 49.7**	**-0.5**
	1.0nm,1.0s,baz=321,slow=2.5,SNR=4.8						
ASAR	**Alice Springs**	**154.13**	**41**	PKPbc	**PKPbc**	**14 02 55.5**	**-0.9**
	0.4nm,0.9s,baz=350,slow=2.8,SNR=2.4						

IPEC ***06*** *13:49:08.7±0.3, 51°.50N×16°.20E, h1^{km}, ML2.6/3, Error ellipse: s-maj=2.9km s-min=1.3km az=60.0*

PRU ***06*** *13:49:09.8±0.0, 51°.47N×16°.08E, h0^{km}*

IDC ***06*** *13:49:09.9±1.0, 51°.47N×15°.97E, h0^{km}, mb3.0/1, mbtmp3.2/6, ML2.9/5, Error ellipse: s-maj=18.5km s-min=8.7km az=109.0*

VIE ***06*** *13:49:11.4±0.8, 51°.31N×16°.04E, h0^{km}, mb2.3/3, ml2.7/3, Error ellipse: s-maj=6.3km s-min=4.8km az=66.0 72 km WNW of Wroclaw Suspected Mining induced.*

ISC 06 13:49:07.9±0.8**, 51°.53N**±0°.04×**16°.13E**±0°.03**, h0^{km}, n37,** σ**1^s.11**/73**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg	**Pg**	**13 49 21.7**	**+0.5**
KSP				*e*Sg	**Sg**	**13 49 30.3**	**+0.1**
CHVC	**Chvalec**	**0.94**	**183**	*e*PG	**Pg**	**13 49 26.6**	**+0.6**
CHVC				*e*SG	**Sg**	**13 49 38.1**	**-0.1**
OSTC	**Ostas**	**0.97**	**177**	*e*PG	**Pb**	**13 49 27.4**	**-0.3**
OSTC				*e*SG	**Sg**	**13 49 39.1**	**-0.1**
	comp=Z,47nm,0.4s						
UPC	**Upice**	**1.02**	**184**	*e*PG	**Pg**	**13 49 27.8**	**+0.3**
UPC				*e*SG	**Sg**	**13 49 40.2**	**-0.6**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*PG	**Pg**	**13 49 30.5**	**-0.1**
DPC				*e*SG	**Sg**	**13 49 45.1**	**-0.9**
	comp=Z,27nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	**Pn**	**13 49 35.0**	**+0.2**
PVCC				*e*SG	**Sb**	**13 49 53.8**	**+0.3**
	comp=Z,159nm,0.3s						
KRLC	**Kraliky**	**1.51**	**164**	*e*PG	**Pn**	**13 49 36.2**	**-0.1**
KRLC				*e*SG	**Sg**	**13 49 54.7**	**-1.7**
	comp=Z,54nm,0.5s						
BRG	**Berggiesshubel**	**1.52**	**245**	Pn	**Pn**	**13 49 36.2**	**-0.2**
BRG				Pg	**Pb**	**13 49 37.7**	**+0.6**
BRG				Sg	**Sg**	**13 49 57.6**	**+0.7**
BRG				Amp		13 50 00.1	
	comp=Z,50nm,0.3s						
PRU	**Pruhonice**	**1.84**	**214**	*e*PG	**Pn**	**13 49 42.0**	**+1.2**
PRU				*e*SG	**Sn**	**13 50 05.7**	**+0.9**
	comp=Z,27nm,0.5s						
MORC	**Moravsky Berou**	**1.97**	**152**	*e*Pn	**Pn**	**13 49 42.5**	**0.0**
	baz=334						
MORC				*e*Sg	**Sb**	**13 50 08.9**	**-0.8**
	comp=Z,40nm,0.6s,baz=334						
MORC	**Moravsky Berou**	**1.97**	**152**	*e*PN	**Pn**	**13 49 42.6**	**0.0**
MORC				*e*SG	**Sb**	**13 50 09.0**	**-0.8**
CLL	**Collm**	**1.97**	**265**	*e*Pn	**Pn**	**13 49 42.0**	**-0.6**
CLL				*e*Pg	**Pb**	**13 49 45.0**	**+0.3**
CLL				*i* x	x	13 49 49.3	
CLL				*e*Sg	**Sg**	**13 50 12.0**	**+0.7**
	comp=Z,21nm,0.7s						
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG	**Pb**	**13 49 47.6**	**+0.3**
OKC				*e*SG	**Sb**	**13 50 14.1**	**0.0**
	comp=Z,53nm,0.8s						
VRAC	**Vranov**	**2.24**	**172**	Pn	**Pn**	**13 49 47.7**	**+1.4**
	comp=Z,3.9nm,0.3s,baz=350,slow=15,SNR=10						
VRAC				Lg	Lg	13 50 18.2	
	comp=Z,4.7nm,0.3s,baz=273,slow=23,SNR=8.5						
	comp=Z,7.2nm,0.3s						
VRAC	**Vranov**	**2.24**	**172**	*e*Pn	**Pn**	**13 49 46.4**	**+0.1**
	baz=354						
VRAC				*e*Sg	**Sb**	**13 50 17.6**	**0.0**
	comp=Z,29nm,0.7s,baz=354						
VRAC	**Vranov**	**2.24**	**172**	*e*PN	**Pn**	**13 49 46.4**	**+0.1**
VRAC				*e*SG	**Sb**	**13 50 17.7**	**+0.1**
PBCC	**Pribram**	**2.29**	**217**	*e*PG	**Pb**	**13 49 50.8**	**+0.6**
MAUC	**Maruska**	**2.42**	**153**	*e*PN	**Pn**	**13 49 49.9**	**+1.1**
MAUC				*e*PG	**Pg**	**13 49 53.5**	**-0.8**
MAUC				*e*SG	**Sg**	**13 50 24.8**	**-0.9**
	comp=Z,34nm,0.3s						
KRUC	**Moravsky**	**2.47**	**176**	*e*Pg	**Pb**	**13 49 53.0**	**-0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**13 50 25.2**	**+1.0**
	comp=Z,27nm,0.6s,baz=357						
KRUC	**Moravsky**	**2.47**	**176**	*e*PG	**Pb**	**13 49 53.0**	**-0.2**
KRUC				*e*SG	**Sb**	**13 50 25.2**	**+1.0**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**13 50 01.1**	**+2.1**
OJC				*e*Sg	**Sg**	**13 50 35.5**	**+1.9**
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**13 49 52.9**	**+0.7**
NKC				*e*PG	**Pg**	**13 49 59.0**	**-0.1**
JAVC	**Velka Javorina**	**2.85**	**159**	*e*PN	**Pn**	**13 49 54.6**	**-0.1**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**13 49 55.8**	**+0.4**
KHC				*e*PG	**Pb**	**13 50 01.6**	**+1.0**
KHC				*e*SN	**Sn**	**13 50 30.0**	**-1.1**
KHC				*e*SG	**Sg**	**13 50 41.3**	**+0.1**
	comp=Z,15nm,0.6s						
CKRC	**Cesky Krumlov**	**2.95**	**204**	*e*PN	**Pn**	**13 49 56.6**	**+0.5**
CKRC				*e*PG	**Pb**	**13 50 02.2**	**+0.8**
CKRC				*e*SG	**Sb**	**13 50 40.2**	**+2.1**
	comp=Z,14nm,0.4s						
GERES	**GERESS Array B**	**3.11**	**211**	Pn	**Pn**	**13 49 59.2**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=26,slow=12,SNR=20						

GERES				Pg	**Pb**	**13 50 05.0**	**+0.9**
	comp=Z,3.5nm,0.3s,baz=30,slow=17,SNR=24						
GERES				Sn	**Sn**	**13 50 33.4**	**-2.7**
	comp=Z,1.9nm,0.3s,baz=29,slow=24,SNR=2.8						
GERES				Lg	Lg	13 50 45.5	
	comp=Z,3.9nm,0.3s,baz=35,slow=30,SNR=8.6						
	comp=Z,2.2nm,0.4s						
SMOL	**Smolenice**	**3.13**	**164**	*e*SG	**Sg**	**13 50 52.1**	**+3.6**
LANS	**Liptovska Anna**	**3.20**	**137**	*e*PG	**Pg**	**13 50 09.4**	**+0.2**
LANS				*e*SG	**Sg**	**13 50 53.3**	**+2.7**
MODS	**Modra-Piesok**	**3.24**	**166**	*e*PG	**Pg**	**13 50 10.2**	**+0.1**
MODS				*e*SG	**Sg**	**13 50 53.5**	**+1.4**
VYHS	**Vyhne**	**3.50**	**149**	*e*PG	**Pg**	**13 50 13.9**	**-1.1**
VYHS				*e*SG	**Sg**	**13 50 59.1**	**-1.3**
CONA	**Conrad Observa**	**3.61**	**183**	*i* Pn	**Pn**	**13 50 06.0**	**+0.8**
	comp=Z,2.1nm,0.3s						
CONA				*i* Sg	**Sg**	**13 51 02.5**	**-1.3**
	comp=Z,18nm,0.5s						
MOA	**Molln**	**3.88**	**199**	*i* Pn	**Pn**	**13 50 09.4**	**+0.7**
	comp=Z,1.5nm,0.2s						
MOA				*e*Sg	**Sg**	**13 51 11.6**	**-0.8**
	comp=Z,10nm,0.5s						
ARSA	**Arzberg**	**4.30**	**186**	*i* Pn	**Pn**	**13 50 15.9**	**+1.3**
	comp=Z,1.1nm,0.2s						
ARSA				*e*Sg	**Sg**	**13 51 25.4**	**-0.6**
	comp=Z,8.1nm,0.6s						
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	**Pn**	**13 50 43.2**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=15,slow=16,SNR=1.7						
DAVOX				Lg	Lg	13 52 24.2	
	comp=Z,0.2nm,0.3s,baz=208,slow=21,SNR=1.6						
	comp=Z,0.7nm,0.3s						
FINES	**FINESS Array B**	**11.34**	**25**	Pn	**Pn**	**13 51 49.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=215,slow=11,SNR=5.7						
	comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	**18.60**	**10**	Pn	**P**	**13 53 23.8**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=200,slow=10,SNR=6.8						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**59.85**	**336**	P	**P**	**13 59 15.9**	**+1.2**
	comp=Z,0.1nm,0.6s,baz=29,slow=6.9,SNR=2.2						
	comp=Z,0.1nm,0.6s						

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*NEIC **06** 13:56:40.8±1.6, 7°.39N±0°.03×73°.08W±0°.07, h140^{km}±6^{km}, mb4.2/19, Error ellipse: s-maj=9.9km s-min=3.5km az=74.0*

*IDC **06** 13:56:41.2±0.8, 7°.40N×73°.04W, h148^{km}±8^{km}, mb3.5/9, mbtmp4.0/11, Error ellipse: s-maj=17.7km s-min=7.9km az=127.0*

*RSNC **06** 13:56:42.1±0.9, 7°.45N×73°.19W, h132^{km}±3^{km}, ML3.7, Mw4.1, Fault plane solution: NP1:ϕ_s44.00000°, δ58.00000°, λ58.00000°.*

ISC 06 13:56:40.4±0.5, **7°.46N**±0°.03×**73°.17W**±0°.03, **h138**^{km}±4^{km}, **n85**, σ**1^{s}.51**/126, **mb4.2**/16, **6C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.48**	**105**	⇑*i*P	**Pn**	**13 57 02.0**	**+1.1**
PAMC				*e*S	**Sn**	**13 57 17.0**	**+0.7**
PAMC				*i*		13 57 18.5	
	comp=Z,2μm,0.2s						
BRRC	**Barranca, Sant**	**0.65**	**237**	⇑*i*P	**Pn**	**13 57 01.8**	**+0.5**
BRRC				*e*S	**Sn**	**13 57 17.0**	**-0.1**
BRRC				*i*		13 57 21.1	
	comp=Z,1μm,0.4s						
OCAC	**Ocana**	**0.79**	**349**	Pn	**Pn**	**13 57 03.4**	**+0.9**
OCAC	**Ocana**	**0.79**	**349**	⇑*i*P	**Pn**	**13 57 03.2**	**+0.8**
OCAC				*e*S	**Sn**	**13 57 19.5**	**+0.3**
OCAC				*i*		13 57 22.4	
	comp=Z,3μm,0.4s						
BARC	**Barichara**	**0.86**	**181**	⇑*i*P	**Pn**	**13 57 03.7**	**+0.5**
BARC				*e*S	**Sn**	**13 57 20.3**	**-0.2**
BARC				*i*		13 57 21.6	
	comp=Z,1μm,0.1s						
RUSC	**La Rusia**	**1.56**	**177**	*e*P	**Pn**	**13 57 10.4**	**+0.1**
RUSC				*e*S	**Sn**	**13 57 33.0**	**-0.1**
RUSC				*i*		13 57 36.4	
	comp=Z,241nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.57**	**234**	⇑*i*P	**Pn**	**13 57 09.5**	**-0.4**
PTBC				*e*S	**Sn**	**13 57 31.9**	**-0.6**
PTBC				*i*		13 57 35.5	
	comp=Z,762nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.68**	**271**	Pn	**Pn**	**13 57 11.7**	**+0.7**
ZARC	**Zaragoza, Cauc**	**1.68**	**271**	⇓*e*P	**Pn**	**13 57 11.7**	**+0.7**
ZARC				*e*S	**Sn**	**13 57 35.1**	**+0.6**
ZARC				*i*		13 57 36.4	
	comp=Z,956nm,0.2s						
TAMC	**Tame, Arauca**	**1.70**	**127**	⇑*e*P	**Pn**	**13 57 12.6**	**+1.2**
TAMC				*e*S	**Sn**	**13 57 36.3**	**+1.2**
TAMC				*i*		13 57 42.5	
	comp=Z,414nm,0.6s						
SPBC	**San Pablo de B**	**2.01**	**207**	*e*P	**Pn**	**13 57 15.9**	**+0.8**
SPBC				*e*S	**Sn**	**13 57 42.6**	**+1.0**
SPBC				*i*		13 57 49.3	
	comp=Z,665nm,0.5s						
LL1C	**La Loma 1 Cana**	**2.10**	**349**	*e*P	**Pn**	**13 57 18.7**	**+2.6**
LL1C				*e*S	**Sn**	**13 57 47.1**	**+3.6**
LL1C				*i*		13 57 56.7	
	comp=Z,1μm,0.4s						
UREC	**San Jos de Ur**	**2.36**	**277**	*e*P	**Pn**	**13 57 19.0**	**-0.3**
UREC				*e*S	**Sn**	**13 57 47.1**	**-2.0**
UREC				*i*		13 57 57.6	
	comp=Z,410nm,0.2s						
NORC	**Norcasia**	**2.53**	**222**	*e*P	**Pn**	**13 57 21.9**	**+0.5**
NORC				*e*S	**Sn**	**13 57 53.7**	**+0.6**
NORC				*i*		13 57 59.0	
	comp=Z,541nm,0.2s						
ARGC	**Ariguani, Magd**	**2.61**	**336**	*e*P	**Pn**	**13 57 24.3**	**+1.9**
ARGC				*e*S	**Sn**	**13 57 56.1**	**+1.4**
ARGC				*i*		13 58 03.8	
	comp=Z,78nm,0.5s						
HELC	**Santa Helena**	**2.66**	**242**	*e*P	**Pn**	**13 57 23.9**	**+0.5**
HELC				*e*S	**Sn**	**13 57 54.8**	**-1.6**
HELC				*i*		13 58 05.2	
	comp=Z,358nm,0.3s						
ROSC	**El Rosal**	**2.85**	**204**	P	**Pn**	**13 57 28.1**	**+2.3**
	comp=Z,70nm,0.3s,baz=70,slow=10,SNR=40						
ROSC				S	**Sn**	**13 58 02.4**	**+1.8**
	comp=Z,242nm,0.5s,baz=22,slow=22,SNR=12						
ROSC	**El Rosal**	**2.85**	**204**		**Pn**	**13 57 28.0**	**+2.3**
ROSC	**El Rosal**	**2.85**	**204**	⇓*e*P	**Pn**	**13 57 27.7**	**+1.9**
ROSC				*e*S	**Sn**	**13 58 04.1**	**+3.5**
ROSC				*i*		13 58 12.3	
	comp=Z,396nm,0.6s						
CHIC	**Chingaza**	**2.87**	**191**	*e*P	**Pn**	**13 57 27.0**	**+1.0**
CHIC				*e*S	**Sn**	**13 58 02.1**	**+0.9**
CHIC				*i*		13 58 09.5	
	comp=Z,131nm,0.5s						
SDV	**Santo Domingo**	**2.88**	**60**	P	**Pn**	**13 57 27.5**	**+1.6**
	comp=Z,87nm,0.3s,baz=38,slow=1.8,SNR=74						
SDV				S	**Sn**	**13 58 00.7**	**-0.3**
	comp=Z,162nm,0.4s,baz=33,slow=15,SNR=6.7						
SDV	**Santo Domingo**	**2.88**	**60**	*e*P	**Pn**	**13 57 27.4**	**+1.6**
SDV				*e*S	**Sn**	**13 58 00.9**	**-0.1**
SJCC	**San Jacinto, C**	**3.13**	**321**	Pn	**Pn**	**13 57 29.4**	**+0.4**
SJCC	**San Jacinto, C**	**3.13**	**321**	*e*P	**Pn**	**13 57 29.6**	**+0.5**
SJCC				*e*S	**Sn**	**13 58 05.3**	**-1.4**
SJCC				*i*		13 58 08.8	
	comp=Z,122nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.24**	**241**	*e*P	**Pn**	**13 57 31.7**	**+1.1**
CBOC				*e*S	**Sn**	**13 58 07.5**	**-1.8**
CBOC				*i*		13 58 25.8	
	comp=Z,128nm,0.5s						
VILC	**Villavicencio,**	**3.37**	**189**	*e*P	**Pn**	**13 57 33.5**	**+1.2**
VILC				*e*S	**Sn**	**13 58 12.4**	**+0.1**
CRJC	**Cerrejon, Guaj**	**3.55**	**5**	*e*P	**Pn**	**13 57 34.4**	**-0.1**
CRJC				*e*S	**Sn**	**13 58 14.8**	**-1.6**
CRJC				*i*		13 58 17.8	
	comp=Z,159nm,0.2s						
ANIL	**Santa Ana**	**3.70**	**217**	*e*P	**Pn**	**13 57 38.6**	**+2.0**
ANIL				*e*S	**Sn**	**13 58 24.6**	**+4.4**
ANIL				*i*		13 58 32.9	
	comp=Z,406nm,0.6s						
SMRC	**Santa Marta, M**	**3.82**	**344**	*e*P	**Pn**	**13 57 38.3**	**+0.2**
SMRC				*e*S	**Sn**	**13 58 20.9**	**-1.9**
SMRC				*i*		13 58 23.5	
	comp=Z,84nm,0.4s						
PLMC	**San Jos del P**	**4.01**	**231**	*e*P	**Pn**	**13 57 40.8**	**+0.3**
PLMC				*e*S	**Sn**	**13 58 28.2**	**+1.1**
PLMC				*i*		13 58 38.5	
	comp=Z,111nm,0.6s						
ORTC	**Ortega, Tolima**	**4.09**	**210**	*e*P	**Pn**	**13 57 42.0**	**+0.4**
ORTC				*e*S	**Sn**	**13 58 32.9**	**+3.7**
ORTC				*i*		13 58 44.5	
	comp=Z,129nm,0.6s						
PRAC	**Prado**	**4.10**	**205**	*e*P	**Pn**	**13 57 42.3**	**+0.6**
PRAC				*e*S	**Sn**	**13 58 32.5**	**+3.2**
PRAC				*i*		13 58 38.4	
	comp=Z,176nm,0.5s						
URIC	**Uribia, Colomb**	**4.37**	**15**	Pn	**Pn**	**13 57 44.9**	**-0.4**
URIC	**Uribia, Colomb**	**4.37**	**15**	*e*P	**Pn**	**13 57 44.8**	**-0.4**
URIC				*e*S	**Sn**	**13 58 32.7**	**-2.9**
URIC				*i*		13 58 41.0	
	comp=Z,38nm,0.5s						
SOLC	**Bahia Solano**	**4.39**	**254**	*e*P	**Pn**	**13 57 46.8**	**+1.3**
SOLC				*e*S	**Sn**	**13 58 35.0**	**-1.0**
YOTC	**Yotoco, Valle**	**4.68**	**223**	*e*P	**Pn**	**13 57 49.6**	**+0.1**
YOTC				*e*S	**Sn**	**13 58 47.6**	**+4.3**
YOTC				*i*		13 58 52.1	
	comp=Z,24nm,0.6s						
GUVC	**San Jose del G**	**4.91**	**174**	*e*P	**Pn**	**13 57 53.8**	**+1.3**
GUVC				*e*S	**Sn**	**13 58 46.7**	**-2.0**
GUVC				*i*		13 58 52.2	
	comp=Z,77nm,0.5s						
BAUV	**El Baul**	**5.28**	**73**		**Pn**	**13 57 56.5**	**-0.9**
MACC	**Macarena, Meta**	**5.33**	**187**	*e*P	**Pn**	**13 57 57.0**	**-1.0**
MACC				*e*S	**Sn**	**13 58 54.5**	**-4.0**
MACC				*i*		13 59 32.1	
	comp=Z,50nm,0.5s						
MARP	**Paez Belalcaza**	**5.36**	**211**	*e*P	**Pn**	**13 57 58.5**	**-0.3**
MARP				*e*S	**Sn**	**13 59 01.6**	**+1.8**
GARC	**Garzon, Huila**	**5.73**	**204**	*e*P	**Pn**	**13 58 04.7**	**+1.1**
GARC				*e*S	**Sn**	**13 59 08.4**	**-0.2**
GARC				*i*		13 59 13.2	
	comp=Z,51nm,0.2s						
PCON	**Cinco Dias**	**6.03**	**212**	*e*P	**Pn**	**13 58 09.4**	**+1.5**
PCON				*e*S	**Sn**	**13 59 17.8**	**+1.5**
PCON				*i*		13 59 28.3	
	comp=Z,20nm,0.5s						
SOTA	**Rioblanco**	**6.31**	**213**	*e*P	**Pn**	**13 58 14.9**	**+3.3**
SOTA				*e*S	**Sn**	**13 59 24.8**	**+2.0**
SOTA				*i*		13 59 51.7	
	comp=Z,15nm,0.6s						
BCIP	**Isla Barro Col**	**6.81**	**285**	Pn	**Pn**	**13 58 19.9**	**+1.9**
BIRV	**Birongo**	**7.44**	**66**	Pn	**Pn**	**13 58 25.0**	**-1.3**
OTAV	**Otavalo**	**8.90**	**217**	Pn	**Pn**	**13 58 43.7**	**-2.7**
SDDR	**Presa de Saban**	**11.60**	**9**	Pn	**Pn**	**13 59 24.7**	**+2.9**
MDP	**Montagnes des**	**20.54**	**95**	P	**P**	**14 01 08.4**	**+0.3**
	comp=Z,13nm,1.1s,baz=270,slow=14,SNR=2.2						
	comp=Z,13nm,1.1s						
LPAZ	**La Paz**	**24.12**	**168**	P	**P**	**14 01 43.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=330,slow=11,SNR=5.2						
	comp=Z,1.3nm,0.6s						
LPAZ	**La Paz**	**24.12**	**168**	P	**P**	**14 01 42.9**	**-1.2**
U40A	**Yellville**	**33.92**	**331**	P	**P**	**14 03 09.5**	**-0.8**
U40A				IAmb	IAmb	14 03 11.7	
	comp=Z,6.9nm,1.1s						
TX32	**Lajitas Array**	**36.01**	**311**	P	**P**	**14 03 29.1**	**+0.7**
TXAR	**Lajitas Array**	**36.01**	**311**	P	**P**	**14 03 29.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=131,slow=9.2,SNR=5.1						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**36.01**	**311**	P	**P**	**14 03 29.3**	**+0.9**
MNTX	**Cornudas Mount**	**38.50**	**313**	P	**P**	**14 03 49.9**	**+0.6**
D62A	**Allapoint, All**	**39.63**	**4**	P	**P**	**14 03 59.4**	**+1.0**
EYMN	**Ely**	**43.25**	**342**	P	**P**	**14 04 28.3**	**+0.4**
SCHQ	**Schefferville**	**47.51**	**5**	P	**P**	**14 05 00.9**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=193,slow=7.2,SNR=7.2						
	comp=Z,2.6nm,0.6s						
SCHQ	**Schefferville**	**47.51**	**5**	P	**P**	**14 05 01.8**	**+0.4**
SCHQ				IAmb	IAmb	14 05 30.9	
	comp=Z,5.3nm,1.1s						
PDAR	**Pinedale Array**	**47.54**	**324**	P	**P**	**14 05 02.9**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=126,slow=9.1,SNR=3.2						
	comp=Z,0.2nm,0.5s						
PLCA	**Paso Flores**	**48.02**	**177**	P	**P**	**14 05 03.3**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=354,slow=8.4,SNR=4.2						
	comp=Z,1.2nm,0.8s						
PLCA	**Paso Flores**	**48.02**	**177**	P	**P**	**14 05 03.6**	**-1.9**
PLCA				IAmb	IAmb	14 05 10.3	
	comp=Z,4.7nm,1.4s						
FCC	**Fort Churchill**	**53.64**	**347**	P	**P**	**14 05 47.4**	**+0.1**
FCC				IAmb	IAmb	14 05 48.3	
	comp=Z,6.4nm,1.5s						
YKA	**Yellowknife Ar**	**62.65**	**340**	P	**P**	**14 06 50.6**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=131,slow=6.8,SNR=86						
YKA				pP	**pP**	**14 07 23.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=128,slow=7.3,SNR=4.5						
	comp=Z,3.1nm,0.6s						
YKA	**Yellowknife Ar**	**62.65**	**340**	P	**P**	**14 06 50.0**	**+0.1**
SUMG	**Summit**	**68.37**	**11**	P	**P**	**14 07 27.1**	**+0.1**
SUMG				IAmb	IAmb	14 07 29.8	
	comp=Z,6.2nm,1.1s						
HOPE	**Hope Point**	**68.79**	**158**	P	**P**	**14 07 27.9**	**-1.4**
M30M	**Minto, Yukon**	**71.44**	**334**	P	**P**	**14 07 46.5**	**+1.0**
M30M				IAmb	IAmb	14 07 47.4	
	comp=Z,2.9nm,0.6s						
INK	**Inuvik**	**72.42**	**340**	P	**P**	**14 07 51.9**	**+0.8**
INK				IAmb	IAmb	14 07 54.0	
	comp=Z,6.0nm,1.4s						
BCAR	**Beaver Creek A**	**73.77**	**334**	P	**P**	**14 08 00.5**	**+1.2**
BMAR	**Burnt Mountain**	**76.05**	**338**	P	**P**	**14 08 13.2**	**+0.9**
ILAR	**Eielson Array**	**76.37**	**335**	P	**P**	**14 08 14.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=109,slow=4.3,SNR=6.0						
	comp=Z,0.6nm,0.7s						
BPAW	**Bear Paw Mtn.**	**78.01**	**334**	P	**P**	**14 08 23.2**	**0.0**
BPAW				IAmb	IAmb	14 08 24.8	
	comp=Z,4.1nm,1.2s						
J20K	**Nowinta River**	**79.39**	**334**	P	**P**	**14 08 31.9**	**+1.1**
J20K				IAmb	IAmb	14 08 38.3	
	comp=Z,8.3nm,1.5s						
ARCES	**ARCESS Array B**	**86.09**	**20**	P	**P**	**14 09 05.6**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=336,slow=2.7,SNR=6.2						
	comp=Z,2.1nm,0.9s						
ARCES	**ARCESS Array B**	**86.09**	**20**	P	**P**	**14 09 06.1**	**+0.8**
ARCES				IAmb	IAmb	14 09 23.3	
	comp=Z,5.4nm,1.5s						
SNAA	**Sanae**	**90.96**	**163**	P	**P**	**14 09 27.9**	**-0.4**
SNAA				IAmb	IAmb	14 09 51.4	
	comp=Z,4.5nm,1.4s						
QSPA	**South Pole Qui**	**97.47**	**180**	P	**P**	**14 09 56.7**	**-1.6**
MKAR	**Makanchi Array**	**121.74**	**20**	PKP	**PKPdf**	**14 15 16.2**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=18,slow=2.7,SNR=1.9						
SONM	**Songino Array**	**124.94**	**0**	PKP	**PKPdf**	**14 15 23.6**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=2.6,slow=3.7,SNR=2.2						
ASAR	**Alice Springs**	**149.44**	**235**	PKPbc	**PKPbc**	**14 16 13.6**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=110,slow=2.8,SNR=7.6						
ASAR				pPKPbc	**pPKPbc**	**14 16 49.8**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=116,slow=3.9,SNR=3.6						
ASAR	**Alice Springs**	**149.44**	**235**		**PKPbc**	**14 16 13.5**	**-0.6**
WRA	**Warramunga Arr**	**150.60**	**242**	PKPbc	**PKPbc**	**14 16 16.6**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=107,slow=2.7,SNR=10						
WRA				pPKPbc	**pPKPbc**	**14 16 53.2**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=104,slow=3.0,SNR=3.0						
WRA	**Warramunga Arr**	**150.60**	**242**		**PKPbc**	**14 16 15.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**153.09**	**17**	PKPbc	**PKiKP**	**14 16 23.2**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=329,slow=2.8,SNR=7.9						
CMAR				PKPab	**PKPab**	**14 16 34.5**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=326,slow=5.7,SNR=4.3						

IDC 06 14:00:38.9±1.3, **4°.72S**×**150°.89E**, **h0**^{km}, **mb3.1**/3, **mbtmp3.1**/3, **Error ellipse: s-maj=43.2km s-min=12.5km az=156.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.20**	**70**	Pg	Pg	14 01 01.8	-0.2
	26nm,0.3s,baz=271,slow=2.2,SNR=78						
KRVT				Lg	Lg	14 01 18.3	
	179nm,0.3s,baz=241,slow=23,SNR=83						
WRA	**Warramunga Arr**	**22.11**	**225**	P	P	14 05 38.0	+1.9
	0.4nm,1.0s,baz=52,slow=10,SNR=1.7						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**24.97**	**219**	P	P	14 06 03.2	-1.1
	0.3nm,0.7s,baz=50,slow=8.9,SNR=5.6						
	0.3nm,0.7s						
SONM	**Songino Array**	**65.26**	**329**	P	P	14 11 22.6	0.0
	0.2nm,0.5s,baz=120,slow=5.7,SNR=1.5						
	0.2nm,0.5s						

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*IDC **06** 14:00:56.2±1.8, 2°.09N×126°.56E, h0^{km}, mb3.8/5, mbtmp3.9/5, Error ellipse: s-maj=104.8km s-min=25.1km az=67.0*

*NEIC **06** 14:01:07.6±1.6, 2°.08N±0°.09×126°.56E±0°.04, h88^{km}±9^{km}, mb4.0/12, Error ellipse: s-maj=13.4km s-min=6.3km az=186.0*

ISC 06 14:01:03.0±0.8, **2°.25N**±0°.09×**126°.8E**±0°.1, **h53**^{km}, **n26**, σ**1^{s}.61**/26, **mb4.0**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.57**	**160**	Pn	Pn	14 01 34.0	+5.5
TNTI				Sn	**Sn**	**14 01 52.9**	**+5.2**
LUWI	**Luwuk**	**5.21**	**231**	Pn	**Pn**	**14 02 18.6**	**+0.2**
TOLI2	**Tolitoli**	**6.14**	**259**	Pn	**Pn**	**14 02 31.7**	**+0.5**
MTN	**Manton Dam**	**15.60**	**164**	Pn	**Pn**	**14 04 36.8**	**-2.7**
KNRA	**Kununurra**	**17.92**	**174**	P	**P**	**14 05 06.1**	**-2.5**
FITZ	**Fitzroy Crossi**	**20.25**	**183**	P	**P**	**14 05 32.2**	**-1.9**
	1.5nm,0.4s,baz=16,slow=9.7,SNR=8.8						
	1.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.25**	**183**	P	**P**	**14 05 33.7**	**-0.4**
FITZ				IAmb	IAmb	14 05 44.5	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**23.11**	**162**	P	**P**	**14 06 03.8**	**-0.8**
WB0				IAmb	IAmb	14 06 04.1	
	comp=Z,7.7nm,1.1s						
WRAB	**Tennant Creek**	**23.25**	**162**	P	**P**	**14 06 04.9**	**-1.1**
WRAB				IAmb	IAmb	14 06 05.6	
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**23.26**	**162**	P	**P**	**14 06 04.8**	**-1.3**
	comp=Z,2.3nm,0.4s,baz=338,slow=10,SNR=59						
	comp=Z,2.3nm,0.4s						
WRA	**Warramunga Arr**	**23.26**	**162**	P	**P**	**14 06 04.2**	**-1.9**
WB2	**Warramunga Arr**	**23.26**	**162**	P	**P**	**14 06 04.8**	**-1.2**
WB2				IAmb	IAmb	14 06 28.8	
	comp=Z,9.4nm,1.4s						
WR0	**Warramunga Arr**	**23.34**	**161**	P	**P**	**14 06 05.8**	**-1.0**
WR0				IAmb	IAmb	14 06 06.3	
	comp=Z,3.5nm,0.6s						
AS31	**Alice Springs**	**26.67**	**165**	P	**P**	**14 06 36.5**	**-0.7**
ASAR	**Alice Springs**	**26.67**	**165**	P	**P**	**14 06 36.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=346,slow=11,SNR=31						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**26.67**	**165**	P	**P**	**14 06 37.4**	**+0.2**
FORT	**Forrest**	**32.87**	**178**	P	**P**	**14 07 31.7**	**-0.3**
STKA	**Stephens Creek**	**36.73**	**159**	P	**P**	**14 08 04.0**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=348,slow=9.4,SNR=5.6						
	comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**36.73**	**159**	P	**P**	**14 08 05.2**	**-0.1**
PETK	**Petropavlovsk-**	**56.76**	**22**	P	**P**	**14 10 41.8**	**+0.4**
MKAR	**Makanchi Array**	**58.82**	**326**	P	**P**	**14 10 56.5**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=120,slow=7.2,SNR=3.6						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.82**	**326**	P	**P**	**14 10 57.5**	**+1.4**
KURK	**Kurchatov**	**63.03**	**328**	P	**P**	**14 11 24.9**	**+0.4**
KURK				IAmb	IAmb	14 11 25.7	
	comp=Z,1.1nm,0.7s						
ABKAR	**Akbulak array**	**73.35**	**321**	P	**P**	**14 12 29.6**	**+0.4**
VNDA	**Vanda**	**81.96**	**173**	P	**P**	**14 13 16.5**	**-0.1**
QSPA	**South Pole Qui**	**92.17**	**180**	P	**P**	**14 14 07.0**	**+0.2**

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*EAF **06** 14:02:21.5±2.7, 20°.73S×25°.08E, h10^{km}, MD3.4*

BUL 06 14:02:21.2±1.6, **20°.71S**×**25°.07E**, **h10**^{km}, **MD3.5, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	**Matopo**	**3.23**	**86**	*i* P	Pn	14 03 10.0	-2.1
MATP				*i* S	Sn	14 03 47.8	-2.9
MATP	**Matopo**	**3.23**	**86**	*i* P	Pn	14 03 10.0	-2.1
MATP				*i* S	Sn	14 03 47.8	-2.9
BLWY	**Bulawayo**	**3.37**	**81**	*i* P	Pn	14 03 14.3	+0.2
BLWY				*i* S	Sn	14 03 52.6	-1.7
BLWY	**Bulawayo**	**3.37**	**81**	*i* P	Pn	14 03 14.3	+0.2
BLWY				*i* S	Sn	14 03 52.6	-1.7
LBTB	**Lobatse**	**4.31**	**174**	*i* P	Pn	14 03 27.0	0.0
LBTB	**Lobatse**	**4.31**	**174**	*i* P	Pn	14 03 27.0	0.0
MSNA	**Messina**	**4.89**	**110**	*i* P	Pn	14 03 34.9	-0.1
MSNA				*i* S	Sn	14 04 28.2	-3.5
MSNA	**Messina**	**4.89**	**110**	*i* P	Pn	14 03 34.9	-0.1
MSNA				*i* S	Sn	14 04 28.2	-3.5
BOSA	**Boshof**	**7.87**	**179**	*i* P	Pn	14 04 15.0	-0.9
BOSA				*i* S	Sn	14 05 35.6	-10
BOSA	**Boshof**	**7.87**	**179**	*i* P	Pn	14 04 15.0	-0.9
BOSA				*i* S	Sn	14 05 35.6	-10
CNG	**Changalane**	**8.58**	**132**	*i* P	Pn	14 04 24.2	-1.3
CNG	**Changalane**	**8.58**	**132**	*i* P	Pn	14 04 24.2	-1.3

ATH 06 14:06:11.6, 37°.55N×**23°.58E, h13**^{km}±3^{km}, **ML1.8**/5, **Error ellipse: s-maj=3.4km s-min=1.0km az=155.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YDRA	**Hydra**	**0.21**	**205**	P	Pg	14 06 16.7	+0.4
YDRA				S	Sg	14 06 19.8	+0.4
YDRA				AML	AML	14 06 20.6	
	comp=E,1793μm,0.2s						
YDRA				AML	AML	14 06 21.1	
	comp=N,1442μm,0.2s						
VLY	**Voula,Athens**	**0.35**	**29**	P	Pg	14 06 18.4	-0.3
VLY				S	Sg	14 06 23.7	+0.2
VLY				AML	AML	14 06 25.6	
	comp=N,154μm,0.4s						
VLY				AML	AML	14 06 25.6	
	comp=E,137μm,0.2s						
EPID	**Epidavros**	**0.37**	**281**	P	Pg	14 06 18.6	-0.5
EPID				S	Sg	14 06 24.5	+0.3
KRND	**KRANIDI**	**0.38**	**245**	P	Pg	14 06 18.6	-0.6
KRND				S	Sg	14 06 24.4	+0.1
KRND				AML	AML	14 06 25.1	
	comp=E,460μm,0.3s						
KRND				AML	AML	14 06 25.9	
	comp=N,404μm,0.3s						
ATHU	**Athens Univers**	**0.45**	**21**	P	Pg	14 06 19.9	-0.7
DION	**Dionisos Attik**	**0.60**	**28**	P	Pg	14 06 23.5	+0.2
LTK	**Loutraki**	**0.68**	**315**	P	Pg	14 06 24.3	-0.6
LTK				S	Sb	14 06 34.4	-0.3
LTK				AML	AML	14 06 37.1	
	comp=E,532μm,0.2s						
LTK				AML	AML	14 06 40.1	
	comp=N,344μm,0.2s						
VIL2	**Platees**	**0.71**	**340**	P	Pg	14 06 23.8	-1.6
VIL2				S	Sg	14 06 33.7	-1.1
VIL2				AML	AML	14 06 37.1	
	comp=E,196μm,0.3s						
VIL2				AML	AML	14 06 37.5	
	comp=N,118μm,0.2s						
VLI	**Veliai**	**0.97**	**212**	P	Pb	14 06 30.1	-0.2
GUR	**Goura**	**1.06**	**292**	P	Pb	14 06 31.2	-0.6

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*ATH **06** 14:07:30.3, 42°.08N×20°.42E, h13^{km}±6^{km}, ML2.8/3, Error ellipse: s-maj=8.4km s-min=1.6km az=306.0*

*TIR **06** 14:07:32.0, 41°.90N×20°.43E, h2^{km}±1^{km}, Md2.7, Ml2.8*

*SKO **06** 14:07:31.6, 41°.91N×20°.47E, h15^{km}*

*PDG **06** 14:07:32.9±0.5, 41°.92N×20°.46E, h6^{km}±1^{km}, MD3.1/1, ML2.9/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*RHSSO **06** 14:07:32.3±0.7, 41°.84N×20°.45E, h5^{km}±2^{km}, ML2.9/10*

*THE **06** 14:07:32.3, 41°.88N×20°.60E, h0^{km}±6^{km}, ML2.5/4, Error ellipse: s-maj=8.4km s-min=1.4km az=10.0*

*BEO **06** 14:07:34.2±0.2, 41°.89N×20°.51E, h16^{km}±5^{km}, ML2.5/13*

ISC 06 14:07:32.5±1.1, **41°.91N**±0°.01×**20°.45E**±0°.01, **h3**^{km}±9^{km}, **n104**, σ**1^{s}.43**/183, **13C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.22**	**183**	P	**Pg**	**14 07 36.9**	**+0.1**
PHP				S	**Sg**	**14 07 39.9**	**+0.2**
PHP	**Peshkopia**	**0.22**	**183**	P	**Pg**	**14 07 36.9**	**+0.1**
	baz=177						
PHP				S	**Sg**	**14 07 39.9**	**+0.2**
	baz=177						
PHP				AMP			
	comp=N,8.4nm,0.1s,baz=177						
BCI	**Bajram Curri**	**0.54**	**328**	P	**Pg**	**14 07 43.3**	**+0.4**
	baz=331						
BCI				S	**Sb**	**14 07 51.7**	**-1.2**
	baz=331						
BCI				AMP			
	comp=E,8.0nm,0.3s,baz=331						
TIR	**Tirane**	**0.71**	**218**	⇓P	**Pb**	**14 07 46.8**	**-0.8**
TIR				⇓S	**Sb**	**14 07 58.2**	**+0.5**
TIR	**Tirane**	**0.71**	**218**	*e*Pg	**Pb**	**14 07 46.8**	**-0.8**
TIR				*e*Sg	**Sn**	**14 07 58.8**	**-2.2**
TIR	**Tirane**	**0.71**	**218**	P	**Pg**	**14 07 46.4**	**+0.2**
TIR				S	**Sb**	**14 07 57.9**	**+0.1**
TIR				AML	AML	14 08 00.1	
	comp=E,2038μm,0.5s						
TIR				AML	AML	14 08 00.8	

	comp=N,2042µm,0.3s						
TIR	Tirane	0.71	218	P	Pg	14 07 46.2	0.0
TIR				S	Sb	14 07 58.3	+0.5
	comp=N,402nm,0.4s						
TIR	Tirane	0.71	218	*i* Pg	Pg	14 07 46.4	+0.2
TIR	Tirane	0.71	218	P	Pg	14 07 46.4	+0.2
	baz=218						
TIR				S	Sb	14 07 57.4	-0.4
	baz=218						
TIR				AMP			
	comp=N,1.7nm,0.3s,baz=218						
SKO	Skopje	0.74	85	*e*Pg	Pg	14 07 46.2	-0.4
SKO				*e*Sg	Sb	14 07 57.1	-1.4
PVY	Plav	0.78	332	⇑*i*Pg	Pg	14 07 47.2	-0.2
PVY				*i* Sg	Sb	14 07 59.5	-0.3
OHR	Ohrid	0.84	162	*e*Pg	Pg	14 07 47.8	-0.7
OHR				*e*Sg	Sb	14 08 01.0	-0.4
OHR	Ohrid	0.84	162	*e*Pg	Pg	14 07 48.2	-0.4
OHR				*e*Sg	Sb	14 08 01.2	-0.2
OHR				*e*Lg	Lg	14 08 03.2	
	comp=E,221nm,0.7s						
OHR				*e*Lg	Lg	14 08 05.6	
	comp=N,270nm,0.6s						
ULC	Ulcinj	0.90	274	*i* Pg	Pg	14 07 49.6	-0.2
ULC	Ulcinj	0.90	274	⇑*i*Pg	Pg	14 07 49.4	-0.4
ULC				*i* Sg	Sb	14 08 03.9	+0.6
DRME	Dracevica, Mon	0.99	287	*e*Pg	Pg	14 07 50.3	-1.1
DRME				*e*Sg	Sg	14 08 03.9	-0.3
DRME	Dracevica, Mon	0.99	287	⇑*i*Pg	Pg	14 07 51.0	-0.4
DRME				*i* Sg	Sn	14 08 06.6	-1.2
PDG	Podgorica	1.03	301	⇑P	Pn	14 07 53.2	-0.7
PDG				⇓S	Sb	14 08 07.1	+0.1
PDG	Podgorica	1.03	301	*e*Pg	Pn	14 07 53.2	-0.7
PDG				*e*Sg	Sn	14 08 08.0	-0.9
PDG	Podgorica	1.03	301	*e*Pg	Pg	14 07 50.8	-1.5
PDG				*e*Sg	Sg	14 08 06.0	+0.3
PDG	Podgorica	1.03	301	*i* Pg	Pg	14 07 52.1	-0.2
PDG				*e*Sg	Sn	14 08 07.7	-1.2
TTG	Podgorica	1.03	301	⇑*i*Pg	Pg	14 07 52.0	-0.3
TTG				*i* Sg	Sn	14 08 08.0	-0.9
BEY	Berane	1.05	337	*i* Pg	Pb	14 07 52.9	-0.5
IVA	Berane	1.05	337	⇑*i*Pg	Pg	14 07 52.2	-0.4
IVA				*i* Sg	Sn	14 08 08.6	-0.9
KOME	Kolasin	1.17	324	⇑*i*Pg	Pg	14 07 54.4	-0.5
KOME				*i* Sg	Sn	14 08 12.9	+0.4
BUM	Brajici-Budva	1.23	289	⇓*i*Pg	Pg	14 07 55.5	-0.5
BUM				*i* Sg	Sn	14 08 14.9	+1.1
CEME	Cevo	1.31	300	⇓*i*Pg	Pn	14 07 56.8	-1.0
CEME				*i* Sg	Sn	14 08 17.3	+1.5
KBN	Korca	1.31	169	P	Pn	14 07 55.5	-2.3
KBN				S	Sb	14 08 14.5	-0.5
	comp=N,180nm,0.5s						
KBN	Korca	1.31	169	P	Pg	14 07 58.1	+0.6
	baz=167						
KBN				S	Sn	14 08 17.6	+1.8
	baz=167						
STIP	Stip	1.31	99	*i* Pg	Pg	14 07 59.6	+2.0
STIP				*i* Sg	Sn	14 08 21.2	+5.4
FNA	Florina	1.32	148	P	Pn	14 07 56.4	-1.5
FNA				S	Sn	14 08 16.6	+0.5
FNA				AML	AML	14 08 22.4	
	comp=N,646µm,0.4s						
FNA				AML	AML	14 08 24.1	
	comp=E,799µm,0.5s						
FNA	Florina	1.32	148	P	Pn	14 07 56.2	-1.7
FNA				S	Sb	14 08 14.6	-0.8
	comp=E,362nm,0.5s						
FNA	Florina	1.32	148	*i* Pg	Pn	14 07 56.0	-1.9
FNA				*e*Sg	Sn	14 08 17.4	+1.3
FNA	Florina	1.32	148	P	Pn	14 07 56.4	-1.5
	baz=146						
FNA				S	Sn	14 08 17.0	+0.9
	baz=146						
BARS	Barje	1.36	48	*e*Pg	Pg	14 07 58.4	-0.1
BARS				*e*Sg	Sn	14 08 17.3	+0.3
BARS	Barje	1.36	48	*i* Pg	Pg	14 07 58.5	0.0
BARS				*e*Sg	Sn	14 08 17.2	+0.3
SJES	Sjenica	1.40	345	*e*Pg	Pg	14 07 59.2	-0.1
SJES				*e*Sg	Sn	14 08 20.5	+2.4
SJES	Sjenica	1.40	345	*e*Pg	Pb	14 07 58.8	-0.6
SJES				*e*Sg	Sn	14 08 19.3	+1.2
SELS	Selova	1.40	20	*e*Pg	Pn	14 07 58.3	-0.7
SELS				*e*Sg	Sg	14 08 18.6	+1.1
NKME	Niksic	1.41	308	⇓*i*Pg	Pn	14 07 58.8	-0.3
NKME				*i* Sg	Sg	14 08 20.9	+3.2
HCY	Herceg Novi	1.55	291	*e*Pn	Pn	14 08 00.9	-0.2
HCY				*e*Sn	Sg	14 08 22.1	-0.3
HCY	Herceg Novi	1.55	291	⇓*i*Pg	Pb	14 08 01.4	-0.5
HCY				*i* Sg	Sg	14 08 25.2	+2.8
NEST	Nestorio	1.56	163	P	Pb	14 08 01.5	-0.5
NEST				S	Sg	14 08 23.7	+1.2
NEST				AML	AML	14 08 29.6	
	comp=E,235µm,0.4s						
NEST				AML	AML	14 08 30.6	
	comp=N,213µm,0.3s						
BOSS	Bosilegrad	1.62	68	*e*Pg	Pg	14 08 03.4	-0.1
BOSS				*e*Sg	Sb	14 08 23.0	-0.8
PLE	Pljevlja	1.62	331	⇑*i*Pn	Pb	14 08 02.8	-0.4
PLE				*i* Sn	Sg	14 08 26.7	+2.0
VAY	Valandovo	1.69	110	*e*Pg	Pg	14 08 04.3	-0.6
VAY				*e*Sg	Sg	14 08 27.0	+0.2
VAY	Valandovo	1.69	110	*e*Pg	Pb	14 08 03.4	-0.8
VAY				*e*Sg	Sg	14 08 27.1	+0.2
VAY				*e*Lg	Lg	14 08 27.9	
	comp=E,34nm,0.4s						
VAY				*e*Lg	Lg	14 08 29.8	
	comp=N,85nm,0.8s						
UPM	Unac-Piva	1.73	319	*e*Pn	Pn	14 08 03.3	-0.4
UPM				*e*Sn	Sb	14 08 26.6	-0.6
UPM	Unac-Piva	1.73	319	⇑*i*Pn	Pb	14 08 04.4	-0.6
UPM				*i* Sn	Sg	14 08 29.2	+1.2
BRY	Bratogost	1.73	306	*e*Pn	Pn	14 08 03.8	+0.1
BRY				*e*Sn	Sb	14 08 26.6	-0.7
BRY	Bratogost	1.73	306	⇑*i*Pn	Pb	14 08 04.4	-0.7
BRY				*i* Sn	Sg	14 08 29.4	+1.3
GRG	Griva	1.75	122	P	Pn	14 08 03.8	0.0
GRG	Griva	1.75	122	*i* Pn	Pb	14 08 04.2	-1.1
GRG				*e*Sg	Sg	14 08 29.4	+0.8
TREB	Trebinje	1.76	298	*e*Pg	Pg	14 08 06.2	0.0
TREB				*e*Sg	Sg	14 08 32.1	+3.1
TREB	Trebinje	1.76	298	*e*Pn	Pn	14 08 03.9	0.0
TREB				*e*Sn	Sb	14 08 27.4	-0.5
LSK	Leskovik	1.76	176	P	Pg	14 08 06.7	+0.5
	baz=175						
LSK				S	Sg	14 08 32.0	+3.0
	baz=175						
KZN	Kozani	1.88	148	P	Pb	14 08 06.7	-0.9
RUDO	Rudo	1.89	335	*e*Pn	Pn	14 08 05.5	-0.2
RUDO				*e*Sn	Sb	14 08 30.5	-1.1
KKB	Krupnik	1.96	90	P	Pg	14 08 10.2	+0.1
GRUS	Gruza	1.99	5	*e*Pg	Pg	14 08 11.1	+0.5
GRUS				*e*Sg	Sg	14 08 37.8	+1.4
SRN	Sarande	2.06	190	P	Pb	14 08 10.3	-0.1
	baz=190						
SRN				S	Sg	14 08 40.2	+1.7
	baz=190						
KPRO	Kipourio	2.07	160	P	Pb	14 08 09.7	-1.1
BBLS	Lazići	2.10	339	*e*Pn	Pn	14 08 09.4	+0.7
BBLS				*e*Sg	Sg	14 08 43.4	+3.3
BBLS	Lazići	2.10	339	*e*Pn	Pn	14 08 09.0	+0.3
BBLS				*e*Sn	Sb	14 08 36.2	-1.7
VTS	Vitosha	2.18	70	⇑P	Pb	14 08 13.1	+0.4
VTS				⇑S	Sg	14 08 42.1	-0.5
VTS	Vitosha	2.18	70	*e*Pn	Pn	14 08 09.6	-0.3
VTS				*e*Sg	Sg	14 08 42.2	-0.5
VTS	Vitosha	2.18	70	*e*Pn	Pb	14 08 11.4	-1.3
VTS				*e*Sg	Sg	14 08 42.8	+0.2
VTS	Vitosha	2.18	70	P	Pb	14 08 12.3	-0.5
DIVS	Divibare	2.21	351	*e*Pn	Pn	14 08 10.1	-0.2
DIVS				*e*Sg	Sg	14 08 44.2	+0.5
DIVS	Divibare	2.21	351	*e*Pn	Pn	14 08 10.2	-0.1
DIVS				*e*Sn	Sb	14 08 39.2	-2.0
KEK	Kerkira	2.25	193	P	Pb	14 08 12.5	-1.3
KEK	Kerkira	2.25	193	P	Pb	14 08 11.9	-1.9
KEK				S	Sb	14 08 39.8	-2.2
	comp=N,70nm,0.8s						
STON	Ston	2.26	296	*e*Pn	Pn	14 08 11.1	+0.4
STON				*e*Sn	Sn	14 08 39.2	+0.1
STON	Ston	2.26	296	*e*Pn	Pb	14 08 12.7	-1.2
STON				Sn	Sg	14 08 44.0	-0.9
TRUS	Trudelj	2.31	359	*e*Pg	Pg	14 08 17.1	+0.2
LIT	Litokhoron	2.37	139	*i* Pn	Pn	14 08 13.2	+0.8
IGT	Igoumenitsa	2.38	182	P	Pb	14 08 14.7	-1.2
IGT				S	Sg	14 08 47.6	-1.1
IGT	Igoumenitsa	2.38	182	*i* Pn	Pb	14 08 14.6	-1.4
SOH	Sokhos	2.44	115	*i* Pn	Pn	14 08 14.2	+0.9
SRS	Serrai	2.49	107	*e*Pn	Pn	14 08 14.8	+0.9
NVR	Nevrokopi	2.62	101	P	Pn	14 08 17.2	+1.5
TEKS	Tekeris	2.73	346	*e*Pn	Pn	14 08 18.2	+1.0
LSTV	Lastovo	2.78	289	*e*Pn	Pn	14 08 19.2	+1.3
LSTV				Sn	Sb	14 08 56.4	-0.8
MPEP	Malo Peshtene	2.82	58	*i* P	Pg	14 08 27.0	+0.4
MAKA	Makarska	2.89	300	*e*Pn	Pn	14 08 20.5	+1.1
MAKA				Sn	Sb	14 08 57.8	-2.5
RICI	Ricice	2.92	304	*e*Pn	Pn	14 08 21.8	+2.0
RICI				Sn	Sb	14 09 00.2	-1.0
MDVR	Moldovita	3.02	17	⇓S	Sb	14 09 00.8	-3.4
SRKY	Kupres RS	3.24	313	*e*Pn	Pn	14 08 24.2	-0.1
SRKY				*e*Sn	Sn	14 09 02.9	-0.6
FRGS	Fruska Gora	3.28	352	*e*Pn	Pn	14 08 25.1	+0.2
HERR	Herculane	3.30	25	⇑P	Pb	14 08 28.4	-3.3
MGRS	Mrkonjic Grad	3.52	317	*e*Sn	Sn	14 09 09.4	-0.8
KIJV	Kijevo	3.64	307	*e*Pn	Pn	14 08 31.7	+2.0
KIJV				Sn	Sb	14 09 17.2	-4.8
BLY	Banja Luka	3.71	321	*e*Sn	Sn	14 09 14.8	-0.1
BZS	Buzias	3.80	12	⇓P	Pn	14 08 34.2	+2.2
ZIRJ	Zirje	3.95	298	*i* Pn	Pn	14 08 34.9	+1.0
ZIRJ				Sn	Sn	14 09 24.4	+3.6
UDBI	Udbina	4.31	309	*e*Pn	Pn	14 08 40.0	+0.9
UDBI				Sn	Sn	14 09 33.1	+3.2
DUGI	Dugi Otok	4.47	300	*e*Pn	Pn	14 08 42.4	+1.2
DUGI				Sn	Sn	14 09 37.4	+3.5
VIRC	Vir	4.62	303	*e*Pn	Pn	14 08 44.4	+1.2
VIRC				Sn	Sn	14 09 40.1	+2.8
NVLJ	Novalja	4.87	305	*e*Pn	Pn	14 08 47.8	+1.3
NVLJ				Sn	Sn	14 09 46.7	+3.3
A250A	Rusevo Krmpots	5.13	310	*e*Pn	Pn	14 08 52.4	+2.1
A250A				Sn	Sn	14 09 52.7	+2.7
CRES	Cresnjev	5.33	319	*e*Pn	Pn	14 08 52.5	-0.5
BRJN	Brijuni	5.73	304	*e*Pn	Pn	14 08 59.1	+0.7
BRJN				Sn	Sn	14 10 07.8	+3.1
CEY	Cerknica	5.80	313	*e*Pn	Pn	14 08 59.0	-0.5
CEY				*e*Sn	Sn	14 10 04.3	-2.3
SKDS	Skadanscina	5.92	310	*e*Sn	Sn	14 10 06.5	-2.9

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*ISU **06** 14:14:52, 39.°97N×70.°21E, h2^{km}*
*KRNET **06** 14:14:55.4±0.1, 40.°09N×70.°29E, h10^{km}, mb2.9*
ISC 06 14:14:55.0±1.3, **40.°06N**±0.°04×**70.°30E**±0.°04, **h6**^{km}±11^{km},
n11, σ1^{s}**98**/18, **11C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.40	90	⇑*i*P	Pb	14 15 03.3	-1.2
	baz=95						
BTK				⇑*i*S	Sg	14 15 09.3	+1.2
	baz=95						
BTK	Batken	0.40	90	P	Pg	14 15 02.9	+0.1
BTK				S	Sb	14 15 10.2	-0.8
GAR	Garm	1.06	179	⇑*i*P	Pn	14 15 16.2	-0.3
	baz=79						
GAR				⇑*i*S	Sn	14 15 31.6	0.0
	baz=79						
SHAK	Shakhimardan	1.11	95	P	Pb	14 15 16.1	-0.7
FRG	Fergana	1.18	74	P	Pn	14 15 18.4	+0.3
CHMG	Chimgan	1.50	352	S	Sg	14 15 45.9	+2.6
TRKS	Terek-Say	1.60	23	⇑*e*P	Pb	14 15 24.1	-1.0
	baz=26						
TRKS				⇑*i*S	Sb	14 15 45.3	-0.3
	baz=26						
CHGR	Chuyangaron	1.66	213	⇑*i*P	Pg	14 15 27.0	+0.3
	baz=12						
CHGR				⇑*i*S	Sg	14 15 49.8	+1.6
	baz=12						
ARK	Arkit	2.15	35	⇓*i*P	Pb	14 15 34.5	+0.2
	baz=36						
ARK				⇓*i*S	Sg	14 16 03.3	-0.7
	baz=36						
KK31	Karatay Array	3.04	3	⇓Pg	Pb	14 15 46.6	-3.0
	1.1nm,0.4s,baz=185,slow=16,SNR=13						
KK31				⇑Lg	Lg	14 16 30.4	
	1.3nm,0.3s,baz=189,slow=29,SNR=5.5						
ARLS	Aral	3.54	58	⇑*i*P	Pb	14 15 54.2	-3.9
	baz=59						
ARLS				⇑*i*S	Sn	14 16 36.8	+3.9
	baz=59						

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*MOS **06** 14:21:15.6±1.0, 52.°09N×170.°97W, h33^{km}, mb4.7/13,*
Error ellipse: s-maj=11.0km s-min=7.9km az=91.5
*AEIC **06** 14:21:16±3.0, 51.°94N±0.°08×170.°88W±0.°08, h25^{km}±5^{km},*
Error ellipse: s-maj=13.0km s-min=4.2km az=153.0
*NEIC **06** 14:21:17.6±2.5, 51.°99N±0.°09×170.°95W±0.°08, h38^{km}±6^{km},*
mb4.3/69, ML3.9(AEIC), Error ellipse: s-maj=14.2km
s-min=5.9km az=159.0
*IDC **06** 14:21:18.4±3.2, 52.°12N×171.°01W, h43^{km}±29^{km}, mb3.9/26,*
mbtmp4.1/29, ML3.7/3, MS3.4/22, Error ellipse:
s-maj=22.1km s-min=10.9km az=1.0
ISC 06 14:21:17.2±0.9, **51.°91N**±0.°08×**170.°89W**±0.°04, **h40**^{km}±7^{km},
n338, σ1^{s}**11**/331, **mb4.4**/67, **MS3.3**/21, **7C-4D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.64	49	Pn	Pn	14 21 42.1	-1.4
NIKH	Nikolski High	1.64	49		Sn	14 22 03.2	-0.2
NIKH	Nikolski High	1.64	49	P	Pn	14 21 41.9	-1.6
	baz=231,SNR=14						
ATKA	Atka Island	2.06	280		Pn	14 21 49.4	+0.1
ATKA					Sn	14 22 13.9	+0.1
KOKL	Mount Kliuchef	2.08	283		Pn	14 21 49.9	+0.2
OKFG	Magazine Ridge	2.36	49		Pn	14 21 53.3	-0.1
OKFG					Sn	14 22 23.4	+2.4
GSMY	Great Sitkin M	3.20	275		Pn	14 22 05.7	+0.7
MSW	Makushin Switc	3.20	49		Pn	14 22 05.5	+0.5
GSTR	Great Sitkin T	3.20	275		Pn	14 22 05.8	+0.8
GSTD	Great Sitkin T	3.25	275		Pn	14 22 06.3	+0.5
GSTD					Sn	14 22 43.7	+0.5
UNV	Unalaska Valle	3.29	52		Pn	14 22 06.3	+0.1
UNV	Unalaska Valle	3.29	52	P	Pn	14 22 06.3	+0.1
	baz=236,SNR=8.1						
ADK	Adak	3.59	272	P	Pn	14 22 10.7	+0.4
ADK	Adak	3.59	272		Pn	14 22 10.7	+0.4
AKUT	Akutan	3.81	52		Pn	14 22 15.6	+2.2
KIWB	Kanaga Island	3.88	272		Pn	14 22 15.1	+0.8
KIKV	Kanaga Island	3.89	272		Pn	14 22 15.4	+0.9
KIMD	Kanaga Island	3.94	270		Pn	14 22 15.8	+0.7
TAPA	Tanaga Point A	4.29	272		Pn	14 22 20.7	+0.7
TASE	Tanaga Southea	4.43	272		Pn	14 22 23.1	+1.2
SPIA	Saint Paul Isl	5.30	4	Pn	Pn	14 22 35.4	+1.7
SPIA	Saint Paul Isl	5.30	4	P	Pn	14 22 33.7	+0.1
	baz=184						
FALS	False Pass	5.36	54	Pn	Pn	14 22 34.1	-0.4
FALS	False Pass	5.36	54	P	Pn	14 22 36.0	+1.5
	baz=240						
SDPT	Sand Point	7.09	57	Pn	Pn	14 22 59.8	+1.6
SDPT	Sand Point	7.09	57	P	Pn	14 22 59.4	+1.2
	baz=245						
CNBA	Chernabura Isl	7.37	62	Pn	Pn	14 23 02.8	+0.8
CHNA	Chernabura Isl	7.37	62	P	Pn	14 23 02.1	+0.1
	baz=251						
CHIR	Chirikof Islan	9.83	60	Pn	Pn	14 23 35.5	-0.3
SII	Sitkinak Islan	10.82	58	P	Pn	14 23 47.6	-1.8
	baz=252						
OHAK	Old Harbor	11.51	56	Pn	Pn	14 23 56.9	-1.9
OHAK	Old Harbor	11.51	56	P	Pn	14 23 57.4	-1.4
	baz=250						
P18K	Big Mountain,	11.57	44	P	Pn	14 24 00.3	+0.6
	baz=236						
O18K	Koktuh Hills	11.85	42	P	Pn	14 24 05.2	+1.8
	baz=235						
GAMB	Gambell	11.91	358	P	Pn	14 24 05.1	+0.8
	baz=178						
KDAK	Kodiak Island	12.06	54	P	Pn	14 24 04.8	-1.5
	1.1nm,0.3s,baz=261,slow=8.7,SNR=14						
KDAK				S	Sn	14 26 06.3	-13
	21nm,1.2s,baz=314,slow=16,SNR=1.9						
	8.0nm,0.6s						
KDAK	Kodiak Island	12.06	54		Pn	14 24 05.1	-1.2
KDAK	Kodiak Island	12.06	54	P	Pn	14 24 05.1	-1.2
	baz=249						
N18K	Kilae Creek	12.08	37	Pn	Pn	14 24 09.5	+2.9
N19K	Bonanza Creek	12.71	39		Pn	14 24 16.9	+1.8
N19K	Bonanza Creek	12.71	39	P	Pn	14 24 14.7	-0.5
	baz=233						
ANM	Nome	13.02	11	P	Pn	14 24 19.2	-0.1
	baz=195						
CNPM	China Poot	13.41	48	Pn	Pn	14 24 22.4	-2.4
M19K	Big River Lodg	13.43	35		Pn	14 24 28.4	+3.4
M19K	Big River Lodg	13.43	35	P	Pn	14 24 25.5	+0.5
	baz=229						
L19K	White Mountain	13.45	34	Pn	Pn	14 24 24.8	-0.5
L19K	White Mountain	13.45	34	P	Pn	14 24 24.8	-0.5
	baz=227						
TTA	Tatalina	13.61	30	P	Pn	14 24 29.4	+2.0
TTA	Tatalina	13.61	30	Pn	Pn	14 24 29.4	+2.0
TTA	Tatalina	13.61	30	P	Pn	14 24 26.9	-0.6
	baz=223						
BRLK	Bradley Lake	13.68	47	Pn	Pn	14 24 25.8	-2.6
BRSE	Bradley Lake S	13.73	47	P	Pn	14 24 29.4	+0.3
	baz=244						
M20K	Styx River	13.88	37	P	Pn	14 24 31.6	+0.4
	baz=232						
L20K	Farewell, AK	13.99	34	P	Pn	14 24 32.4	-0.3
	baz=229						
SEW	Seward	14.47	47	Pn	Pn	14 24 36.7	-2.4
SEW	Seward	14.47	47	P	Pn	14 24 36.9	-2.2
	baz=245						
O22K	Cooper Landing	14.52	45	P	Pn	14 24 37.7	-2.0
	baz=243						
K20K	Telida	14.53	31	Pn	Pn	14 24 40.9	+1.0
K20K	Telida	14.53	31	P	Pn	14 24 40.1	+0.3
	baz=226						
J20K	Nowinta River	15.09	29	P	P	14 24 49.6	-2.4
J20K	Nowinta River	15.09	29	P	Pn	14 24 49.3	+2.0
	baz=223						
CAST	Castle Rocks	15.23	34		Pn	14 24 50.9	+1.7
CAST				IAmb	IAmb	14 24 59.2	
	comp=Z,8.9nm,0.7s						
CAST	Castle Rocks	15.23	34	P	Pn	14 24 50.4	+1.3
	baz=230						
CHUM	Lake Minchumin	15.46	32	P	Pn	14 24 52.2	+0.1
	baz=228						
KNK	Knik Glacier	15.50	43	P	Pn	14 24 52.5	-0.1
	baz=242						
KTH	Kantishna Hill	15.72	34	P	Pn	14 24 57.0	+1.5
KTH				IAmb	IAmb	14 25 00.2	
	comp=Z,13nm,1.0s						
SML	Sawmill	15.74	42	Pn	Pn	14 24 55.4	-0.4
SML				IAmb	IAmb	14 25 15.4	
	comp=Z,26nm,1.2s						
SML	Sawmill	15.74	42	P	Pn	14 24 56.3	+0.6
	baz=241						
M23K	Glacier View	15.98	43	P	Pn	14 24 57.6	-1.3
	baz=242						
BPAW	Bear Paw Mtn.	16.04	33		Pn	14 25 00.6	+1.0
BPAW				IAmb	IAmb	14 25 03.7	
	comp=Z,13nm,0.8s						
BPAW	Bear Paw Mtn.	16.04	33	P	Pn	14 25 00.6	+1.0
	baz=230,SNR=9.5						
SCM	Sheep Creek Mo	16.17	43	P	Pn	14 25 01.2	-0.2
	baz=243						
WAT1	Susitna Watana	16.17	39	P	Pn	14 24 59.0	-2.3
	baz=238						
EYAK	Cordova Ski Ar	16.34	48	P	Pn	14 25 03.7	+0.2
	baz=249						
RND	Reindeer	16.38	37	P	Pn	14 25 03.8	-0.1
RND				pmax	pmax		
	comp=Z,16nm,1.1s						
RND	Reindeer	16.38	37		Pn	14 25 03.8	-0.1
RND				IAmb	IAmb	14 25 21.3	
	comp=Z,16nm,1.1s						
I21K	Tanana	16.46	29	P	Pn	14 25 04.9	+0.1
	baz=225,SNR=9.9						
IMAR	Indian Mountai	16.56	25	P	P	14 25 08.5	+0.3
H21K	Melozitna Rive	16.57	27	P	P	14 25 09.5	+1.1
H21K	Melozitna Rive	16.57	27	P	P	14 25 07.5	-0.8
	baz=222						
KLU	Klutina	16.63	45	P	Pn	14 25 05.3	-1.8
KLU				IAmb	IAmb	14 25 13.3	
	comp=Z,26nm,1.4s						
KLU	Klutina	16.63	45	P	Pn	14 25 06.2	-0.9
	baz=246						
RDOG	Red Dog Mine	16.66	10	P	Pn	14 25 06.7	-0.7
	baz=197						
DHY	Denali Highway	16.76	39	P	Pn	14 25 08.6	-0.2
M24K	Tolsona, Glenn	16.78	43	P	Pn	14 25 08.5	-0.5
M24K				IAmb	IAmb	14 25 32.5	
	comp=Z,18nm,0.8s						
M24K	Tolsona, Glenn	16.78	43	P	Pn	14 25 07.9	-1.1
	baz=244						
NEA2	Nenana	17.00	33	P	Pn	14 25 11.1	-0.6
	baz=232						
BMRM	Bremner River	17.02	48	P	Pn	14 25 10.4	-1.5
	baz=250						
N25K	Chitina, Valde	17.25	46	P	Pn	14 25 13.1	-1.8
N25K				IAmb	IAmb	14 25 32.5	
	comp=Z,21nm,1.4s						
N25K	Chitina, Valde	17.25	46	P	Pn	14 25 14.5	-0.4
	baz=248						
I23K	Minto, Yukon-K	17.26	32	P	Pn	14 25 15.1	+0.3
I23K				IAmb	IAmb	14 25 30.6	
	comp=Z,19nm,1.2s						
I23K	Minto, Yukon-K	17.26	32	P	Pn	14 25 14.5	-0.3
	baz=230,SNR=6.7						
HARP	HAARP	17.34	43	P	Pn	14 25 14.3	-1.5
	baz=244						
BGLC	Bering Glacier	17.37	51	P	Pn	14 25 15.3	-0.9
	baz=254						
PAX	Paxson	17.46	41	P	P	14 25 18.8	+0.4
	baz=242						
CCB	Clear Creek Bu	17.47	34	P	Pn	14 25 16.2	-1.3
MDM	Murphy Dome	17.51	33	P	Pn	14 25 18.0	0.0
GLB	Gilahina Butte	17.55	47	P	Pn	14 25 17.4	-1.1
GLB				IAmb	IAmb	14 25 24.3	
	comp=Z,27nm,1.5s						
COLA	College	17.59	34	*e*P	P	14 25 20.2	+0.6
HDA	Harding Lake	17.64	36	P	P	14 25 20.4	+0.3
HDA				IAmb	IAmb	14 25 31.4	
	comp=Z,19nm,1.2s						
HDA	Harding Lake	17.64	36	P	P	14 25 19.7	-0.5
	baz=236						
H23K	Yukon River	17.65	30	P	P	14 25 21.2	+1.0
H23K	Yukon River	17.65	30	P	Pn	14 25 18.8	-0.9
	baz=228						
IL31		17.86	35	P	P	14 25 23.8	+1.2
ILAR	Eielson Array	17.86	35	P	Pn	14 25 20.7	-1.6
	comp=Z,0.2nm,0.3s,baz=230,slow=9.2,SNR=11						
ILAR				LR	LR	14 32 53.8	
	comp=Z,192nm,18.4s,baz=250,slow=39						
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	17.86	35	P	Pn	14 25 21.2	-1.1
ILAR	Eielson Array	17.86	35	P	Pn	14 25 21.2	-1.1
POKR	Poker Plat Res	17.88	33	P	Pn	14 25 22.1	-0.4
	baz=233						
RIDG	Independent Ri	18.08	39	P	P	14 25 24.8	-0.2
	baz=241						
H24K	Noodor Dome	18.18	31		Pn	14 25 26.4	+0.3
H24K	Noodor Dome	18.18	31	P	P	14 25 25.8	-0.3
	baz=231,SNR=11						
M26K	Nabesna, AK	18.26	44	P	P	14 25 25.6	-1.4
M26K	Nabesna, AK	18.26	44	P	Pn	14 25 27.5	+0.3
	baz=248						
J25K	Salcha River,	18.32	36	P	P	14 25 25.9	-1.9
J25K				IAmb	IAmb	14 25 30.9	
	comp=Z,14nm,0.7s						
J25K	Salcha River,	18.32	36	P	P	14 25 26.2	-1.5
	baz=238,SNR=7.1						
L26K	Log Cabin Wild	18.36	42	P	P	14 25 27.1	-1.0
L26K	Log Cabin Wild	18.36	42	P	P	14 25 27.5	-0.7
	baz=246						
BARN	Barnard Glacie	18.41	49		Pn	14 25 31.4	+2.3
COLD	Coldfoot	18.44	26	P	Pn	14 25 29.2	-0.1
	baz=224						
SCRK	Sand Creek	18.53	39	P	P	14 25 28.3	-1.7
SCRK	Sand Creek	18.53	39	P	P	14 25 29.5	-0.6
	baz=242						
M27K	Edge Creek, AK	18.73	45		P	14 25 32.3	0.0
M27K				IAmb	IAmb	14 25 37.9	
	comp=Z,12nm,0.9s						
M27K	Edge Creek, AK	18.73	45	P	P	14 25 31.3	-1.0
	baz=249						
PINM	Pinnacle	18.84	52	P	P	14 25 33.1	-0.4
	baz=258						
J26L	Joseph Creek	18.94	38	P	P	14 25 33.5	-1.0
	baz=241,SNR=11						
L27K	Beaver Creek,	19.01	43	P	P	14 25 35.3	0.0
L27K	Beaver Creek,	19.01	43	P	Pn	14 25 36.5	+0.2
	baz=248						
BCAR	Beaver Creek A	19.03	43	P	P	14 25 35.4	-0.1
PEA0B	Petropavlovsk-	19.09	286	P	Pn	14 25 37.0	-0.2

PEA0B				pmax	pmax		
	comp=Z,35nm,1.4s						
PEA0B	Petropavlovsk-	19.09	286	P	Pn	14 25 37.0	-0.2
PEA0B				IAmb	IAmb	14 26 06.1	
	comp=Z,35nm,1.4s						
PETK	Petropavlovsk-	19.09	286	P	P	14 25 35.7	-0.4
	comp=Z,0.5nm,0.3s,baz=87,slow=11,SNR=20						
	comp=Z,3.0nm,0.7s						
PETK	Petropavlovsk-	19.09	286	P	P	14 25 36.2	+0.1
PETK	Petropavlovsk-	19.09	286	P	P	14 25 36.2	+0.1
YUK3	Moose Creek	19.17	47	P	P	14 25 35.9	-1.3
	baz=253,SNR=7.4						
PNL	Peninsula	19.18	54	P	Pn	14 25 37.7	-0.6
	baz=260						
BVCY	Beaver Creek	19.19	45	P	P	14 25 37.5	+0.3
	baz=251						
K27K	Chicken	19.30	40	P	Pn	14 25 41.1	+1.4
BILL	Bilibino	19.59	334	*ce*P	Pn	14 25 45.0	+1.8
BILL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,198nm,19.0s						
TOLK	Toolik Lake Re	19.64	23	P	P	14 25 42.0	-0.1
TOLK				IAmb	IAmb	14 25 45.2	
	comp=Z,10nm,0.9s						
TOLK	Toolik Lake Re	19.64	23	P	P	14 25 42.2	+0.1
	baz=222,SNR=8.2						
YUK4	Talbot Arm	19.89	49	P	P	14 25 45.7	+0.6
	baz=256						
YUK6	Outpost Mounta	19.93	50	P	P	14 25 44.5	-1.1
	baz=258						
EGAK	Eagle	19.99	38	P	P	14 25 45.9	0.0
	baz=244						
BMAR	Burnt Mountain	20.20	30	P	P	14 25 48.7	+0.5
HYT	Haines Junctio	20.32	51	P	Pn	14 25 52.1	+0.2
HYT	Haines Junctio	20.32	51	P	Pn	14 25 52.2	+0.3
	baz=259						
DAWY	Dawson	20.40	41	P	P	14 25 49.1	-1.3
DAWY	Dawson	20.40	41	P	P	14 25 50.4	0.0
	baz=248						
A21K	Barrow	20.52	13	P	P	14 25 51.9	+0.4
A21K				IAmb	IAmb	14 25 53.4	
	comp=Z,14nm,0.9s						
A21K	Barrow	20.52	13	P	P	14 25 51.5	0.0
	baz=206						
SKAG	Skagway	21.21	55	P	P	14 25 60.0	+0.9
SKAG	Skagway	21.21	55	P	P	14 25 59.2	+0.1
	baz=265,SNR=8.7						
N31M	Braeburn, Yuko	21.27	50	P	P	14 26 00.2	+0.4
N31M				IAmb	IAmb	14 26 05.3	
	comp=Z,22nm,0.8s						
N31M	Braeburn, Yuko	21.27	50	P	P	14 25 59.5	-0.2
	baz=259						
I29M	Ogilvie Camp,	21.33	38	P	P	14 25 58.7	-1.7
I29M				IAmb	IAmb	14 26 04.4	
	comp=Z,11nm,0.8s						
I29M	Ogilvie Camp,	21.33	38	P	P	14 25 57.7	-2.7
	baz=247,SNR=8.1						
WHY	Whitehorse	21.57	52	P	P	14 26 03.5	+0.4
	baz=262						
M31M	Drury Creek, Y	22.05	48	P	P	14 26 10.7	+2.6
M31M	Drury Creek, Y	22.05	48	P	P	14 26 07.4	-0.7
	baz=259						
SEY	Seymchan	22.31	314	P	P	14 26 09.8	-1.0
	comp=Z,2.4nm,0.8s,baz=109,slow=11,SNR=7.9						
	comp=Z,2.4nm,0.8s						
SEY	Seymchan	22.31	314	*ce*P	P	14 26 09.9	-0.9
SEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MA2	Magadan	22.63	305	P	P	14 26 14.9	+0.6
	comp=Z,7.3nm,0.9s,baz=56,slow=5.9,SNR=6.8						
MA2				LR	LR	14 37 16.7	
	comp=Z,50nm,18.6s,baz=102,slow=43						
	comp=Z,7.3nm,0.9s						
MA2	Magadan	22.63	305	⇑*i*P	P	14 26 14.4	+0.1
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MMPY	Sheldon Lake,	23.56	48	P	P	14 26 22.0	-1.7
	baz=261,SNR=9.1						
DLBC	Dease Lake	23.93	58	P	P	14 26 28.5	+1.3
	comp=Z,21nm,0.9s,baz=282,slow=9.7,SNR=23						
DLBC				LR	LR	14 35 42.6	
	comp=Z,103nm,18.0s,baz=290,slow=36						
	comp=Z,21nm,0.9s						
DLBC	Dease Lake	23.93	58	P	P	14 26 29.6	+2.4
DLBC				IAmb	IAmb	14 26 31.4	
	comp=Z,25nm,0.9s						
INK	Inuvik	24.25	33	P	P	14 26 29.4	-0.6
	comp=Z,7.3nm,0.7s,baz=248,slow=8.4,SNR=45						
INK				LR	LR	14 36 24.9	
	comp=Z,135nm,21.3s,baz=208,slow=38						
	comp=Z,7.3nm,0.7s						
INK	Inuvik	24.25	33	P	P	14 26 28.9	-1.0
INK				IAmb	IAmb	14 26 30.7	
	comp=Z,7.2nm,0.8s						
INK	Inuvik	24.25	33	P	P	14 26 28.9	-1.0
	baz=246,SNR=8.7						
GRNB	Grenville Isla	24.54	69	P	P	14 26 33.5	+0.7
GRNB				IAmb	IAmb	14 26 56.0	
	comp=Z,17nm,1.3s						
TGTN	Hyland Airport	24.84	51	P	P	14 26 35.6	+0.1
	baz=267						
BBB	Bella Bella	26.03	72	LR	LR	14 34 58.7	
	comp=Z,70nm,21.2s,baz=168,slow=32						
C36M	Paulatuk	27.83	34	P	P	14 27 02.0	-0.3
C36M				IAmb	IAmb	14 27 14.9	
	comp=Z,21nm,1.5s						
C36M	Paulatuk	27.83	34	P	P	14 27 02.8	+0.5
	baz=255						
A36M	Sachs Harbour	28.26	28	P	P	14 27 06.0	-0.1
A36M				IAmb	IAmb	14 27 14.1	
	comp=Z,6.9nm,0.9s						
A36M	Sachs Harbour	28.26	28	P	P	14 27 06.6	+0.5
	baz=249						
A04D	Lummi Island	30.49	77	P	P	14 27 25.1	-0.9
	baz=295						
YKA	Yellowknife Ar	31.25	48	P	P	14 27 33.5	+0.9
	comp=Z,3.9nm,0.8s,baz=272,slow=7.8,SNR=47						
YKA				PcP	PcP	14 30 25.9	-0.2
	comp=Z,0.4nm,0.7s,baz=290,slow=3.0,SNR=4.2						
YKA				LR	LR	14 42 21.8	
	comp=Z,100nm,18.5s,baz=278,slow=40						
	comp=Z,3.9nm,0.8s						
ASAJ	Asahikawa	31.61	274	LR	LR	14 40 01.8	
	comp=Z,26nm,21.3s,baz=132,slow=36						
TIXI	Tiksi	32.65	329	LR	LR	14 43 16.0	
	comp=Z,48nm,18.3s,baz=177,slow=41						
YBH	Yreka Blue Hor	33.92	88	LR	LR	14 38 07.8	
	comp=Z,76nm,21.4s,baz=278,slow=30						
NEW	Newport	34.03	74	LR	LR	14 39 25.1	
	comp=Z,46nm,21.8s,baz=302,slow=32						
NEW	Newport	34.03	74	P	P	14 27 57.1	0.0
	baz=297						
KLR	Kul'dur	35.73	289	P	P	14 28 09.9	-1.7
	comp=Z,0.4nm,0.3s,baz=90,slow=11,SNR=2.8						
	comp=Z,0.4nm,0.3s						
KLR	Kul'dur	35.73	289	P	P	14 28 10.0	-1.7
ZEA	Zeya	36.39	298	*e*P	P	14 28 16.1	-1.2
H11N2	WAKE ISLAND Hy	36.51	217	T	T	15 07 02.7	
	baz=21,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	36.52	217	T	T	15 07 01.9	
	baz=21,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	36.53	217	T	T	15 07 06.0	
	baz=21,slow=76,SNR=8.9						
RES	Resolute Bay	37.19	25	LR	LR	14 48 37.1	
	comp=Z,87nm,18.7s,baz=256,slow=44						
H11S1	WAKE ISLAND Hy	37.70	216	T	T	15 09 09.4	
	baz=22,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	37.72	216	T	T	15 09 07.0	
	baz=22,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	37.72	216	T	T	15 09 03.1	
	baz=22,slow=76,SNR=23						
HLID	Hailey	38.02	80	P	P	14 28 31.3	-0.2
	baz=303						
USA0B	Ussuriysk Arra	38.07	282	*e*P	P	14 28 31.9	+0.3
EUNU	Eureka	38.43	16	P	P	14 28 34.3	0.0
EUNU				IAmb	IAmb	14 28 54.7	
	comp=Z,5.6nm,1.2s						
EGMT	Eagleton	38.50	71	P	P	14 28 35.0	-0.4
EGMT				IAmb	IAmb	14 29 02.0	
	comp=Z,8.8nm,0.9s						
EGMT	Eagleton	38.50	71	P	P	14 28 35.6	+0.2
	baz=300						
NVAR	Mina Array Bea	38.60	89	P	P	14 28 38.3	+1.9
	comp=Z,2.6nm,0.8s,baz=292,slow=8.4,SNR=16						
NVAR				PcP	PcP	14 30 48.8	+0.7
	comp=Z,0.7nm,0.8s,baz=308,slow=4.4,SNR=2.3						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	38.60	89	P	P	14 28 37.7	+1.3
BOZ	Bozeman (W)	38.62	75	P	P	14 28 36.2	-0.3
	baz=302						
MAJO	Matsushiro	38.74	267	*i* P	P	14 28 39.9	+2.5
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.6s						
MJAR	Matsushiro Arr	38.74	267	PcP	PcP	14 30 49.0	+0.7
	comp=Z,0.7nm,0.5s,baz=82,slow=2.2,SNR=2.1						
MJAR				LR	LR	14 44 03.4	
	comp=Z,49nm,19.8s,baz=53,slow=35						
ELK	Elko	39.11	84	LR	LR	14 41 45.6	
	comp=Z,55nm,20.8s,baz=307,slow=31						
LCH	Last Change Ra	39.75	90	P	P	14 28 48.1	+2.1
LCH				IAmb	IAmb	14 28 49.2	
	comp=Z,3.3nm,0.9s						
PKM	Mcpherson Peak	39.92	95	P	P	14 28 47.3	-0.1
	baz=312						
ISA	Isabella, Lake	40.24	93	P	P	14 28 49.9	-0.1
	baz=311						
RLMT	Red Lodge	40.28	74	P	P	14 28 50.2	-0.2
	baz=303						
R11A	Troy Canyon, C	40.33	87	P	P	14 28 51.5	+0.6
	baz=308						
MPMC	Manual Prospec	40.60	91	P	P	14 28 53.8	+0.7
	baz=310						
TPNV	Topopah Spring	40.80	89	P	P	14 28 56.5	+1.9
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TPNV	Topopah Spring	40.80	89	P	P	14 28 56.5	+1.9
TPNV				IAmb	IAmb	14 28 57.4	
	comp=Z,6.1nm,0.8s						
TPNV	Topopah Spring	40.80	89	P	P	14 28 53.3	-1.4
	baz=310,SNR=8.5						
DUG	Dugway, Tooele	40.92	83	P	P	14 28 55.7	+0.1
	baz=307						
PRN	Pahroc Range	41.25	88	P	P	14 28 59.7	+1.4
PRN				IAmb	IAmb	14 29 01.2	
	comp=Z,7.5nm,1.0s						
BW06	Boulder Array	41.41	78	P	P	14 29 00.0	+0.3
BW06				IAmb	IAmb	14 29 01.3	
	comp=Z,3.7nm,1.0s						
BW06	Boulder Array	41.41	78	P	P	14 28 59.4	-0.4
	baz=305						
PD31	Pinedale Array	41.41	78	P	P	14 29 00.0	+0.3
PDAR	Pinedale Array	41.41	78	P	P	14 29 01.0	+1.2
	comp=Z,1.6nm,0.8s,baz=309,slow=4.3,SNR=14						
PDAR				LR	LR	14 44 10.0	
	comp=Z,36nm,18.5s,baz=282,slow=33						
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	41.41	78	P	P	14 28 58.9	-0.8
GSC	Goldstone, Bar	41.51	92	P	P	14 29 02.0	+1.5
GSC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GSC	Goldstone, Bar	41.51	92	P	P	14 29 02.0	+1.5
GSC				IAmb	IAmb	14 29 03.2	
	comp=Z,8.5nm,0.8s						
GSC	Goldstone, Bar	41.51	92	P	P	14 28 59.8	-0.6
	baz=311,SNR=8.9						
FCC	Fort Churchill	41.96	49	P	P	14 29 03.4	-0.2
FCC				pmax	pmax		
	comp=Z,17nm,1.0s						
FCC	Fort Churchill	41.96	49	P	P	14 29 03.4	-0.2
HEC	Hector,Ludlow	42.11	92	P	P	14 29 04.3	-1.0
	baz=311						
GMRC	Granite Mounta	42.56	91	P	P	14 29 09.3	+0.3
	baz=311						
HIA	Hailar	42.60	295	P	P	14 29 08.4	-0.7
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HIA	Hailar	42.60	295	P	P	14 29 08.4	-0.7
HIA				IAmb	IAmb	14 29 09.5	
	comp=Z,6.1nm,0.8s						
PFO	Pinyon Flats O	42.84	93	LR	LR	14 43 30.7	
	comp=Z,35nm,18.3s,baz=178,slow=31						
TPFO	Pinon Flats	42.85	93	P	P	14 29 10.6	-0.8
	baz=312						
BELC	Belle Mtn. Jos	42.87	93	P	P	14 29 10.0	-1.6
	baz=312						
IRM	Iron Mountain	43.29	92	P	P	14 29 16.2	+1.4
	baz=312						
MONP2	Monument Peak	43.35	94	P	P	14 29 17.0	+1.5
	baz=313						
BC3	Big Chuckawall	43.43	92	P	P	14 29 17.2	+1.1
	baz=312						
IKP	In-Ko-Pah, Jac	43.70	94	P	P	14 29 18.9	+0.7
	baz=313						
O20A	White River Ci	43.76	80	P	P	14 29 18.5	-0.3
	baz=307						
PDMCI	Parker Dam,Lak	43.81	91	P	P	14 29 19.2	+0.2
	baz=312						
RSSD	Black Hills	43.95	73	P	P	14 29 20.0	-0.2
	baz=305						
KSRS	Korea Array	44.52	276	P	P	14 29 24.8	+0.2
	comp=Z,1.2nm,0.8s,baz=42,slow=9.6,SNR=4.4						
KSRS				LR	LR	14 46 05.1	
	comp=Z,24nm,21.8s,baz=65,slow=33						
	comp=Z,1.2nm,0.8s						
WUAZ	Wupatki	44.73	87	P	P	14 29 24.6	-2.0
	baz=311						
ULM	Lac du Bonnet	45.20	61	P	P	14 29 28.6	-1.3
	comp=Z,3.0nm,0.5s,baz=290,slow=7.8,SNR=2.9						
	comp=Z,3.0nm,0.5s						
MVCO	Mesa Verde	45.42	83	P	P	14 29 31.9	-0.2
	baz=310						
NRIK	Noril'sk	46.38	331	*i* P	P	14 29 37.9	-1.1
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TUC	Tucson	47.23	90	P	P	14 29 46.5	+0.4
	baz=313						
ANMO	Albuquerque	48.14	84	LR	LR	14 47 28.3	
	comp=Z,32nm,21.0s,baz=318,slow=33						
ANMO	Albuquerque	48.14	84	*e*P	P	14 29 54.8	+1.4
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
EYMN	Ely	48.87	61	P	P	14 29 58.8	+0.3
	baz=306						
121A	Cookes Peak, D	48.94	88	P	P	14 30 00.4	+0.9
	baz=313						
KBS	Kingsbay	49.42	359	P	P	14 30 02.3	0.0
KBS				pmax	pmax		
	comp=Z,27nm,1.2s						
KBS	Kingsbay	49.42	359	P	P	14 30 02.3	0.0
SPITS	Spitsbergen Ar	50.10	358	P	P	14 30 06.6	-1.0
SPITS				pmax	pmax		
	comp=Z,55nm,1.5s						
SPB2	Spitsbergen Ar	50.11	358	P	P	14 30 06.8	-0.7
ULN	Ulaanbaatar	50.36	300	*ce*P	P	14 30 09.5	-0.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	50.73	300	P	P	14 30 12.5	-0.4
	comp=Z,0.9nm,0.6s,baz=54,slow=6.7,SNR=6.9						
SONM				PcP	PcP	14 31 30.2	+0.7
	comp=Z,0.9nm,0.8s,baz=29,slow=4.1,SNR=3.7						
SONM				LR	LR	14 53 06.6	
	comp=Z,80nm,19.8s,baz=65,slow=38						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	50.73	300	P	P	14 30 12.7	-0.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	50.73	300	P	P	14 30 12.7	-0.1
MNTX	Cornudas Mount	50.99	87	P	P	14 30 14.3	-0.6
	baz=314						
SUMG	Summit	51.50	17	P	P	14 30 18.8	+0.3
SUMG				pmax	pmax		
	comp=Z,19nm,1.3s						
SUMG	Summit	51.50	17	P	P	14 30 18.8	+0.3
HHC	Hu-ho-hao-te	52.21	290	*e*P	P	14 30 25.4	+1.4
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
SFJD	Kangerlussuaq	53.20	25	LR	LR	14 58 23.2	
	comp=Z,32nm,18.3s,baz=342,slow=42						
TX31	Lajitas Ar. Si	53.70	87	P	P	14 30 35.4	+0.4
TX32	Lajitas Array	53.70	87	P	P	14 30 35.6	+0.6
TX32				IAmb	IAmb	14 30 36.9	
	comp=Z,4.8nm,0.9s						
TXAR	Lajitas Array	53.70	87	P	P	14 30 36.0	+1.0
	comp=Z,2.9nm,0.8s,baz=297,slow=5.3,SNR=27						
	comp=Z,2.9nm,0.8s						
TXAR	Lajitas Array	53.70	87	P	P	14 30 35.9	+0.8
P40A	Paris	53.82	70	P	P	14 30 35.4	-0.3
U40A	Yellville	55.46	73	P	P	14 30 46.5	-1.1
	baz=313						
W39A	Magazine	55.69	75	P	P	14 30 47.8	-1.5
	baz=313						
SFIN	Lafayette	56.10	66	P	P	14 30 50.7	-1.5
	baz=312						
MIAR	Mount Ida	56.26	76	P	P	14 30 53.1	-0.3
	baz=314						
SCHQ	Schefferville	56.41	42	P	P	14 30 54.1	0.0
	comp=Z,4.9nm,0.8s,baz=339,slow=7.1,SNR=5.9						
	comp=Z,4.9nm,0.8s						
W41B	Gary Mavity, V	56.62	74	P	P	14 30 54.7	-1.3
	baz=314						
ZALV	Zalesovo Beam	57.13	317	P	P	14 30 57.9	-1.4
	comp=Z,0.3nm,0.4s,baz=54,slow=7.3,SNR=1.8						
ZALV				PcP	PcP	14 31 53.0	-0.5
	comp=Z,1.0nm,0.7s,baz=66,slow=3.6,SNR=4.3						
	comp=Z,0.3nm,0.4s						
ZALV	Zalesovo Beam	57.13	317	P	P	14 30 58.6	-0.7
ARCES	ARCESS Array B	58.28	353	P	P	14 31 05.7	-1.4
	comp=Z,2.0nm,0.7s,baz=27,slow=11,SNR=5.9						
ARCES				PcP	PcP	14 31 57.9	0.0
	comp=Z,1.0nm,0.8s,baz=2.9,slow=5.4,SNR=1.5						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	58.28	353	P	P	14 31 07.0	-0.1
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARCES	ARCESS Array B	58.28	353	P	P	14 31 07.0	-0.1
ARCES				IAmb	IAmb	14 31 23.2	
	comp=Z,5.8nm,1.2s						
IVI	Ivigtut	58.35	29	P	P	14 31 07.8	+0.1
GTA	Gaotai	59.85	296	*e*P	P	14 31 18.4	-0.2
GTA				pP	pP	14 31 23.0	-6.2
GTA				sP	sP	14 31 26.0	-7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	62.09	318	⇑*i*P	P	14 31 32.8	-0.6
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	62.09	318	P	P	14 31 32.9	-0.5
KURK				IAmb	IAmb	14 31 33.7	
	comp=Z,2.7nm,0.8s						
F64A	Sherman	62.13	51	P	P	14 31 33.7	-0.1
BATG	Bathurst New B	62.17	48	P	P	14 31 34.4	+0.3
WMQ	Urumqi	63.07	307	*e*P	P	14 31 40.2	0.0
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
GGN	Saint George	63.39	50	P	P	14 31 41.5	-0.6
MKAR	Makanchi Array	63.44	313	P	P	14 31 41.2	-1.3
	comp=Z,0.8nm,0.8s,baz=46,slow=6.9,SNR=7.3						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	63.44	313	*ce*P	P	14 31 41.7	-0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	63.44	313	P	P	14 31 41.9	-0.6
LMN	Caledonia Moun	63.80	48	P	P	14 31 45.0	+0.1
ARU	Arti	64.60	332	*d i*P	P	14 31 49.4	-0.5
ARU				S	S	14 40 28.2	+1.9
ARU				SS	SS	14 44 32.9	-3.4
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU	GeErMu	64.91	297	P	P	14 31 49.7	-3.1
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,81nm,4.7s						
FINES	FINESS Array B	66.19	351	P	P	14 31 59.0	-1.2
	comp=Z,1.5nm,0.6s,baz=1.1,slow=9.5,SNR=5.7						
FINES				LR	LR	15 01 32.1	
	comp=Z,26nm,19.8s,baz=296,slow=37						
	comp=Z,1.5nm,0.6s						
FINES	FINESS Array B	66.19	351	P	P	14 31 59.7	-0.4
FINES	FINESS Array B	66.19	351	P	P	14 31 59.7	-0.4
NC204	NORSAR Array S	67.16	359	P	P	14 32 05.7	-0.7
NB2	NORSAR Subarra	67.39	359	P	P	14 32 07.5	-0.4
	comp=Z,0.8nm,0.6s,baz=360,slow=6.2						
NOA	NORSAR Array B	67.39	359	P	P	14 32 07.5	-0.4
	comp=Z,1.4nm,0.7s,baz=1.8,slow=6.4,SNR=6.6						
	comp=Z,1.4nm,0.7s						
PZH	PanZhiHua	68.04	285	P	P	14 32 14.1	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,6.8s						
AAK	Ala-Archa	70.16	315	*d i*P	P	14 32 25.9	+0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ABKAR	Akbulak array	70.33	327	P	P	14 32 26.0	-0.3
KKAR	Karatay Array	71.50	317	P	P	14 32 33.1	-0.4
KKAR	Karatay Array	71.50	317	P	P	14 32 33.1	-0.4
KSH	Kashi	71.99	312	P	P	14 32 40.4	+3.7
KSH				PcP	PcP	14 32 56.7	+1.6
VORR	Voronezh	73.72	341	*e*P	P	14 32 50.2	+3.7
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
CMAR	Chiang Mai Arr	75.80	282	P	P	14 32 59.6	+0.6
	comp=Z,2.2nm,0.8s,baz=26,slow=6.6,SNR=20						
CMAR				LR	LR	15 08 49.4	
	comp=Z,15nm,18.2s,baz=140,slow=38						
	comp=Z,2.2nm,0.8s						
AKASG	Malin Array Be	76.36	347	P	P	14 33 00.9	-0.8
	comp=Z,0.8nm,0.4s,baz=15,slow=5.3,SNR=0.8						
	comp=Z,0.8nm,0.4s						
CLL	Collm	77.11	357	*e*P	P	14 33 06.0	+0.1
CLL	Collm	77.11	357	*e*P	P	14 33 06.0	+0.1
DPC	Dobruska-Polom	77.94	355	*e*P	P	14 33 10.1	-0.6
DPC	Dobruska-Polom	77.94	355	*e*P	P	14 33 10.1	-0.6
PRU	Pruhonice	78.38	356	*e*P	P	14 33 13.4	+0.4
PRU	Pruhonice	78.38	356	*e*P	P	14 33 13.4	+0.4
KHC	Kasperske Hory	79.27	357	*e*P	P	14 33 18.2	+0.2
KHC	Kasperske Hory	79.27	357	*e*P	P	14 33 18.2	+0.2
GERES	GERESS Array B	79.55	357	P	P	14 33 19.2	-0.4
	comp=Z,1.1nm,0.6s,baz=35,slow=4.9,SNR=7.3						
	comp=Z,1.1nm,0.6s						
BURAR	Bucovina Array	79.90	349	⇓P	P	14 33 26.5	+5.0
BURAR	Bucovina Array	79.90	349	⇓P	P	14 33 26.5	+4.9
KBZ	Khabaz	80.36	336	P	P	14 33 24.6	+0.7
	comp=Z,1.6nm,0.7s,baz=75,slow=7.1,SNR=3.9						
	comp=Z,1.6nm,0.7s						
CONA	Conrad Observa	80.38	355	*i* P	P	14 33 24.8	+0.7
	comp=Z,5.2nm,1.2s						
MOA	Molln	80.53	356	*i* P	P	14 33 25.7	+0.9
	comp=Z,1.8nm,0.9s						
ANN	Anapa	80.62	340	*e*P	P	14 33 24.9	-0.4
ANN				*e**PP	pP	14 33 34.5	-1.8
ANN				*e*S	S	14 43 28.5	-0.7
ANN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RETA	Reutte	80.98	359	*i* P	P	14 33 27.8	+0.5
	comp=Z,2.7nm,0.9s						
ARSA	Arzberg	81.07	356	*i* P	P	14 33 29.0	+1.3
	comp=Z,3.3nm,1.1s						
MOTA	Moosalm	81.11	359	*i* P	P	14 33 29.6	+1.5
	comp=Z,8.1nm,1.2s						
WATA	Walderalm	81.12	358	*i* P	P	14 33 28.6	+0.5
	comp=Z,2.9nm,0.6s						
DAVA	Damuels	81.19	359	*i* P	P	14 33 29.7	+1.1
	comp=Z,3.8nm,0.8s						
WTTA	Wattenberg	81.19	358	*i* P	P	14 33 29.3	+0.7
	comp=Z,3.2nm,0.7s						
SQTA	Sankt Quirin	81.24	359	*i* P	P	14 33 29.4	+0.7
	comp=Z,5.0nm,0.8s						
KBA	Koelnbreinsper	81.33	357	*e*P	P	14 33 30.4	+1.1
	comp=Z,12nm,1.1s						
FETA	Feichten	81.44	359	*i* P	P	14 33 30.6	+0.7
	comp=Z,9.0nm,1.1s						
SOKA	Soboth	81.66	356	*i* P	P	14 33 30.9	-0.1
	comp=Z,29nm,0.7s						
WRA	Warramunga Arr	85.98	230	P	P	14 33 53.6	+0.5
	comp=Z,0.4nm,0.9s,baz=34,slow=5.7,SNR=1.6						
	comp=Z,0.4nm,0.9s						
BRTR	Keskin Array B	86.27	341	P	P	14 33 54.4	-0.3
	comp=Z,1.6nm,0.9s,baz=54,slow=7.3,SNR=4.8						
	comp=Z,1.6nm,0.9s						
BRTR	Keskin Array B	86.27	341	*ce*P	P	14 33 55.0	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	88.09	10	P	P	14 34 02.6	-0.7
	comp=Z,2.3nm,0.9s,baz=353,slow=4.6,SNR=13						
	comp=Z,2.3nm,0.9s						
ASAR	Alice Springs	89.38	229	P	P	14 34 10.1	+0.7
	comp=Z,0.7nm,0.8s,baz=28,slow=4.5,SNR=8.2						
ASAR				LR	LR	15 08 57.8	
	comp=Z,29nm,21.2s,baz=108,slow=32						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	89.38	229	P	P	14 34 09.5	+0.1

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*UPA **06** 14:34:59.9±0.7, 10°.44N×83°.75W, h12km±15km, MW4.0*

*INET **06** 14:35:00.0±0.5, 10°.14N×84°.13W, h77km±2km, MW2.7*

ISC 06 14:35:00.7±2.0, 10°.3N±0°.1×84°.13W±0°.07, h68km±9km, n12, σ1ˢ.12/23, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.27**	**176**	⇑iP	**Pn**	**14 35 11.7**	**+0.1**
HDC				eS	**Sn**	**14 35 20.6**	**+1.0**
HDC3	**Heredia 3**	**0.27**	**175**	eP	**Pn**	**14 35 11.7**	**+0.1**
HDC3				eS	**Sn**	**14 35 20.7**	**+1.2**
RIMA	**Rio Macho**	**0.56**	**152**	eP	**Pn**	**14 35 13.5**	**-0.8**
RIMA				eS	**Sn**	**14 35 24.1**	**-0.1**
LAFE	**Finca La Fe, P**	**0.89**	**239**	eP	**Pn**	**14 35 16.9**	**-0.9**
LAFE				eS	**Sn**	**14 35 30.0**	**-0.3**
PEZE	**Perez Zeledon,**	**0.99**	**153**	eP	**Pn**	**14 35 17.7**	**-1.4**
PEZE				eS	**Sn**	**14 35 31.1**	**-1.6**
ORTG	**Ortega, Santa**	**1.31**	**274**	eP	**Pn**	**14 35 22.9**	**-0.2**
ORTG				eS	**Sn**	**14 35 40.9**	**+0.9**
DRK0	**Durika**	**1.33**	**139**	eP	**Pn**	**14 35 22.3**	**-1.2**
DRK0				eS	**Sn**	**14 35 39.1**	**-1.5**
DUNO	**Dulce Nombre,**	**1.35**	**262**	eP	**Pn**	**14 35 22.7**	**-0.9**
DUNO				eS	**Sn**	**14 35 40.6**	**-0.3**
HZTE	**Horizontes, Gu**	**1.50**	**287**	eP	**Pn**	**14 35 25.8**	**+0.1**
PIRO	**Carate, Puerto**	**2.01**	**157**	eP	**Pn**	**14 35 33.3**	**+0.9**
PIRO				eS	**Sn**	**14 35 59.0**	**+2.4**
BRU2	**Volcan**	**2.04**	**136**	eP	**Pn**	**14 35 33.1**	**+0.1**
BRU2				eS	**Sn**	**14 35 56.9**	**-0.7**
PTPM	**Petroterminale**	**2.40**	**149**	eP	**Pn**	**14 35 38.4**	**+0.7**
PTPM				eS	**Sn**	**14 36 07.6**	**+1.6**

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*IDC **06** 14:37:10.0±1.1, 45°.03N×28°.15W, h0km, mb3.5/6, mbtmp3.5/6, MS3.5/37, Error ellipse: s-maj=42.1km s-min=25.2km az=19.0*

ISC 06 14:37:12.1±1.0, 45°.0N±0°.2×28°.2W±0°.2, h14km, n42, σ0ˢ.83/9, mb3.5/6, MS3.5/35, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.62**	**98**	LR	LR	14 47 15.6	
	comp=Z,118nm,19.9s,baz=303,slow=32						
EKA	**Eskdalemuir Ar**	**18.94**	**48**	LR	LR	14 47 09.3	
	comp=Z,171nm,19.0s,baz=192,slow=32						
BORG	**Borgarnes**	**20.14**	**9**	LR	LR	14 47 19.5	
	comp=Z,64nm,20.4s,baz=75,slow=30						
MDT	**Midelt**	**21.91**	**116**	LR	LR	14 49 20.1	
	comp=Z,55nm,19.9s,baz=346,slow=33						
DAVOX	**Davos/Dischmat**	**26.36**	**72**	LR	LR	14 52 32.4	
	comp=Z,123nm,18.0s,baz=261,slow=35						
SCHQ	**Schefferville**	**26.46**	**306**	LR	LR	14 52 08.7	
	comp=Z,111nm,18.1s,baz=234,slow=34						
NOA	**NORSAR Array B**	**28.03**	**41**	LR	LR	14 53 38.4	
	comp=Z,38nm,18.0s,baz=345,slow=35						
GERES	**GERESS Array B**	**28.57**	**67**	LR	LR	14 53 44.5	
	comp=Z,115nm,18.4s,baz=278,slow=35						
HFS	**Hagfors**	**28.99**	**44**	LR	LR	14 52 27.5	
	comp=Z,75nm,20.3s,baz=316,slow=32						
KEST	**Kesra**	**29.80**	**95**	LR	LR	14 54 33.7	
	comp=Z,77nm,19.4s,baz=180,slow=35						
VRAC	**Vranov**	**30.38**	**66**	LR	LR	14 54 53.2	
	comp=Z,135nm,19.1s,baz=300,slow=35						
SADO	**Sadowa**	**35.64**	**288**	LR	LR	14 58 22.7	
	comp=Z,172nm,18.2s,baz=120,slow=36						
ARCES	**ARCESS Array B**	**36.13**	**29**	LR	LR	14 57 56.3	
	comp=Z,49nm,19.9s,baz=308,slow=34						
AKASG	**Malin Array Be**	**38.07**	**60**	P	**P**	**14 44 29.6**	**-0.3**
	0.3nm,0.3s,baz=272,slow=9.0,SNR=4.5						
AKASG				LR	LR	15 00 34.1	
	comp=Z,99nm,18.3s,baz=348,slow=37						
	0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**40.65**	**132**	P	**P**	**14 44 52.1**	**+0.3**
	1.1nm,0.8s,baz=316,slow=6.2,SNR=5.4						
	1.1nm,0.8s						
IDI	**Anoyia**	**41.03**	**85**	LR	LR	15 02 21.3	
	comp=Z,20nm,18.1s,baz=64,slow=37						
RES	**Resolute Bay**	**41.07**	**338**	LR	LR	14 58 21.0	
	comp=Z,23nm,20.6s,baz=149,slow=31						
SJG	**San Juan**	**41.46**	**242**	LR	LR	14 58 00.6	
	comp=Z,23nm,21.9s,baz=117,slow=30						
TKL	**Tuckaleechee C**	**42.68**	**277**	LR	LR	15 02 32.1	
	comp=Z,48nm,18.4s,baz=6.0,slow=36						
DBIC	**Dimbokro**	**43.24**	**145**	LR	LR	15 01 50.4	
	comp=Z,66nm,18.1s,baz=344,slow=34						
ULM	**Lac du Bonnet**	**44.52**	**302**	LR	LR	15 02 21.2	
	comp=Z,79nm,18.1s,baz=78,slow=34						
BRTR	**Keskin Array B**	**44.98**	**74**	LR	LR	15 04 48.6	
	comp=Z,53nm,18.1s,baz=316,slow=37						
MDP	**Montagnes des**	**45.15**	**216**	LR	LR	15 00 24.3	
	comp=Z,27nm,19.4s,baz=84,slow=31						
YKA	**Yellowknife Ar**	**49.86**	**323**	LR	LR	15 04 24.0	
	comp=Z,51nm,18.4s,baz=329,slow=33						
AKTO	**Aktyubinsk**	**55.09**	**51**	LR	LR	15 09 49.3	
	comp=Z,40nm,18.5s,baz=333,slow=36						
PDAR	**Pinedale Array**	**56.30**	**299**	P	**P**	**14 46 53.8**	**+1.4**
	0.3nm,0.8s,baz=112,slow=6.6,SNR=3.8						
PDAR				LR	LR	15 09 33.8	
	comp=Z,76nm,18.8s,baz=46,slow=34						
	0.3nm,0.8s						
ROSC	**El Rosal**	**56.73**	**239**	LR	LR	15 07 51.9	
	comp=Z,40nm,20.9s,baz=148,slow=32						
NEW	**Newport**	**57.80**	**308**	LR	LR	15 09 00.4	
	comp=Z,58nm,18.6s,baz=102,slow=33						
ANMO	**Albuquerque**	**58.67**	**290**	LR	LR	15 12 29.2	
	comp=Z,70nm,19.0s,baz=26,slow=36						
TXAR	**Lajitas Array**	**60.10**	**283**	P	**P**	**14 47 17.9**	**-1.2**
	0.3nm,0.8s,baz=76,slow=4.7,SNR=2.5						
TXAR				LR	LR	15 12 08.4	
	comp=Z,74nm,20.3s,baz=51,slow=35						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**60.61**	**334**	P	**P**	**14 47 21.6**	**-0.3**
	0.3nm,0.7s,baz=33,slow=5.4,SNR=2.5						
	0.3nm,0.7s						
ELK	**Elko**	**60.95**	**300**	LR	LR	15 12 52.1	
	comp=Z,55nm,18.5s,baz=62,slow=35						
BBB	**Bella Bella**	**61.32**	**316**	LR	LR	15 10 26.4	
	comp=Z,25nm,18.9s,baz=14,slow=33						
CMIG	**Matias Romero**	**61.72**	**266**	LR	LR	15 14 25.3	
	comp=Z,23nm,18.0s,baz=24,slow=36						
GEYT	**Alibeck**	**62.09**	**63**	LR	LR	15 15 40.1	
	comp=Z,29nm,18.6s,baz=352,slow=37						
YBH	**Yreka Blue Hor**	**64.84**	**304**	LR	LR	15 14 09.5	
	comp=Z,31nm,18.1s,baz=38,slow=34						
PFO	**Pinyon Flats O**	**66.06**	**294**	LR	LR	15 17 09.6	
	comp=Z,54nm,18.6s,baz=60,slow=36						
ZALV	**Zalesovo Beam**	**66.11**	**37**	LR	LR	15 16 13.5	
	comp=Z,44nm,19.3s,baz=27,slow=36						
AAK	**Ala-Archa**	**68.83**	**51**	LR	LR	15 19 37.7	
	comp=Z,50nm,18.0s,baz=338,slow=37						
SONM	**Songino Array**	**79.30**	**29**	P	**P**	**14 49 17.6**	**+0.5**
	0.5nm,0.8s,baz=318,slow=3.9,SNR=2.0						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**151.09**	**36**	PKPbc	**PKiKP**	**14 57 05.2**	**-0.2**
	0.5nm,0.8s,baz=329,slow=2.1,SNR=2.8						
ASAR	**Alice Springs**	**154.17**	**40**	PKPbc	**PKPbc**	**14 57 11.4**	**-0.3**
	0.3nm,0.9s,baz=319,slow=2.6,SNR=2.4						
ASAR				PKPab	**PKPab**	**14 57 25.2**	**-0.1**
	0.5nm,0.9s,baz=300,slow=2.8,SNR=4.8						

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*ARE **06** 14:52:22±1.2, 11°.80S±0°.09×77°.8W±0°.1, h46km±6km, Error ellipse: s-maj=17.4km s-min=12.1km az=66.0*

*NEIC **06** 14:52:22.3±0.9, 11°.8S±0°.1×77°.8W±0°.1, h68km±8km, mb4.8/12, ML4.2(ARE), Error ellipse: s-maj=20.1km s-min=13.3km az=65.0*

ISC 06 14:52:18.5±0.8, 11°.8S±0°.1×78°.0W±0°.1, h35km, n14, σ0ˢ.83/14, mb4.8/6, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**1.16**	**98**	Pn	**Pn**	**14 52 40.0**	**+1.6**
LPAZ	**La Paz**	**10.57**	**116**	Pn	**Pn**	**14 54 47.2**	**-0.9**
BRU2	**Volcan**	**21.01**	**347**	P	**P**	**14 57 00.3**	**+0.9**
BRU2				IAmb	IAmb	14 57 00.5	
	comp=Z,24nm,0.4s						
VA01	**Torpederas**	**21.89**	**166**	P	**P**	**14 57 08.9**	**+0.4**
VA01				IAmb	IAmb	14 57 12.8	
	comp=Z,24nm,0.9s						
BATAN	**Batan**	**22.42**	**346**	P	**P**	**14 57 14.8**	**+0.3**
URIC	**Uribia, Colomb**	**24.13**	**15**	P	**P**	**14 57 30.1**	**-1.3**
BDFB	**Brasilia**	**29.38**	**101**	P	**P**	**14 58 17.8**	**-1.0**
BDFB				IAmb	IAmb	14 58 22.4	
	comp=Z,42nm,0.9s						
PLCA	**Paso Flores**	**29.53**	**168**	P	**P**	**14 58 19.8**	**-0.1**
SSPA	**Standing Stone**	**52.20**	**0**	P	**P**	**15 01 25.6**	**-0.2**
L61B	**Northampton**	**54.23**	**5**	P	**P**	**15 01 41.0**	**+0.2**
L61B				IAmb	IAmb	15 01 59.5	
	comp=Z,36nm,1.4s						
W13A	**Hualapai Mount**	**57.73**	**325**	P	**P**	**15 02 05.9**	**-0.3**
W13A				IAmb	IAmb	15 02 09.4	
	comp=Z,3.1nm,0.8s						
SNOW	**Snow King Moun**	**62.61**	**334**	P	**P**	**15 02 40.2**	**+0.6**
SNAA	**Sanae**	**74.19**	**161**	P	**P**	**15 03 51.5**	**0.0**
QSPA	**South Pole Qui**	**78.30**	**180**	P	**P**	**15 04 15.2**	**+0.3**
QSPA				IAmb	IAmb	15 04 24.2	
	comp=Z,10.0nm,1.4s						

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*NEIC **06** 14:52:17.0±1.4, 54°.5N±0°.1×158°.40W±0°.10, h18km±11km, ML3.5/14, ML3.0(AEIC), Error ellipse: s-maj=16.9km s-min=8.1km az=171.0*

AEIC 06 14:52:19±1.9, 54°.75N±0°.08×158°.4W±0°.1, h21km±8km, Error ellipse: s-maj=13.0km s-min=6.7km az=145.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.70**	**277**		Pn	14 52 33.6	0.0
SDPT	**Sand Point**	**1.34**	**298**		Pb	14 52 43.1	-0.4
SDPT	**Sand Point**	**1.34**	**298**	IAML		14 53 00.8	
	comp=N,296nm,1.4s						
VNHG	**Veniaminof 1**	**1.54**	**344**		Pn	14 52 45.9	+0.6
VNFG	**Fog Glacier, M**	**1.68**	**337**		Pb	14 52 48.3	-0.9
CHIR	**Chirikof Islan**	**1.91**	**55**		Pn	14 52 51.2	+0.9
CHIR	**Chirikof Islan**	**1.91**	**55**	IAML		14 53 35.4	
	comp=E,230nm,2.6s						
CHIR				IAML		14 54 06.3	
	comp=N,351nm,2.2s						
AZAC	**Aniakchak**	**2.16**	**2**		Pn	14 52 55.5	+1.8
ANNE	**Aniakchak Nort**	**2.18**	**5**		Pn	14 52 55.3	+1.3
FALS	**False Pass**	**2.91**	**274**	Pn	Pn	14 53 01.9	-2.1
SII	**Sitkinak Islan**	**3.00**	**51**	Pn	Pn	14 53 06.3	+1.1
SII				IAML		14 53 28.3	
	comp=E,198nm,3.2s						
SII				IAML		14 53 49.0	
	comp=N,192nm,2.8s						
OHAK	**Old Harbor**	**3.79**	**47**	Pn	Pn	14 53 16.9	+0.8
OHAK				IAML		14 55 41.3	
	comp=E,78nm,3.5s						
OHAK				IAML		14 55 52.8	
	comp=N,80nm,3.4s						
KDAK	**Kodiak Island**	**4.44**	**44**	Pn	Pn	14 53 24.4	-0.6
KDAK				IAML		14 54 26.6	
	comp=N,74nm,3.6s						
Q19K	**Cape Douglas,**	**4.94**	**30**	Pn	Pn	14 53 31.9	+0.1
O18K	**Koktuh Hills**	**5.40**	**17**	Pn	Pn	14 53 39.9	+1.7
N18K	**Kilae Creek**	**6.10**	**12**	Pn	Pn	14 53 48.4	+0.6
N19K	**Bonanza Creek**	**6.43**	**17**	Pn	Pn	14 53 51.9	-0.5
RSO	**Redoubt South**	**6.48**	**26**	Pn	Pn	14 53 54.3	+1.1
M19K	**Big River Lodg**	**7.48**	**15**	Pn	Pn	14 54 08.7	+2.0
M20K	**Styx River**	**7.67**	**19**	Pn	Pn	14 54 11.9	+2.5
L19K	**White Mountain**	**7.68**	**12**	Pn	Pn	14 54 11.2	+1.7
TTA	**Tatalina**	**8.30**	**8**	Pn	Pn	14 54 18.2	+0.2
KLU	**Klutina**	**9.43**	**39**	Pn	Pn	14 54 34.9	+1.4
M24K	**Tolsona, Glenn**	**9.76**	**36**	Pn	Pn	14 54 39.5	+1.6
RIDG	**Independent Ri**	**11.35**	**32**	Pn	Pn	14 55 00.1	+0.4
IL31		**11.58**	**25**	Pn	Pn	14 55 04.6	+1.8
BCAR	**Beaver Creek A**	**11.93**	**39**	Pn	Pn	14 55 08.2	+0.5

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*IDC **06** 14:53:03.5±1.3, 15°.86S×167°.10E, h0km, mb3.8/5, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=51.0km s-min=27.3km az=132.0*

*NOU **06** 14:53:05.7, 15°.80S×166°.86E, h7km, MLv4.3/14, Vanuatu Islands*

ISC 06 14:53:07.3±0.8, 15°.85S±0°.08×166°.9E±0°.1, h27km, n16, σ1ˢ.73/16, mb3.7/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.48**	**34**	P	**Pb**	**14 53 15.6**	**-1.8**
DVP	**Devils Point**	**2.23**	**147**	P	**Pn**	**14 53 44.6**	**+2.2**
RTV	**Rentapao**	**2.41**	**144**	P	**Pn**	**14 53 46.6**	**+1.6**
LIFNC	**LIFOU**	**4.91**	**177**	P	**Pn**	**14 54 21.5**	**+2.1**
KOUNC	**Koumac, New Ca**	**5.30**	**208**	P	**Pn**	**14 54 25.7**	**+0.9**
MARNC	**Mare, Loyalty**	**5.70**	**170**	P	**Pn**	**14 54 31.6**	**+1.4**
YATNC	**Mamie plateau,**	**6.18**	**180**	P	**Pn**	**14 54 37.9**	**+1.1**
DZM	**Mont Dzumac**	**6.21**	**184**	Pn	**Pn**	**14 54 36.8**	**-0.5**
	0.6nm,0.3s,baz=90,slow=16,SNR=37						
DZM				Sn	**Sn**	**14 55 43.5**	**-3.9**
	baz=283,slow=24						
	2.2nm,0.4s						
NOUC	**Port Laguerre**	**6.25**	**185**	P	**Pn**	**14 54 38.5**	**+0.7**
OUENC	**Ouen Island, N**	**6.54**	**181**	P	**Pn**	**14 54 42.2**	**+0.5**
WRA	**Warramunga Arr**	**31.24**	**258**	P	**P**	**14 59 26.0**	**+1.0**
	0.6nm,1.1s,baz=81,slow=8.7,SNR=2.4						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**31.97**	**251**	P	**P**	**14 59 32.9**	**+1.5**
	0.6nm,0.6s,baz=81,slow=9.0,SNR=24						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**87.69**	**18**	P	**P**	**15 05 53.0**	**0.0**
	0.4nm,0.5s,baz=243,slow=4.7,SNR=12						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**97.78**	**316**	P	Pdif	15 06 42.6	+2.4
	0.1nm,0.4s,baz=121,slow=2.5,SNR=2.1						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**98.69**	**27**	P	**P**	**15 06 43.6**	**-0.2**
	0.2nm,0.6s,baz=256,slow=4.3,SNR=4.1						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**121.24**	**345**	PKP	**PKiKP**	**15 11 58.0**	**+0.6**
	2.0nm,1.0s,baz=90,slow=3.6,SNR=5.5						

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*NEIC **06** 15:03:27.3±2.7, 54°.7N±0°.1×168°.2W±0°.2, h209km±8km, mb4.3/16, ML3.6(AEIC), Error ellipse: s-maj=21.8km s-min=8.9km az=152.0*

*AEIC **06** 15:03:27±2.4, 54°.3N±0°.1×167°.8W±0°.2, h245km±7km, Error ellipse: s-maj=23.1km s-min=0.8km az=140.0*

ISC 06 15:03:26.8±1.0, 54°.3N±0°.1×167°.83W±0°.08, h239km±10km, n155, σ1ˢ.00/162, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSW	**Makushin Switc**	**0.71**	**119**		**Pn**	**15 03 59.9**	**+0.7**
MSW					**S**	**15 04 23.3**	**-1.1**
OKFG	**Magazine Ridge**	**0.85**	**183**		**Pn**	**15 04 00.7**	**+0.9**
OKFG					**S**	**15 04 25.7**	**+0.1**
UNV	**Unalaska Valle**	**0.89**	**117**		**Pn**	**15 04 00.6**	**+0.6**
UNV					**S**	**15 04 26.2**	**+0.4**
UNV	**Unalaska Valle**	**0.89**	**117**	P	**Pn**	**15 04 00.6**	**+0.6**
	baz=298						
UNV	**Unalaska Valle**	**0.89**	**117**	P	**Pn**	**15 04 00.7**	**+0.8**
AKBBA	**Akutan Broad B**	**1.13**	**98**		**Pn**	**15 04 02.4**	**+1.1**
AKBBA					**S**	**15 04 28.9**	**+0.4**
AKSA	**Akutan Strait**	**1.26**	**95**		**Pn**	**15 04 03.0**	**+0.8**
AKSA					**S**	**15 04 30.5**	**+0.5**
NIKH	**Nikolski High**	**1.43**	**206**		**Pn**	**15 04 03.6**	**+0.1**
NIKH					**S**	**15 04 32.1**	**-0.1**
NIKH	**Nikolski High**	**1.43**	**206**	P	**Pn**	**15 04 03.8**	**+0.4**
	baz=24						
WESE	**West Dahl East**	**1.91**	**82**		**Pn**	**15 04 08.4**	**+0.9**
SSLN	**Shishaldin Nor**	**2.30**	**75**		**Pn**	**15 04 12.6**	**+1.4**
FALS	**False Pass**	**2.64**	**75**		**Pn**	**15 04 15.5**	**+1.0**
FALS					**S**	**15 04 53.0**	**+0.9**
FALS	**False Pass**	**2.64**	**75**	P	**Pn**	**15 04 15.0**	**+0.5**
	baz=259						
FALS	**False Pass**	**2.64**	**75**	P	**Pn**	**15 04 15.5**	**+1.0**
SPIA	**Saint Paul Isl**	**3.23**	**336**	P	**Pn**	**15 04 21.6**	**+0.7**
	baz=154,SNR=5.7						
KOKL	**Mount Kliuchef**	**4.29**	**246**		**Pn**	**15 04 34.7**	**+1.2**
ATKA	**Atka Island**	**4.34**	**244**		**Pn**	**15 04 34.4**	**+0.4**
ATKA	**Atka Island**	**4.34**	**244**	P	**Pn**	**15 04 34.5**	**+0.4**
SDPT	**Sand Point**	**4.39**	**73**	P	**Pn**	**15 04 34.3**	**-0.3**
	baz=259						
CHNA	**Chernabura Isl**	**4.83**	**80**	P	**Pn**	**15 04 39.4**	**-0.7**
	baz=267						
ADK	**Adak**	**5.84**	**250**		**Pn**	**15 04 52.8**	**+0.2**
ADK	**Adak**	**5.84**	**250**	P	**Pn**	**15 04 52.8**	**+0.2**
KIWB	**Kanaga Island**	**6.11**	**251**		**Pn**	**15 04 56.8**	**+0.7**
CHIR	**Chirikof Islan**	**7.19**	**72**	Pn	**Pn**	**15 05 08.4**	**-1.1**
SII	**Sitkinak Islan**	**8.10**	**68**	Pn	**Pn**	**15 05 19.2**	**-2.0**
SII	**Sitkinak Islan**	**8.10**	**68**	P	**Pn**	**15 05 19.8**	**-1.4**
OHAK	**Old Harbor**	**8.72**	**64**	Pn	**Pn**	**15 05 26.8**	**-2.2**
OHAK	**Old Harbor**	**8.72**	**64**	P	**Pn**	**15 05 26.8**	**-2.2**
	baz=256						
O18K	**Koktuh Hills**	**8.87**	**46**	Pn	**Pn**	**15 05 31.9**	**+1.0**
O18K	**Koktuh Hills**	**8.87**	**46**	P	**Pn**	**15 05 31.5**	**+0.6**
	baz=236						
N18K	**Kilae Creek**	**9.09**	**40**	Pn	**Pn**	**15 05 34.3**	**+0.6**
N18K	**Kilae Creek**	**9.09**	**40**	P	**Pn**	**15 05 34.6**	**+0.9**
	baz=230						
Q19K	**Cape Douglas,**	**9.11**	**53**	Pn	**Pn**	**15 05 33.4**	**-0.6**
Q19K	**Cape Douglas,**	**9.11**	**53**	P	**Pn**	**15 05 33.7**	**-0.4**
	baz=245						
KDAK	**Kodiak Island**	**9.24**	**61**	Pn	**Pn**	**15 05 34.0**	**-1.6**
KDAK	**Kodiak Island**	**9.24**	**61**	P	**Pn**	**15 05 34.4**	**-1.2**
	baz=254						
O19K	**Port Alsworth**	**9.43**	**45**	P	**Pn**	**15 05 39.0**	**+1.1**
	baz=237						
SVW2	**Sparrevohn**	**9.47**	**39**	Pn	**Pn**	**15 05 39.8**	**+1.2**
N19K	**Bonanza Creek**	**9.71**	**42**	Pn	**Pn**	**15 05 43.2**	**+1.5**
N19K	**Bonanza Creek**	**9.71**	**42**	P	**Pn**	**15 05 43.4**	**+1.7**
	baz=234,SNR=11						
RSO	**Redoubt South**	**10.23**	**47**	Pn	**Pn**	**15 05 51.3**	**+3.0**
M19K	**Big River Lodg**	**10.44**	**37**	Pn	**Pn**	**15 05 52.2**	**+1.4**
M19K	**Big River Lodg**	**10.44**	**37**	P	**Pn**	**15 05 52.4**	**+1.7**
	baz=229						
L19K	**White Mountain**	**10.46**	**35**	P	**Pn**	**15 05 52.7**	**+1.6**
	baz=227						
CNPM	**China Poot**	**10.48**	**53**	Pn	**Pn**	**15 05 50.5**	**-1.0**
TTA	**Tatalina**	**10.64**	**31**	P	**Pn**	**15 05 54.5**	**+1.1**
	baz=221						
BRLK	**Bradley Lake**	**10.74**	**52**	Pn	**Pn**	**15 05 53.5**	**-1.1**
BRSE	**Bradley Lake S**	**10.80**	**53**	P	**Pn**	**15 05 55.9**	**+0.5**
	baz=247						
SPCR	**Spurr Chakacha**	**10.85**	**44**	P	**P**	**15 05 58.4**	**-2.6**
	baz=237						
M20K	**Styx River**	**10.88**	**40**	P	**Pn**	**15 05 58.4**	**+2.0**
	baz=232						
L20K	**Farewell, AK**	**11.00**	**36**	P	**Pn**	**15 05 59.7**	**+1.8**
	baz=228						
SEW	**Seward**	**11.54**	**52**	Pn	**Pn**	**15 06 03.0**	**-1.6**
SEW	**Seward**	**11.54**	**52**	P	**Pn**	**15 06 03.8**	**-0.9**
	baz=248						
K20K	**Telida**	**11.55**	**32**	Pn	**Pn**	**15 06 05.6**	**+0.8**
K20K	**Telida**	**11.55**	**32**	P	**Pn**	**15 06 06.1**	**+1.4**
	baz=224,SNR=7.0						
O22K	**Cooper Landing**	**11.57**	**50**	Pn	**Pn**	**15 06 04.5**	**-0.5**
O22K	**Cooper Landing**	**11.57**	**50**	P	**Pn**	**15 06 04.8**	**-0.2**
	baz=246						
RC01	**Rabbit Creek A**	**11.83**	**47**	Pn	**Pn**	**15 06 08.3**	**+0.1**
RC01	**Rabbit Creek A**	**11.83**	**47**	P	**Pn**	**15 06 09.1**	**+0.8**
	baz=243						
PPLA	**Purkeypile**	**11.86**	**37**		**P**	**15 06 11.1**	**-1.3**
PPLA	**Purkeypile**	**11.86**	**37**	P	**P**	**15 06 13.2**	**+0.9**
	baz=230						
M22K	**Willow**	**11.99**	**44**	P	**P**	**15 06 12.0**	**-1.6**
	baz=239						
J20K	**Nowinta River**	**12.13**	**30**	P	**Pn**	**15 06 12.7**	**+0.8**
	baz=221						
CAST	**Castle Rocks**	**12.24**	**35**	P	**P**	**15 06 14.8**	**-1.6**
CAST	**Castle Rocks**	**12.24**	**35**	P	**P**	**15 06 14.9**	**-1.5**
	baz=229,SNR=13						
CUT	**Chulitna**	**12.28**	**41**	P	**Pn**	**15 06 14.8**	**+1.0**
	baz=236						
PMR	**Palmer**	**12.32**	**46**	P	**Pn**	**15 06 15.7**	**+1.4**
	baz=242						
CHUM	**Lake Minchumin**	**12.48**	**33**	P	**P**	**15 06 17.6**	**-1.4**
	baz=227						
GHO	**Glory Hole Cre**	**12.49**	**45**	Pn	**Pn**	**15 06 16.3**	**-0.3**
KNK	**Knik Glacier**	**12.53**	**47**		**Pn**	**15 06 16.1**	**-0.9**
KNK	**Knik Glacier**	**12.53**	**47**	P	**Pn**	**15 06 17.2**	**+0.2**
	baz=244						
KTH	**Kantishna Hill**	**12.72**	**36**		**Pn**	**15 06 16.2**	**-3.2**
SML	**Sawmill**	**12.76**	**46**	Pn	**Pn**	**15 06 19.5**	**-0.4**
SML	**Sawmill**	**12.76**	**46**	P	**Pn**	**15 06 20.4**	**+0.6**
	baz=243						
M23K	**Glacier View**	**13.01**	**47**	P	**Pn**	**15 06 22.7**	**-0.2**
	baz=244						
BPAW	**Bear Paw Mtn.**	**13.06**	**34**	P	**P**	**15 06 24.6**	**-0.9**
	baz=229,SNR=7.2						
WAT1	**Susitna Watana**	**13.18**	**42**	P	**P**	**15 06 25.9**	**-1.0**
	baz=238						
SCM	**Sheep Creek Mo**	**13.20**	**47**		**Pn**	**15 06 25.3**	**0.0**
SCM	**Sheep Creek Mo**	**13.20**	**47**	P	**Pn**	**15 06 25.6**	**+0.4**
	baz=244,SNR=6.0						
WAT6	**Susitna Watana**	**13.37**	**43**	P	**Pn**	**15 06 27.6**	**+0.1**
	baz=241						
RND	**Reindeer**	**13.38**	**39**		**Pn**	**15 06 27.8**	**+0.3**
I21K	**Tanana**	**13.50**	**30**	P	**P**	**15 06 30.3**	**-0.1**
	baz=223						
BWN	**Browne**	**13.62**	**36**	Pn	**Pn**	**15 06 29.9**	**-0.4**
H21K	**Melozitna Rive**	**13.63**	**27**	P	**Pn**	**15 06 30.0**	**-0.4**
H21K	**Melozitna Rive**	**13.63**	**27**	P	**P**	**15 06 31.6**	**-0.3**
	baz=220						
IMAR	**Indian Mountai**	**13.64**	**25**	P	**P**	**15 06 30.6**	**-1.3**
KLU	**Klutina**	**13.67**	**49**	Pn	**Pn**	**15 06 30.4**	**-0.7**
KLU	**Klutina**	**13.67**	**49**	P	**Pn**	**15 06 30.8**	**-0.3**
	baz=248						
DHY	**Denali Highway**	**13.77**	**42**	P	**Pn**	**15 06 32.2**	**-0.1**
DHY	**Denali Highway**	**13.77**	**42**	P	**Pn**	**15 06 32.8**	**+0.4**
	baz=240						
M24K	**Tolsona, Glenn**	**13.81**	**47**		**Pn**	**15 06 32.9**	**+0.2**
M24K	**Tolsona, Glenn**	**13.81**	**47**	P	**P**	**15 06 33.8**	**0.0**
	baz=245						
NEA2	**Nenana**	**14.02**	**35**	Pn	**Pn**	**15 06 34.0**	**-1.2**
NEA2	**Nenana**	**14.02**	**35**	P	**P**	**15 06 35.3**	**-0.8**
	baz=231						
BMRM	**Bremner River**	**14.09**	**52**	Pn	**Pn**	**15 06 35.6**	**-0.5**
WRH	**Wood River Hil**	**14.28**	**36**	Pn	**Pn**	**15 06 37.3**	**-1.0**
I23K	**Minto, Yukon-K**	**14.28**	**33**	P	**P**	**15 06 39.7**	**+0.8**
I23K	**Minto, Yukon-K**	**14.28**	**33**	P	**P**	**15 06 39.2**	**+0.3**
	baz=229,SNR=8.6						
N25K	**Chitina, Valde**	**14.30**	**50**		**Pn**	**15 06 38.3**	**-0.5**
N25K	**Chitina, Valde**	**14.30**	**50**	P	**Pn**	**15 06 39.1**	**+0.3**
	baz=250						
HARP	**HAARP**	**14.36**	**46**	P	**Pn**	**15 06 39.6**	**+0.2**
	baz=246						
PAX	**Paxson**	**14.48**	**44**	P	**Pn**	**15 06 40.7**	**-0.2**
PAX	**Paxson**	**14.48**	**44**	P	**Pn**	**15 06 40.7**	**-0.2**
	baz=243						
CCB	**Clear Creek Bu**	**14.48**	**36**	P	**Pn**	**15 06 39.8**	**-1.0**
MDM	**Murphy Dome**	**14.53**	**35**	P	**Pn**	**15 06 40.8**	**-0.6**
GLB	**Gilahina Butte**	**14.60**	**51**		**Pn**	**15 06 42.3**	**-0.1**
HDA	**Harding Lake**	**14.64**	**38**	P	**Pn**	**15 06 41.7**	**-1.1**
HDA	**Harding Lake**	**14.64**	**38**	P	**Pn**	**15 06 42.2**	**-0.6**
	baz=236						
H23K	**Yukon River**	**14.68**	**31**	P	**P**	**15 06 43.7**	**+0.3**
H23K	**Yukon River**	**14.68**	**31**	P	**P**	**15 06 43.5**	**+0.1**
	baz=227						
VRDI	**Verde Repeater**	**14.70**	**52**	Pn	**Pn**	**15 06 43.4**	**-0.3**
WAX	**Waxell Ridge**	**14.78**	**55**		**Pn**	**15 06 45.0**	**+0.5**
IL31		**14.87**	**37**	P	**Pn**	**15 06 44.0**	**-1.5**
ILAR	**Eielson Array**	**14.87**	**37**		**Pn**	**15 06 44.0**	**-1.6**
POKR	**Poker Plat Res**	**14.89**	**35**	Pn	**Pn**	**15 06 42.8**	**-3.0**
POKR	**Poker Plat Res**	**14.89**	**35**	P	**Pn**	**15 06 44.4**	**-1.4**
	baz=233						
RIDG	**Independent Ri**	**15.09**	**42**		**P**	**15 06 48.1**	**+0.1**
RIDG	**Independent Ri**	**15.09**	**42**	P	**Pn**	**15 06 48.0**	**-0.2**
	baz=242						
MENT	**Mentasta**	**15.19**	**45**	P	**Pn**	**15 06 49.4**	**0.0**
H24K	**Noodor Dome**	**15.20**	**32**	P	**P**	**15 06 49.3**	**+0.1**
H24K	**Noodor Dome**	**15.20**	**32**	P	**P**	**15 06 50.0**	**+0.9**
	baz=230,SNR=7.2						
M26K	**Nabesna, AK**	**15.29**	**48**	P	**P**	**15 06 50.2**	**0.0**
M26K				IAmb	IAmb	15 06 51.8	
	comp=Z,11nm,0.6s						
M26K	**Nabesna, AK**	**15.29**	**48**	P	**Pn**	**15 06 50.8**	**+0.2**
	baz=249,SNR=6.5						
J25K	**Salcha River,**	**15.33**	**39**	P	**P**	**15 06 49.7**	**-0.9**
J25K	**Salcha River,**	**15.33**	**39**	P	**P**	**15 06 50.4**	**-0.2**
	baz=238						
L26K	**Log Cabin Wild**	**15.38**	**45**	P	**Pn**	**15 06 52.0**	**+0.3**
L26K				IAmb	IAmb	15 06 53.6	
	comp=Z,13nm,0.7s						
L26K	**Log Cabin Wild**	**15.38**	**45**	P	**P**	**15 06 51.5**	**+0.3**
	baz=246						
COLD	**Coldfoot**	**15.51**	**26**	P	**Pn**	**15 06 53.5**	**+0.4**
	baz=222						
SCRK	**Sand Creek**	**15.53**	**42**	P	**P**	**15 06 52.8**	**-0.2**
SCRK				IAmb	IAmb	15 06 54.5	
	comp=Z,4.0nm,0.6s						
SCRK	**Sand Creek**	**15.53**	**42**	P	**P**	**15 06 52.5**	**-0.5**
	baz=242						
M27K	**Edge Creek, AK**	**15.77**	**49**	P	**Pn**	**15 06 56.3**	**-0.1**
M27K				IAmb	IAmb	15 06 57.7	
	comp=Z,7.3nm,0.7s						
M27K	**Edge Creek, AK**	**15.77**	**49**	P	**P**	**15 06 55.9**	**+0.4**
	baz=251						
J26L	**Joseph Creek**	**15.95**	**40**	P	**P**	**15 06 57.4**	**0.0**
	baz=241,SNR=18						
PCA	**Pinnacle**	**15.97**	**57**		**Pn**	**15 06 59.7**	**+0.8**
L27K	**Beaver Creek,**	**16.03**	**46**		**Pn**	**15 06 59.1**	**-0.3**
L27K	**Beaver Creek,**	**16.03**	**46**	P	**P**	**15 06 58.3**	**0.0**
	baz=249						
BCAR	**Beaver Creek A**	**16.05**	**46**		**P**	**15 06 59.0**	**+0.4**

YUK3	Moose Creek	16.23	51	P	P	15 07 00.4	-0.3
	baz=255						
BVCY	Beaver Creek	16.23	49	P	Pn	15 07 01.7	-0.1
	baz=252						
BCPM	Bancas Point	16.26	58	P	Pn	15 07 03.3	+1.1
K27K	Chicken	16.31	43		Pn	15 07 03.0	+0.3
TOLK	Toolik Lake Re	16.74	23	P	Pn	15 07 07.2	-0.6
	baz=220						
YUK4	Talbot Arm	16.98	54	P	Pn	15 07 10.3	-0.4
	baz=258						
EGAK	Eagle	16.99	41	P	Pn	15 07 09.7	-1.0
EGAK				IAmb	IAmb	15 07 12.2	
	comp=Z,11nm,0.7s						
EGAK	Eagle	16.99	41	P	Pn	15 07 09.9	-0.8
	baz=244						
BMAR	Burnt Mountain	17.23	31		Pn	15 07 13.3	-0.2
DAWY	Dawson	17.41	44	P	P	15 07 13.7	+0.2
DAWY	Dawson	17.41	44	P	P	15 07 14.0	+0.5
	baz=249						
HYT	Haines Junctio	17.43	56	P	P	15 07 15.5	+1.7
HYT				IAmb	IAmb	15 07 17.1	
	comp=Z,8.1nm,0.5s						
HYT	Haines Junctio	17.43	56	P	P	15 07 14.7	+0.9
	baz=262						
I29M	Ogilvie Camp,	18.34	41	P	P	15 07 22.9	-0.5
I29M				IAmb	IAmb	15 07 24.1	
	comp=Z,8.1nm,1.1s						
I29M	Ogilvie Camp,	18.34	41	P	P	15 07 23.1	-0.3
	baz=247						
WHY	Whitehorse	18.69	57	P	Pn	15 07 30.0	-0.8
WHY				IAmb	IAmb	15 07 34.5	
	comp=Z,17nm,1.1s						
INK	Inuvik	21.26	35	P	P	15 07 53.0	-1.2
INK	Inuvik	21.26	35	P	P	15 07 53.5	-0.7
	baz=246						

TAP 06 15:07:12.9, 23°.30N × 120°.42E, h14^{km} ± 1^{km}, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWK	Hsinying	0.07	113	P	Pg	15 07 16.2	+0.3
	baz=111						
TWK				S	Sg	15 07 18.7	+0.9
	baz=111						
SNST	Tainan City	0.11	135	P	Pb	15 07 16.6	-0.1
	baz=135						
SNST				S	Sb	15 07 19.4	+0.2
	baz=135						
ICHU	Yijhu	0.14	297	P	Pb	15 07 17.2	-0.1
	baz=297						
CHN1	Nanshi	0.15	137	*e*P	Pb	15 07 17.4	-0.1
	baz=136						
CHN1				*e*S	Sb	15 07 21.4	+0.9
	baz=136						
WTP	Ta-pu	0.19	105	*e*P	Pb	15 07 18.0	-0.2
	baz=105						
TPUB	Ta-pu	0.20	88	*e*P	Pb	15 07 18.2	0.0
	baz=88						
CHY	Chiayi	0.20	2	*e*S	Sb	15 07 22.1	+0.1
	baz=4.0						

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*IDC **06** 15:11:34.5 ± 1.1, 18°.64N × 147°.92E, h0^{km}, mb4.0/11, mbtmp4.1/14, ML4.8/2, Error ellipse: s-maj=35.1km s-min=15.5km az=92.0*

*NEIC **06** 15:11:41.4 ± 2.4, 18°.60N ± 0°.08 × 147°.87E ± 0°.09, h47^{km} ± 9^{km}, mb4.6/17, Error ellipse: s-maj=15.3km s-min=4.2km az=47.0*

ISC 06 15:11:39.7 ± 0.8, **18°.68N** ± 0°.06 × **147°.8E** ± 0°.1, **h35^{km}, n41,** σ**1^{s}.20**/40, **mb4.3**/18, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.78	209	Pn	Pn	15 13 03.9	+0.9
	32nm,0.3s,baz=348,slow=5.5,SNR=20						
GUMO				Sn	Sn	15 14 06.4	-1.7
	20nm,0.3s,baz=182,slow=23,SNR=2.0						
	64nm,0.3s						
GUMO	Guam	5.78	209		Pn	15 13 03.7	+0.7
JCJ	Chichijima	9.83	329	Pn	Pn	15 13 58.4	-0.2
	7.6nm,0.3s,baz=284,slow=22,SNR=6.5						
JCJ				Sn	Sn	15 15 43.5	-4.4
	7.0nm,0.3s,baz=304,slow=23,SNR=2.4						
	9.2nm,0.3s						
JCJ	Chichijima	9.83	329	Pn	Pn	15 14 00.9	+2.3
PATS	Pohnpei	15.62	138	Pn	Pn	15 15 15.1	-2.2
JMZ	Minamidaito 2	16.88	298	Pn	Pn	15 15 33.7	+0.3
JMZ				IAmb	IAmb	15 15 38.4	
	comp=Z,25nm,0.7s						
H11S3	WAKE ISLAND Hy	17.93	88	T	T	15 34 13.0	
	baz=275,slow=74,SNR=8.9						
H11S1	WAKE ISLAND Hy	17.95	88	T	T	15 34 04.0	
	baz=275,slow=74,SNR=10						
H11S2	WAKE ISLAND Hy	17.95	88	T	T	15 34 06.7	
	baz=275,slow=74,SNR=8.2						
MJAR	Matsushiro Arr	19.69	337	P	Pn	15 16 07.4	-0.1
	comp=Z,0.7nm,0.5s,baz=153,slow=11,SNR=3.8						
JOW	Kunigami	19.71	298	P	P	15 16 05.5	-0.7
JNU	Nakatsue	20.88	317	P	P	15 16 16.9	-2.0
JNU				IAmb	IAmb	15 16 39.6	
	comp=Z,24nm,1.2s						
SIJI	Sorong	25.31	222	P	P	15 17 03.2	-0.1
	comp=Z,11nm,0.6s,baz=32,slow=14,SNR=11						
	comp=Z,11nm,0.6s						
KSRS	Korea Array	25.53	321	P	P	15 17 06.8	+1.7
	comp=Z,1.5nm,0.6s,baz=145,slow=8.4,SNR=8.5						
	comp=Z,1.5nm,0.6s						
MTN	Manton Dam	35.36	209	P	P	15 18 31.3	-0.8
MTN				IAmb	IAmb	15 18 38.8	
	comp=Z,11nm,1.1s						
KNRA	Kununurra	38.93	210	P	P	15 19 02.3	-0.1
WB0	Warramunga Arr	40.40	200	P	P	15 19 14.7	0.0
WB0				IAmb	IAmb	15 19 16.8	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	40.53	199	P	P	15 19 15.6	-0.1
WRAB	Tennant Creek	40.57	200	P	P	15 19 16.1	+0.1
WRAB				IAmb	IAmb	15 19 17.8	
	comp=Z,17nm,1.4s						
WB2	Warramunga Arr	40.57	200	P	P	15 19 16.4	+0.3
WB2				IAmb	IAmb	15 19 17.9	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	40.58	200	P	P	15 19 16.1	0.0
	comp=Z,2.9nm,0.6s,baz=27,slow=9.1,SNR=38						
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	40.58	200	P	P	15 19 16.7	+0.6
FITZ	Fitzroy Crossi	42.53	212	P	P	15 19 31.9	-0.2
FITZ				IAmb	IAmb	15 19 58.0	
	comp=Z,20nm,1.5s						
AS31	Alice Springs	44.21	198	P	P	15 19 46.7	+1.0
ASAR	Alice Springs	44.21	198	P	P	15 19 45.5	-0.1
	comp=Z,0.9nm,0.4s,baz=20,slow=8.1,SNR=24						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	44.21	198	P	P	15 19 44.5	-1.1
SONM	Songino Array	44.40	320	P	P	15 19 47.0	-0.1
	comp=Z,0.9nm,0.6s,baz=130,slow=7.9,SNR=3.6						
	comp=Z,0.9nm,0.6s						
CMAR	Chiang Mai Arr	46.17	278	P	P	15 20 01.9	+0.5
	comp=Z,0.7nm,0.7s,baz=65,slow=6.7,SNR=6.7						
	comp=Z,0.7nm,0.7s						
KULM	Kulim	47.82	260	P	P	15 20 14.2	-0.1
KULM				IAmb	IAmb	15 20 20.8	
	comp=Z,9.6nm,1.1s						
BBOO	Buckleboo	52.41	192	P	P	15 20 48.5	-0.2
ZALV	Zalesovo Beam	59.23	322	P	P	15 21 38.1	+0.7
	comp=Z,1.7nm,0.7s,baz=127,slow=6.5,SNR=6.5						
	comp=Z,1.7nm,0.7s						
MK31	Makanchi Array	59.90	314	P	P	15 21 43.8	+1.6
MKAR	Makanchi Array	59.90	314	P	P	15 21 43.6	+1.4
	comp=Z,1.2nm,0.7s,baz=90,slow=8.3,SNR=11						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	59.90	314	P	P	15 21 42.6	+0.4
KURK	Kurchatov	62.60	318	P	P	15 22 00.5	+0.1
KURK				IAmb	IAmb	15 22 02.4	
	comp=Z,7.4nm,1.3s						
KKAR	Karatay Array	68.30	310	P	P	15 22 38.7	+1.3
YKA	Yellowknife Ar	77.08	28	P	P	15 23 29.6	+0.4
	comp=Z,0.4nm,0.6s,baz=284,slow=5.7,SNR=6.5						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	77.08	28	P	P	15 23 29.2	0.0
ARCES	ARCESS Array B	83.11	343	P	P	15 24 02.1	+0.5
	comp=Z,1.5nm,0.8s,baz=48,slow=5.6,SNR=2.0						
	comp=Z,1.5nm,0.8s						
FINES	FINESS Array B	87.72	336	P	P	15 24 24.3	-0.4
	comp=Z,0.9nm,0.6s,baz=35,slow=7.0,SNR=4.3						
	comp=Z,0.9nm,0.6s						
FINES	FINESS Array B	87.72	336	P	P	15 24 23.6	-1.0

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*IDC **06** 15:19:22.8 ± 0.5, 44°.99N × 28°.06W, h0^{km}, mb4.3/29, mbtmp4.2/31, ML3.9/2, MS4.4/77, Error ellipse: s-maj=14.5km s-min=11.8km az=0.0*

*NEIC **06** 15:19:24.7 ± 1.4, 45°.0N ± 0°.1 × 28°.0W ± 0°.1, h10^{km} ± 1^{km}, mb4.7/74, Error ellipse: s-maj=19.3km s-min=15.1km az=180.0*

*GCMT **06** 15:19:24.7 ± 0.2, 44°.96N ± 0°.02 × 28°.02W ± 0°.01, h12^{km}, MW5.1/130, Moment Tensor Solution. s51,c64; s130,c214; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.64±.10; $M_{\theta\theta}$0.33±.11; $M_{\phi\phi}$5.31±.08; $M_{r\theta}$0.64±.39; $M_{\theta\phi}$0.30±.09; $M_{\phi r}$1.50±.29; Best double couple: $M_0$5.71900×10^{16} NP1:ϕ_s359.00000°, δ37.00000°, λ-98.00000°. NP2:ϕ_s189.00000°, δ53.00000°, λ-84.00000°. Principal axes: T 5.5410, Plg8.0000°, Azm274.0000°; N 0.3590, Plg5.0000°, Azm5.0000°; P -5.8980, Plg81.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 15:19:25.1 ± 0.4, **45°.01N** ± 0°.07 × **28°.03W** ± 0°.05, **h14^{km}, n279,** σ**1^{s}.36**/224, **mb4.6**/85, **MS4.5**/91, **12C-8D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGAV	Gavieira, Arco	14.66	95	*e*P	Pn	15 22 54.7	+2.6
PGAV				*e*LR	LR	15 26 06.5	
	5µm,18.0s						
PMOZ	Porto Moniz, M	14.79	142	*e*P	P	15 22 58.6	-1.2
PMOZ				*e*LR	LR	15 26 13.7	
	2µm,20.0s						
PMAFR	Mafra	15.18	107	*e*P	P	15 23 01.6	-2.5
POLO	Lamas de Olo	15.19	97	*e*P	P	15 23 02.7	-1.6
COI	Coimbra	15.21	102	*e*P	Pn	15 23 01.3	+1.9
PCAS	Casmilo, Conde	15.22	102	*e*P	Pn	15 22 59.6	+0.1
PSBE	So Bento	15.25	104	*e*P	Pn	15 23 01.4	+1.5
MTE	Manteigas	15.74	100	*e*P	P	15 23 11.1	+0.8
MTE				*e*LR	LR	15 26 37.4	
	2µm,20.0s						
PBRG	Braganca	15.79	94	*e*P	P	15 23 09.4	-1.4
MVO	Moncorvo	15.81	97	*e*P	P	15 23 09.4	-1.6
MVO				*e*LR	LR	15 26 36.7	
	3µm,18.0s						
PMTG	Montargil	15.85	105	*e*P	P	15 23 10.3	-1.1
PNCL	Nicolau / Gran	16.12	109	*e*P	P	15 23 15.2	+0.8
PMRV	Marv??o	16.26	103	*e*P	Pn	15 23 11.7	-1.3
PMRV				*e*LR	LR	15 26 53.1	
	2µm,20.0s						
PESTR	Estremoz	16.38	105	*e*P	P	15 23 15.8	-1.6
PESTR	Estremoz	16.38	105	Pn	Pn	15 23 12.7	-1.8
PFVI	Vila Bisbo	16.45	112	*e*P	Pn	15 23 14.9	-0.6
PCVE	Castro Verde	16.70	109	*e*P	P	15 23 20.6	-0.3
PBDV	Barranco-do-Ve	16.98	110	*e*P	P	15 23 26.6	+2.5
PVAQ	Vaqueiros	17.04	109	*e*P	P	15 23 27.4	+2.8
PVAQ				*e*LR	LR	15 27 19.8	
	3µm,18.0s						
PBAR	Barrancos	17.10	106	*e*P	P	15 23 27.9	+2.6
ESDC	Sonseca Array	18.54	98	P	Pn	15 23 41.6	+0.2
	0.1nm,0.3s,baz=292,slow=10,SNR=6.6						
ESDC				LR	LR	15 29 30.6	
	comp=Z,2µm,19.2s,baz=300,slow=33						
	1.7nm,1.0s						
ESDC	Sonseca Array	18.54	98	P	Pn	15 23 41.4	-0.1
ESK	Eskdalemuir	18.85	48		Pn	15 23 45.7	+0.7
EKA	Eskdalemuir Ar	18.88	48	P	Pn	15 23 45.8	+0.4
	baz=244,slow=8.9						
EKA				LR	LR	15 29 52.9	
	comp=Z,2µm,18.7s,baz=235,slow=33						
	6.0nm,0.9s						
BORG	Borgarnes	20.13	8	LR	LR	15 29 33.5	
	comp=Z,690nm,21.3s,baz=181,slow=30						
OUK	Oukaimeden	20.94	124	P	Pn	15 24 10.0	-0.3
CLF	Chambon-Foret	20.99	71	P	P	15 24 08.7	+0.8
LCRM	LCR	21.11	114	P	P	15 24 15.1	+5.6
AKLM	AKL	21.26	111	P	P	15 24 14.0	+3.1
OUZM	OUZ	21.81	123	P	P	15 24 19.0	+2.1
MDT	Midelt	21.83	116	LR	LR	15 31 34.2	
	comp=Z,824nm,19.0s,baz=345,slow=34						
MDT	Midelt	21.83	116	P	P	15 24 22.0	+4.9
JBK	JBK	22.22	110	P	P	15 24 25.0	+3.6
UCC	Uccle	22.35	63	P	P	15 24 22.4	0.0
UCC				IAmb	IAmb	15 24 24.3	
	comp=Z,37nm,1.5s						
ZGR	Zagora	23.06	123	P	P	15 24 32.0	+1.8
WLF	Walferdange	23.50	66		P	15 24 33.8	-0.5
WLF				IAmb	IAmb	15 24 35.7	
	comp=Z,21nm,1.1s						
ECH	Echery	24.25	70	P	P	15 24 40.0	-1.5
ECH				IAmb	IAmb	15 25 00.5	
	comp=Z,24nm,1.3s						
FIGM	Figuig	24.43	113	P	P	15 24 47.0	+3.6
SENIN	Lac Senin/Sane	24.59	74	P	P	15 24 44.8	-0.1
SENIN				IAmb	IAmb	15 24 48.3	
	comp=Z,19nm,1.1s						
BFO	Black Forest	25.02	69	P	P	15 24 48.1	-0.4
BFO				IAmb	IAmb	15 24 52.8	
	comp=Z,27nm,1.3s						
SFJD	Kangerlussuaq	25.11	339	LR	LR	15 32 27.0	
	comp=Z,2µm,20.2s,baz=144,slow=31						
TUE	Stuetta	25.97	73	P	P	15 24 57.0	-0.4
DAVA	Damuels	26.19	71	*i* P	P	15 25 00.5	+1.2
	comp=Z,17nm,1.1s						
DAVOX	Davos/Dischmat	26.27	73	LR	LR	15 34 37.3	
	comp=Z,2µm,18.5s,baz=262,slow=35						
SCHQ	Schefferville	26.53	306	LR	LR	15 33 45.9	
	comp=Z,2µm,18.8s,baz=94,slow=32						
RETA	Reutte	26.75	71	*e*P	P	15 25 04.4	+0.1
	comp=Z,7.2nm,1.1s						
GRFO	Grafenberg	26.78	66	P	P	15 25 04.8	+0.5
GRFO				IAmb	IAmb	15 25 06.2	
	comp=Z,21nm,1.1s						
GRA1	Grafenberg Arr	26.78	66	P	P	15 25 04.7	+0.3
FETA	Feichten	26.81	72	*e*P	P	15 25 05.9	+1.1
	comp=Z,12nm,1.0s,SNR=7.8						
MOTA	Moosalm	27.00	71	*e*P	P	15 25 07.1	+0.5
	comp=Z,24nm,1.3s,SNR=9.3						
SQTA	Sankt Quirin	27.09	71	*e*P	P	15 25 08.2	+0.8
	comp=Z,20nm,1.5s						
WATA	Walderalm	27.32	71	*e*P	P	15 25 09.9	+0.5
	comp=Z,18nm,1.4s,SNR=5.3						
WTTA	Wattenberg	27.37	71	*e*P	P	15 25 10.7	+0.8
	comp=Z,21nm,1.4s,SNR=7.8						
NKC	Novy Kostel	27.52	64	AMS	AMS	15 35 10.0	
	comp=Z,3µm,17.2s						
CTI	Castel Tesino	27.62	74	P	P	15 25 12.2	+0.1
CTI				IAmb	IAmb	15 25 13.5	
	comp=Z,15nm,1.1s						
JMIC	Jan Mayen	27.74	14	LR	LR	15 33 22.4	
	comp=Z,239nm,20.1s,baz=252,slow=30						
CLL	Collm	27.80	62	P	P	15 25 13.3	-0.2
CLL	Collm	27.80	62	*i* P	P	15 25 13.7	+0.2
	comp=Z,76nm,2.4s						
CLL				*e*x	x	15 25 47.0	
CLL				*e*S	S	15 30 00.0	+4.3
CLL				Lmax		15 36 00.0	
NOA	NORSAR Array B	27.98	41	P	P	15 25 13.4	-1.7
	comp=Z,0.9nm,0.9s,baz=304,slow=20,SNR=3.4						
NOA				LR	LR	15 35 24.3	
	comp=Z,418nm,19.1s,baz=250,slow=34						
	comp=Z,0.9nm,0.9s						
ABTA	Abfaltersbach	28.06	72	*e*P	P	15 25 16.4	+0.4
	comp=Z,11nm,1.3s						
STAL	STALIGIAL	28.29	73	P	P	15 25 17.6	-0.4
STAL				IAmb	IAmb	15 25 20.0	
	comp=Z,24nm,1.2s						
KHC	Kasperske Hory	28.37	67	P	P	15 25 18.3	-0.4
KHC	Kasperske Hory	28.37	67	*e*P	P	15 25 19.2	+0.5
KHC				*e*S	S	15 29 57.7	-7.2
KHC				AMS	AMS	15 35 30.0	
	comp=Z,1µm,14.7s						
BRG	Berggiesshubel	28.42	63	*e*P	P	15 25 19.4	+0.3
BRG				Amp		15 25 22.3	
	comp=Z,34nm,1.7s						
BRG				Amp		15 36 07.0	
	comp=Z,1.9nm,16.2s						
BRG				Amp		15 36 21.0	
	comp=E,2.0nm,19.8s						
BRG				Amp		15 36 21.0	
	comp=N,1.2nm,14.9s						
GEC2	GERESS Array S	28.49	67	P	P	15 25 19.2	-0.6
GEC2				IAmb	IAmb	15 25 22.1	
	comp=Z,15nm,1.2s						
GERES	GERESS Array B	28.49	67	P	P	15 25 19.9	+0.1
	comp=Z,3.1nm,0.9s,baz=292,slow=5.2,SNR=18						
GERES				LR	LR	15 35 49.1	
	comp=Z,1µm,20.0s,baz=265,slow=35						
	comp=Z,3.1nm,0.9s						
GERES	GERESS Array B	28.49	67	P	P	15 25 19.5	-0.3
KBA	Koelnbreinsper	28.55	71	*e*P	P	15 25 22.2	+1.7
	comp=Z,20nm,1.2s,SNR=11						
BIOA	Bad Ischl, Aus	28.64	70	*e*P	P	15 25 21.2	+0.2
	comp=Z,8.4nm,0.8s						
ROBS	Robic	28.84	73	*i* P	P	15 25 22.8	-0.1
PVCC	Panska Ves	28.85	64	AMS	AMS	15 36 10.0	
	comp=Z,2µm,16.2s						
PRU	Pruhonice	28.89	65	*e*P	P	15 25 24.1	+0.9
PRU				*e*S	S	15 30 13.3	+0.4
PRU				AMS	AMS	15 36 20.0	
	comp=Z,2µm,17.4s						
CKRC	Cesky Krumlov	28.89	67	*e*P	P	15 25 24.1	+0.8
CKRC				AMS	AMS	15 35 30.0	
	comp=Z,1µm,18.6s						
HFS	Hagfors	28.93	44	LR	LR	15 36 30.4	
	comp=Z,384nm,18.2s,baz=249,slow=36						
CADS	Cadrg	29.00	73	*e*P	P	15 25 24.2	0.0
MOA	Molln	29.02	69	*e*P	P	15 25 25.5	+1.0
	comp=Z,6.6nm,1.4s						
FRB	Frobisher Bay	29.41	324	P	P	15 25 27.9	+0.2
	comp=Z,9.5nm,0.8s,baz=98,slow=8.0,SNR=11						
FRB				LR	LR	15 34 18.0	
	comp=Z,1µm,19.1s,baz=114,slow=30						
	comp=Z,9.5nm,0.8s						
OBKA	Obir	29.48	72	*e*P	P	15 25 28.6	0.0
	comp=Z,16nm,0.9s,SNR=7.7						
LJU	Ljubljana	29.57	73	*e*P	P	15 25 30.1	+0.7
TREC	Trest	29.59	66	AMS	AMS	15 36 00.0	
	comp=Z,2µm,18.0s						
KEST	Kesra	29.72	95	P	P	15 25 31.3	+0.5
	comp=Z,8.7nm,1.1s,baz=237,slow=12,SNR=4.2						
KEST				LR	LR	15 36 37.1	
	comp=Z,637nm,19.6s,baz=258,slow=35						
	comp=Z,8.7nm,1.1s						
UPC	Upice	29.77	63	AMS	AMS	15 36 40.0	
	comp=Z,2µm,16.7s						
SOKA	Soboth	29.77	71	*i* P	P	15 25 30.4	-0.8
	comp=Z,6.5nm,1.2s						
CHVC	Chvalec	29.78	63	*e*P	P	15 25 31.7	+0.5
CHVC				AMS	AMS	15 36 40.0	
	comp=Z,2µm,17.2s						
OSTC	Ostas	29.89	63	*e*P	P	15 25 32.8	+0.7
OSTC				AMS	AMS	15 36 50.0	
	comp=Z,2µm,17.3s						
KSP	Ksiaz	29.91	63	*e*P	P	15 25 32.8	+0.6
ARSA	Arzberg	29.98	70	*e*P	P	15 25 32.6	-0.3
	comp=Z,10.0nm,0.9s,SNR=8.8						
DPC	Dobruska-Polom	29.98	64	*e*P	P	15 25 33.3	+0.3
DPC				AMS	AMS	15 36 50.0	
	comp=Z,2µm,15.7s						
CONA	Conrad Observa	30.07	69	*e*P	P	15 25 34.2	+0.4
	comp=Z,13nm,1.3s,SNR=8.7						
KRUC	Moravsky	30.21	66	*e*P	P	15 25 34.4	-0.6
VRAC	Vranov	30.30	66	LR	LR	15 37 25.6	
	comp=Z,2µm,18.1s,baz=270,slow=36						
VRAC	Vranov	30.30	66	*e*P	P	15 25 36.0	+0.2
KRLC	Kraliky	30.31	64	*e*P	P	15 25 36.5	+0.6
KRLC				AMS	AMS	15 37 30.0	
	comp=Z,2µm,15.4s						
RONA	Rosalia, Austr	30.40	69	*e*P	P	15 25 36.8	+0.1
	comp=Z,18nm,1.6s,SNR=8.6						
ZST	Bratislava	30.83	68	*e*P	P	15 25 42.7	+2.3
MORC	Moravsky Berou	30.84	65	⇓P	P	15 25 41.8	+1.3
MORC	Moravsky Berou	30.84	65	P	P	15 25 40.4	-0.1
MORC				IAmb	IAmb	15 25 42.3	
	comp=Z,9.4nm,1.0s						
MORC	Moravsky Berou	30.84	65	*e*P	P	15 25 40.8	+0.2
MODS	Modra-Piesok	30.91	67	*e*P	P	15 25 42.5	+1.3
SMOL	Smolenice	30.98	67	*e*P	P	15 25 43.4	+1.6
OKC	Ostrava-Krasne	31.22	64	AMS	AMS	15 38 30.0	
	comp=Z,2µm,15.0s						
MPLH	Magyarpolny	31.34	70	P	P	15 25 45.5	+0.6
KOVH	Kovagotottos	31.97	71	P	P	15 25 50.2	-0.3
LANS	Liptovska Anna	32.19	65	*e*P	P	15 25 54.0	+1.6
OJC	Ojcow	32.21	63	*e*P	P	15 25 53.1	+0.6
OJC	Ojcow	32.21	63	P	P	15 25 51.8	-0.8
OJC				IAmb	IAmb	15 25 54.2	
	comp=Z,12nm,1.0s						
MORH	Mrgy, Hungar	32.30	71	⇑P	P	15 25 51.0	-2.4
MORH	Mrgy, Hungar	32.30	71	P	P	15 25 52.5	-0.8
CUC	Castrocucco	32.41	83	P	P	15 25 54.1	-0.3
CUC				IAmb	IAmb	15 25 55.7	
	comp=Z,14nm,1.1s						
VAE	Valguarnera	32.48	88	LR	LR	15 38 40.2	
	comp=Z,742nm,18.6s,baz=310,slow=36						
NIE	Niedzica	32.67	65	*e*P	P	15 25 58.8	+2.2
PSZ	Piszkesteto	32.72	67	P	P	15 25 57.3	+0.2
PSZ	Piszkesteto	32.72	67	P	P	15 25 58.2	+1.1
RAF	Rauma	33.00	43	*e*P	P	15 25 59.5	+0.2
CRVS	Cervenica-Dubn	33.52	65	*e*P	P	15 26 05.7	+1.7
DIVS	Divibare	33.83	74	P	P	15 26 06.2	-0.7
DIVS				IAmb	IAmb	15 26 08.2	
	comp=Z,14nm,1.1s						
KOLS	Kolonicke sedl	34.04	65	*e*P	P	15 26 10.2	+1.7
PABE	Paberze	34.09	53	*e*P	P	15 26 09.4	+0.6
MEF	Metsahovi	34.24	45	*e*P	P	15 26 10.6	+0.5
SIRR	Siria	34.30	70	⇓P	P	15 26 10.7	-0.2
MDVR	Moldovita	34.78	72	⇑P	P	15 26 15.5	+0.4
DRGR		34.86	69	⇑P	P	15 26 15.8	+0.1
FINES	FINESS Array B	35.11	43	P	P	15 26 17.8	+0.2
	comp=Z,6.5nm,0.9s,baz=264,slow=5.7,SNR=17						
FINES				PcP	PcP	15 28 47.5	-1.2
	comp=Z,1.8nm,0.8s,baz=318,slow=7.7,SNR=4.2						
FINES				LR	LR	15 39 08.3	
	comp=Z,474nm,20.6s,baz=268,slow=34						
	comp=Z,6.5nm,0.9s						
FINES	FINESS Array B	35.11	43	P	P	15 26 17.2	-0.5
HERR	Herculane	35.23	72	⇓P	P	15 26 19.4	+0.5
VSU	Vasula	35.44	48	*e*P	P	15 26 20.6	+0.2
SADO	Sadowa	35.72	288	LR	LR	15 40 35.6	
	comp=Z,3µm,18.3s,baz=92,slow=36						
NACGM	Naroch	35.76	54	⇓*e*P	P	15 26 11.7	-12
FNA	Florina	35.99	79	P	P	15 26 25.5	+0.1
ARCES	ARCESS Array B	36.09	29	P	P	15 26 25.4	-0.6
	comp=Z,4.6nm,0.9s,baz=256,slow=9.9,SNR=6.0						
ARCES				LR	LR	15 39 14.9	
	comp=Z,335nm,19.8s,baz=262,slow=33						
	comp=Z,4.6nm,0.9s						
BUR08	Bucovina Ar. S	36.25	66	P	P	15 26 28.6	+0.9
BUR01	Bucovina Ar. S	36.27	66	⇑P	P	15 26 29.5	+1.6
BURAR	Bucovina Array	36.27	66	P	P	15 26 28.6	+0.7
MNK	Minsk	36.44	54	*i* P	P	15 26 28.6	-0.5
	comp=E,1.0nm,0.4s						
MNK				*i* P	P	15 26 28.6	-0.5
	comp=N,2.0nm,0.4s						
MNK				*i* P	P	15 26 28.6	-0.5
	comp=Z,375nm,13.1s,baz=279						
MNK				*i* PP	PP	15 27 52.5	+0.6
MNK				*i* PPP	PPP	15 28 08.5	
MNK				*i* S	S	15 32 13.8	+3.6
MNK				*i* SS	SS	15 34 46.7	-2.3
MNK				*i* LR	LR	15 40 02.4	
MNK				*i* LRM	MLR	15 46 12.7	
	comp=Z,341nm,14.2s						
MNK				*i* LRM	MLR	15 46 19.1	
	comp=N,314nm,14.2s						
MNK				*i* LRM	MLR	15 46 20.4	
	comp=E,81nm,14.2s						
VTS	Vitosha	36.56	75	⇑P	P	15 26 30.8	+0.3
VTS	Vitosha	36.56	75	P	P	15 26 30.0	-0.5
VOIR		36.81	70	⇑P	P	15 26 32.5	0.0
DOPR	Dopca	36.87	69	⇑P	P	15 26 33.1	+0.2
MLR	Muntele Rosu	37.39	70	⇑P	P	15 26 37.7	+0.2
MLR	Muntele Rosu	37.39	70	LR	LR	15 41 34.9	
	comp=E,889nm,20.1s,baz=276,slow=36						
MLR	Muntele Rosu	37.39	70	P	P	15 26 37.8	+0.2
MLR				IAmb	IAmb	15 26 39.6	
	comp=Z,26nm,1.3s						
SPITS	Spitsbergen Ar	37.42	14	LR	LR	15 38 47.4	
	comp=Z,113nm,18.1s,baz=78,slow=31						
PLOR	Plostina	37.74	69	⇓P	P	15 26 43.6	+3.2
VRI	Vrincioaia	37.79	69	⇓P	P	15 26 41.9	+1.2
ISR	Istrita	37.91	70	⇑P	P	15 26 42.6	+0.8
AKASG	Malin Array Be	38.00	60	P	P	15 26 42.0	-0.4
	comp=Z,6.1nm,0.8s,baz=281,slow=8.3,SNR=18						
AKASG				LR	LR	15 42 04.5	
	comp=Z,672nm,18.7s,baz=284,slow=36						

	comp=Z,6.1nm,0.8s						
AKBB	Malin Array Si	38.00	60	P	P	15 26 41.1	-1.2
AKBB				IAmb	IAmb	15 26 43.0	
	comp=Z,16nm,1.1s						
SORM	Soroca	38.14	65	⇑P	P	15 26 43.3	-0.3
CFR	Carcaliu	38.95	69	⇓P	P	15 26 49.2	-1.2
HARR	Harsova	38.99	70	⇑P	P	15 26 49.4	-1.3
ALN	Alexandroupoli	39.17	76	P	P	15 26 52.6	+0.3
TPGR	Topolog	39.26	70	⇑P	P	15 26 51.9	-1.1
TIRR	Tirgusor	39.39	70	⇓P	P	15 26 53.7	-0.5
TIRR	Tirgusor	39.39	70	P	P	15 26 53.1	-1.0
H05N1	Guadeloupe/Mar	39.84	235	T	T	16 08 56.0	
	SNR=8.5						
TORD	Torodi Ar. Bea	40.59	132	P	P	15 27 03.9	-0.5
	comp=Z,12nm,1.1s,baz=325,slow=7.1,SNR=31						
	comp=Z,12nm,1.1s						
IDI	Anoyia	40.95	85	LR	LR	15 44 52.4	
	comp=Z,275nm,19.1s,baz=296,slow=37						
RES	Resolute Bay	41.10	338	P	P	15 27 07.9	0.0
	comp=Z,3.3nm,0.9s,baz=104,slow=8.0,SNR=10						
RES				LR	LR	15 41 43.6	
	comp=Z,314nm,20.8s,baz=86,slow=33						
	comp=Z,3.3nm,0.9s						
RES	Resolute Bay	41.10	338	P	P	15 27 08.3	+0.4
OBN	Obninsk	41.26	52	LR	LR	15 43 34.3	
	comp=Z,178nm,21.4s,baz=298,slow=35						
FCC	Fort Churchill	41.27	314	P	P	15 27 09.9	+0.4
SJG	San Juan	41.54	242	LR	LR	15 40 27.5	
	comp=Z,411nm,21.8s,baz=73,slow=30						
KLMR	Klimovskoe	41.65	43	*e*P	P	15 27 09.1	-3.4
KLMR				AMP		15 27 14.5	
	comp=Z,13nm,1.2s						
KLMR				*e*PP	PP	15 28 46.0	-2.6
TKL	Tuckaleechee C	42.76	277	LR	LR	15 44 35.2	
	comp=Z,535nm,18.3s,baz=74,slow=35						
DBIC	Dimbokro	43.19	145	P	P	15 27 26.1	+0.6
	comp=Z,5.4nm,0.8s,baz=348,slow=6.3,SNR=4.1						
DBIC				LR	LR	15 43 35.4	
	comp=Z,1µm,21.5s,baz=344,slow=34						
	comp=Z,5.4nm,0.8s						
ULM	Lac du Bonnet	44.59	302	LR	LR	15 44 42.9	
	comp=Z,2µm,18.2s,baz=87,slow=34						
BRTR	Keskin Array B	44.90	74	P	P	15 27 40.0	+0.7
	comp=Z,3.7nm,0.8s,baz=282,slow=6.1,SNR=18						
BRTR				LR	LR	15 46 42.6	
	comp=Z,708nm,20.6s,baz=303,slow=36						
	comp=Z,3.7nm,0.8s						
BRTR	Keskin Array B	44.90	74	P	P	15 27 39.3	0.0
MDP	Montagnes des	45.20	216	LR	LR	15 41 49.6	
	comp=Z,285nm,19.3s,baz=20,slow=30						
BNN	Bunyan	46.82	74	P	P	15 27 54.5	0.0
KIRV	Kirov	47.06	44	LR	LR	15 47 06.3	
	comp=Z,399nm,18.7s,baz=284,slow=35						
R40A	Maddies Statio	47.35	286	P	P	15 27 58.4	0.0
R40A				IAmb	IAmb	15 28 05.8	
	comp=Z,9.0nm,0.9s						
BELG	Belogornoye	48.34	53	LR	LR	15 48 24.6	
	comp=Z,784nm,19.3s,baz=316,slow=36						
U40A	Yellville	48.73	284	P	P	15 28 09.1	-0.1
U40A				IAmb	IAmb	15 28 25.5	
	comp=Z,15nm,1.4s						
KVAR	Kislovodsk Arr	48.95	65	LR	LR	15 48 37.4	
	comp=Z,380nm,20.1s,baz=343,slow=36						
KBZ	Khabaz	49.19	65	P	P	15 28 12.7	+0.2
	comp=Z,3.1nm,0.9s,baz=303,slow=15,SNR=7.7						
KBZ				LR	LR	15 49 06.5	
	comp=Z,580nm,21.4s,baz=313,slow=36						
	comp=Z,3.1nm,0.9s						
MMAI	Mount Meron Ar	49.55	81	LR	LR	15 51 21.4	
	comp=Z,234nm,19.0s,baz=100,slow=39						
BAUV	El Baul	49.79	236	P	P	15 28 18.1	+0.7
YKA	Yellowknife Ar	49.91	323	P	P	15 28 17.3	-0.5
	comp=Z,0.8nm,0.8s,baz=69,slow=7.5,SNR=11						
YKA				PcP	PcP	15 29 37.5	-0.3
	comp=Z,1.0nm,0.8s,baz=67,slow=4.0,SNR=10.0						
YKA				LR	LR	15 46 36.9	
	comp=Z,524nm,19.7s,baz=58,slow=33						
	comp=Z,0.8nm,0.8s						
MIAR	Mount Ida	50.19	282	P	P	15 28 20.7	+0.3
RCBR	Riachuelo	51.10	190	LR	LR	15 44 42.6	
	comp=Z,197nm,21.6s,baz=138,slow=30						
EIL	Elat	51.12	85	LR	LR	15 50 55.0	
	comp=Z,136nm,19.3s,baz=281,slow=37						
SDV	Santo Domingo	51.39	239	LR	LR	15 46 09.9	
	comp=Z,222nm,21.8s,baz=27,slow=31						
GNI	Garni	52.14	68	LR	LR	15 53 28.0	
	comp=Z,243nm,18.4s,baz=314,slow=39						
ARU	Arti	52.44	44	LR	LR	15 50 32.5	
	comp=Z,340nm,18.2s,baz=285,slow=36						
ARU	Arti	52.44	44	P	P	15 28 36.6	-0.3
H10N2	ASCENSION HYDR	53.99	163	T	T	16 26 38.2	
	baz=349,slow=75,SNR=13						
H10N3	ASCENSION HYDR	54.00	163	T	T	16 26 41.6	
	baz=349,slow=75,SNR=10.0						
H10N1	ASCENSION HYDR	54.01	163	T	T	16 26 38.6	
	baz=349,slow=75,SNR=18						
AKTO	Aktyubinsk	55.03	51	LR	LR	15 51 43.7	
	comp=Z,421nm,21.2s,baz=284,slow=35						
H10S3	ASCENSION HYDR	55.05	164	T	T	16 27 59.3	
	SNR=4.4						
ZARC	Zaragoza, Cauc	55.08	242	P	P	15 28 57.7	+1.0
ZARC				IAmb	IAmb	15 29 00.3	
	comp=Z,12nm,1.5s						
N23A	Red Feather La	55.09	295	P	P	15 28 57.2	+0.3
N23A				IAmb	IAmb	15 29 07.6	
	comp=Z,11nm,1.2s						
WALA	Waterton Lakes	55.64	307	P	P	15 29 00.7	+0.2
WALA				IAmb	IAmb	15 29 05.8	
	comp=Z,8.7nm,0.9s						
PDAR	Pinedale Array	56.37	299	P	P	15 29 05.3	-0.6
	comp=Z,2.2nm,1.1s,baz=66,slow=12,SNR=7.1						
PDAR				LR	LR	15 52 05.5	
	comp=Z,1µm,18.2s,baz=58,slow=35						
	comp=Z,2.2nm,1.1s						
MOOW	Moose Ponds	56.57	301	P	P	15 29 07.1	-0.3
MOOW				IAmb	IAmb	15 29 22.4	
	comp=Z,9.0nm,1.4s						
NRIK	Noril'sk	56.61	23	P	P	15 29 08.4	+1.5
	comp=Z,1.2nm,0.4s,baz=304,slow=4.0,SNR=4.5						
	comp=Z,1.2nm,0.4s						
ABKAR	Akbulak array	56.70	52	P	P	15 29 07.6	-0.3
ABKAR	Akbulak array	56.70	52	P	P	15 29 07.5	-0.4
ABKAR				IAmb	IAmb	15 29 09.8	
	comp=Z,6.9nm,1.2s						
ROSC	El Rosal	56.81	239	LR	LR	15 52 10.2	
	comp=Z,322nm,20.4s,baz=63,slow=35						
I29M	Ogilvie Camp,	57.53	332	P	P	15 29 13.3	-0.2
I29M				IAmb	IAmb	15 29 20.7	
	comp=Z,10nm,0.9s						
NEW	Newport	57.87	308	P	P	15 29 16.1	-0.2
NEW				IAmb	IAmb	15 29 21.5	
	comp=Z,8.2nm,0.9s						
DLBC	Dease Lake	58.54	323	LR	LR	15 52 07.2	
	comp=Z,448nm,18.9s,baz=36,slow=34						
ANMO	Albuquerque	58.75	290	LR	LR	15 54 41.7	
	comp=Z,1µm,18.3s,baz=58,slow=36						
SRBA	San Rafael, Bu	59.29	251	P	P	15 29 25.4	-1.2
TMUT	Trail Mountain	59.34	296	P	P	15 29 27.0	+0.1
TMUT				IAmb	IAmb	15 29 36.1	
	comp=Z,5.5nm,1.0s						
BRVK	Borovoye	59.99	44	P	P	15 29 31.0	+0.2
BRVK				IAmb	IAmb	15 29 32.5	
	comp=Z,6.1nm,1.1s						
BVAR	Borovoye Array	60.06	44	P	P	15 29 32.1	+0.8
	comp=Z,0.8nm,0.4s						
	comp=Z,0.8nm,0.4s						
TX31	Lajitas Ar. Si	60.19	283	P	P	15 29 32.9	+0.2
TX32	Lajitas Array	60.19	283	P	P	15 29 32.6	-0.1
TXAR	Lajitas Array	60.19	283	P	P	15 29 33.0	+0.3
	comp=Z,1.8nm,0.8s,baz=73,slow=6.6,SNR=15						
TXAR				LR	LR	15 55 16.0	
	comp=Z,1µm,20.2s,baz=50,slow=36						
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	60.19	283	P	P	15 29 32.0	-0.6
SCRK	Sand Creek	60.29	333	P	P	15 29 33.2	+0.4
SCRK				IAmb	IAmb	15 29 45.2	
	comp=Z,9.4nm,1.2s						
LTY	Liberty	60.41	309	IAmb	IAmb	15 29 43.5	
	comp=Z,8.4nm,1.1s						
ILAR	Eielson Array	60.65	334	P	P	15 29 35.5	+0.3
	comp=Z,1.6nm,0.7s,baz=44,slow=6.3,SNR=16						
ILAR				LR	LR	15 54 38.0	
	comp=Z,327nm,18.0s,baz=178,slow=35						
	comp=Z,1.6nm,0.7s						
ELK	Elko	61.02	300	P	P	15 29 38.7	+0.3
I23K	Minto, Yukon-K	61.12	336	P	P	15 29 39.1	+0.8
I23K				IAmb	IAmb	15 29 49.3	
	comp=Z,10.0nm,1.1s						
BBB	Bella Bella	61.38	316	LR	LR	15 54 17.7	
	comp=Z,479nm,18.2s,baz=14,slow=34						
CMIG	Matias Romero	61.80	266	LR	LR	15 53 11.6	
	comp=Z,461nm,21.8s,baz=48,slow=33						
GEYT	Alibeck	62.02	63	P	P	15 29 45.1	+0.2
	comp=Z,2.9nm,0.8s,baz=16,slow=7.7,SNR=3.7						
	comp=Z,2.9nm,0.8s						
WVOR	Wild Horse Val	62.08	303	P	P	15 29 45.8	+0.5
RAYN	Ar Rayn	62.33	84	P	P	15 29 46.5	-0.7
TIXI	Tiksi	62.49	8	P	P	15 29 48.3	+0.9
OTAV	Otavalo	62.95	240	P	P	15 29 53.6	+1.8
BDFB	Brasilia	63.04	202	LR	LR	15 53 28.6	
	comp=Z,426nm,19.2s,baz=344,slow=32						
KVN	Kaiserville	63.80	300	P	P	15 29 57.1	+0.2
KVN				IAmb	IAmb	15 30 02.4	
	comp=Z,6.8nm,0.9s						
NVAR	Mina Array Bea	64.30	299	P	P	15 29 59.9	-0.4
	comp=Z,0.6nm,0.9s,baz=66,slow=1.8,SNR=4.0						
NVAR				LR	LR	15 57 09.6	
	comp=Z,688nm,19.0s,baz=46,slow=35						
	comp=Z,0.6nm,0.9s						
YBH	Yreka Blue Hor	64.91	305	LR	LR	15 57 03.3	
	comp=Z,594nm,19.4s,baz=58,slow=35						
KURK	Kurchatov	65.48	42	P	P	15 30 07.1	-0.3
KURK				IAmb	IAmb	15 30 08.7	
	comp=Z,7.0nm,1.0s						
KURBB	Kurchatov Arra	65.50	42	P	P	15 30 07.7	+0.1
	comp=Z,3.4nm,0.9s,baz=315,slow=6.8,SNR=24						
KURBB				LR	LR	15 58 58.8	
	comp=Z,199nm,20.8s,baz=285,slow=36						
	comp=Z,3.4nm,0.9s						
ZALV	Zalesovo Beam	66.06	37	P	P	15 30 09.9	-1.2
	comp=Z,0.5nm,0.4s,baz=193,slow=10,SNR=4.8						
ZALV				LR	LR	16 00 11.5	
	comp=Z,277nm,18.3s,baz=300,slow=37						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	66.06	37	P	P	15 30 10.6	-0.6
KKAR	Karatay Array	66.25	52	P	P	15 30 11.2	-1.4
KDAK	Kodiak Island	67.69	332	LR	LR	15 58 07.9	
	comp=Z,255nm,18.6s,baz=58,slow=34						
ATD	Arta Tunnel	68.42	95	LR	LR	16 00 54.9	
	comp=Z,192nm,19.3s,baz=335,slow=36						
AAK	Ala-Archa	68.76	51	P	P	15 30 28.8	+0.1
	comp=Z,0.6nm,0.3s,baz=287,slow=5.8,SNR=6.0						
AAK				LR	LR	16 02 57.7	
	comp=Z,451nm,18.2s,baz=320,slow=38						
	comp=Z,0.6nm,0.3s						
ATAH	Atahualpa	68.78	235	LR	LR	15 58 19.2	
	comp=Z,253nm,21.4s,baz=20,slow=34						
MBAR	Mbarara	68.87	114	LR	LR	16 01 09.8	
	comp=Z,470nm,18.6s,baz=311,slow=36						
LODK	Lodwar	68.96	107	P	P	15 30 30.8	+0.7
LODK				IAmb	IAmb	15 30 38.8	
	comp=Z,10nm,1.5s						
MAKZ	Makanchi	69.78	43	P	P	15 30 34.2	-0.5
MKAR	Makanchi Array	69.94	43	P	P	15 30 35.9	+0.1
	comp=Z,1.8nm,0.9s,baz=317,slow=5.1,SNR=13						
MKAR				LR	LR	16 02 33.4	
	comp=Z,350nm,19.3s,baz=296,slow=37						
	comp=Z,1.8nm,0.9s						
MKAR	Makanchi Array	69.94	43	P	P	15 30 35.2	-0.5
LPAZ	La Paz	71.06	221	P	P	15 30 42.9	-0.6
	comp=Z,4.2nm,1.1s,baz=13,slow=9.1,SNR=6.8						
LPAZ				LR	LR	15 58 43.5	
	comp=Z,108nm,21.3s,baz=19,slow=33						
	comp=Z,4.2nm,1.1s						
LPAZ	La Paz	71.06	221	P	P	15 30 42.5	-0.9
LPAZ				IAmb	IAmb	15 30 48.6	
	comp=Z,10nm,1.4s						
TARG	Taragay, Kyrgy	71.18	50	P	P	15 30 44.3	+0.5
KSH	Kashi	71.70	52	P	P	15 30 49.0	+2.4
KSH				sP	PcP	15 31 01.6	-4.1
KSH				PcP	pwP	15 31 10.5	+17
KSH				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KSH				LR	LR		
	comp=N,750nm,26.0s						
KSH				LR	LR		
	comp=E,790nm,17.8s						
KSH				LR	LR		
	comp=Z,650nm,16.8s						
NNA	Nana	71.85	231	LR	LR	16 00 21.2	
	comp=Z,137nm,20.4s,baz=14,slow=34						
SEY	Seymchan	72.40	360	LR	LR	16 02 26.6	
	comp=Z,126nm,19.0s,baz=318,slow=36						
PB16	IPOC Station P	73.48	221	P	P	15 30 57.0	-0.9
PB16				IAmb	IAmb	15 30 59.9	
	comp=Z,10nm,1.1s						
KMBO	Kilima Mbogo	73.57	109	LR	LR	16 04 14.6	
	comp=Z,513nm,18.9s,baz=76,slow=37						
KMBO	Kilima Mbogo	73.57	109	P	P	15 30 57.7	-0.5
KMBO				IAmb	IAmb	15 31 01.0	
	comp=Z,11nm,1.4s						
PB11	IPOC Station P	74.78	220	P	P	15 31 03.9	-1.0
PB08	IPOC Station P	74.89	220	P	P	15 31 03.7	-2.1
PB08				IAmb	IAmb	15 31 08.0	
	comp=Z,8.6nm,0.9s						
MA2	Magadan	75.77	1	LR	LR	16 04 27.4	
	comp=Z,82nm,18.9s,baz=7.5,slow=36						
CPUP	Villa Florida	75.87	207	P	P	15 31 10.4	-0.4
	comp=Z,1.6nm,0.6s,baz=6.1,slow=7.0,SNR=5.1						
CPUP				LR	LR	16 02 45.7	
	comp=Z,64nm,19.3s,baz=22,slow=34						
	comp=Z,1.6nm,0.6s						
TSUM	Tsumeb	76.20	136	LR	LR	16 03 07.2	
	comp=Z,544nm,19.5s,baz=325,slow=34						
LVC	Limon Verde	76.93	218	LR	LR	16 02 20.0	
	comp=Z,93nm,21.5s,baz=10,slow=34						
LSZ	Lusaka	78.69	125	LR	LR	16 04 51.6	
	comp=Z,428nm,22.0s,baz=326,slow=35						
SONM	Songino Array	79.26	29	P	P	15 31 30.3	+0.4
	comp=Z,5.1nm,0.9s,baz=319,slow=5.9,SNR=19						
	comp=Z,5.1nm,0.9s						
SONM	Songino Array	79.26	29	P	P	15 31 30.1	+0.2
ULN	Ulaanbaatar	79.46	29	P	P	15 31 31.4	+0.3
ULN				IAmb	IAmb	15 31 33.1	
	comp=Z,10nm,1.1s						
SHEM	Shemya Is, Ala	80.80	347	LR	LR	16 07 50.0	
	comp=Z,74nm,19.7s,baz=112,slow=36						
PETK	Petropavlovsk-	82.13	357	LR	LR	16 09 19.5	
	comp=Z,213nm,18.8s,baz=9.1,slow=36						
H09N1	TRISTAN DA CUN	82.93	167	T	T	17 04 07.5	
	SNR=3.7						
LCO	Las Campanas	83.30	217	P	P	15 31 47.6	-4.0
GTA	Gaotai	83.77	38	*e*P	P	15 31 54.3	+0.4
GTA				pP	sP	15 31 58.7	-0.4
GTA				sP	pwP	15 32 01.7	+0.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CO01	Juntas del Tor	83.89	216	P	P	15 31 55.6	+1.1
CO01				IAmb	IAmb	15 31 57.3	
	comp=Z,4.3nm,0.9s						
GOMU	GeErMu	84.07	43	P	P	15 31 55.7	-0.1
GOMU				pP	PcP	15 31 59.5	-0.2
GOMU				sP	pwP	15 32 03.0	+0.7
GOMU	GeErMu	84.07	43	S	S	15 42 17.8	-2.3
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,50nm,5.4s						
GOMU				LR	LR		
	comp=N,170nm,20.7s						
GOMU				LR	LR		
	comp=E,100nm,20.7s						
GOMU				LR	LR		
	comp=Z,240nm,20.6s						
KLR	Kul'dur	84.49	13	P	P	15 31 57.3	+0.1
	comp=Z,4.7nm,0.9s,baz=356,slow=6.6,SNR=14						
	comp=Z,4.7nm,0.9s						
LBTB	Lobatse	85.11	133	LR	LR	16 10 12.5	
	comp=Z,389nm,18.3s,baz=324,slow=36						
BOSA	Boshof	87.88	135	P	P	15 32 12.9	-1.2
	comp=Z,2.5nm,0.8s,baz=114,slow=2.2,SNR=3.4						
BOSA				LR	LR	16 09 03.3	
	comp=Z,532nm,21.0s,baz=327,slow=34						
	comp=Z,2.5nm,0.8s						
SUR	Sutherland	88.89	140	LR	LR	16 08 40.4	
	comp=Z,248nm,20.9s,baz=328,slow=33						
XAN	Xi'an	92.16	35	*i* P	P	15 32 35.5	+1.2
XAN				pP	pwP	15 32 40.6	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				LR	LR		
	comp=N,280nm,19.2s						
XAN				LR	LR		
	comp=E,270nm,16.1s						
XAN				LR	LR		
	comp=Z,390nm,19.8s						
OPO	Ambohidratompo	92.95	113	LR	LR	16 15 39.1	
	comp=Z,233nm,18.8s,baz=192,slow=36						
PALK	Pallekele	97.89	72	LR	LR	16 19 27.4	
	comp=Z,80nm,20.3s,baz=92,slow=37						
VNDA	Vanda	147.14	184	PKPbc	PKPab	15 39 07.0	-0.9
	comp=Z,3.2nm,1.1s,baz=212,slow=3.5,SNR=5.0						
WRA	Warramunga Arr	151.04	36	PKPbc	PKPbc	15 39 17.2	-0.5
	comp=Z,3.4nm,0.9s,baz=329,slow=2.0,SNR=18						
ASAR	Alice Springs	154.11	41	PKPbc	PKPbc	15 39 23.9	-0.6
	comp=Z,1.5nm,0.8s,baz=0.3,slow=2.2,SNR=15						

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*IDC **06** 15:24:47.6±14.0, 15°.32S×177°.42E, h0^{km}, mb4.2/3, mbtmp4.3/4, ML6.3/1, MS3.7/25, Error ellipse: s-maj=286.9km s-min=36.7km az=45.0*

*GCMT **06** 15:25:06.0±0.3, 16°.46S±0°.02×176°.52E±0°.01, h24^{km}±1^{km}, MW4.8/93, Moment Tensor Solution. s15,c16; s93,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.41±.14; M$_{\theta\theta}$0.00±.11; M$_{\phi\phi}$0.41±.09; M$_{r\theta}$0.19±.14; M$_{\theta\phi}$2.37±.08; M$_{\phi r}$0.09±.12; Best double couple: M$_0$2.38700×10^{16} NP1:ϕ_s357.00000°,δ86.00000°,λ179.00000°. NP2: ϕ_s88.00000°,δ89.00000°,λ4.00000°. Principal axes: T 2.5980, Plg4.0000°, Azm313.0000°; N -0.4230, Plg85.0000°, Azm98.0000°; P -2.1750, Plg3.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 06 15:24:58.0±5.7, **16°.0S**±0°.6×**177°.0E**±0°.5, **h35^{km}, n25, σ1^{s}.11**/5, **mb4.0**/3, **MS3.7**/21, **Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.98	150	Pn	Pn	15 25 29.5	+0.4
	266nm,0.3s,baz=278,slow=17,SNR=1584						
MSVF				Sn	Sn	15 25 51.9	-0.7
	115nm,0.3s,baz=74,slow=24,SNR=5.6						
MSVF				LR	LR	15 26 28.7	
	comp=Z,6µm,18.1s,baz=261,slow=41						
	500nm,0.4s						
AFI	Afiamalu	11.05	81	LR	LR	15 30 34.6	
	comp=Z,79nm,20.1s,baz=252,slow=33						
DZM	Mont Dzumac	11.65	237	LR	LR	15 30 54.2	
	comp=Z,447nm,21.0s,baz=66,slow=30						
HNR	Honiara	17.87	289	LR	LR	15 35 07.8	
	comp=Z,364nm,18.0s,baz=146,slow=34						
URZ	Urewera	22.15	180	LR	LR	15 36 49.7	
	comp=Z,123nm,21.1s,baz=31,slow=32						
RAR	Rarotonga	22.60	107	LR	LR	15 35 49.1	
	comp=Z,28nm,21.6s,baz=275,slow=30						
KRVT	Keravat (AS076	27.16	293	LR	LR	15 41 14.5	
	comp=Z,179nm,18.6s,baz=269,slow=36						
CTA	Charters Tower	29.49	257	LR	LR	15 40 34.0	
	comp=Z,105nm,18.7s,baz=83,slow=32						
PMG	Port Moresby	29.82	279	LR	LR	15 42 14.7	
	comp=Z,276nm,18.3s,baz=2.5,slow=35						
STKA	Stephens Creek	35.81	237	P	P	15 31 55.0	+0.8
	8.1nm,0.8s,baz=72,slow=8.5,SNR=16						
STKA				LR	LR	15 44 30.1	
	comp=Z,177nm,21.3s,baz=41,slow=32						
	8.1nm,0.8s						
WRA	Warramunga Arr	40.69	258	P	P	15 32 34.4	-1.0
	1.3nm,0.8s,baz=80,slow=6.4,SNR=10						
WRA				LR	LR	15 46 51.7	
	comp=Z,74nm,19.4s,baz=60,slow=32						
	1.3nm,0.8s						
ASAR	Alice Springs	41.12	252	P	P	15 32 38.6	-0.4
	2.3nm,0.8s,baz=83,slow=9.0,SNR=32						
ASAR				LR	LR	15 48 10.4	
	comp=Z,99nm,19.4s,baz=104,slow=34						
	2.3nm,0.8s						
GUMO	Guam	43.30	311	LR	LR	15 49 25.1	
	comp=Z,53nm,20.1s,baz=103,slow=34						
SIJI	Sorong	47.53	284	LR	LR	15 51 40.3	
	comp=Z,66nm,20.3s,baz=102,slow=34						
FITZ	Fitzroy Crossi	49.02	260	LR	LR	15 52 10.2	
	comp=Z,58nm,18.8s,baz=90,slow=33						
JCJ	Chichijima	54.58	321	LR	LR	15 53 14.8	
	comp=Z,70nm,20.8s,baz=125,slow=31						
DAV	Davao City (W)	55.83	290	LR	LR	15 54 43.9	
	comp=Z,79nm,21.8s,baz=142,slow=32						
VNDA	Vanda	61.99	184	LR	LR	15 59 18.0	
	comp=Z,50nm,18.1s,baz=5.5,slow=33						
MJAR	Matsushiro Arr	63.83	326	LR	LR	15 58 14.2	
	comp=Z,29nm,20.9s,baz=48,slow=32						
KSRS	Korea Array	70.42	320	LR	LR	16 02 20.7	
	comp=Z,26nm,21.5s,baz=140,slow=32						
NEW	Newport	86.64	38	LR	LR	16 09 17.1	
	comp=Z,86nm,20.1s,baz=128,slow=31						
TXAR	Lajitas Array	88.75	59	LR	LR	16 09 55.4	
	comp=Z,96nm,19.0s,baz=117,slow=31						
PDAR	Pinedale Array	89.07	45	LR	LR	16 13 53.7	
	comp=Z,56nm,18.8s,baz=100,slow=33						
TIXI	Tiksi	93.26	346	LR	LR	16 14 55.4	
	comp=Z,59nm,21.6s,baz=349,slow=32						
YKA	Yellowknife Ar	94.50	26	LR	LR	16 12 47.8	
	comp=Z,80nm,20.7s,baz=303,slow=31						

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*DJA **06** 15:45:03.1±2.2, 2°N±3°×12°6E±°, h34^{km}±40^{km}, M3.5/9, mb3.8/2, mB4.5/1, MLv3.4/9, Mw(mB)3.7/1*

*IDC **06** 15:45:09.7±4.3, 1°.76N×124°.98E, h135^{km}±36^{km}, mb3.0/4, mbtmp3.4/4, Error ellipse: s-maj=188.9km s-min=21.6km az=64.0*

ISC 06 15:45:03.3±1.0, **2°.41N**±0°.07×**126°.14E**±0°.10, **h100^{km}, n11, σ1^{s}.82**/13, **mb3.1**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.41	334	P	Pn	15 45 27.0	-1.5
SGSI				S	Sn	15 45 45.9	-1.7
TNTI	Ternate	2.04	143	P	Pn	15 45 35.0	-1.4
KMSI	Cibinong	2.82	230	P	Pn	15 45 45.0	-1.7
LBMI	Labuha	3.32	156	P	Pn	15 45 52.7	-0.6
GTOI	Gorontalo	3.59	241	P	Pn	15 45 56.6	-0.3
SANI	Sanana	4.43	182	P	Pn	15 46 06.8	-1.5
NLAI	Namlea	5.69	170	P	Pn	15 46 23.3	-2.1
WRA	Warramunga Arr	23.62	160	P	P	15 50 06.3	+0.8
	0.2nm,0.3s,baz=335,slow=10,SNR=17						
	0.2nm,0.3s						
ASAR	Alice Springs	27.00	164	P	P	15 50 37.9	+1.8
	0.1nm,0.5s,baz=339,slow=10,SNR=5.7						
	0.1nm,0.5s						
MKAR	Makanchi Array	58.31	326	P	P	15 54 49.8	+2.0
	0.1nm,0.3s,baz=112,slow=7.7,SNR=1.8						
MKAR				ScP	ScP	15 59 27.1	-2.1
	0.8nm,0.9s,baz=114,slow=3.0,SNR=4.8						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	62.53	328	P	P	15 55 18.4	+2.0
	0.9nm,0.2s,baz=126,slow=5.5,SNR=1.2						
	0.9nm,0.2s						

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*IDC **06** 15:50:17.6±4.5, 36°.37N×70°.91E, h183^{km}±39^{km}, mb3.2/8, mbtmp3.7/12, Error ellipse: s-maj=34.8km s-min=18.3km az=36.0*

*NNC **06** 15:50:27.1±3.5, 37°.09N×70°.88E, h255^{km}±54^{km}, mb2.3, mpv3.5, Error ellipse: s-maj=38.8km s-min=21.2km az=9.0*

ISC 06 15:50:18.6±1.1, **36°.5N**±0°.1×**70°.8E**±0°.1, **h188^{km}, n22, σ1^{s}.59**/25, **mb3.3**/7, **2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.08	20	P	Pn	15 51 48.9	+2.0
	SNR=52						
UCH	Uchtor	6.42	25	P	Pn	15 51 53.6	+2.1
	SNR=17						
EKS2	Erkin-Say	6.59	19	P	Pn	15 51 56.1	+2.7
	SNR=11						
KK31	Karatay Array	6.63	358	P	Pn	15 51 55.8	+2.0
	0.5nm,0.3s,baz=181,slow=12,SNR=25						
KK31				⇑S	Sn	15 53 06.5	-2.7
	4.7nm,0.5s,baz=184,slow=26,SNR=3.8						
AAK	Ala-Archa	6.78	23	P	Pn	15 51 57.3	+1.4
	SNR=8.6						
AAK	Ala-Archa	6.78	23	P	Pn	15 51 57.3	+1.4
	7.0nm,0.3s,baz=175,slow=5.9,SNR=20						
AAK				S	Sn	15 53 11.6	-1.3
	6.2nm,0.5s,baz=137,slow=23,SNR=21						
KBK	Karagaybulak	6.95	26	P	Pn	15 52 01.1	+2.9
	SNR=9.0						
ULHL	Ulahol	7.13	34	P	Pn	15 52 02.4	+1.8
	SNR=7.7						
TKM2	Tokmak 2	7.42	28	P	Sn	15 53 26.6	-1.4

	SNR=14						
TKM2	Tokmak 2	7.42	28	⇑P	Pn	15 52 05.8	+1.5
	8.2nm,0.8s						
TKM2				⇓S	Sn	15 53 26.3	-1.8
	0.7nm,0.2s						
MKAR	Makanchi Array	13.39	36	P	Pn	15 53 21.8	+0.5
	0.2nm,0.4s,baz=216,slow=13,SNR=4.8						
AB31	Akbulak array	15.05	332	P	Pn	15 53 41.0	-0.7
	0.5nm,0.6s,baz=236,slow=16,SNR=7.5						
KURBB	Kurchatov Arra	15.20	19	P	Pn	15 53 43.5	0.0
	0.9nm,0.2s,baz=209,slow=8.9,SNR=3.0						
AKTO	Aktyubinsk	16.75	330	P	Pn	15 54 02.2	0.0
	1.6nm,0.5s,baz=133,slow=11,SNR=6.1						
ZALV	Zalesovo Beam	20.00	25	P	P	15 54 36.7	+0.2
	1.3nm,0.3s,baz=211,slow=11,SNR=7.5						
	1.3nm,0.3s						
FINES	FINESS Array B	37.44	326	P	P	15 57 14.2	+0.8
	1.4nm,0.9s,baz=118,slow=11,SNR=3.6						
	1.4nm,0.9s						
ARCES	ARCESS Array B	41.13	338	P	P	15 57 44.3	+0.5
	1.0nm,0.5s,baz=109,slow=7.1,SNR=16						
	1.0nm,0.5s						
NOA	NORSAR Array B	44.33	323	P	P	15 58 09.6	0.0
	0.4nm,0.8s,baz=97,slow=7.7,SNR=1.8						
	0.4nm,0.8s						
TORD	Torodi Ar. Bea	65.59	269	P	P	16 00 41.8	-0.7
	0.3nm,0.4s,baz=45,slow=6.7,SNR=2.6						
	0.3nm,0.4s						
YKA	Yellowknife Ar	81.28	3	P	P	16 02 13.6	+0.2
	0.2nm,0.4s,baz=352,slow=5.2,SNR=7.4						
	0.2nm,0.4s						
WRA	Warramunga Arr	82.08	122	P	P	16 02 17.0	-1.1
	0.2nm,0.4s,baz=325,slow=4.9,SNR=12						
	0.2nm,0.4s						
ASAR	Alice Springs	84.34	125	P	P	16 02 29.1	-0.6
	0.4nm,0.7s,baz=318,slow=4.6,SNR=6.7						
	0.4nm,0.7s						

IDC 06 16:01:57.5±6.2, 31°.42N×141°.16E, h0km, mb3.3/2, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=298.5km s-min=28.2km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	5.67	335	Pn	Pn	16 03 22.9	-0.1
	0.1nm,0.3s,baz=140,slow=11,SNR=1.8						
MJAR				Sn	Sn	16 04 28.6	-0.2
	baz=289,slow=6.8,SNR=1.4						
	0.6nm,0.3s						
WRA	Warramunga Arr	51.48	188	P	P	16 11 04.3	-0.6
	0.5nm,0.8s,baz=6.4,slow=7.6,SNR=5.5						
	0.5nm,0.8s						
ASAR	Alice Springs	55.21	188	P	P	16 11 32.7	+0.4
	0.2nm,0.8s,baz=16,slow=14,SNR=2.0						
	0.2nm,0.8s						

NNC 06 16:02:20.2±4.9, 37°.88N×71°.44E, h206km±68km, mb2.6, mpv3.7, Error ellipse: s-maj=49.5km s-min=25.8km az=16.0

IDC 06 16:02:20.4±6.6, 38°.06N×70°.85E, h145km±35km, mb3.0/1, mbtmp3.6/5, MS3.1/1, Error ellipse: s-maj=114.9km s-min=23.0km az=147.0

ISC 06 16:02:11.2±0.9, 37°.21N±0°.07×71°.59E±0°.09, h150km, n19, σ1s.61/21, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.85	143	*e*P	Pn	16 03 38.0	+2.1
THN				*e*S	Sn	16 04 40.1	-2.0
AAK	Ala-Archa	5.86	21	P	Pn	16 03 37.7	+1.6
	4.4nm,0.3s,baz=195,slow=4.1,SNR=14						
AAK				S	Sn	16 04 40.4	-2.2
	2.9nm,0.4s,baz=130,slow=23,SNR=10						
KK31	Karatay Array	5.95	352	P	Pn	16 03 38.4	+1.3
	4.1nm,0.3s,baz=177,slow=13,SNR=220						
KK31				⇑S	Sn	16 04 40.1	-4.3
	2.4nm,0.3s,baz=178,slow=22,SNR=13						
TKM2	Tokmak 2	6.48	27	P	Pn	16 03 45.7	+1.3
	2.6nm,0.5s						
TKM2				⇑S	Sn	16 04 56.8	-0.6
	3.0nm,0.8s						
GEYT	Alibeck	10.72	278	P	Pn	16 04 41.4	+0.7
	1.2nm,0.3s,baz=133,slow=10,SNR=5.8						
MKAR	Makanchi Array	12.44	36	P	P	16 05 10.2	+1.3
	0.2nm,0.4s,baz=227,slow=13,SNR=5.8						
PYUN	Piuthan	13.21	130	*e*P	Pn	16 05 11.9	-1.4
DANN	Dangsing	13.51	127	*e*P	Pn	16 05 16.1	-1.1
	3.2nm,0.2s						
KOLN	Koldanda	13.82	129	*e*P	Pn	16 05 19.9	-1.2
GKN	Gorkha	14.31	126	*e*P	Pn	16 05 26.8	-0.4
	6.9nm,0.3s						
AB31	Akbulak array	14.71	329	P	P	16 05 33.3	-0.7
	0.5nm,0.3s,baz=133,slow=15,SNR=30						
AB31				⇓S	Sn	16 08 05.2	-10
	0.4nm,0.5s,baz=136,slow=25,SNR=3.9						
PKIN	Phulchoki	15.09	126	*e*P	Pn	16 05 36.8	-0.3
	7.5nm,0.6s						
PKI	Pulchoki	15.11	126	*e*P	Pn	16 05 37.0	-0.3
	7.2nm,0.5s						
GUN	Gumba	15.19	124	*e*P	Pn	16 05 37.7	-0.6
RAMN	Ramite	16.30	125	*e*P	P	16 05 52.3	+0.2
	10nm,0.4s						
TAPN	Taplejung	16.79	121	*e*P	Pn	16 05 58.4	+0.6
	3.1nm,0.3s						
ZALV	Zalesovo Beam	19.08	24	P	Pn	16 06 25.0	+0.7
	1.1nm,0.3s,baz=212,slow=10,SNR=8.4						
BRTR	Keskin Array B	29.68	287	LR	LR	16 22 15.1	
	comp=Z,39nm,19.8s,baz=139,slow=41						
YKA	Yellowknife Ar	80.52	3	P	P	16 14 11.7	+5.6
	0.2nm,0.6s,baz=350,slow=5.6,SNR=5.2						
	0.2nm,0.6s						

GUC 06 16:15:40.2±0.8, 30°.42S×71°.18W, h50km±3km, ML3.9

NEIC 06 16:15:41.7±1.5, 30°.40S±0°.03×71°.3W±0°.1, h35km±2km, Error ellipse: s-maj=21.2km s-min=4.4km az=93.0

ISC 06 16:15:41.7±1.2, 30°.39S±0°.03×71°.27W±0°.06, h49km±12km, n45, σ1s.10/65, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.42	228		Pn	16 15 52.1	+0.1
CO06	Fray Jorge	0.42	228	*e*P	Pn	16 15 52.1	+0.1
CO06				*e*S	Sn	16 16 00.6	+1.3
CO06				IAML		16 16 05.1	
	comp=N,9µm,0.3s						
GO04	Tololo Observa	0.46	62		Pn	16 15 52.2	-0.5
GO04	Tololo Observa	0.46	62	*e*P	Pn	16 15 52.2	-0.5
GO04				*e*S	Sn	16 16 00.6	+0.1
GO04				IAML		16 16 01.9	
	comp=N,22µm,0.5s						
CO05	La Serena	0.47	4		Pn	16 15 52.5	0.0
CO05	La Serena	0.47	4	*e*P	Pn	16 15 52.1	-0.5
CO05				*e*S	Sn	16 16 00.8	+0.6
CO05				IAML		16 16 02.8	
	comp=E,8µm,0.6s						
CO03	El Pedregal	0.68	132	Pn	Pn	16 15 54.6	-0.6
CO02	Combarbal	0.85	164		Pn	16 15 56.9	-0.5
CO02	Combarbal	0.85	164	*e*P	Pn	16 15 56.5	-1.0
CO02				*e*S	Sn	16 16 08.6	-0.4
CO02				IAML		16 16 12.8	
	comp=E,6µm,0.3s						
CO01	Juntas del Tor	1.10	68		Pn	16 16 00.9	-0.1
CO01	Juntas del Tor	1.10	68	*e*P	Pn	16 16 00.9	-0.1
CO01				*e*S	Sn	16 16 15.5	+0.3
LCO	Las Campanas	1.46	20		Pn	16 16 05.4	-0.5
LCO	Las Campanas	1.46	20	*e*P	Pn	16 16 04.5	-1.4
LCO				*e*S	Sn	16 16 23.1	-0.9
AC04	Llanos de Chal	2.18	5		Pn	16 16 15.7	+0.2
AC04	Llanos de Chal	2.18	5	*e*P	Pn	16 16 15.5	-0.1
AC04				*i* S	Sn	16 16 44.1	+2.7
AC04				IAML		16 16 51.5	
	comp=E,606nm,0.5s						
VA03	San Esteban	2.45	166		Pn	16 16 20.2	+0.9
VA03	San Esteban	2.45	166	*e*P	Pn	16 16 19.6	+0.4
VA03				*e*S	Sn	16 16 49.9	+1.8
VA03				IAML		16 16 58.1	
	comp=E,759nm,0.5s						
ROCH	El Roble	2.58	175	*e*P	Pn	16 16 21.6	+0.3
ROCH				⇑*e*P	Pn	16 16 19.2	-2.0
ROCH				*e*S	Sn	16 16 52.9	+1.3
ROCH				*e*S	Sn	16 16 53.6	+2.0
ROCH				IAML		16 16 58.8	
	comp=N,756nm,0.4s						
ROCH				IAML		16 17 02.3	
	comp=N,1µm,0.3s						
ROC1	El Roble	2.59	175		Pn	16 16 19.3	-2.1
VA01	Torpederas	2.65	187		Pn	16 16 21.1	-0.8
PEL	Peldehue	2.79	170		Pn	16 16 23.7	-0.3
MT02	Curacav	2.86	178		Pn	16 16 24.9	0.0
MT02	Curacav	2.86	178	*e*P	Pn	16 16 24.8	-0.2
MT02				*e*S	Sn	16 16 58.8	+0.6
MT02				IAML		16 17 05.6	
	comp=E,317nm,0.4s						
MT05	Renca	3.03	171		Pn	16 16 25.6	-1.6
MT05	Renca	3.03	171	*e*P	Pn	16 16 28.3	+1.1
MT05				*e*S	Sn	16 17 02.6	+0.3
FCH	Farellones	3.05	164	*e*P	Pn	16 16 28.7	+1.0
FCH				*e*S	Sn	16 17 05.2	+2.0
FCH				IAML		16 17 14.9	
	comp=E,200nm,0.7s						
AC06	Mina Casimiro	3.13	15		Pn	16 16 28.3	-0.2
MT03	Universidad Ad	3.16	168		Pn	16 16 28.4	-0.7
MT03	Universidad Ad	3.16	168	*e*P	Pn	16 16 30.9	+1.8
MT03				*e*S	Sn	16 17 07.0	+1.3
MT03				IAML		16 17 19.9	
	comp=E,468nm,0.4s						
VA05	Santo Domingo	3.27	185		Pn	16 16 29.6	-0.8
VA05	Santo Domingo	3.27	185	⇑*e*P	Pn	16 16 29.7	-0.8
VA05				*i* S	Sn	16 17 07.3	-0.9
MT09	Talagante	3.39	176		Pn	16 16 32.4	+0.2
MT09	Talagante	3.39	176	*e*P	Pn	16 16 32.4	+0.2
MT09				*i* S	Sn	16 17 12.4	+1.2
MT01	Popeta	3.46	180		Pn	16 16 32.8	-0.3
MT01	Popeta	3.46	180	*e*P	Pn	16 16 32.8	-0.3
MT01				*e*S	Sn	16 17 13.7	+0.8
BO04	La Punta	3.63	171		Pn	16 16 35.8	+0.3
BO04	La Punta	3.63	171	*e*P	Pn	16 16 35.9	+0.4
BO04				*e*S	Sn	16 17 18.4	+1.2
BO04				IAML		16 17 30.1	
	comp=E,220nm,0.5s						
BO01	Tunca	4.00	178		Pn	16 16 39.4	-1.0
BO01	Tunca	4.00	178	*e*P	Pn	16 16 40.3	-0.1
BO01				*e*S	Sn	16 17 25.6	-0.4
AC02	Maricunga	4.01	29		Pn	16 16 41.4	+0.2
AC01	Pan de Azucar	4.27	8		Pn	16 16 42.3	-1.9
GO05	Huala	4.64	187		Pn	16 16 47.0	-2.3
LC01	Cunco	8.50	183		Pn	16 17 39.9	-2.3
PATCX	Punta Patache	9.58	6	Pn	Pn	16 17 58.2	+1.1
LL05	Los Muermos	11.14	189	Pn	Pn	16 18 16.8	-1.4

NNC 06 16:31:19.1±5.5, 41°.22N×83°.19E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=39.8km s-min=24.7km az=157.0

SOME 06 16:31:21.2, 41°.25N×83°.23E, h10km

ISC 06 16:31:21.6±3.1, 41°.2N±0°.2×83°.00E±0°.09, h10km, n9, σ1s.56/17, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.02	320	*e*P	Pg	16 32 18.2	-1.2
	1.1nm,0.2s						
KTMS				*e*S	Sg	16 32 58.7	+0.2
	4.9nm,0.1s						
PDGK	Podgornoye	3.39	311	⇓Pg	Pb	16 32 21.0	-0.9
	0.6nm,0.3s						
PDGK				⇑Lg	Lg	16 33 09.5	
	5.3nm,0.5s						
UZB	Uzynbulak	3.56	305	*e*P	Pb	16 32 27.5	+2.6
	2.5nm,0.0s						
UZB				*e*S	Sg	16 33 14.9	-1.1
	5.6nm,0.4s						
SATY	Saty	3.91	301	*e*P	Pg	16 32 35.4	-1.1
	0.6nm,0.2s						
SATY				*e*S	Sg	16 33 28.1	+0.9
	5.8nm,0.1s						
KPKS	Kokpek	3.95	307	*e*P	Pg	16 32 35.8	-1.4
	2.0nm,0.0s						
KPKS				*e*S	Sg	16 33 28.8	+0.5
	5.8nm,0.3s						
KTBS	Karatobe	5.33	301	*e*P	Pg	16 33 02.0	-1.6
	0.4nm,0.1s						
KTBS				*e*S	Sg	16 34 13.9	+1.3
	2.8nm,0.2s						
MK31	Makanchi Array	5.66	355	⇑Pn	Pn	16 32 45.4	-0.3
	baz=242,slow=7.3,SNR=2.6						
MK31				⇑Pg	Pb	16 33 03.0	+2.6
	0.2nm,0.5s,baz=173,slow=16,SNR=5.1						
MK31				⇑Sn	Sn	16 33 50.0	-0.8
	0.2nm,0.3s						
MK31				⇑Lg	Lg	16 34 16.6	
	0.5nm,0.4s,baz=170,slow=26						
MAKZ	Makanchi	5.70	353	⇑Pg	Pb	16 33 01.7	+0.6
	3.9nm,1.4s						
MAKZ				⇓Lg	Lg	16 34 19.0	
	0.8nm,0.8s						
KRBS	Karabastau	5.99	298	*e*P	Pg	16 33 14.9	-1.3
	0.3nm,0.1s						
KRBS				*e*S	Sg	16 34 36.1	+2.4
	1.5nm,0.1s						

SNET 06 16:50:06.8±0.9, 13°.08N×90°.77W, h18km±8km, ML3.2

IDC 06 16:50:06.3±2.9, 14°.19N×89°.93W, h0km, mb3.6/3, mbtmp3.5/5, ML3.7/2, MS3.2/1, Error ellipse: s-maj=89.6km s-min=40.7km az=29.0

ISC 06 16:50:05.3±1.6, 13°.0N±0°.2×90°.78W±0°.08, h10km, n17, σ1s.96/16, mb3.7/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	1.32	47	*e*P	Pn	16 50 29.0	-1.0
CEVE	Cerro Verde	1.39	54	*e*P	Pn	16 50 30.9	-0.1
SBLS	San Blas	1.40	53	*e*P	Pn	16 50 30.7	-0.4
SLOZ	Alcaldia de Sa	1.40	44	*e*P	Pn	16 50 31.3	+0.3
RTR	El Retiro	1.41	51	*e*P	Pn	16 50 31.5	+0.2
SNJE	San Jose	1.43	53	*e*P	Pn	16 50 31.6	+0.2
JAYA	Jayaque - finc	1.45	63	*e*P	Pn	16 50 31.6	-0.1
JAYA				IAML		16 51 02.6	
	comp=Z,304nm,0.3s						
MTO3	Montecristo	1.95	45	*e*P	Pn	16 50 38.8	+0.1
ESQI	Esquipulas	2.08	42	*e*P	Pn	16 50 39.8	-0.6
ESQI				IAML		16 51 18.5	
	comp=Z,194nm,0.1s						
CMIG	Matias Romero	5.68	316	Pn	Pn	16 51 28.6	-1.2
	comp=Z,0.6nm,0.3s,baz=161,slow=13,SNR=2.4						
CMIG				Sn	Sn	16 52 39.5	+4.4
	comp=Z,1.3nm,0.3s,baz=58,slow=15,SNR=2.0						
	comp=Z,1.4nm,0.2s						
TXAR	Lajitas Array	20.18	326	P	P	16 54 38.5	-1.8
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=6.3						
	comp=Z,0.7nm,0.7s						
TKL	Tuckaleechee C	23.42	14	LR	LR	17 04 04.1	
	comp=Z,54nm,18.1s,baz=257,slow=38						
NVAR	Mina Array Bea	35.19	321	P	P	16 56 59.0	-0.8
	comp=Z,1.3nm,0.7s,baz=135,slow=9.0,SNR=12						
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	52.26	346	P	P	16 59 12.2	-4.3
	comp=Z,0.4nm,0.8s,baz=144,slow=8.3,SNR=6.4						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	64.22	337	P	P	17 00 37.2	-3.0
	comp=Z,0.6nm,1.0s,baz=134,slow=4.2,SNR=4.4						
	comp=Z,0.6nm,1.0s						
WRA	Warramunga Arr	136.29	255	PKP	PKiKP	17 09 33.3	+3.5
	comp=Z,1.1nm,1.2s,baz=86,slow=2.4,SNR=2.7						
CMAR	Chiang Mai Arr	147.30	343	PKPbc	PKPdf	17 09 49.5	+1.7
	comp=Z,0.4nm,0.3s,baz=6.8,slow=2.8,SNR=4.4						

IDC 06 17:09:30.5±0.7, 45°.11N×28°.02W, h0km, mb3.8/19, mbtmp3.8/21, ML3.6/1, MS4.0/75, Error ellipse: s-maj=20.0km s-min=13.7km az=13.0

NEIC 06 17:09:32.0±1.6, 45°.1N±0°.1×28°.0W±0°.1, h10km±1km, mb4.8/107, Error ellipse: s-maj=18.6km s-min=15.9km az=175.0

GCMT 06 17:09:32.0±0.2, 44°.99N±0°.04×27°.89W±0°.02, h12km, MW4.8/114, Moment Tensor Solution. s24,c27; s114,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.06±.06; $M_{\theta\theta}$0.27±.07; $M_{\phi\phi}$1.79±.05; $M_{r\theta}$0.49±.35; $M_{\theta\phi}$-0.01±.06; $M_{\phi r}$-0.93±.24; Best double couple: $M_0$2.18600×10^{16} NP1:ϕ_s188.00000°,δ33.00000°, λ-73.00000°. NP2:ϕ_s348.00000°,δ59.00000°, λ-101.00000°. Principal axes: T 2.0110, Plg13.0000°, Azm86.0000°; N 0.3490, Plg9.0000°, Azm354.0000°; P -2.3600, Plg74.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 17:09:32.3±0.5, 45°.06N±0°.09×28°.06W±0°.06, h14km, n214, σ0s.93/156, mb4.6/82, MS4.0/73, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	18.57	98	P	P	17 13 48.7	0.0
	1.0nm,1.1s,baz=264,slow=37,SNR=2.5						
ESDC				LR	LR	17 19 37.9	
	comp=Z,680nm,19.1s,baz=306,slow=33						
ESK	Eskdalemuir	18.83	48	P	P	17 13 51.0	-0.4
ESK				IAmb	IAmb	17 14 10.8	
	comp=Z,82nm,2.0s						
EKA	Eskdalemuir Ar	18.86	48	P	Pn	17 13 52.7	+0.3
	baz=240,slow=10						
EKA				LR	LR	17 19 59.9	
	comp=Z,644nm,18.5s,baz=208,slow=34						
	comp=Z,1.5nm,0.8s						
BORG	Borgarnes	20.09	8	LR	LR	17 19 39.8	
	comp=Z,238nm,21.0s,baz=184,slow=30						
CLF	Chambon-Foret	21.00	71		P	17 14 14.7	-0.4
CLF				IAmb	IAmb	17 14 21.6	
	comp=Z,110nm,1.8s						
MDT	Midelt	21.87	116	P	P	17 14 25.6	+1.0
	comp=Z,1.6nm,0.8s,baz=318,slow=12,SNR=1.5						
MDT				LR	LR	17 21 41.7	
	comp=Z,258nm,18.9s,baz=343,slow=33						
	comp=Z,1.6nm,0.8s						
WLF	Walferdange	23.50	66	P	P	17 14 40.0	-1.5
ECH	Echery	24.25	70	P	P	17 14 47.8	-0.9
ECH				IAmb	IAmb	17 14 55.3	
	comp=Z,33nm,1.8s						
BNI	Bardonecchia	24.43	78	P	P	17 14 50.7	+0.3
SENIN	Lac Senin/Sane	24.60	74	P	P	17 14 51.8	-0.3
SENIN				IAmb	IAmb	17 15 14.0	
	comp=Z,29nm,1.9s						
BFO	Black Forest	25.02	69		P	17 14 55.3	-0.3
SFJD	Kangerlussuaq	25.06	339	LR	LR	17 22 33.6	
	comp=Z,471nm,19.8s,baz=147,slow=31						
SFJD	Kangerlussuaq	25.06	339	P	P	17 14 54.8	-0.9
HAL	Halifax	25.08	282	P	P	17 14 54.6	-1.5
STU	Stuttgart	25.55	68	P	P	17 15 00.7	+0.4
STU				IAmb	IAmb	17 15 08.3	
	comp=Z,18nm,1.2s						
LMN	Caledonia Moun	25.65	285	P	P	17 15 00.6	-0.7
SCO	Scoresbysund	25.68	5	P	P	17 15 00.6	-0.7
SCO				IAmb	IAmb	17 15 19.4	
	comp=Z,45nm,1.4s						
TUE	Stuetta	25.98	73	P	P	17 15 03.5	-1.0
DAVA	Damuels	26.20	71	*e*P	P	17 15 07.4	+0.9
	comp=Z,7.4nm,1.2s						
BATG	Bathurst New B	26.25	289	P	P	17 15 05.2	-1.6
DAVOX	Davos/Dischmat	26.28	73	LR	LR	17 24 44.5	
	comp=Z,527nm,18.5s,baz=266,slow=35						
SCHQ	Schefferville	26.48	306	LR	LR	17 23 52.5	
	comp=Z,564nm,18.8s,baz=93,slow=33						
SCHQ	Schefferville	26.48	306	P	P	17 15 07.7	-1.1
SCHQ				IAmb	IAmb	17 15 45.8	
	comp=Z,24nm,1.6s						
MSSA	Maissana	26.57	78	P	P	17 15 07.8	-2.0
MSSA				IAmb	IAmb	17 15 12.5	
	comp=Z,18nm,1.3s						
GRFO	Grafenberg	26.78	66	P	P	17 15 11.0	-0.5
GRFO				IAmb	IAmb	17 15 14.3	
	comp=Z,52nm,1.9s						
GRA1	Grafenberg Arr	26.78	66	P	P	17 15 11.3	-0.2
GRA1				IAmb	IAmb	17 15 14.4	
	comp=Z,50nm,1.8s						
FETA	Feichten	26.81	72	*e*P	P	17 15 11.8	-0.2
	comp=Z,6.5nm,1.3s						
ILULI	Ilulissat	26.90	342	P	P	17 15 11.3	-1.0
MOTA	Moosalm	27.01	71	*e*P	P	17 15 15.3	+1.5
	comp=Z,11nm,1.7s						
SQTA	Sankt Quirin	27.10	71	*e*P	P	17 15 16.2	+1.6
	comp=Z,13nm,1.4s						
WTTA	Wattenberg	27.38	71	*e*P	P	17 15 18.8	+1.7
	comp=Z,6.6nm,1.1s						
ZCCA	Zocca	27.57	77	P	P	17 15 19.1	+0.4
ZCCA				IAmb	IAmb	17 15 55.1	
	comp=Z,50nm,1.9s						
CTI	Castel Tesino	27.63	74	P	P	17 15 18.5	-0.8
PQI	Presque Isle	27.67	288	P	P	17 15 19.8	+0.3
PQI				IAmb	IAmb	17 15 35.8	
	comp=Z,47nm,1.7s						
G65A	Princeton	27.69	285	P	P	17 15 19.8	+0.1
JMIC	Jan Mayen	27.70	14	LR	LR	17 23 47.5	
	comp=Z,100nm,18.6s,baz=256,slow=31						
CLL	Collm	27.80	62	P	P	17 15 20.8	+0.2
CLL				IAmb	IAmb	17 15 34.4	
	comp=Z,26nm,1.9s						
CLL	Collm	27.80	62	*i* P	P	17 15 21.3	+0.7
	comp=Z,19nm,1.9s						
CLL				*e*x	x	17 15 26.0	
CLL				Lmax		17 26 00.0	
TEOL	Teolo	27.80	75	P	P	17 15 21.6	+0.9
NOA	NORSAR Array B	27.96	41	LR	LR	17 25 21.5	
	comp=Z,155nm,19.3s,baz=255,slow=34						
OSSC	Osservatorio P	27.99	79	P	P	17 15 22.0	-0.4
SUMG	Summit	28.03	353	P	P	17 15 22.2	-0.8
SUMG				IAmb	IAmb	17 15 33.4	
	comp=Z,19nm,1.8s						
VSL	Villasalto	28.07	88	P	P	17 15 22.0	-1.3
NC303	NORSAR Array S	28.08	41	P	P	17 15 22.5	-0.6
NC303				IAmb	IAmb	17 15 59.4	
	comp=Z,28nm,1.8s						
NC405	NORSAR Array S	28.21	41	P	P	17 15 23.6	-0.6
NC405				IAmb	IAmb	17 16 00.9	
	comp=Z,45nm,1.7s						
STAL	STALIGIAL	28.30	73	P	P	17 15 24.1	-1.1
STAL				IAmb	IAmb	17 15 27.6	
	comp=Z,20nm,1.6s						
KHC	Kasperske Hory	28.37	67	P	P	17 15 24.9	-0.9
KHC				IAmb	IAmb	17 15 28.6	
	comp=Z,18nm,1.8s						
KHC	Kasperske Hory	28.37	67	*e*P	P	17 15 25.5	-0.3
BRG	Berggiesshubel	28.42	63	*e*P	P	17 15 27.9	+1.8
BRG				Amp		17 15 31.4	
	comp=Z,17nm,1.7s						
BRG				Amp		17 26 15.0	
	comp=Z,0.7nm,10.3s						
BRG				Amp		17 26 19.0	
	comp=E,0.4nm,19.5s						
BRG				Amp		17 26 21.0	
	comp=N,0.4nm,16.4s						
GEC2	GERESS Array S	28.49	67	P	P	17 15 26.1	-0.9
GERES	GERESS Array B	28.49	67	P	P	17 15 25.9	-1.1
	comp=N,0.4nm,0.6s,baz=267,slow=4.9,SNR=6.9						
GERES				LR	LR	17 26 05.9	
	comp=N,414nm,19.3s,baz=273,slow=35						
	comp=N,0.4nm,0.6s						
KBA	Koelnbreinsper	28.56	71	*i* P	P	17 15 29.2	+1.5
	comp=N,10nm,1.5s						
BIOA	Bad Ischl, Aus	28.64	70	*i* P	P	17 15 29.3	+1.0
	comp=N,5.2nm,1.1s						
HFS	Hagfors	28.91	44	LR	LR	17 25 43.4	
	comp=N,155nm,18.8s,baz=251,slow=34						
FRB	Frobisher Bay	29.36	324	P	P	17 15 34.3	-0.1
	comp=N,3.1nm,0.8s,baz=71,slow=6.6,SNR=3.6						
FRB				LR	LR	17 24 24.7	
	comp=N,353nm,18.6s,baz=82,slow=30						
	comp=N,3.1nm,0.8s						
OBKA	Obir	29.49	72	*i* P	P	17 15 36.2	+0.4
	comp=N,7.5nm,1.2s						
KEST	Kesra	29.74	95	LR	LR	17 26 06.8	
	comp=N,298nm,21.5s,baz=289,slow=34						
SOKA	Soboth	29.77	71	*e*P	P	17 15 38.8	+0.4
	comp=N,6.2nm,1.9s						
ARSA	Arzberg	29.98	70	*e*P	P	17 15 40.7	+0.6
	comp=N,3.9nm,0.9s						
CONA	Conrad Observa	30.07	69	*e*P	P	17 15 41.3	+0.3
	comp=N,4.5nm,1.1s						
VRAC	Vranov	30.30	66	LR	LR	17 27 32.8	
	comp=N,594nm,18.1s,baz=273,slow=36						
RONA	Rosalia, Austr	30.40	69	*e*P	P	17 15 44.7	+0.8
	comp=N,7.1nm,1.3s						
ZST	Bratislava	30.83	68	*e*P	P	17 15 50.4	+2.8
MORC	Moravsky Berou	30.84	65	P	P	17 15 47.1	-0.6
MODS	Modra-Piesok	30.91	67	*e*P	P	17 15 50.5	+2.2
OJC	Ojcow	32.20	63	P	P	17 15 59.2	-0.4
OJC				IAmb	IAmb	17 16 06.8	
	comp=Z,13nm,1.4s						
CUC	Castrocucco	32.42	83	P	P	17 16 00.7	-1.1
VAE	Valguarnera	32.50	88	LR	LR	17 28 20.8	
	comp=Z,213nm,18.2s,baz=318,slow=35						
PSZ	Piszkesteto	32.72	68	P	P	17 16 03.8	-0.5

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PSZ                                 IAmb     IAmb     17 16 06.7
          comp=Z,22nm,1.8s
TIP    Timpagrande        33.42  84 P        P        17 16 09.7  -0.8
TIP                                 IAmb     IAmb     17 16 16.5
          comp=Z,20nm,1.6s
CRVS   Cervenica-Dubn     33.52  65 eP       P        17 16 13.0  +1.8
DIVS   Divibare           33.84  74 P        P        17 16 13.6  -0.5
DIVS                                IAmb     IAmb     17 16 20.1
          comp=Z,21nm,1.9s
BRNJ   Basking Ridge      34.00 279 P        P        17 16 14.2  -1.2
PABE   Paberze            34.08  53 P        P        17 16 15.2  -0.7
KWP    Kalwaria Pacla     34.16  64 P        P        17 16 16.8   0.0
FINES  FINESS Array B     35.09  43 P        P        17 16 23.4  -1.2
          comp=Z,1.8nm,0.8s,baz=291,slow=5.9,SNR=5.2
FINES                               LR       LR       17 29 25.0
          comp=Z,200nm,18.4s,baz=272,slow=34
          comp=Z,1.8nm,0.8s
FINES  FINESS Array B     35.09  43 P        P        17 16 23.3  -1.3
R61A   Willards           35.53 276 P        P        17 16 30.3  +1.7
M57A   Sunshine Farm,     35.53 282 P        P        17 16 30.1  +1.4
KBN    Korca              35.65  79 P        P        17 16 29.7  -0.1
KBN                                 IAmb     IAmb     17 16 33.0
          comp=Z,25nm,1.5s
SADO   Sadowa             35.68 288 LR       LR       17 30 42.6
          comp=Z,840nm,18.3s,baz=126,slow=36
FNA    Florina            36.00  79 P        P        17 16 33.4  +0.7
S61A   Accomac            36.05 275 P        P        17 16 33.0  -0.1
ARCES  ARCESS Array B     36.06  29 LR       LR       17 29 31.9
          comp=Z,100nm,19.7s,baz=264,slow=33
ARCES  ARCESS Array B     36.06  29 P        P        17 16 33.5  +0.7
SDMD   Soldier's Deli     36.11 279 P        P        17 16 32.7  -0.9
SDMD                                IAmb     IAmb     17 16 44.8
          comp=Z,40nm,1.9s
WVNY   West Valley, N     36.14 284 P        P        17 16 33.4  -0.5
BUR08  Bucovina Ar. S     36.25  66 P        P        17 16 35.7  +0.8
BUR08                               IAmb     IAmb     17 16 59.6
          comp=Z,18nm,1.6s
BURAR  Bucovina Array     36.27  66 P        P        17 16 36.7  +1.6
VTS    Vitosha            36.57  75 P        P        17 16 37.4  -0.3
KOWA   Kowa               36.64 139 P        P        17 16 38.5  +0.2
KOWA                                IAmb     IAmb     17 16 42.0
          comp=Z,46nm,1.9s
MLR    Muntele Rosu       37.40  70 LR       LR       17 32 22.9
          comp=Z,293nm,19.1s,baz=276,slow=37
MLR    Muntele Rosu       37.40  70 P        P        17 16 44.0  -0.7
MLR                                 IAmb     IAmb     17 16 53.5
          comp=Z,17nm,1.4s
AGG    Agios Georgios     37.40  81 P        P        17 16 43.9  -0.7
AGG                                 IAmb     IAmb     17 17 13.1
          comp=Z,23nm,1.6s
R58B   Mineral            37.48 277 P        P        17 16 45.0  -0.2
ITM    Ithomi             37.95  84 P        P        17 16 48.7  -0.6
ITM                                 IAmb     IAmb     17 16 53.1
          comp=Z,32nm,1.8s
AKASG  Malin Array Be     38.00  60 P        P        17 16 49.1  -0.4
          comp=Z,0.4nm,0.3s,baz=172,slow=34,SNR=1.7
AKASG                               LR       LR       17 32 11.7
          comp=Z,232nm,18.8s,baz=328,slow=36
          comp=Z,0.4nm,0.3s
AKBB   Malin Array Si     38.00  60 P        P        17 16 49.4  -0.1
AKBB                                IAmb     IAmb     17 17 10.4
          comp=Z,25nm,2.0s
RDO    Rodhopi            38.73  76 P        P        17 16 54.4  -1.4
RDO                                 IAmb     IAmb     17 16 59.0
          comp=Z,21nm,1.5s
T57A   Hurt               38.90 276 P        P        17 16 55.7  -1.5
T57A                                IAmb     IAmb     17 17 02.4
          comp=Z,27nm,1.5s
ALN    Alexandroupoli     39.18  76 P        P        17 16 58.6  -1.0
ALN                                 IAmb     IAmb     17 17 07.9
          comp=Z,20nm,1.2s
H05N1  Guadeloupe/Mar     39.85 235 T        T        17 59 04.5
Q52A   Bidwell            40.10 281 P        P        17 17 05.9  -1.4
Q52A                                IAmb     IAmb     17 17 11.4
          comp=Z,46nm,1.6s
R53A   Hurricane          40.17 280 P        P        17 17 07.1  -0.7
R53A                                IAmb     IAmb     17 17 21.3
          comp=Z,24nm,1.2s
TORD   Torodi Ar. Bea     40.63 132 P        P        17 17 11.1  -0.8
          comp=Z,3.2nm,1.0s,baz=336,slow=5.7,SNR=14
TORD                                LR       LR       17 33 01.5
          comp=Z,597nm,18.1s,baz=348,slow=35
          comp=Z,3.2nm,1.0s
IDI    Anoyia             40.97  85 LR       LR       17 35 09.6
          comp=Z,90nm,18.9s,baz=296,slow=38
IDI    Anoyia             40.97  85 P        P        17 17 15.3  +0.8
IDI                                 IAmb     IAmb     17 17 17.4
          comp=Z,31nm,1.2s
RES    Resolute Bay       41.05 338 P        P        17 17 14.3  -0.3
          comp=Z,1.1nm,0.8s,baz=74,slow=8.4,SNR=5.1
RES                                 LR       LR       17 31 28.2
          comp=Z,125nm,21.8s,baz=138,slow=32
          comp=Z,1.1nm,0.8s
RES    Resolute Bay       41.05 338 P        P        17 17 15.2  +0.6
FCC    Fort Churchill     41.23 314 P        P        17 17 16.9  +0.6
FCC                                 IAmb     IAmb     17 17 19.4
          comp=Z,32nm,2.0s
OBN    Obninsk            41.24  52 LR       LR       17 33 40.9
          comp=Z,67nm,20.5s,baz=328,slow=35
SJG    San Juan           41.54 242 LR       LR       17 30 45.7
          comp=Z,126nm,21.7s,baz=88,slow=31
TKL    Tuckaleechee C     42.73 277 LR       LR       17 34 42.1
          comp=Z,180nm,18.4s,baz=79,slow=35
P46A   Rosedale           43.22 284 P        P        17 17 31.9  -0.8
P46A                                IAmb     IAmb     17 18 09.8
          comp=Z,24nm,1.2s
DBIC   Dimbokro           43.24 145 LR       LR       17 34 03.8
          comp=Z,269nm,19.9s,baz=344,slow=34
ULM    Lac du Bonnet      44.55 302 LR       LR       17 34 40.6
          comp=Z,555nm,19.0s,baz=94,slow=34
V48A   Smith Brothers     44.83 279 P        P        17 17 45.7  -0.1
L40A   Anamosa            44.84 290 P        P        17 17 44.9  -0.8
L40A                                IAmb     IAmb     17 17 57.2
          comp=Z,21nm,1.4s
TIGA   Tifton             44.85 272 P        P        17 17 45.9  -0.1
BR131  Keskin Array S     44.91  74 P        P        17 17 46.4  -0.1
BRTR   Keskin Array B     44.91  74 P        P        17 17 48.0  +1.5
          comp=Z,1.1nm,0.8s,baz=280,slow=6.1,SNR=7.9
BRTR                                LR       LR       17 36 39.5
          comp=Z,225nm,21.0s,baz=302,slow=36
          comp=Z,1.1nm,0.8s
BRTR   Keskin Array B     44.91  74 P        P        17 17 46.6  +0.1
152A   Waverly Hall       44.97 274 P        P        17 17 46.8  -0.1
MDP    Montagnes des      45.23 216 LR       LR       17 31 56.8
          comp=Z,128nm,19.1s,baz=29,slow=30
CCM    Cathedral Cave     46.73 285 P        P        17 18 01.4  +0.7
BNN    Bunyan             46.83  74 P        P        17 18 02.5  +0.8
KIRV   Kirov              47.04  44 LR       LR       17 37 03.9
          comp=Z,140nm,18.8s,baz=284,slow=35
Z47A   Carrollton         47.04 277 P        P        17 18 02.8  -0.5
CSS    Mathiatis          47.06  80 P        P        17 18 03.2  -0.2
R40A   Maddies Statio     47.32 285 P        P        17 18 05.6  +0.2
R40A                                IAmb     IAmb     17 18 16.2
          comp=Z,7.3nm,1.1s
MGMO   Mountain Grove     47.89 284 P        P        17 18 09.7  -0.1
BELG   Belogornoye        48.33  53 LR       LR       17 38 41.5
          comp=Z,279nm,19.3s,baz=323,slow=36
S39A   Bolivar            48.34 285 P        P        17 18 12.9  -0.3
FCAR   Ozark Folk Cen     48.44 283 P        P        17 18 14.4  +0.4
FCAR                                IAmb     IAmb     17 18 16.5
          comp=Z,12nm,1.4s
U40A   Yellville          48.70 284 P        P        17 18 16.5  +0.4
WHAR   Wooly Hollow       48.87 282 P        P        17 18 17.7  +0.3
KVAR   Kislovodsk Arr     48.95  65 LR       LR       17 38 44.7
          comp=Z,136nm,20.4s,baz=294,slow=36
KBZ    Khabaz             49.19  65 P        P        17 18 20.6  +1.0
          comp=Z,1.3nm,0.6s,baz=271,slow=6.4,SNR=2.9
KBZ                                 LR       LR       17 39 13.6
          comp=Z,203nm,21.5s,baz=307,slow=36
          comp=Z,1.3nm,0.6s
MMAI   Mount Meron Ar     49.56  81 LR       LR       17 41 18.3
          comp=Z,72nm,19.7s,baz=78,slow=38
YKA    Yellowknife Ar     49.87 323 P        P        17 18 24.6   0.0
          comp=Z,0.1nm,0.4s,baz=71,slow=7.0,SNR=5.1
YKA                                 PcP      PcP      17 19 44.1  -0.8
          comp=Z,0.1nm,0.5s,baz=56,slow=3.8,SNR=5.4
YKA                                 LR       LR       17 36 33.1
          comp=Z,165nm,20.7s,baz=332,slow=33
          comp=Z,0.1nm,0.4s
YKA    Yellowknife Ar     49.87 323 P        P        17 18 24.9  +0.3
W39A   Magazine           49.96 283 P        P        17 18 26.1  +0.5
W39A                                IAmb     IAmb     17 18 35.8
          comp=Z,26nm,1.7s
RCBR   Riachuelo          51.14 190 LR       LR       17 35 21.6
          comp=Z,63nm,19.7s,baz=138,slow=30
EIL    Elat               51.14  85 LR       LR       17 40 54.3
          comp=Z,44nm,21.4s,baz=279,slow=37
GURO   Guroymak-BITLI     51.16  71 P        P        17 18 35.4  +0.5
GEVA   Gevas              51.98  71 P        P        17 18 40.7  -0.4
GNI    Garni              52.14  68 LR       LR       17 43 35.0
          comp=Z,83nm,18.5s,baz=333,slow=39
ARU    Arti               52.43  44 LR       LR       17 40 57.3
          comp=Z,135nm,18.1s,baz=295,slow=36
ARU    Arti               52.43  44 P        P        17 18 43.2  -0.7
ARU                                 IAmb     IAmb     17 18 51.3
          comp=Z,14nm,1.7s
EDM    Edmonton           53.23 312 P        P        17 18 50.2  +0.2
EDM                                 IAmb     IAmb     17 19 27.7
          comp=Z,30nm,1.7s
H10N2  ASCENSION HYDR54.04 163 T        T        18 16 46.2
          baz=350
H10N3  ASCENSION HYDR54.05 163 T        T        18 17 03.3
          baz=350
H10N1  ASCENSION HYDR54.06 163 T        T        18 16 54.8
          baz=350
INK    Inuvik             54.23 334 P        P        17 18 57.3  +0.4
          comp=Z,1.3nm,0.8s,baz=53,slow=12,SNR=4.4
INK                                 LR       LR       17 38 43.4
          comp=Z,101nm,21.4s,baz=72,slow=32
          comp=Z,1.3nm,0.8s
INK    Inuvik             54.23 334 IAmb     IAmb     17 19 30.1
          comp=Z,14nm,1.8s
AKTO   Aktyubinsk         55.01  51 LR       LR       17 41 39.8
          comp=Z,145nm,21.6s,baz=283,slow=35
ZARC   Zaragoza, Cauc     55.08 242 P        P        17 19 03.8  -0.1
WALA   Waterton Lakes     55.60 307 P        P        17 19 07.9  +0.6
WALA                                IAmb     IAmb     17 19 09.3
          comp=Z,6.6nm,1.1s
PDAR   Pinedale Array     56.33 299 P        P        17 19 13.2  +0.3
          comp=Z,0.2nm,0.5s,baz=61,slow=6.5,SNR=2.2
PDAR                                LR       LR       17 42 12.2
          comp=Z,371nm,18.3s,baz=58,slow=35
          comp=Z,0.2nm,0.5s
ABKAR  Akbulak array      56.69  52 P        P        17 19 14.6  -0.4
REDW   Red Top Meadow     56.81 300 P        P        17 19 16.5  +0.3
REDW                                IAmb     IAmb     17 19 19.0
          comp=Z,17nm,1.5s
ROSC   El Rosal           56.81 239 LR       LR       17 42 17.8
          comp=Z,130nm,20.2s,baz=50,slow=35
NEW    Newport            57.82 308 LR       LR       17 41 55.3
          comp=Z,183nm,21.7s,baz=82,slow=34
DLBC   Dease Lake         58.49 323 LR       LR       17 41 53.8
          comp=Z,143nm,20.6s,baz=21,slow=33
ANMO   Albuquerque        58.72 290 LR       LR       17 44 48.6
          comp=Z,437nm,18.3s,baz=56,slow=36
HLID   Hailey             58.86 302 P        P        17 19 29.9  -0.6
TXAR   Lajitas Array      60.16 283 P        P        17 19 40.2  +0.6
          comp=Z,0.9nm,0.9s,baz=76,slow=5.3,SNR=6.7
TXAR                                LR       LR       17 45 22.9
          comp=Z,382nm,20.0s,baz=50,slow=36
          comp=Z,0.9nm,0.9s
TXAR   Lajitas Array      60.16 283 P        P        17 19 39.2  -0.4
ILAR   Eielson Array      60.60 334 P        P        17 19 42.9  +1.0
          comp=Z,0.5nm,0.7s,baz=43,slow=7.0,SNR=5.7
ILAR                                LR       LR       17 44 02.0
          comp=Z,55nm,21.1s,baz=134,slow=34
          comp=Z,0.5nm,0.7s
ELK    Elko               60.98 300 LR       LR       17 45 11.4
          comp=Z,273nm,18.0s,baz=60,slow=35
BBB    Bella Bella        61.34 316 LR       LR       17 44 24.4
          comp=Z,130nm,18.2s,baz=42,slow=34
J08A   Circle Bar Ran     61.39 304 P        P        17 19 47.7  -0.1
J08A                                IAmb     IAmb     17 19 50.4
          comp=Z,6.0nm,0.9s
IMAR   Indian Mountai     61.68 338 P        P        17 19 49.5  +0.2
CMIG   Matias Romero      61.78 266 LR       LR       17 43 18.7
          comp=Z,151nm,21.8s,baz=26,slow=33
GEYT   Alibeck            62.02  63 LR       LR       17 48 12.6
          comp=Z,74nm,20.3s,baz=338,slow=38
TIXI   Tiksi              62.45   8 P        P        17 19 55.0  +0.8
TIXI                                IAmb     IAmb     17 19 57.3
          comp=Z,4.4nm,1.1s
KVN    Kaiserville        63.76 300 P        P        17 20 04.6  +0.8
NVAR   Mina Array Bea     64.26 299 P        P        17 20 07.6  +0.4
          comp=Z,0.8nm,1.1s,baz=63,slow=3.6,SNR=4.2
NVAR                                LR       LR       17 47 25.7
          comp=Z,204nm,18.2s,baz=54,slow=36
          comp=Z,0.8nm,1.1s
NVAR   Mina Array Bea     64.26 299 P        P        17 20 07.2  +0.1
LHV    Little Huntoon     64.50 299 P        P        17 20 08.6  +0.2
LHV                                 IAmb     IAmb     17 20 11.6
          comp=Z,16nm,1.7s
YBH    Yreka Blue Hor     64.87 305 LR       LR       17 47 00.1
          comp=Z,185nm,19.9s,baz=72,slow=35
KURBB  Kurchatov Arra     65.48  42 LR       LR       17 49 15.0
          comp=Z,71nm,20.1s,baz=275,slow=36
ZALV   Zalesovo Beam      66.04  37 P        P        17 20 19.0  +0.9
          comp=Z,0.3nm,0.4s,baz=323,slow=6.2,SNR=1.6
ZALV                                LR       LR       17 50 09.1
          comp=Z,113nm,18.1s,baz=316,slow=37
          comp=Z,0.3nm,0.4s
KDAK   Kodiak Island      67.64 331 LR       LR       17 48 05.2
          comp=Z,109nm,18.3s,baz=68,slow=34
LPIG   La Paz             68.05 283 LR       LR       17 50 21.5
          comp=Z,211nm,18.3s,baz=36,slow=36
ATD    Arta Tunnel        68.45  95 LR       LR       17 51 01.0
          comp=Z,72nm,18.7s,baz=336,slow=36
AAK    Ala-Archa          68.75  51 LR       LR       17 52 17.8
          comp=Z,170nm,19.1s,baz=319,slow=37
ATAH   Atahualpa          68.78 235 LR       LR       17 48 15.3
          comp=Z,89nm,21.5s,baz=14,slow=34
GAR    Garm               68.79  56 P        P        17 20 37.3  +1.3
GAR                                 IAmb     IAmb     17 20 44.6
          comp=Z,12nm,1.4s
MBAR   Mbarara            68.91 114 LR       LR       17 51 16.7
          comp=Z,138nm,18.4s,baz=323,slow=36
MKAR   Makanchi Array     69.93  43 P        P        17 20 42.7  -0.1
          comp=Z,0.7nm,0.9s,baz=318,slow=1.6,SNR=4.0
MKAR                                LR       LR       17 52 40.8
          comp=Z,119nm,18.7s,baz=298,slow=37
          comp=Z,0.7nm,0.9s
MKAR   Makanchi Array     69.93  43 P        P        17 20 43.4  +0.7
LPAZ   La Paz             71.08 221 P        P        17 20 51.6  +0.9
          comp=Z,2.6nm,1.1s,baz=30,slow=12,SNR=5.2
LPAZ                                LR       LR       17 47 54.7
          comp=Z,51nm,21.4s,baz=44,slow=32
          comp=Z,2.6nm,1.1s
LPAZ   La Paz             71.08 221 P        P        17 20 51.0  +0.3
LPAZ                                IAmb     IAmb     17 20 52.9
          comp=Z,14nm,1.7s
WSAR   Wadi Sarin         71.67  75 LR       LR       17 58 12.5
          comp=Z,60nm,18.5s,baz=330,slow=41
KSH    Kashi              71.69  52 P        P        17 20 57.2  +3.5
NNA    Nana               71.86 231 LR       LR       17 50 27.7
          comp=Z,53nm,20.5s,baz=18,slow=34
PB16   IPOC Station P     73.50 221 P        P        17 21 03.8  -1.3
PB16                                IAmb     IAmb     17 21 06.9
          comp=Z,15nm,1.5s
KMBO   Kilima Mbogo       73.61 109 LR       LR       17 54 21.3
          comp=Z,170nm,18.4s,baz=330,slow=37
MA2    Magadan            75.72   1 LR       LR       17 54 23.8
          comp=Z,26nm,18.5s,baz=34,slow=36
TSUM   Tsumeb             76.25 136 LR       LR       17 52 54.7
          comp=Z,156nm,19.6s,baz=328,slow=34
LVC    Limon Verde        76.95 218 LR       LR       17 53 10.6
          comp=Z,33nm,19.7s,baz=12,slow=34
LSZ    Lusaka             78.73 125 LR       LR       17 54 36.6
          comp=Z,148nm,21.1s,baz=328,slow=34
SONM   Songino Array      79.23  29 P        P        17 21 37.3  +0.4
          comp=Z,1.6nm,0.9s,baz=315,slow=5.2,SNR=9.9
SONM                                LR       LR       17 56 46.9
          comp=Z,36nm,19.0s,baz=280,slow=36
          comp=Z,1.6nm,0.9s
SONM   Songino Array      79.23  29 P        P        17 21 37.5  +0.6
ULN    Ulaanbaatar        79.43  29 P        P        17 21 38.2  +0.2
ULN                                 IAmb     IAmb     17 21 41.2
          comp=Z,21nm,1.9s
GTA    Gaotai             83.74  38 eP       P        17 22 02.6  +1.7
GTA                                 pP       pwP      17 22 07.6  -0.4
GTA                                 sP       sP       17 22 11.1  +4.9
GTA                                 pmax     pmax
          comp=Z,4.0nm,1.4s
SUR    Sutherland         88.94 140 LR       LR       17 58 47.5
          comp=Z,78nm,20.7s,baz=327,slow=33
PALK   Pallekele          97.90  72 LR       LR       18 11 47.3
          comp=Z,33nm,18.0s,baz=102,slow=38
VNDA   Vanda             147.18 184 PKPbc    PKPab    17 29 15.6  +0.3
          comp=Z,2.2nm,1.2s,baz=245,slow=2.7,SNR=4.1
VNDA   Vanda             147.18 184          PKPbc    17 29 14.3  +0.9
WRA    Warramunga Arr    151.01  36 PKPbc    PKPbc    17 29 24.6  -0.3
          comp=Z,2.1nm,1.2s,baz=329,slow=3.0,SNR=7.5
WRA    Warramunga Arr    151.01  36          PKPdf    17 29 16.4  -2.7
ASAR   Alice Springs     154.09  41 PKPbc    PKPbc    17 29 31.4  -0.2
          comp=Z,0.4nm,0.7s,baz=302,slow=1.5,SNR=6.2
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*IDC **06** 17:14:38.3±2.1, 9°.69S×112°.65E, h0^{km}, mb3.7/6, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=90.9km s-min=17.8km az=46.0*

*DJA **06** 17:14:43.2±0.5, 10°S±4°×11°3E±°, h10^{km}, M4.0/16, mb4.3/1, MLv3.8/16*

*NEIC **06** 17:14:46.7±1.5, 9°.5S±0°.1×112°.94E±0°.06, h54^{km}±11^{km}, mb4.1/9, Error ellipse: s-maj=19.3km s-min=8.8km az=178.0*

ISC 06 17:14:45.6±1.3**, 9°.68S**±0°.09×**112°.87E**±0°.05**, h53**^{km}±14^{km}**, n41, σ1^s.25**/42**, mb4.1**/10**, South of Jawa**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC        h  m  s  ISC
GMJI   Gumukmas            1.51  22   P        Pn      17 15 08.8  -1.5
GMJI                                  S        Sn      17 15 30.2  +1.4
JAGI   Jajag, Banyuwa      1.75  47            Pn      17 15 12.4  -1.1
JAGI                                  Sn       Sn      17 15 29.3  -5.3
JAGI   Jajag, Banyuwa      1.75  47   P        Pn      17 15 12.5  -1.0
JAGI                                  S        Sn      17 15 37.2  +2.5
PWJI   Pagerwojo           1.96 327   P        Pn      17 15 15.6  -0.8
BLJI   Banyuglugur         2.05  20   P        Pn      17 15 18.3  +0.6
BLJI                                  S        Sn      17 15 44.0  +1.9
PCJI   Pacitan             2.23 311   P        Pn      17 15 19.8  -0.4
ABJI   Asem Bagus          2.31  36   P        Pn      17 15 22.0  +0.8
IGBI   Denpasar            2.40  69   P        Pn      17 15 23.1  +0.6
DNP    Denpasar            2.52  67   P        Pn      17 15 24.6  +0.6
GRJI   Gresik              2.78 352   P        Pn      17 15 27.6   0.0
SRBI   Singaraja           2.81  56   P        Pn      17 15 28.5  +0.5
KMMI   Kalianget           2.83  23   P        Pn      17 15 28.2  -0.2
UGM    Wanagama            2.91 307   Pn       Pn      17 15 29.5   0.0
UGM                                   Sn       Sn      17 16 03.5  +0.2
UGM    Wanagama            2.91 307   P        Pn      17 15 29.3  -0.2
YOGI   Yogyakarta          3.15 306   P        Pn      17 15 32.5  -0.2
UWJI   Ujung Watu          3.76 329   P        Pn      17 15 40.8  -0.3
BWJI   Bawean              3.81 357   P        Pn      17 15 41.7  -0.1
KPJI   Karang Pucung       4.54 301   P        Pn      17 15 51.9  +0.1
PLAI   Plampang            4.92  80   P        Pn      17 15 58.0  +1.0
XMIS   Christmas Isla      7.15 263   Pn       Pn      17 16 24.2  -3.5
BATI   Baumata            10.64  94   Pn       Pn      17 17 16.3  +0.8
          2.0nm,0.3s,baz=22,slow=10,SNR=1.8
          5.1nm,0.3s
MNAI   Manna              11.17 298   Pn       Pn      17 17 19.1  -3.6
GIRL   Giralia            12.96 174   Pn       Pn      17 17 45.1  -1.9
MBWA   Marble Bar         13.18 151            Pn      17 17 46.5  -3.7
FITZ   Fitzroy Crossi     14.95 125   Pn       Pn      17 18 13.7   0.0
          0.1nm,0.3s,baz=137,slow=13,SNR=1.8
FITZ                                  Sn       Sn      17 20 48.3   -10
          0.2nm,0.3s,baz=66,slow=1.4,SNR=1.6
          2.4nm,0.9s
KNRA   Kununurra          16.60 113            Pn      17 18 36.4  +1.5
MTN    Manton Dam         18.18 102   P        Pn      17 18 54.9  +0.6
MTN                                   IAmb     IAmb    17 19 24.1
          comp=Z,15nm,1.1s
WB0    Warramunga Arr     23.08 118   P        P       17 19 47.2  +0.3
WB0                                   IAmb     IAmb    17 20 07.1
          comp=Z,15nm,1.5s
WRA    Warramunga Arr     23.10 119   P        P       17 19 46.9  -0.1
          comp=Z,0.3nm,0.4s,baz=291,slow=11,SNR=11
          comp=Z,0.3nm,0.4s
WB2    Warramunga Arr     23.11 119   P        P       17 19 46.7  -0.5
WB2                                   IAmb     IAmb    17 20 24.9
          comp=Z,11nm,1.4s
WR0    Warramunga Arr     23.28 118   P        P       17 19 47.2  -1.6
ASAR   Alice Springs      24.43 127   P        P       17 20 01.1  +1.6
          comp=Z,1.2nm,0.6s,baz=305,slow=8.7,SNR=28
          comp=Z,1.2nm,0.6s
AS31   Alice Springs      24.43 127   P        P       17 20 00.4  +0.9
CMAR   Chiang Mai Arr     31.16 334   P        P       17 20 59.9  +0.3
          comp=Z,0.2nm,0.5s,baz=164,slow=10,SNR=3.5
          comp=Z,0.2nm,0.5s
SONM   Songino Array      57.55 355   P        P       17 24 29.4  -0.4
          comp=Z,1.0nm,0.7s,baz=174,slow=7.6,SNR=7.1
          comp=Z,1.0nm,0.7s
SONM   Songino Array      57.55 355   P        P       17 24 29.5  -0.2
MK31   Makanchi Array     62.50 337   P        P       17 25 03.3  -0.2
MK31                                  IAmb     IAmb    17 25 25.0
          comp=Z,1.6nm,1.2s
MKAR   Makanchi Array     62.50 337   P        P       17 25 03.0  -0.5
          comp=Z,0.8nm,0.5s,baz=150,slow=7.1,SNR=14
          comp=Z,0.8nm,0.5s
ZALV   Zalesovo Beam      67.69 343   P        P       17 25 36.1  -0.9
          comp=Z,0.9nm,0.4s,baz=158,slow=5.4,SNR=5.4
          comp=Z,0.9nm,0.4s
ABKAR  Akbulak array      74.74 327   P        P       17 26 19.6  -0.2
ABKAR  Akbulak array      74.74 327   P        P       17 26 19.9  +0.1
ABKAR                                 IAmb     IAmb    17 26 35.6
          comp=Z,3.4nm,1.4s
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*IDC **06** 17:15:09.8±3.4, 9°.46S×112°.84E, h0^{km}, mb3.6/6, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=176.4km s-min=19.9km az=49.0*

ISC 06 17:15:14.0±2.4**, 9°.3S**±0°.6×**113°.4E**±0°.6**, h26**^{km}**, n7, σ2^s.50**/8**, mb3.7**/6**, South of Jawa**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC        h  m  s  ISC
FITZ   Fitzroy Crossi     14.72 128   Pn       P       17 18 46.6  +0.1
          0.1nm,0.3s,baz=222,slow=22,SNR=2.3
FITZ                                  Sn       Sn      17 21 20.4  -2.6
          0.2nm,0.3s,baz=222,slow=23,SNR=1.4
          2.5nm,0.7s
WRA    Warramunga Arr     22.79 120   P        P       17 20 18.6  +3.7
          0.3nm,0.5s,baz=300,slow=11,SNR=4.6
          0.3nm,0.5s
ASAR   Alice Springs      24.22 129   P        P       17 20 31.7  +2.8
          1.1nm,0.7s,baz=305,slow=9.0,SNR=7.6
          1.1nm,0.7s
CMAR   Chiang Mai Arr     31.07 333   P        P       17 21 29.6  -0.6
          0.3nm,0.6s,baz=170,slow=41,SNR=2.4
          0.3nm,0.6s
SONM   Songino Array      57.23 354   P        P       17 24 59.8  +0.7
          0.7nm,0.6s,baz=173,slow=10.0,SNR=4.4
          0.7nm,0.6s
MKAR   Makanchi Array     62.37 336   P        P       17 25 34.1  -0.4
          0.6nm,0.5s,baz=153,slow=7.4,SNR=6.6
          0.6nm,0.5s
ZALV   Zalesovo Beam      67.50 342   P        P       17 26 06.2  -1.4
          0.7nm,0.4s,baz=127,slow=7.4,SNR=4.1
          0.7nm,0.4s
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*NEIC **06** 17:33:16.7±1.7, 28°.58N±0°.07×52°.27E±0°.09, h11^{km}±5^{km}, mb4.2/40, mb_Lg4.1(TEH), Error ellipse: s-maj=12.3km s-min=8.7km az=50.0*

*TEH **06** 17:33:18.6, 28°.60N×52°.33E, h21^{km}, ML4.1*

*MOS **06** 17:33:18.7±1.4, 28°.56N×52°.40E, h36^{km}, mb4.3/8, Error ellipse: s-maj=9.3km s-min=6.1km az=70.0*

*DSN **06** 17:33:18.5±0.5, 28°.59N×52°.44E, h10^{km}, ML4.0/12, Error ellipse: s-maj=6.8km s-min=4.2km az=110.0*

*IDC **06** 17:33:21.4±2.5, 28°.53N×52°.45E, h42^{km}±26^{km}, mb3.7/18, mbtmp3.9/21, ML3.9/3, Error ellipse: s-maj=15.9km s-min=13.5km az=36.0*

*OMAN **06** 17:33:24.6±0.1, 28°.20N×52°.41E, h150^{km}±1^{km}, mb3.7/11, ml4.1/14, Error ellipse: s-maj=2.5km s-min=0.9km az=4.0*

*SGS **06** 17:33:39.9, 26°.83N×52°.17E, h4^{km}, Ml3.5*

ISC 06 17:33:17.7±0.4**, 28°.57N**±0°.04×**52°.37E**±0°.03**, h16**^{km}**, n236, σ1^s.78**/260**, mb4.1**/47**, 5C, Southern Iran**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC        h  m  s  ISC
QIR1   Qir                 0.60  98   ePg      Pb      17 33 30.6  +0.8
QIR1                                  eSg      Sn      17 33 40.6  -0.4
QIR1                                  e                17 33 43.3
          comp=Z,77µm,0.6s
AHBU   AHRAM               0.99 288   ePg      Pb      17 33 37.2  +0.7
JHRM   Jahrom              1.06  93   ePg      Pg      17 33 39.7  +1.4
SHI    Shiraz              1.08   6   ePg      Pn      17 33 38.6  +0.2
SHI                                   eSg      Sn      17 33 53.4  +0.3
SHI                                   e                17 34 05.8
          comp=Z,39µm,0.6s
KAZ1   Kazerun             1.24 329   ePg      Pn      17 33 40.7  +0.3
KAZ1                                  e                17 34 12.8
          comp=Z,85µm,0.6s
LMD1   Lamerd              1.41 150   ePn      Pb      17 33 45.1  +1.5
LAR1   LAR                 1.98 116   ePn      Pb      17 33 53.4   0.0
KLNJ   Kolanjah            2.53 345   ePn      Pn      17 33 59.3  +0.9
KLNJ                                  e                17 34 46.8
          comp=Z,7µm,0.5s
SHMA   Al-Shehemyia        2.98 205    P       Pn      17 34 07.7  +3.5
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KHOR	Al-Khor Airpor	3.03	195	P	Pn	17 34 08.0	+3.0
SAKB	Bahrain	3.05	213	P	Pn	17 34 08.6	+3.3
IRAM	Ramesheh	3.23	0	Pn	Pn	17 34 09.1	+1.1
IRAM	Ramesheh	3.23	0	ePn	Pn	17 34 09.1	+1.1
IMEH	Mehriz	3.42	34	Pn	Pn	17 34 12.8	+2.2
IMEH	Mehriz	3.42	34	ePn	Pn	17 34 12.9	+2.3
IMEH				e		17 34 15.5	
	comp=Z,5μm,0.2s						
IBRJ	Brojen	3.47	344	ePn	Pn	17 34 11.7	+0.4
ISAD	Sadrabad	3.52	18	ePn	Pn	17 34 14.0	+1.9
GENO	Geno	3.56	108	ePn	Pn	17 34 13.6	+1.2
GENO				e		17 34 34.9	
	comp=Z,2μm,0.3s						
JRN	Qarnain Island	3.63	173	ePn	Pn	17 34 16.0	+2.7
JRN	Qarnain Island	3.63	173	P	Pn	17 34 15.1	+1.8
IGAR	Gharneh	3.84	356	ePn	Pn	17 34 18.1	+1.8
IBND	Bandar-abas	3.85	106	ePn	Pn	17 34 18.3	+2.0
TRNA	Turayna	3.95	195	P	Pn	17 34 20.1	+2.4
NGRK	Negar Kerman	3.96	73	ePn	Pn	17 34 20.4	+2.2
NGRK				e		17 35 11.0	
	comp=Z,1μm,0.2s						
KHGB	Koh Gabri	4.01	62	ePn	Pn	17 34 20.9	+2.2
KHGB				e		17 34 21.7	
	comp=Z,2μm,0.3s						
SMRA	Abu-Samra	4.05	200	P	Pn	17 34 22.0	+3.0
ICHK	Chekchek	4.07	25	ePn	Pn	17 34 22.1	+2.6
KRBR	Kerman	4.08	69	ePn	Pn	17 34 22.2	+2.4
AMIS	Naft Sefid	4.09	320	ePn	Pn	17 34 20.4	+0.8
TVBK	TV Kerman	4.09	69	ePn	Pn	17 34 22.1	+2.2
TVBK				e		17 34 40.1	
	comp=Z,2μm,0.7s						
IBAF	Bafgh	4.09	42	Pn	Pn	17 34 21.6	+1.8
IBAF	Bafgh	4.09	42	ePn	Pn	17 34 21.6	+1.8
SHME	Shamm	4.18	126	ePn	Pn	17 34 22.5	+1.6
SHME	Shamm	4.18	126	P	Pn	17 34 22.3	+1.4
SHME	Shamm	4.18	126	P	Pn	17 34 22.0	+1.1
UMQ	Umm Al-Quwin	4.22	135	P	Pn	17 34 24.0	+2.6
UMQ				S	Sn	17 35 15.9	+5.6
NASN	Na'in	4.24	5	ePn	Pn	17 34 23.3	+1.4
YZKH	Yazd	4.27	26	ePn	Pn	17 34 24.9	+2.8
IPIR	Pirpir	4.30	343	ePn	Pn	17 34 23.2	+0.4
IZEF	Zefreh	4.32	360	ePn	Pn	17 34 24.2	+1.2
BANOM	Banah	4.38	126	ePn	Pn	17 34 25.6	+2.0
BANOM	Banah	4.38	126	P	Pn	17 34 25.0	+1.4
	SNR=45						
BANOM				S	Sn	17 35 15.6	+1.3
BANOM	Banah	4.38	126	i P	Pn	17 34 24.8	+1.2
	SNR=45						
SLWR	Sila	4.52	188	P	Pn	17 34 28.0	+2.5
SLWR				S	Sn	17 35 19.0	+1.3
NAZ	Nazwa, Dubai	4.62	140	ePn	Pn	17 34 29.4	+2.5
NAZ	Nazwa, Dubai	4.62	140	P	Pn	17 34 29.1	+2.2
	SNR=11						
NAZ				S	Sn	17 35 21.0	+0.8
	SNR=6.9						
NAZ	Nazwa, Dubai	4.62	140	i P	Pn	17 34 29.0	+2.1
	SNR=11						
MASF	Masafi	4.64	132	P	Pn	17 34 29.0	+1.8
	SNR=5.1						
MASF				S	Sn	17 35 21.6	+0.8
MSFE	Esma-Masafi	4.65	133	ePn	Pn	17 34 28.9	+1.6
MSFE	Esma-Masafi	4.65	133	i P	Pn	17 34 28.8	+1.4
	SNR=16						
CHMN	Cheshme madani	4.70	73	ePn	Pn	17 34 30.5	+2.2
ASUD	Al Ashush, Dub	4.73	145	ePn	Pn	17 34 30.8	+2.4
ASUD	Al Ashush, Dub	4.73	145	P	Pn	17 34 31.0	+2.5
	SNR=30						
ASUD				S	Sn	17 35 24.5	+1.5
ASUD	Al Ashush, Dub	4.73	145	i P	Pn	17 34 30.1	+1.7
	SNR=30						
KHNJ	Kahnooj	4.74	96	ePn	Pn	17 34 30.6	+2.0
ANAR	Anarak	4.75	14	ePn	Pn	17 34 30.6	+1.7
FAQ	Al Faqa, Dubai	4.77	142	ePn	Pn	17 34 31.0	+2.0
FAQ	Al Faqa, Dubai	4.77	142	P	Pn	17 34 31.0	+2.0
	SNR=7.0						
FAQ				S	Sn	17 35 24.0	+0.1
	SNR=6.0						
FAQ	Al Faqa, Dubai	4.77	142	i P	Pn	17 34 30.4	+1.4
	SNR=7.0						
IKLH	Kolahrood	4.79	352	ePn	Pn	17 34 30.8	+1.4
NHRD	Haradh	4.87	219	S	Sn	17 35 28.5	+2.2
NHRD				P	Pn	17 34 33.2	+2.9
QYSM	Um Kedad	4.90	263	P	Pg	17 34 54.4	+2.8
MZWR	Madinat Zayed	4.97	164	ePn	Pn	17 34 34.1	+2.4
MZWR	Madinat Zayed	4.97	164	P	Pn	17 34 33.9	+2.2
UOSS	Minazif	4.97	136	Pn	Pn	17 34 32.1	+0.4
UOSS				Sn	Sn	17 35 26.8	-2.2
UOSS	Minazif	4.97	136	ePn	Pn	17 34 33.3	+1.5
UOSS	Minazif	4.97	136	i P	Pn	17 34 32.7	+0.9
	SNR=8.6						
HATD	Hatta, Dubai	5.02	137	ePn	Pn	17 34 34.1	+1.7
HATD	Hatta, Dubai	5.02	137	P	Pn	17 34 35.0	+2.6
	SNR=14						
HATD	Hatta, Dubai	5.02	137	i P	Pn	17 34 33.3	+1.0
	SNR=14						
ASHO	Ashiyiah	5.08	139	ePn	Pn	17 34 35.4	+2.1
ASHO	Ashiyiah	5.08	139	P	Pn	17 34 35.0	+1.7
	SNR=50						
ASHO				S	Sn	17 35 31.0	-0.7
	SNR=6.2						
ASHO	Ashiyiah	5.08	139	i P	Pn	17 34 34.7	+1.4
	SNR=50						
QAMS	Qamsar	5.22	351	ePn	Pn	17 34 36.9	+1.5
KBAM	BAM	5.36	82	ePn	Pn	17 34 40.1	+2.9
KBAM				e		17 34 42.2	
	comp=Z,2μm,0.2s						
ALNE	Al Ain	5.42	145	ePn	Pn	17 34 39.7	+1.8
ALNE	Al Ain	5.42	145	P	Pn	17 34 39.8	+2.0
	SNR=7.3						
ALNE				S	Sn	17 35 41.7	+1.8
	SNR=6.5						
ALNE	Al Ain	5.42	145	i P	Pn	17 34 39.4	+1.5
	SNR=7.5						
KHMZ	Khomeyn	5.56	339	ePn	Pn	17 34 40.7	+0.7
JASK	Jask - Hormozg	5.58	118	ePn	Pn	17 34 41.3	+1.2
MZR	Muzera	5.63	170	ePn	Pn	17 34 43.1	+2.3
MZR	Muzera	5.63	170	P	Pn	17 34 44.0	+3.2
	SNR=9.0						
MZR	Muzera	5.63	170	i P	Pn	17 34 42.8	+2.0
	SNR=8.9						
ISFB	Sefidab	5.77	359	ePn	Pn	17 34 43.0	+0.2
TPRV	Parvadeh(Tabas	5.79	39	ePn	Pn	17 34 45.1	+2.0
RMAH	Rumah	5.86	238	S	Sn	17 35 49.4	-1.4
RMAH				P	Pn	17 34 45.6	+1.7
IKFM	Kafar-mosalman	6.29	323	ePn	Pn	17 34 50.7	+1.0
ASAO	Ashtian	6.29	342	ePn	Pn	17 34 51.1	+1.0
UMZA	Um Al Zommool	6.35	156	ePn	Pn	17 34 52.5	+1.9
ARQ	Araqi	6.41	143	P	Pn	17 34 52.4	+0.9
	SNR=63						
ARQ				S	Sn	17 36 04.3	-0.1
IVRN	Varamin	6.43	355	e		00 00 00.0	
	comp=Z,0.0nm,0.0s						
TKDS	Koohdasht(Taba	6.47	38	ePn	Pn	17 34 54.4	+1.9
HSAM	Samen	6.49	331	ePn	Pn	17 34 53.8	+1.0
TNSJ	Nastanj	6.49	33	ePn	Pn	17 34 55.0	+2.3
TABS	Tabas	6.50	38	ePn	Pn	17 34 54.5	+1.7
HOQ	Hoqain	6.66	137	P	Pn	17 34 56.0	+1.0
	SNR=28						
HOQ				S	Sn	17 36 07.9	-2.6
BSRN	Basiran	6.75	58	ePn	Pn	17 34 57.2	+0.9
ASYS		7.18	263	P	Pn	17 35 02.2	+0.2
BIDO	Bidbid	7.21	133	P	Pn	17 35 04.4	+1.9
BIDO				S	Sn	17 36 21.1	-3.0
NHDN	Nehbandan	7.23	65	ePn	Pn	17 35 04.3	+1.4
BSY	Bisya	7.25	142	P	Pn	17 35 04.0	+0.9
	SNR=61						
BSY				S	Sn	17 36 21.4	-3.7
CHTH	Charan	7.40	352	ePn	Pn	17 35 06.1	+0.8
AFRZ	Afriz	7.48	48	ePn	Pn	17 35 07.9	+1.6
SMDO	Samad	7.50	136	P	Pn	17 35 08.0	+1.4
	SNR=13						
SMDO				S	Sn	17 36 31.0	-0.3
	SNR=7.6						
IGHG	Ghaleghazi	7.59	321	ePn	Pn	17 35 08.2	+0.3
WSAR	Wadi Sarin	7.74	132	P	Pn	17 35 10.2	+0.4
	comp=Z,2.0nm,0.3s,baz=321,slow=6.3,SNR=19						
WSAR				S	Sn	17 36 34.8	-2.3
	comp=Z,8.0nm,0.4s,baz=146,slow=20,SNR=7.8						
	comp=Z,4.1nm,0.3s						
WSAR	Wadi Sarin	7.74	132	P	Pn	17 35 10.1	+0.3
	SNR=10						
CHBR	Chabahar	7.81	110	ePn	Pn	17 35 10.7	0.0
IDHR	Dehrash	7.96	322	ePn	Pn	17 35 12.6	-0.4
SHRO	Shahrood	8.02	22	ePn	Pn	17 35 15.1	+1.4
WBK	Wadi Bani Khal	8.40	133	P	Pn	17 35 19.0	+0.1
	SNR=7.1						
NGCH	Negor - Chabah	8.45	110	ePn	Pn	17 35 20.1	+0.7
SRVN	Saravan	8.94	95	ePn	Pn	17 35 27.5	+1.2
SBZV	Sabzevar	8.96	28	ePn	Pn	17 35 28.5	+1.7
MHTO	MHTO	9.10	145	P	Pn	17 35 28.8	+0.4
MHTO				S	Sn	17 37 06.0	-4.5
TBJM	Torbat-e-JAM	9.50	43	ePn	Pn	17 35 35.5	+1.4
IPAY	Payeh	9.64	34	ePn	Pn	17 35 38.5	+2.4
ISFR	Sfrayin	9.70	28	ePn	Pn	17 35 39.1	+2.3
DOK	Doka	10.03	170	P	Pn	17 35 40.8	-0.4
DOK				P		17 35 40.8	
DOK				S	Sn	17 37 27.0	-6.5
BJRD	Bojnurd	10.04	24	ePn	Pn	17 35 43.3	+1.9
HRA	Herat	10.23	53	Pn	Pn	17 35 44.1	+0.1
GEYT	Alibeck	10.50	26	P	Pn	17 35 50.0	+2.4
	comp=Z,1.3nm,0.3s,baz=209,slow=20,SNR=6.7						
	comp=Z,3.1nm,0.4s						
GEYT	Alibeck	10.50	26	Pn	Pn	17 35 46.9	-0.7
GYA0	ALIBECK ARRAY	10.50	26	P	Pn	17 35 47.2	-0.4
GYA0B	ALIBECK ARRAY	10.50	26	Pn	Pn	17 35 47.2	-0.4
WHFO	Wadi Hawf	10.68	173	P	Pn	17 35 48.7	-1.4
WHFO				S	Sn	17 37 41.3	-8.0
DMTO	DMTO	11.05	167	P	Pn	17 35 55.0	-0.3
	SNR=29						
DMTO				S	Sn	17 37 49.0	-10
ABTO	Aybut	11.19	175	P	Pn	17 35 56.2	-0.9
ABTO				S	Sn	17 37 55.4	-6.6
GEVA	Gevas	12.44	324	Pn	Pn	17 36 10.1	-4.2
MARD	Mardin	13.06	315	Pn	Pn	17 36 19.2	-3.6
MAK	Makhachkala	14.89	346	eP	Pn	17 36 44.3	-3.3
MAK				eS	Sn	17 39 27.0	-5.2
MAK				pmax	pmax		
	comp=Z,18nm,0.3s						
MAK				MLR	MLR		
	comp=Z,280nm,17.0s						
KBL	Kabul	15.40	63	P	Pn	17 36 56.4	+1.8
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBL	Kabul	15.40	63	P	Pn	17 36 56.4	+1.8
KBL				IAmb	IAmb	17 36 58.6	
	comp=Z,9.2nm,0.9s						
ZEI	Tsey	15.76	336	eP	Pn	17 36 59.6	+0.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	16.94	336	i P	P	17 37 15.6	-0.2
KBZ				pmax	pmax		
	comp=Z,12nm,3.8s						
BNN	Bunyan	17.13	311	Pn	Pn	17 37 14.9	-1.7
CHGR	Chuyangaron	17.20	50	P	P	17 37 18.5	-0.5
CHGR	Chuyangaron	17.20	50	P	Pn	17 37 18.2	+0.8
CHGR				IAmb	IAmb	17 37 27.4	
	comp=Z,16nm,0.8s						
KIV	Kislovodsk	17.21	336	eP	P	17 37 19.5	+0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GAR	Garm	18.16	50	P	Pn	17 37 28.9	-0.4
GAR				IAmb	IAmb	17 37 32.0	
	comp=Z,19nm,0.8s						
NIL	Nilore	18.57	69	P	P	17 37 33.4	-0.7
NIL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NIL	Nilore	18.57	69	P	P	17 37 33.4	-0.7
NIL				IAmb	IAmb	17 37 40.3	
	comp=Z,8.3nm,0.5s						
BTK	Batken	19.03	48	P	P	17 37 38.6	-0.5
BTK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTK	Batken	19.03	48	P	P	17 37 38.6	-0.5
BRTR	Keskin Array B	19.05	311	P	Pn	17 37 41.0	+0.9
	comp=Z,0.2nm,0.3s,baz=44,slow=31,SNR=5.0						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	19.05	311	P	Pn	17 37 41.0	+0.9
DRK	Karamyk	19.40	51	P	P	17 37 44.0	+0.7
DRK				IAmb	IAmb	17 37 47.4	
	comp=Z,10nm,0.6s						
KK31	Karatay Array	20.59	40	P	P	17 37 55.5	-0.5
KK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KK31	Karatay Array	20.59	40	P	P	17 37 55.5	-0.5
KKAR	Karatay Array	20.59	40	P	P	17 37 55.1	-0.9
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KKAR	Karatay Array	20.59	40	P	P	17 37 55.1	-0.9
KKAR	Karatay Array	20.59	40	P	P	17 37 55.4	-0.6
KKAR				IAmb	IAmb	17 38 02.5	
	comp=Z,4.9nm,1.1s						
ABKAR	Akbulak array	21.46	14	P	P	17 38 05.2	-0.1
ABKAR	Akbulak array	21.46	14	P	P	17 38 05.3	0.0
ABKAR				IAmb	IAmb	17 38 11.4	
	comp=Z,3.0nm,0.6s						
AML	Almayashu	21.96	46	i P	P	17 38 12.1	+1.0
	SNR=12						
AKTO	Aktyubinsk	22.26	10	P	P	17 38 14.2	+0.4
	comp=Z,0.8nm,0.3s,baz=187,slow=9.1,SNR=4.5						
	comp=Z,0.8nm,0.3s						
KSH	Kashi	22.34	55	P	P	17 38 10.9	-4.1
KSH				pP	pP	17 38 15.0	-4.8
KSH				sP	sP	17 38 19.2	-2.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KARP	Karpathos	22.44	294		P	17 38 11.6	-4.4
AAK	Ala-Archa	22.73	46	P	P	17 38 20.1	+1.0
	comp=Z,1.8nm,0.6s,baz=222,slow=9.4,SNR=7.1						
	comp=Z,1.8nm,0.6s						
AAK	Ala-Archa	22.73	46	ceP	P	17 38 21.3	+2.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	22.73	46	P	P	17 38 17.8	-1.4
BELG	Belogornoye	24.07	353	i P	P	17 38 34.5	+2.4
BELG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
IDI	Anoyia	24.22	293	P	P	17 38 33.8	0.0
TARG	Taragay, Kyrgy	24.49	51	P	P	17 38 37.5	+0.8
PRZ	Przheval'sk	25.21	50	P	P	17 38 42.7	-0.2
PRZ				pmax	pmax		
	comp=Z,18nm,1.2s						
PRZ	Przheval'sk	25.21	50	P	P	17 38 42.7	-0.2
MLR	Muntele Rosu	26.85	316	P	P	17 39 00.1	+2.4
	comp=Z,1.4nm,0.5s,baz=236,slow=1.7,SNR=3.4						
	comp=Z,1.4nm,0.5s						
MLR	Muntele Rosu	26.85	316	P	P	17 38 57.7	+0.1
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MLR	Muntele Rosu	26.85	316	P	P	17 38 57.7	+0.1
MLR				IAmb	IAmb	17 39 07.8	
	comp=Z,4.5nm,0.8s						
BRVK	Borovoye	27.82	23	i P	P	17 39 08.3	+2.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.4s						
BRVK	Borovoye	27.82	23	P	P	17 39 06.0	-0.1
BRVK				IAmb	IAmb	17 39 43.2	
	comp=Z,4.8nm,1.6s						
BURAR	Bucovina Array	28.38	319	P	P	17 39 11.1	-0.2
BUR08	Bucovina Ar. S	28.41	320	P	P	17 39 11.6	+0.1
BUR08				IAmb	IAmb	17 39 16.9	
	comp=Z,4.7nm,1.6s						
MAKZ	Makanchi	29.42	44	P	P	17 39 20.9	+0.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAKZ	Makanchi	29.42	44	P	P	17 39 20.9	+0.4
MAKZ				IAmb	IAmb	17 39 21.8	
	comp=Z,2.9nm,1.0s						
KURBB	Kurchatov Arra	29.59	35	P	P	17 39 22.4	+0.6
	comp=Z,0.9nm,0.8s,baz=234,slow=9.1,SNR=7.8						
	comp=Z,0.9nm,0.8s						
MK31	Makanchi Array	29.61	44	P	P	17 39 21.8	-0.3
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	29.61	44	P	P	17 39 21.8	-0.3
MKAR	Makanchi Array	29.61	44	P	P	17 39 22.7	+0.6
	comp=Z,1.0nm,0.7s,baz=228,slow=7.4,SNR=8.0						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	29.61	44	P	P	17 39 22.6	+0.5
MKAR	Makanchi Array	29.61	44	P	P	17 39 22.6	+0.5
KURK	Kurchatov	29.69	35	i P	P	17 39 23.8	+1.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
KURK	Kurchatov	29.69	35	P	P	17 39 22.5	-0.2
KURK				IAmb	IAmb	17 40 04.6	
	comp=Z,5.0nm,1.6s						
SCTE	Santa Cesarea	30.09	301	P	P	17 39 23.8	-2.6
WMQ	Urumqi	32.04	52	eP	P	17 39 45.5	+1.9
WMQ				pP	sP	17 39 51.8	+0.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=N,200nm,21.1s						
WMQ				LR	LR		
	comp=Z,120nm,17.7s						
NRCA	Norcia	34.59	305	P	P	17 40 03.6	-2.3
NRCA				IAmb	IAmb	17 40 19.1	
	comp=Z,4.2nm,1.2s						
ZAA0	Zalesovo Array	34.67	34	P	P	17 40 05.8	-0.5
ZAA0				IAmb	IAmb	17 40 09.7	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	34.67	34	P	P	17 40 06.6	+0.2
	comp=Z,2.2nm,0.4s,baz=246,slow=9.1,SNR=8.9						
	comp=Z,2.2nm,0.4s						
ZALV	Zalesovo Beam	34.67	34	P	P	17 40 04.9	-1.5
TRI	Trieste	34.81	310	P	P	17 40 05.2	-2.5
TRI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TRI	Trieste	34.81	310	P	P	17 40 05.2	-2.5
MBAR	Mbarara	35.65	219	P	P	17 40 17.2	+1.8
	comp=Z,3.8nm,0.2s,baz=17,slow=3.6,SNR=4.1						
	comp=Z,3.8nm,0.2s						
GERES	GERESS Array B	35.83	315	P	P	17 40 18.0	+1.5
	comp=Z,0.1nm,0.3s,baz=106,slow=10,SNR=2.2						
	comp=Z,0.1nm,0.3s						
GOMU	GeErMu	36.41	67	P	P	17 40 23.1	+1.1
GOMU				pP	pP	17 40 26.5	-0.8
GOMU				sP	sP	17 40 30.3	+0.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,27nm,5.8s						
CLL	Collm	37.14	319	eP	P	17 40 27.0	-0.6
CLL	Collm	37.14	319	eP	P	17 40 27.0	-0.6
CLL				i pP	pP	17 40 31.2	-1.6
	comp=Z,3.0nm,1.0s						
FIA1	FINESS Array S	37.24	339	P	P	17 40 27.4	-0.9
FIA1				IAmb	IAmb	17 40 34.7	
	comp=Z,12nm,1.4s						
FINES	FINESS Array B	37.24	339	P	P	17 40 28.1	-0.2
	comp=Z,1.2nm,0.4s,baz=139,slow=12,SNR=19						
	comp=Z,1.2nm,0.4s						
FINES	FINESS Array B	37.24	339	P	P	17 40 27.2	-1.1
FINES	FINESS Array B	37.24	339	P	P	17 40 27.2	-1.1
SENIN	Lac Senin/Sane	39.35	309	P	P	17 40 44.6	-1.9
SENIN				IAmb	IAmb	17 40 57.3	
	comp=Z,5.4nm,1.2s						
GTA	Gaotai	40.39	62	eP	P	17 40 56.2	+1.1
GTA				sP	sP	17 41 02.5	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NC405	NORSAR Array S	42.28	332	P	P	17 41 09.5	-0.8
NOA	NORSAR Array B	42.45	332	P	P	17 41 10.7	-0.9
	comp=Z,0.2nm,0.4s,baz=121,slow=8.1,SNR=3.5						
	comp=Z,0.2nm,0.4s						
CHTO	Chiang Mai	43.51	92	P	P	17 41 19.9	-0.8
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	Chiang Mai	43.51	92	P	P	17 41 19.9	-0.8
CHTO				IAmb	IAmb	17 41 22.5	
	comp=Z,4.3nm,0.9s						
PZH	PanZhiHua	43.58	81	P	P	17 41 19.6	-1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.6s						
CMAR	Chiang Mai Arr	43.64	93	P	P	17 41 22.1	+0.3
	comp=Z,0.9nm,0.5s,baz=284,slow=9.1,SNR=9.0						
	comp=Z,0.9nm,0.5s						
KEV	Kevo	43.73	348	P	P	17 41 20.6	-1.2
KEV				pmax	pmax		
	comp=Z,15nm,1.2s						
KEV	Kevo	43.73	348	P	P	17 41 20.6	-1.2
ARCES	ARCESS Array B	43.84	347	P	P	17 41 22.9	+0.2
	comp=Z,1.7nm,0.7s,baz=131,slow=6.8,SNR=15						
	comp=Z,1.7nm,0.7s						
ARCES	ARCESS Array B	43.84	347	P	P	17 41 22.2	-0.5
ARCES				pmax	pmax		
	comp=Z,17nm,1.6s						
ARCES	ARCESS Array B	43.84	347	P	P	17 41 22.2	-0.5
NRIK	Noril'sk	45.58	17	ceP	P	17 41 37.8	+1.2
NRIK				pmax	pmax		
	comp=Z,6.0nm,2.2s						
SONM	Songino Array	45.60	50	P	P	17 41 36.9	-0.3
	comp=Z,0.2nm,0.3s,baz=224,slow=6.2,SNR=3.6						
	comp=Z,0.2nm,0.3s						
ULN	Ulaanbaatar	46.04	50	ceP	P	17 41 44.6	+3.8
ULN				pmax	pmax		
	comp=Z,6.0nm,3.0s						
ULN	Ulaanbaatar	46.04	50	P	P	17 41 40.9	+0.1
HHC	Hu-ho-hao-te	49.33	59	eP	P	17 42 06.0	-0.3
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,4.5s						
TORD	Torodi Ar. Bea	49.42	263	P	P	17 42 07.1	-0.1
	comp=Z,0.6nm,0.4s,baz=49,slow=8.6,SNR=11						
	comp=Z,0.6nm,0.4s						
TIXI	Tiksi	58.92	21	P	P	17 43 14.9	-0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TIXI	Tiksi	58.92	21	P	P	17 43 14.9	-0.7
TIXI				IAmb	IAmb	17 43 35.0	
	comp=Z,2.7nm,1.4s						
LBTB	Lobatse	59.17	208	P	P	17 43 17.7	-0.3
LBTB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LBTB	Lobatse	59.17	208	P	P	17 43 17.7	-0.3
KLR	Kul'dur	62.26	47	ceP	P	17 43 37.7	-1.1
KLR				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KSRS	Korea Array	62.44	60	P	P	17 43 39.5	-0.6
	comp=Z,1.2nm,0.7s,baz=280,slow=7.3,SNR=4.6						
	comp=Z,1.2nm,0.7s						
SEY	Seymchan	69.33	29	i P	P	17 44 25.2	+1.1
BILL	Bilibino	72.14	21	⇑eP	P	17 44 42.5	+1.4
BILL				e		17 47 23.8	
BILL				eS	SKiKP	17 54 33.8	+17
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TOLK	Toolik Lake Re	81.74	8	P	P	17 45 35.3	+0.1
TOLK				IAmb	IAmb	17 46 24.8	
	comp=Z,7.3nm,1.6s						
INK	Inuvik	83.32	2	P	P	17 45 43.8	+0.4
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	Inuvik	83.32	2	P	P	17 45 43.8	+0.4
INK				IAmb	IAmb	17 45 59.9	
	comp=Z,4.7nm,1.4s						
BMAR	Burnt Mountain	83.45	7	P	P	17 45 45.0	+0.8
IMAR	Indian Mountai	83.64	10	P	P	17 45 45.0	-0.1
YKA	Yellowknife Ar	88.66	354	P	P	17 46 09.9	+0.1
	comp=Z,0.8nm,0.9s,baz=9.4,slow=5.5,SNR=9.6						
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	88.66	354	P	P	17 46 10.0	+0.1
WRA	Warramunga Arr	92.61	111	P	P	17 46 27.8	-1.2
	comp=Z,0.4nm,0.9s,baz=317,slow=3.9,SNR=2.3						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	94.08	115	P	P	17 46 34.9	-0.9
	comp=Z,0.3nm,0.6s,baz=304,slow=4.7,SNR=6.5						
	comp=Z,0.3nm,0.6s						

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*NEIC **06** 17:47:04.7±2.9, 5°.28S±0°.08×153°.64E±0°.07, h33^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=13.9km s-min=7.4km az=215.0*

*IDC **06** 17:47:07.5±2.7, 5°.38S×153°.55E, h65^{km}±20^{km}, mb3.5/9, mbtmp3.9/10, MS2.8/1, Error ellipse: s-maj=25.6km s-min=13.8km az=76.0*

ISC 06 17:47:04.4±0.6, **5°.27S**±0°.07×**153°.70E**±0°.07, **h43^{km}, n34, σ1.^{s}43**/38, **mb4.0**/12, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.87	305		Pn	17 47 34.3	+0.2
KRVT	Keravat (AS076	1.93	300	P	Pn	17 47 36.0	+1.2
	55nm,0.3s,baz=226,slow=1.2,SNR=24						
KRVT				S	Sn	17 48 00.2	+2.5
	156nm,0.4s,baz=341,slow=23,SNR=5.4						
KRVT				LR	LR	17 48 39.2	
	comp=Z,264nm,20.7s,baz=275,slow=49						
HNR	Honiara	7.45	124	Pn	Pn	17 48 52.8	+2.2
PMG	Port Moresby	7.68	237	P	Pn	17 48 55.4	+1.5
	6.7nm,0.3s,baz=52,slow=11,SNR=12						

PMG				S	Sn	17 50 19.6	0.0
	19nm,0.4s,baz=150,slow=21,SNR=7.3						
PMG				LR	LR	17 51 58.4	
	comp=Z,80nm,20.9s,baz=34,slow=39						
PMG	Port Moresby	7.68	237		Pn	17 48 53.1	-0.7
PATS	Pohnpei	12.88	21	Pn	Pn	17 50 03.0	-2.0
SANVU	Saraoutou	16.68	128	P	Pn	17 50 51.4	-3.8
DZM	Mont Dzumac	20.76	145	P	P	17 51 43.2	+1.3
	3.7nm,0.4s,baz=224,slow=8.5,SNR=13						
	3.7nm,0.4s						
DZM	Mont Dzumac	20.76	145	P	P	17 51 43.1	+1.2
DZM				IAmb	IAmb	17 51 55.7	
	comp=Z,17nm,1.2s						
OUENC	Ouen Island, N	21.26	145	P	P	17 51 47.9	+0.7
OUENC				IAmb	IAmb	17 52 05.5	
	comp=Z,28nm,1.2s						
SAUI	Saumlaki	22.41	262	P	P	17 51 57.7	-2.0
MTN	Manton Dam	23.51	250	P	P	17 52 10.5	-0.4
WR0	Warramunga Arr	23.68	230	P	P	17 52 12.6	+0.1
WR0				IAmb	IAmb	17 52 21.4	
	comp=Z,9.1nm,1.2s						
WB0	Warramunga Arr	23.68	231	P	P	17 52 11.2	-1.3
WRA	Warramunga Arr	23.83	231	P	P	17 52 13.2	-0.6
	comp=Z,0.3nm,0.6s,baz=55,slow=10,SNR=7.8						
WRA				PcP	PcP	17 55 56.5	+0.1
	comp=Z,0.6nm,0.6s,baz=55,slow=2.0,SNR=7.6						
	comp=Z,0.3nm,0.6s						
ARMA	Armidale	25.09	184	P	P	17 52 26.8	+1.5
ARMA				IAmb	IAmb	17 52 39.1	
	comp=Z,13nm,1.4s						
AS31	Alice Springs	26.43	224	P	P	17 52 36.1	-1.3
ASAR	Alice Springs	26.43	224	P	P	17 52 36.5	-1.0
	comp=Z,0.3nm,0.6s,baz=55,slow=8.9,SNR=17						
ASAR				PcP	PcP	17 56 02.5	+0.4
	comp=Z,0.8nm,0.8s,baz=64,slow=2.6,SNR=7.7						
	comp=Z,0.3nm,0.6s						
KNRA	Kununurra	26.58	245	P	P	17 52 39.6	+0.8
FITZ	Fitzroy Crossi	30.23	243	P	P	17 53 08.8	-2.5
	comp=Z,1.4nm,0.6s,baz=30,slow=7.2,SNR=7.9						
	comp=Z,1.4nm,0.6s						
FITZ	Fitzroy Crossi	30.23	243	P	P	17 53 09.4	-2.0
BKZ	Black Stump Fm	39.55	152	P	P	17 54 31.8	+0.4
BKZ				IAmb	IAmb	17 54 37.3	
	comp=Z,10nm,1.1s						
TUWZ	Tuamarina	40.29	156	P	P	17 54 37.8	+0.3
CMWZ	Cape Campbell	40.67	156	P	P	17 54 43.5	+2.8
LTZ	Lake Taylor	40.82	159	P	P	17 54 41.5	-0.4
CMAR	Chiang Mai Arr	58.89	295	P	P	17 57 00.5	+0.9
	comp=Z,1.9nm,0.7s,baz=116,slow=5.1,SNR=17						
	comp=Z,1.9nm,0.7s						
CMAR	Chiang Mai Arr	58.89	295	P	P	17 56 59.9	+0.4
SONM	Songino Array	67.20	328	P	P	17 57 54.8	+0.5
	comp=Z,0.6nm,0.7s,baz=137,slow=5.1,SNR=3.6						
	comp=Z,0.6nm,0.7s						
VNDA	Vanda	72.33	178	P	P	17 58 26.0	+0.7
	comp=Z,0.9nm,0.9s,baz=309,slow=7.5,SNR=2.9						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	72.33	178	P	P	17 58 25.1	-0.2
VNDA				IAmb	IAmb	17 58 36.5	
	comp=Z,7.4nm,1.6s						
MKAR	Makanchi Array	81.27	319	P	P	17 59 16.4	+0.1
	comp=Z,1.3nm,0.7s,baz=91,slow=7.4,SNR=14						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	81.27	319	P	P	17 59 16.5	+0.3
ZALV	Zalesovo Beam	82.04	326	P	P	17 59 21.2	+1.1
	comp=Z,0.7nm,0.5s,baz=104,slow=5.4,SNR=2.9						
	comp=Z,0.7nm,0.5s						
TORD	Torodi Ar. Bea	151.31	288	PKPbc	PKPbc	18 06 53.7	-0.8
	comp=Z,1.0nm,0.5s,baz=66,slow=2.8,SNR=11						

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*NEIC **06** 17:59:58.5±2.5, 9°.57N±0°.04×83°.86W±0°.02, h25^{km}±7^{km}, mb3.8/1, Error ellipse: s-maj=5.6km s-min=3.1km az=196.0*

*UCR **06** 17:59:59.1±1.5, 9°.58N×83°.87W, h26^{km}±1^{km}, MW4.1, mb3.8(NEIC)*

ISC 06 17:59:58.6±0.9, **9°.55N**±0°.03×**83°.89W**±0°.03, **h32**^{km}±5^{km}, **n74**, σ**1^{s}01**/90, **7C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDM	Cerro de Muert	0.13	88	eP	Pn	18 00 04.7	-0.1
CDM				eS	Sb	18 00 09.4	+0.1
RIMA	Rio Macho	0.22	7	Pg	Pb	18 00 04.9	-0.6
RIMA				Sg	Sb	18 00 09.7	-0.5
RIMA	Rio Macho	0.22	7	eP	Pb	18 00 05.0	-0.6
LCR2	La Lucha 2	0.22	330	eP	Pb	18 00 05.1	-0.5
LCR2				eS	Sb	18 00 10.2	-0.1
PEZE	Perez Zeledon,	0.27	128	Pg	Pb	18 00 05.5	-0.5
PEZE				Sg	Sn	18 00 11.3	-0.1
PEZE	Perez Zeledon,	0.27	128	eP	Pb	18 00 05.8	-0.2
EDDO	Dominical	0.29	175	eP	Pn	18 00 06.4	-0.2
EDDO				eS	Sn	18 00 12.4	+0.5
OCM	Ochomogo	0.35	349	eP	Pb	18 00 06.5	-0.6
RAFA	San Farael, Vo	0.41	11	eP	Pb	18 00 07.7	-0.5
SJS	Escuela Geolog	0.42	338	eP	Pb	18 00 07.7	-0.3
VTCV	VTCV, Calle Va	0.46	21	eP	Pb	18 00 08.2	-0.5
VTRT	Volcan Turrial	0.46	12	eP	Pb	18 00 08.2	-0.6
CVTR	Volcan Turrial	0.49	16	Pg	Pb	18 00 08.7	-0.6
CVTR				Sg	Sb	18 00 15.8	-0.8
CVTR	Volcan Turrial	0.49	16	eP	Pb	18 00 08.7	-0.6
HDC	Heredia	0.50	334	Pg	Pb	18 00 08.6	-0.6
HDC					Sb	18 00 16.8	+0.2
HDC	Heredia	0.50	334	eP	Pb	18 00 08.8	-0.5
HDC3	Heredia 3	0.50	334	eP	Pb	18 00 09.1	-0.2
SRBA	San Rafael, Bu	0.61	121		Pb	18 00 10.4	-0.6
SRBA	San Rafael, Bu	0.61	121	eP	Pb	18 00 10.4	-0.6
DRK0	Durika	0.70	114		Pb	18 00 11.5	-1.0
DRK0	Durika	0.70	114	eP	Pb	18 00 11.6	-0.9
EDBA	Buenos Aires	0.72	122	eP	Pb	18 00 11.7	-1.1
EDBA				eS	Sb	18 00 21.3	-1.1
CRPO	Crater poas	0.72	333	eP	Pb	18 00 12.4	-0.6
EDPN	Palmar Norte	0.72	144	eP	Pn	18 00 12.7	+0.1
EDPN				eS	Sn	18 00 23.6	+1.0
BATAN	Batan	0.75	43		Pb	18 00 12.4	-0.8
BATAN					Sn	18 00 23.6	+0.5
RIFO	Rio Frio, Sara	0.76	358	eP	Pb	18 00 12.7	-0.8
JACO	JACO, Garabito	0.77	279		Pb	18 00 12.6	-0.9
JACO	JACO, Garabito	0.77	279	eP	Pb	18 00 12.8	-0.8
SRA1	San Ramn	0.79	313	eP	Pb	18 00 12.9	-1.1
POTG	Potrero Grande	0.91	123	eP	Pn	18 00 15.1	-0.1
LAFE	Finca La Fe, P	1.04	284	eP	Pb	18 00 17.5	-0.6
EDSV	San Vito	1.16	128	eP	Pb	18 00 20.2	-0.1
FORC	Fortuna	1.19	320	i P	Pb	18 00 19.9	-0.7
FORC				i S	Sb	18 00 36.5	+0.7
CAO2	Cobano, Puntar	1.21	277		Pn	18 00 19.2	0.0
CASO	Castillo	1.21	317	i P	Pn	18 00 20.0	+0.7
ARE1	Arenal 1	1.22	318	eP	Pn	18 00 20.1	+0.7
CEDE	Laguna Cedeo	1.23	319	⇑iP	Pn	18 00 20.4	+0.8
CEDE				i S	Sb	18 00 37.8	+0.9
PIRO	Carate, Puerto	1.26	154	eP	Pb	18 00 21.4	-0.5
RGM0	Gandoca	1.27	88	Pn	Pn	18 00 21.1	+1.1
RGM0	Gandoca	1.27	88	eP	Pb	18 00 21.3	-0.6
JTS	Las Juntas de	1.28	305	Pn	Pn	18 00 20.1	-0.2
JTS	Las Juntas de	1.28	305	eP	Pn	18 00 20.3	+0.1
CDITO	Canoas	1.40	134	Pn	Pn	18 00 21.0	-0.8
BRU2	Volcan	1.40	122	Pn	Pn	18 00 22.2	+0.2
BRU2	Volcan	1.40	122	eP	Pn	18 00 22.4	+0.3
ACAL	Aguas Claras	1.56	314	⇑iP	Pn	18 00 25.2	+1.1
PTEN	Parque Tenorio	1.58	317	⇑iP	Pn	18 00 25.8	+1.3
NICO	Nicoya	1.64	291	eP	Pb	18 00 27.5	-0.7
PLVR	Palo Verde	1.64	299	eP	Pn	18 00 26.5	+1.2
DUNO	Dulce Nombre,	1.66	289	Pn	Pn	18 00 25.9	+0.3
DUNO	Dulce Nombre,	1.66	289	eP	Pn	18 00 26.5	+1.0
CUI	Cuipilapa	1.67	311	eP	Pn	18 00 27.1	+1.4
CUI				⇑iP	Pb	18 00 27.3	-1.5
COLC	Colonia	1.70	311	eP	Pn	18 00 27.5	+1.4
COLC				⇑iP	Pb	18 00 27.7	-1.6
HORNC	Hornillas	1.71	313	⇑iP	Pn	18 00 27.7	+1.4
HORNC				eP	Pb	18 00 28.0	-1.5
ORTG	Ortega, Santa	1.74	298	Pn	Pn	18 00 27.0	+0.3
VMAR	Armenia, Volca	1.74	316	eP	Pn	18 00 28.3	+1.6
GUAI	GUAI	1.75	294	i P	Pn	18 00 27.9	+1.2
GUAB	Guayabo de Bag	1.75	311	eP	Pb	18 00 28.4	-1.7
GRZA	Playa Garza	1.76	282	eP	Pn	18 00 27.4	+0.6
SAJU	San Juanillo,	1.86	286	eP	Pn	18 00 28.9	+0.6
VRLE	La Escondida,	1.90	310	eP	Pn	18 00 30.6	+1.7
BUAI	Buenos Aires	1.94	313	i P	Pb	18 00 31.3	-2.0
GB1A	Borinquen Arri	1.95	311	⇑iP	Pn	18 00 31.3	+1.8
GB1A				eP	Pb	18 00 31.5	-2.0
GBS3	Finca Las Img	1.97	309	i P	Pn	18 00 31.4	+1.7
HZTE	Horizontes, Gu	2.04	305	Pn	Pn	18 00 32.6	+2.0
ACON	Acoyapa	2.71	332	Pn	Pn	18 00 39.5	-0.5
BOAB	BOACO BROADBAN	3.37	329	Pn	Pn	18 00 48.5	-0.5
MATN	Matagalpa	3.91	329	Pn	Pn	18 00 57.1	+0.6
BCIP	Isla Barro Col	4.02	95	Pn	Pn	18 00 56.5	-1.5
CRIN	San Cristobal	4.41	316	Pn	Pn	18 01 03.6	+0.3
PRVC	Isla de Provid	4.54	33	Pn	Pn	18 01 04.2	-0.9
MTO3	Montecristo	7.20	313		Pn	18 01 45.1	+3.2
SJCC	San Jacinto, C	8.60	87	Pn	Pn	18 02 02.5	+1.6
ZARC	Zaragoza, Cauc	9.17	102	Pn	Pn	18 02 09.3	+0.6

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*IDC **06** 18:55:24.1±1.1, 29°.84N×139°.08E, h396^{km}±28^{km}, mb2.7/4, mbtmp3.5/7, Error ellipse: s-maj=78.3km s-min=11.8km az=72.0*

*JMA **06** 18:55:26.6±0.5, 30°N±3°×14°0E±°, h419^{km}, MV3.3/23, NEAR TORISHIMA IS*

ISC 06 18:55:24.2±0.9, **29°.93N**±0°.08×**139°.3E**±0°.2, **h400**^{km}, **n15**, σ**1^{s}59**/17, **mb3.0**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.20	8	P	Pn	18 56 30.9	+2.0
JHJ	Hachijo jima 2	3.21	7	P	Pn	18 56 31.1	+2.0
	50nm,0.6s,baz=110,slow=21,SNR=15						
JHJ				S	S	18 57 23.8	+2.2
	74nm,0.9s,baz=296,slow=14,SNR=1.7						
JCJ	Chichijima	3.79	138	P	Pn	18 56 34.5	+0.2
	18nm,0.4s,baz=350,slow=16,SNR=20						
JCJ				S	S	18 57 30.8	-0.4
	16nm,0.3s,baz=292,slow=23,SNR=5.7						
JMKN	Mikurajimanish	3.96	3	eP	Pn	18 56 37.1	+1.4
BSO1	Boso 1	4.92	16	P	Pn	18 56 46.4	+1.8
BSO3	Boso 3	4.96	11	P	Pn	18 56 46.8	+1.3
JKN2	Miekihoku	5.01	330	P	Pn	18 56 48.9	+2.7
BSO4	Boso 4	5.12	9	eS	S	18 57 53.0	-1.8
JRY	Ryogami san	6.08	357	P	Pn	18 56 58.7	+1.0
JAG	Ashikaga	6.48	1	P	Pn	18 57 01.5	-0.5
MJAR	Matsushiro Arr	6.66	352	P	Pn	18 57 04.3	+0.4
	0.6nm,0.3s,baz=165,slow=11,SNR=5.0						
MKAR	Makanchi Array	46.74	308	P	P	19 03 14.0	-1.2
	0.4nm,0.8s,baz=89,slow=7.9,SNR=3.1						
	0.4nm,0.8s						
WRA	Warramunga Arr	49.81	186	P	P	19 03 38.7	+0.2
	0.3nm,0.4s,baz=2.2,slow=7.9,SNR=6.9						
	0.3nm,0.4s						
ASAR	Alice Springs	53.54	186	P	P	19 04 05.7	0.0
	0.3nm,0.4s,baz=7.8,slow=7.9,SNR=8.1						
	0.3nm,0.4s						
FINES	FINESS Array B	74.29	333	P	P	19 06 17.2	-1.4
	0.3nm,0.5s,baz=93,slow=2.8,SNR=4.2						
	0.3nm,0.5s						

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*IDC **06** 19:21:19.1±1.2, 45°.20N×28°.46W, h0^{km}, mb3.3/11, mbtmp3.3/12, ML3.6/1, MS3.7/45, Error ellipse: s-maj=35.8km s-min=20.9km az=6.0*

*GCMT **06** 19:21:35.0±0.4, 45°.26N±0°.07×28°.04W±0°.05, h21^{km}±1^{km}, MW4.8/78, Moment Tensor Solution. s17,c17; s78,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.98±.18; $M_{\theta\theta}$0.42±.12; $M_{\phi\phi}$1.56±.12; $M_{r\theta}$0.45±.32; $M_{\theta\phi}$-0.33±.09; $M_{\phi r}$0.39±.23; Best double couple: $M_0$1.89100×10^{16} NP1:ϕ_s334.00000°,δ42.00000°,λ-108.00000°. NP2: ϕ_s178.00000°,δ51.00000°,λ-74.00000°. Principal axes: T 1.6660, Plg4.0000°, Azm257.0000°; N 0.4520, Plg12.0000°, Azm348.0000°; P -2.1150, Plg77.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 06 19:21:20.6±1.0, **45°.2N**±0°.2×**28°.5W**±0°.1, **h10**^{km}, **n53**, σ**1^{s}03**/12, **mb3.4**/11, **MS3.6**/43, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.87	98	LR	LR	19 31 18.4	
	comp=Z,295nm,20.0s,baz=302,slow=32						
EKA	Eskdalemuir Ar	18.99	49	P	P	19 25 42.1	0.0
	baz=257,slow=9.3						
EKA				LR	LR	19 31 59.9	
	comp=Z,290nm,18.3s,baz=193,slow=34						
	1.1nm,0.8s						
BORG	Borgarnes	20.00	9	LR	LR	19 31 39.0	
	comp=Z,103nm,21.1s,baz=221,slow=31						
MDT	Midelt	22.19	116	LR	LR	19 33 52.5	
	comp=Z,105nm,19.6s,baz=344,slow=34						
SFJD	Kangerlussuaq	24.83	339	LR	LR	19 34 33.4	
	comp=Z,180nm,19.9s,baz=145,slow=32						
SCHQ	Schefferville	26.17	305	LR	LR	19 36 01.5	
	comp=Z,197nm,18.3s,baz=93,slow=34						
DAVOX	Davos/Dischmat	26.52	73	LR	LR	19 36 44.5	
	comp=Z,230nm,18.4s,baz=266,slow=35						
JMIC	Jan Mayen	27.64	14	LR	LR	19 35 05.7	
	comp=Z,60nm,19.3s,baz=6.0,slow=30						
NOA	NORSAR Array B	28.05	41	LR	LR	19 37 01.5	
	comp=Z,66nm,19.5s,baz=255,slow=34						
GERES	GERESS Array B	28.71	67	LR	LR	19 38 15.3	
	comp=Z,164nm,18.1s,baz=269,slow=35						
HFS	Hagfors	29.02	44	LR	LR	19 37 10.9	
	comp=Z,95nm,20.0s,baz=266,slow=33						
FRB	Frobisher Bay	29.09	324	LR	LR	19 36 14.6	
	comp=Z,134nm,20.0s,baz=64,slow=31						
KEST	Kesra	30.04	95	LR	LR	19 38 17.9	
	comp=Z,94nm,19.4s,baz=252,slow=34						
VRAC	Vranov	30.51	66	LR	LR	19 39 23.8	
	comp=Z,230nm,18.7s,baz=276,slow=36						
VAE	Valguarnera	32.79	88	LR	LR	19 40 58.0	
	comp=Z,86nm,18.2s,baz=336,slow=36						
FINES	FINESS Array B	35.20	43	P	P	19 28 14.6	+0.1
	1.7nm,1.0s,baz=248,slow=7.4,SNR=2.4						
FINES				LR	LR	19 40 53.0	
	comp=Z,110nm,20.8s,baz=7.5,slow=33						
	1.7nm,1.0s						
SADO	Sadowa	35.37	288	LR	LR	19 42 42.9	
	comp=Z,318nm,18.3s,baz=97,slow=36						
ARCES	ARCESS Array B	36.08	29	LR	LR	19 41 21.2	
	comp=Z,54nm,18.7s,baz=308,slow=33						
MLR	Muntele Rosu	37.62	70	LR	LR	19 43 42.0	
	comp=Z,126nm,19.1s,baz=278,slow=36						
AKASG	Malin Array Be	38.18	60	P	P	19 28 40.3	+0.3
	0.2nm,0.3s,baz=287,slow=8.4,SNR=4.5						
AKASG				LR	LR	19 44 55.3	
	comp=Z,172nm,18.0s,baz=342,slow=37						
	0.2nm,0.3s						
RES	Resolute Bay	40.82	338	LR	LR	19 42 39.8	
	comp=Z,51nm,21.2s,baz=34,slow=31						
TORD	Torodi Ar. Bea	40.94	132	P	P	19 29 03.3	0.0
	0.6nm,1.0s,baz=324,slow=8.2,SNR=3.6						
TORD				LR	LR	19 45 02.4	
	comp=Z,226nm,18.2s,baz=5.0,slow=35						
	0.6nm,1.0s						
IDI	Anoyia	41.24	85	LR	LR	19 47 00.4	
	comp=Z,32nm,19.5s,baz=296,slow=37						
SJG	San Juan	41.35	242	LR	LR	19 42 13.0	
	comp=Z,76nm,21.6s,baz=92,slow=30						
DBIC	Dimbokro	43.51	145	LR	LR	19 46 04.4	
	comp=Z,110nm,19.0s,baz=332,slow=34						
ULM	Lac du Bonnet	44.23	302	LR	LR	19 46 49.6	
	comp=Z,212nm,18.1s,baz=76,slow=35						
BRTR	Keskin Array B	45.15	74	P	P	19 29 36.7	-0.7
	0.3nm,0.7s,baz=280,slow=8.1,SNR=2.6						
BRTR				LR	LR	19 48 18.1	
	comp=Z,86nm,20.8s,baz=304,slow=36						
	0.3nm,0.7s						
MDP	Montagnes des	45.16	215	LR	LR	19 43 57.7	
	comp=Z,49nm,18.4s,baz=16,slow=30						
KIRV	Kirov	47.15	44	LR	LR	19 49 13.5	
	comp=Z,56nm,18.7s,baz=256,slow=36						
BELG	Belogornoye	48.48	53	LR	LR	19 50 50.7	
	comp=Z,106nm,18.5s,baz=336,slow=36						
KBZ	Khabaz	49.39	65	LR	LR	19 51 24.0	
	comp=Z,76nm,20.4s,baz=314,slow=36						
YKA	Yellowknife Ar	49.59	323	P	P	19 30 10.0	-1.5
	0.1nm,0.6s,baz=80,slow=7.6,SNR=3.2						
	0.1nm,0.6s						
SDV	Santo Domingo	51.21	238	LR	LR	19 51 20.7	
	comp=Z,26nm,19.0s,baz=359,slow=35						
RCBR	Riachuelo	51.22	190	LR	LR	19 46 51.8	
	comp=Z,39nm,20.4s,baz=146,slow=30						
GNI	Garni	52.36	68	LR	LR	19 55 34.9	
	comp=Z,32nm,18.5s,baz=335,slow=39						
ARU	Arti	52.53	44	LR	LR	19 52 29.8	
	comp=Z,51nm,19.1s,baz=316,slow=36						
H10N2	ASCENSION HYDR	54.25	163	T	T	20 28 49.3	
	baz=349,slow=75						
H10N3	ASCENSION HYDR	54.26	163	T	T	20 28 52.8	
	baz=349						
H10N1	ASCENSION HYDR	54.27	163	T	T	20 28 51.1	
	baz=349,slow=75						
AKTO	Aktyubinsk	55.16	51	LR	LR	19 53 28.9	
	comp=Z,74nm,19.8s,baz=280,slow=35						
PDAR	Pinedale Array	56.02	299	P	P	19 30 58.2	-1.4
	0.1nm,0.4s,baz=61,slow=7.3,SNR=1.6						
PDAR				LR	LR	19 54 02.9	
	comp=Z,136nm,18.7s,baz=76,slow=35						
	0.1nm,0.4s						
ROSC	El Rosal	56.63	239	LR	LR	19 54 18.3	
	comp=Z,49nm,19.8s,baz=67,slow=35						
NEW	Newport	57.51	308	LR	LR	19 53 44.8	
	comp=Z,84nm,21.1s,baz=79,slow=34						
DLBC	Dease Lake	58.21	323	LR	LR	19 52 44.5	
	comp=Z,61nm,19.6s,baz=252,slow=32						
ANMO	Albuquerque	58.40	289	LR	LR	19 56 48.5	
	comp=Z,206nm,18.1s,baz=52,slow=36						
TXAR	Lajitas Array	59.85	282	P	P	19 31 27.7	+1.3
	0.1nm,0.3s,baz=75,slow=6.9,SNR=1.8						
TXAR				LR	LR	19 56 51.2	
	comp=Z,161nm,21.6s,baz=54,slow=36						
	0.1nm,0.3s						
ILAR	Eielson Array	60.36	334	P	P	19 31 30.9	+1.6
	0.3nm,0.9s,baz=41,slow=5.3,SNR=2.8						
	0.3nm,0.9s						
CMIG	Matias Romero	61.51	266	LR	LR	19 55 08.0	
	comp=Z,64nm,22.0s,baz=27,slow=33						
GEYT	Alibeck	62.22	63	LR	LR	20 00 43.1	
	comp=Z,23nm,18.3s,baz=313,slow=38						
BDFB	Brasilia	63.09	201	LR	LR	19 56 05.9	
	comp=Z,79nm,19.7s,baz=339,slow=33						
KURBB	Kurchatov Arra	65.58	42	P	P	19 32 03.5	-0.7
	0.2nm,0.7s,baz=306,slow=7.0,SNR=2.9						
	0.2nm,0.7s						
MKAR	Makanchi Array	70.03	43	P	P	19 32 32.4	+0.1
	0.2nm,0.8s,baz=321,slow=5.7,SNR=3.0						
	0.2nm,0.8s						
SONM	Songino Array	79.26	29	P	P	19 33 26.7	+0.7
	0.4nm,0.6s,baz=331,slow=8.3,SNR=1.6						
	0.4nm,0.6s						

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*NEIC **06** 19:22:27.5±1.4, 5°.56S±0°.06×150°.35E±0°.08, h120^{km}±7^{km}, mb4.4/23, Error ellipse: s-maj=11.4km s-min=8.8km az=98.0*

*IDC **06** 19:22:27.1±0.9, 5°.61S×150°.35E, h121^{km}±10^{km}, mb3.6/12, mbtmp4.1/16, MS3.2/2, Error ellipse: s-maj=20.1km s-min=8.2km az=125.0*

ISC 06 19:22:26.6±0.5, **5°.55S**±0°.06×**150°.28E**±0°.07, **h114**^{km}, **n55**, σ**0^{s}95**/57, **mb4.1**/19, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.13	55	P	Pn	19 23 01.9	+0.5
	334nm,0.4s,baz=243,slow=0.6,SNR=117						
KRVT				S	Sn	19 23 29.4	+1.3
	126nm,0.5s,baz=57,slow=23,SNR=2.3						
RABL	Rabaul	2.31	54		Pn	19 23 04.1	+0.3
RABL	Rabaul	2.31	54	P	Pn	19 23 04.3	+0.5
PMG	Port Moresby	4.92	219	P	Pn	19 23 39.6	+1.1
	32nm,0.3s,baz=56,slow=6.6,SNR=42						
PMG				S	Sn	19 24 34.6	+0.3
	158nm,0.3s,baz=28,slow=12,SNR=5.7						
PMG	Port Moresby	4.92	219		Pn	19 23 39.3	+0.9
PMG	Port Moresby	4.92	219	P	Pn	19 23 39.8	+1.4
HNR	Honiara	10.33	112	P	Pn	19 24 51.2	-0.5
	24nm,0.4s,baz=26,slow=16,SNR=6.3						
HNR	Honiara	10.33	112	P	Pn	19 24 52.3	+0.6
COEN	Coen	10.90	219	Pn	Pn	19 25 00.2	+0.8
COEN	Coen	10.90	219	P	Pn	19 25 00.1	+0.8
CTA	Charters Tower	14.97	195	P	Pn	19 25 53.6	+1.2
	9.5nm,0.8s,baz=14,slow=12,SNR=2.7						
CTA				LR	LR	19 30 27.7	
	comp=Z,37nm,21.6s,baz=96,slow=32						
CTAO	Charters Tower	14.97	195	P	P	19 25 56.3	+1.2
QIS	Mount Isa	18.16	214	P	Pn	19 26 32.4	+0.8
KDU	Kakadu	18.95	247	P	P	19 26 39.6	+0.7
EIDS	Eidsvold	19.72	178	P	Pn	19 26 48.8	-1.0
EIDS				IAmb	IAmb	19 26 57.0	
	comp=Z,16nm,1.6s						
RMQ	Roma	20.87	184	P	Pn	19 27 01.6	-1.6
WB0	Warramunga Arr	20.94	226	P	P	19 26 59.8	-0.7
WB0				IAmb	IAmb	19 27 06.9	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	20.96	226	P	P	19 27 00.3	-0.4
WRAB	Tennant Creek	21.08	226	P	P	19 27 01.5	-0.4
WRAB				IAmb	IAmb	19 27 02.8	
	comp=Z,11nm,0.5s						
WB2	Warramunga Arr	21.09	226	P	P	19 27 02.5	+0.5
WB2				IAmb	IAmb	19 27 02.9	
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	21.09	226	P	P	19 27 02.6	+0.5
	comp=Z,5.3nm,0.3s,baz=50,slow=11,SNR=108						
WRA				PcP	PcP	19 31 04.3	0.0
	comp=Z,0.4nm,0.6s,baz=38,slow=2.0,SNR=5.0						
WRA				ScP	ScP	19 34 30.7	-0.1
	comp=Z,0.2nm,0.5s,baz=51,slow=3.0,SNR=8.9						
	comp=Z,5.3nm,0.3s						
WRA	Warramunga Arr	21.09	226	P	P	19 27 00.9	-1.2
QLP	Quilpie	21.70	195	P	P	19 27 09.6	+1.2
DZM	Mont Dzumac	22.68	138	P	P	19 27 17.9	-0.8
	comp=Z,3.6nm,0.7s,baz=134,slow=22,SNR=1.6						
	comp=Z,3.6nm,0.7s						
DZM	Mont Dzumac	22.68	138	IAmb	IAmb	19 27 31.1	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	23.39	243	P	P	19 27 24.6	-0.8
KNRA				IAmb	IAmb	19 27 54.8	
	comp=Z,38nm,1.4s						
KNRA	Kununurra	23.39	243	P	P	19 27 26.0	+0.6
AS31	Alice Springs	23.94	220	P	P	19 27 30.4	0.0
ASAR	Alice Springs	23.94	220	P	P	19 27 31.0	+0.7
	comp=Z,1.2nm,0.4s,baz=55,slow=9.2,SNR=70						
ASAR				S	S	19 31 38.5	-0.4
	comp=Z,1.2nm,1.0s,baz=50,slow=12,SNR=4.9						
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	23.94	220	P	P	19 27 30.5	+0.1
ARMA	Armidale	24.77	177	P	P	19 27 39.0	+1.2
ARMA				IAmb	IAmb	19 27 52.8	
	comp=Z,10nm,1.5s						
FITZ	Fitzroy Crossi	27.10	241	P	P	19 27 59.2	+0.3
	comp=Z,6.3nm,1.0s,baz=62,slow=5.5,SNR=13						
	comp=Z,6.3nm,1.0s						
STKA	Stephens Creek	27.42	196	P	P	19 28 00.5	-1.2
	comp=Z,1.7nm,0.6s,baz=34,slow=16,SNR=6.3						
	comp=Z,1.7nm,0.6s						
BBOO	Buckleboo	30.19	204	P	P	19 28 25.6	-0.6
BBOO				IAmb	IAmb	19 28 30.4	
	comp=Z,33nm,1.5s						
FORT	Forrest	32.65	217	P	P	19 28 47.8	0.0
MBWA	Marble Bar	33.43	239	P	P	19 28 55.0	+0.3
PSA00	Pilbara Seismi	33.49	239	P	P	19 28 55.4	+0.1
TAU	Tasmania Unive	37.30	184	P	P	19 29 28.3	+0.7
JOW	Kunigami	38.60	328	LR	LR	19 45 57.3	
	comp=Z,78nm,18.6s,baz=132,slow=36						
NACB	Ninganchiao	40.68	318	P	P	19 29 53.6	-2.4
NACB				IAmb	IAmb	19 30 17.9	
	comp=Z,13nm,0.8s						
MQZ	McQueen’s Vall	42.80	156	P	P	19 30 12.4	-0.6
KSRS	Korea Array	47.59	336	P	P	19 30 51.9	+1.0
	comp=Z,0.6nm,0.6s,baz=150,slow=8.8,SNR=2.4						
	comp=Z,0.6nm,0.6s						
MCQ	Macquarie Isla	49.30	173	P	P	19 31 02.1	-1.7
PEA0B	Petropavlovsk-	58.78	5	P	P	19 32 13.1	+0.5
PETK	Petropavlovsk-	58.78	5	P	P	19 32 12.5	-0.1
	comp=Z,7.1nm,1.1s,baz=162,slow=6.8,SNR=7.1						
	comp=Z,7.1nm,1.1s						
SONM	Songino Array	65.65	329	P	P	19 32 59.7	+1.0
	comp=Z,0.5nm,0.3s,baz=144,slow=6.3,SNR=4.4						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	65.65	329	P	P	19 32 59.1	+0.4
SONM				IAmb	IAmb	19 33 02.5	
	comp=Z,4.8nm,1.7s						
SEY	Seymchan	68.31	1	P	P	19 33 15.1	0.0
	comp=Z,0.5nm,0.5s,baz=279,slow=24,SNR=5.0						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	79.25	320	P	P	19 34 19.5	+0.1
	comp=Z,0.3nm,0.7s,baz=101,slow=6.6,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	79.25	320	P	P	19 34 21.9	+2.5
L19K	White Mountain	79.41	23	P	P	19 34 20.1	+0.2
L19K				IAmb	IAmb	19 34 20.4	
	comp=Z,19nm,1.6s						
CNPM	China Poot	79.48	26	P	P	19 34 18.6	-1.7
ZALV	Zalesovo Beam	80.40	327	P	P	19 34 25.1	-0.2
	comp=Z,0.6nm,0.6s,baz=99,slow=4.8,SNR=2.9						
	comp=Z,0.6nm,0.6s						

ILAR	**Eielson Array**	**83.80**	**23**	P	**P**	**19 34 41.1**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=246,slow=4.6,SNR=8.3						
	comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.13**	**286**	PKPbc	**PKPbc**	**19 41 58.8**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=84,slow=3.4,SNR=2.0						

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*AEIC **06** 19:25:29±3.5, 51°.8N±0°.1×170°.7W±0°.1, h26^{km}±8^{km}, Error ellipse: s-maj=17.5km s-min=7.9km az=155.0*

NEIC 06 19:25:27.8±2.4**, 51°.8N**±0°.1×**170°.92W**±0°.08**, h33**^{km}±12^{km}**, mb3.9**/11**, ML3.7**/6**, ML3.0**(AEIC)**, Error ellipse: s-maj=22.2km s-min=3.0km az=161.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**1.73**	**46**		Pn	19 25 55.0	-0.5
GSTR	**Great Sitkin T**	**3.19**	**277**	Pn	Pn	19 26 14.7	-0.9
UNV	**Unalaska Valle**	**3.38**	**51**	Pn	Pn	19 26 19.4	+1.3
ADK	**Adak**	**3.57**	**274**	Pn	Pn	19 26 23.1	+2.3
ADK				IAML		19 27 31.7	
	84nm,3.2s						
KIWB	**Kanaga Island**	**3.86**	**273**	Pn	Pn	19 26 24.8	0.0
AKUT	**Akutan**	**3.90**	**51**	Pn	Pn	19 26 26.9	+1.6
AKUT				IAML		19 27 04.2	
	comp=E,128nm,2.7s						
AKUT				IAML		19 28 18.8	
	comp=N,115nm,3.3s						
SPIA	**Saint Paul Isl**	**5.40**	**4**	Pn	Pn	19 26 48.1	+2.2
FALS	**False Pass**	**5.44**	**53**	Pn	Pn	19 26 48.7	+2.2
SDPT	**Sand Point**	**7.17**	**56**	Pn	Pn	19 27 11.2	+1.2
CHIR	**Chirikof Islan**	**9.90**	**60**	Pn	Pn	19 27 47.7	+0.1
Q19K	**Cape Douglas,**	**12.12**	**47**	Pn	Pn	19 28 17.3	-0.7
KDAK	**Kodiak Island**	**12.14**	**53**	Pn	Pn	19 28 16.5	-1.8
M19K	**Big River Lodg**	**13.53**	**35**	Pn	Pn	19 28 41.3	+4.1
J20K	**Nowinta River**	**15.20**	**29**	P	P	19 29 03.0	-1.2
J20K				IAmb	IAmb	19 29 45.8	
	comp=Z,5.6nm,1.3s						
CAST	**Castle Rocks**	**15.33**	**33**	P	P	19 29 05.6	-0.2
CAST				IAmb	IAmb	19 29 27.7	
	comp=Z,4.1nm,1.2s						
FID	**Port Fidalgo**	**16.18**	**47**	Pn	Pn	19 29 09.2	-3.2
SCM	**Sheep Creek Mo**	**16.26**	**43**	Pn	Pn	19 29 13.2	-0.4
SCM				IAmb	IAmb	19 29 49.6	
	comp=Z,25nm,1.4s						
M24K	**Tolsona, Glenn**	**16.87**	**43**	Pn	Pn	19 29 20.8	-0.4
M24K				IAmb	IAmb	19 29 31.4	
	comp=Z,39nm,1.5s						
H24K	**Noodor Dome**	**18.28**	**31**		Pn	19 29 39.0	+0.5
J25K	**Salcha River,**	**18.42**	**36**	P	P	19 29 39.8	-0.3
BARN	**Barnard Glacie**	**18.50**	**49**	P	Pn	19 29 44.8	+3.5
BARN				IAmb	IAmb	19 29 56.6	
	comp=Z,27nm,1.5s						
BMAR	**Burnt Mountain**	**20.30**	**30**	P	Pn	19 30 02.2	-0.5
HYT	**Haines Junctio**	**20.41**	**51**	P	Pn	19 30 03.8	-0.2
INK	**Inuvik**	**24.35**	**33**	P	P	19 30 42.3	+0.1
INK				IAmb	IAmb	19 31 02.0	
	comp=Z,6.0nm,1.4s						

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*IDC **06** 19:31:58.8±0.4, 13°.80N×144°.91E, h102^{km}±3^{km}, mb4.1/32, mbtmp4.5/35, MS3.4/13, Error ellipse: s-maj=13.0km s-min=7.6km az=81.0*

*DJA **06** 19:31:59.3±0.5, 14°N±6°×14°5E±°, h94^{km}±3^{km}, M4.7/28, mb5.0/28, mB5.2/12, MLv4.7/1, Mw(mB)4.6/12*

*NEIC **06** 19:32:00.3±1.6, 13°.79N±0°.06×144°.89E±0°.09, h110^{km}±3^{km}, mb4.8/104, Error ellipse: s-maj=12.1km s-min=9.0km az=101.0*

*GCMT **06** 19:32:04.2±0.3, 13°.64N±0°.02×144°.87E±0°.03, h115^{km}±4^{km}, MW4.9/87, Moment Tensor Solution. s24,c26; s87,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.67±.10; M$_{\theta\theta}$0.24±.10; M$_{\phi\phi}$0.42±.10; M$_{r\theta}$1.43±.06; M$_{\theta\phi}$-2.33±.09; M$_{\phi r}$-0.04±.08; Best double couple: M$_0$2.77600×10^{16} NP1:φ$_s$179.00000°, δ56.00000°, λ-11.00000°. NP2:φ$_s$275.00000°, δ81.00000°, λ-146.00000°. Principal axes: T 2.9670, Plg17.0000°, Azm43.0000°; N -0.3820, Plg55.0000°, Azm288.0000°; P -2.5850, Plg30.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 19:32:01.3±0.3**, 13°.81N**±0°.04×**144°.89E**±0°.06**, h125**^{km}**, n258, σ1^{s}.27**/246**, mb4.7**/87**, 4D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.22**	**185**	P	**Pn**	**19 32 14.6**	**-4.0**
	7µm,0.3s,baz=276,slow=11,SNR=1997						
GUMO				S	**Sn**	**19 32 25.1**	**-6.5**
	9µm,0.3s,baz=329,slow=19,SNR=8.7						
JCJ	**Chichijima**	**13.46**	**350**	P	**Pn**	**19 35 05.7**	**-1.7**
	47nm,0.6s,baz=128,slow=17,SNR=4.4						
JCJ	**Chichijima**	**13.46**	**350**	Pn	**Pn**	**19 35 07.6**	**+0.2**
PATS	**Pohnpei**	**14.91**	**116**	Pn	**Pn**	**19 35 23.6**	**-2.3**
MANU	**Manus Island**	**15.94**	**171**	P	**Pn**	**19 35 38.4**	**-0.3**
MANU				IAmb	IAmb	19 35 42.8	
	comp=Z,57nm,0.9s						
SMPI	**Sarmi**	**16.85**	**202**	P	**P**	**19 35 50.7**	**+0.8**
	comp=Z,18nm,1.3s						
WAMI	**Wamena**	**18.62**	**200**	P	**Pn**	**19 36 11.9**	**+0.9**
	comp=Z,83nm,0.8s						
RABL	**Rabaul**	**19.29**	**158**	P	**P**	**19 36 17.3**	**+0.7**
RABL	**Rabaul**	**19.29**	**158**	P	**Pn**	**19 36 18.3**	**-0.6**
KRVT	**Keravat (AS076**	**19.34**	**158**	P	**P**	**19 36 18.1**	**+1.0**
	comp=Z,70nm,0.6s,baz=49,slow=2.8,SNR=21						
JHJ	**Hachijo jima 2**	**19.78**	**347**	LR	LR	19 43 31.1	
	comp=Z,98nm,19.8s,baz=107,slow=35						
SIJI	**Sorong**	**19.87**	**224**	P	**P**	**19 36 23.0**	**+0.1**
	comp=Z,20nm,0.6s,baz=108,slow=24,SNR=2.6						
SWI	**Sorong**	**19.87**	**224**	P	**Pn**	**19 36 26.9**	**+1.2**
	comp=Z,552nmcomp=Z,54nm,1.0s						
DAV	**Davao City (W)**	**20.13**	**253**	LR	LR	19 43 51.5	
	comp=Z,21nm,21.2s,baz=138,slow=35						
JOW	**Kunigami**	**20.23**	**312**	P	**P**	**19 36 26.9**	**+0.2**
	comp=Z,19nm,0.6s,baz=150,slow=11,SNR=5.3						
	comp=Z,19nm,0.6s						
JOW	**Kunigami**	**20.23**	**312**	P	Pn	19 36 29.5	-0.3
JOW				IAmb	IAmb	19 36 54.1	
	comp=Z,49nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**21.44**	**75**	T	T	19 59 36.6	
	baz=262,slow=71						
H11S1	**WAKE ISLAND Hy**	**21.46**	**75**	T	T	19 59 40.0	
	baz=262,slow=71						
H11S2	**WAKE ISLAND Hy**	**21.46**	**75**	T	T	19 59 35.2	
	baz=262,slow=71,SNR=30						
TNTI	**Ternate**	**21.65**	**235**	P	**P**	**19 36 41.5**	**-0.5**
TNTI	**Ternate**	**21.65**	**235**	P	**P**	**19 36 44.3**	**+2.3**
	comp=Z,466nmcomp=Z,19nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**21.86**	**71**	T	T	19 59 49.5	
	baz=257,slow=75,SNR=87						
H11N2	**WAKE ISLAND Hy**	**21.87**	**71**	T	T	19 59 40.6	
	baz=257,slow=75,SNR=50						
H11N3	**WAKE ISLAND Hy**	**21.88**	**71**	T	T	19 59 50.2	
	baz=257,slow=75,SNR=112						
JSU	**Suzuyama**	**22.04**	**325**	P	**P**	**19 36 47.2**	**+1.2**
JSU				IAmb	IAmb	19 36 49.4	
	comp=Z,25nm,0.7s						
LBMI	**Labuha**	**22.42**	**232**	P	**P**	**19 36 52.6**	**+2.6**
	comp=Z,29nm,1.5s						
INU	**Inuyama**	**22.59**	**343**	P	**P**	**19 36 52.6**	**+1.2**
JGF	**Kuroka**	**22.73**	**344**	P	**P**	**19 36 52.8**	**-0.1**
JNU	**Nakatsue**	**23.08**	**329**	P	**P**	**19 36 57.4**	**+1.2**
	comp=Z,28nm,0.7s,baz=105,slow=2.1,SNR=17						
	comp=Z,28nm,0.7s						
JNU	**Nakatsue**	**23.08**	**329**	P	**P**	**19 36 57.0**	**+0.9**
PMG	**Port Moresby**	**23.17**	**174**	P	**P**	**19 36 56.5**	**-0.6**
	comp=Z,31nm,0.8s,baz=352,slow=7.6,SNR=6.8						
	comp=Z,31nm,0.8s						
PMG	**Port Moresby**	**23.17**	**174**	P	**P**	**19 36 56.0**	**-1.1**
PMG				IAmb	IAmb	19 36 57.5	
	comp=Z,40nm,0.9s						
PMG	**Port Moresby**	**23.17**	**174**	P	**P**	**19 36 58.1**	**+1.0**
PMG	**Port Moresby**	**23.17**	**174**	P	**P**	**19 36 56.6**	**-0.5**
MJAR	**Matsushiro Arr**	**23.42**	**346**	P	**P**	**19 36 58.2**	**-1.0**
	comp=Z,5.1nm,0.7s,baz=169,slow=10,SNR=6.7						
	comp=Z,5.1nm,0.7s						
MAJO	**Matsushiro**	**23.42**	**346**	P	**P**	**19 36 59.6**	**+0.4**
MJB9	**Matsu-Tunnel**	**23.42**	**346**	P	**P**	**19 36 59.2**	**-0.1**
JHS	**Saijyo**	**23.62**	**335**	P	**P**	**19 37 01.5**	**+0.3**
JHS				IAmb	IAmb	19 37 04.3	
	comp=Z,21nm,0.8s						
AAI	**Ambon**	**24.01**	**225**	P	**P**	**19 37 05.4**	**+0.6**
	comp=Z,904nmcomp=Z,35nm,1.1s						
YULB	**Yu-li**	**24.27**	**297**	P	**P**	**19 37 07.4**	**+0.3**
NACB	**Ninganchiao**	**24.28**	**299**	P	**P**	**19 37 06.7**	**-0.5**
NACB				IAmb	IAmb	19 37 40.8	
	comp=Z,78nm,1.8s						
SANI	**Sanana**	**24.48**	**231**	P	**P**	**19 37 07.5**	**-1.5**
KMSI	**Cibinong**	**24.52**	**239**	P	**P**	**19 37 11.8**	**+2.4**
	comp=Z,84nm,0.9s						
SSLB	**Suanglung**	**24.70**	**297**	P	**P**	**19 37 11.1**	**+0.1**
SSLB				IAmb	IAmb	19 37 40.9	
	comp=Z,41nm,1.2s						
JTU	**Tsushima**	**24.94**	**328**	P	**P**	**19 37 13.8**	**+0.8**
MRSI	**Marisa**	**26.30**	**242**	P	**P**	**19 37 27.6**	**+2.1**
	comp=Z,419nmcomp=Z,24nm,0.7s						
LUWI	**Luwuk**	**26.42**	**238**	P	**P**	**19 37 24.5**	**-2.1**
LUWI	**Luwuk**	**26.42**	**238**	P	**P**	**19 37 29.0**	**+2.4**
	comp=Z,919nmcomp=Z,81nm,0.7s						
LUWI	**Luwuk**	**26.42**	**238**	P	**P**	**19 37 25.0**	**-1.6**
TOLI2	**Tolitoli**	**26.98**	**244**	P	**P**	**19 37 28.5**	**-3.1**
TOLI2				IAmb	IAmb	19 37 48.0	
	comp=Z,22nm,1.4s						
MYLDM	**Lahad Datu**	**27.38**	**254**	P	**P**	**19 37 34.4**	**-0.7**
MYLDM				IAmb	IAmb	19 38 21.7	
	comp=Z,35nm,1.1s						
TJN	**Taejon**	**27.42**	**328**	P	**P**	**19 37 35.1**	**-0.1**
COEN	**Coen**	**27.64**	**184**	P	**P**	**19 37 37.2**	**-0.2**
COEN				IAmb	IAmb	19 37 38.3	
	comp=Z,52nm,1.6s						
COEN	**Coen**	**27.64**	**184**	P	**P**	**19 37 37.6**	**+0.2**
KSRS	**Korea Array**	**27.98**	**330**	P	**P**	**19 37 41.3**	**+1.0**
	comp=Z,4.9nm,0.8s,baz=143,slow=9.5,SNR=17						
	comp=Z,4.9nm,0.8s						
KSAR	**Wonju Array Be**	**27.99**	**330**	P	**P**	**19 37 41.2**	**+0.9**
ERM	**Erimo**	**28.14**	**357**	P	**P**	**19 37 41.2**	**-0.5**
KDU	**Kakadu**	**29.06**	**206**	P	**P**	**19 37 48.7**	**-1.3**
MTN	**Manton Dam**	**29.78**	**208**	P	**P**	**19 37 55.3**	**-1.1**
MTN				IAmb	IAmb	19 38 03.4	
	comp=Z,37nm,1.4s						
MTN	**Manton Dam**	**29.78**	**208**	P	**P**	**19 37 55.7**	**-0.8**
NJ2	**Nanjing**	**29.95**	**312**	*e*P	**P**	**19 37 58.9**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
SMKI	**Samarinda**	**30.86**	**245**	P	P	19 38 18.1	+12
KAPI	**Kappang**	**31.18**	**235**	P	**P**	**19 38 09.1**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=212,slow=22,SNR=4.4						
	comp=Z,3.0nm,0.6s						
KAPI	**Kappang**	**31.18**	**235**	P	**P**	**19 38 08.2**	**-0.6**
MTSU	**Mount Surprise**	**31.75**	**181**	P	**P**	**19 38 14.7**	**+1.0**
BATI	**Baumata**	**31.82**	**223**	P	**P**	**19 38 12.2**	**-2.2**
	comp=Z,8.7nm,0.5s,baz=317,slow=1.5,SNR=5.5						
BATI				LR	LR	19 52 25.5	
	comp=Z,72nm,18.6s,baz=94,slow=38						
	comp=Z,8.7nm,0.5s						
KNRA	**Kununurra**	**33.35**	**209**	P	**P**	**19 38 27.1**	**-0.6**
KNRA	**Kununurra**	**33.35**	**209**	P	**P**	**19 38 27.5**	**-0.3**
CTA	**Charters Tower**	**33.71**	**178**	P	**P**	**19 38 31.5**	**+0.7**
CTAO	**Charters Tower**	**33.71**	**178**	P	**P**	**19 38 31.2**	**+0.4**
CTAO				IAmb	IAmb	19 38 32.2	
	comp=Z,20nm,0.8s						
CTAO	**Charters Tower**	**33.71**	**178**	P	**P**	**19 38 31.5**	**+0.7**
CTAO	**Charters Tower**	**33.71**	**178**	⇓P	**P**	**19 38 31.4**	**+0.5**
CTAO				pP	**pP**	**19 38 59.1**	**+2.3**
QIS	**Mount Isa**	**34.54**	**189**	P	**P**	**19 38 39.2**	**+1.2**
WB0	**Warramunga Arr**	**34.93**	**197**	P	**P**	**19 38 40.6**	**-0.7**
WR0	**Warramunga Arr**	**35.07**	**197**	P	**P**	**19 38 41.5**	**-1.1**
WR0				IAmb	IAmb	19 38 42.9	
	comp=Z,28nm,1.2s						
BNX	**BinXian**	**35.09**	**339**	⇓P	**P**	**19 38 45.7**	**+3.2**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,160nm,3.5s						
WRAB	**Tennant Creek**	**35.10**	**197**	P	**P**	**19 38 42.2**	**-0.6**
WRAB	**Tennant Creek**	**35.10**	**197**	P	**P**	**19 38 42.4**	**-0.4**
WRAB	**Tennant Creek**	**35.10**	**197**	⇓P	**P**	**19 38 42.2**	**-0.6**
WRAB				pP	**pP**	**19 39 07.6**	**-1.8**
WRAB				sP	**pwP**	**19 39 16.7**	**+3.5**
WB2	**Warramunga Arr**	**35.11**	**197**	P	**P**	**19 38 42.3**	**-0.6**
WB2				IAmb	IAmb	19 38 43.7	
	comp=Z,24nm,0.8s						
WRA	**Warramunga Arr**	**35.11**	**197**	P	**P**	**19 38 42.2**	**-0.6**
	comp=Z,13nm,0.6s,baz=19,slow=9.1,SNR=88						
WRA				ScP	**ScP**	**19 44 46.9**	**+0.8**
	comp=Z,3.6nm,1.1s,baz=12,slow=3.8,SNR=7.5						
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**35.11**	**197**	P	**P**	**19 38 40.7**	**-2.2**
WRA					**ScP**	**19 44 47.7**	**+1.6**
HNS	**HongShan**	**35.69**	**317**	⇓P	**P**	**19 38 49.6**	**+1.9**
HNS				pmax	pmax		
	comp=Z,19nm,0.8s						
STKI	**Sintang**	**35.79**	**250**	P	P	19 38 59.7	+11
BJI	**Beijing**	**36.28**	**321**	P	**P**	**19 38 53.9**	**+1.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSM	**Kuching**	**36.33**	**253**	P	**P**	**19 38 52.7**	**-0.7**
ENH	**Enshi**	**36.49**	**303**	P	**P**	**19 38 52.9**	**-1.8**
ENH				IAmb	IAmb	19 39 29.8	
	comp=Z,6.0nm,0.7s						
SANVU	**Saraoutou**	**36.50**	**142**	P	**P**	**19 38 54.8**	**0.0**
KLR	**Kul'dur**	**36.94**	**346**	P	**P**	**19 38 58.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=120,slow=4.2,SNR=5.4						
	comp=Z,1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**36.95**	**211**	P	**P**	**19 38 58.2**	**-0.4**
	comp=Z,9.2nm,0.6s,baz=22,slow=7.1,SNR=133						
	comp=Z,9.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**36.95**	**211**	P	**P**	**19 38 58.4**	**-0.2**
FITZ				IAmb	IAmb	19 38 59.5	
	comp=Z,16nm,1.0s						
FITZ	**Fitzroy Crossi**	**36.95**	**211**	P	**P**	**19 38 58.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**37.69**	**236**	P	**P**	**19 39 03.3**	**-1.6**
JAGI				IAmb	IAmb	19 39 16.3	
	comp=Z,24nm,1.2s						
AS31	**Alice Springs**	**38.76**	**196**	P	**P**	**19 39 13.3**	**-0.5**
AS31				IAmb	IAmb	19 39 14.9	
	comp=Z,5.1nm,0.6s						
ASAR	**Alice Springs**	**38.76**	**196**	P	**P**	**19 39 13.2**	**-0.6**
	comp=Z,5.7nm,0.7s,baz=21,slow=12,SNR=124						
ASAR				ScP	**S**	**19 45 01.2**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=270,slow=3.5,SNR=4.4						
	comp=Z,5.7nm,0.7s						
ASAR	**Alice Springs**	**38.76**	**196**	P	**P**	**19 39 12.9**	**-0.9**
KOUNC	**Koumac, New Ca**	**39.11**	**150**	P	**P**	**19 39 17.1**	**+0.5**
EIDS	**Eidsvold**	**39.41**	**171**	P	**P**	**19 39 18.9**	**-0.2**
EIDS				IAmb	IAmb	19 39 19.6	
	comp=Z,10nm,0.7s						
EIDS	**Eidsvold**	**39.41**	**171**	P	**P**	**19 39 19.3**	**+0.2**
HHC	**Hu-ho-hao-te**	**39.62**	**319**	*e*P	**P**	**19 39 22.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,110nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
RMQ	**Roma**	**40.23**	**175**	P	**P**	**19 39 26.2**	**+0.3**
BTO	**Baotou**	**40.48**	**318**	*e*P	**P**	**19 39 31.9**	**+3.9**
CD2	**Chengdu**	**41.40**	**301**	P	**P**	**19 39 36.0**	**+0.4**
NOUC	**Port Laguerre**	**41.41**	**149**	P	**P**	**19 39 37.5**	**+1.9**
DZM	**Mont Dzumac**	**41.45**	**149**	P	**P**	**19 39 37.6**	**+1.5**
	comp=Z,90nm,0.6s,baz=302,slow=4.5,SNR=104						
DZM	**Mont Dzumac**	**41.45**	**149**	P	**P**	**19 39 37.1**	**+1.0**
DZM	**Mont Dzumac**	**41.45**	**149**	P	**P**	**19 39 38.0**	**+1.9**
ONTNC	**Ouen Toro**	**41.66**	**149**	P	**P**	**19 39 38.7**	**+1.1**
YATNC	**Mamie plateau,**	**41.67**	**148**	P	**P**	**19 39 39.6**	**+1.9**
WRKA	**Warakurna**	**41.87**	**203**	P	**P**	**19 39 39.0**	**-0.3**
OUENC	**Ouen Island, N**	**41.94**	**149**	P	**P**	**19 39 39.5**	**-0.4**
OUENC	**Ouen Island, N**	**41.94**	**149**	P	**P**	**19 39 41.8**	**+1.8**
PZH	**PanZhiHua**	**42.23**	**294**	P	**P**	**19 39 43.1**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,4.2s						
OOD	**Oodnadatta**	**42.31**	**192**	P	**P**	**19 39 42.4**	**-0.4**
PINNC	**Pines Island,**	**42.41**	**148**	P	**P**	**19 39 42.8**	**-1.0**
MBWA	**Marble Bar**	**42.64**	**216**	P	**P**	**19 39 44.5**	**-1.1**
MBWA				IAmb	IAmb	19 39 52.1	
	comp=Z,28nm,1.2s						
LZH	**Lanzhou**	**42.90**	**309**	*e*P	**P**	**19 39 48.8**	**+1.0**
LZH				pP	pP	19 40 13.4	-1.5
LZH				sP	sP	19 40 24.5	-4.1
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
PSA00	**Pilbara Seismi**	**42.90**	**215**	P	**P**	**19 39 46.4**	**-1.3**
PSA00				IAmb	IAmb	19 40 31.6	
	comp=Z,37nm,1.4s						
PSA00	**Pilbara Seismi**	**42.90**	**215**	P	**P**	**19 39 46.9**	**-0.9**
PSA00				IAmb	IAmb	19 39 49.1	
	comp=Z,11nm,1.2s						
PSA00	**Pilbara Seismi**	**42.90**	**215**	P	**P**	**19 39 47.8**	**+0.1**
CM31	**Chiang Mai Arr**	**44.29**	**282**	P	**P**	**19 39 58.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**44.29**	**282**	P	**P**	**19 39 59.7**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=90,slow=6.1,SNR=8.3						
CMAR				ScP	**ScP**	**19 45 23.8**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=70,slow=3.0,SNR=4.3						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.29**	**282**	P	**P**	**19 39 59.2**	**+0.2**
KULM	**Kulim**	**44.37**	**263**	P	**P**	**19 39 59.1**	**-0.6**
KULM				IAmb	IAmb	19 40 01.4	
	comp=Z,9.6nm,1.0s						
ARMA	**Armidale**	**44.45**	**172**	P	**P**	**19 40 00.0**	**-0.1**
ARMA				IAmb	IAmb	19 40 01.7	
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**44.45**	**172**	P	**P**	**19 40 00.7**	**+0.6**
LCRK	**Leigh Creek**	**44.47**	**188**	P	**P**	**19 40 00.0**	**-0.1**
MULG	**Mulgathing**	**45.06**	**193**	P	**P**	**19 40 04.5**	**-0.3**
CMSA	**Cobar Meteorol**	**45.09**	**179**	P	**P**	**19 40 05.0**	**-0.1**
MSVF	**Nonsavu**	**45.31**	**133**	P	**P**	**19 40 07.6**	**+0.5**
	comp=Z,8.6nm,0.6s,baz=280,slow=5.5,SNR=8.3						
	comp=Z,8.6nm,0.6s						
MSVF	**Nonsavu**	**45.31**	**133**	P	**P**	**19 40 08.2**	**+1.1**
MSVF				IAmb	IAmb	19 40 09.9	
	comp=Z,18nm,0.9s						
MSVF	**Nonsavu**	**45.31**	**133**	P	**P**	**19 40 08.8**	**+1.7**
MSVF	**Nonsavu**	**45.31**	**133**	P	**P**	**19 40 09.2**	**+2.1**
STKA	**Stephens Creek**	**45.53**	**184**	P	**P**	**19 40 08.2**	**-0.4**
	comp=Z,17nm,0.5s,baz=360,slow=8.0,SNR=62						
STKA				LR	LR	19 59 39.0	
	comp=Z,56nm,18.6s,baz=18,slow=36						
	comp=Z,17nm,0.5s						
STKA	**Stephens Creek**	**45.53**	**184**	P	**P**	**19 40 07.6**	**-0.9**
STKA	**Stephens Creek**	**45.53**	**184**	P	**P**	**19 40 08.3**	**-0.3**
MA2	**Magadan**	**45.90**	**4**	P	**P**	**19 40 10.6**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=119,slow=7.1,SNR=5.2						
	comp=Z,2.4nm,0.7s						
SONM	**Songino Array**	**46.56**	**325**	P	**P**	**19 40 16.9**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=136,slow=8.0,SNR=11						
	comp=Z,1.1nm,0.4s						
SONM	**Songino Array**	**46.56**	**325**	P	**P**	**19 40 17.7**	**+1.0**
BBOO	**Buckleboo**	**47.12**	**190**	P	**P**	**19 40 20.3**	**-0.7**
BBOO	**Buckleboo**	**47.12**	**190**	P	**P**	**19 40 20.8**	**-0.1**
NAPP	**Napperby**	**47.17**	**188**	P	**P**	**19 40 21.3**	**0.0**
FORT	**Forrest**	**47.19**	**200**	P	**P**	**19 40 21.3**	**-0.2**
FORT	**Forrest**	**47.19**	**200**	P	**P**	**19 40 21.9**	**+0.4**
HTT	**Hallett**	**47.32**	**187**	P	**P**	**19 40 22.8**	**+0.3**
MEEK	**Meekatharra**	**47.63**	**212**	P	**P**	**19 40 24.9**	**-0.1**
KIWB	**Kanaga Island**	**48.62**	**31**	P	**P**	**19 40 31.0**	**-1.3**
CAN	**Canberra**	**49.02**	**176**	P	**P**	**19 40 35.7**	**+0.2**
CAN				IAmb	IAmb	19 40 36.9	
	comp=Z,13nm,0.7s						
CAN	**Canberra**	**49.02**	**176**	P	**P**	**19 40 36.4**	**+0.9**
CNB	**Canberra Magne**	**49.04**	**175**	P	**P**	**19 40 36.7**	**+1.0**
SEY	**Seymchan**	**49.34**	**5**	P	**P**	**19 40 38.0**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=242,slow=22,SNR=9.5						
SEY				LR	LR	20 02 23.9	
	comp=Z,29nm,19.5s,baz=290,slow=37						
	comp=Z,1.0nm,0.7s						
YAK	**Yakutsk**	**49.37**	**351**	P	**P**	**19 40 39.1**	**+1.2**
YAK				IAmb	IAmb	19 41 09.2	
	comp=Z,21nm,0.9s						
YAK	**Yakutsk**	**49.37**	**351**	P	P	19 40 46.2	+8.3
YAK				pP	pwP	19 41 08.3	-1.0
GOMU	**GeErMu**	**49.93**	**306**	P	**P**	**19 40 43.5**	**+0.5**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,53nm,4.7s						
ARPS	**Mount Arapiles**	**50.39**	**183**	P	**P**	**19 40 46.9**	**+1.1**
MORW	**Morawa**	**50.93**	**213**	P	**P**	**19 40 48.6**	**-1.5**
MORW				IAmb	IAmb	19 40 49.2	
	comp=Z,32nm,1.4s						
MORW	**Morawa**	**50.93**	**213**	P	**P**	**19 40 49.5**	**-0.6**
AFI	**Afiamalu**	**50.99**	**121**	LR	LR	19 59 25.9	
	comp=Z,45nm,20.6s,baz=272,slow=32						
TOO	**Toolangi**	**51.11**	**179**	P	**P**	**19 40 52.7**	**+1.4**
TOO	**Toolangi**	**51.11**	**179**	P	**P**	**19 40 53.0**	**+1.7**
BLDU	**Ballidu**	**51.83**	**211**	P	**P**	**19 40 55.8**	**-0.9**
KLBR	**Kellerberrin**	**52.11**	**210**	P	**P**	**19 40 57.9**	**-0.9**
MUN	**Mundaring**	**53.18**	**211**	P	**P**	**19 41 05.6**	**-1.1**
NWAO	**Narrogin (SRO)**	**53.46**	**209**	P	**P**	**19 41 07.6**	**-1.1**
TAU	**Tasmania Unive**	**56.48**	**178**	P	**P**	**19 41 30.6**	**+0.4**
TAU	**Tasmania Unive**	**56.48**	**178**	P	**P**	**19 41 31.2**	**+1.0**
WMQ	**Urumqi**	**57.00**	**313**	*e*P	**P**	**19 41 36.5**	**+2.4**
AIN	**Ainahou**	**57.21**	**76**	P	**P**	**19 41 37.9**	**+1.8**
URZ	**Urewera**	**59.95**	**151**	P	**P**	**19 41 53.0**	**-1.5**
	comp=Z,10nm,0.8s,baz=120,slow=22,SNR=8.3						
	comp=Z,10nm,0.8s						
URZ	**Urewera**	**59.95**	**151**	P	**P**	**19 41 56.3**	**+1.8**
QRZ	**Quartz Range**	**60.09**	**156**	P	**P**	**19 41 57.2**	**+1.8**
BKZ	**Black Stump Fm**	**60.40**	**152**	P	**P**	**19 41 57.8**	**+0.2**
BKZ				IAmb	IAmb	19 41 58.6	
	comp=Z,13nm,0.8s						
BKZ	**Black Stump Fm**	**60.40**	**152**	P	**P**	**19 41 58.8**	**+1.2**
MK31	**Makanchi Array**	**61.35**	**316**	P	**P**	**19 42 03.9**	**-0.1**
MK31				IAmb	IAmb	19 42 35.1	
	comp=Z,6.4nm,1.1s						
MKAR	**Makanchi Array**	**61.35**	**316**	P	**P**	**19 42 04.6**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=92,slow=8.8,SNR=24						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**61.35**	**316**	P	**P**	**19 42 04.0**	**+0.1**
SNZO	**South Karori**	**61.38**	**155**	P	**P**	**19 42 05.2**	**+1.1**
ZAA0	**Zalesovo Array**	**61.46**	**324**		pwP	19 42 33.8	-4.7
ZALV	**Zalesovo Beam**	**61.46**	**324**	P	**P**	**19 42 03.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=82,slow=6.6,SNR=2.0						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**61.46**	**324**	P	**P**	**19 42 06.0**	**+1.5**
BFZ	**Birch Farm**	**61.52**	**153**	P	**P**	**19 42 07.8**	**+2.8**
MAKZ	**Makanchi**	**61.56**	**316**	P	**P**	**19 42 05.8**	**+0.3**
MAKZ				IAmb	IAmb	19 42 36.5	
	comp=Z,11nm,1.1s						
MAKZ	**Makanchi**	**61.56**	**316**	P	**P**	**19 42 06.4**	**+1.0**
MAKZ				x	x	19 42 16.6	
MAKZ				pP	**pP**	**19 42 31.4**	**-3.0**
KHZ	**Kahutara**	**61.84**	**156**	P	**P**	**19 42 06.7**	**-0.4**
RPZ	**Rata Peaks**	**62.04**	**159**	P	**P**	**19 42 08.1**	**-0.4**
	comp=Z,12nm,0.7s,baz=123,slow=4.1,SNR=8.4						
	comp=Z,12nm,0.7s						
RPZ	**Rata Peaks**	**62.04**	**159**	P	**P**	**19 42 08.3**	**-0.2**
RPZ				IAmb	IAmb	19 42 08.9	
	comp=Z,17nm,0.9s						
OXZ	**Oxford**	**62.05**	**158**	P	**P**	**19 42 07.5**	**-1.0**
OXZ				IAmb	IAmb	19 42 08.3	
	comp=Z,14nm,0.7s						
ODZ	**Otahua Downs**	**63.06**	**160**	P	**P**	**19 42 17.1**	**+1.9**
KDAK	**Kodiak Island**	**63.87**	**32**	LR	LR	20 04 58.0	
	comp=Z,23nm,22.0s,baz=239,slow=31						
KURK	**Kurchatov**	**64.43**	**320**	P	**P**	**19 42 24.5**	**+0.2**
KURK				IAmb	IAmb	19 42 54.8	
	comp=Z,20nm,1.1s						
KURK	**Kurchatov**	**64.43**	**320**	P	**P**	**19 42 24.6**	**+0.4**
KURK				x	x	19 42 32.0	
KURK				pP	**pP**	**19 42 51.9**	**-1.5**
KURK				sP	**sP**	**19 43 03.3**	**-3.3**
KURBB	**Kurchatov Arra**	**64.47**	**320**	P	**P**	**19 42 24.9**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=105,slow=6.6,SNR=14						
KURBB				LR	LR	20 11 04.0	
	comp=Z,65nm,19.2s,baz=66,slow=36						
	comp=Z,3.2nm,0.6s						
KSH	**Kashi**	**65.12**	**307**	P	P	19 42 37.5	+8.3
KSH				pP	pwP	19 43 02.6	-0.7
CAST	**Castle Rocks**	**65.79**	**26**	P	**P**	**19 42 33.1**	**+0.3**
CAST				IAmb	IAmb	19 43 06.0	
	comp=Z,6.5nm,0.9s						
NRIK	**Noril'sk**	**65.93**	**341**	P	**P**	**19 42 33.0**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=171,slow=11,SNR=1.5						
	comp=Z,1.0nm,0.4s						
NRIK	**Noril'sk**	**65.93**	**341**	P	**P**	**19 42 33.6**	**0.0**
NRIK				IAmb	IAmb	19 43 02.9	
	comp=Z,15nm,1.6s						
NIL	**Nilore**	**67.29**	**301**		pwP	19 43 13.0	-4.5
IL31		**68.36**	**25**	P	**P**	**19 42 48.4**	**-0.6**
ILAR	**Eielson Array**	**68.36**	**25**	P	**P**	**19 42 48.4**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=251,slow=5.8,SNR=18						
	comp=Z,1.3nm,0.6s						
KK31	**Karatay Array**	**69.32**	**311**	P	**P**	**19 42 54.2**	**-1.2**
KKAR	**Karatay Array**	**69.32**	**311**	P	**P**	**19 42 55.2**	**-0.3**
KKAR	**Karatay Array**	**69.32**	**311**	P	**P**	**19 42 54.1**	**-1.4**
KKAR				IAmb	IAmb	19 43 26.3	
	comp=Z,5.7nm,0.9s						
L26K	**Log Cabin Wild**	**69.53**	**28**	P	**P**	**19 42 56.9**	**+0.6**
BRVK	**Borovoye**	**69.83**	**322**	P	**P**	**19 43 00.3**	**+2.0**
BRVK				pP	**pP**	**19 43 26.7**	**-1.3**
CHGR	**Chuyangaron**	**70.43**	**306**		pwP	19 43 33.0	-3.8
INK	**Inuvik**	**74.16**	**22**	P	**P**	**19 43 23.4**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=246,slow=4.7,SNR=8.1						
	comp=Z,2.3nm,0.8s						

ABKAR	Akbulak array	76.39	318	P	P	19 43 36.3	-0.7
ABKAR	Akbulak array	76.39	318	P	P	19 43 36.4	-0.6
YKA	Yellowknife Ar	82.66	27	P	P	19 44 11.0	+0.4
	comp=Z,1.2nm,0.6s,baz=286,slow=5.1,SNR=19						
	comp=Z,1.2nm,0.6s						
YBH	Yreka Blue Hor	82.71	49	P	P	19 44 11.6	+0.1
	comp=Z,5.4nm,0.7s,baz=240,slow=3.4,SNR=9.6						
YBH				LR	LR	20 12 15.1	
	comp=Z,25nm,21.8s,baz=257,slow=29						
	comp=Z,5.4nm,0.7s						
YBH	Yreka Blue Hor	82.71	49	P	P	19 44 11.9	+0.4
YBH				IAmb	IAmb	19 44 14.0	
	comp=Z,6.8nm,0.8s						
PINE	Pine Mountain	83.55	47	P	P	19 44 15.9	+0.1
BEKR	Beckworth	84.87	50	P	P	19 44 21.5	-1.1
BEKR				IAmb	IAmb	19 44 24.3	
	comp=Z,7.6nm,0.7s						
CMB	Columbia Colle	85.28	52	P	P	19 44 23.6	-1.0
BMO	Blue Mountains	85.82	45	P	P	19 44 26.1	-1.1
BMO				IAmb	IAmb	19 44 28.9	
	comp=Z,7.3nm,1.1s						
PLID	Pearl Lake	86.65	44	P	P	19 44 30.9	-0.5
KVN	Kaiserville	86.76	51	P	P	19 44 32.0	0.0
NVAR	Mina Array Bea	86.77	51	P	P	19 44 32.9	+0.8
	comp=Z,2.2nm,0.6s,baz=278,slow=5.2,SNR=25						
	comp=Z,2.2nm,0.6s						
NVAR	Mina Array Bea	86.77	51	P	P	19 44 32.3	+0.2
NV11	Mina Array Sit	86.88	51	P	P	19 44 32.3	-0.3
NV11				IAmb	IAmb	19 44 34.7	
	comp=Z,8.0nm,1.3s						
ARCES	ARCESS Array B	86.88	342	P	P	19 44 30.4	-1.3
	comp=Z,1.0nm,0.6s,baz=60,slow=7.2,SNR=5.3						
ARCES				LR	LR	20 25 33.8	
	comp=Z,38nm,21.8s,baz=12,slow=37						
	comp=Z,1.0nm,0.6s						
MFID	Camas Ranch	87.24	46	P	P	19 44 34.0	-0.1
MFID				IAmb	IAmb	19 44 36.0	
	comp=Z,7.6nm,1.0s						
TPH	Tonopah	87.68	51	P	P	19 44 36.1	-0.3
HLID	Hailey	88.18	46	P	P	19 44 39.2	+0.5
ELK	Elko	88.42	48	P	P	19 44 39.9	-0.1
ELK				IAmb	IAmb	19 44 42.0	
	comp=Z,5.6nm,0.8s						
QSM	Queen of Sheba	88.53	53	P	P	19 44 40.1	-0.1
QSM				IAmb	IAmb	19 44 42.3	
	comp=Z,4.0nm,0.8s						
TPNV	Topopah Spring	88.74	52	P	P	19 44 41.4	0.0
GSC	Goldstone, Bar	88.76	54	P	P	19 44 41.9	+0.5
GSC				IAmb	IAmb	19 44 43.6	
	comp=Z,5.9nm,1.1s						
R11A	Troy Canyon, C	88.85	51	P	P	19 44 41.9	0.0
R11A				IAmb	IAmb	19 44 45.1	
	comp=Z,13nm,1.8s						
DAG	Danmarks Havn	89.07	356	*i* P	P	19 44 44.0	+2.1
PFO	Pinyon Flats O	89.50	56	P	P	19 44 44.0	-1.0
PFO				IAmb	IAmb	19 44 47.8	
	comp=Z,12nm,1.4s						
SHPR	Sheep Range	89.70	53	P	P	19 44 45.6	-0.3
SHPR				IAmb	IAmb	19 44 48.5	
	comp=Z,4.7nm,1.0s						
YHL	Hebgen Lake	89.98	44	P	P	19 44 47.9	+0.7
YHL				IAmb	IAmb	19 44 50.6	
	comp=Z,12nm,1.4s						
AHID	Auburn Hatcher	90.73	46	P	P	19 44 50.1	-0.5
AHID				IAmb	IAmb	19 44 52.7	
	comp=Z,23nm,1.7s						
FINES	FINESS Array B	90.97	335	P	P	19 44 49.7	-1.3
	comp=Z,0.4nm,0.5s,baz=64,slow=4.6,SNR=5.2						
	comp=Z,0.4nm,0.5s						
W13A	Hualapai Mount	91.11	54	P	P	19 44 51.3	-1.3
W13A				IAmb	IAmb	19 44 54.8	
	comp=Z,3.6nm,1.0s						
VNDA	Vanda	91.68	176	P	P	19 44 54.8	+0.9
	comp=Z,3.2nm,0.9s,baz=323,slow=4.8,SNR=16						
	comp=Z,3.2nm,0.9s						
VNDA	Vanda	91.68	176	P	P	19 44 54.1	+0.2
VNDA				IAmb	IAmb	19 44 56.0	
	comp=Z,6.7nm,1.1s						
PDAR	Pinedale Array	91.80	45	P	P	19 44 55.3	-0.3
	comp=Z,0.3nm,0.5s,baz=267,slow=2.5,SNR=3.8						
	comp=Z,0.3nm,0.5s						
JMIC	Jan Mayen	93.47	352	LR	LR	20 29 18.9	
	comp=Z,13nm,19.1s,baz=292,slow=37						
HFS	Hagfors	96.60	338	LR	LR	20 30 10.9	
	comp=Z,26nm,20.8s,baz=26,slow=36						
MAW	Mawson	99.64	203	LR	LR	20 29 40.8	
	comp=Z,36nm,18.4s,baz=152,slow=35						
CSU	Charleston Sou	116.69	42	PKPdf	PKPdf	19 50 27.4	-3.9
SNAA	Sanae	119.00	191	PKPdf	PKiKP	19 50 35.1	+0.3
VNA2	Neumayer--Watz	120.45	190	PKPdf	PKiKP	19 50 38.2	+0.7
	baz=199,slow=1.0						
VNA3	Neumayer Olymp	120.55	189	PKPdf	PKiKP	19 50 38.1	+0.3
TORD	Torodi Ar. Bea	134.76	305	PKP	PKPdf	19 51 06.6	+0.3
	comp=Z,0.7nm,0.5s,baz=81,slow=2.3,SNR=4.2						
TORD				SKPbc	SKPbc	19 54 26.1	+0.9
	comp=Z,1.7nm,0.9s,baz=41,slow=3.5,SNR=6.9						
PLCA	Paso Flores	139.08	138	PKP	PKPdf	19 51 13.5	-0.2
	comp=Z,1.8nm,0.7s,baz=304,slow=2.4,SNR=3.9						
DBIC	Dimbokro	143.72	302	PKP	PKPbc	19 51 20.8	+0.3
	comp=Z,1.9nm,0.4s,baz=57,slow=3.7,SNR=8.6						
LCO	Las Campanas	143.75	120	PKPdf	PKPdf	19 51 22.6	0.0
KIC	Kosan Boka	143.80	302	*e*P	PKPbc	19 51 20.6	-0.2
	comp=Z,5.0nm,0.4s						
TIC	Toumodi	143.87	302	*e*P	PKPbc	19 51 21.0	0.0
LIC	Lamto	144.11	302	*e*P	PKPbc	19 51 22.5	+0.8
	comp=Z,47nm,1.9s						
ZON	Zonda	144.55	126	PKPdf	PKPdf	19 51 24.6	+0.9
PB12	IPOC Station P	145.88	103	PKPab	PKPab	19 51 28.3	+0.5
PB11	IPOC Station P	146.44	105	PKPab	PKPbc	19 51 29.3	+0.4
LVC	Limon Verde	146.79	110	PKPab	PKPab	19 51 31.7	+0.1
LPAZ	La Paz	148.04	99	PKPbc	PKPdf	19 51 32.2	+1.6
	comp=Z,11nm,0.8s,baz=268,slow=3.0,SNR=32						

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*IDC **06** 19:32:31.9±2.4, 43°.10N×105°.07W, h0^{km}, mb3.3/3, mbtmp3.4/5, ML3.3/2, MS3.1/9, Error ellipse: s-maj=50.4km s-min=9.6km az=158.0*

*NEIC **06** 19:32:36.4±2.7, 43°.59N±0°.05×105°.25W±0°.06, h0^{km}±2^{km}, ML3.5/61, Error ellipse: s-maj=10.0km s-min=4.6km az=318.0*

ISC 06 19:32:35.1±1.0**, 43°.63N**±0°.05×**105°.20W**±0°.06**, h0**^{km}**, n58, σ1s.36**/48**, MS3.5**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	59		Pn	19 32 56.0	-0.2
K22A	Casper	1.38	225		Pg	19 32 59.6	-1.8
PHWY	Pilot Hill	2.34	185		Pn	19 33 15.7	+0.7
RWWY	Rawlins	2.44	218	Pn	Pn	19 33 16.9	+0.4
RWWY				IAML		19 34 01.9	
	203nm,1.0s						
N23A	Red Feather La	2.79	192		Pn	19 33 22.6	+1.4
N23A				IAML		19 34 05.7	
	comp=E,151nm,0.8s						
N23A				IAML		19 35 05.3	
	comp=N,141nm,3.6s						
LAO	LASA Array	3.14	347	Pn	Pn	19 33 27.9	+2.0
BW06	Boulder Array	3.30	256		Pn	19 33 28.4	+0.2
BW06				IAML		19 34 28.0	
	comp=N,66nm,2.1s						
PD31	Pinedale Array	3.30	256		Pn	19 33 28.1	-0.1
PDAR	Pinedale Array	3.30	256	Pn	Pn	19 33 28.9	+0.7
	comp=N,3.1nm,0.3s,baz=79,slow=17,SNR=38						
PDAR				Lg	Lg	19 34 14.4	
	comp=N,13nm,0.3s,baz=73,slow=33,SNR=11						
	comp=N,1.7nm,0.3s						
OGNE	Ogallala	3.57	138		Pn	19 33 33.2	+1.5
ISCO	Idaho Springs	3.84	185		Pn	19 33 37.6	+1.9
GCMT	Greycliff	3.85	306		Pn	19 33 36.6	+1.0
LKWY	Lake	3.86	286		Pn	19 33 35.8	-0.1
LKWY				IAML		19 34 42.0	
	comp=N,67nm,1.9s						
LKWY				IAML		19 36 06.4	
	comp=N,64nm,4.7s						
LOHW	Long Hollow	3.92	272		Pn	19 33 38.2	+1.4
LOHW				IAML		19 34 48.7	
	comp=N,38nm,2.5s						
H17A	Grant Village	3.95	283		Pn	19 33 37.9	+0.7
H17A				IAML		19 34 43.0	
	comp=N,57nm,1.7s						
H17A				IAML		19 34 43.7	
	comp=E,49nm,2.3s						
FLWY	Flagg Ranch	4.00	278		Pn	19 33 39.9	+2.1
FLWY				IAML		19 34 50.6	
	comp=E,78nm,2.3s						
MOOW	Moose Ponds	4.02	274		Pn	19 33 36.7	-1.4
SNOW	Snow King Moun	4.04	270		Pn	19 33 40.4	+2.0
SNOW				IAML		19 34 56.3	
	comp=E,65nm,1.1s						
SNOW				IAML		19 35 00.2	
	comp=E,87nm,2.2s						
YNR	Norris Junctio	4.09	287		Pn	19 33 37.5	-1.6
YNR				IAML		19 36 17.8	
	comp=E,43nm,4.4s						
YPP	Pitchstone Pla	4.10	281		Pn	19 33 37.8	-1.4
YPP				IAML		19 36 02.6	
	comp=N,48nm,4.5s						
REDW	Red Top Meadow	4.12	268		Pn	19 33 40.1	+0.6
REDW				IAML		19 34 56.6	
	comp=N,82nm,0.7s						
REDW				IAML		19 35 03.3	
	comp=N,82nm,1.2s						
O20A	White River Ci	4.17	214		Pn	19 33 41.5	+1.4
TPAW	Teton Pass	4.18	270		Pn	19 33 41.4	+1.0
TPAW				IAML		19 35 09.0	
	comp=N,37nm,2.5s						
TPAW				IAML		19 35 19.4	
	comp=N,54nm,2.5s						
YHH	Holmes Hill	4.22	288		Pn	19 33 41.5	+0.5
YHH				IAML		19 35 02.4	
	comp=N,38nm,1.3s						
YMR	Madison River	4.28	286		Pn	19 33 43.0	+1.4
YMR				IAML		19 35 42.5	
	comp=E,56nm,1.2s						
YMR				IAML		19 35 43.6	
	comp=N,65nm,3.2s						
E28A	Huff	4.34	46	Pn	Pn	19 33 42.8	+0.5
AHID	Auburn Hatcher	4.40	261		Pn	19 33 43.2	-0.1
AHID				IAML		19 34 59.2	
	comp=N,56nm,2.7s						
AHID				IAML		19 35 17.9	
	comp=N,45nm,1.1s						
RDMU	Red Mountain	4.46	228		Pn	19 33 45.8	+1.6
RDMU				IAML		19 35 04.9	
	comp=N,40nm,1.4s						
RDMU				IAML		19 35 18.5	
	comp=E,51nm,1.3s						
YHL	Hebgen Lake	4.47	288		Pn	19 33 46.7	+2.4
YHL				IAML		19 35 37.9	
	comp=E,34nm,1.2s						
YHL				IAML		19 35 39.8	
	comp=N,46nm,1.4s						
ECR	Eagle Creek	4.54	265		Pn	19 33 47.1	+1.9
SMCO	Snowmass	4.64	197		Pn	19 33 47.5	+0.7
SMCO				IAML		19 35 52.2	
	comp=N,43nm,1.5s						
SMCO				IAML		19 36 29.9	
	comp=N,41nm,4.0s						
DGMT	Dagmar	4.89	8		Pn	19 33 51.7	+1.9
BOZ	Bozeman (W)	4.99	295		Pn	19 33 51.0	-0.4
BOZ				IAML		19 36 54.5	
	comp=N,26nm,4.2s						
BOZ				IAML		19 36 55.7	
	comp=N,23nm,4.8s						
KSCO	Kaye Shedlock'	5.00	156		Pn	19 33 50.3	-1.3
HWUT	Hardware Ranch	5.11	249		Pn	19 33 54.4	+1.3
EGMT	Eagleton	5.42	326		Pn	19 33 56.9	-0.4
P18A	Preston Nutter	5.50	225		Pn	19 33 59.7	+1.2
JLU	Jordanelle	5.55	239		Pn	19 34 01.7	+2.6
HRY	Holter Researc	5.61	306		Pn	19 33 57.7	-2.1
LRM	Limekiln Ridge	5.61	295		Pn	19 34 00.5	+0.6
MCMT	McKenzie Canyo	5.63	285		Pn	19 34 00.6	+0.4
P17A	Butcher Ranch,	5.88	227		Pn	19 34 02.5	-1.0
PV23	Carpenter Ridg	5.92	210		Pn	19 34 03.4	-0.9
SRU	San Rafael Swe	6.04	223		Pn	19 34 04.5	-1.3
ELK	Elko	7.99	252	LR	LR	19 37 33.2	
	comp=N,71nm,21.0s,baz=30,slow=38						
ANMO	Albuquerque	8.73	187	LR	LR	19 37 04.9	
	comp=N,24nm,20.3s,baz=342,slow=33						
I10CA	LAC DU BONNET	9.08	40	*i*		20 24 00.0	
	comp=N,0.2nm,1.5s,baz=223,slow=336,SNR=7.0						
ULM	Lac du Bonnet	9.19	41	Pn	Pn	19 34 47.5	-1.2
	comp=N,0.7nm,0.3s,baz=231,slow=10,SNR=1.7						
ULM				Lg	Lg	19 37 26.2	
	comp=N,0.9nm,0.3s,baz=124,slow=22,SNR=1.8						
	comp=N,2.3nm,0.4s						
NEW	Newport	9.51	303	Lg	Lg	19 37 29.7	
	comp=N,0.2nm,0.3s,baz=10,slow=16,SNR=1.7						
NEW				LR	LR	19 38 56.8	
	comp=N,213nm,20.8s,baz=132,slow=39						
NVAR	Mina Array Bea	11.18	247	LR	LR	19 39 46.1	
	comp=N,62nm,19.4s,baz=104,slow=40						
YBH	Yreka Blue Hor	13.03	268	LR	LR	19 40 23.5	
	comp=N,24nm,19.1s,baz=60,slow=36						
YKA	Yellowknife Ar	19.68	347	P	Pn	19 37 09.1	+2.3
	comp=N,0.2nm,0.5s,baz=154,slow=11,SNR=3.8						
	comp=N,0.2nm,0.5s						
LPIG	La Paz	19.93	194	LR	LR	19 45 09.1	
	comp=N,68nm,19.6s,baz=328,slow=39						
FRB	Frobisher Bay	28.96	33	LR	LR	19 50 16.3	
	comp=N,152nm,19.3s,baz=222,slow=36						
SFJD	Kangerlussuaq	37.09	32	LR	LR	19 55 11.2	
	comp=N,65nm,19.6s,baz=258,slow=36						
BORG	Borgarnes	49.13	34	LR	LR	20 02 04.8	
	comp=N,42nm,18.8s,baz=343,slow=36						
ARCES	ARCESS Array B	61.50	18	P	P	19 42 52.6	-0.5
	comp=N,0.4nm,0.5s,baz=326,slow=6.7,SNR=1.2						
	comp=N,0.4nm,0.5s						
FINES	FINESS Array B	68.11	23	P	P	19 43 35.8	-0.4
	comp=N,0.3nm,0.6s,baz=339,slow=3.4,SNR=0.8						
	comp=N,0.3nm,0.6s						

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*JMA **06** 19:41:34.0±0.2, 24°.1N±0°.8×121°.7E±0°.7, h4^{km}, MV3.0/9, TAIWAN REGION*

*TAP **06** 19:41:34.4, 24°.11N×121°.64E, h10^{km}, ML3.7, C*

ISC 06 19:41:34.2±0.8**, 24°.06N**±0°.02×**121°.71E**±0°.02**, h10**^{km}±5^{km}**, n117, σ0s.83**/184**, 9C-31D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.11	279	⇓*i*P	Pg	19 41 36.5	-0.4
	baz=225						
TWD				*i* S	Sg	19 41 37.9	-0.9
	baz=225						
ETL	Fush Village	0.13	319	⇓*i*P	Pg	19 41 36.7	-0.5
	baz=344						
ETL				*i* S	Sg	19 41 38.2	-1.2
	baz=344						
HWA	Hwalien	0.13	229	⇑*i*P	Pg	19 41 37.9	+0.7
	baz=189						
HWA				*e*S	Sg	19 41 40.6	+1.3
	baz=189						
NACB	Ninganchiao	0.15	316	⇓*i*P	Pg	19 41 36.9	-0.7
	baz=327						
NACB				*i* S	Sg	19 41 38.7	-1.3
	baz=327						
TEYL	Yanliau Villag	0.22	208	P	Pg	19 41 39.4	+0.7
	baz=189						
TEYL				*e*S	Sg	19 41 45.1	+3.3
	baz=189						
ETM	Tongmen	0.22	244	⇑*i*P	Pg	19 41 38.7	-0.1
	baz=222						
ETM				S	Sg	19 41 41.5	-0.4
	baz=222						
EHP	Heping Village	0.25	6	⇓*i*P	Pg	19 41 39.1	-0.1
	baz=27						
EHP				*i* S	Sg	19 41 42.4	-0.2
	baz=27						
ETLH	Xiulin Townshi	0.26	304	⇓*i*P	Pg	19 41 38.7	-0.7
	baz=304						
ETLH				*i* S	Sg	19 41 41.6	-1.3
	baz=304						
ESL	Shilin	0.36	226	⇑*i*P	Pg	19 41 41.2	0.0
	baz=211						
ESL				*e*S	Sb	19 41 46.9	-1.3
	baz=211						
ENA	Nanau	0.36	4	⇓*i*P	Pg	19 41 41.1	-0.3
	baz=18						
ENA				*i* S	Sg	19 41 45.7	-0.6
	baz=18						
EWUT	Wuta	0.39	9	⇓*i*P	Pg	19 41 41.5	-0.3
	baz=21						
EWUT				S	Sg	19 41 46.2	-0.7
	baz=21						
TEGC	Jichi Village	0.39	204	*e*P	Pb	19 41 43.5	+0.4
	baz=192						
TEGC				*e*S	Sb	19 41 52.2	+3.1
	baz=192						
WHF	Hehuan Shan	0.42	281	⇓*i*P	Pg	19 41 41.9	-0.6
	baz=275						
WHF				*e*S	Sg	19 41 47.1	-1.0
	baz=275						
FUSS	Fushou	0.47	293	⇓*i*P	Pg	19 41 42.9	-0.4
	baz=291						
FUSS				*e*S	Sg	19 41 48.8	-0.7
	baz=291						
EGFH	Guangfu	0.47	214	⇑*e*P	Pb	19 41 43.7	-0.9
	baz=204						
NNSB	Datong	0.47	320	⇓*i*P	Pg	19 41 43.0	-0.5
	baz=324						
NNSB				*i* S	Sg	19 41 48.7	-1.0
	baz=324						
NNS	Nan Shan	0.49	321	⇓*i*P	Pg	19 41 43.2	-0.5
	baz=324						
NNS				*e*S	Sg	19 41 49.2	-0.9
	baz=324						
CHGB	Renai	0.49	270	⇓*i*P	Pg	19 41 43.6	-0.2
	baz=263						
CHGB				*e*S	Sg	19 41 50.0	-0.4
	baz=263						
LATG	Datong	0.50	340	⇓*i*P	Pg	19 41 43.5	-0.5
	baz=346						
LATG				S	Sg	19 41 50.0	-0.6
	baz=346						
OWD	Renai	0.50	258	⇓*e*P	Pg	19 41 43.6	-0.4
	baz=250						
OWD				*e*S	Sg	19 41 49.7	-1.0
	baz=250						
TWT	Tachien	0.53	291	⇓P	Pg	19 41 44.4	0.0
	baz=288						
TWT				*e*S	Sg	19 41 50.6	-0.8
	baz=288						
TDCB	Techi	0.54	291	⇓*e*P	Pg	19 41 44.4	-0.4
	baz=288						
TDCB				*e*S	Sg	19 41 51.3	-0.6
	baz=288						
WUSB	Renai	0.55	263	⇓P	Pg	19 41 44.8	-0.1
	baz=256						
WUSB				*e*S	Sg	19 41 51.6	-0.6
	baz=256						
TWC	Suao	0.56	13	⇓*i*P	Pg	19 41 44.8	-0.2
	baz=22						
TWC				*e*S	Sg	19 41 52.1	-0.3
	baz=22						
NDT	Datong Townshi	0.57	341	⇓*e*P	Pg	19 41 45.0	-0.2
	baz=347						
NDT				*e*S	Sg	19 41 52.0	-0.6
	baz=347						
NDS	Dongshan	0.57	0	⇓*i*P	Pg	19 41 44.9	-0.3
	baz=8.0						
NDS				*e*S	Sg	19 41 51.9	-0.9
	baz=8.0						
ENTT	Nioudou	0.59	347	⇓P	Pg	19 41 45.3	-0.3
	baz=354						
ENTT				*e*S	Sg	19 41 53.1	-0.3
	baz=354						
VWDT	VWDT	0.61	240	⇑*e*P	Pb	19 41 46.0	-0.8
	baz=232						
VWDT				*e*S	Sb	19 41 54.7	-0.7
	baz=232						
HGSD	Ruisui	0.63	205	⇓*e*P	Pb	19 41 47.6	+0.4
	baz=198						
HGSD				*e*S	Sn	19 42 00.7	+1.6
	baz=198						
TWE	Neicheng	0.66	356	⇓*e*P	Pg	19 41 46.7	-0.2
	baz=4.0						
TWE				*e*S	Sg	19 41 55.1	-0.4
	baz=4.0						
EHY	Hungye	0.66	213	*e*P	Pb	19 41 47.0	-0.8
	baz=205						
EHY				*e*S	Sb	19 41 57.2	+0.2
	baz=205						
YHNB	Yeheng	0.68	333	⇓P	Pg	19 41 47.0	-0.4
	baz=337						
YHNB				*e*S	Sg	19 41 55.2	-1.0
	baz=337						
NSK	Sanguang	0.69	332	⇓*e*P	Pg	19 41 47.1	-0.4
	baz=336						
NSK				*e*S	Sg	19 41 55.5	-1.1
	baz=336						
WPL	Puli Township	0.69	266	*e*P	Pg	19 41 47.5	0.0
	baz=261						
WPL				*e*S	Sg	19 41 56.7	0.0
	baz=261						
ILA	Ilan	0.70	3	*e*P	Pg	19 41 47.7	0.0
	baz=9.0						
ILA				*e*S	Sg	19 41 56.9	0.0
	baz=9.0						
FUSB	Fushanzhiwuyua	0.70	351	⇓P	Pg	19 41 47.5	-0.2
	baz=356						
FUSB				*e*S	Sg	19 41 56.9	-0.2
	baz=356						
DPDB	Guoxing	0.72	268	⇑*e*P	Pb	19 41 48.2	-0.6
	baz=263						
DPDB				*e*S	Sg	19 41 57.1	-0.4
	baz=263						
WCS	Beigang Elemen	0.73	270	⇑*e*P	Pg	19 41 48.3	0.0
	baz=265						
WCS				*e*S	Sg	19 41 57.5	-0.4
	baz=265						
WHP	Taichung City	0.73	287	⇓*e*P	Pg	19 41 48.3	0.0
	baz=285						
WHP				*e*S	Sg	19 41 57.9	0.0
	baz=285						
NWLT	Wulai	0.74	345	⇓*e*P	Pg	19 41 48.0	-0.4
	baz=349						
NWLT				*e*S	Sg	19 41 56.9	-1.2
	baz=349						
SSLB	Suanglung	0.75	249	⇑*e*P	Pg	19 41 48.5	-0.1
	baz=243						
SSLB				*e*S	Sg	19 41 57.8	-0.6
	baz=243						
SMLT	Sun Moon Lake	0.77	257	⇑*e*P	Pb	19 41 48.9	-0.7
	baz=251						
SMLT				*e*S	Sg	19 41 59.0	0.0
	baz=251						
YULB	Yu-li	0.77	210	*e*P	Pg	19 41 48.6	-0.4
	baz=204						
YULB				*e*S	Sn	19 42 01.6	-1.1
	baz=204						
ECBN	Changbin	0.78	198	*e*P	Pb	19 41 50.2	+0.3
	baz=192						
ECBN				*e*S	Sn	19 42 03.6	+0.7
	baz=192						
NFF	Wufeng Townshi	0.78	316	*e*P	Pg	19 41 49.1	-0.3
	baz=318						
NFF				*e*S	Sg	19 41 58.6	-1.0
	baz=318						
NTC	Toucheng	0.80	8	⇓*e*P	Pg	19 41 48.3	-1.2
	baz=13						
NTC				*e*S	Sg	19 41 58.1	-1.8
	baz=13						
TYC	Yuchr	0.80	259	*e*P	Pg	19 41 49.2	-0.4
	baz=254						
TYC				*e*S	Sg	19 41 59.5	-0.5
	baz=254						
EYUL	Yuli	0.80	207	*e*P	Pb	19 41 49.4	-0.8
	baz=201						
EGS		0.80	14	*e*P	Pg	19 41 49.9	+0.2
	baz=21						
TWF1	Yuli	0.80	208	*e*P	Pg	19 41 49.2	-0.5
	baz=202						
LIOB	Emei	0.86	313	⇓*e*P	Pg	19 41 50.9	+0.2
	baz=313						
LIOB				*e*S	Sg	19 42 01.3	-0.7
	baz=313						
NSTT	Nanjuang	0.86	311	*e*P	Pg	19 41 50.7	0.0
	baz=312						
NSTT				*e*S	Sg	19 42 01.1	-0.9
	baz=312						
YUS	Yu-Shan	0.90	231	*e*P	Pb	19 41 51.8	-0.3
	baz=225						
TWQ1	Liyutan	0.90	288	*e*P	Pb	19 41 51.9	-0.1
	baz=287						
TIPB	Shuangxi	0.91	6	⇓*e*P	Pg	19 41 51.5	-0.2
	baz=11						
TIPB				*e*S	Sg	19 42 02.0	-1.6
	baz=11						
NHDH	Xindian Distri	0.91	349	*e*P	Pg	19 41 51.7	-0.1
	baz=353						
NHDH				*e*S	Sg	19 42 02.6	-1.0
	baz=353						
TWA	Mucha	0.92	353	*e*P	Pg	19 41 51.7	-0.2
	baz=357						
TWA				*e*S	Sg	19 42 02.9	-1.1
	baz=357						
TATO	Taipei	0.93	347	*e*P	Pg	19 41 52.0	-0.1
	baz=351						
TATO				*e*S	Sg	19 42 03.1	-1.1
	baz=351						

WJS	**Zhushan** baz=251	0.93	255	*e*P	Pb	19 41 51.9	-0.5
NSY	**Sanyi** baz=291	0.94	292	*e*P	Pb	19 41 53.1	+0.5
FULB	**Fuli** baz=199	0.94	204	*e*P	Pb	19 41 52.5	-0.1
TCU	**Taichung** baz=272	0.95	275	*e*P	Pn	19 41 53.7	+0.1
TCU	baz=272			*e*S	Sn	19 42 07.6	+0.4
WNT	**Mingjian** baz=255	0.96	259	*e*P	Pb	19 41 53.2	+0.3
NMLH	**Miaoli** baz=299	0.96	299	*e*P	Pb	19 41 53.5	+0.6
TWB1	**Santiao Chiao** baz=20	0.97	15	*e*P	Pg	19 41 52.8	-0.1
TWB1	baz=20			*e*S	Sg	19 42 04.7	-0.9
SBCB	**Hsinchu** baz=319	0.98	318	*e*P	Pn	19 41 54.7	+0.7
ALS	**Alishan** baz=232	1.00	237	*e*P	Pb	19 41 53.5	-0.2
ALS	baz=232			*e*S	Sb	19 42 07.9	+0.9
NWF	**Wu-fen Shan** baz=8.0	1.00	4	*e*P	Pg	19 41 53.4	-0.1
NWF	baz=8.0			*e*S	Sg	19 42 05.8	-0.9
WFSB	**Wu-fen Shan** baz=8.0	1.00	4	*e*P	Pg	19 41 53.6	0.0
WFSB	baz=8.0			*e*S	Sg	19 42 05.7	-0.9
CHKT	**Chengkung** baz=194	1.01	198	*e*P	Pb	19 41 53.1	-0.6
WDJ	**Dajia District** baz=284	1.02	286	*e*P	Pn	19 41 55.1	+0.6
NCUH	**Zhongli** baz=334	1.02	332	*e*P	Pb	19 41 54.6	+0.6
NCU	**National Centr** baz=335	1.02	332	*e*P	Pb	19 41 54.2	+0.2
SXI1	**Grass Mountain** baz=12	1.04	8	*e*P	Pg	19 41 53.9	-0.3
CHN5	**Tsauling** baz=240	1.05	244	*e*P	Pn	19 41 55.1	0.0
CHN5	baz=240			*e*S	Sn	19 42 10.4	+0.5
TWS1	**Kuangyinshan** baz=349	1.07	345	*e*P	Pb	19 41 55.1	+0.4
ELDTW	**Lidau** baz=211	1.08	216	*e*P	Pg	19 41 53.7	-1.2
YM01	**YM01** baz=357	1.09	353	*e*P	Pb	19 41 55.1	+0.1
WGK	**Gukeng** baz=246	1.12	251	*e*P	Pn	19 41 56.4	+0.5
NTST	**Danshui** baz=351	1.12	348	*e*P	Pb	19 41 56.0	+0.4
YM08	**YM08** baz=358	1.12	354	*e*P	Pg	19 41 55.5	-0.4
ANP	**Anpu** baz=355	1.13	351	*e*P	Pg	19 41 55.8	-0.2
WDLH	**Douliu** baz=247	1.14	251	*e*P	Pn	19 41 56.6	+0.4
EDH	**Donghe** baz=195	1.15	199	*e*P	Pg	19 41 55.0	-1.2
EDH	baz=195			*e*S	Sn	19 42 12.2	+0.1
JYNG	**Yonagunijimaku**	1.19	71	*e*P	Pn	19 41 57.3	+0.4
JYNG				S	Sn	19 42 14.3	+1.3
WRL	**Guolierlin Hig** baz=260	1.23	263	*e*P	Pn	19 41 57.9	+0.5
STYH	**Taoyuan** baz=220	1.24	224	*e*P	Pn	19 41 57.4	-0.1
CHN4	**Tsaushan** baz=232	1.25	236	*e*P	Pn	19 41 58.4	+0.7
TPUB	**Ta-pu** baz=229	1.25	233	*e*P	Pn	19 41 58.3	+0.6
YOJ	**Yonaguni jima** baz=74	1.25	71	*i* P	Pn	19 41 58.1	+0.5
YOJ	baz=74			*e*S	Sn	19 42 16.1	+1.5
YOJ	**Yonaguni jima**	1.25	71	P	Pn	19 41 58.1	+0.5
YOJ				S	Sn	19 42 16.2	+1.7
STYT	**Tauyuan** baz=220	1.25	225	*e*P	Pn	19 41 58.0	+0.2
WTK	**Tuku** baz=250	1.27	253	*e*P	Pn	19 41 58.6	+0.7
LONT	**Longtian** baz=201	1.27	205	*e*P	Pg	19 41 56.1	-2.4
WTP	**Ta-pu** baz=227	1.29	231	*e*P	Pb	19 41 59.1	+0.5
CHY	**Chiayi** baz=241	1.31	245	*e*P	Pb	19 41 60.0	+1.2
WTCT	**Ta-ch'eng** baz=259	1.32	262	*e*P	Pg	19 41 59.4	-0.2
TWG	**Pinlang** baz=202	1.37	206	*e*P	Pn	19 41 57.5	-1.9
TWGBT	**Beinan** baz=202	1.37	205	*e*P	Pn	19 41 57.5	-1.9
TWK	**Hsinying** baz=231	1.37	235	*e*P	Pg	19 42 00.5	-0.1
CHN1	**Nanshi** baz=228	1.39	231	*e*P	Pg	19 42 01.2	+0.2
SNST	**Tainan City** baz=230	1.40	233	*e*P	Pg	19 42 00.9	-0.1
SNST	baz=230			*e*S	Sn	19 42 21.1	+2.9
LDUT	**Ludao** baz=186	1.40	189	*e*P	Pn	19 41 57.7	-2.0
LDUT	baz=186			*e*S	Sb	19 42 17.6	-0.7
ICHU	**Yijhu** baz=239	1.49	242	*e*P	Pg	19 42 02.2	-0.5
ECL	**Taimali** baz=202	1.62	206	*e*P	Pn	19 42 01.7	-1.0
SCST	**Cishan** baz=221	1.62	224	*e*P	Pg	19 42 04.9	-0.3
SHHT	**Tainan City** baz=227	1.63	231	*e*P	Pn	19 42 03.0	+0.1
SSD	**Sandimen** baz=214	1.64	217	*e*P	Pn	19 42 03.6	+0.4
TSMG	**Majia** baz=213	1.67	216	*e*P	Pg	19 42 05.0	-1.2
MASBT	**Mashibuluo** baz=212	1.75	215	*e*P	Pn	19 42 04.5	-0.1
EAST	**Anshuo** baz=203	1.85	206	*e*P	Pn	19 42 05.8	-0.2
IRIF	**Iriomote-Funau**	1.86	81	P	Pn	19 42 06.6	+0.5
HATJ	**Hateruma jima**	1.91	90	P	Pb	19 42 08.8	-0.3
HATJ				S	Sb	19 42 33.7	+0.6
SCZT	**Fangliau** baz=208	1.96	211	*e*P	Pb	19 42 08.5	-1.4
PHUB	**P'eng-hu** baz=252	2.04	255	*e*P	Pn	19 42 08.8	+0.3
JKRS	**Kuro-shima**	2.10	85	*e*P	Pn	19 42 10.4	+0.9
JKRS				S	Sb	19 42 37.8	-0.8
JIJ	**Ishigaki jima**	2.24	82	P	Pn	19 42 11.7	+0.4
JIJ				S	Sn	19 42 39.5	+0.5

TAP 06 19:42:07.3,24°.10N×121°.63E,h10^{km},ML3.5,1C-9D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=222	0.04	230	⇓*i*P	Pg	19 42 09.5	+0.3
TWD	baz=222			*i* S	Sg	19 42 10.9	+0.3
ETL	**Fush Village** baz=357	0.06	357	⇓*i*P	Pg	19 42 09.7	+0.2
ETL	baz=357			*i* S	Sg	19 42 11.1	+0.1
NACB	**Ninganchiao** baz=338	0.08	338	⇓*i*P	Pg	19 42 09.9	+0.3
NACB	baz=338			*i* S	Sg	19 42 11.7	+0.3
HWA	**Hwalien** baz=185	0.13	189	*i* P	Pg	19 42 11.0	+0.7
HWA	baz=185			*i* S	Sg	19 42 12.9	+0.5
ETLH	**Xiulin Townshi** baz=308	0.17	308	⇓*i*P	Pg	19 42 11.7	+0.6
ETLH	baz=308			*i* S	Sg	19 42 14.6	+1.0
ETM	**Tongmen** baz=222	0.18	222	*i* P	Pg	19 42 11.7	+0.4
ETM	baz=222			*i* S	Sg	19 42 14.6	+0.7
EHP	**Heping Village** baz=29	0.23	27	*i* P	Pg	19 42 12.0	-0.1
EHP	baz=29			*e*S	Sg	19 42 15.4	0.0
TEYL	**Yanliau Villag** baz=186	0.23	186	*i* P	Pg	19 42 12.4	+0.3
TEYL	baz=186			*e*S	Sg	19 42 18.0	+2.6
WHF	**Hehuan Shan** baz=277	0.33	277	⇑*i*P	Pb	19 42 14.9	-0.6
WHF	baz=277			*e*S	Sb	19 42 20.0	-1.1
ESL	**Shilin** baz=210	0.34	212	*i* P	Pg	19 42 14.3	+0.3
ESL	baz=210			S	Sg	19 42 18.8	+0.2
ENA	**Nanau** baz=19	0.34	18	⇓*i*P	Pg	19 42 14.1	0.0
ENA	baz=19			*e*S	Sg	19 42 18.7	0.0
EWUT	**Wuta** baz=22	0.37	22	*i* P	Pg	19 42 14.5	-0.1
EWUT	baz=22			S	Sg	19 42 19.1	-0.4
FUSS	**Fushou** baz=292	0.38	292	*e*P	Pb	19 42 16.0	-0.2
FUSS	baz=292			*e*S	Sb	19 42 21.7	-0.5
NNSB	**Datong** baz=326	0.39	326	⇓*i*P	Pb	19 42 15.9	-0.5
NNSB	baz=326			S	Sb	19 42 21.6	-0.9
TEGC	**Jichi Village** baz=190	0.40	191	*e*P	Pb	19 42 16.5	+0.1
TEGC	baz=190			*e*S	Sb	19 42 25.4	+2.8
NNS	**Nan Shan** baz=326	0.41	326	⇓*i*P	Pb	19 42 16.2	-0.5
NNS	baz=326			S	Sb	19 42 22.2	-0.8
CHGB	**Renai** baz=264	0.41	264	⇓*i*P	Pb	19 42 16.7	-0.2
CHGB	baz=264			*e*S	Sb	19 42 22.8	-0.4
OWD	**Renai** baz=250	0.44	250	P	Pb	19 42 17.0	-0.2
OWD	baz=250			*e*S	Sb	19 42 22.8	-1.0
TWT	**Tachien** baz=289	0.44	290	*e*P	Pb	19 42 17.4	+0.2
TWT	baz=289			*e*S	Sb	19 42 23.4	-0.5
LATG	**Datong** baz=348	0.44	348	⇓*e*P	Pg	19 42 16.4	+0.4
LATG	baz=348			*e*S	Sg	19 42 22.6	+0.7
TDCB	**Techi** baz=289	0.45	289	*e*P	Pb	19 42 17.6	+0.1
TDCB	baz=289			*e*S	Sb	19 42 24.2	-0.1
EGFH	**Guangfu** baz=203	0.47	203	P	Pg	19 42 17.0	+0.6
EGFH	baz=203			*e*S	Sb	19 42 24.6	0.0
WUSB	**Renai** baz=257	0.48	257	*e*P	Pb	19 42 17.9	+0.1
WUSB	baz=257			*e*S	Sb	19 42 24.6	-0.4
NDT	**Datong Townshi** baz=348	0.51	348	P	Pb	19 42 17.8	-0.5
NDT	baz=348			*e*S	Sb	19 42 24.9	-0.8
NDS	**Dongshan** baz=9.0	0.54	9	*e*P	Pg	19 42 17.9	+0.2
NDS	baz=9.0			*e*S	Sg	19 42 24.8	0.0
ENTT	**Nioudou** baz=355	0.54	354	*e*P	Pb	19 42 18.4	-0.4
ENTT	baz=355			*e*S	Sb	19 42 26.0	-0.6
TWC	**Suao** baz=23	0.54	22	*e*P	Pg	19 42 17.8	-0.1
TWC	baz=23			*e*S	Sg	19 42 25.3	+0.2
VWDT	**VWDT** baz=232	0.56	232	*e*P	Pb	19 42 20.0	+0.7
VWDT	baz=232			*e*S	Sb	19 42 27.6	+0.3
YHNB	**Yeheng** baz=338	0.61	338	*e*P	Pb	19 42 20.1	+0.1
YHNB	baz=338			*e*S	Sb	19 42 28.0	-0.7
TWE	**Neicheng** baz=5.0	0.62	3	*e*P	Pg	19 42 19.6	+0.3
TWE	baz=5.0			*e*S	Sg	19 42 28.0	+0.6
WPL	**Puli Township** baz=262	0.62	262	*e*P	Pb	19 42 20.6	+0.5
WPL	baz=262			*e*S	Sb	19 42 29.5	+0.6
NSK	**Sanguang** baz=337	0.62	337	*e*P	Pb	19 42 20.3	0.0
NSK	baz=337			*e*S	Sb	19 42 28.4	-0.6
DPDB	**Guoxing** baz=264	0.64	264	*e*P	Pb	19 42 21.4	+0.8
WHP	**Taichung City** baz=286	0.65	286	*e*P	Pn	19 42 21.7	-0.8
FUSB	**Fushanzhiwuyua** baz=357	0.66	357	*e*P	Pb	19 42 21.0	+0.1
FUSB	baz=357			*e*S	Sb	19 42 29.4	-0.7
WCS	**Beigang Elemen** baz=266	0.66	266	*e*P	Pb	19 42 21.4	+0.7
EHY	**Hungye** baz=204	0.66	205	*e*P	Pg	19 42 20.2	+0.2
EHY	baz=204			*e*S	Sb	19 42 29.5	-0.5
ILA	**Ilan** baz=10.0	0.67	10	*e*P	Pb	19 42 20.8	-0.3
NWLT	**Wulai** baz=350	0.68	351	*e*P	Pb	19 42 21.1	-0.2
NWLT	baz=350			*e*S	Sg	19 42 29.9	+0.4
SSLB	**Suanglung** baz=243	0.69	243	*e*P	Pb	19 42 21.6	+0.2
SSLB	baz=243			*e*S	Sb	19 42 30.7	-0.3
SMLT	**Sun Moon Lake** baz=251	0.70	252	*e*P	Pb	19 42 22.1	+0.5
NFF	**Wufeng Townshi** baz=319	0.70	319	*e*P	Pb	19 42 22.4	+0.7
YULB	**Yu-li** baz=203	0.77	203	*e*P	Pb	19 42 22.5	-0.3
LIOB	**Emei** baz=314	0.78	314	*e*P	Pn	19 42 23.9	-0.4
LIOB	baz=314			*e*S	Sn	19 42 34.8	-1.2

TAP 06 19:49:47.3,23°.07N×120°.81E,h7^{km},ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=336	0.11	333	*i* P	Pg	19 49 50.4	+0.6
STYT	baz=336			*e*S	Sg	19 49 51.9	+0.5
STYH	**Taoyuan** baz=346	0.11	343	*i* P	Pg	19 49 50.6	+0.9
STYH	baz=346			*e*S	Sg	19 49 52.4	+1.0
SGST	**Jiashian** baz=273	0.21	274	*e*P	Pg	19 49 52.3	+0.8
ELDTW	**Lidau** baz=59	0.23	58	*e*P	Pg	19 49 53.4	+1.6
ELDTW	baz=59			*e*S	Sg	19 49 56.5	+1.5
WTP	**Ta-pu** baz=315	0.25	315	*e*P	Pb	19 49 53.7	-0.5
TPUB	**Ta-pu** baz=324	0.28	324	*e*P	Pb	19 49 54.4	-0.3
CHN4	**Tsaushan** baz=324	0.34	325	*e*P	Pb	19 49 55.8	0.0
SSD	**Sandimen** baz=205	0.36	207	*i* P	Pb	19 49 55.4	-0.6
TSMG	**Majia** baz=202	0.39	203	*e*P	Pb	19 49 55.8	-0.7

NOU 06 19:51:13.9,21°.31S×169°.73E,h0^{km},MLv3.8/12, Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	1.59	264	P	Pn	19 51 42.7	-0.7
LIFNC	**LIFOU**	2.38	282	P	Pn	19 51 53.0	-1.3
PINNC	**Pines Island,**	2.48	238	P	Pn	19 51 55.1	-0.5
YATNC	**Mamie plateau,**	2.74	254	P	Pn	19 51 58.1	-1.1
OUENC	**Ouen Island, N**	2.90	247	P	Pn	19 52 01.7	+0.3
DZM	**Mont Dzumac**	3.15	255	P	Pn	19 52 05.4	+0.5
ONTNC	**Ouen Toro**	3.20	251	P	Pn	19 52 05.6	+0.1
NOUC	**Port Laguerre**	3.28	255	P	Pn	19 52 06.9	+0.3
DVP	**Devils Point**	3.85	338	P	Pn	19 52 14.3	-0.1
KOUNC	**Koumac, New Ca**	5.14	277	P	Pn	19 52 33.4	+1.2

IDC ***06*** *20:03:16.6±3.3,2°.29N×127°.14E,h46^{km}±30^{km},mb3.8/13, mbtmp4.0/13,MS2.8/4,Error ellipse: s-maj=61.5km s-min=11.4km az=74.0*

DJA ***06*** *20:03:18.7±1.4,2°N±3°×12°7E±°,h22^{km}±13^{km},M4.1/12, mb4.4/6,mB4.6/4,MLv4.1/12,Mw(mB)3.8/4,MwMwp5.6/1, Mwp5.7/1*

NEIC ***06*** *20:03:19.5±2.7,2°.13N±0°.07×126°.66E±0°.07,h61^{km}±7^{km}, mb4.3/29,Error ellipse: s-maj=11.0km s-min=8.4km az=220.0*

ISC 06 20:03:18.9±0.5,2°.14N±0°.04×126°.75E±0°.07,h63^{km},n69, σ1^{s}.69/71,mb4.2/26,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.49	156		Pn	20 03 45.2	+1.6
TNTI				Sn	Sn	20 04 02.2	0.0
TNTI	**Ternate**	1.49	156	P	Pn	20 03 45.4	+1.8
TNTI				S	Sn	20 04 05.3	+3.1
TNTI	**Ternate**	1.49	156	P	Pn	20 03 46.2	+2.6
SGSI	**Sangihe**	1.96	322	P	Pn	20 03 50.0	0.0
SGSI				S	Sn	20 04 14.3	+0.7
LBMI	**Labuha**	2.86	165	P	Pn	20 04 03.7	+1.5
KMSI	**Cibinong**	3.18	241	P	Pn	20 04 06.7	+0.2
GTOI	**Gorontalo**	4.03	248	P	Pn	20 04 19.1	+1.0
SANI	**Sanana**	4.23	190	P	Pn	20 04 20.3	-0.7
SANI	**Sanana**	4.23	190	P	Pn	20 04 21.8	+0.8
DAV	**Davao City (W)** comp=Z,83nm,20.7s,baz=112,slow=42	5.04	347	LR	LR	20 06 45.8	
LUWI	**Luwuk**	5.08	232		Pn	20 04 33.9	+1.3
LUWI				Sn	Sn	20 05 32.6	+2.6
LUWI	**Luwuk** 0.5nm1μm54nm,0.7s	5.08	232	P	Pn	20 04 32.7	+0.1
LUWI	**Luwuk**	5.08	232	P	Pn	20 04 34.4	+1.8
MRSI	**Marisa** 0.2nm588nm61nm,0.9s	5.08	251	P	Pn	20 04 33.1	+0.5
KCP	**Kidapawan**	5.11	341	⇓*e*P	Pn	20 04 33.8	+0.7
KCP				*e*S	Sn	20 05 37.5	+6.7
SWI	**Sorong**	5.41	123	P	Pn	20 04 38.3	+1.3
APSI	**Ampana**	5.93	239	P	Pn	20 04 44.1	-0.2
TOLI2	**Tolitoli**	6.05	260		Pn	20 04 45.3	-0.6
TOLI2				Sn	Sn	20 05 42.5	-11
TOLI2	**Tolitoli**	6.05	260	P	Pn	20 04 46.3	+0.4
MYLDM	**Lahad Datu**	8.77	290		Pn	20 05 25.4	+2.3
KAPI	**Kappang** comp=Z,36nm,19.9s,baz=28,slow=37	9.97	225	LR	LR	20 09 42.2	
KAPI	**Kappang**	9.97	225	P	Pn	20 05 40.8	+1.3
KNRA	**Kununurra**	17.81	174	P	P	20 07 20.3	-2.3
TPUB	**Ta-pu**	21.86	345	P	P	20 08 06.7	+0.1
TPUB	comp=Z,32nm,1.5s			IAmb	IAmb	20 08 13.3	
SSLB	**Suanglung**	22.24	346	P	P	20 08 09.4	-1.3
SSLB	comp=Z,14nm,1.3s			IAmb	IAmb	20 08 13.1	
WB0	**Warramunga Arr**	23.03	161	P	P	20 08 18.7	-0.3
WB0	comp=Z,6.9nm,0.8s			IAmb	IAmb	20 08 27.1	
WRA	**Warramunga Arr** comp=Z,3.0nm,0.6s,baz=338,slow=11,SNR=27	23.18	162	P	P	20 08 19.5	-0.8
WRA	comp=Z,0.5nm,0.6s,baz=338,slow=2.0,SNR=5.2			PcP	PcP	20 12 08.1	+1.0
WRA	comp=Z,2.4nm,0.8s,baz=346,slow=18,SNR=8.4 comp=Z,3.0nm,0.6s			S	S	20 12 27.8	+0.4
WB2	**Warramunga Arr**	23.18	162	P	P	20 08 19.9	-0.5
WB2	comp=Z,6.6nm,0.8s			IAmb	IAmb	20 08 29.4	
AS31	**Alice Springs**	26.58	165	P	P	20 08 52.0	+0.7
ASAR	**Alice Springs** comp=Z,0.7nm,0.4s,baz=347,slow=10,SNR=14	26.58	165	P	P	20 08 51.0	-0.4
ASAR	comp=Z,0.8nm,0.4s,baz=350,slow=2.2,SNR=12			PcP	PcP	20 12 15.5	+0.9
ASAR	comp=Z,0.4nm,0.8s,baz=351,slow=22,SNR=2.3 comp=Z,0.7nm,0.4s			S	S	20 13 24.4	+2.7
JCJ	**Chichijima** comp=Z,13nm,18.5s,baz=152,slow=39	28.89	29	LR	LR	20 21 41.6	
CHTO	**Chiang Mai**	31.88	303	P	P	20 09 38.1	-0.4
CHTO	comp=Z,5.0nm,1.5s			IAmb	IAmb	20 09 49.3	
FORT	**Forrest**	32.76	178	P	P	20 09 45.8	-0.1
KSRS	**Korea Array** comp=Z,0.9nm,0.7s,baz=179,slow=10.0,SNR=3.1 comp=Z,0.9nm,0.7s	35.16	2	P	P	20 10 03.2	-3.5
MJAR	**Matsushiro Arr** comp=Z,29nm,20.5s,baz=298,slow=33	35.83	16	LR	LR	20 22 48.0	
BBOO	**Buckleboo**	35.86	167	P	P	20 10 13.0	+0.2
STKA	**Stephens Creek** comp=Z,2.2nm,0.5s,baz=306,slow=8.9,SNR=5.6 comp=Z,2.2nm,0.5s	36.65	159	P	P	20 10 18.1	-1.4
STKA	**Stephens Creek** comp=Z,1.8nm,1.4s	36.65	159	IAmb	IAmb	20 10 21.6	
JMM	**Marumori**	37.82	18	P	P	20 10 30.3	+0.9
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=153,slow=7.2,SNR=2.8 comp=Z,0.6nm,0.6s	48.80	342	P	P	20 11 57.4	-0.5
SONM	**Songino Array**	48.80	342	P	P	20 11 59.2	+1.3
MK31	**Makanchi Array**	58.87	326	P	P	20 13 10.7	-0.6
MK31	comp=Z,1.1nm,0.6s			IAmb	IAmb	20 13 13.9	
MKAR	**Makanchi Array** comp=Z,1.3nm,0.5s,baz=117,slow=7.3,SNR=20 comp=Z,1.3nm,0.5s	58.87	326	P	P	20 13 11.1	-0.2
MKAR	**Makanchi Array**	58.87	326	P	P	20 13 11.0	-0.3
MAKZ	**Makanchi**	59.05	326	P	P	20 13 12.2	-0.4
MAKZ	comp=Z,2.8nm,1.2s			IAmb	IAmb	20 13 29.6	
LBZ	**Lake Benmore**	60.37	145	P	P	20 13 21.5	-0.1
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=2.8 comp=Z,0.5nm,0.4s	62.01	333	P	P	20 13 31.3	-1.2
GAR	**Garm**	63.01	313	P	P	20 13 40.2	+0.5
GAR	comp=Z,3.3nm,0.6s			IAmb	IAmb	20 13 41.5	
KURK	**Kurchatov**	63.09	328	P	P	20 13 39.5	-0.3
KKAR	**Karatay Array**	64.41	318	P	P	20 13 46.8	-1.9
BRVK	**Borovoye**	68.73	327	P	P	20 14 15.4	-0.6
TIXI	**Tiksi** comp=Z,0.6nm,0.4s,baz=306,slow=8.8 comp=Z,0.6nm,0.4s	69.42	1	P	P	20 14 19.5	-0.4
TIXI	**Tiksi** comp=Z,2.1nm,1.1s	69.42	1	IAmb	IAmb	20 14 22.4	
NRIK	**Noril'sk** comp=Z,1.5nm,0.5s,baz=123,slow=5.6,SNR=2.0 comp=Z,1.5nm,0.5s	71.97	346	P	P	20 14 35.0	-0.4
ABKAR	**Akbulak array**	73.39	321	P	P	20 14 43.2	-1.1
ARU	**Arti**	76.28	328	P	P	20 14 59.2	-1.7
ARU	comp=Z,3.3nm,0.7s			IAmb	IAmb	20 15 02.6	
RDOG	**Red Dog Mine**	80.75	21	P	P	20 15 27.1	+1.9
RDOG	comp=Z,2.5nm,0.8s			IAmb	IAmb	20 15 27.7	
VNDA	**Vanda** comp=Z,0.7nm,0.5s,baz=332,slow=4.6,SNR=7.0 comp=Z,0.7nm,0.5s	81.86	173	P	P	20 15 31.7	+0.8
VNDA	**Vanda** comp=Z,5.3nm,1.6s	81.86	173	IAmb	IAmb	20 16 04.6	
TTA	**Tatalina**	82.30	27	P	P	20 15 36.0	+2.4
M19K	**Big River Lodg**	82.87	28	P	P	20 15 39.2	+2.7
KDAK	**Kodiak Island**	83.22	32	P	P	20 15 39.0	+0.7
J20K	**Nowinta River**	83.33	26	P	P	20 15 41.8	+3.0
J20K	comp=Z,8.5nm,1.4s			IAmb	IAmb	20 16 20.1	
M20K	**Styx River**	83.46	28	P	P	20 15 42.3	+2.6
M20K	comp=Z,4.2nm,0.8s			IAmb	IAmb	20 15 43.3	

IMAR	Indian Mountai	83.78	24	P	P	20 15 43.8	+2.7
H21K	Melozitna Rive	84.12	24	P	P	20 15 44.5	+1.7
H21K				IAmb	IAmb	20 15 46.7	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	86.52	25	P	P	20 15 52.6	-2.2
	comp=Z,0.2nm,0.4s,baz=250,slow=3.9,SNR=1.9						
	comp=Z,0.2nm,0.4s						
ARCES	ARCESS Array B	91.94	340	P	P	20 16 17.9	-2.3
	comp=Z,1.0nm,0.7s,baz=72,slow=9.8,SNR=1.8						
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	93.23	332	P	P	20 16 26.1	-0.3
	comp=Z,1.3nm,0.9s,baz=64,slow=3.2,SNR=1.6						
	comp=Z,1.3nm,0.9s						

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*IDC **06** 20:15:44.0±0.6, 86°.80N×54°.76E, h0^{km}, mb3.6/16, mbtmp3.6/21, ML3.4/4, MS3.4/45, Error ellipse: s-maj=18.1km s-min=13.2km az=98.0*

*IEPN **06** 20:15:50.0, 86°.35N×62°.53E, h10^{km}*

ISC 06 20:15:45.4±0.6**, 86°.69N**±0°.06×**52°.48E**±0°.07**, h10^{km}, n55, σ2^{s}25**/30**, mb3.6**/16**, MS3.3**/42**, North of Franz Josef Land**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	5.94	188	*e*P	Pn	20 17 14.1	+1.0
ZFI2				*e*S	Sn	20 18 16.1	-5.0
	18nm,2.1s						
ZFI	Zemlya Franca-	5.94	188	*e*P	Pn	20 17 14.3	+1.2
ZFI				*e*S	Sn	20 18 16.0	-5.2
	14nm,1.6s						
KBS	Kingsbay	8.88	234	*e*P	Pn	20 17 54.4	+1.0
KBS				*e*S	Sn	20 19 29.4	-3.9
SPA0	Spitsbergen Ar	9.41	228	*e*P	Pn	20 18 01.0	+0.2
SPA0				*e*S	Sn	20 19 41.0	-5.4
SPITS	Spitsbergen Ar	9.41	228	Pn	Pn	20 18 01.3	+0.5
	baz=40,slow=13						
	1.0nm,0.3s						
ARCES	ARCESS Array B	17.68	212	P	Pn	20 19 52.7	+1.4
	baz=0.0,slow=9.2,SNR=2.1						
	2.1nm,0.9s						
TIXI	Tiksi	17.97	94	P	Pn	20 19 53.8	-0.9
	0.4nm,0.5s,baz=91,slow=23,SNR=1.2						
TIXI				LR	LR	20 26 04.5	
	comp=Z,41nm,21.9s,baz=0.0,slow=35						
NRIK	Noril'sk	18.16	139	P	Pn	20 19 57.4	+0.3
	0.1nm,0.3s,baz=7.8,slow=9.2,SNR=2.2						
NRIK				LR	LR	20 27 42.3	
	comp=Z,144nm,19.6s,baz=348,slow=40						
	1.1nm,0.3s						
RES	Resolute Bay	18.30	333	P	Pn	20 19 57.1	-1.7
	0.1nm,0.3s,baz=7.1,slow=15,SNR=4.8						
RES				LR	LR	20 27 04.4	
	comp=Z,77nm,18.5s,baz=102,slow=37						
	0.3nm,0.4s						
BORG	Borgarnes	24.67	261	LR	LR	20 28 50.1	
	comp=Z,36nm,19.5s,baz=341,slow=32						
INK	Inuvik	25.14	5	P	P	20 21 09.5	-0.4
	0.4nm,0.3s,baz=17,slow=18,SNR=2.3						
INK				LR	LR	20 32 12.0	
	comp=Z,42nm,20.3s,baz=335,slow=40						
	0.4nm,0.3s						
FINES	FINESS Array B	25.77	209	P	P	20 21 18.0	+2.3
	1.7nm,0.7s,baz=359,slow=7.6,SNR=6.7						
FINES				LR	LR	20 31 05.3	
	comp=Z,79nm,21.2s,baz=14,slow=36						
	1.7nm,0.7s						
NOA	NORSAR Array B	26.70	226	P	P	20 21 26.6	+2.4
	0.9nm,0.9s,baz=5.6,slow=9.2,SNR=2.8						
	0.9nm,0.9s						
SEY	Seymchan	27.98	74	LR	LR	20 32 34.0	
	comp=Z,38nm,21.2s,baz=292,slow=36						
FRB	Frobisher Bay	28.26	306	LR	LR	20 32 17.0	
	comp=Z,58nm,19.0s,baz=200,slow=35						
KIRV	Kirov	28.26	183	LR	LR	20 35 22.9	
	comp=Z,39nm,20.8s,baz=21,slow=42						
ILAR	Eielson Array	28.54	17	P	P	20 21 39.4	-1.1
	0.5nm,0.8s,baz=349,slow=7.1,SNR=5.9						
ILAR				LR	LR	20 33 27.3	
	comp=Z,31nm,18.8s,baz=17,slow=37						
	0.5nm,0.8s						
ARU	Arti	30.44	173	LR	LR	20 34 15.5	
	comp=Z,65nm,21.6s,baz=344,slow=36						
YKA	Yellowknife Ar	30.92	348	P	P	20 22 00.1	-1.5
	0.1nm,0.4s,baz=2.7,slow=8.1,SNR=2.6						
YKA				PcP	PcP	20 24 57.1	-0.4
	0.3nm,0.7s,baz=358,slow=2.5,SNR=6.3						
YKA				LR	LR	20 33 32.3	
	comp=Z,92nm,21.9s,baz=338,slow=35						
	0.1nm,0.4s						
ZALV	Zalesovo Beam	33.46	145	P	P	20 22 25.9	+1.9
	0.3nm,0.3s,baz=342,slow=7.9,SNR=2.4						
ZALV				LR	LR	20 37 36.5	
	comp=Z,52nm,18.1s,baz=354,slow=39						
	0.3nm,0.3s						
BELG	Belogornoye	34.48	185	LR	LR	20 39 06.8	
	comp=Z,32nm,18.0s,baz=356,slow=40						
DLBC	Dease Lake	35.06	2	LR	LR	20 39 52.0	
	comp=Z,67nm,18.3s,baz=275,slow=41						
KDAK	Kodiak Island	35.43	23	LR	LR	20 36 45.5	
	comp=Z,36nm,21.1s,baz=51,slow=36						
AKTO	Aktyubinsk	36.44	174	LR	LR	20 39 32.3	
	comp=Z,53nm,19.7s,baz=5.7,slow=39						
AKASG	Malin Array Be	36.45	205	P	P	20 22 51.2	+1.5
	0.2nm,0.2s,baz=12,slow=9.5,SNR=1.8						
AKASG				LR	LR	20 37 51.2	
	comp=Z,61nm,18.8s,baz=352,slow=36						
	0.2nm,0.2s						
GERES	GERESS Array B	38.80	221	P	P	20 23 11.4	+1.7
	0.6nm,0.7s,baz=6.7,slow=9.2,SNR=3.1						
GERES				LR	LR	20 39 13.5	
	comp=Z,16nm,18.5s,baz=70,slow=36						
	0.6nm,0.7s						
KLR	Kul'dur	40.45	97	LR	LR	20 40 10.3	
	comp=Z,48nm,20.5s,baz=342,slow=36						
SONM	Songino Array	40.47	123	P	P	20 23 21.8	-1.9
	0.8nm,0.7s,baz=341,slow=7.2,SNR=3.0						
SONM				LR	LR	20 40 30.8	
	comp=Z,27nm,19.6s,baz=335,slow=37						
	0.8nm,0.7s						
MKAR	Makanchi Array	40.53	148	P	P	20 23 24.0	-0.2
	0.7nm,0.8s,baz=18,slow=12,SNR=7.7						
MKAR				LR	LR	20 42 00.5	
	comp=Z,54nm,21.4s,baz=338,slow=39						
	0.7nm,0.8s						
BBB	Bella Bella	41.33	1	LR	LR	20 41 44.6	
	comp=Z,56nm,20.3s,baz=328,slow=38						
ULM	Lac du Bonnet	42.80	330	LR	LR	20 41 08.4	
	comp=Z,54nm,20.6s,baz=271,slow=36						
KVAR	Kislovodsk Arr	42.96	190	LR	LR	20 44 06.6	
	comp=Z,27nm,21.6s,baz=293,slow=40						
KBZ	Khabaz	43.18	190	LR	LR	20 45 29.3	
	comp=Z,31nm,18.2s,baz=27,slow=41						
AAK	Ala-Archa	44.48	157	LR	LR	20 45 51.4	
	comp=Z,135nm,18.2s,baz=4.5,slow=41						
NEW	Newport	45.21	350	LR	LR	20 43 21.1	
	comp=Z,86nm,19.7s,baz=328,slow=37						
GNI	Garni	46.74	188	LR	LR	20 47 13.8	
	comp=Z,23nm,20.1s,baz=3.0,slow=40						
BRTR	Keskin Array B	47.32	200	P	P	20 24 19.2	+0.4
	0.5nm,0.8s,baz=10,slow=8.8,SNR=3.7						
	0.5nm,0.8s						
SADO	Sadowa	47.69	314	LR	LR	20 44 22.0	
	comp=Z,56nm,18.4s,baz=305,slow=36						
ESDC	Sonseca Array	48.73	239	P	P	20 24 31.5	+1.9
	0.8nm,0.7s,baz=305,slow=29,SNR=8.1						
	0.8nm,0.7s						
PDAR	Pinedale Array	50.60	343	LR	LR	20 46 09.9	
	comp=Z,50nm,19.9s,baz=354,slow=36						
YBH	Yreka Blue Hor	51.78	355	LR	LR	20 47 37.8	
	comp=Z,22nm,19.9s,baz=266,slow=37						
IDI	Anoyia	51.96	209	LR	LR	20 49 41.7	
	comp=Z,14nm,18.0s,baz=20,slow=39						
KSRS	Korea Array	51.97	102	LR	LR	20 48 46.9	
	comp=Z,16nm,18.7s,baz=245,slow=38						
ELK	Elko	52.70	348	LR	LR	20 47 27.5	
	comp=Z,63nm,20.8s,baz=50,slow=36						
NVAR	Mina Array Bea	55.05	351	P	P	20 25 16.5	-0.4
	0.3nm,0.7s,baz=2.5,slow=4.1,SNR=2.3						
NVAR				LR	LR	20 50 19.5	
	comp=Z,48nm,18.2s,baz=300,slow=38						
	0.3nm,0.7s						
TKL	Tuckaleechee C	56.96	318	LR	LR	20 48 28.4	
	comp=Z,64nm,21.5s,baz=48,slow=34						
ANMO	Albuquerque	58.35	340	LR	LR	20 51 19.0	
	comp=Z,39nm,19.6s,baz=328,slow=37						
TXAR	Lajitas Array	63.88	337	P	P	20 26 18.3	+0.4
	0.7nm,0.8s,baz=1.4,slow=3.6,SNR=5.5						
TXAR				LR	LR	20 55 08.5	
	comp=Z,117nm,18.1s,baz=338,slow=37						
	0.7nm,0.8s						
LPIG	La Paz	69.23	343	LR	LR	20 58 15.4	
	comp=Z,48nm,18.5s,baz=239,slow=37						
CMAR	Chiang Mai Arr	69.38	133	P	P	20 26 53.1	+0.2
	0.8nm,0.7s,baz=353,slow=7.3,SNR=7.0						
CMAR				LR	LR	20 58 59.1	
	comp=Z,31nm,21.0s,baz=35,slow=37						
	0.8nm,0.7s						
SJG	San Juan	73.62	300	LR	LR	20 59 56.8	
	comp=Z,17nm,19.8s,baz=88,slow=36						
TORD	Torodi Ar. Bea	74.85	231	P	P	20 27 26.2	+0.6
	1.0nm,0.8s,baz=348,slow=6.1,SNR=4.7						
	1.0nm,0.8s						
CMIG	Matias Romero	75.83	328	LR	LR	21 04 59.1	
	comp=Z,31nm,18.2s,baz=67,slow=39						
PALK	Pallekele	79.84	152	LR	LR	21 07 18.1	
	comp=Z,87nm,18.8s,baz=120,slow=39						
MDP	Montagnes des	85.81	285	LR	LR	21 04 52.6	
	comp=Z,17nm,18.2s,baz=220,slow=34						

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*NNC **06** 20:31:44.6±2.7, 38°.19N×72°.01E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=21.0km s-min=15.0km az=179.0*

ISC 06 20:31:46.4±3.8**, 38°.0N**±0°.2×**72°.0E**±0°.1**, h113^{km}, n9, σ0^{s}55**/11**, 2C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.34	17	P	Pn	20 32 50.2	-0.4
	SNR=68						
UCH	Uchtor	4.65	24	P	Pn	20 32 54.3	-0.6
	SNR=10.0						
EKS2	Erkin-Say	4.86	16	P	Pn	20 32 57.5	+0.1
	SNR=36						
AAK	Ala-Archa	5.02	21	P	Pn	20 32 59.4	-0.2
	SNR=10						
KK31	Karatay Array	5.24	348	Pn	Pn	20 33 01.7	-0.7
	2.1nm,0.3s,baz=168,slow=12,SNR=38						
KK31				⇑Sn	Sn	20 34 01.8	+0.2
	9.4nm,0.5s,baz=172,slow=23,SNR=17						
CHMS	Chumysh	5.43	22	P	Pn	20 33 04.6	-0.4
	SNR=5.3						
USP	Ospenovka	5.61	19	P	Pn	20 33 06.5	-0.9
	SNR=6.4						
TKM2	Tokmak 2	5.64	28	⇓Pn	Pn	20 33 07.9	0.0
	2.2nm,0.8s						
TKM2				⇑Sn	Sn	20 34 11.8	+0.3
	3.1nm,0.6s						
AB31	Akbulak array	14.24	326	⇓Pn	Pn	20 35 03.2	+0.5
	0.2nm,0.5s,baz=138,slow=13,SNR=12						

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*VAO **06** 20:47:46.6±1.6, 21°.58S×69°.62W, h174^{km}±9^{km}, mb4.2*

*NEIC **06** 20:47:50.4±1.4, 21°.36S±0°.04×68°.83W±0°.07, h115^{km}±5^{km}, Error ellipse: s-maj=9.1km s-min=5.1km az=75.0*

*IDC **06** 20:47:51.5±0.7, 21°.43S×68°.61W, h116^{km}±5^{km}, mb3.6/5, mbtmp3.9/7, Error ellipse: s-maj=30.7km s-min=9.7km az=106.0*

*GUC **06** 20:47:51.0±0.6, 21°.36S×68°.78W, h110^{km}±3^{km}, ML4.1*

ISC 06 20:47:49.9±0.6**, 21°.37S**±0°.03×**68°.82W**±0°.06**, h117^{km}**±6^{km}**, n70, σ1^{s}13**/93**, mb3.9**/4**, 9C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.58	223		Pn	20 48 08.9	+0.6
PB09	IPOC Station P	0.58	223	⇑*i*P	Pn	20 48 08.9	+0.6
PB09				*e*S	Sn	20 48 22.7	+0.6
PB01	IPOC Station P	0.70	297		Pn	20 48 09.1	0.0
PB01				Sn	Sn	20 48 23.1	-0.4
PB01	IPOC Station P	0.70	297	⇑*i*P	Pn	20 48 09.3	+0.2
PB01				*i* S	Sn	20 48 23.2	-0.4
PB01				IAML		20 48 24.4	
	comp=E,13μm,0.3s						
PB02	IPOC Station P	1.01	273		Pn	20 48 12.3	+0.4
PB02				Sn	Sn	20 48 28.7	+0.2
PB02	IPOC Station P	1.01	273	⇑*i*P	Pn	20 48 12.3	+0.4
PB02				*i* S	Sn	20 48 28.6	+0.2
PB02				IAML		20 48 30.6	
	comp=E,10μm,0.7s						
PB07	IPOC Station P	1.06	250		Pn	20 48 12.2	-0.3
PB07				Sn	Sn	20 48 29.4	-0.1
PB07	IPOC Station P	1.06	250	⇑*i*P	Pn	20 48 12.9	+0.5
PB07				*e*S	Sn	20 48 29.4	-0.1
PB07				IAML		20 48 30.6	
	comp=N,4μm,0.2s						
LVC	Limon Verde	1.24	184	P	Pn	20 48 15.6	+1.1
	comp=N,60nm,0.4s,baz=3.2,slow=7.4,SNR=98						
LVC				S	Sn	20 48 33.9	+0.7
	comp=N,114nm,0.3s,baz=265,slow=24,SNR=10						
LVC	Limon Verde	1.24	184	*e*P	Pn	20 48 15.2	+0.7
LVC				*i* S	Sn	20 48 34.0	+0.7
LVC	Limon Verde	1.24	184	*e*P	Pn	20 48 15.6	+1.1
PB08	IPOC Station P	1.26	345		Pn	20 48 15.5	+0.6
PB08				Sn	Sn	20 48 34.1	+0.4
PB08	IPOC Station P	1.26	345	*e*P	Pn	20 48 15.7	+0.8
PB08				*i* S	Sn	20 48 34.0	+0.3
PB08				IAML		20 48 36.0	
	comp=E,4μm,0.3s						
PATCX	Punta Patache	1.36	293		Pn	20 48 15.9	+0.3
PATCX				Sn	Sn	20 48 35.6	+0.5
PATCX	Punta Patache	1.36	293	⇑*i*P	Pn	20 48 16.3	+0.6
PATCX				*e*S	Sn	20 48 35.6	+0.5
PATCX				IAML		20 48 37.2	
	comp=N,5μm,0.1s						
HMBC	Humberstone	1.48	317	⇑*i*P	Pn	20 48 17.1	+0.1
HMBC				*e*S	Sn	20 48 37.1	-0.5
HMBC				IAML		20 48 38.9	
	comp=E,5μm,0.4s						
PB06	IPOC Station P	1.50	208		Pn	20 48 18.0	+0.7
PB06				Sn	Sn	20 48 38.9	+0.7
PB06	IPOC Station P	1.50	208	⇑*i*P	Pn	20 48 18.2	+0.8
PB06				*e*S	Sn	20 48 38.8	+0.7
PB06				IAML		20 48 39.9	
	comp=E,1μm,0.4s						
TA01	Diego Aracena	1.50	302		Pn	20 48 17.4	+0.2
TA01				Sn	Sn	20 48 37.9	0.0
TA01	Diego Aracena	1.50	302	⇑*i*P	Pn	20 48 17.4	+0.2
TA01				*e*S	Sn	20 48 37.7	-0.2
PB04	IPOC Station P	1.57	232		Pn	20 48 18.2	+0.1
PB04				Sn	Sn	20 48 39.0	-0.5
PB04	IPOC Station P	1.57	232	*e*P	Pn	20 48 18.4	+0.3
PB04				*e*S	Sn	20 48 39.2	-0.3
PB04				IAML		20 48 44.3	
	comp=E,691nm,0.5s						
TA02	Huaiquique	1.65	311		Pn	20 48 18.8	-0.1
TA02				Sn	Sn	20 48 39.9	-1.0
TA02	Huaiquique	1.65	311	*e*P	Pn	20 48 18.7	-0.1
TA02				*e*S	Sn	20 48 39.9	-1.0
AF01	San Pedro de A	1.68	160	Pn	Pn	20 48 19.1	-0.5
PB11	IPOC Station P	1.78	334		Pn	20 48 20.6	-0.1
PB11	IPOC Station P	1.78	334	⇑*i*P	Pn	20 48 20.9	+0.2
PB11				*i* S	Sn	20 48 44.0	-0.2
PB11				IAML		20 48 45.8	
	comp=N,5μm,0.3s						
PB15	IPOC Station P	1.93	198		Pn	20 48 23.6	+1.1
PB15	IPOC Station P	1.93	198	*e*P	Pn	20 48 23.8	+1.3
PB15				*e*S	Sn	20 48 48.5	+1.1
PB10	IPOC Station P	2.67	217		Pn	20 48 32.1	+0.3
PB10	IPOC Station P	2.67	217	*e*P	Pn	20 48 32.1	+0.3
PB12	IPOC Station P	3.09	332		Pn	20 48 36.1	-1.2
PB12	IPOC Station P	3.09	332	*e*P	Pn	20 48 36.2	-1.2
PB12				IAML		20 49 18.8	
	comp=N,384nm,0.2s						
PB16	IPOC Station P	3.09	348		Pn	20 48 38.1	+0.2
PB16	IPOC Station P	3.09	348	*e*P	Pn	20 48 38.6	+0.7
AP01	Chacalluta	3.31	334	Pn	Pn	20 48 39.5	-0.7
AP01	Chacalluta	3.31	334	*e*P	Pn	20 48 39.0	-1.3
PB14	IPOC Station P	3.56	204	Pn	Pn	20 48 42.5	-1.3
AC01	Pan de Azucar	5.03	199	Pn	Pn	20 49 02.0	-1.2
LPAZ	La Paz	5.10	7	P	Pn	20 49 07.0	+2.3
	comp=N,2.5nm,0.3s,baz=160,slow=3.6,SNR=16						
LPAZ	La Paz	5.10	7		Pn	20 49 06.0	+1.2
LPAZ	La Paz	5.10	7	*e*P	Pn	20 49 06.2	+1.4
AC02	Maricunga	5.45	183		Pn	20 49 09.1	-0.2
AC06	Mina Casimiro	6.12	193	Pn	Pn	20 49 16.7	-1.3
AC04	Llanos de Chal	7.11	196	Pn	Pn	20 49 27.8	-3.5
LCO	Las Campanas	7.80	192	Pn	Pn	20 49 38.4	-2.4
CO01	Juntas del Tor	8.65	187	Pn	Pn	20 49 48.5	-3.9
GO04	Tololo Observa	8.95	191	Pn	Pn	20 49 49.5	-6.9
CO02	Combarbal	9.99	191	Pn	Pn	20 50 06.3	-4.1
SALV	Santo Antonio	13.57	69	*e*P	P	20 51 03.2	+0.5
ITAB	Concordia	16.29	114	Pn	Pn	20 51 30.4	-1.5
ITAB				IAmb	IAmb	20 52 01.8	
	comp=Z,14nm,1.3s						
TRQA	Tornquist	17.65	162	P	P	20 51 46.5	-1.2
TRQA				IAmb	IAmb	20 52 19.1	
	comp=Z,10.0nm,1.2s						
FRTB	Fartura	17.92	100	*e*P	Pn	20 51 51.4	-0.4
BB19B	Bebedouro	18.92	93	*e*P	Pn	20 52 01.7	-2.0
SNDB	Serra Nova Dou	19.19	64	*e*P	P	20 52 04.0	-0.8
PLCA	Paso Flores	19.36	184	P	Pn	20 52 07.8	-0.8
	comp=Z,1.9nm,0.7s,baz=0.1,slow=11,SNR=2.8						
PLCA	Paso Flores	19.36	184	IAmb	IAmb	20 52 13.4	
	comp=Z,2.3nm,0.8s						
IPMB	Ipameri, GO	19.69	84	*e*P	P	20 52 09.2	-1.0
BDFB	Brasilia	20.52	77	P	P	20 52 19.0	-0.3
	comp=Z,5.3nm,0.5s,baz=257,slow=6.3,SNR=7.5						
	comp=Z,5.3nm,0.5s						
BDFB	Brasilia	20.52	77	IAmb	IAmb	20 52 23.3	
	comp=Z,17nm,1.6s						
ITTB	Itaituba	21.14	39	*e*P	P	20 52 24.5	-1.2
SMTB	Santa Maria do	23.93	62	*e*P	P	20 52 52.3	-1.1
JANB	Januaria	24.09	79	*e*P	P	20 52 54.5	-0.3
SNAA	Sanae	62.37	161	P	P	20 58 01.0	+1.1
	comp=Z,0.8nm,0.5s,baz=5.9,slow=20,SNR=2.2						
	comp=Z,0.8nm,0.5s						
QSPA	South Pole Qui	68.82	180	P	P	20 58 44.1	+2.6
	comp=Z,0.9nm,0.5s,baz=72,slow=1.2,SNR=5.9						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	77.23	70	P	P	20 59 31.2	-0.5
	comp=Z,0.3nm,0.5s,baz=253,slow=5.5,SNR=10						
TORD				pP	pP	21 00 02.0	-0.6
	comp=Z,1.0nm,0.9s,baz=256,slow=6.0,SNR=3.5						
	comp=Z,0.3nm,0.5s						
YKA	Yellowknife Ar	91.09	341	P	P	21 00 42.0	+1.2
	comp=Z,0.5nm,0.7s,baz=134,slow=4.6,SNR=12						
YKA				pP	pP	21 01 12.5	+0.3
	comp=Z,0.2nm,0.6s,baz=121,slow=4.9,SNR=3.5						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	133.11	210	PKP	PKiKP	21 06 54.3	+0.4
	comp=Z,0.3nm,0.9s,baz=176,slow=4.7,SNR=1.3						
MKAR	Makanchi Array	145.48	36	PKPbc	PKPab	21 07 16.3	+1.5
	comp=Z,0.5nm,0.6s,baz=326,slow=2.9,SNR=7.5						
MKAR				pPKPbc	pPKPbc	21 07 47.1	-0.1
	comp=Z,1.3nm,0.8s,baz=336,slow=3.0,SNR=8.3						
MKAR	Makanchi Array	145.48	36		PKPab	21 07 15.9	+1.1

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*NEIC **06** 20:54:02.1±0.5, 30°.9S±0°.2×179°.8W±0°.3, h373^{km}±8^{km}, mb3.8/6, Error ellipse: s-maj=34.9km s-min=21.0km az=117.0*

*IDC **06** 20:54:06.8±8.1, 31°.17S×179°.88W, h430^{km}±97^{km}, mb3.1/2, mbtmp4.2/3, Error ellipse: s-maj=96.8km s-min=37.4km az=8.0*

ISC 06 20:54:04.7±1.0**, 30°.97S**±0°.09×**179°.8W**±0°.2**, h400^{km}, n66, σ2^{s}02**/80**, mb3.7**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.37	45	P	Pn	20 55 05.0	+1.8
GLKZ				S	S	20 55 51.6	+1.3
MXZ	Matakaoa Point	6.75	193		Pn	20 55 43.8	-1.7
MXZ	Matakaoa Point	6.75	193	P	P	20 55 49.3	+3.2
MXZ				S	S	20 57 05.9	-1.9
KUZ	Kuaotunu	6.85	212	P	P	20 55 51.6	+4.5
WMGZ	Waiomatatini S	6.98	192	P	P	20 55 50.6	+1.9
WMGZ				S	S	20 57 14.0	+1.4
WIZ	White Island	6.99	200	P	P	20 55 51.4	+2.7
HAZ	Te Kaha	7.05	196	P	P	20 55 50.3	+0.9
HAZ				S	S	20 57 12.6	-1.3
PKGZ	Pakihiroa	7.11	194	P	P	20 55 54.1	+3.9
PKGZ				S	S	20 57 15.2	-0.2
PUZ	Puketiti	7.26	192	P	P	20 55 52.8	+1.0
PUZ				S	S	20 57 17.0	-1.3
RUGZ	Raukumara Rang	7.28	196	P	P	20 55 53.0	+1.0
RUGZ				S	S	20 57 17.0	-1.8
TWGZ	Tauwhareparae	7.41	194	P	P	20 55 55.7	+2.3
TWGZ				S	S	20 57 23.5	+2.0
OPRZ	Ohinepanea	7.48	203	P	P	20 55 58.3	+4.1
MWZ	Matawai	7.66	196	P	P	20 55 57.3	+1.1
MWZ				S	S	20 57 25.6	-1.1
CNGZ	Carnagh Statio	7.67	192	P	P	20 55 57.7	+1.5
CNGZ				S	S	20 57 26.5	-0.1
TKGZ	Te Karaka	7.69	194	P	P	20 55 57.4	+0.9
TKGZ				S	S	20 57 25.6	-1.6
URZ	Urewera	7.70	198	P	Pn	20 55 57.0	+1.0
	34nm,0.3s,baz=7.4,slow=2.3,SNR=153						
URZ				S	S	20 57 25.1	-2.1
	13nm,0.3s,baz=50,slow=20,SNR=2.9						
URZ	Urewera	7.70	198		Pn	20 55 55.4	-0.7
URZ	Urewera	7.70	198	P	Pn	20 55 57.1	+1.0
URZ				S	S	20 57 27.4	+0.1
KMRZ	Kaimai	7.70	206	P	P	20 56 01.6	+4.9
TOZ	Tahuroa Road	7.77	209	P	P	20 56 02.9	+5.5
RAGZ	Rawiri	7.84	196	P	P	20 55 59.4	+1.1
TARZ	Mount Tarawera	7.85	202	P	P	20 56 02.3	+3.9
RIGZ	Rimuhau	7.97	194	P	P	20 56 01.4	+1.7
RIGZ				S	S	20 57 32.5	-0.5
MUGZ	Murupara	7.99	200	P	P	20 56 01.2	+1.3
MUGZ				S	S	20 57 32.1	-1.5
RTZ	Ruatahuna	8.06	198	P	Pn	20 56 01.1	+0.8
RTZ				S	S	20 57 31.9	-3.3
PRRZ	Plateau Road	8.13	201	P	P	20 56 04.6	+3.2
SNGZ	Shannon Statio	8.13	196	P	P	20 56 04.6	+3.2
SNGZ				S	S	20 57 36.8	+0.3
PRGZ	Paritu Road	8.15	193	P	P	20 56 04.3	+2.6
PRGZ				S	S	20 57 35.5	-1.5
ALRZ	Allen Road	8.20	202	P	P	20 56 04.8	+2.6
TLZ	Tolley Road	8.27	206	P	P	20 56 07.5	+4.5
KNZ	Kokohu	8.29	194	P	Pn	20 56 03.7	+0.9
RAHZ	Arahi	8.32	197	P	P	20 56 05.9	+2.4
MTHZ	Maungataniwha	8.32	198	P	P	20 56 06.2	+2.5
MHGZ	Mahia Peninsul	8.37	192	P	P	20 56 06.6	+2.5
MRHZ	Matea Rd	8.43	200	P	P	20 56 06.0	+1.2
WHHZ	Waihua	8.44	196	P	Pn	20 56 02.5	-2.0
NMHZ	Naumai	8.56	198	P	P	20 56 07.6	+1.3
RATZ	Rangitukua	8.66	203	P	P	20 56 10.5	+3.1
ARHZ	Aropaoanui	8.67	197	P	P	20 56 09.6	+2.2
HIZ	Hauiti	8.70	209	P	P	20 56 13.0	+5.2
BKZ	Black Stump Fm	8.71	199	P	Pn	20 56 06.7	-1.1
BKZ	Black Stump Fm	8.71	199	P	P	20 56 08.8	+0.8
TMVZ	Te Maari	8.91	203	P	P	20 56 12.3	+2.1
MCHZ	McNeill Hill	8.92	198	P	P	20 56 12.3	+2.2
WTVZ	West Tongariro	8.95	204	P	P	20 56 13.0	+2.3
NNVZ	North Ngauruho	8.96	203	P	P	20 56 13.2	+2.4
OTVZ	Oturere	8.97	203	P	P	20 56 13.6	+2.7
KWHZ	Kaweka Forest	8.97	199	P	P	20 56 12.0	+1.2
SNVZ	South Ngauruho	9.00	203	P	P	20 56 13.1	+1.8
NGZ	Ngauruhoe	9.00	203	P	P	20 56 13.4	+2.1
CKHZ	Cape Kidnapper	9.03	195	P	P	20 56 12.6	+1.2
TUVZ	Tukino	9.07	203	P	P	20 56 13.0	+1.1
FWVZ	Far West T-bar	9.09	203	P	P	20 56 14.6	+2.3
BHHZ	Black Hill Sta	9.14	200	P	P	20 56 12.4	-0.3
WNVZ	Wahianoa	9.14	203	P	Pn	20 56 14.3	+1.5
MSWZ	Moikau Station	11.15	200	P	P	20 56 34.1	-0.9
TUWZ	Tuamarina	11.58	204	P	P	20 56 38.7	-1.0
MARNC	Mare, Loyalty	14.42	308		P	20 57 20.3	+9.3
AS31	Alice Springs	41.52	268	P	P	21 01 12.7	-2.5
AS31				IAmb	IAmb	21 01 31.3	
	comp=Z,0.9nm,1.0s						
ASAR	Alice Springs	41.52	268	P	P	21 01 14.4	-0.8
	comp=Z,0.4nm,0.3s,baz=106,slow=7.3,SNR=20						
	comp=Z,0.4nm,0.3s						
WR0	Warramunga Arr	42.38	274	P	P	21 01 21.0	-1.1
WR0				IAmb	IAmb	21 01 28.4	
	comp=Z,11nm,1.6s						
WRA	Warramunga Arr	42.56	274	P	P	21 01 22.6	-0.9
	comp=Z,0.9nm,0.3s,baz=113,slow=8.0,SNR=40						
	comp=Z,0.9nm,0.3s						
WB0	Warramunga Arr	42.59	274	P	P	21 01 22.8	-0.9
WB0				IAmb	IAmb	21 01 24.1	
	comp=Z,5.8nm,1.1s						
MTN	Manton Dam	48.53	281	P	P	21 02 08.3	-1.3
FITZ	Fitzroy Crossi	50.80	271	P	P	21 02 26.4	0.0
FITZ				IAmb	IAmb	21 02 35.4	
	comp=Z,23nm,1.6s						
FINES	FINESS Array B	145.12	338	PKPbc	PKPdf	21 12 53.5	-1.0
	comp=Z,0.5nm,0.5s,baz=42,slow=4.5,SNR=12						

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*ASIES **06** 20:58:19.5, 23°.18N×121°.01E, h12^{km}, MW3.4*

TAP 06 20:58:19.9, 23°.19N×121°.01E, h4^{km}, ML3.6, 46C-6D, B, Taiwan

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

ELDTW	**Lidau** baz=100	**0.01**	**95**	iP	Pg	20 58 21.1	+0.3
ELDTW	baz=100			iS	Sg	20 58 21.7	+0.4
STYH	**Taoyuan** baz=267	**0.21**	**265**	⇑iP	Pg	20 58 24.6	+0.6
STYH	baz=267			iS	Sg	20 58 27.7	+0.9
ECS	**Chishang** baz=116	**0.22**	**116**	iP	Pg	20 58 25.0	+0.8
ECS	baz=116			iS	Sg	20 58 28.6	+1.6
STYT	**Tauyuan** baz=262	**0.23**	**263**	⇑iP	Pg	20 58 25.0	+0.6
STYT	baz=262			iS	Sg	20 58 28.4	+1.0
FULB	**Fuli** baz=88	**0.27**	**88**	⇑iP	Pb	20 58 26.2	-1.1
FULB	baz=88			iS	Sb	20 58 30.8	-1.4
YUS	**Yu-Shan** baz=352	**0.30**	**351**	⇑iP	Pg	20 58 26.3	+0.4
YUS	baz=352			iS	Sg	20 58 30.7	+0.7
LONT	**Longtian** baz=158	**0.30**	**158**	⇓iP	Pg	20 58 26.2	+0.4
LONT	baz=158			iS	Sg	20 58 30.1	+0.4
TWF1	**Yuli** baz=60	**0.31**	**59**	⇑iP	Pg	20 58 26.5	+0.5
TWF1	baz=60			iS	Sg	20 58 30.4	+0.4
EYUL	**Yuli** baz=62	**0.33**	**61**	⇑iP	Pg	20 58 26.7	+0.5
EYUL	baz=62			S	Sg	20 58 30.8	+0.2
YULB	**Yu-li** baz=53	**0.34**	**53**	⇑iP	Pg	20 58 26.7	+0.3
YULB	baz=53			iS	Sg	20 58 30.7	-0.1
CHKT	**Chengkung** baz=105	**0.34**	**105**	iP	Pb	20 58 28.0	-0.6
CHKT	baz=105			S	Sb	20 58 34.0	-0.5
EDH	**Donghe** baz=128	**0.35**	**128**	⇓iP	Pg	20 58 27.7	+1.0
EDH	baz=128			iS	Sb	20 58 33.1	-1.5
TPUB	**Ta-pu** baz=288	**0.36**	**288**	⇑iP	Pb	20 58 28.2	-0.7
TPUB	baz=288			eS	Sb	20 58 33.8	-1.2
WTP	**Ta-pu** baz=279	**0.36**	**279**	⇑iP	Pb	20 58 28.2	-0.8
WTP	baz=279			S	Sb	20 58 33.8	-1.3
ALS	**Alishan** baz=331	**0.37**	**330**	⇓iP	Pg	20 58 28.1	+1.0
ALS	baz=331			S	Sg	20 58 33.3	+1.4
TWG	**Pinlang** baz=169	**0.37**	**170**	⇓iP	Pg	20 58 27.5	+0.4
TWG	baz=169			S	Sg	20 58 32.2	+0.3
TWGBT	**Beinan** baz=169	**0.38**	**169**	⇓iP	Pg	20 58 27.5	+0.3
TWGBT	baz=169			S	Sg	20 58 32.1	0.0
SLGT	**Liugui** baz=239	**0.38**	**239**	⇑iP	Pb	20 58 28.4	-0.9
SLGT	baz=239			eS	Sg	20 58 33.0	+0.7
SGST	**Jiashian** baz=254	**0.40**	**255**	⇑eP	Pg	20 58 27.9	+0.3
SGST	baz=254			eS	Sg	20 58 33.8	+0.9
CHN4	**Tsaushan** baz=293	**0.41**	**293**	⇑iP	Pb	20 58 29.4	-0.4
CHN4	baz=293			eS	Sb	20 58 35.6	-0.8
ECBN	**Changbin** baz=73	**0.43**	**73**	⇑iP	Pb	20 58 29.8	-0.3
ECBN	baz=73			eS	Sb	20 58 37.3	+0.4
EHY	**Hungye** baz=44	**0.43**	**43**	⇑iP	Pg	20 58 28.4	+0.2
EHY	baz=44			eS	Sg	20 58 33.6	-0.2
CHN1	**Nanshi** baz=269	**0.44**	**269**	⇑P	Pb	20 58 29.9	-0.3
CHN1	baz=269			eS	Sb	20 58 37.2	0.0
TTN	**Taitung** baz=162	**0.45**	**163**	⇑P	Pb	20 58 30.0	-0.5
TTN	baz=162			eS	Sb	20 58 36.8	-0.8
SNST	**Tainan City** baz=274	**0.47**	**274**	⇑P	Pb	20 58 30.6	-0.2
SNST	baz=274			eS	Sb	20 58 38.7	+0.7
TWK	**Hsinying** baz=279	**0.48**	**279**	⇑iP	Pb	20 58 30.8	-0.3
TWK	baz=279			eS	Sb	20 58 38.7	+0.2
HGSD	**Ruisui** baz=52	**0.49**	**52**	⇑P	Pb	20 58 30.2	-0.9
HGSD	baz=52			eS	Sb	20 58 37.9	-0.7
CHN5	**Tsauling** baz=323	**0.50**	**324**	⇓P	Pb	20 58 31.0	-0.4
CHN5	baz=323			eS	Sb	20 58 38.1	-1.1
SCST	**Cishan** baz=237	**0.56**	**237**	⇑P	Pb	20 58 32.0	-0.3
SCST	baz=237			eS	Sb	20 58 41.5	+0.8
SSD	**Sandimen** baz=217	**0.56**	**218**	⇑iP	Pg	20 58 30.5	-0.1
SSD	baz=217			eS	Sg	20 58 37.5	-0.5
VWDT	**VWDT** baz=13	**0.57**	**13**	⇑P	Pg	20 58 30.8	-0.2
VWDT	baz=13			eS	Sb	20 58 40.8	-0.4
TSMG	**Majia** baz=215	**0.59**	**215**	⇑P	Pg	20 58 30.9	-0.2
TSMG	baz=215			eS	Sg	20 58 38.0	-0.8
ECL	**Taimali** baz=184	**0.59**	**185**	⇑P	Pg	20 58 31.1	-0.1
ECL	baz=184			eS	Sg	20 58 38.2	-0.7
CHN2	**Minshiung** baz=305	**0.59**	**305**	eP	Pb	20 58 33.5	+0.6
CHN2	baz=305			eS	Sn	20 58 43.8	-1.5
SSLB	**Suanglung** baz=355	**0.60**	**356**	⇑P	Pg	20 58 31.3	-0.1
SSLB	baz=355			eS	Sg	20 58 38.4	-0.7
CHN3	**Shinhua** baz=259	**0.60**	**259**	⇑eP	Pn	20 58 34.3	-1.0
EGFH	**Guangfu** baz=39	**0.61**	**39**	⇑P	Pg	20 58 31.5	-0.2
EGFH	baz=39			eS	Sg	20 58 39.8	+0.1
CHY	**Chiayi** baz=300	**0.62**	**300**	eP	Pb	20 58 33.6	+0.3
CHY	baz=300			eS	Sb	20 58 43.4	+1.1
SHHT	**Tainan City** baz=254	**0.63**	**255**	⇑eP	Pn	20 58 34.9	-0.7
SHHT	baz=254			eS	Sn	20 58 45.9	-0.2
WGK	**Gukeng** baz=321	**0.64**	**321**	eP	Pb	20 58 33.5	-0.1
TWM1	**Shoushan** baz=235	**0.65**	**236**	eP	Pb	20 58 34.4	+0.6
WDLH	**Douliu** baz=319	**0.66**	**319**	eP	Pb	20 58 34.7	+0.7
WDLH	baz=319			eS	Sn	20 58 45.5	-1.4
SGLT	**Jiouru** baz=225	**0.66**	**226**	eP	Pb	20 58 34.0	0.0
LDUT	**Ludao** baz=140	**0.67**	**140**	P	Pg	20 58 33.0	+0.2
LDUT	baz=140			eS	Sb	20 58 44.8	+0.9
MASBT	**Mashibuluo** baz=211	**0.67**	**211**	⇑iP	Pg	20 58 32.5	-0.3
MASBT	baz=211			eS	Sg	20 58 40.5	-0.9
WJS	**Zhushan** baz=338	**0.68**	**338**	eP	Pb	20 58 34.9	+0.5
WJS	baz=338			eS	Sn	20 58 45.8	-1.6
ICHU	**Yijhu** baz=284	**0.69**	**284**	eP	Pb	20 58 34.9	+0.3
ICHU	baz=284			eS	Sb	20 58 45.6	+1.2
TSPT	**Pingtung City** baz=223	**0.69**	**223**	eP	Pb	20 58 34.5	-0.1
SMLT	**Sun Moon Lake** baz=353	**0.70**	**352**	eP	Pg	20 58 33.6	+0.3
SMLT	baz=353			eS	Sb	20 58 43.6	-1.2
TEGC	**Jichi Village** baz=44	**0.71**	**43**	eP	Pb	20 58 35.1	+0.2
TYC	**Yuchr** baz=350	**0.72**	**349**	eP	Pb	20 58 34.5	-0.6
TYC	baz=350			eS	Sn	20 58 48.3	-0.2
TAI1	**Yung-k'ang** baz=258	**0.73**	**258**	eP	Pn	20 58 37.3	+0.3
ESL	**Shilin** baz=33	**0.73**	**32**	⇑P	Pg	20 58 33.8	-0.2
ESL	baz=33			eS	Sg	20 58 44.5	+0.9
SCLT	**Jiali** baz=269	**0.75**	**269**	eP	Pn	20 58 36.6	-0.7
SCLT	baz=269			eS	Sn	20 58 49.4	+0.4
WNT	**Mingjian** baz=337	**0.75**	**337**	eP	Pn	20 58 36.5	-0.8
WNT	baz=337			eS	Sn	20 58 47.9	-1.2
CHN8	**Yiju** baz=282	**0.75**	**282**	eP	Pb	20 58 35.8	+0.3
WTK	**Tuku** baz=311	**0.75**	**311**	eP	Pb	20 58 36.2	+0.6
WNT1	**Nantou City** baz=337	**0.77**	**337**	eP	Pn	20 58 37.3	-0.4
WNT1	baz=337			eS	Sn	20 58 49.0	-0.8
OWD	**Renai** baz=12	**0.78**	**12**	⇑eP	Pg	20 58 34.0	-0.8
OWD	baz=12			eS	Sg	20 58 45.6	+0.6
WSL	**Shuilin Townsh** baz=295	**0.79**	**295**	⇑eP	Pb	20 58 36.7	+0.5
WSL	baz=295			eS	Sn	20 58 48.8	-1.3
WUSB	**Renai** baz=7.0	**0.81**	**7**	⇑eP	Pg	20 58 34.8	-0.6
SSPT	**Xinbi** baz=210	**0.81**	**210**	⇑eP	Pg	20 58 35.7	+0.2
SSPT	baz=210			eS	Sb	20 58 47.7	-0.1
EAST	**Anshuo** baz=190	**0.82**	**190**	⇑eP	Pg	20 58 35.5	0.0
EAST	baz=190			eS	Sg	20 58 46.2	+0.1
WPL	**Puli Township** baz=356	**0.82**	**357**	eP	Pg	20 58 35.9	+0.2
TAW	**Tawu** baz=186	**0.83**	**187**	eP	Pg	20 58 35.8	-0.1
WSF	**Szhu** baz=302	**0.85**	**302**	eP	Pb	20 58 37.8	+0.6
TAWH	**Dawu Township** baz=187	**0.85**	**187**	⇑eP	Pg	20 58 36.1	-0.1
TAWH	baz=187			eS	Sg	20 58 46.6	-0.7
WYL	**Yuanlin Townsh** baz=333	**0.86**	**333**	eP	Pn	20 58 38.4	-0.5
TEYL	**Yanliau Villag** baz=38	**0.87**	**39**	eP	Pb	20 58 37.2	-0.4
WCS	**Beigang Elemen** baz=354	**0.87**	**354**	eP	Pg	20 58 36.7	+0.1
WSSB	**Gushan** baz=231	**0.88**	**232**	eP	Pn	20 58 39.9	+0.8
WSSB	baz=231			eS	Sn	20 58 55.3	+3.0
CHGB	**Renai** baz=10.0	**0.88**	**10**	⇑eP	Pg	20 58 36.1	-0.7
SCZT	**Fangliau** baz=203	**0.89**	**204**	⇑eP	Pg	20 58 36.6	-0.3
SCZT	baz=203			eS	Sg	20 58 48.5	0.0
ETM	**Tongmen** baz=30	**0.89**	**30**	eP	Pg	20 58 36.5	-0.5
WWF	**Wufeng** baz=342	**0.89**	**342**	eP	Pn	20 58 39.1	-0.2
WWF	baz=342			eS	Sn	20 58 52.8	+0.1
WRL	**Guolierlin Hig** baz=321	**0.91**	**321**	eP	Pb	20 58 38.8	+0.4
HWA	**Hwalien** baz=36	**0.96**	**35**	eP	Pg	20 58 38.5	+0.2
WHF	**Hehuan Shan** baz=14	**0.98**	**14**	eP	Pg	20 58 37.9	-0.9
SLIU	**Shizi** baz=191	**0.99**	**191**	⇑eP	Pg	20 58 38.6	-0.3
SLIU	baz=191			eS	Sg	20 58 51.7	0.0
TCU	**Taichung** baz=343	**1.00**	**343**	eP	Pn	20 58 40.7	-0.1
WLCH	**Liuqiu** baz=215	**1.02**	**215**	eP	Pn	20 58 43.0	+2.1
WLCH	baz=215			eS	Sn	20 59 02.1	+6.4
TWP	**Hsiaoliuchiu** baz=215	**1.03**	**215**	eP	Pn	20 58 43.1	+1.9
TWD	**Chiawan** baz=32	**1.04**	**31**	eP	Pg	20 58 39.5	-0.4
TWD	baz=32			eS	Sg	20 58 53.6	+0.3
TDCB	**Techi** baz=8.0	**1.07**	**8**	eP	Pg	20 58 40.4	-0.1
TWT	**Tachien** baz=8.0	**1.07**	**8**	eP	Pg	20 58 40.5	+0.1
FUSS	**Fushou** baz=12	**1.07**	**12**	⇑eP	Pg	20 58 39.5	-1.0
FUSS	baz=12			eS	Sn	20 58 58.1	+0.5
WHP	**Taichung City** baz=357	**1.08**	**357**	eP	Pg	20 58 40.6	-0.1
WHP	baz=357			eS	Sn	20 58 58.4	+0.8
ETLH	**Xiulin Townshi** baz=23	**1.10**	**23**	⇑eP	Pg	20 58 40.1	-1.0
ETLH	baz=23			eS	Sg	20 58 55.9	+0.5
ETL	**Fush Village** baz=30	**1.12**	**30**	eP	Pg	20 58 41.5	+0.1
NACB	**Ninganchiao** baz=29	**1.12**	**29**	eP	Pg	20 58 40.2	-1.2
TWQ1	**Liyutan** baz=350	**1.17**	**350**	⇑eP	Pn	20 58 43.9	+0.7
WDJ	**Dajia District** baz=344	**1.20**	**344**	eP	Pn	20 58 44.4	+0.9
HEN	**Hengchun** baz=191	**1.20**	**192**	eP	Pn	20 58 43.8	+0.3
WDGT	**Dungji** baz=273	**1.24**	**273**	⇑eP	Pg	20 58 43.5	-0.2
WDGT	baz=273			eS	Sb	20 59 00.3	0.0
NSY	**Sanyi** baz=350	**1.24**	**350**	eP	Pn	20 58 45.3	+1.2
NSY	baz=350			eS	Sn	20 59 03.4	+2.0
TWK1	**Hengchun** baz=188	**1.25**	**189**	eP	Pn	20 58 44.2	0.0
TWK1	baz=188			eS	Sn	20 59 04.5	+2.9
TWKBT	**Hengchun** baz=188	**1.26**	**188**	eP	Pn	20 58 44.3	0.0
TWKBT	baz=188			eS	Sn	20 59 04.8	+3.2
NNSB	**Datong** baz=16	**1.28**	**16**	eP	Pg	20 58 43.1	-1.3
TSEB	**Hengchuen, Pin** baz=186	**1.29**	**184**	eP	Pb	20 58 46.6	+1.9
NNS	**Nan Shan** baz=16	**1.29**	**15**	eP	Pg	20 58 43.7	-0.9
NMLH	**Miaoli** baz=352	**1.35**	**352**	eP	Pg	20 58 47.0	+1.1
PHUB	**P'eng-hu** baz=284	**1.36**	**284**	⇑eP	Pn	20 58 45.0	-0.6
PHUB	baz=284			eS	Sg	20 59 03.0	-0.5
PNG	**Penghu** baz=286	**1.38**	**286**	eP	Pn	20 58 45.7	-0.4
PNG	baz=286			eS	Sg	20 59 04.2	-0.2
ENA	**Nanau** baz=29	**1.41**	**29**	eP	Pn	20 58 46.1	-0.3
LATG	**Datong** baz=20	**1.42**	**20**	eP	Pn	20 58 45.7	-1.0
LATG	baz=20			eS	Sn	20 59 07.2	+1.2
NSTT	**Nanjuang**	**1.44**	**360**	eP	Pg	20 58 47.7	+0.3
NSTT				eS	Sn	20 59 09.2	+3.1
EWUT	**Wuta** baz=30	**1.44**	**29**	eP	Pb	20 58 47.0	-0.2
NFF	**Wufeng Townshi** baz=4.0	**1.44**	**4**	eP	Pg	20 58 47.8	+0.3
NFF	baz=4.0			eS	Sn	20 59 09.4	+3.1
LIOB	**Emei**	**1.45**	**0**	eP	Pg	20 58 47.9	+0.2
VCHM	**Qimei** baz=271	**1.45**	**271**	⇑eP	Pn	20 58 46.4	-0.6
NDT	**Datong Townshi** baz=18	**1.48**	**18**	eP	Pn	20 58 47.7	+0.3
NDT	baz=18			eS	Sg	20 59 08.1	+0.5
YHNB	**Yeheng** baz=13	**1.51**	**13**	eP	Pn	20 58 47.4	-0.5
YHNB	baz=13			eS	Sg	20 59 09.9	+1.4
NSK	**Sanguang** baz=13	**1.51**	**12**	eP	Pn	20 58 47.6	-0.3
NSK	baz=13			eS	Sg	20 59 10.4	+1.7
ENTT	**Nioudou** baz=20	**1.53**	**19**	eP	Pb	20 58 48.6	-0.3
NDS	**Dongshan** baz=24	**1.58**	**24**	⇑eP	Pb	20 58 49.5	-0.2
NDS	baz=24			eS	Sg	20 59 10.6	-0.1
TWC	**Suao** baz=29	**1.61**	**28**	eP	Pb	20 58 50.3	0.0
TWE	**Neicheng** baz=22	**1.64**	**22**	eP	Pb	20 58 50.8	+0.1
NWLT	**Wulai** baz=16	**1.64**	**16**	eP	Pb	20 58 50.3	-0.6
FUSB	**Fushanzhiwuyua** baz=19	**1.65**	**19**	eP	Pb	20 58 50.5	-0.5
NHDH	**Xindian Distri** baz=15	**1.83**	**15**	eP	Pg	20 58 54.8	-0.2
TWA	**Mucha** baz=17	**1.86**	**16**	eP	Pg	20 58 55.9	+0.4
TIPB	**Shuangxi** baz=23	**1.93**	**23**	eP	Pb	20 58 55.6	0.0
TIPB	baz=23			eS	Sb	20 59 20.9	+0.8
TWS1	**Kuangyinshan** baz=11	**1.94**	**11**	eP	Pg	20 58 58.4	+1.3
NWF	**Wu-fen Shan** baz=21	**2.00**	**21**	eP	Pb	20 58 56.6	-0.4
WFSB	**Wu-fen Shan** baz=21	**2.00**	**21**	eP	Pb	20 58 56.3	-0.6
SXI1	**Grass Mountain** baz=23	**2.06**	**23**	eP	Pb	20 58 57.6	-0.3
YOJ	**Yonaguni jima** baz=55	**2.23**	**55**	eP	Pn	20 58 57.5	-0.2
VWUC	**VWUC** baz=322	**2.29**	**322**	eP	Pn	20 58 58.7	+0.2

IDC 06 21:11:20.1±1.8**, 44°.70N**×**101°.74E, h0**km**, mb3.5**/1**, mbtmp3.3**/5**, ML2.9**/4**, Error ellipse: s-maj=30.3km s-min=21.5km az=135.0, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array** 2.5nm,0.3s,baz=229,slow=15,SNR=46	**4.50**	**44**	Pn	Pn	21 12 30.9	+1.2
SONM	8.9nm,0.3s,baz=230,slow=32,SNR=14 3.7nm,0.3s			Lg	Lg	21 13 42.3	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=96,slow=13,SNR=2.6	**13.74**	**286**	Pn	Pn	21 14 37.9	+1.7
MKAR	0.1nm,0.3s,baz=96,slow=23,SNR=1.7 0.3nm,0.8s			Lg	Lg	21 18 29.6	
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=126,slow=15,SNR=1.9 0.4nm,0.4s	**14.37**	**316**	Pn	Pn	21 14 43.1	-1.6
KURBB	**Kurchatov Arra** baz=106,slow=12,SNR=6.0 0.7nm,0.7s	**16.69**	**299**	Pn	Pn	21 15 14.1	-1.1
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=357,slow=9.0,SNR=4.0 0.3nm,0.3s	**26.27**	**186**	P	P	21 16 56.8	-0.3

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*IDC **06** 21:37:28.2±2.4, 36°.81N×139°.50E, h0km, mb3.4/2, mbtmp3.6/3, ML3.5/1, MS2.7/1, Error ellipse: s-maj=27.5km s-min=14.4km az=13.0*

*JMA **06** 21:37:31.5±0.0, 36°.62N±0°.07×139°.49E±0°.09, h5km, MV3.3/20, TOCHIGI GUNMA BORDER*

JMA Felt II J1 at TOCHIGI GUNMA BORDER .

ISC 06 21:37:31.0±1.2**, 36°.62N**±0°.04×**139°.44E**±0°.05**, h13**km±9km**, n10, σ0ˢ.91**/14**, 2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.19**	**177**	P	**Pb**	**21 37 35.5**	**-0.9**
JAG				S	**Sg**	**21 37 38.1**	**-0.1**
JKT	**Katashina**	**0.21**	**314**	⇓P	**Pb**	**21 37 36.5**	**-0.4**
JKT				⇓S	**Sg**	**21 37 39.9**	**+0.9**
JSB	**Shiboa**	**0.52**	**47**	iP	**Pb**	**21 37 41.7**	**-0.4**
JSB				S	**Sb**	**21 37 48.6**	**-0.9**
JRY	**Ryogami san**	**0.74**	**216**	iP	**Pn**	**21 37 45.9**	**-1.4**
JFY	**Yanaizu**	**0.82**	**15**	iP	**Pb**	**21 37 46.9**	**-0.2**
JFY				S	**Sg**	**21 37 57.4**	**-0.2**
MJAR	**Matsushiro Arr** 8.3nm,0.3s,baz=71,slow=16,SNR=146	**0.99**	**266**	Pg	**Pb**	**21 37 49.8**	**-0.3**
MJAR	19nm,0.3s,baz=238,slow=4.2,SNR=16			Lg	Lg	21 38 01.5	
JHJ	**Hachijo jima 2** 9.7nm,0.3s,baz=235,slow=19,SNR=1.4	**3.50**	**175**	Pn	**Pn**	**21 38 26.4**	**+1.3**
JHJ	13nm,0.3s,baz=225,slow=16,SNR=1.5			Sn	**Sn**	**21 39 07.8**	**+1.4**
JHJ	5.4nm,0.3s,baz=92,slow=23,SNR=1.4 24nm,0.3s			Lg	Lg	21 39 25.3	
JOW	**Kunigami** comp=Z,29nm,19.2s,baz=288,slow=37	**13.61**	**227**	LR	LR	21 45 58.4	
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=0.7,slow=7.5,SNR=5.0 0.4nm,0.6s	**56.46**	**186**	P	**P**	**21 47 12.8**	**+0.2**
ASAR	**Alice Springs** 0.3nm,0.8s,baz=11,slow=8.6,SNR=1.4 0.3nm,0.8s	**60.19**	**186**	P	**P**	**21 47 38.7**	**+0.1**

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*IDC **06** 21:47:01.3±0.8, 0°.46N×100°.35E, h169km±6km, mb3.9/25, mbtmp4.3/27, MS3.1/3, Error ellipse: s-maj=14.8km s-min=8.1km az=48.0*

*DJA **06** 21:47:01.8±0.2, 0°N±2°×10°0E±°, h164km±3km, M4.5/25, mb4.6/21, mB5.2/9, MLv4.5/25, Mw(mB)4.5/9, MwMwp5.2/1, Mwp5.5/1*

*NEIC **06** 21:47:02.1±1.8, 0°.39N±0°.04×100°.19E±0°.06, h170km±6km, mb4.3/73, Error ellipse: s-maj=9.9km s-min=4.0km az=63.0*

ISC 06 21:47:01.6±0.3**, 0°.37N**±0°.04×**100°.17E**±0°.04**, h170**km**, n230, σ1ˢ.18**/238**, mb4.3**/89**, 9C-10D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.73**	**305**	P	**Pn**	**21 47 26.5**	**+0.1**
BKNI	**Bangkinang**	**0.87**	**93**	Pn	**Pn**	**21 47 27.9**	**+0.5**
BKNI	**Bangkinang**	**0.87**	**93**	P	**Pn**	**21 47 27.9**	**+0.5**
BKNI	**Bangkinang**	**0.87**	**93**	P	**Pn**	**21 47 28.0**	**+0.6**
SISI	**Saibi**	**2.00**	**213**	P	**Pn**	**21 47 37.7**	**-0.4**
RGRI	**Rengat**	**2.28**	**108**	P	**Pn**	**21 47 40.6**	**-0.6**
PSI	**Prapat** 149nm,0.4s,baz=150,slow=10,SNR=265	**2.72**	**333**	P	**Pn**	**21 47 45.5**	**-1.0**
PSI	38nm,0.6s,baz=33,slow=22,SNR=8.1			S	**Sn**	**21 48 18.1**	**-3.3**
PSI				LR	LR	21 48 30.4	

	comp=Z,107nm,19.0s,baz=242,slow=34						
GSI	Gunungsitoli	2.76	290	Pn	Pn	21 47 46.8	0.0
GSI	Gunungsitoli	2.76	290	P	Pn	21 47 47.3	+0.4
GSI	Gunungsitoli	2.76	290	P	Pn	21 47 47.6	+0.7
KRJI	Kerinci	2.77	152	P	Pn	21 47 47.8	+0.7
PPSI	Pulau Pagai	3.12	183	P	Pn	21 47 49.1	-2.2
TSI	Tuntungan	3.50	333	P	Pn	21 47 56.9	+0.8
MYKOM	Kota Tinggi	3.94	69	Pn	Pn	21 48 02.2	+0.6
MYKOM				Sn	Sn	21 48 47.3	-1.2
KCSI	Kotacane, Aceh	3.94	323	P	Pn	21 48 01.8	0.0
JMBI	JAMBI	4.00	120	P	Pn	21 48 04.5	+2.0
IPM	Ipoh	4.17	12	Pn	Pn	21 48 04.3	-0.4
IPM				Sn	Sn	21 48 53.6	-0.4
IPM	Ipoh	4.17	12	P	Pn	21 48 06.4	+1.7
SNSI	Sinabang, Aceh	4.34	298	P	Pn	21 48 06.5	-0.4
TPRI	Tanjung Pinang	4.39	83	P	Pn	21 48 07.9	+0.4
DSRI	Dabo	4.49	101	P	Pn	21 48 09.9	+1.1
KULM	Kulim	4.91	6	Pn	Pn	21 48 13.9	-0.4
MNAI	Manna	5.46	149	Pn	Pn	21 48 20.7	-0.8
MNAI					Sn	21 49 23.2	-1.0
MNAI	Manna	5.46	149	P	Pn	21 48 21.0	-0.5
	1.6nm149nm,0.6s						
MNAI	Manna	5.46	149	P	Pn	21 48 21.8	+0.3
PMBI	Palembang	5.65	125	Pn	Pn	21 48 24.0	0.0
LHMI	Lhok Sumawe	5.80	326		Pn	21 48 25.0	-0.9
LHMI	Lhok Sumawe	5.80	326	P	Pn	21 48 25.4	-0.5
	0.9nm4µm201nm,0.5s						
LHMI	Lhok Sumawe	5.80	326	P	Pn	21 48 25.6	-0.3
PPBI	Pangkal Pinang	6.47	113	P	Pn	21 48 36.1	+1.3
LWLI	Liwa	6.61	144	P	Pn	21 48 35.2	-1.6
	0.7nm2µm114nm,0.8s						
KLI	Kotabumi	7.00	138	P	Pn	21 48 41.5	-0.2
	0.5nm86nm,0.5s						
KASI	Kota Agung	7.28	144	P	Pn	21 48 43.4	-2.1
	0.3nm48nm,0.4s						
TPI	Tanjungpandan	8.10	113	P	Pn	21 48 58.4	+2.1
	0.1nm237nm24nm,0.8s						
KSM	Kuching	10.19	84	Pn	Pn	21 49 23.1	-0.9
STKI	Sintang	11.31	92	P	Pn	21 49 39.9	+1.4
	5µm37nm,0.8s						
CMJI	Cimerak	11.56	135	P	Pn	21 49 39.2	-2.6
KPJI	Karang Pucung	11.62	131	P	Pn	21 49 41.9	-0.6
	21nm,0.5s						
PBKI	Pangkalan Bun	11.89	105	P	P	21 49 55.9	+3.8
SMRI	Semarang	12.62	126	Pn	Pn	21 49 55.9	+0.4
UGM	Wanagama	13.20	129	P	Pn	21 50 01.2	-1.6
	106nm,1.3s						
PCJI	Pacitan	13.88	128	P	Pn	21 50 08.7	-2.7
GRJI	Gresik	14.25	121	P	P	21 50 21.4	+3.1
PWJI	Pagerwojo	14.28	126	P	Pn	21 50 16.3	-0.1
	32nm,1.4s						
MTKI	Muara Teweh, K	14.78	95	P	P	21 50 23.8	-0.4
	3µm27nm,0.5s						
BBKI	Banjar Baru	15.15	105	P	P	21 50 29.5	+1.2
	2µm54nm,0.7s						
KMMI	Kalianget	15.61	118	P	P	21 50 33.7	+0.3
	70nm,0.8s						
JAGI	Jajag, Banyuwa	16.47	123	P	P	21 50 41.8	-1.0
JAGI				IAmb	IAmb	21 50 48.8	
	comp=Z,14nm,0.8s						
SRBI	Singaraja	17.19	120	P	Pn	21 50 54.3	+2.5
CMAR	Chiang Mai Arr	18.01	356	P	P	21 50 59.1	-0.6
	comp=Z,0.6nm,0.6s,baz=190,slow=10,SNR=7.0						
CMAR				ScP	ScP	21 58 45.0	-1.4
	comp=Z,0.7nm,0.6s,baz=208,slow=3.7,SNR=6.9						
MYLDM	Lahad Datu	18.91	75	P	P	21 51 10.7	+1.1
MYLDM				IAmb	IAmb	21 51 24.2	
	comp=Z,21nm,1.1s						
MPSI	Mapaga	19.73	90	P	Pn	21 51 21.0	-0.8
	comp=Z,491nmcomp=Z,27nm,0.9s						
TTSI	Tana Toraja	19.93	100	P	Pn	21 51 34.6	+10
SPSI	Sidrap Palu	20.05	103	P	Pn	21 51 26.8	+1.1
KAPI	Kappang	20.28	106	P	P	21 51 22.9	-1.4
	comp=Z,5.2nm,0.4s,baz=79,slow=14,SNR=0.9						
	comp=Z,5.2nm,0.4s						
KAPI	Kappang	20.28	106	P	P	21 51 25.0	+0.7
KAPI				IAmb	IAmb	21 51 33.9	
	comp=Z,15nm,0.8s						
BNSI	Bone	20.47	104	P	P	21 51 28.8	+2.4
	comp=Z,25nm,1.4s						
PALK	Pallekele	20.59	290	P	P	21 51 29.2	+1.5
	comp=Z,10nm,1.0s,baz=206,slow=9.3,SNR=3.8						
	comp=Z,10nm,1.0s						
TOLI2	Tolitoli	20.62	88	P	P	21 51 27.0	-1.0
TOLI2				IAmb	IAmb	21 51 29.6	
	comp=Z,11nm,0.8s						
BKSI	Bulukumba	20.71	106	P	P	21 51 31.3	+2.4
	comp=Z,27nm,0.7s						
BSSI	Bau Bau, Buton	21.29	108	P	P	21 51 41.3	+6.2
MRSI	Marisa	21.77	90	P	P	21 51 41.4	+1.2
	comp=Z,40nm,0.6s						
LUWI	Luwuk	22.64	94	P	P	21 51 48.4	-0.2
LUWI	Luwuk	22.64	94	P	P	21 51 50.7	+2.1
	comp=Z,2µmcomp=Z,82nm,0.8s						
GTOI	Gorontalo	22.84	89	P	P	21 51 51.2	+0.8
	comp=Z,17nm,0.8s						
EDFI	Ende, Flores	23.27	113	P	P	21 51 56.6	+2.2
	comp=Z,5.9nm,0.6s						
BATI	Baumata	25.63	115	P	P	21 52 12.7	-3.0
	comp=Z,13nm,0.6s,baz=126,slow=23,SNR=1.5						
	comp=Z,13nm,0.6s						
PZH	PanZhiHua	26.02	3	P	P	21 52 20.6	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,50nm,5.4s						
TAPN	Taplejung	29.37	337	*e*P	P	21 52 50.3	+1.1
	comp=Z,5.2nm,0.3s						
RAMN	Ramite	29.47	335	*e*P	P	21 52 51.4	+1.3
	comp=Z,4.2nm,0.3s						
PKI	Pulchoki	30.53	334	*e*P	P	21 53 00.1	+0.6
	comp=Z,4.2nm,0.4s						
PKIN	Phulchoki	30.54	334	*e*P	P	21 53 00.1	+0.6
	comp=Z,4.5nm,0.5s						
GUN	Gumba	30.62	335	*e*P	P	21 53 00.9	+0.6
	comp=Z,20nm,0.4s						
KKN	Kakani	30.78	334	*e*P	P	21 53 01.9	+0.4
	comp=Z,7.0nm,0.4s						
GKN	Gorkha	31.25	333	*e*P	P	21 53 06.4	+0.8
	comp=Z,7.8nm,0.3s						
KOLN	Koldanda	31.54	331	*e*P	P	21 53 08.6	+0.4
	comp=Z,29nm,0.5s						
DANN	Dangsing	31.95	332	*e*P	P	21 53 12.2	+0.3
	comp=Z,24nm,0.5s						
PYUN	Piuthan	32.11	331	*e*P	P	21 53 13.7	+0.5
	comp=Z,7.7nm,0.3s						
KNRA	Kununurra	32.43	121	P	P	21 53 16.4	+0.5
MORW	Morawa	32.97	154	P	P	21 53 21.3	+0.9
MORW				IAmb	IAmb	21 53 37.4	
	comp=Z,10nm,1.1s						
MTN	Manton Dam	33.40	114	P	P	21 53 24.2	-0.1
LZH	Lanzhou	35.70	5	*e*P	P	21 53 52.0	+8.0
LZH				pP	pP	21 54 28.4	+8.3
LZH				sP	sP	21 54 43.2	+3.6
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
NWAO	Narrogin (SRO)	36.82	156	P	P	21 53 55.2	+1.8
NWAO				IAmb	IAmb	21 53 58.7	
	comp=Z,8.6nm,1.1s						
WB0	Warramunga Arr	39.05	123	P	P	21 54 11.1	-1.2
WRA	Warramunga Arr	39.09	123	P	P	21 54 11.2	-1.4
	comp=Z,3.0nm,0.4s,baz=306,slow=8.5,SNR=112						
WRA				PcP	PcP	21 56 19.0	-0.1
	comp=Z,0.5nm,0.4s,baz=320,slow=2.5,SNR=7.5						
WRA				ScP	ScP	21 59 50.0	-1.6
	comp=Z,0.7nm,0.7s,baz=306,slow=3.2,SNR=7.1						
	comp=Z,3.0nm,0.4s						
WRA	Warramunga Arr	39.09	123	P	P	21 54 12.1	-0.5
WB2	Warramunga Arr	39.10	123	P	P	21 54 11.5	-1.2
WB2				IAmb	IAmb	21 54 14.7	
	comp=Z,5.1nm,1.1s						
WR0	Warramunga Arr	39.26	123	P	P	21 54 12.8	-1.2
WR0				IAmb	IAmb	21 54 16.1	
	comp=Z,3.8nm,0.7s						
AS31	Alice Springs	40.54	128	P	P	21 54 23.1	-1.5
ASAR	Alice Springs	40.54	128	P	P	21 54 22.8	-1.8
	comp=Z,0.7nm,0.4s,baz=295,slow=7.8,SNR=19						
ASAR				PcP	PcP	21 56 23.8	+0.1
	comp=Z,0.8nm,0.4s,baz=307,slow=2.4,SNR=5.1						
ASAR				ScP	ScP	21 59 55.4	-1.9
	comp=Z,1.0nm,0.7s,baz=304,slow=3.8,SNR=7.7						
	comp=Z,0.7nm,0.4s						
ASAR	Alice Springs	40.54	128	P	P	21 54 23.1	-1.4
FORT	Forrest	40.76	142	P	P	21 54 26.1	-0.1
HHC	Hu-ho-hao-te	41.60	13	*e*P	P	21 54 34.7	+1.7
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,210nm,5.0s						
NIL	Nilore	41.64	325	P	P	21 54 33.1	-0.3
WMQ	Urumqi	44.67	347	⇑P	P	21 54 59.4	+1.8
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
KBL	Kabul	44.74	323	P	P	21 54 58.5	0.0
KBL				IAmb	IAmb	21 55 00.4	
	comp=Z,2.6nm,0.5s						
KSRS	Korea Array	44.91	32	P	P	21 54 57.4	-2.1
	comp=Z,1.0nm,0.6s,baz=175,slow=40,SNR=3.1						
	comp=Z,1.0nm,0.6s						
TARG	Taragay, Kyrgy	45.86	337	P	P	21 55 08.5	+1.2
TARG				IAmb	IAmb	21 55 09.4	
	comp=Z,7.0nm,0.5s						
KDJ	Kajisay	46.44	336	P	P	21 55 12.1	+0.5
KDJ				IAmb	IAmb	21 55 14.2	
	comp=Z,10.0nm,0.9s						
DRK	Karamyk	46.76	330	P	P	21 55 14.6	+0.3
BBOO	Buckleboo	47.25	138	P	P	21 55 16.9	-1.0
SOCY	Socotra	47.29	286	P	P	21 55 18.8	+0.3
SOCY				IAmb	IAmb	21 55 21.1	
	comp=Z,6.0nm,0.9s						
SONM	Songino Array	47.58	6	P	P	21 55 20.0	-0.3
	comp=Z,2.8nm,0.6s,baz=189,slow=10.0,SNR=20						
SONM				PcP	PcP	21 56 46.6	-0.8
	comp=Z,0.2nm,0.4s,baz=198,slow=4.0,SNR=4.2						
SONM				ScP	ScP	22 00 23.0	-2.6
	comp=Z,1.3nm,0.8s,baz=191,slow=4.8,SNR=5.3						
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	47.58	6	P	P	21 55 21.4	+1.1
BTK	Batken	47.69	329	P	P	21 55 22.2	+1.0
BTK				IAmb	IAmb	21 55 29.0	
	comp=Z,3.4nm,0.7s						
TKM2	Tokmak 2	47.75	336	P	P	21 55 22.6	+0.9
	SNR=17						
KBK	Karagaybulak	47.80	335	P	P	21 55 23.9	+1.7
	SNR=6.6						
AML	Almayashu	47.92	333	P	P	21 55 24.2	+0.9
	SNR=5.8						
AAK	Ala-Archa	47.98	335	P	P	21 55 23.7	+0.2
	comp=Z,1.4nm,0.5s,baz=168,slow=5.3,SNR=6.8						
	comp=Z,1.4nm,0.5s						
AAK	Ala-Archa	47.98	335	P	P	21 55 24.7	+1.2
EKS2	Erkin-Say	48.31	334	P	P	21 55 27.4	+1.4
	SNR=10						
USP	Ospenovka	48.49	335	P	P	21 55 28.1	+0.8
	SNR=6.5						
MKAR	Makanchi Array	48.81	344	P	P	21 55 29.7	+0.1
	comp=Z,3.1nm,0.4s,baz=158,slow=8.6,SNR=85						
MKAR				pP	pP	21 56 07.9	+0.2
	comp=Z,1.7nm,0.8s,baz=147,slow=6.9,SNR=4.0						
	comp=Z,3.1nm,0.4s						
MAKZ	Makanchi	48.91	343	P	P	21 55 30.8	+0.4
CTA	Charters Tower	49.48	117	P	P	21 55 33.7	-1.4
	comp=Z,4.9nm,0.9s,baz=268,slow=7.0,SNR=2.0						
	comp=Z,4.9nm,0.9s						
STKA	Stephens Creek	50.61	133	P	P	21 55 42.4	-1.0
	comp=Z,1.5nm,0.6s,baz=331,slow=7.3,SNR=5.3						
	comp=Z,1.5nm,0.6s						
STKA	Stephens Creek	50.61	133	P	P	21 55 42.9	-0.6
USRK	Ussuriysk Ar.	52.00	29	P	P	21 55 52.4	-1.2
	comp=Z,1.3nm,0.5s,baz=241,slow=4.7,SNR=2.7						
	comp=Z,1.3nm,0.5s						
USRK	Ussuriysk Ar.	52.00	29	P	P	21 55 53.4	-0.1
KURBB	Kurchatov Arra	53.34	343	P	P	21 56 03.3	0.0
	comp=Z,2.5nm,0.8s,baz=162,slow=7.1,SNR=17						
KURBB				pP	pP	21 56 41.8	-0.2
	comp=Z,0.8nm,0.6s,baz=160,slow=7.1,SNR=3.1						
	comp=Z,2.5nm,0.8s						
KURK	Kurchatov	53.40	343	P	P	21 56 03.9	+0.2
KURK				IAmb	IAmb	21 56 05.1	
	comp=Z,5.2nm,0.9s						
GEYT	Alibeck	53.77	319	P	P	21 56 06.7	0.0
	comp=Z,2.9nm,0.8s,baz=168,slow=10.0,SNR=4.8						
GEYT				LR	LR	22 20 44.4	
	comp=Z,24nm,18.8s,baz=133,slow=38						
	comp=Z,2.9nm,0.8s						
ZAA0	Zalesovo Array	54.89	349	P	P	21 56 14.2	-0.2
ZAA0				IAmb	IAmb	21 56 15.0	
	comp=Z,6.1nm,0.8s						
ZALV	Zalesovo Beam	54.89	349	P	P	21 56 14.2	-0.2
	comp=Z,3.8nm,0.3s,baz=171,slow=6.8,SNR=29						
ZALV				pP	pP	21 56 52.8	-0.5
	comp=Z,1.7nm,0.7s,baz=167,slow=7.4,SNR=2.4						
	comp=Z,3.8nm,0.3s						
ABPO	Ambohimpanom	55.39	247	P	P	21 56 20.2	+1.4
ABPO				IAmb	IAmb	21 56 34.9	
	comp=Z,7.8nm,1.0s						
VOI	Vohitsoka	56.52	243	P	P	21 56 28.4	+1.5
BVAR	Borovoye Array	58.04	339	P	P	21 56 35.5	-1.1
	comp=Z,0.9nm,0.3s						
	comp=Z,0.9nm,0.3s						
BRVK	Borovoye	58.10	339	P	P	21 56 36.6	-0.5
BRVK				IAmb	IAmb	21 56 37.3	
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	59.66	331	P	P	21 56 47.5	-0.4
KMBO	Kilima Mbogo	62.93	269	P	P	21 57 12.4	+1.5
	comp=Z,2.7nm,0.7s,baz=66,slow=8.3,SNR=7.4						
	comp=Z,2.7nm,0.7s						
KMBO	Kilima Mbogo	62.93	269	P	P	21 57 12.7	+1.8
KMBO				IAmb	IAmb	21 57 13.8	
	comp=Z,3.3nm,0.8s						
LODK	Lodwar	64.83	274	P	P	21 57 22.8	-0.3
LODK				IAmb	IAmb	21 57 27.0	
	comp=Z,2.1nm,0.8s						
ARU	Arti	65.12	336	P	P	21 57 23.0	-1.0
ARU				IAmb	IAmb	21 57 26.8	
	comp=Z,2.7nm,1.1s						
GURO	Guroymak-BITLI	65.30	313	P	P	21 57 25.6	-0.2
GURO				IAmb	IAmb	21 57 27.4	
	comp=Z,4.8nm,0.9s						
MARD	Mardin	65.81	311	P	P	21 57 28.4	-0.6
ONI	Oni	65.82	317	P	P	21 57 28.4	-0.5
ONI				IAmb	IAmb	21 57 30.8	
	comp=Z,3.7nm,1.0s						
KBZ	Khabaz	66.65	318	P	P	21 57 33.9	-0.1
	comp=Z,3.6nm,0.7s,baz=120,slow=6.1,SNR=11						
	comp=Z,3.6nm,0.7s						
TOKA	Tokat	69.94	313	P	P	21 57 54.4	-0.3
TOKA				IAmb	IAmb	21 57 56.0	
	comp=Z,6.6nm,0.9s						
BNN	Bunyan	69.98	311	P	P	21 57 54.8	-0.2
BR131	Keskin Array S	71.87	312	P	P	21 58 05.1	-1.4
BRTR	Keskin Array B	71.87	312	P	P	21 58 05.8	-0.6
	comp=Z,5.7nm,0.6s,baz=133,slow=7.0,SNR=53						
	comp=Z,5.7nm,0.6s						
BRTR	Keskin Array B	71.87	312	P	P	21 58 05.9	-0.5
ILGA	Ilgaz	72.16	313	P	P	21 58 07.7	-0.6
MAW	Mawson	72.61	194	P	P	21 58 11.7	+1.7
LSZ	Lusaka	72.73	254	P	P	21 58 13.7	+1.7
LSZ				IAmb	IAmb	21 58 13.9	
	comp=Z,2.4nm,0.7s						
SEY	Seymchan	73.38	22	LR	LR	22 34 37.1	
	comp=Z,23nm,18.7s,baz=0.0,slow=39						
TIXI	Tiksi	73.50	9	P	P	21 58 13.8	-1.4
	comp=Z,1.0nm,0.4s,baz=269,slow=24,SNR=3.1						
	comp=Z,1.0nm,0.4s						
TIXI	Tiksi	73.50	9	P	P	21 58 14.5	-0.7
MDUB	Mudurnu	73.87	312	P	P	21 58 17.1	-1.0
KLMR	Klimovskoe	75.79	334	*e*P	P	21 58 27.7	-0.9
KLMR				AMP		21 58 34.7	
	comp=Z,5.0nm,0.9s						
KARP	Karpathos	76.00	307	P	P	21 58 30.0	-0.4
LBTB	Lobatse	76.19	244	P	P	21 58 33.3	+1.5
TIRR	Tirgusor	76.78	316	⇓P	P	21 58 34.7	+0.2
TIRR	Tirgusor	76.78	316	P	P	21 58 33.6	-0.9
BOSA	Boshof	76.95	241	P	P	21 58 36.7	+0.7
	comp=Z,3.3nm,0.4s,baz=94,slow=3.6,SNR=26						
	comp=Z,3.3nm,0.4s						
BOSA	Boshof	76.95	241	P	P	21 58 37.4	+1.3
MILM	Milestii Mici	77.07	318	⇓P	P	21 58 35.7	-0.4
HARR	Harsova	77.17	316	⇓P	P	21 58 37.1	+0.4
SORM	Soroca	77.66	319	⇓P	P	21 58 39.3	0.0
AKASG	Malin Array Be	77.73	322	P	P	21 58 38.7	-1.0
	comp=Z,1.3nm,0.4s,baz=75,slow=5.8,SNR=8.3						
	comp=Z,1.3nm,0.4s						
IDI	Anoyia	77.79	306	P	P	21 58 40.7	+0.3
VRI	Vrincioaia	78.25	317	⇑P	P	21 58 43.0	+0.3
HIZ	Hauiti	78.28	129	P	P	21 58 42.6	-0.3
PLOR	Plostina	78.30	317	⇑P	P	21 58 43.9	+0.9
TESR	Tescani	78.43	317	⇓P	P	21 58 44.3	+0.7
SGRR	Singureni	78.45	315	⇑P	P	21 58 46.1	+2.3
MLR	Muntele Rosu	78.71	316	⇑P	P	21 58 46.2	+0.8
MLR	Muntele Rosu	78.71	316	IAmb	IAmb	21 58 46.9	
	comp=Z,7.4nm,1.0s						
VOIR		79.32	316	⇓P	P	21 58 48.4	-0.3
ARR	Arges	79.59	316	⇓P	P	21 58 49.9	-0.2
BURAR	Bucovina Array	79.61	318	⇓P	P	21 58 51.3	+1.1
BURAR	Bucovina Array	79.61	318	IAmb	IAmb	21 58 51.9	
	comp=Z,2.9nm,0.8s						
BUR08	Bucovina Ar. S	79.62	318	P	P	21 58 51.3	+1.1
BUR08				IAmb	IAmb	21 58 51.7	
	comp=Z,3.3nm,0.7s						
BKZ	Black Stump Fm	79.64	130	P	P	21 58 51.0	+0.6
BKZ				IAmb	IAmb	21 59 06.5	
	comp=Z,5.7nm,1.1s						
VTS	Vitosha	80.14	313	⇑P	P	21 58 52.9	-0.3
VTS	Vitosha	80.14	313	IAmb	IAmb	21 58 54.1	
	comp=Z,5.9nm,1.1s						
AGG	Agios Georgios	80.32	309	P	P	21 58 52.1	-2.0
LIT	Litokhoron	80.34	311	P	P	21 58 53.1	-1.1
ITM	Ithomi	80.41	308	P	P	21 58 54.1	-0.5
ITM				IAmb	IAmb	21 59 03.9	
	comp=Z,7.8nm,1.0s						
HERR	Herculane	81.06	315	⇑P	P	21 58 58.5	+0.6
DRGR		81.15	317	⇓P	P	21 58 59.3	+0.9
SUR	Sutherland	81.21	237	P	P	21 59 00.5	+1.4
BZS	Buzias	81.73	316	⇑P	P	21 59 01.9	+0.5
KOLS	Kolonicke sedl	81.77	319	*e*P	P	21 59 03.3	+1.8
SIRR	Siria	81.79	317	⇑P	P	21 59 01.9	+0.2
PABE	Paberze	81.90	326	P	P	21 59 01.6	-0.3
PABE				IAmb	IAmb	21 59 02.8	
	comp=Z,7.4nm,0.7s						
FIA1	FINESS Array S	82.11	332	P	P	21 59 02.8	-0.1
FINES	FINESS Array B	82.11	332	P	P	21 59 02.8	-0.2
	comp=Z,0.7nm,0.4s,baz=115,slow=6.0,SNR=15						
	comp=Z,0.7nm,0.4s						
KEK	Kerkira	82.35	310	P	P	21 59 04.4	-0.4
KEK				IAmb	IAmb	21 59 12.4	
	comp=Z,6.7nm,0.9s						
PSZ	Piszkesteto	83.20	318	P	P	21 59 08.9	-0.1
PSZ				IAmb	IAmb	21 59 09.7	
	comp=Z,2.1nm,0.7s						
SRO	Srobarova	84.25	318	*e*P	P	21 59 15.0	+0.8
ARCES	ARCESS Array B	84.32	340	P	P	21 59 13.8	-0.4
	comp=Z,0.6nm,0.4s,baz=106,slow=4.2,SNR=20						
	comp=Z,0.6nm,0.4s						
ARCES	ARCESS Array B	84.32	340	P	P	21 59 13.8	-0.4
VNDA	Vanda	84.44	169	P	P	21 59 15.6	+1.0
MORC	Moravsky Berou	84.95	320	P	P	21 59 18.5	+0.8
MORC				IAmb	IAmb	21 59 18.9	
	comp=Z,2.8nm,0.6s						
KRLC	Kraliky	85.46	320	*e*P	P	21 59 19.9	-0.4
RONA	Rosalia, Austr	85.59	318	*e*P	P	21 59 21.4	+0.4
	comp=Z,1.5nm,0.8s						
DPC	Dobruska-Polom	85.78	320	*e*P	P	21 59 23.2	+1.3
CONA	Conrad Observa	85.90	318	*e*P	P	21 59 22.2	-0.3
	comp=Z,1.6nm,0.7s						
CHVC	Chvalec	85.97	321	*e*P	P	21 59 23.4	+0.6
GROS	Grobnik	86.05	316	*i* P	P	21 59 23.8	+0.4
BOJS	Bojanci	86.17	315	*e*P	P	21 59 24.3	+0.5
SOKA	Soboth	86.39	317	*i* P	P	21 59 25.5	+0.5
	comp=Z,3.5nm,0.8s,SNR=5.4						
OBKA	Obir	86.71	316	*e*P	P	21 59 27.1	+0.5
	comp=Z,1.3nm,0.7s						
CRNS	Crni Vrh	86.89	316	*i* P	P	21 59 27.8	+0.4
PRU	Pruhonice	86.90	320	*e*P	P	21 59 27.8	+0.5
MOA	Molln	86.97	318	*i* P	P	21 59 28.1	+0.4
	comp=Z,1.9nm,0.9s						
CKRC	Cesky Krumlov	86.99	319	*e*P	P	21 59 28.3	+0.5
VOJS	Vojsko	87.15	316	*i* P	P	21 59 28.8	0.0
BRG	Berggiesshubel	87.33	321	*i* P	P	21 59 30.4	+1.1
BRG				Amp		21 59 31.1	
	comp=Z,4.5nm,0.7s						
BIOA	Bad Ischl, Aus	87.39	318	*e*P	P	21 59 29.4	-0.4
	comp=Z,1.7nm,0.5s						
GERES	GERESS Array B	87.39	319	P	P	21 59 30.4	+0.5
	comp=Z,1.4nm,0.6s,baz=92,slow=4.4,SNR=16						
	comp=Z,1.4nm,0.6s						
KHC	Kasperske Hory	87.48	319	P	P	21 59 30.7	+0.5
KHC				IAmb	IAmb	21 59 31.8	
	comp=Z,2.2nm,0.7s						
KHC	Kasperske Hory	87.48	319	*e*P	P	21 59 30.4	+0.2
KBA	Koelnbreinsper	87.56	317	*i* P	P	21 59 30.7	-0.1
	comp=Z,0.9nm,0.4s						
NRCA	Norcia	87.58	313	P	P	21 59 30.8	-0.1
NRCA				IAmb	IAmb	21 59 32.1	
	comp=Z,3.3nm,0.9s						
CLL	Collm	87.94	321	⇓*i*P	P	21 59 32.5	+0.3
	comp=Z,7.0nm,1.4s						
STAL	STALIGIAL	87.97	316	P	P	21 59 31.8	-0.8
STAL				IAmb	IAmb	21 59 33.7	
	comp=Z,7.6nm,1.2s						
ABTA	Abfaltersbach	88.12	317	*e*P	P	21 59 33.0	-0.3
	comp=Z,1.9nm,0.9s						
CTI	Castel Tesino	88.70	316	P	P	21 59 36.4	+0.3
WTTA	Wattenberg	88.73	317	*i* P	P	21 59 36.1	-0.2
	comp=Z,4.2nm,0.9s						
WATA	Walderalm	88.77	317	*i* P	P	21 59 36.1	-0.3
	comp=Z,2.3nm,0.6s						
SQTA	Sankt Quirin	89.02	317	*i* P	P	21 59 37.5	-0.1
	comp=Z,3.4nm,0.5s,SNR=4.8						
MOTA	Moosalm	89.09	317	*i* P	P	21 59 37.7	-0.2
	comp=Z,2.5nm,0.6s,SNR=4.5						
RETA	Reutte	89.33	317	*e*P	P	21 59 39.0	+0.1
	comp=Z,5.2nm,0.8s,SNR=8.2						
FETA	Feichten	89.35	317	*i* P	P	21 59 39.5	+0.3
	comp=Z,2.3nm,0.7s						
DAVA	Damuels	89.93	317	*i* P	P	21 59 42.6	+0.8
	comp=Z,4.7nm,0.8s						
TXAR	Lajitas Array	142.71	36	PKP	PKPdf	22 06 12.2	-3.3
	comp=Z,0.4nm,0.4s,baz=270,slow=0.5,SNR=7.0						
TXAR				SKPbc	SKPbc	22 09 36.0	-1.8
	comp=Z,0.6nm,0.7s,baz=332,slow=1.0,SNR=6.1						
BDFB	Brasilia	145.12	243	PKPbc	PKPab	22 06 20.8	+0.7
	comp=Z,3.5nm,0.5s,baz=131,slow=5.2,SNR=9.1						
CPUP	Villa Florida	146.30	218	PKPbc	PKPbc	22 06 23.2	+0.1
	comp=Z,3.9nm,0.8s,baz=135,slow=2.4,SNR=10						

IDC ***06*** *21:48:44.6±1.4, 52.°99N×158.°59E, h138^{km}±7^{km}, mb3.1/10, mbtmp3.5/10, Error ellipse: s-maj=51.0km s-min=20.0km az=6.0*

KRSC ***06*** *21:48:44.4±0.8, 53.°09N×159.°11E, h128^{km}±6^{km}, ML4.0*

ISC 06 21:48:44.9±0.7**, 53.°14N**±0.°05×**158.°98E**±0.°05**, h131**^{km}±5^{km}**, n50,** σ1.^{s}**16**/57**, mb3.4**/10**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGLR	Uglovaya	0.12	307	*e*P	Pn	21 49 03.4	+0.5
UGLR				*e*S	Sn	21 49 17.1	+0.6
SDLR	Sedlovina	0.15	338	*e*P	Pn	21 49 03.0	0.0
SMAR	Somma	0.17	320	*e*P	Pn	21 49 03.5	+0.4
DALK	Dalny	0.17	232	*e*P	Pn	21 49 02.9	+0.1
DALK				*e*S	Sn	21 49 16.2	-0.1
AVH	Avacha	0.19	311	*e*P	Pn	21 49 03.4	+0.4
KRER	Koryakskii	0.22	320	*e*P	Pn	21 49 03.5	+0.3
KRER				*e*S	Sn	21 49 17.3	+0.2
NLC	Nalytchevo	0.22	81	*e*P	Pn	21 49 03.4	+0.5
NLC				*e*S	Sn	21 49 16.9	+0.4
PET	Petropavlovsk	0.23	240	*e*P	Pn	21 49 03.1	+0.1
PET				*e*S	Sn	21 49 16.5	-0.1
KOK	Koryaka	0.26	307	*e*P	Pn	21 49 03.5	+0.3
KRX	Arik	0.30	318	*e*P	Pn	21 49 03.4	0.0
KRMR	Karymshinskiy	0.60	239	*e*P	Pn	21 49 04.8	+0.1
SPN	Mys Shipunski	0.63	93	*e*P	Pn	21 49 05.1	+0.2
SPN				*e*S	Sn	21 49 19.8	-0.2
RUS	Russkaya	0.76	202	*e*P	Pn	21 49 06.1	+0.2
RUS				*e*S	Sn	21 49 21.7	0.0
PETK	Petropavlovsk-	0.77	268	P	Pn	21 49 05.2	-0.8
	163nm,0.3s,baz=97,slow=12,SNR=288						
PETK				S	Sn	21 49 21.6	-0.3
	75nm,0.5s,baz=310,slow=16,SNR=21						
GRL	Gorelyy	0.80	223	*e*P	Pn	21 49 07.2	+0.8
MTVR	Mutnovka	0.81	217	*e*P	Pn	21 49 07.3	+0.8
MTVR				*e*S	Sn	21 49 23.8	+1.0
GNL	Ganaly	0.83	312	*e*P	Pn	21 49 06.3	-0.3
KII	Karymskiy	0.94	17	*e*P	Pn	21 49 07.8	+0.3
ASAK	Asacha	1.00	221	*e*P	Pn	21 49 09.1	+1.1
APC	Apacha	1.12	260	*e*P	Pn	21 49 09.8	+0.8
APC				*e*S	Sn	21 49 28.0	+0.6
KDTR	Khodutka, Kamc	1.44	203	*e*P	Pn	21 49 12.9	+0.5
KDTR				*e*S	Sn	21 49 33.1	-0.2
MIPR	Malaya Ipel'ka	1.60	238	*e*P	Pn	21 49 15.4	+1.1
PAU	Pauzhetka	2.14	219	*e*P	Pn	21 49 22.1	+1.5
MKZ	Mys Kozlova	2.16	48	*e*P	Pn	21 49 21.2	+0.4
MKZ				*e*S	Sn	21 49 47.3	-1.1
TUMD	Tumrok D	2.23	21	*e*P	Pn	21 49 23.0	+1.3

TUMD				*e*S	Sn	21 49 50.8	+0.7
TUMR	Tumrok	2.26	17	*e*P	Pn	21 49 24.2	+2.1
KMNR	Kamenistaya	2.73	15	*e*P	Pn	21 49 31.3	+3.3
ESO	Esso	2.80	357	*e*P	Pn	21 49 29.0	+0.1
BDR	Baidarnaya	3.67	20	*e*P	Pn	21 49 42.2	+1.9
SMKR	Semkarok	3.74	22	*e*P	Pn	21 49 42.5	+1.3
SRKR	Sorokina	3.74	19	*e*P	Pn	21 49 42.6	+1.3
KBG	Krutoberegovo	3.80	33	*e*P	Pn	21 49 43.9	+2.0
KBTR	Krutoberegovo	3.80	34	*e*P	Pn	21 49 42.5	+0.6
BKI	Bering	4.60	60	*e*S	Sn	21 50 41.3	-3.8
TIXI	Tiksi	22.76	336	P	P	21 53 34.8	-0.8
	0.5nm,0.5s,baz=93,slow=22,SNR=3.5						
	0.5nm,0.5s						
ILAR	Eielson Array	29.26	45	P	P	21 54 35.5	+1.3
	0.5nm,0.6s,baz=264,slow=7.0,SNR=6.3						
	0.5nm,0.6s						
H11N2	WAKE ISLAND Hy	33.90	167	T	T	22 31 16.0	
	baz=352,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	33.92	167	T	T	22 31 22.9	
	baz=352,slow=76,SNR=3.5						
H11N1	WAKE ISLAND Hy	33.92	167	T	T	22 31 22.4	
	baz=352,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	35.08	167	T	T	22 32 20.4	
	baz=352						
H11S3	WAKE ISLAND Hy	35.09	167	T	T	22 32 13.1	
	baz=352						
H11S2	WAKE ISLAND Hy	35.10	167	T	T	22 32 21.5	
	baz=352						
YKA	Yellowknife Ar	43.58	42	P	P	21 56 37.0	+1.7
	0.8nm,0.6s,baz=299,slow=7.1,SNR=10						
	0.8nm,0.6s						
MKAR	Makanchi Array	47.53	295	P	P	21 57 04.9	-1.7
	0.3nm,0.8s,baz=56,slow=8.4,SNR=1.2						
	0.3nm,0.8s						
PDAR	Pinedale Array	58.09	60	P	P	21 58 25.6	+1.1
	0.2nm,0.5s,baz=276,slow=2.1,SNR=3.9						
	0.2nm,0.5s						
FINES	FINESS Array B	59.81	336	P	P	21 58 35.2	-0.4
	0.6nm,0.5s,baz=28,slow=8.7,SNR=8.1						
	0.6nm,0.5s						
NOA	NORSAR Array B	63.31	343	P	P	21 58 57.0	-2.2
	0.2nm,0.4s,baz=14,slow=5.2,SNR=1.3						
	0.2nm,0.4s						
TXAR	Lajitas Array	71.23	66	P	P	21 59 50.1	+0.4
	0.3nm,0.4s,baz=303,slow=5.5,SNR=6.8						
	0.3nm,0.4s						
BRTR	Keskin Array B	76.16	320	P	P	22 00 17.7	-0.6
	0.2nm,0.5s,baz=28,slow=6.5,SNR=1.3						
	0.2nm,0.5s						
ESDC	Sonseca Array	86.39	347	P	P	22 01 11.1	-1.1
	0.3nm,0.6s,baz=11,slow=4.9,SNR=2.5						
	0.3nm,0.6s						

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*MAN **06** 21:57:44.3, 7°.97N×124°.20E, h1^{km}, mb4.4, ML3.3, MS3.0, Hypocentre not reviewed by the ISC*

*IDC **06** 21:57:45.0±1.7, 7°.78N×124°.05E, h0^{km}, mb3.3/3, mbtmp3.3/3, MS2.6/1, Error ellipse: s-maj=46.6km s-min=15.8km az=27.0*

ISC 06 21:57:44.9±0.8**, 7°.84N**±0°.03×**124°.23E**±0°.05**, h10^{km}, n15, σ1^{s}50**/21**, mb3.2**/3**, 3C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.61	178	⇑*i*P	Pn	21 57 58.4	-1.3
CTBH				*i* S	Sn	21 58 08.8	-0.8
CGP	Cagayan de Oro	0.77	37	⇑*e*P	Pg	21 57 57.9	-1.8
CGP				*i* S	Sg	21 58 07.3	-2.4
PAGZ	Pagadian	0.84	271	⇓*e*P	Pn	21 58 01.7	-1.2
PAGZ				*e*S	Sn	21 58 14.3	-0.9
DCPH	Dipolog City	1.14	310	⇑*e*P	Pn	21 58 06.8	-0.2
DCPH				*e*S	Sn	21 58 25.4	+2.7
KCP	Kidapawan	1.19	134	⇓*i*P	Pg	21 58 07.5	-0.2
KCP				*i* S	Sn	21 58 33.4	+9.5
DAV	Davao City (W)	1.54	120	Pg	Pg	21 58 15.0	+0.5
	86nm,0.3s,baz=279,slow=3.2,SNR=4.8						
DAV				Lg	Lg	21 58 38.3	
	78nm,0.3s,baz=253,slow=23,SNR=19						
BUTP	Butuan	1.78	51	⇓*e*P	Pb	21 58 17.4	-0.2
BUTP				*e*S	Sg	21 58 56.0	+14
SNPH	Sibulan	1.79	327	⇓*i*P	Pn	21 58 15.3	-0.7
SNPH				*i* S	Sn	21 58 37.4	-1.4
DDMP	Don Marcelino,	2.27	139	⇓*e*P	Pb	21 58 25.1	-0.9
MSLP	Maasin	2.36	15	⇓*e*P	Pn	21 58 24.4	+0.6
MSLP				*e*S	Sn	21 58 53.9	+1.0
GLSP	General Luna,	2.69	44	⇓*e*P	Pn	21 58 27.8	-0.5
GLSP				*e*S	Sn	21 59 01.9	+0.9
GUMO	Guam	21.06	73	LR	LR	22 12 08.4	
	comp=Z,14nm,18.3s,baz=90,slow=41						
WRA	Warramunga Arr	29.34	160	P	P	22 03 48.1	-0.1
	0.3nm,0.8s,baz=337,slow=10.0,SNR=1.0						
	0.3nm,0.8s						
ASAR	Alice Springs	32.71	163	P	P	22 04 21.3	+3.5
	0.2nm,0.6s,baz=338,slow=7.1,SNR=2.2						
	0.2nm,0.6s						
MKAR	Makanchi Array	52.78	325	P	P	22 07 01.6	+1.2
	0.4nm,0.9s,baz=111,slow=6.3,SNR=1.6						
	0.4nm,0.9s						

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*IDC **06** 22:06:28.5±1.9, 47°.59N×128°.68W, h0^{km}, mb3.6/3, mbtmp3.8/11, ML3.0/6, MS3.4/36, Error ellipse: s-maj=35.1km s-min=12.6km az=65.0*

*NEIC **06** 22:06:31.1±1.8, 47°.70N±0°.07×128°.6W±0°.1, h10^{km}±2^{km}, ML3.3/54, Error ellipse: s-maj=16.7km s-min=11.6km az=255.0*

ISC 06 22:06:29.7±1.4**, 47°.65N**±0°.07×**128°.8W**±0°.1**, h10^{km}, n90, σ0^{s}88**/57**, MS3.4**/28**, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZB	Mount Ozzard	2.56	58	Pn	Pn	22 07 09.9	-1.4
C03A	Quillayute Air	2.86	82	Pn	Pn	22 07 14.8	-0.5
C03A				IAML		22 08 44.2	
	comp=E,88nm,2.7s						
C03A				IAML		22 08 46.5	
	comp=N,88nm,1.8s						
HOLB	Holberg	3.03	8		Pn	22 07 17.5	-0.2
CBB	Campbell River	3.29	42	Pn	Pn	22 07 20.6	-0.6
CBB				IAML		22 08 07.5	
	comp=E,51nm,1.2s						
CLRS	Cowichan Lake	3.33	68	Pn	Pn	22 07 20.6	-1.1
NLWA	Neilton Lookou	3.34	93	Pn	Pn	22 07 20.8	-1.2
WISH	Wishkah	3.45	97		Pn	22 07 22.7	-0.7
WISH				IAML		22 08 32.1	
	comp=N,46nm,1.8s						
WISH				IAML		22 08 43.1	
	comp=E,48nm,3.2s						
B04A	Port Angeles	3.58	81	Pn	Pn	22 07 24.1	-1.1
PGC	Sidney	3.71	72		Pn	22 07 25.5	-1.5
E03A	Lebam	3.73	105		Pn	22 07 26.0	-1.2
E03A				IAML		22 08 20.4	
	comp=N,43nm,1.3s						
E03A				IAML		22 08 30.9	
	comp=E,38nm,1.7s						
HEBO	Mount Hebo	4.24	123	Pn	Pn	22 07 33.5	-0.9
E04D	Cinebar	4.38	102	Pn	Pn	22 07 35.9	-0.3
E04D				IAML		22 08 41.0	
	comp=N,47nm,0.1s						
E04D				IAML		22 10 12.9	
	comp=E,36nm,3.8s						
BBB	Bella Bella	4.56	5	Pn	Pn	22 07 38.6	-0.1
	comp=E,137nm,0.8s,baz=202,slow=12,SNR=39						
BBB				Sn	Sn	22 08 32.6	+0.9
	baz=215,slow=21						
BBB				LR	LR	22 09 12.1	
	comp=E,419nm,20.1s,baz=149,slow=36						
BBB	Bella Bella	4.56	5		Pn	22 07 38.9	+0.2
BBB				IAML		22 09 06.8	
	comp=E,21nm,2.9s						
BBB				IAML		22 10 32.6	
	comp=N,21nm,3.6s						
D05A	Enumclaw	4.64	93		Pn	22 07 40.5	+0.8
D05A				IAML		22 08 43.9	
	comp=E,25nm,3.0s						
D05A				IAML		22 09 06.5	
	comp=N,22nm,2.8s						
F04A	Amboy	4.70	109		Pn	22 07 41.1	+0.6
F04A				IAML		22 08 41.0	
	comp=N,35nm,1.7s						
F04A				IAML		22 09 51.1	
	comp=E,30nm,0.1s						
COR	Corvallis	4.89	127	Pn	Pn	22 07 42.2	-0.9
COR				IAML		22 08 46.5	
	comp=E,45nm,4.0s						
COR				IAML		22 09 04.5	
	comp=E,45nm,2.6s						
I02E	Swisshome, OR	4.94	134	Pn	Pn	22 07 43.2	-0.7
B06A	Marblemount	4.97	77		Pn	22 07 44.7	+0.5
H04D	Lebanon	5.24	124	Pn	Pn	22 07 47.9	-0.1
H04D				IAML		22 10 00.6	
	comp=E,37nm,2.9s						
BUCK	Buck Mountain	5.32	128	Pn	Pn	22 07 49.4	+0.2
BUCK				IAML		22 08 58.8	
	comp=N,34nm,3.6s						
F05D	White Salmon	5.33	107		Pn	22 07 49.5	+0.2
F05D				IAML		22 08 54.2	
	comp=E,27nm,0.5s						
LLLB	Lillooet	5.42	54	Pn	Pn	22 07 50.5	+0.1
LLLB				IAML		22 09 11.7	
	comp=E,13nm,1.4s						
LLLB				IAML		22 09 42.2	
	comp=N,13nm,1.8s						
HOOD	Mount Hood Mea	5.45	113		Pn	22 07 52.2	+1.2
H04A	Detroit Lake	5.46	120		Pn	22 07 52.1	+1.1
H04A				IAML		22 08 59.0	
	comp=N,29nm,1.0s						
H04A				IAML		22 09 50.3	
	comp=E,19nm,3.5s						
LTY	Liberty	5.52	91		Pn	22 07 52.6	+0.7
LTY				IAML		22 09 02.8	
	comp=N,14nm,1.7s						
LTY				IAML		22 09 11.3	
	comp=E,14nm,2.3s						
J01E	Myrtle Point	5.64	141	Pn	Pn	22 07 53.5	+0.1
B08A	Colville Reser	6.38	80	Pn	Pn	22 08 03.6	-0.1
J04D	Umpqua Nationa	6.44	131	Pn	Pn	22 08 05.0	+0.3
HAWA	Hanford	6.45	98	Pn	Pn	22 08 04.5	-0.1
HUMO	Hull Mountain	6.51	139		Pn	22 08 05.4	-0.1
PINE	Pine Mountain	6.71	122	Pn	Pn	22 08 08.4	0.0
C09A	Chrisman Ranch	7.09	85		Pn	22 08 12.3	-1.2
G08A	Pilot Rock	7.18	106	Pn	Pn	22 08 14.4	-0.4
YBH	Yreka Blue Hor	7.33	142	Pn	Pn	22 08 16.8	+0.1
	comp=E,0.4nm,0.3s,baz=184,slow=19,SNR=2.1						
	comp=E,6.5nm,1.1s						
E09A	Wood Farm, Sta	7.35	95		Pn	22 08 16.4	-0.6
I07A	Izee	7.39	115	Pn	Pn	22 08 17.3	-0.4
NEW	Newport	7.86	81	Pn	Pn	22 08 23.7	-0.2
	comp=E,0.5nm,0.3s,baz=272,slow=12,SNR=4.2						
NEW				LR	LR	22 11 33.7	
	comp=E,360nm,20.3s,baz=298,slow=39						
	comp=E,2.4nm,0.6s						
F10A	Beach Ranch, E	8.10	98		Pn	22 08 28.2	+0.7
BMO	Blue Mountains	8.43	105	Pn	Pn	22 08 32.0	+0.1
WVOR	Wild Horse Val	8.87	122	Pn	Pn	22 08 37.7	-0.3
PLID	Pearl Lake	9.20	101	Pn	Pn	22 08 43.0	+0.4
JTMT	Jette	9.78	84	Pn	Pn	22 08 49.7	-0.8
BEKR	Beckworth	9.87	139	Pn	Pn	22 08 54.1	+2.3
WALA	Waterton Lakes	10.00	76	Pn	Pn	22 08 55.4	+1.9
MSO	Missoula	10.13	89	Pn	Pn	22 08 54.8	-0.4
DLBC	Dease Lake	10.84	357	LR	LR	22 12 58.8	
	comp=E,357nm,18.7s,baz=148,slow=36						
BCYI	Bear Canyon	11.21	102	Pn	Pn	22 09 10.5	+0.4
MCMT	McKenzie Canyo	11.39	98	Pn	Pn	22 09 13.1	+0.5
ELK	Elko	11.91	120	Pn	Pn	22 09 20.6	+0.9
	comp=E,0.1nm,0.3s,baz=331,slow=8.5,SNR=5.6						
	comp=E,1.8nm,0.8s						
NVAR	Mina Array Bea	11.97	136	Pn	Pn	22 09 22.2	+1.7
	comp=E,0.1nm,0.3s,baz=314,slow=12,SNR=15						
	comp=E,3.6nm,1.0s						
PDAR	Pinedale Array	14.40	103	Pn	Pn	22 09 54.9	+1.3
	comp=E,3.9nm,1.1s,baz=303,slow=14,SNR=12						
PDAR				LR	LR	22 15 47.3	
	comp=E,152nm,18.6s,baz=312,slow=39						
PFO	Pinyon Flats O	16.82	142	LR	LR	22 17 07.5	
	comp=E,56nm,19.1s,baz=156,slow=38						
YKA	Yellowknife Ar	16.88	23	Pn	Pn	22 10 23.8	-2.0
	baz=211,slow=12,SNR=9.5						
YKA				LR	LR	22 17 27.3	
	comp=E,207nm,21.3s,baz=241,slow=39						
	comp=E,1.1nm,0.9s						
KDAK	Kodiak Island	17.54	314	LR	LR	22 15 07.7	
	comp=E,44nm,18.2s,baz=145,slow=30						
ILAR	Eielson Array	19.76	337	P	P	22 10 59.7	+0.2
	baz=152,slow=11,SNR=6.3						
ILAR				LR	LR	22 18 20.4	
	comp=E,30nm,19.3s,baz=314,slow=36						
	comp=E,1.0nm,1.0s						
INK	Inuvik	20.86	355	P	P	22 11 12.2	+0.9
	comp=E,1.7nm,1.0s,baz=149,slow=9.3,SNR=4.2						
INK				LR	LR	22 19 12.6	
	comp=E,130nm,21.3s,baz=182,slow=36						
	comp=E,1.7nm,1.0s						
ANMO	Albuquerque	20.94	119	P	P	22 11 13.5	+0.7
	comp=E,3.4nm,0.9s,baz=315,slow=15,SNR=5.9						
ANMO				LR	LR	22 19 24.7	
	comp=E,61nm,19.1s,baz=314,slow=37						
	comp=E,3.4nm,0.9s						
ULM	Lac du Bonnet	21.67	71	LR	LR	22 20 04.9	
	comp=E,97nm,20.8s,baz=266,slow=38						
TXAR	Lajitas Array	26.66	124	P	P	22 12 09.0	+0.3
	comp=E,2.3nm,1.1s,baz=311,slow=8.1,SNR=6.7						
TXAR				LR	LR	22 23 32.6	
	comp=E,100nm,18.1s,baz=306,slow=38						
	comp=E,2.3nm,1.1s						
LPIG	La Paz	27.72	141	LR	LR	22 21 03.8	
	comp=E,29nm,21.3s,baz=30,slow=32						
RES	Resolute Bay	30.75	17	LR	LR	22 25 34.9	
	comp=E,116nm,18.0s,baz=74,slow=37						
SADO	Sadowa	34.01	76	LR	LR	22 27 26.0	
	comp=E,148nm,18.6s,baz=174,slow=37						
TKL	Tuckaleechee C	35.23	93	LR	LR	22 27 29.0	
	comp=E,40nm,18.4s,baz=254,slow=36						
SFJD	Kangerlussuaq	42.95	34	LR	LR	22 31 57.9	
	comp=E,63nm,18.1s,baz=284,slow=36						
PETK	Petropavlovsk-	45.30	306	LR	LR	22 30 36.0	
	comp=E,40nm,21.3s,baz=97,slow=32						
MA2	Magadan	46.27	316	LR	LR	22 33 33.2	
	comp=E,26nm,18.9s,baz=114,slow=35						
JMIC	Jan Mayen	54.25	20	LR	LR	22 41 25.5	
	comp=E,38nm,18.9s,baz=230,slow=39						
BORG	Borgarnes	54.66	30	LR	LR	22 39 41.9	
	comp=E,60nm,18.8s,baz=318,slow=36						
H11N2	WAKE ISLAND Hy	58.45	265	T	T	23 19 28.4	
	baz=45,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	58.45	265	T	T	23 19 29.1	
	baz=45,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	58.46	265	T	T	23 19 29.6	
	baz=45,slow=75,SNR=27						
ASAJ	Asahikawa	58.48	302	LR	LR	22 40 57.9	
	comp=E,31nm,18.4s,baz=124,slow=35						
H11S1	WAKE ISLAND Hy	59.43	264	T	T	23 20 39.6	
	baz=45,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	59.44	264	T	T	23 20 38.3	
	baz=45,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	59.45	264	T	T	23 20 41.0	
	baz=45,slow=75,SNR=11						
KLR	Kul'dur	61.09	312	LR	LR	22 42 25.5	
	comp=E,18nm,18.9s,baz=49,slow=35						
MJAR	Matsushiro Arr	65.91	298	LR	LR	22 45 36.7	
	comp=E,9.9nm,19.4s,baz=62,slow=36						
NOA	NORSAR Array B	66.95	20	LR	LR	22 44 50.4	
	comp=E,17nm,21.2s,baz=20,slow=34						
EKA	Eskdalemuir Ar	67.69	30	LR	LR	22 45 55.4	
	comp=E,51nm,18.7s,baz=358,slow=35						
FINES	FINESS Array B	69.39	13	LR	LR	22 49 21.3	
	comp=E,24nm,19.1s,baz=355,slow=37						
JCJ	Chichijima	69.88	288	LR	LR	22 40 04.9	
	comp=E,42nm,21.5s,baz=114,slow=29						
KIRV	Kirov	74.12	1	LR	LR	22 53 01.7	
	comp=E,20nm,21.0s,baz=35,slow=38						
ZALV	Zalesovo Beam	74.85	340	LR	LR	22 52 32.3	
	comp=E,12nm,20.7s,baz=34,slow=37						
ARU	Arti	76.11	356	LR	LR	22 52 55.6	
	comp=E,19nm,20.2s,baz=350,slow=37						
GERES	GERESS Array B	78.53	24	LR	LR	22 53 49.7	
	comp=E,14nm,18.5s,baz=46,slow=36						
VRAC	Vranov	78.88	22	LR	LR	22 55 45.2	
	comp=E,18nm,20.1s,baz=310,slow=38						
DAVOX	Davos/Dischmat	79.27	28	LR	LR	22 54 18.8	
	comp=E,44nm,18.1s,baz=287,slow=36						
AKTO	Aktyubinsk	82.12	356	LR	LR	22 56 36.4	
	comp=E,13nm,21.6s,baz=14,slow=37						
MLR	Muntele Rosu	84.63	18	LR	LR	22 56 50.9	
	comp=E,35nm,18.1s,baz=332,slow=36						

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*IDC **06** 22:37:15.9±9.8, 20°.18S×178°.62E, h481^{km}±99^{km}, mb3.3/3, mbtmp4.2/4, Error ellipse: s-maj=267.5km s-min=107.5km az=86.0*

*NEIC **06** 22:37:16.2±2.0, 20°.4S±0°.2×178°.58E±0°.08, h476^{km}±11^{km}, mb4.1/19, Error ellipse: s-maj=24.3km s-min=8.5km az=160.0*

ISC 06 22:37:14.2±0.8**, 20°.4S**±0°.1×**178°.6E**±0°.1**, h450^{km}, n28, σ1^{s}42**/28**, mb4.0**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.69	349	P	P	22 38 22.3	+3.1
	43nm,0.7s,baz=159,slow=7.1,SNR=29						
RAO	Raoul Island	9.38	161	P	P	22 39 26.1	+1.6
MARNC	Mare, Loyalty	9.93	262	P	P	22 39 32.7	+2.1
PINNC	Pines Island,	10.61	256	P	P	22 39 37.5	-0.5
LIFNC	LIFOU	10.64	266	P	P	22 39 38.5	+0.1
EIDS	Eidsvold	25.80	254	P	P	22 42 10.2	+2.3
EIDS				IAmb	IAmb	22 42 14.5	
	comp=Z,4.5nm,1.1s						
ARMA	Armidale	26.26	242	P	P	22 42 13.8	+1.8
TOO	Toolangi	33.41	232	P	P	22 43 12.2	-1.8
TOO				IAmb	IAmb	22 43 25.6	
	comp=Z,5.8nm,1.1s						
COEN	Coen	34.38	275	P	P	22 43 22.5	0.0
COEN				IAmb	IAmb	22 43 32.5	
	comp=Z,8.0nm,1.1s						
TAU	Tasmania Unive	34.51	222	P	P	22 43 23.0	-0.1
STKA	Stephens Creek	34.97	243	P	P	22 43 27.6	+0.4
	comp=Z,0.7nm,0.4s,baz=80,slow=13,SNR=3.2						
	comp=Z,0.7nm,0.4s						
STKA	Stephens Creek	34.97	243	P	P	22 43 27.6	+0.4
BBOO	Buckleboo	39.74	243	P	P	22 44 05.4	-1.1
BBOO				IAmb	IAmb	22 44 12.4	
	comp=Z,7.9nm,1.1s						
WR0	Warramunga Arr	41.26	263	P	P	22 44 18.8	-0.1
WR0				IAmb	IAmb	22 44 34.6	
	comp=Z,4.2nm,1.1s						
WB0	Warramunga Arr	41.42	263	P	P	22 44 20.4	+0.1
WB0				IAmb	IAmb	22 44 20.7	
	comp=Z,5.2nm,0.5s						
AS31	Alice Springs	41.43	257	P	P	22 44 20.6	+0.3
ASAR	Alice Springs	41.43	257	P	P	22 44 20.4	0.0
	comp=Z,4.0nm,0.7s,baz=95,slow=7.6,SNR=46						
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	41.43	257	P	P	22 44 20.0	-0.3
WB2	Warramunga Arr	41.44	263	P	P	22 44 20.2	-0.2
WB2				IAmb	IAmb	22 44 37.4	
	comp=Z,4.6nm,1.1s						
WRA	Warramunga Arr	41.45	263	P	P	22 44 20.0	-0.4
	comp=Z,2.2nm,0.3s,baz=97,slow=7.8,SNR=95						
	comp=Z,2.2nm,0.3s						
WRA	Warramunga Arr	41.45	263	P	P	22 44 20.2	-0.2
MTN	Manton Dam	45.96	272	P	P	22 44 54.6	-1.2
MTN				IAmb	IAmb	22 44 56.6	
	comp=Z,17nm,1.1s						
FORT	Forrest	46.40	247	P	P	22 44 56.4	-2.5
FORT				IAmb	IAmb	22 44 59.2	
	comp=Z,14nm,0.9s						
KNRA	Kununurra	47.47	267	P	P	22 45 05.1	-2.1
KNRA				IAmb	IAmb	22 45 24.6	
	comp=Z,7.1nm,0.9s						
FITZ	Fitzroy Crossi	49.87	263	P	P	22 45 23.4	-1.7
FITZ				IAmb	IAmb	22 45 24.0	
	comp=Z,4.1nm,0.9s						
AKUT	Akutan	75.43	9	P	P	22 48 10.6	+0.2
109C	Camp Elliot, M	81.08	50	P	P	22 48 40.6	-0.9
KSXB	Camp Six Broad	81.59	40	P	P	22 48 42.2	-1.8

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*ARE **06** 23:10:54±1.9, 8°.80S±0°.06×74°.59W±0°.07, h163^{km}±4^{km}, Error ellipse: s-maj=9.5km s-min=7.3km az=119.0*

*IDC **06** 23:10:56.1±0.4, 8°.92S×74°.44W, h148^{km}±3^{km}, mb4.2/19, mbtmp4.6/24, MS3.4/4, Error ellipse: s-maj=10.8km s-min=8.8km az=89.0*

*NEIC **06** 23:10:56.8±1.3, 8°.92S±0°.06×74°.51W±0°.06, h147^{km}±5^{km}, mb4.7/296, ML5.3(ARE), Error ellipse: s-maj=9.5km s-min=7.8km az=123.0*

*VAO **06** 23:10:59.0±0.3, 8°.85S×74°.21W, h159^{km}±1^{km}, mb4.8*

ISC 06 23:10:56.3±0.3**, 8°.87S**±0°.04×**74°.49W**±0°.05**, h149^{km}**±2^{km}**, h150^{km}:pP-P, n592, σ0^{s}90**/611**, mb4.7**/162**, 12D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.10	57	*e*P	Pn	23 11 33.5	+0.9
NNA	Nana	3.87	217	P	Pn	23 11 54.0	-0.8
	285nm,0.3s,baz=25,slow=6.0,SNR=204						
NNA				S	Sn	23 12 38.8	-1.6
	3µm,0.4s,baz=228,slow=6.6,SNR=15						
NNA	Nana	3.87	217	Pn	Pn	23 11 54.1	-0.8
NNA				Sn	Sn	23 12 38.5	-1.9
ATAH	Atahualpa	4.23	294	P	Pn	23 11 59.4	-0.7
	125nm,0.3s,baz=103,slow=4.6,SNR=369						
ATAH				S	Sn	23 12 47.0	-2.5
	915nm,0.7s,baz=346,slow=12,SNR=21						
TBTG	Tabatinga, AM	6.51	45	*e*P	Pn	23 12 29.5	-0.3
TBTG	Tabatinga, AM	6.51	45	*e*P	Pn	23 12 29.7	-0.1
ETMB	Extrema	8.22	97	*e*P	Pn	23 12 50.6	-2.1
LPAZ	La Paz	9.64	141	P	Pn	23 13 11.0	-1.1
	1.1nm,0.3s,baz=341,slow=9.8,SNR=2.7						
LPAZ	La Paz	9.64	141	Pn	Pn	23 13 11.6	-0.5
LPAZ	La Paz	9.64	141	*e*P	Pn	23 13 24.6	+12
LPAZ	La Paz	9.64	141	*e*P	Pn	23 13 12.7	+0.6
GCUF	Volcan Galeras	10.43	344	*e*P	Pn	23 13 20.9	-1.6
PB16	IPOC Station P	10.58	153		Pn	23 13 24.4	-0.1
CRUC	La Cruz	10.65	347	*e*P	Pn	23 13 29.9	+4.4
MACC	Macarena, Meta	10.96	3	*e*P	Pn	23 13 26.1	-3.0
SOTA	Rioblanco	11.13	349	*e*P	Pn	23 13 31.7	-0.1
PCON	Cinco Dias	11.29	350	*e*P	Pn	23 13 33.4	-0.5
BETC	Betania	11.51	355	*e*P	P	23 13 50.6	+6.6
ORTC	Ortega, Tolima	12.72	357	*e*P	Pn	23 13 49.2	-2.8
YOTC	Yotoco, Valle	12.90	352	*e*P	Pn	23 13 56.3	+1.8
VILC	Villavicencio,	12.92	4	*e*P	P	23 14 09.5	+10
ANIL	Santa Ana	13.30	356	*e*P	P	23 14 03.0	-1.1
CHIC	Chingaza	13.43	3	*e*P	Pn	23 14 00.4	-1.2
PB07	IPOC Station P	13.53	161	P	Pn	23 14 01.4	-1.1
ROSC	El Rosal	13.62	1	P	Pn	23 14 02.9	-1.1
	4.7nm,0.5s,baz=130,slow=23,SNR=1.2						
ROSC	El Rosal	13.62	1		Pn	23 14 04.9	+1.0
PLMC	San Jos del P	13.80	352	*e*P	P	23 14 07.9	-1.6
PB09	IPOC Station P	13.81	159		Pn	23 14 04.9	-1.2
PB06	IPOC Station P	14.54	162	Pn	Pn	23 14 14.2	-1.1
VILB	Vilhena	14.61	107	*e*P	Pn	23 14 16.1	+0.1
LVC	Limon Verde	14.68	159	P	P	23 14 20.3	+0.9
	4.7nm,0.6s,baz=318,slow=5.8,SNR=8.0						
LVC				S	Sn	23 17 04.0	+3.7
	2.1nm,0.7s,baz=307,slow=22,SNR=1.2						
LVC	Limon Verde	14.68	159		Pn	23 14 14.7	-2.5
LVC	Limon Verde	14.68	159	*e*P	P	23 14 20.5	+1.1
CBOC	Ciudad Bolivar	14.71	354	*e*P	P	23 14 20.4	+0.6
RUSC	La Rusia	14.73	6	*e*P	P	23 14 21.0	+0.8
MACA	Manacapuru-AM	14.85	68	*e*P	Pn	23 14 17.2	-1.8
PB15	IPOC Station P	15.05	162	Pn	Pn	23 14 20.6	-1.0
AF01	San Pedro de A	15.26	157	Pn	Pn	23 14 22.9	-1.4
AF01				IAmb	IAmb	23 14 39.3	
	comp=Z,19nm,0.6s						
PTBC	PUERTO BERRIO,	15.31	0	*e*P	P	23 14 26.4	+0.3
BARC	Barichara	15.41	5	*e*P	P	23 14 27.1	-0.4
PAMC	Pamplona, Colo	16.20	6	*e*P	P	23 14 38.4	+1.9
ZARC	Zaragoza, Cauc	16.26	359	P	P	23 14 36.7	+0.1
ZARC				IAmb	IAmb	23 14 39.6	
	comp=Z,21nm,0.5s						
ZARC	Zaragoza, Cauc	16.26	359	*e*P	P	23 14 37.4	+0.8
PTLB	Pontes e Lacer	16.36	115	*e*P	Pn	23 14 37.2	-0.4
UREC	San Jos de Ur	16.54	356	*e*P	P	23 14 38.5	-1.3
OCAC	Ocana	17.04	4	P	P	23 14 44.4	-1.0
SMLC	San Martn de	17.56	1	*e*P	P	23 14 50.9	0.0
AC01	Pan de Azucar	17.58	168	P	P	23 14 49.5	-1.5
PDRB	Porto dos Gac	17.69	100	*e*P	P	23 14 51.7	-0.7
PAYG	Puerto Ayora	17.71	297	P	P	23 14 52.2	-0.4
BOAV	Boa Vista	17.86	52	*e*P	Pn	23 14 55.2	-0.5
SDV	Santo Domingo	18.05	12	P	P	23 14 55.9	-0.7
	comp=Z,19nm,0.4s,baz=185,slow=13,SNR=19						
SDV				S	S	23 18 15.8	-0.2
	comp=Z,4.5nm,0.4s,baz=307,slow=10,SNR=1.6						
SDV	Santo Domingo	18.05	12		P	23 14 57.3	+0.7
SDV				IAmb	IAmb	23 15 01.2	
	comp=Z,19nm,0.6s						
SDV	Santo Domingo	18.05	12	*e*P	Pn	23 14 58.3	+0.2
SDV	Santo Domingo	18.05	12	*e*P	Pn	23 14 58.1	0.0
CLDB	Colider	18.52	98	*e*P	P	23 15 01.1	-0.5
AC02	Maricunga	18.58	165	P	P	23 15 02.3	-0.2
SJCC	San Jacinto, C	18.66	358		P	23 15 04.0	+1.0
SJCC	San Jacinto, C	18.66	358	*e*P	P	23 15 03.9	+0.9
BCIP	Isla Barro Col	18.69	343	*e*P	P	23 14 52.1	-11
AC06	Mina Casimiro	18.80	169		P	23 15 02.9	-1.5

BAUV	El Baul	18.82	20	P	P	23 15 05.1	+0.3
ITTB	Itaituba	19.16	78	eP	P	23 15 08.8	+0.3
CDITO	Canoas	19.23	334	P	P	23 15 09.3	+0.1
CDITO				IAmb	IAmb	23 15 15.7	
	comp=Z,35nm,1.1s						
SALV	Santo Antonio	19.63	113	eP	P	23 15 13.0	-0.5
CRJC	Cerrejon, Guaj	19.82	5	eP	P	23 15 11.6	-4.0
DRK0	Durika	20.01	334	P	P	23 15 18.9	+1.1
DRK0				IAmb	IAmb	23 15 25.6	
	comp=Z,30nm,0.9s						
SRBA	San Rafael, Bu	20.04	334	P	P	23 15 18.1	+0.1
URIC	Uribia, Colomb	20.59	7	IAmb	IAmb	23 15 23.7	
	comp=Z,39nm,0.8s						
BIRV	Birongo	20.89	23	P	P	23 15 27.6	+0.6
PP1B	Ponte de Pedra	20.95	116	eP	P	23 15 27.6	-0.1
MALB	Monte Alegre	21.30	72	eP	P	23 15 31.2	-0.2
MALB				epP	pP	23 15 58.4	+0.4
CO01	Juntas del Tor	21.40	169	P	P	23 15 31.6	-1.0
GO04	Tololo Observa	21.47	171	P	P	23 15 33.2	-0.2
AQDB	Aquidauana	21.50	125	P	P	23 15 32.8	-0.7
AQDB				IAmb	IAmb	23 15 36.5	
	comp=Z,28nm,0.6s						
AQDB	Aquidauana	21.50	125	eP	P	23 15 32.8	-0.7
SNDB	Serra Nova Dou	23.02	100	eP	P	23 15 48.1	-0.5
SNDB				epP	pP	23 16 16.0	-0.8
ACON	Acoyapa	23.27	333	P	P	23 15 51.2	+0.5
ACON				IAmb	IAmb	23 15 54.3	
	comp=Z,21nm,1.0s						
CPUP	Villa Florida	23.80	139	P	P	23 15 54.3	-1.3
	comp=Z,10.0nm,1.0s,baz=322,slow=9.8,SNR=17						
	comp=Z,10.0nm,1.0s						
CPUP	Villa Florida	23.80	139	P	P	23 15 54.5	-1.0
CPUP	Villa Florida	23.80	139	eP	P	23 15 54.6	-1.0
CPUP				epP	pP	23 16 26.6	+1.5
MCPB	Macapa, AP	23.89	70	eP	P	23 15 56.0	-0.5
MCPB				epP	pP	23 16 26.6	+0.5
GRGR	Grenville	24.46	32	P	P	23 16 01.8	+0.3
PRPB	Parauapebas	24.61	85	eP	P	23 16 02.1	-1.0
PRPB				epP	pP	23 16 33.4	-0.4
TRCB	Terra Rica	25.12	126	P	P	23 16 06.7	-0.9
TRCB				IAmb	IAmb	23 16 07.7	
	comp=Z,25nm,0.7s						
TRCB	Terra Rica	25.12	126	eP	P	23 16 06.8	-0.9
SVB	Belmont	25.63	31	P	P	23 16 13.3	+1.1
PCMB	Pacaembu	25.69	122	eP	P	23 16 12.0	-0.8
ITRB	Iturama	25.71	117	eP	P	23 16 12.1	-0.9
MDP	Montagnes des	25.83	58	P	P	23 16 12.6	-1.5
	comp=Z,4.5nm,0.6s,baz=232,slow=19,SNR=1.5						
	comp=Z,4.5nm,0.6s						
PEXB	Peixe	25.95	99	eP	P	23 16 14.9	-0.2
PEXB				epP	pP	23 16 47.4	+1.0
FRBT	Francisco Belt	26.52	133	eP	P	23 16 20.6	+0.4
FRBT				epP	pP	23 16 53.4	+1.9
PTGB	Pitanga	26.56	129	eP	P	23 16 20.1	-0.5
SMTB	Santa Maria do	26.58	92	eP	P	23 16 20.2	-0.6
SMTB				epP	pP	23 16 53.3	+1.2
ITQB	Itaqui	26.62	143	P	P	23 16 21.1	+0.2
ITQB				IAmb	IAmb	23 16 22.5	
	comp=Z,15nm,0.6s						
ITQB	Itaqui	26.62	143	eP	P	23 16 20.9	-0.1
ITQB				epP	pP	23 16 53.4	+1.1
BDFB	Brasilia	26.71	107	P	P	23 16 21.3	-0.9
	comp=Z,5.1nm,0.4s,baz=278,slow=11,SNR=10						
	comp=Z,5.1nm,0.4s						
BDFB	Brasilia	26.71	107	P	P	23 16 22.1	-0.1
MPOM	Morne Pois Mar	26.82	30	P	P	23 16 20.9	-2.0
FDF	Fort de France	26.92	30	P	P	23 16 21.5	-2.3
SVN	Savane Anatole	27.01	29	P	P	23 16 23.1	-1.5
TMAB	Tom-Au,PA,Br	27.03	78	eP	P	23 16 24.5	-0.4
TMAB				epP	pP	23 16 56.4	+0.1
IPMB	Ipameri, GO	27.09	112	eP	P	23 16 24.5	-0.9
IPMB				epP	pP	23 16 57.9	+1.1
MLPR	Magueyes Islan	27.66	15	P	P	23 16 31.6	+1.2
CRPR	Cabo Rojo, PR	27.68	15	P	P	23 16 30.6	+0.1
CRPR				IAmb	IAmb	23 16 35.7	
	comp=Z,12nm,0.7s						
ICMP	Isla Caja de M	27.72	16	P	P	23 16 31.6	+0.7
BB19B	Bebedouro	27.80	119	eP	P	23 16 30.7	-1.1
OBIP	Obispado Ponce	27.85	16	P	P	23 16 32.8	+0.8
SDDR	Presa de Saban	27.86	6	P	P	23 16 34.1	+2.0
SDDR				IAmb	IAmb	23 16 35.3	
	comp=Z,12nm,0.9s						
FRTB	Fartura	27.87	124	eP	P	23 16 31.7	-0.6
CELP	Cerrillos	27.89	16	P	P	23 16 33.0	+0.6
ITAB	Concordia	27.94	134	P	P	23 16 32.7	-0.1
ITAB				IAmb	IAmb	23 16 36.8	
	comp=Z,15nm,0.8s						
ITAB	Concordia	27.94	134	eP	P	23 16 32.6	-0.2
PDPR	Patillas Dam,	27.99	17	P	P	23 16 33.7	+0.4
SJG	San Juan	28.05	17	P	P	23 16 33.5	-0.3
	comp=Z,24nm,0.6s,baz=165,slow=7.2,SNR=8.6						
	comp=Z,24nm,0.6s						
SJG	San Juan	28.05	17	P	P	23 16 33.9	+0.2
AOPR	Arecibo Observ	28.10	16	P	P	23 16 34.8	+0.5
HUMP	Col San Antoni	28.16	18	P	P	23 16 35.5	+0.7
MTP	Monte Pirata	28.21	18	P	P	23 16 35.0	-0.3
MTP				IAmb	IAmb	23 16 40.4	
	comp=Z,27nm,1.1s						
GCPR	Guaynabo City	28.25	17	P	P	23 16 35.6	+0.1
GCPR				IAmb	IAmb	23 16 37.9	
	comp=Z,18nm,0.7s						
CUPR	Culebra, Puert	28.49	19	P	P	23 16 37.2	-0.5
STVI	Saint Thomas	28.64	19	P	P	23 16 38.7	-0.3
CPSB	Cacapava Do Su	29.08	140	eP	P	23 16 43.7	+0.8
RCLB	Rio Claro- Sao	29.18	121	eP	P	23 16 43.1	-0.8
ANWB	Willy Bob	29.20	25	P	P	23 16 42.2	-1.8
TIJ01	Guaruva-PR	29.25	127	eP	P	23 16 45.8	+1.1
SDBA	SAO DESIDERIO	29.28	100	eP	P	23 16 44.0	-0.9
VAO	Valinhos	29.89	121	eP	P	23 16 49.3	-0.9
PLTB	Pedras Altas	29.92	143	P	P	23 16 49.4	-0.9
PLTB				IAmb	IAmb	23 16 51.0	
	comp=Z,8.3nm,0.8s						
PLTB	Pedras Altas	29.92	143	eP	P	23 16 50.1	-0.2
LC01	Cunco	29.99	176	P	P	23 16 51.5	+0.7
JANB	Januaria	30.13	105	eP	P	23 16 51.3	-1.2
JANB				epP	pP	23 17 24.6	+0.4
PET01	Itanhaem-SP	30.17	124	eP	P	23 16 51.1	-1.4
CCIG	Comitan	30.49	325	P	P	23 16 54.0	-1.6
CCIG				IAmb	IAmb	23 17 03.9	
	comp=Z,10nm,1.1s						
ROSB	Rosrio	30.77	81	eP	P	23 16 56.8	-1.2
ROSB				epP	pP	23 17 29.9	+0.2
DIAM	Diamantina, MG	31.34	111	eP	P	23 17 02.6	-0.6
ESAR	Angra dos Reis	32.05	120	eP	P	23 17 09.0	-0.1
SOR	Soroa	32.55	345	P	P	23 17 12.7	-0.7
SOR				IAmb	IAmb	23 17 18.4	
	comp=Z,17nm,1.0s						
NBPS	Pedro II - PI	33.11	84	eP	P	23 17 17.6	-0.9
NBPS				epP	pP	23 17 51.2	+0.7
SJMB	Sao Joao De Ma	33.73	110	eP	P	23 17 26.7	+2.9
NBPN	Ponto Novo - B	33.83	96	eP	P	23 17 24.1	-0.7
NBPN				epP	pP	23 17 56.8	0.0
NAN01	Guarapari, ES	34.55	109	eP	P	23 17 30.1	-0.8
GDU01	Guandu, BA	34.55	101	eP	P	23 17 30.3	-0.6
GDU01				epP	pP	23 18 03.7	+0.7
RIB01	Linhares ES	34.59	111	eP	P	23 17 29.7	-1.5
ALF01	Guarapari-ES	34.60	114	eP	P	23 17 30.7	-0.5
CMC01	Camacan, BA	34.76	104	eP	P	23 17 32.6	-0.1
NBMA	Muriti-CE	35.39	90	eP	P	23 17 37.5	-0.7
NBMA				epP	pP	23 18 11.2	+0.8
NBLA	Lagarto - SE	36.20	96	eP	P	23 17 44.2	-0.9
NBLA				epP	pP	23 18 17.2	-0.1
NBCL	Cascavel-CE	36.24	85	eP	P	23 17 45.4	0.0
NBAN	Anadia - AL	37.71	94	eP	P	23 17 56.7	-1.1
NBRF	Rio Formoso -	38.89	93	eP	P	23 18 07.1	-0.5
451A	Vernon	40.72	345	P	P	23 18 23.2	+0.8
NHSC	New Hope	42.09	353	P	P	23 18 35.3	+1.7
NHSC	New Hope	42.09	353	P	P	23 18 34.0	+0.4
	baz=172						
Y60A	Bolivia	42.78	355	P	P	23 18 39.4	+0.2
GOGA	Godfrey	42.91	349	P	P	23 18 40.8	+0.6
	baz=167						
Y57A	Sumter	43.02	353	P	P	23 18 41.6	+0.5
Y57A				IAmb	IAmb	23 18 42.7	
	comp=Z,24nm,0.8s						
LRAL	Lakeview Retre	43.34	345	P	P	23 18 42.7	-1.0
	baz=162						
BIRD	Birdtown, Kers	43.65	353	IAmb	IAmb	23 18 47.5	
	comp=Z,9.0nm,0.7s						
Y49A	Blount Mountai	43.98	346	P	P	23 18 48.1	-0.7
CNNC	Cliffs of the	43.99	356	P	P	23 18 49.7	+0.9
	baz=175						
W57A	Gilead	44.09	354	P	P	23 18 50.4	+0.8
833A	Chaparral WMA,	44.12	328	P	P	23 18 51.0	+1.0
	baz=144						
KMSC	Kings Mountain	44.25	352	P	P	23 18 51.6	+0.6
KMSC	Kings Mountain	44.25	352	P	P	23 18 51.2	+0.3
	baz=170						
FPAL	Fort Paine	44.44	347	IAmb	IAmb	23 18 52.9	
	comp=Z,10nm,0.8s						
V58A	Windy Hill, Pi	44.64	355	IAmb	IAmb	23 18 55.3	
	comp=Z,19nm,0.7s						
NATX	Nacogdoches	44.77	335	P	P	23 18 56.0	+0.9
	baz=151						
V55A	Taylorsville	44.93	352	P	P	23 18 56.9	+0.6
W50A	Signal Mountai	45.01	347	P	P	23 18 56.8	-0.2
W50A				IAmb	IAmb	23 18 57.6	
	comp=Z,15nm,0.7s						
SWET	Sewanee	45.16	347	IAmb	IAmb	23 18 58.5	
	comp=Z,10nm,0.7s						
435B	Jarrell	45.23	332	P	P	23 18 59.7	+0.9
	baz=147						
V52A	Sevierville	45.29	350	P	P	23 18 58.8	-0.4
V52A				IAmb	IAmb	23 18 59.9	
	comp=Z,12nm,0.8s						
U56A	King	45.32	353	P	P	23 19 00.5	+1.1
U56A				IAmb	IAmb	23 19 01.4	
	comp=Z,20nm,0.8s						
Z41A	Richland Creek	45.38	338	P	P	23 18 59.7	-0.2
	baz=154						
V51A	Loudon	45.40	349	P	P	23 18 59.9	-0.1
V51A				IAmb	IAmb	23 19 00.6	
	comp=Z,12nm,0.8s						
OXF	Oxford	45.40	343	P	P	23 18 59.5	-0.6
	baz=159						
237A	Washetta, Mont	45.46	334	P	P	23 19 02.2	+1.6
T59A	Double "B" Far	45.69	357	IAmb	IAmb	23 19 03.9	
	comp=Z,21nm,0.8s						
T57A	Hurt	45.84	355	P	P	23 19 04.1	+0.6
V48A	Smith Brothers	45.87	346	IAmb	IAmb	23 19 04.0	
	comp=Z,20nm,0.8s						
TZTN	Tazewell	45.97	350	P	P	23 19 04.3	-0.2
TZTN				IAmb	IAmb	23 19 05.1	
	comp=Z,8.6nm,0.7s						
TZTN	Tazewell	45.97	350	P	P	23 19 04.1	-0.4
	baz=168						
JCT	Junction City	46.06	329	P	P	23 19 05.5	+0.1
	baz=144						
WHTX	Lake Whitney,	46.18	333	P	P	23 19 06.5	+0.2
	baz=148						
Z38A	Mt. Pleasant	46.22	336	P	P	23 19 05.7	-0.8
JSRW	J. Sargeant Re	46.43	356	P	P	23 19 08.2	+0.2
WVT	Waverly	46.49	345	P	P	23 19 07.3	-1.2
WVT	Waverly	46.49	345	P	P	23 19 07.2	-1.4
	baz=162						
X40A	Basin Creek Fa	46.49	339	P	P	23 19 08.4	-0.2
	baz=155						
UALR	University of	46.58	340	P	P	23 19 08.0	-1.3
UALR				IAmb	IAmb	23 19 10.0	
	comp=Z,21nm,0.8s						
T50A	Nancy	46.67	349	P	P	23 19 09.2	-0.7
R58B	Mineral	46.70	356	P	P	23 19 11.3	+1.2
R58B				IAmb	IAmb	23 19 11.7	
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	46.81	338	P	P	23 19 10.7	-0.4
	baz=154						
CBN	Corbin Frederi	46.91	357	P	P	23 19 11.7	0.0
	baz=176						
W41B	Gary Mavity, V	46.91	340	IAmb	IAmb	23 19 12.5	
	comp=Z,12nm,0.9s						
W41B	Gary Mavity, V	46.91	340	P	P	23 19 11.4	-0.4
	baz=156,SNR=8.6						
WHAR	Wooly Hollow	47.03	340	P	P	23 19 12.8	+0.1
WHAR				IAmb	IAmb	23 19 13.4	
	comp=Z,18nm,0.9s						
R55A	Marlinton	47.20	354	P	P	23 19 15.1	+0.9
R55A				IAmb	IAmb	23 19 16.2	
	comp=Z,11nm,0.8s						
TX31	Lajitas Ar. Si	47.26	325	P	P	23 19 15.9	+1.1
TX31				IAmb	IAmb	23 19 16.6	
	comp=Z,18nm,0.7s						
TX32	Lajitas Array	47.26	325	P	P	23 19 15.9	+1.2
TXAR	Lajitas Array	47.26	325	P	P	23 19 15.8	+1.1
	comp=Z,5.9nm,0.6s,baz=149,slow=8.7,SNR=49						
TXAR				pP	pP	23 19 49.9	+1.4
	comp=Z,1.4nm,0.5s,baz=152,slow=9.0,SNR=3.8						
TXAR				PcP	PcP	23 20 44.5	+0.9
	comp=Z,0.6nm,0.5s,baz=140,slow=7.1,SNR=2.2						
	comp=Z,5.9nm,0.6s						
LCAR	Lake Charles	47.38	342	P	P	23 19 15.3	-0.1
W39A	Magazine	47.47	338	P	P	23 19 17.1	+0.9
W39A				IAmb	IAmb	23 19 18.3	
	comp=Z,18nm,1.1s						
W39A	Magazine	47.47	338	P	P	23 19 16.3	+0.2
	baz=154,SNR=7.3						
FCAR	Ozark Folk Cen	47.52	341	P	P	23 19 15.7	-0.9
FCAR				IAmb	IAmb	23 19 16.6	
	comp=Z,9.5nm,0.8s						
X37A	Clayton	47.53	337		P	23 19 17.2	+0.5
X37A				IAmb	IAmb	23 19 18.7	
	comp=Z,22nm,0.9s						
ABTX	Abilene, Hawle	47.73	331	P	P	23 19 19.7	+1.4
ABTX				IAmb	IAmb	23 19 20.3	
	comp=Z,17nm,0.7s						
ABTX	Abilene, Hawle	47.73	331	P	P	23 19 19.4	+1.2
	baz=146,SNR=6.7						
R50A	Paris	47.80	350	P	P	23 19 18.5	-0.1
R50A				IAmb	IAmb	23 19 19.2	
	comp=Z,11nm,0.8s						
Q56A	Snyder Ridge,	47.86	355	P	P	23 19 20.4	+1.3
Q56A				IAmb	IAmb	23 19 21.3	
	comp=Z,19nm,0.8s						
Q54A	Coxs Mills	47.97	353	P	P	23 19 20.4	+0.5
Q54A				IAmb	IAmb	23 19 21.1	
	comp=Z,17nm,0.8s						
SDMD	Soldier's Deli	48.08	358	P	P	23 19 20.3	-0.6
SDMD				IAmb	IAmb	23 19 22.4	
	comp=Z,13nm,1.1s						
U40A	Yellville	48.19	340	IAmb	IAmb	23 19 22.4	
	comp=Z,13nm,0.8s						
U40A	Yellville	48.19	340	P	P	23 19 21.0	-0.7
	baz=155,SNR=9.7						
S44A	Carbondale	48.34	344	P	P	23 19 22.3	-0.5
S44A				IAmb	IAmb	23 19 22.8	
	comp=Z,12nm,0.6s						
P53A	Whipple	48.53	353	IAmb	IAmb	23 19 25.4	
	comp=Z,16nm,0.8s						
X34A	Smith Ranch, M	48.56	334	P	P	23 19 25.3	+0.7
WUPA	West Chester U	48.56	359	P	P	23 19 24.7	+0.2
MVL	Millersville	48.65	358	P	P	23 19 26.2	+1.0
P52A	Corning	48.77	352	IAmb	IAmb	23 19 26.6	
	comp=Z,16nm,0.8s						
P52A	Corning	48.77	352	P	P	23 19 25.6	-0.5
	baz=170,SNR=5.1						
TUL1	Leonard	48.85	337	P	P	23 19 27.7	+0.9
TUL1				IAmb	IAmb	23 19 28.2	
	comp=Z,16nm,0.8s						
TUL1	Leonard	48.85	337	P	P	23 19 27.1	+0.3
	baz=152						
FVM	French Village	48.93	343	P	P	23 19 26.9	-0.5
P49A	Miami Univ. Ec	49.08	350	P	P	23 19 27.5	-1.0
	baz=167						
WMOK	Wichita Mounta	49.09	333	P	P	23 19 29.9	+1.2
	baz=148						
O52A	Adamsville	49.21	353	P	P	23 19 29.5	+0.1
O52A				IAmb	IAmb	23 19 30.0	
	comp=Z,17nm,0.9s						
CCM	Cathedral Cave	49.23	343	P	P	23 19 29.6	0.0
CCM				IAmb	IAmb	23 19 31.6	
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	49.23	343	P	P	23 19 29.0	-0.6
	baz=158						
O53A	New Philadelph	49.27	353	P	P	23 19 28.8	-1.1
	baz=171						
SSPA	Standing Stone	49.36	357	P	P	23 19 31.6	+1.0
SSPA				IAmb	IAmb	23 19 31.8	
	comp=Z,6.8nm,0.8s						
SSPA	Standing Stone	49.36	357	P	P	23 19 31.1	+0.6
	baz=176						
ACSO	Alum Creek Sta	49.48	351	P	P	23 19 31.6	+0.1
ACSO				IAmb	IAmb	23 19 31.9	
	comp=Z,13nm,0.8s						
ACSO	Alum Creek Sta	49.48	351	P	P	23 19 30.9	-0.6
	baz=169						
N58A	Sunbury	49.50	358	P	P	23 19 32.3	+0.7
S39A	Bolivar	49.56	340	P	P	23 19 31.4	-0.7
S39A				IAmb	IAmb	23 19 32.5	
	comp=Z,15nm,0.8s						
P46A	Rosedale	49.66	347	IAmb	IAmb	23 19 32.7	
	comp=Z,16nm,0.8s						
ODNJ	Ogdensburg	49.70	360	P	P	23 19 32.8	-0.4
R40A	Maddies Statio	49.76	342	IAmb	IAmb	23 19 33.7	
	comp=Z,8.6nm,0.8s						
O48B	Farmland	49.87	349	P	P	23 19 33.3	-1.1
	baz=166						
MNTX	Cornudas Mount	50.00	325	P	P	23 19 35.8	+0.1
	baz=139,SNR=6.5						
T35A	Sooner Cattle	50.02	337	IAmb	IAmb	23 19 37.7	
	comp=Z,6.7nm,0.7s						
M57A	Sunshine Farm,	50.02	357	P	P	23 19 36.5	+1.0
M57A				IAmb	IAmb	23 19 37.6	
	comp=Z,19nm,0.8s						
M55A	Ridgway	50.24	356	P	P	23 19 37.8	+0.5
M55A				IAmb	IAmb	23 19 48.9	
	comp=Z,9.7nm,0.8s						
N49A	Columbus Grove	50.34	350	IAmb	IAmb	23 19 38.1	
	comp=Z,21nm,1.1s						
MSTX	Muleshoe	50.35	329	P	P	23 19 38.7	+0.4
	baz=143						
SFIN	Lafayette	50.37	347	P	P	23 19 36.8	-1.4
	baz=164						
M53A	WI Miller and	50.38	354	P	P	23 19 37.5	-0.7
	baz=172						
L59A	Walton	50.81	359	P	P	23 19 42.3	+0.8
L59A				IAmb	IAmb	23 19 51.0	
	comp=Z,11nm,1.1s						
P40A	Paris	50.84	342	IAmb	IAmb	23 19 41.8	
	comp=Z,11nm,0.8s						
BINY	Binghamton	50.84	359	P	P	23 19 42.8	+1.1
BINY	Binghamton	50.84	359	P	P	23 19 42.6	+0.9
	baz=178,SNR=8.8						
ERPA	Erie	50.99	355	P	P	23 19 42.5	-0.3
	baz=173						
WVNY	West Valley, N	51.16	356	P	P	23 19 44.5	+0.4
WVNY				IAmb	IAmb	23 19 46.0	
	comp=Z,16nm,0.8s						
HRV	Adam Dziewonsk	51.20	3	P	P	23 19 44.7	+0.4
HRV				IAmb	IAmb	23 19 45.4	
	comp=Z,24nm,1.0s						
HRV	Adam Dziewonsk	51.20	3	P	P	23 19 44.4	+0.1
	baz=184						
K62A	Royalston	51.33	2	P	P	23 19 44.9	-0.4
K62A				IAmb	IAmb	23 19 49.3	
	comp=Z,17nm,1.1s						
P38A	Dawn	51.38	341	IAmb	IAmb	23 19 46.0	
	comp=Z,12nm,0.8s						
K57A	Scipio Center	51.38	358	P	P	23 19 46.5	+0.8
J56A	Wolcott	51.94	358	P	P	23 19 50.0	+0.2
KSU1	Kansas State U	51.97	338	P	P	23 19 49.9	-0.2
KSU1				IAmb	IAmb	23 19 51.0	
	comp=Z,18nm,0.8s						
KSU1	Kansas State U	51.97	338	P	P	23 19 50.0	-0.1
	baz=152						
J55A	Hilton	51.97	357	P	P	23 19 50.5	+0.5
J55A				IAmb	IAmb	23 19 51.3	
	comp=Z,17nm,0.7s						
J58A	Remsen	51.98	359	P	P	23 19 51.0	+0.8
J58A				IAmb	IAmb	23 19 51.3	
	comp=Z,9.4nm,0.7s						
121A	Cookes Peak, D	51.99	324	P	P	23 19 51.5	+0.9
121A	Cookes Peak, D	51.99	324	P	P	23 19 52.0	+1.3
	baz=137						
ACCN	Adirondack Com	52.01	1	P	P	23 19 50.9	+0.6
319A	Douglas	52.06	322	P	P	23 19 52.2	+1.0
319A				IAmb	IAmb	23 19 53.5	
	comp=Z,13nm,0.8s						
J59A	Piesco	52.08	360	IAmb	IAmb	23 19 52.3	
	comp=Z,18nm,0.9s						
NCB	Newcomb	52.59	0	P	P	23 19 55.5	+0.9
PECO	Prince Edward	52.60	358	P	P	23 19 55.2	+0.5
PECO				IAmb	IAmb	23 19 56.0	
	comp=Z,13nm,0.7s						
I63A	Otisfield	52.79	4	P	P	23 19 57.0	+0.9
LBNH	Lisbon	52.91	2	P	P	23 19 57.4	+0.4
LBNH				IAmb	IAmb	23 20 05.8	
	comp=Z,15nm,1.1s						
LBNH	Lisbon	52.91	2	P	P	23 19 57.4	+0.4
	baz=183						
CBKS	Cedar Bluff	52.94	335	P	P	23 19 57.5	+0.1
	baz=148						
L40A	Anamosa	52.95	344	P	P	23 19 57.1	-0.2
L40A				IAmb	IAmb	23 19 57.3	
	comp=Z,9.7nm,0.7s						
ANMO	Albuquerque	53.03	327	P	P	23 19 59.3	+1.0
ANMO	Albuquerque	53.03	327	P	P	23 19 59.1	+0.8
	baz=139						
DELO	Deloro Mine	53.21	357	P	P	23 19 59.6	+0.4
LONY	Lake Ozonia	53.24	360	P	P	23 20 00.1	+0.7
LONY				IAmb	IAmb	23 20 00.8	
	comp=Z,10nm,0.8s						
LONY	Lake Ozonia	53.24	360	P	P	23 19 59.5	+0.1
	baz=180						
H62A	Milan	53.28	3	P	P	23 20 00.4	+0.7
FRNY	Flat Rock	53.46	1	P	P	23 20 02.0	+1.0
FRNY				IAmb	IAmb	23 20 02.7	
	comp=Z,12nm,0.7s						
SADO	Sadowa	53.55	356	P	P	23 20 00.9	-0.7
SADO				IAmb	IAmb	23 20 01.5	
	comp=Z,7.6nm,0.7s						
TUC	Tucson	53.63	322	P	P	23 20 03.1	+0.5
TUC	Tucson	53.63	322	P	P	23 20 03.7	+1.1
	baz=134						
T25A	Trinidad	53.68	330	P	P	23 20 03.5	+0.5
T25A				IAmb	IAmb	23 20 05.2	
	comp=Z,12nm,0.9s						
T25A	Trinidad	53.68	330	P	P	23 20 03.9	+0.9
	baz=142,SNR=5.3						
G62A	West of Eustis	53.95	3	P	P	23 20 05.7	+1.1
G62A					pP	23 20 39.3	+0.2
PKME	Peaks-Kenny Pk	54.09	5	P	P	23 20 06.0	+0.5
PKME				pP	pP	23 20 40.3	+0.2
PKME	Peaks-Kenny Pk	54.09	5	P	P	23 20 06.0	+0.5
	baz=186						
I42A	Draeger Farm,	54.12	347	P	P	23 20 05.1	-0.7
I42A				IAmb	IAmb	23 20 05.7	
	comp=Z,9.3nm,1.1s						
MNTQ	Montreal, Queb	54.12	1	P	P	23 20 06.9	+1.2
GGN	Saint George	54.18	7	P	P	23 20 06.8	+0.6
GGN				pP	pP	23 20 41.3	+0.6
G65A	Princeton	54.18	6	P	P	23 20 06.9	+0.8
G65A				IAmb	IAmb	23 20 17.0	
	comp=Z,8.3nm,1.1s						
G65A				pP	pP	23 20 41.1	+0.3
KSCO	Kaye Shedlock'	54.35	333	P	P	23 20 08.2	+0.5
	baz=145						
HOPE	Hope Point	54.50	154	P	P	23 20 08.9	+0.5
F63A	Nahmakanta, Br	54.54	5	P	P	23 20 09.5	+0.7
F63A				pP	pP	23 20 43.5	+0.1
BGNE	Belgrade	54.55	338	P	P	23 20 09.3	+0.3
BGNE	Belgrade	54.55	338	P	P	23 20 08.7	-0.4
	baz=151						
G45A	Suttons Bay	54.60	350	P	P	23 20 09.9	+0.7
214A	Organ Pipe Nat	54.67	320	P	P	23 20 10.9	+0.8
214A				IAmb	IAmb	23 20 12.4	
	comp=Z,13nm,0.9s						
214A	Organ Pipe Nat	54.67	320	P	P	23 20 11.0	+1.0
	baz=132						
X18A	Snowflake	54.68	324	P	P	23 20 11.3	+1.0
X18A				IAmb	IAmb	23 20 12.4	
	comp=Z,5.4nm,0.7s						
SDCO	Great Sand Dun	54.69	330	IAmb	IAmb	23 20 12.4	
	comp=Z,7.5nm,0.8s						
SDCO	Great Sand Dun	54.69	330	P	P	23 20 11.2	+0.8
	baz=142,SNR=13						
F64A	Sherman	54.76	5	P	P	23 20 11.4	+1.0
F64A				IAmb	IAmb	23 20 18.7	
	comp=Z,12nm,1.1s						
F64A				pP	pP	23 20 45.5	+0.5
TRQ	Mont Tremblant	54.84	360	P	P	23 20 11.5	+0.5
TRQ				pP	pP	23 20 46.0	+0.2
W18A	Petrified Fore	54.98	325	P	P	23 20 13.6	+1.2
	baz=136						
LMN	Caledonia Moun	55.16	8	P	P	23 20 13.3	0.0
LMN				IAmb	IAmb	23 20 32.3	
	comp=Z,8.2nm,1.1s						
LMN				pP	pP	23 20 48.1	+0.1
S22A	4UR Ranch, Cre	55.36	329	P	P	23 20 15.6	+0.4
	baz=140						
Q24A	Divide	55.47	331	P	P	23 20 16.6	+0.5
	baz=142						
E46A	Sault Ste Mari	55.68	352	P	P	23 20 15.8	-1.2
E46A				IAmb	IAmb	23 20 16.5	
	comp=Z,8.8nm,0.7s						

G40A	Rib Lake	55.72	347	P	P	23 20 16.7	-0.5
MVCO	Mesa Verde	55.82	327	P	P	23 20 19.2	+0.7
	baz=138						
D62A	Allapoint, All	55.91	4	P	P	23 20 19.4	+0.8
D62A				IAmb	IAmb	23 20 35.5	
	comp=Z,9.7nm,1.1s						
D62A				pP	pP	23 20 54.0	+0.6
LATQ	La Tuque	56.02	1	P	P	23 20 20.2	+0.8
ECSD	EROS Data Cent	56.08	341	P	P	23 20 19.2	-0.7
	baz=153						
E43A	Lone Tree Farm	56.12	350	P	P	23 20 18.9	-1.2
E43A				IAmb	IAmb	23 20 19.7	
	comp=Z,11nm,0.8s						
WUAZ	Wupatki	56.21	324	P	P	23 20 22.5	+1.3
	baz=135						
COWI	Conover	56.27	348	P	P	23 20 20.5	-0.7
LMQ	La Malbaie	56.29	3	P	P	23 20 21.6	+0.3
LMQ				pP	pP	23 20 56.3	+0.2
PMSA	Palmer Station	56.30	175	LR	LR	23 42 32.2	
	comp=Z,42nm,18.2s,baz=193,slow=34						
SPMN	Marine on St.	56.31	345	P	P	23 20 20.6	-0.9
	baz=158						
ISCO	Idaho Springs	56.35	331	P	P	23 20 23.1	+0.8
ISCO	Idaho Springs	56.35	331	P	P	23 20 22.5	+0.2
	baz=142						
BATG	Bathurst New B	56.40	7	P	P	23 20 22.4	+0.3
BATG				pP	pP	23 20 57.2	+0.3
SMCO	Snowmass	56.53	330	P	P	23 20 23.9	+0.2
PV01	Paradox Valley	56.55	328	P	P	23 20 23.6	0.0
PV01				IAmb	IAmb	23 20 25.7	
	comp=Z,9.0nm,1.0s						
PV15	Paradox Valley	56.66	328	P	P	23 20 24.8	+0.4
PV15				IAmb	IAmb	23 20 26.6	
	comp=Z,17nm,1.2s						
PV13	Radium Mtn., P	56.70	328	P	P	23 20 24.6	0.0
PV13				IAmb	IAmb	23 20 26.5	
	comp=Z,11nm,1.0s						
PV05	Paradox Valley	56.78	328	P	P	23 20 25.3	0.0
PV05				IAmb	IAmb	23 20 26.8	
	comp=Z,7.0nm,1.0s						
VLDQ	Val d'Or	56.79	358	P	P	23 20 25.4	+0.6
VLDQ				IAmb	IAmb	23 20 26.3	
	comp=Z,12nm,1.1s						
VLDQ				pP	pP	23 21 00.0	+0.4
PV07	Paradox Valley	56.81	328	P	P	23 20 25.6	+0.1
PDMCI	Parker Dam,Lak	57.05	321	P	P	23 20 27.7	+0.8
	baz=132						
F36A	Milaca	57.10	344	P	P	23 20 26.5	-0.5
F36A				IAmb	IAmb	23 20 27.3	
	comp=Z,6.4nm,0.8s						
F36A					pP	23 21 01.3	-0.6
SWSC	Sam W. Stewart	57.23	319	P	P	23 20 26.5	-1.7
	baz=129						
IKP	In-Ko-Pah, Jac	57.25	318	P	P	23 20 29.3	+0.8
	baz=129						
U15A	North Rim	57.37	324	P	P	23 20 29.8	+0.3
U15A				IAmb	IAmb	23 20 32.0	
	comp=Z,5.3nm,0.9s						
W13A	Hualapai Mount	57.42	322	P	P	23 20 29.7	-0.1
W13A				pP	pP	23 21 05.0	+0.3
BC3	Big Chuckawall	57.46	320	P	P	23 20 31.5	+1.5
	baz=130						
PHWY	Pilot Hill	57.47	333	P	P	23 20 30.4	+0.3
IRM	Iron Mountain	57.58	320	P	P	23 20 32.1	+1.4
	baz=130,SNR=7.4						
MONP2	Monument Peak	57.61	318	P	P	23 20 32.5	+1.3
	baz=129						
O20A	White River Ci	57.89	330	P	P	23 20 33.1	+0.2
O20A				IAmb	IAmb	23 20 34.8	
	comp=Z,5.8nm,0.8s						
O20A	White River Ci	57.89	330	P	P	23 20 34.5	+1.5
	baz=140						
BELC	Belle Mtn. Jos	58.03	320	P	P	23 20 35.9	+2.0
	baz=130						
TPFO	Pinon Flats	58.07	319	P	P	23 20 36.1	+1.8
	baz=129						
PFO	Pinyon Flats O	58.08	319	P	P	23 20 35.2	+0.9
	baz=129						
SRU	San Rafael Swe	58.30	327	P	P	23 20 36.4	+0.5
GMRC	Granite Mounta	58.31	320	P	P	23 20 37.3	+1.4
	baz=130						
EYMN	Ely	58.54	347	P	P	23 20 36.1	-0.9
	baz=160						
P17A	Butcher Ranch,	58.68	328	P	P	23 20 38.0	-0.4
P17A				IAmb	IAmb	23 20 40.1	
	comp=Z,8.0nm,1.0s						
HEC	Hector,Ludlow	58.77	320	P	P	23 20 41.3	+2.3
	baz=130						
MSU	Marysvale	58.77	326	P	P	23 20 39.2	+0.1
RDMU	Red Mountain	58.88	329	P	P	23 20 40.1	+0.3
RDMU				IAmb	IAmb	23 20 41.8	
	comp=Z,8.7nm,0.8s						
TCRU	Three Creeks R	58.99	326	P	P	23 20 41.1	+0.5
TCRU				IAmb	IAmb	23 20 56.7	
	comp=Z,7.5nm,0.5s						
K22A	Casper	59.03	333	P	P	23 20 41.2	+0.4
K22A				IAmb	IAmb	23 20 43.0	
	comp=Z,5.4nm,0.8s						
K22A	Casper	59.03	333	P	P	23 20 41.6	+0.9
	baz=142						
SHPR	Sheep Range	59.13	322	P	P	23 20 42.1	+0.5
RSSD	Black Hills	59.14	336	P	P	23 20 42.0	+0.4
RSSD				IAmb	IAmb	23 20 44.1	
	comp=Z,7.3nm,0.6s						
RSSD	Black Hills	59.14	336	P	P	23 20 42.9	+1.4
	baz=146						
GSC	Goldstone, Bar	59.37	320	P	P	23 20 43.6	+0.4
GSC	Goldstone, Bar	59.37	320	P	P	23 20 44.8	+1.6
	baz=130						
B35A	Bob, Littlefor	59.46	345	P	P	23 20 43.1	-0.3
B35A				IAmb	IAmb	23 20 43.2	
	comp=Z,5.4nm,0.7s						
PSUT	Pine Spring	59.73	325	P	P	23 20 46.2	+0.5
DRLN	Deer Lake	59.77	13	P	P	23 20 45.5	+0.1
GWY	Greenwater Val	59.84	321	P	P	23 20 46.3	-0.2
JLU	Jordanelle	59.87	328	P	P	23 20 47.6	+1.0
JLU				IAmb	IAmb	23 20 48.6	
	comp=Z,6.4nm,0.9s						
E28A	Huff	59.95	339	P	P	23 20 47.4	+0.6
AGMN	Agassiz Nation	59.97	344	P	P	23 20 46.4	-0.5
AGMN				IAmb	IAmb	23 20 46.9	
	comp=Z,5.5nm,0.6s						
TPNV	Topopah Spring	60.08	322	P	P	23 20 48.9	+0.8
TPNV				IAmb	IAmb	23 20 51.1	
	comp=Z,5.8nm,0.8s						
TPNV	Topopah Spring	60.08	322	P	P	23 20 49.4	+1.3
	baz=131,SNR=10						
FURC	Furnace Creek,	60.14	321	P	P	23 20 49.9	+1.6
	baz=130						
MPMC	Manual Prospec	60.27	320	P	P	23 20 49.9	+0.4
	baz=129						
DUG	Dugway, Tooele	60.31	327	P	P	23 20 50.1	+0.6
DUG				IAmb	IAmb	23 20 51.8	
	comp=Z,6.8nm,0.8s						
DUG	Dugway, Tooele	60.31	327	P	P	23 20 50.7	+1.2
	baz=135,SNR=6.9						
PD31	Pinedale Array	60.53	331	P	P	23 20 51.3	+0.2
PDAR	Pinedale Array	60.53	331	P	P	23 20 50.9	-0.2
	comp=Z,2.1nm,0.7s,baz=142,slow=7.5,SNR=14						
PDAR				pP	pP	23 21 27.0	+0.6
	comp=Z,0.9nm,0.7s,baz=134,slow=6.4,SNR=3.1						
	comp=Z,2.1nm,0.7s						
R11A	Troy Canyon, C	60.60	324	P	P	23 20 52.0	+0.4
R11A	Troy Canyon, C	60.60	324	P	P	23 20 52.8	+1.2
	baz=132,SNR=7.6						
ISA	Isabella, Lake	60.65	320	P	P	23 20 52.0	+0.2
ISA	Isabella, Lake	60.65	320	P	P	23 20 53.4	+1.5
	baz=128						
HWUT	Hardware Ranch	60.66	329	P	P	23 20 52.0	+0.1
HWUT				IAmb	IAmb	23 20 53.3	
	comp=Z,10.0nm,0.8s						
CWC	Cottonwood Cre	60.88	320	P	P	23 20 54.9	+1.3
	baz=129						
BGU	Big Grassy Mou	60.94	327	P	P	23 20 53.6	-0.2
AHID	Auburn Hatcher	61.28	330	P	P	23 20 55.9	-0.2
AHID				IAmb	IAmb	23 20 57.2	
	comp=Z,5.4nm,0.6s						
TPH	Tonopah	61.39	322	P	P	23 20 57.5	+0.5
MBO	M'Bour	61.56	68	P	P	23 20 57.7	-0.6
REDW	Red Top Meadow	61.60	331	P	P	23 20 58.9	+0.6
SNOW	Snow King Moun	61.63	331	P	P	23 20 59.1	+0.6
SNOW				IAmb	IAmb	23 21 02.6	
	comp=Z,4.6nm,0.7s						
LOHW	Long Hollow	61.67	331	P	P	23 20 59.1	+0.3
TPAW	Teton Pass	61.75	331	P	P	23 20 59.4	+0.1
ULM	Lac du Bonnet	61.75	345	P	P	23 20 58.4	-0.5
	comp=Z,5.9nm,0.8s,baz=151,slow=10,SNR=3.9						
	comp=Z,5.9nm,0.8s						
Q09A	Carvers	61.86	323	P	P	23 20 59.8	-0.3
Q09A				IAmb	IAmb	23 21 02.5	
	comp=Z,9.8nm,0.9s						
ELK	Elko	62.02	326	P	P	23 21 01.5	+0.4
FLWY	Flagg Ranch	62.07	331	P	P	23 21 01.9	+0.5
FLWY				IAmb	IAmb	23 21 03.4	
	comp=Z,9.9nm,0.8s						
OMMB	Old Mammoth Mi	62.19	321	P	P	23 21 03.1	+0.6
OMMB				IAmb	IAmb	23 21 04.6	
	comp=Z,5.9nm,0.9s						
RLMT	Red Lodge	62.20	333	P	P	23 21 02.9	+0.6
RLMT	Red Lodge	62.20	333	P	P	23 21 03.1	+0.9
	baz=140						
YPP	Pitchstone Pla	62.26	331	P	P	23 21 02.6	-0.1
NVAR	Mina Array Bea	62.27	322	P	P	23 21 03.1	+0.2
	comp=Z,2.0nm,0.8s,baz=150,slow=5.8,SNR=9.0						
NVAR				pP	pP	23 21 39.0	+0.6
	comp=Z,1.8nm,0.9s,baz=130,slow=8.5,SNR=2.6						
	comp=Z,2.0nm,0.8s						
YMR	Madison River	62.63	331	P	P	23 21 06.2	+1.0
YMR				IAmb	IAmb	23 21 07.7	
	comp=Z,12nm,1.0s						
YHH	Holmes Hill	62.67	332	P	P	23 21 05.9	+0.4
YHH				IAmb	IAmb	23 21 07.9	
	comp=Z,6.1nm,0.8s						
DGMT	Dagmar	62.81	338	P	P	23 21 07.1	+1.1
	baz=147						
YHL	Hebgen Lake	62.87	331	P	P	23 21 07.2	+0.4
BMN	Battle Mountai	62.93	324	P	P	23 21 07.3	+0.2
QLMT	Earthquake Lak	62.98	331	P	P	23 21 08.8	+1.4
YERR	Yerington	63.19	322	P	P	23 21 08.9	0.0
YERR				IAmb	IAmb	23 21 11.1	
	comp=Z,6.3nm,1.1s						
HLID	Hailey	63.53	329	P	P	23 21 11.6	+0.5
HLID	Hailey	63.53	329	P	P	23 21 11.9	+0.9
	baz=135						
BOZ	Bozeman (W)	63.64	332	P	P	23 21 11.7	0.0
BOZ				IAmb	IAmb	23 21 13.4	
	comp=Z,4.9nm,0.8s						
BOZ	Bozeman (W)	63.64	332	P	P	23 21 12.5	+0.8
	baz=138,SNR=6.9						
MCMT	McKenzie Canyo	63.66	330	P	P	23 21 12.2	+0.3
PAHR	Pah Rah Range	63.73	323	P	P	23 21 13.1	+0.7
SCHQ	Schefferville	63.79	5	P	P	23 21 12.0	-0.3
	comp=Z,17nm,1.2s,baz=207,slow=5.0,SNR=9.1						
SCHQ				pP	PcP	23 21 47.4	+0.5
	comp=Z,5.6nm,0.6s,baz=191,slow=3.7,SNR=4.9						
SCHQ				LR	LR	23 47 32.1	
	comp=Z,25nm,20.5s,baz=92,slow=34						
	comp=Z,17nm,1.2s						
SCHQ	Schefferville	63.79	5	P	P	23 21 12.8	+0.6
SCHQ				IAmb	IAmb	23 21 13.5	
	comp=Z,11nm,1.1s						
MFID	Camas Ranch	64.17	328	P	P	23 21 15.6	+0.4
MFID				IAmb	IAmb	23 21 17.3	
	comp=Z,13nm,0.8s						
LRM	Limekiln Ridge	64.19	331	P	P	23 21 16.3	+0.9
BEKR	Beckworth	64.42	322	P	P	23 21 17.6	+0.7
ORV	Oroville	64.93	321	P	P	23 21 20.6	+0.6
ORV				IAmb	IAmb	23 21 22.5	
	comp=Z,8.4nm,0.9s						
PLID	Pearl Lake	65.41	329	P	P	23 21 22.8	-0.5
MSO	Missoula	65.63	331	IAmb	IAmb	23 21 26.6	
	comp=Z,9.7nm,0.8s						
MSO					pP	23 22 01.2	+0.8
MSO	Missoula	65.63	331	P	P	23 21 25.6	+1.0
	baz=136,SNR=8.3						
MOD	Modoc Plateau	65.65	324	P	P	23 21 25.4	+0.6
JTMT	Jette	66.46	332	P	P	23 21 29.9	+0.1
I07A	Izee	66.59	326	P	P	23 21 31.7	+1.0
I07A				IAmb	IAmb	23 21 32.9	
	comp=Z,8.8nm,0.8s						
I07A					pP	23 22 07.4	+0.7
F10A	Beach Ranch, E	66.65	329	P	P	23 21 32.1	+1.1
F10A				IAmb	IAmb	23 21 33.3	
	comp=Z,5.1nm,0.8s						
L04D	Klamath Falls	67.02	323	P	P	23 21 34.3	+0.8
	baz=128						
J05D	Fort Rock, OR	67.06	325	P	P	23 21 35.1	+1.4
	baz=129						
PINE	Pine Mountain	67.21	325	P	P	23 21 35.6	+0.9
PINE				IAmb	IAmb	23 21 37.7	
	comp=Z,15nm,1.1s						
WALA	Waterton Lakes	67.25	333	IAmb	IAmb	23 21 36.2	
	comp=Z,6.2nm,0.7s						
L02F	Cave Junction	67.72	323	P	P	23 21 39.4	+1.7
	baz=126						
I05D	Terrebonne, OR	67.77	326	P	P	23 21 39.5	+1.4
	baz=129						
K02D	Willamette Mer	68.11	323	P	P	23 21 41.4	+1.1
	baz=126						
NEW	Newport	68.17	331	P	P	23 21 40.5	+0.1
NEW	Newport	68.17	331	P	P	23 21 40.9	+0.4
	baz=134						
I03D	Drain, OR	68.52	324	P	P	23 21 43.7	+1.0
	baz=127						
EDM	Edmonton	70.11	336	P	P	23 21 52.3	+0.1
EDM					pP	23 22 28.7	+0.2
B05A	Bryant	70.66	328	P	P	23 21 56.1	+0.4
	baz=129						
D03D	Eldon	70.72	327	P	P	23 21 57.2	+1.2
	baz=128						
LIC	Lamto	70.84	80	*e*P	P	23 21 57.4	-0.1
	comp=Z,14nm,0.7s						
TIC	Toumodi	70.93	80	*e*P	P	23 21 57.5	-0.6
DBIC	Dimbokro	71.10	80	P	P	23 21 58.6	-0.4
	comp=Z,26nm,0.6s,baz=266,slow=5.9,SNR=36						
	comp=Z,26nm,0.6s						
DBIC	Dimbokro	71.10	80	P	P	23 21 58.7	-0.4
KIC	Kosan Boka	71.15	80	*e*P	P	23 21 58.9	-0.5
	comp=Z,52nm,0.7s						
KOWA	Kowa	73.63	72	P	P	23 22 13.7	-0.3
KOWA				IAmb	IAmb	23 22 14.9	
	comp=Z,17nm,0.8s						
SNAA	Sanae	75.89	162	P	P	23 22 26.4	+0.3
	comp=Z,3.4nm,0.5s,baz=275,slow=9.4,SNR=13						
SNAA				pP	pP	23 23 02.5	-0.4
	comp=Z,5.9nm,0.9s,baz=278,slow=5.0,SNR=5.6						
	comp=Z,3.4nm,0.5s						
SNAA	Sanae	75.89	162	P	P	23 22 26.7	+0.6
SNAA				pP	pP	23 23 03.5	+0.6
PFVI	Vila Bisbo	76.50	48	*e*P	P	23 22 31.8	+1.7
PFVI	Vila Bisbo	76.50	48	P	P	23 22 31.1	+1.1
PNCL	Nicolau / Gran	77.09	48	*e*P	P	23 22 34.5	+1.2
PCVE	Castro Verde	77.27	48	*e*P	P	23 22 35.4	+1.0
PVAQ	Vaqueiros	77.42	49	P	P	23 22 36.2	+0.9
YKA	Yellowknife Ar	77.57	342	P	P	23 22 35.3	-0.2
	comp=Z,4.3nm,0.5s,baz=142,slow=5.9,SNR=126						
YKA				pP	pP	23 23 12.5	+0.1
	comp=Z,3.9nm,0.4s,baz=139,slow=6.1,SNR=9.3						
	comp=Z,4.3nm,0.5s						
YKA	Yellowknife Ar	77.57	342	P	P	23 22 35.1	-0.4
YKA				pP	pP	23 23 12.8	+0.4
EVO	Evora	77.62	47	*e*P	P	23 22 37.3	+1.0
PMTG	Montargil	77.67	47	*e*P	P	23 22 37.1	+0.5
DY2G	Dye2	77.92	11	*i* P	P	23 22 36.2	-1.4
DY2G				IAmb	IAmb	23 22 38.2	
	comp=Z,52nm,1.5s						
PESTR	Estremoz	78.06	47	*e*P	P	23 22 40.5	+1.8
MDT	Midelt	78.25	54	LR	LR	23 56 02.6	
	comp=Z,21nm,18.4s,baz=318,slow=35						
PCBR	Castelo Branco	78.50	46	*e*P	P	23 22 41.5	+0.4
PVIS	Viseu	78.53	45	*e*P	P	23 22 41.9	+0.6
MTE	Manteigas	78.66	46	P	P	23 22 42.3	+0.2
TORD	Torodi Ar. Bea	78.74	75	P	P	23 22 42.4	-0.6
	comp=Z,10nm,0.6s,baz=257,slow=4.1,SNR=84						
TORD				pP	pP	23 23 18.8	-1.2
	comp=Z,2.1nm,0.8s,baz=273,slow=4.8,SNR=2.4						
	comp=Z,10nm,0.6s						
MVO	Moncorvo	79.31	45	*e*P	P	23 22 46.5	+0.9
ILULI	Ilulissat	79.59	8	*i* P	P	23 22 45.9	-0.4
ILULI				IAmb	IAmb	23 22 46.4	
	comp=Z,9.4nm,0.8s						
PBRG	Braganca	79.74	45	*e*P	P	23 22 48.3	+0.4
PAB	San Pablo	80.65	47	P	P	23 22 54.1	+1.2
PAB				IAmb	IAmb	23 22 54.6	
	comp=Z,8.0nm,0.8s						
ESDC	Sonseca Array	80.98	47	P	P	23 22 54.6	0.0
	comp=Z,4.6nm,0.9s,baz=254,slow=4.3,SNR=18						
ESDC				pP	pP	23 23 31.1	-0.6
	comp=Z,2.0nm,0.9s,baz=256,slow=6.0,SNR=4.4						
	comp=Z,4.6nm,0.9s						
QSPA	South Pole Qui	81.25	180	P	P	23 22 56.7	+1.1
ICESG	Greenland Ices	81.48	12	*i* P	P	23 22 55.6	-1.3
ICESG				IAmb	IAmb	23 22 57.4	
	comp=Z,37nm,1.4s						
TGTN	Hyland Airport	81.64	337	P	P	23 22 59.1	+1.6
	baz=126						
RAR	Rarotonga	82.48	250	P	P	23 23 02.7	-0.1
MMPY	Sheldon Lake,	83.42	337	P	P	23 23 07.9	+1.1
	baz=124						
SUMG	Summit	84.57	10	P	P	23 23 13.4	+0.7
SUMG	Summit	84.57	10	*i* P	P	23 23 13.5	+0.7
SUMG				IAmb	IAmb	23 23 14.2	
	comp=Z,22nm,0.9s						
N31M	Braeburn, Yuko	84.64	335	P	P	23 23 14.1	+1.1
	baz=120						
M30M	Minto, Yukon	85.59	336	P	P	23 23 18.3	+0.7
	baz=119						
YUK4	Talbot Arm	85.79	334	P	P	23 23 19.9	+1.1
	baz=117						
YUK3	Moose Creek	86.76	334	P	P	23 23 24.3	+0.7
	baz=115						
J29M	Klondike Camp	87.04	337	P	P	23 23 25.4	+0.7
	baz=118						
A36M	Sachs Harbour	87.20	346	P	P	23 23 25.5	+0.3
A36M	Sachs Harbour	87.20	346	P	P	23 23 25.3	+0.1
	baz=130						
BVCY	Beaver Creek	87.20	335	P	P	23 23 26.5	+1.0
	baz=115						
INK	Inuvik	87.32	341	IAmb	IAmb	23 23 27.8	
	comp=Z,5.8nm,0.8s						
INK	Inuvik	87.32	341	P	P	23 23 26.3	+0.4
	baz=122,SNR=8.0						
I29M	Ogilvie Camp,	87.49	338	P	P	23 23 27.0	+0.2
	baz=118						
M27K	Edge Creek, AK	87.61	334	P	P	23 23 28.4	+0.8
	baz=114						
L27K	Beaver Creek,	87.88	335	P	P	23 23 29.7	+1.0
L27K	Beaver Creek,	87.88	335	P	P	23 23 29.7	+1.0
	baz=114						
M26K	Nabesna, AK	88.11	334	P	P	23 23 30.7	+0.9
	baz=113						
VNDA	Vanda	88.26	190	P	P	23 23 31.1	+0.7
	comp=Z,0.6nm,0.8s,baz=238,slow=1.7,SNR=3.9						
VNDA				pP	pP	23 24 08.8	+0.6
	comp=Z,0.7nm,0.8s,baz=113,slow=5.9,SNR=2.8						
	comp=Z,0.6nm,0.8s						
K27K	Chicken	88.37	336	P	P	23 23 32.5	+1.5
	baz=114						
L26K	Log Cabin Wild	88.50	335	P	P	23 23 32.0	+0.4
	baz=113						
KLU	Klutina	89.05	333	P	P	23 23 34.6	+0.2
	baz=110						
TSUM	Tsumeb	89.07	109	LR	LR	23 58 08.3	
	comp=Z,17nm,21.8s,baz=147,slow=32						
TSUM	Tsumeb	89.07	109	P	P	23 23 35.9	+0.5
TSUM				IAmb	IAmb	23 23 37.3	
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	89.13	336	IAmb	IAmb	23 23 37.0	
	comp=Z,3.4nm,0.6s						
SCRK				pP	pP	23 24 13.5	+0.9
SCRK	Sand Creek	89.13	336	P	P	23 23 34.8	+0.2
	baz=112,SNR=7.6						
J26L	Joseph Creek	89.16	336	P	P	23 23 35.5	+0.7
	baz=113						
PAX	Paxson	89.38	334	P	P	23 23 36.1	+0.3
	baz=111						
M24K	Tolsona, Glenn	89.38	333	P	P	23 23 36.7	+0.9
	baz=110						
RIDG	Independent Ri	89.39	335	IAmb	IAmb	23 23 37.5	
	comp=Z,12nm,1.0s						
RIDG					pP	23 24 14.0	+0.3
RIDG	Independent Ri	89.39	335	P	P	23 23 36.4	+0.5
	baz=112						
SCM	Sheep Creek Mo	89.80	333	P	P	23 23 38.4	+0.6
	baz=109						
DOU	Dourbes	89.81	39	*d*PcP	P	23 23 38.5	+0.5
	comp=Z,6.3nm,1.1s						
J25K	Salcha River,	89.92	336	IAmb	IAmb	23 23 39.8	
	comp=Z,9.0nm,1.0s						
J25K					pP	23 24 13.9	-2.3
M23K	Glacier View	89.96	333	P	P	23 23 39.4	+0.9
	baz=109						
BMRD	Maredsous	89.97	39	*d*PcP	P	23 23 39.2	+0.5
	comp=Z,5.3nm,1.0s						
BGES	Gesves	90.18	39	*d*P	P	23 23 39.3	-0.4
	comp=Z,5.5nm,0.9s						
RCHB	Rochefort	90.22	39	*d*P	P	23 23 39.9	0.0
	comp=Z,3.4nm,1.0s						
WAT6	Susitna Watana	90.23	334	P	P	23 23 40.1	+0.3
	baz=109						
DHY	Denali Highway	90.23	334	P	P	23 23 40.0	+0.1
	baz=109						
SML	Sawmill	90.24	333	P	P	23 23 40.5	+0.6
SML				pP	pP	23 24 15.4	-2.3
SML	Sawmill	90.24	333	P	P	23 23 40.0	+0.2
	baz=108						
BCLA	Clavier	90.33	39	*d*PcP	P	23 23 41.0	+0.6
HDA	Harding Lake	90.49	336	P	P	23 23 41.1	+0.2
	baz=110						
BSTI	Sart Tilman	90.53	39	*d*PcP	PcP	23 23 42.1	-0.2
IL31		90.59	336	IAmb	IAmb	23 23 42.1	
	comp=Z,5.1nm,1.1s						
ILAR	Eielson Array	90.59	336	P	P	23 23 41.5	+0.1
	comp=Z,1.0nm,0.5s,baz=125,slow=3.5,SNR=17						
ILAR				pP	pP	23 24 19.4	+0.2
	comp=Z,1.7nm,0.7s,baz=127,slow=3.7,SNR=8.5						
	comp=Z,1.0nm,0.5s						
WAT1	Susitna Watana	90.66	334	P	P	23 23 41.4	-0.3
	baz=108						
WLF	Walferdange	90.69	40	*d*PcP	PcP	23 23 43.0	0.0
	comp=Z,7.1nm,1.1s						
WLF				*d*pP	pP	23 24 19.3	-0.7
BTNL	Ternell	90.88	39	*d*PcP	PcP	23 23 43.8	-0.2
	comp=Z,4.2nm,1.0s						
CCB	Clear Creek Bu	90.92	336	P	P	23 23 43.7	+0.8
CCB				IAmb	IAmb	23 23 44.6	
	comp=Z,4.0nm,0.9s						
CCB					pP	23 24 21.6	+0.9
POKR	Poker Plat Res	90.93	336	P	P	23 23 43.3	+0.4
POKR				IAmb	IAmb	23 23 44.6	
	comp=Z,9.4nm,1.1s						
POKR	Poker Plat Res	90.93	336	P	P	23 23 43.3	+0.4
	baz=109						
WRH	Wood River Hil	90.98	335	P	P	23 23 43.6	+0.5
WRH				IAmb	IAmb	23 23 44.7	
	comp=Z,5.9nm,1.2s						
COLA	College	91.02	336	P	P	23 23 43.7	+0.4
	baz=109						
TCOL	CIGO, UAF Yank	91.02	336	P	P	23 23 43.9	+0.6
	baz=109						
KDAK	Kodiak Island	91.15	328	P	P	23 23 44.6	+0.6
	baz=105						
MDM	Murphy Dome	91.19	336		pP	23 24 22.6	+0.5
DAG	Danmarks Havn	91.22	11	*i* P	P	23 23 44.0	0.0
DAG				IAmb	IAmb	23 24 36.7	
	comp=Z,55nm,2.5s						
CUT	Chulitna	91.29	333	P	P	23 23 45.0	+0.4
	baz=107						
H24K	Noodor Dome	91.34	337	P	P	23 23 45.4	+0.6
	baz=109						
NEA2	Nenana	91.42	335	IAmb	IAmb	23 23 46.5	
	comp=Z,5.7nm,0.9s						
NEA2	Nenana	91.42	335	P	P	23 23 45.5	+0.3
	baz=108,SNR=5.8						
I23K	Minto, Yukon-K	91.71	336	P	P	23 23 46.8	+0.4
	baz=107						
Q19K	Cape Douglas,	91.98	329	P	P	23 23 48.2	+0.3
	baz=104						
BPAW	Bear Paw Mtn.	92.08	335	IAmb	IAmb	23 23 49.4	
	comp=Z,4.8nm,0.8s						
BPAW				pP	pP	23 24 27.0	+0.8
BPAW	Bear Paw Mtn.	92.08	335	P	P	23 23 48.3	0.0
	baz=106						
PPLA	Purkeypile	92.28	333	P	P	23 23 49.3	0.0
	baz=105						
CAST	Castle Rocks	92.37	334	P	P	23 23 49.2	-0.4
CAST				IAmb	IAmb	23 23 49.9	
	comp=Z,3.6nm,0.8s						
CAST	Castle Rocks	92.37	334	P	P	23 23 49.4	-0.2
	baz=105						
M20K	Styx River	92.45	332	P	P	23 23 50.0	-0.1
	baz=104						
CHUM	Lake Minchumin	92.59	334	P	P	23 23 51.8	+1.3
	baz=105						
COLD	Coldfoot	92.64	338	P	P	23 23 51.8	+1.1
	baz=107						
TOLK	Toolik Lake Re	92.83	339	P	P	23 23 52.1	+0.4
	baz=107						

L20K	**Farewell, AK**	**92.93**	**333**	P	**P**	**23 23 52.1**	**-0.1**
	baz=104						
M19K	**Big River Lodg**	**93.03**	**332**	P	**P**	**23 23 53.8**	**+1.1**
	baz=103						
H21K	**Melozitna Rive**	**93.24**	**336**	P	**P**	**23 23 53.3**	**-0.2**
	baz=104						
N18K	**Kilae Creek**	**93.47**	**331**	P	**P**	**23 23 54.6**	**-0.2**
	baz=102						
CTI	**Castel Tesino**	**93.64**	**44**	P	**P**	**23 23 55.8**	**-0.2**
CTI				IAmb	IAmb	23 23 57.9	
	comp=Z,3.8nm,1.2s						
BOSA	**Boshof**	**94.25**	**120**	P	**P**	**23 23 58.4**	**-0.8**
	comp=Z,6.3nm,1.2s,baz=223,slow=18,SNR=2.8						
	comp=Z,6.3nm,1.2s						
BOSA	**Boshof**	**94.25**	**120**	IAmb	IAmb	23 24 10.3	
	comp=Z,3.9nm,0.9s						
GERES	**GERESS Array B**	**95.42**	**42**	P	**P**	**23 24 02.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=232,slow=2.4,SNR=4.3						
	comp=Z,0.1nm,0.3s						
NB2	**NORSAR Subarra**	**95.61**	**29**	P	**P**	**23 24 05.2**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=262,slow=4.6						
NOA	**NORSAR Array B**	**95.61**	**29**	P	**P**	**23 24 05.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=259,slow=4.5,SNR=12						
NOA				pP	**pP**	**23 24 42.5**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=259,slow=4.6,SNR=3.5						
	comp=Z,2.2nm,0.8s						
STKA	**Stephens Creek**	**126.79**	**219**	PKP	**PKPdf**	**23 29 42.9**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=137,slow=2.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**132.07**	**16**	PKP	**PKiKP**	**23 29 52.9**	**-0.3**
	comp=Z,4.0nm,0.6s,baz=257,slow=2.1,SNR=19						
ZALV				pPKP	**pPKPdf**	**23 30 31.6**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=299,slow=1.5,SNR=7.6						
KURK	**Kurchatov**	**132.73**	**23**	PKPdf	**PKiKP**	**23 29 54.7**	**+0.1**
KURBB	**Kurchatov Arra**	**132.77**	**23**	PKP	**PKPdf**	**23 29 54.1**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=310,slow=2.7,SNR=15						
KURBB				pPKP	**pPKPdf**	**23 30 33.3**	**0.0**
	comp=Z,1.3nm,0.5s,baz=310,slow=2.9,SNR=7.2						
KLR	**Kul'dur**	**134.16**	**336**	PKP	**PKPdf**	**23 29 56.6**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=73,slow=4.4,SNR=6.8						
MKAR	**Makanchi Array**	**137.33**	**24**	PKhKP	PKPpre	23 29 56.2	
	comp=Z,0.4nm,0.8s,baz=170,slow=2.1,SNR=3.2						
MKAR				PKP	**PKPdf**	**23 30 02.3**	**0.0**
	comp=Z,1.6nm,0.7s,baz=344,slow=1.6,SNR=14						
MKAR				pPKP	pPKPdf	23 30 41.6	-0.4
	comp=Z,1.3nm,0.7s,baz=334,slow=1.5,SNR=5.8						
ASAR	**Alice Springs**	**137.39**	**220**	PKP	**PKPdf**	**23 30 02.9**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=123,slow=1.9,SNR=16						
ASAR				pPKP	**pPKPdf**	**23 30 41.2**	**-1.7**
	comp=Z,2.0nm,0.9s,baz=122,slow=2.7,SNR=6.4						
MJAR	**Matsushiro Arr**	**139.51**	**318**	PKhKP	PKPpre	23 30 01.4	
	comp=Z,0.8nm,0.3s,baz=176,slow=16,SNR=1.4						
WRA	**Warramunga Arr**	**139.69**	**225**	PKhKP	PKPpre	23 30 02.2	
	comp=Z,0.4nm,0.6s,baz=124,slow=2.2,SNR=2.3						
WRA				PKP	**PKPdf**	**23 30 07.4**	**0.0**
	comp=Z,2.2nm,0.4s,baz=121,slow=2.2,SNR=12						
WRA				pPKP	pPKPdf	23 30 45.0	-2.1
	comp=Z,1.7nm,0.7s,baz=116,slow=2.0,SNR=4.6						
SONM	**Songino Array**	**141.16**	**359**	PKhKP	PKPpre	23 30 04.3	
	comp=Z,0.7nm,0.7s,baz=164,slow=5.9,SNR=4.8						
SONM				PKP	**PKPdf**	**23 30 09.7**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=349,slow=4.4,SNR=5.9						
WMQ	**Urumqi**	**141.88**	**21**	*e*P	**PKPdf**	**23 30 11.1**	**+0.4**
XLT	**XiLinHaoTe**	**143.91**	**347**	⇓*i*P	PKPbc	23 30 12.8	+0.3
XLT				pmax	pmax		
	comp=Z,23nm,0.8s						
XLT				pmax	pmax		
	comp=Z,91nm,3.5s						
KSRS	**Korea Array**	**145.06**	**328**	PKPbc	**PKPbc**	**23 30 16.1**	**0.0**
	comp=Z,11nm,0.8s,baz=53,slow=3.7,SNR=31						
HHC	**Hu-ho-hao-te**	**147.70**	**351**	*e*P	**PKPdf**	**23 30 18.4**	**-2.5**
BTO	**Baotou**	**148.14**	**353**	*e*P	**PKPbc**	**23 30 25.6**	**+0.6**
GTA	**Gaotai**	**149.16**	**9**	*e*P	**PKiKP**	**23 30 28.4**	**-0.5**
GTA				pP	PKPab	23 30 32.8	+0.4
GTA				sP	PKPbc	23 30 35.9	+8.2
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	**HongShan**	**150.40**	**345**	⇓P	**PKiKP**	**23 30 32.0**	**+0.7**
HNS				pmax	pmax		
	comp=Z,16nm,1.0s						
TIA	**Tai'an**	**150.80**	**341**	P	**PKPbc**	**23 30 31.8**	**+0.2**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GOMU	**GeErMu**	**151.10**	**18**	P	**PKiKP**	**23 30 34.0**	**+0.7**
GOMU				pP	PKPab	23 30 37.7	-3.1
GOMU				sP	PKPbc	23 30 41.7	+8.9
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,61nm,5.3s						
PYUN	**Piuthan**	**151.43**	**45**	*e*P	**PKiKP**	**23 30 34.1**	**+0.1**
	comp=Z,54nm,0.6s						
DANN	**Dangsing**	**151.80**	**44**	*e*P	**PKiKP**	**23 30 35.4**	**+0.5**
	comp=Z,69nm,0.8s						
KOLN	**Koldanda**	**152.06**	**45**	*e*P	**PKPbc**	**23 30 35.0**	**0.0**
	comp=Z,11nm,0.6s						
GKN	**Gorkha**	**152.62**	**43**	*e*P	**PKiKP**	**23 30 36.6**	**+0.2**
	comp=Z,14nm,0.5s						
PKIN	**Phulchoki**	**153.41**	**43**	*e*P	**PKiKP**	**23 30 38.2**	**0.0**
	comp=Z,8.7nm,0.7s						
PKI	**Pulchoki**	**153.42**	**43**	*e*P	**PKiKP**	**23 30 38.5**	**+0.2**
GUN	**Gumba**	**153.51**	**42**	*e*P	**PKiKP**	**23 30 39.2**	**+0.7**
	comp=Z,6.4nm,0.4s						
LYN	**LuoYang**	**153.65**	**347**	⇓PKPbc	**PKPab**	**23 30 51.5**	**+0.4**
LYN				pPKP	pPKPab	23 31 29.6	+0.3
NJ2	**Nanjing**	**153.82**	**334**	*e*P	**PKPdf**	**23 30 30.8**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**153.88**	**42**	*e*Pg	**PKiKP**	**23 30 39.8**	**+0.5**
RAMN	**Ramite**	**154.63**	**42**	*e*P	**PKiKP**	**23 30 41.0**	**+0.3**
	comp=Z,10nm,0.6s						
TAPN	**Taplejung**	**155.08**	**40**	*e*P	PKPab	23 30 42.3	-16
PZH	**PanZhiHua**	**162.10**	**11**	PKP	**PKPdf**	**23 30 37.6**	**-3.3**
CMAR	**Chiang Mai Arr**	**168.53**	**33**	PKPab	**PKPab**	**23 31 57.8**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=318,slow=5.9,SNR=8.1						

*IDC **07** 00:18:33.4±0.6, 18.°28N×105.°29W, h0^{km}, mb4.6/29, mbtmp4.6/33, ML4.3/3, MS5.1/64, Error ellipse: s-maj=22.5km s-min=9.9km az=59.0*

*BJI **07** 00:18:35.0±0.0, 18.°40N×105.°30W, h10^{km}, mb5.6/1, mB5.5/9, Ms5.4/17, Ms7 5.3/16*

*MEX **07** 00:18:35.0±1.3, 18.°33N×105.°40W, h5^{km}, MD5.6*

*MOS **07** 00:18:35.3±1.1, 18.°35N×105.°32W, h17^{km}, mb5.2/50, MS5.1/29, Error ellipse: s-maj=8.3km s-min=4.9km az=93.4*

*NEIC **07** 00:18:36.5, 18.°38N×105.°40W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.61; M$_{\theta\theta}$1.52; M$_{\phi\phi}$-2.13; M$_{r\theta}$0.18; M$_{\theta\phi}$-2.66; M$_{\phi r}$-0.54; Fault plane solution: M$_0$3.32000×10^{17} NP1:ϕ_s72.60000°, δ79.18000°, λ176.75000°. NP2:ϕ_s163.21000°, δ86.81000°, λ10.83000°. Principal axes: T 2.9949, Plg10.0000°, Azm28.0000°; N 0.5796, Plg79.0000°, Azm179.0000°; P -3.5746, Plg5.0000°, Azm297.0000°;*

*NEIC **07** 00:18:36.7±1.7, 18.°38N±0.°06×105.°34W±0.°06, h10^{km}±1^{km}, mb5.2/611, Ms_20 5.1/313, Mwb5.6/24, Md5.6/172(MEX) Error ellipse: s-maj=11.5km s-min=7.1km az=223.0*

*GCMT **07** 00:18:37.7±0.1, 18.°44N±0.°01×105.°50W±0.°01, h12^{km}, MW5.5/139, Moment Tensor Solution. s127,c230; s139,c287; Duration: 1.^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.48±.03; M$_{\theta\theta}$0.84±.03; M$_{\phi\phi}$-0.36±.03; M$_{r\theta}$0.29±.07; M$_{\theta\phi}$-2.55±.02; M$_{\phi r}$0.02±.07; Best double couple: M$_0$2.63700×10^{17} NP1:ϕ_s173.00000°, δ83.00000°, λ-2.00000°. NP2:ϕ_s264.00000°, δ88.00000°, λ-173.00000°. Principal axes: T 2.8730, Plg4.0000°, Azm38.0000°; N -0.4710, Plg83.0000°, Azm277.0000°; P -2.4010, Plg6.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 00:18:35.4±0.3**, 18.°28N**±0.°03×**105.°35W**±0.°03**, h10**^{km}**, n1428, σ1.^{s}89**/1430**, mb5.2**/322**, MS5.1**/250**, 26C-14D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**1.25**	**13**	⇑*i*P	**Pb**	**00 18 54.3**	**-4.8**
CJM				*e*S	**Sb**	**00 19 09.6**	**-5.7**
CDAR	**Ciudad de Arme**	**1.43**	**62**	⇑*e*P	**Pn**	**00 18 57.8**	**-3.6**
CDAR				*e*S	**Sb**	**00 19 16.5**	**-4.0**
R15V		**1.57**	**55**		**Pn**	**00 19 00.2**	**-3.3**
R15V		**1.57**	**55**	⇑*i*P	**Pn**	**00 19 00.2**	**-3.3**
R15V				*e*S	**Sn**	**00 19 20.8**	**-3.1**
COIG	**Colima**	**1.81**	**60**	⇑*i*P	**Pn**	**00 19 03.9**	**-2.9**
COIG				*e*S	**Sn**	**00 19 25.6**	**-4.3**
COMA	**Comala**	**1.83**	**55**	*e*P	**Pn**	**00 19 04.6**	**-2.4**
COMA				*i* S	**Sn**	**00 19 26.8**	**-3.6**
MMIG	**Aquila**	**1.91**	**89**		**Pn**	**00 19 05.4**	**-2.6**
MMIG					**Sn**	**00 19 28.7**	**-3.3**
MMIG	**Aquila**	**1.91**	**89**	⇓*e*P	**Pn**	**00 19 05.4**	**-2.6**
MMIG				*e*S	**Sn**	**00 19 28.7**	**-3.3**
MNGA	**Volcan de Coli**	**2.02**	**54**	⇑*e*P	**Pn**	**00 19 07.8**	**-2.0**
MNGA				*e*S	**Sn**	**00 19 31.9**	**-3.3**
EZ5V		**2.04**	**54**		**Pn**	**00 19 08.4**	**-1.7**
EZ5V		**2.04**	**54**	⇑*e*P	**Pn**	**00 19 08.4**	**-1.7**
EZ5V				*e*S	**Sn**	**00 19 31.5**	**-4.3**
INCO	**Volcan de Coli**	**2.07**	**53**	⇑*e*P	**Pn**	**00 19 09.0**	**-1.6**
INCO				*e*S	**Sn**	**00 19 33.2**	**-3.4**
JUBC	**Volcan de Coli**	**2.09**	**54**	⇑*i*P	**Pn**	**00 19 09.1**	**-1.7**
JUBC				*i* S	**Sn**	**00 19 33.0**	**-4.0**
PUVA	**Puert Vallarta**	**2.34**	**3**		**Pn**	**00 19 10.7**	**-3.2**
PUVA					**Sn**	**00 19 36.7**	**-6.0**
PUVA	**Puert Vallarta**	**2.34**	**3**	*e*P	**Pn**	**00 19 10.7**	**-3.2**
PUVA				*e*S	**Sn**	**00 19 36.7**	**-6.0**
ANIG	**Ahuacatlan**	**2.87**	**16**		**Pn**	**00 19 19.2**	**-2.2**
ANIG					**Sn**	**00 19 53.7**	**-2.3**
ANIG	**Ahuacatlan**	**2.87**	**16**	*e*P	**Pn**	**00 19 18.8**	**-2.6**
ANIG				*e*S	**Sn**	**00 19 51.9**	**-4.2**
TEPI	**Tepic**	**3.25**	**7**	*e*P	**Pn**	**00 19 23.9**	**-2.7**
TEPI				*e*S	**Sn**	**00 20 01.9**	**-3.6**
URUA	**Uruapan**	**3.31**	**69**		**Pn**	**00 19 27.0**	**-0.4**
URUA					**Sn**	**00 20 04.2**	**-2.7**
URUA	**Uruapan**	**3.31**	**69**	*e*P	**Pn**	**00 19 27.0**	**-0.4**
URUA				*i* S	**Sn**	**00 20 04.2**	**-2.7**
UON	**La Union**	**3.38**	**95**	*e*P	**Pn**	**00 19 27.5**	**-0.7**
UON				*e*S	**Sn**	**00 20 06.9**	**-1.4**
ZIIG	**Zihuatanejo**	**3.76**	**100**		**Pn**	**00 19 32.3**	**-1.1**
ZIIG					**Sn**	**00 20 12.9**	**-4.9**
ZIIG	**Zihuatanejo**	**3.76**	**100**	*e*P	**Pn**	**00 19 32.3**	**-1.1**
ZIIG				*e*S	**Sn**	**00 20 16.6**	**-1.2**
MOIG	**Morelia**	**4.18**	**70**		**Pn**	**00 19 39.5**	**+0.1**
MOIG					**Sn**	**00 20 21.5**	**-7.0**
MOIG	**Morelia**	**4.18**	**70**	*e*P	**Pn**	**00 19 38.1**	**-1.4**
MOIG				*e*S	**Sn**	**00 20 25.6**	**-2.8**
IGIG	**Irapuato, Guan**	**4.52**	**56**		**Pn**	**00 19 43.9**	**-0.3**
IGIG					**Sn**	**00 20 35.7**	**-1.3**
IGIG	**Irapuato, Guan**	**4.52**	**56**	*e*P	**Pn**	**00 19 42.1**	**-2.1**
IGIG				*e*S	**Sn**	**00 20 35.0**	**-2.0**
AAIG	**Aguscalientes**	**4.61**	**37**	⇑*i*P	**Pn**	**00 19 44.9**	**-0.6**
AAIG				*e*S	**Sn**	**00 20 35.5**	**-3.7**
ARIG	**Puente Sto Nin**	**4.75**	**89**		**Pn**	**00 19 47.8**	**+0.6**
ARIG					**Sn**	**00 20 38.9**	**-3.6**
ARIG	**Puente Sto Nin**	**4.75**	**89**	*e*P	**Pn**	**00 19 47.8**	**+0.6**
ARIG				*e*S	**Sn**	**00 20 38.9**	**-3.6**
MAIG	**Mazatlaan**	**4.99**	**349**		**Pn**	**00 19 47.7**	**-2.7**
MAIG					Sn	00 20 34.3	-14
MAIG	**Mazatlaan**	**4.99**	**349**	*e*P	**Pn**	**00 19 47.7**	**-2.7**
MAIG				*e*S	**Sn**	**00 20 40.0**	**-8.2**
CAIG	**El Cayaco**	**5.00**	**103**		**Pn**	**00 19 51.5**	**+0.9**
CAIG					**Sn**	**00 20 41.4**	**-7.0**
CAIG	**El Cayaco**	**5.00**	**103**	⇑*e*P	**Pn**	**00 19 51.5**	**+0.9**
CAIG				*e*S	**Sn**	**00 20 45.4**	**-3.0**
ZAIG	**Zacatecas**	**5.17**	**30**		**Pn**	**00 19 52.9**	**-0.3**
ZAIG	**Zacatecas**	**5.17**	**30**	*e*P	**Pn**	**00 19 52.3**	**-0.9**
ZAIG				*e*S	**Sn**	**00 20 52.0**	**-1.1**
JRQG	**Juriquilla Cam**	**5.22**	**62**		**Pn**	**00 19 56.0**	**+2.3**
JRQG					**Sn**	**00 20 54.6**	**+0.4**
JRQG	**Juriquilla Cam**	**5.22**	**62**	*i* P	**Pn**	**00 19 56.0**	**+2.3**
JRQG				*e*S	**Sn**	**00 20 54.6**	**+0.4**
ACIG	**Acambay**	**5.44**	**71**	⇑*i*P	**Pn**	**00 19 58.0**	**+1.2**
ACIG				*e*S	**Sn**	**00 21 00.1**	**+0.5**
MEIG	**Mezcala**	**5.46**	**93**		**Pn**	**00 19 58.8**	**+1.8**
MEIG					**Sn**	**00 20 52.7**	**-7.2**
MEIG	**Mezcala**	**5.46**	**93**	*e*P	**Pn**	**00 19 58.0**	**+1.0**
MEIG				*e*S	**Sn**	**00 20 57.8**	**-2.2**
TOVM	**TOLUCA**	**5.47**	**79**		**Pn**	**00 19 59.9**	**+2.6**
TOVM					**Sn**	**00 20 60.0**	**-0.5**
TOVM	**TOLUCA**	**5.47**	**79**	*e*P	**Pn**	**00 19 56.7**	**-0.6**
TOVM				*e*S	**Sn**	**00 20 60.0**	**-0.5**
PLIG	**Platanillo**	**5.56**	**88**		**Pn**	**00 19 59.5**	**+1.2**
PLIG					**Sn**	**00 20 58.3**	**-4.0**
PLIG	**Platanillo**	**5.56**	**88**	⇑*e*P	**Pn**	**00 19 59.5**	**+1.2**
PLIG				*e*S	**Sn**	**00 21 03.2**	**+0.9**
DAIG	**Los Arroyos**	**5.58**	**102**		**Pn**	**00 19 59.4**	**+0.9**
DAIG					Sn	00 20 54.1	-8.6
DAIG	**Los Arroyos**	**5.58**	**102**	*e*P	**Pn**	**00 19 59.4**	**+0.9**
DAIG				*e*S	**Sn**	**00 21 01.2**	**-1.5**
MAVM	**Malinalco, Edo**	**5.59**	**82**		**Pn**	**00 20 00.4**	**+1.4**
MAVM					**Sn**	**00 20 59.5**	**-3.9**
MAVM	**Malinalco, Edo**	**5.59**	**82**	*e*P	**Pn**	**00 20 00.4**	**+1.4**
MAVM				*e*S	**Sn**	**00 20 59.5**	**-3.9**
AOVM	**Tlapan**	**5.80**	**79**	*e*P	**Pn**	**00 20 02.3**	**+0.3**
AOVM				*e*S	**Sn**	**00 21 05.4**	**-3.3**
CJVM	**Cuajimalpa**	**5.84**	**78**	*e*P	**Pn**	**00 20 04.5**	**+2.0**
CJVM				*e*S	**Sn**	**00 21 10.2**	**+0.5**
MCRU	**Las Cruces**	**5.87**	**79**	*e*P	**Pn**	**00 20 03.1**	**+0.4**
MCRU				*e*S	**Sn**	**00 21 11.1**	**+0.8**
APVM	**Azcapotzalco**	**5.94**	**77**	*e*S	**Sn**	**00 21 13.5**	**+1.5**
UNM	**Universidad Na**	**5.94**	**79**	P	**Pn**	**00 20 04.8**	**+1.1**
UNM	**Universidad Na**	**5.94**	**79**	Pn	**Pn**	**00 20 04.8**	**+1.1**
BJVM	**Benito Juarez**	**5.95**	**78**	*e*P	**Pn**	**00 20 01.2**	**-2.7**
BJVM				*e*S	**Sn**	**00 21 13.3**	**+0.9**
COVM	**Coyoacan**	**5.96**	**79**	*e*P	**Pn**	**00 20 04.2**	**+0.1**
COVM				*e*S	**Sn**	**00 21 09.8**	**-2.8**
XCVM	**Xochimilco**	**5.99**	**80**	*e*P	Pn	00 20 10.2	+5.9
XCVM				*e*S	**Sn**	**00 21 16.6**	**+3.5**
YAIG	**Yautepec**	**5.99**	**83**		**Pn**	**00 20 05.9**	**+1.6**
YAIG					Sn	00 21 04.0	-9.0
YAIG	**Yautepec**	**5.99**	**83**	*e*P	**Pn**	**00 20 05.9**	**+1.6**
YAIG				*e*S	Sn	00 21 04.0	-9.0
VRVM	**Mexico City**	**6.01**	**78**	*e*P	Pn	00 20 10.2	+5.5
VRVM				*e*S	**Sn**	**00 21 10.2**	**-3.7**
GMVM	**Gustavo A Made**	**6.03**	**77**	*e*P	**Pn**	**00 20 05.8**	**+0.8**
GMVM				*e*S	**Sn**	**00 21 14.4**	**+0.1**
PBVM	**Pinon**	**6.05**	**78**		**Pn**	**00 20 06.6**	**+1.7**
PBVM					**Sn**	**00 21 13.4**	**-0.8**
PBVM	**Pinon**	**6.05**	**78**	*e*P	**Pn**	**00 20 06.6**	**+1.7**
PBVM				*e*S	**Sn**	**00 21 13.4**	**-0.8**
PTVM	**Pico Tres Padr**	**6.05**	**77**		**Pn**	**00 20 05.2**	**0.0**
PTVM					**Sn**	**00 21 13.9**	**-0.8**
PTVM	**Pico Tres Padr**	**6.05**	**77**	*e*P	**Pn**	**00 20 05.2**	**0.0**
PTVM				*e*S	**Sn**	**00 21 13.9**	**-0.8**
THVM	**De Xico**	**6.13**	**79**	*e*P	Pn	00 20 00.8	-5.6
THVM				*e*S	**Sn**	**00 21 16.5**	**-0.1**
CRIG	**Cruz Grande**	**6.13**	**104**		**Pn**	**00 20 06.3**	**+0.3**
CRIG					**Sn**	**00 21 13.3**	**-3.0**
CRIG	**Cruz Grande**	**6.13**	**104**	*e*P	**Pn**	**00 20 06.3**	**+0.3**
CRIG				*e*S	**Sn**	**00 21 13.3**	**-3.0**
ZUVM	**ZUMPANGO**	**6.13**	**74**		**Pn**	**00 20 07.3**	**+1.0**
ZUVM					**Sn**	**00 21 19.0**	**+2.2**
ZUVM	**ZUMPANGO**	**6.13**	**74**	*e*P	**Pn**	**00 20 07.3**	**+1.0**
ZUVM				*e*S	**Sn**	**00 21 19.0**	**+2.2**
RPIG	**Rio Verde**	**6.19**	**54**	*e*P	**Pn**	**00 20 07.7**	**+0.7**
RPIG				*e*S	**Sn**	**00 21 14.0**	**-3.9**
AMVM	**AMECAMECA**	**6.28**	**81**		**Pn**	**00 20 10.3**	**+1.8**
AMVM					**Sn**	**00 21 21.6**	**+1.2**
AMVM	**AMECAMECA**	**6.28**	**81**	*e*P	**Pn**	**00 20 10.3**	**+1.8**
AMVM				*e*S	**Sn**	**00 21 21.6**	**+1.2**
DEIG	**Demacu**	**6.29**	**70**	*e*P	**Pn**	**00 20 08.7**	**+0.1**
DEIG				*e*S	**Sn**	**00 21 21.0**	**+0.3**
VTVM	**Tizayuca**	**6.40**	**76**		**Pn**	**00 20 10.2**	**+0.2**
VTVM					**Sn**	**00 21 16.9**	**-6.4**
VTVM	**Tizayuca**	**6.40**	**76**	*e*P	**Pn**	**00 20 10.2**	**+0.2**
VTVM				*e*S	**Sn**	**00 21 16.9**	**-6.4**
PPM	**Popocatepetl**	**6.42**	**82**	*e*P	**Pn**	**00 20 12.8**	**+2.2**
PPM				*e*S	**Sn**	**00 21 26.7**	**+2.5**
TLIG	**Tlapa**	**6.50**	**95**		**Pn**	**00 20 12.2**	**+0.9**
TLIG	**Tlapa**	**6.50**	**95**		**Sn**	**00 21 22.9**	**-2.6**
TLIG	**Tlapa**	**6.50**	**95**	*e*P	**Pn**	**00 20 12.2**	**+0.9**
TLIG				*e*S	**Sn**	**00 21 22.4**	**-3.2**
SSIG	**Sanalona**	**6.72**	**346**	*e*P	**Pn**	**00 20 12.6**	**-1.6**
SSIG				*i* S	**Sn**	**00 21 22.8**	**-8.1**
PDIG	**Papasquiaro**	**6.73**	**360**	*i* P	**Pn**	**00 20 15.7**	**+1.2**
PDIG				*e*S	**Sn**	**00 21 31.1**	**-0.2**
FTIG	**Fresnillo de T**	**6.88**	**92**	*e*P	**Pn**	**00 20 17.6**	**+1.2**
FTIG				*e*S	**Sn**	**00 21 32.2**	**-2.7**
SLBS	**Sierra La Lagu**	**6.88**	**322**	Pn	**Pn**	**00 20 15.1**	**-1.4**
PNIG	**Pinotepa**	**7.15**	**104**		**Pn**	**00 20 21.4**	**+1.3**
PNIG					**Sn**	**00 21 38.0**	**-3.4**
PNIG	**Pinotepa**	**7.15**	**104**	*e*P	**Pn**	**00 20 21.4**	**+1.3**
PNIG				*e*S	**Sn**	**00 21 38.0**	**-3.4**
HLIG	**Huajuapan de L**	**7.19**	**92**	⇓*i*P	**Pn**	**00 20 22.3**	**+1.4**
HLIG				*e*S	**Sn**	**00 21 39.6**	**-3.2**
TXIG	**Tlaxiaco**	**7.30**	**97**	⇓*e*P	**Pn**	**00 20 23.9**	**+1.5**
TXIG				*e*S	**Sn**	**00 21 42.8**	**-2.7**
LPIG	**La Paz**	**7.41**	**322**	Pn	**Pn**	**00 20 24.1**	**+0.4**
	25nm,0.3s,baz=72,slow=3.2,SNR=1.1						
LPIG				Sn	Sn	00 21 58.9	+11
	5.1nm,0.3s,baz=166,slow=1.9,SNR=1.1						
LPIG				LR	LR	00 22 34.4	
	comp=Z,23µm,21.5s,baz=136,slow=32						
GTIG	**Gomez Farias**	**7.50**	**49**	⇑*i*P	**Pn**	**00 20 24.9**	**0.0**
GTIG				*e*S	**Sn**	**00 21 46.4**	**-3.6**
CXUV	**Coxquihui**	**7.57**	**74**	*e*P	**Pn**	**00 20 23.7**	**-2.2**
CXUV				*e*S	**Sn**	**00 21 46.4**	**-5.5**
YOIG	**Yosondua**	**7.58**	**100**	⇓*e*P	**Pn**	**00 20 27.9**	**+1.6**
YOIG				*e*S	**Sn**	**00 21 47.0**	**-5.3**
TPIG	**Tehuac#an**	**7.59**	**88**		**Pn**	**00 20 28.5**	**+2.2**
TPIG					**Sn**	**00 21 50.7**	**-1.8**
TPIG	**Tehuac#an**	**7.59**	**88**	*e*P	**Pn**	**00 20 28.5**	**+2.2**
TPIG				*i* S	**Sn**	**00 21 50.7**	**-1.8**
TOIG	**Toxpalan**	**7.88**	**90**	⇑*e*P	**Pn**	**00 20 31.9**	**+1.7**
TOIG				*e*S	**Sn**	**00 21 56.5**	**-3.1**
TSIG	**Topolobambo**	**8.05**	**335**	*e*P	Pn	00 20 25.3	-7.1
PEIG	**Puerto Escondi**	**8.16**	**105**	⇓*e*P	**Pn**	**00 20 35.8**	**+1.8**
PEIG				*e*S	**Sn**	**00 22 08.1**	**+1.6**
VHO	**Vista Hermosa**	**8.30**	**97**	*e*P	**Pn**	**00 20 38.2**	**+2.1**
VHO				*e*S	**Sn**	**00 22 05.6**	**-4.5**
HPIG		**8.62**	**358**	Pn	**Pn**	**00 20 39.2**	**-1.2**
MNIG	**Monterrey**	**8.68**	**32**	*e*P	**Pn**	**00 20 43.7**	**+2.6**
MNIG				*e*S	**Sn**	**00 22 17.3**	**-1.8**
CSIG	**Choix**	**8.96**	**342**	*e*P	**Pn**	**00 20 44.1**	**-0.8**
NEUV	**Arroyo Zacate**	**9.10**	**92**	*e*P	**Pn**	**00 20 47.9**	**+1.0**
NEUV				*e*S	**Sn**	**00 22 27.6**	**-2.0**
HUIG	**Huatulco**	**9.19**	**104**		**Pn**	**00 20 50.4**	**+2.3**
HUIG					**Sn**	**00 22 29.6**	**-2.0**
HUIG	**Huatulco**	**9.19**	**104**	*e*P	**Pn**	**00 20 50.4**	**+2.3**
HUIG				*e*S	**Sn**	**00 22 29.6**	**-2.0**
CMIG	**Matias Romero**	**10.05**	**95**	Pn	**Pn**	**00 21 00.0**	**+0.2**
	4.6nm,0.3s,baz=271,slow=10,SNR=24						
CMIG				Sn	**Sn**	**00 22 54.0**	**+1.3**
	1.3nm,0.3s,baz=73,slow=20,SNR=1.6						
CMIG				LR	LR	00 24 56.1	
	comp=Z,10µm,19.2s,baz=284,slow=38						
	11nm,0.3s						
CMIG	**Matias Romero**	**10.05**	**95**		**Pn**	**00 21 02.0**	**+2.1**
CMIG					**Sn**	**00 22 55.3**	**+2.5**
CMIG	**Matias Romero**	**10.05**	**95**	*e*P	**Pn**	**00 21 02.0**	**+2.1**
CMIG				*e*S	**Sn**	**00 22 55.3**	**+2.5**
MCIG	**Muzquiz**	**10.20**	**20**	⇑*i*P	**Pn**	**00 21 00.3**	**-1.6**
TUIG	**Tuzandepetl**	**10.39**	**90**		**Pn**	**00 21 03.9**	**-0.7**
TUIG					**Sn**	**00 22 55.8**	**-5.4**
TUIG	**Tuzandepetl**	**10.39**	**90**	*e*P	**Pn**	**00 21 03.9**	**-0.7**
TUIG				*e*S	**Sn**	**00 22 55.8**	**-5.4**
UXUV	**UXUV**	**10.72**	**93**	*e*P	**Pn**	**00 21 10.3**	**+1.2**
UXUV				*e*S	**Sn**	**00 23 12.3**	**+3.1**
GUYB	**Guaymas**	**10.84**	**333**	*e*P	**Pn**	**00 21 11.6**	**+1.0**
GUYB				*e*S	**Sn**	**00 23 13.4**	**+1.4**
SRIG	**Santa Rosalia**	**11.01**	**326**	Pn	**Pn**	**00 21 13.1**	**0.0**
SRIG	**Santa Rosalia**	**11.01**	**326**	*e*P	**Pn**	**00 21 12.8**	**-0.3**
TX31	**Lajitas Ar. Si**	**11.11**	**8**		**Pn**	**00 21 14.7**	**+0.1**
TX31	**Lajitas Ar. Si**	**11.11**	**8**	P	**Pn**	**00 21 17.0**	**+2.5**
	baz=189,SNR=78						
TX32	**Lajitas Array**	**11.11**	**8**		**Pn**	**00 21 15.1**	**+0.5**
TXAR	**Lajitas Array**	**11.11**	**8**	Pn	**Pn**	**00 21 15.7**	**+1.1**
	0.9nm,0.3s,baz=187,slow=14,SNR=72						
TXAR				LR	LR	00 25 42.9	
	comp=Z,12µm,18.4s,baz=186,slow=39						
	35nm,0.9s						
TXAR	**Lajitas Array**	**11.11**	**8**	P	**Pn**	**00 21 14.9**	**+0.4**
TXAR	**Lajitas Array**	**11.11**	**8**	Pn	**Pn**	**00 21 14.9**	**+0.4**
833A	**Chaparral WMA,**	**11.40**	**28**	Pn	**Pn**	**00 21 19.7**	**+1.4**
833A	**Chaparral WMA,**	**11.40**	**28**	P	**Pn**	**00 21 21.8**	**+3.5**
	baz=210,SNR=41						
833A				S	Sn	00 23 38.8	+13
	baz=210						
833A	**Chaparral WMA,**	**11.40**	**28**	P	**Pn**	**00 21 21.0**	**+2.6**
	baz=210,SNR=41						
833A				S	Sn	00 23 38.7	+13
	baz=210						
KVTX	**Kingsville**	**11.50**	**35**	Pn	**Pn**	**00 21 19.9**	**+0.2**
KVTX	**Kingsville**	**11.50**	**35**	P	**Pn**	**00 21 21.1**	**+1.4**
	baz=219						
KVTX				S	Sn	00 23 39.4	+11
	baz=219						
TGIG		**11.76**	**95**		**Pn**	**00 21 24.5**	**+1.1**
TGIG					**Sn**	**00 23 33.2**	**-1.7**
TGIG		**11.76**	**95**	*e*P	**Pn**	**00 21 24.5**	**+1.1**
TGIG				*e*S	**Sn**	**00 23 33.2**	**-1.7**
HSIG		**11.86**	**335**	Pn	**Pn**	**00 21 24.8**	**+0.2**
HSIG		**11.86**	**335**	⇓*i*P	**Pn**	**00 21 26.2**	**+1.6**
HSIG				*e*S	**Sn**	**00 23 34.4**	**-2.7**
PCIG		**11.88**	**101**		**Pn**	**00 21 25.9**	**+0.9**
PCIG		**11.88**	**101**	*e*P	**Pn**	**00 21 25.9**	**+0.9**
735A	**Kenedy**	**12.59**	**32**		**Pn**	**00 21 35.5**	**+0.8**
735A	**Kenedy**	**12.59**	**32**	P	**Pn**	**00 21 35.0**	**+0.4**
	baz=215,SNR=6.3						
NZIG	**Nacozari, Sono**	**12.63**	**343**	*e*P	**Pn**	**00 21 38.1**	**+2.7**
CCIG	**Comitan**	**12.78**	**97**		**Pn**	**00 21 37.9**	**+0.4**
CCIG	**Comitan**	**12.78**	**97**	⇓*i*P	**Pn**	**00 21 40.3**	**+2.9**
CCIG				*e*S	**Sn**	**00 23 58.2**	**-1.7**
JCT	**Junction City**	**13.15**	**22**	P	**Pn**	**00 21 43.1**	**+0.7**
JCT	**Junction City**	**13.15**	**22**	Pn	**Pn**	**00 21 43.1**	**+0.7**
JCT	**Junction City**	**13.15**	**22**	P	**Pn**	**00 21 44.6**	**+2.2**
	baz=204,SNR=22						
JCT				S	**Sn**	**00 24 13.8**	**+5.0**
	baz=204						
JCT	**Junction City**	**13.15**	**22**	P	**Pn**	**00 21 44.5**	**+2.2**
	baz=204,SNR=22						
JCT				S	**Sn**	**00 24 15.1**	**+6.2**
	baz=204						
MNTX	**Cornudas Mount**	**13.36**	**360**	Pn	**Pn**	**00 21 45.6**	**+0.4**
MNTX	**Cornudas Mount**	**13.36**	**360**	P	**Pn**	**00 21 44.4**	**-0.9**
	baz=180,SNR=47						
MNTX				S	**Sn**	**00 24 13.5**	**-0.4**
	baz=180						
MNTX	**Cornudas Mount**	**13.36**	**360**	P	**Pn**	**00 21 47.4**	**+2.2**
	baz=180,SNR=47						
MNTX				S	**Sn**	**00 24 13.4**	**-0.6**
	baz=180						
KIDD	**KIDD Seismic O**	**13.48**	**356**	P	**Pn**	**00 21 49.2**	**+2.3**
	baz=175						
319A	**Douglas**	**13.52**	**345**	Pn	**Pn**	**00 21 48.0**	**+0.6**
HUEH	**Huehuetenango**	**13.58**	**100**	Pn	**Pn**	**00 21 51.4**	**+3.0**
RTAL	**Retalhuleu**	**13.62**	**104**	Pn	**Pn**	**00 21 50.5**	**+1.7**
LAPR	**La Primavera**	**13.72**	**334**	*e*P	**Pn**	**00 21 52.3**	**+2.2**
435B	**Jarrell**	**14.31**	**28**		**Pn**	**00 21 58.6**	**+0.5**
435B	**Jarrell**	**14.31**	**28**	P	**Pn**	**00 21 59.0**	**+0.8**
	baz=212,SNR=9.5						
435B				S	S	00 24 47.2	-10
	baz=212						
435B	**Jarrell**	**14.31**	**28**	P	**Pn**	**00 21 58.4**	**+0.3**
	baz=212						
435B				S	S	00 24 46.7	-11
	baz=212						
121A	**Cookes Peak, D**	**14.36**	**352**	Pn	**Pn**	**00 21 59.9**	**+0.9**
121A	**Cookes Peak, D**	**14.36**	**352**	P	**Pn**	**00 22 01.3**	**+2.3**
	baz=171,SNR=31						
121A				S	**Sn**	**00 24 42.2**	**+3.6**
	baz=171						
121A	**Cookes Peak, D**	**14.36**	**352**	P	**Pn**	**00 22 00.8**	**+1.8**
	baz=171,SNR=31						
121A				S	**Sn**	**00 24 42.5**	**+4.0**
	baz=171						
HKT	**Hockley**	**14.50**	**35**	*i* P	**Pn**	**00 22 00.1**	**-0.6**
HKT				pmax	pmax		
	comp=Z,57nm,1.3s						
HKT	**Hockley**	**14.50**	**35**	Pn	**Pn**	**00 21 60.0**	**-0.7**
HKT	**Hockley**	**14.50**	**35**	P	**Pn**	**00 21 59.5**	**-1.1**
	baz=219						
TUC	**Tucson**	**14.81**	**342**	P	**Pn**	**00 22 05.3**	**+0.3**
TUC	**Tucson**	**14.81**	**342**	Pn	**Pn**	**00 22 05.3**	**+0.3**
TUC	**Tucson**	**14.81**	**342**	P	**Pn**	**00 22 05.7**	**+0.6**
	baz=160						
TUC				S	**Sn**	**00 24 54.9**	**+5.7**
	baz=160						
PETF	**Flores**	**14.83**	**93**	P	**Pn**	**00 22 07.6**	**+2.3**
ABTX	**Abilene, Hawle**	**15.18**	**19**	Pn	**Pn**	**00 22 10.2**	**+0.2**
ABTX	**Abilene, Hawle**	**15.18**	**19**	P	**Pn**	**00 22 10.5**	**+0.5**
	baz=201,SNR=66						
ABTX				S	**Sn**	**00 25 02.2**	**+3.9**
	baz=201						
ABTX	**Abilene, Hawle**	**15.18**	**19**	P	**Pn**	**00 22 09.5**	**-0.5**
	baz=201,SNR=66						
ABTX				S	**Sn**	**00 25 02.2**	**+3.9**
	baz=201						

214A	Organ Pipe Nat	15.20	335	Pn	Pn	00 22 10.0	-0.2
214A				IAmb	IAmb	00 22 24.4	
	comp=Z,126nm,1.5s						
214A	Organ Pipe Nat	15.20	335	P	Pn	00 22 10.5	+0.4
	baz=152,SNR=12						
214A				S	Sn	00 25 05.7	+7.1
	baz=152						
SFX	San Felipe	15.35	328	Pn	Pn	00 22 13.2	+1.1
WHTX	Lake Whitney,	15.40	26	Pn	Pn	00 22 12.4	-0.5
WHTX	Lake Whitney,	15.40	26	P	Pn	00 22 12.9	+0.1
	baz=210,SNR=38						
WHTX				S	S	00 25 11.1	-8.8
	baz=210						
WHTX	Lake Whitney,	15.40	26	P	Pn	00 22 12.3	-0.5
	baz=210,SNR=38						
WHTX				S	S	00 25 12.2	-7.6
	baz=210						
Y22A	Socorro	15.66	355	P	Pn	00 22 16.4	0.0
	baz=174,SNR=54						
Y22A				S	Sn	00 25 13.3	+3.2
	baz=174						
Y22D	IRIS PASSCAL I	15.79	355	P	Pn	00 22 18.9	+0.8
Y22D	IRIS PASSCAL I	15.79	355	P	Pn	00 22 19.8	+1.7
	baz=175						
ESQI	Esquipulas	15.80	101		Pn	00 22 20.6	+2.4
MSTX	Muleshoe	15.80	8	Pn	Pn	00 22 17.7	-0.4
MSTX	Muleshoe	15.80	8	P	Pn	00 22 18.5	+0.4
	baz=189,SNR=67						
MSTX	Muleshoe	15.80	8	P	Pn	00 22 18.0	-0.1
	baz=189,SNR=67						
MTO3	Montecristo	15.82	102		Pn	00 22 21.2	+2.6
BNM	Barren Site	15.85	356	P	Pn	00 22 20.2	+1.3
LENM	Lemitar	15.89	355		Pn	00 22 20.5	+1.1
237A	Washetta, Mont	16.15	30		Pn	00 22 22.2	-0.3
237A	Washetta, Mont	16.15	30	P	Pn	00 22 22.4	-0.2
	baz=215,SNR=28						
SNET	Serv Nac Est T	16.15	104		P	00 22 26.1	+0.1
SNET				IAmb	IAmb	00 22 35.3	
	comp=Z,179nm,0.6s						
113A	Mohawk Valley,	16.30	334	P	Pn	00 22 25.7	+1.3
113A				IAmb	IAmb	00 22 31.3	
	comp=Z,233nm,1.6s						
NATX	Nacogdoches	16.54	34	Pn	Pn	00 22 27.2	-0.3
NATX	Nacogdoches	16.54	34	P	Pn	00 22 28.2	+0.7
	baz=218,SNR=33						
NATX	Nacogdoches	16.54	34	P	Pn	00 22 26.1	-1.4
	baz=218,SNR=33						
441A	DeRidder	16.61	39		Pn	00 22 27.4	-1.1
441A				IAmb	IAmb	00 22 39.5	
	comp=Z,176nm,1.0s						
441A	DeRidder	16.61	39	P	Pn	00 22 28.3	-0.2
	baz=225						
ANMO	Albuquerque	16.63	357	Pn	Pn	00 22 30.0	+1.1
	comp=Z,0.3nm,0.3s,baz=174,slow=13,SNR=58						
ANMO				LR	LR	00 28 54.8	
	comp=Z,6μm,21.6s,baz=178,slow=37						
	comp=Z,56nm,1.1s						
ANMO	Albuquerque	16.63	357	*i* P	Pn	00 22 29.1	+0.2
ANMO				pmax	pmax		
	comp=Z,159nm,1.3s						
ANMO	Albuquerque	16.63	357		Pn	00 22 29.7	+0.8
ANMO				IAmb	IAmb	00 22 33.8	
	comp=Z,169nm,1.3s						
ANMO	Albuquerque	16.63	357	P	P	00 22 30.4	-0.9
	baz=176,SNR=97						
ANMO				S	S	00 25 42.0	-3.3
	baz=176						
ANMO	Albuquerque	16.63	357	P	P	00 22 30.5	-0.9
	baz=176						
ANMO				S	S	00 25 42.6	-2.7
	baz=176						
Z35A	Perchaven, San	16.66	24		Pn	00 22 27.6	-1.4
Z35A	Perchaven, San	16.66	24	P	Pn	00 22 29.4	+0.4
	baz=208,SNR=23						
Z35A				S	S	00 25 40.7	-4.8
	baz=208						
CPBX	Cerro Prieto	16.70	329	Pn	Pn	00 22 28.1	-1.4
CPBX				IAmb	IAmb	00 23 07.1	
	comp=Z,240nm,1.6s						
X18A	Snowflake	16.70	347		Pn	00 22 27.7	-2.0
AMTX	Amarillo	16.86	10	Pn	Pn	00 22 30.8	-0.9
AMTX	Amarillo	16.86	10	P	Pn	00 22 31.6	0.0
	baz=192,SNR=49						
AMTX	Amarillo	16.86	10	P	Pn	00 22 30.8	-0.9
	baz=192						
CCX	Cicese	16.96	325	Pn	Pn	00 22 30.8	-2.0
GLA	Glamis	17.00	332	P	Pn	00 22 32.8	-0.6
GLA				pmax	pmax		
	comp=Z,74nm,1.3s						
GLA	Glamis	17.00	332		Pn	00 22 32.8	-0.6
GLA	Glamis	17.00	332	P	Pn	00 22 33.9	+0.5
	baz=148						
GLA				S	S	00 25 52.5	0.0
	baz=148						
Y14A	Wickenburg	17.03	338	P	Pn	00 22 33.2	-0.6
YUH	Yuha Desert	17.18	328	P	Pn	00 22 36.3	+0.7
W18A	Petrified Fore	17.22	348	P	Pn	00 22 36.3	0.0
W18A	Petrified Fore	17.22	348	P	P	00 22 37.7	-0.1
	baz=166,SNR=26						
W18A				S	S	00 25 56.7	-0.6
	baz=166						
RMX	La Rumorosa	17.23	328	Pn	Pn	00 22 35.2	-1.2
IKP	In-Ko-Pah, Jac	17.28	328	P	P	00 22 38.6	+0.2
	baz=143,SNR=14						
IKP				S	S	00 25 58.0	-0.3
	baz=143						
CBX	Cerro Bola	17.30	326	P	Pn	00 22 38.2	+1.0
CBX	Cerro Bola	17.30	326	⇑*i*P	P	00 22 38.5	-0.2
SWSC	Sam W. Stewart	17.36	329	P	P	00 22 40.5	+1.3
	baz=145,SNR=6.8						
TJIG	Tijuana	17.40	326	P	Pn	00 22 35.0	-3.4
TJIG	Tijuana	17.40	326	*e*P	Pn	00 22 35.0	-3.4
WMOK	Wichita Mounta	17.41	18	P	Pn	00 22 37.3	-1.2
	baz=202,SNR=171						
WMOK				S	Sn	00 25 51.7	-0.6
	baz=202						
WMOK	Wichita Mounta	17.41	18	P	Pn	00 22 36.6	-1.9
	baz=202,SNR=171						
WMOK				S	Sn	00 25 52.6	+0.3
	baz=202						
BLYC	Blythe	17.46	334		Pn	00 22 39.3	+0.2
TKX	Tecate	17.47	327	P	Pn	00 22 39.8	+0.5
342B	Flagon Creek P	17.58	40	P	Pn	00 22 40.5	-0.1
	baz=225,SNR=23						
Z38A	Mt. Pleasant	17.58	30	P	Pn	00 22 39.6	-1.0
Z38A				IAmb	IAmb	00 22 45.3	
	comp=Z,199nm,1.1s						
Z38A	Mt. Pleasant	17.58	30	P	Pn	00 22 40.6	0.0
	baz=215,SNR=9.7						
MONP2	Monument Peak	17.63	328	P	P	00 22 42.3	-0.1
	baz=143,SNR=14						
MONP2				S	S	00 26 08.0	+2.3
	baz=143						
TJX	Tijuana	17.66	326		Pn	00 22 42.4	+0.8
PDMCI	Parker Dam,Lak	17.79	336	P	P	00 22 45.1	+1.2
	baz=152,SNR=6.1						
PDMCI				S	S	00 26 11.5	+3.1
	baz=152						
BC3	Big Chuckawall	17.79	331	P	P	00 22 44.1	0.0
	baz=147,SNR=7.2						
BC3				S	S	00 26 10.3	+1.6
	baz=147						
TGUH	Tegucigalpa,Un	17.86	101	P	Pn	00 22 45.1	+0.8
TGUH				IAmb	IAmb	00 23 06.6	
	comp=Z,182nm,1.2s						
109C	Camp Elliot, M	17.98	326	P	Pn	00 22 46.0	+0.5
109C	Camp Elliot, M	17.98	326	P	Pn	00 22 46.2	+0.7
	baz=141						
109C				S	S	00 26 14.4	+2.0
	baz=141						
WUAZ	Wupatki	17.98	344		Pn	00 22 44.5	-1.2
WUAZ	Wupatki	17.98	344	P	P	00 22 49.2	+3.0
	baz=161						
WUAZ				S	S	00 26 14.4	+1.6
	baz=161						
IRM	Iron Mountain	18.07	333	P	P	00 22 47.3	+0.2
	baz=149,SNR=9.9						
IRM				S	S	00 26 18.0	+3.6
	baz=149						
TPFO	Pinon Flats	18.22	329	P	P	00 22 49.5	+0.7
	baz=144,SNR=14						
PFO	Pinyon Flats O	18.23	329	P	Pn	00 22 48.3	-0.4
PFO				pmax	pmax		
	comp=Z,60nm,1.3s						
PFO	Pinyon Flats O	18.23	329	P	Pn	00 22 48.3	-0.4
PFO	Pinyon Flats O	18.23	329	P	P	00 22 49.8	+0.9
	baz=144,SNR=14						
PFO				S	S	00 26 20.4	+2.8
	baz=144						
BELC	Belle Mtn. Jos	18.32	331	P	P	00 22 51.1	+1.1
	baz=146,SNR=22						
BELC				S	S	00 26 26.1	+6.4
	baz=146						
FNO	Franklin	18.33	21		Pn	00 22 48.1	-1.7
FNO				IAmb	IAmb	00 22 53.0	
	comp=Z,225nm,1.1s						
NEE2	Needles Airpor	18.38	335	P	P	00 22 51.0	+0.5
	baz=151						
NEE2				S	S	00 26 23.6	+3.0
	baz=151						
W13A	Hualapai Mount	18.39	337	P	Pn	00 22 49.7	-1.1
OKCSW	OKLAHOMA CITY	18.45	21		Pn	00 22 50.0	-1.3
OKCFA	Oklahoma City	18.45	21	P	Pn	00 22 49.5	-1.8
OKCFA				IAmb	IAmb	00 22 54.6	
	comp=Z,492nm,1.8s						
OKCFA	Oklahoma City	18.45	21	S	S	00 26 21.7	-0.3
	baz=204						
CRIN	San Cristobal	18.48	105	P	P	00 22 51.5	-0.3
CRIN				IAmb	IAmb	00 23 21.0	
	comp=Z,280nm,1.4s						
X37A	Clayton	18.52	27	P	P	00 22 50.9	-1.1
X37A				IAmb	IAmb	00 22 54.5	
	comp=Z,252nm,1.1s						
X37A	Clayton	18.52	27	P	P	00 22 51.5	-0.5
	baz=211,SNR=35						
X37A				S	S	00 26 22.2	-1.2
	baz=211						
MURC	Murrieta	18.58	327	P	Pn	00 22 53.8	+0.8
	baz=142						
MURC				S	S	00 26 29.6	+4.9
	baz=142						
344A	Westbrook Farm	18.63	42	P	P	00 22 51.5	-1.7
344A				IAmb	IAmb	00 23 05.5	
	comp=Z,145nm,1.1s						
344A	Westbrook Farm	18.63	42	P	P	00 22 53.0	-0.2
	baz=229,SNR=9.5						
344A				S	Sn	00 26 23.0	+1.1
	baz=229						
Z41A	Richland Creek	18.69	35	P	P	00 22 52.4	-1.5
Z41A	Richland Creek	18.69	35	P	P	00 22 52.9	-1.0
	baz=220,SNR=40						
Z41A				P	P	00 22 52.9	-1.0
	baz=220,SNR=40						
Z41A				S	Sn	00 26 23.2	-0.1
	baz=220						
Z41A				S	Sn	00 26 23.2	-0.1
	baz=220						
Z41A	Richland Creek	18.69	35	P	P	00 22 52.9	-1.0
	baz=220,SNR=40						
Z41A				S	S	00 26 30.2	+3.4
	baz=220						
ELS	Elsinore Mount	18.74	327	P	P	00 22 53.5	-1.0
T25A	Trinidad	18.81	2	P	P	00 22 55.0	-0.4
T25A				IAmb	IAmb	00 23 01.3	
	comp=Z,312nm,1.4s						
T25A	Trinidad	18.81	2	P	Pn	00 22 56.9	+1.0
	baz=183,SNR=73						
T25A				S	S	00 26 32.8	+3.3
	baz=183						
GMRC	Granite Mounta	18.83	333	P	Pn	00 22 57.1	+1.1
	baz=148,SNR=22						
GMRC				S	S	00 26 33.9	+4.0
	baz=148						
SCI2	San Clemente I	18.84	324	P	P	00 22 54.9	-0.6
	baz=138						
WLAR	White Oak Lake	18.86	33	P	P	00 22 54.4	-1.2
WLAR				IAmb	IAmb	00 23 15.3	
	comp=Z,324nm,1.5s						
CNGN	Cerro Negro	18.87	105	P	P	00 22 57.4	+1.3
U32A	Winter Ranch,	18.88	16		P	00 22 55.1	-0.9
U32A	Winter Ranch,	18.88	16	P	P	00 22 56.4	+0.4
	baz=199,SNR=29						
BBRC	Big Bear Solar	18.98	329	P	Pn	00 22 58.6	+0.7
	baz=144						
BBRC				S	S	00 26 41.0	+8.0
	baz=144						
MVCO	Mesa Verde	19.06	352		Pn	00 22 59.0	0.0
MVCO				IAmb	IAmb	00 23 06.2	
	comp=Z,292nm,1.9s						
MVCO	Mesa Verde	19.06	352	P	Pn	00 23 00.3	+1.3
	baz=171,SNR=34						
MVCO				S	S	00 26 39.2	+4.5
	baz=171						
143A	Socs Landing,	19.07	38	P	P	00 22 57.2	-0.9
143A				IAmb	IAmb	00 23 00.6	
	comp=Z,191nm,0.8s						
143A	Socs Landing,	19.07	38	P	P	00 22 58.6	+0.6
	baz=225,SNR=8.4						
143A				S	S	00 26 39.0	+4.5
	baz=225						
CIS	Catalina Islan	19.08	325	P	Pn	00 23 00.3	+1.3
	baz=139						
CIS				S	S	00 26 40.6	+5.9
	baz=139						
U15A	North Rim	19.09	343	P	P	00 22 58.4	-0.2
HEC	Hector,Ludlow	19.17	331	P	Pn	00 23 01.4	+1.3
	baz=147,SNR=9.2						
HEC				S	S	00 26 41.7	+5.1
	baz=147						
FMP	Fort Macarthur	19.25	326	S	S	00 26 45.4	+7.4
	baz=140						
VBMS	Vicksburg	19.27	41	P	P	00 22 60.0	-0.3
VBMS				IAmb	IAmb	00 23 04.5	
	comp=Z,190nm,0.8s						
VBMS	Vicksburg	19.27	41	P	Pn	00 23 01.5	+0.2
	baz=228,SNR=6.7						
VBMS				S	S	00 26 43.0	+4.5
	baz=228						
VBMS	Vicksburg	19.27	41	P	P	00 22 59.4	-0.8
	baz=228,SNR=6.7						
VBMS				S	S	00 26 42.8	+4.2
	baz=228						
MIAR	Mount Ida	19.30	31	P	P	00 22 59.8	-0.8
	baz=216,SNR=22						
MIAR				S	Sn	00 26 35.4	-2.8
	baz=216						
MIAR	Mount Ida	19.30	31	P	P	00 23 00.1	-0.5
	baz=216,SNR=22						
MIAR				S	S	00 26 41.9	+2.7
	baz=216						
BFSC	Mount Baldy Ra	19.32	328	P	Pn	00 23 02.6	+0.5
	baz=142,SNR=18						
BFSC				S	S	00 26 44.5	+4.7
	baz=142						
SDCO	Great Sand Dun	19.40	360		Pn	00 23 03.7	+0.7
SDCO				IAmb	IAmb	00 23 08.6	
	comp=Z,339nm,1.5s						
SDCO	Great Sand Dun	19.40	360	P	Pn	00 23 04.5	+1.5
	baz=180,SNR=53						
SDCO				S	S	00 26 45.4	+3.9
	baz=180						
SDCO	Great Sand Dun	19.40	360	P	Pn	00 23 04.5	+1.5
	baz=180,SNR=53						
SDCO				S	S	00 26 47.2	+5.7
	baz=180						
346A	Big Creek Wild	19.42	45	P	P	00 23 02.1	+0.3
346A				IAmb	IAmb	00 23 17.6	
	comp=Z,107nm,0.8s						
346A	Big Creek Wild	19.42	45	P	Pn	00 23 03.4	+0.4
	baz=232,SNR=6.1						
S22A	4UR Ranch, Cre	19.44	356		P	00 23 02.6	+0.2
S22A				IAmb	IAmb	00 23 10.0	
	comp=Z,319nm,1.6s						
S22A	4UR Ranch, Cre	19.44	356	P	Pn	00 23 06.9	+3.3
	baz=176,SNR=78						
S22A				S	S	00 26 49.4	+7.0
	baz=176						
MATN	Matagalpa	19.45	103	P	P	00 23 04.3	+1.9
TUL1	Leonard	19.50	24	P	P	00 23 02.2	-0.5
	baz=208,SNR=79						
TUL1				S	Sn	00 26 38.8	-3.9
	baz=208						
TUL1	Leonard	19.50	24	P	P	00 23 01.7	-1.0
	baz=208,SNR=79						
TUL1				S	Sn	00 26 42.0	-0.8
	baz=208						
TUQ	Turquoise Moun	19.50	333	P	Pn	00 23 05.0	+0.9
	baz=149,SNR=10						
TUQ				S	S	00 26 49.2	+5.9
	baz=149						
RRX	Edison Barstow	19.51	330	P	Pn	00 23 05.1	+1.0
	baz=145						
RRX				S	S	00 26 52.2	+8.8
	baz=145						
PASC	Pasadena Art C	19.54	327	P	P	00 23 01.3	-2.0
PASC				IAmb	IAmb	00 23 08.7	
	comp=Z,201nm,1.9s						
SNCC	San Nicolas Is	19.59	322	P	P	00 23 02.4	-1.4
SNCC				IAmb	IAmb	00 23 08.1	
	comp=Z,145nm,1.4s						
SNCC	San Nicolas Is	19.59	322	P	Pn	00 23 05.4	+0.3
	baz=136						
X40A	Basin Creek Fa	19.63	32	P	P	00 23 03.1	-1.1
	baz=218,SNR=27						
X40A				P	P	00 23 03.1	-1.1
	baz=218,SNR=27						
X40A				S	S	00 26 48.0	+2.4
	baz=218						
X40A				S	S	00 26 48.0	+2.4
	baz=218						
X40A	Basin Creek Fa	19.63	32	P	P	00 23 02.5	-1.7
	baz=218,SNR=27						
X40A				S	S	00 26 48.1	+2.5
	baz=218						
DECC	Green Verdugo	19.68	326	P	Pn	00 23 06.1	-0.1
	baz=141						
DECC				S	Sn	00 26 52.9	+5.5
	baz=141						
W39A	Magazine	19.74	29	IAmb	IAmb	00 23 09.4	
	comp=Z,369nm,1.8s						
W39A	Magazine	19.74	29	P	P	00 23 05.0	-0.3
	baz=214,SNR=36						
W39A				S	S	00 26 46.7	-1.1
	baz=214						
W39A	Magazine	19.74	29	P	P	00 23 04.6	-0.8
	baz=214,SNR=36						
W39A				S	Sn	00 26 47.6	-1.0
	baz=214						
CCAR	Cane Creek	19.75	35	P	P	00 23 05.7	+0.2
CCAR	Cane Creek	19.75	35	P	P	00 23 06.0	+0.6
	baz=222,SNR=12						
CCAR				S	Sn	00 26 51.2	+2.3
	baz=222						
GSC	Goldstone, Bar	19.77	331	P	P	00 23 05.6	-0.2
GSC				pmax	pmax		
	comp=Z,64nm,1.2s						
GSC	Goldstone, Bar	19.77	331	P	P	00 23 05.6	-0.2
GSC	Goldstone, Bar	19.77	331	P	P	00 23 05.7	-0.2
	baz=146,SNR=5.7						
GSC				S	Sn	00 26 56.0	+6.4
	baz=146						
LCMT	Little Creek M	19.91	341	P	P	00 23 08.0	+0.6
EDW2	Edwards Air Fo	20.00	328	P	P	00 23 09.4	+1.1
	baz=143						
EDW2				S	Sn	00 26 59.0	+4.0
	baz=143						
PV13	Radium Mtn., P	20.04	352	P	P	00 23 08.6	-0.3
PV13				IAmb	IAmb	00 23 16.3	
	comp=Z,91nm,1.1s						
SHOC	Shoshone, Teco	20.04	333	P	Pn	00 23 10.2	-0.2
	baz=148						
SHOC				S	Sn	00 26 58.3	+2.4
	baz=148						
PKCU	Pink Cliffs	20.05	344	P	P	00 23 09.7	+0.7
PKCU				IAmb	IAmb	00 23 16.4	
	comp=Z,215nm,1.6s						
UALR	University of	20.10	33	P	P	00 23 08.4	-0.9
UALR				IAmb	IAmb	00 23 12.4	
	comp=Z,82nm,0.9s						
SHPR	Sheep Range	20.11	336	P	P	00 23 09.4	-0.2
T35B	Sooner Cattle	20.13	21	P	P	00 23 08.7	-1.0
	baz=205,SNR=147						
T35B				S	S	00 26 55.4	-0.4
	baz=205						
OSI	Osito Audit: C	20.17	326	P	Pn	00 23 12.6	+0.7
	baz=140						
OSI				S	Sn	00 27 05.2	+6.2
	baz=140						
PV15	Paradox Valley	20.18	353	P	Pn	00 23 12.2	-0.1
PV15				IAmb	IAmb	00 23 18.2	
	comp=Z,174nm,1.0s						
CCAC	Calif City Air	20.23	329	P	P	00 23 11.1	+0.4
PV10	Paradox Valley	20.28	352	P	P	00 23 11.2	-0.3
PV10				IAmb	IAmb	00 23 17.2	
	comp=Z,138nm,1.3s						
PV07	Paradox Valley	20.29	353	P	P	00 23 12.2	+0.6
PV07				IAmb	IAmb	00 23 18.8	
	comp=Z,93nm,0.9s						
LRMC	Laurel Mtn Rad	20.33	330	P	Pn	00 23 13.8	-0.2
	baz=144						
QSM	Queen of Sheba	20.35	332	P	P	00 23 12.2	+0.1
PV23	Carpenter Ridg	20.35	352	P	P	00 23 12.9	+0.6
PV23				IAmb	IAmb	00 23 24.5	
	comp=Z,186nm,1.3s						
GWY	Greenwater Val	20.45	333	P	P	00 23 13.0	-0.3
ACON	Acoyapa	20.45	105	P	P	00 23 15.6	+2.3
ACON				IAmb	IAmb	00 23 21.5	
	comp=Z,149nm,1.4s						
W41B	Gary Mavity, V	20.46	32	P	P	00 23 12.9	-0.3
	baz=218,SNR=21						
W41B				S	Sn	00 27 12.6	+6.6
	baz=218						
W41B	Gary Mavity, V	20.46	32	P	P	00 23 13.1	-0.1
	baz=218,SNR=21						
W41B				S	Sn	00 27 12.0	+5.9
	baz=218						
146A	Union	20.48	43	P	P	00 23 14.2	+0.8
	baz=230,SNR=8.6						
146A				S	S	00 27 03.9	+1.3
	baz=230						
WHAR	Wooly Hollow	20.53	32	IAmb	IAmb	00 23 17.0	
	comp=Z,259nm,1.6s						
HZTE	Horizontes, Gu	20.54	109		Pn	00 23 16.9	+0.5
SBC	Santa Barbara	20.57	324	P	Pn	00 23 18.8	+2.2
	baz=138						
MTPU	Mount Pierson	20.58	344	P	P	00 23 15.9	+1.0
Q24A	Divide	20.61	0	P	P	00 23 16.1	+0.9
Q24A				IAmb	IAmb	00 23 21.9	
	comp=Z,168nm,1.4s						
Q24A	Divide	20.61	0	P	Pn	00 23 17.0	-0.5
	baz=181,SNR=10						
Q24A				S	Sn	00 27 10.2	+0.1
	baz=181						
ARVC	Arvin	20.62	327	P	Pn	00 23 16.6	-0.6
	baz=141,SNR=9.4						
ARVC				S	Sn	00 27 14.3	+4.5
	baz=141						
MPMC	Manual Prospec	20.71	331	P	P	00 23 16.6	+0.5
	baz=146,SNR=49						
MPMC				S	Sn	00 27 15.6	+3.3
	baz=146						
FURC	Furnace Creek,	20.77	333	P	P	00 23 15.9	-0.6
	baz=148						
FURC				S	Sn	00 27 18.1	+4.6
	baz=148						
BCW	Bitter Crk WRg	20.78	326	P	P	00 23 17.5	+0.7
BCW				IAmb	IAmb	00 23 25.4	
	comp=Z,116nm,1.2s						
KSCO	Kaye Shedlock’	20.80	6		P	00 23 16.9	-0.1
KSCO				IAmb	IAmb	00 23 48.8	
	comp=Z,132nm,1.2s						
KSCO	Kaye Shedlock’	20.80	6	P	P	00 23 16.4	-0.6
	baz=187						
KSCO				S	Sn	00 27 14.6	+0.4
	baz=187						
ORTG	Ortega, Santa	20.80	110	P	P	00 23 18.6	+1.4
ORTG				IAmb	IAmb	00 23 39.6	
	comp=Z,182nm,1.4s						
ISA	Isabella, Lake	20.86	329	P	P	00 23 18.3	+0.6
	baz=143,SNR=23						
ISA				S	Sn	00 27 19.0	+3.2
	baz=143						
PRN	Pahroc Range	20.87	338	P	P	00 23 17.8	0.0
SMCO	Snowmass	20.87	356	P	P	00 23 18.4	+0.3
DUNO	Dulce Nombre,	20.89	110	P	P	00 23 19.6	+1.6
R32A	Long Quarter,	20.89	15	P	P	00 23 17.9	0.0
	baz=198,SNR=102						
R32A				S	S	00 27 11.1	+0.2
	baz=198						
TPNV	Topopah Spring	20.93	335	P	P	00 23 17.5	-1.0
TPNV				pmax	pmax		
	comp=Z,66nm,1.3s						
TPNV				MLR	MLR		
	comp=Z,4μm,21.0s						
TPNV	Topopah Spring	20.93	335	P	P	00 23 17.5	-1.0
TPNV	Topopah Spring	20.93	335	P	Pn	00 23 20.2	-0.8
	baz=150,SNR=43						
TPNV				S	Sn	00 27 24.2	+6.7
	baz=150						
PKM	Mcpherson Peak	20.96	325	P	P	00 23 20.1	+1.3

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      baz=138
BRAL  Brewton           20.96  49  P        P        00 23 18.3 -0.4
BRAL                               IAmb     IAmb     00 23 21.1
      comp=Z,100nm,0.8s
BRAL  Brewton           20.96  49  P        P        00 23 18.6 -0.1
      baz=237
BRAL  Brewton           20.96  49  P        P        00 23 18.7  0.0
      baz=237
Y45A  Yeager Farm, C    20.99  39  P        P        00 23 19.0  0.0
      baz=226,SNR=9.1
MSU   Marysvale         21.02 345  P        P        00 23 20.1 +0.6
MSU   Marysvale         21.02 345  P        P        00 23 20.1 +0.6
CBKS  Cedar Bluff       21.04  12  P        P        00 23 20.1 +0.6
      baz=195,SNR=41
CBKS                               S        S        00 27 13.1 -0.7
      baz=195
CBKS  Cedar Bluff       21.04  12  P        P        00 23 19.8 +0.3
      baz=195,SNR=41
CBKS                               S        Sn       00 27 25.0 +5.0
      baz=195
FCAR  Ozark Folk Cen    21.09  31  IAmb     IAmb     00 23 24.6
      comp=Z,92nm,1.1s
U40A  Yellville         21.12  29  P        P        00 23 18.9 -1.5
      baz=215,SNR=29
U40A                               P        P        00 23 18.9 -1.5
      baz=215,SNR=29
U40A                               S        S        00 27 17.2 +1.8
      baz=215
U40A                               S        S        00 27 17.2 +1.8
      baz=215
U40A  Yellville         21.12  29  P        P        00 23 18.8 -1.6
      baz=215,SNR=29
U40A                               S        Sn       00 27 18.2 -3.7
      baz=215
Q16A  Castle Valley     21.18 347  P        P        00 23 21.7 +0.5
Q16A                               IAmb     IAmb     00 23 36.8
      comp=Z,110nm,1.1s
ESPN  Las Esperanzas    21.18 104           pP       00 23 24.2 +1.0
TCRU  Three Creeks R    21.18 344  P        P        00 23 21.7 +0.5
TCRU                               IAmb     IAmb     00 23 28.7
      comp=Z,130nm,1.4s
SRU   San Rafael Swe    21.24 349  P        P        00 23 22.1 +0.3
SRU                                pmax     pmax
      comp=Z,68nm,1.2s
SRU   San Rafael Swe    21.24 349  P        P        00 23 22.1 +0.3
JTS   Las Juntas de     21.29 109d iP       P        00 23 24.4 +2.0
JTS                                pmax     pmax
      comp=Z,37nm,1.1s
JTS   Las Juntas de     21.29 109  P        P        00 23 24.4 +2.0
CWC   Cottonwood Cre    21.30 331  P        P        00 23 21.6 -0.8
      baz=145
CWC                                S        Sn       00 27 28.4 +2.1
      baz=145
S11A  Rachel            21.34 337  P        P        00 23 22.9 +0.1
S11A                               IAmb     IAmb     00 23 40.4
      comp=Z,109nm,1.2s
SMMC  Simmler           21.38 325  P        P        00 23 23.4 +0.2
      baz=139
SOR   Soroa             21.39  74  P        P        00 23 23.5 +0.1
SOR                                pmax     pmax
      comp=Z,47nm,1.0s
SOR   Soroa             21.39  74  P        P        00 23 23.5 +0.1
CAO2  Cobano, Puntar    21.40 111  P        P        00 23 22.2 -1.4
ISCO  Idaho Springs     21.45 359  IAmb     IAmb     00 23 34.7
      comp=Z,148nm,1.4s
ISCO                               IAMs_20  IAMs_20  00 31 53.7
      comp=Z,7μm,20.0s
ISCO  Idaho Springs     21.45 359  P        P        00 23 24.8 +0.6
      baz=179,SNR=45
ISCO                               S        Sn       00 27 27.1 -3.1
      baz=179
ISCO  Idaho Springs     21.45 359  P        P        00 23 25.1 +0.9
      baz=179,SNR=45
ISCO                               S        Sn       00 27 28.7 -1.5
      baz=179
Z47A  Carrollton        21.47  43  IAmb     IAmb     00 23 27.2
      comp=Z,136nm,0.8s
Z47A  Carrollton        21.47  43  P        P        00 23 23.5 -0.6
      baz=231,SNR=26
Z47A                               S        Sn       00 27 29.5 -0.9
      baz=231
PSUT  Pine Spring       21.50 342  P        P        00 23 25.2 +0.5
OXF   Oxford            21.52  38  IAmb     IAmb     00 23 32.3
      comp=Z,159nm,1.1s
OXF   Oxford            21.52  38  P        P        00 23 23.2 -1.5
      baz=226,SNR=31
OXF                                S        Sn       00 27 30.7 -0.9
      baz=226
OXF   Oxford            21.52  38  P        P        00 23 23.2 -1.5
      baz=226,SNR=31
TMUT  Trail Mountain    21.55 348  P        P        00 23 25.9 +0.6
TMUT                               IAmb     IAmb     00 23 33.1
      comp=Z,82nm,1.0s
HBAR  Harrisburg        21.58  34  P        P        00 23 24.4 -0.9
451A  Vernon            21.62  52  P        P        00 23 25.4 -0.4
451A  Vernon            21.62  52  S        Sn       00 27 34.5 +0.5
      baz=240
P17A  Butcher Ranch,    21.63 349  P        P        00 23 25.5 -0.5
P17A                               IAmb     IAmb     00 23 32.0
      comp=Z,88nm,1.0s
MET   Memphis--Engin    21.66  36  P        P        00 23 25.4 -0.7
P18A  Preston Nutter    21.70 350  P        P        00 23 26.4 -0.5
P18A                               IAmb     IAmb     00 23 45.8
      comp=Z,84nm,1.0s
LCAR  Lake Charles      21.72  32  P        P        00 23 25.9 -0.8
      baz=219,SNR=87
LCH   Last Change Ra    21.75 333  P        P        00 23 27.0 -0.3
JACO  JACO, Garabito    21.81 110  P        P        00 23 29.7 +1.8
JACO                               IAmb     IAmb     00 23 36.0
      comp=Z,143nm,1.6s
PAGB  Antelope Grade    21.82 326  P        P        00 23 27.1 -0.9
VOG   Valley Oaks Go    21.83 328  P        P        00 23 28.6 +0.7
      baz=142
TIN   Tinemaha, Big     21.87 331  P        P        00 23 29.8 +1.3
      baz=145
TIN                                S        Sn       00 27 38.4 -1.6
      baz=145
R11A  Troy Canyon, C    21.90 338  P        P        00 23 28.9 -0.1
R11A  Troy Canyon, C    21.90 338  P        P        00 23 30.7 +1.7
      baz=153,SNR=30
R11A                               S        Sn       00 27 37.7 -3.2
      baz=153
O20A  White River Ci    21.93 354  P        P        00 23 29.8 +0.6
O20A                               IAmb     IAmb     00 23 35.0
      comp=Z,96nm,1.3s
O20A  White River Ci    21.93 354  P        P        00 23 31.0 +1.8
      baz=173,SNR=16
O20A                               S        Sn       00 27 36.4 -5.0
      baz=173
250A  Grady             21.96  48  P        P        00 23 28.8 -0.7
      baz=236,SNR=15
250A                               S        Sn       00 27 40.2 -2.0
      baz=236
S39A  Bolivar           22.03  26  P        P        00 23 30.5 +0.4
      baz=212,SNR=108
S39A                               S        Sn       00 27 42.5 -1.2
      baz=212
MGMO  Mountain Grove    22.04  29  IAmb     IAmb     00 23 38.5
      comp=Z,108nm,1.1s
LRAL  Lakeview Retre    22.08  45  IAmb     IAmb     00 23 36.4
      comp=Z,105nm,1.0s
LRAL  Lakeview Retre    22.08  45  P        P        00 23 29.7 -1.0
      baz=233,SNR=55
LRAL                               S        S        00 27 37.8 +3.7
      baz=233
LRAL  Lakeview Retre    22.08  45  P        P        00 23 29.7 -1.0
      baz=233,SNR=55
LRAL                               S        Sn       00 27 39.4 -5.4
      baz=233
KSU1  Kansas State U    22.10  18  P        P        00 23 30.6 -0.3
      baz=203,SNR=38
KSU1                               S        S        00 27 37.1 +2.6
      baz=203
KSU1  Kansas State U    22.10  18  P        P        00 23 30.4 -0.4
      baz=203,SNR=38
KSU1                               S        S        00 27 37.2 +2.8
      baz=203
W45A  Hickory Valley    22.11  37  P        P        00 23 29.6 -1.4
W45A  Hickory Valley    22.11  37  P        P        00 23 29.9 -1.1
      baz=225
GNAR  Gosnell           22.23  35  P        P        00 23 32.6 +0.3
TPH   Tonopah           22.29 335  P        P        00 23 32.8 -0.3
TPH                                pmax     pmax
      comp=Z,131nm,1.2s
TPH   Tonopah           22.29 335  P        P        00 23 32.8 -0.3
TPH                                IAmb     IAmb     00 23 41.1
      comp=Z,131nm,1.2s
NLU   North Lily Min    22.37 346  P        P        00 23 34.2 +0.2
553A  Crawfordville     22.42  54  P        P        00 23 33.6 -0.8
553A                               IAmb     IAmb     00 23 57.7
      comp=Z,140nm,1.1s
RIMA  Rio Macho         22.48 109  P        P        00 23 38.1 +2.8
PMPB  Monarch Peak      22.48 326  P        P        00 23 35.4 +0.3
PMPB                               IAmb     IAmb     00 24 13.0
      comp=Z,84nm,1.4s
RDMU  Red Mountain      22.51 352  P        P        00 23 34.8 -0.7
RDMU                               IAmb     IAmb     00 23 48.7
      comp=Z,79nm,1.0s
N23A  Red Feather La    22.55 359  P        P        00 23 36.0 +0.1
N23A  Red Feather La    22.55 359  P        P        00 23 37.7 +1.8
      baz=179,SNR=17
HALT  Halls             22.56  36  P        P        00 23 35.0 -0.9
HALT                               IAmb     IAmb     00 23 40.7
      comp=Z,83nm,0.6s
MLAC  Mammoth, Mammo22.61 331      P        P        00 23 38.8 +2.2
      baz=145
LNXT  Lenox             22.62  35  P        P        00 23 35.8 -0.7
PBMO  Poplar Bluff      22.63  32  P        P        00 23 35.9 -0.7
      baz=220,SNR=12
PLAL  Pickwick Lake     22.64  39  IAmb     IAmb     00 23 38.9
      comp=Z,83nm,1.3s
352A  Blakely           22.67  51  IAmb     IAmb     00 23 43.5
      comp=Z,131nm,1.1s
352A  Blakely           22.67  51  P        P        00 23 37.7 +0.8
      baz=240
OMMB  Old Mammoth Mi    22.68 331  P        P        00 23 37.1 -0.3
MDPB  Devils Postpil    22.73 331  P        P        00 23 38.8 +0.9
OGNE  Ogallala          22.77   7  P        P        00 23 37.9 -0.2
OGNE                               IAMs_20  IAMs_20  00 32 11.8
      comp=Z,5μm,21.0s
OGNE  Ogallala          22.77   7  P        P        00 23 38.1  0.0
      baz=188,SNR=18
OGNE                               S        S        00 27 49.4 +2.3
      baz=188
OGNE  Ogallala          22.77   7  P        P        00 23 39.0 +0.9
      baz=188,SNR=18
OGNE                               S        S        00 27 50.3 +3.2
      baz=188
DUG   Dugway, Tooele    22.77 345  P        P        00 23 39.7 +1.5
DUG                                pmax     pmax
      comp=Z,94nm,1.6s
DUG                                MLR      MLR
      comp=Z,4μm,19.0s
DUG   Dugway, Tooele    22.77 345  P        P        00 23 39.7 +1.5
DUG                                IAmb     IAmb     00 23 46.0
      comp=Z,94nm,1.6s
DUG   Dugway, Tooele    22.77 345  P        P        00 23 41.6 +3.4
      baz=162,SNR=11
DUG                                S        Sn       00 27 54.5 -7.2
      baz=162
GLAT  Glass             22.86  35  P        P        00 23 39.0  0.0
JLU   Jordanelle        22.86 348  P        P        00 23 40.5 +1.3
BBGB  Big Mountain B    22.88 326  P        P        00 23 40.0 +0.7
BBGB                               IAmb     IAmb     00 24 18.6
      comp=Z,171nm,1.9s
X48A  Hartselle         22.93  42  IAmb     IAmb     00 23 46.5
      comp=Z,103nm,0.9s
X48A  Hartselle         22.93  42  P        P        00 23 37.8 -1.9
      baz=230,SNR=28
X48A                               S        S        00 27 50.2 +0.4
      baz=230
PHWY  Pilot Hill        22.95 360  IAmb     IAmb     00 23 45.1
      comp=Z,145nm,2.0s
PHWY                               IAMs_20  IAMs_20  00 32 42.8
      comp=Z,5μm,19.0s
Y49A  Blount Mountai    22.96  44  IAmb     IAmb     00 23 43.2
      comp=Z,54nm,0.8s
Y49A  Blount Mountai    22.96  44  P        P        00 23 38.4 -1.7
      baz=232,SNR=22
Y49A                               S        S        00 27 51.3 +0.8
      baz=232
LHV   Little Huntoon    22.98 333  P        P        00 23 41.3 +1.2
NV11  Mina Array Sit    22.98 334  P        P        00 23 40.2 -0.2
R40A  Maddies Statio    22.98  27  IAmb     IAmb     00 23 47.7
      comp=Z,62nm,0.8s
R40A  Maddies Statio    22.98  27  P        P        00 23 39.1 -1.1
      baz=214,SNR=50
R40A                               S        S        00 27 47.8 -2.8
      baz=214
NVAR  Mina Array Bea    23.04 333  P        P        00 23 41.8 +0.7
      comp=Z,5.7nm,0.8s,baz=157,slow=9.7,SNR=26
NVAR                               LR       LR       00 32 25.1
      comp=Z,4μm,18.8s,baz=153,slow=36
      comp=Z,5.7nm,0.8s
HICK  Hickman           23.09  35  P        P        00 23 40.6 -0.7
SRBA  San Rafael, Bu    23.15 110  P        P        00 23 44.0 +1.7
SAO   San Andreas Ge    23.24 326  IAMs_20  IAMs_20  00 31 17.6
      comp=Z,5μm,20.0s
CCM   Cathedral Cave    23.25  29  P        P        00 23 41.9 -1.0
CCM                                pmax     pmax
      comp=Z,36nm,1.0s
CCM                                MLR      MLR
      comp=Z,13μm,19.0s
CCM   Cathedral Cave    23.25  29  P        P        00 23 41.9 -1.0
CCM   Cathedral Cave    23.25  29  P        P        00 23 41.8 -1.1
      baz=216,SNR=24
CCM                                S        S        00 27 58.1 +3.0
      baz=216
CCM   Cathedral Cave    23.25  29  P        P        00 23 41.3 -1.7
      baz=216
CCM                                S        S        00 27 58.3 +3.2
      baz=216
RYN   Ryan              23.30 333  P        P        00 23 44.4 +0.8
152A  Waverly Hall      23.44  48  IAmb     IAmb     00 24 04.6
      comp=Z,55nm,1.1s
152A  Waverly Hall      23.44  48  P        P        00 23 43.4 -1.5
      baz=238,SNR=18
152A                               S        S        00 28 00.4 +2.0
      baz=238
KVN   Kaiserville       23.48 334  P        P        00 23 46.0 +0.5
KVN                                pmax     pmax
      comp=Z,151nm,1.8s
KVN   Kaiserville       23.48 334  P        P        00 23 46.0 +0.5
KVN                                IAmb     IAmb     00 23 49.1
      comp=Z,151nm,1.8s
Z51A  Franklin          23.48  46  P        P        00 23 45.0 -0.3
Z51A  Franklin          23.48  46  P        P        00 23 44.8 -0.5
      baz=236
BGU   Big Grassy Mou    23.52 345  P        P        00 23 45.9  0.0
656A  Willston          23.57  58  P        P        00 23 45.8 -0.5
656A                               IAmb     IAmb     00 23 49.5
      comp=Z,74nm,0.8s
WVT   Waverly           23.58  38  P        P        00 23 44.8 -1.4
WVT                                pmax     pmax
      comp=Z,306nm,2.0s
WVT                                MLR      MLR
      comp=Z,4μm,22.0s
WVT   Waverly           23.58  38  P        P        00 23 44.8 -1.4
WVT   Waverly           23.58  38  P        P        00 23 44.3 -1.9
      baz=226,SNR=12
WVT                                S        S        00 28 01.6 +1.1
      baz=226
WVT   Waverly           23.58  38  P        P        00 23 44.6 -1.7
      baz=226
WVT                                S        S        00 28 02.6 +2.1
      baz=226
FVM   French Village    23.58  31  IAmb     IAmb     00 23 55.2
      comp=Z,52nm,1.1s
FVM   French Village    23.58  31  P        P        00 23 46.6 +0.4
      baz=218,SNR=11
FVM                                S        S        00 28 03.6 +3.1
      baz=218
P38A  Dawn              23.61  23  P        P        00 23 46.3 -0.2
      baz=209,SNR=27
P38A                               S        S        00 28 01.0  0.0
      baz=209
TIGA  Tifton            23.64  52  P        P        00 23 46.8 -0.2
TIGA                               IAmb     IAmb     00 23 51.2
      comp=Z,92nm,1.1s
TIGA  Tifton            23.64  52  P        P        00 23 46.5 -0.4
      baz=242,SNR=10
TIGA  Tifton            23.64  52  P        P        00 23 46.9  0.0
      baz=242,SNR=10
CMB   Columbia Colle    23.67 329  P        P        00 23 46.6 -0.6
CMB                                pmax     pmax
      comp=Z,17nm,1.1s
CMB                                MLR      MLR
      comp=Z,3μm,19.0s
CMB   Columbia Colle    23.67 329  P        P        00 23 46.6 -0.6
T45B  Paducah           23.75  35  P        P        00 23 48.9 +1.0
      baz=223
T45A  Paducah           23.76  35  P        P        00 23 48.3 +0.4
HWUT  Hardware Ranch    23.85 348  P        P        00 23 49.3 +0.2
BGNE  Belgrade          23.87  13  P        P        00 23 49.9 +0.9
BGNE  Belgrade          23.87  13  P        P        00 23 48.7 -0.4
      baz=197
BGNE                               S        S        00 28 08.5 +3.4
      baz=197
CDITO Canoas            23.87 111  IAmb     IAmb     00 23 59.6
      comp=Z,185nm,1.7s
FPAL  Fort Paine        23.91  43  IAmb     IAmb     00 23 52.4
      comp=Z,87nm,0.9s
V48A  Smith Brothers    23.91  40  P        P        00 23 47.5 -2.0
      baz=228,SNR=16
V48A                               S        S        00 28 07.4 +1.5
      baz=228
S44A  Carbondale        23.94  33  IAmb     IAmb     00 24 01.1
      comp=Z,70nm,0.9s
S44A  Carbondale        23.94  33  P        P        00 23 50.3 +0.6
      baz=221,SNR=8.4
S44A                               S        S        00 28 07.2 +0.9
      baz=221
ELK   Elko              23.95 341  P        P        00 23 49.9 -0.2
      comp=Z,1.9nm,0.9s,baz=155,slow=9.7,SNR=16
ELK                                LR       LR       00 32 23.7
      comp=Z,3μm,20.9s,baz=170,slow=35
      comp=Z,1.9nm,0.9s
PAYG  Puerto Ayora      23.96 140  P        P        00 23 51.9 +1.8
PAYG                               IAmb     IAmb     00 23 55.0
      comp=Z,75nm,1.1s
PAYG  Puerto Ayora      23.96 140  IAMs_20  IAMs_20  00 30 37.2
      comp=Z,7μm,21.0s
SIUC  Southern Illin    23.97  33  IAmb     IAmb     00 23 59.1
      comp=Z,53nm,0.8s
N35A  Tabor             24.01  18  P        P        00 23 50.8 +0.5
DWPF  Disney Wildern    24.02  62  P        P        00 23 51.0 +0.4
DWPF                               IAmb     IAmb     00 23 54.5
      comp=Z,133nm,1.2s
DWPF  Disney Wildern    24.02  62  P        P        00 23 50.2 -0.4
      baz=251
P40A  Paris             24.11  26  IAmb     IAmb     00 23 59.8
      comp=Z,110nm,1.2s
P40A  Paris             24.11  26  P        P        00 23 51.1 -0.3
      baz=212,SNR=19
SWET  Sewanee           24.12  42  IAmb     IAmb     00 24 03.1
      comp=Z,43nm,1.0s
SLM   Saint Louis       24.18  30  P        P        00 23 52.4 +0.4
      baz=217
CBCY  The Bluff, Cay    24.23  82  P        P        00 23 52.7  0.0
HVU   Hansel Valley     24.27 346  P        P        00 23 54.8 +1.8
HVU                                pmax     pmax
      comp=Z,37nm,1.1s
HVU   Hansel Valley     24.27 346  P        P        00 23 54.8 +1.8
K22A  Casper            24.32 358  P        P        00 23 55.4 +2.0
K22A                               IAmb     IAmb     00 24 00.3
      comp=Z,52nm,1.0s
K22A  Casper            24.32 358  P        P        00 23 55.0 +1.6
      baz=177
K22A                               S        S        00 28 27.0  +14
      baz=177
BMN   Battle Mountai    24.33 338  IAmb     IAmb     00 24 03.3
      comp=Z,49nm,1.2s
X51A  Calhoun           24.42  44  IAmb     IAmb     00 24 02.8
      comp=Z,42nm,0.8s
X51A  Calhoun           24.42  44  P        P        00 23 52.6 -1.6
      baz=234,SNR=13
X51A                               P        P        00 23 52.6 -1.6
      baz=234,SNR=13
X51A                               S        S        00 28 18.9 +4.8
      baz=234
X51A                               S        S        00 28 18.9 +4.8
      baz=234
CLTN  Cedars of Leba    24.44  40  IAmb     IAmb     00 24 01.8
      comp=Z,114nm,1.2s
W50A  Signal Mountai    24.50  43  P        P        00 23 53.8 -1.2
      baz=232,SNR=62
W50A                               S        S        00 28 15.1 -0.5
      baz=232
456A  Hilliard          24.52  55  P        P        00 23 55.5 +0.4
Y52A  Lilburn           24.55  47  IAmb     IAmb     00 23 56.8
      comp=Z,43nm,0.8s
Y52A  Lilburn           24.55  47  P        P        00 23 54.2 -1.2
      baz=236,SNR=14
Y52A                               P        P        00 23 54.2 -1.2
      baz=236,SNR=14
Y52A                               S        S        00 28 15.3 -1.0
      baz=236
Y52A                               S        S        00 28 15.3 -1.0
      baz=236
PAHR  Pah Rah Range     24.57 333  P        P        00 23 56.1 +0.4
154A  Montrose          24.57  50  P        P        00 23 55.4 -0.2
      baz=240,SNR=18
T47A  Sharon Grove      24.59  37  P        P        00 23 54.8 -1.0
      baz=226,SNR=24
BW06  Boulder Array     24.67 353  IAMs_20  IAMs_20  00 33 46.2
      comp=Z,4μm,19.0s
BW06  Boulder Array     24.67 353  P        P        00 23 57.2 +0.5
      baz=170
PD31  Pinedale Array    24.67 353  P        P        00 23 56.9 +0.2
PDAR  Pinedale Array    24.67 353  P        P        00 23 56.4 -0.3
      comp=Z,4.9nm,0.8s,baz=161,slow=10.0,SNR=20
PDAR                               LR       LR       00 34 06.9
      comp=Z,2μm,20.1s,baz=184,slow=38
      comp=Z,4.9nm,0.8s
255A  Hazlehurst        24.71  52  P        P        00 23 56.2 -0.6
255A                               IAmb     IAmb     00 23 59.3
      comp=Z,74nm,0.9s
255A  Hazlehurst        24.71  52  P        P        00 23 56.7 -0.2
      baz=242
GOGA  Godfrey           24.72  48  P        P        00 23 56.5 -0.5
      baz=238,SNR=76
GOGA                               S        S        00 28 18.0 -1.0
      baz=238
GOGA  Godfrey           24.72  48  P        P        00 23 55.6 -1.4
      baz=238,SNR=76
GOGA                               S        S        00 28 28.1 +9.1
      baz=238
N38A  Joes South For    24.74  22  P        P        00 23 56.8 -0.3
L34A  Svendsen Farm,    24.82  16  P        P        00 23 57.6 -0.2
L34A                               IAmb     IAmb     00 23 59.4
      comp=Z,75nm,0.8s
L34A  Svendsen Farm,    24.82  16  P        P        00 23 57.6 -0.2
      baz=201
AHID  Auburn Hatcher    24.89 350  P        P        00 23 58.8 +0.1
AHID                               IAmb     IAmb     00 24 28.1
      comp=Z,86nm,1.9s
K31A  O'Neill           24.91  12  P        P        00 23 58.4 -0.2
K31A  O'Neill           24.91  12  P        P        00 24 00.0 +1.4
      baz=195
Q44A  Meyer Farm, Va    24.98  31  P        P        00 23 59.9 +0.6
      baz=219,SNR=19
Q44A                               S        S        00 28 25.1 +2.1
      baz=219
MCCM  Marconi Confer    25.02 326  IAMs_20  IAMs_20  00 32 10.9
      comp=Z,5μm,20.0s
U49A  Red Boiling Sp    25.05  40  IAmb     IAmb     00 24 14.6
      comp=Z,80nm,1.5s
U49A  Red Boiling Sp    25.05  40  P        P        00 24 00.1 +0.2
      baz=229,SNR=13
U49A                               S        S        00 28 26.7 +2.4
      baz=229
BEKR  Beckworth         25.13 332  P        P        00 24 00.0 -0.7
CPCT  Cooper Cave       25.17  43  IAmb     IAmb     00 24 04.1
      comp=Z,46nm,0.9s
ECR   Eagle Creek       25.22 350  P        P        00 24 02.5 +0.8
OLIL  Olney             25.32  33  IAmb     IAmb     00 24 19.2
      comp=Z,62nm,0.9s
OLIL  Olney             25.32  33  P        P        00 24 02.7 +0.4
      baz=221,SNR=14
P43A  Skaggs, Pawnee    25.32  30  P        P        00 24 02.7 +0.4
P43A                               IAmb     IAmb     00 24 06.8
      comp=Z,63nm,0.8s
ORV   Oroville          25.40 330  P        P        00 24 03.4 +0.3
ORV                                pmax     pmax
      comp=Z,74nm,1.7s
ORV                                MLR      MLR
      comp=Z,3μm,18.0s
ORV   Oroville          25.40 330  P        P        00 24 03.4 +0.3
ORV                                IAmb     IAmb     00 24 29.5
      comp=Z,74nm,1.6s
REDW  Red Top Meadow    25.44 351  IAmb     IAmb     00 24 16.0
      comp=Z,67nm,1.1s
GDXM  Geysers           25.47 327  P        P        00 24 03.8  0.0
V51A  Loudon            25.49  43  P        P        00 24 02.8 -1.1
      baz=232,SNR=30
V51A                               S        S        00 28 32.7 +1.4
      baz=232
SNOW  Snow King Moun    25.52 351  IAmb     IAmb     00 24 16.7
      comp=Z,72nm,1.1s
TPAW  Teton Pass        25.58 351  IAmb     IAmb     00 24 25.4
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	comp=Z,88nm,1.2s						
N41A	Harden Midland	25.60	26	P	P	00 24 04.4	-0.4
	baz=214,SNR=10						
LOHW	Long Hollow	25.64	351	IAmb	IAmb	00 24 09.7	
	comp=Z,37nm,0.9s						
SCIA	State Center	25.73	21	P	P	00 24 06.7	+0.7
SCIA	State Center	25.73	21	P	P	00 24 05.8	-0.2
	baz=208						
HOPS	Hopland Field	25.75	327	IAMs_20	IAMs_20	00 32 47.2	
	comp=Z,8µm,20.0s						
TKL	Tuckaleechee C	25.78	44	P	P	00 24 05.7	-0.8
	comp=Z,48nm,0.8s,baz=208,slow=10,SNR=48						
	comp=Z,48nm,0.8s						
TKL	Tuckaleechee C	25.78	44	IAmb	IAmb	00 24 08.8	
	comp=Z,67nm,0.9s						
TKL	Tuckaleechee C	25.78	44	P	P	00 24 06.6	0.0
	baz=234,SNR=26						
RSSD	Black Hills	25.79	2	P	P	00 24 07.7	+0.9
RSSD				pmax	pmax		
	comp=Z,25nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,4µm,21.0s						
RSSD	Black Hills	25.79	2	P	P	00 24 07.7	+0.9
RSSD	Black Hills	25.79	2	P	P	00 24 09.2	+2.4
	baz=183,SNR=11						
RSSD	Black Hills	25.79	2	P	P	00 24 07.4	+0.6
	baz=183						
RSSD				S	S	00 28 40.1	+3.9
	baz=183						
MOOW	Moose Ponds	25.80	351	P	P	00 24 06.9	0.0
MOOW				IAMs_20	IAMs_20	00 34 00.9	
	comp=Z,4µm,18.0s						
T50A	Nancy	25.95	40	IAmb	IAmb	00 24 11.3	
	comp=Z,51nm,0.8s						
T50A	Nancy	25.95	40	P	P	00 24 07.4	-0.7
	baz=230						
T50A				P	P	00 24 07.4	-0.7
	baz=230						
T50A				S	S	00 28 40.1	+1.5
	baz=230						
T50A				S	S	00 28 40.1	+1.5
	baz=230						
BG3	Lake Jocassee	25.96	46	P	P	00 24 08.4	+0.2
BG3				IAmb	IAmb	00 24 13.5	
	comp=Z,81nm,1.0s						
CASEE	Lake Jocassee	25.96	46	P	P	00 24 08.7	+0.5
	baz=236,SNR=26						
V52A	Sevierville	26.00	43	P	P	00 24 07.8	-0.8
V52A				IAmb	IAmb	00 24 11.0	
	comp=Z,43nm,0.9s						
V52A	Sevierville	26.00	43	P	P	00 24 07.8	-0.8
	baz=234						
V52A				S	S	00 28 41.2	+1.8
	baz=234						
HODGE	Hodges	26.01	48	IAmb	IAmb	00 24 12.1	
	comp=Z,63nm,0.8s						
HODGE	Hodges	26.01	48	P	P	00 24 08.8	+0.2
	baz=238,SNR=30						
HODGE				S	S	00 28 40.8	+1.3
	baz=238						
HAW	Hawthorne Fire	26.03	50	P	P	00 24 09.2	+0.4
	baz=241,SNR=10						
HAW				S	S	00 28 44.2	+4.4
	baz=241						
FLWY	Flagg Ranch	26.12	351	P	P	00 24 10.1	+0.3
FLWY				IAmb	IAmb	00 24 23.5	
	comp=Z,75nm,1.4s						
HDIL	Hopedale	26.16	29	IAmb	IAmb	00 24 15.1	
	comp=Z,52nm,0.9s						
HDIL	Hopedale	26.16	29	P	P	00 24 09.2	-0.7
	baz=217						
HDIL				S	S	00 28 49.0	+7.4
	baz=217						
HDIL	Hopedale	26.16	29	P	P	00 24 09.0	-0.8
	baz=217						
O44A	Mansfield	26.22	30	P	P	00 24 09.9	-0.6
O44A				IAmb	IAmb	00 24 19.5	
	comp=Z,33nm,0.7s						
YPP	Pitchstone Pla	26.32	351	P	P	00 24 12.4	+0.8
HLID	Hailey	26.34	345	P	P	00 24 12.1	+0.3
HLID				IAMs_20	IAMs_20	00 34 06.4	
	comp=Z,3µm,19.0s						
HLID	Hailey	26.34	345	P	P	00 24 12.3	+0.6
	baz=160						
HLID				S	S	00 28 53.2	+8.3
	baz=160						
H17A	Grant Village	26.41	352	P	P	00 24 12.8	+0.4
H17A	Grant Village	26.41	352	P	P	00 24 14.2	+1.8
	baz=169						
H17A				S	S	00 28 51.5	+5.4
	baz=169						
V53A	Saluda	26.42	45	IAmb	IAmb	00 24 20.9	
	comp=Z,31nm,0.8s						
V53A	Saluda	26.42	45	P	P	00 24 12.4	0.0
	baz=235,SNR=15						
V53A				P	P	00 24 12.4	0.0
	baz=235,SNR=15						
ECSD	EROS Data Cent	26.43	14	P	P	00 24 12.4	0.0
ECSD	EROS Data Cent	26.43	14	P	P	00 24 12.8	+0.4
	baz=199						
ECSD	EROS Data Cent	26.43	14	P	P	00 24 12.6	+0.2
	baz=199						
ECSD				S	S	00 28 52.7	+6.8
	baz=199						
P46A	Rosedale	26.44	33	IAmb	IAmb	00 24 39.8	
	comp=Z,43nm,0.9s						
P46A	Rosedale	26.44	33	P	P	00 24 13.0	+0.5
	baz=222,SNR=8.4						
TZTN	Tazewell	26.46	42	IAmb	IAmb	00 24 21.0	
	comp=Z,74nm,1.2s						
TZTN	Tazewell	26.46	42	P	P	00 24 12.2	-0.5
	baz=232,SNR=15						
TZTN				S	S	00 28 48.5	+2.0
	baz=232						
TZTN	Tazewell	26.46	42	P	P	00 24 12.3	-0.5
	baz=232,SNR=15						
TZTN				S	S	00 28 48.6	+2.0
	baz=232						
BLO	Bloomington	26.47	34	P	P	00 24 13.4	+0.7
BLO				pmax	pmax		
	comp=Z,46nm,0.7s						
BLO	Bloomington	26.47	34	P	P	00 24 13.4	+0.7
BLO				IAmb	IAmb	00 24 16.8	
	comp=Z,46nm,0.7s						
K38A	Parkersburg	26.54	21	P	P	00 24 12.9	-0.4
K38A				IAmb	IAmb	00 24 32.0	
	comp=Z,50nm,0.9s						
LKWY	Lake	26.55	352	P	P	00 24 15.4	+1.7
LKWY				pmax	pmax		
	comp=Z,22nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,7µm,18.0s						
LKWY	Lake	26.55	352	P	P	00 24 15.4	+1.7
LKWY				IAMs_20	IAMs_20	00 34 03.9	
	comp=Z,7µm,18.0s						
MFID	Camas Ranch	26.58	343	P	P	00 24 14.2	+0.4
L40A	Anamosa	26.59	24	IAmb	IAmb	00 24 23.3	
	comp=Z,40nm,0.8s						
L40A	Anamosa	26.59	24	P	P	00 24 14.1	+0.2
	baz=211,SNR=8.5						
WVOR	Wild Horse Val	26.60	338	P	P	00 24 14.1	+0.1
WVOR				pmax	pmax		
	comp=Z,20nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,3µm,20.0s						
WVOR	Wild Horse Val	26.60	338	P	P	00 24 14.1	+0.1
R49A	Shelbyville	26.60	37	P	P	00 24 13.8	-0.1
R49A	Shelbyville	26.60	37	P	P	00 24 14.6	+0.7
	baz=227						
R49A				P	P	00 24 14.6	+0.7
	baz=227						
R49A				S	S	00 28 52.3	+3.6
	baz=227						
R49A				S	S	00 28 52.3	+3.6
	baz=227						
PAULI	Pauline	26.63	47	P	P	00 24 14.7	+0.4
PAULI	Pauline	26.63	47	P	P	00 24 14.4	+0.1
	baz=238						
SUSD	Miller	26.63	10	P	P	00 24 16.9	+2.7
	baz=194						
YMR	Madison River	26.73	351	P	P	00 24 14.2	-1.1
YNR	Norris Junctio	26.73	352	P	P	00 24 15.8	+0.4
JSC	Jenkinsville	26.74	49	P	P	00 24 14.6	-0.7
JSC				pmax	pmax		
	comp=Z,54nm,1.0s						
JSC	Jenkinsville	26.74	49	P	P	00 24 14.6	-0.7
JSC				IAmb	IAmb	00 24 19.7	
	comp=Z,54nm,1.0s						
JSC	Jenkinsville	26.74	49	P	P	00 24 15.5	+0.2
	baz=240,SNR=12						
MOD	Modoc Plateau	26.79	335	P	P	00 24 15.2	-0.6
BCYI	Bear Canyon	26.82	347	P	P	00 24 15.7	-0.4
YHH	Holmes Hill	26.83	351	P	P	00 24 16.1	-0.2
YHL	Hebgen Lake	26.94	351	P	P	00 24 17.8	+0.5
QLMT	Earthquake Lak	26.96	350	P	P	00 24 18.5	+1.1
RLMT	Red Lodge	26.97	354	P	P	00 24 16.9	-0.5
RLMT	Red Lodge	26.97	354	P	P	00 24 18.8	+1.3
	baz=172						
RLMT				S	S	00 28 57.1	+2.4
	baz=172						
NHSC	New Hope	26.97	52	P	P	00 24 17.4	+0.1
NHSC	New Hope	26.97	52	P	P	00 24 15.4	-1.9
	baz=243,SNR=5.9						
CSU	Charleston Sou	27.00	52	P	P	00 24 17.6	+0.1
SFIN	Lafayette	27.07	32	IAmb	IAmb	00 24 20.5	
	comp=Z,46nm,0.8s						
SFIN	Lafayette	27.07	32	P	P	00 24 19.7	+1.6
	baz=221,SNR=7.5						
SFIN	Lafayette	27.07	32	P	P	00 24 16.7	-1.4
	baz=221,SNR=7.5						
SFIN				S	S	00 29 00.8	+4.8
	baz=221						
R50A	Paris	27.09	38	P	P	00 24 18.7	+0.4
	baz=229,SNR=7.7						
R50A				P	P	00 24 18.7	+0.4
	baz=229,SNR=7.7						
R50A				S	S	00 28 58.3	+1.9
	baz=229						
R50A				S	S	00 28 58.3	+1.9
	baz=229						
S51A	Beattyville	27.11	40	IAmb	IAmb	00 24 21.9	
	comp=Z,44nm,0.8s						
S51A	Beattyville	27.11	40	P	P	00 24 18.2	-0.4
	baz=231,SNR=13						
S51A				P	P	00 24 18.2	-0.4
	baz=231,SNR=13						
KMSC	Kings Mountain	27.14	47	IAmb	IAmb	00 24 23.6	
	comp=Z,61nm,0.8s						
KMSC	Kings Mountain	27.14	47	P	P	00 24 18.9	+0.1
	baz=238,SNR=26						
KMSC	Kings Mountain	27.14	47	P	P	00 24 19.2	+0.3
	baz=238,SNR=26						
KMSC				S	S	00 28 59.7	+2.4
	baz=238						
L42A	Oliver, Polo	27.17	26	IAmb	IAmb	00 24 26.1	
	comp=Z,45nm,0.9s						
L42A	Oliver, Polo	27.17	26	P	P	00 24 18.8	-0.2
	baz=214,SNR=10.0						
MCMT	McKenzie Canyo	27.21	348	P	P	00 24 20.4	+0.8
Y57A	Sumter	27.24	50	P	P	00 24 19.9	+0.2
Y57A				IAmb	IAmb	00 24 22.5	
	comp=Z,51nm,1.1s						
P48A	Milroy	27.27	35	P	P	00 24 20.4	+0.4
P48A				IAmb	IAmb	00 25 01.0	
	comp=Z,54nm,1.6s						
J08A	Circle Bar Ran	27.35	339	P	P	00 24 20.1	-0.8
M44A	Midewin, Midew	27.39	29	P	P	00 24 21.5	+0.5
BIRD	Birdtown, Kers	27.50	49	P	P	00 24 22.1	0.0
I37A	Lemond, Waseca	27.56	19	IAmb	IAmb	00 24 24.0	
	comp=Z,36nm,0.7s						
I37B	Waseca	27.56	19	P	P	00 24 21.9	-0.6
	baz=205,SNR=5.9						
U54A	Nelsons Funny	27.57	44	IAmb	IAmb	00 24 27.3	
	comp=Z,46nm,0.8s						
U54A	Nelsons Funny	27.57	44	P	P	00 24 22.2	-0.6
	baz=235,SNR=12						
U54A				P	P	00 24 22.2	-0.6
	baz=235,SNR=12						
V55A	Taylorsville	27.60	46	S	S	00 29 06.5	+1.9
	baz=237						
V55A				S	S	00 29 06.5	+1.9
	baz=237						
JCC	Jacoby Creek,	27.61	328	IAMs_20	IAMs_20	00 33 58.2	
	comp=Z,6µm,20.0s						
GCMT	Greycliff	27.67	353	P	P	00 24 23.4	-0.3
DLMT	Dillon	27.67	349	P	P	00 24 24.2	+0.5
DLMT				IAMs_20	IAMs_20	00 34 50.6	
	comp=Z,4µm,19.0s						
YBH	Yreka Blue Hor	27.68	331	P	P	00 24 25.3	+1.5
	comp=Z,2.5nm,0.7s,baz=190,slow=5.5,SNR=4.6						
YBH				LR	LR	00 35 01.0	
	comp=Z,3µm,19.7s,baz=155,slow=36						
	comp=Z,2.5nm,0.7s						
YBH	Yreka Blue Hor	27.68	331	IAMs_20	IAMs_20	00 34 40.1	
	comp=Z,3µm,20.0s						
JFWS	Jewell Farm	27.70	24	IAmb	IAmb	00 24 34.7	
	comp=Z,43nm,0.7s						
JFWS	Jewell Farm	27.70	24	IAMs_20	IAMs_20	00 35 44.9	
	comp=Z,6µm,20.0s						
JFWS	Jewell Farm	27.70	24	P	P	00 24 24.3	+0.5
	baz=212,SNR=8.1						
JFWS	Jewell Farm	27.70	24	P	P	00 24 23.9	+0.1
	baz=212,SNR=8.1						
JFWS				S	S	00 29 08.6	+2.6
	baz=212						
P49A	Miami Univ. Ec	27.71	36	IAmb	IAmb	00 24 31.4	
	comp=Z,45nm,0.9s						
P49A				IAMs_20	IAMs_20	00 36 48.8	
	comp=Z,6µm,18.0s						
P49A	Miami Univ. Ec	27.71	36	P	P	00 24 23.8	-0.1
	baz=226,SNR=13						
P49A	Miami Univ. Ec	27.71	36	P	P	00 24 23.1	-0.9
	baz=226,SNR=13						
P49A				S	S	00 29 11.6	+5.4
	baz=226						
K05A	Summer Lake	27.71	335	P	P	00 24 24.1	0.0
K05A				IAmb	IAmb	00 25 13.5	
	comp=Z,55nm,1.5s						
Y58A	Scranton	27.72	51	P	P	00 24 24.1	+0.1
Y58A				IAmb	IAmb	00 24 29.0	
	comp=Z,43nm,0.8s						
BOZ	Bozeman (W)	27.74	351	P	P	00 24 24.4	+0.1
BOZ				pmax	pmax		
	comp=Z,35nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,4µm,18.0s						
BOZ	Bozeman (W)	27.74	351	P	P	00 24 24.4	+0.1
BOZ				IAMs_20	IAMs_20	00 35 07.3	
	comp=Z,4µm,18.0s						
BOZ	Bozeman (W)	27.74	351	P	P	00 24 25.0	+0.7
	baz=167,SNR=16						
BOZ				S	S	00 29 10.4	+3.5
	baz=167						
L04D	Klamath Falls	27.89	332	P	P	00 24 26.1	+0.4
L04D	Klamath Falls	27.89	332	P	P	00 24 26.4	+0.8
	baz=144						
O48B	Farmland	27.98	34	P	P	00 24 25.6	-0.8
	baz=224,SNR=11						
O48B				S	S	00 29 14.5	+4.0
	baz=224						
O48B	Farmland	27.98	34	P	P	00 24 25.5	-0.8
	baz=224,SNR=11						
O48B				S	S	00 29 14.6	+4.1
	baz=224						
L44A	Lake County Fo	28.07	28	S	S	00 29 14.3	+2.4
	baz=217						
W57A	Gilead	28.08	48	P	P	00 24 27.0	-0.3
W57A				IAmb	IAmb	00 24 30.3	
	comp=Z,39nm,1.0s						
W57A	Gilead	28.08	48	P	P	00 24 27.6	+0.3
	baz=240,SNR=8.6						
W57A				P	P	00 24 27.6	+0.3
	baz=240,SNR=8.6						
LRM	Limekiln Ridge	28.09	349	P	P	00 24 27.8	+0.3
N47A	Urbana	28.15	33	P	P	00 24 27.9	+0.1
N47A				IAmb	IAmb	00 24 35.1	
	comp=Z,44nm,1.0s						
N47A	Urbana	28.15	33	P	P	00 24 29.0	+1.1
	baz=223						
N47A				P	P	00 24 29.0	+1.1
	baz=223						
Q51A	Peebles	28.15	38	P	P	00 24 27.4	-0.5
Q51A				IAmb	IAmb	00 24 36.0	
	comp=Z,72nm,1.2s						
Q51A	Peebles	28.15	38	P	P	00 24 27.6	-0.3
	baz=229,SNR=8.3						
Q51A				P	P	00 24 27.6	-0.3
	baz=229,SNR=8.3						
PLID	Pearl Lake	28.17	344	P	P	00 24 28.4	+0.1
PLID				IAMs_20	IAMs_20	00 36 56.8	
	comp=Z,4µm,19.0s						
X58A	Rowland	28.26	50	P	P	00 24 28.4	-0.5
X58A				IAmb	IAmb	00 24 31.8	
	comp=Z,44nm,1.1s						
KSXB	Camp Six Broad	28.31	330	pP	P	00 24 30.1	+0.8
K43A	Burlington	28.31	27	P	P	00 24 30.8	+1.6
K43A				IAmb	IAmb	00 25 17.2	
	comp=Z,42nm,1.1s						
J05D	Fort Rock, OR	28.32	335	P	P	00 24 30.5	+1.0
	baz=147						
BMO	Blue Mountains	28.32	342	IAMs_20	IAMs_20	00 36 23.8	
	comp=Z,3µm,18.0s						
LAO	LASA Array	28.34	359	IAMs_20	IAMs_20	00 36 09.4	
	comp=Z,6µm,21.0s						
LAO	LASA Array	28.34	359	P	P	00 24 28.5	-1.1
	baz=178						
O49A	Covington	28.38	35	IAmb	IAmb	00 24 31.9	
	comp=Z,32nm,0.9s						
O49A	Covington	28.38	35	P	P	00 24 29.4	-0.4
	baz=226,SNR=6.4						
O49A				P	P	00 24 29.4	-0.4
	baz=226,SNR=6.4						
I40A	Norwalk	28.39	23	P	P	00 24 29.4	-0.5
	baz=211,SNR=7.8						
U56A	King	28.43	46	P	P	00 24 29.9	-0.5
U56A				IAmb	IAmb	00 24 33.1	
	comp=Z,54nm,1.1s						
U56A	King	28.43	46	P	P	00 24 31.0	+0.6
	baz=238,SNR=8.2						
U56A				P	P	00 24 31.0	+0.6
	baz=238,SNR=8.2						
E28A	Huff	28.48	7	P	P	00 24 29.4	-1.3
E28A				IAmb	IAmb	00 24 47.2	
	comp=Z,24nm,0.8s						
HUMO	Hull Mountain	28.49	332	IAMs_20	IAMs_20	00 35 28.2	
	comp=Z,6µm,20.0s						
F33A	5 Mile Ranch,	28.50	13	P	P	00 24 30.1	-0.8
F33A				IAmb	IAmb	00 25 19.7	
	comp=Z,48nm,1.3s						
R53A	Hurricane	28.56	41	P	P	00 24 31.5	0.0
	baz=232,SNR=18						
R53A				P	P	00 24 31.5	0.0
	baz=232,SNR=18						
P51A	Williamsport	28.62	38	P	P	00 24 31.5	-0.5
P51A				IAmb	IAmb	00 24 35.6	
	comp=Z,24nm,0.8s						
P51A	Williamsport	28.62	38	P	P	00 24 32.0	0.0
	baz=229,SNR=5.7						
P51A				P	P	00 24 32.0	0.0
	baz=229,SNR=5.7						
PINE	Pine Mountain	28.63	336	P	P	00 24 31.2	-1.1
J04D	Umpqua Nationa	28.64	334	P	P	00 24 31.3	-1.1
J04D				IAmb	IAmb	00 24 36.4	
	comp=Z,36nm,0.9s						
J04D				IAMs_20	IAMs_20	00 35 30.2	
	comp=Z,3µm,18.0s						
J04D	Umpqua Nationa	28.64	334	P	P	00 24 30.1	-2.3
	baz=145						
S54A	Dingess, Beckl	28.64	42	P	P	00 24 30.9	-1.4
S54A				IAmb	IAmb	00 24 35.7	
	comp=Z,39nm,1.1s						
L46A	Eue Claire	28.70	30	P	P	00 24 31.7	-1.0
L46A				IAmb	IAmb	00 24 40.3	
	comp=Z,49nm,1.2s						
Q52A	Bidwell	28.76	39	P	P	00 24 33.2	0.0
	baz=231,SNR=10						
Q52A				P	P	00 24 33.2	0.0
	baz=231,SNR=10						
SPMN	Marine on St.	28.84	19	IAmb	IAmb	00 25 25.6	
	comp=Z,28nm,0.9s						
SPMN	Marine on St.	28.84	19	P	P	00 24 31.9	-2.0
	baz=205						
HRY	Holter Researc	28.86	351	P	P	00 24 34.6	+0.4
K02D	Willamette Mer	28.88	331	P	P	00 24 36.7	+2.3
	baz=142						
N49A	Columbus Grove	28.97	34	IAmb	IAmb	00 24 37.4	
	comp=Z,43nm,1.1s						
N49A	Columbus Grove	28.97	34	P	P	00 24 35.1	0.0
	baz=225,SNR=7.0						
N49A				P	P	00 24 35.1	0.0
	baz=225,SNR=7.0						
V58A	Windy Hill, Pi	29.02	48	IAmb	IAmb	00 24 38.4	
	comp=Z,29nm,0.9s						
V58A	Windy Hill, Pi	29.02	48	P	P	00 24 35.4	-0.2
	baz=240,SNR=8.1						
V58A				P	P	00 24 35.4	-0.2
	baz=240,SNR=8.1						
I42A	Draeger Farm,	29.05	25	P	P	00 24 35.4	-0.3
I42A	Draeger Farm,	29.05	25	P	P	00 24 35.5	-0.3
	baz=214						
ACSO	Alum Creek Sta	29.16	37	P	P	00 24 36.3	-0.5
ACSO				IAMs_20	IAMs_20	00 37 53.3	
	comp=Z,5µm,19.0s						
ACSO	Alum Creek Sta	29.16	37	P	P	00 24 36.2	-0.6
	baz=228						
F36A	Milaca	29.21	17	IAmb	IAmb	00 25 26.9	
	comp=Z,30nm,1.1s						
F36A	Milaca	29.21	17	P	P	00 24 36.1	-1.0
	baz=204,SNR=9.1						
G08A	Pilot Rock	29.23	340	P	P	00 24 37.6	+0.1
I05D	Terrebonne, OR	29.24	336	P	P	00 24 38.6	+1.0
	baz=148						
P52A	Corning	29.26	39	IAmb	IAmb	00 24 39.6	
	comp=Z,98nm,1.8s						
P52A				IAMs_20	IAMs_20	00 37 27.0	
	comp=Z,3µm,22.0s						
P52A	Corning	29.26	39	P	P	00 24 37.4	-0.3
	baz=230,SNR=6.8						
F10A	Beach Ranch, E	29.32	343	P	P	00 24 38.2	-0.1
KEBM	Edson Butte	29.33	331	P	P	00 24 39.3	+0.9
MSO	Missoula	29.34	348	IAmb	IAmb	00 25 00.1	
	comp=Z,35nm,1.1s						
MSO				IAMs_20	IAMs_20	00 35 59.7	
	comp=Z,4µm,20.0s						
MSO	Missoula	29.34	348	P	P	00 24 39.9	+1.4
	baz=163,SNR=30						
MSO				S	S	00 29 34.5	+2.5
	baz=163						
J01E	Myrtle Point	29.37	332	P	P	00 24 36.6	-2.0
J01E				IAMs_20	IAMs_20	00 35 40.6	
	comp=Z,3µm,21.0s						
T57A	Hurt	29.55	46	P	P	00 24 40.3	0.0
T57A				IAmb	IAmb	00 24 42.7	
	comp=Z,50nm,1.1s						
T57A	Hurt	29.55	46	P	P	00 24 40.4	+0.1
	baz=238,SNR=10						
T57A				P	P	00 24 40.4	+0.1
	baz=238,SNR=10						
L48A	N Adams	29.57	33	P	P	00 24 40.1	-0.4
L48A				IAmb	IAmb	00 24 44.1	
	comp=Z,29nm,0.8s						
P53A	Whipple	29.61	39	IAmb	IAmb	00 24 42.9	
	comp=Z,38nm,0.9s						
P53A	Whipple	29.61	39	P	P	00 24 40.5	-0.4
	baz=231,SNR=9.1						
P53A				P	P	00 24 40.5	-0.4
	baz=231,SNR=9.1						
CNNC	Cliffs of the	29.63	50	IAMs_20	IAMs_20	00 38 29.5	
	comp=Z,4µm,20.0s						
Q54A	Coxs Mills	29.65	41	P	P	00 24 40.9	-0.3
R55A	Marlinton	29.69	43	P	P	00 24 41.1	-0.5
R55A				IAmb	IAmb	00 24 50.9	
	comp=Z,110nm,1.8s						
R55A	Marlinton	29.69	43	P	P	00 24 41.1	-0.5
	baz=235						
R55A				P	P	00 24 41.1	-0.5
	baz=235						
G40A	Rib Lake	29.73	22	P	P	00 24 41.8	0.0
O52A	Adamsville	29.75	38	P	P	00 24 41.5	-0.6
O52A	Adamsville	29.75	38	P	P	00 24 41.5	-0.6
	baz=230,SNR=6.5						
O52A				P	P	00 24 41.5	-0.6
	baz=230,SNR=6.5						
BUCK	Buck Mountain	29.79	334	P	P	00 24 42.8	+0.4
H04A	Detroit Lake	29.86	335	P	P	00 24 43.4	+0.3
EGMT	Eagleton	29.89	354	P	P	00 24 43.8	+0.5
EGMT	Eagleton	29.89	354	P	P	00 24 43.9	+0.6
	baz=172						
M50A	Fremont	29.93	35	P	P	00 24 43.1	-0.5
	baz=226,SNR=10						
M50A				P	P	00 24 43.1	-0.5
	baz=226,SNR=10						
H04D	Lebanon	29.95	335	IAMs_20	IAMs_20	00 36 39.0	
	comp=Z,4µm,19.0s						
N51A	Ashland	29.97	36	P	P	00 24 42.9	-1.0
N51A				IAmb	IAmb	00 24 45.5	
	comp=Z,43nm,0.9s						
N51A	Ashland	29.97	36	P	P	00 24 43.7	-0.2
	baz=228						
N51A				P	P	00 24 43.7	-0.2
	baz=228						

H43A	Windswept, Lux	29.99	26	P	P	00 24 42.1	-1.9
H43A				IAmb	IAmb	00 25 36.8	
	comp=Z,35nm,1.1s						
DGMT	Dagmar	30.13	2	P	P	00 24 45.9	+0.5
DGMT				IAmb	IAmb	00 25 02.2	
	comp=Z,27nm,1.0s						
S57A	Dark Hollow, R	30.16	45	P	P	00 24 45.3	-0.4
S57A	Dark Hollow, R	30.16	45	P	P	00 24 45.7	0.0
	baz=237,SNR=8.7						
S57A				P	P	00 24 45.7	0.0
	baz=237,SNR=8.7						
O53A	New Philadelph	30.20	38	P	P	00 24 45.1	-0.9
O53A	New Philadelph	30.20	38	P	P	00 24 44.9	-1.1
	baz=231						
AAM	Ann Arbor	30.23	33	P	P	00 24 45.4	-0.9
AAM				pmax	pmax		
	comp=Z,47nm,0.8s						
AAM				MLR	MLR		
	comp=Z,6µm,18.0s						
AAM	Ann Arbor	30.23	33	P	P	00 24 45.4	-0.9
AAM				IAmb	IAmb	00 24 54.2	
	comp=Z,47nm,0.8s						
AAM	Ann Arbor	30.23	33	P	P	00 24 46.0	-0.3
	baz=224						
U59A	Littleton	30.23	48	P	P	00 24 45.5	-0.9
U59A				IAmb	IAmb	00 25 03.1	
	comp=Z,42nm,1.5s						
U59A	Littleton	30.23	48	P	P	00 24 45.7	-0.6
	baz=241						
U59A				P	P	00 24 45.7	-0.6
	baz=241						
COR	Corvallis	30.23	334	IAMs_20	IAMs_20	00 36 50.5	
	comp=Z,6µm,19.0s						
JTMT	Jette	30.29	348		P	00 24 46.0	-0.8
J47A	Sunmer	30.34	30	P	P	00 24 46.3	-0.9
SJCC	San Jacinto, C	30.39	102	P	P	00 24 48.1	0.0
SJCC				IAmb	IAmb	00 24 52.2	
	comp=Z,38nm,1.1s						
SJCC	San Jacinto, C	30.39	102	*e*P	P	00 24 50.7	+2.6
HAWA	Hanford	30.39	340	P	P	00 24 49.0	+1.4
HAWA				IAMs_20	IAMs_20	00 36 38.7	
	comp=Z,3µm,19.0s						
E38A	The Farm, Brul	30.46	19	P	P	00 24 48.9	+0.7
E38A				IAmb	IAmb	00 25 46.7	
	comp=Z,44nm,1.3s						
F05D	White Salmon	30.60	338	P	P	00 24 50.1	+0.6
F05D				IAmb	IAmb	00 24 59.5	
	comp=Z,31nm,1.3s						
F05D	White Salmon	30.60	338	P	P	00 24 51.5	+2.0
	baz=149						
O54A	Avella	30.66	39	IAmb	IAmb	00 24 51.8	
	comp=Z,76nm,1.5s						
O54A	Avella	30.66	39	P	P	00 24 49.7	-0.4
	baz=232,SNR=5.3						
O54A				P	P	00 24 49.7	-0.4
	baz=232,SNR=5.3						
T59A	Double "B" Far	30.70	47	P	P	00 24 50.8	+0.3
T59A				IAmb	IAmb	00 24 55.2	
	comp=Z,75nm,1.4s						
T59A	Double "B" Far	30.70	47	P	P	00 24 51.3	+0.8
	baz=240,SNR=8.4						
T59A				P	P	00 24 51.3	+0.8
	baz=240,SNR=8.4						
Q56A	Snyder Ridge,	30.72	42	IAmb	IAmb	00 24 52.4	
	comp=Z,26nm,0.9s						
G03D	McMinnville, O	30.73	335	IAMs_20	IAMs_20	00 37 09.6	
	comp=Z,5µm,18.0s						
N53A	Lisbon	30.77	38	IAmb	IAmb	00 24 52.7	
	comp=Z,96nm,1.9s						
COWI	Conover	30.83	22	IAmb	IAmb	00 24 54.9	
	comp=Z,29nm,0.8s						
COWI				IAMs_20	IAMs_20	00 36 11.7	
	comp=Z,4µm,22.0s						
UREC	San Jos de Ur	30.83	106	*e*P	P	00 24 53.4	+1.6
JSRW	J. Sargeant Re	30.85	46	P	P	00 24 51.5	-0.2
AGMN	Agassiz Nation	30.93	12	IAmb	IAmb	00 24 57.2	
	comp=Z,50nm,1.1s						
AGMN	Agassiz Nation	30.93	12	P	P	00 24 53.1	+0.8
	baz=198,SNR=9.3						
AGMN	Agassiz Nation	30.93	12	P	P	00 24 52.6	+0.3
	baz=198,SNR=9.3						
M52A	Chesterland	30.95	36	P	P	00 24 51.4	-1.3
M52A				IAmb	IAmb	00 24 56.9	
	comp=Z,35nm,1.0s						
R58B	Mineral	30.99	45	P	P	00 24 52.1	-0.9
R58B				IAmb	IAmb	00 24 55.8	
	comp=Z,60nm,1.7s						
F04A	Amboy	31.00	337	P	P	00 24 52.8	-0.2
F04A				IAmb	IAmb	00 25 21.8	
	comp=Z,32nm,1.4s						
K50A	Casco	31.11	33	P	P	00 24 53.3	-0.7
CBOC	Ciudad Bolivar	31.17	110	*e*P	P	00 24 57.8	+2.8
M53A	WI Miller and	31.27	37	P	P	00 24 54.8	-0.7
M53A				IAmb	IAmb	00 24 56.5	
	comp=Z,26nm,1.1s						
M53A				IAMs_20	IAMs_20	00 38 51.2	
	comp=Z,4µm,18.0s						
M53A	WI Miller and	31.27	37	P	P	00 24 55.7	+0.2
	baz=230						
C09A	Chrisman Ranch	31.29	343	P	P	00 24 55.4	-0.2
G45A	Suttons Bay	31.34	27	P	P	00 24 55.2	-0.8
NEW	Newport	31.41	345	P	P	00 24 57.7	+1.0
	comp=Z,6.9nm,0.9s,baz=160,slow=7.2,SNR=12						
NEW				LR	LR	00 37 26.1	
	comp=Z,3µm,19.0s,baz=160,slow=36						
	comp=Z,6.9nm,0.9s						
NEW	Newport	31.41	345	P	P	00 24 56.9	+0.2
NEW				pmax	pmax		
	comp=Z,14nm,1.1s						
NEW				MLR	MLR		
	comp=Z,3µm,18.0s						
NEW	Newport	31.41	345	P	P	00 24 56.9	+0.2
NEW	Newport	31.41	345	IAMs_20	IAMs_20	00 37 15.4	
	comp=Z,3µm,18.0s						
NEW	Newport	31.41	345	P	P	00 24 57.9	+1.2
	baz=158,SNR=9.6						
NEW				S	S	00 30 07.8	+3.5
	baz=158						
CBN	Corbin Frederi	31.45	45	P	P	00 24 58.1	+0.9
CBN	Corbin Frederi	31.45	45	P	P	00 24 58.0	+0.9
	baz=239						
HELC	Santa Helena	31.46	109	*e*P	P	00 25 00.8	+3.0
B35A	Bob, Littlefor	31.46	15	P	P	00 24 56.9	-0.2
WALA	Waterton Lakes	31.48	349	P	P	00 24 57.9	+0.6
WALA				IAmb	IAmb	00 25 08.6	
	comp=Z,34nm,1.4s						
LTY	Liberty	31.52	340	P	P	00 24 58.1	+0.4
LTY				IAmb	IAmb	00 25 27.5	
	comp=Z,31nm,1.2s						
E04D	Cinebar	31.58	337	IAMs_20	IAMs_20	00 37 36.0	
	comp=Z,4µm,21.0s						
E04D	Cinebar	31.58	337	P	P	00 24 59.6	+1.5
	baz=148						
GLMI	Grayling	31.64	29	P	P	00 24 58.6	-0.1
GLMI	Grayling	31.64	29	P	P	00 24 58.5	-0.1
	baz=220						
EYMN	Ely	31.68	18	P	P	00 24 59.0	-0.1
	baz=206,SNR=9.1						
EYMN	Ely	31.68	18	P	P	00 24 58.2	-0.8
	baz=206,SNR=9.1						
ALLY	Alegheny Colle	31.71	37	P	P	00 24 58.9	-0.5
P57A	Homestead Farm	31.72	43	P	P	00 24 59.5	+0.1
P57A				IAmb	IAmb	00 25 05.4	
	comp=Z,48nm,1.4s						
YOTC	Yotoco, Valle	31.73	113	*e*P	P	00 25 01.2	+1.2
SMLC	San Martn de	31.79	103	*e*P	P	00 25 01.0	+0.7
I49A	Point Hope	31.83	32	P	P	00 25 00.3	-0.1
I49A				IAmb	IAmb	00 25 08.3	
	comp=Z,39nm,0.9s						
D41A	Chassel	31.85	22	P	P	00 25 00.1	-0.4
OTAV	Otavalo	31.94	121	IAMs_20	IAMs_20	00 34 41.9	
	comp=Z,3µm,19.0s						
E03A	Lebam	31.95	336	P	P	00 25 01.6	+0.2
E03A				IAmb	IAmb	00 25 13.3	
	comp=Z,27nm,0.9s						
B08A	Colville Reser	32.09	342	P	P	00 25 02.9	+0.2
B08A				IAmb	IAmb	00 25 11.5	
	comp=Z,35nm,1.3s						
ERPA	Erie	32.10	37	IAMs_20	IAMs_20	00 39 34.1	
	comp=Z,5µm,18.0s						
ERPA	Erie	32.10	37	P	P	00 25 01.4	-1.4
	baz=230						
C06D	Leavenworth	32.18	340	S	S	00 30 21.8	+5.6
	baz=152						
LL6C	La Loma 6 Bece	32.22	101	*e*P	P	00 25 05.4	+1.3
SDDR	Presa de Saban	32.26	83	P	P	00 25 05.8	+1.3
SDDR				IAmb	IAmb	00 25 14.0	
	comp=Z,27nm,1.1s						
PTBC	PUERTO BERRIO,	32.29	107	*e*P	P	00 25 04.5	-0.2
GCUF	Volcan Galeras	32.29	119	*e*P	P	00 25 07.3	+2.0
GRTK	Grand Turk	32.30	79	IAMs_20	IAMs_20	00 37 46.7	
	comp=Z,3µm,20.0s						
NORC	Norcasia	32.32	109	*e*P	P	00 25 07.7	+2.6
ANIL	Santa Ana	32.32	111	*e*P	P	00 24 59.3	-6.0
SOTA	Rioblanco	32.43	116	*e*P	P	00 25 08.0	+1.4
SDMD	Soldier's Deli	32.44	44	P	P	00 25 04.8	-1.0
SDMD	Soldier's Deli	32.44	44	P	P	00 25 06.4	+0.6
	baz=238,SNR=6.2						
SSPA	Standing Stone	32.45	41	P	P	00 25 04.9	-1.0
SSPA	Standing Stone	32.45	41	IAMs_20	IAMs_20	00 39 00.5	
	comp=Z,3µm,21.0s						
SSPA	Standing Stone	32.45	41	P	P	00 25 05.0	-0.9
	baz=235,SNR=8.2						
SSPA	Standing Stone	32.45	41	P	P	00 25 04.6	-1.3
	baz=235						
PCON	Cinco Dias	32.51	116	*e*P	P	00 25 10.3	+3.1
D03D	Eldon	32.60	337	P	P	00 25 08.6	+1.5
	baz=148						
D03D				S	S	00 30 35.1	+12
	baz=148						
MARP	Paez Belalcaza	32.63	115	*e*P	P	00 25 11.0	+3.0
ORTC	Ortega, Tolima	32.73	112	*e*P	P	00 25 10.7	+2.0
NLWA	Neilton Lookou	32.77	337	IAMs_20	IAMs_20	00 39 11.4	
	comp=Z,4µm,18.0s						
ULM	Lac du Bonnet	32.79	11	P	P	00 25 08.6	-0.1
	comp=Z,6.6nm,0.8s,baz=199,slow=8.9,SNR=4.9						
ULM				LR	LR	00 39 13.7	
	comp=Z,9µm,19.4s,baz=198,slow=38						
	comp=Z,6.6nm,0.8s						
ULM	Lac du Bonnet	32.79	11	*i* P	P	00 25 08.0	-0.7
ULM	Lac du Bonnet	32.79	11	P	P	00 25 07.8	-0.9
B05A	Bryant	32.87	339	P	P	00 25 10.7	+1.3
	baz=150						
B06A	Marblemount	32.89	340	P	P	00 25 09.3	-0.2
B06A				IAmb	IAmb	00 25 19.1	
	comp=Z,32nm,1.3s						
PAGS	Pennsylvania G	32.96	42	P	P	00 25 10.9	+0.6
E46A	Sault Ste Mari	32.97	27	P	P	00 25 10.2	-0.1
E46A				IAmb	IAmb	00 26 23.4	
	comp=Z,25nm,1.1s						
SPBC	San Pablo de B	33.00	108	*e*P	P	00 25 11.8	+0.7
MVL	Millersville	33.08	43	P	P	00 25 10.8	-0.5
MVL				IAmb	IAmb	00 25 13.9	
	comp=Z,69nm,1.6s						
WVNY	West Valley, N	33.08	38	P	P	00 25 10.7	-0.7
WVNY	West Valley, N	33.08	38	P	P	00 25 10.8	-0.6
	baz=232						
ROSC	El Rosal	33.13	110	LR	LR	00 38 35.9	
	comp=Z,1µm,19.1s,baz=328,slow=36						
PRAC	Prado	33.14	112	*e*P	P	00 25 14.8	+2.6
B04A	Port Angeles	33.19	338	P	P	00 25 11.6	-0.6
B04A				IAmb	IAmb	00 25 14.8	
	comp=Z,52nm,1.6s						
N58A	Sunbury	33.30	41	P	P	00 25 13.2	-0.1
	baz=236,SNR=7.4						
N58A				P	P	00 25 13.2	-0.1
	baz=236,SNR=7.4						
M57A	Sunshine Farm,	33.33	40	P	P	00 25 13.5	0.0
M57A				IAmb	IAmb	00 25 17.1	
	comp=Z,64nm,1.4s						
BARC	Barichara	33.42	106	*e*P	P	00 25 17.4	+2.5
WUPA	West Chester U	33.52	44	P	P	00 25 16.3	+1.0
WUPA				IAmb	IAmb	00 25 17.8	
	comp=Z,28nm,1.0s						
L56A	Greenwood	33.53	39	P	P	00 25 15.3	-0.1
L56A				IAmb	IAmb	00 25 17.1	
	comp=Z,30nm,0.9s						
PAMC	Pamplona, Colo	33.58	105	*e*P	P	00 25 19.6	+3.0
J54A	Appleton	33.61	36	P	P	00 25 16.3	+0.4
J54A				IAmb	IAmb	00 25 17.2	
	comp=Z,35nm,1.0s						
MEDO	Medina	33.64	37	P	P	00 25 15.3	-1.0
MEDO				IAmb	IAmb	00 25 17.7	
	comp=Z,34nm,0.9s						
MMNY	Mt. Morris Dam	33.69	38	P	P	00 25 15.0	-1.7
MMNY				IAmb	IAmb	00 25 18.2	
	comp=Z,38nm,1.1s						
CHIC	Chingaza	33.75	110	*e*P	P	00 25 21.1	+3.2
RUSC	La Rusia	33.80	107	*e*P	P	00 25 20.4	+1.9
LUPA	Lehigh Univers	34.03	43	P	P	00 25 19.8	+0.2
J55A	Hilton	34.07	37	IAmb	IAmb	00 25 26.6	
	comp=Z,32nm,1.0s						
KSPA	Keystone Colle	34.29	41	P	P	00 25 22.0	0.0
KSPA				IAmb	IAmb	00 25 26.9	
	comp=Z,47nm,1.3s						
SADO	Sadowa	34.31	34	LR	LR	00 40 41.9	
	comp=Z,5µm,18.7s,baz=241,slow=39						
SADO	Sadowa	34.31	34	IAmb	IAmb	00 25 25.7	
	comp=Z,33nm,0.9s						
K57A	Scipio Center	34.51	39	IAmb	IAmb	00 25 46.7	
	comp=Z,50nm,1.2s						
BINY	Binghamton	34.52	40	P	P	00 25 23.8	-0.1
	baz=235,SNR=9.4						
BINY	Binghamton	34.52	40	P	P	00 25 23.6	-0.3
	baz=235,SNR=9.4						
J56A	Wolcott	34.63	38	P	P	00 25 25.1	+0.3
J56A				IAmb	IAmb	00 25 26.4	
	comp=Z,27nm,0.9s						
ODNJ	Ogdensburg	34.78	43	P	P	00 25 26.0	-0.1
ODNJ	Ogdensburg	34.78	43	P	P	00 25 26.2	+0.1
	baz=238,SNR=6.6						
MACC	Macarena, Meta	34.80	114	*e*P	P	00 25 27.9	+1.3
LLLB	Lillooet	34.85	342	P	P	00 25 26.8	+0.1
PECO	Prince Edward	34.95	37	IAmb	IAmb	00 25 29.2	
	comp=Z,48nm,0.9s						
SDV	Santo Domingo	34.95	101	LR	LR	00 40 43.0	
	comp=Z,1µm,19.4s,baz=306,slow=38						
SDV	Santo Domingo	34.95	101	P	P	00 25 29.8	+1.6
SDV				IAmb	IAmb	00 25 31.6	
	comp=Z,38nm,0.9s						
SDV	Santo Domingo	34.95	101	*e*P	P	00 25 30.1	+1.9
SDV	Santo Domingo	34.95	101	*e*P	P	00 25 29.7	+1.6
DELO	Deloro Mine	34.97	36	IAmb	IAmb	00 25 34.6	
	comp=Z,26nm,1.0s						
TRNY	Table Rock, Ra	35.05	43	P	P	00 25 29.1	+0.6
TRNY				IAmb	IAmb	00 25 30.9	
	comp=Z,60nm,1.1s						
L59A	Walton	35.09	41	P	P	00 25 29.0	+0.1
	baz=237,SNR=7.7						
L59A				P	P	00 25 29.0	+0.1
	baz=237,SNR=7.7						
PAL	Palisades	35.19	43	P	P	00 25 28.2	-1.4
PAL				pmax	pmax		
	comp=Z,84nm,1.1s						
PAL				MLR	MLR		
	comp=Z,3µm,21.0s						
PAL	Palisades	35.19	43	P	P	00 25 28.2	-1.4
PAL				IAMs_20	IAMs_20	00 42 09.0	
	comp=Z,3µm,21.0s						
J57A	Williamstown	35.22	38	IAmb	IAmb	00 25 32.9	
	comp=Z,45nm,1.1s						
J57A	Williamstown	35.22	38	P	P	00 25 28.9	-1.0
	baz=234,SNR=11						
J57A				P	P	00 25 28.9	-1.0
	baz=234,SNR=11						
EDM	Edmonton	35.43	352	P	P	00 25 30.6	-1.0
EDM				pmax	pmax		
	comp=Z,21nm,1.0s						
EDM	Edmonton	35.43	352	P	P	00 25 30.6	-1.0
CBB	Campbell River	35.51	338		P	00 25 32.3	0.0
J58A	Remsen	35.61	39	IAmb	IAmb	00 25 36.6	
	comp=Z,85nm,1.6s						
WSPT	Westport, CT	35.65	43	IAMs_20	IAMs_20	00 41 37.8	
	comp=Z,2µm,18.0s						
WCNY	West Carthage	35.75	38	P	P	00 25 34.7	+0.2
	baz=234						
HCNY	Howe Caverns	35.77	40	P	P	00 25 34.5	-0.2
	baz=237,SNR=9.2						
KSCT	Kent School, K	35.83	42	P	P	00 25 35.2	+0.1
YLE	Yale	35.98	43	IAMs_20	IAMs_20	00 41 48.8	
	comp=Z,2µm,19.0s						
J59A	Piesco	36.13	39	P	P	00 25 37.1	-0.7
J59A				IAmb	IAmb	00 25 44.3	
	comp=Z,75nm,1.6s						
NCB	Newcomb	36.59	39	P	P	00 25 42.2	+0.6
NCB				IAmb	IAmb	00 25 44.4	
	comp=Z,32nm,1.1s						
ACCN	Adirondack Com	36.60	40	IAmb	IAmb	00 25 43.7	
	comp=Z,44nm,1.1s						
ACCN	Adirondack Com	36.60	40	P	P	00 25 41.4	-0.4
	baz=237,SNR=10						
M63A	Gales Ferry	36.60	44	P	P	00 25 42.1	+0.3
M63A	Gales Ferry	36.60	44	P	P	00 25 41.2	-0.6
	baz=241,SNR=6.5						
M63A				P	P	00 25 41.2	-0.6
	baz=241,SNR=6.5						
ATAH	Atahualpa	36.68	131	LR	LR	00 37 32.6	
	comp=Z,4µm,21.2s,baz=313,slow=31						
UCCT	U. Connecticut	36.68	43	P	P	00 25 42.1	-0.3
UCCT				IAmb	IAmb	00 25 44.0	
	comp=Z,66nm,1.0s						
L61B	Northampton	36.72	42	IAMs_20	IAMs_20	00 42 53.4	
	comp=Z,4µm,21.0s						
L61B	Northampton	36.72	42	P	P	00 25 42.6	-0.1
	baz=239,SNR=6.5						
L61B	Northampton	36.72	42	P	P	00 25 43.4	+0.6
	baz=239,SNR=6.5						
LONY	Lake Ozonia	36.75	38	IAMs_20	IAMs_20	00 42 27.1	
	comp=Z,3µm,21.0s						
LONY	Lake Ozonia	36.75	38	P	P	00 25 44.0	+1.0
	baz=234						
OBIP	Obispado Ponce	36.77	84	P	P	00 25 44.7	+1.3
OBIP				IAmb	IAmb	00 25 53.0	
	comp=Z,45nm,1.2s						
K62A	Royalston	37.11	42	P	P	00 25 45.3	-0.8
K62A				IAmb	IAmb	00 25 48.7	
	comp=Z,39nm,0.9s						
BRYW	Bryant College	37.19	43	IAMs_20	IAMs_20	00 42 33.4	
	comp=Z,2µm,18.0s						
SJG	San Juan	37.19	84	LR	LR	00 42 50.0	
	comp=Z,912nm,18.9s,baz=270,slow=39						
SJG	San Juan	37.19	84	P	P	00 25 47.8	+0.7
SJG				pmax	pmax		
	comp=Z,36nm,1.2s						
SJG				MLR	MLR		
	comp=Z,1µm,20.0s						
SJG	San Juan	37.19	84	P	P	00 25 47.8	+0.7
SJG				IAmb	IAmb	00 25 56.6	
	comp=Z,36nm,1.1s						
J61A	Chester	37.26	41	P	P	00 25 46.8	-0.6
J61A	Chester	37.26	41	P	P	00 25 47.1	-0.3
	baz=238,SNR=9.8						
J61A				P	P	00 25 47.1	-0.3
	baz=238,SNR=9.8						
MCVT	Middlebury Col	37.32	40	P	P	00 25 47.5	-0.4
	baz=237,SNR=5.4						
FRNY	Flat Rock	37.45	38	P	P	00 25 49.0	+0.1
HRV	Adam Dziewonsk	37.46	43	P	P	00 25 49.0	-0.1
HRV				pmax	pmax		
	comp=Z,184nm,1.9s						
HRV				MLR	MLR		
	comp=Z,4µm,21.0s						
HRV	Adam Dziewonsk	37.46	43	P	P	00 25 49.0	-0.1
HRV	Adam Dziewonsk	37.46	43	IAMs_20	IAMs_20	00 43 24.2	
	comp=Z,4µm,21.0s						
HRV	Adam Dziewonsk	37.46	43	P	P	00 25 49.2	+0.1
	baz=240						
HUMP	Col San Antoni	37.47	84	P	P	00 25 51.0	+1.5
WES	Weston	37.55	43	IAMs_20	IAMs_20	00 42 42.1	
	comp=Z,3µm,19.0s						
M65A	Busby, Falmout	37.61	44	IAMs_20	IAMs_20	00 43 36.1	
	comp=Z,3µm,18.0s						
L64A	Middleborough	37.65	44	P	P	00 25 48.7	-2.0
VT1	Waterbury	37.67	39	IAMs_20	IAMs_20	00 41 56.9	
	comp=Z,2µm,21.0s						
TRQ	Mont Tremblant	37.72	36	P	P	00 25 50.1	-1.2
TRQ				IAmb	IAmb	00 25 55.7	
	comp=Z,39nm,1.1s						
MTP	Monte Pirata	37.76	84	P	P	00 25 52.8	+0.9
MTP				IAmb	IAmb	00 26 02.5	
	comp=Z,46nm,1.1s						
MNTQ	Montreal, Queb	37.82	37	P	P	00 25 52.1	+0.1
MNTQ				IAmb	IAmb	00 25 55.7	
	comp=Z,87nm,1.4s						
LBNH	Lisbon	38.12	40	P	P	00 25 55.7	+1.0
LBNH				pmax	pmax		
	comp=Z,58nm,1.2s						
LBNH				MLR	MLR		
	comp=Z,6µm,19.0s						
LBNH	Lisbon	38.12	40	P	P	00 25 55.7	+1.0
LBNH				IAmb	IAmb	00 25 59.6	
	comp=Z,58nm,1.1s						
LBNH	Lisbon	38.12	40	P	P	00 25 56.5	+1.9
	baz=238						
BBB	Bella Bella	38.27	337	LR	LR	00 41 47.3	
	comp=Z,1µm,18.1s,baz=152,slow=36						
I62A	Tamworth	38.29	41	P	P	00 25 56.1	0.0
	baz=239,SNR=7.4						
I62A				P	P	00 25 56.1	0.0
	baz=239,SNR=7.4						
STVI	Saint Thomas	38.30	83	P	P	00 25 56.9	+0.5
BIRV	Birongo	38.58	96	P	P	00 26 00.2	+1.3
I63A	Otisfield	38.85	41	P	P	00 26 01.4	+0.7
I63A				IAmb	IAmb	00 26 05.3	
	comp=Z,56nm,1.1s						
LATQ	La Tuque	39.39	35	P	P	00 26 05.6	+0.4
G62A	West of Eustis	39.48	39	IAmb	IAmb	00 26 31.4	
	comp=Z,134nm,1.7s						
F63A	Nahmakanta, Br	40.59	40	IAmb	IAmb	00 26 20.1	
	comp=Z,70nm,1.1s						
LMQ	La Malbaie	40.85	36	P	P	00 26 18.2	+0.8
LMQ				IAmb	IAmb	00 26 21.3	
	comp=Z,70nm,1.4s						
F64A	Sherman	41.13	40	P	P	00 26 19.6	0.0
NNA	Nana	41.18	135	P	P	00 26 19.8	-0.7
	comp=Z,7.5nm,0.8s,baz=270,slow=13,SNR=2.2						
NNA				LR	LR	00 39 50.3	
	comp=Z,2µm,19.9s,baz=329,slow=31						
	comp=Z,7.5nm,0.8s						
NNA	Nana	41.18	135	*i* P	P	00 26 21.7	+1.2
NNA				pmax	pmax		
	comp=Z,20nm,1.0s						
NNA	Nana	41.18	135	IAMs_20	IAMs_20	00 39 36.6	
	comp=Z,2µm,20.0s						
FCC	Fort Churchill	41.26	9	P	P	00 26 19.5	-1.1
FCC				pmax	pmax		
	comp=Z,26nm,0.9s						
FCC	Fort Churchill	41.26	9	P	P	00 26 19.5	-1.1
D62A	Allapoint, All	41.33	38	P	P	00 26 21.6	+0.3
D62A				IAmb	IAmb	00 26 25.5	
	comp=Z,88nm,1.4s						
D62A	Allapoint, All	41.33	38	P	P	00 26 21.7	+0.4
	baz=238,SNR=6.1						
D62A				P	P	00 26 21.7	+0.4
	baz=238,SNR=6.1						
GDHS	Morne Mazeau,	41.60	86	IAMs_20	IAMs_20	00 44 22.1	
	comp=Z,2µm,21.0s						
PQI	Presque Isle	41.73	39	IAMs_20	IAMs_20	00 45 04.5	
	comp=Z,4µm,18.0s						
CBE	Ff, Capester	41.78	86	P	P	00 26 25.9	+0.4
CBE				IAMs_20	IAMs_20	00 44 27.9	
	comp=Z,2µm,20.0s						
ABD	La Joyeuse, An	41.83	86	P	P	00 26 26.5	+0.8
ABD				IAMs_20	IAMs_20	00 44 39.2	
	comp=Z,2µm,21.0s						
MAGL	Barre de l'ile	42.11	86	IAMs_20	IAMs_20	00 44 37.7	
	comp=Z,2µm,19.0s						
ILAM	Ilet Lapin Mar	42.71	88	IAMs_20	IAMs_20	00 43 43.6	
	comp=Z,2µm,20.0s						
BATG	Bathurst New B	43.20	39	P	P	00 26 36.6	+0.1
BATG				IAmb	IAmb	00 26 40.6	
	comp=Z,54nm,1.2s						
LMN	Caledonia Moun	43.31	41	P	P	00 26 37.7	+0.2
TAOE	Nuku Hiva Isla	43.66	235	*e*P	P	00 26 34.0	-6.8
TAOE				*e*S	S	00 33 07.4	-3.5
	comp=Z,628nm,26.8s						
TAOE				*e*LR	LR	00 38 39.5	
	comp=Z,5µm,26.3s,baz=60						
TAOE	Nuku Hiva Isla	43.66	235	*e*T	T	01 12 46.2	
	comp=Z,73nm,0.2s						
DLBC	Dease Lake	44.01	342	P	P	00 26 43.6	+0.7
	comp=Z,15nm,0.8s,baz=173,slow=6.6,SNR=18						
DLBC				LR	LR	00 44 58.9	
	comp=Z,3µm,18.4s,baz=140,slow=36						
	comp=Z,15nm,0.8s						
DLBC	Dease Lake	44.01	342	P	P	00 26 43.7	+0.7
YKA	Yellowknife Ar	44.64	354	P	P	00 26 46.9	-1.0
	comp=Z,6.7nm,0.9s,baz=166,slow=7.5,SNR=68						
YKA				LR	LR	00 45 10.2	
	comp=Z,3µm,18.9s,baz=160,slow=36						
	comp=Z,6.7nm,0.9s						
JIS	Juneau Island	45.28	339	IAMs_20	IAMs_20	00 45 22.1	
	comp=Z,2µm,20.0s						
RPN	Rapa Nui	45.30	185	LR	LR	00 41 14.2	
	comp=Z,3µm,20.6s,baz=356,slow=30						
RPN	Rapa Nui	45.30	185	IAMs_20	IAMs_20	00 40 42.4	
	comp=Z,3µm,21.0s						
TGTN	Hyland Airport	46.13	345	P	P	00 27 01.5	+1.7
	baz=149						

TGTN				S	S	00 33 51.8	+6.2
	baz=149						
BOAV	**Boa Vista**	46.67	104	*e*P	P	00 27 05.5	+0.8
SCHQ	**Schefferville**	46.81	30	P	P	00 27 04.0	-1.2
	comp=Z,16nm,1.0s,baz=237,slow=8.9,SNR=13						
SCHQ				PP	PP	00 28 55.2	0.0
	comp=Z,9.9nm,0.9s,baz=254,slow=8.1,SNR=3.9						
SCHQ				LR	LR	00 47 42.7	
	comp=Z,4µm,18.4s,baz=236,slow=37						
	comp=Z,16nm,1.0s						
SCHQ	**Schefferville**	46.81	30	IAmb	IAmb	00 27 09.1	
	comp=Z,23nm,1.1s						
ETMB	**Extrema**	47.66	123	*e*P	P	00 27 10.9	-1.4
MMPY	**Sheldon Lake,**	47.81	344	P	P	00 27 15.1	+2.1
	baz=146,SNR=11						
MMPY				S	S	00 34 21.2	+12
	baz=146						
N31M	**Braeburn, Yuko**	48.19	341	P	P	00 27 15.6	-0.3
N31M				IAmb	IAmb	00 27 43.1	
	comp=Z,30nm,1.2s						
N31M				IAMs_20	IAMs_20	00 47 54.2	
	comp=Z,2µm,18.0s						
HYT	**Haines Junctio**	48.25	340	P	P	00 27 16.1	-0.3
HYT				IAmb	IAmb	00 28 51.3	
	comp=Z,48nm,1.9s						
M31M	**Drury Creek, Y**	48.33	342	P	P	00 27 17.8	+0.8
M31M				IAMs_20	IAMs_20	00 48 08.6	
	comp=Z,3µm,19.0s						
M31M	**Drury Creek, Y**	48.33	342	P	P	00 27 18.2	+1.3
	baz=142						
BCPM	**Bancas Point**	48.36	338	IAMs_20	IAMs_20	00 44 17.4	
	comp=Z,2µm,22.0s						
N30M	**Aishikik Lake**	48.59	340	P	P	00 27 21.5	+2.5
	baz=138						
MACA	**Manacapuru-AM**	48.88	111	*e*P	P	00 27 21.2	-0.5
DRLN	**Deer Lake**	49.21	40	P	P	00 27 24.2	+0.4
M30M	**Minto, Yukon**	49.34	341	IAMs_20	IAMs_20	00 49 52.1	
	comp=Z,2µm,20.0s						
ISLE	**Juniper Island**	49.79	337	IAMs_20	IAMs_20	00 48 10.2	
	comp=Z,2µm,20.0s						
BARN	**Barnard Glacie**	49.85	338	IAMs_20	IAMs_20	00 52 19.8	
	comp=Z,1µm,19.0s						
WAX	**Waxell Ridge**	49.88	337	IAMs_20	IAMs_20	00 45 22.6	
	comp=Z,1µm,21.0s						
BERG	**Berg Lake**	50.16	336	IAMs_20	IAMs_20	00 52 07.1	
	comp=Z,2µm,18.0s						
LPAZ	**La Paz**	50.23	131	P	P	00 27 32.2	-0.5
	comp=Z,16nm,1.0s,baz=334,slow=8.8,SNR=40						
LPAZ				LR	LR	00 46 23.7	
	comp=Z,2µm,20.8s,baz=314,slow=33						
	comp=Z,16nm,1.0s						
LPAZ	**La Paz**	50.23	131	IAmb	IAmb	00 27 34.6	
	comp=Z,22nm,1.1s						
LPAZ	**La Paz**	50.23	131	*e*P	P	00 27 32.6	0.0
PB12	**IPOC Station P**	50.28	135	IAmb	IAmb	00 27 35.0	
	comp=Z,24nm,1.1s						
RKT	**Rikitea**	50.30	216	*e*T	T	01 21 11.8	
	comp=Z,14nm,0.3s						
BVCY	**Beaver Creek**	50.51	339	P	P	00 27 36.5	+2.9
	baz=134						
VRDI	**Verde Repeater**	50.61	337	IAMs_20	IAMs_20	00 48 34.0	
	comp=Z,1µm,20.0s						
PB16	**IPOC Station P**	50.64	134	IAmb	IAmb	00 27 39.3	
	comp=Z,38nm,1.1s						
M27K	**Edge Creek, AK**	50.81	339	P	P	00 27 35.9	-0.1
M27K				IAMs_20	IAMs_20	00 46 04.4	
	comp=Z,1µm,21.0s						
M27K	**Edge Creek, AK**	50.81	339	P	P	00 27 36.0	0.0
	baz=133						
GLB	**Gilahina Butte**	50.88	337	P	P	00 27 36.8	+0.4
GLB				IAmb	IAmb	00 27 47.0	
	comp=Z,27nm,1.2s						
GLB				IAMs_20	IAMs_20	00 48 42.1	
	comp=Z,1µm,20.0s						
M26K	**Nabesna, AK**	51.23	339	IAMs_20	IAMs_20	00 46 54.4	
	comp=Z,1µm,22.0s						
DAWY	**Dawson**	51.23	342	P	P	00 27 39.4	+0.4
BCAR	**Beaver Creek A**	51.27	340	P	P	00 27 39.9	+0.6
N25K	**Chitina, Valde**	51.28	337	P	P	00 27 40.2	+0.8
N25K				IAMs_20	IAMs_20	00 48 54.8	
	comp=Z,1µm,20.0s						
N25K	**Chitina, Valde**	51.28	337	P	P	00 27 42.0	+2.6
	baz=130						
L27K	**Beaver Creek,**	51.28	340	P	P	00 27 39.4	0.0
L27K	**Beaver Creek,**	51.28	340	P	P	00 27 41.0	+1.6
	baz=134						
DIV	**Divide**	51.42	336	P	P	00 27 39.0	-1.4
DIV				IAmb	IAmb	00 27 53.5	
	comp=Z,45nm,1.6s						
PB11	**IPOC Station P**	51.54	135	IAmb	IAmb	00 27 44.6	
	comp=Z,46nm,1.3s						
KLU	**Klutina**	51.70	337	P	P	00 27 43.7	+1.1
KLU				IAmb	IAmb	00 27 53.1	
	comp=Z,38nm,1.4s						
KLU				IAMs_20	IAMs_20	00 46 27.0	
	comp=Z,1µm,20.0s						
KLU	**Klutina**	51.70	337	P	P	00 27 44.4	+1.8
	baz=128						
TA01	**Diego Aracena**	51.76	137	P	P	00 27 43.6	+0.2
TA01				IAmb	IAmb	00 27 47.7	
	comp=Z,28nm,1.1s						
L26K	**Log Cabin Wild**	51.77	339	IAMs_20	IAMs_20	00 50 57.7	
	comp=Z,1µm,19.0s						
FRB	**Frobisher Bay**	51.86	20	LR	LR	00 50 32.8	
	comp=Z,5µm,18.1s,baz=228,slow=37						
I29M	**Ogilvie Camp,**	51.88	343	IAMs_20	IAMs_20	00 50 18.7	
	comp=Z,2µm,19.0s						
I29M	**Ogilvie Camp,**	51.88	343	P	P	00 27 44.9	+1.1
	baz=139						
PATCX	**Punta Patache**	51.96	137	P	P	00 27 45.7	+0.7
PATCX				IAmb	IAmb	00 27 48.1	
	comp=Z,29nm,1.1s						
K27K	**Chicken**	52.03	340	P	P	00 27 46.1	+1.2
K27K				IAMs_20	IAMs_20	00 51 47.8	
	comp=Z,2µm,18.0s						
K27K	**Chicken**	52.03	340	P	P	00 27 47.6	+2.7
	baz=134						
PB08	**IPOC Station P**	52.14	135	P	P	00 27 47.1	+0.4
PB08				IAmb	IAmb	00 27 54.2	
	comp=Z,34nm,1.2s						
M24K	**Tolsona, Glenn**	52.18	337	P	P	00 27 48.9	+2.8
	baz=128						
EGAK	**Eagle**	52.28	342	P	P	00 27 47.5	+0.8
EGAK				IAMs_20	IAMs_20	00 49 44.9	
	comp=Z,2µm,19.0s						
EGAK	**Eagle**	52.28	342	P	P	00 27 47.4	+0.7
	baz=135,SNR=7.2						
C36M	**Paulatuk**	52.36	352	P	P	00 27 46.6	-0.6
C36M	**Paulatuk**	52.36	352	P	P	00 27 47.8	+0.5
	baz=157						
DOT	**Dot Lake**	52.42	339	P	P	00 27 48.4	+0.5
PAX	**Paxson**	52.46	338	P	P	00 27 48.8	+0.5
PAX	**Paxson**	52.46	338	P	P	00 27 48.8	+0.5
PAX				IAmb	IAmb	00 28 04.6	
	comp=Z,55nm,2.0s						
PAX	**Paxson**	52.46	338	P	P	00 27 49.8	+1.6
	baz=130						
PB02	**IPOC Station P**	52.48	137	IAmb	IAmb	00 27 52.1	
	comp=Z,55nm,1.3s						
KDAK	**Kodiak Island**	52.49	330	P	P	00 27 49.0	+0.6
	comp=Z,6.2nm,0.8s,baz=127,slow=10,SNR=2.3						
KDAK				LR	LR	00 48 28.8	
	comp=Z,768nm,18.3s,baz=137,slow=34						
	comp=Z,6.2nm,0.8s						
PB01	**IPOC Station P**	52.55	136	IAmb	IAmb	00 27 52.0	
	comp=Z,22nm,1.1s						
O22K	**Cooper Landing**	52.62	334	IAMs_20	IAMs_20	00 46 01.2	
	comp=Z,1µm,18.0s						
SCRK	**Sand Creek**	52.62	340	P	P	00 27 49.8	+0.4
SCRK				IAmb	IAmb	00 28 12.1	
	comp=Z,50nm,2.0s						
SCRK				IAMs_20	IAMs_20	00 51 51.1	
	comp=Z,1µm,19.0s						
SCRK	**Sand Creek**	52.62	340	P	P	00 27 50.5	+1.1
	baz=132						
KNK	**Knik Glacier**	52.63	336	P	P	00 27 50.7	+1.3
KNK				IAmb	IAmb	00 28 06.2	
	comp=Z,45nm,1.6s						
BRLK	**Bradley Lake**	52.72	333	IAMs_20	IAMs_20	00 45 59.1	
	comp=Z,1µm,20.0s						
RIDG	**Independent Ri**	52.75	339	IAmb	IAmb	00 28 00.3	
	comp=Z,47nm,1.0s						
RIDG				IAMs_20	IAMs_20	00 47 51.6	
	comp=Z,1µm,21.0s						
RIDG	**Independent Ri**	52.75	339	P	P	00 27 50.9	+0.6
	baz=131						
PB07	**IPOC Station P**	52.78	137	IAmb	IAmb	00 27 54.3	
	comp=Z,48nm,1.4s						
SML	**Sawmill**	52.81	336	P	P	00 27 50.9	+0.1
SML				IAmb	IAmb	00 28 13.9	
	comp=Z,23nm,1.1s						
SML	**Sawmill**	52.81	336	P	P	00 27 52.0	+1.2
	baz=126						
J26L	**Joseph Creek**	52.83	340	P	P	00 27 52.3	+1.3
	baz=132,SNR=12						
HOM	**Homer**	52.99	333	P	P	00 27 52.2	+0.1
HOM	**Homer**	52.99	333	P	P	00 27 53.0	+0.9
	baz=121						
GHO	**Glory Hole Cre**	53.02	336	P	P	00 27 52.8	+0.4
GHO				IAmb	IAmb	00 28 01.9	
	comp=Z,21nm,1.0s						
WAT6	**Susitna Watana**	53.05	337	P	P	00 27 52.3	-0.3
	baz=127						
PB04	**IPOC Station P**	53.05	138	P	P	00 27 54.2	+1.0
PB04				IAmb	IAmb	00 28 01.9	
	comp=Z,35nm,1.3s						
MDP	**Montagnes des**	53.06	97	LR	LR	00 51 25.3	
	comp=Z,614nm,21.1s,baz=293,slow=37						
INK	**Inuvik**	53.07	347	P	P	00 27 53.0	+0.5
	comp=Z,20nm,1.0s,baz=138,slow=7.5,SNR=36						
INK				LR	LR	00 52 55.3	
	comp=Z,1µm,18.6s,baz=134,slow=39						
	comp=Z,20nm,1.0s						
INK	**Inuvik**	53.07	347	IAmb	IAmb	00 27 54.4	
	comp=Z,23nm,1.1s						
INK	**Inuvik**	53.07	347	P	P	00 27 52.9	+0.3
	baz=146,SNR=16						
INK				S	S	00 35 23.3	+0.9
	baz=146						
K24K	**Donnelly Dome**	53.10	339	P	P	00 27 53.8	+0.9
	baz=130						
CHIR	**Chirikof Islan**	53.12	327	IAMs_20	IAMs_20	00 53 11.9	
	comp=Z,1µm,18.0s						
DHY	**Denali Highway**	53.21	338	P	P	00 27 52.9	-0.9
M22K	**Willow**	53.48	335	P	P	00 27 55.8	+0.1
M22K				IAmb	IAmb	00 28 05.5	
	comp=Z,35nm,0.8s						
J25K	**Salcha River,**	53.49	340	P	P	00 27 56.2	+0.4
J25K				IAMs_20	IAMs_20	00 52 28.2	
	comp=Z,2µm,18.0s						
J25K	**Salcha River,**	53.49	340	P	P	00 27 56.1	+0.3
	baz=131						
WAT1	**Susitna Watana**	53.49	337	P	P	00 27 56.2	+0.4
	baz=126						
PB06	**IPOC Station P**	53.69	138	P	P	00 27 57.9	0.0
PB06				IAmb	IAmb	00 28 00.3	
	comp=Z,20nm,0.9s						
ITTB	**Itaituba**	53.82	110	*e*P	P	00 27 58.1	-0.8
HDA	**Harding Lake**	53.89	339	IAMs_20	IAMs_20	00 50 43.7	
	comp=Z,1µm,21.0s						
CUT	**Chulitna**	53.90	336	P	P	00 27 58.8	+0.1
CUT	**Chulitna**	53.90	336	P	P	00 27 59.5	+0.8
	baz=124						
RND	**Reindeer**	53.95	337	P	P	00 27 59.0	-0.1
RND				pmax	pmax		
	comp=Z,47nm,1.5s						
RND	**Reindeer**	53.95	337	P	P	00 27 59.0	-0.1
RND				IAmb	IAmb	00 28 09.1	
	comp=Z,47nm,1.5s						
RND				IAMs_20	IAMs_20	00 48 01.3	
	comp=Z,1µm,19.0s						
SPCR	**Spurr Chakacha**	54.03	334	P	P	00 28 00.9	+1.1
	baz=121						
LVC	**Limon Verde**	54.04	137	P	P	00 28 00.9	+0.2
	comp=Z,18nm,1.2s,baz=305,slow=4.9,SNR=9.3						
LVC				LR	LR	00 46 08.7	
	comp=Z,1µm,21.1s,baz=309,slow=31						
	comp=Z,18nm,1.2s						
LVC	**Limon Verde**	54.04	137	P	P	00 28 01.5	+0.8
LVC				pmax	pmax		
	comp=Z,26nm,1.2s						
LVC	**Limon Verde**	54.04	137	P	P	00 28 01.5	+0.8
LVC				IAmb	IAmb	00 28 04.5	
	comp=Z,26nm,1.2s						
LVC	**Limon Verde**	54.04	137	IAMs_20	IAMs_20	00 45 46.5	
	comp=Z,2µm,22.0s						
MALB	**Monte Alegre**	54.09	106	*e*P	P	00 28 00.8	-0.1
IL31		54.09	339	IAmb	IAmb	00 28 09.4	
	comp=Z,26nm,1.2s						
ILAR	**Eielson Array**	54.09	339	P	P	00 27 59.8	-0.3
	comp=Z,3.9nm,0.9s,baz=146,slow=4.2,SNR=29						
ILAR				LR	LR	00 52 57.5	
	comp=Z,976nm,19.8s,baz=130,slow=38						
	comp=Z,3.9nm,0.9s						
VILB	**Vilhena**	54.28	122	*e*P	P	00 28 01.8	-0.3
WRH	**Wood River Hil**	54.31	339	P	P	00 28 02.5	+0.8
WRH				IAmb	IAmb	00 28 24.6	
	comp=Z,52nm,1.9s						
WRH				IAMs_20	IAMs_20	00 48 26.1	
	comp=Z,1µm,22.0s						
CCB	**Clear Creek Bu**	54.33	339	P	P	00 28 02.5	+0.7
CCB				IAMs_20	IAMs_20	00 52 52.2	
	comp=Z,1µm,21.0s						
P18K	**Big Mountain,**	54.47	331	P	P	00 28 03.1	+0.1
P18K				IAmb	IAmb	00 28 18.0	
	comp=Z,39nm,1.5s						
COLA	**College**	54.48	339	IAMs_20	IAMs_20	00 52 57.5	
	comp=Z,2µm,19.0s						
TCOL	**CIGO, UAF Yank**	54.48	339	IAMs_20	IAMs_20	00 52 56.5	
	comp=Z,2µm,19.0s						
POKR	**Poker Plat Res**	54.49	340	P	P	00 28 02.3	-0.7
POKR				IAMs_20	IAMs_20	00 52 57.8	
	comp=Z,1µm,19.0s						
BWN	**Browne**	54.62	338	P	P	00 28 03.5	-0.4
MDM	**Murphy Dome**	54.66	339	P	P	00 28 04.2	0.0
MDM				IAmb	IAmb	00 28 25.2	
	comp=Z,25nm,1.6s						
MDM				IAMs_20	IAMs_20	00 53 03.2	
	comp=Z,1µm,20.0s						
O18K	**Koktuh Hills**	54.67	332	P	P	00 28 04.8	+0.4
O18K				IAmb	IAmb	00 28 25.4	
	comp=Z,44nm,1.5s						
O18K	**Koktuh Hills**	54.67	332	P	P	00 28 04.9	+0.4
	baz=117						
NEA2	**Nenana**	54.73	339	IAmb	IAmb	00 28 14.1	
	comp=Z,30nm,1.2s						
NEA2	**Nenana**	54.73	339	P	P	00 28 04.8	0.0
	baz=126,SNR=16						
M20K	**Styx River**	54.76	335	IAmb	IAmb	00 28 14.9	
	comp=Z,46nm,1.4s						
M20K	**Styx River**	54.76	335	P	P	00 28 05.3	+0.2
	baz=120,SNR=9.5						
KTH	**Kantishna Hill**	54.79	337	P	P	00 28 04.8	-0.5
KTH				IAmb	IAmb	00 28 14.3	
	comp=Z,24nm,1.1s						
N19K	**Bonanza Creek**	54.80	333	IAmb	IAmb	00 28 14.4	
	comp=Z,27nm,1.0s						
N19K	**Bonanza Creek**	54.80	333	P	P	00 28 04.5	-0.9
	baz=118,SNR=8.0						
PPLA	**Purkeypile**	54.91	336	P	P	00 28 06.3	0.0
	baz=122						
A36M	**Sachs Harbour**	54.95	353	IAmb	IAmb	00 28 17.1	
	comp=Z,22nm,0.8s						
A36M	**Sachs Harbour**	54.95	353	P	P	00 28 06.0	-0.2
	baz=157,SNR=16						
H24K	**Noodor Dome**	55.09	340	IAmb	IAmb	00 28 17.1	
	comp=Z,19nm,1.1s						
H24K				IAMs_20	IAMs_20	00 53 36.5	
	comp=Z,2µm,19.0s						
H24K	**Noodor Dome**	55.09	340	P	P	00 28 07.4	0.0
	baz=128,SNR=6.0						
BPAW	**Bear Paw Mtn.**	55.12	337	P	P	00 28 06.4	-1.2
	baz=124						
BMAR	**Burnt Mountain**	55.13	343	P	P	00 28 07.2	-0.5
CAST	**Castle Rocks**	55.15	336	IAmb	IAmb	00 28 16.6	
	comp=Z,20nm,1.1s						
CAST	**Castle Rocks**	55.15	336	P	P	00 28 07.2	-0.7
	baz=123,SNR=6.6						
I23K	**Minto, Yukon-K**	55.16	339	P	P	00 28 08.2	+0.4
I23K				IAmb	IAmb	00 28 17.6	
	comp=Z,23nm,1.1s						
I23K	**Minto, Yukon-K**	55.16	339	P	P	00 28 08.1	+0.3
	baz=126						
M19K	**Big River Lodg**	55.29	334	P	P	00 28 08.9	0.0
M19K				IAmb	IAmb	00 28 18.9	
	comp=Z,28nm,1.3s						
M19K				IAMs_20	IAMs_20	00 55 48.9	
	comp=Z,933nm,18.0s						
M19K	**Big River Lodg**	55.29	334	P	P	00 28 08.0	-0.9
	baz=119						
N18K	**Kilae Creek**	55.35	332	IAmb	IAmb	00 28 18.3	
	comp=Z,48nm,1.3s						
N18K	**Kilae Creek**	55.35	332	P	P	00 28 08.1	-1.3
	baz=117,SNR=7.3						
L20K	**Farewell, AK**	55.37	335	P	P	00 28 08.2	-1.2
	baz=120,SNR=7.1						
SVW2	**Sparrevohn**	55.41	333	IAmb	IAmb	00 28 18.9	
	comp=Z,52nm,1.6s						
MCPB	**Macapa, AP**	55.53	103	*e*P	P	00 28 12.0	+0.7
L19K	**White Mountain**	55.61	334	IAmb	IAmb	00 28 20.3	
	comp=Z,35nm,1.2s						
L19K				IAMs_20	IAMs_20	00 55 46.5	
	comp=Z,1µm,19.0s						
L19K	**White Mountain**	55.61	334	P	P	00 28 10.8	-0.4
	baz=119,SNR=7.8						
H23K	**Yukon River**	55.62	340	P	P	00 28 11.8	+0.5
H23K				IAMs_20	IAMs_20	00 55 04.7	
	comp=Z,1µm,18.0s						
H23K	**Yukon River**	55.62	340	P	P	00 28 11.0	-0.2
	baz=127						
K20K	**Telida**	55.88	336	IAmb	IAmb	00 28 22.6	
	comp=Z,33nm,1.1s						
K20K	**Telida**	55.88	336	P	P	00 28 12.0	-1.1
	baz=120,SNR=7.0						
I21K	**Tanana**	56.08	338	IAmb	IAmb	00 28 23.7	
	comp=Z,23nm,1.1s						
I21K	**Tanana**	56.08	338	P	P	00 28 14.2	-0.3
	baz=124,SNR=7.7						
PPT	**Papeete**	56.22	233	LR	LR	00 45 20.9	
	comp=Z,2µm,21.6s,baz=38,slow=29						
PPT2	**Papeete2**	56.23	233	*e*P	P	00 28 03.2	-13
PPT2				*e*S	S	00 36 02.7	-3.6
	comp=Z,1µm,28.0s						
PPT2				*e*LR	LR	00 43 59.0	
	comp=Z,6µm,25.8s,baz=45						
J20K	**Nowinta River**	56.33	337	IAmb	IAmb	00 28 25.2	
	comp=Z,32nm,1.1s						
J20K	**Nowinta River**	56.33	337	P	P	00 28 14.8	-1.5
	baz=121,SNR=8.8						
PDRB	**Porto dos Gac**	56.42	118	*e*P	P	00 28 16.7	-0.9
TTA	**Tatalina**	56.44	335	P	P	00 28 16.1	-1.1
	baz=118,SNR=8.5						
PTLB	**Pontes e Lacer**	56.53	123	*e*P	P	00 28 17.6	-0.7
H21K	**Melozitna Rive**	56.63	339	IAmb	IAmb	00 28 27.5	
	comp=Z,24nm,1.2s						
H21K				IAMs_20	IAMs_20	00 54 04.4	
	comp=Z,963nm,18.0s						
H21K	**Melozitna Rive**	56.63	339	P	P	00 28 17.0	-1.4
	baz=123,SNR=14						
AC06	**Mina Casimiro**	56.65	142	P	P	00 28 19.3	+0.2
AC06				IAmb	IAmb	00 28 22.9	
	comp=Z,29nm,1.4s						
RES	**Resolute Bay**	56.71	3	P	P	00 28 16.5	-2.3
	comp=Z,6.6nm,1.0s,baz=182,slow=9.6,SNR=15						
RES				LR	LR	00 51 43.5	
	comp=Z,2µm,21.2s,baz=184,slow=35						
	comp=Z,6.6nm,1.0s						
CLDB	**Colider**	56.83	117	*e*P	P	00 28 19.6	-1.0
IMAR	**Indian Mountai**	57.14	339	P	P	00 28 22.1	+0.1
H03N2	**Juan Fernandez**	57.28	154	T	T	01 30 15.8	
	baz=332,slow=77						
H03N1	**Juan Fernandez**	57.29	154	T	T	01 30 21.3	
	baz=332,slow=77						
H03N3	**Juan Fernandez**	57.30	154	T	T	01 30 16.8	
	baz=332,slow=77						
TOLK	**Toolik Lake Re**	57.35	342	IAMs_20	IAMs_20	00 53 54.3	
	comp=Z,2µm,22.0s						
TOLK	**Toolik Lake Re**	57.35	342	P	P	00 28 23.8	+0.3
	baz=128,SNR=7.9						
LCO	**Las Campanas**	57.71	144	P	P	00 28 28.0	+1.2
LCO				pmax	pmax		
	comp=Z,22nm,1.2s						
LCO	**Las Campanas**	57.71	144	P	P	00 28 28.0	+1.2
LCO				IAmb	IAmb	00 28 41.8	
	comp=Z,22nm,1.2s						
GO04	**Tololo Observa**	58.55	145	P	P	00 28 33.4	+0.8
GO04				IAmb	IAmb	00 28 34.7	
	comp=Z,28nm,1.0s						
NBRS	**Nobres**	58.63	120	*e*P	P	00 28 32.5	-0.7
CO03	**El Pedregal**	59.12	145	P	P	00 28 36.7	+0.2
SALV	**Santo Antonio**	59.54	122	*e*P	P	00 28 39.0	-0.5
NIKH	**Nikolski High**	59.69	321	P	P	00 28 40.0	0.0
TBI	**Tubuai**	59.72	228	*e*P	P	00 28 27.9	-13
TBI				*e*S	S	00 36 55.5	+3.8
TBI				*e*LR	LR	00 45 47.2	
	comp=Z,6µm,27.5s,baz=47						
TBI	**Tubuai**	59.72	228	*e*T	T	01 33 03.2	
	comp=Z,3.6nm,0.2s						
NRS	**Narsarsuaq**	59.77	29	IAMs_20	IAMs_20	00 58 01.8	
	comp=Z,2µm,20.0s						
SFJD	**Kangerlussuaq**	59.85	22	LR	LR	00 55 29.9	
	comp=Z,3µm,18.1s,baz=240,slow=37						
SFJD	**Kangerlussuaq**	59.85	22	P	P	00 28 40.5	-0.3
SFJD				pmax	pmax		
	comp=Z,22nm,1.1s						
SFJD				MLR	MLR		
	comp=Z,3µm,18.0s						
SFJD	**Kangerlussuaq**	59.85	22	P	P	00 28 40.5	-0.3
SFJD				IAmb	IAmb	00 28 43.5	
	comp=Z,22nm,1.1s						
PRPB	**Parauapebas**	59.91	109	*e*P	P	00 28 42.0	-0.1
VA03	**San Esteban**	60.69	147	IAmb	IAmb	00 28 50.0	
	comp=Z,30nm,1.1s						
ILULI	**Ilulissat**	60.70	19	P	P	00 28 46.9	+0.3
ILULI				pmax	pmax		
	comp=Z,19nm,1.0s						
ILULI				MLR	MLR		
	comp=Z,6µm,18.0s						
ILULI	**Ilulissat**	60.70	19	P	P	00 28 46.9	+0.3
ILULI				IAmb	IAmb	00 28 48.9	
	comp=Z,19nm,1.0s						
ZON	**Zonda**	60.77	144	P	P	00 28 47.5	-0.2
ZON				pmax	pmax		
	comp=Z,26nm,1.2s						
ZON	**Zonda**	60.77	144	P	P	00 28 47.5	-0.2
ZON				IAmb	IAmb	00 28 50.2	
	comp=Z,26nm,1.2s						
MT02	**Curacav**	60.78	147	IAmb	IAmb	00 28 49.3	
	comp=Z,28nm,1.1s						
A21K	**Barrow**	60.88	343	IAMs_20	IAMs_20	00 55 47.5	
	comp=Z,1µm,18.0s						
ANM	**Nome**	60.91	335	P	P	00 28 48.1	-0.1
ANM				pmax	pmax		
	comp=Z,42nm,1.4s						
ANM				MLR	MLR		
	comp=Z,800nm,19.0s						
ANM	**Nome**	60.91	335	P	P	00 28 48.1	-0.1
ANM				IAmb	IAmb	00 28 58.2	
	comp=Z,42nm,1.4s						
PEL	**Peldehue**	60.92	147	P	P	00 28 49.3	+0.6
PEL				pmax	pmax		
	comp=Z,29nm,1.2s						
PEL	**Peldehue**	60.92	147	P	P	00 28 49.3	+0.6
PEL				IAmb	IAmb	00 29 16.0	
	comp=Z,29nm,1.2s						
PEL				IAMs_20	IAMs_20	00 51 02.6	
	comp=Z,1000nm,18.0s						
MT05	**Renca**	61.09	147	P	P	00 28 49.8	0.0
PP1B	**Ponte de Pedra**	61.11	123	*e*P	P	00 28 50.4	+0.2
MT01	**Popeta**	61.20	148	P	P	00 28 50.6	+0.1
MT01				IAmb	IAmb	00 28 52.7	
	comp=Z,36nm,1.6s						
SNDB	**Serra Nova Dou**	61.22	115	*e*P	P	00 28 51.0	0.0
DY2G	**Dye2**	61.22	23	*i* P	P	00 28 49.5	-1.1
DY2G				IAmb	IAmb	00 28 51.6	
	comp=Z,18nm,0.7s						
MT09	**Talagante**	61.26	148	P	P	00 28 51.3	+0.2
MT09				IAmb	IAmb	00 28 58.7	
	comp=Z,24nm,0.9s						
RDOG	**Red Dog Mine**	61.28	339	P	P	00 28 49.3	-1.4
RDOG				IAmb	IAmb	00 29 08.1	
	comp=Z,24nm,1.1s						
RDOG				IAMs_20	IAMs_20	00 58 13.3	
	comp=Z,1µm,19.0s						
BO04	**La Punta**	61.62	147	IAmb	IAmb	00 29 18.8	
	comp=Z,29nm,1.2s						
BO01	**Tunca**	61.70	148	IAmb	IAmb	00 28 55.8	
	comp=Z,19nm,0.9s						
GO05	**Huala**	61.77	149	IAmb	IAmb	00 28 55.9	
	comp=Z,11nm,0.8s						
AQDB	**Aquidauana**	62.07	126	*e*P	P	00 28 55.9	-0.7
EUNU	**Eureka**	62.40	4	P	P	00 28 57.2	-0.9
EUNU				IAmb	IAmb	00 29 05.2	
	comp=Z,19nm,1.1s						
ML02	**Panimavida**	62.63	149	P	P	00 29 00.3	+0.3
DVLD	**Doverlandia**	62.80	120	*e*P	P	00 29 01.7	+0.1
SMTB	**Santa Maria do**	63.05	110	*e*P	P	00 29 03.7	+0.3
ROSB	**Rosrio**	63.82	103	*e*P	P	00 29 09.3	+0.8
PEXB	**Peixe**	63.86	114	*e*P	P	00 29 08.9	+0.2
ANGG	**Ammassalik, Gr**	64.33	25	*i* P	P	00 29 05.0	-5.9

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ANGG                                 IAmb     IAmb      00 29 13.1
      comp=Z,6.4nm,0.7s
CPUP  Villa Florida     64.35 132    P        P         00 29 11.5  -0.2
      comp=Z,24nm,1.1s,baz=322,slow=7.2,SNR=32
CPUP                                 LR       LR        00 56 46.3
      comp=Z,1µm,18.5s,baz=328,slow=36
      comp=Z,24nm,1.1s
CPUP  Villa Florida     64.35 132    P        P         00 29 11.5  -0.2
CPUP                                 IAmb     IAmb      00 29 13.2
      comp=Z,24nm,1.0s
CPUP  Villa Florida     64.35 132  eP         P         00 29 11.3  -0.4
ICESG Greenland Ices    64.45  21  i P        P         00 29 10.6  -1.5
ICESG                                IAmb     IAmb      00 29 14.0
      comp=Z,23nm,0.9s
LC01  Cunco             64.94 152    IAmb     IAmb      00 29 18.5
      comp=Z,12nm,1.1s
MCR1  Marechal Candi    65.61 129  eP         P         00 29 20.6  +0.7
TRCB  Terra Rica        65.73 126    P        P         00 29 20.4  -0.3
TRCB                                 IAmb     IAmb      00 29 21.8
      comp=Z,25nm,1.0s
TRCB  Terra Rica        65.73 126  eP         P         00 29 20.6  -0.1
BDFB  Brasilia          65.76 117    P        P         00 29 20.4  -0.8
      comp=Z,17nm,1.1s,baz=294,slow=6.0,SNR=15
      comp=Z,17nm,1.1s
BDFB  Brasilia          65.76 117    P        P         00 29 21.6  +0.4
BDFB                                 pmax     pmax
      comp=Z,11nm,0.8s
BDFB  Brasilia          65.76 117    P        P         00 29 21.6  +0.4
BDFB                                 IAmb     IAmb      00 29 22.8
      comp=Z,11nm,0.8s
SUMG  Summit            65.82  18    P        P         00 29 19.9  -1.1
SUMG                                 pmax     pmax
      comp=Z,23nm,0.9s
SUMG                                 MLR      MLR
      comp=Z,6µm,18.0s
SUMG  Summit            65.82  18    P        P         00 29 19.9  -1.1
SUMG                                 IAmb     IAmb      00 29 23.6
      comp=Z,23nm,0.9s
SUMG  Summit            65.82  18  i P        P         00 29 19.0  -2.0
SUMG                                 IAmb     IAmb      00 29 23.1
      comp=Z,11nm,0.9s
ITRB  Iturama           65.85 122  eP         P         00 29 22.2  +0.7
PCMB  Pacaembu          66.14 124  eP         P         00 29 22.4  -1.0
RAR   Rarotonga         66.19 236    LR       LR        00 50 32.7
      comp=Z,1µm,18.6s,baz=64,slow=29
LL05  Los Muermos       66.32 154    P        P         00 29 24.8  +0.7
IPMB  Ipameri, GO       66.73 120  eP         P         00 29 27.3   0.0
NBPS  Pedro II - PI     66.86 103  eP         P         00 29 29.5  +1.2
ITQB  Itaqui            66.92 135    P        P         00 29 28.8  +0.6
ITQB  Itaqui            66.92 135  eP         P         00 29 28.4  +0.2
SDBA  SAO DESIDERIO     66.97 113  eP         P         00 29 29.3  +0.4
PLCA  Paso Flores       67.03 152    P        P         00 29 28.9  +0.2
      comp=Z,11nm,1.0s,baz=324,slow=8.0,SNR=20
PLCA                                 LR       LR        00 52 34.4
      comp=Z,1µm,19.0s,baz=333,slow=30
      comp=Z,11nm,1.0s
PLCA  Paso Flores       67.03 152    P        P         00 29 29.1  +0.3
PLCA                                 pmax     pmax
      comp=Z,14nm,1.0s
PLCA  Paso Flores       67.03 152    P        P         00 29 29.1  +0.3
PLCA                                 IAmb     IAmb      00 29 30.8
      comp=Z,14nm,1.0s
PLCA  Paso Flores       67.03 152  eP         P         00 29 29.5  +0.7
FRBT  Francisco Belt    67.21 129  eP         P         00 29 30.0  -0.2
PTGB  Pitanga           67.23 128  eP         P         00 29 30.0  -0.4
NBMO  Morrinhos-CE      67.77 101  eP         P         00 29 35.8  +1.8
BB19B Bebedouro         68.02 123  eP         P         00 29 36.3  +0.9
FRTB  Fartura           68.39 125  eP         P         00 29 37.8   0.0
LL02  Futaleuf          68.48 154    P        P         00 29 37.9  +0.1
LL02                                 IAmb     IAmb      00 29 45.8
      comp=Z,14nm,0.9s
ITAB  Concordia         68.61 130    P        P         00 29 38.6  -0.3
ITAB                                 IAmb     IAmb      00 29 41.7
      comp=Z,26nm,1.0s
ITAB  Concordia         68.61 130  eP         P         00 29 39.2  +0.3
JANB  Januaria          68.65 115  eP         P         00 29 40.1  +0.6
AY01  Puyuhuapi         69.18 156    IAmb     IAmb      00 29 49.2
      comp=Z,46nm,1.9s
TRQA  Tornquist         69.28 145    IAMs_20  IAMs_20   00 55 16.0
      comp=Z,1µm,19.0s
RCLB  Rio Claro- Sao    69.51 123  eP         P         00 29 45.0  +0.3
CPSB  Cacapava Do Su    69.55 133  eP         P         00 29 43.9  -0.8
NBCL  Cascavel-CE       69.72 102  eP         P         00 29 47.9  +1.7
TIJ01 Guaruva-PR        69.88 127  eP         P         00 29 49.1  +2.1
SHEM  Shemya Is, Ala    69.98 320    LR       LR        00 52 46.1
      comp=Z,370nm,21.9s,baz=103,slow=29
SPB   Sao Paulo         70.19 124  eP         P         00 29 49.1  +0.3
VAO   Valinhos          70.25 124  eP         P         00 29 49.6  +0.3
PLTB  Pedras Altas      70.26 135    P        P         00 29 49.2  +0.2
PLTB                                 IAmb     IAmb      00 29 50.6
      comp=Z,31nm,1.1s
PLTB  Pedras Altas      70.26 135  eP         P         00 29 49.1  +0.1
COYC  Coyhaique         70.36 156    IAmb     IAmb      00 29 57.7
      comp=Z,25nm,1.3s
COYC  Coyhaique         70.36 156    IAMs_20  IAMs_20   00 53 26.4
      comp=Z,996nm,21.0s
NBMA  Muriti-CE         70.44 105  eP         P         00 29 52.2  +1.6
NBPN  Ponto Novo - B    70.49 109  eP         P         00 29 51.6  +0.8
DIAM  Diamantina, MG    70.67 118  eP         P         00 29 52.9  +0.9
PET01 Itanhaem-SP       70.67 125  eP         P         00 29 52.5  +0.8
BSCB  Bom Sucesso       71.03 121  eP         P         00 29 54.5  +0.5
BORG  Borgarnes         71.09  27    LR       LR        01 01 23.6
      comp=Z,1µm,18.6s,baz=281,slow=36
TER01 Tubaro-SC         71.54 130  eP         P         00 29 56.7  -0.2
DAG   Danmarks Havn     71.58  14  i P        P         00 29 53.9  -2.5
DAG                                  IAmb     IAmb      00 29 56.6
      comp=Z,3.9nm,0.8s
NOR   Nord              71.84   9  i P        P         00 29 56.6  -1.4
NOR                                  IAmb     IAmb      00 30 04.3
      comp=Z,5.2nm,0.7s
SLP01 Ubatuba-SP        71.86 123  eP         P         00 30 00.3  +1.2
GDU01 Guandu, BA        72.22 111  eP         P         00 30 02.3  +1.0
ESAR  Angra dos Reis    72.28 122  eP         P         00 30 02.3  +0.8
RCBR  Riachuelo         72.52 102    LR       LR        01 02 32.2
      comp=Z,1µm,21.4s,baz=86,slow=36
RCBR  Riachuelo         72.52 102    P        P         00 30 04.3  +1.2
RCBR                                 pmax     pmax
      comp=Z,42nm,1.3s
RCBR                                 MLR      MLR
      comp=Z,1µm,22.0s
RCBR  Riachuelo         72.52 102    P        P         00 30 04.3  +1.2
RCBR                                 IAmb     IAmb      00 30 27.2
      comp=Z,42nm,1.3s
RCBR  Riachuelo         72.52 102    IAMs_20  IAMs_20   01 01 58.9
      comp=Z,1µm,22.0s
RCBR  Riachuelo         72.52 102  eP         P         00 30 05.9  +2.7
MAN01 Angra dos Reis    72.59 122  eP         P         00 30 04.8  +1.4
BILL  Bilibino          72.61 337ceP          P         00 30 01.7  -1.0
BILL                               e                    00 32 44.1
BILL                               eS         S         00 39 22.6  -4.7
BILL                                 pmax     pmax
      comp=Z,8.0nm,1.3s
BILL  Bilibino          72.61 337    P        P         00 30 02.2  -0.5
BILL                                 IAmb     IAmb      00 30 12.8
      comp=Z,24nm,1.5s
BILL                                 IAMs_20  IAMs_20   01 07 28.6
      comp=Z,817nm,19.0s
NBLA  Lagarto - SE      72.72 108  eP         P         00 30 05.3  +1.1
VAS01 Vassouras-RJ      72.73 121  eP         P         00 30 04.2  +0.1
AFI   Afiamalu          72.87 249    LR       LR        00 54 58.1
      comp=Z,832nm,18.5s,baz=66,slow=30
NBPV  Pedro Velho       73.30 103  eP         P         00 30 09.3  +1.6
RIB01 Linhares ES       73.90 117  eP         P         00 30 12.2  +1.1
CAM01 Campos-RJ         73.98 120  eP         P         00 30 12.6  +1.1
ALF01 Guarapari-ES      74.20 118  eP         P         00 30 14.3  +1.5
NBRF  Rio Formoso -     74.27 105  eP         P         00 30 15.6  +2.2
JMIC  Jan Mayen         75.08  20    LR       LR        01 04 14.2
      comp=Z,3µm,18.1s,baz=271,slow=36
SACV  Santiago Islan    77.77  78    IAMs_20  IAMs_20   00 59 09.3
      comp=Z,919nm,21.0s
SPITS Spitsbergen Ar    78.35  10    LR       LR        01 04 59.7
      comp=Z,1µm,19.7s,baz=358,slow=36
PMOZ  Porto Moniz, M    78.82  59  eLR        LR        00 56 08.0
      comp=Z,438nm,20.0s
PET   Petropavlovsk     79.14 322  eP         P         00 30 36.1  -4.1
PET                                eS         S         00 40 31.3  -8.5
PET                                ePS        PnS       00 41 15.7  -6.5
PET                                ePPS       PPS       00 41 30.0
PET                                eSS        SS        00 45 39.6  -5.7
PET                                  pmax     pmax
      comp=Z,200nm,14.3s
PET                                  MLR      MLR
      comp=Z,400nm,17.0s
USHA  Ushuaia           79.32 159    LR       LR        00 59 31.3
      comp=Z,672nm,18.6s,baz=314,slow=31
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SEY   Seymchan          79.35 333    P        P         00 30 40.5  -0.7
      comp=Z,4.4nm,0.8s,baz=131,slow=7.7,SNR=16
      comp=Z,4.4nm,0.8s
SEY   Seymchan          79.35 333ceP          P         00 30 41.9  +0.7
SEY                                  pmax     pmax
      comp=Z,8.0nm,1.0s
PETK  Petropavlovsk-    79.67 323    LR       LR        00 59 20.0
      comp=Z,166nm,20.6s,baz=61,slow=31
MA2   Magadan           81.24 330    P        P         00 30 51.3  -0.1
      comp=Z,2.0nm,0.3s,baz=342,slow=20,SNR=2.9
      comp=Z,2.0nm,0.3s
MA2   Magadan           81.24 330ceP          P         00 30 52.5  +1.0
MA2                                  pmax     pmax
      comp=Z,9.0nm,1.0s
MA2   Magadan           81.24 330    P        P         00 30 51.4  -0.1
MA2                                  IAMs_20  IAMs_20   01 12 22.9
      comp=Z,697nm,18.0s
ESK   Eskdalemuir       81.87  34    P        P         00 30 55.8  +0.9
ESK                                  pmax     pmax
      comp=Z,49nm,1.5s
ESK                                  MLR      MLR
      comp=Z,1µm,19.0s
ESK   Eskdalemuir       81.87  34    P        P         00 30 55.8  +0.9
ESK                                  IAmb     IAmb      00 31 01.7
      comp=Z,48nm,1.4s
EKA   Eskdalemuir Ar    81.89  34    LR       LR        01 06 49.2
      comp=Z,881nm,19.9s,baz=292,slow=35
PGAV  Gavieira, Arco    83.09  48  eLR        LR        00 57 50.8
      comp=Z,1µm,18.0s
TIXI  Tiksi             83.13 345    P        P         00 31 00.1  -1.1
      comp=Z,2.1nm,0.4s,baz=92,slow=23,SNR=10.0
TIXI                                 LR       LR        01 11 05.6
      comp=Z,726nm,19.5s,baz=0.0,slow=38
      comp=Z,2.1nm,0.4s
TIXI  Tiksi             83.13 345ceP          P         00 31 00.3  -0.8
TIXI                                 pmax     pmax
      comp=Z,12nm,1.3s
TIXI  Tiksi             83.13 345    P        P         00 30 59.9  -1.3
TIXI                                 IAmb     IAmb      00 31 10.6
      comp=Z,33nm,1.4s
TIXI                                 IAMs_20  IAMs_20   01 10 43.5
      comp=Z,726nm,20.0s
MSVF  Nonsavu           83.37 249    LR       LR        00 59 25.6
      comp=Z,799nm,20.3s,baz=80,slow=29
POLO  Lamas de Olo      83.61  49  eP         P         00 31 05.4  +1.0
      comp=Z,21nm,1.6s
PMTG  Montargil         84.03  51  eP         P         00 31 08.4  +1.9
      comp=Z,38nm,1.5s
MBO   M'Bour            84.10  77    IAMs_20  IAMs_20   01 02 44.8
      comp=Z,1µm,22.0s
MTE   Manteigas         84.11  50  eS         S         00 41 37.2  +5.3
MTE   Manteigas         84.11  50  eLR        LR        00 58 23.3
      comp=Z,710nm,18.0s
MTE   Manteigas         84.11  50    IAMs_20  IAMs_20   01 11 27.4
      comp=Z,867nm,19.0s
MVO   Moncorvo          84.23  49  eP         P         00 31 09.8  +2.3
      comp=Z,30nm,1.6s
MVO   Moncorvo          84.23  49  eS         S         00 41 38.7  +5.6
MVO   Moncorvo          84.23  49  eLR        LR        00 58 41.6
      comp=Z,1µm,20.0s
MORF  Marmelete         84.28  53  eP         P         00 31 08.5  +0.7
MORF                               eSKSac     SKSac     00 41 31.0  -0.9
MORF                                 IAMs_20  IAMs_20   01 08 48.1
      comp=Z,1µm,22.5s
MORF  Marmelete         84.28  53  eP         P         00 31 08.5  +0.7
MORF                               e                    00 41 30.9
PCBR  Castelo Branco    84.34  50  eP         P         00 31 09.5  +1.5
      comp=Z,26nm,1.6s
EVO   Evora             84.36  51  eP         P         00 31 10.0  +1.8
      comp=Z,30nm,1.4s
RAO   Raoul Island      84.42 237    LR       LR        00 59 14.3
      comp=Z,591nm,21.5s,baz=132,slow=29
MESJ  Messejana         84.43  52  eP         P         00 31 09.3  +0.7
MESJ                               eSKSac     SKSac     00 41 32.0  -0.7
MESJ                                 IAMs_20  IAMs_20   01 10 18.7
      comp=Z,1µm,25.0s
MESJ  Messejana         84.43  52  eP         P         00 31 10.0  +1.5
      comp=Z,40nm,1.5s
MESJ  Messejana         84.43  52  eP         P         00 31 09.2  +0.7
MESJ                               e                    00 41 31.9
PMRV  Marv??o           84.53  50  eP         P         00 31 10.2  +1.2
      comp=Z,31nm,1.5s
PMRV  Marv??o           84.53  50  eLR        LR        00 57 45.6
      comp=Z,858nm,18.0s
PESTR Estremoz          84.57  51  eP         P         00 31 10.5  +1.3
      comp=Z,29nm,1.7s
PCVE  Castro Verde      84.63  52  eP         P         00 31 11.6  +2.0
      comp=Z,36nm,1.7s
PVAQ  Vaqueiros         84.95  52  eLR        LR        00 58 25.7
      comp=Z,761nm,18.0s
PBAR  Barrancos         85.20  51  eP         P         00 31 14.1  +1.7
      comp=Z,26nm,1.6s
ARCES ARCESS Array B    85.80  15    P        P         00 31 12.7  -2.1
      comp=Z,2.5nm,0.9s,baz=339,slow=4.8,SNR=2.4
ARCES                                LR       LR        01 10 08.6
      comp=Z,2µm,20.6s,baz=308,slow=36
      comp=Z,2.5nm,0.9s
ARCES ARCESS Array B    85.80  15    P        P         00 31 12.7  -2.1
ARCES                                pmax     pmax
      comp=Z,85nm,2.0s
NB2   NORSAR Subarra    86.25  26    P        P         00 31 15.8  -1.4
      comp=Z,8.2nm,1.7s,baz=300,slow=4.8
NOA   NORSAR Array B    86.25  26    P        P         00 31 15.0  -2.1
      comp=Z,3.2nm,1.1s,baz=302,slow=4.6,SNR=6.3
NOA                                  LR       LR        01 10 10.9
      comp=Z,951nm,19.9s,baz=305,slow=36
      comp=Z,3.2nm,1.1s
KONO  Kongsberg         86.27  27ceP          P         00 31 18.9  +1.7
KONO                                 pmax     pmax
      comp=Z,34nm,2.5s
KONO  Kongsberg         86.27  27    P        P         00 31 17.7  +0.5
KONO                                 IAmb     IAmb      00 31 40.5
      comp=Z,33nm,1.4s
PAB   San Pablo         86.71  49    P        P         00 31 19.8  -0.1
PAB                                  pmax     pmax
      comp=Z,18nm,1.3s
PAB                                  MLR      MLR
      comp=Z,900nm,19.0s
PAB   San Pablo         86.71  49    P        P         00 31 19.8  -0.1
PAB                                  IAmb     IAmb      00 31 24.3
      comp=Z,18nm,1.2s
PAB   San Pablo         86.71  49    IAMs_20  IAMs_20   01 10 48.2
      comp=Z,903nm,19.0s
ESDC  Sonseca Array     86.94  49    P        P         00 31 19.9  -1.1
      comp=Z,2.5nm,1.0s,baz=306,slow=5.2,SNR=11
ESDC                                 LR       LR        01 09 54.0
      comp=Z,625nm,19.7s,baz=293,slow=36
      comp=Z,2.5nm,1.0s
ESDC  Sonseca Array     86.94  49    P        P         00 31 21.2  +0.2
HFS   Hagfors           87.77  26    LR       LR        01 10 58.6
      comp=Z,1µm,18.5s,baz=298,slow=36
CLF   Chambon-Foret     87.82  40    P        P         00 31 25.9  +0.9
DOU   Dourbes           88.30  37  dPcP       P         00 31 28.4  +1.1
BMRD  Maredsous         88.30  37  dP         P         00 31 27.6  +0.4
BGES  Gesves            88.45  37  dPcP       P         00 31 28.9  +0.9
BCLA  Clavier           88.56  37  dP         P         00 31 28.7  +0.3
PMSA  Palmer Station    88.61 164    LR       LR        01 02 10.7
      comp=Z,608nm,20.7s,baz=320,slow=30
MDT   Midelt            88.91  56    LR       LR        01 09 13.0
      comp=Z,410nm,19.9s,baz=318,slow=34
YAK   Yakutsk           88.96 337    IAMs_20  IAMs_20   01 15 48.8
      comp=Z,644nm,18.0s
BHOU  Houvegnez         88.98  37  dPcP       P         00 31 31.7  +1.2
APA   Apatity           89.22  15⇓iP          P         00 31 40.1  +8.9
APA                                  pmax     pmax
      comp=Z,4.0nm,0.9s
APA                                  MLR      MLR
      comp=Z,3µm,20.0s
CART  Cartagena         89.87  50    IAMs_20  IAMs_20   01 12 58.1
      comp=Z,1µm,19.0s
YSS   Yuzh-Sakhalins    90.89 321  eP         P         00 31 43.5  +4.0
YSS                                  pmax     pmax
      comp=Z,20nm,1.0s
STU   Stuttgart         91.57  37    IAMs_20  IAMs_20   01 12 34.3
      comp=Z,1µm,20.0s
FINES FINESS Array B    91.65  21    P        P         00 31 42.0  -0.6
      comp=Z,1.4nm,0.9s,baz=336,slow=3.0,SNR=2.7
FINES                                LR       LR        01 12 47.6
      comp=Z,2µm,19.9s,baz=316,slow=36
      comp=Z,1.4nm,0.9s
URZ   Urewera           91.77 230    LR       LR        01 03 14.9
      comp=Z,1µm,21.9s,baz=31,slow=29
NRIK  Noril'sk          92.14 355    P        P         00 31 44.6  -0.1
      comp=Z,1.9nm,0.6s,baz=53,slow=2.9,SNR=3.3
NRIK                                 LR       LR        01 16 27.7
      comp=Z,1µm,18.0s,baz=23,slow=38
      comp=Z,1.9nm,0.6s
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NRIK  Noril'sk          92.14 355ceP          P         00 31 45.1  +0.3
NRIK                                 pmax     pmax
      comp=Z,4.0nm,1.1s
NRIK  Noril'sk          92.14 355    IAmb     IAmb      00 32 03.2
      comp=Z,17nm,1.5s
CLL   Collm             92.33  34  eP         P         00 31 48.0  +2.0
CLL                                e                    00 42 17.0
CLL                                  MLR      MLR
      comp=Z,900nm,21.1s
CLL                                  MLR      MLR
      comp=Z,500nm,20.2s
CLL   Collm             92.33  34    IAMs_20  IAMs_20   01 14 08.9
      comp=Z,924nm,21.0s
CLL   Collm             92.33  34  eP         P         00 31 48.0  +2.0
CLL                                ePP        PP        00 35 28.0  +2.0
CLL                                eSKSac     SKSac     00 42 17.0  -2.5
CLL                                eS         ScS       00 42 56.0  +4.3
CLL                                ePS        PnS       00 44 04.0  +2.3
CLL                                ePPS       PPS       00 44 42.0
CLL                                eSS        SS        00 49 00.0  +1.2
CLL                                ex         x         00 49 54.0
CLL                                eSSS       SSS       00 53 00.0
CLL                                  LmV                01 14 00.0
      comp=Z,900nm,21.1s
NKC   Novy Kostel       92.61  35    AMS      AMS       01 13 40.0
      comp=Z,2µm,18.9s
DAVOX Davos/Dischmat    92.97  38    LR       LR        01 14 24.4
      comp=Z,3µm,18.1s,baz=302,slow=36
BRG   Berggiesshubel    93.06  34  e(P)       P         00 32 01.7  +12
BRG                                  Amp                00 32 03.0
      comp=Z,3.9nm,1.2s
BRG   Berggiesshubel    93.06  34    PP       PP        00 35 36.0  +4.2
BRG   Berggiesshubel    93.06  34    PS       PS        00 44 14.0  +5.2
BRG                                  Amp                01 13 06.0
      comp=N,0.7nm,18.7s
BRG                                  Amp                01 13 09.0
      comp=E,0.5nm,18.3s
BRG                                  Amp                01 13 12.0
      comp=Z,1.0nm,19.1s
BRG   Berggiesshubel    93.06  34  eP         P         00 32 01.7  +12
BRG                                                     00 35 36.0
BRG                                                     00 42 26.0
BRG                                  PS                 00 44 14.0
BRG                                  pmax     pmax
      comp=Z,4.0nm,1.2s
BRG                                  pmax     pmax
      comp=N,670nm,18.7s
BRG                                  MLR      MLR
      comp=E,510nm,18.3s
BRG                                  MLR      MLR
      comp=Z,990nm,19.1s
FETA  Feichten          93.35  38  eP         P         00 31 52.2  +1.1
      comp=Z,4.0nm,1.2s
MOTA  Moosalm           93.40  38  eP         P         00 31 51.4  +0.1
      comp=Z,3.7nm,1.0s
SQTA  Sankt Quirin      93.53  38  eP         P         00 31 51.8   0.0
      comp=Z,3.9nm,1.0s
WTTA  Wattenberg        93.75  37  eP         P         00 31 53.4  +0.4
      comp=Z,2.5nm,0.7s
KHC   Kasperske Hory    93.83  35  eP         P         00 31 50.5  -2.6
KHC                                e                    00 35 36.1
KHC                                e                    00 42 32.2
KHC                                  MLR      MLR
      comp=Z,2µm,17.9s
KHC   Kasperske Hory    93.83  35  eP         P         00 31 50.5  -2.6
KHC                                ePP        PP        00 35 36.1  -1.9
KHC                                eSKS       SKSac     00 42 32.2  +4.1
KHC                                  AMS      AMS       01 14 30.0
      comp=Z,2µm,17.9s
PRU   Pruhonice         93.88  34  ePP        PP        00 35 37.9  -0.3
PRU                                  AMS      AMS       01 14 30.0
      comp=Z,2µm,18.0s
KLNR  Kaliningrad       93.90  28  i P        P         00 31 54.3  +1.2
KLNR                                 pmax     pmax
      comp=Z,13nm,0.8s
GERES GERESS Array B    94.06  35    P        P         00 31 53.6  -0.6
      comp=Z,0.5nm,0.6s,baz=352,slow=2.7,SNR=7.0
GERES                                LR       LR        01 14 58.5
      comp=Z,1µm,18.6s,baz=303,slow=36
      comp=Z,0.5nm,0.6s
CHVC  Chvalec           94.33  33    AMS      AMS       01 17 30.0
      comp=Z,900nm,18.7s
UPC   Upice             94.35  33    AMS      AMS       01 19 30.0
      comp=Z,900nm,15.8s
CKRC  Cesky Krumlov     94.41  35  ePP        PP        00 35 43.1  +0.7
CKRC                               eSKS       SKSac     00 42 37.6  +6.4
CKRC                                 AMS      AMS       01 14 50.0
      comp=Z,1µm,17.7s
OSTC  Ostas             94.43  33    AMS      AMS       01 19 40.0
      comp=Z,800nm,15.0s
ABTA  Abfaltersbach     94.53  38  i P        P         00 31 56.6  +0.2
      comp=Z,5.2nm,1.2s
DPC   Dobruska-Polom    94.60  33    AMS      AMS       01 19 50.0
      comp=Z,800nm,18.2s
BIOA  Bad Ischl, Aus    94.66  36  i P        P         00 31 56.8  -0.1
      comp=Z,14nm,1.2s
TREC  Trest             94.78  34  ePP        PP        00 35 43.3  -2.0
TREC                                 AMS      AMS       01 15 10.0
      comp=Z,2µm,18.6s
KBA   Koelnbreinsper    94.83  37  i P        P         00 31 57.8  -0.1
      comp=Z,8.9nm,1.2s
MOA   Molln             94.93  36  i P        P         00 31 56.8  -1.3
      comp=Z,13nm,1.4s
DZM   Mont Dzumac       95.10 249  eLR        LR        01 02 50.6
      comp=Z,2µm,27.1s
DZM   Mont Dzumac       95.10 249    LR       LR        01 05 07.0
      comp=Z,1µm,21.5s,baz=87,slow=29
VRAC  Vranov            95.36  34    LR       LR        01 15 05.9
      comp=Z,924nm,20.2s,baz=306,slow=36
CADS  Cadrg             95.53  38  i P        P         00 32 00.7  -0.2
CONA  Conrad Observa    95.77  35  eP         P         00 32 00.6  -1.4
      comp=Z,7.1nm,1.4s
OBKA  Obir              95.84  37  i P        P         00 32 02.1  -0.2
      comp=Z,11nm,1.1s
KOWA  Kowa              95.93  73    IAMs_20  IAMs_20   01 20 28.2
      comp=Z,710nm,20.0s
ARSA  Arzberg           95.97  36  i P        P         00 32 01.6  -1.2
      comp=Z,4.5nm,1.3s
SOKA  Soboth            96.02  37  i P        P         00 32 02.9  -0.3
      comp=Z,8.0nm,1.0s
RONA  Rosalia, Austr    96.14  35  eP         P         00 32 02.3  -1.4
      comp=Z,7.0nm,1.1s
KLMR  Klimovskoe        96.23  16  eP         P         00 32 00.3  -3.4
KLMR                               e                    00 35 52.8
KLMR                                 pmax     pmax
      comp=Z,14nm,1.5s
KLMR  Klimovskoe        96.23  16  eP         P         00 32 00.4  -3.3
KLMR                                 AMP                00 32 05.7
      comp=Z,14nm,1.5s
KLMR                               ePP        PP        00 35 52.9  -3.2
KLMR                                 LQ       LQ        01 04 44.9
KLMR                                 LQ       LQ        01 04 44.9
KLMR                                 LR       LR        01 10 36.0
ZST   Bratislava        96.28  35  eP         P         00 32 06.6  +2.4
ZST   Bratislava        96.28  35  ePDIFF     P         00 32 06.6  +2.4
LATE  Laterza           96.31  41    P        P         00 32 04.5  -0.1
LATE                                 IAmb     IAmb      00 32 08.0
      comp=Z,11nm,1.3s
VSL   Villasalto        96.32  45    IAMs_20  IAMs_20   01 15 25.1
      comp=Z,691nm,20.0s
VISS  Visnje            96.40  37  i P        P         00 32 05.8  +1.0
VISS                               ePP        PP        00 35 56.8  -1.2
VISS                               i SKSac    SKSac     00 42 43.3  +1.4
OJC   Ojcow             96.46  32    IAMs_20  IAMs_20   01 17 12.4
      comp=Z,662nm,20.0s
NACGM Naroch            96.53  26⇑eP          P         00 32 02.3  -2.9
      baz=315
MNK   Minsk             97.26  25  i P        P         00 32 07.8  -0.7
MNK                                i                    00 36 03.7
MNK                                i PPP      PPP       00 38 07.7
MNK                                i S        SKSac     00 42 44.8  -1.1
MNK                                i SS       SS        00 50 09.7  +1.1
MNK                                i SSS      SSS       00 53 55.3
MNK                                  pmax     pmax
      comp=E,1.0nm,0.7s
MNK                                  pmax     pmax
      comp=Z,9.0nm,1.0s
MNK                                  pmax     pmax
      comp=N,11nm,1.2s
MNK                                  MLR      MLR
      comp=Z,912nm,17.0s
MNK                                  MLR      MLR
      comp=N,536nm,20.0s
MNK                                  MLR      MLR
      comp=E,93nm,16.0s
MNK   Minsk             97.26  25  i P        P         00 32 07.8  -0.7
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	comp=E,1.0nm,0.7s						
MNK				*i* P	P	00 32 07.8	-0.7
	comp=N,11nm,1.2s						
MNK				*i* P	P	00 32 07.8	-0.7
	comp=Z,9.0nm,1.0s,baz=137						
MNK				*i* PP	PP	00 36 03.8	-0.4
MNK				*i* PPP	PPP	00 38 07.7	
MNK				*i* S	SKSac	00 42 44.9	-1.1
MNK				*i* SS	SS	00 50 09.8	+1.1
MNK				*i* SSS	SSS	00 53 55.3	
MNK				*i* LQ	LQ	01 07 52.8	
MNK				*i* LR	LR	01 12 13.2	
MNK				*i* LRM	MLR	01 16 38.7	
	comp=E,93nm,15.6s						
MNK				*i* LRM	MLR	01 16 38.7	
	comp=N,536nm,19.5s						
MNK				*i* LRM	MLR	01 16 38.7	
	comp=Z,912nm,17.4s						
DBIC	Dimbokro	97.81	80	LR	LR	01 11 47.1	
	comp=Z,562nm,21.6s,baz=296,slow=33						
RPZ	Rata Peaks	97.92	227	LR	LR	01 09 01.3	
	comp=Z,762nm,18.8s,baz=50,slow=31						
KEST	Kesra	98.15	48	LR	LR	01 18 11.9	
	comp=Z,380nm,18.0s,baz=296,slow=36						
UZH	Uzhgorod	98.73	32	*e*P	P	00 32 15.0	-0.2
UZH				*e*		00 32 18.2	
UZH				*e*		00 32 25.2	
MJAR	Matsushiro Arr	98.97	313	LR	LR	01 10 52.0	
	comp=Z,336nm,19.4s,baz=72,slow=32						
MAJO	Matsushiro	98.97	313	IAMs_20	IAMs_20	01 07 10.1	
	comp=Z,468nm,22.0s						
JHJ	Hachijo jima 2	99.54	309	LR	LR	01 11 46.0	
	comp=Z,839nm,19.2s,baz=86,slow=32						
MDJ	Mudanjiang	99.88	324	IAMs_20	IAMs_20	01 25 23.5	
	comp=Z,442nm,19.0s						
OBN	Obninsk	100.05	21	*e*P	Pdif	00 32 21.7	+0.7
OBN				*e*S	SKSac	00 43 02.1	+2.2
OBN				*i* PS	PS	00 45 28.1	+3.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,1μm,18.0s						
DIVS	Divibare	100.36	37	IAMs_20	IAMs_20	01 17 41.9	
	comp=Z,825nm,22.0s						
AKASG	Malin Array Be	100.57	27	P	Pdif	00 32 21.9	-1.5
	comp=Z,1.5nm,0.7s,baz=302,slow=3.3,SNR=5.6						
AKBB	Malin Array Si	100.57	27	*c* *e*P	Pdif	00 32 23.6	+0.2
CEL	Celeste	101.29	43	IAMs_20	IAMs_20	01 20 27.3	
	comp=Z,818nm,20.0s						
HIA	Hailar	101.76	332	IAMs_20	IAMs_20	01 22 03.5	
	comp=Z,570nm,22.0s						
MILM	Milestii Mici	103.11	30	*e*P	Pdif	00 32 35.0	+0.2
MILM				pmax	pmax		
	comp=Z,26nm,1.4s						
ULN	Ulaanbaatar	108.04	338	IAMs_20	IAMs_20	01 24 00.3	
	comp=Z,524nm,22.0s						
IDI	Anoyia	108.84	41	IAMs_20	IAMs_20	01 24 19.9	
	comp=Z,384nm,22.0s						
KARP	Karpathos	110.07	40	IAMs_20	IAMs_20	01 24 53.1	
	comp=Z,689nm,21.0s						
ANTO	Ankara	110.22	33	IAMs_20	IAMs_20	01 23 52.4	
	comp=Z,680nm,22.0s						
BJT	Baijiatuau	110.28	327	IAMs_20	IAMs_20	01 33 35.5	
	comp=Z,441nm,18.0s						
SOC	Sochi	110.61	26	*i* PKIKP	PKiKP	00 37 09.4	+0.9
SOC				*e*		00 37 43.8	
SOC				*e*PPP	PPP	00 40 01.4	
SOC				*e*SS	SS	00 53 15.6	+3.5
SOC				*e*SSS	SSS	00 57 18.7	
SOC				MLR	MLR		
	comp=Z,911nm,17.0s						
KIV	Kislovodsk	111.50	24	*i* PKIKP	PKiKP	00 37 08.2	-2.2
KIV				*e*		00 37 48.5	
KIV				*e*PS	PS	00 47 20.6	-2.2
KIV				*e*SS	SS	00 53 23.7	-0.5
KIV				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,652nm,21.0s						
KIV	Kislovodsk	111.50	24	IAMs_20	IAMs_20	01 27 10.0	
	comp=Z,598nm,18.0s						
HHC	Hu-ho-hao-te	111.91	331	*e*PKP	PKiKP	00 37 06.7	-4.6
HHC				LR	LR		
	comp=Z,950nm,17.8s						
HHC				LR	LR		
	comp=Z,1μm,17.3s						
HNS	HongShan	113.00	326	*e*PKP	PKiKP	00 37 09.8	-3.4
HNS				LR	LR		
	comp=Z,410nm,17.8s						
HNS				LR	LR		
	comp=Z,490nm,18.7s						
CSS	Mathiatis	114.10	36	IAMs_20	IAMs_20	01 27 44.5	
	comp=Z,574nm,21.0s						
MAK	Makhachkala	114.14	22	*i* P	Pdif	00 33 13.7	-10
MAK				*e*		00 43 54.2	
MAK				*e*PS	PS	00 47 46.2	-0.6
MAK				*e*SSS	SSS	00 58 09.2	
MAK				pmax	pmax		
	comp=Z,84nm,1.0s						
MAK				MLR	MLR		
	comp=Z,669nm,16.0s						
NJ2	Nanjing	114.44	319	*e*PKP	PKiKP	00 37 16.8	+0.6
MKAR	Makanchi Array	114.87	354	*c* *i*PKIKP	PKPdf	00 37 21.3	+4.6
GNI	Garni	115.54	25	IAMs_20	IAMs_20	01 31 08.0	
	comp=Z,660nm,20.0s						
WMQ	Urumqi	117.06	349	*e*PKP	PKPdf	00 37 22.1	+1.1
WMQ				LR	LR		
	comp=Z,850nm,24.9s						
WMQ				LR	LR		
	comp=Z,940nm,26.7s						
TATO	Taipei	117.32	312	IAMs_20	IAMs_20	01 17 46.1	
	comp=Z,501nm,21.0s						
YHNB	Yeheng	117.59	312	IAMs_20	IAMs_20	01 17 41.4	
	comp=Z,566nm,22.0s						
NACB	Ninganchiao	117.74	311	IAMs_20	IAMs_20	01 16 57.5	
	comp=Z,527nm,22.0s						
GHAJ	Ghor Haditha	118.05	38	IAMs_20	IAMs_20	01 31 00.1	
	comp=Z,468nm,21.0s						
YULB	Yu-li	118.44	311	IAMs_20	IAMs_20	01 17 09.0	
	comp=Z,609nm,22.0s						
SSLB	Suanglung	118.44	311	IAMs_20	IAMs_20	01 18 15.0	
	comp=Z,745nm,22.0s						
XAN	Xi'an	118.58	328	Pdif	Pdif	00 33 41.9	-2.1
XAN				LR	LR		
	comp=Z,420nm,17.1s						
XAN				LR	LR		
	comp=Z,460nm,16.5s						
XAN				LR	LR		
	comp=Z,970nm,19.4s						
TWG	Pinlang	118.95	310	IAMs_20	IAMs_20	01 26 57.6	
	comp=Z,313nm,20.0s						
TPUB	Ta-pu	118.98	311	IAMs_20	IAMs_20	01 17 51.2	
	comp=Z,641nm,22.0s						
ENH	Enshi	121.22	325	IAMs_20	IAMs_20	01 36 00.1	
	comp=Z,461nm,19.0s						
GOMU	GeErMu	122.56	341	PKP	PKPdf	00 37 31.1	-1.1
GOMU				SS	SS	00 55 54.8	+6.2
GOMU				AMB	AMB		
	comp=Z,75nm,5.2s						
GOMU				LR	LR		
	comp=Z,190nm,20.2s						
GOMU				LR	LR		
	comp=Z,320nm,21.0s						
CD2	Chengdu	123.65	330	PKP	PKPdf	00 37 33.0	-1.0
CD2				AMB	AMB		
	comp=Z,50nm,5.5s						
CD2				LR	LR		
	comp=Z,810nm,19.0s						
CD2				LR	LR		
	comp=Z,760nm,19.0s						
DAV	Davao City (W)	123.80	292	IAMs_20	IAMs_20	01 22 51.4	
	comp=Z,437nm,20.0s						
WRA	Warramunga Arr	123.84	258	PKP	PKPdf	00 37 32.3	-2.2
	comp=Z,1.8nm,0.8s,baz=80,slow=2.9,SNR=10						
WRA	Warramunga Arr	123.84	258	PKIKP	PKPdf	00 37 33.9	-0.6
WRA	Warramunga Arr	123.84	258	PKPdf	PKPdf	00 37 33.9	-0.6
HKPS	Hong Kong Po S	124.17	315	IAMs_20	IAMs_20	01 42 51.3	
	comp=Z,651nm,21.0s						
ASAR	Alice Springs	124.74	254	PKP	PKPdf	00 37 34.4	-1.8
	comp=Z,1.6nm,0.9s,baz=92,slow=2.2,SNR=7.6						
PZH	PanZhiHua	128.29	329	PKP	PKPdf	00 37 42.8	-0.3
PZH				PP	PP	00 39 44.4	-1.6
PZH				AMB	AMB		
	comp=Z,100nm,4.4s						
PZH				LR	LR		
	comp=Z,260nm,18.6s						
PZH				LR	LR		
	comp=Z,290nm,18.1s						
PZH				LR	LR		
	comp=Z,400nm,15.0s						
QIZ	Qiongzhong	129.31	315	IAMs_20	IAMs_20	01 46 30.0	
	comp=Z,316nm,18.0s						
QIZ	Qiongzhong	129.31	315	PKP	PKPdf	00 37 41.8	-3.2
QIZ				SS	SS	00 57 13.5	-0.6
QIZ				LR	LR		
	comp=Z,260nm,13.2s						
QIZ				LR	LR		
	comp=Z,330nm,17.5s						
RAYN	Ar Rayn	129.64	35	IAMs_20	IAMs_20	01 43 02.7	
	comp=Z,521nm,20.0s						
LSA	Lhasa	129.72	341	IAMs_20	IAMs_20	01 45 52.0	
	comp=Z,488nm,20.0s						
UOSS	Minazif	133.43	23		PKPdf	00 37 53.0	+0.2
UOSS	Minazif	133.43	23	IAMs_20	IAMs_20	01 40 28.6	
	comp=Z,376nm,22.0s						
FURI	Furi	135.40	56	IAMs_20	IAMs_20	01 39 08.5	
	comp=Z,364nm,20.0s						
LODK	Lodwar	135.69	65	IAMs_20	IAMs_20	01 40 36.7	
	comp=Z,381nm,19.0s						
CHTO	Chiang Mai	136.09	326	IAMs_20	IAMs_20	01 46 48.0	
	comp=Z,391nm,19.0s						
CMAR	Chiang Mai Arr	136.38	326	PKP	PKPdf	00 37 57.1	-1.2
	comp=Z,0.9nm,0.3s,baz=306,slow=22,SNR=1.5						
CMAR	Chiang Mai Arr	136.38	326	*c* *i*PKIKP	PKiKP	00 38 01.6	+1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ATD	Arta Tunnel	136.85	49	IAMs_20	IAMs_20	01 37 29.1	
	comp=Z,360nm,20.0s						
KMBO	Kilima Mbogo	139.53	69	IAMs_20	IAMs_20	01 37 14.4	
	comp=Z,541nm,22.0s						
KIBK	Kibwezi	140.79	70	IAMs_20	IAMs_20	01 48 26.8	
	comp=Z,361nm,18.0s						
SOCY	Socotra	143.50	35	IAMs_20	IAMs_20	01 48 48.9	
	comp=Z,368nm,20.0s						
MYKOM	Kota Tinggi	145.02	302	IAMs_20	IAMs_20	01 56 05.5	
	comp=Z,471nm,19.0s						
KULM	Kulim	145.27	310	IAMs_20	IAMs_20	01 55 41.1	
	comp=Z,440nm,19.0s						
PCHI	Peechi	151.33	357	*e*P	PKPab	00 38 36.0	-2.1
PCHI				*e*x	x	00 52 27.4	

IDC ***07*** *00:34:01.2±2.8, 47°.66N×128°.71W, h0^{km}, mbtmp3.4/6, ML3.4/6, Error ellipse: s-maj=45.8km s-min=18.1km az=59.0*

NEIC ***07*** *00:34:02.4±1.5, 47°.79N±0°.05×128°.6W±0°.1, h10^{km}±2^{km}, mb4.0/16, Error ellipse: s-maj=12.3km s-min=7.9km az=282.0*

ISC 07 00:34:01.8±1.1**, 47°.75N**±0°.08×**128°.6W**±0°.1**, h10^{km}, n64, σ1ˢ13**/58**, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZB	Mount Ozzard	2.40	59	Pn	Pn	00 34 40.7	-0.5
C03A	Quillayute Air	2.73	84	Pn	Pn	00 34 45.0	-0.5
HOLB	Holberg	2.91	6	Pn	Pn	00 34 48.6	+0.4
CBB	Campbell River	3.13	42		Pn	00 34 51.3	+0.2
CLRS	Cowichan Lake	3.17	69		Pn	00 34 51.4	-0.4
NLWA	Neilton Lookou	3.23	95	Pn	Pn	00 34 51.3	-1.2
WISH	Wishkah	3.34	99	Pn	Pn	00 34 53.2	-0.8
B04A	Port Angeles	3.45	83	Pn	Pn	00 34 55.8	+0.3
PGC	Sidney	3.56	73		Pn	00 34 56.5	-0.5
HEBO	Mount Hebo	4.20	125	Pn	Pn	00 35 04.7	-1.2
BBB	Bella Bella	4.45	4	Pn	Pn	00 35 09.4	+0.2
	7.1nm,0.3s,baz=199,slow=5.2,SNR=46						
	67nm,0.7s						
BBB	Bella Bella	4.45	4		Pn	00 35 09.7	+0.5
D05A	Enumclaw	4.52	95	Pn	Pn	00 35 10.8	+0.5
F04A	Amboy	4.62	111	Pn	Pn	00 35 12.5	+0.9
COR	Corvallis	4.86	129	Pn	Pn	00 35 14.0	-0.8
H04D	Lebanon	5.20	126		Pn	00 35 20.1	+0.5
F05D	White Salmon	5.25	108	Pn	Pn	00 35 20.1	-0.2
LLLB	Lillooet	5.26	55		Pn	00 35 20.4	0.0
HOOD	Mount Hood Mea	5.38	114		Pn	00 35 22.9	+0.7
LTY	Liberty	5.40	92	Pn	Pn	00 35 23.0	+0.6
H04A	Detroit Lake	5.41	122		Pn	00 35 23.0	+0.5
DBO	Dodson Butte	5.97	139		Pn	00 35 32.6	+2.3
B08A	Colville Reser	6.25	81	Pn	Pn	00 35 34.9	+0.9
HAWA	Hanford	6.34	99		Pn	00 35 36.2	+0.8
J04D	Umpqua Nationa	6.42	132	Pn	Pn	00 35 36.9	+0.4
HUMO	Hull Mountain	6.51	140	Pn	Pn	00 35 38.7	+1.1
C09A	Chrisman Ranch	6.96	86	Pn	Pn	00 35 43.7	-0.1
G08A	Pilot Rock	7.09	107	Pn	Pn	00 35 49.8	+4.1
L04D	Klamath Falls	7.11	139	Pn	Pn	00 35 47.2	+1.3
E09A	Wood Farm, Sta	7.24	96	Pn	Pn	00 35 47.6	0.0
NEW	Newport	7.72	82	Pn	Pn	00 35 55.3	+1.1
	0.3nm,0.3s,baz=289,slow=13,SNR=2.8						
	1.5nm,0.6s						
NEW	Newport	7.72	82		Pn	00 35 54.6	+0.4
HOPS	Hopland Field	9.63	153	Pn	Pn	00 36 23.5	+3.0
JTMT	Jette	9.65	85	Pn	Pn	00 36 22.2	+1.4
WALA	Waterton Lakes	9.86	77	Pn	Pn	00 36 25.3	+1.7
NVAR	Mina Array Bea	11.97	137	Pn	Pn	00 36 55.8	+3.2
	0.1nm,0.3s,baz=319,slow=13,SNR=7.3						
	1.3nm,0.9s						
PDAR	Pinedale Array	14.30	103	Pn	P	00 37 29.7	-2.0
	0.1nm,0.3s,baz=282,slow=14,SNR=4.3						
	1.1nm,0.9s						
PDAR	Pinedale Array	14.30	103	Pn	Pn	00 37 24.3	-0.2
PRN	Pahroc Range	14.35	131	Pn	Pn	00 37 25.7	+0.6
BERG	Berg Lake	15.40	331	Pn	Pn	00 37 39.5	+0.5
Q16A	Castle Valley	15.43	119	P	P	00 37 43.3	-0.9
Q16A				IAmb	IAmb	00 37 48.0	
	comp=Z,6.0nm,0.9s						
YKA	Yellowknife Ar	16.74	23	Pn	Pn	00 37 57.1	+1.0
	baz=212,slow=12,SNR=8.0						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	16.74	23		Pn	00 37 55.9	-0.2
W13A	Hualapai Mount	16.75	134	Pn	Pn	00 37 56.3	-0.3
PV23	Carpenter Ridg	17.02	116		Pn	00 38 00.9	+0.8
PV11	David Mesa, Pa	17.20	116		P	00 38 03.7	-0.2
PV11				IAmb	IAmb	00 38 08.3	
	comp=Z,13nm,1.0s						
PV07	Paradox Valley	17.25	115		P	00 38 04.1	-0.3
PV07				IAmb	IAmb	00 38 08.7	
	comp=Z,14nm,1.1s						
PV13	Radium Mtn., P	17.32	116	Pn	Pn	00 38 03.8	-0.1
PV13				IAmb	IAmb	00 38 10.3	
	comp=Z,10nm,1.1s						
PV15	Paradox Valley	17.41	115	Pn	Pn	00 38 04.3	-0.7
PV15				IAmb	IAmb	00 38 10.4	
	comp=Z,11nm,1.0s						
PHWY	Pilot Hill	17.68	103		Pn	00 38 08.6	+0.2
MVCO	Mesa Verde	18.14	118		P	00 38 14.1	-0.1
MVCO				IAmb	IAmb	00 38 22.7	
	comp=Z,8.7nm,0.9s						
J25K	Salcha River,	19.19	338	P	P	00 38 25.2	-0.3
J25K				IAmb	IAmb	00 38 44.8	
	comp=Z,16nm,1.7s						
SDCO	Great Sand Dun	19.63	112	P	P	00 38 30.2	-0.4
ILAR	Eielson Array	19.71	337	P	Pn	00 38 32.6	0.0
	comp=Z,0.1nm,0.3s,baz=142,slow=8.0,SNR=2.8						
	comp=Z,0.3nm,0.8s						
KTH	Kantishna Hill	20.05	330	P	P	00 38 34.8	0.0
T25A	Trinidad	20.68	112	P	P	00 38 42.0	-0.1
T25A				IAmb	IAmb	00 38 46.0	
	comp=Z,7.8nm,0.9s						
ANMO	Albuquerque	20.89	120	P	P	00 38 44.6	+0.3
B35A	Bob, Littlefor	23.21	75	P	P	00 39 07.9	-0.8
H11N2	WAKE ISLAND Hy	58.58	265	T	T	01 46 59.5	
	baz=45,slow=74						
H11N3	WAKE ISLAND Hy	58.58	265	T	T	01 46 58.3	
	baz=45,slow=74						
H11N1	WAKE ISLAND Hy	58.59	265	T	T	01 46 60.0	
	baz=45						
H11S1	WAKE ISLAND Hy	59.56	264	T	T	01 48 12.2	
	baz=44,slow=75						
H11S2	WAKE ISLAND Hy	59.57	264	T	T	01 48 11.2	
	baz=44,slow=75						
H11S3	WAKE ISLAND Hy	59.58	264	T	T	01 48 12.0	
	baz=44,slow=75						

IDC ***07*** *00:47:46.6±3.3, 39°.37N×78°.67E, h0^{km}, mb3.5/3, mbtmp3.4/5, ML3.2/2, MS3.8/2, Error ellipse: s-maj=62.8km s-min=36.3km az=123.0*

KRNET ***07*** *00:47:52.5±0.1, 39°.96N×78°.21E, mb3.5*

SOME ***07*** *00:47:52.4, 40°.10N×77°.95E, h5^{km}*

NNC ***07*** *00:47:56.5±0.8, 40°.16N×77°.96E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=5.9km s-min=4.8km az=157.0*

ISC 07 00:47:54.1±1.4**, 40°.05N**±0°.07×**78°.07E**±0°.04**, h10^{km}, n67, σ2ˢ39**/100**, mb3.3**/3**, 41C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.69	353	⇑*i*P	Pb	00 48 25.5	-0.1
	baz=50						
TARG				⇑*i*S	Sg	00 48 49.8	+1.1
	baz=50						
KDJ	Kajisay	2.19	342	⇑*i*P	Pb	00 48 33.1	-0.8
	baz=41						
KDJ				⇑*i*S	Sb	00 49 02.3	+1.1
	baz=41						
PRZ	Przheval'sk	2.45	6	⇑*i*P	Pb	00 48 36.4	-1.9
	baz=3.0						
PRZ				⇑*i*S	Sb	00 49 08.2	-0.4
	baz=3.0						
ULHL	Ulahol	2.60	328	⇑*e*P	Pb	00 48 38.9	-2.0
	baz=28						
ULHL				⇑*i*S	Sb	00 49 12.5	-0.5
	baz=28						
ANVS	Anan'yevo	2.75	354	⇑*i*P	Pn	00 48 40.8	+2.3
	baz=52						
ANVS				⇑*i*S	Sb	00 49 15.8	-1.6
	baz=52						
BOOM	Boomskoye usch	2.92	327	⇑*i*P	Pn	00 48 43.6	+2.7
	baz=27						
BOOM				⇑*i*S	Sb	00 49 20.7	-1.6
	baz=27						
SATY	Saty	3.02	5	*e*P	Pb	00 48 49.9	+1.8
	18nm,0.2s						
SATY				*e*S	Sg	00 49 30.7	-0.4
	65nm,0.7s						
SATY	Saty	3.02	5	Pg	Pb	00 48 49.3	+1.2
	26nm,1.1s						
SATY				Lg	Lg	00 49 30.3	
	65nm,0.7s						
TNSS	Tian-Shan	3.10	345	*e*P	Pb	00 48 50.4	+0.7
	48nm,0.4s						
TNSS				*e*S	Sg	00 49 31.9	-2.0
	66nm,0.7s						
TNSS	Tian-Shan	3.10	345	Pg	Pb	00 48 50.4	+0.7
	48nm,0.4s						
TNSS				Lg	Lg	00 49 32.1	
	66nm,0.7s						
ZHN	Zhinishke	3.13	5	*e*P	Pb	00 48 52.0	+2.0
	13nm,0.1s						
ZHN				*e*S	Sg	00 49 34.2	-0.5
	84nm,0.3s						
ZHN	Zhinishke	3.13	5	Pg	Pb	00 48 51.9	+2.0
	21nm,0.1s						
ZHN				Lg	Lg	00 49 34.2	
	84nm,0.3s						
UZB	Uzynbulak	3.18	13	*e*P	Pb	00 48 52.1	+1.3
	19nm,0.6s						
UZB				*e*S	Sg	00 49 35.2	-1.0
	63nm,0.8s						
UZB	Uzynbulak	3.18	13	Pg	Pb	00 48 52.4	+1.6
	19nm,0.6s						
UZB				Lg	Lg	00 49 35.2	
	63nm,0.8s						
MDOK	Medeo	3.21	346	*e*P	Pb	00 48 52.4	+1.0
	42nm,0.4s						
MDOK				*e*S	Sg	00 49 35.5	-1.7
	87nm,0.7s						
MDOK	Medeo	3.21	346	⇑Pn	Pb	00 48 48.1	-3.2
	4.8nm,0.6s						
MDOK				⇑Pg	Pb	00 48 52.3	+1.0
	33nm,0.6s						
MDOK				⇑Lg	Lg	00 49 35.3	
	94nm,0.7s						
MDOK	Medeo	3.21	346	Pg	Pb	00 48 52.3	+1.0
	42nm,0.4s						
MDOK				Lg	Lg	00 49 35.5	
	87nm,0.7s						
KNDC	Almaty	3.27	346	⇑Pg	Pb	00 48 53.8	+1.4
	42nm,0.6s						
KNDC				⇑Lg	Lg	00 49 36.4	
	238nm,0.9s						
AAA	Alma-Ata	3.28	345	*e*P	Pb	00 48 54.0	+1.6
	63nm,0.4s						
AAA				*e*S	Sg	00 49 38.4	-0.9
	196nm,0.6s						
AAA	Alma-Ata	3.28	345	Pg	Pb	00 48 54.1	+1.7
	63nm,0.4s						
AAA				Lg	Lg	00 49 38.4	
	196nm,0.6s						
MTBS	Maitube	3.32	339	*e*P	Pb	00 48 53.9	+0.8
	13nm,0.2s						
MTBS				*e*S	Sg	00 49 38.3	-2.4
	64nm,0.4s						
MTBS	Maitube	3.32	339	Pg	Pb	00 48 53.9	+0.8
	26nm,0.7s						
MTBS				Lg	Lg	00 49 38.3	
	64nm,0.4s						
ARLS	Aral	3.37	304	⇑*e*P	Pn	00 48 49.8	+2.8
	baz=4.0						
ARLS				⇑*i*S	Sb	00 49 31.4	-3.8
	baz=4.0						
KST	Kastek	3.39	333	*e*P	Pb	00 48 55.0	+0.7
	11nm,0.4s						
KST				*e*S	Sg	00 49 40.4	-2.5
	44nm,0.4s						
KST	Kastek	3.39	333	Pg	Pb	00 48 55.1	+0.8
	11nm,0.4s						
KST				Lg	Lg	00 49 40.4	
	44nm,0.4s						
TKM2	Tokmak 2	3.42	328	⇑Pn	Pn	00 48 50.5	+2.7
	1.2nm,0.3s						
TKM2				⇓Pg	Pb	00 48 55.3	+0.3
	19nm,1.1s						
TKM2				⇓Lg	Lg	00 49 40.6	
	35nm,0.7s						
TKM2	Tokmak 2	3.42	328	⇑*i*P	Pn	00 48 50.4	+2.7
	baz=27						
TKM2				⇑*i*S	Sn	00 49 32.4	+3.9
	baz=27						
KURS	Kuram	3.44	1	*e*P	Pb	00 48 57.1	+1.9
	37nm,0.8s						
KURS				*e*S	Sg	00 49 43.8	-0.7
	32nm,0.5s						
KURS	Kuram	3.44	1	Pg	Pg	00 48 57.7	-2.3
	37nm,0.8s						
KURS				Lg	Lg	00 49 43.8	
	32nm,0.5s						
KPKS	Kokpek	3.45	7	*e*P	Pb	00 48 56.9	+1.5
	33nm,0.5s						
KPKS				*e*S	Sg	00 49 43.4	-1.4
	88nm,0.5s						
PDGK	Podgornoye	3.45	17	Pg	Pb	00 48 56.6	+1.2
	5.4nm,0.4s						
PDGK				Lg	Lg	00 49 43.0	
	27nm,0.4s						
PDGK	Podgornoye	3.45	17	⇑Pn	Pn	00 48 50.8	+2.8
	4.3nm,0.5s						
PDGK				⇓Pg	Pg	00 48 58.0	-2.1
	25nm,1.1s						
PDGK				⇑Lg	Lg	00 49 43.2	
	55nm,0.8s						
UCH	Uchtor	3.46	310	⇑*i*P	Pn	00 48 51.0	+2.5
	baz=10.0						
UCH				⇑*i*S	Sn	00 49 33.5	+3.7
	baz=10.0						
KBK	Karagaybulak	3.51	319	⇑*i*P	Pn	00 48 51.7	+2.8
	baz=19						
KBK				⇑*i*S	Sn	00 49 34.8	+4.2
	baz=19						
AAK	Ala-Archa	3.74	315	Pn	Pb	00 49 00.3	0.0
	2.0nm,0.3s,baz=148,slow=12,SNR=10						
	5.6nm,0.4s						
AAK	Ala-Archa	3.74	315	⇑*i*P	Pn	00 48 55.0	+3.0
	baz=15						
AAK				⇑*e*S	Sn	00 49 40.4	+4.2
	baz=15						
KTBS	Karatobe	3.81	345	*e*P	Pb	00 49 02.5	+1.0
	9.6nm,0.5s						
KTBS				*e*S	Sg	00 49 52.6	-3.7
	46nm,0.4s						
KTBS	Karatobe	3.81	345	Pg	Pb	00 49 02.8	+1.3
	9.6nm,0.5s						
KTBS				Lg	Lg	00 49 53.8	
	46nm,0.4s						
CHMS	Chumysh	3.86	321	⇑Pn	Pn	00 48 55.9	+2.3
	2.8nm,0.9s						
CHMS				⇓Pg	Pb	00 49 03.2	+0.8
	9.5nm,0.8s						
CHMS				⇓Lg	Lg	00 49 53.7	
	16nm,0.6s						

CHMS	Chumysh baz=21	3.86	321	⇑iP	Pn	00 48 56.7	+3.1
CHMS	baz=21			⇑iS	Sn	00 49 43.4	+4.3
CHKK	Chushkaly 8.9nm,0.3s	3.89	348	eP	Pb	00 49 04.2	+1.4
CHKK	33nm,0.3s			eS	Sg	00 49 56.1	-2.9
CHKK	Chushkaly 10nm,0.3s	3.89	348	Pg	Pb	00 49 04.3	+1.4
CHKK	33nm,0.3s			Lg	Lg	00 49 56.1	
KUU	Kurty 5.4nm,0.3s	4.05	342	eP	Pb	00 49 06.5	+0.8
KUU	55nm,0.7s			eS	Sg	00 50 00.0	-4.3
KUU	Kurty 9.5nm,0.7s	4.05	342	Pg	Pb	00 49 06.6	+0.9
KUU	55nm,0.7s			Lg	Lg	00 49 59.4	
EKS2	Erkin-Say baz=10.0	4.16	310	⇑eP	Pn	00 49 00.8	+3.0
EKS2	baz=10.0			⇑iS	Sn	00 49 50.5	+4.0
USP	Ospenovka baz=21	4.19	321	⇑iP	Pn	00 49 01.2	+3.1
USP	baz=21			⇑iS	Sn	00 49 51.1	+4.0
SGDS	Sogindy 6.5nm,0.6s	4.27	324	eP	Pb	00 49 09.6	+0.3
SGDS	9.1nm,0.5s			eS	Sb	00 50 05.4	+4.5
SGDS	Sogindy 9.7nm,0.5s	4.27	324	Pg	Pb	00 49 10.0	+0.7
SGDS	9.1nm,0.5s			Lg	Lg	00 50 05.4	
DJR	Jarkent 3.2nm,0.3s	4.47	16	eP	Pb	00 49 14.9	+2.2
DJR	17nm,0.4s			eS	Sg	00 50 14.2	-3.3
DJR	Jarkent 6.3nm,0.6s	4.47	16	Pg	Pg	00 49 17.1	-2.6
DJR	17nm,0.4s			Lg	Lg	00 50 17.2	
MRKS	Merke 3.7nm,0.6s	4.54	308	eP	Pb	00 49 16.4	+2.5
MRKS	10.0nm,0.6s			eS	Sg	00 50 17.1	-2.6
MRKS	Merke 3.7nm,0.5s	4.54	308	Pg	Pg	00 49 18.2	-2.8
MRKS	10.0nm,0.6s			Lg	Lg	00 50 18.6	
KAPS	Kapalarasan 5.6nm,0.5s	5.32	10	eP	Pg	00 49 32.8	-3.2
KAPS	15nm,0.5s			eS	Sg	00 50 45.2	+0.3
KAPS	Kapalarasan 5.6nm,0.5s	5.32	10	Pg	Pg	00 49 32.3	-3.7
KAPS	15nm,0.5s			Lg	Lg	00 50 43.4	
BTLS	Baital 2.4nm,0.3s	5.81	331	eP	Pb	00 49 38.4	+2.9
BTLS	6.9nm,0.6s			eS	Sg	00 50 54.9	-5.7
BTLS	Baital 4.0nm,0.8s	5.81	331	Pg	Pb	00 49 37.9	+2.4
BTLS	6.9nm,0.8s			Lg	Lg	00 50 53.0	
KK31	Karatay Array 1.9nm,0.8s,baz=128,slow=16,SNR=12	6.44	301	⇓Pg	Pb	00 49 51.4	+5.1
KK31	1.5nm,0.6s,baz=128,slow=30,SNR=3.6			⇑Lg	Lg	00 51 18.3	
MK31	Makanchi Array 0.1nm,0.3s,baz=204,slow=12,SNR=4.2	7.41	23	⇑Pn	Pn	00 49 44.6	+2.3
MK31	0.4nm,0.5s,baz=16,slow=13,SNR=6.7			Pg	Pg	00 50 11.5	-4.4
MK31	1.1nm,0.6s,baz=202,slow=12,SNR=5.4			⇑Sn	Sn	00 51 08.4	+2.0
MK31	3.3nm,0.9s,baz=203,slow=24,SNR=4.1			⇓Lg	Lg	00 51 47.8	
MKAR	Makanchi Array 0.2nm,0.3s,baz=204,slow=14,SNR=3.2	7.41	23	Pn	Pn	00 49 44.6	+2.3
MKAR	0.1nm,0.3s,baz=205,slow=19,SNR=1.8 0.2nm,0.3s			Sn	Sn	00 51 07.8	+1.4
OTUK	Ortayu 12nm,1.2s	9.17	335	⇑Lg	Lg	00 52 43.4	
KURBB	Kurchatov Arra 6.8nm,0.9s	10.58	2	⇓Lg	Lg	00 53 30.2	
KURK	Kurchatov 5.3nm,1.0s	10.68	2	⇓Lg	Lg	00 53 30.7	
CMAR	Chiang Mai Arr comp=Z,69nm,21.8s,baz=65,slow=37	28.05	134	LR	LR	01 04 40.6	
FINES	FINESS Array B 0.2nm,0.5s,baz=116,slow=9.4,SNR=4.7 0.2nm,0.5s	37.89	322	P	P	00 55 10.7	-0.3
ARCES	ARCESS Array B 1.9nm,0.9s,baz=101,slow=9.3,SNR=4.7 1.9nm,0.9s	40.18	334	P	P	00 55 29.8	-0.4
KAPI	Kappang comp=Z,252nm,21.6s,baz=70,slow=38	58.97	129	LR	LR	01 25 04.0	
TORD	Torodi Ar. Bea 0.1nm,0.4s,baz=46,slow=5.4,SNR=6.5 0.1nm,0.4s	71.28	272	P	P	00 59 11.6	-2.5

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*IDC **07** 00:53:06.0±2.4, 47°.48N×128°.69W, h0^{km}, mb3.3/2, mbtmp3.2/9, ML2.9/5, MS3.3/1, Error ellipse: s-maj=40.2km s-min=19.4km az=66.0*

*NEIC **07** 00:53:08.2±1.1, 47°.69N±0°.09×128°.6W±0°.2, h10^{km}±2^{km}, mb4.0/13, Error ellipse: s-maj=20.5km s-min=11.4km az=235.0*

ISC 07 00:53:08.2±1.4**, 47°.64N**±0°.09×**128°.6W**±0°.1**, h10^{km}, n58, σ0^s.98**/43**, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZB	Mount Ozzard	2.44	56	Pn	Pn	00 53 48.0	-0.2
C03A	Quillayute Air	2.72	82	Pn	Pn	00 53 52.8	+0.9
HOLB	Holberg	3.02	5	Pn	Pn	00 53 55.2	-0.8
CLRS	Cowichan Lake	3.20	67		Pn	00 53 58.7	+0.3
NLWA	Neilton Lookou	3.20	93	Pn	Pn	00 53 58.3	-0.2
CBB	Campbell River	3.20	40	Pn	Pn	00 53 58.9	+0.4
B04A	Port Angeles	3.44	81	Pn	Pn	00 54 02.3	+0.5
PGC	Sidney	3.58	72		Pn	00 54 03.8	+0.2
E03A	Lebam	3.59	106	Pn	Pn	00 54 03.9	+0.1
D05A	Enumclaw	4.49	93	Pn	Pn	00 54 16.1	-0.1
F04A	Amboy	4.56	110	Pn	Pn	00 54 18.0	+0.9
BBB	Bella Bella comp=Z,389nm,20.8s,baz=112,slow=37	4.56	4	LR	LR	00 56 01.4	
BBB	Bella Bella	4.56	4		Pn	00 54 16.4	-0.8
B06A	Marblemount	4.83	77	Pn	Pn	00 54 21.9	+1.1
F05D	White Salmon	5.19	107		Pn	00 54 26.0	+0.1
LLLB	Lillooet	5.30	53		Pn	00 54 27.6	+0.1
HOOD	Mount Hood Mea	5.31	113		Pn	00 54 28.8	+1.1
H04A	Detroit Lake	5.33	121		Pn	00 54 29.2	+1.4
LTY	Liberty	5.37	91		Pn	00 54 30.1	+1.6
HAWA	Hanford	6.30	98		Pn	00 54 42.3	+1.2
YBH	Yreka Blue Hor 2.2nm,1.0s,baz=337,slow=2.4,SNR=2.3	7.23	143	Pn	Pn	00 54 54.5	+0.5
I07A	Izee	7.26	116	Pn	Pn	00 54 54.9	+0.5
NEW	Newport 0.1nm,0.3s,baz=252,slow=20,SNR=2.8 1.9nm,0.7s	7.71	81	Pn	Pn	00 55 01.2	+0.7
NEW	Newport	7.71	81	Pn	Pn	00 55 00.8	+0.3
F10A	Beach Ranch, E	7.96	98	Pn	Pn	00 55 04.8	+0.8
BEKR	Beckworth	9.78	140		Pn	00 55 29.7	+0.8
WALA	Waterton Lakes	9.87	76	Pn	Pn	00 55 30.1	0.0
MFID	Camas Ranch	9.89	111	Pn	Pn	00 55 31.5	+1.1
MSO	Missoula	9.99	89	Pn	Pn	00 55 32.0	+0.2
PAHR	Pah Rah Range	10.34	137	Pn	Pn	00 55 37.3	+0.6
HLID	Hailey	10.72	107	Pn	Pn	00 55 43.0	+1.1
KVN	Kaiserville	11.47	135	Pn	Pn	00 55 52.6	+0.4
RYN	Ryan	11.61	137	Pn	Pn	00 55 54.0	0.0
ELK	Elko 0.1nm,0.3s,baz=315,slow=13,SNR=2.7 0.8nm,0.8s	11.78	121	Pn	Pn	00 55 57.9	+1.4
NVAR	Mina Array Bea baz=315,slow=13,SNR=1.6 0.2nm,0.7s	11.87	137	Pn	Pn	00 55 58.4	+0.7
FXWY	Fox Creek	12.91	102	Pn	Pn	00 56 11.8	-0.1
BW06	Boulder Array	14.25	103	Pn	Pn	00 56 32.7	+2.5
PDAR	Pinedale Array 0.5nm,0.5s,baz=285,slow=35,SNR=3.4	14.25	103	Pn	Pn	00 56 32.5	+2.3
PDAR	Pinedale Array	14.25	103	P	P	00 56 36.0	-1.5
Q16A	Castle Valley comp=Z,9.4nm,1.2s	15.35	118	IAmb	IAmb	00 57 01.8	
P18A	Preston Nutter comp=Z,7.2nm,1.0s	15.47	114	IAmb	IAmb	00 57 11.4	
O20A	White River Ci comp=Z,7.0nm,0.9s	16.43	110	IAmb	IAmb	00 57 06.9	
YKA	Yellowknife Ar baz=216,slow=12,SNR=8.9 comp=Z,0.7nm,0.8s	16.84	23	Pn	Pn	00 57 03.2	-0.5
PV11	David Mesa, Pa comp=Z,20nm,1.2s	17.13	116	IAmb	IAmb	00 57 14.9	
PV07	Paradox Valley comp=Z,20nm,1.1s	17.18	115	IAmb	IAmb	00 57 22.5	
PV15	Paradox Valley comp=Z,17nm,1.1s	17.35	115	IAmb	IAmb	00 57 23.6	
MENT	Mentasta	17.51	337	P	P	00 57 15.1	+1.7
MVCO	Mesa Verde comp=Z,13nm,1.1s	18.07	118	IAmb	IAmb	00 57 32.4	
ILAR	Eielson Array baz=130,slow=9.5,SNR=2.6 comp=Z,0.3nm,0.9s	19.83	337	P	P	00 57 37.8	-0.9
T25A	Trinidad	20.62	112	P	Pn	00 57 51.9	+1.9
ANMO	Albuquerque comp=Z,0.9nm,0.7s,baz=331,slow=13,SNR=2.6 comp=Z,0.9nm,0.7s	20.81	120	P	P	00 57 49.8	-0.1
TXAR	Lajitas Array comp=Z,0.7nm,1.1s,baz=324,slow=5.6,SNR=2.8 comp=Z,0.7nm,1.1s	26.54	125	P	P	00 58 45.3	-0.8
H11N2	WAKE ISLAND Hy baz=45,slow=75	58.59	265	T	T	02 06 00.3	
H11N3	WAKE ISLAND Hy baz=45,slow=75	58.59	265	T	T	02 06 00.3	
H11N1	WAKE ISLAND Hy baz=45,slow=75	58.61	265	T	T	02 06 02.2	
H11S1	WAKE ISLAND Hy baz=44	59.58	264	T	T	02 07 21.7	
H11S2	WAKE ISLAND Hy baz=44	59.59	264	T	T	02 07 16.8	
H11S3	WAKE ISLAND Hy baz=44	59.59	264	T	T	02 07 22.6	

KRSC 07 01:02:02.6±0.9**, 56°.33N**×**162°.99E, h9^{km}**±4^{km}**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.16	218	i P	Pg	01 02 07.7	+1.8
KBG	Krutoberegovo	0.18	244	i P	Pg	01 02 07.2	+1.0
KBG				eS	Sg	01 02 09.5	+0.8
SMKR	Semkarok	0.88	287	eP	Pg	01 02 19.2	-0.3
BDR	Baidarnaya	1.02	284	eP	Pg	01 02 21.8	-0.3
SRKR	Sorokina	1.06	289	eP	Pg	01 02 22.4	-0.5
KLY	Klyuchi	1.30	270	eP	Pn	01 02 24.6	-2.3
KRSR	Krestovskiy	1.36	266	eP	Pn	01 02 27.2	-0.6
BZWR	Bezymyannyi-We	1.44	256	eP	Pn	01 02 29.3	+0.3
KIRR	Kirishev	1.53	257	eP	Pg	01 02 31.6	-0.3
KPT	Kopyto	1.59	258	eP	Pn	01 02 31.2	+0.2
KMNR	Kamenistaya	1.65	251	eP	Pb	01 02 32.7	-0.4
KOZ	Kozyrevsk	1.76	262	eP	Pb	01 02 34.2	-0.8
TUMD	Tumrok D	1.85	233	eP	Pn	01 02 35.1	+0.6
TUMD				eS	Sn	01 02 58.6	+0.7
MKZ	Mys Kozlova	1.92	202	eP	Pb	01 02 37.7	0.0
MKZ				eS	Sb	01 03 02.0	+0.3
TUMR	Tumrok	1.92	238	eP	Pb	01 02 36.9	-0.8
BKI	Bering	2.03	123	eP	Pb	01 02 38.7	-0.8
BKI				eS	Sb	01 03 04.0	-0.9
SPN	Mys Shipunski	3.67	209	eP	Pn	01 03 01.2	+1.8
SDLR	Sedlovina	3.87	220	eP	Pn	01 03 04.5	+2.2
KRX	Arik	3.89	222	eP	Pb	01 03 07.2	-4.2
GNL	Ganaly	3.93	230	eP	Pn	01 03 07.0	+3.9
AVH	Avacha	3.94	220	eP	Pn	01 03 06.1	+2.9
KOK	Koryaka	3.95	221	P	Pb	01 03 08.4	-4.0
RUS	Russkaya	4.70	216	P	Pn	01 03 17.0	+3.4

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*IDC **07** 01:05:57.9±0.7, 18°.25N×105°.51W, h0^{km}, mb4.4/18, mbtmp4.4/20, ML4.2/2, MS4.7/65, Error ellipse: s-maj=24.6km s-min=12.1km az=62.0*

*BJI **07** 01:05:58.9±0.0, 18°.19N×105°.57W, h12^{km}, mb5.6/1, mB5.4/1, Ms5.3/6, Ms7 5.1/6*

*MOS **07** 01:05:59.3±0.8, 18°.31N×105°.24W, h11^{km}, mb5.2/28, MS5.1/4, Error ellipse: s-maj=11.0km s-min=6.6km az=92.7*

*MEX **07** 01:06:00.5±6.6, 18°.31N×105°.35W, h14^{km}±648^{km}, MD5.1*

*NEIC **07** 01:06:01.0±2.0, 18°.28N±0°.05×105°.30W±0°.05, h10^{km}±1^{km}, mb5.0/456, Md5.1/95(MEX), Error ellipse: s-maj=9.4km s-min=7.1km az=153.0*

*GCMT **07** 01:06:02.0±0.2, 18°.41N±0°.01×105°.49W±0°.01, h12^{km}, MW5.3/135, Moment Tensor Solution. s104,c154; s135,c267; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20±.02; $M_{\theta\theta}$0.66±.02; $M_{\phi\phi}$-0.46±.02; $M_{r\theta}$0.08±.04; $M_{\theta\phi}$-0.90±.01; $M_{\phi r}$0.23±.04; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s255.00000°, δ78.00000°, λ-170.00000°. NP2:ϕ_s163.00000°, δ80.00000°, λ-13.00000°. Principal axes: T 1.1660, Plg2.0000°, Azm209.0000°; N -0.1310, Plg74.0000°, Azm305.0000°; P -1.0340, Plg16.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 01:06:00.1±0.3**, 18°.19N**±0°.03×**105°.28W**±0°.04**, h10^{km}, n857, σ1^s.86**/720**, mb5.0**/221**, MS4.8**/73**, 11C-30D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	1.32	10	i P	Pn	01 06 18.5	-6.2
CJM				eS	Sb	01 06 31.9	-10
MMIG	Aquila	1.84	87		Pn	01 06 29.0	-2.8
MMIG					Sn	01 06 51.6	-3.6
MMIG	Aquila	1.84	87	i P	Pn	01 06 29.0	-2.8
MMIG				eS	Sn	01 06 51.6	-3.6
ANIG	Ahuacatlan	2.94	14		Pn	01 06 44.0	-3.0
ANIG					Sn	01 07 22.9	+0.5
ANIG	Ahuacatlan	2.94	14	i P	Pn	01 06 44.0	-3.0
ANIG				eS	Sn	01 07 22.9	+0.5
ZIIG	Zihuatanejo	3.68	98		Pn	01 06 55.8	-1.3
ZIIG					Sn	01 07 36.5	-4.0
ZIIG	Zihuatanejo	3.68	98	i P	Pn	01 06 55.8	-1.3
ZIIG				eS	Sn	01 07 36.5	-4.0
MOIG	Morelia	4.15	68		Pn	01 07 04.3	+0.6
MOIG					Sn	01 07 51.9	-0.5
MOIG	Morelia	4.15	68	⇑iP	Pn	01 07 04.3	+0.6
MOIG				eS	Sn	01 07 51.9	-0.5
IGIG	Irapuato, Guan	4.52	55		Pn	01 07 11.0	+2.2
IGIG					Sb	01 08 14.0	-0.3
IGIG	Irapuato, Guan	4.52	55	⇑eP	Pn	01 07 11.0	+2.2
IGIG				eS	Sb	01 08 14.0	-0.3
AAIG	Aguscalientes	4.64	35	⇑iP	Pn	01 07 09.3	-1.2
AAIG				eS	Sb	01 08 12.7	-5.2
ARIG	Puente Sto Nin	4.69	88		Pn	01 07 10.8	-0.2
ARIG					Sn	01 08 02.8	-2.8
ARIG	Puente Sto Nin	4.69	88	⇓iP	Pn	01 07 10.8	-0.2
ARIG				eS	Sn	01 08 02.8	-2.8
CAIG	El Cayaco	4.92	103		Pn	01 07 13.6	-0.5
CAIG					Sn	01 08 04.5	-6.6
CAIG	El Cayaco	4.92	103	⇓iP	Pn	01 07 13.6	-0.5
CAIG				eS	Sn	01 08 04.5	-6.6
MAIG	Mazatlaan	5.09	348		Pn	01 07 11.0	-5.4
MAIG	Mazatlaan	5.09	348	⇑eP	Pn	01 07 11.0	-5.4
MAIG				eS	Sg	01 08 51.2	+7.7
ZAIG	Zacatecas	5.22	29		Pn	01 07 16.1	-2.4
ZAIG	Zacatecas	5.22	29	⇑eP	Pn	01 07 16.1	-2.4
ZAIG				eS	Sg	01 08 43.3	-4.4
H06E1	SOCORRO T-PHAS SNR=1909	5.39	277	T	T	01 12 28.8	
MEIG	Mezcala	5.39	92		Pn	01 07 21.8	+1.0
MEIG					Sn	01 08 29.3	+6.4
MEIG	Mezcala	5.39	92	⇓eP	Pn	01 07 21.8	+1.0
MEIG				eS	Sn	01 08 29.3	+6.4
H06S1	SOCORRO T SNR=661	5.41	277	T	T	01 12 32.4	
H06N1	SOCORRO T-PHAS SNR=174	5.45	278	T	T	01 12 34.8	
PLIG	Platanillo	5.49	87		Pn	01 07 22.6	+0.5
PLIG					Sn	01 08 32.9	+7.4
PLIG	Platanillo	5.49	87	⇓iP	Pn	01 07 22.6	+0.5
PLIG				eS	Sn	01 08 32.9	+7.4
DAIG	Los Arroyos	5.50	101		Pn	01 07 22.5	+0.4
DAIG					Sn	01 08 20.3	-5.1
DAIG	Los Arroyos	5.50	101	⇓iP	Pn	01 07 22.5	+0.4
DAIG				eS	Sn	01 08 20.3	-5.1
UNM	Universidad Na	5.89	78	P	Pn	01 07 27.5	-0.3
UNM	Universidad Na	5.89	78	Pn	Pn	01 07 27.5	-0.3
YAIG	Yautepec	5.93	83		Pn	01 07 28.0	-0.2
YAIG					Sn	01 08 45.8	+9.4
YAIG	Yautepec	5.93	83	⇓eP	Pn	01 07 28.0	-0.2
YAIG				eS	Sn	01 08 45.8	+9.4
CRIG	Cruz Grande	6.05	103		Pn	01 07 29.6	0.0
CRIG					Sn	01 08 36.1	-2.8
CRIG	Cruz Grande	6.05	103	⇓iP	Pn	01 07 29.6	0.0
CRIG				eS	Sn	01 08 36.1	-2.8
RPIG	Rio Verde	6.19	53	eP	Pn	01 07 33.3	+1.6
RPIG				eS	Sb	01 09 05.3	+3.0
DEIG	Demacu	6.26	69	⇓eP	Pn	01 07 33.2	+0.4
DEIG				eS	Sb	01 08 59.5	-5.1
PPM	Popocatepetl	6.37	81	⇓iP	Pn	01 07 35.0	+0.5
PPM				eS	Sb	01 09 08.5	+0.6
TLIG	Tlapa	6.42	95		Pn	01 07 36.1	+1.2
TLIG					Sb	01 09 03.8	-5.3
TLIG	Tlapa	6.42	95	⇓iP	Pn	01 07 36.1	+1.2
TLIG				eS	Sb	01 09 03.8	-5.3
FTIG	Fresnillo de T	6.81	91	⇓iP	Pn	01 07 41.0	+0.8
FTIG				eS	Sn	01 08 52.4	-5.5
PDIG	Papasquiaro	6.82	359	⇑iP	Pn	01 07 37.8	-2.6
PDIG				eS	Sg	01 09 43.8	+4.8
SSIG	Sanalona	6.82	346	eP	Pn	01 07 36.3	-3.9
SSIG				eS	Sb	01 09 22.5	+2.2
SLBS	Sierra La Lagu	6.99	322	Pn	Pn	01 07 42.0	-0.7
PNIG	Pinotepa	7.07	104		Pn	01 07 45.9	+2.2
PNIG					Sb	01 09 36.2	+8.7
PNIG	Pinotepa	7.07	104	⇓iP	Pn	01 07 45.9	+2.2
PNIG				eS	Sb	01 09 36.2	+8.7
HLIG	Huajuapan de L	7.12	92	⇓iP	Pn	01 07 45.9	+1.3
HLIG				eS	Sn	01 09 12.3	+6.5
TXIG	Tlaxiaco	7.22	96	⇓iP	Pn	01 07 47.5	+1.5
TXIG				eS	Sb	01 09 31.2	-0.9
YOIG	Yosondua	7.50	99	⇓eP	Pn	01 07 51.9	+2.0
YOIG				eS	Sb	01 09 37.2	-3.0
GTIG	Gomez Farias	7.50	49	⇑iP	Pn	01 07 50.1	+0.4
GTIG				eS	Sb	01 09 33.1	-6.9
LPIG	La Paz 36nm,0.3s,baz=184,slow=2.7,SNR=7.4	7.52	322	Pn	Pn	01 07 49.3	-0.5
TPIG	Tehuac#an	7.53	87		Pn	01 07 51.7	+1.6
TPIG					Sb	01 09 44.3	+3.4
TPIG	Tehuac#an	7.53	87	eP	Pn	01 07 51.7	+1.6
TPIG				eS	Sb	01 09 44.3	+3.4
TOIG	Toxpalan	7.81	89	⇓iP	Pn	01 07 56.0	+2.0
TOIG				eS	Sb	01 09 39.1	-10
PEIG	Puerto Escondi	8.08	104	⇓iP	Pn	01 08 00.7	+3.1
PEIG				eS	Sb	01 09 46.4	-10
TSIG	Topolobambo	8.16	335	eP	Pn	01 07 59.4	+0.8
TSIG				eS	Sn	01 09 40.1	+9.2
VHO	Vista Hermosa	8.23	96	⇑eP	Pn	01 08 02.8	+3.0
VHO				eS	Sb	01 09 49.8	-11
HPIG		8.71	358	eS	Sg	01 10 25.2	-15
CSIG	Choix	9.06	342	⇓iP	Pn	01 08 09.3	-1.7
CSIG				eS		01 10 33.9	
HUIG	Huatulco	9.10	104		Pn	01 08 14.4	+2.8
HUIG	Huatulco	9.10	104	⇓iP	Pn	01 08 14.4	+2.8
HUIG				eS	Sn	01 10 13.2	+19
CMIG	Matias Romero 3.0nm,0.3s,baz=309,slow=9.0,SNR=19	9.97	95	Pn	Pn	01 08 26.3	+2.7
CMIG	comp=Z,8μm,19.8s,baz=284,slow=37 16nm,0.6s			LR	LR	01 12 18.7	
CMIG	Matias Romero	9.97	95		Pn	01 08 24.7	+1.2
CMIG	Matias Romero	9.97	95	⇓iP	Pn	01 08 24.7	+1.2
CMIG				eS	Sn	01 11 03.2	+48
MCIG	Muzquiz	10.25	19	⇑iP	Pn	01 08 27.5	+0.1
MCIG				eS	Sn	01 10 58.7	+36
UXUV	UXUV	10.65	93	⇑iP	Pn	01 08 34.9	+2.2
UXUV				eS	Sn	01 10 46.4	+14
SRIG	Santa Rosalia	11.12	326		Sn	01 10 45.7	+2.0
SRIG	Santa Rosalia	11.12	326	Pn	Pn	01 08 39.4	+0.2
SRIG	Santa Rosalia	11.12	326	⇓eP	Pn	01 08 36.7	-2.5
SRIG				eS	Sn	01 10 45.7	+2.0
TX32	Lajitas Array	11.19	7		Pn	01 08 41.1	+0.8
TXAR	Lajitas Array 0.3nm,0.3s,baz=188,slow=14,SNR=98	11.19	7	Pn	Pn	01 08 42.1	+1.8
TXAR	comp=Z,8μm,19.3s,baz=187,slow=38 9.7nm,0.8s			LR	LR	01 13 07.6	
TXAR	Lajitas Array	11.19	7	P	Pn	01 08 41.1	+0.8
TXAR	Lajitas Array	11.19	7	Pn	Pn	01 08 41.1	+0.8
TX31	Lajitas Ar. Si	11.19	7		Pn	01 08 41.6	+1.3
TX31	Lajitas Ar. Si baz=188,SNR=46	11.19	7	P	Pn	01 08 40.2	-0.1
833A	Chaparral WMA,	11.44	27	Pn	Pn	01 08 45.2	+1.6
833A	Chaparral WMA, baz=210,SNR=16	11.44	27	P	Pn	01 08 44.0	+0.3
833A	baz=210			S	Sn	01 11 02.7	+11
833A	Chaparral WMA, baz=210,SNR=16	11.44	27	P	Pn	01 08 45.5	+1.8
TGIG		11.69	95		Pn	01 08 47.9	+0.7
TGIG		11.69	95	⇓eP	Pn	01 08 47.9	+0.7
TGIG				eS	Sn	01 11 12.3	+15
PCIG		11.80	100		Pn	01 08 51.0	+2.3
PCIG		11.80	100	⇓iP	Pn	01 08 51.0	+2.3
PCIG				eS		01 09 59.6	
HSIG		11.96	335		Sn	01 10 56.6	-7.7
HSIG		11.96	335	Pn	Pn	01 08 50.6	-0.1
HSIG		11.96	335	⇓iP	Pn	01 08 51.9	+1.1
HSIG				eS	Sn	01 10 56.6	-7.7
735A	Kenedy	12.63	31		Pn	01 09 00.8	+0.9
CCIG	Comitan	12.70	97		Pn	01 09 02.3	+1.2
CCIG	Comitan	12.70	97	⇓iP	Pn	01 09 02.3	+1.2
CCIG				eS	Sn	01 11 44.1	+21
JCT	Junction City	13.21	21	P	Pn	01 09 08.5	+0.6
JCT	Junction City	13.21	21	Pn	Pn	01 09 08.5	+0.6
JCT	Junction City baz=204,SNR=9.3	13.21	21	P	Pn	01 09 09.2	+1.3
JCT	Junction City baz=204,SNR=9.3	13.21	21	P	Pn	01 09 09.1	+1.2
MNTX	Cornudas Mount	13.45	360	Pn	Pn	01 09 11.7	+0.6
MNTX	Cornudas Mount baz=180,SNR=14	13.45	360	P	Pn	01 09 10.7	-0.4
MNTX	Cornudas Mount baz=180,SNR=14	13.45	360	P	Pn	01 09 10.9	-0.2
RTAL	Retalhuleu	13.54	104	Pn	Pn	01 09 14.0	+1.6
319A	Douglas	13.62	345	Pn	Pn	01 09 12.3	-1.2
435B	Jarrell	14.35	28		Pn	01 09 23.4	-0.1
435B	Jarrell baz=211	14.35	28	P	Pn	01 09 22.6	-0.9
435B	Jarrell baz=211	14.35	28	P	Pn	01 09 23.6	+0.1
121A	Cookes Peak, D	14.46	352	Pn	Pn	01 09 25.5	+0.4
121A	Cookes Peak, D baz=171,SNR=11	14.46	352	P	Pn	01 09 24.5	-0.5
121A	Cookes Peak, D baz=171,SNR=11	14.46	352	P	Pn	01 09 25.7	+0.6
HKT	Hockley	14.53	35	i P	Pn	01 09 24.8	-1.0
HKT	Hockley	14.53	35	Pn	Pn	01 09 25.3	-0.6
HKT	Hockley baz=219	14.53	35	P	Pn	01 09 24.4	-1.4
PETF	Flores	14.76	93	Pn	Pn	01 09 29.5	+0.5
TUC	Tucson	14.91	342	P	Pn	01 09 31.3	+0.2
TUC	Tucson	14.91	342	Pn	Pn	01 09 31.3	+0.2
TUC	Tucson baz=159	14.91	342	P	Pn	01 09 31.8	+0.7
ABTX	Abilene, Hawle	15.24	18	Pn	Pn	01 09 34.2	-1.3
ABTX	Abilene, Hawle baz=201,SNR=56	15.24	18	P	Pn	01 09 34.4	-1.1
ABTX	Abilene, Hawle baz=201,SNR=56	15.24	18	P	Pn	01 09 34.6	-0.9
214A	Organ Pipe Nat	15.30	335	Pn	Pn	01 09 35.6	-0.7
214A	comp=Z,64nm,1.1s			IAmb	IAmb	01 09 46.7	
214A	Organ Pipe Nat baz=152,SNR=9.5	15.30	335	P	Pn	01 09 36.3	+0.1
214A	baz=152			S	S	01 12 42.1	-0.4
WHTX	Lake Whitney, comp=Z,103nm,1.0s	15.45	26	IAmb	IAmb	01 09 44.8	
WHTX	Lake Whitney, baz=209,SNR=21	15.45	26	P	Pn	01 09 36.7	-1.6
WHTX	Lake Whitney, baz=209,SNR=21	15.45	26	P	Pn	01 09 37.3	-0.9
MTO3	Montecristo comp=Z,210nm,1.3s	15.74	102	IAmb	IAmb	01 09 51.8	
Y22A	Socorro baz=174,SNR=17	15.75	355	P	Pn	01 09 43.0	+0.7
SPIG	San Pedro Mart	15.78	326		Pn	01 09 42.5	-0.4

SPIG	**San Pedro Mart**	**15.78**	**326**	⇓iP	**Pn**	**01 09 42.5**	**-0.4**
MSTX	**Muleshoe**	**15.87**	**8**	P	**Pn**	**01 09 43.8**	**0.0**
	baz=189,SNR=22						
MSTX	**Muleshoe**	**15.87**	**8**	P	**Pn**	**01 09 43.1**	**-0.7**
	baz=189,SNR=22						
Y22D	**IRIS PASSCAL I**	**15.89**	**355**	P	**Pn**	**01 09 45.0**	**+1.0**
	baz=174						
237A	**Washetta, Mont**	**16.19**	**30**	P	**Pn**	**01 09 47.7**	**-0.2**
	baz=214,SNR=8.5						
113A	**Mohawk Valley,**	**16.40**	**334**	IAmb	IAmb	01 09 56.8	
	comp=Z,147nm,1.5s						
NATX	**Nacogdoches**	**16.57**	**33**	Pn	**Pn**	**01 09 52.6**	**-0.1**
NATX	**Nacogdoches**	**16.57**	**33**	P	**Pn**	**01 09 52.8**	**+0.1**
	baz=218,SNR=20						
NATX	**Nacogdoches**	**16.57**	**33**	P	**Pn**	**01 09 50.9**	**-1.7**
	baz=218,SNR=20						
441A	**DeRidder**	**16.64**	**39**	IAmb	IAmb	01 09 58.8	
	comp=Z,146nm,1.1s						
Z35A	**Perchaven, San**	**16.71**	**24**	P	**Pn**	**01 09 54.6**	**+0.2**
	baz=208,SNR=30						
Z35A				S	**S**	**01 13 11.3**	**0.0**
	baz=208						
ANMO	**Albuquerque**	**16.72**	**357**	Pn	**Pn**	**01 09 55.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=60						
ANMO				LR	LR	01 16 57.9	
	comp=Z,2μm,18.7s,baz=178,slow=40						
ANMO	**Albuquerque**	**16.72**	**357**	*c i*P	**Pn**	**01 09 54.0**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,100nm,1.8s						
ANMO	**Albuquerque**	**16.72**	**357**	Pn	**Pn**	**01 09 53.5**	**-1.2**
ANMO	**Albuquerque**	**16.72**	**357**	P	**Pn**	**01 09 55.5**	**+0.8**
	baz=176,SNR=53						
ANMO	**Albuquerque**	**16.72**	**357**	P	**Pn**	**01 09 55.6**	**+0.9**
	baz=176						
ANMO				S	**S**	**01 13 10.5**	**-1.3**
	baz=176						
AMTX	**Amarillo**	**16.93**	**10**	Pn	**Pn**	**01 09 56.5**	**-0.8**
AMTX	**Amarillo**	**16.93**	**10**	P	**Pn**	**01 09 56.3**	**-1.0**
	baz=192,SNR=29						
AMTX	**Amarillo**	**16.93**	**10**	P	**Pn**	**01 09 57.0**	**-0.3**
	baz=192						
GLA	**Glamis**	**17.10**	**332**	P	**P**	**01 10 00.2**	**-0.9**
	baz=148,SNR=20						
GLA				S	**S**	**01 13 17.1**	**-2.3**
	baz=148						
W18A	**Petrified Fore**	**17.32**	**348**	P	**P**	**01 10 03.2**	**-0.5**
	baz=166						
W18A				S	**S**	**01 13 23.8**	**-0.2**
	baz=166						
IKP	**In-Ko-Pah, Jac**	**17.39**	**328**	P	**P**	**01 10 04.8**	**+0.5**
	baz=143,SNR=15						
IKP				S	**S**	**01 13 32.0**	**+6.8**
	baz=143						
WMOK	**Wichita Mounta**	**17.47**	**18**	P	**Pn**	**01 10 01.2**	**-2.7**
	baz=201,SNR=63						
WMOK	**Wichita Mounta**	**17.47**	**18**	P	**Pn**	**01 10 02.3**	**-1.7**
	baz=201,SNR=63						
SWSC	**Sam W. Stewart**	**17.47**	**329**	P	**P**	**01 10 06.6**	**+1.5**
	baz=145,SNR=8.4						
TJIG	**Tijuana**	**17.51**	**326**	P	**Pn**	**01 10 03.7**	**-0.7**
TJIG	**Tijuana**	**17.51**	**326**	*e*P	**Pn**	**01 10 03.7**	**-0.7**
342B	**Flagon Creek P**	**17.60**	**39**	P	**Pn**	**01 10 03.8**	**-1.8**
	baz=225,SNR=18						
Z38A	**Mt. Pleasant**	**17.62**	**30**	P	**Pn**	**01 10 05.1**	**-0.7**
	baz=214						
MONP2	**Monument Peak**	**17.74**	**328**	P	**P**	**01 10 08.5**	**+0.2**
	baz=143,SNR=16						
MONP2				S	**S**	**01 13 34.6**	**+2.1**
	baz=143						
TGUH	**Tegucigalpa,Un**	**17.78**	**101**		**Pn**	**01 10 08.6**	**+0.6**
PDMCI	**Parker Dam,Lak**	**17.89**	**335**	P	**P**	**01 10 10.3**	**+0.6**
	baz=152,SNR=8.3						
PDMCI				S	**S**	**01 13 34.6**	**-0.7**
	baz=152						
BC3	**Big Chuckawall**	**17.89**	**331**	P	**P**	**01 10 11.3**	**+1.4**
	baz=147						
BC3				S	**S**	**01 13 39.4**	**+3.8**
	baz=147						
WUAZ	**Wupatki**	**18.09**	**344**	P	**P**	**01 10 12.1**	**+0.1**
	baz=161,SNR=7.8						
109C	**Camp Elliot, M**	**18.09**	**326**	P	**P**	**01 10 12.6**	**+0.7**
	baz=141						
109C				S	**S**	**01 13 39.7**	**+0.3**
	baz=141						
IRM	**Iron Mountain**	**18.18**	**333**	P	**P**	**01 10 12.9**	**-0.1**
	baz=149,SNR=24						
IRM				S	**S**	**01 13 43.7**	**+2.4**
	baz=149						
PFO	**Pinyon Flats O**	**18.33**	**329**	P	**Pn**	**01 10 13.0**	**-1.7**
PFO				pmax	pmax		
	comp=Z,68nm,1.4s						
PFO	**Pinyon Flats O**	**18.33**	**329**		**Pn**	**01 10 13.0**	**-1.7**
PFO	**Pinyon Flats O**	**18.33**	**329**	P	**P**	**01 10 15.1**	**+0.3**
	baz=144,SNR=13						
PFO				S	**S**	**01 13 47.2**	**+2.7**
	baz=144						
BELC	**Belle Mtn. Jos**	**18.43**	**331**	P	**P**	**01 10 16.8**	**+0.9**
	baz=146,SNR=15						
BELC				S	**S**	**01 13 50.2**	**+3.7**
	baz=146						
NEE2	**Needles Airpor**	**18.49**	**335**	P	**Pn**	**01 10 17.2**	**+0.8**
	baz=151						
NEE2				S	**S**	**01 13 46.7**	**-0.7**
	baz=151						
X37A	**Clayton**	**18.57**	**26**	IAmb	IAmb	01 10 19.4	
	comp=Z,201nm,1.4s						
X37A	**Clayton**	**18.57**	**26**	P	**P**	**01 10 16.0**	**-1.2**
	baz=211,SNR=18						
344A	**Westbrook Farm**	**18.65**	**42**		**P**	**01 10 17.6**	**-0.5**
344A				IAmb	IAmb	01 10 35.1	
	comp=Z,80nm,1.0s						
344A	**Westbrook Farm**	**18.65**	**42**	P	**P**	**01 10 17.4**	**-0.7**
	baz=228						
MURC	**Murrieta**	**18.69**	**327**	P	**Pn**	**01 10 19.9**	**+0.9**
	baz=142						
MURC				S	**S**	**01 13 54.4**	**+2.8**
	baz=142						
Z41A	**Richland Creek**	**18.72**	**34**	IAmb	IAmb	01 10 21.2	
	comp=Z,170nm,1.1s						
Z41A	**Richland Creek**	**18.72**	**34**	P	**P**	**01 10 17.2**	**-1.7**
	baz=220,SNR=20						
Z41A				P	**P**	**01 10 17.2**	**-1.7**
	baz=220,SNR=20						
Z41A	**Richland Creek**	**18.72**	**34**	P	**P**	**01 10 18.8**	**-0.1**
	baz=220,SNR=20						
T25A	**Trinidad**	**18.89**	**2**	IAmb	IAmb	01 10 24.6	
	comp=Z,146nm,1.2s						
T25A	**Trinidad**	**18.89**	**2**	P	**Pn**	**01 10 22.3**	**+0.7**
	baz=183,SNR=39						
T25A				S	**S**	**01 13 59.2**	**+3.2**
	baz=183						
WLAR	**White Oak Lake**	**18.89**	**33**	IAmb	IAmb	01 10 30.4	
	comp=Z,104nm,1.2s						
GMRC	**Granite Mounta**	**18.94**	**333**	P	**Pn**	**01 10 22.0**	**0.0**
	baz=148,SNR=16						
GMRC				S	**S**	**01 13 59.3**	**+2.6**
	baz=148						
U32A	**Winter Ranch,**	**18.95**	**16**	IAmb	IAmb	01 10 25.1	
	comp=Z,137nm,0.9s						
U32A	**Winter Ranch,**	**18.95**	**16**	P	**P**	**01 10 20.2**	**-1.3**
	baz=199,SNR=14						
BBRC	**Big Bear Solar**	**19.08**	**329**	P	**Pn**	**01 10 25.5**	**+1.5**
	baz=144						
BBRC				S	**S**	**01 14 02.6**	**+2.7**
	baz=144						
143A	**Socs Landing,**	**19.10**	**38**	IAmb	IAmb	01 10 23.9	
	comp=Z,83nm,0.9s						
143A	**Socs Landing,**	**19.10**	**38**	P	**P**	**01 10 22.1**	**-0.9**
	baz=224,SNR=7.7						
MVCO	**Mesa Verde**	**19.16**	**352**	IAmb	IAmb	01 10 42.0	
	comp=Z,103nm,1.4s						
MVCO	**Mesa Verde**	**19.16**	**352**	P	**P**	**01 10 23.8**	**-0.1**
	baz=171,SNR=27						
MVCO				S	**S**	**01 14 04.0**	**+2.6**
	baz=171						
CIS	**Catalina Islan**	**19.19**	**325**	S	**S**	**01 14 05.8**	**+4.2**
	baz=139						
HEC	**Hector,Ludlow**	**19.27**	**331**	P	**Pn**	**01 10 26.9**	**+0.8**
	baz=147,SNR=29						
HEC				S	**S**	**01 14 08.5**	**+5.1**
	baz=147						
VBMS	**Vicksburg**	**19.30**	**41**	P	**P**	**01 10 24.8**	**-0.4**
VBMS				IAmb	IAmb	01 10 28.9	
	comp=Z,113nm,1.0s						
VBMS	**Vicksburg**	**19.30**	**41**	P	**Pn**	**01 10 26.4**	**+0.1**
	baz=227						
MIAR	**Mount Ida**	**19.34**	**30**	P	**P**	**01 10 24.0**	**-1.8**
	baz=216,SNR=12						
MIAR	**Mount Ida**	**19.34**	**30**	P	**P**	**01 10 24.4**	**-1.3**
	baz=216,SNR=12						
BFSC	**Mount Baldy Ra**	**19.43**	**328**	P	**Pn**	**01 10 28.2**	**+0.2**
	baz=142,SNR=19						
BFSC				S	**S**	**01 14 11.3**	**+4.6**
	baz=142						
346A	**Big Creek Wild**	**19.43**	**44**	P	**P**	**01 10 26.2**	**-0.5**
346A				IAmb	IAmb	01 10 41.9	
	comp=Z,61nm,0.9s						
346A	**Big Creek Wild**	**19.43**	**44**	P	**P**	**01 10 26.1**	**-0.6**
	baz=231						
SDCO	**Great Sand Dun**	**19.48**	**359**	IAmb	IAmb	01 10 31.2	
	comp=Z,108nm,1.4s						
SDCO	**Great Sand Dun**	**19.48**	**359**	P	**Pn**	**01 10 28.8**	**0.0**
	baz=180,SNR=71						
SDCO	**Great Sand Dun**	**19.48**	**359**	P	**Pn**	**01 10 29.4**	**+0.6**
	baz=180,SNR=71						
SDCO				S	**S**	**01 14 11.6**	**+3.6**
	baz=180						
S22A	**4UR Ranch, Cre**	**19.53**	**356**	IAmb	IAmb	01 10 34.3	
	comp=Z,105nm,1.3s						
S22A	**4UR Ranch, Cre**	**19.53**	**356**	P	**Pn**	**01 10 29.4**	**+0.1**
	baz=176,SNR=26						
S22A				S	**S**	**01 14 15.9**	**+7.0**
	baz=176						
TUL1	**Leonard**	**19.55**	**24**	P	**P**	**01 10 26.5**	**-1.5**
	baz=208,SNR=52						
TUL1	**Leonard**	**19.55**	**24**	P	**P**	**01 10 27.3**	**-0.7**
	baz=208,SNR=52						
TUQ	**Turquoise Moun**	**19.60**	**333**	P	**Pn**	**01 10 31.1**	**+1.0**
	baz=149						
RRX	**Edison Barstow**	**19.62**	**330**	P	**Pn**	**01 10 31.2**	**+1.1**
	baz=145						
RRX				S	**S**	**01 14 14.7**	**+4.5**
	baz=145						
X40A	**Basin Creek Fa**	**19.66**	**32**	P	**P**	**01 10 27.4**	**-1.9**
	baz=218,SNR=10						
X40A				P	**P**	**01 10 27.4**	**-1.9**
	baz=218,SNR=10						
X40A	**Basin Creek Fa**	**19.66**	**32**	P	**P**	**01 10 28.7**	**-0.5**
	baz=218,SNR=10						
BOAB	**BOACO BROADBAN**	**19.75**	**104**	P	**P**	**01 10 31.6**	**+1.3**
CCAR	**Cane Creek**	**19.78**	**35**	P	**P**	**01 10 30.9**	**+0.4**
	baz=221,SNR=12						
W39A	**Magazine**	**19.78**	**29**	IAmb	IAmb	01 10 33.6	
	comp=Z,98nm,1.4s						
W39A	**Magazine**	**19.78**	**29**	P	**P**	**01 10 30.1**	**-0.4**
	baz=214,SNR=22						
W39A	**Magazine**	**19.78**	**29**	P	**P**	**01 10 30.4**	**-0.1**
	baz=214,SNR=22						
W39A				S	**Sn**	**01 14 16.7**	**+2.4**
	baz=214						
DECC	**Green Verdugo**	**19.79**	**326**	P	**Pn**	**01 10 32.5**	**+0.3**
	baz=141						
GSC	**Goldstone, Bar**	**19.88**	**331**	IAmb	IAmb	01 10 36.7	
	comp=Z,84nm,1.4s						
GSC	**Goldstone, Bar**	**19.88**	**331**	P	**P**	**01 10 32.2**	**+0.5**
	baz=146,SNR=23						
GSC				S	**Sn**	**01 14 21.1**	**+4.2**
	baz=146						
EDW2	**Edwards Air Fo**	**20.11**	**328**	P	**P**	**01 10 34.5**	**+0.4**
	baz=143,SNR=6.7						
EDW2				S	Sn	01 14 26.3	+4.0
	baz=143						
SHOC	**Shoshone, Teco**	**20.15**	**333**	P	**P**	**01 10 34.8**	**+0.3**
	baz=148,SNR=12						
SHOC				S	Sn	01 14 26.8	+3.6
	baz=148						
PKCU	**Pink Cliffs**	**20.15**	**344**	IAmb	IAmb	01 10 44.5	
	comp=Z,118nm,1.3s						
T35B	**Sooner Cattle**	**20.19**	**21**	P	**P**	**01 10 33.6**	**-1.3**
	baz=205,SNR=72						
OSI	**Osito Audit: C**	**20.27**	**326**	P	**P**	**01 10 36.2**	**+0.2**
	baz=140						
CCAC	**Calif City Air**	**20.34**	**329**	IAmb	IAmb	01 10 47.0	
	comp=Z,72nm,1.1s						
ACON	**Acoyapa**	**20.37**	**105**	IAmb	IAmb	01 10 44.7	
	comp=Z,176nm,1.5s						
PV07	**Paradox Valley**	**20.39**	**352**	P	**P**	**01 10 36.3**	**-1.1**
PV07				IAmb	IAmb	01 10 43.9	
	comp=Z,97nm,1.0s						
LRMC	**Laurel Mtn Rad**	**20.43**	**330**	P	**P**	**01 10 38.7**	**+0.9**
	baz=144						
HZTE	**Horizontes, Gu**	**20.45**	**109**		**P**	**01 10 38.6**	**+0.6**
HZTE				IAmb	IAmb	01 10 56.5	
	comp=Z,109nm,1.1s						
QSM	**Queen of Sheba**	**20.46**	**332**	IAmb	IAmb	01 10 43.8	
	comp=Z,82nm,1.3s						
146A	**Union**	**20.50**	**42**	P	**P**	**01 10 38.6**	**+0.3**
	baz=230,SNR=7.3						
W41B	**Gary Mavity, V**	**20.50**	**32**	P	**P**	**01 10 37.7**	**-0.6**
	baz=218,SNR=13						
W41B	**Gary Mavity, V**	**20.50**	**32**	P	**P**	**01 10 37.9**	**-0.5**
	baz=218,SNR=13						
GWY	**Greenwater Val**	**20.56**	**333**	IAmb	IAmb	01 10 44.9	
	comp=Z,76nm,1.2s						
WHAR	**Wooly Hollow**	**20.57**	**32**	IAmb	IAmb	01 10 53.8	
	comp=Z,87nm,1.3s						
MTPU	**Mount Pierson**	**20.68**	**344**	IAmb	IAmb	01 10 54.2	
	comp=Z,70nm,1.3s						
Q24A	**Divide**	**20.70**	**0**	P	**P**	**01 10 41.4**	**+0.6**
	baz=180,SNR=18						
ORTG	**Ortega, Santa**	**20.71**	**109**	P	**P**	**01 10 41.8**	**+0.9**
ORTG				IAmb	IAmb	01 10 49.4	
	comp=Z,140nm,1.5s						
ARVC	**Arvin**	**20.73**	**327**	P	**P**	**01 10 40.4**	**-0.4**
	baz=141,SNR=8.3						
ARVC				S	Sn	01 14 44.8	+7.7
	baz=141						
DUNO	**Dulce Nombre,**	**20.80**	**110**	IAmb	IAmb	01 10 57.6	
	comp=Z,112nm,1.3s						
MPMC	**Manual Prospec**	**20.82**	**331**	P	**P**	**01 10 41.5**	**-0.5**
	baz=146,SNR=74						
MPMC				S	Sn	01 14 46.2	+6.6
	baz=146						
KSCO	**Kaye Shedlock'**	**20.87**	**6**	IAmb	IAmb	01 10 57.5	
	comp=Z,134nm,1.4s						
KSCO	**Kaye Shedlock'**	**20.87**	**6**	P	**P**	**01 10 42.6**	**+0.1**
	baz=187						
KSCO	**Kaye Shedlock'**	**20.87**	**6**	P	Pn	01 10 43.9	-1.1
	baz=187						
FURC	**Furnace Creek,**	**20.88**	**333**	P	**P**	**01 10 42.3**	**-0.1**
	baz=148,SNR=17						
FURC				S	Sn	01 14 45.5	+4.8
	baz=148						
BCW	**Bitter Crk WRg**	**20.89**	**326**	IAmb	IAmb	01 10 48.6	
	comp=Z,117nm,1.2s						
R32A	**Long Quarter,**	**20.96**	**15**	P	**P**	**01 10 42.6**	**-0.7**
	baz=198,SNR=44						
ISA	**Isabella, Lake**	**20.97**	**329**	P	**P**	**01 10 43.8**	**+0.3**
	baz=143,SNR=26						
ISA				S	Sn	01 14 49.6	+6.5
	baz=143						
Y45A	**Yeager Farm, C**	**21.02**	**39**	P	**P**	**01 10 43.8**	**-0.2**
	baz=226,SNR=11						
TPNV	**Topopah Spring**	**21.03**	**335**	P	**P**	**01 10 44.8**	**+0.5**
	baz=150,SNR=35						
TPNV				S	Sn	01 14 48.3	+3.6
	baz=150						
PKM	**Mcpherson Peak**	**21.07**	**325**	P	**P**	**01 10 43.4**	**-1.3**
	baz=138						
PKM				S	Sn	01 14 52.0	+6.4
	baz=138						
ESPN	**Las Esperanzas**	**21.10**	**103**	IAmb	IAmb	01 11 00.7	
	comp=Z,93nm,1.3s						
CBKS	**Cedar Bluff**	**21.11**	**12**	P	**P**	**01 10 44.8**	**-0.1**
	baz=195,SNR=30						
CBKS	**Cedar Bluff**	**21.11**	**12**	P	**P**	**01 10 44.8**	**-0.1**
	baz=195,SNR=30						
CBKS				S	Sn	01 14 49.9	+3.5
	baz=195						
FCAR	**Ozark Folk Cen**	**21.13**	**31**	P	**P**	**01 10 44.1**	**-1.0**
FCAR				IAmb	IAmb	01 10 49.5	
	comp=Z,59nm,1.1s						
U40A	**Yellville**	**21.16**	**29**	P	**P**	**01 10 43.8**	**-1.7**
	baz=215,SNR=19						
U40A				P	**P**	**01 10 43.8**	**-1.7**
	baz=215,SNR=19						
U40A				S	Sn	01 14 47.6	-0.1
	baz=215						
U40A				S	Sn	01 14 47.6	-0.1
	baz=215						
U40A	**Yellville**	**21.16**	**29**	P	**P**	**01 10 44.5**	**-1.1**
	baz=215,SNR=19						
U40A				S	Sn	01 14 48.8	+1.2
	baz=215						
JTS	**Las Juntas de**	**21.20**	**109**	*d i*P	**P**	**01 10 48.2**	**+2.1**
JTS				pmax	pmax		
	comp=Z,42nm,1.4s						
JTS	**Las Juntas de**	**21.20**	**109**	P	**P**	**01 10 48.0**	**+1.9**
JTS	**Las Juntas de**	**21.20**	**109**	*e*P	**P**	**01 10 50.1**	**+4.0**
Q16A	**Castle Valley**	**21.28**	**347**	IAmb	IAmb	01 10 57.5	
	comp=Z,94nm,1.1s						
TCRU	**Three Creeks R**	**21.28**	**344**	IAmb	IAmb	01 10 56.7	
	comp=Z,57nm,1.2s						
CWC	**Cottonwood Cre**	**21.40**	**331**	P	**P**	**01 10 48.0**	**-0.2**
	baz=145						
CWC				S	Sn	01 14 53.6	0.0
	baz=145						
S11A	**Rachel**	**21.44**	**337**	IAmb	IAmb	01 10 54.6	
	comp=Z,74nm,1.1s						
SMMC	**Simmler**	**21.48**	**325**	P	**P**	**01 10 50.8**	**+1.8**
	baz=139						
Z47A	**Carrollton**	**21.49**	**43**	IAmb	IAmb	01 10 52.2	
	comp=Z,82nm,1.0s						
Z47A	**Carrollton**	**21.49**	**43**	P	**P**	**01 10 48.1**	**-0.9**
	baz=230,SNR=11						
ISCO	**Idaho Springs**	**21.54**	**359**	IAmb	IAmb	01 11 02.3	
	comp=Z,61nm,1.3s						
ISCO	**Idaho Springs**	**21.54**	**359**	P	**P**	**01 10 49.9**	**0.0**
	baz=179,SNR=34						
ISCO				S	Sn	01 14 52.1	-4.8
	baz=179						
ISCO	**Idaho Springs**	**21.54**	**359**	P	**P**	**01 10 50.4**	**+0.5**
	baz=179,SNR=34						
ISCO				S	Sn	01 14 53.7	-3.3
	baz=179						
OXF	**Oxford**	**21.55**	**38**	IAmb	IAmb	01 10 55.9	
	comp=Z,65nm,1.0s						
OXF	**Oxford**	**21.55**	**38**	P	**P**	**01 10 48.4**	**-1.3**
	baz=225,SNR=11						
OXF	**Oxford**	**21.55**	**38**	P	**P**	**01 10 49.9**	**+0.2**
	baz=225,SNR=11						
TMUT	**Trail Mountain**	**21.65**	**347**	IAmb	IAmb	01 11 00.2	
	comp=Z,84nm,1.2s						
P17A	**Butcher Ranch,**	**21.73**	**349**	IAmb	IAmb	01 11 01.9	
	comp=Z,78nm,1.1s						
LCAR	**Lake Charles**	**21.75**	**32**	P	**P**	**01 10 50.8**	**-1.1**
LCAR				IAmb	IAmb	01 10 57.2	
	comp=Z,81nm,0.9s						
LCAR	**Lake Charles**	**21.75**	**32**	P	**P**	**01 10 51.1**	**-0.7**
	baz=219,SNR=47						
P18A	**Preston Nutter**	**21.79**	**350**	IAmb	IAmb	01 10 57.0	
	comp=Z,50nm,1.0s						
VOG	**Valley Oaks Go**	**21.94**	**328**	P	**P**	**01 10 55.6**	**+1.8**
	baz=142						
250A	**Grady**	**21.97**	**48**	P	**P**	**01 10 53.6**	**-0.7**
	baz=236,SNR=15						
TIN	**Tinemaha, Big**	**21.97**	**331**	P	**P**	**01 10 56.2**	**+1.9**
	baz=145						
TIN				S	Sn	01 15 03.9	-3.3
	baz=145						
R11A	**Troy Canyon, C**	**22.01**	**338**	P	**P**	**01 10 55.1**	**+0.3**
	baz=153,SNR=30						
R11A				S	Sn	01 15 02.6	-5.5
	baz=153						
O20A	**White River Ci**	**22.02**	**354**	IAmb	IAmb	01 11 13.3	
	comp=Z,70nm,1.3s						
O20A	**White River Ci**	**22.02**	**354**	P	**P**	**01 10 55.6**	**+0.7**
	baz=173,SNR=23						
S39A	**Bolivar**	**22.07**	**26**	P	**P**	**01 10 54.4**	**-0.9**
	baz=212,SNR=57						
LRAL	**Lakeview Retre**	**22.09**	**44**	P	**P**	**01 10 54.5**	**-1.0**
LRAL				IAmb	IAmb	01 11 01.4	
	comp=Z,57nm,1.1s						
LRAL	**Lakeview Retre**	**22.09**	**44**	P	**P**	**01 10 54.3**	**-1.2**
	baz=233,SNR=24						
LRAL	**Lakeview Retre**	**22.09**	**44**	P	**P**	**01 10 54.5**	**-1.0**
	baz=233,SNR=24						
LRAL				S	Sn	01 15 05.1	-4.9
	baz=233						
W45A	**Hickory Valley**	**22.14**	**37**	IAmb	IAmb	01 11 03.0	
	comp=Z,78nm,1.0s						
W45A	**Hickory Valley**	**22.14**	**37**	P	**P**	**01 10 55.8**	**-0.2**
	baz=224,SNR=7.5						
KSU1	**Kansas State U**	**22.16**	**18**	P	**P**	**01 10 55.9**	**-0.3**
	baz=202,SNR=20						
KSU1				S	Sn	01 15 05.2	-6.2
	baz=202						
KSU1	**Kansas State U**	**22.16**	**18**	P	**P**	**01 10 55.9**	**-0.3**
	baz=202,SNR=20						
KSU1				S	Sn	01 15 10.7	-0.8
	baz=202						
RIMA	**Rio Macho**	**22.39**	**109**	P	**P**	**01 11 00.1**	**+1.0**
RIMA				IAmb	IAmb	01 11 10.8	
	comp=Z,58nm,1.2s						
PMPB	**Monarch Peak**	**22.59**	**326**	IAmb	IAmb	01 11 08.4	
	comp=Z,53nm,1.2s						
RDMU	**Red Mountain**	**22.61**	**351**	IAmb	IAmb	01 11 11.9	
	comp=Z,50nm,1.0s						
N23A	**Red Feather La**	**22.63**	**359**	P	**P**	**01 11 01.6**	**0.0**
	baz=178,SNR=16						
N23A				S	**S**	**01 15 12.7**	**+3.0**
	baz=178						
PLAL	**Pickwick Lake**	**22.67**	**39**	IAmb	IAmb	01 11 10.3	
	comp=Z,44nm,1.1s						
352A	**Blakely**	**22.67**	**50**	IAmb	IAmb	01 11 08.4	
	comp=Z,91nm,1.2s						
352A	**Blakely**	**22.67**	**50**	P	**P**	**01 11 01.1**	**-0.6**
	baz=239						
PBMO	**Poplar Bluff**	**22.67**	**32**	P	**P**	**01 11 01.4**	**-0.2**
	baz=219,SNR=8.0						
PEZE	**Perez Zeledon,**	**22.71**	**110**	IAmb	IAmb	01 11 09.3	
	comp=Z,83nm,1.5s						
MLAC	**Mammoth, Mammo**	**22.72**	**331**	P	**P**	**01 11 03.9**	**+1.4**
	baz=145						
OMMB	**Old Mammoth Mi**	**22.78**	**331**	IAmb	IAmb	01 11 13.0	
	comp=Z,51nm,1.3s						
MDPB	**Devils Postpil**	**22.84**	**331**	IAmb	IAmb	01 11 13.3	
	comp=Z,58nm,1.2s						
OGNE	**Ogallala**	**22.85**	**6**	P	**P**	**01 11 03.2**	**-0.5**
	baz=188,SNR=9.3						
OGNE	**Ogallala**	**22.85**	**6**	P	**P**	**01 11 03.6**	**0.0**
	baz=188,SNR=9.3						
OGNE				S	Sn	01 15 21.0	-7.1
	baz=188						
DUG	**Dugway, Tooele**	**22.87**	**345**	P	**P**	**01 11 03.4**	**-0.6**
DUG				pmax	pmax		
	comp=Z,38nm,1.4s						
DUG	**Dugway, Tooele**	**22.87**	**345**	P	**P**	**01 11 03.4**	**-0.6**
DUG	**Dugway, Tooele**	**22.87**	**345**	P	**P**	**01 11 05.7**	**+1.7**
	baz=161,SNR=8.9						
DUG				S	Sn	01 15 20.3	-8.4
	baz=161						
X48A	**Hartselle**	**22.95**	**42**	IAmb	IAmb	01 11 11.4	
	comp=Z,53nm,1.1s						
X48A	**Hartselle**	**22.95**	**42**	P	**P**	**01 11 02.5**	**-2.1**
	baz=230,SNR=19						
Y49A	**Blount Mountai**	**22.98**	**44**	P	**P**	**01 11 02.6**	**-2.4**
	baz=232,SNR=10						
R40A	**Maddies Statio**	**23.03**	**27**	IAmb	IAmb	01 11 12.6	
	comp=Z,54nm,1.1s						
R40A	**Maddies Statio**	**23.03**	**27**	P	**P**	**01 11 04.6**	**-0.8**
	baz=213,SNR=19						
Q09A	**Carvers**	**23.03**	**336**	IAmb	IAmb	01 11 25.7	
	comp=Z,76nm,1.4s						
NV11	**Mina Array Sit**	**23.09**	**333**	P	**P**	**01 11 05.2**	**-0.9**
NVAR	**Mina Array Bea**	**23.15**	**333**	P	**P**	**01 11 06.0**	**-0.9**
	comp=Z,3.8nm,0.9s,baz=154,slow=10,SNR=22						
NVAR				LR	LR	01 19 39.4	
	comp=Z,2μm,18.8s,baz=155,slow=36						
	comp=Z,3.8nm,0.9s						
CCM	**Cathedral Cave**	**23.29**	**29**	P	**P**	**01 11 06.4**	**-1.7**
CCM				pmax	pmax		
	comp=Z,43nm,1.2s						
CCM	**Cathedral Cave**	**23.29**	**29**	P	**P**	**01 11 06.4**	**-1.7**
CCM				IAmb	IAmb	01 11 10.3	
	comp=Z,43nm,1.2s						
CCM	**Cathedral Cave**	**23.29**	**29**	P	**P**	**01 11 06.5**	**-1.6**
	baz=216,SNR=17						
CCM	**Cathedral Cave**	**23.29**	**29**	P	**P**	**01 11 06.7**	**-1.4**
	baz=216						
CCM				S	**S**	**01 15 22.2**	**+1.7**
	baz=216						
152A	**Waverly Hall**	**23.45**	**48**	IAmb	IAmb	01 11 19.3	
	comp=Z,37nm,1.1s						
152A	**Waverly Hall**	**23.45**	**48**	P	**P**	**01 11 08.2**	**-1.5**
	baz=237,SNR=10						
RWWY	**Rawlins**	**23.48**	**356**	IAmb	IAmb	01 11 19.5	
	comp=Z,41nm,1.1s						
Z51A	**Franklin**	**23.49**	**46**	IAmb	IAmb	01 11 17.6	
	comp=Z,36nm,1.0s						
Z51A	**Franklin**	**23.49**	**46**	P	**P**	**01 11 08.4**	**-1.8**
	baz=235						
WVT	**Waverly**	**23.60**	**37**	P	**P**	**01 11 09.3**	**-1.9**
WVT				pmax	pmax		

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      comp=Z,42nm,1.2s
WVT   Waverly            23.60  37  P     P     01 11 09.3 -1.9
WVT                                 IAmb  IAmb  01 11 19.5
      comp=Z,42nm,1.2s
WVT   Waverly            23.60  37  P     P     01 11 08.4 -2.8
      baz=226,SNR=7.0
WVT   Waverly            23.60  37  P     P     01 11 09.1 -2.1
      baz=226
WVT                                 S     S     01 15 26.2 +0.5
      baz=226
TIGA  Tifton             23.64  52  IAmb  IAmb  01 11 14.8
      comp=Z,54nm,0.9s
TIGA  Tifton             23.64  52  P     P     01 11 12.2 +0.6
      baz=241
P38A  Dawn               23.66  23  IAmb  IAmb  01 11 20.1
      comp=Z,53nm,0.9s
P38A  Dawn               23.66  23  P     P     01 11 10.2 -1.5
      baz=209
T45A  Paducah            23.79  35  IAmb  IAmb  01 11 18.1
      comp=Z,51nm,0.8s
FPAL  Fort Paine         23.92  43  IAmb  IAmb  01 11 16.9
      comp=Z,50nm,0.9s
V48A  Smith Brothers     23.93  39  P     P     01 11 11.8 -2.6
      baz=228
BGNE  Belgrade           23.93  13  P     P     01 11 15.2 +0.8
      baz=197
YERR  Yerington          24.02 332  IAmb  IAmb  01 11 21.6
      comp=Z,36nm,1.3s
ELK   Elko               24.06 341  P     P     01 11 15.6 -0.2
      comp=Z,4.5nm,1.0s,baz=162,slow=10,SNR=8.9
ELK                                 LR    LR    01 19 47.0
      comp=Z,1µm,18.9s,baz=171,slow=35
      comp=Z,4.5nm,1.0s
ELK   Elko               24.06 341  P     P     01 11 15.7 -0.1
ELK                                 pmax  pmax
      comp=Z,16nm,1.3s
ELK   Elko               24.06 341  P     P     01 11 15.7 -0.1
P40A  Paris              24.16  26  IAmb  IAmb  01 11 21.4
      comp=Z,58nm,1.1s
P40A  Paris              24.16  26  P     P     01 11 15.1 -1.4
      baz=212,SNR=26
K22A  Casper             24.41 358  IAmb  IAmb  01 11 25.9
      comp=Z,76nm,1.4s
K22A  Casper             24.41 358  P     P     01 11 20.3 +1.4
      baz=177
K22A  Casper             24.41 358  P     P     01 11 20.2 +1.3
      baz=177
X51A  Calhoun            24.43  44  P     P     01 11 17.6 -1.4
      baz=234
X51A                                P     P     01 11 17.6 -1.4
      baz=234
BMN   Battle Mountai     24.44 338  IAmb  IAmb  01 11 26.7
      comp=Z,47nm,1.2s
CLTN  Cedars of Leba     24.46  39  IAmb  IAmb  01 11 20.3
      comp=Z,64nm,1.2s
W50A  Signal Mountai     24.52  42  IAmb  IAmb  01 11 21.9
      comp=Z,54nm,0.9s
W50A  Signal Mountai     24.52  42  P     P     01 11 18.7 -1.3
      baz=232,SNR=32
Y52A  Lilburn            24.57  46  IAmb  IAmb  01 11 21.7
      comp=Z,33nm,1.0s
Y52A  Lilburn            24.57  46  P     P     01 11 19.3 -1.0
      baz=236,SNR=5.4
Y52A                                P     P     01 11 19.3 -1.0
      baz=236,SNR=5.4
154A  Montrose           24.58  50  P     P     01 11 19.2 -1.1
      baz=240,SNR=10
T47A  Sharon Grove       24.62  37  P     P     01 11 19.9 -0.9
      baz=226,SNR=8.8
PAHR  Pah Rah Range      24.67 333  P     P     01 11 20.8 -0.6
255A  Hazlehurst         24.71  52  IAmb  IAmb  01 11 23.6
      comp=Z,61nm,1.1s
255A  Hazlehurst         24.71  52  P     P     01 11 21.1 -0.4
      baz=242
GOGA  Godfrey            24.73  48  P     P     01 11 21.0 -0.8
      baz=238,SNR=29
GOGA  Godfrey            24.73  48  P     P     01 11 21.1 -0.8
      baz=238,SNR=29
GOGA                                S     S     01 15 50.8 +6.9
      baz=238
PDAR  Pinedale Array     24.77 352  P     P     01 11 20.9 -1.4
      comp=Z,3.3nm,0.8s,baz=163,slow=10,SNR=14
PDAR                                LR    LR    01 21 20.4
      comp=Z,1µm,18.0s,baz=178,slow=37
      comp=Z,3.3nm,0.8s
Q44A  Meyer Farm, Va     25.02  31  P     P     01 11 24.1 -0.2
      baz=219,SNR=16
U49A  Red Boiling Sp     25.07  39  IAmb  IAmb  01 11 26.3
      comp=Z,38nm,1.4s
U49A  Red Boiling Sp     25.07  39  P     P     01 11 23.8 -1.1
      baz=229,SNR=7.7
CPCT  Cooper Cave        25.19  43  IAmb  IAmb  01 11 27.3
      comp=Z,23nm,1.0s
BEKR  Beckworth          25.23 332  P     P     01 11 25.8 -0.7
OLIL  Olney              25.35  33  IAmb  IAmb  01 11 47.4
      comp=Z,24nm,0.9s
OLIL  Olney              25.35  33  P     P     01 11 27.5 +0.2
      baz=221
W52A  Murphy             25.36  44  P     P     01 11 27.4 -0.1
      baz=234
P43A  Skaggs, Pawnee     25.36  29  IAmb  IAmb  01 11 29.8
      comp=Z,40nm,1.0s
P43A  Skaggs, Pawnee     25.36  29  P     P     01 11 27.3 -0.1
      baz=217,SNR=5.4
V51A  Loudon             25.51  42  IAmb  IAmb  01 11 31.1
      comp=Z,47nm,0.9s
V51A  Loudon             25.51  42  P     P     01 11 27.3 -1.5
      baz=232,SNR=15
SNOW  Snow King Moun     25.61 351  P     P     01 11 28.3 -1.7
N41A  Harden Midland     25.64  26  P     P     01 11 29.4 -0.6
      baz=213,SNR=12
LOHW  Long Hollow        25.74 351  IAmb  IAmb  01 11 42.6
      comp=Z,46nm,1.0s
TKL   Tuckaleechee C     25.80  43  P     P     01 11 31.1 -0.3
      comp=Z,25nm,0.8s,baz=208,slow=11,SNR=24
TKL                                 LR    LR    01 23 06.9
      comp=Z,774nm,19.2s,baz=234,slow=40
      comp=Z,25nm,0.8s
TKL   Tuckaleechee C     25.80  43  IAmb  IAmb  01 11 33.7
      comp=Z,44nm,1.0s
TKL   Tuckaleechee C     25.80  43  P     P     01 11 30.9 -0.5
      baz=233,SNR=11
RSSD  Black Hills        25.87   2  P     P     01 11 31.8 -0.4
RSSD                                pmax  pmax
      comp=Z,9.0nm,0.9s
RSSD  Black Hills        25.87   2  P     P     01 11 31.8 -0.4
RSSD  Black Hills        25.87   2  P     P     01 11 31.1 -1.2
      baz=183
RSSD  Black Hills        25.87   2  P     P     01 11 31.6 -0.7
      baz=183
CASEE Lake Jocassee      25.97  45  P     P     01 11 33.5 +0.5
      baz=236,SNR=14
T50A  Nancy              25.98  40  IAmb  IAmb  01 11 35.7
      comp=Z,35nm,0.9s
T50A  Nancy              25.98  40  P     P     01 11 31.6 -1.4
      baz=229
T50A                                P     P     01 11 31.6 -1.4
      baz=229
HODGE Hodges             26.02  48  IAmb  IAmb  01 11 36.5
      comp=Z,50nm,1.0s
HODGE Hodges             26.02  48  P     P     01 11 32.6 -0.8
      baz=238,SNR=20
V52A  Sevierville        26.02  43  IAmb  IAmb  01 11 35.5
      comp=Z,19nm,0.8s
HDIL  Hopedale           26.20  28  IAmb  IAmb  01 11 37.4
      comp=Z,44nm,1.1s
HDIL  Hopedale           26.20  28  P     P     01 11 34.9 -0.1
      baz=216
FLWY  Flagg Ranch        26.21 351  IAmb  IAmb  01 11 51.8
      comp=Z,41nm,1.3s
O44A  Mansfield          26.26  30  P     P     01 11 36.1 +0.5
      baz=218
HLID  Hailey             26.44 345  P     P     01 11 37.2 -0.2
      baz=160
HLID                                S     S     01 16 15.7 +4.5
      baz=160
P46A  Rosedale           26.48  33  IAmb  IAmb  01 11 39.9
      comp=Z,23nm,0.9s
P46A  Rosedale           26.48  33  P     P     01 11 37.7 +0.2
      baz=222,SNR=5.6
TZTN  Tazewell           26.48  42  IAmb  IAmb  01 11 40.6
      comp=Z,34nm,1.1s
TZTN  Tazewell           26.48  42  P     P     01 11 37.2 -0.4
      baz=232,SNR=7.5
TZTN  Tazewell           26.48  42  P     P     01 11 37.6  0.0
      baz=232,SNR=7.5
ECSD  EROS Data Cent     26.49  14  P     P     01 11 36.6 -1.0
      baz=199
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ECSD  EROS Data Cent     26.49  14  P     P     01 11 36.6 -1.0
      baz=199
H17A  Grant Village      26.50 351  P     P     01 11 39.6 +1.6
      baz=169
BLO   Bloomington        26.50  34  IAmb  IAmb  01 11 41.2
      comp=Z,32nm,0.9s
PAULI Pauline            26.64  47  IAmb  IAmb  01 11 42.1
      comp=Z,45nm,0.8s
PAULI Pauline            26.64  47  P     P     01 11 38.4 -0.7
      baz=238
L40A  Anamosa            26.65  24  P     P     01 11 37.6 -1.4
L40A  Anamosa            26.65  24  P     P     01 11 38.6 -0.5
      baz=211,SNR=6.4
JSC   Jenkinsville       26.75  48  IAmb  IAmb  01 11 43.1
      comp=Z,30nm,1.1s
JSC   Jenkinsville       26.75  48  P     P     01 11 39.9 -0.1
      baz=239,SNR=5.1
NHSC  New Hope           26.97  52  P     P     01 11 44.8 +2.7
      baz=243
RLMT  Red Lodge          27.06 354  P     P     01 11 46.5 +3.5
      baz=172
SFIN  Lafayette          27.10  32  P     P     01 11 41.8 -1.4
SFIN                                IAmb  IAmb  01 11 45.5
      comp=Z,40nm,1.1s
SFIN  Lafayette          27.10  32  P     P     01 11 43.4 +0.2
      baz=221,SNR=6.6
SFIN  Lafayette          27.10  32  P     P     01 11 43.2  0.0
      baz=221,SNR=6.6
S51A  Beattyville        27.13  40  IAmb  IAmb  01 11 48.5
      comp=Z,27nm,0.9s
S51A  Beattyville        27.13  40  P     P     01 11 42.5 -1.0
      baz=230,SNR=12
S51A                                P     P     01 11 42.5 -1.0
      baz=230,SNR=12
KMSC  Kings Mountain     27.15  47  IAmb  IAmb  01 11 46.5
      comp=Z,68nm,1.4s
KMSC  Kings Mountain     27.15  47  P     P     01 11 43.2 -0.4
      baz=238
KMSC  Kings Mountain     27.15  47  P     P     01 11 43.3 -0.3
      baz=238
L42A  Oliver, Polo       27.22  26  IAmb  IAmb  01 11 48.9
      comp=Z,36nm,1.0s
L42A  Oliver, Polo       27.22  26  P     P     01 11 43.0 -1.2
      baz=214
U54A  Nelsons Funny      27.58  44  IAmb  IAmb  01 11 49.1
      comp=Z,26nm,1.1s
U54A  Nelsons Funny      27.58  44  P     P     01 11 47.3 -0.4
      baz=235
U54A                                P     P     01 11 47.3 -0.4
      baz=235
V55A  Taylorsville       27.61  46  IAmb  IAmb  01 11 50.1
      comp=Z,28nm,1.2s
V55A  Taylorsville       27.61  46  P     P     01 11 48.1 +0.3
      baz=237
V55A                                P     P     01 11 48.1 +0.3
      baz=237
I37A  Lemond, Waseca     27.62  19  IAmb  IAmb  01 11 48.5
      comp=Z,35nm,0.9s
I37B  Waseca             27.62  19  P     P     01 11 46.2 -1.6
      baz=205
P49A  Miami Univ. Ec     27.74  36  IAmb  IAmb  01 11 50.1
      comp=Z,36nm,1.1s
P49A  Miami Univ. Ec     27.74  36  P     P     01 11 48.5 -0.4
      baz=226,SNR=5.5
P49A  Miami Univ. Ec     27.74  36  P     P     01 11 48.5 -0.4
      baz=226,SNR=5.5
JFWS  Jewell Farm        27.75  24  IAmb  IAmb  01 11 54.4
      comp=Z,28nm,0.8s
JFWS  Jewell Farm        27.75  24  P     P     01 11 47.7 -1.2
      baz=212
JFWS  Jewell Farm        27.75  24  P     P     01 11 49.2 +0.3
      baz=212
YBH   Yreka Blue Hor     27.79 331  LR    LR    01 22 25.3
      comp=Z,2µm,19.1s,baz=156,slow=36
K05A  Summer Lake        27.82 335  P     P     01 11 49.7 -0.1
K05A                                IAmb  IAmb  01 11 56.6
      comp=Z,46nm,1.4s
BOZ   Bozeman (W)        27.83 350  P     P     01 11 49.4 -0.4
      baz=167,SNR=11
L04D  Klamath Falls      28.00 332  IAmb  IAmb  01 11 55.2
      comp=Z,26nm,1.1s
L04D  Klamath Falls      28.00 332  P     P     01 11 50.4 -1.0
      baz=144
O48B  Farmland           28.02  34  P     P     01 11 51.0 -0.3
      baz=224,SNR=5.5
O48B  Farmland           28.02  34  P     P     01 11 50.7 -0.6
      baz=224,SNR=5.5
W57A  Gilead             28.09  48  IAmb  IAmb  01 11 54.7
      comp=Z,38nm,1.1s
UPD2  Meteti             28.17 106  eP    P     01 11 52.0 -0.9
Q51A  Peebles            28.18  38  IAmb  IAmb  01 11 57.7
      comp=Z,31nm,1.1s
Q51A  Peebles            28.18  38  P     P     01 11 52.2 -0.6
      baz=229
Q51A                                P     P     01 11 52.2 -0.6
      baz=229
PLID  Pearl Lake         28.27 344  P     P     01 11 53.0 -0.8
O49A  Covington          28.41  35  IAmb  IAmb  01 11 56.2
      comp=Z,18nm,1.0s
O49A  Covington          28.41  35  P     P     01 11 53.5 -1.3
      baz=226
O49A                                P     P     01 11 53.5 -1.3
      baz=226
J05D  Fort Rock, OR      28.42 335  P     P     01 11 56.2 +1.1
      baz=147
LAO   LASA Array         28.43 359  IAmb  IAmb  01 12 01.9
      comp=Z,26nm,1.4s
I40A  Norwalk            28.45  23  IAmb  IAmb  01 11 57.1
      comp=Z,21nm,1.1s
U56A  King               28.45  46  IAmb  IAmb  01 11 57.6
      comp=Z,28nm,1.1s
R53A  Hurricane          28.58  41  P     P     01 11 56.5 +0.1
      baz=232,SNR=10
R53A                                P     P     01 11 56.5 +0.1
      baz=232,SNR=10
P51A  Williamsport       28.65  38  IAmb  IAmb  01 12 01.1
      comp=Z,18nm,0.9s
J04D  Umpqua Nationa     28.75 334  P     P     01 11 57.5 -0.6
      baz=145
Q52A  Bidwell            28.78  39  P     P     01 11 58.1 -0.1
      baz=231,SNR=7.7
Q52A                                P     P     01 11 58.1 -0.1
      baz=231,SNR=7.7
SPMN  Marine on St.      28.90  18  P     P     01 11 58.6 -0.5
K02D  Willamette Mer     28.99 331  P     P     01 12 01.0 +0.9
      baz=142
N49A  Columbus Grove     29.01  34  IAmb  IAmb  01 12 01.7
      comp=Z,42nm,1.4s
N49A  Columbus Grove     29.01  34  P     P     01 12 00.2 +0.1
      baz=225
N49A                                P     P     01 12 00.2 +0.1
      baz=225
V58A  Windy Hill, Pi     29.03  48  IAmb  IAmb  01 12 03.4
      comp=Z,34nm,1.2s
I42A  Draeger Farm,      29.09  25  IAmb  IAmb  01 12 01.9
      comp=Z,25nm,1.1s
F36A  Milaca             29.27  17  P     P     01 12 01.0 -1.5
      baz=203
P52A  Corning            29.29  38  IAmb  IAmb  01 12 03.9
      comp=Z,36nm,1.4s
P52A  Corning            29.29  38  P     P     01 12 02.2 -0.5
      baz=230
I05D  Terrebonne, OR     29.35 336  P     P     01 12 04.4 +1.2
      baz=148
MSO   Missoula           29.44 348  IAmb  IAmb  01 12 11.6
      comp=Z,33nm,1.2s
MSO   Missoula           29.44 348  P     P     01 12 03.3 -0.7
      baz=163,SNR=14
T57A  Hurt               29.56  45  IAmb  IAmb  01 12 07.6
      comp=Z,38nm,1.2s
T57A  Hurt               29.56  45  P     P     01 12 05.4 +0.2
      baz=238,SNR=5.3
T57A                                P     P     01 12 05.4 +0.2
      baz=238,SNR=5.3
L48A  N Adams            29.61  33  IAmb  IAmb  01 12 06.8
      comp=Z,42nm,1.4s
P53A  Whipple            29.64  39  IAmb  IAmb  01 12 08.0
      comp=Z,25nm,0.9s
P53A  Whipple            29.64  39  P     P     01 12 05.7 -0.1
      baz=231
P53A                                P     P     01 12 05.7 -0.1
      baz=231
R55A  Marlinton          29.70  42  P     P     01 12 06.7 +0.3
R55A                                IAmb  IAmb  01 12 08.4
      comp=Z,21nm,1.1s
O52A  Adamsville         29.77  38  IAmb  IAmb  01 12 10.0
      comp=Z,43nm,1.5s
G40A  Rib Lake           29.79  22  IAmb  IAmb  01 12 07.1
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      comp=Z,26nm,1.4s
M50A  Fremont            29.96  35  P     P     01 12 08.9 +0.3
      baz=226,SNR=6.1
M50A                                P     P     01 12 08.9 +0.3
      baz=226,SNR=6.1
H04A  Detroit Lake       29.97 335  IAmb  IAmb  01 12 13.4
      comp=Z,21nm,1.1s
EGMT  Eagleton           29.98 354  P     P     01 12 08.3 -0.5
      baz=172
N51A  Ashland            30.00  36  IAmb  IAmb  01 12 12.3
      comp=Z,28nm,1.1s
O53A  New Philadelph     30.23  38  IAmb  IAmb  01 12 15.2
      comp=Z,35nm,1.4s
O53A  New Philadelph     30.23  38  P     P     01 12 10.4 -0.6
      baz=230
AAM   Ann Arbor          30.27  33  P     P     01 12 10.8 -0.5
      baz=224
AAM   Ann Arbor          30.27  33  P     P     01 12 10.8 -0.5
      baz=224
HOOD  Mount Hood Mea     30.30 337  IAmb  IAmb  01 12 18.8
      comp=Z,27nm,1.1s
SJCC  San Jacinto, C     30.31 102  P     P     01 12 13.3 +1.3
SJCC                                IAmb  IAmb  01 12 15.2
      comp=Z,41nm,1.4s
O54A  Avella             30.68  39  IAmb  IAmb  01 12 19.1
      comp=Z,26nm,1.1s
O54A  Avella             30.68  39  P     P     01 12 14.6 -0.5
      baz=232
O54A                                P     P     01 12 14.6 -0.5
      baz=232
T59A  Double "B" Far     30.71  47  IAmb  IAmb  01 12 17.7
      comp=Z,26nm,1.1s
T59A  Double "B" Far     30.71  47  P     P     01 12 15.2 -0.1
      baz=240,SNR=7.5
T59A                                P     P     01 12 15.2 -0.1
      baz=240,SNR=7.5
UREC  San Jos de Ur      30.74 106  eP    P     01 12 16.4 +0.6
COWI  Conover            30.88  22  IAmb  IAmb  01 12 18.6
      comp=Z,24nm,1.0s
COWI  Conover            30.88  22  P     P     01 12 15.6 -1.1
      baz=211
M52A  Chesterland        30.98  36  IAmb  IAmb  01 12 19.0
      comp=Z,37nm,1.2s
AGMN  Agassiz Nation     31.00  12  IAmb  IAmb  01 12 25.0
      comp=Z,33nm,1.2s
CBOC  Ciudad Bolivar     31.08 110  eP    P     01 12 22.2 +3.2
M53A  WI Miller and      31.30  37  IAmb  IAmb  01 12 22.4
      comp=Z,27nm,1.3s
M53A  WI Miller and      31.30  37  P     P     01 12 19.9 -0.6
      baz=230
ZARC  Zaragoza, Cauc     31.46 106  eP    P     01 12 24.3 +2.2
NEW   Newport            31.51 345  LR    LR    01 24 09.0
      comp=Z,773nm,18.3s,baz=158,slow=35
NEW   Newport            31.51 345  P     P     01 12 21.8 -0.5
      baz=158
NEW                                 S     S     01 17 33.2 +2.7
      baz=158
B35A  Bob, Littlefor     31.53  15  IAmb  IAmb  01 12 28.2
      comp=Z,26nm,1.1s
WALA  Waterton Lakes     31.57 349  P     P     01 12 22.4 -0.6
LTY   Liberty            31.62 340  IAmb  IAmb  01 12 34.4
      comp=Z,23nm,1.3s
YOTC  Yotoco, Valle      31.64 113  eP    P     01 12 22.0 -1.8
GLMI  Grayling           31.68  29  P     P     01 12 24.3 +0.5
      baz=220
SMLC  San Martn de       31.70 103  eP    P     01 12 25.9 +1.6
P57A  Homestead Farm     31.74  42  IAmb  IAmb  01 12 39.2
      comp=Z,34nm,1.5s
EYMN  Ely                31.74  18  P     P     01 12 22.7 -1.5
      baz=206
OTAV  Otavalo            31.84 121  P     P     01 12 27.8 +1.8
OTAV                                pmax  pmax
      comp=Z,52nm,1.4s
OTAV  Otavalo            31.84 121  P     P     01 12 27.8 +1.8
I49A  Point Hope         31.87  32  IAmb  IAmb  01 12 31.1
      comp=Z,23nm,1.0s
LL6C  La Loma 6 Bece     32.14 101  eP    P     01 12 29.3 +1.2
B08A  Colville Reser     32.19 342  IAmb  IAmb  01 12 37.0
      comp=Z,29nm,1.3s
SOTA  Rioblanco          32.33 116  eP    P     01 12 32.4 +2.0
SSPA  Standing Stone     32.48  41  P     P     01 12 29.7 -1.1
SSPA  Standing Stone     32.48  41  P     P     01 12 30.1 -0.7
      baz=235
OCAC  Ocana              32.60 103  P     P     01 12 34.1 +1.8
D03D  Eldon              32.70 337  P     P     01 12 37.3 +4.6
      baz=148
ULM   Lac du Bonnet      32.86  11  P     P     01 12 32.0 -2.0
      comp=Z,4.8nm,0.7s,baz=197,slow=7.9,SNR=4.6
ULM                                 LR    LR    01 26 28.5
      comp=Z,5µm,19.1s,baz=198,slow=38
      comp=Z,4.8nm,0.7s
ULM   Lac du Bonnet      32.86  11  i P   P     01 12 34.1 +0.1
ULM   Lac du Bonnet      32.86  11  IAmb  IAmb  01 12 36.1
      comp=Z,25nm,1.5s
B05A  Bryant             32.98 339  P     P     01 12 38.2 +3.2
      baz=150
ROSC  El Rosal           33.04 110  P     P     01 12 40.6 +4.2
      comp=Z,3.6nm,0.4s,baz=45,slow=7.6,SNR=5.3
ROSC                                LR    LR    01 25 59.3
      comp=Z,497nm,18.8s,baz=250,slow=36
ROSC  El Rosal           33.04 110  IAmb  IAmb  01 12 40.7
      comp=Z,17nm,1.1s
MVL   Millersville       33.09  43  IAmb  IAmb  01 12 41.4
      comp=Z,20nm,1.2s
WVNY  West Valley, N     33.11  37  IAmb  IAmb  01 12 41.4
      comp=Z,26nm,1.0s
BARC  Barichara          33.34 106  eP    P     01 12 41.5 +2.6
RUSC  La Rusia           33.71 107  eP    P     01 12 43.8 +1.4
J55A  Hilton             34.10  37  IAmb  IAmb  01 12 48.8
      comp=Z,25nm,1.1s
SADO  Sadowa             34.34  34  LR    LR    01 28 05.6
      comp=Z,2µm,18.4s,baz=236,slow=39
BINY  Binghamton         34.54  40  P     P     01 12 48.6 -0.2
      baz=235,SNR=7.6
BINY  Binghamton         34.54  40  P     P     01 12 48.7 -0.1
      baz=235,SNR=7.6
J56A  Wolcott            34.66  38  IAmb  IAmb  01 12 50.8
      comp=Z,39nm,1.4s
SDV   Santo Domingo      34.88 101  P     P     01 12 54.1 +1.9
      comp=Z,18nm,0.9s,baz=290,slow=3.4,SNR=24
SDV                                 LR    LR    01 28 25.6
      comp=Z,598nm,18.4s,baz=313,slow=38
      comp=Z,18nm,0.9s
SDV   Santo Domingo      34.88 101  P     P     01 12 52.6 +0.4
SDV   Santo Domingo      34.88 101  eP    P     01 12 53.0 +0.8
SDV   Santo Domingo      34.88 101  eP    P     01 12 53.6 +1.4
PECO  Prince Edward      34.98  37  IAmb  IAmb  01 12 53.6
      comp=Z,40nm,1.1s
L59A  Walton             35.12  41  P     P     01 12 53.7 -0.1
      baz=236
L59A                                P     P     01 12 53.7 -0.1
      baz=236
J57A  Williamstown       35.24  38  IAmb  IAmb  01 12 56.5
      comp=Z,36nm,1.2s
J57A  Williamstown       35.24  38  P     P     01 12 54.2 -0.6
      baz=234
J57A                                P     P     01 12 54.2 -0.6
      baz=234
EDM   Edmonton           35.52 352  IAmb  IAmb  01 13 02.6
      comp=Z,31nm,1.4s
ATAH  Atahualpa          36.57 131  P     P     01 13 09.2 +2.2
      comp=Z,7.7nm,0.9s,baz=322,slow=12,SNR=5.1
ATAH                                LR    LR    01 24 55.2
      comp=Z,2µm,21.0s,baz=309,slow=31
      comp=Z,7.7nm,0.9s
NCB   Newcomb            36.61  39  IAmb  IAmb  01 13 08.4
      comp=Z,20nm,1.1s
ACCN  Adirondack Com     36.62  40  P     P     01 13 06.3 -0.3
ACCN                                IAmb  IAmb  01 13 06.9
      comp=Z,17nm,1.0s
L61B  Northampton        36.74  42  P     P     01 13 07.8 +0.2
      baz=239
LONY  Lake Ozonia        36.78  38  P     P     01 13 07.6 -0.3
      baz=234
SJG   San Juan           37.14  84  LR    LR    01 30 22.5
      comp=Z,551nm,18.3s,baz=276,slow=39
J61A  Chester            37.28  41  P     P     01 13 12.5 +0.2
      baz=238,SNR=7.6
J61A                                P     P     01 13 12.5 +0.2
      baz=238,SNR=7.6
FRNY  Flat Rock          37.48  38  IAmb  IAmb  01 13 15.7
      comp=Z,25nm,1.1s
TRQ   Mont Tremblant     37.75  35  IAmb  IAmb  01 13 18.6
      comp=Z,34nm,1.2s
MNTQ  Montreal, Queb     37.84  37  P     P     01 13 16.8 -0.2
MNTQ                                IAmb  IAmb  01 13 18.7
      comp=Z,28nm,1.1s
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LBNH  Lisbon             38.14  40   P      P      01 13 19.9 +0.4
      baz=238
I62A  Tamworth           38.31  41   P      P      01 13 21.3 +0.3
      baz=239,SNR=6.7
I62A                                 P      P      01 13 21.3 +0.3
      baz=239,SNR=6.7
BBB   Bella Bella        38.38 337   LR     LR     01 29 10.5
      comp=Z,577nm,19.7s,baz=152,slow=36
H62A  Milan              38.79  40   IAmb   IAmb   01 13 27.6
      comp=Z,36nm,1.1s
F63A  Nahmakanta, Br     40.62  39   IAmb   IAmb   01 13 43.1
      comp=Z,38nm,1.2s
LMQ   La Malbaie         40.88  36   IAmb   IAmb   01 13 44.9
      comp=Z,31nm,1.2s
NNA   Nana               41.07 135   LR     LR     01 27 12.9
      comp=Z,969nm,19.8s,baz=318,slow=31
NNA   Nana               41.07 135 i P      P      01 13 45.7 +1.4
NNA                                  pmax   pmax
      comp=Z,85nm,2.0s
F64A  Sherman            41.15  40   IAmb   IAmb   01 13 47.0
      comp=Z,64nm,1.4s
CZSB  Cruzeiro do Su     41.20 126  eP      P      01 13 45.8 +0.5
FCC   Fort Churchill     41.34   9   P      P      01 13 44.3 -1.6
FCC                                  pmax   pmax
      comp=Z,20nm,1.0s
FCC   Fort Churchill     41.34   9   P      P      01 13 44.3 -1.6
TBTG  Tabatinga, AM      41.36 119  eP      P      01 13 46.5 -0.2
D62A  Allapoint, All     41.36  38   IAmb   IAmb   01 13 49.2
      comp=Z,28nm,1.0s
D62A  Allapoint, All     41.36  38   P      P      01 13 46.1 -0.2
      baz=238,SNR=5.9
D62A                                 P      P      01 13 46.1 -0.2
      baz=238,SNR=5.9
BATG  Bathurst New B     43.22  39   IAmb   IAmb   01 14 04.1
      comp=Z,26nm,1.0s
LMN   Caledonia Moun     43.34  41   P      P      01 14 02.2 -0.2
LMN                                  IAmb   IAmb   01 14 04.7
      comp=Z,49nm,1.1s
TAOE  Nuku Hiva Isla     43.67 235  eS      S      01 20 23.6  -12
TAOE                                eLR     LR     01 25 38.5
      comp=Z,2µm,26.1s,baz=62
TAOE  Nuku Hiva Isla     43.67 235  eT      T      02 00 13.2
      comp=Z,37nm,0.2s
DLBC  Dease Lake         44.11 342   LR     LR     01 33 26.6
      comp=Z,1µm,18.1s,baz=122,slow=38
DLBC  Dease Lake         44.11 342   IAmb   IAmb   01 14 14.7
      comp=Z,31nm,1.1s
YKA   Yellowknife Ar     44.73 354   P      P      01 14 11.2 -2.2
      comp=Z,4.4nm,0.8s,baz=165,slow=7.6,SNR=41
YKA                                  LR     LR     01 32 23.3
      comp=Z,1µm,18.1s,baz=162,slow=36
      comp=Z,4.4nm,0.8s
RPN   Rapa Nui           45.22 185   LR     LR     01 28 37.3
      comp=Z,2µm,20.6s,baz=355,slow=30
BOAV  Boa Vista          46.58 104  eP      P      01 14 29.5 +0.8
SCHQ  Schefferville      46.86  30   P      P      01 14 29.6 -0.6
      comp=Z,6.2nm,1.0s,baz=199,slow=4.5,SNR=5.4
SCHQ                                 LR     LR     01 35 15.9
      comp=Z,2µm,19.0s,baz=232,slow=38
      comp=Z,6.2nm,1.0s
SCHQ  Schefferville      46.86  30   P      P      01 14 29.8 -0.4
SCHQ                                 IAmb   IAmb   01 14 31.9
      comp=Z,18nm,1.2s
ETMB  Extrema            47.56 123  eP      P      01 14 35.4 -0.8
MMPY  Sheldon Lake,      47.91 344   P      P      01 14 38.5 +0.1
      baz=146
M31M  Drury Creek, Y     48.44 342   P      P      01 14 43.8 +1.4
      baz=142
MACA  Manacapuru-AM      48.78 111  eP      P      01 14 45.2 -0.6
YUK4  Talbot Arm         49.11 339   P      P      01 14 48.8 +0.9
      baz=136
M30M  Minto, Yukon       49.44 341   P      P      01 14 52.3 +2.2
      baz=139
LPAZ  La Paz             50.12 131   P      P      01 14 57.3 +0.7
      comp=Z,6.8nm,0.9s,baz=325,slow=7.2,SNR=18
LPAZ                                 LR     LR     01 33 56.7
      comp=Z,689nm,20.1s,baz=311,slow=33
      comp=Z,6.8nm,0.9s
LPAZ  La Paz             50.12 131   P      P      01 14 57.3 +0.7
LPAZ                                 pmax   pmax
      comp=Z,25nm,1.3s
LPAZ  La Paz             50.12 131   P      P      01 14 57.2 +0.7
LPAZ                                 IAmb   IAmb   01 14 58.2
      comp=Z,25nm,1.2s
LPAZ  La Paz             50.12 131  eP      P      01 14 56.4 -0.2
RKT   Rikitea            50.27 216  eT      T      02 08 36.5
      comp=Z,6.5nm,0.3s
PB16  IPOC Station P     50.54 134   IAmb   IAmb   01 15 02.2
      comp=Z,36nm,1.3s
M27K  Edge Creek, AK     50.92 339   IAmb   IAmb   01 15 09.7
      comp=Z,24nm,1.2s
M27K  Edge Creek, AK     50.92 339   P      P      01 15 03.4 +1.9
      baz=133
GLB   Gilahina Butte     50.99 337   IAmb   IAmb   01 15 07.6
      comp=Z,32nm,1.3s
DAWY  Dawson             51.33 342   P      P      01 15 03.7 -0.8
      baz=137
L27K  Beaver Creek,      51.38 340   P      P      01 15 08.6 +3.7
      baz=134
KLU   Klutina            51.81 337   IAmb   IAmb   01 15 26.2
      comp=Z,42nm,1.5s
KLU   Klutina            51.81 337   P      P      01 15 10.0 +1.9
      baz=128
FRB   Frobisher Bay      51.92  20   LR     LR     01 37 56.9
      comp=Z,3µm,18.8s,baz=228,slow=37
I29M  Ogilvie Camp,      51.99 343   P      P      01 15 09.4 +0.1
      baz=139
K27K  Chicken            52.14 340   IAmb   IAmb   01 15 18.8
      comp=Z,14nm,1.1s
K27K  Chicken            52.14 340   P      P      01 15 10.0 -0.4
      baz=134
EGAK  Eagle              52.38 342   P      P      01 15 11.3 -0.9
EGAK  Eagle              52.38 342   P      P      01 15 11.2 -0.9
      baz=135
PB01  IPOC Station P     52.45 136   IAmb   IAmb   01 15 15.5
      comp=Z,22nm,1.2s
DOT   Dot Lake           52.53 339   IAmb   IAmb   01 15 22.2
      comp=Z,10nm,0.5s
PAX   Paxson             52.57 338   P      P      01 15 12.5 -1.2
      baz=130
KDAK  Kodiak Island      52.60 330   LR     LR     01 35 43.9
      comp=Z,431nm,18.3s,baz=151,slow=34
PB07  IPOC Station P     52.67 137   IAmb   IAmb   01 15 17.9
      comp=Z,20nm,1.2s
SCRK  Sand Creek         52.72 340   P      P      01 15 13.5 -1.4
      baz=132
RIDG  Independent Ri     52.85 339   IAmb   IAmb   01 15 23.6
      comp=Z,31nm,1.0s
RIDG  Independent Ri     52.85 339   P      P      01 15 15.1 -0.6
      baz=131
SML   Sawmill            52.92 336   IAmb   IAmb   01 15 28.9
      comp=Z,20nm,1.1s
SML   Sawmill            52.92 336   P      P      01 15 15.5 -0.8
      baz=126
J26L  Joseph Creek       52.94 340   P      P      01 15 15.5 -1.0
      baz=132
PB09  IPOC Station P     53.14 137   P      P      01 15 19.4 +0.8
WAT6  Susitna Watana     53.15 337   P      P      01 15 16.9 -1.2
      baz=127
INK   Inuvik             53.17 347   LR     LR     01 38 00.1
      comp=Z,369nm,19.1s,baz=133,slow=36
INK   Inuvik             53.17 347   IAmb   IAmb   01 15 33.1
      comp=Z,24nm,1.1s
INK   Inuvik             53.17 347   P      P      01 15 16.8 -1.1
      baz=146,SNR=11
K24K  Donnelly Dome      53.21 339   P      P      01 15 17.4 -1.0
      baz=130
J25K  Salcha River,      53.59 340   P      P      01 15 20.2 -1.0
      baz=130
WAT1  Susitna Watana     53.60 337   P      P      01 15 20.3 -1.0
      baz=126
ITTB  Itaituba           53.73 110  eP      P      01 15 22.5 -0.4
LVC   Limon Verde        53.94 137   LR     LR     01 33 31.6
      comp=Z,667nm,20.9s,baz=312,slow=31
LVC   Limon Verde        53.94 137   P      P      01 15 25.2 +0.5
LVC                                  pmax   pmax
      comp=Z,17nm,1.3s
LVC   Limon Verde        53.94 137   P      P      01 15 25.1 +0.5
LVC                                  IAmb   IAmb   01 15 26.6
      comp=Z,17nm,1.2s
LVC   Limon Verde        53.94 137  eP      P      01 15 25.3 +0.7
HDA   Harding Lake       53.99 339   P      P      01 15 24.5 +0.4
      baz=129
MALB  Monte Alegre       54.00 106  eP      P      01 15 25.7 +0.8
CUT   Chulitna           54.01 336   P      P      01 15 25.1 +0.9
      baz=124
VILB  Vilhena            54.18 122  eP      P      01 15 26.1  0.0
IL31                     54.20 339   IAmb   IAmb   01 15 32.7
      comp=Z,16nm,1.1s
ILAR  Eielson Array      54.20 339   P      P      01 15 23.8 -1.8
      comp=Z,6.3nm,1.1s,baz=150,slow=5.2,SNR=14
ILAR                                 LR     LR     01 39 55.3
      comp=Z,356nm,20.1s,baz=134,slow=38
      comp=Z,6.3nm,1.1s
ILAR  Eielson Array      54.20 339   P      P      01 15 24.1 -1.5
ILAR  Eielson Array      54.20 339   P      P      01 15 24.1 -1.5
WRH   Wood River Hil     54.42 339   IAmb   IAmb   01 15 34.5
      comp=Z,22nm,1.4s
COLA  College            54.58 339 i P      P      01 15 28.5 +0.2
COLA                                 pmax   pmax
      comp=Z,9.0nm,1.2s
POKR  Poker Plat Res     54.60 340   P      P      01 15 29.5 +1.0
      baz=128
O18K  Koktuh Hills       54.78 332   IAmb   IAmb   01 15 33.6
      comp=Z,15nm,1.1s
NEA2  Nenana             54.83 339   IAmb   IAmb   01 15 36.7
      comp=Z,28nm,1.2s
NEA2  Nenana             54.83 339   P      P      01 15 28.6 -1.6
      baz=126
M20K  Styx River         54.87 335   IAmb   IAmb   01 15 35.1
      comp=Z,22nm,1.1s
M20K  Styx River         54.87 335   P      P      01 15 29.1 -1.5
      baz=120
KTH   Kantishna Hill     54.90 337   IAmb   IAmb   01 15 37.7
      comp=Z,28nm,1.3s
N19K  Bonanza Creek      54.91 333   P      P      01 15 30.2 -0.7
N19K  Bonanza Creek      54.91 333   P      P      01 15 29.2 -1.7
      baz=118
PPLA  Purkeypile         55.02 336   P      P      01 15 30.5 -1.2
      baz=122
A36M  Sachs Harbour      55.05 353   IAmb   IAmb   01 15 40.8
      comp=Z,17nm,0.9s
A36M  Sachs Harbour      55.05 353   P      P      01 15 29.6 -2.0
      baz=157,SNR=8.8
H24K  Noodor Dome        55.19 340   IAmb   IAmb   01 15 39.9
      comp=Z,14nm,1.1s
H24K  Noodor Dome        55.19 340   P      P      01 15 31.7 -1.1
      baz=128
SIV   San Ignacio        55.22 125   P      P      01 15 03.3  -30
      comp=Z,13nm,1.1s,baz=298,slow=7.3,SNR=27
BPAW  Bear Paw Mtn.      55.23 337   P      P      01 15 31.1 -2.0
      baz=124
CAST  Castle Rocks       55.26 336   P      P      01 15 31.0 -2.3
      baz=122
I23K  Minto, Yukon-K     55.26 339   P      P      01 15 33.8 +0.6
      baz=126
M19K  Big River Lodg     55.39 334   IAmb   IAmb   01 15 39.0
      comp=Z,26nm,1.2s
M19K  Big River Lodg     55.39 334   P      P      01 15 33.1 -1.2
      baz=119
MCPB  Macapa, AP         55.45 103  eP      P      01 15 35.7 +0.3
N18K  Kilae Creek        55.46 332   P      P      01 15 33.7 -1.1
N18K  Kilae Creek        55.46 332   P      P      01 15 33.1 -1.7
      baz=117
L20K  Farewell, AK       55.47 335   P      P      01 15 32.9 -2.0
      baz=120
SVW2  Sparrevohn         55.51 333   IAmb   IAmb   01 15 39.5
      comp=Z,17nm,1.2s
L19K  White Mountain     55.72 334   P      P      01 15 35.1 -1.5
      baz=119
H23K  Yukon River        55.73 340   P      P      01 15 36.6  0.0
      baz=127
K20K  Telida             55.99 336   IAmb   IAmb   01 15 45.4
      comp=Z,26nm,1.1s
K20K  Telida             55.99 336   P      P      01 15 36.7 -1.8
      baz=120
I21K  Tanana             56.19 338   IAmb   IAmb   01 15 44.5
      comp=Z,19nm,1.1s
I21K  Tanana             56.19 338   P      P      01 15 38.6 -1.3
      baz=124
PPT   Papeete            56.22 233   LR     LR     01 32 44.2
      comp=Z,751nm,19.9s,baz=26,slow=29
PPT2  Papeete2           56.23 233  eS      S      01 23 37.7 +6.6
      comp=Z,329nm,27.8s
PPT2                                eLR     LR     01 31 36.8
      comp=Z,2µm,25.8s,baz=45
PDRB  Porto dos Gac      56.32 118  eP      P      01 15 40.5 -1.2
PTLB  Pontes e Lacer     56.43 123  eP      P      01 15 42.0 -0.3
J20K  Nowinta River      56.44 337   P      P      01 15 39.8 -1.9
      baz=121,SNR=18
TTA   Tatalina           56.55 335   P      P      01 15 41.9 -0.7
TTA                                  pmax   pmax
      comp=Z,20nm,1.2s
TTA   Tatalina           56.55 335   P      P      01 15 41.9 -0.7
TTA                                  IAmb   IAmb   01 15 48.9
      comp=Z,20nm,1.2s
TTA   Tatalina           56.55 335   P      P      01 15 40.5 -2.1
      baz=118
CLDB  Colider            56.74 117  eP      P      01 15 43.7 -0.9
H21K  Melozitna Rive     56.74 339   IAmb   IAmb   01 15 50.1
      comp=Z,28nm,1.2s
H21K  Melozitna Rive     56.74 339   P      P      01 15 42.3 -1.6
      baz=123,SNR=5.5
COLD  Coldfoot           56.78 341   IAmb   IAmb   01 15 51.5
      comp=Z,13nm,1.2s
COLD  Coldfoot           56.78 341   P      P      01 15 45.0 +0.8
      baz=127
RES   Resolute Bay       56.80   3   LR     LR     01 39 16.4
      comp=Z,1µm,18.0s,baz=185,slow=35
AC02  Maricunga          56.87 141   P      P      01 15 46.5 +0.6
AC02                                 IAmb   IAmb   01 15 48.7
      comp=Z,22nm,1.5s
H03N2 Juan Fernandez     57.17 154   T      T      02 17 41.7
      baz=331,slow=77,SNR=70
H03N1 Juan Fernandez     57.18 154   T      T      02 17 42.9
      baz=331,slow=77,SNR=123
H03N3 Juan Fernandez     57.19 154   T      T      02 17 38.7
      baz=331,slow=77,SNR=86
TOLK  Toolik Lake Re     57.45 342   P      P      01 15 47.9 -1.0
      baz=128
NBRS  Nobres             58.53 120  eP      P      01 15 57.6 +0.4
CO03  El Pedregal        59.01 145   IAmb   IAmb   01 16 03.5
      comp=Z,19nm,1.0s
SALV  Santo Antonio      59.44 122  eP      P      01 16 03.1 -0.4
TBI   Tubuai             59.72 228  eS      S      01 24 28.0  +12
      comp=Z,262nm,30.2s
TBI                                 eLR     LR     01 33 22.7
      comp=Z,2µm,27.5s,baz=43
PRPB  Parauapebas        59.82 109  eP      P      01 16 06.5 +0.3
SFJD  Kangerlussuaq      59.91  22   LR     LR     01 42 45.2
      comp=Z,1µm,18.9s,baz=241,slow=37
SFJD  Kangerlussuaq      59.91  22   P      P      01 16 06.9 +1.0
SFJD                                 pmax   pmax
      comp=Z,14nm,1.1s
SFJD  Kangerlussuaq      59.91  22   P      P      01 16 06.9 +1.0
SFJD                                 IAmb   IAmb   01 16 11.4
      comp=Z,14nm,1.1s
ZON   Zonda              60.66 144   IAmb   IAmb   01 16 15.4
      comp=Z,20nm,1.2s
PP1B  Ponte de Pedra     61.01 123  eP      P      01 16 14.4 +0.1
SNDB  Serra Nova Dou     61.12 115  eP      P      01 16 15.6 +0.6
MT09  Talagante          61.15 148   IAmb   IAmb   01 16 18.4
      comp=Z,13nm,1.0s
MT03  Universidad Ad     61.18 147   P      P      01 16 16.6 +1.4
DY2G  Dye2               61.27  23 i P      P      01 16 14.6 -1.0
DY2G                                 IAmb   IAmb   01 16 16.7
      comp=Z,9.3nm,0.8s
RDOG  Red Dog Mine       61.39 339   P      P      01 16 17.1 +1.1
RDOG  Red Dog Mine       61.39 339   P      P      01 16 17.1 +1.1
      baz=114
BO04  La Punta           61.52 147   IAmb   IAmb   01 16 26.9
      comp=Z,18nm,1.1s
BO01  Tunca              61.59 148   P      P      01 16 18.0 +0.2
BO01                                 IAmb   IAmb   01 16 21.0
      comp=Z,15nm,0.9s
GO05  Huala              61.67 149   IAmb   IAmb   01 16 21.6
      comp=Z,13nm,1.1s
AQDB  Aquidauana         61.97 126   P      P      01 16 20.7  0.0
AQDB  Aquidauana         61.97 126  eP      P      01 16 20.5 -0.1
EUNU  Eureka             62.49   4   P      P      01 16 23.3  0.0
DVLD  Doverlandia        62.70 120  eP      P      01 16 25.3 -0.4
SMTB  Santa Maria do     62.96 110  eP      P      01 16 28.3 +0.8
PEXB  Peixe              63.77 114  eP      P      01 16 33.8 +0.9
CPUP  Villa Florida      64.25 132   P      P      01 16 35.9 +0.2
      comp=Z,12nm,1.1s,baz=324,slow=6.8,SNR=14
CPUP                                 LR     LR     01 44 09.1
      comp=Z,517nm,18.2s,baz=325,slow=36
      comp=Z,12nm,1.1s
CPUP  Villa Florida      64.25 132  eP      P      01 16 35.9 +0.2
ANGG  Ammassalik, Gr     64.38  25   P      P      01 16 35.8 -0.2
ANGG                                 IAmb   IAmb   01 16 44.1
      comp=Z,12nm,0.8s
ANGG  Ammassalik, Gr     64.38  25 i P      P      01 16 34.9 -1.0
ANGG                                 IAmb   IAmb   01 16 42.8
      comp=Z,11nm,0.7s
LC01  Cunco              64.84 152   IAmb   IAmb   01 16 41.9
      comp=Z,11nm,1.0s
MCR1  Marechal Candi     65.51 129  eP      P      01 16 44.5 +0.5
TRCB  Terra Rica         65.62 126  eP      P      01 16 44.7 -0.1
BDFB  Brasilia           65.66 117   P      P      01 16 46.0 +0.7
      comp=Z,4.8nm,0.7s,baz=297,slow=7.6,SNR=7.8
BDFB                                 LR     LR     01 44 12.2
      comp=Z,407nm,18.2s,baz=315,slow=35
      comp=Z,4.8nm,0.7s
BDFB  Brasilia           65.66 117   P      P      01 16 45.5 +0.2
BDFB                                 pmax   pmax
      comp=Z,9.0nm,0.9s
BDFB  Brasilia           65.66 117   P      P      01 16 45.5 +0.2
BDFB                                 IAmb   IAmb   01 16 46.2
      comp=Z,9.1nm,0.9s
ITRB  Iturama            65.75 122  eP      P      01 16 46.2 +0.5
SUMG  Summit             65.88  18   P      P      01 16 45.7 -0.5
SUMG                                 pmax   pmax
      comp=Z,37nm,1.3s
SUMG  Summit             65.88  18   P      P      01 16 45.7 -0.5
SUMG  Summit             65.88  18 i P      P      01 16 44.0 -2.2
SUMG                                 IAmb   IAmb   01 16 47.2
      comp=Z,6.5nm,1.0s
PCMB  Pacaembu           66.04 125  eP      P      01 16 47.7 +0.2
RAR   Rarotonga          66.20 236   LR     LR     01 37 05.8
      comp=Z,636nm,21.6s,baz=73,slow=28
LL04  Puerto Octay       66.25 153   IAmb   IAmb   01 16 58.8
      comp=Z,15nm,1.3s
NBPS  Pedro II - PI      66.78 103  eP      P      01 16 53.5 +1.0
ITQB  Itaqui             66.82 135  eP      P      01 16 52.9 +0.7
PLCA  Paso Flores        66.92 152   P      P      01 16 53.6 +0.8
      comp=Z,11nm,1.0s,baz=327,slow=6.9,SNR=15
PLCA                                 LR     LR     01 40 06.9
      comp=Z,530nm,18.9s,baz=331,slow=30
      comp=Z,11nm,1.0s
PLCA  Paso Flores        66.92 152   IAmb   IAmb   01 16 56.0
      comp=Z,10nm,0.9s
PLCA  Paso Flores        66.92 152  eP      P      01 16 53.1 +0.3
FRBT  Francisco Belt     67.10 129  eP      P      01 16 54.0 -0.2
PTGB  Pitanga            67.13 128  eP      P      01 16 54.6 +0.1
BB19B Bebedouro          67.92 123  eP      P      01 17 00.2 +0.7
LL02  Futaleuf           68.37 154   P      P      01 17 01.4 -0.4
LL02                                 IAmb   IAmb   01 17 05.5
      comp=Z,13nm,0.9s
ITAB  Concordia          68.51 130  eP      P      01 17 03.2 +0.2
JANB  Januaria           68.56 115  eP      P      01 17 03.4 -0.2
NBPB  Pedra_Branca-C     68.92 104  eP      P      01 17 06.6 +0.7
AY01  Puyuhuapi          69.07 156   IAmb   IAmb   01 17 16.1
      comp=Z,15nm,1.2s
TRQA  Tornquist          69.17 145   P      P      01 17 07.1 +0.2
TRQA                                 pmax   pmax
      comp=Z,11nm,1.2s
TRQA  Tornquist          69.17 145   P      P      01 17 07.1 +0.2
TRQA                                 IAmb   IAmb   01 17 10.1
      comp=Z,11nm,1.2s
RCLB  Rio Claro- Sao     69.41 123  eP      P      01 17 09.6 +0.8
CPSB  Cacapava Do Su     69.44 133  eP      P      01 17 09.0 +0.2
NBCL  Cascavel-CE        69.64 102  eP      P      01 17 11.7 +1.4
SPB   Sao Paulo          70.09 124  eP      P      01 17 13.5 +0.7
SHEM  Shemya Is, Ala     70.09 320   LR     LR     01 40 10.5
      comp=Z,158nm,21.9s,baz=140,slow=29
PLTB  Pedras Altas       70.15 135  eP      P      01 17 13.4 +0.3
VAO   Valinhos           70.15 124  eP      P      01 17 13.7 +0.3
COYC  Coyhaique          70.25 156   IAmb   IAmb   01 17 24.5
      comp=Z,19nm,1.2s
NBPN  Ponto Novo - B     70.40 109  eP      P      01 17 15.9 +0.9
PET01 Itanhaem-SP        70.57 125  eP      P      01 17 16.5 +0.7
DIAM  Diamantina, MG     70.57 118  eP      P      01 17 16.7 +0.6
BSCB  Bom Sucesso        70.93 121  eP      P      01 17 18.9 +0.7
BORG  Borgarnes          71.14  27   LR     LR     01 48 38.0
      comp=Z,847nm,19.5s,baz=284,slow=36
DAG   Danmarks Havn      71.65  14 i P      P      01 17 18.7 -2.8
DAG                                  IAmb   IAmb   01 17 30.0
      comp=Z,3.3nm,0.9s
NOR   Nord               71.92   9 i P      P      01 17 21.3 -1.8
NOR                                  IAmb   IAmb   01 17 33.8
      comp=Z,2.6nm,1.1s
GDU01 Guandu, BA         72.12 111  eP      P      01 17 25.1 -0.3
RCBR  Riachuelo          72.44 102   LR     LR     01 49 55.0
      comp=Z,553nm,21.1s,baz=84,slow=36
NBLA  Lagarto - SE       72.63 108  eP      P      01 17 28.5  0.0
BILL  Bilibino           72.71 337  eP      P      01 17 28.1 +0.1
BILL                                e              01 20 08.8
BILL                                eSS     SS     01 31 32.3 +0.2
BILL                                 pmax   pmax
      comp=Z,8.0nm,1.2s
BILL  Bilibino           72.71 337   P      P      01 17 28.8 +0.8
BILL                                 IAmb   IAmb   01 17 32.8
      comp=Z,23nm,1.5s
AFI   Afiamalu           72.90 249   LR     LR     01 43 16.1
      comp=Z,247nm,18.4s,baz=54,slow=31
JMIC  Jan Mayen          75.14  20   LR     LR     01 51 29.0
      comp=Z,2µm,18.1s,baz=259,slow=36
SPITS Spitsbergen Ar     78.42  10   LR     LR     01 53 18.1
      comp=Z,907nm,19.9s,baz=360,slow=36
USHA  Ushuaia            79.22 159   LR     LR     01 46 55.6
      comp=Z,414nm,18.0s,baz=223,slow=31
SEY   Seymchan           79.45 333 i P      P      01 18 07.0 +0.5
SEY                                  pmax   pmax
      comp=Z,14nm,1.5s
PETK  Petropavlovsk-     79.77 323   LR     LR     01 47 17.3
      comp=Z,113nm,21.6s,baz=72,slow=31
MA2   Magadan            81.35 330 i P      P      01 18 17.1 +0.3
MA2                                  pmax   pmax
      comp=Z,14nm,1.1s
MA2   Magadan            81.35 330   P      P      01 18 17.1 +0.3
ESK   Eskdalemuir        81.90  34   P      P      01 18 20.9 +1.1
ESK                                  pmax   pmax
      comp=Z,47nm,1.5s
ESK   Eskdalemuir        81.90  34   P      P      01 18 20.9 +1.1
EKA   Eskdalemuir Ar     81.92  34   LR     LR     01 54 12.9
      comp=Z,535nm,19.5s,baz=322,slow=35
PGAV  Gavieira, Arco     83.10  48  eLR     LR     01 45 40.1
      comp=Z,642nm,18.0s
TIXI  Tiksi              83.23 345   LR     LR     01 58 18.9
      comp=Z,293nm,18.7s,baz=359,slow=38
TIXI  Tiksi              83.23 345 i P      P      01 18 27.0 +0.6
TIXI                                 pmax   pmax
      comp=Z,20nm,1.2s
TIXI  Tiksi              83.23 345   P      P      01 18 26.1 -0.3
MSVF  Nonsavu            83.40 249   LR     LR     01 46 48.9
      comp=Z,258nm,19.4s,baz=15,slow=30
PMTG  Montargil          84.04  51  eP      P      01 18 33.4 +2.2
      comp=Z,36nm,1.7s
MTE   Manteigas          84.11  50  eLR     LR     01 45 59.3
      comp=Z,393nm,18.0s
PNCL  Nicolau / Gran     84.11  52  eP      P      01 18 33.8 +2.2
PBRG  Braganca           84.23  48  eP      P      01 18 34.1 +1.9
MVO   Moncorvo           84.23  49  eLR     LR     01 46 04.8
      comp=Z,608nm,18.0s
EVO   Evora              84.37  51  eP      P      01 18 35.3 +2.4
      comp=Z,37nm,1.4s
PMRV  Marv??o            84.54  50  eP      P      01 18 34.4 +0.6
      comp=Z,35nm,1.6s
PMRV  Marv??o            84.54  50  eLR     LR     01 44 42.6
      comp=Z,421nm,20.0s
PESTR Estremoz           84.57  51  eP      P      01 18 34.7 +0.8
      comp=Z,28nm,1.6s
PESTR Estremoz           84.57  51   P      P      01 18 34.8 +0.9
PESTR                                IAmb   IAmb   01 18 42.6
      comp=Z,13nm,1.4s
PVAQ  Vaqueiros          84.95  52  eLR     LR     01 45 54.3
      comp=Z,359nm,18.0s
ARCES ARCESS Array B     85.87  15   LR     LR     01 57 32.3
      comp=Z,1µm,20.9s,baz=309,slow=36
NB2   NORSAR Subarra     86.29  26   P      P      01 18 40.8 -1.3
      comp=Z,17nm,2.0s,baz=301,slow=5.1
NOA   NORSAR Array B     86.29  26   P      P      01 18 41.2 -0.9
      comp=Z,1.1nm,0.9s,baz=339,slow=2.3,SNR=3.1
NOA                                  LR     LR     01 57 35.0
      comp=Z,480nm,19.8s,baz=290,slow=36
      comp=Z,1.1nm,0.9s
PAB   San Pablo          86.71  50   P      P      01 18 45.4 +0.7
PAB                                  pmax   pmax
      comp=Z,18nm,1.4s
PAB   San Pablo          86.71  50   P      P      01 18 45.4 +0.7
PAB                                  IAmb   IAmb   01 18 48.5
      comp=Z,18nm,1.4s
ESDC  Sonseca Array      86.94  49   P      P      01 18 45.8  0.0
      comp=Z,2.1nm,1.2s,baz=307,slow=5.8,SNR=5.8
ESDC                                 LR     LR     01 57 37.7
      comp=Z,290nm,19.8s,baz=293,slow=36
      comp=Z,2.1nm,1.2s
ESDC  Sonseca Array      86.94  49   P      P      01 18 46.3 +0.5
HFS   Hagfors            87.81  26   LR     LR     01 58 22.4
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	comp=Z,627nm,18.9s,baz=288,slow=36						
PMSA	**Palmer Station**	**88.51**	**164**	LR	LR	01 49 33.0	
	comp=Z,319nm,20.6s,baz=313,slow=30						
MDT	**Midelt**	**88.91**	**56**	LR	LR	01 56 56.0	
	comp=Z,233nm,19.6s,baz=314,slow=34						
APA	**Apatity**	**89.28**	**15**	⇓*i*P	P	01 18 49.3	-6.9
APA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS	**Yuzh-Sakhalins**	**91.00**	**321**	*i* P	**P**	**01 19 04.1**	**-0.6**
YSS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FINES	**FINESS Array B**	**91.70**	**21**	LR	LR	02 00 42.6	
	comp=Z,957nm,19.7s,baz=320,slow=36						
URZ	**Urewera**	**91.76**	**230**	LR	LR	01 50 38.7	
	comp=Z,475nm,21.8s,baz=31,slow=29						
NRIK	**Noril'sk**	**92.23**	**355**	P	**P**	**01 19 09.1**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=35,slow=3.9,SNR=2.7						
NRIK				LR	LR	02 03 51.4	
	comp=Z,698nm,18.1s,baz=20,slow=38						
	comp=Z,1.0nm,0.4s						
NRIK	**Noril'sk**	**92.23**	**355**	*i* P	**P**	**01 19 10.5**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**92.23**	**355**	P	**P**	**01 19 10.5**	**+0.6**
NRIK				IAmb	IAmb	01 19 14.7	
	comp=Z,9.8nm,1.3s						
CLL	**Collm**	**92.36**	**34**	*e*PP	PP	01 22 53.0	+2.0
CLL				LmV		02 01 00.0	
	comp=Z,500nm,20.2s						
ASAJ	**Asahikawa**	**92.44**	**318**	LR	LR	01 56 07.6	
	comp=Z,100nm,19.0s,baz=30,slow=33						
DAVOX	**Davos/Dischmat**	**93.00**	**39**	LR	LR	02 01 48.3	
	comp=Z,2µm,18.2s,baz=304,slow=36						
BRG	**Berggiesshubel**	**93.09**	**34**	Pg	**P**	**01 19 13.6**	**-0.7**
BRG	**Berggiesshubel**	**93.09**	**34**	P	**P**	**01 19 13.6**	**-0.7**
WATA	**Walderalm**	**93.71**	**37**	*e*P	**P**	**01 19 17.9**	**+0.5**
	comp=Z,7.0nm,1.5s						
KHC	**Kasperske Hory**	**93.87**	**35**	*i* P	**P**	**01 19 17.4**	**-0.5**
KHC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KLNR	**Kaliningrad**	**93.94**	**28**	*i* P	**P**	**01 19 18.5**	**+0.4**
KLNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSU	**Vasula**	**94.04**	**23**	*i* P	**P**	**01 19 17.4**	**-1.0**
VSU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GERES	**GERESS Array B**	**94.09**	**35**	P	**P**	**01 19 19.5**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=4.6,slow=6.7,SNR=5.4						
GERES				LR	LR	02 01 14.4	
	comp=Z,734nm,21.5s,baz=294,slow=35						
	comp=Z,0.4nm,0.8s						
GERES	**GERESS Array B**	**94.09**	**35**	P	**P**	**01 19 19.4**	**+0.3**
ABTA	**Abfaltersbach**	**94.56**	**38**	*e*P	**P**	**01 19 21.8**	**+0.6**
	comp=Z,4.1nm,1.1s						
BIOA	**Bad Ischl, Aus**	**94.69**	**36**	*i* P	**P**	**01 19 22.7**	**+0.9**
	comp=Z,5.6nm,0.9s						
KBA	**Koelnbreinsper**	**94.86**	**37**	*i* P	**P**	**01 19 23.5**	**+0.7**
	comp=Z,5.1nm,1.2s						
MOA	**Molln**	**94.96**	**36**	*e*P	**P**	**01 19 23.8**	**+0.9**
	comp=Z,8.2nm,1.2s						
DZM	**Mont Dzumac**	**95.13**	**249**	*e*LR	LR	01 50 18.9	
	comp=Z,494nm,22.5s						
DZM	**Mont Dzumac**	**95.13**	**249**	LR	LR	01 51 59.6	
	comp=Z,272nm,21.8s,baz=60,slow=29						
VRAC	**Vranov**	**95.39**	**34**	LR	LR	02 04 19.7	
	comp=Z,482nm,18.3s,baz=306,slow=37						
CONA	**Conrad Observa**	**95.80**	**35**	*e*P	**P**	**01 19 27.0**	**+0.1**
	comp=Z,6.6nm,1.6s						
OBKA	**Obir**	**95.87**	**37**	*i* P	**P**	**01 19 27.8**	**+0.6**
	comp=Z,7.0nm,1.1s						
KLR	**Kul'dur**	**96.02**	**326**	LR	LR	02 00 56.9	
	comp=Z,80nm,19.7s,baz=27,slow=34						
KLR	**Kul'dur**	**96.02**	**326**	*i* P	**P**	**01 19 27.8**	**+0.1**
KLR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SOKA	**Soboth**	**96.05**	**37**	*i* P	**P**	**01 19 28.3**	**+0.3**
	comp=Z,6.8nm,1.3s						
RONA	**Rosalia, Austr**	**96.17**	**35**	*e*P	**P**	**01 19 29.4**	**+0.9**
	comp=Z,6.4nm,1.3s						
KLMR	**Klimovskoe**	**96.30**	**16**	*e*P	**P**	**01 19 28.3**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLMR	**Klimovskoe**	**96.30**	**16**	*e*P	**P**	**01 19 28.3**	**-0.4**
KLMR				AMP		01 19 34.0	
	comp=Z,9.0nm,1.4s						
NACGM	**Naroch**	**96.58**	**26**	⇓*e*P	**P**	**01 19 33.4**	**+3.3**
	baz=315						
MNK	**Minsk**	**97.31**	**25**	*i* P	**P**	**01 19 30.0**	**-3.4**
MNK				*i*		01 23 26.5	
MNK				*i* S	**SKSac**	**01 30 07.2**	**-3.6**
MNK				MLR	MLR		
	comp=E,43nm,16.0s						
MNK				MLR	MLR		
	comp=Z,410nm,16.0s						
MNK				MLR	MLR		
	comp=N,200nm,15.0s						
MNK	**Minsk**	**97.31**	**25**	*i* P	**P**	**01 19 30.1**	**-3.4**
MNK				*i* P	**P**	**01 19 30.1**	**-3.4**
MNK				*i* P	**P**	**01 19 30.1**	**-3.4**
	baz=136						
MNK				*i* PP	**PP**	**01 23 26.6**	**-2.7**
MNK				*i* PPP	PPP	01 25 30.6	
MNK				*i* S	**SKSac**	**01 30 07.2**	**-3.6**
MNK				*i* SS	SS	01 37 14.1	-20
MNK				*i* SSS	SSS	01 40 53.8	
MNK				*i* LQ	LQ	01 55 28.6	
MNK				*i* LR	LR	01 59 12.7	
MNK				*i* LRM	MLR	02 04 04.6	
	comp=E,43nm,15.7s						
MNK				*i* LRM	MLR	02 04 04.6	
	comp=N,200nm,14.7s						
MNK				*i* LRM	MLR	02 04 04.6	
	comp=Z,410nm,15.6s						
DBIC	**Dimbokro**	**97.76**	**80**	LR	LR	01 58 58.2	
	comp=Z,200nm,21.9s,baz=304,slow=32						
RPZ	**Rata Peaks**	**97.91**	**227**	LR	LR	01 56 15.2	
	comp=Z,263nm,18.8s,baz=38,slow=31						
KEST	**Kesra**	**98.16**	**48**	LR	LR	02 04 08.4	
	comp=Z,133nm,19.1s,baz=278,slow=36						
MJAR	**Matsushiro Arr**	**99.08**	**313**	LR	LR	01 55 08.0	
	comp=Z,239nm,21.4s,baz=79,slow=30						
JHJ	**Hachijo jima 2**	**99.65**	**309**	LR	LR	01 58 51.1	
	comp=Z,518nm,19.3s,baz=82,slow=32						
OBN	**Obninsk**	**100.11**	**21**	⇓*e*P	**Pdif**	**01 19 42.7**	**-3.2**
OBN				*e*PS	**PS**	**01 32 53.7**	**+3.7**
OBN				*e*SS	SS	01 38 06.9	-6.1
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,660nm,17.0s						
AKASG	**Malin Array Be**	**100.62**	**27**	P	**Pdif**	**01 19 46.4**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=292,slow=4.9,SNR=4.5						
AKASG	**Malin Array Be**	**100.62**	**27**	*i* P	**Pdif**	**01 19 47.2**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	**Kislovodsk**	**111.56**	**24**	*i* PKIKP	**PKiKP**	**01 24 34.5**	**-0.7**
KIV				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,303nm,21.0s						
HHC	**Hu-ho-hao-te**	**112.02**	**331**	*e*PKP	**PKiKP**	**01 24 30.8**	**-5.4**
HHC				LR	LR		
	comp=Z,310nm,14.6s						
HHC				LR	LR		
	comp=Z,570nm,16.5s						
NJ2	**Nanjing**	**114.55**	**319**	*e*PKP	**PKiKP**	**01 24 39.8**	**-1.3**
WMQ	**Urumqi**	**117.16**	**349**	*e*PKP	**PKPdf**	**01 24 46.3**	**+0.4**
WMQ				LR	LR		
	comp=Z,390nm,18.9s						
WMQ				LR	LR		
	comp=Z,400nm,20.5s						
XAN	**Xi'an**	**118.68**	**328**	Pdif	**Pdif**	**01 21 08.9**	**-0.2**
XAN				LR	LR		
	comp=Z,200nm,19.9s						
XAN				LR	LR		
	comp=Z,530nm,21.6s						
GOMU	**GeErMu**	**122.66**	**341**	PKP	**PKPdf**	**01 24 57.2**	**+0.1**
GOMU				AMB	AMB		
	comp=Z,82nm,7.2s						
GOMU				LR	LR		
	comp=Z,290nm,19.4s						
GOMU				LR	LR		
	comp=Z,130nm,19.1s						
GOMU				LR	LR		
	comp=Z,180nm,19.6s						
CD2	**Chengdu**	**123.76**	**330**	PKP	**PKPdf**	**01 24 57.0**	**-1.9**
WRA	**Warramunga Arr**	**123.88**	**258**	PKP	**PKPdf**	**01 24 56.5**	**-2.8**
	comp=Z,1.5nm,0.9s,baz=72,slow=1.7,SNR=4.4						
WRA	**Warramunga Arr**	**123.88**	**258**	PKIKP	**PKPdf**	**01 24 58.9**	**-0.4**
WRA	**Warramunga Arr**	**123.88**	**258**		**PKPdf**	**01 24 58.9**	**-0.4**
ASAR	**Alice Springs**	**124.78**	**253**	PKP	**PKPdf**	**01 24 59.0**	**-2.0**
	comp=Z,1.3nm,0.9s,baz=129,slow=2.1,SNR=7.6						
ASAR	**Alice Springs**	**124.78**	**253**	PKIKP	**PKPdf**	**01 25 00.9**	**-0.1**
ASAR	**Alice Springs**	**124.78**	**253**	PKPdf	**PKPdf**	**01 25 00.8**	**-0.1**
PZH	**PanZhiHua**	**128.40**	**329**	PKP	**PKPdf**	**01 25 07.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**136.49**	**326**	PKIKP	**PKPdf**	**01 25 22.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**136.49**	**326**	PKPdf	**PKPdf**	**01 25 22.4**	**-0.9**
MYKOM	**Kota Tinggi**	**145.12**	**302**	PKPbc	**PKPbc**	**01 25 37.4**	**-1.0**
KULM	**Kulim**	**145.38**	**310**	PKPbc	**PKPbc**	**01 25 37.4**	**-1.8**
IPM	**Ipoh**	**145.64**	**308**		**PKPdf**	**01 25 37.5**	**-2.3**
PSI	**Prapat**	**148.32**	**309**	PKPbc	**PKPbc**	**01 25 47.7**	**-0.2**
	comp=Z,12nm,1.0s,baz=223,slow=4.3,SNR=10						
RPSI	**Rantau Prapat**	**148.39**	**309**		**PKPbc**	**01 25 47.7**	**-0.2**

*GUC **07** 01:09:43.6±0.8, 20°.17S×69°.02W, h107^{km}±3^{km}, ML3.5*
*IDC **07** 01:09:44.6±1.6, 20°.30S×68°.55W, h122^{km}±19^{km}, mb3.2/2, mbtmp3.6/5, Error ellipse: s-maj=37.5km s-min=18.0km az=94.0*
ISC 07 01:09:43.3±1.0**, 20°.20S**±0°.03×**69°.14W**±0°.07**, h111**^{km}±7^{km}**, n24, σ0^{s}.80**/38**, 9C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.06**	**344**	⇑*i*P	**Pn**	**01 09 58.6**	**-0.5**
PB08				*i* S	**Sn**	**01 10 10.1**	**-0.8**
PB08				IAML		01 10 11.8	
	comp=E,7µm,0.1s						
PB11	**IPOC Station P**	**0.66**	**312**	⇑*i*P	**Pn**	**01 10 01.5**	**-0.1**
PB11				*i* S	**Sn**	**01 10 15.7**	**+0.4**
PB11				IAML		01 10 18.1	
	comp=E,3µm,0.2s						
HMBC	**Humberstone**	**0.71**	**264**	⇑*i*P	**Pn**	**01 10 02.0**	**0.0**
HMBC				*i* S	**Sn**	**01 10 16.6**	**+0.5**
HMBC				IAML		01 10 17.6	
	comp=E,3µm,0.3s						
PB01	**IPOC Station P**	**0.90**	**201**	⇓*i*P	**Pn**	**01 10 03.9**	**+0.2**
PB01				*i* S	**Sn**	**01 10 19.7**	**+0.6**
PB01				IAML		01 10 21.1	
	comp=N,2µm,0.2s						
TA02	**Huaiquique**	**0.94**	**266**	*e*P	**Pn**	**01 10 04.4**	**+0.5**
TA02				*i* S	**Sn**	**01 10 20.4**	**+0.8**
TA01	**Diego Aracena**	**1.05**	**250**	⇑*i*P	**Pn**	**01 10 05.2**	**+0.2**
TA01				*i* S	**Sn**	**01 10 21.7**	**+0.3**
TA01				IAML		01 10 27.8	
	comp=N,641nm,0.2s						
PATCX	**Punta Patache**	**1.14**	**237**	⇑*i*P	**Pn**	**01 10 06.5**	**+0.4**
PATCX				*i* S	**Sn**	**01 10 24.3**	**+0.9**
PATCX				IAML		01 10 25.3	
	comp=E,1µm,0.3s						
PB02	**IPOC Station P**	**1.32**	**212**	⇓*i*P	**Pn**	**01 10 08.8**	**+0.6**
PB02				*i* S	**Sn**	**01 10 28.2**	**+1.1**
PB02				IAML		01 10 30.3	
	comp=E,1µm,0.5s						
PB09	**IPOC Station P**	**1.59**	**184**	⇓*i*P	**Pn**	**01 10 12.0**	**+0.5**
PB09				*i* S	**Sn**	**01 10 33.8**	**+0.9**
PB09				IAML		01 10 37.7	
	comp=E,497nm,0.3s						
PB07	**IPOC Station P**	**1.67**	**205**	⇑*i*P	**Pn**	**01 10 12.8**	**+0.3**
PB07				*i* S	**Sn**	**01 10 35.2**	**+0.5**
PB07				IAML		01 10 42.9	
	comp=E,402nm,0.6s						
PB16	**IPOC Station P**	**1.89**	**349**	⇑*i*P	**Pn**	**01 10 16.1**	**+0.6**
PB16				*i* S	**Sn**	**01 10 40.9**	**+0.9**
PB16				IAML		01 10 47.8	
	comp=N,135nm,0.2s						
PB12	**IPOC Station P**	**1.94**	**324**	⇑*i*P	**Pn**	**01 10 15.3**	**-0.4**
PB12				*i* S	**Sn**	**01 10 40.6**	**+0.3**
PB12				IAML		01 10 42.0	
	comp=E,483nm,0.3s						
AP01	**Chacalluta**	**2.15**	**328**	⇑*i*P	**Pn**	**01 10 18.0**	**-0.2**
AP01				IAML		01 10 51.5	
	comp=N,604nm,0.6s						
PB04	**IPOC Station P**	**2.32**	**204**	*e*P	**Pn**	**01 10 21.2**	**+0.5**
PB04				IAML		01 10 57.2	
	comp=N,195nm,0.2s						
LVC	**Limon Verde**	**2.41**	**175**	P	**Pn**	**01 10 23.0**	**+1.1**
	comp=N,16nm,0.3s,baz=25,slow=11,SNR=49						
LVC				S	**Sn**	**01 10 52.1**	**+0.7**
	comp=N,106nm,0.3s,baz=108,slow=21,SNR=34						
LVC	**Limon Verde**	**2.41**	**175**	*e*P	**Pn**	**01 10 22.6**	**+0.7**
LVC				*i* S	**Sn**	**01 10 52.3**	**+0.8**
PB06	**IPOC Station P**	**2.53**	**189**	⇓*i*P	**Pn**	**01 10 23.1**	**-0.1**
PB06				*i* S	**Sn**	**01 10 52.9**	**-1.1**
PB06				IAML		01 10 54.2	
	comp=E,224nm,0.2s						
PB15	**IPOC Station P**	**3.01**	**186**	*e*P	**Pn**	**01 10 29.9**	**+0.3**
PB15				*i* S	**Sn**	**01 11 04.9**	**-0.5**
LPAZ	**La Paz**	**4.01**	**14**	P	**Pn**	**01 10 45.1**	**+1.7**
	comp=E,2.4nm,0.3s,baz=194,slow=5.2,SNR=24						
LPAZ	**La Paz**	**4.01**	**14**	*e*P	**Pn**	**01 10 44.5**	**+1.2**
SIV	**San Ignacio**	**8.73**	**63**	P	Pn	01 11 12.9	-34
	comp=E,1.5nm,0.4s,baz=264,slow=12,SNR=7.6						
CPUP	**Villa Florida**	**12.44**	**122**	P	Pn	01 12 29.8	-6.8
	comp=E,2.1nm,0.5s,baz=298,slow=12,SNR=6.8						
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	**P**	**01 21 23.1**	**-2.0**
	comp=E,0.2nm,0.3s,baz=254,slow=5.2,SNR=10						
	comp=E,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**89.90**	**341**	P	**P**	**01 22 29.9**	**+0.6**
	comp=E,0.2nm,0.6s,baz=130,slow=4.7,SNR=5.9						
	comp=E,0.2nm,0.6s						

PRU 07 01:18:46.0±0.0**, 51°.52N**×**16°.24E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.94**	**187**	*e*PG	Pg	01 19 03.1	-0.9
CHVC				*e*SG	Sg	01 19 15.4	-0.8
OSTC	**Ostas**	**0.96**	**181**	*e*PG	Pg	01 19 03.6	-0.9
OSTC				*e*SG	Sg	01 19 17.3	+0.4
UPC	**Upice**	**1.02**	**188**	*e*PG	Pg	01 19 04.3	-1.3
UPC				*e*SG	Sg	01 19 19.1	+0.2
DPC	**Dobruska-Polom**	**1.17**	**177**	*e*PG	Pg	01 19 06.7	-1.7
DPC				*e*SG	Sg	01 19 22.3	-1.3
PVCC	**Panska Ves**	**1.45**	**227**	*e*P	Pg	01 19 11.8	-1.9
PVCC	**Panska Ves**	**1.45**	**227**	*e*PG	Pn	01 19 11.8	-1.6
PVCC				*e*SG	Sg	01 19 31.8	-0.7
	comp=Z,3.6nm,0.5s						
KRLC	**Kraliky**	**1.49**	**166**	*e*PG	Pn	01 19 12.8	-1.2
KRLC				*e*SG	Sg	01 19 32.7	-1.0
BRG	**Berggiesshubel**	**1.58**	**247**	Sg	Sn	01 19 34.5	-2.0
BRG	**Berggiesshubel**	**1.58**	**247**	Amp		01 19 35.0	
	comp=Z,3.0nm,0.3s						

KRSC 07 01:31:16.6±3.1**, 49°.63N**×**157°.18E, h41**^{km}±28^{km}**, ML3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.26**	**327**	S	Sn	01 31 50.9	-2.4
KDTR	**Khodutka, Kamc**	**2.25**	**14**	P	Pn	01 31 54.8	+3.5
KDTR				S	Sn	01 32 22.9	+5.1
ASAK	**Asacha**	**2.79**	**9**	P	Pn	01 32 02.1	+3.3
MTVR	**Mutnovka**	**2.92**	**12**	P	Pn	01 32 04.3	+3.6
MTVR				S	Sn	01 32 39.5	+4.9
RUS	**Russkaya**	**2.93**	**16**	P	Pn	01 32 03.5	+3.0
RUS				S	Sn	01 32 38.5	+4.1
UGLR	**Uglovaya**	**3.73**	**15**	P	Pn	01 32 16.1	+4.5
KOK	**Koryaka**	**3.78**	**13**	P	Pn	01 32 17.2	+4.9
SDLR	**Sedlovina**	**3.80**	**16**	P	Pn	01 32 16.6	+3.9
KRX	**Arik**	**3.84**	**13**	P	Pn	01 32 17.7	+4.4
MKZ	**Mys Kozlova**	**5.67**	**28**	P	Pn	01 32 41.9	+3.7

*MAN **07** 01:35:19.4, 9°.34N×126°.29E, h1^{km}, mb4.2, ML3.0, MS2.7, Hypocentre not reviewed by the ISC*
ISC 07 01:35:23.7±1.7**, 9°.56N**±0°.06×**126°.23E**±0°.08**, h3**^{km}±15^{km}**, n9, σ1^{s}.41**/14**, 4C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.24**	**336**	⇓*e*P	**Pg**	**01 35 28.2**	**-0.2**
GLSP				*e*S	**Sg**	**01 35 32.5**	**+1.0**
SCPH	**Surigao**	**0.76**	**287**	⇑*e*P	**Pg**	**01 35 37.2**	**-1.1**
SCPH				*i* S	**Sg**	**01 35 48.8**	**+0.7**
BUTP	**Butuan**	**0.84**	**226**	⇓*e*P	**Pb**	**01 35 41.2**	**+0.3**
BUTP				*e*S	**Sn**	**01 35 57.5**	**+2.3**
BIPH	**Bislig**	**1.37**	**174**	⇑*i*P	**Pn**	**01 35 48.0**	**-1.8**
BIPH				*i* S	**Sb**	**01 36 08.8**	**+0.7**
MSLP	**Maasin**	**1.46**	**293**	⇑*e*P	**Pn**	**01 35 49.2**	**-1.8**
BUKP	**Musuan**	**2.03**	**215**	⇓*e*P	**Pb**	**01 36 02.6**	**+1.4**
TBP	**Tagbilaran**	**2.33**	**273**	*e*P	**Pn**	**01 36 01.4**	**-1.6**
TBP				*i* S	**Sn**	**01 36 31.8**	**-0.5**
KCP	**Kidapawan**	**2.77**	**204**	⇓*e*P	Pn	01 36 03.7	-5.5
KCP				*i* S	**Sb**	**01 36 48.2**	**-0.2**
RCP	**Roxas**	**3.96**	**300**	⇑*e*P	**Pn**	**01 36 25.7**	**+0.4**

*IDC **07** 02:31:02.2±1.7, 33°.18N×131°.12E, h0^{km}, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=32.8km s-min=9.8km az=172.0*
*JMA **07** 02:31:02.1±0.0, 33°.0N±0°.1×131°.1E±0°.1, h9^{km}, MV3.5/20, NE KUMAMOTO PREF*
JMA Felt III J1 at NE KUMAMOTO PREF .
*NIED **07** 02:31:02.1, 32°.99N×131°.07E, h9^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.18; M$_{\theta\theta}$2.11; M$_{\phi\phi}$-2.29; M$_{r\theta}$0.28; M$_{\theta\phi}$0.77; M$_{\phi r}$1.26; Fault plane solution: M$_0$2.63000×10^{14} NP1: ϕ_s123.00000°, δ64.00000°, λ-5.00000°. NP2:ϕ_s216.00000°, δ85.00000°, λ-154.00000°.*
ISC 07 02:31:02.8±1.0**, 32°.95N**±0°.05×**131°.07E**±0°.04**, h12**^{km}**, n8, σ1^{s}.95**/11**, 3D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.23**	**317**	Pg	**Pg**	**02 31 06.2**	**-1.6**
	867nm,0.3s,baz=104,slow=6.9,SNR=1610						
JNU				Lg	Lg	02 31 09.1	
	2µm,0.3s,baz=217,slow=20,SNR=422						
JNU	**Nakatsue**	**0.23**	**317**	*i* P	**Pg**	**02 31 06.6**	**-1.1**
JNU				S	**Sg**	**02 31 09.8**	**-1.3**
JTA	**Tamana**	**0.45**	**271**	⇓*i*P	**Pg**	**02 31 11.0**	**-0.7**
JIU3	**Izumi3**	**0.46**	**208**	*i* P	**Pb**	**02 31 11.5**	**-1.3**
JIU3				S	**Sb**	**02 31 18.6**	**-1.0**
JUS	**Usuki**	**0.59**	**79**	⇓*i*P	**Pg**	**02 31 12.9**	**-1.4**
JUS				⇓S	**Sg**	**02 31 21.0**	**-1.0**
KSRS	**Korea Array**	**5.17**	**331**	Pg	**Pb**	**02 32 33.7**	**+0.5**
	0.5nm,0.3s,baz=142,slow=16,SNR=3.5						
WRA	**Warramunga Arr**	**52.69**	**176**	P	**P**	**02 40 18.9**	**+1.6**
	0.4nm,0.9s,baz=359,slow=7.9,SNR=1.4						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**56.37**	**177**	P	**P**	**02 40 48.0**	**+4.0**
	0.1nm,0.5s,baz=13,slow=13,SNR=4.1						
	0.1nm,0.5s						

*MDD **07** 02:37:21.3±0.4, 35°.45N×3°.77W, h1^{km}±3^{km}, mb_Lg2.1/14, Error ellipse: s-maj=3.8km s-min=2.1km az=162.0*
*SFS **07** 02:37:21.0, 35°.45N×3°.77W, h1^{km}, ML2.1, ALBORAN SUR*
*IGIL **07** 02:37:21.0, 35°.45N×3°.77W, h1^{km}, ML2.3*
*CNRM **07** 02:37:22.5, 35°.50N×3°.75W, h26^{km}, ml2.6*
*INMG **07** 02:37:22.3±1.9, 35°.46N×3°.76W, h6^{km}±8^{km}, ML2.0, Error ellipse: s-maj=4.6km s-min=4.4km az=104.0*
ISC 07 02:37:21.2±1.0**, 35°.49N**±0°.02×**3°.78W**±0°.02**, h16**^{km}±8^{km}**, n59, σ1^{s}.42**/93**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.30**	**206**	P	**Pn**	**02 37 33.0**	**+2.0**
PALE	**Palemas**	**0.30**	**206**	P	**Pg**	**02 37 27.5**	**-0.1**
PALE				S	**Sb**	**02 37 33.5**	**+0.6**
PVLZ	**Peæn de**	**0.53**	**234**	P	**Pg**	**02 37 31.7**	**0.0**
PVLZ				S	**Sg**	**02 37 38.7**	**-0.1**
GOG	**Mont Gurugu**	**0.69**	**112**	P	**Pn**	**02 37 36.0**	**-0.5**
GOG	**Mont Gurugu**	**0.69**	**112**	P	**Pn**	**02 37 36.5**	**+0.1**
GOG				S	**Sn**	**02 37 46.8**	**-0.2**
WMELI	**Melilla**	**0.70**	**104**	P	**Pg**	**02 37 34.6**	**-0.3**
WMELI				S	**Sg**	**02 37 43.8**	**-0.4**
EMEL	**Melilla**	**0.70**	**105**	Pg	**Pg**	**02 37 34.7**	**-0.2**
EMEL				Sg	**Sg**	**02 37 44.1**	**-0.1**
EALB	**Alboran**	**0.76**	**53**	Pg	**Pb**	**02 37 36.1**	**+0.1**
EALB				Sg	**Sb**	**02 37 46.6**	**+0.5**
EALB				*i* Vmb_Lg		02 37 48.9	
AKLM	**AKL**	**0.98**	**184**	P	**Pn**	**02 37 42.0**	**+1.6**
AKLM				S	**Sn**	**02 37 54.6**	**+0.7**
CHAS	**Isla Isabel II**	**1.15**	**105**	P	**Pn**	**02 37 41.2**	**-1.3**
CHAS				S	**Sb**	**02 37 55.4**	**-1.9**
TAF	**Taforalt**	**1.31**	**120**	P	**Pb**	**02 37 46.0**	**+0.5**
TAF	**Taforalt**	**1.31**	**120**	P	**Pn**	**02 37 44.4**	**-0.5**
TAF				S	**Sb**	**02 38 00.1**	**-1.8**
EMIJ	**Mijas**	**1.34**	**324**	Pg	**Pn**	**02 37 44.7**	**-0.7**
EMIJ				*i* Vmb_Lg		02 38 07.4	
CEU	**Ceuta**	**1.36**	**288**	P	**Pn**	**02 37 44.2**	**-1.3**
CEU				S	**Sn**	**02 37 58.1**	**-5.1**
ELGU	**Los Guajares,**	**1.38**	**5**	Pn	**Pn**	**02 37 45.3**	**-0.7**
ELGU				Sn	**Sb**	**02 38 04.2**	**-0.1**
ELGU				*i* Vmb_Lg		02 38 07.0	
JBK	**JBK**	**1.52**	**139**	P	**Pg**	**02 37 51.0**	**+0.5**
JBK	**JBK**	**1.52**	**139**	P	**Pn**	**02 37 48.0**	**0.0**
JBK				S	**Sn**	**02 38 05.3**	**-2.2**
EBER	**Berja**	**1.58**	**27**	Pn	**Pn**	**02 37 48.5**	**-0.2**
EBER				Sn	**Sb**	**02 38 10.1**	**+0.1**
EBER				*i* Vmb_Lg		02 38 13.0	
EGOR	**Sierra Gorda,**	**1.64**	**351**	Pn	**Pn**	**02 37 50.2**	**+0.7**
EGOR				Sn	**Sb**	**02 38 12.3**	**+0.5**
EGOR				*i* Vmb_Lg		02 38 16.7	
EJIF	**Jimena Fronter**	**1.67**	**306**	Pn	**Pb**	**02 37 50.9**	**-0.7**
ENIJ	**Nijar**	**1.95**	**40**	Sn	**Sn**	**02 38 16.1**	**-1.8**
LCRM	**LCR**	**2.00**	**207**	P	**Pg**	**02 37 60.0**	**+0.3**
LCRM	**LCR**	**2.00**	**207**	P	**Pg**	**02 37 58.9**	**-0.8**
LCRM				S	**Sb**	**02 38 23.0**	**+0.9**
ESPR	**Espera**	**2.17**	**310**	Sn	**Sb**	**02 38 26.8**	**0.0**
ESPR				*i* Vmb_Lg		02 38 30.9	
IFR	**Ifrane**	**2.26**	**210**	P	**Pn**	**02 37 58.2**	**+0.2**
IFR				S	**Sn**	**02 38 23.8**	**-1.9**
EQES	**Quesada**	**2.38**	**14**	Pn	**Pb**	**02 38 02.6**	**-1.2**
EQES				Sn	**Sb**	**02 38 32.1**	**-0.9**
EQES				*i* Vmb_Lg		02 38 33.9	
MD31	**MD31**	**2.74**	**197**	P	**Pn**	**02 38 06.7**	**+2.2**
MD31				S	**Sn**	**02 38 36.9**	**-0.5**
EADA	**Adamuz**	**2.75**	**347**	Pn	**Pn**	**02 38 06.6**	**+1.9**
EADA				*i* Vmb_Lg		02 38 45.5	
MDT	**Midelt**	**2.75**	**195**	P	**Pn**	**02 38 07.3**	**+2.6**
MDT				S	**Sn**	**02 38 39.4**	**+1.6**
ECAB	**El Cabril**	**2.90**	**334**	Pn	**Pn**	**02 38 09.1**	**+2.3**
ECAB				Sn	**Sn**	**02 38 44.0**	**+2.7**
EZAR	**Zarzadilla de**	**2.92**	**35**	Pn	**Pn**	**02 38 08.8**	**+1.7**
EZAR				Sn	**Sn**	**02 38 42.3**	**+0.5**
EMUR	**La Murta**	**3.12**	**40**	Sn	**Sn**	**02 38 46.1**	**-0.5**
EMIN	**Mina Concepcio**	**3.25**	**315**	Pn	**Pn**	**02 38 12.1**	**+0.5**
EMIN				Sn	**Sn**	**02 38 50.2**	**+0.2**
EMIN				*i* Vmb_Lg		02 38 53.9	
EGRO	**El Granado**	**3.61**	**306**	Pn	**Pn**	**02 38 17.1**	**+0.5**
EGRO				Sn	**Sn**	**02 38 57.5**	**-1.4**
EGRO				*i* Vmb_Lg		02 38 59.7	
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**02 38 19.2**	**+2.5**
ETOB				Sn	**Sn**	**02 39 01.4**	**+2.2**
ETOB				*i* Vmb_Lg		02 39 03.0	
PVAQ	**Vaqueiros**	**3.71**	**302**	*e*Pn	**Pn**	**02 38 18.4**	**+0.6**
PVAQ				*e*Sn	**Sn**	**02 39 00.4**	**-0.7**
PVAQ				A	A	02 39 01.3	
	4.1nm,0.4s						
PVAQ	**Vaqueiros**	**3.71**	**302**	P	**Pn**	**02 38 19.4**	**+1.6**
PVAQ				S	**Sn**	**02 38 59.9**	**-1.2**
PBAR	**Barrancos**	**3.75**	**317**	*e*Pn	**Pn**	**02 38 19.2**	**+0.9**
PBAR				*e*Sn	**Sn**	**02 39 01.8**	**-0.3**
PBAR				A	A	02 39 05.0	
	1.6nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.78**	**299**	*e*Pn	**Pn**	**02 38 19.3**	**+0.5**
PBDV				*e*Sn	**Sn**	**02 39 01.7**	**-1.3**
PBDV				A	A	02 39 04.2	
	3.3nm,0.8s						
PCVE	**Castro Verde**	**4.04**	**303**	*e*Pn	**Pn**	**02 38 24.0**	**+1.6**
PCVE				*e*Sn	**Sn**	**02 39 08.7**	**-0.7**
PCVE				A	A	02 39 14.2	
	1.9nm,0.6s						
PAB	**San Pablo**	**4.08**	**354**	Pn	**Pn**	**02 38 25.2**	**+2.2**
PAB				*i* Vmb_Lg		02 41 30.5	
EBAD	**Badajoz**	**4.16**	**323**	Pn	**Pn**	**02 38 24.6**	**+0.6**
EBAD				Sn	**Sn**	**02 39 12.2**	**-0.1**
EBAD				*i* Vmb_Lg		02 39 17.0	
ESDC	**Sonseca Array**	**4.18**	**358**	Pn	**Pn**	**02 38 26.5**	**+2.1**
ESDC				*i* Vmb_Lg		02 39 48.4	
MESJ	**Messejana**	**4.27**	**305**	*e*P	**Pn**	**02 38 25.6**	**0.0**
MESJ	**Messejana**	**4.27**	**305**	*e*Pn	**Pn**	**02 38 26.5**	**+0.9**

MESJ				eSn	Sn	02 39 14.1	-1.0
MESJ				A	A	02 39 35.3	
	1.6nm,0.7s						
MORF	Marmelete	4.33	296	eS	Sn	02 39 14.0	-2.5
MORF				IAML		02 39 16.3	
	comp=E,5.8nm,0.4s						
MORF	Marmelete	4.33	296	eSn	Sn	02 39 16.2	-0.3
MORF				A	A	02 39 21.0	
	comp=E,1.5nm,0.5s						
PFVI	Vila Bisbo	4.39	293	eSn	Sn	02 39 16.6	-1.5
PTEO	Sao Teotonio	4.48	299	eSn	Sn	02 39 19.0	-1.2
PESTR	Estremoz	4.54	319	ePn	Pn	02 38 31.3	+2.0
PESTR				eSn	Sn	02 39 21.1	-0.7
EVO	Evora	4.55	313	ePn	Pn	02 38 30.3	+0.9
EVO				eSn	Sn	02 39 20.3	-1.6
EVO				A	A	02 39 25.8	
	comp=E,1.6nm,0.4s						
PNCL	Nicolau / Gran	4.62	306	ePn	Pn	02 38 31.6	+1.2
PNCL				eSn	Sn	02 39 22.4	-1.3
PMRV	Marv??o	4.87	325	ePn	Pn	02 38 35.3	+1.5
PMTG	Montargil	5.03	317	ePn	Pn	02 38 38.1	+2.1
PSBE	So Bento	5.66	317	ePn	Pn	02 38 46.7	+2.0
PVIS	Viseu	6.14	329	ePn	Pn	02 38 53.2	+1.8
MVO	Moncorvo	6.22	337	ePn	Pn	02 38 54.4	+2.0
PBRG	Braganca	6.72	341	ePn	Pn	02 39 01.6	+2.4
PGAV	Gavieira, Arco	7.36	333	ePn	Pn	02 39 09.9	+1.9

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*IDC **07** 02:46:02.5±1.3, 6°.52S×154°.19E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.8/1, Error ellipse: s-maj=37.3km s-min=23.1km az=94.0*

ISC 07 02:46:09.5±1.2, **6°.4S**±0°.1×**154°.2E**±0°.2, **h48**^{km}, **n10**, σ**1^{s}.42**/10, **mb3.7**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.00	314	Pn	Pn	02 46 53.9	-0.6
	12nm,0.3s,baz=273,slow=1.8,SNR=12						
	28nm,0.3s						
COEN	Coen	13.17	234	P	P	02 49 25.1	+2.4
WRA	Warramunga Arr	23.50	233	P	P	02 51 13.6	-1.7
	2.4nm,0.5s,baz=57,slow=9.9,SNR=28						
	2.4nm,0.5s						
ASAR	Alice Springs	25.97	227	P	P	02 51 36.5	-1.4
	1.2nm,0.7s,baz=58,slow=9.1,SNR=10						
	1.2nm,0.7s						
STKA	Stephens Creek	27.93	203	P	P	02 51 53.9	-1.4
	1.8nm,0.6s,baz=9.3,slow=10,SNR=3.5						
	1.8nm,0.6s						
CMAR	Chiang Mai Arr	59.80	296	P	P	02 56 09.9	-0.4
	2.1nm,0.4s,baz=96,slow=3.6,SNR=1.4						
	2.1nm,0.4s						
VNDA	Vanda	71.18	178	P	P	02 57 22.9	+0.1
	0.8nm,0.9s,baz=325,slow=7.3,SNR=4.8						
	0.8nm,0.9s						
MKAR	Makanchi Array	82.44	319	P	P	02 58 27.7	+0.9
	0.5nm,0.6s,baz=103,slow=7.0,SNR=5.2						
	0.5nm,0.6s						
ILAR	Eielson Array	83.13	22	P	P	02 58 30.4	+0.4
	0.4nm,1.0s,baz=256,slow=5.3,SNR=2.1						
	0.4nm,1.0s						
TORD	Torodi Ar. Bea	152.09	286	PKPbc	PKPbc	03 06 00.2	-0.5
	1.2nm,0.9s,baz=67,slow=2.6,SNR=6.1						

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*DJA **07** 02:46:12.4±0.6, 6°S±3°×15°5E±°, h39^{km}±6^{km}, M5.1/59, mB5.5/25, mb5.2/59, MLv5.8/1, Mw(mB)4.9/25*
*MOS **07** 02:46:17.9±1.0, 6°.44S×154°.11E, h9^{km}, mb5.2/31, Error ellipse: s-maj=9.2km s-min=7.4km az=110.7*
*BJI **07** 02:46:17.6±0.0, 6°.21S×154°.35E, h6^{km}, mb4.9/56, mB5.1/42, Ms4.7/46, Ms7 4.5/48*
*IDC **07** 02:46:17.2±0.4, 6°.38S×154°.27E, h0^{km}, mb4.7/25, mbtmp4.8/29, ML4.0/4, MS4.0/5, Error ellipse: s-maj=15.7km s-min=11.7km az=74.0*
*NEIC **07** 02:46:20.4±1.6, 6°.54S±0°.07×154°.09E±0°.07, h10^{km}±1^{km}, mb5.0/96, Error ellipse: s-maj=14.7km s-min=7.2km az=45.0*
*GCMT **07** 02:46:22.4±0.2, 6°.54S±0°.01×154°.08E±0°.03, h14^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s30,c37; s87,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.11±.16; $M_{\theta\theta}$-2.65±.11; $M_{\phi\phi}$0.54±.10; $M_{r\theta}$1.49±.24; $M_{\theta\phi}$0.61±.07; $M_{\phi r}$-1.32±.32; Best double couple: $M_0$3.18700×10^{16} NP1: ϕ_s257.00000°, δ32.00000°, λ50.00000°. NP2: ϕ_s121.00000°, δ66.00000°, λ112.00000°. Principal axes: T 3.0510, Plg63.0000°, Azm66.0000°; N 0.2730, Plg20.0000°, Azm292.0000°; P -3.3240, Plg18.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:46:19.9±0.2, **6°.58S**±0°.02×**154°.02E**±0°.02, **h10**^{km}, **n440**, σ**1^{s}.88**/400, **mb5.1**/137, **MS4.4**/25, **19C-4D**, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.00	319	Pn	Pn	02 47 08.7	+1.1
	56nm,0.3s,baz=322,slow=2.0,SNR=17						
	805nm,0.7s						
RABL	Rabaul	3.00	322	Pn	Pn	02 47 07.7	0.0
RABL	Rabaul	3.00	322	P	Pn	02 47 08.4	+0.8
HNR	Honiara	6.52	116	P	Pn	02 47 56.2	+0.3
HNR	Honiara	6.52	116	Pn	Pn	02 47 56.2	+0.3
PMG	Port Moresby	7.35	247	Pn	Pn	02 48 12.0	+4.7
	13nm,0.3s,baz=57,slow=9.2,SNR=57						
	367nm,0.8s						
PMG	Port Moresby	7.35	247	ceP	Pn	02 48 10.1	+2.7
PMG				pmax	pmax		
	comp=Z,443nm,0.8s						
PMG	Port Moresby	7.35	247	Pn	Pn	02 48 09.7	+2.4
MANU	Manus Island	8.02	304	Pn	Pn	02 48 18.6	+2.1
COEN	Coen	12.94	235	P	Pn	02 49 30.8	+6.8
	baz=13,SNR=5.6						
MTSU	Mount Surprise	14.88	219	P	P	02 49 55.9	-0.4
	baz=15,SNR=14						
MTSU	Mount Surprise	14.88	219	P	Pn	02 49 51.6	+1.1
CTA	Charters Tower	15.40	209	Pn	P	02 50 01.7	-0.3
	comp=Z,1.5nm,0.3s,baz=30,slow=12,SNR=12						
	comp=Z,28nm,0.8s						
CTA	Charters Tower	15.40	209	P	Pn	02 49 58.3	+0.9
CTAO	Charters Tower	15.40	209	P	Pn	02 49 58.4	+1.0
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
CTAO	Charters Tower	15.40	209	Pn	Pn	02 49 58.4	+1.0
CTAO	Charters Tower	15.40	209	P	Pn	02 49 58.3	+0.9
SANVU	Saraoutou	15.65	125	Pn	Pn	02 49 55.4	-5.3
SANVU				IAmb	IAmb	02 50 17.8	
	comp=Z,82nm,0.9s						
SMPI	Sarmi	15.93	286	P	P	02 50 07.4	-0.5
	comp=Z,40nm,1.2s						
KOUNC	Koumac, New Ca	17.09	145	Pn	Pn	02 50 15.1	-4.0
KOUNC	Koumac, New Ca	17.09	145	P	P	02 50 23.8	+3.0
BAKI	Biak	18.65	286	P	P	02 50 39.3	+1.2
EIDS	Eidsvold	18.90	188	P	Pn	02 50 42.1	+0.8
	baz=19,SNR=7.2						
EIDS	Eidsvold	18.90	188		P	02 50 40.8	+0.1
EIDS	Eidsvold	18.90	188	P	Pn	02 50 43.5	+2.2
LIFNC	LIFOU	19.06	139	P	P	02 50 42.7	+0.1
LIFNC				IAmb	IAmb	02 51 10.9	
	comp=Z,88nm,0.9s						
NOUC	Port Laguerre	19.46	144	P	Pn	02 50 48.2	0.0
DZM	Mont Dzumac	19.52	143	eP	Pn	02 51 03.6	+15
DZM	Mont Dzumac	19.52	143	P	P	02 50 47.8	+0.1
	comp=Z,0.6nm,0.3s,baz=350,slow=15,SNR=11						
DZM				LR	LR	02 55 43.2	
	comp=Z,387nm,21.0s,baz=307,slow=29						
	comp=Z,49nm,1.0s						
DZM	Mont Dzumac	19.52	143	P	P	02 50 47.6	-0.2
DZM				IAmb	IAmb	02 51 03.7	
	comp=Z,82nm,1.0s						
DZM	Mont Dzumac	19.52	143	P	Pn	02 50 49.1	+0.1
QIS	Mount Isa	19.71	224	P	Pn	02 50 51.8	+0.7
	baz=20,SNR=14						
QIS	Mount Isa	19.71	224	P	Pn	02 50 52.0	+0.9
ONTNC	Ouen Toro	19.71	144	P	P	02 50 50.1	+0.5
ONTNC				IAmb	IAmb	02 51 16.6	
	comp=Z,114nm,1.1s						
ONTNC	Ouen Toro	19.71	144	P	Pn	02 50 55.4	+4.3
YATNC	Mamie plateau,	19.78	142	P	Pn	02 50 53.9	+1.9
OUENC	Ouen Island, N	20.03	143	P	P	02 50 52.8	-0.3
OUENC				IAmb	IAmb	02 50 59.0	
	comp=Z,61nm,0.9s						
OUENC	Ouen Island, N	20.03	143	P	Pn	02 50 56.2	+1.4
	comp=Z,74nm,1.1s						
RMQ	Roma	20.42	194	P	Pn	02 50 59.8	+0.4
	baz=21,SNR=22						
RMQ	Roma	20.42	194	P	Pn	02 51 00.0	+0.5
KMPI	Kaimana, Papua	20.44	277	P	P	02 50 58.9	+1.3
	comp=Z,5µm,0.9s						
QLP	Quilpie	21.97	204	P	P	02 51 15.5	+1.5
	baz=22,SNR=22						
QLP	Quilpie	21.97	204	P	P	02 51 16.3	+2.3
FAKI	Fak Fak	21.99	278	P	P	02 51 14.1	-0.3
FAKI	Fak Fak	21.99	278	P	P	02 51 14.2	-0.2
	comp=Z,1µmcomp=Z,57nm,1.8s						
KDU	Kakadu	22.08	252	P	P	02 51 16.0	+0.6
	baz=22,SNR=11						
KDU	Kakadu	22.08	252	P	P	02 51 16.4	+1.0
SAUI	Saumlaki	22.58	265	P	P	02 51 22.9	+2.2
	comp=Z,454nm,1.1s						
WRAB	Tennant Creek	23.26	233	ceP	P	02 51 28.0	+0.3
WRAB				pmax	pmax		
	comp=Z,75nm,1.0s						
WRAB	Tennant Creek	23.26	233	P	P	02 51 27.1	-0.6
WRAB				IAmb	IAmb	02 51 29.5	
	comp=Z,62nm,0.9s						
WRAB	Tennant Creek	23.26	233	P	P	02 51 28.9	+1.2
WB2	Warramunga Arr	23.26	233	P	P	02 51 27.8	0.0
WB2				IAmb	IAmb	02 51 32.1	
	comp=Z,73nm,1.0s						
WRA	Warramunga Arr	23.27	233	P	P	02 51 28.1	+0.2
	comp=Z,52nm,0.9s,baz=56,slow=9.9,SNR=78						
WRA				ScP	ScP	02 58 55.0	+1.0
	comp=Z,5.3nm,1.0s,baz=54,slow=2.9,SNR=7.5						
WRA				LR	LR	03 00 57.6	
	comp=Z,1µm,18.0s,baz=42,slow=37						
	comp=Z,52nm,0.9s						
MTN	Manton Dam	23.39	253	P	P	02 51 30.0	+0.9
	baz=24,SNR=4.0						
MTN	Manton Dam	23.39	253	P	P	02 51 29.6	+0.5
MTN	Manton Dam	23.39	253	P	P	02 51 30.3	+1.2
SIJI	Sorong	23.39	283	P	P	02 51 28.8	-0.4
	comp=Z,9.2nm,0.3s,baz=89,slow=7.3,SNR=17						
SIJI				LR	LR	03 03 37.1	
	comp=Z,600nm,18.2s,baz=76,slow=44						
	comp=Z,9.2nm,0.3s						
SWI	Sorong	23.40	283	P	P	02 51 28.0	-1.2
	comp=Z,53nm,1.0s						
ARMA	Armidale	23.82	185	P	P	02 51 34.0	+0.7
	baz=24,SNR=9.7						
ARMA	Armidale	23.82	185	P	P	02 51 32.7	-0.6
ARMA	Armidale	23.82	185	P	P	02 51 34.1	+0.8
	comp=Z,30nm,0.9s						
INKA	Innaminka	24.53	209	P	P	02 51 41.8	+2.0
AS31	Alice Springs	25.73	227	P	P	02 51 51.2	+0.3
ASAR	Alice Springs	25.74	227	P	P	02 51 51.6	+0.8
	comp=Z,26nm,0.9s,baz=58,slow=8.7,SNR=37						
ASAR				ScP	ScP	02 59 02.5	+1.7
	comp=Z,3.8nm,1.1s,baz=53,slow=3.6,SNR=6.0						
	comp=Z,26nm,0.9s						
ASAR	Alice Springs	25.74	227		ScP	02 59 02.3	+1.5
MSVF	Nonsavu	25.94	117	P	P	02 51 50.9	-1.9
	comp=Z,5.0nm,0.6s,baz=283,slow=19,SNR=3.9						
	comp=Z,5.0nm,0.6s						
MSVF	Nonsavu	25.94	117	P	P	02 51 52.9	+0.1
MSVF				pmax	pmax		
	comp=Z,20nm,0.9s						
MSVF	Nonsavu	25.94	117	P	P	02 51 52.9	+0.1
MSVF	Nonsavu	25.94	117	P	P	02 51 56.2	+3.4
CMSA	Cobar Meteorol	26.02	196	P	P	02 51 53.6	+0.4
	baz=26,SNR=17						
CMSA	Cobar Meteorol	26.02	196	P	P	02 51 53.8	+0.5
NTLH	Newcastle Hard	26.28	184	P	P	02 51 59.3	+3.8
	comp=Z,79nm,1.0s						
KNRA	Kununurra	26.35	248	P	P	02 51 57.4	+1.0
	baz=27,SNR=12						
KNRA	Kununurra	26.35	248	P	P	02 51 56.2	-0.2
KNRA	Kununurra	26.35	248	P	P	02 51 57.5	+1.1
MGCD	Mangrove Creek	26.64	185	P	P	02 52 00.3	+1.5
	baz=27,SNR=8.5						
MGCD	Mangrove Creek	26.64	185	P	P	02 52 01.6	+2.8
LBMI	Labuha	27.10	282	P	P	02 52 01.9	-1.3
	comp=Z,2µmcomp=Z,118nm,1.1s						
OOD	Oodnadatta	27.34	217	P	P	02 52 05.6	+0.4
STKA	Stephens Creek	27.72	203	P	P	02 52 08.8	+0.3
	comp=Z,24nm,0.8s,baz=4.2,slow=8.9,SNR=20						
STKA				ScP	ScP	02 59 07.0	+0.5
	comp=Z,20nm,1.1s,baz=49,slow=3.1,SNR=11						
	comp=Z,24nm,0.8s						
STKA	Stephens Creek	27.72	203	P	P	02 52 08.6	+0.1
	baz=28,SNR=19						
STKA	Stephens Creek	27.72	203	P	P	02 52 08.3	-0.3
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	27.72	203	P	P	02 52 08.2	-0.3
STKA	Stephens Creek	27.72	203	P	P	02 52 08.8	+0.3
LCRK	Leigh Creek	28.00	210	P	P	02 52 11.6	+0.5
SANI	Sanana	28.30	278	P	P	02 52 12.9	-1.1
	comp=Z,868nmcomp=Z,37nm,1.0s						
SANI	Sanana	28.30	278	P	P	02 52 14.9	+0.9
CNB	Canberra Magne	28.92	188	P	P	02 52 20.6	+1.3
	baz=29,SNR=5.4						
CNB	Canberra Magne	28.92	188	P	P	02 52 20.3	+1.0
CAN	Canberra	28.98	188	P	P	02 52 20.2	+0.4
CAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CAN	Canberra	28.98	188	P	P	02 52 20.1	+0.4
CAN	Canberra	28.98	188	P	P	02 52 21.3	+1.5
	comp=Z,21nm,2.0s						
HTT	Hallett	30.17	206	P	P	02 52 30.4	0.0
	baz=30,SNR=3.2						
HTT	Hallett	30.17	206	P	P	02 52 32.2	+1.8
BATI	Baumata	30.24	261	P	P	02 52 31.8	+0.6
	comp=Z,42nm,0.9s						
NAPP	Napperby	30.30	207	P	P	02 52 34.7	+3.2
	comp=Z,19nm,1.1s						
WHYH	Whyalla	30.44	208	P	P	02 52 33.3	+0.6
	comp=Z,25nm,0.9s						
WRKA	Warakurna	30.70	230	P	P	02 52 35.3	+0.1
	baz=31,SNR=18						
WRKA	Warakurna	30.70	230	P	P	02 52 35.8	+0.6
KMSI	Cibinong	30.81	282	P	P	02 52 36.1	-0.1
	comp=Z,179nm,1.1s						
BBSI	Bau Bau	31.29	270	P	P	02 52 41.7	+1.2
	comp=Z,838nmcomp=Z,6.9nm,0.8s						
MMRI	Maumere	31.56	264	P	P	02 52 43.1	+0.2
MMRI	Maumere	31.56	264	P	P	02 52 42.3	-0.6
	comp=Z,138nm,0.9s						
MMRI	Maumere	31.56	264	P	P	02 52 43.9	+1.0
LUWI	Luwuk	31.64	279	P	P	02 52 43.7	+0.1
	comp=Z,8µmcomp=Z,131nm,1.1s						
LUWI	Luwuk	31.64	279	P	P	02 52 44.5	+0.9
GTOI	Gorontalo	31.76	282	P	P	02 52 45.3	+0.7
	comp=Z,374nmcomp=Z,35nm,0.9s						
ARPS	Mount Arapiles	32.05	199	P	P	02 52 47.5	+0.7
	baz=32,SNR=6.9						
ARPS	Mount Arapiles	32.05	199	P	P	02 52 46.8	0.0
EDFI	Ende, Flores	32.10	264	P	P	02 52 47.1	-0.7
	comp=Z,552nmcomp=Z,66nm,0.9s						
MRSI	Marisa	32.77	281	P	P	02 52 52.8	-0.7
	comp=Z,49nm,1.0s						
APSI	Ampana	32.77	279	P	P	02 52 52.2	-1.3
	comp=Z,801nmcomp=Z,66nm,1.0s						
BASI	Baing, Sumba	33.27	261	P	P	02 52 57.2	-0.6
BSSI	Bau Bau, Buton	33.32	269	P	P	02 52 58.3	0.0
	comp=Z,65nm,0.9s						
BKSI	Bulukumba	33.73	270	P	P	02 53 01.4	-0.5
	comp=Z,360nmcomp=Z,25nm,0.9s						
BNSI	Bone	33.82	272	P	P	02 53 03.0	+0.3
	comp=Z,656nmcomp=Z,28nm,1.1s						
TOLI2	Tolitoli	34.04	282	P	P	02 53 04.1	-0.5
TOLI2	Tolitoli	34.04	282	P	P	02 53 07.5	+2.9
KAPI	Kappang	34.12	271	i P	P	02 53 05.4	+0.1
KAPI				pmax	pmax		
	comp=Z,29nm,1.0s						
KAPI	Kappang	34.12	271	P	P	02 53 05.5	+0.1
KAPI				IAmb	IAmb	02 53 10.8	
	comp=Z,33nm,1.1s						
KAPI	Kappang	34.12	271	P	P	02 53 07.3	+2.0
SPSI	Sidrap Palu	34.20	273	P	P	02 53 05.5	-0.4
	comp=Z,11nm,0.8s						
TTSI	Tana Toraja	34.25	274	P	P	02 53 05.8	-0.6
	comp=Z,1µmcomp=Z,18nm,1.0s						
WBSI	Waikabubak, Su	34.41	263	P	P	02 53 06.6	-1.2
GLAD	Gladstone	34.68	188	P	P	02 53 11.7	+2.0
	comp=Z,29nm,1.0s						
MPSI	Mapaga	34.73	280	P	P	02 53 09.1	-1.5
	comp=Z,799nmcomp=Z,94nm,0.9s						
CORO	Coronation Par	35.26	189	P	P	02 53 17.6	+2.9
	comp=Z,29nm,1.0s						
PLAI	Plampang	35.97	264	P	P	02 53 19.8	-1.5
	comp=Z,66nm,0.8s						
PLAI	Plampang	35.97	264	P	P	02 53 21.0	-0.3
PSA00	Pilbara Seismi	36.23	242	IAmb	IAmb	02 53 26.3	
	comp=Z,22nm,1.0s						
MYLDM	Lahad Datu	37.33	287	P	P	02 53 32.7	-0.1
URZ	Urewera	37.85	150	P	P	02 53 37.1	+0.2
	comp=Z,3.9nm,0.5s,baz=127,slow=22,SNR=4.3						
	comp=Z,3.9nm,0.5s						
BKZ	Black Stump Fm	38.26	151	P	P	02 53 40.2	-0.2
BKZ				IAmb	IAmb	02 54 04.5	
	comp=Z,32nm,1.2s						
BKZ	Black Stump Fm	38.26	151	P	P	02 53 44.0	+3.6
SRBI	Singaraja	38.51	265	P	P	02 53 42.4	-0.4
	comp=Z,17nm,0.7s						
BBKI	Banjar Baru	39.14	273	P	P	02 53 47.2	-0.9
	comp=Z,31nm,0.6s						
MEEK	Meekatharra	39.14	235	P	P	02 53 48.5	+0.5
	baz=39,SNR=7.4						
MEEK	Meekatharra	39.14	235	P	P	02 53 49.2	+1.2
MTKI	Muara Teweh, K	39.42	277	P	P	02 53 53.7	+3.2
ABJI	Asem Bagus	39.48	266	P	P	02 53 50.0	-0.9
	comp=Z,27nm,0.7s						
JAGI	Jajag, Banyuwa	39.55	265	P	P	02 53 50.0	-1.6
JAGI	Jajag, Banyuwa	39.55	265	P	P	02 53 50.0	-1.6
	comp=Z,65nm,0.9s						
JAGI	Jajag, Banyuwa	39.55	265	P	P	02 53 53.2	+1.6
KMMI	Kalianget	39.76	267	P	P	02 53 53.0	-0.3
	comp=Z,2µmcomp=Z,17nm,1.0s						
RPZ	Rata Peaks	39.90	161	P	P	02 53 54.1	0.0
	comp=Z,20nm,1.0s,baz=357,slow=0.6,SNR=11						
	comp=Z,20nm,1.0s						
GMJI	Gumukmas	40.26	265	P	P	02 53 57.0	-0.4
	comp=Z,22nm,1.0s						
MQZ	McQueen's Vall	40.44	159	P	P	02 53 58.2	-0.3
MQZ				IAmb	IAmb	02 54 01.6	
	comp=Z,55nm,1.4s						
JOW	Kunigami	41.54	324	P	P	02 54 08.2	+0.5
PWJI	Pagerwojo	41.88	265	P	P	02 54 09.8	-1.0
	comp=Z,38nm,1.1s						
KLBR	Kellerberrin	42.02	229	P	P	02 54 11.8	+0.1
	baz=42,SNR=4.9						
MORW	Morawa	42.22	233	P	P	02 54 13.7	+0.3
	baz=42,SNR=4.0						
PCJI	Pacitan	42.50	265	P	P	02 54 14.3	-1.6
	comp=Z,92nm,1.0s						
SBUM	Sibu	42.68	281	P	P	02 54 18.1	+0.8
SBUM				IAmb	IAmb	02 54 21.7	
	comp=Z,34nm,1.1s						
YULB	Yu-li	43.70	314	IAmb	IAmb	02 54 45.2	
	comp=Z,40nm,1.2s						
TPUB	Ta-pu	44.12	313	P	P	02 54 28.3	-0.5
TPUB				IAmb	IAmb	02 54 52.2	
	comp=Z,34nm,0.9s						
TPUB	Ta-pu	44.12	313	P	P	02 54 32.9	+4.1
SSLB	Suanglung	44.19	314	P	P	02 54 30.2	+0.8
KSM	Kuching	44.35	279	P	P	02 54 30.3	-0.5
KSM				IAmb	IAmb	02 54 34.2	
	comp=Z,16nm,0.8s						
KSM	Kuching	44.35	279	P	P	02 54 32.9	+2.0
YHNB	Yeheng	44.45	316	P	P	02 54 32.3	+0.8
KPJI	Karang Pucung	44.75	266	P	P	02 54 33.6	-0.4
	comp=Z,79nm,1.0s						
CMJI	Cimerak	45.21	266	P	P	02 54 35.9	-1.8
	comp=Z,56nm,0.8s						
TPI	Tanjungpandan	46.35	272	P	P	02 54 46.1	-0.6
	comp=Z,8.4nm,1.0s						
CNJI	Cibinong	46.53	266	P	P	02 54 46.9	-1.2
	comp=Z,194nm,1.0s						
QZH	Quanzhou	46.59	314	eP	P	02 54 48.8	+0.5
QZH				S	S	03 01 38.4	+0.9
QZH				LR	LR		
	comp=Z,170nm,14.9s						
QZH				LR	LR		
	comp=Z,200nm,13.9s						
QZH				LR	LR		
	comp=Z,410nm,18.9s						
KASI	Kota Agung	49.24	268	P	P	02 55 09.0	-0.1
KSRS	Korea Array	50.12	333	P	P	02 55 14.3	-1.1
	comp=Z,4.3nm,0.9s,baz=154,slow=8.5,SNR=11						
	comp=Z,4.3nm,0.9s						
KSAR	Wonju Array Be	50.13	333	P	P	02 55 15.7	+0.2
KSAR	Wonju Array Be	50.13	333	P	P	02 55 15.7	+0.2
QIZ	Qiongzhong	50.42	301	P	P	02 55 17.3	-0.7
QIZ				S	S	03 02 32.4	+0.7
QIZ				LR	LR		
	comp=Z,160nm,17.5s						
QIZ				LR	LR		
	comp=Z,200nm,20.7s						
QIZ				LR	LR		
	comp=Z,260nm,18.6s						
INCN	Inchon	50.74	332	P	P	02 55 19.9	-0.3
INCN				pmax	pmax		
	comp=Z,27nm,0.9s						
INCN	Inchon	50.74	332	P	P	02 55 19.9	-0.3
NJ2	Nanjing	50.98	321	eP	P	02 55 23.0	+1.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WHN	Wuhan	52.97	316	⇓P	P	02 55 36.5	-0.4
WHN				S	S	03 03 09.3	+2.7
WHN				LR	LR		
	comp=Z,660nm,15.2s						
WHN				LR	LR		
	comp=Z,560nm,17.0s						
WHN				LR	LR		
	comp=Z,830nm,17.9s						
PPI	Padang Panjang	53.83	274	P	P	02 55 45.1	+1.6
USRK	Ussuriysk Ar.	54.31	341	P	P	02 55 47.7	+1.2
	comp=Z,3.8nm,0.9s,baz=148,slow=5.1,SNR=4.2						
USRK	Ussuriysk Ar.	54.31	341	P	P	02 55 46.9	+0.4
USRK	Ussuriysk Ar.	54.31	341	P	P	02 55 46.9	+0.4
PPT2	Papeete2	56.05	107	eLR	LR	03 12 53.0	
	comp=Z,149nm,21.2s						
SRIT	Nakonsritamara	56.30	285	P	P	02 56 02.4	+1.0
CN2	Changchun	56.41	335	eP	P	02 56 01.7	+0.1
CN2				ePP	PP	02 58 09.2	+1.9
CN2				eS	S	03 03 51.4	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA	Guiyang	56.43	308	⇑P	P	02 56 05.0	+2.8
GYA				S	S	03 03 57.3	+3.7
GYA				pmax	pmax		
	comp=Z,19nm,0.9s						
GYA				LR	LR		
	comp=Z,460nm,18.3s						
LYN	LuoYang	56.67	319	⇓P	P	02 56 04.9	+1.3
LYN				S	S	03 03 55.0	-1.2
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				pmax	pmax		
	comp=Z,180nm,4.1s						
LYN				LR	LR		
	comp=Z,420nm,17.0s						
LYN				LR	LR		
	comp=Z,290nm,17.8s						
LYN				LR	LR		
	comp=Z,450nm,21.2s						
TBI	Tubuai	56.73	114	eLR	LR	03 13 54.6	
HNS	HongShan	57.09	323	⇑P	P	02 56 08.5	+2.0
HNS				S	S	03 04 02.2	+0.6
HNS				pmax	pmax		
	comp=Z,28nm,1.3s						
HNS				LR	LR		
	comp=Z,130nm,15.8s						
HNS				LR	LR		
	comp=Z,240nm,16.8s						
HNS				LR	LR		
	comp=Z,210nm,15.3s						
BNX	BinXian	57.26	338	⇓P	P	02 56 07.5	-0.1
BNX				pmax	pmax		
	comp=Z,16nm,0.5s						
BNX				pmax	pmax		
	comp=Z,340nm,5.3s						
BJI	Beijing	58.03	326	P	P	02 56 16.0	+2.9
BJI				S	S	03 04 14.0	+0.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJI				LR	LR		
	comp=Z,100nm,16.1s						
BJI				LR	LR		
	comp=Z,180nm,17.3s						
BJI				LR	LR		
	comp=Z,250nm,19.5s						
XAN	Xi'an	58.74	317	P	P	02 56 18.0	-0.3
XAN				pP	sP	02 56 23.0	+3.9

XAN				S	**S**	**03 04 25.0**	**+1.5**
XAN				ScS	**ScS**	**03 06 05.2**	**-3.5**
XAN				SS	**SS**	**03 08 11.6**	**-5.3**
XAN				pmax	pmax		
	comp=Z,34nm,1.3s						
XAN				pmax	pmax		
	comp=Z,230nm,11.9s						
XAN				LR	LR		
	comp=Z,230nm,16.7s						
XAN				LR	LR		
	comp=Z,290nm,17.3s						
XAN				LR	LR		
	comp=Z,490nm,18.6s						
KLR	**Kul'dur**	**58.88**	**343**	*ce*P	**P**	**02 56 17.2**	**-1.7**
KLR				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI	**Kunming**	**58.98**	**304**	⇑P	**P**	**02 56 21.4**	**+1.0**
KMI				S	**S**	**03 04 31.2**	**+3.9**
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI				LR	LR		
	comp=Z,210nm,17.2s						
KMI				LR	LR		
	comp=Z,170nm,20.7s						
KMI				LR	LR		
	comp=Z,220nm,17.0s						
PETK	**Petropavlovsk-**	**59.54**	**3**	P	**P**	**02 56 23.5**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=314,slow=19,SNR=3.6						
CM31	**Chiang Mai Arr**	**59.73**	**296**	P	**P**	**02 56 25.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**59.73**	**296**	P	**P**	**02 56 26.9**	**+1.5**
	comp=Z,18nm,1.1s,baz=113,slow=5.0,SNR=28						
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	**59.73**	**296**	*ce*P	**P**	**02 56 26.6**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,18nm,1.0s						
CHTO	**Chiang Mai**	**59.85**	**296**	P	**P**	**02 56 26.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,20nm,1.2s						
CHTO	**Chiang Mai**	**59.85**	**296**	P	**P**	**02 56 26.5**	**+0.3**
CHTO				IAmb	IAmb	02 56 29.8	
	comp=Z,20nm,1.2s						
PZH	**PanZhiHua**	**60.38**	**305**	P	**P**	**02 56 31.1**	**+1.2**
PZH				S	**S**	**03 04 47.3**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,6.1s						
PZH				LR	LR		
	comp=Z,580nm,20.0s						
PZH				LR	LR		
	comp=Z,570nm,19.6s						
PZH				LR	LR		
	comp=Z,860nm,20.1s						
XLT	**XiLinHaoTe**	**60.80**	**329**	⇑*i*P	**P**	**02 56 31.8**	**-0.6**
XLT				pP	sP	02 56 36.4	+3.1
XLT				sP	pwP	02 56 39.5	-4.1
XLT				S	**S**	**03 04 48.4**	**-1.5**
XLT				sS	sS	03 04 56.2	+5.0
XLT				SS	**SS**	**03 08 48.0**	**-1.1**
XLT				pmax	pmax		
	comp=Z,24nm,0.6s						
XLT				pmax	pmax		
	comp=Z,97nm,3.7s						
XLT				LR	LR		
	comp=Z,290nm,22.6s						
XLT				LR	LR		
	comp=Z,260nm,18.5s						
CD2	**Chengdu**	**60.81**	**311**	*e*P	**P**	**02 56 33.5**	**+0.9**
HHC	**Hu-ho-hao-te**	**61.19**	**324**	*e*P	**P**	**02 56 37.9**	**+2.8**
HHC				S	**S**	**03 04 55.6**	**+0.7**
HHC				ScS	**SKKSac**	**03 06 22.0**	**-4.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,4.3s						
HHC				LR	LR		
	comp=Z,310nm,15.2s						
HHC				LR	LR		
	comp=Z,370nm,14.6s						
HHC				LR	LR		
	comp=Z,640nm,16.5s						
BTO	**Baotou**	**61.94**	**323**	*e*P	**P**	**02 56 43.3**	**+3.1**
BTO				S	**S**	**03 05 10.2**	**+5.7**
BTO				LR	LR		
	comp=Z,610nm,16.9s						
BTO				LR	LR		
	comp=Z,590nm,14.8s						
LZH	**Lanzhou**	**63.34**	**316**	*e*P	**P**	**02 56 49.7**	**0.0**
LZH				*e*S	**S**	**03 05 24.1**	**+1.7**
LZH				sS	sS	03 05 32.2	+8.6
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,230nm,4.6s						
LZH				LR	LR		
	comp=Z,190nm,16.5s						
LZH				LR	LR		
	comp=Z,210nm,15.7s						
LZH				LR	LR		
	comp=Z,270nm,18.4s						
ZEA	**Zeya**	**64.19**	**343**	*e*P	**P**	**02 56 53.0**	**-1.7**
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
TAOE	**Nuku Hiva Isla**	**65.21**	**97**	*e*LR	LR	03 16 11.6	
MA2	**Magadan**	**65.99**	**358**	*ce*P	**P**	**02 57 03.5**	**-2.8**
MA2				pmax	pmax		
	comp=Z,12nm,2.5s						
MA2	**Magadan**	**65.99**	**358**	P	**P**	**02 57 04.5**	**-1.8**
MA2				IAmb	IAmb	02 57 33.6	
	comp=Z,10.0nm,1.0s						
GTA	**Gaotai**	**67.78**	**317**	⇓P	**P**	**02 57 19.1**	**+0.8**
GTA				pP	pwP	02 57 26.6	-3.1
GTA				sP	sP	02 57 29.6	+11
GTA				S	**S**	**03 06 17.0**	**+0.5**
GTA				pmax	pmax		
	comp=Z,14nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=Z,110nm,19.1s						
GTA				LR	LR		
	comp=Z,180nm,16.3s						
GTA				LR	LR		
	comp=Z,220nm,19.5s						
ULN	**Ulaanbaatar**	**68.14**	**328**	*ce*P	**P**	**02 57 20.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
ULN	**Ulaanbaatar**	**68.14**	**328**	P	**P**	**02 57 20.3**	**-0.1**
ULN				IAmb	IAmb	02 57 32.0	
	comp=Z,11nm,1.0s						
SONM	**Songino Array**	**68.47**	**328**	P	**P**	**02 57 22.3**	**-0.1**
	comp=Z,2.7nm,0.5s,baz=141,slow=9.6,SNR=6.6						
	comp=Z,2.7nm,0.5s						
SONM	**Songino Array**	**68.47**	**328**	P	**P**	**02 57 22.1**	**-0.3**
SONM				pmax	pmax		
	comp=Z,16nm,1.2s						
SONM	**Songino Array**	**68.47**	**328**	P	**P**	**02 57 22.1**	**-0.3**
SONM				IAmb	IAmb	02 57 30.1	
	comp=Z,16nm,1.2s						
SEY	**Seymchan**	**69.32**	**359**	*ce*P	**P**	**02 57 27.5**	**+0.3**
SEY				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GOMU	**GeErMu**	**69.85**	**312**	P	**P**	**02 57 32.0**	**+0.5**
GOMU				S	**S**	**03 06 44.4**	**+2.7**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,87nm,3.6s						
GOMU				LR	LR		
	comp=Z,110nm,19.6s						
GOMU				LR	LR		
	comp=Z,180nm,19.7s						
GOMU				LR	LR		
	comp=Z,160nm,19.4s						
VNDA	**Vanda**	**71.02**	**178**	P	**P**	**02 57 38.1**	**+0.7**
	comp=Z,7.6nm,0.9s,baz=332,slow=6.2,SNR=36						
	comp=Z,7.6nm,0.9s						
VNDA	**Vanda**	**71.02**	**178**	P	**P**	**02 57 38.2**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**71.02**	**178**	P	**P**	**02 57 38.2**	**+0.7**
VNDA				IAmb	IAmb	02 57 41.0	
	comp=Z,13nm,1.1s						
SBA	**Scott Base**	**71.55**	**177**	P	**P**	**02 57 42.0**	**+1.3**
SBA				pmax	pmax		
	comp=Z,17nm,1.2s						
SBA	**Scott Base**	**71.55**	**177**	P	**P**	**02 57 42.0**	**+1.3**
SBA				IAmb	IAmb	02 57 57.1	
	comp=Z,17nm,1.2s						
ZAK	**Zakamensk**	**71.63**	**329**	*e*P	**P**	**02 57 41.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,30nm,1.3s						
BOD	**Bodaibo**	**71.88**	**339**	*e*P	**P**	**02 57 40.3**	**-2.6**
BOD				pmax	pmax		
	comp=Z,13nm,1.6s						
MOY	**Mondy**	**73.55**	**329**	*e*P	**P**	**02 57 53.4**	**+0.2**
MOY				pmax	pmax		
	comp=Z,18nm,1.3s						
PALK	**Pallekele**	**74.42**	**279**	LR	LR	03 35 59.6	
	comp=Z,49nm,18.1s,baz=195,slow=40						
GAMB	**Gambell**	**74.77**	**15**	P	P	02 58 05.3	+5.5
	baz=215						
BILL	**Bilibino**	**74.94**	**5**	*ce*P	**P**	**02 57 58.2**	**-2.6**
BILL				*i*		02 58 06.7	
BILL				*e*		03 00 44.1	
BILL				*e*S	**S**	**03 07 33.8**	**-4.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,156nm,18.0s						
BILL	**Bilibino**	**74.94**	**5**	P	**P**	**02 57 59.9**	**-0.9**
OHAK	**Old Harbor**	**76.58**	**26**	P	P	02 58 14.7	+4.3
	baz=234						
P18K	**Big Mountain,**	**77.06**	**24**	P	P	02 58 17.3	+4.2
	baz=232						
ANM	**Nome**	**77.11**	**17**	P	P	02 58 18.6	+5.3
	baz=222						
KDAK	**Kodiak Island**	**77.22**	**26**	P	**P**	**02 58 11.3**	**-2.6**
	comp=Z,4.6nm,0.7s,baz=196,slow=7.4,SNR=2.1						
	comp=Z,4.6nm,0.7s						
KDAK	**Kodiak Island**	**77.22**	**26**	P	**P**	**02 58 17.9**	**+3.9**
	baz=235						
O18K	**Koktuh Hills**	**77.36**	**24**	P	**P**	**02 58 18.3**	**+3.5**
	baz=232						
Q19K	**Cape Douglas,**	**77.44**	**25**	P	P	02 58 19.4	+4.2
	baz=234,SNR=5.9						
N18K	**Kilae Creek**	**77.61**	**23**	P	P	02 58 21.1	+5.0
	baz=231,SNR=17						
WMQ	**Urumqi**	**77.86**	**317**	*e*P	**P**	**02 58 18.5**	**+0.5**
WMQ				sP	PcP	02 58 25.2	-2.7
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				LR	LR		
	comp=Z,500nm,29.2s						
WMQ				LR	LR		
	comp=Z,280nm,29.3s						
WMQ				LR	LR		
	comp=Z,150nm,24.7s						
O19K	**Port Alsworth**	**77.92**	**24**	P	P	02 58 21.9	+4.1
	baz=233						
P19K	**Oil Pt**	**78.03**	**24**	P	**P**	**02 58 22.6**	**+4.1**
	baz=234,SNR=7.2						
N19K	**Bonanza Creek**	**78.23**	**23**	P	P	02 58 24.1	+4.4
	baz=232,SNR=7.4						
O20K	**Slope Mountain**	**78.54**	**24**	P	**P**	**02 58 25.2**	**+3.8**
	baz=234						
L19K	**White Mountain**	**78.93**	**22**	P	**P**	**02 58 22.8**	**-0.6**
L19K	**White Mountain**	**78.93**	**22**	P	P	02 58 28.5	+5.0
	baz=232,SNR=16						
M19K	**Big River Lodg**	**78.93**	**22**	P	P	02 58 28.9	+5.4
	baz=232						
TTA	**Tatalina**	**78.98**	**21**	P	P	02 58 28.3	+4.6
	baz=231,SNR=14						
BRSE	**Bradley Lake S**	**79.12**	**25**	P	P	02 58 28.7	+4.2
	baz=236						
SPCR	**Spurr Chakacha**	**79.35**	**23**	P	P	02 58 31.2	+5.3
	baz=234						
M20K	**Styx River**	**79.40**	**23**	P	**P**	**02 58 28.0**	**+2.0**
M20K				IAmb	IAmb	02 58 33.6	
	comp=Z,17nm,0.8s						
M20K	**Styx River**	**79.40**	**23**	P	P	02 58 30.7	+4.6
	baz=234,SNR=9.2						
L20K	**Farewell, AK**	**79.47**	**22**	P	P	02 58 31.2	+4.8
	baz=233,SNR=8.9						
CAPN	**Captain Cook N**	**79.53**	**24**	P	P	02 58 31.4	+4.8
	baz=236						
TIXI	**Tiksi**	**79.81**	**352**	LR	LR	03 28 39.4	
	comp=Z,39nm,21.8s,baz=180,slow=32						
TIXI	**Tiksi**	**79.81**	**352**	*ce*P	**P**	**02 58 27.2**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TIXI	**Tiksi**	**79.81**	**352**	P	**P**	**02 58 27.3**	**-0.7**
GCSA	**Galena City Sc**	**79.85**	**19**	P	P	02 58 33.0	+4.7
	baz=230						
SEW	**Seward**	**79.86**	**25**	P	**P**	**02 58 32.5**	**+4.0**
	baz=237						
K20K	**Telida**	**79.94**	**21**	P	P	02 58 34.4	+5.6
	baz=232,SNR=12						
O22K	**Cooper Landing**	**79.96**	**25**	P	P	02 58 35.5	+6.6
	baz=237						
RC01	**Rabbit Creek A**	**80.28**	**24**	P	P	02 58 35.0	+4.2
	baz=237						
PPLA	**Purkeypile**	**80.35**	**22**	P	P	02 58 35.7	+4.4
	baz=234						
RDOG	**Red Dog Mine**	**80.37**	**15**	P	P	02 58 35.3	+4.2
	baz=223						
J20K	**Nowinta River**	**80.41**	**20**	P	P	02 58 36.6	+5.2
	baz=232,SNR=13						
M22K	**Willow**	**80.49**	**24**	P	**P**	**02 58 33.6**	**+1.7**
	baz=236						
CAST	**Castle Rocks**	**80.69**	**22**	P	**P**	**02 58 36.7**	**+3.7**
	baz=234,SNR=16						
CUT	**Chulitna**	**80.80**	**23**	P	**P**	**02 58 35.3**	**+1.8**
	baz=236						
PMR	**Palmer**	**80.80**	**24**	P	**P**	**02 58 37.5**	**+4.0**
	baz=237,SNR=9.6						
CHUM	**Lake Minchumin**	**80.88**	**21**	P	P	02 58 39.0	+5.1
	baz=234,SNR=13						
KNK	**Knik Glacier**	**80.98**	**24**	P	P	02 58 41.7	+7.2
	baz=238						
SML	**Sawmill**	**81.24**	**24**	P	**P**	**02 58 39.8**	**+3.9**
	baz=238						
M23K	**Glacier View**	**81.48**	**24**	P	**P**	**02 58 41.0**	**+3.8**
	baz=239						
BPAW	**Bear Paw Mtn.**	**81.49**	**21**	P	**P**	**02 58 40.5**	**+3.3**
	baz=235,SNR=7.4						
SCM	**Sheep Creek Mo**	**81.66**	**24**	P	P	02 58 42.5	+4.3
	baz=239						
WAT1	**Susitna Watana**	**81.70**	**23**	P	**P**	**02 58 42.0**	**+3.6**
	baz=238						
I21K	**Tanana**	**81.76**	**20**	P	P	02 58 43.4	+4.9
	baz=234,SNR=16						
H21K	**Melozitna Rive**	**81.76**	**20**	P	P	02 58 43.0	+4.4
	baz=233,SNR=9.8						
WAT6	**Susitna Watana**	**81.88**	**23**	P	**P**	**02 58 42.9**	**+3.5**
	baz=238						
KLU	**Klutina**	**82.07**	**25**	P	**P**	**02 58 44.4**	**+4.0**
	baz=240						
M24K	**Tolsona, Glenn**	**82.27**	**24**	P	P	02 58 45.7	+4.3
	baz=240						
DHY	**Denali Highway**	**82.28**	**23**	P	P	02 58 45.9	+4.4
	baz=239,SNR=9.5						
BMRM	**Bremner River**	**82.37**	**26**	P	**P**	**02 58 45.5**	**+3.6**
	baz=242						
MK31	**Makanchi Array**	**82.45**	**319**	*i* P	**P**	**02 58 41.0**	**-1.7**
MK31				pmax	pmax		
	comp=Z,27nm,1.1s						
MK31	**Makanchi Array**	**82.45**	**319**	P	**P**	**02 58 42.4**	**-0.3**
MK31				IAmb	IAmb	02 58 54.9	
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**82.45**	**319**	P	**P**	**02 58 42.8**	**+0.1**
	comp=Z,14nm,1.0s,baz=100,slow=6.6,SNR=27						
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	**82.45**	**319**	*ce*P	**P**	**02 58 42.5**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	**82.45**	**319**	P	**P**	**02 58 42.0**	**-0.7**
NEA2	**Nenana**	**82.45**	**21**	P	**P**	**02 58 45.6**	**+3.4**
	baz=237,SNR=14						
I23K	**Minto, Yukon-K**	**82.66**	**21**	P	P	02 58 47.4	+4.1
	baz=237						
MAKZ	**Makanchi**	**82.66**	**319**	P	**P**	**02 58 43.5**	**-0.2**
MAKZ	**Makanchi**	**82.66**	**319**	P	**P**	**02 58 43.6**	**-0.1**
N25K	**Chitina, Valde**	**82.68**	**25**	P	P	02 58 48.1	+4.5
	baz=242						
WRH	**Wood River Hil**	**82.75**	**22**		pP	02 58 47.3	+2.9
HARP	**HAARP**	**82.83**	**24**	P	P	02 58 49.4	+5.1
	baz=241						
H23K	**Yukon River**	**82.97**	**20**	P	P	02 58 49.6	+4.7
	baz=236,SNR=10						
PAX	**Paxson**	**82.98**	**24**	P	P	02 58 50.5	+5.4
	baz=240						
TCOL	**CIGO, UAF Yank**	**83.04**	**21**	P	**P**	**02 58 49.2**	**+4.0**
	baz=238						
COLA	**College**	**83.05**	**21**	*i* P	**P**	**02 58 45.3**	**0.0**
COLA				pmax	pmax		
	comp=Z,23nm,0.8s						
HDA	**Harding Lake**	**83.14**	**22**	P	**P**	**02 58 49.7**	**+3.9**
	baz=239						
K24K	**Donnelly Dome**	**83.27**	**23**	P	P	02 58 50.9	+4.4
	baz=240						
ZAA0	**Zalesovo Array**	**83.30**	**326**	P	**P**	**02 58 45.8**	**-1.0**
ZAA0				IAmb	IAmb	02 58 57.3	
	comp=Z,8.0nm,0.8s						
ZALV	**Zalesovo Beam**	**83.30**	**326**	P	**P**	**02 58 45.3**	**-1.5**
	comp=Z,4.7nm,0.6s,baz=119,slow=5.2,SNR=16						
	comp=Z,4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**83.30**	**326**	P	**P**	**02 58 45.5**	**-1.3**
ZALV	**Zalesovo Beam**	**83.30**	**326**	P	**P**	**02 58 45.5**	**-1.3**
POKR	**Poker Plat Res**	**83.33**	**21**	P	**P**	**02 58 49.3**	**+2.5**
	baz=238						
ILAR	**Eielson Array**	**83.35**	**22**	P	**P**	**02 58 43.5**	**-3.3**
	comp=Z,1.0nm,0.6s,baz=242,slow=5.6,SNR=19						
	comp=Z,1.0nm,0.6s						
PDGK	**Podgornoye**	**83.36**	**315**	P	**P**	**02 58 46.5**	**-1.1**
QSPA	**South Pole Qui**	**83.39**	**180**	P	**P**	**02 58 47.6**	**+0.2**
	comp=Z,46nm,1.1s,baz=342,slow=2.5,SNR=46						
	comp=Z,46nm,1.1s						
QSPA	**South Pole Qui**	**83.39**	**180**	P	**P**	**02 58 47.1**	**-0.2**
COLD	**Coldfoot**	**83.53**	**19**	P	P	02 58 52.4	+4.6
	baz=236						
H24K	**Noodor Dome**	**83.55**	**21**	P	P	02 58 52.1	+4.1
	baz=238,SNR=6.4						
RIDG	**Independent Ri**	**83.60**	**23**	P	**P**	**02 58 51.2**	**+2.9**
	baz=241						
M26K	**Nabesna, AK**	**83.72**	**25**	P	P	02 58 53.8	+5.0
	baz=243						
J25K	**Salcha River,**	**83.83**	**22**	P	**P**	**02 58 53.4**	**+4.0**
	baz=240						
L26K	**Log Cabin Wild**	**83.86**	**24**	P	P	02 58 53.7	+4.1
	baz=242						
PRZ	**Przheval'sk**	**83.92**	**314**	P	**P**	**02 58 50.7**	**+0.1**
PRZ				pmax	pmax		
	comp=Z,103nm,1.2s						
PRZ	**Przheval'sk**	**83.92**	**314**	P	**P**	**02 58 50.6**	**+0.1**
SCRK	**Sand Creek**	**84.05**	**23**	P	**P**	**02 58 54.3**	**+3.7**
	baz=242						
MAW	**Mawson**	**84.41**	**203**	P	**P**	**02 58 52.8**	**+0.5**
	comp=Z,24nm,0.9s,baz=100,slow=6.3,SNR=10						
	comp=Z,24nm,0.9s						
MAW	**Mawson**	**84.41**	**203**	P	**P**	**02 58 52.7**	**+0.5**
	baz=85,SNR=7.8						
MAW	**Mawson**	**84.41**	**203**	P	**P**	**02 58 52.9**	**+0.7**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**84.41**	**203**	P	**P**	**02 58 52.9**	**+0.5**
J26L	**Joseph Creek**	**84.46**	**23**	P	P	02 58 57.6	+4.9
	baz=242						
L27K	**Beaver Creek,**	**84.49**	**24**	P	P	02 58 57.1	+4.3
	baz=244						
YUK3	**Moose Creek**	**84.52**	**26**	P	**P**	**02 58 56.4**	**+3.3**
	baz=245						
TOLK	**Toolik Lake Re**	**84.52**	**18**	P	P	02 58 57.6	+4.8
	baz=236,SNR=14						
KDJ	**Kajisay**	**84.71**	**313**	P	**P**	**02 58 54.6**	**0.0**
KDJ				pmax	pmax		
	comp=Z,80nm,1.1s						
KDJ	**Kajisay**	**84.71**	**313**	P	**P**	**02 58 54.6**	**0.0**
K27K	**Chicken**	**84.82**	**23**	P	P	02 58 59.3	+4.9
	baz=244						
KSH	**Kashi**	**85.00**	**311**	P	**P**	**02 58 58.1**	**+2.1**
KSH				S	**S**	**03 09 29.2**	**+3.7**
KSH				pmax	pmax		
	comp=Z,36nm,1.3s						
MDOK	**Medeo**	**85.05**	**314**	P	**P**	**02 58 56.2**	**0.0**
YUK4	**Talbot Arm**	**85.13**	**27**	P	**P**	**02 58 59.7**	**+3.4**
	baz=247						
HYT	**Haines Junctio**	**85.45**	**27**	P	P	02 59 02.1	+4.4
	baz=248						
EGAK	**Eagle**	**85.51**	**23**	P	**P**	**02 59 01.9**	**+4.1**
	baz=244						
BOOM	**Boomskoye usch**	**85.69**	**313**	P	**P**	**02 58 58.5**	**-0.9**
BOOM				pmax	pmax		
	comp=Z,41nm,1.2s						
BOOM	**Boomskoye usch**	**85.69**	**313**	P	**P**	**02 58 58.5**	**-0.9**
KURK	**Kurchatov**	**85.91**	**322**	*ce*P	**P**	**02 59 00.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,38nm,1.7s						
KURK	**Kurchatov**	**85.91**	**322**	P	**P**	**02 58 59.8**	**-0.2**
DAWY	**Dawson**	**85.91**	**24**	P	P	02 59 04.6	+4.7
	baz=246						
KURBB	**Kurchatov Arra**	**85.94**	**322**	P	**P**	**02 58 58.9**	**-1.4**
	comp=Z,5.8nm,0.9s,baz=107,slow=3.8,SNR=19						
	comp=Z,5.8nm,0.9s						
KURBB	**Kurchatov Arra**	**85.94**	**322**	P	**P**	**02 58 58.3**	**-1.9**
NIL	**Nilore**	**85.97**	**304**	P	**P**	**02 58 59.8**	**-1.1**
NIL				pmax	pmax		
	comp=Z,40nm,1.5s						
NIL	**Nilore**	**85.97**	**304**	P	**P**	**02 58 59.8**	**-1.1**
TKM2	**Tokmak 2**	**86.03**	**314**	*i* P	**P**	**02 59 00.5**	**-0.7**
TKM2				pmax	pmax		
	comp=Z,25nm,1.2s						
AAK	**Ala-Archa**	**86.76**	**313**	P	**P**	**02 59 04.4**	**-0.3**
	comp=Z,5.8nm,0.9s,baz=143,slow=2.8,SNR=13						
	comp=Z,5.8nm,0.9s						
AAK	**Ala-Archa**	**86.76**	**313**	*ce*P	**P**	**02 59 05.1**	**+0.4**
AAK				pmax	pmax		
	comp=Z,20nm,1.7s						
AAK	**Ala-Archa**	**86.76**	**313**	P	**P**	**02 59 04.8**	**+0.1**
AAK				IAmb	IAmb	02 59 24.7	
	comp=Z,8.1nm,0.8s						
I29M	**Ogilvie Camp,**	**86.85**	**23**	P	**P**	**02 59 08.0**	**+3.5**
	baz=247						
NRIK	**Noril'sk**	**88.03**	**341**	P	**P**	**02 59 07.3**	**-2.7**
	comp=Z,1.1nm,0.3s,baz=103,slow=4.2,SNR=4.7						
	comp=Z,1.1nm,0.3s						
NRIK	**Noril'sk**	**88.03**	**341**	*ce*P	**P**	**02 59 09.3**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NRIK	**Noril'sk**	**88.03**	**341**	IAmb	IAmb	02 59 29.6	
	comp=Z,9.9nm,1.1s						
DRK	**Karamyk**	**88.16**	**310**	P	**P**	**02 59 11.9**	**+0.2**
OTUK	**Ortayu**	**89.34**	**319**	P	**P**	**02 59 15.4**	**-1.3**
KBL	**Kabul**	**89.56**	**305**	P	**P**	**02 59 16.7**	**-1.6**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	**Kabul**	**89.56**	**305**	P	**P**	**02 59 16.7**	**-1.6**
INK	**Inuvik**	**89.67**	**21**	P	**P**	**02 59 14.3**	**-3.4**
	comp=Z,1.0nm,0.9s,baz=210,slow=7.4,SNR=2.0						
	comp=Z,1.0nm,0.9s						
INK	**Inuvik**	**89.67**	**21**	P	P	02 59 22.1	+4.4
	baz=251						
KK31	**Karatay Array**	**89.72**	**313**	*i* P	**P**	**02 59 19.8**	**+1.2**
KK31	**Karatay Array**	**89.72**	**313**	P	**P**	**02 59 19.2**	**+0.6**
KK31				IAmb	IAmb	02 59 23.1	
	comp=Z,12nm,1.4s						
KKAR	**Karatay Array**	**89.72**	**313**	IAmb	IAmb	02 59 23.1	
	comp=Z,12nm,1.4s						
J05D	**Fort Rock, OR**	**90.65**	**47**	P	P	02 59 28.3	+5.2
	baz=262						
BVAR	**Borovoye Array**	**91.38**	**323**	P	**P**	**02 59 24.2**	**-1.9**
	comp=Z,1.5nm,0.6s						
	comp=Z,1.5nm,0.6s						
BRVK	**Borovoye**	**91.45**	**323**	*ce*P	**P**	**02 59 26.8**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,15nm,1.7s						
BRVK	**Borovoye**	**91.45**	**323**	P	**P**	**02 59 26.2**	**-0.1**
BRVK				IAmb	IAmb	02 59 27.8	
	comp=Z,7.6nm,1.0s						
MDPB	**Devils Postpil**	**91.52**	**52**	P	**P**	**02 59 26.2**	**-1.2**
OMMB	**Old Mammoth Mi**	**91.58**	**52**	P	**P**	**02 59 27.1**	**-0.7**
EDW2	**Edwards Air Fo**	**92.07**	**55**	P	**P**	**02 59 28.5**	**-1.3**
	baz=263						
RYN	**Ryan**	**92.08**	**52**	P	**P**	**02 59 28.6**	**-1.2**
RYN				IAmb	IAmb	02 59 40.0	
	comp=Z,11nm,1.1s						
CWC	**Cottonwood Cre**	**92.18**	**54**	P	**P**	**02 59 32.9**	**+2.6**
	baz=263						
NVAR	**Mina Array Bea**	**92.23**	**52**	P	**P**	**02 59 29.0**	**-1.6**
	comp=Z,9.0nm,1.2s,baz=254,slow=5.2,SNR=8.2						
	comp=Z,9.0nm,1.2s						
MPMC	**Manual Prospec**	**92.61**	**54**	P	**P**	**02 59 33.0**	**+0.6**
	baz=264						
GSC	**Goldstone, Bar**	**93.08**	**55**	P	**P**	**02 59 34.0**	**-0.5**
GSC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GSC	**Goldstone, Bar**	**93.08**	**55**	P	**P**	**02 59 34.0**	**-0.5**
GSC				IAmb	IAmb	02 59 45.8	
	comp=Z,7.6nm,1.3s						
QSM	**Queen of Sheba**	**93.10**	**54**	IAmb	IAmb	02 59 44.8	

	comp=Z,10nm,1.2s						
MONP2	**Monument Peak**	**93.16**	**57**	P	**P**	**02 59 34.1**	**-0.9**
	baz=264						
PFO	**Pinyon Flats O**	**93.20**	**57**	P	**P**	**02 59 33.3**	**-1.8**
PFO				pmax	pmax		
	comp=Z,24nm,1.5s						
PFO	**Pinyon Flats O**	**93.20**	**57**	P	**P**	**02 59 33.3**	**-1.8**
PFO	**Pinyon Flats O**	**93.20**	**57**	P	**P**	**02 59 33.2**	**-1.9**
	baz=264						
C36M	**Paulatuk**	**93.26**	**21**	P	**P**	**02 59 34.7**	**+0.4**
	baz=260						
GWY	**Greenwater Val**	**93.28**	**54**	P	**P**	**02 59 35.5**	**0.0**
GWY				IAmb	IAmb	02 59 45.6	
	comp=Z,8.4nm,1.2s						
A36M	**Sachs Harbour**	**93.35**	**18**	P	P	02 59 38.9	+4.2
	baz=259						
YUH	**Yuha Desert**	**93.55**	**58**	IAmb	IAmb	02 59 47.6	
	comp=Z,8.0nm,1.0s						
BELC	**Belle Mtn. Jos**	**93.62**	**56**	P	**P**	**02 59 36.0**	**-1.1**
	baz=264						
TPNV	**Topopah Spring**	**93.69**	**53**	IAmb	IAmb	02 59 47.7	
	comp=Z,11nm,1.3s						
TPNV	**Topopah Spring**	**93.69**	**53**	P	**P**	**02 59 36.2**	**-1.2**
	baz=265						
F10A	**Beach Ranch, E**	**93.81**	**44**	IAmb	IAmb	02 59 53.4	
	comp=Z,7.4nm,1.1s						
GMRC	**Granite Mounta**	**93.97**	**56**	P	**P**	**02 59 37.6**	**-1.1**
	baz=265						
BC3	**Big Chuckawall**	**94.04**	**57**	P	**P**	**02 59 38.0**	**-0.9**
	baz=265						
IRM	**Iron Mountain**	**94.34**	**56**	P	**P**	**02 59 39.3**	**-0.9**
	baz=265						
R11A	**Troy Canyon, C**	**94.34**	**52**	IAmb	IAmb	02 59 51.2	
	comp=Z,8.1nm,1.2s						
R11A	**Troy Canyon, C**	**94.34**	**52**	P	**P**	**02 59 38.8**	**-1.6**
	baz=265						
GLA	**Glamis**	**94.51**	**57**	P	**P**	**02 59 39.5**	**-1.5**
GLA				pmax	pmax		
	comp=Z,22nm,1.2s						
GLA	**Glamis**	**94.51**	**57**	P	**P**	**02 59 39.5**	**-1.5**
GLA	**Glamis**	**94.51**	**57**	P	**P**	**02 59 39.8**	**-1.2**
	baz=265						
SHPR	**Sheep Range**	**94.53**	**54**	IAmb	IAmb	02 59 51.9	
	comp=Z,14nm,1.3s						
PRN	**Pahroc Range**	**94.69**	**53**	IAmb	IAmb	02 59 52.5	
	comp=Z,6.9nm,1.0s						
HRA	**Herat**	**95.13**	**304**	IAmb	IAmb	02 59 46.1	
	comp=Z,11nm,1.2s						
PDMCI	**Parker Dam,Lak**	**95.18**	**56**	P	**P**	**02 59 43.4**	**-0.6**
	baz=266						
HLID	**Hailey**	**95.62**	**47**	P	**P**	**02 59 46.7**	**+0.6**
	baz=266						
LCMT	**Little Creek M**	**96.10**	**54**	IAmb	IAmb	02 59 59.8	
	comp=Z,8.9nm,1.3s						
YKA	**Yellowknife Ar**	**96.42**	**28**	P	**P**	**02 59 45.4**	**-3.6**
	comp=Z,0.6nm,0.8s,baz=264,slow=4.2,SNR=8.6						
	comp=Z,0.6nm,0.8s						
U15A	**North Rim**	**96.83**	**54**	IAmb	IAmb	03 00 01.1	
	comp=Z,3.9nm,0.9s						
AB31	**Akbulak array**	**97.60**	**319**	*i* P	**P**	**02 59 51.6**	**-3.0**
ABKAR	**Akbulak array**	**97.60**	**319**	P	**P**	**02 59 53.5**	**-1.1**
ARU	**Arti**	**98.46**	**326***c*	*i*P	**P**	**02 59 58.1**	**-0.2**
ARU						03 03 58.8	
ARU				S	**SKSac**	**03 10 36.1**	**-0.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ARU				MLR	MLR		
	comp=Z,172nm,17.0s						
GEYT	**Alibeck**	**98.65**	**307**	P	**P**	**02 59 58.9**	**-0.9**
GEYT				IAmb	IAmb	03 00 01.9	
	comp=Z,4.7nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**98.65**	**307**	P	**P**	**02 59 58.3**	**-1.4**
PDAR	**Pinedale Array**	**99.14**	**48**	P	**Pdif**	**02 59 58.8**	**-3.3**
	comp=Z,0.8nm,0.9s,baz=230,slow=3.6,SNR=5.4						
	comp=Z,0.8nm,0.9s						
PDAR	**Pinedale Array**	**99.14**	**48**	P	**Pdif**	**02 59 60.0**	**-2.1**
OBN	**Obninsk**	**110.87**	**327**	*i* PKIKP	**PKiKP**	**03 04 48.0**	**-5.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MNK	**Minsk**	**115.73**	**328**	*i* PKIKP	**PKiKP**	**03 04 57.3**	**-5.2**
MNK				*i*		03 06 00.8	
MNK				*i* PPP	PPP	03 08 27.4	
MNK				*i*		03 12 09.5	
MNK				MLR	MLR		
	comp=N,56nm,19.0s						
MNK				MLR	MLR		
	comp=Z,190nm,21.0s						
MNK				MLR	MLR		
	comp=E,22nm,21.0s						
MNK	**Minsk**	**115.73**	**328**	*i* PKP	**PKiKP**	**03 04 57.4**	**-5.2**
MNK				*i* PKP	**PKiKP**	**03 04 57.4**	**-5.2**
MNK				*i* PKP	**PKiKP**	**03 04 57.4**	**-5.2**
	baz=63						
MNK				*i* PP	**PP**	**03 06 00.9**	**-4.3**
MNK				*i* PPP	PPP	03 08 27.5	
MNK				*i* SKS	**SKSdf**	**03 12 09.5**	**-5.2**
MNK				*i* SSS	SSS	03 24 56.1	
MNK				*i* LQ	LQ	03 47 35.4	
MNK				*i* LR	LR	03 50 29.0	
MNK				*i* LRM	MLR	03 54 08.6	
	comp=E,22nm,20.8s						
MNK				*i* LRM	MLR	03 54 08.6	
	comp=N,56nm,18.5s						
MNK				*i* LRM	MLR	03 54 08.6	
	comp=Z,190nm,20.8s						
AKASG	**Malin Array Be**	**116.64**	**324**	PKP	**PKPdf**	**03 05 02.9**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=58,slow=3.1,SNR=3.3						
BRTR	**Keskin Array B**	**117.38**	**311**	PKP	**PKPdf**	**03 05 04.8**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=115,slow=2.4,SNR=5.2						
MAUC	**Maruska**	**123.70**	**327**	*e*PKPDF	**PKiKP**	**03 05 20.7**	**+2.4**
KRLC	**Kraliky**	**123.85**	**328**	*e*PKIKP	**PKiKP**	**03 05 20.4**	**+1.8**
KRLC	**Kraliky**	**123.85**	**328**	*e*PKPDF	**PKiKP**	**03 05 20.4**	**+1.8**
CLL	**Collm**	**124.98**	**331**	*e*PKIKP	**PKiKP**	**03 05 22.0**	**+1.2**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**124.98**	**331**	*e*PKPdf	**PKiKP**	**03 05 22.0**	**+1.2**
	comp=Z,4.0nm,1.0s						
CLL				*e*PP	**PP**	**03 07 10.0**	**+1.6**
DIVS	**Divibare**	**125.20**	**321**	PKPdf	**PKPdf**	**03 05 20.4**	**-0.8**
FNA	**Florina**	**125.81**	**316**	PKIKP	**PKPdf**	**03 05 20.6**	**-1.8**
FNA	**Florina**	**125.81**	**316**		**PKPdf**	**03 05 20.6**	**-1.8**
CKRC	**Cesky Krumlov**	**125.89**	**328**	*e*PKPDF	**PKiKP**	**03 05 23.8**	**+1.1**
KHC	**Kasperske Hory**	**126.08**	**329**	*e*PKIKP	**PKiKP**	**03 05 24.6**	**+1.5**
KHC	**Kasperske Hory**	**126.08**	**329**	*e*PKPDF	**PKiKP**	**03 05 24.6**	**+1.5**
KHC				*e*x	x	03 05 38.5	
GERES	**GERESS Array B**	**126.19**	**328**	PKP	**PKPdf**	**03 05 22.3**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=67,slow=3.5,SNR=10						
GERES	**GERESS Array B**	**126.19**	**328**	PKIKP	**PKiKP**	**03 05 24.6**	**+1.2**
GERES	**GERESS Array B**	**126.19**	**328**		**PKiKP**	**03 05 24.6**	**+1.2**
KBA	**Koelnbreinsper**	**127.47**	**327**	*e*P	**PKPdf**	**03 05 25.5**	**-0.1**
	comp=Z,3.3nm,1.2s						
ABTA	**Abfaltersbach**	**128.12**	**327**	*e*P	**PKPdf**	**03 05 26.6**	**-0.1**
	comp=Z,3.8nm,1.4s						
WTTA	**Wattenberg**	**128.26**	**328**	*e*P	**PKPdf**	**03 05 27.2**	**+0.1**
	comp=Z,5.0nm,0.8s						
MOTA	**Moosalm**	**128.49**	**328**	*i* P	**PKPdf**	**03 05 27.2**	**-0.2**
	comp=Z,4.8nm,1.2s						
SQTA	**Sankt Quirin**	**128.52**	**328**	*i* P	**PKPdf**	**03 05 26.3**	**-1.2**
	comp=Z,1.6nm,0.7s						
CPUP	**Villa Florida**	**135.34**	**138**	PKP	**PKPdf**	**03 05 42.0**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=5.0,slow=3.4,SNR=4.7						
ESDC	**Sonseca Array**	**141.56**	**332**	PKhKP	PKPpre	03 05 45.3	
	comp=Z,1.2nm,1.1s,baz=5.6,slow=2.3,SNR=3.7						
TOSP	**Speyside**	**145.56**	**80**		**PKPdf**	**03 05 56.6**	**-2.9**
BDFB	**Brasilia**	**148.96**	**136**	PKPbc	**PKPdf**	**03 06 07.5**	**+2.1**
	comp=Z,4.3nm,0.6s,baz=248,slow=0.8,SNR=8.8						
BDFB	**Brasilia**	**148.96**	**136**	PKIKP	**PKPdf**	**03 06 06.9**	**+1.5**
BDFB	**Brasilia**	**148.96**	**136**	PKPbc	**PKPdf**	**03 06 06.9**	**+1.5**
TORD	**Torodi Ar. Bea**	**151.98**	**286**	PKP	**PKPdf**	**03 06 09.1**	**-0.8**
	comp=Z,10nm,0.9s,baz=38,slow=2.1,SNR=19						
TORD				PKPbc	**PKPbc**	**03 06 14.9**	**-1.5**
	comp=Z,12nm,0.8s,baz=71,slow=2.3,SNR=22						
TORD				PP	**PP**	**03 09 52.6**	**-5.0**
	comp=Z,1.3nm,1.1s,baz=104,slow=6.1,SNR=2.5						
KIC	**Kosan Boka**	**158.89**	**271**	*e*P	**PKPab**	**03 06 55.8**	**+0.4**
	comp=Z,25nm,1.1s						
DBIC	**Dimbokro**	**159.01**	**271**	PKPab	**PKPab**	**03 06 55.6**	**-0.2**
	comp=Z,12nm,1.1s,baz=114,slow=5.6,SNR=3.4						
LIC	**Lamto**	**159.17**	**270**	*e*P	**PKPab**	**03 06 57.4**	**+0.8**
	comp=Z,20nm,1.1s						
TIC	**Toumodi**	**159.18**	**271**	*e*P	**PKPab**	**03 06 56.7**	**+0.1**

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*IDC **07** 02:55:02.2±1.4, 35°.86N×27°.30E, h0^{km}, mb3.6/4, mbtmp3.5/5, ML2.7/1, MS3.8/2, Error ellipse: s-maj=63.8km s-min=20.7km az=140.0*

*NIC **07** 02:55:04.0±0.0, 35°.70N×27°.49E, h16^{km}, Ml3.9/4*

*DDA **07** 02:55:03.9±0.0, 35°.82N×27°.29E, h23^{km}±2^{km}, MW3.5*

*ISK **07** 02:55:03.9, 35°.76N×27°.41E, h11^{km}, ML3.5/19*

*ATH **07** 02:55:04.1, 35°.81N×27°.38E, h19^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=2.1km s-min=0.9km az=127.0*

*THE **07** 02:55:04.7, 35°.74N×27°.48E, h5^{km}±2^{km}, ML3.2/6, Error ellipse: s-maj=3.3km s-min=0.6km az=137.0*

*GII **07** 02:55:08.6±0.0, 35°.30N×27°.81E, h5^{km}*

ISC 07 02:55:03.9±1.0**, 35°.71N**±0°.02×**27°.46E**±0°.02**, h17**^{km}±7^{km}**, n123,** σ**1^s.40**/162**, mb3.6**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.29**	**236**	P	**Pg**	**02 55 10.7**	**+0.4**
KARP				S	**Sb**	**02 55 15.7**	**+0.5**
KARP				AML	AML	02 55 16.5	
	comp=N,90522µm,0.3s						
KARP				AML	AML	02 55 16.7	
	comp=E,71046µm,0.2s						
KARP	**Karpathos**	**0.29**	**236**	P	**Pg**	**02 55 10.7**	**+0.4**
KARP				S	**Sb**	**02 55 15.9**	**+0.6**
	comp=E,41µm,0.2s						
KARP	**Karpathos**	**0.29**	**236**	PG	**Pg**	**02 55 10.5**	**+0.2**
KARP				SG	**Sb**	**02 55 15.3**	**0.0**
KARP	**Karpathos**	**0.29**	**236**	P	**Pg**	**02 55 10.6**	**+0.4**
KARP				S	**Sb**	**02 55 15.8**	**+0.6**
KARP				AML	AML	02 55 15.9	
	comp=E,90nm,0.3s						
KARP				AML	AML	02 55 15.9	
	comp=E,90nm,0.3s						
KARP				AML	AML	02 55 16.2	
	comp=E,70nm,0.2s						
KARP				AML	AML	02 55 16.2	
	comp=E,70nm,0.2s						
ARG	**Arkhangelos**	**0.74**	**47**	P	**Pg**	**02 55 18.5**	**0.0**
ARG				S	**Sg**	**02 55 28.2**	**0.0**
ARG				AML	AML	02 55 31.2	
	comp=N,4807µm,0.3s						
ARG				AML	AML	02 55 32.4	
	comp=E,6196µm,0.3s						
ARG	**Arkhangelos**	**0.74**	**47**	P	**Pg**	**02 55 18.5**	**0.0**
ARG				S	**Sb**	**02 55 28.9**	**+0.8**
	comp=E,3µm,0.3s						
ARG	**Arkhangelos**	**0.74**	**47**	PG	**Pg**	**02 55 18.5**	**0.0**
ARG				SG	**Sb**	**02 55 29.1**	**+1.0**
ARG	**Arkhangelos**	**0.74**	**47**	P	**Pg**	**02 55 18.4**	**0.0**
ARG				S	**Sb**	**02 55 28.9**	**+0.8**
NISR	**Nisiros**	**0.94**	**344**	P	**Pn**	**02 55 23.2**	**+1.0**
NISR				S	**Sn**	**02 55 35.9**	**+0.7**
	comp=E,2µm,0.5s						
DAT	**Datca**	**1.02**	**5**	P	**Pn**	**02 55 23.9**	**+0.4**
DAT				S	**Sn**	**02 55 38.0**	**+0.5**
DAT	**Datca**	**1.02**	**5**	PG	**Pb**	**02 55 23.3**	**+0.1**
DAT				SG	**Sn**	**02 55 37.2**	**-0.3**
KOSK	**Kos Island**	**1.11**	**340**	P	**Pn**	**02 55 24.6**	**0.0**
KOSK				S	**Sg**	**02 55 37.0**	**-2.9**
KOSK				AML	AML	02 55 47.0	
	comp=E,3269µm,0.5s						
KOSK				AML	AML	02 55 47.5	
	comp=N,4435µm,0.7s						
KOSK	**Kos Island**	**1.11**	**340**	P	**Pn**	**02 55 25.2**	**+0.6**
KOSK				S	**Sn**	**02 55 40.3**	**+0.9**
	comp=N,688nm,0.6s						
KOSK	**Kos Island**	**1.11**	**340**	PG	**Pn**	**02 55 24.9**	**+0.3**
ZKR	**Zakros**	**1.18**	**240**	P	**Pb**	**02 55 26.3**	**+0.5**
ZKR				S	**Sn**	**02 55 42.9**	**+1.8**
ZKR				AML	AML	02 55 47.3	
	comp=E,5344µm,0.3s						
ZKR				AML	AML	02 55 48.7	
	comp=N,2010µm,0.3s						
ZKR	**Zakros**	**1.18**	**240**	P	**Pg**	**02 55 26.6**	**-0.1**
ZKR				S	**Sn**	**02 55 43.0**	**+1.8**
	comp=N,2µm,0.4s						
ZKR	**Zakros**	**1.18**	**240**	PN	**Pb**	**02 55 26.3**	**+0.5**
ZKR				SN	**Sn**	**02 55 43.6**	**+2.4**
ZKR	**Zakros**	**1.18**	**240**	P	**Pb**	**02 55 25.4**	**-0.4**
ZKR				S	**Sn**	**02 55 42.8**	**+1.8**
ZKR				AML	AML	02 55 44.4	
	comp=N,1.2nm,0.4s						
ZKR				AML	AML	02 55 44.4	
	comp=N,1.2nm,0.4s						
ZKR				AML	AML	02 55 46.0	
	comp=N,4.5nm,0.3s						
ZKR				AML	AML	02 55 46.0	
	comp=N,4.5nm,0.3s						
TURN	**Turunc**	**1.24**	**31**	PN	**Pb**	**02 55 27.0**	**+0.2**
TURN	**Turunc**	**1.24**	**31**	P	**Pg**	**02 55 27.3**	**-0.5**
TURN				S	**Sn**	**02 55 43.4**	**+0.8**
TURN				*i* AML	AML	02 55 48.0	
	comp=N,427nm,0.3s						
BDRM	**Kayabasi**	**1.35**	**360**	P	**Pn**	**02 55 28.0**	**0.0**
BDRM				S	**Sb**	**02 55 45.1**	**-0.7**
BDRM				*i* AML	AML	02 55 50.0	
	comp=N,240nm,0.5s						
BODT	**Bodrum**	**1.35**	**355**	P	**Pg**	**02 55 29.2**	**-0.8**
BODT				S	**Sb**	**02 55 45.3**	**-0.5**
BODT	**Bodrum**	**1.35**	**355**	PN	**Pn**	**02 55 28.2**	**+0.2**
BODT	**Bodrum**	**1.35**	**355**	P	**Pg**	**02 55 30.7**	**+0.7**
BODT				S	**Sb**	**02 55 44.8**	**-1.0**
DALY	**Dalyan (Mula)**	**1.47**	**41**	PN	**Pb**	**02 55 31.2**	**+0.5**
YER	**Yerkesik**	**1.57**	**25**	PN	**Pb**	**02 55 32.2**	**-0.3**
YER	**Yerkesik**	**1.57**	**25**	P	**Pb**	**02 55 32.5**	**0.0**
YER				S	**Sg**	**02 55 54.2**	**-0.3**
YER				*i* AML	AML	02 55 58.0	
	comp=N,40nm,0.4s						
YER				*i* AML	AML	02 56 03.0	
	comp=N,76nm,0.7s						
FRMA	**Ierapetra Chan**	**1.57**	**244**	P	**Pn**	**02 55 31.6**	**+0.6**
FRMA				S	**Sb**	**02 55 52.5**	**+0.5**
FRMA				AML	AML	02 55 58.7	
	comp=N,3506µm,0.5s						
FRMA				AML	AML	02 56 00.7	
	comp=E,3274µm,0.4s						
FRMA	**Ierapetra Chan**	**1.57**	**244**	P	**Pn**	**02 55 31.6**	**+0.6**
FRMA				S	**Sn**	**02 55 51.7**	**+0.8**
MLSB	**Milas**	**1.60**	**9**	PN	**Pn**	**02 55 32.1**	**+0.7**
MLSB	**Milas**	**1.60**	**9**	P	**Pg**	**02 55 33.5**	**-1.2**
MLSB				S	**Sn**	**02 55 51.5**	**-0.2**
MLSB				*i* AML	AML	02 55 57.0	
	comp=E,108nm,0.7s						
MLSB				*i* AML	AML	02 56 01.0	
	comp=E,31nm,0.5s						
FETY	**Fethiye**	**1.61**	**55**	PN	**Pb**	**02 55 33.4**	**+0.3**
MULA	**Mugla, Merkez-**	**1.69**	**24**	P	**Pb**	**02 55 34.9**	**+0.3**
MULA				S	**Sb**	**02 55 56.0**	**+0.4**
MULA				*i* AML	AML	02 56 04.0	
	comp=E,134nm,0.6s						
MULA				*i* AML	AML	02 56 06.0	
	comp=E,276nm,0.6s						
THR8	**Santorini-Mono**	**1.75**	**294**	P	**Pn**	**02 55 33.9**	**+0.6**
THR8	**Santorini-Mono**	**1.75**	**294**	P	**Pn**	**02 55 34.0**	**+0.6**
DDIM	**Aydin, Didim**	**1.75**	**354**	P	**Pn**	**02 55 33.5**	**+0.1**
THR6	**Thira Island,**	**1.79**	**292**	P	**Pb**	**02 55 35.1**	**-1.1**
THR6	**Thira Island,**	**1.79**	**292**	P	**Pb**	**02 55 35.1**	**-1.1**
SFIR	**Foira Santorin**	**1.79**	**294**	P	**Pn**	**02 55 34.7**	**+0.7**
THT2	**Imerovigli**	**1.80**	**294**	P	**Pn**	**02 55 35.0**	**+0.9**
THR3	**Thira Island,**	**1.81**	**293**	P	**Pn**	**02 55 35.1**	**+0.8**
THR3	**Thira Island,**	**1.81**	**293**	P	**Pn**	**02 55 35.0**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.81**	**293**	P	**Pn**	**02 55 35.0**	**+0.8**
AKAS	**Kas**	**1.82**	**73**	PN	**Pn**	**02 55 36.6**	**+2.1**
AKAS	**Kas**	**1.82**	**73**	P	**Pn**	**02 55 35.5**	**+1.0**
AKAS				S	**Sn**	**02 55 59.2**	**+2.0**
THR9	**Santorini-Faro**	**1.82**	**291**	P	**Pn**	**02 55 35.5**	**+1.0**
THR9	**Santorini-Faro**	**1.82**	**291**	P	**Pn**	**02 55 35.4**	**+1.0**
CMBO	**Columbo, Santo**	**1.82**	**295**	P	**Pn**	**02 55 35.2**	**+0.8**
CMBO	**Columbo, Santo**	**1.82**	**295**	P	**Pn**	**02 55 35.3**	**+0.8**
THR5	**Thira Island,**	**1.85**	**293**	P	**Pn**	**02 55 35.3**	**+0.5**
THR5	**Thira Island,**	**1.85**	**293**	P	**Pn**	**02 55 35.2**	**+0.5**
HRKL	**Herakleio**	**1.96**	**259**	PN	**Pn**	**02 55 37.8**	**+1.4**
AYDN	**Tasoluk**	**1.97**	**10**	P	**Pn**	**02 55 38.1**	**+1.5**
KSTL	**Kastelli Herak**	**1.99**	**259**	P	**Pn**	**02 55 35.7**	**-1.0**
KSTL	**Kastelli Herak**	**1.99**	**259**	P	**Pn**	**02 55 36.2**	**-0.5**
GCAM	**G?zelcaml?**	**1.99**	**355**	PN	**Pb**	**02 55 38.2**	**-1.5**
GCAM	**G?zelcaml?**	**1.99**	**355**	P	**Pb**	**02 55 38.6**	**-1.1**
SMG	**Samos**	**2.05**	**346**	P	**Pn**	**02 55 38.2**	**+0.6**
SMG	**Samos**	**2.05**	**346**	P	**Pn**	**02 55 38.3**	**+0.6**
CAEL	**Denizli, Camel**	**2.06**	**46**	P	**Pb**	**02 55 41.1**	**+0.2**
CAEL				S	**Sg**	**02 56 10.3**	**0.0**
CAEL				*i* AML	AML	02 56 19.0	
	comp=E,581nm,0.5s						
CAEL				*i* AML	AML	02 56 25.0	
	comp=E,402nm,0.7s						
APE	**Apeiranthos**	**2.06**	**312**	P	**Pn**	**02 55 38.2**	**+0.4**
APE	**Apeiranthos**	**2.06**	**312**	P	**Pn**	**02 55 38.5**	**+0.8**
APE	**Apeiranthos**	**2.06**	**312**	PN	**Pn**	**02 55 38.6**	**+0.8**
APE	**Apeiranthos**	**2.06**	**312**	P	**Pn**	**02 55 37.0**	**-0.7**
TAVA	**DENIZLI_Tavas**	**2.11**	**33**	P	**Pb**	**02 55 41.4**	**-0.3**
TAVA				S	**Sb**	**02 56 08.1**	**+0.5**
TAVA				*i* AML	AML	02 56 15.0	
	comp=E,246nm,0.6s						
TAVA				*i* AML	AML	02 56 16.0	
	comp=E,221nm,0.4s						
IDI	**Anoyia**	**2.14**	**259**	P	**Pn**	**02 55 39.5**	**+0.7**
IDI	**Anoyia**	**2.14**	**259**	P	**Pn**	**02 55 39.8**	**+1.0**
IDI	**Anoyia**	**2.14**	**259**	PN	**Pn**	**02 55 39.6**	**+0.7**
ELL	**Elmali**	**2.23**	**62**	PN	**Pn**	**02 55 42.5**	**+2.2**
ELL	**Elmali**	**2.23**	**62**	P	**Pn**	**02 55 42.1**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**2.26**	**9**	PN	**Pn**	**02 55 41.6**	**+1.1**
SIVA	**Sivas**	**2.27**	**253**	P	**Pb**	**02 55 43.6**	**-0.8**
GOLH	**Golhisar**	**2.28**	**47**	P	**Pn**	**02 55 43.1**	**+2.3**
GOLH				S	**Sb**	**02 56 14.3**	**+1.8**
GOLH				*i* AML	AML	02 56 24.0	
	comp=E,178nm,0.6s						
GOLH				*i* AML	AML	02 56 25.0	
	comp=E,192nm,0.6s						
TMBK	**Timbaki Herakl**	**2.29**	**255**	P	**Pb**	**02 55 43.4**	**-1.3**
DGB	**zmir**	**2.38**	**349**	P	**Pn**	**02 55 42.1**	**0.0**
AKUM	**Antalya-Kumluc**	**2.42**	**75**	P	**Pn**	**02 55 43.1**	**+0.5**
AKUM				S	**Sn**	**02 56 11.8**	**0.0**
CHAN	**Chania**	**2.79**	**267**	P	**Pn**	**02 55 49.4**	**+1.7**
IMMV	**Iera Moni Meta**	**2.84**	**266**	P	**Pn**	**02 55 49.6**	**+1.1**
IMMV	**Iera Moni Meta**	**2.84**	**266**	P	**Pn**	**02 55 50.0**	**+1.5**
IMMV	**Iera Moni Meta**	**2.84**	**266**	PN	**Pn**	**02 55 50.0**	**+1.5**
BRDR	**BURDUR-Merkez**	**2.88**	**46**	P	**Pn**	**02 55 49.1**	**0.0**
GVD	**Gavdhos**	**2.89**	**253**	P	**Pb**	**02 55 53.1**	**-1.9**
GVD	**Gavdhos**	**2.89**	**253**	PN	**Pn**	**02 55 51.3**	**+2.2**
MANT	**Manisa**	**2.91**	**17**	P	**Pn**	**02 55 48.6**	**-1.0**
KULA	**Kula-Manisa**	**2.96**	**19**	P	**Pn**	**02 55 51.1**	**+1.0**
BUCA	**Burdur, Bucak-**	**2.97**	**56**	P	**Pn**	**02 55 52.7**	**+2.3**
RODP	**Rodopos**	**3.02**	**268**	P	**Pn**	**02 55 52.5**	**+1.6**
PASA	**Karahalli, USA**	**3.09**	**31**	P	**Pn**	**02 55 53.2**	**+1.2**
KNDR	**Palaiochora Ch**	**3.12**	**262**	P	**Pn**	**02 55 55.4**	**+3.2**
USAK	**Uak-Merkez**	**3.25**	**22**	P	**Pn**	**02 55 55.7**	**+1.6**
KZIL	**AFYON_Kizioren**	**3.33**	**39**	P	**Pn**	**02 55 55.7**	**+0.4**
SIMA	**Simav-Kutahya**	**3.58**	**19**	P	**Pn**	**02 55 58.2**	**-0.5**
KTHR	**Kythira**	**3.65**	**280**	P	**Pn**	**02 56 01.4**	**+1.8**
STEP	**BALIKESIR_Sava**	**3.66**	**3**	P	**Pn**	**02 56 01.2**	**+1.4**
GDZ	**Gediz**	**3.73**	**25**	P	**Pn**	**02 56 03.7**	**+2.9**
VLI	**Veliai**	**3.79**	**287**	P	**Pn**	**02 56 03.4**	**+1.9**
BUHA	**Balikesir, Bur**	**3.79**	**356**	P	**Pn**	**02 56 01.7**	**+0.2**
OSC1	**CSNet OBS 1**	**3.85**	**124**	P	**Pn**	**02 56 02.4**	**+0.2**
DURS	**Dursunbey**	**3.96**	**11**	P	**Pn**	**02 56 03.7**	**-0.2**
AKMS	**Akamas**	**4.05**	**98**	P	**Pn**	**02 56 05.6**	**+0.5**
AKMS				AML	AML	02 56 52.7	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	02 56 53.0	
	comp=E,0.6nm,0.3s						
ALFC	**Alefka**	**4.24**	**96**	P	**Pn**	**02 56 07.9**	**+0.2**
ALFC				AML	AML	02 56 55.4	
	comp=E,0.2nm,0.5s						
ALFC				AML	AML	02 56 55.5	
	comp=E,0.4nm,0.6s						
NATA	**Nata**	**4.29**	**101**	P	**Pn**	**02 56 08.8**	**+0.5**
SZAC	**Souni**	**4.54**	**101**	P	**Pn**	**02 56 12.6**	**+0.7**
ASGA	**Asgata**	**4.83**	**99**	P	**Pn**	**02 56 16.4**	**+0.6**
CSS	**Mathiatis**	**4.86**	**97**	P	**Pn**	**02 56 16.4**	**+0.2**
MVOU	**Mavrovouni**	**5.09**	**96**	P	**Pn**	**02 56 19.9**	**+0.4**
BRTR	**Keskin Array B**	**6.33**	**49**	Pn	**Pn**	**02 56 38.8**	**+2.2**
	comp=E,0.2nm,0.3s,baz=234,slow=15,SNR=6.1						
BRTR				Sn	**Sn**	**02 57 50.7**	**+2.3**
	comp=E,0.1nm,0.3s,baz=217,slow=25,SNR=3.6						
	comp=E,0.5nm,0.4s						
GEM	**Giv'at Ha'Em**	**7.22**	**108**	Pn	**Pn**	**02 56 50.1**	**+1.4**
NATI	**Neve Ativ**	**7.26**	**107**	Pn	**Pn**	**02 56 50.1**	**+0.9**
NATI				Sn	**Sn**	**02 58 09.1**	**-2.1**
AMAZ	**Amatzia**	**7.49**	**122**	Pn	**Pn**	**02 56 52.5**	**+0.2**
AMAZ				Sn	**Sn**	**02 58 14.1**	**-2.7**
KZIT	**Kziot**	**7.53**	**128**	Pn	**Pn**	**02 56 52.6**	**-0.3**
KZIT				Sn	**Sn**	**02 58 13.9**	**-4.0**
YTIR	**Yattir**	**7.72**	**122**	Pn	**Pn**	**02 56 55.6**	**-0.1**
YTIR				Sn	**Sn**	**02 58 19.6**	**-3.2**
KRMI	**Paran Flat**	**8.27**	**130**	Pn	**Pn**	**02 57 02.5**	**-0.6**
KRMI				Sn	**Sn**	**02 58 31.9**	**-4.3**
PRNI	**Paran**	**8.29**	**128**	Pn	**Pn**	**02 57 03.7**	**+0.4**
PRNI				Sn	**Sn**	**02 58 32.4**	**-4.2**
HRFI	**Mount Harif**	**8.52**	**129**	Pn	**Pn**	**02 57 06.5**	**-0.1**
HRFI				Sn	**Sn**	**02 58 37.7**	**-4.6**
MBRI	**Mt Berech**	**8.62**	**131**	Pn	**Pn**	**02 57 07.8**	**-0.1**
MBRI				Sn	**Sn**	**02 58 40.2**	**-4.5**
EIL	**Elat**	**8.73**	**132**	Pn	**Pn**	**02 57 09.8**	**+0.5**
EIL				Sn	**Sn**	**02 58 42.4**	**-4.9**
DAVOX	**Davos/Dischmat**	**17.19**	**315**	LR	LR	03 07 49.3	
	comp=E,48nm,18.1s,baz=95,slow=45						
TORD	**Torodi Ar. Bea**	**32.30**	**232**	P	**P**	**03 01 32.7**	**+0.7**
	comp=E,0.9nm,0.5s,baz=34,slow=8.8,SNR=22						
	comp=E,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**33.90**	**359**	P	**P**	**03 01 45.1**	**-0.4**
	comp=E,1.3nm,0.9s,baz=163,slow=6.4,SNR=1.6						
	comp=E,1.3nm,0.9s						
KURBB	**Kurchatov Arra**	**39.31**	**51**	P	**P**	**03 02 33.3**	**+1.5**
	comp=E,0.4nm,0.6s,baz=277,slow=8.9,SNR=2.4						
	comp=E,0.4nm,0.6s						
MKAR	**Makanchi Array**	**41.90**	**57**	P	**P**	**03 02 54.4**	**+1.0**
	comp=E,0.2nm,0.5s,baz=269,slow=8.1,SNR=1.6						
	comp=E,0.2nm,0.5s						
ULM	**Lac du Bonnet**	**80.88**	**327**	LR	LR	03 44 51.4	
	comp=E,292nm,19.1s,baz=288,slow=37						

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*MEX **07** 03:30:50.1±1.4, 18°.30N×105°.47W, h16^{km}±77^{km}, MD4.2*

*NEIC **07** 03:30:56.0±2.6, 18°.58N±0°.07×104°.9W±0°.1, h10^{km}±2^{km}, mb4.3/63, Md4.2/31(MEX), Error ellipse: s-maj=18.3km s-min=9.6km az=239.0*

*IDC **07** 03:30:59.5±6.8, 18°.48N×105°.11W, h78^{km}±42^{km}, mb3.1/4, mbtmp3.6/7, ML3.4/3, MS3.4/1, Error ellipse: s-maj=89.9km s-min=31.8km az=35.0*

ISC 07 03:30:52.3±2.7**, 18°.47N**±0°.06×**105°.10W**±0°.07**, h5**^{km}±15^{km}**, n72,** σ**1^s.28**/73**, mb4.2**/12**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDAR	**Ciudad de Arme**	**1.13**	**65**	*e*P	**Pb**	**03 31 12.9**	**-1.5**
CDAR				*e*S	**Sn**	**03 31 30.9**	**+0.1**
R15V		**1.26**	**56**		**Sn**	**03 31 34.9**	**+0.7**
R15V		**1.26**	**56**	*i* P	**Pn**	**03 31 15.2**	**-1.6**
R15V				*e*S	**Sn**	**03 31 34.9**	**+0.7**
COIG	**Colima**	**1.51**	**62**	*i* P	**Pn**	**03 31 18.9**	**-1.2**
COIG				*e*S	**Sg**	**03 31 41.0**	**+0.2**
MMIG	**Aquila**	**1.67**	**96**		**Pn**	**03 31 20.3**	**-2.1**
MMIG					**Sn**	**03 31 43.4**	**-0.8**
MMIG	**Aquila**	**1.67**	**96**	*i* P	**Pn**	**03 31 20.3**	**-2.1**
MMIG				*e*S	**Sn**	**03 31 43.4**	**-0.8**
MNGA	**Volcan de Coli**	**1.71**	**54**	*i* P	**Pn**	**03 31 23.0**	**-0.1**
MNGA				*e*S	**Sn**	**03 31 45.3**	**-0.3**
EZ5V		**1.73**	**54**		**Pn**	**03 31 23.4**	**0.0**
EZ5V		**1.73**	**54**	*i* P	**Pn**	**03 31 23.4**	**0.0**
EZ5V				*e*S	**Sg**	**03 31 48.6**	**+0.5**
INCO	**Volcan de Coli**	**1.76**	**53**	*i* P	**Pn**	**03 31 23.3**	**-0.6**
INCO				*e*S	**Sb**	**03 31 47.2**	**-0.7**
JUBC	**Volcan de Coli**	**1.78**	**54**	*i* P	**Pn**	**03 31 24.1**	**+0.1**
JUBC				*e*S	**Sg**	**03 31 50.0**	**+0.4**
ANIG	**Ahuacatlan**	**2.62**	**12**		**Pn**	**03 31 33.9**	**-1.7**
ANIG					**Sn**	**03 32 08.1**	**+0.2**
ANIG	**Ahuacatlan**	**2.62**	**12**	*i* P	**Pn**	**03 31 33.9**	**-1.7**
ANIG				*e*S	**Sn**	**03 32 08.1**	**+0.2**
ZIIG	**Zihuatanejo**	**3.56**	**103**		**Pn**	**03 31 47.6**	**-0.7**
ZIIG					**Sn**	**03 32 30.2**	**-0.6**
ZIIG	**Zihuatanejo**	**3.56**	**103**	*e*P	**Pn**	**03 31 47.6**	**-0.7**
ZIIG				*e*S	**Sn**	**03 32 30.2**	**-0.6**
ARIG	**Puente Sto Nin**	**4.51**	**92**		**Pn**	**03 32 02.4**	**+0.9**
ARIG					**Sn**	**03 32 56.5**	**+2.1**
ARIG	**Puente Sto Nin**	**4.51**	**92**	*e*P	**Pn**	**03 32 02.4**	**+0.9**
ARIG				*e*S	**Sn**	**03 32 56.5**	**+2.1**
ZAIG	**Zacatecas**	**4.89**	**29**		**Sn**	**03 33 03.8**	**-0.2**
ZAIG	**Zacatecas**	**4.89**	**29**	*e*P	**Pn**	**03 32 06.4**	**-0.4**
ZAIG				*e*S	**Sn**	**03 33 03.8**	**-0.2**
H06E1	**SOCORRO T-PHAS**	**5.54**	**274**	T	T	03 37 15.5	
	SNR=246						
H06S1	**SOCORRO T**	**5.56**	**274**	T	T	03 37 18.7	
	SNR=55						
H06N1	**SOCORRO T-PHAS**	**5.60**	**275**	T	T	03 37 22.1	
	SNR=8.6						
TLIG	**Tlapa**	**6.28**	**97**	Pn	**Pn**	**03 32 25.6**	**-0.2**
CMIG	**Matias Romero**	**9.83**	**96**	P	**Pn**	**03 33 18.4**	**+4.0**

	0.4nm,0.3s,baz=290,slow=8.1,SNR=4.7						
	2.7nm,0.7s						
TX31	Lajitas Ar. Si	10.89	7		Pn	03 33 30.3	+1.2
TX32	Lajitas Array	10.89	7		Pn	03 33 30.0	+1.0
TXAR	Lajitas Array	10.89	7	P	Pn	03 33 32.2	+3.1
	0.1nm,0.3s,baz=186,slow=14,SNR=14						
TXAR				LR	LR	03 37 54.7	
	comp=Z,175nm,18.9s,baz=182,slow=38						
	1.3nm,0.8s						
TXAR	Lajitas Array	10.89	7	Pn	Pn	03 33 29.8	+0.7
833A	Chaparral WMA,	11.11	27	Pn	Pn	03 33 32.8	+0.7
JCT	Junction City	12.89	21	Pn	Pn	03 33 57.4	+1.0
ABTX	Abilene, Hawle	14.92	18	Pn	Pn	03 34 25.3	+1.2
WHTX	Lake Whitney,	15.12	26	Pn	Pn	03 34 27.8	+1.0
MSTX	Muleshoe	15.57	7	Pn	Pn	03 34 33.7	+0.9
MSTX				IAmb	IAmb	03 34 40.8	
	comp=Z,13nm,0.8s						
BNM	Barren Site	15.68	355	Pn	Pn	03 34 34.9	+0.7
NATX	Nacogdoches	16.24	33	Pn	Pn	03 34 41.8	+0.4
NATX				IAmb	IAmb	03 34 47.8	
	comp=Z,39nm,0.9s						
Z35A	Perchaven, San	16.38	24	Pn	Pn	03 34 44.2	+1.1
Z35A				IAmb	IAmb	03 34 48.1	
	comp=Z,22nm,0.7s						
ANMO	Albuquerque	16.45	356	P	P	03 34 45.7	-1.4
	comp=Z,0.1nm,0.3s,baz=178,slow=8.8,SNR=9.7						
	comp=Z,4.1nm,1.1s						
ANMO	Albuquerque	16.45	356	Pn	Pn	03 34 45.4	+1.1
AMTX	Amarillo	16.63	10	Pn	Pn	03 34 45.8	-0.5
AMTX				IAmb	IAmb	03 34 51.9	
	comp=Z,23nm,0.8s						
342A	Flagon Creek P	17.28	40	Pn	Pn	03 34 53.2	-1.2
342A				IAmb	IAmb	03 34 59.6	
	comp=Z,21nm,0.8s						
X34A	Smith Ranch, M	17.32	21		Pn	03 34 55.0	0.0
OKCFA	Oklahoma City	18.19	20		Pn	03 35 05.2	-0.5
OKCFA				IAmb	IAmb	03 35 07.6	
	comp=Z,14nm,0.8s						
T25A	Trinidad	18.61	2	IAmb	IAmb	03 35 14.2	
	comp=Z,14nm,1.1s						
U32A	Winter Ranch,	18.63	16	IAmb	IAmb	03 35 13.6	
	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	19.21	359	P	Pn	03 35 19.6	+1.2
TUL1	Leonard	19.22	23	IAmb	IAmb	03 35 21.2	
	comp=Z,16nm,0.8s						
PV15	Paradox Valley	20.02	352	P	Pn	03 35 28.5	+0.5
PV15				IAmb	IAmb	03 35 32.2	
	comp=Z,11nm,1.0s						
QSM	Queen of Sheba	20.30	332	P	Pn	03 35 33.2	+2.2
CBKS	Cedar Bluff	20.80	12	P	P	03 35 35.5	+0.9
TPNV	Topopah Spring	20.86	334	P	Pn	03 35 38.6	+0.8
ISCO	Idaho Springs	21.26	359	P	P	03 35 41.4	+1.5
LCAR	Lake Charles	21.42	32	P	P	03 35 41.6	+0.3
LCAR				IAmb	IAmb	03 35 45.7	
	comp=Z,10nm,0.9s						
S39A	Bolivar	21.75	26	IAmb	IAmb	03 35 48.8	
	comp=Z,11nm,0.9s						
KSU1	Kansas State U	21.84	18	P	P	03 35 46.0	+0.3
R40A	Maddies Statio	22.70	27	IAmb	IAmb	03 36 01.7	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	22.98	333	P	P	03 35 56.8	-1.4
	comp=Z,0.3nm,0.8s,baz=155,slow=11,SNR=2.4						
	comp=Z,0.3nm,0.8s						
P38A	Dawn	23.34	23	P	P	03 36 02.5	+1.0
P38A				IAmb	IAmb	03 36 07.0	
	comp=Z,9.9nm,1.1s						
P40A	Paris	23.83	26	IAmb	IAmb	03 36 08.1	
	comp=Z,8.1nm,1.0s						
W50A	Signal Mountai	24.20	43	P	P	03 36 08.9	-1.1
W50A				IAmb	IAmb	03 36 16.8	
	comp=Z,9.0nm,1.1s						
BMN	Battle Mountai	24.25	337	P	P	03 36 14.3	+3.7
T47A	Sharon Grove	24.29	37	P	P	03 36 10.0	-0.8
T47A				IAmb	IAmb	03 36 16.3	
	comp=Z,11nm,1.1s						
PDAR	Pinedale Array	24.51	352	P	P	03 36 13.2	+0.2
	comp=Z,0.7nm,0.9s,baz=160,slow=11,SNR=5.2						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	24.51	352	P	P	03 36 14.5	+1.5
K31A	O'Neill	24.67	11	P	P	03 36 13.3	-0.8
SNOW	Snow King Moun	25.37	350	IAmb	IAmb	03 36 32.7	
	comp=Z,4.9nm,1.0s						
TKL	Tuckaleechee C	25.47	44	P	P	03 36 20.0	-1.5
	comp=Z,3.0nm,0.8s,baz=195,slow=12,SNR=4.5						
	comp=Z,3.0nm,0.8s						
MDND	Maddock	29.64	7	P	P	03 37 00.2	+1.4
YKA	Yellowknife Ar	44.48	354	P	P	03 39 02.1	-2.2
	comp=Z,0.6nm,0.9s,baz=164,slow=7.8,SNR=6.4						
	comp=Z,0.6nm,0.9s						
H03N2	Juan Fernandez	57.35	154	T	T	04 42 35.8	
	baz=331,slow=77,SNR=8.4						
H03N1	Juan Fernandez	57.36	154	T	T	04 42 37.6	
	baz=331,slow=77,SNR=18						
H03N3	Juan Fernandez	57.36	154	T	T	04 42 34.2	
	baz=331,slow=77,SNR=13						
PZH	PanZhiHua	128.25	329	PKP	PKiKP	03 50 02.4	+0.9

IDC 07 03:44:08.9±2.3**, 30°.00S×176°.91W, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, MS3.3**/3**, Error ellipse: s-maj=55.4km s-min=32.2km az=46.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.15	310	Pn	Pn	03 44 32.6	+0.4
	184nm,0.3s,baz=215,slow=23,SNR=5.7						
RAO				Sn	Sn	03 44 48.6	+0.1
	179nm,0.3s,baz=102,slow=24,SNR=5.0						
DZM	Mont Dzumac	16.90	294	LR	LR	03 53 24.8	
	comp=Z,207nm,20.2s,baz=204,slow=33						
PPT	Papeete	27.83	70	LR	LR	03 58 55.5	
	comp=Z,32nm,18.5s,baz=255,slow=32						
CTA	Charters Tower	34.67	278	LR	LR	04 03 08.3	
	comp=Z,50nm,19.4s,baz=81,slow=33						
ASAR	Alice Springs	44.07	266	P	P	03 52 19.1	+0.2
	0.5nm,0.8s,baz=112,slow=7.2,SNR=5.1						
	0.5nm,0.8s						
WRA	Warramunga Arr	45.02	271	P	P	03 52 26.1	-0.5
	1.2nm,0.9s,baz=113,slow=7.0,SNR=7.7						
	1.2nm,0.9s						
FINES	FINESS Array B	145.08	341	PKPbc	PKPbc	04 03 46.1	-0.9
	1.0nm,0.4s,baz=51,slow=4.4,SNR=23						

IDC 07 03:46:37.5±4.9**, 29°.91S×179°.19W, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=228.8km s-min=76.5km az=166.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.10	267	P	P	03 54 30.8	-0.9
	0.4nm,0.5s,baz=105,slow=7.7,SNR=5.8						
	0.4nm,0.5s						
WRA	Warramunga Arr	43.05	272	P	P	03 54 39.8	+0.5
	0.7nm,0.3s,baz=112,slow=7.7,SNR=23						
	0.7nm,0.3s						
FINES	FINESS Array B	144.33	339	PKP	PKPdf	04 06 14.3	-0.6
	0.6nm,0.5s,baz=57,slow=3.4,SNR=8.5						

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*UCR **07** 03:58:10.0±1.7, 5°.68N×82°.60W, h14^{km}±69^{km}, MW3.6*

ISC 07 03:58:09.1±1.7**, 5°.57N**±0°.08×**82°.69W**±0°.10**, h15^{km}, n45, σ1^{s}82**/56**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	2.53	46	*e*P	Pn	03 58 48.1	-1.7
CACAO				*e*S	Sn	03 59 15.8	-4.6
CACAO				*i*		03 59 19.7	
	comp=Z,60nm,0.2s						
GMAL	Guarumal, Vera	2.62	34	*e*P	Pn	03 58 49.5	-1.4
GMAL				*e*S	Sn	03 59 19.4	-3.0
GMAL				*i*		03 59 21.4	
	comp=Z,412nm,0.2s						
GMAL	Guarumal, Vera	2.62	34	*e*P	Pn	03 58 49.5	-1.4
CCOL	Caracol de Cor	2.83	354	*e*P	Pn	03 58 53.2	-0.6
PIRO	Carate, Puerto	2.88	347	*e*P	Pn	03 58 53.4	-1.2
CDITO	Canoas	2.99	357	*e*P	Pn	03 58 54.6	-1.4
PTJ1	Puerto Jimnez	3.01	348	*e*P	Pn	03 58 55.6	-0.6
PTJ1				*e*S	Sn	03 59 31.8	-0.3
BRU2	Volcan	3.20	0	*e*P	Pn	03 58 58.4	-0.7
BRU2				*e*S	Sn	03 59 36.3	-0.8
RIOS	Rincon, Osa	3.21	345	*e*P	Pn	03 58 57.6	-1.5
POTG	Potrero Grande	3.48	353	*e*P	Pn	03 59 03.3	+0.4
PEZE	Perez Zeledon,	3.91	346	*e*P	Pn	03 59 08.6	-0.1
CDM	Cerro de Muert	4.09	345	*e*P	Pn	03 59 11.6	0.0
CDM				*e*S	Sn	03 59 59.2	-0.3
RIMA	Rio Macho	4.33	345	*e*P	Pn	03 59 14.8	+0.2
RIMA				*e*P	Pn	03 59 14.8	+0.2
LCR2	La Lucha 2	4.34	343	*e*P	Pn	03 59 14.8	0.0
ZANG	Zanguenga, Cho	4.38	40	*e*P	Pn	03 59 16.0	+0.8
JACO	JACO, Garabito	4.51	334	*e*P	Pn	03 59 16.1	-0.8
BCIP	Isla Barro Col	4.56	38	*e*P	Pn	03 59 18.5	+0.9
BCIP				*e*S	Sn	04 00 08.9	-1.4
BCIP				*i*		04 00 16.9	
	comp=Z,4.9nm,0.3s						
LAFE	Finca La Fe, P	4.75	333	*e*P	Pn	03 59 20.1	-0.1
INDI	Punta indio, G	5.09	327	*e*P	Pn	03 59 24.7	-0.3
JTS	Las Juntas de	5.20	335	*e*P	Pn	03 59 26.5	+0.1
GRZA	Playa Garza	5.21	326	*e*P	Pn	03 59 26.4	-0.1
DUNO	Dulce Nombre,	5.27	328	*e*P	Pn	03 59 26.9	-0.5
PLVR	Palo Verde	5.43	331	*e*P	Pn	03 59 29.3	-0.5
GUAI	GUAI	5.44	329	*e*P	Pn	03 59 29.8	+0.1
ACAL	Aguas Claras	5.54	335	*e*P	Pn	03 59 32.4	+1.2
MALC	Bahia Malaga	5.56	106	*e*P	Pn	03 59 32.8	+1.4
CUI	Cuipilapa	5.61	334	*e*P	Pn	03 59 32.8	+0.6
COLC	Colonia	5.64	334	*e*P	Pn	03 59 34.4	+1.9
LIM1	Limonal	5.69	334	*e*P	Pn	03 59 34.8	+1.5
GPS2	Hotel Rincn d	5.78	333	*e*P	Pn	03 59 37.0	+2.5
BUEV	Buena Vista	5.85	333	*e*P	Pn	03 59 37.0	+1.5
GBS3	Finca Las Img	5.85	332	*e*P	Pn	03 59 37.6	+2.2
GB1A	Borinquen Arri	5.86	333	*e*P	Pn	03 59 37.0	+1.4
PLMC	San Jos del P	6.42	96	*e*P	Pn	03 59 44.2	+0.9
PLMC				*e*S	Sn	04 00 54.0	-2.4
PLMC				*i*		04 01 01.2	
	comp=Z,8.0nm,0.4s						
YOTC	Yotoco, Valle	6.52	104	*e*P	Pn	03 59 45.2	+0.5
YOTC				*e*S	Sn	04 00 55.0	-4.0
YOTC				*i*		04 01 04.2	
	comp=Z,2.3nm,0.4s						
GCUF	Volcan Galeras	6.87	129	*e*P	Pn	03 59 49.7	-0.1
SOTA	Rioblanco	6.96	119	*e*P	Pn	03 59 52.7	+1.5
SOTA				*e*S	Sn	04 01 11.6	+1.2
SOTA				*i*		04 01 14.4	
	comp=Z,4.1nm,0.5s						
PCON	Cinco Dias	7.06	117	*e*P	Pn	03 59 55.3	+2.8
PCON				*e*S	Sn	04 01 16.5	+3.6
PCON				*i*		04 01 21.4	
	comp=Z,3.4nm,0.6s						
UREC	San Jos de Ur	7.43	73	*e*P	Pn	04 00 00.1	+2.9
ORTC	Ortega, Tolima	7.60	102	*e*P	Pn	04 00 01.6	+2.1
ORTC				*e*S	Sn	04 01 23.7	-1.9
ORTC				*i*		04 01 36.0	
	comp=Z,2.6nm,0.3s						
NORC	Norcasia	7.79	90	*e*P	Pn	04 00 07.2	+5.1
ZARC	Zaragoza, Cauc	8.02	76	*e*P	Pn	04 00 07.3	+2.1
PTBC	PUERTO BERRIO,	8.25	83	*e*P	Pn	04 00 11.7	+3.3
CHIC	Chingaza	8.97	96	*e*P	Pn	04 00 22.1	+3.4
SMLC	San Martn de	9.14	69	*e*P	Pn	04 00 23.8	+3.2

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*SKHL **07** 04:04:18.1±0.5, 46°.40N×140°.50E, h10^{km}, mb4.4/3*

*JMA **07** 04:04:18.9±0.4, 46°N±1°×14°1E±°, h2^{km}±4^{km}, MV3.1/14, SOUTH SAKHALIN*

ISC 07 04:04:19.7±3.2**, 46°.27N**±0°.08×**140°.7E**±0°.2**, h10^{km}, n5, σ1^{s}74**/10**, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRBN	Rebuntou	0.89	162	*e*P	Pg	04 04 36.7	-0.1
JRR	Rishiri	1.21	158	*e*P	Pn	04 04 42.4	-0.3
JRR				*e*S	Sb	04 04 59.5	+1.0
KHLM	Kholmsk	1.24	50	*e*Pg	Pg	04 04 42.4	-1.1
KHLM				AMB	AMB	04 04 43.6	
	100nm,0.2s						
KHLM				*e*S	Sg	04 04 58.4	-1.1
KHLM				A	A	04 05 00.5	
	900nm,0.6s						
KHLM				A	A	04 05 00.5	
	1μm,0.6s						
JWK2	Keihoku	1.28	137	*e*P	Pn	04 04 43.7	0.0
JWK2				*e*S	Sn	04 05 01.8	+0.9
YSS	Yuzh-Sakhalins	1.59	64	*e*P	Pb	04 04 48.2	-1.0
YSS				P	Pn	04 04 51.8	+3.8
	20nm,0.1s						
YSS				*e*S	Sn	04 05 07.6	-1.0
YSS				A	A	04 05 10.7	
	80nm,0.4s						
YSS				A	A	04 05 10.7	
	70nm,0.4s						

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*IDC **07** 04:11:50.4±2.0, 18°.25N×105°.33W, h0^{km}, mb3.7/6, mbtmp3.8/9, ML3.6/3, MS3.6/26, Error ellipse: s-maj=49.1km s-min=22.4km az=52.0*

*MEX **07** 04:11:52.0±1.5, 18°.26N×105°.41W, h16^{km}±999^{km}, MD4.2*

*NEIC **07** 04:11:53.3±2.1, 18°.40N±0°.09×105°.22W±0°.08, h10^{km}±2^{km}, mb4.4/104, Md4.2/18(MEX), Error ellipse: s-maj=14.5km s-min=12.1km az=185.0*

ISC 07 04:11:52.2±1.0**, 18°.34N**±0°.08×**105°.17W**±0°.06**, h10^{km}, n111, σ1^{s}57**/65**, mb4.3**/32**, MS3.7**/22**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAR	Ciudad de Arme	1.25	61	*e*P	Pn	04 12 14.2	-1.5
CDAR				*e*S	Sb	04 12 32.1	+0.2
R15V		1.39	54		Sn	04 12 36.3	+0.1
R15V		1.39	54	*e*P	Pn	04 12 16.4	-1.3
R15V				*e*S	Sn	04 12 36.3	+0.1
COIG	Colima	1.63	59	*e*P	Pn	04 12 20.2	-0.8
COIG				*e*S	Sn	04 12 42.2	+0.1
MMIG	Aquila	1.73	92		Pn	04 12 21.9	-0.4
MMIG					Sn	04 12 43.2	-1.3
MMIG	Aquila	1.73	92	*e*P	Pn	04 12 21.9	-0.4
MMIG				*e*S	Sn	04 12 43.2	-1.3
ZAIG	Zacatecas	5.03	29	Pn	Pn	04 13 08.8	+0.7
H06E1	SOCORRO T-PHAS	5.48	275	T	T	04 18 19.0	
	SNR=399						
H06S1	SOCORRO T	5.51	275	T	T	04 18 20.1	
	SNR=64						
H06N1	SOCORRO T-PHAS	5.54	276	T	T	04 18 21.2	
	SNR=9.1						
TLIG	Tlapa	6.33	96	Pn	Pn	04 13 26.8	+1.1
FTIG	Fresnillo de T	6.70	93	*i* P	Pn	04 13 34.2	+3.4
FTIG				*i* S	Sn	04 14 45.9	-1.5
SLBS	Sierra La Lagu	6.94	321		Pn	04 13 31.9	-2.2
HLIG	Huajuapan de L	7.02	93	*i* P	Pn	04 13 38.6	+3.2
HLIG				*i* S	Sn	04 14 49.1	-6.3
LPIG	La Paz	7.47	321	LR	LR	04 15 49.2	
	comp=Z,363nm,21.7s,baz=166,slow=32						
CMIG	Matias Romero	9.88	96	Pn	Pn	04 14 17.4	+3.1
	0.6nm,0.3s,baz=272,slow=11,SNR=6.7						
CMIG				LR	LR	04 17 53.0	
	comp=Z,119nm,19.0s,baz=286,slow=36						
	1.8nm,0.4s						
TX31	Lajitas Ar. Si	11.03	7		Pn	04 14 32.2	+2.1
TX32	Lajitas Array	11.03	7		Pn	04 14 31.4	+1.3
TXAR	Lajitas Array	11.03	7	Pn	Pn	04 14 33.8	+3.7
	0.2nm,0.3s,baz=185,slow=14,SNR=21						
TXAR				LR	LR	04 18 34.5	
	comp=Z,135nm,19.5s,baz=185,slow=36						
	1.9nm,0.8s						
TXAR	Lajitas Array	11.03	7	Pn	Pn	04 14 32.0	+1.9
SRIG	Santa Rosalia	11.06	325	Pn	Pn	04 14 30.1	-0.4
833A	Chaparral WMA,	11.26	27	Pn	Pn	04 14 35.5	+2.3
HSIG		11.87	335		Pn	04 14 41.4	-0.2
JCT	Junction City	13.03	21		Pn	04 14 57.1	-0.4
319A	Douglas	13.50	345	Pn	Pn	04 15 04.0	+0.1
121A	Cookes Peak, D	14.32	351	Pn	Pn	04 15 14.7	-0.6
WHTX	Lake Whitney,	15.27	26		Pn	04 15 28.5	+0.6
MSTX	Muleshoe	15.71	7		Pn	04 15 33.9	+0.2
MSTX				IAmb	IAmb	04 15 42.3	
	comp=Z,22nm,0.9s						
BNM	Barren Site	15.80	356	Pn	Pn	04 15 33.8	-1.2
237A	Washetta, Mont	16.01	30	Pn	Pn	04 15 37.0	-0.5
237A				IAmb	IAmb	04 15 42.8	
	comp=Z,52nm,1.2s						
NATX	Nacogdoches	16.39	33	Pn	Pn	04 15 41.6	-0.7
Z35A	Perchaven, San	16.53	24		Pn	04 15 44.0	-0.2
ANMO	Albuquerque	16.58	356	Pn	P	04 15 47.5	0.0
	comp=Z,0.1nm,0.3s,baz=175,slow=10,SNR=13						
ANMO				LR	LR	04 22 18.5	
	comp=Z,161nm,18.1s,baz=178,slow=38						
	comp=Z,5.2nm,0.9s						
ANMO	Albuquerque	16.58	356	Pn	Pn	04 15 45.4	+0.4
AMTX	Amarillo	16.76	10	IAmb	IAmb	04 15 53.4	
	comp=Z,37nm,0.9s						
GLA	Glamis	17.02	331	Pn	Pn	04 15 48.7	-1.8
342A	Flagon Creek P	17.42	39	Pn	Pn	04 15 55.3	0.0
342A				IAmb	IAmb	04 16 00.2	
	comp=Z,38nm,0.8s						
X34A	Smith Ranch, M	17.46	21	Pn	Pn	04 15 54.4	-1.5
FNO	Franklin	18.20	21	P	Pn	04 16 04.5	-0.6
FNO				IAmb	IAmb	04 16 08.8	
	comp=Z,19nm,1.0s						
X37A	Clayton	18.38	26		Pn	04 16 07.6	+0.3
X37A				IAmb	IAmb	04 16 08.9	
	comp=Z,16nm,1.1s						
344A	Westbrook Farm	18.46	42	P	Pn	04 16 09.4	+1.2
344A				IAmb	IAmb	04 16 26.9	
	comp=Z,26nm,1.1s						
Z41A	Richland Creek	18.54	34	IAmb	IAmb	04 16 11.2	
	comp=Z,22nm,0.8s						
T25A	Trinidad	18.74	2	IAmb	IAmb	04 16 17.6	
	comp=Z,26nm,1.3s						
143A	Socs Landing,	18.91	38	P	P	04 16 12.4	-0.6
143A				IAmb	IAmb	04 16 16.9	
	comp=Z,18nm,0.8s						
VBMS	Vicksburg	19.11	41	P	P	04 16 16.5	+1.3
VBMS				IAmb	IAmb	04 16 18.8	
	comp=Z,22nm,0.9s						
TUL1	Leonard	19.36	24	IAmb	IAmb	04 16 22.7	
	comp=Z,26nm,0.8s						
GSC	Goldstone, Bar	19.80	331	P	P	04 16 24.0	+1.1
PV07	Paradox Valley	20.25	352	P	P	04 16 28.1	+0.2
PV07				IAmb	IAmb	04 16 34.9	
	comp=Z,11nm,1.0s						
SMCO	Snowmass	20.82	356	P	P	04 16 32.5	-1.8
Y45A	Yeager Farm, C	20.83	39	IAmb	IAmb	04 16 41.9	
	comp=Z,24nm,1.1s						
CBKS	Cedar Bluff	20.94	12	P	P	04 16 35.3	+0.1
TPNV	Topopah Spring	20.94	334	P	P	04 16 35.0	-0.4
Z47A	Carrollton	21.31	43	P	P	04 16 39.8	+0.6
Z47A				IAmb	IAmb	04 16 49.4	
	comp=Z,18nm,0.9s						
S11A	Rachel	21.35	336	P	P	04 16 41.1	+1.3
S11A				IAmb	IAmb	04 16 47.7	
	comp=Z,10nm,1.1s						
OXF	Oxford	21.36	38	P	P	04 16 39.4	-0.3
OXF				IAmb	IAmb	04 16 54.2	
	comp=Z,28nm,1.3s						
ISCO	Idaho Springs	21.39	359	IAmb	IAmb	04 16 49.8	
	comp=Z,13nm,1.4s						
LCAR	Lake Charles	21.57	32	IAmb	IAmb	04 16 46.7	
	comp=Z,13nm,0.8s						
O20A	White River Ci	21.88	354	IAmb	IAmb	04 16 54.0	
	comp=Z,8.8nm,0.9s						
S39A	Bolivar	21.89	26	IAmb	IAmb	04 16 52.1	
	comp=Z,16nm,0.8s						
MGMO	Mountain Grove	21.90	29	P	P	04 16 46.8	+1.3
MGMO				IAmb	IAmb	04 16 52.8	
	comp=Z,7.5nm,0.9s						
LRAL	Lakeview Retre	21.91	45	P	P	04 16 46.0	+0.4
LRAL				IAmb	IAmb	04 16 50.5	
	comp=Z,8.2nm,0.7s						
TPH	Tonopah	22.30	334	IAmb	IAmb	04 16 58.5	
	comp=Z,24nm,1.2s						
X48A	Hartselle	22.76	42	IAmb	IAmb	04 17 01.4	
	comp=Z,13nm,1.1s						
R40A	Maddies Statio	22.84	27	IAmb	IAmb	04 17 03.5	
	comp=Z,7.0nm,0.8s						
NVAR	Mina Array Bea	23.06	333	P	P	04 16 57.5	-0.6
	comp=Z,0.9nm,1.0s,baz=159,slow=9.1,SNR=5.9						
NVAR				LR	LR	04 25 50.3	
	comp=Z,43nm,18.7s,baz=304,slow=36						
	comp=Z,0.9nm,1.0s						
RWWY	Rawlins	23.34	356	IAmb	IAmb	04 17 08.4	
	comp=Z,4.2nm,0.7s						
P38A	Dawn	23.48	23	IAmb	IAmb	04 17 09.5	
	comp=Z,10nm,0.7s						
FPAL	Fort Paine	23.74	43	P	P	04 17 03.0	-1.6
FPAL				IAmb	IAmb	04 17 06.1	
	comp=Z,9.2nm,1.0s						
ELK	Elko	23.95	341	LR	LR	04 25 27.7	
	comp=Z,77nm,20.9s,baz=178,slow=34						
P40A	Paris	23.98	26	IAmb	IAmb	04 17 12.2	
	comp=Z,9.5nm,1.0s						
CLTN	Cedars of Leba	24.28	39	IAmb	IAmb	04 17 16.3	
	comp=Z,9.8nm,1.1s						
W50A	Signal Mountai	24.34	42	IAmb	IAmb	04 17 11.9	
	comp=Z,14nm,1.1s						
T47A	Sharon Grove	24.43	37	IAmb	IAmb	04 17 17.9	
	comp=Z,14nm,1.1s						
PD31	Pinedale Array	24.63	352	P	P	04 17 14.7	+1.6
PDAR	Pinedale Array	24.63	352	P	P	04 17 13.8	+0.7
	comp=Z,1.3nm,0.8s,baz=160,slow=10,SNR=8.7						
PDAR				LR	LR	04 26 07.4	
	comp=Z,71nm,18.1s,baz=188,slow=35						
	comp=Z,1.3nm,0.8s						
CPCT	Cooper Cave	25.00	43	IAmb	IAmb	04 17 36.4	
	comp=Z,15nm,1.4s						
V51A	Loudon	25.33	42	IAmb	IAmb	04 17 20.6	
	comp=Z,8.8nm,0.8s						
REDW	Red Top Meadow	25.40	350	IAmb	IAmb	04 17 24.6	
	comp=Z,6.6nm,1.1s						
SNOW	Snow King Moun	25.48	351	IAmb	IAmb	04 17 26.4	
	comp=Z,9.3nm,1.0s						
LOHW	Long Hollow	25.61	351	IAmb	IAmb	04 17 27.4	
	comp=Z,5.5nm,1.0s						
TKL	Tuckaleechee C	25.61	43	P	P	04 17 22.2	+0.4
	comp=Z,4.4nm,0.8s,baz=213,slow=7.0,SNR=6.3						
	comp=Z,4.4nm,0.8s						
T50A	Nancy	25.79	40	IAmb	IAmb	04 17 25.8	
	comp=Z,7.5nm,0.8s						
HODGE	Hodges	25.84	48	P	P	04 17 24.3	+0.5
PAULI	Pauline	26.46	47	IAmb	IAmb	04 17 34.1	
	comp=Z,11nm,0.9s						
YBH	Yreka Blue Hor	27.71	331	LR	LR	04 28 04.1	
	comp=Z,75nm,18.6s,baz=198,slow=35						
ULM	Lac du Bonnet	32.69	11	LR	LR	04 32 16.2	
	comp=Z,156nm,18.1s,baz=206,slow=37						
SADO	Sadowa	34.16	34	LR	LR	04 33 55.8	
	comp=Z,81nm,18.5s,baz=243,slow=39						
ATAH	Atahualpa	36.59	131	LR	LR	04 30 24.8	
	comp=Z,80nm,20.9s,baz=326,slow=30						
BBB	Bella Bella	38.28	337	LR	LR	04 35 53.0	
	comp=Z,42nm,20.2s,baz=338,slow=38						
NNA	Nana	41.10	135	LR	LR	04 33 35.2	
	comp=Z,29nm,20.8s,baz=320,slow=32						
DLBC	Dease Lake	44.00	341	LR	LR	04 38 54.9	
	comp=Z,55nm,19.3s,baz=327,slow=37						
YKA	Yellowknife Ar	44.60	354	P	P	04 20 03.0	-1.2
	comp=Z,0.5nm,0.9s,baz=165,slow=7.4,SNR=5.8						
	comp=Z,0.5nm,0.9s						
LPAZ	La Paz	50.14	131	P	P	04 20 48.9	+0.1
	comp=Z,1.2nm,0.9s,baz=349,slow=8.5,SNR=4.6						
LPAZ				LR	LR	04 39 37.1	
	comp=Z,49nm,19.1s,baz=26,slow=33						
	comp=Z,1.2nm,0.9s						
LPAZ	La Paz	50.14	131	IAmb	IAmb	04 20 56.5	
	comp=Z,3.0nm,1.2s						
FRB	Frobisher Bay	51.74	20	LR	LR	04 42 26.5	
	comp=Z,88nm,19.9s,baz=207,slow=35						
INK	Inuvik	53.05	347	P	P	04 21 11.1	+1.9
	comp=Z,2.3nm,1.0s,baz=153,slow=6.8,SNR=3.1						
	comp=Z,2.3nm,1.0s						
INK	Inuvik	53.05	347	IAmb	IAmb	04 21 13.5	
	comp=Z,4.3nm,1.2s						
H03N2	Juan Fernandez	57.26	154	T	T	05 23 37.9	
	baz=331,slow=78,SNR=12						
H03N1	Juan Fernandez	57.27	154	T	T	05 23 40.8	
	baz=331,slow=78,SNR=15						
H03N3	Juan Fernandez	57.28	154	T	T	05 23 37.7	
	baz=331,slow=78,SNR=13						
SFJD	Kangerlussuaq	59.72	22	LR	LR	04 45 59.4	
	comp=Z,59nm,18.6s,baz=218,slow=34						
EKA	Eskdalemuir Ar	81.73	34	LR	LR	04 59 27.8	
	comp=Z,130nm,19.8s,baz=182,slow=35						
ARCES	ARCESS Array B	85.69	16	LR	LR	05 02 27.5	
	comp=Z,41nm,21.3s,baz=279,slow=35						
NOA	NORSAR Array B	86.11	26	LR	LR	05 03 55.1	
	comp=Z,27nm,18.8s,baz=290,slow=36						
FINES	FINESS Array B	91.52	21	LR	LR	05 07 51.1	
	comp=Z,44nm,18.1s,baz=325,slow=37						
URZ	Urewera	91.94	230	LR	LR	05 01 06.8	
	comp=Z,55nm,18.1s,baz=31,slow=32						
DAVOX	Davos/Dischmat	92.81	39	LR	LR	05 07 18.8	
	comp=Z,56nm,18.2s,baz=270,slow=36						
GERES	GERESS Array B	93.91	35	LR	LR	05 06 54.1	
	comp=Z,40nm,20.3s,baz=301,slow=35						
VRAC	Vranov	95.20	34	LR	LR	05 07 12.0	
	comp=Z,76nm,20.0s,baz=280,slow=35						
KEST	Kesra	97.98	48	LR	LR	05 08 51.0	
	comp=Z,35nm,21.2s,baz=270,slow=35						
PZH	PanZhiHua	128.33	329	PKP	PKPdf	04 30 58.3	-1.6

MAN ***07*** *04:26:02.9, 9°.91N×123°.64E, h1^{km}, mb4.0, ML2.8, MS2.4, Hypocentre not reviewed by the ISC*

ISC 07 04:26:01.9±1.5**, 9°.73N**±0°.07×**123°.67E**±0°.05**, h0**^{km}±17^{km}**, n5,** σ1^{s}.**67**/10**, 2C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.19	100	*e*P	Pg	04 26 03.5	-2.1
TBP				*i* S	Sg	04 26 08.5	+0.3
SNPH	Sibulan	0.57	228	⇑*i*P	Pg	04 26 12.9	0.0
SNPH				*i* S	Sb	04 26 23.3	-0.2
LLP	Lapu-Lapu	0.66	26	⇑*e*P	Pg	04 26 13.0	-1.6
LLP				*e*S	Sn	04 26 29.8	+0.2
CNOP	Candoni, Negro	1.02	276	⇓*e*P	Pb	04 26 22.1	-0.4
CNOP				*e*S	Sn	04 26 38.7	+0.2
MSLP	Maasin	1.24	71	⇓*e*P	Pg	04 26 26.4	+0.7
MSLP				*e*S	Sg	04 26 44.8	+3.0

BJI ***07*** *04:29:14.9±0.0, 19°.64S×174°.86W, h28^{km}, mb5.0/31, mB5.3/20, Ms5.0/6, Ms7 4.5/5*

NOU ***07*** *04:29:23.3, 19°.95S×174°.41W, h150^{km}, mb5.1/59, Tonga Islands*

IDC ***07*** *04:29:24.2±0.6, 19°.98S×175°.36W, h98^{km}±5^{km}, mb4.5/17, mbtmp4.9/18, MS3.6/26, Error ellipse: s-maj=15.7km s-min=11.3km az=129.0*

NEIC ***07*** *04:29:24.7±1.8, 20°.0S±0°.1×175°.1W±0°.1, h98^{km}±4^{km}, mb4.9/214, Error ellipse: s-maj=16.6km s-min=14.8km az=163.0*

GCMT ***07*** *04:29:26.7±0.2, 20°.05S±0°.03×174°.68W±0°.02, h119^{km}±3^{km}, MW4.9/95, Moment Tensor Solution. s33,c37; s95,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.14; $M_{\theta\theta}$0.40±.18; $M_{\phi\phi}$-0.38±.18; $M_{r\theta}$0.38±.09; $M_{\theta\phi}$0.74±.18; $M_{\phi r}$-3.03±.08; Best double couple: $M_0$3.13200×10^{16} NP1:ϕ_s275.00000°, δ13.00000°, λ10.00000°. NP2:ϕ_s176.00000°, δ88.00000°, λ102.00000°. Principal axes: T 2.8580, Plg46.0000°, Azm98.0000°; N 0.5490, Plg12.0000°, Azm355.0000°; P -3.4060, Plg42.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 04:29:24.1±0.4**, 20°.16S**±0°.05×**175°.05W**±0°.05**, h102**^{km}±3^{km}**, h102**^{km}**:pP-P, n628,** σ1^{s}.**26**/560**, mb4.9**/141**, 28C-26D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.95	78	P	Pn	04 30 30.2	-6.0
	baz=4.9,SNR=209						
NIUE				S	Sn	04 31 18.4	-14
	baz=4.9						
NIUE	Niue	4.95	78	Pn	Pn	04 30 29.8	-6.4
DGTI	Dogotuki	6.27	307	P	Pn	04 30 57.7	+3.5
AFI	Afiamalu	6.96	27	P	Pn	04 30 56.3	-7.3
	76nm,0.4s,baz=148,slow=2.4,SNR=14						
AFI				S	Sn	04 32 03.0	-18
	103nm,0.4s,baz=8.9,slow=22,SNR=4.7						
AFI	Afiamalu	6.96	27	P	Pn	04 30 56.7	-6.9
MSVF	Nonsavu	6.96	289	P	Pn	04 31 08.7	+5.0
	313nm,0.7s,baz=115,slow=12,SNR=192						
MSVF				LR	LR	04 33 12.6	
	comp=Z,514nm,21.6s,baz=80,slow=34						
MSVF	Nonsavu	6.96	289	Pn	Pn	04 31 07.8	+4.2
MSVF	Nonsavu	6.96	289	P	Pn	04 31 09.0	+5.3
GLKZ	Green Lake	9.43	196	P	Pn	04 31 35.6	-1.5
GLKZ				S	Sn	04 33 18.2	-3.1
RAR	Rarotonga	14.34	97	P	Pn	04 32 39.3	-3.1
	64nm,0.4s,baz=249,slow=7.8,SNR=25						
RAR				S	Sn	04 35 04.3	-16
	50nm,0.5s,baz=292,slow=22,SNR=7.8						
RAR				LR	LR	04 37 35.0	
	comp=Z,219nm,18.3s,baz=270,slow=34						
RAR	Rarotonga	14.34	97	Pn	Pn	04 32 37.0	-5.3
MARNC	Mare, Loyalty	15.88	262		P	04 33 04.2	+0.7
MARNC	Mare, Loyalty	15.88	262	P	P	04 33 06.4	+2.9
DVP	Devils Point	16.05	276	P	P	04 33 07.3	+1.9
PINNC	Pines Island,	16.49	258	P	P	04 33 12.4	+2.1
LIFNC	LIFOU	16.61	265	P	P	04 33 12.4	+0.8
LIFNC	LIFOU	16.61	265	P	P	04 33 15.1	+3.5
YATNC	Mamie plateau,	16.96	260	P	P	04 33 18.9	+3.4
OUENC	Ouen Island, N	17.03	259		P	04 33 18.3	+2.1
OUENC	Ouen Island, N	17.03	259	P	P	04 33 19.9	+3.7
DZM	Mont Dzumac	17.37	260	P	Pn	04 33 23.5	+3.2
	94nm,0.6s,baz=90,slow=18,SNR=44						
DZM				LR	LR	04 37 41.6	
	comp=Z,264nm,20.2s,baz=84,slow=29						
DZM	Mont Dzumac	17.37	260	P	Pn	04 33 21.6	+1.3
DZM	Mont Dzumac	17.37	260	P	Pn	04 33 23.4	+3.0
ONTNC	Ouen Toro	17.38	260		Pn	04 33 21.5	+1.2
NOUC	Port Laguerre	17.51	260	P	Pn	04 33 24.6	+2.7
SANVU	Saraoutou	17.54	283	P	Pn	04 33 23.4	+1.2
SANVU	Saraoutou	17.54	283	P	Pn	04 33 25.0	+2.8
OUZ	Omahuta	18.04	211	P	P	04 33 27.1	-0.1
OUZ	Omahuta	18.04	211	P	Pn	04 33 29.0	+0.9
KUZ	Kuaotunu	18.39	204	P	Pn	04 33 32.0	-0.3
HAZ	Te Kaha	18.61	198	P	P	04 33 29.6	-3.9
ABAZ	Army Bay	18.62	206	P	Pn	04 33 35.7	+0.6
PKGZ	Pakihiroa	18.65	197	P	Pn	04 33 35.1	-0.4
WIAZ	Waiheke Island	18.66	205	P	Pn	04 33 35.7	+0.1
PUZ	Puketiti	18.77	197	P	P	04 33 35.6	+0.3
RUGZ	Raukumara Rang	18.83	198	P	Pn	04 33 36.7	-1.1
TWGZ	Tauwhareparae	18.95	197	P	Pn	04 33 38.2	-0.8
WTAZ	Waiatarua	19.01	206	P	Pn	04 33 39.9	+0.1
CNGZ	Carnagh Statio	19.17	196	P	Pn	04 33 42.5	+0.9
MWZ	Matawai	19.22	198	P	P	04 33 37.4	-2.8
MWZ				S	S	04 36 57.0	-15
TKGZ	Te Karaka	19.23	197	P	P	04 33 37.8	-2.4
TKGZ				S	S	04 37 00.0	-13
EDRZ	Edgecumbe	19.25	200	P	Pn	04 33 42.4	-0.2
URZ	Urewera	19.27	199	P	P	04 33 40.5	-0.3
	60nm,0.3s,baz=22,slow=2.8,SNR=56						
URZ				S	S	04 36 59.7	-14
	3.5nm,0.3s,baz=15,slow=20,SNR=1.5						
URZ				LR	LR	04 39 56.5	
	comp=Z,136nm,21.4s,baz=31,slow=33						
URZ	Urewera	19.27	199	P	P	04 33 40.1	-0.6
URZ				S	S	04 36 59.8	-14
URZ	Urewera	19.27	199	P	P	04 33 40.3	-0.4
KMRZ	Kaimai	19.28	202	P	Pn	04 33 42.3	-0.7
TOZ	Tahuroa Road	19.34	203	P	Pn	04 33 43.9	+0.4
OMRZ	Omania	19.37	201	P	Pn	04 33 44.6	+0.6
KOUNC	Koumac, New Ca	19.38	265	P	Pn	04 33 44.6	+0.4
RAGZ	Rawiri	19.40	198	P	Pn	04 33 43.3	-1.1
TARZ	Mount Tarawera	19.44	200	P	Pn	04 33 44.5	-0.4
RIGZ	Rimuhau	19.50	197	P	Pn	04 33 44.9	-0.5
MUGZ	Murupara	19.58	199	P	P	04 33 44.3	+0.2
RTZ	Ruatahuna	19.64	199	P	P	04 33 44.9	+0.1
RTZ				S	S	04 37 05.8	-15
HRRZ	Handcock Road	19.66	201	P	Pn	04 33 46.8	-0.5
PRGZ	Paritu Road	19.67	197	P	Pn	04 33 46.9	-0.5
SNGZ	Shannon Statio	19.69	198	P	Pn	04 33 47.5	-0.1
SNGZ				S	S	04 37 08.5	-13
KNZ	Kokohu	19.82	197	P	P	04 33 47.1	+0.5
KNZ				S	S	04 37 12.7	-12
TLZ	Tolley Road	19.86	202	P	Pn	04 33 49.0	-0.7
MHGZ	Mahia Peninsul	19.88	196	P	Pn	04 33 48.4	-1.5
RAHZ	Arahi	19.89	198	P	P	04 33 47.7	+0.3
RAHZ				S	S	04 37 06.6	-19
MTHZ	Maungataniwha	19.90	199	P	P	04 33 48.0	+0.4
MTHZ				S	S	04 37 14.1	-12
WHHZ	Waihua	19.99	198	P	P	04 33 45.0	-3.5
WHHZ				S	S	04 37 14.5	-13
MRHZ	Matea Rd	20.02	200	P	P	04 33 48.2	-0.6
WATZ	Wairara	20.13	201	P	P	04 33 50.6	+0.5
NMHZ	Naumai	20.14	199	P	P	04 33 49.6	-0.5
ARHZ	Aropaoanui	20.23	198	P	P	04 33 51.9	+0.8
HIZ	Hauiti	20.27	203	P	Pn	04 33 54.0	-0.4
HIZ	Hauiti	20.27	203	P	P	04 33 51.4	-0.1
BKZ	Black Stump Fm	20.30	199	P	P	04 33 50.7	-1.1
BKZ	Black Stump Fm	20.30	199	P	P	04 33 50.6	-1.3
RITZ	Rihia Road	20.33	201	P	P	04 33 52.2	0.0
KATZ	Kakaramea	20.38	201	P	P	04 33 53.2	+0.3
MCHZ	McNeill Hill	20.49	199	P	P	04 33 53.9	0.0
NTVZ	North Tongarir	20.50	201	P	P	04 33 53.6	-0.6
TMVZ	Te Maari	20.51	201	P	P	04 33 53.6	-0.6
ETVZ	East Tongariro	20.52	201	P	P	04 33 53.5	-0.8
WTVZ	West Tongariro	20.54	201	P	P	04 33 54.1	-0.5
NNVZ	North Ngauruho	20.55	201	P	P	04 33 54.1	-0.6
KWHZ	Kaweka Forest	20.55	199	P	P	04 33 53.7	-0.9
OTVZ	Oturere	20.56	201	P	P	04 33 53.0	-1.9
CKHZ	Cape Kidnapper	20.58	198	P	P	04 33 55.4	+0.6
SNVZ	South Ngauruho	20.59	201	P	P	04 33 54.0	-1.1
NGZ	Ngauruhoe	20.59	201	P	P	04 33 54.8	-0.4
TUVZ	Tukino	20.66	201	P	P	04 33 54.6	-1.3
FWVZ	Far West T-bar	20.68	201	P	P	04 33 54.8	-1.4
WHVZ	Whangaehu Hut	20.70	201	P	P	04 33 55.6	-0.7
BHHZ	Black Hill Sta	20.73	200	P	P	04 33 54.7	-1.8
WNVZ	Wahianoa	20.73	201	P	P	04 33 55.3	-1.4
MOVZ	Moawhango	20.75	200	P	P	04 33 55.9	-0.9
KAHZ	Kahuranaki	20.76	198	P	P	04 33 57.4	+0.6
KRHZ	Kereru	20.77	199	P	P	04 33 56.4	-0.6
PKVZ	Pokaka	20.78	201	P	P	04 33 56.0	-1.1
VRZ	Vera Road	20.84	203	P	P	04 33 58.5	+0.8
PXZ	Pawanui	20.98	198	P	P	04 33 59.3	+0.1
PNHZ	Pukenui	21.07	199	P	P	04 33 58.6	-1.5
WPHZ	Waipukurau	21.14	198	P	P	04 34 01.1	+0.2
PKE	Pukeiti	21.19	204	P	P	04 34 03.9	+2.4
NEZ	North Egmont	21.22	204	P	P	04 34 04.4	+2.6
PRHZ	Porangahau	21.27	198	P	P	04 34 02.3	+0.1
KHEZ	Kahui Hut	21.27	204	P	P	04 34 03.9	+1.6
TSZ	Takapari Road	21.28	199	P	P	04 34 00.7	-1.6
WAZ	Wanganui	21.32	202	P	P	04 34 02.2	-0.7
DVHZ	Dannevirke	21.44	199	P	P	04 34 03.0	-1.0
ANWZ	Angora Road	21.49	198	P	P	04 34 06.8	+2.2
POWZ	Post Office Ro	21.64	199	P	P	04 34 05.1	-1.1
PRWZ	Pori Road	21.73	199	P	P	04 34 06.9	-0.3
BFZ	Birch Farm	21.77	198	P	P	04 34 06.0	-1.5
BFZ	Birch Farm	21.77	198	P	P	04 34 06.0	-1.5
MRZ	Mangatainoka R	21.95	199	P	P	04 34 06.9	-2.5
TIWZ	Tintock	21.96	199	P	P	04 34 08.5	-1.1
HOWZ	Holdsworth Sta	22.18	199	P	P	04 34 11.2	-0.7
OGWZ	Otaki Gorge	22.22	200	P	P	04 34 10.1	-2.2
TMWZ	Te Maipa	22.26	198	P	P	04 34 12.7	-0.1
KIW	Kapiti Island	22.34	200	P	P	04 34 12.1	-1.5
CAW	Cannon Point	22.51	200	P	P	04 34 14.1	-1.2
MSWZ	Moikau Station	22.74	199	P	P	04 34 15.6	-2.0
SNZO	South Karori	22.81	200	P	P	04 34 17.7	-0.6
BHW	Baring Head	22.85	200	P	P	04 34 18.2	-0.5
QRZ	Quartz Range	23.16	205	P	P	04 34 21.0	-0.8
TBI	Tubuai	23.97	102	*e*P	P	04 34 30.8	+1.6
TBI				*e*LR	LR	04 39 33.3	
TBI	Tubuai	23.97	102	*e*T	T	04 58 46.9	
	34nm,0.3s						
KHZ	Kahutara	24.19	201	P	P	04 34 30.3	-0.7
PAE	Paea	24.21	88	*e*P	P	04 34 32.7	+1.2
PAE	Paea	24.21	88	*e*T	T	04 58 50.0	
	7.0nm,0.2s						
PPT2	Papeete2	24.23	88	*e*P	P	04 34 32.3	+0.6
PPT2				*e*LR	LR	04 39 40.3	
	comp=Z,1µm,34.0s,baz=257						
PPT2	Papeete2	24.23	88	*e*T	T	04 58 52.3	
	6.3nm,0.3s						
PPT	Papeete	24.23	88	P	P	04 34 28.9	-2.8
	86nm,0.9s,baz=19,slow=2.3,SNR=6.1						
PPT				LR	LR	04 41 47.6	
	comp=Z,143nm,20.1s,baz=291,slow=30						
RPZ	Rata Peaks	26.21	203	P	P	04 34 48.7	-0.6
	94nm,0.6s,baz=338,slow=0.7,SNR=40						
RPZ				LR	LR	04 43 41.6	
	comp=Z,140nm,19.1s,baz=22,slow=33						
	94nm,0.6s						
PMOR	Pomariorio Ree	26.37	83	*e*T	T	05 01 49.3	
	6.0nm,0.2s						
FOZ	Fox Glacier	26.53	205	P	P	04 34 53.4	+1.3
ODZ	Otahua Downs	27.50	202	P	P	04 35 01.0	+0.1
EIDS	Eidsvold	31.61	254	P	P	04 35 36.9	-0.5
	baz=32,SNR=5.4						
EIDS	Eidsvold	31.61	254	P	P	04 35 37.7	+0.3
ARMA	Armidale	31.71	245	P	P	04 35 38.1	-0.4
	baz=32,SNR=22						
ARMA	Armidale	31.71	245	P	P	04 35 38.1	-0.4
ARMA				IAmb	IAmb	04 35 39.0	
	comp=Z,18nm,0.7s						
ARMA	Armidale	31.71	245	P	P	04 35 38.3	-0.1
MGCD	Mangrove Creek	32.76	240	P	P	04 35 47.2	-0.3
	baz=33,SNR=18						
MGCD	Mangrove Creek	32.76	240	P	P	04 35 47.3	-0.2
RMQ	Roma	33.75	252	P	P	04 35 56.2	0.0
	baz=34,SNR=14						
RMQ	Roma	33.75	252	P	P	04 35 56.1	0.0
CNB	Canberra Magne	34.72	237	P	P	04 36 03.8	-0.7
	baz=35,SNR=30						
CNB	Canberra Magne	34.72	237	P	P	04 36 04.1	-0.4
CAN	Canberra	35.01	237	P	P	04 36 06.0	-1.0
CAN	Canberra	35.01	237	P	P	04 36 06.3	-0.7
CAN	Canberra	35.01	237	P	P	04 36 06.0	-1.0
CAN				pP	pP	04 36 26.3	-3.2
TAOE	Nuku Hiva Isla	35.53	77	*e*LR	LR	04 44 55.9	
	comp=Z,398nm,32.9s,baz=250						
TAOE	Nuku Hiva Isla	35.53	77	*e*T	T	05 12 35.0	
	comp=Z,28nm,0.2s						
KRVT	Keravat (AS076	35.72	292	LR	LR	04 49 22.8	
	comp=Z,100nm,21.2s,baz=246,slow=34						
CTA	Charters Tower	36.28	263	LR	LR	04 49 12.4	
	comp=Z,101nm,19.5s,baz=83,slow=33						
CTA	Charters Tower	36.28	263	P	P	04 36 17.6	-0.4
CTAO	Charters Tower	36.28	263	P	P	04 36 17.0	-1.0
CTAO	Charters Tower	36.28	263	P	P	04 36 17.6	-0.4
CTAO	Charters Tower	36.28	263	P	P	04 36 17.2	-0.8
CTAO				⇑pP	pwP	04 36 46.2	+2.8
CMSA	Cobar Meteorol	36.92	244	P	P	04 36 22.1	-1.2
	baz=37,SNR=36						
CMSA	Cobar Meteorol	36.92	244	P	P	04 36 22.4	-0.9
RKT	Rikitea	37.29	102	*e*P	P	04 36 26.7	+0.2
RKT	Rikitea	37.29	102	*e*T	T	05 15 21.6	
	comp=Z,14nm,0.3s						
QLP	Quilpie	37.80	252	P	P	04 36 29.5	-1.2
	baz=38,SNR=6.2						
QLP	Quilpie	37.80	252	P	P	04 36 29.6	-1.2
PMG	Port Moresby	37.98	281	P	P	04 36 30.6	-1.8
TOO	Toolangi	38.34	234	P	P	04 36 34.1	-1.1
	baz=38,SNR=31						
TOO	Toolangi	38.34	234	P	P	04 36 33.4	-1.8
TOO	Toolangi	38.34	234	P	P	04 36 34.2	-1.0
MTSU	Mount Surprise	38.38	266	P	P	04 36 34.7	-1.1
	baz=38,SNR=23						
MTSU	Mount Surprise	38.38	266	P	P	04 36 34.8	-0.9
TAU	Tasmania Unive	38.83	226	P	P	04 36 38.9	-0.2
COEN	Coen	40.33	272	P	P	04 36 51.3	-0.7
	baz=40,SNR=22						
COEN	Coen	40.33	272	P	P	04 36 51.4	-0.7
COEN	Coen	40.33	272	P	P	04 36 51.5	-0.5
STKA	Stephens Creek	40.43	244	P	P	04 36 51.5	-1.2
	comp=Z,9.5nm,0.5s,baz=93,slow=11,SNR=30						
STKA				LR	LR	04 51 23.0	
	comp=Z,87nm,19.4s,baz=41,slow=33						
	comp=Z,9.5nm,0.5s						
STKA	Stephens Creek	40.43	244	P	P	04 36 51.4	-1.2
	baz=40,SNR=22						
STKA	Stephens Creek	40.43	244	P	P	04 36 51.3	-1.3
STKA	Stephens Creek	40.43	244	P	P	04 36 51.5	-1.2
MANU	Manus Island	40.88	291	P	P	04 36 55.9	-0.6
ARPS	Mount Arapiles	40.98	237	P	P	04 36 56.2	-0.9
	baz=41,SNR=6.6						
QIS	Mount Isa	42.41	261	P	P	04 37 07.0	-1.9
	baz=42,SNR=4.9						
QIS	Mount Isa	42.41	261	P	P	04 37 07.4	-1.6
HTT	Hallett	42.83	242	P	P	04 37 10.8	-1.4
	baz=43,SNR=6.0						
HTT	Hallett	42.83	242	P	P	04 37 12.1	-0.2
LCRK	Leigh Creek	43.22	247	P	P	04 37 13.9	-1.4
NAPP	Napperby	43.45	243	P	P	04 37 16.5	-0.7
BBOO	Buckleboo	45.18	243	P	P	04 37 29.0	-2.0
	baz=45,SNR=6.7						
BBOO	Buckleboo	45.18	243	P	P	04 37 28.9	-2.0
BBOO				IAmb	IAmb	04 37 39.1	
	comp=Z,38nm,1.2s						
BBOO	Buckleboo	45.18	243	P	P	04 37 28.9	-2.0
OOD	Oodnadatta	45.41	251	P	P	04 37 31.9	-0.9
MULG	Mulgathing	46.80	247	P	P	04 37 42.0	-1.8
GENI	Genyem	47.04	286	P	P	04 37 45.0	-0.7
	comp=Z,2µmcomp=Z,205nm,0.7s						
WR0	Warramunga Arr	47.20	261	P	P	04 37 45.4	-1.6
WR0				IAmb	IAmb	04 37 47.4	
	comp=Z,12nm,0.5s						
AS31	Alice Springs	47.29	256	P	P	04 37 46.0	-1.7
ASAR	Alice Springs	47.29	256	P	P	04 37 46.0	-1.6
	comp=Z,22nm,0.8s,baz=92,slow=8.0,SNR=95						
ASAR				PcP	PcP	04 39 16.4	-0.9
	comp=Z,8.2nm,0.9s,baz=105,slow=3.8,SNR=12						
ASAR				ScP	ScP	04 43 04.3	+2.3
	comp=Z,2.5nm,1.1s,baz=121,slow=4.5,SNR=6.0						
ASAR				S	S	04 44 29.5	-4.2
	comp=Z,0.9nm,0.8s,baz=91,slow=15,SNR=5.9						
ASAR				LR	LR	04 55 41.5	
	comp=Z,36nm,20.0s,baz=115,slow=34						
	comp=Z,22nm,0.8s						
ASAR	Alice Springs	47.29	256	P	P	04 37 46.3	-1.4
ASPA	Alice Springs	47.29	256	P	P	04 37 46.3	-1.4
	baz=47						
WC3	Warramunga Arr	47.36	261	P	P	04 37 46.4	-1.9
	baz=47						
WB2	Warramunga Arr	47.38	261	IAmb	IAmb	04 37 50.8	
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	47.38	261	P	P	04 37 46.6	-1.8
WRAB				IAmb	IAmb	04 37 51.6	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	47.38	261	P	P	04 37 46.6	-1.8
WRA	Warramunga Arr	47.39	261	P	P	04 37 46.4	-2.1
	comp=Z,10nm,0.3s,baz=96,slow=7.5,SNR=387						
WRA				PcP	PcP	04 39 17.8	+0.1
	comp=Z,5.7nm,0.8s,baz=92,slow=4.2,SNR=5.5						
WRA				LR	LR	04 56 00.4	
	comp=Z,92nm,18.9s,baz=104,slow=34						
	comp=Z,10nm,0.3s						
SMPI	Sarmi	48.61	286	P	P	04 37 56.9	-1.0
	comp=Z,72nm,0.9s						
KDU	Kakadu	50.72	270	P	P	04 38 12.0	-1.9
	baz=51,SNR=7.7						
KDU	Kakadu	50.72	270	P	P	04 38 12.0	-1.9
BAKI	Biak	51.30	285	P	P	04 38 17.9	-0.4
	comp=Z,1µmcomp=Z,134nm,0.8s						
GUMO	Guam	51.76	307	LR	LR	04 58 45.5	
	comp=Z,32nm,19.9s,baz=97,slow=34						
MTN	Manton Dam	51.93	269	P	P	04 38 21.2	-1.8
	baz=52,SNR=10						
MTN	Manton Dam	51.93	269	P	P	04 38 20.6	-2.4
MTN	Manton Dam	51.93	269	P	P	04 38 21.2	-1.8
FORT	Forrest	51.97	246	P	P	04 38 20.9	-2.1
	baz=52,SNR=6.7						
FORT	Forrest	51.97	246	P	P	04 38 21.5	-1.5
FORT	Forrest	51.97	246	P	P	04 38 20.8	-2.2
WRKA	Warakurna	52.22	253	P	P	04 38 23.2	-1.8
	baz=52,SNR=42						
WRKA	Warakurna	52.22	253	P	P	04 38 23.2	-1.8
KNRA	Kununurra	53.45	265	P	P	04 38 33.6	-0.5
	baz=53,SNR=27						
KNRA	Kununurra	53.45	265	P	P	04 38 33.4	-0.7
KNRA	Kununurra	53.45	265	P	P	04 38 33.1	-1.0
FAKI	Fak Fak	54.13	281	P	P	04 38 38.2	-1.0
FAKI	Fak Fak	54.13	281	P	P	04 38 38.4	-0.8
DRV	Dumont d'Urvil	54.61	200	⇓P	P	04 38 42.9	+1.2
DRV				pP	sP	04 39 17.1	-0.3
FITZ	Fitzroy Crossi	55.82	261	P	P	04 38 50.1	-1.1
	baz=56						
SIJI	Sorong	55.84	283	LR	LR	05 01 01.5	
	comp=Z,57nm,21.4s,baz=298,slow=34						
SWI	Sorong	55.85	283	P	P	04 38 50.8	-0.7
	comp=Z,136nm,0.7s						
SBA	Scott Base	58.41	184	P	P	04 39 12.3	+3.8
SBA	Scott Base	58.41	184	P	P	04 39 12.2	+3.7
SBA				pP	pP	04 39 37.6	+4.4
VNDA	Vanda	58.51	186	P	P	04 39 12.2	+3.0
	comp=Z,5.5nm,0.7s,baz=0.2,slow=7.2,SNR=42						
	comp=Z,5.5nm,0.7s						
VNDA	Vanda	58.51	186	P	P	04 39 11.7	+2.5
VNDA				IAmb	IAmb	04 39 13.0	
	comp=Z,6.9nm,0.8s						
VNDA	Vanda	58.51	186	P	P	04 39 12.2	+3.0
VNDA				sP	PcP	04 40 00.6	+2.0
BATI	Baumata	59.70	270	LR	LR	05 03 25.4	
	comp=Z,88nm,18.9s,baz=12,slow=34						
TNTI	Ternate	60.07	283	P	P	04 39 19.8	-1.2
TNTI	Ternate	60.07	283	P	P	04 39 19.5	-1.5
	comp=Z,3µmcomp=Z,70nm,0.8s						
SANI	Sanana	60.25	279	P	P	04 39 20.3	-1.9
	comp=Z,45nm,0.7s						
MBWA	Marble Bar	60.63	257	P	P	04 39 23.3	-1.4
MBWA				IAmb	IAmb	04 39 23.6	
	comp=Z,12nm,0.8s						
MBWA	Marble Bar	60.63	257	P	P	04 39 23.4	-1.3
MEEK	Meekatharra	60.64	250	P	P	04 39 22.7	-2.1
	baz=61,SNR=4.3						
MEEK	Meekatharra	60.64	250	P	P	04 39 22.7	-2.1
KLBR	Kellerberrin	60.70	244	P	P	04 39 23.7	-1.4
	baz=61,SNR=5.1						
BLDU	Ballidu	61.72	245	P	P	04 39 30.2	-1.8
	baz=62,SNR=6.9						
BLDU	Ballidu	61.72	245	P	P	04 39 30.2	-1.8
EDFI	Ende, Flores	61.99	271	P	P	04 39 32.1	-2.0
	comp=Z,12nm,0.8s						
CCD	Concordia, Ant	63.49	195	P	P	04 39 45.1	+1.7
CCD				sP	PcP	04 40 20.1	+0.8
DAV	Davao City (W)	64.33	289	LR	LR	05 04 00.8	
	comp=Z,18nm,20.5s,baz=171,slow=32						
MRSI	Marisa	64.94	280	P	P	04 39 51.8	-1.7
	comp=Z,21nm,0.7s						
KAPI	Kappang	65.02	274	LR	LR	05 09 44.0	
	comp=Z,31nm,18.2s,baz=108,slow=37						
CASY	Casey	65.45	205	P	P	04 39 56.4	+0.5
CASY				IAmb	IAmb	04 39 58.0	
	comp=Z,29nm,1.0s						
PLAI	Plampang	65.64	269	P	P	04 39 56.6	-1.4
	comp=Z,56nm,0.8s						
PLAI	Plampang	65.64	269	P	P	04 39 56.5	-1.4
TOLI2	Tolitoli	66.26	281	P	P	04 40 01.1	-0.8
TOLI2				IAmb	IAmb	04 40 03.4	
	comp=Z,8.7nm,0.7s						
MPSI	Mapaga	66.78	279	P	P	04 40 03.7	-1.6
	comp=Z,2µmcomp=Z,23nm,0.8s						
SMKI	Samarinda	68.99	278	P	P	04 40 17.8	-1.3
	comp=Z,355nm,0.7s						
QSPA	South Pole Qui	69.91	180	P	P	04 40 25.4	+1.4
QSPA				IAmb	IAmb	04 40 27.2	
	comp=Z,21nm,0.8s						
QSPA	South Pole Qui	69.91	180	P	P	04 40 26.1	+2.0
QSPA				x	x	04 40 39.1	
QSPA				pP	pP	04 40 48.3	-1.5
MJAR	Matsushiro Arr	71.62	322	P	P	04 40 32.9	-1.7
	comp=Z,20nm,0.7s,baz=155,slow=6.2,SNR=35						
MJAR				LR	LR	05 06 15.6	
	comp=Z,20nm,21.8s,baz=133,slow=31						
	comp=Z,20nm,0.7s						
MJAR	Matsushiro Arr	71.62	322	IAmb	IAmb	04 40 34.2	
	comp=Z,7.1nm,0.6s						
MAJO	Matsushiro	71.62	322	P	P	04 40 33.9	-0.8
MAJO				IAmb	IAmb	04 40 34.3	
	comp=Z,23nm,0.7s						
MAJO	Matsushiro	71.62	322	P	P	04 40 33.8	-0.9
MAJO				pP	pwP	04 41 01.8	-0.3
MJB9	Matsu-Tunnel	71.62	322	P	P	04 40 33.3	-1.4
MJB9				IAmb	IAmb	04 40 34.3	
	comp=Z,23nm,0.7s						
UGM	Wanagama	72.74	268	P	P	04 40 40.8	-1.1
SHEM	Shemya Is, Ala	73.19	353	LR	LR	05 07 25.6	
	comp=Z,31nm,21.5s,baz=236,slow=31						
JHS	Saijyo	73.68	318	IAmb	IAmb	04 40 47.5	
	comp=Z,25nm,0.7s						
SBUM	Sibu	74.69	278	P	P	04 40 52.1	-1.1
LEM	Lembang	75.82	268	LR	LR	05 14 52.4	
	comp=Z,16nm,20.1s,baz=146,slow=36						
KSM	Kuching	76.12	277	IAmb	IAmb	04 41 02.2	
	comp=Z,14nm,0.7s						
ARVC	Arvin	76.59	44	P	P	04 41 04.0	+0.4
	baz=233						
PETK	Petropavlovsk-	76.69	344	P	P	04 41 02.7	-1.1
	comp=Z,3.8nm,0.6s,baz=90,slow=8.9,SNR=8.6						
	comp=Z,3.8nm,0.6s						
MURC	Murrieta	76.79	47	P	P	04 41 05.5	+0.7
	baz=235						
BFSC	Mount Baldy Ra	76.85	46	P	P	04 41 05.5	+0.3
	baz=234						
MONP2	Monument Peak	76.92	48	P	P	04 41 06.6	+0.8
	baz=236						
SRIG	Santa Rosalia	76.96	54	P	P	04 41 06.4	+0.5
SRIG				IAmb	IAmb	04 41 07.4	
	comp=Z,37nm,1.1s						
SRIG				pP	pP	04 41 31.0	-1.0
EDW2	Edwards Air Fo	77.00	45	P	P	04 41 06.7	+0.8
	baz=234,SNR=11						
IKP	In-Ko-Pah, Jac	77.00	48	P	P	04 41 06.7	+0.7
	baz=236						
YUH	Yuha Desert	77.13	48	IAmb	IAmb	04 41 08.2	
	comp=Z,14nm,1.1s						
CCAC	Calif City Air	77.14	45	IAmb	IAmb	04 41 08.3	
	comp=Z,13nm,1.1s						
ISA	Isabella, Lake	77.14	44	IAmb	IAmb	04 41 08.4	
	comp=Z,18nm,1.1s						

ISA	Isabella, Lake	77.14	44	P	P	04 41 07.6	+0.8
	baz=234,SNR=6.9						
PFO	Pinyon Flats O	77.30	47	P	P	04 41 07.6	-0.2
PFO	Pinyon Flats O	77.30	47	P	P	04 41 08.5	+0.7
	baz=235						
CMB	Columbia Colle	77.36	41	P	P	04 41 07.3	-0.6
CMB				pP	pP	04 41 32.9	-1.0
BELC	Belle Mtn. Jos	77.84	47	P	P	04 41 11.2	+0.4
	baz=236,SNR=6.8						
CWC	Cottonwood Cre	77.86	44	P	P	04 41 11.3	+0.5
	baz=234						
BC3	Big Chuckawall	78.02	47	P	P	04 41 12.8	+1.1
	baz=236						
MPMC	Manual Prospec	78.02	44	P	P	04 41 12.7	+0.9
	baz=234,SNR=18						
GSC	Goldstone, Bar	78.03	45	P	P	04 41 11.6	-0.1
GSC				pP	pP	04 41 37.9	+0.2
GSC	Goldstone, Bar	78.03	45	P	P	04 41 12.0	+0.3
	baz=235,SNR=5.5						
HEC	Hector,Ludlow	78.08	46	P	P	04 41 12.5	+0.5
	baz=235,SNR=8.6						
GLA	Glamis	78.12	48	IAmb	IAmb	04 41 14.2	
	comp=Z,26nm,1.1s						
GLA	Glamis	78.12	48	P	P	04 41 13.6	+1.4
	baz=236						
YBH	Yreka Blue Hor	78.32	37	P	P	04 41 13.6	+0.4
YBH				IAmb	IAmb	04 41 14.9	
	comp=Z,23nm,1.1s						
QSM	Queen of Sheba	78.37	45	IAmb	IAmb	04 41 15.0	
	comp=Z,20nm,1.3s						
KSRS	Korea Array	78.50	317	P	P	04 41 14.4	+0.3
	comp=Z,4.1nm,0.7s,baz=132,slow=5.6,SNR=15						
	comp=Z,4.1nm,0.7s						
GMRC	Granite Mounta	78.51	46	P	P	04 41 15.2	+0.8
	baz=236,SNR=7.1						
IRM	Iron Mountain	78.51	47	P	P	04 41 15.4	+1.1
	baz=236,SNR=8.3						
KS19	Wonju Array Si	78.56	317	P	P	04 41 14.0	-0.5
KS19				IAmb	IAmb	04 41 15.2	
	comp=Z,38nm,1.4s						
YERR	Yerington	78.65	41	IAmb	IAmb	04 41 16.5	
	comp=Z,14nm,1.0s						
LHV	Little Huntoon	78.67	42	IAmb	IAmb	04 41 16.9	
	comp=Z,14nm,1.0s						
FURC	Furnace Creek,	78.67	44	P	P	04 41 15.9	+0.8
	baz=235						
TUQ	Turquoise Moun	78.70	46	P	P	04 41 16.2	+0.7
	baz=235,SNR=7.2						
BLYC	Blythe	78.72	48	P	P	04 41 15.2	-0.2
BLYC				IAmb	IAmb	04 41 17.3	
	comp=Z,14nm,0.9s						
SHOC	Shoshone, Teco	78.73	45	P	P	04 41 16.4	+1.0
	baz=235						
PPBI	Pangkal Pinang	78.76	272	P	P	04 41 15.2	-0.9
HSIG		78.81	53	P	P	04 41 15.8	-0.3
HSIG				IAmb	IAmb	04 41 17.3	
	comp=Z,20nm,1.2s						
HSIG				pP	pP	04 41 41.7	-0.6
L04D	Klamath Falls	78.86	37	P	P	04 41 16.7	+0.4
	baz=230						
NVAR	Mina Array Bea	78.90	42	P	P	04 41 17.0	+0.4
	comp=Z,8.7nm,0.8s,baz=223,slow=8.2,SNR=74						
NVAR				pP	pP	04 41 43.1	+0.5
	comp=Z,7.7nm,0.8s,baz=226,slow=8.5,SNR=7.6						
	comp=Z,8.7nm,0.8s						
214A	Organ Pipe Nat	78.96	50	P	P	04 41 17.8	+1.0
	baz=238						
NV11	Mina Array Sit	78.99	42	IAmb	IAmb	04 41 18.5	
	comp=Z,17nm,1.1s						
KASI	Kota Agung	79.17	268	P	P	04 41 16.3	-2.1
	comp=Z,44nm,0.9s						
PDMCI	Parker Dam,Lak	79.28	47	P	P	04 41 19.2	+0.7
	baz=237						
TPNV	Topopah Spring	79.35	44	IAmb	IAmb	04 41 20.6	
	comp=Z,11nm,0.8s						
TPNV	Topopah Spring	79.35	44	P	P	04 41 19.7	+0.7
	baz=235,SNR=11						
BELA	Belgrano 2	79.53	172	P	P	04 41 20.6	+1.4
BELA				IAmb	IAmb	04 41 23.3	
	comp=Z,10nm,0.7s						
J04D	Umpqua Nationa	79.64	36	P	P	04 41 21.2	+0.7
	baz=230						
MOD	Modoc Plateau	79.81	38	IAmb	IAmb	04 41 22.6	
	comp=Z,17nm,1.1s						
SHPR	Sheep Range	79.82	45	IAmb	IAmb	04 41 23.5	
	comp=Z,16nm,1.2s						
Y14A	Wickenburg	79.88	48	IAmb	IAmb	04 41 23.6	
	comp=Z,12nm,0.9s						
K05A	Summer Lake	79.99	37	IAmb	IAmb	04 41 24.0	
	comp=Z,25nm,0.9s						
S11A	Rachel	80.08	44	IAmb	IAmb	04 41 24.4	
	comp=Z,12nm,1.0s						
H04D	Lebanon	80.13	35	P	P	04 41 23.6	+0.8
	baz=229						
J05D	Fort Rock, OR	80.16	37	P	P	04 41 24.0	+0.7
	baz=230						
USRK	Ussuriysk Ar.	80.27	324	P	P	04 41 25.0	+1.4
	comp=Z,4.2nm,0.7s,baz=89,slow=5.6,SNR=7.4						
PRN	Pahroc Range	80.40	44	IAmb	IAmb	04 41 26.8	
	comp=Z,19nm,1.2s						
PMSA	Palmer Station	80.49	156	LR	LR	05 09 27.2	
	comp=Z,33nm,19.2s,baz=222,slow=30						
H04A	Detroit Lake	80.53	35	P	P	04 41 25.3	+0.2
H04A				IAmb	IAmb	04 41 25.4	
	comp=Z,10nm,0.7s						
R11A	Troy Canyon, C	80.58	43	P	P	04 41 26.0	+0.3
	baz=235,SNR=7.1						
TUC	Tucson	80.61	51	P	P	04 41 26.6	+0.8
TUC				IAmb	IAmb	04 41 28.2	
	comp=Z,24nm,1.4s						
TUC	Tucson	80.61	51	P	P	04 41 26.8	+1.0
	baz=239						
PINE	Pine Mountain	80.64	36	IAmb	IAmb	04 41 27.5	
	comp=Z,22nm,0.8s						
I05D	Terrebonne, OR	80.77	36	P	P	04 41 26.8	+0.5
	baz=230						
P18K	Big Mountain,	80.92	10	P	P	04 41 25.9	-0.8
	baz=199						
WVOR	Wild Horse Val	81.11	39	IAmb	IAmb	04 41 29.6	
	comp=Z,11nm,0.9s						
319A	Douglas	81.24	52	IAmb	IAmb	04 41 31.5	
	comp=Z,26nm,1.1s						
G05D	Wamic, OR	81.36	35	P	P	04 41 29.9	+0.5
	baz=230						
E04D	Cinebar	81.55	34	P	P	04 41 31.3	+0.9
	baz=229						
I07A	Izee	81.63	37	IAmb	IAmb	04 41 32.5	
	comp=Z,15nm,1.0s						
U15A	North Rim	81.70	46	IAmb	IAmb	04 41 34.1	
	comp=Z,13nm,1.0s						
J08A	Circle Bar Ran	81.77	38	IAmb	IAmb	04 41 33.1	
	comp=Z,22nm,1.2s						
NJ2	Nanjing	81.82	308	*e*P	P	04 41 33.8	+1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WUAZ	Wupatki	81.85	48	IAmb	IAmb	04 41 34.8	
	comp=Z,18nm,1.1s						
WUAZ	Wupatki	81.85	48	P	P	04 41 33.6	+1.1
	baz=238						
MDJ	Mudanjiang	81.86	324	P	P	04 41 31.8	-0.2
MDJ				IAmb	IAmb	04 41 34.2	
	comp=Z,16nm,0.8s						
MG05	Puerto Natales	81.89	142	P	P	04 41 33.9	+1.6
MG05				IAmb	IAmb	04 41 35.2	
	comp=Z,15nm,1.1s						
PKCU	Pink Cliffs	82.23	46	IAmb	IAmb	04 41 38.3	
	comp=Z,31nm,1.0s						
D05A	Enumclaw	82.27	33	IAmb	IAmb	04 41 36.5	
	comp=Z,50nm,1.5s						
ZAIG	Zacatecas	82.58	63	P	P	04 41 35.6	-1.1
MTPU	Mount Pierson	82.64	45	IAmb	IAmb	04 41 39.6	
	comp=Z,27nm,1.3s						
G08A	Pilot Rock	82.69	36	IAmb	IAmb	04 41 37.8	
	comp=Z,23nm,1.0s						
MAW	Mawson	82.81	199	P	P	04 41 38.1	+1.5
	comp=Z,9.6nm,0.6s,baz=141,slow=5.4,SNR=15						
	comp=Z,9.6nm,0.6s						
MAW	Mawson	82.81	199	P	P	04 41 38.2	+1.5
	baz=83,SNR=10						
MAW	Mawson	82.81	199	IAmb	IAmb	04 41 38.4	
	comp=Z,2.7nm,0.8s						
A04D	Lummi Island	82.91	32	P	P	04 41 38.3	+0.9
	baz=229						
121A	Cookes Peak, D	82.91	52	IAmb	IAmb	04 41 40.5	
	comp=Z,19nm,1.1s						
121A	Cookes Peak, D	82.91	52	P	P	04 41 38.8	+0.7
	baz=241						
121A	Cookes Peak, D	82.91	52	P	P	04 41 39.6	+1.6
	baz=241						
B05A	Bryant	82.92	33	P	P	04 41 37.9	+0.4
	baz=229						
LTY	Liberty	83.00	34	P	P	04 41 38.3	+0.3
HAWA	Hanford	83.06	35	IAmb	IAmb	04 41 39.6	
	comp=Z,23nm,1.1s						
BMO	Blue Mountains	83.35	37	IAmb	IAmb	04 41 40.9	
	comp=Z,7.9nm,0.8s						
MFID	Camas Ranch	83.36	39	IAmb	IAmb	04 41 41.2	
	comp=Z,12nm,1.1s						
DUG	Dugway, Tooele	83.40	43	P	P	04 41 40.9	+0.5
	baz=237						
CN2	Changchun	83.75	321	*e*P	P	04 41 40.1	-1.7
CN2				*e*PP	PP	04 44 55.2	-1.3
BNX	BinXian	83.77	324	⇓P	P	04 41 42.0	+0.1
BNX				pmax	pmax		
	comp=Z,27nm,0.6s						
BNX				pmax	pmax		
	comp=Z,240nm,3.7s						
D08A	Wollman Farm,	83.80	35	IAmb	IAmb	04 41 43.4	
	comp=Z,20nm,0.9s						
E09A	Wood Farm, Sta	83.89	36	IAmb	IAmb	04 41 43.4	
	comp=Z,15nm,1.1s						
TTA	Tatalina	84.17	9	P	P	04 41 44.1	+0.5
	baz=198						
Y22A	Socorro	84.19	51	P	P	04 41 46.2	+1.6
	baz=241						
HLID	Hailey	84.28	40	P	P	04 41 44.5	-0.3
HLID				IAmb	IAmb	04 41 46.5	
	comp=Z,15nm,0.9s						
HLID				pP	pP	04 42 11.3	+0.1
HLID	Hailey	84.28	40	P	P	04 41 45.4	+0.6
	baz=235,SNR=36						
HVU	Hansel Valley	84.29	42	IAmb	IAmb	04 41 46.2	
	comp=Z,22nm,1.3s						
MNTX	Cornudas Mount	84.31	53	IAmb	IAmb	04 41 47.1	
	comp=Z,19nm,1.0s						
MNTX	Cornudas Mount	84.31	53	P	P	04 41 46.0	+1.0
	baz=242						
MNTX	Cornudas Mount	84.31	53	P	P	04 41 46.1	+1.1
	baz=242						
CTU	Camp Tracy	84.35	43	IAmb	IAmb	04 41 46.5	
	comp=Z,12nm,1.0s						
P17A	Butcher Ranch,	84.36	44	P	P	04 41 45.8	+0.5
P17A				IAmb	IAmb	04 41 47.9	
	comp=Z,17nm,1.0s						
B08A	Colville Reser	84.39	34	IAmb	IAmb	04 41 45.6	
	comp=Z,10nm,0.9s						
JLU	Jordanelle	84.49	43	IAmb	IAmb	04 41 47.4	
	comp=Z,8.7nm,0.9s						
COYC	Coyhaique	84.50	137	P	P	04 41 47.2	+1.4
COYC				IAmb	IAmb	04 41 49.3	
	comp=Z,35nm,1.3s						
TX31	Lajitas Ar. Si	84.55	56	P	P	04 41 47.4	+1.0
	baz=244						
TX32	Lajitas Array	84.55	56	IAmb	IAmb	04 41 48.5	
	comp=Z,18nm,1.1s						
TXAR	Lajitas Array	84.55	56	P	P	04 41 47.2	+0.8
	comp=Z,9.6nm,1.0s,baz=216,slow=6.2,SNR=38						
TXAR				pP	pP	04 42 13.6	+0.8
	comp=Z,2.6nm,0.9s,baz=215,slow=8.5,SNR=3.5						
	comp=Z,9.6nm,1.0s						
LLLB	Lillooet	84.56	31	IAmb	IAmb	04 41 47.9	
	comp=Z,6.4nm,0.6s						
AY01	Puyuhuapi	84.58	135	P	P	04 41 47.7	+1.5
C09A	Chrisman Ranch	84.61	35	IAmb	IAmb	04 41 47.1	
	comp=Z,19nm,1.1s						
SCM	Sheep Creek Mo	84.66	13	P	P	04 41 45.8	-0.3
	baz=206						
MVCO	Mesa Verde	84.71	47	P	P	04 41 47.9	+0.7
	baz=240						
P18A	Preston Nutter	84.76	45	IAmb	IAmb	04 41 49.1	
	comp=Z,15nm,1.0s						
K20K	Telida	84.86	9	P	P	04 41 46.4	-0.6
	baz=200						
PV13	Radium Mtn., P	84.97	46	IAmb	IAmb	04 41 50.0	
	comp=Z,18nm,1.3s						
PV23	Carpenter Ridg	84.98	46	IAmb	IAmb	04 41 50.2	
	comp=Z,19nm,0.9s						
PV11	David Mesa, Pa	85.00	46	IAmb	IAmb	04 41 50.9	
	comp=Z,29nm,1.3s						
ANMO	Albuquerque	85.05	50	P	P	04 41 49.3	+0.5
ANMO				IAmb	IAmb	04 41 50.9	
	comp=Z,29nm,1.0s						
ANMO	Albuquerque	85.05	50	P	P	04 41 50.0	+1.1
	baz=241						
ANMO	Albuquerque	85.05	50	P	P	04 41 50.0	+1.1
	baz=241						
N25K	Chitina, Valde	85.06	14	IAmb	IAmb	04 41 49.0	
	comp=Z,16nm,1.1s						
N25K	Chitina, Valde	85.06	14	P	P	04 41 47.7	-0.4
	baz=209						
PV07	Paradox Valley	85.22	46	IAmb	IAmb	04 41 51.2	
	comp=Z,12nm,1.1s						
CAST	Castle Rocks	85.23	10	P	P	04 41 47.0	-1.8
	baz=202						
WAT6	Susitna Watana	85.25	12	P	P	04 41 49.0	-0.2
	baz=206						
BARN	Barnard Glacie	85.29	16	IAmb	IAmb	04 41 50.5	
	comp=Z,15nm,1.1s						
PV15	Paradox Valley	85.29	46	IAmb	IAmb	04 41 51.4	
	comp=Z,19nm,1.2s						
WAT1	Susitna Watana	85.32	12	P	P	04 41 49.0	-0.4
	baz=205						
NEW	Newport	85.50	35	P	P	04 41 50.3	-0.3
	baz=233						
LL02	Futaleuf	85.60	134	P	P	04 41 53.2	+1.8
LL02				IAmb	IAmb	04 41 54.2	
	comp=Z,14nm,0.8s						
J20K	Nowinta River	85.62	9	P	P	04 41 51.1	+0.3
	baz=200						
RDMU	Red Mountain	85.70	44	IAmb	IAmb	04 41 53.2	
	comp=Z,8.6nm,0.9s						
RND	Reindeer	85.79	11	IAmb	IAmb	04 41 52.5	
	comp=Z,12nm,1.0s						
IPM	Ipoh	85.84	276	IAmb	IAmb	04 41 53.8	
	comp=Z,16nm,0.9s						
AHID	Auburn Hatcher	85.87	42	IAmb	IAmb	04 41 54.8	
	comp=Z,12nm,1.1s						
S34M	Telegraph Cree	85.90	22	P	P	04 41 53.0	+0.8
	baz=221						
LL04	Puerto Octay	86.12	132	IAmb	IAmb	04 41 56.4	
	comp=Z,12nm,0.9s						
M26K	Nabesna, AK	86.12	14	IAmb	IAmb	04 42 12.3	
	comp=Z,16nm,1.4s						
M26K	Nabesna, AK	86.12	14	P	P	04 41 50.3	-3.0
	baz=210						
S22A	4UR Ranch, Cre	86.13	48	IAmb	IAmb	04 41 56.1	
	comp=Z,8.9nm,0.9s						
S22A	4UR Ranch, Cre	86.13	48	P	P	04 41 54.5	+0.2
	baz=241						
YUK3	Moose Creek	86.20	16	P	P	04 41 53.8	-0.2
	baz=212						
O20A	White River Ci	86.35	45	IAmb	IAmb	04 41 56.3	
	comp=Z,13nm,0.8s						
O20A	White River Ci	86.35	45	P	P	04 41 55.2	0.0
	baz=240						
DLMT	Dillon	86.37	39	P	P	04 41 55.1	+0.1
DLMT				IAmb	IAmb	04 41 57.3	
	comp=Z,16nm,1.4s						
DLMT				pP	pP	04 42 21.3	-0.4
SNOW	Snow King Moun	86.45	41	IAmb	IAmb	04 41 57.7	
	comp=Z,6.2nm,0.8s						
L26K	Log Cabin Wild	86.58	14	P	P	04 41 55.6	+0.1
	baz=210						
LR03	Panguipulli	86.67	131	P	P	04 41 57.6	+0.9
LR03				pP	pP	04 42 24.4	+1.1
SMCO	Snowmass	86.73	46	IAmb	IAmb	04 42 00.1	
	comp=Z,10nm,0.8s						
K24K	Donnelly Dome	86.75	13	P	P	04 41 56.8	+0.4
	baz=208						
NEA2	Nenana	86.83	11	P	P	04 41 56.4	-0.4
	baz=204,SNR=5.6						
BW06	Boulder Array	86.83	42	P	P	04 41 57.4	-0.1
	baz=239						
PD31	Pinedale Array	86.83	42	P	P	04 41 57.5	0.0
PDAR	Pinedale Array	86.83	42	P	P	04 41 57.2	-0.3
	comp=Z,1.5nm,0.7s,baz=208,slow=4.1,SNR=13						
PDAR				pP	pP	04 42 24.2	0.0
	comp=Z,1.2nm,0.7s,baz=212,slow=3.7,SNR=4.0						
	comp=Z,1.5nm,0.7s						
RIDG	Independent Ri	86.89	13	P	P	04 41 56.6	-0.5
	baz=208						
I21K	Tanana	86.89	10	P	P	04 41 56.3	-0.6
	baz=202,SNR=7.7						
WRH	Wood River Hil	86.90	11	IAmb	IAmb	04 41 57.7	
	comp=Z,11nm,1.1s						
L27K	Beaver Creek,	86.97	14	P	P	04 41 57.4	0.0
	baz=211						
SDCO	Great Sand Dun	87.05	48	P	P	04 41 59.1	+0.2
	baz=242						
SDCO	Great Sand Dun	87.05	48	P	P	04 41 59.0	+0.2
	baz=242						
HDA	Harding Lake	87.06	12	P	P	04 41 55.9	-1.9
	baz=206,SNR=8.2						
BOZ	Bozeman (W)	87.07	39	IAmb	IAmb	04 42 00.0	
	comp=Z,12nm,1.4s						
BOZ	Bozeman (W)	87.07	39	P	P	04 41 58.6	+0.1
	baz=237,SNR=9.0						
PSI	Prapat	87.23	274	LR	LR	05 21 36.8	
	comp=Z,26nm,18.3s,baz=148,slow=36						
SCRK	Sand Creek	87.28	13	P	P	04 41 58.6	-0.4
	baz=209						
MSTX	Muleshoe	87.30	52	IAmb	IAmb	04 42 00.7	
	comp=Z,8.6nm,0.8s						
MSTX	Muleshoe	87.30	52	P	P	04 42 00.2	+0.4
	baz=244						
MSTX	Muleshoe	87.30	52	P	P	04 42 00.2	+0.4
	baz=244						
TCOL	CIGO, UAF Yank	87.31	11	P	P	04 41 59.4	+0.5
	baz=206,SNR=6.2						
HNS	HongShan	87.38	311	⇑P	P	04 42 00.4	+0.4
IL31		87.40	12	IAmb	IAmb	04 41 59.9	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	87.40	12	P	P	04 41 58.6	-0.8
	comp=Z,1.7nm,0.9s,baz=231,slow=5.1,SNR=9.7						
ILAR				pP	pP	04 42 25.2	-0.4
	comp=Z,2.7nm,0.8s,baz=214,slow=5.8,SNR=7.1						
	comp=Z,1.7nm,0.9s						
ILAR	Eielson Array	87.40	12	P	P	04 41 59.1	-0.3
PLCA	Paso Flores	87.48	133	P	P	04 42 02.7	+2.0
	comp=Z,4.6nm,0.9s,baz=223,slow=4.9,SNR=9.2						
PLCA				LR	LR	05 13 32.3	
	comp=Z,24nm,19.9s,baz=218,slow=30						
	comp=Z,4.6nm,0.9s						
833A	Chaparral WMA,	87.51	59	IAmb	IAmb	04 42 01.9	
	comp=Z,10nm,0.9s						
833A	Chaparral WMA,	87.51	59	P	P	04 42 00.2	-0.6
	baz=246						
J25K	Salcha River,	87.55	12	P	P	04 42 00.3	0.0
	baz=208,SNR=5.0						
BJI	Beijing	87.62	314	P	P	04 42 01.1	+0.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WALA	Waterton Lakes	87.69	35	IAmb	IAmb	04 42 02.3	
	comp=Z,9.7nm,1.1s						
LYN	LuoYang	87.71	308	⇑P	P	04 42 02.1	+0.5
LYN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
K27K	Chicken	87.74	14	P	P	04 42 01.6	+0.6
	baz=211						
RWWY	Rawlins	87.80	44	IAmb	IAmb	04 42 02.0	
	comp=Z,16nm,1.1s						
J26L	Joseph Creek	87.83	13	P	P	04 42 02.0	+0.4
	baz=210,SNR=5.1						
M30M	Minto, Yukon	87.83	17	P	P	04 42 00.7	-0.9
	baz=216						
ISCO	Idaho Springs	87.95	46	P	P	04 42 03.4	+0.3
	baz=242						
ISCO	Idaho Springs	87.95	46	P	P	04 42 03.3	+0.3
	baz=242						
TROLL	Troll, Antarti	88.05	179	P	P	04 42 03.9	+1.0
ENH	Enshi	88.16	303	P	P	04 42 04.6	+0.7
N23A	Red Feather La	88.25	45	IAmb	IAmb	04 42 05.7	
	comp=Z,10nm,1.0s						
N23A	Red Feather La	88.25	45	P	P	04 42 04.6	+0.2
	baz=242						
SNAA	Sanae	88.25	178	P	P	04 42 04.6	+0.9
SNAA	Sanae	88.25	178	P	P	04 42 05.0	+1.3
VNA3	Neumayer Olymp	88.27	175	P	P	04 42 04.6	+0.8
DAWY	Dawson	88.40	15	IAmb	IAmb	04 42 05.7	
	comp=Z,9.4nm,1.4s						
DAWY	Dawson	88.40	15	P	P	04 42 03.9	-0.3
	baz=213						
AMTX	Amarillo	88.51	52	IAmb	IAmb	04 42 06.6	
	comp=Z,8.1nm,0.9s						
SRIT	Nakonsritamara	88.60	280	IAmb	IAmb	04 42 09.8	
	comp=Z,14nm,0.9s						
K22A	Casper	88.71	43	P	P	04 42 07.1	+0.7
	baz=241						
VNA2	Neumayer--Watz	88.75	176	P	P	04 42 07.5	+1.5
	baz=185,slow=4.0						
VNA1	Neumayer--Stat	88.96	176	P	P	04 42 08.3	+1.4
ABTX	Abilene, Hawle	89.09	55	P	P	04 42 09.8	+1.6
	baz=245						
ABTX	Abilene, Hawle	89.09	55	P	P	04 42 09.4	+1.2
	baz=246						
XLT	XiLinHaoTe	89.54	318	*i* P	P	04 42 10.3	+0.2
XLT				pP	PcP	04 42 18.7	+7.3
XLT				sP	pP	04 42 25.8	-11
XLT				S	S	04 52 59.6	+7.1
XLT				sS	pS	04 53 14.9	-11
XLT				pmax	pmax		
	comp=Z,17nm,0.8s						
XLT				pmax	pmax		
	comp=Z,91nm,4.4s						
XLT				LR	LR		
	comp=Z,290nm,14.1s						
XLT				LR	LR		
	comp=Z,88nm,9.1s						
XAN	Xi'an	90.15	306	P	P	04 42 13.2	0.0
XAN				pP	PcP	04 42 23.4	+9.1
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				LR	LR		
	comp=Z,100nm,11.7s						
LAO	LASA Array	90.85	40	P	P	04 42 17.0	+0.8
	baz=241						
LAO	LASA Array	90.85	40	P	P	04 42 17.4	+1.2
	baz=241						
MTO3	Montecristo	90.93	75	IAmb	IAmb	04 42 19.6	
	comp=Z,12nm,1.2s						
RSSD	Black Hills	91.00	43	P	P	04 42 17.4	+0.2
RSSD				IAmb	IAmb	04 42 18.0	
	comp=Z,14nm,1.0s						
RSSD	Black Hills	91.00	43	P	P	04 42 17.3	+0.1
	baz=243						
RSSD	Black Hills	91.00	43	P	P	04 42 17.2	+0.1
	baz=243						
HHC	Hu-ho-hao-te	91.12	313	*e*P	P	04 42 19.8	+2.2
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,91nm,5.6s						
GO04	Tololo Observa	91.66	123	P	P	04 42 21.7	+1.1
R32A	Long Quarter,	92.16	50	P	P	04 42 23.1	+0.7
	baz=246						
CMAR	Chiang Mai Arr	92.62	289	P	P	04 42 24.8	-0.1
	comp=Z,3.6nm,0.4s,baz=127,slow=3.0,SNR=22						
	comp=Z,3.6nm,0.4s						
CHTO	Chiang Mai	92.75	289	P	P	04 42 25.1	-0.4
CHTO				IAmb	IAmb	04 42 26.8	
	comp=Z,6.5nm,0.6s						
DGMT	Dagmar	92.90	39	P	P	04 42 26.5	+0.9
	baz=243						
DGMT	Dagmar	92.90	39	P	P	04 42 26.2	+0.7
	baz=243						
PZH	PanZhiHua	93.01	297	P	P	04 42 27.3	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.1s						
T35B	Sooner Cattle	93.17	52	P	P	04 42 27.1	+0.1
	baz=247						
TUL1	Leonard	93.32	53	P	P	04 42 28.0	+0.3
	baz=248						
NNA	Nana	93.47	104	LR	LR	05 17 29.4	
	comp=Z,17nm,18.1s,baz=299,slow=31						
BGNE	Belgrade	93.76	47	P	P	04 42 30.7	+1.0
	baz=247						
ATAH	Atahualpa	93.77	99	LR	LR	05 16 50.0	
	comp=Z,53nm,19.2s,baz=298,slow=30						
K31A	O'Neill	93.83	46	P	P	04 42 30.9	+0.9
	baz=246						
E28A	Huff	94.20	42	P	P	04 42 31.5	-0.1
	baz=245						
LZH	Lanzhou	94.78	307	*e*P	P	04 42 37.4	+2.7
LZH				pP	PcP	04 42 46.5	+12
LZH				sP	pP	04 42 50.4	-11
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
YKA	Yellowknife Ar	95.06	24	P	P	04 42 34.7	-0.4
	comp=Z,1.9nm,0.8s,baz=239,slow=4.2,SNR=39						
YKA				pP	pP	04 43 00.6	-0.9
	comp=Z,2.9nm,0.9s,baz=236,slow=4.1,SNR=9.4						

YKA				PKKP	PKKPdf	04 59 28.2	-4.0
	comp=Z,0.3nm,0.5s,baz=42,slow=2.2,SNR=10						
	comp=Z,1.9nm,0.8s						
YKA	Yellowknife Ar	95.06	24	P	P	04 42 34.4	-0.7
ECSD	EROS Data Cent	95.71	46	P	P	04 42 38.5	0.0
	baz=248						
ECSD	EROS Data Cent	95.71	46	P	P	04 42 38.5	0.0
	baz=248						
LVC	Limon Verde	96.33	117	LR	LR	05 19 18.8	
	comp=Z,29nm,18.3s,baz=250,slow=31						
F33A	5 Mile Ranch,	96.71	44	P	P	04 42 42.9	-0.1
	baz=248						
R40A	Maddies Statio	96.81	52	P	P	04 42 43.7	+0.1
R40A					pP	04 43 10.0	-0.5
F36A	Milaca	98.53	44	P	Pdif	04 42 51.9	+0.7
F36A				IAmb	IAmb	04 42 52.9	
	comp=Z,4.2nm,0.9s						
F36A					pP	04 43 17.9	-0.2
LPAZ	La Paz	99.62	111	P	Pdif	04 42 60.0	+2.4
	comp=Z,1.3nm,0.9s,baz=162,slow=3.2,SNR=4.0						
LPAZ				LR	LR	05 20 56.5	
	comp=Z,25nm,18.0s,baz=246,slow=31						
	comp=Z,1.3nm,0.9s						
ZALV	Zalesovo Beam	111.97	321	PKiKP	PKiKP	04 47 45.9	-1.2
	comp=Z,1.0nm,0.5s,baz=78,slow=0.4,SNR=4.5						
MKAR	Makanchi Array	112.98	313	PKiKP	PKiKP	04 47 47.2	-2.0
	comp=Z,0.7nm,0.4s,baz=134,slow=0.3,SNR=9.0						
KURK	Kurchatov	115.62	317		PKPdf	04 47 53.0	-1.2
KURBB	Kurchatov Arra	115.68	317	PKP	PKPdf	04 47 53.0	-1.3
	comp=Z,1.3nm,0.6s,baz=89,slow=1.9,SNR=16						
KURBB				PKKPbc	PKKPbc	04 58 28.9	+0.4
	comp=Z,0.3nm,0.8s,baz=274,slow=3.8,SNR=4.1						
BVAR	Borovoye Array	120.59	320	PKP	PKPdf	04 48 03.0	-0.7
BRVK	Borovoye	120.65	320		PKPdf	04 48 03.2	-0.6
KK31	Karatay Array	121.20	309		PKPdf	04 48 04.8	-0.4
KKAR	Karatay Array	121.20	309		PKPdf	04 48 04.8	-0.4
KBL	Kabul	122.16	299	PKPdf	PKPdf	04 48 07.1	-0.5
ARU	Arti	126.48	326	PKP	PKPdf	04 48 12.7	-2.2
	comp=Z,1.4nm,0.4s,baz=284,slow=4.2,SNR=6.6						
BOSA	Boshof	127.69	203	PKP	PKiKP	04 48 19.3	+0.4
	comp=Z,3.7nm,0.7s,baz=165,slow=1.5,SNR=11						
AKTO	Aktyubinsk	128.64	319	PKP	PKPdf	04 48 19.5	+0.3
	comp=Z,1.3nm,0.6s,baz=39,slow=6.5,SNR=2.7						
ARCES	ARCESS Array B	129.06	351	PKP	PKPdf	04 48 18.9	-0.5
	comp=Z,2.1nm,0.5s,baz=5.7,slow=1.8,SNR=56						
FINES	FINESS Array B	136.18	346	PKhKP	PKPpre	04 48 20.9	
	comp=Z,1.0nm,0.8s,baz=69,slow=6.3,SNR=5.2						
FINES				PKP	PKPdf	04 48 31.9	-1.1
	comp=Z,2.0nm,0.5s,baz=43,slow=3.3,SNR=17						
NB2	NORSAR Subarra	138.92	355	PKP	PKPpre	04 48 31.1	
	comp=Z,0.7nm,0.6s,baz=34,slow=2.6						
NOA	NORSAR Array B	138.92	355	PKP	PKiKP	04 48 39.8	-0.7
	comp=Z,0.4nm,0.5s,baz=14,slow=3.9,SNR=4.5						
AKASG	Malin Array Be	144.00	334	PKhKP	PKPpre	04 48 44.2	
	comp=Z,1.5nm,0.4s,baz=41,slow=4.3,SNR=18						
AKBB	Malin Array Si	144.00	334	PKPdf	PKiKP	04 48 49.4	-1.6
MARD	Mardin	144.50	307		PKPbc	04 48 47.8	0.0
LODK	Lodwar	146.01	245	PKPbc	PKPbc	04 48 52.9	-0.3
SORM	Soroca	146.30	331	⇓P	PKPdf	04 48 50.3	-1.3
MILM	Milestii Mici	146.97	329	⇑P	PKPbc	04 48 54.2	-0.7
MBAR	Mbarara	147.38	234	PKPbc	PKPbc	04 48 57.9	+0.7
VASR	Vaslui	147.66	330	⇑P	PKPbc	04 48 56.9	+0.1
BUR08	Bucovina Ar. S	148.04	334		PKPbc	04 48 57.6	-0.3
BURAR	Bucovina Array	148.06	334	⇑P	PKPbc	04 48 58.4	+0.4
KSP	Ksiaz	148.10	346	*e*PKP	PKPbc	04 48 58.2	+0.4
KOLS	Kolonicke sedl	148.10	338	*e*	PKPab	04 49 01.2	+0.3
TLCR		148.19	327	⇓P	PKPbc	04 48 57.9	-0.3
SCTR	Scanteiesti	148.26	329	⇑P	PKPbc	04 48 58.8	+0.4
GHRR		148.26	330	⇓P	PKPbc	04 48 59.1	+0.8
CLL	Collm	148.28	350	⇓*i*PKPbc	PKPbc	04 48 58.2	0.0
	comp=Z,11nm,0.7s						
CLL				*i* PKPab	PKiKP	04 49 00.1	+0.2
	comp=Z,13nm,1.0s						
CLL				*i* pPKPbc	pPKPbc	04 49 26.1	+0.6
	comp=Z,9.0nm,0.9s						
TESR	Tescani	148.28	331	⇓P	PKPbc	04 48 57.9	-0.5
NIE	Niedzica	148.33	341	*e*PKP	PKiKP	04 48 59.7	-0.4
OSTC	Ostas	148.38	346	*e*PKP	PKPbc	04 48 58.9	+0.3
CHVC	Chvalec	148.39	346	*e*PKP	PKPbc	04 48 59.2	+0.6
CRVS	Cervenica-Dubn	148.41	339	*e*	PKPab	04 49 02.9	+0.7
BRG	Berggiesshubel	148.54	349	*i* PKP	PKPbc	04 48 59.4	+0.4
BRG				Amp		04 48 59.7	
	comp=Z,5.1nm,0.7s						
BRG				*e*x	x	04 49 26.5	
BRG				Amp		04 49 32.6	
	comp=Z,6.6nm,0.8s						
CFR	Carcaliu	148.54	328	⇑P	PKPbc	04 48 58.8	-0.3
DPC	Dobruska-Polom	148.55	346	*e*PKP	PKPbc	04 48 59.6	+0.5
DPC				*e*x	x	04 49 28.7	
BR131	Keskin Array S	148.62	315		PKPbc	04 48 58.7	-1.0
BRTR	Keskin Array B	148.62	315	PKP	PKPdf	04 48 55.8	-0.2
	comp=Z,4.8nm,0.8s,baz=143,slow=3.7,SNR=29						
BRTR				PKPbc	PKPbc	04 48 59.3	-0.4
	comp=Z,6.7nm,0.8s,baz=145,slow=5.6,SNR=28						
BRTR	Keskin Array B	148.62	315	PKPbc	PKPbc	04 48 59.1	-0.6
TPGR	Topolog	148.62	327	⇓P	PKPbc	04 48 59.3	-0.1
KRLC	Kraliky	148.70	345	*e*PKP	PKPbc	04 48 59.4	-0.1
VRI	Vrincioaia	148.73	330	⇑P	PKPbc	04 48 58.8	-0.8
PLOR	Plostina	148.78	330	⇓P	PKPdf	04 48 57.2	+1.4
MORC	Moravsky Berou	148.79	344	⇑P	PKPbc	04 48 58.7	-1.0
MORC	Moravsky Berou	148.79	344	*e*PKP	PKPbc	04 48 58.8	-0.9
LANS	Liptovska Anna	148.82	341	*e*PKP	PKiKP	04 49 01.3	+0.2
TIRR	Tirgusor	148.90	326	⇑P	PKPbc	04 48 59.8	-0.3
HARR	Harsova	148.99	327	⇑P	PKPbc	04 49 00.4	+0.2
TLBR	Topalu	149.03	327	⇑P	PKPbc	04 49 00.7	+0.3
ASF	Jabal al Asfar	149.05	299	PKPbc	PKPbc	04 49 01.4	+0.5
	comp=Z,6.8nm,0.8s,baz=32,slow=3.8,SNR=7.8						
MAUC	Maruska	149.09	344	*e*PKP	PKiKP	04 49 01.1	-0.6
KECS	Kecovo	149.09	340	*e*PKP	PKPbc	04 49 00.9	+0.5
ANTO	Ankara	149.10	316		PKPbc	04 49 00.7	-0.1
NEHR	Nehoiu	149.26	330	⇑P	PKPbc	04 49 00.0	-1.0
DOPR	Dopca	149.26	332	⇑P	PKPbc	04 49 01.3	+0.3
PRU	Pruhonice	149.27	348	*e*PKP	PKPbc	04 49 01.0	+0.2
MESR	Meseseni	149.34	336	⇓P	PKPbc	04 48 59.5	-1.6
ISR	Istrita	149.37	329	⇑P	PKPbc	04 49 01.2	0.0
MLR	Muntele Rosu	149.37	330	⇑P	PKPbc	04 49 00.8	-0.6
VRAC	Vranov	149.46	345	*e*PKP	PKiKP	04 49 02.0	-0.4
JAVC	Velka Javorina	149.60	343	*e*PKP	PKPbc	04 49 02.2	+0.5
VYHS	Vyhne	149.60	342	*e*PKP	PKiKP	04 49 02.2	-0.5
MEM	Membach	149.60	359	*d*PKPbc	PKPbc	04 49 01.4	-0.2
MEM				*d*PKPab	PKPab	04 49 07.0	+0.1
BTNL	Ternell	149.62	359	*d*PKPbc	PKPbc	04 49 01.7	0.0
BTNL				*d*PKPab	PKPab	04 49 06.2	-0.9
BSTI	Sart Tilman	149.64	359	*d*PKPbc	PKPbc	04 49 01.8	+0.2
KOLL	Kolacno	149.65	342	*e*PKP	PKiKP	04 49 02.4	-0.4
SECR		149.66	330	⇑P	PKPbc	04 49 02.0	0.0
PBCC	Pribram	149.67	348	*e*PKP	PKPbc	04 49 01.9	+0.1
DRGR		149.73	335	⇑P	PKPbc	04 49 01.9	-0.2
KRUC	Moravsky	149.74	345	*e*PKP	PKPbc	04 49 01.2	-0.8
PSZ	Piszkesteto	149.78	340	⇓P	PKPbc	04 49 02.0	-0.2
PSZ	Piszkesteto	149.78	340	PKP	PKiKP	04 49 03.1	0.0
BCLA	Clavier	149.81	360	*d*PKPdf	PKPdf	04 48 57.6	+0.3
BCLA				*d*PKPbc	PKPbc	04 49 02.0	-0.1
BCLA				*d*PKPab	PKPab	04 49 06.9	-0.9
VOIR		149.82	331	⇓P	PKPbc	04 49 02.1	-0.4
BHOU	Houvegnez	149.86	359	*d*PKPbc	PKPbc	04 49 02.5	+0.2
ARR	Arges	150.06	332	⇓P	PKiKP	04 49 03.5	-0.4
DOU	Dourbes	150.13	0	*d*PKPbc	PKPbc	04 49 02.8	0.0
DOU				*d*PKPab	PKPab	04 49 08.2	-0.9
MODS	Modra-Piesok	150.15	343	*e*PKP	PKiKP	04 49 04.0	+0.1
KHC	Kasperske Hory	150.28	349	*e*PKP	PKPbc	04 49 03.6	+0.2
KHC				*e*x	x	04 49 31.1	
CKRC	Cesky Krumlov	150.43	347	*e*PKP	PKPbc	04 49 04.0	+0.3
CKRC				*e*x	x	04 49 31.2	
RAZG	Razgrad	150.51	327	⇑P	PKPbc	04 49 03.9	-0.2
GERES	GERESS Array B	150.53	348	PKPbc	PKPbc	04 49 04.2	+0.2
	comp=Z,4.2nm,0.6s,baz=37,slow=2.5,SNR=50						
GERES	GERESS Array B	150.53	348		PKPbc	04 49 03.8	-0.2
WLF	Walferdange	150.55	358	*d*PKPbc	PKiKP	04 49 04.7	+0.1
WLF				*d*PKPab	PKPab	04 49 09.7	-1.1
SIRR	Siria	150.57	336	⇑P	PKPbc	04 49 04.1	0.0
GZR	Gura Zlata	150.85	334	⇑P	PKPbc	04 49 04.2	-0.7
CONA	Conrad Observa	150.92	345	*i* P	PKPbc	04 49 05.2	+0.2
	comp=Z,9.8nm,0.6s,SNR=12						
SOP	Sopron	150.97	344	PKP	PKiKP	04 49 05.4	-0.1
EGYH	Egyhazaskeszo	151.01	343	PKP	PKiKP	04 49 06.5	+0.8
RONA	Rosalia, Austr	151.03	344	*i* P	PKPbc	04 49 05.4	+0.2
	comp=Z,16nm,0.5s,SNR=13						
BZS	Buzias	151.13	335	⇑P	PKPbc	04 49 05.1	-0.4
MPLH	Magyarpolny	151.17	342	PKP	PKiKP	04 49 05.7	-0.3
VLAD	Vladila	151.22	330	⇑P	PKPbc	04 49 05.4	-0.3
EIL	Elat	151.26	295	PKPbc	PKiKP	04 49 06.7	0.0
	comp=Z,10.0nm,0.8s,baz=110,slow=3.3,SNR=7.0						
MOA	Molln	151.37	347	*i* P	PKPbc	04 49 05.8	-0.2
	comp=Z,5.1nm,0.5s,SNR=5.3						
HERR	Herculane	151.41	334	⇑P	PKPbc	04 49 05.6	-0.5
ARSA	Arzberg	151.64	345	*e*P	PKPbc	04 49 06.1	-0.5
	comp=Z,2.4nm,0.7s						
BIOA	Bad Ischl, Aus	151.65	348	*e*P	PKPbc	04 49 06.2	-0.4
	comp=Z,4.3nm,0.4s						
MDVR	Moldovita	151.78	334	⇑P	PKPbc	04 49 05.5	-1.5
KOVH	Kovagotottos	151.97	340	PKP	PKPbc	04 49 06.9	-0.4
FRGS	Fruska Gora	152.20	337	⇑P	PKPbc	04 49 07.2	-0.7
KBA	Koelnbreinsper	152.29	348	*i* P	PKPbc	04 49 07.2	-1.0
	comp=Z,6.2nm,0.5s,SNR=13						
SOKA	Soboth	152.29	345	*e*P	PKPbc	04 49 07.4	-0.7
	comp=Z,5.2nm,0.6s						
PERS	Pernice	152.31	345	*i* PKPbc	PKPbc	04 49 07.4	-0.8
RETA	Reutte	152.33	351	*i* P	PKPbc	04 49 08.3	+0.1
	comp=Z,4.6nm,0.8s						
WATA	Walderalm	152.36	350	*i* P	PKPbc	04 49 07.9	-0.5
	comp=Z,7.5nm,0.5s,SNR=5.3						
WTTA	Wattenberg	152.42	350	*i* P	PKPbc	04 49 08.3	-0.2
	comp=Z,17nm,0.5s,SNR=11						
MOTA	Moosalm	152.43	351	*e*P	PKPbc	04 49 07.9	-0.6
	comp=Z,5.3nm,1.0s						
SQTA	Sankt Quirin	152.53	351	*e*P	PKPbc	04 49 08.4	-0.3
	comp=Z,6.8nm,0.7s						
OBKA	Obir	152.57	346	*e*P	PKPbc	04 49 07.9	-0.9
	comp=Z,3.1nm,0.6s						
DAVA	Damuels	152.65	353	*i* P	PKiKP	04 49 09.1	-0.1
	comp=Z,3.4nm,0.5s						
MYKA	Terra Mystica	152.66	347	*e*P	PKPbc	04 49 08.2	-0.8
	comp=Z,7.4nm,0.5s						
ABTA	Abfaltersbach	152.77	349	*i* P	PKPbc	04 49 08.3	-0.9
	comp=Z,10nm,0.5s,SNR=9.5						
FETA	Feichten	152.79	351	*e*P	PKPbc	04 49 09.2	-0.1
	comp=Z,5.0nm,0.6s						
VTS	Vitosha	152.82	330	⇑P	PKPbc	04 49 09.5	-0.1
VTS	Vitosha	152.82	330		PKPbc	04 49 08.6	-1.0
CRES	Cresnjev	152.98	344	*e*PKPbc	PKPbc	04 49 09.2	-0.4
LJU	Ljubljana	153.01	345	*i* PKPbc	PKPbc	04 49 09.4	-0.3
CTI	Castel Tesino	153.60	349		PKPbc	04 49 10.0	-1.1
ESDC	Sonseca Array	159.10	20	PKPab	PKPab	04 49 47.2	-0.4
	comp=Z,1.1nm,0.9s,baz=335,slow=3.3,SNR=5.6						
TORD	Torodi Ar. Bea	172.36	155	PKP	PKPdf	04 49 20.9	-1.0
	comp=Z,0.8nm,0.8s,baz=349,slow=1.3,SNR=4.3						
TORD				PKPab	PKPab	04 50 47.7	+1.2
	comp=Z,1.8nm,0.9s,baz=208,slow=3.9,SNR=6.7						

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*NNC **07** 04:30:25.0±1.5, 39°.00N×76°.30E, h4^{km}±8^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=9.7km s-min=8.7km az=7.0*

ISC 07 04:30:30.2±3.1**, 39°.3N**±0°.2×**76°.14E**±0°.07**, h10**^{km}**, n29, σ1**^{s}.**74**/30**, 4C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.29	333	Pg	Pg	04 30 34.6	-1.5
KSH				Sg	Sg	04 30 40.7	+0.6
KSH				smax	smax		
	comp=N,2μm,0.4s						
KSH				smax	smax		
	comp=E,1μm,0.7s						
ULHL	Ulahol	2.98	1	P	Pg	04 31 26.1	-1.4
	SNR=20						
UCH	Uchtor	3.21	338	P	Pg	04 31 30.1	-1.7
	SNR=6.8						
AML	Almayashu	3.42	328	P	Pb	04 31 31.1	0.0
	SNR=28						
KBK	Karagaybulak	3.51	345	P	Pg	04 31 35.0	-2.6
	SNR=5.6						
AAK	Ala-Archa	3.60	340	P	Pg	04 31 36.7	-2.5
	SNR=6.0						
TKM2	Tokmak 2	3.68	354	P	Pb	04 31 34.4	-1.1
	SNR=9.3						
TKM2	Tokmak 2	3.68	354	⇓Pn	Pn	04 31 26.8	-0.6
	comp=E,1.4nm,0.3s						
TKM2				⇓Pg	Pg	04 31 37.9	-2.8
	comp=E,5.8nm,0.4s						
TKM2				⇓Lg	Lg	04 32 29.6	
	comp=E,19nm,0.5s						
KST	Kastek	3.78	358	Pg	Pb	04 31 36.8	-0.4
	comp=E,10nm,0.3s						
KST				Lg	Lg	04 32 33.0	
	comp=E,33nm,0.5s						
TNSS	Tian-Shan	3.82	9	Pg	Pb	04 31 38.2	+0.2
	comp=E,6.7nm,0.3s						
TNSS				Lg	Lg	04 32 34.4	
	comp=E,18nm,0.5s						
EKS2	Erkin-Say	3.84	333	P	Pb	04 31 39.1	+0.9
	SNR=9.5						
MTBS	Maitube	3.87	3	Pg	Pb	04 31 38.6	-0.1
	comp=E,4.6nm,0.3s						
MTBS				Lg	Lg	04 32 35.4	
	comp=E,21nm,0.3s						
CHMS	Chumysh	3.88	345	⇓Pg	Pb	04 31 40.7	+1.9
	comp=E,5.2nm,0.3s						
CHMS				⇓Lg	Lg	04 32 36.4	
	comp=E,9.3nm,0.5s						
MDOK	Medeo	3.96	10	⇑Pg	Pb	04 31 41.1	+0.9
	comp=E,4.4nm,0.6s						
MDOK				⇓Lg	Lg	04 32 39.0	
	comp=E,33nm,0.7s						
MDOK	Medeo	3.96	10	Pg	Pb	04 31 41.0	+0.8
	comp=E,5.3nm,0.4s						
MDOK				Lg	Lg	04 32 39.1	
	comp=E,30nm,0.6s						
MRKS	Merke	4.12	329	Pg	Pg	04 31 47.8	-1.4
	comp=E,12nm,0.3s						
MRKS				Lg	Lg	04 32 50.0	
	comp=E,13nm,0.3s						
SATY	Saty	4.17	24	Pg	Pb	04 31 44.8	+1.1
	comp=E,3.8nm,0.4s						
SATY				Lg	Lg	04 32 45.0	
	comp=E,46nm,0.7s						
ZHN	Zhinishke	4.27	23	Pg	Pb	04 31 47.3	+1.8
	comp=E,5.6nm,0.1s						
ZHN				Lg	Lg	04 32 49.7	
	comp=E,35nm,0.3s						
SGDS	Sogindy	4.34	345	Pg	Pb	04 31 48.5	+1.9
	comp=E,5.0nm,0.3s						
SGDS				Lg	Lg	04 32 50.2	
	comp=E,9.8nm,0.3s						
UZB	Uzynbulak	4.45	28	Pg	Pb	04 31 49.5	+0.9
	comp=E,2.9nm,0.2s						
UZB				Lg	Lg	04 32 53.1	
	comp=E,15nm,0.7s						
KTBS	Karatobe	4.47	5	Pg	Pb	04 31 50.6	+1.8
	comp=E,3.2nm,0.4s						
KTBS				Lg	Lg	04 32 55.1	
	comp=E,18nm,0.3s						
KURS	Kuram	4.49	19	Pg	Pb	04 31 51.9	+2.7
	comp=E,2.1nm,0.3s						
KURS				Lg	Lg	04 32 56.3	
	comp=E,17nm,0.6s						
KUU	Kurty	4.63	2	Pg	Pb	04 31 53.4	+1.8
	comp=E,1.8nm,0.3s						
KUU				Lg	Lg	04 32 59.1	
	comp=E,15nm,0.6s						
CHKK	Chushkaly	4.64	8	Pg	Pb	04 31 54.1	+2.5
	comp=E,2.1nm,0.1s						
CHKK				Lg	Lg	04 33 00.2	
	comp=E,20nm,0.2s						
PDGK	Podgornoye	4.79	31	Pg	Pb	04 31 53.7	-0.6
	comp=E,1.3nm,0.4s						
PDGK				Lg	Lg	04 32 59.3	
	comp=E,5.6nm,0.5s						
PDGK	Podgornoye	4.79	31	⇓Pg	Pb	04 31 56.2	+2.0
	comp=E,2.9nm,0.5s						
PDGK				⇓Lg	Lg	04 33 02.3	
	comp=E,14nm,0.6s						
KK31	Karatay Array	5.72	314	⇑Pn	Pn	04 31 54.9	-0.4
	comp=E,1.4nm,0.6s,baz=126,slow=13,SNR=8.0						
KK31				⇓Sn	Sn	04 33 04.3	+3.2
	comp=E,1.2nm,0.3s,baz=131,slow=14,SNR=3.9						
KK31				⇓Lg	Lg	04 33 34.4	
	comp=E,2.0nm,0.3s,baz=133,slow=28,SNR=4.3						
OTUK	Ortayu	9.39	344	⇑Lg	Lg	04 35 32.0	
	comp=E,2.8nm,0.8s						
KURK	Kurchatov	11.59	8	⇑Lg	Lg	04 36 40.2	
	comp=E,5.7nm,1.1s						

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*SEA **07** 04:52:29.1±1.5, 47°.29N±0°.02×122°.28W±0°.03, h22^{km}±5^{km}, ML2.1/70, ML2.0/24(NEIC), Error ellipse: s-maj=3.2km s-min=2.8km az=215.0*

*PNSN **07** 04:52:29.1, 47°.29N×122°.28W, h22^{km}, MD2.0, Fault plane solution: NP1:ϕ_s95.00000°, δ55.00000°, λ80.00000°.*

NEIC 07 04:52:28.2±1.5**, 47°.27N**±0°.01×**122°.29W**±0°.03**, h29**^{km}±8^{km}**, Error ellipse: s-maj=3.3km s-min=2.0km az=85.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBPA	Tacoma Substat	0.05	254		Pb	04 52 32.7	-0.4
TBPA					Sb	04 52 36.5	0.0
SMNR	Sumner High Sc	0.08	148		Pb	04 52 32.9	-0.5
SMNR					Sb	04 52 36.7	-0.2
PAYL	Puyallup Schoo	0.08	190		Pb	04 52 32.9	-0.4
PAYL					Sb	04 52 36.6	-0.2
KNEL	Kent Elementar	0.11	15		Sb	04 52 37.1	-0.1
UPS	University of	0.13	266		Pb	04 52 33.5	-0.2
VVHS	Vashon High Sc	0.19	324		Pb	04 52 33.9	-0.4
VVHS					Sb	04 52 38.2	-0.1
D05A	Enumclaw	0.22	112		Pb	04 52 34.7	+0.1
D05A					Sb	04 52 39.0	0.0
D05A	Enumclaw	0.22	112	IAML		04 52 39.4	
	comp=E,104nm,0.6s						
D05A				IAML		04 52 39.9	
	comp=N,79nm,0.4s						
GHW	Garrison Hill	0.23	176		Pb	04 52 34.5	-0.3
GHW					Sb	04 52 38.7	-0.4
RAW	Raver	0.26	75		Sb	04 52 39.5	-0.1
TKCO	King County	0.27	359		Pb	04 52 35.1	-0.1
SP2	Seward Park 2	0.29	6		Pb	04 52 35.3	-0.1
B941	Kapowsin	0.29	170		Pb	04 52 35.1	-0.3
B941					Sb	04 52 39.7	-0.6
PCFR	Pierce County	0.30	200		Pb	04 52 35.5	0.0
PCFR					Sb	04 52 40.7	+0.1
D04E	Lakebay	0.34	254		Pn	04 52 37.0	-0.1
GSM	Grass Mountain	0.35	101		Pb	04 52 36.2	-0.1
ELW	Echo Lake	0.36	52		Pb	04 52 36.0	-0.6
RATT	Rattlesnake La	0.37	65		Pb	04 52 36.2	-0.4
RATT					Sb	04 52 41.8	-0.5
CDMR	Cedar Moraine	0.39	67		Pb	04 52 36.7	-0.3
CDMR					Sb	04 52 42.7	-0.2
RVC	Mount Rainier-	0.40	146		Pb	04 52 37.1	0.0
GMW	Gold Mountain	0.43	310		Pb	04 52 37.2	-0.4
GNW	Green Mountain	0.46	309		Pb	04 52 37.5	-0.6
GNW					Sb	04 52 44.3	-0.4
FMW	Mount Fremont	0.55	128		Pb	04 52 39.4	-0.1
FMW	Mount Fremont	0.55	128		Sb	04 52 46.8	-0.3
REMR	Mount Rainier-	0.55	145		Pb	04 52 39.4	-0.2
REMR					Sb	04 52 47.0	-0.3
RCS	Mount Rainier-	0.56	136		Pb	04 52 39.6	-0.1
RCM	Mount Rainier-	0.58	138		Pb	04 52 40.1	-0.1
RCM					Sb	04 52 48.0	-0.4
C05A	Tolt Reservoir	0.59	44		Sb	04 52 47.6	-0.6
D03D	Eldon	0.60	296		Pb	04 52 40.0	-0.3
D03D					Sb	04 52 48.6	+0.1
LON	Longmire	0.62	147		Pb	04 52 40.4	-0.2
C04A	Brinnon	0.64	314		Pb	04 52 40.5	-0.4
C04A					Sb	04 52 49.5	0.0
HTW	Haystack Looko	0.64	34		Pb	04 52 40.3	-0.7
B013	Quilcene	0.68	323		Pb	04 52 41.1	-0.6
B013					Sb	04 52 50.7	-0.1
E04D	Cinebar	0.74	195		Pn	04 52 42.8	+0.1
E04D	Cinebar	0.74	195	IAML		04 52 53.7	
	comp=E,66nm,0.3s						
E04D				IAML		04 52 54.0	
	comp=N,39nm,0.3s						
B017	Montesano	0.91	253		Pb	04 52 45.9	+0.6
TDL	Tradedollar La	0.92	177		Pb	04 52 45.6	-0.1
SQM	Sequim	0.95	328		Pn	04 52 45.8	+0.3
ERK	Elk Rock	0.97	182		Pb	04 52 46.2	-0.2
B201	Coldwater, Mou	0.97	179		Pb	04 52 46.3	-0.2
B05A	Bryant	1.00	8		Pn	04 52 46.4	+0.1
BMW	Boistfort Moun	1.02	219		Pb	04 52 47.4	0.0
SOSW	Source of Smit	1.03	174		Pb	04 52 47.5	-0.1
FL2	Flat Top 2	1.08	182		Pb	04 52 48.1	-0.2
NLWA	Neilton Lookou	1.08	277	Pn	Pb	04 52 48.5	+0.2
NLWA				IAML		04 53 05.6	
	comp=N,22nm,2.0s						
NLWA				IAML		04 53 06.8	
	comp=N,19nm,0.4s						
HSR	South Ridge	1.10	176		Pb	04 52 49.2	+0.4
B203	Quarry, Mount	1.10	181		Pb	04 52 48.5	-0.3
LTY	Liberty	1.11	90		Pb	04 52 49.3	+0.5
WRW	Wenatchee Ridg	1.12	58		Pb	04 52 48.9	-0.2
E03A	Lebam	1.13	231	Pn	Pb	04 52 49.6	+0.4
E03A				IAML		04 53 10.8	
	comp=E,38nm,0.5s						
E03A				IAML		04 53 11.5	
	comp=N,43nm,2.0s						
B04A	Port Angeles	1.13	314		Pb	04 52 48.9	-0.3
NAC	Naches	1.14	118		Pb	04 52 50.5	+1.1
GPW	Glacier Peak	1.15	42		Pn	04 52 49.1	+0.5
CMW	Cultus Mountai	1.16	6		Pb	04 52 49.3	-0.4
RVW	Rose Valley	1.17	196		Pn	04 52 49.1	+0.5
CDFW	Cedar Flats	1.17	172		Pb	04 52 49.9	+0.1
EBG	Ellensburg	1.23	106		Pb	04 52 52.2	+1.2
MTMW	Mount Mitchell	1.25	177		Pb	04 52 51.3	+0.1
B023	Clatskanie	1.28	205		Pb	04 52 51.5	-0.2
RPW	Rockport	1.29	24		Pb	04 52 51.2	-0.7
F04A	Amboy	1.34	184		Pb	04 52 52.9	+0.2
F04A	Amboy	1.34	184	IAML		04 53 01.7	
	comp=N,20nm,3.5s						
F04A				IAML		04 53 14.2	
	comp=E,29nm,0.5s						
B06A	Marblemount	1.36	23		Pb	04 52 52.6	-0.5
ETW	Entiat	1.37	75		Pb	04 52 54.5	+1.1
F05D	White Salmon	1.50	157		Pn	04 52 52.5	-0.7
MBW	Mount Baker	1.54	10		Pb	04 52 55.2	-0.9
NLW	Nelson Butte	1.55	58		Pb	04 52 56.5	+0.2
PGC	Sidney	1.58	331	Pn	Pn	04 52 55.5	+1.3
PGC				IAML		04 53 18.3	
	comp=N,16nm,2.2s						
PGC				IAML		04 53 19.5	
	comp=E,32nm,0.9s						
SHUK	Shuksan-Mt. Ba	1.64	14		Pb	04 52 57.1	-0.7
VDB	Vedder Mountai	1.76	4		Pb	04 52 59.1	-0.7
TDH	Tom, Dick, Har	2.01	170		Pb	04 53 04.2	0.0
B08A	Colville Reser	2.27	60		Pn	04 53 05.1	+1.3
B08A	Colville Reser	2.27	60	IAML		04 53 38.4	
	comp=N,8.3nm,1.0s						
B08A				IAML		04 53 39.3	
	comp=E,6.9nm,0.6s						
H04A	Detroit Lake	2.59	178	Pn	Pn	04 53 10.4	+2.3
I04A	Tendick Farm,	3.48	181		Pn	04 53 20.5	+0.1

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*MAN **07** 04:55:22.7, 16°.90N×120°.43E, h78^{km}, mb4.2, ML3.0, MS2.7, Hypocentre not reviewed by the ISC*

ISC 07 04:55:23.8±2.6**, 16°.83N**±0°.07×**120°.43E**±0°.07**, h91**^{km}±19^{km}**, n8, σ1**^{s}.**20**/15**, 1C-7D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAMP	Sagada Mountai	0.51	61	⇓*e*P	Pn	04 55 38.1	-0.7
SAMP				*e*S	Sn	04 55 49.6	-0.3
BOLP	Bolinao	0.67	228	⇓*e*P	Pn	04 55 39.7	-0.4
BOLP				*e*S	Sn	04 55 53.6	+1.3
SMPP	San Manuel, Pa	0.71	161	⇓*e*P	Pn	04 55 39.8	-0.8
SMPP				*e*S	Sn	04 55 53.2	+0.1
SCZP	Santa Cruz	1.16	206	⇓*e*P	Pn	04 55 45.2	-0.3
SCZP				*e*S	Sn	04 56 03.0	+1.3
APYP	Conner	1.28	37	⇑*e*P	Pn	04 55 45.8	-1.1
APYP				*e*S	Sn	04 56 13.8	+9.4
CAUP	Cauayan	1.33	85	⇓*e*P	Pn	04 55 47.6	+0.1
CAUP				*e*S	Sn	04 56 07.9	+2.5
PCPH	Palayan	1.41	153	⇓*e*P	Pn	04 55 47.2	-1.3
PCPH				*e*S	Sn	04 56 06.3	-0.8
BALP	Baler	1.54	134	⇓*e*P	Pn	04 55 49.7	-0.4
BALP				*e*S	Sn	04 56 11.1	+1.1

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*NIED **07** 05:23:40.5, 31°.10N×129°.05E, h13^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.88; $M_{\theta\theta}$1.60; $M_{\phi\phi}$-0.72; $M_{r\theta}$-1.18; $M_{\theta\phi}$1.31; $M_{\phi r}$1.40; Fault plane solution: $M_0$2.59000×10^{14} NP1: ϕ_s210.00000°, δ52.00000°, λ-156.00000°. NP2: ϕ_s105.00000°, δ71.00000°, λ-41.00000°.*

JMA 07 05:23:40.5±0.3**, 31°.1N**±0°.5×**12°9E**±°**, h13**^{km}±2^{km}**,**
MV3.5/31**, SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.81	45	*e*P	Pg	05 23 55.4	-0.8
JKC	Kuchinoerabu	1.18	123	*e*P	Pn	05 24 02.5	0.0
JKC				S	Sb	05 24 17.5	-0.2

JSU	Suzuyama	1.27	71	*e*P	Pn	05 24 03.8	-0.1
JSU				*e*S	Sn	05 24 20.6	-0.2
JNN	Nakanoshima	1.45	150	*e*P	Pn	05 24 05.8	-0.5
JYAK	Yakushimahirau	1.52	124	*e*P	Pn	05 24 06.7	-0.7
JFU	Fukue jima 2	1.57	351	*e*P	Pn	05 24 08.7	+0.7
JTN	Tanegashima 3	1.72	105	*e*P	Pn	05 24 09.8	-0.2
JMTN	Minamitane	1.74	113	*e*P	Pn	05 24 10.1	-0.3
JTZ	Takazaki	1.91	65	*e*P	Pn	05 24 13.4	+0.7

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*PGC **07** 05:25:19.3±4.9,47°.37N×129°.00W,h10^{km},ML3.6/39,MLSn3.8/38,Mw4.4/38,302km Wsw of Tofino, Bc Off Coast Of Washington*

*IDC **07** 05:25:22.1±1.3,47°.55N×128°.81W,h0^{km},mb3.9/6,mbtmp3.9/15,ML3.4/8,MS4.3/31,Error ellipse: s-maj=26.6km s-min=11.3km az=55.0*

*GCMT **07** 05:25:23.8±0.2,47°.51N±0°.01×129°.02W±0°.02,h22^{km}±1^{km},MW5.1/127,Moment Tensor Solution. s51,c61; s127,c194; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.15; $M_{\theta\theta}$-5.10±.13; $M_{\phi\phi}$5.39±.15; $M_{r\theta}$-0.88±.22; $M_{\theta\phi}$-0.40±.11; $M_{\phi r}$-0.13±.21; Best double couple: $M_0$5.33900×10^{16} NP1:ϕ_s133.00000°,δ82.00000°,λ-174.00000°. NP2:ϕ_s42.00000°,δ84.00000°,λ-8.00000°. Principal axes: T 5.4070, Plg1.0000°, Azm88.0000°; N -0.1290, Plg80.0000°, Azm183.0000°; P -5.2710, Plg10.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 05:25:25.8±2.6,47°.73N±0°.06×128°.5W±0°.1,h10^{km}±2^{km},mb4.3/51,ML3.7/52 Error ellipse: s-maj=13.9km s-min=10.0km az=244.0*

ISC 07 05:25:23.2±1.4,**47°.70N**±0°.04×**128°.74W**±0°.04,**h2**^{km}±9^{km},**n463,**σ1^s.**40**/485,**mb4.4**/16,**MS4.3**/26,**Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMF	NEPTUNE Canada	0.35	316	P	Pg	05 25 28.0	-1.9
KEMF	NEPTUNE Canada	0.35	316	P	Pg	05 25 28.0	-1.9
NC27	ODP1027	0.66	84	P	Pg	05 25 35.3	-0.6
NC27	ODP1027	0.66	84	P	Pg	05 25 35.3	-0.6
NC89	ODP889	1.59	52	Pn	Pn	05 25 51.1	-1.1
NC89				Sn	Sg	05 26 14.8	+0.4
NC89	ODP889	1.59	52	Pn	Pn	05 25 51.1	-1.1
NC89				Sn	Sg	05 26 14.8	+0.4
ETB	Estevan Point	2.23	40	Pn	Pn	05 25 59.8	-1.2
ETB	Estevan Point	2.23	40	Pn	Pn	05 25 59.8	-1.2
TOFB	Tofino	2.38	51	Pn	Pn	05 26 01.3	-1.9
TOFB				Sn	Sn	05 26 30.7	-2.2
TOFB	Tofino	2.38	51	Pn	Pn	05 26 01.3	-1.9
TOFB				Sn	Sn	05 26 30.7	-2.2
EDB	Eliza Dome	2.43	26	Pn	Pn	05 26 02.3	-1.5
EDB	Eliza Dome	2.43	26	Pn	Pn	05 26 02.3	-1.5
B012	Ucluelet	2.46	59	Pn	Pn	05 26 01.9	-2.3
B012				Sn	Sn	05 26 33.8	-1.1
B012	Ucluelet	2.46	59	Pn	Pn	05 26 01.9	-2.3
B012				Sn	Sn	05 26 33.8	-1.1
OZB	Mount Ozzard	2.51	59		Pn	05 26 02.8	-2.1
OZB	Mount Ozzard	2.51	59	Pn	Pn	05 26 02.8	-2.1
OZB				Sn	Sn	05 26 35.1	-1.0
OZB	Mount Ozzard	2.51	59	Pn	Pn	05 26 02.8	-2.1
OZB				Sn	Sn	05 26 35.1	-1.0
BPBC	Brooks Peninsu	2.54	14	Pn	Pn	05 26 03.6	-1.9
BPBC	Brooks Peninsu	2.54	14	Pn	Pn	05 26 03.6	-1.9
BFSB	Bamfield	2.66	63	Pn	Pn	05 26 04.8	-2.1
BFSB				Sn	Sn	05 26 38.8	-1.0
BFSB	Bamfield	2.66	63	Pn	Pn	05 26 04.8	-2.1
BFSB				Sn	Sn	05 26 38.8	-1.0
B928	Bamfield	2.66	63	Pn	Pn	05 26 05.1	-1.9
B928				Sn	Sn	05 26 38.5	-1.2
B928	Bamfield	2.66	63	Pn	Pn	05 26 05.1	-1.9
B928				Sn	Sn	05 26 38.5	-1.2
GDR	Gold River	2.75	40	Pn	Pn	05 26 07.6	-0.6
GDR				Sn	Sn	05 26 41.7	-0.2
GDR	Gold River	2.75	40	Pn	Pn	05 26 07.6	-0.6
GDR				Sn	Sn	05 26 41.7	-0.2
BTB	Buttle Lake	2.77	49	Pn	Pn	05 26 07.4	-1.4
BTB				Sn	Sn	05 26 42.3	-0.6
BTB	Buttle Lake	2.77	49	Pn	Pn	05 26 07.4	-1.4
BTB				Sn	Sn	05 26 42.3	-0.6
C03A	Quillayute Air	2.82	83	Pn	Pn	05 26 07.1	-2.1
C03A				IAML		05 26 59.4	
	comp=E,226nm,2.4s						
C03A				IAML		05 27 44.6	
	comp=N,219nm,3.9s						
OCP	Olym-Cheeka Pk	2.83	76	Pn	Pn	05 26 07.4	-2.0
OCP	Olym-Cheeka Pk	2.83	76	Pn	Pn	05 26 07.4	-2.0
WOSB	Woss	2.85	29	Pn	Pn	05 26 09.1	-0.6
WOSB	Woss	2.85	29	Pn	Pn	05 26 09.1	-0.6
PACB	Port Alice, BC	2.86	16	Pn	Pn	05 26 08.2	-1.5
PACB	Port Alice, BC	2.86	16	Pn	Pn	05 26 08.2	-1.5
MAYB	Maynard	2.90	20	Pn	Pn	05 26 09.3	-1.1
MAYB	Maynard	2.90	20	Pn	Pn	05 26 09.3	-1.1
HOLB	Holberg	2.97	7		Pn	05 26 10.4	-0.9
HOLB	Holberg	2.97	7	Pn	Pn	05 26 10.1	-1.3
HOLB	Holberg	2.97	7	Pn	Pn	05 26 10.1	-1.3
MGB	Mount Grey	3.00	63	Pn	Pn	05 26 09.7	-2.0
MGB				Sn	Sn	05 26 47.3	-0.9
MGB	Mount Grey	3.00	63	Pn	Pn	05 26 09.7	-2.0
MGB				Sn	Sn	05 26 47.3	-0.9
SPLB	Strathcona Par	3.00	42	Pn	Pn	05 26 11.2	-0.4
SPLB				Sn	Sn	05 26 48.4	+0.3
SPLB	Strathcona Par	3.00	42	Pn	Pn	05 26 11.2	-0.4
SPLB				Sn	Sn	05 26 48.4	+0.3
PFB	Port Renfrew	3.01	72	Pn	Pn	05 26 09.4	-2.4
PFB				Sn	Sn	05 26 46.3	-2.1
PFB	Port Renfrew	3.01	72	Pn	Pn	05 26 09.4	-2.4
PFB				Sn	Sn	05 26 46.3	-2.1
B927	Port Alberni	3.02	58	Pn	Pn	05 26 10.3	-1.6
B927				Sn	Sn	05 26 47.5	-1.1
B927	Port Alberni	3.02	58	Pn	Pn	05 26 10.3	-1.6
B927				Sn	Sn	05 26 47.5	-1.1
MWAB	Mount Washingt	3.06	47	Pn	Pn	05 26 11.9	-0.7
MWAB				Sn	Sn	05 26 49.6	-0.2
MWAB	Mount Washingt	3.06	47	Pn	Pn	05 26 11.9	-0.7
MWAB				Sn	Sn	05 26 49.6	-0.2
PHC	Port Hardy	3.13	15	Pn	Pn	05 26 12.9	-0.5
PHC	Port Hardy	3.13	15	Pn	Pn	05 26 12.9	-0.5
OBC	Olympics--Boni	3.15	82	Pn	Pn	05 26 12.2	-1.7
OBC	Olympics--Boni	3.15	82	Pn	Pn	05 26 12.2	-1.7
CBB	Campbell River	3.23	42		Pn	05 26 14.5	-0.3
CBB				IAML		05 26 59.6	
	comp=N,169nm,1.3s						
CBB				IAML		05 27 06.9	
	comp=E,207nm,1.5s						
CBB	Campbell River	3.23	42	Pn	Pn	05 26 14.5	-0.3
CBB				Sn	Sn	05 26 54.5	+0.7
CBB	Campbell River	3.23	42	Pn	Pn	05 26 14.5	-0.3
CBB				Sn	Sn	05 26 54.5	+0.7
NCRB	Newcastle Ridg	3.23	32	Pn	Pn	05 26 14.9	-0.1
NCRB	Newcastle Ridg	3.23	32	Pn	Pn	05 26 14.9	-0.1
B926	Mesachie Lake	3.28	68	Pn	Pn	05 26 13.7	-1.8
B926				Sn	Sn	05 26 53.9	-1.0
B926	Mesachie Lake	3.28	68	Pn	Pn	05 26 13.7	-1.8
B926				Sn	Sn	05 26 53.9	-1.0
CLRS	Cowichan Lake	3.28	68		Pn	05 26 13.5	-2.0
CLRS	Cowichan Lake	3.28	68	Pn	Pn	05 26 13.6	-1.8
CLRS				Sn	Sn	05 26 53.2	-1.8
CLRS	Cowichan Lake	3.28	68	Pn	Pn	05 26 13.6	-1.8
CLRS				Sn	Sn	05 26 53.2	-1.8
NLWA	Neilton Lookou	3.31	94		Pn	05 26 13.8	-2.2
GHNB	Nanoose	3.40	60	Pn	Pn	05 26 16.0	-1.1
GHNB				Sn	Sn	05 26 58.0	+0.1
GHNB	Nanoose	3.40	60	Pn	Pn	05 26 16.0	-1.1
GHNB				Sn	Sn	05 26 58.0	+0.1
WISH	Wishkah	3.42	98		Pn	05 26 16.1	-1.3
WISH				IAML		05 27 07.6	
	comp=E,164nm,2.0s						
WISH				IAML		05 27 59.5	
	comp=N,157nm,2.2s						
WISH	Wishkah	3.42	98	Pn	Pn	05 26 15.4	-2.1
WISH				Sn	Sn	05 26 56.5	-2.1
WISH	Wishkah	3.42	98	Pn	Pn	05 26 15.4	-2.1
WISH				Sn	Sn	05 26 56.5	-2.1
STW	Striped Peak	3.44	81	Pn	Pn	05 26 16.1	-1.6
STW	Striped Peak	3.44	81	Pn	Pn	05 26 16.1	-1.6
TXB	Texada	3.48	53	Pn	Pn	05 26 17.7	-0.7
TXB	Texada	3.48	53	Pn	Pn	05 26 17.7	-0.7
NLLB	Nanaimo Lost L	3.51	62	Pn	Pn	05 26 17.6	-1.1
NLLB				Sn	Sn	05 27 01.7	+1.0
NLLB	Nanaimo Lost L	3.51	62	Pn	Pn	05 26 17.6	-1.1
NLLB				Sn	Sn	05 27 01.7	+1.0
B04A	Port Angeles	3.54	82		Pn	05 26 17.1	-2.1
B009	North Saanich	3.66	73	Pn	Pn	05 26 19.1	-1.7
B009	North Saanich	3.66	73	Pn	Pn	05 26 19.1	-1.7
B010	North Saanich	3.66	73	Pn	Pn	05 26 18.7	-2.1
B010				Sn	Sn	05 27 04.6	+0.1
B010	North Saanich	3.66	73	Pn	Pn	05 26 18.7	-2.1
B010				Sn	Sn	05 27 04.6	+0.1
PGC	Sidney	3.66	73		Pn	05 26 18.6	-2.1
PGC				IAML		05 27 15.1	
	comp=N,106nm,1.5s						
PGC	Sidney	3.66	73	Pn	Pn	05 26 18.8	-2.0
PGC				Sn	Sn	05 27 03.2	-1.3
PGC	Sidney	3.66	73	Pn	Pn	05 26 18.8	-2.0
PGC				Sn	Sn	05 27 03.2	-1.3
B011	North Saanich	3.67	73	Pn	Pn	05 26 18.6	-2.2
B011				Sn	Sn	05 27 04.7	+0.2
B011	North Saanich	3.67	73	Pn	Pn	05 26 18.6	-2.2
B011				Sn	Sn	05 27 04.7	+0.2
PA02	PA02 Ocean	3.67	73	Pn	Pn	05 26 19.1	-1.7
PA02				Sn	Sn	05 27 03.9	-0.7
PA02	PA02 Ocean	3.67	73	Pn	Pn	05 26 19.1	-1.7
PA02				Sn	Sn	05 27 03.9	-0.7
PA01	PA01 North	3.67	73	Pn	Pn	05 26 18.9	-2.0
PA01	PA01 North	3.67	73	Pn	Pn	05 26 18.9	-2.0
VGZ	Gonzales	3.70	77	Pn	Pn	05 26 18.9	-2.4
VGZ				Sn	Sn	05 27 05.0	-0.4
VGZ	Gonzales	3.70	77	Pn	Pn	05 26 18.9	-2.4
VGZ				Sn	Sn	05 27 05.0	-0.4
GOBB	Galiano Island	3.71	68	Pn	Pn	05 26 19.8	-1.5
GOBB	Galiano Island	3.71	68	Pn	Pn	05 26 19.8	-1.5
E03A	Lebam	3.71	106		Pn	05 26 19.6	-1.9
E03A				IAML		05 27 07.7	
	comp=N,131nm,1.9s						
E03A				IAML		05 27 10.4	
	comp=E,129nm,2.3s						
E03A	Lebam	3.71	106	Pn	Pn	05 26 19.5	-2.0
E03A				Sn	Sn	05 27 04.0	-1.8
E03A	Lebam	3.71	106	Pn	Pn	05 26 19.5	-2.0
E03A				Sn	Sn	05 27 04.0	-1.8
SHB	Sechelt	3.74	58	Pn	Pn	05 26 21.5	-0.5
SHB				Sn	Sn	05 27 06.6	-0.1
SHB	Sechelt	3.74	58	Pn	Pn	05 26 21.5	-0.5
SHB				Sn	Sn	05 27 06.6	-0.1
D03D	Eldon	3.82	90	P	Pn	05 26 21.8	-1.2
	baz=275,SNR=14						
D03D				S	Sn	05 27 08.2	-0.3
	baz=275						
SNB	Saturna Island	3.87	72	Pn	Pn	05 26 22.5	-1.2
SNB	Saturna Island	3.87	72	Pn	Pn	05 26 22.5	-1.2
CPW	Capitol Peak	3.88	99	Pn	Pn	05 26 21.6	-2.2
CPW	Capitol Peak	3.88	99	Pn	Pn	05 26 21.6	-2.2
BIB	Bowen Island	3.99	63	Pn	Pn	05 26 24.6	-0.7
BIB				Sn	Sn	05 27 13.9	+1.3
BIB	Bowen Island	3.99	63	Pn	Pn	05 26 24.6	-0.7
BIB				Sn	Sn	05 27 13.9	+1.3
GNW	Green Mountain	4.00	90	Pn	Pn	05 26 23.9	-1.5
GNW	Green Mountain	4.00	90	Pn	Pn	05 26 23.9	-1.5
MCW	Mount Constitu	4.07	74	Pn	Pn	05 26 25.1	-1.4
MCW	Mount Constitu	4.07	74	Pn	Pn	05 26 25.1	-1.4
D04E	Lakebay	4.08	95	P	Pn	05 26 25.7	-0.8
	baz=280						
WPB	Watts Point	4.15	60	Pn	Pn	05 26 26.8	-0.7
WPB	Watts Point	4.15	60	Pn	Pn	05 26 26.8	-0.7
A04D	Lummi Island	4.16	74	P	Pn	05 26 27.5	-0.1
	baz=258,SNR=19						
E04D	Cinebar	4.36	103		Pn	05 26 29.2	-1.2
E04D				IAML		05 28 58.5	
	comp=N,61nm,4.4s						
E04D	Cinebar	4.36	103	P	Pn	05 26 29.5	-1.0
	baz=288						
HNBB	Haney	4.40	67	Pn	Pn	05 26 29.3	-1.6
HNBB				Sn	Sn	05 27 23.6	+1.0
HNBB	Haney	4.40	67	Pn	Pn	05 26 29.3	-1.6
HNBB				Sn	Sn	05 27 23.6	+1.0
B05A	Bryant	4.50	80	P	Pn	05 26 31.9	-0.3
	baz=266,SNR=33						
CMW	Cultus Mountai	4.50	78	Pn	Pn	05 26 31.9	-0.4
CMW	Cultus Mountai	4.50	78	Pn	Pn	05 26 31.9	-0.4
BBB	Bella Bella	4.51	5	Pn	Pn	05 26 31.9	-0.5
	comp=N,192nm,0.5s,baz=202,slow=10,SNR=250						
BBB				LR	LR	05 28 06.3	
	comp=N,5µm,20.5s,baz=194,slow=35						
BBB	Bella Bella	4.51	5		Pn	05 26 32.1	-0.3
BBB				IAML		05 28 29.6	
	comp=E,66nm,4.3s						
BBB				IAML		05 29 29.2	
	comp=N,68nm,4.8s						
BBB	Bella Bella	4.51	5	Pn	Pn	05 26 31.9	-0.5
BBB	Bella Bella	4.51	5	Pn	Pn	05 26 31.9	-0.5
G03D	McMinnville, O	4.53	121	P	Pn	05 26 32.2	-0.5
	baz=307,SNR=10.0						
WSLR	Whistler	4.54	55	Pn	Pn	05 26 33.3	+0.4
WSLR	Whistler	4.54	55	Pn	Pn	05 26 33.3	+0.4
D05A	Enumclaw	4.61	94		Pn	05 26 33.1	-0.6
D05A				IAML		05 27 45.6	
	comp=E,64nm,2.0s						
D05A				IAML		05 27 50.0	
	comp=N,63nm,2.0s						
D05A	Enumclaw	4.61	94	Pn	Pn	05 26 32.6	-1.2
D05A	Enumclaw	4.61	94	Pn	Pn	05 26 32.6	-1.2
VDB	Vedder Mountai	4.62	71	Pn	Pn	05 26 32.8	-1.1
VDB	Vedder Mountai	4.62	71	Pn	Pn	05 26 32.8	-1.1
A05A	Maple Falls	4.62	71	Pn	Pn	05 26 33.1	-0.8
A05A	Maple Falls	4.62	71	Pn	Pn	05 26 33.1	-0.8
F04A	Amboy	4.68	110		Pn	05 26 34.5	-0.3
F04A				IAML		05 27 47.3	
	comp=E,70nm,2.7s						
MBW	Mount Baker	4.70	74	Pn	Pn	05 26 34.5	-0.7
MBW	Mount Baker	4.70	74	Pn	Pn	05 26 34.5	-0.7
C05A	Tolt Reservoir	4.76	87	Pn	Pn	05 26 35.6	-0.3
C05A	Tolt Reservoir	4.76	87	Pn	Pn	05 26 35.6	-0.3
FMW	Mount Fremont	4.87	96	Pn	Pn	05 26 36.5	-1.0
FMW	Mount Fremont	4.87	96	Pn	Pn	05 26 36.5	-1.0
COR	Corvallis	4.89	128		Pn	05 26 36.5	-1.2
COR				IAML		05 27 35.6	
	comp=E,92nm,2.0s						
RPW	Rockport	4.90	79	Pn	Pn	05 26 37.1	-0.7
RPW	Rockport	4.90	79	Pn	Pn	05 26 37.1	-0.7
B06A	Marblemount	4.93	78		Pn	05 26 37.5	-0.6
B06A				IAML		05 27 54.0	
	comp=E,88nm,1.6s						
B06A				IAML		05 27 57.0	
	comp=N,59nm,1.7s						
B06A	Marblemount	4.93	78	Pn	Pn	05 26 37.5	-0.6
B06A	Marblemount	4.93	78	Pn	Pn	05 26 37.5	-0.6
I02E	Swisshome, OR	4.95	135	Pn	Pn	05 26 36.7	-1.7
I02E				IAML		05 27 50.6	
	comp=E,78nm,3.5s						
I02E				IAML		05 29 31.2	
	comp=N,79nm,4.7s						
I02E	Swisshome, OR	4.95	135	P	Pn	05 26 36.8	-1.7
	baz=320,SNR=8.5						
H04D	Lebanon	5.24	125		Pn	05 26 42.1	-0.4
H04D	Lebanon	5.24	125	P	Pn	05 26 42.1	-0.4
	baz=311,SNR=16						
H04D				S	Sn	05 27 43.4	0.0
	baz=311						
F05D	White Salmon	5.32	107		Pn	05 26 44.5	+1.0
F05D	White Salmon	5.32	107	P	Pn	05 26 44.2	+0.7
	baz=294,SNR=7.8						
BUCK	Buck Mountain	5.32	129		Pn	05 26 42.9	-0.8
BUCK				IAML		05 27 57.9	
	comp=E,70nm,2.1s						
LLLB	Lillooet	5.36	55		Pn	05 26 44.3	+0.1
LLLB				IAML		05 28 05.7	
	comp=E,49nm,1.6s						
LLLB				IAML		05 29 08.2	
	comp=N,61nm,4.9s						
LLLB	Lillooet	5.36	55	Pn	Pn	05 26 44.0	-0.1
LLLB	Lillooet	5.36	55	Pn	Pn	05 26 44.0	-0.1
BUTB	Butedale	5.38	2	Pn	Pn	05 26 43.4	-1.0
BUTB	Butedale	5.38	2	Pn	Pn	05 26 43.4	-1.0
HOOD	Mount Hood Mea	5.44	113		Pn	05 26 44.9	-0.4
H04A	Detroit Lake	5.46	121		Pn	05 26 44.8	-0.7
H04A				IAML		05 27 48.5	
	comp=E,48nm,1.7s						
LTY	Liberty	5.49	92		Pn	05 26 45.3	-0.6
LTY				IAML		05 27 54.9	
	comp=N,62nm,1.9s						
LTY	Liberty	5.49	92	Pn	Pn	05 26 45.6	-0.3
LTY	Liberty	5.49	92	Pn	Pn	05 26 45.6	-0.3
I03D	Drain, OR	5.50	135	P	Pn	05 26 44.5	-1.5
	baz=320						
I03D				S	Sn	05 27 46.9	-2.8
	baz=320						
J01E	Myrtle Point	5.66	142	Pn	Pn	05 26 46.1	-2.1
G05D	Wamic, OR	5.68	113	P	Pn	05 26 48.7	+0.1
	baz=299,SNR=11						
G05D				S	Sn	05 27 56.3	+2.0
	baz=299						
BNKB	Banks Island	5.69	353	Pn	Pn	05 26 47.7	-1.0
BNKB	Banks Island	5.69	353	Pn	Pn	05 26 47.7	-1.0
KEBM	Edson Butte	5.74	146	Pn	Pn	05 26 49.9	+0.5
UBRB	Upper Baezaeko	5.99	28	Pn	Pn	05 26 54.0	+1.1
UBRB	Upper Baezaeko	5.99	28	Pn	Pn	05 26 54.0	+1.1
I05D	Terrebonne, OR	6.15	120	P	Pn	05 26 54.5	-0.5
	baz=307,SNR=29						
I05D				S	Sn	05 28 05.4	-0.5
	baz=307						
K02D	Willamette Mer	6.15	143	P	Pn	05 26 55.2	+0.1
	baz=328						
E07A	Sunnyside	6.17	97	Pn	Pn	05 26 53.5	-1.7
PNT	Penticton	6.27	72	Pn	Pn	05 26 55.8	-0.9
PNT	Penticton	6.27	72	Pn	Pn	05 26 55.8	-0.9
B08A	Colville Reser	6.34	81		Pn	05 26 57.2	-0.4
B08A	Colville Reser	6.34	81	Pn	Pn	05 26 57.3	-0.4
B08A	Colville Reser	6.34	81	Pn	Pn	05 26 57.3	-0.4
KITB	Kitimat	6.39	1	Pn	Pn	05 26 56.8	-1.4
KITB	Kitimat	6.39	1	Pn	Pn	05 26 56.8	-1.4
HAWA	Hanford	6.42	98		Pn	05 26 58.0	-0.8
J04D	Umpqua Nationa	6.45	131		Pn	05 26 59.0	-0.2
J04D	Umpqua Nationa	6.45	131	P	Pn	05 26 59.4	+0.2
	baz=317,SNR=13						
J04D				S	Sn	05 28 13.0	-0.4
	baz=317						
HUMO	Hull Mountain	6.53	139		Pn	05 26 59.6	-0.6
PINE	Pine Mountain	6.71	123		Pn	05 27 02.4	-0.4
KSXB	Camp Six Broad	6.81	148	Pn	Pn	05 27 05.0	+0.9
J05D	Fort Rock, OR	6.87	127	P	Pn	05 27 04.5	-0.5
	baz=314						
J05D				S	Sn	05 28 22.0	-1.9
	baz=314						
C09A	Chrisman Ranch	7.06	85		Pn	05 27 05.6	-1.9
C09A	Chrisman Ranch	7.06	85	Pn	Pn	05 27 05.2	-2.2
C09A	Chrisman Ranch	7.06	85	Pn	Pn	05 27 05.2	-2.2
L04D	Klamath Falls	7.13	138		Pn	05 27 08.9	+0.4
L04D	Klamath Falls	7.13	138	P	Pn	05 27 10.3	+1.7
	baz=324						
G08A	Pilot Rock	7.17	106		Pn	05 27 07.4	-1.6
E09A	Wood Farm, Sta	7.33	95		Pn	05 27 09.8	-1.3
YBH	Yreka Blue Hor	7.35	142	Pn	Pn	05 27 09.4	-2.1
	comp=N,0.1nm,0.3s,baz=153,slow=16,SNR=1.9						
YBH				LR	LR	05 29 25.7	
	comp=N,854nm,21.9s,baz=326,slow=34						
	comp=N,1.3nm,0.7s						
YBH	Yreka Blue Hor	7.35	142		Pn	05 27 12.7	+1.2
I07A	Izee	7.39	116		Pn	05 27 11.3	-0.7
K05A	Summer Lake	7.44	129		Pn	05 27 14.2	+1.3
BLBC	Blue River	7.52	51	P	Pn	05 27 14.1	+0.1
BLBC	Blue River	7.52	51	P	Pn	05 27 14.1	+0.1
KHMM	Horse Mountain	7.71	150	Pn	Pn	05 27 21.7	+5.2
SLEB	Sale Mountain	7.74	59	P	Pn	05 27 16.7	-0.2
SLEB	Sale Mountain	7.74	59	P	Pn	05 27 16.7	-0.2
NEW	Newport	7.82	82	Pn	Pn	05 27 16.5	-1.3
	comp=N,0.7nm,0.3s,baz=270,slow=13,SNR=12						
NEW				LR	LR	05 30 28.1	
	comp=N,5µm,20.7s,baz=278,slow=39						
	comp=N,4.9nm,0.6s						
NEW	Newport	7.82	82		Pn	05 27 15.8	-2.1
NEW	Newport	7.82	82	P	Pn	05 27 17.0	-0.9
	baz=270						
MNB	Mounoet Dainar	8.05	52	P	Pn	05 27 21.9	+0.6
MNB	Mounoet Dainar	8.05	52	P	Pn	05 27 21.9	+0.6
F10A	Beach Ranch, E	8.08	98		Pn	05 27 21.4	-0.2
J08A	Circle Bar Ran	8.41	117		Pn	05 27 25.7	-0.4
BMO	Blue Mountains	8.41	106		Pn	05 27 25.5	-0.6
WVOR	Wild Horse Val	8.87	123		Pn	05 27 32.1	-0.4
PLID	Pearl Lake	9.18	102		Pn	05 27 36.2	-0.6
BMBC	Bull Mountain	9.30	24	P	Pn	05 27 40.5	+2.3
BMBC	Bull Mountain	9.30	24	P	Pn	05 27 40.5	+2.3
BSMT	Bassoo Peak	9.40	84	P	Pn	05 27 38.9	-0.8
BSMT	Bassoo Peak	9.40	84	P	Pn	05 27 38.9	-0.8
BDMTA	Bald Mountain	9.41	37	P	Pn	05 27 41.4	+1.7
BDMTA	Bald Mountain	9.41	37	P	Pn	05 27 41.4	+1.7
NBC4	NorthernBC 4	9.44	29	P	Pn	05 27 39.3	-0.7
NBC4	NorthernBC 4	9.44	29	P	Pn	05 27 39.3	-0.7
HOPS	Hopland Field	9.62	153		Pn	05 27 44.3	+1.7
ORV	Oroville	9.68	145		Pn	05 27 45.5	+2.2
JTMT	Jette	9.74	84		Pn	05 27 42.9	-1.5
JTMT	Jette	9.74	84	P	Pn	05 27 41.3	-3.1
JTMT	Jette	9.74	84	P	Pn	05 27 41.3	-3.1
BEKR	Beckworth	9.89	139		Pn	05 27 48.5	+2.1
WALA	Waterton Lakes	9.96	77		Pn	05 27 47.5	+0.2
WALA	Waterton Lakes	9.96	77	P	Pn	05 27 46.5	-0.8
WALA	Waterton Lakes	9.96	77	P	Pn	05 27 46.5	-0.8
MFID	Camas Ranch	10.01	111		Pn	05 27 47.7	-0.4
MSO	Missoula	10.10	89		Pn	05 27 47.4	-1.8
MSO	Missoula	10.10	89	P	Pn	05 27 48.0	-1.2
	baz=281						
PAHR	Pah Rah Range	10.46	136		Pn	05 27 56.3	+2.0
NBC5	NorthernBC 5	10.50	18	P	Pn	05 27 57.7	+3.0
NBC5	NorthernBC 5	10.50	18	P	Pn	05 27 57.7	+3.0
DLBC	Dease Lake	10.79	356	Pn	Pn	05 28 02.0	+3.5
	comp=N,0.2nm,0.3s,baz=168,slow=17,SNR=8.2						
DLBC				LR	LR	05 31 53.0	
	comp=N,4µm,19.1s,baz=178,slow=36						
	comp=N,5.5nm,0.8s						
DLBC	Dease Lake	10.79	356		Pn	05 28 01.7	+3.1
DLBC	Dease Lake	10.79	356	P	Pn	05 28 00.7	+2.1
DLBC	Dease Lake	10.79	356	P	Pn	05 28 00.7	+2.1
HLID	Hailey	10.85	107		Pn	05 27 59.9	+0.4
BMN	Battle Mountai	11.01	127	Pn	Pn	05 28 04.3	+2.5
YERR	Yerington	11.11	138		Pn	05 28 06.3	+3.1
LYMT	Lyon Mountain	11.19	88	P	Pn	05 28 03.1	-1.2
LYMT	Lyon Mountain	11.19	88	P	Pn	05 28 03.1	-1.2
EDM	Edmonton	11.25	55		Pn	05 28 04.6	-0.2
LRM	Limekiln Ridge	11.33	94	Pn	Pn	05 28 04.9	-1.3
DLMT	Dillon	11.36	96	Pn	Pn	05 28 06.4	-0.1
MCMT	McKenzie Canyo	11.37	99		Pn	05 28 06.0	-0.7
CMB	Columbia Colle	11.43	145		Pn	05 28 09.3	+2.0
BESE	Bessie Mountai	11.50	344		Pn	05 28 11.2	+2.9
HRY	Holter Researc	11.55	89		Pn	05 28 08.2	-0.9
KVN	Kaiserville	11.59	134		Pn	05 28 12.7	+2.9
FNBB	Fort Nelson	11.72	15	P	Pn	05 28 13.5	+2.3
FNBB	Fort Nelson	11.72	15	P	Pn	05 28 13.5	+2.3
RYN	Ryan	11.73	137		Pn	05 28 14.5	+2.9
NBC6	NorthernBC 6	11.77	19	P	Pn	05 28 15.5	+3.6
NBC6	NorthernBC 6	11.77	19	P	Pn	05 28 15.5	+3.6
ELK	Elko	11.91	121	Pn	Pn	05 28 15.6	+1.5
	comp=N,0.1nm,0.3s,baz=314,slow=18,SNR=9.8						
ELK				LR	LR	05 32 57.2	
	comp=N,2µm,18.6s,baz=310,slow=38						
	comp=N,2.1nm,0.7s						
ELK	Elko	11.91	121		Pn	05 28 15.9	+1.8
BOZ	Bozeman (W)	11.95	94		Pn	05 28 15.2	+0.6
NVAR	Mina Array Bea	11.99	137	Pn	Pn	05 28 17.6	+2.4
	comp=N,0.2nm,0.3s,baz=312,slow=12,SNR=29						
NVAR				LR	LR	05 32 33.7	
	comp=N,882nm,19.7s,baz=319,slow=36						
	comp=N,5.9nm,1.0s						
NVAR	Mina Array Bea	11.99	137		Pn	05 28 18.1	+2.9
LHV	Little Huntoon	12.04	138		Pn	05 28 18.6	+2.9
NV11	Mina Array Sit	12.06	136		Pn	05 28 18.0	+1.9
Q09A	Carvers	12.21	132	Pn	Pn	05 28 20.3	+2.1
MDPB	Devils Postpil	12.30	141		Pn	05 28 21.1	+1.5
QLMT	Earthquake Lak	12.32	97	Pn	Pn	05 28 19.1	-0.6
OMMB	Old Mammoth Mi	12.36	141		Pn	05 28 22.5	+2.2
NBC2	NorthernBC 2	12.65	15	P	Pn	05 28 26.2	+2.3
NBC2	NorthernBC 2	12.65	15	P	Pn	05 28 26.2	+2.3
YMR	Madison River	12.68	97		Pn	05 28 25.6	+1.0
YHH	Holmes Hill	12.72	97		Pn	05 28 25.4	+0.2
EGMT	Eagleton	12.76	82		Pn	05 28 26.1	+0.6
TPH	Tonopah	12.78	135	Pn	Pn	05 28 27.2	+1.2
HVU	Hansel Valley	12.79	112		Pn	05 28 27.6	+1.6
H17A	Grant Village	13.04	98		Pn	05 28 31.0	+1.4
FLWY	Flagg Ranch	13.07	99		Pn	05 28 30.6	+0.6
BGU	Big Grassy Mou	13.12	115		Pn	05 28 31.1	+0.5
MOOW	Moose Ponds	13.17	101		Pn	05 28 33.6	+2.2
R11A	Troy Canyon, C	13.39	129		Pn	05 28 35.7	+1.4
WHY	Whitehorse	13.47	347		Pn	05 28 37.1	+1.9
HWUT	Hardware Ranch	13.64	110		Pn	05 28 39.3	+1.5

RLMT	**Red Lodge**	**13.68**	**94**		**Pn**	**05 28 37.7**	**-0.5**
RLMT	**Red Lodge**	**13.68**	**94**	P	**Pn**	**05 28 39.5**	**+1.2**
	baz=288						
S11A	**Rachel**	**13.85**	**132**		**Pn**	**05 28 42.6**	**+2.1**
HYT	**Haines Junctio**	**14.10**	**342**	S	**S**	**05 31 36.2**	**-6.1**
	baz=154						
TPNV	**Topopah Spring**	**14.15**	**135**	P	**Pn**	**05 28 46.0**	**+1.4**
	baz=324						
FURC	**Furnace Creek,**	**14.25**	**138**	P	**Pn**	**05 28 48.0**	**+2.1**
	baz=326						
MPMC	**Manual Prospec**	**14.31**	**140**	P	**Pn**	**05 28 48.4**	**+1.5**
	baz=328						
PDAR	**Pinedale Array**	**14.38**	**103**	Pn	**Pn**	**05 28 50.3**	**+2.5**
	baz=307,slow=12,SNR=15						
PDAR				LR	LR	05 34 31.2	
	comp=N,2µm,19.7s,baz=292,slow=38						
	comp=N,1.9nm,0.9s						
N30M	**Aishikik Lake**	**14.60**	**344**	P	**Pn**	**05 28 52.5**	**+2.0**
	baz=156						
MMPY	**Sheldon Lake,**	**15.02**	**355**	P	**P**	**05 29 00.2**	**-1.7**
	baz=173						
GSC	**Goldstone, Bar**	**15.25**	**140**		**Pn**	**05 29 00.8**	**+1.3**
GSC				IAmb	IAmb	05 29 08.9	
	comp=Z,12nm,0.9s						
GSC	**Goldstone, Bar**	**15.25**	**140**	P	**Pn**	**05 29 01.5**	**+2.0**
	baz=329						
SZCU	**Shurtz Canyon**	**15.29**	**126**		**Pn**	**05 29 00.5**	**+0.4**
SZCU				IAmb	IAmb	05 29 08.2	
	comp=Z,9.4nm,0.9s						
LAO	**LASA Array**	**15.33**	**85**	P	**P**	**05 29 05.2**	**-0.3**
	baz=282						
TUQ	**Turquoise Moun**	**15.53**	**137**	P	**Pn**	**05 29 04.2**	**+1.0**
	baz=327						
M30M	**Minto, Yukon**	**15.59**	**346**		**Pn**	**05 29 04.2**	**+0.5**
M30M				IAmb	IAmb	05 29 14.0	
	comp=Z,16nm,1.1s						
M30M	**Minto, Yukon**	**15.59**	**346**	P	**Pn**	**05 29 02.5**	**-1.2**
M30M	**Minto, Yukon**	**15.59**	**346**	P	**Pn**	**05 29 02.5**	**-1.2**
M30M	**Minto, Yukon**	**15.59**	**346**	P	**P**	**05 29 06.5**	**-1.7**
	baz=159						
YUK3	**Moose Creek**	**15.61**	**339**	P	**Pn**	**05 29 05.1**	**+1.0**
	baz=149						
BFSC	**Mount Baldy Ra**	**15.81**	**144**	P	**P**	**05 29 10.9**	**0.0**
	baz=332						
GMRC	**Granite Mounta**	**16.19**	**138**	P	**P**	**05 29 14.7**	**-0.4**
	baz=327						
K22A	**Casper**	**16.44**	**100**	P	**Pn**	**05 29 16.1**	**+1.1**
	baz=296						
O20A	**White River Ci**	**16.56**	**110**	P	**P**	**05 29 20.6**	**+1.4**
	baz=304						
BELC	**Belle Mtn. Jos**	**16.70**	**140**	P	**P**	**05 29 20.9**	**+0.1**
	baz=329						
W13A	**Hualapai Mount**	**16.77**	**133**		**Pn**	**05 29 19.0**	**-0.3**
YKA	**Yellowknife Ar**	**16.82**	**23**	Pn	**Pn**	**05 29 19.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=28						
YKA				LR	LR	05 36 29.3	
	comp=Z,1µm,21.0s,baz=214,slow=39						
	comp=Z,2.9nm,0.9s						
YKA	**Yellowknife Ar**	**16.82**	**23**		**Pn**	**05 29 18.7**	**-0.9**
PFO	**Pinyon Flats O**	**16.84**	**142**	P	**P**	**05 29 21.3**	**-1.0**
IRM	**Iron Mountain**	**16.95**	**138**	P	**P**	**05 29 23.0**	**-0.4**
	baz=328						
L27K	**Beaver Creek,**	**17.04**	**339**	P	**P**	**05 29 23.4**	**-0.9**
L27K				IAmb	IAmb	05 29 28.7	
	comp=Z,24nm,1.5s						
L27K	**Beaver Creek,**	**17.04**	**339**	P	**P**	**05 29 26.4**	**+2.2**
	baz=148						
PV11	**David Mesa, Pa**	**17.26**	**116**	P	**Pn**	**05 29 26.2**	**+0.7**
PV13	**Radium Mtn., P**	**17.38**	**116**	P	**Pn**	**05 29 27.5**	**+0.5**
PV13				IAmb	IAmb	05 29 32.1	
	comp=Z,30nm,0.9s						
DAWY	**Dawson**	**17.42**	**344**	P	**P**	**05 29 29.9**	**+1.5**
DAWY	**Dawson**	**17.42**	**344**	P	**P**	**05 29 28.0**	**-0.4**
DAWY	**Dawson**	**17.42**	**344**	P	**P**	**05 29 28.0**	**-0.4**
DAWY	**Dawson**	**17.42**	**344**	P	**P**	**05 29 29.0**	**+0.6**
	baz=155						
KDAK	**Kodiak Island**	**17.52**	**314**	LR	LR	05 34 21.3	
	comp=Z,437nm,18.4s,baz=140,slow=31						
N23A	**Red Feather La**	**17.64**	**104**	P	**Pn**	**05 29 30.4**	**+0.2**
N23A				IAmb	IAmb	05 29 56.0	
	comp=Z,32nm,1.4s						
N23A	**Red Feather La**	**17.64**	**104**	P	**P**	**05 29 32.7**	**+1.4**
	baz=301						
PHWY	**Pilot Hill**	**17.76**	**103**	P	**Pn**	**05 29 31.2**	**-0.5**
PHWY				IAmb	IAmb	05 29 35.7	
	comp=Z,16nm,0.9s						
KNK	**Knik Glacier**	**17.77**	**328**	P	**P**	**05 29 36.9**	**+4.7**
	baz=131						
K27K	**Chicken**	**17.93**	**341**	P	**P**	**05 29 34.8**	**+0.8**
	baz=149						
DOT	**Dot Lake**	**18.09**	**338**	P	**P**	**05 29 36.4**	**+0.7**
Y14A	**Wickenburg**	**18.14**	**134**	P	**P**	**05 29 37.1**	**+0.5**
MVCO	**Mesa Verde**	**18.19**	**118**	P	**P**	**05 29 37.6**	**+0.3**
	baz=312						
SCRK	**Sand Creek**	**18.34**	**338**	P	**P**	**05 29 40.1**	**+1.4**
	baz=145						
RIDG	**Independent Ri**	**18.36**	**337**	P	**P**	**05 29 39.3**	**+0.4**
	baz=143						
EGAK	**Eagle**	**18.40**	**343**	P	**P**	**05 29 39.4**	**+0.3**
	baz=152						
I29M	**Ogilvie Camp,**	**18.44**	**347**	P	**P**	**05 29 40.2**	**+0.6**
M22K	**Willow**	**18.59**	**327**	P	**Pn**	**05 29 43.0**	**+1.5**
J26L	**Joseph Creek**	**18.67**	**340**	P	**Pn**	**05 29 42.7**	**+0.2**
	baz=147						
S22A	**4UR Ranch, Cre**	**18.86**	**114**	P	**P**	**05 29 44.3**	**-0.4**
S22A				IAmb	IAmb	05 30 02.0	
	comp=Z,15nm,1.2s						
S22A	**4UR Ranch, Cre**	**18.86**	**114**	P	**Pn**	**05 29 46.1**	**+0.9**
	baz=309						
E28A	**Huff**	**19.07**	**83**	P	**P**	**05 29 46.2**	**-0.6**
E28A				IAmb	IAmb	05 30 05.4	
	comp=Z,15nm,0.7s						
Q24A	**Divide**	**19.19**	**108**	P	**P**	**05 29 47.3**	**-1.1**
J25K	**Salcha River,**	**19.21**	**338**	P	**Pn**	**05 29 49.0**	**0.0**
J25K	**Salcha River,**	**19.21**	**338**	P	**P**	**05 29 48.1**	**0.0**
	baz=144						
X18A	**Snowflake**	**19.26**	**126**	P	**P**	**05 29 48.3**	**-0.7**
RND	**Reindeer**	**19.28**	**332**	P	**Pn**	**05 29 50.2**	**+0.3**
RND				IAmb	IAmb	05 30 07.5	
	comp=Z,17nm,1.3s						
O19K	**Port Alsworth**	**19.42**	**320**	P	**Pn**	**05 29 52.8**	**+1.4**
O19K				IAmb	IAmb	05 30 11.6	
	comp=Z,22nm,1.2s						
SDCO	**Great Sand Dun**	**19.69**	**112**	P	**P**	**05 29 54.4**	**+0.5**
SDCO	**Great Sand Dun**	**19.69**	**112**	P	**Pn**	**05 29 54.8**	**-0.4**
	baz=308						
ILAR	**Eielson Array**	**19.73**	**337**	P	**P**	**05 29 52.6**	**-1.1**
	baz=150,slow=9.3,SNR=6.5						
	comp=Z,1.4nm,0.9s						
ILAR	**Eielson Array**	**19.73**	**337**	P	**P**	**05 29 53.6**	**-0.1**
N19K	**Bonanza Creek**	**19.79**	**321**	P	**Pn**	**05 29 56.4**	**+0.4**
N19K				IAmb	IAmb	05 30 07.8	
	comp=Z,28nm,1.3s						
M20K	**Styx River**	**19.81**	**325**	P	**P**	**05 29 53.7**	**-1.0**
	baz=124						
PPLA	**Purkeypile**	**20.07**	**328**	P	Pn	05 29 59.6	+0.3
	baz=128						
OGNE	**Ogallala**	**20.20**	**100**	P	**P**	**05 29 59.7**	**+0.5**
NEA2	**Nenana**	**20.20**	**334**	P	**P**	**05 29 59.3**	**+0.4**
	baz=137						
MDM	**Murphy Dome**	**20.24**	**336**	P	Pn	05 30 01.6	+0.4
M19K	**Big River Lodg**	**20.32**	**324**	P	**P**	**05 30 00.6**	**+0.4**
	baz=122						
N18K	**Kilae Creek**	**20.33**	**320**	P	**P**	**05 30 00.8**	**+0.4**
	baz=117						
CAST	**Castle Rocks**	**20.36**	**329**	P	**P**	**05 29 58.7**	**-1.9**
	baz=129						
SVW2	**Sparrevohn**	**20.40**	**321**	P	Pn	05 30 03.1	0.0
SVW2				IAmb	IAmb	05 30 19.5	
	comp=Z,30nm,1.4s						
L20K	**Farewell, AK**	**20.44**	**326**	P	**P**	**05 30 00.7**	**-0.8**
	baz=124						
BPAW	**Bear Paw Mtn.**	**20.44**	**332**	P	**P**	**05 30 02.6**	**+1.0**
BPAW				IAmb	IAmb	05 30 10.4	
	comp=Z,20nm,1.2s						
BPAW	**Bear Paw Mtn.**	**20.44**	**332**	P	**P**	**05 29 59.8**	**-1.7**
	baz=132						
TUC	**Tucson**	**20.55**	**132**	P	Pn	05 30 04.8	-0.3
L19K	**White Mountain**	**20.66**	**324**	P	**P**	**05 30 02.9**	**-1.0**
	baz=122						
T25A	**Trinidad**	**20.75**	**112**	P	**P**	**05 30 05.0**	**-0.2**
T25A				IAmb	IAmb	05 30 08.8	
	comp=Z,24nm,0.9s						
T25A	**Trinidad**	**20.75**	**112**	P	Pn	05 30 06.6	-1.0
	baz=309						
KSCO	**Kaye Shedlock'**	**20.80**	**105**	P	**P**	**05 30 05.7**	**0.0**
KSCO	**Kaye Shedlock'**	**20.80**	**105**	P	Pn	05 30 07.0	-1.1
	baz=304						
INK	**Inuvik**	**20.81**	**355**	P	**P**	**05 30 05.8**	**+0.4**
	comp=Z,5.6nm,1.0s,baz=162,slow=11,SNR=8.3						
	comp=Z,5.6nm,1.0s						
INK	**Inuvik**	**20.81**	**355**	P	Pn	05 30 06.6	-1.2
INK				IAmb	IAmb	05 30 16.9	
	comp=Z,21nm,1.3s						
INK	**Inuvik**	**20.81**	**355**	P	**P**	**05 30 06.2**	**+0.8**
	baz=170						
H24K	**Noodor Dome**	**20.82**	**338**	P	**P**	**05 30 06.0**	**+0.3**
	baz=141						
SUSD	**Miller**	**20.86**	**88**	P	**P**	**05 30 05.8**	**-0.4**
ANMO	**Albuquerque**	**20.94**	**119**	P	**P**	**05 30 07.0**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=309,slow=12,SNR=14						
ANMO				LR	LR	05 37 55.4	
	comp=Z,458nm,20.9s,baz=310,slow=36						
	comp=Z,2.6nm,0.8s						
ANMO	**Albuquerque**	**20.94**	**119**	P	**P**	**05 30 07.6**	**+0.2**
	baz=315						
K20K	**Telida**	**21.02**	**327**	P	**P**	**05 30 06.4**	**-1.5**
	baz=126						
KUKN	**Kugluktuk,NWT**	**21.35**	**14**	P	**P**	**05 30 09.7**	**-1.6**
KUKN	**Kugluktuk,NWT**	**21.35**	**14**	P	**P**	**05 30 09.7**	**-1.6**
BMAR	**Burnt Mountain**	**21.40**	**343**	P	**P**	**05 30 11.8**	**-0.1**
I21K	**Tanana**	**21.50**	**333**	P	**P**	**05 30 11.5**	**-1.3**
	baz=133						
TTA	**Tatalina**	**21.51**	**325**	P	**P**	**05 30 12.4**	**-0.8**
TTA	**Tatalina**	**21.51**	**325**	P	**P**	**05 30 11.6**	**-1.5**
	baz=122						
J20K	**Nowinta River**	**21.55**	**329**	P	**P**	**05 30 15.3**	**+1.9**
J20K				IAmb	IAmb	05 30 23.5	
	comp=Z,32nm,1.4s						
J20K	**Nowinta River**	**21.55**	**329**	P	**P**	**05 30 14.0**	**+0.5**
	baz=128						
ULM	**Lac du Bonnet**	**21.63**	**71**	P	**P**	**05 30 14.7**	**+0.3**
	comp=Z,5.9nm,0.8s,baz=278,slow=12,SNR=5.7						
ULM				LR	LR	05 38 58.2	
	comp=Z,2µm,18.4s,baz=276,slow=38						
	comp=Z,5.9nm,0.8s						
ULM	**Lac du Bonnet**	**21.63**	**71**	P	**P**	**05 30 14.3**	**0.0**
ULM	**Lac du Bonnet**	**21.63**	**71**	P	**P**	**05 30 13.3**	**-1.0**
ULM	**Lac du Bonnet**	**21.63**	**71**	P	**P**	**05 30 13.3**	**-1.0**
K31A	**O'Neill**	**21.66**	**92**	P	**P**	**05 30 14.9**	**0.0**
C36M	**Paulatuk**	**21.84**	**4**	P	**P**	**05 30 16.6**	**+0.2**
C36M				IAmb	IAmb	05 30 17.6	
	comp=Z,23nm,1.1s						
C36M	**Paulatuk**	**21.84**	**4**	P	**P**	**05 30 14.2**	**-2.3**
C36M	**Paulatuk**	**21.84**	**4**	P	**P**	**05 30 14.2**	**-2.3**
C36M	**Paulatuk**	**21.84**	**4**	P	**P**	**05 30 15.4**	**-1.0**
	baz=188						
AGMN	**Agassiz Nation**	**21.92**	**76**	P	**P**	**05 30 16.9**	**-0.6**
AGMN				IAmb	IAmb	05 30 26.3	
	comp=Z,38nm,1.5s						
121A	**Cookes Peak, D**	**21.95**	**126**	P	**P**	**05 30 19.1**	**+0.9**
121A				IAmb	IAmb	05 30 30.9	
	comp=Z,20nm,1.4s						
319A	**Douglas**	**22.06**	**131**	P	**P**	**05 30 18.7**	**-0.6**
319A				IAmb	IAmb	05 30 33.1	
	comp=Z,16nm,1.0s						
H21K	**Melozitna Rive**	**22.08**	**333**	P	**P**	**05 30 17.5**	**-1.7**
	baz=132						
F33A	**5 Mile Ranch,**	**22.22**	**83**	P	**P**	**05 30 20.7**	**-0.1**
COLD	**Coldfoot**	**22.50**	**338**	P	**P**	**05 30 23.4**	**-0.2**
COLD	**Coldfoot**	**22.50**	**338**	P	**P**	**05 30 23.4**	**-0.2**
COLD	**Coldfoot**	**22.50**	**338**	P	**P**	**05 30 23.6**	**+0.1**
	baz=139						
BGNE	**Belgrade**	**22.59**	**95**	P	**P**	**05 30 24.6**	**-0.2**
ECSD	**EROS Data Cent**	**22.68**	**88**	P	**P**	**05 30 25.0**	**-0.8**
ECSD				IAmb	IAmb	05 30 36.4	
	comp=Z,18nm,1.1s						
ECSD	**EROS Data Cent**	**22.68**	**88**	P	**P**	**05 30 25.2**	**-0.6**
	baz=292						
FCC	**Fort Churchill**	**23.23**	**49**	P	**P**	**05 30 31.8**	**+0.5**
FCC	**Fort Churchill**	**23.23**	**49**	P	**P**	**05 30 31.1**	**-0.2**
FCC	**Fort Churchill**	**23.23**	**49**	P	**P**	**05 30 31.1**	**-0.2**
TOLK	**Toolik Lake Re**	**23.45**	**341**	P	**P**	**05 30 34.2**	**+0.6**
	baz=142						
L34A	**Svendsen Farm,**	**23.54**	**92**	P	**P**	**05 30 33.8**	**-0.8**
MNTX	**Cornudas Mount**	**23.91**	**124**	P	**P**	**05 30 37.6**	**-0.7**
MNTX				IAmb	IAmb	05 30 54.1	
	comp=Z,14nm,1.4s						
MNTX	**Cornudas Mount**	**23.91**	**124**	P	**P**	**05 30 37.9**	**-0.4**
	baz=319						
SOLO	**Sioux Lookout**	**24.08**	**71**	P	**P**	**05 30 39.4**	**-0.3**
SOLO	**Sioux Lookout**	**24.08**	**71**	P	**P**	**05 30 39.4**	**-0.3**
A36M	**Sachs Harbour**	**24.42**	**3**	P	**P**	**05 30 41.4**	**-1.3**
A36M	**Sachs Harbour**	**24.42**	**3**	P	**P**	**05 30 41.4**	**-1.3**
A36M	**Sachs Harbour**	**24.42**	**3**	P	**P**	**05 30 42.4**	**-0.2**
	baz=185						
KSU1	**Kansas State U**	**24.73**	**98**	P	**P**	**05 30 46.5**	**+0.7**
TX32	**Lajitas Array**	**26.66**	**124**	P	**P**	**05 31 02.9**	**-0.5**
TX32				IAmb	IAmb	05 31 13.6	
	comp=Z,9.1nm,1.4s						
TXAR	**Lajitas Array**	**26.66**	**124**	P	**P**	**05 31 03.1**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=303,slow=7.0,SNR=10						
TXAR				LR	LR	05 41 44.0	
	comp=Z,742nm,19.9s,baz=311,slow=37						
	comp=Z,2.4nm,0.9s						
TXAR	**Lajitas Array**	**26.66**	**124**	P	**P**	**05 31 03.4**	**-0.1**
LPIG	**La Paz**	**27.74**	**142**	LR	LR	05 41 30.3	
	comp=Z,405nm,18.7s,baz=330,slow=35						
JCT	**Junction City**	**28.05**	**117**	P	**P**	**05 31 16.1**	**+0.2**
JCT				IAmb	IAmb	05 31 17.2	
	comp=Z,9.9nm,1.0s						
RES	**Resolute Bay**	**30.69**	**17**	LR	LR	05 44 38.9	
	comp=Z,832nm,18.3s,baz=237,slow=38						
RES	**Resolute Bay**	**30.69**	**17**	P	**P**	**05 31 37.9**	**-0.8**
RES	**Resolute Bay**	**30.69**	**17**	P	**P**	**05 31 37.9**	**-0.8**
TKL	**Tuckaleechee C**	**35.20**	**93**	LR	LR	05 47 11.9	
	comp=Z,510nm,20.2s,baz=306,slow=37						
FRB	**Frobisher Bay**	**35.93**	**41**	LR	LR	05 46 53.2	
	comp=Z,551nm,18.8s,baz=271,slow=36						
SHEM	**Shemya Is, Ala**	**36.09**	**300**	LR	LR	05 43 39.1	
	comp=Z,206nm,21.3s,baz=124,slow=30						
SCHQ	**Schefferville**	**38.23**	**56**	LR	LR	05 48 32.5	
	comp=Z,810nm,18.1s,baz=289,slow=36						
CMIG	**Matias Romero**	**41.24**	**126**	LR	LR	05 51 16.1	
	comp=Z,224nm,18.1s,baz=332,slow=38						
SFJD	**Kangerlussuaq**	**42.89**	**34**	LR	LR	05 50 28.4	
	comp=Z,505nm,20.0s,baz=286,slow=35						
SEY	**Seymchan**	**44.34**	**320**	P	**P**	**05 33 32.5**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=68,slow=10,SNR=6.9						
	comp=Z,1.4nm,0.5s						
SPITS	**Spitsbergen Ar**	**52.61**	**9**	LR	LR	05 58 43.0	
	comp=Z,247nm,19.6s,baz=282,slow=38						
JMIC	**Jan Mayen**	**54.19**	**20**	LR	LR	05 59 23.0	
	comp=Z,189nm,19.1s,baz=280,slow=38						
BORG	**Borgarnes**	**54.59**	**30**	LR	LR	05 58 27.3	
	comp=Z,597nm,18.4s,baz=319,slow=36						
TAOE	**Nuku Hiva Isla**	**57.21**	**193**	*e*S	S	05 43 25.0	+17
TAOE				*e*LR	LR	05 51 30.7	
	comp=Z,813nm,26.0s						
H11N2	**WAKE ISLAND Hy**	**58.48**	**265**	T	T	06 38 22.8	
	baz=45,slow=75,SNR=272						
H11N3	**WAKE ISLAND Hy**	**58.48**	**265**	T	T	06 38 20.0	
	baz=45,slow=75,SNR=299						
H11N1	**WAKE ISLAND Hy**	**58.50**	**265**	T	T	06 38 24.0	
	baz=45,slow=75,SNR=138						
H11S1	**WAKE ISLAND Hy**	**59.47**	**264**	T	T	06 39 30.3	
	baz=45,slow=75,SNR=97						
H11S2	**WAKE ISLAND Hy**	**59.48**	**264**	T	T	06 39 35.2	
	baz=45,slow=75,SNR=76						
H11S3	**WAKE ISLAND Hy**	**59.49**	**264**	T	T	06 39 39.6	
	baz=45,slow=75,SNR=37						
SDV	**Santo Domingo**	**62.23**	**109**	LR	LR	06 06 41.9	
	comp=Z,161nm,19.1s,baz=317,slow=40						
ROSC	**El Rosal**	**63.03**	**115**	LR	LR	06 08 51.3	
	comp=Z,94nm,18.4s,baz=16,slow=41						
PMOR	**Pomariorio Ree**	**64.72**	**201**	*e*T	T	06 45 57.6	
	comp=Z,8.5nm,0.3s						
NOA	**NORSAR Array B**	**66.89**	**20**	P	**P**	**05 36 17.8**	**+1.4**
	comp=Z,1.0nm,0.9s,baz=333,slow=6.3,SNR=3.5						
	comp=Z,1.0nm,0.9s						
PPT	**Papeete**	**67.60**	**202**	LR	LR	05 57 50.0	
	comp=Z,155nm,21.3s,baz=316,slow=29						
PPT2	**Papeete2**	**67.62**	**202**	*e*LR	LR	05 56 17.7	
	comp=Z,567nm,27.2s						
JCJ	**Chichijima**	**69.89**	**288**	LR	LR	05 59 33.7	
	comp=Z,384nm,20.7s,baz=46,slow=29						
RKT	**Rikitea**	**70.71**	**186**	*e*T	T	06 53 27.9	
	comp=Z,1.4nm,0.3s						
XLT	**XiLinHaoTe**	**72.44**	**317**	*e*P	**P**	**05 36 52.9**	**+2.0**
XLT				pP	pwP	05 36 58.4	+4.1
XLT				sP	PcP	05 37 01.6	-7.1
XLT				sS	S	05 46 20.2	+4.7
XLT	**XiLinHaoTe**	**72.44**	**317**	SS	SS	05 50 51.4	-1.4
XLT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,120nm,4.9s						
XLT				LR	LR		
	comp=N,170nm,10.3s						
XLT				LR	LR		
	comp=E,1µm,10.6s						
XLT				LR	LR		
	comp=Z,800nm,9.6s						
TBI	**Tubuai**	**73.14**	**200**	*e*LR	LR	05 58 29.0	
	comp=Z,364nm,31.2s						
TBI	**Tubuai**	**73.14**	**200**	*e*T	T	06 56 29.4	
	comp=Z,6.8nm,0.3s						
RPN	**Rapa Nui**	**76.50**	**162**	LR	LR	06 03 48.3	
	comp=Z,94nm,20.9s,baz=263,slow=30						
MDP	**Montagnes des**	**76.89**	**97**	LR	LR	06 15 22.6	
	comp=Z,117nm,19.2s,baz=260,slow=39						
HHC	**Hu-ho-hao-te**	**76.91**	**317**	*e*P	**P**	**05 37 17.3**	**+0.4**
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
WMQ	**Urumqi**	**83.38**	**334**	*e*P	**P**	**05 37 54.9**	**+3.2**
PZH	**PanZhiHua**	**93.32**	**316**	P	**P**	**05 38 41.3**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.8s						
BDFB	**Brasilia**	**95.32**	**107**	LR	LR	06 26 51.0	
	comp=Z,101nm,19.1s,baz=332,slow=39						
RCBR	**Riachuelo**	**96.18**	**92**	LR	LR	06 22 33.6	
	comp=Z,112nm,18.4s,baz=98,slow=36						

IDC 07 05:29:41.8±2.0**, 3°.35S**×**128°.01E, h0**^{km}**, mb4.1**/2**, mbtmp4.2**/3**, ML4.3**/1**, MS5.3**/1**, Error ellipse: s-maj=152.2km s-min=25.6km az=67.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.61**	**160**	P	P	05 33 50.0	+0.1
	1.2nm,0.3s,baz=339,slow=12,SNR=37						
	4.3nm,0.6s						
ASAR	**Alice Springs**	**20.98**	**165**	P	P	05 34 25.8	-1.1
	3.6nm,0.3s,baz=343,slow=11,SNR=76						
	3.6nm,0.3s						
JOW	**Kunigami**	**30.01**	**0**	LR	LR	05 48 21.4	
	comp=Z,6µm,19.6s,baz=36,slow=37						
MKAR	**Makanchi Array**	**64.11**	**327**	P	P	05 40 18.1	+0.2
	1.6nm,0.7s,baz=118,slow=8.3,SNR=13						
	1.6nm,0.7s						

JMA ***07*** *05:42:09.3±0.3, 31°.1N±0°.4×129°.0E±1°.0, h6*^{km}*±2*^{km}*, MD5.5/39, MW5.4/39, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

NIED ***07*** *05:42:09.3, 31°.10N×128°.99E, h6*^{km}*, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.28;* $M_{\theta\theta}$*0.60;* $M_{\phi\phi}$*-0.32;* $M_{r\theta}$*-0.32;* $M_{\theta\phi}$*0.79;* $M_{\phi r}$*0.48; Fault plane solution:* M_0*1.10000×10*^{17} *NP1:* ϕ_s*200.00000°,* δ*66.00000°,* λ*-156.00000°. NP2:* ϕ_s*100.00000°,* δ*69.00000°,* λ*-26.00000°.*

MOS ***07*** *05:42:10.9±1.0, 31°.17N×129°.24E, h11*^{km}*, mb5.3/63, MS5.3/38 Error ellipse: s-maj=6.1km s-min=4.0km az=107.1*

IDC ***07*** *05:42:11.0±0.4, 31°.16N×129°.25E, h0*^{km}*, mb4.7/40, mbtmp4.6/44, ML3.9/4, MS4.8/69, Error ellipse: s-maj=12.6km s-min=9.2km az=106.0*

NEIC ***07*** *05:42:13.5±1.6, 31°.26N±0°.06×129°.30E±0°.07, h10*^{km}*±1*^{km}*, mb5.2/134, Ms_20 5.1/232, Mwb5.3/29, Mww5.3, Error ellipse: s-maj=10.8km s-min=8.3km az=317.0*

BJI ***07*** *05:42:14.0±0.0, 31°.20N×129°.40E, h45*^{km}*, mb4.8/69, mB5.2/56, Ms5.6/82, Ms7 5.5/78*

GCMT ***07*** *05:42:14.5±0.1, 31°.14N±0°.01×129°.05E±0°.01, h12*^{km}*, MW5.4/147, Moment Tensor Solution. s113,c191; s147,c290; Duration:* $1^{s}.2$ *Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*-0.38±.02;* $M_{\theta\theta}$*0.95±.02;* $M_{\phi\phi}$*-0.57±.02;* $M_{r\theta}$*0.12±.04;* $M_{\theta\phi}$*1.18±.01;* $M_{\phi r}$*0.67±.04; Best double couple:* M_0*1.58600×10*^{17} *NP1:* ϕ_s*105.00000°,* δ*62.00000°,* λ*-11.00000°. NP2:* ϕ_s*200.00000°,* δ*80.00000°,* λ*-152.00000°. Principal axes: T 1.6870, Plg12.0000°, Azm329.0000°; N -0.2020, Plg60.0000°, Azm217.0000°; P -1.4850, Plg27.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***07*** *05:42:17.5, 31°.26N×129°.32E, h14*^{km}*, Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.32;* $M_{\theta\theta}$*0.73;* $M_{\phi\phi}$*-0.41;* $M_{r\theta}$*0.13;* $M_{\theta\phi}$*1.06;* $M_{\phi r}$*-0.09; Fault plane solution:* M_0*1.25000×10*^{17} *NP1:* ϕ_s*14.48000°,* δ*80.82000°,* λ*-174.01000°. NP2:* ϕ_s*283.52000°,* δ*84.09000°,* λ*-9.23000°. Principal axes: T 1.3693, Plg2.0000°, Azm329.0000°; N -0.2995, Plg79.0000°, Azm71.0000°; P -1.0698, Plg11.0000°, Azm239.0000°;*

NEIC ***07*** *05:42:20, 31°.21N×129°.21E, h18*^{km}*, Moment Tensor Solution. Duration:* $4^{s}.0$ *Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.24;* $M_{\theta\theta}$*0.78;* $M_{\phi\phi}$*-0.54;* $M_{r\theta}$*-0.20;* $M_{\theta\phi}$*1.06;* $M_{\phi r}$*0.06; Fault plane solution:* M_0*1.28000×10*^{17} *NP1:* ϕ_s*196.00000°,* δ*80.00000°,* λ*-176.00000°. NP2:* ϕ_s*106.00000°,* δ*87.00000°,* λ*-10.00000°. Principal axes: T 1.3747, Plg5.0000°, Azm151.0000°; N -0.2244, Plg79.0000°, Azm269.0000°; P -1.1502, Plg9.0000°, Azm60.0000°;*

ISC 07 05:42:13.4±0.2**, 31°.22N**±0°.03×**129°.29E**±0°.03**, h10**^{km}**, n926,** σ**2**^{s}**.07**/781**, mb5.1**/213**, MS5.1**/217**, 34C-38D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.58**	**39**	⇓P	**Pb**	**05 42 24.9**	**-0.8**
JSJ				⇓*e*S	**Sn**	**05 42 38.1**	**+0.7**
JSJ	**Shimokoshiki**	**0.58**	**39**	A	A	05 42 24.9	
	comp=E,191nm,1.6s,comp=E,248nm,5.4s						
JSU	**Suzuyama**	**1.04**	**74**	Pn	**Pn**	**05 42 33.7**	**-0.3**
JSU				Sn	**Sb**	**05 42 47.4**	**+0.2**
JSU	**Suzuyama**	**1.04**	**74**	⇓*i*P	**Pn**	**05 42 33.7**	**-0.3**
JSU				⇓*e*S	**Sn**	**05 42 51.5**	**+2.9**
JSU	**Suzuyama**	**1.04**	**74**	A	A	05 42 33.7	
	comp=E,127nm,1.2s,comp=E,213nm,2.1s						
JKC	**Kuchinoerabu**	**1.09**	**134**	P	**Pb**	**05 42 31.9**	**-2.4**
JKC				S	**Sg**	**05 42 47.9**	**-0.6**
JKC	**Kuchinoerabu**	**1.09**	**134**	A	A	05 42 31.9	
	comp=E,133nm,3.7s,comp=E,266nm,2.4s						
JTSR	**Tashiro 2**	**1.40**	**92**	A	A	05 42 39.0	
	comp=E,51nm,7.3s,comp=E,89nm,5.7s						
JHD	**Hondo**	**1.44**	**30**	A	A	05 42 39.4	
	comp=E,81nm,6.5s,comp=E,63nm,7.2s						
JYAK	**Yakushimahirau**	**1.44**	**133**	P	**Pn**	**05 42 36.8**	**-2.7**
JYAK				*e*S	**Sn**	**05 42 57.9**	**-0.5**
JYAK	**Yakushimahirau**	**1.44**	**133**	A	A	05 42 36.8	
	comp=E,81nm,7.8s,comp=E,111nm,6.3s						
JZO	**Okuchi**	**1.44**	**50**	A	A	05 42 40.1	
	comp=E,80nm,5.5s,comp=E,92nm,9.0s						
JNN	**Nakanoshima**	**1.47**	**160**	P	**Pn**	**05 42 35.9**	**-4.0**
JNN	**Nakanoshima**	**1.47**	**160**	A	A	05 42 35.9	
	comp=E,131nm,1.4s,comp=E,194nm,6.1s						
NGSJ	**Nagasakinomoza**	**1.47**	**17**	A	A	05 42 39.4	
	comp=E,94nm,5.0s,comp=E,72nm,9.7s						
JFU	**Fukue jima 2**	**1.50**	**342**	*i* P	**Pn**	**05 42 38.5**	**-1.9**
JFU				*e*S	**Sn**	**05 42 58.6**	**-1.5**
JTN	**Tanegashima 3**	**1.56**	**111**	⇓P	**Pn**	**05 42 40.0**	**-1.2**
JTN	**Tanegashima 3**	**1.56**	**111**	A	A	05 42 40.0	
	comp=E,73nm,4.9s,comp=E,116nm,15.7s						
JMTN	**Minamitane**	**1.61**	**120**	*e*P	**Pn**	**05 42 40.4**	**-1.5**
JMTN	**Minamitane**	**1.61**	**120**	A	A	05 42 40.4	
	comp=E,59nm,6.3s,comp=E,91nm,9.3s						
JTZ	**Takazaki**	**1.68**	**66**	⇓P	**Pn**	**05 42 43.3**	**+0.5**
JTZ	**Takazaki**	**1.68**	**66**	A	A	05 42 43.3	
	comp=E,61nm,11.0s,comp=E,103nm,5.7s						
JNAR	**Kushima--Naru**	**1.72**	**79**	A	A	05 42 44.1	
	comp=E,74nm,7.2s,comp=E,90nm,2.3s						
JNKG	**Nichinankitago**	**1.84**	**76**	A	A	05 42 45.9	
	comp=E,76nm,1.4s,comp=E,110nm,1.5s						
JIU3	**Izumi3**	**1.85**	**44**	⇓*i*P	**Pn**	**05 42 45.8**	**+0.5**
JIU3	**Izumi3**	**1.85**	**44**	A	A	05 42 45.8	
	comp=E,62nm,10.3s,comp=E,36nm,6.2s						
JUR	**Ureshino**	**1.95**	**16**	A	A	05 42 46.4	
	comp=E,77nm,6.8s,comp=E,60nm,6.1s						
JTAJ	**Takarajima**	**2.06**	**182**	*e*P	**Pn**	**05 42 44.1**	**-4.0**

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JTAJ  Takarajima       2.06 182   A      A       05 42 44.1
      comp=E,88nm,7.6s,comp=E,70nm,9.0s
JTSN  Tsuno            2.15  61   A      A       05 42 50.4
      comp=E,29nm,6.1s,comp=E,39nm,8.1s
JKIT  Kitakata         2.31  52   A      A       05 42 52.7
      comp=E,39nm,5.9s,comp=E,22nm,10.3s
JNU   Nakatsue         2.33  35   Pn     Pb      05 42 53.4  -2.1
      baz=231,slow=20
JNU   Nakatsue         2.33  35   A      A       05 42 52.5
      comp=E,43nm,11.7s,comp=E,37nm,7.6s
JHHC  Hyugahichiya     2.34  58   A      A       05 42 53.2
      comp=E,30nm,8.1s,comp=E,28nm,7.9s
JFI   Itaya            2.39  23   A      A       05 42 53.0
      comp=E,52nm,14.6s,comp=E,31nm,5.3s
JSKE  Saikikamae       2.72  54   A      A       05 42 58.6
      comp=E,25nm,6.4s,comp=E,22nm,6.0s
JBEP  Beppuamama       2.77  40   A      A       05 42 59.0
      comp=E,44nm,5.8s,comp=E,61nm,8.5s
JUS   Usuki            2.78  48   A      A       05 42 59.4
      comp=E,32nm,9.5s,comp=E,44nm,8.7s
JFA   Akaike           2.79  27   A      A       05 42 58.9
      comp=E,22nm,9.2s,comp=E,16nm,7.2s
JAM   Amami Oshima     2.81 174   A      A       05 42 54.6
      comp=E,31nm,8.9s,comp=E,18nm,7.8s
JZK   Kikaishima       2.96 168   A      A       05 42 57.1
      comp=E,86nm,7.8s,comp=E,69nm,6.6s
JAMN  Amaminishikomi   2.97 182   A      A       05 42 56.4
      comp=E,28nm,14.7s,comp=E,14nm,11.7s
JKI   Kunimi           3.08  38   A      A       05 43 03.4
      comp=E,27nm,10.1s,comp=E,29nm,13.9s
JTSM  Tsushimamitsus   3.11   1   A      A       05 43 02.2
      comp=E,32nm,10.2s,comp=E,13nm,5.8s
JTU   Tsushima         3.30   2   Pn     Pn      05 43 04.7  -0.4
JTU   Tsushima         3.30   2   A      A       05 43 04.8
      comp=E,32nm,13.5s,comp=E,14nm,11.9s
JTY   Toyota           3.38  26   A      A       05 43 07.3
      comp=E,28nm,14.5s,comp=E,25nm,11.8s
JTO   Tosashimizu      3.40  60   A      A       05 43 08.3
      comp=E,18nm,5.1s,comp=E,20nm,9.3s
JTK   Tokunoshima      3.44 185   A      A       05 43 02.8
      comp=E,25nm,13.9s,comp=E,12nm,9.0s
UWA2  Uwa jima 2       3.46  54   A      A       05 43 09.0
      comp=E,25nm,6.2s,comp=E,20nm,6.1s
JNA   Nagahama         3.56  48   A      A       05 43 10.5
      comp=E,23nm,6.5s,comp=E,19nm,4.7s
JKD   Kudamatsu        3.57  37   A      A       05 43 10.3
      comp=E,20nm,7.3s,comp=E,14nm,7.2s
JKU   Kubokawa         3.81  56   A      A       05 43 14.1
      comp=E,15nm,6.9s,comp=E,22nm,8.1s
JHGM  Hagimishima      3.88  23   A      A       05 43 14.1
      comp=E,39nm,13.2s,comp=E,41nm,10.0s
JOKE  Okinoerabujima   3.90 189   A      A       05 43 09.1
      comp=E,24nm,15.1s,comp=E,10.0nm,9.2s
JHIK  Hikimi           3.98  33   A      A       05 43 16.0
      comp=E,17nm,6.0s,comp=E,24nm,6.8s
JHM   Kurahashi        3.99  42   A      A       05 43 16.4
      comp=E,19nm,9.4s,comp=E,16nm,6.3s
JET   Tanbara          4.07  50   A      A       05 43 17.7
      comp=E,14nm,6.5s,comp=E,18nm,5.4s
JKHR  Kochiharuno      4.23  56   A      A       05 43 20.0
      comp=E,15nm,6.8s,comp=E,23nm,9.0s
JYRO  Yoronjima        4.25 190   A      A       05 43 14.0
      comp=E,21nm,9.5s,comp=E,12nm,8.3s
JHT   Toyohira         4.33  37   A      A       05 43 20.9
      comp=E,11nm,12.3s,comp=E,16nm,7.2s
JIH   Iheya            4.33 196   A      A       05 43 14.8
      comp=E,29nm,10.2s,comp=E,16nm,8.0s
JOW   Kunigami         4.46 192   Pn     Pn      05 43 19.5  -1.6
      17nm,0.3s,baz=75,slow=17,SNR=31
      165nm,0.5s
JOW   Kunigami         4.46 192   Pn     Pn      05 43 20.8  -0.3
JOW   Kunigami         4.46 192   P      Pn      05 43 21.2   0.0
JOW   Kunigami         4.46 192   A      A       05 43 16.9
      comp=E,16nm,10.8s,comp=E,10.0nm,9.9s
JMN   Monobe           4.61  56   A      A       05 43 25.4
      comp=E,24nm,7.8s,comp=E,15nm,6.1s
MRT2  Murotomisaki 2   4.64  61   A      A       05 43 25.8
      comp=E,13nm,8.7s,comp=E,12nm,7.4s
JGT2  ShimaneMisato    4.69  34   A      A       05 43 25.9
      comp=E,16nm,7.9s,comp=E,16nm,7.8s
JJG   Jouge            4.71  43   A      A       05 43 26.5
      comp=E,15nm,8.2s,comp=E,19nm,6.2s
JNTH  Nagotoyohara     4.81 194   A      A       05 43 21.8
      comp=E,16nm,10.7s,comp=E,9.0nm,12.0s
JHS   Saijyo           4.95  39   Pn     Pn      05 43 27.2  -0.6
JHS   Saijyo           4.95  39   A      A       05 43 29.8
      comp=E,14nm,16.2s,comp=E,9.0nm,10.4s
JAGN  Aguni-jima       4.95 202   A      A       05 43 23.2
      comp=E,18nm,14.9s,comp=E,19nm,8.8s
JMAF  Mimaanabuki      4.97  54   A      A       05 43 30.4
      comp=E,16nm,8.8s,comp=E,13nm,10.9s
JJS   Sakaide          5.01  50   A      A       05 43 30.9
      comp=E,14nm,7.6s,comp=E,13nm,7.7s
JAI   Aioi             5.06  58   A      A       05 43 31.6
      comp=E,10.0nm,6.4s,comp=E,9.0nm,7.2s
JISK  Izumosakaura     5.20  34   A      A       05 43 33.2
      comp=E,22nm,5.9s,comp=E,19nm,6.3s
JJT3  Tamagusuku3      5.23 195   A      A       05 43 27.5
      comp=E,23nm,15.3s,comp=E,32nm,10.4s
JNM   Ikuma            5.29  35   A      A       05 43 34.4
      comp=E,23nm,10.6s,comp=E,22nm,11.2s
JKE   Kume jima 2      5.35 205   A      A       05 43 28.7
      comp=E,15nm,10.2s,comp=E,16nm,9.8s
TJN   Taejon           5.39 343   P      Pn      05 43 34.3  +0.5
TJN   Taejon           5.39 343   Pn     Pn      05 43 34.3  +0.5
TJN   Taejon           5.39 343   P      Pn      05 43 34.7  +0.9
JAD   Aida             5.52  47   A      A       05 43 38.0
      comp=E,11nm,6.9s,comp=E,11nm,9.5s
JKR   Kurayoshi        5.62  41   A      A       05 43 39.2
      comp=E,20nm,6.9s,comp=E,14nm,12.3s
JWM   Minabe           5.75  61   A      A       05 43 41.3
      comp=E,7.0nm,8.5s,comp=E,7.0nm,6.2s
JTNC  Tanabenakahech   5.93  62   A      A       05 43 43.9
      comp=E,6.0nm,6.1s,comp=E,6.0nm,6.3s
JMIK  Miki             6.02  52   A      A       05 43 45.0
      comp=E,16nm,6.7s,comp=E,11nm,5.6s
JWY   Kouya            6.09  59   A      A       05 43 46.1
      comp=E,8.0nm,7.3s,comp=E,9.0nm,6.2s
JKSM  Kasumi           6.26  44   A      A       05 43 48.2
      comp=E,11nm,6.9s,comp=E,12nm,6.4s
KSAR  Wonju Array Be   6.31 350   P      Pn      05 43 47.0  +0.5
KSAR  Wonju Array Be   6.31 350          Pn      05 43 47.0  +0.5
KSRS  Korea Array      6.32 350   Pn     Pn      05 43 47.5  +0.9
      3.8nm,0.3s,baz=176,slow=15,SNR=56
KSRS                              Lg     Lg      05 45 34.6
      8.4nm,0.3s,baz=176,slow=32,SNR=8.4
KSRS                              LR     LR      05 46 14.9
      comp=Z,13µm,21.0s,baz=170,slow=38
      22nm,0.7s
JHE   Heguri           6.37  56   A      A       05 43 50.0
      comp=E,15nm,6.7s,comp=E,9.0nm,7.4s
KS19  Wonju Array Si   6.38 350          Pn      05 43 47.5   0.0
JWT   Wachi            6.53  50   A      A       05 43 52.1
      comp=E,4.0nm,5.6s,comp=E,10.0nm,7.5s
JKY   Yasaka           6.55  46   A      A       05 43 52.4
      comp=E,11nm,6.2s,comp=E,11nm,11.7s
INCN  Inchon           6.62 341   P      Pn      05 43 50.9  +0.1
INCN  Inchon           6.62 341   Pn     Pn      05 43 50.9  +0.1
INCN  Inchon           6.62 341   P      Pn      05 43 51.7  +0.9
TSUJ  Tsu 2            6.93  58   A      A       05 43 57.7
      comp=E,10.0nm,6.6s,comp=E,13nm,9.5s
SSE   Sheshan          6.95 271   P      Pn      05 43 55.8  +0.5
SSE                               S      Sn      05 45 20.6  +6.3
SSE                               pmax   pmax
      comp=Z,16nm,0.4s
JFM   Mihama           7.06  51   A      A       05 43 59.5
      comp=E,7.0nm,6.7s,comp=E,11nm,9.7s
JEG   Eigenji          7.12  55   A      A       05 44 00.4
      comp=E,10.0nm,8.2s,comp=E,5.0nm,7.0s
JIKM  Ikemajima        7.22 211   A      A       05 43 54.6
      comp=E,18nm,9.2s,comp=E,13nm,13.4s
JOGS  Gusukube         7.29 209   A      A       05 43 55.7
      comp=E,29nm,12.0s,comp=E,33nm,8.8s
JIRB  Irabujima        7.33 211   A      A       05 43 56.2
      comp=E,15nm,13.0s,comp=E,10.0nm,7.8s
JMJ2  Miyako jima3     7.34 209   A      A       05 43 56.4
      comp=E,25nm,11.3s,comp=E,19nm,11.1s
JAA   Atsumi           7.43  61   A      A       05 44 04.7
      comp=E,8.0nm,7.6s,comp=E,5.0nm,8.9s
JICN  Ichinomiyachia   7.52  55   A      A       05 44 06.0
      comp=E,11nm,6.3s,comp=E,9.0nm,12.0s
JYTA  Yamagatataniai   7.60  53   A      A       05 44 07.1
      comp=E,5.0nm,6.4s,comp=E,4.0nm,7.3s
INU   Inuyama          7.67  55   Pn     Pn      05 44 06.8  +1.6
INU   Inuyama          7.67  55   P      Pn      05 44 08.9  +3.7
JKG   Kaga             7.73  47   A      A       05 44 08.8
      comp=E,8.0nm,8.1s,comp=E,9.0nm,6.9s
JAO   Obara            7.80  57   A      A       05 44 09.8
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      comp=E,10.0nm,7.5s,comp=E,12nm,6.9s
HMMJ  Hamamatsu 2      7.95  61   A      A       05 44 12.0
      comp=E,4.0nm,7.6s,comp=E,4.0nm,9.5s
JGF   Kuroka           8.03  55   Pn     Pn      05 44 11.6  +1.3
JGF   Kuroka           8.03  55   A      A       05 44 13.1
      comp=E,8.0nm,7.9s,comp=E,5.0nm,9.5s
JKKS  Kakegawashinom   8.11  62   A      A       05 44 14.2
      comp=E,15nm,8.1s,comp=E,9.0nm,7.9s
JSG   Sagara           8.23  63   A      A       05 44 15.9
      comp=E,19nm,8.3s,comp=E,8.0nm,9.4s
JNY   Yasuok           8.28  58   A      A       05 44 16.5
      comp=E,9.0nm,7.5s,comp=E,4.0nm,6.4s
JGN   Niukaw           8.34  51   A      A       05 44 17.3
      comp=E,8.0nm,8.8s,comp=E,4.0nm,8.4s
SHZ3  Shizuoka 3       8.40  60   A      A       05 44 18.3
      comp=E,6.0nm,8.9s,comp=E,5.0nm,9.8s
JJH   Hakui            8.42  46   A      A       05 44 18.3
      comp=E,6.0nm,8.1s,comp=E,5.0nm,11.7s
JTT   Ttatey           8.57  49   A      A       05 44 20.5
      comp=E,9.0nm,8.0s,comp=E,6.0nm,10.8s
YOJ   Yonaguni jima    8.73 221   P      Pn      05 44 21.4  +1.7
YOJ   Yonaguni jima    8.73 221          Pn      05 44 21.4  +1.7
YOJ   Yonaguni jima    8.73 221   P      Pn      05 44 22.8  +3.1
NJ2   Nanjing          8.94 278  eP      Pn      05 44 24.5  +1.9
NJ2                               S      Sn      05 46 07.2  +3.9
NJ2                               pmax   pmax
      comp=Z,61nm,0.5s
NJ2                               LR     LR
      comp=N,19µm,11.8s
NJ2                               LR     LR
      comp=E,22µm,10.0s
NJ2                               LR     LR
      comp=Z,23µm,10.0s
JHJ   Hachijo jima 2   9.09  75   Pn     Pn      05 44 28.3  +3.6
      8.5nm,0.3s,baz=127,slow=20,SNR=1.7
JHJ                               LR     LR      05 46 35.2
      comp=Z,639nm,21.4s,baz=264,slow=29
MAJO  Matsushiro       9.12  52  iP      Pn      05 44 26.2  +1.2
MAJO  Matsushiro       9.12  52   Pn     Pn      05 44 24.6  -0.4
MAJO  Matsushiro       9.12  52   P      Pn      05 44 27.0  +2.0
MJB9  Matsu-Tunnel     9.12  52          Pn      05 44 26.8  +1.7
MJAR  Matsushiro Arr   9.12  52   Pn     Pn      05 44 26.9  +1.9
      0.4nm,0.3s,baz=226,slow=12,SNR=15
MJAR                              LR     LR      05 48 42.6
      comp=Z,9µm,18.0s,baz=232,slow=43
      4.5nm,0.4s
MJAR  Matsushiro Arr   9.12  52   P      Pn      05 44 25.9  +0.9
MJAR  Matsushiro Arr   9.12  52          Pn      05 44 25.9  +0.9
TATO  Taipei           9.28 230          Pn      05 44 28.7  +1.4
YHNB  Yeheng           9.57 229          Pn      05 44 33.9  +2.6
YHNB  Yeheng           9.57 229   P      Pn      05 44 36.5  +5.2
NACB  Ninganchiao      9.78 226          Pn      05 44 34.3  +0.1
DL2   Dalian           9.91 323   P      Pn      05 44 36.1  +0.3
DL2                               S      Sn      05 46 29.0  +1.9
DL2                               pmax   pmax
      comp=Z,25nm,1.0s
DL2                               pmax   pmax
      comp=Z,590nm,8.1s
DL2                               LR     LR
      comp=N,15µm,10.3s
DL2                               LR     LR
      comp=E,13µm,11.1s
DL2                               LR     LR
      comp=Z,16µm,10.5s
JYT   Yasato          10.36  58          Pn      05 44 43.2  +1.1
SSLB  Suanglung       10.46 227          Pn      05 44 46.0  +2.4
SSLB  Suanglung       10.46 227   P      Pn      05 44 45.7  +2.1
YULB  Yu-li           10.55 224          Pn      05 44 45.0  +0.3
TPUB  Ta-pu           11.02 226          Pn      05 44 51.0  -0.3
TPUB  Ta-pu           11.02 226   P      Pn      05 44 53.0  +1.8
TWG   Pinlang         11.12 223          Pn      05 44 52.1  -0.4
TIA   Tai'an          11.28 299  eP      Pn      05 44 52.7  -2.0
TIA                               pmax   pmax
      comp=Z,44nm,1.0s
TIA                               LR     LR
      comp=N,7µm,10.3s
TIA                               LR     LR
      comp=E,14µm,10.3s
TIA                               LR     LR
      comp=Z,10µm,9.2s
QZH   Quanzhou        11.32 239 ⇓P       Pn      05 44 48.9  -6.4
QZH                               S      Sn      05 46 57.3  -4.7
QZH                               SS     SnSn    05 47 17.6  +3.7
QZH                               LR     LR
      comp=N,12µm,12.8s
QZH                               LR     LR
      comp=E,11µm,9.9s
QZH                               LR     LR
      comp=Z,18µm,11.8s
SNY   Shenyang        11.54 338 ⇑P       Pn      05 45 09.7   +12
SNY                               S      Sn      05 47 20.3   +13
SNY                               pmax   pmax
      comp=Z,19nm,0.9s
SNY                               AMB    AMB
      comp=Z,510nm,9.4s
SNY                               LR     LR
      comp=N,21µm,12.3s
SNY                               LR     LR
      comp=E,30µm,10.3s
SNY                               LR     LR
      comp=Z,31µm,17.5s
JCJ   Chichijima      11.99 107   LR     LR      05 48 52.6
      comp=Z,2µm,21.1s,baz=284,slow=33
JCJ   Chichijima      11.99 107   Pn     Pn      05 45 06.3  +1.8
WHN   Wuhan           12.85 271 ⇓P       Pn      05 45 26.7   +11
WHN                               S      Sn      05 47 52.7   +13
WHN                               LR     LR
      comp=N,32µm,10.0s
WHN                               LR     LR
      comp=E,27µm,14.3s
WHN                               LR     LR
      comp=Z,42µm,11.9s
CN2   Changchun       12.92 347  eP      Pn      05 45 18.9  +1.8
CN2                              ePP     PnPn    05 45 30.1  +5.1
CN2                              eS      Sn      05 47 43.1  +2.2
CN2                               pmax   pmax
      comp=Z,20nm,1.5s
CN2                               LR     LR
      comp=Z,12µm,13.0s
CN2                               LR     LR
      comp=Z,36µm,13.0s
CN2                               LR     LR
      comp=Z,22µm,13.0s
USA0B Ussuriysk Arra  13.13   9   P      Pn      05 45 22.8  +2.9
USA0B Ussuriysk Arra  13.13   9   Pn     Pn      05 45 22.8  +2.9
USRK  Ussuriysk Ar.   13.13   9   Pn     P       05 45 24.9  -5.2
      comp=Z,0.3nm,0.3s,baz=199,slow=14,SNR=12
USRK                              LR     LR      05 50 09.4
      comp=Z,5µm,18.2s,baz=178,slow=36
USRK  Ussuriysk Ar.   13.13   9   P      Pn      05 45 23.6  +3.7
USRK  Ussuriysk Ar.   13.13   9   Pn     Pn      05 45 23.6  +3.7
MDJ   Mudanjiang      13.38   1   P      Pn      05 45 25.0  +1.7
MDJ                               pP     P       05 45 30.1  -2.8
MDJ                               sP             05 45 37.2
MDJ                               S      Sn      05 47 55.1  +3.1
MDJ                               sS     S       05 48 06.1   -10
MDJ                               PcS    PcS     05 54 25.8  -0.4
MDJ                               pmax   pmax
      comp=Z,9.0nm,2.3s
MDJ                               pmax   pmax
      comp=Z,1µm,9.1s
MDJ                               LR     LR
      comp=Z,1µm,8.3s
MDJ                               LR     LR
      comp=Z,280nm,5.6s
MDJ                               LR     LR
      comp=Z,11µm,17.9s
HNS   HongShan        13.53 301 ⇓P       Pn      05 45 25.5  +0.1
HNS                               pP     P       05 45 36.0  +1.4
HNS                               sP             05 45 45.4
HNS                              eS      Sn      05 47 55.7  -0.1
HNS                               sS     S       05 48 06.3   -13
HNS                               SS     SnSn    05 48 13.6  +5.5
HNS                               pmax   pmax
      comp=Z,21nm,1.3s
HNS                               pmax   pmax
      comp=Z,650nm,9.2s
HNS                               LR     LR
      comp=Z,8µm,12.7s
HNS                               LR     LR
      comp=Z,9µm,12.3s
HNS                               LR     LR
      comp=Z,7µm,12.5s
BJT   Baijiatuau      13.81 313   P      Pn      05 45 29.7  +0.5
BJT   Baijiatuau      13.81 313          Pn      05 45 29.7  +0.5
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BJI   Beijing         13.81 313   P      Pn      05 45 30.7  +1.4
BJI                               S      Sn      05 48 07.5  +4.8
BJI                               pmax   pmax
      comp=Z,24nm,1.6s
BJI                               pmax   pmax
      comp=Z,930nm,8.4s
BJI                               LR     LR
      comp=Z,14µm,17.4s
BJI                               LR     LR
      comp=Z,10µm,16.5s
BJI                               LR     LR
      comp=Z,16µm,15.8s
LYN   LuoYang         14.52 288 ⇑P       Pn      05 45 37.3  -1.7
LYN                               pP     P       05 45 46.9  +1.3
LYN                               sP             05 45 53.4
LYN                               S      Sn      05 48 20.0   0.0
LYN                               pmax   pmax
      comp=Z,40nm,2.0s
LYN                               pmax   pmax
      comp=Z,800nm,7.1s
LYN                               LR     LR
      comp=Z,52µm,14.7s
LYN                               LR     LR
      comp=Z,20µm,14.6s
LYN                               LR     LR
      comp=Z,13µm,11.4s
BNX   BinXian         14.57 355 ⇑P       P       05 45 44.6  -1.5
BNX                               pP     Pn      05 45 52.9   +13
BNX                               S      Sn      05 48 26.9  +5.8
BNX                               pmax   pmax
      comp=Z,60nm,1.4s
BNX                               pmax   pmax
      comp=Z,2µm,7.5s
BNX                               LR     LR
      comp=Z,6µm,6.3s
BNX                               LR     LR
      comp=Z,24µm,13.3s
BNX                               LR     LR
      comp=Z,24µm,16.2s
TEY   Ternei          14.93  20⇑eP       P       05 45 53.3  +3.1
TEY                               pmax   pmax
      comp=N,30nm,1.3s
TEY                               pmax   pmax
      comp=Z,30nm,1.9s
TEY                               pmax   pmax
      comp=N,100nm,8.6s
TEY                               pmax   pmax
      comp=Z,200nm,7.8s
TEY                               MLR    MLR
      comp=E,400nm,12.0s
TEY                               MLR    MLR
      comp=N,200nm,14.0s
TEY                               MLR    MLR
      comp=Z,300nm,11.0s
ERM   Erimo           15.47  42  iP      Pn      05 45 51.2  -0.5
XLT   XiLinHaoTe      16.40 324⇑iP       Pn      05 46 03.4  -0.3
XLT                               pP     sP      05 46 12.9  +2.5
XLT                               sP     pP      05 46 19.0   +10
XLT                               S      Sn      05 49 06.4  +0.6
XLT                               sS     S       05 49 18.6  +0.4
XLT                               SS     SnSn    05 49 28.8   +10
XLT                               pmax   pmax
      comp=Z,1µm,8.9s
XLT                               LR     LR
      comp=Z,12µm,16.2s
XLT                               LR     LR
      comp=Z,12µm,15.2s
ASAJ  Asahikawa       16.61  35   Pn     Pn      05 46 06.2  -0.1
      comp=Z,0.7nm,0.3s,baz=202,slow=20,SNR=7.8
      comp=Z,14nm,0.7s
HHC   Hu-ho-hao-te    17.23 309  eP      Pn      05 46 14.8  +0.5
HHC                               S      Sn      05 49 29.4  +3.4
HHC                               sS     sS      05 49 38.6  -0.8
HHC                               pmax   pmax
      comp=Z,37nm,0.9s
HHC                               pmax   pmax
      comp=Z,2µm,8.0s
HHC                               LR     LR
      comp=Z,19µm,14.3s
HHC                               LR     LR
      comp=Z,20µm,14.3s
HHC                               LR     LR
      comp=Z,26µm,15.6s
XAN   Xi'an           17.39 285   P      Pn      05 46 14.3  -1.9
XAN                               pP     sP      05 46 24.0  +2.7
XAN                               S      Sn      05 49 31.1  +1.3
XAN                               pmax   pmax
      comp=Z,52nm,1.4s
XAN                               pmax   pmax
      comp=Z,770nm,5.7s
XAN                               LR     LR
      comp=Z,33µm,12.6s
XAN                               LR     LR
      comp=Z,17µm,12.4s
XAN                               LR     LR
      comp=Z,16µm,11.4s
GULI  GuiLin          17.68 255 ⇓P       Pn      05 46 20.4  +0.6
GULI                              S      Sn      05 49 32.6  -4.3
GULI                              pmax   pmax
      comp=Z,50nm,1.8s
GULI                              LR     LR
      comp=Z,14µm,12.5s
GULI                              LR     LR
      comp=Z,18µm,10.8s
GULI                              LR     LR
      comp=Z,27µm,11.9s
KLR   Kul'dur         18.09   5   P      P       05 46 28.5  +3.5
      comp=Z,58nm,1.0s,baz=190,slow=8.6,SNR=59
KLR                               LR     LR      05 53 07.3
      comp=Z,1µm,20.9s,baz=180,slow=36
KLR   Kul'dur         18.09   5deP       P       05 46 27.7  +2.6
KLR                               pmax   pmax
      comp=Z,192nm,1.7s
BTO   Baotou          18.17 306  eP      P       05 46 28.6  +2.4
BTO                               S      Sn      05 49 50.7  +1.9
BTO                               LR     LR
      comp=Z,64µm,17.3s
BTO                               LR     LR
      comp=Z,37µm,16.1s
YUK   Yuzh-Kuril'sk   18.28  41   P      P       05 46 30.0  +2.7
YUK                              eS      Sn      05 49 48.4  -2.8
YUK                               MLR    MLR
      comp=Z,6µm,15.0s
YUK                               MLR    MLR
      comp=E,7µm,14.0s
YSS   Yuzh-Sakhalins  18.83  30  eP      P       05 46 30.5  -2.7
YSS                              eS      Sn      05 49 52.7   -12
YSS                               pmax   pmax
      comp=Z,1µm,5.0s
YSS                               pmax   pmax
      comp=Z,50nm,1.3s
YSS                               MLR    MLR
      comp=Z,9µm,12.0s
YSS   Yuzh-Sakhalins  18.83  30   P      P       05 46 32.1  -1.1
YSS   Yuzh-Sakhalins  18.83  30   P      Pn      05 46 35.3  +1.6
HIA   Hailar          19.41 341   P      P       05 46 39.8  +0.1
HIA                               pmax   pmax
      comp=Z,85nm,1.2s
HIA   Hailar          19.41 341   P      P       05 46 39.8  +0.1
GRNR  Gornyy          20.24  13⇑iP       P       05 46 48.7   0.0
GRNR                              pmax   pmax
      comp=Z,9.0nm,1.0s
GRNR                              MLR    MLR
      comp=E,7µm,12.0s
GRNR                              MLR    MLR
      comp=N,4µm,14.0s
GRNR                              MLR    MLR
      comp=Z,6µm,13.0s
UGL   Uglegorsk       20.28  25   P      P       05 46 48.5  -0.6
UGL                               MLR    MLR
      comp=Z,9µm,13.0s
UGL                               MLR    MLR
      comp=N,4µm,15.0s
UGL                               MLR    MLR
      comp=E,4µm,11.0s
GYA   Guiyang         20.37 262⇓iP       P       05 46 49.3  -1.1
GYA                               pP     sP      05 47 01.6  +7.4
GYA                               S      S       05 50 36.1  -2.7
GYA                               SS     SnSn    05 51 07.7   +11
GYA                               pmax   pmax
      comp=E,37nm,1.0s
GYA                               LR     LR
      comp=E,8µm,10.6s
GYA                               LR     LR
      comp=E,6µm,14.1s
GYA                               LR     LR
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	comp=E,8µm,13.7s						
QIZ	**Qiongzhong**	**21.35**	**240**	⇑*i*P	**P**	**05 47 04.6**	**+3.7**
QIZ				S	**S**	**05 50 59.4**	**+1.4**
QIZ				pmax	pmax		
	comp=E,51nm,1.2s						
QIZ				LR	LR		
	comp=E,7µm,15.9s						
QIZ				LR	LR		
	comp=E,7µm,12.0s						
QIZ				LR	LR		
	comp=E,8µm,14.3s						
QIZ	**Qiongzhong**	**21.35**	**240**	P	**P**	**05 47 05.6**	**+4.7**
LZH	**Lanzhou**	**21.71**	**290**	*e*P	**P**	**05 47 05.5**	**+0.7**
LZH				pP	sP	05 47 16.1	+7.5
LZH				sP	pP	05 47 20.6	+13
LZH				PP	**PnPn**	**05 47 30.5**	**+4.9**
LZH				*e*S	S	05 50 50.4	-15
LZH				SS	**SnSn**	**05 51 37.3**	**+8.0**
LZH				pmax	pmax		
	comp=E,15nm,1.0s						
LZH				pmax	pmax		
	comp=E,510nm,4.3s						
LZH				LR	LR		
	comp=E,32µm,13.8s						
LZH				LR	LR		
	comp=E,6µm,13.3s						
LZH				LR	LR		
	comp=E,15µm,14.4s						
CD2	**Chengdu**	**21.86**	**276**	P	**P**	**05 47 06.8**	**+0.4**
CD2				pP	sP	05 47 17.5	+7.3
CD2				S	**S**	**05 51 04.1**	**-4.0**
CD2				pmax	pmax		
	comp=E,120nm,0.9s						
CD2				pmax	pmax		
	comp=E,320nm,2.7s						
ZEA	**Zeya**	**22.55**	**357**	*e*P	**P**	**05 47 14.7**	**+1.2**
ZEA				*e*S	**S**	**05 51 13.3**	**-7.3**
ZEA				pmax	pmax		
	comp=N,300nm,4.3s						
ZEA				pmax	pmax		
	comp=Z,400nm,6.2s						
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
ZEA				smax	smax		
	comp=E,1µm,12.5s						
ZEA				smax	smax		
	comp=N,2µm,10.4s						
ZEA				MLR	MLR		
	comp=E,3µm,9.0s						
ZEA				MLR	MLR		
	comp=N,3µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,10.0s						
GUMO	**Guam**	**22.65**	**137**	LR	LR	05 55 10.8	
	comp=Z,2µm,18.7s,baz=332,slow=34						
NKL	**Nikolayevsk**	**23.43**	**17**	*e*P	**P**	**05 47 19.1**	**-3.4**
NKL				*e*S	**S**	**05 51 33.0**	**-2.6**
NKL				pmax	pmax		
	comp=E,2.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,35nm,1.2s						
NKL				smax	smax		
	comp=E,3.0nm,2.6s						
NKL				smax	smax		
	comp=N,1.0nm,1.9s						
NKL				MLR	MLR		
	comp=E,16nm,13.0s						
NKL				MLR	MLR		
	comp=N,1.0nm,12.0s						
NKL				MLR	MLR		
	comp=Z,4µm,12.0s						
ULN	**Ulaanbaatar**	**23.75**	**321**	*ce*P	**P**	**05 47 23.9**	**-2.1**
ULN				pmax	pmax		
	comp=Z,38nm,1.3s						
ULN	**Ulaanbaatar**	**23.75**	**321**	IAMs_20	IAMs_20	05 57 12.4	
	comp=Z,7µm,20.0s						
CIT	**Chita**	**23.78**	**335**	*e*P	**P**	**05 47 27.0**	**+0.9**
CIT				*e*		05 48 00.9	
CIT				*e*		05 48 08.5	
CIT				pmax	pmax		
	comp=Z,312nm,1.9s						
SONM	**Songino Array**	**24.09**	**320**	P	**P**	**05 47 29.3**	**+0.1**
	comp=Z,19nm,1.0s,baz=138,slow=9.3,SNR=21						
SONM				LR	LR	05 57 34.8	
	comp=Z,6µm,20.4s,baz=129,slow=38						
	comp=Z,19nm,1.0s						
SONM	**Songino Array**	**24.09**	**320**	P	**P**	**05 47 29.4**	**+0.2**
KMI	**Kunming**	**24.15**	**262**	⇓P	**P**	**05 47 31.2**	**+1.2**
KMI				pP	sP	05 47 41.3	+7.3
KMI				PP	**PnPn**	**05 48 05.8**	**+6.6**
KMI				S	**S**	**05 51 41.8**	**-6.4**
KMI				sS	sS	05 52 04.5	+12
KMI				SS	**SnSn**	**05 52 38.9**	**+9.5**
KMI				pmax	pmax		
	comp=Z,100nm,1.5s						
KMI				pmax	pmax		
	comp=Z,620nm,3.7s						
KMI				LR	LR		
	comp=Z,6µm,15.0s						
KMI				LR	LR		
	comp=Z,9µm,12.8s						
KMI				LR	LR		
	comp=Z,10µm,13.3s						
DAV	**Davao City (W)**	**24.28**	**189**	LR	LR	05 59 08.8	
	comp=Z,3µm,18.2s,baz=358,slow=42						
PZH	**PanZhiHua**	**24.55**	**266**	P	**P**	**05 47 31.0**	**-2.6**
PZH				pP	**sP**	**05 47 44.3**	**+6.7**
PZH				PP	**PnPn**	**05 48 11.8**	**+7.3**
PZH				S	**S**	**05 51 46.0**	**-8.5**
PZH				SS	**SnSn**	**05 52 43.1**	**+4.0**
PZH				pmax	pmax		
	comp=Z,110nm,1.6s						
PZH				pmax	pmax		
	comp=Z,710nm,3.6s						
PZH				LR	LR		
	comp=Z,8µm,13.3s						
PZH				LR	LR		
	comp=Z,6µm,12.0s						
PZH				LR	LR		
	comp=Z,5µm,12.7s						
GTA	**Gaotai**	**25.32**	**297**	⇑P	**P**	**05 47 39.1**	**-1.3**
GTA				pP	sP	05 47 51.0	+6.6
GTA				sP	pP	05 47 58.4	+15
GTA				S	**S**	**05 52 03.6**	**-3.0**
GTA				sS	sS	05 52 20.3	+9.0
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				pmax	pmax		
	comp=Z,340nm,6.8s						
GTA				LR	LR		
	comp=Z,14µm,13.5s						
GTA				LR	LR		
	comp=Z,8µm,14.3s						
GTA				LR	LR		
	comp=Z,9µm,11.6s						
ZAK	**Zakamensk**	**27.23**	**322**	*e*P	**P**	**05 47 56.6**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,48nm,1.3s						
MYLDM	**Lahad Datu**	**27.82**	**204**	P	**P**	**05 48 03.2**	**+0.2**
MYLDM				IAmb	IAmb	05 48 46.7	
	comp=Z,60nm,1.1s						
SKR	**Severo-Kuril's**	**27.83**	**38**	*e*P	P	05 48 11.4	+8.6
SKR				*e*SS	SS	05 54 05.0	-38
SKR				pmax	pmax		
	comp=Z,100nm,2.5s						
SKR				MLR	MLR		
	comp=Z,1µm,15.0s						
SKR				MLR	MLR		
	comp=Z,2µm,14.0s						
IRK	**Irkutsk**	**27.86**	**326**	*e*P	**P**	**05 48 03.1**	**0.0**
IRK				pmax	pmax		
	comp=Z,80nm,2.5s						
BOD	**Bodaibo**	**28.60**	**343**	*e*P	**P**	**05 48 11.6**	**+2.0**
BOD				pmax	pmax		
	comp=Z,15nm,2.0s						
GOMU	**GeErMu**	**29.01**	**289**	P	**P**	**05 48 13.4**	**-0.5**
GOMU				S	S	05 52 54.6	-11
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,130nm,5.3s						
GOMU				LR	LR		
	comp=Z,8µm,18.2s						
GOMU				LR	LR		
	comp=Z,3µm,18.6s						
GOMU				LR	LR		
	comp=Z,3µm,18.1s						
MOY	**Mondy**	**29.15**	**323**	*e*P	**P**	**05 48 17.2**	**+2.5**
MOY				pmax	pmax		
	comp=Z,37nm,2.8s						
PETK	**Petropavlovsk-**	**30.02**	**35**	P	**P**	**05 48 23.0**	**+0.7**
	comp=Z,15nm,1.1s,baz=126,slow=2.6,SNR=7.9						
PETK				LR	LR	06 00 37.2	
	comp=Z,1µm,18.3s,baz=208,slow=37						
	comp=Z,15nm,1.1s						
PETK	**Petropavlovsk-**	**30.02**	**35**	P	**P**	**05 48 22.9**	**+0.6**
CHTO	**Chiang Mai**	**30.04**	**253**	P	**P**	**05 48 22.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,31nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,4µm,19.0s						
CHTO	**Chiang Mai**	**30.04**	**253**	P	**P**	**05 48 22.5**	**-0.3**
CHTO				IAmb	IAmb	05 48 28.1	
	comp=Z,31nm,0.8s						
CHTO	**Chiang Mai**	**30.04**	**253**	IAMs_20	IAMs_20	06 01 28.7	
	comp=Z,4µm,19.0s						
CHTO	**Chiang Mai**	**30.04**	**253**	P	**P**	**05 48 22.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.22**	**252**	P	**P**	**05 48 24.6**	**+0.3**
	comp=Z,3.8nm,0.5s,baz=44,slow=8.1,SNR=17						
CMAR				LR	LR	06 01 54.8	
	comp=Z,5µm,18.7s,baz=60,slow=39						
	comp=Z,3.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.22**	**252**	P	**P**	**05 48 24.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**30.22**	**252**	P	**P**	**05 48 24.2**	**-0.2**
PET	**Petropavlovsk**	**30.45**	**36**	*e*P	**P**	**05 48 27.3**	**+1.3**
PET				*e*S	**S**	**05 53 23.9**	**-2.9**
PET				pmax	pmax		
	comp=Z,114nm,1.4s						
PET				MLR	MLR		
	comp=Z,4µm,16.0s						
PET				MLR	MLR		
	comp=Z,4µm,16.0s						
PET	**Petropavlovsk**	**30.45**	**36**	P	**P**	**05 48 26.8**	**+0.8**
YAK	**Yakutsk**	**30.82**	**0**	*e*P	P	05 48 34.9	+5.7
YAK				*e**PP	sP	05 48 44.4	+11
YAK				*e*		05 49 41.1	
YAK				*e*		05 51 33.6	
YAK				*e*S	**S**	**05 53 37.4**	**+4.9**
YAK				*e*SS	**SS**	**05 55 40.0**	**-3.9**
YAK				*e*		05 59 09.8	
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=Z,163nm,3.5s						
YAK				pmax	pmax		
	comp=E,113nm,3.5s						
YAK				pmax	pmax		
	comp=N,87nm,4.0s						
YAK				smax	smax		
	comp=N,136nm,3.3s						
YAK				smax	smax		
	comp=E,110nm,4.1s						
YAK				MLR	MLR		
	comp=Z,6µm,15.0s						
YAK				MLR	MLR		
	comp=E,4µm,16.0s						
YAK				MLR	MLR		
	comp=N,4µm,14.0s						
TOLI2	**Tolitoli**	**31.01**	**197**	P	**P**	**05 48 29.4**	**-2.0**
TOLI2				IAmb	IAmb	05 48 34.9	
	comp=Z,49nm,1.4s						
TOLI2	**Tolitoli**	**31.01**	**197**	P	**P**	**05 48 34.3**	**+3.0**
MRSI	**Marisa**	**31.36**	**194**	P	**P**	**05 48 32.2**	**-2.2**
	comp=Z,30nm,1.9s						
MA2	**Magadan**	**31.82**	**21**	P	**P**	**05 48 38.6**	**+0.6**
	comp=Z,21nm,0.9s,baz=200,slow=8.3,SNR=20						
MA2				LR	LR	06 00 41.2	
	comp=Z,292nm,19.1s,baz=223,slow=35						
	comp=Z,21nm,0.9s						
MA2	**Magadan**	**31.82**	**21**	*de*P	**P**	**05 48 38.2**	**+0.2**
MA2				pmax	pmax		
	comp=Z,36nm,1.0s						
MA2	**Magadan**	**31.82**	**21**	P	**P**	**05 48 38.5**	**+0.6**
MA2				IAmb	IAmb	05 48 39.6	
	comp=Z,38nm,1.1s						
MA2	**Magadan**	**31.82**	**21**	P	**P**	**05 48 38.5**	**+0.5**
	comp=Z,37nm,1.4s						
SIJI	**Sorong**	**31.97**	**176**	LR	LR	05 59 59.1	
	comp=Z,3µm,20.0s,baz=9.0,slow=34						
MPSI	**Mapaga**	**31.98**	**198**	P	**P**	**05 48 38.2**	**-1.6**
	comp=Z,650nmcomp=Z,15nm,1.5s						
LSA	**Lhasa**	**32.81**	**277**	IAMs_20	IAMs_20	06 03 15.7	
	comp=Z,3µm,19.0s						
SBUM	**Sibu**	**32.85**	**213**	P	**P**	**05 48 45.8**	**-1.6**
SBUM				IAmb	IAmb	05 48 51.5	
	comp=Z,61nm,1.7s						
SANI	**Sanana**	**33.23**	**186**	P	**P**	**05 48 47.3**	**-3.5**
	comp=Z,577nmcomp=Z,31nm,0.8s						
KSM	**Kuching**	**34.61**	**215**	P	**P**	**05 49 01.3**	**-1.5**
KSM				IAmb	IAmb	05 49 07.2	
	comp=Z,30nm,1.0s						
KSM	**Kuching**	**34.61**	**215**	P	**P**	**05 49 02.2**	**-0.6**
WMQ	**Urumqi**	**34.95**	**303**	*e*P	**P**	**05 49 05.9**	**+0.3**
WMQ				pP	sP	05 49 15.5	+5.9
WMQ				sP	pP	05 49 22.2	+14
WMQ				S	**S**	**05 54 35.4**	**-1.9**
WMQ				pmax	pmax		
	comp=Z,76nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.8s						
WMQ				LR	LR		
	comp=Z,7µm,16.3s						
WMQ				LR	LR		
	comp=Z,6µm,14.5s						
WMQ				LR	LR		
	comp=Z,4µm,17.1s						
SEY	**Seymchan**	**35.00**	**18**	P	**P**	**05 49 06.5**	**+0.8**
	comp=Z,13nm,1.0s,baz=212,slow=6.9,SNR=31						
SEY				LR	LR	06 02 49.7	
	comp=Z,3µm,19.1s,baz=216,slow=35						
	comp=Z,13nm,1.0s						
TTSI	**Tana Toraja**	**35.25**	**197**	P	**P**	**05 49 07.3**	**-1.0**
	comp=Z,15nm,0.7s						
TAPN	**Taplejung**	**36.32**	**275**	*e*P	**P**	**05 49 19.2**	**+1.4**
	comp=Z,181nm,1.5s						
ODAN	**Odare**	**36.73**	**274**	*e*P	**P**	**05 49 21.5**	**+0.2**
	comp=Z,102nm,1.0s						
KAPI	**Kappang**	**37.16**	**196**	P	**P**	**05 49 22.3**	**-2.4**
	comp=Z,2.5nm,0.4s,baz=350,slow=12,SNR=9.7						
KAPI				LR	LR	06 04 24.3	
	comp=Z,907nm,20.7s,baz=3.5,slow=36						
	comp=Z,2.5nm,0.4s						
KAPI	**Kappang**	**37.16**	**196**	*i* P	**P**	**05 49 21.7**	**-3.0**
KAPI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KAPI	**Kappang**	**37.16**	**196**	P	**P**	**05 49 25.0**	**+0.3**
KAPI	**Kappang**	**37.16**	**196**	P	**P**	**05 49 26.7**	**+2.0**
KULM	**Kulim**	**37.25**	**232**	IAMs_20	IAMs_20	06 04 18.3	
	comp=Z,2µm,21.0s						
ZSN	**Zaisan**	**37.43**	**309**	*e*P	**P**	**05 49 26.0**	**-0.7**
ZSN				*e*S	**S**	**05 55 13.2**	**-1.9**
ZSN	**Zaisan**	**37.43**	**309**	*e*P	**P**	**05 49 26.1**	**-0.7**
	baz=309						
ZSN				*e*S	**S**	**05 55 13.2**	**-1.9**
	baz=309						
IPM	**Ipoh**	**37.60**	**231**	P	**P**	**05 49 28.8**	**+0.3**
IPM				IAmb	IAmb	05 49 32.3	
	comp=Z,46nm,1.2s						
IPM				IAMs_20	IAMs_20	06 05 15.5	
	comp=Z,2µm,20.0s						
IPM	**Ipoh**	**37.60**	**231**	P	**P**	**05 49 29.2**	**+0.7**
GUN	**Gumba**	**37.73**	**276**	*e*P	**P**	**05 49 31.4**	**+1.5**
	comp=Z,452nm,1.4s						
PKI	**Pulchoki**	**38.22**	**276**	*e*P	**P**	**05 49 34.9**	**+0.9**
	comp=Z,302nm,1.4s						
PKIN	**Phulchoki**	**38.23**	**276**	*e*P	**P**	**05 49 35.1**	**+1.1**
	comp=Z,297nm,1.6s						
KKN	**Kakani**	**38.27**	**276**	*e*P	**P**	**05 49 35.6**	**+1.3**
DMN	**Daman**	**38.47**	**276**	*e*P	**P**	**05 49 37.5**	**+1.5**
	comp=Z,412nm,1.7s						
GKN	**Gorkha**	**38.76**	**277**	*e*P	**P**	**05 49 39.7**	**+1.4**
ZAA0	**Zalesovo Array**	**38.98**	**319**	P	**P**	**05 49 39.4**	**-0.2**
ZALV	**Zalesovo Beam**	**38.98**	**319**	P	**P**	**05 49 38.8**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=103,slow=6.4,SNR=6.8						
ZALV				PcP	**PcP**	**05 51 48.0**	**-1.9**
	comp=Z,4.7nm,1.0s,baz=27,slow=0.6,SNR=3.0						
ZALV				LR	LR	06 06 58.8	
	comp=Z,3µm,18.3s,baz=111,slow=38						
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**38.98**	**319**	P	**P**	**05 49 39.3**	**-0.4**
MK31	**Makanchi Array**	**39.09**	**307**	*i* P	**P**	**05 49 40.4**	**-0.3**
MK31	**Makanchi Array**	**39.09**	**307**	P	**P**	**05 49 39.5**	**-1.2**
MKAR	**Makanchi Array**	**39.09**	**307**	P	**P**	**05 49 39.4**	**-1.3**
	comp=Z,5.2nm,0.9s,baz=92,slow=8.9,SNR=25						
MKAR				PcP	**PcP**	**05 51 48.9**	**-1.5**
	comp=Z,5.6nm,1.1s,baz=133,slow=2.5,SNR=2.9						
	comp=Z,5.2nm,0.9s						
MKAR	**Makanchi Array**	**39.09**	**307**	*i* P	**P**	**05 49 39.7**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**39.09**	**307**	P	**P**	**05 49 39.5**	**-1.2**
MAKZ	**Makanchi**	**39.30**	**307**	P	**P**	**05 49 41.8**	**-0.7**
MAKZ	**Makanchi**	**39.30**	**307**	P	**P**	**05 49 41.3**	**-1.2**
MAKZ				IAMs_20	IAMs_20	06 07 44.1	
	comp=Z,3µm,18.0s						
DANN	**Dangsing**	**39.41**	**278**	*e*P	**P**	**05 49 45.2**	**+1.3**
TPI	**Tanjungpandan**	**39.57**	**215**	P	**P**	**05 49 43.6**	**-1.4**
	comp=Z,450nmcomp=Z,21nm,1.6s						
KOLN	**Koldanda**	**39.70**	**277**	*e*P	**P**	**05 49 47.7**	**+1.4**
PPBI	**Pangkal Pinang**	**39.84**	**218**	P	**P**	**05 49 46.0**	**-1.2**
PYUN	**Piuthan**	**40.13**	**278**	*e*P	**P**	**05 49 51.0**	**+1.1**
	comp=Z,240nm,1.5s						
PSI	**Prapat**	**40.24**	**231**	P	**P**	**05 49 51.4**	**+0.7**
	comp=Z,8.3nm,0.9s,baz=357,slow=3.8,SNR=6.5						
PSI				LR	LR	06 06 15.3	
	comp=Z,2µm,21.0s,baz=46,slow=36						
	comp=Z,8.3nm,0.9s						
RPSI	**Rantau Prapat**	**40.32**	**231**	P	**P**	**05 49 51.4**	**+0.2**
EDFI	**Ende, Flores**	**40.41**	**192**	P	**P**	**05 49 48.4**	**-3.6**
	comp=Z,11nm,0.7s						
TIXI	**Tiksi**	**40.48**	**360**	P	**P**	**05 49 50.8**	**-1.1**
	comp=Z,12nm,1.1s,baz=96,slow=21,SNR=23						
TIXI				LR	LR	06 05 50.8	
	comp=Z,2µm,20.5s,baz=180,slow=35						
	comp=Z,12nm,1.1s						
TIXI	**Tiksi**	**40.48**	**360**	*ce*P	**P**	**05 49 51.5**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,26nm,1.3s						
TIXI	**Tiksi**	**40.48**	**360**	P	**P**	**05 49 51.3**	**-0.6**
TIXI				IAmb	IAmb	05 50 11.6	
	comp=Z,60nm,1.4s						
TIXI				IAMs_20	IAMs_20	06 09 45.9	
	comp=Z,3µm,18.0s						
BKNI	**Bangkinang**	**40.75**	**226**	P	**P**	**05 49 54.7**	**-0.1**
	comp=Z,41nm,0.4s						
KMMI	**Kalianget**	**40.78**	**204**	P	**P**	**05 49 53.2**	**-1.8**
	comp=Z,2µmcomp=Z,55nm,1.2s						
PDGK	**Podgornoye**	**40.87**	**302**	P	**P**	**05 49 54.4**	**-1.3**
SEM	**Semipalatinsk**	**40.91**	**312**	*e*P	**P**	**05 49 53.6**	**-2.4**
SEM				*e*S	**S**	**05 56 03.8**	**-3.9**
SEM				MLR	MLR		
	comp=Z,2µm,14.0s						
SEM	**Semipalatinsk**	**40.91**	**312**	*e*P	**P**	**05 49 53.6**	**-2.4**
	baz=312						
SEM				*e*S	**S**	**05 56 03.8**	**-3.9**
	baz=312						
SEM				LR	LR	06 06 11.5	
	comp=Z,2µm,14.1s,baz=312						
UZB	**Uzynbulak**	**41.21**	**301**	*e*P	**P**	**05 49 56.6**	**-1.9**
UZB				pmax	pmax		
	comp=Z,18nm,1.3s						
UZB	**Uzynbulak**	**41.21**	**301**	*e*P	**P**	**05 49 56.7**	**-1.9**
	comp=Z,18nm,1.3s,baz=301						
PLAI	**Plampang**	**41.32**	**197**	P	**P**	**05 49 56.6**	**-2.8**
	comp=Z,2µmcomp=Z,76nm,1.6s						
PLAI	**Plampang**	**41.32**	**197**	P	**P**	**05 49 59.3**	**-0.1**
SRBI	**Singaraja**	**41.34**	**201**	P	**P**	**05 49 57.1**	**-2.5**
	comp=Z,29nm,1.3s						
KRVT	**Keravat (AS076**	**41.46**	**144**	LR	LR	06 06 58.1	
	comp=Z,664nm,18.4s,baz=121,slow=36						
KPKS	**Kokpek**	**41.46**	**302**	*e*P	**P**	**05 49 58.7**	**-1.8**
KPKS				*e*S	**S**	**05 56 13.3**	**-2.5**
KPKS				pmax	pmax		
	comp=Z,17nm,1.4s						
KPKS	**Kokpek**	**41.46**	**302**	*e*P	**P**	**05 49 58.7**	**-1.8**
	comp=Z,17nm,1.4s,baz=302						
KPKS				*e*S	**S**	**05 56 13.3**	**-2.5**
	baz=302						
BATI	**Baumata**	**41.54**	**188**	LR	LR	06 06 12.9	
	comp=Z,550nm,21.6s,baz=49,slow=35						
BATI	**Baumata**	**41.54**	**188**	P	**P**	**05 49 59.1**	**-2.2**
	comp=Z,53nm,0.9s						
ZHN	**Zhinishke**	**41.64**	**301**	*e*P	**P**	**05 50 00.6**	**-1.4**
ZHN	**Zhinishke**	**41.64**	**301**	*e*P	**P**	**05 50 00.7**	**-1.4**
	baz=301						
SATY	**Saty**	**41.66**	**301**	*e*P	**P**	**05 50 00.5**	**-1.7**
SATY				pmax	pmax		
	comp=Z,23nm,1.5s						
SATY	**Saty**	**41.66**	**301**	*e*P	**P**	**05 50 00.5**	**-1.7**
	comp=Z,23nm,1.5s,baz=301						
TDK	**Taldyqorghan**	**41.67**	**304**	*e*P	**P**	**05 50 00.9**	**-1.2**
TDK				pmax	pmax		
	comp=Z,15nm,0.6s						
TDK				MLR	MLR		
	comp=Z,2µm,15.0s						
TDK	**Taldyqorghan**	**41.67**	**304**	*e*P	**P**	**05 50 00.9**	**-1.2**
	comp=Z,15nm,0.6s,baz=304						
TDK				LR	LR	06 06 33.6	
	comp=Z,2µm,14.8s,baz=304						
PPI	**Padang Panjang**	**41.76**	**227**	P	**P**	**05 50 05.2**	**+2.1**
KURK	**Kurchatov**	**41.98**	**313**	*ce*P	**P**	**05 50 04.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,29nm,1.3s						
KURK	**Kurchatov**	**41.98**	**313**	P	**P**	**05 50 03.9**	**-0.7**
KURBB	**Kurchatov Arra**	**42.03**	**313**	P	**P**	**05 50 03.6**	**-1.3**
	comp=Z,7.7nm,0.9s,baz=99,slow=9.1,SNR=24						
	comp=Z,7.7nm,0.9s						
JAGI	**Jajag, Banyuwa**	**42.05**	**203**	P	**P**	**05 50 03.0**	**-2.4**
	comp=Z,34nm,1.1s						
GMJI	**Gumukmas**	**42.10**	**204**	P	**P**	**05 50 04.9**	**-0.9**
	comp=Z,16nm,1.4s						
TARG	**Taragay, Kyrgy**	**42.15**	**299**	P	**P**	**05 50 05.5**	**-1.1**
GSI	**Gunungsitoli**	**42.25**	**231**	P	**P**	**05 50 07.6**	**+0.5**
GSI				IAmb	IAmb	05 50 10.6	
	comp=Z,85nm,1.5s						
GSI				IAMs_20	IAMs_20	06 08 15.6	
	comp=Z,3µm,19.0s						
PWJI	**Pagerwojo**	**42.46**	**206**	P	**P**	**05 50 08.3**	**-0.4**
	comp=Z,35nm,1.4s						
KDJ	**Kajisay**	**42.60**	**300**	P	**P**	**05 50 10.6**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,69nm,2.0s						
KDJ	**Kajisay**	**42.60**	**300**	P	**P**	**05 50 10.6**	**+0.7**
MDOK	**Medeo**	**42.66**	**301**	P	**P**	**05 50 09.7**	**-0.7**
MDOK	**Medeo**	**42.66**	**301**	*e*P	**P**	**05 50 09.1**	**-1.3**
	baz=301						
MDOK				*e*S	**S**	**05 56 31.5**	**-2.1**
	baz=301						
MDOK				LR	LR	06 07 22.0	
	comp=Z,2µm,16.4s,baz=301						
BILL	**Bilibino**	**42.66**	**20**	*ce*P	**P**	**05 50 10.5**	**+0.6**
BILL				*i*		05 51 44.7	
BILL				*e*S	**S**	**05 56 38.8**	**+6.0**
BILL				pmax	pmax		
	comp=Z,36nm,1.7s						
BILL				MLR	MLR		
	comp=Z,4µm,16.0s						
BILL	**Bilibino**	**42.66**	**20**	P	**P**	**05 50 09.7**	**-0.2**
BILL				IAMs_20	IAMs_20	06 09 01.8	
	comp=Z,2µm,18.0s						
CHKK	**Chushkaly**	**42.69**	**302**	*e*P	**P**	**05 50 08.6**	**-1.8**
CHKK	**Chushkaly**	**42.69**	**302**	*e*P	**P**	**05 50 08.7**	**-1.8**
	baz=302						
TNSS	**Tian-Shan**	**42.73**	**301**	*e*P	**P**	**05 50 08.9**	**-2.4**
TNSS	**Tian-Shan**	**42.73**	**301**	*e*P	**P**	**05 50 09.0**	**-2.4**
	baz=301						
AAA	**Alma-Ata**	**42.75**	**301**	*e*P	**P**	**05 50 09.9**	**-1.1**
AAA	**Alma-Ata**	**42.75**	**301**	*e*P	**P**	**05 50 10.0**	**-1.1**
	baz=301						
KLI	**Kotabumi**	**42.80**	**217**	P	**P**	**05 50 11.7**	**+0.2**
	comp=Z,8µmcomp=Z,85nm,0.5s						
KPJI	**Karang Pucung**	**43.00**	**210**	P	**P**	**05 50 12.3**	**-0.9**
	comp=Z,60nm,1.9s						
LEM	**Lembang**	**43.14**	**212**	P	**P**	**05 50 14.4**	**-0.1**
	comp=Z,36nm,0.6s,baz=81,slow=8.8,SNR=18						
	comp=Z,36nm,0.6s						
LEM	**Lembang**	**43.14**	**212**	P	**P**	**05 50 13.9**	**-0.6**
	comp=Z,1µmcomp=Z,64nm,1.9s						
CBJI	**Citeko**	**43.14**	**214**	P	**P**	**05 50 15.0**	**+0.7**
KUU	**Kurty**	**43.15**	**302**	*e*P	**P**	**05 50 12.1**	**-2.1**
KUU				pmax	pmax		
	comp=Z,30nm,1.0s						

KUU				MLR	MLR		
	comp=Z,1µm,14.0s						
KUU	Kurty	43.15	302	*e*P	P	05 50 12.1	-2.1
	comp=Z,30nm,1.0s,baz=302						
KUU				LR	LR	06 08 33.9	
	comp=Z,1µm,14.1s,baz=302						
DBJI	Dramaga	43.31	214	P	P	05 50 15.5	-0.2
	comp=Z,84nm,1.3s						
KASI	Kota Agung	43.54	217	P	P	05 50 17.1	-0.4
	comp=Z,43nm,1.4s						
KSH	Kashi	43.72	296	P	P	05 50 23.4	+4.5
KSH				pmax	pmax		
	comp=Z,18nm,1.7s						
KSH				LR	LR		
	comp=Z,3µm,15.7s						
KSH				LR	LR		
	comp=Z,4µm,17.3s						
KSH				LR	LR		
	comp=Z,5µm,13.8s						
TKM2	Tokmak 2	43.73	301	P	P	05 50 19.7	+0.6
MTN	Manton Dam	43.85	177	P	P	05 50 18.8	-1.1
PMG	Port Moresby	43.88	154	LR	LR	06 05 48.1	
	comp=Z,2µm,21.6s,baz=332,slow=32						
SGDS	Sogindy	44.41	302	*e*P	P	05 50 22.2	-2.1
SGDS	Sogindy	44.41	302	*e*P	P	05 50 22.3	-2.1
	baz=302						
AAK	Ala-Archa	44.56	301	P	P	05 50 25.3	-0.3
	comp=Z,3.3nm,0.6s,baz=94,slow=5.5,SNR=14						
	comp=Z,3.3nm,0.6s						
AAK	Ala-Archa	44.56	301	P	P	05 50 24.9	-0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK				MLR	MLR		
	comp=Z,3µm,22.0s						
AAK	Ala-Archa	44.56	301	P	P	05 50 24.9	-0.8
AAK	Ala-Archa	44.56	301	IAMs_20	IAMs_20	06 10 36.5	
	comp=Z,3µm,22.0s						
AAK	Ala-Archa	44.56	301	P	P	05 50 27.6	+1.9
BTLS	Baital	44.76	304	*e*P	P	05 50 25.0	-2.1
BTLS				*e*S	S	05 57 01.2	-2.8
BTLS	Baital	44.76	304	*e*P	P	05 50 25.0	-2.1
	baz=304						
BTLS				*e*S	S	05 57 01.3	-2.8
	baz=304						
NRIK	Noril'sk	44.84	340	P	P	05 50 26.9	-0.5
	comp=Z,8.3nm,0.9s,baz=104,slow=7.7,SNR=11						
NRIK				LR	LR	06 12 30.6	
	comp=Z,1µm,19.1s,baz=114,slow=40						
	comp=Z,8.3nm,0.9s						
NRIK	Noril'sk	44.84	340	*ce*P	P	05 50 26.2	-1.1
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	44.84	340	P	P	05 50 26.3	-1.0
NRIK				IAmb	IAmb	05 50 50.2	
	comp=Z,36nm,1.3s						
AML	Almayashu	45.19	300	*i* P	P	05 50 30.8	-0.1
	SNR=5.3						
OTUK	Ortayu	45.90	309	P	P	05 50 33.2	-2.9
KNRA	Kununurra	46.63	181	P	P	05 50 40.8	-1.2
DZA	Taraz	46.86	301	*e*P	P	05 50 43.4	-0.3
DZA	Taraz	46.86	301	*e*P	P	05 50 43.4	-0.3
	baz=301						
NIL	Nilore	46.87	289	P	P	05 50 42.3	-1.6
NIL				pmax	pmax		
	comp=Z,15nm,0.9s						
NIL				MLR	MLR		
	comp=Z,3µm,18.0s						
NIL	Nilore	46.87	289	P	P	05 50 42.3	-1.6
BRVK	Borovoye	47.35	315	*ce*P	P	05 50 46.5	-0.9
BRVK				pmax	pmax		
	comp=Z,58nm,1.3s						
BRVK	Borovoye	47.35	315	P	P	05 50 45.9	-1.5
KK31	Karatay Array	47.44	302	*i* P	P	05 50 46.9	-1.3
KK31	Karatay Array	47.44	302	P	P	05 50 46.7	-1.5
KK31				IAmb	IAmb	05 50 52.1	
	comp=Z,27nm,1.1s						
KKAR	Karatay Array	47.44	302	P	P	05 50 47.0	-1.2
KKAR				pmax	pmax		
	comp=Z,27nm,1.1s						
KKAR	Karatay Array	47.44	302	P	P	05 50 46.9	-1.3
KKAR	Karatay Array	47.44	302	P	P	05 50 47.0	-1.2
KKAR				IAmb	IAmb	05 50 52.1	
	comp=Z,27nm,1.1s						
BTK	Batken	47.59	298	P	P	05 50 48.6	-0.9
BTK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTK	Batken	47.59	298	P	P	05 50 48.6	-0.9
HYBB	Hyderabad (bro	47.85	266	*e*P	P	05 50 51.6	-0.1
IUG	Iuzhnay	47.89	301	*e*P	P	05 50 51.2	-0.7
IUG	Iuzhnay	47.89	301	*e*P	P	05 50 51.2	-0.7
	baz=300						
GAR	Garm	48.14	296	P	P	05 50 52.7	-1.1
GAR				IAmb	IAmb	05 50 57.3	
	comp=Z,23nm,0.9s						
CHGR	Chuyangaron	49.09	296	P	P	05 50 59.4	-1.7
KBL	Kabul	50.05	291	P	P	05 51 07.9	-0.8
KBL				pmax	pmax		
	comp=Z,38nm,1.4s						
KBL	Kabul	50.05	291	P	P	05 51 07.9	-0.8
KBL				IAmb	IAmb	05 51 13.1	
	comp=Z,38nm,1.4s						
TNA	Tin City	50.80	29	P	P	05 51 14.1	+0.6
TNA				IAmb	IAmb	05 51 15.6	
	comp=Z,48nm,1.2s						
TNA	Tin City	50.80	29	P	P	05 51 14.3	+0.8
	baz=260						
WRAB	Tennant Creek	51.09	174	*i* P	P	05 51 12.1	-4.2
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	51.09	174	P	P	05 51 14.6	-1.7
WRAB				IAmb	IAmb	05 52 04.9	
	comp=Z,34nm,1.4s						
WRAB	Tennant Creek	51.09	174	P	P	05 51 16.4	+0.1
WRA	Warramunga Arr	51.10	174	P	P	05 51 14.0	-2.3
	comp=Z,5.1nm,0.6s,baz=353,slow=8.1,SNR=24						
WRA				LR	LR	06 11 29.0	
	comp=Z,647nm,21.9s,baz=16,slow=34						
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	51.10	174	P	P	05 51 14.0	-2.3
PALK	Pallekele	51.17	253	P	P	05 51 16.1	-0.9
	comp=Z,14nm,0.9s,baz=121,slow=5.9,SNR=4.8						
PALK				LR	LR	06 14 02.0	
	comp=Z,1µm,20.4s,baz=152,slow=37						
	comp=Z,14nm,0.9s						
PALK	Pallekele	51.17	253	P	P	05 51 16.5	-0.6
PALK				pmax	pmax		
	comp=Z,38nm,1.3s						
PALK				MLR	MLR		
	comp=Z,1µm,20.0s						
PALK	Pallekele	51.17	253	P	P	05 51 16.4	-0.6
PALK				IAmb	IAmb	05 51 22.3	
	comp=Z,38nm,1.2s						
PALK	Pallekele	51.17	253	IAMs_20	IAMs_20	06 13 40.5	
	comp=Z,1µm,20.0s						
ANM	Nome	51.71	30	P	P	05 51 21.4	+0.9
ANM				pmax	pmax		
	comp=Z,36nm,1.1s						
ANM				MLR	MLR		
	comp=Z,1µm,18.0s						
ANM	Nome	51.71	30	P	P	05 51 21.4	+0.9
ANM				IAmb	IAmb	05 51 27.9	
	comp=Z,36nm,1.1s						
ANM				IAMs_20	IAMs_20	06 16 25.4	
	comp=Z,1µm,18.0s						
ANM	Nome	51.71	30	P	P	05 51 21.8	+1.3
	baz=263						
QIS	Mount Isa	52.43	168	P	P	05 51 28.1	+1.9
	comp=Z,11nm,1.2s						
MBWA	Marble Bar	52.88	191	P	P	05 51 32.3	+2.7
SVE	Sverdlovsk	52.97	320	*e*P	P	05 51 29.3	-0.6
SVE				*e*S	S	05 59 00.5	+1.4
SVE				pmax	pmax		
	comp=Z,62nm,1.6s						
SVE				MLR	MLR		
	comp=Z,6µm,15.0s						
PCHI	Peechi	53.03	259⇑	*e*P	P	05 51 32.9	+1.9
PCHI				*e*S	S	05 58 56.5	-4.6
RDOG	Red Dog Mine	53.16	26	P	P	05 51 29.6	-1.6
RDOG				IAMs_20	IAMs_20	06 14 17.4	
	comp=Z,2µm,21.0s						
PSA00	Pilbara Seismi	53.27	191	P	P	05 51 31.2	-1.2
PSA00	Pilbara Seismi	53.27	191	P	P	05 51 32.4	0.0
	comp=Z,48nm,1.9s						
CTA	Charters Tower	53.55	160	LR	LR	06 13 23.5	
	comp=Z,687nm,20.1s,baz=340,slow=35						
CTA	Charters Tower	53.55	160	P	P	05 51 36.5	+2.0
CTAO	Charters Tower	53.55	160	P	P	05 51 34.0	-0.6
CTAO				pmax	pmax		
	comp=Z,32nm,1.3s						
CTAO	Charters Tower	53.55	160	P	P	05 51 34.0	-0.6
CTAO				IAmb	IAmb	05 51 38.6	
	comp=Z,32nm,1.3s						
CTAO	Charters Tower	53.55	160	P	P	05 51 36.5	+2.0
AB31	Akbulak array	54.01	311	*i* P	P	05 51 44.2	+6.5
ABKAR	Akbulak array	54.01	311	P	P	05 51 36.5	-1.1
ABKAR	Akbulak array	54.01	311	P	P	05 51 36.1	-1.5
ABKAR				IAmb	IAmb	05 51 54.8	
	comp=Z,14nm,0.8s						
ARU	Arti	54.13	320	*d i*P	P	05 51 37.6	-0.8
ARU						05 52 40.7	
ARU						05 53 39.2	
ARU				PPP	PPP	05 54 45.9	
ARU				S	S	05 59 14.6	-0.3
ARU						06 01 24.6	
ARU				SS	SS	06 02 53.8	-2.3
ARU				pmax	pmax		
	comp=Z,23nm,1.0s						
ARU				MLR	MLR		
	comp=Z,4µm,16.0s						
ARU	Arti	54.13	320	P	P	05 51 37.3	-1.1
AS31	Alice Springs	54.75	175	P	P	05 51 41.5	-1.8
ASAR	Alice Springs	54.76	175	P	P	05 51 42.0	-1.3
	comp=Z,3.6nm,0.8s,baz=5.9,slow=13,SNR=48						
ASAR				LR	LR	06 14 25.4	
	comp=Z,393nm,21.3s,baz=14,slow=35						
	comp=Z,3.6nm,0.8s						
ASAR	Alice Springs	54.76	175	P	P	05 51 41.8	-1.5
AKTO	Aktyubinsk	55.08	312	P	P	05 51 40.0	-5.4
HRA	Herat	55.51	292	P	P	05 51 47.7	-1.4
A21K	Barrow	55.67	22	P	P	05 51 49.1	-0.2
A21K				IAMs_20	IAMs_20	06 17 14.8	
	comp=Z,2µm,19.0s						
A21K	Barrow	55.67	22	P	P	05 51 49.8	+0.4
	baz=266						
TTA	Tatalina	55.80	32	P	P	05 51 50.1	-0.4
TTA				pmax	pmax		
	comp=Z,21nm,1.2s						
TTA	Tatalina	55.80	32	P	P	05 51 50.1	-0.4
TTA	Tatalina	55.80	32	P	P	05 51 51.0	+0.4
	baz=272,SNR=11						
WRKA	Warakurna	55.95	181	P	P	05 51 52.7	+0.8
N18K	Kilae Creek	55.99	35	P	P	05 51 51.8	-0.1
N18K				IAMs_20	IAMs_20	06 18 18.5	
	comp=Z,1µm,19.0s						
N18K	Kilae Creek	55.99	35	P	P	05 51 51.0	-0.8
	baz=274						
SVW2	Sparrevohn	56.11	34	P	P	05 51 52.9	+0.2
SVW2				IAmb	IAmb	05 51 58.7	
	comp=Z,33nm,1.4s						
L19K	White Mountain	56.38	33	P	P	05 51 54.7	+0.1
L19K				IAmb	IAmb	05 52 01.7	
	comp=Z,34nm,1.1s						
L19K				IAMs_20	IAMs_20	06 18 58.8	
	comp=Z,1µm,19.0s						
L19K	White Mountain	56.38	33	P	P	05 51 55.3	+0.8
	baz=274,SNR=14						
O18K	Koktuh Hills	56.39	36	IAMs_20	IAMs_20	06 17 25.3	
	comp=Z,1µm,18.0s						
O18K	Koktuh Hills	56.39	36	P	P	05 51 55.4	+0.7
	baz=275						
P18K	Big Mountain,	56.42	36	P	P	05 51 55.1	+0.1
	baz=276						
J20K	Nowinta River	56.57	31	P	P	05 51 56.1	+0.2
J20K				IAmb	IAmb	05 52 03.1	
	comp=Z,35nm,1.2s						
J20K	Nowinta River	56.57	31	P	P	05 51 56.4	+0.5
	baz=273,SNR=15						
M19K	Big River Lodg	56.62	33	P	P	05 51 57.0	+0.7
M19K				IAmb	IAmb	05 52 16.3	
	comp=Z,41nm,1.6s						
M19K				IAMs_20	IAMs_20	06 17 40.1	
	comp=Z,1µm,18.0s						
M19K	Big River Lodg	56.62	33	P	P	05 51 56.6	+0.3
	baz=275						
IMAR	Indian Mountai	56.65	29	P	P	05 51 56.1	-0.4
K20K	Telida	56.66	32	P	P	05 51 56.7	+0.1
K20K				IAmb	IAmb	05 52 03.8	
	comp=Z,29nm,1.1s						
K20K	Telida	56.66	32	P	P	05 51 57.3	+0.7
	baz=274,SNR=22						
N19K	Bonanza Creek	56.66	35	P	P	05 51 56.9	+0.1
	baz=275						
O19K	Port Alsworth	56.80	35	P	P	05 51 58.1	+0.6
	baz=276						
L20K	Farewell, AK	56.81	33	P	P	05 51 58.3	+0.6
	baz=275,SNR=13						
H21K	Melozitna Rive	57.06	29	P	P	05 51 59.4	0.0
H21K				IAmb	IAmb	05 52 01.2	
	comp=Z,29nm,1.3s						
H21K	Melozitna Rive	57.06	29	P	P	05 51 59.7	+0.4
	baz=274,SNR=15						
M20K	Styx River	57.21	33	P	P	05 52 01.1	+0.5
M20K				IAmb	IAmb	05 52 03.0	
	comp=Z,65nm,1.9s						
M20K				IAMs_20	IAMs_20	06 19 34.8	
	comp=Z,1µm,18.0s						
M20K	Styx River	57.21	33	P	P	05 52 01.8	+1.2
	baz=276						
CHUM	Lake Minchumin	57.40	31	P	P	05 52 02.7	+1.0
	baz=275,SNR=13						
I21K	Tanana	57.43	29	P	P	05 52 02.4	+0.4
I21K				IAmb	IAmb	05 52 09.3	
	comp=Z,25nm,1.0s						
I21K				IAMs_20	IAMs_20	06 19 18.6	
	comp=Z,1µm,18.0s						
I21K	Tanana	57.43	29	P	P	05 52 02.7	+0.7
	baz=274,SNR=29						
CAST	Castle Rocks	57.54	32	P	P	05 52 03.0	+0.1
CAST				IAmb	IAmb	05 52 09.8	
	comp=Z,27nm,1.1s						
CAST	Castle Rocks	57.54	32	P	P	05 52 03.4	+0.6
	baz=276,SNR=19						
PPLA	Purkeypile	57.55	32	P	P	05 52 03.7	+0.7
	baz=276,SNR=9.4						
GEYT	Alibeck	57.70	298	P	P	05 52 07.0	+2.6
	comp=Z,2.6nm,0.5s,baz=80,slow=18,SNR=3.7						
GEYT	Alibeck	57.70	298	P	P	05 52 04.8	+0.5
SPCR	Spurr Chakacha	57.73	34	P	P	05 52 04.4	+0.2
	baz=277,SNR=10						
BPAW	Bear Paw Mtn.	57.96	31	IAMs_20	IAMs_20	06 19 58.5	
	comp=Z,1µm,19.0s						
BPAW	Bear Paw Mtn.	57.96	31	P	P	05 52 06.1	+0.3
	baz=276,SNR=11						
COLD	Coldfoot	57.99	27	P	P	05 52 05.6	-0.2
COLD				IAmb	IAmb	05 52 21.8	
	comp=Z,36nm,1.8s						
COLD	Coldfoot	57.99	27	P	P	05 52 06.2	+0.3
	baz=275						
KDAK	Kodiak Island	58.00	38	P	P	05 52 05.8	-0.2
	comp=Z,32nm,1.2s,baz=330,slow=3.6,SNR=6.9						
	comp=Z,32nm,1.2s						
KDAK	Kodiak Island	58.00	38	IAmb	IAmb	05 52 12.8	
	comp=Z,46nm,1.2s						
KDAK	Kodiak Island	58.00	38	P	P	05 52 05.6	-0.4
	baz=279						
KTH	Kantishna Hill	58.05	31	P	P	05 52 06.5	+0.1
KTH				IAmb	IAmb	05 52 08.1	
	comp=Z,56nm,1.6s						
TOLK	Toolik Lake Re	58.11	25	P	P	05 52 06.3	-0.5
TOLK	Toolik Lake Re	58.11	25	P	P	05 52 06.6	-0.1
	baz=274,SNR=6.2						
H23K	Yukon River	58.39	29	P	P	05 52 08.8	0.0
H23K				IAmb	IAmb	05 52 16.2	
	comp=Z,32nm,0.9s						
H23K	Yukon River	58.39	29	P	P	05 52 09.8	+1.0
	baz=276,SNR=31						
MEEK	Meekatharra	58.43	191	P	P	05 52 11.6	+2.2
CUT	Chulitna	58.49	33	P	P	05 52 09.7	+0.4
	baz=278						
I23K	Minto, Yukon-K	58.54	29	IAMs_20	IAMs_20	06 19 43.8	
	comp=Z,1µm,18.0s						
I23K	Minto, Yukon-K	58.54	29	P	P	05 52 10.4	+0.7
	baz=277						
BWN	Browne	58.62	30	P	P	05 52 10.7	+0.4
BWN				IAMs_20	IAMs_20	06 20 09.7	
	comp=Z,2µm,18.0s						
M22K	Willow	58.65	33	P	P	05 52 10.1	-0.4
M22K				IAMs_20	IAMs_20	06 18 53.8	
	comp=Z,1µm,18.0s						
M22K	Willow	58.65	33	P	P	05 52 10.6	+0.1
	baz=278						
NEA2	Nenana	58.73	30	P	P	05 52 10.4	-0.7
NEA2				IAMs_20	IAMs_20	06 19 40.9	
	comp=Z,1µm,18.0s						
NEA2	Nenana	58.73	30	P	P	05 52 11.4	+0.3
	baz=277,SNR=28						
KIRV	Kirov	58.78	323	P	P	05 52 10.9	-0.5
	comp=Z,13nm,0.6s,baz=76,slow=15,SNR=6.0						
	comp=Z,13nm,0.6s						
KIRV	Kirov	58.78	323	*ce*P	P	05 52 11.3	-0.2
SANVU	Saraoutou	58.98	136	P	P	05 52 15.8	+2.4
RND	Reindeer	58.99	31	P	P	05 52 11.8	-1.2
RND				pmax	pmax		
	comp=Z,30nm,1.0s						
RND	Reindeer	58.99	31	P	P	05 52 11.8	-1.2
RND				IAMs_20	IAMs_20	06 16 53.7	
	comp=Z,1µm,22.0s						
OOD	Oodnadatta	59.00	173	P	P	05 52 12.7	-0.6
MDM	Murphy Dome	59.04	29	P	P	05 52 13.1	-0.1
H24K	Noodor Dome	59.06	28	P	P	05 52 12.9	-0.6
H24K				IAmb	IAmb	05 52 24.0	
	comp=Z,36nm,1.4s						
H24K	Noodor Dome	59.06	28	P	P	05 52 14.0	+0.6
	baz=278,SNR=15						
PMR	Palmer	59.14	33	P	P	05 52 13.1	-0.8
PMR				pmax	pmax		
	comp=Z,29nm,1.1s						
PMR	Palmer	59.14	33	P	P	05 52 13.1	-0.8
PMR				IAmb	IAmb	05 52 19.7	
	comp=Z,29nm,1.1s						
PMR	Palmer	59.14	33	P	P	05 52 13.3	-0.6
	baz=279,SNR=7.9						
WRH	Wood River Hil	59.17	30	IAMs_20	IAMs_20	06 19 45.4	
	comp=Z,950nm,19.0s						
TCOL	CIGO, UAF Yank	59.21	30	P	P	05 52 13.7	-0.6
TCOL				IAmb	IAmb	05 52 24.2	
	comp=Z,27nm,1.2s						
TCOL				IAMs_20	IAMs_20	06 20 25.4	
	comp=Z,1µm,20.0s						
TCOL	CIGO, UAF Yank	59.21	30	P	P	05 52 15.2	+0.9
	baz=278						
COLA	College	59.21	30	*i* P	P	05 52 13.5	-0.9
COLA				pmax	pmax		
	comp=Z,25nm,1.6s						
COLA	College	59.21	30	P	P	05 52 14.6	+0.2
COLA				IAmb	IAmb	05 52 24.2	
	comp=Z,27nm,1.2s						
COLA	College	59.21	30	IAMs_20	IAMs_20	06 20 25.4	
	comp=Z,990nm,20.0s						
WAT1	Susitna Watana	59.21	32	P	P	05 52 14.0	-0.5
	baz=279						
QLP	Quilpie	59.23	164	P	P	05 52 15.3	+0.4
SEW	Seward	59.23	35	P	P	05 52 14.3	-0.3
SEW	Seward	59.23	35	P	P	05 52 13.5	-1.0
	baz=280						
POKR	Poker Plat Res	59.35	29	P	P	05 52 16.1	+0.7
	baz=279,SNR=12						
SML	Sawmill	59.48	33	P	P	05 52 16.1	-0.3
	baz=280						
KNK	Knik Glacier	59.48	34	IAMs_20	IAMs_20	06 20 49.0	
	comp=Z,1µm,18.0s						
KNK	Knik Glacier	59.48	34	P	P	05 52 15.9	-0.5
	baz=280						
WAT6	Susitna Watana	59.62	32	P	P	05 52 16.9	-0.6
	baz=280						
ILAR	Eielson Array	59.63	30	P	P	05 52 16.5	-0.8
	comp=Z,2.1nm,0.7s,baz=280,slow=5.8,SNR=26						
	comp=Z,2.1nm,0.7s						
INKA	Innaminka	59.64	168	P	P	05 52 21.7	+4.0
	comp=Z,20nm,0.5s						
HDA	Harding Lake	59.67	30	P	P	05 52 16.6	-0.9
HDA				IAmb	IAmb	05 52 23.0	
	comp=Z,32nm,1.0s						
HDA				IAMs_20	IAMs_20	06 20 17.6	
	comp=Z,1µm,20.0s						
HDA	Harding Lake	59.67	30	P	P	05 52 16.8	-0.8
	baz=279,SNR=20						
DHY	Denali Highway	59.70	32	IAMs_20	IAMs_20	06 17 17.6	
	comp=Z,1µm,21.0s						
DHY	Denali Highway	59.70	32	P	P	05 52 18.2	+0.2
	baz=280						
SCM	Sheep Creek Mo	59.94	33	P	P	05 52 19.2	-0.4
	baz=281						
PRGR	Permogore	60.11	327	*e*P	P	05 52 19.6	-1.0
BMAR	Burnt Mountain	60.12	26	P	P	05 52 21.5	+0.8
K24K	Donnelly Dome	60.28	31	P	P	05 52 21.0	-0.8
	baz=281						
J25K	Salcha River,	60.30	30	IAMs_20	IAMs_20	06 20 48.4	
	comp=Z,1µm,18.0s						
J25K	Salcha River,	60.30	30	P	P	05 52 20.5	-1.5
	baz=281						
RMQ	Roma	60.32	160	P	P	05 52 25.8	+3.3
	comp=Z,9.9nm,1.4s						
M24K	Tolsona, Glenn	60.42	33	P	P	05 52 22.0	-0.9
	baz=281						
PAX	Paxson	60.58	32	P	P	05 52 26.1	+2.1
	baz=282						
KLU	Klutina	60.67	33	IAMs_20	IAMs_20	06 18 08.2	
	comp=Z,894nm,19.0s						
KLU	Klutina	60.67	33	P	P	05 52 23.7	-0.9
	baz=282						
RIDG	Independent Ri	60.70	31	IAMs_20	IAMs_20	06 21 40.9	
	comp=Z,1µm,18.0s						
RIDG	Independent Ri	60.70	31	P	P	05 52 22.7	-2.0
	baz=282						
HARP	HAARP	60.83	32	P	P	05 52 25.6	0.0
	baz=282						
SCRK	Sand Creek	61.02	30	P	P	05 52 25.9	-1.1
SCRK				IAmb	IAmb	05 52 32.3	
	comp=Z,25nm,1.1s						
SCRK				IAMs_20	IAMs_20	06 21 50.4	
	comp=Z,1µm,18.0s						
SCRK	Sand Creek	61.02	30	P	P	05 52 26.2	-0.8
	baz=282,SNR=18						
BELG	Belogornoye	61.07	316	P	P	05 52 26.3	-1.0
	comp=Z,21nm,0.8s,baz=270,slow=7.1,SNR=2.4						
	comp=Z,21nm,0.8s						
J26L	Joseph Creek	61.09	30	P	P	05 52 26.3	-1.1
	baz=282,SNR=12						
N25K	Chitina, Valde	61.26	33	P	P	05 52 28.6	0.0
	baz=283						
BMRM	Bremner River	61.40	34	IAMs_20	IAMs_20	06 19 52.7	
	comp=Z,927nm,19.0s						
BMRM	Bremner River	61.40	34	P	P	05 52 29.0	-0.6
	baz=283						
KOUNC	Koumac, New Ca	61.47	142	P	P	05 52 30.4	+0.1
KOUNC				IAmb	IAmb	05 52 35.5	
	comp=Z,28nm,1.2s						
RAGM	Ragged Mountai	61.50	34	IAMs_20	IAMs_20	06 22 43.3	
	comp=Z,1µm,18.0s						
L26K	Log Cabin Wild	61.51	31	P	P	05 52 29.6	-0.6
L26K				IAmb	IAmb	05 52 36.4	
	comp=Z,21nm,1.1s						
L26K				IAMs_20	IAMs_20	06 18 24.4	
	comp=Z,1µm,20.0s						
L26K	Log Cabin Wild	61.51	31	P	P	05 52 30.1	-0.1
	baz=283,SNR=15						
M26K	Nabesna, AK	61.81	32	P	P	05 52 32.4	+0.1
	baz=284,SNR=18						
K27K	Chicken	61.83	30	IAMs_20	IAMs_20	06 22 05.8	
	comp=Z,1µm,20.0s						
K27K	Chicken	61.83	30	P	P	05 52 32.5	+0.2
	baz=284						
LCRK	Leigh Creek	61.91	171	P	P	05 52 36.7	+3.5
EGAK	Eagle	62.04	29	IAMs_20	IAMs_20	06 21 32.2	
	comp=Z,908nm,19.0s						
EGAK	Eagle	62.04	29	P	P	05 52 33.5	-0.2
	baz=284						
L27K	Beaver Creek,	62.17	31	P	P	05 52 34.6	0.0
L27K				IAmb	IAmb	05 52 41.6	
	comp=Z,22nm,1.0s						
L27K				IAMs_20	IAMs_20	06 22 37.9	
	comp=Z,1µm,18.0s						
L27K	Beaver Creek,	62.17	31	P	P	05 52 35.4	+0.7
	baz=284,SNR=20						
M27K	Edge Creek, AK	62.33	32	P	P	05 52 35.6	-0.3
M27K				IAmb	IAmb	05 52 42.8	
	comp=Z,24nm,1.1s						
M27K				IAMs_20	IAMs_20	06 21 53.1	
	comp=Z,936nm,19.0s						
M27K	Edge Creek, AK	62.33	32	P	P	05 52 35.5	-0.4
	baz=285						
WSAR	Wadi Sarin	62.40	282	LR	LR	06 22 52.4	
	comp=Z,667nm,18.9s,baz=92,slow=39						
BLDU	Ballidu	62.65	192	P	P	05 52 40.7	+2.6
BVCY	Beaver Creek	62.77	32	P	P	05 52 39.3	+0.6
	baz=286						
DAWY	Dawson	62.96	30	P	P	05 52 40.0	+0.1
	baz=286						

I29M	**Ogilvie Camp,**	**63.05**	**28**	P	**P**	**05 52 40.1**	**-0.4**
I29M				IAmb	IAmb	05 52 49.6	
	comp=Z,18nm,1.2s						
I29M				IAMs_20	IAMs_20	06 19 60.0	
	comp=Z,862nm,18.0s						
I29M	**Ogilvie Camp,**	**63.05**	**28**	P	**P**	**05 52 40.9**	**+0.4**
	baz=286,SNR=9.2						
YUK3	**Moose Creek**	**63.13**	**32**	P	**P**	**05 52 41.1**	**-0.2**
	baz=286						
KLMR	**Klimovskoe**	**63.16**	**327**	*e*P	**P**	**05 52 38.8**	**-2.4**
KLMR				*e*S	**S**	**06 01 06.1**	**-6.2**
KLMR				*e*SS	**SS**	**06 05 12.1**	**-5.5**
KLMR				pmax	pmax		
	comp=Z,22nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,2µm,15.0s						
KLMR	**Klimovskoe**	**63.16**	**327**	*e*P	**P**	**05 52 38.8**	**-2.4**
KLMR				AMP		05 52 50.6	
	comp=Z,22nm,1.2s						
KLMR				*e*S	**S**	**06 01 06.1**	**-6.2**
KLMR				*e*S	**S**	**06 01 06.1**	**-6.2**
KLMR				*e*SS	**SS**	**06 05 12.1**	**-5.5**
KLMR				*e*SS	**SS**	**06 05 12.1**	**-5.5**
KLMR				LQ	LQ	06 15 18.0	
KLMR				LQ	LQ	06 15 18.0	
KLMR				LR	LR	06 18 56.7	
KLMR				AMP		06 23 03.4	
	comp=Z,2µm,15.4s						
BANOM	**Banah**	**63.26**	**285**	P	**P**	**05 52 43.8**	**+1.3**
SHME	**Shamm**	**63.34**	**286**	*i* P	**P**	**05 52 43.3**	**+0.3**
	SNR=5.5						
UOSS	**Minazif**	**63.73**	**284**	IAMs_20	IAMs_20	06 21 31.0	
	comp=Z,1µm,20.0s						
SOHO	**SOHO**	**63.78**	**283**	*i* P	**P**	**05 52 48.2**	**+2.2**
	SNR=6.2						
STKA	**Stephens Creek**	**63.83**	**168**	P	**P**	**05 52 45.2**	**-0.7**
	comp=Z,4.3nm,0.7s,baz=320,slow=5.0,SNR=5.3						
STKA				LR	LR	06 20 26.4	
	comp=Z,399nm,21.9s,baz=349,slow=36						
	comp=Z,4.3nm,0.7s						
STKA	**Stephens Creek**	**63.83**	**168**	P	**P**	**05 52 49.3**	**+3.4**
HATD	**Hatta, Dubai**	**63.84**	**284**	*i* P	**P**	**05 52 48.1**	**+1.7**
	SNR=5.3						
DZM	**Mont Dzumac**	**63.85**	**141**	*e*LR	LR	06 12 01.8	
	comp=Z,1µm,27.2s						
DZM	**Mont Dzumac**	**63.85**	**141**	LR	LR	06 17 27.6	
	comp=Z,279nm,21.3s,baz=346,slow=33						
MAK	**Makhachkala**	**63.89**	**306**	*e*P	**P**	**05 52 45.4**	**-0.9**
MAK				*e*S	**S**	**06 01 19.4**	**-2.5**
MAK				pmax	pmax		
	comp=Z,111nm,0.9s						
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
ASHO	**Ashiyiah**	**63.96**	**284**	*i* P	**P**	**05 52 48.8**	**+1.6**
	SNR=6.2						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**05 52 46.3**	**-0.1**
	baz=289						
YUK4	**Talbot Arm**	**64.08**	**32**	P	**P**	**05 52 48.3**	**+0.7**
	baz=288						
SPITS	**Spitsbergen Ar**	**64.16**	**348**	P	**P**	**05 52 47.6**	**0.0**
	comp=Z,11nm,0.9s,baz=77,slow=9.0,SNR=1.7						
SPITS				LR	LR	06 23 06.5	
	comp=Z,1µm,18.8s,baz=262,slow=38						
	comp=Z,11nm,0.9s						
CMSA	**Cobar Meteorol**	**64.33**	**164**	P	**P**	**05 52 52.4**	**+3.2**
M30M	**Minto, Yukon**	**64.53**	**31**	IAMs_20	IAMs_20	06 21 46.1	
	comp=Z,988nm,18.0s						
M30M	**Minto, Yukon**	**64.53**	**31**	P	**P**	**05 52 51.0**	**+0.7**
	baz=289,SNR=6.7						
ASUD	**Al Ashush, Dub**	**64.58**	**284**	P	**P**	**05 52 54.8**	**+3.6**
NAPP	**Napperby**	**64.60**	**172**	P	**P**	**05 52 51.2**	**+0.3**
	comp=Z,28nm,0.7s						
N30M	**Aishikik Lake**	**64.76**	**32**	P	**P**	**05 52 52.6**	**+0.7**
	baz=289						
HYT	**Haines Junctio**	**64.78**	**33**	P	**P**	**05 52 52.5**	**+0.5**
HYT				IAmb	IAmb	05 52 59.0	
	comp=Z,23nm,1.2s						
HYT	**Haines Junctio**	**64.78**	**33**	P	**P**	**05 52 52.6**	**+0.5**
	baz=289						
ARMA	**Armidale**	**64.87**	**159**	P	**P**	**05 52 55.6**	**+2.7**
VRH	**Novokhopyorsk**	**64.93**	**316**	*e*P	**P**	**05 52 49.9**	**-3.1**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRH				MLR	MLR		
	comp=Z,2µm,16.0s						
GROC	**Groznyy**	**64.99**	**307**	*e*P	**P**	**05 52 54.0**	**+0.5**
GROC				*e*		05 53 26.9	
GROC				*e*S	**S**	**06 01 30.2**	**-5.3**
GROC				*i*		06 02 39.8	
GROC				pmax	pmax		
	comp=Z,51nm,1.0s						
A36M	**Sachs Harbour**	**65.22**	**19**	P	**P**	**05 52 54.3**	**-0.2**
A36M	**Sachs Harbour**	**65.22**	**19**	P	**P**	**05 52 54.6**	**0.0**
	baz=295						
N31M	**Braeburn, Yuko**	**65.34**	**32**	IAMs_20	IAMs_20	06 24 31.7	
	comp=Z,865nm,18.0s						
N31M	**Braeburn, Yuko**	**65.34**	**32**	P	**P**	**05 52 56.2**	**+0.6**
	baz=290						
M31M	**Drury Creek, Y**	**65.71**	**31**	IAMs_20	IAMs_20	06 25 18.3	
	comp=Z,933nm,18.0s						
M31M	**Drury Creek, Y**	**65.71**	**31**	P	**P**	**05 52 57.9**	**0.0**
	baz=291						
MOS	**Moscow**	**65.71**	**322**	*e*P	**P**	**05 52 56.8**	**-1.2**
MOS				*e*		05 53 28.8	
MOS				*e*		05 55 24.5	
MOS				MLR	MLR		
	comp=Z,3µm,18.0s						
ARCES	**ARCESS Array B**	**65.73**	**338**	P	**P**	**05 52 56.8**	**-1.2**
	comp=Z,11nm,1.1s,baz=58,slow=8.6,SNR=9.4						
ARCES				LR	LR	06 25 44.9	
	comp=Z,2µm,18.4s,baz=51,slow=40						
	comp=Z,11nm,1.1s						
WHY	**Whitehorse**	**66.04**	**32**	P	**P**	**05 52 59.8**	**-0.5**
WHY	**Whitehorse**	**66.04**	**32**	P	**P**	**05 53 00.5**	**+0.3**
	baz=291						
NOR	**Nord**	**66.06**	**355**	*i* P	**P**	**05 52 58.1**	**-1.8**
NOR				IAmb	IAmb	05 53 17.8	
	comp=Z,1.6nm,1.0s						
LPSR	**Galich'ya Gora**	**66.08**	**318**	*e*P	**P**	**05 52 58.8**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2µm,16.0s						
GOF	**Gofitskoye**	**66.20**	**309**	⇑*e*P	**P**	**05 53 00.9**	**-0.4**
GOF				pmax	pmax		
	comp=Z,42nm,0.7s						
VORR	**Voronezh**	**66.25**	**317**	⇓*i*P	**P**	**05 53 01.0**	**-0.5**
VORR				pmax	pmax		
	comp=Z,44nm,1.7s						
VORR				MLR	MLR		
	comp=Z,3µm,18.0s						
ZEI	**Tsey**	**66.43**	**307**	*e*P	**P**	**05 53 01.0**	**-2.2**
ZEI				pmax	pmax		
	comp=Z,28nm,1.3s						
OBN	**Obninsk**	**66.50**	**321**	*ce*P	**P**	**05 53 02.5**	**-0.5**
OBN				*i* S	**S**	**06 01 57.3**	**+3.8**
OBN				pmax	pmax		
	comp=Z,58nm,2.5s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
C36M	**Paulatuk**	**66.72**	**22**	P	**P**	**05 53 03.4**	**-0.8**
C36M	**Paulatuk**	**66.72**	**22**	P	**P**	**05 53 03.7**	**-0.5**
	baz=297						
KBZ	**Khabaz**	**66.77**	**308**	P	**P**	**05 53 05.3**	**+0.3**
	comp=Z,23nm,1.0s,baz=83,slow=2.7,SNR=11						
	comp=Z,23nm,1.0s						
KBZ	**Khabaz**	**66.77**	**308**	*ce*P	**P**	**05 53 03.5**	**-1.5**
KBZ				pmax	pmax		
	comp=Z,31nm,1.0s						
GNI	**Garni**	**66.82**	**304**	LR	LR	06 23 33.8	
	comp=Z,1µm,21.4s,baz=75,slow=37						
GNI	**Garni**	**66.82**	**304**	IAMs_20	IAMs_20	06 23 11.5	
	comp=Z,1µm,22.0s						
KVAR	**Kislovodsk Arr**	**66.83**	**308**	LR	LR	06 24 03.3	
	comp=Z,1µm,19.1s,baz=5.5,slow=38						
KIV	**Kislovodsk**	**66.83**	**308**	*e*P	**P**	**05 53 04.8**	**-0.8**
KIV				*e*S	**S**	**06 01 55.9**	**-2.3**
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				pmax	pmax		
	comp=Z,12nm,3.4s						
KIV				MLR	MLR		
	comp=Z,1µm,17.0s						
KIV	**Kislovodsk**	**66.83**	**308**	P	**P**	**05 53 05.1**	**-0.5**
KIV				IAMs_20	IAMs_20	06 22 02.5	
	comp=Z,1µm,21.0s						
KIV	**Kislovodsk**	**66.83**	**308**	*i* P	**P**	**05 53 05.3**	**-0.3**
	SNR=13						
MMPY	**Sheldon Lake,**	**66.90**	**30**	P	**P**	**05 53 05.8**	**+0.2**
	baz=293						
JIS	**Juneau Island**	**67.17**	**35**	IAMs_20	IAMs_20	06 22 00.7	
	comp=Z,915nm,18.0s						
EUNU	**Eureka**	**67.23**	**6**	P	**P**	**05 53 07.2**	**-0.3**
MSVF	**Nonsavu**	**67.54**	**129**	LR	LR	06 21 10.9	
	comp=Z,276nm,18.2s,baz=324,slow=35						
TGTN	**Hyland Airport**	**68.64**	**30**	P	**P**	**05 53 17.2**	**+0.6**
	baz=296						
CAN	**Canberra**	**68.74**	**163**	P	**P**	**05 53 20.0**	**+2.6**
SOC	**Sochi**	**68.96**	**309**	*e*P	**P**	**05 53 17.4**	**-1.4**
SOC				*e*		05 55 47.8	
SOC				*e*PPP	PPP	05 57 28.5	
SOC				*e*S	**S**	**06 02 21.9**	**-1.6**
SOC				*e*SS	**SS**	**06 06 43.8**	**-4.6**
SOC				*e*SSS	SSS	06 09 50.3	
SOC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
FINES	**FINESS Array B**	**69.01**	**330**	P	**P**	**05 53 18.1**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=65,slow=5.9,SNR=11						
FINES				LR	LR	06 26 05.5	
	comp=Z,1µm,20.6s,baz=54,slow=38						
	comp=Z,2.6nm,0.6s						
FINES	**FINESS Array B**	**69.01**	**330**	P	**P**	**05 53 17.7**	**-1.1**
ANN	**Anapa**	**69.97**	**311**	*e*P	**P**	**05 53 25.2**	**+0.2**
ANN				*e*S	**S**	**06 02 36.8**	**+1.5**
ANN				pmax	pmax		
	comp=Z,64nm,1.4s						
ANN				MLR	MLR		
	comp=N,2µm,20.0s						
ANN				MLR	MLR		
	comp=Z,2µm,17.0s						
VSU	**Vasula**	**70.07**	**327**	*e*P	**P**	**05 53 26.4**	**+1.0**
MEF	**Metsahovi**	**70.31**	**329**	*e*P	**P**	**05 53 28.6**	**+1.8**
DAG	**Danmarks Havn**	**70.44**	**353**	*i* P	**P**	**05 53 26.0**	**-1.4**
DAG				IAmb	IAmb	05 53 46.8	
	comp=Z,3.2nm,1.0s						
RES	**Resolute Bay**	**70.49**	**11**	P	**P**	**05 53 27.4**	**-0.2**
	comp=Z,6.9nm,0.8s,baz=313,slow=7.2,SNR=25						
RES				LR	LR	06 27 24.0	
	comp=Z,435nm,18.5s,baz=316,slow=38						
	comp=Z,6.9nm,0.8s						
RES	**Resolute Bay**	**70.49**	**11**	P	**P**	**05 53 27.0**	**-0.7**
RES				IAmb	IAmb	05 53 27.9	
	comp=Z,23nm,1.2s						
MARD	**Mardin**	**70.79**	**302**	P	**P**	**05 53 29.3**	**-1.1**
RAF	**Rauma**	**71.04**	**331**	*e*P	**P**	**05 53 34.0**	**+2.8**
SOCY	**Socotra**	**71.29**	**273**	P	**P**	**05 53 32.7**	**-1.0**
SOCY				IAMs_20	IAMs_20	06 24 35.8	
	comp=Z,1µm,20.0s						
MTSE	**Matsula**	**71.30**	**328**	*e*P	**P**	**05 53 33.5**	**+0.7**
MNK	**Minsk**	**71.33**	**323**	*i* P	P	05 53 27.7	-5.4
MNK				*i*		05 56 05.9	
MNK				*i* PPP	PPP	05 57 49.5	
MNK				*i* S	**S**	**06 02 43.7**	**-7.0**
MNK				*i* SS	**SS**	**06 07 19.4**	**-4.8**
MNK				*i* SSS	SSS	06 10 39.1	
MNK				pmax	pmax		
	comp=Z,12nm,0.8s						
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,3µm,20.0s						
MNK				MLR	MLR		
	comp=N,729nm,16.0s						
MNK				MLR	MLR		
	comp=E,335nm,20.0s						
MNK	**Minsk**	**71.33**	**323**	*i* P	P	05 53 27.7	-5.4
	comp=E,4.0nm,0.8s						
MNK				*i* P	P	05 53 27.7	-5.4
	comp=N,21nm,0.8s						
MNK				*i* P	P	05 53 27.7	-5.4
	comp=Z,12nm,0.8s,baz=242						
MNK				*i* PP	**PP**	**05 56 06.0**	**-4.9**
MNK				*i* PPP	PPP	05 57 49.5	
MNK				*i* S	**S**	**06 02 43.8**	**-7.0**
MNK				*i* SS	**SS**	**06 07 19.5**	**-4.8**
MNK				*i* SSS	SSS	06 10 39.2	
MNK				*i* LQ	LQ	06 19 57.8	
MNK				*i* LR	LR	06 25 23.7	
MNK				*i* LRM	MLR	06 27 23.8	
	comp=E,335nm,20.4s						
MNK				*i* LRM	MLR	06 27 23.8	
	comp=N,729nm,16.3s						
MNK				*i* LRM	MLR	06 27 23.8	
	comp=Z,3µm,20.4s						
NACGM	**Naroch**	**71.70**	**324**	*e*P	**P**	**05 53 31.7**	**-3.7**
	baz=62						
AFI	**Afiamalu**	**72.18**	**119**	LR	LR	06 17 46.0	
	comp=Z,332nm,21.9s,baz=303,slow=30						
AKASG	**Malin Array Be**	**72.37**	**319**	P	**P**	**05 53 37.8**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=55,slow=6.7,SNR=4.9						
	comp=Z,1.0nm,0.5s						
SLIT	**Slitere, Latvi**	**72.54**	**327**	*e*P	**P**	**05 53 40.5**	**+0.1**
DIKM	**Dikmen**	**72.76**	**308**	⇓P	**P**	**05 53 41.9**	**-0.1**
PABE	**Paberze**	**72.82**	**325**	*e*P	**P**	**05 53 41.8**	**-0.2**
BBB	**Bella Bella**	**73.06**	**39**	LR	LR	06 24 47.6	
	comp=Z,346nm,21.0s,baz=314,slow=35						
RAYN	**Ar Rayn**	**73.15**	**288**	P	**P**	**05 53 43.0**	**-1.7**
RAYN				pmax	pmax		
	comp=Z,61nm,1.9s						
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
RAYN	**Ar Rayn**	**73.15**	**288**	P	**P**	**05 53 43.0**	**-1.7**
RAYN				IAmb	IAmb	05 53 49.6	
	comp=Z,61nm,1.9s						
RAYN	**Ar Rayn**	**73.15**	**288**	IAMs_20	IAMs_20	06 29 01.4	
	comp=Z,1µm,20.0s						
UPP	**Uppsala**	**73.40**	**331**	*e*P	**P**	**05 53 45.5**	**+0.1**
BNN	**Bunyan**	**73.62**	**306**	P	**P**	**05 53 46.2**	**-1.1**
YKA	**Yellowknife Ar**	**73.63**	**26**	P	**P**	**05 53 46.4**	**-0.3**
	comp=Z,10.0nm,1.0s,baz=302,slow=5.7,SNR=49						
YKA				LR	LR	06 29 21.5	
	comp=Z,547nm,18.3s,baz=302,slow=38						
	comp=Z,10.0nm,1.0s						
YKA	**Yellowknife Ar**	**73.63**	**26**	P	**P**	**05 53 46.2**	**-0.5**
YKA	**Yellowknife Ar**	**73.63**	**26**	P	**P**	**05 53 46.2**	**-0.5**
JMIC	**Jan Mayen**	**73.78**	**347**	LR	LR	06 29 42.4	
	comp=Z,420nm,18.7s,baz=62,slow=39						
SUW	**Suwalki**	**73.97**	**324**	*e*P	**P**	**05 53 49.1**	**+0.2**
SORM	**Soroca**	**74.09**	**317**	⇑P	**P**	**05 53 49.3**	**-0.4**
MILM	**Milestii Mici**	**74.41**	**316**	*e*P	**P**	**05 53 53.0**	**+1.4**
MILM				*e*S	**SKiKP**	**06 03 22.0**	**+3.7**
MILM				*e*L	L	06 21 41.0	
MILM				LQM		06 23 53.0	
	comp=Z,2µm,16.0s						
MILM				LRM	MLR	06 29 18.0	
	comp=Z,2µm,16.5s						
MILM	**Milestii Mici**	**74.41**	**316**	*e*P	**P**	**05 53 53.0**	**+1.4**
MILM				*e*S	**SKiKP**	**06 03 22.0**	**+3.7**
MILM				MLR	MLR		
	comp=Z,2µm,16.0s						
VIKU	**Vikbolandet**	**74.56**	**330**	*e*P	**P**	**05 53 51.4**	**-0.9**
BR131	**Keskin Array S**	**74.73**	**307**	P	**P**	**05 53 52.1**	**-1.8**
BR131				pmax	pmax		
	comp=Z,32nm,1.1s						
BR131	**Keskin Array S**	**74.73**	**307**	P	**P**	**05 53 52.0**	**-1.8**
BR131				IAmb	IAmb	05 53 57.9	
	comp=Z,32nm,1.1s						
BRTR	**Keskin Array B**	**74.73**	**307**	P	**P**	**05 53 52.0**	**-1.8**
	comp=Z,4.3nm,0.8s,baz=97,slow=5.0,SNR=20						
	comp=Z,4.3nm,0.8s						
BRTR	**Keskin Array B**	**74.73**	**307**	P	**P**	**05 53 52.3**	**-1.5**
BRTR	**Keskin Array B**	**74.73**	**307**	P	**P**	**05 53 52.3**	**-1.5**
HFS	**Hagfors**	**74.85**	**332**	LR	LR	06 28 13.7	
	comp=Z,2µm,18.3s,baz=42,slow=37						
NC303	**NORSAR Array S**	**75.09**	**334**	P	**P**	**05 53 53.7**	**-1.6**
NC303				IAmb	IAmb	05 54 20.9	
	comp=Z,64nm,1.9s						
ANTO	**Ankara**	**75.24**	**308**	IAMs_20	IAMs_20	06 27 46.1	
	comp=Z,701nm,20.0s						
NB2	**NORSAR Subarra**	**75.27**	**334**	P	**P**	**05 53 54.1**	**-2.2**
	comp=Z,20nm,1.4s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**75.27**	**334**	P	**P**	**05 53 54.6**	**-1.7**
	comp=Z,8.3nm,1.1s,baz=50,slow=5.7,SNR=12						
NOA				LR	LR	06 30 52.7	
	comp=Z,826nm,18.5s,baz=50,slow=39						
	comp=Z,8.3nm,1.1s						
TATR	**Tatarca**	**75.52**	**315**	⇑P	**P**	**05 53 57.5**	**-0.5**
TPGR	**Topolog**	**75.66**	**314**	⇑P	**P**	**05 53 57.8**	**-1.0**
CFR	**Carcaliu**	**75.67**	**314**	⇑P	**P**	**05 53 58.3**	**-0.6**
LVV	**L'vov**	**75.70**	**320**	*e*P	**P**	**05 54 02.2**	**+3.2**
LVV				*e*S	**S**	**06 03 40.0**	**-0.5**
LVV				pmax	pmax		
	comp=Z,40nm,1.4s						
LVV				MLR	MLR		
	comp=E,2µm,16.0s						
LVV				MLR	MLR		
	comp=Z,2µm,16.0s						
ASF	**Jabal al Asfar**	**75.94**	**299**	LR	LR	06 31 27.5	
	comp=Z,929nm,19.9s,baz=91,slow=39						
MDUB	**Mudurnu**	**76.03**	**309**	P	**P**	**05 53 59.3**	**-1.9**
HARR	**Harsova**	**76.05**	**314**	⇑P	**P**	**05 54 00.8**	**-0.2**
SUMG	**Summit**	**76.14**	**356**	IAMs_20	IAMs_20	06 26 18.3	
	comp=Z,1µm,19.0s						
SUMG	**Summit**	**76.14**	**356**	*i* P	**P**	**05 54 00.0**	**-1.6**
SUMG				IAmb	IAmb	05 54 24.6	
	comp=Z,5.6nm,0.8s						
BUR08	**Bucovina Ar. S**	**76.17**	**318**	P	**P**	**05 54 01.1**	**-0.7**
BUR01	**Bucovina Ar. S**	**76.18**	**317**	⇑P	**P**	**05 54 01.1**	**-0.8**
BURAR	**Bucovina Array**	**76.18**	**317**	P	**P**	**05 54 00.9**	**-1.0**
VRI	**Vrincioaia**	**76.19**	**315**	⇓P	**P**	**05 54 01.8**	**-0.1**
PLOR	**Plostina**	**76.24**	**315**	⇓P	**P**	**05 54 01.9**	**-0.3**
BISRR	**Bisoca**	**76.36**	**315**	⇑P	**P**	**05 54 02.2**	**-0.7**
KALB	**Balgarevo**	**76.39**	**313**	⇓P	**P**	**05 54 02.4**	**-0.6**
MMAI	**Mount Meron Ar**	**76.65**	**301**	LR	LR	06 32 15.1	
	comp=Z,504nm,18.3s,baz=237,slow=39						
BORA	**Eskisehir**	**76.81**	**309**	P	**P**	**05 54 03.9**	**-1.7**
BORA				IAmb	IAmb	05 54 09.3	
	comp=Z,40nm,1.4s						
MLR	**Muntele Rosu**	**76.85**	**315**	⇑P	**P**	**05 54 05.0**	**-0.8**
MLR	**Muntele Rosu**	**76.85**	**315**	LR	LR	06 31 04.3	
	comp=Z,2µm,18.3s,baz=50,slow=38						
CSS	**Mathiatis**	**77.22**	**303**	IAMs_20	IAMs_20	06 29 23.9	
	comp=Z,721nm,20.0s						
UZH	**Uzhgorod**	**77.30**	**319**	*e*P	**P**	**05 54 10.3**	**+2.2**
UZH				*e*		05 54 15.0	
UZH				*i*		05 54 20.2	
UZH				*e*S	**S**	**06 03 56.4**	**-1.6**
UZH				MLR	MLR		
	comp=N,500nm,16.0s						
UZH				MLR	MLR		
	comp=E,300nm,16.0s						
UZH				MLR	MLR		
	comp=Z,230nm,16.0s						
GHAJ	**Ghor Haditha**	**77.35**	**299**	IAMs_20	IAMs_20	06 32 45.6	
	comp=Z,838nm,18.0s						
VOIR		**77.41**	**316**	⇓P	**P**	**05 54 08.4**	**-0.5**
CRVS	**Cervenica-Dubn**	**77.61**	**320**	*e*P	P	05 54 18.1	+8.3
CRVS				pmax	pmax		
	comp=Z,24nm,1.4s						
CRVS	**Cervenica-Dubn**	**77.61**	**320**	*e*P	P	05 54 18.1	+8.3
ARR	**Arges**	**77.70**	**316**	⇑P	**P**	**05 54 09.9**	**-0.6**
ISP	**Isparta**	**77.79**	**307**	IAMs_20	IAMs_20	06 34 00.5	
	comp=Z,638nm,20.0s						
DRGR		**78.06**	**318**	⇓P	**P**	**05 54 12.1**	**-0.4**
RAO	**Raoul Island**	**78.35**	**135**	LR	LR	06 24 34.6	
	comp=Z,343nm,19.9s,baz=107,slow=32						
LANS	**Liptovska Anna**	**78.56**	**321**	*e*P	P	05 54 20.7	+5.6
LANS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LANS	**Liptovska Anna**	**78.56**	**321**	*e*P	P	05 54 20.7	+5.6
EIL	**Elat**	**78.60**	**298**	LR	LR	06 34 11.8	
	comp=Z,771nm,18.5s,baz=92,slow=40						
MSEY	**Mahe Island**	**78.68**	**257**	IAMs_20	IAMs_20	06 29 37.5	
	comp=Z,1µm,19.0s						
GZR	**Gura Zlata**	**78.79**	**316**	⇓P	**P**	**05 54 15.6**	**-0.9**
OKC	**Ostrava-Krasne**	**78.87**	**322**	AMS	AMS	06 32 00.0	
	comp=Z,2µm,15.5s						
PSZ	**Piszkesteto**	**79.03**	**320**	P	**P**	**05 54 19.7**	**+1.9**
ALN	**Alexandroupoli**	**79.19**	**311**	P	**P**	**05 54 17.4**	**-1.3**
ALN				pmax	pmax		
	comp=Z,15nm,1.2s						
ALN	**Alexandroupoli**	**79.19**	**311**	P	**P**	**05 54 17.4**	**-1.3**
MORC	**Moravsky Berou**	**79.23**	**322**	⇓P	**P**	**05 54 18.5**	**-0.3**
MORC	**Moravsky Berou**	**79.23**	**322**	P	**P**	**05 54 18.0**	**-0.8**
MORC				pmax	pmax		
	comp=Z,21nm,1.3s						
MORC	**Moravsky Berou**	**79.23**	**322**	P	**P**	**05 54 18.0**	**-0.8**
MORC	**Moravsky Berou**	**79.23**	**322**	*e*P	**P**	**05 54 17.9**	**-0.8**
VYHS	**Vyhne**	**79.28**	**321**	*e*P	**P**	**05 54 23.5**	**+4.4**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VYHS	**Vyhne**	**79.28**	**321**	*e*P	**P**	**05 54 23.5**	**+4.4**
HERR	**Herculane**	**79.28**	**316**	⇑P	**P**	**05 54 18.1**	**-1.0**
MAUC	**Maruska**	**79.32**	**322**	AMS	AMS	06 31 40.0	
	comp=Z,3µm,15.7s						
KRLC	**Kraliky**	**79.45**	**323**	*e*P	**P**	**05 54 22.7**	**+2.7**
KRLC				*e*		05 54 33.4	
KRLC				MLR	MLR		
	comp=Z,2µm,14.5s						
KRLC	**Kraliky**	**79.45**	**323**	*e*P	**P**	**05 54 22.7**	**+2.7**
KRLC				*e*pP	**PcP**	**05 54 33.4**	**+5.4**
KRLC				AMS	AMS	06 32 10.0	
	comp=Z,2µm,14.5s						
OSTC	**Ostas**	**79.45**	**323**	*e*P	**P**	**05 54 24.1**	**+4.1**
OSTC				AMS	AMS	06 32 30.0	
	comp=Z,3µm,16.3s						
CHVC	**Chvalec**	**79.52**	**323**	AMS	AMS	06 32 40.0	
	comp=Z,3µm,16.5s						
DPC	**Dobruska-Polom**	**79.52**	**323**	*e*P	**P**	**05 54 25.0**	**+4.6**
DPC				*e*		05 54 34.5	
DPC				MLR	MLR		
	comp=Z,2µm,16.2s						
DPC	**Dobruska-Polom**	**79.52**	**323**	*e*P	**P**	**05 54 25.0**	**+4.6**
DPC				*e*pP	**PcP**	**05 54 34.5**	**+6.1**
DPC				AMS	AMS	06 32 20.0	
	comp=Z,2µm,16.2s						
UPC	**Upice**	**79.58**	**323**	AMS	AMS	06 32 50.0	
	comp=Z,3µm,16.6s						
ICESG	**Greenland Ices**	**79.66**	**356**	*i* P	**P**	**05 54 17.2**	**-3.9**
ICESG				IAmb	IAmb	05 54 38.9	
	comp=Z,5.1nm,0.8s						
JAVC	**Velka Javorina**	**79.70**	**321**	*e*P	**P**	**05 54 22.2**	**+0.8**
MDVR	**Moldovita**	**79.76**	**316**	⇓P	**P**	**05 54 21.0**	**-0.8**
B08A	**Colville Reser**	**79.86**	**39**	P	**P**	**05 54 21.6**	**-0.6**
ILULI	**Ilulissat**	**79.86**	**0**	IAMs_20	IAMs_20	06 30 24.7	
	comp=Z,960nm,20.0s						
VRAC	**Vranov**	**80.00**	**322**	⇑P	**P**	**05 54 22.4**	**-0.6**
VRAC	**Vranov**	**80.00**	**322**	LR	LR	06 33 08.8	
	comp=Z,2µm,18.5s,baz=68,slow=38						
VRAC	**Vranov**	**80.00**	**322**	*e*P	**P**	**05 54 22.5**	**-0.5**
SMOL	**Smolenice**	**80.03**	**321**	*e*P	**P**	**05 54 27.0**	**+3.9**
SMOL				pmax	pmax		
	comp=Z,13nm,1.3s						
SMOL	**Smolenice**	**80.03**	**321**	*e*P	**P**	**05 54 27.0**	**+3.9**
VTS	**Vitosha**	**80.03**	**314**	⇓P	**P**	**05 54 22.6**	**-0.8**
MODS	**Modra-Piesok**	**80.19**	**321**	*e*P	**P**	**05 54 27.2**	**+3.2**
MODS				pmax	pmax		
	comp=Z,82nm,1.7s						
MODS	**Modra-Piesok**	**80.19**	**321**	*e*P	**P**	**05 54 27.2**	**+3.2**
KRUC	**Moravsky**	**80.25**	**322**	*e*P	**P**	**05 54 23.9**	**-0.4**
PVCC	**Panska Ves**	**80.31**	**324**	AMS	AMS	06 33 50.0	
	comp=Z,3µm,14.0s						
ZST	**Bratislava**	**80.39**	**321**	*e*P	P	05 54 31.1	+6.0
ZST	**Bratislava**	**80.39**	**321**	*e*P	P	05 54 31.1	+6.0
BRG	**Berggiesshubel**	**80.41**	**324**	*e*P	**P**	**05 54 24.6**	**-0.5**
BRG				Amp		05 54 29.9	
	comp=Z,7.6nm,1.4s						
BRG				*e*x	x	05 54 35.2	
BRG				Amp		05 54 40.7	
	comp=Z,16nm,1.5s						
BRG	**Berggiesshubel**	**80.41**	**324**	SKS	**S**	**06 04 27.0**	**-4.1**
BRG				Amp		06 33 56.0	
	comp=E,2.5nm,16.2s						
BRG				Amp		06 33 59.0	
	comp=Z,3.0nm,14.5s						
BRG				Amp		06 34 01.0	
	comp=N,1.2nm,14.1s						
BRG	**Berggiesshubel**	**80.41**	**324**	*e*P	**P**	**05 54 24.5**	**-0.5**
BRG						06 04 27.0	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,16nm,1.5s						
BRG				pmax	pmax		
	comp=E,3µm,16.2s						
BRG				MLR	MLR		
	comp=Z,3µm,14.5s						
BRG				MLR	MLR		
	comp=N,1µm,14.1s						
CLL	**Collm**	**80.60**	**325**	*i* P	**P**	**05 54 24.6**	**-1.5**
CLL				*e*S	**S**	**06 04 37.0**	**+3.9**
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						

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CLL   Collm             80.60 325 i P      P         05 54 24.6 -1.5
        comp=Z,18nm,1.5s
CLL                               i Pmax             05 54 28.7
        comp=Z,12nm,1.1s
CLL                               ePcP     PcP       05 54 33.0 +0.1
CLL                               i x      x         05 54 38.6
CLL                               ex       x         05 57 22.0
CLL                               ePP      PP        05 57 32.0 +3.0
CLL                               eS       S         06 04 37.0 +3.9
CLL                               eSS      SS        06 10 00.0  +16
CLL                               eSSS     SSS       06 13 36.0
CLL                                 LmH              06 30 00.0
        comp=N,2µm,19.6s
CLL                                 LmH              06 30 00.0
        comp=E,3µm,19.0s
CLL                                 LmV              06 33 00.0
        comp=N,2µm,20.6s
CLL                                 LmV              06 33 00.0
        comp=E,2µm,19.7s
PRU   Pruhonice         80.65 324   AMS      AMS     06 34 00.0
        comp=E,3µm,14.6s
FRGS  Fruska Gora       80.66 317 ⇑P       P         05 54 25.8 -0.8
C09A  Chrisman Ranch    80.76  39   P      P         05 54 26.3 -0.8
C09A                                IAmb     IAmb    05 54 37.8
        comp=Z,38nm,1.9s
NEW   Newport           81.10  38   P      P         05 54 28.2 -0.8
        comp=Z,2.4nm,0.8s,baz=341,slow=4.1,SNR=6.1
NEW                                 LR       LR      06 31 31.3
        comp=Z,460nm,19.5s,baz=326,slow=36
        comp=Z,2.4nm,0.8s
NEW   Newport           81.10  38   IAMs_20  IAMs_20 06 31 09.9
        comp=Z,596nm,19.0s
NEW   Newport           81.10  38   P      P         05 54 28.3 -0.6
        baz=308
ATD   Arta Tunnel       81.11 278   LR       LR      06 32 09.0
        comp=Z,354nm,19.5s,baz=60,slow=37
PBCC  Pribram           81.12 324 eP       P         05 54 32.5 +3.6
RONA  Rosalia, Austr    81.12 321 eP       P         05 54 28.8 -0.2
        comp=Z,14nm,1.7s
VAY   Valandovo         81.16 313 eP       P         05 54 27.6 -1.7
CONA  Conrad Observa    81.22 321 eP       P         05 54 29.8 +0.2
        comp=Z,24nm,1.4s
CKRC  Cesky Krumlov     81.49 323 eP       P         05 54 34.6 +3.6
CKRC                              ex       x         05 54 44.9
CKRC                                AMS      AMS     06 34 50.0
        comp=Z,2µm,15.7s
NKC   Novy Kostel       81.55 325   AMS      AMS     06 34 10.0
        comp=Z,4µm,14.1s
BORG  Borgarnes         81.62 348   LR       LR      06 33 56.7
        comp=Z,294nm,18.1s,baz=32,slow=38
KHC   Kasperske Hory    81.67 323 eP       P         05 54 35.4 +3.5
KHC                               eS       S         06 04 41.7 -2.8
KHC                                 MLR      MLR
        comp=Z,3µm,14.2s
KHC   Kasperske Hory    81.67 323 eP       P         05 54 30.5 -1.4
KHC                               ex       x         05 54 35.4
KHC                               epP      PcP       05 54 45.9 +8.1
KHC                               eS       S         06 04 41.7 -2.8
KHC                                 AMS      AMS     06 33 30.0
        comp=Z,3µm,14.2s
YBH   Yreka Blue Hor    81.73  46   LR       LR      06 27 59.7
        comp=Z,131nm,19.1s,baz=316,slow=34
J05D  Fort Rock, OR     81.73  44   P      P         05 54 32.5  0.0
        baz=305
GERES GERESS Array B    81.79 323   P      P         05 54 32.2 -0.4
        comp=Z,0.7nm,0.7s,baz=58,slow=8.6,SNR=5.9
GERES                               LR       LR      06 34 12.2
        comp=Z,1µm,19.3s,baz=63,slow=38
        comp=Z,0.7nm,0.7s
ARSA  Arzberg           81.81 321 eP       P         05 54 30.6 -2.1
        comp=Z,7.9nm,1.2s
SFJD  Kangerlussuaq     82.09 360   P      P         05 54 33.0 -0.7
        comp=Z,3.5nm,0.7s,baz=297,slow=11,SNR=1.9
SFJD                                LR       LR      06 32 03.2
        comp=Z,1µm,19.6s,baz=350,slow=36
        comp=Z,3.5nm,0.7s
SFJD  Kangerlussuaq     82.09 360   IAMs_20  IAMs_20 06 31 41.5
        comp=Z,1µm,19.0s
MOA   Molln             82.12 322 eP       P         05 54 33.9 -0.3
        comp=Z,9.8nm,1.4s
WALA  Waterton Lakes    82.28  36   P      P         05 54 34.7 -0.5
OHR   Ohrid             82.38 314 eP       P         05 54 33.1 -2.8
SOKA  Soboth            82.43 321 eP       P         05 54 35.6 -0.4
        comp=Z,12nm,1.1s
GRA1  Grafenberg Arr    82.50 325   P      P         05 54 36.1 -0.2
GRF   Grafenberg Arr    82.50 325   P      P         05 54 36.1 -0.2
GRF                                 pmax     pmax
        comp=Z,43nm,1.3s
GRF                                 MLR      MLR
        comp=Z,2µm,18.0s
BIOA  Bad Ischl, Aus    82.55 322 eP       P         05 54 36.0 -0.6
        comp=Z,11nm,1.6s
DY2G  Dye2              82.56 358 i P      P         05 54 29.9 -6.6
DY2G                                IAmb     IAmb    05 54 41.7
        comp=Z,6.1nm,0.8s
OBKA  Obir              82.80 321 eP       P         05 54 37.1 -0.8
        comp=Z,5.9nm,1.0s
IDI   Anoyia            82.97 307   LR       LR      06 37 16.4
        comp=Z,662nm,20.4s,baz=56,slow=40
IDI   Anoyia            82.97 307   IAMs_20  IAMs_20 06 37 04.8
        comp=Z,885nm,22.0s
BMO   Blue Mountains    83.08  41   P      P         05 54 38.8 -0.7
BMO                                 pmax     pmax
        comp=Z,10.0nm,1.2s
BMO   Blue Mountains    83.08  41   P      P         05 54 38.8 -0.7
KBA   Koelnbreinsper    83.09 322 eP       P         05 54 37.5 -2.1
        comp=Z,11nm,1.5s
MYKA  Terra Mystica     83.21 321 eP       P         05 54 38.7 -1.4
        comp=Z,3.4nm,0.6s
FCC   Fort Churchill    83.36  21   P      P         05 54 39.5 -0.9
FCC                                 pmax     pmax
        comp=Z,41nm,1.1s
FCC   Fort Churchill    83.36  21   P      P         05 54 39.5 -0.9
MSO   Missoula          83.68  38   IAMs_20  IAMs_20 06 36 39.1
        comp=Z,720nm,21.0s
MSO   Missoula          83.68  38   P      P         05 54 41.7 -0.8
        baz=310
ABTA  Abfaltersbach     83.74 322 eP       P         05 54 39.9 -2.9
        comp=Z,17nm,1.1s
RPZ   Rata Peaks        83.79 151   LR       LR      06 27 11.8
        comp=Z,282nm,19.3s,baz=318,slow=32
WATA  Walderalm         83.85 323 i P      P         05 54 42.5 -0.9
        comp=Z,6.3nm,0.9s
WTTA  Wattenberg        83.87 323 eP       P         05 54 42.5 -1.0
        comp=Z,13nm,1.3s
ITM   Ithomi            83.91 310   P      P         05 54 41.2 -2.5
STAL  STALIGIAL         83.94 321   P      P         05 54 41.7 -2.1
STAL                                IAmb     IAmb    05 54 47.0
        comp=Z,25nm,1.2s
MOTA  Moosalm           84.09 323 eP       P         05 54 43.7 -1.0
        comp=Z,11nm,1.3s
SQTA  Sankt Quirin      84.12 323 eP       P         05 54 43.7 -1.0
        comp=Z,3.6nm,0.7s
RETA  Reutte            84.17 323 eP       P         05 54 44.0 -1.0
        comp=Z,11nm,1.6s
FRB   Frobisher Bay     84.30   8   P      P         05 54 43.6 -1.5
        comp=Z,3.2nm,0.8s,baz=353,slow=9.3,SNR=5.2
FRB                                 LR       LR      06 36 19.3
        comp=Z,748nm,18.1s,baz=346,slow=38
        comp=Z,3.2nm,0.8s
BTNL  Ternell           84.34 328 dP       P         05 54 44.5 -1.2
MEM   Membach           84.38 328 bP       P         05 54 44.6 -1.2
MEM                               dPcP     pP        05 54 48.3 -0.6
MQZ   McQueen's Vall    84.46 150   IAMs_20  IAMs_20 06 33 50.9
        comp=Z,1µm,22.0s
FETA  Feichten          84.49 323 i P      P         05 54 44.8 -1.9
        comp=Z,7.5nm,1.0s
BHOU  Houvegnez         84.56 327 dP       P         05 54 46.3 -0.4
BSTI  Sart Tilman       84.60 328 dPcP     PcP       05 54 49.9 -0.6
CTI   Castel Tesino     84.64 322   P      P         05 54 45.8 -1.7
CTI                                 pmax     pmax
        comp=Z,24nm,1.2s
CTI   Castel Tesino     84.64 322   P      P         05 54 45.8 -1.7
CTI                                 IAmb     IAmb    05 55 07.6
        comp=Z,24nm,1.2s
EKA   Eskdalemuir Ar    84.67 335   LR       LR      06 38 01.7
        comp=Z,1µm,18.6s,baz=26,slow=40
DAVA  Damuels           84.75 323 eP       P         05 54 47.3 -0.8
        comp=Z,16nm,1.2s
MFID  Camas Ranch       84.80  42   P      P         05 54 47.6 -0.7
MFID                                IAmb     IAmb    05 54 49.8
        comp=Z,39nm,1.9s
BCLA  Clavier           84.83 328 bP       P         05 54 46.9 -1.2
HRY   Holter Researc    84.86  37   P      P         05 54 48.0 -0.5
BGES  Gesves            84.95 328 dP       P         05 54 47.9 -0.8
PAHR  Pah Rah Range     84.96  46   P      P         05 54 48.8 -0.4
PAHR                                IAmb     IAmb    05 54 55.1
        comp=Z,16nm,1.2s
EGMT  Eagleton          85.04  35   P      P         05 54 48.6 -0.7
EGMT                                IAmb     IAmb    05 54 50.2
        comp=Z,21nm,1.0s
EGMT  Eagleton          85.04  35   P      P         05 54 48.8 -0.5
        baz=313
RCHB  Rochefort         85.05 328 dP       P         05 54 48.0 -1.3
RCHB                              dPcP     pP        05 54 51.7 -0.6
DAVOX Davos/Dischmat    85.09 323   LR       LR      06 34 17.6
        comp=Z,2µm,18.8s,baz=61,slow=37
BMRD  Maredsous         85.16 328 dP       P         05 54 48.4 -1.4
CMB   Columbia Colle    85.33  48   P      P         05 54 50.1 -0.9
CMB                                 pmax     pmax
        comp=Z,50nm,2.0s
CMB   Columbia Colle    85.33  48   P      P         05 54 50.0 -0.9
CMB                                 IAmb     IAmb    05 54 51.8
        comp=Z,50nm,2.0s
DLMT  Dillon            85.34  39   IAMs_20  IAMs_20 06 38 12.1
        comp=Z,537nm,18.0s
DOU   Dourbes           85.38 328 bP       P         05 54 49.7 -1.2
HLID  Hailey            85.51  41   P      P         05 54 52.1 +0.2
        baz=310
RAR   Rarotonga         85.67 118   LR       LR      06 26 28.7
        comp=Z,250nm,19.4s,baz=286,slow=31
BOZ   Bozeman (W)       85.70  38   IAMs_20  IAMs_20 06 38 04.6
        comp=Z,785nm,18.0s
BOZ   Bozeman (W)       85.70  38   P      P         05 54 52.7 -0.2
        baz=312
BMN   Battle Mountai    85.84  45   P      P         05 54 53.0 -0.6
BMN                                 pmax     pmax
        comp=Z,38nm,1.8s
BMN   Battle Mountai    85.84  45   P      P         05 54 53.0 -0.6
BMN                                 IAmb     IAmb    05 54 55.3
        comp=Z,38nm,1.8s
MURB  Monte Urbino      85.96 319   P      P         05 54 54.5 +0.5
KVN   Kaiserville       86.15  46   P      P         05 54 54.7 -0.5
KVN                                 pmax     pmax
        comp=Z,16nm,1.2s
KVN   Kaiserville       86.15  46   P      P         05 54 54.7 -0.5
KVN                                 IAmb     IAmb    05 54 55.8
        comp=Z,16nm,1.2s
NVAR  Mina Array Bea    86.40  47   P      P         05 54 56.7 +0.2
        comp=Z,3.2nm,0.8s,baz=292,slow=4.8,SNR=30
NVAR                                LR       LR      06 32 50.2
        comp=Z,129nm,19.6s,baz=320,slow=35
        comp=Z,3.2nm,0.8s
NVAR  Mina Array Bea    86.40  47   P      P         05 54 55.8 -0.7
YHL   Hebgen Lake       86.43  38   P      P         05 54 56.2 -0.4
GCMT  Greycliff         86.59  37   P      P         05 54 56.9 -0.3
ELK   Elko              86.82  43   P      P         05 54 59.0 +0.4
        comp=Z,3.2nm,1.0s,baz=310,slow=3.4,SNR=7.2
        comp=Z,3.2nm,1.0s
ELK   Elko              86.82  43   P      P         05 54 59.0 +0.4
LKWY  Lake              87.04  38   IAMs_20  IAMs_20 06 35 13.0
        comp=Z,693nm,21.0s
H17A  Grant Village     87.06  38   P      P         05 55 00.4 +0.8
H17A                                IAmb     IAmb    05 55 02.8
        comp=Z,19nm,1.1s
H17A  Grant Village     87.06  38   P      P         05 55 01.2 +1.6
        baz=312
FLWY  Flagg Ranch       87.20  39   P      P         05 54 59.3 -1.0
FLWY                                IAmb     IAmb    05 55 07.3
        comp=Z,14nm,1.1s
RLMT  Red Lodge         87.26  37   IAMs_20  IAMs_20 06 38 04.6
        comp=Z,551nm,18.0s
RLMT  Red Lodge         87.26  37   P      P         05 55 00.2 -0.3
        baz=313
TPH   Tonopah           87.29  46   P      P         05 55 00.3 -0.5
TPH                                 pmax     pmax
        comp=Z,53nm,1.1s
TPH   Tonopah           87.29  46   P      P         05 55 00.3 -0.5
DGMT  Dagmar            87.38  32   IAMs_20  IAMs_20 06 38 27.5
        comp=Z,699nm,18.0s
DGMT  Dagmar            87.38  32   P      P         05 55 00.4 -0.4
        baz=317
DGMT  Dagmar            87.38  32   P      P         05 55 00.4 -0.4
        baz=317
LOHW  Long Hollow       87.57  39   IAMs_20  IAMs_20 06 39 40.1
        comp=Z,482nm,18.0s
LAO   LASA Array        87.70  35   IAMs_20  IAMs_20 06 40 16.1
        comp=Z,627nm,19.0s
LAO   LASA Array        87.70  35   P      P         05 55 01.5 -0.9
        baz=315
LAO   LASA Array        87.70  35   P      P         05 55 02.5  0.0
        baz=315
NRS   Narsarsuaq        87.85 357   IAMs_20  IAMs_20 06 38 52.8
        comp=Z,952nm,19.0s
R11A  Troy Canyon, C    88.13  45   P      P         05 55 03.7 -1.1
R11A  Troy Canyon, C    88.13  45   P      P         05 55 04.5 -0.3
        baz=309
MPMC  Manual Prospec    88.36  48   P      P         05 55 05.1 -0.9
        baz=308
HWUT  Hardware Ranch    88.38  41   P      P         05 55 05.8 -0.2
HWUT                                IAMs_20  IAMs_20 06 39 01.6
        comp=Z,582nm,19.0s
FURC  Furnace Creek,    88.51  48   P      P         05 55 06.9 +0.6
        baz=309
VAE   Valguarnera       88.52 314   LR       LR      06 39 14.4
        comp=Z,784nm,18.0s,baz=65,slow=39
DUG   Dugway, Tooele    88.59  43   P      P         05 55 06.3 -0.6
DUG                                 pmax     pmax
        comp=Z,16nm,1.4s
DUG   Dugway, Tooele    88.59  43   P      P         05 55 06.3 -0.6
DUG                                 IAmb     IAmb    05 55 13.4
        comp=Z,16nm,1.4s
DUG   Dugway, Tooele    88.59  43   P      P         05 55 07.2 +0.2
        baz=311
TPNV  Topopah Spring    88.59  47   P      P         05 55 06.9 -0.2
        baz=309
BW06  Boulder Array     88.70  39   P      P         05 55 06.8 -0.7
        baz=313
PD31  Pinedale Array    88.70  39   P      P         05 55 06.6 -0.9
PDAR  Pinedale Array    88.70  39   P      P         05 55 07.2 -0.4
        comp=Z,3.1nm,0.9s,baz=348,slow=0.7,SNR=26
PDAR                                PP     PP        05 58 40.5 +4.9
        comp=Z,1.5nm,1.1s,baz=295,slow=6.9,SNR=4.4
PDAR                                LR       LR      06 36 04.3
        comp=Z,190nm,19.0s,baz=346,slow=36
        comp=Z,3.1nm,0.9s
EDW2  Edwards Air Fo    88.76  49   P      P         05 55 07.6 -0.1
        baz=308
GSC   Goldstone, Bar    89.27  48   P      P         05 55 09.9 -0.2
        baz=309
ULM   Lac du Bonnet     89.56  27   P      P         05 55 10.7 -0.3
        comp=Z,22nm,0.8s,baz=324,slow=5.0,SNR=20
ULM                                 LR       LR      06 40 16.9
        comp=Z,480nm,18.0s,baz=335,slow=39
        comp=Z,22nm,0.8s
TUQ   Turquoise Moun    89.75  48   P      P         05 55 12.9 +0.5
        baz=309
MDND  Maddock           89.89  30   P      P         05 55 13.4 +0.7
        baz=320
MDND  Maddock           89.89  30   P      P         05 55 12.9 +0.2
        baz=320
MSU   Marysvale         90.07  44   P      P         05 55 14.1 +0.1
MSU   Marysvale         90.07  44   P      P         05 55 14.1 +0.1
P17A  Butcher Ranch,    90.27  42   P      P         05 55 13.9 -0.9
P17A                                IAmb     IAmb    05 55 16.5
        comp=Z,17nm,1.0s
K22A  Casper            90.40  38   P      P         05 55 15.2 -0.2
        baz=315
K22A  Casper            90.40  38   P      P         05 55 15.2 -0.2
        baz=315
RSSD  Black Hills       90.61  35   IAMs_20  IAMs_20 06 41 12.3
        comp=Z,512nm,18.0s
RSSD  Black Hills       90.61  35   P      P         05 55 16.3 -0.1
        baz=317
RSSD  Black Hills       90.61  35   P      P         05 55 16.4  0.0
        baz=317
RWWY  Rawlins           90.71  39   P      P         05 55 15.2 -1.7
RWWY                                IAmb     IAmb    05 55 21.7
        comp=Z,21nm,1.4s
RWWY                                IAMs_20  IAMs_20 06 37 29.1
        comp=Z,667nm,19.0s
IRM   Iron Mountain     91.05  48   P      P         05 55 18.6 +0.2
        baz=310
AGMN  Agassiz Nation    91.12  28   IAMs_20  IAMs_20 06 37 24.1
        comp=Z,778nm,21.0s
AGMN  Agassiz Nation    91.12  28   P      P         05 55 17.4 -1.0
        baz=323
AGMN  Agassiz Nation    91.12  28   P      P         05 55 17.5 -0.9
        baz=323
O20A  White River Ci    91.23  40   P      P         05 55 18.9 -0.4
        baz=314
PPT   Papeete           91.65 109   LR       LR      06 31 09.3
        comp=Z,199nm,19.1s,baz=303,slow=32
PPT2  Papeete2          91.66 109 eLR      LR        06 24 51.9
        comp=Z,578nm,27.5s
PHWY  Pilot Hill        91.92  38   IAMs_20  IAMs_20 06 43 26.0
        comp=Z,531nm,20.0s
N23A  Red Feather La    91.95  39   P      P         05 55 22.1 -0.6
N23A                                IAmb     IAmb    05 55 28.5
        comp=Z,17nm,1.2s
N23A  Red Feather La    91.95  39   P      P         05 55 23.0 +0.3
        baz=315
PV23  Carpenter Ridg    91.95  42   P      P         05 55 22.8 +0.1
PV10  Paradox Valley    91.98  42   P      P         05 55 23.0 +0.1
KMBO  Kilima Mbogo      92.32 270   LR       LR      06 38 27.8
        comp=Z,292nm,18.4s,baz=58,slow=37
PV15  Paradox Valley    92.33  42   P      P         05 55 23.6 -0.9
PV15                                IAmb     IAmb    05 55 30.8
        comp=Z,18nm,1.2s
WUAZ  Wupatki           92.53  45   P      P         05 55 26.1 +0.7
        baz=312
KEST  Kesra             92.75 315   LR       LR      06 44 14.7
        comp=Z,777nm,18.5s,baz=350,slow=40
F33A  5 Mile Ranch,     92.89  30   P      P         05 55 26.4 -0.2
        baz=322
ISCO  Idaho Springs     92.90  39   IAMs_20  IAMs_20 06 38 54.2
        comp=Z,550nm,19.0s
ISCO  Idaho Springs     92.90  39   P      P         05 55 27.4 +0.2
        baz=316
ISCO  Idaho Springs     92.90  39   P      P         05 55 27.4 +0.2
        baz=316
MVCO  Mesa Verde        93.09  43   IAMs_20  IAMs_20 06 43 28.6
        comp=Z,580nm,18.0s
MVCO  Mesa Verde        93.09  43   P      P         05 55 28.3 +0.3
        baz=314
EYMN  Ely               93.11  26   IAMs_20  IAMs_20 06 38 00.7
        comp=Z,597nm,20.0s
SCHQ  Schefferville     93.18   9   P      P         05 55 26.5 -1.3
        comp=Z,5.4nm,1.1s,baz=0.0,slow=4.0,SNR=3.7
SCHQ                                LR       LR      06 39 37.8
        comp=Z,630nm,19.5s,baz=349,slow=37
        comp=Z,5.4nm,1.1s
S22A  4UR Ranch, Cre    93.68  41   P      P         05 55 31.3 +0.5
        baz=315
OGNE  Ogallala          93.95  36   IAMs_20  IAMs_20 06 45 13.6
        comp=Z,499nm,21.0s
ECSD  EROS Data Cent    94.41  31   IAMs_20  IAMs_20 06 39 56.4
        comp=Z,572nm,20.0s
ECSD  EROS Data Cent    94.41  31   P      P         05 55 33.0 -0.7
        baz=322
TBI   Tubuai            94.79 114 eLR      LR        06 26 08.3
        comp=Z,304nm,31.8s
TAOE  Nuku Hiva Isla    95.00  97 eLR      LR        06 26 29.6
        comp=Z,629nm,23.4s
TUC   Tucson            95.02  47   P      P         05 55 36.6 -0.2
        baz=312
COWI  Conover           95.54  26   IAMs_20  IAMs_20 06 44 22.0
        comp=Z,710nm,18.0s
CBKS  Cedar Bluff       96.71  36   IAMs_20  IAMs_20 06 46 20.8
        comp=Z,556nm,18.0s
ESDC  Sonseca Array     97.19 325   PP     PP        05 59 40.3 -1.5
        comp=Z,2.5nm,1.1s,baz=40,slow=8.4,SNR=7.0
ESDC                                LR       LR      06 42 36.4
        comp=Z,1µm,20.0s,baz=23,slow=37
MBAR  Mbarara           97.63 274   LR       LR      06 43 24.6
        comp=Z,398nm,18.4s,baz=20,slow=38
MBAR  Mbarara           97.63 274   IAMs_20  IAMs_20 06 47 35.0
        comp=Z,578nm,19.0s
JFWS  Jewell Farm       97.78  28   IAMs_20  IAMs_20 06 41 10.5
        comp=Z,598nm,21.0s
KSU1  Kansas State U    98.04  34   IAMs_20  IAMs_20 06 43 01.9
        comp=Z,619nm,20.0s
MNTX  Cornudas Mount    98.78  45   IAMs_20  IAMs_20 06 48 39.2
        comp=Z,396nm,18.0s
L44A  Lake County Fo    99.33  27   IAMs_20  IAMs_20 06 43 14.4
        comp=Z,643nm,21.0s
HDIL  Hopedale         100.15  29   IAMs_20  IAMs_20 06 45 39.1
        comp=Z,483nm,18.0s
WMOK  Wichita Mounta   100.30  39   IAMs_20  IAMs_20 06 47 30.1
        comp=Z,544nm,18.0s
CCM   Cathedral Cave   101.38  32   IAMs_20  IAMs_20 06 42 10.0
        comp=Z,483nm,20.0s
TXAR  Lajitas Array    101.49  45   P      Pdif      05 56 05.1 -0.8
        comp=Z,0.6nm,0.8s,baz=220,slow=3.3,SNR=5.8
U40A  Yellville        102.03  34   IAMs_20  IAMs_20 06 44 52.2
        comp=Z,637nm,20.0s
MIAR  Mount Ida        103.13  35   IAMs_20  IAMs_20 06 46 12.6
        comp=Z,673nm,20.0s
X40A  Basin Creek Fa   103.54  35   IAMs_20  IAMs_20 06 50 26.4
        comp=Z,544nm,18.0s
P52A  Corning          103.70  24   IAMs_20  IAMs_20 06 48 04.8
        comp=Z,607nm,20.0s
435B  Jarrell          103.97  40   IAMs_20  IAMs_20 06 51 13.2
        comp=Z,424nm,20.0s
WVT   Waverly          104.49  30   IAMs_20  IAMs_20 06 46 38.2
        comp=Z,560nm,20.0s
NATX  Nacogdoches      104.79  38   IAMs_20  IAMs_20 06 46 33.7
        comp=Z,594nm,20.0s
OXF   Oxford           105.14  32   IAMs_20  IAMs_20 06 46 18.6
        comp=Z,494nm,21.0s
HKT   Hockley          105.57  40   IAMs_20  IAMs_20 06 53 01.3
        comp=Z,474nm,18.0s
GOGA  Godfrey          108.66  29   IAMs_20  IAMs_20 06 46 07.4
        comp=Z,661nm,22.0s
QSPA  South Pole Qui   120.98 180   PKP    PKPdf     06 01 02.9 -2.5
        comp=Z,1.7nm,0.7s,baz=258,slow=1.4,SNR=15
SJG   San Juan         128.76  19   IAMs_20  IAMs_20 07 03 54.1
        comp=Z,318nm,21.0s
SMRT  St. Maarten      129.59  15   IAMs_20  IAMs_20 07 01 44.9
        comp=Z,400nm,18.0s
SEUS  St. Eustatius    130.15  15   IAMs_20  IAMs_20 07 03 27.8
        comp=Z,315nm,18.0s
BCIP  Isla Barro Col   131.09  40   IAMs_20  IAMs_20 07 10 13.6
        comp=Z,442nm,21.0s
SDV   Santo Domingo    135.79  29   PKP    PKPdf     06 01 34.1 -1.2
        comp=Z,2.5nm,0.7s,baz=320,slow=7.9,SNR=1.5
SDV   Santo Domingo    135.79  29   IAMs_20  IAMs_20 07 07 35.1
        comp=Z,418nm,20.0s
ATAH  Atahualpa        144.73  53   PKP    PKPbc     06 01 50.7 +0.1
        comp=Z,14nm,0.9s,baz=10,slow=3.9,SNR=2.1
TBTG  Tabatinga, AM    147.60  38 eP       PKPdf     06 01 56.7 +0.6
CZSB  Cruzeiro do Su   148.89  46 eP       PKPdf     06 01 59.9 +1.7
MCPB  Macapa, AP       149.28   3 eP       PKPdf     06 02 00.8 +1.9
MACA  Manacapuru-AM    150.55  21 eP       PKPdf     06 02 02.8 +1.9
MALB  Monte Alegre     150.60   7 eP       PKPdf     06 02 02.4 +1.4
TMAB  Tom-Au,PA,Br     151.20 355 eP       PKPdf     06 02 03.8 +2.0
ITTB  Itaituba         152.87  11 eP       PKPdf     06 02 06.2 +1.8
NBMA  Muriti-CE        153.77 332 eP       PKPdf     06 02 07.6 +1.9
ETMB  Extrema          154.29  37 eP       PKPdf     06 02 08.7 +2.4
SAML  Samuel           154.98  30   IAMs_20  IAMs_20 07 26 51.9
        comp=Z,305nm,20.0s
LPAZ  La Paz           158.25  51   PKPab  PKPab     06 02 43.6 -2.6
        comp=Z,5.0nm,1.1s,baz=356,slow=5.3,SNR=6.6
LPAZ  La Paz           158.25  51 eP       PKPdf     06 02 14.5 +2.3
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*NIED **07** 05:48:18.9, 31°.08N×129°.04E, h19^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.32; $M_{\theta\theta}$4.14; $M_{\phi\phi}$-2.82; $M_{r\theta}$-1.45; $M_{\theta\phi}$2.91; $M_{\phi r}$1.12; Fault plane solution: $M_0$4.99000×10^{15} NP1: ϕ_s207.00000°, δ66.00000°, λ-167.00000°. NP2: ϕ_s112.00000°, δ78.00000°, λ-25.00000°.*

*JMA **07** 05:48:18.9±0.2, 31°.1N±0°.3×129°.0E±0°.8, h19^{km}±1^{km}, MD4.7/30, MV4.8/30, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*IDC **07** 05:48:19.2±0.6, 31°.10N×129°.39E, h0^{km}, mb4.0/16, mbtmp4.1/19, ML3.6/3, Error ellipse: s-maj=22.7km s-min=14.7km az=74.0*

*NEIC **07** 05:48:21.5±2.3, 31°.09N±0°.06×129°.38E±0°.08, h10^{km}±1^{km}, mb4.6/44, Error ellipse: s-maj=12.2km s-min=9.4km az=131.0*

ISC 07 05:48:21.5±0.4**, 31°.10N**±0°.04×**129°.34E**±0°.04**, h11**^{km}**, n106, σ1^s.28**/101**, mb4.5**/42**, 1C-1D, Kyushu**

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                     Op     ISC        h  m  s    ISC
JSJ   Shimokoshiki       0.66  29   eP     Pg         05 48 34.3 -0.1
JSJ                                 S      Sn         05 48 45.6 -1.7
JSJ   Shimokoshiki       0.66  29   A      A          05 48 34.3
        comp=E,55nm,0.9s,comp=E,51nm,0.9s
JKC   Kuchinoerabu       0.97 130   i P    Pn         05 48 40.5 -0.5
JKC                                 S      Sn         05 48 55.2 +0.4
JKC   Kuchinoerabu       0.97 130   A      A          05 48 40.5
        comp=E,29nm,1.2s,comp=E,43nm,1.6s
JSU   Suzuyama           1.04  67   Pn     Pb         05 48 41.4 -0.1
JSU   Suzuyama           1.04  67   eP     Pn         05 48 42.2 +0.2
JSU                                 S      Sn         05 48 58.9 +2.3
JSU   Suzuyama           1.04  67   A      A          05 48 42.2
```

	comp=E,14nm,0.9s,comp=E,26nm,4.9s						
JYAK	Yakushimahirau	1.32	130	⇓eP	Pn	05 48 44.7	-1.3
JYAK	Yakushimahirau	1.32	130	A	A	05 48 44.7	
	comp=E,11nm,4.2s,comp=E,13nm,1.2s						
JNN	Nakanoshima	1.33	160	eP	Pn	05 48 44.5	-1.6
JNN	Nakanoshima	1.33	160	A	A	05 48 44.5	
	comp=E,34nm,1.3s,comp=E,24nm,1.5s						
JTN	Tanegashima 3	1.48	107	P	Pn	05 48 47.9	-0.1
JMTN	Minamitane	1.52	117	eP	Pn	05 48 48.3	-0.3
JFU	Fukue jima 2	1.63	342	eP	Pn	05 48 46.6	-3.6
JNU	Nakatsue	2.40	33	Pn	Pg	05 49 06.7	-1.0
	baz=38,slow=19						
JNU				Sn	Sg	05 49 38.9	+0.1
	baz=84,slow=0.0						
JTU	Tsushima	3.42	1		Pn	05 49 13.9	-0.8
JOW	Kunigami	4.35	193	Pn	Pn	05 49 27.9	+0.4
	6.7nm,0.3s,baz=134,slow=14,SNR=7.5						
	25nm,0.4s						
JOW	Kunigami	4.35	193		Pn	05 49 26.2	-1.4
JHS	Saijyo	5.02	38	Pn	Pn	05 49 37.1	+0.3
KSAR	Wonju Array Be	6.44	350	Pn	Pn	05 49 55.1	-1.2
KSRS	Korea Array	6.45	350	Pn	Pn	05 49 55.5	-0.8
	1.2nm,0.3s,baz=176,slow=14,SNR=4.6						
KSRS				Lg	Lg	05 51 38.8	
	1.6nm,0.3s,baz=209,slow=31,SNR=4.3						
	9.9nm,0.7s						
INU	Inuyama	7.70	55	Pn	Pn	05 50 15.0	+1.4
JGF	Kuroka	8.07	54	Pn	Pn	05 50 19.5	+0.8
NJ2	Nanjing	9.00	279	eP	Pn	05 50 35.5	+4.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
MAJO	Matsushiro	9.16	51	Pn	Pn	05 50 33.9	+0.3
MJB9	Matsu-Tunnel	9.16	51	Pn	Pn	05 50 33.9	+0.3
MJAR	Matsushiro Arr	9.16	51	Pn	Pn	05 50 36.0	+2.4
	comp=Z,0.1nm,0.3s,baz=163,slow=12,SNR=4.2						
ASAJ	Asahikawa	16.68	35	Pn	Pn	05 52 16.0	+0.8
	comp=Z,0.4nm,0.3s,baz=256,slow=8.3,SNR=4.8						
	comp=Z,9.7nm,0.7s						
JKA	Kamikawa-asahi	16.68	35	P	Pn	05 52 16.0	+0.8
JKA	Kamikawa-asahi	16.68	35	IAmb	IAmb	05 52 34.2	
	comp=Z,71nm,1.4s						
HHC	Hu-ho-hao-te	17.34	309	eP	P	05 52 29.5	+4.5
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
KLR	Kul'dur	18.20	5	P	P	05 52 36.5	+2.2
	comp=Z,12nm,0.9s,baz=169,slow=16,SNR=8.9						
BTO	Baotou	18.28	307	eP	P	05 52 43.2	+7.9
LZH	Lanzhou	21.79	290	eP	P	05 53 16.5	+2.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
ULN	Ulaanbaatar	23.87	321	P	P	05 53 35.5	+0.4
ULN				IAmb	IAmb	05 53 39.0	
	comp=Z,22nm,1.4s						
KMI	Kunming	24.17	262	⇑P	P	05 53 39.3	+1.1
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
SONM	Songino Array	24.21	320	P	P	05 53 37.0	-1.2
	comp=Z,2.2nm,0.6s,baz=129,slow=11,SNR=3.3						
	comp=Z,2.2nm,0.6s						
SONM	Songino Array	24.21	320	P	P	05 53 38.2	-0.1
PZH	PanZhiHua	24.58	266	P	P	05 53 42.5	+0.7
PZH				pmax	pmax		
	comp=Z,20nm,1.4s						
GTA	Gaotai	25.41	297	eP	P	05 53 47.9	-1.3
GTA				pP	pP	05 53 51.8	-0.5
GTA				sP	sP	05 53 54.9	+1.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU	GeErMu	29.09	289	P	P	05 54 22.6	0.0
GOMU				pP	sP	05 54 26.4	-0.6
GOMU				sP	pP	05 54 30.2	+4.5
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,160nm,6.2s						
CHTO	Chiang Mai	30.05	253	P	P	05 54 30.7	-0.1
CHTO				IAmb	IAmb	05 54 34.5	
	comp=Z,7.8nm,0.8s						
CMAR	Chiang Mai Arr	30.23	253	P	P	05 54 33.5	+1.2
SBUM	Sibu	32.77	213	P	P	05 54 53.5	-1.2
SBUM				IAmb	IAmb	05 55 00.9	
	comp=Z,9.3nm,1.5s						
WMQ	Urumqi	35.05	303	eP	P	05 55 16.2	+1.8
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				LR	LR		
	comp=N,2μm,16.5s						
WMQ				LR	LR		
	comp=E,2μm,11.7s						
WMQ				LR	LR		
	comp=Z,680nm,15.3s						
ZAA0	Zalesovo Array	39.10	319	P	P	05 55 49.1	+0.5
ZALV	Zalesovo Beam	39.10	319	P	P	05 55 48.1	-0.4
	comp=Z,1.0nm,0.5s,baz=119,slow=8.4,SNR=2.9						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	39.10	319	P	P	05 55 49.1	+0.5
MK31	Makanchi Array	39.19	307	P	P	05 55 49.0	-0.5
MKAR	Makanchi Array	39.19	307	P	P	05 55 48.3	-1.2
	comp=Z,1.7nm,0.8s,baz=100,slow=9.5,SNR=8.1						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	39.19	307	P	P	05 55 49.4	-0.1
MAKZ	Makanchi	39.41	307	P	P	05 55 51.9	+0.6
TIXI	Tiksi	40.61	360	P	P	05 56 01.9	+1.0
KURK	Kurchatov	42.10	313	P	P	05 56 14.1	+0.7
KURBB	Kurchatov Arra	42.14	313	P	P	05 56 12.7	-1.1
	comp=Z,1.8nm,0.6s,baz=101,slow=9.4,SNR=12						
	comp=Z,1.8nm,0.6s						
BILL	Bilibino	42.77	19	P	P	05 56 18.4	-0.2
KSH	Kashi	43.81	296	P	P	05 56 34.6	+7.0
KSH				pP	sP	05 56 43.1	+11
KSH				pmax	pmax		
	comp=Z,5.0nm,1.5s						
NIL	Nilore	46.95	289	P	P	05 56 53.0	+0.6
BRVK	Borovoye	47.47	315	P	P	05 56 56.1	-0.1
KK31	Karatay Array	47.53	302	P	P	05 56 55.9	-1.0
KK31				IAmb	IAmb	05 56 59.5	
	comp=Z,8.1nm,1.1s						
KKAR	Karatay Array	47.53	302	P	P	05 56 56.1	-0.8
KKAR	Karatay Array	47.53	302	P	P	05 56 55.9	-1.0
KKAR				IAmb	IAmb	05 56 59.5	
	comp=Z,8.1nm,1.1s						
GAR	Garm	48.23	296	P	P	05 57 03.1	+0.6
KBL	Kabul	50.14	291	P	P	05 57 18.5	+1.3
KBL				IAmb	IAmb	05 57 20.6	
	comp=Z,6.9nm,1.1s						
WRA	Warramunga Arr	50.97	174	P	P	05 57 21.5	-1.8
	comp=Z,1.0nm,0.6s,baz=353,slow=8.1,SNR=9.8						
	comp=Z,1.0nm,0.6s						
ABKAR	Akbulak array	54.12	311	P	P	05 57 45.7	-0.7
ABKAR				IAmb	IAmb	05 57 49.0	
	comp=Z,4.1nm,0.8s						
ABKAR	Akbulak array	54.12	311	P	P	05 57 45.9	-0.5
ASAR	Alice Springs	54.63	175	P	P	05 57 49.0	-1.3
	comp=Z,0.9nm,0.7s,baz=5.1,slow=14,SNR=16						
	comp=Z,0.9nm,0.7s						
HRA	Herat	55.59	293	P	P	05 57 58.8	+1.2
HRA				IAmb	IAmb	05 58 00.8	
	comp=Z,6.5nm,1.1s						
H21K	Melozitna Rive	57.15	29	P	P	05 58 07.2	-0.7
H21K				IAmb	IAmb	05 58 08.2	
	comp=Z,9.2nm,1.4s						
H23K	Yukon River	58.47	29	P	P	05 58 17.6	+0.3
RND	Reindeer	59.07	31	P	P	05 58 20.5	-1.0
RND				IAmb	IAmb	05 58 28.9	
	comp=Z,5.9nm,1.2s						
MDM	Murphy Dome	59.12	29	P	P	05 58 21.5	-0.3
MDM				IAmb	IAmb	05 58 26.0	
	comp=Z,8.6nm,1.2s						
H24K	Noodor Dome	59.15	28	P	P	05 58 22.0	0.0
H24K				IAmb	IAmb	05 58 29.0	
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	59.72	30	P	P	05 58 24.6	-1.3
	comp=Z,0.5nm,0.7s,baz=276,slow=7.0,SNR=5.5						
	comp=Z,0.5nm,0.7s						
SCM	Sheep Creek Mo	60.02	33	P	P	05 58 27.3	-0.8
BMAR	Burnt Mountain	60.22	26	P	P	05 58 29.2	-0.1
DOT	Dot Lake	61.14	31	P	P	05 58 34.5	-1.1
DOT				IAmb	IAmb	05 58 37.4	
	comp=Z,7.8nm,1.5s						
M26K	Nabesna, AK	61.90	32	P	P	05 58 40.6	-0.2
M26K				IAmb	IAmb	05 58 45.4	
	comp=Z,4.1nm,0.8s						
L27K	Beaver Creek,	62.26	31	P	P	05 58 42.8	-0.4
BCAR	Beaver Creek A	62.27	31	P	P	05 58 43.4	+0.1
DAWY	Dawson	63.05	30	P	P	05 58 47.4	-1.1
DAWY				IAmb	IAmb	05 58 59.5	
	comp=Z,4.0nm,1.2s						
STKA	Stephens Creek	63.70	168	P	P	05 58 53.9	+0.9
	comp=Z,1.3nm,0.7s,baz=344,slow=16,SNR=3.2						
	comp=Z,1.3nm,0.7s						
STKA	Stephens Creek	63.70	168	IAmb	IAmb	05 59 02.6	
	comp=Z,1.5nm,1.4s						
C36M	Paulatuk	66.82	22	P	P	05 59 11.4	-1.4
KBZ	Khabaz	66.88	308	P	P	05 59 15.3	+1.7
	comp=Z,7.3nm,0.9s,baz=111,slow=1.9,SNR=12						
	comp=Z,7.3nm,0.9s						
EUNU	Eureka	67.35	6	P	P	05 59 15.2	-1.0
EUNU				IAmb	IAmb	05 59 23.7	
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	69.13	330	P	P	05 59 25.8	-1.7
	comp=Z,1.1nm,0.6s,baz=35,slow=7.0,SNR=4.8						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	69.13	330	P	P	05 59 26.4	-1.1
GURO	Guroymak-BITLI	69.48	303	P	P	05 59 31.8	+1.5
RES	Resolute Bay	70.60	11	P	P	05 59 35.9	-0.4
RES				IAmb	IAmb	05 59 47.9	
	comp=Z,3.8nm,1.1s						
MARD	Mardin	70.89	302	P	P	05 59 40.5	+1.6
NACGM	Naroch	71.83	324	eP	P	05 59 44.1	+0.1
	baz=62						
YKA	Yellowknife Ar	73.72	26	P	P	05 59 54.5	-0.7
	comp=Z,0.7nm,0.7s,baz=308,slow=5.7,SNR=7.3						
	comp=Z,0.7nm,0.7s						
BR131	Keskin Array S	74.84	307	P	P	06 00 03.9	+1.6
BR131				IAmb	IAmb	06 00 05.4	
	comp=Z,7.5nm,0.9s						
BRTR	Keskin Array B	74.84	307	P	P	06 00 02.5	+0.1
	comp=Z,3.4nm,1.0s,baz=104,slow=5.2,SNR=11						
	comp=Z,3.4nm,1.0s						
NB2	NORSAR Subarra	75.39	334	P	P	06 00 02.3	-2.7
	comp=Z,12nm,1.7s,baz=49,slow=5.9						
NOA	NORSAR Array B	75.39	334	P	P	06 00 04.5	-0.5
	comp=Z,1.0nm,1.0s,baz=52,slow=5.6,SNR=3.0						
	comp=Z,1.0nm,1.0s						
BURAR	Bucovina Array	76.30	318	P	P	06 00 12.3	+1.8
BORA	Eskisehir	76.92	309	P	P	06 00 14.9	+0.8
BORA				IAmb	IAmb	06 00 16.8	
	comp=Z,5.9nm,0.9s						
CLL	Collm	80.72	325	eP	P	06 00 34.0	-0.7
ITM	Ithomi	84.02	310	P	P	06 00 52.0	-0.2
CMB	Columbia Colle	85.38	48	P	P	06 00 57.9	-1.2
CMB				IAmb	IAmb	06 01 03.8	
	comp=Z,3.7nm,1.2s						
NVAR	Mina Array Bea	86.45	47	P	P	06 01 04.6	-0.1
	comp=Z,0.8nm,0.7s,baz=308,slow=5.3,SNR=6.6						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	88.77	39	P	P	06 01 15.1	-0.7
	comp=Z,0.7nm,0.8s,baz=166,slow=0.6,SNR=4.5						
	comp=Z,0.7nm,0.8s						
ULM	Lac du Bonnet	89.65	27	P	P	06 01 18.5	-0.9
	comp=Z,4.4nm,0.6s,baz=332,slow=7.8,SNR=4.5						
	comp=Z,4.4nm,0.6s						

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*IDC **07** 06:03:41.0±2.4, 6°.46S×146°.31E, h128^{km}±22^{km}, mb3.7/7, mbtmp4.0/9, Error ellipse: s-maj=28.7km s-min=20.3km az=83.0*

ISC 07 06:03:40.5±0.9**, 6°.4S**±0°.1×**146°.2E**±0°.2**, h122**^{km}**, n12, σ0^{s}.91**/12**, mb4.0**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.11	163	P	Pn	06 04 29.4	+1.1
	68nm,0.4s,baz=50,slow=5.8,SNR=23						
PMG				S	Sn	06 05 04.9	-0.3
	237nm,0.5s,baz=142,slow=22,SNR=5.2						
WRA	Warramunga Arr	17.73	220	P	P	06 07 38.1	-0.9
	0.8nm,0.4s,baz=40,slow=11,SNR=11						
ASAR	Alice Springs	20.86	213	P	P	06 08 12.0	-0.9
	1.2nm,0.7s,baz=49,slow=7.8,SNR=14						
	1.2nm,0.7s						
STKA	Stephens Creek	25.70	189	P	P	06 08 58.3	-1.1
	1.0nm,0.3s,baz=341,slow=6.6,SNR=4.7						
	1.0nm,0.3s						
CMAR	Chiang Mai Arr	52.78	299	P	P	06 12 44.9	+1.3
	1.9nm,0.4s,baz=123,slow=5.8,SNR=9.4						
	1.9nm,0.4s						
VNDA	Vanda	71.55	176	P	P	06 14 48.4	+0.6
	0.4nm,0.5s,baz=337,slow=7.1,SNR=7.1						
	0.4nm,0.5s						
MKAR	Makanchi Array	77.33	321	P	P	06 15 22.2	+0.4
	0.7nm,0.3s,baz=105,slow=7.3,SNR=16						
	0.7nm,0.3s						
ZALV	Zalesovo Beam	78.96	328	P	P	06 15 29.9	-0.6
	1.5nm,0.5s,baz=108,slow=4.8,SNR=4.3						
	1.5nm,0.5s						
ILAR	Eielson Array	86.16	23	P	P	06 16 06.8	-0.8
	2.2nm,0.7s,baz=248,slow=5.2,SNR=26						
	2.2nm,0.7s						
SCHQ	Schefferville	124.91	23	PKP	PKPdf	06 22 25.7	-0.4
	1.6nm,1.0s,baz=297,slow=6.8,SNR=3.8						
TORD	Torodi Ar. Bea	144.46	284	PKP	PKPbc	06 23 02.4	+0.1
	2.4nm,0.9s,baz=79,slow=3.3,SNR=10						
DBIC	Dimbokro	151.29	272	PKPbc	PKiKP	06 23 21.4	+0.1
	3.5nm,0.5s,baz=129,slow=1.6,SNR=7.3						

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*NIED **07** 06:35:23.0, 31°.08N×129°.02E, h13^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.66; M$_{\theta\theta}$1.57; M$_{\phi\phi}$-0.91; M$_{r\theta}$-0.04; M$_{\theta\phi}$0.88; M$_{\phi r}$1.28; Fault plane solution: M$_{0}$2.05000×10^{15} NP1: φ$_{s}$110.00000°, δ56.00000°, λ-24.00000°. NP2: φ$_{s}$214.00000°, δ71.00000°, λ-143.00000°.*

*JMA **07** 06:35:23.0±0.2, 31°.1N±0°.3×129°.0E±0°.7, h13^{km}±1^{km}, MD4.2/35, MV4.2/35, SW OFF KYUSHU*

*IDC **07** 06:35:25.1±1.1, 31°.13N×129°.45E, h0^{km}, mb3.6/7, mbtmp3.7/10, ML3.4/3, MS3.6/3, Error ellipse: s-maj=33.1km s-min=21.6km az=88.0*

ISC 07 06:35:25.6±0.8**, 31°.05N**±0°.04×**129°.19E**±0°.06**, h10**^{km}**, n26, σ1^{s}.34**/21**, mb3.6**/7**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.77	36	eP	Pg	06 35 38.6	-1.9
JSJ				S	Sg	06 35 50.2	-0.3
JSJ	Shimokoshiki	0.77	36	A	A	06 35 38.6	
	comp=E,10.0nm,0.7s,comp=E,16nm,1.4s						
JKC	Kuchinoerabu	1.05	124	eP	Pb	06 35 45.0	-0.8
JKC				S	Sb	06 36 00.1	+0.6
JKC	Kuchinoerabu	1.05	124	A	A	06 35 45.0	
	comp=E,13nm,1.2s,comp=E,15nm,1.9s						
JSU	Suzuyama	1.17	67	i P	Pn	06 35 46.8	-1.3
JSU				S	Sb	06 36 04.1	+0.8
JSU	Suzuyama	1.17	67	A	A	06 35 46.8	
	comp=E,4.0nm,0.6s,comp=E,6.0nm,2.0s						
JNN	Nakanoshima	1.34	154	eP	Pn	06 35 48.3	-2.1
JNN	Nakanoshima	1.34	154	A	A	06 35 48.3	
	comp=E,12nm,1.2s,comp=E,7.0nm,1.2s						
JYAK	Yakushimahirau	1.40	125	eP	Pn	06 35 49.7	-1.4
JYAK				S	Sn	06 36 08.9	-0.7
JTN	Tanegashima 3	1.59	104	⇓eP	Pn	06 35 53.0	-0.8
JMTN	Minamitane	1.61	113	eP	Pn	06 35 53.5	-0.6
JFU	Fukue jima 2	1.64	347	eP	Pn	06 35 51.4	-3.1
JTZ	Takazaki	1.83	62	⇓P	Pn	06 35 56.5	-0.6
JNU	Nakatsue	2.51	34	Pn	Pb	06 36 11.2	+0.4
	77nm,0.3s,baz=327,slow=0.1,SNR=34						
JOW	Kunigami	4.28	191	Pn	Pn	06 36 33.4	+2.6
	4.8nm,0.3s,baz=20,slow=10,SNR=9.3						
JOW				LR	LR	06 38 02.8	
	comp=Z,255nm,21.3s,baz=83,slow=36						
	15nm,0.4s						
KSRS	Korea Array	6.47	351	Pn	Pn	06 37 00.3	-0.6
	1.0nm,0.3s,baz=177,slow=14,SNR=19						
KSRS				Lg	Lg	06 38 42.7	
	0.8nm,0.3s,baz=162,slow=32,SNR=4.8						
	3.6nm,0.5s						
KLR	Kul'dur	18.26	5	P	P	06 39 40.4	+1.2
	0.1nm,0.3s,baz=226,slow=6.9,SNR=6.2						
	3.0nm,0.8s						
CMAR	Chiang Mai Arr	30.09	252	LR	LR	06 55 07.1	
	comp=Z,101nm,19.6s,baz=295,slow=39						
MKAR	Makanchi Array	39.12	307	P	P	06 42 56.0	+2.8
	0.5nm,0.7s,baz=92,slow=11,SNR=5.5						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	42.08	313	P	P	06 43 18.3	+0.8
	0.9nm,0.7s,baz=101,slow=8.8,SNR=5.6						
	0.9nm,0.7s						
ASAR	Alice Springs	54.59	175	P	P	06 44 55.7	+1.4
	0.8nm,0.9s,baz=4.2,slow=13,SNR=3.7						
	0.8nm,0.9s						
ILAR	Eielson Array	59.82	30	P	P	06 45 32.0	+1.2
	0.4nm,0.8s,baz=279,slow=6.3,SNR=2.2						
	0.4nm,0.8s						
FINES	FINESS Array B	69.11	330	P	P	06 46 32.5	+0.9
	0.5nm,0.7s,baz=57,slow=10,SNR=1.8						
	0.5nm,0.7s						
YKA	Yellowknife Ar	73.82	26	P	P	06 46 59.1	-0.8
	0.2nm,0.6s,baz=308,slow=5.1,SNR=8.5						
	0.2nm,0.6s						
BRTR	Keskin Array B	74.77	307	P	P	06 47 08.6	+2.4
	1.5nm,1.0s,baz=90,slow=5.3,SNR=8.0						
	1.5nm,1.0s						
OPO	Ambohidratompo	92.82	250	LR	LR	07 28 35.4	
	comp=Z,81nm,18.2s,baz=136,slow=34						

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*IDC **07** 06:53:35.1±1.0, 3°.36N×128°.82E, h0^{km}, mb4.1/7, mbtmp4.0/7, Error ellipse: s-maj=52.2km s-min=20.6km az=84.0*

*NEIC **07** 06:53:42.2±0.9, 3°.32N±0°.10×128°.66E±0°.10, h51^{km}±8^{km}, mb4.4/12, Error ellipse: s-maj=15.4km s-min=13.1km az=224.0*

*DJA **07** 06:53:43.0±0.4, 3°N±4°×12°8E±°, h10^{km}, M4.4/9, mB5.1/6, mb4.7/9, MLv4.2/8, Mw(mB)4.4/6*

ISC 07 06:53:41.7±0.6**, 3°.35N**±0°.05×**128°.85E**±0°.08**, h50**^{km}**, n37, σ1^{s}.74**/38**, mb4.3**/11**, 1C-2D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.96	210		Pn	06 54 25.1	-1.1
TNTI	Ternate	2.96	210	P	Pn	06 54 28.3	+2.1
TNTI				S	Sn	06 55 02.9	+2.4
DDMP	Don Marcelino,	4.15	311	⇓eP	Pn	06 54 42.8	+0.3
DDMP				eS	Sn	06 55 33.6	+3.8
LBMI	Labuha	4.18	199	P	Pn	06 54 46.5	+3.5
SWI	Sorong	4.83	150	P	Pn	06 54 58.6	+6.7
	0.2nm30nm,0.5s						
KCP	Kidapawan	5.21	314	⇑eP	Pn	06 55 09.6	+12
KCP				i S	Sn	06 56 01.8	+5.7
KMSI	Cibinong	5.59	241	P	Pn	06 55 02.7	+0.4
	1.1nm176nm,0.8s						
BUKP	Musuan	5.87	320	⇓eP	Pn	06 55 07.5	+1.3
BUKP				eS	Sn	06 56 13.5	+1.4
SANI	Sanana	6.08	208	P	Pn	06 55 11.0	+2.0
	0.1nm779nm31nm,0.8s						
GTOI	Gorontalo	6.42	245	P	Pn	06 55 14.7	+0.9
	0.1nm284nm23nm,0.7s						
MRSI	Marisa	7.47	248	P	Pn	06 55 27.9	-0.2
	0.4nm2μm117nm,0.6s						
APSI	Ampana	8.35	240	P	Pn	06 55 40.1	0.0
	730nm35nm,0.6s						
TOLI2	Tolitoli	8.36	255		Pn	06 55 37.4	-2.9
MPSI	Mapaga	9.43	252	P	Pn	06 55 54.8	-0.2
	16nm,0.9s						
PCI	Palu	9.95	245	P	Pn	06 56 01.7	-0.4
	4μm109nm,1.1s						
KAPI	Kappang	12.31	228	Pn	Pn	06 56 32.6	-1.8
SBUM	Sibu	16.63	267	Pn	Pn	06 57 28.9	-2.5
KNRA	Kununurra	18.91	180	P	P	06 57 58.0	-0.3
KNRA				IAmb	IAmb	06 58 19.1	
	comp=Z,46nm,1.4s						
PSA00	Pilbara Seismi	26.29	199	P	P	06 59 11.4	-1.3
PSA00				IAmb	IAmb	06 59 30.3	
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	27.30	170	P	P	06 59 21.9	0.0
	comp=Z,0.2nm,0.4s,baz=360,slow=7.7,SNR=8.1						
	comp=Z,0.2nm,0.4s						
MJAR	Matsushiro Arr	34.14	14	P	P	07 00 21.2	-0.7
	comp=Z,2.4nm,0.5s,baz=182,slow=9.1,SNR=5.8						
	comp=Z,2.4nm,0.5s						
MJAR	Matsushiro Arr	34.14	14	IAmb	IAmb	07 00 30.9	
	comp=Z,2.6nm,1.0s						
STKA	Stephens Creek	37.07	162	P	P	07 00 47.2	+0.1
	comp=Z,1.8nm,0.6s,baz=333,slow=14,SNR=2.2						
	comp=Z,1.8nm,0.6s						
PETK	Petropavlovsk-	55.01	21	P	P	07 03 08.9	+1.0
	comp=Z,2.3nm,0.6s,baz=187,slow=4.8,SNR=12						
	comp=Z,2.3nm,0.6s						
MK31	Makanchi Array	59.08	324	P	P	07 03 36.3	-0.6
MK31				IAmb	IAmb	07 03 37.7	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	59.08	324	P	P	07 03 37.1	+0.2
	comp=Z,1.7nm,0.4s,baz=112,slow=7.9,SNR=34						
	comp=Z,1.7nm,0.4s						
MAKZ	Makanchi	59.27	324	P	P	07 03 37.4	-0.8
MAKZ				IAmb	IAmb	07 03 38.6	
	comp=Z,2.1nm,0.5s						
BKZ	Black Stump Fm	60.90	139	P	P	07 03 49.8	+0.3
KURK	Kurchatov	63.20	327	P	P	07 04 04.4	-0.3
KKAR	Karatay Array	64.95	317	P	P	07 04 15.4	-0.9
TIXI	Tiksi	68.20	0	P	P	07 04 36.4	-0.2
TIXI				IAmb	IAmb	07 04 37.2	
	comp=Z,3.1nm,0.7s						
BRVK	Borovoye	68.86	326	P	P	07 04 40.8	-0.2
BRVK				IAmb	IAmb	07 04 41.3	
	comp=Z,2.8nm,1.1s						
UNV	Unalaska Valle	72.54	34	P	P	07 05 03.3	0.0
ABKAR	Akbulak array	73.78	320	P	P	07 05 09.8	-0.9
ILAR	Eielson Array	84.54	25	P	P	07 06 09.7	+0.5
	comp=Z,0.4nm,0.6s,baz=246,slow=4.8,SNR=8.2						
	comp=Z,0.4nm,0.6s						
QSPA	South Pole Qui	93.26	180	P	P	07 06 49.5	-1.3
YKA	Yellowknife Ar	98.96	25	P	Pdif	07 07 16.1	-0.5
	comp=Z,0.1nm,0.5s,baz=294,slow=4.2,SNR=2.6						
	comp=Z,0.1nm,0.5s						

IDC 07 06:57:59.4±4.9**, 64°.19S**×**174°.75E, h0**^{km}**, mb4.0**/2**, mbtmp3.9**/3**, ML2.9**/1**, MS3.4**/4**, Error ellipse: s-maj=184.0km s-min=30.3km az=70.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	13.98	192	Pn	Pn	07 01 16.9	-1.4
	0.1nm,0.3s,baz=29,slow=16,SNR=15						
VNDA				LR	LR	07 04 33.7	
	comp=Z,53nm,19.5s,baz=344,slow=28						
	1.4nm,0.7s						
RPZ	Rata Peaks	20.62	352	LR	LR	07 09 54.3	
	comp=Z,107nm,18.2s,baz=190,slow=35						
QSPA	South Pole Qui	25.90	180	P	P	07 03 33.7	+1.0
	3.1nm,1.0s,baz=33,slow=3.5,SNR=6.9						
QSPA				LR	LR	07 11 39.6	
	comp=Z,163nm,20.5s,baz=339,slow=32						
	3.1nm,1.0s						
URZ	Urewera	26.00	4	LR	LR	07 12 54.0	
	comp=Z,94nm,18.2s,baz=211,slow=34						
H01W1	Cape Leeuwin H	46.48	279	T	T	07 56 42.0	
	baz=147,slow=75,SNR=51						
H01W2	Cape Leeuwin H	46.48	279	T	T	07 56 42.3	
	baz=147,slow=75,SNR=63						
H01W3	Cape Leeuwin H	46.49	279	T	T	07 56 43.2	
	baz=147,slow=75,SNR=65						
ASAR	Alice Springs	48.51	307	P	P	07 06 44.2	+0.4
	1.6nm,1.0s,baz=156,slow=7.5,SNR=7.8						
	1.6nm,1.0s						
H08S2	Diego Garcia H	88.47	256	T	T	08 49 18.6	
	baz=154,slow=76,SNR=22						
H08S1	Diego Carcia H	88.48	256	T	T	08 49 19.3	
	baz=154,slow=76,SNR=3.9						
H08S3	Diego Garcia H	88.49	256	T	T	08 49 20.2	
	baz=154,slow=76,SNR=32						
BRTR	Keskin Array B	146.63	242	PKPbc	PKPdf	07 17 40.1	-0.4
	1.4nm,0.9s,baz=151,slow=3.3,SNR=6.8						

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*IDC **07** 07:08:05.4±2.6, 19°.35N×145°.79E, h131^{km}±25^{km}, mb3.3/9, mbtmp3.9/11, Error ellipse: s-maj=29.5km s-min=16.8km az=88.0*

*NEIC **07** 07:08:05.8±1.6, 19°.34N±0°.08×145°.9E±0°.2, h134^{km}±3^{km}, mb4.1/13, Error ellipse: s-maj=25.0km s-min=11.5km az=88.0*

ISC 07 07:08:02.0±0.6**, 19°.35N**±0°.07×**145°.9E**±0°.2**, h100**^{km}**, n28, σ0^{s}.91**/29**, mb3.9**/15**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.81	190	P	Pn	07 09 30.9	+5.1
	169nm,1.0s,baz=332,slow=3.2,SNR=7.2						
GUMO				S	Sn	07 10 32.5	+1.4
	43nm,0.7s,baz=342,slow=20,SNR=1.3						
JCJ	Chichijima	8.42	337	P	Pn	07 10 02.2	+1.0
	22nm,0.6s,baz=266,slow=22,SNR=8.7						
JCJ				S	Sn	07 11 32.8	-1.8
	26nm,0.3s,baz=295,slow=23,SNR=7.0						
JGF	Kuroka	17.85	337	P	Pn	07 12 04.0	0.0

JGF				IAmb	IAmb	07 12 22.1	
	comp=Z,6.5nm,1.1s						
KLR	Kul'dur	31.90	342	P	P	07 14 19.1	+1.3
	comp=Z,0.8nm,0.4s,baz=165,slow=12,SNR=4.9						
	comp=Z,0.8nm,0.4s						
WRAB	Tennant Creek	40.64	197	P	P	07 15 31.9	-0.6
FITZ	Fitzroy Crossi	42.18	209	P	P	07 15 45.1	+0.1
FITZ				IAmb	IAmb	07 15 50.9	
	comp=Z,6.6nm,1.1s						
AS31	Alice Springs	44.32	196	P	P	07 16 02.2	0.0
ASAR	Alice Springs	44.32	196	P	P	07 16 01.4	-0.8
	comp=Z,0.5nm,0.5s,baz=13,slow=7.0,SNR=15						
	comp=Z,0.5nm,0.5s						
FORT	Forrest	52.70	199	P	P	07 17 06.3	-0.1
MKAR	Makanchi Array	58.13	314	P	P	07 17 45.8	+0.5
	comp=Z,0.2nm,0.5s,baz=103,slow=6.5,SNR=2.2						
	comp=Z,0.2nm,0.5s						
CAST	Castle Rocks	60.45	27	P	P	07 18 01.3	+0.4
CAST				IAmb	IAmb	07 18 03.0	
	comp=Z,1.8nm,0.9s						
IMAR	Indian Mountai	60.56	24	P	P	07 18 02.7	+1.1
KURBB	Kurchatov Arra	60.95	318	P	P	07 18 03.9	-0.6
	comp=Z,0.4nm,0.4s,baz=92,slow=7.6,SNR=12						
	comp=Z,0.4nm,0.4s						
KTH	Kantishna Hill	60.98	27	P	P	07 18 03.4	-1.2
KTH				IAmb	IAmb	07 18 18.2	
	comp=Z,4.4nm,1.1s						
BPAW	Bear Paw Mtn.	61.10	27	P	P	07 18 05.5	+0.1
SML	Sawmill	61.73	29	P	P	07 18 09.5	-0.2
MDM	Murphy Dome	62.48	26	P	P	07 18 15.4	+0.8
MDM				IAmb	IAmb	07 18 17.3	
	comp=Z,1.3nm,0.9s						
TOLK	Toolik Lake Re	62.93	22	P	P	07 18 17.1	-0.5
TOLK				IAmb	IAmb	07 18 26.8	
	comp=Z,1.6nm,1.1s						
ILAR	Eielson Array	62.99	26	P	P	07 18 17.1	-0.9
	comp=Z,0.3nm,0.5s,baz=249,slow=6.4,SNR=6.1						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	64.46	24	P	P	07 18 27.5	-0.1
BKZ	Black Stump Fm	64.88	154	P	P	07 18 29.8	-0.9
BCAR	Beaver Creek A	64.94	29	P	P	07 18 31.1	+0.4
KHZ	Kahutara	66.55	158	P	P	07 18 39.3	-1.9
KHZ				IAmb	IAmb	07 18 51.5	
	comp=Z,3.9nm,1.1s						
ABKAR	Akbulak array	72.98	317	P	P	07 19 20.2	-0.6
YKA	Yellowknife Ar	77.34	28	P	P	07 19 45.8	+0.2
	comp=Z,0.4nm,0.7s,baz=286,slow=5.5,SNR=5.9						
	comp=Z,0.4nm,0.7s						
ARCES	ARCESS Array B	81.93	342	P	P	07 20 11.1	+0.8
	comp=Z,0.8nm,0.8s,baz=46,slow=3.5,SNR=4.6						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	82.61	52	P	P	07 20 15.5	+0.7
	comp=Z,0.3nm,0.6s,baz=268,slow=6.7,SNR=6.0						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	86.36	335	P	P	07 20 31.6	-1.2
	comp=Z,0.7nm,0.3s,baz=57,slow=4.2,SNR=16						
	comp=Z,0.7nm,0.3s						

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*IDC **07** 07:22:15.4±1.0, 33°.66S×71°.10W, h0^{km}, mb4.1/5, mbtmp4.1/6, ML4.8/1, Error ellipse: s-maj=49.3km s-min=27.0km az=53.0*

*SJA **07** 07:22:20.7±0.7, 33°.94S×71°.51W, h59^{km}±3^{km}, ML4.2, MW4.0*

*NEIC **07** 07:22:22.0±1.6, 33°.96S±0°.04×71°.48W±0°.06, h52^{km}±5^{km}, mb4.5/11, ML4.2(GUC), Error ellipse: s-maj=7.7km s-min=5.7km az=89.0*

*GUC **07** 07:22:22.4±0.7, 33°.93S×71°.48W, h52^{km}±2^{km}, ML4.2*

ISC 07 07:22:22.0±0.7, **33°.95S**±0°.03×**71°.51W**±0°.04, **h55**^{km}±5^{km}, **n94**, σ1^{s}.**27**/118, **mb4.4**/10, **4C-13D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT01	Popeta	0.23	69		Pn	07 22 31.0	-0.1
MT01	Popeta	0.23	69	⇑iP	Pn	07 22 31.1	0.0
MT01				i S	Sn	07 22 37.2	-0.4
MT01				IAML		07 22 38.5	
	comp=E,68µm,0.3s						
MT01	Popeta	0.23	69	eP	Pn	07 22 30.8	-0.3
MT01				eP	Pn	07 22 31.0	-0.1
MT01				eS	Sn	07 22 38.2	+0.6
MT01				IAML		07 22 39.5	
	comp=Z,18µm,0.1s						
VA05	Santo Domingo	0.30	342		Pn	07 22 31.5	-0.1
VA05	Santo Domingo	0.30	342	⇑iP	Pn	07 22 31.5	-0.1
VA05				i S	Sn	07 22 38.2	-0.3
VA05				IAML		07 22 40.8	
	comp=E,58µm,0.9s						
MT09	Talagante	0.46	69		Pn	07 22 32.9	-0.5
MT09	Talagante	0.46	69	⇓iP	Pn	07 22 33.1	-0.2
MT09				i S	Sn	07 22 40.6	-0.9
MT09				IAML		07 22 42.5	
	comp=N,75µm,0.2s						
BO01	Tunca	0.56	142		Pn	07 22 34.7	+0.4
BO01	Tunca	0.56	142	⇑iP	Pn	07 22 34.9	+0.5
BO01				i S	Sn	07 22 44.0	+0.7
BO01				IAML		07 22 44.7	
	comp=N,20µm,0.3s						
BO01	Tunca	0.56	142	eP	Pn	07 22 34.0	-0.4
BO01				eP	Pn	07 22 34.5	+0.1
BO01				eS	Sn	07 22 44.3	+0.9
BO01				IAML		07 22 44.3	
	comp=Z,10µm,0.7s						
BO03	Pichilemu	0.67	214	⇓iP	Pn	07 22 36.0	+0.4
BO03				i S	Sn	07 22 45.9	+0.4
BO03				IAML		07 22 47.1	
	comp=N,13µm,0.2s						
BO04	La Punta	0.75	94		Pn	07 22 36.4	-0.2
BO04	La Punta	0.75	94	⇓iP	Pn	07 22 36.6	0.0
BO04				i S	Sn	07 22 47.5	+0.2
BO04				IAML		07 22 51.8	
	comp=N,12µm,0.1s						
MT02	Curacav	0.75	24		Pn	07 22 36.4	-0.3
MT02	Curacav	0.75	24	⇓iP	Pn	07 22 36.4	-0.3
MT02				i S	Sn	07 22 46.6	-0.7
MT02				IAML		07 22 48.5	
	comp=E,4µm,0.3s						
MT02	Curacav	0.75	24	eP	Pn	07 22 36.4	-0.3
MT05	Renca	0.85	49		Pn	07 22 37.5	-0.4
MT05	Renca	0.85	49	⇓iP	Pn	07 22 37.9	-0.1
MT05				i S	Sn	07 22 49.3	-0.3
MT05				IAML		07 22 50.4	
	comp=E,20µm,0.4s						
MT05	Renca	0.85	49	eP	Pn	07 22 37.0	-0.9
MT05				eP	Pn	07 22 37.8	-0.1
MT05				eS	Sn	07 22 50.3	+0.7
MT05				IAML		07 22 51.1	
	comp=Z,8µm,0.1s						
VA01	Torpederas	0.93	353		Pn	07 22 39.0	+0.1
VA01	Torpederas	0.93	353	eP	Pn	07 22 39.1	+0.2
VA01				i S	Sn	07 22 51.4	+0.1
VA01				IAML		07 22 52.2	
	comp=E,6µm,0.4s						
VA01	Torpederas	0.93	353	eP	Pn	07 22 39.0	+0.1
VA01				eP	Pn	07 22 39.0	+0.1
VA01				eS	Sn	07 22 51.7	+0.3
MT03	Universidad Ad	0.94	62		Pn	07 22 38.6	-0.6
MT03	Universidad Ad	0.94	62	⇓iP	Pn	07 22 39.0	-0.2
MT03				i S	Sn	07 22 51.6	-0.3
MT03				IAML		07 22 52.0	
	comp=N,14µm,0.2s						
MT03	Universidad Ad	0.94	62	eP	Pn	07 22 39.0	-0.2
MT03				eS	Sn	07 22 52.0	+0.1
MT03				IAML		07 22 52.7	
	comp=Z,7µm,0.1s						
ROC1	El Roble	1.05	23		Pn	07 22 38.3	-2.5
ROC1	El Roble	1.05	23	eP	Pn	07 22 38.2	-2.5
PEL	Peldehue	1.05	41		Pn	07 22 40.2	-0.4
PEL	Peldehue	1.05	41	⇓iP	Pn	07 22 40.7	0.0
PEL				i S	Sn	07 22 54.8	+0.4
PEL				IAML		07 22 59.5	
	comp=N,7µm,0.1s						
PEL	Peldehue	1.05	41	eP	Pn	07 22 40.7	0.0
PEL				eS	Sn	07 22 55.7	+1.3
ROCH	El Roble	1.06	23	⇓iP	Pn	07 22 41.0	+0.1
ROCH				i S	Sn	07 22 54.5	-0.2
ROCH				IAML		07 22 56.1	
	comp=N,14µm,0.6s						
GO05	Huala	1.12	198		Pn	07 22 41.5	0.0
GO05	Huala	1.12	198	⇓iP	Pn	07 22 41.7	+0.2
GO05				i S	Sn	07 22 56.6	+0.7
GO05				IAML		07 22 59.5	
	comp=N,3µm,0.4s						
GO05	Huala	1.12	198	eP	Pn	07 22 41.5	0.0
GO05				eS	Sn	07 22 57.1	+1.2
FCH	Farellones	1.19	59	⇓iP	Pn	07 22 42.5	-0.1
FCH				i S	Sn	07 22 57.4	-0.6
FCH				IAML		07 22 58.1	
	comp=E,19µm,0.2s						
VA03	San Esteban	1.42	34		Pn	07 22 45.5	-0.1
VA03	San Esteban	1.42	34	⇓iP	Pn	07 22 45.8	+0.1
VA03				i S	Sn	07 23 03.4	0.0
VA03				IAML		07 23 06.6	
	comp=E,8µm,0.2s						
VA03	San Esteban	1.42	34	eP	Pn	07 22 45.8	+0.1
VA03				eS	Sn	07 23 04.1	+0.7
VA03				IAML		07 23 07.5	
	comp=Z,3µm,0.5s						
ML02	Panimavida	1.81	178		Pn	07 22 51.4	+0.5
ML02	Panimavida	1.81	178	⇓iP	Pn	07 22 51.7	+0.8
ML02				IAML		07 23 26.3	
	comp=N,3µm,0.4s						
AAGR	Agrelo	2.40	70	eP	Pn	07 23 01.0	+2.1
AAGR				eS	Sn	07 23 11.6	-16
ARCO	CERRO ARCO	2.42	64	eP	Pn	07 23 02.0	+2.7
ARCO				eP	Pn	07 23 02.0	+2.7
AUSP	Uspallata	2.47	47	eP	Pn	07 23 02.0	+1.9
AUSP				eS	Sn	07 23 30.2	+0.9
ASAL	Salagasta	2.61	60	eP	Pn	07 23 04.0	+2.1
ASAL				eS	Sn	07 23 18.0	-14
RFA	San Rafael	2.65	109	eP	Pn	07 23 04.0	+1.7
RFA				eP	Pn	07 23 04.1	+1.8
RFA				eS	Sn	07 23 24.4	-8.8
CO02	Combarbal	2.77	9	eP	Pn	07 23 04.2	+0.1
CO02				i S	Sn	07 23 36.4	+0.1
CO02				IAML		07 23 46.1	
	comp=E,3µm,0.3s						
BI05	Punta Hualpn	3.12	206		Pn	07 23 07.6	-1.0
CO06	Fray Jorge	3.27	358		Pn	07 23 09.9	-0.8
CO06	Fray Jorge	3.27	358	eP	Pn	07 23 09.3	-1.4
CO06				IAML		07 24 08.7	
	comp=E,454nm,0.3s						
GO04	Tololo Observa	3.81	9		Pn	07 23 18.3	-0.1
GO04	Tololo Observa	3.81	9	eP	Pn	07 23 17.9	-0.5
CO05	La Serena	4.02	3	eP	Pn	07 23 20.7	-0.4
CO01	Juntas del Tor	4.13	17		Pn	07 23 23.9	+1.1
CO01	Juntas del Tor	4.13	17	eP	Pn	07 23 23.8	+0.9
AVFE	Valle Fertil	4.74	47	eP	Pn	07 23 31.0	0.0
AVFE				IAML		07 24 34.1	
	comp=Z,116nm,0.6s						
ACHE	Chepes	4.94	57	eP	Pn	07 23 34.0	+0.2
LC01	Cunco	4.95	183		Pn	07 23 33.5	-0.3
LC01	Cunco	4.95	183	⇓iP	Pn	07 23 33.6	-0.1
LCO	Las Campanas	4.97	8	eP	Pn	07 23 35.0	+0.7
LC02	Puerto Saavedr	5.07	197	Pn	Pn	07 23 34.2	-1.1
LC02	Puerto Saavedr	5.07	197	⇑iP	Pn	07 23 34.0	-1.4
MRA	San Martin	5.09	74	eP	Pn	07 23 37.0	+1.2
MRA				IAML		07 25 05.5	
	comp=Z,186nm,0.6s						
LR03	Panguipulli	5.71	187		Pn	07 23 43.3	-0.9
H03S1	Juan Fernandez	6.16	269	T	T	07 29 54.3	
	baz=97,SNR=710						
H03S3	Juan Fernandez	6.16	269	T	T	07 29 58.6	
	baz=97,SNR=722						
H03S2	Juan Fernandez	6.17	269	T	T	07 29 53.5	
	baz=97,SNR=598						
PLCA	Paso Flores	6.82	174	Pn	Pn	07 24 01.0	+1.6
	comp=Z,3.7nm,0.3s,baz=341,slow=12,SNR=142						
	comp=Z,7.8nm,0.3s						
PLCA	Paso Flores	6.82	174		Pn	07 24 00.4	+1.0
LL04	Puerto Octay	6.99	186		Pn	07 24 00.7	-1.0
LL05	Los Muermos	7.61	191	Pn	Pn	07 24 07.1	-3.0
GO07	Milladeo Hill,	9.31	190		Pn	07 24 29.8	-3.6
AY01	Puyuhuapi	10.50	184	Pn	Pn	07 24 49.4	-0.2
LPAZ	La Paz	17.84	11	P	P	07 26 27.3	+0.2
SIV	San Ignacio	20.20	30	P	P	07 26 40.3	-12
	comp=Z,9.6nm,0.9s,baz=216,slow=12,SNR=21						
ZARC	Zaragoza, Cauc	41.33	355	P	P	07 30 02.7	+0.2
CDITO	Canoas	43.64	344	P	P	07 30 21.8	+0.6
QSPA	South Pole Qui	56.29	180	P	P	07 31 55.8	-1.0
QSPA				IAmb	IAmb	07 32 13.3	
	comp=Z,4.2nm,1.1s						
TXAR	Lajitas Array	69.91	330	P	P	07 33 28.2	+0.9
	comp=Z,0.8nm,0.5s,baz=154,slow=8.8,SNR=14						
	comp=Z,0.8nm,0.5s						
TXAR	Lajitas Array	69.91	330	P	P	07 33 27.7	+0.4
TX31	Lajitas Ar. Si	69.91	330	P	P	07 33 27.6	+0.3
TX31				IAmb	IAmb	07 33 28.5	
	comp=Z,3.5nm,0.7s						
LCAR	Lake Charles	72.03	343	P	P	07 33 39.6	-0.3
LCAR				IAmb	IAmb	07 33 40.3	
	comp=Z,4.8nm,0.6s						
CCM	Cathedral Cave	73.95	344	P	P	07 33 51.2	0.0
CCM				IAmb	IAmb	07 33 52.0	
	comp=Z,4.1nm,0.8s						
R40A	Maddies Statio	74.42	343	P	P	07 33 53.5	-0.4
R40A				IAmb	IAmb	07 33 54.4	
	comp=Z,4.7nm,0.7s						
BOSA	Boshof	79.70	117	P	P	07 34 24.7	+0.4
	comp=Z,11nm,1.2s,baz=172,slow=7.1,SNR=4.3						
	comp=Z,11nm,1.2s						
BOSA	Boshof	79.70	117	IAmb	IAmb	07 34 25.1	
	comp=Z,12nm,1.1s						
TORD	Torodi Ar. Bea	83.78	70	P	P	07 34 45.2	-0.4
	comp=Z,1.4nm,0.7s,baz=258,slow=5.4,SNR=11						
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	83.92	333	P	P	07 34 47.1	+1.1
	comp=Z,0.3nm,0.6s,baz=134,slow=3.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	84.09	325	P	P	07 34 48.3	+1.3
	comp=Z,0.5nm,0.7s,baz=160,slow=6.0,SNR=6.0						
	comp=Z,0.5nm,0.7s						
ARCES	ARCESS Array B	123.78	25	PKP	PKPdf	07 41 12.0	-0.6
	comp=Z,1.3nm,0.9s,baz=245,slow=3.9,SNR=5.0						
H11S2	WAKE ISLAND Hy	126.22	269	T	T	10 00 26.3	
	baz=118,slow=74,SNR=7.1						
H11S1	WAKE ISLAND Hy	126.23	269	T	T	10 00 27.9	
	baz=118,slow=74,SNR=4.6						
H11S3	WAKE ISLAND Hy	126.23	269	T	T	10 00 26.9	
	baz=118,SNR=4.9						
ZALV	Zalesovo Beam	153.94	33	PKPbc	PKPbc	07 42 14.1	-0.6
	comp=Z,2.6nm,0.7s,baz=310,slow=3.8,SNR=6.8						
MKAR	Makanchi Array	156.39	49	PKPab	PKPab	07 42 38.7	-0.2
	comp=Z,0.2nm,0.4s,baz=289,slow=4.4,SNR=3.7						

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*GUC **07** 07:27:21.6±0.8, 19°.81S×69°.23W, h99^{km}±3^{km}, ML3.7*

*VAO **07** 07:27:21.8±0.8, 19°.72S×69°.43W, h139^{km}±6^{km}, mb3.9*

*IDC **07** 07:27:22.8±1.9, 19°.89S×68°.92W, h122^{km}±19^{km}, mb3.5/2, mbtmp3.7/4, Error ellipse: s-maj=52.3km s-min=25.5km az=92.0*

ISC 07 07:27:20.5±0.7, **19°.83S**±0°.03×**69°.26W**±0°.07, **h106**^{km}±7^{km}, **n47**, σ1^{s}.**30**/59, **8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.33	162	⇓iP	Pn	07 27 36.5	+0.1
PB08				i S	Sn	07 27 47.9	-0.4
PB08				IAML		07 27 48.9	
	comp=E,5µm,0.5s						
PB11	IPOC Station P	0.38	280	⇑iP	Pn	07 27 36.3	-0.1
PB11				i S	Sn	07 27 47.7	-0.5
PB11				IAML		07 27 48.5	
	comp=E,4µm,0.5s						
TA02	Huaiquique	0.93	241	⇑iP	Pn	07 27 41.0	+0.4
TA02				i S	Sn	07 27 56.0	+0.2
TA02				IAML		07 27 59.5	
	comp=N,7µm,0.1s						
TA01	Diego Aracena	1.13	229	⇑iP	Pn	07 27 42.9	+0.1
TA01				i S	Sn	07 27 59.6	-0.1
TA01				IAML		07 28 01.7	
	comp=N,692nm,0.1s						
PB01	IPOC Station P	1.23	190	⇑iP	Pn	07 27 44.6	+0.7
PB01				i S	Sn	07 28 02.4	+0.6
PB01				IAML		07 28 03.5	
	comp=N,4µm,0.3s						
PATCX	Punta Patache	1.29	220	⇑iP	Pn	07 27 44.9	+0.2
PATCX				i S	Sn	07 28 03.0	0.0
PATCX				IAML		07 28 09.0	
	comp=N,1µm,0.2s						
PB16	IPOC Station P	1.50	351	⇑iP	Pn	07 27 48.6	+0.9
PB16				i S	Sn	07 28 09.9	+1.6
PB12	IPOC Station P	1.57	320	⇑iP	Pn	07 27 47.9	-0.1
PB12				i S	Sn	07 28 08.7	-0.3
PB12				IAML		07 28 10.8	
	comp=E,936nm,0.4s						
PB02	IPOC Station P	1.60	202	⇑iP	Pn	07 27 48.7	+0.3
PB02				i S	Sn	07 28 09.8	+0.2
PB02				IAML		07 28 15.9	
	comp=E,1µm,0.1s						
AP01	Chacalluta	1.77	325	eP	Pn	07 27 51.0	+0.5
AP01				i S	Sn	07 28 13.3	+0.1
AP01				IAML		07 28 17.6	
	comp=E,1µm,0.4s						
PB09	IPOC Station P	1.96	179	eP	Pn	07 27 54.0	+1.1
PB09				i S	Sn	07 28 18.6	+0.8
PB09				IAML		07 28 24.8	
	comp=E,344nm,0.6s						
PB07	IPOC Station P	1.98	197	eP	Pn	07 27 53.6	+0.3
PB07				i S	Sn	07 28 19.1	+1.0
PB07				i S	Sn	07 28 19.8	+1.6
PB07				IAML		07 28 25.0	
	comp=E,587nm,0.7s						
PB04	IPOC Station P	2.63	198	eP	Pn	07 28 03.0	+1.3
PB04				IAML		07 28 40.9	
	comp=N,218nm,0.3s						
LVC	Limon Verde	2.79	173	P	Pn	07 28 05.6	+1.7
	comp=N,19nm,0.4s,baz=20,slow=9.5,SNR=15						
LVC				S	Sn	07 28 32.0	-5.3
	comp=N,36nm,0.3s,baz=340,slow=11,SNR=7.1						
LVC	Limon Verde	2.79	173	eP	Pn	07 28 07.2	+3.3
PB06	IPOC Station P	2.88	186	eP	Pn	07 28 05.4	+0.5
PB06				IAML		07 28 47.1	
	comp=E,123nm,0.3s						
PB06				IAML		07 28 48.3	
	comp=N,163nm,0.5s						
LPAZ	La Paz	3.68	17	P	Pn	07 28 18.6	+2.5
	comp=N,10nm,0.7s,baz=198,slow=7.0,SNR=20						
LPAZ	La Paz	3.68	17	eP	Pn	07 28 18.7	+2.5
SIV	San Ignacio	8.68	65	P	Pn	07 28 50.5	-33
	comp=N,4.8nm,0.6s,baz=261,slow=9.7,SNR=18						
PTLB	Pontes e Lacer	10.59	67	eP	Pn	07 29 48.4	-0.8
VILB	Vilhena	11.06	53	eP	Pn	07 29 55.8	+0.2
NBRS	Nobres	14.01	69	eP	P	07 30 36.8	-2.0
PDRB	Porto dos Gac	14.56	58	eP	Pn	07 30 42.6	+1.0
MCR1	Marechal Candi	14.84	111	eP	P	07 30 48.3	+0.2
CLDB	Colider	15.74	58	eP	Pn	07 30 56.2	-0.1
TRCB	Terra Rica	15.78	104	eP	P	07 30 59.7	+1.2
DVLD	Doverlandia	16.55	82	eP	P	07 31 08.7	+1.6
PTGB	Pitanga	16.64	110	eP	P	07 31 09.3	+1.1
ITAB	Concordia	17.34	118	eP	Pn	07 31 16.9	+1.0
ITRB	Iturama	17.80	93	eP	Pn	07 31 22.0	+0.5
PLTB	Pedras Altas	18.41	133	eP	P	07 31 27.9	+0.4
MACA	Manacapuru-AM	18.56	28	eP	P	07 31 27.5	-1.7
FRTB	Fartura	18.65	104	eP	Pn	07 31 31.5	-0.2
SNDB	Serra Nova Dou	18.95	68	eP	P	07 31 32.5	-1.0
BB19B	Bebedouro	19.47	97	eP	P	07 31 38.5	-0.6
TIJ01	Guaruva-PR	19.48	110	eP	Pn	07 31 40.5	-1.1
IPMB	Ipameri, GO	20.00	88	eP	Pn	07 31 46.4	-1.3
ITTB	Itaituba	20.25	42	eP	P	07 31 46.1	-1.5
TER01	Tubaro-SC	20.29	119	eP	P	07 31 48.8	+0.9
PEXB	Peixe	21.55	72	eP	P	07 32 02.5	+1.0
BSCB	Bom Sucesso	22.98	97	eP	P	07 32 16.0	-0.3
SMTB	Santa Maria do	23.63	66	eP	P	07 32 21.7	-0.5
JANB	Januaria	24.26	83	eP	P	07 32 27.5	-0.5
SDBA	SAO DESIDERIO	24.52	76	eP	P	07 32 29.7	-0.7
NBLA	Lagarto - SE	31.54	79	eP	P	07 33 31.9	-1.1
TORD	Torodi Ar. Bea	77.11	71	P	P	07 39 01.9	-0.9
	comp=N,0.6nm,0.4s,baz=249,slow=5.5,SNR=13						
	comp=N,0.6nm,0.4s						
YKA	Yellowknife Ar	89.51	341	P	P	07 40 06.2	+1.0
	comp=N,0.4nm,0.7s,baz=132,slow=4.7,SNR=6.9						
	comp=N,0.4nm,0.7s						

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*TUL **07** 07:51:02±0.3, 36°.69N±0°.01×98°.27W±0°.02, h4^{km}±4^{km}, ML2.7, mb_Lg2.4/15(NEIC), Error ellipse: s-maj=2.0km s-min=1.5km az=124.0*

NEIC 07 07:51:02.6±0.4, **36°.69N**±0°.02×**98°.27W**±0°.03, **h7**^{km}±7^{km}, **Error ellipse: s-maj=3.8km s-min=1.8km az=130.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.67	242		Pg	07 51 14.8	-0.7
T35A	Sooner Cattle	1.42	80		Pn	07 51 28.2	-0.6
OKCSW	OKLAHOMA CITY	1.45	152		Pn	07 51 28.3	-0.9
WMOK	Wichita Mounta	2.00	192	IAmb_Lg		07 52 08.3	
	comp=Z,14nm,1.0s						
X34A	Smith Ranch, M	2.12	170		Pn	07 51 39.3	+1.0
TUL1	Leonard	2.14	111	Pn	Pn	07 51 39.5	+0.8
CBKS	Cedar Bluff	2.42	332	IAmb_Lg		07 52 25.5	
	comp=Z,14nm,0.7s						
KSU1	Kansas State U	2.74	28	IAmb_Lg		07 52 34.6	
	comp=Z,13nm,1.1s						
AMTX	Amarillo	3.31	238	IAmb_Lg		07 52 53.7	
	comp=Z,8.1nm,0.9s						
U40A	Yellville	4.37	93	IAmb_Lg		07 53 19.7	
	comp=Z,8.2nm,0.8s						
MGMO	Mountain Grove	4.83	83	IAmb_Lg		07 53 42.8	
	comp=Z,8.0nm,1.0s						
FCAR	Ozark Folk Cen	5.02	97	IAmb_Lg		07 53 54.0	
	comp=Z,3.8nm,0.9s						
R40A	Maddies Statio	5.03	70	IAmb_Lg		07 53 43.9	
	comp=Z,5.7nm,0.8s						
JCT	Junction City	6.33	192	IAmb_Lg		07 54 24.0	
	comp=Z,6.9nm,1.0s						

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*NIED **07** 07:54:18.0, 31°.08N×129°.05E, h10^{km}, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{13}Nm; M$_{rr}$-3.34; M$_{\theta\theta}$2.26; M$_{\phi\phi}$1.08; M$_{r\theta}$-2.08; M$_{\theta\phi}$9.71; M$_{\phi r}$-0.97; Fault plane solution: M$_{0}$9.94000×10^{13} NP1: ϕ_s181.00000°, δ78.00000°, λ-180.00000°. NP2: ϕ_s91.00000°, δ90.00000°, λ-12.00000°.*

JMA 07 07:54:18.0±0.2, **31°.1N**±0°.3×**129°.1E**±0°.8, **h10**^{km}±1^{km}, **MV3.5**/30, **SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.82	43	eP	Pg	07 54 33.4	-0.5
JSJ				S	Sg	07 54 44.7	0.0
JKC	Kuchinoerabu	1.16	122	eP	Pb	07 54 39.9	-0.3
JKC				eS	Sb	07 54 54.9	-0.4
JSU	Suzuyama	1.27	70	eP	Pn	07 54 41.6	-0.3
JSU				S	Sb	07 54 57.8	-0.7
JNN	Nakanoshima	1.43	150	P	Pn	07 54 43.4	-0.6
JYAK	Yakushimahirau	1.51	123	P	Pn	07 54 44.2	-0.9
JYAK				eS	Sn	07 55 03.6	-1.2
JFU	Fukue jima 2	1.59	351	eP	Pn	07 54 46.3	+0.1
JFU				eS	Sn	07 55 07.2	+0.4
JTN	Tanegashima 3	1.71	104	eP	Pn	07 54 47.7	-0.1
JTZ	Takazaki	1.92	64	P	Pb	07 54 52.1	-1.0

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*IDC **07** 08:09:18.8±0.6, 31°.08N×129°.17E, h0^{km}, mb4.2/18, mbtmp4.2/22, ML3.5/4, MS3.7/46, Error ellipse: s-maj=19.0km s-min=15.3km az=73.0*

*JMA **07** 08:09:19.2±0.2, 31°.1N±0°.3×129°.0E±0°.7, h19^{km}±1^{km}, MD4.6/38, MW4.6/38, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*NIED **07** 08:09:19.2, 31°.06N×129°.01E, h19^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.36; M$_{\theta\theta}$4.33; M$_{\phi\phi}$0.03; M$_{r\theta}$-0.47; M$_{\theta\phi}$2.52; M$_{\phi r}$3.74; Fault plane solution: M$_{0}$6.20000×10^{15} NP1: ϕ_s92.00000°, δ46.00000°, λ-43.00000°. NP2: ϕ_s215.00000°, δ60.00000°, λ-127.00000°.*

*NEIC **07** 08:09:22.1±1.3, 31°.11N±0°.06×129°.24E±0°.06, h15^{km}±4^{km}, mb4.8/55 Error ellipse: s-maj=9.0km s-min=7.0km az=143.0*

*BJI **07** 08:09:23.5±0.0, 30°.96N×129°.02E, h27^{km}, mb4.4/51, mB4.6/31, Ms4.3/48, Ms7 4.1/46*

ISC 07 08:09:22.0±0.8, **31°.07N**±0°.03×**129°.20E**±0°.03, **h19**^{km}±3^{km}, **n183**, σ1^{s}.**58**/163, **mb4.6**/63, **MS3.8**/49, **2C-6D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.75	36	eP	Pb	08 09 34.9	-1.5
JSJ				eS	Sg	08 09 46.9	+0.2
JSJ	Shimokoshiki	0.75	36	A	A	08 09 34.9	
	comp=E,35nm,1.7s,comp=E,52nm,1.2s						
JKC	Kuchinoerabu	1.05	125	eP	Pb	08 09 40.5	-1.2
JKC				eS	Sb	08 09 56.0	+0.9
JKC	Kuchinoerabu	1.05	125	A	A	08 09 40.5	
	comp=E,35nm,1.0s,comp=E,48nm,0.8s						
JSU	Suzuyama	1.16	68		Pn	08 09 43.1	-0.2
JSU				Sn	Sg	08 09 59.8	+0.1

JSU	**Suzuyama**	**1.16**	**68**	*e*P	**Pn**	**08 09 42.7**	**-0.6**
JSU				*e*S	**Sg**	**08 09 59.9**	**+0.1**
JSU	**Suzuyama**	**1.16**	**68**	A	A	08 09 42.7	
	comp=E,21nm,2.4s,comp=E,19nm,1.9s						
JNN	**Nakanoshima**	**1.36**	**154**	*e*P	**Pn**	**08 09 44.1**	**-1.9**
JNN	**Nakanoshima**	**1.36**	**154**	A	A	08 09 44.1	
	comp=E,32nm,1.0s,comp=E,27nm,1.0s						
JYAK	**Yakushimahirau**	**1.41**	**126**	⇓*e*P	**Pn**	**08 09 45.3**	**-1.3**
JTN	**Tanegashima 3**	**1.59**	**105**	⇓*e*P	**Pn**	**08 09 48.7**	**-0.5**
JTN				⇓*e*S	**Sn**	**08 10 09.3**	**+0.1**
JZO	**Okuchi**	**1.60**	**48**	A	A	08 09 49.0	
	comp=E,9.0nm,2.9s,comp=E,11nm,2.2s						
JHD	**Hondo**	**1.60**	**30**	A	A	08 09 48.5	
	comp=E,8.0nm,1.2s,comp=E,6.0nm,2.5s						
JMTN	**Minamitane**	**1.61**	**114**	*e*P	**Pn**	**08 09 48.8**	**-0.7**
JMTN	**Minamitane**	**1.61**	**114**	A	A	08 09 48.8	
	comp=E,9.0nm,2.9s,comp=E,14nm,1.7s						
JFU	**Fukue jima 2**	**1.62**	**347**	*e*P	**Pn**	**08 09 47.5**	**-2.1**
JFU				*e*S	**Sn**	**08 10 07.4**	**-2.6**
JTZ	**Takazaki**	**1.81**	**62**	⇓*e*P	**Pn**	**08 09 52.2**	**0.0**
JNAR	**Kushima--Naru**	**1.83**	**75**	A	A	08 09 52.8	
	comp=E,10.0nm,1.4s,comp=E,13nm,2.6s						
JTAJ	**Takarajima**	**1.91**	**180**	*e*P	**Pn**	**08 09 52.2**	**-1.4**
JNKG	**Nichinankitago**	**1.95**	**72**	A	A	08 09 54.5	
	comp=E,19nm,1.5s,comp=E,12nm,1.2s						
JIU3	**Izumi3**	**2.01**	**43**	*e*P	**Pn**	**08 09 54.7**	**-0.3**
JNU	**Nakatsue**	**2.49**	**35**	Pn	**Pb**	**08 10 05.8**	**-0.4**
	37nm,0.3s,baz=209,slow=9.0,SNR=22						
JNU				Lg	Lg	08 10 39.5	
	55nm,0.3s,baz=270,slow=23,SNR=10						
JNU	**Nakatsue**	**2.49**	**35**		**Pn**	**08 10 01.6**	**0.0**
JUS	**Usuki**	**2.94**	**47**	A	A	08 10 08.2	
	comp=E,3.0nm,2.8s,comp=E,4.0nm,3.8s						
JTU	**Tsushima**	**3.44**	**3**	Pn	**Pn**	**08 10 14.7**	**0.0**
JOW	**Kunigami**	**4.30**	**191**	Pn	**Pn**	**08 10 27.2**	**+0.7**
	11nm,0.3s,baz=63,slow=15,SNR=22						
JOW				LR	LR	08 12 19.8	
	comp=Z,678nm,19.5s,baz=96,slow=42						
	108nm,0.8s						
JOW	**Kunigami**	**4.30**	**191**	Pn	**Pn**	**08 10 27.5**	**+1.0**
TJN	**Taejon**	**5.50**	**344**	Pn	**Pn**	**08 10 43.2**	**+0.2**
KSAR	**Wonju Array Be**	**6.45**	**351**		**Pn**	**08 10 56.4**	**+0.5**
KSRS	**Korea Array**	**6.45**	**351**	Pn	**Pn**	**08 10 55.9**	**-0.1**
	1.2nm,0.3s,baz=177,slow=14,SNR=34						
KSRS				Sn	**Sn**	**08 12 10.0**	**+0.9**
	1.5nm,0.3s,baz=168,slow=27,SNR=5.0						
KSRS				Lg	Lg	08 12 37.2	
	2.1nm,0.3s,baz=169,slow=32,SNR=4.5						
KSRS				LR	LR	08 13 22.2	
	comp=Z,641nm,19.7s,baz=170,slow=38						
	17nm,0.8s						
KS19	**Wonju Array Si**	**6.51**	**351**		**Pn**	**08 10 55.8**	**-1.0**
SSE	**Sheshan**	**6.87**	**272**	Pn	**Pn**	**08 11 01.0**	**-0.8**
SSE				Sn	**Sn**	**08 12 18.1**	**-1.3**
SSE				LR	LR		
	comp=N,1µm,15.3s						
SSE				LR	LR		
	comp=E,280nm,17.9s						
INU	**Inuyama**	**7.82**	**55**	Pn	**Pn**	**08 11 14.8**	**+0.1**
JGF	**Kuroka**	**8.18**	**54**	Pn	**Pn**	**08 11 18.9**	**-1.0**
NJ2	**Nanjing**	**8.88**	**279**	*e*P	**Pn**	**08 11 31.1**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				LR	LR		
	comp=N,650nm,9.0s						
NJ2				LR	LR		
	comp=E,1µm,9.3s						
NJ2				LR	LR		
	comp=Z,1µm,9.6s						
MJAR	**Matsushiro Arr**	**9.27**	**52**	Pn	**Pn**	**08 11 34.4**	**-0.3**
	0.1nm,0.3s,baz=235,slow=13,SNR=6.7						
	4.2nm,0.7s						
NACB	**Ninganchiao**	**9.62**	**226**	Pn	**Pn**	**08 11 40.9**	**+1.3**
TIA	**Tai'an**	**11.29**	**300**	*e*P	**Pn**	**08 11 59.6**	**-2.7**
TIA				LR	LR		
	comp=N,650nm,11.8s						
TIA				LR	LR		
	comp=E,530nm,11.0s						
TIA				LR	LR		
	comp=Z,720nm,11.8s						
JCJ	**Chichijima**	**12.03**	**106**	LR	LR	08 16 00.6	
	comp=Z,174nm,21.5s,baz=175,slow=33						
USRK	**Ussuriysk Ar.**	**13.29**	**9**	Pn	**P**	**08 12 37.0**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=191,slow=12,SNR=2.9						
USRK				LR	LR	08 17 17.8	
	comp=Z,185nm,20.5s,baz=178,slow=36						
HNS	**HongShan**	**13.54**	**302**	⇑P	**P**	**08 12 41.8**	**-0.3**
HNS				*e*S	**S**	**08 15 19.3**	**-6.9**
HNS				SS	SnSn	08 15 36.6	+21
HNS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HNS				LR	LR		
	comp=N,200nm,11.3s						
HNS				LR	LR		
	comp=E,580nm,11.7s						
HNS				LR	LR		
	comp=Z,530nm,11.3s						
BJI	**Beijing**	**13.86**	**314**	P	**Pn**	**08 12 37.1**	**-0.3**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI				LR	LR		
	comp=Z,770nm,18.2s						
BJI				LR	LR		
	comp=Z,600nm,17.2s						
BJI				LR	LR		
	comp=Z,670nm,13.3s						
LYN	**LuoYang**	**14.49**	**288**	*e*P	**Pn**	**08 12 46.4**	**+0.3**
LYN				pP	P	08 12 53.9	+1.2
LYN				S	**Sn**	**08 15 27.7**	**+1.5**
LYN				LR	LR		
	comp=Z,2µm,14.6s						
LYN				LR	LR		
	comp=Z,840nm,14.0s						
LYN				LR	LR		
	comp=Z,690nm,10.4s						
ERM	**Erimo**	**15.63**	**42**	Pn	**Pn**	**08 13 00.5**	**-0.7**
ERM				IAmb	IAmb	08 13 01.2	
	comp=Z,108nm,1.3s						
XLT	**XiLinHaoTe**	**16.47**	**325**	⇓*i*P	**P**	**08 13 17.4**	**+2.7**
XLT				pP	pP	08 13 19.5	-0.3
XLT				sP	sP	08 13 24.2	+2.1
XLT				S	**Sn**	**08 16 14.4**	**-0.1**
XLT				SS	**SnSn**	**08 16 38.0**	**+10**
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				pmax	pmax		
	comp=Z,130nm,4.6s						
XLT				LR	LR		
	comp=Z,690nm,9.9s						
XLT				LR	LR		
	comp=Z,530nm,17.1s						
ASAJ	**Asahikawa**	**16.77**	**35**	Pn	**Pn**	**08 13 16.4**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=167,slow=8.8,SNR=4.9						
ASAJ				LR	LR	08 19 41.8	
	comp=Z,134nm,19.4s,baz=134,slow=37						
	comp=Z,12nm,0.8s						
JKA	**Kamikawa-asahi**	**16.77**	**35**	P	**Pn**	**08 13 16.4**	**+0.6**
JKA	**Kamikawa-asahi**	**16.77**	**35**	IAmb	IAmb	08 13 33.8	
	comp=Z,133nm,1.5s						
HHC	**Hu-ho-hao-te**	**17.26**	**309**	*e*P	**P**	**08 13 23.5**	**0.0**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,6.0s						
HHC				LR	LR		
	comp=Z,750nm,8.6s						
HHC				LR	LR		
	comp=Z,1µm,9.2s						
HHC				LR	LR		
	comp=Z,1µm,9.5s						
XAN	**Xi'an**	**17.35**	**285**	P	**P**	**08 13 25.7**	**+1.3**
XAN				pP	pP	08 13 30.4	+0.9
XAN				S	**S**	**08 16 41.0**	**-3.2**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				LR	LR		
	comp=Z,730nm,10.2s						
XAN				LR	LR		
	comp=Z,980nm,11.3s						
XAN				LR	LR		
	comp=Z,990nm,10.7s						
BTO	**Baotou**	**18.19**	**307**	*e*P	**P**	**08 13 35.8**	**+2.0**
BTO				S	**S**	**08 17 01.2**	**-0.2**
BTO				LR	LR		
	comp=Z,3µm,15.7s						
BTO				LR	LR		
	comp=Z,2µm,17.1s						
KLR	**Kul'dur**	**18.24**	**5**	P	**P**	**08 13 35.5**	**+1.4**
	comp=Z,17nm,0.9s,baz=193,slow=8.9,SNR=31						
KLR				LR	LR	08 20 04.0	
	comp=Z,91nm,21.5s,baz=324,slow=35						
GYA	**Guiyang**	**20.27**	**263**	⇓P	Pn	08 13 59.4	+0.7
GYA				S	Sn	08 17 45.0	-1.6
GYA				pmax	pmax		
	comp=Z,17nm,0.7s						
GYA				LR	LR		
	comp=Z,360nm,13.8s						
QIZ	**Qiongzhong**	**21.20**	**240**	P	**P**	**08 14 08.2**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,190nm,3.7s						
QIZ				LR	LR		
	comp=Z,400nm,14.0s						
QIZ				LR	LR		
	comp=Z,350nm,9.6s						
QIZ				LR	LR		
	comp=Z,290nm,10.4s						
LZH	**Lanzhou**	**21.68**	**290**	*e*P	**P**	**08 14 12.2**	**+0.3**
LZH				pP	pP	08 14 17.1	+0.1
LZH				sP	sP	08 14 20.3	+0.9
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
LZH				LR	LR		
	comp=Z,250nm,14.4s						
LZH				LR	LR		
	comp=Z,550nm,15.2s						
CD2	**Chengdu**	**21.80**	**276**	P	**P**	**08 14 13.5**	**+0.4**
CD2				S	**S**	**08 18 14.9**	**+1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,780nm,9.4s						
CD2				LR	LR		
	comp=Z,1µm,9.4s						
GUMO	**Guam**	**22.60**	**137**	LR	LR	08 21 11.2	
	comp=Z,74nm,19.6s,baz=8.0,slow=32						
ULN	**Ulaanbaatar**	**23.82**	**321**	P	**P**	**08 14 34.8**	**+0.9**
KMI	**Kunming**	**24.05**	**262**	⇑P	**P**	**08 14 39.0**	**+2.6**
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
KMI				LR	LR		
	comp=Z,370nm,12.2s						
KMI				LR	LR		
	comp=Z,380nm,11.4s						
KMI				LR	LR		
	comp=Z,390nm,13.1s						
DAV	**Davao City (W)**	**24.12**	**189**	LR	LR	08 26 15.7	
	comp=Z,121nm,18.1s,baz=332,slow=42						
SONM	**Songino Array**	**24.15**	**320**	P	**P**	**08 14 37.8**	**+0.7**
	comp=Z,4.3nm,1.1s,baz=120,slow=8.8,SNR=6.3						
SONM				LR	LR	08 24 42.0	
	comp=Z,334nm,20.2s,baz=132,slow=38						
	comp=Z,4.3nm,1.1s						
SONM	**Songino Array**	**24.15**	**320**	P	**P**	**08 14 38.1**	**+1.0**
PZH	**PanZhiHua**	**24.46**	**266**	P	**P**	**08 14 43.6**	**+3.6**
PZH				S	**S**	**08 19 00.7**	**+1.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,3.6s						
PZH				LR	LR		
	comp=Z,520nm,15.0s						
PZH				LR	LR		
	comp=Z,500nm,15.5s						
PZH				LR	LR		
	comp=Z,410nm,14.2s						
GTA	**Gaotai**	**25.32**	**297**	*e*P	**P**	**08 14 48.2**	**+0.5**
GTA				pP	pP	08 14 52.6	-0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,76nm,6.4s						
GTA				LR	LR		
	comp=Z,490nm,17.5s						
GTA				LR	LR		
	comp=Z,330nm,15.1s						
GTA				LR	LR		
	comp=Z,470nm,12.0s						
GOMU	**GeErMu**	**28.98**	**289**	P	**P**	**08 15 21.3**	**+0.4**
GOMU				S	**S**	**08 20 06.9**	**-4.5**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,67nm,6.7s						
GOMU				LR	LR		
	comp=Z,310nm,15.5s						
GOMU				LR	LR		
	comp=Z,150nm,15.5s						
GOMU				LR	LR		
	comp=Z,100nm,15.2s						
CHTO	**Chiang Mai**	**29.92**	**253**	P	**P**	**08 15 29.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**30.10**	**252**	P	**P**	**08 15 32.6**	**+2.0**
	comp=Z,1.4nm,0.3s,baz=39,slow=8.8,SNR=7.0						
CMAR				LR	LR	08 28 51.0	
	comp=Z,93nm,19.9s,baz=55,slow=39						
CMAR	**Chiang Mai Arr**	**30.10**	**252**	P	**P**	**08 15 30.8**	**+0.2**
PETK	**Petropavlovsk-**	**30.19**	**35**	LR	LR	08 27 54.8	
	comp=Z,75nm,18.7s,baz=226,slow=37						
SIJI	**Sorong**	**31.83**	**176**	LR	LR	08 28 02.7	
	comp=Z,114nm,19.5s,baz=34,slow=35						
MA2	**Magadan**	**31.98**	**21**	LR	LR	08 28 08.0	
	comp=Z,34nm,18.4s,baz=227,slow=35						
MA2	**Magadan**	**31.98**	**21**	P	**P**	**08 15 46.9**	**+0.2**
MA2				IAmb	IAmb	08 15 48.8	
	comp=Z,7.3nm,0.9s						
SBUM	**Sibu**	**32.68**	**213**	P	**P**	**08 15 52.9**	**-0.3**
KSM	**Kuching**	**34.44**	**215**	P	**P**	**08 16 09.0**	**+0.4**
KSM				IAmb	IAmb	08 16 14.2	
	comp=Z,7.3nm,0.8s						
WMQ	**Urumqi**	**34.96**	**303**	*e*P	**P**	**08 16 11.2**	**-1.8**
WMQ				pP	pP	08 16 19.4	+0.9
WMQ				pmax	pmax		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=Z,660nm,19.9s						
WMQ				LR	LR		
	comp=Z,280nm,16.9s						
WMQ				LR	LR		
	comp=Z,170nm,15.5s						
SEY	**Seymchan**	**35.16**	**18**	LR	LR	08 29 50.0	
	comp=Z,142nm,20.8s,baz=280,slow=35						
ZAA0	**Zalesovo Array**	**39.03**	**319**	P	**P**	**08 16 47.9**	**+0.6**
ZALV	**Zalesovo Beam**	**39.03**	**319**	P	**P**	**08 16 46.1**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=90,slow=5.8,SNR=2.0						
ZALV				PcP	**PcP**	**08 18 56.9**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=77,slow=6.5,SNR=4.2						
ZALV				LR	LR	08 33 55.3	
	comp=Z,82nm,21.8s,baz=81,slow=38						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**39.03**	**319**	P	**P**	**08 16 47.9**	**+0.6**
MK31	**Makanchi Array**	**39.11**	**307**	P	**P**	**08 16 49.7**	**+1.6**
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**08 16 47.6**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=96,slow=10,SNR=13						
MKAR				PcP	**PcP**	**08 18 57.2**	**-0.4**
	comp=Z,2.0nm,1.0s,baz=77,slow=3.3,SNR=4.9						
MKAR				LR	LR	08 32 18.1	
	comp=Z,86nm,18.9s,baz=86,slow=35						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**08 16 49.9**	**+1.7**
MAKZ	**Makanchi**	**39.33**	**307**	P	**P**	**08 16 50.1**	**+0.2**
KURK	**Kurchatov**	**42.02**	**313**	P	**P**	**08 17 13.4**	**+1.3**
KURBB	**Kurchatov Arra**	**42.07**	**313**	LR	LR	08 35 18.7	
	comp=Z,177nm,21.3s,baz=68,slow=37						
TARG	**Taragay, Kyrgy**	**42.16**	**299**	P	**P**	**08 17 14.9**	**+1.1**
BILL	**Bilibino**	**42.83**	**19**	P	**P**	**08 17 18.9**	**+0.5**
PMG	**Port Moresby**	**43.78**	**154**	LR	LR	08 32 33.1	
	comp=Z,96nm,20.5s,baz=320,slow=32						
AAK	**Ala-Archa**	**44.56**	**301**	LR	LR	08 38 09.4	
	comp=Z,115nm,20.1s,baz=106,slow=39						
NRIK	**Noril'sk**	**44.95**	**340**	P	**P**	**08 17 34.6**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=118,slow=10,SNR=4.8						
NRIK				LR	LR	08 37 52.1	
	comp=Z,99nm,20.9s,baz=106,slow=38						
	comp=Z,2.0nm,0.5s						
NRIK	**Noril'sk**	**44.95**	**340**	P	**P**	**08 17 35.2**	**-0.2**
NRIK				IAmb	IAmb	08 17 48.9	
	comp=Z,12nm,1.4s						
KNRA	**Kununurra**	**46.48**	**181**	P	**P**	**08 17 47.9**	**-0.2**
BRVK	**Borovoye**	**47.40**	**315**	P	**P**	**08 17 54.9**	**-0.1**
KK31	**Karatay Array**	**47.44**	**302**	P	**P**	**08 17 55.3**	**-0.2**
KK31				IAmb	IAmb	08 18 00.5	
	comp=Z,7.8nm,1.1s						
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**08 17 55.0**	**-0.5**
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**08 17 55.2**	**-0.3**
KKAR				IAmb	IAmb	08 18 00.5	
	comp=Z,7.8nm,1.1s						
WRAB	**Tennant Creek**	**50.95**	**174**	P	**P**	**08 18 22.4**	**-0.1**
WRAB				IAmb	IAmb	08 18 24.2	
	comp=Z,16nm,1.4s						
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**08 18 44.7**	**-0.5**
ABKAR				IAmb	IAmb	08 18 49.8	
	comp=Z,4.9nm,0.7s						
ARU	**Arti**	**54.19**	**320**	LR	LR	08 42 44.1	
	comp=Z,113nm,20.4s,baz=74,slow=37						
ARU	**Arti**	**54.19**	**320**	P	**P**	**08 18 45.4**	**-0.7**
ARU				IAmb	IAmb	08 18 51.0	
	comp=Z,9.9nm,1.1s						
ASAR	**Alice Springs**	**54.62**	**175**	P	**P**	**08 18 49.1**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=5.0,slow=14,SNR=20						
	comp=Z,1.6nm,0.8s						
AKTO	**Aktyubinsk**	**55.12**	**312**	LR	LR	08 44 10.1	
	comp=Z,214nm,18.4s,baz=82,slow=38						
IMAR	**Indian Mountai**	**56.82**	**28**	P	**P**	**08 19 04.8**	**0.0**
K20K	**Telida**	**56.82**	**32**	P	**P**	**08 19 05.1**	**+0.2**
K20K				IAmb	IAmb	08 19 06.6	
	comp=Z,4.9nm,0.8s						
CAST	**Castle Rocks**	**57.71**	**31**	P	**P**	**08 19 11.8**	**+0.6**
PPLA	**Purkeypile**	**57.71**	**32**	P	**P**	**08 19 12.0**	**+0.6**
PPLA				IAmb	IAmb	08 19 17.0	
	comp=Z,15nm,1.3s						
BPAW	**Bear Paw Mtn.**	**58.13**	**31**	P	**P**	**08 19 14.7**	**+0.6**
BPAW				IAmb	IAmb	08 19 20.2	
	comp=Z,8.6nm,1.3s						
KDAK	**Kodiak Island**	**58.16**	**38**	LR	LR	08 44 45.4	
	comp=Z,46nm,21.2s,baz=240,slow=37						
KDAK	**Kodiak Island**	**58.16**	**38**	P	**P**	**08 19 14.0**	**-0.4**
H23K	**Yukon River**	**58.55**	**28**	P	**P**	**08 19 18.3**	**+1.2**
H23K				IAmb	IAmb	08 19 19.4	
	comp=Z,11nm,0.9s						
KIRV	**Kirov**	**58.85**	**323**	LR	LR	08 44 51.8	
	comp=Z,73nm,20.4s,baz=67,slow=36						
NEA2	**Nenana**	**58.90**	**30**	P	**P**	**08 19 20.0**	**+0.5**
NEA2				IAmb	IAmb	08 19 21.0	
	comp=Z,11nm,1.0s						
MDM	**Murphy Dome**	**59.20**	**29**	P	**P**	**08 19 21.7**	**+0.1**
H24K	**Noodor Dome**	**59.23**	**28**	P	**P**	**08 19 22.3**	**+0.5**
H24K				IAmb	IAmb	08 19 23.9	
	comp=Z,6.7nm,1.1s						
WRH	**Wood River Hil**	**59.33**	**30**	P	**P**	**08 19 22.3**	**-0.2**
POKR	**Poker Plat Res**	**59.52**	**29**	P	**P**	**08 19 24.7**	**+1.0**
KNK	**Knik Glacier**	**59.65**	**34**	P	**P**	**08 19 25.1**	**+0.3**
ILAR	**Eielson Array**	**59.80**	**30**	P	**P**	**08 19 25.1**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=272,slow=6.1,SNR=23						
ILAR				LR	LR	08 47 56.9	
	comp=Z,38nm,18.3s,baz=352,slow=39						
	comp=Z,1.8nm,0.7s						
SCM	**Sheep Creek Mo**	**60.11**	**33**	P	**P**	**08 19 28.1**	**+0.1**
SCM				IAmb	IAmb	08 19 56.0	
	comp=Z,13nm,1.2s						
BMAR	**Burnt Mountain**	**60.29**	**26**	P	**P**	**08 19 30.3**	**+1.2**
BELG	**Belogornoye**	**61.12**	**316**	LR	LR	08 48 15.1	
	comp=Z,118nm,18.2s,baz=222,slow=38						
SCRK	**Sand Creek**	**61.19**	**30**	P	**P**	**08 19 34.6**	**-0.8**
SCRK				IAmb	IAmb	08 19 40.5	
	comp=Z,7.2nm,1.1s						
BMRM	**Bremner River**	**61.57**	**34**	P	**P**	**08 19 37.2**	**-0.7**
GLB	**Gilahina Butte**	**61.83**	**33**	P	**P**	**08 19 39.9**	**+0.3**
GLB				IAmb	IAmb	08 19 43.3	
	comp=Z,12nm,1.3s						
M26K	**Nabesna, AK**	**61.98**	**32**	P	**P**	**08 19 41.0**	**+0.5**
M26K				IAmb	IAmb	08 19 42.1	
	comp=Z,8.5nm,0.8s						
L27K	**Beaver Creek,**	**62.34**	**31**	P	**P**	**08 19 43.5**	**+0.5**
L27K				IAmb	IAmb	08 19 44.3	
	comp=Z,5.5nm,0.8s						
BCAR	**Beaver Creek A**	**62.36**	**31**	P	**P**	**08 19 43.5**	**+0.3**
STKA	**Stephens Creek**	**63.70**	**168**	P	**P**	**08 19 51.6**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=334,slow=12,SNR=4.0						
	comp=Z,2.4nm,0.8s						
INK	**Inuvik**	**64.13**	**24**	P	**P**	**08 19 54.8**	**+0.2**
SPITS	**Spitsbergen Ar**	**64.28**	**348**	LR	LR	08 49 34.2	
	comp=Z,54nm,20.4s,baz=265,slow=38						
M30M	**Minto, Yukon**	**64.69**	**31**	P	**P**	**08 19 59.6**	**+1.1**
M30M				IAmb	IAmb	08 20 06.5	
	comp=Z,5.7nm,1.1s						
HYT	**Haines Junctio**	**64.94**	**33**	P	**P**	**08 20 01.2**	**+0.9**
HYT				IAmb	IAmb	08 20 01.8	
	comp=Z,6.5nm,0.9s						
A36M	**Sachs Harbour**	**65.39**	**19**	P	**P**	**08 20 02.9**	**+0.1**
ARCES	**ARCESS Array B**	**65.83**	**338**	P	**P**	**08 20 05.1**	**-0.7**
	comp=Z,3.1nm,1.0s,baz=35,slow=6.5,SNR=6.6						
ARCES				LR	LR	08 53 13.1	
	comp=Z,94nm,18.8s,baz=86,slow=40						
	comp=Z,3.1nm,1.0s						
ARCES	**ARCESS Array B**	**65.83**	**338**	IAmb	IAmb	08 20 20.0	
	comp=Z,12nm,1.5s						
KBZ	**Khabaz**	**66.80**	**308**	P	**P**	**08 20 13.1**	**+0.7**
	comp=Z,7.6nm,1.0s,baz=62,slow=8.3,SNR=7.6						
	comp=Z,7.6nm,1.0s						
GNI	**Garni**	**66.83**	**304**	LR	LR	08 50 41.2	
	comp=Z,56nm,21.3s,baz=70,slow=37						
C36M	**Paulatuk**	**66.89**	**22**	P	**P**	**08 20 12.4**	**-0.1**
C36M				IAmb	IAmb	08 20 13.0	
	comp=Z,7.7nm,0.8s						
EUNU	**Eureka**	**67.39**	**6**	P	**P**	**08 20 15.7**	**+0.1**
EUNU				IAmb	IAmb	08 20 16.6	
	comp=Z,4.2nm,0.8s						
FINES	**FINESS Array B**	**69.09**	**330**	P	**P**	**08 20 25.8**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=77,slow=6.1,SNR=9.7						
FINES				LR	LR	08 52 50.9	
	comp=Z,66nm,18.6s,baz=48,slow=38						
	comp=Z,1.8nm,0.7s						
RES	**Resolute Bay**	**70.65**	**11**	LR	LR	08 54 42.2	
	comp=Z,20nm,19.0s,baz=37,slow=39						
RES	**Resolute Bay**	**70.65**	**11**	P	**P**	**08 20 35.9**	**+0.1**
RES				IAmb	IAmb	08 20 37.0	
	comp=Z,5.4nm,0.8s						
AKASG	**Malin Array Be**	**72.43**	**319**	P	**P**	**08 20 46.9**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=62,slow=6.3,SNR=1.2						
AKASG				LR	LR	08 54 22.2	
	comp=Z,114nm,19.9s,baz=114,slow=37						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**73.80**	**26**	P	**P**	**08 20 55.0**	**+0.2**
	comp=Z,3.1nm,1.0s,baz=299,slow=5.6,SNR=20						
	comp=Z,3.1nm,1.0s						
BRTR	**Keskin Array B**	**74.76**	**307**	P	**P**	**08 21 01.2**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=93,slow=6.2,SNR=17						
BRTR				LR	LR	08 57 39.2	
	comp=Z,33nm,18.2s,baz=52,slow=39						
	comp=Z,4.9nm,0.9s						
HFS	**Hagfors**	**74.94**	**332**	LR	LR	08 56 19.8	
	comp=Z,57nm,18.8s,baz=44,slow=38						
NB2	**NORSAR Subarra**	**75.36**	**334**	P	**P**	**08 21 02.6**	**-1.4**
	comp=Z,3.6nm,0.9s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**75.36**	**334**	P	**P**	**08 21 02.8**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=50,slow=5.6,SNR=8.3						
NOA				LR	LR	08 58 00.6	
	comp=Z,37nm,19.4s,baz=25,slow=39						
	comp=Z,2.2nm,0.8s						
SUMG	**Summit**	**76.28**	**356**	*i* P	**P**	**08 21 06.6**	**-2.9**
MLR	**Muntele Rosu**	**76.90**	**315**	LR	LR	08 59 53.9	
	comp=Z,69nm,18.1s,baz=51,slow=40						
VRAC	**Vranov**	**80.07**	**322**	LR	LR	09 00 17.0	
	comp=Z,62nm,20.2s,baz=70,slow=38						
CLL	**Collm**	**80.67**	**325**	*i* P	**P**	**08 21 33.6**	**0.0**
	comp=Z,13nm,1.7s						
CLL				*i* Pmax		08 21 37.8	
	comp=Z,26nm,1.9s						
CLL				*i* (sP)	**sP**	**08 21 42.2**	**+0.5**
CLL				*e*S	**S**	**08 31 48.0**	**+7.9**
CLL				Lm	MLR	09 00 00.0	
	comp=N,100nm,19.5s						
CLL				Lm	MLR	09 00 00.0	
	comp=E,100nm,19.4s						
CLL				Lm	MLR	09 00 00.0	
	comp=Z,200nm,18.4s						
RONA	**Rosalia, Austr**	**81.19**	**321**	*e*P	**P**	**08 21 36.7**	**+0.1**
	comp=Z,4.6nm,1.2s						
CONA	**Conrad Observa**	**81.28**	**321**	*e*P	**P**	**08 21 38.1**	**+1.0**
	comp=Z,5.4nm,1.2s						
BORG	**Borgarnes**	**81.75**	**348**	LR	LR	08 59 59.4	
	comp=Z,20nm,18.1s,baz=337,slow=37						
GERES	**GERESS Array B**	**81.86**	**323**	P	**P**	**08 21 39.9**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=77,slow=2.9,SNR=5.8						
GERES				LR	LR	09 00 43.4	
	comp=Z,46nm,18.7s,baz=64,slow=38						
	comp=Z,0.7nm,0.6s						
MOA	**Molln**	**82.18**	**322**	*e*P	**P**	**08 21 42.2**	**+0.5**
	comp=Z,3.9nm,1.6s						

SFJD	Kangerlussuaq	82.24	360	LR	LR	08 59 30.1	
	comp=Z,47nm,18.5s,baz=352,slow=37						
OBKA	Obir	82.86	321	*i* P	P	08 21 45.4	0.0
	comp=Z,2.0nm,1.1s						
IDI	Anoyia	83.00	307	LR	LR	09 03 52.0	
	comp=Z,32nm,18.2s,baz=98,slow=39						
KBA	Koelnbreinsper	83.15	322	*e*P	P	08 21 47.4	+0.4
	comp=Z,4.8nm,1.3s						
ABTA	Abfaltersbach	83.80	322	*e*P	P	08 21 49.8	-0.4
	comp=Z,5.0nm,1.1s						
WTTA	Wattenberg	83.93	323	*i* P	P	08 21 50.4	-0.7
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	84.16	323	*i* P	P	08 21 52.0	-0.1
	comp=Z,3.6nm,0.9s						
RETA	Reutte	84.24	323	*i* P	P	08 21 52.7	+0.3
	comp=Z,1.7nm,0.5s						
FRB	Frobisher Bay	84.46	8	LR	LR	08 59 29.5	
	comp=Z,45nm,21.2s,baz=345,slow=36						
FETA	Feichten	84.56	323	*e*P	P	08 21 54.2	0.0
	comp=Z,3.2nm,0.9s						
EKA	Eskdalemuir Ar	84.77	335	LR	LR	09 02 30.6	
	comp=Z,59nm,19.2s,baz=356,slow=38						
DAVA	Damuels	84.83	323	*e*P	P	08 21 55.2	-0.4
	comp=Z,7.6nm,1.2s						
DAVOX	Davos/Dischmat	85.16	323	LR	LR	09 01 45.0	
	comp=Z,84nm,18.1s,baz=81,slow=37						
KVN	Kaiserville	86.31	46	P	P	08 22 03.3	+0.2
KVN				IAmb	IAmb	08 22 04.8	
	comp=Z,7.7nm,1.0s						
NVAR	Mina Array Bea	86.56	47	P	P	08 22 05.1	+0.7
	comp=Z,2.8nm,0.8s,baz=290,slow=4.9,SNR=17						
	comp=Z,2.8nm,0.8s						
RLMT	Red Lodge	87.42	37	P	P	08 22 09.5	+1.0
PDAR	Pinedale Array	88.87	39	P	P	08 22 15.6	+0.1
	comp=Z,2.0nm,0.8s,baz=314,slow=1.2,SNR=18						
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	88.87	39	P	P	08 22 15.4	0.0
ULM	Lac du Bonnet	89.73	27	P	P	08 22 18.8	-0.2
	comp=Z,15nm,0.8s,baz=326,slow=4.8,SNR=16						
ULM	Lac du Bonnet	89.73	27	P	P	08 22 18.9	0.0
P18A	Preston Nutter	90.61	42	P	P	08 22 24.5	+0.8
SRU	San Rafael Swe	90.80	42	P	P	08 22 25.3	+0.9
SRU				IAmb	IAmb	08 22 26.1	
	comp=Z,5.7nm,0.8s						
SCHQ	Schefferville	93.34	9	P	P	08 22 35.7	+0.1
	comp=Z,2.1nm,1.0s,baz=32,slow=9.5,SNR=2.1						
SCHQ				LR	LR	09 10 11.3	
	comp=Z,33nm,18.2s,baz=86,slow=39						
	comp=Z,2.1nm,1.0s						
ESDC	Sonseca Array	97.26	325	LR	LR	09 09 44.6	
	comp=Z,55nm,20.5s,baz=40,slow=37						
TXAR	Lajitas Array	101.65	45	P	Pdif	08 23 14.5	+0.7
	comp=Z,0.4nm,0.8s,baz=317,slow=3.8,SNR=5.1						
LPAZ	La Paz	158.40	51	PKPab	PKPab	08 29 52.9	-1.0
	comp=Z,1.7nm,0.8s,baz=12,slow=6.5,SNR=6.8						

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*NOU **07** 08:15:50.4, 38°.28S×174°.38E, h71km, MLv3.6/5, North Island, New Zealand*

*WEL **07** 08:15:55.1±0.4, 39°S±3°×17°5E±°, h15km±5km, M3.1/24, ML3.4/24, MLv3.1/24, Error ellipse: s-maj=0.0km s-min=0.0km az=158.5*

ISC 07 08:15:55.0±1.2**, 38°.87S**±0°.02×**174°.69E**±0°.02**, h12**km±13km**, n111, σ0s.77**/118**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.26	167	P	Pb	08 16 01.8	+0.2
VRZ				S	Sb	08 16 06.4	+0.3
MHEZ	Mangahewa	0.35	234	P	Pb	08 16 03.6	+0.5
MHEZ				S	Sb	08 16 09.7	+1.1
HIZ	Hauiti	0.38	21	P	Pb	08 16 04.3	+0.7
HIZ				S	Sb	08 16 10.5	+1.1
HIZ	Hauiti	0.38	21	P	Pb	08 16 04.3	+0.7
DREZ	Durham Road	0.49	229	P	Pb	08 16 05.7	+0.1
DREZ				S	Sb	08 16 13.7	+1.0
NEZ	North Egmont	0.61	229	P	Pb	08 16 07.8	+0.2
NEZ				S	Sb	08 16 16.8	+0.6
LREZ	Lake Rotokare	0.63	200	P	Pg	08 16 07.6	+0.4
PKE	Pukeiti	0.63	239	P	Pb	08 16 08.2	+0.2
PKE				S	Sb	08 16 17.2	+0.4
PKVZ	Pokaka	0.67	129	P	Pg	08 16 08.1	+0.1
KHEZ	Kahui Hut	0.67	231	P	Pb	08 16 08.7	+0.1
WTVZ	West Tongariro	0.75	110	P	Pg	08 16 09.7	+0.2
NBEZ	Newall Road No	0.75	238	P	Pb	08 16 10.0	0.0
NNVZ	North Ngauruho	0.77	110	P	Pg	08 16 10.1	+0.1
NGZ	Ngauruhoe	0.78	114	P	Pg	08 16 10.1	0.0
FWVZ	Far West T-bar	0.78	120	P	Pg	08 16 10.1	0.0
KATZ	Kakaramea	0.80	98	P	Pb	08 16 10.7	-0.1
TRVZ	Turoa	0.80	123	P	Pg	08 16 10.3	-0.1
TRVZ				S	Sg	08 16 21.1	+0.2
MTVZ	Mangateitei	0.80	130	P	Pg	08 16 10.1	-0.4
NTVZ	North Tongarir	0.81	107	P	Pg	08 16 10.7	+0.1
SNVZ	South Ngauruho	0.81	113	P	Pg	08 16 10.7	+0.1
WHVZ	Whangaehu Hut	0.82	121	P	Pg	08 16 11.0	+0.2
OTVZ	Oturere	0.82	111	P	Pg	08 16 10.9	+0.1
NMEZ	Namu Road	0.83	229	P	Pg	08 16 11.1	0.0
TMVZ	Te Maari	0.83	108	P	Pg	08 16 11.2	+0.1
WATZ	Wairara	0.83	79	P	Pb	08 16 11.4	0.0
ETVZ	East Tongariro	0.84	109	P	Pb	08 16 11.5	-0.1
WNVZ	Wahianoa	0.84	123	P	Pg	08 16 11.2	-0.2
RATZ	Rangitukua	0.85	90	P	Pb	08 16 11.8	+0.1
TUVZ	Tukino	0.85	118	P	Pb	08 16 11.9	+0.1
TLZ	Tolley Road	0.86	51	P	Pg	08 16 11.6	0.0
WAZ	Wanganui	0.92	165	P	Pg	08 16 12.4	-0.3
RITZ	Rihia Road	0.92	97	P	Pb	08 16 13.2	+0.3
KUTZ	Kaahu Road	0.97	67	P	Pb	08 16 13.6	0.0
MOVZ	Moawhango	0.99	123	P	Pg	08 16 13.5	-0.6
WHTZ	Whakaora	1.01	79	P	Pb	08 16 14.8	+0.3
WPRZ	Whakapapatarin	1.21	74	P	Pb	08 16 16.9	-0.8
GRRZ	Galatos Road	1.23	66	P	Pn	08 16 17.3	-0.7
BHHZ	Black Hill Sta	1.24	121	P	Pn	08 16 17.2	-0.9
TOZ	Tahuroa Road	1.30	30	P	Pn	08 16 18.1	-0.8
HRRZ	Handcock Road	1.34	70	P	Pg	08 16 21.1	+0.4
HSRZ	Hossack Road	1.34	66	P	Pn	08 16 19.1	-0.4
MRHZ	Matea Rd	1.35	89	P	Pn	08 16 18.8	-0.9
UTU	Utuhina	1.37	60	P	Pn	08 16 19.3	-0.6
NGRZ	Ngongotaha	1.41	57	P	Pn	08 16 19.8	-0.6
KMRZ	Kaimai	1.42	44	P	Pn	08 16 20.1	-0.5
OHWZ	Ohakea	1.42	160	P	Pn	08 16 20.7	+0.1
BKZ	Black Stump Fm	1.44	102	P	Pn	08 16 20.5	-0.5
BKZ	Black Stump Fm	1.44	102	P	Pn	08 16 20.4	-0.5
KWHZ	Kaweka Forest	1.46	113	P	Pn	08 16 21.6	+0.4
KARZ	Kaharoa	1.49	56	P	Pg	08 16 23.5	-0.1
KRHZ	Kereru	1.52	121	P	Pb	08 16 23.5	+0.4
TSZ	Takapari Road	1.55	141	P	Pn	08 16 22.1	-0.2
PNHZ	Pukenui	1.57	132	P	Pn	08 16 23.1	+0.4
MCHZ	McNeill Hill	1.67	111	P	Pg	08 16 26.6	-0.3
NMHZ	Naumai	1.67	99	P	Pb	08 16 25.7	+0.1
MUGZ	Murupara	1.68	77	P	Pb	08 16 25.8	+0.1
TGRZ	Tauranga	1.68	48	P	Pn	08 16 23.4	-0.7
MTHZ	Maungataniwha	1.68	90	P	Pb	08 16 25.9	0.0
POWZ	Post Office Ro	1.74	152	P	Pn	08 16 25.3	+0.4
OPRZ	Ohinepanea	1.79	56	P	Pn	08 16 24.8	-0.8
AWAZ	Awhitu Peninsu	1.80	359	P	Pn	08 16 25.4	-0.4
MKAZ	Moumakai	1.80	12	P	Pn	08 16 25.5	-0.3
WPHZ	Waipukurau	1.81	132	P	Pb	08 16 27.9	-0.1
RTZ	Ruatahuna	1.81	83	P	Pb	08 16 27.6	-0.5
DVHZ	Dannevirke	1.83	142	P	Pb	08 16 27.6	-0.8
ARHZ	Aropaoanui	1.84	103	P	Pb	08 16 28.4	-0.2
RAHZ	Arahi	1.87	92	P	Pb	08 16 29.8	+0.6
MRZ	Mangatainoka R	1.92	159	P	Pn	08 16 27.9	+0.5
ETAZ	East Tamaki Re	1.92	6	P	Pn	08 16 27.1	-0.4
WTAZ	Waiatarua	1.93	357	P	Pn	08 16 28.6	+0.9
PRWZ	Pori Road	1.96	150	P	Pb	08 16 29.4	-1.1
OGWZ	Otaki Gorge	1.98	169	P	Pn	08 16 28.9	+0.7
URZ	Urewera	2.00	73	P	Pb	08 16 30.8	-0.4
KIW	Kapiti Island	2.00	175	P	Pn	08 16 28.8	+0.3
DUWZ	D'Urville Isla	2.02	197	P	Pn	08 16 28.6	-0.2
PXZ	Pawanui	2.05	125	P	Pb	08 16 32.8	+0.8
RVAZ	Riverhead Bore	2.10	358	P	Pn	08 16 29.4	-0.4
MBAZ	Motutapu North	2.10	5	P	Pn	08 16 29.6	-0.3
WIAZ	Waiheke Island	2.10	10	P	Pn	08 16 29.7	-0.3
TIWZ	Tintock	2.12	154	P	Pn	08 16 31.5	+1.3
HOWZ	Holdsworth Sta	2.12	163	P	Pn	08 16 31.7	+1.4
BFZ	Birch Farm	2.17	147	P	Pn	08 16 31.9	+0.9
BFZ	Birch Farm	2.17	147	P	Pb	08 16 32.9	-1.3
CAW	Cannon Point	2.26	173	P	Pn	08 16 32.6	+0.5
KUZ	Kuaotunu	2.27	21	P	Pn	08 16 31.5	-0.8
MWZ	Matawai	2.29	77	P	Pb	08 16 35.4	-0.9
TCW	Tory Channel	2.36	188	P	Pn	08 16 33.9	+0.4
MTW	Mount Morrison	2.37	165	P	Pn	08 16 35.4	+1.8
TMWZ	Te Maipa	2.42	158	P	Pb	08 16 37.0	-1.4
RUGZ	Raukumara Rang	2.52	70	P	Pb	08 16 38.7	-1.5
TKNZ	Takaka Hill	2.54	211	P	Pn	08 16 36.2	+0.2
BHW	Baring Head	2.54	177	P	Pn	08 16 36.8	+0.8
NNZ	Nelson	2.55	203	P	Pn	08 16 35.4	-0.7
QRZ	Quartz Range	2.56	220	P	Pn	08 16 34.6	-1.8
QRZ	Quartz Range	2.56	220	P	Pn	08 16 34.5	-1.8
PAWZ	Paruwai Farm	2.57	167	P	Pb	08 16 41.7	+0.7
MSWZ	Moikau Station	2.58	171	P	Pn	08 16 37.4	+0.9
TRWZ	Traveller	2.64	163	P	Pg	08 16 44.1	-1.5
HAZ	Te Kaha	2.68	66	P	Pb	08 16 40.8	-2.0
PLWZ	Palliser	2.73	171	P	Pb	08 16 43.2	-0.6
BSWZ	Blackbirch Sta	2.91	192	P	Pn	08 16 43.3	+2.2
MRNZ	Matariki Terra	2.93	210	P	Pn	08 16 40.4	-0.9
WMGZ	Waiomatatini S	3.11	72	P	Pn	08 16 46.4	+2.6
THZ	Tophouse	3.19	205	P	Pn	08 16 45.1	+0.1
DSZ	Denniston Nort	3.62	217	P	Pn	08 16 49.6	-1.2
KHZ	Kahutara	3.65	193	P	Pn	08 16 51.6	+0.4
KHZ	Kahutara	3.65	193	P	Pn	08 16 51.6	+0.4
OUZ	Omahuta	3.74	346	P	Pn	08 16 52.0	-0.5
LTZ	Lake Taylor	4.32	204	P	Pn	08 17 00.3	-0.1
OKCZ	Okains Bay	5.00	194	P	Pn	08 17 08.9	-0.9
TMZ	Timaru	6.16	205	P	Pn	08 17 24.3	-1.4

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*IDC **07** 08:29:48.8±0.8, 18°.70N×67°.06W, h0km, mb3.7/10, mbtmp3.7/10, MS3.0/3, Error ellipse: s-maj=26.4km s-min=8.5km az=41.0*

*OSPL **07** 08:29:49.3±2.0, 18°.34N×66°.82W, h14km±8km, ML4.0*

*NEIC **07** 08:29:50.9±2.0, 18°.29N±0°.04×67°.19W±0°.03, h22km±3km, Error ellipse: s-maj=5.1km s-min=4.7km az=166.0*

*RSPR **07** 08:29:51.1, 18°.31N×67°.25W, h14km±1km, MD3.7/19*

ISC 07 08:29:49.5±0.6**, 18°.29N**±0°.03×**67°.28W**±0°.02**, h23**km±4km**, n158, σ1s.66**/153**, mb3.9**/13**, 9C-12D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRSN	Puerto Rico Se	0.15	120		Pb	08 29 55.2	+0.8
IDE	Isla Desecheo	0.20	297	⇑*e*P	Pb	08 29 56.1	+1.0
LSP	Las Mesas	0.22	122	⇑*e*P	Pb	08 29 56.1	+0.8
AGPR	Aguadilla, PR	0.24	43	⇑*e*P	Pb	08 29 55.7	+0.2
AGPR	Aguadilla, PR	0.24	43		Pb	08 29 55.6	+0.2
AGPR				IAML		08 29 59.9	
	comp=N,43µm,0.3s						
AGPR	Aguadilla, PR	0.24	43	*i* P	Pb	08 29 55.7	+0.2
AGPR				*e*S	Sb	08 29 59.3	-0.3
AGPR				IAML		08 30 01.1	
	comp=Z,12µm,0.2s						
CRPR	Cabo Rojo, PR	0.33	150	⇓*e*P	Pb	08 29 57.6	+0.8
CRPR	Cabo Rojo, PR	0.33	150		Pb	08 29 57.6	+0.8
CRPR	Cabo Rojo, PR	0.33	150		Sb	08 30 02.8	+1.0
CRPR	Cabo Rojo, PR	0.33	150	*i* P	Pb	08 29 57.6	+0.8
CRPR				*e*S	Sb	08 30 02.8	+1.0
CRPR				IAML		08 30 03.6	
	comp=Z,17µm,0.2s						
MLPR	Magueyes Islan	0.39	145	⇓*e*P	Pb	08 29 58.4	+0.6
MLPR	Magueyes Islan	0.39	145	*e*S	Sb	08 30 04.3	+0.7
MLPR	Magueyes Islan	0.39	145	Pg	Pb	08 29 58.4	+0.6
MLPR	Magueyes Islan	0.39	145		Sb	08 30 04.3	+0.7
GBPR	Guanica, Bosqu	0.50	130	⇑*i*P	Pb	08 29 59.9	+0.4
AOPR	Arecibo Observ	0.50	84	⇓*e*P	Pb	08 29 59.5	-0.2
AOPR	Arecibo Observ	0.50	84		Pb	08 29 59.5	-0.2
AOPR	Arecibo Observ	0.50	84		Sb	08 30 06.4	-0.3
AOPR	Arecibo Observ	0.50	84	*e*P	Pb	08 29 59.6	-0.2
AOPR				*e*S	Sb	08 30 06.2	-0.6
OBIP	Obispado Ponce	0.69	111	⇓*e*P	Pb	08 30 02.6	-0.3
OBIP	Obispado Ponce	0.69	111	*e*S	Sb	08 30 12.4	+0.5
OBIP	Obispado Ponce	0.69	111		Pb	08 30 02.6	-0.3
OBIP				IAML		08 30 13.2	
	comp=N,10µm,0.3s						
OBIP	Obispado Ponce	0.69	111		Sb	08 30 12.4	+0.5
CELP	Cerrillos	0.70	108	⇓*e*P	Pb	08 30 02.8	-0.3
CELP	Cerrillos	0.70	108	*e*S	Sb	08 30 12.4	+0.1
CELP	Cerrillos	0.70	108		Pb	08 30 02.8	-0.3
CELP				IAML		08 30 13.1	
	comp=E,12µm,0.5s						
CELP	Cerrillos	0.70	108		Sb	08 30 12.4	+0.1
EMPR	Esperanza - Ma	0.74	76	⇑*e*P	Pb	08 30 03.6	-0.1
EMPR	Esperanza - Ma	0.74	76	*e*S	Sn	08 30 13.7	-1.2
EMPR	Esperanza - Ma	0.74	76		Pb	08 30 03.6	-0.1
EMPR				IAML		08 30 16.2	
	comp=E,20µm,0.3s						
EMPR	Esperanza - Ma	0.74	76		Sn	08 30 13.7	-1.2
ICMP	Isla Caja de M	0.82	119	⇓*e*P	Pn	08 30 05.0	-0.6
ICMP	Isla Caja de M	0.82	119	*e*S	Sn	08 30 17.2	+0.1
ICMP	Isla Caja de M	0.82	119		Pn	08 30 04.9	-0.8
ICMP	Isla Caja de M	0.82	119		Sn	08 30 17.2	+0.1
ICMP	Isla Caja de M	0.82	119	IAML		08 30 21.5	
	comp=E,8µm,0.5s						
ICMP				IAML		08 30 21.6	
	comp=N,5µm,0.2s						
SJG	San Juan	1.09	99	Pg	Pn	08 30 08.9	-0.4
	comp=N,326nm,0.3s,baz=318,slow=17,SNR=713						
SJG				Lg	Lg	08 30 22.6	
	comp=N,2µm,0.3s,baz=336,slow=12,SNR=83						
SJG				LR	LR	08 30 43.9	
	comp=N,8µm,21.7s,baz=311,slow=53						
SJG	San Juan	1.09	99	*e*P	Pn	08 30 09.1	-0.2
SJG				*e*S	Sn	08 30 23.1	-0.6
GCPR	Guaynabo City	1.14	89	⇓*e*P	Pn	08 30 09.5	-0.5
GCPR	Guaynabo City	1.14	89	*e*S	Sn	08 30 23.9	-0.9
GCPR	Guaynabo City	1.14	89		Pn	08 30 09.6	-0.3
GCPR	Guaynabo City	1.14	89		Sn	08 30 23.9	-0.9
GCPR	Guaynabo City	1.14	89	IAML		08 30 25.5	
	comp=E,11µm,0.4s						
GCPR				IAML		08 30 25.6	
	comp=N,10µm,0.3s						
IGPR	InterUniversit	1.16	106	⇓*e*P	Pn	08 30 10.0	-0.3
IGPR	InterUniversit	1.16	106	*e*S	Sn	08 30 25.1	-0.4
PDPR	Patillas Dam,	1.23	103	⇑*e*P	Pn	08 30 11.3	+0.1
PDPR	Patillas Dam,	1.23	103	*e*S	Sn	08 30 26.9	-0.2
PDPR	Patillas Dam,	1.23	103		Pn	08 30 11.2	0.0
PDPR	Patillas Dam,	1.23	103		Sn	08 30 26.9	-0.2
PDPR	Patillas Dam,	1.23	103	IAML		08 30 27.6	
	comp=E,7µm,0.3s						
PDPR				IAML		08 30 27.6	
	comp=N,24µm,0.6s						
CBYP	Canovanas	1.35	91	⇑*e*P	Pn	08 30 12.9	-0.1
CBYP	Canovanas	1.35	91	*e*S	Sn	08 30 30.1	-0.2
CBYP	Canovanas	1.35	91		Pn	08 30 12.7	-0.3
CBYP	Canovanas	1.35	91		Sn	08 30 30.1	-0.2
CBYP	Canovanas	1.35	91	IAML		08 30 31.9	
	comp=N,41µm,0.2s						
CBYP				IAML		08 30 31.9	
	comp=E,44µm,0.2s						
HUMP	Col San Antoni	1.37	96	⇓*e*P	Pn	08 30 13.1	-0.1
HUMP	Col San Antoni	1.37	96	*e*S	Sb	08 30 30.8	-0.7
HUMP	Col San Antoni	1.37	96		Pn	08 30 13.1	-0.1
HUMP	Col San Antoni	1.37	96		Sb	08 30 30.8	-0.7
MTP	Monte Pirata	1.66	97	⇑*e*P	Pn	08 30 17.7	+0.6
MTP	Monte Pirata	1.66	97	*e*S	Sb	08 30 39.0	-0.8
MTP	Monte Pirata	1.66	97		Pn	08 30 17.7	+0.6
MTP	Monte Pirata	1.66	97		Sb	08 30 39.0	-0.8
MTP	Monte Pirata	1.66	97	IAML		08 30 39.3	
	comp=E,4µm,0.2s						
MTP				IAML		08 30 39.8	
	comp=N,2µm,0.4s						
CUPR	Culebra, Puert	1.90	89	⇓*e*P	Pn	08 30 19.9	-0.5
CUPR	Culebra, Puert	1.90	89	*e*S	Sn	08 30 42.8	-0.9
CUPR	Culebra, Puert	1.90	89	Pn	Pn	08 30 20.0	-0.5
CUPR	Culebra, Puert	1.90	89		Sn	08 30 42.8	-0.9
CUPR	Culebra, Puert	1.90	89	IAML		08 30 49.4	
	comp=N,1µm,0.6s						
CUPR				IAML		08 30 50.3	
	comp=E,1µm,0.5s						
STVI	Saint Thomas	2.21	88	⇑*e*P	Pn	08 30 24.1	-0.6
STVI	Saint Thomas	2.21	88	*e*S	Sn	08 30 50.2	-1.1
STVI	Saint Thomas	2.21	88	Pn	Pn	08 30 24.3	-0.4
STVI	Saint Thomas	2.21	88		Sn	08 30 50.2	-1.1
SJVI	Gifft Hill Sch	2.38	89	⇓*e*P	Pn	08 30 27.1	-0.1
SJVI	Gifft Hill Sch	2.38	89	*e*S	Sn	08 30 54.9	-0.7
SJVI	Gifft Hill Sch	2.38	89		Pn	08 30 27.1	-0.1
SJVI					Sn	08 30 54.9	-0.7
CDVI	St. Croix	2.45	102	⇑*e*P	Pn	08 30 29.2	+1.1
CDVI	St. Croix	2.45	102		Pn	08 30 29.2	+1.1
CDVI	St. Croix	2.45	102	*e*P	Pb	08 30 30.6	-2.3
CDVI				*e*S	Sb	08 31 01.9	-0.8
SDD	Santo Domingo	2.50	274		Pn	08 30 31.4	+2.6
SDD	Santo Domingo	2.50	274	*i* P	Pb	08 30 34.6	+0.9
SDD				*e*S	Sb	08 31 06.8	+2.6
LONA1	Toro Cenizo, N	2.67	294	*i* P	Pb	08 30 35.0	-1.7
LONA1				*e*S	Sb	08 31 10.6	+1.5
LONA1				IAML		08 31 25.7	
	comp=Z,2µm,1.7s						
SC01	Santiago de lo	3.45	290		Pb	08 30 47.2	-2.7
SC01				IAML		08 31 45.9	
	comp=E,764nm,0.8s						
SC01	Santiago de lo	3.45	290	*i* P	Pb	08 30 47.5	-2.4
SC01				IAML		08 31 54.4	
	comp=Z,242nm,0.7s						
SDDR	Presa de Saban	3.86	281	⇓*e*P	Pb	08 30 53.3	-3.6
SDDR	Presa de Saban	3.86	281		Pb	08 30 53.0	-3.9
SDDR				IAML		08 31 51.9	
	comp=Z,431nm,0.7s						
SDDR				IAML		08 31 54.4	
	comp=Z,293nm,0.5s						
SDDR	Presa de Saban	3.86	281	*e*P	Pb	08 30 53.1	-3.9
SDDR				*e*Pg	Pn	08 30 56.0	+8.5
SDDR				*e*S	Sb	08 31 41.0	-2.3
SDDR	Presa de Saban	3.86	281	*i* P	Pb	08 30 53.3	-3.6
SDDR				IAML		08 31 54.9	
	comp=Z,180nm,0.6s						
SMRT	St. Maarten	4.01	93		Pn	08 30 49.8	+0.3
SMRT				IAML		08 31 36.2	
	comp=N,601nm,0.2s						
SMRT				IAML		08 31 47.1	
	comp=E,466nm,0.6s						
SMRT	St. Maarten	4.01	93	*e*P	Pn	08 30 50.0	+0.5
SMRT				*e*S	Sn	08 31 34.2	-1.5
GRTK	Grand Turk	4.83	312	Pn	Pn	08 31 01.8	+1.0
GRTK				IAML		08 31 59.3	
	comp=E,210nm,0.3s						
GRTK				IAML		08 32 01.3	
	comp=E,210nm,0.3s						
GRTK	Grand Turk	4.83	312	*i* P	Pn	08 31 02.2	+1.4
GRTK				IAML		08 32 01.5	
	comp=Z,97nm,1.0s						
MBFL	Flemmings, Mon	5.08	107	*e*P	Pn	08 31 05.4	+1.2
MBFL	Flemmings, Mon	5.08	107	*e*S	Sn	08 31 58.6	-3.5
MLYT	Lee's Yard	5.10	107	*e*P	Pn	08 31 05.6	+1.0
MLYT	Lee's Yard	5.10	107	*e*S	Sn	08 32 00.3	-2.5
ANWB	Willy Bob	5.27	96	Pn	Pn	08 31 06.1	-0.7
ANWB				IAML		08 32 18.3	
	comp=Z,154nm,1.3s						
ANWB	Willy Bob	5.27	96	*e*P	Pn	08 31 06.7	-0.1
ANWB	Willy Bob	5.27	96	*e*S	Sn	08 32 05.0	-1.8
BPA	Boggy Peak	5.32	103	*e*P	Pn	08 31 08.0	+0.5
BPA	Boggy Peak	5.32	103	*e*S	Sn	08 32 05.2	-2.9
ANDO	Antigua, Disas	5.33	102	*e*P	Pn	08 31 13.4	+5.8
ANDO	Antigua, Disas	5.33	102	*e*S	Sn	08 32 09.1	+0.8
ANBD	Bethesda, Anti	5.40	102	*e*P	Pn	08 31 09.9	+1.3
ANBD	Bethesda, Anti	5.40	102	*e*S	Sn	08 32 07.4	-2.7
ABD	La Joyeuse, An	5.82	107	*e*P	Pn	08 31 14.7	+0.4
ABD	La Joyeuse, An	5.82	107	*e*S	Sn	08 32 17.1	-3.4
CBE	Ff, Capester	5.86	111	*e*P	Pn	08 31 19.4	+4.5
CBE	Ff, Capester	5.86	111	*e*S	Sn	08 32 17.4	-4.0
MAGL	Barre de l'ile	6.19	111	*e*P	Pn	08 31 17.7	-1.8
MAGL	Barre de l'ile	6.19	111	*e*S	Sn	08 32 26.7	-3.0
DSLB	Salisbury	6.29	116	*e*P	Pn	08 31 21.0	+0.1
DSLB	Salisbury	6.29	116	*e*S	Sn	08 32 23.0	-9.1
MASC	Masc	6.83	287	*e*P	Pn	08 31 27.9	-0.3
MASC				*e*S	Sn	08 32 44.4	-0.8
FDF	Fort de France	6.86	120	Pn	Pn	08 31 28.2	-0.6
BIM	Bigot	7.04	121	*e*P	Pn	08 31 25.3	-5.9
BIM	Bigot	7.04	121	*e*S	Sn	08 32 45.4	-5.3
MPOM	Morne Pois Mar	7.26	121	Pn	Pn	08 31 34.2	+0.1
SLBI	Saint Lucia, B	7.40	124	*e*P	Pn	08 31 34.0	-2.1
SLBI	Saint Lucia, B	7.40	124	*e*S	Sn	08 32 52.5	-6.9
GTBY	Guantanamo Bay	7.58	284	*e*P	Pn	08 31 38.8	+0.3
GTBY				*e*S	Sn	08 33 04.2	+0.5
MOAC	Moa	7.62	289	*e*P	Pn	08 31 37.8	-1.3
MOAC				*e*S	Sn	08 32 59.5	-5.2
SVB	Belmont	7.66	130	Pn	Pn	08 31 39.3	-0.3
BIRV	Birongo	7.83	173	Pn	Pn	08 31 43.0	+0.9
URIC	Uribia, Colomb	7.98	215	Pn	Pn	08 31 43.2	-0.9
RCC	Rio Carpintero	8.13	283	*e*P	Pn	08 31 45.7	-0.4
RCC				*e*S	Sn	08 33 16.3	-1.1
BAUV	El Baul	9.32	185		Pn	08 32 05.1	+2.5
LMGC	Las Mercedes	9.36	282	*e*P	Pn	08 32 01.8	-1.1
LMGC				*e*S	Sn	08 33 44.5	-3.0
TRN	Trinidad (W)	9.49	142	*e*P	Pn	08 32 07.6	+2.8
CCCC	Cccc	10.29	288	*e*P	Pn	08 32 07.9	-7.7
CCCC				*e*S	Sn	08 33 55.2	-15
PAMC	Pamplona, Colo	12.10	207	*e*P	Pn	08 32 41.7	+0.7
LCCY	Blossom Villag	12.19	278	Pn	Pn	08 32 45.3	+3.6
ZARC	Zaragoza, Cauc	13.03	215	Pn	Pn	08 32 52.6	-0.6
ROSC	El Rosal	15.04	208	LR	LR	08 39 23.6	
	comp=Z,42nm,21.6s,baz=48,slow=37						
PRAC	Prado	16.29	208	*e*P	P	08 33 39.4	-0.4
456A	Hilliard	18.23	316	P	P	08 34 03.5	+2.4
Y60A	Bolivia	18.45	330	P	Pn	08 34 04.7	+1.1
W57A	Gilead	20.24	329	P	Pn	08 34 25.5	+0.5
W57A				IAmb	IAmb	08 34 34.1	
	comp=Z,11nm,1.2s						
GOGA	Godfrey	20.90	319	P	Pn	08 34 32.8	-0.1
V55A	Taylorsville	21.40	328	P	P	08 34 38.6	+3.0
V55A				IAmb	IAmb	08 34 58.3	
	comp=Z,10nm,1.3s						
R58B	Mineral	21.68	337	P	P	08 34 40.7	+2.2
R58B				IAmb	IAmb	08 34 42.9	
	comp=Z,14nm,1.4s						
TKL	Tuckaleechee C	22.64	323	P	P	08 34 51.1	+2.2
	comp=Z,1.6nm,0.9s,baz=131,slow=11,SNR=1.4						
TKL				S	S	08 38 56.8	+1.2
	comp=Z,3.9nm,0.8s,baz=198,slow=21,SNR=3.5						
	comp=Z,1.6nm,0.9s						
LRAL	Lakeview Retre	22.99	313	P	P	08 34 55.3	+2.7
L59A	Walton	24.72	346	P	P	08 35 09.8	+0.8
WVT	Waverly	25.39	319	P	P	08 35 16.0	+0.9
WVT				IAmb	IAmb	08 35 26.1	
	comp=Z,4.3nm,1.0s						
CMIG	Matias Romero	26.32	272	LR	LR	08 44 49.4	
	comp=Z,37nm,21.9s,baz=84,slow=34						
LPAZ	La Paz	34.37	181	P	P	08 36 43.1	+7.6
	comp=Z,0.3nm,0.4s,baz=17,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	34.92	295	P	P	08 36 42.3	+2.6
	comp=Z,0.5nm,0.6s,baz=117,slow=9.2,SNR=9.3						
	comp=Z,0.5nm,0.6s						
SCHQ	Schefferville	36.47	0	P	P	08 36 53.8	+1.2
	comp=Z,2.1nm,0.9s,baz=192,slow=9.3,SNR=2.1						
	comp=Z,2.1nm,0.9s						
SCHQ	Schefferville	36.47	0	IAmb	IAmb	08 36 54.6	
	comp=Z,4.1nm,1.2s						
CPUP	Villa Florida	45.40	167	P	P	08 38 11.6	+5.2
	comp=Z,1.4nm,0.6s,baz=343,slow=11,SNR=5.2						
	comp=Z,1.4nm,0.6s						
NVAR	Mina Array Bea	48.51	305	P	P	08 38 33.7	+2.7
	comp=Z,0.3nm,0.5s,baz=92,slow=7.9,SNR=6.4						
	comp=Z,0.3nm,0.5s						
NEW	Newport	50.09	318	LR	LR	08 59 11.2	
	comp=Z,23nm,19.7s,baz=317,slow=35						
YKA	Yellowknife Ar	54.88	335	P	P	08 39 18.4	+0.6
	comp=Z,1.3nm,0.7s,baz=111,slow=7.5,SNR=17						
	comp=Z,1.3nm,0.7s						
ESDC	Sonseca Array	58.15	54	P	P	08 39 42.7	+1.1
	comp=Z,0.5nm,0.6s,baz=266,slow=6.1,SNR=5.0						
	comp=Z,0.5nm,0.6s						
ESDC	Sonseca Array	58.15	54	IAmb	IAmb	08 39 47.3	
	comp=Z,2.3nm,1.4s						
TORD	Torodi Ar. Bea	66.26	83	P	P	08 40 36.4	+0.1
	comp=Z,0.5nm,0.8s,baz=264,slow=5.5,SNR=2.6						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	69.18	333	P	P	08 40 54.9	+0.9
	comp=Z,0.6nm,0.8s,baz=100,slow=4.7,SNR=4.8						
	comp=Z,0.6nm,0.8s						

IDC 07 08:35:10.0±3.7**, 5°.95S**×**147°.96E, h0**km**, mb4.0**/2**, mbtmp4.1**/2**, MS3.5**/3**, Error ellipse: s-maj=122.1km s-min=52.1km az=96.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	12.37	107	LR	LR	08 42 38.5	
	comp=Z,136nm,19.0s,baz=242,slow=36						
ASAR	Alice Springs	22.21	216	P	P	08 40 07.7	-0.6
	4.3nm,0.6s,baz=54,slow=8.7,SNR=93						
	4.3nm,0.6s						
STKA	Stephens Creek	26.48	192	P	P	08 40 49.5	+0.5
	1.8nm,0.7s,baz=15,slow=12,SNR=5.0						
	1.8nm,0.7s						
URZ	Urewera	41.64	145	LR	LR	08 57 36.1	
	comp=Z,125nm,21.2s,baz=31,slow=32						
MJAR	Matsushiro Arr	43.24	349	LR	LR	08 59 07.2	
	comp=Z,57nm,21.7s,baz=182,slow=33						

TORD	Torodi Ar. Bea	146.00	285	PKPbc	PKPdf	08 54 52.0	-0.1
	0.2nm,0.5s,baz=62,slow=4.6,SNR=1.9						

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*NOU **07** 08:35:10.5,37°.75S×176°.02E,h349^{km},mb3.7/7,North Island, New Zealand*

*WEL **07** 08:35:18.0±0.8,38°S±6°×17°6E±°,h280^{km}±6^{km},M2.7/29, MLv2.7/29,Error ellipse: s-maj=0.0km s-min=0.0km az=129.3*

ISC 07 08:35:12.2±2.1**,37°.87S**±0°.07×**175°.91E**±0°.07**, h323**^{km}±12^{km}**,n126,**σ**1**^{s}**69**/141**,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMRZ	Kaimai	0.04	43	P	Pn	08 35 54.2	+1.3
TOZ	Tahuroa Road	0.35	293	P	Pn	08 35 54.6	+1.5
TLZ	Tolley Road	0.54	213	P	Pn	08 35 55.4	+2.0
MUGZ	Murupara	0.91	132	P	Pn	08 35 55.7	+1.2
MUGZ				S	S	08 36 25.2	-3.2
MKAZ	Moumakai	0.97	322	P	Pn	08 35 56.5	+1.6
RATZ	Rangitukua	1.00	186	P	Pn	08 35 56.5	+1.6
URZ	Urewera	1.02	113	P	Pn	08 35 55.8	+0.8
URZ				S	S	08 36 26.6	-2.6
URZ	Urewera	1.02	113	P	Pn	08 35 55.8	+0.8
MRHZ	Matea Rd	1.04	158	P	Pn	08 35 56.5	+1.4
MRHZ				S	S	08 36 27.7	-1.8
HIZ	Hauiti	1.05	232	P	Pn	08 35 57.4	+2.3
KATZ	Kakaramea	1.11	189	P	Pn	08 35 57.5	+1.9
RTZ	Ruatahuna	1.12	132	P	Pn	08 35 57.0	+1.4
RTZ				S	S	08 36 28.2	-2.0
KUZ	Kuaotunu	1.13	352	P	Pn	08 35 56.6	+1.0
MTHZ	Maungataniwha	1.22	144	P	Pn	08 35 57.7	+1.7
MTHZ				S	S	08 36 28.9	-2.1
NTVZ	North Tongarir	1.24	189	P	Pn	08 35 58.3	+2.1
WIAZ	Waiheke Island	1.24	330	P	Pn	08 35 57.7	+1.5
TMVZ	Te Maari	1.25	187	P	Pn	08 35 58.2	+2.0
WTVZ	West Tongariro	1.27	191	P	Pn	08 35 58.0	+1.7
ETVZ	East Tongariro	1.27	187	P	Pn	08 35 58.1	+1.8
NNVZ	North Ngauruho	1.28	190	P	Pn	08 35 58.4	+2.0
AWAZ	Awhitu Peninsu	1.29	308	P	Pn	08 35 58.3	+1.9
OTVZ	Oturere	1.30	188	P	Pn	08 35 58.5	+1.9
OTVZ				S	S	08 36 31.0	-1.0
NGZ	Ngauruhoe	1.32	190	P	Pn	08 35 58.4	+1.8
NGZ				S	S	08 36 31.9	-0.3
SNVZ	South Ngauruho	1.33	189	P	Pn	08 35 58.8	+2.1
RAGZ	Rawiri	1.34	118	P	Pn	08 35 58.5	+1.8
RAGZ				S	S	08 36 31.1	-1.1
MWZ	Matawai	1.36	110	P	Pn	08 35 58.1	+1.4
MWZ				S	S	08 36 30.7	-1.7
MBAZ	Motutapu North	1.36	323	P	Pn	08 35 58.3	+1.5
BKZ	Black Stump Fm	1.37	161	P	Pn	08 35 58.5	+1.7
BKZ				S	S	08 36 29.7	-2.8
BKZ	Black Stump Fm	1.37	161	P	Pn	08 35 58.5	+1.7
RAHZ	Arahi	1.39	139	P	Pn	08 35 59.0	+2.1
RAHZ				S	S	08 36 33.0	+0.3
RUGZ	Raukumara Rang	1.40	94	P	Pn	08 35 57.4	+0.3
TUVZ	Tukino	1.41	188	P	Pn	08 35 58.9	+1.8
TUVZ				S	S	08 36 31.5	-1.6
FWVZ	Far West T-bar	1.41	191	P	Pn	08 35 58.4	+1.2
NMHZ	Naumai	1.41	150	P	Pn	08 35 59.5	+2.5
WHVZ	Whangaehu Hut	1.43	190	P	Pn	08 35 59.4	+2.0
SNGZ	Shannon Statio	1.45	129	P	Pn	08 35 59.2	+2.0
SNGZ				S	S	08 36 31.7	-1.5
TRVZ	Turoa	1.45	191	P	Pn	08 35 59.0	+1.6
TRVZ				S	S	08 36 31.2	-2.5
WNVZ	Wahianoa	1.47	189	P	Pn	08 35 59.4	+1.9
PKVZ	Pokaka	1.48	197	P	Pn	08 35 59.3	+1.9
PKVZ				S	S	08 36 34.2	+0.5
HAZ	Te Kaha	1.49	86	P	Pn	08 35 57.9	+0.5
HAZ				S	S	08 36 30.0	-3.6
RVAZ	Riverhead Bore	1.53	316	P	Pn	08 35 59.4	+1.6
ABAZ	Army Bay	1.53	326	P	Pn	08 35 59.7	+1.9
MOVZ	Moawhango	1.54	185	P	Pn	08 35 59.4	+1.6
VRZ	Vera Road	1.54	216	P	Pn	08 35 60.0	+2.3
MTVZ	Mangateitei	1.55	193	P	Pn	08 35 59.7	+1.9
KWHZ	Kaweka Forest	1.60	166	P	Pn	08 36 00.3	+2.1
BHHZ	Black Hill Sta	1.62	176	P	Pn	08 35 60.0	+1.7
ARHZ	Aropaoanui	1.63	149	P	Pn	08 36 00.5	+2.3
TKGZ	Te Karaka	1.63	111	P	Pn	08 36 00.2	+1.9
TWGZ	Tauwhareparae	1.66	101	P	Pn	08 36 00.5	+1.9
RIGZ	Rimuhau	1.68	120	P	Pn	08 36 00.7	+2.0
MCHZ	McNeill Hill	1.69	159	P	Pn	08 36 01.1	+2.4
PKGZ	Pakihiroa	1.71	91	P	Pn	08 36 00.5	+1.5
KNZ	Kokohu	1.80	130	P	Pn	08 36 01.2	+1.8
KRHZ	Kereru	1.81	169	P	Pn	08 36 01.3	+1.8
PUZ	Puketiti	1.86	97	P	Pn	08 36 01.6	+1.6
PRGZ	Paritu Road	1.87	125	P	Pn	08 36 02.1	+2.1
CNGZ	Carnagh Statio	1.91	109	P	Pn	08 36 02.5	+2.2
MXZ	Matakaoa Point	1.92	82	P	Pn	08 36 01.9	+1.5
WMGZ	Waiomatatini S	1.98	89	P	Pn	08 36 02.6	+1.9
NEZ	North Egmont	1.99	225	P	Pn	08 36 03.7	+2.8
CKHZ	Cape Kidnapper	2.00	153	P	Pn	08 36 03.2	+2.3
WAZ	Wanganui	2.02	201	P	Pn	08 36 02.9	+1.9
MHGZ	Mahia Peninsul	2.02	130	P	Pn	08 36 03.2	+2.2
PNHZ	Pukenui	2.05	174	P	Pn	08 36 02.9	+1.6
KHEZ	Kahui Hut	2.06	226	P	Pn	08 36 04.2	+2.8
KAHZ	Kahuranaki	2.06	159	P	Pn	08 36 03.8	+2.4
TSZ	Takapari Road	2.18	179	P	Pn	08 36 04.0	+1.7
WPHZ	Waipukurau	2.23	169	P	Pn	08 36 04.5	+1.9
PXZ	Pawanui	2.28	161	P	Pn	08 36 05.2	+2.1
WCZ	Waipu Caves	2.30	326	P	Pn	08 36 05.1	+1.7
OHWZ	Ohakea	2.38	191	P	Pn	08 36 06.2	+2.4
DVHZ	Dannevirke	2.43	175	P	Pn	08 36 05.9	+1.6
PRHZ	Porangahau	2.46	167	P	Pn	08 36 06.6	+2.1
POWZ	Post Office Ro	2.52	182	P	Pn	08 36 06.6	+1.6
ANWZ	Angora Road	2.62	171	P	Pn	08 36 08.0	+2.1
PRWZ	Pori Road	2.68	179	P	Pn	08 36 08.4	+1.9
MRZ	Mangatainoka R	2.80	185	P	Pn	08 36 08.9	+1.4
BFZ	Birch Farm	2.82	175	P	Pn	08 36 09.4	+1.7
TIWZ	Tintock	2.90	180	P	Pn	08 36 10.1	+1.6
OGWZ	Otaki Gorge	3.00	191	P	Pn	08 36 10.8	+1.4
HOWZ	Holdsworth Sta	3.04	186	P	Pn	08 36 10.9	+1.2
KIW	Kapiti Island	3.08	194	P	Pn	08 36 11.4	+1.2
TMWZ	Te Maipa	3.23	180	P	Pn	08 36 13.4	+1.8
OUZ	Omahuta	3.24	324	P	Pn	08 36 13.5	+1.7
CAW	Cannon Point	3.30	191	P	Pn	08 36 13.4	+1.1
MTW	Mount Morrison	3.30	185	P	Pn	08 36 13.4	+1.1
DUWZ	D’Urville Isla	3.31	207	P	Pn	08 36 13.4	+1.0
WEL	Wellington	3.52	194	P	Pn	08 36 15.9	+1.4
PAWZ	Paruwai Farm	3.53	186	P	Pn	08 36 15.7	+1.1
TRWZ	Traveller	3.53	183	P	Pn	08 36 16.3	+1.7
TCW	Tory Channel	3.57	200	P	Pn	08 36 16.2	+1.3
MSWZ	Moikau Station	3.58	188	P	Pn	08 36 16.1	+1.0
BHW	Baring Head	3.62	192	P	Pn	08 36 16.5	+1.0
PLWZ	Palliser	3.73	188	P	Pn	08 36 17.7	+1.0
TUWZ	Tuamarina	3.87	203	P	Pn	08 36 19.2	+1.2
NNZ	Nelson	3.87	210	P	Pn	08 36 18.9	+0.8
TKNZ	Takaka Hill	3.90	215	P	Pn	08 36 19.0	+0.6
QRZ	Quartz Range	3.95	221	P	Pn	08 36 19.3	+0.4
QRZ	Quartz Range	3.95	221	P	Pn	08 36 19.6	+0.7
CMWZ	Cape Campbell	4.09	198	P	Pn	08 36 22.9	+2.5
BSWZ	Blackbirch Sta	4.15	202	P	Pn	08 36 22.6	+1.6
MRNZ	Matariki Terra	4.28	214	P	Pn	08 36 22.8	+0.3
THZ	Tophouse	4.52	210	P	Pn	08 36 25.9	+0.7
KHZ	Kahutara	4.89	201	P	Pn	08 36 30.5	+1.4
KHZ	Kahutara	4.89	201	P	Pn	08 36 30.4	+1.2
DSZ	Denniston Nort	5.00	218	P	Pn	08 36 30.7	+0.3
GVZ	Greta Valley S	5.54	202	P	Pn	08 36 37.5	+0.8
LTZ	Lake Taylor	5.64	208	P	Pn	08 36 38.5	+0.7
AMCZ	Amberley	5.85	204	P	Pn	08 36 38.4	-1.9
INZ	Inchbonnie	5.93	214	P	Pn	08 36 41.9	+0.7
OXZ	Oxford	6.19	207	P	Pn	08 36 44.5	+0.2
OKCZ	Okains Bay	6.23	199	P	Pn	08 36 46.2	+1.4
MQZ	McQueen’s Vall	6.33	202	P	Pn	08 36 46.1	+0.3
AKCZ	Akaroa Harbour	6.41	200	P	Pn	08 36 47.9	+1.1
RACZ	Rakaia	6.51	205	P	Pn	08 36 48.6	+0.7
WACZ	Wakanui South	6.80	206	P	Pn	08 36 52.6	+1.2
GCSZ	Gaunt Creek Bo	6.90	216	P	Pn	08 36 53.2	+0.6
RPZ	Rata Peaks	6.90	211	P	Pn	08 36 53.3	+0.7
RPZ	Rata Peaks	6.90	211	P	Pn	08 36 53.5	+0.8
ARCZ	Arundel	7.05	209	P	Pn	08 36 55.0	+0.6
FOZ	Fox Glacier	7.31	217	P	Pn	08 36 58.0	+0.6
TMZ	Timaru	7.48	208	P	Pn	08 37 01.0	+1.4
ODZ	Otahua Downs	8.18	207	P	Pn	08 37 10.1	+2.1
ODZ	Otahua Downs	8.18	207	P	Pn	08 37 08.6	+0.6
JCZ	Jackson Bay	8.21	219	P	Pn	08 37 09.7	+1.3

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*DJA **07** 08:38:22.5±0.3,3°N±3°×12°7E±°,h10^{km},M4.4/13,mB5.0/6, mb4.5/13,MLv4.3/13,Mw(mB)4.4/6*

*BJI **07** 08:38:23.7±0.0,2°.42N×126°.65E,h70^{km},mb4.6/17, mB4.9/9,Ms4.4/1,Ms7 3.9/1*

*IDC **07** 08:38:24.1±2.8,2°.46N×126°.72E,h57^{km}±26^{km},mb4.0/16, mbtmp4.3/18,ML4.1/2,MS3.3/6,Error ellipse: s-maj=24.4km s-min=12.1km az=73.0*

*NEIC **07** 08:38:24.7±1.3,2°.45N±0°.06×126°.78E±0°.08,h65^{km}±7^{km}, mb4.3/25,Error ellipse: s-maj=12.5km s-min=8.1km az=68.0*

ISC 07 08:38:23.6±0.4**,2°.43N**±0°.05×**126°.83E**±0°.07**,h53**^{km}**,n84,** σ**1**^{s}**66**/76**,mb4.3**/29**,MS3.4**/8**,1C-2D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.74	162	Pn	Pn	08 38 52.5	+1.1
TNTI	Ternate	1.74	162	P	Pn	08 38 53.2	+1.8
SGSI	Sangihe	1.80	314	P	Pn	08 38 53.0	+0.8
LBMI	Labuha	3.12	168	P	Pn	08 39 13.3	+2.9
KMSI	Cibinong	3.39	237	P	Pn	08 39 17.9	+3.8
DDMP	Don Marcelino,	3.81	343	⇓eP	Pn	08 39 19.3	-0.6
DDMP				eS	Sn	08 40 08.3	+4.8
GTOI	Gorontalo	4.21	245	P	Pn	08 39 28.6	+3.3
SANI	Sanana	4.53	191	P	Pn	08 39 32.0	+2.3
KCP	Kidapawan	4.86	339	⇓eP	Pn	08 39 35.9	+1.6
MRSI	Marisa	5.26	248	P	Pn	08 39 42.8	+3.1
	0.4nm1µm130nm,1.0s						
LUWI	Luwuk	5.33	230	Pn	Pn	08 39 41.5	+0.9
LUWI	Luwuk	5.33	230	P	Pn	08 39 43.9	+3.3
	1.0nm3µm108nm,0.6s						
SWI	Sorong	5.51	126	P	Pn	08 39 45.6	+2.5
	0.1nm32nm,0.6s						
SIJI	Sorong	5.52	126	P	Pn	08 39 45.7	+2.4
	3.4nm,0.3s,baz=329,slow=19,SNR=8.6						
	8.8nm,0.3s						
BUKP	Musuan	5.69	342	⇑eP	Pn	08 39 48.0	+2.3
APSI	Ampana	6.15	237	P	Pn	08 39 55.7	+3.8
	0.3nm813nm72nm,0.6s						
TOLI2	Tolitoli	6.18	258	Pn	Pn	08 39 52.4	0.0
MPSI	Mapaga	7.23	253	P	Pn	08 40 10.3	+3.5
	0.1nm554nm26nm,0.9s						
MYLDM	Lahad Datu	8.74	288	Pn	Pn	08 40 29.0	+1.5
TTSI	Tana Toraja	8.87	232	P	Pn	08 40 32.9	+3.7
	20nm,1.1s						
SPSI	Sidrap Palu	9.49	228	P	Pn	08 40 41.9	+4.1
	15nm,0.8s						
KAPI	Kappang	10.23	224	P	Pn	08 40 49.4	+1.6
	2.3nm,0.3s,baz=49,slow=11,SNR=16						
	12nm,0.5s						
KAPI	Kappang	10.23	224		Pn	08 40 48.1	+0.2
EDFI	Ende, Flores	12.23	205	P	Pn	08 41 18.8	+3.5
	4.6nm,0.7s						
PLAI	Plampang	14.37	219	P	P	08 41 48.3	-1.6
	490nm36nm,0.9s						
KSM	Kuching	16.54	267	P	P	08 42 13.7	-0.2
JAGI	Jajag, Banyuwa	16.64	229	P	P	08 42 15.1	0.0
JAGI				IAmb	IAmb	08 42 22.7	
	comp=Z,22nm,1.0s						
GUMO	Guam	21.00	57	LR	LR	08 50 50.6	
	comp=Z,47nm,19.7s,baz=107,slow=35						
YHNB	Yeheng	22.73	347	P	P	08 43 19.8	-1.6
YHNB				IAmb	IAmb	08 43 21.7	
	comp=Z,17nm,1.1s						
COEN	Coen	22.98	136	P	P	08 43 23.4	-0.6
COEN				IAmb	IAmb	08 43 27.2	
	comp=Z,10nm,1.0s						
WRAB	Tennant Creek	23.42	162	P	P	08 43 26.8	-1.4
WRAB				IAmb	IAmb	08 43 35.0	
	comp=Z,22nm,1.1s						
PMG	Port Moresby	23.43	120	LR	LR	08 53 53.0	
	comp=Z,171nm,20.0s,baz=300,slow=40						
AS31	Alice Springs	26.84	166	P	P	08 43 58.5	-0.9
ASAR	Alice Springs	26.84	166	P	P	08 43 58.6	-0.7
	comp=Z,2.1nm,0.7s,baz=338,slow=6.0,SNR=22						
ASAR				PcP	PcP	08 47 21.6	+0.5
	comp=Z,0.5nm,0.4s,baz=356,slow=2.1,SNR=4.5						
ASAR				LR	LR	08 54 18.1	
	comp=Z,87nm,19.3s,baz=347,slow=36						
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	26.84	166	P	P	08 43 59.0	-0.3
CTA	Charters Tower	29.40	140	LR	LR	08 57 23.6	
	comp=Z,123nm,20.0s,baz=263,slow=39						
CMAR	Chiang Mai Arr	31.62	302	P	P	08 44 40.5	-1.4
	comp=Z,3.0nm,0.3s,baz=118,slow=6.8,SNR=11						
CMAR				LR	LR	08 58 59.3	
	comp=Z,20nm,18.9s,baz=125,slow=39						
	comp=Z,3.0nm,0.3s						
CHTO	Chiang Mai	31.79	303	P	P	08 44 41.6	-1.7
CHTO				IAmb	IAmb	08 44 42.7	
	comp=Z,5.6nm,0.8s						
FORT	Forrest	33.05	178	P	P	08 44 53.9	-0.2
PZH	PanZhiHua	33.95	317	P	P	08 45 03.8	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,6.1s						
KSRS	Korea Array	34.87	2	P	P	08 45 10.2	+0.4
	comp=Z,1.8nm,0.5s,baz=177,slow=10.0,SNR=8.6						
	comp=Z,1.8nm,0.5s						
MJAR	Matsushiro Arr	35.53	16	P	P	08 45 15.2	-0.4
	comp=Z,2.0nm,0.6s,baz=178,slow=9.6,SNR=5.8						
	comp=Z,2.0nm,0.6s						
MJAR	Matsushiro Arr	35.53	16	IAmb	IAmb	08 45 22.9	
	comp=Z,3.1nm,1.1s						
XAN	Xi'an	35.61	334	P	P	08 45 15.3	-1.1
XAN				pP	pwP	08 45 30.7	-1.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BBOO	Buckleboo	36.12	167	P	P	08 45 20.0	-0.7
STKA	Stephens Creek	36.89	159	P	P	08 45 27.3	+0.1
	comp=Z,15nm,0.8s,baz=332,slow=8.3,SNR=24						
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	36.89	159	P	P	08 45 27.6	+0.3
STKA				IAmb	IAmb	08 45 29.1	
	comp=Z,3.5nm,0.9s						
ARMA	Armidale	40.34	146	P	P	08 45 57.1	+0.7
HHC	Hu-ho-hao-te	40.65	342	eP	P	08 46 00.3	+1.5
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
USRK	Ussuriysk Ar.	41.84	6	P	P	08 46 08.5	+0.2
	comp=Z,3.2nm,0.7s,baz=198,slow=8.5,SNR=4.1						
	comp=Z,3.2nm,0.7s						
XLT	XiLinHaoTe	42.38	348	eP	P	08 46 13.0	+0.1
XLT				SS	SS	08 55 33.6	-7.6
XLT				pmax	pmax		
	comp=Z,11nm,1.1s						
XLT				pmax	pmax		
	comp=Z,61nm,3.7s						
XLT				LR	LR		
	comp=Z,250nm,13.5s						
XLT				LR	LR		
	comp=Z,81nm,10.2s						
SONM	Songino Array	48.55	342	P	P	08 47 00.9	-0.8
	comp=Z,1.3nm,0.6s,baz=165,slow=8.2,SNR=5.5						
	comp=Z,1.3nm,0.6s						
SONM	Songino Array	48.55	342	IAmb	IAmb	08 47 04.0	
	comp=Z,2.0nm,0.8s						
WMQ	Urumqi	53.84	326	eP	P	08 47 43.0	+1.7
PETK	Petropavlovsk-	56.59	22	P	P	08 48 01.3	+0.5
	comp=Z,1.2nm,0.6s,baz=160,slow=4.6,SNR=2.2						
	comp=Z,1.2nm,0.6s						
MK31	Makanchi Array	58.67	326	P	P	08 48 14.6	-1.1
MK31				IAmb	IAmb	08 48 16.5	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	58.67	326	P	P	08 48 14.7	-1.0
	comp=Z,1.9nm,0.5s,baz=120,slow=7.9,SNR=24						
	comp=Z,1.9nm,0.5s						
RPZ	Rata Peaks	60.65	145	P	P	08 48 30.0	+0.7
	comp=Z,3.8nm,0.8s,baz=315,slow=1.4,SNR=2.1						
	comp=Z,3.8nm,0.8s						
BKZ	Black Stump Fm	61.56	138	P	P	08 48 34.8	-0.8
BKZ				IAmb	IAmb	08 49 00.2	
	comp=Z,5.5nm,1.3s						
ZALV	Zalesovo Beam	61.78	333	P	P	08 48 35.1	-1.6
	comp=Z,1.0nm,0.4s,baz=120,slow=8.5,SNR=3.2						
	comp=Z,1.0nm,0.4s						
GAR	Garm	62.87	313	P	P	08 48 42.8	-1.7
KURK	Kurchatov	62.88	328	P	P	08 48 43.0	-1.1
KK31	Karatay Array	64.24	317	P	P	08 48 52.1	-1.2
KK31				IAmb	IAmb	08 48 53.6	
	comp=Z,3.2nm,0.9s						
KKAR	Karatay Array	64.24	317	P	P	08 48 52.0	-1.4
BRVK	Borovoye	68.53	327	P	P	08 49 19.1	-1.4
BRVK				IAmb	IAmb	08 49 23.5	
	comp=Z,2.7nm,0.8s						
TIXI	Tiksi	69.13	1	P	P	08 49 22.7	-1.2
TIXI				IAmb	IAmb	08 49 25.0	
	comp=Z,8.3nm,1.4s						
NRIK	Noril'sk	71.70	346	P	P	08 49 39.4	-0.3
	comp=Z,3.4nm,0.8s,baz=135,slow=8.8,SNR=2.5						
	comp=Z,3.4nm,0.8s						
NRIK	Noril'sk	71.70	346	P	P	08 49 38.9	-0.8
NRIK				IAmb	IAmb	08 49 40.6	
	comp=Z,4.6nm,1.0s						
ABKAR	Akbulak array	73.21	321	P	P	08 49 47.7	-1.3
ABKAR	Akbulak array	73.21	321	P	P	08 49 48.0	-1.0
ABKAR				IAmb	IAmb	08 49 53.7	
	comp=Z,2.5nm,1.1s						
ARU	Arti	76.08	328	P	P	08 50 04.5	-1.0
VNDA	Vanda	82.14	173	P	P	08 50 38.2	0.0
	comp=Z,1.6nm,0.8s,baz=316,slow=7.5,SNR=11						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	82.14	173	P	P	08 50 38.5	+0.3
IMAR	Indian Mountai	83.48	24	P	P	08 50 47.1	+1.7
ATD	Arta Tunnel	83.62	281	LR	LR	09 27 41.8	
	comp=Z,11nm,19.6s,baz=169,slow=35						
CAST	Castle Rocks	83.84	27	P	P	08 50 49.4	+2.1
KBZ	Khabaz	83.94	314	P	P	08 50 48.6	+0.5
	comp=Z,1.1nm,0.5s,baz=105,slow=4.7,SNR=4.0						
	comp=Z,1.1nm,0.5s						
KLMR	Klimovskoe	86.58	331	eP	P	08 50 58.6	-2.4
KLMR				AMP		08 51 05.3	
	comp=Z,12nm,1.3s						
BRTR	Keskin Array B	90.92	310	P	P	08 51 22.8	+0.6
	comp=Z,1.0nm,0.7s,baz=111,slow=6.8,SNR=5.4						
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	91.69	340	P	P	08 51 23.5	-1.4
	comp=Z,3.0nm,0.9s,baz=34,slow=5.0,SNR=5.6						
	comp=Z,3.0nm,0.9s						
MATP	Matopo	98.65	250	LR	LR	09 32 45.9	
	comp=Z,553nm,20.8s,baz=98,slow=33						
SCHQ	Schefferville	121.82	9	PKP	PKiKP	08 57 12.8	+0.8
	comp=Z,0.8nm,0.7s,baz=310,slow=7.9,SNR=1.4						
TORD	Torodi Ar. Bea	123.41	287	PKP	PKiKP	08 57 15.9	-0.3
	comp=Z,0.3nm,0.7s,baz=55,slow=1.8,SNR=2.0						
CPUP	Villa Florida	155.91	171	PKPab	PKPab	08 58 40.6	+1.1
	comp=Z,0.8nm,0.7s,baz=191,slow=5.2,SNR=3.6						

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*NIED **07** 09:16:02.0,31°.07N×129°.02E,h13^{km},MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.34; M$_{\theta\theta}$1.01; M$_{\phi\phi}$-0.68; M$_{r\theta}$0.05; M$_{\theta\phi}$0.79; M$_{\phi r}$0.72; Fault plane solution: M$_0$1.39000×10^{16} NP1: ϕ_s109.00000°,δ59.00000°,λ-16.00000°. NP2: ϕ_s208.00000°,δ76.00000°,λ-148.00000°.*

*IDC **07** 09:16:02.3±0.7,31°.08N×129°.13E,h0^{km},mb4.1/21, mbtmp4.1/24,ML3.5/3,MS3.9/72 Error ellipse: s-maj=17.8km s-min=17.4km az=75.0*

*JMA **07** 09:16:02.0±0.2,31°.1N±0°.4×129°.0E±0°.8,h13^{km}±1^{km}, MD4.7/35,MW4.7/35,SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*BJI **07** 09:16:03.3±0.0,31°.02N×129°.33E,h23^{km},mb4.4/53, mB4.7/30,Ms4.7/54,Ms7 4.4/50*

*NEIC **07** 09:16:05.1±1.4,31°.16N±0°.06×129°.19E±0°.06,h10^{km}±1^{km}, mb4.7/79,Error ellipse: s-maj=10.6km s-min=7.7km az=149.0*

*GCMT **07** 09:16:06.1±0.3,31°.14N±0°.02×129°.06E±0°.02,h16^{km}±1^{km}, MW4.8/91,Moment Tensor Solution. s21,c28; s91,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.29±.08; M$_{\theta\theta}$1.52±.08; M$_{\phi\phi}$-1.23±.07; M$_{r\theta}$0.11±.17; M$_{\theta\phi}$1.18±.06; M$_{\phi r}$0.53±.21; Best double couple: M$_0$1.90200×10^{16} NP1:ϕ_s114.00000°,δ73.00000°,λ-7.00000°. NP2: ϕ_s206.00000°,δ83.00000°,λ-162.00000°. Principal axes: T 1.9950, Plg7.0000°, Azm339.0000°; N -0.1840, Plg71.0000°, Azm226.0000°; P -1.8080, Plg17.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 09:16:04.6±1.0**,31°.08N**±0°.03×**129°.24E**±0°.03**,h10**^{km}±6^{km}**, n234,**σ**1**^{s}**73**/166**,mb4.6**/66**,MS4.1**/73**,2C-4D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.72	34	eP	Pg	09 16 17.9	-0.6
JSJ				eS	Sb	09 16 29.1	-0.1
JSJ	Shimokoshiki	0.72	34	A	A	09 16 17.9	
	comp=E,113nm,0.9s,comp=E,117nm,1.5s						
JKC	Kuchinoerabu	1.03	127	eP	Pg	09 16 23.9	-0.4
JKC				S	Sn	09 16 39.5	0.0
JKC	Kuchinoerabu	1.03	127	A	A	09 16 23.9	
	comp=E,46nm,3.9s,comp=E,70nm,0.9s						
JSU	Suzuyama	1.12	68		Pn	09 16 26.7	+0.3
JSU					Sn	09 16 43.4	+1.5
JSU	Suzuyama	1.12	68	⇓eP	Pg	09 16 25.8	-0.4
JSU				⇓S	Sn	09 16 43.4	+1.5
JSU	Suzuyama	1.12	68	A	A	09 16 25.8	
	comp=E,25nm,1.7s,comp=E,32nm,3.4s						
JNN	Nakanoshima	1.35	156	P	Pn	09 16 27.5	-2.0
JNN	Nakanoshima	1.35	156	A	A	09 16 27.5	
	comp=E,42nm,1.4s,comp=E,33nm,3.3s						
JYAK	Yakushimahirau	1.38	127	eP	Pn	09 16 28.4	-1.5
JYAK				S	Sb	09 16 48.6	+0.4
JYAK	Yakushimahirau	1.38	127	A	A	09 16 28.4	
	comp=E,13nm,5.6s,comp=E,19nm,3.4s						
JTSR	Tashiro 2	1.44	86	A	A	09 16 30.8	
	comp=E,10.0nm,2.0s,comp=E,16nm,4.4s						
JTN	Tanegashima 3	1.56	105	eP	Pn	09 16 32.0	-0.3
JTN	Tanegashima 3	1.56	105	A	A	09 16 32.0	
	comp=E,11nm,3.9s,comp=E,19nm,4.6s						
JZO	Okuchi	1.57	47	A	A	09 16 32.1	
	comp=E,21nm,0.4s,comp=E,40nm,1.4s						
JHD	Hondo	1.57	29	A	A	09 16 31.7	
	comp=E,22nm,1.3s,comp=E,14nm,2.7s						
JMTN	Minamitane	1.58	115	eP	Pn	09 16 32.5	-0.2
JMTN	Minamitane	1.58	115	A	A	09 16 32.5	
	comp=E,14nm,3.0s,comp=E,27nm,1.9s						
NGSJ	Nagasakinomoza	1.62	17	A	A	09 16 31.8	
	comp=E,19nm,5.5s,comp=E,11nm,3.8s						
JFU	Fukue jima 2	1.62	345	eP	Pn	09 16 30.4	-2.8
JFU	Fukue jima 2	1.62	345	A	A	09 16 30.4	
	comp=E,9.0nm,3.1s,comp=E,10.0nm,1.9s						
JTZ	Takazaki	1.78	62	⇓P	Pn	09 16 35.6	+0.2
JTZ	Takazaki	1.78	62	A	A	09 16 35.6	
	comp=E,10.0nm,2.8s,comp=E,13nm,8.2s						
JNAR	Kushima--Naru	1.79	75	A	A	09 16 35.9	
	comp=E,17nm,1.8s,comp=E,22nm,2.5s						
JNKG	Nichinankitago	1.92	72	A	A	09 16 37.7	
	comp=E,19nm,1.6s,comp=E,17nm,1.8s						
JIU3	Izumi3	1.98	42	⇓P	Pn	09 16 38.2	0.0
JIU3	Izumi3	1.98	42	A	A	09 16 38.2	
	comp=E,9.0nm,5.6s,comp=E,10.0nm,3.3s						
JUR	Ureshino	2.09	16	A	A	09 16 38.7	
	comp=E,16nm,3.3s,comp=E,10.0nm,2.3s						
JTA	Tamana	2.17	30	A	A	09 16 40.4	
	comp=E,9.0nm,2.7s,comp=E,7.0nm,2.9s						
JTSN	Tsuno	2.25	58	A	A	09 16 42.3	
	comp=E,5.0nm,3.0s,comp=E,7.0nm,8.0s						
JNU	Nakatsue	2.46	34	Pn	Pb	09 16 47.5	-1.5
	63nm,0.3s,baz=243,slow=0.1,SNR=63						
JNU				Lg	Lg	09 17 23.2	
	344nm,0.3s,baz=270,slow=20,SNR=14						
JNU	Nakatsue	2.46	34		Pn	09 16 42.7	-2.2
JFI	Itaya	2.53	22	A	A	09 16 45.2	
	comp=E,10.0nm,3.0s,comp=E,5.0nm,5.7s						
JII	Iki	2.74	9	A	A	09 16 47.6	
	comp=E,9.0nm,2.2s,comp=E,10.0nm,3.6s						
JUS	Usuki	2.91	46	A	A	09 16 51.4	
	comp=E,7.0nm,4.4s,comp=E,11nm,3.9s						
JKI	Kunimi	3.22	37	A	A	09 16 55.5	
	comp=E,6.0nm,3.1s,comp=E,5.0nm,5.6s						
JTU	Tsushima	3.44	2		Pn	09 16 58.0	-0.2
JOW	Kunigami	4.32	192	Pn	Pn	09 17 10.4	+0.1
	9.8nm,0.3s,baz=63,slow=15,SNR=21						
JOW				LR	LR	09 19 03.0	
	comp=Z,2µm,18.7s,baz=66,slow=42						
	47nm,0.7s						
JOW	Kunigami	4.32	192	Pn	Pn	09 17 11.5	+1.1
JHS	Saijyo	5.08	39	Pn	Pn	09 17 20.2	-0.7
TJN	Taejon	5.51	344	Pn	Pn	09 17 26.3	-0.3
KSAR	Wonju Array Be	6.44	350		Pn	09 17 40.2	+0.7
KSRS	Korea Array	6.45	351	Pn	Pn	09 17 39.3	-0.3
	1.4nm,0.3s,baz=177,slow=15,SNR=53						
KSRS				Sn	Sn	09 18 50.2	-3.0
	4.2nm,0.3s,baz=170,slow=25,SNR=7.5						
KSRS				Lg	Lg	09 19 22.6	
	2.8nm,0.3s,baz=174,slow=33,SNR=5.7						

KSRS				LR	LR	09 20 07.3	
	comp=Z,1µm,21.9s,baz=175,slow=38						
	12nm,0.8s						
KS19	**Wonju Array Si**	6.50	350		Pn	09 17 39.5	-0.9
INCN	**Inchon**	6.74	342	Pn	Pn	09 17 42.5	-1.1
SSE	**Sheshan**	6.91	272	Pn	Pn	09 17 48.6	+2.7
SSE				Sn	Sn	09 19 05.8	+1.2
SSE				LR	LR		
	comp=N,2µm,16.5s						
SSE				LR	LR		
	comp=E,760nm,18.2s						
INU	**Inuyama**	7.78	55	Pn	Pn	09 17 59.0	+1.1
JGF	**Kuroka**	8.15	54		Pn	09 18 03.8	+0.8
YOJ	**Yonaguni jima**	8.60	221	Pn	Pn	09 18 11.4	+2.2
NJ2	**Nanjing**	8.91	279	*e*P	Pn	09 18 15.4	+1.9
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,2µm,10.4s						
NJ2				LR	LR		
	comp=E,2µm,9.0s						
NJ2				LR	LR		
	comp=Z,2µm,9.0s						
TATO	**Taipei**	9.16	230	Pn	Pn	09 18 19.9	+3.1
JHJ	**Hachijo jima 2**	9.17	74	Pn	Pn	09 18 20.7	+3.8
	4.4nm,0.3s,baz=231,slow=19,SNR=1.4						
JHJ				LR	LR	09 20 48.6	
	comp=Z,150nm,20.7s,baz=84,slow=31						
MAJO	**Matsushiro**	9.23	51	Pn	Pn	09 18 17.2	-0.7
MJB9	**Matsu-Tunnel**	9.23	51	Pn	Pn	09 18 17.0	-0.8
MJAR	**Matsushiro Arr**	9.23	51	Pn	Pn	09 18 20.0	+2.2
	0.1nm,0.3s,baz=239,slow=12,SNR=3.7						
MJAR				LR	LR	09 22 34.1	
	comp=Z,838nm,18.2s,baz=231,slow=42						
	2.4nm,0.5s						
MJAR	**Matsushiro Arr**	9.23	51		Pn	09 18 16.4	-1.5
YHNB	**Yeheng**	9.44	229		Pn	09 18 21.7	+0.9
SSLB	**Suanglung**	10.34	227	Pn	Pn	09 18 31.9	-1.2
YULB	**Yu-li**	10.42	225	Pn	Pn	09 18 34.1	0.0
QZH	**Quanzhou**	11.22	240	*e*P	Pn	09 18 41.2	-3.8
QZH				SS	Sn	09 21 08.6	+18
QZH				LR	LR		
	comp=N,2µm,16.1s						
QZH				LR	LR		
	comp=E,530nm,8.5s						
QZH				LR	LR		
	comp=Z,2µm,12.3s						
TIA	**Tai'an**	11.32	300	*e*P	Pn	09 18 47.1	+0.7
TIA				LR	LR		
	comp=Z,930nm,13.1s						
TIA				LR	LR		
	comp=Z,2µm,12.0s						
TIA				LR	LR		
	comp=Z,1µm,9.8s						
JCJ	**Chichijima**	12.00	106	LR	LR	09 23 11.0	
	comp=Z,218nm,21.6s,baz=154,slow=36						
WHN	**Wuhan**	12.81	271	*e*P	Pn	09 19 16.3	+9.5
WHN				S	Sn	09 21 39.9	+10
WHN				LR	LR		
	comp=N,4µm,9.7s						
WHN				LR	LR		
	comp=E,3µm,10.2s						
WHN				LR	LR		
	comp=Z,4µm,10.6s						
USA0B	**Ussuriysk Arra**	13.27	9	Pn	Pn	09 19 11.5	-1.5
USRK	**Ussuriysk Ar.**	13.27	9	Pn	Pn	09 19 15.4	+2.3
	baz=186,slow=10						
USRK				LR	LR	09 24 02.3	
	comp=Z,467nm,18.0s,baz=177,slow=36						
MDJ	**Mudanjiang**	13.51	1	P	Pn	09 19 17.5	+1.2
MDJ				pP	P	09 19 24.9	-0.7
MDJ				sP		09 19 29.1	
MDJ				S	Sn	09 21 49.4	+2.8
MDJ				sS	S	09 22 00.7	-9.5
MDJ				ScP	ScP	09 28 11.0	-5.7
MDJ				pmax	pmax		
	comp=Z,13nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.5s						
MDJ				LR	LR		
	comp=Z,940nm,12.7s						
MDJ				LR	LR		
	comp=Z,2µm,11.7s						
MDJ				LR	LR		
	comp=Z,960nm,17.9s						
HNS	**HongShan**	13.57	302	⇑P	Pn	09 19 21.2	+4.1
HNS				S	Sn	09 21 55.8	+7.9
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HNS				LR	LR		
	comp=Z,1µm,12.6s						
HNS				LR	LR		
	comp=Z,1µm,12.6s						
HNS				LR	LR		
	comp=Z,1µm,11.9s						
BJI	**Beijing**	13.88	314	P	Pn	09 19 21.8	+0.5
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,110nm,3.8s						
BJI				LR	LR		
	comp=Z,2µm,17.9s						
BJI				LR	LR		
	comp=Z,1µm,16.9s						
BJI				LR	LR		
	comp=Z,2µm,15.8s						
LYN	**LuoYang**	14.52	288	*e*P	Pn	09 19 29.4	-0.8
LYN				S	Sn	09 22 11.7	+0.4
LYN				pmax	pmax		
	comp=Z,150nm,4.7s						
LYN				LR	LR		
	comp=Z,5µm,15.3s						
LYN				LR	LR		
	comp=Z,2µm,14.3s						
LYN				LR	LR		
	comp=Z,2µm,12.4s						
XLT	**XiLinHaoTe**	16.49	325	*e*P	P	09 19 58.7	0.0
XLT				pP	sP	09 20 03.5	+1.0
XLT				sP	pP	09 20 05.6	+4.3
XLT				pmax	pmax		
	comp=Z,18nm,1.0s						
XLT				pmax	pmax		
	comp=Z,190nm,3.8s						
XLT				LR	LR		
	comp=Z,900nm,15.9s						
XLT				LR	LR		
	comp=Z,840nm,16.6s						
ASAJ	**Asahikawa**	16.74	35	Pn	P	09 20 02.6	+1.2
	comp=Z,0.3nm,0.3s,baz=225,slow=14,SNR=2.3						
ENH	**Enshi**	17.02	272		Pn	09 20 02.0	-0.8
HHC	**Hu-ho-hao-te**	17.29	309	*e*P	Pn	09 20 06.1	-0.1
HHC				S	Sn	09 23 16.0	-2.5
HHC				SS	SnSn	09 23 33.2	+1.3
HHC				pmax	pmax		
	comp=Z,54nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,4.4s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
HHC				LR	LR		
	comp=Z,3µm,13.3s						
HHC				LR	LR		
	comp=Z,3µm,12.4s						
XAN	**Xi'an**	17.38	285	P	Pn	09 20 06.9	-0.4
XAN				pP	pP	09 20 10.9	-0.3
XAN				S	Sn	09 23 21.2	+0.4
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN				LR	LR		
	comp=Z,3µm,12.8s						
XAN				LR	LR		
	comp=Z,2µm,13.7s						
XAN				LR	LR		
	comp=Z,2µm,12.1s						
BTO	**Baotou**	18.22	307	*e*P	P	09 20 18.9	+1.0
BTO				LR	LR		
	comp=Z,8µm,18.1s						
BTO				LR	LR		
	comp=Z,4µm,17.3s						
KLR	**Kul'dur**	18.23	5	P	P	09 20 19.7	+1.9
	comp=Z,12nm,1.0s,baz=190,slow=9.5,SNR=14						
KLR				LR	LR	09 26 38.4	
	comp=Z,242nm,21.7s,baz=226,slow=35						
HIA	**Hailar**	19.53	341	P	P	09 20 30.0	-2.2
GYA	**Guiyang**	20.31	263	⇑P	P	09 20 41.4	+0.5
GYA				pP	sP	09 20 47.8	+3.1
GYA				S	S	09 24 27.0	-1.8
GYA				pmax	pmax		
	comp=Z,19nm,1.1s						
GYA				LR	LR		
	comp=Z,940nm,11.3s						
GYA				LR	LR		
	comp=Z,600nm,13.8s						
GYA				LR	LR		
	comp=Z,890nm,14.1s						
QIZ	**Qiongzhong**	21.24	240	P	P	09 20 52.2	+1.3
QIZ				LR	LR		
	comp=Z,850nm,14.3s						
QIZ				LR	LR		
	comp=Z,820nm,11.2s						
QIZ				LR	LR		
	comp=Z,730nm,13.5s						
LZH	**Lanzhou**	21.71	290	*e*P	P	09 20 58.3	+2.2
LZH				pP	sP	09 21 02.5	+2.7
LZH				sP	pP	09 21 05.1	+6.4
LZH				*e*S	S	09 24 45.3	-11
LZH				SS	SnSn	09 25 29.9	+9.2
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
LZH				LR	LR		
	comp=Z,3µm,16.0s						
LZH				LR	LR		
	comp=Z,820nm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
CD2	**Chengdu**	21.84	276	P	P	09 20 57.0	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GUMO	**Guam**	22.58	137	LR	LR	09 29 01.0	
	comp=Z,145nm,18.0s,baz=32,slow=34						
ULN	**Ulaanbaatar**	23.83	321	P	P	09 21 16.8	-1.2
DAV	**Davao City (W)**	24.13	189	LR	LR	09 32 59.4	
	comp=Z,275nm,18.1s,baz=350,slow=42						
SONM	**Songino Array**	24.17	320	P	P	09 21 20.1	-1.0
	comp=Z,6.6nm,1.0s,baz=134,slow=8.5,SNR=14						
SONM				LR	LR	09 31 15.3	
	comp=Z,692nm,20.3s,baz=133,slow=38						
	comp=Z,6.6nm,1.0s						
SONM	**Songino Array**	24.17	320	P	P	09 21 20.3	-0.9
PZH	**PanZhiHua**	24.50	266	P	P	09 21 23.3	-1.0
PZH				pP	pP	09 21 26.5	-0.6
PZH				S	S	09 25 41.4	-3.4
PZH				pmax	pmax		
	comp=Z,20nm,1.4s						
PZH				pmax	pmax		
	comp=Z,110nm,3.5s						
PZH				LR	LR		
	comp=Z,2µm,13.4s						
PZH				LR	LR		
	comp=Z,1µm,13.1s						
PZH				LR	LR		
	comp=Z,1µm,15.2s						
GTA	**Gaotai**	25.34	297	*e*P	P	09 21 31.0	-0.9
GTA				pP	pP	09 21 34.3	-0.3
GTA				sP	sP	09 21 38.8	+3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,4.0s						
GTA				LR	LR		
	comp=Z,1µm,13.9s						
GTA				LR	LR		
	comp=Z,760nm,14.3s						
GTA				LR	LR		
	comp=Z,990nm,11.6s						
GOMU	**GeErMu**	29.02	289	P	P	09 22 05.4	+0.2
GOMU				pP	sP	09 22 09.5	+0.4
GOMU				sP	pP	09 22 13.3	+5.4
GOMU				S	S	09 27 00.5	+3.8
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,36nm,3.6s						
GOMU				LR	LR		
	comp=Z,820nm,17.6s						
GOMU				LR	LR		
	comp=Z,280nm,17.6s						
GOMU				LR	LR		
	comp=Z,310nm,17.2s						
CHTO	**Chiang Mai**	29.96	253	P	P	09 22 13.0	-0.3
CHTO				IAmb	IAmb	09 22 19.4	
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	30.14	252	P	P	09 22 17.3	+2.4
	comp=Z,1.3nm,0.3s,baz=47,slow=8.4,SNR=6.7						
CMAR				LR	LR	09 35 45.6	
	comp=Z,523nm,19.0s,baz=60,slow=39						
CMAR	**Chiang Mai Arr**	30.14	252	P	P	09 22 11.9	-3.0
PEA0B	**Petropavlovsk-**	30.16	35	P	P	09 22 14.5	-0.2
PEA0B				IAmb	IAmb	09 22 31.9	
	comp=Z,24nm,1.4s						
PETK	**Petropavlovsk-**	30.16	35	P	P	09 22 15.7	+1.0
	comp=Z,3.2nm,1.0s,baz=203,slow=7.6,SNR=2.4						
PETK				LR	LR	09 34 38.6	
	comp=Z,150nm,18.3s,baz=166,slow=37						
	comp=Z,3.2nm,1.0s						
PETK	**Petropavlovsk-**	30.16	35	P	P	09 22 11.9	-2.8
SIJI	**Sorong**	31.83	176	LR	LR	09 34 55.2	
	comp=Z,225nm,19.2s,baz=40,slow=36						
MA2	**Magadan**	31.96	21	P	P	09 22 30.5	0.0
	comp=Z,3.5nm,0.8s,baz=207,slow=8.3,SNR=5.2						
MA2				LR	LR	09 35 29.7	
	comp=Z,282nm,18.1s,baz=222,slow=36						
	comp=Z,3.5nm,0.8s						
MA2	**Magadan**	31.96	21	P	P	09 22 29.6	-0.9
MA2				IAmb	IAmb	09 22 31.8	
	comp=Z,13nm,1.3s						
SBUM	**Sibu**	32.71	213	P	P	09 22 37.2	-0.2
KSM	**Kuching**	34.47	215	P	P	09 22 52.3	-0.5
WMQ	**Urumqi**	34.99	303	*e*P	P	09 23 00.7	+3.5
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.8s						
WMQ				LR	LR		
	comp=Z,1µm,15.9s						
WMQ				LR	LR		
	comp=Z,440nm,20.1s						
WMQ				LR	LR		
	comp=Z,280nm,17.1s						
SEY	**Seymchan**	35.14	18	P	P	09 22 58.6	+0.5
	comp=Z,1.7nm,0.8s,baz=213,slow=12,SNR=7.7						
SEY				LR	LR	09 36 32.4	
	comp=Z,218nm,18.8s,baz=208,slow=35						
	comp=Z,1.7nm,0.8s						
KAPI	**Kappang**	37.02	196	LR	LR	09 38 04.5	
	comp=Z,111nm,20.5s,baz=4.5,slow=36						
SHEM	**Shemya Is, Ala**	38.95	43	LR	LR	09 40 18.1	
	comp=Z,65nm,21.1s,baz=314,slow=37						
ZAA0	**Zalesovo Array**	39.05	319	P	P	09 23 30.2	-1.2
ZALV	**Zalesovo Beam**	39.05	319	P	P	09 23 30.4	-1.0
	comp=Z,0.6nm,0.4s,baz=105,slow=11,SNR=4.5						
ZALV				LR	LR	09 40 25.8	
	comp=Z,208nm,19.0s,baz=289,slow=38						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	39.05	319	P	P	09 23 29.6	-1.8
MK31	**Makanchi Array**	39.13	307	P	P	09 23 30.8	-1.5
MKAR	**Makanchi Array**	39.13	307	P	P	09 23 30.7	-1.6
	comp=Z,1.3nm,0.8s,baz=90,slow=11,SNR=11						
MKAR				LR	LR	09 40 41.0	
	comp=Z,293nm,18.6s,baz=92,slow=38						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	39.13	307	P	P	09 23 30.8	-1.5
MAKZ	**Makanchi**	39.35	307	P	P	09 23 32.9	-1.2
PSI	**Prapat**	40.12	231	LR	LR	09 40 26.6	
	comp=Z,205nm,19.8s,baz=48,slow=36						
TIXI	**Tiksi**	40.62	360	P	P	09 23 44.7	+0.4
	comp=Z,2.0nm,0.4s,baz=270,slow=20,SNR=1.9						
TIXI				LR	LR	09 40 24.7	
	comp=Z,227nm,19.2s,baz=180,slow=36						
	comp=Z,2.0nm,0.4s						
TIXI	**Tiksi**	40.62	360	P	P	09 23 44.4	+0.2
BATI	**Baumata**	41.40	188	LR	LR	09 41 47.2	
	comp=Z,54nm,21.0s,baz=34,slow=37						
KURK	**Kurchatov**	42.05	313	P	P	09 23 55.4	-0.8
KURBB	**Kurchatov Arra**	42.09	313	P	P	09 23 54.9	-1.8
	comp=Z,1.6nm,0.7s,baz=99,slow=9.0,SNR=13						
KURBB				LR	LR	09 41 40.3	
	comp=Z,420nm,19.4s,baz=77,slow=37						
	comp=Z,1.6nm,0.7s						
TARG	**Taragay, Kyrgy**	42.18	299	P	P	09 23 57.8	-0.2
KDJ	**Kajisay**	42.63	300	P	P	09 24 00.8	-0.6
BILL	**Bilibino**	42.81	19	P	P	09 24 01.9	-0.3
BILL				IAmb	IAmb	09 24 18.2	
	comp=Z,24nm,1.6s						
MTN	**Manton Dam**	43.71	177	P	P	09 24 10.3	+0.3
MTN				IAmb	IAmb	09 24 35.7	
	comp=Z,19nm,1.1s						
KSH	**Kashi**	43.74	296	P	P	09 24 19.0	+8.7
KSH				pmax	pmax		
	comp=Z,9.0nm,2.1s						
KSH				LR	LR		
	comp=N,700nm,17.9s						
KSH				LR	LR		
	comp=E,500nm,18.2s						
KSH				LR	LR		
	comp=Z,310nm,20.3s						
PMG	**Port Moresby**	43.77	154	LR	LR	09 40 00.7	
	comp=Z,150nm,21.2s,baz=328,slow=33						
AAK	**Ala-Archa**	44.59	301	LR	LR	09 44 53.6	
	comp=Z,284nm,18.8s,baz=98,slow=39						
NRIK	**Noril'sk**	44.95	340	P	P	09 24 19.7	+0.2
	comp=Z,1.2nm,0.3s,baz=126,slow=9.6,SNR=3.6						
NRIK				LR	LR	09 45 36.3	
	comp=Z,192nm,18.1s,baz=128,slow=40						
	comp=Z,1.2nm,0.3s						
NRIK	**Noril'sk**	44.95	340	P	P	09 24 19.3	-0.2
BRVK	**Borovoye**	47.42	315	P	P	09 24 38.3	-0.8
BRVK				IAmb	IAmb	09 24 43.5	
	comp=Z,7.0nm,0.7s						
KK31	**Karatay Array**	47.47	302	P	P	09 24 39.2	-0.4
KK31				IAmb	IAmb	09 24 43.9	
	comp=Z,11nm,1.2s						
KKAR	**Karatay Array**	47.47	302	P	P	09 24 38.4	-1.2
KKAR	**Karatay Array**	47.47	302	P	P	09 24 39.4	-0.3
KKAR				IAmb	IAmb	09 24 43.9	
	comp=Z,11nm,1.2s						
GAR	**Garm**	48.16	296	P	P	09 24 44.7	-0.5
CHGR	**Chuyangaron**	49.11	296	P	P	09 24 52.0	-0.5
KBL	**Kabul**	50.06	291	P	P	09 25 00.0	+0.1
KBL				IAmb	IAmb	09 25 04.8	
	comp=Z,13nm,1.6s						
PALK	**Pallekele**	51.09	253	LR	LR	09 47 43.1	
	comp=Z,136nm,20.8s,baz=150,slow=37						
CTA	**Charters Tower**	53.44	160	LR	LR	09 49 56.1	
	comp=Z,54nm,18.1s,baz=25,slow=38						
ABKAR	**Akbulak array**	54.07	311	P	P	09 25 28.7	-0.6
ARU	**Arti**	54.21	320	P	P	09 25 30.2	0.0
ARU				IAmb	IAmb	09 25 39.5	
	comp=Z,5.1nm,0.8s						
AS31	**Alice Springs**	54.62	175	P	P	09 25 33.4	-0.1
ASAR	**Alice Springs**	54.62	175	P	P	09 25 33.0	-0.5
	comp=Z,1.2nm,0.7s,baz=5.0,slow=14,SNR=24						
ASAR				LR	LR	09 47 24.6	
	comp=Z,44nm,21.4s,baz=20,slow=34						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	54.62	175	P	P	09 25 34.0	+0.5
AKTO	**Aktyubinsk**	55.14	312	LR	LR	09 49 45.8	
	comp=Z,420nm,19.0s,baz=83,slow=37						
N18K	**Kilae Creek**	56.12	35	P	P	09 25 43.6	-0.4
N18K				IAmb	IAmb	09 25 55.5	
	comp=Z,9.5nm,1.2s						
J20K	**Nowinta River**	56.71	31	IAmb	IAmb	09 25 50.1	
	comp=Z,18nm,1.6s						
IMAR	**Indian Mountai**	56.79	28	P	P	09 25 48.4	-0.2
K20K	**Telida**	56.80	32	IAmb	IAmb	09 25 51.2	
	comp=Z,8.5nm,1.2s						
H21K	**Melozitna Rive**	57.20	29	IAmb	IAmb	09 25 53.1	
	comp=Z,7.6nm,1.2s						
I21K	**Tanana**	57.57	29	IAmb	IAmb	09 25 56.1	
	comp=Z,15nm,1.2s						
CAST	**Castle Rocks**	57.68	31	P	P	09 25 55.9	+0.8
CAST				IAmb	IAmb	09 25 56.1	
	comp=Z,11nm,1.4s						
GEYT	**Alibeck**	57.73	298	LR	LR	09 53 11.7	
	comp=Z,125nm,18.3s,baz=108,slow=39						
KDAK	**Kodiak Island**	58.13	38	LR	LR	09 51 27.9	
	comp=Z,144nm,21.1s,baz=267,slow=36						
H23K	**Yukon River**	58.53	29	P	P	09 26 01.6	+0.7
H23K				IAmb	IAmb	09 26 03.0	
	comp=Z,13nm,1.2s						
KIRV	**Kirov**	58.87	323	LR	LR	09 51 35.7	
	comp=Z,143nm,21.3s,baz=85,slow=36						
NEA2	**Nenana**	58.87	30	P	P	09 26 03.6	+0.3
NEA2				IAmb	IAmb	09 26 10.7	
	comp=Z,7.6nm,1.1s						
ILAR	**Eielson Array**	59.77	30	P	P	09 26 07.2	-2.3
	comp=Z,1.0nm,0.9s,baz=286,slow=8.5,SNR=8.4						
ILAR				LR	LR	09 54 21.8	
	comp=Z,65nm,18.2s,baz=351,slow=38						
	comp=Z,1.0nm,0.9s						
BELG	**Belogornoye**	61.14	316	LR	LR	09 54 49.2	
	comp=Z,283nm,19.0s,baz=75,slow=38						
SCRK	**Sand Creek**	61.16	30	P	P	09 26 18.6	-0.5
SCRK				IAmb	IAmb	09 26 39.2	
	comp=Z,12nm,1.5s						
M26K	**Nabesna, AK**	61.95	32	IAmb	IAmb	09 26 25.1	
	comp=Z,9.3nm,1.1s						
L27K	**Beaver Creek,**	62.31	31	P	P	09 26 26.5	-0.3
L27K				IAmb	IAmb	09 26 28.5	
	comp=Z,6.1nm,1.1s						
BCAR	**Beaver Creek A**	62.33	31	P	P	09 26 27.4	+0.4
WSAR	**Wadi Sarin**	62.38	282	LR	LR	09 56 43.5	
	comp=Z,72nm,18.1s,baz=86,slow=39						
KLMR	**Klimovskoe**	63.26	327	*e*P	P	09 26 34.9	+1.9
KLMR				AMP		09 26 42.1	
	comp=Z,13nm,1.3s						
EPYK	**Eagle Plains**	63.53	27	IAmb	IAmb	09 26 39.3	
	comp=Z,8.0nm,1.1s						
STKA	**Stephens Creek**	63.70	168	LR	LR	09 56 29.2	
	comp=Z,22nm,19.3s,baz=18,slow=38						
DZM	**Mont Dzumac**	63.77	141	LR	LR	09 52 36.4	
	comp=Z,129nm,18.5s,baz=28,slow=34						
INK	**Inuvik**	64.10	24	P	P	09 26 38.0	-0.5
	comp=Z,1.5nm,0.8s,baz=308,slow=11,SNR=3.1						
INK				LR	LR	09 57 43.7	
	comp=Z,145nm,19.0s,baz=257,slow=39						
	comp=Z,1.5nm,0.8s						
INK	**Inuvik**	64.10	24	IAmb	IAmb	09 26 45.1	
	comp=Z,8.4nm,1.4s						
SPITS	**Spitsbergen Ar**	64.28	348	LR	LR	09 56 58.4	
	comp=Z,147nm,18.1s,baz=261,slow=38						
ARCES	**ARCESS Array B**	65.84	338	P	P	09 26 48.9	-1.0
	comp=Z,2.0nm,0.9s,baz=55,slow=7.8,SNR=5.0						
ARCES				LR	LR	09 59 36.4	
	comp=Z,206nm,18.4s,baz=73,slow=40						
	comp=Z,2.0nm,0.9s						
OBN	**Obninsk**	66.58	321	LR	LR	09 57 55.1	
	comp=Z,40nm,22.0s,baz=150,slow=38						
KBZ	**Khabaz**	66.83	308	P	P	09 26 56.6	+0.1
	comp=Z,3.5nm,0.9s,baz=302,slow=1.1,SNR=5.7						
KBZ				LR	LR	09 57 27.6	
	comp=Z,187nm,18.1s,baz=82,slow=37						
	comp=Z,3.5nm,0.9s						
GNI	**Garni**	66.86	304	LR	LR	09 57 24.7	
	comp=Z,107nm,20.9s,baz=76,slow=37						
C36M	**Paulatuk**	66.86	22	P	P	09 26 56.0	-0.4
KVAR	**Kislovodsk Arr**	66.88	308	LR	LR	09 57 45.3	
	comp=Z,240nm,18.1s,baz=66,slow=38						
KIV	**Kislovodsk**	66.89	308	P	P	09 26 57.1	0.0
FINES	**FINESS Array B**	69.11	330	P	P	09 27 09.1	-1.5
	comp=Z,0.9nm,0.6s,baz=86,slow=5.9,SNR=6.2						
FINES				LR	LR	09 59 56.8	
	comp=Z,116nm,19.3s,baz=34,slow=38						
	comp=Z,0.9nm,0.6s						
DLBC	**Dease Lake**	69.34	34	LR	LR	09 58 21.8	
	comp=Z,64nm,18.2s,baz=287,slow=37						
GURO	**Guroymak-BITLI**	69.42	303	P	P	09 27 13.8	+0.7
GURO				IAmb	IAmb	09 27 35.4	
	comp=Z,3.1nm,0.7s						
RES	**Resolute Bay**	70.63	11	LR	LR	10 01 24.9	
	comp=Z,56nm,18.0s,baz=358,slow=38						
RES	**Resolute Bay**	70.63	11	P	P	09 27 19.5	-0.2
NACGM	**Naroch**	71.79	324	*e*P	P	09 27 27.1	0.0
	baz=62						
AKASG	**Malin Array Be**	72.45	319	LR	LR	10 01 06.1	
	comp=Z,302nm,18.4s,baz=102,slow=37						
BBB	**Bella Bella**	73.19	39	LR	LR	10 01 12.4	
	comp=Z,33nm,18.2s,baz=320,slow=37						
YKA	**Yellowknife Ar**	73.78	26	P	P	09 27 38.0	-0.8
	comp=Z,1.3nm,0.9s,baz=300,slow=5.6,SNR=15						
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	73.78	26	P	P	09 27 38.2	-0.5
JMIC	**Jan Mayen**	73.91	347	LR	LR	10 03 33.9	
	comp=Z,46nm,19.0s,baz=30,slow=39						
BR131	**Keskin Array S**	74.79	307	P	P	09 27 44.5	-0.8
BR131				IAmb	IAmb	09 27 50.4	
	comp=Z,9.3nm,1.2s						
BRTR	**Keskin Array B**	74.79	307	P	P	09 27 44.4	-0.9

	comp=Z,1.5nm,0.9s,baz=99,slow=6.4,SNR=7.7						
	comp=Z,1.5nm,0.9s						
HFS	Hagfors	74.95	332	LR	LR	10 02 04.9	
	comp=Z,159nm,18.1s,baz=45,slow=37						
NB2	NORSAR Subarra	75.37	334	P	P	09 27 46.8	-1.3
	comp=Z,18nm,1.7s,baz=50,slow=5.9						
NOA	NORSAR Array B	75.37	334	P	P	09 27 45.5	-2.6
	comp=Z,1.0nm,0.8s,baz=51,slow=5.8,SNR=5.3						
NOA				LR	LR	10 04 54.6	
	comp=Z,73nm,18.3s,baz=80,slow=39						
	comp=Z,1.0nm,0.8s						
MMAI	Mount Meron Ar	76.68	301	LR	LR	10 03 42.4	
	comp=Z,71nm,21.7s,baz=230,slow=37						
MLR	Muntele Rosu	76.92	315	LR	LR	10 04 07.8	
	comp=Z,146nm,20.8s,baz=52,slow=38						
VRAC	Vranov	80.08	322	LR	LR	10 04 25.3	
	comp=Z,160nm,19.6s,baz=80,slow=36						
CLL	Collm	80.69	325	*i*P	P	09 28 19.3	+1.5
	comp=Z,3.0nm,0.9s						
CLL				*e*PP	PP	09 31 22.0	+1.0
CLL				LmV		10 07 00.0	
	comp=Z,200nm,19.6s						
ATD	Arta Tunnel	81.09	278	LR	LR	10 07 38.5	
	comp=Z,40nm,18.6s,baz=322,slow=38						
NEW	Newport	81.24	38	LR	LR	10 05 41.4	
	comp=Z,53nm,19.1s,baz=326,slow=37						
BORG	Borgarnes	81.75	348	LR	LR	10 07 07.4	
	comp=Z,35nm,18.2s,baz=11,slow=38						
GERES	GERESS Array B	81.88	323	LR	LR	10 05 54.5	
	comp=Z,107nm,19.3s,baz=81,slow=37						
SFJD	Kangerlussuaq	82.23	360	LR	LR	10 05 55.0	
	comp=Z,96nm,19.6s,baz=354,slow=36						
IDI	Anoyia	83.02	307	LR	LR	10 12 24.3	
	comp=Z,53nm,18.3s,baz=92,slow=41						
BMO	Blue Mountains	83.21	41	P	P	09 28 31.7	+0.4
J08A	Circle Bar Ran	83.44	43	P	P	09 28 33.0	+0.4
J08A				IAmb	IAmb	09 28 34.0	
	comp=Z,5.3nm,1.0s						
FCC	Fort Churchill	83.50	21	P	P	09 28 31.7	-0.7
FCC				IAmb	IAmb	09 28 32.9	
	comp=Z,7.6nm,1.0s						
FRB	Frobisher Bay	84.44	8	LR	LR	10 07 41.4	
	comp=Z,80nm,20.9s,baz=359,slow=37						
EKA	Eskdalemuir Ar	84.78	335	LR	LR	10 11 53.8	
	comp=Z,140nm,18.4s,baz=357,slow=40						
BFO	Black Forest	84.92	325	P	P	09 28 39.8	-0.1
MFID	Camas Ranch	84.94	42	P	P	09 28 39.7	-0.5
MFID				IAmb	IAmb	09 28 41.6	
	comp=Z,3.9nm,1.1s						
HRY	Holter Researc	85.00	37	P	P	09 28 40.6	+0.2
DAVOX	Davos/Dischmat	85.18	323	LR	LR	10 08 08.6	
	comp=Z,197nm,19.0s,baz=81,slow=37						
EGMT	Eagleton	85.18	35	P	P	09 28 41.1	-0.1
EGMT				IAmb	IAmb	09 28 42.2	
	comp=Z,5.3nm,0.8s						
LRM	Limekiln Ridge	85.25	38	P	P	09 28 42.0	+0.1
HLID	Hailey	85.64	41	IAmb	IAmb	09 28 45.6	
	comp=Z,8.5nm,1.4s						
KVN	Kaiserville	86.27	46	P	P	09 28 47.0	0.0
KVN				IAmb	IAmb	09 28 48.4	
	comp=Z,5.6nm,1.1s						
NVAR	Mina Array Bea	86.53	47	P	P	09 28 48.5	+0.2
	comp=Z,1.6nm,0.9s,baz=288,slow=5.1,SNR=11						
	comp=Z,1.6nm,0.9s						
LKWY	Lake	87.17	38	IAmb	IAmb	09 28 55.0	
	comp=Z,5.2nm,1.0s						
H17A	Grant Village	87.19	38	IAmb	IAmb	09 28 54.8	
	comp=Z,7.9nm,1.2s						
RLMT	Red Lodge	87.39	37	IAmb	IAmb	09 28 53.9	
	comp=Z,7.8nm,1.2s						
PD31	Pinedale Array	88.84	39	IAmb	IAmb	09 29 12.9	
	comp=Z,4.1nm,1.3s						
PDAR	Pinedale Array	88.84	39	P	P	09 28 59.0	-0.4
	comp=Z,1.2nm,0.9s,baz=309,slow=2.8,SNR=8.2						
PDAR				LR	LR	10 12 07.2	
	comp=Z,29nm,18.0s,baz=348,slow=38						
	comp=Z,1.2nm,0.9s						
PDAR	Pinedale Array	88.84	39	P	P	09 28 58.7	-0.6
QSM	Queen of Sheba	88.94	48	IAmb	IAmb	09 29 01.6	
	comp=Z,5.7nm,1.1s						
ULM	Lac du Bonnet	89.70	27	P	P	09 29 02.5	-0.4
	comp=Z,7.9nm,0.8s,baz=337,slow=4.2,SNR=7.1						
ULM				LR	LR	10 13 42.4	
	comp=Z,40nm,18.6s,baz=333,slow=39						
	comp=Z,7.9nm,0.8s						
ULM	Lac du Bonnet	89.70	27	P	P	09 29 02.2	-0.7
MTPU	Mount Pierson	90.50	44	IAmb	IAmb	09 29 09.7	
	comp=Z,6.5nm,1.3s						
RSSD	Black Hills	90.75	35	P	P	09 29 07.9	-0.3
RSSD				IAmb	IAmb	09 29 10.3	
	comp=Z,6.7nm,1.1s						
SRU	San Rafael Swe	90.77	42	IAmb	IAmb	09 29 09.8	
	comp=Z,3.8nm,1.0s						
U15A	North Rim	91.50	45	IAmb	IAmb	09 29 14.1	
	comp=Z,6.1nm,1.4s						
PPT	Papeete	91.64	109	LR	LR	10 05 00.3	
	comp=Z,30nm,20.1s,baz=269,slow=32						
KMBO	Kilima Mbogo	92.28	270	LR	LR	10 11 15.2	
	comp=Z,32nm,20.5s,baz=91,slow=36						
KEST	Kesra	92.82	315	LR	LR	10 13 46.5	
	comp=Z,68nm,19.8s,baz=292,slow=37						
SCHQ	Schefferville	93.32	9	LR	LR	10 13 10.8	
	comp=Z,53nm,19.7s,baz=65,slow=37						
ESDC	Sonseca Array	97.28	325	LR	LR	10 16 27.6	
	comp=Z,121nm,18.7s,baz=48,slow=37						
TXAR	Lajitas Array	101.62	45	P	Pdif	09 29 58.5	+0.8
	comp=Z,0.5nm,0.9s,baz=299,slow=4.0,SNR=3.5						
LPAZ	La Paz	158.37	51	PKPab	PKPab	09 36 35.4	-2.5
	comp=Z,0.9nm,0.9s,baz=333,slow=4.5,SNR=4.5						

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*IDC **07** 09:22:23.4±6.9, 6°.80S×148°.20E, h56km±49km, mb3.8/3, mbtmp4.1/5, ML2.6/2, Error ellipse: s-maj=66.3km s-min=45.6km az=93.0*

*NEIC **07** 09:22:24.7±1.0, 6°.8S±0°.1×147°.9E±0°.1, h62km±11km, mb4.0/10, Error ellipse: s-maj=25.3km s-min=8.6km az=129.0*

ISC 07 09:22:22.2±1.0, **6°.6S**±0°.1×**147°.9E**±0°.1, **h51**km, **n35**, σ**0ˢ.92**/36, **mb4.0**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.87	195	P	Pn	09 23 05.7	+0.2
	10nm,0.3s,baz=20,slow=9.1,SNR=21						
PMG				S	Sn	09 23 39.1	+0.4
	49nm,0.5s,baz=0.0,slow=17,SNR=4.2						
	27nm,0.3s						
PMG	Port Moresby	2.87	195		Pn	09 23 05.8	+0.4
PMG				Sn	Sn	09 23 39.9	+1.1
PMG	Port Moresby	2.87	195	P	Pn	09 23 06.4	+0.9
RABL	Rabaul	4.88	61	Pn	Pn	09 23 35.7	+2.6
COEN	Coen	8.65	212	Pn	Pn	09 24 25.6	+0.8
COEN	Coen	8.65	212	P	Pn	09 24 25.9	+1.1
CTA	Charters Tower	13.48	187	P	Pn	09 25 28.2	-2.8
	0.2nm,0.3s,baz=6.6,slow=13,SNR=3.4						
	5.1nm,0.8s						
CTAO	Charters Tower	13.48	187	Pn	Pn	09 25 28.9	-2.1
WRAB	Tennant Creek	18.66	224	P	Pn	09 26 35.9	-1.0
WRAB	Tennant Creek	18.66	224	P	Pn	09 26 36.9	-0.1
QLP	Quilpie	20.16	190	P	Pn	09 26 53.0	-1.6
KNRA	Kununurra	20.81	243	P	P	09 26 59.5	0.0
KNRA				IAmb	IAmb	09 27 12.6	
	comp=Z,26nm,1.1s						
KNRA	Kununurra	20.81	243	P	P	09 26 59.5	0.0
AS31	Alice Springs	21.64	217	P	P	09 27 09.0	+0.6
AS31				IAmb	IAmb	09 27 09.4	
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	21.64	217	P	P	09 27 08.8	+0.4
	comp=Z,5.8nm,0.5s,baz=55,slow=9.1,SNR=176						
	comp=Z,5.8nm,0.5s						
ASAR	Alice Springs	21.64	217	P	P	09 27 08.6	+0.2
INKA	Innaminka	22.08	197	P	P	09 27 13.2	+0.2
ARMA	Armidale	23.93	172	P	P	09 27 31.2	-0.5
ARMA				IAmb	IAmb	09 27 32.9	
	comp=Z,5.9nm,0.8s						
OOD	Oodnadatta	24.04	207	P	P	09 27 32.9	+0.3
FITZ	Fitzroy Crossi	24.52	240	P	P	09 27 37.8	+0.7
FITZ				IAmb	IAmb	09 27 38.7	
	comp=Z,5.9nm,0.7s						
LCRK	Leigh Creek	25.39	200	P	P	09 27 45.4	+0.5
STKA	Stephens Creek	25.81	192	P	P	09 27 48.2	-0.5
	comp=Z,2.1nm,0.5s,baz=22,slow=12,SNR=7.5						
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	25.81	192	P	P	09 27 48.6	-0.1
STKA	Stephens Creek	25.81	192	P	P	09 27 48.4	-0.3
WRKA	Warakurna	26.22	224	P	P	09 27 52.5	-0.1
MULG	Mulgathing	26.90	207	P	P	09 27 58.6	+0.1
MBWA	Marble Bar	30.85	239	P	P	09 28 33.7	-0.1
MEEK	Meekatharra	34.25	231	P	P	09 29 04.2	+0.6
KLBR	Kellerberrin	37.55	225	P	P	09 29 31.5	-0.3
RPZ	Rata Peaks	42.17	155	P	P	09 30 09.9	+0.1
VNDA	Vanda	71.25	177	P	P	09 33 35.8	+0.1
	comp=Z,0.4nm,0.6s,baz=14,slow=4.2,SNR=3.5						
	comp=Z,0.4nm,0.6s						
VNDA	Vanda	71.25	177	P	P	09 33 36.1	+0.4
VNDA				IAmb	IAmb	09 33 52.2	
	comp=Z,1.6nm,1.1s						
SBA	Scott Base	71.88	176	P	P	09 33 38.5	-0.9
QSPA	South Pole Qui	83.35	180	P	P	09 34 43.5	-0.2
QSPA				IAmb	IAmb	09 34 56.5	
	comp=Z,0.8nm,1.0s						
TORD	Torodi Ar. Bea	146.11	284	PKPbc	PKPab	09 41 58.5	+0.1
	comp=Z,0.4nm,0.5s,baz=58,slow=3.0,SNR=11						

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*IDC **07** 09:43:34.1±0.8, 25°.39N×91°.57E, h0km, mb3.8/8, mbtmp3.8/9, ML4.2/1, Error ellipse: s-maj=37.9km s-min=15.9km az=69.0*

*NEIC **07** 09:43:39.6±1.0, 25°.40N±0°.07×91°.79E±0°.07, h38km±7km, mb4.1/18, Error ellipse: s-maj=10.5km s-min=8.8km az=206.0*

*NDI **07** 09:43:40.0±1.9, 25°.44N×91°.71E, h24km±6km, ML4.1, mb4.1(NEIC)*

ISC 07 09:43:39.2±1.0, **25°.42N**±0°.04×**91°.70E**±0°.04, **h34**km±3km, **n47**, σ**1ˢ.22**/52, **mb4.0**/16, **India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	0.22	48	*e*P	Pb	09 43 45.7	-0.8
SHL				*e*S	Sb	09 43 50.2	-1.2
SHL				IAML		09 43 50.5	
	comp=N,14μm,0.1s						
SHL				IAML		09 43 50.9	
	comp=E,10μm,0.2s						
GUWA	GUWAHATI	0.78	359	*e*P	Pb	09 43 54.0	-0.5
GUWA				*e*S	Sn	09 44 04.5	+0.3
SILR	SILCHAR	1.18	122	*e*P	Pb	09 44 01.4	+0.2
SILR				*e*S	Sb	09 44 18.6	+2.4
TURI	Tura	1.24	276	*e*P	Pb	09 44 04.1	+1.9
TEZP	TEZPUR	1.55	39	*e*P	Pn	09 44 05.3	+0.9
AZL	Aizawl	1.90	151	*e*P	Pn	09 44 10.2	+0.9
KOHI	KOHIMA	2.20	82	*e*P	Pn	09 44 14.2	+0.8
ITAN	ITANAGAR	2.50	46	*e*P	Pn	09 44 19.5	+2.0
ITAN				*e*S	Sn	09 44 48.3	+1.4
ITAN				IAML		09 44 50.3	
	comp=E,3μm,0.2s						
ITAN				IAML		09 44 50.4	
	comp=N,3μm,0.1s						
BRDH	Bariadhala	2.73	181	Pn	Pn	09 44 20.4	-0.2
	comp=N,0.4nm,0.3s,baz=360,slow=24,SNR=1.5						
BRDH				Sn	Sn	09 44 52.9	+0.5
	comp=N,0.5nm,0.3s,baz=180,slow=24,SNR=17						
GTK	Tadong	3.36	305	*e*P	Pn	09 44 32.1	+2.6
LKP	Lekhapani	4.18	62	*e*P	Pn	09 44 42.1	+1.5
LSA	Lhasa	4.30	354		Pn	09 44 43.9	+1.2
CMAR	Chiang Mai Arr	9.65	134	Pn	Pn	09 45 54.8	-0.9
	comp=N,0.6nm,0.3s,baz=311,slow=15,SNR=1.8						
	comp=N,1.3nm,0.4s						
JBP	Jabalpur	10.92	261	*e*S	Sn	09 48 09.0	-5.0
ENH	Enshi	16.45	69		Pn	09 47 26.8	-0.8
TARG	Taragay, Kyrgy	19.93	328	P	P	09 48 08.6	+0.1
KDJ	Kajisay	20.53	328	P	P	09 48 14.8	-0.1
KDJ				IAmb	IAmb	09 48 30.3	
	comp=Z,3.6nm,0.8s						
KBL	Kabul	21.59	300	P	P	09 48 26.7	+0.3
KBL				IAmb	IAmb	09 48 36.9	
	comp=Z,5.0nm,0.8s						
GAR	Garm	22.53	312	P	P	09 48 36.4	+0.1
GAR				IAmb	IAmb	09 48 47.3	
	comp=Z,20nm,1.1s						
MK31	Makanchi Array	22.61	343	P	P	09 48 36.1	-0.9
MKAR	Makanchi Array	22.61	343	P	P	09 48 37.0	0.0
	comp=Z,0.7nm,0.5s,baz=154,slow=11,SNR=13						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	22.61	343	P	P	09 48 37.4	+0.4
MAKZ	Makanchi	22.71	343	P	P	09 48 38.1	+0.1
BTK	Batken	22.76	315	P	P	09 48 39.5	+0.8
BTK				IAmb	IAmb	09 48 54.5	
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	24.75	321	P	P	09 48 56.5	-1.0
SONM	Songino Array	25.21	24	P	P	09 49 02.4	+0.6
	comp=Z,1.2nm,0.5s,baz=226,slow=8.4,SNR=2.4						
	comp=Z,1.2nm,0.5s						
KURBB	Kurchatov Arra	27.14	341	P	P	09 49 19.9	+0.9
	comp=Z,0.7nm,0.7s,baz=155,slow=9.9,SNR=4.1						
	comp=Z,0.7nm,0.7s						
KURK	Kurchatov	27.19	342	P	P	09 49 18.6	-0.9
KURK				IAmb	IAmb	09 49 19.6	
	comp=Z,5.0nm,1.4s						
ABKAR	Akbulak array	34.28	322	P	P	09 50 22.3	+0.2
ABKAR				IAmb	IAmb	09 50 35.7	
	comp=Z,1.8nm,0.6s						
BUR08	Bucovina Ar. S	56.06	312	P	P	09 53 15.9	+1.0
FIA0	FINESS Array S	56.38	328	P	P	09 53 15.5	-1.3
FINES	FINESS Array B	56.38	328	P	P	09 53 16.3	-0.5
	comp=Z,0.5nm,0.5s,baz=99,slow=8.6,SNR=6.2						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	56.38	328	P	P	09 53 16.8	0.0
ARCES	ARCESS Array B	58.13	338	P	P	09 53 28.5	-0.6
	comp=Z,1.7nm,0.9s,baz=104,slow=7.6,SNR=4.1						
	comp=Z,1.7nm,0.9s						
WRAB	Tennant Creek	61.24	133	P	P	09 53 51.4	+0.2
NC405	NORSAR Array S	63.29	328	P	P	09 54 04.3	0.0
NB2	NORSAR Subarra	63.54	328	P	P	09 54 05.3	-0.7
	comp=Z,0.5nm,0.6s,baz=85,slow=6.5						
NOA	NORSAR Array B	63.54	328	P	P	09 54 05.0	-1.0
	comp=Z,0.5nm,0.6s,baz=86,slow=6.6,SNR=4.6						
	comp=Z,0.5nm,0.6s						
GEC2	GERESS Array S	63.60	314	P	P	09 54 06.8	+0.1
GEC2				IAmb	IAmb	09 54 36.3	
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	63.65	137	P	P	09 54 07.7	+0.4
	comp=Z,2.0nm,0.5s,baz=317,slow=6.6,SNR=56						
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	63.65	137	P	P	09 54 05.3	-1.9
BMAR	Burnt Mountain	78.47	19	P	P	09 55 36.1	-0.3
INK	Inuvik	80.83	16	P	P	09 55 49.1	0.0
INK				IAmb	IAmb	09 56 00.4	
	comp=Z,5.9nm,1.4s						
SCRK	Sand Creek	80.90	22	P	P	09 55 49.9	+0.1
SCRK				IAmb	IAmb	09 56 04.7	
	comp=Z,1.7nm,1.0s						
C36M	Paulatuk	82.02	12	P	P	09 55 55.2	-0.2
TORD	Torodi Ar. Bea	84.47	282	P	P	09 56 09.1	0.0
	comp=Z,0.4nm,0.9s,baz=59,slow=3.9,SNR=2.4						
	comp=Z,0.4nm,0.9s						
CPUP	Villa Florida	152.15	261	PKPbc	PKPbc	10 03 31.0	-0.6
	comp=Z,0.9nm,0.7s,baz=117,slow=2.3,SNR=3.1						

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*IDC **07** 09:44:47.5±0.9, 51°.87N×179°.50E, h91km±7km, mb3.7/19, mbtmp4.1/21, MS2.6/1, Error ellipse: s-maj=19.8km s-min=8.2km az=178.0*

*NEIC **07** 09:44:47.3±1.7, 51°.7N±0°.2×179°.55E±0°.06, h78km±8km, Error ellipse: s-maj=22.2km s-min=5.6km az=177.0*

*AEIC **07** 09:44:48±1.7, 51°.8N±0°.2×179°.61E±0°.08, h70km±6km, ML4.2, mb4.3/77(NEIC), Error ellipse: s-maj=22.1km s-min=6.6km az=185.0*

ISC 07 09:44:47.0±0.7, **51°.85N**±0°.10×**179°.52E**±0°.03, **h83**km±5km, **n152**, σ**1ˢ.46**/158, **mb4.2**/45, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GASW	Gareloi Southw	1.01	94		Pn	09 45 06.0	-0.3
GASW					Sn	09 45 19.9	-0.9
GANO	Gareloi North	1.04	91		Pn	09 45 06.3	-0.4
GALAA	Gareloi Lava P	1.06	94		Pn	09 45 06.9	-0.1
GAEA	Gareloi East	1.07	93		Pn	09 45 07.0	-0.2
GAEA					Sn	09 45 22.4	+0.1
TASE	Tanaga Southea	1.51	90		Pn	09 45 12.6	-0.1
TAFP	Tanaga Falls P	1.55	87		Pn	09 45 13.0	-0.1
TAFP					Sn	09 45 32.0	-0.7
TAPA	Tanaga Point A	1.65	90		Pn	09 45 14.4	-0.1
KIMD	Kanaga Island	2.01	91		Pn	09 45 19.1	-0.1
KIMD					Sn	09 45 43.3	-0.4
KICM	Kanaga Island	2.03	87		Pn	09 45 19.4	0.0
KIKV	Kanaga Island	2.05	88		Pn	09 45 19.6	-0.1
KIWB	Kanaga Island	2.06	89		Pn	09 45 19.6	-0.2
ADK	Adak	2.35	88		Pn	09 45 23.4	-0.2
ADK				Sn	Sn	09 45 50.8	-0.9
GSSP	Great Sitkin S	2.67	83		Pn	09 45 27.6	-0.3
GSTD	Great Sitkin T	2.69	84		Pn	09 45 27.9	-0.3
GSTD					Sn	09 46 02.0	+2.1
GSMY	Great Sitkin M	2.74	84		Pn	09 45 28.9	0.0
GSTR	Great Sitkin T	2.74	83		Pn	09 45 28.5	-0.4
SHEM	Shemya Is, Ala	3.44	287	P	Pn	09 45 38.4	0.0
	36nm,0.3s,baz=148,slow=4.8,SNR=30						
SHEM				S	Sn	09 46 19.3	+1.2
	115nm,0.4s,baz=188,slow=19,SNR=9.1						
SMY	Shemya	3.44	287	Pn	Pn	09 45 39.6	+1.2
SMY	Shemya	3.44	287		Sn	09 46 19.4	+1.4
ATKA	Atka Island	3.90	82		Pn	09 45 44.8	+0.3
KOKL	Mount Kliuchef	3.90	81		Pn	09 45 45.0	+0.3
KOFP	Korovin Flat P	3.96	81		Pn	09 45 45.6	+0.2
OKFG	Magazine Ridge	7.80	74		Pn	09 46 39.3	+1.6
SPIA	Saint Paul Isl	7.99	44		Pn	09 46 41.0	+0.8
MSW	Makushin Switc	8.54	71		Pn	09 46 49.3	+1.6
UNV	Unalaska Valle	8.69	71	Pn	Pn	09 46 52.1	+2.3
ZRO	Akutan Zero	9.03	70		Pn	09 46 55.5	+1.0
AKBBA	Akutan Broad B	9.06	70		Pn	09 46 56.8	+1.9
SDPT	Sand Point	12.37	66	Pn	Pn	09 47 39.3	-0.6
CNBA	Chernabura Isl	12.82	68	Pn	Pn	09 47 44.7	-1.2
PETK	Petropavlovsk-	13.36	284	P	Pn	09 47 56.4	+3.4
	1.4nm,0.6s,baz=100,slow=19,SNR=7.4						
PETK				S	Sn	09 50 12.7	-6.8
	0.7nm,0.6s,baz=94,slow=19,SNR=1.1						
N18K	Kilae Creek	16.17	47		P	09 48 33.7	+3.0
O18K	Koktuh Hills	16.21	51		P	09 48 31.0	0.0
O18K				IAmb	IAmb	09 48 35.1	
	comp=Z,18nm,0.8s						
Q19K	Cape Douglas,	16.72	54		P	09 48 37.5	+0.7
Q19K				IAmb	IAmb	09 49 15.8	
	comp=Z,33nm,1.3s						
N19K	Bonanza Creek	16.87	48		P	09 48 41.2	+2.8
N19K				IAmb	IAmb	09 48 42.4	
	comp=Z,22nm,1.4s						
KDAK	Kodiak Island	17.05	59	P	Pn	09 48 38.3	-1.5
	comp=Z,4.6nm,0.3s,baz=286,slow=5.4,SNR=9.8						
KDAK				S	Sn	09 51 42.6	-6.2
	comp=Z,9.0nm,1.1s,baz=121,slow=22,SNR=1.1						
KDAK	Kodiak Island	17.05	59	P	Pn	09 48 38.7	-1.2
M19K	Big River Lodg	17.32	44	P	P	09 48 45.4	+2.1
RSO	Redoubt South	17.56	50	P	P	09 48 47.5	+1.3
M20K	Styx River	17.86	45	P	Pn	09 48 51.4	+1.6
M20K				IAmb	IAmb	09 48 55.9	
	comp=Z,28nm,1.8s						
CNPM	China Poot	18.06	53	P	P	09 48 52.2	+0.7
K20K	Telida	18.08	40	P	Pn	09 48 54.9	+2.5
BRLK	Bradley Lake	18.29	53	P	P	09 48 53.8	-0.2
J20K	Nowinta River	18.44	38	P	Pn	09 48 58.5	+1.9
PPLA	Purkeypile	18.66	43	P	Pn	09 49 00.6	+1.2
PPLA				IAmb	IAmb	09 49 32.6	
	comp=Z,43nm,1.8s						
CAST	Castle Rocks	18.91	41	P	Pn	09 49 04.1	+1.8
O22K	Cooper Landing	19.02	51	P	P	09 49 03.5	+1.6
SEW	Seward	19.06	52	P	P	09 49 03.7	+1.3
M22K	Willow	19.16	47	P	P	09 49 04.8	+1.3
M22K				IAmb	IAmb	09 49 06.2	
	comp=Z,24nm,1.1s						
KTH	Kantishna Hill	19.44	42	P	Pn	09 49 09.1	+0.4
KTH				IAmb	IAmb	09 49 09.8	
	comp=Z,15nm,0.8s						
IMAR	Indian Mountai	19.54	33	P	Pn	09 49 10.2	+0.6
BPAW	Bear Paw Mtn.	19.64	40	P	Pn	09 49 11.3	+0.4
BPAW				IAmb	IAmb	09 49 51.8	
	comp=Z,34nm,2.0s						
H21K	Melozitna Rive	19.69	35	P	Pn	09 49 12.2	+0.8
I21K	Tanana	19.75	37	P	Pn	09 49 12.0	0.0
KNK	Knik Glacier	19.84	49	P	P	09 49 11.4	+0.5
KNK				IAmb	IAmb	09 49 43.7	
	comp=Z,15nm,0.8s						
SML	Sawmill	20.00	48	P	P	09 49 12.6	0.0
RND	Reindeer	20.25	43	P	P	09 49 16.8	+1.4
BWN	Browne	20.28	41	P	Pn	09 49 18.1	-0.2
BWN				IAmb	IAmb	09 49 41.7	
	comp=Z,23nm,1.1s						
SCM	Sheep Creek Mo	20.46	48	P	P	09 49 18.6	+0.9
SCM				IAmb	IAmb	09 49 18.8	
	comp=Z,20nm,1.0s						
NEA2	Nenana	20.60	40	P	P	09 49 21.3	+2.2
NEA2				IAmb	IAmb	09 49 21.9	
	comp=Z,7.9nm,0.5s						
I23K	Minto, Yukon-K	20.72	38	P	P	09 49 22.2	+1.9
DHY	Denali Highway	20.78	44	P	P	09 49 22.6	+1.4
M24K	Tolsona, Glenn	21.06	48	P	P	09 49 25.9	+1.8
MDM	Murphy Dome	21.08	39	P	P	09 49 26.0	+1.8
ILAR	Eielson Array	21.54	40	P	P	09 49 28.6	-0.5
	comp=Z,0.5nm,0.4s,baz=238,slow=8.4,SNR=14						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	21.54	40	P	P	09 49 28.6	-0.5
H24K	Noodor Dome	21.57	37	P	P	09 49 31.3	+1.8
BMRM	Bremner River	21.58	51	P	P	09 49 31.7	+2.1
BMRM				IAmb	IAmb	09 49 51.5	
	comp=Z,14nm,1.0s						
PAX	Paxson	21.59	45	P	P	09 49 31.2	+1.5
PAX				IAmb	IAmb	09 49 59.6	
	comp=Z,23nm,1.9s						
N25K	Chitina, Valde	21.69	49	P	P	09 49 32.1	+1.3
TOLK	Toolik Lake Re	22.36	30	P	P	09 49 39.5	+1.7
DOT	Dot Lake	22.37	44	P	P	09 49 38.7	+0.6
SCRK	Sand Creek	22.49	43	P	P	09 49 39.4	0.0
L26K	Log Cabin Wild	22.54	46	P	P	09 49 41.4	+1.6
M26K	Nabesna, AK	22.57	48	P	P	09 49 41.6	+1.4
M26K				IAmb	IAmb	09 49 50.3	
	comp=Z,13nm,1.4s						
BARN	Barnard Glacie	23.01	51	P	P	09 49 45.6	+0.8
M27K	Edge Creek, AK	23.08	48	P	P	09 49 46.9	+1.5
M27K				IAmb	IAmb	09 50 22.9	
	comp=Z,24nm,1.6s						
L27K	Beaver Creek,	23.23	46	P	P	09 49 48.1	+1.5
BCAR	Beaver Creek A	23.25	46	P	P	09 49 47.9	+1.0
BMAR	Burnt Mountain	23.43	35	P	P	09 49 49.9	+1.4
EGAK	Eagle	23.89	42	P	P	09 49 53.9	+1.4
EGAK				IAmb	IAmb	09 49 55.2	
	comp=Z,11nm,1.0s						
DAWY	Dawson	24.48	44	P	P	09 49 59.2	+1.2
DAWY				IAmb	IAmb	09 50 01.9	
	comp=Z,21nm,1.7s						
HYT	Haines Junctio	25.02	52	P	P	09 50 03.6	+0.5
HYT				IAmb	IAmb	09 50 47.8	
	comp=Z,17nm,1.6s						
ASAJ	Asahikawa	25.68	267	P	P	09 50 09.2	+0.2
	comp=Z,20nm,1.1s,baz=102,slow=14,SNR=3.4						
	comp=Z,20nm,1.1s						
INK	Inuvik	27.68	36	P	P	09 50 27.5	+0.9
	comp=Z,1.2nm,0.4s,baz=264,slow=5.4,SNR=14						
	comp=Z,1.2nm,0.4s						
INK	Inuvik	27.68	36	P	P	09 50 27.6	+0.9
INK				IAmb	IAmb	09 50 32.3	
	comp=Z,14nm,1.9s						
KLR	Kul'dur	30.05	284	P	P	09 50 47.2	-0.7
	comp=Z,1.7nm,0.4s,baz=42,slow=6.9,SNR=9.4						
	comp=Z,1.7nm,0.4s						
USRK	Ussuriysk Ar.	32.20	275	P	P	09 51 06.2	-0.7
	comp=Z,3.0nm,0.6s,baz=66,slow=9.5,SNR=6.5						
	comp=Z,3.0nm,0.6s						
USRK	Ussuriysk Ar.	32.20	275	P	P	09 51 06.6	-0.3
MJAR	Matsushiro Arr	32.84	259	LR	LR	10 07 37.7	
	comp=Z,10nm,18.9s,baz=114,slow=42						
H11N2	WAKE ISLAND Hy	33.55	202	T	T	10 26 57.9	
	baz=12						
H11N3	WAKE ISLAND Hy	33.56	202	T	T	10 27 15.8	
	baz=12						
H11N1	WAKE ISLAND Hy	33.57	202	T	T	10 26 55.5	
	baz=12						
H11S1	WAKE ISLAND Hy	34.78	202	T	T	10 28 28.9	
	baz=16						
H11S2	WAKE ISLAND Hy	34.79	202	T	T	10 28 36.7	
	baz=16						
H11S3	WAKE ISLAND Hy	34.79	202	T	T	10 28 47.1	
	baz=16						
YKA	Yellowknife Ar	35.66	47	P	P	09 51 36.5	-0.1
	comp=Z,1.1nm,0.8s,baz=282,slow=8.5,SNR=13						
YKA				PcP	PcP	09 54 02.6	-0.5
	comp=Z,0.1nm,0.4s,baz=292,slow=3.3,SNR=1.5						
YKA				ScP	ScP	09 57 38.9	-2.4
	comp=Z,0.2nm,0.5s,baz=285,slow=3.2,SNR=2.6						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	35.66	47	P	P	09 51 37.3	+0.6
KSRS	Korea Array	38.59	269	P	P	09 52 02.2	+0.5
	comp=Z,1.7nm,0.8s,baz=56,slow=9.0,SNR=7.5						
	comp=Z,1.7nm,0.8s						
KSXB	Camp Six Broad	39.07	82	P	P	09 52 07.3	+1.5

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EDM   Edmonton          39.49  61   P      P       09 52 08.5 -0.6
RES   Resolute Bay      39.74  24   P      P       09 52 13.3 +2.5
RES                                 IAmb   IAmb    09 52 30.5
      comp=Z,11nm,1.9s
K05A  Summer Lake       40.39  79   P      P       09 52 18.2 +1.4
WVOR  Wild Horse Val    41.92  78   P      P       09 52 30.0 +0.7
WVOR                                IAmb   IAmb    09 52 30.6
      comp=Z,7.5nm,1.4s
BEKR  Beckworth         42.38  82   P      P       09 52 34.0 +0.8
BEKR                                IAmb   IAmb    09 52 34.7
      comp=Z,7.2nm,1.5s
YERR  Yerington         43.61  82   P      P       09 52 44.7 +1.6
YERR                                IAmb   IAmb    09 53 07.5
      comp=Z,5.8nm,1.3s
BMN   Battle Mountai    43.96  79   P      P       09 52 47.1 +1.3
BMN                                 IAmb   IAmb    09 52 47.6
      comp=Z,2.4nm,0.5s
BCYI  Bear Canyon       43.98  72   P      P       09 52 45.3 -0.7
MCMT  McKenzie Canyo    44.02  71   P      P       09 52 45.8 -0.6
NVAR  Mina Array Bea    44.52  82   P      P       09 52 50.9 +0.4
      comp=Z,1.4nm,0.6s,baz=299,slow=7.3,SNR=13
NVAR                                pP     pwP     09 53 11.7 -0.6
      comp=Z,0.7nm,0.8s,baz=306,slow=6.6,SNR=3.3
      comp=Z,1.4nm,0.6s
YHL   Hebgen Lake       44.98  70   P      P       09 52 54.4 +0.3
YHL                                 IAmb   IAmb    09 52 55.0
      comp=Z,5.3nm,1.2s
SONM  Songino Array     45.50 295   P      P       09 52 57.8 -0.1
      comp=Z,0.8nm,0.4s,baz=60,slow=8.5,SNR=2.0
      comp=Z,0.8nm,0.4s
HVU   Hansel Valley     45.84  75   P      P       09 53 01.3 +0.6
R11A  Troy Canyon, C    46.24  80   P      P       09 53 05.2 +1.2
FCC   Fort Churchill    46.38  46   P      P       09 53 04.5  0.0
HHC   Hu-ho-hao-te      46.56 284  eP      P       09 53 06.6 +0.3
HHC                                 pmax   pmax
      comp=Z,30nm,0.8s
HHC                                 pmax   pmax
      comp=Z,220nm,5.7s
TPNV  Topopah Spring    46.72  82   P      P       09 53 09.0 +1.3
TPNV                                IAmb   IAmb    09 53 10.2
      comp=Z,2.5nm,0.8s
DUG   Dugway, Tooele    46.78  76   P      P       09 53 08.8 +0.7
DUG                                 IAmb   IAmb    09 53 09.5
      comp=Z,6.5nm,1.4s
PD31  Pinedale Array    47.16  72   P      P       09 53 10.9 -0.2
PDAR  Pinedale Array    47.16  72   P      P       09 53 10.6 -0.5
      comp=Z,1.2nm,0.5s,baz=327,slow=3.1,SNR=21
PDAR                                pP     pwP     09 53 32.4 -1.0
      comp=Z,0.5nm,0.5s,baz=334,slow=3.6,SNR=2.5
      comp=Z,1.2nm,0.5s
PDAR  Pinedale Array    47.16  72   P      P       09 53 10.9 -0.2
PRN   Pahroc Range      47.16  81   P      P       09 53 13.0 +1.9
PRN                                 IAmb   IAmb    09 53 13.6
      comp=Z,3.3nm,0.9s
PSUT  Pine Spring       47.18  79   P      P       09 53 12.2 +0.9
PSUT                                IAmb   IAmb    09 53 19.1
      comp=Z,2.4nm,0.7s
GSC   Goldstone, Bar    47.45  84   P      P       09 53 13.8 +0.6
GSC                                 IAmb   IAmb    09 53 35.1
      comp=Z,2.8nm,0.9s
TMUT  Trail Mountain    48.30  76   P      P       09 53 21.5 +1.4
TMUT                                IAmb   IAmb    09 53 21.9
      comp=Z,2.7nm,0.6s
SRU   San Rafael Swe    48.83  76   P      P       09 53 25.1 +1.1
U15A  North Rim         49.48  80   P      P       09 53 30.1 +0.9
U15A                                IAmb   IAmb    09 53 31.5
      comp=Z,2.4nm,0.7s
SPB2  Spitsbergen Ar    49.83 356   P      P       09 53 31.0 +0.2
PV13  Radium Mtn., P    50.47  76   P      P       09 53 37.0 +0.5
ISCO  Idaho Springs     51.33  72   P      P       09 53 43.6 +0.6
ISCO                                IAmb   IAmb    09 53 48.3
      comp=Z,6.0nm,1.8s
ARCES ARCESS Array B    57.44 349   P      P       09 54 25.6 -0.9
      comp=Z,0.4nm,0.4s,baz=27,slow=8.1,SNR=1.4
      comp=Z,0.4nm,0.4s
KURK  Kurchatov         57.93 313   P      P       09 54 30.4 +0.2
KURK                                IAmb   IAmb    09 54 52.6
      comp=Z,2.7nm,1.1s
KURBB Kurchatov Arra    58.04 313   P      P       09 54 30.4 -0.5
      comp=Z,1.1nm,0.4s,baz=42,slow=6.7,SNR=18
KURBB                               pP     pP      09 54 52.5 +0.8
      comp=Z,0.3nm,0.5s,baz=39,slow=6.6,SNR=2.1
      comp=Z,1.1nm,0.4s
WMQ   Urumqi            58.20 302  eP      P       09 54 36.4 +4.1
E46A  Sault Ste Mari    58.69  54   P      P       09 54 35.8 +0.3
MK31  Makanchi Array    58.92 307   P      P       09 54 36.7 -0.4
MK31                                IAmb   IAmb    09 54 37.5
      comp=Z,4.0nm,1.5s
MKAR  Makanchi Array    58.92 307   P      P       09 54 36.3 -0.9
      comp=Z,0.9nm,0.4s,baz=49,slow=6.9,SNR=13
      comp=Z,0.9nm,0.4s
MKAR  Makanchi Array    58.92 307   P      P       09 54 36.6 -0.6
P40A  Paris             59.31  64   P      P       09 54 39.2 -0.7
TXAR  Lajitas Array     59.61  80   P      P       09 54 41.7 -0.6
      comp=Z,0.3nm,0.4s,baz=297,slow=3.7,SNR=8.1
      comp=Z,0.3nm,0.4s
TXAR  Lajitas Array     59.61  80   P      P       09 54 42.6 +0.4
PZH   PanZhiHua         62.24 278   P      P       09 55 02.8 +2.7
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                 pmax   pmax
      comp=Z,80nm,7.5s
NB2   NORSAR Subarra    67.07 354   P      P       09 55 30.4 -0.5
      comp=Z,0.3nm,0.5s,baz=7.9,slow=6.5
NOA   NORSAR Array B    67.07 354   P      P       09 55 30.4 -0.5
      comp=Z,0.5nm,0.5s,baz=2.7,slow=5.6,SNR=4.9
      comp=Z,0.5nm,0.5s
KSH   Kashi             67.38 305   P      P       09 55 37.4 +4.1
KSH                                 pmax   pmax
      comp=Z,6.0nm,0.7s
CMAR  Chiang Mai Arr    69.93 274   P      P       09 55 49.0 -0.3
      comp=Z,0.9nm,0.3s,baz=15,slow=6.1,SNR=5.4
      comp=Z,0.9nm,0.3s
AKASG Malin Array Be    74.77 341   P      P       09 56 15.8 -1.8
      comp=Z,0.5nm,0.3s,baz=11,slow=6.6,SNR=2.1
      comp=Z,0.5nm,0.3s
ASAR  Alice Springs     85.14 221   P      P       09 57 12.8 -1.0
      comp=Z,0.5nm,0.5s,baz=24,slow=5.1,SNR=14
      comp=Z,0.5nm,0.5s
STKA  Stephens Creek    89.77 212   P      P       09 57 35.6 -0.2
      comp=Z,2.1nm,0.7s,baz=343,slow=11,SNR=4.3
      comp=Z,2.1nm,0.7s
TORD  Torodi Ar. Bea   115.24 358   PKP    PKiKP   10 03 16.7 -2.2
      comp=Z,0.1nm,0.3s,baz=33,slow=1.4,SNR=1.7
BOSA  Boshof           149.88 310   PKPbc  PKPbc   10 04 26.5 -0.9
      comp=Z,1.9nm,0.5s,baz=30,slow=2.5,SNR=7.9
BOSA  Boshof           149.88 310          PKPbc   10 04 27.3 -0.2
```

ROM 07 09:55:32.9±0.1**, 37°.120N**±0°.005×**14°.754E**±0°.007**,**
h24^{km}, ML3.5/42**, 8C-12D, Error ellipse: s-maj=0.6km**
s-min=0.4km az=60.0, Sicily

```
Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                     Op     ISC      h  m  s   ISC
MEU   Monte Lauro       0.14  98  ⇓P     Pb      09 55 36.6 -1.2
MEU                                S      Sb      09 55 39.7 -1.5
MEU                                AML    AML
      comp=E,84500µm,0.2s
MEU                                AML    AML
MEU                                AML    AML
      comp=E,84450µm,0.2s
HMDC  Modica            0.16 172  ⇓P     Pb      09 55 37.6 -0.4
HMDC                               S      Sb      09 55 41.5 +0.1
HMDC                               AML    AML
      comp=N,32900µm,0.4s
HMDC                               AML    AML
      comp=E,32600µm,0.3s
HLNI  Lentini           0.25  22  ⇑P     Pb      09 55 38.4 -0.6
HLNI                               S      Sb      09 55 42.7 -0.5
HLNI                               AML    AML
      comp=N,23750µm,0.5s
HLNI                               AML    AML
      comp=E,66400µm,0.1s
SSY   Sortino           0.26  82  ⇑P     Pb      09 55 39.4 +0.2
SSY                                S      Sb      09 55 44.6 +1.1
SSY                                AML    AML
      comp=N,67800µm,0.3s
SSY                                AML    AML
      comp=E,42900µm,0.2s
HAVL  Avola             0.34 118  ⇓P     Pb      09 55 40.5 +0.1
HAVL                               S      Sb      09 55 46.7 +1.2
HAVL                               AML    AML
      comp=N,79600µm,0.3s
HAVL                               AML    AML
      comp=E,69100µm,0.3s
HAGA  Augusta           0.36  63  ⇑P     Pb      09 55 40.6 -0.2
HAGA                               S      Sb      09 55 46.8 +0.8
HAGA                               AML    AML
      comp=E,18550µm,0.3s
HAGA                               AML    AML
      comp=N,9615µm,0.3s
AGST  Augusta-Monte     0.40  70  ⇑P     Pb      09 55 41.2 -0.1
AGST                               S      Sb      09 55 48.0 +0.9
AGST                               AML    AML
      comp=N,22750µm,0.3s
AGST                               AML    AML
      comp=E,23550µm,0.3s
EPOZ  Pozzillo          0.47  34   P      Pn      09 55 46.2 +2.1
ESML  S. M. di Licod    0.51  11   P      Pb      09 55 42.9 -0.3
ESML                               S      Sn      09 55 51.5 -1.2
HPAC  Pachino           0.51 146  ⇓P     Pb      09 55 42.8 -0.4
HPAC                               S      Sb      09 55 51.1 +0.9
HPAC                               AML    AML
      comp=N,15500µm,0.5s
HPAC                               AML    AML
      comp=E,16000µm,0.7s
CAGR  Agira             0.54 338   P      Pb      09 55 43.9 +0.1
CAGR                               AML    AML
      comp=E,4615µm,0.4s
CAGR                               AML    AML
      comp=N,5190µm,0.6s
ESLN  Serra La Nave     0.60  17   P      Pb      09 55 44.8  0.0
ESLN                               S      Sn      09 55 54.4 -0.8
ESLN                               AML    AML
      comp=E,6205µm,0.4s
ESLN                               AML    AML
      comp=N,6200µm,0.6s
GALF  Gagliano Caste    0.61 346  ⇓P     Pb      09 55 45.2 +0.3
CLTA  Licata            0.63 274  ⇑P     Pb      09 55 45.5 +0.1
CLTA                               AML    AML
      comp=E,19350µm,0.5s
CLTA                               AML    AML
      comp=N,19500µm,0.7s
EPZF  Pizzo Felice      0.71   7   P      Pn      09 55 47.3 -0.3
EPZF                               AML    AML
      comp=N,5500µm,1.3s
EPZF                               AML    AML
      comp=E,6400µm,0.4s
RESU  Resuttano         0.77 314  ⇓P     Pn      09 55 48.5 +0.2
RESU                               AML    AML
      comp=E,1675µm,0.4s
RESU                               AML    AML
      comp=N,1835µm,1.2s
MNO   Monte Soro        0.81 357  ⇓P     Pn      09 55 48.9 -0.1
MNO                                AML    AML
      comp=N,3550µm,0.5s
MNO                                AML    AML
      comp=E,4930µm,0.5s
PETRA Petralia Sopra    0.88 325  ⇓P     Pb      09 55 49.5  0.0
PETRA                              AML    AML
      comp=E,1405µm,0.4s
PETRA                              AML    AML
      comp=N,1555µm,0.5s
PETRA                              AML    AML
      comp=E,1410µm,0.4s
FAVR  Favara            0.88 280   P      Pn      09 55 50.1 +0.3
FAVR                               AML    AML
      comp=N,3385µm,0.7s
FAVR                               AML    AML
      comp=E,2980µm,0.8s
MSFR  San Fratello      0.92 352  ⇓P     Pb      09 55 50.3 +0.1
MSFR                               S      Sn      09 56 04.1 +1.2
MSFR                               AML    AML
      comp=E,848µm,0.4s
MSFR                               AML    AML
      comp=E,848µm,0.4s
MSFR                               AML    AML
      comp=N,1052µm,0.3s
AIO   Antillo           0.93  24   P      Pb      09 55 50.3 -0.1
AIO                                S      Sn      09 56 03.5 +0.3
AIO                                AML    AML
      comp=E,3850µm,1.5s
AIO                                AML    AML
      comp=N,1945µm,0.3s
CSLB  Castelbuono       0.99 326   P      Pn      09 55 50.8 -0.5
CSLB                               AML    AML
      comp=E,642µm,0.9s
CSLB                               AML    AML
      comp=N,796µm,0.9s
PLLN  Pollina           1.00 331   P      Pn      09 55 51.4 -0.1
PLLN                               AML    AML
      comp=E,1990µm,0.5s
PLLN                               AML    AML
      comp=N,2835µm,0.9s
PLLN                               AML    AML
      comp=E,1995µm,0.5s
ALJA  Alia              1.01 309   P      Pb      09 55 52.2 +0.4
ALJA                               AML    AML
      comp=E,1385µm,0.7s
ALJA                               AML    AML
      comp=N,2225µm,0.3s
ALJA                               AML    AML
      comp=E,1390µm,0.7s
GIB   Gibilmanna        1.04 327   P      Pb      09 55 52.2 -0.1
GIB                                AML    AML
      comp=E,2460µm,0.7s
GIB                                AML    AML
      comp=N,2820µm,1.1s
MTTG  Motta San Giov    1.15  40  ⇑P     Pn      09 55 53.8 +0.2
MTTG                               S      Sb      09 56 10.4 +1.7
MTTG                               AML    AML
      comp=N,1935µm,0.6s
MTTG                               AML    AML
      comp=E,1565µm,1.2s
VPL   Vulcano Piano     1.27   8   P      Pn      09 55 55.5 +0.3
VPL                                AML    AML
      comp=N,8845µm,0.5s
VPL                                AML    AML
      comp=E,8215µm,0.3s
MSRU  Castanea          1.29  27   P      Pb      09 55 56.1 -0.3
MSRU                               S      Sb      09 56 13.9 +1.3
MSRU                               AML    AML
      comp=N,2790µm,1.1s
MSRU                               AML    AML
      comp=E,2830µm,0.4s
CLTB  Caltabellotta     1.31 291   P      Pb      09 55 57.0 +0.2
LLI   Lipari            1.33   7   P      Pb      09 55 57.2 +0.1
LLI                                AML    AML
      comp=N,11550µm,0.4s
LLI                                AML    AML
      comp=E,11650µm,0.6s
GMB   Gambarie          1.35  39  ⇑P     Pn      09 55 56.8 +0.4
GMB                                S      Sb      09 56 15.4 +0.9
GMB                                AML    AML
      comp=E,6805µm,1.0s
GMB                                AML    AML
      comp=N,5670µm,0.5s
SOLUN Solunto           1.37 315  ⇓P     Pb      09 55 57.5 -0.3
SOLUN                              AML    AML
      comp=E,1290µm,0.8s
SOLUN                              AML    AML
      comp=N,998µm,1.2s
MSCL  Scilla            1.38  36  ⇑P     Pn      09 55 57.4 +0.6
SOI   Samo              1.40  47   P      Pn      09 55 57.0  0.0
SOI                                AML    AML
      comp=N,484µm,0.6s
SOI                                AML    AML
      comp=E,388µm,0.3s
IACL  Alicudi           1.45 348  ⇓P     Pn      09 55 57.4 -0.2
IACL                               AML    AML
      comp=N,1244µm,0.6s
IACL                               AML    AML
      comp=E,1520µm,1.5s
IFIL  Filicudi I Eol    1.45 354  ⇓P     Pn      09 55 57.6 -0.1
IFIL                               S      Sb      09 56 16.6 -0.6
IFIL                               AML    AML
      comp=N,2825µm,0.5s
IFIL                               AML    AML
      comp=E,7170µm,0.3s
CEL   Celeste           1.45  38   P      Pn      09 55 58.3 +0.6
MMGO  Monte Magaggia    1.52 291   P      Pn      09 55 58.5  0.0
MPG   Monte Pellegri    1.52 314   AML    AML
      comp=E,750µm,0.3s
MPG                                AML    AML
      comp=E,750µm,0.3s
MPG                                AML    AML
      comp=N,593µm,0.6s
MPG                                AML    AML
      comp=N,594µm,0.6s
CRJA  Costa Raja        1.55 297   P      Pb      09 56 00.1 -0.8
ISTR  Stromboli Gino    1.70  12   P      Pb      09 56 02.7 -0.7
JOPP  Joppolo           1.73  31   P      Pn      09 56 01.9 +0.4
JOPP                               S      Sn      09 56 23.6 +0.7
JOPP                               AML    AML
      comp=E,414µm,0.5s
JOPP                               AML    AML
      comp=N,419µm,0.9s
PLAC  Placanica         1.88  45   P      Pn      09 56 04.2 +0.6
PLAC                               AML    AML
      comp=E,296µm,0.6s
PLAC                               AML    AML
      comp=N,354µm,0.6s
ERC   Erice             1.95 299   P      Pn      09 56 04.8 +0.2
USI   Ustica            2.02 322   P      Pn      09 56 05.2 -0.2
USI                                AML    AML
      comp=E,1705µm,1.0s
USI                                AML    AML
      comp=N,1930µm,0.5s
GRI   Girifalco         2.15  37   P      Pn      09 56 08.7 +1.5
CAR1  CAROLEI           2.42  28   P      Pn      09 56 11.1 +0.1
CAR1                               S      Sn      09 56 39.9  0.0
CAR1                               AML    AML
      comp=E,376µm,0.5s
CAR1                               AML    AML
      comp=N,358µm,0.5s
SERS  Sersale           2.45  38   P      Pn      09 56 12.3 +0.9
SERS                               AML    AML
      comp=N,80µm,0.5s
SERS                               AML    AML
      comp=E,112µm,0.6s
CET2  Cetraro           2.58  21   P      Pn      09 56 13.4 +0.2
CET2                               S      Sn      09 56 43.9  0.0
CET2                               AML    AML
      comp=E,400µm,0.4s
CET2                               AML    AML
      comp=N,547µm,0.4s
TIP   Timpagrande       2.59  37   P      Pn      09 56 14.1 +0.7
TIP                                AML    AML
      comp=N,70µm,0.6s
TIP                                AML    AML
      comp=E,65µm,0.5s
CELI  Celico            2.67  31   P      Pn      09 56 15.2 +0.7
TDS   Terranova Siba    2.82  26   P      Pn      09 56 16.8 +0.2
CUC   Castrocucco       2.99  16   P      Pn      09 56 19.5 +0.7
CUC                                S      Sn      09 56 53.6 -0.3
CUC                                AML    AML
      comp=N,84µm,0.6s
CUC                                AML    AML
      comp=E,110µm,0.6s
SALB  San Lorenzo Be    3.02  24   P      Pn      09 56 20.7 +1.3
MGR   Morigerati        3.08  11   P      Pn      09 56 20.3 +0.3
SIRI  Monte Sirino -    3.18  16   P      Pn      09 56 23.0 +1.5
MTSN  Montesano sull    3.24  14   P      Pn      09 56 23.5 +1.3
LTRZ  Laterza           3.83  24   P      Pn      09 56 30.6 +0.2
MATE  Matera            3.84  23   P      Pn      09 56 31.1 +0.7
MATE                               AML    AML
      comp=N,48µm,0.3s
MATE                               AML    AML
      comp=E,40µm,0.5s
AMUR  Altamura          4.05  20   P      Pn      09 56 34.0 +0.7
AMUR                               AML    AML
      comp=E,95µm,0.9s
AMUR                               AML    AML
      comp=N,53µm,0.6s
NOCI  Noci              4.08  25   AML    AML
      comp=E,112µm,1.4s
NOCI                               AML    AML
      comp=N,104µm,0.2s
MRVN  Minervino Murg    4.09  15   P      Pn      09 56 35.0 +1.0
MRVN                               AML    AML
      comp=E,23µm,0.9s
MRVN                               AML    AML
      comp=N,14µm,0.7s
VSL   Villasalto        4.85 301   P      Pn      09 56 44.3  0.0
```

IDC ***07*** *10:06:38.0±1.9, 6°.78N×72°.93W, h165^{km}±43^{km}, mb2.8/3, mbtmp3.5/5, Error ellipse: s-maj=113.8km s-min=14.5km az=132.0*

RSNC ***07*** *10:06:39.3±1.1, 6°.82N×73°.15W, h146^{km}±4^{km}, ML3.1, Mw3.6, Fault plane solution: NP1:φ$_s$130.00000°, δ18.00000°, λ-162.00000°.*

ISC 07 10:06:37.6±0.9**, 6°.84N**±0°.03×**73°.12W**±0°.04**, h154**^{km}±6^{km}**,**
n36, σ1^{s}42/69**, mb3.0**/3**, 3C-4D, Northern Colombia**

```
Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                     Op     ISC      h  m  s   ISC
BARC  Barichara         0.26 193 ⇓iP     Pn      10 06 59.0 +0.2
BARC                              eS     Sn      10 07 13.9 -1.1
BARC                              i              10 07 15.3
      comp=Z,418nm,0.2s
BRRC  Barranca, Sant    0.64 294  eP     Pn      10 07 00.8 +0.6
BRRC                              eS     Sn      10 07 17.6 +0.2
BRRC                              i              10 07 21.0
      comp=Z,167nm,0.2s
PAMC  Pamplona, Colo    0.65  41 ⇓eP     Pn      10 07 01.9 +1.1
PAMC                              eS     Sn      10 07 18.8 +0.2
PAMC                              i              10 07 21.2
      comp=Z,518nm,0.5s
RUSC  La Rusia          0.95 178  eP     Pn      10 07 03.0 +0.1
RUSC                              eS     Sn      10 07 22.1 -0.2
RUSC                              i              10 07 22.8
      comp=Z,248nm,0.3s
PTBC  PUERTO BERRIO,    1.36 257 ⇑eP     Pn      10 07 05.4 -0.7
PTBC                              eS     Sn      10 07 26.7 -1.1
PTBC                              i              10 07 33.2
      comp=Z,123nm,0.3s
TAMC  Tame, Arauca      1.39 107 ⇓iP     Pn      10 07 07.4 +1.1
TAMC                              i              10 07 28.3
      comp=Z,48nm,0.4s
TAMC                              eS     Sn      10 07 29.2 +0.8
OCAC  Ocana             1.40 352 ⇑iP     Pn      10 07 07.0 +0.4
OCAC                              eS     Sn      10 07 28.4 -0.6
OCAC                              i              10 07 32.5
      comp=Z,288nm,0.2s
SPBC  San Pablo de B    1.51 219  eP     Pn      10 07 07.7 -0.1
SPBC                              eS     Sn      10 07 30.2 -0.6
SPBC                              i              10 07 32.7
      comp=Z,281nm,0.3s
ZARC  Zaragoza, Cauc    1.84 291  eP     Pn      10 07 11.5 +0.4
ZARC                              eS     Sn      10 07 36.7 -0.3
ZARC                              i              10 07 42.5
      comp=Z,128nm,0.4s
NORC  Norcasia          2.15 234  eP     Pn      10 07 14.8  0.0
NORC                              eS     Sn      10 07 42.9 -0.6
NORC                              i              10 07 45.6
      comp=Z,114nm,0.2s
SMLC  San Martn de      2.16 334  eP     Pn      10 07 15.1 +0.2
SMLC                              eS     Sn      10 07 44.7 +1.0
SMLC                              i              10 07 47.4
      comp=Z,113nm,0.1s
CHIC  Chingaza          2.28 195  eP     Pn      10 07 17.0 +0.2
CHIC                              eS     Sn      10 07 46.5 -0.4
CHIC                              i              10 07 50.3
      comp=Z,130nm,0.5s
ROSC  El Rosal          2.32 211   P     Pn      10 07 18.6 +1.5
      comp=Z,90nm,0.3s,baz=90,slow=20,SNR=108
ROSC                               S     Sn      10 07 45.3 -2.3
      comp=Z,107nm,0.4s,baz=132,slow=18,SNR=8.8
ROSC  El Rosal          2.32 211  eP     Pn      10 07 18.5 +1.4
ROSC                              i              10 07 31.6
      comp=Z,37nm,0.4s
ROSC                              eS     Sn      10 07 47.9 +0.3
HELC  Santa Helena      2.48 255  i P    Pn      10 07 20.2 +1.3
HELC                              eS     Sn      10 07 50.2 -0.7
HELC                              i              10 07 56.7
      comp=Z,78nm,0.5s
UREC  San Jos de Ur     2.55 291  eP     Pn      10 07 18.7 -0.9
UREC                              eS     Sn      10 07 49.8 -2.3
UREC                              i              10 08 01.8
      comp=Z,69nm,0.3s
PTGC  Puerto Gaitan,    2.81 159 ⇓eP     Pn      10 07 22.1 -0.6
PTGC                              eS     Sn      10 07 55.5 -2.2
PTGC                              i              10 08 00.5
      comp=Z,118nm,0.3s
LL6C  La Loma 6 Bece    2.88 357  eP     Pn      10 07 23.6 -0.1
LL6C                              eS     Sn      10 07 58.7 -0.6
LL6C                              i              10 08 06.0
      comp=Z,47nm,0.4s
CBOC  Ciudad Bolivar    3.03 251  eP     Pn      10 07 26.9 +1.2
CBOC                              eS     Sn      10 08 03.8 +0.9
CBOC                              i              10 08 07.3
      comp=Z,21nm,0.2s
ARGC  Ariguani, Magd    3.19 340  eP     Pn      10 07 28.2 +0.6
ARGC                              eS     Sn      10 08 07.6 +1.1
```

ARGC				*i*		10 08 16.5	
	comp=Z,21nm,0.5s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**10 07 28.4**	**+0.6**
	comp=Z,20nm,0.3s,baz=242,slow=12,SNR=8.8						
SDV				S	**Sn**	**10 08 05.9**	**-0.8**
	comp=Z,64nm,0.5s,baz=46,slow=20,SNR=33						
SDV	**Santo Domingo**	**3.19**	**50**	*e*P	**Pn**	**10 07 28.4**	**+0.6**
SDV				*e*S	**Sn**	**10 08 06.2**	**-0.4**
ANIL	**Santa Ana**	**3.26**	**224**	*e*P	**Pn**	**10 07 30.1**	**+1.4**
ANIL				*e*S	**Sn**	**10 08 09.1**	**+0.8**
ANIL				*i*		10 08 13.5	
	comp=Z,207nm,0.3s						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**10 07 32.2**	**-0.3**
PRAC				*e*S	**Sn**	**10 08 14.5**	**-0.6**
PRAC				*i*		10 08 19.2	
	comp=Z,63nm,0.2s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**10 07 33.2**	**+0.3**
ORTC				*e*S	**Sn**	**10 08 15.5**	**-0.3**
ORTC				*i*		10 08 20.4	
	comp=Z,62nm,0.3s						
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P	**Pn**	**10 07 32.6**	**-0.9**
SJCC				*e*S	**Sn**	**10 08 14.2**	**-2.8**
SJCC				*i*		10 08 21.1	
	comp=Z,30nm,0.6s						
PLMC	**San Jos del P**	**3.69**	**239⇑**	*e*P	**Pn**	**10 07 34.5**	**+0.5**
PLMC				*e*S	**Sn**	**10 08 17.8**	**+0.1**
PLMC				*i*		10 08 20.7	
	comp=Z,30nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*e*P	**Pn**	**10 07 39.2**	**-0.9**
CRJC				*e*S	**Sn**	**10 08 26.6**	**-2.2**
CRJC				*i*		10 08 34.2	
	comp=Z,48nm,0.4s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**10 07 41.5**	**-0.3**
YOTC				*e*S	**Sn**	**10 08 34.5**	**+2.7**
YOTC				*i*		10 08 38.6	
	comp=Z,5.4nm,0.3s						
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**	**10 07 43.4**	**-0.2**
SMRC				*e*S	**Sn**	**10 08 32.3**	**-2.8**
SMRC				*i*		10 08 35.5	
	comp=Z,29nm,0.2s						
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P	**Pn**	**10 07 45.8**	**-1.7**
MACC				*e*S	**Sn**	**10 08 38.0**	**-4.1**
MACC				*i*		10 08 42.5	
	comp=Z,15nm,0.3s						
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**10 07 49.6**	**-0.9**
URIC				*e*S	**Sn**	**10 08 43.6**	**-3.8**
URIC				*i*		10 08 59.2	
	comp=Z,6.4nm,0.2s						
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**10 07 53.0**	**-0.9**
GARC				*e*S	**Sn**	**10 08 48.8**	**-4.8**
GARC				*i*		10 08 55.5	
	comp=Z,25nm,0.3s						
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**10 13 28.8**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=116,slow=8.5,SNR=4.1						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**10 15 02.3**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=119,slow=9.4,SNR=1.7						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**10 16 49.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=129,slow=6.6,SNR=5.7						
	comp=Z,0.3nm,0.6s						

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*IDC **07** 10:12:22.9±3.9, 13.°01S×166.°48E, h0^{km}, mb4.0/6, mbtmp3.9/6, MS3.5/2, Error ellipse: s-maj=131.0km s-min=39.8km az=137.0*

ISC 07 10:12:29.0±3.5**, 13.°1S**±0.°6×**166.°5E**±0.°6**, h44^{km}, n8,** σ**0^{s}76**/6**, mb3.9**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**12.04**	**114**	LR	LR	10 19 06.0	
	comp=Z,168nm,18.7s,baz=32,slow=33						
URZ	**Urewera**	**26.75**	**161**	LR	LR	10 27 40.0	
	comp=Z,103nm,18.3s,baz=31,slow=34						
ASAR	**Alice Springs**	**32.59**	**247**	P	**P**	**10 18 56.5**	**0.0**
	0.6nm,0.9s,baz=67,slow=9.2,SNR=5.1						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**73.62**	**294**	P	**P**	**10 23 59.0**	**+0.6**
	0.5nm,0.3s,baz=128,slow=5.8,SNR=1.0						
	0.5nm,0.3s						
SONM	**Songino Array**	**80.77**	**324**	P	**P**	**10 24 38.2**	**+0.1**
	0.7nm,0.6s,baz=134,slow=4.2,SNR=3.8						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**85.24**	**18**	P	**P**	**10 25 00.9**	**+0.3**
	0.4nm,0.9s,baz=242,slow=3.8,SNR=4.2						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**95.53**	**317**	P	**P**	**10 25 49.0**	**-0.4**
	0.5nm,0.6s,baz=89,slow=5.6,SNR=4.5						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**95.66**	**324**	P	**P**	**10 25 48.8**	**-1.0**
	0.6nm,0.4s,baz=96,slow=5.1,SNR=1.8						
	0.6nm,0.4s						

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*ISN **07** 10:16:02.9±0.8, 33.°04N×46.°41E, h10^{km}±7^{km}, ML3.1*

*TEH **07** 10:16:05.0, 33.°09N×46.°44E, h21^{km}, ML3.0*

ISC 07 10:16:04.7±0.9**, 33.°04N**±0.°05×**46.°34E**±0.°04**, h10^{km}, n14,** σ**1^{s}08**/18**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.35**	**282**	*e*Pg	**Pg**	**10 16 11.0**	**-0.6**
IBDR				*e*Sg	**Sg**	**10 16 17.0**	**+0.7**
IGHG	**Ghaleghazi**	**1.30**	**8**	*e*Pg	**Pg**	**10 16 30.0**	**+0.3**
IGHG				*e*		10 16 53.4	
	comp=Z,4μm,0.6s						
RAFI	**Al-Rafai**	**1.32**	**188**	*e*Pg	**Pn**	**10 16 29.0**	**-0.2**
RAFI				*e*Sg	**Sb**	**10 16 47.0**	**+0.4**
RAFI				AML	AML	10 16 50.4	
	comp=E,288nm,0.4s						
IKFM	**Kafar-mosalman**	**1.35**	**69**	*e*Pg	**Pg**	**10 16 30.3**	**-0.3**
IKFM				*e*Sg	**Sn**	**10 16 48.7**	**+1.1**
IKFM				*e*		10 16 52.9	
	comp=Z,5μm,0.6s						
KCHF	**Cheshme Sefid,**	**1.37**	**25**	*e*Pg	**Pg**	**10 16 31.2**	**+0.3**
KCHF				*e*		10 16 54.8	
	comp=Z,3μm,0.4s						
KER	**Kermanshah**	**1.50**	**26**	*e*Pg	**Pg**	**10 16 33.5**	**+0.1**
IDHR	**Dehrash**	**1.66**	**1**	*e*Pg	**Pg**	**10 16 36.5**	**0.0**
IDHR				*e*		10 17 02.3	
	comp=Z,3μm,0.6s						
IDOB	**Doab**	**1.71**	**64**	*e*Pn	**Pb**	**10 16 35.4**	**-0.9**
IBZA	**Bozab**	**1.91**	**41**	*e*Pn	**Pb**	**10 16 38.6**	**-1.2**
ILIN	**Lien**	**1.95**	**15**	*e*Pn	**Pg**	**10 16 40.6**	**-1.4**
ILIN				*e*		10 16 44.9	
	comp=Z,693nm,0.5s						
HSAM	**Samen**	**2.22**	**58**	*e*Pn	**Pb**	**10 16 42.8**	**-2.3**
AMIS	**Naft Sefid**	**2.84**	**118**	*e*Pn	**Pn**	**10 16 51.8**	**+1.7**
AMIS				*e*		10 17 48.6	
	comp=Z,325nm,0.5s						
IKRK	**Kirkuk**	**2.88**	**325**	*e*Pn	**Pn**	**10 16 51.0**	**+0.3**
IKRK				*e*Sn	**Sn**	**10 17 27.0**	**+1.6**
IKRK				AML	AML	10 18 09.6	
	comp=N,116nm,0.8s						
IKRK				AML	AML	10 18 27.2	
	comp=E,92nm,0.9s						
IPIR	**Pirpir**	**3.85**	**94**	*e*Pn	**Pn**	**10 17 04.5**	**+0.3**
IPIR				*e*		10 17 52.1	
	comp=Z,188nm,0.6s						

WEL 07 10:34:28.9±0.8**, 34°S**±14°×**18°0W**±2°3**, h317^{km}**±15^{km}**, M3.4**/14**, mB4.0**/11**, ML4.2**/18**, MLv4.0**/14**, Mw(mB)3.0**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.34**	**202**	P	Pn	10 35 40.2	+0.6
MXZ				S	S	10 36 36.2	-0.2
WMGZ	**Waiomatatini S**	**4.54**	**200**	P	Pn	10 35 40.8	-1.0
WMGZ				S	S	10 36 43.3	+2.8
HAZ	**Te Kaha**	**4.69**	**206**	P	Pn	10 35 41.5	-2.0
HAZ				S	S	10 36 44.2	+0.7
PKGZ	**Pakihiroa**	**4.71**	**202**	P	Pn	10 35 41.5	-2.3
PKGZ				S	S	10 36 45.0	+1.0
PUZ	**Puketiti**	**4.82**	**200**	P	Pn	10 35 44.8	-0.2
PUZ				S	S	10 36 46.7	+0.4
RUGZ	**Raukumara Rang**	**4.91**	**205**	P	Pn	10 35 45.2	-0.9
RUGZ				S	S	10 36 47.5	-0.8
TWGZ	**Tauwhareparae**	**5.00**	**202**	P	Pn	10 35 49.6	+2.5
TWGZ				S	S	10 36 54.0	+4.0
MWZ	**Matawai**	**5.29**	**205**	P	Pn	10 35 47.9	-2.5
MWZ				S	S	10 36 57.1	+1.0
URZ	**Urewera**	**5.38**	**208**	P	Pn	10 35 50.0	-1.3
URZ				S	S	10 36 59.9	+2.0
RIGZ	**Rimuhau**	**5.56**	**201**	P	Pn	10 35 55.0	+1.6
MUGZ	**Murupara**	**5.71**	**209**	P	Pn	10 35 54.5	-0.6
MUGZ				S	S	10 37 03.7	-1.1
RTZ	**Ruatahuna**	**5.74**	**207**	P	Pn	10 35 53.0	-2.6
RTZ				S	S	10 37 04.9	-0.8
SNGZ	**Shannon Statio**	**5.76**	**204**	P	Pn	10 35 57.1	+1.3
SNGZ				S	S	10 37 05.6	-0.3
KNZ	**Kokohu**	**5.87**	**201**	P	Pn	10 35 58.1	+1.0
KNZ				S	S	10 37 06.6	-1.6
RAHZ	**Arahi**	**5.97**	**205**	P	Pn	10 35 58.8	+0.6
RAHZ				S	S	10 37 11.6	+1.2
MTHZ	**Maungataniwha**	**6.00**	**207**	P	Pn	10 35 59.4	+0.7
MTHZ				S	S	10 37 08.0	-3.2
MRHZ	**Matea Rd**	**6.16**	**210**	P	Pn	10 36 00.3	-0.2
NMHZ	**Naumai**	**6.23**	**206**	P	Pn	10 36 02.6	+1.2
NMHZ				S	S	10 37 17.9	+1.7
ARHZ	**Aropaoanui**	**6.31**	**204**	P	Pn	10 36 03.6	+1.3
ARHZ				S	S	10 37 19.7	+2.0
BKZ	**Black Stump Fm**	**6.41**	**208**	P	Pn	10 36 03.7	+0.2
BKZ				S	S	10 37 19.8	-0.2
CKHZ	**Cape Kidnapper**	**6.64**	**202**	P	Pn	10 36 07.4	+1.3
CKHZ				S	S	10 37 26.9	+2.0
HIZ	**Hauiti**	**6.66**	**220**	P	Pn	10 36 09.6	+3.3
KWHZ	**Kaweka Forest**	**6.66**	**207**	P	Pn	10 36 06.1	-0.4
KWHZ				S	S	10 37 27.2	+1.7
NTVZ	**North Tongarir**	**6.70**	**213**	P	Pn	10 36 08.0	+1.0
TMVZ	**Te Maari**	**6.70**	**213**	P	Pn	10 36 07.4	+0.4
ETVZ	**East Tongariro**	**6.71**	**213**	P	Pn	10 36 07.5	+0.3
OTVZ	**Oturere**	**6.76**	**213**	P	Pn	10 36 06.3	-1.4
SNVZ	**South Ngauruho**	**6.79**	**213**	P	Pn	10 36 08.5	+0.5
BHHZ	**Black Hill Sta**	**6.86**	**209**	P	Pn	10 36 08.8	0.0
BHHZ				S	S	10 37 30.0	+0.2
KRHZ	**Kereru**	**6.87**	**207**	P	Pn	10 36 08.8	-0.2
KRHZ				S	S	10 37 30.5	+0.5
MOVZ	**Moawhango**	**6.92**	**211**	P	Pn	10 36 09.6	0.0
PXZ	**Pawanui**	**7.05**	**202**	P	Pn	10 36 11.3	+0.3
PXZ				S	S	10 37 32.5	-1.3
PNHZ	**Pukenui**	**7.17**	**206**	P	Pn	10 36 12.4	-0.1
PNHZ				S	S	10 37 36.7	+0.1
PRHZ	**Porangahau**	**7.33**	**203**	P	Pn	10 36 14.6	+0.2
PRHZ				S	S	10 37 39.7	-0.4
TSZ	**Takapari Road**	**7.39**	**207**	P	Pn	10 36 14.8	-0.3

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*IDC **07** 10:45:26.8±0.7, 44.°92N×27.°99W, h0^{km}, mb3.9/21, mbtmp3.9/23, ML3.8/1, MS3.7/48, Error ellipse: s-maj=18.9km s-min=13.2km az=12.0*

*NEIC **07** 10:45:28.8±1.1, 44.°99N±0.°09×28.°0W±0.°1, h10^{km}±1^{km}, mb4.5/69, Error ellipse: s-maj=16.0km s-min=15.0km az=218.0*

*GCMT **07** 10:45:28.8±0.4, 44.°76N±0.°06×28.°10W±0.°05, h18^{km}±1^{km}, MW4.8/77, Moment Tensor Solution. s8,c8; s77,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.64±.17; M$_{\theta\theta}$0.32±.11; M$_{\phi\phi}$1.32±.11; M$_{r\theta}$-0.97±.33; M$_{\theta\phi}$-0.32±.07; M$_{\phi r}$0.76±.24; Best double couple: M$_0$1.94300×10^{16} NP1:ϕ_s355.00000°, δ29.00000°, λ-62.00000°. NP2: ϕ_s144.00000°, δ64.00000°, λ-105.00000°. Principal axes: T 1.7430, Plg18.0000°, Azm245.0000°; N 0.3970, Plg13.0000°, Azm150.0000°; P -2.1420, Plg67.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 10:45:29.0±0.5**, 44.°94N**±0.°08×**28.°02W**±0.°06**, h14^{km}, n175,** σ**0^{s}75**/132**, mb4.4**/65**, MS3.8**/58**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMLA	**Cha da Macela**	**7.41**	**164**	Pn	**Pn**	**10 47 17.7**	**+1.0**
PMOZ	**Porto Moniz, M**	**14.73**	**142**	Pn	**Pn**	**10 48 56.8**	**-0.1**
COI	**Coimbra**	**15.19**	**101**	Pn	**Pn**	**10 49 02.8**	**-0.1**
COI				IAmb	IAmb	10 49 31.8	
	comp=Z,27nm,0.9s						
ESDC	**Sonseca Array**	**18.53**	**98**	P	**Pn**	**10 49 46.0**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=291,slow=11,SNR=1.9						
ESDC				LR	LR	10 55 33.9	
	comp=Z,266nm,18.9s,baz=304,slow=33						
ESBB	**Sonseca Array**	**18.53**	**98**	P	**P**	**10 49 42.9**	**-2.1**
ESK	**Eskdalemuir**	**18.89**	**48**	P	**P**	**10 49 47.6**	**-1.1**
ESK				IAmb	IAmb	10 50 03.5	
	comp=Z,44nm,1.4s						
EKA	**Eskdalemuir Ar**	**18.93**	**48**	P	**Pn**	**10 49 49.9**	**+0.1**
	baz=238,slow=9.1						
EKA				LR	LR	10 55 55.3	
	comp=Z,287nm,19.2s,baz=177,slow=33						
	comp=Z,5.0nm,1.0s						
MACI	**Morro de la Ar**	**19.01**	**147**	P	**Pn**	**10 49 50.8**	**-0.5**
BORG	**Borgarnes**	**20.20**	**8**	LR	LR	10 55 34.4	
	comp=Z,102nm,21.9s,baz=217,slow=30						
BORG	**Borgarnes**	**20.20**	**8**	P	**P**	**10 50 02.5**	**-0.5**
BORG				IAmb	IAmb	10 50 08.8	
	comp=Z,34nm,1.1s						
DRLN	**Deer Lake**	**20.46**	**293**	P	**P**	**10 50 05.6**	**-0.3**
DRLN				IAmb	IAmb	10 50 06.5	
	comp=Z,26nm,1.1s						
CLF	**Chambon-Foret**	**21.01**	**71**	P	**P**	**10 50 11.4**	**-0.5**
MDT	**Midelt**	**21.80**	**116**	LR	LR	10 57 38.1	
	comp=Z,110nm,19.0s,baz=340,slow=34						
UCC	**Uccle**	**22.38**	**63**	P	**P**	**10 50 27.5**	**+0.9**
SSB	**Saint Sauveur**	**22.90**	**78**	P	**P**	**10 50 31.4**	**-0.8**
WLF	**Walferdange**	**23.52**	**66**	P	**P**	**10 50 35.5**	**-2.9**
GBN	**Guysborough**	**23.52**	**283**	P	**P**	**10 50 36.6**	**-1.8**
ECH	**Echery**	**24.27**	**70**	P	**P**	**10 50 45.0**	**-0.6**
SENIN	**Lac Senin/Sane**	**24.61**	**74**	P	**P**	**10 50 48.9**	**0.0**
SENIN				IAmb	IAmb	10 50 52.7	
	comp=Z,15nm,1.2s						
BFO	**Black Forest**	**25.04**	**69**	P	**P**	**10 50 52.7**	**+0.2**
BFO				IAmb	IAmb	10 51 01.1	
	comp=Z,14nm,1.4s						
SFJD	**Kangerlussuaq**	**25.17**	**339**	LR	LR	10 58 29.8	
	comp=Z,164nm,20.9s,baz=150,slow=31						
STU	**Stuttgart**	**25.57**	**68**	P	**P**	**10 50 57.8**	**+0.5**
STU				IAmb	IAmb	10 51 03.9	
	comp=Z,8.9nm,0.9s						
LMN	**Caledonia Moun**	**25.71**	**285**	P	**P**	**10 50 58.2**	**-0.4**
LMN				IAmb	IAmb	10 50 58.8	
	comp=Z,9.6nm,0.8s						
TUE	**Stuetta**	**25.99**	**73**	P	**P**	**10 51 00.6**	**-0.8**
TUE				IAmb	IAmb	10 51 05.8	
	comp=Z,8.2nm,1.0s						
DAVA	**Damuels**	**26.21**	**71**	*e*P	**P**	**10 51 03.3**	**0.0**
	comp=Z,15nm,1.5s						
DAVOX	**Davos/Dischmat**	**26.29**	**72**	LR	LR	11 00 31.0	
	comp=Z,244nm,19.2s,baz=261,slow=34						
SCHQ	**Schefferville**	**26.57**	**306**	P	**P**	**10 51 06.9**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=86,slow=13,SNR=2.4						
SCHQ				LR	LR	10 59 39.5	
	comp=Z,249nm,20.3s,baz=92,slow=32						
	comp=Z,1.9nm,0.9s						
SCHQ	**Schefferville**	**26.57**	**306**	P	**P**	**10 51 05.7**	**-0.6**
RETA	**Reutte**	**26.77**	**71**	*i* P	**P**	**10 51 09.0**	**+0.7**
	comp=Z,4.2nm,0.9s						
FETA	**Feichten**	**26.82**	**72**	*e*P	**P**	**10 51 09.8**	**+1.0**
	comp=Z,8.7nm,1.3s						
MOTA	**Moosalm**	**27.02**	**71**	*e*P	**P**	**10 51 10.4**	**-0.2**
	comp=Z,12nm,1.3s						
SQTA	**Sankt Quirin**	**27.11**	**71**	*e*P	**P**	**10 51 12.3**	**+0.9**
	comp=Z,16nm,1.6s						
WATA	**Walderalm**	**27.34**	**71**	*e*P	**P**	**10 51 14.1**	**+0.6**
	comp=Z,15nm,1.5s						
WTTA	**Wattenberg**	**27.39**	**71**	*e*P	**P**	**10 51 15.2**	**+1.2**
	comp=Z,11nm,1.6s						
NKC	**Novy Kostel**	**27.55**	**64**	AMS	AMS	11 01 20.0	
	comp=Z,500nm,15.7s						
JMIC	**Jan Mayen**	**27.81**	**14**	LR	LR	10 59 42.5	
	comp=Z,60nm,19.1s,baz=240,slow=31						
CLL	**Collm**	**27.83**	**62**	*e*P	**P**	**10 51 16.0**	**-1.6**
	comp=Z,7.0nm,1.5s						
CLL				Lm	MLR	11 01 00.0	
	comp=Z,200nm,21.4s						
NOA	**NORSAR Array B**	**28.03**	**41**	P	**P**	**10 51 20.1**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=254,slow=9.6,SNR=3.4						
NOA				LR	LR	11 01 16.9	
	comp=Z,71nm,19.5s,baz=250,slow=34						
	comp=Z,0.7nm,0.9s						
ABTA	**Abfaltersbach**	**28.08**	**72**	*i* P	**P**	**10 51 20.7**	**+0.7**
	comp=Z,6.5nm,1.3s						
STAL	**STALIGIAL**	**28.31**	**73**	P	**P**	**10 51 22.2**	**+0.1**
KHC	**Kasperske Hory**	**28.40**	**66**	P	**P**	**10 51 23.1**	**+0.3**
KHC	**Kasperske Hory**	**28.40**	**66**	*e*P	**P**	**10 51 22.6**	**-0.2**
KHC				AMS	AMS	11 01 20.0	
	comp=Z,200nm,18.4s						
BRG	**Berggiesshubel**	**28.45**	**63**	*e*P	**P**	**10 51 24.9**	**+1.8**
BRG				Amp		10 51 29.8	
	comp=Z,7.4nm,1.3s						
GEC2	**GERESS Array S**	**28.52**	**67**	P	**P**	**10 51 24.0**	**+0.1**
GEC2				IAmb	IAmb	10 51 30.5	
	comp=Z,8.4nm,1.2s						
GERES	**GERESS Array B**	**28.52**	**67**	P	**P**	**10 51 23.7**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=350,slow=6.8,SNR=6.2						
GERES				LR	LR	11 02 01.6	
	comp=Z,182nm,19.4s,baz=272,slow=35						
	comp=Z,1.4nm,0.9s						
GERES	**GERESS Array B**	**28.52**	**67**	P	**P**	**10 51 23.6**	**-0.3**
KBA	**Koelnbreinsper**	**28.57**	**71**	*i* P	**P**	**10 51 25.2**	**+0.7**
	comp=Z,8.4nm,1.3s						
BIOA	**Bad Ischl, Aus**	**28.66**	**69**	*e*P	**P**	**10 51 25.2**	**+0.2**
	comp=Z,5.4nm,0.9s						
PRU	**Pruhonice**	**28.91**	**65**	*e*P	**P**	**10 51 29.5**	**+2.2**
PRU				AMS	AMS	11 02 20.0	
	comp=Z,400nm,15.7s						
CKRC	**Cesky Krumlov**	**28.92**	**67**	*e*P	**P**	**10 51 27.6**	**+0.2**
CKRC				AMS	AMS	11 01 50.0	
	comp=Z,200nm,18.3s						
HFS	**Hagfors**	**28.98**	**43**	LR	LR	11 02 23.2	
	comp=Z,84nm,18.1s,baz=234,slow=35						
MOA	**Molln**	**29.05**	**69**	*e*P	**P**	**10 51 28.7**	**+0.2**
	comp=Z,3.4nm,1.4s						
FRB	**Frobisher Bay**	**29.47**	**324**	P	**P**	**10 51 31.8**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=96,slow=8.6,SNR=7.0						
FRB				LR	LR	11 00 11.2	
	comp=Z,142nm,21.3s,baz=50,slow=30						
	comp=Z,3.9nm,0.8s						
OBKA	**Obir**	**29.50**	**72**	*i* P	**P**	**10 51 32.6**	**0.0**
	comp=Z,10nm,1.1s						
TREC	**Trest**	**29.61**	**66**	AMS	AMS	11 02 20.0	
	comp=Z,400nm,18.0s						
KEST	**Kesra**	**29.71**	**95**	LR	LR	11 02 50.1	
	comp=Z,93nm,18.6s,baz=279,slow=35						
UPC	**Upice**	**29.79**	**63**	AMS	AMS	11 02 40.0	
	comp=Z,400nm,19.6s						
CHVC	**Chvalec**	**29.81**	**63**	*e*P	**P**	**10 51 35.7**	**+0.4**
CHVC				AMS	AMS	11 02 40.0	
	comp=Z,400nm,15.4s						
OSTC	**Ostas**	**29.92**	**63**	AMS	AMS	11 02 40.0	
	comp=Z,300nm,17.2s						
ARSA	**Arzberg**	**30.00**	**70**	*e*P	**P**	**10 51 37.0**	**0.0**
	comp=Z,3.6nm,0.9s						
DPC	**Dobruska-Polom**	**30.01**	**64**	AMS	AMS	11 03 20.0	
	comp=Z,300nm,15.1s						
CONA	**Conrad Observa**	**30.09**	**68**	*e*P	**P**	**10 51 38.3**	**+0.5**
	comp=Z,4.6nm,1.2s						
VRAC	**Vranov**	**30.33**	**66**	LR	LR	11 03 19.3	
	comp=Z,274nm,18.7s,baz=269,slow=35						
KRLC	**Kraliky**	**30.34**	**64**	AMS	AMS	11 03 20.0	
	comp=Z,400nm,15.1s						
RONA	**Rosalia, Austr**	**30.42**	**69**	*e*P	**P**	**10 51 41.1**	**+0.4**
	comp=Z,9.5nm,1.3s						
SOP	**Sopron**	**30.59**	**69**	P	**P**	**10 51 42.4**	**+0.2**
MORC	**Moravsky Berou**	**30.87**	**64**	P	**P**	**10 51 44.7**	**+0.1**
MORC				IAmb	IAmb	10 51 51.3	
	comp=Z,10.0nm,1.3s						
MODS	**Modra-Piesok**	**30.93**	**67**	*e*P	**P**	**10 51 47.1**	**+1.9**
EGYH	**Egyhazaskeszo**	**31.16**	**69**	P	**P**	**10 51 48.5**	**+1.3**
OKC	**Ostrava-Krasne**	**31.24**	**64**	AMS	AMS	11 04 10.0	
	comp=Z,300nm,14.8s						
MPLH	**Magyarpolny**	**31.36**	**69**	P	**P**	**10 51 49.5**	**+0.6**
KOVH	**Kovagotottos**	**31.99**	**71**	P	**P**	**10 51 54.5**	**0.0**
MORH	**Mrgy, Hungar**	**32.32**	**71**	P	**P**	**10 51 56.5**	**-0.9**
CUC	**Castrocucco**	**32.41**	**83**	P	**P**	**10 51 57.7**	**-0.6**
CUC				IAmb	IAmb	10 52 09.6	
	comp=Z,4.6nm,0.9s						
VAE	**Valguarnera**	**32.48**	**88**	LR	LR	11 04 52.9	
	comp=Z,89nm,18.2s,baz=192,slow=36						
PSZ	**Piszkesteto**	**32.74**	**67**	P	**P**	**10 52 02.4**	**+1.3**
DIVS	**Divibare**	**33.85**	**74**	P	**P**	**10 52 10.2**	**-0.7**
DIVS				IAmb	IAmb	10 52 17.3	
	comp=Z,5.9nm,1.2s						
FINES	**FINESS Array B**	**35.16**	**43**	P	**P**	**10 52 21.6**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=254,slow=5.2,SNR=5.9						
	comp=Z,2.3nm,0.8s						
FINES	**FINESS Array B**	**35.16**	**43**	P	**P**	**10 52 21.7**	**-0.2**
SADO	**Sadowa**	**35.74**	**288**	LR	LR	11 06 39.2	
	comp=Z,328nm,18.3s,baz=64,slow=36						
FNA	**Florina**	**35.99**	**79**	P	**P**	**10 52 30.1**	**+0.7**
FNA				IAmb	IAmb	10 52 36.1	
	comp=Z,8.6nm,1.2s						
ARCES	**ARCESS Array B**	**36.15**	**29**	P	**P**	**10 52 30.7**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=253,slow=8.2,SNR=6.2						
ARCES				LR	LR	11 05 47.4	
	comp=Z,48nm,19.4s,baz=282,slow=34						
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**36.15**	**29**	P	**P**	**10 52 30.6**	**+0.3**
BUR08	**Bucovina Ar. S**	**36.28**	**66**	P	**P**	**10 52 32.6**	**+0.8**
BUR08				IAmb	IAmb	10 52 39.4	
	comp=Z,7.3nm,1.1s						
BURAR	**Bucovina Array**	**36.29**	**66**	P	**P**	**10 52 32.5**	**+0.6**
KOWA	**Kowa**	**36.53**	**139**	P	**P**	**10 52 34.9**	**+0.8**
KOWA				IAmb	IAmb	10 52 36.7	
	comp=Z,7.5nm,1.2s						
VTS	**Vitosha**	**36.58**	**75**	P	**P**	**10 52 34.8**	**+0.3**
AGG	**Agios Georgios**	**37.40**	**81**	P	**P**	**10 52 41.2**	**-0.1**
AGG				IAmb	IAmb	10 52 48.2	
	comp=Z,6.6nm,1.0s						
MLR	**Muntele Rosu**	**37.41**	**69**	P	**P**	**10 52 42.1**	**+0.6**
AKASG	**Malin Array Be**	**38.03**	**60**	P	**P**	**10 52 45.7**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=284,slow=8.5,SNR=4.7						
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**38.03**	**60**	P	**P**	**10 52 46.4**	**-0.1**
RDO	**Rodhopi**	**38.73**	**76**	P	**P**	**10 52 53.4**	**+0.8**
RDO				IAmb	IAmb	10 52 59.8	
	comp=Z,12nm,1.4s						
ALN	**Alexandroupoli**	**39.19**	**76**	P	**P**	**10 52 56.6**	**+0.3**
ALN				IAmb	IAmb	10 53 03.6	
	comp=Z,12nm,1.3s						
TORD	**Torodi Ar. Bea**	**40.54**	**132**	P	**P**	**10 53 07.7**	**0.0**
	comp=Z,5.4nm,1.1s,baz=318,slow=6.9,SNR=14						
TORD				LR	LR	11 08 48.5	
	comp=Z,207nm,18.7s,baz=270,slow=35						
	comp=Z,5.4nm,1.1s						
RES	**Resolute Bay**	**41.17**	**338**	P	**P**	**10 53 13.6**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=110,slow=6.2,SNR=4.7						
RES				LR	LR	11 07 47.6	
	comp=Z,50nm,20.4s,baz=115,slow=33						
	comp=Z,1.2nm,0.8s						
RES	**Resolute Bay**	**41.17**	**338**	P	**P**	**10 53 11.6**	**-0.8**
SJG	**San Juan**	**41.51**	**242**	LR	LR	11 06 30.7	
	comp=Z,80nm,21.9s,baz=90,slow=30						
BORA	**Eskisehir**	**42.66**	**75**	P	**P**	**10 53 24.1**	**-1.0**
EYMN	**Ely**	**42.75**	**298**	P	**P**	**10 53 24.9**	**-0.7**
EYMN				IAmb	IAmb	10 53 47.5	
	comp=Z,12nm,1.3s						
TKL	**Tuckaleechee C**	**42.77**	**278**	LR	LR	11 08 36.0	
	comp=Z,90nm,21.1s,baz=92,slow=32						
DBIC	**Dimbokro**	**43.13**	**145**	P	**P**	**10 53 29.1**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=349,slow=10,SNR=2.0						
DBIC				LR	LR	11 09 39.5	
	comp=Z,128nm,21.7s,baz=350,slow=34						
	comp=Z,2.2nm,0.7s						
ULM	**Lac du Bonnet**	**44.63**	**302**	LR	LR	11 10 27.4	
	comp=Z,220nm,20.1s,baz=79,slow=34						
BR131	**Keskin Array S**	**44.91**	**74**	P	**P**	**10 53 42.2**	**-1.0**
BRTR	**Keskin Array B**	**44.91**	**74**	P	**P**	**10 53 42.4**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=300,slow=5.3,SNR=6.9						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**44.91**	**74**	P	**P**	**10 53 41.5**	**-1.8**
MDP	**Montagnes des**	**45.15**	**216**	LR	LR	11 07 54.1	
	comp=Z,48nm,19.1s,baz=20,slow=30						
BNN	**Bunyan**	**46.84**	**74**	P	**P**	**10 53 58.2**	**-0.2**
PBMO	**Poplar Bluff**	**46.86**	**283**	P	**P**	**10 53 59.0**	**+0.5**
143A	**Socs Landing,**	**49.70**	**279**	P	**P**	**10 54 19.9**	**-0.5**
YKA	**Yellowknife Ar**	**49.97**	**323**	P	**P**	**10 54 22.0**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=68,slow=7.4,SNR=5.6						
YKA				LR	LR	11 12 30.3	
	comp=Z,75nm,20.7s,baz=328,slow=32						
	comp=Z,0.2nm,0.5s						
RCBR	**Riachuelo**	**51.03**	**190**	LR	LR	11 12 22.9	
	comp=Z,29nm,18.9s,baz=130,slow=32						
SDV	**Santo Domingo**	**51.35**	**239**	LR	LR	11 11 37.8	
	comp=Z,42nm,20.8s,baz=120,slow=31						
ARU	**Arti**	**52.49**	**44**	P	**P**	**10 54 41.0**	**-0.1**
ARU				IAmb	IAmb	10 54 42.7	
	comp=Z,10nm,1.5s						
EGMT	**Eagleton**	**53.82**	**305**	P	**P**	**10 54 51.1**	**0.0**
EGMT				IAmb	IAmb	10 54 58.3	
	comp=Z,7.1nm,1.3s						
H10N2	**ASCENSION HYDR**	**53.92**	**163**	T	T	11 52 48.1	

	baz=349,slow=76,SNR=12						
H10N3	ASCENSION HYDR	53.93	163	T	T	11 52 49.3	
	baz=349,slow=76,SNR=5.1						
H10N1	ASCENSION HYDR	53.94	163	T	T	11 52 47.4	
	baz=349,slow=76,SNR=16						
WHTX	Lake Whitney,	54.33	282	P	P	10 54 55.7	+0.7
INK	Inuvik	54.34	334	P	P	10 54 54.6	+0.2
	comp=Z,1.6nm,0.9s,baz=43,slow=9.3,SNR=3.9						
INK				LR	LR	11 16 12.7	
	comp=Z,30nm,18.2s,baz=8.5,slow=34						
	comp=Z,1.6nm,0.9s						
INK	Inuvik	54.34	334	P	P	10 54 55.1	+0.7
INK				IAmb	IAmb	10 55 03.1	
	comp=Z,6.0nm,1.4s						
GCMT	Greycliff	54.89	302	P	P	10 54 59.0	0.0
AKTO	Aktyubinsk	55.07	51	P	P	10 54 59.6	-0.5
	comp=Z,1.6nm,0.8s,baz=292,slow=8.8						
	comp=Z,1.6nm,0.8s						
WALA	Waterton Lakes	55.69	307	P	P	10 55 03.8	-0.9
WALA				IAmb	IAmb	10 55 11.6	
	comp=Z,5.5nm,1.0s						
HRY	Holter Researc	55.70	304	P	P	10 55 04.6	-0.2
PDAR	Pinedale Array	56.41	299	P	P	10 55 10.1	-0.1
	comp=Z,1.0nm,1.0s,baz=66,slow=8.3,SNR=5.6						
PDAR				LR	LR	11 17 49.6	
	comp=Z,145nm,20.1s,baz=60,slow=34						
	comp=Z,1.0nm,1.0s						
NRIK	Noril'sk	56.68	23	P	P	10 55 12.3	+1.0
NRIK				IAmb	IAmb	10 55 28.5	
	comp=Z,7.1nm,1.4s						
ABKAR	Akbulak array	56.74	52	P	P	10 55 12.8	+0.7
ROSC	El Rosal	56.77	239	LR	LR	11 18 14.2	
	comp=Z,56nm,20.5s,baz=42,slow=35						
REDW	Red Top Meadow	56.89	300	P	P	10 55 13.6	+0.1
NEW	Newport	57.91	308	LR	LR	11 17 28.6	
	comp=Z,88nm,21.9s,baz=72,slow=33						
DLBC	Dease Lake	58.60	323	LR	LR	11 17 17.3	
	comp=Z,77nm,19.7s,baz=8.5,slow=33						
DAWY	Dawson	58.77	331	P	P	10 55 26.8	+0.7
DAWY				IAmb	IAmb	10 55 41.0	
	comp=Z,6.8nm,1.4s						
ANMO	Albuquerque	58.78	290	LR	LR	11 20 44.7	
	comp=Z,185nm,18.1s,baz=67,slow=36						
TMUT	Trail Mountain	59.38	296	P	P	10 55 30.9	-0.1
TMUT				IAmb	IAmb	10 55 36.9	
	comp=Z,2.3nm,0.8s						
DUG	Dugway, Tooele	59.87	298	P	P	10 55 34.0	-0.3
DUG				IAmb	IAmb	10 55 41.8	
	comp=Z,5.5nm,1.2s						
BRVK	Borovoye	60.04	44	P	P	10 55 35.2	+0.2
BRVK				IAmb	IAmb	10 55 37.5	
	comp=Z,2.6nm,0.9s						
TXAR	Lajitas Array	60.21	283	P	P	10 55 36.6	0.0
	comp=Z,0.6nm,0.7s,baz=63,slow=6.3,SNR=8.1						
TXAR				LR	LR	11 21 19.3	
	comp=Z,151nm,19.9s,baz=48,slow=36						
	comp=Z,0.6nm,0.7s						
TXAR	Lajitas Array	60.21	283	P	P	10 55 36.2	-0.4
ILAR	Eielson Array	60.72	335	P	P	10 55 40.1	+0.7
	comp=Z,0.8nm,0.8s,baz=44,slow=5.2,SNR=8.9						
	comp=Z,0.8nm,0.8s						
ILAR	Eielson Array	60.72	335	P	P	10 55 39.1	-0.3
H23K	Yukon River	60.75	336	P	P	10 55 40.5	+0.7
ELK	Elko	61.06	300	LR	LR	11 21 07.6	
	comp=Z,119nm,18.0s,baz=70,slow=35						
BBB	Bella Bella	61.44	316	LR	LR	11 20 11.3	
	comp=Z,42nm,19.5s,baz=0.0,slow=34						
J08A	Circle Bar Ran	61.48	304	P	P	10 55 45.3	+0.2
CMIG	Matias Romero	61.80	266	LR	LR	11 19 15.6	
	comp=Z,70nm,21.7s,baz=47,slow=33						
BMN	Battle Mountai	62.46	301	P	P	10 55 52.0	+0.2
BMN				IAmb	IAmb	10 55 59.5	
	comp=Z,4.7nm,1.1s						
TIXI	Tiksi	62.56	8	P	P	10 55 52.1	+0.4
TIXI				IAmb	IAmb	10 55 53.3	
	comp=Z,5.6nm,1.5s						
KVN	Kaiserville	63.84	300	P	P	10 56 00.8	-0.2
TPH	Tonopah	63.89	298	P	P	10 56 01.7	+0.3
NVAR	Mina Array Bea	64.34	299	P	P	10 56 04.7	+0.3
	comp=Z,0.3nm,0.8s,baz=47,slow=8.0,SNR=2.9						
NVAR				LR	LR	11 22 42.2	
	comp=Z,112nm,20.4s,baz=18,slow=35						
	comp=Z,0.3nm,0.8s						
YBH	Yreka Blue Hor	64.95	305	LR	LR	11 23 06.3	
	comp=Z,97nm,18.9s,baz=67,slow=35						
GSC	Goldstone, Bar	65.34	296	P	P	10 56 11.0	+0.3
KURK	Kurchatov	65.54	42	P	P	10 56 11.7	+0.1
KURK				IAmb	IAmb	10 56 17.7	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	66.12	37	LR	LR	11 25 23.7	
	comp=Z,63nm,18.6s,baz=252,slow=36						
ZALV	Zalesovo Beam	66.12	37	P	P	10 56 15.7	+0.4
KKAR	Karatay Array	66.29	52	P	P	10 56 17.5	+0.9
LPIG	La Paz	68.10	283	LR	LR	11 26 53.6	
	comp=Z,87nm,18.3s,baz=48,slow=36						
ATD	Arta Tunnel	68.41	95	LR	LR	11 27 10.1	
	comp=Z,32nm,18.1s,baz=108,slow=37						
ATAH	Atahualpa	68.74	235	LR	LR	11 24 34.5	
	comp=Z,48nm,20.8s,baz=15,slow=34						
AAK	Ala-Archa	68.81	51	LR	LR	11 28 59.7	
	comp=Z,99nm,18.2s,baz=292,slow=38						
AAK	Ala-Archa	68.81	51	P	P	10 56 33.2	+0.4
GAR	Garm	68.84	56	P	P	10 56 33.4	+0.4
MAKZ	Makanchi	69.83	43	P	P	10 56 38.4	-0.5
MK31	Makanchi Array	69.99	43	P	P	10 56 39.4	-0.5
MKAR	Makanchi Array	69.99	43	P	P	10 56 39.6	-0.3
	comp=Z,0.3nm,0.5s,baz=340,slow=6.4,SNR=6.3						
	comp=Z,0.3nm,0.5s						
LPAZ	La Paz	71.01	221	P	P	10 56 47.1	+0.1
	comp=Z,1.1nm,0.8s,baz=56,slow=3.6,SNR=3.6						
	comp=Z,1.1nm,0.8s						
LPAZ	La Paz	71.01	221	P	P	10 56 46.5	-0.5
LPAZ				IAmb	IAmb	10 57 00.1	
	comp=Z,5.3nm,1.4s						
WSAR	Wadi Sarin	71.68	75	LR	LR	11 32 39.7	
	comp=Z,16nm,20.4s,baz=329,slow=40						
NNA	Nana	71.80	231	LR	LR	11 28 10.2	
	comp=Z,27nm,19.0s,baz=358,slow=36						
KMBO	Kilima Mbogo	73.54	109	LR	LR	11 30 38.2	
	comp=Z,58nm,18.8s,baz=94,slow=37						
LVC	Limon Verde	76.88	218	LR	LR	11 28 02.5	
	comp=Z,21nm,21.7s,baz=32,slow=33						
SONM	Songino Array	79.32	29	P	P	10 57 34.3	+0.3
	comp=Z,1.7nm,1.0s,baz=302,slow=4.8,SNR=5.9						
	comp=Z,1.7nm,1.0s						
SONM	Songino Array	79.32	29	P	P	10 57 33.9	-0.2
ULN	Ulaanbaatar	79.52	29	P	P	10 57 34.6	-0.6
ULN				IAmb	IAmb	10 57 42.1	
	comp=Z,3.9nm,1.0s						
GTA	Gaotai	83.82	38	*e*P	P	10 57 58.2	+0.2
GTA				pP	PcP	10 58 02.2	+0.1
GTA				sP	pwP	10 58 05.4	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						

BJI ***07*** *10:51:39.3±0.0, 13.°02N×51.°32E, h10^{km}, mb4.6/29, mB4.8/15, Ms4.6/5, Ms7 4.2/5*

GCMT ***07*** *10:51:44.5±0.4, 13.°85N±0.°03×51.°66E±0.°04, h16^{km}±1^{km}, MW4.7/71, Moment Tensor Solution. s16,c17; s71,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.09±.13; M$_{\theta\theta}$1.48±.10; M$_{\phi\phi}$-0.38±.09; M$_{r\theta}$-0.11±.24; M$_{\theta\phi}$0.53±.07; M$_{\phi r}$-0.36±.33; Best double couple: M$_0$1.44100×10^{16} NP1:ϕ_s278.00000°, δ46.00000°, λ-55.00000°. NP2: ϕ_s54.00000°, δ54.00000°, λ-120.00000°. Principal axes: T 1.6320, Plg4.0000°, Azm165.0000°; N -0.3800, Plg24.0000°, Azm73.0000°; P -1.2500, Plg66.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***07*** *10:51:46.7±0.5, 13.°88N×51.°76E, h0^{km}, mb4.5/45, mbtmp4.5/46, ML4.0/1, MS3.8/50 Error ellipse: s-maj=12.4km s-min=10.5km az=119.0*

NEIC ***07*** *10:51:48.5±1.5, 13.°88N±0.°07×51.°88E±0.°07, h10^{km}±1^{km}, mb4.9/105, Error ellipse: s-maj=12.8km s-min=10.1km az=208.0*

OMAN ***07*** *10:51:54.2±0.1, 14.°34N×51.°66E, h92^{km}±1^{km}, mb4.3/6, ml4.4/6, Error ellipse: s-maj=4.1km s-min=1.0km az=322.0*

ISC 07 10:51:48.0±0.4**, 13.°90N**±0.°05×**51.°87E**±0.°05**, h10**^{km}**, n343, σ1.**^{s}**43**/342**, mb4.8**/122**, MS3.8**/51**, 19C-22D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.67	129	Pn	Pn	10 52 27.6	-3.6
SOCY				Sn	Sn	10 52 55.2	-8.6
SOCY	Socotra	2.67	129	P	Pn	10 52 27.7	-3.6
	SNR=55						
ABTO	Aybut	3.70	22	P	Pn	10 52 44.0	-1.4
	SNR=21						
ABTO				S	Sn	10 53 24.9	-4.2
RBK	Rabkut	4.23	32	P	Pn	10 52 52.9	+0.2
	SNR=95						
RBK				S	Sn	10 53 40.9	-1.3
WHFO	Wadi Hawf	4.40	24	P	Pn	10 52 54.0	-1.0
	SNR=11						
WHFO				S	Sn	10 53 42.6	-3.7
DMTO	DMTO	4.82	38	P	Pn	10 53 01.0	+0.3
	SNR=45						
DMTO				S	Sn	10 53 56.4	-0.2
DOK	Doka	5.17	25	P	Pn	10 53 04.8	-0.7
	SNR=44						
DOK				S	Sn	10 54 02.5	-2.9
SHAO	Shalim	5.46	41	P	Pn	10 53 11.7	+2.1
	SNR=7.0						
SHAO				S	Sn	10 54 13.0	+0.3
DQM	DQM	8.09	41	P	Pn	10 53 46.4	+0.8
DQM				S	Sn	10 55 16.6	-0.6
ATD	Arta Tunnel	9.11	256	Pn	Pn	10 54 01.4	+1.6
	13nm,0.3s,baz=74,slow=8.1,SNR=19						
ATD				LR	LR	10 56 31.0	
	comp=Z,1µm,19.1s,baz=96,slow=32						
ATD	Arta Tunnel	9.11	256		Pn	10 53 58.9	-0.9
ATD	Arta Tunnel	9.11	256	P	Pn	10 54 02.0	+2.2
	SNR=11						
MHTO	MHTO	9.14	39	P	Pn	10 54 00.3	+0.2
MHTO				S	Sn	10 55 39.4	-3.7
MZR	Muzera	9.18	9	P	Pn	10 53 57.8	-2.9
	SNR=6.7						
MZR				S	Sn	10 55 35.4	-8.8
MZR	Muzera	9.18	9	Pn	Pn	10 53 57.7	-2.9
MZR				Sn	Sn	10 55 35.1	-9.1
JMDO	Jabal Madar	10.30	34	P	Pn	10 54 15.9	-0.1
JMDO				S	Sn	10 56 05.0	-6.6
ASUD	Al Ashush, Dub	11.16	16	P	Pn	10 54 27.6	-0.1
	SNR=9.4						
ASUD				S	Sn	10 56 23.6	-9.1
ASUD	Al Ashush, Dub	11.16	16	Pn	Pn	10 54 26.8	-1.0
WSAR	Wadi Sarin	11.29	34	Pn	Pn	10 54 28.4	-1.1
	1.0nm,0.3s,baz=272,slow=12,SNR=7.4						
WSAR				Sn	Sn	10 56 27.5	-8.2
	2.5nm,0.3s,baz=182,slow=23,SNR=7.5						
WSAR				LR	LR	10 58 30.1	
	comp=Z,216nm,18.0s,baz=226,slow=36						
	2.5nm,0.4s						
RAYN	Ar Rayn	11.31	329		Pn	10 54 25.2	-4.7
UOSS	Minazif	11.72	20	Pn	Pn	10 54 34.7	-0.8
MSFE	Esma-Masafi	12.10	19	Pn	Pn	10 54 37.8	-2.8
MSFE				Pn	Pn	10 54 40.1	-0.5
BANOM	Banah	12.67	18	Pn	Pn	10 54 46.5	-1.9
BANOM				Sn	Sn	10 56 58.3	-11
SHME	Shamm	12.74	18	Pn	Pn	10 54 45.2	-4.2
LODK	Lodwar	19.34	239	P	P	10 56 13.7	-0.2
LODK	Lodwar	19.34	239	P	P	10 56 13.5	-0.4
	SNR=13						
KMBO	Kilima Mbogo	20.80	225	P	P	10 56 29.4	-0.6
	7.5nm,0.9s,baz=40,slow=10,SNR=6.9						
KMBO				LR	LR	11 05 01.8	
	comp=Z,214nm,20.1s,baz=70,slow=38						
	7.5nm,0.9s						
KMBO	Kilima Mbogo	20.80	225	P	P	10 56 29.7	-0.3
KIBK	Kibwezi	21.17	221	P	P	10 56 31.9	-1.8
EIL	Elat	22.16	318	P	P	10 56 44.2	0.0
	18nm,1.0s,baz=129,slow=7.4,SNR=13						
EIL				Lg	Lg	11 03 10.0	
	0.2nm,0.3s,baz=239,slow=23,SNR=1.8						
EIL				LR	LR	11 04 56.1	
	comp=Z,399nm,18.5s,baz=127,slow=36						
	18nm,1.0s						
HRA	Herat	22.46	23	P	P	10 56 48.9	+1.3
HRA				IAmb	IAmb	10 57 00.6	
	comp=Z,45nm,1.1s						
ASF	Jabal al Asfar	22.77	326	P	P	10 56 51.2	+0.4
	comp=Z,17nm,0.9s,baz=143,slow=4.1,SNR=14						
ASF				Lg	Lg	11 03 44.7	
	comp=Z,0.2nm,0.3s,baz=318,slow=22,SNR=3.0						
	comp=Z,17nm,0.9s						
GHAJ	Ghor Haditha	22.90	322	P	P	10 56 53.1	+1.1
MMAI	Mount Meron Ar	24.23	325	LR	LR	11 06 49.1	
	comp=Z,312nm,21.3s,baz=302,slow=37						
GEYT	Alibeck	24.57	12	P	P	10 57 10.0	+1.7
	comp=Z,6.7nm,0.6s,baz=176,slow=4.5,SNR=9.1						
GEYT				LR	LR	11 07 16.4	
	comp=Z,258nm,20.5s,baz=204,slow=38						
	comp=Z,6.7nm,0.6s						
GEYT	Alibeck	24.57	12	P	P	10 57 09.1	+0.8
GYA0B	ALIBECK ARRAY	24.57	12	P	P	10 57 09.2	+1.0
GYA0B				IAmb	IAmb	10 57 21.9	
	comp=Z,17nm,0.9s						
MARD	Mardin	25.33	339	P	P	10 57 16.8	+1.6
MARD				IAmb	IAmb	10 57 56.2	
	comp=Z,16nm,0.9s						
MBAR	Mbarara	25.41	237	P	P	10 57 16.1	-0.2
	comp=Z,4.2nm,0.2s,baz=350,slow=6.1,SNR=3.8						
	comp=Z,4.2nm,0.2s						
MBAR	Mbarara	25.41	237	P	P	10 57 15.8	-0.4
KBL	Kabul	25.76	34	P	P	10 57 20.2	+0.9
KBL				IAmb	IAmb	10 57 34.4	
	comp=Z,19nm,1.1s						
GURO	Guroymak-BITLI	26.06	342	P	P	10 57 22.4	+0.6
GURO				IAmb	IAmb	10 57 34.6	
	comp=Z,13nm,0.9s						
GNI	Garni	26.89	348	P	P	10 57 31.5	+2.1
	comp=Z,26nm,0.9s,baz=181,slow=3.0,SNR=8.2						
GNI				LR	LR	11 09 16.4	
	comp=Z,290nm,19.8s,baz=184,slow=39						
	comp=Z,26nm,0.9s						
GNI	Garni	26.89	348	P	P	10 57 31.3	+1.9
GNI				IAmb	IAmb	10 57 33.0	
	comp=Z,33nm,0.9s						
KARS	Kars	27.72	346	P	P	10 57 34.4	-2.4
KOPT	Kop Dagi	27.87	341	P	P	10 57 38.1	-0.3
KOPT				IAmb	IAmb	10 57 52.7	
	comp=Z,27nm,1.5s						
BNN	Bunyan	28.61	333	P	P	10 57 44.5	-0.2
BNN				IAmb	IAmb	10 57 47.4	
	comp=Z,31nm,1.1s						
CHGR	Chuyangaron	29.02	29	P	P	10 57 48.1	-0.3
PALK	Pallekele	29.08	100	LR	LR	11 07 12.2	
	comp=Z,228nm,19.6s,baz=23,slow=32						
ONI	Oni	29.50	347	P	P	10 57 52.7	+0.2
GAR	Garm	29.84	30	P	P	10 57 55.9	+0.2
GAR				IAmb	IAmb	10 58 09.5	
	comp=Z,13nm,1.0s						
ELL	Elmali	30.05	323	P	P	10 57 58.4	+0.8
BR131	Keskin Array S	30.31	331	P	P	10 58 00.6	+0.7
BRTR	Keskin Array B	30.31	331	P	P	10 58 00.3	+0.4
	comp=Z,5.6nm,1.0s,baz=149,slow=10,SNR=20						
BRTR				PcP	PcP	11 01 00.6	+0.4
	comp=Z,1.2nm,0.6s,baz=111,slow=3.1,SNR=5.0						
	comp=Z,5.6nm,1.0s						
ISP	Isparta	30.46	325	P	P	10 58 01.7	+0.5
ISP				IAmb	IAmb	10 58 02.1	
	comp=Z,22nm,0.8s						
KBZ	Khabaz	30.71	347	P	P	10 58 04.9	+1.8
	comp=Z,12nm,0.8s,baz=174,slow=7.8,SNR=26						
	comp=Z,12nm,0.8s						
BR231	Keskin MP Arra	30.81	331	P	P	10 58 05.4	+1.2
BR231				IAmb	IAmb	10 58 06.4	
	comp=Z,21nm,0.8s						
ANTO	Ankara	30.83	331	P	P	10 58 04.7	+0.4
ANTO				IAmb	IAmb	10 58 06.6	
	comp=Z,26nm,0.9s						
KARP	Karpathos	30.96	318	P	P	10 58 05.3	-0.2
KVAR	Kislovodsk Arr	30.97	347	LR	LR	11 12 57.1	
	comp=Z,534nm,19.2s,baz=57,slow=41						
KIV	Kislovodsk	30.97	347	P	P	10 58 06.5	+0.9
KIV				IAmb	IAmb	10 58 08.3	
	comp=Z,29nm,1.2s						
ILGA	Ilgaz	31.35	333	P	P	10 58 09.8	+0.8
BORA	Eskisehir	32.00	328	P	P	10 58 12.8	-1.8
MANT	Manisa	32.03	324	P	P	10 58 15.2	0.0
MANT				IAmb	IAmb	10 58 16.4	
	comp=Z,16nm,0.9s						
MDUB	Mudurnu	32.06	330	P	P	10 58 15.2	-0.1
IUG	Iuzhnay	32.25	26	*e*P	P	10 58 17.9	+1.0
	baz=26						
IUG				*i* S	S	11 03 33.1	+2.8
	baz=26						
IDI	Anoyia	32.30	316	⇓P	P	10 58 18.0	+0.6
IDI	Anoyia	32.30	316	P	P	10 58 18.0	+0.6
	comp=Z,17nm,1.0s,baz=69,slow=6.8,SNR=3.9						
IDI				LR	LR	11 13 09.9	
	comp=Z,120nm,20.4s,baz=94,slow=40						
	comp=Z,17nm,1.0s						
IDI	Anoyia	32.30	316	P	P	10 58 17.4	0.0
IDI				IAmb	IAmb	10 58 20.3	
	comp=Z,29nm,1.1s						
OPO	Ambohidratompo	32.59	188	P	P	10 58 21.5	+1.4
	comp=Z,4.9nm,0.8s,baz=6.0,slow=15,SNR=3.1						
OPO				LR	LR	11 11 08.8	
	comp=Z,96nm,18.4s,baz=158,slow=36						
	comp=Z,4.9nm,0.8s						
KK31	Karatay Array	33.23	25	P	P	10 58 25.2	-0.1
KKAR	Karatay Array	33.23	25	P	P	10 58 26.6	+1.2
KKAR	Karatay Array	33.23	25	P	P	10 58 26.5	+1.1
DZA	Taraz	33.41	26	*e*P	P	10 58 28.0	+1.0
	baz=26						
ANKY	Antikythira Is	33.70	316	P	P	10 58 28.7	-0.8
AML	Almayashu	33.89	30	P	P	10 58 34.1	+2.5
VLI	Veliai	34.41	317	P	P	10 58 33.9	-1.8
VLY	Voula,Athens	34.50	319	P	P	10 58 35.7	-0.8
AAK	Ala-Archa	34.66	30	P	P	10 58 40.5	+2.5
	comp=Z,3.2nm,0.6s,baz=223,slow=8.3,SNR=9.5						
	comp=Z,3.2nm,0.6s						
AAK	Ala-Archa	34.66	30	P	P	10 58 38.9	+1.0
AAK				IAmb	IAmb	10 58 50.8	
	comp=Z,21nm,1.2s						
AAK	Ala-Archa	34.66	30	P	P	10 58 40.3	+2.3
RER	Riviere de l'E	35.05	174	P	P	10 58 40.2	-1.1
ALN	Alexandroupoli	35.09	325	P	P	10 58 41.6	+0.2
ALN	Alexandroupoli	35.09	325	P	P	10 58 41.9	+0.4
ALN				IAmb	IAmb	10 58 43.4	
	comp=Z,30nm,1.3s						
SMTH	Samothraki Isl	35.09	324	P	P	10 58 40.8	-0.7
ITM	Ithomi	35.34	316	P	P	10 58 41.9	-1.9
ITM	Ithomi	35.34	316	P	P	10 58 43.5	-0.2
SGDS	Sogindy	35.34	29	*e*P	P	10 58 44.5	+0.8
	baz=29						
GUR	Goura	35.49	318	P	P	10 58 43.8	-1.3
RDO	Rodhopi	35.54	325	P	P	10 58 46.3	+1.0
RDO	Rodhopi	35.54	325	P	P	10 58 45.9	+0.6
RDO				IAmb	IAmb	10 58 47.3	
	comp=Z,24nm,1.0s						
KDJ	Kajisay	35.66	33	P	P	10 58 46.9	+0.4
KDJ				IAmb	IAmb	10 59 00.4	
	comp=Z,12nm,1.1s						
KLV	Kalavryta, Ach	35.67	318	P	P	10 58 43.6	-3.0
TARG	Taragay, Kyrgy	35.71	34	IAmb	IAmb	10 59 00.4	
	comp=Z,38nm,1.3s						
XOR	Xorichti	35.78	320	P	P	10 58 46.0	-1.5
ABKAR	Akbulak array	35.88	9	P	P	10 58 48.7	+0.6
DRO	Drossia	35.91	317	P	P	10 58 45.6	-3.0
EFP	Efpalio	36.05	318	P	P	10 58 48.5	-1.3
AGG	Agios Georgios	36.12	319	P	P	10 58 50.4	0.0
AGG	Agios Georgios	36.12	319	P	P	10 58 49.4	-1.1
AGG				IAmb	IAmb	10 58 50.9	
	comp=Z,12nm,0.9s						
ANX	Ano Chora	36.13	318	P	P	10 58 49.2	-1.4
TNSS	Tian-Shan	36.18	32	*e*P	P	10 58 51.7	+0.4
	baz=32						
BTLS	Baital	36.31	27	*e*P	P	10 58 52.2	+0.3
	baz=27						
MDOK	Medeo	36.32	32	*e*P	P	10 58 53.1	+0.8
	baz=32						
TIRR	Tirgusor	36.44	331	⇓P	P	10 58 52.9	-0.1
TIRR	Tirgusor	36.44	331	P	P	10 58 52.9	-0.1
KUU	Kurty	36.50	30	*e*P	P	10 58 53.8	+0.2
	comp=Z,9.9nm,0.8s,baz=30						
NVR	Nevrokopi	36.62	324	P	P	10 58 54.4	-0.3
SRS	Serrai	36.63	323	P	P	10 58 52.9	-1.8
THL	Klokotos Trika	36.63	320	P	P	10 58 51.1	-3.6
LIT	Litokhoron	36.66	321	IAmb	IAmb	10 58 55.8	
	comp=Z,11nm,0.7s						
TLBR	Topalu	36.67	331	⇑P	P	10 58 54.7	-0.3
RAZG	Razgrad	36.70	329	⇑P	P	10 58 55.9	+0.6
TPGR	Topolog	36.73	332	⇑P	P	10 58 55.1	-0.4
AKTO	Aktyubinsk	36.78	7	P	P	10 58 57.3	+1.5
	comp=Z,12nm,1.0s,baz=196,slow=7.9,SNR=24						
	comp=Z,12nm,1.0s						
CHKK	Chushkaly	36.79	31	*e*P	P	10 58 56.7	+0.7
	baz=31						
HARR	Harsova	36.84	331	⇑P	P	10 58 56.9	+0.5
SATY	Saty	36.95	33	*e*P	P	10 58 58.3	+0.7
	comp=Z,7.2nm,0.9s,baz=33						
EVGI	Lefkada island	36.97	318	P	P	10 58 57.0	-0.6
ZHN	Zhinishke	37.04	33	*e*P	P	10 58 59.1	+0.8
	baz=33						
CFR	Carcaliu	37.11	332	⇓P	P	10 58 58.8	+0.1
LSZ	Lusaka	37.27	220	P	P	10 59 00.7	+0.2
	comp=Z,0.8nm,0.3s,baz=45,slow=11,SNR=1.4						
	comp=Z,0.8nm,0.3s						
LSZ	Lusaka	37.27	220	P	P	10 58 59.6	-0.9
UZB	Uzynbulak	37.34	33	*e*P	P	10 59 01.2	+0.3
	baz=33						
KPKS	Kokpek	37.38	33	*e*P	P	10 59 01.7	+0.5
	comp=Z,9.2nm,0.7s,baz=33						
PURM	Purcari	37.41	335	⇑P	P	10 59 00.9	-0.3
FNA	Florina	37.75	321	P	P	10 59 03.5	-0.8
FNA	Florina	37.75	321	P	P	10 59 03.6	-0.6
FNA				IAmb	IAmb	10 59 05.1	
	comp=Z,19nm,0.9s						
VTS	Vitosha	37.80	325	⇑P	P	10 59 04.8	0.0
VTS	Vitosha	37.80	325	IAmb	IAmb	10 59 06.3	
	comp=Z,15nm,0.9s						
ISR	Istrita	37.81	330	⇓P	P	10 59 04.9	+0.2
NEHR	Nehoiu	38.16	331	⇓P	P	10 59 07.6	0.0
HUMR	Humele	38.16	328	⇑P	P	10 59 08.7	+1.1
VRI	Vrincioaia	38.28	331	⇑P	P	10 59 09.2	+0.6
PLOR	Plostina	38.30	331	⇑P	P	10 59 09.0	+0.1
MLR	Muntele Rosu	38.37	330	⇑P	P	10 59 09.4	-0.2
MLR	Muntele Rosu	38.37	330	P	P	10 59 09.4	-0.2
	comp=Z,4.9nm,0.8s,baz=145,slow=4.0,SNR=10						
MLR				LR	LR	11 17 09.6	
	comp=Z,277nm,18.3s,baz=123,slow=40						
	comp=Z,4.9nm,0.8s						
MLR	Muntele Rosu	38.37	330	IAmb	IAmb	10 59 13.0	
	comp=Z,22nm,1.5s						
COVR	Voineasa-Covas	38.51	331	⇑P	P	10 59 11.0	+0.4
BELG	Belogornoye	38.55	356	P	P	10 59 11.2	+0.5
	comp=Z,23nm,0.8s,baz=147,slow=12,SNR=7.3						
BELG				LR	LR	11 17 48.6	
	comp=Z,185nm,18.1s,baz=182,slow=40						
	comp=Z,23nm,0.8s						
VOIR		38.77	330	⇑P	P	10 59 13.5	+0.7
TESR	Tescani	38.80	332	⇓P	P	10 59 13.1	+0.1
ARR	Arges	38.93	329	⇓P	P	10 59 14.4	+0.2
PUNG	Punghina	39.06	327	⇑P	P	10 59 14.8	-0.3
SORM	Soroca	39.31	335	⇑P	P	10 59 16.9	-0.3
LOT	Lotru	39.42	329	⇓P	P	10 59 17.9	-0.4
TIP	Timpagrande	39.86	316	⇑P	P	10 59 22.3	+0.3
TIP	Timpagrande	39.86	316	P	P	10 59 21.7	-0.3
MDVR	Moldovita	40.05	326	⇓P	P	10 59 23.3	-0.1
BUR01	Bucovina Ar. S	40.27	332	⇑P	P	10 59 26.0	+0.6
BURAR	Bucovina Array	40.27	332	P	P	10 59 25.3	-0.1
MATE	Matera	40.63	318	⇓P	P	10 59 28.4	+0.1
VAE	Valguarnera	40.72	312	LR	LR	11 16 31.0	
	comp=Z,66nm,19.6s,baz=151,slow=36						
DRGR		40.88	329	⇑P	P	10 59 31.2	+0.8
AKASG	Malin Array Be	41.05	338	P	P	10 59 31.4	-0.2
	comp=Z,7.1nm,0.8s,baz=140,slow=7.2,SNR=35						
AKASG				PP	PP	11 01 06.0	-0.3
	comp=Z,0.3nm,0.4s,baz=138,slow=9.7,SNR=4.6						
AKASG				LR	LR	11 20 15.1	
	comp=Z,131nm,18.8s,baz=170,slow=42						
	comp=Z,7.1nm,0.8s						
AKBB	Malin Array Si	41.05	338	IAmb	IAmb	10 59 32.6	
	comp=Z,19nm,0.9s						
MATP	Matopo	41.13	214	P	P	10 59 32.5	-0.3
	comp=Z,2.0nm,0.4s,baz=23,slow=11,SNR=1.7						
	comp=Z,2.0nm,0.4s						
MAKZ	Makanchi	41.37	31	P	P	10 59 35.2	+0.9
MAKZ				IAmb	IAmb	10 59 45.7	
	comp=Z,18nm,1.2s						
MK31	Makanchi Array	41.52	32	P	P	10 59 35.9	+0.3
MKAR	Makanchi Array	41.52	32	P	P	10 59 36.9	+1.4
	comp=Z,6.2nm,0.6s,baz=222,slow=7.5,SNR=85						
	comp=Z,6.2nm,0.6s						
MKAR	Makanchi Array	41.52	32	P	P	10 59 36.8	+1.2
BRVK	Borovoye	41.72	17	P	P	10 59 37.0	-0.1
SGRT	San Giovanni R	41.82	319	IAmb	IAmb	10 59 38.8	
	comp=Z,11nm,0.8s						
KURBB	Kurchatov Arra	42.54	25	P	P	10 59 45.0	+1.1

	comp=Z,3.7nm,0.9s,baz=227,slow=8.1,SNR=37						
	comp=Z,3.7nm,0.9s						
KOLS	**Kolonicke sedl**	**42.59**	**331**	*e*P	**P**	**10 59 45.3**	**+1.0**
MORH	**Mrgy, Hungar**	**42.62**	**326**	⇑P	**P**	**10 59 44.4**	**-0.1**
MORH	**Mrgy, Hungar**	**42.62**	**326**	P	**P**	**10 59 44.4**	**-0.1**
KURK	**Kurchatov**	**42.65**	**25**	P	**P**	**10 59 45.0**	**+0.3**
WMQ	**Urumqi**	**42.73**	**39**	*e*P	**P**	**10 59 46.8**	**+1.3**
WMQ				LR	LR		
	comp=Z,2µm,28.3s						
WMQ				LR	LR		
	comp=Z,950nm,28.9s						
WMQ				LR	LR		
	comp=Z,98nm,29.0s						
ARU	**Arti**	**42.76**	**5**	P	**P**	**10 59 46.1**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=192,slow=7.8,SNR=9.3						
ARU				LR	LR	11 19 36.1	
	comp=Z,120nm,20.7s,baz=172,slow=39						
	comp=Z,0.8nm,0.4s						
ARU	**Arti**	**42.76**	**5**	P	**P**	**10 59 45.6**	**+0.1**
ARU				IAmb	IAmb	10 59 55.9	
	comp=Z,17nm,0.8s						
OBN	**Obninsk**	**42.82**	**347**	P	**P**	**10 59 45.9**	**-0.1**
	comp=Z,9.9nm,0.4s,baz=164,slow=10,SNR=7.4						
OBN				LR	LR	11 20 29.0	
	comp=Z,61nm,19.1s,baz=168,slow=40						
	comp=Z,9.9nm,0.4s						
OBN	**Obninsk**	**42.82**	**347**	P	**P**	**10 59 46.2**	**+0.3**
KOVH	**Kovagotottos**	**42.84**	**325**	P	**P**	**10 59 46.2**	**-0.2**
CRVS	**Cervenica-Dubn**	**42.95**	**331**	*e*P	**P**	**10 59 47.9**	**+0.7**
PSZ	**Piszkesteto**	**43.05**	**329**	P	**P**	**10 59 48.1**	**0.0**
PSZ	**Piszkesteto**	**43.05**	**329**	P	**P**	**10 59 48.3**	**+0.1**
SEM	**Semipalatinsk**	**43.10**	**26**	*e*P	**P**	**10 59 48.9**	**+0.2**
	baz=26						
ZSN	**Zaisan**	**43.28**	**33**	*e*P	**P**	**10 59 50.4**	**+0.5**
	baz=33						
SRO	**Srobarova**	**43.80**	**327**	*e*P	**P**	**10 59 54.5**	**+0.5**
MPLH	**Magyarpolny**	**43.81**	**326**	P	**P**	**10 59 54.4**	**+0.2**
KEST	**Kesra**	**43.86**	**307**	P	**P**	**10 59 55.7**	**+0.9**
	comp=Z,8.7nm,0.9s,baz=180,slow=4.0,SNR=4.6						
KEST				LR	LR	11 19 55.5	
	comp=Z,210nm,18.0s,baz=318,slow=39						
	comp=Z,8.7nm,0.9s						
VYHS	**Vyhne**	**43.97**	**329**	*e*P	**P**	**10 59 55.3**	**-0.1**
LANS	**Liptovska Anna**	**44.08**	**330**	*e*P	**P**	**10 59 56.5**	**+0.1**
GOMU	**GeErMu**	**44.33**	**52**	P	**P**	**11 00 01.1**	**+2.1**
GOMU				pP	pwP	11 00 04.4	-1.3
GOMU				sP	sP	11 00 08.5	+6.7
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,30nm,4.5s						
MURB	**Monte Urbino**	**44.63**	**319**	IAmb	IAmb	11 00 02.8	
	comp=Z,12nm,0.9s						
KIRV	**Kirov**	**44.64**	**358**	P	**P**	**11 00 00.4**	**-0.2**
	comp=Z,9.7nm,0.5s,baz=159,slow=5.0,SNR=4.6						
KIRV				LR	LR	11 22 52.0	
	comp=Z,143nm,18.1s,baz=175,slow=42						
	comp=Z,9.7nm,0.5s						
SOP	**Sopron**	**44.65**	**326**	P	**P**	**11 00 00.7**	**-0.2**
MNK	**Minsk**	**44.66**	**340**	*i* P	**P**	**11 00 00.4**	**-0.3**
	comp=E,6.0nm,1.4s						
MNK				*i* P	**P**	**11 00 00.4**	**-0.3**
	comp=N,50nm,0.7s						
MNK				*i* P	**P**	**11 00 00.4**	**-0.3**
	comp=Z,18nm,0.6s,baz=147						
MNK				*i* PP	**PP**	**11 01 46.2**	**+1.2**
MNK				*i* S	**S**	**11 06 39.6**	**+2.6**
MNK				*i* SS	**ScS**	**11 10 04.9**	**+6.2**
MNK				*i* LQ	LQ	11 15 39.1	
MNK				*i* LQ	LQ	11 15 39.1	
MNK				*i* LR	LR	11 19 05.5	
ZST	**Bratislava**	**44.67**	**327**	*e*P	**P**	**11 00 00.9**	**-0.1**
MODS	**Modra-Piesok**	**44.69**	**327**	*e*P	**P**	**11 00 01.1**	**-0.1**
SMOL	**Smolenice**	**44.70**	**328**	*e*P	**P**	**11 00 01.0**	**-0.3**
JAVC	**Velka Javorina**	**44.79**	**328**	*e*P	**P**	**11 00 02.6**	**+0.5**
RONA	**Rosalia, Austr**	**44.80**	**326**	*i* P	**P**	**11 00 02.1**	**0.0**
	comp=Z,19nm,1.3s,SNR=9.5						
SOKA	**Soboth**	**44.91**	**324**	*i* P	**P**	**11 00 03.2**	**+0.1**
	comp=Z,7.8nm,1.1s						
ARSA	**Arzberg**	**44.96**	**325**	*i* P	**P**	**11 00 03.6**	**+0.2**
	comp=Z,13nm,0.9s,SNR=7.7						
MAUC	**Maruska**	**45.04**	**329**	*e*P	**P**	**11 00 04.1**	**+0.1**
MAUC				*e*pP	**pwP**	**11 00 13.0**	**+3.3**
OBKA	**Obir**	**45.09**	**324**	*i* P	**P**	**11 00 04.8**	**+0.2**
	comp=Z,17nm,1.3s,SNR=8.8						
CONA	**Conrad Observa**	**45.17**	**326**	*i* P	**P**	**11 00 05.1**	**-0.1**
	comp=Z,15nm,1.0s,SNR=12						
CMAR	**Chiang Mai Arr**	**45.34**	**78**	P	**P**	**11 00 08.5**	**+1.7**
	comp=Z,3.3nm,0.3s,baz=274,slow=8.6,SNR=19						
CMAR				LR	LR	11 20 07.1	
	comp=Z,42nm,18.3s,baz=260,slow=37						
	comp=Z,3.3nm,0.3s						
NACGM	**Naroch**	**45.35**	**340**	⇑*e*P	**P**	**11 00 05.9**	**-0.4**
	baz=145						
MORC	**Moravsky Berou**	**45.44**	**329**	⇓P	**P**	**11 00 07.0**	**-0.2**
MORC	**Moravsky Berou**	**45.44**	**329**	P	**P**	**11 00 06.8**	**-0.4**
MORC				IAmb	IAmb	11 00 07.5	
	comp=Z,9.9nm,0.9s						
MORC	**Moravsky Berou**	**45.44**	**329**	*e*P	**P**	**11 00 07.0**	**-0.2**
KRUC	**Moravsky**	**45.58**	**328**	*e*P	**P**	**11 00 07.7**	**-0.5**
VRAC	**Vranov**	**45.63**	**328**	P	**P**	**11 00 08.1**	**-0.5**
	comp=Z,6.5nm,1.0s,baz=128,slow=9.1,SNR=8.9						
VRAC				LR	LR	11 20 45.5	
	comp=Z,80nm,20.0s,baz=128,slow=38						
	comp=Z,6.5nm,1.0s						
VRAC	**Vranov**	**45.63**	**328**	*e*P	**P**	**11 00 08.2**	**-0.5**
MYKA	**Terra Mystica**	**45.68**	**323**	*i* P	**P**	**11 00 09.2**	**0.0**
	comp=Z,21nm,0.9s,SNR=7.5						
IDID	**Didziasalis**	**45.70**	**340**	*e*P	**P**	**11 00 08.6**	**-0.4**
IIGN	**Ignalina**	**45.90**	**340**	*e*P	**P**	**11 00 10.3**	**-0.3**
SUW	**Suwalki**	**45.94**	**337**	P	**P**	**11 00 10.3**	**-0.7**
SUW	**Suwalki**	**45.94**	**337**	*e*P	**P**	**11 00 10.7**	**-0.3**
MOA	**Molln**	**46.00**	**325**	*i* P	**P**	**11 00 11.6**	**-0.1**
	comp=Z,13nm,0.8s,SNR=13						
KRLC	**Kraliky**	**46.01**	**329**	*e*P	**P**	**11 00 11.2**	**-0.5**
KRLC				*e*pP	**pwP**	**11 00 20.1**	**+2.7**
KBA	**Koelnbreinsper**	**46.09**	**324**	*i* P	**P**	**11 00 12.2**	**-0.4**
	comp=Z,16nm,1.1s,SNR=12						
ISAL	**Salakas**	**46.11**	**340**	*e*P	**P**	**11 00 11.0**	**-1.3**
BIOA	**Bad Ischl, Aus**	**46.27**	**325**	*i* P	**P**	**11 00 13.3**	**-0.5**
	comp=Z,15nm,1.1s,SNR=5.1						
LBTB	**Lobatse**	**46.40**	**214**	LR	LR	11 18 44.8	
	comp=Z,135nm,20.0s,baz=40,slow=35						
ABTA	**Abfaltersbach**	**46.40**	**323**	*i* P	**P**	**11 00 14.6**	**-0.3**
	comp=Z,7.9nm,0.8s,SNR=6.7						
DPC	**Dobruska-Polom**	**46.41**	**329**	*e*P	**P**	**11 00 14.5**	**-0.4**
DPC				*e*pP	**pwP**	**11 00 23.1**	**+2.5**
CKRC	**Cesky Krumlov**	**46.54**	**326**	*e*P	**P**	**11 00 15.4**	**-0.4**
CKRC				*e*pP	**pwP**	**11 00 23.5**	**+2.0**
CTI	**Castel Tesino**	**46.55**	**322**	P	**P**	**11 00 15.6**	**-0.5**
CTI				IAmb	IAmb	11 00 16.7	
	comp=Z,8.9nm,0.9s						
OSTC	**Ostas**	**46.60**	**329**	*e*P	**P**	**11 00 15.6**	**-0.7**
OSTC				*e*pP	**pwP**	**11 00 24.6**	**+2.6**
UPC	**Upice**	**46.67**	**329**	*e*P	**P**	**11 00 16.5**	**-0.3**
CHVC	**Chvalec**	**46.70**	**329**	*e*P	**P**	**11 00 16.5**	**-0.6**
CHVC				*e*pP	**pwP**	**11 00 25.6**	**+2.8**
KSP	**Ksiaz**	**46.74**	**330**	*e*P	**P**	**11 00 17.2**	**-0.1**
PABE	**Paberze**	**46.80**	**339**	*e*P	**P**	**11 00 17.9**	**+0.2**
GEC2	**GERESS Array S**	**46.88**	**326**	P	**P**	**11 00 17.4**	**-1.2**
GEC2				IAmb	IAmb	11 00 18.8	
	comp=Z,6.4nm,0.9s						
GERES	**GERESS Array B**	**46.88**	**326**	P	**P**	**11 00 17.4**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=134,slow=7.6,SNR=14						
GERES				PcP	**PcP**	**11 01 49.1**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=170,slow=3.0,SNR=3.6						
GERES				LR	LR	11 23 08.3	
	comp=Z,60nm,20.3s,baz=96,slow=40						
	comp=Z,2.2nm,0.7s						
GERES	**GERESS Array B**	**46.88**	**326**	P	**P**	**11 00 17.8**	**-0.9**
PRU	**Pruhonice**	**47.10**	**328**	*e*P	**P**	**11 00 19.8**	**-0.4**
KHC	**Kasperske Hory**	**47.11**	**326**	*e*P	**P**	**11 00 18.7**	**-1.6**
TSUM	**Tsumeb**	**47.14**	**227**	LR	LR	11 21 37.1	
	comp=Z,215nm,18.5s,baz=146,slow=38						
WTTA	**Wattenberg**	**47.18**	**323**	*i* P	**P**	**11 00 20.2**	**-0.9**
	comp=Z,30nm,1.3s,SNR=11						
PBCC	**Pribram**	**47.21**	**327**	*e*P	**P**	**11 00 19.9**	**-1.1**
WATA	**Walderalm**	**47.25**	**323**	*i* P	**P**	**11 00 20.5**	**-1.1**
	comp=Z,26nm,1.1s,SNR=7.6						
SQTA	**Sankt Quirin**	**47.41**	**323**	*i* P	**P**	**11 00 21.9**	**-0.9**
	comp=Z,15nm,0.8s,SNR=7.1						
MOTA	**Moosalm**	**47.53**	**323**	*i* P	**P**	**11 00 22.5**	**-1.3**
	comp=Z,20nm,0.8s,SNR=14						
FETA	**Feichten**	**47.59**	**322**	*i* P	**P**	**11 00 23.4**	**-0.8**
	comp=Z,7.2nm,0.9s,SNR=6.9						
ZAA0	**Zalesovo Array**	**47.61**	**26**	P	**P**	**11 00 23.8**	**-0.2**
ZAA0				IAmb	IAmb	11 00 24.9	
	comp=Z,9.5nm,0.6s						
ZALV	**Zalesovo Beam**	**47.61**	**26**	P	**P**	**11 00 23.9**	**-0.1**
	comp=Z,10nm,0.6s,baz=233,slow=8.0,SNR=45						
	comp=Z,10nm,0.6s						
ZALV	**Zalesovo Beam**	**47.61**	**26**	P	**P**	**11 00 24.0**	**-0.1**
KLMR	**Klimovskoe**	**47.74**	**352**	*e*P	**P**	**11 00 21.8**	**-3.2**
KLMR				AMP		11 00 34.8	
	comp=Z,82nm,1.0s						
KLMR				*e*SS	**SS**	**11 10 52.8**	**+3.5**
KLMR				*e*SS	**SS**	**11 10 52.8**	**+3.5**
RETA	**Reutte**	**47.81**	**323**	*i* P	**P**	**11 00 24.5**	**-1.3**
	comp=Z,16nm,1.1s,SNR=7.7						
BRG	**Berggiesshubel**	**47.94**	**328**	*e*P	**P**	**11 00 24.7**	**-1.9**
BRG				Amp		11 00 27.9	
	comp=Z,8.0nm,1.1s						
DAVOX	**Davos/Dischmat**	**47.98**	**322**	P	**P**	**11 00 26.5**	**-0.8**
	comp=Z,9.1nm,0.9s,baz=140,slow=7.0,SNR=17						
DAVOX				LR	LR	11 22 42.2	
	comp=Z,55nm,20.5s,baz=81,slow=39						
	comp=Z,9.1nm,0.9s						
PZH	**PanZhiHua**	**48.18**	**67**	P	**P**	**11 00 30.0**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,6.3s						
DAVA	**Damuels**	**48.23**	**322**	*i* P	**P**	**11 00 28.0**	**-1.2**
	comp=Z,17nm,0.9s,SNR=8.0						
VSU	**Vasula**	**48.31**	**343**	*e*P	**P**	**11 00 28.9**	**-0.4**
CLL	**Collm**	**48.67**	**328**	P	**P**	**11 00 31.5**	**-0.9**
CLL				IAmb	IAmb	11 00 32.2	
	comp=Z,5.3nm,0.8s						
CLL	**Collm**	**48.67**	**328**	⇓*i*P	**P**	**11 00 31.4**	**-0.9**
	comp=Z,24nm,1.7s						
CLL				*e*PP	**PP**	**11 02 25.0**	**-0.3**
CLL				*e*Sx	Sx	11 07 24.0	
CLL				*e*SS	SS	11 11 18.0	+13
TOA0	**Torodi Ar. Sit**	**48.72**	**275**	P	**P**	**11 00 32.9**	**-0.3**
	SNR=6.6						
TORD	**Torodi Ar. Bea**	**48.72**	**275**	P	**P**	**11 00 32.3**	**-0.9**
	comp=Z,9.1nm,0.9s,baz=94,slow=8.4,SNR=41						
TORD				PcP	**PcP**	**11 01 58.5**	**0.0**
	comp=Z,1.2nm,0.6s,baz=77,slow=4.4,SNR=6.0						
	comp=Z,9.1nm,0.9s						
SLIT	**Slitere, Latvi**	**49.04**	**339**	*e*P	**P**	**11 00 34.8**	**-0.2**
MTSE	**Matsula**	**49.40**	**341**	*e*P	**P**	**11 00 38.1**	**+0.3**
BOSA	**Boshof**	**49.49**	**211**	P	**P**	**11 00 38.8**	**-0.2**
	comp=Z,5.5nm,1.2s,baz=43,slow=7.7,SNR=3.6						
BOSA				LR	LR	11 20 12.1	
	comp=Z,69nm,21.0s,baz=22,slow=34						
	comp=Z,5.5nm,1.2s						
BOSA	**Boshof**	**49.49**	**211**	P	**P**	**11 00 38.3**	**-0.7**
BOSA				IAmb	IAmb	11 01 52.9	
	comp=Z,35nm,1.5s						
BFO	**Black Forest**	**49.65**	**323**	P	**P**	**11 00 39.0**	**-0.9**
ECH	**Echery**	**50.28**	**322**	P	**P**	**11 00 43.7**	**-1.0**
ECH				IAmb	IAmb	11 00 44.9	
	comp=Z,11nm,1.1s						
MEF	**Metsahovi**	**50.44**	**343**	*e*P	**P**	**11 00 46.0**	**+0.4**
SSB	**Saint Sauveur**	**50.67**	**318**	P	**P**	**11 00 46.4**	**-1.4**
FIA0	**FINESS Array S**	**50.99**	**344**	P	**P**	**11 00 50.3**	**+0.5**
FINES	**FINESS Array B**	**50.99**	**344**	P	**P**	**11 00 49.8**	**0.0**
	comp=Z,14nm,0.7s,baz=134,slow=11,SNR=48						
FINES				LR	LR	11 26 35.8	
	comp=Z,113nm,18.5s,baz=116,slow=41						
	comp=Z,14nm,0.7s						
FINES	**FINESS Array B**	**50.99**	**344**	P	**P**	**11 00 50.2**	**+0.4**
FIA1	**FINESS Array S**	**50.99**	**344**	P	**P**	**11 00 49.9**	**+0.1**
LZH	**Lanzhou**	**51.35**	**55**	*e*P	**P**	**11 00 52.3**	**-0.9**
LZH				pP	pP	11 00 55.9	+0.7
LZH				sP	pwP	11 00 59.1	-0.8
LZH				pmax	pmax		
	comp=Z,13nm,0.8s						
WLF	**Walferdange**	**51.54**	**324**	*d*P	**P**	**11 00 53.4**	**-0.7**
	comp=Z,19nm,1.0s						
VIKU	**Vikbolandet**	**51.69**	**337**	*e*P	**P**	**11 00 54.8**	**-0.3**
AAL	**Aland**	**51.77**	**340**	*e*P	**P**	**11 00 55.4**	**-0.2**
RAF	**Rauma**	**51.86**	**342**	*e*P	**P**	**11 00 56.0**	**-0.3**
BHOU	**Houvegnez**	**51.94**	**324**	*d*P	**P**	**11 00 57.4**	**+0.2**
BTNL	**Ternell**	**51.98**	**325**	*d*P	**P**	**11 00 57.6**	**+0.1**
MEM	**Membach**	**52.06**	**325**	*d*P	**P**	**11 00 57.8**	**-0.2**
RCHB	**Rochefort**	**52.30**	**324**	*d*P	**P**	**11 00 59.4**	**-0.4**
	comp=Z,11nm,1.0s						
BSTI	**Sart Tilman**	**52.30**	**324**	*d*P	**P**	**11 00 59.7**	**0.0**
UPP	**Uppsala**	**52.33**	**339**	*e*P	**P**	**11 00 59.6**	**-0.2**
BCLA	**Clavier**	**52.37**	**324**	*d*P	**P**	**11 01 00.1**	**-0.2**
	comp=Z,4.7nm,1.3s						
BGES	**Gesves**	**52.48**	**324**	*d*P	**P**	**11 01 01.1**	**-0.1**
	comp=Z,8.2nm,1.1s						
BMRD	**Maredsous**	**52.62**	**324**	*d*P	**P**	**11 01 02.2**	**0.0**
	comp=Z,9.8nm,1.0s						
SNF	**Seneffe**	**52.99**	**324**	*d*P	**P**	**11 01 04.7**	**-0.2**
	comp=Z,14nm,0.8s						
HFS	**Hagfors**	**53.94**	**338**	P	**P**	**11 01 10.7**	**-1.0**
	comp=Z,5.7nm,1.0s,baz=229,slow=13,SNR=12						
HFS				LR	LR	11 26 20.0	
	comp=Z,133nm,20.1s,baz=144,slow=38						
	comp=Z,5.7nm,1.0s						
KOWA	**Kowa**	**54.06**	**278**	P	**P**	**11 01 12.7**	**-0.7**
KOWA				IAmb	IAmb	11 01 13.5	
	comp=Z,7.4nm,0.8s						
MDT	**Midelt**	**54.52**	**300**	LR	LR	11 25 41.0	
	comp=Z,202nm,18.4s,baz=121,slow=37						
SUR	**Sutherland**	**54.78**	**212**	LR	LR	11 24 22.3	
	comp=Z,79nm,18.0s,baz=346,slow=36						
MDSI	**Maura Dua**	**55.01**	**106**	P	**P**	**11 01 20.2**	**0.0**
	comp=Z,4.8nm,1.0s						
ESBB	**Sonseca Array**	**55.06**	**309**	P	**P**	**11 01 19.9**	**-0.5**
ESBB				IAmb	IAmb	11 01 20.8	
	comp=Z,16nm,1.0s						
ESDC	**Sonseca Array**	**55.06**	**309**	P	**P**	**11 01 19.7**	**-0.6**
	comp=Z,8.8nm,0.8s,baz=88,slow=6.5,SNR=56						
ESDC				LR	LR	11 26 36.6	
	comp=Z,53nm,19.3s,baz=102,slow=38						
	comp=Z,8.8nm,0.8s						
ESDC	**Sonseca Array**	**55.06**	**309**	P	**P**	**11 01 19.7**	**-0.6**
ESDC				IAmb	IAmb	11 01 20.7	
	comp=Z,13nm,1.1s						
XAN	**Xi'an**	**55.14**	**58**	P	**P**	**11 01 21.4**	**+0.4**
XAN				pP	sP	11 01 25.3	+1.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,100nm,6.5s						
XAN				LR	LR		
	comp=Z,100nm,20.6s						
XAN				LR	LR		
	comp=Z,86nm,13.1s						
NC405	**NORSAR Array S**	**55.32**	**338**	IAmb	IAmb	11 01 21.3	
	comp=Z,20nm,1.0s						
PAB	**San Pablo**	**55.33**	**309**	P	**P**	**11 01 22.0**	**-0.3**
PAB				IAmb	IAmb	11 01 22.9	
	comp=Z,22nm,1.4s						
NB2	**NORSAR Subarra**	**55.45**	**337**	P	**P**	**11 01 21.3**	**-1.5**
	comp=Z,12nm,1.1s,baz=124,slow=7.9						
NOA	**NORSAR Array B**	**55.45**	**337**	P	**P**	**11 01 21.6**	**-1.2**
	comp=Z,4.7nm,0.9s,baz=123,slow=7.7,SNR=16						
NOA				LR	LR	11 27 27.3	
	comp=Z,66nm,20.6s,baz=135,slow=39						
	comp=Z,4.7nm,0.9s						
KIC	**Kosan Boka**	**56.12**	**268**	*e*P	**P**	**11 01 27.6**	**-0.7**
	comp=Z,14nm,1.0s						
DBIC	**Dimbokro**	**56.17**	**269**	P	**P**	**11 01 28.0**	**-0.6**
	comp=Z,11nm,1.0s,baz=86,slow=6.1,SNR=6.7						
DBIC				LR	LR	11 25 32.4	
	comp=Z,72nm,18.4s,baz=62,slow=36						
	comp=Z,11nm,1.0s						
DBIC	**Dimbokro**	**56.17**	**269**	P	**P**	**11 01 27.1**	**-1.5**
DBIC				IAmb	IAmb	11 01 29.7	
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**56.22**	**41**	P	**P**	**11 01 29.9**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=240,slow=8.4,SNR=9.1						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**56.22**	**41**	P	**P**	**11 01 28.9**	**+0.4**
SONM				IAmb	IAmb	11 01 40.3	
	comp=Z,8.4nm,1.2s						
TIC	**Toumodi**	**56.33**	**269**	*e*P	**P**	**11 01 29.9**	**+0.1**
LIC	**Lamto**	**56.43**	**268**	*e*P	**P**	**11 01 30.1**	**-0.3**
	comp=Z,28nm,1.0s						
ARCES	**ARCESS Array B**	**58.03**	**349**	P	**P**	**11 01 40.6**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=142,slow=6.1,SNR=25						
ARCES				LR	LR	11 29 40.3	
	comp=Z,128nm,19.2s,baz=112,slow=39						
	comp=Z,4.4nm,0.6s						
ARCES	**ARCESS Array B**	**58.03**	**349**	P	**P**	**11 01 40.8**	**-0.1**
HHC	**Hu-ho-hao-te**	**58.18**	**50**	*e*P	**P**	**11 01 43.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,4.4s						
HHC				LR	LR		
	comp=Z,280nm,12.7s						
HHC				LR	LR		
	comp=Z,260nm,14.0s						
HHC				LR	LR		
	comp=Z,300nm,12.7s						
LEM	**Lembang**	**59.03**	**107**	LR	LR	11 22 05.3	
	comp=Z,62nm,20.9s,baz=346,slow=31						
EKA	**Eskdalemuir Ar**	**59.08**	**327**	P	**P**	**11 01 47.1**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=113,slow=6.7,SNR=14						
EKA				LR	LR	11 33 21.2	
	comp=Z,36nm,18.3s,baz=356,slow=42						
	comp=Z,3.7nm,0.6s						
NRIK	**Noril'sk**	**59.80**	**14**	P	**P**	**11 01 52.8**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=224,slow=4.3,SNR=6.0						
NRIK				LR	LR	11 31 24.7	
	comp=Z,95nm,18.9s,baz=214,slow=40						
	comp=Z,2.5nm,0.6s						
NRIK	**Noril'sk**	**59.80**	**14**	P	**P**	**11 01 53.2**	**+0.1**
NRIK				IAmb	IAmb	11 02 04.5	
	comp=Z,12nm,1.3s						
SBUM	**Sibu**	**60.65**	**95**	P	**P**	**11 01 58.5**	**-1.4**
SBUM				IAmb	IAmb	11 02 14.7	
	comp=Z,6.4nm,1.2s						
NJ2	**Nanjing**	**63.35**	**61**	*e*P	**P**	**11 02 17.1**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**66.64**	**353**	LR	LR	11 35 11.0	
	comp=Z,62nm,18.5s,baz=170,slow=39						
JMIC	**Jan Mayen**	**67.49**	**342**	LR	LR	11 36 53.2	
	comp=Z,28nm,18.1s,baz=78,slow=40						
KAPI	**Kappang**	**69.91**	**101**	P	**P**	**11 03 00.2**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=247,slow=5.4,SNR=2.1						
	comp=Z,1.6nm,0.3s						
BORG	**Borgarnes**	**70.37**	**334**	LR	LR	11 36 43.1	
	comp=Z,57nm,18.9s,baz=98,slow=38						
KSRS	**Korea Array**	**70.68**	**55**	P	**P**	**11 03 04.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=275,slow=6.6,SNR=5.0						
	comp=Z,0.6nm,0.6s						
JOW	**Kunigami**	**71.87**	**66**	LR	LR	11 35 14.7	
	comp=Z,102nm,19.9s,baz=312,slow=36						
DBG	**Daneborg**	**71.88**	**344**	*i* P	**P**	**11 03 10.3**	**-0.6**
DBG				IAmb	IAmb	11 03 20.2	
	comp=Z,4.2nm,0.8s						
DAG	**Danmarks Havn**	**72.13**	**347**	*i* P	**P**	**11 03 11.0**	**-1.4**
DAG				IAmb	IAmb	11 03 20.6	
	comp=Z,3.4nm,0.8s						
TIXI	**Tiksi**	**72.81**	**19**	LR	LR	11 38 10.9	
	comp=Z,58nm,19.9s,baz=190,slow=38						
TIXI	**Tiksi**	**72.81**	**19**	P	**P**	**11 03 15.9**	**-0.5**
TIXI				IAmb	IAmb	11 03 26.5	
	comp=Z,13nm,1.4s						
KLR	**Kul'dur**	**73.02**	**42**	LR	LR	11 39 33.5	
	comp=Z,82nm,18.1s,baz=312,slow=39						
SUMG	**Summit**	**76.94**	**342**	P	**P**	**11 03 40.4**	**-0.5**
SUMG				IAmb	IAmb	11 03 42.3	
	comp=Z,15nm,1.1s						
SUMG	**Summit**	**76.94**	**342**	*i* P	**P**	**11 03 40.0**	**-0.9**
SUMG				IAmb	IAmb	11 03 41.2	
	comp=Z,3.9nm,0.9s						
ICESG	**Greenland Ices**	**77.67**	**338**	*i* P	**P**	**11 03 43.5**	**-1.5**
ICESG				IAmb	IAmb	11 03 53.4	
	comp=Z,3.5nm,0.7s						
MJAR	**Matsushiro Arr**	**78.96**	**55**	P	**P**	**11 03 53.0**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=281,slow=3.9,SNR=4.9						
	comp=Z,1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**78.96**	**55**	P	**P**	**11 03 52.1**	**-0.3**
DY2G	**Dye2**	**80.59**	**336**	*i* P	**P**	**11 03 59.7**	**-1.2**
DY2G				IAmb	IAmb	11 04 10.1	
	comp=Z,9.7nm,0.8s						
MAW	**Mawson**	**81.67**	**176**	LR	LR	11 35 30.4	
	comp=Z,67nm,18.4s,baz=354,slow=32						
SFJD	**Kangerlussuaq**	**82.13**	**337**	LR	LR	11 43 10.3	
	comp=Z,38nm,20.2s,baz=49,slow=38						
MA2	**Magadan**	**82.59**	**30**	P	**P**	**11 04 10.9**	**-0.3**
MA2				IAmb	IAmb	11 04 22.0	
	comp=Z,9.6nm,1.2s						
EUNU	**Eureka**	**83.74**	**353**	P	**P**	**11 04 17.4**	**+0.5**
ASAR	**Alice Springs**	**88.39**	**115**	P	**P**	**11 04 40.8**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=286,slow=4.6,SNR=14						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**88.39**	**115**	P	**P**	**11 04 40.0**	**-0.9**
RES	**Resolute Bay**	**89.19**	**352**	LR	LR	11 48 27.6	
	comp=Z,57nm,20.2s,baz=65,slow=38						
FRB	**Frobisher Bay**	**90.28**	**337**	P	**P**	**11 04 48.0**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=324,slow=1.7,SNR=4.0						
FRB				LR	LR	11 47 41.6	
	comp=Z,38nm,19.8s,baz=333,slow=37						
	comp=Z,1.3nm,0.7s						
SNAA	**Sanae**	**92.80**	**195**	LR	LR	11 42 14.9	
	comp=Z,24nm,18.8s,baz=13,slow=33						
SCHQ	**Schefferville**	**94.31**	**329**	P	**P**	**11 05 06.0**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=35,slow=3.8,SNR=5.1						
	comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**96.98**	**121**	LR	LR	11 43 35.4	
	comp=Z,99nm,19.6s,baz=215,slow=32						
INK	**Inuvik**	**97.93**	**2**	LR	LR	11 56 47.3	
	comp=Z,45nm,20.2s,baz=328,slow=40						
ILAR	**Eielson Array**	**100.28**	**8**	PP	**PP**	**11 09 42.5**	**+2.8**
	comp=Z,0.2nm,0.6s,baz=338,slow=7.0,SNR=5.4						
YKA	**Yellowknife Ar**	**103.12**	**354**	PP	**PP**	**11 09 58.4**	**-2.7**
	comp=Z,0.2nm,0.7s,baz=9.6,slow=7.8,SNR=4.1						
PDAR	**Pinedale Array**	**121.09**	**344**	PKP	**PKPdf**	**11 10 41.5**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=75,slow=4.1,SNR=14						
NVAR	**Mina Array Bea**	**127.14**	**350**	PKP	**PKiKP**	**11 10 54.9**	**+1.0**
	comp=Z,2.5nm,0.7s,baz=35,slow=0.9,SNR=33						
TXAR	**Lajitas Array**	**130.96**	**331**	PKP	**PKPdf**	**11 11 00.8**	**0.0**
	comp=Z,0.8nm,0.6s,baz=177,slow=1.8,SNR=13						

*NEIC **07** 10:53:56.7±0.8, 36°.297N±0°.006×98°.17W±0°.01, h5^{km}±2^{km}, mb_Lg2.8/58, Error ellipse: s-maj=3.0km s-min=2.2km az=253.0*

*ANF **07** 10:53:57.0±0.5, 36°.28N×98°.18W, h5^{km}, ML3.4/9, Error ellipse: s-maj=6.6km s-min=3.7km az=13.0*

ISC 07 10:53:57.4±0.9**, 36°.28N**±0°.04×**98°.17W**±0°.03**, h10^{km}, n50, σ0^{s}.65**/34**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.68**	**279**	Pg	**Pg**	**10 54 09.7**	**-0.8**
U32A	**Winter Ranch,**	**0.68**	**279**	P	**Pg**	**10 54 09.7**	**-0.8**
	baz=97						
U32A				S	**Sg**	**10 54 19.5**	**+0.1**
	baz=97						
OKCFA	**Oklahoma City**	**1.04**	**146**	Pg	**Pg**	**10 54 16.8**	**-0.6**
OKCFA	**Oklahoma City**	**1.04**	**146**	S	**Sg**	**10 54 31.3**	**+0.3**
	baz=327						
OKCSW	**OKLAHOMA CITY**	**1.05**	**145**		**Pg**	**10 54 17.3**	**-0.4**
FNO	**Franklin**	**1.20**	**148**		**Pn**	**10 54 19.5**	**-0.7**
T35A	**Sooner Cattle**	**1.48**	**64**		**Pn**	**10 54 23.9**	**-0.2**
T35B	**Sooner Cattle**	**1.48**	**64**	P	**Pn**	**10 54 23.9**	**-0.2**
	baz=246						
T35B				S	**Sb**	**10 54 43.5**	**-0.4**
	baz=246						
WMOK	**Wichita Mounta**	**1.61**	**198**		**Pn**	**10 54 26.0**	**0.0**
WMOK	**Wichita Mounta**	**1.61**	**198**	P	**Pn**	**10 54 26.0**	**0.0**
	baz=18						
X34A	**Smith Ranch, M**	**1.69**	**170**	IAmb_Lg		10 54 51.8	
	comp=Z,37nm,0.8s						
TUL1	**Leonard**	**1.96**	**100**		**Pn**	**10 54 31.1**	**+0.4**
TUL1				IAmb_Lg		10 55 02.4	
	comp=Z,52nm,0.9s						
TUL1	**Leonard**	**1.96**	**100**	P	**Pn**	**10 54 31.1**	**+0.4**
	baz=282						
TUL1				Sb	**Sb**	**10 54 58.7**	**+1.0**
	baz=282						
R32A	**Long Quarter,**	**2.18**	**349**	P	**Pn**	**10 54 35.0**	**+1.2**
	baz=168						
X37A	**Clayton**	**2.84**	**126**		**Pn**	**10 54 43.2**	**+0.4**
X37A				IAmb_Lg		10 55 32.2	
	comp=Z,20nm,0.7s						
Z35A	**Perchaven, San**	**3.04**	**165**	Pn	**Pn**	**10 54 45.4**	**0.0**
KSU1	**Kansas State U**	**3.08**	**23**	IAmb_Lg		10 55 36.4	
	comp=Z,20nm,0.9s						
KSU1	**Kansas State U**	**3.08**	**23**	P	**Pb**	**10 54 53.7**	**+1.5**
	baz=204						
AMTX	**Amarillo**	**3.18**	**245**	IAmb_Lg		10 55 42.5	
	comp=Z,30nm,0.7s						
W39A	**Magazine**	**3.73**	**106**	IAmb_Lg		10 56 03.7	
	comp=Z,22nm,0.8s						
W39A	**Magazine**	**3.73**	**106**	Sb	**Sg**	**10 55 55.5**	**-1.7**
	baz=288						

Z38A	Mt. Pleasant	3.99	138	Pn	Pn	10 54 59.1	+0.5
Z38A				IAmb_Lg		10 56 15.0	
	comp=Z,21nm,0.7s						
S39A	Bolivar	4.13	69	Pn	Pn	10 55 00.6	+0.1
S39A				IAmb_Lg		10 56 08.8	
	comp=Z,17nm,0.8s						
S39A	Bolivar	4.13	69	P	Pn	10 55 00.6	+0.1
	baz=252						
S39A				P	Pb	10 55 10.6	+0.4
	baz=252						
MIAR	Mount Ida	4.13	113	Pn	Pn	10 55 01.0	+0.4
MIAR	Mount Ida	4.13	113	P	Pn	10 55 01.3	+0.8
	baz=296						
U40A	Yellville	4.30	87	IAmb_Lg		10 56 14.3	
	comp=Z,31nm,0.9s						
MSTX	Muleshoe	4.42	240	Pn	Pn	10 55 04.5	-0.1
KSCO	Kaye Shedlock'	4.47	309	IAmb_Lg		10 56 30.0	
	comp=Z,20nm,0.8s						
N33A	J Bar K, Exete	4.49	7	Pn	Pn	10 55 04.5	-1.0
237A	Washetta, Mont	4.69	155	IAmb_Lg		10 56 38.9	
	comp=Z,11nm,1.0s						
X40A	Basin Creek Fa	4.71	111	IAmb_Lg		10 56 31.0	
	comp=Z,11nm,0.7s						
MGMO	Mountain Grove	4.82	78	Pn	Pn	10 55 10.3	+0.2
MGMO				IAmb_Lg		10 56 29.6	
	comp=Z,10nm,0.9s						
W41B	Gary Mavity, V	4.94	101	Pn	Pn	10 55 11.2	-0.5
P38A	Dawn	4.96	46	Pn	Pn	10 55 11.7	-0.2
P38A				IAmb_Lg		10 56 40.5	
	comp=Z,19nm,0.8s						
T25A	Trinidad	5.09	282	IAmb_Lg		10 56 44.1	
	comp=Z,13nm,0.7s						
R40A	Maddies Statio	5.12	65	Pn	Pn	10 55 13.7	-0.4
R40A				IAmb_Lg		10 56 40.3	
	comp=Z,10nm,0.7s						
BGNE	Belgrade	5.12	0	Pn	Pn	10 55 13.7	-0.5
BGNE				IAmb_Lg		10 56 47.0	
	comp=Z,23nm,0.8s						
Z41A	Richland Creek	5.35	123	IAmb_Lg		10 57 00.7	
	comp=Z,12nm,0.8s						
435B	Jarrell	5.50	175	IAmb_Lg		10 56 56.5	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	5.81	70	IAmb_Lg		10 57 06.0	
	comp=Z,16nm,0.8s						
L34A	Svendsen Farm,	5.85	13	IAmb_Lg		10 57 06.0	
	comp=Z,19nm,0.9s						
JCT	Junction City	5.94	194	IAmb_Lg		10 57 15.1	
	comp=Z,15nm,0.7s						
Q24A	Divide	6.15	298	IAmb_Lg		10 57 17.9	
	comp=Z,10nm,0.7s						
FVM	French Village	6.42	72	Pn	Pn	10 55 31.7	-0.3
FVM				IAmb_Lg		10 57 26.3	
	comp=Z,11nm,0.8s						
143A	Socs Landing,	6.63	121	IAmb_Lg		10 57 35.6	
	comp=Z,11nm,0.8s						
S44A	Carbondale	7.28	76	IAmb_Lg		10 57 48.5	
	comp=Z,16nm,0.9s						
OXF	Oxford	7.37	101	IAmb_Lg		10 58 01.5	
	comp=Z,7.9nm,0.7s						
Y22D	IRIS PASSCAL I	7.49	255	IAmb_Lg		10 58 07.7	
	comp=Z,15nm,0.8s						
N23A	Red Feather La	7.63	309	IAmb_Lg		10 58 01.1	
	comp=Z,15nm,0.9s						

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*IDC **07** 11:29:12.1±2.3, 17°.28S×174°.43W, h168^{km}±20^{km}, mb3.7/9, mbtmp4.1/10, Error ellipse: s-maj=28.4km s-min=12.9km az=114.0*

*NEIC **07** 11:29:14.8±2.4, 17°.11S±0°.08×174°.3W±0°.1, h191^{km}±7^{km}, mb4.3/28, Error ellipse: s-maj=14.6km s-min=11.4km az=106.0*

*NOU **07** 11:29:16.5, 17°.10S×174°.26W, h131^{km}, MLv5.0/8, Tonga Islands*

ISC 07 11:29:13.0±0.5**, 17°.19S**±0°.07×**174°.33W**±0°.08**, h172**^{km}**, n58,** σ1^{s}.**69**/57**, mb4.2**/23**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.08	37	P	Pn	11 30 15.3	+0.3
	75nm,0.5s,baz=236,slow=11,SNR=28						
AFI				S	Sn	11 31 00.3	-3.1
	457nm,0.5s,baz=14,slow=16,SNR=16						
AFI	Afiamalu	4.08	37		Pn	11 30 15.5	+0.6
AFI	Afiamalu	4.08	37	P	Pn	11 30 15.6	+0.6
NIUE	Niue	4.59	115	Pn	Pn	11 30 24.0	+2.5
NIUE	Niue	4.59	115	P	Pn	11 30 23.9	+2.5
DGTI	Dogotuki	5.75	278	P	Pn	11 30 40.5	+3.8
MSVF	Nonsavu	7.29	265	P	Pn	11 31 01.2	+4.1
	81nm,0.9s,baz=116,slow=14,SNR=32						
MSVF	Nonsavu	7.29	265		Pn	11 31 01.1	+4.0
MSVF	Nonsavu	7.29	265	P	Pn	11 31 01.4	+4.3
KNTN	Kanton	14.55	10	P	Pn	11 32 32.1	+1.1
URZ	Urewera	22.30	198	P	P	11 33 55.2	-1.1
	7.2nm,0.5s,baz=58,slow=4.5,SNR=8.8						
URZ				S	S	11 37 47.1	-1.6
	4.3nm,0.7s,baz=120,slow=20,SNR=10						
	7.2nm,0.5s						
QRZ	Quartz Range	26.15	203	P	P	11 34 30.0	-1.2
NNZ	Nelson	26.18	201	P	P	11 34 31.5	0.0
LTZ	Lake Taylor	27.95	201	P	P	11 34 46.0	-1.3
ARMA	Armidale	33.68	241	P	P	11 35 36.4	-1.4
ARMA				IAmb	IAmb	11 35 44.6	
	comp=Z,7.1nm,1.2s						
TOO	Toolangi	40.66	232	P	P	11 36 35.4	-1.1
TOO				IAmb	IAmb	11 37 02.0	
	comp=Z,10nm,1.3s						
STKA	Stephens Creek	42.39	241	P	P	11 36 49.5	-1.1
	comp=Z,2.9nm,0.9s,baz=85,slow=9.0,SNR=4.1						
	comp=Z,2.9nm,0.9s						
STKA	Stephens Creek	42.39	241	P	P	11 36 47.8	-2.7
BBOO	Buckleboo	47.16	241	P	P	11 37 28.7	+0.4
WRAB	Tennant Creek	48.58	258	P	P	11 37 37.2	-2.2
AS31	Alice Springs	48.73	253	P	P	11 37 38.7	-1.8
ASAR	Alice Springs	48.73	253	P	P	11 37 38.5	-2.0
	comp=Z,4.9nm,0.7s,baz=87,slow=8.6,SNR=80						
	comp=Z,4.9nm,0.7s						
ASAR	Alice Springs	48.73	253	P	P	11 37 38.3	-2.3
MTN	Manton Dam	52.72	267	P	P	11 38 07.2	-3.2
MTN				IAmb	IAmb	11 38 34.4	
	comp=Z,22nm,1.3s						
KNRA	Kununurra	54.44	263	P	P	11 38 21.2	-1.7
FITZ	Fitzroy Crossi	56.98	259	P	P	11 38 38.8	-2.2
FITZ				IAmb	IAmb	11 38 45.1	
	comp=Z,12nm,1.5s						
VNDA	Vanda	61.52	186	P	P	11 39 12.2	+1.1
CASY	Casey	68.42	205	P	P	11 39 54.1	-1.7
CASY				IAmb	IAmb	11 40 01.9	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	72.87	180	P	P	11 40 23.1	+0.2
UGM	Wanagama	73.57	267	P	P	11 40 25.8	-2.1
PEA0B	Petropavlovsk-	74.06	343	P	P	11 40 29.2	-0.6
PETK	Petropavlovsk-	74.06	343	P	P	11 40 29.1	-0.6
	comp=Z,2.1nm,0.6s,baz=112,slow=8.2,SNR=14						
	comp=Z,2.1nm,0.6s						
PETK	Petropavlovsk-	74.06	343	P	P	11 40 29.8	+0.1
NVAR	Mina Array Bea	76.25	42	P	P	11 40 43.8	+0.9
	comp=Z,0.4nm,0.8s,baz=224,slow=7.6,SNR=2.1						
	comp=Z,0.4nm,0.8s						
KSRS	Korea Array	76.81	316	P	P	11 40 47.1	+1.3
	comp=Z,1.3nm,0.9s,baz=118,slow=5.7,SNR=4.8						
	comp=Z,1.3nm,0.9s						
PMR	Palmer	81.04	12	P	P	11 41 07.8	-0.4
PMR				IAmb	IAmb	11 41 32.5	
	comp=Z,9.1nm,1.3s						
TTA	Tatalina	81.14	8	P	P	11 41 09.0	+0.1
N25K	Chitina, Valde	82.02	14	P	P	11 41 14.1	+0.6
N25K				IAmb	IAmb	11 41 14.6	
	comp=Z,4.1nm,0.7s						
BCAR	Beaver Creek A	83.94	14	P	P	11 41 23.5	+0.2
SEY	Seymchan	84.01	345	P	P	11 41 23.2	-0.3
	comp=Z,2.4nm,0.7s,baz=140,slow=6.4,SNR=11						
	comp=Z,2.4nm,0.7s						
HDA	Harding Lake	84.02	12	P	P	11 41 23.8	+0.2
HDA				IAmb	IAmb	11 41 24.4	
	comp=Z,3.6nm,0.7s						
CCB	Clear Creek Bu	84.08	11	P	P	11 41 23.8	-0.1
CCB				IAmb	IAmb	11 41 24.4	
	comp=Z,4.2nm,0.7s						
PDAR	Pinedale Array	84.18	42	P	P	11 41 25.7	+0.5
	comp=Z,0.2nm,0.5s,baz=204,slow=4.0,SNR=2.8						
	comp=Z,0.2nm,0.5s						
MDM	Murphy Dome	84.28	11	P	P	11 41 24.4	-0.6
IL31		84.36	11	P	P	11 41 25.6	+0.4
IL31				IAmb	IAmb	11 41 26.2	
	comp=Z,8.4nm,1.4s						
ILAR	Eielson Array	84.36	11	P	P	11 41 24.9	-0.4
	comp=Z,0.8nm,0.5s,baz=228,slow=5.8,SNR=33						
	comp=Z,0.8nm,0.5s						
ILAR	Eielson Array	84.36	11	P	P	11 41 25.2	-0.1
DAWY	Dawson	85.36	15	P	P	11 41 30.4	0.0
DAWY				IAmb	IAmb	11 41 31.8	
	comp=Z,2.4nm,0.8s						
EGAK	Eagle	85.55	14	P	P	11 41 31.8	+0.6
EGAK				IAmb	IAmb	11 41 33.0	
	comp=Z,3.3nm,1.0s						
BMAR	Burnt Mountain	87.16	11	P	P	11 41 39.2	+0.1
TOLK	Toolik Lake Re	87.43	9	P	P	11 41 40.7	+0.3
TOLK				IAmb	IAmb	11 41 55.7	
	comp=Z,4.3nm,1.4s						
SNAA	Sanae	91.18	177	P	P	11 41 55.5	-2.7
SNAA				IAmb	IAmb	11 42 11.1	
	comp=Z,6.7nm,1.4s						
MKAR	Makanchi Array	111.43	314	PKiKP	PKiKP	11 47 25.3	-1.4
	comp=Z,0.2nm,0.4s,baz=191,slow=3.0,SNR=2.7						
ARCES	ARCESS Array B	126.24	351	PKP	PKPdf	11 47 54.3	-0.1
	comp=Z,1.8nm,0.9s,baz=0.0,slow=0.5,SNR=4.8						
ARCES	ARCESS Array B	126.24	351		PKPdf	11 47 54.1	-0.3
CLL	Collm	145.46	352	⇓*i*PKPbc	PKPdf	11 48 30.8	+0.4
	comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	146.93	318	PKPbc	PKPdf	11 48 34.9	+1.4
	comp=Z,1.0nm,0.8s,baz=114,slow=1.7,SNR=6.6						
GERES	GERESS Array B	147.75	350	PKPbc	PKPdf	11 48 37.4	+2.9
	comp=Z,0.3nm,0.6s,baz=358,slow=2.9,SNR=3.8						

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*JMA **07** 11:33:55.8±0.3, 44°.4N±1°.0×14°2E±°, h235^{km}±2^{km}, MV3.6/35, KAMIKAWA-SORACHI REGION*

*NIED **07** 11:33:55.8, 44°.40N×142°.47E, h235^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.05; M$_{\theta\theta}$-0.36; M$_{\phi\phi}$3.41; M$_{r\theta}$6.07; M$_{\theta\phi}$-2.09; M$_{\phi r}$-0.33; Fault plane solution: M$_0$6.97000×10^{14} NP1: φ$_s$179.00000°, δ30.00000°, λ-26.00000°. NP2: φ$_s$292.00000°, δ78.00000°, λ-117.00000°.*

*IDC **07** 11:33:56.6±0.5, 44°.46N×142°.42E, h222^{km}±4^{km}, mb3.1/6, mbtmp3.7/13 Error ellipse: s-maj=18.5km s-min=12.3km az=121.0*

ISC 07 11:33:56.6±0.7**, 44°.37N**±0°.06×**142°.53E**±0°.06**, h229**^{km}±6^{km}**, n31,** σ0^{s}.**92**/46**, mb3.4**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	0.26	169	P	Pn	11 34 26.7	+0.2
	172nm,0.3s,baz=267,slow=6.5,SNR=416						
ASAJ				S	S	11 34 49.4	-0.4
	38nm,0.6s,baz=317,slow=18,SNR=11						
ASAJ	Asahikawa	0.26	169	P	Pn	11 34 26.7	+0.2
ASAJ				*e*S	S	11 34 49.8	0.0
JSS	Shosan	0.48	274	P	Pn	11 34 26.9	0.0
JKK2	Kamakawa 2	0.52	162	P	Pn	11 34 27.6	+0.4
JKK2				*e*S	S	11 34 51.6	+0.5
JSE	Soyaes	0.59	4	P	Pn	11 34 27.3	0.0
JSE				*e*S	S	11 34 51.7	+0.2
JMP	Maruseppu	0.70	121	P	Pn	11 34 28.2	+0.3
JMP				*e*S	S	11 34 52.5	+0.2
JYG	Yagishiri	0.79	275	P	Pn	11 34 27.9	-0.3
JAB	Ashibetsu	0.89	194	P	Pn	11 34 29.3	+0.5
JAB				*e*S	S	11 34 54.7	+0.8
JWK2	Keihoku	1.05	335	P	Pn	11 34 29.4	-0.2
JWK2				*e*S	S	11 34 55.0	-0.5
JTKR	Abashiri--Toko	1.07	111	P	Pn	11 34 30.5	+0.7
JTKR				*e*S	S	11 34 56.4	+0.8
JRR	Rishiri	1.16	312	*e*P	Pn	11 34 30.1	-0.1
JAR	Ashorobuto	1.40	140	P	Pn	11 34 32.8	+0.7
JAR				*e*S	S	11 35 00.5	+0.7
JRBN	Rebuntou	1.48	316	*e*P	Pn	11 34 31.5	-1.2
JRBN				*e*S	S	11 34 58.9	-2.1
JEW	Eniwo	1.72	208	*e*P	Pn	11 34 35.3	+0.5
JEW				*e*S	S	11 35 05.0	+0.4
JCH	Churui	1.85	161	*e*P	Pn	11 34 35.0	-1.0
JCH				*e*S	S	11 35 04.3	-2.5
JAK	Akkeshi	2.09	130	*e*P	Pn	11 34 37.4	-0.8
JAK				*e*S	S	11 35 09.2	-1.3
JNBK	Urakawa-nobuka	2.09	175	*e*P	Pn	11 34 37.9	-0.4
JNBK				*e*S	S	11 35 09.8	-0.9
NEM2	Nemuro 2	2.53	112	*e*P	Pn	11 34 41.8	-0.9
NEM2				*e*S	S	11 35 16.2	-2.5
USRK	Ussuriysk Ar.	7.57	272	P	Pn	11 35 43.8	-0.4
	5.4nm,0.7s,baz=92,slow=15,SNR=5.4						
MJAR	Matsushiro Arr	8.48	204	P	Pn	11 35 56.2	+0.2
	0.8nm,0.5s,baz=20,slow=12,SNR=2.7						
KLR	Kul'dur	8.85	307	P	Pn	11 35 59.7	-0.8
	2.0nm,0.6s,baz=106,slow=14,SNR=5.8						
KSRS	Korea Array	13.02	243	P	Pn	11 36 52.8	-0.5
	0.4nm,0.5s,baz=55,slow=12,SNR=1.9						
PETK	Petropavlovsk-	13.27	43	P	Pn	11 36 56.8	+0.6
	1.1nm,0.8s,baz=213,slow=6.0,SNR=5.0						
MA2	Magadan	16.03	15	P	P	11 37 28.9	+0.2
	1.9nm,0.6s,baz=159,slow=9.8,SNR=4.4						
SEY	Seymchan	19.45	14	P	P	11 38 04.8	-0.9
	2.4nm,0.5s,baz=198,slow=9.0,SNR=14						
JOW	Kunigami	20.93	218	P	P	11 38 22.7	+0.8
	4.1nm,0.5s,baz=25,slow=14,SNR=5.1						
	4.1nm,0.5s						
SONM	Songino Array	25.15	291	P	P	11 39 01.1	+0.3
	0.7nm,0.4s,baz=80,slow=9.7,SNR=4.6						
	0.7nm,0.4s						
MKAR	Makanchi Array	41.33	295	P	P	11 41 19.9	0.0
	0.8nm,0.5s,baz=77,slow=9.7,SNR=10						
	0.8nm,0.5s						
ILAR	Eielson Array	42.96	36	P	P	11 41 34.2	+1.5
	0.4nm,0.6s,baz=284,slow=8.1,SNR=6.1						
	0.4nm,0.6s						
FINES	FINESS Array B	62.77	331	P	P	11 43 55.8	-1.3
	0.3nm,0.4s,baz=59,slow=5.4,SNR=5.3						
	0.3nm,0.4s						
ASAR	Alice Springs	68.16	189	P	P	11 44 33.1	+1.1
	0.4nm,0.8s,baz=2.0,slow=5.0,SNR=6.6						
	0.4nm,0.8s						

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*JMA **07** 12:13:09.3±0.2, 32°N±2°×13°8E±°, h389^{km}, MV3.6/21, NEAR TORISHIMA IS*

*IDC **07** 12:13:11.1±0.8, 31°.89N×138°.09E, h350^{km}±7^{km}, mb3.1/13, mbtmp3.8/17, Error ellipse: s-maj=14.8km s-min=14.4km az=63.0*

ISC 07 12:13:10.8±0.6**, 31°.84N**±0°.06×**138°.27E**±0°.07**, h350**^{km}**, n33,** σ1^{s}.**33**/40**, mb3.5**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.41	63	P	Pn	12 14 01.4	+3.0
JHJ	Hachijo jima 2	1.81	45	P	Pn	12 14 02.7	+1.9
	114nm,0.3s,baz=219,slow=18,SNR=68						
JHJ				S	S	12 14 42.6	+1.8
	83nm,0.4s,baz=246,slow=20,SNR=4.7						
JHJ2	Mitsune	1.82	45	P	Pn	12 14 03.0	+2.1
TTO1	TONANKAI O.B.S	2.17	325	P	Pn	12 14 05.0	+2.1
JIE	Ise	2.86	333	P	Pn	12 14 10.3	+1.5
JTNC	Tanabenakahech	2.98	312	*e*P	Pn	12 14 10.8	+0.9
JWY	Kouya	3.27	317	P	Pn	12 14 14.0	+1.4
JOD2	Odawara 2	3.48	11	P	Pn	12 14 15.0	+0.4
JOD2				S	S	12 15 06.8	+0.7
BSO1	Boso 1	3.61	38	P	Pn	12 14 15.7	+0.4
BSO1				S	S	12 15 06.2	-1.1
JAI	Aioi	3.76	302	P	Pn	12 14 18.1	+0.8
JRY	Ryogami san	4.20	7	P	Pn	12 14 22.1	+0.3
JRY				S	S	12 15 18.3	-0.9
MJAR	Matsushiro Arr	4.69	359	P	Pn	12 14 26.0	-1.0
	10nm,0.3s,baz=174,slow=11,SNR=30						
MJAR				S	S	12 15 26.6	-2.0
	3.8nm,0.6s,baz=178,slow=19,SNR=2.1						
JTO	Tosashimizu	4.74	284	P	Pn	12 14 28.3	+0.8
JHS	Saijyo	5.34	308	P	Pn	12 14 34.7	+0.6
CBIJ	Chichi jima	5.83	143	*e*P	Pn	12 14 40.4	+0.6
CBIJ				*e*S	S	12 15 49.9	-2.0
JCJ	Chichijima	5.83	143	P	Pn	12 14 40.2	+0.4
	20nm,0.4s,baz=10.0,slow=18,SNR=41						
JCJ				S	S	12 15 49.4	-2.5
	65nm,0.3s,baz=282,slow=22,SNR=30						
JOW	Kunigami	10.04	243	P	P	12 15 32.4	+1.6
	6.6nm,0.5s,baz=43,slow=5.7,SNR=5.0						
KSRS	Korea Array	10.19	306	P	Pn	12 15 31.4	+0.4
	0.9nm,0.4s,baz=118,slow=12,SNR=6.9						
ASAJ	Asahikawa	12.72	14	P	P	12 16 00.7	+0.5
	8.0nm,1.0s,baz=240,slow=3.6,SNR=1.5						
KLR	Kul'dur	18.05	346	P	P	12 16 57.9	-0.2
	0.9nm,0.6s,baz=142,slow=5.0,SNR=3.8						
SONM	Songino Array	28.96	313	P	P	12 18 38.5	-0.7
	0.5nm,0.3s,baz=122,slow=7.9,SNR=4.1						
	0.5nm,0.3s						
MA2	Magadan	28.98	13	P	P	12 18 39.0	0.0
	2.1nm,0.7s,baz=210,slow=20,SNR=2.8						
	2.1nm,0.7s						
CMAR	Chiang Mai Arr	37.80	259	P	P	12 19 54.3	-0.7
	0.9nm,0.3s,baz=54,slow=7.9,SNR=5.4						
	0.9nm,0.3s						
MKAR	Makanchi Array	44.88	306	P	P	12 20 50.6	-1.0
	2.2nm,0.6s,baz=91,slow=9.5,SNR=21						
	2.2nm,0.6s						
ILAR	Eielson Array	55.27	30	P	P	12 22 08.2	-0.4
	0.3nm,0.8s,baz=253,slow=6.2,SNR=2.8						
	0.3nm,0.8s						
ASAR	Alice Springs	55.35	185	P	P	12 22 09.5	-0.1
	0.2nm,0.6s,baz=23,slow=12,SNR=2.4						
	0.2nm,0.6s						
INK	Inuvik	60.18	25	P	P	12 22 42.5	+0.2
	0.7nm,0.3s,baz=295,slow=5.4,SNR=6.8						
	0.7nm,0.3s						
YKA	Yellowknife Ar	69.60	28	P	P	12 23 42.5	0.0
	0.5nm,0.6s,baz=300,slow=6.4,SNR=5.9						
	0.5nm,0.6s						
FINES	FINESS Array B	72.19	332	P	P	12 23 57.0	-0.9
	0.6nm,0.4s,baz=63,slow=5.6,SNR=12						
	0.6nm,0.4s						
NVAR	Mina Array Bea	80.23	51	P	P	12 24 45.9	+2.3
	0.4nm,0.7s,baz=286,slow=5.9,SNR=5.3						
	0.4nm,0.7s						
BRTR	Keskin Array B	80.31	311	P	P	12 24 42.5	-1.4
	0.5nm,0.6s,baz=49,slow=6.5,SNR=2.9						
	0.5nm,0.6s						
PDAR	Pinedale Array	83.19	43	P	P	12 24 59.7	+0.8
	0.1nm,0.4s,baz=270,slow=3.2,SNR=2.4						
	0.1nm,0.4s						
TXAR	Lajitas Array	95.38	51	P	P	12 25 57.8	+1.3
	0.2nm,0.6s,baz=333,slow=6.4,SNR=3.7						
	0.2nm,0.6s						

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*IDC **07** 12:23:13.2±0.6, 6°.06S×147°.56E, h78^{km}±4^{km}, mb4.1/19, mbtmp4.4/23, MS3.3/26, Error ellipse: s-maj=15.4km s-min=10.2km az=79.0*

*DJA **07** 12:23:13.1±0.4, 6°S±3°×14°8E±°, h72^{km}±4^{km}, M4.9/22, mB5.4/9, mb4.7/22, MLv5.0/3, Mw(mB)4.9/9*

*NEIC **07** 12:23:14.6±1.8, 6°.12S±0°.06×147°.50E±0°.07, h85^{km}±5^{km}, mb4.6/40, Error ellipse: s-maj=10.6km s-min=8.2km az=67.0*

ISC 07 12:23:13.3±0.3**, 6°.14S**±0°.04×**147°.51E**±0°.06**, h77**^{km}**, n149,** σ1^{s}.**21**/147**, mb4.5**/47**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.27	186	P	Pn	12 24 01.4	-0.9
	481nm,0.7s,baz=11,slow=9.8,SNR=90						
PMG				S	Sn	12 24 39.4	-0.7
	505nm,0.7s,baz=348,slow=15,SNR=5.1						
PMG	Port Moresby	3.27	186	Pn	Pn	12 24 01.8	-0.4
PMG	Port Moresby	3.27	186	P	Pn	12 24 01.3	-1.0
PMG	Port Moresby	3.27	186	P	Pn	12 24 01.7	-0.6
MANU	Manus Island	4.07	358		Pn	12 24 14.1	+0.8
KRVT	Keravat (AS076	4.86	68	P	Pn	12 24 23.9	0.0
	79nm,0.4s,baz=293,slow=1.1,SNR=27						
RABL	Rabaul	5.03	68		Pn	12 24 26.7	+0.4
RABL	Rabaul	5.03	68	P	Pn	12 24 27.1	+0.8
COEN	Coen	8.86	208	Pn	Pn	12 25 19.2	+0.5
SMPI	Sarmi	9.69	295	P	Pn	12 25 30.0	0.0
	24nm,1.0s						
MTSU	Mount Surprise	12.32	194	P	Pn	12 26 06.4	+0.5
HNR	Honiara	12.75	106	P	Pn	12 26 13.8	+2.1
	52nm,0.3s,baz=252,slow=9.6,SNR=4.0						
CTA	Charters Tower	13.92	185	P	Pn	12 26 27.9	+0.6
	4.4nm,0.7s,baz=356,slow=13,SNR=6.7						
CTA				LR	LR	12 31 34.3	
	comp=Z,182nm,19.7s,baz=16,slow=36						
CTAO	Charters Tower	13.92	185		Pn	12 26 27.8	+0.6
SAUI	Saumlaki	16.19	263		P	12 26 57.3	-0.7
KDU	Kakadu	16.19	245	P	P	12 26 58.7	+0.7
QIS	Mount Isa	16.26	207	P	Pn	12 26 57.6	+0.5
SIJI	Sorong	17.03	287	P	Pn	12 27 07.0	+0.3
	5.8nm,0.4s,baz=124,slow=18,SNR=3.2						
SWI	Sorong	17.04	287	P	P	12 27 07.5	+0.1
	769nm29nm,0.8s						
RK1H	Rockhampton Ha	17.39	171	P	Pn	12 27 10.9	-0.1
MTN	Manton Dam	17.46	246	P	P	12 27 12.8	+0.7
MTN				IAmb	IAmb	12 27 36.7	
	comp=Z,15nm,0.6s						
BNDI	Bandanaira	17.60	274	P	Pn	12 27 16.0	+2.4
WRAB	Tennant Creek	18.75	222	P	P	12 27 26.0	-0.3
WRAB				IAmb	IAmb	12 27 28.7	
	comp=Z,33nm,0.9s						
WRAB	Tennant Creek	18.75	222	P	P	12 27 25.9	-0.3
AAI	Ambon	19.39	276	P	P	12 27 33.2	-0.1
	comp=Z,112nm,0.8s						
EIDS	Eidsvold	19.43	170		Pn	12 27 34.9	-0.6
EIDS				IAmb	IAmb	12 27 36.6	
	comp=Z,38nm,1.1s						
EIDS	Eidsvold	19.43	170	P	Pn	12 27 34.7	-0.8
GUMO	Guam	19.77	352	LR	LR	12 34 30.7	
	comp=Z,61nm,18.4s,baz=189,slow=34						
RMQ	Roma	20.27	177	P	Pn	12 27 44.4	-1.0
QLP	Quilpie	20.57	188	P	P	12 27 46.8	+0.8
KNRA	Kununurra	20.68	241	P	P	12 27 47.2	-0.1
KNRA				IAmb	IAmb	12 27 51.8	
	comp=Z,41nm,0.8s						
KNRA	Kununurra	20.68	241	P	P	12 27 47.8	+0.5
LBMI	Labuha	20.70	285	P	Pn	12 27 53.8	+3.3
AS31	Alice Springs	21.79	216	P	P	12 27 59.4	+0.3
AS31				IAmb	IAmb	12 28 00.0	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	21.80	216	P	P	12 27 59.4	+0.2
	comp=Z,29nm,0.7s,baz=48,slow=9.2,SNR=692						
ASAR				S	S	12 31 55.3	-0.8
	comp=Z,0.9nm,0.6s,baz=31,slow=22,SNR=3.0						
ASAR				LR	LR	12 37 26.6	
	comp=Z,98nm,20.1s,baz=34,slow=39						
	comp=Z,29nm,0.7s						
ASAR	Alice Springs	21.80	216	P	P	12 27 58.9	-0.3
SANI	Sanana	21.84	280	P	P	12 28 01.1	+1.4
	comp=Z,21nm,0.9s						
SANI	Sanana	21.84	280	P	P	12 28 03.3	+3.6
INKA	Innaminka	22.43	196	P	P	12 28 05.8	0.0
BATI	Baumata	23.94	259	P	P	12 28 22.9	+2.3
	comp=Z,61nm,0.7s,baz=181,slow=1.0,SNR=12						
	comp=Z,61nm,0.7s						
BATI	Baumata	23.94	259	P	P	12 28 22.8	+2.2
	comp=Z,50nm,1.1s						
LIFNC	LIFOU	24.04	129	P	P	12 28 21.3	-0.1
DZM	Mont Dzumac	24.20	133	P	P	12 28 22.9	-0.1
	comp=Z,8.7nm,0.6s,baz=330,slow=5.8,SNR=7.7						
DZM				LR	LR	12 35 22.6	
	comp=Z,244nm,19.0s,baz=337,slow=30						
	comp=Z,8.7nm,0.6s						
OOD	Oodnadatta	24.29	206	P	P	12 28 24.1	+0.5
FITZ	Fitzroy Crossi	24.42	239	P	P	12 28 26.1	+1.2
ARMA	Armidale	24.46	171	P	P	12 28 25.9	+0.6
ARMA				IAmb	IAmb	12 28 27.7	
	comp=Z,21nm,0.8s						
ARMA	Armidale	24.46	171	P	P	12 28 25.9	+0.6
LUWI	Luwuk	25.19	281	P	P	12 28 33.4	+1.4
	comp=Z,59nm,1.2s						
LUWI	Luwuk	25.19	281	P	P	12 28 35.6	+3.6
CMSA	Cobar Meteorol	25.33	184	P	P	12 28 34.2	+1.2
LCRK	Leigh Creek	25.71	199	P	P	12 28 37.6	+1.1
EDFI	Ende, Flores	25.73	263	P	P	12 28 35.5	-1.4
	comp=Z,14nm,0.6s						
STKA	Stephens Creek	26.20	191	P	P	12 28 40.5	-0.4
	comp=Z,7.8nm,0.6s,baz=351,slow=9.5,SNR=13						
	comp=Z,7.8nm,0.6s						
STKA	Stephens Creek	26.20	191	P	P	12 28 41.1	+0.2
STKA	Stephens Creek	26.20	191	P	P	12 28 41.1	+0.2
WRKA	Warakurna	26.30	222	P	P	12 28 43.0	+1.0
BSSI	Bau Bau, Buton	26.86	269	P	P	12 28 47.8	+0.7
	comp=Z,14nm,1.2s						
BKSI	Bulukumba	27.26	270	P	P	12 28 50.9	+0.3
	comp=Z,13nm,1.0s						
TOLI2	Tolitoli	27.63	284	P	P	12 28 53.0	-1.0
TOLI2				IAmb	IAmb	12 28 58.5	
	comp=Z,10nm,0.9s						
KAPI	Kappang	27.64	271	P	P	12 28 54.0	-0.1
	comp=Z,8.1nm,0.9s,baz=71,slow=4.9,SNR=9.0						
KAPI				LR	LR	12 42 31.5	
	comp=Z,45nm,18.2s,baz=82,slow=42						
	comp=Z,8.1nm,0.9s						
KAPI	Kappang	27.64	271	P	P	12 28 55.6	+1.5
	comp=Z,11nm,1.1s						

BBOO	**Buckleboo**	28.60	200	P	P	12 29 02.4	0.0
BBOO				IAmb	IAmb	12 29 12.6	
	comp=Z,13nm,1.1s						
FORT	**Forrest**	30.57	214	P	P	12 29 20.3	+0.5
FORT				IAmb	IAmb	12 29 20.5	
	comp=Z,22nm,0.8s						
MBWA	**Marble Bar**	30.76	238	P	P	12 29 21.8	+0.2
MBWA				IAmb	IAmb	12 29 23.6	
	comp=Z,14nm,0.7s						
PSA00	**Pilbara Seismi**	30.84	237	P	P	12 29 22.6	+0.2
PSA00	**Pilbara Seismi**	30.84	237	P	P	12 29 23.5	+1.1
PSA00				IAmb	IAmb	12 29 24.4	
	comp=Z,7.0nm,0.8s						
TOO	**Toolangi**	31.34	183	P	P	12 29 26.8	+0.2
TOO				IAmb	IAmb	12 29 53.4	
	comp=Z,12nm,1.4s						
MTKI	**Muara Teweh, K**	32.94	278	P	P	12 29 51.0	+10
JCJ	**Chichijima**	33.44	351	P	P	12 29 43.6	-1.3
	comp=Z,22nm,0.5s,baz=103,slow=23,SNR=11						
	comp=Z,22nm,0.5s						
JCJ	**Chichijima**	33.44	351	P	P	12 29 44.0	-1.0
MEEK	**Meekatharra**	34.25	230	P	P	12 29 53.0	+0.8
GIRL	**Giralia**	36.03	239	P	P	12 30 06.9	-0.6
UGM	**Wanagama**	36.74	265	P	P	12 30 13.1	-0.6
MORW	**Morawa**	37.46	229	P	P	12 30 20.6	+1.1
JOW	**Kunigami**	37.70	331	LR	LR	12 43 10.8	
	comp=Z,36nm,19.4s,baz=84,slow=32						
NWAO	**Narrogin (SRO)**	38.77	223	P	P	12 30 31.0	+0.5
LEM	**Lembang**	39.63	267	LR	LR	12 52 52.6	
	comp=Z,32nm,18.3s,baz=160,slow=45						
TPI	**Tanjungpandan**	39.86	273	P	P	12 30 41.0	+1.1
	comp=Z,176nmcomp=Z,20nm,1.1s						
PPBI	**Pangkal Pinang**	41.44	274	P	P	12 30 53.7	+0.9
URZ	**Urewera**	41.75	144	P	P	12 30 55.5	+0.5
	comp=Z,3.1nm,0.8s,baz=108,slow=19,SNR=1.9						
URZ				LR	LR	12 47 20.9	
	comp=Z,71nm,18.6s,baz=31,slow=35						
	comp=Z,3.1nm,0.8s						
BKZ	**Black Stump Fm**	42.02	146	P	P	12 30 55.9	-1.4
TUWZ	**Tuamarina**	42.31	150	P	P	12 31 00.3	+0.8
LTZ	**Lake Taylor**	42.56	153	P	P	12 31 02.8	+1.2
LTZ				IAmb	IAmb	12 31 29.1	
	comp=Z,18nm,1.4s						
RPZ	**Rata Peaks**	42.77	155	P	P	12 31 03.4	+0.1
	comp=Z,6.6nm,0.6s,baz=330,slow=2.2,SNR=8.5						
RPZ				LR	LR	12 45 24.5	
	comp=Z,119nm,21.1s,baz=311,slow=31						
	comp=Z,6.6nm,0.6s						
BFZ	**Birch Farm**	42.95	148	P	P	12 31 05.0	+0.3
BFZ				IAmb	IAmb	12 31 19.4	
	comp=Z,8.8nm,0.9s						
PLWZ	**Palliser**	43.07	149	P	P	12 31 05.1	-0.7
MDSI	**Maura Dua**	43.16	270	P	P	12 31 06.7	-0.2
	comp=Z,771nmcomp=Z,17nm,1.2s						
MJAR	**Matsushiro Arr**	43.34	349	P	P	12 31 06.7	-1.2
	comp=Z,2.9nm,0.8s,baz=160,slow=8.9,SNR=5.7						
MJAR				pP	pP	12 31 25.6	-0.6
	comp=Z,4.3nm,1.0s,baz=162,slow=9.3,SNR=3.3						
MJAR				LR	LR	12 47 29.8	
	comp=Z,26nm,21.0s,baz=150,slow=34						
	comp=Z,2.9nm,0.8s						
MJAR	**Matsushiro Arr**	43.34	349	P	P	12 31 07.0	-0.9
MAJO	**Matsushiro**	43.34	349	P	P	12 31 07.4	-0.5
MAJO				IAmb	IAmb	12 31 33.6	
	comp=Z,16nm,1.4s						
MJB9	**Matsu-Tunnel**	43.34	349	P	P	12 31 08.1	+0.1
MJB9				IAmb	IAmb	12 31 33.5	
	comp=Z,16nm,1.4s						
NJ2	**Nanjing**	46.77	326	*e*P	P	12 31 37.1	+1.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSRS	**Korea Array**	47.06	339	P	P	12 31 36.9	-0.4
	comp=Z,0.9nm,0.5s,baz=153,slow=9.8,SNR=7.1						
KSRS				pP	pP	12 31 55.5	-0.3
	comp=Z,0.2nm,0.3s,baz=356,slow=15,SNR=1.5						
KSRS				LR	LR	12 48 39.9	
	comp=Z,24nm,21.3s,baz=165,slow=32						
	comp=Z,0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	53.76	298	P	P	12 32 29.1	+0.9
	comp=Z,0.4nm,0.4s,baz=122,slow=6.8,SNR=1.6						
CMAR				pP	pP	12 32 48.5	+0.8
	comp=Z,0.9nm,0.6s,baz=113,slow=6.9,SNR=2.6						
CMAR				LR	LR	12 54 31.7	
	comp=Z,5.7nm,20.7s,baz=100,slow=35						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	53.76	298	P	P	12 32 27.8	-0.4
XAN	**Xi'an**	54.11	320	P	P	12 32 29.1	-1.5
XAN				pP	pP	12 32 48.0	-1.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PZH	**PanZhiHua**	54.94	308	P	P	12 32 39.9	+3.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,5.5s						
KLR	**Kul'dur**	56.83	348	P	P	12 32 50.1	+0.3
	comp=Z,2.3nm,0.7s,baz=187,slow=5.6,SNR=8.6						
	comp=Z,2.3nm,0.7s						
HHC	**Hu-ho-hao-te**	57.21	328	*e*P	P	12 32 56.7	+3.9
HHC				pmax	pmax		
	comp=Z,32nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
PEA0B	**Petropavlovsk-**	59.65	7	P	P	12 33 09.5	+0.2
PETK	**Petropavlovsk-**	59.65	7	P	P	12 33 09.1	-0.3
	comp=Z,5.1nm,0.8s,baz=197,slow=14,SNR=9.2						
PETK				LR	LR	12 53 28.0	
	comp=Z,28nm,21.9s,baz=182,slow=30						
	comp=Z,5.1nm,0.8s						
PETK	**Petropavlovsk-**	59.65	7	P	P	12 33 09.9	+0.5
GTA	**Gaotai**	63.17	320	*e*P	P	12 33 34.3	+0.8
GTA				sP	pP	12 33 40.0	-13
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	**Ulaanbaatar**	64.47	331	P	P	12 33 41.7	-0.2
SONM	**Songino Array**	64.77	331	P	P	12 33 43.1	-0.8
	comp=Z,2.1nm,0.8s,baz=148,slow=7.9,SNR=11						
SONM				pP	pP	12 34 03.6	-0.1
	comp=Z,1.4nm,0.8s,baz=146,slow=4.6,SNR=3.4						
SONM				LR	LR	13 02 53.4	
	comp=Z,20nm,20.7s,baz=174,slow=37						
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	64.77	331	P	P	12 33 43.9	0.0
MA2	**Magadan**	65.55	2	LR	LR	12 58 58.8	
	comp=Z,12nm,21.6s,baz=144,slow=33						
MA2	**Magadan**	65.55	2	P	P	12 33 48.4	-0.2
MA2				IAmb	IAmb	12 33 48.8	
	comp=Z,4.6nm,0.9s						
PALK	**Pallekele**	67.96	280	LR	LR	13 06 30.0	
	comp=Z,27nm,20.0s,baz=186,slow=38						
SEY	**Seymchan**	68.97	2	LR	LR	13 04 24.5	
	comp=Z,19nm,19.0s,baz=300,slow=36						
VNDA	**Vanda**	71.75	177	P	P	12 34 27.8	+0.9
	comp=Z,0.8nm,0.5s,baz=332,slow=2.0,SNR=3.7						
VNDA				LR	LR	13 03 35.1	
	comp=Z,17nm,18.5s,baz=336,slow=34						
	comp=Z,0.8nm,0.5s						
VNDA	**Vanda**	71.75	177	P	P	12 34 27.2	+0.4
WMQ	**Urumqi**	73.22	319	*e*P	P	12 34 38.0	+1.7
MK31	**Makanchi Array**	77.92	320	P	P	12 35 02.3	-0.8
MKAR	**Makanchi Array**	77.92	320	P	P	12 35 02.1	-1.0
	comp=Z,0.6nm,0.6s,baz=94,slow=8.0,SNR=7.0						
	comp=Z,0.6nm,0.6s						
MAKZ	**Makanchi**	78.13	320	P	P	12 35 03.4	-0.8
ZAA0	**Zalesovo Array**	79.39	328	P	P	12 35 09.3	-1.6
ZALV	**Zalesovo Beam**	79.39	328	P	P	12 35 08.8	-2.1
	comp=Z,1.5nm,0.4s,baz=114,slow=6.3,SNR=9.0						
	comp=Z,1.5nm,0.4s						
ZALV	**Zalesovo Beam**	79.39	328	P	P	12 35 09.4	-1.5
KDAK	**Kodiak Island**	79.78	28	LR	LR	13 05 11.8	
	comp=Z,25nm,21.4s,baz=244,slow=32						
MAW	**Mawson**	82.32	203	LR	LR	13 09 34.5	
	comp=Z,25nm,21.6s,baz=126,slow=34						
IMAR	**Indian Mountai**	83.44	21	P	P	12 35 32.4	+0.4
QSPA	**South Pole Qui**	83.83	180	LR	LR	13 12 48.3	
	comp=Z,20nm,18.0s,baz=350,slow=36						
QSPA	**South Pole Qui**	83.83	180	P	P	12 35 33.6	-0.7
QSPA				IAmb	IAmb	12 35 57.7	
	comp=Z,6.8nm,0.9s						
KKAR	**Karatay Array**	84.74	314	P	P	12 35 37.3	-1.9
H23K	**Yukon River**	84.87	22	P	P	12 35 39.3	-0.1
ILAR	**Eielson Array**	85.41	23	P	P	12 35 39.3	-2.7
	comp=Z,0.7nm,0.7s,baz=243,slow=4.9,SNR=10						
ILAR				pP	pP	12 36 03.1	+0.6
	comp=Z,1.1nm,0.8s,baz=256,slow=5.1,SNR=4.9						
ILAR				LR	LR	13 08 19.1	
	comp=Z,13nm,20.2s,baz=186,slow=32						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	85.41	23	P	P	12 35 39.6	-2.4
NRIK	**Noril'sk**	85.56	342	P	P	12 35 41.6	-1.0
	comp=Z,0.7nm,0.3s,baz=117,slow=5.7,SNR=2.0						
	comp=Z,0.7nm,0.3s						
TOLK	**Toolik Lake Re**	86.16	19	P	P	12 35 44.8	-0.9
TOLK				IAmb	IAmb	12 36 05.3	
	comp=Z,4.1nm,1.2s						
BCAR	**Beaver Creek A**	86.84	25	P	P	12 35 46.7	-2.5
BMAR	**Burnt Mountain**	87.34	21	P	P	12 35 50.8	-0.7
DAWY	**Dawson**	88.18	25	P	P	12 35 55.5	-0.1
DAWY				IAmb	IAmb	12 36 16.6	
	comp=Z,4.1nm,1.4s						
DLBC	**Dease Lake**	91.25	31	LR	LR	13 12 26.3	
	comp=Z,30nm,18.5s,baz=252,slow=32						
ABKAR	**Akbulak array**	93.01	319	P	P	12 36 15.3	-3.0
YBH	**Yreka Blue Hor**	93.88	49	LR	LR	13 12 08.4	
	comp=Z,28nm,20.0s,baz=260,slow=31						
NEW	**Newport**	98.12	42	LR	LR	13 18 25.6	
	comp=Z,14nm,18.1s,baz=246,slow=34						
RPN	**Rapa Nui**	98.84	119	LR	LR	13 13 49.7	
	comp=Z,14nm,19.4s,baz=235,slow=31						
ELK	**Elko**	99.47	50	LR	LR	13 12 49.6	
	comp=Z,275nm,19.9s,baz=236,slow=30						
PLCA	**Paso Flores**	121.73	147	PKP	PKPdf	12 41 58.5	-0.4
	comp=Z,1.1nm,0.8s,baz=193,slow=2.6,SNR=4.8						
PLCA	**Paso Flores**	121.73	147		PKiKP	12 41 59.2	+0.1
GERES	**GERESS Array B**	122.30	326	PKP	PKPdf	12 41 58.2	-1.5
	comp=Z,0.5nm,0.5s,baz=90,slow=2.0,SNR=6.0						
GERES	**GERESS Array B**	122.30	326		PKPdf	12 41 58.8	-1.0
LPAZ	**La Paz**	138.29	123	PKP	PKPdf	12 42 32.4	+0.8
	comp=Z,3.5nm,1.1s,baz=318,slow=0.8,SNR=6.4						
LPAZ				SKP	SKPdf	12 46 01.0	+1.2
	comp=Z,2.5nm,1.0s,baz=168,slow=1.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	145.61	284	PKPbc	PKPdf	12 42 43.1	-0.7
	comp=Z,3.6nm,0.4s,baz=84,slow=3.2,SNR=24						
TORD				pPKPbc	pPKPdf	12 43 05.1	-1.1
	comp=Z,3.2nm,0.9s,baz=85,slow=3.9,SNR=3.8						
TORD				SKPbc	SKiKP	12 46 17.3	-0.2
	comp=Z,0.6nm,0.7s,baz=72,slow=2.5,SNR=3.6						
DBIC	**Dimbokro**	152.53	273	PKPbc	PKiKP	12 43 02.5	+0.3
	comp=Z,1.2nm,0.3s,baz=84,slow=3.2,SNR=3.7						
DBIC	**Dimbokro**	152.53	273	PKPdf	PKPdf	12 42 54.2	-0.8
DBIC					PKPbc	12 43 01.3	-0.7
DBIC				PKPab	PKiKP	12 43 07.3	+5.0
BDFB	**Brasilia**	153.46	145	PKP	PKPdf	12 42 56.5	0.0
	comp=Z,2.0nm,0.6s,baz=146,slow=8.9,SNR=4.6						
BDFB				PKPbc	PKPbc	12 43 03.5	-0.6
	comp=Z,7.0nm,1.0s,baz=150,slow=5.9,SNR=5.8						
BDFB	**Brasilia**	153.46	145		PKPdf	12 42 55.5	-0.9
BDFB					PKiKP	12 43 04.3	+0.1
BDFB				PKPab	PKPab	12 43 14.8	-1.6

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*IDC **07** 12:27:14.3±2.2, 7°.09S×128°.00E, h0^{km}, mb3.9/3, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=254.2km s-min=38.3km az=69.0*

*NEIC **07** 12:27:24.1±1.6, 7°.4S±0°.1×128°.4E±0°.2, h97^{km}±11^{km}, mb4.2/4, Error ellipse: s-maj=32.3km s-min=13.3km az=56.0*

ISC 07 12:27:24.6±0.8, 7°.4S±0°.1×128°.4E±0°.2, h100^{km}, n14, σ1ˢ.57/15, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	6.08	154	Pn	Pn	12 28 51.6	-0.4
KNRA	**Kununurra**	8.27	178	Pn	Pn	12 29 21.0	-0.8
COEN	**Coen**	15.93	116	P	Pn	12 31 03.5	+0.3
COEN				IAmb	IAmb	12 31 32.0	
	comp=Z,29nm,1.4s						
ASAR	**Alice Springs**	17.06	163	P	P	12 31 19.1	+1.9
	comp=Z,0.1nm,0.3s,baz=340,slow=11,SNR=4.3						
ASAR				S	Sn	12 34 23.3	-3.4
	comp=Z,0.3nm,0.6s,baz=352,slow=27,SNR=1.6						
	comp=Z,1.0nm,0.5s						
USRK	**Ussuriysk Ar.**	51.42	3	P	P	12 36 18.7	-0.6
SONM	**Songino Array**	58.29	343	P	P	12 37 08.7	-0.3
	comp=Z,0.5nm,0.7s,baz=156,slow=7.4,SNR=2.5						
	comp=Z,0.5nm,0.7s						
MK31	**Makanchi Array**	67.66	328	P	P	12 38 10.6	-0.3
MKAR	**Makanchi Array**	67.66	328	P	P	12 38 10.8	-0.2
	comp=Z,1.3nm,0.5s,baz=127,slow=7.8,SNR=12						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	67.66	328	P	P	12 38 09.8	-1.2
ZALV	**Zalesovo Beam**	71.21	335	P	P	12 38 31.9	-0.6
	comp=Z,0.8nm,0.5s,baz=122,slow=5.2,SNR=2.0						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	71.21	335	P	P	12 38 31.2	-1.3
KURK	**Kurchatov**	72.00	329	P	P	12 38 36.2	-1.2
KURK				IAmb	IAmb	12 38 38.2	
	comp=Z,3.2nm,0.9s						
ABKAR	**Akbulak array**	81.80	322	P	P	12 39 32.7	+0.2
QSPA	**South Pole Qui**	82.62	180	P	P	12 39 39.4	+2.8

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*IDC **07** 12:39:47.2±1.6, 30°.35S×71°.82W, h0^{km}, mb3.5/2, mbtmp3.4/3, ML3.6/1, MS2.9/1, Error ellipse: s-maj=71.1km s-min=40.1km az=72.0*

*NEIC **07** 12:39:49.6±2.1, 30°.28S±0°.05×72°.00W±0°.09, h23^{km}±7^{km}, mb4.4/5, ML3.6(GUC), Error ellipse: s-maj=10.9km s-min=7.1km az=92.0*

*GUC **07** 12:39:49.6±0.7, 30°.38S×71°.93W, h32^{km}±3^{km}, ML3.6*

ISC 07 12:39:48.2±1.7, 30°.32S±0°.03×72°.05W±0°.07, h14^{km}±10^{km}, n46, σ1ˢ.22/50, mb4.0/4, 2C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	0.51	135		Pg	12 39 58.9	+0.7
CO06	**Fray Jorge**	0.51	135	⇓*i*P	Pg	12 39 58.9	+0.7
CO06				*i* S	Sb	12 40 05.5	-0.5
CO06				IAML		12 40 08.9	
	comp=E,7µm,0.2s						
CO05	**La Serena**	0.81	61		Pb	12 40 04.0	+0.1
CO05	**La Serena**	0.81	61	⇓*i*P	Pb	12 40 04.3	+0.3
CO05				*i* S	Sn	12 40 15.9	-0.9
CO05				IAML		12 40 20.4	
	comp=E,3µm,0.4s						
GO04	**Tololo Observa**	1.09	83		Pb	12 40 08.9	0.0
GO04	**Tololo Observa**	1.09	83	⇓*i*P	Pb	12 40 09.0	0.0
GO04				*i* S	Sn	12 40 23.7	-0.6
GO04				IAML		12 40 27.0	
	comp=N,5µm,0.5s						
CO02	**Combarbal**	1.26	135	⇓*i*P	Pn	12 40 11.4	-0.1
CO02				*e*S	Sg	12 40 27.9	-1.1
CO01	**Juntas del Tor**	1.73	79	*e*P	Pb	12 40 19.4	-0.4
CO01				*i* S	Sg	12 40 42.1	-1.8
LCO	**Las Campanas**	1.75	42		Pn	12 40 18.9	+0.5
LCO	**Las Campanas**	1.75	42	⇑*e*P	Pn	12 40 18.8	+0.5
AC04	**Llanos de Chal**	2.27	22		Pn	12 40 24.7	-0.6
AC04	**Llanos de Chal**	2.27	22	⇑*e*P	Pn	12 40 24.6	-0.6
AC04				*e*S	Sn	12 40 51.6	-1.3
AC04				IAML		12 41 08.8	
	comp=E,306nm,0.8s						
VA03	**San Esteban**	2.75	153		Pn	12 40 33.4	+1.4
VA03	**San Esteban**	2.75	153	*e*P	Pn	12 40 33.4	+1.4
VA03				IAML		12 41 23.3	
	comp=E,377nm,0.3s						
ROCH	**El Roble**	2.79	162	*e*P	Pn	12 40 33.0	+0.4
ROCH				IAML		12 41 22.3	
	comp=N,365nm,0.4s						
ROC1	**El Roble**	2.79	162		Pn	12 40 30.6	-2.1
MT02	**Curacav**	3.04	165		Pn	12 40 36.5	+0.7
MT02	**Curacav**	3.04	165	*e*P	Pn	12 40 36.0	+0.2
MT02				IAML		12 41 33.9	
	comp=E,96nm,0.5s						
PEL	**Peldehue**	3.05	158		Pn	12 40 37.2	+1.3
PEL	**Peldehue**	3.05	158	*e*P	Pn	12 40 37.1	+1.1
PEL				*e*S	Sn	12 41 11.8	-0.5
PEL				IAML		12 41 27.5	
	comp=E,182nm,0.6s						
MT05	**Renca**	3.26	160		Pn	12 40 39.2	+0.2
MT05	**Renca**	3.26	160	*e*P	Pn	12 40 40.0	+1.0
AC06	**Mina Casimiro**	3.30	27	*e*P	Pn	12 40 39.7	+0.3
AC06				IAML		12 41 36.7	
	comp=E,122nm,0.3s						
FCH	**Farellones**	3.35	154	*e*P	Pn	12 40 41.8	+1.4
FCH				*i* S	Sn	12 41 22.2	+2.0
FCH				IAML		12 41 26.3	
	comp=E,88nm,0.4s						
MT03	**Universidad Ad**	3.43	158		Pn	12 40 42.7	+1.4
MT03	**Universidad Ad**	3.43	158	*e*P	Pn	12 40 42.6	+1.4
MT09	**Talagante**	3.56	166	*e*P	Pn	12 40 43.8	+0.6
MT09				*e*S	Sn	12 41 22.5	-2.7
MT09				IAML		12 41 53.5	
	comp=N,128nm,0.4s						
MT01	**Popeta**	3.60	169	*e*P	Pn	12 40 43.6	+0.1
MT01				*e*S	Sn	12 41 22.3	-3.6
MT01				IAML		12 41 45.3	
	comp=E,68nm,0.6s						
BO04	**La Punta**	3.86	162		Pn	12 40 48.0	+0.8
BO04	**La Punta**	3.86	162	*e*P	Pn	12 40 48.3	+1.2
BO04				*i* S	Sn	12 41 30.8	-1.5
BO04				IAML		12 41 55.3	
	comp=N,91nm,0.6s						
H03N1	**Juan Fernandez**	6.62	240	T	T	12 48 27.9	
	baz=70,slow=72,SNR=769						
H03N2	**Juan Fernandez**	6.63	240	T	T	12 48 33.4	
	baz=70,slow=72,SNR=735						
H03N3	**Juan Fernandez**	6.63	240	T	T	12 48 34.5	
	baz=70,slow=72,SNR=797						
PB10	**IPOC Station P**	6.91	11	Pn	Pn	12 41 29.3	+0.3
PLCA	**Paso Flores**	10.46	174	Pn	Pn	12 42 17.8	0.0
	comp=N,0.1nm,0.3s,baz=345,slow=12,SNR=3.8						
	comp=N,0.6nm,0.6s						
CPUP	**Villa Florida**	13.56	77	LR	LR	12 48 34.7	
	comp=N,55nm,20.0s,baz=241,slow=39						
OTAV	**Otavalo**	30.99	347	P	P	12 46 03.5	-2.2
SNAA	**Sanae**	55.00	159	P	P	12 49 19.0	+0.3
QSPA	**South Pole Qui**	59.91	180	P	P	12 49 54.0	+0.6
QSPA				IAmb	IAmb	12 50 19.2	
	comp=Z,4.6nm,1.2s						
TXAR	**Lajitas Array**	66.53	330	P	P	12 50 39.8	+2.1
	comp=Z,0.2nm,0.8s,baz=145,slow=6.4,SNR=2.2						
	comp=Z,0.2nm,0.8s						
VNDA	**Vanda**	67.70	191	P	P	12 50 43.9	-0.6
VNDA				IAmb	IAmb	12 50 58.6	
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	82.98	70	P	P	12 52 13.7	+0.5
	comp=Z,0.6nm,0.8s,baz=235,slow=5.1,SNR=3.2						
	comp=Z,0.6nm,0.8s						
H11S2	**WAKE ISLAND Hy**	125.73	272	T	T	15 17 36.6	
	baz=115,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	125.74	272	T	T	15 17 36.7	
	baz=115,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hy**	125.75	272	T	T	15 17 37.0	
	baz=115,slow=75,SNR=10.0						
ZALV	**Zalesovo Beam**	151.06	29	PKPbc	PKPbc	12 59 41.3	+1.1
	comp=Z,1.1nm,0.5s,baz=315,slow=1.4,SNR=7.5						

KRSC 07 12:43:05.5±2.8, 48°.82N×156°.78E, h17^{km}±35^{km}, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	1.91	347	*e*P	Pn	12 43 36.2	-1.1
SKR				*e*S	Sn	12 44 00.2	-0.8
KDTR	**Khodutka, Kamc**	3.10	15	*e*P	Pn	12 43 56.7	+3.0
KDTR				*e*S	Sb	12 44 34.9	-2.9
MIPR	**Malaya Ipel'ka**	3.46	360	*e*P	Pn	12 44 00.6	+2.0
ASAK	**Asacha**	3.64	11	*e*P	Pn	12 44 05.2	+4.1
MTVR	**Mutnovka**	3.77	13	*e*P	Pn	12 44 06.9	+3.9
MTVR				*e*S	Sb	12 44 52.6	-4.6
RUS	**Russkaya**	3.78	16	*e*P	Pn	12 44 06.4	+3.4
GRL	**Gorelyy**	3.82	12	*e*P	Pn	12 44 08.0	+4.3
DALK	**Dalny**	4.40	16	*e*P	Pn	12 44 15.2	+3.8
UGLR	**Uglovaya**	4.58	16	*e*P	Pn	12 44 18.8	+4.7
AVH	**Avacha**	4.62	15	*e*P	Pb	12 44 20.4	-5.7
KOK	**Koryaka**	4.63	14	*e*P	Pn	12 44 20.1	+5.4
SMAR	**Somma**	4.63	15	*e*P	Pn	12 44 19.8	+5.0
SDLR	**Sedlovina**	4.66	16	*e*P	Pn	12 44 19.7	+4.6
KRX	**Arik**	4.69	14	*e*P	Pn	12 44 20.4	+4.7
SPN	**Mys Shipunski**	4.75	24	*e*P	Pn	12 44 21.2	+4.9
GNL	**Ganaly**	4.93	8	*e*P	Pn	12 44 23.6	+4.6
MKZ	**Mys Kozlova**	6.51	26	*e*P	Pn	12 44 44.0	+3.5

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*JMA **07** 12:51:28.1±0.2, 24°.8N±0°.6×122°.4E±0°.3, h5^{km}±3^{km}, MV2.4/6, NW OFF ISHIGAKIJIMA IS*

*TAP **07** 12:51:28.7, 24°.82N×122°.37E, h7^{km}, ML2.5, D*

ISC 07 12:51:27.9±1.3, 24°.84N±0°.04×122°.43E±0°.04, h8^{km}±13^{km}, n31, σ0ˢ.47/39, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	0.44	292	P	Pg	12 51 37.0	+0.6
	baz=298						
TWB1				*e*S	Sb	12 51 43.1	-1.4
	baz=298						
EGS		0.46	270	*e*P	Pb	12 51 37.7	-0.5
	baz=272						
NTC	**Toucheng**	0.55	271	*e*P	Pg	12 51 38.6	0.0
	baz=273						
SXI1	**Grass Mountain**	0.56	296	*e*P	Pb	12 51 39.6	-0.4
	baz=301						
SXI1				*e*S	Sb	12 51 48.0	-0.3
	baz=301						
TIPB	**Shuangxi**	0.57	283	*e*P	Pb	12 51 40.1	0.0
	baz=286						
TIPB				*e*S	Sb	12 51 48.0	-0.3
	baz=286						
TWC	**Suao**	0.58	247	P	Pb	12 51 39.8	-0.5
	baz=245						
TWC				*e*S	Sb	12 51 48.9	+0.2
	baz=245						
JYNG	**Yonagunijimaku**	0.61	130	P	Pg	12 51 39.6	0.0
ILA	**Ilan**	0.63	263	*e*P	Pb	12 51 41.0	-0.1
	baz=263						
NWF	**Wu-fen Shan**	0.63	291	*e*P	Pb	12 51 41.3	0.0
	baz=294						
YOJ	**Yonaguni jima**	0.65	126	P	Pg	12 51 40.3	-0.1
YOJ				S	Sg	12 51 48.9	0.0
NDS	**Dongshan**	0.68	252	*e*P	Pb	12 51 41.4	-0.7
	baz=252						
TWE	**Neicheng**	0.71	260	*e*P	Pb	12 51 42.1	-0.4
	baz=260						
EWUT	**Wuta**	0.71	237	P	Pb	12 51 42.7	+0.1
	baz=234						
EWUT				*e*S	Sb	12 51 53.4	+0.9
	baz=234						
ENA	**Nanau**	0.75	237	*e*P	Pb	12 51 43.4	+0.2
	baz=234						
ENA				*e*S	Sb	12 51 54.4	+0.7
	baz=234						
FUSB	**Fushanzhiwuyua**	0.77	264	*e*P	Pb	12 51 43.8	+0.2
	baz=264						
TWA	**Mucha**	0.78	280	*e*P	Pg	12 51 42.4	-0.6
	baz=282						
ENTT	**Nioudou**	0.81	256	*e*P	Pb	12 51 44.1	-0.2
	baz=255						
YM01	**YM01**	0.84	291	*e*P	Pg	12 51 44.3	+0.2
	baz=294						
NWLT	**Wulai**	0.85	266	*e*P	Pb	12 51 44.8	-0.1
	baz=266						
TWY	**Chenhua**	0.87	300	*e*P	Pb	12 51 45.4	+0.2
	baz=303						
TWY				*e*S	Sb	12 51 58.0	+0.9
	baz=303						
LATG	**Datong**	0.88	250	*e*P	Pb	12 51 45.5	0.0
	baz=249						
YHNB	**Yeheng**	0.98	260	*e*P	Pb	12 51 47.4	+0.3
	baz=260						
NSK	**Sanguang**	0.99	261	*e*P	Pb	12 51 47.2	-0.2
	baz=260						
ETL	**Fush Village**	1.00	227	*e*P	Pg	12 51 46.9	-0.3
	baz=225						
NACB	**Ninganchiao**	1.01	229	*e*P	Pg	12 51 47.1	-0.3
	baz=227						
NNS	**Nan Shan**	1.04	248	*e*P	Pb	12 51 47.9	-0.4
	baz=246						
ETLH	**Xiulin Townshi**	1.07	234	*e*P	Pb	12 51 48.8	0.0
	baz=232						
TWD	**Chiawan**	1.08	225	*e*P	Pg	12 51 48.2	-0.4
	baz=223						
IRIF	**Iriomote-Funau**	1.28	113	P	Pn	12 51 51.7	-0.4
WHP	**Taichung City**	1.47	248	*e*P	Pg	12 51 56.4	+0.4
	baz=247						
JKRS	**Kuro-shima**	1.56	112	*e*P	Pn	12 51 56.4	+0.5

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*ISK **07** 13:56:33.9, 38°.72N×43°.49E, h16^{km}, ML2.5/6*

*DDA **07** 13:56:34.9±0.0, 38°.72N×43°.43E, h7^{km}±5^{km}, ML2.2*

ISC 07 13:56:34.7±1.0, 38°.72N±0°.04×43°.50E±0°.05, h18^{km}±6^{km}, n12, σ0ˢ.93/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.15	215	PG	Pb	13 56 39.2	+0.4
VANB				SG	Sg	13 56 43.8	+1.9

TVAN	**Van**	**0.20**	**201**	P	**Pg**	**13 56 39.2**	**-0.7**
TVAN				S	**Sg**	**13 56 43.7**	**+0.4**
TVAN				*i* AML	AML	13 56 44.0	
	comp=N,714nm,0.5s						
TVAN				*i* AML	AML	13 56 44.0	
	comp=E,1μm,0.4s						
VMUR	**Van-Muradiye**	**0.28**	**12**	P	**Pg**	**13 56 40.3**	**-0.8**
VMUR				*i* AML	AML	13 56 46.0	
	comp=N,524nm,0.4s						
VMUR				S	**Sb**	**13 56 46.4**	**+0.6**
VMUR				*i* AML	AML	13 56 48.0	
	comp=E,514nm,0.2s						
ERCV	**ERCIS-VAN**	**0.33**	**338**	PG	**Pg**	**13 56 41.2**	**-0.7**
CLDR	**Caldiran**	**0.54**	**37**	PG	**Pg**	**13 56 44.8**	**-0.8**
CLDR				SG	**Sg**	**13 56 53.1**	**+0.2**
CLDR	**Caldiran**	**0.54**	**37**	P	**Pg**	**13 56 44.8**	**-0.8**
CLDR				S	**Sb**	**13 56 54.4**	**+1.1**
CLDR				*i* AML	AML	13 56 55.0	
	comp=E,322nm,0.5s						
CLDR				*i* AML	AML	13 56 56.0	
	comp=N,291nm,0.4s						
AKDM	**Akdamar-Van**	**0.56**	**226**	PG	**Pg**	**13 56 45.2**	**-0.8**
ADCV	**BITLIS_Adilcev**	**0.61**	**279**	P	**Pb**	**13 56 46.5**	**-0.5**
ADCV				S	**Sn**	**13 56 57.4**	**-0.8**
ADCV				*i* AML	AML	13 56 58.0	
	comp=E,114nm,0.3s						
ADCV				*i* AML	AML	13 56 59.0	
	comp=N,95nm,0.2s						
AGRB	**Hanur-Agry**	**0.94**	**336**	PG	**Pb**	**13 56 52.5**	**-0.2**
BLIS	**Bitlis-Merkez**	**1.12**	**255**	P	**Pb**	**13 56 54.9**	**-0.9**
BLIS				S	**Sn**	**13 57 11.0**	**+0.1**
BLIS				*i* AML	AML	13 57 12.0	
	comp=N,56nm,0.3s						
BLIS				*i* AML	AML	13 57 13.0	
	comp=E,66nm,0.4s						
GURO	**Guroymak-BITLI**	**1.16**	**262**	PN	**Pb**	**13 56 55.9**	**-0.4**
EATA	**Eleskirt**	**1.38**	**326**	P	**Pb**	**13 57 00.3**	**0.0**
EATA				S	**Sg**	**13 57 21.4**	**+1.8**
EATA				*i* AML	AML	13 57 22.0	
	comp=E,27nm,0.6s						
EATA				*i* AML	AML	13 57 23.0	
	comp=N,17nm,0.5s						

BJI ***07*** *13:58:59.8±0.0, 17°.19S×178°.30W, h521^{km}, mb5.0/51, mB4.9/31*

MOS ***07*** *13:59:01.3±1.2, 17°.53S×178°.63W, h534^{km}, mb5.3/15, Error ellipse: s-maj=8.3km s-min=7.9km az=67.2*

IDC ***07*** *13:59:01.3±0.4, 17°.55S×178°.53W, h529^{km}±4^{km}, mb4.7/36, mbtmp5.6/40, Error ellipse: s-maj=8.1km s-min=7.7km az=37.0*

NOU ***07*** *13:59:01.9, 17°.67S×178°.47W, h540^{km}, ML5.4/125, Fiji Islands Region*

NEIC ***07*** *13:59:01.8±2.2, 17°.60S±0°.10×178°.58W±0°.09, h539^{km}±4^{km}, mb5.2/311, Error ellipse: s-maj=14.0km s-min=12.6km az=155.0*

GCMT ***07*** *13:59:06.8±0.2, 17°.44S±0°.02×178°.43W±0°.02, h559^{km}±1^{km}, MW5.5/103, Moment Tensor Solution. s103,c157; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.25±.03; M$_{\theta\theta}$0.61±.04; M$_{\phi\phi}$-0.86±.04; M$_{r\theta}$0.00±.04; M$_{\theta\phi}$0.18±.04; M$_{\phi r}$-1.79±.04; Best double couple: M$_0$1.88300×10^{17} NP1:φ$_s$323.00000°, δ11.00000°, λ52.00000°. NP2:φ$_s$182.00000°, δ82.00000°, λ97.00000°. Principal axes: T 1.5800, Plg53.0000°, Azm100.0000°; N 0.6080, Plg7.0000°, Azm1.0000°; P -2.1870, Plg36.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 07 13:59:01.7±0.3**, 17°.64S**±0°.04×**178°.53W**±0°.04**, h540^{km}**±2^{km}**, h540^{km}:pP-P, n1308,** σ**1^{s}21**/1301**, mb5.2**/293**, 331C-169D, Fault plane solution: NP1:**φ$_s$182.76883°**,** δ76.21368°**,** λ97.26217°. **NP2:**φ$_s$334.63315°**,** δ15.54924°**,** λ62.74342°. **Principal axes:** T Plg58.1825°**,** Azm102.5300°**;** N Plg7.0519°**,** Azm1.0295°**;** P Plg30.8453°**,** Azm266.7929°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.65**	**204**	P	**P**	**14 00 08.4**	**+2.1**
MSVF	**Nonsavu**	**3.26**	**268**	P	**P**	**14 00 20.4**	**+2.6**
	7μm,0.8s,baz=116,slow=5.5,SNR=340						
MSVF	**Nonsavu**	**3.26**	**268**	*c* *i*P	**P**	**14 00 20.2**	**+2.5**
MSVF	**Nonsavu**	**3.26**	**268**	P	**P**	**14 00 19.7**	**+1.9**
MSVF	**Nonsavu**	**3.26**	**268**	P	**P**	**14 00 20.9**	**+3.2**
AFI	**Afiamalu**	**7.48**	**61**	P	**P**	**14 00 52.1**	**-2.2**
	1μm,0.6s,baz=34,slow=0.5,SNR=73						
AFI				S	**S**	**14 02 21.6**	**-4.8**
	145nm,0.6s,baz=36,slow=19,SNR=1.8						
AFI	**Afiamalu**	**7.48**	**61**	P	**P**	**14 00 51.6**	**-2.6**
AFI	**Afiamalu**	**7.48**	**61**	P	**P**	**14 00 52.5**	**-1.7**
NIUE	**Niue**	**8.30**	**101**	P	**P**	**14 01 02.8**	**+0.7**
	baz=8.3,SNR=98						
NIUE	**Niue**	**8.30**	**101**	P	**P**	**14 01 01.7**	**-0.5**
FUNA	**Funafuti**	**9.32**	**346**	P	**P**	**14 01 09.7**	**-2.9**
RIZ	**Raoul Island**	**11.57**	**177**	P	**P**	**14 01 31.3**	**-4.4**
RIZ				S	**S**	**14 03 41.9**	**-0.5**
RAO	**Raoul Island**	**11.58**	**177**	P	**P**	**14 01 34.9**	**-0.9**
	491nm,0.3s,baz=293,slow=21,SNR=5.0						
RAO				S	**S**	**14 03 41.3**	**-1.2**
	355nm,0.3s,baz=95,slow=23,SNR=2.2						
GLKZ	**Green Lake**	**11.59**	**177**	P	**P**	**14 01 33.1**	**-2.8**
GLKZ				S	**S**	**14 03 41.0**	**-1.6**
RTV	**Rentapao**	**12.43**	**267**	P	**P**	**14 01 45.6**	**+0.8**
DVP	**Devils Point**	**12.66**	**268**	P	**P**	**14 01 47.7**	**+0.5**
MARNC	**Mare, Loyalty**	**13.23**	**251**	P	**P**	**14 01 51.3**	**-1.7**
LIFNC	**LIFOU**	**13.80**	**255**	P	**P**	**14 01 56.8**	**-2.2**
SANVU	**Saraoutou**	**13.85**	**277**	P	**P**	**14 01 57.8**	**-1.7**
PINNC	**Pines Island,**	**14.07**	**247**	P	**P**	**14 02 00.2**	**-1.5**
OUENC	**Ouen Island, N**	**14.54**	**249**	P	**P**	**14 02 04.9**	**-1.8**
DZM	**Mont Dzumac**	**14.80**	**250**	*e*P	**P**	**14 02 08.5**	**-1.0**
	590nm,1.0s						
DZM	**Mont Dzumac**	**14.80**	**250**	P	**P**	**14 02 08.7**	**-0.8**
	179nm,0.7s,baz=77,slow=15,SNR=31						
DZM				S	**S**	**14 04 43.2**	**-1.1**
	35nm,1.0s,baz=231,slow=18,SNR=2.0						
DZM	**Mont Dzumac**	**14.80**	**250**	P	**P**	**14 02 07.8**	**-1.8**
ONTNC	**Ouen Toro**	**14.86**	**249**	P	**P**	**14 02 08.5**	**-1.4**
KNTN	**Kanton**	**16.21**	**25**	P	**P**	**14 02 22.1**	**-1.6**
KNTN	**Kanton**	**16.21**	**25**	P	**P**	**14 02 22.4**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.50**	**257**	P	**P**	**14 02 25.6**	**-0.8**
KOUNC	**Koumac, New Ca**	**16.50**	**257**	P	**P**	**14 02 26.6**	**+0.2**
NFK	**Norfolk Island**	**16.81**	**225**	P	**P**	**14 02 29.1**	**-0.1**
	baz=17,SNR=5.7						
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**14 02 41.0**	**+0.4**
	108nm,0.9s,baz=261,slow=6.4,SNR=13						
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**14 02 41.0**	**+0.4**
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**14 02 41.5**	**+0.9**
OUZ	**Omahuta**	**18.86**	**200**	P	**P**	**14 02 48.1**	**+0.2**
OUZ	**Omahuta**	**18.86**	**200**	P	**P**	**14 02 49.3**	**+1.5**
OUZ	**Omahuta**	**18.86**	**200**	P	**P**	**14 02 50.5**	**+2.7**
WCZ	**Waipu Caves**	**19.30**	**198**	P	**P**	**14 02 54.6**	**+2.8**
KUZ	**Kuaotunu**	**19.70**	**194**	P	**P**	**14 02 58.1**	**+2.6**
MXZ	**Matakaoa Point**	**20.05**	**187**	P	**P**	**14 02 56.5**	**-2.0**
MXZ				IAmb	IAmb	14 03 02.2	
	comp=Z,70nm,1.1s						
MXZ	**Matakaoa Point**	**20.05**	**187**	P	**P**	**14 02 57.2**	**-1.3**
RUGZ	**Raukumara Rang**	**20.52**	**189**	P	**P**	**14 03 00.4**	**-2.7**
RUGZ				S	**S**	**14 06 19.1**	**+0.6**
TGRZ	**Tauranga**	**20.53**	**192**	P	**P**	**14 03 05.0**	**+2.0**
OPRZ	**Ohinepanea**	**20.59**	**191**	P	**P**	**14 03 03.9**	**+0.4**
TWGZ	**Tauwhareparae**	**20.69**	**188**	P	**P**	**14 03 03.8**	**-0.7**
TWGZ				S	**S**	**14 06 17.5**	**-3.5**
KMRZ	**Kaimai**	**20.71**	**192**	P	**P**	**14 03 06.4**	**+1.7**
EDRZ	**Edgecumbe**	**20.81**	**191**	P	**P**	**14 03 06.5**	**+0.9**
OMRZ	**Omania**	**20.88**	**191**	P	**P**	**14 03 06.6**	**+0.4**
URZ	**Urewera**	**20.90**	**190**	P	**P**	**14 03 04.0**	**-2.3**
	comp=Z,116nm,0.7s,baz=245,slow=0.8,SNR=96						
URZ				S	**S**	**14 06 20.1**	**-4.0**
	comp=Z,35nm,0.9s,baz=214,slow=18,SNR=4.6						
URZ	**Urewera**	**20.90**	**190**	P	**P**	**14 03 03.8**	**-2.5**
URZ	**Urewera**	**20.90**	**190**	P	**P**	**14 03 03.8**	**-2.5**
URZ				S	**S**	**14 06 19.2**	**-4.9**
URZ	**Urewera**	**20.90**	**190**	P	**P**	**14 03 03.9**	**-2.3**
MWZ	**Matawai**	**20.91**	**189**	P	**P**	**14 03 04.3**	**-2.2**
MWZ				S	**S**	**14 06 16.2**	**-8.2**
NGRZ	**Ngongotaha**	**20.91**	**192**	P	**P**	**14 03 08.8**	**+2.3**
CNGZ	**Carnagh Statio**	**20.97**	**187**	P	**P**	**14 03 06.3**	**-0.6**
TKGZ	**Te Karaka**	**20.97**	**188**	P	**P**	**14 03 06.5**	**-0.4**
TKGZ				S	**S**	**14 06 25.4**	**+0.2**
TARZ	**Mount Tarawera**	**20.98**	**191**	P	**P**	**14 03 08.1**	**+1.0**
HLRZ	**Highlands Stat**	**21.02**	**191**	P	**P**	**14 03 08.4**	**+0.9**
RRRZ	**Republican Roa**	**21.08**	**191**	P	**P**	**14 03 09.3**	**+1.3**
RAGZ	**Rawiri**	**21.08**	**189**	P	**P**	**14 03 07.7**	**-0.3**
HSRZ	**Hossack Road**	**21.10**	**191**	P	**P**	**14 03 09.9**	**+1.8**
GRRZ	**Galatos Road**	**21.16**	**192**	P	**P**	**14 03 10.5**	**+1.8**
MUGZ	**Murupara**	**21.17**	**190**	P	**P**	**14 03 06.8**	**-1.9**
HRRZ	**Handcock Road**	**21.17**	**191**	P	**P**	**14 03 09.2**	**+0.4**
RIGZ	**Rimuhau**	**21.24**	**188**	P	**P**	**14 03 07.8**	**-1.6**
RIGZ				S	**S**	**14 06 30.3**	**+0.6**
PRRZ	**Plateau Road**	**21.26**	**191**	P	**P**	**14 03 08.8**	**-0.7**
TLZ	**Tolley Road**	**21.26**	**193**	P	**P**	**14 03 11.2**	**+1.5**
RTZ	**Ruatahuna**	**21.27**	**190**	P	**P**	**14 03 08.3**	**-1.4**
RTZ				S	**S**	**14 06 30.8**	**+0.7**
WPRZ	**Whakapapatarin**	**21.32**	**192**	P	**P**	**14 03 10.3**	**+0.2**
SNGZ	**Shannon Statio**	**21.38**	**189**	P	**P**	**14 03 08.7**	**-1.9**
SNGZ				S	**S**	**14 06 38.2**	**+6.4**
PRGZ	**Paritu Road**	**21.44**	**188**	P	**P**	**14 03 11.5**	**+0.3**
PRGZ				S	**S**	**14 06 34.0**	**+1.2**
MTHZ	**Maungataniwha**	**21.52**	**190**	P	**P**	**14 03 11.6**	**-0.4**
MTHZ				S	**S**	**14 06 34.9**	**+0.8**
RAHZ	**Arahi**	**21.55**	**189**	P	**P**	**14 03 11.8**	**-0.4**
RAHZ				S	**S**	**14 06 35.1**	**+0.7**
KNZ	**Kokohu**	**21.56**	**188**	P	**P**	**14 03 11.3**	**-1.0**
KNZ				S	**S**	**14 06 30.2**	**-4.4**
MRHZ	**Matea Rd**	**21.58**	**191**	P	**P**	**14 03 11.0**	**-1.5**
WATZ	**Wairara**	**21.59**	**192**	P	**P**	**14 03 12.8**	**+0.3**
HIZ	**Hauiti**	**21.59**	**194**	P	**P**	**14 03 14.1**	**+1.6**
HIZ				IAmb	IAmb	14 03 46.5	
	comp=Z,56nm,1.0s						
HIZ	**Hauiti**	**21.59**	**194**	P	**P**	**14 03 15.4**	**+2.8**
HIZ	**Hauiti**	**21.59**	**194**	P	**P**	**14 03 14.6**	**+2.1**
MHGZ	**Mahia Peninsul**	**21.66**	**188**	P	**P**	**14 03 14.0**	**+0.8**
WHHZ	**Waihua**	**21.68**	**189**	P	**P**	**14 03 07.3**	**-6.0**
WHHZ				S	**S**	**14 06 28.0**	**-8.5**
HATZ	**Hinemaiaia**	**21.69**	**191**	P	**P**	**14 03 12.2**	**-1.3**
RATZ	**Rangitukua**	**21.73**	**192**	P	**P**	**14 03 13.5**	**-0.4**
RITZ	**Rihia Road**	**21.82**	**192**	P	**P**	**14 03 14.1**	**-0.5**
KATZ	**Kakaramea**	**21.85**	**192**	P	**P**	**14 03 17.4**	**+2.4**
BKZ	**Black Stump Fm**	**21.89**	**190**	P	**P**	**14 03 12.3**	**-2.9**
BKZ				IAmb	IAmb	14 03 21.4	
	comp=Z,30nm,0.5s						
BKZ	**Black Stump Fm**	**21.89**	**190**	P	**P**	**14 03 12.7**	**-2.5**
BKZ	**Black Stump Fm**	**21.89**	**190**	P	**P**	**14 03 12.7**	**-2.5**
ARHZ	**Aropaoanui**	**21.90**	**189**	P	**P**	**14 03 14.3**	**-1.0**
NTVZ	**North Tongarir**	**21.97**	**192**	P	**P**	**14 03 16.4**	**+0.3**
TMVZ	**Te Maari**	**21.98**	**192**	P	**P**	**14 03 15.9**	**-0.3**
ETVZ	**East Tongariro**	**22.00**	**192**	P	**P**	**14 03 15.6**	**-0.8**
WTVZ	**West Tongariro**	**22.01**	**192**	P	**P**	**14 03 16.1**	**-0.3**
NNVZ	**North Ngauruho**	**22.02**	**192**	P	**P**	**14 03 16.7**	**+0.2**
OTVZ	**Oturere**	**22.04**	**192**	P	**P**	**14 03 15.7**	**-1.0**
NGZ	**Ngauruhoe**	**22.06**	**192**	P	**P**	**14 03 16.9**	**-0.1**
SNVZ	**South Ngauruho**	**22.07**	**192**	P	**P**	**14 03 16.6**	**-0.4**
MCHZ	**McNeill Hill**	**22.12**	**190**	P	**P**	**14 03 16.2**	**-1.1**
TUVZ	**Tukino**	**22.14**	**192**	P	**P**	**14 03 16.9**	**-0.8**
FWVZ	**Far West T-bar**	**22.15**	**192**	P	**P**	**14 03 17.9**	**+0.1**
KWHZ	**Kaweka Forest**	**22.15**	**190**	P	**P**	**14 03 15.8**	**-1.8**
WNVZ	**Wahianoa**	**22.21**	**192**	P	**P**	**14 03 17.3**	**-1.0**
PKVZ	**Pokaka**	**22.22**	**193**	P	**P**	**14 03 18.1**	**-0.2**
MOVZ	**Moawhango**	**22.26**	**192**	P	**P**	**14 03 18.0**	**-0.5**
BHHZ	**Black Hill Sta**	**22.28**	**191**	P	**P**	**14 03 16.7**	**-2.1**
MTVZ	**Mangateitei**	**22.29**	**192**	P	**P**	**14 03 13.7**	**-5.2**
KRHZ	**Kereru**	**22.37**	**190**	P	**P**	**14 03 18.0**	**-1.6**
KAHZ	**Kahuranaki**	**22.44**	**189**	P	**P**	**14 03 19.0**	**-1.1**
HNR	**Honiara**	**22.44**	**289**	P	**P**	**14 03 20.5**	**+0.1**
	comp=Z,374nm,0.7s,baz=165,slow=1.8,SNR=20						
	comp=Z,374nm,0.7s						
HNR	**Honiara**	**22.44**	**289**	P	**P**	**14 03 17.9**	**-2.6**
HNR	**Honiara**	**22.44**	**289**	P	**P**	**14 03 21.5**	**+1.0**
PKE	**Pukeiti**	**22.45**	**195**	P	**P**	**14 03 22.6**	**+2.3**
KHEZ	**Kahui Hut**	**22.54**	**195**	P	**P**	**14 03 24.5**	**+3.4**
LREZ	**Lake Rotokare**	**22.60**	**194**	P	**P**	**14 03 23.7**	**+2.2**
PNHZ	**Pukenui**	**22.66**	**191**	P	**P**	**14 03 20.9**	**-1.3**
WAZ	**Wanganui**	**22.75**	**193**	P	**P**	**14 03 23.1**	**+0.2**
WPHZ	**Waipukurau**	**22.77**	**190**	P	**P**	**14 03 22.8**	**-0.3**
TSZ	**Takapari Road**	**22.85**	**191**	P	**P**	**14 03 22.7**	**-1.1**
PRHZ	**Porangahau**	**22.94**	**190**	P	**P**	**14 03 24.0**	**-0.5**
DVHZ	**Dannevirke**	**23.05**	**190**	P	**P**	**14 03 24.2**	**-1.3**
BFZ	**Birch Farm**	**23.41**	**190**	P	**P**	**14 03 27.1**	**-1.6**
BFZ				IAmb	IAmb	14 03 28.7	
	comp=Z,32nm,0.7s						
BFZ	**Birch Farm**	**23.41**	**190**	P	**P**	**14 03 27.2**	**-1.6**
BFZ	**Birch Farm**	**23.41**	**190**	P	**P**	**14 03 27.1**	**-1.6**
MSWZ	**Moikau Station**	**24.30**	**191**	P	**P**	**14 03 35.2**	**-1.4**
SNZO	**South Karori**	**24.30**	**192**	P	**P**	**14 03 34.9**	**-1.7**
SNZO				IAmb	IAmb	14 03 36.9	
	comp=Z,90nm,0.8s						
SNZO	**South Karori**	**24.30**	**192**	P	**P**	**14 03 35.5**	**-1.1**
BHW	**Baring Head**	**24.36**	**192**	P	**P**	**14 03 34.2**	**-3.0**
QRZ	**Quartz Range**	**24.36**	**197**	P	**P**	**14 03 37.1**	**-0.1**
QRZ				IAmb	IAmb	14 03 38.1	
	comp=Z,53nm,1.0s						
QRZ	**Quartz Range**	**24.36**	**197**	P	**P**	**14 03 37.6**	**+0.4**
PLWZ	**Palliser**	**24.44**	**191**	P	**P**	**14 03 35.9**	**-2.1**
NNZ	**Nelson**	**24.51**	**195**	P	**P**	**14 03 36.6**	**-1.8**
NNZ				IAmb	IAmb	14 03 38.8	
	comp=Z,60nm,1.1s						
LHI	**Lord Howe Isla**	**24.55**	**232**	P	**P**	**14 03 40.4**	**+1.4**
	baz=25,SNR=6.1						
LHI	**Lord Howe Isla**	**24.55**	**232**	P	**P**	**14 03 41.0**	**+1.9**
	comp=Z,272nm,1.1s						
TUWZ	**Tuamarina**	**24.58**	**194**	P	**P**	**14 03 37.0**	**-2.1**
BSWZ	**Blackbirch Sta**	**24.87**	**194**	P	**P**	**14 03 40.9**	**-0.8**
THZ	**Tophouse**	**25.14**	**195**	P	**P**	**14 03 42.2**	**-1.9**
THZ				IAmb	IAmb	14 03 48.0	
	comp=Z,32nm,0.6s						
KHZ	**Kahutara**	**25.61**	**194**	P	**P**	**14 03 46.2**	**-2.0**
KHZ				IAmb	IAmb	14 03 48.2	
	comp=Z,37nm,0.5s						
KHZ	**Kahutara**	**25.61**	**194**	P	**P**	**14 03 46.6**	**-1.6**
LTZ	**Lake Taylor**	**26.26**	**195**	P	**P**	**14 03 52.1**	**-1.9**
LTZ				IAmb	IAmb	14 03 55.0	
	comp=Z,50nm,0.6s						
OXZ	**Oxford**	**26.83**	**195**	P	**P**	**14 03 57.6**	**-1.4**
OXZ				IAmb	IAmb	14 03 58.6	
	comp=Z,80nm,0.8s						
MQZ	**McQueen's Vall**	**27.04**	**194**	P	**P**	**14 03 59.2**	**-1.5**
RPZ	**Rata Peaks**	**27.45**	**197**	P	**P**	**14 04 02.5**	**-1.9**
	comp=Z,15nm,0.5s,baz=298,slow=1.1,SNR=20						
RPZ	**Rata Peaks**	**27.45**	**197**	P	**P**	**14 04 02.0**	**-2.4**
RPZ	**Rata Peaks**	**27.45**	**197**	P	**P**	**14 04 02.5**	**-1.9**
PAE	**Paea**	**27.58**	**95**	*e*P	**P**	**14 04 06.2**	**+0.3**
	comp=Z,33nm,0.9s						
PPT2	**Papeete2**	**27.59**	**94**	*e*P	**P**	**14 04 06.7**	**+0.6**
	comp=Z,178nm,1.0s						
PPT2				*e*pP	**pP**	**14 05 34.0**	**+1.8**
PPT2				*e*LR	LR	14 10 32.6	
	comp=Z,1μm,27.2s						
PPT	**Papeete**	**27.59**	**94**	P	**P**	**14 04 06.6**	**+0.6**
	comp=Z,146nm,0.7s,baz=70,slow=2.9,SNR=24						
	comp=Z,146nm,0.7s						
PPTF	**Pamatai, Papee**	**27.60**	**94**	P	**P**	**14 04 06.3**	**+0.2**
PPTF	**Pamatai, Papee**	**27.60**	**94**	P	**P**	**14 04 06.9**	**+0.7**
FOZ	**Fox Glacier**	**27.64**	**198**	P	**P**	**14 04 05.0**	**-1.0**
FOZ				IAmb	IAmb	14 04 07.7	
	comp=Z,65nm,0.7s						
TBI	**Tubuai**	**27.79**	**107**	*e*P	**P**	**14 04 09.5**	**+1.8**
	comp=Z,271nm,0.8s						
TBI				*e*pP	**pP**	**14 05 34.7**	**+0.4**
TBI				*e*LR	LR	14 10 38.8	
	comp=Z,521nm,32.2s						
LBZ	**Lake Benmore**	**28.31**	**197**	P	**P**	**14 04 10.0**	**-2.0**
LBZ				IAmb	IAmb	14 04 33.5	
	comp=Z,112nm,2.0s						
ODZ	**Otahua Downs**	**28.79**	**196**	P	**P**	**14 04 14.5**	**-1.6**
ODZ				IAmb	IAmb	14 04 18.9	
	comp=Z,94nm,1.9s						
ODZ	**Otahua Downs**	**28.79**	**196**	P	**P**	**14 04 14.8**	**-1.3**
WKZ	**Wanaka**	**29.05**	**198**	P	**P**	**14 04 17.4**	**-1.0**
WKZ				IAmb	IAmb	14 04 17.9	
	comp=Z,52nm,0.6s						
EIDS	**Eidsvold**	**29.25**	**249**	P	**P**	**14 04 20.1**	**-0.3**
	baz=29,SNR=122						
EIDS	**Eidsvold**	**29.25**	**249**	P	**P**	**14 04 19.5**	**-0.9**
EIDS	**Eidsvold**	**29.25**	**249**	P	**P**	**14 04 20.2**	**-0.2**
PMOR	**Pomariorio Ree**	**29.50**	**89**	*e*P	**P**	**14 04 23.2**	**+0.5**
	comp=Z,456nm,1.1s						
RK1H	**Rockhampton Ha**	**29.53**	**254**	P	**P**	**14 04 22.7**	**-0.1**
VAH	**Vaihoa**	**29.72**	**90**	*e*P	**P**	**14 04 24.6**	**+0.1**
	comp=Z,212nm,1.1s						
MLZ	**Mavora Lakes**	**29.82**	**199**	P	**P**	**14 04 24.9**	**-0.1**
ARMA	**Armidale**	**29.98**	**239**	P	**P**	**14 04 27.6**	**+0.9**
	baz=30,SNR=283						
ARMA	**Armidale**	**29.98**	**239**	P	**P**	**14 04 26.8**	**+0.1**
ARMA	**Armidale**	**29.98**	**239**	P	**P**	**14 04 27.7**	**+1.0**
DCZ	**Deep Cove**	**30.21**	**200**	P	**P**	**14 04 27.4**	**-0.9**
WHZ	**Wether Hill Ro**	**30.34**	**199**	P	**P**	**14 04 29.5**	**0.0**
WHZ				IAmb	IAmb	14 06 08.3	
	comp=Z,78nm,1.0s						
NTLH	**Newcastle Hard**	**30.77**	**235**	P	**P**	**14 04 34.7**	**+1.3**
MGCD	**Mangrove Creek**	**31.35**	**235**	P	**P**	**14 04 39.4**	**+1.0**
	baz=31,SNR=47						
MGCD	**Mangrove Creek**	**31.35**	**235**	P	**P**	**14 04 39.3**	**+1.0**
RMQ	**Roma**	**31.50**	**248**	P	**P**	**14 04 40.3**	**+0.6**
	baz=32,SNR=465						
RMQ	**Roma**	**31.50**	**248**	P	**P**	**14 04 40.2**	**+0.5**
RIV	**Riverview**	**31.55**	**233**	P	**P**	**14 04 41.2**	**+1.2**
	baz=32,SNR=11						
RABL	**Rabaul**	**31.66**	**292**	P	**P**	**14 04 39.6**	**-1.6**
RABL	**Rabaul**	**31.66**	**292**	P	**P**	**14 04 40.2**	**-1.0**
KRVT	**Keravat (AS076**	**31.73**	**291**	P	**P**	**14 04 41.0**	**-0.8**
	comp=Z,489nm,0.7s,baz=269,slow=0.6,SNR=63						
	comp=Z,489nm,0.7s						
SYDH	**Sydney Hard Ro**	**31.85**	**234**	P	**P**	**14 04 43.9**	**+1.3**
CTA	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 55.5**	**-0.3**
	comp=Z,241nm,0.9s,baz=90,slow=9.7,SNR=158						
CTA				PcP	**PcP**	**14 07 22.0**	**+0.3**
	comp=Z,11nm,0.6s,baz=80,slow=5.1,SNR=2.2						
CTA				ScP	**ScP**	**14 10 17.1**	**+2.1**
	comp=Z,50nm,1.0s,baz=70,slow=2.5,SNR=13						
	comp=Z,241nm,0.9s						
CTA	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 55.3**	**-0.5**
	comp=Z,388nm,0.9s						
CTAO	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 54.7**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,266nm,0.9s						
CTAO	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 54.7**	**-1.0**
CTAO	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 55.5**	**-0.3**
CTAO	**Charters Tower**	**33.38**	**260**	P	**P**	**14 04 55.5**	**-0.3**
CTAO				pP	**pwP**	**14 06 31.3**	**+2.0**
CTAO				sP	**PcP**	**14 07 22.3**	**+0.6**
CNB	**Canberra Magne**	**33.50**	**232**	P	**P**	**14 04 57.6**	**+0.9**
	baz=34,SNR=207						
CNB	**Canberra Magne**	**33.50**	**232**	P	**P**	**14 04 57.4**	**+0.7**
CAN	**Canberra**	**33.78**	**232**	P	**P**	**14 04 58.7**	**-0.3**
CAN				pmax	pmax		
	comp=Z,186nm,1.0s						
CAN	**Canberra**	**33.78**	**232**	P	**P**	**14 04 58.7**	**-0.3**
CAN	**Canberra**	**33.78**	**232**	P	**P**	**14 04 59.6**	**+0.6**
CAN	**Canberra**	**33.78**	**232**	P	**P**	**14 04 59.6**	**+0.6**
CAN				pP	**PP**	**14 06 38.8**	**-2.6**
CAN				PP	pwP	14 06 46.3	+13
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**14 05 04.4**	**+0.8**
	comp=Z,720nm,0.8s,baz=78,slow=6.3,SNR=122						
	comp=Z,720nm,0.8s						
PMG	**Port Moresby**	**34.30**	**279**	*d* *i*P	**P**	**14 05 04.3**	**+0.8**
PMG				pmax	pmax		
	comp=Z,854nm,0.8s						
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**14 05 03.7**	**+0.1**
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**14 05 04.5**	**+1.0**
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**14 05 04.5**	**+1.0**
CMSA	**Cobar Meteorol**	**35.18**	**240**	P	**P**	**14 05 10.9**	**+0.1**
	baz=35,SNR=347						
CMSA	**Cobar Meteorol**	**35.18**	**240**	P	**P**	**14 05 10.8**	**+0.1**
MTSU	**Mount Surprise**	**35.32**	**263**	P	**P**	**14 05 11.8**	**-0.4**
	baz=35,SNR=118						
MTSU	**Mount Surprise**	**35.32**	**263**	P	**P**	**14 05 11.7**	**-0.4**
QLP	**Quilpie**	**35.52**	**249**	P	**P**	**14 05 13.5**	**-0.1**
	baz=36,SNR=164						
QLP	**Quilpie**	**35.52**	**249**	P	**P**	**14 05 13.6**	**-0.1**
MANU	**Manus Island**	**36.89**	**291**	P	**P**	**14 05 25.3**	**+0.2**
GLAD	**Gladstone**	**36.96**	**224**	P	**P**	**14 05 26.0**	**+0.7**
COEN	**Coen**	**36.99**	**270**	P	**P**	**14 05 26.2**	**+0.4**
	baz=37,SNR=89						
COEN	**Coen**	**36.99**	**270**	P	**P**	**14 05 25.7**	**-0.2**
COEN	**Coen**	**36.99**	**270**	P	**P**	**14 05 26.2**	**+0.4**
TOO	**Toolangi**	**37.25**	**230**	P	**P**	**14 05 28.4**	**+0.7**
	baz=37,SNR=221						
TOO	**Toolangi**	**37.25**	**230**	P	**P**	**14 05 28.0**	**+0.2**
TOO				pmax	pmax		
	comp=Z,450nm,1.0s						
TOO	**Toolangi**	**37.25**	**230**	P	**P**	**14 05 28.0**	**+0.2**
TOO	**Toolangi**	**37.25**	**230**	P	**P**	**14 05 28.5**	**+0.7**
CORO	**Coronation Par**	**37.76**	**224**	P	**P**	**14 05 33.1**	**+1.3**
MLBS	**Spotswood, Mel**	**37.79**	**230**	P	**P**	**14 05 33.5**	**+1.5**
MOO	**Moorlands**	**38.21**	**222**	P	**P**	**14 05 36.2**	**+0.8**
	baz=38,SNR=18						
MOO	**Moorlands**	**38.21**	**222**	P	**P**	**14 05 36.0**	**+0.5**
TAOE	**Nuku Hiva Isla**	**38.30**	**82**	*e*P	**P**	**14 05 37.3**	**+0.6**
	comp=Z,338nm,1.0s						
TAOE				*e*S	**S**	**14 10 51.2**	**-1.6**
TAOE				*e*LR	LR	14 14 57.0	
	comp=Z,381nm,25.2s						
TAOE	**Nuku Hiva Isla**	**38.30**	**82**	P	**P**	**14 05 36.8**	**+0.1**
TAOE	**Nuku Hiva Isla**	**38.30**	**82**	P	**P**	**14 05 37.9**	**+1.2**
TAOE	**Nuku Hiva Isla**	**38.30**	**82**	P	**P**	**14 05 37.7**	**+1.0**
TAOE				sP	sP	14 08 25.5	+14
TAU	**Tasmania Unive**	**38.36**	**222**	P	**P**	**14 05 37.2**	**+0.5**
TAU				pmax	pmax		
	comp=Z,84nm,0.9s						
TAU	**Tasmania Unive**	**38.36**	**222**	P	**P**	**14 05 37.1**	**+0.5**
TAU				IAmb	IAmb	14 05 38.2	
	comp=Z,84nm,0.8s						
TAU	**Tasmania Unive**	**38.36**	**222**	P	**P**	**14 05 37.0**	**+0.3**
TAU	**Tasmania Unive**	**38.36**	**222**	P	**P**	**14 05 37.5**	**+0.9**
GEXS	**Deakin Univers**	**38.37**	**230**	P	**P**	**14 05 38.0**	**+1.2**
BRAT	**Ballarat**	**38.40**	**231**	P	**P**	**14 05 38.6**	**+1.6**
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**14 05 40.0**	**+0.8**
	comp=Z,294nm,0.9s,baz=86,slow=9.3,SNR=294						
STKA				ScP	**ScP**	**14 10 37.1**	**+2.6**
	comp=Z,18nm,0.9s,baz=80,slow=7.9,SNR=4.8						
	comp=Z,294nm,0.9s						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**14 05 40.1**	**+0.8**
	baz=39,SNR=178						
STKA	**Stephens Creek**	**38.66**	**241**	*d* *i*P	**P**	**14 05 39.8**	**+0.5**
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**14 05 39.6**	**+0.3**
STKA				IAmb	IAmb	14 05 41.2	
	comp=Z,113nm,1.1s						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**14 05 40.0**	**+0.8**
INKA	**Innaminka**	**38.74**	**248**	P	**P**	**14 05 40.9**	**+0.9**
QIS	**Mount Isa**	**39.59**	**259**	P	**P**	**14 05 46.0**	**-1.0**
	baz=40,SNR=27						
QIS	**Mount Isa**	**39.59**	**259**	P	**P**	**14 05 46.1**	**-0.9**
ARPS	**Mount Arapiles**	**39.72**	**233**	P	**P**	**14 05 48.0**	**+0.3**
	baz=40,SNR=16						
ARPS	**Mount Arapiles**	**39.72**	**233**	P	**P**	**14 05 48.1**	**+0.4**
MMPI	**Merauke**	**40.97**	**277**	P	**P**	**14 05 57.8**	**-0.2**
	comp=Z,18μmcomp=Z,2μm,0.9s						
RKT	**Rikitea**	**41.08**	**105**	*e*P	**P**	**14 05 59.6**	**+0.8**
	comp=Z,102nm,1.0s						
HTT	**Hallett**	**41.18**	**239**	P	**P**	**14 06 00.1**	**+0.6**
	baz=41,SNR=120						
HTT	**Hallett**	**41.18**	**239**	P	**P**	**14 06 00.0**	**+0.5**
LCRK	**Leigh Creek**	**41.27**	**244**	P	**P**	**14 06 00.4**	**+0.2**
GHSS	**Government Hou**	**41.76**	**237**	P	**P**	**14 06 05.4**	**+1.4**
NAPP	**Napperby**	**41.77**	**240**	P	**P**	**14 06 05.0**	**+0.9**
TWOA	**Tennyson Woods**	**41.80**	**237**	P	**P**	**14 06 04.7**	**+0.4**
PTPS	**Port Pirie**	**41.89**	**240**	P	**P**	**14 06 06.0**	**+0.9**
WHYH	**Whyalla**	**42.22**	**240**	P	**P**	**14 06 08.2**	**+0.6**
KHLU	**Kahalu`u**	**43.16**	**32**	P	**P**	**14 06 15.4**	**+0.1**
OOD	**Oodnadatta**	**43.21**	**248**	P	**P**	**14 06 16.2**	**+0.7**
MWH	**Moku'aweowe**	**43.22**	**32**	P	**P**	**14 06 15.9**	**-0.4**
HUH	**Hualalai**	**43.27**	**32**	P	**P**	**14 06 16.0**	**-0.3**
MLOA	**Mauna Loa Obse**	**43.28**	**32**	P	**P**	**14 06 15.7**	**-0.8**
MLH	**Mauna Loa**	**43.34**	**33**	P	**P**	**14 06 16.9**	**+0.1**
HMH	**Humu'ula Sheep**	**43.38**	**33**	P	**P**	**14 06 17.2**	**0.0**
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**14 06 17.4**	**+0.3**
	baz=44,SNR=264						
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**14 06 16.8**	**-0.4**
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**14 06 17.5**	**+0.3**
POHA	**Pohakuloa**	**43.48**	**32**	P	**P**	**14 06 17.8**	**-0.1**
POHA	**Pohakuloa**	**43.48**	**32**	P	**P**	**14 06 18.5**	**+0.6**
HPAH	**Hawaii Prepara**	**43.63**	**32**	P	**P**	**14 06 18.3**	**-0.5**
HPAH				PcP	**PcP**	**14 07 53.4**	**-0.8**
MHA	**Mahukona**	**43.66**	**32**	P	**P**	**14 06 19.8**	**+0.8**
MHA	**Mahukona**	**43.66**	**32**	P	**P**	**14 06 19.8**	**+0.8**
KIP	**Kipapa**	**43.72**	**28**	⇑*e*P	**P**	**14 06 19.9**	**+0.5**
KIP				pmax	pmax		
	comp=Z,231nm,2.5s						
HLK	**Haleakala**	**43.97**	**31**	P	**P**	**14 06 21.3**	**-0.4**
KHLH	**Kahului Airpor**	**44.00**	**30**	P	**P**	**14 06 21.7**	**+0.1**
WRAB	**Tennant Creek**	**44.56**	**259**	*d* *i*P	**P**	**14 06 24.9**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,379nm,1.5s						
WRAB	**Tennant Creek**	**44.56**	**259**	P	**P**	**14 06 24.3**	**-1.8**
WRAB	**Tennant Creek**	**44.56**	**259**	P	**P**	**14 06 25.2**	**-0.8**
WRAB	**Tennant Creek**	**44.56**	**259**	P	**P**	**14 06 25.0**	**-1.0**

WRAB				pP	PcP	14 07 57.9	+0.4
AS31	Alice Springs	44.75	254	P	P	14 06 26.6	-1.0
ASAR	Alice Springs	44.75	254	P	P	14 06 27.6	0.0
	comp=Z,1µm,0.7s,baz=88,slow=8.0						
ASAR				PcP	PcP	14 07 58.2	0.0
	comp=Z,26nm,0.5s,baz=105,slow=3.9,SNR=5.6						
ASAR				ScP	ScP	14 11 01.8	+2.6
	comp=Z,17nm,0.9s,baz=99,slow=4.3,SNR=10						
ASAR				S	S	14 12 23.2	-2.2
	comp=Z,24nm,1.0s,baz=86,slow=16,SNR=20						
ASAR				P4KPbc		14 44 11.1	
	comp=Z,0.6nm,1.1s,baz=94,slow=4.9,SNR=5.8						
ASAR	Alice Springs	44.75	254	P	P	14 06 27.1	-0.5
ASAR					PcP	14 07 58.3	0.0
SMPI	Sarmi	44.76	285	P	P	14 06 27.8	+0.2
	comp=Z,3µmcomp=Z,331nm,0.9s						
MULG	Mulgathing	44.82	245	P	P	14 06 28.2	+0.3
SRPI	Serui, Papua	47.08	284	P	P	14 06 45.8	+0.5
	comp=Z,330nm,0.8s						
KDU	Kakadu	47.45	269	P	P	14 06 47.6	-0.4
	baz=47,SNR=132						
KDU	Kakadu	47.45	269	P	P	14 06 47.7	-0.4
BAKI	Biak	47.46	285	P	P	14 06 48.8	+0.6
	comp=Z,7µmcomp=Z,721nm,0.9s						
GUMO	Guam	47.62	308	P	P	14 06 49.2	0.0
	comp=Z,392nm,0.7s,baz=143,slow=7.8,SNR=19						
	comp=Z,392nm,0.7s						
GUMO	Guam	47.62	308	P	P	14 06 48.6	-0.6
GUMO	Guam	47.62	308	P	P	14 06 49.6	+0.4
MTN	Manton Dam	48.69	268	P	P	14 06 56.6	-0.7
	baz=49,SNR=46						
MTN	Manton Dam	48.69	268	P	P	14 06 55.7	-1.6
MTN	Manton Dam	48.69	268	P	P	14 06 56.8	-0.5
SAUI	Saumlaki	49.72	274	P	P	14 07 04.0	-1.0
SAUI	Saumlaki	49.72	274	P	P	14 07 05.9	+0.9
	comp=Z,10µmcomp=Z,778nm,1.0s						
SAUI	Saumlaki	49.72	274	P	P	14 07 06.4	+1.4
WRKA	Warakurna	49.82	252	P	P	14 07 05.5	0.0
	baz=50,SNR=829						
WRKA	Warakurna	49.82	252	P	P	14 07 05.6	0.0
FORT	Forrest	50.02	244	P	P	14 07 06.3	-0.6
	baz=50,SNR=133						
FORT	Forrest	50.02	244	P	P	14 07 05.7	-1.2
FORT	Forrest	50.02	244	P	P	14 07 06.5	-0.4
KNRA	Kununurra	50.40	264	P	P	14 07 09.4	-0.5
	baz=50,SNR=168						
KNRA	Kununurra	50.40	264	P	P	14 07 08.6	-1.2
KNRA	Kununurra	50.40	264	P	P	14 07 09.6	-0.3
SWI	Sorong	52.07	283	P	P	14 07 21.8	-0.2
	comp=Z,12µmcomp=Z,1µm,0.8s						
BNDI	Bandanaira	52.08	278	P	P	14 07 22.2	+0.1
FITZ	Fitzroy Crossi	52.96	260	P	P	14 07 28.4	+0.1
	baz=53,SNR=8.4						
FITZ	Fitzroy Crossi	52.96	260	P	P	14 07 27.7	-0.6
MSAI	Masohi	53.38	279	P	P	14 07 30.9	-0.5
	comp=Z,383nmcomp=Z,45nm,0.7s						
AAI	Ambon	53.96	278	P	P	14 07 35.0	-0.5
	comp=Z,4µmcomp=Z,364nm,1.3s						
LBMI	Labuha	55.65	282	P	P	14 07 47.7	+0.4
	comp=Z,3µmcomp=Z,358nm,0.9s						
DRV	Dumont d'Urvil	55.88	199	P	P	14 07 48.8	+0.8
DRV				pP	pwP	14 09 37.1	+1.1
TNTI	Ternate	56.28	283	P	P	14 07 50.3	-1.4
TNTI	Ternate	56.28	283	P	P	14 07 51.7	0.0
	comp=Z,4µmcomp=Z,464nm,1.0s						
TNTI	Ternate	56.28	283	P	P	14 07 52.7	+1.0
BATI	Baumata	56.42	269	P	P	14 07 53.9	+1.2
	comp=Z,2µmcomp=Z,197nm,0.8s						
SANI	Sanana	56.58	279	P	P	14 07 52.8	-1.0
	comp=Z,4µmcomp=Z,486nm,0.9s						
SANI	Sanana	56.58	279	P	P	14 07 53.4	-0.4
PSA00	Pilbara Seismi	57.86	255	P	P	14 08 00.6	-1.8
PSA00				IAmb	IAmb	14 08 03.0	
	comp=Z,136nm,0.9s						
PSA00	Pilbara Seismi	57.86	255	P	P	14 08 01.2	-1.3
PSA00				IAmb	IAmb	14 08 03.0	
	comp=Z,347nm,0.9s						
PSA00	Pilbara Seismi	57.86	255	P	P	14 08 02.1	-0.3
MBWA	Marble Bar	58.03	256	P	P	14 08 01.9	-1.6
MBWA				IAmb	IAmb	14 08 04.0	
	comp=Z,175nm,0.8s						
MBWA	Marble Bar	58.03	256	P	P	14 08 03.0	-0.5
MBWA	Marble Bar	58.03	256	P	P	14 08 03.1	-0.4
MBWA				PP	PP	14 10 15.5	-4.9
MMRI	Maumere	58.18	271	P	P	14 08 03.5	-1.2
MMRI	Maumere	58.18	271	P	P	14 08 03.9	-0.7
	comp=Z,4µmcomp=Z,412nm,0.9s						
MMRI	Maumere	58.18	271	P	P	14 08 04.2	-0.4
MEEK	Meekatharra	58.42	249	P	P	14 08 05.4	-0.7
	baz=58,SNR=36						
MEEK	Meekatharra	58.42	249	P	P	14 08 05.6	-0.6
JCJ	Chichijima	58.56	319	P	P	14 08 06.5	-0.5
JCJ				IAmb	IAmb	14 08 06.9	
	comp=Z,77nm,0.9s						
JCJ	Chichijima	58.56	319	P	P	14 08 10.1	+3.2
EDFI	Ende, Flores	58.67	270	P	P	14 08 06.9	-1.2
	comp=Z,2µmcomp=Z,208nm,1.0s						
BBSI	Bau Bau	58.74	274	P	P	14 08 09.7	+1.3
	comp=Z,200nmcomp=Z,24nm,1.1s						
KLBR	Kellerberrin	58.84	243	P	P	14 08 08.3	-0.6
	baz=59,SNR=59						
KLBR	Kellerberrin	58.84	243	P	P	14 08 08.3	-0.6
NWAO	Narrogin (SRO)	59.23	242	P	P	14 08 10.8	-0.7
NWAO				pmax	pmax		
	comp=Z,259nm,1.5s						
NWAO	Narrogin (SRO)	59.23	242	P	P	14 08 10.8	-0.7
NWAO				IAmb	IAmb	14 08 12.3	
	comp=Z,259nm,1.4s						
NWAO	Narrogin (SRO)	59.23	242	P	P	14 08 11.2	-0.3
BASI	Baing, Sumba	59.35	268	P	P	14 08 13.3	+0.8
	comp=Z,3µmcomp=Z,330nm,1.3s						
KMSI	Cibinong	59.37	281	P	P	14 08 12.4	-0.2
	comp=Z,3µmcomp=Z,438nm,0.8s						
RKGY	Rocky Gully	59.40	240	P	P	14 08 13.1	+0.5
	baz=59,SNR=6.1						
BLDU	Ballidu	59.79	244	P	P	14 08 14.6	-0.7
	baz=60,SNR=46						
BLDU	Ballidu	59.79	244	P	P	14 08 14.5	-0.7
LUWI	Luwuk	59.95	279	P	P	14 08 16.0	-0.5
LUWI	Luwuk	59.95	279	P	P	14 08 16.9	+0.4
	comp=Z,7µmcomp=Z,563nm,1.4s						
LUWI	Luwuk	59.95	279	P	P	14 08 17.2	+0.7
MUN	Mundaring	60.14	243	P	P	14 08 17.2	-0.3
	baz=60,SNR=14						
MUN	Mundaring	60.14	243	P	P	14 08 17.7	+0.2
DAV	Davao City (W)	60.40	289	P	P	14 08 20.7	+1.2
	comp=Z,240nm,0.4s						
MORW	Morawa	60.48	246	P	P	14 08 18.7	-1.1
	baz=60,SNR=44						
MORW	Morawa	60.48	246	P	P	14 08 19.0	-0.9
MORW				IAmb	IAmb	14 08 19.8	
	comp=Z,77nm,0.7s						
MORW	Morawa	60.48	246	P	P	14 08 19.4	-0.4
MTKN	Mount Kenneth	60.51	243	P	P	14 08 22.2	+2.2
	comp=Z,498nm,0.9s						
BSSI	Bau Bau, Buton	60.53	273	P	P	14 08 19.6	-0.7
	comp=Z,1µmcomp=Z,150nm,1.3s						
SBA	Scott Base	60.68	184	P	P	14 08 22.1	+1.8
SBA				pmax	pmax		
	comp=Z,37nm,1.0s						
SBA	Scott Base	60.68	184	P	P	14 08 22.1	+1.8
VNDA	Vanda	60.70	185	P	P	14 08 21.6	+1.2
	comp=Z,12nm,1.0s,baz=360,slow=7.2,SNR=32						
VNDA				ScP	ScP	14 12 09.5	+2.2
	comp=Z,3.4nm,0.8s,baz=329,slow=5.0,SNR=5.0						
	comp=Z,12nm,1.0s						
VNDA	Vanda	60.70	185	P	P	14 08 21.4	+1.0
VNDA	Vanda	60.70	185	P	P	14 08 22.0	+1.5
APSI	Ampana	61.05	279	P	P	14 08 24.6	+0.8
	comp=Z,5µmcomp=Z,511nm,1.1s						
BKSI	Bulukumba	61.11	274	P	P	14 08 23.1	-1.1
	comp=Z,1µmcomp=Z,110nm,1.6s						
MRSI	Marisa	61.24	281	P	P	14 08 24.4	-0.6
	comp=Z,2µmcomp=Z,198nm,1.2s						
BNSI	Bone	61.40	275	P	P	14 08 25.9	-0.2
	comp=Z,3µmcomp=Z,390nm,1.1s						
KAPI	Kappang	61.56	274	*d i*P	P	14 08 26.8	-0.3
KAPI				pmax	pmax		
	comp=Z,126nm,1.2s						
KAPI	Kappang	61.56	274	P	P	14 08 26.3	-0.8
KAPI	Kappang	61.56	274	P	P	14 08 27.1	0.0
KAPI	Kappang	61.56	274	P	P	14 08 27.0	-0.1
KAPI				pP	pP	14 10 21.0	+6.3
KAPI				PP	PP	14 10 46.3	-5.2
SPSI	Sidrap Palu	61.85	275	P	P	14 08 27.9	-1.1
	comp=Z,2µmcomp=Z,217nm,0.9s						
TTSI	Tana Toraja	62.09	276	P	P	14 08 30.8	+0.2
	comp=Z,918nmcomp=Z,119nm,0.9s						
PLAI	Plampang	62.38	269	P	P	14 08 31.7	-0.8
	comp=Z,6µmcomp=Z,639nm,1.0s						
PLAI	Plampang	62.38	269	P	P	14 08 32.2	-0.3
TOLI2	Tolitoli	62.55	281	P	P	14 08 32.6	-1.0
TOLI2				IAmb	IAmb	14 08 34.4	
	comp=Z,151nm,1.1s						
TOLI2	Tolitoli	62.55	281	P	P	14 08 33.6	0.0
GIRL	Giralia	62.86	253	P	P	14 08 36.3	+0.9
	baz=63,SNR=20						
GIRL	Giralia	62.86	253	P	P	14 08 35.8	+0.4
GIRL	Giralia	62.86	253	P	P	14 08 36.2	+0.8
MPSI	Mapaga	63.11	280	P	P	14 08 36.7	-0.5
	comp=Z,3µmcomp=Z,302nm,0.9s						
JHJ	Hachijo jima 2	64.28	322	P	P	14 08 44.0	-0.2
	comp=Z,116nm,0.4s,baz=190,slow=5.5,SNR=20						
	comp=Z,116nm,0.4s						
DNP	Denpasar	64.87	269	P	P	14 08 48.5	+0.2
	comp=Z,733nm,0.8s						
IGBI	Denpasar	64.89	268	P	P	14 08 48.1	-0.4
	comp=Z,5µmcomp=Z,541nm,0.9s						
SRBI	Singaraja	65.02	269	P	P	14 08 48.6	-0.7
	comp=Z,4µmcomp=Z,300nm,1.1s						
CCD	Concordia, Ant	65.10	194	P	P	14 08 50.0	+0.7
CCD				pP	pwP	14 10 51.8	+11
CCD				PP	PP	14 11 15.4	-6.0
CCD				sP	sP	14 11 31.3	-3.6
SMKI	Samarinda	65.39	278	P	P	14 08 54.0	+2.4
	comp=Z,6µmcomp=Z,384nm,1.2s						
JAGI	Jajag, Banyuwa	65.93	268	P	P	14 08 53.2	-1.9
JAGI	Jajag, Banyuwa	65.93	268	P	P	14 08 53.4	-1.6
	comp=Z,4µmcomp=Z,540nm,0.9s						
JAGI	Jajag, Banyuwa	65.93	268	P	P	14 08 53.8	-1.2
ABJI	Asem Bagus	66.03	269	P	P	14 08 55.2	-0.4
	comp=Z,3µmcomp=Z,345nm,1.1s						
JYT	Yasato	66.28	324	P	P	14 08 56.2	-0.4
KMMI	Kalianget	66.49	270	P	P	14 08 57.5	-1.0
	comp=Z,3µmcomp=Z,288nm,1.0s						
BLJI	Banyuglugur	66.66	269	P	P	14 08 59.0	-0.5
	comp=Z,3µmcomp=Z,302nm,0.9s						
GMJI	Gumukmas	66.66	268	P	P	14 08 58.4	-1.1
	comp=Z,3µmcomp=Z,252nm,1.0s						
BBKI	Banjar Baru	66.69	274	P	P	14 09 00.2	+0.4
	comp=Z,3µmcomp=Z,214nm,1.2s						
MTKI	Muara Teweh, K	67.42	276	P	P	14 09 04.4	+0.2
	comp=Z,98nm,1.0s						
JGF	Kuroka	67.45	322	P	P	14 09 03.2	-0.7
JGF				IAmb	IAmb	14 09 04.8	
	comp=Z,57nm,1.2s						
INU	Inuyama	67.48	322	P	P	14 09 03.6	-0.5
INU	Inuyama	67.48	322	P	P	14 09 04.9	+0.8
TGY	Tagaytay City	67.53	294	P	P	14 09 05.1	+0.2
	comp=Z,172nm,0.5s,baz=276,slow=5.7,SNR=4.2						
	comp=Z,172nm,0.5s						
MJAR	Matsushiro Arr	67.62	323	P	P	14 09 03.9	-1.1
	comp=Z,14nm,0.4s,baz=154,slow=5.9,SNR=71						
	comp=Z,14nm,0.4s						
MJAR	Matsushiro Arr	67.62	323	P	P	14 09 03.9	-1.1
MAJO	Matsushiro	67.62	323	⇑P	P	14 09 04.6	-0.4
MAJO	Matsushiro	67.62	323	P	P	14 09 04.5	-0.4
MAJO				IAmb	IAmb	14 09 05.2	
	comp=Z,32nm,0.6s						
MAJO	Matsushiro	67.62	323	P	P	14 09 04.8	-0.2
MAJO	Matsushiro	67.62	323	P	P	14 09 04.8	-0.2
MAJO				pP	pwP	14 11 01.0	+2.7
MJB9	Matsu-Tunnel	67.62	323	P	P	14 09 04.6	-0.4
MJB9				IAmb	IAmb	14 09 05.1	
	comp=Z,31nm,0.6s						
GRJI	Gresik	67.95	270	P	P	14 09 08.6	+1.2
	comp=Z,2µmcomp=Z,161nm,0.5s						
JOW	Kunigami	67.96	309	P	P	14 09 07.8	+0.6
	comp=Z,31nm,0.9s,baz=136,slow=10,SNR=15						
	comp=Z,31nm,0.9s						
JOW	Kunigami	67.96	309	P	P	14 09 06.4	-0.8
JOW				IAmb	IAmb	14 09 09.2	
	comp=Z,130nm,1.4s						
JOW	Kunigami	67.96	309	P	P	14 09 08.3	+1.1
BWJI	Bawean	68.07	271	P	P	14 09 07.5	-0.7
	comp=Z,80nm,1.1s						
PWJI	Pagerwojo	68.29	268	P	P	14 09 09.0	-0.5
	comp=Z,2µmcomp=Z,204nm,0.6s						
TBJI	Tambak Boyo	68.58	269	P	P	14 09 11.5	+0.3
	comp=Z,4µmcomp=Z,412nm,1.0s						
PCJI	Pacitan	68.84	268	P	P	14 09 12.8	0.0
	comp=Z,8µmcomp=Z,958nm,0.9s						
JSU	Suzuyama	69.15	315	P	P	14 09 13.7	-0.7
UGM	Wanagama	69.54	268	P	P	14 09 17.0	-0.1
	comp=Z,7µmcomp=Z,625nm,1.0s						
UGM	Wanagama	69.54	268	P	P	14 09 17.0	-0.1
UWJI	Ujung Watu	69.55	270	P	P	14 09 17.2	+0.1
	comp=Z,350nm,1.1s						
JHS	Saijyo	69.61	319	IAmb	IAmb	14 09 18.7	
	comp=Z,102nm,0.9s						
YOGI	Yogyakarta	69.78	268	P	P	14 09 19.7	+1.2
	comp=Z,3µmcomp=Z,382nm,1.0s						
SMRI	Semarang	69.85	269	P	P	14 09 19.2	+0.3
	comp=Z,4µmcomp=Z,435nm,0.9s						
SMRI	Semarang	69.85	269	P	P	14 09 19.7	+0.8
PBKI	Pangkalan Bun	69.94	274	P	P	14 09 20.4	+1.0
	comp=Z,7µmcomp=Z,794nm,1.1s						
SHEM	Shemya Is, Ala	70.36	355	P	P	14 09 20.4	-0.6
	comp=Z,31nm,0.5s,baz=20,slow=9.0,SNR=5.6						
	comp=Z,31nm,0.5s						
NIKH	Nikolski High	70.81	6	P	P	14 09 22.9	-0.8
	baz=190						
STKI	Sintang	70.98	276	P	P	14 09 26.3	+0.7
	comp=Z,5µmcomp=Z,176nm,1.1s						
JKA	Kamikawa-asahi	70.98	331	P	P	14 09 24.3	-0.6
ASAJ	Asahikawa	70.98	331	P	P	14 09 26.1	+1.2
	comp=Z,15nm,0.5s,baz=194,slow=3.7,SNR=5.0						
	comp=Z,15nm,0.5s						
SBUM	Sibu	71.05	279	IAmb	IAmb	14 09 27.8	
	comp=Z,86nm,1.0s						
KPJI	Karang Pucung	71.21	268	P	P	14 09 26.6	-0.4
	comp=Z,3µmcomp=Z,334nm,0.8s						
CMJI	Cimerak	71.55	268	P	P	14 09 27.9	-1.0
	comp=Z,2µmcomp=Z,157nm,0.9s						
SKR	Severo-Kuril's	71.59	343	*e*P	P	14 09 33.4	+5.2
SKR				*e*S	S	14 18 03.8	-0.4
SKR				pmax	pmax		
	comp=Z,300nm,2.8s						
UNV	Unalaska Valle	71.94	7	IAmb	IAmb	14 09 30.3	
	comp=Z,174nm,1.6s						
UNV	Unalaska Valle	71.94	7	P	P	14 09 29.2	-1.0
	baz=192						
SSLB	Suanglung	71.99	303	IAmb	IAmb	14 09 31.2	
	comp=Z,68nm,0.9s						
SSLB	Suanglung	71.99	303	P	P	14 09 30.5	-0.8
TPUB	Ta-pu	72.01	302	P	P	14 09 30.5	-0.9
JCJI	Jatiwangi	72.08	269	P	P	14 09 31.9	-0.1
	comp=Z,7µmcomp=Z,613nm,1.1s						
YHNB	Yeheng	72.09	304	P	P	14 09 32.4	+0.5
QSPA	South Pole Qui	72.42	180	P	P	14 09 34.2	+1.0
	comp=Z,61nm,0.9s,baz=12,slow=1.0,SNR=187						
	comp=Z,61nm,0.9s						
QSPA	South Pole Qui	72.42	180	P	P	14 09 34.1	+1.0
QSPA				IAmb	IAmb	14 09 35.3	
	comp=Z,83nm,1.0s						
KSM	Kuching	72.53	277	P	P	14 09 35.6	+1.0
CNJI	Cibinong	72.94	268	P	P	14 09 35.9	-1.0
	comp=Z,4µmcomp=Z,535nm,1.0s						
PET	Petropavlovsk	73.08	346	⇑P	P	14 09 36.5	-0.3
PET	Petropavlovsk	73.08	346	P	P	14 09 36.4	-0.5
PEA0B	Petropavlovsk-	73.39	345	*de*P	P	14 09 38.7	0.0
PEA0B	Petropavlovsk-	73.39	345	P	P	14 09 38.6	0.0
PETK	Petropavlovsk-	73.39	345	P	P	14 09 38.5	-0.2
	comp=Z,6.7nm,0.6s,baz=137,slow=8.5,SNR=52						
PETK				pP	pP	14 11 29.9	-1.0
	comp=Z,4.1nm,1.0s,baz=134,slow=10,SNR=2.9						
	comp=Z,6.7nm,0.6s						
PETK	Petropavlovsk-	73.39	345	P	P	14 09 38.1	-0.5
CBJI	Citeko	73.45	268	P	P	14 09 38.7	-1.2
	comp=Z,548nm,0.9s						
XMIS	Christmas Isla	73.49	264	P	P	14 09 41.1	+1.0
	comp=Z,173nm,1.0s						
DBJI	Dramaga	73.51	268	P	P	14 09 39.9	-0.4
	comp=Z,12µmcomp=Z,318nm,1.1s						
SKJI	Sukabumi	73.57	268	P	P	14 09 39.9	-0.7
	comp=Z,5µmcomp=Z,682nm,0.7s						
TPI	Tanjungpandan	73.75	272	P	P	14 09 41.6	0.0
	comp=Z,694nmcomp=Z,58nm,1.2s						
TJN	Taejon	74.13	317	⇑*e*P	P	14 09 42.0	-1.2
TJN	Taejon	74.13	317	P	P	14 09 46.4	+3.2
	comp=Z,67nm,1.1s						
KSRS	Korea Array	74.42	318	P	P	14 09 45.7	+0.9
	comp=Z,8.8nm,0.7s,baz=131,slow=6.2,SNR=50						
	comp=Z,8.8nm,0.7s						
QZH	Quanzhou	74.43	303	⇓*i*P	P	14 09 45.8	+0.6
QZH				pP	pP	14 11 39.3	+1.2
QZH				S	S	14 18 35.1	-1.6
QZH				ScS	ScS	14 19 06.3	+0.3
QZH				pmax	pmax		
	comp=Z,310nm,2.5s						
KSAR	Wonju Array Be	74.44	318	P	P	14 09 45.1	+0.1
KSAR	Wonju Array Be	74.44	318	P	P	14 09 45.1	+0.1
INCN	Inchon	75.26	318	P	P	14 09 52.5	+2.9
	comp=Z,29nm,1.6s						
BLSI	Bandar Lampung	75.28	269	P	P	14 09 49.0	-1.2
	comp=Z,3µmcomp=Z,292nm,0.8s						
CHIR	Chirikof Islan	75.69	13	P	P	14 09 51.1	-0.4
CHIR				IAmb	IAmb	14 09 52.1	
	comp=Z,86nm,0.8s						
MSHR	Mys Shultsa	75.71	324	*d i*P	P	14 09 53.0	+1.1
MSHR				pmax	pmax		
	comp=Z,29nm,1.0s						
KASI	Kota Agung	75.95	269	P	P	14 09 52.7	-1.2
	comp=Z,5µmcomp=Z,632nm,0.9s						
SBC	Santa Barbara	76.20	47	P	P	14 09 56.3	+1.5
	baz=237						
SCI2	San Clemente I	76.24	49	P	P	14 09 56.2	+1.1
	baz=238,SNR=7.1						
SAO	San Andreas Ge	76.31	44	IAmb	IAmb	14 09 57.5	
	comp=Z,80nm,0.8s						
USRK	Ussuriysk Ar.	76.32	326	P	P	14 09 56.1	+0.9
	comp=Z,61nm,1.3s,baz=142,slow=4.3,SNR=12						
	comp=Z,61nm,1.3s						
PKM	Mcpherson Peak	76.37	46	P	P	14 09 57.6	+1.5
	baz=237,SNR=21						
PMPB	Monarch Peak	76.43	45	IAmb	IAmb	14 09 58.5	
	comp=Z,117nm,1.1s						
PMBI	Palembang	76.44	271	P	P	14 09 58.1	+1.5
	comp=Z,361nm,1.1s						
PMBI	Palembang	76.44	271	P	P	14 09 58.1	+1.5
	comp=Z,361nm,1.1s						
BBGB	Big Mountain B	76.48	44	IAmb	IAmb	14 09 59.2	
	comp=Z,81nm,1.0s						
SMMC	Simmler	76.48	46	P	P	14 09 57.8	+1.3
	baz=237,SNR=22						
LWLI	Liwa	76.51	269	P	P	14 09 56.1	-1.1
	comp=Z,7µmcomp=Z,321nm,0.7s						
CIS	Catalina Islan	76.56	48	P	P	14 09 57.5	+0.7
	baz=238,SNR=6.3						
KCPM	Cahto Peak	76.64	40	P	P	14 09 57.2	-0.1
KCPM				IAmb	IAmb	14 09 59.5	
	comp=Z,92nm,1.2s						
BCW	Bitter Crk WRg	76.68	46	IAmb	IAmb	14 09 60.0	
	comp=Z,81nm,0.8s						
SII	Sitkinak Islan	76.69	14	IAmb	IAmb	14 09 57.8	
	comp=Z,111nm,0.8s						
SII	Sitkinak Islan	76.69	14	P	P	14 09 56.7	-0.3
	baz=204,SNR=6.1						
SII	Sitkinak Islan	76.69	14	P	P	14 09 57.1	+0.1
FMP	Fort Macarthur	76.81	48	P	P	14 09 59.1	+0.9
	baz=238						
KMRM	Mail Ridge	76.88	40	P	P	14 10 00.1	+1.5
OSI	Osito Audit: C	76.98	47	P	P	14 10 00.3	+1.1
	baz=238						
DECC	Green Verdugo	77.06	48	P	P	14 10 00.7	+1.0
	baz=238						
ARVC	Arvin	77.18	47	P	P	14 10 01.2	+1.0
	baz=238,SNR=13						
109C	Camp Elliot, M	77.23	49	P	P	14 10 01.4	+0.9
	baz=239,SNR=5.9						
DSRI	Dabo	77.36	274	P	P	14 10 02.1	+0.4
	comp=Z,1µmcomp=Z,83nm,1.2s						
VES	Vestal, Richgr	77.39	46	P	P	14 10 02.0	+0.7
	baz=237,SNR=25						
VOG	Valley Oaks Go	77.45	45	P	P	14 10 02.3	+0.7
	baz=237						
OHAK	Old Harbor	77.50	14	IAmb	IAmb	14 10 02.2	
	comp=Z,70nm,0.8s						
OHAK	Old Harbor	77.50	14	P	P	14 10 01.4	+0.1
	baz=205,SNR=9.2						
MURC	Murrieta	77.53	49	P	P	14 10 03.2	+1.0
	baz=239,SNR=21						
BFSC	Mount Baldy Ra	77.53	48	P	P	14 10 02.9	+0.6
	baz=238,SNR=32						
EDW2	Edwards Air Fo	77.63	47	P	P	14 10 03.7	+0.9
	baz=238,SNR=97						
NJ2	Nanjing	77.67	309	⇓P	P	14 10 03.6	+0.7
NJ2				pmax	pmax		
	comp=Z,44nm,0.9s						
ISA	Isabella, Lake	77.71	46	IAmb	IAmb	14 10 05.3	
	comp=Z,94nm,0.9s						
ISA	Isabella, Lake	77.71	46	P	P	14 10 04.2	+1.0
	baz=238,SNR=91						
CMB	Columbia Colle	77.72	43	IAmb	IAmb	14 10 04.9	
	comp=Z,60nm,0.9s						
MONP2	Monument Peak	77.73	50	P	P	14 10 04.6	+1.1
	baz=240,SNR=69						
KSXB	Camp Six Broad	77.75	39	P	P	14 10 04.0	+0.8
MNAI	Manna	77.75	269	P	P	14 10 03.8	0.0
IKP	In-Ko-Pah, Jac	77.83	50	P	P	14 10 05.1	+1.2
	baz=240,SNR=31						
TPRI	Tanjung Pinang	77.84	275	P	P	14 10 05.0	+0.7
	comp=Z,132nm,1.1s						
MDJ	Mudanjiang	77.90	325	P	P	14 10 05.2	+1.4
	comp=Z,56nm,1.0s						
JMBI	JAMBI	77.91	272	P	P	14 10 06.5	+1.9
	comp=Z,2µmcomp=Z,224nm,1.0s						
YUH	Yuha Desert	77.97	50	P	P	14 10 05.2	+0.7
YUH				IAmb	IAmb	14 10 06.7	
	comp=Z,67nm,1.0s						
PFO	Pinyon Flats O	78.06	49	P	P	14 10 05.7	+0.5
PFO				pmax	pmax		
	comp=Z,24nm,0.9s						
PFO	Pinyon Flats O	78.06	49	P	P	14 10 05.7	+0.5
PFO	Pinyon Flats O	78.06	49	P	P	14 10 06.0	+0.8
	baz=239,SNR=10.0						
TPFO	Pinon Flats	78.07	49	P	P	14 10 06.0	+0.8
	baz=239,SNR=15						
BBRC	Big Bear Solar	78.07	48	P	P	14 10 06.2	+0.9
	baz=239						
L02F	Cave Junction	78.11	38	P	P	14 10 05.6	+0.6
	baz=233						
LRMC	Laurel Mtn Rad	78.16	47	P	P	14 10 06.5	+0.8
	baz=238,SNR=41						
KDAK	Kodiak Island	78.17	14	P	P	14 10 05.1	+0.1
	comp=Z,43nm,0.7s,baz=242,slow=3.0,SNR=46						
	comp=Z,43nm,0.7s						
KDAK	Kodiak Island	78.17	14	*de*P	P	14 10 05.4	+0.5
KDAK				pmax	pmax		
	comp=Z,103nm,1.0s						
KDAK	Kodiak Island	78.17	14	P	P	14 10 05.0	0.0
KDAK				IAmb	IAmb	14 10 06.1	
	comp=Z,232nm,1.6s						
KDAK	Kodiak Island	78.17	14	P	P	14 10 05.1	+0.1
	baz=205						
SWSC	Sam W. Stewart	78.21	50	P	P	14 10 06.9	+1.1
	baz=240,SNR=16						
RRX	Edison Barstow	78.33	48	P	P	14 10 07.2	+0.8
	baz=239						
MDPB	Devils Postpil	78.36	44	IAmb	IAmb	14 10 08.8	
	comp=Z,86nm,0.9s						
CWC	Cottonwood Cre	78.40	46	P	P	14 10 07.8	+0.9
	baz=238						
K02D	Willamette Mer	78.40	38	P	P	14 10 07.6	+0.9
	baz=233						
OMMB	Old Mammoth Mi	78.41	44	IAmb	IAmb	14 10 09.1	
	comp=Z,77nm,1.2s						
J01E	Myrtle Point	78.53	37	P	P	14 10 08.3	+1.1
	baz=232						
MLAC	Mammoth, Mammo	78.53	44	P	P	14 10 08.9	+1.2
	baz=237,SNR=22						
SLBS	Sierra La Lagu	78.53	61	P	P	14 10 08.4	+0.6
SLBS				IAmb	IAmb	14 10 10.6	
	comp=Z,77nm,1.1s						
BELC	Belle Mtn. Jos	78.59	49	P	P	14 10 09.0	+1.0
	baz=240,SNR=43						
MPMC	Manual Prospec	78.60	46	P	P	14 10 09.0	+1.0
	baz=238,SNR=70						
TIN	Tinemaha, Big	78.62	45	P	P	14 10 09.6	+1.5
	baz=238,SNR=13						
GSC	Goldstone, Bar	78.68	47	P	P	14 10 09.2	+0.8
	baz=239,SNR=26						
MYKOM	Kota Tinggi	78.75	276	IAmb	IAmb	14 10 10.8	
	comp=Z,168nm,1.3s						
BEKR	Beckworth	78.77	42	IAmb	IAmb	14 10 10.7	
	comp=Z,84nm,1.2s						
HEC	Hector,Ludlow	78.77	48	P	P	14 10 09.6	+0.7
	baz=239,SNR=44						
BC3	Big Chuckawall	78.81	49	P	P	14 10 10.3	+1.1
	baz=240,SNR=23						

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L04D  Klamath Falls    78.92  39  IAmb     IAmb     14 10 11.4
      comp=Z,66nm,0.8s
L04D  Klamath Falls    78.92  39  P        P        14 10 10.4 +0.8
      baz=234,SNR=15
GLA   Glamis           78.97  50  P        P        14 10 11.4 +1.5
      baz=240,SNR=12
Q19K  Cape Douglas,    78.98  13  IAmb     IAmb     14 10 09.9
      comp=Z,72nm,0.8s
Q19K  Cape Douglas,    78.98  13  P        P        14 10 08.9 -0.4
      baz=204,SNR=7.8
YERR  Yerington        79.00  43  IAmb     IAmb     14 10 11.9
      comp=Z,90nm,0.9s
P18K  Big Mountain,    79.08  12  IAmb     IAmb     14 10 10.1
      comp=Z,88nm,0.8s
P18K  Big Mountain,    79.08  12  P        P        14 10 09.1 -0.7
      baz=203,SNR=18
LHV   Little Huntoon   79.08  44  IAmb     IAmb     14 10 12.8
      comp=Z,112nm,1.0s
I02E  Swisshome, OR    79.15  37  P        P        14 10 10.8 +0.3
I02E  Swisshome, OR    79.15  37  P        P        14 10 11.7 +1.2
      baz=232
I03D  Drain, OR        79.19  37  P        P        14 10 11.5 +0.8
      baz=233
GMRC  Granite Mounta   79.23  48  P        P        14 10 12.1 +0.7
      baz=240,SNR=23
FURC  Furnace Creek,   79.25  46  P        P        14 10 12.1 +0.9
      baz=239,SNR=14
IRM   Iron Mountain    79.28  49  P        P        14 10 12.7 +1.2
      baz=240,SNR=27
PAHR  Pah Rah Range    79.30  42  IAmb     IAmb     14 10 13.6
      comp=Z,56nm,0.9s
NVAR  Mina Array Bea   79.31  44  P        P        14 10 12.6 +0.8
      comp=Z,50nm,0.8s,baz=225,slow=9.1,SNR=356
NVAR                              pP       pwP      14 12 08.5 -0.7
      comp=Z,8.4nm,1.1s,baz=224,slow=5.0,SNR=5.7
NVAR                              PKKPbc   PKKPbc   14 28 59.5 +1.0
      comp=Z,0.3nm,0.5s,baz=72,slow=5.0,SNR=3.7
      comp=Z,50nm,0.8s
SHOC  Shoshone, Teco   79.36  47  P        P        14 10 12.7 +0.8
      baz=239,SNR=15
TUQ   Turquoise Moun   79.37  48  P        P        14 10 12.9 +0.8
      baz=239,SNR=10
NV11  Mina Array Sit   79.41  44  IAmb     IAmb     14 10 14.2
      comp=Z,76nm,1.0s
K04D  Chiloquin, OR    79.49  39  P        P        14 10 13.3 +0.7
      baz=234
O18K  Koktuh Hills     79.51  12  IAmb     IAmb     14 10 12.7
      comp=Z,131nm,0.8s
O18K  Koktuh Hills     79.51  12  P        P        14 10 11.7 -0.4
      baz=203,SNR=49
J04D  Umpqua Nationa   79.64  38  P        P        14 10 14.4 +1.0
      baz=234,SNR=16
BUCK  Buck Mountain    79.70  37  IAmb     IAmb     14 10 15.5
      comp=Z,76nm,1.1s
P19K  Oil Pt           79.73  13  P        P        14 10 12.8 -0.4
      baz=204,SNR=9.1
CN2   Changchun        79.73 322 eP        P        14 10 13.4 -0.2
CN2                              epP       pwP      14 12 10.1 -1.6
CN2                              eS        S        14 19 32.9 +0.8
CN2                               pmax     pmax
      comp=Z,60nm,1.2s
KVN   Kaiserville      79.78  43  IAmb     IAmb     14 10 16.0
      comp=Z,104nm,1.3s
I04A  Tendick Farm,    79.79  38  P        P        14 10 14.4 +0.4
      baz=234,SNR=9.7
BNX   BinXian          79.81 325 ⇓P        P        14 10 14.1 +0.2
BNX                               pmax     pmax
      comp=Z,96nm,1.0s
BNX                               pmax     pmax
      comp=Z,290nm,3.8s
KLR   Kul'dur          79.82 329  P        P        14 10 14.5 +0.5
      comp=Z,3.9nm,0.7s,baz=221,slow=4.4,SNR=8.4
      comp=Z,3.9nm,0.7s
KLR   Kul'dur          79.82 329⇓eP        P        14 10 14.4 +0.5
KLR                               pmax     pmax
      comp=Z,12nm,1.3s
KRJI  Kerinci          79.85 271  P        P        14 10 15.1  0.0
      comp=Z,287nm,1.0s
HEBO  Mount Hebo       79.88  36  P        P        14 10 14.1 -0.4
TPNV  Topopah Spring   79.92  46  P        P        14 10 15.9 +0.9
      baz=239,SNR=48
214A  Organ Pipe Nat   79.94  52  P        P        14 10 16.5 +1.4
      baz=242,SNR=11
MOD   Modoc Plateau    79.95  40  IAmb     IAmb     14 10 16.8
      comp=Z,53nm,0.7s
NEE2  Needles Airpor   79.96  49  P        P        14 10 16.2 +1.1
      baz=240,SNR=8.6
O19K  Port Alsworth    80.00  12  P        P        14 10 14.1 -0.5
      baz=203,SNR=57
H04D  Lebanon          80.03  37  P        P        14 10 16.1 +0.9
      baz=233,SNR=5.1
K05A  Summer Lake      80.06  39  IAmb     IAmb     14 10 17.8
      comp=Z,111nm,1.0s
HOM   Homer            80.08  13  P        P        14 10 15.6 +0.5
      baz=206
PDMCI Parker Dam,Lak   80.08  49  P        P        14 10 16.9 +1.3
      baz=241,SNR=12
G03D  McMinnville, O   80.15  36  P        P        14 10 17.0 +1.2
      baz=233
N18K  Kilae Creek      80.15  11  P        P        14 10 15.1 -0.4
      baz=202,SNR=11
J05D  Fort Rock, OR    80.18  39  P        P        14 10 17.4 +1.2
      baz=234,SNR=61
O20K  Slope Mountain   80.25  13  P        P        14 10 15.5 -0.5
      baz=205
BRLK  Bradley Lake     80.34  14  IAmb     IAmb     14 10 17.1
      comp=Z,61nm,0.8s
WHN   Wuhan            80.35 306 ⇑P        P        14 10 18.3 +1.2
WHN                               pmax     pmax
      comp=Z,490nm,1.9s
BRSE  Bradley Lake S   80.35  14  P        P        14 10 16.4 -0.1
      baz=207,SNR=15
H04A  Detroit Lake     80.45  37  IAmb     IAmb     14 10 18.7
      comp=Z,184nm,1.7s
N19K  Bonanza Creek    80.54  12  P        P        14 10 16.5 -1.0
N19K  Bonanza Creek    80.54  12  P        P        14 10 16.6 -0.9
      baz=203,SNR=13
PINE  Pine Mountain    80.65  38  IAmb     IAmb     14 10 20.9
      comp=Z,99nm,0.9s
I05D  Terrebonne, OR   80.73  38  P        P        14 10 19.7 +0.7
      baz=234,SNR=19
MA2   Magadan          80.90 345  P        P        14 10 18.6 -0.7
      comp=Z,5.3nm,0.6s,baz=130,slow=7.5,SNR=15
MA2                               pP       pP       14 12 12.9 -1.4
      comp=Z,0.8nm,0.5s,baz=146,slow=9.0,SNR=1.5
      comp=Z,5.3nm,0.6s
MA2   Magadan          80.90 345  P        P        14 10 18.1 -1.3
MA2   Magadan          80.90 345  P        P        14 10 19.2 -0.1
PRN   Pahroc Range     80.97  46  IAmb     IAmb     14 10 22.9
      comp=Z,96nm,1.0s
BKNI  Bangkinang       80.97 273  P        P        14 10 21.5 +0.7
      comp=Z,4µmcomp=Z,368nm,1.2s
BKNI  Bangkinang       80.97 273  P        P        14 10 21.9 +1.1
SEW   Seward           80.97  14  P        P        14 10 19.1 -0.5
      baz=208,SNR=6.2
F04A  Amboy            81.06  36  IAmb     IAmb     14 10 22.1
      comp=Z,116nm,1.4s
R11A  Troy Canyon, C   81.09  45  P        P        14 10 21.6 +0.5
      baz=239,SNR=44
BMN   Battle Mountai   81.09  43  IAmb     IAmb     14 10 22.9
      comp=Z,87nm,1.0s
NLWA  Neilton Lookou   81.15  34  IAmb     IAmb     14 10 23.0
      comp=Z,61nm,1.2s
O22K  Cooper Landing   81.25  14  IAmb     IAmb     14 10 21.4
      comp=Z,68nm,0.6s
O22K  Cooper Landing   81.25  14  P        P        14 10 20.6 -0.5
      baz=208,SNR=11
G05D  Wamic, OR        81.28  37  P        P        14 10 22.2 +0.6
      baz=234,SNR=9.4
WVOR  Wild Horse Val   81.28  40  IAmb     IAmb     14 10 23.9
      comp=Z,113nm,1.1s
GAMB  Gambell          81.32   3  P        P        14 10 21.7 +0.3
GAMB  Gambell          81.32   3  P        P        14 10 21.7 +0.3
      baz=187,SNR=5.1
SPCR  Spurr Chakacha   81.35  13  P        P        14 10 20.5 -1.2
      baz=205,SNR=9.5
E04D  Cinebar          81.35  35  P        P        14 10 22.9 +0.9
      baz=233,SNR=10
M19K  Big River Lodg   81.56  11  P        P        14 10 22.2 -0.5
M19K  Big River Lodg   81.56  11  P        P        14 10 22.2 -0.5
      baz=203
F05D  White Salmon     81.57  36  P        P        14 10 23.8 +0.6
      baz=234,SNR=10.0
D04E  Lakebay          81.61  35  P        P        14 10 24.8 +1.5
      baz=233,SNR=5.6
TUC   Tucson           81.63  52  P        P        14 10 25.5 +1.7
TUC                               pmax     pmax
      comp=Z,82nm,1.0s
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TUC   Tucson           81.63  52  P        P        14 10 25.5 +1.7
TUC                               IAmb     IAmb     14 10 26.8
      comp=Z,82nm,0.9s
TUC   Tucson           81.63  52  P        P        14 10 25.5 +1.7
      baz=243
D03D  Eldon            81.66  34  P        P        14 10 24.3 +0.8
      baz=232,SNR=13
I07A  Izee             81.67  39  IAmb     IAmb     14 10 25.8
      comp=Z,72nm,0.9s
L19K  White Mountain   81.73  11  P        P        14 10 23.5 -0.1
      baz=203,SNR=22
B04A  Port Angeles     81.76  34  IAmb     IAmb     14 10 26.1
      comp=Z,116nm,1.6s
M20K  Styx River       81.78  12  P        P        14 10 23.2 -0.7
      baz=204,SNR=7.5
RC01  Rabbit Creek A   81.78  14  IAmb     IAmb     14 10 24.4
      comp=Z,51nm,1.0s
RC01  Rabbit Creek A   81.78  14  P        P        14 10 23.4 -0.5
      baz=208,SNR=9.5
J08A  Circle Bar Ran   81.89  40  IAmb     IAmb     14 10 26.8
      comp=Z,109nm,1.1s
LCMT  Little Creek M   82.03  47  IAmb     IAmb     14 10 28.0
      comp=Z,60nm,0.9s
CBB   Campbell River   82.04  31  IAmb     IAmb     14 10 27.1
      comp=Z,57nm,1.1s
D05A  Enumclaw         82.05  35  IAmb     IAmb     14 10 27.7
      comp=Z,168nm,1.3s
BBB   Bella Bella      82.14  29  P        P        14 10 25.6 -0.2
BBB                               IAmb     IAmb     14 10 27.3
      comp=Z,78nm,1.2s
PGC   Sidney           82.15  33  IAmb     IAmb     14 10 27.5
      comp=Z,103nm,1.4s
L20K  Farewell, AK     82.19  11  P        P        14 10 25.4 -0.5
      baz=204,SNR=26
CCUT  Cedar City       82.21  47  IAmb     IAmb     14 10 29.3
      comp=Z,60nm,1.0s
GLI   Glacier Island   82.22  15  IAmb     IAmb     14 10 26.3
      comp=Z,98nm,0.7s
GLI   Glacier Island   82.22  15  P        P        14 10 25.4 -0.7
      baz=210,SNR=20
TTA   Tatalina         82.23  10  P        P        14 10 26.4 +0.2
      baz=202,SNR=29
IPM   Ipoh             82.27 277  P        P        14 10 28.2 +0.8
EYAK  Cordova Ski Ar   82.28  16  P        P        14 10 25.7 -0.6
      baz=211
M22K  Willow           82.29  13  P        P        14 10 25.7 -0.6
      baz=207
SISI  Saibi            82.34 271  P        P        14 10 29.2 +1.4
      comp=Z,69nm,1.2s
PSUT  Pine Spring      82.35  46  IAmb     IAmb     14 10 29.4
      comp=Z,47nm,0.8s
KNK   Knik Glacier     82.36  14  IAmb     IAmb     14 10 27.3
      comp=Z,41nm,0.8s
KNK   Knik Glacier     82.36  14  P        P        14 10 26.3 -0.5
      baz=209,SNR=14
PMR   Palmer           82.37  14  IAmb     IAmb     14 10 27.1
      comp=Z,97nm,1.4s
PMR   Palmer           82.37  14  P        P        14 10 26.2 -0.6
      baz=208,SNR=18
SZCU  Shurtz Canyon    82.42  47  IAmb     IAmb     14 10 30.3
      comp=Z,82nm,1.2s
BELA  Belgrano 2       82.45 173  IAmb     IAmb     14 10 28.4
      comp=Z,79nm,0.8s
ELK   Elko             82.54  43  IAmb     IAmb     14 10 30.2
      comp=Z,58nm,0.9s
ANM   Nome             82.56   6  P        P        14 10 27.7  0.0
ANM                               pmax     pmax
      comp=Z,27nm,1.3s
ANM   Nome             82.56   6  P        P        14 10 27.7  0.0
ANM   Nome             82.56   6  P        P        14 10 28.0 +0.2
      baz=193
GHO   Glory Hole Cre   82.57  14  IAmb     IAmb     14 10 28.4
      comp=Z,89nm,0.8s
A04D  Lummi Island     82.58  34  P        P        14 10 29.0 +0.8
      baz=233,SNR=7.4
B05A  Bryant           82.63  34  P        P        14 10 29.0 +0.6
      baz=233,SNR=24
WUAZ  Wupatki          82.66  49  IAmb     IAmb     14 10 31.5
      comp=Z,100nm,1.1s
WUAZ  Wupatki          82.66  49  P        P        14 10 30.4 +1.3
      baz=242,SNR=67
G08A  Pilot Rock       82.67  38  IAmb     IAmb     14 10 30.6
      comp=Z,77nm,1.1s
SML   Sawmill          82.74  14  P        P        14 10 28.3 -0.4
      baz=209
DIV   Divide           82.77  15  IAmb     IAmb     14 10 29.4
      comp=Z,60nm,0.7s
CUT   Chulitna         82.84  13  P        P        14 10 28.4 -0.7
      baz=207,SNR=25
M23K  Glacier View     82.87  14  P        P        14 10 28.6 -0.7
      baz=210,SNR=8.0
E07A  Sunnyside        82.87  36  IAmb     IAmb     14 10 31.5
      comp=Z,106nm,1.2s
KULM  Kulim            82.88 278  IAmb     IAmb     14 10 32.3
      comp=Z,106nm,1.1s
PPLA  Purkeypile       82.89  12  P        P        14 10 28.0 -1.6
      baz=205
BMRM  Bremner River    82.93  16  IAmb     IAmb     14 10 30.3
      comp=Z,47nm,0.8s
BMRM  Bremner River    82.93  16  P        P        14 10 29.3 -0.4
      baz=212,SNR=12
HAWA  Hanford          82.96  37  IAmb     IAmb     14 10 31.9
      comp=Z,89nm,1.1s
K20K  Telida           82.96  11  IAmb     IAmb     14 10 30.6
      comp=Z,58nm,0.8s
K20K  Telida           82.96  11  P        P        14 10 29.7 -0.1
      baz=204,SNR=50
WAX   Waxell Ridge     82.97  17  IAmb     IAmb     14 10 31.0
      comp=Z,83nm,0.8s
SCM   Sheep Creek Mo   83.00  14  P        P        14 10 29.7 -0.3
      baz=210,SNR=29
KLU   Klutina          83.04  15  P        P        14 10 29.8 -0.5
      baz=211,SNR=8.3
ISLE  Juniper Island   83.24  17  IAmb     IAmb     14 10 32.1
      comp=Z,67nm,0.9s
HNS   HongShan         83.25 313 ⇑P        P        14 10 33.1 +1.3
HNS                               pmax     pmax
      comp=Z,35nm,1.5s
MTPU  Mount Pierson    83.27  47  IAmb     IAmb     14 10 35.2
      comp=Z,79nm,1.0s
WRAK  Wrangell Islan   83.31  24  P        P        14 10 32.2 +0.6
      baz=224,SNR=5.7
TNA   Tin City         83.33   4  P        P        14 10 31.7 +0.2
      baz=190
PNL   Peninsula        83.34  19  P        P        14 10 31.8  0.0
      baz=217
CAST  Castle Rocks     83.39  12  IAmb     IAmb     14 10 31.7
      comp=Z,67nm,0.8s
CAST  Castle Rocks     83.39  12  P        P        14 10 30.2 -1.7
      baz=205,SNR=74
PINM  Pinnacle         83.42  18  P        P        14 10 32.1 -0.1
      baz=216
TABL  Table Mountain   83.44  18  IAmb     IAmb     14 10 33.4
      comp=Z,75nm,0.7s
VRDI  Verde Repeater   83.45  16  IAmb     IAmb     14 10 33.2
      comp=Z,44nm,1.0s
N25K  Chitina, Valde   83.47  16  IAmb     IAmb     14 10 33.2
      comp=Z,76nm,0.7s
N25K  Chitina, Valde   83.47  16  P        P        14 10 32.2 -0.2
      baz=212,SNR=34
SEY   Seymchan         83.48 347  P        P        14 10 32.1 -0.2
      comp=Z,23nm,0.5s,baz=150,slow=5.7,SNR=180
SEY                               pP       pP       14 12 27.6 -0.9
      comp=Z,8.2nm,1.0s,baz=115,slow=5.3,SNR=6.2
      comp=Z,23nm,0.5s
M24K  Tolsona, Glenn   83.51  15  P        P        14 10 32.7 +0.2
      baz=211,SNR=19
BJI   Beijing          83.51 315  P        P        14 10 33.5 +0.5
BJI                               SKS      SKSac    14 20 04.0  0.0
BJI                               S        SKKSac   14 20 12.8 +2.5
BJI                               pmax     pmax
      comp=Z,35nm,1.0s
GLB   Gilahina Butte   83.54  16  IAmb     IAmb     14 10 33.3
      comp=Z,49nm,0.6s
MFID  Camas Ranch      83.54  41  IAmb     IAmb     14 10 35.1
      comp=Z,70nm,1.1s
WAT6  Susitna Watana   83.55  14  P        P        14 10 32.4 -0.5
      baz=209,SNR=38
LYN   LuoYang          83.56 309⇓iP        P        14 10 34.1 +0.7
LYN                               pP       pP       14 12 33.2 +2.9
LYN                               SKS      SKSac    14 20 04.7 +0.1
LYN                               S        ScS      14 20 16.4 -4.0
LYN                               sS       sS       14 23 31.4 -7.5
LYN                               pmax     pmax
      comp=Z,50nm,1.4s
LYN                               pmax     pmax
      comp=Z,280nm,5.8s
WAT1  Susitna Watana   83.59  13  P        P        14 10 32.3 -0.7
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      baz=209
W18A  Petrified Fore   83.67  50  P        P        14 10 35.2 +1.0
      baz=243,SNR=6.2
D08A  Wollman Farm,    83.68  36  IAmb     IAmb     14 10 35.4
      comp=Z,56nm,1.0s
J20K  Nowinta River    83.70  10  IAmb     IAmb     14 10 34.3
      comp=Z,36nm,0.8s
J20K  Nowinta River    83.70  10  P        P        14 10 33.1 -0.3
      baz=203,SNR=40
KTH   Kantishna Hill   83.73  12  IAmb     IAmb     14 10 33.3
      comp=Z,42nm,0.9s
PSI   Prapat           83.74 275  P        P        14 10 34.5 -0.4
      comp=Z,118nm,0.9s,baz=124,slow=3.9,SNR=71
      comp=Z,118nm,0.9s
CHUM  Lake Minchumin   83.76  11  P        P        14 10 32.5 -1.2
      baz=205,SNR=9.1
GCSA  Galena City Sc   83.79   9  P        P        14 10 33.9 +0.2
      baz=201,SNR=5.6
BARN  Barnard Glacie   83.80  17  IAmb     IAmb     14 10 35.2
      comp=Z,62nm,0.9s
DUG   Dugway, Tooele   83.87  45  P        P        14 10 35.4 +0.4
      baz=241,SNR=18
121A  Cookes Peak, D   84.00  53  P        P        14 10 37.5 +1.6
      baz=245
121A  Cookes Peak, D   84.00  53  P        P        14 10 37.3 +1.5
      baz=245
HARP  HAARP            84.00  15  P        P        14 10 34.9 -0.1
      baz=212,SNR=17
F10A  Beach Ranch, E   84.06  38  IAmb     IAmb     14 10 37.0
      comp=Z,82nm,0.9s
DHY   Denali Highway   84.06  14  IAmb     IAmb     14 10 35.9
      comp=Z,113nm,1.7s
DHY   Denali Highway   84.06  14  P        P        14 10 34.7 -0.7
      baz=210,SNR=18
MAW   Mawson           84.08 200  P        P        14 10 36.2 +0.8
      comp=Z,10nm,0.7s,baz=176,slow=7.3,SNR=13
      comp=Z,10nm,0.7s
MAW   Mawson           84.08 200  P        P        14 10 36.3 +1.0
      baz=84,SNR=8.8
BGU   Big Grassy Mou   84.08  44  P        P        14 10 35.8 -0.3
PMSA  Palmer Station   84.11 157  P        P        14 10 36.5 +1.0
      comp=Z,33nm,1.1s,baz=244,slow=4.2,SNR=7.5
      comp=Z,33nm,1.1s
PMSA  Palmer Station   84.11 157  P        P        14 10 36.0 +0.5
PMSA                              IAmb     IAmb     14 10 38.1
      comp=Z,73nm,1.3s
PMSA  Palmer Station   84.11 157 eP        P        14 10 36.8 +1.2
LLLB  Lillooet         84.15  32  P        P        14 10 35.6 -0.4
B08A  Colville Reser   84.19  35  IAmb     IAmb     14 10 37.1
      comp=Z,39nm,0.8s
BPAW  Bear Paw Mtn.    84.21  12  P        P        14 10 34.3 -1.7
      baz=206,SNR=12
TSI   Tuntungan        84.30 275  P        P        14 10 37.8 +0.3
      comp=Z,7µmcomp=Z,246nm,0.8s
PAX   Paxson           84.42  15  P        P        14 10 36.3 -0.8
PAX                               pmax     pmax
      comp=Z,23nm,0.8s
PAX   Paxson           84.42  15  P        P        14 10 36.3 -0.8
PAX   Paxson           84.42  15  P        P        14 10 36.1 -1.0
      baz=212,SNR=18
SKAG  Skagway          84.49  21  P        P        14 10 37.8 +0.5
SKAG  Skagway          84.49  21  P        P        14 10 38.2 +0.8
      baz=221,SNR=6.8
HLID  Hailey           84.50  41  IAmb     IAmb     14 10 40.2
      comp=Z,44nm,0.8s
HLID  Hailey           84.50  41  P        P        14 10 39.1 +1.0
      baz=240,SNR=83
TMUT  Trail Mountain   84.53  46  IAmb     IAmb     14 10 40.9
      comp=Z,57nm,1.2s
M26K  Nabesna, AK      84.55  16  IAmb     IAmb     14 10 38.7
      comp=Z,56nm,0.9s
M26K  Nabesna, AK      84.55  16  P        P        14 10 37.5 -0.3
      baz=214,SNR=52
GSI   Gunungsitoli     84.57 273  P        P        14 10 39.8 +0.9
      comp=Z,3µmcomp=Z,335nm,1.0s
GSI   Gunungsitoli     84.57 273  P        P        14 10 40.2 +1.3
BWN   Browne           84.58  12  IAmb     IAmb     14 10 38.0
      comp=Z,96nm,1.1s
HVU   Hansel Valley    84.67  43  IAmb     IAmb     14 10 40.8
      comp=Z,48nm,1.2s
YUK6  Outpost Mounta   84.67  18  P        P        14 10 38.6  0.0
      baz=218
KIDD  KIDD Seismic O   84.67  54  P        P        14 10 40.6 +1.5
      baz=246
YUK3  Moose Creek      84.72  17  P        P        14 10 38.8  0.0
      baz=216,SNR=36
GYA   Guiyang          84.80 300⇓iP        P        14 10 40.7 +0.8
GYA                               pP       pP       14 12 40.4 +3.2
GYA                               PP       PP       14 14 05.8 -0.5
GYA                               SKS      SKSac    14 20 14.1 +1.0
GYA                               S        S        14 20 23.2 -0.3
GYA                               pmax     pmax
      comp=Z,51nm,1.1s
GYA                               pmax     pmax
      comp=Z,360nm,3.7s
M27K  Edge Creek, AK   84.81  16  IAmb     IAmb     14 10 40.4
      comp=Z,65nm,1.0s
M27K  Edge Creek, AK   84.81  16  P        P        14 10 39.2 +0.1
      baz=215
HYT   Haines Junctio   84.84  19  P        P        14 10 39.4 +0.2
      baz=219,SNR=9.3
S34M  Telegraph Cree   84.84  23  P        P        14 10 40.1 +1.0
      baz=225
ZEA   Zeya             84.89 331 eP        P        14 10 39.8 +0.3
ZEA                               pmax     pmax
      comp=N,10.0nm,1.4s
ZEA                               pmax     pmax
      comp=Z,20nm,1.5s
YUK4  Talbot Arm       84.90  18  P        P        14 10 40.0 +0.4
      baz=218,SNR=6.3
L26K  Log Cabin Wild   84.98  15  P        P        14 10 40.2 +0.4
      baz=214,SNR=6.0
I21K  Tanana           85.00  11  P        P        14 10 39.2 -0.6
      baz=205,SNR=26
NEA2  Nenana           85.04  12  P        P        14 10 38.5 -1.4
      baz=208,SNR=8.3
K24K  Donnelly Dome    85.06  14  P        P        14 10 40.0 -0.2
      baz=211,SNR=40
BVCY  Beaver Creek     85.13  17  P        P        14 10 40.6 +0.1
      baz=216,SNR=24
WRH   Wood River Hil   85.13  13  IAmb     IAmb     14 10 41.3
      comp=Z,44nm,0.8s
Y22A  Socorro          85.22  52  P        P        14 10 43.0 +1.2
      baz=245
RIDG  Independent Ri   85.22  14  P        P        14 10 40.5 -0.5
RIDG                              IAmb     IAmb     14 10 41.5
      comp=Z,47nm,1.0s
RIDG  Independent Ri   85.22  14  P        P        14 10 40.5 -0.5
      baz=212,SNR=22
H21K  Melozitna Rive   85.29  10  P        P        14 10 40.8 -0.4
      baz=205,SNR=14
HDA   Harding Lake     85.32  13  IAmb     IAmb     14 10 41.6
      comp=Z,39nm,0.8s
HDA   Harding Lake     85.32  13  P        P        14 10 40.6 -0.8
      baz=210,SNR=41
CCB   Clear Creek Bu   85.34  13  IAmb     IAmb     14 10 41.4
      comp=Z,42nm,1.0s
NEW   Newport          85.36  36  P        P        14 10 41.9 -0.1
      baz=237,SNR=24
L27K  Beaver Creek,    85.40  16  P        P        14 10 41.5 -0.4
      baz=215,SNR=15
N30M  Aishikik Lake    85.46  19  P        P        14 10 42.1  0.0
      baz=219
I23K  Minto, Yukon-K   85.47  12  P        P        14 10 41.0 -1.0
      baz=208,SNR=14
MVCO  Mesa Verde       85.49  49  P        P        14 10 42.7 -0.4
MVCO  Mesa Verde       85.49  49  P        P        14 10 43.4 +0.3
      baz=244,SNR=5.8
MNTX  Cornudas Mount   85.52  55  IAmb     IAmb     14 10 45.4
      comp=Z,51nm,1.1s
MNTX  Cornudas Mount   85.52  55  P        P        14 10 44.2 +1.1
      baz=246
MNTX  Cornudas Mount   85.52  55  P        P        14 10 44.2 +1.1
      baz=246,SNR=54
MDM   Murphy Dome      85.53  12  IAmb     IAmb     14 10 42.3
      comp=Z,35nm,1.0s
TCOL  CIGO, UAF Yank   85.53  13  IAmb     IAmb     14 10 42.3
      comp=Z,98nm,1.4s
TCOL  CIGO, UAF Yank   85.53  13  P        P        14 10 41.2 -1.1
      baz=209,SNR=18
COLA  College          85.53  13c iP       P        14 10 41.1 -1.2
COLA                             i *PP     pwP      14 12 41.6 -0.1
COLA                              pmax     pmax
      comp=Z,45nm,1.1s
COLA  College          85.53  13  P        P        14 10 41.5 -0.8
COLA                              IAmb     IAmb     14 10 42.3
      comp=Z,98nm,1.4s
WHY   Whitehorse       85.54  20  P        P        14 10 42.9 +0.3
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	baz=221,SNR=12						
SCRK	Sand Creek	85.63	15	P	P	14 10 42.6	-0.4
	baz=213,SNR=24						
ILAR	Eielson Array	85.65	13	P	P	14 10 42.1	-0.8
	comp=Z,14nm,0.7s,baz=224,slow=5.0,SNR=135						
ILAR				pP	pP	14 12 40.2	+0.3
	comp=Z,5.7nm,1.1s,baz=228,slow=5.6,SNR=4.8						
	comp=Z,14nm,0.7s						
POKR	Poker Plat Res	85.83	13	IAmb	IAmb	14 10 43.5	
	comp=Z,19nm,0.6s						
POKR	Poker Plat Res	85.83	13	P	P	14 10 42.6	-1.2
	baz=210,SNR=8.1						
J25K	Salcha River,	85.85	14	IAmb	IAmb	14 10 44.6	
	comp=Z,56nm,1.4s						
J25K	Salcha River,	85.85	14	P	P	14 10 43.4	-0.6
	baz=212,SNR=31						
N31M	Braeburn, Yuko	85.88	19	P	P	14 10 44.3	+0.2
	baz=220,SNR=10						
TX31	Lajitas Ar. Si	85.95	58	P	P	14 10 47.3	+2.0
	baz=247						
TXAR	Lajitas Array	85.95	58	P	P	14 10 47.0	+1.7
	comp=Z,52nm,0.8s,baz=221,slow=6.2,SNR=500						
TXAR				PKKPbc	PKKPbc	14 28 42.8	+0.2
	comp=Z,0.3nm,0.4s,baz=141,slow=3.4,SNR=7.6						
	comp=Z,52nm,0.8s						
XAN	Xi'an	86.00	307	P	P	14 10 46.3	+0.9
XAN				SKS	SKSac	14 20 18.3	-1.7
XAN				S	ScS	14 20 38.2	-2.5
XAN				pmax	pmax		
	comp=Z,120nm,1.1s						
ANMO	Albuquerque	86.02	52*c*	*i*P	P	14 10 46.2	+0.6
ANMO				*i* *PP	pwP	14 12 46.4	-0.2
ANMO				pmax	pmax		
	comp=Z,44nm,1.3s						
ANMO	Albuquerque	86.02	52	P	P	14 10 45.6	0.0
ANMO				IAmb	IAmb	14 10 47.5	
	comp=Z,32nm,1.0s						
ANMO	Albuquerque	86.02	52	P	P	14 10 46.2	+0.6
	baz=245						
ANMO	Albuquerque	86.02	52	P	P	14 10 46.3	+0.7
	baz=245						
H23K	Yukon River	86.04	12	P	P	14 10 43.9	-0.8
	baz=208,SNR=5.5						
GO10	Punta Arenas	86.11	145	P	P	14 10 47.5	+1.9
K27K	Chicken	86.14	15	P	P	14 10 45.4	+0.2
	baz=215						
MG03	Isla Dawson	86.14	146	P	P	14 10 47.0	+1.4
BILL	Bilibino	86.15	354	⇓P	P	14 10 44.7	-0.5
J26L	Joseph Creek	86.17	14	P	P	14 10 45.6	0.0
	baz=213,SNR=45						
RDOG	Red Dog Mine	86.21	6	P	P	14 10 43.4	-2.1
	baz=195						
LHMI	Lhok Sumawe	86.36	277	P	P	14 10 48.6	+1.1
	comp=Z,2µmcomp=Z,197nm,1.1s						
LHMI	Lhok Sumawe	86.36	277	P	P	14 10 48.4	+0.9
H24K	Noodor Dome	86.37	12	P	P	14 10 44.4	-2.0
	baz=209,SNR=5.9						
M30M	Minto, Yukon	86.41	18	IAmb	IAmb	14 10 47.6	
	comp=Z,30nm,0.8s						
M30M	Minto, Yukon	86.41	18	P	P	14 10 46.5	-0.1
	baz=220,SNR=33						
MSO	Missoula	86.44	38	P	P	14 10 46.8	-0.4
	baz=240,SNR=18						
TPAW	Teton Pass	86.67	42	IAmb	IAmb	14 10 50.6	
	comp=Z,49nm,1.0s						
REDW	Red Top Meadow	86.67	43	IAmb	IAmb	14 10 50.5	
	comp=Z,78nm,1.0s						
USHA	Ushuaia	86.79	147	P	P	14 10 50.2	+1.5
	comp=Z,45nm,1.0s,baz=216,slow=4.8,SNR=11						
	comp=Z,45nm,1.0s						
M31M	Drury Creek, Y	86.86	19	P	P	14 10 48.2	-0.5
	baz=222,SNR=11						
DAWY	Dawson	86.86	16	P	P	14 10 48.6	-0.1
	baz=217,SNR=12						
S22A	4UR Ranch, Cre	86.92	49	IAmb	IAmb	14 10 52.1	
	comp=Z,43nm,1.1s						
S22A	4UR Ranch, Cre	86.92	49	P	P	14 10 50.9	+1.0
	baz=245,SNR=52						
LOHW	Long Hollow	86.94	42	IAmb	IAmb	14 10 51.2	
	comp=Z,27nm,0.8s						
O20A	White River Ci	86.95	46	P	P	14 10 50.4	+0.5
	baz=244,SNR=20						
EGAK	Eagle	86.98	15	P	P	14 10 48.9	-0.3
	baz=216						
HHC	Hu-ho-hao-te	87.00	314	*e*P	P	14 10 51.1	+1.1
HHC				S	S	14 20 46.0	+2.2
HHC				pmax	pmax		
	comp=Z,88nm,1.2s						
HHC				pmax	pmax		
	comp=Z,290nm,4.6s						
FLWY	Flagg Ranch	87.10	42	IAmb	IAmb	14 10 52.9	
	comp=Z,81nm,1.0s						
COLD	Coldfoot	87.17	11	P	P	14 10 50.1	0.0
	baz=207,SNR=34						
YMR	Madison River	87.21	41	IAmb	IAmb	14 10 53.6	
	comp=Z,58nm,0.9s						
BOZ	Bozeman (W)	87.24	40	IAmb	IAmb	14 10 53.1	
	comp=Z,37nm,1.1s						
BOZ	Bozeman (W)	87.24	40	P	P	14 10 51.7	+0.7
	baz=241,SNR=43						
BW06	Boulder Array	87.24	43	IAmb	IAmb	14 10 52.5	
	comp=Z,82nm,1.4s						
BW06	Boulder Array	87.24	43	P	P	14 10 51.3	+0.1
	baz=243,SNR=65						
PD31	Pinedale Array	87.24	43	IAmb	IAmb	14 10 52.5	
	comp=Z,67nm,1.3s						
PDAR	Pinedale Array	87.24	43	P	P	14 10 51.5	+0.3
	comp=Z,23nm,0.7s,baz=212,slow=3.2,SNR=199						
PDAR				pP	pP	14 12 47.9	-0.7
	comp=Z,1.6nm,0.8s,baz=197,slow=2.8,SNR=4.3						
PDAR				PP	PP	14 14 23.2	-2.3
	comp=Z,4.6nm,1.1s,baz=243,slow=6.5,SNR=7.9						
	comp=Z,23nm,0.7s						
H17A	Grant Village	87.33	42	P	P	14 10 53.7	+2.0
	baz=242,SNR=58						
WALA	Waterton Lakes	87.59	37	IAmb	IAmb	14 10 54.0	
	comp=Z,29nm,0.9s						
KMI	Kunming	87.60	297	⇓P	P	14 10 54.8	+1.5
KMI				SKS	SKSac	14 20 30.8	+0.4
KMI				S	S	14 20 52.1	+1.8
KMI				pmax	pmax		
	comp=Z,57nm,1.0s						
SDCO	Great Sand Dun	87.88	49	P	P	14 10 55.1	+0.7
	baz=246						
SDCO	Great Sand Dun	87.88	49	P	P	14 10 54.8	+0.3
	baz=246,SNR=15						
BTO	Baotou	87.95	314	*e*P	P	14 10 56.4	+1.9
MMPY	Sheldon Lake,	88.16	20	P	P	14 10 55.3	+0.4
	baz=224,SNR=31						
I29M	Ogilvie Camp,	88.17	16	IAmb	IAmb	14 10 55.2	
	comp=Z,46nm,1.7s						
I29M	Ogilvie Camp,	88.17	16	P	P	14 10 54.2	-0.6
	baz=218,SNR=10.0						
TGTN	Hyland Airport	88.40	22	P	P	14 10 56.7	+0.7
	baz=227,SNR=22						
MSTX	Muleshoe	88.43	54	P	P	14 10 57.2	+0.4
	baz=248						
MSTX	Muleshoe	88.43	54	P	P	14 10 57.2	+0.4
	baz=248						
T25A	Trinidad	88.43	50	P	P	14 10 57.1	+0.2
	baz=246,SNR=9.2						
RLMT	Red Lodge	88.49	41	IAmb	IAmb	14 10 59.2	
	comp=Z,36nm,0.9s						
RLMT	Red Lodge	88.49	41	P	P	14 10 57.9	+0.9
	baz=243,SNR=39						
TOLK	Toolik Lake Re	88.54	10	P	P	14 10 56.1	-0.4
	baz=208,SNR=9.9						
Q24A	Divide	88.62	48	P	P	14 10 58.5	+0.5
	baz=246						
ISCO	Idaho Springs	88.64	47	P	P	14 10 58.5	+0.5
	baz=246						
ISCO	Idaho Springs	88.64	47	P	P	14 10 58.7	+0.7
	baz=246,SNR=9.4						
CMAR	Chiang Mai Arr	88.68	290	P	P	14 10 59.5	+1.3
	comp=Z,31nm,0.9s,baz=107,slow=2.9,SNR=124						
CMAR				pP	pP	14 12 56.3	-0.2
	comp=Z,4.4nm,1.0s,baz=110,slow=3.3,SNR=3.4						
CMAR				PP	PP	14 14 36.5	-0.6
	comp=Z,4.5nm,0.9s,baz=121,slow=6.3,SNR=6.6						
CMAR				PKKPbc	PKKPbc	14 28 36.5	+1.0
	comp=Z,2.0nm,0.7s,baz=290,slow=4.9,SNR=13						
	comp=Z,31nm,0.9s						
CHTO	Chiang Mai	88.80	290	P	P	14 10 57.3	-1.5
CHTO				pmax	pmax		
	comp=Z,53nm,1.1s						
CHTO	Chiang Mai	88.80	290	P	P	14 10 57.3	-1.5
CHTO				IAmb	IAmb	14 11 00.8	
	comp=Z,53nm,1.1s						
CHTO	Chiang Mai	88.80	290	P	P	14 10 59.9	+1.1
CD2	Chengdu	88.82	303	*e*P	P	14 10 58.5	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
N23A	Red Feather La	88.86	46	P	P	14 10 59.7	+0.8
	baz=246,SNR=18						
PZH	PanZhiHua	88.92	298	⇓P	P	14 11 00.2	+0.8
PZH				pP	pP	14 12 57.1	-1.0
PZH				PP	PP	14 14 37.9	-1.1
PZH				SKS	SKSac	14 20 36.0	-1.9
PZH				S	ScS	14 21 04.1	-1.3
PZH				pmax	pmax		
	comp=Z,40nm,1.2s						
PZH				pmax	pmax		
	comp=Z,220nm,4.2s						
833A	Chaparral WMA,	89.07	60	P	P	14 11 01.1	+1.3
	baz=249						
833A	Chaparral WMA,	89.07	60	P	P	14 11 00.9	+1.1
	baz=249						
K22A	Casper	89.20	45	P	P	14 11 00.5	+0.2
	baz=245						
K22A	Casper	89.20	45	P	P	14 11 00.7	+0.4
	baz=245,SNR=15						
EPYK	Eagle Plains	89.37	16	IAmb	IAmb	14 11 01.1	
	comp=Z,38nm,1.2s						
EPYK	Eagle Plains	89.37	16	P	P	14 11 00.0	-0.4
	baz=220,SNR=14						
JCT	Junction City	89.49	58	P	P	14 11 02.4	+0.7
	baz=249						
JCT	Junction City	89.49	58	P	P	14 11 02.2	+0.4
	baz=249						
EGMT	Eagleton	89.51	39	P	P	14 11 01.7	+0.2
	baz=243,SNR=9.6						
AMTX	Amarillo	89.61	53	P	P	14 11 02.9	+0.6
	baz=248						
AMTX	Amarillo	89.61	53	P	P	14 11 02.5	+0.2
	baz=248						
ABTX	Abilene, Hawle	90.37	56	P	P	14 11 06.7	+0.8
	baz=249						
ABTX	Abilene, Hawle	90.37	56	P	P	14 11 06.4	+0.5
	baz=249						
735A	Kenedy	90.56	60	P	P	14 11 08.8	+2.1
	baz=250						
TROLL	Troll, Antarti	90.58	180	P	P	14 11 06.5	+0.3
LZH	Lanzhou	90.63	308	*e*P	P	14 11 08.5	+1.4
LZH				SKS	SKSac	14 20 45.9	-1.4
LZH				*e*S	ScS	14 21 22.0	+2.7
LZH				sS	sS	14 24 41.4	-7.4
LZH				pmax	pmax		
	comp=Z,58nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
SNAA	Sanae	90.87	179	P	P	14 11 07.3	-0.2
SNAA	Sanae	90.87	179	P	P	14 11 07.6	+0.1
	comp=Z,18nm,0.9s,baz=196,slow=7.1,SNR=45						
	comp=Z,18nm,0.9s						
SNAA	Sanae	90.87	179	*ce*P	P	14 11 06.9	-0.6
SNAA				pmax	pmax		
	comp=Z,25nm,1.2s						
SNAA	Sanae	90.87	179	P	P	14 11 07.3	-0.2
SNAA				IAmb	IAmb	14 11 10.5	
	comp=Z,20nm,1.0s						
VNA3	Neumayer Olymp	91.02	176	P	P	14 11 08.5	+0.4
LAO	LASA Array	91.08	41	P	P	14 11 10.2	+1.4
	baz=245						
LAO	LASA Array	91.08	41	P	P	14 11 10.1	+1.2
	baz=245,SNR=30						
435B	Jarrell	91.39	58	P	P	14 11 11.8	+1.3
	baz=250						
435B	Jarrell	91.39	58	P	P	14 11 11.4	+0.9
	baz=250						
RSSD	Black Hills	91.45	44	P	P	14 11 10.6	-0.2
RSSD				pmax	pmax		
	comp=Z,37nm,1.0s						
RSSD	Black Hills	91.45	44	P	P	14 11 10.6	-0.2
RSSD				IAmb	IAmb	14 11 11.9	
	comp=Z,37nm,0.9s						
RSSD	Black Hills	91.45	44	P	P	14 11 11.1	+0.3
	baz=247						
RSSD	Black Hills	91.45	44	P	P	14 11 10.8	+0.1
	baz=247						
VNA2	Neumayer--Watz	91.45	177	P	P	14 11 10.3	+0.2
	baz=180,slow=4.0						
OGNE	Ogallala	91.60	47	P	P	14 11 12.0	+0.7
	baz=248						
OGNE	Ogallala	91.60	47	P	P	14 11 12.1	+0.7
	baz=248						
INK	Inuvik	91.65	15	P	P	14 11 10.2	-0.6
	comp=Z,24nm,1.0s,baz=218,slow=3.4,SNR=32						
	comp=Z,24nm,1.0s						
INK	Inuvik	91.65	15	P	P	14 11 10.2	-0.6
INK				IAmb	IAmb	14 11 11.1	
	comp=Z,24nm,0.9s						
INK	Inuvik	91.65	15	P	P	14 11 09.9	-0.9
	baz=222,SNR=18						
VNA1	Neumayer--Stat	91.68	177	P	P	14 11 12.0	+1.0
WMOK	Wichita Mounta	91.78	54	P	P	14 11 12.0	-0.2
	baz=250						
WMOK	Wichita Mounta	91.78	54	P	P	14 11 11.9	-0.3
	baz=250						
WHTX	Lake Whitney,	91.89	57	P	P	14 11 13.5	+0.7
	baz=250						
WHTX	Lake Whitney,	91.89	57	P	P	14 11 13.2	+0.4
	baz=250						
CBKS	Cedar Bluff	92.48	50	P	P	14 11 15.8	+0.4
	baz=249						
Z35A	Perchaven, San	92.50	56	P	P	14 11 16.2	+0.7
	baz=251						
HKT	Hockley	92.54	60	⇑*i*P	P	14 11 16.9	+1.2
HKT				pmax	pmax		
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	92.87	320	*de*P	P	14 11 16.8	-0.3
ULN				pmax	pmax		
	comp=Z,16nm,1.3s						
DGMT	Dagmar	93.06	40	P	P	14 11 18.5	+0.7
DGMT	Dagmar	93.06	40	P	P	14 11 18.7	+0.9
	baz=247						
DGMT	Dagmar	93.06	40	P	P	14 11 18.6	+0.9
	baz=247,SNR=19						
R32A	Long Quarter,	93.09	51	P	P	14 11 19.1	+0.9
	baz=250						
237A	Washetta, Mont	93.22	58	P	P	14 11 20.9	+2.0
	baz=251						
SONM	Songino Array	93.27	319	P	P	14 11 18.7	-0.2
	comp=Z,2.3nm,0.5s,baz=122,slow=4.5,SNR=9.9						
SONM				pP	pP	14 13 16.6	-1.1
	comp=Z,1.0nm,1.0s,baz=116,slow=3.4,SNR=2.1						
SONM				PP	PP	14 15 14.2	+1.9
	comp=Z,1.8nm,0.9s,baz=124,slow=5.3,SNR=3.8						
SONM				PKKPbc	PKKPdf	14 28 24.0	+0.5
	comp=Z,1.3nm,0.8s,baz=262,slow=3.0,SNR=6.8						
	comp=Z,2.3nm,0.5s						
SONM	Songino Array	93.27	319	P	P	14 11 18.5	-0.4
SONM				IAmb	IAmb	14 11 19.8	
	comp=Z,38nm,1.8s						
NATX	Nacogdoches	94.07	58	P	P	14 11 24.7	+2.0
	baz=252						
YKA	Yellowknife Ar	94.13	25	P	P	14 11 22.0	-0.3
	comp=Z,13nm,0.8s,baz=245,slow=4.4,SNR=178						
YKA				pP	pP	14 13 19.7	-1.0
	comp=Z,0.2nm,0.6s,baz=249,slow=4.5,SNR=1.3						
YKA				PP	PP	14 15 09.9	-8.6
	comp=Z,1.4nm,0.9s,baz=242,slow=7.2,SNR=5.9						
YKA				PKKPbc	PKKPdf	14 28 20.5	-1.7
	comp=Z,0.5nm,0.4s,baz=38,slow=2.2,SNR=14						
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	94.13	25	P	P	14 11 21.9	-0.4
T35B	Sooner Cattle	94.24	53	P	P	14 11 24.1	+0.6
	baz=251						
X37A	Clayton	94.39	55	P	P	14 11 24.1	-0.1
	baz=252						
TUL1	Leonard	94.47	54	P	P	14 11 25.0	+0.5
	baz=252						
TUL1	Leonard	94.47	54	P	P	14 11 25.0	+0.5
	baz=252						
BGNE	Belgrade	94.51	48	P	P	14 11 25.5	+0.9
	baz=251						
BGNE	Belgrade	94.51	48	P	P	14 11 25.5	+0.9
	baz=251						
GTA	Gaotai	94.77	310	⇑P	P	14 11 26.5	+0.6
GTA				SKS	SKSac	14 21 07.9	-1.7
GTA				S	ScS	14 21 55.7	+2.1
GTA				SS	SS	14 28 34.1	0.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,68nm,5.6s						
C36M	Paulatuk	94.87	17	P	P	14 11 24.8	-0.6
	baz=231						
KSU1	Kansas State U	94.87	51	P	P	14 11 27.5	+1.2
	baz=251						
KSU1	Kansas State U	94.87	51	P	P	14 11 27.3	+1.0
	baz=251						
MIAR	Mount Ida	95.78	56	P	P	14 11 31.0	+0.5
	baz=253						
W39A	Magazine	95.81	55	P	P	14 11 31.4	+0.8
	baz=253						
TIXI	Tiksi	95.86	345	P	P	14 11 29.1	-0.8
	comp=Z,1.2nm,0.5s,baz=90,slow=23,SNR=4.4						
	comp=Z,1.2nm,0.5s						
TIXI	Tiksi	95.86	345	⇑*e*P	P	14 11 29.5	-0.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
A36M	Sachs Harbour	96.25	15	P	P	14 11 31.5	-0.1
A36M	Sachs Harbour	96.25	15	P	P	14 11 31.3	-0.3
	baz=230						
ECSD	EROS Data Cent	96.33	46	P	P	14 11 32.6	-0.1
	baz=252						
ECSD	EROS Data Cent	96.33	46	P	P	14 11 32.6	-0.1
	baz=252						
U40A	Yellville	96.88	54	P	P	14 11 35.5	+0.1
	baz=253						
U40A				P	P	14 11 35.5	+0.1
	baz=253						
U40A	Yellville	96.88	54	P	P	14 11 35.5	+0.1
	baz=253						
S39A	Bolivar	96.90	53	P	P	14 11 35.9	+0.5
	baz=253						
P38A	Dawn	97.30	51	P	P	14 11 37.6	+0.4
	baz=253						
R40A	Maddies Statio	97.87	52	P	P	14 11 40.1	+0.4
	baz=254						
P40A	Paris	98.38	51	P	P	14 11 42.7	+0.8
	baz=254						
CCM	Cathedral Cave	98.58	53	P	P	14 11 43.1	+0.2
	baz=254						
CCM	Cathedral Cave	98.58	53	P	Pdif	14 11 42.8	-0.1
	baz=254						
ULM	Lac du Bonnet	98.78	40	⇓*e*P	Pdif	14 11 42.6	-0.8
JFWS	Jewell Farm	100.56	48	P	Pdif	14 11 52.8	+1.3
	baz=256						
PALK	Pallekele	102.39	274	PKiKP	PKiKP	14 16 17.9	-0.8
	comp=Z,7.1nm,0.8s,baz=90,slow=2.0,SNR=5.1						
LPAZ	La Paz	103.61	112	Pdiff	Pdif	14 12 05.9	-0.6
	comp=Z,1.7nm,0.9s,baz=218,slow=4.5,SNR=1.7						
ZALV	Zalesovo Beam	107.95	322	PKiKP	PKiKP	14 16 26.7	-1.1
	comp=Z,1.6nm,0.5s,baz=28,slow=0.3,SNR=8.3						
ZALV				PKKPbc	PKKPbc	14 27 41.6	-1.9
	comp=Z,0.8nm,0.4s,baz=259,slow=3.6,SNR=5.9						
MKAR	Makanchi Array	108.86	314	Pdiff	Pdif	14 12 29.1	+0.7
	comp=Z,0.8nm,0.8s,baz=89,slow=6.3,SNR=3.9						
MKAR				PKiKP	PKiKP	14 16 28.8	-1.0
	comp=Z,2.3nm,0.5s,baz=174,slow=0.6,SNR=41						
MKAR				PP	PP	14 17 07.2	-0.8
	comp=Z,2.2nm,1.0s,baz=108,slow=7.8,SNR=4.0						
MKAR				PKKPbc	PKKPbc	14 27 39.6	-0.8
	comp=Z,3.7nm,0.8s,baz=272,slow=3.7,SNR=20						
KURK	Kurchatov	111.55	318	*i* PKIKP	PKiKP	14 16 33.5	-1.2
KURBB	Kurchatov Arra	111.60	318	PKiKP	PKiKP	14 16 33.5	-1.3
	comp=Z,2.5nm,0.6s,baz=100,slow=1.7,SNR=13						
KURBB				PP	PP	14 17 16.3	-11
	comp=Z,1.7nm,0.2s,baz=100,slow=5.4,SNR=4.9						
KSH	Kashi	112.82	306	PKP	PKiKP	14 16 38.6	+0.9
AAK	Ala-Archa	114.12	309	PKiKP	PKPdf	14 16 39.5	-0.6
	comp=Z,0.7nm,0.3s,baz=166,slow=4.5,SNR=3.6						
BRVK	Borovoye	116.62	321*d*	*i*PKIKP	PKPdf	14 16 43.2	-1.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SCHQ	Schefferville	116.72	37	PP	PP	14 17 59.1	-3.5
	comp=Z,6.8nm,1.1s,baz=296,slow=6.8,SNR=5.1						
GAR	Garm	117.18	305	PKPdf	PKPdf	14 16 45.9	-0.2
KBS	Kingsbay	118.47	358	*e*PKPdf	PKiKP	14 16 47.4	0.0
SPA0	Spitsbergen Ar	118.99	357	*e*PKPdf	PKPdf	14 16 48.1	-0.2
DAG	Danmarks Havn	119.95	5	*i* P	PKPdf	14 16 47.5	-2.7
SFJD	Kangerlussuaq	120.47	21	PKP	PKPdf	14 16 50.6	-0.8
	comp=Z,4.5nm,0.5s,baz=112,slow=3.4,SNR=4.7						
SUMG	Summit	120.49	13	*i* P	PKPdf	14 16 50.4	-1.4
BSCB	Bom Sucesso	120.60	128	*e*P	PKPdf	14 16 52.8	-0.4
VAS01	Vassouras-RJ	120.80	130	*e*P	PKiKP	14 16 53.6	0.0
BDFB	Brasilia	121.08	121	PKP	PKPdf	14 16 53.9	-0.3
	comp=Z,4.6nm,0.7s,baz=188,slow=3.6,SNR=5.5						
BDFB				PKKPbc	PKKPbc	14 26 59.0	+0.2
	comp=Z,2.3nm,0.5s,baz=112,slow=5.4,SNR=3.7						
DUB01	Friburgo-RJ	121.69	131	*e*P	PKPdf	14 16 55.0	-0.2
DBG	Daneborg	122.07	7	*i* P	PKPdf	14 16 52.7	-1.6
DY2G	Dye2	122.23	21	*i* P	PKPdf	14 16 53.7	-1.3
CAM01	Campos-RJ	122.37	131	*e*P	PKPdf	14 16 56.5	+0.1
OPO	Ambohidratompo	122.43	234	PKP	PKPdf	14 16 56.8	-0.1
	comp=Z,5.6nm,0.7s,baz=215,slow=1.5,SNR=7.6						
ARU	Arti	122.56	326	PKP	PKPdf	14 16 55.3	-0.4
	comp=Z,5.4nm,0.5s,baz=335,slow=0.7,SNR=20						
ARU	Arti	122.56	326	*i* PKIKP	PKPdf	14 16 55.2	-0.5
ARU						14 18 42.0	
ARU				PPP	PPP	14 21 25.7	
ARU						14 23 13.6	
ARU				SP	SP	14 27 39.5	-3.5
ARU	Arti	122.56	326	PKPdf	PKPdf	14 16 55.5	-0.2
ICESG	Greenland Ices	122.61	16	*i* P	PKPdf	14 16 54.1	-1.8
PEXB	Peixe	122.66	118	*e*P	PKPdf	14 16 56.9	-0.3
DIAM	Diamantina, MG	123.03	127	*e*P	PKPdf	14 16 57.5	-0.5
ABKAR	Akbulak array	123.65	318	PKPdf	PKPdf	14 16 57.6	-0.4
ALF01	Guarapari-ES	123.81	131	*e*P	PKPdf	14 16 58.2	-1.0
PRPB	Parauapebas	124.12	110	*e*P	PKPdf	14 17 00.0	0.0
JANB	Januaria	124.39	123	*e*P	PKPdf	14 16 59.6	-0.9
MCPB	Macapa, AP	124.40	103	*e*P	PKPdf	14 17 00.5	-0.1
AKTO	Aktyubinsk	124.59	320	PKP	PKPdf	14 16 59.6	-0.2
	comp=Z,1.2nm,0.4s,baz=99,slow=5.1,SNR=4.8						
AKTO				PKKPbc	PKKPab	14 26 44.6	+0.5
	comp=Z,2.0nm,0.7s,baz=176,slow=4.7,SNR=6.0						
SJMB	Sao Joao De Ma	124.67	129	*e*P	PKPdf	14 17 00.6	-0.3
BSFB	Barra de Sao F	124.84	129	*e*P	PKPdf	14 17 00.5	-0.7
SMTB	Santa Maria do	124.85	115	*e*P	PKPdf	14 17 01.4	0.0
RIB01	Linhares ES	124.87	130	*e*P	PKPdf	14 17 00.5	-0.8
HAMF	Hammerfest	125.33	351	*e*PKPdf	PKPdf	14 17 00.2	-0.4
SDBA	SAO DESIDERIO	125.34	120	*e*P	PKPdf	14 17 01.7	-0.7
ANGG	Ammassalik, Gr	125.53	19	*i* P	PKPdf	14 16 58.5	-2.6
MDP	Montagnes des	125.69	96	PKP	PKPdf	14 17 03.0	0.0
	comp=Z,11nm,0.8s,baz=214,slow=4.6,SNR=4.6						
NAN01	Guarapari, ES	125.98	129	*e*P	PKPdf	14 17 02.7	-0.8
ARA0	ARCESS Array S	126.03	350	*e*PKPdf	PKPdf	14 17 02.0	0.0
ARCES	ARCESS Array B	126.03	350	PKP	PKPdf	14 17 01.8	-0.2
	comp=Z,9.8nm,0.8s,baz=48,slow=1.8,SNR=38						
ARCES				PKKPbc	PKKPab	14 26 37.9	+0.4
	comp=Z,2.2nm,0.7s,baz=211,slow=2.1,SNR=10						
KIRV	Kirov	126.23	331	PKP	PKPdf	14 17 02.7	+0.1
	comp=Z,8.4nm,0.4s,baz=44,slow=3.1,SNR=4.8						
WSAR	Wadi Sarin	126.42	286	PKP	PKPdf	14 17 04.1	0.0
	comp=Z,1.5nm,0.4s,baz=223,slow=4.1,SNR=6.6						
JETT	Jettan, Norway	126.79	352	*e*PKPdf	PKPdf	14 17 03.5	0.0
GEYT	Alibeck	126.79	304	PKP	PKPdf	14 17 04.3	-0.2
	comp=Z,2.8nm,0.4s,baz=216,slow=12,SNR=5.8						
GEYT				PP	PP	14 19 09.2	-1.4
	comp=Z,4.4nm,1.0s,baz=74,slow=11,SNR=6.1						
KTK1	Kautokeino	126.87	350	*e*PKPdf	PKPdf	14 17 03.4	-0.2
TRO	Tromso	126.91	352	*e*PKPdf	PKiKP	14 17 03.9	-0.2
SUR	Sutherland	126.93	201	PKP	PKiKP	14 17 06.0	+0.3
	comp=Z,6.5nm,0.5s,baz=158,slow=5.4,SNR=2.1						
ABR01	Abrolhos, BA	126.97	130	*e*P	PKPdf	14 17 04.9	-0.4
GUA01	Guaratinga, BA	127.00	128	*e*P	PKPdf	14 17 05.0	-0.4
CMC01	Camacan, BA	127.97	127	*e*P	PKPdf	14 17 06.6	-0.6
BOSA	Boshof	128.59	207	PKP	PKiKP	14 17 09.4	+0.3
	comp=Z,2.1nm,0.4s,baz=150,slow=4.6,SNR=2.9						
BOSA				SKPbc	SKPbc	14 19 40.0	
	comp=Z,4.0nm,0.8s,baz=146,slow=3.5,SNR=4.9						
GDU01	Guandu, BA	128.90	125	*e*P	PKPdf	14 17 09.1	0.0
LOF	Lofoten	128.94	354	*e*PKPdf	PKPdf	14 17 07.6	+0.1
STEI	Steigen	128.96	353	*e*PKPdf	PKPdf	14 17 07.6	0.0
KLMR	Klimovskoe	129.06	337	*e*PKIKP	PKPdf	14 17 06.8	-1.2
KLMR				*e*		14 19 26.7	
KLMR				pmax	pmax		
	comp=Z,11nm,1.2s						
KLMR	Klimovskoe	129.06	337	*e*PKPdf	PKPdf	14 17 06.8	-1.2
KLMR				AMP		14 17 16.3	
	comp=Z,11nm,1.2s						
KLMR				*e*PP	PP	14 19 26.8	+2.7
BELG	Belogornoye	130.00	325*d*	*i*PKIKP	PKPdf	14 17 10.4	+0.4
NBPN	Ponto Novo - B	130.05	121	*e*P	PKPdf	14 17 10.8	-0.5
KONS	Konsvik	130.57	354	*e*PKPdf	PKPdf	14 17 10.0	-0.6
ROSB	Rosrio	130.64	110	*e*P	PKPdf	14 17 12.9	+0.5
MOR8	Moi Rana	130.74	353	*e*PKPdf	PKPdf	14 17 10.4	-0.7
LBTB	Lobatse	131.53	210	PKP	PKiKP	14 17 14.8	-0.3
	comp=Z,2.2nm,0.6s,baz=134,slow=2.2,SNR=2.3						

NBLA	Lagarto - SE	131.91	123	eP	PKPdf	14 17 14.2	-0.6
NBPS	Pedro II - PI	132.33	113	eP	PKPdf	14 17 15.8	0.0
FINES	FINESS Array B	132.90	344	PKhKP	PKPpre	14 17 08.5	
	comp=Z,1.2nm,0.5s,baz=83,slow=1.4,SNR=12						
FINES				PKP	PKPdf	14 17 15.7	+0.5
	comp=Z,3.0nm,0.5s,baz=68,slow=3.7,SNR=6.6						
FINES				SKPbc	SKPbc	14 19 52.8	+0.4
	comp=Z,8.7nm,0.7s,baz=58,slow=4.7,SNR=18						
NBMA	Muriti-CE	133.14	119	eP	PKPdf	14 17 16.9	-0.3
NBPB	Pedra_Branca-C	133.39	116	eP	PKPdf	14 17 17.4	-0.3
MAK	Makhachkala	133.66	313	i P	Pdif	14 14 19.7	+1.0
MAK				i		14 17 17.8	
MAK				e		14 19 23.2	
MAK				e		14 19 50.8	
MAK				e		14 23 38.7	
MAK				pmax	pmax		
	comp=Z,29nm,0.4s						
MATP	Matopo	133.80	216	PKP	PKPdf	14 17 18.5	+0.1
	comp=Z,5.2nm,0.6s,baz=169,slow=2.0,SNR=7.1						
OBN	Obninsk	134.00	333	⇑iPKIKP	PKPdf	14 17 13.9	-3.5
OBN				i		14 19 57.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NBMO	Morrinhos-CE	134.08	113	eP	PKPdf	14 17 18.9	0.0
GROC	Groznyy	134.76	314	i PKIKP	PKPdf	14 17 14.8	-4.5
GROC				e		14 19 59.7	
GROC				pmax	pmax		
	comp=Z,15nm,0.5s						
VORR	Voronezh	134.84	327	ePKIKP	PKPdf	14 17 19.1	0.0
VORR				e		14 20 00.7	
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
NBCL	Cascavel-CE	135.16	115	eP	PKPdf	14 17 21.6	+0.7
AAL	Aland	135.46	347	eP	PKPpre	14 17 11.2	
FOO	Floro	136.01	358	ePKPdf	PKPdf	14 17 21.0	0.0
NB2	NORSAR Subarra	136.09	353	PKP	PKPpre	14 17 10.3	
	comp=Z,0.7nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.09	353	PKhKP	PKPpre	14 17 11.6	
	comp=Z,0.5nm,0.5s,baz=20,slow=2.5,SNR=4.9						
NOA				PKP	PKPdf	14 17 21.2	-0.1
	comp=Z,0.7nm,0.6s,baz=7.0,slow=4.0,SNR=14						
NOA				SKPbc	SKPbc	14 20 03.3	+0.6
	comp=Z,1.6nm,0.9s,baz=6.3,slow=4.0,SNR=6.2						
UPP	Uppsala	136.24	348	eP	PKPdf	14 17 19.6	-1.9
RCBR	Riachuelo	136.35	119	PKhKP	PKPpre	14 17 13.7	
	comp=Z,16nm,1.1s,baz=177,slow=4.5,SNR=2.5						
RCBR	Riachuelo	136.35	119	eP	PKPdf	14 17 23.5	+0.3
GNI	Garni	136.52	310	SKPbc	SKPbc	14 20 05.3	+0.5
	comp=Z,6.8nm,0.4s,baz=192,slow=6.3,SNR=7.5						
KBZ	Khabaz	136.53	316	SKPbc	SKPbc	14 20 05.3	+0.8
	comp=Z,12nm,1.1s,baz=45,slow=1.9,SNR=11						
KIV	Kislovodsk	136.58	316	i PKIKP	PKPdf	14 17 23.3	+0.5
KIV				eSSS	SSS	14 42 46.8	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HFS	Hagfors	136.65	351	SKPbc	SKPbc	14 20 04.6	+0.3
	comp=Z,3.8nm,1.0s,baz=243,slow=6.3,SNR=5.3						
SKAR	Skarslia	136.73	355	ePKPdf	PKPdf	14 17 22.2	-0.2
VIKU	Vikbolandet	137.68	348	eP	PKPpre	14 17 17.5	
LSZ	Lusaka	138.00	220	PKhKP	PKPpre	14 17 20.5	
	comp=Z,1.3nm,0.2s,baz=232,slow=3.7,SNR=4.0						
LSZ				PKP	PKPdf	14 17 27.2	+1.0
	comp=Z,3.7nm,0.4s,baz=49,slow=1.2,SNR=6.4						
ANN	Anapa	139.55	320	i PKIKP	PKiKP	14 17 35.0	+4.5
ANN				pmax	pmax		
	comp=Z,29nm,1.0s						
ATD	Arta Tunnel	139.56	267	SKPbc	SKiKP	14 20 15.8	-0.8
	comp=Z,16nm,0.7s,baz=28,slow=1.1,SNR=8.2						
DEL	Delary	140.12	349	eP	PKPpre	14 17 20.4	
KMBO	Kilima Mbogo	140.13	246	PKhKP	PKPpre	14 17 24.1	
	comp=Z,1.3nm,0.3s,baz=2.7,slow=2.7,SNR=4.2						
KMBO				PKP	PKPdf	14 17 31.5	+1.1
	comp=Z,3.1nm,0.5s,baz=108,slow=1.3,SNR=5.4						
KMBO				SKPbc	SKiKP	14 20 17.8	-0.3
	comp=Z,16nm,1.0s,baz=61,slow=3.1,SNR=11						
AKASG	Malin Array Be	140.26	332	PKhKP	PKPpre	14 17 21.2	
	comp=Z,2.7nm,0.3s,baz=42,slow=4.3,SNR=22						
AKASG				PKP	PKPdf	14 17 29.7	+0.6
	comp=Z,1.2nm,0.3s,baz=40,slow=4.2,SNR=5.5						
AKASG				SKPbc	SKPbc	14 20 15.3	+0.7
	comp=Z,11nm,1.1s,baz=45,slow=3.8,SNR=11						
AKBB	Malin Array Si	140.26	332	c iPKIKP	PKiKP	14 17 31.5	-0.3
BSD	Bornholm Skovb	141.20	348	i P	PKPpre	14 17 24.0	
EKA	Eskdalemuir Ar	142.21	4	PKhKP	PKPpre	14 17 27.9	
	comp=Z,3.2nm,0.5s,baz=344,slow=2.6,SNR=20						
EKA				SKPbc	SKiKP	14 20 20.5	-0.2
	comp=Z,2.7nm,0.9s,baz=354,slow=2.5,SNR=3.8						
SORM	Soroca	142.50	330	⇑P	PKPdf	14 17 29.8	-3.4
SORM	Soroca	142.50	330	⇑PKHKP	PKPpre	14 17 29.8	
LVV	L'vov	143.11	336	ePKIKP	PKPbc	14 17 32.4	0.0
MILM	Milestii Mici	143.12	328	⇓P	PKPbc	14 17 32.8	+0.3
MILM	Milestii Mici	143.12	328	⇓PKIKP	PKPbc	14 17 32.8	+0.3
BZK	Bozkurt	143.15	318	⇓P	PKPbc	14 17 32.7	0.0
WIM	Isle of Man	143.25	6	⇑eP	PKPab	14 17 32.0	-0.3
BNN	Bunyan	143.38	312	PKPdf	PKPbc	14 17 34.3	+0.5
HPK	Haverah Park	143.67	3	eP	PKPab	14 17 33.4	-0.5
LEOM	Leova	143.71	328	⇑P	PKPbc	14 17 34.6	+0.3
LEOM	Leova	143.71	328	⇑PKIKP	PKPbc	14 17 34.6	+0.3
KWP	Kalwaria Pacla	143.78	337	ePKP	PKPab	14 17 34.6	+0.2
KWP	Kalwaria Pacla	143.78	337	PKIKP	PKPab	14 17 34.9	+0.4
KWP	Kalwaria Pacla	143.78	337	PKPdf	PKPab	14 17 34.9	+0.4
ILGA	Ilgaz	143.80	317		PKPdf	14 17 36.3	+0.3
VASR	Vaslui	143.82	329	⇓P	PKPab	14 17 35.0	+0.3
RUE	Ruedersdorf	143.91	347	eP	PKPbc	14 17 34.5	-0.2
WPS	Cemaes, Angles	144.01	6	eP	PKPbc	14 17 33.6	-1.4
WPS				IAmb	IAmb	14 17 35.0	
	comp=Z,163nm,1.6s						
WME	Myndd Eilian	144.03	6	eP	PKPbc	14 17 35.0	-0.1
WLF1	Llynfaes	144.13	6	⇑eP	PKPbc	14 17 34.8	-0.6
WLF1				IAmb	IAmb	14 17 35.6	
	comp=Z,134nm,0.9s						
YRC	Rhoscolyn	144.15	6	⇑eP	PKPbc	14 17 35.0	-0.5
LBWR	Ladybower, Pea	144.22	3	⇑eP	PKPbc	14 17 35.5	-0.3
LBWR				IAmb	IAmb	14 17 36.2	
	comp=Z,54nm,1.0s						
VLDR	Vladesti	144.22	328	⇑P	PKPdf	14 17 36.8	+0.5
TLCR		144.28	326	⇓P	PKPdf	14 17 36.4	0.0
TLCR		144.28	326	⇓PKIKP	PKPdf	14 17 36.4	0.0
YLL	Llanberis	144.29	6	eP	PKPbc	14 17 35.4	-0.6
OJC	Ojcow	144.32	340	ePKP	PKPbc	14 17 36.1	0.0
OJC	Ojcow	144.32	340	PKIKP	PKPbc	14 17 36.2	+0.1
OJC	Ojcow	144.32	340	PKPdf	PKPbc	14 17 36.2	+0.1
BURAR	Bucovina Array	144.32	332	⇓P	PKPab	14 17 36.8	0.0
BURAR	Bucovina Array	144.32	332	⇓PKIKP	PKPab	14 17 36.8	0.0
BURAR	Bucovina Array	144.32	332	PKPdf	PKPab	14 17 37.2	+0.5
GHRR		144.41	328	⇓P	PKPab	14 17 37.5	+0.5
TESR	Tescani	144.47	330	⇓P	PKPab	14 17 37.1	-0.1
BR131	Keskin Array S	144.51	315	d iPKIKP	PKPdf	14 17 36.9	-0.3
BRTR	Keskin Array B	144.51	315	PKP	PKPdf	14 17 37.1	-0.1
	comp=Z,14nm,0.7s,baz=118,slow=4.3,SNR=74						
BRTR				SKPbc	SKiKP	14 20 26.7	+0.5
	comp=Z,2.6nm,0.9s,baz=116,slow=2.9,SNR=3.7						
BRTR	Keskin Array B	144.51	315	PKIKP	PKPbc	14 17 37.4	+0.1
BRTR	Keskin Array B	144.51	315		PKPbc	14 17 37.4	+0.1
KOLS	Kolonicke sedl	144.51	336	ePKIKP	PKPab	14 17 37.4	+0.1
KOLS	Kolonicke sedl	144.51	336	ePKP	PKPab	14 17 37.4	+0.1
JURR	Jurilovca	144.52	326	⇑P	PKPab	14 17 37.5	+0.1
SLCR	Slobozia Conac	144.55	328	⇑P	PKPab	14 17 37.3	-0.2
IZVR	Izvoarele	144.59	327	⇓P	PKPab	14 17 38.1	+0.4
FOEL	Foel Wylfa	144.63	5	⇑eP	PKPbc	14 17 36.9	-0.1
FOEL				IAmb	IAmb	14 17 37.7	
	comp=Z,132nm,0.9s						
LLW	Llanuwychllyn	144.63	5	eP	PKPdf	14 17 36.5	-0.2
CFR	Carcaliu	144.64	327	⇓P	PKPab	14 17 37.9	0.0
CFR	Carcaliu	144.64	327	⇓PKIKP	PKPab	14 17 37.9	0.0
PANC	Panciu	144.67	328	⇑P	PKPab	14 17 38.5	+0.5
TPGR	Topolog	144.71	326	⇓P	PKPab	14 17 37.9	-0.3
IWEX	Carrickbyrne,	144.73	9	⇑eP	PKPdf	14 17 37.0	0.0
UZH	Uzhgorod	144.75	336	⇑iPKIKP	PKPbc	14 17 37.4	-0.1
UZH				e		14 19 38.2	
ODBI	Odobesti	144.79	328	⇑P	PKPab	14 17 38.6	+0.1
KSP	Ksiaz	144.82	344	ePKP	PKPab	14 17 38.3	-0.1
NIE	Niedzica	144.83	339	ePKP	PKPab	14 17 39.2	+0.7
CRVS	Cervenica-Dubn	144.84	337	ePKIKP	PKPab	14 17 38.4	-0.2
CRVS	Cervenica-Dubn	144.84	337	ePKP	PKPab	14 17 38.4	-0.2
VRI	Vrincioaia	144.89	329	⇑P	PKPab	14 17 38.7	-0.2
VRI	Vrincioaia	144.89	329	⇑PKIKP	PKPab	14 17 38.7	-0.2
PLOR	Plostina	144.94	329	⇑P	PKPbc	14 17 38.3	+0.1
PLOR	Plostina	144.94	329	⇑PKIKP	PKPbc	14 17 38.3	+0.1
ASF	Jabal al Asfar	144.94	301	PKP	PKPbc	14 17 38.8	0.0
	comp=Z,37nm,0.9s,baz=108,slow=2.2,SNR=30						
ASF				SKPbc	SKiKP	14 20 27.8	+0.5
	comp=Z,8.7nm,0.8s,baz=284,slow=0.5,SNR=5.8						
TIRR	Tirgusor	144.98	326	⇑P	PKPbc	14 17 38.4	+0.1
TIRR	Tirgusor	144.98	326	⇑PKIKP	PKPbc	14 17 38.4	+0.1
WACR	West Acre	144.98	1	eP	PKPdf	14 17 37.1	-0.3
BMR	Baia Mare	145.02	334	⇓P	PKPbc	14 17 38.8	+0.4
BMR	Baia Mare	145.02	334	⇓PKIKP	PKPbc	14 17 38.8	+0.4
HLM1	Long Mynd	145.02	5	⇑eP	PKPbc	14 17 38.1	-0.1
HLM1				IAmb	IAmb	14 17 38.8	
	comp=Z,59nm,1.0s						
HARR	Harsova	145.08	326	⇓P	PKPab	14 17 39.3	-0.3
HARR	Harsova	145.08	326	⇓PKIKP	PKPab	14 17 39.3	-0.3
OSTC	Ostas	145.10	344	ePKP	PKPbc	14 17 39.0	+0.5
ARCR	ARCALIA	145.10	332	⇑P	PKPab	14 17 39.2	-0.4
CHVC	Chvalec	145.11	344	ePKP	PKPbc	14 17 39.0	+0.4
TLBR	Topalu	145.12	326	⇑P	PKPbc	14 17 39.1	+0.3
BISRR	Bisoca	145.12	328	⇑P	PKPab	14 17 39.7	-0.1
MFTR	Murfatlar	145.16	325	⇑P	PKPbc	14 17 38.9	+0.1
COVR	Voineasa-Covas	145.16	329	⇑P	PKPbc	14 17 39.0	+0.1
CLL	Collm	145.17	347	i PKIKP	PKPbc	14 17 38.8	+0.1
CLL				i		14 17 40.0	
CLL				pmax	pmax		
	comp=Z,43nm,0.6s						
CLL	Collm	145.17	347	PKPdf	PKPbc	14 17 38.8	+0.1
CLL	Collm	145.17	347	i PKPbc	PKPbc	14 17 38.8	+0.1
	comp=Z,43nm,0.6s						
CLL				i PKPab	PKPab	14 17 40.0	+0.3
	comp=Z,34nm,0.9s						
CLL				i PKiKP	PKiKP	14 17 41.8	-0.1
CLL				ex	x	14 18 24.0	
CLL				epPKiKP	pPKiKP	14 19 49.0	+0.9
CLL				ex	x	14 19 55.0	
CLL				e(SKPdf)		14 20 24.0	
CLL				ePP	PP	14 21 04.0	+1.2
OKC	Ostrava-Krasne	145.18	341	ePKIKP	PKPbc	14 17 38.8	0.0
OKC	Ostrava-Krasne	145.18	341	ePKP	PKPbc	14 17 38.8	0.0
UPC	Upice	145.20	344	ePKP2	PKPbc	14 17 39.2	+0.4
UPC	Upice	145.20	344	ePKP	PKPbc	14 17 39.2	+0.4
DPC	Dobruska-Polom	145.25	343	ePKP2	PKPab	14 17 39.7	-0.5
DPC	Dobruska-Polom	145.25	343	ePKP	PKPab	14 17 39.7	-0.5
DPC				epPKP	pPKPdf	14 19 47.4	+2.5
CVDA	Cernavoda	145.26	326	⇓P	PKPab	14 17 40.0	-0.3
MANR	Mangalia	145.30	325	⇓P	PKPab	14 17 39.9	-0.5
LANS	Liptovska Anna	145.34	339	ePKP2	PKPab	14 17 40.6	+0.1
LANS	Liptovska Anna	145.34	339	ePKP	PKPab	14 17 40.6	+0.1
BRG	Berggiesshubel	145.37	346	ePKP	PKPbc	14 17 39.1	-0.2
BRG				Amp		14 17 40.6	
	comp=Z,18nm,0.8s						
BRG				pPKP	pPKPdf	14 19 48.9	+3.9
BRG				Amp		14 19 53.6	
	comp=Z,10.0nm,1.2s						
BRG	Berggiesshubel	145.37	346	ePKIKP	PKPbc	14 17 39.1	-0.2
BRG				pmax	pmax		
	comp=Z,18nm,0.8s						
KRLC	Kraliky	145.37	343	ePKP2	PKPbc	14 17 39.7	+0.3
KRLC	Kraliky	145.37	343	ePKP	PKPbc	14 17 39.7	+0.3
RSBS	Rosebush, Pemb	145.41	7	eP	PKPdf	14 17 38.1	-0.1
BHL	Bhannes	145.41	305	eP	PKPbc	14 17 40.2	+0.1
NEHR	Nehoiu	145.41	329	⇓P	PKPbc	14 17 40.3	+0.6
MORC	Moravsky Berou	145.42	342	⇑P	PKPbc	14 17 39.6	+0.1
MORC	Moravsky Berou	145.42	342	⇑PKIKP	PKPbc	14 17 39.6	+0.1
MORC	Moravsky Berou	145.42	342	ePKP	PKPdf	14 17 37.2	-1.1
MORC				epPKIKP		14 19 43.7	
DOPR	Dopca	145.46	330	⇑P	PKPbc	14 17 40.3	+0.5
ISR	Istrita	145.50	328	⇑P	PKPab	14 17 40.6	-0.6
ISR	Istrita	145.50	328	⇑PKP2	PKPab	14 17 40.7	-0.6
SHBL	Chebaa	145.52	304	eP	PKPbc	14 17 40.8	+0.2
MCH1	Michaelchurch	145.53	5	⇑eP	PKPbc	14 17 39.5	-0.3
MCH1				IAmb	IAmb	14 17 40.0	
	comp=Z,59nm,0.8s						
MLR	Muntele Rosu	145.54	329	⇓P	PKPbc	14 17 40.3	+0.2
MLR	Muntele Rosu	145.54	329	PKPbc	PKPbc	14 17 39.9	-0.2
	comp=Z,13nm,0.5s,baz=338,slow=6.4,SNR=37						
MLR				SKPbc	SKiKP	14 20 28.9	+0.8
	comp=Z,9.6nm,0.9s,baz=339,slow=8.0,SNR=4.7						
MLR	Muntele Rosu	145.54	329	⇓PKP2	PKPbc	14 17 40.3	+0.2
MLR	Muntele Rosu	145.54	329		PKPbc	14 17 40.2	0.0
PVCC	Panska Ves	145.55	345	ePKP2	PKPab	14 17 40.6	-0.6
PVCC	Panska Ves	145.55	345	ePKP	PKPab	14 17 40.6	-0.6
KECS	Kecovo	145.55	337	ePKP2	PKPbc	14 17 40.4	+0.5
KECS	Kecovo	145.55	337	ePKP	PKPbc	14 17 40.4	+0.5
PSN	Preselentsi	145.61	325	P	PKPbc	14 17 40.0	-0.2
ELMS	Elmsett, Ipswi	145.62	1	eP	PKPbc	14 17 40.0	0.0
CBBR	Cluj-Babes-Bol	145.70	333	⇓P	PKPbc	14 17 41.1	+0.7
MONM	Monmouth	145.70	5	⇑eP	PKPbc	14 17 40.0	-0.2
MONM				IAmb	IAmb	14 17 40.7	
	comp=Z,108nm,0.8s						
CJR	Cluj-Napoca	145.72	333	⇓P	PKPbc	14 17 41.1	+0.6
CJR	Cluj-Napoca	145.72	333	⇓PKP2	PKPbc	14 17 41.1	+0.6
SECR		145.80	328	⇑P	PKPbc	14 17 40.8	0.0
MDB	Medias	145.81	331	⇑P	PKPbc	14 17 41.0	+0.3
MDB	Medias	145.81	331	⇑PKP2	PKPbc	14 17 41.0	+0.3
STRD	Stroud	145.81	4	eP	PKPbc	14 17 39.8	-0.7
MMAI	Mount Meron Ar	145.90	303	PKPbc	PKPab	14 17 42.5	-0.9
	comp=Z,5.2nm,0.4s,baz=310,slow=49,SNR=11						
MBAR	Mbarara	145.96	241	PKPbc	PKPbc	14 17 43.1	+0.7
	comp=Z,29nm,0.6s,baz=221,slow=0.4,SNR=47						
MBAR				pPKPbc	pPKPdf	14 19 48.8	+1.8
	comp=Z,2.9nm,0.3s,baz=71,slow=5.6,SNR=1.3						
VOIR		146.01	330	⇑P	PKPbc	14 17 40.7	-0.7
VOIR		146.01	330	⇑PKIKP	PKPbc	14 17 40.7	-0.7
DRGR		146.04	334	⇑P	PKPbc	14 17 41.2	-0.3
DRGR		146.04	334	⇑PKIKP	PKPbc	14 17 41.2	-0.3
PRU	Pruhonice	146.05	345	ePKP2	PKPbc	14 17 41.7	+0.4
PRU	Pruhonice	146.05	345	ePKP	PKPbc	14 17 41.7	+0.4
VRAC	Vranov	146.12	342	PKPbc	PKPbc	14 17 41.7	+0.2
	comp=Z,4.5nm,0.5s,baz=14,slow=1.1,SNR=9.2						
VRAC	Vranov	146.12	342	ePKP	PKPdf	14 17 39.1	-0.4
VRAC				epPKIKP		14 19 48.0	
VYHS	Vyhne	146.12	339	ePKP2	PKPbc	14 17 42.2	+0.7
VYHS	Vyhne	146.12	339	ePKP	PKPbc	14 17 42.2	+0.7
JAVC	Velka Javorina	146.19	341	ePKP	PKPdf	14 17 39.3	-0.4
JAVC				epPKIKP		14 19 47.5	
BORR	Bors	146.19	335	⇓P	PKPbc	14 17 40.8	-0.9
KOLL	Kolacno	146.19	340	ePKP	PKPbc	14 17 42.5	+0.8
PSZ	Piszkesteto	146.24	338	PKP	PKPab	14 17 43.2	-0.9
ARR	Arges	146.26	330	⇑P	PKPbc	14 17 42.5	+0.4
MQOL	MQOL	146.29	281	i	PKPdf	14 17 36.7	-3.8
	baz=243,slow=16						
MQOL				i P	PKPbc	14 17 42.9	+0.1
MQOL				i S	pPKPdf	14 19 49.7	+2.3
NKC	Novy Kostel	146.31	347	ePKP2	PKPbc	14 17 42.5	+0.5
NKC	Novy Kostel	146.31	347	ePKP	PKPbc	14 17 42.5	+0.5
PRD	Provadia	146.36	325	P	PKPbc	14 17 42.0	-0.3
KRUC	Moravsky	146.39	342	ePKP	PKPdf	14 17 39.7	-0.2
KRUC				epPKIKP		14 19 48.7	
PBCC	Pribram	146.47	345	ePKP	PKPbc	14 17 42.8	+0.4
BORA	Eskisehir	146.53	317		PKPbc	14 17 43.2	+0.1
ELSH	Elham, Standar	146.56	0	⇑eP	PKPbc	14 17 43.0	+0.4
SMOL	Smolenice	146.57	341	ePKP2	PKiKP	14 17 44.0	-0.9
SMOL	Smolenice	146.57	341	ePKP	PKiKP	14 17 44.0	-0.9
HUMR	Humele	146.71	329	⇑P	PKPbc	14 17 43.1	-0.1
MODS	Modra-Piesok	146.74	341	ePKP2	PKiKP	14 17 44.3	-1.0
MODS	Modra-Piesok	146.74	341	ePKP	PKiKP	14 17 44.3	-1.0
CSS	Mathiatis	146.82	308		PKPbc	14 17 43.8	-0.1
SRO	Srobarova	146.89	339	ePKP2	PKPbc	14 17 44.2	+0.6
SRO	Srobarova	146.89	339	ePKP	PKPbc	14 17 44.2	+0.6
MEM	Membach	146.90	355	dPKP	PKPbc	14 17 43.6	0.0
BTNL	Ternell	146.92	355	dPKP	PKPbc	14 17 43.8	+0.1
BUD	Budapest	146.92	338	PKP	PKPbc	14 17 44.4	+0.7
ZST	Bratislava	146.95	341	ePKP2	PKPbc	14 17 44.6	+0.8
ZST	Bratislava	146.95	341	ePKP	PKPbc	14 17 44.6	+0.8
BSTI	Sart Tilman	146.97	355	dPKP	PKPbc	14 17 44.1	+0.4
KHC	Kasperske Hory	147.08	345	⇑ePKIKP	PKPdf	14 17 41.6	+0.5
KHC	Kasperske Hory	147.08	345	ePKP	PKPbc	14 17 44.6	+0.4
KHC				epPKP	pPKPbc	14 19 52.3	+3.5
GZR	Gura Zlata	147.10	332	⇓P	PKPbc	14 17 43.5	-0.9
GZR	Gura Zlata	147.10	332	⇓PKHKP	PKPbc	14 17 43.5	-0.9
SNF	Seneffe	147.13	357	dPKP	PKPbc	14 17 44.4	+0.2
BCLA	Clavier	147.15	355	dPKP	PKPbc	14 17 45.0	+0.8
BHOU	Houvegnez	147.16	355	dPKP	PKPbc	14 17 44.9	+0.6
CKRC	Cesky Krumlov	147.19	344	ePKP	PKPdf	14 17 42.0	+0.7
CKRC				ex	x	14 17 44.8	
CKRC				epPKP	pPKPbc	14 19 53.0	+3.9
EIL	Elat	147.19	298	PKPbc	PKPbc	14 17 45.0	0.0
	comp=Z,20nm,0.8s,baz=128,slow=6.0,SNR=21						
EIL				pPKPbc	pPKPdf	14 19 48.5	-0.2
	comp=Z,4.7nm,0.8s,baz=117,slow=4.5,SNR=2.1						
EIL				SKPbc	SKiKP	14 20 32.9	+1.1
	comp=Z,8.6nm,0.8s,baz=109,slow=5.1,SNR=4.1						
BGES	Gesves	147.20	356	dPKP	PKPbc	14 17 44.1	-0.2
BMRD	Maredsous	147.30	356	dPKP	PKPbc	14 17 44.6	0.0
GERES	GERESS Array B	147.32	345	PKPbc	PKPbc	14 17 45.0	+0.1
	comp=Z,12nm,0.5s,baz=23,slow=2.3,SNR=81						
GERES				pPKPbc	pPKPdf	14 19 45.4	-3.1
	comp=Z,0.2nm,0.4s,baz=53,slow=5.0,SNR=0.9						
GERES	GERESS Array B	147.32	345	PKP2	PKPbc	14 17 44.7	-0.1
GERES	GERESS Array B	147.32	345		PKPbc	14 17 44.7	-0.1
RCHB	Rochefort	147.42	356	dPKP	PKPbc	14 17 44.9	0.0
BZS	Buzias	147.44	333	⇑P	PKPbc	14 17 44.0	-1.1
BZS	Buzias	147.44	333	⇑PKIKP	PKPbc	14 17 44.0	-1.1
DOU	Dourbes	147.52	356	dPKP	PKPbc	14 17 45.4	+0.2
EGYH	Egyhazaskeszo	147.56	340	PKP	PKiKP	14 17 46.5	-0.5
CONA	Conrad Observa	147.57	342	i P	PKPbc	14 17 46.0	+0.5
	comp=Z,23nm,0.6s,SNR=23						
CONA				i P	pPKPab	14 19 54.2	+3.7
	comp=Z,18nm,1.3s						
SOP	Sopron	147.57	341	PKP	PKiKP	14 17 46.3	-0.7
RONA	Rosalia, Austr	147.64	341	i P	PKPbc	14 17 46.1	+0.4
	comp=Z,20nm,0.6s,SNR=19						
RONA				i P	pPKPab	14 19 54.3	+3.0
	comp=Z,12nm,1.1s						
HERR	Herculane	147.66	332	⇑P	PKPbc	14 17 44.6	-1.1
MPLH	Magyarpolny	147.71	339	PKP	PKPbc	14 17 46.0	+0.3
WLF	Walferdange	147.83	354	dPKP	PKiKP	14 17 46.9	-0.5
MDVR	Moldovita	148.05	332	⇓P	PKPbc	14 17 45.0	-1.8
MOA	Molln	148.09	344	i P	PKPbc	14 17 46.8	0.0
	comp=Z,5.7nm,0.5s,SNR=7.2						
MOA				i P	pPKPab	14 19 54.2	+1.6
	comp=Z,11nm,1.1s						
MORH	Mrgy, Hungar	148.14	337	⇑P	PKPdf	14 17 43.3	+0.4
MORH	Mrgy, Hungar	148.14	337	⇓iP	PKPbc	14 17 46.5	-0.3
MORH	Mrgy, Hungar	148.14	337	PKP	PKPbc	14 17 46.5	-0.3
ARSA	Arzberg	148.28	342	i P	PKPbc	14 17 46.8	-0.5
	comp=Z,3.0nm,0.5s						
ARSA				i P	pPKPab	14 19 55.4	+2.3
	comp=Z,7.3nm,1.0s						
JVM	Valle D.L. Mar	148.36	5	⇑eP	PKPbc	14 17 47.5	+0.2
JQE	Queens East	148.39	4	⇑eP	PKPbc	14 17 47.4	0.0
JSA	Saint Aubin	148.39	5	⇑eP	PKPbc	14 17 47.6	+0.2
JSA				IAmb	IAmb	14 17 48.1	
	comp=Z,118nm,0.7s						
BIOA	Bad Ischl, Aus	148.40	344	i P	PKPbc	14 17 47.2	-0.4
	comp=Z,12nm,1.0s,SNR=6.3						
BIOA				i P	pPKPab	14 19 55.8	+1.9
	comp=Z,5.9nm,0.8s						
KOVH	Kovagotottos	148.44	338	PKP	PKPbc	14 17 47.5	-0.2
BLKB	Belogradchik	148.50	330	⇑P	PKPdf	14 17 44.3	+0.7
FRGS	Fruska Gora	148.56	335	⇑P	PKPbc	14 17 46.0	-2.0
FRGS	Fruska Gora	148.56	335	⇓iP	PKPbc	14 17 47.2	-0.8
ALN	Alexandroupoli	148.62	323	P	PKPbc	14 17 47.1	-1.2
RDO	Rodhopi	148.75	324	P	PKPbc	14 17 48.1	-0.5
KOGS	Kog	148.77	340	i PKPbc	PKPbc	14 17 48.0	-0.4
BFO	Black Forest	148.88	351	PKHKP	PKPbc	14 17 48.8	+0.1
BFO	Black Forest	148.88	351		PKPbc	14 17 48.8	+0.1
SOKA	Soboth	148.94	342	i P	PKPbc	14 17 48.5	-0.5
	comp=Z,7.3nm,0.5s,SNR=6.0						
SOKA				i P	pPKPab	14 19 57.0	+0.5
	comp=Z,6.0nm,1.0s						
BOVS	Bovan	148.94	331	⇑P	PKPdf	14 17 46.6	+2.3
VTS	Vitosha	148.96	328	⇓P	PKPbc	14 17 47.8	-1.5
VTS	Vitosha	148.96	328	⇓PKHKP	PKPbc	14 17 47.8	-1.5
VTS	Vitosha	148.96	328	P	PKPbc	14 17 48.5	-0.8
KBA	Koelnbreinsper	149.05	344	i P	PKPbc	14 17 48.7	-0.7
	comp=Z,17nm,0.4s,SNR=24						
KBA				i P	pPKPab	14 19 56.2	-0.2
	comp=Z,5.4nm,0.9s						
TEKS	Tekeris	149.18	334	eP	PKPbc	14 17 49.0	-0.5
SMTH	Samothraki Isl	149.20	323	P	PKPbc	14 17 48.8	-0.9
WATA	Walderalm	149.23	347	i P	PKPbc	14 17 49.5	-0.2
	comp=Z,21nm,0.5s,SNR=17						
WATA				i P	pPKPab	14 19 57.3	+0.4
	comp=Z,10nm,1.3s						
OBKA	Obir	149.24	342	i P	PKPbc	14 17 49.1	-0.7
	comp=Z,6.2nm,0.5s,SNR=5.3						
OBKA				i P	pPKPab	14 19 58.9	+2.0
	comp=Z,5.9nm,1.3s						
RETA	Reutte	149.26	348	i P	PKPbc	14 17 49.6	-0.1
	comp=Z,11nm,0.5s,SNR=13						
RETA				i P	pPKPab	14 19 58.2	+1.3
	comp=Z,11nm,1.4s						
WTTA	Wattenberg	149.29	346	i P	PKPbc	14 17 50.0	0.0
	comp=Z,48nm,0.5s,SNR=26						
WTTA				i P	pPKPab	14 19 58.4	+1.2
	comp=Z,7.5nm,0.8s						
MOTA	Moosalm	149.33	347	i P	PKPbc	14 17 49.8	-0.2
	comp=Z,9.7nm,0.4s,SNR=9.2						
MOTA				i P	pPKPab	14 19 58.4	+1.1
	comp=Z,9.9nm,1.0s						
DIVS	Divibare	149.35	333	⇓iP	PKPbc	14 17 49.9	-0.2
MYKA	Terra Mystica	149.38	343	i P	PKPbc	14 17 49.3	-0.8
	comp=Z,23nm,0.5s,SNR=19						
MYKA				i P	pPKPab	14 19 59.0	+1.5
	comp=Z,13nm,1.2s						
SQTA	Sankt Quirin	149.42	347	i P	PKPbc	14 17 50.2	0.0
	comp=Z,31nm,0.5s,SNR=18						
SQTA				i P	pPKPab	14 19 58.7	+1.1
	comp=Z,16nm,1.9s						
PRK	Paraskevi	149.53	320	P	PKiKP	14 17 51.0	-0.3
NVR	Nevrokopi	149.54	326	P	PKPbc	14 17 49.8	-0.7
ABTA	Abfaltersbach	149.57	345	i P	PKPbc	14 17 49.9	-0.6
	comp=Z,31nm,0.5s,SNR=22						
ABTA				i P	pPKPab	14 19 58.3	-0.1
	comp=Z,7.5nm,1.3s						
CRES	Cresnjev	149.57	341	⇓iP	PKPbc	14 17 50.2	-0.2
DAVA	Damuels	149.63	349	i P	PKPbc	14 17 50.7	0.0
	comp=Z,18nm,0.6s,SNR=12						
DAVA				i P	pPKPab	14 19 57.6	-0.8
	comp=Z,23nm,1.9s						
LJU	Ljubljana	149.66	342	⇓iP	PKPbc	14 17 50.5	-0.1
LJU	Ljubljana	149.66	342	i PKPbc	PKPbc	14 17 50.6	-0.1
LJU				epPKPbc	pPKPab	14 19 58.7	-0.3
FETA	Feichten	149.72	347	i P	PKPbc	14 17 51.0	+0.1
	comp=Z,14nm,0.7s						
FETA				i P	pPKPab	14 19 60.0	+1.1
	comp=Z,11nm,1.0s						
LIA	Limnos Island	149.77	322	P	PKPbc	14 17 50.2	-0.8
BBLS	Lazići	149.78	334	⇓iP	PKPbc	14 17 51.2	+0.1
KOKK	Kokkinochori,	149.83	325	P	PKPbc	14 17 50.3	-0.9
BLY	Banja Luka	149.92	337	eP	PKPbc	14 17 51.3	0.0
CEY	Cerknica	149.97	342	⇓iP	PKPbc	14 17 51.1	-0.3
CEY	Cerknica	149.97	342	i PKPbc	PKPbc	14 17 51.3	-0.1
STAL	STALIGIAL	149.97	344		PKPbc	14 17 50.9	-0.5
RUDO	Rudo	150.00	333	⇑iP	PKPbc	14 17 51.0	-0.5
SJES	Sjenica	150.02	332	⇓iP	PKPbc	14 17 51.9	+0.2
DAVOX	Davos/Dischmat	150.12	348	PKP	PKPdf	14 17 46.4	+0.2
	comp=Z,3.9nm,0.7s,baz=38,slow=2.9,SNR=10						
DAVOX				PKPbc	PKiKP	14 17 52.3	-0.2
	comp=Z,39nm,0.4s,baz=251,slow=3.1,SNR=136						
DAVOX				pPKPbc	pPKPbc	14 19 55.4	-1.9
	comp=Z,4.3nm,0.9s,baz=329,slow=5.9,SNR=1.4						
JAWL	J.Aulia	150.16	270	i P	PKiKP	14 17 53.4	+0.1
STIP	Stip	150.17	328	i P	PKPbc	14 17 50.7	-1.3
MGRS	Mrkonjic Grad	150.24	337	⇑iP	PKPbc	14 17 52.3	+0.2
VAY	Valandovo	150.25	327	i P	PKPbc	14 17 51.4	-0.8
SKDS	Skadanscina	150.27	342	⇓iP	PKPbc	14 17 51.5	-0.6
RIY	Rijeka	150.33	341	eP	PKPbc	14 17 52.0	-0.2
SKO	Skopje	150.34	329	i P	PKPbc	14 17 52.1	-0.3
SRKY	Kupres RS	150.51	337	⇑iP	PKPbc	14 17 52.4	-0.4
TUE	Stuetta	150.51	349	PKPbc	PKPbc	14 17 53.0	+0.1
UPM	Unac-Piva	150.53	334	eP	PKPbc	14 17 52.0	-1.0
BRY	Bratogost	150.94	334	⇓iP	PKPbc	14 17 53.2	-0.7
PDG	Podgorica	151.00	332	⇑P	PKPdf	14 17 49.4	+2.0
PDG	Podgorica	151.00	332	eP	PKPbc	14 17 53.6	-0.2
PHP	Peshkopia	151.04	330	P	PKPbc	14 17 53.4	-0.6
LIT	Litokhoron	151.16	325	P	PKPbc	14 17 52.9	-1.4
TREB	Trebinje	151.16	334	⇑iP	PKPbc	14 17 53.4	-0.8
DRME	Dracevica, Mon	151.23	332	⇓iP	PKPbc	14 17 54.0	-0.4
FNA	Florina	151.25	327	P	PKPbc	14 17 53.9	-0.7
FNA	Florina	151.25	327	PKIKP	PKPbc	14 17 54.1	-0.4
FNA	Florina	151.25	327	PKPbc	PKPbc	14 17 54.1	-0.4
OHR	Ohrid	151.30	329	i P	PKPbc	14 17 54.5	-0.1
STON	Ston	151.31	335	⇑iP	PKPbc	14 17 53.6	-0.9
THL	Klokotos Trika	151.79	325	P	PKPbc	14 17 54.3	-1.4
AGG	Agios Georgios	152.00	324	P	PKPbc	14 17 55.0	-1.2
ANX	Ano Chora	152.53	324	P	PKPbc	14 17 57.5	0.0
EFP	Efpalio	152.65	323	P	PKPbc	14 17 57.3	-0.3
GUR	Goura	152.73	322	P	PKPbc	14 17 56.6	-1.4
IDI	Anoyia	152.75	315	⇑P	PKPdf	14 17 52.0	+1.6
IDI	Anoyia	152.75	315	PKPbc	PKiKP	14 17 58.7	+0.5
	comp=Z,8.3nm,0.4s,baz=309,slow=9.9,SNR=18						
KLV	Kalavryta, Ach	152.77	322	P	PKPbc	14 17 57.3	-0.7
KEK	Kerkira	152.86	328	P	PKPdf	14 17 52.5	+2.2
ITM	Ithomi	153.48	321	P	PKPbc	14 17 59.0	-0.5
PCAB	Cabril	154.66	17	ePKPab	PKPab	14 18 19.7	+0.3
POLO	Lamas de Olo	155.04	17	ePKPab	PKPab	14 18 21.4	+0.3
PVRL	Vila Real	155.15	17	ePKPab	PKPab	14 18 22.0	+0.4

MVO	Moncorvo	155.44	16	*e*PKPdf	PKPdf	14 17 54.7	+0.8
MVO	Moncorvo	155.44	16	*e*PKPab	PKPab	14 18 23.3	+0.5
PVIS	Viseu	155.62	17	*e*PKPab	PKPab	14 18 23.8	+0.2
MTE	Manteigas	156.01	17	*e*PKPab	PKPab	14 18 25.6	+0.3
PCAS	Casmilo, Conde	156.05	19	*e*PKPab	PKPab	14 18 24.0	-1.4
PCBR	Castelo Branco	156.55	18	*e*PKPab	PKPab	14 18 25.7	-1.9
PMRV	Marv??o	156.96	18	*e*PKPab	PKPab	14 18 29.6	+0.2
PESTR	Estremoz	157.42	19	*e*PKPab	PKPab	14 18 31.2	-0.2
ESDC	Sonseca Array	157.54	11	PKP	PKPdf	14 17 57.2	+0.5
	comp=Z,1.4nm,1.0s,baz=348,slow=3.1,SNR=6.6						
ESDC				PKPab	PKPab	14 18 31.1	-0.8
	comp=Z,4.1nm,0.8s,baz=342,slow=4.3,SNR=12						
EVO	Evora	157.59	20	*e*PKPab	PKPab	14 18 31.6	-0.5
PBAR	Barrancos	158.22	18	*e*PKPab	PKPab	14 18 35.2	+0.3
PCVE	Castro Verde	158.40	21	*e*PKPab	PKPab	14 18 34.8	-0.9
KEST	Kesra	160.66	340	PKPab	PKPab	14 18 44.9	-0.9
	comp=Z,2.9nm,0.5s,baz=324,slow=1.0,SNR=7.1						
MDT	Midelt	163.92	19	PKP	PKPdf	14 18 04.2	+0.5
	comp=Z,4.1nm,0.9s,baz=136,slow=1.4,SNR=4.5						
MDT				PKPab	PKPab	14 19 00.1	0.0
	comp=Z,16nm,0.9s,baz=8.5,slow=2.0,SNR=13						
LIC	Lamto	167.00	150	*e*PKIKP	PKPdf	14 18 06.2	-0.4
	comp=Z,23nm,1.0s						
LIC	Lamto	167.00	150	*e*PKP1	PKPab	14 19 14.9	+0.9
	comp=Z,29nm,1.1s						
KIC	Kosan Boka	167.26	151	*e*PKIKP	PKPdf	14 18 06.0	-0.8
	comp=Z,11nm,0.7s						
KIC	Kosan Boka	167.26	151	*e*PKP1	PKPab	14 19 15.5	+0.3
	comp=Z,29nm,1.2s						
TIC	Toumodi	167.37	149	*e*PKIKP	PKPdf	14 18 05.8	-1.1
TIC	Toumodi	167.37	149	*e*PKP1	PKPab	14 19 16.0	+0.3
DBIC	Dimbokro	167.47	150	PKP	PKPdf	14 18 06.4	-0.5
	comp=Z,7.7nm,0.8s,baz=347,slow=0.2,SNR=9.1						
DBIC				PKPab	PKPab	14 19 16.5	+0.4
	comp=Z,12nm,0.8s,baz=215,slow=5.6,SNR=9.7						
TORD	Torodi Ar. Bea	175.53	183	PKP	PKPdf	14 18 10.0	-0.8
	comp=Z,6.0nm,0.8s,baz=329,slow=1.1,SNR=34						
TORD				PKPab	PKPab	14 19 52.0	+0.3
	comp=Z,2.6nm,0.8s,baz=190,slow=4.2,SNR=8.0						
TORD				PP	PP	14 23 44.2	+1.0
	comp=Z,1.6nm,0.8s,baz=197,slow=5.2,SNR=2.1						

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*BJI **07** 14:02:25.9±0.0, 34°.77N×104°.84E, h12^{km}, mb4.2/9, mB4.3/2, ML4.3/26, Ms3.9/17, Ms7 3.8/15*

*IDC **07** 14:02:26.0±1.0, 34°.91N×104°.74E, h0^{km}, mb3.9/17, mbtmp3.9/20, ML3.7/3, MS3.4/16, Error ellipse: s-maj=20.9km s-min=18.6km az=30.0*

*NEIC **07** 14:02:27.2±1.9, 34°.89N±0°.09×104°.72E±0°.07, h13^{km}±5^{km}, mb4.0/14, ML4.4(BJI), Error ellipse: s-maj=14.0km s-min=6.7km az=206.0*

ISC 07 14:02:26.3±0.4**, 34°.85N**±0°.04×**104°.88E**±0°.04**, h10**^{km}**, n65,** σ**1**^{s}**77**/67**, mb4.0**/20**, MS3.6**/14**, 3C, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	Lanzhou	1.50	326	Pg	Pn	14 02 53.9	+0.5
LZH				Sg	Sn	14 03 13.8	+0.7
LZH				smax	smax		
	comp=N,10µm,0.7s						
LZH				smax	smax		
	comp=E,6µm,1.1s						
XAN	Xi'an	3.43	102	Pn	Pn	14 03 20.2	+0.3
XAN				Pg	Pb	14 03 29.0	+1.8
XAN				Sn	Sn	14 03 58.7	-2.0
XAN				Sg	Sg	14 04 14.2	-2.4
XAN				smax	smax		
	comp=N,1µm,0.9s						
XAN				smax	smax		
	comp=E,1µm,0.8s						
XAN				LR	LR		
	comp=E,2µm,5.8s						
XAN				LR	LR		
	comp=Z,1µm,10.4s						
ENH	Enshi	6.00	138		Pn	14 03 57.4	+2.3
GTA	Gaotai	6.09	320	Pn	Pn	14 03 57.7	+1.2
GTA				Pg	Pg	14 04 18.7	-4.2
GTA				Sn	Sn	14 05 07.6	+1.3
GTA				Sg	Sg	14 05 41.1	-0.7
GTA				smax	smax		
	comp=N,120nm,1.2s						
GTA				smax	smax		
	comp=E,140nm,1.1s						
GTA				LR	LR		
	comp=N,710nm,8.4s						
GTA				LR	LR		
	comp=E,690nm,9.2s						
GTA				LR	LR		
	comp=Z,890nm,8.4s						
LYN	LuoYang	6.25	91	⇑Pn	Pn	14 03 58.5	-0.1
LYN				Pg	Pb	14 04 20.8	+5.5
LYN				Sn	Sn	14 05 08.3	-1.9
LYN				Sg	Sg	14 05 44.7	-2.4
LYN				smax	smax		
	comp=N,170nm,0.9s						
LYN				smax	smax		
	comp=E,140nm,0.8s						
LYN				LR	LR		
	comp=E,600nm,7.3s						
LYN				LR	LR		
	comp=Z,310nm,7.6s						
BTO	Baotou	7.04	34	*e*Pn	Pn	14 04 11.5	+2.0
BTO				LR	LR		
	comp=N,1µm,5.4s						
BTO				LR	LR		
	comp=E,2µm,7.4s						
GOMU	GeErMu	8.32	282	P	Pn	14 04 28.5	+1.2
GOMU				smax	smax		
	comp=N,57nm,0.9s						
GOMU				smax	smax		
	comp=E,30nm,0.7s						
HNS	HongShan	8.35	69	P	Pn	14 04 29.2	+1.9
HNS				smax	smax		
	comp=N,160nm,1.6s						
HNS				smax	smax		
	comp=E,98nm,0.7s						
GYA	Guiyang	8.50	169	P	Pn	14 04 31.0	+1.3
GYA				S	Sn	14 06 12.3	+6.5
GYA				smax	smax		
	comp=N,110nm,0.8s						
GYA				smax	smax		
	comp=E,180nm,1.0s						
GYA				LR	LR		
	comp=N,550nm,6.6s						
GYA				LR	LR		
	comp=E,350nm,4.5s						
GYA				LR	LR		
	comp=Z,540nm,6.3s						
PZH	PanZhiHua	8.75	199	P	Pn	14 04 33.3	+0.3
PZH				pP	Pg	14 04 39.4	-34
PZH				S	Sn	14 06 12.1	+0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,5.4s						
PZH				LR	LR		
	comp=N,180nm,10.2s						
PZH				LR	LR		
	comp=E,420nm,10.1s						
PZH				LR	LR		
	comp=Z,280nm,11.5s						
WHN	Wuhan	9.06	116	⇑P	Pn	14 04 40.6	+3.5
WHN				S	Sn	14 06 16.7	-2.4
WHN				LR	LR		
	comp=N,1µm,6.9s						
WHN				LR	LR		
	comp=E,1µm,8.3s						
WHN				LR	LR		
	comp=Z,1µm,7.2s						
BJT	Baijiatuau	10.35	57	Pn	Pn	14 04 54.1	-0.7
GULI	GuiLin	10.64	152	⇑P	Pn	14 04 58.6	-0.2
SONM	Songino Array	13.02	5	Pn	Pn	14 05 31.4	0.0
	0.3nm,0.3s,baz=186,slow=15,SNR=9.6						
SONM				Sn	Sn	14 07 57.0	+0.6
	0.5nm,0.3s,baz=177,slow=28,SNR=4.3						
SONM				Lg	Lg	14 09 18.7	
	0.3nm,0.3s,baz=182,slow=39,SNR=2.3						
SONM				LR	LR	14 10 58.2	
	comp=Z,108nm,18.7s,baz=208,slow=40						
	1.3nm,0.4s						
SONM	Songino Array	13.02	5	Pn	Pn	14 05 29.9	-1.5
ULN	Ulaanbaatar	13.10	6	Pn	Pn	14 05 31.2	-1.3
WMQ	Urumqi	16.01	309	*e*P	Pn	14 06 11.7	+0.1
WMQ				LR	LR		
	comp=E,360nm,13.1s						
WMQ				LR	LR		
	comp=Z,140nm,20.3s						
QIZ	Qiongzhong	16.36	163	P	Pn	14 06 13.0	-3.2
QIZ				S	Sn	14 09 15.0	-2.8
QIZ				LR	LR		
	comp=N,350nm,9.6s						
QIZ				LR	LR		
	comp=E,410nm,11.1s						
QIZ				LR	LR		
	comp=Z,360nm,8.8s						
CHTO	Chiang Mai	16.82	200	Pn	Pn	14 06 19.3	-2.7
CMAR	Chiang Mai Arr	17.16	199	P	P	14 06 27.9	0.0
	0.1nm,0.3s,baz=8.0,slow=9.6,SNR=9.2						
	2.2nm,0.9s						
CMAR	Chiang Mai Arr	17.16	199		P	14 06 26.1	-1.9
KSRS	Korea Array	18.78	75	P	Pn	14 06 48.1	+2.0
	0.4nm,0.3s,baz=257,slow=10,SNR=15						
KSRS				LR	LR	14 15 08.1	
	comp=Z,42nm,18.2s,baz=275,slow=40						
	1.7nm,0.6s						
MK31	Makanchi Array	20.77	312	P	P	14 07 05.9	-1.4
MKAR	Makanchi Array	20.77	312	P	P	14 07 07.2	-0.1
	2.3nm,0.6s,baz=108,slow=12,SNR=17						
MKAR				LR	LR	14 16 04.2	
	comp=Z,68nm,21.8s,baz=108,slow=40						
	2.3nm,0.6s						
MKAR	Makanchi Array	20.77	312	P	P	14 07 06.3	-1.0
MAKZ	Makanchi	20.97	312	P	P	14 07 07.8	-1.6
MAKZ				IAmb	IAmb	14 07 14.2	
	comp=Z,6.7nm,0.9s						
TARG	Taragay, Kyrgy	22.28	296	P	P	14 07 21.6	-2.4
TARG				IAmb	IAmb	14 07 34.5	
	comp=Z,9.2nm,1.0s						
KDJ	Kajisay	22.80	297	P	P	14 07 26.9	-2.5
KDJ				IAmb	IAmb	14 07 35.6	
	comp=Z,4.2nm,0.8s						
USRK	Ussuriysk Ar.	22.81	58	LR	LR	14 16 55.9	
	comp=Z,81nm,18.5s,baz=281,slow=38						
ZAA0	Zalesovo Array	23.73	330	P	P	14 07 38.1	-0.2
ZAA0				IAmb	IAmb	14 07 41.2	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	23.73	330	P	P	14 07 38.5	+0.2
	comp=Z,1.9nm,0.5s,baz=133,slow=10.0,SNR=9.3						
ZALV				LR	LR	14 17 18.0	
	comp=Z,61nm,21.9s,baz=160,slow=38						
	comp=Z,1.9nm,0.5s						
ZALV	Zalesovo Beam	23.73	330	P	P	14 07 37.5	-0.8
BOOM	Boomskoye usch	23.77	297	P	P	14 07 39.6	+0.5
BOOM				IAmb	IAmb	14 07 48.6	
	comp=Z,3.8nm,0.9s						
KLR	Kul'dur	24.42	46	P	P	14 07 47.3	+2.4
	comp=Z,1.0nm,0.6s,baz=283,slow=12,SNR=5.0						
KLR				LR	LR	14 18 25.7	
	comp=Z,64nm,20.0s,baz=300,slow=39						
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	24.77	318	P	P	14 07 45.7	-2.3
KURBB	Kurchatov Arra	24.78	318	P	P	14 07 48.5	+0.4
	comp=Z,1.4nm,0.3s,baz=120,slow=10,SNR=17						
	comp=Z,1.4nm,0.3s						
AAK	Ala-Archa	24.85	297	P	P	14 07 49.7	+0.7
	comp=Z,0.7nm,0.3s,baz=124,slow=14,SNR=2.4						
AAK				LR	LR	14 19 32.1	
	comp=Z,50nm,18.1s,baz=100,slow=42						
	comp=Z,0.7nm,0.3s						
NRIK	Noril'sk	35.86	350	P	P	14 09 26.7	+0.9
	comp=Z,2.7nm,0.5s,baz=152,slow=5.6,SNR=4.7						
	comp=Z,2.7nm,0.5s						
AKTO	Aktyubinsk	37.16	309	LR	LR	14 26 05.6	
	comp=Z,106nm,18.0s,baz=96,slow=38						
ARU	Arti	37.95	319	P	P	14 09 44.3	+0.5
	comp=Z,1.7nm,0.4s,baz=96,slow=3.0,SNR=8.3						
	comp=Z,1.7nm,0.4s						
TIXI	Tiksi	38.96	12	P	P	14 09 52.6	+0.5
	comp=Z,1.1nm,0.3s,baz=270,slow=20,SNR=4.2						
	comp=Z,1.1nm,0.3s						
TIXI	Tiksi	38.96	12	IAmb	IAmb	14 10 18.5	
	comp=Z,3.1nm,1.4s						
SEY	Seymchan	40.53	31	LR	LR	14 28 24.5	
	comp=Z,113nm,18.1s,baz=348,slow=38						
KAPI	Kappang	42.05	158	LR	LR	14 27 05.9	
	comp=Z,103nm,21.2s,baz=145,slow=35						
OBN	Obninsk	50.19	316	LR	LR	14 34 20.0	
	comp=Z,14nm,19.8s,baz=72,slow=38						
SHEM	Shemya Is, Ala	51.02	47	LR	LR	14 33 18.3	
	comp=Z,58nm,21.1s,baz=334,slow=36						
ARCES	ARCESS Array B	54.14	335	P	P	14 11 51.6	+0.5
	comp=Z,2.6nm,0.9s,baz=70,slow=8.0,SNR=8.8						
	comp=Z,2.6nm,0.9s						
FINES	FINESS Array B	54.86	325	P	P	14 11 56.7	+0.3
	comp=Z,0.9nm,0.5s,baz=90,slow=9.5,SNR=9.6						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	55.35	312	P	P	14 12 00.1	0.0
	comp=Z,0.6nm,0.5s,baz=62,slow=8.2,SNR=3.1						
	comp=Z,0.6nm,0.5s						
AKASG	Malin Array Be	55.35	312	IAmb	IAmb	14 12 11.4	
	comp=Z,2.1nm,1.2s						
BR131	Keskin Array S	55.52	298	P	P	14 12 00.3	-1.5
BR131				IAmb	IAmb	14 12 02.5	
	comp=Z,2.9nm,1.0s						
BRTR	Keskin Array B	55.52	298	P	P	14 12 01.8	-0.1
	comp=Z,0.7nm,0.7s,baz=112,slow=5.6,SNR=5.0						
	comp=Z,0.7nm,0.7s						
MLR	Muntele Rosu	58.98	306	LR	LR	14 39 45.8	
	comp=Z,69nm,21.8s,baz=99,slow=38						
WRAB	Tennant Creek	61.26	148	P	P	14 12 42.9	+1.1
NC405	NORSAR Array S	61.63	327	P	P	14 12 43.4	-0.5
NB2	NORSAR Subarra	61.88	327	P	P	14 12 44.9	-0.7
	comp=Z,0.7nm,0.5s,baz=70,slow=6.9						
NOA	NORSAR Array B	61.88	327	P	P	14 12 45.3	-0.3
	comp=Z,0.8nm,0.6s,baz=69,slow=6.7,SNR=5.7						
	comp=Z,0.8nm,0.6s						
VRAC	Vranov	63.50	313	LR	LR	14 39 50.5	
	comp=Z,37nm,18.2s,baz=204,slow=35						
ASAR	Alice Springs	64.38	150	P	P	14 13 04.5	+1.9
	comp=Z,1.6nm,0.6s,baz=348,slow=7.9,SNR=1.7						
	comp=Z,1.6nm,0.6s						
GERES	GERESS Array B	65.43	313	P	P	14 13 09.8	+0.6
	comp=Z,0.4nm,0.6s,baz=93,slow=7.3,SNR=2.2						
	comp=Z,0.4nm,0.6s						
INK	Inuvik	68.41	20	P	P	14 13 28.6	+0.8
	comp=Z,3.0nm,0.9s,baz=322,slow=6.8,SNR=3.4						
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	77.93	18	P	P	14 14 24.7	+0.6
	comp=Z,0.4nm,0.6s,baz=326,slow=5.6,SNR=4.1						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	77.93	18	P	P	14 14 24.1	0.0
YBH	Yreka Blue Hor	92.17	34	LR	LR	14 56 53.9	
	comp=Z,38nm,19.8s,baz=320,slow=35						
TSUM	Tsumeb	98.59	253	LR	LR	15 01 44.8	
	comp=Z,17nm,18.6s,baz=150,slow=36						

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*SJA **07** 14:09:52.2±0.7, 36°.66S×70°.69W, h186^{km}±6^{km}, ML4.5, MW4.1*

*IDC **07** 14:09:54.5±1.7, 36°.67S×70°.47W, h157^{km}±15^{km}, mb4.1/15, mbtmp4.6/18, MS3.4/2, Error ellipse: s-maj=18.5km s-min=10.9km az=92.0*

*GUC **07** 14:09:54.9±0.6, 36°.49S×70°.91W, h187^{km}±4^{km}, ML4.9*

*NEIC **07** 14:09:54.1±1.8, 36°.64S±0°.06×70°.5W±0°.1, h157^{km}±7^{km}, mb4.7/46, Md4.5(SJA), ML4.6(GUC), Error ellipse: s-maj=13.0km s-min=8.3km az=91.0*

ISC 07 14:09:54.3±0.6**, 36°.64S**±0°.03×**70°.65W**±0°.05**, h159**^{km}±5^{km}**, n243,** σ**1**^{s}**33**/273**, mb4.6**/36**, 18C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ML02	Panimavida	1.07	324		Pn	14 10 21.8	+1.3
ML02	Panimavida	1.07	324	⇑*i*P	Pn	14 10 21.8	+1.3
ML02				*i* S	Sn	14 10 42.5	+1.9
ML02				IAML		14 10 43.5	
	comp=E,17µm,0.7s						
EDS3	Malargue	1.33	50	*e*P	Pn	14 10 23.9	+0.9
EDS3				*e*S	Sn	14 10 46.1	+1.1
COIS	El Sosneado	1.75	30	*e*P	Pn	14 10 28.3	+1.1
COIS				*e*S	Sn	14 10 50.2	-2.4
GO05	Huala	1.93	327		Pn	14 10 29.7	+0.5
GO05	Huala	1.93	327	⇑*i*P	Pn	14 10 29.6	+0.5
GO05				*i* S	Sn	14 10 55.2	-0.9
GO05				IAML		14 11 01.6	
	comp=E,3µm,0.3s						
GO05	Huala	1.93	327	*e*P	Pn	14 10 29.5	+0.3
GO05				*e*S	Sn	14 10 57.1	+1.0
BI05	Punta Hualpn	2.05	266		Pn	14 10 31.1	+0.8
BI05	Punta Hualpn	2.05	266	⇑*i*P	Pn	14 10 31.2	+0.8
BI05				*i* S	Sn	14 10 57.8	-0.5
BI05				IAML		14 10 59.8	
	comp=E,6µm,0.2s						
BO01	Tunca	2.27	351		Pn	14 10 33.5	+0.4
BO01	Tunca	2.27	351	⇑*i*P	Pn	14 10 33.5	+0.4
BO01				*i* S	Sn	14 11 02.9	-0.1
BO01				IAML		14 11 05.5	
	comp=E,2µm,0.3s						
BO01	Tunca	2.27	351	*e*P	Pn	14 10 33.4	+0.4
BO01				*e*S	Sn	14 11 04.0	+0.9
BO03	Pichilemu	2.39	333	⇑*i*P	Pn	14 10 35.1	+0.6
BO03				*i* S	Sn	14 11 04.2	-1.4
BO03				IAML		14 11 07.1	
	comp=N,3µm,0.4s						
LC01	Cunco	2.46	203		Pn	14 10 34.8	-0.4
LC01	Cunco	2.46	203	⇑*i*P	Pn	14 10 34.9	-0.4
LC01				*i* S	Sn	14 11 06.8	-0.3
LC01	Cunco	2.46	203	*e*P	Pn	14 10 34.8	-0.4
LC01				*e*S	Sn	14 11 06.7	-0.4
RFA	San Rafael	2.57	44	*e*P	Pn	14 10 37.3	+0.5
BO04	La Punta	2.64	1		Pn	14 10 38.5	+0.8
BO04	La Punta	2.64	1	⇑*i*P	Pn	14 10 38.4	+0.8
BO04				*i* S	Sn	14 11 11.7	+0.5
BO04				IAML		14 11 15.9	
	comp=E,2µm,0.4s						
LMEL	Las Melosas	2.81	8		Pn	14 10 41.1	+1.3
MT01	Popeta	2.81	350		Pn	14 10 39.5	-0.2
MT01	Popeta	2.81	350	⇑*i*P	Pn	14 10 39.5	-0.2
MT01				*i* S	Sn	14 11 12.8	-2.0
MT01				IAML		14 11 16.9	
	comp=E,4µm,0.3s						
MT01	Popeta	2.81	350	*e*P	Pn	14 10 39.5	-0.2
MT01				*e*S	Sn	14 11 14.1	-0.7
MT01				IAML		14 11 17.5	
	comp=Z,1µm,0.1s						
MT09	Talagante	2.87	354		Pn	14 10 40.9	+0.3
MT09	Talagante	2.87	354	⇑*i*P	Pn	14 10 40.5	0.0
MT09				*i* S	Sn	14 11 15.7	-0.6
LC02	Puerto Saavedr	3.05	224	*e*P	Pn	14 10 41.7	-0.9
LC02				*i* S	Sn	14 11 17.8	-2.4
VA05	Santo Domingo	3.08	345		Pn	14 10 42.6	-0.4
VA05	Santo Domingo	3.08	345	⇑*i*P	Pn	14 10 42.6	-0.4
MT03	Universidad Ad	3.14	2		Pn	14 10 43.8	0.0
MT03	Universidad Ad	3.14	2	⇑*i*P	Pn	14 10 44.1	+0.2
MT03				*i* S	Sn	14 11 21.9	-0.4
MT03				IAML		14 11 26.7	
	comp=E,2µm,0.2s						
MT03	Universidad Ad	3.14	2	*e*P	Pn	14 10 44.0	+0.2
MT03				*e*S	Sn	14 11 24.2	+1.9
MT03				IAML		14 11 25.9	
	comp=Z,1µm,0.3s						
MT05	Renca	3.24	359		Pn	14 10 45.2	0.0
MT05	Renca	3.24	359	⇑*i*P	Pn	14 10 45.1	0.0
MT05				*i* S	Sn	14 11 23.7	-0.8
MT05				IAML		14 11 26.0	
	comp=N,3µm,0.3s						
MT05	Renca	3.24	359	*e*P	Pn	14 10 45.1	0.0
MT05				*e*S	Sn	14 11 24.1	-0.4
MT05				IAML		14 11 29.0	
	comp=Z,1µm,0.3s						
FCH	Farellones	3.31	5	⇑*i*P	Pn	14 10 46.5	+0.2
FCH				*i* S	Sn	14 11 26.2	-0.4
FCH				IAML		14 11 32.5	
	comp=N,1µm,0.3s						
MT02	Curacav	3.39	353		Pn	14 10 46.8	-0.3
MT02	Curacav	3.39	353	⇑*i*P	Pn	14 10 46.6	-0.4
MT02				*i* S	Sn	14 11 26.2	-1.8
MT02	Curacav	3.39	353	*e*P	Pn	14 10 46.7	-0.3
MT02				*e*S	Sn	14 11 27.7	-0.2
MT02				IAML		14 11 30.1	
	comp=Z,538nm,0.3s						
PEL	Peldehue	3.49	359		Pn	14 10 48.0	-0.3
PEL	Peldehue	3.49	359	⇑*i*P	Pn	14 10 47.9	-0.3
PEL				*i* S	Sn	14 11 29.1	-1.1
PEL				IAML		14 11 35.7	
	comp=E,1µm,0.4s						
PEL	Peldehue	3.49	359	*e*P	Pn	14 10 48.1	-0.2
PEL				*e*S	Sn	14 11 31.3	+1.2
ROC1	El Roble	3.67	355		Pn	14 10 47.5	-3.2
ROC1	El Roble	3.67	355	*e*P	Pn	14 10 47.7	-3.0
ROC1				*e*S	Sn	14 11 31.0	-3.6
ROCH	El Roble	3.67	355	⇑*i*P	Pn	14 10 50.1	-0.7
ROCH				IAML		14 11 36.2	
	comp=N,2µm,0.3s						
VA01	Torpederas	3.70	347		Pn	14 10 50.4	-0.4
VA01	Torpederas	3.70	347	⇑*i*P	Pn	14 10 50.7	-0.2
VA01				*i* S	Sn	14 11 32.7	-2.2
VA01				IAML		14 11 37.4	
	comp=N,995nm,0.3s						
VA01	Torpederas	3.70	347	*e*P	Pn	14 10 50.6	-0.2
VA01				*e*S	Sn	14 11 33.7	-1.2
VA01				IAML		14 11 37.7	
	comp=Z,475nm,0.7s						
VA03	San Esteban	3.87	1		Pn	14 10 52.8	-0.4
VA03	San Esteban	3.87	1	⇑*i*P	Pn	14 10 52.7	-0.4
VA03				*i* S	Sn	14 11 38.0	-0.9
PLCA	Paso Flores	4.09	179	P	Pn	14 10 55.1	-0.9
	comp=Z,67nm,0.7s,baz=357,slow=13,SNR=109						
PLCA				LR	LR	14 12 22.6	
	comp=Z,204nm,21.9s,baz=278,slow=36						
PLCA	Paso Flores	4.09	179	*e*P	Pn	14 10 55.0	-0.9
ASAL	Salagasta	4.30	21	*e*P	Pn	14 10 59.3	+0.5
AUSP	Uspallata	4.53	14	*e*P	Pn	14 11 02.5	+0.6
ZON	Zonda	5.33	18		Pn	14 11 11.4	-0.9
ZON	Zonda	5.33	18	*e*P	Pn	14 11 11.5	-0.9
ZON				*e*S	Sn	14 12 12.5	-0.9
CO02	Combarbal	5.43	357		Pn	14 11 12.2	-1.4
CO03	El Pedregal	5.78	360	Pn	Pn	14 11 16.8	-1.5
CO06	Fray Jorge	6.00	352		Pn	14 11 19.6	-1.5
GO04	Tololo Observa	6.45	359		Pn	14 11 25.3	-2.0
LL07	Hotel Espejo d	6.56	199	Pn	Pn	14 11 24.6	-3.7
CO01	Juntas del Tor	6.66	4		Pn	14 11 29.3	-0.7
CO05	La Serena	6.72	356		Pn	14 11 29.2	-1.4
GO07	Milladeo Hill,	6.87	199		Pn	14 11 28.7	-3.8
TRQA	Tornquist	7.05	104	Pn	Pn	14 11 32.7	-2.3
LCO	Las Campanas	7.61	360	Pn	Pn	14 11 40.2	-2.4
AC04	Llanos de Chal	8.42	357	Pn	Pn	14 11 51.6	-1.6
AC06	Mina Casimiro	9.26	2		Pn	14 12 01.4	-3.0
AC02	Maricunga	9.86	8	Pn	Pn	14 12 11.1	-1.6
AC01	Pan de Azucar	10.46	0		Pn	14 12 16.1	-4.1
PB10	IPOC Station P	13.08	0	Pn	Pn	14 12 51.8	-2.4
PB15	IPOC Station P	13.42	5		Pn	14 12 56.8	-2.0
PB06	IPOC Station P	13.92	4	Pn	Pn	14 13 03.3	-1.6
LVC	Limon Verde	14.06	7	P	Pn	14 13 06.4	-0.5
	comp=Z,8.1nm,0.4s,baz=204,slow=6.1,SNR=9.9						
LVC				S	S	14 15 50.1	-1.0
	comp=Z,2.7nm,0.6s,baz=62,slow=20,SNR=6.3						
LVC	Limon Verde	14.06	7	Pn	Pn	14 13 06.6	-0.3
PB04	IPOC Station P	14.26	2		Pn	14 13 07.7	-1.6
GO09	Cerro Castillo	14.68	184		Pn	14 13 12.9	-1.2
PB09	IPOC Station P	14.84	5	P	Pn	14 13 16.7	+0.3
PB07	IPOC Station P	14.87	3		Pn	14 13 15.4	-1.5
PB02	IPOC Station P	15.28	3		Pn	14 13 20.5	-1.4
PB02				IAmb	IAmb	14 13 26.3	
	comp=Z,39nm,0.9s						
CPUP	Villa Florida	15.30	52	P	P	14 13 22.8	-0.4
	comp=Z,0.8nm,0.6s,baz=186,slow=13,SNR=1.9						
PB01	IPOC Station P	15.57	4		Pn	14 13 23.8	-1.7
PATCX	Punta Patache	15.77	2		Pn	14 13 26.6	-1.2
PATCX				IAmb	IAmb	14 13 32.0	
	comp=Z,38nm,0.9s						
PB08	IPOC Station P	16.49	5	P	P	14 13 36.1	-0.7
PB11	IPOC Station P	16.84	3		P	14 13 40.4	+0.1
MG03	Isla Dawson	17.21	180	Pn	Pn	14 13 44.9	0.0
DSPA	Despedida	17.40	175		P	14 13 46.4	+0.5
EFI	East Falkland	17.50	153	P	P	14 13 46.0	-1.1
USHA	Ushuaia	18.26	176	P	P	14 13 56.2	+0.8
	comp=Z,24nm,0.7s,baz=15,slow=10,SNR=15						
LPAZ	La Paz	20.39	7	P	Pn	14 14 21.6	-1.8
	comp=Z,7.0nm,0.5s,baz=109,slow=4.6,SNR=16						
	comp=Z,7.0nm,0.5s						
LPAZ	La Paz	20.39	7	P	P	14 14 21.2	+1.8
TRCB	Terra Rica	20.81	53	P	P	14 14 23.7	+0.4
SIV	San Ignacio	22.26	25	P	P	14 14 39.5	+1.2
	comp=Z,7.2nm,0.9s,baz=216,slow=13,SNR=10.0						
	comp=Z,7.2nm,0.9s						
BDFB	Brasilia	29.02	50	P	P	14 15 38.4	-1.1
	comp=Z,2.3nm,0.5s,baz=222,slow=5.6,SNR=3.2						
	comp=Z,2.3nm,0.5s						
MALB	Monte Alegre	37.78	27	*e*P	P	14 16 55.6	+0.5
BELA	Belgrano 2	44.09	170	P	P	14 17 46.2	+0.2
MDP	Montagnes des	44.81	26	P	P	14 17 52.2	-0.2
	comp=Z,14nm,0.8s,baz=215,slow=9.4,SNR=4.6						
	comp=Z,14nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAUV	**El Baul**	**45.40**	**4**	P	**P**	**14 17 55.7**	**-1.3**
BAUV				IAmb	IAmb	14 17 57.5	
	comp=Z,13nm,0.7s						
BCIP	**Isla Barro Col**	**46.37**	**347**	P	**P**	**14 18 04.6**	**0.0**
VNA3	**Neumayer Olymp**	**46.49**	**157**	P	**P**	**14 18 05.1**	**+0.1**
VNA3	**Neumayer Olymp**	**46.49**	**157**	PKiKP	**PKiKP**	**14 26 33.0**	**+2.3**
VNA3	**Neumayer Olymp**	**46.49**	**157**	PcP	**PcP**	**14 19 35.1**	**-1.6**
VNA3	**Neumayer Olymp**	**46.49**	**157**	ScP	**ScP**	**14 23 12.2**	**-2.8**
VNA1	**Neumayer--Stat**	**46.81**	**156**	P	**P**	**14 18 08.5**	**+1.2**
BIRV	**Birongo**	**47.04**	**6**	P	**P**	**14 18 08.5**	**-1.3**
VNA2	**Neumayer--Watz**	**47.15**	**156**	P	**P**	**14 18 10.6**	**+0.6**
VNA2	**Neumayer--Watz**	**47.15**	**156**	ScP	**ScP**	**14 23 16.6**	**-1.1**
SNAA	**Sanae**	**48.72**	**157**	P	**P**	**14 18 22.2**	**+0.1**
SNAA	**Sanae**	**48.72**	**157**	P	**P**	**14 18 22.0**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=251,slow=8.4,SNR=14						
	comp=Z,2.5nm,0.5s						
SNAA	**Sanae**	**48.72**	**157**	P	**P**	**14 18 20.1**	**-2.1**
ORTG	**Ortega, Santa**	**48.78**	**340**	P	**P**	**14 18 23.0**	**-0.2**
ORTG				IAmb	IAmb	14 18 25.9	
	comp=Z,13nm,0.7s						
TROLL	**Troll, Antarti**	**50.42**	**157**	P	**P**	**14 18 35.3**	**+0.2**
QSPA	**South Pole Qui**	**53.61**	**180**	P	**P**	**14 18 59.3**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=302,slow=2.1,SNR=9.0						
	comp=Z,4.6nm,0.8s						
QSPA	**South Pole Qui**	**53.61**	**180**	P	**P**	**14 18 59.4**	**+0.6**
833A	**Chaparral WMA,**	**70.05**	**333**	P	**P**	**14 20 50.4**	**+1.6**
	baz=156						
GOGA	**Godfrey**	**70.71**	**349**	P	**P**	**14 20 51.5**	**-1.1**
GOGA				IAmb	IAmb	14 20 53.7	
	comp=Z,10.0nm,0.8s						
GOGA	**Godfrey**	**70.71**	**349**	P	**P**	**14 20 53.0**	**+0.3**
	baz=169						
LRAL	**Lakeview Retre**	**70.98**	**346**	P	**P**	**14 20 54.9**	**+0.6**
LRAL				IAmb	IAmb	14 20 55.7	
	comp=Z,9.2nm,0.7s						
LRAL	**Lakeview Retre**	**70.98**	**346**	P	**P**	**14 20 54.8**	**+0.5**
	baz=166						
Z47A	**Carrollton**	**71.36**	**345**	P	**P**	**14 20 56.7**	**+0.2**
KMSC	**Kings Mountain**	**72.10**	**351**	P	**P**	**14 21 01.0**	**0.0**
	baz=171						
JCT	**Junction City**	**72.15**	**334**	P	**P**	**14 21 02.8**	**+1.4**
	baz=156						
FPAL	**Fort Paine**	**72.17**	**347**	P	**P**	**14 21 01.5**	**0.0**
FPAL				IAmb	IAmb	14 21 02.7	
	comp=Z,11nm,0.7s						
TX32	**Lajitas Array**	**72.58**	**330**	P	**P**	**14 21 05.0**	**+0.9**
TXAR	**Lajitas Array**	**72.58**	**330**	P	**P**	**14 21 05.5**	**+1.5**
	comp=Z,2.0nm,0.3s,baz=157,slow=7.8,SNR=61						
	comp=Z,2.0nm,0.3s						
TXAR	**Lajitas Array**	**72.58**	**330**	P	**P**	**14 21 05.2**	**+1.1**
TX31	**Lajitas Ar. Si**	**72.58**	**330**	P	**P**	**14 21 05.2**	**+1.1**
WHTX	**Lake Whitney,**	**72.74**	**336**	P	**P**	**14 21 05.8**	**+1.0**
	baz=158						
W50A	**Signal Mountai**	**72.76**	**347**	P	**P**	**14 21 05.4**	**+0.4**
W50A				IAmb	IAmb	14 21 06.4	
	comp=Z,12nm,0.8s						
V55A	**Taylorsville**	**72.79**	**351**	P	**P**	**14 21 04.7**	**-0.4**
V55A				IAmb	IAmb	14 21 06.0	
	comp=Z,9.6nm,0.6s						
OXF	**Oxford**	**72.91**	**344**	P	**P**	**14 21 05.5**	**-0.2**
	baz=164						
TKL	**Tuckaleechee C**	**72.96**	**349**	P	**P**	**14 21 05.8**	**-0.3**
	comp=Z,4.9nm,0.6s,baz=170,slow=8.0,SNR=11						
	comp=Z,4.9nm,0.6s						
V48A	**Smith Brothers**	**73.56**	**346**	P	**P**	**14 21 10.0**	**+0.4**
V48A				IAmb	IAmb	14 21 11.0	
	comp=Z,21nm,1.1s						
TZTN	**Tazewell**	**73.79**	**349**	P	**P**	**14 21 11.0**	**+0.1**
	baz=169						
MIAR	**Mount Ida**	**73.97**	**340**	P	**P**	**14 21 12.6**	**+0.7**
	baz=161						
ABTX	**Abilene, Hawle**	**74.05**	**335**	P	**P**	**14 21 13.5**	**+1.0**
	baz=156						
U49A	**Red Boiling Sp**	**74.12**	**347**	P	**P**	**14 21 12.5**	**-0.3**
U49A				IAmb	IAmb	14 21 13.3	
	comp=Z,8.9nm,0.5s						
WVT	**Waverly**	**74.14**	**346**	P	**P**	**14 21 12.1**	**-0.8**
WVT	**Waverly**	**74.14**	**346**	P	**P**	**14 21 13.1**	**+0.2**
	baz=166						
LIC	**Lamto**	**74.57**	**70**	*e*PKP2	**P**	**14 21 16.2**	**+0.3**
	comp=Z,7.3nm,0.6s						
W39A	**Magazine**	**74.64**	**341**	P	**P**	**14 21 17.0**	**+1.2**
	baz=161						
LCAR	**Lake Charles**	**74.81**	**343**	P	**P**	**14 21 17.1**	**+0.3**
TIC	**Toumodi**	**74.85**	**70**	*e*PKP2	**P**	**14 21 17.3**	**-0.3**
FCAR	**Ozark Folk Cen**	**74.87**	**342**	P	**P**	**14 21 16.8**	**-0.3**
FCAR				IAmb	IAmb	14 21 17.9	
	comp=Z,7.0nm,0.5s						
S51A	**Beattyville**	**74.87**	**349**	P	**P**	**14 21 17.5**	**+0.4**
S51A				IAmb	IAmb	14 21 18.1	
	comp=Z,12nm,0.7s						
KIC	**Kosan Boka**	**74.87**	**70**	*e*PKP2	**P**	**14 21 17.5**	**-0.2**
	comp=Z,18nm,0.5s						
DBIC	**Dimbokro**	**74.99**	**70**	P	**P**	**14 21 18.2**	**-0.1**
	comp=Z,8.4nm,0.6s,baz=225,slow=5.3,SNR=11						
	comp=Z,8.4nm,0.6s						
DBIC	**Dimbokro**	**74.99**	**70**	P	**P**	**14 21 17.8**	**-0.5**
DBIC				IAmb	IAmb	14 21 18.8	
	comp=Z,9.8nm,0.7s						
R55A	**Marlinton**	**75.06**	**352**	P	**P**	**14 21 18.5**	**+0.3**
R55A				IAmb	IAmb	14 21 20.4	
	comp=Z,12nm,0.8s						
MNTX	**Cornudas Mount**	**75.36**	**330**	P	**P**	**14 21 20.2**	**+0.2**
	baz=152						
U40A	**Yellville**	**75.50**	**342**	P	**P**	**14 21 21.2**	**+0.4**
U40A				IAmb	IAmb	14 21 22.0	
	comp=Z,13nm,1.1s						
U40A	**Yellville**	**75.50**	**342**	P	**P**	**14 21 21.1**	**+0.4**
	baz=162						
WMOK	**Wichita Mounta**	**75.69**	**336**	P	**P**	**14 21 22.5**	**+0.6**
	baz=157						
TUL1	**Leonard**	**75.87**	**339**	P	**P**	**14 21 23.4**	**+0.6**
	baz=159						
MSTX	**Muleshoe**	**76.37**	**333**	P	**P**	**14 21 26.8**	**+1.0**
	baz=154						
P52A	**Corning**	**76.63**	**351**	P	**P**	**14 21 27.2**	**+0.1**
	baz=170						
CCM	**Cathedral Cave**	**76.72**	**343**	P	**P**	**14 21 27.9**	**+0.3**
CCM				IAmb	IAmb	14 21 29.2	
	comp=Z,23nm,1.1s						
CCM	**Cathedral Cave**	**76.72**	**343**	P	**P**	**14 21 27.9**	**+0.3**
	baz=163						
AMTX	**Amarillo**	**76.80**	**334**	P	**P**	**14 21 29.6**	**+1.4**
	baz=155						
121A	**Cookes Peak, D**	**77.08**	**328**	P	**P**	**14 21 32.0**	**+2.1**
	baz=150						
SSPA	**Standing Stone**	**77.19**	**354**	P	**P**	**14 21 31.1**	**+1.0**
	baz=174						
ACSO	**Alum Creek Sta**	**77.33**	**350**	P	**P**	**14 21 31.2**	**+0.2**
	baz=170						
O48B	**Farmland**	**77.67**	**349**	P	**P**	**14 21 32.4**	**-0.5**
	baz=168						
BOSA	**Boshof**	**77.86**	**117**	P	**P**	**14 21 34.1**	**-0.4**
	comp=Z,4.9nm,0.9s,baz=169,slow=8.5,SNR=3.2						
	comp=Z,4.9nm,0.9s						
TUC	**Tucson**	**78.19**	**326**	P	**P**	**14 21 38.3**	**+2.3**
	baz=148						
M53A	**WI Miller and**	**78.24**	**352**	P	**P**	**14 21 36.3**	**+0.4**
	baz=172						
ANMO	**Albuquerque**	**78.64**	**331**	LR	LR	14 49 51.8	
	comp=Z,44nm,18.7s,baz=144,slow=30						
ANMO	**Albuquerque**	**78.64**	**331**	P	**P**	**14 21 40.3**	**+1.7**
	baz=151						
L56A	**Greenwood**	**78.65**	**355**	P	**P**	**14 21 37.5**	**-0.8**
L56A				IAmb	IAmb	14 21 39.9	
	comp=Z,13nm,0.8s						
L61B	**Northampton**	**78.73**	**358**	P	**P**	**14 21 40.0**	**+1.4**
	baz=178						
214A	**Organ Pipe Nat**	**78.82**	**324**	P	**P**	**14 21 41.9**	**+2.5**
	baz=147						
T25A	**Trinidad**	**79.80**	**333**	P	**P**	**14 21 47.1**	**+2.3**
	baz=153						
LBNH	**Lisbon**	**80.51**	**359**	P	**P**	**14 21 49.5**	**+1.4**
	baz=179						
SDCO	**Great Sand Dun**	**80.73**	**333**	P	**P**	**14 21 51.5**	**+1.6**
	baz=152						
WUAZ	**Wupatki**	**81.16**	**327**	P	**P**	**14 21 54.7**	**+2.6**
	baz=148						
S22A	**4UR Ranch, Cre**	**81.23**	**332**	P	**P**	**14 21 54.4**	**+1.8**
	baz=151						
MONP2	**Monument Peak**	**81.32**	**322**	P	**P**	**14 21 55.1**	**+2.0**
	baz=144						
SADO	**Sadowa**	**81.39**	**354**	P	**P**	**14 21 53.4**	**+0.6**
	baz=193,slow=5.6						
MVCO	**Mesa Verde**	**81.42**	**330**	P	**P**	**14 21 55.2**	**+1.8**
	baz=150						
BC3	**Big Chuckawall**	**81.47**	**324**	P	**P**	**14 21 56.1**	**+2.5**
	baz=145						
IRM	**Iron Mountain**	**81.74**	**324**	P	**P**	**14 21 57.0**	**+2.1**
	baz=145						
PFO	**Pinyon Flats O**	**81.92**	**323**	P	**P**	**14 21 57.8**	**+1.7**
PFO				IAmb	IAmb	14 21 59.6	
	comp=Z,12nm,0.8s						
PFO	**Pinyon Flats O**	**81.92**	**323**	P	**P**	**14 21 58.7**	**+2.6**
	baz=144						
BELC	**Belle Mtn. Jos**	**82.02**	**323**	P	**P**	**14 21 59.0**	**+2.4**
	baz=145						
MURC	**Murrieta**	**82.27**	**322**	P	**P**	**14 22 00.3**	**+2.5**
	baz=144						
GMRC	**Granite Mounta**	**82.50**	**324**	P	**P**	**14 22 01.4**	**+2.4**
	baz=145						
ISCO	**Idaho Springs**	**82.59**	**334**	P	**P**	**14 22 01.3**	**+1.7**
	baz=152						
URZ	**Urewera**	**82.72**	**227**	P	**P**	**14 22 01.8**	**+1.7**
	comp=Z,5.5nm,0.9s,baz=128,slow=19,SNR=3.0						
	comp=Z,5.5nm,0.9s						
BFSC	**Mount Baldy Ra**	**83.02**	**322**	P	**P**	**14 22 03.5**	**+1.8**
	baz=144						
ECSD	**EROS Data Cent**	**83.40**	**341**	P	**P**	**14 22 04.0**	**+0.8**
ECSD				IAmb	IAmb	14 22 04.9	
	comp=Z,17nm,1.2s						
ECSD	**EROS Data Cent**	**83.40**	**341**	P	**P**	**14 22 04.1**	**+0.8**
	baz=159						
GSC	**Goldstone, Bar**	**83.46**	**324**	P	**P**	**14 22 06.3**	**+2.4**
	baz=144						
MTPU	**Mount Pierson**	**83.64**	**328**	P	**P**	**14 22 06.1**	**+1.0**
N23A	**Red Feather La**	**83.67**	**334**	P	**P**	**14 22 06.8**	**+1.8**
	baz=152						
EDW2	**Edwards Air Fo**	**83.69**	**323**	P	**P**	**14 22 07.0**	**+1.9**
	baz=144						
CCUT	**Cedar City**	**83.74**	**327**	P	**P**	**14 22 06.7**	**+1.2**
CCUT				IAmb	IAmb	14 22 09.0	
	comp=Z,10.0nm,1.0s						
O20A	**White River Ci**	**83.85**	**332**	P	**P**	**14 22 07.5**	**+1.6**
	baz=150						
LRMC	**Laurel Mtn Rad**	**84.02**	**323**	P	**P**	**14 22 09.1**	**+2.3**
	baz=144						
TORD	**Torodi Ar. Bea**	**84.07**	**69**	P	**P**	**14 22 06.8**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=244,slow=5.0,SNR=8.4						
	comp=Z,4.1nm,0.8s						
TMUT	**Trail Mountain**	**84.30**	**330**	P	**P**	**14 22 09.2**	**+0.8**
MPMC	**Manual Prospec**	**84.40**	**324**	P	**P**	**14 22 10.4**	**+1.7**
	baz=144						
TPNV	**Topopah Spring**	**84.54**	**325**	P	**P**	**14 22 12.0**	**+2.6**
	baz=145,SNR=6.6						
ISA	**Isabella, Lake**	**84.56**	**323**	P	**P**	**14 22 11.9**	**+2.5**
	baz=143,SNR=6.2						
PKM	**Mcpherson Peak**	**84.60**	**321**	P	**P**	**14 22 12.8**	**+2.9**
	baz=142						
CWC	**Cottonwood Cre**	**84.99**	**323**	P	**P**	**14 22 13.8**	**+2.1**
	baz=144						
VES	**Vestal, Richgr**	**85.00**	**322**	P	**P**	**14 22 14.0**	**+2.5**
	baz=143						
SMMC	**Simmler**	**85.03**	**321**	P	**P**	**14 22 14.5**	**+2.7**
	baz=142						
R11A	**Troy Canyon, C**	**85.38**	**326**	P	**P**	**14 22 15.8**	**+2.2**
	baz=145,SNR=9.7						
RAO	**Raoul Island**	**85.40**	**237**	P	**P**	**14 22 14.7**	**+0.8**
	comp=Z,244nm,0.4s,baz=38,slow=18,SNR=3.5						
K22A	**Casper**	**85.43**	**334**	P	**P**	**14 22 15.2**	**+1.5**
	baz=152						
JLU	**Jordanelle**	**85.50**	**330**	P	**P**	**14 22 14.9**	**+0.7**
JLU				IAmb	IAmb	14 22 16.6	
	comp=Z,7.1nm,0.7s						
DUG	**Dugway, Tooele**	**85.72**	**329**	P	**P**	**14 22 15.7**	**+0.5**
DUG	**Dugway, Tooele**	**85.72**	**329**	P	**P**	**14 22 16.8**	**+1.7**
	baz=147,SNR=7.5						
RSSD	**Black Hills**	**85.90**	**337**	P	**P**	**14 22 15.8**	**-0.3**
RSSD				IAmb	IAmb	14 22 17.9	
	comp=Z,11nm,0.9s						
RSSD	**Black Hills**	**85.90**	**337**	P	**P**	**14 22 17.1**	**+1.0**
	baz=154						
MLAC	**Mammoth, Mammo**	**86.30**	**324**	P	**P**	**14 22 20.6**	**+2.4**
	baz=143						
HWUT	**Hardware Ranch**	**86.40**	**331**	P	**P**	**14 22 19.3**	**+0.7**
PDAR	**Pinedale Array**	**86.62**	**332**	P	**P**	**14 22 20.5**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=163,slow=5.7,SNR=10						
	comp=Z,1.1nm,0.7s						
PDAR	**Pinedale Array**	**86.62**	**332**	P	**P**	**14 22 19.7**	**0.0**
BW06	**Boulder Array**	**86.62**	**332**	P	**P**	**14 22 20.2**	**+0.5**
	baz=150						
NVAR	**Mina Array Bea**	**86.69**	**324**	P	**P**	**14 22 22.0**	**+1.9**
	comp=Z,5.1nm,0.9s,baz=154,slow=5.9,SNR=25						
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	**86.69**	**324**	P	**P**	**14 22 20.2**	**+0.1**
AGMN	**Agassiz Nation**	**87.50**	**343**	P	**P**	**14 22 24.2**	**+0.8**
	baz=160						
H17A	**Grant Village**	**88.40**	**333**	P	**P**	**14 22 30.1**	**+2.0**
	baz=149						
LAO	**LASA Array**	**88.89**	**336**	P	**P**	**14 22 30.7**	**+0.6**
	baz=152						
HLID	**Hailey**	**89.18**	**330**	P	**P**	**14 22 33.8**	**+2.0**
	baz=146						
ULM	**Lac du Bonnet**	**89.34**	**344**	P	**P**	**14 22 32.4**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=168,slow=5.9,SNR=4.8						
	comp=Z,5.3nm,0.7s						
YKA	**Yellowknife Ar**	**104.92**	**341**	Pdiff	**Pdif**	**14 23 42.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=146,slow=4.8,SNR=5.3						
ASAR	**Alice Springs**	**115.70**	**205**	PKP	**PKiKP**	**14 28 17.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=129,slow=1.5,SNR=13						
ASAR				PKKPbc	**PKKPbc**	**14 38 50.1**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=342,slow=3.3,SNR=6.5						
ASAR	**Alice Springs**	**115.70**	**205**	PKPdf	**PKiKP**	**14 28 17.3**	**-0.7**
ILAR	**Eielson Array**	**117.05**	**332**	PKP	**PKPdf**	**14 28 18.5**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=176,slow=1.2,SNR=4.8						
NOA	**NORSAR Array B**	**117.62**	**33**	PKhKP	PKPpre	14 28 16.7	
	comp=Z,0.2nm,0.3s,baz=171,slow=15,SNR=8.6						
MLR	**Muntele Rosu**	**119.16**	**53**	PKP	**PKiKP**	**14 28 24.8**	**+0.7**
	comp=Z,9.7nm,1.3s,baz=258,slow=5.5,SNR=3.0						
TOLK	**Toolik Lake Re**	**119.75**	**336**	P	**PKiKP**	**14 28 25.1**	**+0.7**
	baz=114						
BRTR	**Keskin Array B**	**122.09**	**62**	PKP	**PKiKP**	**14 28 30.1**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=197,slow=3.9,SNR=10						
AKASG	**Malin Array Be**	**123.11**	**48**	PKP	**PKPdf**	**14 28 30.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=262,slow=2.8,SNR=6.9						
ARCES	**ARCESS Array B**	**125.91**	**26**	PKP	**PKPdf**	**14 28 35.9**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=318,slow=1.6,SNR=9.5						
PETK	**Petropavlovsk-**	**142.78**	**312**	PKhKP	PKPpre	14 29 04.1	
	comp=Z,2.2nm,0.7s,baz=75,slow=8.4,SNR=13						
NRIK	**Noril'sk**	**145.14**	**13**	PKPbc	**PKPbc**	**14 29 11.4**	**-0.1**
	comp=Z,5.2nm,0.6s,baz=57,slow=2.5,SNR=6.4						
NRIK				SKPbc	**SKiKP**	**14 32 37.7**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=117,slow=2.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**155.75**	**37**	PKP	**PKPdf**	**14 29 28.4**	**0.0**
	comp=Z,1.6nm,1.0s,baz=104,slow=3.1,SNR=4.0						
ZALV				PKPbc	PKPbc	14 29 38.0	
	comp=Z,1.1nm,0.5s,baz=298,slow=3.2,SNR=4.3						
MKAR	**Makanchi Array**	**157.50**	**55**	PKP	**PKPdf**	**14 29 31.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=180,slow=1.2,SNR=4.4						
MKAR				PKPab	**PKPab**	**14 30 03.2**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=283,slow=3.8,SNR=14						
PZH	**PanZhiHua**	**168.00**	**145**	PKP	**PKPdf**	**14 29 38.5**	**-3.4**
SONM	**Songino Array**	**168.60**	**10**	PKPab	**PKPab**	**14 30 53.2**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=347,slow=5.9,SNR=4.4						
LZH	**Lanzhou**	**175.52**	**95**	*e*PKP	**PKPdf**	**14 29 46.0**	**+0.7**
LZH				pPKP	pPKPdf	14 30 28.4	+0.1
LZH				sPKP		14 30 46.9	

NIED ***07*** *14:51:06.1, 23°.97N×121°.53E, h25^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.99; M$_{\theta\theta}$-1.60; M$_{\phi\phi}$-2.39; M$_{r\theta}$5.63; M$_{\theta\phi}$-3.01; M$_{\phi r}$4.42; Fault plane solution: M$_0$8.47000×10^{15} NP1: ϕ_s208.00000°, δ17.00000°, λ68.00000°. NP2:ϕ_s51.00000°, δ74.00000°, λ97.00000°.*

JMA ***07*** *14:51:06.1±0.2, 24°.0N±0°.8×12°2E±°, h25^{km}, MD4.7/14, MV4.3/14, TAIWAN REGION*

BJI ***07*** *14:51:07.6±0.0, 24°.21N×121°.94E, h7^{km}, mb4.2/41, mB4.5/29, ML4.3/10, Ms4.6/53, Ms7 4.4/51*

IDC ***07*** *14:51:07.2±0.8, 24°.23N×121°.83E, h0^{km}, mb4.0/20, mbtmp4.0/21, ML3.6/1, MS3.7/30, Error ellipse: s-maj=19.3km s-min=17.4km az=41.0*

NEIC ***07*** *14:51:08.5±1.5, 24°.18N±0°.02×121°.79E±0°.04, h10^{km}±1^{km}, mb4.5/11, ML4.8(TAP), Error ellipse: s-maj=6.8km s-min=2.9km az=302.0*

ASIES ***07*** *14:51:09.2, 24°.25N×121°.75E, h13^{km}, MW-0.5*

TAP ***07*** *14:51:09.0, 24°.22N×121°.76E, h12^{km}, ML4.8, B*

ISC 07 14:51:08.6±0.8, **24°.22N**±0°.01×**121°.82E**±0°.02, **h8**^{km}±5^{km}, **n270**, σ1^{s}**37**/366, **mb4.1**/27, **MS3.8**/32, **27C-45D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**321**	⇓*i*P	**Pg**	**14 51 11.8**	**+0.6**
	baz=356						
EHP				S	**Sg**	**14 51 14.0**	**+1.0**
	baz=356						
ETL	**Fush Village**	**0.19**	**251**	⇓*i*P	**Pg**	**14 51 12.5**	**+0.1**
	baz=243						
ETL				*i* S	**Sg**	**14 51 15.3**	**+0.3**
	baz=243						
NACB	**Ninganchiao**	**0.21**	**257**		**Pg**	**14 51 11.6**	**-1.2**
NACB	**Ninganchiao**	**0.21**	**257**	⇓*i*P	**Pg**	**14 51 12.7**	**-0.1**
	baz=252						
NACB				*i* S	**Sg**	**14 51 15.9**	**+0.2**
	baz=252						
ENA	**Nanau**	**0.22**	**341**	*i* P	**Pg**	**14 51 13.6**	**+0.6**
	baz=358						
ENA				S	**Sg**	**14 51 17.0**	**+1.0**
	baz=358						
EWUT	**Wuta**	**0.23**	**351**	⇑*i*P	**Pg**	**14 51 13.9**	**+0.8**
	baz=5.0						
EWUT				*i* S	**Sg**	**14 51 17.5**	**+1.2**
	baz=5.0						
TWD	**Chiawan**	**0.25**	**236**	⇓*i*P	**Pg**	**14 51 13.4**	**-0.1**
	baz=225						
TWD				*e*S	**Sg**	**14 51 17.0**	**+0.2**
	baz=225						
ETLH	**Xiulin Townshi**	**0.31**	**268**	⇓*i*P	**Pg**	**14 51 14.5**	**-0.2**
	baz=267						
ETLH				S	**Sg**	**14 51 18.7**	**-0.1**
	baz=267						
HWA	**Hwalien**	**0.31**	**219**	⇓*i*P	**Pg**	**14 51 15.3**	**+0.6**
	baz=208						
TWC	**Suao**	**0.39**	**4**	⇑*i*P	**Pb**	**14 51 17.0**	**-0.8**
	baz=14						
TWC				*e*S	**Sb**	**14 51 22.4**	**-1.5**
	baz=14						
ETM	**Tongmen**	**0.39**	**230**	⇓*i*P	**Pg**	**14 51 16.0**	**-0.2**
	baz=223						
ETM				*e*S	**Sg**	**14 51 21.5**	**+0.1**
	baz=223						
TEYL	**Yanliau Villag**	**0.41**	**210**	*e*P	**Pg**	**14 51 16.9**	**+0.4**
	baz=204						
LATG	**Datong**	**0.41**	**320**	⇓*i*P	**Pg**	**14 51 17.0**	**+0.3**
	baz=326						
LATG				*e*S	**Sg**	**14 51 22.7**	**+0.6**
	baz=326						
NDS	**Dongshan**	**0.42**	**347**	⇑*i*P	**Pb**	**14 51 17.5**	**-0.9**
	baz=355						
NDS				S	**Sb**	**14 51 23.2**	**-1.7**
	baz=355						
NNSB	**Datong**	**0.45**	**298**	⇓*i*P	**Pg**	**14 51 17.5**	**+0.2**
	baz=301						
NNSB				S	**Sg**	**14 51 23.6**	**+0.4**
	baz=301						
NNS	**Nan Shan**	**0.46**	**298**	⇓*i*P	**Pg**	**14 51 17.7**	**+0.1**
	baz=302						
NNS				S	**Sg**	**14 51 23.6**	**-0.1**
	baz=302						
NDT	**Datong Townshi**	**0.47**	**324**	⇓*i*P	**Pb**	**14 51 18.2**	**-1.0**
	baz=330						
NDT				*e*S	**Sb**	**14 51 25.0**	**-1.3**
	baz=330						
ENTT	**Nioudou**	**0.48**	**331**	⇓*i*P	**Pb**	**14 51 18.4**	**-0.9**
	baz=338						
ENTT				*e*S	**Sb**	**14 51 25.0**	**-1.5**
	baz=338						
WHF	**Hehuan Shan**	**0.51**	**262**	⇓*i*P	**Pg**	**14 51 18.4**	**-0.2**
	baz=260						
WHF				*e*S	**Sg**	**14 51 25.1**	**-0.2**
	baz=260						
TWE	**Neicheng**	**0.52**	**345**	⇑*i*P	**Pb**	**14 51 19.4**	**-0.6**
	baz=352						
TWE				*e*S	**Sb**	**14 51 26.4**	**-1.3**
	baz=352						
FUSS	**Fushou**	**0.53**	**273**	⇓*i*P	**Pg**	**14 51 18.9**	**0.0**
	baz=273						
FUSS				*e*S	**Sg**	**14 51 25.8**	**0.0**
	baz=273						
ESL	**Shilin**	**0.54**	**221**	⇓*i*P	**Pg**	**14 51 18.7**	**-0.3**
	baz=215						
ESL				*e*S	**Sg**	**14 51 26.6**	**+0.6**
	baz=215						
ILA	**Ilan**	**0.55**	**353**	*e*P	**Pb**	**14 51 20.3**	**-0.2**
ILA				*e*S	**Sb**	**14 51 28.4**	**-0.1**
TEGC	**Jichi Village**	**0.57**	**207**	P	**Pg**	**14 51 20.6**	**+1.0**
	baz=200						
TEGC				*e*S	**Sb**	**14 51 30.1**	**+1.0**
	baz=200						
TWT	**Tachien**	**0.59**	**273**	⇓*e*P	**Pg**	**14 51 20.4**	**+0.4**
	baz=273						
TWT				*e*S	**Sg**	**14 51 28.1**	**+0.4**
	baz=273						
YHNB	**Yeheng**	**0.60**	**318**		**Pg**	**14 51 20.2**	**0.0**
YHNB	**Yeheng**	**0.60**	**318**	P	**Pb**	**14 51 21.4**	**-0.1**
YHNB	**Yeheng**	**0.60**	**318**	⇓*i*P	**Pb**	**14 51 20.9**	**-0.6**
	baz=322						
YHNB				*e*S	**Sg**	**14 51 28.5**	**+0.3**
	baz=322						
TDCB	**Techi**	**0.60**	**273**	⇓*i*P	**Pg**	**14 51 20.4**	**+0.2**
	baz=273						
TDCB				*e*S	**Sg**	**14 51 28.0**	**-0.2**
	baz=273						
CHGB	**Renai**	**0.61**	**255**	⇓*i*P	**Pg**	**14 51 20.4**	**0.0**
	baz=253						
CHGB				*e*S	**Sg**	**14 51 28.3**	**-0.1**
	baz=253						
NSK	**Sanguang**	**0.62**	**317**	⇓*i*P	**Pb**	**14 51 21.0**	**-0.7**
	baz=322						
NSK				*e*S	**Sg**	**14 51 29.0**	**+0.3**
	baz=322						
NWLT	**Wulai**	**0.62**	**333**	⇑P	**Pb**	**14 51 21.2**	**-0.6**
	baz=337						
NWLT				*e*S	**Sb**	**14 51 29.7**	**-1.1**
	baz=337						
EGS		**0.63**	**9**	*e*P	**Pb**	**14 51 21.8**	**-0.1**
	baz=15						
EGS				*e*S	**Sb**	**14 51 29.8**	**-1.1**
	baz=15						
NTC	**Toucheng**	**0.63**	**1**	⇑*e*P	**Pg**	**14 51 20.6**	**-0.2**
	baz=6.0						
NTC				*e*S	**Sb**	**14 51 29.4**	**-1.6**
	baz=6.0						
OWD	**Renai**	**0.65**	**246**	⇓*i*P	**Pg**	**14 51 20.7**	**-0.3**
	baz=243						
OWD				*e*S	**Sg**	**14 51 29.4**	**-0.1**
	baz=243						
EGFH	**Guangfu**	**0.66**	**213**	⇓P	**Pg**	**14 51 21.2**	**0.0**
	baz=209						
EGFH				*e*S	**Sb**	**14 51 31.6**	**-0.1**
	baz=209						
WUSB	**Renai**	**0.68**	**251**	⇓*i*P	**Pg**	**14 51 21.7**	**-0.1**
	baz=249						
WUSB				*e*S	**Sg**	**14 51 30.4**	**-0.2**
	baz=249						
TIPB	**Shuangxi**	**0.75**	**0**	⇑P	**Pb**	**14 51 23.8**	**-0.2**
	baz=5.0						
TIPB				*e*S	**Sb**	**14 51 34.0**	**-0.4**
	baz=5.0						
NFF	**Wufeng Townshi**	**0.76**	**303**	⇓*i*P	**Pb**	**14 51 23.5**	**-0.6**
	baz=305						
NFF				*e*S	**Sg**	**14 51 33.4**	**+0.3**
	baz=305						
VWDT	**VWDT**	**0.78**	**233**	⇓*e*P	**Pg**	**14 51 23.2**	**-0.3**
	baz=230						
VWDT				*e*S	**Sb**	**14 51 35.6**	**+0.6**
	baz=230						
NHDH	**Xindian Distri**	**0.79**	**340**	⇑P	**Pb**	**14 51 24.3**	**-0.2**
	baz=344						
NHDH				*e*S	**Sb**	**14 51 34.7**	**-0.7**
	baz=344						
TWA	**Mucha**	**0.79**	**344**	⇑*e*P	**Pb**	**14 51 24.4**	**-0.2**
	baz=349						
TWA				*e*S	**Sb**	**14 51 34.6**	**-0.9**
	baz=349						
WHP	**Taichung City**	**0.80**	**274**	⇓P	**Pg**	**14 51 24.2**	**+0.2**
	baz=274						
WHP				*e*S	**Sg**	**14 51 34.3**	**-0.1**
	baz=274						
TWB1	**Santiao Chiao**	**0.80**	**11**	*e*P	**Pb**	**14 51 24.6**	**-0.2**
	baz=16						
TWB1				*e*S	**Sb**	**14 51 35.3**	**-0.5**
	baz=16						
HGSD	**Ruisui**	**0.81**	**207**	*e*P	**Pg**	**14 51 24.7**	**+0.5**
	baz=203						
HGSD				*e*S	**Sb**	**14 51 37.8**	**+1.7**
	baz=203						
TATO	**Taipei**	**0.81**	**338**		**Pb**	**14 51 24.6**	**-0.4**
TATO	**Taipei**	**0.81**	**338**	⇑*e*P	**Pb**	**14 51 24.6**	**-0.4**
	baz=343						

TATO				eS	Sb	14 51 35.0	-1.0
	baz=343						
WPL	**Puli Township**	0.81	255	⇓eP	Pg	14 51 24.3	0.0
	baz=254						
WPL				eS	Sg	14 51 34.7	-0.2
	baz=254						
DPDB	**Guoxing**	0.84	257	⇓eP	Pg	14 51 24.8	+0.2
	baz=256						
DPDB				eS	Sg	14 51 35.3	-0.3
	baz=256						
NJD	**Zhudong**	0.84	308	eP	Pb	14 51 26.1	+0.6
	baz=310						
EHY	**Hungye**	0.84	213	eP	Pg	14 51 24.4	-0.4
	baz=209						
WCS	**Beigang Elemen**	0.84	259	⇓eP	Pg	14 51 24.8	0.0
	baz=258						
WCS				eS	Sg	14 51 35.5	-0.3
	baz=258						
LIOB	**Emei**	0.85	300	⇓eP	Pb	14 51 25.5	-0.1
	baz=302						
LIOB				eS	Sg	14 51 35.7	-0.2
	baz=302						
BACT	**New Taipei Cit**	0.85	336	eP	Pb	14 51 25.6	+0.1
	baz=340						
NHY	**Taipei**	0.85	344	eP	Pb	14 51 25.9	+0.3
	baz=348						
NWF	**Wu-fen Shan**	0.85	358	⇑eP	Pb	14 51 25.9	+0.2
	baz=2.0						
NWF				eS	Sb	14 51 36.9	-0.3
	baz=2.0						
WFSB	**Wu-fen Shan**	0.85	358	⇑eP	Pb	14 51 25.9	+0.3
	baz=2.0						
WFSB				eS	Sb	14 51 37.2	0.0
	baz=2.0						
NSTT	**Nanjuang**	0.85	299	⇓eP	Pb	14 51 25.3	-0.3
	baz=301						
NSTT				eS	Sg	14 51 35.2	-0.8
	baz=301						
TAP1	**Taipei**	0.86	342	eP	Pn	14 51 26.8	-0.3
	baz=345						
TAP	**Taipei**	0.86	341	eP	Pn	14 51 26.9	-0.2
	baz=345						
SXI1	**Grass Mountain**	0.87	3	⇑eP	Pb	14 51 26.2	+0.2
	baz=7.0						
SXI1				eS	Sb	14 51 38.1	+0.2
	baz=7.0						
SSLB	**Suanglung**	0.90	242	Pg	Pg	14 51 25.1	-0.9
SSLB	**Suanglung**	0.90	242	P	Pg	14 51 25.7	-0.2
SSLB	**Suanglung**	0.90	242	⇓P	Pg	14 51 25.5	-0.4
	baz=240						
SSLB				eS	Sg	14 51 37.2	-0.5
	baz=240						
SMLT	**Sun Moon Lake**	0.91	248	⇓eP	Pg	14 51 25.8	-0.2
	baz=246						
SMLT				eS	Sg	14 51 37.9	+0.2
	baz=246						
NTY	**Taoyuan**	0.91	329	eP	Pn	14 51 27.9	+0.2
	baz=332						
HSN1	**Hsinchu**	0.92	307	eP	Pn	14 51 27.8	-0.1
	baz=310						
TNOU	**National Taiwa**	0.93	357	eP	Pn	14 51 27.3	-0.7
	baz=1.0						
TNOU				eS	Sb	14 51 39.0	-0.4
	baz=1.0						
TYC	**Yuchr**	0.93	251	eP	Pg	14 51 26.2	-0.4
	baz=249						
TYC				eS	Sg	14 51 37.4	-1.3
	baz=249						
NCUH	**Zhongli**	0.94	322	⇑eP	Pn	14 51 27.8	-0.4
	baz=325						
NCUH				eS	Sn	14 51 40.9	-1.0
	baz=325						
NCU	**National Centr**	0.94	323	eP	Pn	14 51 28.0	-0.2
	baz=325						
NCU				eS	Sn	14 51 41.5	-0.4
	baz=325						
SBCB	**Hsinchu**	0.95	307	eP	Pn	14 51 28.3	0.0
	baz=309						
SBCB				eS	Sn	14 51 41.0	-1.0
	baz=309						
TWS1	**Kuangyinshan**	0.95	337	eP	Pn	14 51 27.9	-0.3
	baz=341						
TWS1				eS	Sn	14 51 41.0	-1.0
	baz=341						
YM01	**YM01**	0.95	346	⇑eP	Pn	14 51 27.7	-0.6
	baz=350						
YM01				eS	Sb	14 51 40.5	+0.3
	baz=350						
YULB	**Yu-li**	0.95	210		Pg	14 51 25.6	-1.3
YULB	**Yu-li**	0.95	210	eP	Pg	14 51 25.6	-1.3
	baz=207						
YULB				eS	Sg	14 51 39.8	+0.5
	baz=207						
ECBN	**Changbin**	0.96	201	eP	Pg	14 51 27.1	+0.1
	baz=197						
ECBN				eS	Sg	14 51 40.0	+0.5
	baz=197						
TWQ1	**Liyutan**	0.96	278	eP	Pb	14 51 27.7	+0.1
	baz=278						
TWQ1				eS	Sn	14 51 42.0	-0.4
	baz=278						
HSN	**Hsinchu**	0.97	307	eP	Pn	14 51 28.4	-0.1
	baz=312						
HSN				eS	Sn	14 51 41.6	-0.9
	baz=312						
EYUL	**Yuli**	0.98	208	eP	Pg	14 51 26.8	-0.7
	baz=205						
NSY	**Sanyi**	0.98	282	⇓eP	Pn	14 51 28.6	-0.2
	baz=282						
NSY				eS	Sn	14 51 43.3	+0.3
	baz=282						
YM08	**YM08**	0.99	348	⇑eP	Pb	14 51 28.0	0.0
	baz=351						
YM08				eS	Sn	14 51 41.8	-1.2
	baz=351						
TWF1	**Yuli**	0.99	209	eP	Pg	14 51 26.1	-1.4
	baz=205						
TWF1				eS	Sg	14 51 40.9	+0.5
	baz=205						
NMLH	**Miaoli**	0.99	289	⇓eP	Pn	14 51 28.5	-0.3
	baz=290						
NTST	**Danshui**	1.00	340	⇑eP	Pn	14 51 28.8	-0.2
	baz=343						
ANP	**Anpu**	1.00	344	⇑eP	Pb	14 51 28.4	+0.1
	baz=348						
ANP				eS	Sn	14 51 43.3	-0.1
	baz=348						
WWF	**Wufeng**	1.04	260	eP	Pn	14 51 29.6	+0.1
	baz=260						
TCU	**Taichung**	1.05	266	⇓eP	Pn	14 51 29.8	+0.2
	baz=266						
TCU				eS	Sn	14 51 44.5	+0.1
	baz=266						
NHW	**Xinwu Township**	1.05	318	eP	Pn	14 51 29.9	+0.2
	baz=321						
NHW				eS	Sn	14 51 44.5	-0.1
	baz=321						
JYNG	**Yonagunijimaku**	1.05	77	P	Pn	14 51 30.3	+0.6
JYNG				S	Sn	14 51 46.4	+1.9
JYNG	**Yonagunijimaku**	1.05	77	A	A	14 51 30.3	
	comp=E,17nm,3.1s,comp=E,31nm,2.6s						
TWY	**Chenhua**	1.07	349	eP	Pn	14 51 29.9	0.0
	baz=353						
WJS	**Zhushan**	1.07	249	eP	Pb	14 51 29.5	+0.1
	baz=247						
WJS				eS	Sn	14 51 45.9	+0.8
	baz=247						
YUS	**Yu-Shan**	1.08	228	eP	Pg	14 51 29.0	-0.3
	baz=225						
YUS				eS	Sg	14 51 44.1	+0.7
	baz=225						
WDJ	**Dajia District**	1.08	277	eP	Pn	14 51 30.0	-0.1
	baz=277						
WDJ				eS	Sn	14 51 45.1	-0.2
	baz=277						
WNT1	**Nantou City**	1.09	254	eP	Pn	14 51 30.9	+0.8
	baz=252						
WNT	**Mingjian**	1.09	252	eP	Pb	14 51 30.4	+0.6
	baz=251						
WNT				eS	Sn	14 51 46.1	+0.5
	baz=251						
YOJ	**Yonaguni jima**	1.11	77	Pn	Pn	14 51 31.0	+0.5
YOJ	**Yonaguni jima**	1.11	77	P	Pn	14 51 31.3	+0.8
YOJ	**Yonaguni jima**	1.11	77	⇓iP	Pn	14 51 31.1	+0.5
	baz=78						
YOJ				eS	Sn	14 51 48.0	+1.9
	baz=78						
YOJ	**Yonaguni jima**	1.11	77	P	Pn	14 51 31.2	+0.7
YOJ				eS	Sn	14 51 47.7	+1.6
YOJ	**Yonaguni jima**	1.11	77	A	A	14 51 31.2	
	comp=E,21nm,2.1s,comp=E,23nm,2.1s						
FULB	**Fuli**	1.12	205	eP	Pg	14 51 29.4	-0.8
	baz=203						
FULB				eS	Sb	14 51 46.5	+1.3
	baz=203						
WCHH	**Zhanghua**	1.16	263	⇓eP	Pn	14 51 31.4	+0.2
	baz=263						
WCHH				eS	Sn	14 51 47.8	+0.6
	baz=263						
WYL	**Yuanlin Townsh**	1.16	257	eP	Pn	14 51 31.8	+0.6
	baz=256						
ALS	**Alishan**	1.17	233	⇓eP	Pg	14 51 30.8	-0.2
	baz=231						
ALS				eS	Sg	14 51 46.9	+0.7
	baz=231						
CHKT	**Chengkung**	1.19	201	eP	Pg	14 51 30.3	-1.2
	baz=197						
CHKT				eS	Sg	14 51 47.4	+0.5
	baz=197						
CHN5	**Tsauling**	1.22	240	⇓eP	Pb	14 51 32.3	+0.4
	baz=238						
CHN5				eS	Sn	14 51 50.1	+1.4
	baz=238						
ECS	**Chishang**	1.25	206	eP	Pg	14 51 31.2	-1.3
	baz=204						
ELDTW	**Lidau**	1.26	216	eP	Pg	14 51 30.4	-2.4
	baz=213						
ELDTW				eS	Sg	14 51 49.2	-0.1
	baz=213						
WGK	**Gukeng**	1.27	245	eP	Pn	14 51 33.3	+0.7
	baz=244						
WGK				eS	Sn	14 51 51.6	+1.7
	baz=244						
WDLH	**Douliu**	1.29	246	⇓eP	Pb	14 51 33.6	+0.5
	baz=245						
WDLH				eS	Sg	14 51 49.1	-0.9
	baz=245						
EDH	**Donghe**	1.33	201	⇓eP	Pn	14 51 31.6	-1.9
	baz=198						
EDH				eS	Sg	14 51 49.1	-2.3
	baz=198						
WRL	**Guolierlin Hig**	1.36	257	eP	Pn	14 51 34.1	+0.3
	baz=256						
WRL				eS	Sn	14 51 53.2	+1.1
	baz=256						
CHN2	**Minshiung**	1.41	241	eP	Pg	14 51 36.3	+0.7
	baz=240						
CHN2				eS	Sn	14 51 56.7	+3.3
	baz=240						
WTK	**Tuku**	1.41	248	eP	Pb	14 51 35.3	+0.1
	baz=247						
WTK				eS	Sn	14 51 55.3	+1.8
	baz=247						
STYH	**Taoyuan**	1.42	223	⇑eP	Pn	14 51 34.2	-0.5
	baz=221						
STYH				eS	Sb	14 51 53.6	+0.1
	baz=221						
CHN4	**Tsaushan**	1.42	233	eP	Pb	14 51 35.8	+0.4
	baz=231						
CHN4				eS	Sg	14 51 56.3	+2.1
	baz=231						
PCYT	**Pengchaiyu**	1.42	9	eP	Pg	14 51 35.8	-0.1
	baz=12						
TPUB	**Ta-pu**	1.42	230		Pn	14 51 35.0	+0.2
TPUB	**Ta-pu**	1.42	230	P	Pg	14 51 36.1	+0.2
TPUB	**Ta-pu**	1.42	230	eP	Pn	14 51 35.0	+0.2
	baz=228						
TPUB				eS	Sg	14 51 55.2	+0.8
	baz=228						
STYT	**Tauyuan**	1.43	223	eP	Pn	14 51 34.8	-0.2
	baz=221						
STYT				eS	Sb	14 51 54.9	+0.8
	baz=221						
WTCT	**Ta-ch'eng**	1.45	256	eP	Pn	14 51 35.6	+0.4
	baz=255						
WTCT				eS	Sg	14 51 56.3	+1.1
	baz=255						
LONT	**Longtian**	1.45	206	eP	Pn	14 51 33.5	-1.7
	baz=204						
CHY	**Chiayi**	1.47	241	eP	Pb	14 51 36.3	+0.2
	baz=239						
CHY				eS	Sg	14 51 57.0	+1.3
	baz=239						
WTP	**Ta-pu**	1.47	229	eP	Pn	14 51 35.8	+0.3
	baz=227						
TWK	**Hsinying**	1.54	232	eP	Pn	14 51 37.2	+0.7
	baz=230						
TWGBT	**Beinan**	1.55	206	eP	Pn	14 51 34.2	-2.3
	baz=204						
TWG	**Pinlang**	1.55	206		Pn	14 51 33.9	-2.7
TWG	**Pinlang**	1.55	206	eP	Pn	14 51 34.2	-2.3
	baz=204						
SNST	**Tainan City**	1.57	231	eP	Pb	14 51 38.0	+0.1
	baz=229						
SNST				eS	Sg	14 51 59.7	+0.7
	baz=229						
CHN1	**Nanshi**	1.57	229	eP	Pb	14 51 38.1	+0.2
	baz=227						
CHN1				eS	Sg	14 52 01.3	+2.2
	baz=227						
WSF	**Szhu**	1.57	249	eP	Pn	14 51 37.3	+0.4
	baz=247						
LDUT	**Ludao**	1.57	192	eP	Pn	14 51 34.5	-2.4
	baz=190						
LDUT				eS	Sn	14 51 54.6	-2.8
	baz=190						
TTN	**Taitung**	1.58	203	eP	Pn	14 51 36.1	-0.9
	baz=201						
SGST	**Jiashian**	1.60	225	eP	Pn	14 51 37.4	+0.1
	baz=223						
WSL	**Shuilin Townsh**	1.61	245	⇑eP	Pb	14 51 38.6	0.0
	baz=244						
WSL				eS	Sg	14 52 01.3	+0.8
	baz=244						
SLGT	**Liugui**	1.63	222	eP	Pb	14 51 39.1	+0.2
	baz=220						
ICHU	**Yijhu**	1.65	239	eP	Pb	14 51 39.2	0.0
	baz=238						
CHN8	**Yiju**	1.71	240	eP	Pb	14 51 40.4	+0.1
	baz=238						
CHN8				eS	Sg	14 52 03.7	+0.1
	baz=238						
IRIF	**Iriomote-Funau**	1.75	86	P	Pn	14 51 39.7	+0.5
IRIF				eS	Sb	14 52 03.6	+0.5
IRIF	**Iriomote-Funau**	1.75	86	A	A	14 51 39.7	
	comp=E,9.0nm,2.2s,comp=E,14nm,1.5s						
CHN3	**Shinhua**	1.75	230	eP	Pg	14 51 42.1	-0.1
	baz=228						
ECL	**Taimali**	1.80	206	eP	Pn	14 51 37.6	-2.3
	baz=204						
SCST	**Cishan**	1.80	223	eP	Pn	14 51 41.5	+1.5
	baz=221						
SHHT	**Tainan City**	1.80	229	eP	Pb	14 51 42.1	+0.2
	baz=227						
SCLT	**Jiali**	1.82	235	eP	Pb	14 51 42.1	0.0
	baz=234						
HATJ	**Hateruma jima**	1.82	95	P	Pn	14 51 41.2	+0.9
HATJ				eS	Sb	14 52 05.8	+0.7
HATJ	**Hateruma jima**	1.82	95	A	A	14 51 41.2	
	comp=E,24nm,2.9s,comp=E,21nm,3.8s						
SSD	**Sandimen**	1.83	217	eP	Pn	14 51 40.5	+0.1
	baz=215						
SSD				eS	Sb	14 52 06.0	+0.6
	baz=215						
TSMG	**Majia**	1.85	216	eP	Pn	14 51 40.5	-0.3
	baz=214						
TSMG				eS	Sn	14 52 06.1	+1.7
	baz=214						
TWM1	**Shoushan**	1.89	223	eP	Pb	14 51 43.5	0.0
	baz=221						
TWM1				eS	Sg	14 52 11.1	+1.7
	baz=221						
SGLT	**Jiouru**	1.92	220	eP	Pb	14 51 44.0	+0.1
	baz=218						
MASBT	**Mashibuluo**	1.94	214	eP	Pn	14 51 41.6	-0.2
	baz=213						
MASBT				eS	Sb	14 52 08.6	+0.1
	baz=213						
JKRS	**Kuro-shima**	2.00	89	P	Pn	14 51 43.9	+1.2
JKRS				eS	Sb	14 52 09.9	-0.4
JKRS	**Kuro-shima**	2.00	89	A	A	14 51 43.9	
	comp=E,24nm,3.9s,comp=E,28nm,3.2s						
EAST	**Anshuo**	2.04	206	eP	Pn	14 51 41.6	-1.7
	baz=204						
EAST				eS	Sg	14 52 14.1	0.0
	baz=204						
TAWH	**Dawu Township**	2.06	205	eP	Pn	14 51 41.9	-1.6
	baz=203						
SSPT	**Xinbi**	2.08	214	eP	Pn	14 51 45.1	+1.4
	baz=212						
JIJ	**Ishigaki jima**	2.12	86	P	Pn	14 51 45.0	+0.6
JIJ				eS	Sn	14 52 12.2	+1.1
JIJ	**Ishigaki jima**	2.12	86	A	A	14 51 45.0	
	comp=E,3.0nm,3.0s,comp=E,5.0nm,4.5s						
SCZT	**Fangliau**	2.15	211	eP	Pn	14 51 44.0	-0.8
	baz=209						
SCZT				eS	Sb	14 52 14.9	+0.4
	baz=209						
PNG	**Penghu**	2.17	253	eP	Pn	14 51 45.0	-0.1
	baz=252						
PHUB	**P'eng-hu**	2.17	252	eP	Pn	14 51 45.0	-0.2
	baz=250						
PHUB				eS	Sn	14 52 13.0	+0.8
	baz=250						
LAY	**Lan-yu**	2.19	187	eP	Pn	14 51 42.7	-2.6
	baz=185						
LAY				eS	Sn	14 52 08.6	-4.0
	baz=185						
WDGT	**Dungji**	2.20	245	⇓eP	Pn	14 51 46.2	+0.8
	baz=243						
WDGT				eS	Sn	14 52 13.2	+0.3
	baz=243						
SLIU	**Shizi**	2.20	205	eP	Pn	14 51 44.7	-0.8
	baz=204						
LYUB	**Lan-yu**	2.22	186	eP	Pn	14 51 43.3	-2.4
	baz=184						
WLCH	**Liuqiu**	2.28	216	eP	Pn	14 51 48.8	+2.2
	baz=214						
WLCH				eS	Sg	14 52 23.6	+1.6
	baz=214						
VWUC	**VWUC**	2.29	290	⇑eP	Pn	14 51 46.2	-0.5
	baz=290						
VWUC				eS	Sn	14 52 13.7	-1.5
	baz=290						
VCHM	**Qimei**	2.41	246	eP	Pn	14 51 49.1	+0.8
	baz=245						
VCHM				eS	Sn	14 52 19.3	+1.2
	baz=245						
MATB	**Ma-tsu**	2.56	319	eP	Pn	14 51 49.4	-1.1
	baz=319						
PTMZ	**Houxiangcun**	2.59	289	⇑eP	Pn	14 51 50.3	-0.5
	baz=289						
PTMZ				eS	Sn	14 52 20.7	-1.8
	baz=289						
JTJ	**Tarama**	2.66	80	P	Pn	14 51 53.5	+1.6
JTJ				S	Sb	14 52 27.4	-2.0
JTJ	**Tarama**	2.66	80	A	A	14 51 53.5	
	comp=E,7.0nm,3.5s,comp=E,7.0nm,2.7s						
QZH	**Quanzhou**	3.02	284	⇑iPn	Pn	14 51 56.4	-0.4
QZH				Sn	Sn	14 52 31.5	-1.8
QZH				smax	smax		
	comp=N,870nm,0.8s						
QZH				smax	smax		
	comp=E,760nm,0.9s						
QZH				LR	LR		
	comp=Z,4µm,9.0s						
JIRB	**Irabujima**	3.11	78	P	Pn	14 52 00.5	+2.4
JIRB	**Irabujima**	3.11	78	A	A	14 52 00.5	
	comp=E,4.0nm,2.4s,comp=E,5.0nm,3.1s						
KNMB	**Chin-men Tao**	3.14	275		Pn	14 51 58.3	-0.1
MHZQ	**Yeshan**	3.15	307	⇑eP	Pn	14 51 57.7	-0.8
	baz=307						
MHZQ				eS	Sn	14 52 34.9	-1.4
	baz=307						
JIKM	**Ikemajima**	3.20	77	eP	Pn	14 52 02.0	+2.8
JIKM				eS	Sb	14 52 42.4	-2.4
JMJ	**Miyako jima 2**	3.22	79	P	Pn	14 52 01.7	+2.2
JMJ2	**Miyako jima3**	3.24	80	P	Pn	14 52 01.8	+2.0
JOGS	**Gusukube**	3.31	80	P	Pn	14 52 03.1	+2.3
JOGS	**Gusukube**	3.31	80	A	A	14 52 03.1	
	comp=E,7.0nm,3.1s,comp=E,11nm,3.7s						
APYP	**Conner**	6.35	185	⇓eP	Pn	14 52 42.9	+0.4
JOW	**Kunigami**	6.38	65	Pn	Pn	14 52 43.3	+0.3
	3.1nm,0.3s,baz=178,slow=29,SNR=25						
JOW				Sn	Sn	14 53 56.4	+0.2
	baz=156,slow=20						
	8.2nm,0.3s						
JOW	**Kunigami**	6.38	65	P	Pn	14 52 43.3	+0.3
SSE	**Sheshan**	6.87	355	Pn	Pn	14 52 47.6	-2.1
SSE				Sn	Sn	14 54 08.2	+0.1
SSE				smax	smax		
	comp=N,71nm,1.0s						
SSE				smax	smax		
	comp=E,44nm,1.0s						
SSE				LR	LR		
	comp=N,880nm,10.3s						
SSE				LR	LR		
	comp=E,230nm,10.1s						
NJ2	**Nanjing**	8.23	342	eP	Pn	14 53 08.9	+0.6
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,2µm,12.3s						
NJ2				LR	LR		
	comp=E,1µm,10.4s						
NJ2				LR	LR		
	comp=Z,2µm,9.8s						
WHN	**Wuhan**	9.15	315	⇑P	Pn	14 53 22.5	+1.6
WHN				S	Sn	14 55 13.6	+9.4
WHN				LR	LR		
	comp=N,4µm,8.5s						
WHN				LR	LR		
	comp=E,6µm,9.1s						
WHN				LR	LR		
	comp=Z,8µm,10.0s						
QIZ	**Qiongzhong**	12.28	247	P	Pn	14 54 04.1	+0.3
QIZ				S	Sn	14 56 22.7	+1.7
QIZ				LR	LR		
	comp=N,630nm,18.2s						
QIZ				LR	LR		
	comp=E,280nm,12.9s						
QIZ				LR	LR		
	comp=Z,250nm,10.6s						
GYA	**Guiyang**	13.88	282	⇑P	Pn	14 54 25.6	-0.3
GYA				S	Sn	14 57 03.9	+3.4
GYA				pmax	pmax		
	comp=Z,170nm,5.8s						
GYA				LR	LR		
	comp=N,820nm,7.4s						
GYA				LR	LR		
	comp=E,2µm,10.0s						
GYA				LR	LR		
	comp=Z,2µm,9.4s						
KSRS	**Korea Array**	14.19	20	Pn	Pn	14 54 31.4	+1.5
	0.1nm,0.3s,baz=200,slow=12,SNR=5.1						
KSRS				LR	LR	15 00 49.5	
	comp=Z,159nm,21.2s,baz=195,slow=41						
HNS	**HongShan**	14.48	337	eP	Pn	14 54 36.9	+3.0
HNS				S	Sn	14 57 22.1	+7.5
HNS				LR	LR		
	comp=N,1µm,12.3s						
HNS				LR	LR		
	comp=E,1µm,12.2s						
HNS				LR	LR		
	comp=Z,1µm,13.4s						
XAN	**Xi'an**	14.91	314	P	Pn	14 54 39.6	-0.2
XAN				S	Sn	14 57 26.2	+0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
XAN				LR	LR		
	comp=N,1µm,7.7s						
XAN				LR	LR		
	comp=E,2µm,10.1s						
XAN				LR	LR		
	comp=Z,2µm,9.9s						
CD2	**Chengdu**	17.34	297	P	Pn	14 55 10.0	-1.1
CD2				S	Sn	14 58 23.7	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=E,1µm,8.2s						
CD2				LR	LR		
	comp=Z,1µm,9.8s						
KMI	**Kunming**	17.37	277	⇑P	Pn	14 55 12.3	+0.6
KMI				pmax	pmax		
	comp=Z,98nm,4.6s						
KMI				LR	LR		
	comp=N,630nm,9.3s						
KMI				LR	LR		
	comp=E,2µm,9.8s						
KMI				LR	LR		
	comp=Z,2µm,9.8s						
DAV	**Davao City (W)**	17.43	167	LR	LR	15 02 19.4	

	comp=Z,212nm,19.0s,baz=352,slow=38						
PZH	**PanZhiHua**	**18.29**	**281**	P	**P**	**14 55 24.0**	**+0.9**
PZH				S	**Sn**	**14 58 45.7**	**-1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.1s						
PZH				LR	LR		
	comp=N,550nm,14.8s						
PZH				LR	LR		
	comp=E,650nm,13.8s						
PZH				LR	LR		
	comp=Z,750nm,14.3s						
HHC	**Hu-ho-hao-te**	**18.68**	**335**	*e*P	**Pn**	**14 55 28.7**	**+1.1**
HHC				pmax	pmax		
	comp=Z,62nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,4.9s						
HHC				LR	LR		
	comp=N,1μm,12.7s						
HHC				LR	LR		
	comp=E,680nm,13.3s						
HHC				LR	LR		
	comp=Z,1μm,13.3s						
MJAR	**Matsushiro Arr**	**18.70**	**45**	LR	LR	15 03 36.2	
	comp=Z,238nm,19.5s,baz=226,slow=40						
BTO	**Baotou**	**19.10**	**332**	*e*P	Pn	14 55 40.2	+7.4
BTO				S	S	14 59 23.1	+14
BTO				LR	LR		
	comp=N,4μm,13.4s						
BTO				LR	LR		
	comp=E,2μm,14.4s						
LZH	**Lanzhou**	**19.49**	**311**	*e*P	**Pn**	**14 55 43.3**	**+5.7**
LZH				pP	sP	14 55 47.4	+8.3
LZH				sP	pP	14 55 48.8	+11
LZH				S	**S**	**14 59 21.8**	**+4.8**
LZH				SS	**SnSn**	**14 59 38.6**	**+7.7**
LZH				pmax	pmax		
	comp=E,28nm,0.9s						
LZH				LR	LR		
	comp=E,800nm,9.5s						
LZH				LR	LR		
	comp=E,1μm,10.3s						
LZH				LR	LR		
	comp=E,2μm,11.1s						
XLT	**XiLinHaoTe**	**20.19**	**348**	*e*P	Pn	14 55 45.0	-0.7
XLT				pP	sP	14 55 49.2	+2.7
XLT				sP	pP	14 55 51.6	+5.8
XLT				S	**S**	**14 59 30.7**	**+0.1**
XLT				sS	Sn	14 59 34.7	+1.6
XLT				SS	**SnSn**	**14 59 57.0**	**+9.2**
XLT				pmax	pmax		
	comp=E,17nm,1.0s						
XLT				pmax	pmax		
	comp=E,94nm,3.8s						
XLT				LR	LR		
	comp=E,50nm,13.0s						
XLT				LR	LR		
	comp=E,370nm,14.5s						
XLT				LR	LR		
	comp=E,590nm,14.2s						
USRK	**Ussuriysk Ar.**	**21.60**	**20**	LR	LR	15 04 40.0	
	comp=E,129nm,20.7s,baz=181,slow=38						
CMAR	**Chiang Mai Arr**	**22.05**	**259**	P	**P**	**14 56 04.1**	**0.0**
	comp=E,0.5nm,0.4s,baz=68,slow=7.6,SNR=1.6						
CMAR				LR	LR	15 04 59.1	
	comp=E,134nm,19.2s,baz=70,slow=38						
	comp=E,0.5nm,0.4s						
GTA	**Gaotai**	**23.97**	**314**	⇓P	**P**	**14 56 23.9**	**+0.2**
GTA				pP	sP	14 56 28.3	+1.8
GTA				S	**S**	**15 00 44.9**	**+4.1**
GTA				pmax	pmax		
	comp=E,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=E,82nm,9.2s						
GTA				LR	LR		
	comp=E,300nm,13.5s						
GTA				LR	LR		
	comp=E,890nm,12.0s						
GTA				LR	LR		
	comp=E,940nm,11.9s						
GUMO	**Guam**	**24.20**	**112**	LR	LR	15 06 47.9	
	comp=E,29nm,18.2s,baz=286,slow=39						
GOMU	**GeErMu**	**26.12**	**303**	P	**P**	**14 56 45.0**	**+1.4**
GOMU				pP	sP	14 56 48.2	+1.8
GOMU				sP	pP	14 56 53.0	+7.5
GOMU				S	**S**	**15 01 15.8**	**+0.1**
GOMU				pmax	pmax		
	comp=E,2.0nm,0.9s						
GOMU				LR	LR		
	comp=E,330nm,14.5s						
GOMU				LR	LR		
	comp=E,130nm,14.9s						
GOMU				LR	LR		
	comp=E,140nm,15.0s						
KLR	**Kul'dur**	**26.15**	**15**	P	**P**	**14 56 44.1**	**+0.8**
	comp=E,2.5nm,0.8s,baz=214,slow=4.2,SNR=6.1						
KLR				LR	LR	15 07 38.6	
	comp=E,146nm,19.6s,baz=202,slow=38						
	comp=E,2.5nm,0.8s						
SONM	**Songino Array**	**26.56**	**336**	P	**P**	**14 56 47.2**	**0.0**
	comp=E,4.9nm,1.1s,baz=154,slow=9.1,SNR=19						
SONM				LR	LR	15 08 46.4	
	comp=E,263nm,18.7s,baz=144,slow=40						
	comp=E,4.9nm,1.1s						
SONM	**Songino Array**	**26.56**	**336**	P	**P**	**14 56 45.4**	**-1.8**
SONM				IAmb	IAmb	14 56 49.3	
	comp=Z,7.5nm,1.2s						
SIJI	**Sorong**	**26.57**	**158**	LR	LR	15 05 10.3	
	comp=Z,51nm,21.9s,baz=60,slow=32						
KAPI	**Kappang**	**29.13**	**184**	LR	LR	15 09 09.8	
	comp=Z,71nm,20.8s,baz=18,slow=37						
WMQ	**Urumqi**	**34.05**	**314**	*e*P	**P**	**14 57 55.0**	**+1.6**
WMQ				LR	LR		
	comp=Z,310nm,13.1s						
WMQ				LR	LR		
	comp=Z,690nm,12.1s						
WMQ				LR	LR		
	comp=Z,180nm,11.1s						
MK31	**Makanchi Array**	**38.72**	**316**	P	**P**	**14 58 33.0**	**-0.2**
MKAR	**Makanchi Array**	**38.72**	**316**	P	**P**	**14 58 33.1**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=108,slow=9.4,SNR=19						
MKAR				LR	LR	15 15 44.6	
	comp=Z,204nm,18.0s,baz=108,slow=38						
	comp=Z,3.1nm,0.9s						
MKAR	**Makanchi Array**	**38.72**	**316**	P	**P**	**14 58 33.9**	**+0.7**
MAKZ	**Makanchi**	**38.92**	**316**	P	**P**	**14 58 33.2**	**-1.7**
MAKZ				IAmb	IAmb	14 58 47.3	
	comp=Z,12nm,1.4s						
PETK	**Petropavlovsk-**	**39.51**	**34**	LR	LR	15 16 17.6	
	comp=Z,121nm,18.4s,baz=202,slow=38						
ZALV	**Zalesovo Beam**	**40.53**	**327**	P	**P**	**14 58 47.9**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=109,slow=8.3,SNR=6.9						
ZALV				LR	LR	15 16 35.7	
	comp=Z,172nm,19.5s,baz=128,slow=38						
	comp=Z,3.3nm,0.8s						
MA2	**Magadan**	**40.73**	**22**	LR	LR	15 17 23.6	
	comp=Z,106nm,19.3s,baz=216,slow=39						
KRVT	**Keravat (AS076**	**40.85**	**130**	LR	LR	15 15 10.8	
	comp=Z,65nm,19.8s,baz=120,slow=35						
KSH	**Kashi**	**41.37**	**303**	P	**P**	**14 58 59.6**	**+4.2**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				LR	LR		
	comp=Z,210nm,13.0s						
KSH				LR	LR		
	comp=Z,200nm,13.1s						
KSH				LR	LR		
	comp=Z,290nm,16.6s						
PMG	**Port Moresby**	**41.59**	**140**	LR	LR	15 16 47.0	
	comp=Z,70nm,19.1s,baz=326,slow=37						
H11N1	**WAKE ISLAND Hy**	**41.91**	**87**	T	T	15 44 16.1	
	baz=283,slow=74,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**41.91**	**87**	T	T	15 44 19.8	
	baz=283,slow=74,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**41.92**	**87**	T	T	15 44 20.3	
	baz=283,slow=74,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**42.04**	**89**	T	T	15 44 19.2	
	baz=284						
H11S1	**WAKE ISLAND Hy**	**42.05**	**89**	T	T	15 44 20.1	
	baz=284						
H11S2	**WAKE ISLAND Hy**	**42.06**	**89**	T	T	15 44 26.6	
	baz=284						
FITZ	**Fitzroy Crossi**	**42.23**	**175**	P	**P**	**14 59 00.7**	**-1.6**
FITZ				IAmb	IAmb	14 59 14.2	
	comp=Z,16nm,1.4s						
KURBB	**Kurchatov Arra**	**42.45**	**320**	P	**P**	**14 59 04.5**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=119,slow=7.6,SNR=11						
	comp=Z,0.7nm,0.4s						
AAK	**Ala-Archa**	**42.95**	**307**	LR	LR	15 19 42.5	
	comp=Z,130nm,18.9s,baz=89,slow=40						
COEN	**Coen**	**43.30**	**149**	P	**P**	**14 59 09.4**	**-1.8**
WRAB	**Tennant Creek**	**45.55**	**163**	P	**P**	**14 59 26.9**	**-2.2**
WRAB				IAmb	IAmb	14 59 51.8	
	comp=Z,7.9nm,1.3s						
PSA00	**Pilbara Seismi**	**45.56**	**183**	P	**P**	**14 59 26.7**	**-2.4**
PSA00				IAmb	IAmb	14 59 27.4	
	comp=Z,8.7nm,1.2s						
TIXI	**Tiksi**	**47.63**	**3**	P	**P**	**14 59 43.1**	**-1.6**
	comp=Z,6.2nm,1.0s,baz=300,slow=12,SNR=29						
TIXI				LR	LR	15 22 11.0	
	comp=Z,114nm,18.2s,baz=180,slow=39						
	comp=Z,6.2nm,1.0s						
TIXI	**Tiksi**	**47.63**	**3**	P	**P**	**14 59 43.2**	**-1.6**
AS31	**Alice Springs**	**49.02**	**165**	P	**P**	**14 59 54.2**	**-2.0**
ASAR	**Alice Springs**	**49.02**	**165**	P	**P**	**14 59 55.5**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=340,slow=7.1,SNR=10						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**49.02**	**165**	P	**P**	**14 59 55.1**	**-1.1**
CTA	**Charters Tower**	**50.06**	**150**	LR	LR	15 19 36.6	
	comp=Z,56nm,21.1s,baz=291,slow=34						
ABKAR	**Akbulak array**	**53.83**	**314**	P	**P**	**15 00 31.2**	**-0.8**
AKTO	**Aktyubinsk**	**55.15**	**316**	LR	LR	15 25 48.3	
	comp=Z,87nm,21.8s,baz=94,slow=38						
ARU	**Arti**	**55.43**	**323**	P	**P**	**15 00 43.0**	**-0.4**
	comp=Z,0.5nm,0.2s,baz=81,slow=3.5,SNR=4.7						
	comp=Z,0.5nm,0.2s						
STKA	**Stephens Creek**	**58.90**	**160**	P	**P**	**15 01 09.0**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=346,slow=8.3,SNR=3.3						
	comp=Z,2.2nm,0.7s						
KIRV	**Kirov**	**60.52**	**325**	LR	LR	15 29 23.5	
	comp=Z,109nm,19.4s,baz=95,slow=38						
BELG	**Belogornoye**	**61.66**	**318**	LR	LR	15 29 47.2	
	comp=Z,84nm,18.5s,baz=166,slow=38						
KLMR	**Klimovskoe**	**65.44**	**328**	*e*P	**P**	**15 01 48.6**	**-3.2**
KLMR				AMP		15 01 53.0	
	comp=Z,12nm,1.4s						
KBZ	**Khabaz**	**65.91**	**309**	P	**P**	**15 01 55.5**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=135,slow=6.4,SNR=4.7						
	comp=Z,2.2nm,0.8s						
H21K	**Melozitna Rive**	**66.31**	**27**	P	**P**	**15 01 57.5**	**+0.2**
H23K	**Yukon River**	**67.62**	**26**	P	**P**	**15 02 05.8**	**+0.1**
ILAR	**Eielson Array**	**68.92**	**27**	P	**P**	**15 02 14.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=287,slow=7.5,SNR=7.8						
	comp=Z,0.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**69.57**	**348**	LR	LR	15 36 44.8	
	comp=Z,97nm,18.5s,baz=242,slow=39						
ARCES	**ARCESS Array B**	**69.72**	**338**	LR	LR	15 38 11.6	
	comp=Z,45nm,18.5s,baz=106,slow=40						
FINES	**FINESS Array B**	**71.71**	**330**	P	**P**	**15 02 31.2**	**+0.3**
	comp=Z,4.0nm,1.2s,baz=159,slow=5.7,SNR=5.6						
FINES				LR	LR	15 36 50.8	
	comp=Z,137nm,19.1s,baz=82,slow=38						
	comp=Z,4.0nm,1.2s						
INK	**Inuvik**	**72.97**	**22**	P	**P**	**15 02 38.5**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=314,slow=2.7,SNR=5.0						
INK				LR	LR	15 36 58.2	
	comp=Z,43nm,19.1s,baz=62,slow=38						
	comp=Z,2.2nm,0.8s						
AKASG	**Malin Array Be**	**73.23**	**318**	P	**P**	**15 02 39.2**	**-1.0**
	comp=Z,0.2nm,0.2s,baz=57,slow=7.0,SNR=7.9						
	comp=Z,0.2nm,0.2s						
BRTR	**Keskin Array B**	**73.62**	**307**	P	**P**	**15 02 42.9**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=104,slow=5.2,SNR=12						
	comp=Z,2.3nm,0.9s						
HFS	**Hagfors**	**77.82**	**331**	LR	LR	15 40 40.2	
	comp=Z,253nm,18.3s,baz=72,slow=38						
NB2	**NORSAR Subarra**	**78.46**	**332**	P	**P**	**15 03 07.5**	**-2.5**
	comp=Z,2.3nm,1.2s,baz=59,slow=5.6						
NOA	**NORSAR Array B**	**78.46**	**332**	P	**P**	**15 03 10.3**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=59,slow=5.6,SNR=3.9						
NOA				LR	LR	15 41 03.0	
	comp=Z,131nm,20.3s,baz=60,slow=38						
	comp=Z,0.3nm,0.6s						
RES	**Resolute Bay**	**78.53**	**9**	LR	LR	15 41 29.6	
	comp=Z,37nm,19.9s,baz=16,slow=38						
YKA	**Yellowknife Ar**	**82.71**	**23**	P	**P**	**15 03 31.2**	**-1.5**
	comp=Z,2.1nm,0.8s,baz=315,slow=4.8,SNR=19						
	comp=Z,2.1nm,0.8s						
GERES	**GERESS Array B**	**83.18**	**321**	P	**P**	**15 03 34.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=64,slow=9.1,SNR=4.0						
	comp=Z,0.2nm,0.3s						
OPO	**Ambohidratompo**	**84.24**	**247**	LR	LR	15 40 57.6	
	comp=Z,24nm,18.6s,baz=199,slow=36						
NVAR	**Mina Array Bea**	**96.01**	**43**	P	**P**	**15 04 37.2**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=290,slow=5.7,SNR=2.2						
	comp=Z,0.2nm,0.6s						

TAP 07 14:51:29.0, 24°.23N×121°.75E, h11$^{\mathrm{km}}$, ML4.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**357**	*i* P	Pg	14 51 31.5	0.0
	baz=2.0						
EHP				*i* S	Sg	14 51 33.6	+0.3
	baz=2.0						
ETL	**Fush Village**	**0.13**	**237**	*i* P	Pg	14 51 32.3	+0.1
	baz=236						
ETL				*i* S	Sg	14 51 35.2	+0.6
	baz=236						
NACB	**Ninganchiao**	**0.15**	**247**	P	Pg	14 51 32.7	+0.2
	baz=247						
NACB				*e*S	Sg	14 51 35.4	+0.5
	baz=247						
ENA	**Nanau**	**0.19**	**359**	*i* P	Pg	14 51 33.4	+0.2
	baz=1.0						
ENA				*i* S	Sg	14 51 36.6	+0.5
	baz=1.0						
TWD	**Chiawan**	**0.20**	**222**	P	Pg	14 51 33.4	0.0
	baz=221						
TWD				S	Sg	14 51 36.9	+0.6
	baz=221						
EWUT	**Wuta**	**0.21**	**8**	*i* P	Pg	14 51 33.7	+0.2
	baz=8.0						
EWUT				*i* S	Sg	14 51 36.9	+0.3
	baz=8.0						
ETLH	**Xiulin Townshi**	**0.24**	**264**	*e*P	Pg	14 51 34.5	+0.4
	baz=264						
HWA	**Hwalien**	**0.29**	**207**	*e*P	Pn	14 51 40.3	+1.2
	baz=205						
ETM	**Tongmen**	**0.35**	**221**	*e*P	Pg	14 51 36.4	+0.3
	baz=221						
ETM				*e*S	Sg	14 51 41.6	+0.8
	baz=221						
NNSB	**Datong**	**0.38**	**300**	*e*P	Pb	14 51 37.6	-0.3
	baz=300						
NNSB				*e*S	Sg	14 51 42.9	+1.0
	baz=300						
TWC	**Suao**	**0.39**	**14**	*e*P	Pg	14 51 36.8	+0.1
	baz=15						
TWC				*e*S	Sg	14 51 42.0	+0.2
	baz=15						
TEYL	**Yanliau Villag**	**0.39**	**200**	*e*P	Pb	14 51 38.1	+0.1
	baz=202						
NNS	**Nan Shan**	**0.40**	**301**	*e*P	Pb	14 51 38.0	-0.2
	baz=301						
NNS				*e*S	Sg	14 51 43.3	+1.0
	baz=301						
NDS	**Dongshan**	**0.40**	**356**	*e*P	Pb	14 51 37.7	-0.5
	baz=356						
NDS				*e*S	Sg	14 51 42.9	+0.6
	baz=356						
NDT	**Datong Townshi**	**0.42**	**330**	*e*P	Pb	14 51 38.2	-0.4
	baz=330						
NDT				*e*S	Sb	14 51 44.3	-0.7
	baz=330						
ENTT	**Nioudou**	**0.44**	**338**	*e*P	Pb	14 51 38.6	-0.2
	baz=339						
ENTT				*e*S	Sb	14 51 44.8	-0.6
	baz=339						
WHF	**Hehuan Shan**	**0.45**	**259**	*e*P	Pg	14 51 38.5	+0.6
	baz=258						
WHF				*e*S	Sg	14 51 44.8	+0.8
	baz=258						
TWE	**Neicheng**	**0.49**	**352**	*e*P	Pb	14 51 39.4	-0.4
	baz=353						
TWE				*e*S	Sg	14 51 46.0	+0.8
	baz=353						
ESL	**Shilin**	**0.51**	**215**	*e*P	Pb	14 51 39.7	-0.2
	baz=214						
TDCB	**Techi**	**0.54**	**272**	*e*P	Pg	14 51 39.4	-0.2
	baz=272						
YHNB	**Yeheng**	**0.55**	**322**	*e*P	Pb	14 51 40.8	+0.1
	baz=322						
YHNB				*e*S	Sg	14 51 47.9	+0.7
	baz=322						
NSK	**Sanguang**	**0.56**	**321**	*e*P	Pb	14 51 41.2	+0.2
	baz=322						
NSK				*e*S	Sb	14 51 48.7	-0.4
	baz=322						
NWLT	**Wulai**	**0.58**	**338**	*e*P	Pb	14 51 41.1	-0.3
	baz=338						
NWLT				*e*S	Sg	14 51 48.9	+0.7
	baz=338						

TAP 07 14:51:57.5, 24°.23N×121°.75E, h12$^{\mathrm{km}}$, ML3.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**355**	*i* P	Pg	14 52 00.1	-0.1
EHP				S	Sg	14 52 02.3	+0.3
ETL	**Fush Village**	**0.14**	**239**	*i* P	Pg	14 52 00.9	+0.1
	baz=238						
ETL				S	Sg	14 52 03.7	+0.5
	baz=238						
NACB	**Ninganchiao**	**0.15**	**249**	*i* P	Pg	14 52 01.1	+0.1
	baz=249						
NACB				S	Sg	14 52 04.2	+0.6
	baz=249						
ENA	**Nanau**	**0.20**	**358**	*i* P	Pg	14 52 01.9	+0.1
ENA				*e*S	Sg	14 52 05.4	+0.6
TWD	**Chiawan**	**0.20**	**223**	P	Pg	14 52 02.1	+0.2
	baz=222						
TWD				S	Sg	14 52 05.8	+0.9
	baz=222						
EWUT	**Wuta**	**0.22**	**7**	*i* P	Pg	14 52 02.2	0.0
	baz=7.0						
EWUT				*e*S	Sg	14 52 05.8	+0.5
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.24**	**265**	*i* P	Pg	14 52 03.1	+0.5
	baz=265						
ETLH				S	Sg	14 52 07.2	+1.0
	baz=265						
HWA	**Hwalien**	**0.28**	**208**	*e*P	Pb	14 52 04.7	+0.2
	baz=206						
ETM	**Tongmen**	**0.35**	**222**	P	Pg	14 52 04.7	+0.2
	baz=222						
ETM				*e*S	Sb	14 52 10.7	-0.5
	baz=222						
LATG	**Datong**	**0.37**	**326**	P	Pb	14 52 05.5	-0.5
	baz=326						
LATG				*e*S	Sb	14 52 11.3	-0.5
	baz=326						
TEYL	**Yanliau Villag**	**0.39**	**201**	*e*P	Pb	14 52 06.7	+0.4
	baz=202						
NNSB	**Datong**	**0.39**	**301**	P	Pb	14 52 06.0	-0.4
	baz=301						
NNSB				*e*S	Sb	14 52 11.6	-0.8
	baz=301						
TWC	**Suao**	**0.39**	**14**	P	Pg	14 52 05.6	+0.4
	baz=15						
TWC				S	Sg	14 52 11.1	+0.6
	baz=15						
NNS	**Nan Shan**	**0.40**	**302**	*e*P	Pb	14 52 06.2	-0.4
	baz=302						
NNS				*e*S	Sb	14 52 12.1	-0.7
	baz=302						
NDS	**Dongshan**	**0.40**	**356**	P	Pg	14 52 06.0	+0.5
	baz=356						
NDS				*e*S	Sb	14 52 12.0	-0.8
	baz=356						
NDT	**Datong Townshi**	**0.43**	**330**	*e*P	Pb	14 52 06.8	-0.3
	baz=330						
NDT				*e*S	Sb	14 52 13.4	-0.1
	baz=330						
ENTT	**Nioudou**	**0.44**	**338**	P	Pb	14 52 06.9	-0.3
	baz=339						
ENTT				S	Sb	14 52 13.6	-0.2
	baz=339						
WHF	**Hehuan Shan**	**0.45**	**259**	*e*P	Pg	14 52 07.0	+0.5
	baz=259						
WHF				*e*S	Sb	14 52 13.6	-0.8
	baz=259						
FUSS	**Fushou**	**0.46**	**272**	*e*P	Pb	14 52 07.8	0.0
	baz=272						
FUSS				*e*S	Sb	14 52 14.3	-0.3
	baz=272						
TWE	**Neicheng**	**0.50**	**351**	*e*P	Pb	14 52 07.8	-0.4
	baz=353						
TWE				*e*S	Sg	14 52 14.5	+0.6
	baz=353						
ESL	**Shilin**	**0.50**	**215**	*e*P	Pb	14 52 08.0	-0.3
	baz=214						
ESL				*e*S	Sb	14 52 15.2	-0.4
	baz=214						
TDCB	**Techi**	**0.54**	**273**	*e*P	Pb	14 52 08.9	-0.1
	baz=272						
CHGB	**Renai**	**0.55**	**252**	*e*P	Pb	14 52 09.1	-0.1
	baz=252						
CHGB				*e*S	Sb	14 52 16.9	-0.2
	baz=252						
YHNB	**Yeheng**	**0.56**	**322**	*e*P	Pb	14 52 09.2	0.0
	baz=322						
YHNB				*e*S	Sb	14 52 17.2	0.0
	baz=322						
NSK	**Sanguang**	**0.57**	**321**	*e*P	Pb	14 52 09.5	0.0
	baz=322						
NSK				*e*S	Sb	14 52 17.3	-0.3
	baz=322						
NWLT	**Wulai**	**0.59**	**338**	*e*P	Pb	14 52 09.9	+0.1
	baz=338						
NWLT				*e*S	Sb	14 52 17.7	-0.4
	baz=338						
OWD	**Renai**	**0.59**	**243**	*e*P	Pb	14 52 09.9	0.0
	baz=242						
OWD				*e*S	Sb	14 52 18.7	+0.4
	baz=242						
WUSB	**Renai**	**0.62**	**248**	*e*P	Pb	14 52 10.7	+0.3
	baz=248						
WUSB				*e*S	Sb	14 52 19.4	+0.2
	baz=248						
NFF	**Wufeng Townshi**	**0.70**	**305**	*e*P	Pb	14 52 12.1	+0.4
	baz=305						
TIPB	**Shuangxi**	**0.74**	**5**	*e*P	Pb	14 52 12.9	+0.5
	baz=5.0						

TAP 07 15:08:27.1, 24°.22N×121°.72E, h15$^{\mathrm{km}}$, ML2.5, 6D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.11**	**234**	*i* P	Pg	15 08 30.5	0.0
	baz=234						
ETL				S	Sb	15 08 33.2	-0.3
	baz=234						
NACB	**Ninganchiao**	**0.12**	**247**	⇓*i*P	Pg	15 08 30.7	+0.1
	baz=247						
NACB				S	Sb	15 08 33.5	-0.4
	baz=247						
TWD	**Chiawan**	**0.18**	**219**	*i* P	Pg	15 08 31.4	0.0
	baz=217						
ENA	**Nanau**	**0.20**	**5**	*i* P	Pg	15 08 31.8	0.0
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.22**	**266**	⇓*i*P	Pb	15 08 32.5	-0.3
	baz=266						
EWUT	**Wuta**	**0.23**	**14**	⇓*i*P	Pg	15 08 32.1	0.0
	baz=13						
ETM	**Tongmen**	**0.33**	**219**	*e*P	Pg	15 08 34.1	+0.2
	baz=219						
LATG	**Datong**	**0.36**	**330**	P	Pb	15 08 35.2	0.0
	baz=330						
LATG				*e*S	Sb	15 08 41.8	+1.0
	baz=330						
NNSB	**Datong**	**0.37**	**304**	⇓*e*P	Pb	15 08 35.7	+0.2
	baz=304						
NNSB				*e*S	Sb	15 08 41.4	+0.3
	baz=304						
TEYL	**Yanliau Villag**	**0.37**	**198**	*e*P	Pb	15 08 35.8	+0.4
	baz=199						
NNS	**Nan Shan**	**0.38**	**304**	*e*P	Pb	15 08 35.9	+0.2
	baz=305						
TWC	**Suao**	**0.40**	**17**	*e*P	Pg	15 08 35.4	+0.1
	baz=18						
TWC				*e*S	Sg	15 08 41.1	+0.3
	baz=18						
NDS	**Dongshan**	**0.41**	**359**	*e*P	Pb	15 08 35.7	-0.3
	baz=360						
NDS				*e*S	Sb	15 08 41.7	-0.5
	baz=360						
NDT	**Datong Townshi**	**0.42**	**333**	⇓*e*P	Pb	15 08 36.6	+0.3
	baz=333						
NDT				*e*S	Sb	15 08 43.2	+0.7

	baz=333						
WHF	**Hehuan Shan**	**0.42**	**260**	*e*P	Pb	15 08 36.4	-0.2
	baz=259						
WHF				*e*S	Sb	15 08 43.4	+0.5
	baz=259						
FUSS	**Fushou**	**0.43**	**273**	*e*P	Pb	15 08 36.8	+0.2
	baz=273						
ENTT	**Nioudou**	**0.44**	**341**	*e*P	Pb	15 08 36.7	+0.1
	baz=342						
ENTT				*e*S	Sb	15 08 43.4	+0.4
	baz=342						
TWE	**Neicheng**	**0.50**	**354**	*e*P	Pb	15 08 37.6	+0.1
	baz=356						
CHGB	**Renai**	**0.52**	**252**	*e*P	Pb	15 08 38.5	+0.3
	baz=252						
YHNB	**Yeheng**	**0.54**	**325**	⇓*e*P	Pb	15 08 39.1	+0.6
	baz=325						
YHNB				*e*S	Sb	15 08 46.9	+0.8
	baz=325						
FUSB	**Fushanzhiwuyua**	**0.55**	**347**	*e*P	Pb	15 08 38.8	+0.3
	baz=347						
NSK	**Sanguang**	**0.56**	**324**	*e*P	Pb	15 08 39.2	+0.6
	baz=324						
NSK				*e*S	Sb	15 08 47.3	+0.7
	baz=324						
OWD	**Renai**	**0.56**	**242**	*e*P	Pb	15 08 39.3	+0.5
	baz=242						
TIPB	**Shuangxi**	**0.75**	**7**	*e*P	Pb	15 08 42.2	+0.3
	baz=7.0						

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*NEIC **07** 15:15:37.7±1.8, 2°.9N±0°.1×89°.47E±0°.08, h10^{km}±1^{km}, mb4.9/15, Error ellipse: s-maj=22.1km s-min=12.6km az=194.0*

*IDC **07** 15:15:37.2±0.6, 3°.00N×89°.31E, h0^{km}, mb4.3/26, mbtmp4.3/29, ML4.0/3, MS3.8/36, Error ellipse: s-maj=15.5km s-min=13.6km az=29.0*

*GCMT **07** 15:15:39.7±0.4, 2°.88N±0°.02×89°.56E±0°.02, h15^{km}±2^{km}, MW4.8/77, Moment Tensor Solution. s9,c9; s77,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.03±.08; $M_{\theta\theta}$-1.26±.06; $M_{\phi\phi}$1.28±.07; $M_{r\theta}$-0.83±.29; $M_{\theta\phi}$-0.78±.07; $M_{\phi r}$0.09±.23; Best double couple: $M_0$1.69300×10^{16} NP1:ϕ_s27.00000°, δ64.00000°, λ-8.00000°. NP2: ϕ_s120.00000°, δ83.00000°, λ-154.00000°. Principal axes: T 1.5700, Plg13.0000°, Azm251.0000°; N 0.2410, Plg63.0000°, Azm135.0000°; P -1.8160, Plg24.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 15:15:38.5±0.4**, 3°.02N**±0°.05×**89°.46E**±0°.05**, h10^{km}, n173,** σ**1^s.98**/151**, mb4.8**/73**, MS3.9**/46**, 5C-1D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**6.88**	**95**	P	**Pn**	**15 17 19.1**	**-0.5**
	5.7nm8µm502nm,0.8s						
LHMI	**Lhok Sumawe**	**7.78**	**73**		**Pn**	**15 17 31.9**	**-0.1**
LHMI	**Lhok Sumawe**	**7.78**	**73**	P	**Pn**	**15 17 31.5**	**-0.4**
	1.6nm3µm355nm,0.7s						
GSI	**Gunungsitoli**	**8.29**	**102**		**Pn**	**15 17 35.1**	**-3.7**
GSI	**Gunungsitoli**	**8.29**	**102**	P	**Pn**	**15 17 35.5**	**-3.3**
	4µm294nm,0.6s						
KCSI	**Kotacane, Aceh**	**8.31**	**86**	P	**Pn**	**15 17 39.7**	**+0.5**
	4µm469nm,0.9s						
TSI	**Tuntungan**	**9.10**	**87**	P	**Pn**	**15 17 48.6**	**-1.4**
	4µm377nm,0.8s						
PBA	**Port Blair**	**9.18**	**21**	*e*x	**Sn**	**15 19 28.2**	**-6.3**
PSI	**Prapat**	**9.45**	**91**	Pn	**Pn**	**15 17 55.3**	**+0.4**
	2.6nm,0.3s,baz=351,slow=8.6,SNR=9.4						
PSI				Sn	**Sn**	**15 19 38.7**	**-2.8**
	3.9nm,0.3s,baz=76,slow=18,SNR=1.8						
PSI				LR	LR	15 21 39.6	
	comp=Z,1µm,18.2s,baz=226,slow=38						
	7.8nm,0.3s						
PALK	**Pallekele**	**9.69**	**296**	Pn	**Pn**	**15 17 57.0**	**-1.2**
	2.3nm,0.3s,baz=227,slow=12,SNR=16						
PALK				Sn	Sn	15 19 37.0	-10
	20nm,0.3s,baz=307,slow=19,SNR=15						
PALK				LR	LR	15 21 29.7	
	comp=Z,448nm,18.5s,baz=223,slow=37						
	8.9nm,0.5s						
PALK	**Pallekele**	**9.69**	**296**	Pn	**Pn**	**15 17 57.2**	**-1.0**
SISI	**Saibi**	**10.55**	**114**	P	**Pn**	**15 18 10.8**	**+0.9**
	39nm,1.1s						
KULM	**Kulim**	**11.39**	**78**		**Pn**	**15 18 19.6**	**-1.7**
SRIT	**Nakonsritamara**	**11.51**	**61**	Pn	**Pn**	**15 18 21.8**	**-1.3**
IPM	**Ipoh**	**11.63**	**82**		**Pn**	**15 18 22.8**	**-1.9**
BKNI	**Bangkinang**	**11.88**	**103**	P	**Pn**	**15 18 32.1**	**+4.0**
	3µm96nm,0.8s						
PPSI	**Pulau Pagai**	**12.01**	**118**	P	**Pn**	**15 18 33.5**	**+3.7**
	116nm,1.1s						
KRJI	**Kerinci**	**13.03**	**113**	P	**Pn**	**15 18 44.2**	**+0.3**
	5µm475nm,0.7s						
MDRS	**Chennai**	**13.52**	**318**	*e*P	**Pn**	**15 18 49.4**	**-1.1**
MDRS				*e*x	Sn	15 21 07.0	-14
MYKOM	**Kota Tinggi**	**14.43**	**95**		**P**	**15 19 07.3**	**-2.5**
PCHI	**Peechi**	**15.00**	**300**	*e*P	**Pn**	**15 19 10.2**	**-0.6**
PCHI				*e*S	Sn	15 21 42.7	-15
MNAI	**Manna**	**15.35**	**118**	pP	pP	15 19 22.2	+0.1
	345nm,1.0s						
DSRI	**Dabo**	**15.51**	**103**	P	Pn	15 19 10.1	-7.3
LWLI	**Liwa**	**16.63**	**119**	P	**P**	**15 19 34.0**	**-0.4**
	255µm9µm203nm,0.7s						
RAGD	**RAYAGADA**	**17.16**	**340**	*e*P	**P**	**15 19 40.8**	**+0.5**
KASI	**Kota Agung**	**17.25**	**119**	P	**P**	**15 19 39.9**	**-1.3**
	82nm,1.0s						
PPBI	**Pangkal Pinang**	**17.45**	**107**	P	**P**	**15 19 44.1**	**+0.7**
	5µm75nm,1.2s						
BWNR	**Bhubaneshwar**	**17.54**	**349**	*e*P	**Pn**	**15 19 43.1**	**-0.2**
HYB	**Hyderabad**	**17.87**	**324**	*e*P	**Pn**	**15 19 46.8**	**-0.7**
HYBB	**Hyderabad (bro**	**17.87**	**324**	*e*P	**Pn**	**15 19 46.7**	**-0.8**
HYBB				*e*		15 22 51.8	
HYBB				*e*S	**Sn**	**15 23 07.9**	**+1.0**
CM31	**Chiang Mai Arr**	**17.94**	**31**	P	**Pn**	**15 19 48.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**17.94**	**31**	P	**P**	**15 19 49.5**	**+0.7**
	0.1nm,0.3s,baz=225,slow=12,SNR=27						
CMAR				LR	LR	15 26 31.8	
	comp=Z,222nm,21.0s,baz=215,slow=36						
	4.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.94**	**31**	P	**P**	**15 19 49.0**	**+0.2**
CHTO	**Chiang Mai**	**18.24**	**30**	P	**Pn**	**15 19 51.5**	**-0.5**
TPI	**Tanjungpandan**	**19.07**	**107**	P	**P**	**15 20 00.4**	**-0.9**
	234nm12nm,1.4s						
JHSG	**JHARSUGUGA**	**19.43**	**344**	*e*x	**Pn**	**15 20 12.5**	**+6.1**
H08S3	**Diego Garcia H**	**19.97**	**238**	T	T	15 40 18.9	
	baz=58,slow=74,SNR=1825						
H08S2	**Diego Garcia H**	**19.97**	**238**	T	T	15 40 29.0	
	baz=58,slow=74,SNR=542						
H08S1	**Diego Carcia H**	**19.98**	**238**	T	T	15 40 29.1	
	baz=58,slow=74,SNR=148						
BLSP	**Bilaspur**	**20.29**	**340**	*e*P	Pn	15 20 16.6	0.0
CNJI	**Cibinong**	**20.40**	**120**	P	Pn	15 20 16.3	-1.6
	87nm,0.9s						
LEM	**Lembang**	**20.59**	**118**	P	Pn	15 20 20.3	-0.1
	9.2nm,0.4s,baz=290,slow=19,SNR=3.8						
LEM				LR	LR	15 27 11.5	
	comp=Z,124nm,18.7s,baz=319,slow=34						
	9.2nm,0.4s						
LEM	**Lembang**	**20.59**	**118**	P	Pn	15 20 20.3	-0.1
	699nm26nm,1.4s						
KAD	**Karad**	**20.65**	**314**	*e*P	Pn	15 20 21.9	+1.0
AZL	**Aizawl**	**20.84**	**8**	*e*P	**P**	**15 20 21.2**	**+0.6**
KSM	**Kuching**	**20.89**	**94**	P	**P**	**15 20 20.9**	**-0.3**
KSM				IAmb	IAmb	15 20 41.0	
	comp=Z,31nm,0.8s						
BOK	**Bokaro**	**20.94**	**351**	*e*P	**P**	**15 20 22.9**	**+1.2**
AKL	**Akola**	**21.36**	**326**	*e*P	**P**	**15 20 27.8**	**+1.7**
KPJI	**Karang Pucung**	**21.98**	**118**	P	**P**	**15 20 32.1**	**-0.8**
	comp=Z,59nm,0.8s						
JBP	**Jabalpur**	**22.03**	**336**	*e*P	**P**	**15 20 34.2**	**+0.8**
JBP				*e*x	**P**	**15 20 34.2**	**+0.8**
JBP				IAmb	IAmb	15 20 35.5	
	comp=Z,29nm,0.9s						
JBP				*e*S	**S**	**15 24 38.3**	**+1.8**
STKI	**Sintang**	**22.20**	**97**	P	**P**	**15 20 35.0**	**-0.3**
	comp=Z,61nm,1.2s						
SHL	**Shillong**	**22.54**	**6**	*e*P	**P**	**15 20 38.9**	**-0.1**
SBUM	**Sibu**	**22.74**	**91**	P	**P**	**15 20 39.9**	**-1.2**
SBUM				IAmb	IAmb	15 20 52.1	
	comp=Z,22nm,0.9s						
PBKI	**Pangkalan Bun**	**22.92**	**104**	P	P	15 20 52.2	+9.3
KOHI	**KOHIMA**	**23.01**	**11**	*e*P	**P**	**15 20 42.9**	**-1.0**
KOHI				IAmb	IAmb	15 21 01.3	
	comp=Z,40nm,0.6s						
BHPL	**Bhopal**	**23.24**	**331**	*e*P	**P**	**15 20 47.8**	**+1.6**
BHPL				IAmb	IAmb	15 21 04.8	
	comp=Z,25nm,0.9s						
MOKO	**MOKOCHONG**	**23.67**	**11**	*e*P	**P**	**15 20 49.2**	**-1.4**
TEZP	**TEZPUR**	**23.68**	**7**	*e*P	**P**	**15 20 50.6**	**+0.2**
TEZP				IAmb	IAmb	15 21 01.9	
	comp=Z,18nm,0.7s						
ODAN	**Odare**	**23.79**	**355**	*e*P	**P**	**15 20 53.3**	**+1.5**
	comp=Z,71nm,0.7s						
RAMN	**Ramite**	**23.95**	**354**	*e*P	**P**	**15 20 55.4**	**+2.0**
	comp=Z,34nm,0.5s						
TAPN	**Taplejung**	**24.25**	**356**	*e*P	**P**	**15 20 57.4**	**+1.2**
	comp=Z,49nm,0.8s						
JIRN	**Jiri**	**24.70**	**353**	*e*P	**P**	**15 21 01.7**	**+1.3**
PKI	**Pulchoki**	**24.72**	**351**	*e*P	**P**	**15 21 01.6**	**+1.1**
	comp=Z,28nm,0.7s						
PKIN	**Phulchoki**	**24.73**	**351**	*e*P	**P**	**15 21 01.6**	**+1.1**
	comp=Z,32nm,0.7s						
DMN	**Daman**	**24.81**	**351**	*e*P	**P**	**15 21 02.7**	**+1.5**
	comp=Z,66nm,1.0s						
KKN	**Kakani**	**24.96**	**351**	*e*P	**P**	**15 21 03.8**	**+1.3**
	comp=Z,58nm,0.8s						
GUN	**Gumba**	**24.99**	**352**	*e*P	**P**	**15 21 04.4**	**+1.5**
	comp=Z,123nm,0.8s						
KOLN	**Koldanda**	**25.24**	**348**	*e*P	**P**	**15 21 06.6**	**+1.5**
GKN	**Gorkha**	**25.27**	**350**	*e*P	**P**	**15 21 06.7**	**+1.4**
	comp=Z,67nm,0.8s						
KMI	**Kunming**	**25.43**	**29**	⇑P	**P**	**15 21 08.7**	**+1.9**
KMI				sP	pwP	15 21 17.0	+3.6
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
KMI				LR	LR		
	comp=N,350nm,18.6s						
KMI				LR	LR		
	comp=E,280nm,17.4s						
KMI				LR	LR		
	comp=Z,290nm,21.6s						
QIZ	**Qiongzhong**	**25.51**	**50**	P	**P**	**15 21 08.6**	**+1.3**
QIZ				S	**S**	**15 25 36.4**	**+1.4**
QIZ				LR	LR		
	comp=N,690nm,14.9s						
QIZ				LR	LR		
	comp=E,420nm,22.8s						
QIZ				LR	LR		
	comp=Z,290nm,16.6s						
PYUN	**Piuthan**	**25.70**	**347**	*e*P	**P**	**15 21 10.7**	**+1.5**
	comp=Z,45nm,0.8s						
DANN	**Dangsing**	**25.77**	**348**	*e*P	**P**	**15 21 11.4**	**+1.4**
	comp=Z,107nm,1.0s						
PZH	**PanZhiHua**	**26.16**	**26**	P	**P**	**15 21 14.1**	**+0.8**
PZH				sP	**pwP**	**15 21 22.6**	**+2.7**
PZH				S	**S**	**15 25 49.0**	**+3.7**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,4.3s						
PZH				LR	LR		
	comp=N,410nm,15.0s						
PZH				LR	LR		
	comp=E,590nm,14.0s						
PZH				LR	LR		
	comp=Z,540nm,15.5s						
KMMI	**Kalianget**	**26.43**	**112**	P	**P**	**15 21 16.0**	**+0.3**
	comp=Z,1µmcomp=Z,16nm,1.1s						
LSA	**Lhasa**	**26.59**	**3**	P	**P**	**15 21 18.9**	**+1.4**
LSA				S	**S**	**15 25 56.1**	**+3.5**
LSA				pmax	pmax		
	comp=Z,36nm,0.7s						
LSA				LR	LR		
	comp=N,62nm,8.9s						
LSA				LR	LR		
	comp=E,350nm,21.7s						
LSA				LR	LR		
	comp=Z,98nm,5.3s						
KAPI	**Kappang**	**31.30**	**105**	P	**P**	**15 22 01.3**	**+2.2**
	comp=Z,6.1nm,0.8s,baz=60,slow=13,SNR=2.8						
KAPI				LR	LR	15 35 57.7	
	comp=Z,223nm,18.3s,baz=266,slow=39						
	comp=Z,6.1nm,0.8s						
BKSI	**Bulukumba**	**31.73**	**105**	P	**P**	**15 22 01.9**	**-1.0**
	comp=Z,12nm,0.7s						
BKSI				pP	**pwP**	**15 22 08.1**	**-1.2**
	comp=Z,12nm,0.7s						
BSSI	**Bau Bau, Buton**	**32.29**	**106**	P	**P**	**15 22 08.8**	**+0.9**
	comp=Z,9.6nm,0.9s						
GOMU	**GeErMu**	**33.39**	**8**	P	**P**	**15 22 18.1**	**+0.5**
GOMU				pP	sP	15 22 21.2	+0.7
GOMU				sP	pwP	15 22 25.5	+1.3
GOMU				S	S	15 27 50.8	+12
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,20nm,4.7s						
GOMU				LR	LR		
	comp=N,54nm,19.4s						
GOMU				LR	LR		
	comp=E,140nm,19.5s						
GOMU				LR	LR		
	comp=Z,100nm,19.2s						
NIL	**Nilore**	**34.03**	**335**	P	**P**	**15 22 23.2**	**+0.3**
BBSI	**Bau Bau**	**34.13**	**104**	P	**P**	**15 22 25.6**	**+1.6**
	comp=Z,122nmcomp=Z,6.7nm,1.0s						
KMSI	**Cibinong**	**34.59**	**93**	P	P	15 22 41.9	+14
LZH	**Lanzhou**	**35.49**	**20**	*e*P	**P**	**15 22 34.6**	**-1.0**
LZH				pP	sP	15 22 38.8	+0.3
LZH				sP	pwP	15 22 42.6	+0.4
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				LR	LR		
	comp=N,300nm,14.4s						
LZH				LR	LR		
	comp=E,240nm,14.6s						
LZH				LR	LR		
	comp=Z,290nm,16.5s						
XAN	**Xi'an**	**35.80**	**28**	P	**P**	**15 22 37.0**	**-1.2**
XAN				pP	sP	15 22 41.3	+0.2
XAN				S	**S**	**15 28 15.3**	**-0.5**
XAN				SS	**SS**	**15 30 49.5**	**-2.4**
XAN				pmax	pmax		
	comp=Z,27nm,1.0s						
XAN				LR	LR		
	comp=N,330nm,13.7s						
XAN				LR	LR		
	comp=E,270nm,14.3s						
XAN				LR	LR		
	comp=Z,330nm,15.5s						
WSAR	**Wadi Sarin**	**35.97**	**307**	LR	LR	15 36 25.3	
	comp=Z,144nm,18.1s,baz=144,slow=35						
WHN	**Wuhan**	**36.10**	**38**	⇑P	P	15 22 49.8	+9.1
WHN				S	**S**	**15 28 28.5**	**+8.2**
WHN				pmax	pmax		
	comp=Z,44nm,0.9s						
WHN				LR	LR		
	comp=N,310nm,8.9s						
WHN				LR	LR		
	comp=E,610nm,13.2s						
WHN				LR	LR		
	comp=Z,620nm,14.6s						
DAV	**Davao City (W)**	**36.19**	**82**	LR	LR	15 38 60.0	
	comp=Z,69nm,18.9s,baz=294,slow=39						
BATI	**Baumata**	**36.50**	**112**	LR	LR	15 38 57.5	
	comp=Z,290nm,18.4s,baz=344,slow=38						
SSLB	**Suanglung**	**36.77**	**53**	P	**P**	**15 22 45.8**	**-0.8**
SSLB				IAmb	IAmb	15 23 05.4	
	comp=Z,19nm,0.7s						
SANI	**Sanana**	**36.86**	**97**	P	**P**	**15 22 50.1**	**+2.6**
	comp=Z,12nm,1.2s						
GTA	**Gaotai**	**37.43**	**13**	⇓P	**P**	**15 22 52.9**	**+0.8**
GTA				pP	pwP	15 22 58.2	-0.5
GTA				sP	sP	15 23 01.6	+6.6
GTA				pmax	pmax		
	comp=Z,28nm,0.9s						
LYN	**LuoYang**	**37.98**	**32**	*e*P	**P**	**15 22 57.3**	**+0.6**
LYN				S	**S**	**15 28 48.5**	**-0.4**
LYN				SS	**SnSn**	**15 31 21.2**	**-10**
LYN				LR	LR		
	comp=N,330nm,17.8s						
LYN				LR	LR		
	comp=E,460nm,17.7s						
LYN				LR	LR		
	comp=Z,360nm,17.7s						
LBMI	**Labuha**	**38.20**	**95**	P	**P**	**15 23 02.1**	**+3.3**
	comp=Z,17nm,1.3s						
KSH	**Kashi**	**38.34**	**343**	P	**P**	**15 22 59.0**	**-0.8**
KSH				pP	pwP	15 23 05.1	-1.3
KSH				PcP	**PcP**	**15 25 09.1**	**-4.5**
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2	**Nanjing**	**39.96**	**40**	*e*P	**P**	**15 23 14.6**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WMQ	**Urumqi**	**40.66**	**358**	*e*P	**P**	**15 23 20.2**	**+1.2**
ULHL	**Ulahol**	**40.81**	**345**	P	**P**	**15 23 21.9**	**+1.4**
	SNR=5.7						
SSE	**Sheshan**	**40.93**	**44**	P	**P**	**15 23 23.5**	**+2.2**
SSE				S	**S**	**15 29 35.5**	**+2.3**
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,89nm,3.0s						
SSE				LR	LR		
	comp=N,150nm,15.3s						
SSE				LR	LR		
	comp=E,91nm,14.9s						
BOOM	**Boomskoye usch**	**41.12**	**345**	P	**P**	**15 23 23.4**	**+0.5**
UCH	**Uchtor**	**41.27**	**343**	P	**P**	**15 23 25.4**	**+0.9**
	SNR=7.0						
HNS	**HongShan**	**41.33**	**31**	⇑P	**P**	**15 23 25.3**	**+0.8**
HNS				pP	**pwP**	**15 23 33.5**	**+2.4**
HNS				*e*S	**S**	**15 29 41.9**	**+2.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HNS				LR	LR		
	comp=N,190nm,16.8s						
HNS				LR	LR		
	comp=E,290nm,18.4s						
HNS				LR	LR		
	comp=Z,210nm,21.8s						
AML	**Almayashu**	**41.42**	**342**	P	**P**	**15 23 27.1**	**+1.3**
	SNR=8.1						
KBK	**Karagaybulak**	**41.54**	**344**	P	**P**	**15 23 28.3**	**+1.9**
	SNR=5.8						
TKM2	**Tokmak 2**	**41.61**	**345**	P	**P**	**15 23 28.0**	**+0.9**
	SNR=8.5						
AAK	**Ala-Archa**	**41.65**	**343**	P	**P**	**15 23 28.3**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=148,slow=5.6,SNR=8.3						
AAK				LR	LR	15 41 58.1	
	comp=Z,76nm,18.9s,baz=172,slow=38						
	comp=Z,1.3nm,0.5s						
TIA	**Tai'an**	**41.75**	**34**	*e*P	P	15 23 35.5	+7.5
TIA				pmax	pmax		
	comp=Z,14nm,1.1s						
TIA				LR	LR		
	comp=N,100nm,17.2s						
TIA				LR	LR		
	comp=E,220nm,19.1s						
TIA				LR	LR		
	comp=Z,150nm,21.6s						
SIJI	**Sorong**	**41.97**	**95**	LR	LR	15 43 22.5	
	comp=Z,54nm,19.0s,baz=214,slow=40						
USP	**Ospenovka**	**42.23**	**344**	P	**P**	**15 23 33.1**	**+1.2**
	SNR=5.8						
HHC	**Hu-ho-hao-te**	**42.61**	**25**	*e*P	**P**	**15 23 36.4**	**+1.3**
HHC				pmax	pmax		
	comp=Z,26nm,0.7s						
HHC				pmax	pmax		
	comp=Z,280nm,5.3s						
HHC				LR	LR		
	comp=N,340nm,12.7s						
HHC				LR	LR		
	comp=E,450nm,13.3s						
HHC				LR	LR		
	comp=Z,310nm,13.3s						
KKAR	**Karatay Array**	**43.33**	**340**	P	**P**	**15 23 40.7**	**-0.1**
JOW	**Kunigami**	**44.05**	**54**	LR	LR	15 41 52.7	
	comp=Z,125nm,21.0s,baz=272,slow=36						
MK31	**Makanchi Array**	**44.05**	**353**	P	**P**	**15 23 45.8**	**-0.7**
MK31				IAmb	IAmb	15 23 56.2	
	comp=Z,6.3nm,0.8s						
MKAR	**Makanchi Array**	**44.05**	**353**	P	**P**	**15 23 46.4**	**-0.1**
	comp=Z,6.6nm,0.7s,baz=172,slow=9.4,SNR=95						
	comp=Z,6.6nm,0.7s						
BJI	**Beijing**	**44.08**	**30**	P	**P**	**15 23 47.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
H01W3	**Cape Leeuwin H**	**44.25**	**151**	T	T	16 10 40.3	
	baz=325,slow=76,SNR=147						
H01W2	**Cape Leeuwin H**	**44.27**	**151**	T	T	16 10 41.2	
	baz=325,slow=76,SNR=86						
H01W1	**Cape Leeuwin H**	**44.27**	**151**	T	T	16 10 41.6	
	baz=325,slow=76,SNR=70						
GEYT	**Alibeck**	**45.05**	**324**	P	**P**	**15 23 54.7**	**0.0**
	comp=Z,4.2nm,0.6s,baz=149,slow=12,SNR=6.2						
	comp=Z,4.2nm,0.6s						
OPO	**Ambohidratompo**	**46.81**	**241**	P	**P**	**15 24 08.1**	**-0.9**
	comp=Z,5.7nm,0.7s,baz=104,slow=5.3,SNR=8.7						
	comp=Z,5.7nm,0.7s						
ATD	**Arta Tunnel**	**46.95**	**283**	LR	LR	15 40 15.9	
	comp=Z,38nm,20.3s,baz=150,slow=32						
SONM	**Songino Array**	**46.98**	**16**	P	**P**	**15 24 10.3**	**+0.5**
	comp=Z,17nm,0.7s,baz=195,slow=9.1,SNR=96						
SONM				LR	LR	15 45 49.2	
	comp=Z,171nm,20.1s,baz=193,slow=38						
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	**46.98**	**16**	P	**P**	**15 24 07.2**	**-2.6**
KURBB	**Kurchatov Arra**	**48.33**	**351**	P	**P**	**15 24 20.0**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=176,slow=7.3,SNR=61						
	comp=Z,5.4nm,0.8s						
KURK	**Kurchatov**	**48.40**	**351**	P	**P**	**15 24 19.3**	**-1.4**
KURK				IAmb	IAmb	15 24 31.0	
	comp=Z,8.6nm,0.8s						
KSRS	**Korea Array**	**49.16**	**41**	LR	LR	15 45 12.1	
	comp=Z,112nm,21.6s,baz=240,slow=36						
WRAB	**Tennant Creek**	**49.62**	**119**	P	**P**	**15 24 28.7**	**-1.8**
WRAB				IAmb	IAmb	15 24 44.7	
	comp=Z,34nm,1.6s						
ASAR	**Alice Springs**	**50.74**	**124**	P	**P**	**15 24 39.2**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=293,slow=8.1,SNR=5.2						
ASAR				LR	LR	15 47 24.7	
	comp=Z,55nm,18.9s,baz=332,slow=38						
	comp=Z,0.3nm,0.4s						
ZAA0	**Zalesovo Array**	**50.91**	**356**	P	**P**	**15 24 39.0**	**-0.7**
ZAA0				IAmb	IAmb	15 24 48.6	
	comp=Z,7.4nm,0.6s						
ZALV	**Zalesovo Beam**	**50.91**	**356**	P	**P**	**15 24 39.3**	**-0.5**
	comp=Z,5.0nm,0.5s,baz=177,slow=7.5,SNR=27						
ZALV				LR	LR	15 47 30.0	
	comp=Z,87nm,21.8s,baz=205,slow=38						
	comp=Z,5.0nm,0.5s						
ZALV	**Zalesovo Beam**	**50.91**	**356**	P	**P**	**15 24 38.6**	**-1.2**
CN2	**Changchun**	**51.60**	**33**	*e*P	P	15 24 50.8	+5.7
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
KMBO	**Kilima Mbogo**	**52.35**	**266**	P	**P**	**15 24 51.2**	**-0.3**
	comp=Z,6.7nm,0.8s,baz=59,slow=12,SNR=12						
KMBO				LR	LR	15 44 19.1	
	comp=Z,104nm,20.3s,baz=92,slow=33						
	comp=Z,6.7nm,0.8s						
ABKAR	**Akbulak array**	**52.49**	**336**	P	**P**	**15 24 51.0**	**-0.7**
BNX	**BinXian**	**53.92**	**32**	⇑P	P	15 25 10.4	+8.1
BNX				pmax	pmax		
	comp=Z,25nm,0.5s						
BNX				pmax	pmax		
	comp=Z,220nm,3.8s						
GNI	**Garni**	**54.73**	**319**	LR	LR	15 48 16.5	
	comp=Z,40nm,21.7s,baz=116,slow=36						
USRK	**Ussuriysk Ar.**	**55.55**	**36**	P	P	15 25 20.8	+6.7
	comp=Z,5.4nm,0.7s,baz=244,slow=5.6,SNR=6.2						
USRK				LR	LR	15 50 13.7	
	comp=Z,89nm,18.5s,baz=226,slow=37						
MJAR	**Matsushiro Arr**	**55.86**	**47**	P	**P**	**15 25 19.6**	**+3.1**
	comp=Z,4.5nm,0.9s,baz=244,slow=7.0,SNR=8.0						
MJAR				LR	LR	15 51 03.6	
	comp=Z,105nm,18.3s,baz=237,slow=38						
	comp=Z,4.5nm,0.9s						
KBZ	**Khabaz**	**57.74**	**322**	P	**P**	**15 25 29.8**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=136,slow=3.6,SNR=4.4						
	comp=Z,2.0nm,0.8s						
KLR	**Kul'dur**	**58.41**	**31**	LR	LR	15 54 11.3	
	comp=Z,110nm,18.4s,baz=226,slow=40						
MMAI	**Mount Meron Ar**	**58.61**	**307**	LR	LR	15 51 29.5	
	comp=Z,80nm,18.5s,baz=272,slow=37						
ARU	**Arti**	**58.70**	**340**	LR	LR	15 53 11.8	
	comp=Z,61nm,19.1s,baz=117,slow=38						
MBAR	**Mbarara**	**58.81**	**267**	P	**P**	**15 25 37.8**	**-0.2**
	comp=Z,3.4nm,0.2s,baz=51,slow=6.8,SNR=4.7						
MBAR				LR	LR	15 46 43.5	
	comp=Z,62nm,21.4s,baz=64,slow=32						
	comp=Z,3.4nm,0.2s						
CTA	**Charters Tower**	**60.25**	**115**	LR	LR	15 54 51.5	
	comp=Z,82nm,18.1s,baz=276,slow=39						
STKA	**Stephens Creek**	**60.40**	**129**	P	**P**	**15 25 49.6**	**+1.2**

	comp=Z,2.3nm,0.8s,baz=317,slow=15,SNR=3.1						
	comp=Z,2.3nm,0.8s						
ASAJ	Asahikawa	62.11	41	LR	LR	15 53 24.7	
	comp=Z,64nm,20.7s,baz=128,slow=36						
BRTR	Keskin Array B	62.23	314	P	P	15 26 00.6	-0.3
	comp=Z,1.8nm,0.6s,baz=126,slow=7.3,SNR=5.7						
	comp=Z,1.8nm,0.6s						
BRTR	Keskin Array B	62.23	314	P	P	15 25 57.5	-3.3
LSZ	Lusaka	63.28	251	LR	LR	15 50 00.1	
	comp=Z,127nm,19.7s,baz=128,slow=33						
NRIK	Noril'sk	66.23	359	P	P	15 26 24.9	-1.4
	comp=Z,4.8nm,0.8s,baz=229,slow=8.2,SNR=4.2						
	comp=Z,4.8nm,0.8s						
IDI	Anoyia	67.61	307	LR	LR	16 00 24.0	
	comp=Z,21nm,18.2s,baz=96,slow=40						
LBTB	Lobatse	67.84	242	LR	LR	15 52 08.3	
	comp=Z,126nm,19.6s,baz=118,slow=32						
KLMR	Klimovskoe	68.89	336	eP	P	15 26 41.4	-1.8
KLMR				AMP		15 26 53.8	
	comp=Z,10.0nm,1.3s						
BOSA	Boshof	69.07	238	P	P	15 26 43.5	-1.8
	comp=Z,6.0nm,0.9s,baz=82,slow=6.0,SNR=5.3						
BOSA				LR	LR	15 51 30.9	
	comp=Z,61nm,21.9s,baz=168,slow=31						
	comp=Z,6.0nm,0.9s						
BOSA	Boshof	69.07	238	P	P	15 26 43.5	-1.8
AKASG	Malin Array Be	69.17	324	P	P	15 26 44.1	-1.1
	comp=Z,0.2nm,0.3s,baz=89,slow=5.0,SNR=2.0						
AKASG				LR	LR	15 59 44.8	
	comp=Z,45nm,19.9s,baz=161,slow=38						
	comp=Z,0.2nm,0.3s						
MLR	Muntele Rosu	69.49	318	LR	LR	15 59 45.9	
	comp=Z,68nm,19.9s,baz=111,slow=38						
NACGM	Naroch	72.10	327	⇑eP	P	15 27 07.8	+4.9
	baz=111						
TIXI	Tiksi	72.90	12	P	P	15 27 05.3	-2.2
TIXI				IAmb	IAmb	15 27 15.8	
	comp=Z,20nm,0.9s						
MA2	Magadan	73.20	28	LR	LR	16 03 30.5	
	comp=Z,54nm,18.8s,baz=305,slow=39						
PETK	Petropavlovsk-	74.64	35	P	P	15 27 18.6	+0.6
	comp=Z,2.1nm,1.0s,baz=259,slow=1.5,SNR=2.6						
PETK				LR	LR	16 02 55.1	
	comp=Z,44nm,18.7s,baz=223,slow=38						
	comp=Z,2.1nm,1.0s						
FINES	FINESS Array B	74.88	334	P	P	15 27 18.9	-0.4
	comp=Z,2.0nm,0.7s,baz=94,slow=6.1,SNR=9.5						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	78.28	341	P	P	15 27 38.5	+0.1
	comp=Z,5.9nm,0.8s,baz=91,slow=6.2,SNR=20						
	comp=Z,5.9nm,0.8s						
ARCES	ARCESS Array B	78.28	341	P	P	15 27 38.1	-0.3
ARCES				IAmb	IAmb	15 27 39.2	
	comp=Z,24nm,1.2s						
GERES	GERESS Array B	78.37	319	P	P	15 27 39.5	+0.1
	comp=Z,1.1nm,0.7s,baz=117,slow=4.7,SNR=5.6						
	comp=Z,1.1nm,0.7s						
CLL	Collm	79.19	322	eP	P	15 27 44.0	+0.3
NOA	NORSAR Array B	81.68	331	P	P	15 27 57.8	+0.8
	comp=Z,0.9nm,0.9s,baz=102,slow=5.7,SNR=3.0						
NOA				LR	LR	16 06 31.8	
	comp=Z,38nm,20.8s,baz=95,slow=37						
	comp=Z,0.9nm,0.9s						
SPITS	Spitsbergen Ar	83.62	349	LR	LR	16 10 02.0	
	comp=Z,71nm,19.1s,baz=194,slow=39						
TORD	Torodi Ar. Bea	87.15	283	P	P	15 28 24.5	-1.1
	comp=Z,1.0nm,1.0s,baz=90,slow=3.0,SNR=3.6						
	comp=Z,1.0nm,1.0s						
VNDA	Vanda	89.16	168	P	P	15 28 34.9	+1.0
	comp=Z,0.6nm,0.7s,baz=290,slow=10,SNR=2.1						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	131.29	19	PKP	PKiKP	15 34 54.0	+1.4
	comp=Z,0.2nm,0.4s,baz=336,slow=1.1,SNR=2.7						
NVAR	Mina Array Bea	131.43	29	PKP	PKPdf	15 34 52.0	-0.1
	comp=Z,0.3nm,0.6s,baz=290,slow=2.7,SNR=2.7						
TXAR	Lajitas Array	145.46	20	PKPbc	PKPdf	15 35 16.9	-0.9
	comp=Z,1.6nm,0.6s,baz=244,slow=0.4,SNR=20						

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*CNRM **07** 15:20:51.3, 36°.44N×4°.90W, h30^{km}*

*INMG **07** 15:20:52.9±1.6, 36°.68N×4°.67W, h59^{km}±6^{km}, ML2.0, Error ellipse: s-maj=3.4km s-min=3.3km az=173.0*

*MDD **07** 15:20:53.1±0.4, 36°.63N×4°.67W, h60^{km}±6^{km}, Mb3.0/16, M_mb2.1/17, Error ellipse: s-maj=3.8km s-min=1.9km az=163.0*

ISC 07 15:20:50.8±1.2**, 36°.61N**±0°.03×**4°.65W**±0°.02**, h74**^{km}±7^{km}**, n38, σ1^{s}.37**/70**, 14C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMIJ	Mijas	0.11	247	P	Pn	15 21 01.5	-0.1
EMIJ				S	Sn	15 21 08.5	-1.0
EGOR	Sierra Gorda,	0.66	40	P	Pn	15 21 06.7	+1.0
EGOR				S	Sn	15 21 16.5	-0.3
EJIF	Jimena Fronter	0.68	257	P	Pn	15 21 05.8	0.0
EJIF				S	Sn	15 21 16.6	-0.3
ELGU	Los Guajares,	0.86	72	P	Pn	15 21 08.2	+0.3
ELGU				⇑i Vmb_V		15 21 08.9	
	276nm,SNR=2.4						
ELGU				S	Sn	15 21 20.2	-0.3
ECEU	Ceuta	0.92	220	P	Pn	15 21 10.8	+2.2
ECEU				S	Sn	15 21 22.4	+0.6
ESPR	Espera	1.01	285	P	Pn	15 21 10.6	+1.0
ESPR				⇑i Vmb_V		15 21 11.7	
	109nm,SNR=0.9						
ESPR				S	Sn	15 21 22.6	-1.0
EQUE	Quentar	1.14	58	P	Pn	15 21 13.0	+1.7
EQUE				⇑i Vmb_V		15 21 14.7	
	152nm,SNR=2.0						
EQUE				S	Sn	15 21 25.9	-0.7
EBER	Berja	1.44	78	P	Pn	15 21 15.6	+0.4
EBER				⇑i Vmb_V		15 21 17.1	
	83nm,SNR=0.5						
EBER				S	Sn	15 21 32.9	-0.8
EADA	Adamuz	1.56	2	P	Pn	15 21 17.5	+0.8
EADA				⇑i Vmb_V		15 21 18.1	
	62nm,SNR=0.6						
EADA				S	Sn	15 21 36.1	-0.2
ECAB	El Cabril	1.59	337	P	Pn	15 21 18.1	+1.0
ECAB				S	Sn	15 21 36.3	-0.6
EQES	Quesada	1.73	46	P	Pn	15 21 20.0	+1.0
EQES				⇑i Vmb_V		15 21 22.1	
	58nm,SNR=0.6						
EQES				S	Sn	15 21 40.2	-0.3
GOG	Mont Gurugu	1.93	135	P	Pn	15 21 23.3	+1.7
GOG				S	Sn	15 21 42.9	-2.2
EMIN	Mina Concepcio	1.99	306	P	Pn	15 21 22.9	+0.5
EMIN				⇑i Vmb_V		15 21 23.6	
	201nm,SNR=1.4						
EMIN				S	Sn	15 21 45.2	-1.2
EGRO	El Granado	2.45	293	P	Pn	15 21 30.2	+1.6
EGRO				⇑i Vmb_V		15 21 31.1	
	196nm,SNR=1.1						
EGRO				S	Sn	15 21 56.9	-0.6
PBAR	Barrancos	2.47	310	eP	Pn	15 21 30.4	+1.6
PBAR				eS	Sn	15 21 56.6	-1.3
PBAR				A	A	15 21 58.7	
	3.1nm,0.2s						
PVAQ	Vaqueiros	2.58	289	eP	Pn	15 21 31.1	+0.7
PVAQ				eS	Sn	15 21 59.1	-1.7
PVAQ				A	A	15 22 00.5	
	4.7nm,0.5s						
PVAQ	Vaqueiros	2.58	289	P	Pn	15 21 29.8	-0.6
PVAQ				S	Sn	15 21 59.6	-1.2
EZAR	Zarzadilla de	2.67	61	P	Pn	15 21 33.5	+1.7
EZAR				S	Sn	15 22 03.2	+0.1
PBDV	Barranco-do-Ve	2.71	285	eP	Pn	15 21 34.0	+1.9
PBDV				eS	Sn	15 22 03.4	-0.5
PBDV				A	A	15 22 09.1	
	6.8nm,1.1s						
JBK	JBK	2.83	143	P	Pn	15 21 34.1	+0.2
JBK				S	Sn	15 22 06.4	-0.7
EBAD	Badajoz	2.85	319	P	Pn	15 21 35.1	+1.1
EBAD				⇑i Vmb_V		15 21 35.7	
	182nm,SNR=1.5						
EBAD				S	Sn	15 22 05.8	-1.5
PCVE	Castro Verde	2.90	292	eS	Sn	15 22 07.5	-1.0
PAB	San Pablo	2.94	4	P	Pn	15 21 36.5	+1.2
PAB				⇑i Vmb_V		15 21 36.7	
	154nm,SNR=1.7						
PAB				S	Sn	15 22 08.2	-1.4
MESJ	Messejana	3.11	294	eS	Sn	15 22 11.7	-1.8
MESJ				A	A	15 22 19.1	
	2.7nm,0.6s						
ESDC	Sonseca Array	3.11	10	P	Pn	15 21 39.0	+1.4
ESDC				⇑i Vmb_V		15 21 39.8	
	50nm,SNR=0.5						
ESDC				S	Sn	15 22 12.0	-1.6
ETOB	Tobarra	3.19	49	P	Pn	15 21 39.3	+0.6
ETOB				⇑i Vmb_V		15 21 41.4	
	81nm,SNR=0.7						
ETOB				S	Sn	15 22 13.9	-1.8
PESTR	Estremoz	3.25	315	eP	Pn	15 21 41.1	+1.7
PESTR				eS	Sn	15 22 15.2	-1.7
PESTR				A	A	15 22 16.4	
	2.1nm,0.9s						
PESTR	Estremoz	3.25	315	P	Pn	15 21 40.0	+0.5
PESTR				S	Sn	15 22 16.2	-0.7
EVO	Evora	3.29	307	eS	Sn	15 22 16.5	-1.6
PFVI	Vila Bisbo	3.39	280	eS	Sn	15 22 19.6	-0.9
PTEO	Sao Teotonio	3.39	287	eS	Sn	15 22 20.2	-0.3
PNCL	Nicolau / Gran	3.44	297	eS	Sn	15 22 20.5	-1.1
PNCL				A	A	15 22 32.1	
	3.8nm,0.6s						
PMRV	Marv??o	3.55	323	eP	Pn	15 21 45.1	+1.5
PMRV				eS	Sn	15 22 23.0	-1.4
PMRV				A	A	15 22 25.0	
	2.5nm,0.9s						
ZHG	ZHG	3.56	208	P	Pn	15 21 46.3	+2.6
ZHG				S	Sn	15 22 21.9	-2.7
MD31	MD31	3.73	181	P	Pn	15 21 46.8	+0.6
MD31				S	Sn	15 22 26.2	-2.7
PMTG	Montargil	3.75	312	eP	Pn	15 21 47.6	+1.3
PMTG				eS	Sn	15 22 27.7	-1.5
ETOR	Torete	4.67	25	P	Pn	15 21 59.9	+1.1
ETOR				⇑i Vmb_V		15 22 00.1	
	74nm,SNR=0.8						
ETOR				S	Sn	15 22 48.6	-3.1
EMOS	Mosqueruela	4.98	40	P	Pn	15 22 05.1	+1.9
EMOS				⇑i Vmb_V		15 22 07.7	
	64nm,SNR=0.6						
EMOS				S	Sn	15 22 57.9	-1.5

TAP 07 15:21:32.0, 24°.24N×121°.73E, h13^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.13	228	eP	Pg	15 21 35.5	+0.1
	baz=228						
ETL				eS	Sg	15 21 38.1	+0.4
	baz=228						
NACB	Ninganchiao	0.14	240	i P	Pg	15 21 35.7	+0.2
	baz=240						
NACB				S	Sg	15 21 38.4	+0.5
	baz=240						
ENA	Nanau	0.18	4	P	Pg	15 21 36.3	+0.1
	baz=6.0						
TWD	Chiawan	0.20	216	eP	Pg	15 21 36.5	0.0
	baz=215						
TWD				eS	Sg	15 21 39.9	+0.4
	baz=215						
EWUT	Wuta	0.21	13	i P	Pg	15 21 36.6	0.0
	baz=13						
EWUT				eS	Sg	15 21 39.9	+0.2
	baz=13						
ETLH	Xiulin Townshi	0.23	261	i P	Pb	15 21 37.5	-0.6
	baz=261						
ETLH				eS	Sg	15 21 41.2	+0.9
	baz=261						
LATG	Datong	0.34	328	eP	Pb	15 21 39.9	-0.3
	baz=328						
LATG				eS	Sb	15 21 46.0	+0.4
	baz=328						

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*DDA **07** 15:22:27.6±0.0, 41°.15N×35°.69E, h11^{km}, ML2.3*

*ISK **07** 15:22:27.4, 41°.20N×35°.75E, h9^{km}, ML2.5/11*

ISC 07 15:22:27.5±0.9**, 41°.17N**±0°.03×**35°.72E**±0°.02**, h14**^{km}±6^{km}**, n31, σ0^{s}.78**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAVZ	Havza	0.10	181	P	Pg	15 22 30.4	-0.3
HAVZ				S	Sg	15 22 32.3	-0.5
HAVZ				i AML	AML	15 22 33.0	
	comp=N,3µm,0.4s						
KVT	Kavak	0.26	111	PG	Pg	15 22 33.2	+0.1
KVT				SG	Sg	15 22 37.2	+0.3
YARM	Yarimca-Ladik(	0.26	162	PG	Pg	15 22 33.4	+0.2
YARM				SG	Sb	15 22 38.1	-0.4
KIZO	Buyukkizoglu-L	0.32	149	PG	Pg	15 22 34.4	+0.3
KIZO				SG	Sb	15 22 39.9	-0.2
SAMS	Samsun-Alacam	0.40	62	P	Pb	15 22 36.4	0.0
SAMS				S	Sb	15 22 42.7	+0.3
SAMS				i AML	AML	15 22 43.0	
	comp=N,398nm,0.3s						
AMSY	Amasya-Merkez	0.54	171	P	Pg	15 22 38.4	+0.2
AMSY				S	Sg	15 22 46.0	+0.6
AMSY				i AML	AML	15 22 47.0	
	comp=E,201nm,0.2s						
AMSY				i AML	AML	15 22 48.0	
	comp=N,223nm,0.4s						
DIKM	Dikmen	0.59	324	PG	Pg	15 22 38.9	-0.2
DIKM				SG	Sb	15 22 47.6	-0.3
BOYA	Sinop/Boyabat-	0.86	295	P	Pg	15 22 43.2	-1.0
BOYA				S	Sg	15 22 54.0	-1.5
BOYA				i AML	AML	15 23 00.0	
	comp=N,112nm,1.4s						
CTAK	Corum_Osmancik	0.88	234	P	Pg	15 22 44.0	-0.5
CTAK				S	Sb	15 22 56.6	+0.2
ERBA	Erbaa	0.93	122	P	Pg	15 22 45.1	-0.3
ERBA				S	Sb	15 22 58.1	+0.5
KAGI	orum-Kargı	0.94	268	P	Pg	15 22 45.5	-0.2
KAGI				S	Sb	15 22 58.9	+0.9
KAGI				i AML	AML	15 23 02.0	
	comp=N,81nm,0.3s						
TOKA	Tokat	1.03	146	P	Pg	15 22 43.8	-3.6
TOKT	Tokat	1.06	143	PG	Pn	15 22 48.3	+0.3
COAL	Corum-Alaca	1.07	212	P	Pg	15 22 47.4	-0.9
COAL				S	Sg	15 23 02.0	-0.3
COAL				i AML	AML	15 23 07.0	
	comp=E,86nm,0.4s						
COAL				i AML	AML	15 23 09.0	
	comp=N,57nm,0.5s						
CORM	Corum	1.29	220	PN	Pb	15 22 51.9	+0.2
RSDY	Resadiye-TOKAT	1.45	122	PN	Pn	15 22 54.2	+0.9
HACI	Hacifakili, Ak	1.47	180	P	Pb	15 22 55.3	+0.6
HACI				S	Sg	15 23 14.4	-0.5
BZK	Bozkurt	1.51	302	PN	Pb	15 22 55.4	+0.1
ILGA	Ilgaz	1.52	266	P	Pn	15 22 55.3	+0.8
ILGA				S	Sg	15 23 16.3	-0.2
ILGA				i AML	AML	15 23 23.0	
	comp=N,36nm,0.4s						
ILGA				i AML	AML	15 23 25.0	
	comp=E,53nm,0.5s						
YOZ	Yozgat	1.56	191	PN	Pb	15 22 56.6	+0.3
SVSK	Karacayir	1.59	142	PN	Pb	15 22 56.5	-0.1
CANT	Cankiri	1.69	251	PN	Pb	15 22 58.4	-0.1
CUSAR	Sarkisla-SIVAS	1.80	167	P	Pb	15 23 00.2	-0.1
CUSAR				S	Sb	15 23 23.2	+0.4
DELI	KIRIKKALE	1.81	230	P	Pb	15 23 00.5	0.0
DELI				S	Sb	15 23 24.0	+1.1
PELI	Kastamonı-Ara	1.82	275	P	Pn	15 22 59.5	+1.0
PELI				S	Sb	15 23 23.6	+0.1
CDAG	Cicekdag	1.86	214	P	Pb	15 23 01.4	0.0
CDAG				S	Sg	15 23 27.4	+0.1
CDAG				i AML	AML	15 23 30.0	
	comp=E,41nm,0.4s						
CDAG				i AML	AML	15 23 30.0	
	comp=N,42nm,0.5s						
ELDT	Eldivan	1.87	249	P	Pb	15 23 01.4	-0.2
ELDT				S	Sg	15 23 26.8	-0.9
ELDT				i AML	AML	15 23 34.0	
	comp=E,37nm,0.5s						
SIRC	Yozgat	1.89	194	P	Pb	15 23 01.8	-0.1
SIRC				S	Sg	15 23 27.1	-1.1
CUAYA	Sivas-Altinyay	2.06	157	P	Pb	15 23 04.9	+0.1
SUSE	Susehri	2.12	116	P	Pb	15 23 05.0	-0.8
SUSE				i AML	AML	15 23 44.0	
	comp=N,22nm,0.7s						
ESPY	Espiye-Giresun	2.29	95	PN	Pn	15 23 06.1	+1.2

TAP 07 15:25:09.9, 24°.21N×121°.77E, h5^{km}, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.11	346	i P	Pg	15 25 12.2	0.0
	baz=349						
EHP				i S	Sg	15 25 14.6	+0.9
	baz=349						
ETL	Fush Village	0.14	251	i P	Pg	15 25 12.7	-0.1
	baz=250						
ETL				i S	Sg	15 25 15.5	+0.8
	baz=250						
NACB	Ninganchiao	0.16	259	i P	Pg	15 25 12.9	-0.2
	baz=258						
NACB				i S	Sg	15 25 15.7	+0.4
	baz=258						
TWD	Chiawan	0.20	232	i P	Pg	15 25 13.7	-0.2
	baz=230						
TWD				i S	Sg	15 25 17.0	+0.4
	baz=230						
ENA	Nanau	0.22	353	i P	Pg	15 25 14.0	-0.3
	baz=354						
ENA				i S	Sg	15 25 17.4	+0.2
	baz=354						
EWUT	Wuta	0.24	2	i P	Pg	15 25 14.4	-0.1
	baz=1.0						
EWUT				i S	Sg	15 25 17.8	+0.1
	baz=1.0						
ETLH	Xiulin Townshi	0.26	270	i P	Pg	15 25 14.8	-0.2
	baz=270						
ETLH				i S	Sg	15 25 18.7	+0.2
	baz=270						
LATG	Datong	0.40	326	P	Pg	15 25 17.3	-0.2
	baz=325						
LATG				S	Sg	15 25 23.5	+0.7
	baz=325						
TWC	Suao	0.41	10	i P	Pg	15 25 17.6	-0.2
	baz=11						
TWC				i S	Sg	15 25 23.2	+0.1
	baz=11						
NNSB	Datong	0.42	302	i P	Pg	15 25 17.8	-0.2
	baz=302						
NNSB				i S	Sg	15 25 23.1	-0.3
	baz=302						
NDS	Dongshan	0.43	353	i P	Pg	15 25 18.0	-0.2
	baz=353						
NDS				i S	Sg	15 25 24.5	+0.7
	baz=353						
NNS	Nan Shan	0.43	303	i P	Pg	15 25 18.1	-0.1
	baz=302						
WHF	Hehuan Shan	0.47	263	i P	Pg	15 25 18.7	-0.2
	baz=262						
WHF				i S	Sg	15 25 25.2	+0.1
	baz=262						
ENTT	Nioudou	0.47	337	i P	Pg	15 25 18.9	0.0
	baz=337						
ENTT				i S	Sg	15 25 25.9	+0.8
	baz=337						
FUSS	Fushou	0.48	275	i P	Pg	15 25 19.1	-0.1
	baz=274						
FUSS				i S	Sg	15 25 25.2	-0.3
	baz=274						
ESL	Shilin	0.50	218	i P	Pg	15 25 19.0	-0.5
	baz=217						
TWE	Neicheng	0.52	350	i P	Pg	15 25 19.9	0.0
	baz=351						
TWE				i S	Sg	15 25 27.1	+0.3
	baz=351						
TWT	Tachien	0.55	275	i S	Sb	15 25 28.9	-1.3
	baz=274						
TDCB	Techi	0.56	275	i S	Sg	15 25 28.5	+0.5
	baz=274						
CHGB	Renai	0.56	255	i P	Pg	15 25 20.6	-0.2
	baz=255						
CHGB				i S	Sg	15 25 28.6	+0.5
	baz=255						
FUSB	Fushanzhiwuyua	0.58	343	i P	Pg	15 25 20.8	-0.2
	baz=343						
FUSB				i S	Sg	15 25 28.8	+0.3
	baz=343						
YHNB	Yeheng	0.58	322	i P	Pg	15 25 21.2	0.0
	baz=322						
YHNB				i S	Sg	15 25 29.2	+0.5
	baz=322						
OWD	Renai	0.60	245	i P	Pg	15 25 21.4	0.0
	baz=245						
OWD				i S	Sg	15 25 29.5	+0.4
	baz=245						
NSK	Sanguang	0.60	321	i P	Pg	15 25 21.3	-0.2
	baz=321						
NSK				i S	Sg	15 25 29.8	+0.5
	baz=321						
NWLT	Wulai	0.62	337	i P	Pg	15 25 21.7	-0.1
	baz=336						
NWLT				i S	Sg	15 25 30.3	+0.5
	baz=336						
EGFH	Guangfu	0.62	210	P	Pg	15 25 21.9	+0.1
	baz=210						
EGFH				S	Sb	15 25 32.2	0.0
	baz=210						
WUSB	Renai	0.63	250	i P	Pg	15 25 21.9	-0.1
	baz=250						
WUSB				i S	Sg	15 25 30.4	+0.1
	baz=250						
NFF	Wufeng Townshi	0.73	306	P	Pg	15 25 23.8	-0.1
	baz=305						
NFF				S	Sg	15 25 34.1	+0.7
	baz=305						
VWDT	VWDT	0.73	232	P	Pg	15 25 24.1	+0.2
	baz=231						
VWDT				S	Sb	15 25 34.5	-0.8
	baz=231						
WHP	Taichung City	0.76	276	P	Pg	15 25 24.4	0.0
	baz=275						
WHP				S	Sg	15 25 34.9	+0.7
	baz=275						
TIPB	Shuangxi	0.76	4	i P	Pg	15 25 24.4	-0.2
	baz=3.0						
HGSD	Ruisui	0.78	204	P	Pg	15 25 25.3	+0.5
	baz=204						
NHDH	Xindian Distri	0.79	344	i P	Pb	15 25 25.8	-0.2
	baz=343						
WCS	Beigang Elemen	0.80	259	i P	Pg	15 25 25.0	-0.2
	baz=259						
WCS				i S	Sg	15 25 35.9	+0.3
	baz=259						
EHY	Hungye	0.81	211	P	Pg	15 25 25.1	-0.3
	baz=209						
LIOB	Emei	0.81	303	i P	Pb	15 25 26.2	-0.4
	baz=302						
NSTT	Nanjuang	0.82	301	P	Pg	15 25 25.5	-0.1
	baz=301						
NSTT				S	Sb	15 25 37.3	-0.7
	baz=301						
SSLB	Suanglung	0.85	241	i P	Pg	15 25 26.4	+0.1
	baz=240						
SMLT	Sun Moon Lake	0.86	248	i P	Pg	15 25 26.5	+0.1
	baz=247						
SMLT				i S	Sg	15 25 37.8	+0.3
	baz=247						
NWF	Wu-fen Shan	0.86	1	P	Pg	15 25 26.6	+0.2
NWF				S	Sg	15 25 37.6	0.0
TYC	Yuchr	0.89	250	i P	Pg	15 25 26.8	-0.1
	baz=250						
TYC				i S	Sg	15 25 38.6	+0.1
	baz=250						
SXI1	Grass Mountain	0.89	6	i P	Pg	15 25 26.8	-0.2
	baz=6.0						
YULB	Yu-li	0.92	208	i P	Pg	15 25 26.8	-0.7
	baz=208						
YM01	YM01	0.95	349	P	Pb	15 25 28.7	-0.3
	baz=348						
YM01				S	Sb	15 25 41.6	-0.3
	baz=348						
YUS	Yu-Shan	1.03	227	P	Pg	15 25 29.5	-0.3
	baz=226						
CHKT	Chengkung	1.16	199	eP	Pg	15 25 30.9	-1.3
	baz=198						

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*IDC **07** 15:28:16.7±0.7, 37°.06S×96°.28W, h0^{km}, mb4.2/9, mbtmp4.2/9, MS4.1/24, Error ellipse: s-maj=24.1km s-min=19.4km az=110.0*

*NEIC **07** 15:28:18.0±1.8, 37°.04S±0°.07×96°.1W±0°.2, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=28.4km s-min=7.4km az=67.0*

ISC 07 15:28:17.7±0.6**, 37°.0S**±0°.1×**96°.1W**±0°.1**, h10**^{km}**, n73, σ0^{s}.99**/42**, mb4.5**/18**, MS4.0**/23**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	14.36	82	T	T	15 46 51.9	

	baz=254						
H03S1	**Juan Fernandez**	**14.37**	**82**	T	T	15 46 55.1	
	baz=254						
H03S3	**Juan Fernandez**	**14.38**	**82**	T	T	15 46 56.2	
	baz=254						
H03N2	**Juan Fernandez**	**14.48**	**81**	T	T	15 46 46.2	
	baz=249,slow=72,SNR=604						
H03N3	**Juan Fernandez**	**14.48**	**81**	T	T	15 46 47.5	
	baz=249,slow=72,SNR=412						
H03N1	**Juan Fernandez**	**14.49**	**81**	T	T	15 46 45.6	
	baz=249,slow=72,SNR=563						
RPN	**Rapa Nui**	**14.91**	**308**	LR	LR	15 35 42.8	
	comp=Z,1μm,19.4s,baz=171,slow=30						
LC01	**Cunco**	**19.19**	**103**	P	**P**	**15 32 40.6**	**-0.9**
AY01	**Puyuhuapi**	**19.22**	**120**	P	**Pn**	**15 32 44.0**	**+1.2**
LL02	**Futaleuf**	**19.52**	**116**	P	**P**	**15 32 43.9**	**-1.2**
PLCA	**Paso Flores**	**20.21**	**108**	P	**P**	**15 32 54.4**	**+1.6**
	5.3nm,1.1s,baz=263,slow=8.7,SNR=5.2						
PLCA				LR	LR	15 38 49.0	
	comp=Z,512nm,19.6s,baz=274,slow=31						
	5.3nm,1.1s						
PLCA	**Paso Flores**	**20.21**	**108**	P	Pn	15 32 55.0	+0.2
BO04	**La Punta**	**20.95**	**89**	P	**P**	**15 32 59.7**	**-1.1**
LMEL	**Las Melosas**	**21.32**	**89**	P	**P**	**15 33 04.0**	**-0.9**
LMEL				IAmb	IAmb	15 33 24.7	
	comp=Z,28nm,1.1s						
GO09	**Cerro Castillo**	**22.10**	**138**	P	**P**	**15 33 13.4**	**+0.5**
GO09				IAmb	IAmb	15 33 15.3	
	comp=Z,21nm,1.1s						
AC06	**Mina Casimiro**	**23.76**	**74**	P	**P**	**15 33 28.2**	**-2.2**
AC06				IAmb	IAmb	15 33 38.1	
	comp=Z,23nm,1.4s						
AC02	**Maricunga**	**24.96**	**74**	P	**P**	**15 33 41.8**	**-0.1**
AC02				IAmb	IAmb	15 33 47.0	
	comp=Z,14nm,1.0s						
USHA	**Ushuaia**	**25.97**	**142**	LR	LR	15 41 52.7	
	comp=Z,605nm,18.2s,baz=262,slow=31						
LVC	**Limon Verde**	**27.50**	**66**	P	**P**	**15 34 06.7**	**+2.0**
	comp=Z,4.7nm,0.7s,baz=299,slow=4.7,SNR=4.1						
LVC				LR	LR	15 42 13.6	
	comp=Z,483nm,18.9s,baz=228,slow=30						
	comp=Z,4.7nm,0.7s						
NNA	**Nana**	**30.33**	**40**	LR	LR	15 43 26.3	
	comp=Z,853nm,21.1s,baz=208,slow=30						
LPAZ	**La Paz**	**32.22**	**58**	P	**P**	**15 34 48.0**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=220,slow=6.7,SNR=15						
LPAZ				LR	LR	15 45 27.3	
	comp=Z,86nm,19.3s,baz=234,slow=32						
	comp=Z,5.0nm,0.9s						
LPAZ	**La Paz**	**32.22**	**58**	P	**P**	**15 34 47.5**	**+0.6**
LPAZ				IAmb	IAmb	15 34 58.9	
	comp=Z,8.2nm,0.9s						
PMSA	**Palmer Station**	**33.67**	**156**	LR	LR	15 44 51.5	
	comp=Z,201nm,19.3s,baz=302,slow=30						
ATAH	**Atahualpa**	**33.83**	**33**	LR	LR	15 45 23.8	
	comp=Z,726nm,21.2s,baz=213,slow=30						
CPUP	**Villa Florida**	**34.46**	**83**	LR	LR	15 47 01.8	
	comp=Z,256nm,21.1s,baz=248,slow=32						
ROSC	**El Rosal**	**46.33**	**31**	LR	LR	15 53 51.1	
	comp=Z,416nm,18.3s,baz=228,slow=33						
BDFB	**Brasilia**	**47.49**	**77**	LR	LR	15 55 50.7	
	comp=Z,343nm,19.2s,baz=198,slow=35						
ZARC	**Zaragoza, Cauc**	**48.53**	**29**	P	**P**	**15 36 59.1**	**-2.0**
SJCC	**San Jacinto, C**	**50.63**	**27**	P	**P**	**15 37 16.8**	**-0.3**
PPT	**Papeete**	**50.63**	**277**	LR	LR	15 53 59.2	
	comp=Z,37nm,18.4s,baz=78,slow=31						
SDV	**Santo Domingo**	**51.53**	**33**	LR	LR	15 57 00.2	
	comp=Z,210nm,19.2s,baz=196,slow=33						
QSPA	**South Pole Qui**	**53.21**	**180**	P	**P**	**15 37 36.0**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=140,slow=1.1,SNR=11						
QSPA				LR	LR	15 57 06.5	
	comp=Z,69nm,18.4s,baz=288,slow=32						
	comp=Z,3.3nm,0.9s						
QSPA	**South Pole Qui**	**53.21**	**180**	P	**P**	**15 37 36.0**	**+0.1**
QSPA				IAmb	IAmb	15 37 46.2	
	comp=Z,10nm,1.2s						
CMIG	**Matias Romero**	**53.82**	**1**	LR	LR	15 54 49.0	
	comp=Z,106nm,21.5s,baz=202,slow=30						
SNAA	**Sanae**	**56.35**	**158**	P	**P**	**15 37 57.6**	**-0.9**
SNAA				IAmb	IAmb	15 38 25.2	
	comp=Z,7.5nm,1.3s						
VNDA	**Vanda**	**56.73**	**195**	P	**P**	**15 38 00.9**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=104,slow=8.3,SNR=3.1						
VNDA				LR	LR	15 57 11.9	
	comp=Z,110nm,19.3s,baz=114,slow=31						
	comp=Z,0.8nm,0.9s						
VNDA	**Vanda**	**56.73**	**195**	P	**P**	**15 38 01.2**	**+0.2**
VNDA				IAmb	IAmb	15 38 08.5	
	comp=Z,7.3nm,1.4s						
SJG	**San Juan**	**61.68**	**33**	LR	LR	16 03 12.4	
	comp=Z,140nm,20.9s,baz=206,slow=34						
URZ	**Urewera**	**66.11**	**239**	LR	LR	16 00 39.9	
	comp=Z,293nm,21.9s,baz=211,slow=30						
TX31	**Lajitas Ar. Si**	**66.37**	**353**	P	**P**	**15 39 08.0**	**+1.3**
TXAR	**Lajitas Array**	**66.37**	**353**	P	**P**	**15 39 07.9**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=164,slow=7.9,SNR=6.9						
TXAR				LR	LR	16 03 06.5	
	comp=Z,59nm,18.5s,baz=188,slow=32						
	comp=Z,1.5nm,0.9s						
TXAR	**Lajitas Array**	**66.37**	**353**	P	**P**	**15 39 07.6**	**+0.9**
RPZ	**Rata Peaks**	**67.42**	**232**	P	**P**	**15 39 12.9**	**-0.5**
	comp=Z,6.6nm,1.0s,baz=124,slow=3.6,SNR=2.9						
	comp=Z,6.6nm,1.0s						
TUC	**Tucson**	**70.31**	**347**	P	**P**	**15 39 30.8**	**-0.5**
TUC				IAmb	IAmb	15 39 45.9	
	comp=Z,5.5nm,1.2s						
MSTX	**Muleshoe**	**70.89**	**354**	P	**P**	**15 39 34.7**	**-0.2**
AMTX	**Amarillo**	**71.72**	**355**	P	**P**	**15 39 39.7**	**-0.1**
TKL	**Tuckaleechee C**	**73.20**	**10**	LR	LR	16 08 09.8	
	comp=Z,74nm,18.1s,baz=186,slow=33						
MAW	**Mawson**	**74.50**	**172**	LR	LR	16 11 57.2	
	comp=Z,74nm,19.1s,baz=193,slow=35						
SMCO	**Snowmass**	**76.47**	**351**		**P**	**15 40 09.3**	**+1.3**
NV11	**Mina Array Sit**	**77.78**	**342**	P	**P**	**15 40 16.7**	**+1.7**
NV11				IAmb	IAmb	15 40 28.3	
	comp=Z,6.3nm,1.1s						
NVAR	**Mina Array Bea**	**77.81**	**342**	P	**P**	**15 40 16.0**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=174,slow=6.4,SNR=25						
	comp=Z,3.7nm,0.8s						
NVAR	**Mina Array Bea**	**77.81**	**342**	P	**P**	**15 40 15.1**	**-0.1**
BW06	**Boulder Array**	**80.34**	**350**	P	**P**	**15 40 29.0**	**0.0**
BW06				IAmb	IAmb	15 40 38.7	
	comp=Z,3.2nm,0.7s						
PD31	**Pinedale Array**	**80.34**	**350**	P	**P**	**15 40 29.5**	**+0.5**
PDAR	**Pinedale Array**	**80.34**	**350**	P	**P**	**15 40 29.8**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=161,slow=6.1,SNR=18						
	comp=Z,1.5nm,0.6s						
PDAR	**Pinedale Array**	**80.34**	**350**	P	**P**	**15 40 29.3**	**+0.3**
RSSD	**Black Hills**	**81.07**	**354**	P	**P**	**15 40 33.8**	**+0.9**
RSSD				IAmb	IAmb	15 40 56.7	
	comp=Z,6.2nm,1.0s						
TPAW	**Teton Pass**	**81.25**	**349**	P	**P**	**15 40 35.2**	**+1.3**
TPAW				IAmb	IAmb	15 40 50.2	
	comp=Z,5.6nm,0.9s						
YBH	**Yreka Blue Hor**	**82.05**	**340**	LR	LR	16 09 37.6	
	comp=Z,52nm,18.1s,baz=212,slow=30						
STKA	**Stephens Creek**	**92.81**	**226**	LR	LR	16 15 31.2	
	comp=Z,103nm,18.5s,baz=162,slow=31						
CTA	**Charters Tower**	**98.31**	**237**	LR	LR	16 18 10.7	
	comp=Z,115nm,22.0s,baz=90,slow=30						
H01W1	**Cape Leeuwin H**	**103.12**	**205**	T	T	17 38 04.0	
	baz=155,slow=76,SNR=39						
H01W2	**Cape Leeuwin H**	**103.13**	**205**	T	T	17 38 06.2	
	baz=155,slow=76,SNR=34						
H01W3	**Cape Leeuwin H**	**103.14**	**205**	T	T	17 38 07.0	
	baz=155,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**106.50**	**281**	T	T	17 41 30.5	
	baz=123						
H11S1	**WAKE ISLAND Hy**	**106.52**	**281**	T	T	17 41 18.0	
	baz=123,SNR=3.4						
H11S3	**WAKE ISLAND Hy**	**106.52**	**281**	T	T	17 41 21.7	
	baz=123						
KSRS	**Korea Array**	**145.18**	**284**	PKPbc	**PKPbc**	**15 47 54.5**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=117,slow=4.0,SNR=9.0						
NRIK	**Noril'sk**	**147.55**	**358**	PKPbc	**PKPbc**	**15 48 01.0**	**0.0**
	comp=Z,1.3nm,0.4s,baz=3.3,slow=3.6,SNR=1.7						
KBZ	**Khabaz**	**148.30**	**65**	PKPbc	**PKiKP**	**15 48 05.8**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=45,slow=1.4,SNR=3.7						
CMAR	**Chiang Mai Arr**	**157.28**	**220**	PKPab	**PKPab**	**15 48 45.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=168,slow=3.7,SNR=2.5						
SONM	**Songino Array**	**160.25**	**310**	PKPab	**PKPab**	**15 48 57.2**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=338,slow=1.6,SNR=4.3						
PZH	**PanZhiHua**	**161.59**	**240**	PKP	**PKPdf**	**15 48 18.6**	**-0.6**

IDC ***07*** *16:07:06.5±0.5, 0°.29S×18°.97W, h0^{km}, mb4.7/27, mbtmp4.7/29, ML5.3/2, MS4.1/72, Error ellipse: s-maj=15.3km s-min=11.6km az=146.0*

MOS ***07*** *16:07:06.2±1.0, 0°.22S×18°.93W, h11^{km}, mb5.4/50, Error ellipse: s-maj=12.6km s-min=4.9km az=53.4*

NEIC ***07*** *16:07:08.2±1.7, 0°.27S±0°.10×18°.94W±0°.09, h10^{km}±1^{km}, mb5.2/111, Error ellipse: s-maj=16.4km s-min=15.1km az=151.0*

GCMT ***07*** *16:07:11.2±0.2, 0°.15S±0°.01×18°.86W±0°.01, h24^{km}±1^{km}, MW5.1/123, Moment Tensor Solution. s75,c105; s123,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.46±.14; M$_{\theta\theta}$1.88±.12; M$_{\phi\phi}$-2.35±.13; M$_{r\theta}$0.84±.18; M$_{\theta\phi}$-4.77±.12; M$_{\phi r}$-1.06±.19; Best double couple: M$_0$5.40300×10^{16} NP1:ϕ$_s$77.00000°, δ77.00000°, λ172.00000°. NP2:ϕ$_s$169.00000°, δ83.00000°, λ14.00000°. Principal axes: T 5.3210, Plg15.0000°, Azm34.0000°; N 0.1580, Plg75.0000°, Azm197.0000°; P -5.4850, Plg4.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 16:07:08.0±0.3, **0°.15S**±0°.06×**18°.86W**±0°.05, **h10^{km}, n584, σ1^{s}.71**/544, **mb5.2**/156, **MS4.2**/80, **138C-50D, Fault plane solution: NP1:**ϕ$_s$148.96643°, δ64.16945°, λ24.17635°. **NP2:**ϕ$_s$47.89909°, δ68.36902°, λ152.04878°. **Principal axes:** T Plg34.6633°, Azm7.3113°; N Plg55.1990°, Azm193.1109°; P Plg2.7189°, Azm99.1931°; **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**8.79**	**150**	T	T	16 17 51.6	
	baz=330,slow=74,SNR=213						
H10N3	**ASCENSION HYDR**	**8.79**	**150**	T	T	16 17 52.7	
	baz=330,slow=74,SNR=252						
H10N1	**ASCENSION HYDR**	**8.80**	**150**	T	T	16 17 55.8	
	baz=330,slow=74,SNR=470						
ASCN	**Ascension**	**8.94**	**150**	Pn	**Pn**	**16 09 15.5**	**-1.8**
H10S3	**ASCENSION HYDR**	**9.69**	**155**	T	T	16 19 01.1	
	baz=336,slow=74,SNR=370						
H10S2	**ASCENSION HYDR**	**9.71**	**155**	T	T	16 19 02.8	
	baz=244,slow=74,SNR=178						
LIC	**Lamto**	**15.19**	**65**	*e*P	**Pn**	**16 10 43.4**	**+0.6**
	92nm,0.3s						
TIC	**Toumodi**	**15.37**	**64**	*e*P	**Pn**	**16 10 45.7**	**+0.5**
KIC	**Kosan Boka**	**15.50**	**65**	*e*P	**Pn**	**16 10 47.3**	**+0.4**
	149nm,0.3s						
DBIC	**Dimbokro**	**15.53**	**64**	*e*P	**Pn**	**16 10 47.4**	**+0.2**
DBIC				IAmb	IAmb	16 10 50.7	
	comp=Z,131nm,0.9s						
DBIC	**Dimbokro**	**15.53**	**64**	Pn	**Pn**	**16 10 47.4**	**+0.2**
	comp=Z,40nm,0.3s,baz=261,slow=14,SNR=234						
DBIC				Sn	**Sn**	**16 13 29.9**	**-10**
	comp=Z,12nm,0.3s,baz=162,slow=17,SNR=6.1						
DBIC				LR	LR	16 15 47.3	
	comp=Z,1μm,18.8s,baz=244,slow=33						
	comp=Z,109nm,0.4s						
DBIC	**Dimbokro**	**15.53**	**64**	P	**Pn**	**16 10 47.6**	**+0.4**
DBIC				pmax	pmax		
	comp=Z,134nm,0.5s						
DBIC	**Dimbokro**	**15.53**	**64**	Pn	**Pn**	**16 10 47.6**	**+0.4**
NBPV	**Pedro Velho**	**17.54**	**249**	*e*P	**P**	**16 11 14.8**	**+0.8**
RCBR	**Riachuelo**	**17.92**	**251**	P	**Pn**	**16 11 14.5**	**-3.2**
	comp=Z,3.5nm,0.3s,baz=228,slow=13,SNR=22						
RCBR				S	Sn	16 14 15.3	-22
	comp=Z,11nm,1.0s,baz=266,slow=16,SNR=2.0						
RCBR				LR	LR	16 16 33.4	
	comp=Z,1μm,18.8s,baz=221,slow=32						
	comp=Z,12nm,0.4s						
RCBR	**Riachuelo**	**17.92**	**251**	P	**Pn**	**16 11 13.8**	**-3.9**
NBAN	**Anadia - AL**	**19.75**	**241**	*e*P	**Pn**	**16 11 40.2**	**+0.5**
KOWA	**Kowa**	**20.67**	**45**	P	**P**	**16 11 49.5**	**+1.1**
KOWA	**Kowa**	**20.67**	**45**	P	**P**	**16 11 49.6**	**+1.3**
NBPB	**Pedra_Branca-C**	**21.38**	**255**	*e*P	**P**	**16 11 56.8**	**+0.9**
NBMO	**Morrinhos-CE**	**21.40**	**261**	*e*P	**P**	**16 11 55.3**	**-0.9**
NBPS	**Pedro II - PI**	**22.96**	**259**	*e*P	**P**	**16 12 12.4**	**-0.5**
NBPN	**Ponto Novo - B**	**23.73**	**243**	*e*P	**P**	**16 12 22.9**	**+2.3**
TOA0	**Torodi Ar. Sit**	**24.28**	**56**	P	**P**	**16 12 26.6**	**+0.8**
	SNR=12						
TORD	**Torodi Ar. Bea**	**24.28**	**56**	P	**P**	**16 12 26.4**	**+0.6**
	comp=Z,47nm,0.7s,baz=234,slow=10,SNR=199						
TORD				S	**S**	**16 16 50.0**	**+5.1**
	comp=Z,21nm,1.1s,baz=246,slow=22,SNR=4.3						
TORD				LR	LR	16 21 23.7	
	comp=Z,476nm,18.1s,baz=204,slow=35						
	comp=Z,47nm,0.7s						
GDU01	**Guandu, BA**	**24.55**	**236**	*e*P	**P**	**16 12 32.9**	**+4.7**
CMC01	**Camacan, BA**	**25.40**	**233**	*e*P	**P**	**16 12 40.2**	**+4.4**
ROSB	**Rosrio**	**25.40**	**264**	*e*P	**P**	**16 12 34.4**	**-1.6**
GUA01	**Guaratinga, BA**	**26.33**	**231**	*e*P	**P**	**16 12 48.6**	**+4.3**
NAN01	**Guarapari, ES**	**27.33**	**229**	*e*P	**P**	**16 12 58.8**	**+5.4**
SJMB	**Sao Joao De Ma**	**28.65**	**229**	*e*P	P	16 13 11.1	+6.0
JANB	**Januaria**	**29.19**	**238**	*e*P	P	16 13 15.5	+5.4
TMAB	**Tom-Au,PA,Br**	**29.31**	**265**	*e*P	**P**	**16 13 10.3**	**-0.8**
SMTB	**Santa Maria do**	**29.89**	**252**	*e*P	**P**	**16 13 19.0**	**+2.7**
DIAM	**Diamantina, MG**	**30.33**	**232**	*e*P	P	16 13 24.9	+4.7
PEXB	**Peixe**	**31.54**	**247**	*e*P	**P**	**16 13 34.1**	**+3.3**
TTIG	**Tnine Tigouga,**	**32.09**	**17**	P	**P**	**16 13 40.0**	**+4.4**
BDFB	**Brasilia**	**32.64**	**240**	P	**P**	**16 13 39.1**	**-1.5**
	comp=Z,1.5nm,0.4s,baz=57,slow=14,SNR=4.3						
BDFB				LR	LR	16 25 00.7	
	comp=Z,817nm,20.9s,baz=107,slow=33						
	comp=Z,1.5nm,0.4s						
OUK	**Oukaimeden**	**32.88**	**18**	P	**P**	**16 13 46.0**	**+3.3**
OUZM	**OUZ**	**32.96**	**19**	P	**P**	**16 13 46.0**	**+2.8**
TZRR	**Tazzarine**	**33.26**	**21**	P	**P**	**16 13 49.0**	**+3.2**
MDP	**Montagnes des**	**34.14**	**279**	P	**P**	**16 13 52.9**	**-0.7**
	comp=Z,13nm,0.9s,baz=117,slow=6.8,SNR=1.9						
MDP				LR	LR	16 25 23.4	
	comp=Z,206nm,21.7s,baz=70,slow=32						
	comp=Z,13nm,0.9s						
GOLM	**Goulmima**	**34.31**	**21**	P	**P**	**16 13 59.0**	**+4.0**
ZHG	**ZHG**	**35.34**	**18**	P	**P**	**16 14 07.0**	**+3.2**
MDT	**Midelt**	**35.43**	**21**	P	**P**	**16 14 07.8**	**+3.2**
	comp=Z,19nm,0.7s,baz=337,slow=3.1,SNR=29						
MDT				LR	LR	16 28 40.9	
	comp=Z,279nm,18.7s,baz=208,slow=36						
	comp=Z,19nm,0.7s						
MDT	**Midelt**	**35.43**	**21**	P	**P**	**16 14 08.1**	**+3.5**
MALB	**Monte Alegre**	**35.44**	**267**	*e*P	**P**	**16 14 04.1**	**-0.7**
CZD	**Col de Zad**	**35.48**	**20**	P	**P**	**16 14 09.0**	**+3.8**
FIGM	**Figuig**	**36.16**	**26**	P	**P**	**16 14 14.0**	**+3.1**
TDRA	**Tendrara**	**36.62**	**24**	P	**P**	**16 14 18.0**	**+3.1**
ITTB	**Itaituba**	**37.08**	**263**	*e*P	**P**	**16 14 17.8**	**-1.1**
CHEFC	**Chefchaouen**	**37.28**	**18**	P	**P**	**16 14 24.3**	**+3.9**
JBK	**JBK**	**37.55**	**22**	P	**P**	**16 14 26.0**	**+3.2**
FRTB	**Fartura**	**37.70**	**230**	*e*P	P	16 14 29.7	+5.7
TAF	**Taforalt**	**38.03**	**22**	P	**P**	**16 14 30.0**	**+3.3**
PCMB	**Pacaembu**	**38.13**	**234**	*e*P	P	16 14 32.5	+4.8
CLDB	**Colider**	**38.22**	**253**	*e*P	**P**	**16 14 31.5**	**+2.9**
PBDV	**Barranco-do-Ve**	**38.55**	**14**	*e*P	**P**	**16 14 34.3**	**+3.3**
PTEO	**Sao Teotonio**	**38.66**	**13**	*e*P	**P**	**16 14 34.7**	**+2.9**
PVAQ	**Vaqueiros**	**38.76**	**14**	*e*LR	LR	16 26 11.7	
	comp=Z,203nm,18.0s						
PCVE	**Castro Verde**	**38.90**	**14**	*e*P	**P**	**16 14 35.6**	**+1.7**
MESJ	**Messejana**	**39.06**	**13**	*e*P	**P**	**16 14 37.3**	**+2.2**
MESJ				IAmb	IAmb	16 14 39.1	
	comp=Z,56nm,1.2s						
MESJ	**Messejana**	**39.06**	**13**	*e*P	**P**	**16 14 35.2**	**0.0**
MESJ	**Messejana**	**39.06**	**13**	*e*P	**P**	**16 14 37.3**	**+2.2**
PDRB	**Porto dos Gac**	**39.29**	**252**	*e*P	**P**	**16 14 36.4**	**-1.1**
PBAR	**Barrancos**	**39.66**	**15**	*e*P	**P**	**16 14 44.2**	**+4.0**
EVO	**Evora**	**39.76**	**13**	*e*P	**P**	**16 14 42.6**	**+1.5**
TRCB	**Terra Rica**	**39.82**	**233**	*e*P	P	16 14 46.9	+5.1
PESTR	**Estremoz**	**40.18**	**14**	*e*P	**P**	**16 14 47.3**	**+2.7**
PTGB	**Pitanga**	**40.36**	**230**	*e*P	P	16 14 52.2	+5.8
TSUM	**Tsumeb**	**40.44**	**120**	*e*P	**P**	**16 14 48.4**	**+1.2**
TSUM				IAmb	IAmb	16 14 52.6	
	comp=Z,56nm,1.1s						
TSUM	**Tsumeb**	**40.44**	**120**	P	**P**	**16 14 48.1**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=333,slow=6.0,SNR=3.1						
TSUM				LR	LR	16 27 42.4	
	comp=Z,304nm,21.5s,baz=314,slow=30						
	comp=Z,3.9nm,0.9s						
PMRV	**Marv??o**	**40.76**	**14**	*e*P	**P**	**16 14 53.0**	**+3.6**
CART	**Cartagena**	**41.01**	**22**	P	**P**	**16 14 52.5**	**+1.0**
CART				IAmb	IAmb	16 14 54.5	
	comp=Z,65nm,0.9s						
PCAS	**Casmilo, Conde**	**41.11**	**12**	*e*P	**P**	**16 14 55.6**	**+3.4**
COI	**Coimbra**	**41.28**	**12**	*e*P	**P**	**16 14 56.4**	**+2.8**
MTE	**Manteigas**	**41.65**	**13**	*e*P	**P**	**16 14 59.3**	**+2.5**
MTE	**Manteigas**	**41.65**	**13**	*e*LR	LR	16 25 35.9	
	comp=Z,402nm,18.0s						
PAB	**San Pablo**	**41.68**	**17**	P	**P**	**16 14 59.9**	**+2.9**
PAB				pmax	pmax		
	comp=Z,37nm,1.1s						
PAB	**San Pablo**	**41.68**	**17**	P	**P**	**16 14 59.9**	**+2.9**
PAB				IAmb	IAmb	16 15 00.8	
	comp=Z,37nm,1.1s						
PAB	**San Pablo**	**41.68**	**17**	P	**P**	**16 15 00.1**	**+3.1**
BOAV	**Boa Vista**	**41.73**	**274**	*e*P	**P**	**16 14 57.2**	**-0.5**
ITAB	**Concordia**	**41.79**	**227**	P	**P**	**16 14 55.2**	**-2.8**
ITAB	**Concordia**	**41.79**	**227**	*e*P	P	16 15 03.4	+5.4
FRBT	**Francisco Belt**	**41.79**	**229**	*e*P	P	16 15 03.2	+5.1
PVIS	**Viseu**	**41.88**	**13**	*e*P	**P**	**16 15 01.1**	**+2.5**
ESDC	**Sonseca Array**	**41.91**	**17**	P	**P**	**16 15 01.2**	**+2.3**
	comp=Z,22nm,1.2s,baz=209,slow=8.9,SNR=37						
ESDC				PP	**PP**	**16 16 36.8**	**+0.9**
	comp=Z,11nm,1.2s,baz=205,slow=10,SNR=8.5						
ESDC				LR	LR	16 33 16.7	
	comp=Z,246nm,18.8s,baz=206,slow=37						
	comp=Z,22nm,1.2s						
ESDC	**Sonseca Array**	**41.91**	**17**	P	**P**	**16 15 01.0**	**+2.1**
ESBB	**Sonseca Array**	**41.91**	**17**	P	**P**	**16 15 00.7**	**+1.8**
ESBB				IAmb	IAmb	16 15 02.8	
	comp=Z,36nm,1.2s						
PVRL	**Vila Real**	**42.45**	**12**	*e*P	**P**	**16 15 05.5**	**+2.3**
MVO	**Moncorvo**	**42.50**	**13**	*e*P	**P**	**16 15 05.7**	**+2.0**
MVO	**Moncorvo**	**42.50**	**13**	*e*LR	LR	16 26 25.2	
	comp=Z,274nm,18.0s						
PTLB	**Pontes e Lacer**	**42.58**	**247**	*e*P	**P**	**16 15 07.7**	**+3.1**
PBRG	**Braganca**	**43.17**	**13**	*e*P	**P**	**16 15 13.0**	**+3.9**
KEST	**Kesra**	**44.31**	**33**	P	**P**	**16 15 19.9**	**+1.5**
	comp=Z,8.6nm,0.9s,baz=159,slow=3.9,SNR=5.2						
KEST				LR	LR	16 35 30.2	
	comp=Z,1μm,18.9s,baz=194,slow=38						
	comp=Z,8.6nm,0.9s						
CPUP	**Villa Florida**	**45.27**	**232**	P	**P**	**16 15 25.5**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=64,slow=5.8,SNR=3.8						
CPUP				LR	LR	16 33 08.1	
	comp=Z,352nm,18.4s,baz=66,slow=35						
	comp=Z,1.9nm,0.9s						
PLTB	**Pedras Altas**	**45.47**	**223**	P	**P**	**16 15 31.2**	**+3.5**
PLTB	**Pedras Altas**	**45.47**	**223**	*e*P	P	16 15 34.0	+6.4
CLTB	**Caltabellotta**	**47.80**	**35**	P	**P**	**16 15 45.2**	**-0.8**
CLTB				IAmb	IAmb	16 15 50.6	
	comp=Z,31nm,1.0s						
VAE	**Valguarnera**	**48.42**	**36**	LR	LR	16 38 25.5	
	comp=Z,479nm,18.3s,baz=134,slow=39						
LSZ	**Lusaka**	**48.83**	**110**	*e*P	**P**	**16 15 54.8**	**+0.6**
LSZ				IAmb	IAmb	16 15 55.1	
	comp=Z,65nm,0.9s						
LSZ	**Lusaka**	**48.83**	**110**	P	**P**	**16 15 55.1**	**+0.9**
	comp=Z,2.0nm,0.3s,baz=332,slow=5.2,SNR=9.2						
LSZ				LR	LR	16 34 42.2	
	comp=Z,282nm,18.2s,baz=287,slow=34						
	comp=Z,2.0nm,0.3s						
LSZ	**Lusaka**	**48.83**	**110**	P	**P**	**16 15 54.8**	**+0.6**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LSZ	**Lusaka**	**48.83**	**110**	P	**P**	**16 15 54.8**	**+0.6**
SUR	**Sutherland**	**49.26**	**135**	P	**P**	**16 15 58.3**	**+0.9**
	comp=Z,10.0nm,0.8s,baz=304,slow=14,SNR=1.6						
SUR				LR	LR	16 32 36.6	
	comp=Z,100nm,21.1s,baz=308,slow=31						
	comp=Z,10.0nm,0.8s						
LBTB	**Lobatse**	**49.56**	**123**	*e*P	**P**	**16 15 59.1**	**-0.5**
LBTB				IAmb	IAmb	16 16 09.2	
	comp=Z,49nm,1.8s						
LBTB	**Lobatse**	**49.56**	**123**	P	**P**	**16 15 59.3**	**-0.4**
	comp=Z,8.6nm,0.9s,baz=298,slow=6.8,SNR=9.6						
LBTB				LR	LR	16 34 31.4	
	comp=Z,182nm,18.8s,baz=306,slow=33						
	comp=Z,8.6nm,0.9s						
LBTB	**Lobatse**	**49.56**	**123**	P	**P**	**16 15 59.1**	**-0.5**
MBAR	**Mbarara**	**49.60**	**91**	LR	LR	16 35 07.2	
	comp=Z,767nm,18.5s,baz=257,slow=34						
MBAR	**Mbarara**	**49.60**	**91**	*ce*P	**P**	**16 16 02.0**	**+1.8**
MBAR	**Mbarara**	**49.60**	**91**	P	**P**	**16 16 01.7**	**+1.5**
MBAR				IAmb	IAmb	16 16 03.3	
	comp=Z,24nm,0.9s						
HUMP	**Col San Antoni**	**49.62**	**294**	P	**P**	**16 15 57.9**	**-2.2**
PDPR	**Patillas Dam,**	**49.75**	**294**	P	**P**	**16 16 00.4**	**-0.7**
PDPR				IAmb	IAmb	16 16 02.5	
	comp=Z,35nm,1.1s						
SSB	**Saint Sauveur**	**49.75**	**22**	P	**P**	**16 16 02.0**	**+1.3**
SSB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SSB	**Saint Sauveur**	**49.75**	**22**	P	**P**	**16 16 02.0**	**+1.3**
BAUV	**El Baul**	**49.80**	**282**	P	**P**	**16 16 01.0**	**-0.6**
SJG	**San Juan**	**49.89**	**294**	LR	LR	16 32 24.6	
	comp=Z,304nm,21.1s,baz=96,slow=30						
SWZ	**Schweizer**	**50.22**	**126**	*e*P	**P**	**16 16 03.9**	**-0.8**
SWZ				IAmb	IAmb	16 16 07.2	
	comp=Z,198nm,2.6s						
BNI	**Bardonecchia**	**50.37**	**23**	P	**P**	**16 16 07.3**	**+1.8**
BNI				pmax	pmax		
	comp=Z,26nm,1.0s						
BNI	**Bardonecchia**	**50.37**	**23**	P	**P**	**16 16 07.3**	**+1.8**
BNI				IAmb	IAmb	16 16 09.7	
	comp=Z,26nm,1.0s						
CASP	**Castiglione de**	**50.39**	**28**	P	**P**	**16 16 04.5**	**-1.0**
CASP				IAmb	IAmb	16 16 09.3	
	comp=Z,31nm,1.2s						
BLWY	**Bulawayo**	**50.50**	**116**	*e*P	**P**	**16 16 06.0**	**-1.0**
BLWY				IAmb	IAmb	16 16 06.3	
	comp=Z,95nm,1.7s						
LATE	**Laterza**	**50.71**	**29**	P	**P**	**16 16 10.0**	**+2.0**
LATE				IAmb	IAmb	16 16 11.1	
	comp=Z,42nm,0.9s						
BOSA	**Boshof**	**50.77**	**128**	*e*P	**P**	**16 16 08.1**	**-0.7**
BOSA				IAmb	IAmb	16 16 13.2	
	comp=Z,2μm,5.1s						
BOSA	**Boshof**	**50.77**	**128**	P	**P**	**16 16 08.4**	**-0.4**
	comp=Z,7.0nm,0.9s,baz=307,slow=6.3,SNR=6.1						
BOSA				LR	LR	16 34 42.8	
	comp=Z,170nm,18.4s,baz=316,slow=33						
	comp=Z,7.0nm,0.9s						
TIP	**Timpagrande**	**50.93**	**36**	⇓P	**P**	**16 16 11.8**	**+2.0**
TIP	**Timpagrande**	**50.93**	**36**	P	**P**	**16 16 10.7**	**+0.9**
CUC	**Castrocucco**	**50.94**	**34**	P	**P**	**16 16 10.2**	**+0.4**
PAOL	**Paolisi**	**50.97**	**32**	P	**P**	**16 16 11.3**	**+1.3**
OSSC	**Osservatorio P**	**51.13**	**28**	P	**P**	**16 16 12.0**	**+0.8**
LPAZ	**La Paz**	**51.15**	**249**	P	**P**	**16 16 11.0**	**-1.4**
	comp=Z,4.4nm,0.8s,baz=67,slow=7.6,SNR=20						
LPAZ				LR	LR	16 37 13.7	
	comp=Z,306nm,18.0s,baz=84,slow=35						
	comp=Z,4.4nm,0.8s						
LPAZ	**La Paz**	**51.15**	**249**	P	**P**	**16 16 10.4**	**-2.0**
AQU	**L'Aquila**	**51.31**	**30**	P	**P**	**16 16 13.7**	**+1.1**
AQU				pmax	pmax		
	comp=Z,34nm,0.9s						
AQU	**L'Aquila**	**51.31**	**30**	P	**P**	**16 16 13.7**	**+1.1**
AQU				IAmb	IAmb	16 16 26.2	
	comp=Z,34nm,0.9s						
CLF	**Chambon-Foret**	**51.37**	**18**	P	**P**	**16 16 13.7**	**+0.9**
CLF				IAmb	IAmb	16 16 16.3	
	comp=Z,54nm,1.1s						
NRCA	**Norcia**	**51.52**	**30**	P	**P**	**16 16 14.6**	**+0.5**
NRCA				IAmb	IAmb	16 16 17.9	
	comp=Z,18nm,1.0s						
MURB	**Monte Urbino**	**51.55**	**29**	P	**P**	**16 16 14.0**	**-0.3**
MURB				IAmb	IAmb	16 16 17.8	
	comp=Z,27nm,1.1s						
ZCCA	**Zocca**	**51.64**	**27**	P	**P**	**16 16 14.6**	**-0.4**
ZCCA				IAmb	IAmb	16 16 20.8	
	comp=Z,36nm,1.1s						
SENIN	**Lac Senin/Sane**	**51.70**	**23**	P	**P**	**16 16 17.1**	**+1.5**
SENIN				IAmb	IAmb	16 16 18.1	
	comp=Z,14nm,0.8s						
SLR	**Silverton**	**52.08**	**123**	*e*P	**P**	**16 16 17.6**	**-1.1**
SLR				IAmb	IAmb	16 16 23.9	
	comp=Z,20nm,1.0s						
SDV	**Santo Domingo**	**52.34**	**281**	LR	LR	16 38 20.8	
	comp=Z,144nm,18.1s,baz=103,slow=36						
MSNA	**Messina**	**52.42**	**118**	*e*P	**P**	**16 16 24.2**	**+3.0**
MSNA				IAmb	IAmb	16 16 29.3	
	comp=Z,128nm,2.9s						
PSDA	**Pessada-Kefalo**	**52.59**	**39**	P	**P**	**16 16 22.4**	**+0.3**
TUE	**Stuetta**	**52.61**	**24**	P	**P**	**16 16 22.6**	**+0.3**
PYL	**PYLOS**	**52.62**	**41**	P	**P**	**16 16 22.7**	**+0.4**
TEOL	**Teolo**	**52.74**	**27**	P	**P**	**16 16 23.8**	**+0.7**
TEOL				IAmb	IAmb	16 16 24.8	
	comp=Z,25nm,0.9s						
ITM	**Ithomi**	**52.90**	**41**	P	**P**	**16 16 23.0**	**-1.4**
ITM				IAmb	IAmb	16 16 27.2	
	comp=Z,49nm,0.9s						
DAVOX	**Davos/Dischmat**	**53.08**	**24**	P	**P**	**16 16 27.0**	**+1.2**
	comp=Z,19nm,0.7s,baz=209,slow=7.5,SNR=62						
DAVOX				LR	LR	16 40 09.9	
	comp=Z,108nm,18.3s,baz=250,slow=37						

	comp=Z,19nm,0.7s						
KEK	**Kerkira**	53.08	37	P	P	16 16 26.0	+0.3
KEK				IAmb	IAmb	16 16 28.5	
	comp=Z,22nm,1.1s						
ECH	**Echery**	53.19	21	P	P	16 16 26.4	0.0
ECH				pmax	pmax		
	comp=Z,12nm,1.0s						
ECH	**Echery**	53.19	21	P	P	16 16 26.4	0.0
DRO	**Drossia**	53.21	40	P	P	16 16 29.0	+2.3
CTI	**Castel Tesino**	53.26	26	P	P	16 16 28.2	+1.1
CTI				pmax	pmax		
	comp=Z,18nm,0.7s						
CTI	**Castel Tesino**	53.26	26	P	P	16 16 28.2	+1.1
CTI				IAmb	IAmb	16 16 31.5	
	comp=Z,18nm,0.7s						
IGT	**Igoumenitsa**	53.29	38	P	P	16 16 28.8	+1.5
VLI	**Veliai**	53.31	42	P	P	16 16 29.2	+1.7
DAVA	**Damuels**	53.48	24	*i* P	P	16 16 29.7	+1.0
	comp=Z,56nm,0.7s,SNR=26						
LVC	**Limon Verde**	53.54	242	LR	LR	16 39 03.1	
	comp=Z,228nm,20.2s,baz=66,slow=36						
LVC	**Limon Verde**	53.54	242	*e*P	P	16 16 32.5	+2.7
KLV	**Kalavryta, Ach**	53.54	40	P	P	16 16 31.7	+2.5
PB09	**IPOC Station P**	53.59	243	P	P	16 16 28.4	-1.6
PB09				IAmb	IAmb	16 16 35.3	
	comp=Z,30nm,1.2s						
FETA	**Feichten**	53.62	25	*i* P	P	16 16 30.6	+0.9
	comp=Z,22nm,0.8s,SNR=16						
FETA				*i* P	PP	16 18 29.9	-0.7
	comp=Z,6.3nm,1.0s						
ANX	**Ano Chora**	53.72	39	P	P	16 16 32.5	+2.0
BFO	**Black Forest**	53.72	22	P	P	16 16 31.5	+1.2
BFO				pmax	pmax		
	comp=Z,32nm,1.1s						
BFO	**Black Forest**	53.72	22	P	P	16 16 31.5	+1.2
BFO				IAmb	IAmb	16 16 32.9	
	comp=Z,32nm,1.1s						
IDI	**Anoyia**	53.88	44	⇑P	P	16 16 33.1	+1.3
IDI	**Anoyia**	53.88	44	P	P	16 16 33.7	+1.9
IDI	**Anoyia**	53.88	44	P	P	16 16 33.6	+1.8
STAL	**STALIGIAL**	53.89	27	P	P	16 16 32.2	+0.6
STAL				IAmb	IAmb	16 16 34.4	
	comp=Z,20nm,0.8s						
DOU	**Dourbes**	53.92	18	*b*P	P	16 16 33.0	+1.3
	comp=Z,18nm,1.0s						
DOU				*d*PP	PP	16 18 32.6	-0.5
SKDS	**Skadanscina**	53.96	28	*e*P	P	16 16 33.6	+1.5
TRI	**Trieste**	53.96	28	P	P	16 16 32.9	+0.9
TRI				pmax	pmax		
	comp=Z,27nm,0.9s						
TRI	**Trieste**	53.96	28	P	P	16 16 32.9	+0.9
TRI				IAmb	IAmb	16 16 34.3	
	comp=Z,26nm,0.9s						
SQTA	**Sankt Quirin**	53.98	25	*i* P	P	16 16 33.1	+0.8
	comp=Z,28nm,0.8s,SNR=16						
MOPA	**Mopani**	53.99	119	*e*P	P	16 16 28.7	-4.0
MOPA				IAmb	IAmb	16 16 29.4	
	comp=Z,4.4nm,0.6s						
RETA	**Reutte**	54.01	24	*i* P	P	16 16 33.1	+0.7
	comp=Z,19nm,1.0s,SNR=13						
RIY	**Rijeka**	54.02	29	*e*P	P	16 16 34.2	+1.7
MOTA	**Moosalm**	54.04	25	*i* P	P	16 16 33.3	+0.5
	comp=Z,26nm,1.3s,SNR=10						
MOTA				*i* P	PP	16 18 34.9	+0.6
	comp=Z,5.8nm,1.0s						
WLF	**Walferdange**	54.06	20	*d*P	P	16 16 34.7	+2.0
WLF				*d*PP	PP	16 18 33.9	-0.5
KNDS	**Knezji Dol**	54.12	28	*i* P	P	16 16 35.0	+1.7
KNDS				IAMb		16 16 36.0	
	comp=Z,26nm,1.4s						
PB07	**IPOC Station P**	54.15	243	P	P	16 16 32.0	-2.0
PB07				IAmb	IAmb	16 16 39.1	
	comp=Z,18nm,0.9s						
NWCL	**Newcastle**	54.15	125	*e*P	P	16 16 33.9	-0.1
NWCL				IAmb	IAmb	16 16 38.9	
	comp=Z,141nm,2.1s						
BMRD	**Maredsous**	54.16	18	*d*P	P	16 16 34.4	+1.0
ABTA	**Abfaltersbach**	54.18	26	*i* P	P	16 16 35.4	+1.6
	comp=Z,22nm,0.8s,SNR=20						
ABTA				*e*P	PP	16 18 34.8	-0.8
	comp=Z,12nm,1.3s						
KPRO	**Kipourio**	54.18	38	P	P	16 16 35.8	+1.9
TREB	**Trebinje**	54.18	33	*e*P	P	16 16 35.8	+2.1
CZSB	**Cruzeiro do Su**	54.20	261	*e*P	P	16 16 36.0	+1.7
WTTA	**Wattenberg**	54.20	25	*i* P	P	16 16 34.9	+0.9
	comp=Z,20nm,0.7s,SNR=15						
WTTA				*i* P	PP	16 18 33.5	-2.3
	comp=Z,7.5nm,0.9s						
PB15	**IPOC Station P**	54.21	241	P	P	16 16 31.1	-3.5
PB15				IAmb	IAmb	16 16 40.5	
	comp=Z,49nm,1.5s						
WATA	**Walderalm**	54.23	25	*i* P	P	16 16 34.7	+0.5
	comp=Z,22nm,1.2s,SNR=10						
CEY	**Cerknica**	54.30	28	*e*P	P	16 16 36.3	+1.7
DRME	**Dracevica, Mon**	54.30	34	*e*P	P	16 16 37.1	+2.5
LODK	**Lodwar**	54.30	86	P	P	16 16 36.5	+1.3
LODK	**Lodwar**	54.30	86	P	P	16 16 37.2	+2.0
	SNR=5.3						
BGES	**Gesves**	54.33	19	*b*P	P	16 16 35.8	+1.2
	comp=Z,8.6nm,0.9s						
THL	**Klokotos Trika**	54.35	39	P	P	16 16 36.3	+1.3
BRY	**Bratogost**	54.41	33	*e*P	P	16 16 37.2	+1.6
BCLA	**Clavier**	54.43	19	*d*P	P	16 16 36.9	+1.5
SRKY	**Kupres RS**	54.46	31	*e*P	P	16 16 37.4	+1.5
PDG	**Podgorica**	54.49	34	⇑P	P	16 16 38.0	+2.0
PDG	**Podgorica**	54.49	34	P	P	16 16 37.5	+1.5
PDG				IAmb	IAmb	16 16 39.8	
	comp=Z,44nm,1.1s						
PDG	**Podgorica**	54.49	34	*e*P	P	16 16 38.5	+2.5
OHR	**Ohrid**	54.55	36	*i* P	P	16 16 39.2	+2.7
LJU	**Ljubljana**	54.57	28	*e*P	P	16 16 38.6	+2.1
LJU	**Ljubljana**	54.57	28	*i* P	P	16 16 38.5	+2.1
LJU				IAMb		16 16 39.4	
	comp=Z,30nm,1.1s						
MYKA	**Terra Mystica**	54.59	27	*i* P	P	16 16 38.7	+1.9
	comp=Z,20nm,1.0s,SNR=7.9						
BHOU	**Houvegnez**	54.60	19	*d*P	P	16 16 38.3	+1.6
HAGI	**HAGI**	54.66	122	*e*P	P	16 16 36.8	-0.8
HAGI				IAmb	IAmb	16 16 43.2	
	comp=Z,9.8nm,0.8s						
BSTI	**Sart Tilman**	54.66	19	*d*P	P	16 16 38.5	+1.5
PTL	**Penteli**	54.66	41	P	P	16 16 38.6	+1.2
MGRS	**Mrkonjic Grad**	54.66	31	*e*P	P	16 16 39.3	+2.0
FNA	**Florina**	54.69	37	P	P	16 16 39.2	+1.7
FNA	**Florina**	54.69	37	P	P	16 16 38.7	+1.1
FNA				pmax	pmax		
	comp=Z,58nm,0.9s						
FNA	**Florina**	54.69	37	P	P	16 16 38.6	+1.1
PHP	**Peshkopia**	54.70	36	P	P	16 16 39.5	+1.9
KBA	**Koelnbreinsper**	54.80	26	*i* P	P	16 16 39.6	+1.2
	comp=Z,9.5nm,0.6s,SNR=10						
KBA				*e*P	PP	16 18 42.4	+1.2
	comp=Z,4.3nm,1.0s						
UPM	**Unac-Piva**	54.81	33	*e*P	P	16 16 40.8	+2.3
MEM	**Membach**	54.82	19	*d*P	P	16 16 40.2	+2.0
	comp=Z,10nm,0.9s						
BTNL	**Ternell**	54.84	19	*d*P	P	16 16 40.7	+2.2
	comp=Z,13nm,1.0s						
CRES	**Cresnjev**	54.85	29	*e*P	P	16 16 39.5	+0.9
OBKA	**Obir**	54.92	28	*i* P	P	16 16 40.9	+1.8
	comp=Z,8.5nm,0.9s,SNR=5.4						
OBKA				*i* P	PP	16 18 42.7	+0.4
	comp=Z,7.0nm,1.0s						
LIT	**Litokhoron**	54.96	38	P	P	16 16 40.4	+1.0
LIT	**Litokhoron**	54.96	38	P	P	16 16 40.5	+1.0
LIT				pmax	pmax		
	comp=Z,49nm,1.0s						
LIT	**Litokhoron**	54.96	38	P	P	16 16 40.5	+1.0
APE	**Apeiranthos**	55.25	43	⇑P	P	16 16 42.6	+1.0
APE	**Apeiranthos**	55.25	43*c*	*i*P	P	16 16 42.6	+1.0
APE				pmax	pmax		
	comp=Z,36nm,0.9s						
SOKA	**Soboth**	55.27	28	*i* P	P	16 16 43.4	+1.7
	comp=Z,19nm,0.9s,SNR=12						
RUDO	**Rudo**	55.34	33	*e*P	P	16 16 43.1	+1.0
BIOA	**Bad Ischl, Aus**	55.40	26	*i* P	P	16 16 42.9	+0.4
	comp=Z,5.4nm,0.6s,SNR=6.5						
SJES	**Sjenica**	55.44	34	*e*P	P	16 16 44.9	+1.9
SKO	**Skopje**	55.46	36	*i* P	P	16 16 45.0	+2.0
POGA	**Pongola**	55.52	124	*e*P	P	16 16 45.6	+1.9
POGA				IAmb	IAmb	16 16 48.5	
	comp=Z,25nm,0.9s						
BBLS	**Lazići**	55.52	33	*e*P	P	16 16 45.1	+1.6
ROSC	**El Rosal**	55.62	276	LR	LR	16 37 38.3	
	comp=Z,467nm,21.5s,baz=78,slow=33						
KOGS	**Kog**	55.68	29	*i* P	P	16 16 46.1	+1.6
STIP	**Stip**	55.73	37	*i* P	P	16 16 47.8	+2.9
VAY	**Valandovo**	55.73	37	*i* P	P	16 16 46.5	+1.5
MOA	**Molln**	55.79	26	*i* P	P	16 16 45.7	+0.3
	comp=Z,16nm,0.9s,SNR=13						
MOA				*i* P	PP	16 18 47.4	-2.5
	comp=Z,12nm,1.0s						
ARSA	**Arzberg**	55.92	28	*e*P	P	16 16 47.5	+1.3
	comp=Z,17nm,1.3s,SNR=7.2						
DIVS	**Divibare**	55.99	33	P	P	16 16 48.1	+1.2
DIVS				IAmb	IAmb	16 16 50.2	
	comp=Z,42nm,1.3s						
DIVS	**Divibare**	55.99	33	*e*P	P	16 16 48.7	+1.8
KMBO	**Kilima Mbogo**	56.11	91	P	P	16 16 50.0	+1.5
	comp=Z,1.5nm,0.5s,baz=213,slow=4.2,SNR=4.2						
KMBO				LR	LR	16 39 10.9	
	comp=Z,631nm,18.3s,baz=272,slow=34						
	comp=Z,1.5nm,0.5s						
KMBO	**Kilima Mbogo**	56.11	91	⇑*e*P	P	16 16 50.7	+2.2
SRS	**Serrai**	56.23	38	P	P	16 16 49.4	+0.8
GEC2	**GERESS Array S**	56.30	25	P	P	16 16 49.5	+0.4
GEC2				IAmb	IAmb	16 16 52.3	
	comp=Z,16nm,0.9s						
GERES	**GERESS Array B**	56.30	25	P	P	16 16 50.3	+1.3
	comp=Z,6.4nm,0.7s,baz=210,slow=7.7,SNR=34						
GERES				PP	PP	16 18 51.3	-3.2
	comp=Z,14nm,0.9s,baz=205,slow=8.5,SNR=14						
GERES				LR	LR	16 40 25.7	
	comp=Z,96nm,20.4s,baz=268,slow=35						
	comp=Z,6.4nm,0.7s						
GERES	**GERESS Array B**	56.30	25	P	P	16 16 48.9	-0.2
KOVH	**Kovagotottos**	56.34	30	P	P	16 16 50.6	+1.4
KKB	**Krupnik**	56.37	37	*i* P	P	16 16 51.9	+2.3
KHC	**Kasperske Hory**	56.47	25	*e*P	P	16 16 50.9	+0.7
KHC				*e*		16 18 53.5	
KHC				MLR	MLR		
	comp=Z,200nm,16.3s						
KHC	**Kasperske Hory**	56.47	25	P	P	16 16 50.8	+0.7
KHC				IAmb	IAmb	16 16 52.7	
	comp=Z,15nm,1.1s						
KHC	**Kasperske Hory**	56.47	25	*e*P	P	16 16 50.9	+0.7
KHC				*e*x	x	16 18 53.5	
KHC				AMS	AMS	16 40 20.0	
	comp=Z,200nm,16.3s						
NVR	**Nevrokopi**	56.53	38	P	P	16 16 52.4	+1.6
CKRC	**Cesky Krumlov**	56.54	26	*e*P	P	16 16 51.9	+1.2
CKRC				*e*S	S	16 24 44.6	+2.3
CKRC				AMS	AMS	16 46 30.0	
	comp=Z,200nm,18.4s						
CONA	**Conrad Observa**	56.57	27	*i* P	P	16 16 52.1	+1.1
	comp=Z,17nm,1.1s,SNR=14						
CONA				*e*P	PP	16 18 54.0	-3.0
	comp=Z,7.6nm,1.0s						
FRGS	**Fruska Gora**	56.59	32	⇓P	P	16 16 52.5	+1.4
FRGS	**Fruska Gora**	56.59	32	*e*P	P	16 16 52.1	+1.0
MMB	**Musomiste**	56.59	37	*i* P	P	16 16 52.9	+1.7
SIGR	**SIGRI**	56.60	41	P	P	16 16 53.0	+1.8
RONA	**Rosalia, Austr**	56.61	28	*i* P	P	16 16 52.8	+1.6
	comp=Z,29nm,0.9s,SNR=26						
ARG	**Arkhangelos**	56.62	45	P	P	16 16 50.6	-0.9
ARG				pmax	pmax		
	comp=Z,187nm,1.3s						
ARG	**Arkhangelos**	56.62	45	P	P	16 16 50.6	-0.9
MORH	**Mrgy, Hungar**	56.70	30	⇑P	P	16 16 53.2	+1.4
MORH	**Mrgy, Hungar**	56.70	30	*e*P	P	16 16 53.2	+1.4
MORH	**Mrgy, Hungar**	56.70	30	P	P	16 16 53.3	+1.5
SOP	**Sopron**	56.72	28	P	P	16 16 53.5	+1.6
MPLH	**Magyarpolny**	56.82	29	P	P	16 16 53.7	+1.1
VTS	**Vitosha**	56.91	36	⇑P	P	16 16 55.3	+1.8
VTS	**Vitosha**	56.91	36	P	P	16 16 54.5	+1.0
VTS				pmax	pmax		
	comp=Z,42nm,1.1s						
VTS	**Vitosha**	56.91	36	P	P	16 16 54.5	+1.0
VTS				IAmb	IAmb	16 16 56.9	
	comp=Z,42nm,1.1s						
VTS	**Vitosha**	56.91	36	*i* P	P	16 16 55.5	+2.0
PBCC	**Pribram**	57.07	25	*e*P	P	16 16 55.0	+0.6
SMTH	**Samothraki Isl**	57.08	39	P	P	16 16 55.1	+0.5
ZST	**Bratislava**	57.34	28	*e*P	P	16 16 58.0	+1.7
ZST				pmax	pmax		
	comp=Z,107nm,1.2s						
ZST	**Bratislava**	57.34	28	*e*P	P	16 16 58.0	+1.7
MDVR	**Moldovita**	57.37	33	⇑P	P	16 16 58.5	+1.8
PGB	**Panagyurishte**	57.42	37	*i* P	P	16 16 58.9	+1.8
RDO	**Rodhopi**	57.46	39	P	P	16 16 58.6	+1.3
RDO				IAmb	IAmb	16 16 60.0	
	comp=Z,36nm,1.1s						
PRU	**Pruhonice**	57.53	25	*e*S	S	16 24 58.7	+3.5
PRU				AMS	AMS	16 48 00.0	
	comp=Z,200nm,12.1s						
MODS	**Modra-Piesok**	57.55	28	*e*P	P	16 16 59.1	+1.3
MODS				pmax	pmax		
	comp=Z,89nm,1.3s						
MODS	**Modra-Piesok**	57.55	28	*e*P	P	16 16 59.1	+1.3
ALN	**Alexandroupoli**	57.64	39	P	P	16 16 59.9	+1.4
ALN	**Alexandroupoli**	57.64	39	P	P	16 16 57.6	-0.9
ALN				pmax	pmax		
	comp=Z,19nm,1.0s						
ALN	**Alexandroupoli**	57.64	39	P	P	16 16 57.6	-0.9
ALN				IAmb	IAmb	16 17 00.6	
	comp=Z,19nm,1.0s						
KRUC	**Moravsky**	57.64	27	*e*P	P	16 16 58.9	+0.5
KRUC				*e*		16 19 04.3	
SRO	**Srobarova**	57.64	29	*e*P	P	16 17 00.3	+1.9
SRO				pmax	pmax		
	comp=Z,31nm,1.2s						
SRO	**Srobarova**	57.64	29	*e*P	P	16 17 00.3	+1.9
MPEP	**Malo Peshtene**	57.65	36	*i* P	P	16 17 00.9	+2.3
AKAS	**Kas**	57.68	46	P	P	16 16 59.5	+0.4
SMOL	**Smolenice**	57.72	28	*e*P	P	16 17 00.8	+1.8
SMOL	**Smolenice**	57.72	28	*e*P	P	16 17 00.8	+1.8
PUNG	**Punghina**	57.74	34	⇑P	P	16 17 01.5	+2.3
DJES	**Djerdap**	57.75	34	⇓P	P	16 17 01.1	+1.8
BUD	**Budapest**	57.76	29	P	P	16 17 01.0	+1.7
HERR	**Herculane**	57.83	34	⇓P	P	16 17 01.4	+1.6
BZS	**Buzias**	57.85	33	⇑P	P	16 17 01.7	+1.7
VRAC	**Vranov**	57.91	27	P	P	16 17 01.3	+1.0
	comp=Z,7.9nm,0.9s,baz=226,slow=7.5,SNR=16						
VRAC				PP	PP	16 19 06.3	-2.5
	comp=Z,8.2nm,1.0s,baz=220,slow=9.2,SNR=6.7						
VRAC				LR	LR	16 40 52.0	
	comp=Z,92nm,21.1s,baz=242,slow=35						
	comp=Z,7.9nm,0.9s						
VRAC	**Vranov**	57.91	27	*e*P	P	16 17 00.9	+0.6
VRAC				*e*		16 19 06.7	
CLL	**Collm**	57.92	23	*i* P	P	16 17 01.6	+1.3
CLL				*e*		16 17 07.0	
CLL				*e*S	S	16 25 00.0	-0.3
CLL				pmax	pmax		
	comp=Z,25nm,1.5s						
CLL	**Collm**	57.92	23	P	P	16 17 00.1	-0.2
CLL				IAmb	IAmb	16 17 02.9	
	comp=Z,17nm,1.2s						
CLL	**Collm**	57.92	23	*i* P	P	16 17 01.6	+1.3
	comp=Z,25nm,1.5s						
CLL				*e*sP	pwP	16 17 07.0	-0.9
CLL				*e*x	x	16 18 57.0	
CLL				*e*PP	PP	16 19 06.0	-2.8
CLL				*e*pPP		16 19 12.0	
CLL				*e*S	S	16 25 00.0	-0.3
MANT	**Manisa**	58.03	43	P	P	16 17 02.8	+1.1
MANT				IAmb	IAmb	16 17 04.3	
	comp=Z,55nm,1.3s						
JAVC	**Velka Javorina**	58.08	28	*e*P	P	16 17 03.2	+1.6
JAVC				*e*		16 19 13.2	
ELL	**Elmali**	58.14	45	P	P	16 17 04.6	+2.3
ELL				pmax	pmax		
	comp=Z,250nm,0.7s						
ELL	**Elmali**	58.14	45	P	P	16 17 04.6	+2.3
KOLL	**Kolacno**	58.22	28	*e*P	P	16 17 04.3	+1.8
GZR	**Gura Zlata**	58.34	33	⇑P	P	16 17 05.3	+1.8
VYHS	**Vyhne**	58.37	29	*e*P	P	16 17 04.9	+1.3
VYHS				pmax	pmax		
	comp=Z,23nm,1.1s						
VYHS	**Vyhne**	58.37	29	*e*P	P	16 17 04.9	+1.3
VLAD	**Vladila**	58.41	35	⇑P	P	16 17 05.8	+1.8
VA03	**San Esteban**	58.42	231	P	P	16 17 02.0	-2.4
PSZ	**Piszkesteto**	58.49	30	⇑P	P	16 17 06.0	+1.5
PSZ	**Piszkesteto**	58.49	30	P	P	16 17 04.2	-0.3
PSZ				pmax	pmax		
	comp=Z,26nm,1.0s						
PSZ	**Piszkesteto**	58.49	30	P	P	16 17 04.2	-0.3
PSZ				IAmb	IAmb	16 17 07.3	
	comp=Z,26nm,1.0s						
PSZ	**Piszkesteto**	58.49	30	P	P	16 17 05.8	+1.3
MAUC	**Maruska**	58.51	27	*e*P	P	16 17 06.3	+1.7
UPC	**Upice**	58.54	25	AMS	AMS	16 38 40.0	
	comp=Z,200nm,18.8s						
MORC	**Moravsky Berou**	58.68	27	⇑P	P	16 17 07.0	+1.2
MORC	**Moravsky Berou**	58.68	27	P	P	16 17 05.9	+0.2
MORC				pmax	pmax		
	comp=Z,22nm,1.1s						
MORC	**Moravsky Berou**	58.68	27	P	P	16 17 05.9	+0.2
MORC				IAmb	IAmb	16 17 08.3	
	comp=Z,22nm,1.1s						
MORC	**Moravsky Berou**	58.68	27	*e*P	P	16 17 06.7	+1.0
MORC				*e*		16 19 13.8	
NNA	**Nana**	58.72	256	LR	LR	16 41 35.3	
	comp=Z,551nm,18.3s,baz=70,slow=35						
DEV	**Deva**	58.72	33	⇓P	P	16 17 08.2	+2.1
SZH	**Strazhica**	58.89	37	*i* P	P	16 17 08.7	+1.4
KSP	**Ksiaz**	58.91	25	*e*P	P	16 17 08.4	+1.1
HUMR	**Humele**	59.06	35	⇑P	P	16 17 08.9	+0.5
LANS	**Liptovska Anna**	59.13	28	*e*P	P	16 17 11.0	+2.1
LANS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LANS	**Liptovska Anna**	59.13	28	*e*P	P	16 17 11.0	+2.1
EIL	**Elat**	59.16	55	LR	LR	16 45 17.1	
	comp=Z,343nm,18.0s,baz=267,slow=39						
DRGR		59.19	32	⇓P	P	16 17 10.9	+1.5
ARR	**Arges**	59.36	34	⇓P	P	16 17 12.2	+1.6
RAZG	**Razgrad**	59.41	37	⇑P	P	16 17 11.6	+0.8
CJR	**Cluj-Napoca**	59.62	33	⇓P	P	16 17 13.7	+1.4
VOIR		59.64	34	⇑P	P	16 17 13.7	+1.1
NIE	**Niedzica**	59.71	29	*e*P	P	16 17 15.4	+2.6
PRD	**Provadia**	59.74	38	*i* P	P	16 17 14.2	+1.0
ATAH	**Atahualpa**	59.77	262	LR	LR	16 41 38.8	
	comp=Z,596nm,21.4s,baz=92,slow=35						
CRVS	**Cervenica-Dubn**	59.92	30	*e*P	P	16 17 16.0	+1.7
CRVS				pmax	pmax		
	comp=Z,57nm,1.6s						
CRVS	**Cervenica-Dubn**	59.92	30	*e*P	P	16 17 16.0	+1.7
SECR		59.99	35	⇑P	P	16 17 15.7	+0.8
OJC	**Ojcow**	60.02	28	*e*P	P	16 17 16.2	+1.2
OJC	**Ojcow**	60.02	28	P	P	16 17 14.6	-0.4
OJC				pmax	pmax		
	comp=Z,32nm,1.2s						
OJC	**Ojcow**	60.02	28	P	P	16 17 14.6	-0.4
OJC				IAmb	IAmb	16 17 17.4	
	comp=Z,32nm,1.2s						
DOPR	**Dopca**	60.15	34	⇑P	P	16 17 16.9	+1.0
UZH	**Uzhgorod**	60.16	30	⇓*i*P	P	16 17 16.5	+0.6
UZH				*i*		16 17 20.6	
BMR	**Baia Mare**	60.16	32	⇑P	P	16 17 17.7	+1.7
MLR	**Muntele Rosu**	60.18	35	⇑P	P	16 17 16.8	+0.5
MLR	**Muntele Rosu**	60.18	35	LR	LR	16 45 53.4	
	comp=Z,261nm,18.6s,baz=214,slow=38						
MLR	**Muntele Rosu**	60.18	35	P	P	16 17 16.1	-0.2
MLR				pmax	pmax		
	comp=Z,82nm,1.3s						
MLR	**Muntele Rosu**	60.18	35	P	P	16 17 16.1	-0.2
NEHR	**Nehoiu**	60.34	35	⇓P	P	16 17 17.9	+0.6
KOLS	**Kolonicke sedl**	60.35	30	*e*P	P	16 17 19.4	+2.2
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KOLS	**Kolonicke sedl**	60.35	30	*e*P	P	16 17 19.3	+2.1
PSN	**Preselentsi**	60.49	38	*i* P	P	16 17 18.6	+0.3
COVR	**Voineasa-Covas**	60.53	35	⇓P	P	16 17 19.4	+0.8
SHAB	**Shabla**	60.67	38	⇑P	P	16 17 20.2	+0.7
MMAI	**Mount Meron Ar**	60.70	51	LR	LR	16 45 15.5	
	comp=Z,170nm,21.4s,baz=63,slow=38						
MDUB	**Mudurnu**	60.78	42	P	P	16 17 21.3	+0.8
PLOR	**Plostina**	60.79	35	⇓P	P	16 17 21.0	+0.6
VRI	**Vrincioaia**	60.85	35	⇑P	P	16 17 21.4	+0.7
TLBR	**Topalu**	60.87	37	⇑P	P	16 17 21.9	+1.1
HARR	**Harsova**	60.88	37	⇓P	P	16 17 21.5	+0.5
MFTR	**Murfatlar**	60.90	37	⇑P	P	16 17 22.2	+1.2
ODBI	**Odobesti**	60.98	35	⇑P	P	16 17 22.5	+0.9
KWP	**Kalwaria Pacla**	61.02	30	P	P	16 17 22.2	+0.4
KWP				pmax	pmax		
	comp=Z,162nm,1.0s						
KWP	**Kalwaria Pacla**	61.02	30	P	P	16 17 22.2	+0.4
BURAR	**Bucovina Array**	61.04	33	⇓P	P	16 17 23.2	+1.1
BURAR	**Bucovina Array**	61.04	33	P	P	16 17 23.1	+0.9
TIRR	**Tirgusor**	61.05	37	⇑P	P	16 17 22.5	+0.5
TIRR	**Tirgusor**	61.05	37	P	P	16 17 21.6	-0.4
TIRR				pmax	pmax		
	comp=Z,102nm,1.5s						
TIRR	**Tirgusor**	61.05	37	P	P	16 17 21.6	-0.4
BUR08	**Bucovina Ar. S**	61.05	33	P	P	16 17 22.3	+0.1
BUR08				IAmb	IAmb	16 17 25.1	
	comp=Z,24nm,1.4s						
PANC	**Panciu**	61.09	35	⇑P	P	16 17 22.8	+0.4
TESR	**Tescani**	61.17	34	⇑P	P	16 17 23.2	+0.3
TPGR	**Topolog**	61.27	37	⇓P	P	16 17 24.0	+0.4
CFR	**Carcaliu**	61.27	36	⇓P	P	16 17 23.9	+0.3
GHRR		61.35	35	⇑P	P	16 17 24.3	+0.2
SCTR	**Scanteiesti**	61.47	36	⇑P	P	16 17 24.9	0.0
ANTO	**Ankara**	61.58	43	P	P	16 17 27.0	+1.1
ANTO				pmax	pmax		
	comp=Z,41nm,1.0s						
ANTO	**Ankara**	61.58	43	P	P	16 17 27.0	+1.1
TLCR		61.68	36	⇑P	P	16 17 27.3	+1.0
PLCA	**Paso Flores**	61.79	223	LR	LR	16 41 01.8	
	comp=Z,172nm,20.7s,baz=71,slow=33						
LVV	**L'vov**	61.80	30	*e*P	P	16 17 27.8	+0.8
VASR	**Vaslui**	61.89	35	⇓P	P	16 17 28.2	+0.5
BR131	**Keskin Array S**	62.10	44*c*	*i*P	P	16 17 30.3	+0.8
BR131	**Keskin Array S**	62.10	44	P	P	16 17 30.0	+0.5
BR131	**Keskin Array S**	62.10	44	P	P	16 17 31.0	+1.5
	SNR=21						
BRTR	**Keskin Array B**	62.10	44	P	P	16 17 30.8	+1.3
	comp=Z,19nm,1.0s,baz=233,slow=5.7,SNR=76						
BRTR				PP	PP	16 19 48.9	+2.7
	comp=Z,2.3nm,0.9s,baz=227,slow=8.3,SNR=3.9						
BRTR				LR	LR	16 47 31.5	
	comp=Z,137nm,19.1s,baz=224,slow=39						
	comp=Z,19nm,1.0s						
BRTR	**Keskin Array B**	62.10	44	P	P	16 17 30.3	+0.8
DEL	**Delary**	62.31	20	*e*P	P	16 17 31.5	+1.2
ATD	**Arta Tunnel**	62.35	77	LR	LR	16 42 48.8	
	comp=Z,79nm,19.9s,baz=237,slow=34						
MILM	**Milestii Mici**	62.63	35	*e*P	P	16 17 32.0	-0.7
	comp=Z,130nm,1.6s						
MILM				*e*L	L	16 42 20.0	
MILM				LRM	MLR	16 47 54.0	
	comp=Z,200nm,16.0s						
MILM	**Milestii Mici**	62.63	35	⇓P	P	16 17 33.0	+0.3
MILM	**Milestii Mici**	62.63	35	*e*P	P	16 17 32.0	-0.7
MILM				pmax	pmax		
	comp=Z,130nm,1.6s						
MILM				MLR	MLR		
	comp=Z,200nm,16.0s						
KIS	**Kishinev**	62.68	35	*e*P	P	16 17 32.0	-1.0
	comp=Z,70nm,2.6s						
KIS				LRM	MLR	16 48 28.0	
	comp=Z,120nm,20.0s						
KIS	**Kishinev**	62.68	35	*e*P	P	16 17 32.0	-1.0
KIS				pmax	pmax		
	comp=Z,70nm,2.6s						
KIS				MLR	MLR		
	comp=Z,120nm,20.0s						
ILGA	**Ilgaz**	62.75	43	P	P	16 17 34.0	+0.1
PURM	**Purcari**	63.03	36	⇓P	P	16 17 36.2	+0.9
SORM	**Soroca**	63.05	33	⇑P	P	16 17 35.5	+0.1
BNN	**Bunyan**	63.28	46	P	P	16 17 37.5	+0.1
BZK	**Bozkurt**	63.35	42	⇑P	P	16 17 37.9	+0.4
KONO	**Kongsberg**	63.62	16	⇓*e*P	P	16 17 40.4	+1.4
KONO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DIKM	**Dikmen**	64.05	42	⇓P	P	16 17 42.9	+0.7
SUW	**Suwalki**	64.14	26	*e*P	P	16 17 43.4	+0.9
SUW	**Suwalki**	64.14	26	*e*P	P	16 17 43.5	+0.9
BORG	**Borgarnes**	64.77	359	LR	LR	16 39 24.2	
	comp=Z,110nm,19.2s,baz=167,slow=30						
VIKU	**Vikbolandet**	64.85	20	*e*P	P	16 17 48.6	+1.6
PBUR	**Paburge**	64.98	24	*e*P	P	16 17 49.2	+1.3
AKASG	**Malin Array Be**	64.99	31	P	P	16 17 48.4	+0.3
	comp=Z,20nm,0.9s,baz=232,slow=6.4,SNR=77						
AKASG				LR	LR	16 46 51.8	
	comp=Z,109nm,20.5s,baz=180,slow=37						
	comp=Z,20nm,0.9s						
AKASG	**Malin Array Be**	64.99	31	P	P	16 17 47.4	-0.7
AKASG				IAmb	IAmb	16 17 49.2	
	comp=Z,32nm,1.1s						
AKBB	**Malin Array Si**	64.99	31*c*	*i*P	P	16 17 47.9	-0.2
AKBB	**Malin Array Si**	64.99	31	P	P	16 17 47.4	-0.7

NBO00	NORSAR Array S	65.11	15	P	P	16 17 49.4	+0.7
HFS	Hagfors	65.19	17	LR	LR	16 46 12.7	
	comp=Z,88nm,21.0s,baz=209,slow=36						
NB2	NORSAR Subarra	65.23	16	P	P	16 17 50.5	+0.9
	comp=Z,14nm,0.9s,baz=210,slow=6.9						
NOA	NORSAR Array B	65.23	16	P	P	16 17 50.8	+1.2
	comp=Z,8.1nm,0.8s,baz=211,slow=6.6,SNR=33						
NOA				LR	LR	16 46 08.7	
	comp=Z,119nm,21.6s,baz=215,slow=36						
	comp=Z,8.1nm,0.8s						
NC204	NORSAR Array S	65.31	15	P	P	16 17 50.1	0.0
NC204				IAmb	IAmb	16 17 52.9	
	comp=Z,30nm,1.1s						
PABE	Paberze	65.47	25	eP	P	16 17 52.4	+1.3
UPP	Uppsala	66.20	19	eP	P	16 17 57.1	+1.3
NACGM	Naroch	66.32	27⇓	eP	P	16 17 58.1	+1.5
	baz=231						
BINY	Binghamton	66.32	317	P	P	16 17 58.6	+1.6
	baz=114						
MARD	Mardin	66.33	49	P	P	16 17 58.1	+0.8
MNK	Minsk	66.57	28	iP	P	16 17 56.2	-2.0
MNK				iS	S	16 26 47.9	-1.4
MNK				iSS	SS	16 31 03.1	-3.5
MNK				iSSS	SSS	16 34 09.3	
MNK				pmax	pmax		
	comp=Z,34nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,17nm,0.8s						
MNK				MLR	MLR		
	comp=N,102nm,21.0s						
MNK				MLR	MLR		
	comp=E,16nm,21.0s						
MNK				MLR	MLR		
	comp=Z,251nm,18.0s						
MNK	Minsk	66.57	28	iLRM	MLR	16 49 23.6	
	comp=Z,251nm,18.3s						
MNK	Minsk	66.57	28	iP	P	16 17 56.3	-2.0
	comp=N,17nm,0.8s						
MNK	Minsk	66.57	28	iP	P	16 17 56.3	-2.0
	comp=E,2.0nm,0.7s						
MNK	Minsk	66.57	28	iP	P	16 17 56.3	-2.0
	comp=Z,34nm,0.8s,baz=53						
MNK	Minsk	66.57	28	iPP	PP	16 20 16.9	-8.0
MNK	Minsk	66.57	28	iPPP	PPP	16 21 56.3	
MNK	Minsk	66.57	28	iS	S	16 26 47.9	-1.4
MNK	Minsk	66.57	28	iSS	SS	16 31 03.1	-3.5
MNK	Minsk	66.57	28	iSSS	SSS	16 34 09.4	
MNK	Minsk	66.57	28	iLQ	LQ	16 42 12.1	
MNK	Minsk	66.57	28	iLR	LR	16 45 51.5	
MNK	Minsk	66.57	28	iLRM	MLR	16 48 17.1	
	comp=N,102nm,20.9s						
MNK	Minsk	66.57	28	iLRM	MLR	16 49 23.6	
	comp=E,16nm,20.9s						
ANN	Anapa	66.84	40	eP	P	16 17 59.7	-0.5
ANN				pmax	pmax		
	comp=Z,65nm,1.0s						
ACON	Acoyapa	66.89	283	P	P	16 17 59.8	-1.3
KOPT	Kop Dagi	67.06	46	P	P	16 18 03.6	+1.5
TRQ	Mont Tremblant	67.08	321	P	P	16 18 00.6	-1.2
TRQ				IAmb	IAmb	16 18 03.1	
	comp=Z,9.9nm,1.0s						
AAL	Aland	67.23	20	eP	P	16 18 03.2	+0.9
MTSE	Matsula	67.57	22	eP	P	16 18 06.0	+1.4
GURO	Guroymak-BITLI	67.68	48	P	P	16 18 07.1	+1.2
KMSC	Kings Mountain	67.84	308	P	P	16 18 07.8	+1.1
	baz=107						
USHA	Ushuaia	67.84	208	LR	LR	16 42 33.2	
	comp=Z,113nm,21.7s,baz=162,slow=31						
SOC	Sochi	67.84	42	eP	P	16 18 06.0	-0.6
SOC				e		16 20 34.2	
SOC				ePPP	PPP	16 22 09.0	
SOC				eS	S	16 27 03.4	-1.7
SOC				eSS	SS	16 31 24.5	-2.3
SOC				pmax	pmax		
	comp=Z,42nm,1.1s						
SOC				MLR	MLR		
	comp=Z,57nm,17.0s						
WVNY	West Valley, N	68.20	316	P	P	16 18 08.4	-0.5
WVNY				IAmb	IAmb	16 18 10.6	
	comp=Z,22nm,0.8s						
RAF	Rauma	68.45	20	eP	P	16 18 11.1	+1.1
VSU	Vasula	68.56	24c	iP	P	16 18 11.1	+0.4
VSU				pmax	pmax		
	comp=Z,38nm,0.9s						
VSU	Vasula	68.56	24	eP	P	16 18 11.5	+0.8
TIGA	Tifton	68.68	304	P	P	16 18 13.4	+1.3
	baz=104						
MEF	Metsahovi	68.82	22	eP	P	16 18 13.5	+1.2
ERPA	Erie	69.05	316	P	P	16 18 15.1	+0.9
	baz=110						
V53A	Saluda	69.14	308	P	P	16 18 14.4	-0.6
V53A				IAmb	IAmb	16 18 16.2	
	comp=Z,11nm,1.1s						
O53A	New Philadelph	69.30	314	P	P	16 18 16.9	+1.1
	baz=109						
M53A	WI Miller and	69.31	315	P	P	16 18 16.8	+1.0
	baz=110						
SADO	Sadowa	69.43	319	LR	LR	16 44 48.2	
	comp=Z,160nm,18.1s,baz=120,slow=33						
P52A	Corning	69.78	313	P	P	16 18 19.6	+0.8
	baz=108						
TKL	Tuckaleechee C	69.89	308	LR	LR	16 44 29.6	
	comp=Z,134nm,18.7s,baz=102,slow=32						
KIV	Kislovodsk	69.98	43	eP	P	16 18 20.7	+0.7
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV	Kislovodsk	69.98	43	P	P	16 18 20.2	+0.2
KIV				IAmb	IAmb	16 18 22.2	
	comp=Z,36nm,1.2s						
ONI	Oni	70.04	44	P	P	16 18 20.6	+0.2
ONI				pmax	pmax		
	comp=Z,31nm,1.1s						
ONI	Oni	70.04	44	P	P	16 18 20.6	+0.2
ONI				IAmb	IAmb	16 18 22.1	
	comp=Z,31nm,1.1s						
KBZ	Khabaz	70.04	43	P	P	16 18 21.6	+1.3
	comp=Z,24nm,0.8s,baz=235,slow=4.8,SNR=49						
KBZ				LR	LR	16 50 54.8	
	comp=Z,60nm,21.9s,baz=266,slow=37						
	comp=Z,24nm,0.8s						
KBZ	Khabaz	70.04	43c	iP	P	16 18 21.3	+1.0
KBZ				pmax	pmax		
	comp=Z,29nm,0.9s						
GNI	Garni	70.17	47	LR	LR	16 54 30.8	
	comp=Z,65nm,18.0s,baz=272,slow=40						
GNI	Garni	70.17	47c	eP	P	16 18 22.3	+0.9
GNI				pmax	pmax		
	comp=Z,24nm,1.1s						
GNI	Garni	70.17	47	P	P	16 18 21.6	+0.2
GNI				IAmb	IAmb	16 18 23.7	
	comp=Z,44nm,1.2s						
FINES	FINESS Array B	70.25	21	P	P	16 18 22.4	+1.2
	comp=Z,19nm,0.7s,baz=195,slow=3.7,SNR=96						
FINES				LR	LR	16 50 54.0	
	comp=Z,171nm,18.6s,baz=236,slow=37						
	comp=Z,19nm,0.7s						
FINES	FINESS Array B	70.25	21	P	P	16 18 21.2	0.0
FIA1	FINESS Array S	70.25	21	P	P	16 18 21.8	+0.7
FIA1				IAmb	IAmb	16 18 23.5	
	comp=Z,28nm,0.8s						
NCK	Nalchik	70.44	43d	eP	P	16 18 24.0	+1.2
NCK				pmax	pmax		
	comp=Z,21nm,1.0s						
X51A	Calhoun	70.47	307	P	P	16 18 23.0	-0.2
X51A				IAmb	IAmb	16 18 25.2	
	comp=Z,45nm,1.4s						
SFJD	Kangerlussuaq	70.62	347	LR	LR	16 40 52.3	
	comp=Z,76nm,21.5s,baz=162,slow=29						
VORD	Divnogorie	70.63	35	eP	P	16 18 22.5	-1.2
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR	Storozhevoye	70.67	34	eP	P	16 18 21.7	-2.2
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORR	Voronezh	70.89	34⇓	iP	P	16 18 25.8	+0.5
VORR				pmax	pmax		
	comp=Z,53nm,1.9s						
OBN	Obninsk	71.10	30	LR	LR	16 52 04.6	
	comp=Z,33nm,19.0s,baz=180,slow=38						
OBN	Obninsk	71.10	30c	eP	P	16 18 26.3	-0.1
OBN				e		16 21 12.2	
OBN				eS	S	16 27 40.7	-2.2
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
OBN				MLR	MLR		
	comp=Z,116nm,17.0s						
LPSR	Galich'ya Gora	71.15	33	eP	P	16 18 25.9	-0.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
SWET	Sewanee	71.49	307	P	P	16 18 28.7	-0.6
SWET				IAmb	IAmb	16 18 44.4	
	comp=Z,18nm,1.2s						
LRAL	Lakeview Retre	71.86	305	P	P	16 18 31.1	-0.4
LRAL	Lakeview Retre	71.86	305	P	P	16 18 32.0	+0.5
	baz=103						
GROC	Groznyy	71.86	44	eP	P	16 18 31.9	+0.5
GROC				e		16 18 50.6	
GROC				e		16 21 12.5	
GROC				pmax	pmax		
	comp=Z,15nm,0.5s						
MOS	Moscow	71.93	30	eP	P	16 18 31.6	+0.1
MOS				e		16 21 08.4	
MOS				pmax	pmax		
	comp=Z,104nm,1.1s						
VALR	Valaam	72.00	23d	eP	P	16 18 33.1	+1.4
VALR				pmax	pmax		
	comp=Z,34nm,1.0s						
VRH	Novokhopyorsk	72.12	35	eP	P	16 18 30.8	-1.9
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
O48B	Farmland	72.18	313	P	P	16 18 34.0	+0.7
	baz=106						
PMSA	Palmer Station	72.28	199	LR	LR	16 42 02.9	
	comp=Z,130nm,21.7s,baz=48,slow=29						
T47A	Sharon Grove	72.83	309	P	P	16 18 37.4	+0.1
T47A				IAmb	IAmb	16 18 38.4	
	comp=Z,23nm,1.4s						
ABTO	Aybut	73.03	72	P	P	16 18 39.8	+0.9
WVT	Waverly	73.20	308	P	P	16 18 39.6	+0.1
	baz=103						
WHFO	Wadi Hawf	73.53	71	P	P	16 18 42.5	+0.7
DOK	Doka	73.94	71	P	P	16 18 45.0	+0.9
KLMR	Klimovskoe	75.26	26	eP	P	16 18 48.8	-2.1
KLMR				pmax	pmax		
	comp=Z,45nm,1.1s						
KLMR	Klimovskoe	75.26	26	eP	P	16 18 48.9	-2.0
KLMR				AMP		16 18 53.1	
	comp=Z,45nm,1.1s						
UMZA	Um Al Zommool	75.33	67	P	P	16 18 53.1	+0.9
ARCES	ARCESS Array B	75.58	15	P	P	16 18 53.6	+1.0
	comp=Z,5.2nm,0.8s,baz=232,slow=4.0,SNR=32						
ARCES				LR	LR	16 53 58.7	
	comp=Z,77nm,19.3s,baz=250,slow=37						
	comp=Z,5.2nm,0.8s						
BELG	Belogornoye	75.97	35	LR	LR	16 57 36.0	
	comp=Z,52nm,18.4s,baz=326,slow=40						
BELG	Belogornoye	75.97	35c	iP	P	16 18 55.1	0.0
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ALNE	Al Ain	76.02	65	P	P	16 18 57.8	+1.7
	SNR=5.0						
CCM	Cathedral Cave	76.27	309	P	P	16 18 56.2	-1.1
CCM				pmax	pmax		
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	76.27	309	P	P	16 18 56.1	-1.1
CCM				IAmb	IAmb	16 18 57.6	
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	76.27	309	P	P	16 18 56.9	-0.4
	baz=101						
ASHO	Ashiyiah	76.37	65	P	P	16 18 58.6	+0.5
HATD	Hatta, Dubai	76.45	65	P	P	16 18 59.4	+0.8
UOSS	Minazif	76.53	64	P	P	16 18 58.2	-0.8
UOSS				IAmb	IAmb	16 19 00.2	
	comp=Z,53nm,1.4s						
UOSS	Minazif	76.53	64	P	P	16 18 59.3	+0.3
ARQ	Araqi	76.64	66	P	P	16 19 00.5	+0.8
	SNR=5.4						
ARQ				P	P	16 19 00.5	+0.8
	SNR=5.4						
CMIG	Matias Romero	76.69	288	LR	LR	16 51 51.9	
	comp=Z,96nm,18.5s,baz=60,slow=35						
BANOM	Banah	76.73	63	P	P	16 19 00.1	0.0
MGMO	Mountain Grove	76.91	308	P	P	16 19 00.7	-0.2
MGMO				IAmb	IAmb	16 19 01.7	
	comp=Z,13nm,0.9s						
X40A	Basin Creek Fa	76.91	305	P	P	16 19 00.9	0.0
	baz=100						
LVZ	Lovozero	77.13	18⇓	eP	P	16 19 03.3	+1.7
LVZ				pmax	pmax		
	comp=Z,33nm,1.7s						
BSY	Bisya	77.21	67	P	P	16 19 03.1	+0.2
U40A	Yellville	77.23	307	P	P	16 19 02.5	-0.3
	baz=100						
MIAR	Mount Ida	77.52	305	P	P	16 19 04.5	+0.1
	baz=99						
W39A	Magazine	77.79	306	P	P	16 19 06.6	+0.8
	baz=99						
S39A	Bolivar	77.83	309	P	P	16 19 05.3	-0.8
JMDO	Jabal Madar	78.00	67	P	P	16 19 06.9	-0.5
SMDO	Samad	78.02	67	P	P	16 19 07.8	+0.3
	SNR=5.7						
SMDO				P	P	16 19 07.8	+0.3
	SNR=5.7						
PRGR	Permogore	78.26	26	eP	P	16 19 06.7	-1.2
WSAR	Wadi Sarin	78.56	66	LR	LR	16 54 13.4	
	comp=Z,101nm,20.2s,baz=282,slow=36						
WBK	Wadi Bani Khal	78.82	67	P	P	16 19 12.1	+0.2
KIRV	Kirov	78.95	30	LR	LR	16 56 54.9	
	comp=Z,116nm,18.5s,baz=257,slow=38						
KIRV	Kirov	78.95	30c	eP	P	16 19 11.6	-0.1
GEYT	Alibeck	79.83	52	P	P	16 19 18.2	+1.1
	comp=Z,4.2nm,0.7s,baz=15,slow=3.4,SNR=7.4						
GEYT				LR	LR	16 58 00.4	
	comp=Z,168nm,18.6s,baz=294,slow=38						
	comp=Z,4.2nm,0.7s						
T35A	Sooner Cattle	80.22	307	P	P	16 19 18.6	-0.6
AKTO	Aktyubinsk	81.76	39	LR	LR	16 58 42.1	
	comp=Z,109nm,21.7s,baz=269,slow=38						
ULM	Lac du Bonnet	81.82	321	LR	LR	16 52 47.6	
	comp=Z,69nm,18.6s,baz=79,slow=34						
ABKAR	Akbulak array	82.80	40	P	P	16 19 32.8	+0.2
ARU	Arti	83.17	33	LR	LR	16 59 09.1	
	comp=Z,99nm,19.8s,baz=262,slow=38						
ARU	Arti	83.17	33c	iP	P	16 19 34.9	+0.6
ARU						16 22 40.2	
ARU				S	S	16 29 53.7	-0.7
ARU				pmax	pmax		
	comp=Z,30nm,0.9s						
ARU	Arti	83.17	33	P	P	16 19 34.5	+0.2
SVE	Sverdlovsk	84.37	33	eP	P	16 19 41.4	+1.0
SVE				pmax	pmax		
	comp=Z,19nm,1.0s						
MSTX	Muleshoe	85.03	304	P	P	16 19 43.6	-0.8
MSTX				IAmb	IAmb	16 19 46.0	
	comp=Z,22nm,1.1s						
MSTX	Muleshoe	85.03	304	P	P	16 19 45.3	+0.8
	baz=94						
TXAR	Lajitas Array	85.54	299	P	P	16 19 47.2	+0.1
	comp=Z,2.0nm,1.0s,baz=116,slow=5.7,SNR=14						
TXAR				LR	LR	16 53 50.2	
	comp=Z,49nm,21.4s,baz=73,slow=33						
	comp=Z,2.0nm,1.0s						
TXAR	Lajitas Array	85.54	299	P	P	16 19 46.9	-0.1
TX31	Lajitas Ar. Si	85.54	299	P	P	16 19 46.1	-1.0
TX31				IAmb	IAmb	16 20 12.3	
	comp=Z,27nm,1.4s						
RES	Resolute Bay	86.47	345	LR	LR	16 50 34.8	
	comp=Z,47nm,21.7s,baz=110,slow=30						
SDCO	Great Sand Dun	87.43	308	P	P	16 19 55.3	-1.1
SDCO	Great Sand Dun	87.43	308	P	P	16 19 57.3	+0.9
	baz=92						
N23A	Red Feather La	87.89	311	P	P	16 20 00.6	+2.0
	baz=92						
ANMO	Albuquerque	88.11	305	LR	LR	16 55 06.1	
	comp=Z,102nm,19.2s,baz=82,slow=33						
ANMO	Albuquerque	88.11	305⇑	eP	P	16 20 00.1	+0.5
ANMO				pmax	pmax		
	comp=Z,10.0nm,3.3s						
SMCO	Snowmass	88.63	309	P	P	16 20 00.1	-2.2
GAR	Garm	89.45	51	P	P	16 20 05.9	+0.1
GAR				IAmb	IAmb	16 20 08.4	
	comp=Z,26nm,1.0s						
BRVK	Borovoye	89.60	37c	iP	P	16 20 06.7	+0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	89.60	37	P	P	16 20 05.4	-0.6
BRVK	Borovoye	89.60	37	P	P	16 20 07.1	+1.1
BRVK				P	P	16 20 07.1	+1.1
KK31	Karatay Array	89.64	47	P	P	16 20 05.8	-0.6
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	Karatay Array	89.64	47	P	P	16 20 05.8	-0.6
KKAR	Karatay Array	89.64	47	P	P	16 20 06.0	-0.4
KKAR	Karatay Array	89.64	47	P	P	16 20 06.0	-0.4
RPN	Rapa Nui	90.36	243	LR	LR	16 58 15.7	
	comp=Z,135nm,18.4s,baz=98,slow=34						
PDAR	Pinedale Array	90.61	313	P	P	16 20 11.9	+0.7
	comp=Z,0.2nm,0.7s,baz=72,slow=2.9,SNR=1.8						
PDAR				LR	LR	16 55 07.4	
	comp=Z,51nm,21.2s,baz=100,slow=32						
LPIG	La Paz	91.39	294	LR	LR	16 57 21.2	
	comp=Z,39nm,19.3s,baz=310,slow=33						
AAK	Ala-Archa	92.57	48	LR	LR	17 08 07.9	
	comp=Z,134nm,19.3s,baz=288,slow=40						
AAK	Ala-Archa	92.57	48c	iP	P	16 20 21.2	+0.9
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AAK	Ala-Archa	92.57	48	P	P	16 20 20.4	+0.2
AAK				IAmb	IAmb	16 20 22.2	
	comp=Z,7.2nm,1.2s						
YKA	Yellowknife Ar	92.80	332	P	P	16 20 20.5	-0.1
	comp=Z,1.0nm,0.9s,baz=87,slow=5.2,SNR=9.8						
YKA				LR	LR	16 55 47.0	
	comp=Z,70nm,19.8s,baz=10.0,slow=32						
	comp=Z,1.0nm,0.9s						
KSH	Kashi	93.83	51	P	P	16 20 26.2	+0.1
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURBB	Kurchatov Arra	94.81	39	LR	LR	17 06 04.7	
	comp=Z,92nm,21.7s,baz=279,slow=37						
KURK	Kurchatov	94.86	39⇓	eP	P	16 20 31.1	+0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ELK	Elko	94.94	311	LR	LR	17 01 09.5	
	comp=Z,117nm,18.2s,baz=92,slow=34						
NEW	Newport	95.62	318	LR	LR	17 01 08.1	
	comp=Z,123nm,18.1s,baz=110,slow=34						
NRIK	Noril'sk	95.89	20	LR	LR	17 06 57.8	
	comp=Z,70nm,19.7s,baz=322,slow=37						
NVAR	Mina Array Bea	97.50	309	LR	LR	16 59 42.0	
	comp=Z,84nm,20.2s,baz=80,slow=32						
MKAR	Makanchi Array	97.74	43	P	P	16 20 43.6	0.0
	comp=Z,0.3nm,0.5s,baz=259,slow=5.9,SNR=3.6						
MKAR				PP	PP	16 24 37.9	-3.5
	comp=Z,1.1nm,0.9s,baz=286,slow=6.2,SNR=6.4						
MKAR				LR	LR	17 11 14.5	
	comp=Z,56nm,18.1s,baz=305,slow=39						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	98.15	35	LR	LR	17 09 31.0	
	comp=Z,89nm,18.3s,baz=316,slow=38						
INK	Inuvik	99.06	340	LR	LR	17 00 34.8	
	comp=Z,58nm,18.1s,baz=54,slow=32						
PALK	Pallekele	99.50	83	LR	LR	17 01 49.5	
	comp=Z,159nm,20.0s,baz=14,slow=33						
WMQ	Urumqi	102.00	45	eP	Pdif	16 21 07.7	+5.0
SONM	Songino Array	113.00	37	PP	PP	16 26 29.0	-5.3
	comp=Z,0.9nm,1.0s,baz=284,slow=6.0,SNR=4.8						
PZH	PanZhiHua	117.21	60	PKP	PKPdf	16 25 49.9	-4.7
CD2	Chengdu	117.68	55	PKP	PKPdf	16 25 54.3	-1.0
HHC	Hu-ho-hao-te	119.58	42	ePKP	PKPdf	16 25 53.7	-5.0
HHC				LR	LR		
	comp=Z,210nm,14.6s						
HHC				LR	LR		
	comp=Z,240nm,15.9s						
HHC				LR	LR		
	comp=Z,330nm,16.5s						
XAN	Xi'an	120.67	50	iPKP	PKiKP	16 26 05.8	+4.8
XAN				LR	LR		
	comp=Z,94nm,16.5s						
XAN				LR	LR		
	comp=Z,83nm,18.6s						
XAN				LR	LR		
	comp=Z,170nm,20.1s						
NJ2	Nanjing	129.02	47	ePKP	PKPdf	16 26 15.5	-1.4
KSRS	Korea Array	131.86	36	PP	PP	16 28 38.9	-3.1
	comp=Z,0.2nm,0.3s,baz=318,slow=3.4,SNR=4.5						
ASAR	Alice Springs	144.51	134	PKP	PKPab	16 26 43.3	-0.8
	comp=Z,5.4nm,0.7s,baz=227,slow=2.6,SNR=76						
ASAR	Alice Springs	144.51	134		PKPab	16 26 43.0	-1.1
AS31	Alice Springs	144.51	134	PKPdf	PKPab	16 26 43.0	-1.1

PRU 07 16:15:58.1±0.0**, 51°.13N**×**15°.62E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.51	124	ePg	Pn	16 16 12.7	0.0
KSP				eSg	Sn	16 16 20.9	-1.3
UPC	Upice	0.67	158	eSG	Sg	16 16 20.0	+0.4
	comp=Z,48nm,0.3s						
OSTC	Ostas	0.69	146	ePG	Pb	16 16 12.7	-0.3
OSTC				eSG	Sg	16 16 19.4	-0.7
	comp=Z,9.7nm,0.3s						
DPC	Dobruska-Polom	0.90	150	ePG	Pg	16 16 15.6	+0.3
PVCC	Panska Ves	0.90	228	eSG	Sg	16 16 26.1	-0.8
	comp=Z,17nm,0.5s						
BRG	Berggiesshubel	1.09	257	Pg	Pn	16 16 22.6	+2.0
BRG	Berggiesshubel	1.09	257	Pg	Pn	16 16 28.6	+8.0
BRG				Sg	Sn	16 16 42.9	+6.5
BRG				Amp		16 16 43.4	
	comp=Z,3.3nm,0.3s						

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*IDC **07** 16:25:34.0±0.6, 17°.46S×174°.01W, h0^{km}, mb4.5/17, mbtmp4.5/20, ML3.9/3, MS3.5/17, Error ellipse: s-maj=19.2km s-min=14.5km az=129.0*

*NEIC **07** 16:25:40.5±2.2, 17°.61S±0°.09×173°.77W±0°.08, h60^{km}±7^{km}, mb4.7/24, Error ellipse: s-maj=13.1km s-min=10.8km az=150.0*

*NOU **07** 16:25:44.9, 17°.74S×173°.52W, h111^{km}, mb5.0/37, Tonga Islands*

ISC 07 16:25:40.1±0.4**, 17°.44S**±0°.06×**173°.85W**±0°.06**, h50**^{km}**, n226,** $\sigma 1^{s}42$/182**, mb4.8**/48**, MS3.7**/17**, 14C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.04	30	Pn	Pn	16 26 38.6	-1.0
	28nm,0.3s,baz=204,slow=2.7,SNR=28						
AFI				Sn	Sn	16 27 20.5	-5.2
	122nm,0.3s,baz=335,slow=20,SNR=3.9						
	225nm,0.5s						
AFI	Afiamalu	4.04	30	Pn	Pn	16 26 38.3	-1.3
AFI	Afiamalu	4.04	30	P	Pn	16 26 46.2	+6.6
NIUE	Niue	4.07	114	P	Pn	16 26 38.6	-1.3
	baz=4.0,SNR=166						
NIUE	Niue	4.07	114	Pn	Pn	16 26 39.1	-0.8
NIUE	Niue	4.07	114	P	Pn	16 26 39.4	-0.5
LKBA	Tubou, Lakemba	4.79	260	P	Pn	16 26 58.6	+8.8
DGTI	Dogotuki	6.24	280	P	Pn	16 27 18.6	+8.9
	128nm,0.9s						
MSVF	Nonsavu	7.73	267	LR	LR	16 29 44.9	
	comp=Z,169nm,21.4s,baz=120,slow=33						
MSVF	Nonsavu	7.73	267	Pn	Pn	16 27 39.8	+10
MSVF	Nonsavu	7.73	267	P	Pn	16 27 40.0	+10
RAR	Rarotonga	13.81	108	Pn	Pn	16 28 52.7	-0.6
	3.5nm,0.3s,baz=259,slow=8.5,SNR=15						
RAR				Sn	Sn	16 31 13.2	-12
	1.1nm,0.3s,baz=82,slow=21,SNR=1.5						
RAR				LR	LR	16 33 31.2	
	comp=Z,71nm,19.7s,baz=282,slow=34						
	16nm,0.4s						
RAR	Rarotonga	13.81	108		Pn	16 28 51.5	-1.8
MARNC	Mare, Loyalty	17.55	254	P	P	16 29 43.4	+1.6
LIFNC	LIFOU	18.17	256	P	Pn	16 29 54.1	+5.2
	74nm,0.7s						
OUENC	Ouen Island, N	18.81	252	P	Pn	16 29 58.1	+1.5
DZM	Mont Dzumac	19.10	253	eLR	LR	16 34 45.0	
	comp=Z,569nm,27.4s						
DZM	Mont Dzumac	19.10	253	P	P	16 29 56.8	-2.3
	0.1nm,0.3s,baz=143,slow=20,SNR=2.7						
DZM				LR	LR	16 35 07.9	
	comp=Z,132nm,18.8s,baz=79,slow=30						
	11nm,1.1s						
MXZ	Matakaoa Point	21.20	197	P	P	16 30 22.5	+1.0
MXZ				IAmb	IAmb	16 30 25.2	
	comp=Z,25nm,0.5s						
MXZ	Matakaoa Point	21.20	197	P	P	16 30 22.7	+1.2
WMGZ	Waiomatatini S	21.41	197	P	P	16 30 24.9	+1.2
HAZ	Te Kaha	21.53	198	P	P	16 30 24.7	-0.3
PKGZ	Pakihiroa	21.57	198	P	P	16 30 26.2	+0.7
PUZ	Puketiti	21.69	197	P	P	16 30 25.8	-1.0
RUGZ	Raukumara Rang	21.76	198	P	P	16 30 27.5	-0.1
TWGZ	Tauwhareparae	21.86	197	P	P	16 30 29.4	+0.8
TGRZ	Tauranga	22.00	201	P	P	16 30 31.8	+1.7

OPRZ	Ohinepanea	22.00	201	P	P	16 30 31.4	+1.3
CNGZ	Carnagh Statio	22.09	197	P	P	16 30 31.8	+0.8
MARZ	Manawahe	22.09	200	P	P	16 30 22.6	-8.5
URZ	Urewera	22.20	199	P	P	16 30 30.7	-1.6
	comp=Z,22nm,0.3s,baz=24,slow=2.8,SNR=65						
	comp=Z,22nm,0.3s						
URZ	Urewera	22.20	199	P	P	16 30 30.5	-1.7
URZ				IAmb	IAmb	16 30 36.6	
	comp=Z,27nm,0.6s						
URZ	Urewera	22.20	199	P	P	16 30 30.2	-2.0
URZ	Urewera	22.20	199	P	P	16 30 30.6	-1.6
KMRZ	Kaimai	22.22	202	P	P	16 30 33.5	+1.1
NGRZ	Ngongotaha	22.36	201	P	P	16 30 35.5	+1.5
HLRZ	Highlands Stat	22.44	201	P	P	16 30 36.0	+1.1
MUGZ	Murupara	22.51	200	P	P	16 30 35.3	-0.2
PAE	Paea	23.14	94	*e*T	T	16 54 03.6	
	comp=Z,5.0nm,0.2s						
PPT2	Papeete2	23.15	94	*e*LR	LR	16 36 09.1	
	comp=Z,510nm,29.5s						
PPT2	Papeete2	23.15	94	*e*T	T	16 54 05.0	
	comp=Z,6.5nm,0.3s						
PPT	Papeete	23.15	94	LR	LR	16 39 24.7	
	comp=Z,86nm,18.2s,baz=299,slow=36						
BKZ	Black Stump Fm	23.22	199	P	P	16 30 40.1	-2.9
BKZ				IAmb	IAmb	16 30 47.9	
	comp=Z,13nm,0.6s						
BKZ	Black Stump Fm	23.22	199	P	P	16 30 40.2	-2.7
TBI	Tubuai	23.59	108	*e*LR	LR	16 36 24.7	
TBI	Tubuai	23.59	108	*e*T	T	16 54 41.7	
	comp=Z,9.3nm,0.3s						
BFZ	Birch Farm	24.69	198	P	P	16 30 54.8	-1.6
BFZ				IAmb	IAmb	16 31 04.2	
	comp=Z,29nm,1.1s						
BFZ	Birch Farm	24.69	198	P	P	16 30 55.1	-1.3
PMOR	Pomariorio Ree	25.04	88	*e*T	T	16 56 25.0	
	comp=Z,4.7nm,0.3s						
VAH	Vaihoa	25.26	89	*e*T	T	16 56 41.4	
	comp=Z,9.5nm,0.3s						
QRZ	Quartz Range	26.10	204	P	P	16 31 07.6	-1.6
TUWZ	Tuamarina	26.11	201	P	P	16 31 06.0	-3.2
KHZ	Kahutara	27.12	201	P	P	16 31 16.3	-2.1
LTZ	Lake Taylor	27.89	202	P	P	16 31 22.7	-2.6
RPZ	Rata Peaks	29.14	203	P	P	16 31 35.7	-0.7
	comp=Z,4.2nm,0.3s,baz=1.7,slow=2.1,SNR=13						
	comp=Z,4.2nm,0.3s						
RPZ	Rata Peaks	29.14	203	P	P	16 31 34.9	-1.5
EIDS	Eidsvold	33.51	250	P	P	16 32 14.0	-1.0
	baz=34,SNR=3.3						
EIDS	Eidsvold	33.51	250	P	P	16 32 14.4	-0.7
EIDS				IAmb	IAmb	16 32 19.9	
	comp=Z,8.0nm,1.1s						
TAOE	Nuku Hiva Isla	33.87	80	*e*LR	LR	16 41 10.8	
	comp=Z,248nm,29.2s						
TAOE	Nuku Hiva Isla	33.87	80	*e*T	T	17 07 23.8	
	comp=Z,67nm,0.2s						
ARMA	Armidale	33.95	241	P	P	16 32 18.5	-0.5
	baz=34,SNR=8.5						
ARMA	Armidale	33.95	241	P	P	16 32 18.1	-0.8
ARMA				IAmb	IAmb	16 32 21.3	
	comp=Z,6.0nm,0.8s						
RMQ	Roma	35.72	249	P	P	16 32 33.2	-1.0
	baz=36,SNR=14						
RMQ	Roma	35.72	249	P	P	16 32 33.4	-0.8
KRVT	Keravat (AS076	35.88	287	P	P	16 32 34.6	-1.0
	comp=Z,49nm,0.9s,baz=226,slow=0.6,SNR=4.4						
	comp=Z,49nm,0.9s						
RKT	Rikitea	36.83	105	*e*T	T	17 11 13.0	
	comp=Z,5.8nm,0.3s						
CTA	Charters Tower	37.80	260	LR	LR	16 46 55.3	
	comp=Z,33nm,19.2s,baz=78,slow=34						
CTA	Charters Tower	37.80	260	P	P	16 32 51.1	-0.9
CTAO	Charters Tower	37.80	260	P	P	16 32 50.5	-1.5
CTAO				IAmb	IAmb	16 32 54.9	
	comp=Z,8.9nm,0.8s						
CTAO	Charters Tower	37.80	260	P	P	16 32 51.0	-0.9
PMG	Port Moresby	38.69	277	LR	LR	16 46 23.4	
	comp=Z,111nm,21.1s,baz=122,slow=32						
CMSA	Cobar Meteorol	39.17	241	P	P	16 33 02.1	-1.2
QLP	Quilpie	39.76	249	P	P	16 33 06.7	-1.6
	baz=40,SNR=7.8						
QLP	Quilpie	39.76	249	P	P	16 33 07.0	-1.3
MTSU	Mount Surprise	39.77	262	P	P	16 33 07.4	-1.1
	baz=40,SNR=8.7						
H11S2	WAKE ISLAND Hy	40.50	331	T	T	17 16 50.3	
	SNR=26						
H11S3	WAKE ISLAND Hy	40.52	331	T	T	17 14 49.8	
	SNR=4.5						
TOO	Toolangi	40.86	232	P	P	16 33 15.5	-1.8
	baz=41,SNR=5.4						
TOO	Toolangi	40.86	232	P	P	16 33 14.9	-2.4
COEN	Coen	41.45	269	P	P	16 33 22.0	-0.4
	baz=42,SNR=17						
COEN	Coen	41.45	269	P	P	16 33 22.1	-0.2
COEN				IAmb	IAmb	16 33 22.5	
	comp=Z,12nm,0.6s						
H11N3	WAKE ISLAND Hy	41.48	332	T	T	17 18 32.8	
	baz=151,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	41.48	332	T	T	17 18 22.7	
	baz=151,slow=76,SNR=9.1						
H11N2	WAKE ISLAND Hy	41.50	332	T	T	17 18 28.6	
	baz=151,slow=76,SNR=15						
STKA	Stephens Creek	42.67	242	P	P	16 33 30.7	-1.4
	comp=Z,7.2nm,0.9s,baz=101,slow=10,SNR=9.4						
STKA				LR	LR	16 48 42.0	
	comp=Z,37nm,20.4s,baz=23,slow=33						
	comp=Z,7.2nm,0.9s						
STKA	Stephens Creek	42.67	242	P	P	16 33 30.7	-1.4
	baz=43,SNR=8.1						
STKA	Stephens Creek	42.67	242	P	P	16 33 29.8	-2.3
STKA	Stephens Creek	42.67	242	P	P	16 33 30.6	-1.5
INKA	Innaminka	42.94	248	P	P	16 33 34.2	-0.2
HTT	Hallett	45.13	240	P	P	16 33 50.7	-1.3
	baz=45,SNR=6.5						
LCRK	Leigh Creek	45.37	244	P	P	16 33 52.9	-0.9
WHYH	Whyalla	46.19	241	P	P	16 34 01.8	+1.6
	comp=Z,22nm,0.8s						
OOD	Oodnadatta	47.42	248	P	P	16 34 09.6	-0.3
BBOO	Buckleboo	47.43	241	P	P	16 34 08.4	-1.6
	baz=48,SNR=15						
BBOO	Buckleboo	47.43	241	P	P	16 34 08.0	-2.0
MULG	Mulgathing	48.94	245	P	P	16 34 20.3	-1.3
WRAB	Tennant Creek	48.97	259	P	P	16 34 20.0	-2.0
WRAB	Tennant Creek	48.97	259	P	P	16 34 20.3	-1.7
AS31	Alice Springs	49.09	254	P	P	16 34 21.3	-1.6
ASAR	Alice Springs	49.09	254	P	P	16 34 21.8	-1.1
	comp=Z,73nm,0.6s,baz=91,slow=8.0,SNR=670						
ASAR				LR	LR	16 53 23.1	
	comp=Z,53nm,19.0s,baz=114,slow=34						
ASAR	Alice Springs	49.09	254	P	P	16 34 21.7	-1.2
GUMO	Guam	51.09	304	LR	LR	16 55 44.5	
	comp=Z,22nm,18.1s,baz=98,slow=36						
KDU	Kakadu	51.91	267	P	P	16 34 43.0	-1.3
	baz=52,SNR=21						
KDU	Kakadu	51.91	267	P	P	16 34 43.1	-1.1
MTN	Manton Dam	53.16	267	P	P	16 34 52.1	-1.4
	baz=53,SNR=11						
MTN	Manton Dam	53.16	267	P	P	16 34 51.4	-2.1
MTN				IAmb	IAmb	16 34 52.7	
	comp=Z,15nm,1.1s						
WRKA	Warakurna	54.11	251	P	P	16 34 59.1	-1.3
	baz=54,SNR=79						
WRKA	Warakurna	54.11	251	P	P	16 34 59.6	-0.8
KNRA	Kununurra	54.85	263	P	P	16 35 04.3	-1.5
	baz=55,SNR=4.3						
SIJI	Sorong	56.39	281	P	P	16 35 16.9	0.0
	comp=Z,13nm,0.6s,baz=116,slow=7.2,SNR=12						
SIJI				LR	LR	16 58 08.7	
	comp=Z,26nm,20.9s,baz=62,slow=35						
	comp=Z,13nm,0.6s						
SWI	Sorong	56.39	281	P	P	16 35 16.7	-0.2
	comp=Z,31nm,0.8s						
FITZ	Fitzroy Crossi	57.38	259	P	P	16 35 22.9	-1.0
	baz=58,SNR=4.1						
FITZ	Fitzroy Crossi	57.38	259	P	P	16 35 20.1	-3.7
FITZ				IAmb	IAmb	16 35 27.5	
	comp=Z,8.2nm,1.1s						
AAI	Ambon	58.36	277	P	P	16 35 30.7	-0.1
	comp=Z,856nmcomp=Z,28nm,0.5s						
TNTI	Ternate	60.61	281	P	P	16 35 46.1	-0.2
	comp=Z,19nm,0.8s						
TNTI	Ternate	60.61	281	P	P	16 35 47.6	+1.3
	comp=Z,19nm,0.9s						
SANI	Sanana	60.97	278	P	P	16 35 48.0	-0.7
	comp=Z,7.6nm,0.8s						
VNDA	Vanda	61.31	186	P	P	16 35 52.0	+1.9
	comp=Z,2.0nm,0.9s,baz=18,slow=5.6,SNR=8.2						
	comp=Z,2.0nm,0.9s						
VNDA	Vanda	61.31	186	P	P	16 35 48.0	-2.0
PSA00	Pilbara Seismi	62.22	254	P	P	16 35 54.7	-2.4
PSA00	Pilbara Seismi	62.22	254	P	P	16 35 55.2	-1.9
PSA00				IAmb	IAmb	16 35 57.5	
	comp=Z,7.0nm,1.1s						
MBWA	Marble Bar	62.39	255	P	P	16 35 56.2	-2.1
MEEK	Meekatharra	62.65	249	P	P	16 35 59.6	-0.4
	baz=63,SNR=5.0						
EDFI	Ende, Flores	63.13	269	P	P	16 36 01.6	-1.8
	comp=Z,6.6nm,0.8s						
KMSI	Cibinong	63.72	280	P	P	16 36 06.6	-0.6
	comp=Z,249nmcomp=Z,48nm,0.6s						
BSSI	Bau Bau, Buton	64.98	271	P	P	16 36 14.4	-1.0
	comp=Z,7.5nm,1.0s						
TOLI2	Tolitoli	66.91	279	P	P	16 36 29.8	+2.0
SRBI	Singaraja	69.49	268	P	P	16 36 55.6	+12
MJAR	Matsushiro Arr	70.22	321	P	P	16 36 48.9	+0.9
	comp=Z,2.2nm,0.8s,baz=232,slow=7.6,SNR=6.0						
	comp=Z,2.2nm,0.8s						
KMMI	Kalianget	70.96	268	P	P	16 36 51.7	-1.3
	comp=Z,17nm,1.1s						
BBKI	Banjar Baru	71.14	272	P	P	16 36 55.2	+1.1
PCJI	Pacitan	73.31	266	P	P	16 37 06.5	-0.5
	comp=Z,69nm,0.6s						
UGM	Wanagama	74.00	267	P	P	16 37 10.9	-0.3
	comp=Z,48nm,0.5s						
PBKI	Pangkalan Bun	74.39	272	P	P	16 37 14.0	+0.6
	comp=Z,48nm,0.9s						
PETK	Petropavlovsk-	74.43	343	P	P	16 37 13.2	+0.5
	comp=Z,4.3nm,0.7s,baz=119,slow=8.4,SNR=29						
	comp=Z,4.3nm,0.7s						
STKI	Sintang	75.40	275	P	P	16 37 19.8	+0.6
	comp=Z,10nm,0.6s						
SBUM	Sibu	75.44	277	P	P	16 37 18.2	-1.3
KPJI	Karang Pucung	75.68	267	P	P	16 37 20.1	-0.7
	comp=Z,14nm,0.8s						
NVAR	Mina Array Bea	76.13	42	P	P	16 37 25.1	+2.0
	comp=Z,0.2nm,0.3s,baz=234,slow=7.7,SNR=4.8						
	comp=Z,0.2nm,0.3s						
KSM	Kuching	76.94	276	P	P	16 37 29.5	+1.5
	comp=Z,29nm,1.0s						
LEM	Lembang	77.07	267	P	P	16 37 29.5	+0.6
	comp=Z,25nm,0.7s,baz=338,slow=4.7,SNR=8.3						
	comp=Z,25nm,0.7s						
LEM	Lembang	77.07	267	P	P	16 37 28.5	-0.4
	comp=Z,18nm,0.8s						
KSRS	Korea Array	77.31	316	P	P	16 37 30.7	+1.2
	comp=Z,2.3nm,1.0s,baz=133,slow=5.9,SNR=9.5						
	comp=Z,2.3nm,1.0s						
SKJI	Sukabumi	78.03	266	P	P	16 37 44.6	+11
LWLI	Liwa	80.98	268	P	P	16 37 51.8	+1.5
NJ2	Nanjing	81.05	308	*e*P	P	16 37 47.2	-2.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TXAR	Lajitas Array	82.11	56	P	P	16 37 58.1	+2.3
	comp=Z,0.6nm,0.9s,baz=224,slow=6.3,SNR=4.2						
	comp=Z,0.6nm,0.9s						
PDAR	Pinedale Array	84.07	42	P	P	16 38 07.1	+1.2
	comp=Z,0.5nm,0.7s,baz=194,slow=4.5,SNR=4.5						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	84.07	42	P	P	16 38 06.2	+0.4
H03S2	Juan Fernandez	84.44	124	T	T	18 10 58.5	
	SNR=55						
H03S1	Juan Fernandez	84.46	124	T	T	18 10 59.6	
	SNR=52						
H03S3	Juan Fernandez	84.46	124	T	T	18 10 58.3	
	SNR=57						
ILAR	Eielson Array	84.52	11	P	P	16 38 08.2	+0.9
	comp=Z,2.0nm,1.0s,baz=233,slow=6.5,SNR=15						
	comp=Z,2.0nm,1.0s						
IMAR	Indian Mountai	84.54	8	P	P	16 38 08.9	+1.5
H03N2	Juan Fernandez	84.55	123	T	T	18 11 19.5	
	baz=257,slow=73,SNR=16						
H03N3	Juan Fernandez	84.56	123	T	T	18 11 20.9	
	baz=257,slow=73,SNR=10						
H03N1	Juan Fernandez	84.57	123	T	T	18 11 27.8	
	baz=257,slow=73,SNR=8.3						
CMIG	Matias Romero	84.97	70	LR	LR	17 06 36.3	
	comp=Z,29nm,20.2s,baz=204,slow=29						
BILL	Bilibino	86.47	353	P	P	16 38 17.3	+0.4
BJI	Beijing	86.55	314	P	P	16 38 13.6	-4.4
BJI				pP	sP	16 38 43.9	+6.3
BJI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PSI	Prapat	88.18	273	P	P	16 38 27.2	+0.6
	comp=Z,4.8nm,0.7s,baz=148,slow=4.2,SNR=5.4						
	comp=Z,4.8nm,0.7s						
PLCA	Paso Flores	88.47	132	P	P	16 38 28.9	+1.4
	comp=Z,1.1nm,0.6s,baz=206,slow=8.7,SNR=3.6						
PLCA				LR	LR	17 10 02.0	
	comp=Z,30nm,21.9s,baz=249,slow=30						
	comp=Z,1.1nm,0.6s						
XAN	Xi'an	89.47	306	P	P	16 38 34.2	+2.1
XAN				pP	sP	16 38 55.0	+3.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC	Hu-ho-hao-te	90.09	313	*e*P	P	16 38 31.0	-3.9
HHC				pmax	pmax		
	comp=Z,61nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,5.0s						
HHC				LR	LR		
	comp=N,220nm,14.0s						
HHC				LR	LR		
	comp=E,250nm,13.3s						
HHC				LR	LR		
	comp=Z,310nm,14.0s						
PZH	PanZhiHua	92.80	297	P	P	16 38 42.9	-5.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
CMAR	Chiang Mai Arr	92.84	288	P	P	16 38 49.3	+1.3
	comp=Z,0.9nm,0.8s,baz=108,slow=2.0,SNR=7.3						
	comp=Z,0.9nm,0.8s						
ATAH	Atahualpa	93.06	98	LR	LR	17 10 07.0	
	comp=Z,50nm,21.0s,baz=163,slow=29						
ULM	Lac du Bonnet	95.78	39	LR	LR	17 14 34.0	
	comp=Z,31nm,18.7s,baz=290,slow=31						
SONM	Songino Array	96.07	318	LR	LR	17 17 17.8	
	comp=Z,82nm,20.8s,baz=324,slow=32						
LVC	Limon Verde	96.52	116	LR	LR	17 12 23.1	
	comp=Z,40nm,20.8s,baz=242,slow=29						
LPAZ	La Paz	99.52	110	LR	LR	17 13 46.5	
	comp=Z,27nm,19.1s,baz=230,slow=29						
ARCES	ARCESS Array B	126.56	352	PKP	PKPdf	16 44 38.1	+1.0
	comp=Z,1.5nm,0.9s,baz=355,slow=1.3,SNR=8.9						
FINES	FINESS Array B	133.83	347	PKP	PKiKP	16 44 52.6	+0.2
	comp=Z,0.7nm,0.7s,baz=56,slow=3.4,SNR=5.6						
KMBO	Kilima Mbogo	144.23	242	PKP	PKPbc	16 45 11.3	+1.2
	comp=Z,4.9nm,0.7s,baz=49,slow=6.4,SNR=10						
CLL	Collm	145.77	352	*i* PKPbc	PKPbc	16 45 14.2	+0.7
	comp=Z,13nm,1.1s						
CLL				*i* pPKiKP	sPKPab	16 45 36.6	+2.9
OSTC	Ostas	145.99	348	*e*PKP	PKPbc	16 45 15.6	+1.3
BRG	Berggiesshubel	146.07	351	*e*PKP	PKPbc	16 45 15.3	+0.9
BRG				Amp		16 45 17.3	
	comp=Z,7.3nm,1.1s						
BRG				*e*x	x	16 45 38.4	
BRG				Amp		16 45 39.2	
	comp=Z,4.7nm,1.1s						
BURAR	Bucovina Array	146.08	337	⇑P	PKPab	16 45 16.5	+1.2
DPC	Dobruska-Polom	146.17	348	*e*PKP	PKPbc	16 45 16.0	+1.1
PVCC	Panska Ves	146.31	350	*e*PKP	PKPab	16 45 16.9	+0.9
KRLC	Kraliky	146.34	348	*e*PKP	PKPbc	16 45 16.6	+1.2
TESR	Tescani	146.40	334	⇑P	PKPdf	16 45 14.9	+0.6
MORC	Moravsky Berou	146.46	347	*e*PKP	PKPbc	16 45 17.0	+1.3
CFR	Carcaliu	146.79	331	⇓P	PKPbc	16 45 17.4	+0.6
PRU	Pruhonice	146.84	350	*e*PKP	PKPbc	16 45 17.9	+1.1
VRI	Vrincioaia	146.88	333	⇑P	PKPbc	16 45 17.6	+0.6
TPGR	Topolog	146.90	330	⇑P	PKPbc	16 45 17.5	+0.4
PLOR	Plostina	146.93	333	⇑P	PKPbc	16 45 17.4	+0.2
VRAC	Vranov	147.10	347	*e*PKP	PKPbc	16 45 18.9	+1.3
TIRR	Tirgusor	147.20	330	⇑P	PKPdf	16 45 17.3	+1.6
HARR	Harsova	147.25	331	⇓P	PKPbc	16 45 19.0	+0.9
JAVC	Velka Javorina	147.29	346	*e*PKP	PKPbc	16 45 19.6	+1.4
DOPR	Dopca	147.36	335	⇑P	PKPbc	16 45 20.0	+1.6
KRUC	Moravsky	147.38	347	*e*PKP	PKPbc	16 45 18.9	+0.6
BRTR	Keskin Array B	147.43	319	PKPbc	PKPbc	16 45 19.6	+0.6
	comp=Z,4.1nm,0.9s,baz=124,slow=1.8,SNR=18						
BRTR	Keskin Array B	147.43	319		PKPbc	16 45 19.7	+0.7
MLR	Muntele Rosu	147.51	334	⇑P	PKPbc	16 45 19.5	+0.5
DRGR		147.69	339	⇑P	PKPbc	16 45 19.9	+0.6
KHC	Kasperske Hory	147.82	351	*e*PKP	PKPbc	16 45 20.7	+1.1
MODS	Modra-Piesok	147.84	346	*e*PKP	PKPbc	16 45 21.3	+1.7
CKRC	Cesky Krumlov	148.00	350	*e*PKP	PKPbc	16 45 21.5	+1.4
GERES	GERESS Array B	148.08	351	PKPbc	PKPbc	16 45 21.0	+0.7
	comp=Z,2.8nm,0.8s,baz=29,slow=3.0,SNR=15						
ARR	Arges	148.16	335	⇑P	PKPbc	16 45 22.1	+1.4
CONA	Conrad Observa	148.57	347	*e*P	PKiKP	16 45 23.3	+0.2
	comp=Z,9.3nm,1.2s,SNR=6.2						
RONA	Rosalia, Austr	148.69	347	*e*P	PKiKP	16 45 23.5	+0.2
	comp=Z,5.3nm,0.8s,SNR=5.4						
GZR	Gura Zlata	148.86	337	⇑P	PKPbc	16 45 22.4	-0.1
MOA	Molln	148.95	349	*i* P	PKPbc	16 45 23.8	+1.3
	comp=Z,4.9nm,1.1s						
BIOA	Bad Ischl, Aus	149.21	350	*i* P	PKPbc	16 45 24.3	+1.1
	comp=Z,2.6nm,0.7s						
ARSA	Arzberg	149.28	347	*i* P	PKPbc	16 45 23.7	+0.3
	comp=Z,5.0nm,1.4s						
HERR	Herculane	149.43	337	⇑P	PKPbc	16 45 24.2	+0.4
MORH	Mrgy, Hungar	149.49	343	⇑P	PKPbc	16 45 25.0	+1.2
RETA	Reutte	149.80	354	*i* P	PKPbc	16 45 26.0	+1.3
	comp=Z,3.6nm,0.9s						
KBA	Koelnbreinsper	149.85	350	*i* P	PKPbc	16 45 25.8	+0.8
	comp=Z,1.7nm,0.5s						
WATA	Walderalm	149.85	353	*i* P	PKPbc	16 45 26.0	+1.0
	comp=Z,2.8nm,0.6s						
MOTA	Moosalm	149.90	353	*i* P	PKPbc	16 45 26.1	+1.0
	comp=Z,6.5nm,0.8s						
WTTA	Wattenberg	149.92	353	*i* P	PKPbc	16 45 26.4	+1.2
	comp=Z,8.9nm,0.9s						
SOKA	Soboth	149.93	348	*i* P	PKPbc	16 45 25.7	+0.7
	comp=Z,6.2nm,1.1s						
SQTA	Sankt Quirin	150.01	353	*i* P	PKPbc	16 45 26.5	+1.2
	comp=Z,6.9nm,1.1s						
DAVA	Damuels	150.08	355	*i* P	PKiKP	16 45 26.8	+0.4
	comp=Z,10nm,1.1s						
FRGS	Fruska Gora	150.09	340	⇑P	PKPbc	16 45 25.4	-0.1
OBKA	Obir	150.19	348	*i* P	PKiKP	16 45 27.4	+0.8
	comp=Z,3.6nm,1.3s						
MYKA	Terra Mystica	150.24	350	*i* P	PKPbc	16 45 26.2	+0.4
	comp=Z,2.1nm,0.5s						
FETA	Feichten	150.26	354	*i* P	PKiKP	16 45 27.4	+0.6
	comp=Z,9.6nm,1.1s,SNR=5.0						
ABTA	Abfaltersbach	150.31	351	*e*P	PKPbc	16 45 26.6	+0.7
	comp=Z,15nm,1.1s,SNR=9.5						
LJU	Ljubljana	150.64	348	*i* PKPbc	PKPbc	16 45 27.4	+0.7
CRNS	Crni Vrh	150.66	348	*i* PKPbc	PKPbc	16 45 27.1	+0.3

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*IDC **07** 16:29:27.9±2.0, 13°.38S×73°.40W, h72^{km}±24^{km}, mb3.6/3, mbtmp3.9/7, Error ellipse: s-maj=49.6km s-min=14.9km az=35.0*

ISC 07 16:29:29.0±0.9, **13°.5S**±0°.2×**73°.5W**±0°.1, **h100**^{km}, **n8**, σ**1^{s}.31**/10, **mb3.6**/3, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.56	294	P	Pn	16 30 22.0	-0.4
	12nm,0.3s,baz=183,slow=7.1,SNR=5.6						
NNA				S	Sn	16 31 03.9	+0.2
	8.7nm,0.3s,baz=254,slow=15,SNR=1.5						
LPAZ	La Paz	5.91	119	P	Pn	16 30 53.6	-1.2
	2.9nm,0.5s,baz=296,slow=9.5,SNR=15						
ATAH	Atahualpa	7.92	322	P	Pn	16 31 20.4	-1.4
	20nm,0.7s,baz=194,slow=5.4,SNR=7.1						
ATAH				S	Sn	16 32 49.3	-0.8
	9.2nm,0.8s,baz=133,slow=19,SNR=2.3						
CPUP	Villa Florida	19.85	133	P	P	16 33 52.0	-0.2
	3.1nm,1.0s,baz=298,slow=14,SNR=2.8						
SCHQ	Schefferville	68.29	4	P	P	16 40 20.1	+1.0
	1.4nm,0.4s,baz=194,slow=14,SNR=4.7						
	1.4nm,0.4s						
TORD	Torodi Ar. Bea	79.08	74	P	P	16 41 24.1	+1.1
	1.0nm,0.9s,baz=271,slow=4.8,SNR=4.0						
	1.0nm,0.9s						
YKA	Yellowknife Ar	82.23	342	P	P	16 41 40.5	+1.7
	0.4nm,0.8s,baz=136,slow=5.5,SNR=4.6						
	0.4nm,0.8s						
SONM	Songino Array	145.76	0	PKPbc	PKiKP	16 48 58.7	-1.6
	0.7nm,0.7s,baz=5.8,slow=1.6,SNR=5.3						

IDC 07 16:30:22.8±2.1, **8°.41N**×**126°.80E**, **h0**^{km}, **mb4.0**/3, **mbtmp4.2**/4, **ML4.5**/1, **Error ellipse: s-maj=122.9km s-min=24.3km az=69.0**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	18.76	190	P	Pn	16 34 43.8	-0.2
	1.4nm,0.3s,baz=343,slow=17,SNR=4.5						
	9.8nm,0.5s						
ASAR	Alice Springs	32.63	168	P	P	16 36 56.4	-0.2
	1.2nm,0.4s,baz=341,slow=6.8,SNR=12						
	1.2nm,0.4s						
STKA	Stephens Creek	42.49	161	P	P	16 38 19.8	0.0
	1.5nm,0.5s,baz=346,slow=12,SNR=2.4						
	1.5nm,0.5s						
MKAR	Makanchi Array	53.82	323	P	P	16 39 47.4	-0.1
	0.6nm,0.4s,baz=117,slow=7.7,SNR=15						
	0.6nm,0.4s						

RSNC 07 16:36:54.2±1.1, **6°.81N**×**73°.14W**, **h142**^{km}±4^{km}, **ML2.8**, **Mw3.8**, **3C**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.22	191	⇑*i*P	Pn	16 37 13.3	-0.6
BARC				*e*S	Sn	16 37 27.8	-1.1
BARC				*i*		16 37 29.4	
	comp=Z,123nm,0.2s						
BRRC	Barranca, Sant	0.64	297	*e*P	Pn	16 37 15.2	-0.2
BRRC				*e*S	Sn	16 37 32.1	+0.5
BRRC				*i*		16 37 36.2	
	comp=Z,83nm,0.1s						
PAMC	Pamplona, Colo	0.68	40	⇑*i*P	Pn	16 37 16.2	-0.1
PAMC				*e*S	Sn	16 37 33.0	-0.1
PAMC				*i*		16 37 35.3	
	comp=Z,419nm,0.5s						
RUSC	La Rusia	0.92	176	*e*P	Pn	16 37 17.6	-0.5
RUSC				*e*S	Sn	16 37 35.7	-0.5
RUSC				*i*		16 37 37.5	
	comp=Z,102nm,0.4s						
PTBC	PUERTO BERRIO,	1.33	258	*e*P	Pn	16 37 20.2	-1.2
PTBC				*e*S	Sn	16 37 41.2	-1.0
PTBC				*i*		16 37 44.3	
	comp=Z,76nm,0.2s						
TAMC	Tame, Arauca	1.39	106	⇑*i*P	Pn	16 37 21.7	-0.4
TAMC				*e*S	Sn	16 37 43.0	-0.3
TAMC				*i*		16 37 47.9	
	comp=Z,33nm,0.5s						
OCAC	Ocana	1.43	353	*e*P	Pn	16 37 21.6	-0.9
OCAC				*e*S	Sn	16 37 43.3	-1.0
SPBC	San Pablo de B	1.48	219	*e*P	Pn	16 37 22.5	-0.6
SPBC				*e*S	Sn	16 37 44.4	-0.7
SPBC				*i*		16 37 49.2	
	comp=Z,73nm,0.3s						
ZARC	Zaragoza, Cauc	1.83	292	*e*P	Pn	16 37 26.3	-0.6
ZARC				*e*S	Sn	16 37 52.1	+0.2
ZARC				*i*		16 37 57.6	
	comp=Z,88nm,0.4s						
NORC	Norcasia	2.12	234	*e*P	Pn	16 37 30.1	-0.3
NORC				*e*S	Sn	16 37 57.7	-0.4
NORC				*i*		16 38 03.1	
	comp=Z,46nm,0.3s						
SMLC	San Martn de	2.18	335	*e*P	Pn	16 37 29.8	-1.2
SMLC				*e*S	Sn	16 37 58.9	-0.4
SMLC				*i*		16 38 01.3	
	comp=Z,109nm,0.3s						
CHIC	Chingaza	2.25	195	*e*P	Pn	16 37 31.6	-0.6
CHIC				*e*S	Sn	16 38 02.1	+0.6
CHIC				*i*		16 38 04.3	
	comp=Z,33nm,0.6s						
ROSC	El Rosal	2.29	211	*e*P	Pn	16 37 31.8	-0.9
ROSC				*e*S	Sn	16 38 02.7	+0.5
ROSC				*i*		16 38 12.6	
	comp=Z,64nm,0.4s						
HELC	Santa Helena	2.45	256	*e*P	Pn	16 37 34.9	+0.2
HELC				*e*S	Sn	16 38 04.6	-1.2
HELC				*i*		16 38 10.4	
	comp=Z,29nm,0.4s						
UREC	San Jos de Ur	2.55	292	*e*P	Pn	16 37 33.9	-1.7
UREC				*e*S	Sn	16 38 04.9	-2.6
UREC				*i*		16 38 18.1	
	comp=Z,47nm,0.3s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	16 37 34.5	-3.6
VILC				*e*S	Sn	16 38 11.4	-0.5
PTGC	Puerto Gaitan,	2.78	159	*e*P	Pn	16 37 36.6	-1.9
PTGC				*e*S	Sn	16 38 09.8	-2.9

PTGC				*i*		16 38 12.2	
	comp=Z,67nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.01**	**252**	*e*P	Pn	16 37 41.6	+0.1
CBOC				*e*S	Sn	16 38 17.7	-0.3
CBOC				*i*		16 38 21.1	
	comp=Z,12nm,0.4s						
DBBC	**Dabeiba**	**3.05**	**274**	*e*P	Pn	16 37 41.5	-0.6
DBBC				*e*S	Sn	16 38 16.2	-2.8
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	Pn	16 37 43.7	-0.3
ARGC				*e*S	Sn	16 38 22.7	0.0
ARGC				*i*		16 38 30.6	
	comp=Z,17nm,0.3s						
ANIL	**Santa Ana**	**3.22**	**224**	*e*P	Pn	16 37 45.7	+1.3
ANIL				*e*S	Sn	16 38 24.4	+1.2
ANIL				*i*		16 38 29.4	
	comp=Z,71nm,0.4s						
SDV	**Santo Domingo**	**3.23**	**50**	*e*P	Pn	16 37 43.2	-1.1
SDV				*e*S	Sn	16 38 20.1	-3.1
PRAC	**Prado**	**3.54**	**210**	*e*P	Pn	16 37 47.2	-1.1
PRAC				*e*S	Sn	16 38 29.0	-1.2
PRAC				*i*		16 38 36.6	
	comp=Z,27nm,0.4s						
ORTC	**Ortega, Tolima**	**3.57**	**216**	*e*P	Pn	16 37 48.3	-0.4
ORTC				*e*S	Sn	16 38 31.0	+0.1
ORTC				*i*		16 38 36.6	
	comp=Z,26nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*e*P	Pn	16 37 54.1	-2.7
CRJC				*e*S	Sn	16 38 40.9	-4.7
CRJC				*i*		16 38 44.9	
	comp=Z,11nm,0.2s						
YOTC	**Yotoco, Valle**	**4.25**	**229**	*e*P	Pn	16 37 56.6	-1.1
YOTC				*e*S	Sn	16 38 50.5	+3.5
YOTC				*i*		16 38 53.7	
	comp=Z,4.9nm,0.5s						

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*NEIC **07** 16:58:57.9±0.9, 53°.10N±0°.05×166°.89W±0°.08, h27^{km}±10^{km}, mb3.8/6, ML3.6(AEIC), Error ellipse: s-maj=9.3km s-min=3.8km az=138.0*

*AEIC **07** 16:58:57±1.5, 53°.07N±0°.05×166°.82W±0°.07, h26^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=3.6km az=140.0*

*IDC **07** 16:58:59.1±1.3, 54°.37N×167°.65W, h0^{km}, mb3.6/10, mbtmp3.7/11, ML3.4/1, Error ellipse: s-maj=40.4km s-min=18.2km az=177.0*

ISC 07 16:58:57.7±1.5**, 53°.09N**±0°.08×**166°.82W**±0°.06**, h34**^{km}±3^{km}**, n45, σ1^{s}.55**/43**, mb3.6**/10**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.71**	**358**		**Pn**	**16 59 11.8**	**+0.5**
OKFG	**Magazine Ridge**	**0.73**	**297**		**Pn**	**16 59 12.0**	**+0.4**
OKFG					**Sn**	**16 59 22.3**	**+0.8**
UNV	**Unalaska Valle**	**0.78**	**14**		**Pb**	**16 59 12.3**	**-0.6**
UNV					**Sb**	**16 59 22.7**	**-0.6**
MSW	**Makushin Switc**	**0.83**	**2**		**Pb**	**16 59 13.5**	**-0.3**
MSW					**Sn**	**16 59 24.6**	**+0.6**
MTBL	**Makushin Table**	**0.89**	**5**		**Pn**	**16 59 14.8**	**+0.9**
ZRO	**Akutan Zero**	**1.12**	**26**		**Pn**	**16 59 17.7**	**+0.7**
AKBBA	**Akutan Broad B**	**1.14**	**27**		**Pn**	**16 59 17.0**	**-0.3**
AKUT	**Akutan**	**1.22**	**30**		**Pn**	**16 59 19.0**	**+0.6**
NIKH	**Nikolski High**	**1.23**	**265**		**Pn**	**16 59 18.6**	**+0.1**
NIKH					**Sn**	**16 59 34.0**	**+0.1**
AKSA	**Akutan Strait**	**1.25**	**32**		**Pn**	**16 59 19.0**	**+0.3**
AKSA					**Sn**	**16 59 34.7**	**+0.4**
WESE	**West Dahl East**	**1.92**	**43**		**Pn**	**16 59 29.9**	**+1.8**
FALS	**False Pass**	**2.68**	**47**		**Pn**	**16 59 40.1**	**+1.8**
KDAK	**Kodiak Island**	**9.35**	**54**	Pn	**Pn**	**17 01 11.4**	**+1.5**
	0.4nm,0.3s,baz=276,slow=9.2,SNR=7.4						
KDAK				Sn	**Sn**	**17 02 48.6**	**-5.2**
	0.2nm,0.3s,baz=326,slow=23,SNR=1.2						
	5.3nm,1.0s						
KDAK	**Kodiak Island**	**9.35**	**54**		**Pn**	**17 01 11.7**	**+1.8**
L19K	**White Mountain**	**11.12**	**30**	Pn	**Pn**	**17 01 36.2**	**+2.0**
ANM	**Nome**	**11.54**	**3**	Pn	**Pn**	**17 01 40.9**	**+1.2**
SCM	**Sheep Creek Mo**	**13.61**	**42**	Pn	**Pn**	**17 02 09.2**	**+1.0**
KLU	**Klutina**	**14.03**	**45**	Pn	**Pn**	**17 02 12.8**	**-1.1**
M24K	**Tolsona, Glenn**	**14.22**	**42**	Pn	**Pn**	**17 02 15.9**	**-0.6**
IMAR	**Indian Mountai**	**14.48**	**22**	Pn	**Pn**	**17 02 21.3**	**+1.3**
GLB	**Gilahina Butte**	**14.92**	**47**	Pn	**Pn**	**17 02 27.2**	**+1.2**
VRDI	**Verde Repeater**	**15.00**	**48**	Pn	**Pn**	**17 02 27.8**	**+0.7**
M26K	**Nabesna, AK**	**15.68**	**44**	Pn	**Pn**	**17 02 36.4**	**+0.6**
M26K				IAmb	IAmb	17 02 40.6	
	comp=Z,7.8nm,1.4s						
J25K	**Salcha River,**	**15.91**	**35**	Pn	**Pn**	**17 02 39.8**	**+1.0**
J25K				IAmb	IAmb	17 02 56.5	
	comp=Z,6.5nm,1.4s						
SCRK	**Sand Creek**	**16.05**	**38**	Pn	**Pn**	**17 02 42.2**	**+1.6**
EPYK	**Eagle Plains**	**19.90**	**36**	P	**P**	**17 03 25.6**	**-0.3**
EPYK				IAmb	IAmb	17 03 26.1	
	comp=Z,4.0nm,0.6s						
PETK	**Petropavlovsk-**	**21.18**	**284**	P	**P**	**17 03 39.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=90,slow=13,SNR=15						
	comp=Z,0.8nm,0.5s						
PETK	**Petropavlovsk-**	**21.18**	**284**	P	**P**	**17 03 41.3**	**+1.5**
DLBC	**Dease Lake**	**21.18**	**61**	P	**P**	**17 03 44.6**	**+4.7**
	comp=Z,2.3nm,0.9s,baz=278,slow=12,SNR=3.5						
	comp=Z,2.3nm,0.9s						
INK	**Inuvik**	**21.89**	**33**	P	**P**	**17 03 45.4**	**-1.9**
	comp=Z,1.5nm,0.5s,baz=254,slow=7.1,SNR=11						
	comp=Z,1.5nm,0.5s						
INK	**Inuvik**	**21.89**	**33**	P	**P**	**17 03 45.7**	**-1.7**
INK				IAmb	IAmb	17 04 03.9	
	comp=Z,7.5nm,1.4s						
YKA	**Yellowknife Ar**	**28.60**	**50**	P	**P**	**17 04 51.8**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=275,slow=8.6,SNR=4.4						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**36.15**	**94**	P	P	17 06 09.4	+13
	comp=Z,0.5nm,0.6s,baz=302,slow=8.5,SNR=4.6						
	comp=Z,0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**39.00**	**222**	T	T	17 48 02.4	
	baz=25,slow=76,SNR=95						
H11N3	**WAKE ISLAND Hy**	**39.01**	**221**	T	T	17 48 00.9	
	baz=25,slow=76,SNR=114						
H11N1	**WAKE ISLAND Hy**	**39.02**	**222**	T	T	17 48 11.0	
	baz=25,slow=76,SNR=66						
H11S1	**WAKE ISLAND Hy**	**40.18**	**221**	T	T	17 49 20.9	
	baz=24,slow=76,SNR=103						
H11S2	**WAKE ISLAND Hy**	**40.20**	**221**	T	T	17 49 50.8	
	baz=24,slow=76,SNR=57						
H11S3	**WAKE ISLAND Hy**	**40.20**	**221**	T	T	17 49 31.8	
	baz=24,slow=76,SNR=30						
TXAR	**Lajitas Array**	**51.20**	**92**	P	P	17 08 08.2	+10
	comp=Z,0.4nm,0.7s,baz=305,slow=6.4,SNR=3.1						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**57.36**	**355**	PcP	**PcP**	**17 09 35.8**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=12,slow=4.6,SNR=6.6						
FINES	**FINESS Array B**	**65.35**	**353**	P	**P**	**17 09 34.8**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=81,slow=12,SNR=4.4						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**75.70**	**350**	P	**P**	**17 10 37.9**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=15,slow=5.4,SNR=2.1						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**77.95**	**285**	P	**P**	**17 10 52.8**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=26,slow=6.8,SNR=7.1						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**85.88**	**344**	P	**P**	**17 11 34.3**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=18,slow=4.9,SNR=5.2						
	comp=Z,0.9nm,0.8s						

WEL 07 17:00:14.2±0.8**, 35°S**±7°×**18°0W**±1°1**, h33**^{km}**, M3.6**/19**, mB4.1**/2**, ML3.8**/27**, MLv3.6**/19**, Mw(mB)3.2**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=118.9, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.70**	**217**	P	Pn	17 00 54.9	-0.3
MXZ				S	Sn	17 01 27.0	+0.4
WMGZ	**Waiomatatini S**	**2.85**	**213**	P	Pn	17 00 58.7	+1.4
WMGZ				S	Sn	17 01 33.5	+3.0
PKGZ	**Pakihiroa**	**3.06**	**216**	P	Pn	17 01 01.2	+0.8
PKGZ				S	Sn	17 01 37.0	+1.2
HAZ	**Te Kaha**	**3.11**	**221**	P	Pn	17 01 01.6	+0.7
HAZ				S	Sn	17 01 40.5	+3.6
PUZ	**Puketiti**	**3.13**	**212**	P	Pn	17 01 01.9	+0.7
PUZ				S	Sn	17 01 39.1	+1.6
RUGZ	**Raukumara Rang**	**3.32**	**220**	P	Pn	17 01 04.4	+0.5
TWGZ	**Tauwhareparae**	**3.34**	**214**	P	Pn	17 01 05.1	+0.9
TWGZ				S	Sn	17 01 45.1	+2.4
CNGZ	**Carnagh Statio**	**3.50**	**209**	P	Pn	17 01 07.5	+1.2
TKGZ	**Te Karaka**	**3.62**	**213**	P	Pn	17 01 08.9	+1.1
TKGZ				S	Sn	17 01 49.8	+0.5
MWZ	**Matawai**	**3.68**	**217**	P	Pn	17 01 08.7	-0.1
MWZ				S	Sn	17 01 50.3	-0.8
URZ	**Urewera**	**3.84**	**222**	P	Pn	17 01 10.7	-0.3
RIGZ	**Rimuhau**	**3.88**	**212**	P	Pn	17 01 12.0	+0.6
RIGZ				S	Sn	17 01 55.8	-0.1
OPRZ	**Ohinepanea**	**3.89**	**231**	P	Pn	17 01 12.0	+0.4
KUZ	**Kuaotunu**	**3.98**	**249**	P	Pn	17 01 12.9	+0.1
PRGZ	**Paritu Road**	**4.01**	**209**	P	Pn	17 01 13.5	+0.2
PRGZ				S	Sn	17 01 59.2	+0.1
TGRZ	**Tauranga**	**4.02**	**234**	P	Pn	17 01 13.6	+0.2
SNGZ	**Shannon Statio**	**4.13**	**215**	P	Pn	17 01 15.4	+0.6
SNGZ				S	Sn	17 02 02.0	0.0
RTZ	**Ruatahuna**	**4.17**	**219**	P	Pn	17 01 15.5	-0.1
KNZ	**Kokohu**	**4.18**	**210**	P	Pn	17 01 14.9	-0.6
MUGZ	**Murupara**	**4.18**	**222**	P	Pn	17 01 14.6	-1.1
MUGZ				S	Sn	17 02 03.2	-0.3
MHGZ	**Mahia Peninsul**	**4.20**	**207**	P	Pn	17 01 15.7	-0.2
RAHZ	**Arahi**	**4.35**	**216**	P	Pn	17 01 18.8	+0.8
RAHZ				S	Sn	17 02 07.8	+0.2
MTHZ	**Maungataniwha**	**4.42**	**218**	P	Pn	17 01 19.5	+0.5
MTHZ				S	Sn	17 02 10.0	+0.6
MKAZ	**Moumakai**	**4.52**	**247**	P	Pn	17 01 21.2	+1.0
TOZ	**Tahuroa Road**	**4.53**	**238**	P	Pn	17 01 20.2	-0.2
NMHZ	**Naumai**	**4.63**	**217**	P	Pn	17 01 22.3	+0.5
NMHZ				S	Sn	17 02 15.9	+1.4
MRHZ	**Matea Rd**	**4.63**	**222**	P	Pn	17 01 21.4	-0.4
ARHZ	**Aropaoanui**	**4.67**	**214**	P	Pn	17 01 21.7	-0.6
ARHZ				S	Sn	17 02 15.8	+0.3
BKZ	**Black Stump Fm**	**4.84**	**218**	P	Pn	17 01 24.0	-0.7
BKZ				S	Sn	17 02 17.2	-2.4
MCHZ	**McNeill Hill**	**4.96**	**215**	P	Pn	17 01 25.1	-1.2
MCHZ				S	Sn	17 02 23.0	+0.6
CKHZ	**Cape Kidnapper**	**4.96**	**211**	P	Pn	17 01 25.9	-0.4
KAHZ	**Kahuranaki**	**5.16**	**211**	P	Pn	17 01 27.7	-1.4
TMVZ	**Te Maari**	**5.23**	**224**	P	Pn	17 01 29.8	-0.3
NTVZ	**North Tongarir**	**5.23**	**224**	P	Pn	17 01 29.8	-0.4
OTVZ	**Oturere**	**5.28**	**224**	P	Pn	17 01 29.7	-1.2
BHHZ	**Black Hill Sta**	**5.30**	**219**	P	Pn	17 01 30.2	-0.9
PXZ	**Pawanui**	**5.37**	**210**	P	Pn	17 01 30.5	-1.4
TSZ	**Takapari Road**	**5.79**	**216**	P	Pn	17 01 35.1	-2.6
CTZ	**Chatham Island**	**8.62**	**165**	P	Pn	17 02 19.7	+3.2
CTZ				S	Sn	17 03 46.8	-5.8

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*AEIC **07** 17:12:09±2.2, 53°.13N±0°.07×166°.89W±0°.07, h26^{km}±8^{km}, Error ellipse: s-maj=10.8km s-min=4.5km az=159.0*

NEIC 07 17:12:10.1±2.3**, 53°.17N**±0°.06×**166°.91W**±0°.07**, h27**^{km}±12^{km}**, ML3.5**/8**, ML3.2**/21(AEIC)**, Error ellipse: s-maj=9.8km s-min=4.0km az=145.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.63**	**2**		Pn	17 12 23.1	-0.2
MGOD					Sn	17 12 33.0	+0.6
OKFG	**Magazine Ridge**	**0.65**	**292**		Pb	17 12 23.1	+0.2
OKFG					Sn	17 12 33.2	+0.4
UNV	**Unalaska Valle**	**0.72**	**19**		Pb	17 12 23.6	-0.4
UNV					Sn	17 12 34.3	-0.2
MSW	**Makushin Switc**	**0.75**	**6**		Pb	17 12 24.7	+0.2
MSW					Sn	17 12 35.9	+0.5
MTBL	**Makushin Table**	**0.81**	**9**		Pn	17 12 26.0	+0.2
ZRO	**Akutan Zero**	**1.08**	**30**		Pn	17 12 29.3	-0.1
AKBBA	**Akutan Broad B**	**1.10**	**32**		Pn	17 12 29.4	-0.2
HSB	**Akutan Spr's B**	**1.18**	**30**		Pn	17 12 30.7	-0.1
AKUT	**Akutan**	**1.18**	**34**		Pn	17 12 30.4	-0.3
AKUT	**Akutan**	**1.18**	**34**		Sn	17 12 44.7	-1.2
NIKH	**Nikolski High**	**1.19**	**261**		Pn	17 12 29.8	-1.1
AKSA	**Akutan Strait**	**1.21**	**36**		Pn	17 12 30.7	-0.4
WESE	**West Dahl East**	**1.90**	**46**		Pn	17 12 41.0	+0.3
SSLN	**Shishaldin Nor**	**2.38**	**45**		Pn	17 12 48.0	+0.7
ISLZ	**Isanotski Laza**	**2.45**	**49**		Pn	17 12 49.0	+0.7
FALS	**False Pass**	**2.66**	**49**	Pn	Pn	17 12 49.9	-1.2
SDPT	**Sand Point**	**4.36**	**57**	Pn	Pn	17 13 14.9	+0.6
SDPT				IAML		17 14 19.0	
	comp=N,59nm,2.3s						
SDPT				IAML		17 14 21.1	
	comp=E,74nm,2.9s						
SPIA	**Saint Paul Isl**	**4.45**	**336**	Pn	Pn	17 13 15.3	-0.4
CNBA	**Chernabura Isl**	**4.62**	**66**	Pn	Pn	17 13 18.8	+0.8
CNBA				IAML		17 14 26.4	
	comp=N,49nm,3.6s						
CNBA				IAML		17 14 52.0	
	comp=E,30nm,3.3s						
GSTR	**Great Sitkin T**	**5.68**	**263**	Pn	Pn	17 13 33.6	+1.1
KIWB	**Kanaga Island**	**6.39**	**262**	Pn	Pn	17 13 44.0	+1.7
P18K	**Big Mountain,**	**8.99**	**41**	Pn	Pn	17 14 21.1	+3.1
O18K	**Koktuh Hills**	**9.30**	**39**	Pn	Pn	17 14 25.6	+3.4
KDAK	**Kodiak Island**	**9.35**	**55**	Pn	Pn	17 14 23.8	+1.0
Q19K	**Cape Douglas,**	**9.39**	**47**	Pn	Pn	17 14 24.3	+0.9
N19K	**Bonanza Creek**	**10.21**	**36**	Pn	Pn	17 14 36.1	+1.4
CNPM	**China Poot**	**10.76**	**48**	Pn	Pn	17 14 43.3	+1.1
GAMB	**Gambell**	**10.93**	**349**	Pn	Pn	17 14 46.2	+1.8
L19K	**White Mountain**	**11.08**	**31**	Pn	Pn	17 14 46.5	-0.1
ANM	**Nome**	**11.46**	**3**	Pn	Pn	17 14 51.4	-0.3
KLU	**Klutina**	**14.01**	**45**		Pn	17 15 23.7	-2.9
M24K	**Tolsona, Glenn**	**14.20**	**43**	Pn	Pn	17 15 26.7	-2.5
H21K	**Melozitna Rive**	**14.38**	**24**	Pn	Pn	17 15 28.5	-3.0
WAX	**Waxell Ridge**	**14.99**	**51**	Pn	Pn	17 15 36.7	-3.2
ISLE	**Juniper Island**	**15.28**	**51**	Pn	Pn	17 15 40.5	-3.2
BARN	**Barnard Glacie**	**15.74**	**50**	Pn	Pn	17 15 48.8	-1.0

KRSC 07 17:13:14.8±0.7**, 54°.99N**×**162°.33E, h41**^{km}±17^{km}**, ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.56**	**219**	*i* P	Pn	17 13 27.3	+1.0
MKZ				*e*S	Sn	17 13 35.5	+1.0
TUMD	**Tumrok D**	**1.13**	**282**	*e*P	Pn	17 13 35.2	+1.0
TUMD				*e*S	Sn	17 13 49.0	+0.5
KBTR	**Krutoberegovo**	**1.25**	**12**	*e*P	Pn	17 13 37.0	+1.2
KBTR				*e*S	Sn	17 13 53.3	+1.9
KBG	**Krutoberegovo**	**1.28**	**9**	*e*P	Pn	17 13 38.2	+2.0
KBG				*e*S	Sn	17 13 54.5	+2.3
TUMR	**Tumrok**	**1.29**	**284**	*e*P	Pn	17 13 37.9	+1.5
BZGR	**Bezymyannyi-Gr**	**1.33**	**316**	*e*P	Pn	17 13 38.5	+1.5
ZLN	**Zelenaya**	**1.35**	**320**	*e*P	Pn	17 13 38.9	+1.7
KMNR	**Kamenistaya**	**1.42**	**304**	*e*P	Pn	17 13 39.8	+1.6
BZWR	**Bezymyannyi-We**	**1.43**	**314**	*e*P	Pn	17 13 39.8	+1.4
KIRR	**Kirishev**	**1.49**	**311**	*e*P	Pn	17 13 41.5	+2.3
KPT	**Kopyto**	**1.55**	**310**	*e*P	Pn	17 13 41.8	+1.8
KRSR	**Krestovskiy**	**1.59**	**322**	*e*P	Pn	17 13 41.7	+1.2
KLY	**Klyuchi**	**1.63**	**325**	*e*P	Pn	17 13 41.6	+0.6
SMKR	**Semkarok**	**1.67**	**343**	*e*P	Pn	17 13 43.5	+1.9
BDR	**Baidarnaya**	**1.71**	**339**	*e*P	Pn	17 13 44.1	+2.0
KOZ	**Kozyrevsk**	**1.76**	**308**	*e*P	Pn	17 13 44.9	+2.1
SRKR	**Sorokina**	**1.79**	**339**	*e*P	Pn	17 13 45.1	+1.8
KII	**Karymskiy**	**1.94**	**242**	*e*P	Pn	17 13 47.8	+2.6
BKI	**Bering**	**2.10**	**83**	*e*P	Pn	17 13 49.7	+2.3
BKI				*e*S	Sn	17 14 14.2	+1.9
ESO	**Esso**	**2.27**	**296**	*e*P	Pn	17 13 50.1	+0.3
SPN	**Mys Shipunski**	**2.33**	**217**	*e*P	Pn	17 13 51.5	+0.9
SPN				*e*S	Sn	17 14 18.2	+0.1
NLC	**Nalytchevo**	**2.53**	**225**	*e*P	Pn	17 13 57.0	+3.6
NLC				*e*S	Sn	17 14 25.0	+2.1
SDLR	**Sedlovina**	**2.66**	**231**	*e*P	Pn	17 13 58.0	+2.8
KRER	**Koryakskii**	**2.70**	**233**	*e*P	Pn	17 13 59.6	+3.7
SMAR	**Somma**	**2.71**	**232**	*e*P	Pn	17 13 58.8	+2.9
SMAR				*e*S	Sn	17 14 31.7	+4.2
KRX	**Arik**	**2.71**	**234**	*e*P	Pn	17 13 59.6	+3.6
UGLR	**Uglovaya**	**2.73**	**231**	*e*P	Pn	17 13 59.2	+3.0
AVH	**Avacha**	**2.73**	**232**	*e*P	Pn	17 14 00.5	+4.3
KOK	**Koryaka**	**2.76**	**233**	*e*P	Pn	17 14 00.6	+4.0
GNL	**Ganaly**	**2.88**	**245**	*e*P	Pn	17 14 01.4	+3.2
DALK	**Dalny**	**2.88**	**229**	*e*P	Pn	17 14 01.2	+3.0
PET	**Petropavlovsk**	**2.93**	**229**	*e*P	Pn	17 14 02.1	+3.3
PET				*e*S	Sn	17 14 35.5	+2.7
RUS	**Russkaya**	**3.42**	**223**	*e*P	Pn	17 14 08.6	+3.0
GRL	**Gorelyy**	**3.52**	**228**	*e*P	Pn	17 14 11.1	+4.1
MTVR	**Mutnovka**	**3.52**	**226**	*e*P	Pn	17 14 10.4	+3.4
APC	**Apacha**	**3.69**	**238**	*e*P	Pn	17 14 14.1	+4.8
ASAK	**Asacha**	**3.71**	**227**	*e*P	Pn	17 14 13.8	+4.2
KDTR	**Khodutka, Kamc**	**4.08**	**220**	*e*P	Pn	17 14 18.1	+3.5
MIPR	**Malaya Ipel'ka**	**4.29**	**233**	*e*P	Pn	17 14 22.4	+4.9
OSSR	**Ossora**	**4.29**	**5**	*e*P	Pn	17 14 20.5	+3.1

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*NEIC **07** 17:30:00.8±1.5, 11°.66S±0°.06×166°.47E±0°.07, h57^{km}±6^{km}, mb4.9/117, Error ellipse: s-maj=11.0km s-min=8.7km az=56.0*

*GCMT **07** 17:30:01.8±0.3, 11°.73S±0°.02×166°.02E±0°.02, h47^{km}, MW5.0/76, Moment Tensor Solution. s76,c90; s59,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.88±.14; $M_{\theta\theta}$-0.60±.10; $M_{\phi\phi}$-3.28±.09; $M_{r\theta}$0.16±.08; $M_{\theta\phi}$0.82±.07; $M_{\phi r}$0.72±.09; Best double couple: $M_0$3.76500×10^{16} NP1:ϕ_s160.00000°,δ40.00000°,λ83.00000°. NP2: ϕ_s349.00000°,δ50.00000°,λ96.00000°. Principal axes: T 3.9640, Plg83.0000°, Azm297.0000°; N -0.3950, Plg4.0000°, Azm165.0000°; P -3.5670, Plg5.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **07** 17:30:02.1±2.4, 11°.67S×166°.36E, h62^{km}±20^{km}, mb4.2/19, mbtmp4.5/23, MS3.8/54 Error ellipse: s-maj=17.3km s-min=12.4km az=71.0*

ISC 07 17:30:00.5±0.5**, 11°.67S**±0°.05×**166°.43E**±0°.05**, h54**^{km}±4^{km}**, h55**^{km}**:pP-P, n291, σ1^{s}.10**/267**, mb4.9**/106**, MS3.9**/59**, 5C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.83**	**169**	Pn	**Pn**	**17 30 58.9**	**+1.9**
SANVU				Sn	**Sn**	**17 31 41.6**	**+0.8**
SANVU	**Saraoutou**	**3.83**	**169**	P	**Pn**	**17 30 59.4**	**+2.4**
HNR	**Honiara**	**6.75**	**289**	P	**Pn**	**17 31 37.9**	**+1.0**
	553nm,0.4s,baz=143,slow=6.3,SNR=53						
HNR				S	**Sn**	**17 32 52.7**	**+0.2**
	219nm,0.9s,baz=252,slow=20,SNR=1.3						
HNR	**Honiara**	**6.75**	**289**		**Pn**	**17 31 37.7**	**+0.8**
HNR	**Honiara**	**6.75**	**289**	Sn	**Sn**	**17 32 51.2**	**-1.3**
KOUNC	**Koumac, New Ca**	**9.07**	**193**	Pn	**Pn**	**17 32 09.7**	**+1.0**
KOUNC				Sn	**Sn**	**17 33 45.4**	**-4.1**
KOUNC	**Koumac, New Ca**	**9.07**	**193**	P	**Pn**	**17 32 10.9**	**+2.1**
LIFNC	**LIFOU**	**9.09**	**175**	Pn	**Pn**	**17 32 09.7**	**+0.6**
MARNC	**Mare, Loyalty**	**9.88**	**171**	Pn	**Pn**	**17 32 18.2**	**-1.6**
YATNC	**Mamie plateau,**	**10.35**	**178**	P	**Pn**	**17 32 29.6**	**+3.4**
DZM	**Mont Dzumac**	**10.35**	**180**	*e*LR	LR	17 35 04.8	
DZM	**Mont Dzumac**	**10.35**	**180**	P	**Pn**	**17 32 28.0**	**+1.6**
	3.2nm,0.4s,baz=118,slow=23,SNR=26						
DZM				S	**Sn**	**17 34 18.6**	**-2.3**
	11nm,0.8s,baz=102,slow=21,SNR=2.5						
DZM	**Mont Dzumac**	**10.35**	**180**	Pn	**Pn**	**17 32 26.5**	**+0.1**
DZM	**Mont Dzumac**	**10.35**	**180**	P	**Pn**	**17 32 28.0**	**+1.6**
NOUC	**Port Laguerre**	**10.38**	**181**	P	**Pn**	**17 32 29.4**	**+2.7**
ONTNC	**Ouen Toro**	**10.58**	**180**	Pn	**Pn**	**17 32 29.8**	**+0.3**
ONTNC	**Ouen Toro**	**10.58**	**180**	P	**Pn**	**17 32 32.4**	**+2.9**
OUENC	**Ouen Island, N**	**10.70**	**178**	Pn	**Pn**	**17 32 30.8**	**-0.3**
OUENC	**Ouen Island, N**	**10.70**	**178**	P	**Pn**	**17 32 33.5**	**+2.4**
PINNC	**Pines Island,**	**10.93**	**175**	Pn	**Pn**	**17 32 34.0**	**-0.2**
PINNC	**Pines Island,**	**10.93**	**175**	P	**Pn**	**17 32 36.4**	**+2.2**
MSVF	**Nonsavu**	**12.76**	**120**	P	**P**	**17 33 05.5**	**-3.3**
	14nm,1.1s,baz=275,slow=14,SNR=3.8						
MSVF				LR	LR	17 36 59.4	
	comp=Z,1μm,20.9s,baz=303,slow=33						
MSVF	**Nonsavu**	**12.76**	**120**	Pn	**Pn**	**17 33 04.0**	**+4.8**
FUNA	**Funafuti**	**12.95**	**77**	Pn	**Pn**	**17 33 00.2**	**-1.7**
RABL	**Rabaul**	**15.95**	**297**		**P**	**17 33 43.9**	**-0.3**
RABL				IAmb	IAmb	17 33 58.9	
	comp=Z,104nm,0.7s						
KRVT	**Keravat (AS076**	**16.02**	**296**	P	**Pn**	**17 33 43.4**	**+1.0**
	comp=Z,31nm,0.7s,baz=165,slow=16,SNR=2.1						
KRVT				LR	LR	17 40 17.4	
	comp=Z,377nm,19.7s,baz=255,slow=38						
PMG	**Port Moresby**	**19.07**	**275**	P	**Pn**	**17 34 19.7**	**-0.3**
	comp=Z,21nm,1.0s,baz=53,slow=20,SNR=3.5						
PMG				LR	LR	17 41 08.9	
	comp=Z,658nm,21.2s,baz=116,slow=35						
PMG	**Port Moresby**	**19.07**	**275**	P	**P**	**17 34 17.5**	**-1.2**
EIDS	**Eidsvold**	**19.91**	**225**	P	**Pn**	**17 34 30.3**	**+0.5**
	baz=20,SNR=4.5						
EIDS	**Eidsvold**	**19.91**	**225**	P	**P**	**17 34 27.6**	**0.0**
EIDS	**Eidsvold**	**19.91**	**225**	P	**Pn**	**17 34 30.2**	**+0.5**
PATS	**Pohnpei**	**20.08**	**336**	P	Pn	17 34 30.9	-0.8
KWAJ	**Kwajalein Atol**	**20.37**	**3**	P	**P**	**17 34 32.8**	**+0.1**
LHI	**Lord Howe Isla**	**20.90**	**198**	P	**P**	**17 34 36.6**	**-1.7**
CTA	**Charters Tower**	**21.11**	**244**	P	**P**	**17 34 42.0**	**+1.1**
	comp=Z,15nm,0.9s,baz=80,slow=9.6,SNR=9.5						
CTA				LR	LR	17 41 40.1	
	comp=Z,577nm,20.8s,baz=76,slow=33						
	comp=Z,15nm,0.9s						
CTAO	**Charters Tower**	**21.11**	**244**	P	**P**	**17 34 42.6**	**+1.8**
MANU	**Manus Island**	**21.18**	**295**	P	**P**	**17 34 40.1**	**-1.4**
AFI	**Afiamalu**	**21.37**	**98**	LR	LR	17 41 27.6	
	comp=Z,334nm,21.3s,baz=256,slow=32						
RMQ	**Roma**	**22.23**	**226**	P	**P**	**17 34 54.3**	**+1.6**
	baz=22,SNR=16						
RMQ	**Roma**	**22.23**	**226**	P	**P**	**17 34 56.1**	**+3.4**
MTSU	**Mount Surprise**	**22.30**	**251**	P	**P**	**17 34 55.0**	**+1.4**
	baz=22,SNR=7.3						
MTSU	**Mount Surprise**	**22.30**	**251**	P	**P**	**17 34 55.1**	**+1.5**
COEN	**Coen**	**22.79**	**262**	P	**P**	**17 34 58.8**	**+0.1**
COEN	**Coen**	**22.79**	**262**	P	**P**	**17 35 00.7**	**+2.0**
ARMA	**Armidale**	**23.17**	**214**	P	**P**	**17 35 04.0**	**+1.5**
	baz=23,SNR=30						
ARMA	**Armidale**	**23.17**	**214**	P	**P**	**17 35 02.0**	**-0.6**
ARMA				IAmb	IAmb	17 35 06.1	
	comp=Z,68nm,0.9s						
ARMA	**Armidale**	**23.17**	**214**	P	**P**	**17 35 04.2**	**+1.7**
KNTN	**Kanton**	**23.39**	**69**	P	**P**	**17 35 04.2**	**-0.5**
KNTN				IAmb	IAmb	17 35 08.3	
	comp=Z,48nm,1.1s						
CMSA	**Cobar Meteorol**	**27.52**	**221**	P	**P**	**17 35 43.1**	**+1.0**
	baz=28,SNR=9.1						
MXZ	**Matakaoa Point**	**27.90**	**160**	P	**P**	**17 35 43.9**	**-1.5**
URZ	**Urewera**	**28.15**	**162**	P	**P**	**17 35 47.8**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=308,slow=20,SNR=6.2						
URZ				LR	LR	17 45 09.0	
	comp=Z,407nm,21.9s,baz=31,slow=32						
	comp=Z,2.0nm,0.4s						
URZ	**Urewera**	**28.15**	**162**	P	**P**	**17 35 47.8**	**+0.2**
URZ	**Urewera**	**28.15**	**162**	P	**P**	**17 35 47.0**	**-0.6**
CNB	**Canberra Magne**	**28.18**	**211**	P	**P**	**17 35 49.5**	**+1.5**
	baz=28,SNR=5.2						
CNB	**Canberra Magne**	**28.18**	**211**	P	**P**	**17 35 49.5**	**+1.5**
CAN	**Canberra**	**28.36**	**211**	P	**P**	**17 35 50.2**	**+0.6**
BKZ	**Black Stump Fm**	**28.81**	**164**	P	**P**	**17 35 53.6**	**+0.1**
BKZ	**Black Stump Fm**	**28.81**	**164**	P	**P**	**17 35 53.3**	**-0.2**
INKA	**Innaminka**	**28.89**	**233**	P	**P**	**17 35 55.2**	**+0.9**
SMPI	**Sarmi**	**29.12**	**287**	P	**P**	**17 35 55.2**	**-1.3**
	comp=Z,24nm,1.2s						
SMPI				pP	**pP**	**17 36 10.7**	**+1.1**
	comp=Z,24nm,1.2s						
QRZ	**Quartz Range**	**29.54**	**171**	P	**P**	**17 36 01.3**	**+1.4**
NNZ	**Nelson**	**30.06**	**169**	P	**P**	**17 36 04.1**	**-0.4**
NNZ				IAmb	IAmb	17 36 49.0	
	comp=Z,22nm,1.3s						
BFZ	**Birch Farm**	**30.17**	**165**	P	**P**	**17 36 04.7**	**-0.8**
TUWZ	**Tuamarina**	**30.37**	**169**	P	**P**	**17 36 06.4**	**-0.8**
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**17 36 09.1**	**+0.9**
	comp=Z,14nm,0.8s,baz=31,slow=8.5,SNR=18						
STKA				LR	LR	17 47 39.0	
	comp=Z,388nm,20.8s,baz=38,slow=35						
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**17 36 09.4**	**+1.2**
	baz=31,SNR=15						
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**17 36 09.2**	**+0.9**
THZ	**Tophouse**	**30.51**	**170**	P	**P**	**17 36 08.7**	**+0.1**
BHW	**Baring Head**	**30.54**	**167**	P	**P**	**17 36 07.3**	**-1.4**
MSWZ	**Moikau Station**	**30.63**	**167**	P	**P**	**17 36 08.3**	**-1.2**
BSWZ	**Blackbirch Sta**	**30.64**	**169**	P	**P**	**17 36 09.1**	**-0.5**
KHZ	**Kahutara**	**31.26**	**170**	P	**P**	**17 36 14.2**	**-0.8**
LTZ	**Lake Taylor**	**31.41**	**172**	P	**P**	**17 36 16.1**	**-0.3**
LTZ				IAmb	IAmb	17 36 17.3	
	comp=Z,11nm,0.7s						
FOZ	**Fox Glacier**	**31.89**	**175**	P	**P**	**17 36 20.7**	**+0.2**
FOZ				IAmb	IAmb	17 36 48.0	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**31.89**	**251**	P	**P**	**17 36 20.3**	**-0.6**
WRAB				IAmb	IAmb	17 36 21.4	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**31.89**	**251**	P	**P**	**17 36 20.6**	**-0.4**
TOO	**Toolangi**	**31.90**	**212**	P	**P**	**17 36 22.3**	**+1.5**
	baz=32,SNR=11						
TOO	**Toolangi**	**31.90**	**212**	P	**P**	**17 36 21.3**	**+0.5**
TOO				IAmb	IAmb	17 36 22.9	
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**31.90**	**212**	P	**P**	**17 36 21.8**	**+1.0**
OXZ	**Oxford**	**31.92**	**172**	P	**P**	**17 36 20.2**	**-0.7**
OXZ				IAmb	IAmb	17 36 24.9	
	comp=Z,9.6nm,0.7s						
RPZ	**Rata Peaks**	**32.18**	**174**	P	**P**	**17 36 24.3**	**+1.2**
	comp=Z,10nm,0.7s,baz=282,slow=5.0,SNR=11						
RPZ				LR	LR	17 47 52.1	

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      comp=Z,320nm,21.7s,baz=344,slow=33
      comp=Z,10nm,0.7s
RPZ   Rata Peaks       32.18 174  P      P      17 36 23.6 +0.4
RPZ                               IAmb   IAmb   17 36 30.8
      comp=Z,14nm,1.0s
RPZ   Rata Peaks       32.18 174  P      P      17 36 24.1 +0.9
MQZ   McQueen's Vall   32.38 172  P      P      17 36 23.4 -1.4
MQZ                               IAmb   IAmb   17 37 05.4
      comp=Z,20nm,1.1s
LBZ   Lake Benmore     32.76 175  P      P      17 36 26.6 -1.7
LBZ                               IAmb   IAmb   17 36 31.2
      comp=Z,58nm,1.8s
GUMO  Guam             32.97 319  LR     LR     17 49 13.3
      comp=Z,93nm,21.1s,baz=110,slow=35
AS31  Alice Springs    33.12 244  P      P      17 36 30.7 -1.0
ASAR  Alice Springs    33.12 244  P      P      17 36 31.2 -0.5
      comp=Z,8.8nm,0.8s,baz=75,slow=9.6,SNR=71
ASAR                              PcP    PcP    17 39 13.9 -0.1
      comp=Z,3.8nm,0.8s,baz=76,slow=2.7,SNR=15
ASAR                              ScP    ScP    17 42 53.2 -0.7
      comp=Z,1.0nm,1.0s,baz=103,slow=3.6,SNR=5.0
ASAR                              LR     LR     17 49 06.5
      comp=Z,317nm,19.8s,baz=108,slow=35
      comp=Z,8.8nm,0.8s
ASAR  Alice Springs    33.12 244         P      17 36 30.3 -1.4
KDU   Kakadu           33.19 265  P      P      17 36 32.4 +0.1
      baz=33,SNR=6.8
KDU   Kakadu           33.19 265  P      P      17 36 32.4 +0.1
HTT   Hallett          33.20 225  P      P      17 36 33.4 +1.1
      baz=33,SNR=8.3
HTT   Hallett          33.20 225  P      P      17 36 33.6 +1.3
ODZ   Otahua Downs     33.46 175  P      P      17 36 33.5 -0.8
ODZ                               IAmb   IAmb   17 36 35.9
      comp=Z,39nm,1.7s
ODZ   Otahua Downs     33.46 175  P      P      17 36 34.1 -0.2
RAR   Rarotonga        33.71 111  LR     LR     17 47 47.4
      comp=Z,93nm,19.9s,baz=286,slow=32
PYZ   Puysegur Point   34.38 180  P      P      17 36 41.7 -0.6
MTN   Manton Dam       34.49 264  P      P      17 36 43.5 -0.1
      baz=34,SNR=3.9
MTN   Manton Dam       34.49 264  P      P      17 36 43.3 -0.4
MTN                               IAmb   IAmb   17 36 45.1
      comp=Z,22nm,1.1s
MTN   Manton Dam       34.49 264  P      P      17 36 44.8 +1.1
BBOO  Buckleboo        34.90 228  P      P      17 36 47.7 +0.7
      baz=35,SNR=7.5
BBOO  Buckleboo        34.90 228  P      P      17 36 46.6 -0.4
BBOO  Buckleboo        34.90 228  P      P      17 36 47.5 +0.5
MULG  Mulgathing       35.26 233  P      P      17 36 49.9 -0.2
TAU   Tasmania Unive   35.28 205  P      P      17 36 50.2 +0.2
TAU                               IAmb   IAmb   17 36 55.2
      comp=Z,26nm,1.2s
SIJI  Sorong           36.51 285  P      P      17 37 01.1 +0.1
      comp=Z,7.9nm,0.7s,baz=140,slow=17,SNR=5.3
SIJI                              LR     LR     17 53 09.8
      comp=Z,232nm,20.9s,baz=125,slow=38
      comp=Z,7.9nm,0.7s
KNRA  Kununurra        36.78 259  P      P      17 37 03.6 +0.3
      baz=37,SNR=6.5
KNRA  Kununurra        36.78 259  P      P      17 37 02.2 -1.1
KNRA  Kununurra        36.78 259  P      P      17 37 03.4 +0.1
WRKA  Warakurna        38.41 244  P      P      17 37 17.1 +0.1
      baz=38,SNR=4.9
WRKA  Warakurna        38.41 244  P      P      17 37 17.7 +0.7
FITZ  Fitzroy Crossi   39.87 256  P      P      17 37 28.8 -0.4
FITZ                              IAmb   IAmb   17 37 31.1
      comp=Z,22nm,0.8s
LBMI  Labuha           40.16 283  P      P      17 37 32.3 +0.6
      comp=Z,21nm,1.0s
FORT  Forrest          40.24 236  P      P      17 37 32.0 -0.2
TNTI  Ternate          40.72 285  P      P      17 37 35.2 -1.1
SANI  Sanana           41.21 280  P      P      17 37 38.9 -1.5
      comp=Z,329nmcomp=Z,20nm,1.6s
BATI  Baumata          41.98 268  P      P      17 37 45.4 -1.3
      comp=Z,22nm,0.9s
PPT   Papeete          42.90 103  LR     LR     17 52 34.0
      comp=Z,165nm,19.8s,baz=312,slow=32
PPT2  Papeete2         42.90 103  eLR    LR     17 50 09.9
      comp=Z,671nm,29.0s
TBI   Tubuai           43.48 112  eLR    LR     17 50 42.5
      comp=Z,561nm,29.0s
MMRI  Maumere          43.57 270  P      P      17 37 58.7 -0.8
KMSI  Cibinong         43.88 283  P      P      17 38 02.2 +0.2
      comp=Z,49nm,1.0s
LUWI  Luwuk            44.58 280  P      P      17 38 07.2 -0.4
JCJ   Chichijima       45.15 329  LR     LR     17 53 54.6
      comp=Z,91nm,21.9s,baz=110,slow=32
PSA00 Pilbara Seismi   45.56 251  P      P      17 38 15.6 +0.2
PSA00                             IAmb   IAmb   17 38 17.1
      comp=Z,26nm,1.2s
PSA00 Pilbara Seismi   45.56 251  P      P      17 38 15.5 +0.1
PSA00                             IAmb   IAmb   17 38 17.0
      comp=Z,46nm,1.2s
MBWA  Marble Bar       45.63 252  P      P      17 38 15.5 -0.4
MBWA                              IAmb   IAmb   17 38 17.7
      comp=Z,24nm,0.9s
BSSI  Bau Bau, Buton   45.67 273  P      P      17 38 18.7 +2.4
BNSI  Bone             46.38 275  P      P      17 38 35.5  +14
KAPI  Kappang          46.60 274  LR     LR     18 00 25.2
      comp=Z,67nm,18.8s,baz=94,slow=39
KAPI  Kappang          46.60 274  P      P      17 38 23.1 -0.5
KAPI                              IAmb   IAmb   17 38 40.1
      comp=Z,10nm,0.9s
TOLI2 Tolitoli         47.09 283  P      P      17 38 26.4 -1.1
TOLI2                             IAmb   IAmb   17 38 39.6
      comp=Z,14nm,0.9s
MEEK  Meekatharra      47.28 245  P      P      17 38 29.6 +0.8
      baz=47,SNR=12
MPSI  Mapaga           47.72 281  P      P      17 38 32.5 +0.2
      comp=Z,20nm,1.0s
PLAI  Plampang         47.91 269  P      P      17 38 34.9 +1.1
MORW  Morawa           49.92 242  P      P      17 38 48.0 -1.0
MYLDM Lahad Datu       50.52 287  P      P      17 38 54.9 +1.2
JHJ2  Mitsune          51.26 331  P      P      17 38 58.9  0.0
JHJ   Hachijo jima 2   51.28 331  LR     LR     17 59 23.7
      comp=Z,46nm,19.8s,baz=76,slow=34
JAGI  Jajag, Banyuwa   51.51 268  P      P      17 39 00.2 -1.0
TAOE  Nuku Hiva Isla   52.59  92  eLR    LR     17 54 31.8
      comp=Z,259nm,26.7s
JOW   Kunigami         53.26 316  LR     LR     18 01 25.8
      comp=Z,77nm,19.1s,baz=108,slow=35
JOW   Kunigami         53.26 316  P      P      17 39 14.4 +0.4
JGF   Kuroka           54.46 331  P      P      17 39 22.2 -0.3
JGF                               IAmb   IAmb   17 39 49.4
      comp=Z,24nm,1.5s
JMN   Monobe           54.75 327  P      P      17 39 24.5 -0.2
MJAR  Matsushiro Arr   54.83 332  P      P      17 39 24.3 -0.9
      comp=Z,2.3nm,0.8s,baz=158,slow=9.4,SNR=5.5
MJAR                              LR     LR     18 00 47.9
      comp=Z,58nm,21.5s,baz=162,slow=34
      comp=Z,2.3nm,0.8s
MJAR  Matsushiro Arr   54.83 332  P      P      17 39 24.3 -0.9
MJB9  Matsu-Tunnel     54.83 332  P      P      17 39 25.2  0.0
MJB9                              IAmb   IAmb   17 39 48.9
      comp=Z,13nm,1.1s
JSU   Suzuyama         55.06 322  P      P      17 39 26.8 -0.2
SBUM  Sibu             55.67 281  P      P      17 39 31.2 -0.5
JHS   Saijyo           56.12 327  P      P      17 39 33.7 -0.9
JHS                               IAmb   IAmb   17 39 50.0
      comp=Z,12nm,1.0s
YULB  Yu-li            56.24 308  P      P      17 39 35.3 -0.3
YULB                              IAmb   IAmb   17 39 49.5
      comp=Z,10nm,0.9s
TPUB  Ta-pu            56.71 308  P      P      17 39 37.1 -1.8
SSLB  Suanglung        56.72 309  P      P      17 39 38.0 -1.0
SSLB                              IAmb   IAmb   17 39 53.2
      comp=Z,6.2nm,0.7s
YHNB  Yeheng           56.89 310  P      P      17 39 39.3 -0.9
YHNB                              IAmb   IAmb   17 39 41.3
      comp=Z,12nm,0.8s
DRV   Dumont d'Urvil   57.74 192  P      P      17 39 45.6 +0.2
DRV                               pP     pP     17 40 00.3 +0.5
DRV                               sP     sP     17 40 06.3 +0.4
JTU   Tsushima         57.83 324  P      P      17 39 45.8 -0.8
LEM   Lembang          58.16 269  LR     LR     18 07 22.6
      comp=Z,54nm,19.4s,baz=326,slow=39
ASAJ  Asahikawa        59.60 340  LR     LR     18 02 48.4
      comp=Z,115nm,20.4s,baz=130,slow=33
KSRS  Korea Array      60.76 325  P      P      17 40 07.1 +0.4
      comp=Z,1.7nm,0.7s,baz=134,slow=7.4,SNR=10
KSRS                              LR     LR     18 05 22.4
      comp=Z,32nm,19.3s,baz=115,slow=35
      comp=Z,1.7nm,0.7s
KSAR  Wonju Array Be   60.78 325  P      P      17 40 06.2 -0.7
NJ2   Nanjing          62.93 315  eP     P      17 40 22.4 +1.0
NJ2                               pmax   pmax
      comp=Z,20nm,0.9s
USRK  Ussuriysk Ar.    63.80 333  P      P      17 40 27.9 +0.9
      comp=Z,4.0nm,0.9s,baz=134,slow=5.5,SNR=4.7
USRK                              LR     LR     18 06 32.9
      comp=Z,19nm,20.1s,baz=120,slow=34
      comp=Z,4.0nm,0.9s
SHEM  Shemya Is, Ala   64.47   5  LR     LR     18 03 05.7
      comp=Z,80nm,21.9s,baz=342,slow=31
PETK  Petropavlovsk-   64.95 354  P      P      17 40 34.8 +0.5
      comp=Z,2.1nm,0.8s,baz=184,slow=11,SNR=4.8
PETK                              LR     LR     18 03 20.4
      comp=Z,80nm,21.7s,baz=157,slow=31
      comp=Z,2.1nm,0.8s
PETK  Petropavlovsk-   64.95 354  P      P      17 40 33.7 -0.6
VNDA  Vanda            65.89 181  P      P      17 40 40.6 +0.6
      comp=Z,3.1nm,1.0s,baz=358,slow=6.3,SNR=11
VNDA                              LR     LR     18 06 03.7
      comp=Z,56nm,20.6s,baz=355,slow=33
      comp=Z,3.1nm,1.0s
VNDA  Vanda            65.89 181  P      P      17 40 40.3 +0.2
VNDA  Vanda            65.89 181  P      P      17 40 40.5 +0.4
CASY  Casey            66.05 202  P      P      17 40 40.8 -0.5
CASY                              IAmb   IAmb   17 40 58.6
      comp=Z,19nm,0.9s
CASY  Casey            66.05 202  P      P      17 40 41.4 +0.1
CASY                              pP     pP     17 40 54.8 -1.1
SBA   Scott Base       66.18 180  P      P      17 40 42.9 +0.9
SBA   Scott Base       66.18 180  P      P      17 40 43.4 +1.4
SBA                               pP     pP     17 40 56.1 -0.5
IPM   Ipoh             66.99 280  P      P      17 40 47.2 -1.0
IPM                               IAmb   IAmb   17 41 03.6
      comp=Z,16nm,0.9s
KULM  Kulim            67.55 281  P      P      17 40 52.2 +0.4
KULM                              IAmb   IAmb   17 41 19.2
      comp=Z,12nm,1.2s
CCD   Concordia, Ant   67.73 191  P      P      17 40 52.5 +0.1
CCD                               pP     pP     17 41 05.6 -1.4
NIKH  Nikolski High    67.78  16  P      P      17 40 52.3 -0.1
KLR   Kul'dur          67.89 336  LR     LR     18 06 45.3
      comp=Z,65nm,22.0s,baz=145,slow=32
PSI   Prapat           68.61 278  LR     LR     18 14 37.2
      comp=Z,51nm,18.3s,baz=92,slow=39
LYN   LuoYang          68.76 314 ⇓P      P      17 40 59.8 +0.9
LYN                               pmax   pmax
      comp=Z,20nm,0.9s
LYN                               LR     LR
      comp=E,150nm,20.4s
LYN                               LR     LR
      comp=Z,210nm,20.2s
HNS   HongShan         68.79 318 ⇑P      P      17 40 59.8 +0.8
HNS                               pmax   pmax
      comp=Z,14nm,1.3s
ENH   Enshi            68.81 309  P      P      17 40 59.1 -0.3
ENH                               IAmb   IAmb   17 41 00.4
      comp=Z,25nm,0.9s
ENH   Enshi            68.81 309 ⇑P      P      17 40 59.0 -0.3
ENH                               pP     pP     17 41 12.4 -1.8
GYA   Guiyang          69.32 304⇑iP      P      17 41 03.2 +0.5
GYA                               pmax   pmax
      comp=Z,19nm,0.9s
BJT   Baijiatuau       69.37 321  P      P      17 41 01.5 -1.1
BJT                               IAmb   IAmb   17 41 04.1
      comp=Z,7.5nm,0.7s
BJI   Beijing          69.38 321  P      P      17 41 03.5 +0.9
BJI                               pmax   pmax
      comp=Z,10.0nm,0.7s
GSI   Gunungsitoli     69.59 276  P      P      17 41 04.3 -0.2
GSI                               IAmb   IAmb   17 41 06.5
      comp=Z,18nm,0.7s
XAN   Xi'an            71.03 312  P      P      17 41 13.6 +0.6
XAN                               pP     pP     17 41 30.2 +2.4
XAN                               S      S      17 50 26.3 +1.0
XAN                               pmax   pmax
      comp=Z,27nm,0.8s
XAN                               LR     LR
      comp=N,110nm,18.6s
XAN                               LR     LR
      comp=E,170nm,19.9s
XAN                               LR     LR
      comp=Z,230nm,22.0s
XLT   XiLinHaoTe       71.75 324⇓iP      P      17 41 18.5 +1.3
XLT                               pP     pP     17 41 32.8 +0.8
XLT                               sP     sP     17 41 40.8 +2.9
XLT                               pmax   pmax
      comp=Z,22nm,0.8s
XLT                               pmax   pmax
      comp=Z,71nm,3.6s
KMI   Kunming          72.01 301 ⇑P      P      17 41 19.8 +0.5
KMI                               pP     pP     17 41 33.4 -0.8
KMI                               pmax   pmax
      comp=Z,28nm,1.3s
KMI                               LR     LR
      comp=Z,120nm,20.2s
MA2   Magadan          72.11 352  LR     LR     18 08 06.8
      comp=Z,70nm,21.7s,baz=141,slow=32
HHC   Hu-ho-hao-te     72.73 319  eP     P      17 41 25.2 +2.1
HHC                               pmax   pmax
      comp=Z,52nm,0.8s
HHC                               pmax   pmax
      comp=Z,86nm,4.4s
HHC                               LR     LR
      comp=N,190nm,17.1s
HHC                               LR     LR
      comp=E,220nm,18.4s
HHC                               LR     LR
      comp=Z,390nm,17.8s
CM31  Chiang Mai Arr   72.97 294  P      P      17 41 24.7 -0.2
CMAR  Chiang Mai Arr   72.97 294  P      P      17 41 26.2 +1.4
      comp=Z,18nm,0.9s,baz=120,slow=4.5,SNR=106
CMAR                              LR     LR     18 11 31.5
      comp=Z,40nm,21.3s,baz=125,slow=34
      comp=Z,18nm,0.9s
CMAR  Chiang Mai Arr   72.97 294  P      P      17 41 24.9 +0.1
CHTO  Chiang Mai       73.08 294  P      P      17 41 25.2 -0.3
HIA   Hailar           73.24 330  P      P      17 41 25.2 -0.6
PZH   PanZhiHua        73.37 302  P      P      17 41 27.9 +0.7
PZH                               pmax   pmax
      comp=Z,10.0nm,0.9s
PZH                               pmax   pmax
      comp=Z,100nm,5.5s
SEY   Seymchan         75.16 353  LR     LR     18 09 35.5
      comp=Z,104nm,21.9s,baz=164,slow=32
LZH   Lanzhou          75.67 312  eP     P      17 41 42.1 +1.7
LZH                               pP     sP     17 41 59.8 -1.5
LZH                               sP     pP     17 42 08.8  +13
LZH                               pmax   pmax
      comp=Z,53nm,1.2s
KDAK  Kodiak Island    76.91  21  LR     LR     18 08 51.3
      comp=Z,143nm,20.4s,baz=232,slow=30
P18K  Big Mountain,    77.26  19  P      P      17 41 48.1 -0.6
P18K                              IAmb   IAmb   17 42 28.4
      comp=Z,19nm,1.2s
Q19K  Cape Douglas,    77.42  20  P      P      17 41 49.3 -0.3
Q19K                              IAmb   IAmb   17 42 21.0
      comp=Z,25nm,1.1s
O18K  Koktuh Hills     77.63  19  P      P      17 41 50.6 -0.2
O18K                              IAmb   IAmb   17 42 22.4
      comp=Z,27nm,1.6s
N18K  Kilae Creek      78.07  18  P      P      17 41 53.2 +0.1
QSPA  South Pole Qui   78.34 180  LR     LR     18 14 07.6
      comp=Z,65nm,19.5s,baz=30,slow=34
QSPA  South Pole Qui   78.34 180  P      P      17 41 54.4 -0.5
QSPA                              IAmb   IAmb   17 41 56.5
      comp=Z,22nm,1.0s
YAK   Yakutsk          78.88 343  P      P      17 41 56.0 -1.5
YAK                               IAmb   IAmb   17 42 31.3
      comp=Z,5.5nm,0.5s
ULN   Ulaanbaatar      79.19 324  P      P      17 41 58.8 -1.0
ULN                               IAmb   IAmb   17 42 01.6
      comp=Z,13nm,0.9s
TNA   Tin City         79.36  11  P      P      17 41 59.3 -0.7
TNA                               IAmb   IAmb   17 42 06.7
      comp=Z,25nm,1.1s
M19K  Big River Lodg   79.48  18  P      P      17 42 01.8 +0.9
M19K                              IAmb   IAmb   17 42 32.8
      comp=Z,17nm,1.7s
BILL  Bilibino         79.50 360  P      P      17 41 59.8 -1.1
SONM  Songino Array    79.56 324  P      P      17 42 02.6 +0.9
      comp=Z,5.0nm,1.0s,baz=135,slow=5.2,SNR=21
SONM                              LR     LR     18 15 22.9
      comp=Z,34nm,21.8s,baz=118,slow=34
      comp=Z,5.0nm,1.0s
SONM  Songino Array    79.56 324  P      P      17 42 01.5 -0.3
L19K  White Mountain   79.56  17  P      P      17 42 02.0 +0.6
RPN   Rapa Nui         79.70 116  LR     LR     18 10 28.6
      comp=Z,56nm,19.1s,baz=200,slow=30
TTA   Tatalina         79.83  16  P      P      17 42 01.8 -1.0
M20K  Styx River       79.85  18  P      P      17 42 01.8 -1.2
M20K                              IAmb   IAmb   17 42 29.5
      comp=Z,15nm,1.4s
GTA   Gaotai           79.97 314 ⇑P      P      17 42 05.4 +1.2
GTA                               pP     PcP    17 42 12.4 +0.9
GTA                               sP     pP     17 42 16.9 -2.3
GTA                               pmax   pmax
      comp=Z,17nm,1.0s
K20K  Telida           80.71  17  P      P      17 42 07.9 +0.4
PPLA  Purkeypile       80.91  18  P      P      17 42 08.3 -0.4
PPLA                              IAmb   IAmb   17 42 36.7
      comp=Z,26nm,1.5s
FID   Port Fidalgo     81.23  21  P      P      17 42 10.6 +0.3
J20K  Nowinta River    81.33  16  P      P      17 42 10.6 -0.1
CAST  Castle Rocks     81.33  18  P      P      17 42 09.8 -1.1
KAIM  Kayak Island     81.42  23  P      P      17 42 10.7 -0.6
SCM   Sheep Creek Mo   81.69  20  P      P      17 42 12.6 -0.1
SCM                               IAmb   IAmb   17 42 28.1
      comp=Z,13nm,1.1s
KLU   Klutina          81.93  21  P      P      17 42 14.1  0.0
KLU                               IAmb   IAmb   17 42 56.0
      comp=Z,15nm,1.4s
BMRM  Bremner River    82.05  22  P      P      17 42 13.6 -1.1
BMRM                              IAmb   IAmb   17 42 48.2
      comp=Z,13nm,1.3s
M24K  Tolsona, Glenn   82.27  20  P      P      17 42 15.8  0.0
RND   Reindeer         82.31  19  P      P      17 42 16.9 +0.9
RND                               IAmb   IAmb   17 42 55.9
      comp=Z,15nm,1.4s
WAX   Waxell Ridge     82.36  23  P      P      17 42 18.2 +1.9
GOMU  GeErMu           82.42 309  P      P      17 42 18.9 +1.3
GOMU                              pP     PcP    17 42 22.7  0.0
GOMU                              sP     pP     17 42 26.5 -6.2
GOMU                              pmax   pmax
      comp=Z,8.0nm,0.9s
GOMU                              pmax   pmax
      comp=Z,33nm,4.1s
N25K  Chitina, Valde   82.48  21  P      P      17 42 17.4 +0.4
N25K                              IAmb   IAmb   17 42 46.3
      comp=Z,12nm,1.3s
RDOG  Red Dog Mine     82.50  11  P      P      17 42 19.2 +2.4
RDOG                              IAmb   IAmb   17 42 21.6
      comp=Z,12nm,0.7s
I21K  Tanana           82.70  16  P      P      17 42 18.4 +0.5
I21K                              IAmb   IAmb   17 42 33.2
      comp=Z,16nm,1.6s
BARN  Barnard Glacie   83.20  23  P      P      17 42 20.1 -0.8
BARN                              IAmb   IAmb   17 42 21.4
      comp=Z,34nm,1.6s
CCB   Clear Creek Bu   83.52  18  P      P      17 42 22.1  0.0
M26K  Nabesna, AK      83.57  21  P      P      17 42 22.0 -0.6
HDA   Harding Lake     83.61  19  P      P      17 42 22.3 -0.3
HDA                               IAmb   IAmb   17 42 45.7
      comp=Z,7.8nm,1.0s
RIDG  Independent Ri   83.83  20  P      P      17 42 24.2 +0.4
RIDG                              IAmb   IAmb   17 43 05.9
      comp=Z,13nm,1.2s
YBH   Yreka Blue Hor   83.85  45  LR     LR     18 12 47.0
      comp=Z,57nm,21.9s,baz=249,slow=31
IL31                   83.89  18  P      P      17 42 23.8 -0.2
ILAR  Eielson Array    83.89  18  P      P      17 42 24.2 +0.2
      comp=Z,1.2nm,0.6s,baz=238,slow=4.6,SNR=20
ILAR                              LR     LR     18 12 45.9
      comp=Z,54nm,20.7s,baz=172,slow=31
      comp=Z,1.2nm,0.6s
J25K  Salcha River,    84.25  19  P      P      17 42 25.6 -0.4
J25K                              IAmb   IAmb   17 42 41.7
      comp=Z,9.5nm,1.1s
SCRK  Sand Creek       84.27  20  P      P      17 42 26.0 -0.2
SCRK                              IAmb   IAmb   17 42 42.2
      comp=Z,7.6nm,1.0s
MAW   Mawson           84.40 202  LR     LR     18 13 53.9
      comp=Z,111nm,19.9s,baz=108,slow=31
BBB   Bella Bella      84.71  34  LR     LR     18 12 16.6
      comp=Z,90nm,21.8s,baz=261,slow=30
TAPN  Taplejung        85.49 299  eP     P      17 42 33.8 +0.5
      comp=Z,48nm,1.1s
ODAN  Odare            85.63 298  eP     P      17 42 34.6 +0.6
      comp=Z,81nm,1.1s
EGAK  Eagle            85.73  20  P      P      17 42 33.7 +0.5
EGAK                              IAmb   IAmb   17 42 55.6
      comp=Z,7.1nm,0.9s
NVAR  Mina Array Bea   85.91  50  P      P      17 42 37.2 +2.1
      comp=Z,0.6nm,0.6s,baz=229,slow=8.0,SNR=7.4
NVAR                              LR     LR     18 13 30.6
      comp=Z,173nm,21.1s,baz=232,slow=30
      comp=Z,0.6nm,0.6s
NVAR  Mina Array Bea   85.91  50  P      P      17 42 34.9 -0.2
RAMN  Ramite           86.34 298  eP     P      17 42 37.6 +0.1
      comp=Z,5.3nm,0.6s
DLBC  Dease Lake       86.64  28  LR     LR     18 13 14.2
      comp=Z,39nm,21.1s,baz=284,slow=30
TIXI  Tiksi            86.82 349  LR     LR     18 17 14.1
      comp=Z,44nm,22.0s,baz=180,slow=33
GUN   Gumba            87.20 299  eP     P      17 42 42.1 +0.3
PALK  Pallekele        87.30 278  LR     LR     18 26 42.5
      comp=Z,25nm,18.1s,baz=232,slow=39
PKI   Pulchoki         87.52 299  eP     P      17 42 43.3  0.0
      comp=Z,52nm,1.2s
PKIN  Phulchoki        87.53 299  eP     P      17 42 43.2 -0.1
      comp=Z,35nm,1.0s
KKN   Kakani           87.69 299  eP     P      17 42 44.2 +0.2
      comp=Z,28nm,1.0s
DMN   Daman            87.79 299  eP     P      17 42 44.9 +0.4
      comp=Z,57nm,0.9s
GKN   Gorkha           88.29 299  eP     P      17 42 46.5 -0.3
      comp=Z,52nm,1.0s
LPIG  La Paz           88.66  65  LR     LR     18 11 50.6
      comp=Z,39nm,21.9s,baz=240,slow=28
ELK   Elko             88.86  48  LR     LR     18 15 08.8
      comp=Z,78nm,20.9s,baz=250,slow=30
DANN  Dangsing         89.12 299  eP     P      17 42 50.3 -0.6
      comp=Z,48nm,1.0s
KOLN  Koldanda         89.12 298  eP     P      17 42 50.2 -0.6
      comp=Z,36nm,1.1s
PYUN  Piuthan          89.73 299  eP     P      17 42 52.9 -0.7
      comp=Z,30nm,0.9s
NEW   Newport          89.78  41  LR     LR     18 15 18.3
      comp=Z,74nm,21.5s,baz=235,slow=30
U15A  North Rim        89.94  53  P      P      17 42 54.4 -0.1
U15A                              IAmb   IAmb   17 43 25.2
      comp=Z,4.6nm,1.0s
WMQ   Urumqi           90.00 315  eP     P      17 42 55.4 +1.1
WMQ                               LR     LR
      comp=N,340nm,28.9s
WMQ                               LR     LR
      comp=Z,94nm,26.3s
INK   Inuvik           90.27  19  LR     LR     18 16 25.9
      comp=Z,83nm,21.1s,baz=196,slow=31
PDAR  Pinedale Array   93.48  47  P      P      17 43 13.1 +2.4
      comp=Z,0.3nm,0.7s,baz=216,slow=4.5,SNR=2.7
PDAR                              LR     LR     18 20 37.3
      comp=Z,33nm,18.1s,baz=268,slow=32
      comp=Z,0.3nm,0.7s
PDAR  Pinedale Array   93.48  47  P      P      17 43 12.1 +1.4
ANMO  Albuquerque      94.25  55  LR     LR     18 18 58.2
      comp=Z,60nm,19.9s,baz=258,slow=31
MK31  Makanchi Array   94.43 317  P      P      17 43 14.1 -0.6
MK31                              IAmb   IAmb   17 43 15.8
      comp=Z,6.8nm,0.9s
MKAR  Makanchi Array   94.43 317  P      P      17 43 15.0 +0.3
      comp=Z,6.9nm,0.8s,baz=98,slow=6.2,SNR=72
MKAR                              LR     LR     18 27 10.0
      comp=Z,11nm,19.2s,baz=98,slow=36
      comp=Z,6.9nm,0.8s
MKAR  Makanchi Array   94.43 317  P      P      17 43 14.1 -0.6
ZALV  Zalesovo Beam    94.45 324  P      P      17 43 14.4 -0.1
      comp=Z,1.9nm,0.7s,baz=126,slow=4.0,SNR=7.9
ZALV                              LR     LR     18 23 21.3
      comp=Z,27nm,21.8s,baz=106,slow=34
      comp=Z,1.9nm,0.7s
MAKZ  Makanchi         94.64 317  P      P      17 43 14.9 -0.7
MAKZ                              IAmb   IAmb   17 43 16.7
      comp=Z,7.7nm,1.0s
SMCO  Snowmass         94.66  51  P      P      17 43 15.5 -0.9
SMCO                              IAmb   IAmb   17 43 20.0
      comp=Z,4.0nm,0.7s
YKA   Yellowknife Ar   95.22  27  P      P      17 43 18.9 +1.1
      comp=Z,0.2nm,0.5s,baz=258,slow=4.6,SNR=4.4
YKA                               LR     LR     18 19 04.2
      comp=Z,48nm,21.4s,baz=288,slow=31
      comp=Z,0.2nm,0.5s
TXAR  Lajitas Array    95.54  61  LR     LR     18 18 55.8
      comp=Z,66nm,20.3s,baz=256,slow=31
NRIK  Noril'sk         96.93 339  LR     LR     18 24 16.2
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	comp=Z,49nm,21.9s,baz=140,slow=34						
KURBB	Kurchatov Arra	97.58	320	LR	LR	18 29 46.6	
	comp=Z,25nm,18.1s,baz=72,slow=37						
ARCES	ARCESS Array B	117.10	346	PKP	PKPdf	17 48 38.5	-0.4
	comp=Z,0.7nm,0.5s,baz=63,slow=2.3,SNR=11						
FINES	FINESS Array B	122.59	339	PKP	PKPdf	17 48 49.1	-0.5
	comp=Z,1.4nm,1.1s,baz=45,slow=3.5,SNR=5.2						
GERES	GERESS Array B	136.55	334	PKP	PKPdf	17 49 17.4	+0.7
	comp=Z,0.2nm,0.3s,baz=28,slow=3.2,SNR=4.4						
KEST	Kesra	148.31	323	PKPbc	PKPbc	17 49 41.0	-0.2
	comp=Z,4.7nm,0.9s,baz=90,slow=2.0,SNR=2.0						
ESDC	Sonseca Array	150.83	345	PKPbc	PKPbc	17 49 47.3	0.0
	comp=Z,0.8nm,0.9s,baz=25,slow=2.2,SNR=3.0						
TORD	Torodi Ar. Bea	165.01	277	PKPab	PKPab	17 50 56.8	+0.3
	comp=Z,3.3nm,0.9s,baz=89,slow=5.9,SNR=11						
DBIC	Dimbokro	170.07	241	PKPab	PKPab	17 51 19.0	+0.3
	comp=Z,4.7nm,0.9s,baz=195,slow=3.7,SNR=4.4						

*CRAAG **07** 17:36:54.1, 35°.90N×0°.39W, Ml2.9*
*CNRM **07** 17:36:55.5, 35°.95N×0°.33W, h30^{km}, ml2.7*
*MDD **07** 17:36:57.2±0.5, 35°.84N×0°.47W, h24^{km}±5^{km}, mb_Lg2.9/19, Error ellipse: s-maj=4.9km s-min=2.5km az=147.0*
ISC 07 17:36:54.4±3.0, **35°.93N**±0°.03×**0°.47W**±0°.03, **h17**^{km}±22^{km}, **n49**, σ**1^{s}71**/77, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USTO	Oran	0.21	198	P	Pb	17 37 00.0	+0.3
ODJA	Bouhanifia	0.66	156	P	Pb	17 37 07.4	0.0
OTSS	Djebel Tessala	0.70	202	P	Pn	17 37 12.0	+2.4
OJBR	Djebel Berber	0.75	117	P	Pn	17 37 11.0	+0.8
OKGL	Djebel Kef Gue	0.91	83	P	Pb	17 37 10.0	-1.8
OLHC	Oulhaca	1.03	229	P	Pn	17 37 16.8	+2.8
CART	Cartagena	1.71	346	P	Pn	17 37 24.4	+1.1
CART				S	Sn	17 37 44.3	-0.4
CART	Cartagena	1.71	346	P	Pb	17 37 25.1	-0.2
CART				S	Sn	17 37 43.8	-0.9
ENIJ	Nijar	1.74	307	Pn	Pn	17 37 24.7	+0.8
ENIJ				Sn	Sn	17 37 45.8	+0.2
ENIJ				*i* Vmb_Lg		17 37 47.2	
CHAS	Isla Isabel II	1.76	246	P	Pn	17 37 24.8	+0.7
CHAS				S	Sn	17 37 46.8	+0.7
TAF	Taforalt	1.94	235	P	Pn	17 37 28.2	+1.6
TLOR	Lorca, Murcia	1.98	331	Pn	Pn	17 37 28.9	+1.8
TLOR				Sn	Sn	17 37 51.9	+0.4
EMUR	La Murta	2.00	342	Pn	Pn	17 37 28.9	+1.5
EMUR				Sn	Sb	17 37 54.3	-0.8
EMUR				*i* Vmb_Lg		17 39 21.8	
EALB	Alboran	2.08	271	Pn	Pn	17 37 29.5	+1.1
EALB				Sn	Sn	17 37 53.9	0.0
EALB				*i* Vmb_Lg		17 38 50.0	
EMEL	Melilla	2.12	253	Sn	Sn	17 37 54.3	-0.6
EZAR	Zarzadilla de	2.17	334	Pn	Pn	17 37 31.4	+1.6
EZAR				Sn	Sn	17 37 56.5	+0.1
EBER	Berja	2.17	297	Pn	Pn	17 37 31.9	+2.0
EBER				Sn	Sn	17 37 58.2	+1.6
EBER				*i* Vmb_Lg		17 39 20.8	
GOG	Mont Gurugu	2.17	252	P	Pb	17 37 33.0	-0.4
JBK	JBK	2.34	228	P	Pb	17 37 34.8	-1.4
EQUE	Quentar	2.71	299	Pn	Pn	17 37 40.1	+2.9
EQUE				Sn	Sn	17 38 10.5	+0.9
EQUE				*i* Vmb_Lg		17 39 32.3	
ELGU	Los Guajares,	2.71	291	Pn	Pn	17 37 38.6	+1.4
ELGU				Sn	Sn	17 38 08.3	-1.3
ELGU				*i* Vmb_Lg		17 38 14.2	
AFON	Font Roja	2.73	359	Pn	Pn	17 37 40.5	+3.0
AFON				Sn	Sn	17 38 12.6	+2.5
AFON				*i* Vmb_Lg		17 39 35.0	
EBEN2	Beniarda presa	2.75	5	Pn	Pn	17 37 39.6	+1.9
EBEN2				Sn	Sn	17 38 11.0	+0.5
EBEN2				*i* Vmb_Lg		17 38 18.6	
EQES	Quesada	2.80	313	Pn	Pb	17 37 42.3	-1.6
EQES				Sn	Sn	17 38 13.8	+2.0
EQES				*i* Vmb_Lg		17 38 20.2	
ETOB	Tobarra	2.84	343	Pn	Pn	17 37 41.5	+2.5
ETOB				Sn	Sn	17 38 13.2	+0.4
ETOB				*i* Vmb_Lg		17 38 20.5	
AKLM	AKL	3.12	244	P	Pn	17 37 42.8	0.0
EGOR	Sierra Gorda,	3.16	293	Pn	Pn	17 37 45.9	+2.5
EGOR				Sn	Sn	17 38 22.1	+1.4
EGOR				*i* Vmb_Lg		17 38 33.5	
TDRA	Tendrara	3.16	204	P	Pn	17 37 44.3	+0.8
EIBI	Ibiza	3.41	25	Pn	Pn	17 37 48.9	+2.1
EIBI				Sn	Sn	17 38 26.4	-0.4
EIBI				*i* Vmb_Lg		17 38 32.0	
EMIJ	Mijas	3.53	282	Pn	Pn	17 37 48.1	-0.3
EMIJ				Sn	Sn	17 38 27.1	-2.7
EMIJ				*i* Vmb_Lg		17 38 36.3	
ECHE	Chera	3.67	354	Pn	Pn	17 37 52.9	+2.5
ECHE				Sn	Sn	17 38 35.0	+1.6
ECHE				*i* Vmb_Lg		17 40 28.3	
EADA	Adamuz	3.97	305	Pn	Pn	17 37 56.5	+2.0
EADA				Sn	Sn	17 38 39.4	-1.3
EADA				*i* Vmb_Lg		17 39 01.6	
EMOS	Mosqueruela	4.42	0	Pn	Pn	17 38 04.3	+3.4
EMOS				Sn	Sn	17 38 52.6	+0.6
EMOS				*i* Vmb_Lg		17 40 44.1	
ECAB	El Cabril	4.50	300	Pn	Pn	17 38 03.4	+1.7
ECAB				Sn	Sn	17 38 51.3	-2.4
ECAB				*i* Vmb_Lg		17 41 06.9	
MDT	Midelt	4.62	229	P	Pn	17 38 06.2	+2.7
ETOS	Mallorca	4.63	33	Pn	Pn	17 38 04.6	+1.1
ETOS				Sn	Sn	17 38 56.8	-0.1
ETOS				*i* Vmb_Lg		17 41 16.8	
ESDC	Sonseca Array	4.65	325	Pn	Pn	17 38 06.6	+2.8
ESDC				Sn	Sn	17 38 57.3	0.0
MD31	MD31	4.68	230	P	Pn	17 38 05.5	+1.2
PAB	San Pablo	4.74	321	Pn	Pn	17 38 07.4	+2.3
PAB				Sn	Sn	17 38 58.6	-1.1
GUD	Guadarrama	5.52	329	Pn	Pn	17 38 16.4	+0.5
GUD				Sn	Sn	17 39 17.6	-1.5
EPOB	Poblet	5.55	12	Pn	Pn	17 38 17.9	+1.7
EPOB				Sn	Sn	17 39 16.9	-2.7
PBAR	Barrancos	5.71	295	*e*Pn	Pn	17 38 20.4	+2.1
EBAD	Badajoz	5.92	300	Pn	Pn	17 38 23.2	+1.9
EBAD				Sn	Sn	17 39 27.7	-1.0
PVAQ	Vaqueiros	6.00	286	*e*Pn	Pn	17 38 24.1	+1.7
PESTR	Estremoz	6.38	299	*e*Pn	Pn	17 38 31.0	+3.4
PESTR	Estremoz	6.38	299	P	Pn	17 38 28.3	+0.8
MESJ	Messejana	6.50	289	*e*Pn	Pn	17 38 30.8	+1.7
EVO	Evora	6.55	296	*e*Pn	Pn	17 38 32.0	+2.1
PNCL	Nicolau / Gran	6.80	291	*e*Pn	Pn	17 38 35.2	+1.9

*SOME **07** 17:57:54.2, 45°.00N×81°.32E, h20^{km}, MS2.7*
*NNC **07** 17:57:54.2±0.6, 45°.04N×81°.24E, h3^{km}±4^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=5.2km s-min=2.8km az=118.0*
ISC 07 17:57:53.8±1.7, **45°.04N**±0°.03×**81°.39E**±0°.05, **h9**^{km}±13^{km}, **n54**, σ**1^{s}64**/82, **15C-12D**, **Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.34	239	*e*P	Pn	17 58 18.8	0.0
	38nm,0.3s						
DJR				*e*S	Sn	17 58 36.0	-0.7
	659nm,0.4s						
DJR	Jarkent	1.34	239	P	Pn	17 58 18.7	0.0
	38nm,0.3s						
DJR				S	Sn	17 58 36.0	-0.7
	586nm,0.6s						
KAPS	Kapalarasan	1.46	280	*e*P	Pn	17 58 20.8	+0.4
	33nm,0.2s						
KAPS				*e*S	Sb	17 58 39.6	-0.2
	876nm,0.3s						
KAPS	Kapalarasan	1.46	280	P	Pn	17 58 20.7	+0.4
	78nm,0.1s						
KAPS				S	Sb	17 58 39.5	-0.2
	876nm,0.3s						
KTMS	Ketmen	1.76	205	*e*P	Pn	17 58 24.9	+0.4
	85nm,0.3s						
KTMS				*e*S	Sn	17 58 46.9	-0.2
	354nm,0.4s						
KTMS	Ketmen	1.76	205	P	Pn	17 58 24.9	+0.4
	85nm,0.3s						
KTMS				S	Sn	17 58 46.8	-0.3
	354nm,0.4s						
MAKZ	Makanchi	1.82	13	⇑Pn	Pb	17 58 27.2	-0.1
	16nm,0.3s						
MAKZ				⇑Lg	Lg	17 58 51.0	
	126nm,0.4s						
MK31	Makanchi Array	1.87	19	⇓Pn	Pb	17 58 28.0	-0.1
	3.2nm,0.1s,baz=202,slow=13,SNR=1972						
MK31				Lg	Lg	17 58 53.1	
	38nm,0.2s,baz=195,slow=25,SNR=32						
TDK	Taldyqorghan	2.11	270	*e*P	Pb	17 58 32.4	+0.1
	109nm,0.1s						
TDK				*e*S	Sb	17 58 59.0	+0.3
	990nm,0.2s						
TDK	Taldyqorghan	2.11	270	Pg	Pb	17 58 32.1	-0.2
	109nm,0.1s						
TDK				Lg	Lg	17 58 58.6	
	990nm,0.2s						
PDGK	Podgornoye	2.19	219	Pg	Pb	17 58 33.1	-0.5
	31nm,0.3s						
PDGK				Lg	Lg	17 59 00.7	
	555nm,0.7s						
PDGK	Podgornoye	2.19	219	⇑Pn	Pn	17 58 31.6	+1.2
	26nm,0.4s						
PDGK				⇑Lg	Lg	17 59 02.1	
	746nm,0.8s						
KPKS	Kokpek	2.50	232	*e*P	Pb	17 58 38.5	-0.4
	104nm,0.3s						
KPKS				*e*S	Sb	17 59 10.0	+0.2
	842nm,0.4s						
UZB	Uzynbulak	2.54	223	*e*P	Pb	17 58 39.2	-0.5
	17nm,0.2s						
UZB				*e*S	Sb	17 59 10.7	-0.4
	272nm,0.3s						
UZB	Uzynbulak	2.54	223	Pg	Pb	17 58 39.2	-0.5
	17nm,0.2s						
UZB				Lg	Lg	17 59 10.7	
	272nm,0.3s						
KURS	Kuram	2.78	237	*e*P	Pb	17 58 44.2	+0.5
	28nm,0.4s						
KURS				*e*S	Sb	17 59 19.6	+1.7
	124nm,0.4s						
KURS	Kuram	2.78	237	Pg	Pb	17 58 44.2	+0.5
	28nm,0.4s						
KURS				Lg	Lg	17 59 19.6	
	124nm,0.4s						
ZHN	Zhinishke	2.83	230	*e*P	Pb	17 58 44.2	-0.3
	27nm,0.2s						
ZHN				*e*S	Sb	17 59 19.8	+0.5
	453nm,0.3s						
ZHN	Zhinishke	2.83	230	Pg	Pb	17 58 44.2	-0.3
	27nm,0.2s						
ZHN				Lg	Lg	17 59 19.8	
	453nm,0.3s						
SATY	Saty	2.92	228	*e*P	Pb	17 58 46.7	+0.6
	16nm,0.2s						
SATY				*e*S	Sb	17 59 23.9	+2.0
	472nm,0.3s						
SATY	Saty	2.92	228	Pg	Pb	17 58 46.7	+0.6
	16nm,0.2s						
SATY				Lg	Lg	17 59 23.9	
	472nm,0.3s						
CHKK	Chushkaly	3.37	251	*e*P	Pb	17 58 54.3	+0.7
	4.4nm,0.2s						
CHKK				*e*S	Sb	17 59 36.5	+1.8
	238nm,0.2s						
CHKK	Chushkaly	3.37	251	Pg	Pb	17 58 54.3	+0.7
	4.4nm,0.2s						
CHKK				Lg	Lg	17 59 36.5	
	238nm,0.2s						
KTBS	Karatobe	3.62	250	*e*P	Pb	17 58 58.1	0.0
	3.3nm,0.2s						
KTBS				*e*S	Sb	17 59 43.6	+1.5
	173nm,0.6s						
KTBS	Karatobe	3.62	250	Pg	Pb	17 58 58.1	0.0
	3.3nm,0.2s						
KTBS				Lg	Lg	17 59 43.6	
	173nm,0.6s						
MDOK	Medeo	3.64	241	*e*P	Pb	17 58 59.2	+0.8
	21nm,0.4s						
MDOK				*e*S	Sb	17 59 45.4	+2.6
	158nm,0.8s						
MDOK	Medeo	3.64	241	⇓Pg	Pb	17 58 59.8	+1.4
	24nm,0.8s						
MDOK				⇑Lg	Lg	17 59 45.9	
	96nm,0.8s						
MDOK	Medeo	3.64	241	Pg	Pb	17 58 59.2	+0.8
	21nm,0.4s						
MDOK				Lg	Lg	17 59 45.4	
	158nm,0.8s						
KNDC	Almaty	3.67	242	⇑Pg	Pb	17 59 00.4	+1.7
	33nm,0.5s						
KNDC				⇓Lg	Lg	17 59 47.2	
	184nm,0.5s						
AAA	Alma-Ata	3.70	242	*e*P	Pb	17 59 00.6	+1.2
	18nm,0.1s						
AAA				*e*S	Sb	17 59 47.7	+3.4
	130nm,0.5s						
AAA	Alma-Ata	3.70	242	Pg	Pb	17 59 00.6	+1.2
	18nm,0.1s						
AAA				Lg	Lg	17 59 47.7	
	130nm,0.5s						
TNSS	Tian-Shan	3.77	240	*e*P	Pb	17 59 01.6	+0.8
	4.4nm,0.4s						
TNSS				*e*S	Sb	17 59 49.6	+2.8
	53nm,0.4s						
TNSS	Tian-Shan	3.77	240	Pg	Pb	17 59 01.6	+0.8
	4.4nm,0.4s						
TNSS				Lg	Lg	17 59 49.6	
	53nm,0.4s						
KUU	Kurty	3.79	254	*e*P	Pb	17 59 01.3	+0.4
	3.8nm,0.5s						
KUU				*e*S	Sb	17 59 48.8	+1.9
	113nm,0.4s						
KUU	Kurty	3.79	254	Pg	Pb	17 59 01.3	+0.4
	3.8nm,0.5s						
KUU				Lg	Lg	17 59 48.8	
	113nm,0.4s						
MTBS	Maitube	4.05	244	*e*P	Pb	17 59 05.5	+0.2
	6.1nm,0.2s						
MTBS				*e*S	Sb	17 59 56.1	+1.7
	165nm,0.3s						
MTBS	Maitube	4.05	244	Pg	Pb	17 59 05.5	+0.2
	6.1nm,0.2s						
MTBS				Lg	Lg	17 59 56.1	
	165nm,0.3s						
KRBS	Karabastau	4.31	254	*e*P	Pb	17 59 09.9	+0.2
	3.8nm,0.3s						
KRBS				*e*S	Sb	18 00 03.7	+1.8
	50nm,0.5s						
KRBS	Karabastau	4.31	254	Pg	Pb	17 59 09.9	+0.2
	3.8nm,0.3s						
KRBS				Lg	Lg	18 00 03.7	
	50nm,0.5s						
KST	Kastek	4.39	245	*e*P	Pb	17 59 12.0	+0.9
	7.7nm,0.5s						
KST				*e*S	Sb	18 00 07.3	+3.1
	76nm,0.8s						
KST	Kastek	4.39	245	Pg	Pb	17 59 12.0	+0.9
	7.7nm,0.5s						
KST				Lg	Lg	18 00 07.3	
	76nm,0.8s						
TKM2	Tokmak 2	4.68	245	⇑Pn	Pn	17 59 05.4	+0.6
	1.2nm,0.5s						
TKM2				⇓Pg	Pb	17 59 19.3	+3.1
	6.5nm,0.5s						
TKM2				⇑Lg	Lg	18 00 19.8	
	104nm,0.9s						
SGDS	Sogindy	5.11	254	*e*P	Pb	17 59 25.6	+2.3
	1.5nm,0.3s						
SGDS				*e*S	Sb	18 00 30.0	+5.2
	28nm,0.8s						
SGDS	Sogindy	5.11	254	Pg	Pb	17 59 25.6	+2.3
	1.5nm,0.3s						
SGDS				Lg	Lg	18 00 30.0	
	28nm,0.8s						
CHMS	Chumysh	5.20	249	⇑Pg	Pb	17 59 26.6	+1.7
	8.3nm,0.7s						
CHMS				⇓Lg	Lg	18 00 35.7	
	25nm,0.6s						
BTLS	Baital	5.20	273	*e*P	Pb	17 59 28.2	+3.3
	5.0nm,0.1s						
BTLS				*e*S	Sg	18 00 35.0	-5.8
	17nm,0.8s						
BTLS	Baital	5.20	273	Pg	Pb	17 59 28.2	+3.3
	5.0nm,0.1s						
BTLS				Lg	Lg	18 00 35.0	
	17nm,0.8s						
SEM	Semipalatinsk	5.43	352	*e*P	Pg	17 59 37.4	-0.3
	6.8nm,0.4s						
SEM				*e*S	Sg	18 00 50.6	+2.6
	65nm,0.3s						
KURBB	Kurchatov Arra	5.91	342	⇑Pn	Pn	17 59 21.7	+0.2
	1.9nm,0.5s						
KURBB				⇓Sn	Sn	18 00 28.6	-0.6
	37nm,0.6s						
KURBB				⇓Lg	Lg	18 00 58.6	
	162nm,0.8s						
OTUK	Ortayu	7.00	300	⇓Pn	Pn	17 59 35.9	-0.6
	1.7nm,0.5s						
OTUK				⇑Sn	Sn	18 00 54.6	-1.6
	7.0nm,0.6s						
OTUK				⇑Lg	Lg	18 01 35.4	
	20nm,0.5s						
KK31	Karatay Array	8.07	260	⇑Pn	Pn	17 59 51.1	0.0
	0.2nm,0.2s,baz=70,slow=14,SNR=6.5						
KK31				⇑Lg	Lg	18 02 05.6	
	3.2nm,0.4s,baz=62,slow=27,SNR=7.5						
BRVK	Borovoye	10.83	322	⇑Pn	Pn	18 00 29.0	+0.1
	1.2nm,0.6s						
BRVK				⇓Sn	Sn	18 02 26.8	-3.2
	2.9nm,0.7s						
BRVK				⇓Lg	Lg	18 03 37.6	
	24nm,0.9s						
AB31	Akbulak array	15.17	294	⇓Pn	Pn	18 01 25.7	-2.4
	0.2nm,0.4s,baz=109,slow=8.1,SNR=4.9						
AKTO	Aktyubinsk	16.59	297	⇓Pn	Pn	18 01 46.3	-0.2
	5.4nm,1.1s						

*NEIC **07** 18:27:02.4±1.7, 1°.78S±0°.08×99°.59E±0°.07, h39^{km}±4^{km}, mb4.3/12, Error ellipse: s-maj=13.1km s-min=7.5km az=223.0*
*DJA **07** 18:27:03.7±0.3, 2°S±2°×10°0E±°, h46^{km}±10^{km}, M4.3/18, mb4.5/7, mB4.7/6, MLv4.4/18, Mw(mB)4.0/6*
*IDC **07** 18:27:04.5±3.2, 1°.59S×99°.74E, h56^{km}±29^{km}, mb3.7/10, mbtmp3.9/13, ML3.7/3, MS3.0/1, Error ellipse: s-maj=34.5km s-min=15.0km az=48.0*
ISC 07 18:27:03.9±0.9, **1°.68S**±0°.04×**99°.66E**±0°.04, **h55**^{km}±9^{km}, **n62**, σ**1^{s}22**/64, **mb4.1**/12, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	Saibi	0.67	301	P	Pn	18 27 17.6	+0.1
SISI				S	Sn	18 27 27.7	+0.3
PPSI	Pulau Pagai	1.13	162	P	Pn	18 27 24.3	+0.8
PPI	Padang Panjang	1.42	31	P	Pn	18 27 26.7	-0.7
PPI				S	Sn	18 27 43.7	-1.3
KRJI	Kerinci	1.85	103	P	Pn	18 27 33.9	+0.6
KRJI				S	Sn	18 27 58.1	+2.5
BKNI	Bangkinang	2.42	35		Pn	18 27 41.3	+0.2
BKNI	Bangkinang	2.42	35	P	Pn	18 27 40.5	-0.6
BKNI				S	Sn	18 28 09.4	-0.1
BKNI	Bangkinang	2.42	35	P	Pn	18 27 41.6	+0.5
RGRI	Rengat	2.98	64	P	Pn	18 27 49.8	+1.1
RGRI				S	Sn	18 28 24.7	+1.4
GSI	Gunungsitoli	3.62	325		Pn	18 27 56.6	-0.9
GSI	Gunungsitoli	3.62	325	P	Pn	18 27 56.8	-0.7
GSI	Gunungsitoli	3.62	325	P	Pn	18 27 56.9	-0.6
MNAI	Manna	4.23	129		Pn	18 28 06.8	+0.9
MNAI					Sn	18 28 53.9	-0.2
MNAI	Manna	4.23	129	P	Pn	18 28 07.0	+1.1
MNAI				S	Sn	18 28 52.5	-1.6
MNAI	Manna	4.23	129	P	Pn	18 28 07.2	+1.3
RPSI	Rantau Prapat	4.41	350		Pn	18 28 07.5	-0.7
RPSI					Sn	18 29 02.9	+4.6
PSI	Prapat	4.51	351	P	Pn	18 28 07.5	-2.3
	2.6nm,0.3s,baz=139,slow=19,SNR=5.9						
PSI				S	Sn	18 29 02.9	+1.8
	6.4nm,0.4s,baz=169,slow=21,SNR=1.1						
	6.0nm,0.3s						
DSRI	Dabo	5.06	76	P	Pn	18 28 17.6	+0.4
	0.3nm1μm19nm,0.4s						
PMBI	Palembang	5.26	104		Pn	18 28 17.2	-2.7
MYKOM	Kota Tinggi	5.42	51		Pn	18 28 22.4	+0.2
KCSI	Kotacane, Aceh	5.50	340	P	Pn	18 28 21.8	-1.5
	0.2nm28nm,0.8s						
LWLI	Liwa	5.50	127	P	Pn	18 28 25.1	+1.7
	1.4nm5μm191nm,0.7s						
TPRI	Tanjung Pinang	5.51	62	P	Pn	18 28 23.6	+0.2
	0.3nm57nm,0.4s						
KASI	Kota Agung	6.16	128	P	Pn	18 28 32.8	+0.5
	0.4nm1μm66nm,0.7s						
IPM	Ipoh	6.27	13	Pn	Pn	18 28 34.3	+0.5
IPM	Ipoh	6.27	13	P	Pn	18 28 35.0	+1.2
KULM	Kulim	6.99	8	Pn	Pn	18 28 43.5	-0.3
LHMI	Lhok Sumawe	7.38	338	Pn	Pn	18 28 47.5	-1.5
LHMI	Lhok Sumawe	7.38	338	P	Pn	18 28 48.5	-0.5
LEM	Lembang	9.44	123	P	Pn	18 29 18.1	+0.6
	2.0nm,0.3s,baz=332,slow=22,SNR=1.8						
LEM				LR	LR	18 32 38.4	
	comp=Z,80nm,19.6s,baz=16,slow=35						
	5.6nm,0.3s						
XMIS	Christmas Isla	10.58	146	Pn	Pn	18 29 27.1	-5.8
UGM	Wanagama	12.47	120	Pn	Pn	18 29 56.3	-2.4
UGM	Wanagama	12.47	120	P	Pn	18 29 59.5	+0.8
JAGI	Jajag, Banyuwa	15.93	116	Pn	Pn	18 30 44.4	-0.2
JAGI				IAmb	IAmb	18 31 04.1	
	comp=Z,44nm,1.6s						
JAGI	Jajag, Banyuwa	15.93	116	P	Pn	18 30 45.6	+1.0
MYLDM	Lahad Datu	20.02	70	P	P	18 31 32.5	+0.2
MYLDM				IAmb	IAmb	18 32 02.9	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	20.02	358	P	P	18 31 32.0	-0.4
	comp=Z,0.1nm,0.3s,baz=187,slow=11,SNR=2.9						
	comp=Z,0.5nm,0.6s						
PALK	Pallekele	20.90	295	P	P	18 31 43.1	+1.2
	comp=Z,2.8nm,0.6s,baz=175,slow=20,SNR=1.6						
	comp=Z,2.8nm,0.6s						
PALK	Pallekele	20.90	295	IAmb	IAmb	18 32 21.2	
	comp=Z,14nm,1.2s						
TOLI2	Tolitoli	21.30	83	P	P	18 31 46.0	-0.1
TOLI2				IAmb	IAmb	18 31 47.1	
	comp=Z,14nm,0.6s						
H08S2	Diego Garcia H	27.71	257	T	T	19 00 53.9	
	baz=79,slow=75,SNR=31						
H08S3	Diego Garcia H	27.71	257	T	T	19 00 59.2	
	baz=79,slow=75,SNR=150						
H08S1	Diego Carcia H	27.72	257	T	T	19 00 59.9	
	baz=79,slow=75,SNR=6.0						
FITZ	Fitzroy Crossi	30.27	124	P	P	18 33 09.8	-0.2
SIJI	Sorong	31.61	89	P	P	18 33 21.4	-0.4
	comp=Z,6.6nm,0.6s,baz=306,slow=10,SNR=5.5						
	comp=Z,6.6nm,0.6s						
KNRA	Kununurra	31.88	118	P	P	18 33 22.0	-2.2
WRAB	Tennant Creek	38.45	121	P	P	18 34 20.0	-0.7
AS31	Alice Springs	39.72	126	P	P	18 34 31.8	+0.5
ASAR	Alice Springs	39.72	126	P	P	18 34 31.5	+0.2
	comp=Z,1.5nm,0.5s,baz=302,slow=7.8,SNR=54						
	comp=Z,1.5nm,0.5s						
KSRS	Korea Array	46.92	31	P	P	18 35 28.1	-0.9
	comp=Z,1.0nm,0.8s,baz=222,slow=7.3,SNR=5.0						
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	49.62	132	P	P	18 35 50.6	+0.6
	comp=Z,1.1nm,0.6s,baz=330,slow=16,SNR=1.3						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	49.66	6	P	P	18 35 50.0	-0.2
	comp=Z,0.5nm,0.7s,baz=187,slow=11,SNR=3.9						
	comp=Z,0.5nm,0.7s						
SONM	Songino Array	49.66	6	IAmb	IAmb	18 35 58.3	
	comp=Z,3.3nm,1.6s						
MK31	Makanchi Array	50.63	345	P	P	18 35 58.1	+0.7
MKAR	Makanchi Array	50.63	345	P	P	18 35 57.8	+0.4
	comp=Z,1.1nm,0.5s,baz=157,slow=8.8,SNR=20						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	56.79	350	P	P	18 36 41.9	-0.4
	comp=Z,0.6nm,0.4s,baz=197,slow=3.1,SNR=5.2						
	comp=Z,0.6nm,0.4s						
ABKAR	Akbulak array	61.20	331	P	P	18 37 12.7	-0.2
ABKAR				IAmb	IAmb	18 37 13.4	
	comp=Z,1.5nm,0.7s						
ABKAR	Akbulak array	61.20	331	P	P	18 37 12.6	-0.3
PETK	Petropavlovsk-	72.80	32	P	P	18 38 28.0	+1.5
BRTR	Keskin Array B	72.86	312	P	P	18 38 26.8	-0.5
	comp=Z,0.3nm,0.6s,baz=96,slow=5.8,SNR=2.8						
	comp=Z,0.3nm,0.6s						
BKZ	Black Stump Fm	78.74	129	P	P	18 39 00.4	-0.4
BKZ				IAmb	IAmb	18 39 07.8	
	comp=Z,5.5nm,1.2s						
FINES	FINESS Array B	83.67	332	P	P	18 39 26.8	+0.4
	comp=Z,0.4nm,0.5s,baz=98,slow=5.8,SNR=7.3						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	144.65	37	PKP	PKPbc	18 46 35.2	+1.1
	comp=Z,0.8nm,0.6s,baz=244,slow=0.7,SNR=14						

*NEIC **07** 18:33:41.1±2.7, 6°.53S±0°.08×130°.04E±0°.08, h154^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=14.2km s-min=7.6km*

az=223.0

*IDC **07** 18:33:41.3±1.9, 6°.38S×130°.08E, h158^{km}±18^{km}, mb3.4/6, mbtmp4.0/9, Error ellipse: s-maj=28.0km s-min=14.6km az=68.0*

ISC 07 18:33:39.7±0.5**, 6°.44S**±0°.05×**130°.03E**±0°.06**, h146**^{km}**, n55,** σ**1**^{s}**61**/62**, mb4.1**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.99	141	Pn	Pn	18 34 14.9	+0.4
SAUI				Sn	Sn	18 34 42.7	+1.5
SAUI	Saumlaki	1.99	141	P	Pn	18 34 17.9	+3.5
SIJI	Sorong	5.67	13	P	Pn	18 35 01.9	-0.2
	14nm,0.2s,baz=214,slow=22,SNR=34						
SIJI				S	Sn	18 36 02.0	-4.3
	34nm,0.2s,baz=282,slow=24,SNR=24						
MTN	Manton Dam	6.46	170		Pn	18 35 13.0	+0.5
MTN				Sn	Sn	18 36 22.6	-2.6
MTN	Manton Dam	6.46	170	P	Pn	18 35 14.0	+1.5
KDU	Kakadu	6.66	159	P	Pn	18 35 16.0	+0.8
BATI	Baumata	7.33	239	P	Pn	18 35 26.9	+2.7
	18nm,0.4s,baz=93,slow=2.6,SNR=18						
BATI				S	Sn	18 36 45.9	-0.3
	16nm,0.3s,baz=37,slow=7.6,SNR=3.2						
LUWI	Luwuk	9.01	306	Pn	Pn	18 35 46.5	-0.2
KNRA	Kununurra	9.27	188	Pn	Pn	18 35 51.0	+1.0
KNRA					Sn	18 37 28.9	-3.9
KNRA	Kununurra	9.27	188	P	Pn	18 35 50.6	+0.5
TOLI2	Tolitoli	11.89	309	Pn	Pn	18 36 26.1	+1.3
FITZ	Fitzroy Crossi	12.36	200	Pn	Pn	18 36 29.2	-1.6
FITZ	Fitzroy Crossi	12.36	200	P	Pn	18 36 30.4	-0.4
WRAB	Tennant Creek	14.06	163	P	Pn	18 36 49.9	-2.7
WRAB	Tennant Creek	14.06	163	P	Pn	18 36 52.6	0.0
COEN	Coen	14.93	121	P	Pn	18 37 04.3	+0.7
COEN	Coen	14.93	121	P	P	18 37 05.6	0.0
JAGI	Jajag, Banyuwa	15.87	262	Pn	Pn	18 37 13.8	-1.4
JAGI				IAmb	IAmb	18 37 38.3	
	comp=Z,19nm,1.3s						
MYLDM	Lahad Datu	16.30	315		P	18 37 23.2	+2.5
MYLDM				IAmb	IAmb	18 37 39.8	
	comp=Z,23nm,1.3s						
QIS	Mount Isa	16.83	147	P	Pn	18 37 27.9	+1.0
AS31	Alice Springs	17.53	168	P	Pn	18 37 35.3	0.0
ASAR	Alice Springs	17.53	168	P	Pn	18 37 35.9	+0.6
	comp=Z,3.0nm,0.4s,baz=346,slow=11,SNR=64						
ASAR				S	S	18 40 44.3	-5.0
	comp=Z,0.6nm,0.4s,baz=348,slow=26,SNR=4.9						
ASAR				ScP	ScP	18 45 25.7	-3.0
	comp=Z,0.3nm,0.5s,baz=3.7,slow=2.2,SNR=2.6						
ASAR	Alice Springs	17.53	168	Pn	Pn	18 37 35.6	+0.3
MTSU	Mount Surprise	18.15	131	P	Pn	18 37 43.0	+0.4
WRKA	Warakurna	18.57	185	P	Pn	18 37 47.5	-0.1
SBUM	Sibu	19.85	296	P	P	18 38 00.9	+1.4
SBUM				IAmb	IAmb	18 38 03.9	
	comp=Z,4.2nm,0.9s						
CTA	Charters Tower	20.79	132	P	P	18 38 10.9	+1.4
	comp=Z,4.0nm,0.9s,baz=327,slow=11,SNR=1.7						
	comp=Z,4.0nm,0.9s						
CTA	Charters Tower	20.79	132	P	P	18 38 11.1	+1.5
OOD	Oodnadatta	21.91	166	P	P	18 38 22.0	+0.7
RABL	Rabaul	22.15	85	P	P	18 38 24.3	+0.3
INKA	Innaminka	23.50	156	P	P	18 38 38.7	+2.2
MULG	Mulgathing	24.02	171	P	P	18 38 42.2	+1.0
FORT	Forrest	24.29	184	P	P	18 38 44.8	+1.3
LCRK	Leigh Creek	25.09	163	P	P	18 38 51.8	+0.9
	comp=Z,39nm,2.8s						
BBOO	Buckleboo	26.83	169	P	P	18 39 06.0	-0.5
BBOO	Buckleboo	26.83	169	P	P	18 39 07.1	+0.5
STKA	Stephens Creek	27.52	158	P	P	18 39 13.1	+0.4
	comp=Z,1.4nm,0.3s,baz=334,slow=7.0,SNR=7.8						
	comp=Z,1.4nm,0.3s						
STKA	Stephens Creek	27.52	158	P	P	18 39 13.1	+0.4
EIDS	Eidsvold	27.56	135	P	P	18 39 13.2	+0.1
EIDS				IAmb	IAmb	18 39 22.1	
	comp=Z,18nm,1.4s						
NAPP	Napperby	27.66	165	P	P	18 39 14.9	+1.0
HTT	Hallett	28.10	164	P	P	18 39 18.9	+1.0
CMSA	Cobar Meteorol	28.95	152	P	P	18 39 26.6	+1.2
TWOA	Tennyson Woods	29.53	166	P	P	18 39 32.0	+1.6
KULM	Kulim	31.56	291	P	P	18 39 48.2	-0.4
ARPS	Mount Arapiles	32.06	162	P	P	18 39 54.3	+1.6
CAN	Canberra	33.63	151	P	P	18 40 07.4	+0.9
CAN				IAmb	IAmb	18 40 16.5	
	comp=Z,14nm,1.2s						
CMAR	Chiang Mai Arr	39.40	309	P	P	18 40 54.8	-0.8
	comp=Z,0.5nm,0.8s,baz=117,slow=7.2,SNR=2.4						
	comp=Z,0.5nm,0.8s						
JTU	Tsushima	40.74	359	P	P	18 41 07.1	+0.7
BKZ	Black Stump Fm	52.97	135	P	P	18 42 40.1	-1.3
BKZ				IAmb	IAmb	18 42 44.2	
	comp=Z,10nm,1.4s						
SONM	Songino Array	57.92	341	P	P	18 43 16.9	+0.2
	comp=Z,0.3nm,0.5s,baz=165,slow=6.9,SNR=4.9						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	67.78	327	P	P	18 44 22.4	+0.7
	comp=Z,1.5nm,0.4s,baz=114,slow=7.8,SNR=26						
	comp=Z,1.5nm,0.4s						
MAKZ	Makanchi	67.95	327	P	P	18 44 24.0	+1.1
MAKZ				IAmb	IAmb	18 44 24.7	
	comp=Z,3.2nm,1.3s						
KURBB	Kurchatov Arra	72.05	328	P	P	18 44 48.0	+0.3
	comp=Z,0.5nm,0.5s,baz=127,slow=4.9,SNR=8.5						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	72.06	329	P	P	18 44 48.0	+0.3
QSPA	South Pole Qui	83.53	180	P	P	18 45 50.6	-0.6
QSPA				IAmb	IAmb	18 46 07.4	
	comp=Z,5.4nm,1.6s						

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*IDC **07** 18:42:46.0±1.4, 42°.51N×111°.64W, h0^{km}, mbtmp2.8/3, ML3.1/3, Error ellipse: s-maj=35.5km s-min=5.4km az=159.0*

*NEIC **07** 18:42:46.7±1.7, 42°.56N±0°.02×111°.63W±0°.04, h5^{km}±7^{km}, ML2.7/95, Error ellipse: s-maj=4.1km s-min=2.2km az=118.0*

ISC 07 18:42:46.7±1.2**, 42°.54N**±0°.03×**111°.62W**±0°.03**, h6**^{km}±11^{km}**, n83,** σ**1**^{s}**09**/93**, Eastern Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHID	Auburn Hatcher	0.44	59		Pg	18 42 55.5	+0.2
AHID				Sg	Sg	18 43 02.0	+0.9
ECR	Eagle Creek	0.55	19		Pg	18 42 57.8	+0.5
HWUT	Hardware Ranch	0.93	178		Pg	18 43 04.3	-0.3
HWUT				Sg	Sb	18 43 17.9	-0.2
REDW	Red Top Meadow	0.99	34		Pg	18 43 05.2	-0.6
REDW				Sg	Sg	18 43 19.0	+0.3
REDW				IAML		18 43 23.3	
	417nm,0.6s						
TPAW	Teton Pass	1.07	27		Pg	18 43 06.6	-0.6
TPAW				Sg	Sg	18 43 21.4	+0.3
TPAW				IAML		18 43 23.5	
	341nm,0.6s						
TPAW				IAML		18 43 27.7	
	147nm,0.6s						
SNOW	Snow King Moun	1.12	34		Pg	18 43 07.7	-0.4
SNOW				Sg	Sg	18 43 22.8	+0.1
SNOW				IAML		18 43 30.2	
	162nm,0.7s						
SNOW				IAML		18 43 30.7	
	184nm,0.7s						
HVU	Hansel Valley	1.15	229		Pg	18 43 08.0	-0.7
HVU				Sg	Sb	18 43 23.6	-0.7
FXWY	Fox Creek	1.18	21	Pg	Pg	18 43 08.5	-0.8
FXWY				Sg	Sg	18 43 24.8	+0.1
LOHW	Long Hollow	1.30	34		Pg	18 43 10.6	-1.1
LOHW				Sg	Sg	18 43 28.4	-0.2
LOHW				IAML		18 43 31.2	
	130nm,0.7s						
LOHW				IAML		18 43 31.4	
	192nm,0.8s						
MOOW	Moose Ponds	1.37	28		Pg	18 43 11.4	-1.5
MOOW					Sg	18 43 29.3	-1.3
MOOW				IAML		18 43 32.5	
	80nm,0.6s						
BW06	Boulder Array	1.54	81		Pn	18 43 15.4	+0.6
BW06				Sn	Sn	18 43 35.1	-0.1
PD31	Pinedale Array	1.54	81		Pn	18 43 14.7	-0.2
PD31				Sn	Sn	18 43 35.6	+0.4
PDAR	Pinedale Array	1.54	81	Pg	Pg	18 43 16.1	-0.1
	11nm,0.3s,baz=256,slow=15,SNR=225						
PDAR				Lg	Lg	18 43 35.3	
	9.5nm,0.3s,baz=273,slow=32,SNR=9.6						
PDAR	Pinedale Array	1.54	81		Pn	18 43 14.8	0.0
FLWY	Flagg Ranch	1.68	23		Pn	18 43 16.6	-0.2
FLWY				Sn	Sb	18 43 39.9	+0.2
FLWY				IAML		18 43 44.4	
	68nm,1.2s						
FLWY				IAML		18 43 45.0	
	69nm,0.9s						
YPP	Pitchstone Pla	1.83	19	Pn	Pn	18 43 19.4	+0.4
YPP				IAML		18 43 47.4	
	comp=N,55nm,0.8s						
BGU	Big Grassy Mou	1.93	214		Pn	18 43 20.0	-0.2
BGU				IAML		18 43 50.3	
	comp=N,49nm,0.4s						
BGU				IAML		18 43 56.1	
	comp=E,54nm,0.7s						
JLU	Jordanelle	1.94	176		Pn	18 43 21.2	+0.8
JLU				IAML		18 43 55.6	
	comp=E,77nm,1.3s						
JLU				IAML		18 44 01.6	
	comp=N,52nm,1.1s						
YFT	Old Faithful	1.99	16		Pn	18 43 21.5	+0.3
YFT				IAML		18 43 54.6	
	comp=N,37nm,0.8s						
YFT				IAML		18 43 58.9	
	comp=E,36nm,0.8s						
H17A	Grant Village	2.00	22		Pn	18 43 21.4	+0.1
YMR	Madison River	2.18	12		Pn	18 43 22.9	-0.9
YMR				IAML		18 43 59.5	
	comp=E,54nm,0.7s						
YMR				IAML		18 44 04.9	
	comp=N,49nm,0.7s						
BCYI	Bear Canyon	2.20	324		Pn	18 43 24.7	+0.7
LKWY	Lake	2.21	23		Pn	18 43 24.0	-0.1
LKWY				IAML		18 43 37.2	
	comp=N,25nm,0.6s						
YNR	Norris Junctio	2.28	17		Pn	18 43 25.8	+0.6
HLID	Hailey	2.29	297		Pn	18 43 25.4	+0.2
HLID				IAML		18 44 02.0	
	comp=N,33nm,0.5s						
HLID				IAML		18 44 02.7	
	comp=N,34nm,0.6s						
QLMT	Earthquake Lak	2.29	3		Pn	18 43 26.1	+0.7
YHH	Holmes Hill	2.31	14		Pn	18 43 26.4	+0.7
YHL	Hebgen Lake	2.33	8		Pn	18 43 26.6	+0.8
YHL				IAML		18 44 05.6	
	comp=E,23nm,0.5s						
MCMT	McKenzie Canyo	2.46	339		Pn	18 43 29.4	+1.8
RDMU	Red Mountain	2.50	141		Pn	18 43 28.4	+0.3
DUG	Dugway, Tooele	2.51	201		Pn	18 43 28.3	+0.1
DUG				IAML		18 44 09.1	
	comp=E,27nm,0.8s						
DUG				IAML		18 44 11.3	
	comp=E,33nm,1.2s						
NLU	North Lily Min	2.61	188		Pn	18 43 29.8	+0.2
DLMT	Dillon	2.91	346		Pn	18 43 33.3	-0.4
DLMT				IAML		18 44 28.9	
	comp=E,18nm,1.6s						
BOZ	Bozeman (W)	3.06	360		Pn	18 43 35.6	-0.1
P18A	Preston Nutter	3.09	160		Pn	18 43 37.2	+1.0
P18A				IAML		18 44 23.5	
	comp=N,31nm,0.7s						
P18A				IAML		18 44 27.1	
	comp=E,27nm,0.7s						
RLMT	Red Lodge	3.09	33		Pn	18 43 36.7	+0.4
P17A	Butcher Ranch,	3.13	168		Pn	18 43 36.6	-0.2
P17A				IAML		18 44 28.9	
	comp=N,27nm,0.9s						
P17A				IAML		18 44 31.7	
	comp=E,30nm,0.7s						
MFID	Camas Ranch	3.21	287		Pn	18 43 39.5	+1.7
MFID				IAML		18 44 30.6	
	comp=E,27nm,0.4s						
MFID				IAML		18 44 32.6	
	comp=E,29nm,0.4s						
ELK	Elko	3.25	238	Pn	Pn	18 43 39.3	+0.8
	comp=E,0.9nm,0.3s,baz=52,slow=14,SNR=14						
ELK				Lg	Lg	18 44 27.9	
	comp=E,1.8nm,0.3s,baz=22,slow=5.4,SNR=4.0						
	comp=E,1.2nm,0.2s						
ELK	Elko	3.25	238		Pn	18 43 39.3	+0.8
ELK				IAML		18 44 31.8	
	comp=E,11nm,0.7s						
ELK				IAML		18 44 34.0	
	comp=E,9.5nm,0.4s						
TMUT	Trail Mountain	3.25	174		Pn	18 43 39.9	+1.3
TMUT				IAML		18 44 35.0	
	comp=N,22nm,0.8s						
TMUT				IAML		18 44 47.4	
	comp=E,22nm,0.7s						
LRM	Limekiln Ridge	3.34	350		Pn	18 43 39.1	-0.6
RWWY	Rawlins	3.39	103		Pn	18 43 40.8	+0.4
O20A	White River Ci	3.50	132		Pn	18 43 43.5	+1.7
SRU	San Rafael Swe	3.52	166		Pn	18 43 43.3	+1.1
SRU				IAML		18 44 38.4	
	comp=N,22nm,0.8s						
GCMT	Greycliff	3.54	23	Pn	Pn	18 43 45.4	+3.0
Q16A	Castle Valley	3.63	175		Pn	18 43 44.7	+1.0
Q16A				IAML		18 44 45.9	
	comp=N,12nm,0.6s						
Q16A				IAML		18 44 53.4	
	comp=E,12nm,1.4s						
K22A	Casper	3.76	87		Pn	18 43 44.7	-0.8
TCRU	Three Creeks R	3.98	189		Pn	18 43 48.9	+0.4
MSU	Marysvale	4.05	186		Pn	18 43 49.7	+0.3
PLID	Pearl Lake	4.07	310		Pn	18 43 49.9	+0.2
PLID				IAML		18 44 58.4	
	comp=E,7.8nm,1.7s						
PLID				IAML		18 45 00.8	
	comp=E,7.5nm,0.8s						
HRY	Holter Researc	4.17	358		Pn	18 43 49.7	-1.3
PSUT	Pine Spring	4.35	204	Pn	Pn	18 43 53.2	-0.3
MTPU	Mount Pierson	4.51	186	Pn	Pn	18 43 56.4	+0.5
PV23	Carpenter Ridg	4.54	153		Pn	18 43 55.9	-0.3
N23A	Red Feather La	4.55	109		Pn	18 43 55.6	-0.8
MSO	Missoula	4.60	340		Pn	18 43 57.8	+0.9
MSO				IAML		18 45 14.7	
	comp=E,8.9nm,1.1s						
MSO				IAML		18 45 15.5	
	comp=E,6.6nm,0.6s						
PV10	Paradox Valley	4.60	154		Pn	18 43 58.1	+1.0
PV07	Paradox Valley	4.68	150	Pn	Pn	18 43 59.2	+1.1
BMN	Battle Mountai	4.71	245		Pn	18 43 58.3	-0.2
PV11	David Mesa, Pa	4.72	153		Pn	18 43 57.9	-0.8
BMO	Blue Mountains	4.73	301		Pn	18 43 58.3	-0.3
PHWY	Pilot Hill	4.76	103		Pn	18 43 58.6	-0.6
PV15	Paradox Valley	4.83	149		Pn	18 43 58.2	-2.0
SMCO	Snowmass	4.87	132		Pn	18 43 59.9	-0.9
PV13	Radium Mtn., P	4.87	153		Pn	18 43 59.2	-1.6
J08A	Circle Bar Ran	5.10	282	Pn	Pn	18 44 04.1	+0.3
CCUT	Cedar City	5.16	196	Pn	Pn	18 44 04.4	-0.3
R11A	Troy Canyon, C	5.17	217	Pn	Pn	18 44 04.8	0.0
R11A				IAML		18 45 38.3	
	comp=E,4.0nm,2.6s						
R11A				IAML		18 45 39.0	
	comp=N,3.5nm,2.6s						
WVOR	Wild Horse Val	5.19	271	Pn	Pn	18 44 04.7	-0.4
WVOR				IAML		18 45 44.5	
	comp=N,7.5nm,4.5s						
WVOR				IAML		18 46 01.4	
	comp=N,9.2nm,4.6s						
ISCO	Idaho Springs	5.29	119		Pn	18 44 05.0	-1.6
ISCO				IAML		18 45 38.6	
	comp=N,6.5nm,0.9s						
ISCO				IAML		18 45 38.7	
	comp=N,7.5nm,0.7s						
F10A	Beach Ranch, E	5.29	312	Pn	Pn	18 44 05.9	-0.5
EGMT	Eagleton	5.64	13	Pn	Pn	18 44 09.0	-2.1
LAO	LASA Array	5.66	41	Pn	Pn	18 44 08.3	-3.1
RSSD	Black Hills	5.75	71		Pn	18 44 12.6	-0.2
MVCO	Mesa Verde	5.84	155	Pn	Pn	18 44 13.8	-0.2
KVN	Kaiserville	6.03	237	Pn	Pn	18 44 10.9	-5.7
NVAR	Mina Array Bea	6.54	233	Pn	Pn	18 44 23.9	+0.2
	comp=N,0.4nm,0.3s,baz=53,slow=14,SNR=8.1						
NVAR				Sn	Sn	18 45 37.6	-1.2
	baz=31,slow=41						
NVAR				Lg	Lg	18 46 12.9	
	comp=N,0.4nm,0.3s,baz=51,slow=27,SNR=1.9						
	comp=N,0.3nm,0.3s						
RYN	Ryan	6.55	236	Pn	Pn	18 44 29.6	+5.9
LHV	Little Huntoon	6.78	233	Pn	Pn	18 44 30.9	+4.2
YERR	Yerington	6.79	241	Pn	Pn	18 44 30.4	+3.3
NEW	Newport	6.91	328	Lg	Lg	18 46 15.2	
	comp=N,0.1nm,0.3s,baz=304,slow=23,SNR=1.7						
TXAR	Lajitas Array	14.65	151	Pn	Pn	18 46 16.3	+1.6
	baz=340,slow=10.0,SNR=2.7						
	comp=N,0.1nm,0.6s						

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*IDC **07** 18:55:14.8±0.9, 28°.34S×177°.19W, h0^{km}, mb4.1/6, mbtmp4.1/9, ML3.5/3, MS3.6/6, Error ellipse: s-maj=27.3km s-min=16.2km az=118.0*

*NEIC **07** 18:55:19.2±2.9, 28°.44S±0°.04×177°.0W±0°.1, h35^{km}±2^{km}, mb4.6/20, Error ellipse: s-maj=16.0km s-min=5.3km az=110.0*

ISC 07 18:55:20.6±0.5**, 28°.59S**±0°.06×**177°.15W**±0°.08**, h48**^{km}**, n49,** σ**1**^{s}**93**/42**, mb4.5**/13**, MS3.6**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.94	226	Pn	Pn	18 55 38.8	+1.4
	1µm,0.3s,baz=116,slow=6.6,SNR=24						
RAO				Sn	Sn	18 55 52.5	+2.7
	3µm,0.3s,baz=79,slow=22,SNR=11						
RAO	Raoul Island	0.94	226		Pn	18 55 38.6	+1.2
RAO				Sn	Sn	18 55 52.7	+2.9
URZ	Urewera	10.76	205	Pn	Pn	18 57 52.1	+0.1
	0.8nm,0.3s,baz=299,slow=18,SNR=2.1						
URZ				Sn	Sn	18 59 46.1	-4.9
	2.6nm,0.3s,baz=288,slow=19,SNR=9.2						
	2.2nm,0.3s						
NIUE	Niue	11.55	36	Pn	Pn	18 57 57.7	-5.2
MSVF	Nonsavu	11.67	337	Pn	Pn	18 58 05.8	+1.1
	0.1nm,0.3s,baz=217,slow=20,SNR=1.9						
MSVF				LR	LR	19 01 49.5	
	comp=Z,163nm,18.8s,baz=145,slow=35						
BKZ	Black Stump Fm	11.79	205	Pn	Pn	18 58 03.1	-3.0
BFZ	Birch Farm	13.22	202	Pn	Pn	18 58 19.7	-5.9
TUWZ	Tuamarina	14.73	207	Pn	Pn	18 58 42.0	-3.8
KHZ	Kahutara	15.72	206	P	Pn	18 58 49.8	-8.9
DZM	Mont Dzumac	16.18	290	Pn	Pn	18 59 03.7	-1.1
	0.1nm,0.3s,baz=140,slow=15,SNR=1.8						
DZM				LR	LR	19 03 46.8	
	comp=Z,277nm,19.5s,baz=82,slow=32						
	4.7nm,0.9s						
OXZ	Oxford	17.08	208	Pn	Pn	18 59 08.5	-7.4
OXZ				IAmb	IAmb	18 59 23.2	
	comp=Z,24nm,1.5s						
RAR	Rarotonga	17.38	69	P	Pn	18 59 18.1	-1.6
	comp=Z,1.4nm,0.3s,baz=158,slow=21,SNR=1.9						
	comp=Z,16nm,0.7s						
RAR	Rarotonga	17.38	69	P	Pn	18 59 15.7	-4.1
RAR				IAmb	IAmb	18 59 52.0	
	comp=Z,196nm,1.8s						
KOUNC	Koumac, New Ca	18.67	291	P	P	18 59 30.8	-4.0
PPT	Papeete	27.57	73	LR	LR	19 11 07.4	
	comp=Z,40nm,18.8s,baz=176,slow=35						
CTA	Charters Tower	34.29	276	P	P	19 02 03.8	+1.2
	comp=Z,2.1nm,0.4s,baz=112,slow=10,SNR=6.7						
CTA				LR	LR	19 14 28.7	
	comp=Z,82nm,18.0s,baz=86,slow=34						
	comp=Z,2.1nm,0.4s						
CTAO	Charters Tower	34.29	276		P	19 02 03.2	+0.7
CTAO				IAmb	IAmb	19 02 27.1	
	comp=Z,13nm,1.2s						
RABL	Rabaul	37.92	304	P	P	19 02 35.5	+1.9
BBOO	Buckleboo	40.20	252	P	P	19 02 51.8	-0.7
AS31	Alice Springs	43.98	265	P	P	19 03 22.6	-0.8
ASAR	Alice Springs	43.98	265	P	P	19 03 22.6	-0.8
	comp=Z,1.2nm,0.6s,baz=101,slow=6.9,SNR=35						
ASAR				LR	LR	19 20 23.4	
	comp=Z,75nm,18.6s,baz=144,slow=34						
	comp=Z,1.2nm,0.6s						
WRAB	Tennant Creek	44.80	270	P	P	19 03 28.4	-1.6
WRAB				IAmb	IAmb	19 03 30.3	
	comp=Z,4.5nm,0.8s						
VNDA	Vanda	49.96	186	P	P	19 04 12.6	+3.3
	comp=Z,0.9nm,0.8s,baz=27,slow=5.5,SNR=5.6						
	comp=Z,0.9nm,0.8s						
VNDA	Vanda	49.96	186	P	P	19 04 11.4	+2.1
VNDA				IAmb	IAmb	19 04 47.4	
	comp=Z,9.3nm,1.7s						
MTN	Manton Dam	50.47	277	P	P	19 04 13.4	-0.6
MTN				IAmb	IAmb	19 04 41.9	
	comp=Z,24nm,1.4s						
KNRA	Kununurra	51.34	272	P	P	19 04 20.4	-0.1
FITZ	Fitzroy Crossi	53.13	268	P	P	19 04 32.6	-1.1
CASY	Casey	57.08	207	P	P	19 05 01.3	-0.3
CASY				IAmb	IAmb	19 05 02.7	
	comp=Z,7.8nm,0.8s						
BATI	Baumata	58.18	276	LR	LR	19 30 16.3	
	comp=Z,134nm,18.1s,baz=122,slow=36						
QSPA	South Pole Qui	61.51	180	P	P	19 05 34.5	+2.2
QSPA				IAmb	IAmb	19 05 54.3	
	comp=Z,4.9nm,1.1s						
BELA	Belgrano 2	71.47	172	P	P	19 06 36.1	+0.5
BELA				IAmb	IAmb	19 06 52.4	
	comp=Z,10nm,1.7s						
MJAR	Matsushiro Arr	77.19	325	P	P	19 07 08.3	-1.0
	comp=Z,1.5nm,0.9s,baz=104,slow=10,SNR=2.9						
	comp=Z,1.5nm,0.9s						
SNAA	Sanae	79.93	178	P	P	19 07 24.6	+0.5
SNAA				IAmb	IAmb	19 07 53.4	
	comp=Z,15nm,1.6s						
H03N3	Juan Fernandez	81.02	123	T	T	20 37 29.1	
	baz=244,slow=73,SNR=11						
H03N2	Juan Fernandez	81.02	123	T	T	20 37 29.0	
	baz=244,slow=73,SNR=8.3						
H03N1	Juan Fernandez	81.04	123	T	T	20 37 28.0	
	baz=244,slow=73,SNR=9.1						
PEA0B	Petropavlovsk-	84.26	345	P	P	19 07 47.2	+0.6
PETK	Petropavlovsk-	84.26	345	P	P	19 07 47.1	+0.5
	comp=Z,1.9nm,0.6s,baz=123,slow=7.6,SNR=11						
	comp=Z,1.9nm,0.6s						
PRN	Pahroc Range	87.73	45	P	P	19 08 05.4	+1.0
PRN				IAmb	IAmb	19 08 07.8	
	comp=Z,2.9nm,0.9s						
PDAR	Pinedale Array	94.32	43	P	P	19 08 35.9	+0.8
	comp=Z,0.4nm,0.9s,baz=197,slow=2.8,SNR=2.4						
	comp=Z,0.4nm,0.9s						
FINES	FINESS Array B	143.69	341	PKhKP	PKPpre	19 14 46.4	
	comp=Z,0.4nm,0.3s,baz=123,slow=5.1,SNR=3.2						
NB2	NORSAR Subarra	147.07	353	PKP	PKPbc	19 14 57.2	-0.4
	comp=Z,0.4nm,0.5s,baz=15,slow=3.0						
NOA	NORSAR Array B	147.07	353	PKPbc	PKPbc	19 14 58.5	+1.0
	comp=Z,0.4nm,0.5s,baz=15,slow=4.5,SNR=4.8						
AKASG	Malin Array Be	150.28	325	PKPbc	PKPbc	19 15 05.8	-0.3
	comp=Z,0.9nm,0.2s,baz=47,slow=3.3,SNR=7.8						
AKASG	Malin Array Be	150.28	325		PKPbc	19 15 05.9	-0.1
BRTR	Keskin Array B	152.34	302	PKPbc	PKPbc	19 15 11.2	-0.2
	comp=Z,0.7nm,0.6s,baz=150,slow=5.5,SNR=4.0						
BRTR	Keskin Array B	152.34	302		PKPbc	19 15 09.4	-2.0
GERES	GERESS Array B	158.12	341	PKPab	PKPab	19 15 45.9	+0.1
	comp=Z,0.2nm,0.5s,baz=337,slow=2.2,SNR=2.5						
TORD	Torodi Ar. Bea	164.59	176	PKPab	PKPab	19 16 15.8	+1.1
	comp=Z,0.5nm,0.7s,baz=178,slow=3.5,SNR=4.0						

IDC 07 19:01:59.1±1.4**, 3°.63S**×**150°.13E, h0**^{km}**, mb3.5**/2**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=34.6km s-min=30.4km az=28.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.01	110	Pn	Pn	19 02 34.8	+0.4
	28nm,0.3s,baz=240,slow=1.3,SNR=63						
KRVT				Sn	Sn	19 02 50.7	-10
	30nm,0.3s,baz=258,slow=22,SNR=9.1						
	87nm,0.3s						
CTA	Charters Tower	16.79	193	Pn	Pn	19 05 55.4	-0.4
	0.1nm,0.3s,baz=0.0,slow=16,SNR=3.3						
	2.2nm,0.6s						
ASAR	Alice Springs	25.35	217	P	P	19 07 28.4	+0.4
	0.4nm,0.5s,baz=52,slow=9.1,SNR=15						
	0.4nm,0.5s						
MKAR	Makanchi Array	77.70	319	P	P	19 13 58.9	+0.9
	0.5nm,0.8s,baz=90,slow=4.1,SNR=5.1						
	0.5nm,0.8s						
TORD	Torodi Ar. Bea	147.41	289	PKPbc	PKPdf	19 21 43.6	-0.1
	0.2nm,0.3s,baz=101,slow=2.0,SNR=5.6						

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*RSNC **07** 19:05:07.3±1.3, 6°.39N×72°.91W, h4^{km}±4^{km}, ML3.8, Mw3.9, Fault plane solution: NP1:ϕ_s128.00000°, δ65.00000°, λ-22.00000°.*

*IDC **07** 19:05:11.1±1.1, 6°.43N×72°.75W, h60^{km}±15^{km}, mb3.1/3, mbtmp3.6/5, MS3.0/1, Error ellipse: s-maj=30.5km s-min=8.2km az=131.0*

ISC 07 19:05:05.7±1.2**, 6°.42N**±0°.02×**72°.93W**±0°.03**, h3**^{km}±9^{km}**, n45,** σ**1**^{s}**55**/81**, mb3.6**/3**, 4C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.31	304	⇑iP	Pb	19 05 13.6	-0.3

BARC				*e*S	Sb	19 05 18.8	-0.7
BARC				*i*		19 05 19.6	
	comp=Z,22μm,0.3s						
RUSC	La Rusia	0.55	197	⇑*i*P	Pg	19 05 16.7	+0.4
RUSC				*e*S	Sg	19 05 24.2	+0.9
RUSC				*i*		19 05 24.9	
	comp=Z,4μm,0.3s						
PAMC	Pamplona, Colo	0.94	14	⇑*i*P	Pg	19 05 23.9	+0.1
PAMC				*e*S	Sg	19 05 37.0	+1.0
PAMC				*i*		19 05 41.5	
	comp=Z,2μm,0.4s						
BRRC	Barranca, Sant	1.04	311	⇑*i*P	Pn	19 05 26.7	-0.4
BRRC				*e*S	Sn	19 05 41.5	-0.6
BRRC				*i*		19 05 42.4	
	comp=Z,1μm,0.3s						
TAMC	Tame, Arauca	1.13	89	⇓*i*P	Pg	19 05 27.6	+0.3
TAMC				*e*S	Sg	19 05 42.3	+0.3
TAMC				*i*		19 05 45.6	
	comp=Z,854nm,0.2s						
SPBC	San Pablo de B	1.37	236	*e*P	Pn	19 05 30.5	-1.3
SPBC				*e*S	Sn	19 05 49.6	-0.8
SPBC				*i*		19 05 51.7	
	comp=Z,2μm,0.2s						
PTBC	PUERTO BERRIO,	1.52	275	*e*P	Pb	19 05 33.8	-0.8
PTBC				*e*S	Sg	19 05 55.3	+0.6
PTBC				*i*		19 05 57.0	
	comp=Z,4μm,0.4s						
OCAC	Ocana	1.85	348	*e*P	Pn	19 05 39.4	+0.9
OCAC				*e*S	Sb	19 06 04.2	+0.4
OCAC				*i*		19 06 10.1	
	comp=Z,2μm,0.5s						
CHIC	Chingaza	1.95	204	*e*P	Pb	19 05 41.6	-0.5
CHIC				*e*S	Sb	19 06 06.9	0.0
CHIC				*i*		19 06 11.7	
	comp=Z,922nm,0.3s						
ROSC	El Rosal	2.09	222	P	Pb	19 05 44.6	+0.1
	comp=Z,259nm,0.5s,baz=296,slow=19,SNR=31						
ROSC				S	Sg	19 06 13.2	+0.1
	comp=Z,371nm,0.3s,baz=48,slow=23,SNR=4.0						
ROSC	El Rosal	2.09	222	*e*P	Pb	19 05 44.6	+0.1
ROSC				*e*S	Sg	19 06 12.1	-1.0
ROSC				*i*		19 06 22.7	
	comp=Z,637nm,0.5s						
NORC	Norcasia	2.11	246	*e*P	Pn	19 05 42.2	+0.2
NORC				*e*S	Sb	19 06 10.8	-0.4
NORC				*i*		19 06 13.1	
	comp=Z,676nm,0.5s						
ZARC	Zaragoza, Cauc	2.19	299	*e*P	Pn	19 05 44.1	+1.0
ZARC				*e*S	Sb	19 06 12.3	-1.3
ZARC				*i*		19 06 17.4	
	comp=Z,968nm,0.4s						
PTGC	Puerto Gaitan,	2.34	160	*e*P	Pn	19 05 44.6	-0.5
PTGC				*e*S	Sb	19 06 17.6	-0.3
PTGC				*i*		19 06 28.4	
	comp=Z,857nm,0.4s						
VILC	Villavicencio,	2.42	198	*e*P	Pn	19 05 46.8	+0.6
VILC				*e*S	Sg	19 06 24.5	+1.1
HELC	Santa Helena	2.60	265	⇓*e*P	Pn	19 05 49.3	+0.5
HELC				*e*S	Sn	19 06 22.0	+0.9
HELC				*i*		19 06 31.7	
	comp=Z,344nm,0.4s						
SMLC	San Martn de	2.62	334	*e*P	Pb	19 05 51.9	-1.5
SMLC				*e*S	Sb	19 06 26.2	+0.2
SMLC				*i*		19 06 30.0	
	comp=Z,358nm,0.1s						
UREC	San Jos de Ur	2.91	297	*e*P	Pn	19 05 54.7	+1.9
UREC				*e*S	Sb	19 06 32.3	-1.8
UREC				*i*		19 06 41.0	
	comp=Z,381nm,0.6s						
CBOC	Ciudad Bolivar	3.12	260	*e*P	Pb	19 05 58.7	-3.2
CBOC				*e*S	Sb	19 06 41.1	+0.8
CBOC				*i*		19 06 50.8	
	comp=Z,170nm,0.5s						
ANIL	Santa Ana	3.12	232	*e*P	Pn	19 05 57.5	+1.5
ANIL				*e*S	Sb	19 06 40.7	+0.1
ANIL				*i*		19 06 50.5	
	comp=Z,756nm,0.3s						
LL1C	La Loma 1 Cana	3.17	349	*e*P	Pn	19 05 59.1	+2.7
LL1C				*e*S	Sb	19 06 42.1	+0.5
LL1C				*i*		19 06 55.5	
	comp=Z,748nm,0.6s						
LL6C	La Loma 6 Bece	3.31	354	*e*P	Pn	19 05 60.0	+1.5
LL6C				*e*S	Sn	19 06 41.5	+3.2
LL6C				*i*		19 07 01.1	
	comp=Z,131nm,0.5s						
DBBC	Dabeiba	3.31	281	*e*P	Pn	19 06 01.1	+2.6
DBBC				*e*S	Sb	19 06 46.3	+0.3
DBBC				*i*		19 06 58.0	
	comp=Z,705nm,0.6s						
PRAC	Prado	3.32	216	*e*P	Pn	19 06 00.2	+1.6
PRAC				*e*S	Sg	19 06 49.5	-3.0
PRAC				*i*		19 07 00.8	
	comp=Z,323nm,0.5s						
SDV	Santo Domingo	3.34	43	P	Pn	19 06 00.4	+1.4
	comp=Z,27nm,0.3s,baz=131,slow=3.0,SNR=7.7						
SDV				S	Sn	19 06 37.0	-2.3
	comp=Z,141nm,0.5s,baz=299,slow=15,SNR=7.3						
SDV	Santo Domingo	3.34	43	*e*P	Pn	19 06 00.1	+1.0
SDV				*e*S	Sb	19 06 47.8	+0.9
ORTC	Ortega, Tolima	3.40	223	*e*P	Pn	19 06 00.5	+0.8
ORTC				*e*S	Sn	19 06 42.9	+2.4
ORTC				*i*		19 06 58.0	
	comp=Z,264nm,0.4s						
ARGC	Ariguani, Magd	3.66	339	*e*P	Pn	19 06 05.6	+2.4
ARGC				*e*S	Sb	19 06 54.9	-0.9
ARGC				*i*		19 07 38.7	
	comp=Z,68nm,0.6s						
PLMC	San Jos del P	3.66	246	*e*P	Pn	19 06 06.2	+2.9
PLMC				*i*		19 07 11.3	
	comp=Z,62nm,0.4s						
GUVC	San Jose del G	3.86	176	*e*P	Pn	19 06 05.7	-0.2
GUVC				*e*S	Sn	19 06 49.4	-2.4
GUVC				*i*		19 07 14.8	
	comp=Z,373nm,0.3s						
SJCC	San Jacinto, C	4.11	327	*e*P	Pn	19 06 10.7	+1.2
SJCC				*e*S	Sn	19 06 59.8	+1.7
SJCC				*i*		19 07 20.0	
	comp=Z,68nm,0.6s						
YOTC	Yotoco, Valle	4.18	235	*e*P	Pn	19 06 11.1	+0.7
YOTC				*e*S	Sn	19 06 59.4	-0.4
LCBC	Los crdobas,	4.18	306	*e*P	Pb	19 06 15.4	-4.5
LCBC				*e*S	Sn	19 07 02.9	+3.1
LCBC				*i*		19 07 27.3	
	comp=Z,102nm,0.5s						
MACC	Macarena, Meta	4.34	192	*e*P	Pn	19 06 11.7	-0.9
MACC				*e*S	Sb	19 07 15.5	-0.1
BETC	Betania	4.48	214	*e*P	Pb	19 06 26.5	+1.5
BETC				*e*S	Sb	19 07 22.6	+3.1
BETC				*i*		19 07 34.5	
	comp=Z,120nm,0.7s						
CRJC	Cerrejon, Guaj	4.57	1	*e*P	Pn	19 06 16.1	+0.3
CRJC				*i*		19 07 38.2	
	comp=Z,90nm,0.6s						
MARP	Paez Belalcaza	4.66	220	*e*P	Pn	19 06 18.5	+1.3
MARP				*e*S	Sn	19 07 11.9	-0.1
SMRC	Santa Marta, M	4.89	345	*e*P	Pn	19 06 21.5	+1.5
SMRC				*e*S	Sn	19 07 15.8	-1.4
SMRC				*i*		19 07 56.0	
	comp=Z,28nm,0.6s						
GARC	Garzon, Huila	4.92	211	*e*P	Pn	19 06 22.2	+1.4
GARC				*e*S	Sn	19 07 20.6	+2.3
GARC				*i*		19 07 43.3	
	comp=Z,141nm,0.3s						
PCON	Cinco Dias	5.34	221	*e*P	Pn	19 06 28.9	+2.1
PCON				*i*		19 08 05.7	
	comp=Z,36nm,0.4s						
MDP	Montagnes des	20.23	93	LR	LR	19 17 47.3	
	comp=Z,39nm,18.7s,baz=341,slow=38						
LPAZ	La Paz	23.05	168	P	P	19 10 12.9	-0.1
	comp=Z,1.1nm,0.6s,baz=329,slow=11,SNR=4.7						
	comp=Z,1.1nm,0.6s						
TXAR	Lajitas Array	36.87	312	P	P	19 12 16.9	+1.2
	comp=Z,0.1nm,0.4s,baz=108,slow=8.6,SNR=2.8						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	63.70	340	P	P	19 15 35.6	-2.6
	comp=Z,0.3nm,0.5s,baz=132,slow=6.7,SNR=10						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	149.03	234	PKPbc	PKPdf	19 24 52.5	+0.4
	comp=Z,0.3nm,0.8s,baz=148,slow=3.2,SNR=2.0						

*JMA **07** 19:08:18.4±0.1, 24°.0N±0°.7×121°.6E±0°.8, h23^{km}, TAIWAN REGION*

*TAP **07** 19:08:20.3, 24°.22N×121°.78E, h9^{km}, ML2.9, C*

ISC 07 19:08:19.5±1.0, **24°.22N**±0°.01×**121°.88E**±0°.02, **h4**^{km}±8^{km}, **n96**, σ**0ˢ81**/181, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.15	305	*e*P	Pg	19 08 23.2	+0.7
	baz=345						
EHP				*e*S	Sg	19 08 25.4	+0.8
	baz=345						
ENA	Nanau	0.24	329	*i* P	Pg	19 08 25.0	+0.8
	baz=353						
ENA				S	Sg	19 08 28.5	+1.2
	baz=353						
EWUT	Wuta	0.24	338	P	Pg	19 08 25.3	+1.1
EWUT				S	Sg	19 08 28.7	+1.4
ETL	Fush Village	0.24	255	P	Pg	19 08 23.9	-0.2
	baz=248						
ETL				*e*S	Sg	19 08 26.8	-0.6
	baz=248						
NACB	Ninganchiao	0.26	259	P	Pg	19 08 24.2	-0.4
	baz=256						
NACB				S	Sg	19 08 27.1	-1.0
	baz=256						
TWD	Chiawan	0.29	241	P	Pg	19 08 24.7	-0.5
	baz=236						
TWD				S	Sg	19 08 28.3	-0.8
	baz=236						
HWA	Hwalien	0.35	225	*e*P	Pb	19 08 27.3	-0.9
	baz=226						
HWA				*e*S	Sg	19 08 32.1	+1.3
	baz=226						
ETLH	Xiulin Townshi	0.36	267	*e*P	Pg	19 08 26.2	-0.3
	baz=269						
ETLH				*e*S	Sg	19 08 30.0	-1.3
	baz=269						
TWC	Suao	0.39	356	P	Pb	19 08 28.4	-0.5
	baz=7.0						
TWC				S	Sb	19 08 34.1	-1.1
	baz=7.0						
NDS	Dongshan	0.43	340	*e*P	Pb	19 08 29.0	-0.7
	baz=352						
NDS				*e*S	Sb	19 08 34.9	-1.7
	baz=352						
LATG	Datong	0.45	314	P	Pg	19 08 28.4	+0.3
	baz=324						
LATG				S	Sg	19 08 34.1	+0.2
	baz=324						
NNSB	Datong	0.49	294	P	Pg	19 08 29.0	0.0
	baz=301						
NNSB				S	Sg	19 08 34.5	-1.0
	baz=301						
ENTT	Nioudou	0.50	326	P	Pb	19 08 29.9	-1.0
	baz=336						
ENTT				*e*S	Sg	19 08 36.7	+1.0
	baz=336						
NNS	Nan Shan	0.51	295	P	Pg	19 08 29.2	-0.1
	baz=302						
NNS				S	Sg	19 08 35.1	-0.8
	baz=302						
TWE	Neicheng	0.53	339	P	Pb	19 08 30.9	-0.5
	baz=350						
TWE				S	Sb	19 08 38.0	-1.4
	baz=350						
ILA	Ilan	0.55	348	*e*P	Pb	19 08 31.5	-0.2
	baz=358						
ILA				*e*S	Sb	19 08 39.8	-0.2
	baz=358						
WHF	Hehuan Shan	0.56	262	*i* P	Pg	19 08 29.9	-0.5
	baz=262						
WHF				S	Sg	19 08 36.4	-1.4
	baz=262						
ESL	Shilin	0.57	225	P	Pg	19 08 30.3	-0.3
	baz=227						
ESL				*e*S	Sg	19 08 37.6	-0.4
	baz=227						
FUSS	Fushou	0.58	272	*e*P	Pg	19 08 30.4	-0.3
	baz=275						
FUSS				*e*S	Sg	19 08 37.1	-1.1
	baz=275						
FUSB	Fushanzhiwuyua	0.59	334	P	Pb	19 08 31.9	-0.6
	baz=342						
FUSB				S	Sg	19 08 39.5	+0.8
	baz=342						
EGS		0.62	5	*e*P	Pn	19 08 33.7	-1.4
	baz=23						
NTC	Toucheng	0.63	356	*e*P	Pb	19 08 33.4	+0.4
	baz=4.0						
NTC				*e*S	Sb	19 08 41.0	-1.2
	baz=4.0						
YHNB	Yeheng	0.64	314	*e*P	Pb	19 08 32.3	-1.0
	baz=321						
YHNB				*e*S	Sg	19 08 40.5	+0.4
	baz=321						
TWT	Tachien	0.64	273	*e*P	Pg	19 08 32.0	+0.2
	baz=275						
TWT				S	Sg	19 08 39.9	-0.3
	baz=275						
NWLT	Wulai	0.65	328	P	Pb	19 08 32.8	-0.6
	baz=336						
NWLT				S	Sg	19 08 40.9	+0.5
	baz=336						
NSK	Sanguang	0.65	314	P	Pb	19 08 32.5	-1.0
	baz=321						
NSK				*e*S	Sg	19 08 40.7	+0.1
	baz=321						
TDCB	Techi	0.66	273	*e*P	Pb	19 08 33.1	-0.4
	baz=275						
TDCB				S	Sg	19 08 39.3	-1.4
	baz=275						
CHGB	Renai	0.66	256	P	Pg	19 08 32.0	-0.3
	baz=247						
CHGB				S	Sg	19 08 39.5	-1.3
	baz=247						
EGFH	Guangfu	0.69	217	*e*P	Pg	19 08 32.6	-0.1
	baz=218						
EGFH				*e*S	Sb	19 08 44.0	+0.1
	baz=218						
OWD	Renai	0.69	247	*e*P	Pg	19 08 32.8	0.0
	baz=246						
OWD				S	Sg	19 08 40.6	-1.3
	baz=246						
WUSB	Renai	0.73	252	P	Pg	19 08 33.3	-0.3
	baz=243						
WUSB				*e*S	Sg	19 08 41.8	-1.3
	baz=243						
TIPB	Shuangxi	0.75	356	P	Pb	19 08 35.5	+0.4
	baz=3.0						
TIPB				S	Sb	19 08 44.9	-0.7
	baz=3.0						
TWB1	Santiao Chiao	0.79	7	*e*P	Pn	19 08 36.1	-1.2
	baz=14						
TWB1				*e*S	Sn	19 08 48.5	-1.1
	baz=14						
TWA	Mucha	0.80	341	*e*P	Pb	19 08 36.0	0.0
	baz=347						
TWA				*e*S	Sb	19 08 47.1	0.0
	baz=347						
NFF	Wufeng Townshi	0.80	301	*e*P	Pb	19 08 35.3	-0.8
	baz=305						
NFF				*e*S	Sg	19 08 44.8	-0.6
	baz=305						
NHDH	Xindian Distri	0.80	337	P	Pb	19 08 36.0	-0.1
	baz=343						
NHDH				*e*S	Sb	19 08 46.4	-0.8
	baz=343						
VWDT	VWDT	0.82	235	P	Pg	19 08 34.8	-0.4
	baz=233						
VWDT				*e*S	Sg	19 08 46.4	+0.5
	baz=233						
HGSD	Ruisui	0.84	210	P	Pb	19 08 36.5	-0.1
	baz=193						
NWF	Wu-fen Shan	0.85	354	*i* P	Pn	19 08 37.5	-0.8
	baz=351						
NWF				S	Sb	19 08 49.0	+0.4
	baz=351						
WHP	Taichung City	0.85	274	P	Pg	19 08 36.0	+0.1
	baz=276						
WHP				S	Sg	19 08 45.8	-1.1
	baz=276						
SXI1	Grass Mountain	0.87	360	P	Pn	19 08 37.9	-0.6
	baz=13						
SXI1				*e*S	Sb	19 08 49.2	+0.1
	baz=13						
EHY	Hungye	0.88	216	*e*P	Pg	19 08 36.1	-0.2
	baz=222						
EHY				*e*S	Sg	19 08 48.2	+0.5
	baz=222						
LIOB	Emei	0.89	298	P	Pb	19 08 37.1	-0.4
	baz=303						
LIOB				*e*S	Sg	19 08 48.3	+0.1
	baz=303						
NSTT	Nanjuang	0.90	297	P	Pb	19 08 37.0	-0.5
	baz=301						
NSTT				S	Sg	19 08 47.7	-0.6
	baz=301						
WCS	Beigang Elemen	0.90	260	*e*P	Pg	19 08 35.9	-0.8
	baz=260						
WCS				*e*S	Sg	19 08 46.9	-1.5
	baz=260						
SSLB	Suanglung	0.95	243	P	Pg	19 08 36.9	-0.8
	baz=251						
SSLB				S	Sg	19 08 48.2	-1.8
	baz=251						
SMLT	Sun Moon Lake	0.95	249	*e*P	Pg	19 08 38.1	+0.2
	baz=248						
SMLT				*e*S	Sg	19 08 48.7	-1.6
	baz=248						
YM01	YM01	0.96	343	P	Pn	19 08 39.5	-0.3
	baz=348						
YM01				*e*S	Sb	19 08 51.9	+0.1
	baz=348						
TWS1	Kuangyinshan	0.97	335	P	Pn	19 08 40.0	+0.2
	baz=340						
TWS1				*e*S	Sn	19 08 52.9	-1.1
	baz=340						
NCUH	Zhongli	0.97	320	*e*P	Pb	19 08 39.1	+0.2
	baz=325						
NCUH				*e*S	Sn	19 08 54.5	+0.3
	baz=325						
NCU	National Centr	0.97	320	*e*P	Pn	19 08 40.2	+0.3
	baz=325						
NCU				*e*S	Sn	19 08 54.4	+0.3
	baz=325						
YULB	Yu-li	0.98	213	P	Pg	19 08 37.8	-0.6
	baz=219						
YULB				S	Sg	19 08 50.2	-0.9
	baz=219						
TYC	Yuchr	0.98	251	*e*P	Pb	19 08 38.9	-0.2
	baz=242						
TYC				*e*S	Sg	19 08 49.8	-1.4
	baz=242						
SBCB	Hsinchu	0.99	305	*e*P	Pb	19 08 39.0	-0.2
	baz=309						
SBCB				*e*S	Sb	19 08 53.6	+1.0
	baz=309						
JYNG	Yonagunijimaku	1.00	77	P	Pn	19 08 41.7	+1.4
HSN	Hsinchu	1.01	305	*e*P	Pg	19 08 38.2	-0.6
	baz=312						
HSN				*e*S	Sb	19 08 52.6	-0.4
	baz=312						
EYUL	Yuli	1.01	210	*e*P	Pg	19 08 38.7	-0.2
	baz=224						
TWQ1	Liyutan	1.01	277	*e*P	Pn	19 08 41.0	+0.5
	baz=279						
TWQ1				S	Sg	19 08 52.4	+0.3
	baz=279						
NSY	Sanyi	1.04	281	*e*P	Pb	19 08 40.1	+0.2
	baz=283						
NSY				S	Sb	19 08 53.5	-0.5
	baz=283						
NMLH	Miaoli	1.04	288	*e*P	Pn	19 08 41.2	+0.4
	baz=291						
NMLH				*e*S	Sg	19 08 53.4	+0.5
	baz=291						
YOJ	Yonaguni jima	1.06	77	P	Pn	19 08 42.5	+1.4
	baz=64						
TWY	Chenhua	1.08	347	*e*P	Pn	19 08 42.7	+1.3
	baz=336						
TCU	Taichung	1.10	266	*e*P	Pn	19 08 42.2	+0.6
	baz=267						
TCU				*e*S	Sb	19 08 56.0	+0.3
	baz=267						
YUS	Yu-Shan	1.12	229	P	Pg	19 08 40.8	-0.2
	baz=227						
YUS				*e*S	Sg	19 08 55.7	+0.2
	baz=227						
WJS	Zhushan	1.12	249	*e*P	Pn	19 08 42.0	0.0
	baz=243						
WJS				*e*S	Sb	19 08 57.0	+0.6
	baz=243						
WDJ	Dajia District	1.14	277	*e*P	Pn	19 08 42.1	0.0
	baz=278						
WDJ				*e*S	Sn	19 08 58.0	-0.1
	baz=278						
WNT	Mingjian	1.14	253	*e*P	Pn	19 08 42.3	+0.1
	baz=248						
WNT				*e*S	Sb	19 08 57.7	+0.7
	baz=248						
FULB	Fuli	1.15	208	*e*P	Pb	19 08 41.8	-0.2
	baz=221						
FULB				*e*S	Sn	19 08 58.9	+0.3
	baz=221						
ALS	Alishan	1.21	234	*e*P	Pg	19 08 42.5	-0.2
	baz=233						
ALS				*e*S	Sb	19 08 59.4	+0.1
	baz=233						
CHKT	Chengkung	1.21	203	P	Pg	19 08 42.4	-0.4
	baz=199						
CHKT				*e*S	Sb	19 08 59.7	+0.7
	baz=199						
WCHH	Zhanghua	1.21	263	*e*P	Pn	19 08 43.6	+0.4
	baz=264						
WCHH				*e*S	Sb	19 08 59.7	+0.7
	baz=264						
CHN5	Tsauling	1.26	241	*e*P	Pn	19 08 44.1	+0.1
	baz=241						
CHN5				*e*S	Sn	19 09 02.3	+0.9
	baz=241						
WDLH	Douliu	1.33	247	*e*P	Pb	19 08 46.3	+1.3
	baz=247						
WDLH				*e*S	Sn	19 09 03.9	+0.8
	baz=247						
EDH	Donghe	1.35	203	*e*P	Pn	19 08 43.6	-1.5
	baz=187						
WRL	Guolierlin Hig	1.41	257	*e*P	Pg	19 08 46.5	0.0
	baz=258						
WRL				*e*S	Sn	19 09 05.8	+1.0
	baz=258						
STYH	Taoyuan	1.46	224	P	Pn	19 08 46.3	-0.2
	baz=224						
STYH				S	Sn	19 09 06.5	+0.5
	baz=224						
CHN4	Tsaushan	1.46	234	*e*P	Pg	19 08 47.8	+0.2
	baz=234						
CHN4				S	Sn	19 09 08.3	+2.1
	baz=234						
WTK	Tuku	1.46	249	*e*P	Pg	19 08 47.3	-0.2
	baz=250						
WTK				*e*S	Sn	19 09 08.1	+1.9
	baz=250						
TPUB	Ta-pu	1.47	231	P	Pn	19 08 47.0	+0.2
	baz=232						
TPUB				S	Sn	19 09 07.9	+1.6
	baz=232						
WTP	Ta-pu	1.51	230	*e*P	Pg	19 08 48.5	0.0
	baz=231						
WTP				*e*S	Sg	19 09 09.3	+1.2
	baz=231						
CHY	Chiayi	1.51	242	*e*P	Pg	19 08 49.8	+1.3
	baz=242						
CHY				*e*S	Sb	19 09 08.0	+0.4
	baz=242						
TWGBT	Beinan	1.58	208	*e*P	Pn	19 08 46.2	-2.1
	baz=190						
TWK	Hsinying	1.59	233	*e*P	Pg	19 08 49.6	-0.4
	baz=234						
TWK				*e*S	Sg	19 09 11.2	+0.6
	baz=234						
SNST	Tainan City	1.61	232	*e*P	Pg	19 08 50.9	+0.5
	baz=233						
SNST				*e*S	Sg	19 09 11.8	+0.4
	baz=233						
CHN1	Nanshi	1.61	230	*e*P	Pb	19 08 49.8	0.0
	baz=231						
CHN1				*e*S	Sg	19 09 11.8	+0.5
	baz=231						
WSF	Szhu	1.62	249	*e*S	Sg	19 09 11.5	-0.2
	baz=261						
SGST	Jiashian	1.64	226	*e*P	Pg	19 08 50.9	-0.1
	baz=227						
SGST				*e*S	Sb	19 09 11.7	+0.3
	baz=227						
WSL	Shuilin Townsh	1.66	246	*e*P	Pb	19 08 50.7	+0.1
	baz=247						
WSL				*e*S	Sg	19 09 13.3	+0.4
	baz=247						
IRIF	Iriomote-Funau	1.69	86	*e*P	Pg	19 08 51.2	-0.8

IRIF				eS	Sg	19 09 15.9	+1.9
ICHU	Yijhu	1.70	240	eP	Pn	19 08 50.4	+0.5
	baz=242						
ICHU				eS	Sg	19 09 14.5	+0.4
	baz=242						
SCST	Cishan	1.84	224	eP	Pb	19 08 53.2	-0.5
	baz=225						
SCST				eS	Sg	19 09 19.5	+0.9
	baz=225						
SSD	Sandimen	1.86	218	eP	Pn	19 08 53.0	+0.9
	baz=232						
SSD				eS	Sn	19 09 17.1	+1.0
	baz=232						
JKRS	Kuro-shima	1.95	89	eP	Pg	19 08 55.6	-1.3
MASBT	Mashibuluo	1.97	216	eP	Pn	19 08 54.2	+0.6
	baz=217						
MASBT				eS	Sb	19 09 20.3	-0.5
	baz=217						
JIJ	Ishigaki jima	2.07	86	eP	Pb	19 08 56.4	-1.3
JIJ				eS	Sb	19 09 22.9	-0.8
JISG	Ishigakijimahi	2.25	80	P	Pn	19 08 58.4	+1.0

NEIC 07 19:14:30.1±2.5, 14°.47S±0°.08×76°.3W±0°.1, h10^{km}±2^{km},
Error ellipse: s-maj=23.8km s-min=3.5km az=235.0
ARE 07 19:14:32±2.1, 14°.43S±0°.09×76°.3W±0°.1, h18^{km}±6^{km},
ML4.2, mb4.0/2(NEIC), Error ellipse: s-maj=21.0km
s-min=7.9km az=61.0
ISC 07 19:14:31.7±1.2, **14°.5S**±0°.1×**76°.3W**±0°.2, **h23**^{km}**, n14,**
σ**0^{s}.99**/16, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.51	347	Pn	Pn	19 15 10.9	-0.2
NNA				Sn	Sn	19 15 40.6	-0.6
PB12	IPOC Station P	7.03	127	Pn	Pn	19 16 12.8	-0.6
PB12				Sn	Sn	19 17 31.1	-1.6
PB16	IPOC Station P	7.54	122	Pn	Pn	19 16 23.0	+2.2
PB11	IPOC Station P	8.23	131	Pn	Pn	19 16 29.8	0.0
TA01	Diego Aracena	8.40	137	Pn	Pn	19 16 31.5	-0.6
PATCX	Punta Patache	8.60	138	Pn	Pn	19 16 34.9	0.0
PB08	IPOC Station P	8.83	131	Pn	Pn	19 16 39.2	+0.9
PB02	IPOC Station P	9.13	139	Pn	Pn	19 16 42.3	+0.1
PB01	IPOC Station P	9.20	136	Pn	Pn	19 16 43.9	+0.8
PB07	IPOC Station P	9.44	141	Pn	Pn	19 16 45.6	-0.9
PB09	IPOC Station P	9.89	139	Pn	Pn	19 16 53.7	+1.0
LVC	Limon Verde	10.69	140	Pn	Pn	19 17 04.4	+0.5
MG03	Isla Dawson	39.57	175	P	P	19 22 01.6	+0.6
MG03				IAmb	IAmb	19 22 14.3	
	comp=Z,12nm,1.2s						
PZH	PanZhiHua	167.86	9	PKP	PKPdf	19 34 37.3	+0.2

ISU 07 19:15:02, 40°.13N×71°.78E, h24^{km}
KRNET 07 19:15:02.4±0.1, 40°.14N×71°.68E, h15^{km}, mb3.1
NNC 07 19:15:04.5±1.2, 40°.26N×71°.73E, h10^{km}±4^{km}, mb3.7,
mpv3.4, Error ellipse: s-maj=9.4km s-min=4.4km az=0.0
SOME 07 19:15:05.3, 40°.30N×71°.73E, h5^{km}
ISC 07 19:15:02.8±0.8, **40°.12N**±0°.02×**71°.81E**±0°.02, **h17**^{km}±6^{km},
n61, σ**2^{s}.19**/98, **31C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAK	Shakhimardan	0.18	198	P	Pg	19 15 07.0	-0.5
SHAK				S	Sg	19 15 11.6	+1.0
FRG	Fergana	0.25	356	P	Pg	19 15 07.9	-0.6
FRG				S	Sg	19 15 12.6	+0.2
FRG				S		19 16 15.7	
CHMI	Chimion	0.26	304	P	Pg	19 15 07.0	-1.7
CHMI				S	Sg	19 15 11.8	-0.9
DRK	Karamyk	0.64	181	⇑iP	Pg	19 15 15.2	-0.3
	baz=72						
DRK				⇑iS	Sg	19 15 24.6	+0.5
	baz=72						
TSTA	Tashata	0.68	48	P	Pb	19 15 15.4	-0.9
TSTA				S	Sg	19 15 25.7	+0.3
ANR	Andizhan	0.76	33	P	Pn	19 15 19.0	+0.2
ANR				S	Sn	19 15 29.4	-0.4
BTK	Batken	0.76	265	⇑iP	Pb	19 15 15.2	-2.5
	baz=63						
BTK				⇑iS	Sb	19 15 24.6	-3.2
	baz=63						
BTK	Batken	0.76	265	P	Pb	19 15 14.6	-3.1
BTK				S	Sb	19 15 25.1	-2.7
OHH	Osh	0.85	61	⇑iP	Pn	19 15 19.9	-0.1
	baz=65						
OHH				⇑iS	Sn	19 15 32.8	+0.7
	baz=65						
NAM	Namangan	0.88	353	P	Pb	19 15 18.9	-0.6
NAM				S	Sb	19 15 32.3	+1.3
TRKS	Terek-Say	1.50	340	⇑iP	Pn	19 15 28.0	-1.0
	baz=44						
TRKS				⇑iS	Sn	19 15 47.0	-1.2
	baz=44						
GAR	Garm	1.61	226	⇑iP	Pn	19 15 31.2	+0.7
	baz=23						
GAR				⇑iS	Sb	19 15 52.3	+0.1
	baz=23						
ARK	Arkit	1.68	4	⇑iP	Pb	19 15 33.3	0.0
	baz=7.0						
ARK				⇑iS	Sb	19 15 55.8	+1.6
	baz=7.0						
CHMG	Chimgan	1.97	317	P	Pn	19 15 37.5	+1.9
CHMG				S	Sb	19 16 03.3	+0.6
CHRV	Charvak	2.07	318	P	Pn	19 15 38.5	+1.7
CHRV				S	Sb	19 16 06.3	+0.9
TGS	TashGRES	2.17	308	P	Pb	19 15 42.0	+0.4
TGS				S	Sg	19 16 12.5	-0.1
TAS	Tashkent	2.26	303	⇓iP	Pn	19 15 41.1	+1.8
	baz=4.0						
TAS				⇓iS	Sn	19 16 09.1	+2.3
	baz=4.0						
IUG	Iuzhnay	2.43	327	eP	Pb	19 15 46.9	+0.9
	759nm,0.3s						
IUG				eS	Sb	19 16 17.0	+1.3
	122nm,0.4s						
IUG	Iuzhnay	2.43	327	Pg	Pb	19 15 45.8	-0.3
	969nm,0.2s						
IUG				Lg	Lg	19 16 17.0	
	122nm,0.4s						
AML	Almayashu	2.46	35	P	Pn	19 15 43.9	+1.4
	SNR=22						
CHGR	Chuyangaron	2.52	235	⇑iP	Pn	19 15 45.0	+1.9
	baz=34						
CHGR				⇑iS	Sb	19 16 16.0	-2.4
	baz=34						
ARLS	Aral	2.58	47	⇑iP	Pb	19 15 47.6	-1.0
	baz=49						
ARLS				⇑iS	Sb	19 16 20.4	+0.3
	baz=49						
CHM	Chimkent	2.75	324	eP	Pb	19 15 53.5	+1.9
	50nm,0.2s						
CHM				eS	Sb	19 16 28.7	+3.7
	227nm,0.3s						
DZA	Taraz	2.79	353	eP	Pb	19 15 53.5	+1.3
	28nm,0.1s						
DZA				eS	Sb	19 16 28.6	+2.5
	204nm,0.3s						
DZA	Taraz	2.79	353	Pg	Pb	19 15 52.7	+0.5
	42nm,0.1s						
DZA				Lg	Lg	19 16 28.6	
	204nm,0.3s						
MRKS	Merke	2.83	22	eP	Pg	19 15 57.3	+0.3
	2.4nm,0.2s						
MRKS				eS	Sg	19 16 35.1	+1.4
	39nm,0.4s						
MRKS	Merke	2.83	22	Pg	Pg	19 15 56.2	-0.8
	2.1nm,0.1s						
MRKS				Lg	Lg	19 16 35.2	
	39nm,0.4s						
UCH	Uchtor	2.93	43	⇑iP	Pb	19 15 52.5	-2.3
	baz=45						
UCH				⇑iS	Sb	19 16 29.0	-1.5
	baz=45						
EKS2	Erkin-Say	2.94	30	P	Pn	19 15 51.0	+2.2
	SNR=17						
EKS2	Erkin-Say	2.94	30	⇑eP	Pn	19 15 52.0	+3.2
	baz=31						
EKS2				⇑iS	Sb	19 16 28.2	-2.2
	baz=31						
KK31	Karatay Array	3.13	342	Pn	Pn	19 15 51.6	+0.2
	0.2nm,0.1s,baz=326,slow=12,SNR=84						
KK31				Pg	Pb	19 15 59.4	+1.4
	1.9nm,0.2s,baz=150,slow=14,SNR=60						
KK31				⇑Sn	Sn	19 16 28.5	+0.1
	1.4nm,0.2s,baz=158,slow=29,SNR=3.7						
KK31				⇑Lg	Lg	19 16 39.2	
	9.9nm,0.5s,baz=163,slow=30,SNR=7.2						
AAK	Ala-Archa	3.22	38	⇑eP	Pb	19 15 56.4	-3.3
	baz=39						
AAK				⇑iS	Sb	19 16 35.7	-3.0
	baz=39						
BRLS	Borolday	3.26	334	eP	Pb	19 15 59.6	-0.6
	4.5nm,0.1s						
BRLS				eS	Sb	19 16 38.6	-1.1
	30nm,0.2s						
BRLS	Borolday	3.26	334	Pg	Pb	19 15 58.2	-2.0
	5.2nm,0.2s						
BRLS				Lg	Lg	19 16 38.6	
	30nm,0.2s						
FRU1	Bishkek	3.42	37	⇓iP	Pn	19 15 58.8	+3.4
	baz=39						
FRU1				⇓iS	Sb	19 16 41.1	-3.2
	baz=39						
KBK	Karagaybulak	3.46	42	P	Pn	19 15 59.0	+3.0
	SNR=7.8						
KBK	Karagaybulak	3.46	42	⇑iP	Pn	19 15 59.6	+3.5
	baz=43						
KBK				⇑iS	Sb	19 16 41.4	-4.2
	baz=43						
CHMS	Chumysh	3.62	37	⇓Pn	Pn	19 15 60.0	+1.8
	1.7nm,0.3s						
CHMS				⇑Sn	Sn	19 16 42.5	+2.0
	5.8nm,0.6s						
CHMS				⇓Lg	Lg	19 16 56.1	
	5.7nm,0.6s						
USP	Ospenovka	3.73	32	P	Pn	19 16 01.3	+1.7
	SNR=5.5						
AGL	Agalyk	3.84	263	P	Pb	19 16 11.8	+1.6
AGL				S	Sg	19 17 02.6	-3.6
BOOM	Boomskoye usch	3.91	51	⇑iP	Pn	19 16 05.6	+3.4
	baz=52						
BOOM				⇑iS	Sn	19 16 52.6	+4.9
	baz=52						
SGDS	Sogindy	3.94	31	eP	Pg	19 16 16.3	-1.9
	2.1nm,0.2s						
SGDS				eS	Sg	19 17 07.3	-1.9
	4.9nm,0.3s						
SGDS	Sogindy	3.94	31	Pg	Pb	19 16 14.9	+3.1
	1.3nm,0.2s						
SGDS				Lg	Lg	19 17 07.4	
	9.5nm,0.7s						
TKM2	Tokmak 2	3.99	44	P	Pn	19 16 05.8	+2.5
	SNR=13						
TKM2	Tokmak 2	3.99	44	⇑Pn	Pn	19 16 05.5	+2.2
	3.0nm,0.5s						
TKM2				⇑Lg	Lg	19 17 08.2	
	6.7nm,0.6s						
KST	Kastek	4.27	46	eP	Pg	19 16 23.3	-1.2
	1.0nm,0.0s						
KST				eS	Sg	19 17 19.4	-0.5
	6.3nm,0.7s						
KST	Kastek	4.27	46	Pg	Pg	19 16 21.9	-2.6
	1.5nm,0.5s						
KST				Lg	Lg	19 17 18.6	
	6.3nm,0.7s						
KRBS	Karabastau	4.59	38	eP	Pg	19 16 27.6	-3.1
	1.1nm,0.3s						
KRBS				eS	Sg	19 17 26.8	-3.3
	5.4nm,0.6s						
KRBS	Karabastau	4.59	38	Pg	Pb	19 16 25.9	+3.1
	1.1nm,0.3s						
KRBS				Lg	Lg	19 17 26.0	
	5.4nm,0.6s						
TNSS	Tian-Shan	4.83	51	eP	Pg	19 16 34.0	-1.2
	1.0nm,0.2s						
TNSS				eS	Sg	19 17 38.0	+0.2
	2.7nm,0.8s						
TNSS	Tian-Shan	4.83	51	Pg	Pg	19 16 32.3	-3.0
	1.1nm,0.5s						
TNSS				Lg	Lg	19 17 37.4	
	2.7nm,0.8s						
MDOK	Medeo	4.96	51	eP	Pg	19 16 36.0	-1.9
	0.8nm,0.0s						
MDOK				eS	Sg	19 17 41.1	-1.0
	4.7nm,0.8s						
MDOK	Medeo	4.96	51	⇓Lg	Lg	19 17 40.6	
	3.6nm,0.5s						
MDOK	Medeo	4.96	51	Pg	Pg	19 16 34.9	-2.9
MDOK				Lg	Lg	19 17 41.5	
	4.7nm,0.8s						
KUU	Kurty	5.06	40	eP	Pg	19 16 35.8	-3.8
	0.3nm,0.1s						
KUU				eS	Sg	19 17 41.0	-4.1
	4.6nm,0.6s						
KUU	Kurty	5.06	40	Pg	Pb	19 16 34.0	+3.2
	0.7nm,0.3s						
KUU				Lg	Lg	19 17 40.0	
	4.6nm,0.6s						
KTBS	Karatobe	5.11	44	Pg	Pb	19 16 35.5	+3.8
	1.1nm,0.5s						
KTBS				Lg	Lg	19 17 42.7	
	5.1nm,1.0s						
BTLS	Baital	5.18	18	eP	Pg	19 16 38.2	-3.8
	1.3nm,0.2s						
BTLS				eS	Sg	19 17 44.7	-4.5
	3.7nm,0.5s						
BTLS	Baital	5.18	18	Pg	Pb	19 16 37.9	+4.9
	1.3nm,0.2s						
BTLS				Lg	Lg	19 17 44.4	
	3.7nm,0.5s						
PDGK	Podgornoye	6.58	58	⇓Lg	Lg	19 18 33.1	
	2.3nm,0.7s						
AB31	Akbulak array	12.42	321	⇓Pn	Pn	19 17 59.7	+1.0
	0.5nm,0.6s,baz=131,slow=13,SNR=8.5						

BJI 07 19:15:49.3±0.0, 44°.29N×147°.59E, h99^{km}, mb4.6/48,
mB4.7/25
MOS 07 19:15:50.6±1.0, 44°.23N×147°.55E, h110^{km}, mb4.7/24,
Error ellipse: s-maj=7.0km s-min=4.7km az=112.2
NIED 07 19:15:51.8, 43°.99N×147°.65E, h96^{km}, MW4.3, Moment
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M_{rr}-0.45; $M_{\theta\theta}$0.08; $M_{\phi\phi}$0.37; $M_{r\theta}$2.37; $M_{\theta\phi}$-0.07; $M_{\phi r}$1.85;
Fault plane solution: $M_0$3.02000×10^{15} NP1:ϕ_s9.00000°,
δ4.00000°, λ-132.00000°. NP2:ϕ_s231.00000°, δ87.00000°,
λ-88.00000°.
SKHL 07 19:15:51.4±0.2, 44°.20N×147°.60E, h107^{km}±2^{km}, mb5.2/7,
msh6.1/4
JMA 07 19:15:51.8±0.2, 44°N±1°×14°8E±°, h96^{km}±4^{km}, MD4.2/35,
MV4.4/35, E OFF HOKKAIDO
IDC 07 19:15:52.4±2.1, 44°.37N×147°.52E, h104^{km}±18^{km},
mb4.1/32, mbtmp4.4/38, MS3.0/11, Error ellipse:
s-maj=17.8km s-min=10.2km az=162.0
NEIC 07 19:15:52.2±1.4, 44°.27N±0°.08×147°.5E±0°.1, h106^{km}±7^{km},
mb4.6/103, Error ellipse: s-maj=13.4km s-min=10.2km
az=126.0
ISC 07 19:15:51.3±0.6, **44°.24N**±0°.04×**147°.57E**±0°.05, **h103**^{km}±4^{km},
n492, σ**1^{s}.21**/515, **mb4.5**/155, **56C-33D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.01	12	d iPN	Pn	19 16 12.2	+0.1
KUR				eS	Sn	19 16 27.8	0.0
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,714nm,0.2s						
KUR				pmax	pmax		
	comp=N,701nm,0.3s						
KUR				smax	smax		
	comp=E,12μm,0.5s						
KUR				smax	smax		
	comp=N,6μm,0.2s						
YUK	Yuzh-Kuril'sk	1.25	261	d iPN	Pn	19 16 14.9	+0.2
NEM2	Nemuro 2	1.58	237	eP	Pn	19 16 18.1	-0.6
NEM2				eS	Sn	19 16 37.9	-1.6
NMR	Nemuro--Hokkai	1.59	237	⇓iPN	Pn	19 16 18.2	-0.6
NMR				eS	Sn	19 16 37.8	-1.9
RUSJ	Misakicho	1.67	266	⇓iPN	Pn	19 16 21.0	+1.2
RUSJ				i S	Sn	19 16 43.9	+2.3
JRA	Rausu	1.79	261	P	Pn	19 16 22.3	+1.1
JRA				eS	Sn	19 16 45.4	+1.3
JRA	Rausu	1.79	261	A	A	19 16 22.3	
	comp=N,6.0nm,0.5s,comp=N,6.0nm,1.6s						
JNSB	Nemuroshibetsu	1.91	257	P	Pn	19 16 24.1	+1.3
JNSB				eS	Sn	19 16 48.3	+1.6
JNSB	Nemuroshibetsu	1.91	257	A	A	19 16 24.1	
	comp=N,8.0nm,0.8s,comp=N,11nm,1.0s						
JKHN	Kushirohamanak	2.10	237	P	Pn	19 16 25.1	-0.1
JKHN				eS	Sn	19 16 49.7	-1.4
JNK	Nakash	2.16	253	eP	Pn	19 16 26.5	+0.5
JNK				eS	Sn	19 16 52.7	0.0
JAK	Akkeshi	2.43	240	eP	Pn	19 16 29.3	-0.2
JAK				eS	Sn	19 16 57.4	-1.4
JTKR	Abashiri--Toko	2.65	265	eP	Pn	19 16 33.8	+1.3
JTKR				eS	Sn	19 17 05.7	+1.6
JAR	Ashorobuto	2.91	252	eP	Pn	19 16 37.3	+1.5
JAR				eS	Sn	19 17 11.7	+1.5
JAR	Ashorobuto	2.91	252	A	A	19 16 37.3	
	comp=N,2.0nm,1.1s,comp=N,2.0nm,1.2s						
JOB	Onbets	3.02	245	eP	Pn	19 16 38.2	+0.8
JOB				eS	Sn	19 17 12.7	-0.2
JMP	Maruseppu	3.04	267	eP	Pn	19 16 39.2	+1.6
JMP				eS	Sn	19 17 15.3	+2.0
JCH	Churui	3.47	243	eP	Pn	19 16 43.4	+0.1
JCH				eS	Sn	19 17 22.0	-1.5
JKK2	Kamakawa 2	3.49	266	eP	Pn	19 16 45.6	+1.9
JKK2				eS	Sn	19 17 27.1	+2.9
JKA	Kamikawa-asahi	3.58	270		Pn	19 16 46.8	+2.1
ASAJ	Asahikawa	3.58	270	P	Pn	19 16 46.4	+1.6
	comp=N,18nm,0.4s,baz=71,slow=25,SNR=71						
ASAJ				S	Sn	19 17 24.2	-2.0
	comp=N,50nm,0.7s,baz=133,slow=21,SNR=4.5						
ASAJ				LR	LR	19 18 12.7	
	comp=N,180nm,20.4s,baz=173,slow=40						
ASAJ	Asahikawa	3.58	270	PN	Pn	19 16 46.8	+2.0
JSE	Soyaes	3.63	283	eP	Pn	19 16 47.0	+1.5
ERM	Erimo	3.92	237	dePN	Pn	19 16 50.2	+0.8
ERM	Erimo	3.92	237		Pn	19 16 50.6	+1.2
ERM				Sn	Sn	19 17 33.7	-0.7
JNBK	Urakawa-nobuka	4.03	243	eP	Pn	19 16 50.6	-0.2
JNBK				eS	Sn	19 17 35.7	-1.3
JWK2	Keihoku	4.18	287	eP	Pn	19 16 55.9	+3.0
YSS	Yuzh-Sakhalins	4.33	310	ePN	Pn	19 16 56.3	+1.4
YSS				eS	Sn	19 17 45.9	+1.6
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				smax	smax		
	comp=E,100nm,0.8s						
YSS	Yuzh-Sakhalins	4.33	310		Pn	19 16 56.0	+1.1
JEW	Eniwo	4.66	255	Pn	Pn	19 17 00.5	+1.0
JRBN	Rebuntou	4.77	287	eP	Pn	19 17 02.8	+1.9
TYV	Tymovskoe	7.41	335	ePN	Pn	19 17 37.8	+1.2
TYV				pmax	pmax		
	comp=Z,300nm,4.3s						
TYV				pmax	pmax		
	comp=Z,20nm,1.1s						
JMM	Marumori	8.17	221	Pn	Pn	19 17 44.6	-2.4
MAJO	Matsushiro	10.49	226	⇓ePN	Pn	19 18 16.0	-2.5
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAJO	Matsushiro	10.49	226	Pn	Pn	19 18 18.0	-0.5
MJAR	Matsushiro Arr	10.49	226	P	Pn	19 18 17.1	-1.5
	comp=Z,1.5nm,0.6s,baz=25,slow=14,SNR=5.7						
MJAR	Matsushiro Arr	10.49	226	PN	Pn	19 18 17.5	-1.1
MJAR	Matsushiro Arr	10.49	226	Pn	Pn	19 18 17.5	-1.1
PETK	Petropavlovsk-	11.11	33	P	Pn	19 18 24.9	-1.8
	comp=Z,1.1nm,0.3s,baz=102,slow=29,SNR=6.8						
PETK	Petropavlovsk-	11.11	33	PN	Pn	19 18 25.0	-1.8
USA0B	Ussuriysk Arra	11.18	275	PN	Pn	19 18 27.5	-0.4
USA0B	Ussuriysk Arra	11.18	275		Pn	19 18 27.5	-0.4
USRK	Ussuriysk Ar.	11.18	275	P	Pn	19 18 26.9	-1.0
	comp=Z,16nm,1.1s,baz=92,slow=14,SNR=7.2						
USRK	Ussuriysk Ar.	11.18	275	PN	Pn	19 18 27.6	-0.3
USRK	Ussuriysk Ar.	11.18	275	Pn	Pn	19 18 27.6	-0.3
JGF	Kuroka	11.65	226	Pn	Pn	19 18 34.0	-0.2
KLR	Kul'dur	11.94	300	P	Pn	19 18 39.4	+1.5
	comp=Z,3.2nm,1.1s,baz=98,slow=16,SNR=6.1						
KLR				LR	LR	19 23 04.2	
	comp=Z,48nm,21.1s,baz=130,slow=36						
KLR	Kul'dur	11.94	300	⇑ePN	Pn	19 18 38.9	+1.0
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BNX	BinXian	14.35	283	⇓P	Pn	19 19 09.4	0.0
BNX				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,380nm,3.6s						
MA2	Magadan	15.48	6	P	Pn	19 19 23.5	-0.1
	comp=Z,9.5nm,0.7s,baz=177,slow=10,SNR=14						
MA2				LR	LR	19 25 19.9	
	comp=Z,24nm,18.5s,baz=152,slow=37						
MA2	Magadan	15.48	6	deP	Pn	19 19 24.3	+0.7
MA2				pmax	pmax		
	comp=Z,21nm,1.7s						
MA2	Magadan	15.48	6		Pn	19 19 23.5	-0.1
CN2	Changchun	15.91	276	eP	Pn	19 19 25.0	-4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	Korea Array	16.32	252	P	Pn	19 19 33.2	-1.0
	comp=Z,1.1nm,0.5s,baz=64,slow=10,SNR=7.3						
KSRS				LR	LR	19 25 39.9	
	comp=Z,3.6nm,20.8s,baz=185,slow=36						
ZEA	Zeya	16.32	313	eP	Pn	19 19 33.9	-0.2
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY	Seymchan	18.93	7	P	P	19 20 02.7	-1.1
	comp=Z,7.2nm,0.8s,baz=196,slow=9.3,SNR=20						
SEY	Seymchan	18.93	7	⇑eP	P	19 20 02.6	-1.2
SEY				pmax	pmax		
	comp=Z,14nm,1.3s						
YAK	Yakutsk	20.67	336	eP	P	19 20 19.6	-2.9
YAK				eS	S	19 24 03.5	-3.9
YAK				e		19 24 27.7	
YAK				e*SS	sS	19 24 35.3	-4.6
YAK				e		19 31 37.1	
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,74nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				smax	smax		
	comp=E,50nm,2.5s						
YAK				smax	smax		
	comp=N,50nm,2.9s						
XLT	XiLinHaoTe	22.56	280	⇓iP	P	19 20 44.0	+1.2
XLT				pmax	pmax		
	comp=N,36nm,0.7s						
XLT				pmax	pmax		
	comp=N,85nm,5.1s						
BJI	Beijing	23.57	271	P	P	19 20 52.2	-0.2
BJI				pmax	pmax		
	comp=N,5.0nm,0.5s						
BJT	Baijiatuau	23.59	271	P	P	19 20 51.5	-1.0
BJT				pmax	pmax		
	comp=Z,11nm,0.9s						
BJT	Baijiatuau	23.59	271	P	P	19 20 51.5	-1.0
BOD	Bodaibo	24.79	315	eP	P	19 21 00.2	-3.0
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2	Nanjing	25.51	251	eP	P	19 21 10.5	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HNS	HongShan	25.67	266	⇑P	P	19 21 13.5	+2.1
HNS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BILL	Bilibino	25.80	16	⇓eP	P	19 21 11.5	-0.8
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	Bilibino	25.80	16	P	P	19 21 10.4	-1.9
HHC	Hu-ho-hao-te	26.61	275	eP	P	19 21 18.7	-1.3
HHC				pmax	pmax		
	comp=Z,48nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
BTO	Baotou	27.79	276	eP	P	19 21 35.7	+5.1
ULN	Ulaanbaatar	28.12	292	i P	P	19 21 33.5	0.0
ULN	Ulaanbaatar	28.12	292	P	P	19 21 32.8	-0.7
ULN				IAmb	IAmb	19 21 35.1	
	comp=Z,5.7nm,0.7s						
SONM	Songino Array	28.56	292	P	P	19 21 38.5	+1.1
	comp=Z,4.8nm,0.7s,baz=82,slow=8.3,SNR=42						
SONM				LR	LR	19 32 27.8	
	comp=Z,34nm,20.3s,baz=106,slow=35						
	comp=Z,4.8nm,0.7s						
SONM	Songino Array	28.56	292	P	P	19 21 37.8	+0.5
TIXI	Tiksi	28.94	348	P	P	19 21 36.7	-3.6
	comp=Z,1.8nm,0.4s,baz=272,slow=23,SNR=31						
TIXI				LR	LR	19 34 36.4	

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      comp=Z,19nm,18.2s,baz=180,slow=39
TIXI  Tiksi            28.94 348 i P      P      19 21 36.5 -3.7
H11N2 WAKE ISLAND Hy   29.28 140   T      T      19 52 46.6
      baz=332,slow=76,SNR=293
H11N1 WAKE ISLAND Hy   29.29 140   T      T      19 52 45.0
      baz=332,slow=76,SNR=195
H11N3 WAKE ISLAND Hy   29.30 140   T      T      19 52 47.9
      baz=332,slow=76,SNR=254
H11S1 WAKE ISLAND Hy   30.26 142   T      T      19 53 55.3
      baz=333,slow=76,SNR=312
H11S3 WAKE ISLAND Hy   30.27 142   T      T      19 54 01.2
      baz=333,slow=76,SNR=148
H11S2 WAKE ISLAND Hy   30.28 142   T      T      19 53 58.6
      baz=333,slow=76,SNR=177
XAN   Xi'an            31.40 264   P      P      19 22 01.5 -1.0
XAN                                pP     pP     19 22 23.9 -1.6
XAN                                pmax   pmax
      comp=Z,4.0nm,1.2s
LZH   Lanzhou          34.06 271 e P      P      19 22 27.3 +1.6
LZH                                pP     pP     19 22 46.7 -2.2
LZH                                sP     sP     19 22 56.7 -4.1
LZH                                pmax   pmax
      comp=Z,38nm,1.1s
GTA   Gaotai           35.51 279 e P      P      19 22 39.5 +1.3
GTA                                pmax   pmax
      comp=Z,6.0nm,1.1s
N18K  Kilae Creek      36.84  43   P      P      19 22 51.1 +2.0
      baz=270
TTA   Tatalina         36.86  39   P      P      19 22 50.4 +1.1
TTA                                pmax   pmax
      comp=Z,4.0nm,0.9s
TTA   Tatalina         36.86  39   P      P      19 22 50.4 +1.1
TTA   Tatalina         36.86  39   P      P      19 22 50.3 +1.0
      baz=267
O18K  Koktuh Hills     37.19  45   P      P      19 22 53.7 +1.6
      baz=272
P18K  Big Mountain,    37.20  45   P      P      19 22 53.3 +1.2
      baz=272
K20K  Telida           37.76  39   P      P      19 22 58.1 +1.2
      baz=268
J20K  Nowinta River    37.77  37   P      P      19 22 57.6 +0.8
J20K                               IAmb   IAmb   19 22 58.9
      comp=Z,4.4nm,0.8s
J20K  Nowinta River    37.77  37   P      P      19 22 58.0 +1.2
      baz=267
IMAR  Indian Mountai   38.07  35   P      P      19 22 59.9 +0.6
M20K  Styx River       38.17  41   P      P      19 23 01.7 +1.3
M20K                               IAmb   IAmb   19 23 03.4
      comp=Z,5.1nm,0.8s
M20K  Styx River       38.17  41   P      P      19 23 02.3 +1.9
      baz=271
H21K  Melozitna Rive   38.43  35   P      P      19 23 03.1 +0.7
H21K                               IAmb   IAmb   19 23 05.3
      comp=Z,3.1nm,0.6s
H21K  Melozitna Rive   38.43  35   P      P      19 23 03.1 +0.7
      baz=266
PPLA  Purkeypile       38.61  40   P      P      19 23 06.0 +1.9
      baz=270
CAST  Castle Rocks     38.66  39   P      P      19 23 05.4 +1.0
CAST                               IAmb   IAmb   19 23 06.9
      comp=Z,5.8nm,0.8s
CAST  Castle Rocks     38.66  39   P      P      19 23 05.9 +1.6
      baz=270,SNR=7.4
KDAK  Kodiak Island    38.70  48   P      P      19 23 04.8 +0.2
KDAK                               pmax   pmax
      comp=Z,52nm,1.5s
KDAK  Kodiak Island    38.70  48   P      P      19 23 04.8 +0.2
KDAK  Kodiak Island    38.70  48   P      P      19 23 05.1 +0.4
      baz=276
I21K  Tanana           38.75  36   P      P      19 23 06.2 +1.2
      baz=268
NRIK  Noril'sk         38.97 331   P      P      19 23 07.4 +0.6
      comp=Z,2.7nm,0.5s,baz=50,slow=7.7,SNR=3.7
      comp=Z,2.7nm,0.5s
NRIK  Noril'sk         38.97 331⇑e P      P      19 23 05.0 -1.8
NRIK                               pmax   pmax
      comp=Z,2.0nm,1.1s
NRIK  Noril'sk         38.97 331   P      P      19 23 07.6 +0.8
BPAW  Bear Paw Mtn.    39.15  38   P      P      19 23 09.7 +1.3
      baz=270
COLD  Coldfoot         39.58  33   P      P      19 23 13.0 +1.1
      baz=267
H23K  Yukon River      39.78  35   P      P      19 23 15.2 +1.5
      baz=269,SNR=7.6
I23K  Minto, Yukon-K   39.85  36   P      P      19 23 15.4 +1.2
      baz=270
TOLK  Toolik Lake Re   39.91  31   P      P      19 23 15.6 +0.9
      baz=266,SNR=7.9
NEA2  Nenana           39.98  37   P      P      19 23 16.3 +1.0
NEA2                               IAmb   IAmb   19 23 18.0
      comp=Z,5.7nm,0.8s
NEA2  Nenana           39.98  37   P      P      19 23 16.4 +1.1
      baz=271,SNR=5.1
WAT1  Susitna Watana   40.28  40   P      P      19 23 18.1 +0.3
      baz=274
MDM   Murphy Dome      40.33  36   P      P      19 23 19.0 +0.7
KNK   Knik Glacier     40.42  42   P      P      19 23 20.9 +1.9
      baz=275
SML   Sawmill          40.45  41   P      P      19 23 20.3 +1.1
      baz=275,SNR=6.9
H24K  Noodor Dome      40.47  35   P      P      19 23 20.8 +1.4
      baz=270
GOMU  GeErMu           40.47 277   P      P      19 23 21.5 +1.3
GOMU                               pmax   pmax
      comp=Z,5.0nm,0.8s
GOMU                               pmax   pmax
      comp=Z,49nm,4.4s
COLA  College          40.50  36deP      P      19 23 21.0 +1.5
COLA                               pmax   pmax
      comp=Z,6.0nm,0.9s
WAT6  Susitna Watana   40.67  40   P      P      19 23 21.3 +0.1
      baz=274
POKR  Poker Plat Res   40.67  36   P      P      19 23 21.6 +0.6
      baz=272
PZH   PanZhiHua        40.76 260   P      P      19 23 22.9 +0.6
PZH                                pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                pmax   pmax
      comp=Z,80nm,4.4s
DHY   Denali Highway   40.80  39   P      P      19 23 22.7 +0.5
DHY                                IAmb   IAmb   19 23 23.6
      comp=Z,7.9nm,0.8s
DHY   Denali Highway   40.80  39   P      P      19 23 22.7 +0.5
      baz=274,SNR=6.9
HDA   Harding Lake     40.90  37   P      P      19 23 23.3 +0.4
HDA                                IAmb   IAmb   19 23 24.5
      comp=Z,5.8nm,0.7s
HDA   Harding Lake     40.90  37   P      P      19 23 24.0 +1.1
      baz=273,SNR=6.5
IL31                   40.91  37   P      P      19 23 23.1 +0.2
ILAR  Eielson Array    40.91  37   P      P      19 23 23.5 +0.5
      comp=Z,13nm,1.2s,baz=257,slow=6.6,SNR=25
      comp=Z,13nm,1.2s
ZAA0  Zalesovo Array   40.94 307   P      P      19 23 22.9 -0.4
ZALV  Zalesovo Beam    40.94 307   P      P      19 23 23.5 +0.2
      comp=Z,1.0nm,0.3s,baz=79,slow=9.2,SNR=7.2
ZALV                               PcP    PcP    19 25 22.0 +0.4
      comp=Z,2.7nm,0.6s,baz=52,slow=3.1,SNR=10
ZALV                               LR     LR     19 39 49.4
      comp=Z,22nm,19.1s,baz=59,slow=35
      comp=Z,1.0nm,0.3s
ZALV  Zalesovo Beam    40.94 307   P      P      19 23 22.9 -0.4
K24K  Donnelly Dome    41.46  38   P      P      19 23 28.0 +0.5
      baz=275,SNR=6.0
J25K  Salcha River,    41.57  37   P      P      19 23 28.3 -0.1
      baz=274
KLU   Klutina          41.63  41   P      P      19 23 30.0 +1.1
      baz=277
BMAR  Burnt Mountain   41.76  32   P      P      19 23 31.2 +1.4
RIDG  Independent Ri   41.88  38   P      P      19 23 31.5 +0.6
      baz=276
HARP  HAARP            41.88  40   P      P      19 23 31.8 +0.9
      baz=277
WMQ   Urumqi           42.20 291 e P      P      19 23 34.7 +0.9
WMQ                                pmax   pmax
      comp=Z,29nm,1.3s
WMQ                                LR     LR
      comp=Z,360nm,28.9s
WMQ                                LR     LR
      comp=Z,1µm,29.0s
WMQ                                LR     LR
      comp=Z,64nm,27.9s
SCRK  Sand Creek       42.23  38   P      P      19 23 34.4 +0.5
      baz=276,SNR=8.1
BMRM  Bremner River    42.33  42   P      P      19 23 35.8 +1.2
      baz=279
J26L  Joseph Creek     42.36  37   P      P      19 23 35.1 +0.2

      baz=276
L26K  Log Cabin Wild   42.63  39   P      P      19 23 38.8 +1.8
      baz=278,SNR=5.6
M26K  Nabesna, AK      42.88  40   P      P      19 23 40.9 +1.9
      baz=279,SNR=9.2
K27K  Chicken          43.06  37   P      P      19 23 41.9 +1.5
K27K                               IAmb   IAmb   19 23 42.7
      comp=Z,9.5nm,0.7s
K27K  Chicken          43.06  37   P      P      19 23 41.7 +1.3
      baz=278
L27K  Beaver Creek,    43.31  39   P      P      19 23 44.3 +1.8
      baz=279,SNR=16
BCAR  Beaver Creek A   43.33  39   P      P      19 23 44.3 +1.6
EGAK  Eagle            43.36  36   P      P      19 23 43.1 +0.3
      baz=278
M27K  Edge Creek, AK   43.40  40   P      P      19 23 45.3 +1.9
M27K                               IAmb   IAmb   19 23 46.0
      comp=Z,8.0nm,0.8s
M27K  Edge Creek, AK   43.40  40   P      P      19 23 45.0 +1.7
      baz=280
BVCY  Beaver Creek     43.85  40   P      P      19 23 48.4 +1.5
      baz=280
DAWY  Dawson           44.22  37   P      P      19 23 50.8 +1.0
      baz=280
I29M  Ogilvie Camp,    44.47  35   P      P      19 23 52.9 +1.2
      baz=279,SNR=13
MK31  Makanchi Array   44.62 297c iP      P      19 23 53.5 +0.3
MK31  Makanchi Array   44.62 297   P      P      19 23 53.8 +0.6
MKAR  Makanchi Array   44.62 297   P      P      19 23 53.8 +0.6
      comp=Z,15nm,0.8s,baz=77,slow=8.6,SNR=140
      comp=Z,15nm,0.8s
MAKZ  Makanchi         44.82 297   P      P      19 23 55.2 +0.5
MAKZ                               pmax   pmax
      comp=Z,16nm,0.8s
MAKZ  Makanchi         44.82 297   P      P      19 23 55.2 +0.5
EPYK  Eagle Plains     44.95  34   P      P      19 23 57.0 +1.5
      baz=280
KURK  Kurchatov        45.51 304ceP      P      19 24 00.1 +0.1
KURK                             i *PP    pP     19 24 27.8 +3.5
KURK                               pmax   pmax
      comp=Z,8.0nm,0.6s
KURK  Kurchatov        45.51 304   P      P      19 24 00.1 +0.1
M30M  Minto, Yukon     45.67  39   P      P      19 24 03.1 +1.9
      baz=283
HYT   Haines Junctio   45.76  41   P      P      19 24 04.0 +2.0
HYT                                IAmb   IAmb   19 24 05.8
      comp=Z,14nm,0.9s
HYT   Haines Junctio   45.76  41   P      P      19 24 04.5 +2.4
      baz=284,SNR=7.5
INK   Inuvik           45.83  31   P      P      19 24 03.3 +1.0
      comp=Z,7.3nm,0.4s,baz=297,slow=8.9,SNR=63
      comp=Z,7.3nm,0.4s
INK   Inuvik           45.83  31   P      P      19 24 03.2 +0.9
INK                                pmax   pmax
      comp=Z,9.0nm,0.8s
INK   Inuvik           45.83  31   P      P      19 24 03.2 +0.9
INK                                IAmb   IAmb   19 24 04.2
      comp=Z,8.7nm,0.8s
INK   Inuvik           45.83  31   P      P      19 24 03.6 +1.3
      baz=280,SNR=12
N31M  Braeburn, Yuko   46.40  40   P      P      19 24 09.0 +2.0
      baz=285
M31M  Drury Creek, Y   46.85  39   P      P      19 24 12.3 +1.9
      baz=286
CHTO  Chiang Mai       47.71 254   P      P      19 24 18.9 +1.3
CHTO                               pmax   pmax
      comp=Z,4.0nm,0.8s
CHTO  Chiang Mai       47.71 254   P      P      19 24 18.9 +1.3
A36M  Sachs Harbour    47.80  25   P      P      19 24 18.5 +0.9
      baz=284
CMAR  Chiang Mai Arr   47.95 254   P      P      19 24 21.1 +1.6
      comp=Z,1.4nm,0.8s,baz=42,slow=7.6,SNR=8.5
      comp=Z,1.4nm,0.8s
MMPY  Sheldon Lake,    48.12  38   P      P      19 24 22.4 +2.0
      baz=288
C36M  Paulatuk         48.90  28   P      P      19 24 26.9 +0.8
      baz=288
PRZ   Przheval'sk      48.93 294   P      P      19 24 28.2 +1.2
PRZ                                pmax   pmax
      comp=Z,12nm,0.7s
PRZ   Przheval'sk      48.93 294   P      P      19 24 28.2 +1.2
BRVK  Borovoye         49.47 309ceP      P      19 24 31.2 +0.5
BRVK                               pmax   pmax
      comp=Z,8.0nm,0.8s
BRVK  Borovoye         49.47 309   P      P      19 24 30.4 -0.3
BRVK                               IAmb   IAmb   19 24 32.4
      comp=Z,6.7nm,0.7s
TARG  Taragay, Kyrgy   49.67 293   P      P      19 24 33.8 +0.9
TARG                               IAmb   IAmb   19 24 35.4
      comp=Z,6.7nm,1.1s
KDJ   Kajisay          49.90 294   P      P      19 24 34.9 +0.5
KDJ                                pmax   pmax
      comp=Z,9.0nm,0.8s
KDJ   Kajisay          49.90 294   P      P      19 24 34.9 +0.5
DLBC  Dease Lake       50.11  43   P      P      19 24 37.1 +1.5
      comp=Z,2.3nm,0.5s,baz=264,slow=4.4,SNR=6.1
      comp=Z,2.3nm,0.5s
DLBC  Dease Lake       50.11  43   P      P      19 24 36.9 +1.3
DLBC                               IAmb   IAmb   19 24 44.9
      comp=Z,16nm,1.5s
TAPN  Taplejung        50.30 271 e P      P      19 24 38.9 +1.2
ULHL  Ulahol           50.46 294   P      P      19 24 39.8 +1.1
      SNR=16
BOOM  Boomskoye usch   50.54 295   P      P      19 24 40.4 +1.2
BOOM                               pmax   pmax
      comp=Z,14nm,0.8s
BOOM  Boomskoye usch   50.54 295   P      P      19 24 40.4 +1.2
TKM2  Tokmak 2         50.57 295   P      P      19 24 39.9 +0.5
      SNR=16
ODAN  Odare            50.82 271 e P      P      19 24 42.7 +1.2
KBK   Karagaybulak     51.11 295   P      P      19 24 44.7 +1.3
      SNR=9.3
USP   Ospenovka        51.12 296   P      P      19 24 44.5 +1.2
      SNR=10
FRU1  Bishkek          51.25 296   P      P      19 24 45.7 +1.3
FRU1                               pmax   pmax
      comp=Z,9.0nm,0.6s
FRU1  Bishkek          51.25 296   P      P      19 24 45.6 +1.3
GUN   Gumba            51.29 273 e P      P      19 24 45.9 +0.8
      comp=Z,14nm,0.6s
RAMN  Ramite           51.33 272 e P      P      19 24 46.0 +0.6
      comp=Z,18nm,0.5s
AAK   Ala-Archa        51.42 295   P      P      19 24 46.6 +0.9
      SNR=5.4
AAK   Ala-Archa        51.42 295ceP      P      19 24 46.6 +0.9
AAK                                pmax   pmax
      comp=Z,9.0nm,1.3s
AAK   Ala-Archa        51.42 295   P      P      19 24 46.0 +0.3
AAK                                IAmb   IAmb   19 24 47.5
      comp=Z,10.0nm,1.2s
KKN   Kakani           51.79 273 e P      P      19 24 49.4 +0.7
PKI   Pulchoki         51.82 273 e P      P      19 24 49.4 +0.3
      comp=Z,5.8nm,0.6s
EKS2  Erkin-Say        51.87 296   P      P      19 24 50.1 +1.0
      SNR=12
KSH   Kashi            51.96 291   P      P      19 24 54.5 +4.7
KSH                                pmax   pmax
      comp=Z,3.0nm,0.9s
DMN   Daman            52.02 273 e P      P      19 24 51.3 +0.8
      comp=Z,11nm,0.7s
GKN   Gorkha           52.12 274 e P      P      19 24 51.8 +0.7
      comp=Z,5.0nm,0.3s
AML   Almayashu        52.18 295   P      P      19 24 53.2 +1.5
      SNR=9.6
EUNU  Eureka           52.32  10   P      P      19 24 50.5 -1.3
EUNU                               IAmb   IAmb   19 24 52.2
      comp=Z,4.1nm,0.7s
DANN  Dangsing         52.55 275 e P      P      19 24 55.7 +1.2
      comp=Z,33nm,0.6s
SVE   Sverdlovsk       52.99 317 e P      P      19 24 56.3 -0.6
SVE                                pmax   pmax
      comp=Z,18nm,1.2s
KOLN  Koldanda         53.00 275 e P      P      19 24 58.3 +0.6
PYUN  Piuthan          53.25 275 e P      P      19 25 00.4 +0.9
      comp=Z,7.2nm,0.4s
KK31  Karatay Array    53.75 298   P      P      19 25 03.1 +0.4
KK31                               pmax   pmax
      comp=Z,7.0nm,0.7s
KK31  Karatay Array    53.75 298   P      P      19 25 03.1 +0.4
KK31                               IAmb   IAmb   19 25 04.2
      comp=Z,6.9nm,0.7s
KKAR  Karatay Array    53.75 298   P      P      19 25 03.2 +0.5
KKAR  Karatay Array    53.75 298   P      P      19 25 03.2 +0.5
ARU   Arti             54.19 317   P      P      19 25 04.8 -0.9
      comp=Z,1.4nm,0.3s,baz=142,slow=18,SNR=5.7
      comp=Z,1.4nm,0.3s

ARU   Arti             54.19 317d iP      P      19 25 04.7 -1.0
ARU                                              19 27 05.6
ARU                                S      S      19 32 34.0 -0.5
ARU                                              19 34 46.3
ARU                                SS     SS     19 36 11.7 -5.3
ARU                                pmax   pmax
      comp=Z,13nm,1.0s
ARU   Arti             54.19 317   P      P      19 25 04.3 -1.4
SPA0  Spitsbergen Ar   54.36 349 e P      P      19 25 05.5 -1.1
RES   Resolute Bay     54.41  17   P      P      19 25 06.7 -0.3
      comp=Z,7.1nm,0.5s,baz=306,slow=6.3,SNR=41
      comp=Z,7.1nm,0.5s
RES   Resolute Bay     54.41  17   P      P      19 25 06.5 -0.5
DRK   Karamyk          54.76 293   P      P      19 25 11.0 +0.6
DRK                                IAmb   IAmb   19 25 12.4
      comp=Z,4.7nm,0.7s
BTK   Batken           55.10 294   P      P      19 25 12.5 -0.1
BTK                                pmax   pmax
      comp=Z,9.0nm,1.2s
BTK   Batken           55.10 294   P      P      19 25 12.5 -0.1
BTK                                IAmb   IAmb   19 25 14.2
      comp=Z,9.4nm,1.2s
YKA   Yellowknife Ar   55.23  34   P      P      19 25 13.8 +0.7
      comp=Z,2.2nm,0.6s,baz=299,slow=6.7,SNR=31
      comp=Z,2.2nm,0.6s
YKA   Yellowknife Ar   55.23  34   P      P      19 25 12.8 -0.2
GAR   Garm             55.99 294   P      P      19 25 18.8 -0.3
CHGR  Chuyangaron      56.93 294   P      P      19 25 25.8 +0.1
NIL   Nilore           56.94 287   P      P      19 25 26.2 +0.5
NIL                                pmax   pmax
      comp=Z,16nm,1.1s
NIL   Nilore           56.94 287   P      P      19 25 26.2 +0.5
ABKAR Akbulak array    56.99 309   P      P      19 25 26.0 +0.2
ABKAR Akbulak array    56.99 309   P      P      19 25 26.1 +0.2
ABKAR                              IAmb   IAmb   19 25 27.1
      comp=Z,20nm,0.6s
PRGR  Permogore        57.33 326 e P      P      19 25 25.9 -2.0
KIRV  Kirov            57.39 322⇓e P      P      19 25 28.9 +0.5
AKTO  Aktyubinsk       57.44 311   P      P      19 25 28.8 -0.2
      comp=Z,5.8nm,0.7s,baz=63,slow=8.9,SNR=23
AKTO                               LR     LR     19 50 33.7
      comp=Z,13nm,21.0s,baz=48,slow=36
      comp=Z,5.8nm,0.7s
LVZ   Lovozero         57.48 336   P      P      19 25 27.3 -1.7
LVZ                                pmax   pmax
      comp=Z,1.0nm,0.5s
LVZ   Lovozero         57.48 336   P      P      19 25 27.3 -1.7
KEV   Kevo             58.36 339   P      P      19 25 33.9 -1.2
KEV                                pmax   pmax
      comp=Z,6.0nm,0.7s
KEV   Kevo             58.36 339   P      P      19 25 33.9 -1.2
KEV                                IAmb   IAmb   19 25 34.7
      comp=Z,6.0nm,0.7s
HAMF  Hammerfest       58.54 341 e P      P      19 25 34.9 -1.5
ARA0  ARCESS Array S   58.89 340 e P      P      19 25 37.9 -0.9
ARCES ARCESS Array B   58.89 340   P      P      19 25 37.5 -1.3
      comp=Z,1.2nm,0.4s,baz=50,slow=7.5,SNR=33
      comp=Z,1.2nm,0.4s
ARCES ARCESS Array B   58.89 340   P      P      19 25 37.8 -1.0
ARCES                              pmax   pmax
      comp=Z,13nm,1.5s
ARCES ARCESS Array B   58.89 340   P      P      19 25 37.8 -1.0
KBL   Kabul            59.30 290   P      P      19 25 40.5 -1.9
KBL                                pmax   pmax
      comp=Z,12nm,1.4s
KBL   Kabul            59.30 290   P      P      19 25 40.5 -1.9
KTK1  Kautokeino       59.83 340 e P      P      19 25 44.4 -0.8
JETT  Jettan, Norway   60.10 341 e P      P      19 25 46.7 -0.5
KLMR  Klimovskoe       60.18 328 e P      P      19 25 44.8 -2.9
KLMR                               pmax   pmax
      comp=Z,9.0nm,1.2s
KLMR  Klimovskoe       60.18 328 e P      P      19 25 44.9 -2.8
KLMR                               AMP           19 25 48.6
      comp=Z,9.0nm,1.2s
TRO   Tromso           60.39 342 e P      P      19 25 47.3 -1.6
EDM   Edmonton         60.84  43   P      P      19 25 53.1 +0.7
EDM                                pmax   pmax
      comp=Z,6.0nm,0.6s
EDM   Edmonton         60.84  43   P      P      19 25 53.1 +0.7
EDM                                IAmb   IAmb   19 25 54.1
      comp=Z,5.6nm,0.6s
BELG  Belogornoye      61.75 317   P      P      19 25 58.5 +0.1
      comp=Z,22nm,0.7s,baz=3.3,slow=5.5,SNR=6.6
      comp=Z,22nm,0.7s
STEI  Steigen          62.56 342 e P      P      19 26 02.7 -0.9
FAUS  Fauske           62.99 341 e P      P      19 26 05.7 -0.8
VALR  Valaam           63.02 331d iP      P      19 26 05.5 -1.2
VALR                             i *PP    pP     19 26 35.4 +3.0
VALR                               pmax   pmax
      comp=Z,10.0nm,0.8s
SUMG  Summit           63.41   2   P      P      19 26 09.8 +0.1
SUMG                               pmax   pmax
      comp=Z,7.0nm,0.6s
SUMG  Summit           63.41   2   P      P      19 26 09.8 +0.1
JMIC  Jan Mayen        63.80 351   LR     LR     19 56 50.0
      comp=Z,19nm,18.1s,baz=262,slow=39
CTAO  Charters Tower   64.03 181   P      P      19 26 14.3 +0.4
CTAO                               pmax   pmax
      comp=Z,21nm,1.5s
CTAO  Charters Tower   64.03 181   P      P      19 26 14.3 +0.4
KONS  Konsvik          64.21 341 e P      P      19 26 14.5  0.0
GEYT  Alibeck          64.47 299   P      P      19 26 17.6 +0.9
      comp=Z,1.8nm,0.4s,baz=234,slow=21,SNR=4.6
      comp=Z,1.8nm,0.4s
GEYT  Alibeck          64.47 299   P      P      19 26 16.5 -0.2
GYA0B ALIBECK ARRAY    64.47 299   P      P      19 26 16.7 -0.1
GYA0B                              IAmb   IAmb   19 26 19.5
      comp=Z,5.3nm,0.9s
FIA1  FINESS Array S   64.57 333   P      P      19 26 16.0 -1.0
FINES FINESS Array B   64.57 333   P      P      19 26 15.9 -1.1
      comp=Z,9.9nm,0.7s,baz=46,slow=8.2,SNR=51
      comp=Z,9.9nm,0.7s
FINES FINESS Array B   64.57 333   P      P      19 26 15.8 -1.2
WRAB  Tennant Creek    65.00 194   P      P      19 26 20.2  0.0
WRAB                               pmax   pmax
      comp=Z,13nm,1.5s
WRAB  Tennant Creek    65.00 194   P      P      19 26 20.2  0.0
WRAB                               IAmb   IAmb   19 26 23.6
      comp=Z,13nm,1.5s
VRH   Novokhopyorsk    65.36 318 e P      P      19 26 20.0 -2.2
VRH                                pmax   pmax
      comp=Z,10.0nm,0.9s
FCC   Fort Churchill   65.45  30   P      P      19 26 23.0 +0.4
FCC                                pmax   pmax
      comp=Z,4.0nm,0.6s
FCC   Fort Churchill   65.45  30   P      P      19 26 23.0 +0.4
FCC                                IAmb   IAmb   19 26 23.3
      comp=Z,3.7nm,0.6s
HRY   Holter Researc   65.58  48   P      P      19 26 24.0 +0.1
LPSR  Galich'ya Gora   65.74 321 e P      P      19 26 24.3 -0.4
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.7s
LRM   Limekiln Ridge   65.80  49   P      P      19 26 26.2 +0.7
MEF   Metsahovi        66.04 333 e P      P      19 26 26.4  0.0
NSS   Namsos           66.12 341 e P      P      19 26 26.7 -0.2
VORR  Voronezh         66.23 320 e P      P      19 26 28.0 +0.2
VORR                               pmax   pmax
      comp=Z,30nm,0.5s
RAF   Rauma            66.26 334 e P      P      19 26 27.3 -0.6
BOZ   Bozeman (W)      66.39  49   P      P      19 26 29.9 +0.7
BOZ                                pmax   pmax
      comp=Z,3.0nm,0.6s
BOZ   Bozeman (W)      66.39  49   P      P      19 26 29.9 +0.7
BOZ   Bozeman (W)      66.39  49   P      P      19 26 30.3 +1.2
      baz=310
VSR   Storozhevoye     66.56 319 e P      P      19 26 29.5 -0.4
VSR                                pmax   pmax
      comp=Z,10.0nm,0.6s
VSU   Vasula           66.56 331deP      P      19 26 29.2 -0.5
VSU                                pmax   pmax
      comp=Z,17nm,0.9s
VSU   Vasula           66.56 331 e P      P      19 26 29.6 -0.2
VORD  Divnogorie       66.66 319 e P      P      19 26 29.8 -0.8
VORD                               pmax   pmax
      comp=Z,10.0nm,0.7s
NVAR  Mina Array Bea   67.06  58   P      P      19 26 34.9 +1.3
      comp=Z,1.0nm,0.7s,baz=297,slow=6.1,SNR=8.7
      comp=Z,1.0nm,0.7s
NVAR  Mina Array Bea   67.06  58   P      P      19 26 33.8 +0.2
MTSE  Matsula          67.38 332 e P      P      19 26 34.9  0.0
AAL   Aland            67.47 335 e P      P      19 26 35.1 -0.4
UPP   Uppsala          68.45 335 e P      P      19 26 41.7 +0.1
UPP                                IAmb   IAmb   19 26 41.8
      comp=Z,5.0nm,0.4s
ASAR  Alice Springs    68.73 193   P      P      19 26 44.5 +0.7
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	comp=Z,0.9nm,0.9s,baz=13,slow=6.6,SNR=9.0						
	comp=Z,0.9nm,0.9s						
ASAR	**Alice Springs**	**68.73**	**193**	P	**P**	**19 26 44.0**	**+0.3**
IDID	**Didziasalis**	**68.91**	**328**	*e*P	**P**	**19 26 45.4**	**+0.8**
DOMB	**Dombas**	**68.93**	**340**	*e*P	**P**	**19 26 44.5**	**-0.2**
NC303	**NORSAR Array S**	**69.06**	**339**	P	**P**	**19 26 45.2**	**-0.2**
IIGN	**Ignalina**	**69.07**	**329**	*e*P	**P**	**19 26 46.3**	**+0.7**
MNK	**Minsk**	**69.07**	**327**	*i* P	**P**	**19 26 46.0**	**+0.4**
MNK				*i* *PP	**pP**	**19 27 13.1**	**+1.5**
MNK				*i*		19 29 24.1	
MNK				*i* PPP	PPP	19 31 04.6	
MNK				*i* S	**S**	**19 35 44.5**	**+2.2**
MNK				*i* SS	**SS**	**19 40 08.2**	**-0.8**
MNK				pmax	pmax		
	comp=Z,14nm,1.3s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,12nm,1.3s						
MNK	**Minsk**	**69.07**	**327**	*i* P	**P**	**19 26 46.1**	**+0.4**
	comp=E,2.0nm,1.3s						
MNK				*i* P	**P**	**19 26 46.1**	**+0.4**
	comp=N,12nm,1.3s						
MNK				*i* P	**P**	**19 26 46.1**	**+0.4**
	comp=Z,14nm,1.3s,baz=42						
MNK				*i* pP	**pP**	**19 27 13.2**	**+1.5**
MNK				*i* PP	**PP**	**19 29 24.2**	**+5.3**
MNK				*i* PPP	PPP	19 31 04.7	
MNK				*i* S	**S**	**19 35 44.5**	**+2.2**
MNK				*i* SS	**SS**	**19 40 08.2**	**-0.8**
MNK				*i* SSS	SSS	19 43 25.8	
NACGM	**Naroch**	**69.20**	**328**	⇑*e*P	**P**	**19 26 47.0**	**+0.7**
	baz=41						
NB2	**NORSAR Subarra**	**69.25**	**339**	P	**P**	**19 26 46.3**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=31,slow=6.5						
NB2	**NORSAR Subarra**	**69.25**	**339**	P	**P**	**19 26 46.3**	**-0.4**
	baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.25**	**339**	P	**P**	**19 26 46.4**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=40,slow=6.9,SNR=44						
NOA				LR	LR	20 02 06.7	
	comp=Z,8.8nm,18.3s,baz=245,slow=40						
	comp=Z,2.5nm,0.5s						
HFS	**Hagfors**	**69.35**	**337**	LR	LR	20 02 08.8	
	comp=Z,16nm,19.6s,baz=352,slow=40						
PD31	**Pinedale Array**	**69.36**	**50**	P	**P**	**19 26 48.0**	**0.0**
PDAR	**Pinedale Array**	**69.36**	**50**	P	**P**	**19 26 48.5**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=272,slow=2.0,SNR=11						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**69.36**	**50**	P	**P**	**19 26 48.2**	**+0.2**
NC602	**NORSAR Array S**	**69.43**	**339**	*e*P	**P**	**19 26 47.6**	**-0.1**
NCK	**Nalchik**	**69.48**	**311**	⇓*e*P	**P**	**19 26 48.1**	**-0.3**
NCK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KIV	**Kislovodsk**	**69.66**	**312**	*e*P	**P**	**19 26 47.7**	**-1.9**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV	**Kislovodsk**	**69.66**	**312**	P	**P**	**19 26 50.4**	**+0.8**
KBZ	**Khabaz**	**69.70**	**312**	P	**P**	**19 26 51.4**	**+1.7**
	comp=Z,5.2nm,0.7s,baz=64,slow=3.6,SNR=16						
	comp=Z,5.2nm,0.7s						
KBZ	**Khabaz**	**69.70**	**312**	*ce*P	**P**	**19 26 50.9**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PABE	**Paberze**	**69.79**	**330**	P	**P**	**19 26 50.3**	**+0.4**
PABE				IAmb	IAmb	19 26 50.9	
	comp=Z,12nm,0.8s						
PABE	**Paberze**	**69.79**	**330**	*e*P	**P**	**19 26 50.2**	**+0.2**
VIKU	**Vikbolandet**	**69.83**	**335**	*e*P	**P**	**19 26 50.6**	**+0.4**
ONI	**Oni**	**70.16**	**310**	P	**P**	**19 26 53.1**	**+0.5**
ONI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ONI	**Oni**	**70.16**	**310**	P	**P**	**19 26 53.0**	**+0.5**
ONI				IAmb	IAmb	19 26 55.3	
	comp=Z,5.8nm,0.8s						
SKAR	**Skarslia**	**70.29**	**340**	*e*P	**P**	**19 26 52.9**	**-0.2**
GNI	**Garni**	**71.08**	**308**	P	**P**	**19 26 59.3**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=224,slow=2.3,SNR=4.8						
	comp=Z,2.8nm,0.6s						
GNI	**Garni**	**71.08**	**308**	⇑*e*P	**P**	**19 27 00.0**	**+1.6**
GNI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GNI	**Garni**	**71.08**	**308**	P	**P**	**19 26 59.0**	**+0.6**
GNI				IAmb	IAmb	19 27 01.5	
	comp=Z,8.3nm,1.1s						
BER	**Bergen**	**71.26**	**341**	*e*P	**P**	**19 26 58.1**	**-0.7**
AKASG	**Malin Array Be**	**71.36**	**324**	P	**P**	**19 26 59.5**	**-0.1**
	comp=Z,9.4nm,0.6s,baz=40,slow=6.9,SNR=48						
	comp=Z,9.4nm,0.6s						
AKASG	**Malin Array Be**	**71.36**	**324**	P	**P**	**19 26 59.2**	**-0.4**
AKBB	**Malin Array Si**	**71.36**	**324**	*c i*P	**P**	**19 26 59.3**	**-0.3**
AKBB	**Malin Array Si**	**71.36**	**324**	P	**P**	**19 26 59.1**	**-0.6**
DEL	**Delary**	**72.37**	**335**	*e*P	**P**	**19 27 05.2**	**-0.3**
BSD	**Bornholm Skovb**	**73.19**	**334**	*e*P	**P**	**19 27 10.4**	**+0.1**
SORM	**Soroca**	**73.67**	**322**	⇑P	**P**	**19 27 13.3**	**-0.1**
SORM	**Soroca**	**73.67**	**322**	⇑P	**P**	**19 27 13.3**	**-0.1**
GURO	**Guroymak-BITLI**	**73.70**	**308**	P	**P**	**19 27 14.4**	**+0.5**
GURO				IAmb	IAmb	19 27 16.7	
	comp=Z,5.1nm,0.9s						
UOSS	**Minazif**	**73.97**	**289**	P	**P**	**19 27 15.6**	**0.0**
UOSS				IAmb	IAmb	19 27 20.2	
	comp=Z,6.3nm,0.9s						
MILM	**Milestii Mici**	**74.38**	**321**	⇑P	**P**	**19 27 17.3**	**-0.3**
MILM	**Milestii Mici**	**74.38**	**321**	⇑P	**P**	**19 27 17.3**	**-0.3**
KWP	**Kalwaria Pacla**	**74.86**	**326**	P	**P**	**19 27 21.0**	**+0.7**
KWP				pmax	pmax		
	comp=Z,162nm,0.9s						
KWP	**Kalwaria Pacla**	**74.86**	**326**	P	**P**	**19 27 21.0**	**+0.7**
MARD	**Mardin**	**75.28**	**308**	P	**P**	**19 27 23.6**	**+0.6**
MARD				IAmb	IAmb	19 27 25.6	
	comp=Z,7.6nm,0.7s						
BUR08	**Bucovina Ar. S**	**75.40**	**324**	P	**P**	**19 27 24.1**	**+0.6**
BUR08				IAmb	IAmb	19 27 25.0	
	comp=Z,4.2nm,0.6s						
BURAR	**Bucovina Array**	**75.42**	**324**	⇑P	**P**	**19 27 24.4**	**+0.7**
BURAR	**Bucovina Array**	**75.42**	**324**	⇑P	**P**	**19 27 24.4**	**+0.7**
BURAR	**Bucovina Array**	**75.42**	**324**	P	**P**	**19 27 24.0**	**+0.3**
BURAR				IAmb	IAmb	19 27 25.4	
	comp=Z,5.8nm,0.6s						
OJC	**Ojcow**	**75.52**	**328**	P	**P**	**19 27 24.1**	**0.0**
OJC				pmax	pmax		
	comp=Z,11nm,1.0s						
OJC	**Ojcow**	**75.52**	**328**	P	**P**	**19 27 24.1**	**0.0**
OJC				IAmb	IAmb	19 27 25.7	
	comp=Z,11nm,1.0s						
VLDR	**Vladesti**	**75.53**	**321**	⇑P	**P**	**19 27 25.0**	**+0.8**
KOLS	**Kolonicke sedl**	**75.59**	**326**	*e*P	**P**	**19 27 25.9**	**+1.4**
KOLS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KOLS	**Kolonicke sedl**	**75.59**	**326**	*e*P	**P**	**19 27 25.9**	**+1.4**
TESR	**Tescani**	**75.65**	**322**	⇑P	**P**	**19 27 25.2**	**+0.3**
GHRR		**75.67**	**322**	⇑P	**P**	**19 27 26.5**	**+1.5**
TLCR		**75.69**	**320**	⇑P	**P**	**19 27 25.7**	**+0.6**
TLCR		**75.69**	**320**	⇑P	**P**	**19 27 25.7**	**+0.6**
PANC	**Panciu**	**75.92**	**322**	⇓P	**P**	**19 27 28.0**	**+1.6**
CFR	**Carcaliu**	**76.01**	**321**	⇑P	**P**	**19 27 27.5**	**+0.6**
CFR	**Carcaliu**	**76.01**	**321**	⇑P	**P**	**19 27 27.5**	**+0.6**
ODBI	**Odobesti**	**76.05**	**322**	⇑P	**P**	**19 27 29.5**	**+2.3**
VRI	**Vrincioaia**	**76.12**	**322**	⇑P	**P**	**19 27 26.6**	**-0.9**
VRI	**Vrincioaia**	**76.12**	**322**	⇑P	**P**	**19 27 26.6**	**-0.9**
TPGR	**Topolog**	**76.13**	**320**	⇑P	**P**	**19 27 28.1**	**+0.5**
PLOR	**Plostina**	**76.16**	**322**	⇑P	**P**	**19 27 28.4**	**+0.6**
PLOR	**Plostina**	**76.16**	**322**	⇑P	**P**	**19 27 28.4**	**+0.6**
COVR	**Voineasa-Covas**	**76.36**	**322**	⇑P	**P**	**19 27 30.0**	**+1.0**
TIRR	**Tirgusor**	**76.43**	**320**	⇓P	**P**	**19 27 30.1**	**+0.8**
TIRR	**Tirgusor**	**76.43**	**320**	⇓P	**P**	**19 27 30.1**	**+0.8**
HARR	**Harsova**	**76.48**	**320**	⇑P	**P**	**19 27 30.3**	**+0.8**
HARR	**Harsova**	**76.48**	**320**	⇑P	**P**	**19 27 30.3**	**+0.8**
LANS	**Liptovska Anna**	**76.51**	**328**	*e*P	**P**	**19 27 31.6**	**+1.8**
LANS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LANS	**Liptovska Anna**	**76.51**	**328**	*e*P	**P**	**19 27 31.6**	**+1.8**
TLBR	**Topalu**	**76.54**	**320**	⇑P	**P**	**19 27 30.5**	**+0.6**
OSTC	**Ostas**	**76.55**	**331**	*e*P	**P**	**19 27 30.7**	**+0.8**
DPC	**Dobruska-Polom**	**76.69**	**330**	*e*P	**P**	**19 27 31.8**	**+1.1**
DPC	**Dobruska-Polom**	**76.69**	**330**	*e*P	**P**	**19 27 31.8**	**+1.1**
MORC	**Moravsky Berou**	**76.72**	**329**	⇑P	**P**	**19 27 31.1**	**+0.2**
MORC	**Moravsky Berou**	**76.72**	**329**	⇑P	**P**	**19 27 31.1**	**+0.2**
MORC	**Moravsky Berou**	**76.72**	**329**	P	**P**	**19 27 30.6**	**-0.3**
MORC	**Moravsky Berou**	**76.72**	**329**	*e*P	**P**	**19 27 31.4**	**+0.5**
KRLC	**Kraliky**	**76.75**	**330**	*e*P	**P**	**19 27 32.0**	**+0.9**
KRLC	**Kraliky**	**76.75**	**330**	*e*P	**P**	**19 27 32.0**	**+0.9**
MLR	**Muntele Rosu**	**76.75**	**322**	⇑P	**P**	**19 27 32.0**	**+0.7**
MLR	**Muntele Rosu**	**76.75**	**322**	P	**P**	**19 27 32.4**	**+1.1**
	comp=Z,5.0nm,0.7s,baz=134,slow=5.7,SNR=14						
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**76.75**	**322**	⇑P	**P**	**19 27 32.0**	**+0.7**
MLR	**Muntele Rosu**	**76.75**	**322**	P	**P**	**19 27 31.4**	**+0.1**
MLR				IAmb	IAmb	19 27 34.8	
	comp=Z,5.3nm,0.8s						
ICOR	**Ion Corvin**	**76.98**	**320**	⇑P	**P**	**19 27 33.8**	**+1.4**
CLL	**Collm**	**77.02**	**333**	⇑*i*P	**P**	**19 27 32.5**	**+0.1**
CLL				pmax	pmax		
	comp=Z,17nm,1.3s						
CLL	**Collm**	**77.02**	**333**	P	**P**	**19 27 32.6**	**+0.1**
CLL				IAmb	IAmb	19 27 33.5	
	comp=Z,13nm,1.1s						
CLL	**Collm**	**77.02**	**333**	⇑*i*P	**P**	**19 27 32.5**	**+0.1**
	comp=Z,17nm,1.3s						
CLL				Lm	MLR	22 50 00.0	
	comp=Z,100nm,18.5s						
SCHQ	**Schefferville**	**77.06**	**20**	P	**P**	**19 27 33.4**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=263,slow=7.5,SNR=5.7						
	comp=Z,2.8nm,0.9s						
PVCC	**Panska Ves**	**77.15**	**331**	*e*P	**P**	**19 27 33.9**	**+0.7**
PVCC	**Panska Ves**	**77.15**	**331**	*e*P	**P**	**19 27 33.9**	**+0.7**
VOIR		**77.19**	**322**	⇑P	**P**	**19 27 34.8**	**+1.1**
VOIR		**77.19**	**322**	⇑P	**P**	**19 27 34.8**	**+1.1**
VYHS	**Vyhne**	**77.29**	**328**	*e*P	**P**	**19 27 35.0**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.8s						
VYHS	**Vyhne**	**77.29**	**328**	*e*P	**P**	**19 27 35.0**	**+0.9**
PSZ	**Piszkesteto**	**77.35**	**327**	P	**P**	**19 27 35.0**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PSZ	**Piszkesteto**	**77.35**	**327**	P	**P**	**19 27 35.0**	**+0.5**
PSZ				IAmb	IAmb	19 27 36.5	
	comp=Z,4.4nm,0.7s						
BR131	**Keskin Array S**	**77.42**	**314**	P	**P**	**19 27 35.2**	**0.0**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**77.42**	**314**	P	**P**	**19 27 35.2**	**0.0**
BRTR	**Keskin Array B**	**77.42**	**314**	P	**P**	**19 27 35.8**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=72,slow=5.3,SNR=11						
	comp=Z,2.3nm,0.9s						
BRTR	**Keskin Array B**	**77.42**	**314**	*i* P	**P**	**19 27 36.2**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**77.42**	**314**	P	**P**	**19 27 35.3**	**+0.2**
ARR	**Arges**	**77.43**	**323**	⇑P	**P**	**19 27 36.7**	**+1.7**
JAVC	**Velka Javorina**	**77.43**	**329**	*e*P	**P**	**19 27 36.5**	**+1.6**
VRAC	**Vranov**	**77.45**	**330**	LR	LR	20 03 42.3	
	comp=Z,7.6nm,18.1s,baz=34,slow=37						
VRAC	**Vranov**	**77.45**	**330**	*e*P	**P**	**19 27 35.9**	**+0.9**
PRU	**Pruhonice**	**77.61**	**331**	*e*P	**P**	**19 27 36.7**	**+0.9**
PRU	**Pruhonice**	**77.61**	**331**	*e*P	**P**	**19 27 36.7**	**+0.9**
KRUC	**Moravsky**	**77.73**	**330**	*e*P	**P**	**19 27 37.0**	**+0.5**
ESK	**Eskdalemuir**	**77.76**	**343**	P	**P**	**19 27 37.0**	**+0.4**
ESK				pmax	pmax		
	comp=Z,14nm,1.2s						
ESK	**Eskdalemuir**	**77.76**	**343**	P	**P**	**19 27 37.0**	**+0.4**
ESK				IAmb	IAmb	19 27 59.4	
	comp=Z,14nm,1.1s						
BR231	**Keskin MP Arra**	**77.78**	**314**	P	**P**	**19 27 37.6**	**+0.4**
BR231				IAmb	IAmb	19 27 39.3	
	comp=Z,7.4nm,0.7s						
MODS	**Modra-Piesok**	**77.98**	**329**	*e*P	**P**	**19 27 38.9**	**+1.0**
MODS	**Modra-Piesok**	**77.98**	**329**	*e*P	**P**	**19 27 38.9**	**+1.0**
GZR	**Gura Zlata**	**78.21**	**324**	⇑P	**P**	**19 27 39.8**	**+0.5**
GZR	**Gura Zlata**	**78.21**	**324**	⇑P	**P**	**19 27 39.8**	**+0.5**
BZS	**Buzias**	**78.52**	**325**	⇑P	**P**	**19 27 41.4**	**+0.5**
BZS	**Buzias**	**78.52**	**325**	⇑P	**P**	**19 27 41.4**	**+0.5**
KHC	**Kasperske Hory**	**78.67**	**331**	*e*P	**P**	**19 27 42.6**	**+0.8**
KHC	**Kasperske Hory**	**78.67**	**331**	P	**P**	**19 27 42.6**	**+0.8**
KHC				IAmb	IAmb	19 27 43.4	
	comp=Z,7.8nm,0.6s						
KHC	**Kasperske Hory**	**78.67**	**331**	*e*P	**P**	**19 27 42.6**	**+0.8**
CKRC	**Cesky Krumlov**	**78.68**	**331**	*e*P	**P**	**19 27 42.4**	**+0.6**
HERR	**Herculane**	**78.77**	**324**	⇑P	**P**	**19 27 42.4**	**+0.1**
CONA	**Conrad Observa**	**78.87**	**329**	*i* P	**P**	**19 27 44.1**	**+1.1**
	comp=Z,4.0nm,0.7s						
GEC2	**GERESS Array S**	**78.88**	**331**	P	**P**	**19 27 43.1**	**+0.2**
GERES	**GERESS Array B**	**78.88**	**331**	P	**P**	**19 27 43.5**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=36,slow=5.4,SNR=16						
	comp=Z,1.8nm,0.6s						
RONA	**Rosalia, Austr**	**78.91**	**329**	*i* P	**P**	**19 27 44.3**	**+1.2**
	comp=Z,4.2nm,0.7s						
GRA1	**Grafenberg Arr**	**78.99**	**333**	P	**P**	**19 27 43.9**	**+0.5**
GRA1				IAmb	IAmb	19 27 45.3	
	comp=Z,8.6nm,0.7s						
GRF	**Grafenberg Arr**	**78.99**	**333**	P	**P**	**19 27 43.9**	**+0.5**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MORH	**Mrgy, Hungar**	**79.23**	**327**	⇑P	**P**	**19 27 44.5**	**-0.3**
MOA	**Molln**	**79.52**	**330**	*i* P	**P**	**19 27 47.0**	**+0.6**
	comp=Z,3.8nm,0.8s						
FRGS	**Fruska Gora**	**79.63**	**325**	⇑P	**P**	**19 27 46.5**	**-0.6**
BTNL	**Ternell**	**79.78**	**336**	*d*P	**P**	**19 27 48.0**	**+0.3**
	comp=Z,4.5nm,0.8s						
MEM	**Membach**	**79.79**	**336**	*d*P	**P**	**19 27 47.9**	**+0.1**
	comp=Z,5.5nm,0.8s						
MEM				*d*PcP	**PcP**	**19 27 53.0**	**-2.1**
BIOA	**Bad Ischl, Aus**	**79.88**	**330**	*i* P	**P**	**19 27 49.0**	**+0.6**
	comp=Z,2.9nm,0.6s						
BSTI	**Sart Tilman**	**79.94**	**337**	*d*P	**P**	**19 27 49.2**	**+0.7**
BHOU	**Houvegnez**	**80.02**	**336**	*d*P	**P**	**19 27 50.0**	**+0.9**
BCLA	**Clavier**	**80.17**	**337**	*d*P	**P**	**19 27 49.9**	**+0.1**
	comp=Z,4.4nm,0.8s						
VTS	**Vitosha**	**80.22**	**322**	⇑P	**P**	**19 27 51.5**	**+1.1**
VTS	**Vitosha**	**80.22**	**322**	⇑P	**P**	**19 27 51.5**	**+1.1**
VTS	**Vitosha**	**80.22**	**322**	P	**P**	**19 27 50.5**	**+0.1**
SOKA	**Soboth**	**80.23**	**329**	*e*P	**P**	**19 27 50.6**	**+0.3**
	comp=Z,5.9nm,0.8s,SNR=6.5						
BGES	**Gesves**	**80.26**	**337**	*d*P	**P**	**19 27 50.8**	**+0.5**
ALN	**Alexandroupoli**	**80.29**	**319**	P	**P**	**19 27 50.9**	**+0.3**
ALN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ALN	**Alexandroupoli**	**80.29**	**319**	P	**P**	**19 27 50.9**	**+0.3**
RDO	**Rodhopi**	**80.34**	**319**	P	**P**	**19 27 51.6**	**+0.7**
RDO				IAmb	IAmb	19 27 52.8	
	comp=Z,4.7nm,0.8s						
SNF	**Seneffe**	**80.37**	**337**	*d*P	**P**	**19 27 51.5**	**+0.7**
	comp=Z,4.9nm,0.7s						
SNF				*d*PcP	**PcP**	**19 27 56.3**	**-1.4**
BMRD	**Maredsous**	**80.42**	**337**	*d*P	**P**	**19 27 51.6**	**+0.4**
	comp=Z,6.3nm,0.9s						
BMRD				*d*PcP	**PcP**	**19 27 56.5**	**-1.4**
RCHB	**Rochefort**	**80.42**	**337**	*d*PcP	**PcP**	**19 27 56.0**	**-1.8**
KBA	**Koelnbreinsper**	**80.50**	**330**	*e*P	**P**	**19 27 52.4**	**+0.5**
	comp=Z,10nm,1.0s,SNR=8.0						
OBKA	**Obir**	**80.55**	**329**	*e*P	**P**	**19 27 52.3**	**+0.3**
	comp=Z,3.2nm,0.8s						
WLF	**Walferdange**	**80.59**	**336**	*d*P	**P**	**19 27 50.2**	**-1.9**
DOU	**Dourbes**	**80.66**	**337**	*d*P	**P**	**19 27 51.6**	**-0.8**
WATA	**Walderalm**	**80.90**	**331**	*i* P	**P**	**19 27 54.3**	**+0.3**
	comp=Z,4.8nm,0.6s						
WTTA	**Wattenberg**	**80.94**	**331**	*i* P	**P**	**19 27 55.0**	**+0.7**
	comp=Z,5.3nm,0.6s						
RETA	**Reutte**	**81.05**	**332**	*i* P	**P**	**19 27 54.6**	**-0.1**
	comp=Z,5.3nm,1.0s						
MOTA	**Moosalm**	**81.06**	**332**	*e*P	**P**	**19 27 55.2**	**+0.4**
	comp=Z,9.9nm,0.9s,SNR=6.7						
BFO	**Black Forest**	**81.11**	**334**	P	**P**	**19 27 55.1**	**+0.2**
BFO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BFO	**Black Forest**	**81.11**	**334**	P	**P**	**19 27 55.0**	**+0.2**
SQTA	**Sankt Quirin**	**81.13**	**332**	*e*P	**P**	**19 27 55.9**	**+0.7**
	comp=Z,5.7nm,0.7s						
ASF	**Jabal al Asfar**	**81.18**	**307**	P	**P**	**19 27 57.2**	**+1.6**
	comp=Z,2.9nm,0.7s,baz=339,slow=3.7,SNR=4.9						
	comp=Z,2.9nm,0.7s						
STAL	**STALIGIAL**	**81.43**	**330**	P	**P**	**19 27 55.5**	**-1.1**
STAL				IAmb	IAmb	19 27 56.9	
	comp=Z,5.8nm,0.9s						
FETA	**Feichten**	**81.47**	**332**	*i* P	**P**	**19 27 57.4**	**+0.4**
	comp=Z,3.6nm,0.9s						
DAVA	**Damuels**	**81.52**	**332**	*i* P	**P**	**19 27 57.3**	**+0.1**
	comp=Z,8.8nm,1.1s						
ECH	**Echery**	**81.58**	**334**	P	**P**	**19 27 57.0**	**-0.4**
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ECH	**Echery**	**81.58**	**334**	P	**P**	**19 27 57.0**	**-0.4**
DAVOX	**Davos/Dischmat**	**81.96**	**332**	P	**P**	**19 28 00.4**	**+0.8**
	comp=Z,2.3nm,0.7s						
	comp=Z,2.3nm,0.7s						
RAYN	**Ar Rayn**	**82.06**	**295**	P	**P**	**19 28 01.0**	**+0.6**
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RAYN	**Ar Rayn**	**82.06**	**295**	P	**P**	**19 28 00.9**	**+0.6**
PDG	**Podgorica**	**82.10**	**324**	⇑P	**P**	**19 28 00.0**	**-0.1**
PDG	**Podgorica**	**82.10**	**324**	P	**P**	**19 28 00.1**	**-0.1**
PDG				IAmb	IAmb	19 28 00.9	
	comp=Z,5.9nm,0.9s						
TX31	**Lajitas Ar. Si**	**82.13**	**57**	P	**P**	**19 28 01.5**	**+0.8**
TX31				IAmb	IAmb	19 28 02.6	
	comp=Z,6.7nm,0.7s						
TXAR	**Lajitas Array**	**82.13**	**57**	P	**P**	**19 28 01.6**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=298,slow=4.1,SNR=34						
	comp=Z,1.9nm,0.6s						
TUE	**Stuetta**	**82.41**	**332**	P	**P**	**19 28 02.5**	**+0.5**
TUE				IAmb	IAmb	19 28 03.4	
	comp=Z,7.4nm,1.0s						
SENIN	**Lac Senin/Sane**	**83.18**	**334**	P	**P**	**19 28 06.5**	**+0.5**
NRCA	**Norcia**	**84.22**	**328**	P	**P**	**19 28 11.6**	**+0.4**
NRCA				IAmb	IAmb	19 28 12.7	
	comp=Z,7.1nm,0.9s						
H62A	**Milan**	**85.09**	**27**	P	**P**	**19 28 15.8**	**+0.4**
IDI	**Anoyia**	**85.27**	**316**	⇑P	**P**	**19 28 16.6**	**+0.1**
IDI	**Anoyia**	**85.27**	**316**	P	**P**	**19 28 16.5**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=24,slow=8.5,SNR=15						
	comp=Z,3.5nm,0.5s						
IDI	**Anoyia**	**85.27**	**316**	P	**P**	**19 28 16.7**	**+0.1**
IDI				IAmb	IAmb	19 28 19.1	
	comp=Z,5.0nm,0.7s						
LMN	**Caledonia Moun**	**85.81**	**22**	P	**P**	**19 28 18.5**	**-0.5**
LMN				IAmb	IAmb	19 28 29.8	
	comp=Z,11nm,1.4s						
Q54A	**Coxs Mills**	**86.35**	**36**	P	**P**	**19 28 22.5**	**+0.8**
Q54A				IAmb	IAmb	19 28 47.4	
	comp=Z,13nm,1.4s						
TKL	**Tuckaleechee C**	**87.83**	**40**	P	**P**	**19 28 29.3**	**+0.3**
TKL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TKL	**Tuckaleechee C**	**87.83**	**40**	P	**P**	**19 28 29.3**	**+0.3**
TKL				IAmb	IAmb	19 28 39.9	
	comp=Z,9.7nm,1.4s						
ESDC	**Sonseca Array**	**92.61**	**338**	P	**P**	**19 28 51.5**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=352,slow=6.0,SNR=3.3						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**114.99**	**323**	PKP	**PKiKP**	**19 34 20.0**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=55,slow=1.9,SNR=1.6						
H03N2	**Juan Fernandez**	**142.66**	**89**	T	T	22 14 09.4	
	baz=304,slow=77,SNR=9.5						
H03N3	**Juan Fernandez**	**142.67**	**89**	T	T	22 14 20.4	
	baz=304,slow=77,SNR=12						
H03N1	**Juan Fernandez**	**142.68**	**89**	T	T	22 14 13.0	
	baz=304,slow=77,SNR=14						

JMA ***07*** *19:18:50.8±0.2, 24˚N±1˚×12˚2E±˚, h23km±1km, MV2.8/8,*
TAIWAN REGION
TAP ***07*** *19:18:53.8, 24˚.21N×121˚.80E, h11km, ML3.5, C*
ISC 07 19:18:53.4±0.9**, 24˚.19N**±0˚.01×**121˚.85E**±0˚.02**, h8**km±7km**,**
n124, σ**0s.88**/208**, 4C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**320**	⇓*i*P	**Pg**	**19 18 56.9**	**+0.3**
	baz=336						
EHP				*e*S	**Sg**	**19 18 59.8**	**+1.0**
	baz=336						
ETL	**Fush Village**	**0.21**	**260**	⇓*i*P	**Pg**	**19 18 57.8**	**+0.2**
	baz=255						
ETL				*i* S	**Sg**	**19 19 00.7**	**+0.2**
	baz=255						
NACB	**Ninganchiao**	**0.23**	**265**	⇓*i*P	**Pg**	**19 18 58.0**	**0.0**
	baz=262						
NACB				*i* S	**Sg**	**19 19 01.1**	**-0.1**
	baz=262						
ENA	**Nanau**	**0.25**	**337**	⇓*i*P	**Pg**	**19 18 58.7**	**+0.3**
	baz=349						
ENA				*i* S	**Sg**	**19 19 02.3**	**+0.5**
	baz=349						
TWD	**Chiawan**	**0.26**	**244**	⇑*i*P	**Pg**	**19 18 58.6**	**+0.2**
	baz=242						
TWD				*i* S	**Sg**	**19 19 02.3**	**+0.4**
	baz=242						
EWUT	**Wuta**	**0.26**	**346**	⇓*i*P	**Pg**	**19 18 59.0**	**+0.5**
	baz=354						
EWUT				*i* S	**Sg**	**19 19 02.5**	**+0.5**
	baz=354						
HWA	**Hwalien**	**0.31**	**226**	P	**Pb**	**19 19 00.9**	**-0.3**
	baz=227						
ETLH	**Xiulin Townshi**	**0.34**	**272**	⇓P	**Pg**	**19 18 59.8**	**-0.2**
	baz=272						
ETLH				S	**Sg**	**19 19 04.6**	**+0.2**
	baz=272						
ETM	**Tongmen**	**0.40**	**235**	P	**Pg**	**19 19 01.2**	**+0.1**
	baz=236						
TEYL	**Yanliau Villag**	**0.40**	**215**	⇑*i*P	**Pb**	**19 19 02.7**	**+0.1**
	baz=224						
TEYL				S	**Sb**	**19 19 09.8**	**+0.9**
	baz=224						
TWC	**Suao**	**0.41**	**0**	⇓*i*P	**Pg**	**19 19 02.0**	**+0.5**
	baz=6.0						
TWC				S	**Sb**	**19 19 08.1**	**-1.3**
	baz=6.0						
LATG	**Datong**	**0.45**	**319**	⇓*i*P	**Pg**	**19 19 02.3**	**+0.2**
	baz=324						
LATG				S	**Sg**	**19 19 08.5**	**+0.5**
	baz=324						
NDS	**Dongshan**	**0.45**	**345**	⇓*i*P	**Pg**	**19 19 02.7**	**+0.5**
	baz=349						
NDS				*i* S	**Sg**	**19 19 08.7**	**+0.5**
	baz=349						
NNSB	**Datong**	**0.48**	**299**	⇓*i*P	**Pg**	**19 19 02.9**	**+0.1**
	baz=302						
NNSB				S	**Sg**	**19 19 08.6**	**-0.6**
	baz=302						
NNS	**Nan Shan**	**0.50**	**300**	⇓*i*P	**Pg**	**19 19 03.0**	**0.0**
	baz=303						
NNS				S	**Sg**	**19 19 09.0**	**-0.6**
	baz=303						
ENTT	**Nioudou**	**0.51**	**330**	⇓*i*P	**Pg**	**19 19 03.7**	**+0.3**
	baz=335						
ENTT				*i* S	**Sg**	**19 19 10.6**	**+0.6**
	baz=335						
ESL	**Shilin**	**0.54**	**225**	⇑*i*P	**Pg**	**19 19 03.9**	**+0.2**
	baz=230						
ESL				S	**Sb**	**19 19 12.8**	**-0.2**
	baz=230						
WHF	**Hehuan Shan**	**0.54**	**265**	⇓*i*P	**Pg**	**19 19 03.6**	**-0.2**
	baz=265						
WHF				*i* S	**Sg**	**19 19 10.7**	**-0.2**
	baz=265						
TWE	**Neicheng**	**0.55**	**343**	⇓*i*P	**Pg**	**19 19 04.5**	**+0.5**
	baz=348						
TWE				*i* S	**Sg**	**19 19 11.8**	**+0.6**
	baz=348						
FUSS	**Fushou**	**0.56**	**276**	P	**Pg**	**19 19 04.2**	**+0.1**
	baz=277						
FUSS				S	**Sg**	**19 19 10.9**	**-0.5**
	baz=277						
TEGC	**Jichi Village**	**0.56**	**210**	*e*P	**Pb**	**19 19 05.6**	**+0.2**
	baz=210						
TEGC				*e*S	**Sn**	**19 19 16.2**	**-0.9**
	baz=210						
ILA	**Ilan**	**0.58**	**351**	P	**Pb**	**19 19 05.2**	**-0.5**
	baz=351						
ILA				S	**Sb**	**19 19 13.6**	**-0.5**
	baz=351						
FUSB	**Fushanzhiwuyua**	**0.61**	**337**	⇓*i*P	**Pg**	**19 19 05.7**	**+0.5**
	baz=340						
FUSB				*i* S	**Sg**	**19 19 13.5**	**+0.2**
	baz=340						
TWT	**Tachien**	**0.62**	**276**	*e*P	**Pg**	**19 19 06.1**	**+0.8**
	baz=275						
TWT				*e*S	**Sg**	**19 19 13.4**	**0.0**
	baz=275						
CHGB	**Renai**	**0.63**	**258**	⇓*i*P	**Pg**	**19 19 05.7**	**+0.1**
	baz=250						
CHGB				S	**Sg**	**19 19 13.4**	**-0.5**
	baz=250						
TDCB	**Techi**	**0.63**	**275**	*e*P	**Pg**	**19 19 05.8**	**+0.1**
	baz=276						
TDCB				S	**Sg**	**19 19 13.2**	**-0.7**
	baz=276						
YHNB	**Yeheng**	**0.64**	**318**	⇓*i*P	**Pg**	**19 19 06.2**	**+0.4**
	baz=321						
YHNB				S	**Sg**	**19 19 13.7**	**-0.4**
	baz=321						
EGFH	**Guangfu**	**0.65**	**217**	P	**Pg**	**19 19 06.6**	**+0.8**
	baz=222						
EGFH				S	**Sb**	**19 19 16.2**	**0.0**
	baz=222						
EGS		**0.65**	**7**	*e*P	**Pb**	**19 19 06.7**	**-0.4**
	baz=9.0						
NSK	**Sanguang**	**0.66**	**317**	⇓*i*P	**Pg**	**19 19 06.3**	**+0.3**

	baz=321						
NSK				S	Sg	19 19 14.7	+0.1
	baz=321						
NTC	Toucheng	0.66	358	P	Pg	19 19 05.6	-0.4
	baz=9.0						
OWD	Renai	0.66	249	*e*P	Pg	19 19 06.4	+0.3
	baz=248						
OWD				*e*S	Sg	19 19 15.3	+0.5
	baz=248						
NWLT	Wulai	0.66	332	⇓P	Pg	19 19 06.5	+0.4
	baz=334						
NWLT				S	Sg	19 19 14.9	+0.2
	baz=334						
WUSB	Renai	0.70	253	⇓P	Pg	19 19 07.0	+0.2
	baz=246						
WUSB				*e*S	Sg	19 19 16.4	+0.4
	baz=246						
TIPB	Shuangxi	0.78	358	P	Pb	19 19 08.9	-0.2
	baz=1.0						
TIPB				S	Sg	19 19 18.3	-0.1
	baz=1.0						
VWDT	VWDT	0.78	236	P	Pg	19 19 08.8	+0.4
	baz=243						
VWDT				*e*S	Sb	19 19 19.8	-0.2
	baz=243						
NFF	Wufeng Townshi	0.80	303	*e*P	Pg	19 19 09.1	+0.4
	baz=306						
NFF				*e*S	Sg	19 19 18.5	-0.6
	baz=306						
HGSD	Ruisui	0.80	209	*e*P	Pb	19 19 09.5	0.0
	baz=199						
TWA	Mucha	0.82	343	P	Pb	19 19 09.7	-0.2
	baz=335						
TWA				S	Sb	19 19 21.1	0.0
	baz=335						
NHDH	Xindian Distri	0.82	339	*e*P	Pb	19 19 09.7	-0.2
	baz=342						
NHDH				*e*S	Sg	19 19 19.8	0.0
	baz=342						
TWB1	Santiao Chiao	0.82	9	P	Pb	19 19 09.9	0.0
	baz=9.0						
TWB1				S	Sb	19 19 21.4	+0.3
	baz=9.0						
WHP	Taichung City	0.83	276	*e*P	Pg	19 19 09.8	+0.5
	baz=277						
WHP				*e*S	Sg	19 19 19.9	-0.2
	baz=277						
WPL	Puli Township	0.83	258	P	Pg	19 19 09.8	+0.4
	baz=250						
WPL				*e*S	Sg	19 19 20.5	+0.2
	baz=250						
EHY	Hungye	0.84	215	*e*P	Pg	19 19 09.2	-0.2
	baz=225						
WCS	Beigang Elemen	0.87	261	*e*P	Pg	19 19 10.3	+0.2
	baz=261						
WCS				*e*S	Sg	19 19 20.4	-0.9
	baz=261						
NWF	Wu-fen Shan	0.88	356	⇓P	Pb	19 19 11.0	+0.1
	baz=351						
NWF				S	Sb	19 19 22.2	-0.6
	baz=351						
LIOB	Emei	0.88	301	*e*P	Pb	19 19 11.0	+0.1
	baz=303						
LIOB				*e*S	Sg	19 19 21.9	+0.1
	baz=303						
NSTT	Nanjuang	0.89	300	*e*P	Pg	19 19 10.8	+0.4
	baz=302						
NSTT				*e*S	Sg	19 19 21.9	-0.1
	baz=302						
SXI1	Grass Mountain	0.90	2	*e*P	Pb	19 19 11.3	0.0
	baz=8.0						
TAP	Taipei	0.90	340	*e*P	Pn	19 19 11.9	-0.4
	baz=343						
TAP				*e*S	Sb	19 19 22.8	-0.5
	baz=343						
SSLB	Suanglung	0.91	244	P	Pg	19 19 10.8	-0.2
	baz=252						
SSLB				S	Sg	19 19 22.2	-0.6
	baz=252						
SMLT	Sun Moon Lake	0.92	251	P	Pg	19 19 11.6	+0.5
	baz=250						
SMLT				*e*S	Sb	19 19 24.4	+0.3
	baz=250						
YULB	Yu-li	0.94	212	*e*P	Pb	19 19 11.0	-1.0
	baz=222						
NTY	Taoyuan	0.95	328	*e*P	Pn	19 19 12.6	-0.3
	baz=331						
TYC	Yuchr	0.95	253	*e*P	Pb	19 19 12.0	-0.1
	baz=252						
TYC				*e*S	Sb	19 19 22.7	-2.2
	baz=252						
HSN1	Hsinchu	0.95	308	*e*P	Pn	19 19 13.5	+0.4
	baz=310						
EYUL	Yuli	0.97	210	*e*P	Pn	19 19 13.2	-0.2
	baz=220						
NCUH	Zhongli	0.98	322	*e*P	Pn	19 19 13.2	-0.2
	baz=324						
NCUH				*e*S	Sn	19 19 27.1	-0.5
	baz=324						
TWF1	Yuli	0.98	211	*e*P	Pb	19 19 11.4	-1.2
	baz=227						
NCU	National Centr	0.98	322	*e*P	Pn	19 19 13.3	-0.1
	baz=325						
NCU				*e*S	Sn	19 19 26.7	-0.8
	baz=325						
YM01	YM01	0.98	345	⇑P	Pn	19 19 13.1	-0.4
	baz=348						
TWS1	Kuangyinshan	0.98	337	*e*P	Pn	19 19 13.4	-0.1
	baz=339						
TWS1				*e*S	Sn	19 19 27.0	-0.6
	baz=339						
SBCB	Hsinchu	0.99	307	*e*P	Pn	19 19 13.5	0.0
	baz=309						
SBCB				*e*S	Sn	19 19 27.1	-0.6
	baz=309						
TWQ1	Liyutan	0.99	279	*e*P	Pg	19 19 13.1	+0.6
	baz=280						
TWQ1				*e*S	Sb	19 19 25.9	-0.2
	baz=280						
HSN	Hsinchu	1.00	307	*e*P	Pn	19 19 13.8	0.0
	baz=303						
HSN				*e*S	Sn	19 19 28.2	+0.1
	baz=303						
NSY	Sanyi	1.02	283	*e*P	Pn	19 19 13.9	-0.1
	baz=285						
NMLH	Miaoli	1.02	290	*e*P	Pn	19 19 14.3	+0.3
	baz=292						
JYNG	Yonagunijimaku	1.03	75	P	Pn	19 19 15.1	+1.0
NTST	Danshui	1.03	339	*e*P	Pn	19 19 13.8	-0.4
	baz=342						
NTST				*e*S	Sn	19 19 28.4	-0.4
	baz=342						
ANP	Anpu	1.03	343	*e*P	Pn	19 19 13.8	-0.4
	baz=346						
WWF	Wufeng	1.06	262	*e*P	Pn	19 19 15.9	+1.3
	baz=259						
YUS	Yu-Shan	1.08	230	*e*P	Pb	19 19 14.3	-0.3
	baz=229						
YUS				*e*S	Sb	19 19 28.6	-0.5
	baz=229						
NHW	Xinwu Township	1.09	318	*e*P	Pg	19 19 15.6	+1.3
	baz=320						
NHW				*e*S	Sn	19 19 32.2	+2.0
	baz=320						
WJS	Zhushan	1.09	250	*e*P	Pg	19 19 15.2	+0.9
	baz=245						
WJS				*e*S	Sn	19 19 29.6	-0.6
	baz=245						
YOJ	Yonaguni jima	1.09	76	*e*P	Pg	19 19 15.8	+1.4
	baz=61						
TWY	Chenhua	1.10	348	*e*P	Pg	19 19 16.1	+1.6
	baz=351						
WNT	Mingjian	1.11	254	*e*P	Pg	19 19 15.7	+1.1
	baz=250						
WNT				*e*S	Sn	19 19 31.5	+0.8
	baz=250						
FULB	Fuli	1.11	207	*e*P	Pb	19 19 14.5	-0.4
	baz=197						
WDJ	Dajia District	1.11	278	*e*P	Pg	19 19 16.0	+1.3
	baz=279						
WDJ				*e*S	Sn	19 19 31.0	+0.2
	baz=279						
ALS	Alishan	1.17	235	⇓P	Pn	19 19 16.1	-0.3
	baz=235						
ALS				S	Sn	19 19 32.5	-0.2
	baz=235						
CHKT	Chengkung	1.18	202	*e*P	Pn	19 19 15.0	-1.1
	baz=204						
CHKT				*e*S	Sg	19 19 33.1	+1.8
	baz=204						
WCHH	Zhanghua	1.19	265	*e*P	Pg	19 19 17.0	+0.9
	baz=266						
WCHH				*e*S	Sg	19 19 33.9	+2.4
	baz=266						
CHN5	Tsauling	1.23	241	P	Pg	19 19 17.4	+0.6
	baz=242						
CHN5				S	Sg	19 19 35.8	+3.0
	baz=242						
ELDTW	Lidau	1.26	217	P	Pn	19 19 15.6	-1.8
	baz=204						
WDLH	Douliu	1.30	248	*e*P	Pg	19 19 19.2	+0.9
	baz=249						
WDLH				*e*S	Sg	19 19 37.6	+2.4
	baz=249						
EDH	Donghe	1.31	202	*e*P	Pn	19 19 17.5	-0.5
	baz=204						
WRL	Guolierlin Hig	1.38	258	*e*P	Pg	19 19 19.9	+0.1
	baz=260						
WRL				*e*S	Sg	19 19 37.9	+0.3
	baz=260						
STYH	Taoyuan	1.42	224	*e*P	Pn	19 19 19.5	+0.1
	baz=225						
STYH				*e*S	Sb	19 19 38.1	-0.1
	baz=225						
CHN2	Minshiung	1.42	243	*e*P	Pg	19 19 21.6	+1.0
	baz=244						
CHN2				*e*S	Sg	19 19 43.1	+4.1
	baz=244						
TPUB	Ta-pu	1.43	232	P	Pb	19 19 20.6	+0.3
	baz=221						
TPUB				S	Sg	19 19 40.4	+1.1
	baz=221						
WTK	Tuku	1.43	250	*e*P	Pg	19 19 20.9	+0.1
	baz=251						
WTK				*e*S	Sg	19 19 42.1	+2.8
	baz=251						
LONT	Longtian	1.44	207	*e*P	Pn	19 19 18.2	-1.6
	baz=210						
PCYT	Pengchaiyu	1.44	8	*e*P	Pb	19 19 20.5	0.0
	baz=7.0						
WTP	Ta-pu	1.47	230	P	Pb	19 19 21.3	+0.3
	baz=232						
WTP				*e*S	Sg	19 19 42.1	+1.4
	baz=232						
CHY	Chiayi	1.48	242	*e*P	Pg	19 19 21.7	0.0
	baz=244						
CHY				*e*S	Sg	19 19 42.3	+1.4
	baz=244						
TWGBT	Beinan	1.54	207	*e*P	Pn	19 19 18.7	-2.4
	baz=211						
TWG	Pinlang	1.54	208	*e*P	Pn	19 19 18.7	-2.5
	baz=211						
TWK	Hsinying	1.55	234	*e*P	Pb	19 19 22.4	0.0
	baz=235						
TWK				*e*S	Sg	19 19 43.2	-0.1
	baz=235						
LDUT	Ludao	1.55	193	*e*P	Pn	19 19 18.8	-2.5
	baz=182						
CHN1	Nanshi	1.57	231	*e*P	Pb	19 19 22.6	-0.1
	baz=222						
CHN1				*e*S	Sg	19 19 44.5	+0.6
	baz=222						
SNST	Tainan City	1.57	232	*e*P	Pb	19 19 22.8	+0.1
	baz=234						
SNST				*e*S	Sg	19 19 44.5	+0.5
	baz=234						
WSF	Szhu	1.59	250	*e*P	Pb	19 19 23.2	+0.2
	baz=262						
WSF				*e*S	Sg	19 19 45.5	+1.1
	baz=262						
SGST	Jiashian	1.60	227	*e*P	Pb	19 19 22.9	-0.3
	baz=228						
SGST				*e*S	Sg	19 19 45.2	+0.2
	baz=228						
WSL	Shuilin Townsh	1.63	246	*e*P	Pb	19 19 23.4	-0.3
	baz=248						
WSL				*e*S	Sg	19 19 46.0	+0.3
	baz=248						
ICHU	Yijhu	1.66	240	*e*P	Pb	19 19 24.0	-0.2
	baz=243						
ICHU				*e*S	Sg	19 19 46.8	+0.1
	baz=243						
CHN8	Yiju	1.72	241	*e*P	Pb	19 19 25.7	+0.5
	baz=243						
CHN8				S	Sg	19 19 49.0	+0.3
	baz=243						
ECL	Taimali	1.79	208	*e*P	Pn	19 19 24.0	-0.5
	baz=196						
HATJ	Hateruma jima	1.79	94	*e*S	Sb	19 19 49.6	+0.5
SCST	Cishan	1.80	224	*e*P	Pb	19 19 26.8	+0.2
	baz=226						
SSD	Sandimen	1.82	218	*e*P	Pb	19 19 26.2	-0.7
	baz=233						
SSD				*e*S	Sb	19 19 51.2	+1.2
	baz=233						
TSMG	Majia	1.85	217	*e*P	Pb	19 19 26.8	-0.7
	baz=210						
TWM1	Shoushan	1.89	224	*e*P	Pb	19 19 28.7	+0.6
	baz=226						
MASBT	Mashibuluo	1.93	216	*e*P	Pn	19 19 27.0	+0.5
	baz=217						
MASBT				*e*S	Sb	19 19 52.9	-0.2
	baz=217						
JKRS	Kuro-shima	1.97	88	P	Pb	19 19 28.7	-0.9
EAST	Anshuo	2.02	207	*e*P	Pb	19 19 29.3	-1.1
	baz=198						
SSPT	Xinbi	2.07	215	*e*P	Pb	19 19 30.4	-0.8
	baz=210						
JIJ	Ishigaki jima	2.10	85	P	Pb	19 19 30.0	-1.7
SCZT	Fangliau	2.14	212	*e*P	Pb	19 19 30.9	-1.4
	baz=214						
PNG	Penghu	2.19	254	*e*P	Pn	19 19 30.4	+0.3
	baz=258						
PNG				*e*S	Sb	19 19 58.6	-1.9
	baz=258						
PHUB	P'eng-hu	2.19	252	*e*P	Pn	19 19 30.7	+0.6
	baz=256						
PHUB				*e*S	Sb	19 19 58.7	-1.9
	baz=256						
WDGT	Dungji	2.21	246	*e*P	Pn	19 19 31.0	+0.6
	baz=249						
WDGT				*e*S	Sn	19 19 58.8	+0.9
	baz=249						
VWUC	VWUC	2.32	290	*e*P	Pn	19 19 31.0	-0.9
	baz=281						
VCHM	Qimei	2.42	247	*e*P	Pn	19 19 34.8	+1.4
	baz=233						
VCHM				*e*S	Sn	19 20 03.7	+0.5
	baz=233						
PTMZ	Houxiangcun	2.62	289	*e*P	Pn	19 19 34.5	-1.5
	baz=292						

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*IDC **07** 19:27:37.6±1.0, 46°.09N×53°.32E, $h0^{km}$, mb3.7/6, mbtmp3.7/15, ML3.3/9, MS2.2/1, Error ellipse: s-maj=20.3km s-min=8.9km az=146.0*

*NNC **07** 19:27:41.9±1.6, 45°.97N×53°.85E, $h15^{km}$±28^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=26.9km s-min=6.7km az=65.0*

ISC 07 19:27:40.1±0.6**, 46°.01N**±0°.06×**53°.33E**±0°.04**, $h35^{km}$, n26, $\sigma 2.^{s}03$/35, mb3.6/6, 8C-3D, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	5.42	34	Pn	Pn	19 28 59.4	+1.0
	2.6nm,0.3s,baz=208,slow=12,SNR=24						
AKTO				Sn	Sn	19 30 00.5	+1.0
	1.6nm,0.3s,baz=1.1,slow=23,SNR=7.9						
	5.5nm,0.3s						
AKTO	Aktyubinsk	5.42	34	⇑Pn	Pn	19 28 59.6	+1.2
	4.5nm,0.6s						
AKTO				⇑Sn	Sn	19 30 01.4	+1.9
	9.7nm,0.6s						
AB31	Akbulak array	5.52	52	⇑Pn	Pn	19 29 00.6	+0.8
	1.3nm,0.2s,baz=230,slow=13,SNR=171						
AB31				⇑Sn	Sn	19 30 01.7	-0.3
	5.2nm,0.3s,baz=234,slow=23,SNR=11						
BELG	Belogornoye	7.40	332	Pn	Pn	19 29 24.2	-1.2
	2.2nm,0.3s,baz=148,slow=2.4,SNR=7.6						
BELG				Sn	Sn	19 30 45.5	-2.5
	2.7nm,0.3s,baz=121,slow=23,SNR=6.9						
	5.1nm,0.3s						
KBZ	Khabaz	7.75	257	Pn	Pn	19 29 31.7	+1.4
	0.7nm,0.3s,baz=72,slow=6.4,SNR=14						
KBZ				Sn	Sn	19 30 54.8	-2.0
	2.4nm,0.3s,baz=286,slow=4.8,SNR=8.8						
	1.7nm,0.3s						
KVAR	Kislovodsk Arr	7.81	259	Pn	Pn	19 29 31.6	+0.3
	baz=289,slow=15						
KVAR				Sn	Sn	19 30 56.0	-2.5
	baz=314,slow=10						
	0.8nm,0.4s						
GNI	Garni	8.59	230	LR	LR	19 34 18.9	
	comp=Z,14nm,19.9s,baz=133,slow=46						
GEYT	Alibeck	8.83	155	Pn	Pn	19 29 45.7	+0.6
	0.4nm,0.3s,baz=276,slow=16,SNR=2.0						
GEYT				Sn	Sn	19 31 22.2	-1.2
	0.3nm,0.3s,baz=248,slow=43,SNR=1.4						
	1.0nm,0.4s						
ARU	Arti	10.93	16	Pn	Pn	19 30 12.3	-1.5
	baz=194,slow=9.1,SNR=9.0						
	1.5nm,0.3s						
KK31	Karatay Array	12.60	97	Pn	Pn	19 30 35.5	-1.1
	0.4nm,0.3s,baz=308,slow=13,SNR=16						
KK31				⇑Sn	Sn	19 32 52.4	-3.3
	1.0nm,0.5s,baz=277,slow=25,SNR=6.0						
BRVK	Borovoye	13.06	51	⇓Pn	Pn	19 30 42.2	-0.6
	2.7nm,0.5s						
BRVK				⇑Sn	Sn	19 33 05.3	-1.4
	1.3nm,0.5s						
OTUK	Ortayu	13.14	73	⇑Pn	Pn	19 30 43.2	-0.9
	0.7nm,0.5s						
OTUK				⇑Sn	Sn	19 33 05.9	-2.8
	1.6nm,0.7s						
AKASG	Malin Array Be	16.66	295	Pn	Pn	19 31 28.1	-2.6
	0.5nm,0.3s,baz=94,slow=10,SNR=2.8						
	0.1nm,0.2s						
KURBB	Kurchatov Arra	17.35	65	Pn	Pn	19 31 38.0	-1.2
	0.1nm,0.3s,baz=273,slow=12,SNR=11						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	17.35	65	⇓Pn	P	19 31 39.8	-0.5
	2.6nm,0.7s						
MK31	Makanchi Array	19.95	77	⇓Pn	Pn	19 32 10.8	+0.1
	0.3nm,0.5s,baz=276,slow=9.0,SNR=5.3						
MKAR	Makanchi Array	19.95	77	P	Pn	19 32 10.3	-0.4
	0.1nm,0.3s,baz=279,slow=8.1,SNR=5.8						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	21.61	57	P	P	19 32 28.6	+1.8
	1.1nm,0.4s,baz=264,slow=11,SNR=6.4						
	1.1nm,0.4s						
FINES	FINESS Array B	22.08	324	P	P	19 32 31.6	-0.1
	5.8nm,0.4s,baz=138,slow=12,SNR=150						
	5.8nm,0.4s						
MEF	Metsahovi	22.20	320	*e*P	P	19 32 33.0	0.0
RAF	Rauma	23.72	321	*e*P	P	19 32 48.1	-0.3
AAL	Aland	24.19	318	*e*P	P	19 32 59.6	+6.7
HFS	Hagfors	27.19	316	P	P	19 33 21.8	+1.7
	0.3nm,0.6s,baz=118,slow=9.0,SNR=1.4						
	0.3nm,0.6s						
ARCES	ARCESS Array B	27.36	339	P	P	19 33 23.2	+1.7
	1.1nm,0.9s,baz=338,slow=2.9,SNR=1.9						
	1.1nm,0.9s						
TORD	Torodi Ar. Bea	54.30	250	P	P	19 37 05.8	+2.8
	0.2nm,0.4s,baz=40,slow=6.8,SNR=2.2						
	0.2nm,0.4s						
YKA	Yellowknife Ar	71.41	354	P	P	19 38 58.4	+2.2
	0.5nm,0.6s,baz=5.1,slow=6.4,SNR=13						
	0.5nm,0.6s						

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*TIF **07** 19:41:06.0, 41°.79N×43°.43E, $h12^{km}$*

*ISK **07** 19:41:05.2, 41°.84N×43°.38E, $h8^{km}$, ML2.5/6*

*IASPEI **07** 19:41:06.2±0.9, 41°.78N±0°.02×43°.42E±0°.03, $h12^{km}$±6^{km}, Error ellipse: s-maj=3.7km s-min=3.5km az=97.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*DDA **07** 19:41:06.2±0.0, 41°.76N×43°.41E, $h22^{km}$±1^{km}, ML2.3*

*NORS **07** 19:41:09.2±0.0, 41°.90N×43°.54E, $h1^{km}$, MPVA3.1*

ISC 07 19:41:06.5±0.8**, 41°.79N**±0°.02×**43°.42E**±0°.02**, $h11^{km}$**±6^{km}**, n37, $\sigma 0.^{s}96$/63, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKRG	Bakuriani	0.08	110	P	Pg	19 41 08.9	-0.3
BKRG				S	Sg	19 41 10.9	-0.3
AKH	Akhalkalaki	0.38	172	P	Pg	19 41 14.3	+0.2
AKH				S	Sg	19 41 20.3	+1.1
AKH	Akhalkalaki	0.38	172	PG	Pg	19 41 14.4	+0.2
AKH				SG	Sg	19 41 20.3	+1.1
ABS	Abastumani	0.46	266	P	Pg	19 41 15.3	-0.3
ABS				S	Sb	19 41 23.0	-0.5
BGD	Bogdanovka	0.54	166	P	Pg	19 41 17.1	+0.1
BGD				S	Sg	19 41 25.1	+0.9
TRLG	Trialeti	0.56	116	P	Pb	19 41 18.0	-0.5
TRLG				S	Sb	19 41 26.6	0.0
EPOS	Posof	0.59	242	P	Pg	19 41 17.9	-0.2
EPOS				S	Sg	19 41 26.9	+1.0
EPOS				*i* AML	AML	19 41 31.0	
	comp=N,151nm,0.4s						
TKB	Tkibuli	0.65	331	P	Pb	19 41 19.2	-0.6
TKB				S	Sb	19 41 28.4	-0.5
DMNI	Dmanisi	0.73	128	P	Pg	19 41 20.5	-0.3
DMNI				S	Sg	19 41 30.8	+0.4
ONI	Oni	0.80	2	P	Pb	19 41 22.0	-0.5
ONI				S	Sn	19 41 33.6	-2.1
KZRT	Kazreti	0.83	118	P	Pg	19 41 21.6	-1.0
BTNK	Botanikuri	1.03	95	P	Pb	19 41 20.8	-5.6
BTNK				*i* AML	AML	19 41 37.0	
	comp=E,73nm,0.6s						
GUDG	Gudauri	1.04	49	P	Pn	19 41 26.2	-0.9
GUDG				S	Sn	19 41 41.2	-0.6
EAK	Akyaka	1.11	173	P	Pb	19 41 26.6	-1.1
DIGR	Digorskoe uzhe	1.12	6	*e*Pg	Pn	19 41 27.5	-0.8
DIGR				*e*Sg	Sn	19 41 43.9	+0.1
LACR	Lac	1.23	32	*e*Pg	Pg	19 41 29.7	-0.4
LACR				*e*Sg	Sn	19 41 46.5	+0.2
BATM	Batumi	1.31	263	P	Pn	19 41 30.0	-0.7
BATM				S	Sn	19 41 48.3	+0.2
BATM	Batumi	1.31	263	PN	Pn	19 41 29.9	-0.7
BATM				SN	Sn	19 41 48.2	+0.1
DAGI	Agillar	1.34	239	P	Pn	19 41 30.8	-0.4
DAGI				S	Sg	19 41 50.0	+0.4
CHVG	Ch'k'valeri	1.36	314	P	Pg	19 41 32.7	0.0
CHVG				S	Sg	19 41 52.1	+1.7
DIGO	Kars	1.37	182	P	Pn	19 41 31.8	0.0
DIGO				S	Sn	19 41 49.0	-1.0
SENK	Senkaya-Erzuru	1.47	214	PN	Pn	19 41 33.1	0.0
DGRG	David-gareji	1.50	102	P	Pg	19 41 34.6	-0.7
DGRG				S	Sg	19 41 55.0	+0.3
DBAD	Bademkaya	1.51	240	P	Pn	19 41 33.5	-0.1
DBAD				S	Sb	19 41 54.7	+0.9
DBAD				*i* AML	AML	19 41 56.0	
	comp=E,39nm,0.4s						
LSNR	Lesken	1.52	11	*e*Pg	Pg	19 41 35.6	-0.1
LSNR				*e*Sg	Sg	19 41 57.6	+2.2
HOPA	Hopa-Artvin	1.54	256	PN	Pn	19 41 33.5	-0.3
DDEM	Demirkent	1.54	235	P	Pb	19 41 35.5	+0.4
DDEM				S	Sb	19 41 55.1	+0.4
DDEM				*i* AML	AML	19 41 59.0	
	comp=E,39nm,0.4s						
DDEM				*i* AML	AML	19 42 00.0	
	comp=N,46nm,0.3s						
STDR	Stavd-Durt	1.65	16	*e*Pg	Pg	19 41 38.8	+0.6
STDR				*e*Sg	Sg	19 42 02.6	+3.0
KMGR	Komgaron	1.66	40	*e*Pg	Pg	19 41 39.6	+1.2
KMGR				*e*Sg	Sg	19 42 01.4	+1.5
GNI	Garni	1.92	148	PN	Pn	19 41 39.9	+0.7
SHA1	Shidzhatmaz	2.03	344	*e*Pg	Pg	19 41 45.0	-0.5
SHA1				*e*Sg	Sg	19 42 11.8	0.0
DDFL	Dedoflistskaro	2.05	99	P	Pg	19 41 45.0	-0.8
DDFL	Dedoflistskaro	2.05	99	P	Pb	19 41 44.4	+0.7
DDFL				S	Sg	19 42 15.8	+3.5
DDFL				*i* AML	AML	19 42 19.0	
	comp=E,25nm,0.6s						
DDFL				*i* AML	AML	19 42 25.0	
	comp=N,17nm,0.5s						
LGD	Lagodekhi	2.11	88	P	Pb	19 41 44.6	-0.1
LGD				S	Sg	19 42 14.4	+0.2
CHOM	Cayeli-Rize	2.12	252	PN	Pn	19 41 41.8	0.0
KIV	Kislovodsk	2.23	346	PN	Pn	19 41 42.7	-0.8
KRIK	Erzurum-spir	2.38	233	P	Pb	19 41 49.0	-0.4

IDC 07 19:41:27.4±1.9**, 16°.95S**×**178°.13W, $h0^{km}$, mb4.1**/3**, mbtmp4.1**/3**, Error ellipse: s-maj=231.1km s-min=33.4km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.33	240	P	P	19 48 58.7	+0.2
	1.4nm,0.5s,baz=76,slow=7.8,SNR=8.7						
	1.4nm,0.5s						
ASAR	Alice Springs	45.31	253	P	P	19 49 47.0	-0.4
	8.1nm,0.6s,baz=88,slow=8.2,SNR=210						
	8.1nm,0.6s						
TXAR	Lajitas Array	85.26	58	P	P	19 54 06.6	0.0
	0.3nm,0.8s,baz=210,slow=7.2,SNR=3.7						
	0.3nm,0.8s						

GUC 07 20:02:34.6±0.6, 29°.68S×70°.87W, h79km±3km, ML3.6, 1C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.40	234	eP	Pn	20 02 47.2	-0.3
CO05				i S	Sn	20 02 56.4	-0.5
GO04	Tololo Observa	0.49	173	eP	Pn	20 02 48.1	-0.4
GO04				i S	Sn	20 02 58.7	-0.1
GO04				IAML		20 03 04.2	
	comp=N,3μm,0.4s						
LCO	Las Campanas	0.68	12	⇑iP	Pn	20 02 49.4	-0.9
CO01	Juntas del Tor	0.73	114	⇓iP	Pn	20 02 50.8	0.0
CO01				i S	Sn	20 03 02.3	-0.5
CO06	Fray Jorge	1.19	214	⇓eP	Pn	20 02 55.7	-0.3
CO06				eS	Sn	20 03 11.8	-0.2
AC04	Llanos de Chal	1.48	353	eP	Pn	20 02 59.6	-0.1
AC04				i S	Sn	20 03 18.9	+0.3
AC04				IAML		20 03 24.7	
	comp=E,737nm,0.3s						
CO02	Combarbal	1.52	184	⇓iP	Pn	20 03 00.3	0.0
CO02				i S	Sn	20 03 19.6	-0.1
CO02				IAML		20 03 22.1	
	comp=E,1μm,0.1s						
AC06	Mina Casimiro	2.36	11	eP	Pn	20 03 11.6	+0.3
AC06				i S	Sn	20 03 39.3	-0.1
AC06				IAML		20 03 45.5	
	comp=N,159nm,0.3s						
VA03	San Esteban	3.09	175	eP	Pn	20 03 22.1	+0.9
VA03				i S	Sn	20 03 57.4	+0.4
VA03				IAML		20 04 05.5	
	comp=E,262nm,0.1s						
ROCH	El Roble	3.28	182	eP	Pn	20 03 25.1	+1.1
ROCH				IAML		20 04 15.3	
	comp=N,159nm,0.5s						
PEL	Peldehue	3.46	177	eP	Pn	20 03 26.5	+0.3
PEL				eS	Sn	20 04 06.1	+0.1
PEL				IAML		20 04 25.1	
	comp=N,75nm,0.3s						
MT02	Curacav	3.58	184	eP	Pn	20 03 27.6	-0.1
MT02				eS	Sn	20 04 08.2	-0.6
MT02				IAML		20 04 25.6	
	comp=E,80nm,0.6s						
MT09	Talagante	4.08	181	eP	Pn	20 03 34.9	+0.1
MT09				eS	Sn	20 04 21.3	-0.2

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*JMA **07** 20:04:47.3±0.4, 32°N±4°×13°8E±°, h464km, MV3.7/43, NEAR TORISHIMA IS*
*IDC **07** 20:04:52.5±0.8, 32°.18N×137°.70E, h411km±8km, mb2.9/8, mbtmp3.8/14, Error ellipse: s-maj=19.9km s-min=14.1km az=90.0*
*NEIC **07** 20:04:52.6±1.6, 32°.2N±0°.1×137°.6E±0°.1, h410km±9km, mb4.0/15, Error ellipse: s-maj=18.8km s-min=14.4km az=118.0*
ISC 07 20:04:51.5±0.5, 32°.05N±0°.06×137°.73E±0°.07, h400km, n53, σ1s.51/59, mb3.8/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.04	58	P	Pn	20 05 50.2	+2.6
	102nm,0.6s,baz=311,slow=23,SNR=22						
JHJ				S	S	20 06 35.1	+2.1
	77nm,0.6s,baz=86,slow=20,SNR=1.5						
JHJ2	Mitsune	2.06	58	P	Pn	20 05 50.2	+2.5
JHJ2				S	S	20 06 37.8	+4.6
JHJ2	Mitsune	2.06	58	eP	Pn	20 05 50.7	+3.0
JAI	Aioi	3.26	303	eP	Pn	20 05 58.7	+1.9
JNY	Yasuok	3.30	2	eP	Pn	20 05 59.5	+2.3
INU	Inuyama	3.34	350	P	Pn	20 05 58.3	+0.9
JOD2	Odawara 2	3.40	19	eP	Pn	20 05 59.6	+1.6
JOD2				eS	S	20 06 53.3	+1.3
JYN	Shimob	3.50	11	eP	Pn	20 06 01.4	+2.4
JGF	Kuroka	3.56	355	P	Pn	20 06 00.9	+1.5
BSO3	Boso 3	3.60	40	P	Pn	20 05 60.0	+0.6
BSO3				eS	S	20 06 55.1	+0.5
BSO1	Boso 1	3.76	45	eP	Pn	20 06 01.1	+0.6
BSO1				eS	S	20 06 57.0	+0.2
JHU	Hanno	4.00	18	eP	Pn	20 06 04.2	+0.7
JRY	Ryogami san	4.08	13	P	Pn	20 06 05.6	+1.4
MJAR	Matsushiro Arr	4.50	5	P	Pn	20 06 08.2	-0.1
	13nm,0.7s,baz=180,slow=9.7,SNR=43						
MAJO	Matsushiro	4.50	5	P	Pn	20 06 09.0	+0.7
JAG	Ashikaga	4.59	18	eP	Pn	20 06 09.0	-0.2
JYT	Yasato	4.64	25	P	Pn	20 06 08.9	-0.8
JYT	Yasato	4.64	25	eP	Pn	20 06 09.2	-0.5
JHO	Hitachi	5.12	27	eP	Pn	20 06 14.1	-0.5
JFK	Kawauchi	5.90	25	eP	Pn	20 06 22.9	-0.1
JCJ	Chichijima	6.28	141	P	Pn	20 06 29.8	+2.6
	26nm,0.8s,baz=334,slow=22,SNR=6.3						
JCJ				S	S	20 07 41.8	-3.5
	62nm,0.4s,baz=255,slow=21,SNR=14						
JCJ	Chichijima	6.28	141	P	Pn	20 06 28.3	+1.1
JMM	Marumori	6.32	23	P	Pn	20 06 27.4	-0.1
JTU	Tsushima	7.40	292	P	P	20 06 39.9	-0.2
KSRS	Korea Array	9.70	306	P	Pn	20 07 07.0	+1.0
	1.1nm,0.5s,baz=122,slow=9.6,SNR=11						
JOW	Kunigami	9.74	240	P	Pn	20 07 09.5	+2.9
	6.7nm,0.5s,baz=44,slow=9.2,SNR=3.7						
TPUB	Ta-pu	17.46	244	P	P	20 08 31.0	+0.6
KLR	Kul'dur	17.74	347	P	P	20 08 33.7	+0.7
	1.9nm,0.5s,baz=182,slow=8.8,SNR=11						
MA2	Magadan	28.88	14	P	P	20 10 14.9	-0.1
	2.7nm,0.5s,baz=197,slow=9.7,SNR=5.6						
	2.7nm,0.5s						
MA2	Magadan	28.88	14	P	P	20 10 14.9	-0.1
MA2				IAmb	IAmb	20 10 30.4	
	comp=Z,5.2nm,1.0s						
KSM	Kuching	39.91	226	P	P	20 11 48.7	-0.2
KSM				IAmb	IAmb	20 12 05.4	
	comp=Z,19nm,1.3s						
MKAR	Makanchi Array	44.38	306	P	P	20 12 22.9	-1.3
	comp=Z,0.2nm,0.7s,baz=334,slow=20,SNR=1.7						
	comp=Z,0.2nm,0.7s						
KNRA	Kununurra	48.23	192	P	P	20 12 54.0	+0.1
GSI	Gunungsitoli	48.64	239	P	P	20 12 56.0	-1.2
GSI				IAmb	IAmb	20 13 04.5	
	comp=Z,12nm,1.0s						
BOOM	Boomskoye usch	49.28	301	P	P	20 13 00.7	-1.2
K20K	Telida	52.15	32	P	P	20 13 23.1	+0.6
K20K				IAmb	IAmb	20 13 32.1	
	comp=Z,4.0nm,1.4s						
IMAR	Indian Mountai	52.48	29	P	P	20 13 24.9	+0.2
KDAK	Kodiak Island	52.85	39	P	P	20 13 27.9	+0.3
ILAR	Eielson Array	55.32	30	P	P	20 13 45.2	+0.2
	comp=Z,0.3nm,0.5s,baz=290,slow=7.6,SNR=5.3						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	55.52	184	P	P	20 13 48.0	+1.0
	comp=Z,0.3nm,0.6s,baz=17,slow=11,SNR=9.1						
	comp=Z,0.3nm,0.6s						
SCRK	Sand Creek	56.63	31	P	P	20 13 54.3	-0.1
ABKAR	Akbulak array	58.89	312	P	P	20 14 08.4	-1.6
ABKAR	Akbulak array	58.89	312	P	P	20 14 08.1	-1.9
ABKAR				IAmb	IAmb	20 14 08.9	
	comp=Z,0.7nm,0.7s						
INK	Inuvik	60.19	25	P	P	20 14 18.1	-0.2
INK				IAmb	IAmb	20 14 46.7	
	comp=Z,5.6nm,1.5s						
A36M	Sachs Harbour	61.99	20	P	P	20 14 30.2	0.0
A36M				IAmb	IAmb	20 14 31.4	
	comp=Z,5.8nm,0.8s						
ARCES	ARCESS Array B	67.58	339	P	P	20 15 05.0	-0.9
	comp=Z,0.5nm,0.5s,baz=57,slow=8.8,SNR=10						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	67.58	339	P	P	20 15 05.0	-0.9
ARCES				IAmb	IAmb	20 15 05.6	
	comp=Z,9.2nm,1.4s						
YKA	Yellowknife Ar	69.63	28	P	P	20 15 18.2	-0.3
	comp=Z,0.7nm,0.7s,baz=299,slow=6.1,SNR=8.3						
	comp=Z,0.7nm,0.7s						
FIA1	FINESS Array S	71.78	332	P	P	20 15 29.7	-1.7
FIA1				IAmb	IAmb	20 15 39.2	
	comp=Z,3.4nm,1.2s						
FINES	FINESS Array B	71.78	332	P	P	20 15 30.0	-1.4
	comp=Z,0.9nm,0.4s,baz=63,slow=5.6,SNR=26						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	71.78	332	P	P	20 15 29.8	-1.6
NOA	NORSAR Array B	77.56	336	P	P	20 16 02.9	-1.3
	comp=Z,0.2nm,0.5s,baz=45,slow=5.6,SNR=3.1						
	comp=Z,0.2nm,0.5s						
BEKR	Beckworth	78.33	50	P	P	20 16 09.1	+0.1
BEKR				IAmb	IAmb	20 16 14.3	
	comp=Z,5.4nm,1.4s						

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*NOU **07** 20:08:18.1, 25°.42S×179°.60W, h566km, mb4.3/28, South of Fiji Islands*
*NEIC **07** 20:08:19.5±1.7, 25°.5S±0°.1×179°.7E±0°.1, h506km±10km, mb4.2/15, Error ellipse: s-maj=18.0km s-min=17.5km az=67.0*
*IDC **07** 20:08:19.9±1.4, 25°.37S×179°.53E, h498km±17km, mb3.5/9, mbtmp4.3/10, Error ellipse: s-maj=17.9km s-min=16.4km az=5.0*
ISC 07 20:08:19.7±0.6, 25°.52S±0°.07×179°.63E±0°.09, h507km, n62, σ1s.25/63, mb4.1/22, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.31	150	P	P	20 09 42.8	+1.8
	777nm,0.2s,baz=83,slow=8.7,SNR=11						
RAO	Raoul Island	4.31	150	P	P	20 09 42.5	+1.5
RAO	Raoul Island	4.31	150	P	P	20 09 43.5	+2.5
LKBA	Tubou, Lakemba	7.40	12	P	P	20 10 09.1	-1.2
MSVF	Nonsavu	7.89	349	P	P	20 10 13.3	-2.1
	12nm,0.5s,baz=243,slow=22,SNR=27						
MSVF	Nonsavu	7.89	349	P	P	20 10 13.9	-1.5
DGTI	Dogotuki	9.18	1	P	P	20 10 27.6	-1.1
MARNC	Mare, Loyalty	11.37	288	P	P	20 10 52.0	+0.3
NIUE	Niue	11.60	59	P	P	20 10 52.0	-2.1
MXZ	Matakaoa Point	12.06	185	P	P	20 10 58.2	-0.4
DZM	Mont Dzumac	12.55	283	P	P	20 11 06.0	+1.7
URZ	Urewera	12.88	189	P	P	20 11 04.7	-2.6
	18nm,0.5s,baz=332,slow=1.7,SNR=32						
URZ				S	S	20 13 22.6	-2.9
	6.0nm,0.6s,baz=324,slow=17,SNR=2.8						
URZ	Urewera	12.88	189		P	20 11 05.5	-1.9
URZ	Urewera	12.88	189	P	P	20 11 06.7	-0.6
HIZ	Hauiti	13.57	196	P	P	20 11 15.3	+0.7
BKZ	Black Stump Fm	13.86	190	P	P	20 11 16.1	-1.6
BKZ	Black Stump Fm	13.86	190	P	P	20 11 16.7	-1.0
BFZ	Birch Farm	15.38	190	P	P	20 11 31.8	-1.8
QRZ	Quartz Range	16.37	199	P	P	20 11 43.4	-0.4
ARMA	Armidale	25.17	252	P	P	20 13 05.7	+1.2
ARMA				IAmb	IAmb	20 13 10.1	
	comp=Z,9.6nm,1.3s						
ARMA	Armidale	25.17	252	P	P	20 13 05.2	+0.7
EIDS	Eidsvold	25.76	264	P	P	20 13 10.2	+0.6
EIDS				IAmb	IAmb	20 13 20.2	
	comp=Z,11nm,1.3s						
EIDS	Eidsvold	25.76	264	P	P	20 13 09.7	+0.1
MGCD	Mangrove Creek	25.95	246	P	P	20 13 13.3	+2.1
RMQ	Roma	27.73	261	P	P	20 13 29.3	+2.3
CTA	Charters Tower	31.18	273	P	P	20 13 57.6	+0.6
	comp=Z,12nm,0.5s,baz=97,slow=10,SNR=31						
	comp=Z,12nm,0.5s						
CTA	Charters Tower	31.18	273	P	P	20 13 57.7	+0.6
CTAO	Charters Tower	31.18	273	P	P	20 13 57.6	+0.6
CTAO				IAmb	IAmb	20 13 58.4	
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	31.18	273	P	P	20 13 57.5	+0.5
STKA	Stephens Creek	33.83	250	P	P	20 14 20.2	+0.8
	comp=Z,2.5nm,0.6s,baz=100,slow=13,SNR=9.3						
	comp=Z,2.5nm,0.6s						
STKA	Stephens Creek	33.83	250	P	P	20 14 20.1	+0.7
STKA	Stephens Creek	33.83	250	P	P	20 14 20.6	+1.2
INKA	Innaminka	34.73	258	P	P	20 14 28.5	+1.5
COEN	Coen	36.07	282	P	P	20 14 38.8	+0.5
COEN	Coen	36.07	282	P	P	20 14 39.5	+1.2
OOD	Oodnadatta	39.18	257	P	P	20 15 04.5	+0.9
	comp=Z,17nm,2.8s						
MULG	Mulgathing	40.35	253	P	P	20 15 12.6	-0.4
	comp=Z,32nm,2.6s						
AS31	Alice Springs	41.46	263	P	P	20 15 22.0	0.0
ASAR	Alice Springs	41.46	263	P	P	20 15 21.9	-0.1
	comp=Z,4.0nm,0.7s,baz=89,slow=8.1,SNR=82						
	comp=Z,4.0nm,0.7s						
WRAB	Tennant Creek	41.98	268	P	P	20 15 25.5	-0.6
WRAB				IAmb	IAmb	20 15 26.2	
	comp=Z,7.3nm,0.8s						
WRAB	Tennant Creek	41.98	268	P	P	20 15 25.0	-1.1
	comp=Z,10nm,2.9s						
KDU	Kakadu	46.12	277	P	P	20 15 57.5	-0.8
	comp=Z,5.3nm,1.7s						
WRKA	Warakurna	46.17	259	P	P	20 15 57.6	-1.1
	comp=Z,8.9nm,1.6s						
KNRA	Kununurra	48.36	271	P	P	20 16 15.0	-0.2
KNRA	Kununurra	48.36	271	P	P	20 16 14.4	-0.8
	comp=Z,28nm,1.8s						
FITZ	Fitzroy Crossi	50.39	267	P	P	20 16 30.0	-0.1
SIJI	Sorong	52.65	290	P	P	20 16 45.6	-1.0
	comp=Z,7.9nm,0.7s,baz=107,slow=12,SNR=6.1						
	comp=Z,7.9nm,0.7s						
PLAI	Plampang	60.88	274	P	P	20 17 42.2	-1.0
	comp=Z,12nm,1.1s						
JAGI	Jajag, Banyuwa	64.30	273	P	P	20 18 03.8	-1.6
QSPA	South Pole Qui	64.57	180	P	P	20 18 07.5	+1.2
	comp=Z,1.3nm,0.6s,baz=330,slow=1.7,SNR=11						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	64.57	180	P	P	20 18 07.3	+1.0
QSPA				IAmb	IAmb	20 18 19.9	
	comp=Z,4.9nm,1.4s						
MJAR	Matsushiro Arr	73.04	326	P	P	20 18 56.7	-1.1
	comp=Z,2.1nm,0.7s,baz=153,slow=7.6,SNR=5.5						
	comp=Z,2.1nm,0.7s						
MJAR	Matsushiro Arr	73.04	326	P	P	20 18 57.3	-0.5
MAJO	Matsushiro	73.05	326	P	P	20 18 57.6	-0.1
MAJO				IAmb	IAmb	20 19 13.2	
	comp=Z,4.8nm,1.1s						
BELA	Belgrano 2	74.87	173	P	P	20 19 07.3	-0.3
BELA				IAmb	IAmb	20 19 36.3	
	comp=Z,4.9nm,1.4s						
KSRS	Korea Array	79.27	321	P	P	20 19 32.2	+0.2
	comp=Z,0.9nm,0.7s,baz=135,slow=5.8,SNR=7.2						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	86.15	44	P	P	20 20 07.7	+0.6
	comp=Z,1.0nm,0.8s,baz=225,slow=9.1,SNR=7.2						
	comp=Z,1.0nm,0.8s						
K05A	Summer Lake	87.22	39	P	P	20 20 12.7	+0.7
K05A				IAmb	IAmb	20 20 23.7	
	comp=Z,8.1nm,1.4s						
TMUT	Trail Mountain	91.20	46	P	P	20 20 31.4	+0.7
TMUT				IAmb	IAmb	20 20 32.7	
	comp=Z,3.0nm,0.7s						
TXAR	Lajitas Array	91.57	58	P	P	20 20 33.3	+0.9
	comp=Z,0.7nm,0.8s,baz=217,slow=7.5,SNR=7.1						
	comp=Z,0.7nm,0.8s						
SCHQ	Schefferville	123.94	40	PKP	PKiKP	20 26 21.5	+1.6
	comp=Z,1.2nm,0.6s,baz=202,slow=11,SNR=2.5						
BRTR	Keskin Array B	148.25	305	PKPbc	PKiKP	20 27 10.8	+0.8
	comp=Z,0.7nm,0.6s,baz=138,slow=4.2,SNR=5.2						

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*IDC **07** 20:09:29.6±7.0, 59°.68S×27°.24W, h82km±63km, mb3.8/3, mbtmp4.1/4, ML4.1/1, MS2.8/1, Error ellipse: s-maj=49.6km s-min=29.1km az=33.0*
ISC 07 20:09:29.8±0.8, 59°.8S±0°.2×27°.3W±0°.3, h93km, n17, σ0s.99/11, mb4.2/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.37	152	P	Pn	20 12 36.4	+1.0
VNA3	Neumayer Olymp	13.49	155	P	Pn	20 12 37.3	+0.3
SNAA	Sanae	15.37	150	P	P	20 13 03.1	-0.8
SNAA	Sanae	15.37	150	P	P	20 13 02.7	-1.2
	0.7nm,0.3s,baz=312,slow=13,SNR=33						
	1.8nm,0.4s						
CPUP	Villa Florida	39.36	315	P	P	20 16 49.3	-0.7
	1.2nm,0.7s,baz=199,slow=5.7,SNR=3.0						
	1.2nm,0.7s						
LVC	Limon Verde	47.25	303	LR	LR	20 41 40.0	
	comp=Z,8.9nm,18.1s,baz=326,slow=41						
H10S2	ASCENSION HYDR	51.66	16	T	T	21 13 45.9	
	baz=188,slow=74,SNR=96						
H10S3	ASCENSION HYDR	51.66	16	T	T	21 13 48.4	
	baz=32,slow=74,SNR=193						
LPAZ	La Paz	52.59	308	P	P	20 18 35.7	+1.2
	2.0nm,0.8s,baz=113,slow=9.1,SNR=7.5						
	2.0nm,0.8s						
H10N1	ASCENSION HYDR	52.78	16	T	T	21 15 10.2	
	baz=188,slow=76,SNR=114						
H10N3	ASCENSION HYDR	52.78	16	T	T	21 15 10.7	
	baz=188,slow=76,SNR=410						
H10N2	ASCENSION HYDR	52.80	16	T	T	21 15 11.6	
	baz=188,slow=76,SNR=212						
TORD	Torodi Ar. Bea	76.40	29	P	P	20 21 08.8	0.0
	2.8nm,0.8s,baz=197,slow=6.6,SNR=18						
	2.8nm,0.8s						
YKA	Yellowknife Ar	138.89	315	PKP	PKPdf	20 28 43.2	-0.4
	0.4nm,0.8s,baz=127,slow=2.4,SNR=6.2						
INK	Inuvik	148.62	317	PKPbc	PKiKP	20 29 04.5	-1.0
	0.8nm,0.7s,baz=143,slow=8.0,SNR=3.2						
SONM	Songino Array	150.79	93	PKPbc	PKiKP	20 29 12.1	+1.2
	0.6nm,0.6s,baz=228,slow=2.7,SNR=5.7						
ILAR	Eielson Array	152.46	306	PKPbc	PKiKP	20 29 13.0	-0.7
	1.0nm,1.0s,baz=150,slow=2.7,SNR=6.5						

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*DSN **07** 20:23:48.0±0.0, 28°.14N×57°.61E, h10km, ML3.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*TEH **07** 20:23:50.1, 28°.21N×57°.08E, h8km, ML3.2*
*OMAN **07** 20:23:55.8±0.5, 28°.05N×57°.08E, h35km±24km, mb4.7/1, ml3.1/13, Error ellipse: s-maj=32.5km s-min=2.5km az=9.0*
ISC 07 20:23:50.0±0.9, 28°.19N±0°.03×57°.09E±0°.04, h10km, n60, σ1s.23/74, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.60	114	ePg	Pg	20 24 02.3	+0.6
IBND	Bandar-abas	0.89	213	e		20 24 36.2	
	comp=Z,13μm,0.5s						
IBND				ePg	Pg	20 24 07.3	+0.2
GENO	Geno	1.13	226	ePg	Pb	20 24 11.8	0.0
GENO				e		20 24 13.6	
	comp=Z,7μm,0.2s						
GENO				eSg	Sb	20 24 27.3	+0.6
NGRK	Negar Kerman	1.48	348	ePn	Pn	20 24 16.1	-1.0
NGRK				e		20 24 44.5	
	comp=Z,4μm,0.3s						
KBAM	BAM	1.52	52	ePg	Pn	20 24 17.6	+0.2
KBAM				e		20 24 51.6	
	comp=Z,3μm,0.3s						
CHMN	Cheshme madani	1.71	13	ePn	Pb	20 24 20.9	-0.9
CHMN				e		20 24 49.0	
	comp=Z,3μm,0.3s						
TVBK	TV Kerman	1.81	351	ePn	Pb	20 24 22.6	-0.9
TVBK				e		20 24 31.6	
	comp=Z,4μm,0.3s						
KHGB	Koh Gabri	2.24	346	ePn	Pb	20 24 29.7	-1.0
KHGB				e		20 25 11.7	
	comp=Z,1μm,0.4s						
SHME	Shamm	2.29	202	ePn	Pn	20 24 27.9	-0.1
SHME	Shamm	2.29	202	P	Pn	20 24 28.2	+0.2
	SNR=10						
SHME				S	Sn	20 24 55.1	-1.1
SHME	Shamm	2.29	202	eP	Pn	20 24 27.8	-0.1
	SNR=13						
SHME				S	Sb	20 24 59.9	-0.1
BANOM	Banah	2.37	197	ePn	Pn	20 24 28.5	-0.5
BANOM	Banah	2.37	197	P	Pn	20 24 28.9	-0.1
BANOM				S	Sn	20 24 57.1	-1.0
BANOM	Banah	2.37	197	eP	Pn	20 24 29.0	0.0
	SNR=28						
JASK	Jask - Hormozg	2.42	163	ePn	Pn	20 24 31.6	+1.9
LAR1	LAR	2.46	258	ePn	Pn	20 24 31.9	+1.7
MASF	Masafi	2.93	197	P	Pn	20 24 37.9	+1.1
MSFE	Esma-Masafi	2.94	197	ePn	Pn	20 24 37.0	+0.1
MSFE	Esma-Masafi	2.94	197	P	Pn	20 24 37.4	+0.6
UMQ	Umm Al-Quwin	2.95	206	P	Pn	20 24 38.5	+1.6
UOSS	Minazif	3.33	194	ePn	Pn	20 24 42.5	+0.3
UOSS	Minazif	3.33	194	P	Pn	20 24 44.3	+2.1
UOSS	Minazif	3.33	194	P	Pn	20 24 41.3	-0.9
NAZ	Nazwa, Dubai	3.44	202	ePn	Pn	20 24 44.3	+0.6
NAZ	Nazwa, Dubai	3.44	202	P	Pn	20 24 44.6	+0.9
	SNR=7.3						
NAZ				S	Sn	20 25 24.3	-0.2
NAZ	Nazwa, Dubai	3.44	202	i P	Pn	20 24 43.1	-0.6
	SNR=7.3						
NAZ				S	Sn	20 25 26.2	+1.7
HATD	Hatta, Dubai	3.46	195	ePn	Pn	20 24 44.2	+0.2
HATD	Hatta, Dubai	3.46	195	P	Pn	20 24 45.6	+1.6
HATD				S	Sn	20 25 24.9	-0.2
ASHO	Ashiyiah	3.62	195	ePn	Pn	20 24 46.9	+0.7
ASHO	Ashiyiah	3.62	195	P	Pn	20 24 47.5	+1.4
ASHO	Ashiyiah	3.62	195	P	Pn	20 24 46.6	+0.4
IBAF	Bafgh	3.63	339	ePn	Pn	20 24 48.4	+1.9
FAQ	Al Faqa, Dubai	3.69	202	ePn	Pn	20 24 47.4	+0.3
FAQ	Al Faqa, Dubai	3.69	202	P	Pn	20 24 47.9	+0.8
	SNR=5.9						
FAQ				S	Sn	20 25 29.7	-0.9
FAQ	Al Faqa, Dubai	3.69	202	i P	Pn	20 24 47.3	+0.3
	SNR=5.9						
IMEH	Mehriz	3.84	327	ePn	Pn	20 24 51.2	+1.7
ASUD	Al Ashush, Dub	3.89	204	ePn	Pn	20 24 50.8	+1.0
ASUD	Al Ashush, Dub	3.89	204	P	Pn	20 24 51.0	+1.1
	SNR=81						
ASUD				S	Sn	20 25 34.7	-0.9
ASUD	Al Ashush, Dub	3.89	204	i P	Pn	20 24 50.9	+1.0
	SNR=81						
AJN	Ajban	4.08	208	P	Pn	20 24 53.2	+0.8
	SNR=6.2						
AJN				S	Sn	20 25 38.8	-1.4
AJN	Ajban	4.08	208	i P	Pn	20 24 53.2	+0.8
	SNR=6.2						
NHDN	Nehbandan	4.10	38	ePn	Pn	20 24 55.5	+2.6
NGCH	Negor - Chabah	4.59	127	ePn	Pn	20 25 01.9	+2.4
HOQ	Hoqain	4.60	177	P	Pn	20 25 00.2	+0.6
	SNR=5.9						
HOQ				S	Sn	20 25 52.6	-0.5
ISAD	Sadrabad	4.74	322	ePn	Pn	20 25 04.1	+2.3
BIDO	Bidbid	4.75	168	P	Pn	20 25 02.4	+0.7
TPRV	Parvadeh(Tabas	4.83	356	ePn	Pn	20 25 06.3	+3.4
WSAR	Wadi Sarin	5.13	164	P	Pn	20 25 07.5	+0.6
	SNR=42						
WSAR				S	Sn	20 26 03.3	-2.9
TKDS	Koohdasht(Taba	5.40	0	ePn	Pn	20 25 13.2	+2.4
IRAM	Ramesheh	5.44	313	ePn	Pn	20 25 12.4	+0.9
UMZA	Um Al Zommool	5.73	198	ePn	Pn	20 25 14.0	-1.2
ANAR	Anarak	5.76	331	ePn	Pn	20 25 17.6	+1.9
WBK	Wadi Bani Khal	5.81	163	P	Pn	20 25 17.0	+0.6
	SNR=11						
WBK				S	Sn	20 26 21.4	-1.8
JMDO	Jabal Madar	5.87	171	P	Pn	20 25 18.2	+1.0
JMDO				S	Sn	20 26 23.4	-1.1
MZR	Muzera	6.11	213	ePn	Pn	20 25 19.7	-0.7
MZR	Muzera	6.11	213	P	Pn	20 25 19.9	-0.6
	SNR=6.0						
MZR	Muzera	6.11	213	P	Pn	20 25 19.7	-0.7
IZEF	Zefreh	6.23	320	ePn	Pn	20 25 22.9	+0.6
TRNA	Turayna	6.29	238	P	Pn	20 25 22.6	-0.2
IPIR	Pirpir	6.97	311	ePn	Pn	20 25 33.8	+1.3

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*JMA **07** 20:37:12.1±0.2, 31°.1N±0°.3×129°.1E±0°.7, h13km±1km, MD4.1/36, MW4.1/36, SW OFF KYUSHU*
JMA Felt I J1 at SW OFF KYUSHU .
*IDC **07** 20:37:13.0±1.1, 31°.07N×129°.10E, h0km, mb3.5/6, mbtmp3.6/10, ML2.9/4, MS3.4/22, Error ellipse: s-maj=27.1km s-min=18.2km az=99.0*
*NIED **07** 20:37:12.1, 31°.08N×129°.05E, h13km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.16; $M_{\theta\theta}$1.24; $M_{\phi\phi}$-1.08; $M_{r\theta}$-0.07; $M_{\theta\phi}$1.05; $M_{\phi r}$1.54; Fault plane solution: $M_0$2.13000×10^{15} NP1: ϕ_s107.00000°, δ51.00000°, λ-11.00000°. NP2: ϕ_s204.00000°, δ81.00000°, λ-141.00000°.*
ISC 07 20:37:13.9±0.7, 31°.06N±0°.04×129°.19E±0°.06, h10km, n46, σ1s.07/28, mb3.5/6, MS3.4/18, 3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.77	36	eP	Pg	20 37 27.3	-1.4
JSJ				eS	Sg	20 37 38.0	-0.7
JSJ	Shimokoshiki	0.77	36	A	A	20 37 27.3	
	comp=E,13nm,1.3s,comp=E,13nm,0.8s						
JKC	Kuchinoerabu	1.05	124	eP	Pb	20 37 33.3	-0.8
JKC				eS	Sb	20 37 48.9	+0.9
JKC	Kuchinoerabu	1.05	124	A	A	20 37 33.3	
	comp=E,9.0nm,1.2s,comp=E,10.0nm,1.5s						
JSU	Suzuyama	1.18	67	⇓eP	Pn	20 37 35.4	-1.0

JSU				⇓eS	Sb	20 37 52.2	+0.7
JSU	**Suzuyama**	1.18	67	A	A	20 37 35.4	
	comp=E,6.0nm,0.3s,comp=E,9.0nm,1.2s						
JNN	**Nakanoshima**	1.35	154	eP	Pn	20 37 37.3	-1.4
JNN				eS	Sn	20 37 56.1	-0.6
JNN	**Nakanoshima**	1.35	154	A	A	20 37 37.3	
	comp=E,6.0nm,1.6s,comp=E,5.0nm,1.8s						
JYAK	**Yakushimahirau**	1.40	125	eP	Pn	20 37 38.2	-1.2
JYAK				eS	Sn	20 37 57.1	-1.0
JYAK	**Yakushimahirau**	1.40	125	A	A	20 37 38.2	
	comp=E,4.0nm,4.9s,comp=E,4.0nm,4.0s						
JTN	**Tanegashima 3**	1.59	104	eP	Pn	20 37 41.9	-0.2
JMTN	**Minamitane**	1.62	114	eP	Pn	20 37 41.9	-0.5
JZO	**Okuchi**	1.62	48	A	A	20 37 41.8	
	comp=E,4.0nm,1.1s,comp=E,6.0nm,1.1s						
JFU	**Fukue jima 2**	1.64	347	P	Pn	20 37 40.6	-2.2
JFU	**Fukue jima 2**	1.64	347	A	A	20 37 40.6	
	comp=E,3.0nm,2.2s,comp=E,3.0nm,0.5s						
JTZ	**Takazaki**	1.83	62	⇓eP	Pn	20 37 45.1	-0.3
JNKG	**Nichinankitago**	1.97	72	A	A	20 37 47.4	
	comp=E,4.0nm,1.8s,comp=E,5.0nm,1.5s						
JIU3	**Izumi3**	2.03	43	P	Pn	20 37 47.2	-0.9
JNU	**Nakatsue**	2.51	34	Pn	Pn	20 37 55.5	+0.8
	145nm,0.3s,baz=192,slow=0.7,SNR=2.0						
JNU				Sn	Sb	20 38 30.1	0.0
	57nm,0.3s,baz=274,slow=5.0,SNR=6.1						
JOW	**Kunigami**	4.28	191	Pn	Pn	20 38 20.1	+0.9
	0.9nm,0.3s,baz=114,slow=28,SNR=3.7						
JOW				LR	LR	20 40 12.6	
	comp=Z,271nm,19.7s,baz=70,slow=42 11nm,0.8s						
KSRS	**Korea Array**	6.47	351	Pn	Pn	20 38 48.0	-1.0
	0.7nm,0.3s,baz=178,slow=14,SNR=12						
KSRS				Sn	Sn	20 40 03.8	+0.9
	1.1nm,0.3s,baz=171,slow=24,SNR=7.3						
KSRS				Lg	Lg	20 40 29.6	
	1.1nm,0.3s,baz=170,slow=30,SNR=6.8 3.0nm,0.5s						
JHJ	**Hachijo jima 2**	9.22	74	LR	LR	20 43 04.9	
	comp=Z,74nm,19.8s,baz=90,slow=38						
MJAR	**Matsushiro Arr**	9.29	51	Pn	Pn	20 39 30.2	+2.3
	baz=240,slow=13,SNR=2.0						
MJAR				LR	LR	20 43 25.5	
	comp=Z,163nm,19.6s,baz=236,slow=40 0.6nm,0.4s						
KLR	**Kul'dur**	18.26	5	P	P	20 41 27.6	+0.2
	0.1nm,0.3s,baz=252,slow=23,SNR=3.2						
KLR				LR	LR	20 47 46.3	
	comp=Z,39nm,20.3s,baz=184,slow=35 2.2nm,0.7s						
GUMO	**Guam**	22.59	137	LR	LR	20 50 18.7	
	comp=Z,41nm,18.2s,baz=91,slow=35						
DAV	**Davao City (W)**	24.10	189	LR	LR	20 54 00.3	
	comp=Z,47nm,18.3s,baz=34,slow=42						
SONM	**Songino Array**	24.16	320	P	P	20 42 29.5	-0.8
	1.2nm,0.9s,baz=133,slow=9.2,SNR=5.9						
SONM				LR	LR	20 52 25.0	
	comp=Z,115nm,20.4s,baz=169,slow=38 1.2nm,0.9s						
CMAR	**Chiang Mai Arr**	30.09	252	LR	LR	20 56 56.0	
	comp=Z,82nm,18.8s,baz=65,slow=39						
SIJI	**Sorong**	31.81	176	LR	LR	20 56 41.8	
	comp=Z,44nm,18.8s,baz=195,slow=37						
ZALV	**Zalesovo Beam**	39.04	319	LR	LR	21 02 35.9	
	comp=Z,38nm,20.3s,baz=100,slow=39						
MKAR	**Makanchi Array**	39.11	307	P	P	20 44 42.6	+1.3
	0.6nm,0.9s,baz=96,slow=11,SNR=4.1						
MKAR				LR	LR	21 01 58.9	
	comp=Z,46nm,19.4s,baz=100,slow=38 0.6nm,0.9s						
PSI	**Prapat**	40.07	231	LR	LR	21 01 59.2	
	comp=Z,51nm,18.0s,baz=17,slow=37						
KURBB	**Kurchatov Arra**	42.07	313	LR	LR	21 03 50.0	
	comp=Z,69nm,18.7s,baz=170,slow=38						
PMG	**Port Moresby**	43.77	154	LR	LR	21 04 33.3	
	comp=Z,37nm,18.1s,baz=290,slow=37						
AAK	**Ala-Archa**	44.56	301	LR	LR	21 06 03.1	
	comp=Z,45nm,18.9s,baz=110,slow=39						
HNR	**Honiara**	49.91	139	LR	LR	21 06 36.5	
	comp=Z,54nm,18.1s,baz=236,slow=35						
PALK	**Pallekele**	51.03	253	LR	LR	21 10 34.6	
	comp=Z,26nm,18.1s,baz=167,slow=39						
ARU	**Arti**	54.20	320	LR	LR	21 12 00.4	
	comp=Z,69nm,20.9s,baz=100,slow=39						
ASAR	**Alice Springs**	54.60	175	P	P	20 46 42.9	+0.3
	0.4nm,0.6s,baz=6.0,slow=14,SNR=6.5 0.4nm,0.6s						
AKTO	**Aktyubinsk**	55.12	312	LR	LR	21 10 54.9	
	comp=Z,57nm,18.5s,baz=82,slow=37						
KIRV	**Kirov**	58.86	323	LR	LR	21 14 56.4	
	comp=Z,52nm,19.2s,baz=135,slow=38						
FINES	**FINESS Array B**	69.11	330	P	P	20 48 20.1	+0.3
	0.7nm,0.8s,baz=64,slow=4.4,SNR=4.1 0.7nm,0.8s						
YKA	**Yellowknife Ar**	73.82	26	P	P	20 48 49.0	+0.7
	0.3nm,0.8s,baz=296,slow=5.3,SNR=4.2 0.3nm,0.8s						
BRTR	**Keskin Array B**	74.76	307	P	P	20 48 55.2	+0.8
	0.4nm,0.7s,baz=58,slow=4.7,SNR=4.2 0.4nm,0.7s						
NOA	**NORSAR Array B**	75.37	334	LR	LR	21 26 05.0	
	comp=Z,19nm,20.0s,baz=260,slow=39						
EIL	**Elat**	78.60	298	LR	LR	21 28 50.3	
	comp=Z,31nm,18.2s,baz=286,slow=39						

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*NOU **07** 21:18:43.5, 38°.11S×175°.70E, h275^{km}, MLv3.6/6, North Island, New Zealand*

*WEL **07** 21:18:44.2±0.7, 38°S±5°×17°6E±°, h253^{km}±6^{km}, M2.7/35, ML2.3/7, MLv2.7/35, Error ellipse: s-maj=0.0km s-min=0.0km az=69.1*

ISC 07 21:18:37.9±2.1**, 37°.89S**±0°.07×**175°.97E**±0°.07**, h300**^{km}±12^{km}**, n120, σ1^{s}.81**/136**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OMRZ	**Omania**	0.39	125	P	Pn	21 19 17.7	+1.4
TOZ	**Tahuroa Road**	0.40	293	P	Pn	21 19 17.8	+1.6
OPRZ	**Ohinepanea**	0.47	85	P	Pn	21 19 17.3	+0.9
TARZ	**Mount Tarawera**	0.55	130	P	Pn	21 19 18.7	+2.0
TLZ	**Tolley Road**	0.56	217	P	Pn	21 19 18.6	+2.0
MUGZ	**Murupara**	0.86	133	P	Pn	21 19 18.8	+1.2
MUGZ				S	S	21 19 46.2	-3.1
URZ	**Urewera**	0.97	113	P	Pn	21 19 18.8	+0.7
URZ				S	S	21 19 46.9	-3.2
MRHZ	**Matea Rd**	1.01	160	P	Pn	21 19 19.8	+1.5
MRHZ				S	S	21 19 47.8	-2.6
MKAZ	**Moumakai**	1.01	320	P	Pn	21 19 20.0	+1.6
HIZ	**Hauiti**	1.08	234	P	Pn	21 19 20.9	+2.3
HIZ	**Hauiti**	1.08	234	P	Pn	21 19 20.9	+2.3
RTZ	**Ruatahuna**	1.08	133	P	Pn	21 19 20.0	+1.3
RTZ				S	S	21 19 49.6	-1.5
KATZ	**Kakaramea**	1.11	191	P	Pn	21 19 21.0	+2.1
KUZ	**Kuaotunu**	1.16	350	P	Pn	21 19 20.1	+1.0
MTHZ	**Maungataniwha**	1.18	145	P	Pn	21 19 20.9	+1.8
MTHZ				S	S	21 19 50.4	-1.7
NTVZ	**North Tongarir**	1.23	191	P	Pn	21 19 22.1	+2.6
TMVZ	**Te Maari**	1.25	190	P	Pn	21 19 21.9	+2.3
ETAZ	**East Tamaki Re**	1.25	318	P	Pn	21 19 21.1	+1.5
WTVZ	**West Tongariro**	1.26	194	P	Pn	21 19 21.8	+2.1
WTVZ				S	S	21 19 52.5	-0.4
ETVZ	**East Tongariro**	1.26	189	P	Pn	21 19 21.8	+2.1
NNVZ	**North Ngauruho**	1.27	192	P	Pn	21 19 22.0	+2.2
WIAZ	**Waiheke Island**	1.28	328	P	Pn	21 19 21.3	+1.5
RAGZ	**Rawiri**	1.29	119	P	Pn	21 19 21.6	+1.8
RAGZ				S	S	21 19 49.9	-3.3
OTVZ	**Oturere**	1.30	190	P	Pn	21 19 22.2	+2.3
OTVZ				S	S	21 19 51.9	-1.5
MWZ	**Matawai**	1.31	110	P	Pn	21 19 21.1	+1.2
MWZ				S	S	21 19 52.1	-1.2
NGZ	**Ngauruhoe**	1.32	193	P	Pn	21 19 22.2	+2.1
SNVZ	**South Ngauruho**	1.32	191	P	Pn	21 19 22.4	+2.3
AWAZ	**Awhitu Peninsu**	1.34	307	P	Pn	21 19 21.8	+1.8
BKZ	**Black Stump Fm**	1.34	162	P	Pn	21 19 21.8	+1.7
BKZ				S	S	21 19 51.4	-2.2
BKZ	**Black Stump Fm**	1.34	162	P	Pn	21 19 22.1	+2.0
RAHZ	**Arahi**	1.35	140	P	Pn	21 19 22.5	+2.4
RAHZ				S	S	21 19 52.8	-0.9
RUGZ	**Raukumara Rang**	1.35	94	P	Pn	21 19 20.4	+0.2
NMHZ	**Naumai**	1.38	152	P	Pn	21 19 23.0	+2.7
SNGZ	**Shannon Statio**	1.40	130	P	Pn	21 19 22.5	+2.1
SNGZ				S	S	21 19 52.9	-1.4
TUVZ	**Tukino**	1.40	190	P	Pn	21 19 22.4	+1.9
TUVZ				S	S	21 19 53.4	-1.0
FWVZ	**Far West T-bar**	1.41	193	P	Pn	21 19 22.8	+2.1
HAZ	**Te Kaha**	1.44	85	P	Pn	21 19 21.2	+0.6
WTAZ	**Waiatarua**	1.46	310	P	Pn	21 19 23.0	+2.1
WNVZ	**Wahianoa**	1.47	191	P	Pn	21 19 23.1	+2.1
PKVZ	**Pokaka**	1.48	199	P	Pn	21 19 23.1	+2.2
MOVZ	**Moawhango**	1.53	186	P	Pn	21 19 22.8	+1.6
MTVZ	**Mangateitei**	1.55	194	P	Pn	21 19 22.9	+1.6
ABAZ	**Army Bay**	1.57	324	P	Pn	21 19 23.4	+1.8
KWHZ	**Kaweka Forest**	1.58	167	P	Pn	21 19 23.9	+2.3
KWHZ				S	S	21 19 54.9	-1.4
TKGZ	**Te Karaka**	1.58	111	P	Pn	21 19 23.5	+2.0
ARHZ	**Aropaoanui**	1.59	150	P	Pn	21 19 24.1	+2.5
ARHZ				S	S	21 19 55.8	-0.6
BHHZ	**Black Hill Sta**	1.60	177	P	Pn	21 19 23.5	+1.8
BHHZ				S	S	21 19 54.3	-2.3
TWGZ	**Tauwhareparae**	1.61	101	P	Pn	21 19 23.9	+2.0
RIGZ	**Rimuhau**	1.63	121	P	Pn	21 19 24.2	+2.3
PKGZ	**Pakihiroa**	1.67	91	P	Pn	21 19 23.7	+1.5
KNZ	**Kokohu**	1.75	131	P	Pn	21 19 24.8	+2.1
KRHZ	**Kereru**	1.78	170	P	Pn	21 19 25.0	+2.0
PUZ	**Puketiti**	1.82	97	P	Pn	21 19 24.8	+1.5
PRGZ	**Paritu Road**	1.83	125	P	Pn	21 19 25.4	+2.1
CNGZ	**Carnagh Statio**	1.86	109	P	Pn	21 19 25.9	+2.4
MXZ	**Matakaoa Point**	1.88	81	P	Pn	21 19 25.1	+1.3
WMGZ	**Waiomatatini S**	1.94	89	P	Pn	21 19 25.9	+1.7
CKHZ	**Cape Kidnapper**	1.97	154	P	Pn	21 19 26.8	+2.5
MHGZ	**Mahia Peninsul**	1.98	130	P	Pn	21 19 26.7	+2.3
NEZ	**North Egmont**	2.02	226	P	Pn	21 19 28.2	+3.4
WAZ	**Wanganui**	2.02	202	P	Pn	21 19 26.9	+2.1
PKE	**Pukeiti**	2.03	229	P	Pn	21 19 27.6	+2.8
PNHZ	**Pukenui**	2.03	175	P	Pn	21 19 26.7	+1.9
KAHZ	**Kahuranaki**	2.03	160	P	Pn	21 19 27.4	+2.5
KHEZ	**Kahui Hut**	2.08	227	P	Pn	21 19 28.6	+3.3
TSZ	**Takapari Road**	2.17	180	P	Pn	21 19 27.8	+1.8
WPHZ	**Waipukurau**	2.21	171	P	Pn	21 19 28.3	+2.0
WCZ	**Waipu Caves**	2.34	326	P	Pn	21 19 29.5	+1.9
OHWZ	**Ohakea**	2.37	192	P	Pn	21 19 30.2	+2.6
DVHZ	**Dannevirke**	2.41	176	P	Pn	21 19 29.7	+1.6
PRHZ	**Porangahau**	2.43	168	P	Pn	21 19 30.4	+2.2
POWZ	**Post Office Ro**	2.51	184	P	Pn	21 19 30.5	+1.6
ANWZ	**Angora Road**	2.60	171	P	Pn	21 19 32.0	+2.3
PRWZ	**Pori Road**	2.67	180	P	Pn	21 19 32.3	+2.0
MRZ	**Mangatainoka R**	2.79	186	P	Pn	21 19 33.0	+1.5
BFZ	**Birch Farm**	2.80	176	P	Pn	21 19 33.4	+1.8
BFZ	**Birch Farm**	2.80	176	P	Pn	21 19 33.5	+1.9
TIWZ	**Tintock**	2.89	181	P	Pn	21 19 34.1	+1.7
OGWZ	**Otaki Gorge**	2.99	192	P	Pn	21 19 35.1	+1.6
CPWZ	**Castlepoint**	3.02	177	P	Pn	21 19 36.0	+2.3
HOWZ	**Holdsworth Sta**	3.03	187	P	Pn	21 19 35.1	+1.2
KIW	**Kapiti Island**	3.08	195	P	Pn	21 19 35.7	+1.4
TMWZ	**Te Maipa**	3.22	181	P	Pn	21 19 37.3	+1.5
OUZ	**Omahuta**	3.28	324	P	Pn	21 19 37.2	+0.8
MTW	**Mount Morrison**	3.29	186	P	Pn	21 19 37.5	+1.1
CAW	**Cannon Point**	3.29	192	P	Pn	21 19 37.8	+1.3
DUWZ	**D'Urville Isla**	3.32	208	P	Pn	21 19 38.0	+1.3
TRWZ	**Traveller**	3.51	183	P	Pn	21 19 40.3	+1.6
PAWZ	**Paruwai Farm**	3.52	187	P	Pn	21 19 40.0	+1.2
WEL	**Wellington**	3.52	195	P	Pn	21 19 40.3	+1.5
SNZO	**South Karori**	3.56	196	P	Pn	21 19 40.9	+1.7
MSWZ	**Moikau Station**	3.57	189	P	Pn	21 19 40.4	+1.1
TCW	**Tory Channel**	3.57	201	P	Pn	21 19 40.7	+1.4
BHW	**Baring Head**	3.62	193	P	Pn	21 19 41.0	+1.2
PLWZ	**Palliser**	3.72	188	P	Pn	21 19 42.1	+1.1
TUWZ	**Tuamarina**	3.87	203	P	Pn	21 19 44.0	+1.5
NNZ	**Nelson**	3.88	210	P	Pn	21 19 43.6	+0.9
TKNZ	**Takaka Hill**	3.91	216	P	Pn	21 19 43.4	+0.3
QRZ	**Quartz Range**	3.96	221	P	Pn	21 19 44.0	+0.4
QRZ	**Quartz Range**	3.96	221	P	Pn	21 19 44.1	+0.5
BSWZ	**Blackbirch Sta**	4.15	202	P	Pn	21 19 47.3	+1.7
MRNZ	**Matariki Terra**	4.29	214	P	Pn	21 19 47.6	+0.3
THZ	**Tophouse**	4.53	210	P	Pn	21 19 50.7	+0.7
KHZ	**Kahutara**	4.89	202	P	Pn	21 19 55.5	+1.6
KHZ	**Kahutara**	4.89	202	P	Pn	21 19 55.6	+1.6
DSZ	**Denniston Nort**	5.01	218	P	Pn	21 19 55.6	+0.1
GVZ	**Greta Valley S**	5.55	203	P	Pn	21 20 02.6	+0.9
LTZ	**Lake Taylor**	5.65	209	P	Pn	21 20 03.8	+0.9
INZ	**Inchbonnie**	5.94	214	P	Pn	21 20 06.9	+0.5
OKCZ	**Okains Bay**	6.23	200	P	Pn	21 20 11.3	+1.4
MQZ	**McQueen's Vall**	6.33	202	P	Pn	21 20 11.3	+0.3
AKCZ	**Akaroa Harbour**	6.41	200	P	Pn	21 20 13.2	+1.2
RACZ	**Rakaia**	6.52	205	P	Pn	21 20 14.1	+0.8
WACZ	**Wakanui South**	6.81	206	P	Pn	21 20 17.8	+1.1
RPZ	**Rata Peaks**	6.91	211	P	Pn	21 20 18.5	+0.5
GCSZ	**Gaunt Creek Bo**	6.92	217	P	Pn	21 20 19.2	+1.1
FOZ	**Fox Glacier**	7.32	218	P	Pn	21 20 24.0	+1.0
TMZ	**Timaru**	7.49	208	P	Pn	21 20 26.3	+1.2
ODZ	**Otahua Downs**	8.19	208	P	Pn	21 20 35.6	+2.0
JCZ	**Jackson Bay**	8.23	219	P	Pn	21 20 34.0	-0.1

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*IDC **07** 21:42:10.2±2.9, 30°.32S×177°.62W, h0^{km}, mb3.8/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=68.3km s-min=22.6km az=106.0*

*NEIC **07** 21:42:15.2±0.9, 30°.17S±0°.08×178°.0W±0°.3, h27^{km}±10^{km}, mb4.1/3, Error ellipse: s-maj=37.0km s-min=8.3km az=103.0*

ISC 07 21:42:15.6±1.4**, 30°.19S**±0°.08×**177°.9W**±0°.2**, h35**^{km}**, n12, σ1^{s}.46**/15**, mb3.8**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	0.93	358	Pn	Pn	21 42 32.7	+0.5
	295nm,0.3s,baz=106,slow=11,SNR=12						
RAO				Sn	Sn	21 42 42.3	-2.0
	2µm,0.3s,baz=74,slow=21,SNR=17						
RAO	**Raoul Island**	0.93	358		Pn	21 42 32.6	+0.3
RAO				Sn	Sn	21 42 44.0	-0.4
URZ	**Urewera**	9.05	206	Pn	Pn	21 44 21.8	-1.9
	0.3nm,0.3s,baz=328,slow=18,SNR=1.5						
URZ				Sn	Sn	21 46 03.8	-0.6
	1.3nm,0.3s,baz=214,slow=22,SNR=11 1.2nm,0.4s						
URZ	**Urewera**	9.05	206		Pn	21 44 23.1	-0.6
BKZ	**Black Stump Fm**	10.08	206	Pn	Pn	21 44 36.3	-1.6
STKA	**Stephens Creek**	34.62	257	P	P	21 49 04.3	+2.8
	1.9nm,0.8s,baz=86,slow=14,SNR=6.0 1.9nm,0.8s						
STKA	**Stephens Creek**	34.62	257	P	P	21 49 03.0	+1.5
STKA				IAmb	IAmb	21 49 32.7	
	comp=Z,3.4nm,1.5s						
AS31	**Alice Springs**	43.22	267	P	P	21 50 12.5	-1.1
AS31				IAmb	IAmb	21 50 38.0	
	comp=Z,1.2nm,1.1s						
ASAR	**Alice Springs**	43.22	267	P	P	21 50 13.8	+0.2
	comp=Z,0.3nm,0.4s,baz=107,slow=7.5,SNR=9.6 comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	43.22	267	P	P	21 50 12.6	-1.0
QSPA	**South Pole Qui**	59.92	180	P	P	21 52 19.2	+1.2
QSPA				IAmb	IAmb	21 52 27.1	
	comp=Z,9.0nm,1.4s						
FINES	**FINESS Array B**	144.98	340	PKPbc	PKPdf	22 01 47.8	-0.6
	comp=Z,1.3nm,0.5s,baz=57,slow=3.8,SNR=14						

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*JMA **07** 21:48:55.8±0.2, 31°.1N±0°.3×129°.0E±0°.6, h9^{km}±1^{km}, MD3.9/31, MV4.0/31, SW OFF KYUSHU*

*IDC **07** 21:48:55.9±1.2, 31°.33N×128°.14E, h0^{km}, mb3.4/6, mbtmp3.3/8, ML3.4/3, MS2.9/3, Error ellipse: s-maj=33.8km s-min=18.9km az=84.0*

*NIED **07** 21:48:55.8, 31°.06N×128°.99E, h9^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.52; $M_{\theta\theta}$6.89; $M_{\phi\phi}$-6.36; $M_{r\theta}$0.70; $M_{\theta\phi}$6.15; $M_{\phi r}$-0.93; Fault plane solution: $M_0$9.12000×10^{14} NP1:ϕ_s24.00000°, δ83.00000°, λ-176.00000°. NP2:ϕ_s293.00000°, δ86.00000°, λ-7.00000°.*

ISC 07 21:48:52.6±1.7**, 31°.02N**±0°.04×**128°.90E**±0°.06**, h4**^{km}±12^{km}**, n25, σ1^{s}.91**/24**, mb3.3**/6**, 2D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.96	47	P	Pb	21 49 12.2	+0.5
JSJ				eS	Sb	21 49 24.4	-0.4
JSJ	**Shimokoshiki**	0.96	47	A	A	21 49 12.2	
	comp=E,7.0nm,1.2s,comp=E,8.0nm,1.6s						
JKC	**Kuchinoerabu**	1.25	116	P	Pg	21 49 18.2	+1.7
JKC				S	Sn	21 49 33.6	-0.5
JKC	**Kuchinoerabu**	1.25	116	A	A	21 49 18.2	
	comp=E,6.0nm,1.4s,comp=E,7.0nm,1.5s						
JSU	**Suzuyama**	1.42	70	⇓iP	Pg	21 49 20.2	+0.5
JSU				⇓S	Sg	21 49 37.6	-0.5
JSU	**Suzuyama**	1.42	70	A	A	21 49 20.2	
	comp=E,4.0nm,0.2s,comp=E,5.0nm,2.7s						
JNN	**Nakanoshima**	1.45	144	P	Pg	21 49 22.0	+1.7
JYAK	**Yakushimahirau**	1.59	119	P	Pb	21 49 23.1	+0.5
JYAK				S	Sg	21 49 43.8	0.0
JHD	**Hondo**	1.78	36	A	A	21 49 26.1	
	comp=E,2.0nm,5.4s,comp=E,2.0nm,5.2s						
JZO	**Okuchi**	1.83	52	A	A	21 49 26.6	
	comp=E,2.0nm,2.5s,comp=E,3.0nm,1.8s						
JMTN	**Minamitane**	1.83	109	P	Pb	21 49 26.8	+0.1
JMTN				S	Sg	21 49 50.1	-1.4
JTZ	**Takazaki**	2.06	64	P	Pb	21 49 30.0	-0.7
JTZ				eS	Sb	21 49 55.0	-1.7
JNKG	**Nichinankitago**	2.21	73	A	A	21 49 32.2	
	comp=E,2.0nm,1.5s,comp=E,3.0nm,1.9s						
JNU	**Nakatsue**	2.68	38	Pn	Pg	21 49 44.3	+0.2
	38nm,0.3s,baz=129,slow=0.1,SNR=17						
JNU				Sn	Sb	21 50 15.8	+1.2
	22nm,0.3s,baz=101,slow=10,SNR=7.2						
JOW	**Kunigami**	4.21	188	Pn	Pb	21 50 06.5	-0.7
	1.8nm,0.3s,baz=32,slow=16,SNR=9.4						
JOW				LR	LR	21 51 47.6	
	comp=Z,130nm,21.4s,baz=110,slow=38 7.3nm,0.5s						
KSRS	**Korea Array**	6.47	353	Pn	Pn	21 50 25.1	-3.4
	0.2nm,0.3s,baz=121,slow=38,SNR=3.6						
KSRS				Sn	Sn	21 51 46.4	+3.6
	0.5nm,0.3s,baz=172,slow=25,SNR=4.3						
KSRS				Lg	Lg	21 52 11.9	
	0.2nm,0.3s,baz=148,slow=19,SNR=6.0 0.4nm,0.5s						
JHJ	**Hachijo jima 2**	9.47	74	LR	LR	21 55 35.0	
	comp=Z,43nm,18.5s,baz=116,slow=40						
MJAR	**Matsushiro Arr**	9.50	52	LR	LR	21 55 10.5	
	comp=Z,93nm,20.1s,baz=240,slow=38						
KLR	**Kul'dur**	18.32	6	P	P	21 53 12.4	+4.8
	0.7nm,0.4s,baz=198,slow=7.4,SNR=5.0						
MKAR	**Makanchi Array**	38.94	307	P	P	21 56 18.2	-1.4
	0.3nm,0.8s,baz=87,slow=10,SNR=2.6 0.3nm,0.8s						
KURBB	**Kurchatov Arra**	41.92	313	P	P	21 56 41.3	-2.8
	0.1nm,0.3s,baz=100,slow=9.6,SNR=3.4 0.1nm,0.3s						
ASAR	**Alice Springs**	54.59	174	P	P	21 58 28.2	+6.0
	0.4nm,0.9s,baz=3.6,slow=14,SNR=4.3 0.4nm,0.9s						
FINES	**FINESS Array B**	69.01	330	P	P	21 59 59.8	+0.8
	0.8nm,0.9s,baz=31,slow=8.8,SNR=1.9 0.8nm,0.9s						
BRTR	**Keskin Array B**	74.59	307	P	P	22 00 33.7	+0.6
	0.1nm,0.4s,baz=125,slow=7.2,SNR=1.4 0.1nm,0.4s						
NOA	**NORSAR Array B**	75.29	334	P	P	22 00 36.9	+0.2
	0.4nm,0.9s,baz=0.3,slow=18,SNR=2.1 0.4nm,0.9s						

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*NIED **07** 21:58:50.4, 31°.08N×129°.06E, h11^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.04; $M_{\theta\theta}$2.32; $M_{\phi\phi}$-2.35; $M_{r\theta}$-0.16; $M_{\theta\phi}$1.73; $M_{\phi r}$2.86; Fault plane solution: $M_0$3.89000×10^{15} NP1: ϕ_s110.00000°, δ51.00000°, λ-8.00000°. NP2:ϕ_s205.00000°, δ84.00000°, λ-141.00000°.*

*JMA **07** 21:58:50.4±0.2, 31°.1N±0°.2×129°.1E±0°.6, h11^{km}±1^{km}, MD4.2/37, MW4.4/37, SW OFF KYUSHU*

JMA Felt I J1 at SW OFF KYUSHU .

*IDC **07** 21:58:51.9±0.9, 31°.11N×129°.19E, h0^{km}, mb3.8/15, mbtmp3.8/19, ML3.5/4, MS3.6/39, Error ellipse: s-maj=22.1km s-min=17.3km az=129.0*

*NEIC **07** 21:58:53.2±1.0, 31°.12N±0°.07×129°.23E±0°.06, h10^{km}±1^{km}, mb4.3/23, Error ellipse: s-maj=12.2km s-min=8.0km az=152.0*

ISC 07 21:58:53.2±1.3**, 31°.12N**±0°.03×**129°.22E**±0°.03**, h9**^{km}±8^{km}**, n129, σ2^{s}.16**/110**, mb4.2**/29**, MS3.6**/41**, 2C-8D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.70	37	⇓P	Pg	21 59 05.7	-1.1
JSJ				⇓eS	Sb	21 59 17.2	-0.3
JSJ	**Shimokoshiki**	0.70	37	A	A	21 59 05.7	
	comp=E,16nm,1.0s,comp=E,24nm,1.5s						
JKC	**Kuchinoerabu**	1.06	127	eP	Pg	21 59 12.1	-1.5
JKC				S	Sg	21 59 27.1	-0.4
JKC	**Kuchinoerabu**	1.06	127	A	A	21 59 12.1	
	comp=E,16nm,1.7s,comp=E,19nm,2.0s						
JSU	**Suzuyama**	1.13	70	Pn	Pg	21 59 13.7	-1.2
JSU				Sn	Sn	21 59 31.2	+0.3
JSU	**Suzuyama**	1.13	70	⇓P	Pg	21 59 13.7	-1.2
JSU				⇓eS	Sn	21 59 30.5	-0.4
JSU	**Suzuyama**	1.13	70	A	A	21 59 13.7	
	comp=E,10.0nm,0.3s,comp=E,14nm,1.9s						
JNN	**Nakanoshima**	1.39	156	eP	Pn	21 59 15.7	-3.2
JNN	**Nakanoshima**	1.39	156	A	A	21 59 15.7	
	comp=E,12nm,1.3s,comp=E,8.0nm,1.1s						
JYAK	**Yakushimahirau**	1.42	128	eP	Pn	21 59 16.8	-2.4
JYAK				eS	Sn	21 59 36.1	-1.8
JYAK	**Yakushimahirau**	1.42	128	A	A	21 59 16.8	
	comp=E,5.0nm,3.8s,comp=E,5.0nm,1.1s						
JZO	**Okuchi**	1.56	49	A	A	21 59 20.1	
	comp=E,7.0nm,2.7s,comp=E,10.0nm,2.1s						
JTN	**Tanegashima 3**	1.58	106	⇓eP	Pn	21 59 19.9	-1.5
JTN				⇓eS	Sn	21 59 42.0	-0.1
JTN	**Tanegashima 3**	1.58	106	A	A	21 59 19.9	
	comp=E,3.0nm,4.5s,comp=E,5.0nm,5.4s						
JFU	**Fukue jima 2**	1.59	346	eP	Pn	21 59 18.9	-2.6
JFU				eS	Sn	21 59 39.5	-2.7
JFU	**Fukue jima 2**	1.59	346	A	A	21 59 18.9	
	comp=E,2.0nm,4.4s,comp=E,3.0nm,2.6s						
JMTN	**Minamitane**	1.62	116	eP	Pn	21 59 20.5	-1.4
JMTN				eS	Sn	21 59 42.1	-0.8
JMTN	**Minamitane**	1.62	116	A	A	21 59 20.5	
	comp=E,5.0nm,3.3s,comp=E,7.0nm,2.0s						
JTZ	**Takazaki**	1.78	63	i P	Pn	21 59 23.4	-0.8
JNAR	**Kushima--Naru**	1.81	76	A	A	21 59 24.0	
	comp=E,5.0nm,4.8s,comp=E,6.0nm,2.2s						
JNKG	**Nichinankitago**	1.93	73	A	A	21 59 25.7	
	comp=E,6.0nm,1.5s,comp=E,8.0nm,1.3s						
JIU3	**Izumi3**	1.97	43	⇓P	Pn	21 59 25.9	-0.9
JNU	**Nakatsue**	2.45	35	Pn	Pn	21 59 33.6	+0.2
	107nm,0.3s,baz=228,slow=0.2,SNR=2.3						
JNU				Sn	Sg	22 00 10.3	-1.6
	309nm,0.3s,baz=294,slow=1.3,SNR=11 304nm,0.4s						
JTU	**Tsushima**	3.40	3	Pn	Pn	21 59 46.4	-0.1
JOW	**Kunigami**	4.35	191	Pn	Pn	21 59 59.2	-0.3
	4.3nm,0.3s,baz=9.6,slow=20,SNR=15						
JOW				Sn	Sn	22 00 53.9	+3.6
	baz=221,slow=4.4						
JOW				LR	LR	22 01 51.5	
	comp=Z,497nm,20.0s,baz=98,slow=42 19nm,0.5s						
JHS	**Saijyo**	5.07	39	Pn	Pn	22 00 08.9	-0.6
TJN	**Taejon**	5.47	344	Pn	Pn	22 00 14.3	-0.6
KSAR	**Wonju Array Be**	6.41	350	Pn	Pn	22 00 27.5	-0.3
KSRS	**Korea Array**	6.41	351	Pn	Pn	22 00 27.4	-0.4
	0.4nm,0.3s,baz=178,slow=15,SNR=20						
KSRS				Sn	Sn	22 01 39.5	-1.7
	1.1nm,0.3s,baz=172,slow=25,SNR=5.8						
KSRS				Lg	Lg	22 02 07.8	
	0.7nm,0.3s,baz=170,slow=30,SNR=6.8 4.2nm,0.6s						
KS19	**Wonju Array Si**	6.47	350	Pn	Pn	22 00 28.2	-0.4
INCN	**Inchon**	6.70	342		Pn	22 00 30.5	-1.4
SSE	**Sheshan**	6.89	272	P	Pn	22 00 32.9	-1.5
SSE				S	Sn	22 01 51.3	-1.6
SSE				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SSE				LR	LR		
	comp=N,640nm,13.4s						
SSE				LR	LR		
	comp=E,170nm,13.9s						
INU	**Inuyama**	7.78	55	Pn	Pn	22 00 47.0	+0.4
JGF	**Kuroka**	8.14	55	Pn	Pn	22 00 51.7	0.0
MJAR	**Matsushiro Arr**	9.23	52	Pn	Pn	22 01 07.6	+1.1
	comp=E,0.1nm,0.3s,baz=235,slow=13,SNR=4.8						
MJAR				LR	LR	22 05 03.5	
	comp=E,342nm,19.2s,baz=232,slow=40 comp=E,2.5nm,0.8s						
YHNB	**Yeheng**	9.45	229		Pn	22 01 09.6	0.0
SSLB	**Suanglung**	10.35	227		Pn	22 01 22.5	+0.6
TIA	**Tai'an**	11.28	300	eP	Pn	22 01 28.3	-6.4
TIA				LR	LR		
	comp=N,370nm,9.4s						
TIA				LR	LR		
	comp=E,560nm,9.4s						

TIA				LR	LR		
	comp=Z,370nm,9.6s						
USRK	**Ussuriysk Ar.**	**13.24**	**9**	Pn	**Pn**	**22 02 05.1**	**+3.7**
	comp=Z,0.2nm,0.3s,baz=116,slow=44,SNR=2.4						
USRK				LR	LR	22 06 50.2	
	comp=Z,150nm,19.6s,baz=177,slow=36						
USRK	**Ussuriysk Ar.**	**13.24**	**9**		**Pn**	**22 02 01.9**	**+0.5**
HNS	**HongShan**	**13.53**	**301**	⇓P	**Pn**	**22 02 08.4**	**+3.0**
HNS				*e*S	**Sn**	**22 04 42.4**	**+6.5**
HNS				LR	LR		
	comp=N,380nm,11.9s						
HNS				LR	LR		
	comp=E,140nm,10.2s						
HNS				LR	LR		
	comp=Z,270nm,9.4s						
BJT	**Baijiatuau**	**13.83**	**314**	Pn	**Pn**	**22 02 10.8**	**+1.3**
LYN	**LuoYang**	**14.49**	**288**	*e*P	**Pn**	**22 02 20.9**	**+2.4**
LYN				sP	P	22 02 27.5	+2.2
LYN				S	**S**	**22 05 12.0**	**-7.2**
LYN				pmax	pmax		
	comp=Z,120nm,8.3s						
LYN				LR	LR		
	comp=N,1µm,15.3s						
LYN				LR	LR		
	comp=E,570nm,15.5s						
LYN				LR	LR		
	comp=Z,200nm,9.1s						
ASAJ	**Asahikawa**	**16.73**	**35**	Pn	**P**	**22 02 52.3**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=133,slow=7.0,SNR=4.1						
ENH	**Enshi**	**16.99**	**272**	P	**P**	**22 02 52.3**	**-0.8**
ENH				IAmb	IAmb	22 02 57.6	
	comp=Z,20nm,1.0s						
HHC	**Hu-ho-hao-te**	**17.25**	**309**	*e*P	**Pn**	**22 02 54.1**	**-0.4**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,550nm,12.7s						
HHC				LR	LR		
	comp=E,660nm,12.7s						
HHC				LR	LR		
	comp=Z,790nm,11.4s						
XAN	**Xi'an**	**17.35**	**285**	P	**P**	**22 02 57.1**	**0.0**
XAN				pP	sP	22 03 01.9	+1.6
XAN				S	**Sn**	**22 06 13.4**	**+4.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN				LR	LR		
	comp=N,890nm,12.8s						
XAN				LR	LR		
	comp=E,520nm,12.0s						
XAN				LR	LR		
	comp=Z,410nm,10.8s						
KLR	**Kul'dur**	**18.20**	**5**	P	**P**	**22 03 09.1**	**+2.9**
	comp=Z,7.3nm,1.0s,baz=196,slow=8.2,SNR=17						
KLR				LR	LR	22 09 25.5	
	comp=Z,85nm,21.2s,baz=180,slow=35						
HIA	**Hailar**	**19.49**	**341**	P	**P**	**22 03 20.9**	**+0.4**
HIA				IAmb	IAmb	22 03 33.1	
	comp=Z,8.4nm,0.5s						
GYA	**Guiyang**	**20.29**	**262**	⇑P	Pn	22 03 31.3	-0.2
GYA				pmax	pmax		
	comp=Z,34nm,0.9s						
QIZ	**Qiongzhong**	**21.24**	**240**	P	**P**	**22 03 38.5**	**-1.2**
QIZ				S	**S**	**22 07 37.9**	**+1.9**
QIZ				LR	LR		
	comp=N,320nm,8.0s						
QIZ				LR	LR		
	comp=E,220nm,10.4s						
QIZ				LR	LR		
	comp=Z,180nm,15.9s						
LZH	**Lanzhou**	**21.68**	**290**	*e*P	**P**	**22 03 48.4**	**+3.9**
LZH				pP	sP	22 03 51.4	+3.7
LZH				sP	pP	22 03 53.6	+6.9
LZH				*e*S	**S**	**22 07 36.0**	**-8.8**
LZH				SS	**SnSn**	**22 08 19.2**	**+10**
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=N,840nm,14.1s						
LZH				LR	LR		
	comp=E,250nm,13.6s						
GUMO	**Guam**	**22.62**	**137**	LR	LR	22 12 06.9	
	comp=E,73nm,20.2s,baz=80,slow=35						
ULN	**Ulaanbaatar**	**23.79**	**321**	P	**P**	**22 04 06.0**	**-0.4**
KMI	**Kunming**	**24.07**	**262**	⇑P	**P**	**22 04 09.9**	**+0.6**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
KMI				LR	LR		
	comp=N,210nm,12.5s						
KMI				LR	LR		
	comp=E,340nm,12.5s						
KMI				LR	LR		
	comp=Z,360nm,13.3s						
SONM	**Songino Array**	**24.13**	**320**	P	**P**	**22 04 09.0**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=130,slow=8.7,SNR=12						
SONM				LR	LR	22 14 03.0	
	comp=Z,208nm,20.0s,baz=129,slow=38						
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**24.13**	**320**	P	**P**	**22 04 08.5**	**-1.0**
DAV	**Davao City (W)**	**24.16**	**189**	LR	LR	22 15 37.6	
	comp=Z,92nm,18.3s,baz=330,slow=42						
PZH	**PanZhiHua**	**24.48**	**266**	P	**P**	**22 04 13.3**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,3.5s						
PZH				LR	LR		
	comp=N,500nm,13.1s						
PZH				LR	LR		
	comp=E,270nm,12.1s						
PZH				LR	LR		
	comp=Z,560nm,17.0s						
GTA	**Gaotai**	**25.31**	**297**	*e*P	**P**	**22 04 22.6**	**+2.2**
GTA				pP	sP	22 04 27.5	+3.8
GTA				sP	pP	22 04 30.3	+7.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GOMU	**GeErMu**	**28.98**	**289**	P	**P**	**22 04 54.4**	**+0.7**
GOMU				pP	sP	22 04 58.1	+1.1
GOMU				sP	pP	22 05 01.9	+5.8
GOMU				S	**S**	**22 09 45.3**	**+0.2**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,35nm,7.0s						
GOMU				LR	LR		
	comp=N,210nm,16.0s						
GOMU				LR	LR		
	comp=E,100nm,15.3s						
GOMU				LR	LR		
	comp=Z,81nm,15.6s						
CMAR	**Chiang Mai Arr**	**30.13**	**252**	P	**P**	**22 05 04.3**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=51,slow=6.2,SNR=6.8						
CMAR				LR	LR	22 18 35.0	
	comp=Z,146nm,19.8s,baz=60,slow=39						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.13**	**252**	P	**P**	**22 05 03.5**	**0.0**
PET	**Petropavlovsk**	**30.57**	**36**	P	**P**	**22 05 05.9**	**-1.1**
SIJI	**Sorong**	**31.87**	**176**	LR	LR	22 17 43.1	
	comp=Z,72nm,19.3s,baz=24,slow=36						
MA2	**Magadan**	**31.94**	**21**	LR	LR	22 18 17.1	
	comp=Z,88nm,18.1s,baz=282,slow=36						
WMQ	**Urumqi**	**34.96**	**303**	*e*P	**P**	**22 05 47.2**	**+1.5**
WMQ				sP	sP	22 05 53.7	+4.7
WMQ				PcP	**PcP**	**22 08 19.2**	**+1.2**
WMQ				PcS	**PcS**	**22 12 05.0**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,51nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,38nm,3.6s						
WMQ				LR	LR		
	comp=N,220nm,12.1s						
WMQ				LR	LR		
	comp=E,110nm,13.7s						
WMQ				LR	LR		
	comp=Z,110nm,16.5s						
SEY	**Seymchan**	**35.12**	**18**	P	**P**	**22 05 47.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=234,slow=5.8,SNR=3.8						
	comp=Z,0.8nm,0.6s						
KAPI	**Kappang**	**37.05**	**196**	LR	LR	22 22 10.0	
	comp=Z,26nm,19.4s,baz=353,slow=38						
ZALV	**Zalesovo Beam**	**39.01**	**319**	LR	LR	22 24 14.5	
	comp=Z,61nm,21.4s,baz=102,slow=39						
ZALV	**Zalesovo Beam**	**39.01**	**319**	P	**P**	**22 06 20.7**	**+0.8**
MK31	**Makanchi Array**	**39.10**	**307**	P	**P**	**22 06 18.1**	**-2.7**
MKAR	**Makanchi Array**	**39.10**	**307**	P	**P**	**22 06 20.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=107,slow=6.5,SNR=7.6						
MKAR				LR	LR	22 23 19.3	
	comp=Z,83nm,18.9s,baz=98,slow=38						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**39.10**	**307**	P	**P**	**22 06 18.3**	**-2.5**
PSI	**Prapat**	**40.12**	**231**	LR	LR	22 23 05.2	
	comp=Z,91nm,20.3s,baz=48,slow=36						
TIXI	**Tiksi**	**40.59**	**360**	P	**P**	**22 06 32.9**	**+0.1**
	comp=Z,0.6nm,0.2s,baz=92,slow=23,SNR=6.3						
TIXI				LR	LR	22 24 19.0	
	comp=Z,51nm,18.2s,baz=180,slow=38						
	comp=Z,0.6nm,0.2s						
TIXI	**Tiksi**	**40.59**	**360**	P	**P**	**22 06 31.4**	**-1.4**
TIXI				IAmb	IAmb	22 06 34.6	
	comp=Z,7.9nm,1.4s						
KURK	**Kurchatov**	**42.01**	**313**	P	**P**	**22 06 43.8**	**-1.0**
KURK				IAmb	IAmb	22 06 48.0	
	comp=Z,5.1nm,1.1s						
PMG	**Port Moresby**	**43.81**	**154**	LR	LR	22 22 14.6	
	comp=Z,64nm,19.8s,baz=322,slow=32						
AAK	**Ala-Archa**	**44.56**	**301**	LR	LR	22 25 50.8	
	comp=Z,33nm,18.3s,baz=96,slow=36						
NRIK	**Noril'sk**	**44.92**	**340**	LR	LR	22 27 44.7	
	comp=Z,87nm,18.9s,baz=146,slow=39						
NRIK	**Noril'sk**	**44.92**	**340**	P	**P**	**22 07 07.5**	**-0.4**
BRVK	**Borovoye**	**47.38**	**315**	P	**P**	**22 07 26.0**	**-1.5**
KK31	**Karatay Array**	**47.44**	**302**	P	**P**	**22 07 26.9**	**-1.3**
KK31				IAmb	IAmb	22 07 31.6	
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**22 07 27.2**	**-1.0**
KKAR				IAmb	IAmb	22 07 31.6	
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**22 07 27.4**	**-0.8**
PALK	**Pallekele**	**51.08**	**253**	LR	LR	22 31 20.3	
	comp=Z,50nm,18.8s,baz=148,slow=38						
CTA	**Charters Tower**	**53.48**	**160**	LR	LR	22 30 11.5	
	comp=Z,27nm,20.1s,baz=81,slow=35						
ABKAR	**Akbulak array**	**54.03**	**311**	P	**P**	**22 08 17.4**	**-0.4**
ABKAR	**Akbulak array**	**54.03**	**311**	P	**P**	**22 08 17.5**	**-0.4**
ABKAR				IAmb	IAmb	22 08 20.4	
	comp=Z,3.3nm,1.1s						
ARU	**Arti**	**54.17**	**320**	P	**P**	**22 08 18.5**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=252,slow=23,SNR=1.9						
ARU				LR	LR	22 34 04.3	
	comp=Z,125nm,19.1s,baz=88,slow=39						
	comp=Z,0.4nm,0.4s						
ARU	**Arti**	**54.17**	**320**	P	**P**	**22 08 18.1**	**-0.5**
ARU				IAmb	IAmb	22 08 24.6	
	comp=Z,6.0nm,1.1s						
ASAR	**Alice Springs**	**54.66**	**175**	P	**P**	**22 08 22.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=5.0,slow=14,SNR=2.6						
	comp=Z,0.5nm,0.6s						
AKTO	**Aktyubinsk**	**55.10**	**312**	P	**P**	**22 08 26.5**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=85,slow=9.0,SNR=4.0						
AKTO				LR	LR	22 32 33.3	
	comp=Z,109nm,18.4s,baz=81,slow=37						
	comp=Z,1.0nm,0.6s						
HRA	**Herat**	**55.49**	**293**	P	**P**	**22 08 29.0**	**+0.1**
HRA				IAmb	IAmb	22 08 31.7	
	comp=Z,4.7nm,1.1s						
IMAR	**Indian Mountai**	**56.77**	**28**	P	**P**	**22 08 37.1**	**-0.2**
KDAK	**Kodiak Island**	**58.12**	**38**	LR	LR	22 34 24.5	
	comp=Z,56nm,20.5s,baz=232,slow=37						
H23K	**Yukon River**	**58.51**	**29**	P	**P**	**22 08 49.5**	**-0.1**
H23K				IAmb	IAmb	22 08 54.1	
	comp=Z,4.5nm,1.1s						
KIRV	**Kirov**	**58.83**	**323**	LR	LR	22 36 43.0	
	comp=Z,104nm,18.6s,baz=78,slow=39						
MDM	**Murphy Dome**	**59.16**	**29**	P	**P**	**22 08 53.2**	**-0.9**
MDM				IAmb	IAmb	22 08 59.5	
	comp=Z,4.1nm,1.0s						
ILAR	**Eielson Array**	**59.76**	**30**	P	**P**	**22 09 00.2**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=281,slow=6.9,SNR=7.1						
	comp=Z,0.6nm,0.7s						
BMAR	**Burnt Mountain**	**60.24**	**26**	P	**P**	**22 09 01.4**	**-0.1**
BELG	**Belogornoye**	**61.11**	**316**	LR	LR	22 37 26.7	
	comp=Z,98nm,19.1s,baz=185,slow=38						
BCAR	**Beaver Creek A**	**62.31**	**31**	P	**P**	**22 09 15.5**	**-0.1**
SPITS	**Spitsbergen Ar**	**64.25**	**348**	LR	LR	22 39 15.7	
	comp=Z,42nm,19.8s,baz=270,slow=38						
ARCES	**ARCESS Array B**	**65.80**	**338**	LR	LR	22 42 57.2	
	comp=Z,71nm,18.2s,baz=7.0,slow=40						
KBZ	**Khabaz**	**66.79**	**308**	P	**P**	**22 09 46.2**	**+1.1**
	comp=Z,4.1nm,1.1s,baz=192,slow=1.7,SNR=5.5						
	comp=Z,4.1nm,1.1s						
KIV	**Kislovodsk**	**66.85**	**308**	P	**P**	**22 09 44.9**	**-0.7**
FINES	**FINESS Array B**	**69.07**	**330**	P	**P**	**22 09 58.0**	**-1.1**
	comp=Z,0.9nm,1.0s,baz=72,slow=6.1,SNR=6.4						
FINES				LR	LR	22 42 42.8	
	comp=Z,28nm,19.8s,baz=50,slow=38						
	comp=Z,0.9nm,1.0s						
GURO	**Guroymak-BITLI**	**69.38**	**303**	P	**P**	**22 10 01.1**	**-0.7**
GURO				IAmb	IAmb	22 10 05.5	
	comp=Z,2.2nm,0.8s						
MARD	**Mardin**	**70.79**	**302**	P	**P**	**22 10 09.6**	**-0.8**
AKASG	**Malin Array Be**	**72.41**	**319**	LR	LR	22 43 44.9	
	comp=Z,81nm,18.4s,baz=14,slow=37						
YKA	**Yellowknife Ar**	**73.75**	**26**	P	**P**	**22 10 26.9**	**-0.5**
	comp=Z,1.9nm,1.1s,baz=305,slow=5.6,SNR=10						
	comp=Z,1.9nm,1.1s						
BR131	**Keskin Array S**	**74.75**	**307**	P	**P**	**22 10 32.5**	**-1.4**
BR131				IAmb	IAmb	22 10 36.9	
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**74.75**	**307**	P	**P**	**22 10 33.1**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=146,slow=9.0,SNR=10						
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**74.75**	**307**	P	**P**	**22 10 32.4**	**-1.4**
HFS	**Hagfors**	**74.92**	**332**	LR	LR	22 48 41.0	
	comp=Z,44nm,18.1s,baz=47,slow=40						
NB2	**NORSAR Subarra**	**75.33**	**334**	P	**P**	**22 10 37.9**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**75.33**	**334**	P	**P**	**22 10 36.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=51,slow=5.7,SNR=4.4						
NOA				LR	LR	22 46 24.7	
	comp=Z,24nm,18.6s,baz=55,slow=38						
	comp=Z,0.7nm,0.8s						
BURAR	**Bucovina Array**	**76.22**	**317**	P	**P**	**22 10 41.2**	**-0.9**
MLR	**Muntele Rosu**	**76.88**	**315**	LR	LR	22 46 55.3	
	comp=Z,59nm,18.1s,baz=45,slow=38						
VRAC	**Vranov**	**80.05**	**322**	LR	LR	22 47 24.1	
	comp=Z,48nm,20.8s,baz=70,slow=36						
BORG	**Borgarnes**	**81.71**	**348**	LR	LR	22 50 56.0	
	comp=Z,14nm,18.4s,baz=352,slow=38						
SFJD	**Kangerlussuaq**	**82.20**	**360**	LR	LR	22 46 06.4	
	comp=Z,43nm,21.5s,baz=344,slow=34						
IDI	**Anoyia**	**82.99**	**307**	LR	LR	22 55 03.2	
	comp=Z,18nm,18.5s,baz=80,slow=41						
FRB	**Frobisher Bay**	**84.42**	**8**	LR	LR	22 49 23.9	
	comp=Z,30nm,21.0s,baz=234,slow=36						
DAVOX	**Davos/Dischmat**	**85.14**	**323**	LR	LR	22 50 56.1	
	comp=Z,55nm,18.4s,baz=86,slow=37						
NVAR	**Mina Array Bea**	**86.52**	**47**	P	**P**	**22 11 36.3**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=350,slow=33,SNR=2.0						
	comp=Z,0.3nm,0.7s						
ESDC	**Sonseca Array**	**97.24**	**325**	LR	LR	23 00 44.2	
	comp=Z,42nm,18.2s,baz=9.5,slow=38						

JMA 07 22:00:04.4±0.2, 24°3N±0°3×123°8E±0°4, h18^{km}±1^{km}, MV0.6/5, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.10**	**320**	P	Pg	22 00 08.1	0.0
IRIF				S	Sg	22 00 10.7	0.0
JKRS	**Kuro-shima**	**0.19**	**95**	P	Pg	22 00 09.2	0.0
JKRS				S	Sg	22 00 12.6	+0.1
HATJ	**Hateruma jima**	**0.20**	**180**	P	Pb	22 00 09.1	0.0
HATJ				S	Sg	22 00 12.4	-0.2
JIJ	**Ishigaki jima**	**0.33**	**71**	P	Pg	22 00 11.2	-0.2
JIJ				S	Sg	22 00 15.7	-0.5

TAP 07 22:00:50.7, 24°19N×121°42E, h9^{km}±1^{km}, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	**Xiulin Townshi**	**0.06**	**71**	*i*P	Pg	22 00 53.5	+0.8
	baz=71						
ETLH				*i*S	Sg	22 00 54.5	+0.3
	baz=71						
WHF	**Hehuan Shan**	**0.15**	**253**	*i*P	Pg	22 00 55.0	+0.8
	baz=251						
WHF				*i*S	Sg	22 00 57.0	+0.3
	baz=251						
NACB	**Ninganchiao**	**0.16**	**96**	P	Pg	22 00 55.4	+1.4
	baz=95						
NACB				S	Sg	22 00 57.8	+1.4
	baz=95						
ETL	**Fush Village**	**0.18**	**99**	S	Sg	22 00 58.9	+1.7
	baz=99						
TWD	**Chiawan**	**0.19**	**125**	*i*P	Pg	22 00 56.1	+1.5
	baz=122						
TWD				*i*S	Sg	22 00 58.9	+1.5
	baz=122						
NNSB	**Datong**	**0.24**	**351**	P	Pg	22 00 57.1	+1.4
	baz=351						
NNSB				S	Sg	22 01 00.2	+1.2
	baz=351						
NNS	**Nan Shan**	**0.25**	**349**	P	Pb	22 00 57.2	-0.4
	baz=351						
NNS				S	Sb	22 01 00.9	-1.2
	baz=351						
CHGB	**Renai**	**0.26**	**241**	P	Pb	22 00 57.3	-0.4
	baz=240						
CHGB				S	Sb	22 01 01.6	-0.8
	baz=240						
OWD	**Renai**	**0.33**	**224**	*i*P	Pg	22 00 57.9	+0.7
	baz=224						
OWD				*i*S	Sg	22 01 01.9	+0.4
	baz=224						
WUSB	**Renai**	**0.34**	**235**	*i*P	Pb	22 00 58.7	-0.3
	baz=234						
WUSB				S	Sb	22 01 04.2	-0.4
	baz=234						
LATG	**Datong**	**0.36**	**15**	P	Pb	22 00 59.4	+0.2
	baz=15						
LATG				S	Sb	22 01 04.7	-0.4
	baz=15						
WHP	**Taichung City**	**0.45**	**282**	*i*S	Sb	22 01 07.5	-0.1
	baz=281						
ENTT	**Nioudou**	**0.47**	**16**	*i*P	Pb	22 01 01.2	+0.1
	baz=17						
ENTT				*i*S	Sb	22 01 07.7	-0.5
	baz=17						
VWDT	**VWDT**	**0.51**	**211**	P	Pb	22 01 01.1	-0.6
	baz=210						
VWDT				S	Sb	22 01 10.2	+1.1
	baz=210						
NDS	**Dongshan**	**0.52**	**31**	P	Pb	22 01 01.9	0.0
	baz=31						
NDS				S	Sb	22 01 09.2	-0.3
	baz=31						
SSLB	**Suanglung**	**0.59**	**227**	P	Pb	22 01 02.9	-0.3
	baz=227						

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*NIED **07** 22:04:15.8, 31°09N×129°04E, h10^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.27; $M_{\theta\theta}$1.15; $M_{\phi\phi}$-1.41; $M_{r\theta}$0.65; $M_{\theta\phi}$0.89; $M_{\phi r}$-0.48; Fault plane solution: $M_0$1.75000×10^{14} NP1:ϕ_s28.00000°, δ62.00000°, λ177.00000°. NP2:ϕ_s119.00000°, δ87.00000°, λ28.00000°.*

JMA 07 22:04:15.8±0.2, 31°1N±0°3×129°0E±0°7, h10^{km}±1^{km}, MV3.5/27, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.82**	**44**	*e*P	Pg	22 04 31.2	-0.5
JSJ				*e*S	Sg	22 04 42.5	0.0
JKC	**Kuchinoerabu**	**1.17**	**122**	P	Pb	22 04 37.9	-0.3
JKC				*e*S	Sb	22 04 52.8	-0.6
JSU	**Suzuyama**	**1.28**	**71**	P	Pn	22 04 39.4	-0.4
JSU				S	Sb	22 04 56.4	-0.1
JFU	**Fukue jima 2**	**1.58**	**351**	P	Pn	22 04 44.2	+0.2
JFU				*e*S	Sb	22 05 05.0	-0.3
JTN	**Tanegashima 3**	**1.72**	**104**	*e*P	Pn	22 04 45.5	-0.4
JTN				*e*S	Sn	22 05 07.7	-0.1
JMTN	**Minamitane**	**1.74**	**113**	*e*P	Pn	22 04 46.0	-0.1
JMTN				*e*S	Sn	22 05 08.2	-0.2
JTZ	**Takazaki**	**1.93**	**65**	P	Pn	22 04 49.1	+0.4

NOU 07 22:52:30.7, 16°33S×167°24E, h0^{km}, ML4.5/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.66**	**147**	P	Pn	22 53 01.4	+0.4
RTV	**Rentapao**	**1.84**	**142**	P	Pn	22 53 03.9	+0.3
KOUNC	**Koumac, New Ca**	**5.05**	**213**	P	Pn	22 53 47.9	+0.2
YATNC	**Mamie plateau,**	**5.71**	**183**	P	Pn	22 53 55.2	-1.6

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*NEIC **07** 22:53:19.3±2.9, 14°29N±0°04×93°20W±0°03, h20^{km}±11^{km}, mb3.9/4, Md4.0/16(MEX), Error ellipse: s-maj=6.8km s-min=3.2km az=201.0*

*MEX **07** 22:53:20.0±1.5, 14°20N×93°29W, h20^{km}, MD4.0*

ISC 07 22:53:18.9±3.3, 14°34N±0°09×93°17W±0°05, h15^{km}±25^{km}, n24, σ1^{s}01/34, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.04**	**57**		**Pn**	**22 53 38.0**	**-0.9**
THIG					**Sb**	**22 53 52.3**	**+0.3**
THIG		**1.04**	**57**	*e*P	**Pn**	**22 53 38.0**	**-0.9**
THIG				*e*S	**Sb**	**22 53 52.3**	**+0.3**
PATR	**El Naranjo**	**1.19**	**49**	*e*P	**Pn**	**22 53 40.7**	**-0.5**
PATR				*i*S	**Sn**	**22 53 58.2**	**+0.9**
CHUJ	**Union Juarez**	**1.27**	**54**	*e*P	**Pn**	**22 53 41.5**	**-0.8**
CHUJ				*i*S	**Sn**	**22 53 59.5**	**+0.3**
PAVE	**Pavencul**	**1.28**	**48**	*e*P	**Pn**	**22 53 42.3**	**-0.1**
PAVE				*i*S	**Sn**	**22 53 59.6**	**+0.1**
PCIG		**1.36**	**358**		**Pn**	**22 53 43.9**	**+0.6**
PCIG					**Sn**	**22 53 59.7**	**-1.3**
PCIG		**1.36**	**358**	*e*P	**Pn**	**22 53 43.9**	**+0.6**
PCIG				*i*S	**Sn**	**22 53 59.7**	**-1.3**
RTAL	**Retalhuleu**	**1.44**	**82**	Pn	**Pn**	**22 53 43.2**	**-1.2**
HUEH	**Huehuetenango**	**1.88**	**59**		**Pn**	**22 53 51.5**	**+0.8**
CARR	**Arriaga**	**2.03**	**339**	*e*P	**Pb**	**22 53 55.0**	**-0.5**
CARR				*e*S	**Sb**	**22 54 21.3**	**+0.7**
CCIG	**Comitan**	**2.17**	**27**		**Pb**	**22 53 58.0**	**0.0**
CCIG	**Comitan**	**2.17**	**27**	*e*P	**Pb**	**22 53 58.4**	**+0.4**
TGIG		**2.43**	**1**		**Pb**	**22 54 01.4**	**-0.9**
TGIG		**2.43**	**1**	*e*P	**Pb**	**22 54 01.4**	**-0.9**
CMIG	**Matias Romero**	**3.20**	**329**		**Pn**	**22 54 10.8**	**+2.2**
CMIG					**Sb**	**22 54 53.4**	**-0.8**
CMIG	**Matias Romero**	**3.20**	**329**	*e*P	**Pn**	**22 54 10.8**	**+2.2**
CMIG				*e*S	**Sb**	**22 54 53.4**	**-0.8**
MTO3	**Montecristo**	**3.69**	**89**		**Pn**	**22 54 15.5**	**-0.1**
PETF	**Flores**	**4.09**	**51**		**Pn**	**22 54 22.0**	**+1.2**
ORTG	**Ortega, Santa**	**8.51**	**117**	Pn	**Pn**	**22 55 20.4**	**-1.3**
RIMA	**Rio Macho**	**10.17**	**115**	Pn	**Pn**	**22 55 45.4**	**+0.8**
TX31	**Lajitas Ar. Si**	**17.81**	**329**	P	**Pn**	**22 57 26.5**	**+0.2**
TX31				IAmb	IAmb	22 57 42.8	
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	**17.81**	**329**	P	**P**	**22 57 27.4**	**+0.4**
MNTX	**Cornudas Mount**	**20.58**	**329**	P	**P**	**22 57 55.7**	**-1.6**
GOGA	**Godfrey**	**20.93**	**23**	P	**P**	**22 58 01.7**	**+0.6**
GOGA				IAmb	IAmb	22 58 28.5	
	comp=Z,7.4nm,1.4s						

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*TUL **07** 23:02:19.4±0.3, 36°27N±0°01×97°58W±0°01, h5^{km}±1^{km}, ML2.6, mb_Lg2.2/24(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=47.0*

NEIC 07 23:02:20.1±0.4, 36°27N±0°01×97°58W±0°01, h5^{km}±6^{km}, Error ellipse: s-maj=1.9km s-min=1.0km az=213.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.86**	**173**	Pg	Pg	23 02 35.8	-0.7
FNO	**Franklin**	**1.02**	**172**		Pg	23 02 38.6	-1.0
T35A	**Sooner Cattle**	**1.07**	**53**	Pg	Pg	23 02 39.6	-1.1
U32A	**Winter Ranch,**	**1.16**	**276**		Pg	23 02 41.0	-1.2
TUL1	**Leonard**	**1.49**	**103**		Pn	23 02 46.3	-1.1
X34A	**Smith Ranch, M**	**1.68**	**187**	Pn	Pn	23 02 50.0	0.0
X34A				IAmb_Lg		23 03 15.8	
	comp=Z,14nm,0.8s						
WMOK	**Wichita Mounta**	**1.82**	**213**	Pn	Pn	23 02 51.0	-1.0
X37A	**Clayton**	**2.46**	**132**	Pn	Pn	23 03 00.5	-0.3
X37A				IAmb_Lg		23 03 39.3	
	comp=Z,8.4nm,0.8s						
KSU1	**Kansas State U**	**2.93**	**15**	Pn	Pn	23 03 05.4	-1.9
HHAR	**Hobbs**	**2.94**	**89**		Pn	23 03 06.5	-0.9

W39A	Magazine	3.27	108	IAmb_Lg		23 04 05.7	
	comp=Z,8.1nm,0.8s						
AMTX	Amarillo	3.62	249	IAmb_Lg		23 04 18.8	
	comp=Z,9.5nm,0.8s						
S39A	Bolivar	3.69	66	Pn	Pn	23 03 17.1	-0.6
S39A				IAmb_Lg		23 04 20.9	
	comp=Z,9.8nm,0.7s						
MIAR	Mount Ida	3.69	117		Pn	23 03 17.9	+0.2
X40A	Basin Creek Fa	4.26	113		Pn	23 03 25.3	-0.3
X40A				IAmb_Lg		23 04 36.6	
	comp=Z,3.4nm,0.9s						
WHAR	Wooly Hollow	4.41	101		Pn	23 03 27.1	-0.5
W41B	Gary Mavity, V	4.47	103		Pn	23 03 28.0	-0.4
R40A	Maddies Statio	4.69	63	Pn	Pn	23 03 30.2	-1.3
LCAR	Lake Charles	5.20	90	IAmb_Lg		23 05 05.7	
	comp=Z,5.7nm,0.9s						
CCM	Cathedral Cave	5.36	69	IAmb_Lg		23 05 16.8	
	comp=Z,6.1nm,0.7s						
T25A	Trinidad	5.56	281	IAmb_Lg		23 05 17.8	
	comp=Z,5.7nm,1.1s						
MNTX	Cornudas Mount	7.92	237	IAmb_Lg		23 06 43.3	
	comp=Z,2.8nm,1.2s						

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*NIED **07** 23:07:05.3, 31°.07N×129°.05E, h15^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.32; $M_{\theta\theta}$1.13; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.68; $M_{\theta\phi}$0.75; $M_{\phi r}$0.58; Fault plane solution: $M_0$1.54000×10^{14} NP1: ϕ_s210.00000°, δ55.00000°, λ-167.00000°. NP2: ϕ_s112.00000°, δ79.00000°, λ-36.00000°.*

JMA 07 23:07:05.3±0.3**, 31°.1N**±0°.5×**12°9E**±°**, h15**^{km}±2^{km}**,**
MV3.5/24**, SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.83	43	*e*P	Pg	23 07 20.6	-0.8
JKC	Kuchinoerabu	1.16	121	*e*P	Pn	23 07 26.8	-0.2
JKC				*e*S	Sb	23 07 41.3	-0.6
JSU	Suzuyama	1.28	70	*e*P	Pn	23 07 28.6	-0.1
JSU				*e*S	Sn	23 07 45.8	+0.2
JNN	Nakanoshima	1.42	150	*e*P	Pn	23 07 30.4	-0.2
JYAK	Yakushimahirau	1.50	123	*e*P	Pn	23 07 31.2	-0.6
JYAK				*e*S	Sn	23 07 50.2	-0.9

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*IDC **08** 00:09:31.1±1.2, 37°.02N×97°.82W, h0^{km}, mb3.3/1, mbtmp3.2/5, ML3.7/4, MS2.8/1, Error ellipse: s-maj=15.8km s-min=15.1km az=171.0*

*TUL **08** 00:09:31.1±0.5, 36°.82N±0°.03×97°.62W±0°.02, h6^{km}±7^{km}, ML3.8, mb_Lg3.5/108(NEIC), Mwr3.1/12(SLM), Error ellipse: s-maj=4.2km s-min=2.3km az=204.0*

*ANF **08** 00:09:31.3±0.2, 36°.80N×97°.63W, h6^{km}, ML4.1/10, Error ellipse: s-maj=2.9km s-min=2.1km az=179.0*

*NEIC **08** 00:09:31.1, 36°.79N×97°.62W, h2^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}0.00; $M_{\theta\theta}$5.52; $M_{\phi\phi}$-5.52; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.97; $M_{\phi r}$-0.38; Fault plane solution: $M_0$5.62000×10^{13} NP1: ϕ_s50.00000°, δ85.00000°, λ-180.00000°. NP2: ϕ_s320.00000°, δ90.00000°, λ-5.00000°. Principal axes: T 5.6265, Plg4.0000°, Azm5.0000°; N 0.0000, Plg85.0000°, Azm140.0000°; P -5.6264, Plg4.0000°, Azm275.0000°;*

*NEIC **08** 00:09:31.9±0.5, 36°.82N±0°.03×97°.62W±0°.04, h4^{km}±7^{km} Error ellipse: s-maj=5.1km s-min=3.0km az=51.0*

ISC 08 00:09:30.8±1.2**, 36°.83N**±0°.03×**97°.62W**±0°.02**, h1**^{km}±11^{km}**,**
n109, σ**1**^{s}**20**/87**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.89	84		Pg	00 09 48.0	+0.1
T35B	Sooner Cattle	0.89	84	P	Pg	00 09 48.1	+0.1
	baz=264,SNR=273						
T35B				S	Sg	00 10 00.3	+0.7
	baz=264						
ADOK	Arcadia Dam	1.19	170	Pg	Pg	00 09 53.3	-0.4
U32A	Winter Ranch,	1.20	249	Pg	Pg	00 09 53.4	-0.4
U32A	Winter Ranch,	1.20	249	P	Pg	00 09 53.4	-0.4
	baz=68,SNR=160						
U32A				S	Sg	00 10 09.8	+0.5
	baz=68						
OK009	Oakdale Elemen	1.25	173		Pg	00 09 54.4	-0.5
OK001	Jones High Sch	1.29	168		Pn	00 09 55.0	-1.0
OKCFA	Oklahoma City	1.42	174	Pg	Pn	00 09 57.0	-0.7
OKCFA	Oklahoma City	1.42	174	S	Sn	00 10 16.4	-0.7
	baz=355						
OKCSW	OKLAHOMA CITY	1.43	174		Pn	00 09 57.3	-0.6
FNO	Franklin	1.58	173		Pn	00 09 59.6	-0.3
TUL1	Leonard	1.74	121		Pn	00 10 02.2	+0.1
TUL1				IAmb_Lg		00 10 27.2	
	comp=Z,406nm,0.9s						
TUL1	Leonard	1.74	121	P	Pn	00 10 02.3	+0.1
	baz=302,SNR=52						
TUL1				S	Sb	00 10 25.6	-0.2
	baz=302						
TUL1	Leonard	1.74	121	P	Pn	00 10 02.3	+0.1
	baz=302						
TUL1				S	Sb	00 10 25.5	-0.2
	baz=302						
R32A	Long Quarter,	1.81	332		Pn	00 10 03.8	+0.6
R32A	Long Quarter,	1.81	332	Pb	Pb	00 10 04.9	0.0
	baz=151,SNR=71						
R32A				S	Sb	00 10 28.6	+0.5
	baz=151						
X34A	Smith Ranch, M	2.23	185		Pn	00 10 09.3	+0.4
X34A				IAmb_Lg		00 10 40.5	
	comp=Z,171nm,1.2s						
WMOK	Wichita Mounta	2.29	205		Pn	00 10 09.6	-0.1
WMOK	Wichita Mounta	2.29	205	P	Pn	00 10 09.7	-0.1
	baz=24,SNR=112						
WMOK	Wichita Mounta	2.29	205	P	Pn	00 10 09.6	-0.1
	baz=24						
WMOK				S	Sb	00 10 41.5	-0.3
	baz=24						
KSU1	Kansas State U	2.41	19	Pn	Pn	00 10 11.6	+0.2
KSU1	Kansas State U	2.41	19	P	Pn	00 10 12.1	+0.7
	baz=200,SNR=20						
KSU1	Kansas State U	2.41	19	P	Pn	00 10 12.0	+0.7
	baz=200						
KSU1				S	Sb	00 10 45.9	+0.7
	baz=200						
CBKS	Cedar Bluff	2.60	320		Pn	00 10 14.8	+0.7
CBKS	Cedar Bluff	2.60	320	Sb	Sb	00 10 51.6	+0.9
	baz=139						
X37A	Clayton	2.89	140		Pn	00 10 18.1	+0.1
X37A				IAmb_Lg		00 11 10.3	
	comp=Z,255nm,0.7s						
X37A	Clayton	2.89	140	Sb	Sb	00 11 00.0	+1.1
	baz=321						
HHAR	Hobbs	3.01	99		Pn	00 10 19.6	-0.1
HHAR				IAmb_Lg		00 11 11.9	
	comp=Z,134nm,0.8s						
HHAR	Hobbs	3.01	99	P	Pn	00 10 20.1	+0.4
	baz=281						
Z35A	Perchaven, San	3.50	175		Pn	00 10 26.1	-0.4
W39A	Magazine	3.51	116		Pn	00 10 26.5	-0.1
W39A				IAmb_Lg		00 11 28.0	
	comp=Z,172nm,0.9s						
W39A	Magazine	3.51	116	Pb	Pb	00 10 34.9	+1.2
	baz=299						
S39A	Bolivar	3.54	75		Pn	00 10 26.8	-0.1
S39A				IAmb_Lg		00 11 24.9	
	comp=Z,84nm,0.7s						
AMTX	Amarillo	3.83	241		Pn	00 10 30.8	-0.2
AMTX	Amarillo	3.83	241	Sb	Sg	00 11 30.0	-3.7
	baz=58						
U40A	Yellville	3.86	96		Pn	00 10 31.5	0.0
U40A	Yellville	3.86	96	P	Pn	00 10 31.5	0.0
	baz=278,SNR=21						
U40A				P	Pn	00 10 31.5	0.0
	baz=278,SNR=21						
U40A	Yellville	3.86	96	P	Pn	00 10 31.4	0.0
	baz=278						
N33A	J Bar K, Exete	3.91	2		Pn	00 10 31.7	-0.4
MIAR	Mount Ida	4.00	123		Pn	00 10 33.9	+0.6
MIAR				IAmb_Lg		00 11 39.8	
	comp=Z,155nm,0.8s						
MIAR	Mount Ida	4.00	123	Pb	Pb	00 10 42.9	+0.7
	baz=306						
MIAR	Mount Ida	4.00	123	Pb	Pb	00 10 42.9	+0.7
	baz=306						
Z38A	Mt. Pleasant	4.16	148		Pn	00 10 34.2	-1.3
P38A	Dawn	4.26	48	Pn	Pn	00 10 37.1	+0.2
P38A				IAmb_Lg		00 11 49.2	
	comp=Z,124nm,0.7s						
MGMO	Mountain Grove	4.30	84		Pn	00 10 38.0	+0.6
MGMO				IAmb_Lg		00 11 48.4	
	comp=Z,130nm,0.8s						
R40A	Maddies Statio	4.50	69		Pn	00 10 40.0	-0.1
R40A				IAmb_Lg		00 11 56.5	
	comp=Z,95nm,1.1s						
ABTX	Abilene, Hawle	4.51	202		Pn	00 10 40.2	-0.2
ABTX	Abilene, Hawle	4.51	202	P	Pn	00 10 40.6	+0.2
	baz=21,SNR=6.6						
ABTX	Abilene, Hawle	4.51	202	Sb	Sb	00 11 48.5	+2.7
	baz=21						
KSCO	Kaye Shedlock'	4.52	300	IAmb_Lg		00 12 06.4	
	comp=Z,153nm,0.8s						
FCAR	Ozark Folk Cen	4.53	100		Pn	00 10 39.9	-0.7
FCAR				IAmb_Lg		00 11 53.8	
	comp=Z,85nm,0.8s						
X40A	Basin Creek Fa	4.54	120	Pn	Pn	00 10 41.1	+0.4
X40A				IAmb_Lg		00 11 57.2	
	comp=Z,70nm,0.7s						
WHAR	Wooly Hollow	4.58	108		Pn	00 10 41.3	0.0
WHAR				IAmb_Lg		00 12 02.7	
	comp=Z,116nm,0.9s						
BGNE	Belgrade	4.59	355		Pn	00 10 41.3	-0.2
BGNE				IAmb_Lg		00 12 09.5	
	comp=Z,125nm,0.8s						
W41B	Gary Mavity, V	4.66	109		Pn	00 10 41.4	-0.9
W41B				IAmb_Lg		00 12 08.1	
	comp=Z,84nm,0.9s						
UALR	University of	4.75	114	IAmb_Lg		00 12 07.3	
	comp=Z,72nm,0.8s						
WHTX	Lake Whitney,	4.83	178	Pn	Pn	00 10 44.4	-0.3
WHTX	Lake Whitney,	4.83	178	P	Pn	00 10 44.5	-0.1
	baz=358						
WHTX				Sb	Sg	00 12 00.5	-5.4
	baz=358						
WLAR	White Oak Lake	4.84	129	IAmb_Lg		00 12 09.7	
	comp=Z,110nm,0.9s						
237A	Washetta, Mont	5.04	162	IAmb_Lg		00 12 20.5	
	comp=Z,58nm,0.8s						
MSTX	Muleshoe	5.08	237	Pn	Pn	00 10 47.1	-1.2
MSTX				IAmb_Lg		00 12 23.6	
	comp=Z,98nm,1.0s						
MSTX	Muleshoe	5.08	237	Sb	Sb	00 12 07.3	+5.0
	baz=54						
P40A	Paris	5.15	57	Pn	Pn	00 10 49.0	-0.1
P40A				IAmb_Lg		00 12 19.4	
	comp=Z,94nm,0.7s						
CCM	Cathedral Cave	5.22	74	Pn	Pn	00 10 49.7	-0.3
L34A	Svendsen Farm,	5.22	10	IAmb_Lg		00 12 23.6	
	comp=Z,83nm,0.8s						
N38A	Joes South For	5.24	40		Pn	00 10 49.9	-0.4
LCAR	Lake Charles	5.27	96	Pn	Pn	00 10 50.6	-0.1
LCAR				IAmb_Lg		00 12 24.7	
	comp=Z,63nm,1.0s						
T25A	Trinidad	5.45	275		Pn	00 10 53.2	-0.2
T25A				IAmb_Lg		00 12 33.0	
	comp=Z,110nm,0.9s						
CCAR	Cane Creek	5.59	120	IAmb_Lg		00 12 32.6	
	comp=Z,68nm,0.8s						
NATX	Nacogdoches	5.62	153	IAmb_Lg		00 12 43.9	
	comp=Z,104nm,0.8s						
PBMO	Poplar Bluff	5.77	88	IAmb_Lg		00 12 39.9	
	comp=Z,68nm,0.8s						
HBAR	Harrisburg	5.77	101	IAmb_Lg		00 12 43.6	
	comp=Z,97nm,0.8s						
FVM	French Village	5.84	76	IAmb_Lg		00 12 38.6	
	comp=Z,71nm,0.9s						
435B	Jarrell	6.03	180	IAmb_Lg		00 12 50.6	
	comp=Z,74nm,0.8s						
SLM	Saint Louis	6.12	71	IAmb_Lg		00 12 46.6	
	comp=Z,83nm,0.9s						
PARMO	Parma	6.32	89	IAmb_Lg		00 13 06.6	
	comp=Z,87nm,0.8s						
143A	Socs Landing,	6.56	127	IAmb_Lg		00 13 14.4	
	comp=Z,68nm,0.8s						
JCT	Junction City	6.59	197	IAmb_Lg		00 13 16.5	
	comp=Z,89nm,0.8s						
LNXT	Lenox	6.59	94	IAmb_Lg		00 13 14.9	
	comp=Z,88nm,0.8s						
ECSD	EROS Data Cent	6.94	6	Pn	Pn	00 11 12.7	-1.0
ISCO	Idaho Springs	6.95	298	Pn	Pn	00 11 14.2	+0.2
ISCO				IAmb_Lg		00 13 14.8	
	comp=Z,45nm,0.8s						
ISCO	Idaho Springs	6.95	298	P	Pn	00 11 14.3	+0.2
	baz=113						
P43A	Skaggs, Pawnee	6.97	64	IAmb_Lg		00 13 17.2	
	comp=Z,81nm,0.7s						
W45A	Hickory Valley	7.04	101	IAmb_Lg		00 13 21.5	
	comp=Z,68nm,0.9s						
OXF	Oxford	7.07	107	Pn	Pn	00 11 14.6	-0.8
OXF				IAmb_Lg		00 13 19.8	
	comp=Z,45nm,0.8s						
T45A	Paducah	7.19	86	IAmb_Lg		00 13 15.5	
	comp=Z,63nm,0.7s						
Y45A	Yeager Farm, C	7.23	112	IAmb_Lg		00 13 30.7	
	comp=Z,44nm,0.8s						
ANMO	Albuquerque	7.42	258	Pn	Pn	00 11 19.1	-1.2
	comp=Z,0.2nm,0.3s,baz=70,slow=15,SNR=2.8						
ANMO				Pg	Pb	00 11 43.7	+3.3
	comp=Z,0.3nm,0.3s,baz=66,slow=14,SNR=4.6						
ANMO				Lg	Lg	00 13 14.9	
	comp=Z,0.8nm,0.3s,baz=52,slow=14,SNR=2.0						
	comp=Z,0.3nm,0.3s						
VBMS	Vicksburg	7.45	126	IAmb_Lg		00 13 48.3	
	comp=Z,47nm,1.0s						
PHWY	Pilot Hill	7.56	309		Pn	00 11 22.2	-0.2
PHWY				IAmb_Lg		00 13 47.7	
	comp=Z,33nm,0.8s						
I37A	Lemond, Waseca	7.87	23	IAmb_Lg		00 13 47.2	
	comp=Z,73nm,1.1s						
146A	Union	8.19	118	IAmb_Lg		00 14 01.4	
	comp=Z,31nm,1.0s						
MNTX	Cornudas Mount	8.21	234	Pn	Pn	00 11 30.9	-0.3
MNTX				IAmb_Lg		00 14 02.8	
	comp=Z,37nm,0.9s						
JFWS	Jewell Farm	8.31	41	IAmb_Lg		00 14 11.6	
	comp=Z,50nm,0.7s						
M44A	Midewin, Midew	8.72	56	IAmb_Lg		00 14 09.2	
	comp=Z,59nm,0.8s						
I40A	Norwalk	8.85	35	IAmb_Lg		00 14 13.0	
	comp=Z,28nm,0.8s						
RWWY	Rawlins	8.88	306	IAmb_Lg		00 14 34.0	
	comp=Z,39nm,0.9s						
K22A	Casper	8.99	313	IAmb_Lg		00 14 31.8	
	comp=Z,45nm,0.7s						
TX31	Lajitas Ar. Si	9.03	216		Pn	00 11 41.6	-0.9
TXAR	Lajitas Array	9.03	216	Pn	Pn	00 11 41.8	-0.7
	comp=Z,0.3nm,0.3s,baz=38,slow=11,SNR=11						
TXAR				Lg	Lg	00 14 12.0	
	comp=Z,1.3nm,0.3s,baz=31,slow=31,SNR=2.9						
	comp=Z,0.4nm,0.4s						
TXAR	Lajitas Array	9.03	216		Pn	00 11 41.2	-1.3
SPMN	Marine on St.	9.14	22	IAmb_Lg		00 14 32.5	
	comp=Z,25nm,1.1s						
I42A	Draeger Farm,	9.69	41	IAmb_Lg		00 14 47.7	
	comp=Z,30nm,0.8s						
PDAR	Pinedale Array	10.93	307	Pn	Pn	00 12 07.2	-1.4
	comp=Z,0.1nm,0.3s,baz=121,slow=16,SNR=2.9						
PDAR				Pg		00 12 51.6	
	comp=Z,0.3nm,0.3s,baz=107,slow=23,SNR=4.1						
PDAR				Lg	Lg	00 15 02.4	
	comp=Z,0.4nm,0.3s,baz=121,slow=35,SNR=2.9						
	comp=Z,0.2nm,0.3s						
PDAR	Pinedale Array	10.93	307		Pn	00 12 07.6	-1.0
TKL	Tuckaleechee C	11.24	92	Pn	Pn	00 12 14.4	+1.8
	comp=Z,0.2nm,0.3s,baz=249,slow=8.5,SNR=4.2						
TKL				Lg	Lg	00 15 20.1	
	comp=Z,0.4nm,0.3s,baz=182,slow=18,SNR=3.7						
	comp=Z,1.1nm,0.4s						
ULM	Lac du Bonnet	13.48	5	LR	LR	00 17 50.7	
	comp=Z,43nm,19.0s,baz=96,slow=38						
SADO	Sadowa	16.06	55	Lg	Lg	00 17 50.4	
	comp=Z,0.4nm,0.3s,baz=170,slow=17,SNR=6.3						
ILAR	Eielson Array	40.22	330	P	P	00 17 07.0	-1.7
	comp=Z,0.3nm,0.7s,baz=116,slow=8.4,SNR=4.5						
	comp=Z,0.3nm,0.7s						

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*IDC **08** 00:21:30.1±2.2, 6°.32S×130°.25E, h138^{km}±24^{km}, mb3.4/1, mbtmp3.7/6, Error ellipse: s-maj=30.8km s-min=19.1km az=108.0*

ISC 08 00:21:29.2±1.0**, 6°.33S**±0°.07×**130°.4E**±0°.1**, h150**^{km}**, n6,**
σ**3**^{s}**14**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.50	9	P	Pn	00 22 50.2	+1.0
	4.0nm,0.3s,baz=192,slow=19,SNR=15						
SIJI				S	Sn	00 23 47.6	-4.2
	16nm,0.3s,baz=128,slow=19,SNR=13						
BATI	Baumata	7.68	239	P	Pn	00 23 19.1	+0.7
	7.4nm,0.4s,baz=143,slow=7.1,SNR=2.7						
BATI				S	Sn	00 24 42.2	-1.9
	4.7nm,0.5s,baz=72,slow=20,SNR=1.5						
FITZ	Fitzroy Crossi	12.58	201	P	Pn	00 24 22.6	-0.4
	1.4nm,0.7s,baz=21,slow=10,SNR=1.7						
FITZ				S	Sn	00 26 32.2	-10
	1.9nm,0.3s,baz=294,slow=12,SNR=7.1						
WRA	Warramunga Arr	14.07	164	P	Pn	00 24 43.7	+1.7
	0.5nm,0.5s,baz=350,slow=13,SNR=8.8						
WRA				S	Sn	00 27 10.5	-7.5
	0.4nm,0.4s,baz=336,slow=21,SNR=0.8						
ASAR	Alice Springs	17.57	169	P	Pn	00 25 27.4	+2.4
	0.3nm,0.6s,baz=344,slow=9.6,SNR=2.4						
ASAR				S	S	00 28 34.0	-5.0
	0.3nm,0.8s,baz=352,slow=27,SNR=1.4						
MKAR	Makanchi Array	67.88	327	P	P	00 32 13.1	+1.7
	0.4nm,0.4s,baz=115,slow=8.2,SNR=10						
	0.4nm,0.4s						

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*IDC **08** 00:27:31.6±1.0, 2°.62N×95°.43E, h0^{km}, mb3.9/13, mbtmp4.0/15, ML4.5/2, MS3.1/5, Error ellipse: s-maj=34.0km s-min=15.1km az=42.0*

*NEIC **08** 00:27:35.3±1.2, 2°.61N±0°.07×95°.34E±0°.09, h27^{km}±4^{km}, mb4.3/25, Error ellipse: s-maj=14.1km s-min=9.3km az=68.0*

*DJA **08** 00:27:36.0±2.5, 3°N±6°×9°5E±°, h28^{km}±19^{km}, M4.3/8, mb4.4/7, mB4.7/2, MLv4.2/8, Mw(mB)3.9/2*

ISC 08 00:27:34.9±0.6**, 2°.61N**±0°.07×**95°.38E**±0°.06**, h25**^{km}**, n78,**
σ**1**^{s}**07**/75**, mb4.2**/30**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.96	102	P	Pb	00 27 52.4	-0.6
SNSI				S	Sb	00 28 04.6	-0.7
GSI	Gunungsitoli	2.55	121		Pn	00 28 14.3	-0.4
GSI	Gunungsitoli	2.55	121	P	Pn	00 28 14.5	-0.2
KCSI	Kotacane, Aceh	2.55	69	P	Pn	00 28 15.2	+0.5
LHMI	Lhok Sumawe	3.03	31		Pn	00 28 19.7	-1.6
LHMI	Lhok Sumawe	3.03	31	P	Pn	00 28 21.3	0.0
TSI	Tuntungan	3.30	74	P	Pn	00 28 25.6	+0.6
RPSI	Rantau Prapat	3.54	89		Pn	00 28 27.9	-0.4
RPSI					Sn	00 29 11.8	+2.4
PSI	Prapat	3.54	87	Pn	Pn	00 28 27.9	-0.5
	9.1nm,0.3s,baz=289,slow=10.0,SNR=24						
PSI				Sn	Sn	00 29 11.8	+2.1
	4.1nm,0.3s,baz=236,slow=9.1,SNR=1.7						
PSI				LR	LR	00 30 07.5	
	comp=Z,170nm,19.1s,baz=256,slow=45						
	23nm,0.3s						
PPI	Padang Panjang	5.87	121	P	Pn	00 29 01.3	+1.0
	22nm,0.6s						
KULM	Kulim	5.89	63	Pn	Pn	00 28 59.9	-0.8
IPM	Ipoh	5.93	72	Pn	Pn	00 29 00.3	-0.9
BKNI	Bangkinang	6.09	112	Pn	Pn	00 29 02.3	-1.1
SRIT	Nakonsritamara	7.28	35	Pn	Pn	00 29 17.8	-1.9
MNAI	Manna	10.26	132	Pn	Pn	00 29 58.5	-2.2
PALK	Pallekele	15.34	288	Sn	Sn	00 33 45.4	-14
	0.9nm,0.3s,baz=132,slow=18,SNR=7.1						
PALK				LR	LR	00 36 42.7	
	comp=Z,87nm,18.8s,baz=216,slow=36						
LEM	Lembang	15.40	128	LR	LR	00 36 57.3	
	comp=Z,78nm,19.5s,baz=288,slow=37						
CM31	Chiang Mai Arr	16.13	12	Pn	Pn	00 31 19.4	-0.7
CMAR	Chiang Mai Arr	16.13	12	Pn	Pn	00 31 20.3	+0.2
	2.3nm,0.3s,baz=203,slow=11,SNR=24						
CMAR				LR	LR	00 37 11.0	
	comp=Z,45nm,21.3s,baz=205,slow=36						
	3.2nm,0.3s						
CMAR	Chiang Mai Arr	16.13	12	Pn	Pn	00 31 20.2	0.0
CHTO	Chiang Mai	16.48	12	Pn	Pn	00 31 22.0	-2.5
MYLDM	Lahad Datu	23.20	83	P	P	00 32 39.6	-0.6
PZH	PanZhiHua	24.53	14	P	P	00 32 52.5	-0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,70nm,4.6s						
H08S2	Diego Garcia H	25.01	246	T	T	00 58 54.1	
	baz=67,slow=76,SNR=1174						
H08S3	Diego Garcia H	25.01	246	T	T	00 58 55.9	
	baz=67,slow=76,SNR=2698						
H08S1	Diego Carcia H	25.02	246	T	T	00 58 57.3	
	baz=67,slow=76,SNR=277						
TOLI2	Tolitoli	25.43	93	P	P	00 33 00.8	-0.2
TOLI2				IAmb	IAmb	00 33 01.9	
	comp=Z,4.7nm,0.7s						
KAPI	Kappang	25.50	107	P	P	00 33 01.9	+0.4
	comp=Z,3.3nm,0.6s,baz=312,slow=7.3,SNR=4.1						
	comp=Z,3.3nm,0.6s						
KAPI	Kappang	25.50	107	P	P	00 32 59.9	-1.6
KAPI				IAmb	IAmb	00 33 14.3	
	comp=Z,7.9nm,1.0s						
LSA	Lhasa	27.24	352	P	P	00 33 16.7	-0.9
XAN	Xi'an	33.73	20	P	P	00 34 13.1	-1.3
XAN				pP	pP	00 34 20.1	-1.5
XAN				pmax	pmax		
	comp=Z,19nm,0.6s						
XAN				LR	LR		
	comp=N,100nm,13.7s						
XAN				LR	LR		
	comp=E,66nm,14.4s						
XAN				LR	LR		
	comp=Z,160nm,12.6s						
FITZ	Fitzroy Crossi	36.22	126	P	P	00 34 35.5	-0.6
HNS	HongShan	38.91	25	⇓P	P	00 34 59.8	+1.2
HNS				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH	Kashi	40.76	337	P	P	00 35 10.5	-3.6
KSH				sP	pP	00 35 21.2	-0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC	Hu-ho-hao-te	40.77	19	*e*P	P	00 35 17.6	+3.4
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,6.1s						
H01W3	Cape Leeuwin H	41.24	156	T	T	01 19 03.7	
	baz=332,slow=76,SNR=198						
H01W2	Cape Leeuwin H	41.26	156	T	T	01 19 02.0	
	baz=332,slow=76,SNR=263						
H01W1	Cape Leeuwin H	41.26	156	T	T	01 19 01.4	
	baz=332,slow=76,SNR=128						
WMQ	Urumqi	41.60	352	*e*P	P	00 35 22.0	+1.1
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
BJT	Baijiatuau	41.73	24	P	P	00 35 21.7	-0.2
BJT				IAmb	IAmb	00 35 30.7	
	comp=Z,12nm,1.3s						
TARG	Taragay, Kyrgy	42.02	340	P	P	00 35 24.2	-0.7
TARG				IAmb	IAmb	00 35 28.6	
	comp=Z,2.7nm,0.6s						
DRK	Karamyk	42.50	333	P	P	00 35 28.2	-0.5
KDJ	Kajisay	42.59	340	P	P	00 35 29.8	+0.5
KDJ				IAmb	IAmb	00 35 33.1	
	comp=Z,4.0nm,0.8s						
BOOM	Boomskoye usch	43.35	339	P	P	00 35 34.6	-0.6
BTK	Batken	43.42	332	P	P	00 35 35.0	-0.8
BTK				IAmb	IAmb	00 35 47.3	
	comp=Z,5.7nm,0.8s						
AAK	Ala-Archa	44.01	338	P	P	00 35 40.7	+0.1
WB0	Warramunga Arr	44.29	122	P	P	00 35 42.8	-0.2
WB0				IAmb	IAmb	00 36 08.7	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	44.32	122	P	P	00 35 43.3	0.0
	comp=Z,0.8nm,0.5s,baz=301,slow=9.2,SNR=19						
WRA				LR	LR	00 54 08.0	
	comp=Z,37nm,20.9s,baz=348,slow=36						
	comp=Z,0.8nm,0.5s						
MK31	Makanchi Array	45.46	347		P	00 35 51.9	0.0
MK31				IAmb	IAmb	00 35 53.3	
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	45.46	347	P	P	00 35 52.5	+0.6
	comp=Z,4.3nm,0.7s,baz=164,slow=7.9,SNR=51						
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	45.46	347	P	P	00 35 52.3	+0.4
MAKZ	Makanchi	45.54	347	P	P	00 35 52.3	-0.3
MAKZ				IAmb	IAmb	00 35 54.2	
	comp=Z,4.3nm,0.7s						
AS31	Alice Springs	45.69	127	P	P	00 35 53.7	-0.5

ASAR	**Alice Springs**	45.69	127	P	P	00 35 53.9	-0.2
	comp=Z,0.7nm,0.6s,baz=299,slow=8.2,SNR=12						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	45.69	127	P	P	00 35 53.1	-1.0
KSRS	**Korea Array**	45.77	37	P	P	00 35 53.9	-0.6
	comp=Z,0.5nm,0.5s,baz=231,slow=7.7,SNR=2.4						
	comp=Z,0.5nm,0.5s						
KK31	**Karatay Array**	46.00	335	P	P	00 35 55.6	-0.7
KKAR	**Karatay Array**	46.00	335	P	P	00 35 55.3	-1.0
KKAR	**Karatay Array**	46.00	335	P	P	00 35 55.5	-0.8
KKAR				IAmb	IAmb	00 36 05.6	
	comp=Z,1.8nm,0.8s						
SONM	**Songino Array**	46.04	10	P	P	00 35 56.2	-0.5
	comp=Z,1.4nm,0.7s,baz=191,slow=9.0,SNR=6.9						
SONM				PcP	PcP	00 37 33.4	+0.6
	comp=Z,0.5nm,0.5s,baz=189,slow=4.0,SNR=2.9						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	46.04	10	P	P	00 35 55.7	-1.0
SONM				IAmb	IAmb	00 36 04.5	
	comp=Z,3.7nm,1.3s						
JHS	**Saijyo**	47.59	43	P	P	00 36 08.7	-0.2
KURK	**Kurchatov**	49.98	346	P	P	00 36 27.2	+0.3
KURK				IAmb	IAmb	00 36 28.0	
	comp=Z,2.1nm,0.7s						
ZAA0	**Zalesovo Array**	51.90	352	P	P	00 36 41.2	-0.1
ZALV	**Zalesovo Beam**	51.90	352	P	P	00 36 41.7	+0.4
	comp=Z,5.3nm,0.6s,baz=184,slow=7.0,SNR=34						
	comp=Z,5.3nm,0.6s						
ZALV	**Zalesovo Beam**	51.90	352	P	P	00 36 40.7	-0.6
BVAR	**Borovoye Array**	54.34	342	P	P	00 36 59.6	+0.3
	comp=Z,1.0nm,0.5s						
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	54.40	342	P	P	00 36 59.4	-0.3
ABKAR	**Akbulak array**	55.43	333	P	P	00 37 06.9	-0.3
ABKAR	**Akbulak array**	55.43	333	P	P	00 37 06.8	-0.5
ABKAR				IAmb	IAmb	00 37 16.4	
	comp=Z,3.4nm,0.8s						
AKTO	**Aktyubinsk**	57.14	332	P	P	00 37 20.6	+1.2
	comp=Z,0.9nm,0.5s,baz=106,slow=15,SNR=2.2						
	comp=Z,0.9nm,0.5s						
BRTR	**Keskin Array B**	66.82	312	P	P	00 38 25.6	+0.6
	comp=Z,0.1nm,0.3s,baz=108,slow=3.3,SNR=1.4						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	77.92	333	P	P	00 39 30.8	+0.3
	comp=Z,1.1nm,0.9s,baz=69,slow=7.6,SNR=2.8						
	comp=Z,1.1nm,0.9s						
FINES	**FINESS Array B**	77.92	333	P	P	00 39 30.5	0.0
ARCES	**ARCESS Array B**	80.61	340	P	P	00 39 46.3	+1.2
	comp=Z,1.7nm,0.9s,baz=96,slow=6.4,SNR=2.2						
	comp=Z,1.7nm,0.9s						
GERES	**GERESS Array B**	82.56	319	P	P	00 39 57.7	+1.8
	comp=Z,0.1nm,0.3s,baz=131,slow=4.4,SNR=1.3						
	comp=Z,0.1nm,0.3s						
VNA3	**Neumayer Olymp**	97.28	198	P	P	00 41 05.4	0.0
VNA3				S	S	00 52 27.1	-0.3
TXAR	**Lajitas Array**	143.37	29	PKP	PKPdf	00 47 07.6	-0.5
	comp=Z,0.1nm,0.3s,baz=272,slow=4.4,SNR=1.7						

*IDC **08** 01:00:14.9±1.2, 14°.28S×166°.56E, h0^{km}, mb3.6/5, mbtmp3.5/5, MS2.9/1, Error ellipse: s-maj=53.0km s-min=30.1km az=134.0*

*NOU **08** 01:00:18.2, 14°.85S×166°.87E, h0^{km}, MLv4.5/11, Vanuatu Islands*

ISC 08 01:00:19.3±1.1**, 14°.7S**±0°.1×**166°.9E**±0°.2**, h35^{km}, n15, σ1^{s}84**/13**, mb3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	0.85	160	P	Pn	01 00 31.2	-3.6
DVP	**Devils Point**	3.30	158	P	Pn	01 01 09.8	+1.3
KOUNC	**Koumac, New Ca**	6.38	203	P	Pn	01 01 51.1	+0.2
YATNC	**Mamie plateau,**	7.37	180	P	Pn	01 02 03.2	-1.3
DZM	**Mont Dzumac**	7.40	183	LR	LR	01 04 21.9	
	comp=Z,84nm,19.4s,baz=22,slow=32						
DZM	**Mont Dzumac**	7.40	183	P	Pn	01 02 04.1	-0.8
NOUC	**Port Laguerre**	7.43	184	P	Pn	01 02 04.5	-0.9
OUENC	**Ouen Island, N**	7.73	180	P	Pn	01 02 09.6	+0.2
	20nm,1.4s						
WRA	**Warramunga Arr**	31.50	256	P	P	01 06 36.2	-2.0
	0.3nm,0.6s,baz=84,slow=7.7,SNR=2.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	32.37	249	P	P	01 06 45.3	-0.6
	0.3nm,0.6s,baz=72,slow=11,SNR=4.2						
	0.3nm,0.6s						
VNDA	**Vanda**	62.94	181	P	P	01 10 45.0	+3.2
	0.3nm,0.5s,baz=359,slow=7.2,SNR=1.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	86.56	18	P	P	01 12 58.2	-0.2
	0.4nm,0.7s,baz=232,slow=5.6,SNR=5.5						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	97.64	27	P	Pdif	01 13 49.5	-0.5
	0.1nm,0.7s,baz=260,slow=4.3,SNR=1.9						
	0.1nm,0.7s						
ARCES	**ARCESS Array B**	120.08	345	PKP	PKiKP	01 19 06.8	+0.9
	0.9nm,0.8s,baz=70,slow=2.0,SNR=8.5						
KEST	**Kesra**	150.92	320	PKPbc	PKiKP	01 20 08.7	-0.8
	2.6nm,0.9s,baz=24,slow=10.0,SNR=1.4						

*TUL **08** 01:11:02.3±1.2, 36°.69N±0°.02×98°.00W±0°.02, h6^{km}±6^{km}, ML2.6, mb_Lg2.5/35(NEIC), Error ellipse: s-maj=2.7km s-min=1.4km az=132.0*

NEIC 08 01:11:02.2±0.7**, 36°.67N**±0°.02×**98°.00W**±0°.02**, h6^{km}**±6^{km}**, Error ellipse: s-maj=2.7km s-min=1.1km az=139.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	0.86	251	Pg	Pg	01 11 17.8	-0.9
T35A	**Sooner Cattle**	1.22	78		Pg	01 11 25.1	-0.4
OKCFA	**Oklahoma City**	1.32	160	Pn	Pb	01 11 27.5	0.0
FNO	**Franklin**	1.49	161	Pn	Pb	01 11 29.9	-0.3
R32A	**Long Quarter,**	1.84	342		Pn	01 11 34.4	0.0
TUL1	**Leonard**	1.93	112	Pn	Pn	01 11 35.4	-0.2
WMOK	**Wichita Mounta**	2.03	199	Pn	Pn	01 11 36.7	-0.3
X34A	**Smith Ranch, M**	2.07	176		Pn	01 11 37.8	+0.4
KSU1	**Kansas State U**	2.67	24	IAmb_Lg		01 12 25.6	
	comp=Z,12nm,1.1s						
X37A	**Clayton**	2.98	133	Pn	Pn	01 11 50.0	0.0
AMTX	**Amarillo**	3.49	240	Pn	Pn	01 11 57.3	+0.2
AMTX				IAmb_Lg		01 13 01.0	
	comp=Z,9.5nm,0.7s						
W39A	**Magazine**	3.72	112	Pn	Pn	01 11 59.2	-1.0
W39A				IAmb_Lg		01 13 00.5	
	comp=Z,13nm,0.9s						
S39A	**Bolivar**	3.87	73	Pn	Pn	01 12 02.5	+0.3
S39A				IAmb_Lg		01 13 09.9	
	comp=Z,12nm,0.8s						
U40A	**Yellville**	4.15	93	Pn	Pn	01 12 05.7	-0.5
U40A				IAmb_Lg		01 13 16.2	
	comp=Z,13nm,0.7s						
MIAR	**Mount Ida**	4.18	119	Pn	Pn	01 12 06.3	-0.2
P38A	**Dawn**	4.59	49	Pn	Pn	01 12 12.9	+0.7
P38A				IAmb_Lg		01 13 39.8	
	comp=Z,8.8nm,0.7s						
MGMO	**Mountain Grove**	4.62	82	IAmb_Lg		01 13 31.5	
	comp=Z,12nm,1.0s						
X40A	**Basin Creek Fa**	4.74	116	IAmb_Lg		01 13 42.9	
	comp=Z,12nm,1.2s						
MSTX	**Muleshoe**	4.74	237	IAmb_Lg		01 13 34.4	
	comp=Z,7.0nm,1.0s						
WHAR	**Wooly Hollow**	4.83	105	IAmb_Lg		01 13 46.4	
	comp=Z,6.3nm,0.9s						
R40A	**Maddies Statio**	4.83	69	Pn	Pn	01 12 15.8	+0.3
R40A				IAmb_Lg		01 13 44.7	
	comp=Z,9.6nm,0.8s						
UALR	**University of**	4.97	111	IAmb_Lg		01 13 53.6	
	comp=Z,11nm,1.1s						
T25A	**Trinidad**	5.16	277	Pn	Pn	01 12 20.2	0.0
T25A				IAmb_Lg		01 13 53.6	
	comp=Z,6.4nm,1.0s						
P40A	**Paris**	5.49	57	IAmb_Lg		01 14 01.5	
	comp=Z,11nm,0.8s						
LCAR	**Lake Charles**	5.55	94	IAmb_Lg		01 14 03.1	
	comp=Z,4.6nm,0.7s						
CCM	**Cathedral Cave**	5.55	74	IAmb_Lg		01 13 57.5	
	comp=Z,7.6nm,0.8s						
PBMO	**Poplar Bluff**	6.08	87	IAmb_Lg		01 14 16.1	
	comp=Z,9.0nm,0.8s						
JCT	**Junction City**	6.35	194	IAmb_Lg		01 14 28.5	
	comp=Z,8.7nm,1.2s						
N23A	**Red Feather La**	7.51	307	IAmb_Lg		01 15 09.2	
	comp=Z,4.2nm,0.8s						

WEL 08 01:16:27.7±0.8**, 34°S**±8°×**18°0E**±1°6**, h293^{km}**±9^{km}**, M4.0**/19**, mB4.6**/12**, ML4.8**/15**, MLv4.4**/19**, Mw(mB)3.8**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	3.38	201	P	Pn	01 17 24.7	-2.0
MXZ				S	S	01 18 12.0	-1.9
HAZ	**Te Kaha**	3.73	205	P	Pn	01 17 31.5	+1.2
HAZ				S	S	01 18 19.3	-1.3
PUZ	**Puketiti**	3.87	198	P	Pn	01 17 32.4	+0.4
PUZ				S	S	01 18 23.1	-0.4
RUGZ	**Raukumara Rang**	3.95	205	P	Pn	01 17 33.3	+0.3
MWZ	**Matawai**	4.33	204	P	Pn	01 17 36.2	-0.9
MWZ				S	S	01 18 32.7	-0.2
URZ	**Urewera**	4.42	209	P	Pn	01 17 37.7	-0.4
TARZ	**Mount Tarawera**	4.66	214	P	Pn	01 17 43.7	+2.7
WCZ	**Waipu Caves**	4.73	250	P	Pn	01 17 38.2	-3.5
MUGZ	**Murupara**	4.75	210	P	Pn	01 17 42.6	+0.7
MUGZ				S	S	01 18 44.1	+2.7
RTZ	**Ruatahuna**	4.78	208	P	Pn	01 17 42.1	-0.2
RTZ				S	S	01 18 44.3	+2.1
SNGZ	**Shannon Statio**	4.80	204	P	Pn	01 17 43.0	+0.5
SNGZ				S	S	01 18 44.4	+1.8
TOZ	**Tahuroa Road**	4.81	225	P	Pn	01 17 46.5	+3.8
ALRZ	**Allen Road**	5.00	213	P	Pn	01 17 45.7	+0.9
RAHZ	**Arahi**	5.01	205	P	Pn	01 17 45.8	+0.9
RAHZ				S	S	01 18 46.8	-0.2
MRHZ	**Matea Rd**	5.19	211	P	Pn	01 17 47.5	+0.3
MRHZ				S	S	01 18 52.0	+1.0
ARHZ	**Aropaoanui**	5.35	204	P	Pn	01 17 49.5	+0.6
ARHZ				S	S	01 18 54.6	+0.4
KAHZ	**Kahuranaki**	5.87	203	P	Pn	01 17 56.3	+1.1
TSZ	**Takapari Road**	6.42	207	P	Pn	01 18 01.0	-0.8
TSZ				S	S	01 19 18.9	+1.2
POWZ	**Post Office Ro**	6.79	207	P	Pn	01 18 06.3	+0.1
POWZ				S	S	01 19 26.2	+0.4
BFZ	**Birch Farm**	6.88	203	P	Pn	01 18 07.1	-0.1
BFZ				S	S	01 19 28.5	+0.8
TIWZ	**Tintock**	7.08	205	P	Pn	01 18 10.2	+0.3
TIWZ				S	S	01 19 32.8	+0.4
HOWZ	**Holdsworth Sta**	7.32	206	P	Pn	01 18 11.9	-0.9
HOWZ				S	S	01 19 36.4	-1.3
TMWZ	**Te Maipa**	7.38	204	P	Pn	01 18 13.9	+0.4
TMWZ				S	S	01 19 39.5	+0.5
OGWZ	**Otaki Gorge**	7.38	208	P	Pn	01 18 11.7	-1.7
OGWZ				S	S	01 19 40.3	+1.3
KIW	**Kapiti Island**	7.53	210	P	Pn	01 18 14.1	-1.2
KIW				S	S	01 19 41.8	-0.5
MTW	**Mount Morrison**	7.55	206	P	Pn	01 18 14.8	-0.8
MTW				S	S	01 19 43.8	+0.9
CAW	**Cannon Point**	7.67	208	P	Pn	01 18 16.3	-0.7
CAW				S	S	01 19 44.9	-0.7
MSWZ	**Moikau Station**	7.87	206	P	Pn	01 18 19.0	-0.5
MSWZ				S	S	01 19 49.5	-0.6

IDC 08 01:17:46.5±1.5**, 12°.38N**×**143°.35E, h0^{km}, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=119.0km s-min=29.7km az=101.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	1.90	51	LR	LR	01 18 50.3	
	comp=Z,66nm,20.3s,baz=98,slow=34						
H11S3	**WAKE ISLAND Hy**	23.29	72	T	T	01 46 49.8	
	baz=260,slow=72,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	23.30	72	T	T	01 46 46.4	
	baz=260,slow=72,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	23.30	72	T	T	01 46 48.4	
	baz=260,slow=72,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	23.75	69	T	T	01 47 21.3	
	baz=255,slow=75,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	23.76	69	T	T	01 47 23.3	
	baz=255,slow=75,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	23.77	69	T	T	01 47 23.3	
	baz=255,slow=75,SNR=4.8						
WRA	**Warramunga Arr**	33.33	196	P	P	01 24 25.7	-0.7
	0.4nm,0.6s,baz=22,slow=10,SNR=5.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	37.00	194	P	P	01 24 58.8	+0.7
	0.5nm,1.0s,baz=14,slow=12,SNR=2.4						
	0.5nm,1.0s						
YKA	**Yellowknife Ar**	84.60	27	P	P	01 30 22.2	+0.6
	0.1nm,0.5s,baz=287,slow=5.1,SNR=2.9						
	0.1nm,0.5s						
FINES	**FINESS Array B**	91.62	335	P	P	01 30 54.7	-0.6
	0.3nm,0.4s,baz=108,slow=4.5,SNR=5.1						
	0.3nm,0.4s						

*IDC **08** 01:45:28.4±1.1, 44°.90N×15°.09E, h0^{km}, mb3.7/4, mbtmp3.6/11, ML3.1/7, MS2.6/4, Error ellipse: s-maj=20.1km s-min=12.0km az=70.0*

*BEO **08** 01:45:29.7±0.5, 44°.90N×15°.30E, h0^{km}, ML3.6/10*

*BGR **08** 01:45:29.4±0.6, 44°.75N×15°.76E, h10^{km}, ML3.7/9, Error ellipse: s-maj=12.2km s-min=10.0km az=29.0*

*PDG **08** 01:45:30.4±0.6, 44°.96N×15°.35E, h12^{km}±1^{km}, ML3.6/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*NEIC **08** 01:45:30.4±1.7, 44°.94N±0°.05×15°.28E±0°.08, h6^{km}±4^{km}, ML3.3/44, Error ellipse: s-maj=7.8km s-min=7.5km az=60.0*

*LDG **08** 01:45:30.5±0.1, 45°.00N×15°.34E, h10^{km}, Ml3.6/28, Error ellipse: s-maj=3.2km s-min=2.2km az=2.0*

*ROM **08** 01:45:30.2±0.1, 44°.917N±0°.006×15°.379E±0°.008, h10^{km}, ML3.7/54, Error ellipse: s-maj=0.7km s-min=0.0km az=144.0*

*RHSSO **08** 01:45:30.7±0.2, 44°.95N×15°.37E, h3^{km}±1^{km}, ML3.6/19*

*PRU **08** 01:45:31.8±0.0, 45°.05N×15°.33E, h1^{km}*

ISC 08 01:45:29.8±0.9**, 44°.94N**±0°.01×**15°.33E**±0°.01**, h7^{km}**±7^{km}**, n381, σ1^{s}83**/550**, mb3.8**/4**, 45C-47D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIT	**Plitvice**	0.22	105	*i* Pg	Pg	01 45 33.7	-0.5
PLIT				Sg	Sg	01 45 36.8	-0.3
A250A	**Rusevo Krmpots**	0.33	297	*e*Pg	Pg	01 45 36.6	+0.2
A250A				Sg	Sg	01 45 41.5	+0.7
RABC	**Rab**	0.43	245	*i* Pg	Pg	01 45 38.2	+0.1
RABC				Sg	Sg	01 45 44.0	+0.1
NVLJ	**Novalja**	0.49	222	*i* Pg	Pg	01 45 38.9	-0.5
NVLJ				Sg	Sg	01 45 46.1	+0.3
UDBI	**Udbina**	0.51	143	*e*Pg	Pg	01 45 39.3	-0.4
UDBI				Sg	Sg	01 45 47.0	+0.6
BOJS	**Bojanci**	0.57	354	*i* Pg	Pg	01 45 39.9	-0.9
BOJS				*i* Sg	Sg	01 45 48.9	+0.5
BOJS				IAML		01 45 52.0	
	comp=Z,1µm,0.4s						
BOJS	**Bojanci**	0.57	354	P	Pg	01 45 40.4	-0.5
BOJS				S	Sg	01 45 48.9	+0.5
BOJS				AML	AML		
	comp=E,9645µm,0.6s						
BOJS				AML	AML		
	comp=N,9545µm,0.6s						
VIRC	**Vir**	0.67	197	*e*Pg	Pg	01 45 41.9	-0.9
VIRC				Sg	Sg	01 45 51.6	+0.1
OZLJ	**Ozalj**	0.69	8	*e*Pg	Pg	01 45 42.9	-0.2
OZLJ				Sg	Sg	01 45 51.4	-0.6
GBRS	**Gornja Briga**	0.70	329	*i* Pg	Pg	01 45 42.9	-0.4
GBRS				*i* Sg	Sg	01 45 53.0	+0.6
GBRS				IAML		01 45 56.4	
	comp=Z,437nm,0.3s						
RIY	**Rijeka**	0.71	303	*e*Pg	Pg	01 45 42.9	-0.7
RIY				*e*Sg	Sg	01 45 54.1	+1.2
RIY	**Rijeka**	0.71	303	*i* Pg	Pg	01 45 43.0	-0.7
RIY				Sg	Sg	01 45 53.3	+0.4
SMRN	**Sveta Marina**	0.84	277	*e*Pg	Pg	01 45 45.9	-0.1
SMRN				Sg	Sg	01 45 57.2	+0.4
CRES	**Cresnjev**	0.90	6	⇑*i*Pg	Pg	01 45 46.4	-0.6
CRES				*e*Sg	Sg	01 45 58.8	+0.1
CRES	**Cresnjev**	0.90	6	⇑*i*Pg	Pg	01 45 46.4	-0.6
CRES				*i* Sg	Sg	01 45 58.8	+0.1
CRES				IAML		01 46 05.3	
	comp=Z,450nm,0.3s						
VISS	**Visnje**	0.94	338	*i* Pg	Pg	01 45 47.1	-0.7
VISS				IAML		01 46 07.8	
	comp=Z,173nm,0.2s						
DUGI	**Dugi Otok**	0.96	192	*i* Pg	Pg	01 45 47.0	-1.3
DUGI				Sg	Sg	01 46 01.3	+0.6
A050A	**Klekovaca**	0.97	117	⇑*i*Pg	Pg	01 45 46.8	-1.6
A050A				*e*Sg	Sg	01 46 00.4	-0.6
PRIJ	**Prijedor**	0.98	87	⇓*i*Pg	Pg	01 45 47.7	-1.0
PRIJ				*e*Sg	Sg	01 46 01.7	+0.2
ZAG	**Zagreb**	1.00	27	⇑*i*Pg	Pg	01 45 48.9	-0.2
ZAG				*e*Sg	Sg	01 46 02.3	+0.1
ZAG	**Zagreb**	1.00	27	*e*Pg	Pg	01 45 49.5	+0.4
ZAG				Sg	Sb	01 46 03.4	+0.5
ZAG	**Zagreb**	1.00	27	⇑P	Pg	01 45 48.9	-0.2
ZAG				S	Sb	01 46 04.2	+1.3
CEY	**Cerknica**	1.03	322	*e*Pg	Pg	01 45 48.6	-0.9
CEY				*e*Sg	Sb	01 46 03.8	+0.2
PTJ	**Puntijarka**	1.07	25	*i* Pg	Pg	01 45 50.4	0.0
PTJ				Sg	Sb	01 46 05.0	+0.1
MORI	**Morici**	1.10	166	*i* Pg	Pg	01 45 50.5	-0.4
MORI				Sg	Sg	01 46 06.1	+0.9
SKDS	**Skadanscina**	1.11	304	⇑*i*Pg	Pg	01 45 51.0	-0.2
SKDS				*e*Sg	Sg	01 46 05.9	+0.3
SKDS	**Skadanscina**	1.11	304	*i* Pg	Pg	01 45 49.7	-1.5
A051A	**Mrakovica**	1.12	85	⇑*i*Pg	Pg	01 45 49.8	-1.5
A051A				*e*Sg	Sg	01 46 05.7	-0.2
BRJN	**Brijuni**	1.12	269	*e*Pg	Pg	01 45 51.6	+0.3
BRJN				Sg	Sb	01 46 07.5	+1.2
BRJN	**Brijuni**	1.12	269	P	Pg	01 45 50.7	-0.6
BRJN				S	Sg	01 46 06.8	+0.9
PDKS	**Podkum**	1.15	348	*i* Pg	Pg	01 45 51.5	-0.4
PDKS				*e*Sg	Sn	01 46 09.0	+0.7
PDKS				IAML		01 46 15.1	
	comp=Z,467nm,0.4s						
KIJV	**Kijevo**	1.21	140	*e*Pg	Pg	01 45 51.6	-1.4
KIJV				Sg	Sn	01 46 10.3	+0.7
MOSL	**Moslavina**	1.21	55	*e*Pg	Pg	01 45 52.5	-0.5
MOSL				Sg	Sg	01 46 09.3	+0.4
LJU	**Ljubljana**	1.24	333	*e*Pg	Pg	01 45 53.6	-0.1
LJU				*e*Sg	Sg	01 46 09.8	0.0
LJU	**Ljubljana**	1.24	333	*i* Pg	Pg	01 45 54.1	+0.4
LJU	**Ljubljana**	1.24	333	P	Pg	01 45 53.9	+0.2
LJU				S	Sb	01 46 10.3	+0.5
LJU				AML	AML		
	comp=N,9255µm,0.3s						
LJU				AML	AML		
	comp=E,8065µm,0.4s						
ZIRJ	**Zirje**	1.30	170	*e*Pg	Pn	01 45 53.9	-0.4
ZIRJ				Sg	Sb	01 46 12.3	+0.9
LOBO	**Lobor**	1.33	23	*e*Pg	Pn	01 45 54.6	-0.1
LOBO				Sg	Sn	01 46 13.3	+0.7
BLY	**Banja Luka**	1.33	97	*e*Pg	Pn	01 45 53.1	-1.7
BLY				*e*Sg	Sn	01 46 13.4	+0.7
BLY	**Banja Luka**	1.33	97	⇑*i*Pg	Pn	01 45 53.2	-1.6
BLY				*e*Sg	Sb	01 46 12.2	-0.1
BLY	**Banja Luka**	1.33	97	⇑P	Pn	01 45 53.2	-1.6
BLY				S	Sb	01 46 11.8	-0.6
TRI	**Trieste**	1.35	306		Pn	01 45 55.2	+0.1
TRI				IAML		01 46 18.5	
	comp=N,368nm,0.5s						
TRI				IAML		01 46 20.2	
	comp=E,703nm,0.6s						
TRI	**Trieste**	1.35	306	P	Pn	01 45 55.7	+0.7
TRI				S	Sn	01 46 14.7	+1.6
TRI				AML	AML		
	comp=E,1785µm,0.6s						
TRI				AML	AML		
	comp=N,931µm,0.9s						
MGRS	**Mrkonjic Grad**	1.35	112	⇑*i*Pg	Pn	01 45 53.9	-1.2
MGRS				*e*Sg	Sb	01 46 13.3	+0.3
KALN	**Kalnik**	1.43	33	*i* Pn	Pn	01 45 56.5	+0.2
KALN				Sg	Sg	01 46 16.7	+0.8
A052A	**Srbac**	1.56	83	*e*Pg	Pn	01 45 57.5	-0.4
A052A				*e*Sg	Sb	01 46 19.3	+0.5
SRKY	**Kupres RS**	1.57	123	*e*Pn	Pn	01 45 58.7	+0.5
SRKY				*e*Sn	Sb	01 46 20.2	+0.8
SABO	**M.te Sabotino**	1.60	311	S	Sg	01 46 24.0	+2.6
KOGS	**Kog**	1.65	23	⇑P	Pn	01 45 59.0	-0.1
KOGS				S	Sg	01 46 22.9	+0.2
OBKA	**Obir**	1.67	341	*e*Pn	Pn	01 45 59.9	+0.4
	comp=N,64nm,0.3s,SNR=140						
OBKA				Sn	Sb	01 46 22.8	+0.8
	comp=N,247nm,0.5s						
OBKA	**Obir**	1.67	341	*e*Pn	Pb	01 46 00.8	-0.1
OBKA				*e*Sn	Sn	01 46 21.9	+0.7
OBKA	**Obir**	1.67	341	*e*Pn	Pn	01 46 00.6	+1.1
	SNR=332						
OBKA				*e*Sn	Sg	01 46 24.5	+1.1
	SNR=2.4						
SOKA	**Soboth**	1.76	353	Pn	Pn	01 46 01.1	+0.4
	comp=N,58nm,0.3s,SNR=78						
A252A	**Venje**	1.85	73	*e*Pn	Pn	01 46 03.2	+1.2
A252A				Sn	Sb	01 46 28.3	+1.1
HVAR	**Hvar**	1.93	155	*e*Pn	Pn	01 46 04.6	+1.6
HVAR				Sn	Sb	01 46 30.5	+0.9
HVAR	**Hvar**	1.93	155	⇑P	Pn	01 46 04.7	+1.6
HVAR				S	Sb	01 46 30.9	+1.3
RICI	**Ricice**	1.94	137	*i* Pn	Pb	01 46 05.1	-0.3
RICI				Sn	Sb	01 46 31.3	+1.5
VINO	**Villanova**	1.95	313	⇓P	Pn	01 46 04.5	+1.2
VINO				S	Sb	01 46 31.3	+1.0
VINO				AML	AML		
	comp=N,777µm,0.5s						
VINO				AML	AML		
	comp=E,526µm,1.5s						
DOB	**Doboj**	1.98	95	*e*Pn	Pn	01 46 04.3	+0.6
DOB				*e*Sn	Sn	01 46 29.0	+0.3
GEPF	**Gemona**	2.04	312	⇓P	Pn	01 46 05.6	+1.1
GEPF				S	Sb	01 46 33.6	+0.9
GEPF				AML	AML		
	comp=E,1350µm,0.6s						
GEPF				AML	AML		
	comp=N,1285µm,0.5s						
PESA	**Pesaro**	2.04	242	P	Pn	01 46 06.2	+1.7
PESA				S	Sb	01 46 32.7	0.0
PESA				AML	AML		
	comp=E,1830µm,0.4s						
PESA				AML	AML		
	comp=N,1630µm,0.5s						
MAKA	**Makarska**	2.05	143	*e*Pn	Pn	01 46 06.5	+1.9
MAKA				Sn	Sb	01 46 33.3	+0.4
ACOM	**Acomizza, Ital**	2.06	322	⇓P	Pn	01 46 06.8	+1.9
ACOM				S	Sb	01 46 33.1	-0.2
ACOM				AML	AML		
	comp=N,1380µm,0.5s						
ACOM				AML	AML		
	comp=E,1455µm,0.5s						
MYKA	**Terra Mystica**	2.07	326	*e*Pn	Pb	01 46 07.1	-0.5
	comp=E,24nm,0.3s,SNR=20						
MPRI	**Monte Prat**	2.10	309	⇓P	Pn	01 46 06.6	+1.2
MPRI				S	Sb	01 46 35.4	+0.8
MPRI				AML	AML		
	comp=N,2230µm,0.4s						
MPRI				AML	AML		
	comp=E,1445µm,0.7s						
CING	**Cingoli**	2.19	225	P	Pn	01 46 07.1	+0.5
CING				S	Sn	01 46 34.8	+0.8
CING				AML	AML		
	comp=E,396µm,0.4s						
CING				AML	AML		
	comp=N,328µm,0.5s						
FSSB	**Fossombrone**	2.21	237	P	Pn	01 46 07.3	+0.3
FSSB				S	Sn	01 46 36.3	+1.8
FSSB				AML	AML		
	comp=N,1425µm,0.4s						
FSSB				AML	AML		
	comp=E,770µm,0.5s						
ARVD	**Arcevia**	2.24	231	P	Pn	01 46 07.4	+0.1
ARVD				S	Sn	01 46 35.3	+0.2
ARVD				AML	AML		
	comp=N,306µm,0.8s						
ARVD				AML	AML		
	comp=E,357µm,0.6s						
MPAG	**Monte Paganucc**	2.26	236	⇓P	Pn	01 46 07.9	+0.3
MPAG				S	Sn	01 46 37.8	+2.0
MPAG				AML	AML		
	comp=E,490µm,0.6s						
MPAG				AML	AML		
	comp=N,503µm,0.5s						
KOVH	**Kovagotottos**	2.26	58	P	Pn	01 46 07.0	-0.6
KOVH				S	Sn	01 46 35.0	-0.7
STAL	**STALIGIAL**	2.27	307		Pn	01 46 07.9	+0.2
STAL				IAML		01 46 49.1	
	comp=N,359nm,0.5s						
STAL	**STALIGIAL**	2.27	307	⇓P	Pn	01 46 08.3	+0.7
STAL				AML	AML		
	comp=E,1255µm,0.4s						
STAL				AML	AML		

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          comp=N,932µm,0.4s
STAL                               AML     AML
          comp=E,966µm,0.3s
STAL                               AML     AML
          comp=N,1245µm,0.8s
EL6   Elcito             2.27 226  P       Pn      01 46 07.9 +0.2
EL6                                S       Sn      01 46 36.4 +0.4
POLC  Polcenigo          2.27 300 ⇓P       Pn      01 46 08.8 +1.1
POLC                               AML     AML
          comp=E,2940µm,0.4s
POLC                               AML     AML
          comp=N,3120µm,0.5s
CLUD  Cludinico          2.29 312 ⇓P       Pn      01 46 09.0 +1.0
CLUD                               S       Sb      01 46 41.3 +1.2
CLUD                               AML     AML
          comp=E,886µm,0.7s
CLUD                               AML     AML
          comp=N,818µm,1.0s
ZOU   Zoufplan           2.31 315 ⇓P       Pn      01 46 09.9 +1.4
ZOU                                S       Sb      01 46 40.2  -0.6
ZOU                                AML     AML
          comp=N,669µm,0.9s
ZOU                                AML     AML
          comp=E,880µm,0.8s
ARSA  Arzberg            2.32   3  ePn     Pn      01 46 08.9 +0.4
          comp=E,4.8nm,0.3s,SNR=24
ARSA  Arzberg            2.32   3⇑iPn     Pn      01 46 08.8 +0.4
ARSA                               eSn     Sn      01 46 37.5 +0.3
ARSA  Arzberg            2.32   3  ePn     Pn      01 46 08.9 +0.4
          SNR=49
ARSA                               ePg     Pb      01 46 10.7  -1.3
          SNR=49
ARSA  Arzberg            2.32   3 ⇑P       Pn      01 46 08.7 +0.3
ARSA                               AML     AML
          comp=E,188µm,1.1s
ARSA                               AML     AML
          comp=N,157µm,0.6s
SSFR  Montelago di S     2.37 232 ⇓P       Pn      01 46 09.2 +0.1
SSFR                               S       Sn      01 46 39.9 +1.5
SSFR                               AML     AML
          comp=E,510µm,0.3s
SSFR                               AML     AML
          comp=N,560µm,0.8s
SSFR                               AML     AML
          comp=E,482µm,0.3s
SSFR                               AML     AML
          comp=N,448µm,0.7s
NARO  Abbazia di Nar     2.38 237 ⇓P       Pn      01 46 09.4 +0.3
NARO                               S       Sn      01 46 40.9 +2.4
NARO                               AML     AML
          comp=E,316µm,0.9s
NARO                               AML     AML
          comp=N,312µm,0.5s
LSTV  Lastovo            2.44 152  ePn     Pn      01 46 11.2 +1.2
LSTV                               Sn      Sn      01 46 42.3 +2.2
PIEI  Pieia              2.45 236  P       Pn      01 46 10.4 +0.2
PIEI                               S       Sn      01 46 41.5 +1.2
PIEI                               AML     AML
          comp=N,294µm,0.6s
PIEI                               AML     AML
          comp=E,530µm,1.0s
VARN  Col Varnada, M     2.50 296  P       Pn      01 46 11.5 +0.6
VARN                               AML     AML
          comp=N,1290µm,0.7s
VARN                               AML     AML
          comp=E,1720µm,0.5s
ATFO  Monte Foce - G     2.53 233 ⇑P       Pn      01 46 13.1 +1.7
ATFO                               AML     AML
          comp=E,628µm,0.5s
ATFO                               AML     AML
          comp=N,548µm,1.2s
KBA   Koelnbreinsper     2.55 328  ePn     Pn      01 46 13.5 +1.8
          comp=N,8.7nm,0.3s,SNR=25
KBA                                Sn      Sn      01 46 45.3 +2.3
          comp=N,15nm,0.3s
KBA   Koelnbreinsper     2.55 328  ePn     Pn      01 46 13.8 +2.0
          SNR=16
KBA                                eSn     Sn      01 46 45.4 +2.3
          SNR=1.8
CESI  CESI - Serrava     2.61 223  P       Pn      01 46 12.6 +0.3
CESI                               S       Sn      01 46 45.3 +1.0
CESI                               AML     AML
          comp=E,493µm,1.4s
CESI                               AML     AML
          comp=N,515µm,0.5s
ATCC  AVT- Casa Cast     2.61 229 ⇓P       Pn      01 46 12.8 +0.4
ATCC                               AML     AML
          comp=E,650µm,0.9s
ATCC                               AML     AML
          comp=N,682µm,1.3s
MURB  Monte Urbino       2.62 231  Pn      Pn      01 46 12.8 +0.2
TEOL  Teolo              2.62 281          Pn      01 46 12.3  -0.3
NRCA  Norcia             2.64 218          Pn      01 46 12.7  -0.1
NRCA                               IAML            01 47 01.0
          comp=N,110nm,0.6s
NRCA                               IAML            01 47 08.4
          comp=E,154nm,0.9s
MORH  Mrgy, Hungar       2.66  60  ePn     Pn      01 46 14.3 +1.3
MORH                               eSn     Sn      01 46 46.4 +1.0
MORH  Mrgy, Hungar       2.66  60  P       Pn      01 46 12.2  -0.8
MORH  Mrgy, Hungar       2.66  60  PG      Pb      01 46 19.5 +1.9
MORH  Mrgy, Hungar       2.66  60  S       Sn      01 46 46.6 +1.2
CGRP  Cima Grappa        2.66 292 ⇓P       Pn      01 46 13.7 +0.4
CGRP                               AML     AML
          comp=N,743µm,0.6s
CGRP                               AML     AML
          comp=E,1050µm,0.6s
ABTA  Abfaltersbach      2.68 314  ePn     Pn      01 46 14.7 +1.3
          comp=E,5.9nm,0.3s,SNR=38
STON  Ston               2.68 139  ePg     Pn      01 46 16.4 +3.1
STON                               eSg     Sb      01 46 52.9 +1.8
STON  Ston               2.68 139  ePn     Pn      01 46 15.1 +1.8
STON                               eSn     Sn      01 46 47.0 +1.0
STON  Ston               2.68 139  ePn     Pn      01 46 15.2 +1.8
STON                               Sn      Sn      01 46 48.6 +2.6
STON  Ston               2.68 139 ⇓P       Pn      01 46 15.6 +2.3
STON                               AML     AML
          comp=E,557µm,1.0s
STON                               AML     AML
          comp=N,534µm,0.6s
ASSB  Assisi San Ben     2.70 226 ⇓P       Pn      01 46 14.0 +0.3
ASSB                               AML     AML
          comp=E,454µm,0.4s
ASSB                               AML     AML
          comp=N,564µm,0.6s
MPLH  Magyarpolny        2.71  34  P       Pn      01 46 13.6  -0.2
MPLH                               S       Sn      01 46 47.6 +0.7
LMD   Lutirano           2.73 253 ⇓P       Pn      01 46 16.0 +2.0
LMD                                AML     AML
          comp=E,274µm,0.7s
LMD                                AML     AML
          comp=N,242µm,1.4s
ATTE  AVT- Monte Tez     2.76 232  P       Pn      01 46 15.5 +1.0
ATTE                               AML     AML
          comp=N,320µm,0.4s
ATTE                               AML     AML
          comp=E,281µm,0.8s
CRE   Caprese Michel     2.76 243  P       Pn      01 46 15.8 +1.3
CRE                                AML     AML
          comp=N,314µm,1.6s
CRE                                AML     AML
          comp=E,220µm,0.8s
ASQU  Asqua              2.78 247  P       Pn      01 46 15.9 +1.1
ASQU                               AML     AML
          comp=E,398µm,1.2s
ASQU                               AML     AML
          comp=N,330µm,0.8s
BLJ   Bijeljina          2.80  92  ePn     Pn      01 46 16.0 +1.0
BLJ                                eSn     Sn      01 46 48.8  -0.2
CTI   Castel Tesino      2.82 295  Pn      Pn      01 46 16.0 +0.7
CTI   Castel Tesino      2.82 295  P       Pn      01 46 16.4 +1.1
CTI                                AML     AML
          comp=E,797µm,0.3s
CTI                                AML     AML
          comp=N,908µm,0.5s
RONA  Rosalia, Austr     2.84  13  ePn     Pn      01 46 16.2 +0.6
          comp=N,62nm,0.4s,SNR=107
EGYH  Egyhazaskeszo      2.85  29  P       Pn      01 46 17.1 +1.5
EGYH                               S       Sn      01 46 50.6 +0.5
LNSS  Leonessa           2.86 216  P       Pn      01 46 16.9 +1.0
LNSS                               AML     AML
          comp=E,500µm,0.5s
LNSS                               AML     AML
          comp=N,536µm,0.4s
RM33  Pellescritta (     2.87 213 ⇑P       Pn      01 46 17.2 +1.2
RM33                               AML     AML
          comp=N,380µm,0.3s
RM33                               AML     AML
          comp=E,324µm,1.1s
SOP   Sopron             2.88  17  PN      Pn      01 46 17.1 +1.1
SOP   Sopron             2.88  17  S       Sn      01 46 50.6  -0.2
CAFI  Castiglion Fio     2.91 238  P       Pn      01 46 17.2 +0.8
CAFI                               AML     AML
          comp=E,204µm,0.7s
CAFI                               AML     AML
          comp=N,280µm,0.9s
AQU   L'Aquila           2.94 209  Pn      Pn      01 46 18.2 +1.3
AQU                                IAML            01 47 28.9
          comp=N,90nm,0.9s
AQU                                IAML            01 47 30.4
          comp=E,85nm,0.8s
FAGN  Fagnano            2.95 206 ⇑P       Pn      01 46 17.6 +0.4
FAGN                               AML     AML
          comp=E,774µm,0.5s
FAGN                               AML     AML
          comp=N,567µm,0.4s
SEI   Scarperia          2.98 254  P       Pn      01 46 18.6 +1.1
SEI                                AML     AML
          comp=N,476µm,0.5s
SEI                                AML     AML
          comp=E,554µm,0.6s
BIOA  Bad Ischl, Aus     3.00 338  ePn     Pn      01 46 19.8 +2.1
          comp=E,5.0nm,0.2s,SNR=15
BIOA                               Sn      Sn      01 46 56.9 +3.1
          comp=E,61nm,0.4s
RAVA  Ravarino           3.00 268  P       Pn      01 46 19.3 +1.6
RAVA                               AML     AML
          comp=N,668µm,1.1s
RAVA                               AML     AML
          comp=E,797µm,1.1s
MOA   Molln              3.01 346  ePn     Pn      01 46 19.3 +1.5
          comp=E,6.2nm,0.3s,SNR=9.4
MOA                                Sn      Sn      01 46 55.1 +1.0
          comp=E,32nm,0.4s
MOA   Molln              3.01 346  ePn     Pn      01 46 19.5 +1.7
          SNR=39
TEKS  Tekeris            3.02  96  ePn     Pn      01 46 19.0 +1.0
TEKS  Tekeris            3.02  96  ePn     Pn      01 46 19.4 +1.4
CONA  Conrad Observa     3.02   7  ePn     Pn      01 46 18.7 +0.7
          comp=E,21nm,0.4s,SNR=50
RISI  Rein               3.03 313  P       Pn      01 46 19.8 +1.4
RISI                               AML     AML
          comp=E,1450µm,0.6s
RISI                               AML     AML
          comp=N,1105µm,0.5s
DBRK  Dubrovnik          3.05 137  ePn     Pn      01 46 20.0 +1.6
DBRK                               Sn      Sn      01 46 58.2 +3.2
DOSS  Dosso del Somm     3.07 289 ⇓P       Pn      01 46 19.4 +0.6
DOSS                               AML     AML
          comp=E,704µm,0.5s
DOSS                               AML     AML
          comp=N,694µm,0.5s
DOSS                               AML     AML
          comp=N,665µm,0.5s
DOSS                               AML     AML
          comp=E,661µm,0.5s
MGAB  Montegabbione      3.08 230  P       Pn      01 46 19.4 +0.5
MGAB                               AML     AML
          comp=E,317µm,0.3s
MGAB                               AML     AML
          comp=N,427µm,0.5s
MGAB                               AML     AML
          comp=E,328µm,0.5s
MGAB                               AML     AML
          comp=N,426µm,0.5s
BRY   Bratogost          3.08 130  ePn     Pn      01 46 20.9 +1.9
BRY                                eSn     Sn      01 46 56.5 +0.4
BRY   Bratogost          3.08 130⇓iPn     Pn      01 46 20.9 +1.9
BRY                                i Sn    Sn      01 46 58.7 +2.6
ROVR  Rover Verones      3.09 285 ⇓P       Pn      01 46 19.3 +0.3
ROVR                               AML     AML
          comp=E,196µm,0.6s
ROVR                               AML     AML
          comp=N,250µm,0.9s
UPM   Unac-Piva          3.10 123  ePn     Pn      01 46 20.6 +1.2
UPM                                eSn     Sn      01 46 57.5 +0.8
UPM   Unac-Piva          3.10 123⇑iPn     Pn      01 46 20.5 +1.2
UPM                                i Sn    Sn      01 46 59.5 +2.8
BBLS  Lazi&#263;i        3.11 109  ePn     Pn      01 46 20.0 +0.7
BBLS                               eSg     Sg      01 47 10.2 +0.5
BBLS  Lazi&#263;i        3.11 109⇑iPn     Pn      01 46 20.0 +0.7
BBLS                               eSn     Sn      01 46 57.1 +0.4
FIAM  Fiamignano         3.11 212  P       Pn      01 46 20.8 +1.5
FIAM                               AML     AML
          comp=E,246µm,0.8s
FIAM                               AML     AML
          comp=N,206µm,0.6s
TREB  Trebinje           3.11 134  ePn     Pn      01 46 22.8 +3.5
TREB                               eSg     Sg      01 47 07.6  -2.2
TREB  Trebinje           3.11 134  ePn     Pn      01 46 21.3 +2.0
TREB                               eSn     Sn      01 46 58.0 +1.3
ZCCA  Zocca              3.16 261  Pn      Pn      01 46 21.5 +1.5
ZCCA                               IAML            01 47 49.5
          comp=E,68nm,1.1s
ZCCA                               IAML            01 47 50.6
          comp=N,66nm,0.8s
KOSI  Kohlern            3.16 300  P       Pn      01 46 21.6 +1.5
KOSI                               AML     AML
          comp=N,848µm,0.6s
KOSI                               AML     AML
          comp=E,1150µm,0.6s
CSKK  Cskako             3.17  39  P       Pn      01 46 19.9  -0.1
APRC  Apricena           3.18 177 ⇑P       Pn      01 46 21.0 +0.8
APRC                               S       Sn      01 46 59.0 +0.6
APRC                               AML     AML
          comp=E,254µm,0.5s
APRC                               AML     AML
          comp=N,285µm,0.6s
FRGS  Fruska Gora        3.18  84 ⇑P       Pn      01 46 20.6 +0.3
FRGS                              ⇓S       Sn      01 46 57.2  -1.3
FRGS  Fruska Gora        3.18  84  ePn     Pn      01 46 19.5  -0.8
FRGS                               eSg     Sg      01 47 09.9  -2.1
FRGS  Fruska Gora        3.18  84  ePn     Pn      01 46 20.7 +0.4
FRGS                               eSn     Sn      01 46 59.1 +0.7
RUDO  Rudo               3.19 113  ePn     Pn      01 46 21.3 +1.0
RUDO                               eSn     Sn      01 46 59.4 +0.9
SGRT  San Giovanni R     3.19 174  Pn      Pn      01 46 20.6 +0.2
MSAG  Monte S. Angel     3.25 172  P       Pn      01 46 22.2 +1.0
LUSI  Trento, Gardas     3.25 290 ⇓P       Pn      01 46 21.9 +0.6
LUSI                               AML     AML
          comp=E,492µm,0.8s
LUSI                               AML     AML
          comp=N,690µm,0.4s
OSSC  Osservatorio P     3.26 246  Pn      Pn      01 46 22.0 +0.7
OSSC                               IAML            01 47 23.7
          comp=E,64nm,0.6s
GAGG  Gaggia             3.28 292 ⇑P       Pn      01 46 22.7 +1.0
GAGG                               AML     AML
          comp=N,378µm,0.5s
GAGG                               AML     AML
          comp=E,668µm,0.8s
RJOB  Jochberg           3.31 329  ePn     Pn      01 46 24.5 +2.5
          SNR=46
RJOB                               eSn     Sn      01 47 05.5 +3.9
          SNR=3.0
ABSI  Aberstueckl        3.33 304 ⇓P       Pn      01 46 23.6 +1.2
ABSI                               AML     AML
          comp=E,872µm,0.6s
ABSI                               AML     AML
          comp=N,1465µm,0.6s
PLE   Pljevlja           3.33 117⇑iPn     Pn      01 46 23.6 +1.2
PLE                                i Sn    Sn      01 47 04.0 +1.7
HCY   Herceg Novi        3.38 136  ePn     Pn      01 46 24.7 +1.7
HCY                                eSn     Sn      01 47 04.1 +0.7
HCY   Herceg Novi        3.38 136⇑iPn     Pn      01 46 24.5 +1.5
HCY                                i Sn    Sn      01 47 06.2 +2.8
ROSI  Rosskopf           3.38 307  P       Pn      01 46 24.9 +1.7
ROSI                               AML     AML
          comp=E,688µm,0.8s
ROSI                               AML     AML
          comp=N,513µm,0.7s
NKY   Niksic             3.39 127⇑iPn     Pn      01 46 24.6 +1.4
NKY                                i Sn    Sn      01 47 05.9 +2.2
NKME  Niksic             3.40 128⇑iPn     Pn      01 46 24.9 +1.6
NKME                               i Sn    Sn      01 47 06.5 +2.7
MAGA  Magasa             3.42 286 ⇓P       Pn      01 46 23.8 +0.2
MAGA                               AML     AML
          comp=E,1425µm,0.5s
MAGA                               AML     AML
          comp=N,548µm,0.7s
DIVS  Divibare           3.44 102  ePn     Pn      01 46 24.9 +1.1
DIVS                               eSg     Sg      01 47 20.2   0.0
DIVS  Divibare           3.44 102          Pn      01 46 24.7 +0.9
DIVS                               IAML            01 47 30.0
          comp=N,61nm,1.1s
DIVS  Divibare           3.44 102  ePn     Pn      01 46 25.0 +1.1
DIVS                               eSn     Sn      01 47 05.2 +0.4
SALO  Salr               3.46 283  Pn      Pn      01 46 24.2 +0.1
SALO  Salr               3.46 283 ⇓P       Pn      01 46 24.5 +0.4
SALO                               AML     AML
          comp=E,674µm,1.0s
SALO                               AML     AML
          comp=N,686µm,1.1s
WTTA  Wattenberg         3.47 314  i Pn    Pn      01 46 26.1 +1.9
          comp=N,19nm,0.3s,SNR=35
WTTA  Wattenberg         3.47 314  ePn     Pn      01 46 26.2 +1.9
          SNR=69
WTTA                               eSn     Sb      01 47 10.6  -3.4
          SNR=2.7
WTTA                               eSg     Sg      01 47 25.7 +4.5
WTTA  Wattenberg         3.47 314  P       Pn      01 46 25.9 +1.6
WTTA                               AML     AML
          comp=E,314µm,0.8s
WTTA                               AML     AML
          comp=N,242µm,0.9s
ZST   Bratislava         3.48  20  ePN     Pn      01 46 24.8 +0.4
ZST                                eSN     Sn      01 47 06.2 +0.4
ZST                                eSG     Sg      01 47 24.1 +2.4
CEME  Cevo               3.53 131⇑iPn     Pn      01 46 27.2 +2.1
CEME                               i Sn    Sn      01 47 09.5 +2.5
SRO   Srobarova          3.54  35  ePN     Pn      01 46 26.4 +1.2
SRO                                eSN     Sn      01 47 06.7  -0.5
WATA  Walderalm          3.55 314  i Pn    Pn      01 46 27.8 +2.4
          comp=N,11nm,0.3s,SNR=36
PRMA  PARMA              3.57 269  Pn      Pn      01 46 26.8 +1.3
PRMA                               IAML            01 47 16.7
          comp=E,116nm,0.8s
PRMA                               IAML            01 47 55.0
          comp=N,68nm,0.9s
BUD   Budapest           3.62  44  P       Pn      01 46 25.5  -0.7
BUD                                S       Sn      01 47 10.3 +1.3
SQTA  Sankt Quirin       3.67 310  i Pn    Pn      01 46 29.1 +2.1
          comp=N,8.3nm,0.3s,SNR=13
KOME  Kolasin            3.67 123⇑iPn     Pn      01 46 28.8 +1.7
KOME                               i Sn    Sn      01 47 12.5 +1.9
BUM   Brajici-Budva      3.69 134⇑iPn     Pn      01 46 29.0 +1.7
BUM                                i Sn    Sn      01 47 13.1 +2.1
MODS  Modra-Piesok       3.69  21  ePN     Pn      01 46 27.5 +0.2
MODS                               eSG     Sg      01 47 29.5 +1.2
TRUS  Trudelj            3.70  99  ePn     Pn      01 46 28.4 +1.1
IVAS  Ivanjica           3.72 110  ePn     Pn      01 46 28.3 +0.6
IVAS                               eSg     Sg      01 47 28.4  -0.9
SJES  Sjenica            3.74 115  ePn     Pn      01 46 29.1 +1.1
SJES                               eSg     Sg      01 47 29.3  -0.6
SJES  Sjenica            3.74 115  ePn     Pn      01 46 28.9 +0.9
SJES                               eSn     Sn      01 47 12.5 +0.2
MOSI  Grossmontoni       3.74 298  P       Pn      01 46 29.8 +1.6
MOSI                               AML     AML
          comp=E,1195µm,0.7s
MOSI                               AML     AML
          comp=N,1555µm,0.5s
ZONE  Zone               3.77 285 ⇑P       Pn      01 46 28.7 +0.4
ZONE                               AML     AML
          comp=E,185µm,0.5s
ZONE                               AML     AML
          comp=N,261µm,0.7s
LAV9  Lanuvio            3.78 211  AML     AML
          comp=E,249µm,0.4s
LAV9                               AML     AML
          comp=E,552µm,1.6s
LAV9                               AML     AML
          comp=N,248µm,0.5s
LAV9                               AML     AML
          comp=N,293µm,0.8s
PDG   Podgorica          3.79 130 ⇓P       Pn      01 46 29.3 +0.7
PDG                               ⇑S       Sn      01 47 12.9  -0.5
PDG   Podgorica          3.79 130  Pn      Pn      01 46 31.2 +2.6
PDG                                IAML            01 47 34.5
          comp=E,50nm,0.8s
PDG                                IAML            01 47 38.3
          comp=N,56nm,1.0s
PDG   Podgorica          3.79 130  ePn     Pn      01 46 30.2 +1.6
PDG                                eSn     Sn      01 47 13.9 +0.5
TTG   Podgorica          3.79 130⇑iPn     Pn      01 46 30.1 +1.5
TTG                                i Sn    Sn      01 47 15.9 +2.5
MOTA  Moosalm            3.80 311  i Pn    Pn      01 46 31.1 +2.3
          comp=N,5.9nm,0.4s,SNR=20
MOTA                               eSn     Sn      01 47 16.5 +2.6
          comp=N,28nm,0.4s
FETA  Feichten           3.83 305  ePn     Pn      01 46 31.0 +1.7
          comp=N,5.0nm,0.4s,SNR=6.0
SMOL  Smolenice          3.86  21  ePN     Pn      01 46 29.4  -0.1
CASP  Castiglione de     3.88 238  Pn      Pn      01 46 28.5  -1.3
IVA   Berane             3.89 120⇓iPn     Pn      01 46 31.3 +1.3
IVA                                i Sn    Sn      01 47 18.2 +2.2
PART  Garmisch-Parte     3.89 313  ePn     Pn      01 46 32.0 +1.9
          SNR=5.3
PART                               eSn     Sn      01 47 19.3 +3.4
          SNR=1.9
ZUGS  Zugspitze, Sch     3.91 311  ePn     Pn      01 46 33.4 +2.9
          SNR=4.3
ZUGS                               eSn     Sn      01 47 21.9 +5.2
          SNR=2.4
DRME  Dracevica, Mon     3.92 133  ePn     Pn      01 46 32.1 +1.7
DRME                               eSn     Sn      01 47 17.1 +0.4
DRME  Dracevica, Mon     3.92 133⇑iPn     Pn      01 46 32.3 +1.9
DRME                               i Sn    Sn      01 47 19.0 +2.3
PAOL  Paolisi            3.94 188  Pn      Pn      01 46 31.2 +0.5
CKRC  Cesky Krumlov      3.95 350  ePN     Pn      01 46 31.9 +1.1
CKRC                               eSN     Sn      01 47 16.5  -0.8
GRUS  Gruza              4.00 103  ePn     Pn      01 46 32.5 +1.1
GEC2  GERESS Array S     4.07 345  Pn      Pn      01 46 32.7 +0.2
GEC2  GERESS Array S     4.07 345  eSn     Sn      01 47 20.4   0.0
          SNR=4.1
GERES GERESS Array B     4.07 345  Pn      Pn      01 46 33.6 +1.1
          comp=N,1.6nm,0.3s,baz=158,slow=14,SNR=35
GERES                              Sn      Sn      01 47 20.0  -0.4
          comp=N,9.2nm,0.3s,baz=161,slow=25,SNR=17
          comp=N,2.1nm,0.3s
RETA  Reutte             4.07 310  i Pn    Pn      01 46 34.5 +2.0
          comp=N,1.6nm,0.3s
RETA                               eSn     Sn      01 47 24.3 +3.9
          comp=N,16nm,0.5s
PVY   Plav               4.09 123  ePn     Pn      01 46 34.6 +1.8
ULC   Ulcinj             4.12 135⇓iPn     Pn      01 46 34.5 +1.4
ULC                                i Sn    Sn      01 47 23.6 +2.1
BANR  Banloc             4.13  82 ⇓S       Sn      01 47 22.5 +0.8
AMUR  Altamura           4.13 166 ⇓P       Pn      01 46 34.7 +1.4
AMUR                               AML     AML
          comp=N,60µm,0.8s
AMUR                               AML     AML
          comp=E,80µm,0.5s
BSZH  Besenyszg          4.17  54 ⇓S       Sn      01 47 22.1  -0.5
KRUC  Moravsky           4.19  10  ePN     Pn      01 46 34.1   0.0
KRUC                               eSN     Sn      01 47 21.7  -1.6
MSSA  Maissana           4.20 264          Pn      01 46 35.7 +1.5
MSSA                               IAML            01 47 30.8
          comp=E,57nm,0.7s
MSSA                               IAML            01 47 34.8
          comp=N,41nm,0.8s
MSSA  Maissana           4.20 264  P       Pn      01 46 35.7 +1.5
MSSA                               AML     AML
          comp=E,144µm,0.8s
MSSA                               AML     AML
          comp=N,104µm,0.7s
KOLL  Kolacno            4.21  29  ePN     Pn      01 46 34.8 +0.4
KOLL                               eSN     Sn      01 47 23.0  -0.8
TIM   Timisoara          4.23  77 ⇓S       Sn      01 47 23.5  -0.6
DAVOX Davos/Dischmat     4.23 298  Pn      Pn      01 46 36.6 +1.8
          comp=N,5.9nm,0.3s,baz=109,slow=10.0,SNR=80
DAVOX                              Sn      Sn      01 47 22.0  -2.5
          comp=N,1.5nm,0.3s,baz=291,slow=23,SNR=1.1
DAVOX                              LR      LR      01 47 51.9
          comp=N,11nm,19.9s,baz=72,slow=35
DAVOX Davos/Dischmat     4.23 298  P       Pn      01 46 36.6 +1.8
DAVOX                              AML     AML
          comp=E,107µm,1.0s
DAVOX                              AML     AML
          comp=N,122µm,0.6s
JAVC  Velka Javorina     4.24  21  ePN     Pn      01 46 35.6 +0.8
FUR   Furstenfeldbru     4.27 321  ePn     Pn      01 46 37.0 +1.8
          SNR=3.9
OBER  Oberstdorf         4.28 307  eSn     Sn      01 47 31.4 +5.7
          SNR=2.1
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VYHS	Vyhne	4.30	33	*e*PN	Pn	01 46 35.7	+0.1
VYHS				*e*SN	Sn	01 47 23.7	-2.3
NOCI	Noci	4.33	162	⇑P	Pn	01 46 37.2	+1.1
PSZ	Piszkesteto	4.34	45	⇑P	Pn	01 46 36.7	+0.4
PSZ				⇓S	Sn	01 47 28.1	+1.0
PSZ	Piszkesteto	4.34	45	Pn	Pn	01 46 35.0	-1.2
PSZ				IAML		01 48 16.4	
	comp=N,29nm,1.1s						
PSZ	Piszkesteto	4.34	45	P	Pn	01 46 35.1	-1.2
PSZ				S	Sn	01 47 28.4	+1.3
TREC	Trest	4.36	1	*e*PN	Pn	01 46 37.4	+0.9
KHC	Kasperske Hory	4.37	345	Pn	Pn	01 46 37.2	+0.6
KHC				IAML		01 47 29.2	
	comp=E,24nm,0.7s						
KHC	Kasperske Hory	4.37	345	*e*PN	Pn	01 46 37.5	+1.0
KHC				*e*SN	Sn	01 47 26.5	-1.1
MATE	Matera	4.40	166	⇓P	Pn	01 46 38.3	+1.4
MATE				⇑S	Sn	01 47 28.3	-0.1
MIGL	Miglionico	4.41	169	⇑P	Pn	01 46 37.9	+0.8
DAVA	Damuels	4.46	304	*i* Pn	Pn	01 46 40.4	+2.4
	comp=E,4.6nm,0.3s						
DAVA				*e*Sn	Sn	01 47 33.0	+2.9
	comp=E,21nm,0.6s						
DAVA	Damuels	4.46	304	*e*Pn	Pn	01 46 40.6	+2.6
	SNR=6.5						
VRAC	Vranov	4.46	11	Pn	Pn	01 46 38.1	+0.3
	comp=E,2.0nm,0.3s,baz=193,slow=13,SNR=33						
VRAC				Sn	Sn	01 47 27.9	-2.0
	comp=E,1.1nm,0.3s,baz=288,slow=20,SNR=6.1						
VRAC				LR	LR	01 48 38.5	
	comp=E,25nm,19.1s,baz=196,slow=42						
	comp=E,11nm,0.5s						
VRAC	Vranov	4.46	11	*e*PN	Pn	01 46 37.7	-0.1
VRAC				*e*SN	Sn	01 47 27.3	-2.6
TUE	Stuetta	4.46	292	Pn	Pn	01 46 40.1	+2.1
TUE				IAML		01 47 57.5	
	comp=N,44nm,0.8s						
TUE	Stuetta	4.46	292	P	Pn	01 46 39.8	+1.7
TUE				AML	AML		
	comp=N,116µm,0.5s						
TUE				AML	AML		
	comp=E,166µm,0.7s						
BZS	Buzias	4.49	79	⇓P	Pn	01 46 38.4	+0.2
BZS				⇓S	Sn	01 47 30.7	0.0
BZS	Buzias	4.49	79	*e*Pn	Pn	01 46 38.9	+0.7
SELS	Selova	4.51	110	*e*Pn	Pn	01 46 38.5	0.0
WET	Wettzell	4.53	339	*e*Pn	Pn	01 46 39.6	+0.8
	SNR=9.7						
WET				*e*Sn	Sn	01 47 30.7	-1.0
	SNR=2.7						
MDVR	Moldovita	4.54	90	⇓P	Pn	01 46 39.7	+0.7
UBR	Ueberruh	4.54	309	*e*Pn	Pn	01 46 40.5	+1.5
	SNR=8.6						
PLONS	Plons/SG	4.65	299	*e*Pn	Pn	01 46 42.9	+2.4
	SNR=24						
PLONS	Plons/SG	4.65	299	P	Pn	01 46 42.7	+2.2
PLONS				AML	AML		
	comp=N,60µm,1.3s						
PLONS				AML	AML		
	comp=E,69µm,1.2s						
MAUC	Maruska	4.75	20	*e*PN	Pn	01 46 42.1	+0.3
MAUC				*e*SN	Sn	01 47 35.1	-1.9
PBCC	Pribram	4.84	350	*e*PN	Pn	01 46 43.9	+0.9
PBCC				*e*SN	Sn	01 47 38.0	-1.2
TIR	Tirane	4.88	136	⇑S	Sn	01 47 40.9	+0.5
TIR	Tirane	4.88	136	Pn	Pn	01 46 45.6	+2.0
TIR				IAML		01 48 22.0	
	comp=E,39nm,1.4s						
CUC	Castrocucco	4.95	176	Pn	Pn	01 46 45.1	+0.6
CUC				IAML		01 47 56.7	
	comp=E,16nm,0.6s						
NORI	Noerdlinger Ri	4.98	321	*e*Pn	Pn	01 46 46.0	+1.1
	SNR=4.6						
NORI				*e*Sn	Sn	01 47 42.4	-0.2
	SNR=3.9						
KECS	Kecovo	5.02	43	*e*PN	Pn	01 46 46.3	+0.9
HERR	Herculane	5.03	88	⇑P	Pn	01 46 46.2	+0.5
HERR				⇓S	Sn	01 47 43.0	-1.0
MORC	Moravsky Berou	5.07	16	⇓P	Pn	01 46 47.2	+0.9
MORC				⇓S	Sn	01 47 45.8	+0.8
MORC	Moravsky Berou	5.07	16	Pn	Pn	01 46 46.7	+0.4
MORC	Moravsky Berou	5.07	16	*e*PN	Pn	01 46 46.6	+0.4
MORC				*e*SN	Sn	01 47 45.3	+0.3
ZAGS	Zajecar	5.07	100	*e*Pn	Pn	01 46 46.8	+0.6
LANS	Liptovska Anna	5.08	32	*e*PN	Pn	01 46 48.2	+1.9
PRU	Pruhonice	5.08	354	*e*PN	Pn	01 46 47.0	+0.7
PRU				*e*SN	Sn	01 47 43.6	-1.7
WILA	Wila	5.10	301	*e*Pn	Pn	01 46 48.4	+1.7
	SNR=3.6						
BARS	Barje	5.14	112	*e*Pn	Pn	01 46 42.6	-4.6
BARS	Barje	5.14	112	*e*Pn	Pn	01 46 48.0	+0.8
PGF	Pioggiola	5.17	245	*e*Pn	Pn	01 46 46.3	-1.3
PGF				*e*Sn	Sn	01 47 43.1	-4.4
	comp=E,9.5nm,0.6s						
LTVH	Ltavrtes, Hu	5.18	59	⇑S	Sn	01 47 47.0	-0.6
KRLC	Kraliky	5.24	10	*e*PN	Pn	01 46 49.2	+0.7
KRLC				*e*SN	Sn	01 47 47.7	-1.4
OKC	Ostrava-Krasne	5.26	20	*e*PN	Pn	01 46 49.0	+0.2
GZR	Gura Zlata	5.29	82	⇑P	Pn	01 46 49.4	+0.2
GZR				⇑S	Sn	01 47 49.5	-0.8
SCTE	Santa Cesarea	5.38	153	Pn	Pn	01 46 50.8	+0.3
SCTE	Santa Cesarea	5.38	153	⇓P	Pn	01 46 51.3	+0.8
SCTE				AML	AML		
	comp=N,61µm,0.8s						
SCTE				AML	AML		
	comp=E,54µm,0.6s						
BLKB	Belogradchik	5.43	101	⇑P	Pn	01 46 51.3	+0.1
BLKB				⇓S	Sn	01 47 53.2	-0.8
DPC	Dobruska-Polom	5.46	7	*e*PN	Pn	01 46 51.8	+0.2
DRGR		5.48	68	⇓P	Pn	01 46 52.2	+0.3
SLE	Schleitheim	5.51	303	*e*Sn	Sn	01 47 56.3	+0.3
	SNR=1.4						
GRF	Grafenberg Arr	5.52	331	*e*Sn	Sn	01 47 56.0	+0.1
	SNR=2.2						
OHR	Ohrid	5.54	132	*i* Pn	Pn	01 46 55.5	+2.8
OHR				*e*Sn	Sn	01 48 01.1	+4.6
UPC	Upice	5.59	4	*e*PN	Pn	01 46 54.3	+0.9
PVCC	Panska Ves	5.62	355	*e*PN	Pn	01 46 55.3	+1.6
NKC	Novy Kostel	5.65	341	*e*PN	Pn	01 46 54.6	+0.5
NKC				*e*SN	Sn	01 47 56.3	-2.9
OSTC	Ostas	5.66	6	*e*PN	Pn	01 46 54.7	+0.5
CHVC	Chvalec	5.68	5	*e*PN	Pn	01 46 55.3	+0.8
STU	Stuttgart	5.69	315	Pn	Pn	01 46 53.9	-0.9
STU	Stuttgart	5.69	315	*e*Pn	Pn	01 46 55.5	+0.8
	SNR=3.3						
BOSS	Bosilegrad	5.73	113	*e*Pn	Pn	01 46 55.7	+0.5
SBF	Sospel	5.76	262	*e*Pn	Pn	01 46 55.0	-0.7
SBF	Sospel	5.76	262	*e*P	Pn	01 46 58.4	+2.7
SBF				*e*Sn	Sn	01 47 55.8	-6.2
	comp=E,33nm,0.5s						
GUNZ	Gunzen	5.80	341	*e*Pn	Pn	01 46 57.5	+1.3
	SNR=4.1						
SENIN	Lac Senin/Sane	5.81	287	Pn	Pn	01 46 57.9	+1.4
TANN	Tannenbergstha	5.81	342	*e*Pn	Pn	01 46 58.4	+2.0
	SNR=5.6						
BALST	Balsthal	5.82	297	*e*Pn	Pn	01 46 57.8	+1.2
	SNR=4.9						
KBN	Korca	5.89	135	Pn	Pn	01 46 60.0	+2.5
BFO	Black Forest	5.90	308	Pn	Pn	01 46 57.6	0.0
BFO	Black Forest	5.90	308	*e*Pn	Pn	01 46 58.0	+0.5
	SNR=9.7						
PLN	Plauen	5.95	340	*e*Pn	Pn	01 47 00.8	+2.6
	SNR=3.2						
STIP	Stip	5.96	121	*i* Pn	Pn	01 47 02.4	+4.0
BRG	Berggiesshubel	6.01	352	Pn	Pn	01 47 00.6	+1.5
BRG				Amp		01 47 02.4	
	comp=Z,3.3nm,0.4s						
BRG	Berggiesshubel	6.01	352	Pg	Pg	01 47 28.8	+3.9
BRG				*e*x	x	01 48 00.0	
BRG	Berggiesshubel	6.01	352	Sn	Sn	01 48 08.5	+0.3
BRG				*e*x	x	01 48 19.2	
BRG	Berggiesshubel	6.01	352	Sg	Sg	01 48 41.6	-1.2
BRG				Amp		01 48 45.5	
	comp=Z,10nm,0.7s						
BRG	Berggiesshubel	6.01	352	*e*Pn	Pn	01 46 59.3	+0.2
	SNR=5.1						
FNA	Florina	6.08	131	Pn	Pn	01 47 01.7	+1.6
LPG	La Plagne	6.09	278	*e*Pn	Pn	01 47 00.5	+0.1
LPG				*e*Sn	Sn	01 48 04.5	-5.9
	comp=Z,47nm,0.8s						
MBDF	Montbardon	6.09	271	*e*Pn	Pn	01 46 59.5	-0.8
MBDF				*e*Sn	Sn	01 48 03.9	-6.4
	comp=Z,19nm,0.6s						
LPL	La Plagne	6.10	279	*e*Pn	Pn	01 47 00.1	-0.4
LPL	La Plagne	6.10	279	*e*P	Pn	01 47 03.5	+3.0
LPL				*e*Sn	Sn	01 48 05.6	-5.0
	comp=Z,24nm,0.6s						
BNI	Bardonecchia	6.14	274	Pn	Pn	01 47 01.8	+0.8
VTS	Vitosha	6.17	109	⇓P	Pn	01 47 01.0	-0.5
VTS	Vitosha	6.17	109	Pn	Pn	01 47 01.9	+0.5
KEK	Kerkira	6.18	146	Pn	Pn	01 47 02.0	+0.6
MOX	Moxa	6.24	338	*e*Pn	Pn	01 47 02.8	+0.6
	SNR=14						
ECH	Echery	6.52	303		Pn	01 47 06.1	0.0
HINF	Hinteralfeld	6.53	299	*e*Pn	Pn	01 47 06.1	-0.2
HINF				*e*Sn	Sn	01 48 14.6	-6.4
	comp=Z,26nm,0.5s						
CDF	Champ du Feu	6.54	305	*e*Pn	Pn	01 47 05.5	-0.9
CDF				*e*Sn	Sn	01 48 12.7	-8.6
	comp=Z,14nm,0.7s						
LMR	La Mourre	6.55	259	*e*Pn	Pn	01 47 05.3	-1.1
LMR				*e*Sn	Sn	01 48 15.2	-6.1
	comp=Z,8.4nm,0.5s						
CLL	Collm	6.56	347	Pn	Pn	01 47 06.8	+0.2
CLL	Collm	6.56	347	*e*Pn	Pn	01 47 08.0	+1.3
CLL				*e*Sn	Sn	01 48 18.0	-3.7
CLL				*e*Sg	Sg	01 48 55.0	-5.4
	comp=Z,23nm,0.8s						
CLL	Collm	6.56	347	*e*Pn	Pn	01 47 08.0	+1.3
	SNR=3.9						
CABF	La Chapelle	6.68	288	*e*Pn	Pn	01 47 07.8	-0.5
CABF				*e*Sn	Sn	01 48 17.1	-7.6
	comp=Z,9.2nm,0.6s						
ORIF	Oris-en-Rattie	6.71	273	*e*Pn	Pn	01 47 07.2	-1.6
ORIF	Oris-en-Rattie	6.71	273	*e*P	Pn	01 47 11.9	+3.1
ORIF				*e*Sn	Sn	01 48 18.5	-6.9
	comp=Z,29nm,0.6s						
KWP	Kalwaria Pacla	6.87	44	Pn	Pn	01 47 13.0	+2.1
HAU	Haudompre	6.92	300	*e*Pn	Pn	01 47 11.2	-0.4
HAU	Haudompre	6.92	300	*e*P	Pn	01 47 14.7	+3.1
HAU				*e*Sn	Sn	01 48 23.9	-6.6
	comp=Z,24nm,0.5s						
SMRF	Simiane la Rot	7.05	266	*e*Pn	Pn	01 47 13.6	+0.2
SMRF				*e*Sn	Sn	01 48 26.8	-6.9
	comp=Z,2.4nm,0.4s						
LIT	Litokhoron	7.16	130	Pn	Pn	01 47 15.5	+0.6
BUR08	Bucovina Ar. S	7.36	65	Pn	Pn	01 47 20.1	+2.5
BURAR	Bucovina Array	7.36	65	⇑P	Pn	01 47 17.8	+0.2
BURAR	Bucovina Array	7.36	65	Pn	Pn	01 47 20.0	+2.3
MLR	Muntele Rosu	7.52	82	⇑P	Pn	01 47 19.9	0.0
MLR	Muntele Rosu	7.52	82	Pn	Pn	01 47 23.0	+3.1
	comp=Z,0.1nm,0.3s,baz=3.2,slow=12,SNR=2.4						
	comp=Z,0.9nm,0.8s						
PAGF	Fort de Pagny	7.53	302	*e*Pn	Pn	01 47 18.4	-1.5
PAGF				*e*Sn	Sn	01 48 37.0	-8.4
	comp=Z,12nm,0.7s						
VIVF	Saint-Julien-l	7.57	273	*e*Pn	Pn	01 47 16.7	-3.8
VIVF				*e*Sn	Sn	01 48 40.2	-6.3
	comp=Z,13nm,0.6s						
SSB	Saint Sauveur	7.64	276	Pn	Pn	01 47 20.8	-0.7
SFTF	Sexfontaines	7.81	298	*e*Pn	Pn	01 47 22.6	-1.2
	baz=118						
SFTF				*e*Sn	Sn	01 48 43.2	-9.2
	comp=Z,3.2nm,0.4s						
AGG	Agios Georgios	7.88	136	Pn	Pn	01 47 25.1	+0.4
MEZF	Maizieres J'vi	7.91	300	*e*Pn	Pn	01 47 22.8	-2.3
MEZF				*e*Sn	Sn	01 48 46.1	-8.7
	comp=Z,8.7nm,0.6s						
SAVF	Savonnieres en	7.91	301	*e*Pn	Pn	01 47 22.9	-2.3
SAVF				*e*Sn	Sn	01 48 46.1	-8.8
	comp=Z,3.2nm,0.5s						
SMF	Signal de Mont	8.21	286	*e*Pn	Pn	01 47 28.6	-0.7
SMF	Signal de Mont	8.21	286	*e*P	Pn	01 47 32.5	+3.2
SMF				*e*Sn	Sn	01 48 54.0	-8.2
	comp=Z,17nm,0.7s						
LASF	Ste Croix	8.25	268	*e*Pn	Pn	01 47 27.9	-1.9
LASF				*e*Sn	Sn	01 48 56.5	-6.7
	comp=Z,5.9nm,0.7s						
LOR	Lormes	8.31	290	*e*Pn	Pn	01 47 28.4	-2.2
	baz=111						
LOR				*e*Sn	Sn	01 48 57.9	-6.7
	comp=Z,5.4nm,0.4s						
SSF	Saint Saulge	8.50	289	*e*Pn	Pn	01 47 31.3	-2.0
SSF	Saint Saulge	8.50	289	*e*P	Pn	01 47 36.2	+2.9
SSF				*e*Sn	Sn	01 49 01.6	-7.8
	comp=Z,5.3nm,0.5s						
AVF	Avril sur Loir	8.56	287	*e*Pn	Pn	01 47 32.7	-1.4
AVF	Avril sur Loir	8.56	287	*e*P	Pn	01 47 37.2	+3.1
AVF				*e*Sn	Sn	01 49 02.4	-8.5
	comp=Z,4.4nm,0.8s						
BCLA	Clavier	8.71	313	*d*PP	Pg	01 48 03.1	-13
BGES	Gesves	8.80	312	*d*PP	Pn	01 47 44.7	+7.3
ALN	Alexandroupoli	8.84	113	Pn	Pn	01 47 39.3	+1.5
BGF	Bois d'Agland	8.88	285	*e*Pn	Pn	01 47 37.2	-1.3
BGF				*e*Sn	Sn	01 49 09.8	-8.9
	comp=Z,11nm,0.5s						
DOU	Dourbes	8.91	309	*d*P	Pn	01 47 38.0	-0.8
BAIF	Baives	9.11	308	*e*Pn	Pn	01 47 39.3	-2.2
HYF	Humbligny	9.12	289	*e*Pn	Pn	01 47 39.5	-2.3
HYF				*e*Sn	Sn	01 49 14.4	-10
ITM	Ithomi	9.21	145	Pn	Pn	01 47 45.2	+2.2
TCF	Toulx Ste Croi	9.30	283	*e*Pn	Pn	01 47 43.3	-0.9
TCF				*e*Sn	Sn	01 49 19.0	-10
	comp=Z,7.1nm,0.6s						
CAF	Calviac	9.41	275	*e*Pn	Pn	01 47 44.7	-1.1
CAF				*e*Sn	Sn	01 49 25.5	-6.3
CLF	Chambon-Foret	9.53	294	Pn	Pn	01 47 49.4	+2.0
RJF	Les Rejaudoux	9.78	277	*e*Pn	Pn	01 47 49.5	-1.2
RJF				*e*Sn	Sn	01 49 32.5	-8.2
KEST	Kesra	10.26	208	Pn	Pn	01 47 54.8	-2.6
	baz=294,slow=23,SNR=1.4						
	comp=Z,2.9nm,1.0s						
MFF	Saint Martin d	10.94	284	*e*Pn	Pn	01 48 05.3	-1.4
EPF	Esparros	10.97	265	*e*Pn	Pn	01 48 04.4	-2.7
EPF				*e*Sn	Sn	01 50 01.6	-8.5
LDF	La Druitiere	11.21	295	*e*Pn	Pn	01 48 08.4	-1.9
FLN	La Foliniere	11.48	295	*e*Pn	Pn	01 48 11.7	-2.3
GRR	Gorron	11.65	293	*e*Pn	Pn	01 48 13.8	-2.5
GRR				*e*Sn	Sn	01 50 15.6	-11
SJPF	Ste Jean	12.06	267	*e*Pg	Pn	01 48 18.7	-3.3
SJPF				*e*Sn	Sn	01 50 26.4	-10
IDI	Anoyia	12.09	140	Pn	Pn	01 48 22.4	0.0
	comp=Z,0.2nm,0.3s,baz=340,slow=12,SNR=2.4						
IDI				Sn	Sn	01 50 26.1	-11
	comp=Z,0.1nm,0.3s,baz=16,slow=16,SNR=1.5						
	comp=Z,1.8nm,0.9s						
IDI	Anoyia	12.09	140	Pn	Pn	01 48 22.6	+0.1
SGMF	Saint Gilles	12.74	291	*e*Pn	Pn	01 48 29.5	-1.7
QUIF	Quistinic	13.10	290	*e*P	Pn	01 48 38.5	+2.3
QUIF				*e*Sn	Sn	01 50 49.7	-12
	comp=Z,1.1nm,0.3s						
ESDC	Sonseca Array	15.20	257	Pn	P	01 49 08.4	-1.6
	baz=59,slow=11,SNR=6.2						
EKA	Eskdalemuir Ar	15.72	318	Pn	P	01 49 14.8	-0.8
	baz=130,slow=14						
FINES	FINESS Array B	17.70	17	P	P	01 49 37.8	+0.4
	comp=Z,0.1nm,0.3s,baz=187,slow=8.8,SNR=5.6						
	comp=Z,0.4nm,0.6s						
KBZ	Khabaz	19.73	84	P	P	01 50 01.0	+1.2
	comp=Z,0.1nm,0.3s,baz=297,slow=6.6,SNR=4.6						
	comp=Z,1.6nm,0.8s						
TORD	Torodi Ar. Bea	33.75	204	P	P	01 52 10.2	-1.8
	comp=Z,0.3nm,0.5s,baz=18,slow=8.6,SNR=5.8						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	44.37	52	P	P	01 53 41.3	+0.9
	comp=Z,0.9nm,0.6s,baz=294,slow=11,SNR=4.5						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	45.38	63	P	P	01 53 50.1	+1.5
	comp=Z,0.8nm,0.8s,baz=282,slow=5.6,SNR=7.5						
	comp=Z,0.8nm,0.8s						
KMBO	Kilima Mbogo	49.83	151	LR	LR	02 17 49.3	
	comp=Z,20nm,18.3s,baz=56,slow=39						
SONM	Songino Array	59.25	52	P	P	01 55 33.2	+1.4
	comp=Z,1.2nm,0.9s,baz=292,slow=7.6,SNR=6.3						
	comp=Z,1.2nm,0.9s						
INK	Inuvik	64.69	348	LR	LR	02 25 19.4	
	comp=Z,21nm,19.8s,baz=98,slow=37						

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*IDC **08** 02:33:37.8±1.9, 19°.43S×169°.73E, h308km±26km, mb3.5/5, mbtmp4.2/7, Error ellipse: s-maj=74.2km s-min=18.3km az=157.0*

*NOU **08** 02:33:40.2, 19°.10S×169°.39E, h233km, MLv3.7/12, Vanuatu Islands*

ISC 08 02:33:36.8±0.9**, 19°.0S**±0°.1×**169°.6E**±0°.1**, h300km, n17, σ2ˢ.12**/18**, mb3.8**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.65	318	P	Pn	02 34 18.0	-3.0
DVP	Devils Point	1.85	314	P	Pn	02 34 19.3	-3.2
LIFNC	LIFOU	2.81	231	P	Pn	02 34 27.5	-3.1
MARNC	Mare, Loyalty	2.84	211	P	Pn	02 34 27.7	-3.3
YATNC	Mamie plateau,	3.93	219	P	Pn	02 34 39.3	-2.9
DZM	Mont Dzumac	4.22	224	P	Pn	02 34 44.1	-1.5
	12nm,0.4s,baz=329,slow=19,SNR=62						
DZM				S	S	02 35 40.2	-0.4
	7.4nm,0.4s,baz=133,slow=21,SNR=2.0						
DZM	Mont Dzumac	4.22	224	P	Pn	02 34 44.4	-1.1
OUENC	Ouen Island, N	4.24	217	P	Pn	02 34 44.4	-1.2
NOUC	Port Laguerre	4.33	225	P	Pn	02 34 45.7	-1.0
ONTNC	Ouen Toro	4.38	221	P	Pn	02 34 46.1	-1.2
MSVF	Nonsavu	8.14	82	P	Pn	02 35 32.3	+0.1
	14nm,0.8s,baz=267,slow=13,SNR=10						
CTA	Charters Tower	22.01	263	P	P	02 38 08.6	+1.5
	2.3nm,0.5s,baz=107,slow=10,SNR=5.1						
	2.3nm,0.5s						
STKA	Stephens Creek	28.23	238	P	P	02 39 01.7	-1.1
	3.1nm,0.7s,baz=80,slow=8.6,SNR=4.1						
	3.1nm,0.7s						
WRA	Warramunga Arr	33.20	262	P	P	02 39 46.9	+0.6
	1.4nm,0.6s,baz=94,slow=8.3,SNR=25						
	1.4nm,0.6s						
ASAR	Alice Springs	33.49	256	P	P	02 39 50.0	+1.1
	10nm,0.6s,baz=82,slow=9.2,SNR=206						
	10nm,0.6s						
SONM	Songino Array	87.25	323	P	P	02 45 52.2	+2.5
	0.2nm,0.4s,baz=129,slow=4.6,SNR=2.1						
	0.2nm,0.4s						
GERES	GERESS Array B	144.46	332	PKP	PKPdf	02 52 38.5	+1.0
	0.3nm,0.5s,baz=44,slow=4.6,SNR=5.0						

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*NIED **08** 02:46:31.4, 23°.87N×121°.01E, h5km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.47; $M_{\theta\theta}$2.07; $M_{\phi\phi}$-3.54; $M_{r\theta}$-0.59; $M_{\theta\phi}$0.45; $M_{\phi r}$-2.11; Fault plane solution: $M_0$3.60000×10^{15} NP1: ϕ_s313.00000°, δ43.00000°, λ22.00000°. NP2: ϕ_s207.00000°, δ75.00000°, λ131.00000°.*

*JMA **08** 02:46:31.4±0.1, 23°.9N±0°.5×121°.0E±0°.4, h5km±1km, MD4.3/11, MV4.4/11, TAIWAN REGION*

*BJI **08** 02:46:31.8±0.0, 24°.03N×121°.05E, h7km, mb4.4/31, mB4.4/20, ML4.5/9, Ms4.2/37, Ms7 4.1/36*

*NEIC **08** 02:46:32.9±1.0, 24°.01N±0°.02×121°.00E±0°.05, h10km±1km, mb4.6/40, ML4.8(TAP), Error ellipse: s-maj=8.1km s-min=3.1km az=101.0*

*ASIES **08** 02:46:33.1, 23°.98N×121°.05E, h21km, MW4.2*

*TAP **08** 02:46:33.2, 23°.99N×121°.02E, h19km, ML4.9, B*

*IASPEI **08** 02:46:33.6±0.8, 23°.98N±0°.01×121°.06E±0°.01, h18km±4km, mb4.4/45, MS3.6/30, Error ellipse: s-maj=1.9km s-min=1.4km az=118.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*IDC **08** 02:46:38.8±2.8, 23°.96N×121°.34E, h72km±25km, mb3.8/20, mbtmp4.2/23, MS3.6/30, Error ellipse: s-maj=16.4km s-min=11.9km az=64.0*

ISC 08 02:46:33.6±0.6**, 23°.99N**±0°.01×**121°.05E**±0°.01**, h18km**±3km**, n320, σ1ˢ.37**/468**, mb4.4**/45**, MS3.6**/30**, 25C-83D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WUSB	Renai	0.06	84	⇑*i*P	Pg	02 46 37.2	+0.2
	baz=91						
WPL	Puli Township	0.09	287	⇑*i*P	Pg	02 46 37.0	-0.1
	baz=287						
WPL				*i* S	Sg	02 46 39.6	+0.1
	baz=287						
OWD	Renai	0.12	105	⇓*i*P	Pg	02 46 37.9	+0.4
	baz=105						
OWD				*i* S	Sg	02 46 40.9	+0.7
	baz=105						
DPDB	Guoxing	0.13	292	⇑*i*P	Pg	02 46 37.3	-0.2
	baz=295						
DPDB				*i* S	Sg	02 46 40.5	+0.3
	baz=295						
CHGB	Renai	0.13	56	⇑*i*P	Pg	02 46 38.1	+0.3
	baz=64						
CHGB				*i* S	Sg	02 46 41.4	+0.8
	baz=64						
WCS	Beigang Elemen	0.15	299	⇑*i*P	Pg	02 46 37.6	-0.1
	baz=302						
WCS				*i* S	Sg	02 46 40.6	0.0
	baz=302						
SMLT	Sun Moon Lake	0.17	234	⇑*i*P	Pg	02 46 38.0	-0.2
	baz=223						
SMLT				*i* S	Sg	02 46 41.5	+0.2
	baz=223						
TYC	Yuchr	0.20	246	⇑*i*P	Pg	02 46 38.1	-0.3
	baz=238						
TYC				*i* S	Sg	02 46 41.8	+0.1
	baz=238						
SSLB	Suanglung	0.22	205		Pb	02 46 38.0	-1.0
SSLB	Suanglung	0.22	205	P	Pg	02 46 38.4	-0.4
SSLB	Suanglung	0.22	205	⇑*i*P	Pg	02 46 38.4	-0.4
	baz=197						
SSLB				*i* S	Sb	02 46 41.7	-0.9
	baz=197						
VWDT	VWDT	0.24	161	⇓*i*P	Pg	02 46 39.6	+0.5
	baz=156						
VWDT				*i* S	Sg	02 46 43.7	+0.7
	baz=156						
WHF	Hehuan Shan	0.25	50	⇓*i*P	Pg	02 46 40.2	+0.7
	baz=57						
WHF				*i* S	Sg	02 46 44.8	+1.1
	baz=57						
TDCB	Techi	0.28	20	⇓*i*P	Pb	02 46 39.8	-0.4
	baz=26						
TDCB				*i* S	Sg	02 46 43.9	-0.3
	baz=26						
TWT	Tachien	0.29	23	⇓*i*P	Pb	02 46 39.9	-0.5
	baz=26						
TWT				*i* S	Sb	02 46 44.0	-0.9
	baz=26						
WHP	Taichung City	0.31	341	⇑*i*P	Pb	02 46 40.1	-0.5
	baz=346						
WHP				S	Sb	02 46 45.3	-0.1
	baz=346						
FUSS	Fushou	0.31	34	⇓*i*P	Pb	02 46 40.4	-0.4
	baz=38						
FUSS				*e*S	Sg	02 46 44.7	-0.4
	baz=38						
WWF	Wufeng	0.33	280	⇓*i*P	Pb	02 46 41.2	+0.3
	baz=279						
WWF				*e*S	Sn	02 46 47.4	-2.5
	baz=279						
WJS	Zhushan	0.34	241	⇓*i*P	Pb	02 46 41.0	-0.1
	baz=238						
WJS				*e*S	Sn	02 46 47.5	-2.6
	baz=238						
WNT1	Nantou City	0.35	257	⇓*i*P	Pb	02 46 41.5	+0.2
	baz=255						
WNT1				S	Sb	02 46 47.5	+1.0
	baz=255						
WNT	Mingjian	0.35	253	⇓*i*P	Pb	02 46 41.4	0.0
	baz=249						
WNT				S	Sb	02 46 47.4	+0.7
	baz=249						
TCU	Taichung	0.38	295	⇓*i*P	Pb	02 46 42.0	+0.1
	baz=296						
TCU				*e*S	Sn	02 46 48.8	-2.3
	baz=296						
ESL	Shilin	0.39	116	⇓*i*P	Pb	02 46 42.0	+0.1
	baz=115						
ESL				*e*S	Sb	02 46 47.9	+0.3
	baz=115						
ETM	Tongmen	0.40	93	⇓*i*P	Pb	02 46 42.1	-0.1
	baz=94						
ETM				*e*S	Sb	02 46 48.4	+0.3
	baz=94						
WYL	Yuanlin Townsh	0.43	267	⇓*i*P	Pb	02 46 42.8	+0.1
	baz=265						
WYL				*e*S	Sn	02 46 50.0	-2.4
	baz=265						
TWQ1	Liyutan	0.44	325	⇓*i*P	Pb	02 46 43.2	+0.3
	baz=327						
TWQ1				S	Sn	02 46 50.1	-2.5
	baz=327						
ETLH	Xiulin Townshi	0.45	61	⇓*i*P	Pb	02 46 42.8	-0.2
	baz=63						
ETLH				*e*S	Sb	02 46 49.4	0.0
	baz=63						

WCHH	**Zhanghua**	0.46	282	⇓iP	Pb	02 46 43.1	-0.1
	baz=281						
WCHH				eS	Sb	02 46 50.2	+0.5
	baz=281						
EGFH	**Guangfu**	0.47	133	i P	Pb	02 46 43.2	0.0
	baz=131						
EGFH				eS	Sb	02 46 50.3	+0.5
	baz=131						
YUS	**Yu-Shan**	0.50	191	⇑iP	Pg	02 46 43.6	-0.3
	baz=187						
YUS				eS	Sb	02 46 51.6	+0.2
	baz=187						
HWA	**Hwalien**	0.50	91	⇓iP	Pb	02 46 44.3	+0.4
	baz=92						
HWA				eS	Sn	02 46 53.2	-0.9
	baz=92						
TWD	**Chiawan**	0.50	79	⇓iP	Pb	02 46 43.8	-0.1
	baz=81						
TWD				eS	Sb	02 46 51.2	+0.2
	baz=81						
NSY	**Sanyi**	0.51	328	⇓iP	Pn	02 46 44.6	-1.4
	baz=331						
NSY				eS	Sn	02 46 52.6	-1.6
	baz=331						
TEYL	**Yanliau Villag**	0.51	103	⇓iP	Pg	02 46 44.3	+0.4
	baz=100						
TEYL				eS	Sn	02 46 53.2	-1.2
	baz=100						
CHN5	**Tsauling**	0.52	222	⇓iP	Pg	02 46 44.0	0.0
	baz=219						
CHN5				eS	Sb	02 46 51.9	+0.5
	baz=219						
WDJ	**Dajia District**	0.52	314	⇓iP	Pn	02 46 44.6	-1.5
	baz=315						
WDJ				eS	Sn	02 46 53.6	-1.0
	baz=315						
TEGC	**Jichi Village**	0.52	122	⇓P	Pn	02 46 44.9	-1.3
	baz=121						
TEGC				eS	Sn	02 46 53.0	-1.7
	baz=121						
ALS	**Alishan**	0.53	206	⇓iP	Pg	02 46 44.3	+0.1
	baz=202						
ALS				i S	Sb	02 46 52.1	+0.2
	baz=202						
NACB	**Ninganchiao**	0.53	69		Pg	02 46 43.9	-0.2
NACB	**Ninganchiao**	0.53	69	⇓iP	Pg	02 46 44.1	-0.1
	baz=71						
NACB				eS	Sn	02 46 52.7	-2.1
	baz=71						
NNSB	**Datong**	0.53	34	⇓iP	Pg	02 46 43.9	-0.4
	baz=37						
NNSB				eS	Sg	02 46 50.8	-0.7
	baz=37						
EHY	**Hungye**	0.54	153	⇓iP	Pg	02 46 44.4	+0.1
	baz=150						
EHY				eS	Sg	02 46 51.7	+0.2
	baz=150						
NNS	**Nan Shan**	0.54	33	⇓iP	Pg	02 46 44.1	-0.3
	baz=36						
NNS				eS	Sb	02 46 51.3	-0.8
	baz=36						
WGK	**Gukeng**	0.54	237	⇓iP	Pg	02 46 44.5	+0.2
	baz=233						
WGK				eS	Sn	02 46 53.0	-2.0
	baz=233						
ETL	**Fush Village**	0.55	72	eP	Pg	02 46 44.4	-0.1
	baz=73						
ETL				eS	Sn	02 46 53.3	-2.0
	baz=73						
WDLH	**Douliu**	0.56	238	⇓iP	Pg	02 46 44.8	+0.1
	baz=236						
WDLH				eS	Sg	02 46 53.2	+1.1
	baz=236						
HGSD	**Ruisui**	0.60	145	⇓iP	Pg	02 46 45.9	+0.5
	baz=144						
HGSD				eS	Sg	02 46 53.9	+0.5
	baz=144						
NMLH	**Miaoli**	0.60	336	⇓iP	Pn	02 46 46.3	-0.9
	baz=339						
NMLH				eS	Sn	02 46 55.0	-1.5
	baz=339						
WRL	**Guolierlin Hig**	0.62	262	⇓iP	Pg	02 46 45.4	-0.5
	baz=261						
WRL				eS	Sg	02 46 53.9	-0.4
	baz=261						
YULB	**Yu-li**	0.63	159		Pg	02 46 45.8	-0.3
YULB	**Yu-li**	0.63	159	⇓iP	Pg	02 46 46.0	-0.1
	baz=157						
YULB				eS	Sg	02 46 54.4	-0.1
	baz=157						
NSTT	**Nanjuang**	0.65	356	⇓eP	Pn	02 46 46.6	-1.3
	baz=359						
NSTT				eS	Sg	02 46 55.4	+0.4
	baz=359						
NFF	**Wufeng Townshi**	0.65	5	⇓P	Pg	02 46 46.2	-0.2
	baz=8.0						
NFF				eS	Sg	02 46 55.0	0.0
	baz=8.0						
LIOB	**Emei**	0.66	357	⇓iP	Pn	02 46 47.0	-1.1
	baz=359						
LIOB				eS	Sn	02 46 56.0	-2.0
	baz=359						
TWF1	**Yuli**	0.67	160	⇓iP	Pg	02 46 46.8	0.0
	baz=158						
TWF1				eS	Sg	02 46 55.7	0.0
	baz=158						
WTK	**Tuku**	0.68	244	⇓eP	Pb	02 46 46.3	-0.5
	baz=242						
WTK				eS	Sg	02 46 56.4	+0.5
	baz=242						
EYUL	**Yuli**	0.68	159	⇓iP	Pg	02 46 46.9	0.0
	baz=157						
EYUL				eS	Sg	02 46 56.0	-0.1
	baz=157						
CHN2	**Minshiung**	0.70	230	⇓P	Pg	02 46 47.3	0.0
	baz=228						
CHN2				eS	Sn	02 46 57.7	-1.2
	baz=228						
LATG	**Datong**	0.70	38	⇓P	Pb	02 46 46.7	-0.6
	baz=40						
LATG				eS	Sg	02 46 56.2	-0.5
	baz=40						
EHP	**Heping Village**	0.71	63	eP	Pg	02 46 47.5	0.0
	baz=65						
EHP				eS	Sg	02 46 57.3	+0.5
	baz=65						
NJN	**Zhunan**	0.71	346	eP	Pn	02 46 48.4	-0.4
	baz=349						
NJN				eS	Sn	02 46 58.7	-0.7
	baz=349						
WTCT	**Ta-ch'eng**	0.72	260	⇓eP	Pb	02 46 47.0	-0.6
	baz=259						
WTCT				eS	Sn	02 46 57.7	-1.7
	baz=259						
NSK	**Sanguang**	0.74	22	⇓eP	Pg	02 46 47.7	-0.4
	baz=25						
NSK				eS	Sb	02 46 56.9	-1.0
	baz=25						
YHNB	**Yeheng**	0.74	23		Pg	02 46 47.7	-0.4
YHNB	**Yeheng**	0.74	23	P	Pg	02 46 47.9	-0.2
YHNB	**Yeheng**	0.74	23	⇓iP	Pg	02 46 47.7	-0.4
	baz=26						
YHNB				eS	Sb	02 46 56.9	-1.0
	baz=26						
NDT	**Datong Townshi**	0.74	34	⇓iP	Pb	02 46 47.5	-0.5
	baz=36						
NDT				eS	Sb	02 46 57.0	-0.9
	baz=36						
NJD	**Zhudong**	0.75	2	eP	Pn	02 46 49.1	-0.2
	baz=5.0						
NJD				eS	Sn	02 46 59.2	-1.0
	baz=5.0						
CHY	**Chiayi**	0.75	230	⇓P	Pg	02 46 47.9	-0.5
	baz=228						
CHY				eS	Sg	02 46 58.6	+0.2
	baz=228						
ECBN	**Changbin**	0.76	151	eP	Pn	02 46 49.4	0.0
	baz=150						
ECBN				eS	Sn	02 47 01.1	+0.7
	baz=150						
CHN4	**Tsaushan**	0.76	214	⇓iP	Pg	02 46 48.0	-0.4
	baz=212						
CHN4				eS	Sn	02 46 59.8	-0.7
	baz=212						
ENA	**Nanau**	0.77	55	⇓P	Pg	02 46 48.3	-0.2
	baz=57						
ENA				eS	Sg	02 46 58.6	-0.2
	baz=57						
WMLT	**Mailiao**	0.78	257	eP	Pb	02 46 48.1	-0.5
	baz=256						
WMLT				eS	Sn	02 46 59.8	-1.2
	baz=256						
TPUB	**Ta-pu**	0.79	210		Pb	02 46 48.3	-0.4
TPUB	**Ta-pu**	0.79	210	P	Pb	02 46 48.4	-0.3
TPUB	**Ta-pu**	0.79	210	⇓P	Pb	02 46 48.3	-0.4
	baz=208						
TPUB				eS	Sn	02 47 00.1	-1.1
	baz=208						
HSN1	**Hsinchu**	0.79	358	eP	Pn	02 46 49.7	-0.1
	baz=360						
HSN1				eS	Sn	02 47 01.9	+0.7
	baz=360						
ELDTW	**Lidau**	0.79	182	eP	Pb	02 46 48.2	-0.7
	baz=180						
ELDTW				eS	Sn	02 47 01.0	-0.5
	baz=180						
ENTT	**Nioudou**	0.80	36	⇓P	Pg	02 46 48.6	-0.6
	baz=38						
ENTT				eS	Sg	02 46 59.3	-0.6
	baz=38						
EWUT	**Wuta**	0.80	55	⇓P	Pg	02 46 48.8	-0.5
	baz=57						
EWUT				eS	Sg	02 46 59.5	-0.5
	baz=57						
SBCB	**Hsinchu**	0.81	356	eP	Pn	02 46 49.7	-0.4
	baz=358						
SBCB				eS	Sn	02 47 02.1	+0.5
	baz=358						
FULB	**Fuli**	0.81	164	⇓P	Pn	02 46 50.1	-0.1
	baz=163						
FULB				eS	Sn	02 47 01.5	-0.4
	baz=163						
HSN	**Hsinchu**	0.82	355	eP	Pn	02 46 50.0	-0.2
	baz=359						
HSN				eS	Sn	02 47 02.8	+1.0
	baz=359						
WSF	**Szhu**	0.84	246	⇓P	Pb	02 46 48.8	-0.8
	baz=244						
WSF				eS	Sg	02 47 01.1	+0.1
	baz=244						
WTP	**Ta-pu**	0.84	209	eP	Pb	02 46 49.1	-0.6
	baz=206						
WTP				eS	Sg	02 47 01.2	+0.1
	baz=206						
STYH	**Taoyuan**	0.85	198	⇓iP	Pb	02 46 49.5	-0.4
	baz=195						
STYH				eS	Sb	02 47 00.7	-0.2
	baz=195						
STYT	**Tauyuan**	0.86	198	⇓iP	Pg	02 46 49.9	-0.5
	baz=196						
STYT				eS	Sg	02 47 01.7	-0.1
	baz=196						
NDS	**Dongshan**	0.88	43	⇓P	Pb	02 46 50.0	-0.4
	baz=45						
NDS				eS	Sg	02 47 01.7	-0.8
	baz=45						
TWK	**Hsinying**	0.88	216	⇓P	Pb	02 46 49.9	-0.5
	baz=214						
TWK				eS	Sg	02 47 02.5	+0.1
	baz=214						
WSL	**Shuilin Townsh**	0.89	239	⇓P	Pb	02 46 49.6	-0.8
	baz=237						
WSL				eS	Sg	02 47 02.2	-0.3
	baz=237						
NWLT	**Wulai**	0.89	27	⇓P	Pg	02 46 50.1	-0.7
	baz=29						
NWLT				eS	Sn	02 47 02.8	-0.9
	baz=29						
ECS	**Chishang**	0.90	170	eP	Pn	02 46 51.2	-0.1
	baz=169						
ECS				eS	Sn	02 47 03.9	0.0
	baz=169						
FUSB	**Fushanzhiwuyua**	0.91	32	⇓P	Pb	02 46 50.5	-0.4
	baz=34						
FUSB				eS	Sn	02 47 04.1	-0.2
	baz=34						
SNST	**Tainan City**	0.92	214	⇓eP	Pb	02 46 50.2	-0.7
	baz=212						
SNST				eS	Sn	02 47 04.0	-0.4
	baz=212						
TWE	**Neicheng**	0.92	37	⇓eP	Pg	02 46 51.1	-0.4
	baz=40						
TWE				eS	Sg	02 47 03.0	-0.7
	baz=40						
CHKT	**Chengkung**	0.93	162	⇑eP	Pg	02 46 51.6	0.0
	baz=160						
CHKT				eS	Sn	02 47 05.4	+0.8
	baz=160						
CHN1	**Nanshi**	0.93	211	⇓eP	Pb	02 46 50.5	-0.7
	baz=209						
CHN1				eS	Sg	02 47 03.8	-0.2
	baz=209						
ICHU	**Yijhu**	0.94	229	⇓P	Pb	02 46 50.8	-0.6
	baz=227						
ICHU				eS	Sg	02 47 03.9	-0.5
	baz=227						
TWC	**Suao**	0.95	49	⇓eP	Pg	02 46 51.6	-0.5
	baz=51						
TWC				eS	Sg	02 47 04.3	-0.4
	baz=51						
NCUH	**Zhongli**	0.98	7	⇑eP	Pg	02 46 52.3	-0.5
	baz=9.0						
NCUH				eS	Sn	02 47 06.3	+0.3
	baz=9.0						
NCU	**National Centr**	0.99	7	eP	Pg	02 46 52.3	-0.5
	baz=9.0						
NCU				eS	Sn	02 47 06.8	+0.7
	baz=9.0						
SGST	**Jiashian**	1.00	206	eP	Pb	02 46 51.4	-1.0
	baz=204						
SGST				eS	Sg	02 47 06.0	0.0
	baz=204						
CHN8	**Yiju**	1.00	231	⇓eP	Pb	02 46 51.8	-0.6
	baz=229						
CHN8				eS	Sg	02 47 06.3	+0.2
	baz=229						
ILA	**Ilan**	1.00	39	eP	Pg	02 46 52.5	-0.5
	baz=41						
ILA				eS	Sg	02 47 06.9	+0.7
	baz=41						
NHW	**Xinwu Township**	1.02	360	eP	Pg	02 46 52.8	-0.5
	baz=1.0						
NHW				eS	Sg	02 47 07.3	+0.6
	baz=1.0						
EDH	**Donghe**	1.03	167	⇑eP	Pn	02 46 53.0	-0.2
	baz=166						
EDH				eS	Sg	02 47 07.8	+0.6
	baz=166						
SLGT	**Liugui**	1.06	201	eP	Pg	02 46 53.9	-0.1
	baz=199						
SLGT				eS	Sg	02 47 08.9	+1.0
	baz=199						
TATO	**Taipei**	1.06	22		Pg	02 46 53.7	-0.4
TATO	**Taipei**	1.06	22	⇑eP	Pg	02 46 53.8	-0.4
	baz=24						
TATO				eS	Sg	02 47 09.2	+1.1
	baz=24						
NHDH	**Xindian Distri**	1.06	24	eP	Pg	02 46 53.9	-0.3
	baz=25						
NHDH				eS	Sg	02 47 09.2	+1.0
	baz=25						
BACT	**New Taipei Cit**	1.07	19	eP	Pg	02 46 55.3	+1.0
	baz=21						
LONT	**Longtian**	1.08	176	⇑eP	Pg	02 46 53.9	-0.6
	baz=175						
LONT				eS	Sg	02 47 08.8	+0.3
	baz=175						
TWA	**Mucha**	1.10	26	eP	Pg	02 46 54.6	-0.3
	baz=28						
TWA				eS	Sg	02 47 10.7	+1.3
	baz=28						
CHN3	**Shinhua**	1.10	215	eP	Pg	02 46 54.8	-0.1
	baz=213						
CHN3				eS	Sg	02 47 11.2	+1.7
	baz=213						
NTC	**Toucheng**	1.12	39	eP	Pn	02 46 53.3	-1.1
	baz=41						
NTC				eS	Sn	02 47 08.8	-0.5
	baz=41						
TAP	**Taipei**	1.13	21	eP	Pg	02 46 54.6	-0.8
	baz=23						
TAP				eS	Sg	02 47 11.1	+0.9
	baz=23						
SCLT	**Jiali**	1.13	225	eP	Pb	02 46 54.1	-0.4
	baz=223						
SCLT				eS	Sg	02 47 11.1	+0.9
	baz=223						
TAP1	**Taipei**	1.13	22	eP	Pg	02 46 55.4	-0.1
	baz=23						
SHHT	**Tainan City**	1.16	214	⇓eP	Pg	02 46 55.2	-0.8
	baz=213						
SHHT				eS	Sg	02 47 12.0	+0.8
	baz=213						
TWS1	**Kuangyinshan**	1.16	17	eP	Pg	02 46 55.0	-1.0
	baz=18						
TWS1				eS	Sg	02 47 11.6	+0.4
	baz=18						
TWG	**Pinlang**	1.16	179		Pb	02 46 55.2	+0.1
TWG	**Pinlang**	1.16	179	⇑eP	Pb	02 46 55.2	+0.1
	baz=177						
TWG				eS	Sg	02 47 11.5	+0.3
	baz=177						
TWGBT	**Beinan**	1.16	179	⇑eP	Pb	02 46 55.1	0.0
	baz=177						
TWGBT				eS	Sg	02 47 11.7	+0.4
	baz=177						
EGS		1.17	43	eP	Pg	02 46 56.6	+0.4
	baz=45						
EGS				eS	Sg	02 47 11.6	0.0
	baz=45						
TIPB	**Shuangxi**	1.21	35	⇓eP	Pg	02 46 56.0	-1.0
	baz=37						
TIPB				eS	Sg	02 47 12.3	-0.5
	baz=37						
TAI1	**Yung-k'ang**	1.21	219	eP	Pb	02 46 56.0	0.0
	baz=217						
TAI1				eS	Sg	02 47 13.8	+1.0
	baz=217						
SCST	**Cishan**	1.21	205	⇓eP	Pb	02 46 56.0	+0.1
	baz=204						
SCST				eS	Sg	02 47 13.0	+0.2
	baz=204						
NTST	**Danshui**	1.23	17	eP	Pb	02 46 55.9	-0.3
	baz=18						
NTST				eS	Sg	02 47 15.0	+1.6
	baz=18						
TTN	**Taitung**	1.23	176	eP	Pg	02 46 56.8	-0.5
	baz=174						
YM01	**YM01**	1.25	22	⇑eP	Pb	02 46 56.3	-0.4
	baz=23						
YM01				eS	Sg	02 47 13.7	-0.3
	baz=23						
TAI	**Tainan**	1.26	219	eP	Pg	02 46 57.0	-0.9
	baz=217						
NWF	**Wu-fen Shan**	1.27	31	⇑eP	Pg	02 46 57.1	-1.0
	baz=33						
NWF				eS	Sg	02 47 14.8	+0.2
	baz=33						
WFSB	**Wu-fen Shan**	1.27	31	⇑eP	Pb	02 46 56.7	-0.2
	baz=33						
WFSB				eS	Sg	02 47 14.9	+0.3
	baz=33						
ANP	**Anpu**	1.27	19	eP	Pb	02 46 56.4	-0.7
	baz=21						
SSD	**Sandimen**	1.29	198	eP	Pb	02 46 57.2	-0.2
	baz=196						
SSD				eS	Sg	02 47 14.6	-0.8
	baz=196						
YM08	**YM08**	1.29	22	eP	Pb	02 46 56.6	-0.8
	baz=23						
YM08				eS	Sg	02 47 15.3	-0.1
	baz=23						
TWM1	**Shoushan**	1.29	207	eP	Pg	02 46 58.1	-0.5
	baz=205						
TWM1				eS	Sg	02 47 18.5	+3.0
	baz=205						
TWB1	**Santiao Chiao**	1.33	40	eP	Pg	02 46 58.4	-0.8
	baz=41						
TWB1				eS	Sg	02 47 16.2	-0.3
	baz=41						
TSMG	**Majia**	1.33	197	eP	Pb	02 46 57.6	-0.4
	baz=195						
TSMG				eS	Sb	02 47 15.1	+0.4
	baz=195						
NWRT	**Kuosheng**	1.33	24	eP	Pg	02 46 58.9	-0.4
	baz=26						
TNOU	**National Taiwa**	1.33	29	eP	Pg	02 46 58.7	-0.6
	baz=31						
TNOU				eS	Sg	02 47 17.0	+0.3
	baz=31						
SXI1	**Grass Mountain**	1.33	34	eP	Pb	02 46 57.9	-0.2
	baz=35						
SXI1				eS	Sg	02 47 17.7	+0.9
	baz=35						
SGLT	**Jiouru**	1.36	203	eP	Pg	02 47 00.0	+0.2
	baz=201						
LDUT	**Ludao**	1.36	164	⇑eP	Pn	02 46 57.2	-0.5
	baz=163						
LDUT				eS	Sb	02 47 15.2	-0.4
	baz=163						
TWY	**Chenhua**	1.38	21	eP	Pb	02 46 57.8	-1.0
	baz=23						
ECL	**Taimali**	1.39	184	eP	Pb	02 46 58.6	-0.3
	baz=182						
ECL				eS	Sg	02 47 17.2	-1.1
	baz=182						
MASBT	**Mashibuluo**	1.42	196	⇑eP	Pb	02 46 58.9	-0.7
	baz=195						
MASBT				eS	Sb	02 47 17.9	+0.5
	baz=195						
PNG	**Penghu**	1.44	253	⇓eP	Pn	02 46 57.5	-1.2
	baz=252						
PNG				eS	Sn	02 47 16.2	-1.0
	baz=252						
PHUB	**P'eng-hu**	1.44	251	⇓eP	Pn	02 46 57.5	-1.2
	baz=250						
PHUB				eS	Sn	02 47 15.8	-1.4
	baz=250						
WDGT	**Dungji**	1.47	241	⇓eP	Pn	02 46 58.5	-0.7
	baz=240						
WDGT				eS	Sb	02 47 17.8	-1.0
	baz=240						
WSSB	**Gushan**	1.52	209	eP	Pb	02 47 00.5	-0.8
	baz=207						
WSSB				eS	Sb	02 47 21.0	+0.7
	baz=207						
SSPT	**Xinbi**	1.56	197	eP	Pb	02 47 01.4	-0.6
	baz=196						
EAST	**Anshuo**	1.61	187	eP	Pb	02 47 02.1	-0.7
	baz=185						
EAST				eS	Sg	02 47 23.9	-1.6
	baz=185						
TAWH	**Dawu Township**	1.65	185	eP	Pb	02 47 02.4	-1.0
	baz=184						
TAWH				eS	Sb	02 47 24.9	+1.1
	baz=184						
SCZT	**Fangliau**	1.66	194	eP	Pb	02 47 02.3	-1.2
	baz=193						
SCZT				eS	Sb	02 47 24.1	0.0
	baz=193						
VCHM	**Qimei**	1.68	243	⇓eP	Pn	02 47 01.3	-0.7
	baz=242						
VCHM				eS	Sn	02 47 22.4	-0.8
	baz=242						
WLCH	**Liuqiu**	1.74	201	eP	Pb	02 47 03.5	-1.5
	baz=200						
TWP	**Hsiaoliuchiu**	1.75	201	eP	Pb	02 47 04.6	-0.6
	baz=200						
VWUC	**VWUC**	1.77	305	⇓eP	Pn	02 47 01.3	-2.0
	baz=305						
VWUC				eS	Sn	02 47 22.5	-2.9
	baz=305						
SLIU	**Shizi**	1.78	188	eP	Pn	02 47 03.9	+0.5
	baz=187						
SLIU				eS	Sb	02 47 28.6	+1.0
	baz=187						
JYNG	**Yonagunijimaku**	1.79	75	P	Pb	02 47 04.9	-1.0
JYNG				eS	Sb	02 47 28.8	+0.8
JYNG	**Yonagunijimaku**	1.79	75	A	A	02 47 04.9	
	comp=E,5.0nm,3.0s,comp=E,5.0nm,3.3s						
YOJ	**Yonaguni jima**	1.85	75	Pn	Pb	02 47 05.3	-1.5
YOJ	**Yonaguni jima**	1.85	75	P	Pb	02 47 05.4	-1.5
YOJ	**Yonaguni jima**	1.85	75	eP	Pb	02 47 05.2	-1.7
	baz=75						
YOJ				eS	Sb	02 47 28.6	-1.1
	baz=75						
YOJ	**Yonaguni jima**	1.85	75	P	Pb	02 47 05.5	-1.3
YOJ				eS	Sb	02 47 30.8	+1.1
PCYT	**Pengchaiyu**	1.88	29	eP	Pn	02 47 05.2	+0.4
	baz=31						
LAY	**Lan-yu**	1.99	167	eP	Pn	02 47 06.1	-0.3
	baz=166						
HEN	**Hengchun**	1.99	188	eP	Pn	02 47 07.3	+0.9
	baz=187						

LYUB	**Lan-yu**	2.03	166	*e*P	Pn	02 47 05.6	-1.4
	baz=165						
TWK1	**Hengchun**	2.05	186	*e*P	Pn	02 47 07.7	+0.5
	baz=185						
TWKBT	**Hengchun**	2.05	186	*e*P	Pn	02 47 07.6	+0.4
	baz=185						
PTMZ	**Houxiangcun**	2.05	301	⇓*e*P	Pn	02 47 05.2	-2.0
	baz=301						
PTMZ				*e*S	Sn	02 47 29.1	-3.2
	baz=301						
MATB	**Ma-tsu**	2.38	335	⇓*e*P	Pn	02 47 09.9	-1.8
	baz=335						
MATB				*e*S	Sn	02 47 38.3	-2.2
	baz=335						
MSUT	**Lienchiang**	2.40	335	*e*P	Pn	02 47 10.3	-1.7
	baz=335						
MSUT				*e*S	Sn	02 47 38.7	-2.4
	baz=335						
KNM	**Kinmen**	2.43	281	*e*P	Pn	02 47 12.4	0.0
	baz=279						
KNM				*e*S	Sn	02 47 41.8	0.0
	baz=279						
QZH	**Quanzhou**	2.44	294	⇓*i*Pn	Pn	02 47 10.4	-2.1
QZH				Sn	Sn	02 47 37.1	-4.8
QZH				smax	smax		
	comp=N,2µm,0.3s						
QZH				smax	smax		
	comp=E,1µm,0.7s						
IRIF	**Iriomote-Funau**	2.47	81	P	Pn	02 47 13.6	+0.7
IRIF				S	Sn	02 47 43.6	+0.9
KNMB	**Chin-men Tao**	2.48	282		Pn	02 47 11.2	-1.8
KNMB	**Chin-men Tao**	2.48	282	⇓*e*P	Pn	02 47 11.3	-1.8
	baz=281						
KNMB				*e*S	Sn	02 47 40.2	-2.7
	baz=281						
HATJ	**Hateruma jima**	2.52	88	P	Pn	02 47 14.4	+0.8
HATJ				*e*S	Sb	02 47 46.0	-2.9
HATJ	**Hateruma jima**	2.52	88	A	A	02 47 14.4	
	comp=E,5.0nm,3.2s,comp=E,5.0nm,5.7s						
JKRS	**Kuro-shima**	2.71	84	P	Pn	02 47 17.5	+1.2
MHZQ	**Yeshan**	2.79	319	*e*P	Pn	02 47 15.6	-1.8
	baz=319						
MHZQ				*e*S	Sn	02 47 47.7	-3.0
	baz=319						
LYJJ	**Jianjiangzhen**	2.81	336	*e*P	Pn	02 47 16.0	-1.7
	baz=336						
LYJJ				*e*S	Sn	02 47 48.4	-2.6
	baz=336						
JIJ	**Ishigaki jima**	2.85	82	P	Pn	02 47 18.6	+0.4
JIJ				*e*S	Sn	02 47 52.1	+0.1
AXDP	**Jialang**	2.95	289	⇓*e*P	Pn	02 47 18.0	-1.6
	baz=288						
AXDP				*e*S	Sn	02 47 51.8	-2.9
	baz=288						
ZPLA	**Ao Xicun**	3.02	270	⇓*e*P	Pn	02 47 19.2	-1.3
	baz=269						
ZPLA				*e*S	Sn	02 47 55.0	-1.4
	baz=269						
XPSS	**Dashiqiu**	3.03	345	*e*P	Pn	02 47 19.1	-1.6
	baz=346						
XPSS				*e*S	Sn	02 47 52.6	-4.0
	baz=346						
DSXP	**Dongshan**	3.33	266	*e*P	Pn	02 47 23.1	-1.8
	baz=265						
DSXP				*e*S	Sn	02 48 00.7	-3.3
	baz=265						
JTJ	**Tarama**	3.39	78	P	Pn	02 47 27.2	+1.6
JMJ	**Miyako jima 2**	3.95	77	P	Pn	02 47 35.3	+2.0
JMJ2	**Miyako jima3**	3.97	78	P	Pn	02 47 35.3	+1.7
JMJ2				*e*S	Sn	02 48 21.2	+1.5
APYP	**Conner**	6.09	178	⇑*e*P	Pn	02 48 03.8	+0.9
APYP				*e*S	Sn	02 49 13.0	+0.8
HKPS	**Hong Kong Po S**	6.59	256	Pn	Pn	02 48 09.2	-0.3
SSE	**Sheshan**	7.08	1	Pn	Pn	02 48 21.9	+5.5
SSE				Sn	Sn	02 49 45.9	+9.4
SSE				smax	smax		
	comp=N,83nm,0.9s						
SSE				smax	smax		
	comp=E,83nm,1.1s						
SSE				LR	LR		
	comp=N,67nm,4.7s						
SSE				LR	LR		
	comp=E,360nm,7.7s						
JOW	**Kunigami**	7.12	65	P	Pn	02 48 17.0	+0.1
	comp=E,70nm,0.4s,baz=198,slow=10,SNR=28						
JOW				S	Sn	02 49 34.9	-2.5
	comp=E,3.2nm,0.3s,baz=150,slow=20,SNR=0.6						
JOW	**Kunigami**	7.12	65	Pn	Pn	02 48 17.0	+0.1
NJ2	**Nanjing**	8.27	347	*e*P	Pn	02 48 34.9	+2.3
NJ2				S	Sn	02 50 10.2	+4.6
NJ2				pmax	pmax		
	comp=E,33nm,0.6s						
NJ2				smax	smax		
	comp=E,170nm,0.9s						
NJ2				smax	smax		
	comp=E,93nm,1.0s						
NJ2				LR	LR		
	comp=E,950nm,8.8s						
NJ2				LR	LR		
	comp=E,410nm,4.0s						
NJ2				LR	LR		
	comp=E,930nm,12.3s						
WHN	**Wuhan**	8.84	319	⇑P	Pn	02 48 42.3	+1.8
WHN				S	Sn	02 50 19.1	-0.7
WHN				pmax	pmax		
	comp=E,30nm,0.8s						
WHN				LR	LR		
	comp=E,810nm,3.9s						
WHN				LR	LR		
	comp=E,2µm,6.3s						
WHN				LR	LR		
	comp=E,2µm,11.2s						
GULI	**GuiLin**	9.81	280	P	Pn	02 48 52.7	-1.1
GULI				LR	LR		
	comp=E,290nm,11.9s						
GULI				LR	LR		
	comp=E,1µm,12.0s						
QIZ	**Qiongzhong**	11.54	247	P	Pn	02 49 17.6	+0.1
QIZ				S	Sn	02 51 27.2	+1.1
QIZ				LR	LR		
	comp=E,350nm,15.9s						
QIZ				LR	LR		
	comp=E,250nm,14.3s						
QIZ				LR	LR		
	comp=E,290nm,15.1s						
LYN	**LuoYang**	12.91	327	*e*P	Pn	02 49 38.8	+2.5
LYN				S	Sn	02 52 08.0	+8.4
LYN				pmax	pmax		
	comp=E,130nm,5.5s						
LYN				LR	LR		
	comp=E,1µm,11.5s						
LYN				LR	LR		
	comp=E,530nm,9.8s						
LYN				LR	LR		
	comp=E,1µm,10.4s						
GYA	**Guiyang**	13.26	284	⇑P	Pn	02 49 41.5	+0.4
GYA				S	Sn	02 52 12.1	+3.9
GYA				pmax	pmax		
	comp=E,15nm,1.1s						
GYA				LR	LR		
	comp=E,1µm,10.3s						
HNS	**HongShan**	14.44	339	⇓P	P	02 50 06.7	+3.0
HNS				*e*S	S	02 52 55.1	-1.2
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
HNS				LR	LR		
	comp=N,470nm,13.9s						
HNS				LR	LR		
	comp=E,240nm,12.3s						
HNS				LR	LR		
	comp=Z,540nm,14.5s						
XAN	**Xi'an**	14.58	316	P	Pn	02 49 59.5	+0.4
XAN				pP	P	02 50 03.1	-2.4
XAN				S	Sn	02 52 43.4	+3.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=Z,380nm,12.4s						
XAN				LR	LR		
	comp=Z,610nm,12.6s						
XAN				LR	LR		
	comp=Z,760nm,12.6s						
KSRS	**Korea Array**	14.66	22	P	Pn	02 50 02.4	+2.3
	comp=Z,6.3nm,0.8s,baz=215,slow=15,SNR=3.9						
KSRS				LR	LR	02 56 04.6	
	comp=Z,112nm,19.4s,baz=205,slow=39						

DAV	**Davao City (W)**	17.37	165	LR	LR	02 57 05.5	
	comp=Z,127nm,20.4s,baz=333,slow=36						
PZH	**PanZhiHua**	17.65	282	P	P	02 50 38.7	-1.0
PZH				S	Sn	02 53 54.2	-0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.2s						
PZH				LR	LR		
	comp=Z,370nm,13.8s						
PZH				LR	LR		
	comp=Z,1µm,13.0s						
PZH				LR	LR		
	comp=Z,2µm,14.3s						
HHC	**Hu-ho-hao-te**	18.61	337	*e*P	Pn	02 50 50.9	+0.5
HHC				pmax	pmax		
	comp=Z,32nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
HHC				LR	LR		
	comp=Z,630nm,14.1s						
HHC				LR	LR		
	comp=Z,200nm,13.1s						
HHC				LR	LR		
	comp=Z,520nm,15.1s						
BTO	**Baotou**	18.99	333	*e*P	Pn	02 50 58.7	+3.7
BTO				LR	LR		
	comp=Z,2µm,13.7s						
BTO				LR	LR		
	comp=Z,1µm,12.8s						
LZH	**Lanzhou**	19.13	313	*e*P	Pn	02 51 00.4	+3.5
LZH				pP	sP	02 51 03.7	-0.1
LZH				sP	pP	02 51 06.4	+5.2
LZH				S	S	02 54 36.2	+3.8
LZH				SS	SnSn	02 54 54.8	+10
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=Z,410nm,10.8s						
LZH				LR	LR		
	comp=Z,560nm,10.8s						
LZH				LR	LR		
	comp=Z,840nm,12.5s						
JCJ	**Chichijima**	19.32	76	P	P	02 50 56.9	-1.0
	comp=Z,33nm,0.7s,baz=353,slow=21,SNR=9.0						
JCJ				LR	LR	02 58 07.7	
	comp=Z,147nm,19.4s,baz=300,slow=36						
JCJ	**Chichijima**	19.32	76	IAmb	IAmb	02 51 05.8	
	comp=Z,107nm,1.0s						
MJAR	**Matsushiro Arr**	19.36	46	LR	LR	02 59 13.8	
	comp=Z,112nm,20.6s,baz=223,slow=39						
CN2	**Changchun**	20.09	9	*e*P	P	02 51 03.9	-2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CHTO	**Chiang Mai**	21.21	260	P	P	02 51 16.9	-1.6
CMAR	**Chiang Mai Arr**	21.32	259	P	P	02 51 24.2	+4.5
	comp=Z,1.5nm,0.3s,baz=63,slow=9.3,SNR=11						
CMAR				LR	LR	03 00 22.7	
	comp=Z,114nm,21.3s,baz=75,slow=38						
	comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	21.32	259	P	P	02 51 20.0	+0.2
MDJ	**Mudanjiang**	21.73	17	P	P	02 51 24.2	+0.3
USRK	**Ussuriysk Ar.**	22.07	21	P	P	02 51 26.2	-1.3
	comp=Z,2.7nm,0.7s,baz=214,slow=11,SNR=5.7						
USRK				LR	LR	03 00 38.3	
	comp=Z,105nm,20.1s,baz=167,slow=38						
	comp=Z,2.7nm,0.7s						
USRK	**Ussuriysk Ar.**	22.07	21	P	P	02 51 27.5	+0.1
TOLI2	**Tolitoli**	22.74	181	P	P	02 51 33.6	-1.3
TOLI2				IAmb	IAmb	02 51 35.9	
	comp=Z,12nm,0.8s						
SBUM	**Sibu**	23.05	203	P	P	02 51 36.4	-1.7
GTA	**Gaotai**	23.64	316	*e*P	P	02 51 50.0	+6.0
GTA				pP	sP	02 51 54.8	+2.7
GTA				sP	pP	02 51 57.9	+8.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
APSI	**Ampana**	24.75	179	P	P	02 51 53.9	-0.4
	comp=Z,17nm,1.2s						
GUMO	**Guam**	24.77	110	LR	LR	03 01 00.0	
	comp=Z,115nm,20.0s,baz=98,slow=35						
LUWI	**Luwuk**	24.93	176	P	P	02 52 00.4	+4.5
	comp=Z,12µmcomp=Z,52nm,0.6s						
GOMU	**GeErMu**	25.67	304	P	P	02 52 11.2	+8.2
GOMU				pP	sP	02 52 15.0	+3.9
GOMU				sP	pP	02 52 18.8	+10
GOMU				S	S	02 56 40.3	+9.2
GOMU				SS		03 00 14.3	
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,67nm,4.4s						
GOMU				LR	LR		
	comp=N,210nm,9.1s						
GOMU				LR	LR		
	comp=E,170nm,8.9s						
GOMU				LR	LR		
	comp=Z,230nm,9.5s						
ULN	**Ulaanbaatar**	26.30	338	P	P	02 52 07.5	-0.9
SANI	**Sanana**	26.32	169	P	P	02 52 09.8	+1.3
	comp=Z,617nmcomp=Z,12nm,0.6s						
SONM	**Songino Array**	26.50	338	P	P	02 52 10.1	0.0
	comp=Z,3.0nm,0.9s,baz=160,slow=9.2,SNR=16						
SONM				LR	LR	03 03 36.0	
	comp=Z,153nm,21.5s,baz=159,slow=38						
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	26.50	338	P	P	02 52 09.5	-0.6
KLR	**Kul'dur**	26.56	16	P	P	02 52 10.4	0.0
	comp=Z,3.2nm,0.9s,baz=220,slow=7.0,SNR=7.2						
KLR				LR	LR	03 03 28.8	
	comp=Z,141nm,18.9s,baz=186,slow=38						
	comp=Z,3.2nm,0.9s						
ASAJ	**Asahikawa**	26.72	36	LR	LR	03 03 16.8	
	comp=Z,227nm,19.5s,baz=164,slow=38						
KAPI	**Kappang**	28.85	183	LR	LR	03 04 04.7	
	comp=Z,52nm,21.6s,baz=18,slow=36						
PSI	**Prapat**	30.01	229	LR	LR	03 03 42.8	
	comp=Z,92nm,20.9s,baz=42,slow=34						
WMQ	**Urumqi**	33.71	314	*e*P	P	02 53 16.2	+2.3
WMQ				sP	sP	02 53 23.6	+1.6
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,12.7s						
WMQ				LR	LR		
	comp=Z,340nm,14.1s						
WMQ				LR	LR		
	comp=Z,120nm,15.3s						
MK31	**Makanchi Array**	38.40	316	P	P	02 53 53.6	-0.3
MKAR	**Makanchi Array**	38.40	316	P	P	02 53 54.6	+0.7
	comp=Z,3.4nm,0.6s,baz=110,slow=9.9,SNR=43						
MKAR				PcP	PcP	02 56 06.5	-0.7
	comp=Z,0.6nm,0.6s,baz=95,slow=4.8,SNR=3.4						
	comp=Z,3.4nm,0.6s						
MKAR	**Makanchi Array**	38.40	316	P	P	02 53 54.2	+0.3
MAKZ	**Makanchi**	38.60	316	P	P	02 53 55.1	-0.5
MAKZ				IAmb	IAmb	02 54 02.9	
	comp=Z,7.3nm,1.1s						
PETK	**Petropavlovsk-**	40.10	34	LR	LR	03 11 53.2	
	comp=Z,82nm,18.2s,baz=251,slow=38						
ZAA0	**Zalesovo Array**	40.35	327	P	P	02 54 09.4	-0.6
ZAA0				IAmb	IAmb	02 54 16.4	
	comp=Z,6.6nm,0.9s						
ZALV	**Zalesovo Beam**	40.35	327	P	P	02 54 09.6	-0.5
	comp=Z,4.5nm,0.6s,baz=115,slow=7.9,SNR=18						
ZALV				PcP	PcP	02 56 11.0	-2.2
	comp=Z,0.8nm,0.6s,baz=128,slow=4.0,SNR=2.1						
ZALV				LR	LR	03 11 54.9	
	comp=Z,76nm,20.6s,baz=99,slow=37						
	comp=Z,4.5nm,0.6s						
KSH	**Kashi**	40.91	303	P	P	02 54 15.2	+0.1
KSH				sP	sP	02 54 29.0	+5.8
KSH				LR	LR		
	comp=Z,150nm,14.9s						
PMG	**Port Moresby**	41.86	139	LR	LR	03 11 36.5	
	comp=Z,54nm,18.7s,baz=159,slow=36						
KURK	**Kurchatov**	42.17	320	P	P	02 54 24.7	-0.4
AAK	**Ala-Archa**	42.53	308	LR	LR	03 14 15.8	
	comp=Z,57nm,19.9s,baz=96,slow=39						
H11N1	**WAKE ISLAND Hy**	42.62	86	T	T	03 39 37.5	
	baz=283,slow=74,SNR=7.0						

H11N2	**WAKE ISLAND Hy**	42.62	86	T	T	03 39 36.3	
	baz=283,slow=74,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	42.63	86	T	T	03 39 36.9	
	baz=283,slow=74,SNR=9.0						
H11S3	**WAKE ISLAND Hy**	42.74	88	T	T	03 39 43.2	
	baz=284,slow=74,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	42.75	88	T	T	03 39 44.9	
	baz=284,slow=74,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	42.76	88	T	T	03 39 44.4	
	baz=284,slow=74,SNR=4.2						
KKAR	**Karatay Array**	45.50	308	P	P	02 54 51.4	-0.6
WRA	**Warramunga Arr**	45.54	162	P	P	02 54 49.7	-2.8
	comp=Z,2.3nm,0.7s,baz=345,slow=8.7,SNR=20						
WRA				PcP	PcP	02 56 28.8	-2.2
	comp=Z,1.3nm,0.6s,baz=346,slow=3.4,SNR=8.7						
	comp=Z,2.3nm,0.7s						
KBL	**Kabul**	46.14	296	P	P	02 54 57.3	-0.1
KBL				IAmb	IAmb	02 55 03.2	
	comp=Z,6.8nm,1.1s						
BRVK	**Borovoye**	47.82	321	P	P	02 55 09.7	-0.3
BRVK				IAmb	IAmb	02 55 17.8	
	comp=Z,6.0nm,0.8s						
TIXI	**Tiksi**	47.90	3	P	P	02 55 09.0	-1.3
TIXI				IAmb	IAmb	02 55 09.7	
	comp=Z,8.7nm,1.2s						
AS31	**Alice Springs**	48.98	164	P	P	02 55 18.9	-0.3
ASAR	**Alice Springs**	48.98	164	P	P	02 55 17.1	-2.2
	comp=Z,1.6nm,0.7s,baz=339,slow=6.4,SNR=18						
ASAR				PcP	PcP	02 56 40.9	-2.3
	comp=Z,1.2nm,0.6s,baz=340,slow=3.3,SNR=8.0						
	comp=Z,1.6nm,0.7s						
NRIK	**Noril'sk**	49.56	345	P	P	02 55 23.1	0.0
	comp=Z,2.4nm,0.7s,baz=126,slow=7.0,SNR=2.6						
	comp=Z,2.4nm,0.7s						
NRIK	**Noril'sk**	49.56	345	P	P	02 55 24.2	+1.1
NRIK				IAmb	IAmb	02 55 29.1	
	comp=Z,3.9nm,0.8s						
CTA	**Charters Tower**	50.22	149	LR	LR	03 16 56.1	
	comp=Z,31nm,18.7s,baz=84,slow=36						
HNR	**Honiara**	50.46	127	LR	LR	03 14 25.9	
	comp=Z,74nm,21.2s,baz=40,slow=33						
ABKAR	**Akbulak array**	53.49	314	P	P	02 55 52.2	-0.7
ARU	**Arti**	55.19	323	P	P	02 56 05.1	-0.1
STKA	**Stephens Creek**	58.92	160	P	P	02 56 29.8	-1.9
	comp=Z,2.1nm,0.6s,baz=316,slow=7.9,SNR=3.3						
	comp=Z,2.1nm,0.6s						
KIRV	**Kirov**	60.31	325	LR	LR	03 24 50.8	
	comp=Z,66nm,18.2s,baz=86,slow=38						
GNI	**Garni**	64.82	305	LR	LR	03 29 09.2	
	comp=Z,23nm,20.1s,baz=98,slow=39						
KLMR	**Klimovskoe**	65.27	328	*e*P	P	02 57 12.6	-1.4
KLMR				AMP		02 57 24.4	
	comp=Z,13nm,1.3s						
ONI	**Oni**	65.32	307	P	P	02 57 15.3	+0.5
KBZ	**Khabaz**	65.51	309	P	P	02 57 15.8	-0.1
	comp=Z,1.1nm,0.7s,baz=76,slow=12,SNR=2.3						
	comp=Z,1.1nm,0.7s						
L19K	**White Mountain**	66.35	31	P	P	02 57 21.2	+0.2
J20K	**Nowinta River**	66.44	28	P	P	02 57 21.5	0.0
J20K				IAmb	IAmb	02 57 22.5	
	comp=Z,5.0nm,1.1s						
H21K	**Melozitna Rive**	66.83	27	P	P	02 57 24.2	+0.2
H21K				IAmb	IAmb	02 57 24.7	
	comp=Z,4.3nm,0.8s						
GURO	**Guroymak-BITLI**	67.20	303	P	P	02 57 27.4	+0.3
GURO				IAmb	IAmb	02 57 35.5	
	comp=Z,3.4nm,1.0s						
H23K	**Yukon River**	68.14	26	P	P	02 57 32.4	+0.1
H23K				IAmb	IAmb	02 57 55.3	
	comp=Z,4.5nm,0.9s						
MDM	**Murphy Dome**	68.84	27	IAmb	IAmb	02 57 37.0	
	comp=Z,5.9nm,1.0s						
ILAR	**Eielson Array**	69.44	27	P	P	02 57 37.2	-3.2
	comp=Z,0.5nm,0.7s,baz=300,slow=8.4,SNR=6.9						
	comp=Z,0.5nm,0.7s						
SPITS	**Spitsbergen Ar**	69.65	348	LR	LR	03 33 55.6	
	comp=Z,29nm,18.9s,baz=260,slow=41						
ARCES	**ARCESS Array B**	69.68	338	P	P	02 57 41.3	-0.5
	comp=Z,2.9nm,0.7s,baz=66,slow=8.2,SNR=16						
ARCES				LR	LR	03 32 27.0	
	comp=Z,22nm,19.4s,baz=122,slow=39						
	comp=Z,2.9nm,0.7s						
FINES	**FINESS Array B**	71.56	330	P	P	02 57 53.0	-0.3
	comp=Z,1.6nm,0.5s,baz=53,slow=6.0,SNR=36						
FINES				LR	LR	03 32 03.1	
	comp=Z,50nm,19.8s,baz=80,slow=38						
	comp=Z,1.6nm,0.5s						
FINES	**FINESS Array B**	71.56	330	P	P	02 57 53.5	+0.1
M26K	**Nabesna, AK**	71.73	29	IAmb	IAmb	02 57 55.6	
	comp=Z,8.9nm,1.1s						
L27K	**Beaver Creek,**	72.05	28	IAmb	IAmb	02 57 57.0	
	comp=Z,6.5nm,1.1s						
VSU	**Vasula**	72.08	327	*e*P	P	02 57 56.2	-0.3
MNK	**Minsk**	72.61	322	*i* P	P	02 57 58.0	-1.9
MNK				*i* P	P	02 57 58.0	-1.9
	comp=N,7.0nm,1.2s						
MNK				*i* P	P	02 57 58.0	-1.9
	comp=Z,3.0nm,1.1s,baz=73						
MNK				*i* PcP	PcP	02 58 15.1	-2.1
MNK				*i* PP	PP	03 00 39.3	-1.7
MNK				*i* PPP	PPP	03 02 23.6	
MNK				*i* S	S	03 07 25.8	+2.1
MNK				*i* SS	SS	03 12 03.9	+1.5
MNK				*i* SSS	SSS	03 15 24.3	
MNK				*i* LR	LR	03 30 30.0	
MNK				*i* LRM	MLR	03 32 34.8	
	comp=Z,89nm,17.2s						
MNK				*i* LRM	MLR	03 32 38.7	
	comp=N,34nm,19.8s						
MNK				*i* LRM	MLR	03 32 57.8	
	comp=E,6.0nm,16.0s						
AKASG	**Malin Array Be**	72.94	318	P	P	02 58 01.0	-0.9
	comp=E,0.3nm,0.4s,baz=64,slow=6.1,SNR=2.4						
	comp=E,0.3nm,0.4s						
AKBB	**Malin Array Si**	72.94	318	P	P	02 58 02.2	+0.4
AKBB				IAmb	IAmb	02 58 15.2	
	comp=Z,7.0nm,1.4s						
IDID	**Didziasalis**	73.00	323	*e*P	P	02 58 01.6	-0.5
BR131	**Keskin Array S**	73.19	306	P	P	02 58 03.4	-0.3
BR131				IAmb	IAmb	02 58 15.6	
	comp=Z,2.9nm,0.9s						
BRTR	**Keskin Array B**	73.19	306	P	P	02 58 03.8	0.0
	comp=Z,0.9nm,0.5s,baz=98,slow=3.2,SNR=11						
BRTR				LR	LR	03 35 55.8	
	comp=Z,29nm,18.0s,baz=98,slow=40						
	comp=Z,0.9nm,0.5s						
BRTR	**Keskin Array B**	73.19	306	P	P	02 58 03.3	-0.5
MTSE	**Matsula**	73.46	327	*e*P	P	02 58 04.7	0.0
PABE	**Paberze**	74.44	324	*e*P	P	02 58 10.8	+0.3
SLIT	**Slitere, Latvi**	74.59	327	*e*P	P	02 58 10.6	-0.7
SUW	**Suwalki**	75.38	323	*e*P	P	02 58 15.8	-0.2
UPP	**Uppsala**	76.01	330	*e*P	P	02 58 19.2	-0.3
BURAR	**Bucovina Array**	76.42	316	P	P	02 58 22.2	-0.1
VIKU	**Vikbolandet**	77.00	329	*e*P	P	02 58 25.6	+0.5
HFS	**Hagfors**	77.68	331	LR	LR	03 35 52.0	
	comp=Z,110nm,18.6s,baz=63,slow=38						
NB2	**NORSAR Subarra**	78.34	332	P	P	02 58 31.6	-1.1
	comp=Z,8.5nm,1.0s,baz=62,slow=5.6						
NOA	**NORSAR Array B**	78.34	332	P	P	02 58 31.7	-1.0
	comp=Z,4.7nm,0.8s,baz=58,slow=5.7,SNR=22						
NOA				LR	LR	03 37 05.5	
	comp=Z,59nm,20.4s,baz=50,slow=39						
	comp=Z,4.7nm,0.8s						
OJC	**Ojcow**	78.75	320	P	P	02 58 33.9	-1.2
OJC				IAmb	IAmb	02 58 36.1	
	comp=Z,13nm,1.4s						
JMIC	**Jan Mayen**	78.99	345	LR	LR	03 38 58.9	
	comp=Z,37nm,18.4s,baz=253,slow=40						
VTS	**Vitosha**	79.58	312	P	P	02 58 39.5	-0.5
VTS				IAmb	IAmb	02 58 42.0	
	comp=Z,4.6nm,0.9s						
VRAC	**Vranov**	81.02	320	LR	LR	03 37 43.3	
	comp=Z,26nm,18.7s,baz=64,slow=38						
KBN	**Korca**	82.06	311	P	P	02 58 52.2	-1.0
KBN				IAmb	IAmb	02 58 53.4	
	comp=Z,7.4nm,1.1s						
CLL	**Collm**	82.14	323	*i* P	P	02 58 52.7	-0.5
	comp=Z,4.0nm,0.9s						
CLL				*e*(PcP)	pP	02 58 59.0	-0.5
GEC2	**GERESS Array S**	82.92	321	P	P	02 58 57.2	-0.4
GEC2				IAmb	IAmb	02 58 58.3	
	comp=Z,2.9nm,1.0s						
GERES	**GERESS Array B**	82.92	321	P	P	02 58 57.1	-0.4
	comp=Z,1.5nm,0.9s,baz=67,slow=4.5,SNR=11						
GERES				LR	LR	03 39 08.7	
	comp=Z,33nm,18.4s,baz=100,slow=38						
	comp=Z,1.5nm,0.9s						

GERES	GERESS Array B	82.92	321	P	P	02 58 57.3	-0.2
YKA	Yellowknife Ar	83.20	23	P	P	02 58 56.9	-1.6
	comp=Z,1.1nm,0.6s,baz=314,slow=4.8,SNR=35						
	comp=Z,1.1nm,0.6s						
EKA	Eskdalemuir Ar	87.83	332	LR	LR	03 43 02.5	
	comp=Z,128nm,18.0s,baz=357,slow=38						
NVAR	Mina Array Bea	96.66	43	P	P	03 00 01.5	-1.8
	comp=Z,0.3nm,0.6s,baz=284,slow=5.2,SNR=3.6						
	comp=Z,0.3nm,0.6s						
ZARC	Zaragoza, Cauc	145.07	28	PKPbc	PKPbc	03 06 08.2	-2.0
SDV	Santo Domingo	145.39	21	PKPbc	PKPbc	03 06 09.8	-1.6
	comp=Z,5.6nm,0.4s,baz=313,slow=3.1,SNR=6.5						
SDV	Santo Domingo	145.39	21	PKPbc	PKPbc	03 06 10.0	-1.5

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*IDC **08** 02:57:51.8±3.5, 16°.11S×71°.81W, h157^{km}±31^{km}, mb3.5/2, mbtmp3.7/4, Error ellipse: s-maj=37.2km s-min=22.1km az=120.0*

ISC 08 02:57:46.9±0.9, **15°.98S**±0°.10×**72°.19W**±0°.09, **h114**^{km}**, n8,** σ**1^{s}.46**/10**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.91	95	P	Pn	02 58 47.8	+2.0
	2.8nm,0.4s,baz=283,slow=9.0,SNR=26						
LPAZ				S	Sn	02 59 29.9	-1.4
	5.2nm,0.7s,baz=224,slow=19,SNR=8.7						
NNA	Nana	6.01	311	S	Sn	03 00 20.8	-0.3
	4.7nm,0.4s,baz=81,slow=21,SNR=1.8						
LVC	Limon Verde	7.29	155	P	Pn	02 59 32.4	+1.3
	1.8nm,0.4s,baz=360,slow=4.7,SNR=6.3						
LVC				S	Sn	03 00 51.3	-1.3
	12nm,0.3s,baz=57,slow=15,SNR=15						
TORD	Torodi Ar. Bea	78.56	73	P	P	03 09 34.6	-1.9
	1.3nm,0.7s,baz=263,slow=5.4,SNR=13						
	1.3nm,0.7s						
YKA	Yellowknife Ar	84.98	342	P	P	03 10 08.8	-0.3
	0.5nm,0.8s,baz=138,slow=5.4,SNR=9.5						
	0.5nm,0.8s						
MJAR	Matsushiro Arr	146.13	313	PKPbc	PKPab	03 17 15.1	0.0
	1.1nm,0.8s,baz=96,slow=2.4,SNR=2.2						
SONM	Songino Array	148.21	2	PKPbc	PKPbc	03 17 20.5	+0.7
	0.6nm,0.8s,baz=48,slow=2.1,SNR=2.6						
KSRS	Korea Array	152.18	324	PKPbc	PKiKP	03 17 30.9	+1.1
	0.6nm,0.5s,baz=30,slow=2.2,SNR=2.6						

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*IDC **08** 03:36:02.0±8.4, 15°.57S×172°.83W, h0^{km}, mb3.4/2, mbtmp3.4/2, MS3.5/1, Error ellipse: s-maj=357.4km s-min=27.5km az=137.0*

*NOU **08** 03:36:18.0, 13°.95S×172°.17W, h112^{km}, MLv3.0/4, Samoa Islands*

ISC 08 03:36:04.8±3.5, **15°S**±1°×**173°.1W**±0°.7**, h10**^{km}**, n6,** σ**1^{s}.74**/6**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.69	51	Pn	Pn	03 36 35.7	+1.2
	83nm,0.3s,baz=218,slow=8.6,SNR=49						
AFI				Sn	Sn	03 36 54.2	-2.0
	132nm,0.3s,baz=194,slow=9.0,SNR=15						
AFI	Afiamalu	1.69	51	P	Pn	03 36 35.7	+1.2
HNR	Honiara	26.86	279	LR	LR	03 50 29.2	
	comp=Z,85nm,18.4s,baz=180,slow=32						
WRA	Warramunga Arr	50.19	256	P	P	03 45 01.4	+0.2
	0.3nm,0.7s,baz=88,slow=7.0,SNR=1.6						
	0.3nm,0.7s						
ASAR	Alice Springs	50.48	252	P	P	03 45 02.0	-1.4
	0.4nm,0.5s,baz=90,slow=8.1,SNR=6.5						
	0.4nm,0.5s						
BRTR	Keskin Array B	145.98	322	PKPbc	PKPab	03 55 46.3	+0.5
	0.6nm,0.8s,baz=140,slow=2.9,SNR=5.0						

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*IDC **08** 04:00:22.0±1.1, 32°.78N×130°.75E, h0^{km}, mb3.4/7, mbtmp3.4/10, ML2.9/3, MS2.9/4, Error ellipse: s-maj=23.1km s-min=8.8km az=113.0*

*JMA **08** 04:00:23.3±0.0, 32°.82N±0°.08×130°.9E±0°.1, h4^{km}, MV3.6/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

*NIED **08** 04:00:23.3, 32°.82N×130°.86E, h4^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.45; $M_{\theta\theta}$3.60; $M_{\phi\phi}$-3.16; $M_{r\theta}$-1.05; $M_{\theta\phi}$-1.04; $M_{\phi r}$-1.16; Fault plane solution: $M_0$3.89000×10^{14} NP1: ϕ_s322.00000°, δ66.00000°, λ-7.00000°. NP2:ϕ_s55.00000°, δ83.00000°, λ-156.00000°.*

ISC 08 04:00:23.9±0.7, **32°.81N**±0°.03×**130°.82E**±0°.06**, h12**^{km}**, n19,** σ**0^{s}.86**/19**, mb3.5**/8**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.26	181	i P	Pg	04 00 28.9	-0.5
JIU3				S	Sg	04 00 33.0	-0.1
JTA	Tamana	0.28	302	i P	Pg	04 00 29.6	-0.2
JTA				S	Sg	04 00 34.5	+0.7
JNU	Nakatsue	0.31	9	Pg	Pg	04 00 29.1	-1.2
	711nm,0.3s,baz=119,slow=0.0,SNR=582						
JNU				Lg	Lg	04 00 33.1	
	2μm,0.3s,baz=198,slow=6.2,SNR=4.5						
JNU	Nakatsue	0.31	9	i P	Pg	04 00 29.7	-0.7
JNU				S	Sg	04 00 34.1	-0.5
JTZ	Takazaki	0.94	166	i P	Pg	04 00 41.6	-0.4
KSRS	Korea Array	5.20	334	Pn	Pn	04 01 42.3	+0.8
	0.3nm,0.3s,baz=151,slow=14,SNR=4.1						
KSRS				Lg	Lg	04 03 06.2	
	1.0nm,0.3s,baz=153,slow=30,SNR=8.0						
	0.6nm,0.3s						
MJAR	Matsushiro Arr	7.13	57	Pn	Pn	04 02 10.2	+2.1
	0.2nm,0.3s,baz=240,slow=13,SNR=7.7						
	2.0nm,0.4s						
JHJ	Hachijo jima 2	7.54	85	LR	LR	04 05 08.1	
	comp=Z,88nm,20.9s,baz=297,slow=38						
KLR	Kul'dur	16.42	2	Pn	Pn	04 04 14.3	+0.3
	0.1nm,0.3s,baz=186,slow=6.2,SNR=1.4						
KLR				LR	LR	04 09 18.3	
	comp=Z,19nm,21.1s,baz=296,slow=33						
	0.2nm,0.3s						
SONM	Songino Array	23.78	316	P	P	04 05 37.5	+1.1
	0.3nm,0.3s,baz=128,slow=9.3,SNR=2.2						
	0.3nm,0.3s						
CMAR	Chiang Mai Arr	31.95	251	LR	LR	04 21 49.5	
	comp=Z,12nm,19.6s,baz=315,slow=40						
MKAR	Makanchi Array	39.19	305	P	P	04 07 51.2	-0.6
	0.1nm,0.3s,baz=111,slow=8.0,SNR=2.3						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	41.94	311	P	P	04 08 14.2	-0.2
	0.4nm,0.2s,baz=99,slow=8.6,SNR=4.2						
	0.4nm,0.2s						
NRIK	Noril'sk	43.79	339	LR	LR	04 28 21.4	
	comp=Z,44nm,18.5s,baz=244,slow=38						
ASAR	Alice Springs	56.24	177	P	P	04 10 03.1	-1.0
	0.4nm,0.7s,baz=8.9,slow=13,SNR=4.7						
	0.4nm,0.7s						
FINES	FINESS Array B	68.28	330	P	P	04 11 24.3	-0.1
	0.4nm,0.6s,baz=69,slow=7.6,SNR=1.6						
	0.4nm,0.6s						
YKA	Yellowknife Ar	71.64	26	P	P	04 11 45.6	+0.6
	0.1nm,0.7s,baz=304,slow=6.2,SNR=2.1						
	0.1nm,0.7s						
AKASG	Malin Array Be	72.03	319	P	P	04 11 47.3	-0.2
	0.2nm,0.4s,baz=51,slow=6.8,SNR=1.5						
	0.2nm,0.4s						
KEST	Kesra	92.53	316	P	P	04 13 34.5	-0.8
	2.7nm,0.7s,baz=36,slow=0.1,SNR=4.0						

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*IDC **08** 04:01:54.1±6.3, 2°.75S×101°.48E, h95^{km}±39^{km}, mb3.3/6, mbtmp3.6/6, Error ellipse: s-maj=152.6km s-min=18.1km az=54.0*

*DJA **08** 04:01:56.8±0.6, 3°S±6°×10°2E±°, h60^{km}±9^{km}, M3.8/7, MLv3.8/7*

ISC 08 04:01:55.2±0.9, **2°.6S**±0°.1×**101°.61E**±0°.10**, h100**^{km}**, n17,** σ**0^{s}.69**/15**, mb3.7**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.54	344	P	Pn	04 02 11.0	-0.5
KSI	Kapahiang	1.42	137	P	Pn	04 02 20.3	-0.4
PPSI	Pulau Pagai	1.61	265	P	Pn	04 02 22.9	+0.1
MNAI	Manna	2.19	142	P	Pn	04 02 30.9	+0.5
SISI	Saibi	2.83	297	P	Pn	04 02 39.4	+0.7
MDSI	Maura Dua	3.17	126	P	Pn	04 02 44.7	+1.4
GSI	Gunungsitoli	5.60	314	P	Pn	04 03 17.0	+0.8
H08S2	Diego Garcia H	29.42	259	T	T	04 37 30.4	
	baz=82,slow=75,SNR=6.9						
H08S3	Diego Garcia H	29.43	259	T	T	04 37 26.8	
	baz=82,slow=75,SNR=6.0						
H08S1	Diego Carcia H	29.44	259	T	T	04 37 34.4	
	baz=82,slow=75,SNR=4.4						
WRA	Warramunga Arr	36.30	121	P	P	04 08 48.9	-0.6
	0.3nm,0.3s,baz=304,slow=8.3,SNR=8.3						
	0.3nm,0.3s						
ASAR	Alice Springs	37.59	127	P	P	04 09 00.1	-0.4
	0.5nm,0.7s,baz=298,slow=8.1,SNR=6.1						
ASAR				ScP	ScP	04 14 54.3	-0.6
	0.3nm,0.7s,baz=291,slow=3.9,SNR=1.7						
	0.5nm,0.7s						
SONM	Songino Array	50.41	4	P	P	04 10 43.3	+0.7
	0.4nm,0.4s,baz=186,slow=10,SNR=2.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	52.06	343	P	P	04 10 54.7	-0.1
	0.3nm,0.4s,baz=139,slow=8.3,SNR=5.5						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	56.60	343	P	P	04 11 27.8	+0.2
	0.6nm,0.7s,baz=164,slow=6.5,SNR=5.9						
	0.6nm,0.7s						
ZALV	Zalesovo Beam	58.08	348	P	P	04 11 37.2	-0.6
	0.4nm,0.4s,baz=175,slow=8.2,SNR=3.7						
	0.4nm,0.4s						
TXAR	Lajitas Array	144.18	40	PKP	PKPdf	04 21 19.9	-0.4
	0.1nm,0.4s,baz=209,slow=1.2,SNR=5.9						

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*IDC **08** 04:10:21.7±1.5, 59°.84N×153°.24W, h90^{km}±16^{km}, mb3.2/7, mbtmp3.6/11, Error ellipse: s-maj=19.6km s-min=14.3km az=79.0*

*NEIC **08** 04:10:22.6±1.0, 59°.84N±0°.03×152°.96W±0°.06, h104^{km}±2^{km}, Error ellipse: s-maj=4.8km s-min=4.5km az=114.0*

*AEIC **08** 04:10:23±1.3, 59°.83N±0°.03×152°.97W±0°.05, h99^{km}±4^{km}, ML3.1, ML3.4/118(NEIC), Error ellipse: s-maj=4.5km s-min=3.5km az=187.0*

ISC 08 04:10:23.0±0.7, **59°.84N**±0°.03×**152°.97W**±0°.03, **h104**^{km}±5^{km}**, n221,** σ**0^{s}.83**/222**, mb3.3**/7**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPT	Oil Point	0.23	216		Pn	04 10 37.5	-0.3
OPT	Oil Point	0.23	216	P	Pn	04 10 37.5	-0.3
	baz=36						
P19K	Oil Pt	0.23	216		Pn	04 10 37.5	-0.4
P19K					Sn	04 10 48.5	-0.4
P19K	Oil Pt	0.23	216	P	Pn	04 10 37.5	-0.4
	baz=36						
P19K				S	Sn	04 10 48.5	-0.4
	baz=36						
O20K	Slope Mountain	0.30	35		Pn	04 10 37.7	-0.4
O20K					Sn	04 10 49.6	0.0
O20K	Slope Mountain	0.30	35	P	Pn	04 10 37.7	-0.4
	baz=215						
O20K				S	Sn	04 10 49.6	0.0
	baz=215						
AU22	Augustine Moun	0.51	203		Pn	04 10 39.0	-0.3
AU22					Sn	04 10 51.0	-0.5
AU2	Augustine Isla	0.52	204		Pn	04 10 39.1	-0.2
AUL	Augustine Lava	0.52	208		Pn	04 10 39.2	-0.2
AUL					Sn	04 10 51.5	-0.1
AUQ	Augustine Qik’	0.54	205		Pn	04 10 39.3	-0.3
RED	Redoubt Volcan	0.59	9		Pn	04 10 39.4	-0.6
RED					Sn	04 10 51.9	-0.8
RSO	Redoubt South	0.63	10		Pn	04 10 40.2	-0.3
RDWB	Redoubt West	0.65	6		Pn	04 10 40.1	-0.5
RDWB					Sn	04 10 53.0	-0.7
HOM	Homer	0.69	105		Pn	04 10 40.7	0.0
HOM	Homer	0.69	105	P	Pn	04 10 40.7	0.0
	baz=285						
NCT	North Crescent	0.72	1		Pn	04 10 40.7	-0.5
NCT					Sn	04 10 54.1	-0.7
RDJH	Redoubt Jeurge	0.76	6		Pn	04 10 41.1	-0.4
DFR	Drift River	0.77	10		Pn	04 10 41.1	-0.4
DFR					Sn	04 10 55.1	-0.4
O19K	Port Alsworth	0.77	298		Pn	04 10 41.1	-0.3
O19K					Sn	04 10 54.6	-0.6
O19K	Port Alsworth	0.77	298	IAML		04 10 55.2	
	comp=N,3μm,0.4s						
O19K	Port Alsworth	0.77	298	P	Pn	04 10 41.1	-0.3
	baz=118						
O19K				S	Sn	04 10 54.6	-0.6
	baz=118						
CNPM	China Poot	0.93	109		Pn	04 10 42.5	-0.6
CNPM					Sn	04 10 57.3	-0.9
CNPM	China Poot	0.93	109	IAML		04 10 58.8	
	comp=N,2μm,0.4s						
CNPM				IAML		04 10 59.9	
	comp=E,2μm,0.4s						
Q19K	Cape Douglas,	0.98	201		Pn	04 10 42.9	-0.7
Q19K					Sn	04 10 58.5	-0.5
Q19K	Cape Douglas,	0.98	201	IAML		04 11 00.3	
	comp=E,1μm,0.7s						
Q19K				IAML		04 11 01.1	
	comp=N,991nm,0.6s						
Q19K	Cape Douglas,	0.98	201	P	Pn	04 10 42.9	-0.7
	baz=21						
Q19K				S	Sn	04 10 58.5	-0.5
	baz=21						
BRLK	Bradley Lake	1.05	93		Pn	04 10 43.8	-0.6
BRLK	Bradley Lake	1.05	93	IAML		04 11 00.5	
	comp=E,2μm,0.2s						
BRSE	Bradley Lake S	1.13	94		Pn	04 10 44.6	-0.6
BRSE	Bradley Lake S	1.13	94	P	Pn	04 10 44.6	-0.6
	baz=275						
O18K	Koktuh Hills	1.13	272		Pn	04 10 44.8	-0.4
O18K					Sn	04 11 01.0	-1.0
O18K	Koktuh Hills	1.13	272	IAML		04 11 01.6	
	comp=N,616nm,0.8s						
O18K				IAML		04 11 02.1	
	comp=E,377nm,1.4s						
O18K	Koktuh Hills	1.13	272	P	Pn	04 10 44.8	-0.4
	baz=90						
O18K				S	Sn	04 11 01.0	-1.0
	baz=90						
N19K	Bonanza Creek	1.23	323		Pn	04 10 45.9	-0.5
N19K					Sn	04 11 03.2	-0.9
N19K	Bonanza Creek	1.23	323	IAML		04 11 03.6	
	comp=E,336nm,0.8s						
N19K				IAML		04 11 04.3	
	comp=N,369nm,0.8s						
N19K	Bonanza Creek	1.23	323	P	Pn	04 10 45.9	-0.5
	baz=142						
N19K				S	Sn	04 11 03.2	-0.9
	baz=142						
P18K	Big Mountain,	1.23	250		Pn	04 10 45.6	-0.7
P18K					Sn	04 11 02.3	-1.7
P18K	Big Mountain,	1.23	250	P	Pn	04 10 45.6	-0.7
	baz=68						
P18K				S	Sn	04 11 02.3	-1.7
	baz=68						
CAPN	Captain Cook N	1.30	43		Sn	04 11 05.5	+0.3
CAPN	Captain Cook N	1.30	43		Pn	04 10 48.5	+1.5
CAPN	Captain Cook N	1.30	43	P	Pn	04 10 48.5	+1.5
	baz=225						
SPCR	Spurr Chakacha	1.42	15		Pn	04 10 48.3	-0.2
SPCR					Sn	04 11 07.1	-0.8
SPCR	Spurr Chakacha	1.42	15	P	Pn	04 10 48.3	-0.2
	baz=196						
SPCR				S	Sn	04 11 07.1	-0.8
	baz=196						
SPU	Mount Spurr	1.42	18		Pn	04 10 48.3	-0.2
CKN	Chakachatna No	1.44	15		Pn	04 10 48.8	0.0
SPWE	Spurr West	1.45	8		Pn	04 10 49.3	+0.3
SPBG	Spurr Blockage	1.45	11		Pn	04 10 49.1	+0.1
SLKM	Skilak Lake	1.53	63		Pn	04 10 49.5	-0.3
SLKM					Sn	04 11 09.1	-1.1
SPCG	Spurr Capps Gl	1.53	17		Pn	04 10 49.8	-0.1
N18K	Kilae Creek	1.68	301		Pn	04 10 51.2	-0.5
N18K	Kilae Creek	1.68	301	IAML		04 11 12.9	
	comp=E,180nm,0.5s						
N18K				IAML		04 11 13.0	
	comp=N,201nm,0.8s						
N18K	Kilae Creek	1.68	301	P	Pn	04 10 51.2	-0.5
	baz=119						
O22K	Cooper Landing	1.74	67		Pn	04 10 52.2	-0.2
O22K	Cooper Landing	1.74	67	P	Pn	04 10 52.2	-0.2
	baz=249						
STLK	Strandline Lak	1.75	18		Pn	04 10 52.6	0.0
SEW	Seward	1.79	80		Pn	04 10 52.5	-0.5
SEW	Seward	1.79	80	P	Pn	04 10 52.5	-0.5
	baz=263						
SVW2	Sparrevohn	1.81	315		Pn	04 10 52.8	-0.5
SVW2					Sn	04 11 15.0	-1.3
FIS	Fire Island	1.89	45	Pn	Pn	04 10 54.0	-0.2
FIS				IAML		04 11 24.2	
	comp=N,408nm,0.7s						
FIS				IAML		04 11 40.7	
	comp=E,359nm,0.7s						
KELA	Mount Kelaz	2.00	227		Pn	04 10 55.6	-0.3
RC01	Rabbit Creek A	2.03	51		Pn	04 10 56.0	-0.1
RC01	Rabbit Creek A	2.03	51	IAML		04 11 22.5	
	comp=E,574nm,0.3s						
RC01				IAML		04 11 23.4	
	comp=N,436nm,0.4s						
RC01	Rabbit Creek A	2.03	51	P	Pn	04 10 56.0	-0.1
	baz=233						
M20K	Styx River	2.05	358		Pn	04 10 56.6	+0.2
M20K	Styx River	2.05	358	P	Pn	04 10 56.6	+0.2
	baz=178						
KDAK	Kodiak Island	2.07	174	P	Pn	04 10 55.4	-1.2
	comp=N,137nm,0.5s,baz=51,slow=11,SNR=110						
KDAK				S	Sn	04 11 20.9	-1.4
	comp=N,105nm,0.3s,baz=311,slow=19,SNR=40						
KDAK	Kodiak Island	2.07	174	IAML		04 11 22.5	
	comp=N,510nm,0.4s						
KDAK				IAML		04 11 22.7	
	comp=N,350nm,0.3s						
CAHL	Cahill	2.16	215		Pn	04 10 58.4	+0.5
M19K	Big River Lodg	2.19	342		Pn	04 10 58.0	-0.1
M19K	Big River Lodg	2.19	342	P	Pn	04 10 58.0	-0.1
	baz=161						
M22K	Willow	2.37	35		Pn	04 11 00.6	+0.1
M22K				IAML		04 11 31.7	
	comp=E,370nm,0.4s						
M22K				IAML		04 11 35.9	
	comp=N,403nm,0.4s						
L19K	White Mountain	2.52	339		Pn	04 11 02.2	-0.3
L19K	White Mountain	2.52	339	IAML		04 11 34.5	
	comp=E,71nm,1.1s						
L19K	White Mountain	2.52	339	P	Pn	04 11 02.2	-0.3
	baz=158						
PMR	Palmer	2.58	45		Pn	04 11 01.5	-1.6
PMR	Palmer	2.58	45	IAML		04 11 34.1	
	comp=N,122nm,0.3s						
PMR				IAML		04 11 34.2	
	comp=E,117nm,0.2s						
PMR	Palmer	2.58	45	P	Pn	04 11 01.5	-1.6
	baz=228						
OHAK	Old Harbor	2.63	184		Pn	04 11 02.5	-1.4
OHAK	Old Harbor	2.63	184	IAML		04 11 34.5	
	comp=N,160nm,0.3s						
OHAK				IAML		04 11 34.7	
	comp=E,108nm,0.1s						
OHAK	Old Harbor	2.63	184	P	Pn	04 11 02.5	-1.4
	baz=3.5						
L20K	Farewell, AK	2.68	351		Pn	04 11 04.7	+0.1
L20K	Farewell, AK	2.68	351	P	Pn	04 11 04.7	+0.1
	baz=170						
KNK	Knik Glacier	2.73	53		Pn	04 11 04.0	-1.1
KNK	Knik Glacier	2.73	53	P	Pn	04 11 04.0	-1.1
	baz=236						
GHO	Glory Hole Cre	2.77	44		Pn	04 11 04.8	-1.0
GHO	Glory Hole Cre	2.77	44	IAML		04 11 39.2	
	comp=N,137nm,0.3s						
GHO				IAML		04 11 39.8	
	comp=E,137nm,0.6s						
CUT	Chulitna	2.89	26		Pn	04 11 06.9	-0.4
CUT	Chulitna	2.89	26	IAML		04 11 45.1	
	comp=N,138nm,0.3s						
CUT				IAML		04 11 47.6	
	comp=E,172nm,0.3s						
CUT	Chulitna	2.89	26	P	Pn	04 11 06.9	-0.4
	baz=208						
SML	Sawmill	3.01	47		Pn	04 11 07.9	-1.0
SML	Sawmill	3.01	47	IAML		04 11 53.9	
	comp=E,70nm,1.0s						
SML				IAML		04 11 54.4	
	comp=N,77nm,0.9s						
SML	Sawmill	3.01	47	P	Pn	04 11 07.9	-1.0
	baz=231						
PPLA	Purkeypile	3.09	7		Pn	04 11 10.9	+0.8
PPLA	Purkeypile	3.09	7	P	Pn	04 11 10.9	+0.8
	baz=187						
GLI	Glacier Island	3.10	68		Pn	04 11 08.6	-1.5
GLI				IAML		04 11 44.5	
	comp=E,223nm,0.4s						
M23K	Glacier View	3.23	50	P	Pn	04 11 11.0	-0.8
	baz=235						
SII	Sitkinak Islan	3.35	192		Pn	04 11 12.7	-0.8
SII	Sitkinak Islan	3.35	192	IAML		04 11 51.4	
	comp=E,120nm,0.3s						
SII				IAML		04 11 52.5	
	comp=N,144nm,0.5s						
SII	Sitkinak Islan	3.35	192	P	Pn	04 11 12.7	-0.8
	baz=11						
FID	Port Fidalgo	3.36	71		Pn	04 11 11.2	-2.3
JPK	Jack Peak	3.38	66		Pn	04 11 12.9	-1.1
Q23K	Middleton Isla	3.38	94		Pn	04 11 13.0	-0.9
Q23K	Middleton Isla	3.38	94	IAML		04 11 57.4	
	comp=N,164nm,1.7s						
Q23K	Middleton Isla	3.38	94	P	Pn	04 11 13.0	-0.9
	baz=280						
MID	Middleton Isla	3.39	94		Pn	04 11 12.9	-1.0
MID	Middleton Isla	3.39	94	IAML		04 12 04.8	
	comp=N,162nm,1.5s						
SCM	Sheep Creek Mo	3.41	52		Pn	04 11 13.5	-0.8
SCM	Sheep Creek Mo	3.41	52	IAML		04 11 55.7	
	comp=N,60nm,0.3s						
SCM				IAML		04 12 09.6	
	comp=E,73nm,0.8s						
SCM	Sheep Creek Mo	3.41	52	P	Pn	04 11 13.5	-0.8
	baz=236						
TT01	Tatalina	3.41	336		Pn	04 11 13.8	-0.5
TTA	Tatalina	3.43	336		Pn	04 11 13.9	-0.6
TTA	Tatalina	3.43	336	P	Pn	04 11 13.9	-0.6
	baz=154						
K20K	Telida	3.57	352		Pn	04 11 16.3	0.0
K20K	Telida	3.57	352	P	Pn	04 11 16.3	0.0
	baz=171						
CAST	Castle Rocks	3.62	6		Pn	04 11 16.9	-0.1
CAST	Castle Rocks	3.62	6	P	Pn	04 11 16.9	-0.1
	baz=187						
EYAK	Cordova Ski Ar	3.67	76		Pn	04 11 16.2	-1.5
EYAK	Cordova Ski Ar	3.67	76	P	Pn	04 11 16.2	-1.5
	baz=262						
WAT1	Susitna Watana	3.68	33		Pn	04 11 17.3	-0.5
WAT1	Susitna Watana	3.68	33	P	Pn	04 11 17.3	-0.5
	baz=217						
WAT6	Susitna Watana	3.73	40		Pn	04 11 17.9	-0.8
WAT6	Susitna Watana	3.73	40	P	Pn	04 11 17.9	-0.8
	baz=225						
DIV	Divide	3.79	67		Pn	04 11 18.2	-1.1
KLU	Klutina	3.84	61		Pn	04 11 18.8	-1.3
KLU	Klutina	3.84	61	IAML		04 12 04.9	
	comp=E,101nm,0.4s						
KLU	Klutina	3.84	61	P	Pn	04 11 18.8	-1.3
	baz=247						
KTH	Kantishna Hill	3.85	14		Pn	04 11 19.6	-0.6
M24K	Tolsona, Glenn	4.01	53		Pn	04 11 21.9	-0.5
M24K	Tolsona, Glenn	4.01	53	IAML		04 12 23.5	
	comp=E,63nm,0.6s						
M24K				IAML		04 12 26.0	
	comp=N,56nm,1.5s						
M24K	Tolsona, Glenn	4.01	53	P	Pn	04 11 21.9	-0.5
	baz=238						
CHUM	Lake Minchumin	4.07	4		Pn	04 11 23.0	-0.1
CHUM	Lake Minchumin	4.07	4	P	Pn	04 11 23.0	-0.1
	baz=185						
RND	Reindeer	4.08	27		Pn	04 11 23.2	-0.1
GOAT	Goat Mountain	4.18	76		Pn	04 11 22.9	-1.7
RAGM	Ragged Mountai	4.19	79		Pn	04 11 23.4	-1.3
DHY	Denali Highway	4.21	37		Pn	04 11 24.6	-0.5
DHY	Denali Highway	4.21	37	IAML		04 12 15.9	
	comp=N,23nm,0.4s						
DHY				IAML		04 12 16.2	
	comp=E,29nm,0.5s						
DHY	Denali Highway	4.21	37	P	Pn	04 11 24.6	-0.5
	baz=222						
BMRM	Bremner River	4.30	71		Pn	04 11 26.1	-0.2
BMRM				IAML		04 12 16.0	
	comp=E,59nm,0.3s						
BMRM				IAML		04 12 20.8	
	comp=N,49nm,0.4s						
KAIM	Kayak Island	4.31	85	Pn	Pn	04 11 26.2	-0.1
BPAW	Bear Paw Mtn.	4.38	11		Pn	04 11 26.4	-0.8
BPAW	Bear Paw Mtn.	4.38	11	P	Pn	04 11 26.4	-0.8
	baz=193						
HMT	Hamilton	4.39	80	Pn	Pn	04 11 26.7	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
J20K	Nowinta River	4.39	353		Pn	04 11 27.4	0.0
J20K	Nowinta River	4.39	353	P	Pn	04 11 27.4	0.0
	baz=172						
N25K	Chitina, Valde	4.47	63		Pn	04 11 27.3	-1.3
N25K	Chitina, Valde	4.47	63	IAML		04 12 19.5	
	comp=E,30nm,0.5s						
N25K				IAML		04 12 20.1	
	comp=N,34nm,0.5s						
N25K	Chitina, Valde	4.47	63	P	Pn	04 11 27.3	-1.3
	baz=250						
NICHA	Nichawak Mount	4.53	81		Pn	04 11 28.1	-1.2
HARP	HAARP	4.57	53		Pn	04 11 29.5	-0.4
HARP	HAARP	4.57	53	P	Pn	04 11 29.5	-0.4
	baz=239						
BWN	Browne	4.65	19		Pn	04 11 31.1	+0.3
BWN	Browne	4.65	19	IAML		04 13 18.4	
	comp=E,26nm,2.6s						
BWN				IAML		04 13 43.9	
	comp=N,32nm,2.1s						
BERG	Berg Lake	4.67	79		Pn	04 11 30.2	-1.0
PAX	Paxson	4.78	46		Pn	04 11 33.1	+0.4
GLB	Gilahina Butte	4.79	66		Pn	04 11 32.4	-0.4
GLB				IAML		04 12 26.5	
	comp=N,38nm,0.4s						
GLB				IAML		04 12 27.2	
	comp=E,27nm,0.5s						
VRDI	Verde Repeater	4.90	69		Pn	04 11 32.8	-1.7
VRDI	Verde Repeater	4.90	69	IAML		04 12 30.9	
	comp=E,15nm,0.5s						
VRDI				IAML		04 12 31.1	
	comp=N,23nm,0.5s						
WAX	Waxell Ridge	5.09	79		Pn	04 11 36.8	-0.1
SNH	Sunshine Point	5.09	82	Pn	Pn	04 11 36.8	-0.1
NEA2	Nenana	5.11	19		Pn	04 11 36.4	-0.7
NEA2	Nenana	5.11	19	P	Pn	04 11 36.4	-0.7
	baz=203						
WRH	Wood River Hil	5.18	24		Pn	04 11 37.3	-0.7
WRH	Wood River Hil	5.18	24	IAML		04 12 34.7	
	comp=E,9.8nm,2.1s						
WRH				IAML		04 14 15.1	
	comp=N,9.4nm,4.5s						
GCSA	Galena City Sc	5.25	341		Pn	04 11 38.6	-0.4
GCSA	Galena City Sc	5.25	341	P	Pn	04 11 38.6	-0.4
	baz=158						
ISLE	Juniper Island	5.35	77		Pn	04 11 39.8	-0.8
ISLE	Juniper Island	5.35	77	IAML		04 12 40.4	
	comp=E,38nm,0.5s						
KIAG	Kiagna River	5.37	74		Pn	04 11 40.6	-0.3
I21K	Tanana	5.38	4		Pn	04 11 40.3	-0.4
I21K	Tanana	5.38	4	IAML		04 12 56.2	
	comp=E,9.4nm,3.6s						
I21K				IAML		04 13 31.5	
	comp=N,10.0nm,3.7s						
I21K	Tanana	5.38	4	P	Pn	04 11 40.3	-0.4
	baz=185						
HDA	Harding Lake	5.38	29		Pn	04 11 40.2	-0.6
HDA				IAML		04 12 43.3	
	comp=E,17nm,0.4s						
HDA				IAML		04 12 47.5	
	comp=N,19nm,0.5s						
CCB	Clear Creek Bu	5.39	24		Pn	04 11 40.0	-0.8
BAGL	Bagley Icefiel	5.47	78		Pn	04 11 42.0	0.0
M26K	Nabesna, AK	5.47	58	Pn	Pn	04 11 42.3	+0.2
RIDG	Independent Ri	5.49	41		Pn	04 11 42.5	+0.2
TCOL	CIGO, UAF Yank	5.58	23		Pn	04 11 43.5	0.0
COLA	College	5.58	23		Pn	04 11 43.3	-0.1
I23K	Minto, Yukon-K	5.58	16		Pn	04 11 42.9	-0.5
I23K	Minto, Yukon-K	5.58	16	P	Pn	04 11 42.9	-0.5
	baz=199						
MDM	Murphy Dome	5.59	21		Pn	04 11 42.6	-0.9
DOT	Dot Lake	5.70	44	Pn	Pn	04 11 45.8	+0.8
IL31		5.70	27		Pn	04 11 44.2	-0.8
ILAR	Eielson Array	5.70	27	P	Pn	04 11 44.1	-1.0
	comp=N,2.5nm,0.5s,baz=211,slow=13,SNR=27						
ILAR				S	Sn	04 12 45.2	-3.9
	comp=N,1.4nm,0.5s,baz=206,slow=15,SNR=4.8						
ILAR	Eielson Array	5.70	27		Pn	04 11 44.6	-0.5
BARN	Barnard Glacie	5.73	73		Pn	04 11 45.6	-0.1
H21K	Melozitna Rive	5.84	1		Pn	04 11 46.3	-0.7
H21K	Melozitna Rive	5.84	1	P	Pn	04 11 46.3	-0.7
	baz=181						
SCRK	Sand Creek	5.93	42		Pn	04 11 47.7	-0.6
TABL	Table Mountain	5.94	79		Pn	04 11 48.3	-0.2
M27K	Edge Creek, AK	5.94	60		Pn	04 11 49.2	+0.8
M27K	Edge Creek, AK	5.94	60	P	Pn	04 11 49.2	+0.8
	baz=250						
J25K	Salcha River,	5.96	33		Pn	04 11 47.9	-0.8
J25K	Salcha River,	5.96	33	P	Pn	04 11 47.9	-0.8
	baz=220						
SAMH	Samovar Hills	6.12	82		Pn	04 11 51.0	+0.1
IM03		6.18	357		Pn	04 11 51.8	+0.3
IMAR	Indian Mountai	6.18	357	Pn	Pn	04 11 51.1	-0.4
H23K	Yukon River	6.21	13		Pn	04 11 51.3	-0.7
H23K	Yukon River	6.21	13	P	Pn	04 11 51.3	-0.7
	baz=196						
BCAR	Beaver Creek A	6.26	54	Pn	Pn	04 11 53.0	+0.2
PCA	Pinnacle	6.39	82		Pn	04 11 54.8	+0.3
PINM	Pinnacle	6.39	82	P	Pn	04 11 54.8	+0.3
	baz=273						
H24K	Noodor Dome	6.45	19		Pn	04 11 54.5	-0.8
H24K	Noodor Dome	6.45	19	P	Pn	04 11 54.5	-0.8
	baz=203						
BCPM	Bancas Point	6.71	83		Pn	04 11 59.3	+0.5
PNL	Peninsula	6.86	86		Pn	04 12 00.2	-0.6
PNL	Peninsula	6.86	86	P	Pn	04 12 00.2	-0.6
	baz=277						
YUK4	Talbot Arm	7.21	72	P	Pn	04 12 06.5	+0.7
	baz=264						
ANM	Nome	7.48	315	Pn	Pn	04 12 09.8	+0.6
BM03	Burnt Mountain	8.46	22		Pn	04 12 20.8	-1.8
BMAR	Burnt Mountain	8.47	22	Pn	Pn	04 12 22.1	-0.6
DLBC	Dease Lake	11.85	87	P	Pn	04 13 09.2	+0.8
	comp=N,2.2nm,0.3s,baz=259,slow=10,SNR=21						
DLBC				S	Sn	04 15 15.2	-3.3
	comp=N,0.9nm,0.5s,baz=342,slow=20,SNR=1.8						
YKA	Yellowknife Ar	18.50	65	P	P	04 14 31.1	+0.4
	comp=N,0.6nm,0.4s,baz=277,slow=9.8,SNR=19						
YKA				ScP	ScP	04 22 21.1	-0.1
	comp=N,0.1nm,0.8s,baz=300,slow=2.1,SNR=3.8						
NVAR	Mina Array Bea	30.63	119	P	P	04 16 29.4	+2.1
	comp=N,0.4nm,0.7s,baz=302,slow=9.4,SNR=4.3						
	comp=N,0.4nm,0.7s						
PDAR	Pinedale Array	31.34	103	P	P	04 16 34.8	+1.3
	comp=N,0.2nm,0.6s,baz=308,slow=7.6,SNR=1.8						
	comp=N,0.2nm,0.6s						
TXAR	Lajitas Array	44.91	110	P	P	04 18 28.3	+1.2
	comp=N,0.3nm,0.7s,baz=321,slow=7.1,SNR=3.8						
	comp=N,0.3nm,0.7s						
SONM	Songino Array	54.90	306	P	P	04 19 42.7	+0.2
	comp=N,0.2nm,0.4s,baz=46,slow=6.2,SNR=2.0						
	comp=N,0.2nm,0.4s						
ZALV	Zalesovo Beam	57.51	324	P	P	04 20 00.2	-0.6
	comp=N,1.3nm,0.4s,baz=22,slow=8.1,SNR=5.9						
	comp=N,1.3nm,0.4s						
FINES	FINESS Array B	59.04	1	P	P	04 20 11.8	+0.6
	comp=N,1.9nm,1.1s,baz=353,slow=9.8,SNR=2.6						
	comp=N,1.9nm,1.1s						
MKAR	Makanchi Array	64.57	321	P	P	04 20 47.4	-1.2
	comp=N,0.2nm,0.5s,baz=34,slow=9.4,SNR=2.7						
	comp=N,0.2nm,0.5s						

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*IDC **08** 04:27:39.0±6.0, 2°.87S×28°.72E, h0^{km}, mb3.8/4, mbtmp3.8/4, MS3.1/5, Error ellipse: s-maj=143.3km s-min=42.0km az=172.0*

*EAF **08** 04:27:43.4±14.0, 1°.18S×27°.49E, h0^{km}±999^{km}, MD4.1*

*ECGS **08** 04:27:49.6, 1°.54S±0°.03×28°.23E±0°.07, h19^{km}±6^{km}, ML3.8, Error ellipse: s-maj=12.1km s-min=2.8km az=109.8, smi:local/efb49b3f-a6f6-4e31-9b5c-06503832d78f Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX -84.0376 Y -4.89942 Z 18.274 CovXX 56.8417 XY -19.2668 XZ 19.0869 YY 10.2596 YZ -9.32434 ZZ 42.5199 EllAz1 198.36 Dip1 -4.12307 Len1 3.33832 Az2 281.737 Dip2 57.994 Len2 10.2313 Len3 1.646630e+01*

ISC 08 04:27:48.9±1.0, **1°.49S**±0°.07×**28°.27E**±0°.06, **h10**^{km}, **n28**, σ**2**^{s}**06**/25, **mb3.7**/4, **MS2.9**/4, **Zaire**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOBN	Bobandana	0.77	106	*i* P	Pg	04 28 03.6	-0.3
KTSH	Kitshanga	0.82	72	*i* P	Pb	04 28 05.2	-0.1
KTSH	Kitshanga	0.82	72	*i* S	Sn	04 28 18.8	-0.1
RSY	Rusayo	0.91	95	*i* S	Sg	04 28 18.4	0.0
RSY	Rusayo	0.91	95	*i* P	Pb	04 28 07.0	0.0
LWI	Lwiro	0.91	145	*i* P	Pg	04 28 05.9	-0.6
GOM	Goma	0.97	101	*i* P	Pg	04 28 07.6	-0.1
GOM	Goma	0.97	101	*i* S	Sg	04 28 18.9	-1.5
IDJ	Idjwi	0.97	126	*i* P	Pg	04 28 07.3	-0.4
IDJ	Idjwi	0.97	126	*i* S	Sg	04 28 18.5	-1.8
KBTI	Kibati	1.01	94	*i* S	Sg	04 28 10.2	-11
KBTI	Kibati	1.01	94	*i* P	Pb	04 28 08.4	-0.3
RGB	Rumangabo	1.10	82	*i* P	Pb	04 28 10.2	0.0
RGB	Rumangabo	1.10	82	*i* S	Sg	04 28 24.3	-0.3
SAHA	Sahara	1.27	93	*i* P	Pn	04 28 12.8	-0.2
KIL	Kilembe	2.42	46	*e*P	Pb	04 28 31.1	-1.6
KIL				*e*S	Sn	04 28 51.7	-6.7
MBAR	Mbarara	2.62	70	*i* P	Pn	04 28 32.7	+1.3
MBAR	Mbarara	2.62	70	*e*P	Pn	04 28 32.8	+1.3
MBAR				*e*S	Sn	04 29 03.9	+0.4
TEBE	Entebbe	4.47	70	*e*P	Pn	04 28 57.4	+0.4
TEBE				*e*S	Sb	04 30 06.1	+4.4
ATD	Arta Tunnel	19.42	48	LR	LR	04 39 55.0	
	comp=Z,95nm,19.1s,baz=137,slow=37						
TSUM	Tsumeb	20.48	210	LR	LR	04 38 38.6	
	comp=Z,29nm,19.6s,baz=151,slow=34						
TORD	Torodi Ar. Bea	30.11	300	P	P	04 34 00.6	+1.5
	1.7nm,0.8s,baz=108,slow=8.2,SNR=10						
	1.7nm,0.8s						
IDI	Anoyia	36.73	355	LR	LR	04 50 13.2	
	comp=Z,12nm,20.7s,baz=227,slow=36						
BRTR	Keskin Array B	41.31	6	P	P	04 35 37.8	+2.8
	0.7nm,0.6s,baz=183,slow=9.1,SNR=6.4						
	0.7nm,0.6s						
GERES	GERESS Array B	51.70	348	LR	LR	05 01 19.4	
	comp=Z,24nm,20.0s,baz=42,slow=38						
RCBR	Riachuelo	64.16	264	LR	LR	05 01 44.9	
	comp=Z,19nm,21.6s,baz=305,slow=32						
MKAR	Makanchi Array	67.37	37	P	P	04 38 42.2	-2.3
	0.3nm,0.8s,baz=240,slow=7.3,SNR=1.8						
	0.3nm,0.8s						
ARCES	ARCESS Array B	70.92	359	P	P	04 39 05.0	-1.0
	1.0nm,0.5s,baz=184,slow=4.9,SNR=12						
	1.0nm,0.5s						

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*NEIC **08** 04:41:34.0±1.5, 49°.41N±0°.01×122°.28W±0°.02, h3^{km}±5^{km}, Error ellipse: s-maj=2.0km s-min=1.6km az=141.0*

*SEA **08** 04:41:34.8±1.9, 49°.41N±0°.01×122°.22W±0°.03, h3^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=1.8km az=66.0*

*PGC **08** 04:41:35.1±0.0, 49°.40N×122°.24W, h1^{km}, ML2.3/32, ML2.3/32, 19km Nne of Mission, Bc British Columbia, Canada*

ISC 08 04:41:34.3±0.7, **49°.39N**±0°.02×**122°.30W**±0°.01, **h10**^{km}, **n98**, σ**0**^{s}**96**/155, **British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNBB	Haney	0.20	239	P	Pg	04 41 39.6	+1.0
HNBB				S	Sg	04 41 42.8	+1.2
VDB	Vedder Mountai	0.39	160		Pg	04 41 42.1	+0.1
VDB					Sg	04 41 47.4	+0.2
VDB	Vedder Mountai	0.39	160	P	Pg	04 41 42.1	+0.1
VDB				S	Sg	04 41 47.1	-0.1
A05A	Maple Falls	0.42	160		Sg	04 41 48.5	+0.4
A05A	Maple Falls	0.42	160	P	Pg	04 41 42.6	+0.1
A05A				S	Sg	04 41 48.1	0.0
WPB	Watts Point	0.65	295	P	Pg	04 41 47.0	+0.1
WPB				S	Sg	04 41 55.3	0.0
BIB	Bowen Island	0.66	272	P	Pg	04 41 47.2	+0.2
BIB				S	Sg	04 41 56.1	+0.6
MBW	Mount Baker	0.66	156		Pg	04 41 46.8	-0.4
MBW					Sg	04 41 55.9	-0.1
MBW	Mount Baker	0.66	156	P	Pg	04 41 46.9	-0.4
SHUK	Shuksan-Mt. Ba	0.68	142		Pg	04 41 47.0	-0.5
SHUK					Sg	04 41 55.6	-0.8
A04D	Lummi Island	0.72	202		Pg	04 41 48.6	+0.3
A04D					Sb	04 41 59.7	+0.7
MCW	Mount Constitu	0.79	206		Pg	04 41 49.9	+0.2
MCW	Mount Constitu	0.79	206	P	Pg	04 41 49.8	+0.2
WSLR	Whistler	0.84	332		Pg	04 41 50.0	-0.5
WSLR					Sg	04 42 00.7	-0.7
WSLR	Whistler	0.84	332	P	Pg	04 41 49.9	-0.6
WSLR				S	Sg	04 42 00.5	-0.9
SNB	Saturna Island	0.84	223		Pb	04 41 51.1	+0.1
SNB					Sb	04 42 03.2	+0.9
SNB	Saturna Island	0.84	223	P	Pb	04 41 51.1	+0.1
SNB				S	Sb	04 42 03.1	+0.7
GOBB	Galiano Island	0.91	241	P	Pg	04 41 51.6	-0.2
CMW	Cultus Mountai	0.98	173	P	Pg	04 41 51.5	-1.6
CMW				S	Sg	04 42 05.0	-0.8
B06A	Marblemount	1.03	148		Pg	04 41 53.2	-0.9
B06A					Sg	04 42 07.0	-0.4
B06A	Marblemount	1.03	148	IAML		04 42 07.4	
	comp=N,150nm,0.4s						
B06A	Marblemount	1.03	148	P	Pg	04 41 53.2	-0.9
B06A				S	Sg	04 42 06.4	-1.1
SHB	Sechelt	1.04	282		Pg	04 41 54.1	-0.4
SHB	Sechelt	1.04	282	P	Pg	04 41 53.9	-0.5
SHB				S	Sg	04 42 07.5	-0.5
PA01	PA01 North	1.06	226	P	Pg	04 41 54.1	-0.5
PA01				S	Sg	04 42 08.2	-0.1
PA02	PA02 Ocean	1.06	226	P	Pg	04 41 54.2	-0.5
PA02				S	Sg	04 42 08.6	+0.2
B011	North Saanich	1.06	226		Pg	04 41 54.2	-0.5
B011					Sg	04 42 08.4	0.0
B011	North Saanich	1.06	226	P	Pg	04 41 54.1	-0.6
B011				S	Sg	04 42 08.1	-0.3
B010	North Saanich	1.06	226	P	Pg	04 41 54.0	-0.7
B010				S	Sg	04 42 08.2	-0.2
PGC	Sidney	1.06	226		Pg	04 41 54.2	-0.4
PGC					Sg	04 42 08.5	+0.1
PGC	Sidney	1.06	226	IAML		04 42 08.7	
	comp=E,126nm,0.9s						
PGC				IAML		04 42 08.8	
	comp=N,142nm,0.7s						
PGC	Sidney	1.06	226	P	Pg	04 41 54.1	-0.6
PGC				S	Sg	04 42 08.5	+0.1
B009	North Saanich	1.06	226	P	Pg	04 41 54.0	-0.6
B009				S	Sg	04 42 08.4	0.0
RPW	Rockport	1.08	151		Pg	04 41 54.1	-0.9
RPW					Sg	04 42 08.4	-0.7
RPW	Rockport	1.08	151	P	Pg	04 41 53.9	-1.1
RPW				S	Sg	04 42 08.2	-0.9
NLLB	Nanaimo Lost L	1.11	262		Pb	04 41 55.0	-0.7
NLLB					Sb	04 42 10.0	-0.2
NLLB	Nanaimo Lost L	1.11	262	P	Pb	04 41 55.0	-0.7
NLLB				S	Sb	04 42 09.6	-0.6
B05A	Bryant	1.14	173		Pb	04 41 55.6	-0.4
VGZ	Gonzales	1.19	215		Pb	04 41 56.2	-0.8
VGZ	Gonzales	1.19	215	P	Pb	04 41 56.2	-0.8
VGZ				S	Sb	04 42 11.7	-0.7
LLLB	Lillooet	1.25	12		Pn	04 41 57.0	-0.9
LLLB				IAML		04 42 16.2	
	comp=N,108nm,0.4s						
LLLB				IAML		04 42 17.0	
	comp=E,64nm,0.5s						
LLLB	Lillooet	1.25	12	P	Pn	04 41 57.0	-0.9
LLLB				S	Sb	04 42 12.6	-1.5
GHNB	Nanoose	1.27	267	P	Pn	04 41 57.5	-0.5
GHNB				S	Sb	04 42 14.4	-0.1
B926	Mesachie Lake	1.33	245	P	Pn	04 41 58.3	-0.6
B926				S	Sb	04 42 16.0	-0.4
CLRS	Cowichan Lake	1.33	245	Pn	Pn	04 41 58.9	0.0
CLRS	Cowichan Lake	1.33	245	P	Pn	04 41 58.5	-0.4
CLRS				S	Sb	04 42 15.9	-0.6
TXB	Texada	1.42	283	P	Pn	04 42 00.1	-0.2
TXB				S	Sn	04 42 18.7	-0.3
GPW	Glacier Peak	1.49	148	P	Pn	04 42 01.1	-0.4
GPW				S	Sn	04 42 20.4	-0.6
STW	Striped Peak	1.54	217	P	Pn	04 42 01.8	0.0
STW				S	Sn	04 42 21.6	-0.2
B04A	Port Angeles	1.55	211		Pn	04 42 02.1	+0.1
B04A	Port Angeles	1.55	211		Pn	04 42 02.1	+0.1
B04A	Port Angeles	1.55	211	IAML		04 42 25.5	
	comp=N,73nm,0.3s						
MGB	Mount Grey	1.61	257	P	Pn	04 42 03.2	+0.2
MGB				S	Sn	04 42 24.3	+0.4
HTW	Haystack Looko	1.63	167		Pb	04 42 04.2	-0.3
PFB	Port Renfrew	1.63	241	P	Pn	04 42 03.6	+0.5
PFB				S	Sn	04 42 24.4	+0.2
B013	Quilcene	1.63	195		Pn	04 42 03.3	+0.2
B013					Sg	04 42 26.1	-0.7
B013	Quilcene	1.63	195		Pn	04 42 03.2	+0.2
B927	Port Alberni	1.65	265	P	Pn	04 42 03.6	+0.3
B927				S	Sn	04 42 25.2	+0.6
C05A	Tolt Reservoir	1.75	166	S	Sb	04 42 28.2	-0.3
PNT	Penticton	1.76	91		Pb	04 42 05.8	-0.9
PNT	Penticton	1.76	91	P	Pb	04 42 05.8	-0.9
PNT				S	Sb	04 42 27.6	-1.2
OBC	Olympics--Boni	1.80	222	P	Pn	04 42 06.0	+0.6
OBC				S	Sb	04 42 29.6	-0.4
NLW	Nelson Butte	1.85	135		Pb	04 42 07.7	-0.6
GNW	Green Mountain	1.86	191		Pn	04 42 07.2	+0.9
GNW	Green Mountain	1.86	191	P	Pn	04 42 06.7	+0.4
GNW				S	Sb	04 42 31.3	-0.4
GMW	Gold Mountain	1.87	190		Pn	04 42 07.2	+0.7
OCP	Olym-Cheeka Pk	1.88	235	P	Pn	04 42 07.3	+0.7
OCP				S	Sb	04 42 31.7	-0.7
D03D	Eldon	1.93	196		Pn	04 42 08.2	+1.0
B928	Bamfield	1.94	254	P	Pb	04 42 08.6	-1.2
B928				S	Sn	04 42 32.7	+1.0
BFSB	Bamfield	1.94	254	P	Pn	04 42 07.9	+0.6
BFSB				S	Sn	04 42 33.0	+1.2
MWAB	Mount Washingt	1.98	281	S	Sb	04 42 34.8	-0.6
RATT	Rattlesnake La	2.00	170		Pb	04 42 09.4	-1.3
CBB	Campbell River	2.09	289	Pn	Pn	04 42 10.4	+1.0
CBB	Campbell River	2.09	289	P	Pn	04 42 10.5	+1.1
CBB				S	Sb	04 42 38.3	0.0
BTB	Buttle Lake	2.10	273	P	Pn	04 42 10.9	+1.2
BTB				S	Sb	04 42 38.7	-0.1
OZB	Mount Ozzard	2.14	260	P	Pn	04 42 10.9	+0.8
OZB				S	Sb	04 42 38.9	-0.8
D05A	Enumclaw	2.22	174	P	Pn	04 42 12.4	+1.3
D05A				S	Sb	04 42 42.4	+0.4
B08A	Colville Reser	2.22	117		Pn	04 42 12.5	+1.3
B08A				IAML		04 42 43.3	
	comp=N,24nm,0.3s						
B08A				IAML		04 42 44.7	
	comp=E,20nm,0.2s						
B08A	Colville Reser	2.22	117	P	Pb	04 42 13.4	-1.1
B08A				S	Sb	04 42 41.8	-0.2
SPLB	Strathcona Par	2.23	284	P	Pn	04 42 12.6	+1.2
SPLB				S	Sb	04 42 40.9	-1.5
NLWA	Neilton Lookou	2.26	208	Pn	Pn	04 42 13.1	+1.3
NLWA				IAML		04 42 58.0	
	comp=E,19nm,2.4s						
NLWA				IAML		04 43 03.6	
	comp=E,28nm,3.8s						
LTY	Liberty	2.40	152	Pn	Pn	04 42 15.1	+1.3
LTY	Liberty	2.40	152	P	Pb	04 42 16.2	-1.4
LTY				S	Sb	04 42 48.5	+1.2
GDR	Gold River	2.46	281	P	Pb	04 42 16.9	-1.6
GDR				S	Sb	04 42 49.9	+1.1
RVC	Mount Rainier-	2.46	175		Pb	04 42 17.3	-1.4
FMW	Mount Fremont	2.50	170	P	Pn	04 42 16.9	+1.6
FMW				S	Sb	04 42 49.0	-1.3
WOSB	Woss	2.87	287	P	Pn	04 42 22.6	+2.4
WOSB				S	Sb	04 43 00.6	-0.3
C09A	Chrisman Ranch	3.11	119	Pn	Pn	04 42 23.5	0.0
C09A	Chrisman Ranch	3.11	119	P	Pb	04 42 28.9	-0.9
C09A				S	Sb	04 43 09.1	+1.3
SLEB	Sale Mountain	3.21	55	P	Pn	04 42 24.9	-0.2
SLEB				S	Sb	04 43 12.0	+1.2
D08A	Wollman Farm,	3.25	135	Pn	Pn	04 42 26.9	+1.5
D08A				IAML		04 43 16.9	
	comp=N,9.6nm,0.3s						
D08A				IAML		04 43 21.8	
	comp=E,13nm,0.5s						
OT3	Othello 3	3.42	142		Pn	04 42 25.1	-2.6
NEW	Newport	3.60	106	Pn	Pn	04 42 29.7	-0.6
NEW				IAML		04 43 33.9	
	comp=E,7.3nm,2.4s						
NEW				IAML		04 43 38.3	
	comp=E,8.6nm,4.8s						
UBRB	Upper Baezaeko	3.68	343	S	Sb	04 43 27.7	+3.6
MNB	Mounoet Dainar	3.75	40	S	Sb	04 43 28.2	+1.8
LNOR	Lincton Mounta	4.45	141		Pb	04 42 53.6	+1.0
F10A	Beach Ranch, E	4.84	133	Pn	Pn	04 42 47.9	+0.6
BSMT	Bassoo Peak	5.22	104	Pg	Pb	04 43 07.6	+1.9
BSMT				Sg	Sb	04 44 13.4	+4.9

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*IDC **08** 05:11:19.3±0.8, 29°.53S×178°.91W, h217^{km}±7^{km}, mb3.8/13, mbtmp4.4/15, Error ellipse: s-maj=16.4km s-min=15.3km az=142.0*

*NEIC **08** 05:11:19.5±1.9, 29°.5S±0°.1×178°.7W±0°.2, h218^{km}±6^{km}, mb4.2/13, Error ellipse: s-maj=21.6km s-min=18.7km az=83.0*

ISC 08 05:11:17.8±0.7, **30°.26S**±0°.08×**177°.9W**±0°.2, **h250**^{km}, **n127**, σ**1**^{s}**66**/125, **mb4.0**/19, **1C**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.00	359	P	Pn	05 11 49.8	-3.0
GLKZ				S	S	05 12 11.2	-9.2
RAO	Raoul Island	1.01	359	P	Pn	05 11 50.1	-2.8
	2µm,0.4s,baz=208,slow=3.7,SNR=16						
RAO				S	S	05 12 10.5	-10
	3µm,0.3s,baz=265,slow=22,SNR=12						
RAO	Raoul Island	1.01	359		Pn	05 11 49.8	-3.1
MXZ	Matakaoa Point	7.93	202	P	Pn	05 13 10.4	+0.3
MXZ				S	S	05 14 40.8	+0.3
WMGZ	Waiomatatini S	8.13	201	P	Pn	05 13 12.8	+0.2
HAZ	Te Kaha	8.29	204	P	Pn	05 13 14.4	-0.1
HAZ				S	S	05 14 50.0	+1.2
PKGZ	Pakihiroa	8.30	203	P	Pn	05 13 15.9	+1.0
PKGZ				S	S	05 14 49.7	+0.4
PUZ	Puketiti	8.41	201	P	Pn	05 13 15.7	-0.5
PUZ				S	S	05 14 51.2	-0.5
RUGZ	Raukumara Rang	8.51	204	P	Pn	05 13 16.9	-0.6
RUGZ				S	S	05 14 50.5	-3.7
TWGZ	Tauwhareparae	8.60	202	P	Pn	05 13 18.6	+0.1
TWGZ				S	S	05 14 57.6	+1.6
CNGZ	Carnagh Statio	8.81	200	P	Pn	05 13 21.3	+0.1
TKGZ	Te Karaka	8.88	202	P	Pn	05 13 22.1	+0.1
TKGZ				S	S	05 15 02.6	+0.1
MWZ	Matawai	8.89	204	P	Pn	05 13 20.9	-1.4
MWZ				S	S	05 15 02.5	-0.4
URZ	Urewera	8.98	206	P	Pn	05 13 21.4	-1.9
	4.6nm,0.2s,baz=301,slow=19,SNR=12						
URZ				S	S	05 14 48.5	-16
	8.3nm,0.3s,baz=116,slow=20,SNR=2.1						
URZ	Urewera	8.98	206	P	Pn	05 13 22.2	-1.1
URZ				S	S	05 15 04.7	-0.1
RIGZ	Rimuhau	9.15	202	P	Pn	05 13 26.4	+0.9
RIGZ				S	S	05 15 09.3	+0.5
MUGZ	Murupara	9.30	207	P	Pn	05 13 26.1	-1.3
PRGZ	Paritu Road	9.31	201	P	Pn	05 13 27.3	-0.2
PRGZ				S	S	05 15 14.1	+1.5
KNZ	Kokohu	9.46	201	P	Pn	05 13 28.8	-0.6
RAHZ	Arahi	9.57	204	P	Pn	05 13 30.6	-0.2
RAHZ				S	S	05 15 17.4	-1.2
MTHZ	Maungataniwha	9.60	205	P	Pn	05 13 30.9	-0.3
MTHZ				S	S	05 15 18.8	-0.6
TLZ	Tolley Road	9.70	212	P	P	05 13 37.6	-1.1
MRHZ	Matea Rd	9.75	207	P	Pn	05 13 32.6	-0.5
MRHZ				S	S	05 15 23.9	+1.1
NMHZ	Naumai	9.83	205	P	Pn	05 13 32.0	-2.1
ARHZ	Aropaoanui	9.91	204	P	Pn	05 13 32.0	-3.0
ARHZ				S	S	05 15 26.2	-0.3
BKZ	Black Stump Fm	10.01	206	P	Pn	05 13 34.7	-1.6
HIZ	Hauiti	10.17	214	P	P	05 13 44.0	+0.1
KWHZ	Kaweka Forest	10.26	205	P	Pn	05 13 38.0	-1.5
NTVZ	North Tongarir	10.27	209	P	Pn	05 13 39.3	-0.5
TMVZ	Te Maari	10.28	209	P	Pn	05 13 38.8	-1.0
ETVZ	East Tongariro	10.29	209	P	Pn	05 13 38.6	-1.4
WTVZ	West Tongariro	10.32	209	P	Pn	05 13 42.6	+2.2
NNVZ	North Ngauruho	10.33	209	P	Pn	05 13 42.3	+1.8
OTVZ	Oturere	10.33	209	P	Pn	05 13 39.3	-1.3
OTVZ				S	S	05 15 37.7	+1.1
SNVZ	South Ngauruho	10.36	209	P	Pn	05 13 39.7	-1.3
NGZ	Ngauruhoe	10.37	209	P	Pn	05 13 43.0	+2.0
KAHZ	Kahuranaki	10.43	203	P	Pn	05 13 40.6	-1.0
TUVZ	Tukino	10.43	209	P	Pn	05 13 42.7	+1.0
KRHZ	Kereru	10.47	205	P	Pn	05 13 39.9	-2.2
PKVZ	Pokaka	10.57	210	P	P	05 13 45.8	-2.7
VRZ	Vera Road	10.70	212	P	P	05 13 48.6	-1.2
TSZ	Takapari Road	10.98	206	P	P	05 13 49.8	-3.1

WAZ	Wanganui	11.12	210	P	P	05 13 52.1	-2.3
DVHZ	Dannevirke	11.12	204	P	Pn	05 13 50.6	+0.3
PKE	Pukeiti	11.12	215	P	P	05 13 55.4	+0.9
NEZ	North Egmont	11.13	214	P	P	05 13 53.6	-1.0
ANWZ	Angora Road	11.16	203	P	Pn	05 13 51.0	+0.3
PRWZ	Pori Road	11.42	204	P	Pn	05 13 53.2	-0.7
TIWZ	Tintock	11.64	204	P	Pn	05 13 55.1	-1.7
MRZ	Mangatainoka R	11.65	205	P	Pn	05 13 53.9	-3.0
TMWZ	Te Maipa	11.93	203	P	Pn	05 14 00.1	-0.3
MTW	Mount Morrison	12.12	204	P	Pn	05 14 01.3	-1.3
MSVF	Nonsavu	13.01	343	P	Pn	05 14 05.6	-8.4
	89nm,0.7s,baz=172,slow=8.4,SNR=69						
DZM	Mont Dzumac	16.24	296	P	P	05 14 47.0	-4.4
	8.5nm,0.5s,baz=139,slow=12,SNR=24						
AFI	Afiamalu	17.23	20	P	Pn	05 15 01.0	-3.5
	18nm,0.3s,baz=201,slow=17,SNR=6.3						
AFI				S	S	05 17 55.7	-13
	22nm,0.4s,baz=211,slow=19,SNR=4.3						
AFI	Afiamalu	17.23	20	P	Pn	05 15 01.4	-3.0
HNR	Honiara	29.28	310	P	P	05 16 50.5	-6.6
	96nm,0.3s,baz=188,slow=12,SNR=9.7						
CTAO	Charters Tower	33.86	279	P	P	05 17 35.4	-1.7
CTAO				IAmb	IAmb	05 18 01.5	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	34.59	257	P	P	05 17 42.5	-0.7
	comp=Z,0.8nm,0.4s,baz=90,slow=13,SNR=1.6						
	comp=Z,0.8nm,0.4s						
STKA	Stephens Creek	34.59	257	P	P	05 17 42.3	-0.9
BBOO	Buckleboo	39.09	254	P	P	05 18 21.6	+0.6
COEN	Coen	39.31	286	P	P	05 18 19.6	-3.5
AS31	Alice Springs	43.20	267	P	P	05 18 52.9	-1.7
ASAR	Alice Springs	43.20	267	P	P	05 18 51.9	-2.7
	comp=Z,0.3nm,0.3s,baz=106,slow=7.2,SNR=14						
ASAR				ScP	ScP	05 24 10.4	+4.1
	comp=Z,1.1nm,1.0s,baz=80,slow=3.0,SNR=4.7						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	43.20	267	P	P	05 18 51.8	-2.8
WR0	Warramunga Arr	44.00	272	P	P	05 18 57.6	-3.3
WR0				IAmb	IAmb	05 18 58.9	
	comp=Z,8.0nm,1.4s						
WB2	Warramunga Arr	44.17	272	P	P	05 18 59.9	-2.4
WB2				IAmb	IAmb	05 18 59.9	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	44.18	272	P	P	05 18 59.5	-2.8
	comp=Z,1.4nm,0.5s,baz=110,slow=8.1,SNR=17						
WRA				PcP	PcP	05 20 44.8	+2.3
	comp=Z,1.8nm,0.7s,baz=114,slow=7.3,SNR=3.3						
WRA				ScP	ScP	05 24 13.8	+3.5
	comp=Z,0.6nm,0.9s,baz=102,slow=3.5,SNR=3.0						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	44.18	272	P	P	05 18 59.9	-2.4
WB0	Warramunga Arr	44.20	272	P	P	05 18 60.0	-2.6
WB0				IAmb	IAmb	05 19 22.2	
	comp=Z,11nm,1.4s						
QSPA	South Pole Qui	59.85	180	P	P	05 21 07.8	+11
	comp=Z,3.0nm,0.7s,baz=24,slow=3.2						
	comp=Z,3.0nm,0.7s						
QSPA	South Pole Qui	59.85	180	P	P	05 21 07.5	+11
QSPA				IAmb	IAmb	05 21 28.5	
	comp=Z,12nm,1.5s						
MJAR	Matsushiro Arr	78.18	325	P	P	05 22 48.9	-0.6
	comp=Z,3.4nm,0.7s,baz=152,slow=7.5,SNR=8.5						
	comp=Z,3.4nm,0.7s						
MJAR	Matsushiro Arr	78.18	325	P	P	05 22 48.2	-1.2
MJAR				IAmb	IAmb	05 23 00.6	
	comp=Z,3.6nm,1.5s						
MAJO	Matsushiro	78.18	325	P	P	05 22 49.2	-0.3
MAJO				IAmb	IAmb	05 22 50.8	
	comp=Z,10nm,1.1s						
H03S2	Juan Fernandez	80.47	124	T	T	06 53 13.0	
	baz=237						
H03S1	Juan Fernandez	80.48	124	T	T	06 53 20.4	
	baz=237						
H03S3	Juan Fernandez	80.49	124	T	T	06 53 05.3	
	baz=237						
H03N3	Juan Fernandez	80.66	123	T	T	06 53 19.2	
	baz=240						
H03N2	Juan Fernandez	80.66	123	T	T	06 53 32.0	
	baz=240						
H03N1	Juan Fernandez	80.68	123	T	T	06 53 24.4	
	baz=240						
KSRS	Korea Array	84.30	320	P	P	05 23 21.8	+0.3
	comp=Z,2.3nm,0.8s,baz=141,slow=5.9,SNR=11						
	comp=Z,2.3nm,0.8s						
PETK	Petropavlovsk-	85.70	346	P	P	05 23 28.6	+0.5
	comp=Z,8.0nm,0.8s,baz=186,slow=13,SNR=7.3						
	comp=Z,8.0nm,0.8s						
PETK	Petropavlovsk-	85.70	346	P	P	05 23 27.9	-0.2
USRK	Ussuriysk Ar.	87.09	326	P	P	05 23 36.1	+1.1
	comp=Z,4.5nm,0.8s,baz=150,slow=4.6,SNR=6.7						
	comp=Z,4.5nm,0.8s						
NVAR	Mina Array Bea	88.08	43	P	P	05 23 45.8	+5.6
	comp=Z,2.3nm,0.8s,baz=223,slow=8.5,SNR=24						
	comp=Z,2.3nm,0.8s						
KLR	Kul'dur	90.96	330	P	P	05 23 54.6	+1.6
	comp=Z,4.4nm,0.7s,baz=123,slow=2.6,SNR=14						
	comp=Z,4.4nm,0.7s						
TXAR	Lajitas Array	92.24	57	P	P	05 24 05.8	+6.2
	comp=Z,0.2nm,0.6s,baz=240,slow=7.2,SNR=2.8						
	comp=Z,0.2nm,0.6s						
SEY	Seymchan	95.86	347	P	P	05 24 16.2	+1.0
	comp=Z,0.4nm,0.2s,baz=244,slow=0.3,SNR=15						
	comp=Z,0.4nm,0.2s						
PDAR	Pinedale Array	95.98	43	P	P	05 24 21.2	+4.7
	comp=Z,0.3nm,0.8s,baz=215,slow=1.1,SNR=2.3						
	comp=Z,0.3nm,0.8s						
PDAR	Pinedale Array	95.98	43	P	P	05 24 20.2	+3.6
MKAR	Makanchi Array	117.75	310	PKP	PKiKP	05 29 36.0	+2.0
	comp=Z,0.6nm,0.6s,baz=85,slow=1.6,SNR=7.2						
KURK	Kurchatov	121.02	314		PKiKP	05 29 42.4	+2.2
KURBB	Kurchatov Arra	121.05	314	PKP	PKiKP	05 29 42.6	+2.3
	comp=Z,2.6nm,0.7s,baz=102,slow=1.9,SNR=30						
ARCES	ARCESS Array B	138.47	348	PKP	PKiKP	05 30 17.5	+2.7
	comp=Z,1.2nm,0.7s,baz=99,slow=1.3,SNR=7.5						
FINES	FINESS Array B	145.05	340	PKP	PKiKP	05 30 26.1	-2.3
	comp=Z,8.8nm,0.4s,baz=44,slow=3.5,SNR=100						
FINES	FINESS Array B	145.05	340		PKiKP	05 30 26.0	-2.4
KBZ	Khabaz	145.10	304	PKP	PKiKP	05 30 27.1	-2.0
	comp=Z,3.8nm,0.7s,baz=118,slow=2.3,SNR=12						
NB2	NORSAR Subarra	148.63	351	PKP	PKPab	05 30 37.1	-1.9
	comp=Z,4.5nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.63	351	PKPbc	PKPab	05 30 37.1	-1.9
	comp=Z,1.9nm,0.6s,baz=16,slow=4.3,SNR=13						
AKASG	Malin Array Be	151.24	323	PKPbc	PKiKP	05 30 43.5	+2.1
	comp=Z,7.8nm,0.7s,baz=48,slow=3.9,SNR=45						
AKASG				PKPab	PKPab	05 30 50.4	+0.3
	comp=Z,4.7nm,0.8s,baz=46,slow=4.7,SNR=9.5						
AKASG	Malin Array Be	151.24	323		PKiKP	05 30 43.6	+2.1
AKASG				PKPab	PKPab	05 30 50.7	+0.7
BRTR	Keskin Array B	152.61	299	PKPbc	PKiKP	05 30 47.2	+2.3
	comp=Z,1.9nm,0.5s,baz=134,slow=4.2,SNR=5.1						
OSTC	Ostas	157.13	336	*e*PKP	PKPab	05 31 17.5	+2.3
CHVC	Chvalec	157.16	337	*e*PKP	PKPab	05 31 16.8	+1.5
UPC	Upice	157.24	337	*e*PKP	PKPab	05 31 17.1	+1.5
DPC	Dobruska-Polom	157.27	336	*e*PKP	PKPab	05 31 17.0	+1.2
KRLC	Kraliky	157.33	335	*e*PKP	PKPab	05 31 17.2	+1.1
CLL	Collm	157.46	342	⇑*i*PKPab	PKPab	05 31 17.9	+1.4
	comp=Z,8.0nm,0.8s						
PVCC	Panska Ves	157.70	339	*e*PKP	PKPab	05 31 19.3	+1.7
KHC	Kasperske Hory	159.23	338	*e*PKP	PKPab	05 31 25.8	+1.4
CKRC	Cesky Krumlov	159.26	337	*e*PKP	PKPab	05 31 25.6	+1.1
CONA	Conrad Observa	159.43	333	*i* P	PKPab	05 31 26.8	+1.5
	comp=Z,2.6nm,0.9s						
GERES	GERESS Array B	159.44	338	PKPab	PKPab	05 31 26.5	+1.2
	comp=Z,1.4nm,0.7s,baz=35,slow=4.9,SNR=13						
GERES	GERESS Array B	159.44	338	PKPdf	PKPdf	05 30 49.4	+3.3
GERES					PKPab	05 31 25.8	+0.4
RONA	Rosalia, Austr	159.44	332	*e*P	PKPab	05 31 26.9	+1.6
	comp=Z,2.0nm,0.7s						
ARSA	Arzberg	160.12	332	*e*P	PKPab	05 31 29.2	+1.0
	comp=Z,2.0nm,1.1s						
BIOA	Bad Ischl, Aus	160.46	336	*e*P	PKPab	05 31 31.4	+1.7
	comp=Z,6.7nm,1.1s						
WATA	Walderalm	161.45	339	*e*P	PKPab	05 31 35.5	+1.3
	comp=Z,2.7nm,0.5s						
WTTA	Wattenberg	161.49	339	*e*P	PKPab	05 31 35.9	+1.4
	comp=Z,3.2nm,0.7s,SNR=4.2						
RETA	Reutte	161.55	341	*e*P	PKPab	05 31 36.2	+1.7
	comp=Z,4.8nm,0.9s						
MOTA	Moosalm	161.58	340	*i* P	PKPab	05 31 36.2	+1.4
	comp=Z,4.3nm,0.9s						
SQTA	Sankt Quirin	161.66	340	*i* P	PKPab	05 31 36.6	+1.5
	comp=Z,4.4nm,0.7s,SNR=4.8						
ABTA	Abfaltersbach	161.66	337	*e*P	PKPab	05 31 35.8	+0.7
	comp=Z,2.5nm,0.8s						
DAVA	Damuels	161.97	343	*e*P	PKPab	05 31 38.0	+1.5
	comp=Z,4.4nm,0.9s						
FETA	Feichten	161.98	341	P	PKPab	05 31 38.3	+1.7
	comp=Z,5.3nm,1.2s,SNR=6.9						
TORD	Torodi Ar. Bea	162.96	179	PKPab	PKPab	05 31 48.8	+7.5
	comp=Z,2.1nm,0.8s,baz=172,slow=3.6,SNR=9.8						

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*AZER **08** 05:17:11.5±0.7, 40°.57N×52°.23E, h60^{km}±88^{km}, Error ellipse: s-maj=8.5km s-min=4.6km az=275.0*

*TEH **08** 05:17:12.1, 40°.21N×52°.11E, h10^{km}, ML3.2*

ISC 08 05:17:13.7±1.8**, 40°.51N**±0°.08×**52°.16E**±0°.08**, h49^{km}, n22, σ1^{s}.47**/29**, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PQL	Pirkuli	2.73	277	P	Pn	05 17 56.2	+1.2
PQL				S	Sn	05 18 28.8	+1.9
QUBA	Quba, Azerbaij	2.90	288	P	Pn	05 17 58.5	+1.1
QUBA				S	Sn	05 18 31.2	+0.2
IML	Ismayilli	3.04	277	S	Sn	05 18 36.7	+2.3
QSAR	Qusar	3.11	290	P	Pn	05 17 59.4	-0.8
	SNR=3.9						
QSAR				S	Sn	05 18 35.7	-0.5
XNQ	Khinaliq	3.12	283	P	Pn	05 18 00.2	-0.3
	SNR=5.0						
XNQ				S	Sn	05 18 36.5	-0.2
ASTR	Astara	3.25	234	S	Sn	05 18 41.5	+1.9
YRD	Yardimli	3.42	243	P	Pn	05 18 04.0	-0.6
YRD				S	Sn	05 18 44.3	+0.3
LRK	Lerik	3.49	239	P	Pn	05 18 05.3	-0.3
LRK				S	Sn	05 18 46.4	+0.6
BRDA	Brd	3.81	268	S	Sn	05 18 55.5	+2.1
SEKA	Sheki	3.83	282	S	Sn	05 18 53.2	-0.6
AGDM	Agdam	3.88	266	S	Sn	05 18 56.7	+1.5
IGLO	Ghaloghah	4.21	161	*e*Pn	Pn	05 18 15.1	-0.5
IGLO				*e*		05 19 04.6	
	comp=Z,642nm,0.1s						
QALM	Alamut, Qazvin	4.24	197	*e*Pn	Pn	05 18 14.9	-1.1
QALM				*e*		05 19 05.5	
	comp=Z,303nm,0.3s						
ZKTA	Zakatala	4.33	287	S	Sn	05 19 06.7	+0.4
IGZV	Ghazvin	4.39	201	*e*Pn	Pn	05 18 16.4	-1.7
GANJ	Ganja	4.45	274	S	Sn	05 19 06.0	-3.0
IHRS	Heris	4.53	243	*e*Pn	Pn	05 18 21.0	+1.1
IHRS				*e*		05 18 22.9	
	comp=Z,92nm,0.2s						
ISHM	Shahmirzad	4.78	169	*e*Pn	Pn	05 18 23.1	-0.4
GDB	GEDABAY	4.88	275	P	Pn	05 18 22.6	-2.0
GDB				S	Sn	05 19 17.1	-2.8
ORD	Ordubad	5.01	254	S	Sn	05 19 24.3	+1.3
QZX	Qazax, Azerbai	5.18	278	S	Sn	05 19 25.5	-1.6
ISFR	Sfrayin	5.72	125	*e*Pn	Pn	05 18 37.4	+1.1

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*IDC **08** 05:18:43.1±1.4, 39°.64S×175°.83E, h74^{km}±14^{km}, mb3.8/2, mbtmp4.0/3, Error ellipse: s-maj=38.2km s-min=11.0km az=129.0*

*WEL **08** 05:18:45.8±0.8, 39°S±4°×17°6E±°, h70^{km}±5^{km}, M3.4/22, ML3.7/22, MLv3.4/22, Error ellipse: s-maj=0.0km s-min=0.0km az=40.8*

*NOU **08** 05:18:45.2, 39°.40S×175°.67E, h82^{km}, MLv4.4/9, North Island, New Zealand*

*NEIC **08** 05:18:45.4±1.2, 39°.42S±0°.04×175°.63E±0°.07, h75^{km}±4^{km}, Error ellipse: s-maj=8.1km s-min=5.9km az=77.0*

ISC 08 05:18:45.2±0.7**, 39°.39S**±0°.03×**175°.63E**±0°.03**, h85^{km}**±4^{km}**, n207, σ1^{s}.02**/232**, mb4.4**/8**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WNVZ	Wahianoa	0.07	339	P	Pn	05 18 57.3	-0.1
WNVZ				S	Sn	05 19 05.4	-1.1
MOVZ	Moawhango	0.10	100	P	Pn	05 18 57.1	-0.3
MOVZ				S	Sn	05 19 04.9	-1.5
TRVZ	Turoa	0.11	325	P	Pn	05 18 57.5	-0.1
TRVZ				S	Sn	05 19 05.8	-1.0
WHVZ	Whangaehu Hut	0.11	344	P	Pn	05 18 57.5	-0.1
WHVZ				S	Sn	05 19 05.6	-1.1
MTVZ	Mangateitei	0.12	272	P	Pn	05 18 57.5	+0.1
MTVZ				S	Sn	05 19 06.0	-0.5
TUVZ	Tukino	0.12	9	P	Pn	05 18 57.5	-0.1
TUVZ				S	Sn	05 19 05.8	-0.9
DRZ	Dome Shelter	0.12	336	P	Pn	05 18 57.7	0.0
FWVZ	Far West T-bar	0.15	336	P	Pn	05 18 57.5	-0.2
FWVZ				S	Sn	05 19 06.0	-0.9
SNVZ	South Ngauruho	0.20	3	P	Pn	05 18 57.5	-0.3
SNVZ				S	Sn	05 19 05.8	-1.3
NGZ	Ngauruhoe	0.21	354	P	Pn	05 18 57.4	-0.4
NGZ				S	Sn	05 19 06.6	-0.5
OTVZ	Oturere	0.23	7	P	Pn	05 18 57.5	-0.4
OTVZ				S	Sn	05 19 06.3	-0.9
PKVZ	Pokaka	0.24	294	P	Pn	05 18 57.9	+0.1
PKVZ				S	Sn	05 19 06.8	-0.3
NNVZ	North Ngauruho	0.26	358	P	Pn	05 18 57.4	-0.7
ETVZ	East Tongariro	0.26	14	P	Pn	05 18 57.6	-0.4
ETVZ				S	Sn	05 19 06.6	-0.9
WTVZ	West Tongariro	0.28	354	P	Pn	05 18 57.4	-0.7
WTVZ				S	Sn	05 19 06.9	-0.6
TMVZ	Te Maari	0.28	12	P	Pn	05 18 57.6	-0.5
TMVZ				S	Sn	05 19 06.4	-1.2
NTVZ	North Tongarir	0.29	7	P	Pn	05 18 57.6	-0.6
BHHZ	Black Hill Sta	0.35	107	P	Pn	05 18 58.2	-0.2
BHHZ				S	Sn	05 19 07.1	-1.1
KATZ	Kakaramea	0.42	7	P	Pn	05 18 58.4	-0.6
KATZ				S	Sn	05 19 08.4	-0.7
RITZ	Rihia Road	0.45	24	P	Pn	05 18 58.8	-0.2
RATZ	Rangitukua	0.53	12	P	Pn	05 18 59.2	-0.5
HATZ	Hinemaiaia	0.61	36	P	Pn	05 18 59.8	-0.7
HATZ				S	Sn	05 19 09.9	-1.9
WAZ	Wanganui	0.62	233	P	Pn	05 19 01.7	+1.3
KWHZ	Kaweka Forest	0.62	93	P	Pn	05 19 01.0	+0.5
KWHZ				S	Sn	05 19 13.1	+1.2
KRHZ	Kereru	0.63	114	P	Pn	05 19 01.0	+0.4
KRHZ				S	Sn	05 19 12.4	+0.4
PNHZ	Pukenui	0.69	140	P	Pn	05 19 01.8	+0.7
WATZ	Wairara	0.69	7	P	Pn	05 19 00.7	-0.4
BKZ	Black Stump Fm	0.71	72		Pn	05 19 01.2	-0.1
BKZ	Black Stump Fm	0.71	72	P	Pn	05 19 01.2	-0.1
BKZ	Black Stump Fm	0.71	72	P	Pn	05 19 01.3	-0.1
TSZ	Takapari Road	0.72	159	P	Pn	05 19 02.5	+1.0
VRZ	Vera Road	0.72	291	P	Pn	05 19 01.8	+0.3
VRZ				S	Sn	05 19 14.2	+0.6
WHTZ	Whakaora	0.77	20	P	Pn	05 19 01.9	-0.1
MRHZ	Matea Rd	0.83	48	P	Pn	05 19 02.0	-0.6
MCHZ	McNeill Hill	0.83	94	P	Pn	05 19 03.5	+0.9
OHWZ	Ohakea	0.85	196	P	Pn	05 19 04.9	+2.1
KUTZ	Kaahu Road	0.91	10	P	Pn	05 19 03.2	-0.4
WPHZ	Waipukurau	0.92	137	P	Pn	05 19 04.3	+0.7
LREZ	Lake Rotokare	0.95	265	P	Pn	05 19 05.2	+1.3
NMHZ	Naumai	0.96	73	P	Pn	05 19 04.9	+0.7
WPRZ	Whakapapatarin	0.96	26	P	Pn	05 19 03.6	-0.5
ALRZ	Allen Road	1.00	34	P	Pn	05 19 04.1	-0.4
DVHZ	Dannevirke	1.00	156	P	Pn	05 19 05.2	+0.6
POWZ	Post Office Ro	1.01	174	P	Pn	05 19 05.6	+1.0
KAHZ	Kahuranaki	1.05	113	P	Pn	05 19 06.0	+0.9
MHEZ	Mangahewa	1.06	287	P	Pn	05 19 06.6	+1.4
TLZ	Tolley Road	1.06	356	P	Pn	05 19 05.0	-0.3
HIZ	Hauiti	1.06	325	Pn	Pn	05 19 05.3	0.0
HIZ				Sn	Sn	05 19 20.4	+0.1
HIZ	Hauiti	1.06	325	P	Pn	05 19 05.3	0.0
HIZ	Hauiti	1.06	325	P	Pn	05 19 05.3	0.0
ARHZ	Aropaoanui	1.07	84	P	Pn	05 19 05.8	+0.5
PRRZ	Plateau Road	1.07	34	P	Pn	05 19 05.0	-0.3
MTHZ	Maungataniwha	1.08	61	P	Pn	05 19 05.4	-0.1
GRRZ	Galatos Road	1.10	20	P	Pn	05 19 05.7	-0.2
HRRZ	Handcock Road	1.12	27	P	Pn	05 19 06.0	0.0
DREZ	Durham Road	1.13	280	P	Pn	05 19 07.3	+1.3
PXZ	Pawanui	1.15	124	P	Pn	05 19 06.8	+0.6
CKHZ	Cape Kidnapper	1.15	104	P	Pn	05 19 06.7	+0.4
PRHZ	Porangahau	1.17	139	P	Pn	05 19 07.5	+1.0
HSRZ	Hossack Road	1.18	24	P	Pn	05 19 06.6	-0.1
PRWZ	Pori Road	1.19	167	P	Pn	05 19 07.8	+1.0
NEZ	North Egmont	1.20	275	P	Pn	05 19 08.4	+1.5
RAHZ	Arahi	1.23	68	P	Pn	05 19 07.5	+0.2
ANWZ	Angora Road	1.25	149	P	Pn	05 19 08.5	+1.0
KHEZ	Kahui Hut	1.25	274	P	Pn	05 19 09.1	+1.4
RRRZ	Republican Roa	1.26	34	P	Pn	05 19 07.4	-0.3
HLRZ	Highlands Stat	1.27	27	P	Pn	05 19 08.2	+0.3
MRZ	Mangatainoka R	1.27	182	P	Pn	05 19 08.6	+0.8
MUGZ	Murupara	1.27	45	P	Pn	05 19 07.3	-0.6
PKE	Pukeiti	1.29	278	P	Pn	05 19 09.4	+1.4
UTU	Utuhina	1.29	20	P	Pn	05 19 08.1	0.0
RTZ	Ruatahuna	1.31	54	P	Pn	05 19 07.9	-0.4
TARZ	Mount Tarawera	1.34	31	P	Pn	05 19 08.9	+0.1
NMEZ	Namu Road	1.36	268	P	Pn	05 19 10.3	+1.4
NGRZ	Ngongotaha	1.36	19	P	Pn	05 19 09.0	0.0
NBEZ	Newall Road No	1.37	275	P	Pn	05 19 10.2	+1.2
BFZ	Birch Farm	1.38	160	Pn	Pn	05 19 09.7	+0.6
BFZ				Sn	Sn	05 19 27.2	0.0
BFZ	Birch Farm	1.38	160	P	Pn	05 19 09.7	+0.6
BFZ	Birch Farm	1.38	160	P	Pn	05 19 09.9	+0.8
TIWZ	Tintock	1.40	172	P	Pn	05 19 10.2	+0.8
OMRZ	Omania	1.41	25	P	Pn	05 19 09.5	-0.1
MKRZ	Makatiti	1.41	28	P	Pn	05 19 10.0	+0.4
KARZ	Kaharoa	1.45	20	P	Pn	05 19 10.1	0.0
SNGZ	Shannon Statio	1.46	66	P	Pn	05 19 10.4	+0.1
OGWZ	Otaki Gorge	1.47	194	P	Pn	05 19 11.3	+1.0
LIRZ	Lichensteins R	1.50	23	P	Pn	05 19 10.8	+0.1
HOWZ	Holdsworth Sta	1.51	183	P	Pn	05 19 11.3	+0.5
EDRZ	Edgecumbe	1.55	34	P	Pn	05 19 11.2	-0.2
KMRZ	Kaimai	1.56	9	P	Pn	05 19 11.6	+0.1
KIW	Kapiti Island	1.57	200	P	Pn	05 19 12.2	+0.7
CPWZ	Castlepoint	1.58	164	P	Pn	05 19 12.8	+1.1
URZ	Urewera	1.62	46	P	Pn	05 19 11.6	-0.6
	513nm,0.3s,baz=232,slow=7.3,SNR=1001						
URZ				S	Sn	05 19 31.7	-0.9
	583nm,0.4s,baz=218,slow=10,SNR=4.6						
URZ	Urewera	1.62	46	Pn	Pn	05 19 12.1	-0.1
URZ				Sn	Sn	05 19 32.1	-0.5
URZ	Urewera	1.62	46	P	Pn	05 19 11.6	-0.6
URZ	Urewera	1.62	46	P	Pn	05 19 11.8	-0.4
MARZ	Manawahe	1.62	31	P	Pn	05 19 12.3	0.0
KNZ	Kokohu	1.63	78	P	Pn	05 19 11.6	-0.7
RAGZ	Rawiri	1.66	58	P	Pn	05 19 12.7	-0.1
TOZ	Tahuroa Road	1.66	357	P	Pn	05 19 12.7	0.0
OPRZ	Ohinepanea	1.71	25	P	Pn	05 19 13.3	0.0
TMWZ	Te Maipa	1.73	173	P	Pn	05 19 14.0	+0.4
TGRZ	Tauranga	1.73	17	P	Pn	05 19 13.6	-0.1
CAW	Cannon Point	1.77	194	P	Pn	05 19 14.6	+0.4
MTW	Mount Morrison	1.77	183	P	Pn	05 19 14.3	+0.2
MHGZ	Mahia Peninsul	1.79	83	P	Pn	05 19 14.3	-0.1
RIGZ	Rimuhau	1.80	68	P	Pn	05 19 14.1	-0.5
PRGZ	Paritu Road	1.81	76	P	Pn	05 19 14.2	-0.6
MWZ	Matawai	1.82	55	P	Pn	05 19 14.2	-0.6
WHRZ	Whale Island	1.86	35	P	Pn	05 19 16.6	+1.2
DUWZ	D’Urville Isla	1.92	222	P	Pn	05 19 16.6	+0.4
TKGZ	Te Karaka	1.98	62	P	Pn	05 19 16.6	-0.3
PAWZ	Paruwai Farm	2.00	184	P	Pn	05 19 17.1	-0.1
WEL	Wellington	2.00	199	P	Pn	05 19 17.3	+0.1
TRWZ	Traveller	2.01	179	P	Pn	05 19 17.2	-0.1
SNZO	South Karori	2.04	200		Pn	05 19 17.5	-0.2
SNZO	South Karori	2.04	200	P	Pn	05 19 17.8	0.0
MSWZ	Moikau Station	2.04	188		Pn	05 19 17.6	-0.2
MSWZ	Moikau Station	2.04	188	P	Pn	05 19 17.6	-0.2
TCW	Tory Channel	2.09	209	P	Pn	05 19 18.5	+0.1
BHW	Baring Head	2.10	196		Pn	05 19 18.3	-0.2
BHW	Baring Head	2.10	196	P	Pn	05 19 18.3	-0.2
RUGZ	Raukumara Rang	2.14	49	P	Pn	05 19 18.1	-1.1
MYRZ	Mayor Island	2.16	13	P	Pn	05 19 20.0	+0.7
PLWZ	Palliser	2.20	187		Pn	05 19 19.3	-0.5
PLWZ	Palliser	2.20	187	P	Pn	05 19 19.4	-0.5
TWGZ	Tauwhareparae	2.20	57	P	Pn	05 19 19.8	-0.1
CNGZ	Carnagh Statio	2.21	67	P	Pn	05 19 19.4	-0.5
WIZ	White Island	2.23	34	P	Pn	05 19 20.4	+0.2
MKAZ	Moumakai	2.31	351	P	Pn	05 19 21.2	-0.1
HAZ	Te Kaha	2.35	47	P	Pn	05 19 20.4	-1.4
TUWZ	Tuamarina	2.41	212		Pn	05 19 22.5	-0.1
TUWZ	Tuamarina	2.41	212	P	Pn	05 19 22.6	-0.1
PKGZ	Pakihiroa	2.43	53	P	Pn	05 19 22.7	-0.4
PUZ	Puketiti	2.44	58	P	Pn	05 19 22.0	-1.1
AWAZ	Awhitu Peninsu	2.45	341	P	Pn	05 19 23.5	+0.4
ETAZ	East Tamaki Re	2.49	347	P	Pn	05 19 23.8	0.0
NNZ	Nelson	2.51	223		Pn	05 19 23.7	-0.3
NNZ	Nelson	2.51	223	P	Pn	05 19 23.6	-0.3
WTAZ	Waiatarua	2.59	341	P	Pn	05 19 22.6	-2.5
CMWZ	Cape Campbell	2.59	204		Pn	05 19 25.0	-0.1
CMWZ	Cape Campbell	2.59	204	P	Pn	05 19 25.2	+0.1
EPAZ	Eden Park BICE	2.60	344	P	Pn	05 19 25.5	+0.2
TKNZ	Takaka Hill	2.62	230	P	Pn	05 19 25.4	-0.1
WIAZ	Waiheke Island	2.62	351	P	Pn	05 19 25.5	0.0
HBAZ	Herne Bay Bore	2.63	344	P	Pn	05 19 25.9	+0.2
KUZ	Kuaotunu	2.64	2	P	Pn	05 19 25.6	-0.1
BSWZ	Blackbirch Sta	2.68	209		Pn	05 19 25.7	-0.5
BSWZ	Blackbirch Sta	2.68	209	P	Pn	05 19 25.8	-0.4
MBAZ	Motutapu North	2.68	347	P	Pn	05 19 26.3	0.0
WMGZ	Waiomatatini S	2.69	55	P	Pn	05 19 25.3	-1.1
RVAZ	Riverhead Bore	2.74	342	P	Pn	05 19 27.5	+0.4
QRZ	Quartz Range	2.78	238		Pn	05 19 27.7	+0.2
QRZ	Quartz Range	2.78	238	P	Pn	05 19 27.4	-0.2
QRZ	Quartz Range	2.78	238	P	Pn	05 19 28.4	+0.8
MXZ	Matakaoa Point	2.78	50	Pn	Pn	05 19 27.1	-0.5
MXZ	Matakaoa Point	2.78	50	P	Pn	05 19 26.9	-0.8
ABAZ	Army Bay	2.85	347	P	Pn	05 19 28.8	+0.2
MRNZ	Matariki Terra	2.97	227	P	Pn	05 19 29.9	-0.3
GRZ	Great Barrier	3.14	357	P	Pn	05 19 32.1	-0.3
THZ	Tophouse	3.15	220	Pn	Pn	05 19 32.2	-0.4
THZ	Tophouse	3.15	220	P	Pn	05 19 32.3	-0.4
KHZ	Kahutara	3.41	207	Pn	Pn	05 19 35.1	-0.9
KHZ	Kahutara	3.41	207	P	Pn	05 19 35.2	-0.9
KHZ	Kahutara	3.41	207	P	Pn	05 19 35.2	-0.9
WCZ	Waipu Caves	3.59	343	P	Pn	05 19 39.1	+0.5
DSZ	Denniston Nort	3.74	230	P	Pn	05 19 39.6	-1.1
GVZ	Greta Valley S	4.08	208	P	Pn	05 19 43.5	-1.6
LTZ	Lake Taylor	4.23	216	Pn	Pn	05 19 45.4	-1.9
LTZ	Lake Taylor	4.23	216	P	Pn	05 19 45.4	-1.9
AMCZ	Amberley	4.40	210	P	Pn	05 19 47.4	-2.1
OUZ	Omahuta	4.47	338	P	Pn	05 19 51.3	+0.8
OUZ	Omahuta	4.47	338	P	Pn	05 19 51.1	+0.6
INZ	Inchbonnie	4.59	222	P	Pn	05 19 50.4	-1.8
OXZ	Oxford	4.77	213		Pn	05 19 51.5	-3.1
MQZ	McQueen’s Vall	4.86	206		Pn	05 19 52.4	-3.4
WVZ	Waitaha Valley	5.21	223	P	Pn	05 20 02.0	+1.5
RPZ	Rata Peaks	5.52	217	P	Pn	05 20 01.7	-3.0
	5.0nm,0.5s,baz=91,slow=18,SNR=3.4						
RPZ				S	Sn	05 21 02.2	-4.6
	38nm,0.3s,baz=112,slow=19,SNR=4.6						
RPZ	Rata Peaks	5.52	217	Pn	Pn	05 20 02.2	-2.6
RPZ	Rata Peaks	5.52	217	P	Pn	05 20 04.3	-0.5
GCSZ	Gaunt Creek Bo	5.59	224	P	Pn	05 20 07.2	+1.4
FOZ	Fox Glacier	6.01	225		Pn	05 20 09.7	-1.8
FOZ	Fox Glacier	6.01	225	P	Pn	05 20 10.3	-1.2
LBZ	Lake Benmore	6.43	217	Pn	Pn	05 20 15.6	-1.7
LBZ	Lake Benmore	6.43	217	P	Pn	05 20 15.5	-1.7
ODZ	Otahua Downs	6.75	212	Pn	Pn	05 20 18.0	-3.6
JCZ	Jackson Bay	6.93	225	P	Pn	05 20 22.1	-2.1
CTZ	Chatham Island	7.26	129	P	Pn	05 20 28.9	+0.5
MSZ	Milford Sound	7.79	225	P	Pn	05 20 39.2	+3.5
MLZ	Mavora Lakes	8.16	220	P	Pn	05 20 40.5	-0.3
WHZ	Wether Hill Ro	8.62	219	Pn	Pn	05 20 44.9	-2.0
AS31	Alice Springs	38.50	281	P	P	05 25 59.4	+0.1
ASAR	Alice Springs	38.50	281	P	P	05 26 00.2	+0.9
	1.8nm,0.8s,baz=133,slow=9.1,SNR=18						
	1.8nm,0.8s						
ASAR	Alice Springs	38.50	281	P	P	05 25 58.7	-0.6
WR0	Warramunga Arr	40.19	287	P	P	05 26 14.0	+0.7
WR0				IAmb	IAmb	05 26 39.8	
	comp=Z,13nm,1.5s						
WB2	Warramunga Arr	40.34	287	P	P	05 26 15.4	+0.8
WB2				IAmb	IAmb	05 26 33.3	
	comp=Z,8.0nm,1.2s						
WRA	Warramunga Arr	40.35	287	P	P	05 26 15.4	+0.8
	comp=Z,1.7nm,0.4s,baz=125,slow=8.1,SNR=36						
	comp=Z,1.7nm,0.4s						
WRA	Warramunga Arr	40.35	287	P	P	05 26 15.4	+0.8
WB0	Warramunga Arr	40.42	287	P	P	05 26 16.3	+1.1
WB0				IAmb	IAmb	05 26 38.5	
	comp=Z,7.2nm,1.3s						
KNRA	Kununurra	47.15	286	P	P	05 27 09.9	+0.8
FITZ	Fitzroy Crossi	48.01	281	P	P	05 27 16.6	+0.8
FITZ				IAmb	IAmb	05 27 37.6	
	comp=Z,5.7nm,1.2s						
QSPA	South Pole Qui	50.74	180	P	P	05 27 39.4	+3.3
QSPA				IAmb	IAmb	05 27 51.0	
	comp=Z,5.1nm,1.3s						
BELA	Belgrano 2	61.56	173	P	P	05 28 52.2	-0.7
BELA				IAmb	IAmb	05 28 59.5	
	comp=Z,1.9nm,1.1s						
SNAA	Sanae	69.24	181	P	P	05 29 43.5	+1.0
MKAR	Makanchi Array	119.36	308	PKP	PKiKP	05 37 24.1	-0.1
	comp=Z,0.1nm,0.3s,baz=96,slow=2.0,SNR=1.5						
ARCES	ARCESS Array B	145.89	342	PKPbc	PKPbc	05 38 12.6	-1.1
	comp=Z,1.1nm,0.7s,baz=9.5,slow=3.0,SNR=6.0						
FINES	FINESS Array B	151.08	330	PKPab	PKPab	05 38 34.6	-0.8

	comp=Z,0.7nm,0.9s,baz=52,slow=9.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**153.32**	**193**	PKPab	**PKPab**	**05 38 44.3**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=165,slow=4.8,SNR=2.1						

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*NNC **08** 06:03:53.7±8.1, 37°.20N×70°.65E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=87.8km s-min=49.4km az=52.0*

*IDC **08** 06:03:54.7±8.4, 36°.75N×71°.23E, h93^{km}±56^{km}, mb3.4/3, mbtmp3.8/8, ML3.6/5, Error ellipse: s-maj=67.7km s-min=37.8km az=6.0*

ISC 08 06:03:55.0±1.9**, 36°.9N**±0°.2×**71°.0E**±0°.2**, h88^{km}, n18, σ1^s.12**/19**, mb3.4**/3**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.64**	**21**	P	**Pn**	**06 05 16.9**	**+0.2**
	SNR=54						
UCH	**Uchtor**	**5.98**	**26**	P	**Pn**	**06 05 21.8**	**+0.4**
	SNR=11						
EKS2	**Erkin-Say**	**6.15**	**19**	P	**Pn**	**06 05 24.2**	**+0.8**
	SNR=14						
KK31	**Karatay Array**	**6.24**	**356**	⇑Pn	**Pn**	**06 05 23.8**	**-0.6**
	2.1nm,0.3s,baz=175,slow=12,SNR=70						
KK31				⇑Sn	**Sn**	**06 06 31.7**	**-2.6**
	3.7nm,0.3s,baz=181,slow=23,SNR=3.5						
AAK	**Ala-Archa**	**6.34**	**24**	P	**Pn**	**06 05 26.8**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**6.34**	**24**	P	**Pn**	**06 05 26.8**	**+0.8**
	4.3nm,0.3s,baz=195,slow=5.6,SNR=29						
AAK				S	**Sn**	**06 06 39.0**	**+2.0**
	4.3nm,0.6s,baz=357,slow=22,SNR=1.1						
	12nm,0.4s						
CHMS	**Chumysh**	**6.75**	**24**	P	**Pn**	**06 05 31.8**	**+0.3**
	SNR=13						
CHMS	**Chumysh**	**6.75**	**24**	⇓Pn	**Pn**	**06 05 31.5**	**0.0**
	23nm,0.7s						
TKM2	**Tokmak 2**	**6.98**	**29**	P	**Pn**	**06 05 35.0**	**+0.2**
	SNR=25						
TKM2	**Tokmak 2**	**6.98**	**29**	⇑Pn	**Pn**	**06 05 34.7**	**-0.1**
	12nm,0.7s						
GEYT	**Alibeck**	**10.34**	**280**	P	Pn	06 06 28.2	+7.8
	1.4nm,0.4s,baz=75,slow=17,SNR=2.3						
GEYT				S	Sn	06 08 05.3	-9.0
	1.4nm,0.5s,baz=90,slow=8.6,SNR=1.4						
MKAR	**Makanchi Array**	**12.97**	**37**	P	**Pn**	**06 06 54.5**	**-1.4**
	0.3nm,0.3s,baz=223,slow=15,SNR=11						
	1.9nm,0.7s						
KURBB	**Kurchatov Arra**	**14.76**	**19**	P	**Pn**	**06 07 20.2**	**+1.2**
	0.1nm,0.3s,baz=204,slow=10,SNR=8.4						
	0.9nm,0.6s						
AKTO	**Aktyubinsk**	**16.47**	**329**	P	**Pn**	**06 07 41.5**	**+0.8**
	0.2nm,0.3s,baz=135,slow=11,SNR=2.7						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**19.56**	**25**	P	**P**	**06 08 14.5**	**-1.1**
	0.6nm,0.3s,baz=214,slow=12,SNR=8.6						
	2.5nm,0.5s						
SONM	**Songino Array**	**28.10**	**56**	P	**P**	**06 09 37.7**	**-0.8**
	0.3nm,0.6s,baz=260,slow=8.6,SNR=2.3						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**40.81**	**337**	P	**P**	**06 11 28.3**	**+0.9**
	2.5nm,1.0s,baz=103,slow=10,SNR=3.8						
	2.5nm,1.0s						
YKA	**Yellowknife Ar**	**80.87**	**3**	P	**P**	**06 15 58.5**	**-0.4**
	0.4nm,0.6s,baz=350,slow=5.5,SNR=11						
	0.4nm,0.6s						

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*IDC **08** 06:17:37.0±0.9, 15°.17S×173°.55W, h0^{km}, mb3.7/8, mbtmp3.7/9, ML4.4/1, MS3.5/32, Error ellipse: s-maj=48.3km s-min=18.9km az=145.0*

*NEIC **08** 06:17:41.6±1.1, 15°.08S±0°.04×173°.36W±0°.08, h35^{km}±2^{km}, mb4.4/8, Error ellipse: s-maj=13.9km s-min=4.8km az=71.0*

*NOU **08** 06:17:56.3, 13°.63S×172°.02W, h94^{km}, MLv3.6/4, Samoa Islands*

ISC 08 06:17:41.7±0.6**, 15°.15S**±0°.06×**173°.25W**±0°.09**, h35^{km}, n59, σ1^s.97**/30**, mb3.9**/11**, MS3.7**/31**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.89**	**50**	Pn	**Pn**	**06 18 12.2**	**+0.7**
	112nm,0.3s,baz=188,slow=2.4,SNR=63						
AFI				Sn	**Sn**	**06 18 31.3**	**-2.8**
	633nm,0.3s,baz=38,slow=20,SNR=30						
AFI				LR	LR	06 18 56.4	
	comp=Z,808nm,20.1s,baz=202,slow=37						
	369nm,0.3s						
AFI	**Afiamalu**	**1.89**	**50**		**Pn**	**06 18 11.9**	**+0.4**
AFI				Sn	**Sn**	**06 18 31.7**	**-2.4**
AFI	**Afiamalu**	**1.89**	**50**	P	**Pn**	**06 18 11.9**	**+0.4**
NIUE	**Niue**	**5.04**	**141**	Pn	**Pn**	**06 18 55.8**	**+1.0**
NIUE				Sn	**Sn**	**06 19 47.6**	**-4.2**
KNTN	**Kanton**	**12.39**	**7**	Pn	**Pn**	**06 20 33.8**	**-1.9**
DZM	**Mont Dzumac**	**20.42**	**247**	LR	LR	06 28 48.4	
	comp=Z,290nm,21.7s,baz=39,slow=33						
PPT	**Papeete**	**22.84**	**99**	LR	LR	06 28 28.4	
	comp=Z,39nm,20.7s,baz=126,slow=28						
URZ	**Urewera**	**24.55**	**198**	LR	LR	06 30 43.2	
	comp=Z,167nm,21.5s,baz=31,slow=32						
RPZ	**Rata Peaks**	**31.47**	**202**	LR	LR	06 36 20.4	
	comp=Z,237nm,18.5s,baz=38,slow=36						
WHZ	**Wether Hill Ro**	**34.48**	**203**	P	**P**	**06 24 26.9**	**+0.6**
ARMA	**Armidale**	**35.59**	**239**	P	**P**	**06 24 34.9**	**-1.3**
ARMA				IAmb	IAmb	06 24 53.2	
	comp=Z,12nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**38.82**	**329**	T	T	07 06 05.8	
	baz=146,slow=76						
H11S3	**WAKE ISLAND Hy**	**38.83**	**329**	T	T	07 06 17.1	
	baz=146,slow=76						
CTA	**Charters Tower**	**38.84**	**257**	LR	LR	06 38 42.5	
	comp=Z,26nm,21.1s,baz=81,slow=33						
H11S1	**WAKE ISLAND Hy**	**38.84**	**329**	T	T	07 06 15.4	
	baz=146,slow=76						
PMG	**Port Moresby**	**39.06**	**274**	LR	LR	06 38 34.5	
	comp=Z,32nm,18.2s,baz=84,slow=32						
H11N3	**WAKE ISLAND Hy**	**39.76**	**330**	T	T	07 07 35.0	
	baz=156,slow=80						
H11N1	**WAKE ISLAND Hy**	**39.77**	**330**	T	T	07 07 32.8	
	baz=156,slow=80						
H11N2	**WAKE ISLAND Hy**	**39.78**	**330**	T	T	07 07 32.8	
	baz=156,slow=80						
TOO	**Toolangi**	**42.73**	**231**	P	**P**	**06 25 34.0**	**-1.8**
TOO				IAmb	IAmb	06 25 47.9	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**44.28**	**240**	LR	LR	06 41 47.2	
	comp=Z,46nm,19.9s,baz=26,slow=33						
WB2	**Warramunga Arr**	**50.03**	**257**	P	**P**	**06 26 31.4**	**-1.9**
WRA	**Warramunga Arr**	**50.04**	**257**	P	**P**	**06 26 30.7**	**-2.6**
	comp=Z,0.9nm,0.7s,baz=98,slow=5.9,SNR=13						
WRA				LR	LR	06 45 39.7	
	comp=Z,49nm,20.1s,baz=50,slow=34						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**50.04**	**257**	P	**P**	**06 26 31.2**	**-2.1**
GUMO	**Guam**	**50.32**	**302**	LR	LR	06 45 32.2	
	comp=Z,29nm,19.6s,baz=92,slow=33						
AS31	**Alice Springs**	**50.32**	**252**	P	**P**	**06 26 33.8**	**-1.7**
ASAR	**Alice Springs**	**50.32**	**252**	P	**P**	**06 26 32.9**	**-2.6**
	comp=Z,3.1nm,0.6s,baz=85,slow=8.3,SNR=77						
ASAR				LR	LR	06 46 01.4	
	comp=Z,87nm,22.0s,baz=116,slow=34						
	comp=Z,3.1nm,0.6s						
ASAR	**Alice Springs**	**50.32**	**252**	P	**P**	**06 26 33.4**	**-2.1**
FITZ	**Fitzroy Crossi**	**58.40**	**258**	LR	LR	06 50 01.6	
	comp=Z,60nm,20.5s,baz=108,slow=34						
VNDA	**Vanda**	**63.64**	**186**	P	**P**	**06 28 10.2**	**+1.4**
	comp=Z,0.7nm,1.0s,baz=8.4,slow=8.0,SNR=2.7						
	comp=Z,0.7nm,1.0s						
VNDA	**Vanda**	**63.64**	**186**	P	**P**	**06 28 11.0**	**+2.2**
VNDA				IAmb	IAmb	06 28 33.2	
	comp=Z,2.7nm,1.2s						
SHEM	**Shemya Is, Ala**	**68.47**	**352**	LR	LR	06 51 54.4	
	comp=Z,52nm,21.6s,baz=290,slow=30						
MJAR	**Matsushiro Arr**	**68.84**	**320**	LR	LR	06 52 42.5	
	comp=Z,26nm,20.6s,baz=150,slow=31						
LPIG	**La Paz**	**72.79**	**58**	LR	LR	06 54 18.6	
	comp=Z,52nm,18.8s,baz=216,slow=30						
YBH	**Yreka Blue Hor**	**73.31**	**37**	LR	LR	06 53 09.1	
	comp=Z,64nm,20.6s,baz=242,slow=29						
NVAR	**Mina Array Bea**	**74.05**	**42**	P	**P**	**06 29 16.7**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=229,slow=9.5,SNR=3.8						
NVAR				LR	LR	06 53 25.2	
	comp=Z,59nm,21.5s,baz=228,slow=29						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**74.05**	**42**	P	**P**	**06 29 13.9**	**-0.6**
KDAK	**Kodiak Island**	**74.65**	**11**	LR	LR	06 53 39.9	
	comp=Z,62nm,21.1s,baz=212,slow=29						
QSPA	**South Pole Qui**	**74.90**	**180**	P	**P**	**06 29 20.2**	**+1.4**
QSPA				IAmb	IAmb	06 29 22.2	
	comp=Z,2.5nm,0.8s						
KSRS	**Korea Array**	**76.08**	**315**	LR	LR	07 01 49.9	
	comp=Z,6.4nm,18.2s,baz=85,slow=35						
ELK	**Elko**	**77.30**	**41**	LR	LR	06 57 42.3	
	comp=Z,52nm,20.2s,baz=215,slow=31						
BBB	**Bella Bella**	**77.60**	**27**	LR	LR	06 57 30.0	
	comp=Z,35nm,18.3s,baz=54,slow=31						
MA2	**Magadan**	**79.97**	**342**	LR	LR	06 57 36.5	
	comp=Z,21nm,21.4s,baz=120,slow=30						
TXAR	**Lajitas Array**	**80.36**	**56**	P	**P**	**06 29 51.3**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=255,slow=2.7,SNR=4.2						
TXAR				LR	LR	06 57 38.5	
	comp=Z,29nm,18.2s,baz=230,slow=30						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**80.36**	**56**	P	**P**	**06 29 49.5**	**-0.3**
KLR	**Kul'dur**	**80.38**	**327**	LR	LR	06 59 53.2	
	comp=Z,18nm,21.8s,baz=280,slow=32						
NEW	**Newport**	**80.42**	**34**	LR	LR	06 57 16.0	
	comp=Z,45nm,19.1s,baz=221,slow=30						
ANMO	**Albuquerque**	**80.53**	**50**	LR	LR	06 57 25.9	
	comp=Z,39nm,20.0s,baz=238,slow=30						
DLBC	**Dease Lake**	**81.42**	**21**	LR	LR	07 00 30.4	
	comp=Z,35nm,18.3s,baz=246,slow=32						
PDAR	**Pinedale Array**	**81.98**	**42**	P	**P**	**06 29 58.9**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=191,slow=0.9,SNR=1.8						
PDAR				LR	LR	07 00 34.8	
	comp=Z,47nm,19.2s,baz=253,slow=31						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**82.17**	**11**	P	**P**	**06 30 01.1**	**+2.5**
	comp=Z,0.7nm,1.1s,baz=243,slow=4.0,SNR=3.8						
	comp=Z,0.7nm,1.1s						
PMSA	**Palmer Station**	**84.35**	**156**	LR	LR	06 58 33.0	
	comp=Z,33nm,20.0s,baz=246,slow=29						
INK	**Inuvik**	**87.99**	**14**	LR	LR	07 03 25.8	
	comp=Z,34nm,19.8s,baz=142,slow=31						
MAW	**Mawson**	**88.08**	**199**	LR	LR	07 08 37.7	
	comp=Z,36nm,18.1s,baz=144,slow=35						
PLCA	**Paso Flores**	**89.58**	**132**	LR	LR	07 02 19.2	
	comp=Z,13nm,19.2s,baz=204,slow=30						
YKA	**Yellowknife Ar**	**89.81**	**23**	P	**P**	**06 30 38.6**	**+2.2**
	comp=Z,0.3nm,0.9s,baz=239,slow=4.1,SNR=3.3						
	comp=Z,0.3nm,0.9s						
GERES	**GERESS Array B**	**145.91**	**352**	PKPbc	**PKPab**	**06 37 19.3**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=62,slow=2.3,SNR=1.7						
BRTR	**Keskin Array B**	**146.05**	**321**	PKPbc	**PKPab**	**06 37 19.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=182,slow=1.3,SNR=4.6						
BRTR	**Keskin Array B**	**146.05**	**321**		**PKPdf**	**06 37 15.2**	**-2.4**

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*PRE **08** 06:34:45.5±2.2, 26°.38S×27°.70E, h2^{km}, ML2.6*

*BUL **08** 06:34:48.7±0.7, 26°.42S×27°.85E, h9^{km}±8^{km}, MD4.0*

*EAF **08** 06:34:48.9±0.9, 26°.44S×27°.86E, h13^{km}±10^{km}, MD3.8*

ISC 08 06:34:46.4±1.0**, 26°.37S**±0°.03×**27°.66E**±0°.03**, h14^{km}**±7^{km}**, n36, σ1^s.76**/70**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.22**	**256**	*e*P	**Pb**	**06 34 51.7**	**-0.6**
WDLM				*e*S	**Sg**	**06 34 54.8**	**-0.1**
WDLM				IAML		06 34 55.0	
	comp=Z,976nm,0.2s						
SLR	**Silverton**	**0.84**	**41**	*e*P	**Pg**	**06 35 01.6**	**-1.3**
SLR				*e*S	**Sg**	**06 35 11.8**	**-2.2**
SLR				IAML		06 35 19.1	
	comp=Z,148nm,1.1s						
KSR	**Koster**	**0.86**	**307**	*e*P	**Pg**	**06 35 02.9**	**-0.3**
KSR				*e*S	**Sg**	**06 35 13.8**	**-0.7**
KSR				IAML		06 35 21.7	
	comp=Z,128nm,0.3s						
SNKL	**Senekal, Frees**	**1.90**	**177**	*e*P	**Pb**	**06 35 20.9**	**-0.1**
SNKL				*e*S	**Sg**	**06 35 45.6**	**-2.0**
SNKL				IAML		06 35 47.8	
	comp=Z,169nm,0.6s						
CRLN	**Carolina, Mapu**	**2.15**	**80**	*e*P	**Pn**	**06 35 22.7**	**+0.6**
CRLN				*e*S	**Sn**	**06 35 49.7**	**+0.9**
CRLN				IAML		06 35 52.9	
	comp=Z,25nm,0.2s						
SWZ	**Schweizer**	**2.23**	**248**	*e*P	**Pn**	**06 35 24.4**	**+1.3**
SWZ				*e*S	**Sb**	**06 35 54.4**	**+0.1**
SWZ				IAML		06 35 56.2	
	comp=Z,115nm,0.3s						
LBTB	**Lobatse**	**2.30**	**306**	*e*P	**Pn**	**06 35 26.2**	**+2.1**
LBTB				*e*S	**Sb**	**06 35 57.0**	**+0.9**
LBTB				IAML		06 36 00.2	
	comp=Z,40nm,0.3s						
LBTB	**Lobatse**	**2.30**	**306**	*i* P	**Pb**	**06 35 28.6**	**+0.8**
LBTB	**Lobatse**	**2.30**	**306**	*i* P	**Pb**	**06 35 28.6**	**+0.8**
NWCL	**Newcastle**	**2.41**	**125**	*e*P	**Pn**	**06 35 27.3**	**+1.7**
NWCL				*e*S	**Sn**	**06 35 56.4**	**+1.4**
NWCL				IAML		06 36 02.0	
	comp=Z,36nm,0.5s						
BOSA	**Boshof**	**3.09**	**223**	*e*P	**Pn**	**06 35 35.3**	**+0.4**
BOSA				*e*S	**Sn**	**06 36 11.3**	**-0.5**
BOSA				IAML		06 36 27.1	
	comp=Z,37nm,0.3s						
HAGI	**HAGI**	**3.18**	**86**	*e*P	**Pn**	**06 35 37.0**	**+0.8**
HAGI				*e*S	**Sn**	**06 36 15.5**	**+1.6**
HAGI				IAML		06 36 31.9	
	comp=Z,20nm,0.5s						
MMAL	**MMAL**	**3.20**	**85**	*e*P	**Pn**	**06 35 38.0**	**+1.6**
MMAL				*e*S	**Sn**	**06 36 13.6**	**-0.7**
MMAL				IAML		06 36 30.6	
	comp=Z,22nm,0.8s						
MAGG	**Maguga Dam**	**3.25**	**86**	*e*P	**Pn**	**06 35 38.5**	**+1.4**
MAGG				*e*S	**Sn**	**06 36 16.4**	**+0.8**
MAGG				IAML		06 36 30.1	
	comp=Z,26nm,0.4s						
POGA	**Pongola**	**3.74**	**106**	*e*P	**Pn**	**06 35 44.7**	**+1.0**
POGA				*e*S	**Sn**	**06 36 26.6**	**-1.0**
POGA				IAML		06 36 47.7	
	comp=Z,36nm,0.5s						
CNG	**Changalane**	**4.06**	**90**	*e*P	**Pn**	**06 35 48.8**	**+0.6**
CNG				*e*S	**Sn**	**06 36 36.1**	**+0.5**
CNG				IAML		06 36 51.5	
	comp=Z,7.6nm,0.7s						
CNG	**Changalane**	**4.06**	**90**	*i* P	**Pn**	**06 35 48.5**	**+0.3**
CNG				*i* Sg	**Sb**	**06 36 49.7**	**+2.9**
CNG	**Changalane**	**4.06**	**90**	*i* P	**Pn**	**06 35 48.5**	**+0.3**
CNG				*i* Sg	**Sb**	**06 36 49.7**	**+2.9**
MOPA	**Mopani**	**4.42**	**51**	*i* P	**Pn**	**06 35 53.6**	**+0.4**
MOPA				*i* S	**Sn**	**06 36 41.1**	**-3.4**
MOPA	**Mopani**	**4.42**	**51**	*i* P	**Pn**	**06 35 53.6**	**+0.4**
MOPA				*i* S	**Sn**	**06 36 41.1**	**-3.4**
KSD	**Kokstad**	**4.43**	**160**	*e*P	**Pn**	**06 35 54.6**	**+1.2**
KSD				*e*S	**Sn**	**06 36 43.7**	**-1.1**
KSD				IAML		06 37 08.0	
	comp=Z,18nm,0.6s						
MSNA	**Messina**	**4.55**	**29**	*i* P	**Pn**	**06 35 56.4**	**+1.5**
MSNA				*i* S	**Sn**	**06 36 46.3**	**-1.4**
MSNA	**Messina**	**4.55**	**29**	*i* P	**Pn**	**06 35 56.4**	**+1.5**
MSNA				*i* S	**Sn**	**06 36 46.3**	**-1.4**
HVD	**Gariep Dam**	**4.63**	**204**	*e*P	**Pn**	**06 35 57.2**	**+1.1**
HVD				*e*S	**Sn**	**06 36 48.0**	**-1.7**
HVD				IAML		06 37 11.9	
	comp=Z,16nm,0.4s						
MATP	**Matopo**	**5.97**	**8**	*i* P	**Pn**	**06 36 17.7**	**+3.2**
MATP				*i* S	**Sn**	**06 37 21.7**	**-1.1**
MATP	**Matopo**	**5.97**	**8**	*i* P	**Pn**	**06 36 17.7**	**+3.2**
MATP				*i* S	**Sn**	**06 37 21.7**	**-1.1**
UPI	**Upington**	**6.03**	**249**	*e*P	**Pn**	**06 36 17.9**	**+2.5**
UPI				*e*S	**Sn**	**06 37 21.9**	**-2.4**
UPI				IAML		06 37 56.3	
	comp=Z,7.0nm,0.4s						
BLWY	**Bulawayo**	**6.26**	**8**	*e*P	**Pn**	**06 36 21.0**	**+2.4**
BLWY				*e*S	**Sn**	**06 37 29.1**	**-1.0**
BLWY				IAML		06 38 03.3	
	comp=Z,25nm,0.5s						
BLWY	**Bulawayo**	**6.26**	**8**	*i* P	**Pn**	**06 36 20.5**	**+1.9**
BLWY				*i* S	**Sn**	**06 37 27.9**	**-2.2**
BLWY	**Bulawayo**	**6.26**	**8**	*i* P	**Pn**	**06 36 20.5**	**+1.9**
BLWY				*i* S	**Sn**	**06 37 27.9**	**-2.2**
KEIM	**Keimoes**	**6.38**	**247**	*e*P	**Pn**	**06 36 20.3**	**+0.2**
KEIM				*e*S	**Sn**	**06 37 30.5**	**-2.3**
KEIM				IAML		06 38 08.1	
	comp=Z,11nm,0.7s						
SOE	**Somerset East**	**6.58**	**196**	*e*P	**Pn**	**06 36 23.1**	**+0.3**
SOE				*e*S	**Sn**	**06 37 36.5**	**-1.1**
SOE				IAML		06 38 12.9	
	comp=Z,7.8nm,0.7s						
GRAN	**Grantham**	**7.61**	**218**	*e*P	**Pn**	**06 36 39.8**	**+2.8**
GRAN				*e*S	**Sn**	**06 38 02.1**	**-0.9**
GRAN				IAML		06 38 48.5	
	comp=Z,8.1nm,0.7s						
CVNA	**Calvinia**	**8.59**	**232**	*e*P	**Pn**	**06 36 52.1**	**+1.6**
CVNA				*e*S	**Sn**	**06 38 25.6**	**-1.6**
CVNA				IAML		06 39 14.8	
	comp=Z,11nm,0.7s						
MATJ	**Matjiesfontein**	**9.22**	**220**	*e*P	**Pn**	**06 37 01.8**	**+2.8**
MATJ				*e*S	**Sn**	**06 38 39.2**	**-3.5**
MATJ				IAML		06 39 40.6	
	comp=Z,9.3nm,0.5s						
CER	**Ceres**	**10.06**	**224**	*e*P	**Pn**	**06 37 13.9**	**+3.3**
CER				*e*S	**Sn**	**06 39 01.6**	**-1.6**
CER				IAML		06 40 12.3	
	comp=Z,2.3nm,0.7s						

IDC 08 06:45:22.7±1.3**, 2°.63N×123°.66E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=132.8km s-min=25.5km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.76**	**155**	P	P	06 50 45.8	-0.5
	0.2nm,0.3s,baz=336,slow=10,SNR=11						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**27.97**	**160**	P	P	06 51 15.4	+0.1
	0.1nm,0.3s,baz=341,slow=7.2,SNR=7.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**56.76**	**327**	P	P	06 55 07.9	-0.6
	0.3nm,0.4s,baz=120,slow=8.8,SNR=5.9						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**124.69**	**51**	PKP	PKiKP	07 04 26.3	+0.8
	0.2nm,0.7s,baz=245,slow=1.9,SNR=2.7						

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*MAN **08** 06:58:42.8, 5°.15N×126°.24E, h14^{km}, mb5.0, ML3.9, MS3.9, Hypocentre not reviewed by the ISC*

*DJA **08** 06:58:43.2±0.5, 5°N±4°×12°6E±°, h10^{km}, M4.4/8, mb4.6/6, mB5.0/5, MLv4.4/8, Mw(mB)4.4/5*

*NEIC **08** 06:58:43.8±1.4, 4°.85N±0°.06×126°.1E±0°.1, h91^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=17.5km s-min=5.9km az=66.0*

*IDC **08** 06:58:43.0±1.5, 4°.92N×126°.04E, h89^{km}±13^{km}, mb3.6/15, mbtmp4.0/18, MS2.7/4, Error ellipse: s-maj=37.0km s-min=9.9km az=76.0*

ISC 08 06:58:42.9±0.8**, 4°.97N**±0°.04×**126°.10E**±0°.07**, h87^{km}**±8^{km}**, n60, σ1^s.69**/67**, mb4.0**/19**, 2C-6D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.19**	**341**	⇓*e*P	**Pn**	**06 59 02.1**	**-2.6**
DDMP				*e*S	**Sn**	**06 59 17.2**	**-3.8**
SGSI	**Sangihe**	**1.39**	**204**	P	**Pn**	**06 59 07.7**	**+0.6**
SGSI				S	**Sn**	**06 59 26.2**	**+0.8**
GSPH	**General Santos**	**1.59**	**314**	⇓*i*P	**Pn**	**06 59 07.7**	**-2.2**
GSPH				*i* S	**Sn**	**06 59 28.2**	**-2.1**
MATI	**Mati**	**1.97**	**5**	⇓*e*P	**Pn**	**06 59 13.1**	**-1.6**
DAV	**Davao City (W)**	**2.15**	**346**	P	**Pn**	**06 59 18.9**	**+1.8**
	99nm,0.3s,baz=334,slow=6.3,SNR=1.1						
DAV				S	**Sn**	**06 59 44.2**	**+1.1**
	169nm,0.3s,baz=68,slow=12,SNR=2.5						
DAV	**Davao City (W)**	**2.15**	**346**	Pn	**Pn**	**06 59 19.5**	**+2.5**
KCP	**Kidapawan**	**2.26**	**334**	⇓*i*P	**Pn**	**06 59 18.3**	**-0.3**
KCP				*i* S	**Sn**	**06 59 49.8**	**+4.0**
CTBH	**Cotabato--PC H**	**2.90**	**321**	⇑*i*P	**Pn**	**06 59 29.7**	**+2.7**
BUKP	**Musuan**	**3.07**	**341**	⇓*e*P	**Pn**	**06 59 29.1**	**-0.3**
BUKP				*e*S	**Sn**	**07 00 06.2**	**+1.0**
BIPH	**Bislig**	**3.21**	**5**	⇑*e*P	**Pn**	**06 59 31.6**	**+0.4**
BIPH				*e*S	**Sn**	**07 00 12.3**	**+3.9**
TNTI	**Ternate**	**4.36**	**163**		**Pn**	**06 59 45.9**	**-0.9**
GLSP	**General Luna,**	**4.79**	**0**	⇓*e*P	**Pn**	**06 59 53.7**	**+1.0**
KMSI	**Cibinong**	**4.85**	**206**	P	**Pn**	**06 59 58.1**	**+4.7**
GTOI	**Gorontalo**	**5.29**	**216**	P	**Pn**	**06 59 59.7**	**+0.2**
	0.1nm310nm33nm,0.8s						
MRSI	**Marisa**	**6.09**	**223**	P	**Pn**	**07 00 11.8**	**+1.4**
	0.5nm2µm110nm,0.5s						
TOLI2	**Tolitoli**	**6.54**	**234**		**Pn**	**07 00 16.4**	**-0.2**
LUWI	**Luwuk**	**6.83**	**209**		**Pn**	**07 00 19.4**	**-1.0**
LUWI	**Luwuk**	**6.83**	**209**	P	Pn	07 00 25.3	+4.8
	0.4nm2µm78nm,0.8s						
APSI	**Ampana**	**7.33**	**217**	P	**Pn**	**07 00 29.6**	**+2.2**
	0.2nm598nm51nm,0.6s						
MYLDM	**Lahad Datu**	**7.57**	**272**	Pn	**Pn**	**07 00 32.0**	**+1.5**
SIJI	**Sorong**	**7.76**	**138**	P	**Pn**	**07 00 33.0**	**-0.2**
	3.6nm,0.3s,baz=171,slow=23,SNR=2.1						
SIJI				S	**Sn**	**07 01 57.2**	**-2.4**
	2.7nm,0.3s,baz=260,slow=22,SNR=1.6						
SIJI				LR	LR	07 02 57.0	
	comp=Z,31nm,18.5s,baz=38,slow=33						
TTSI	**Tana Toraja**	**10.13**	**218**	P	**Pn**	**07 01 09.0**	**+3.5**
	17nm,0.9s						
SPSI	**Sidrap Palu**	**10.89**	**216**	P	**Pn**	**07 01 19.0**	**+3.1**
EDFI	**Ende, Flores**	**14.31**	**198**	P	**P**	**07 02 08.5**	**+2.3**
BATI	**Baumata**	**15.27**	**189**	P	**Pn**	**07 02 13.2**	**-0.5**
	14nm,0.5s,baz=281,slow=20,SNR=2.4						
BATI				LR	LR	07 08 20.9	
	comp=Z,61nm,18.4s,baz=217,slow=38						
KSM	**Kuching**	**16.14**	**258**	P	**Pn**	**07 02 25.3**	**+0.6**
KSM				IAmb	IAmb	07 02 32.4	
	comp=Z,7.0nm,0.8s						
KNRA	**Kununurra**	**20.68**	**173**	P	**P**	**07 03 17.1**	**+1.1**
JOW	**Kunigami**	**21.84**	**5**	P	**P**	**07 03 29.3**	**+0.9**
	comp=Z,6.1nm,0.7s,baz=243,slow=6.8,SNR=2.0						
	comp=Z,6.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.92**	**181**	P	**P**	**07 03 40.1**	**+0.4**
	comp=Z,3.0nm,0.4s,baz=357,slow=9.5,SNR=37						
	comp=Z,3.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.92**	**181**	P	**P**	**07 03 40.2**	**+0.4**
FITZ				IAmb	IAmb	07 03 42.1	
	comp=Z,6.1nm,0.8s						
PMG	**Port Moresby**	**25.39**	**124**	LR	LR	07 16 21.0	
	comp=Z,19nm,20.1s,baz=206,slow=42						
WB0	**Warramunga Arr**	**25.90**	**162**	P	**P**	**07 04 07.3**	**+0.3**
WB0				IAmb	IAmb	07 04 12.5	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**26.05**	**162**	P	**P**	**07 04 07.9**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=338,slow=10,SNR=22						
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**26.05**	**162**	P	**P**	**07 04 06.8**	**-1.4**
WB2	**Warramunga Arr**	**26.05**	**162**	P	**P**	**07 04 07.4**	**-0.9**
WB2				IAmb	IAmb	07 04 26.7	
	comp=Z,5.7nm,1.1s						
WR0	**Warramunga Arr**	**26.12**	**162**	P	**P**	**07 04 08.1**	**-0.9**
WR0				IAmb	IAmb	07 04 27.8	
	comp=Z,12nm,1.4s						
PSA00	**Pilbara Seismi**	**27.08**	**193**	P	**P**	**07 04 15.2**	**-2.3**
PSA00				IAmb	IAmb	07 04 40.8	
	comp=Z,9.6nm,1.4s						
ASAR	**Alice Springs**	**29.46**	**165**	P	**P**	**07 04 39.0**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=345,slow=7.3,SNR=3.3						
	comp=Z,0.5nm,0.6s						
KSRS	**Korea Array**	**32.38**	**3**	P	**P**	**07 05 05.2**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=193,slow=10,SNR=4.4						
	comp=Z,0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**33.34**	**18**	LR	LR	07 20 38.0	
	comp=Z,9.5nm,18.8s,baz=177,slow=39						
BBOO	**Buckleboo**	**38.74**	**167**	P	**P**	**07 05 57.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**39.42**	**7**	P	**P**	**07 06 05.6**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=196,slow=7.5,SNR=4.7						
	comp=Z,2.9nm,0.7s						
STKA	**Stephens Creek**	**39.50**	**159**	P	**P**	**07 06 03.6**	**-1.5**
	comp=Z,6.3nm,1.1s,baz=348,slow=7.9,SNR=3.0						
	comp=Z,6.3nm,1.1s						
STKA	**Stephens Creek**	**39.50**	**159**	P	**P**	**07 06 03.7**	**-1.5**
SONM	**Songino Array**	**45.93**	**342**	P	**P**	**07 06 57.7**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=157,slow=7.8,SNR=1.8						
SONM				PcP	**PcP**	**07 08 33.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=158,slow=3.7,SNR=4.7						
	comp=Z,0.3nm,0.8s						
MK31	**Makanchi Array**	**56.19**	**325**	P	**P**	**07 08 14.0**	**+0.1**
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**07 08 13.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=117,slow=7.8,SNR=9.1						
MKAR				PcP	**PcP**	**07 09 09.7**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=147,slow=3.7,SNR=5.2						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**07 08 13.7**	**-0.1**
DRK	**Karamyk**	**59.70**	**313**	P	**P**	**07 08 37.3**	**-1.7**
KURBB	**Kurchatov Arra**	**60.36**	**327**	P	**P**	**07 08 42.3**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=128,slow=5.9,SNR=12						
	comp=Z,0.8nm,0.7s						
ABKAR	**Akbulak array**	**70.80**	**321**	P	**P**	**07 09 49.0**	**-1.1**
IMAR	**Indian Mountai**	**81.48**	**24**	P	**P**	**07 10 51.2**	**+0.9**
ILAR	**Eielson Array**	**84.27**	**25**	P	**P**	**07 11 04.2**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=258,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.8s						

VNDA	**Vanda**	**84.72**	**173**	P	**P**	**07 11 06.3**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=304,slow=4.6,SNR=5.1						
	comp=Z,1.1nm,0.9s						
VNDA	**Vanda**	**84.72**	**173**	P	**P**	**07 11 06.1**	**-0.7**
VNDA				IAmb	IAmb	07 11 08.7	
	comp=Z,3.3nm,1.1s						
ARCES	**ARCESS Array B**	**89.08**	**340**	P	**P**	**07 11 27.5**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=97,slow=7.4,SNR=2.0						
	comp=Z,2.1nm,0.9s						
FINES	**FINESS Array B**	**90.45**	**332**	P	**P**	**07 11 35.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=134,slow=8.2,SNR=7.6						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**90.45**	**332**	P	**P**	**07 11 34.6**	**0.0**
YKA	**Yellowknife Ar**	**98.64**	**24**	P	**P**	**07 12 11.1**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=289,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**121.93**	**289**	PKP	**PKPdf**	**07 17 28.2**	**0.0**
	comp=Z,0.4nm,0.6s,baz=57,slow=1.3,SNR=3.9						

IDC 08 07:24:06.0±15.0**,6°.92S**×**129°.76E,h100**^{km}±165^{km}**,**
mb3.1/1**,mbtmp3.4**/4**,ML3.4**/3**,Error ellipse:**
s-maj=121.4km s-min=61.2km az=29.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.82**	**199**	P	Pn	07 26 52.1	+0.8
	0.2nm,0.3s,baz=31,slow=10,SNR=11						
FITZ				S	Sn	07 28 56.3	-5.0
	1.4nm,0.7s,baz=99,slow=11,SNR=1.9						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**13.69**	**161**	P	Pn	07 27 14.2	-1.8
	0.2nm,0.3s,baz=339,slow=13,SNR=14						
WRA				S	Sn	07 29 38.3	-8.5
	0.8nm,0.5s,baz=330,slow=22,SNR=7.1						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.12**	**167**	P	P	07 28 00.1	+0.7
	0.2nm,0.3s,baz=352,slow=10,SNR=6.3						
ASAR				S	Sn	07 30 59.6	-10
	0.5nm,0.8s,baz=355,slow=27,SNR=2.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**68.03**	**327**	P	P	07 34 54.7	0.0
	0.2nm,0.4s,baz=132,slow=6.0,SNR=2.1						
	0.2nm,0.4s						

NNC ***08*** *07:27:39.0±14.0,37°.77N×70°.78E,h0^{km},mb3.9,mpv3.6,*
Error ellipse: s-maj=115.6km s-min=76.7km az=176.0
IDC ***08*** *07:27:39.4±6.2,37°.42N×71°.90E,h93^{km}±44^{km},mb3.4/4,*
mbtmp3.6/8,Error ellipse: s-maj=60.3km s-min=31.2km
az=144.0
ISC 08 07:27:39.4±0.9**,37°.41N**±0°.08×**71°.63E**±0°.10**,h109**^{km}**,n18,**
σ**3**^{s}**24**/22**,mb3.6**/4**,4C-3D,Afghanistan-Tajikistan border**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.66**	**22**	P	**Pn**	**07 29 01.8**	**+0.5**
	1.9nm,0.3s,baz=146,slow=4.3,SNR=4.0						
AAK				S	**Sn**	**07 30 01.9**	**-3.2**
	3.5nm,0.4s,baz=336,slow=19,SNR=9.1						
KK31	**Karatay Array**	**5.75**	**352**	⇑P	**Pn**	**07 29 02.4**	**+0.1**
	4.3nm,0.3s,baz=182,slow=15,SNR=97						
KK31				⇓S	**Sn**	**07 30 04.0**	**-3.0**
	2.3nm,0.2s,baz=189,slow=25,SNR=9.4						
TKM2	**Tokmak 2**	**6.28**	**28**	⇑P	**Pn**	**07 29 10.8**	**+1.0**
	2.1nm,0.6s						
TKM2				⇓S	**Sn**	**07 30 25.2**	**+5.0**
	3.7nm,1.1s						
PYUN	**Piuthan**	**13.31**	**131**	*e*P	**Pn**	**07 30 41.0**	**-3.4**
DANN	**Dangsing**	**13.61**	**128**	*e*P	**Pn**	**07 30 45.1**	**-3.2**
KOLN	**Koldanda**	**13.92**	**130**	*e*P	**Pn**	**07 30 49.3**	**-2.9**
KURBB	**Kurchatov Arra**	**14.10**	**18**	P	**Pn**	**07 30 54.6**	**+0.6**
	0.2nm,0.4s,baz=206,slow=10,SNR=2.7						
GKN	**Gorkha**	**14.40**	**127**	*e*P	**Pn**	**07 30 54.7**	**-3.7**
AB31	**Akbulak array**	**14.55**	**328**	⇓P	**Pn**	**07 30 59.5**	**-0.5**
	0.4nm,0.3s,baz=135,slow=12,SNR=43						
AB31				⇑S	**Sn**	**07 33 32.9**	**-7.5**
	0.5nm,0.4s						
PKI	**Pulchoki**	**15.20**	**126**	*e*P	**Pn**	**07 31 05.2**	**-3.4**
GUN	**Gumba**	**15.27**	**124**	*e*P	**Pn**	**07 31 05.4**	**-4.1**
AKTO	**Aktyubinsk**	**16.26**	**327**	P	**P**	**07 31 23.2**	**+0.9**
	1.1nm,0.3s,baz=125,slow=7.3,SNR=6.1						
AKTO	**Aktyubinsk**	**16.26**	**327**	⇑P	**Pn**	**07 31 21.9**	**+0.5**
	1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**18.88**	**25**	P	**P**	**07 31 51.3**	**+0.3**
	0.9nm,0.5s,baz=229,slow=8.8,SNR=3.7						
FINES	**FINESS Array B**	**37.02**	**325**	P	**P**	**07 34 41.0**	**+2.9**
	0.4nm,0.4s,baz=112,slow=8.5,SNR=6.8						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**40.50**	**337**	P	**P**	**07 35 10.0**	**+2.9**
	0.9nm,0.8s,baz=116,slow=10,SNR=1.4						
	0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.25**	**269**	P	**P**	**07 38 18.4**	**+2.3**
	0.3nm,0.5s,baz=51,slow=5.5,SNR=6.2						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**80.31**	**3**	P	**P**	**07 39 39.7**	**+1.7**
	0.5nm,0.5s,baz=351,slow=5.5,SNR=22						
	0.5nm,0.5s						

IDC ***08*** *07:30:09.5±1.3,3°.25S×130°.77E,h0^{km},mb3.8/4,*
mbtmp3.8/7,ML3.8/3,Error ellipse: s-maj=58.0km
s-min=19.3km az=88.0
DJA ***08*** *07:30:13.3±0.5,3°S±5°×13°1E±°,h10^{km},M4.4/7,MLv4.4/7*
ISC 08 07:30:14.2±0.9**,3°.23S**±0°.07×**130°.81E**±0°.06**,h35**^{km}**,n12,**
σ**1**^{s}**78**/14**,mb3.7**/3**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.47**	**78**	P	**Pn**	**07 30 39.8**	**+1.6**
FAKI				S	**Sn**	**07 30 54.6**	**-1.6**
MSAI	**Masohi**	**1.89**	**266**	P	**Pn**	**07 30 45.9**	**+1.9**
SIJI	**Sorong**	**2.39**	**11**	Pn	**Pn**	**07 30 50.2**	**-0.7**
	13nm,0.3s,baz=194,slow=9.4,SNR=37						
SIJI				Sn	**Sn**	**07 31 20.2**	**+1.2**
	9.5nm,0.3s,baz=221,slow=23,SNR=11						
	28nm,0.2s						
SWI	**Sorong**	**2.39**	**11**	P	**Pn**	**07 30 50.3**	**-0.7**
AAI	**Ambon**	**2.65**	**260**	P	**Pn**	**07 30 55.9**	**+1.3**
SANI	**Sanana**	**4.96**	**284**	P	**Pn**	**07 31 23.9**	**-2.4**
FITZ	**Fitzroy Crossi**	**15.62**	**199**	Pn	**Pn**	**07 33 49.0**	**-3.0**
	0.2nm,0.3s,baz=29,slow=9.6,SNR=8.3						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**16.96**	**169**	Pn	**Pn**	**07 34 07.0**	**-2.0**
	0.6nm,0.3s,baz=350,slow=11,SNR=12						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**20.54**	**172**	P	**P**	**07 34 50.7**	**+0.9**
	6.5nm,0.3s,baz=351,slow=10,SNR=185						
	6.5nm,0.3s						
SONM	**Songino Array**	**55.17**	**340**	P	**P**	**07 39 44.9**	**+1.4**
	0.3nm,0.4s,baz=142,slow=4.9,SNR=1.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**65.56**	**326**	P	**P**	**07 40 55.2**	**+0.7**
	0.3nm,0.5s,baz=121,slow=8.2,SNR=5.5						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**69.76**	**328**	P	**P**	**07 41 20.9**	**+0.1**
	0.5nm,0.6s,baz=125,slow=5.7,SNR=6.0						
	0.5nm,0.6s						

IDC ***08*** *07:31:08.0±0.5,3°.15S×130°.71E,h0^{km},mb4.6/26,*
mbtmp4.6/31,ML4.4/4,MS4.3/7,Error ellipse:
s-maj=15.5km s-min=10.0km az=71.0
NEIC ***08*** *07:31:09.7±1.6,3°.19S±0°.06×130°.70E±0°.05,h10^{km}±1^{km},*
mb4.9/77,Error ellipse: s-maj=10.7km s-min=9.3km
az=188.0
GCMT ***08*** *07:31:11.7±0.3,3°.18S±0°.02×130°.84E±0°.02,h20^{km}±1^{km},*
MW5.1/79,Moment Tensor Solution. s40,c45; s79,c108;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.11±.27;
$M_{\theta\theta}$-2.12±.16; $M_{\phi\phi}$-1.98±.17; $M_{r\theta}$-1.99±.29; $M_{\theta\phi}$1.69±.09;
$M_{\phi r}$3.63±.38; Best double couple: $M_0$5.69600×10^{16}
NP1:ϕ_s125.00000°,δ23.00000°,λ71.00000°. NP2:
ϕ_s326.00000°,δ68.00000°,λ98.00000°. Principal axes: T
5.9610, Plg66.0000°, Azm250.0000°; N -0.5210,
Plg7.0000°, Azm143.0000°; P -5.4300, Plg23.0000°,
Azm50.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
DJA ***08*** *07:31:12.9±0.5,3°S±3°×13°1E±°,h33^{km}±5^{km},M4.7/35,*
mb4.9/35,mB5.3/18,MLv4.7/7,Mw(mB)4.7/18,
MwMwp4.7/4,Mwp5.0/4
ISC 08 07:31:11.2±0.3**,3°.24S**±0°.04×**130°.73E**±0°.03**,h24**^{km}**,n232,**
σ**1**^{s}**55**/238**,mb4.8**/70**,MS4.5**/14**,1C-1D,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.55**	**78**	Pn	**Pb**	**07 31 38.3**	**-0.9**
FAKI	**Fak Fak**	**1.55**	**78**	P	**Pn**	**07 31 37.9**	**+0.6**
FAKI				S	**Sb**	**07 31 58.6**	**+0.1**
MSAI	**Masohi**	**1.80**	**267**	P	**Pb**	**07 31 43.9**	**+0.4**
MSAI				S	**Sb**	**07 32 05.0**	**-0.7**
SIJI	**Sorong**	**2.42**	**13**	Pn	**Pn**	**07 31 48.8**	**-0.5**
	42nm,0.3s,baz=143,slow=24,SNR=18						
SIJI				Sn	**Sn**	**07 32 17.1**	**-1.1**
	99nm,0.3s,baz=270,slow=23,SNR=9.2						
SIJI				LR	LR	07 32 42.5	
	comp=Z,4μm,18.1s,baz=180,slow=40						
	285nm,0.7s						
SWI	**Sorong**	**2.42**	**13**	P	**Pn**	**07 31 48.8**	**-0.5**
AAI	**Ambon**	**2.57**	**260**	P	**Pb**	**07 31 54.3**	**-2.3**
LBMI	**Labuha**	**4.14**	**309**	P	**Pn**	**07 32 13.5**	**+0.6**
SAUI	**Saumlaki**	**4.74**	**173**		Pn	07 32 26.6	+5.3
SANI	**Sanana**	**4.88**	**284**	P	**Pn**	**07 32 23.4**	**+0.2**
SANI	**Sanana**	**4.88**	**284**	P	**Pn**	**07 32 22.5**	**-0.7**
SANI	**Sanana**	**4.88**	**284**	S	**Pn**	**07 32 22.8**	**-0.4**
TNTI	**Ternate**	**5.22**	**320**	Pn	**Pn**	**07 32 26.9**	**-0.8**
SRPI	**Serui, Papua**	**5.67**	**76**	P	**Pn**	**07 32 33.6**	**-0.4**
	1.5nm2μm148nm,0.8s						
BAKI	**Biak**	**5.75**	**69**	P	**Pn**	**07 32 36.9**	**+1.8**
KMSI	**Cibinong**	**7.74**	**299**	P	**Pn**	**07 33 04.9**	**+2.5**
LUWI	**Luwuk**	**8.25**	**285**	Pn	**Pn**	**07 33 08.7**	**-0.7**
LUWI	**Luwuk**	**8.25**	**285**	P	**Pn**	**07 33 12.2**	**+2.8**
LUWI	**Luwuk**	**8.25**	**285**	P	**Pn**	**07 33 09.9**	**+0.5**
GTOI	**Gorontalo**	**8.62**	**296**	P	**Pn**	**07 33 18.0**	**+3.4**
	457nm26nm,0.8s						
APSI	**Ampana**	**9.37**	**284**	P	**Pn**	**07 33 24.6**	**-0.2**
	2μm128nm,0.8s						
MRSI	**Marisa**	**9.53**	**293**	P	**Pn**	**07 33 26.7**	**-0.3**
	1μm74nm,0.6s						
KDU	**Kakadu**	**9.54**	**170**	P	**Pn**	**07 33 25.8**	**-1.3**
MTN	**Manton Dam**	**9.55**	**178**	Pn	**Pn**	**07 33 26.8**	**-0.4**
MTN	**Manton Dam**	**9.55**	**178**	P	**Pn**	**07 33 27.3**	**+0.1**
BATI	**Baumata**	**9.85**	**225**	Pn	**Pn**	**07 33 33.5**	**+2.1**
	12nm,0.3s,baz=270,slow=0.5,SNR=7.0						
BATI				LR	LR	07 38 08.7	
	comp=Z,2μm,19.9s,baz=43,slow=42						
	43nm,0.7s						
BATI	**Baumata**	**9.85**	**225**	P	**Pn**	**07 33 34.9**	**+3.4**
MMRI	**Maumere**	**10.00**	**237**	Pn	**Pn**	**07 33 32.7**	**-0.8**
EDFI	**Ende, Flores**	**10.52**	**238**	P	**Pn**	**07 33 43.5**	**+2.8**
	535nm28nm,0.8s						
BSSI	**Bau Bau, Buton**	**10.60**	**254**	P	**Pn**	**07 33 45.1**	**+3.4**
BNSI	**Bone**	**10.66**	**263**	P	**Pn**	**07 33 45.2**	**+2.7**
	892nm37nm,0.9s						
BKSI	**Bulukumba**	**10.78**	**259**	P	**Pn**	**07 33 46.5**	**+2.4**
	1μm118nm,0.9s						
TOLI2	**Tolitoli**	**10.84**	**293**	Pn	**Pn**	**07 33 44.6**	**-0.5**
TOLI2	**Tolitoli**	**10.84**	**293**	P	**Pn**	**07 33 44.1**	**-0.9**
TTSI	**Tana Toraja**	**10.90**	**271**	P	**Pn**	**07 33 47.6**	**+1.9**
	28nm,0.9s						
SPSI	**Sidrap Palu**	**10.96**	**266**	P	**Pn**	**07 33 50.2**	**+3.5**
KAPI	**Kappang**	**11.09**	**261**	Pn	**Pn**	**07 33 50.2**	**+1.8**
	0.8nm,0.3s,baz=88,slow=8.9,SNR=4.8						
KAPI				LR	LR	07 39 21.4	
	comp=Z,2μm,18.8s,baz=74,slow=44						
	6.5nm,0.6s						
KAPI	**Kappang**	**11.09**	**261**	Pn	**Pn**	**07 33 50.6**	**+2.2**
KAPI	**Kappang**	**11.09**	**261**	P	**Pn**	**07 33 46.3**	**-2.1**
MPSI	**Mapaga**	**11.40**	**288**	P	**Pn**	**07 33 54.1**	**+1.5**
	2μm27nm,0.7s						
DAV	**Davao City (W)**	**11.46**	**333**	LR	LR	07 39 03.5	
	comp=Z,2μm,21.0s,baz=122,slow=42						
KNRA	**Kununurra**	**12.51**	**189**	Pn	**Pn**	**07 34 04.6**	**-3.1**
KNRA	**Kununurra**	**12.51**	**189**	P	**Pn**	**07 34 04.6**	**-3.1**
WBSI	**Waikabubak, Su**	**12.93**	**240**	P	**Pn**	**07 34 14.3**	**+0.7**
	1μm48nm,2.0s						
PLAI	**Plampang**	**14.02**	**246**	P	**Pn**	**07 34 31.5**	**+3.0**
	2μm2μm106nm,0.8s						
PLAI	**Plampang**	**14.02**	**246**	P	**Pn**	**07 34 27.4**	**-1.1**
MYLDM	**Lahad Datu**	**14.81**	**304**	Pn	**Pn**	**07 34 39.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**15.58**	**198**	Pn	**Pn**	**07 34 46.1**	**-3.4**
	0.9nm,0.3s,baz=38,slow=12,SNR=3.7						
FITZ				Sn	Sn	07 37 29.5	-12
	0.3nm,0.3s,baz=296,slow=7.3,SNR=2.2						
FITZ	**Fitzroy Crossi**	**15.58**	**198**		**Pn**	**07 34 45.1**	**-4.4**
BBKI	**Banjar Baru**	**15.86**	**269**	P	**Pn**	**07 34 54.8**	**+1.7**
	3μm42nm,0.9s						
MTKI	**Muara Teweh, K**	**15.99**	**278**	P	**P**	**07 34 56.9**	**-1.1**
	85nm,0.5s						
SRBI	**Singaraja**	**16.17**	**252**	P	**Pn**	**07 34 58.0**	**+1.0**
	1μm47nm,1.2s						
COEN	**Coen**	**16.26**	**132**	Pn	**Pn**	**07 34 56.7**	**-1.4**
COEN	**Coen**	**16.26**	**132**	P	**P**	**07 35 00.3**	**-0.7**
WB0	**Warramunga Arr**	**16.81**	**168**		**Pn**	**07 35 01.9**	**-3.2**
WRAB	**Tennant Creek**	**16.96**	**168**		**Pn**	**07 35 04.3**	**-2.7**
WRAB	**Tennant Creek**	**16.96**	**168**	P	**Pn**	**07 35 06.3**	**-0.7**
WRA	**Warramunga Arr**	**16.97**	**168**	P	**P**	**07 35 08.8**	**-0.1**
	1.8nm,0.3s,baz=350,slow=11,SNR=16						
WRA				S	Sn	07 38 03.2	-12
	23nm,0.9s,baz=354,slow=23,SNR=7.3						
	14nm,0.7s						
WRA	**Warramunga Arr**	**16.97**	**168**		**Pn**	**07 35 02.6**	**-4.5**
WB2	**Warramunga Arr**	**16.97**	**168**		**Pn**	**07 35 04.4**	**-2.7**
WR0	**Warramunga Arr**	**17.03**	**168**		**Pn**	**07 35 06.8**	**-1.0**
ABJI	**Asem Bagus**	**17.03**	**254**	P	**P**	**07 35 10.8**	**+1.2**
KMMI	**Kalianget**	**17.12**	**257**	P	**P**	**07 35 12.1**	**+1.6**
	2μm98nm,1.6s						
JAGI	**Jajag, Banyuwa**	**17.28**	**252**	P	**Pn**	**07 35 09.6**	**-1.5**
PMG	**Port Moresby**	**17.43**	**111**	P	**Pn**	**07 35 11.8**	**-1.2**
	22nm,0.9s,baz=301,slow=11,SNR=5.7						
PMG				LR	LR	07 43 37.0	
	comp=Z,1μm,19.4s,baz=305,slow=43						
PMG	**Port Moresby**	**17.43**	**111**	P	**Pn**	**07 35 12.3**	**-0.6**
BLJI	**Banyuglugur**	**17.63**	**255**	P	**P**	**07 35 16.5**	**+0.3**
	908nm51nm,0.7s						
QIS	**Mount Isa**	**19.26**	**154**	P	**Pn**	**07 35 35.3**	**0.0**
SBUM	**Sibu**	**19.35**	**287**	P	**P**	**07 35 34.6**	**-0.6**
SBUM				IAmb	IAmb	07 35 44.6	
	comp=Z,100nm,1.5s						
PWJI	**Pagerwojo**	**19.42**	**255**	P	**P**	**07 35 34.2**	**-1.7**
STKI	**Sintang**	**19.52**	**279**	P	**Pn**	**07 35 38.6**	**+0.2**
MTSU	**Mount Surprise**	**19.91**	**139**	P	**Pn**	**07 35 43.2**	**+0.2**
AS31	**Alice Springs**	**20.53**	**172**	P	**P**	**07 35 48.6**	**+0.6**
AS31				IAmb	IAmb	07 35 57.8	
	comp=Z,30nm,0.6s						
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**07 35 48.2**	**+0.1**
	comp=Z,29nm,0.3s,baz=351,slow=10,SNR=69						
	comp=Z,29nm,0.3s						
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**07 35 48.4**	**+0.3**
SMRI	**Semarang**	**20.55**	**259**	P	**P**	**07 35 47.1**	**-1.2**
MBWA	**Marble Bar**	**20.78**	**210**	P	**P**	**07 35 49.5**	**-1.1**
MBWA				IAmb	IAmb	07 35 51.8	
	comp=Z,49nm,1.4s						
MBWA	**Marble Bar**	**20.78**	**210**	P	**P**	**07 35 48.7**	**-2.0**
KSM	**Kuching**	**20.94**	**283**	P	**P**	**07 35 52.5**	**-0.1**
KSM				IAmb	IAmb	07 35 58.6	
	comp=Z,37nm,0.9s						
KSM	**Kuching**	**20.94**	**283**	P	Pn	07 35 54.5	-0.7
PSA00	**Pilbara Seismi**	**21.07**	**209**	P	**P**	**07 35 51.9**	**-1.9**
PSA00				IAmb	IAmb	07 35 59.2	
	comp=Z,103nm,1.5s						
PSA00	**Pilbara Seismi**	**21.07**	**209**	P	**P**	**07 35 52.5**	**-1.3**
PSA00				IAmb	IAmb	07 35 59.1	
	comp=Z,54nm,1.7s						
PSA00	**Pilbara Seismi**	**21.07**	**209**	P	**P**	**07 35 51.9**	**-1.9**
KRVT	**Keravat (AS076**	**21.28**	**94**	P	**P**	**07 35 58.0**	**+1.9**
	comp=Z,102nm,0.9s,baz=276,slow=7.9,SNR=7.3						
	comp=Z,102nm,0.9s						
RABL	**Rabaul**	**21.41**	**93**	P	**P**	**07 35 56.9**	**-0.7**
WRKA	**Warakurna**	**21.79**	**186**	P	**P**	**07 36 01.0**	**-0.6**
KPJI	**Karang Pucung**	**22.08**	**259**	P	**P**	**07 36 03.0**	**-1.7**
CTA	**Charters Tower**	**22.58**	**139**	P	**P**	**07 36 10.5**	**+0.4**
	comp=Z,16nm,0.9s,baz=321,slow=10,SNR=14						
	comp=Z,16nm,0.9s						
CTA	**Charters Tower**	**22.58**	**139**	P	**P**	**07 36 10.9**	**+0.9**
CTAO	**Charters Tower**	**22.58**	**139**	P	**P**	**07 36 09.9**	**-0.1**
CTAO				IAmb	IAmb	07 36 41.0	
	comp=Z,30nm,1.1s						
CTAO	**Charters Tower**	**22.58**	**139**	P	**P**	**07 36 11.1**	**+1.1**
TPI	**Tanjungpandan**	**23.05**	**271**	P	**P**	**07 36 17.5**	**+2.5**
LEM	**Lembang**	**23.29**	**260**	P	**P**	**07 36 17.1**	**-0.5**
	comp=Z,14nm,0.5s,baz=316,slow=20,SNR=2.2						
	comp=Z,14nm,0.5s						
OOD	**Oodnadatta**	**24.87**	**170**	P	**P**	**07 36 33.4**	**+1.3**
MEEK	**Meekatharra**	**26.00**	**205**	P	**P**	**07 36 41.1**	**-1.3**
INKA	**Innaminka**	**26.17**	**160**	P	**P**	**07 36 45.1**	**+1.2**
DSRI	**Dabo**	**26.28**	**275**	P	**P**	**07 36 46.0**	**+0.9**
	comp=Z,758nmcomp=Z,18nm,0.6s						
MDSI	**Maura Dua**	**26.52**	**266**	P	**P**	**07 36 47.2**	**0.0**
	comp=Z,8.3nm,1.4s						
MULG	**Mulgathing**	**27.08**	**174**	P	**P**	**07 36 52.6**	**+0.6**
FORT	**Forrest**	**27.50**	**185**	P	**P**	**07 36 55.1**	**-0.8**
FORT	**Forrest**	**27.50**	**185**	P	**P**	**07 36 55.9**	**0.0**
LCRK	**Leigh Creek**	**27.97**	**166**	P	**P**	**07 37 02.3**	**+2.3**
SSLB	**Suanglung**	**28.51**	**341**	P	**P**	**07 37 03.5**	**-1.4**
SSLB				IAmb	IAmb	07 37 05.2	
	comp=Z,10.0nm,0.8s						
MORW	**Morawa**	**29.23**	**207**	P	**P**	**07 37 10.9**	**-0.5**
MORW				IAmb	IAmb	07 38 13.6	
	comp=Z,56nm,1.6s						
EIDS	**Eidsvold**	**29.45**	**140**	P	**P**	**07 37 13.9**	**+0.6**
EIDS	**Eidsvold**	**29.45**	**140**	P	**P**	**07 37 15.8**	**+2.5**
BBOO	**Buckleboo**	**29.83**	**171**	P	**P**	**07 37 16.8**	**+0.1**
BBOO	**Buckleboo**	**29.83**	**171**	P	**P**	**07 37 17.1**	**+0.5**
JOW	**Kunigami**	**29.99**	**356**	P	**P**	**07 37 17.0**	**-1.0**
	comp=Z,12nm,0.8s,baz=36,slow=6.4,SNR=3.6						
	comp=Z,12nm,0.8s						
JOW	**Kunigami**	**29.99**	**356**	P	**P**	**07 37 17.3**	**-0.8**
JOW				IAmb	IAmb	07 37 19.8	
	comp=Z,41nm,1.2s						
QIZ	**Qiongzhong**	**30.20**	**318**	P	**P**	**07 37 20.5**	**+0.5**
QIZ				S	**S**	**07 42 20.4**	**+2.2**
QIZ				LR	LR		
	comp=N,330nm,15.1s						
QIZ				LR	LR		
	comp=E,300nm,14.3s						
QIZ				LR	LR		
	comp=Z,250nm,27.1s						
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 37 21.6**	**+1.2**
	comp=Z,4.3nm,0.5s,baz=340,slow=9.3,SNR=18						
	comp=Z,4.3nm,0.5s						
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 37 21.1**	**+0.7**
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 37 21.4**	**+1.0**
BLDU	**Ballidu**	**30.28**	**204**	P	**P**	**07 37 19.5**	**-1.1**
PPI	**Padang Panjang**	**30.44**	**275**	P	**P**	**07 37 23.2**	**+1.0**
	comp=Z,20nm,0.5s						
KLBR	**Kellerberrin**	**30.73**	**202**	P	**P**	**07 37 24.0**	**-0.6**
HTT	**Hallett**	**30.99**	**167**	P	**P**	**07 37 28.5**	**+1.6**
KULM	**Kulim**	**31.22**	**286**	P	**P**	**07 37 29.0**	**-0.1**
KULM				IAmb	IAmb	07 37 32.2	
	comp=Z,12nm,0.8s						
CMSA	**Cobar Meteorol**	**31.48**	**155**	P	**P**	**07 37 32.4**	**+1.3**
MUN	**Mundaring**	**31.68**	**204**	P	**P**	**07 37 32.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**32.12**	**202**	P	**P**	**07 37 35.5**	**-1.3**
NWAO	**Narrogin (SRO)**	**32.12**	**202**	P	**P**	**07 37 35.8**	**-1.0**
PSI	**Prapat**	**32.35**	**280**	P	**P**	**07 37 39.0**	**-0.2**
	comp=Z,8.4nm,0.8s,baz=83,slow=7.3,SNR=12						
	comp=Z,8.4nm,0.8s						
TWOA	**Tennyson Woods**	**32.46**	**168**	P	**P**	**07 37 41.9**	**+2.2**
SRIT	**Nakonsritamara**	**33.19**	**291**	P	**P**	**07 37 47.5**	**+1.2**
GSI	**Gunungsitoli**	**33.45**	**277**	P	**P**	**07 37 47.5**	**-1.2**
ARMA	**Armidale**	**33.48**	**146**	P	**P**	**07 37 49.0**	**+0.1**
ARMA				IAmb	IAmb	07 38 05.4	
	comp=Z,8.7nm,0.9s						
ARPS	**Mount Arapiles**	**34.90**	**164**	P	**P**	**07 38 02.3**	**+1.4**
CAN	**Canberra**	**36.13**	**154**	P	**P**	**07 38 12.5**	**+0.9**
CAN	**Canberra**	**36.13**	**154**	P	**P**	**07 38 13.4**	**+1.8**
TOO	**Toolangi**	**36.75**	**160**	P	**P**	**07 38 18.8**	**+1.9**
TOO				IAmb	IAmb	07 38 47.5	
	comp=Z,42nm,1.6s						
TOO	**Toolangi**	**36.75**	**160**	P	**P**	**07 38 18.3**	**+1.4**
NJ2	**Nanjing**	**36.87**	**343**	*e*P	**P**	**07 38 20.4**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WHN	**Wuhan**	**37.06**	**336**	⇑P	**P**	**07 38 20.5**	**+1.0**
WHN				sP	**pP**	**07 38 26.9**	**+0.3**
WHN				S	**S**	**07 44 06.4**	**+2.2**
WHN				pmax	pmax		
	comp=Z,46nm,1.1s						
WHN				LR	LR		
	comp=Z,820nm,17.8s						
CMAR	**Chiang Mai Arr**	**38.01**	**306**	P	**P**	**07 38 28.6**	**+0.9**
	comp=Z,4.8nm,0.3s,baz=138,slow=6.1,SNR=7.4						
	comp=Z,4.8nm,0.3s						
CHTO	**Chiang Mai**	**38.20**	**306**	P	**P**	**07 38 28.7**	**-0.6**
ENH	**Enshi**	**39.03**	**330**	P	**P**	**07 38 35.9**	**-0.3**
DZM	**Mont Dzumac**	**39.38**	**121**	P	**P**	**07 38 41.0**	**+1.7**
	comp=Z,6.2nm,0.9s,baz=249,slow=23,SNR=3.6						
	comp=Z,6.2nm,0.9s						
TJN	**Taejon**	**39.54**	**356**	P	**P**	**07 38 40.3**	**0.0**
MJAR	**Matsushiro Arr**	**40.19**	**9**	P	**P**	**07 38 43.4**	**-2.3**
	comp=Z,5.5nm,0.8s,baz=178,slow=9.1,SNR=15						
MJAR				LR	LR	07 54 09.7	
	comp=Z,361nm,21.6s,baz=199,slow=34						
	comp=Z,5.5nm,0.8s						
MJAR	**Matsushiro Arr**	**40.19**	**9**	P	**P**	**07 38 43.4**	**-2.3**
MAJO	**Matsushiro**	**40.19**	**9**	P	**P**	**07 38 43.6**	**-2.2**
MJB9	**Matsu-Tunnel**	**40.19**	**9**	P	**P**	**07 38 43.7**	**-2.1**
KSAR	**Wonju Array Be**	**40.56**	**357**	P	**P**	**07 38 48.3**	**-0.5**
KSRS	**Korea Array**	**40.57**	**357**	P	**P**	**07 38 48.6**	**-0.2**
	comp=Z,5.2nm,0.6s,baz=176,slow=9.3,SNR=29						
	comp=Z,5.2nm,0.6s						
KS19	**Wonju Array Si**	**40.63**	**357**	P	**P**	**07 38 48.9**	**-0.4**
PZH	**PanZhiHua**	**40.74**	**318**	P	**P**	**07 38 54.2**	**+3.6**
PZH				S	**S**	**07 44 58.6**	**-1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,3.8s						
PZH				LR	LR		
	comp=N,450nm,23.0s						
PZH				LR	LR		
	comp=E,540nm,22.0s						
PZH				LR	LR		
	comp=Z,620nm,24.5s						
LYN	**LuoYang**	**41.34**	**337**	*e*P	**P**	**07 38 55.6**	**+0.4**
LYN				S	**S**	**07 45 08.6**	**+0.2**
LYN				pmax	pmax		
	comp=Z,70nm,5.9s						
LYN				LR	LR		
	comp=E,360nm,26.9s						
LYN				LR	LR		
	comp=Z,630nm,16.9s						
XAN	**Xi'an**	**42.40**	**333**	P	**P**	**07 39 01.8**	**-2.2**
XAN				pP	pP	07 39 06.6	-4.6
XAN				S	**S**	**07 45 26.5**	**+2.2**
XAN				ScS	SS	07 48 48.0	+14
XAN				pmax	pmax		
	comp=Z,19nm,1.5s						
XAN				LR	LR		
	comp=N,180nm,16.5s						
XAN				LR	LR		
	comp=E,240nm,19.9s						
XAN				LR	LR		
	comp=Z,430nm,15.3s						
CD2	**Chengdu**	**42.60**	**325**	P	**P**	**07 39 07.0**	**+1.3**
BJT	**Baijiatuau**	**45.08**	**344**	P	**P**	**07 39 25.3**	**-0.1**
BJI	**Beijing**	**45.10**	**344**	P	**P**	**07 39 25.4**	**-0.1**
BJI				pP	**pP**	**07 39 29.7**	**-3.0**
BJI				sP	**sP**	**07 39 31.9**	**-3.7**
BJI				S	**S**	**07 46 04.8**	**+1.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BJI				LR	LR		
	comp=N,180nm,16.0s						
BJI				LR	LR		
	comp=E,150nm,16.9s						
BJI				LR	LR		
	comp=Z,230nm,17.6s						
AZL	**Aizawl**	**45.73**	**308**	*i* x	**P**	**07 39 32.3**	**+1.4**
LZH	**Lanzhou**	**46.50**	**330**	*e*P	**P**	**07 39 36.4**	**-0.5**
LZH				pP	pP	07 39 39.3	-4.8
LZH				sP	sP	07 39 41.2	-6.0
LZH				*e*S	**S**	**07 46 23.5**	**-0.6**
LZH				sS	pS	07 46 32.8	+0.1
LZH	**Lanzhou**	**46.50**	**330**	SS	SS	07 49 47.7	-2.7
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,85nm,4.1s						
LZH				LR	LR		
	comp=N,470nm,11.7s						
LZH				LR	LR		
	comp=E,260nm,12.5s						
LZH				LR	LR		
	comp=Z,720nm,14.1s						
CN2	**Changchun**	**47.07**	**355**	*e*P	**P**	**07 39 40.0**	**-1.0**
CN2				*e*S	**S**	**07 46 29.5**	**-2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,200nm,19.0s						
CN2				LR	LR		

	comp=E,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
USA0B	**Ussuriysk Arra**	**47.24**	**1**	P	**P**	**07 39 42.3**	**0.0**
USRK	**Ussuriysk Ar.**	**47.24**	**1**	P	**P**	**07 39 42.2**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=191,slow=9.2,SNR=7.0						
	comp=Z,6.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**47.24**	**1**	P	**P**	**07 39 41.5**	**-0.8**
HHC	**Hu-ho-hao-te**	**47.25**	**340**	*e*P	**P**	**07 39 44.1**	**+1.5**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						
HHC				LR	LR		
	comp=N,1µm,19.2s						
HHC				LR	LR		
	comp=E,790nm,15.9s						
HHC				LR	LR		
	comp=Z,790nm,20.9s						
SHL	**Shillong**	**47.30**	**310**	*i* x	**P**	**07 39 42.4**	**-0.9**
BTO	**Baotou**	**47.58**	**339**	*e*P	P	07 39 50.5	+5.4
BTO				S	**S**	**07 46 46.6**	**+7.4**
BTO				LR	LR		
	comp=N,870nm,17.8s						
BTO				LR	LR		
	comp=E,540nm,16.8s						
MDJ	**Mudanjiang**	**47.66**	**359**	P	**P**	**07 39 45.4**	**-0.1**
MDJ				IAmb	IAmb	07 39 46.8	
	comp=Z,8.3nm,0.8s						
ASAJ	**Asahikawa**	**48.34**	**11**	LR	LR	08 01 32.8	
	comp=Z,179nm,18.7s,baz=249,slow=38						
BNX	**BinXian**	**48.86**	**357**	⇓P	**P**	**07 39 55.1**	**+0.3**
BNX				pmax	pmax		
	comp=Z,15nm,0.6s						
BNX				pmax	pmax		
	comp=Z,160nm,4.3s						
LSA	**Lhasa**	**50.07**	**314**	P	**P**	**07 40 03.5**	**-1.5**
LSA				IAmb	IAmb	07 40 24.6	
	comp=Z,48nm,1.8s						
GTA	**Gaotai**	**51.09**	**329**	*e*P	**P**	**07 40 12.6**	**+0.5**
GTA				pP	pP	07 40 18.6	-0.8
GTA				sP	sP	07 40 22.2	-0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YSS	**Yuzh-Sakhalins**	**51.10**	**11**	P	**P**	**07 40 11.5**	**-0.3**
ODAN	**Odare**	**51.43**	**308**	*e*P	**P**	**07 40 15.4**	**+0.4**
GOMU	**GeErMu**	**51.61**	**323**	P	P	07 40 23.3	+7.0
GOMU				pP	sP	07 40 27.1	+0.5
GOMU				sP	pP	07 40 30.8	+7.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,27nm,5.1s						
RAMN	**Ramite**	**52.10**	**308**	*e*P	**P**	**07 40 20.0**	**0.0**
	comp=Z,46nm,0.5s						
KLR	**Kul'dur**	**52.27**	**1**	P	**P**	**07 40 20.4**	**-0.1**
	comp=Z,5.7nm,0.9s,baz=211,slow=12						
	comp=Z,5.7nm,0.9s						
GUN	**Gumba**	**53.11**	**309**	*e*P	**P**	**07 40 27.0**	**-0.6**
	comp=Z,37nm,0.6s						
HIA	**Hailar**	**53.16**	**351**	P	**P**	**07 40 27.5**	**+0.4**
HIA				IAmb	IAmb	07 40 46.7	
	comp=Z,8.5nm,0.5s						
PKI	**Pulchoki**	**53.32**	**308**	*e*P	**P**	**07 40 28.9**	**-0.2**
KKN	**Kakani**	**53.52**	**308**	*e*P	**P**	**07 40 29.9**	**-0.6**
LBZ	**Lake Benmore**	**53.71**	**146**	P	**P**	**07 40 32.9**	**+1.6**
LBZ				IAmb	IAmb	07 40 33.4	
	comp=Z,14nm,0.9s						
NNZ	**Nelson**	**53.78**	**141**	P	**P**	**07 40 31.9**	**+0.1**
NNZ				IAmb	IAmb	07 40 34.5	
	comp=Z,17nm,1.3s						
RPZ	**Rata Peaks**	**53.80**	**144**	P	**P**	**07 40 33.8**	**+1.8**
	comp=Z,11nm,1.0s,baz=301,slow=9.4,SNR=3.4						
	comp=Z,11nm,1.0s						
KHZ	**Kahutara**	**54.54**	**142**	P	**P**	**07 40 37.7**	**+0.4**
KHZ				IAmb	IAmb	07 40 39.6	
	comp=Z,9.6nm,0.9s						
URZ	**Urewera**	**54.77**	**136**	P	**P**	**07 40 40.9**	**+1.8**
	comp=Z,4.3nm,0.9s,baz=120,slow=23,SNR=2.2						
	comp=Z,4.3nm,0.9s						
URZ	**Urewera**	**54.77**	**136**	P	**P**	**07 40 39.7**	**+0.6**
URZ				IAmb	IAmb	07 41 30.0	
	comp=Z,29nm,1.5s						
BKZ	**Black Stump Fm**	**54.77**	**137**	P	**P**	**07 40 39.7**	**+0.5**
BKZ				IAmb	IAmb	07 41 02.1	
	comp=Z,8.1nm,0.9s						
KOLN	**Koldanda**	**54.84**	**307**	*e*P	**P**	**07 40 39.8**	**-0.3**
	comp=Z,28nm,0.5s						
ULN	**Ulaanbaatar**	**54.96**	**341**	P	**P**	**07 40 41.2**	**+0.7**
ULN				IAmb	IAmb	07 40 49.5	
	comp=Z,16nm,1.1s						
DANN	**Dangsing**	**54.97**	**308**	*e*P	**P**	**07 40 40.8**	**-0.3**
	comp=Z,34nm,0.7s						
SONM	**Songino Array**	**55.15**	**340**	P	**P**	**07 40 42.3**	**+0.5**
	comp=Z,4.0nm,0.9s,baz=160,slow=8.1,SNR=22						
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**55.15**	**340**	P	**P**	**07 40 42.2**	**+0.3**
SONM				IAmb	IAmb	07 40 50.1	
	comp=Z,8.9nm,1.0s						
PYUN	**Piuthan**	**55.47**	**307**	*e*P	**P**	**07 40 44.2**	**-0.4**
	comp=Z,234nm,1.6s						
PETK	**Petropavlovsk-**	**60.55**	**18**	P	**P**	**07 41 20.0**	**+0.5**
	comp=Z,6.7nm,0.8s,baz=216,slow=15,SNR=4.5						
	comp=Z,6.7nm,0.8s						
PETK	**Petropavlovsk-**	**60.55**	**18**	P	**P**	**07 41 19.4**	**-0.1**
WMQ	**Urumqi**	**60.70**	**325**	*e*P	**P**	**07 41 22.8**	**+2.0**
WMQ				pP	pP	07 41 28.1	-0.2
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				LR	LR		
	comp=N,860nm,14.7s						
WMQ				LR	LR		
	comp=Z,330nm,19.5s						
SMLA	**Simla**	**61.34**	**308**	*i* x	**P**	**07 41 24.1**	**-1.2**
MK31	**Makanchi Array**	**65.53**	**326**	P	**P**	**07 41 52.8**	**0.0**
MK31				IAmb	IAmb	07 42 08.8	
	comp=Z,13nm,1.1s						
MKAR	**Makanchi Array**	**65.53**	**326**	P	**P**	**07 41 53.0**	**+0.3**
	comp=Z,4.8nm,0.6s,baz=118,slow=7.8,SNR=37						
	comp=Z,4.8nm,0.6s						
MKAR	**Makanchi Array**	**65.53**	**326**	P	**P**	**07 41 53.2**	**+0.5**
MAKZ	**Makanchi**	**65.71**	**325**	P	**P**	**07 41 54.0**	**+0.1**
KSH	**Kashi**	**65.79**	**316**	P	**P**	**07 41 56.8**	**+2.1**
KSH				pP	pP	07 42 01.4	-0.9
KSH				PcP	**PcP**	**07 42 30.1**	**+4.3**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KDJ	**Kajisay**	**66.19**	**319**	P	**P**	**07 41 57.8**	**+0.5**
KDJ				IAmb	IAmb	07 42 05.6	
	comp=Z,11nm,1.1s						
SEY	**Seymchan**	**68.00**	**10**	P	**P**	**07 42 08.9**	**+0.8**
	comp=Z,11nm,0.8s,baz=203,slow=5.0,SNR=35						
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**68.19**	**319**	P	**P**	**07 42 09.2**	**-0.8**
AAK				IAmb	IAmb	07 42 21.9	
	comp=Z,18nm,1.6s						
ZAA0	**Zalesovo Array**	**68.58**	**333**	P	**P**	**07 42 11.2**	**-0.7**
ZAA0				IAmb	IAmb	07 42 19.8	
	comp=Z,14nm,1.1s						
ZALV	**Zalesovo Beam**	**68.58**	**333**	P	**P**	**07 42 11.3**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=108,slow=4.8,SNR=7.7						
	comp=Z,2.5nm,0.6s						
KBL	**Kabul**	**68.95**	**309**	P	**P**	**07 42 14.1**	**-0.8**
KBL				IAmb	IAmb	07 42 22.1	
	comp=Z,12nm,1.2s						
GAR	**Garm**	**69.58**	**314**	P	**P**	**07 42 18.5**	**-0.1**
BTK	**Batken**	**69.63**	**315**	IAmb	IAmb	07 42 26.8	
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**69.73**	**328**	P	**P**	**07 42 19.5**	**+0.4**
KK31	**Karatay Array**	**71.04**	**318**	P	**P**	**07 42 27.3**	**0.0**
KK31				IAmb	IAmb	07 42 35.2	
	comp=Z,12nm,1.2s						
KKAR	**Karatay Array**	**71.04**	**318**	P	**P**	**07 42 27.3**	**0.0**
KKAR				IAmb	IAmb	07 42 35.2	
	comp=Z,12nm,1.2s						
TIXI	**Tiksi**	**74.77**	**359**	P	**P**	**07 42 48.5**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=88,slow=23,SNR=7.7						
	comp=Z,1.5nm,0.3s						
TIXI	**Tiksi**	**74.77**	**359**	P	**P**	**07 42 48.7**	**-0.1**
BRVK	**Borovoye**	**75.38**	**327**	P	**P**	**07 42 52.7**	**0.0**
BRVK				IAmb	IAmb	07 43 01.4	
	comp=Z,19nm,1.0s						
VNDA	**Vanda**	**76.07**	**173**	P	**P**	**07 42 56.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=322,slow=6.3,SNR=8.4						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	**76.07**	**173**	P	**P**	**07 42 57.0**	**+0.8**
VNDA				IAmb	IAmb	07 43 03.6	
	comp=Z,16nm,1.7s						
SBA	**Scott Base**	**76.94**	**173**	P	**P**	**07 43 01.3**	**+0.1**
SBA				IAmb	IAmb	07 43 05.6	
	comp=Z,12nm,1.3s						
NRIK	**Noril'sk**	**78.12**	**346**	P	**P**	**07 43 07.7**	**-0.2**
	comp=Z,5.1nm,0.7s,baz=119,slow=6.8,SNR=13						
	comp=Z,5.1nm,0.7s						
NRIK	**Noril'sk**	**78.12**	**346**	P	**P**	**07 43 08.0**	**+0.1**
NRIK				IAmb	IAmb	07 43 16.0	
	comp=Z,23nm,1.4s						
GEYT	**Alibeck**	**78.37**	**310**	P	**P**	**07 43 10.4**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=188,slow=9.0,SNR=6.6						
	comp=Z,4.3nm,0.8s						
GEYT	**Alibeck**	**78.37**	**310**	P	**P**	**07 43 10.4**	**+0.4**
GEYT				IAmb	IAmb	07 43 18.7	
	comp=Z,13nm,1.1s						
ABKAR	**Akbulak array**	**80.05**	**321**	P	**P**	**07 43 18.7**	**-0.1**
ABKAR	**Akbulak array**	**80.05**	**321**	P	**P**	**07 43 19.0**	**+0.1**
ABKAR				IAmb	IAmb	07 43 26.6	
	comp=Z,37nm,1.6s						
ARU	**Arti**	**82.93**	**328**	P	**P**	**07 43 33.9**	**0.0**
	comp=Z,0.9nm,0.5s,baz=143,slow=5.1,SNR=5.6						
	comp=Z,0.9nm,0.5s						
ARU	**Arti**	**82.93**	**328**	P	**P**	**07 43 34.0**	**0.0**
ARU				IAmb	IAmb	07 43 41.7	
	comp=Z,19nm,1.3s						
QSPA	**South Pole Qui**	**86.71**	**180**	P	**P**	**07 43 53.2**	**+0.3**
RAYN	**Ar Rayn**	**86.91**	**294**	P	**P**	**07 43 54.9**	**+0.1**
BRLK	**Bradley Lake**	**86.95**	**30**	P	**P**	**07 43 50.2**	**-4.0**
KLMR	**Klimovskoe**	**93.40**	**331**	*e*P	**P**	**07 44 25.4**	**+1.1**
KLMR				AMP		07 44 38.5	
	comp=Z,8.0nm,1.3s						
ARCES	**ARCESS Array B**	**98.33**	**340**	P	Pdif	07 44 47.5	+1.0
	comp=Z,1.0nm,0.7s,baz=61,slow=7.3,SNR=6.4						
	comp=Z,1.0nm,0.7s						
SNAA	**Sanae**	**99.46**	**193**	LR	LR	08 28 22.6	
	comp=Z,2µm,21.3s,baz=252,slow=34						
TORD	**Torodi Ar. Bea**	**128.70**	**284**	PKP	**PKPdf**	**07 50 17.2**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=78,slow=1.9,SNR=5.6						
CPUP	**Villa Florida**	**149.58**	**166**	PKPbc	**PKiKP**	**07 51 00.2**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=235,slow=1.2,SNR=9.2						
LPAZ	**La Paz**	**153.09**	**137**	PKPbc	**PKiKP**	**07 51 10.1**	**+1.3**
	comp=Z,3.0nm,0.7s,baz=257,slow=6.6,SNR=9.3						

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*SNET **08** 07:33:23.7±0.9, 16°.93N×100°.43W, h24^{km}, ML6.0*
*UCR **08** 07:33:30.0±2.3, 20°.06N×98°.64W, h24^{km}, ML4.6, mb5.8(NEIC)*
*GCG **08** 07:33:49.2±3.0, 19°.71N×97°.54W, h50^{km}, MD5.7*
*MOS **08** 07:33:59.0±0.9, 16°.54N×97°.69W, h21^{km}, mb5.9/53, MS5.6/39, Error ellipse: s-maj=7.3km s-min=4.7km az=96.8*
*MEX **08** 07:33:59.9±0.9, 16°.32N×97°.88W, h7^{km}±5^{km}, MD6.0*
*NEIC **08** 07:34:00.7±2.5, 16°.411N±0°.009×97°.84W±0°.03, h22^{km}±1^{km}, mb5.9/726, Ms_20 5.6/383, Mwb5.7/36, Mww5.8, Md6.0/201(MEX), Error ellipse: s-maj=5.3km s-min=2.7km az=258.0*
*NEIC **08** 07:34:01.5, 16°.56N×97°.71W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.13; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$-1.98; $M_{r\theta}$2.83; $M_{\theta\phi}$1.89; $M_{\phi r}$-1.77; Fault plane solution: $M_0$4.71000×10^{17} NP1:ϕ_s127.40000°, δ68.05000°, λ78.42000°. NP2:ϕ_s336.14000°, δ24.68000°, λ116.48000°. Principal axes: T 4.6339, Plg65.0000°, Azm18.0000°; N 0.1565, Plg11.0000°, Azm132.0000°; P -4.7904, Plg22.0000°, Azm226.0000°;*
*IDC **08** 07:34:01.6±2.4, 16°.46N×97°.63W, h32^{km}±17^{km}, mb5.2/41, mbtmp5.4/44, ML4.4/3, MS5.5/60 Error ellipse: s-maj=15.3km s-min=8.7km az=59.0*
*GCMT **08** 07:34:02.7±0.1, 16°.61N±0°.01×97°.79W±0°.01, h24^{km}, MW5.9/156, Moment Tensor Solution. s152,c299; s156,c445; Duration: 2^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}4.17±.06; $M_{\theta\theta}$-2.95±.04; $M_{\phi\phi}$-1.23±.04; $M_{r\theta}$5.36±.12; $M_{\theta\phi}$1.58±.03; $M_{\phi r}$-4.64±.11; Best double couple: $M_0$8.15200×10^{17} NP1:ϕ_s294.00000°, δ15.00000°, λ75.00000°. NP2:ϕ_s129.00000°, δ75.00000°, λ94.00000°. Principal axes: T 8.3350, Plg60.0000°, Azm45.0000°; N -0.3760, Plg4.0000°, Azm308.0000°; P -7.9690, Plg30.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **08** 07:34:06, 16°.47N×97°.80W, h24^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.16; $M_{\theta\theta}$-3.30; $M_{\phi\phi}$-0.86; $M_{r\theta}$4.15; $M_{\theta\phi}$1.50; $M_{\phi r}$-3.94; Fault plane solution: $M_0$7.03000×10^{17} NP1: ϕ_s284.00000°, δ19.00000°, λ66.00000°. NP2: ϕ_s130.00000°, δ73.00000°, λ98.00000°. Principal axes: T 7.2217, Plg62.0000°, Azm52.0000°; N -0.3954, Plg8.0000°, Azm307.0000°; P -6.8263, Plg27.0000°, Azm213.0000°;*
ISC 08 07:33:59.4±0.4**, 16°.33N**±0°.02×**97°.84W**±0°.02**, h20**^{km}±1^{km}, **h20**^{km}**:pP-P, n2066, σ2^{s}23**/2321**, mb5.9**/429**, MS5.7**/312**, 462C-130D, Fault plane solution: NP1:**ϕ_s138.88968°**,** δ61.45681°**,**λ59.00227°. **NP2:**ϕ_s10.39447°**,**δ41.14884°**,** λ133.43518°. **Principal axes:** T Plg60.4963°**,** Azm1.2053°**;** N Plg26.8983°**,** Azm154.9073°**;** P Plg11.2204°**,** Azm250.6830°**; Fault plane solution: NP1:**ϕ_s120.98224°**,**δ71.19775°**,**λ103.50697°. **NP2:** ϕ_s264.28565°**,**δ23.00744°**,**λ55.54987°. **Principal axes:** T Plg61.4934°**,** Azm51.2279°**;** N Plg12.7736°**,** Azm296.5553°**;** P Plg25.0214°**,** Azm200.4809°**; Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.28**	**284**		**Pb**	**07 34 04.3**	**-1.5**
PNIG					**Sb**	**07 34 08.4**	**-1.8**
PNIG	**Pinotepa**	**0.28**	**284**	⇑*e*P	**Pb**	**07 34 04.4**	**-1.4**
PNIG				*i* S	**Sb**	**07 34 08.8**	**-1.3**
YOIG	**Yosondua**	**0.60**	**28**	⇓*e*P	**Pb**	**07 34 10.8**	**-0.6**
YOIG				*e*S	**Sg**	**07 34 19.6**	**-0.1**
PEIG	**Puerto Escondi**	**0.74**	**116**	*e*P	**Pb**	**07 34 13.2**	**-0.5**
PEIG				*e*S	**Sg**	**07 34 24.2**	**+0.2**
TXIG	**Tlaxiaco**	**0.93**	**4**	⇓*e*P	**Pb**	**07 34 15.7**	**-1.3**
TXIG				*e*S	**Sb**	**07 34 28.8**	**-0.2**
MGIG	**Malinaltepec**	**1.18**	**320**	*e*P	**Pn**	**07 34 18.8**	**-2.2**
MGIG				*e*S	**Sb**	**07 34 34.1**	**-2.1**
VHO	**Vista Hermosa**	**1.29**	**55**	*e*P	**Pn**	**07 34 22.4**	**-0.3**
VHO				*e*S	**Sn**	**07 34 38.4**	**-1.1**
OXBJ	**Oaxaca**	**1.30**	**55**		**Pn**	**07 34 22.2**	**-0.5**
OXBJ					**Sg**	**07 34 40.7**	**-1.0**
OXBJ	**Oaxaca**	**1.30**	**55**	*e*P	**Pn**	**07 34 22.3**	**-0.4**
OXBJ				*e*S	**Sn**	**07 34 39.1**	**-0.5**
CRIG	**Cruz Grande**	**1.30**	**288**		**Pn**	**07 34 19.2**	**-3.3**
CRIG	**Cruz Grande**	**1.30**	**288**	*e*P	**Pn**	**07 34 19.6**	**-2.9**
CRIG				*e*S	**Sn**	**07 34 36.4**	**-3.0**
OXLC	**Oaxaca**	**1.31**	**56**	*e*P	**Pn**	**07 34 22.8**	**-0.1**
OXLC				*e*S	**Sn**	**07 34 39.3**	**-0.7**
TLIG	**Tlapa**	**1.41**	**331**	Pn	**Pn**	**07 34 22.9**	**-1.3**
TLIG				Sn	**Sn**	**07 34 40.8**	**-1.5**
TLIG	**Tlapa**	**1.41**	**331**	⇑*e*P	**Pn**	**07 34 22.8**	**-1.3**
TLIG				*e*S	**Sn**	**07 34 39.6**	**-2.6**
PANG	**Puerto Angel**	**1.47**	**116**		**Pb**	**07 34 25.7**	**-0.4**
PANG					**Sb**	**07 34 44.9**	**+0.5**
HLIG	**Huajuapan de L**	**1.50**	**1**	*e*P	**Pn**	**07 34 24.8**	**-0.6**
HLIG				*e*S	**Sn**	**07 34 42.3**	**-2.2**
FTIG	**Fresnillo de T**	**1.60**	**350**	*e*P	**Pn**	**07 34 26.3**	**-0.4**
FTIG				*e*S	**Sn**	**07 34 46.8**	**-0.1**
HMTT	**Tlapaneco**	**1.62**	**335**		**Pb**	**07 34 28.0**	**-0.7**
HMTT					**Sb**	**07 34 48.7**	**0.0**
HMTT	**Tlapaneco**	**1.62**	**335**	*e*P	**Pn**	**07 34 26.5**	**-0.5**
HMTT				*e*S	**Sn**	**07 34 45.9**	**-1.4**
HUIG	**Huatulco**	**1.76**	**108**		**Pn**	**07 34 27.9**	**-0.9**
HUIG	**Huatulco**	**1.76**	**108**	⇑*e*P	**Pn**	**07 34 28.2**	**-0.6**
HUIG				*e*S	**Sn**	**07 34 49.2**	**-1.4**
DAIG	**Los Arroyos**	**1.87**	**292**		**Pn**	**07 34 27.7**	**-2.7**
DAIG	**Los Arroyos**	**1.87**	**292**	*e*P	**Pn**	**07 34 27.8**	**-2.5**
DAIG				*e*S	**Sn**	**07 34 53.2**	**-0.1**
TOIG	**Toxpalan**	**1.91**	**23**	*e*P	**Pn**	**07 34 31.0**	**0.0**
TOIG				*e*S	**Sn**	**07 34 55.1**	**+0.6**
VNTA	**La Mica**	**1.98**	**287**	*e*P	**Pn**	**07 34 31.3**	**-0.6**
VNTA				*e*S	**Sn**	**07 34 53.5**	**-2.7**
ACP2	**Acapulco**	**2.04**	**286**		**Pn**	**07 34 31.5**	**-1.2**
ACP2					**Sb**	**07 34 59.4**	**-1.3**
ACP2	**Acapulco**	**2.04**	**286**	*e*P	**Pn**	**07 34 31.4**	**-1.2**
ACP2				*e*S	**Sn**	**07 34 54.0**	**-3.5**
TPIG	**Tehuac#an**	**2.13**	**12**		**Pn**	**07 34 34.9**	**+0.8**
TPIG	**Tehuac#an**	**2.13**	**12**	⇑*e*P	**Pn**	**07 34 34.6**	**+0.5**
TPIG				*e*S	**Sn**	**07 34 58.5**	**-1.6**
THEZ	**Tehuacan**	**2.18**	**11**	*e*P	**Pn**	**07 34 36.4**	**+1.6**
THEZ				*e*S	**Sn**	**07 34 59.3**	**-2.1**
MEIG	**Mezcala**	**2.33**	**313**		**Pn**	**07 34 36.5**	**-0.2**
MEIG	**Mezcala**	**2.33**	**313**	⇓*e*P	**Pn**	**07 34 36.6**	**-0.2**
MEIG				*e*S	**Sb**	**07 35 07.5**	**-1.7**
NEUV	**Arroyo Zacate**	**2.39**	**54**	⇑*e*P	**Pn**	**07 34 37.8**	**+0.3**
NEUV				*e*S	**Sn**	**07 35 06.7**	**+0.5**
CAIG	**El Cayaco**	**2.43**	**287**		**Pn**	**07 34 36.0**	**-2.1**
CAIG	**El Cayaco**	**2.43**	**287**	⇓*e*P	**Pn**	**07 34 36.0**	**-2.1**
CAIG				*e*S	**Sn**	**07 35 04.4**	**-2.9**
PLIG	**Platanillo**	**2.60**	**323**		**Pn**	**07 34 40.7**	**+0.3**
PLIG					**Sb**	**07 35 17.2**	**+0.3**
PLIG	**Platanillo**	**2.60**	**323**	⇑*e*P	**Pn**	**07 34 40.7**	**+0.3**
PLIG				*e*S	**Sn**	**07 35 09.8**	**-1.6**
OZST	**Orizaba**	**2.62**	**16**	*e*P	**Pn**	**07 34 41.4**	**+0.6**
OZST				*i* S	**Sn**	**07 35 12.5**	**+0.4**
ATYC	**Atoyac**	**2.63**	**290**	*e*P	**Pn**	**07 34 40.1**	**-0.7**
ATYC				*e*S	**Sn**	**07 35 10.6**	**-1.7**
PHPU	**Puebla**	**2.72**	**353**		**Pb**	**07 34 45.3**	**-2.3**
PHPU					**Sb**	**07 35 19.4**	**-1.2**
PHPU	**Puebla**	**2.72**	**353**	*e*P	**Pn**	**07 34 43.8**	**+1.5**
PHPU				*e*S	**Sn**	**07 35 13.3**	**-1.5**
YAIG	**Yautepec**	**2.78**	**335**		**Pn**	**07 34 43.5**	**+0.5**
YAIG					**Sb**	**07 35 23.3**	**+1.0**
YAIG	**Yautepec**	**2.78**	**335**	*e*P	**Pn**	**07 34 44.0**	**+1.0**
YAIG				*e*S	**Sn**	**07 35 16.1**	**0.0**
PPM	**Popocatepetl**	**2.83**	**345**	⇑*e*P	**Pn**	**07 34 45.5**	**+1.5**
PPM				*e*S	**Sn**	**07 35 17.1**	**-0.7**
AMVM	**AMECAMECA**	**2.93**	**342**		**Pn**	**07 34 46.1**	**+0.8**
AMVM					**Sb**	**07 35 24.8**	**-2.0**
AMVM	**AMECAMECA**	**2.93**	**342**	*e*P	**Pn**	**07 34 46.5**	**+1.3**
AMVM				*e*S	**Sn**	**07 35 18.3**	**-1.7**
CMIG	**Matias Romero**	**2.93**	**75**	Pn	**Pn**	**07 34 44.2**	**-0.8**
	362nm,0.3s,baz=267,slow=13,SNR=1565						
CMIG				LR	LR	07 35 19.3	
	comp=Z,28µm,19.9s,baz=242,slow=29						
CMIG				Sn	Sg	07 35 31.8	-2.0
	2µm,0.3s,baz=333,slow=7.6,SNR=6.7						
	2µm,0.5s						
CMIG	**Matias Romero**	**2.93**	**75**	*e*P	**Pn**	**07 34 44.5**	**-0.5**
CMIG				*e*S	**Sn**	**07 35 18.8**	**-0.9**
MAVM	**Malinalco, Edo**	**3.06**	**329**		**Pn**	**07 34 48.2**	**+1.3**
MAVM					**Sb**	**07 35 27.1**	**-3.1**
MAVM	**Malinalco, Edo**	**3.06**	**329**	*e*P	**Pn**	**07 34 48.1**	**+1.2**
MAVM				*e*S	**Sn**	**07 35 21.8**	**-1.2**
ARIG	**Puente Sto Nin**	**3.08**	**309**		**Pn**	**07 34 47.2**	**+0.2**
ARIG					**Sb**	**07 35 30.5**	**-0.4**
ARIG	**Puente Sto Nin**	**3.08**	**309**	*e*P	**Pn**	**07 34 48.6**	**+1.5**
ARIG				*e*S	**Sn**	**07 35 21.1**	**-2.3**
XCVM	**Xochimilco**	**3.15**	**338**	*e*P	**Pn**	**07 34 49.4**	**+1.2**
XCVM				*e*S	**Sn**	**07 35 25.6**	**+0.1**
UNM	**Universidad Na**	**3.25**	**337**	P	**Pn**	**07 34 50.5**	**+1.0**
UNM	**Universidad Na**	**3.25**	**337**	Pn	**Pn**	**07 34 50.5**	**+1.0**
UNM	**Universidad Na**	**3.25**	**337**	⇑*e*P	**Pn**	**07 34 50.8**	**+1.3**
UNM				*e*S	**Sn**	**07 35 26.0**	**-1.8**
AOVM	**Tlapan**	**3.25**	**334**	⇑*e*P	**Pn**	**07 34 51.4**	**+1.7**
AOVM				*e*S	**Sn**	**07 35 28.4**	**+0.4**
COVM	**Coyoacan**	**3.26**	**338**	*e*P	**Pn**	**07 34 52.9**	**+3.2**
COVM				*e*S	**Sn**	**07 35 27.6**	**-0.4**
BJVM	**Benito Juarez**	**3.29**	**338**	*e*P	**Pn**	**07 34 51.9**	**+1.9**
BJVM				*e*S	**Sn**	**07 35 26.9**	**-1.9**
VRVM	**Mexico City**	**3.31**	**339**	*e*P	**Pn**	**07 34 53.7**	**+3.4**
VRVM				*e*S	**Sn**	**07 35 27.1**	**-2.1**
CJVM	**Cuajimalpa**	**3.32**	**336**	⇑*e*P	**Pn**	**07 34 52.4**	**+1.9**
CJVM				*e*S	**Sn**	**07 35 28.5**	**-1.0**
PBVM	**Pinon**	**3.32**	**339**		**Pn**	**07 34 49.4**	**-0.8**
PBVM					**Sn**	**07 35 27.1**	**-2.0**
PBVM	**Pinon**	**3.32**	**339**	⇑*e*P	**Pn**	**07 34 49.4**	**-0.8**
PBVM				*e*S	**Sn**	**07 35 27.8**	**-1.3**
GMVM	**Gustavo A Made**	**3.37**	**339**	⇑*e*P	**Pn**	**07 34 52.3**	**+1.0**
GMVM				*e*S	**Sn**	**07 35 29.3**	**-1.6**
TEJU	**Tejupilco**	**3.38**	**320**	*e*P	**Pn**	**07 34 52.3**	**+1.0**
TEJU				*e*S	**Sn**	**07 35 30.0**	**-1.1**
APVM	**Azcapotzalco**	**3.40**	**338**	*e*P	**Pn**	**07 34 53.6**	**+1.9**
APVM				*e*S	**Sn**	**07 35 30.1**	**-1.6**
TOVM	**TOLUCA**	**3.42**	**330**		**Pn**	**07 34 53.6**	**+1.6**
TOVM					**Sn**	**07 35 30.8**	**-1.4**
TOVM	**TOLUCA**	**3.42**	**330**	*e*P	**Pn**	**07 34 53.7**	**+1.6**
TOVM				*e*S	**Sn**	**07 35 32.2**	**0.0**
PTVM	**Pico Tres Padr**	**3.47**	**340**		**Pn**	**07 34 54.2**	**+1.6**
PTVM					**Sn**	**07 35 30.0**	**-3.2**
PTVM	**Pico Tres Padr**	**3.47**	**340**	⇑*e*P	**Pn**	**07 34 53.4**	**+0.8**
PTVM				*e*S	**Sn**	**07 35 31.6**	**-1.6**
VTVM	**Tizayuca**	**3.54**	**346**		**Pn**	**07 34 55.2**	**+1.6**
VTVM					**Sn**	**07 35 32.0**	**-3.0**
VTVM	**Tizayuca**	**3.54**	**346**	⇑*e*P	**Pn**	**07 34 54.9**	**+1.3**
VTVM				*e*S	**Sn**	**07 35 33.0**	**-2.1**
LVIG	**Laguna Verde**	**3.64**	**22**	*e*P	**Pn**	**07 34 52.3**	**-2.3**
LVIG				*e*S	**Sn**	**07 35 38.8**	**+1.7**
UXUV	**UXUV**	**3.67**	**74**	⇑*e*P	**Pn**	**07 34 54.9**	**-0.3**
UXUV				*e*S	**Sn**	**07 35 38.2**	**+0.2**
ZUVM	**ZUMPANGO**	**3.67**	**342**		**Pb**	**07 35 03.7**	**-0.2**
ZUVM					**Sn**	**07 35 39.9**	**+1.5**
TUIG	**Tuzandepetl**	**3.68**	**62**		**Pn**	**07 34 54.8**	**-0.5**
TUIG					**Sb**	**07 35 48.1**	**0.0**
TUIG	**Tuzandepetl**	**3.68**	**62**	*e*P	**Pn**	**07 34 54.7**	**-0.5**
TUIG				*e*S	**Sn**	**07 35 38.1**	**0.0**
ZIIG	**Zihuatanejo**	**3.69**	**291**		**Pn**	**07 34 55.1**	**-0.3**
ZIIG					**Sn**	**07 35 42.3**	**+3.9**
ZIIG	**Zihuatanejo**	**3.69**	**291**	⇓*e*P	**Pn**	**07 34 55.2**	**-0.3**
ZIIG				*e*S	**Sn**	**07 35 33.3**	**-5.2**
CARR	**Arriaga**	**3.77**	**91**	*e*P	**Pn**	**07 34 55.1**	**-1.5**
CARR				*e*S	**Sn**	**07 35 39.0**	**-1.4**
CXUV	**Coxquihui**	**3.83**	**4**	*e*P	**Pn**	**07 35 00.9**	**+3.5**
CXUV				*i* S	**Sn**	**07 35 43.6**	**+1.7**
DEIG	**Demacu**	**4.11**	**344**	*e*P	**Pn**	**07 35 01.7**	**+0.3**
DEIG				*e*S	**Sn**	**07 35 46.2**	**-2.9**
ACIG	**Acambay**	**4.12**	**332**	⇑*e*P	**Pn**	**07 35 02.1**	**+0.7**
ACIG				*e*S	**Sn**	**07 35 49.1**	**-0.1**
UON	**La Union**	**4.14**	**294**	*e*P	**Pn**	**07 35 02.3**	**+0.8**
UON				*e*S	**Sn**	**07 35 45.8**	**-3.5**
PCIG		**4.49**	**97**		**Pn**	**07 35 06.6**	**+0.2**
PCIG		**4.49**	**97**	*e*P	**Pn**	**07 35 06.2**	**-0.2**
PCIG				*i* S	**Sn**	**07 35 58.0**	**0.0**
TGIG		**4.55**	**84**		**Pn**	**07 35 06.9**	**-0.4**
TGIG					**Sn**	**07 35 59.5**	**-0.1**
TGIG		**4.55**	**84**	*e*P	**Pn**	**07 35 06.5**	**-0.7**
TGIG				*e*S	**Sn**	**07 36 00.5**	**+0.9**
TGBT	**Tuxtla Gutierr**	**4.58**	**84**		**Pn**	**07 35 10.1**	**+2.5**
TGBT					**Sn**	**07 36 03.0**	**+2.8**
TGBT	**Tuxtla Gutierr**	**4.58**	**84**	*e*P	**Pn**	**07 35 09.1**	**+1.5**
TGBT				*e*S	**Sn**	**07 36 00.7**	**+0.4**
MOIG	**Morelia**	**4.61**	**317**		**Pn**	**07 35 09.8**	**+1.5**
MOIG	**Morelia**	**4.61**	**317**	*e*P	**Pn**	**07 35 09.8**	**+1.5**
MOIG				*e*S	**Sn**	**07 36 01.9**	**+0.5**
URUA	**Uruapan**	**5.07**	**308**		**Pn**	**07 35 17.7**	**+3.1**
URUA					**Sn**	**07 36 13.1**	**+0.4**
URUA	**Uruapan**	**5.07**	**308**	*e*P	**Pn**	**07 35 11.1**	**-3.5**
URUA				*e*S	**Sn**	**07 36 09.5**	**-3.2**
CCIG	**Comitan**	**5.48**	**90**		**Pn**	**07 35 19.7**	**-0.4**
CCIG	**Comitan**	**5.48**	**90**	⇑*e*P	**Pn**	**07 35 20.6**	**+0.5**
CCIG				*e*S	**Sn**	**07 36 23.1**	**+0.4**
IGIG	**Irapuato, Guan**	**5.51**	**324**		**Pn**	**07 35 22.1**	**+1.5**
IGIG					**Sn**	**07 36 20.1**	**-3.3**
IGIG	**Irapuato, Guan**	**5.51**	**324**	*e*P	**Pn**	**07 35 21.9**	**+1.3**
IGIG				*e*S	**Sn**	**07 36 23.5**	**+0.1**
PATR	**El Naranjo**	**5.53**	**102**	⇑*e*P	**Pn**	**07 35 21.2**	**+0.3**
PATR				*e*S	**Sn**	**07 36 22.6**	**-1.5**
THIG		**5.55**	**104**		**Pn**	**07 35 21.3**	**+0.3**
THIG		**5.55**	**104**	*e*P	**Pn**	**07 35 21.4**	**+0.3**
THIG				*e*S	**Sn**	**07 36 24.5**	**+0.2**
PAVE	**Pavencul**	**5.57**	**101**	⇑*e*P	**Pn**	**07 35 22.7**	**+1.2**
PAVE				*e*S	**Sn**	**07 36 26.3**	**+1.3**
MMIG	**Aquila**	**5.61**	**291**		**Pn**	**07 35 21.2**	**-0.6**
MMIG	**Aquila**	**5.61**	**291**	*e*P	**Pn**	**07 35 21.0**	**-0.7**
MMIG				*e*S	**Sn**	**07 36 26.0**	**+0.3**
CHUJ	**Union Juarez**	**5.66**	**102**	*e*P	**Pn**	**07 35 23.6**	**+0.9**
CHUJ				*e*S	**Sn**	**07 36 26.0**	**-1.2**
RPIG	**Rio Verde**	**5.89**	**340**	*e*P	**Pn**	**07 35 26.0**	**+0.3**
RPIG				*e*S	**Sn**	**07 36 33.7**	**+1.0**
HUEH	**Huehuetenango**	**6.18**	**98**		**Pn**	**07 35 31.2**	**+1.3**
HUEH	**Huehuetenango**	**6.18**	**98**	*e*P	**Pn**	**07 35 30.8**	**+0.9**
HUEH	**Huehuetenango**	**6.18**	**98**	*e*P	**Pn**	**07 35 30.8**	**+0.9**
RTAL	**Retalhuleu**	**6.19**	**106**	Pn	**Pn**	**07 35 31.9**	**+2.1**
RTAL	**Retalhuleu**	**6.19**	**106**	*e*P	**Pn**	**07 35 30.6**	**+0.8**
COIG	**Colima**	**6.25**	**298**	⇓*e*P	**Pn**	**07 35 32.3**	**+1.6**
COIG				*e*S	**Sn**	**07 36 40.7**	**-1.1**
JUBC	**Volcan de Coli**	**6.31**	**301**	*e*P	**Pn**	**07 35 34.3**	**+2.6**

JUBC				*e*S	Sn	07 36 42.0	-1.4
EZ5V		6.32	301		Pn	07 35 36.3	+4.5
EZ5V		6.32	301	*e*P	Pn	07 35 33.8	+2.0
EZ5V				*e*S	Sn	07 36 51.2	+7.6
MNGA	Volcan de Coli	6.33	300	*e*P	Pn	07 35 34.2	+2.3
MNGA				*e*S	Sn	07 36 44.6	+0.8
INCO	Volcan de Coli	6.34	301	*e*P	Pn	07 35 35.0	+2.8
INCO				*e*S	Sn	07 36 43.9	-0.4
CDAR	Ciudad de Arme	6.43	295	*e*P	Pn	07 35 33.2	+0.1
CDAR				*e*S	Sn	07 36 45.9	0.0
R15V		6.50	297		Pn	07 35 34.1	+0.1
R15V		6.50	297⇓	*e*P	Pn	07 35 35.6	+1.5
R15V				*e*S	Sn	07 36 49.4	+1.7
GTIG	Gomez Farias	6.82	350⇑	*e*P	Pn	07 35 38.6	+0.1
GTIG				*e*S	Sn	07 36 57.6	+2.0
SCIG	Sabancuy	6.87	67		Pn	07 35 36.0	-3.1
SCIG	Sabancuy	6.87	67⇑	*e*P	Pn	07 35 36.4	-2.7
FUG	Fuego 3	7.00	105	*e*P	Pn	07 35 44.6	+3.4
FUG				*e*S	Sb	07 37 20.0	-3.9
AAIG	Aguscalientes	7.06	323	*e*P	Pn	07 35 43.9	+1.9
AAIG				*e*S	Sn	07 36 59.6	-2.2
NBG	Las Nubes	7.43	102	*e*P	Pn	07 35 51.1	+4.0
CJM	Chamela	7.55	296	*e*P	Pn	07 35 48.7	+0.3
CJM				*e*S	Sn	07 37 13.8	+0.3
PETF	Flores	7.67	84		Pn	07 35 49.2	-0.9
PETF	Flores	7.67	84	*e*P	Pn	07 35 48.9	-1.1
ZAIG	Zacatecas	7.80	326	Pn	Pn	07 35 52.6	+0.4
ZAIG	Zacatecas	7.80	326	*e*P	Pn	07 35 54.4	+2.2
ZAIG				*e*S	Sn	07 37 24.1	+3.9
ANIG	Ahuacatlan	7.88	308		Pn	07 35 57.4	+4.3
ANIG	Ahuacatlan	7.88	308	*e*P	Pn	07 35 56.3	+3.1
ANIG				*e*S	Sn	07 37 21.2	-0.7
MRL	Marmol	7.95	98	*e*P	Pn	07 35 56.7	+2.5
MRL				*e*S	Sn	07 37 33.3	+9.5
NUBE	Las Nubes	8.15	106	*e*P	Pn	07 35 56.3	-0.6
NUBE	Las Nubes	8.15	106	*e*P	Pn	07 35 56.3	-0.6
PUVA	Puert Vallarta	8.20	303		Pn	07 36 00.9	+3.5
PUVA					Sn	07 37 31.6	+2.0
CEVE	Cerro Verde	8.32	106	*e*P	Pn	07 36 01.5	+2.3
CEVE				*e*S	Sb	07 38 03.1	+1.4
CEVE				IAML		07 39 05.3	
	comp=Z,545nm,0.4s						
CEVE	Cerro Verde	8.32	106	*e*P	Pn	07 36 01.5	+2.3
CEVE				*e*S	Sb	07 38 03.1	+1.4
CEVE				IAML		07 39 05.3	
	comp=Z,545nm,0.4s						
ESQI	Esquipulas	8.38	101		Pn	07 36 02.0	+2.0
ESQI	Esquipulas	8.38	101	*e*P	Pn	07 36 00.2	+0.2
ESQI				*e*S	Sb	07 38 02.0	-1.5
ESQI				IAML		07 38 53.5	
	comp=Z,578nm,0.7s						
MTO3	Montecristo	8.40	102		Pn	07 36 01.4	+1.1
MTO3	Montecristo	8.40	102	*e*P	Pn	07 36 01.1	+0.8
MTO3				IAML		07 39 11.5	
	comp=Z,92nm,0.6s						
MTO3	Montecristo	8.40	102	*e*P	Pn	07 36 01.1	+0.8
MTO3				IAML		07 39 11.5	
	comp=Z,92nm,0.6s						
BOQS	Boqueron	8.66	106	*e*P	Pn	07 36 03.6	-0.3
BOQS	Boqueron	8.66	106	*e*P	Pn	07 36 03.6	-0.3
LNIG	Linares	8.66	350	*e*P	Pn	07 36 03.4	-0.3
LNIG				*e*S	Sn	07 37 44.5	+3.5
SNET	Serv Nac Est T	8.72	106		Pn	07 36 06.2	+1.6
LFRS	El Faro	8.90	106	*e*P	Pn	07 36 07.7	+0.6
LFRS	El Faro	8.90	106	*e*P	Pn	07 36 07.7	+0.6
MYIG	Mrida	8.96	58		Pn	07 36 06.0	-1.8
MYIG					Sn	07 37 51.1	+3.0
MYIG	Mrida	8.96	58	*e*P	Pn	07 36 05.8	-1.9
MYIG				*e*S	Sn	07 37 49.8	+1.7
SCLA	Alcaldia de Sa	9.18	105	*e*P	Pn	07 36 11.5	+0.6
SCLA	Alcaldia de Sa	9.18	105	*e*P	Pn	07 36 11.5	+0.6
COEB	Comit de Eme	9.43	106	*e*P	Pn	07 36 14.0	-0.4
COEB				IAML		07 39 26.2	
	comp=Z,76nm,0.5s						
COEB	Comit de Eme	9.43	106	*e*P	Pn	07 36 14.0	-0.4
COEB				IAML		07 39 26.2	
	comp=Z,76nm,0.5s						
MNIG	Monterrey	9.52	347	*e*P	Pn	07 36 15.9	+0.4
MNIG				*e*S	Sn	07 37 58.8	-3.2
PACA	Pacayal	9.63	106	*e*P	Pn	07 36 17.8	+0.7
PACA	Pacayal	9.63	106	*e*P	Pn	07 36 17.8	+0.7
CAHU	Cacacuatique	9.64	104	*e*P	Pn	07 36 18.3	+0.9
CAHU	Cacacuatique	9.64	104	*e*P	Pn	07 36 18.3	+0.9
LCND	La Caada	10.08	106	IAML		07 40 10.0	
	comp=Z,49nm,0.3s						
LCND	La Caada	10.08	106	IAML		07 40 10.0	
	comp=Z,49nm,0.3s						
CNCH	Conchagua	10.14	106	*e*P	Pn	07 36 25.6	+1.5
CNCH	Conchagua	10.14	106	*e*P	Pn	07 36 25.6	+1.5
TGUH	Tegucigalpa,Un	10.45	101	Pn	Pn	07 36 29.3	+0.9
MAIG	Mazatlaan	10.57	312		Pn	07 36 33.5	+3.6
MAIG	Mazatlaan	10.57	312	*e*P	Pn	07 36 33.6	+3.6
CRIN	San Cristobal	11.05	108		Pn	07 36 39.2	+2.6
KVTX	Kingsville	11.17	360	P	Pn	07 36 39.0	+1.0
	baz=180,SNR=6.3						
KVTX				S	Sn	07 38 51.5	+9.2
	baz=180						
PDIG	Papasquiaro	11.18	322⇑	*e*P	Pn	07 36 42.0	+3.6
CNGN	Cerro Negro	11.44	108		Pn	07 36 43.8	+1.8
MCIG	Muzquiz	11.98	344⇑	*e*P	Pn	07 36 51.0	+1.8
MATN	Matagalpa	12.02	105		Pn	07 36 50.6	+0.8
833A	Chaparral WMA,	12.03	353	Pn	Pn	07 36 51.0	+1.2
833A	Chaparral WMA,	12.03	353	P	Pn	07 36 50.7	+0.9
	baz=173,SNR=117						
833A				S	Sn	07 39 06.6	+3.2
	baz=173						
833A	Chaparral WMA,	12.03	353	P	Pn	07 36 51.2	+1.4
	baz=173,SNR=117						
833A				S	Sn	07 39 10.6	+7.2
	baz=173						
SSIG	Sanalona	12.13	316⇑	*e*P	Pn	07 36 53.8	+2.6
BOAB	BOACO BROADBAN	12.41	107	Pn	Pn	07 36 55.3	+0.2
735A	Kenedy	12.47	0		Pn	07 36 56.2	+0.3
735A	Kenedy	12.47	0	P	Pn	07 36 56.3	+0.5
	baz=180,SNR=20						
HPIG		12.81	327		Pn	07 37 03.2	+2.4
HPIG		12.81	327	*e*P	Pn	07 37 02.9	+2.2
ACON	Acoyapa	13.03	108		Pn	07 37 03.7	+0.2
HZTE	Horizontes, Gu	13.15	114		Pn	07 37 08.5	+3.3
HZTE	Horizontes, Gu	13.15	114	*e*P	Pn	07 37 08.5	+3.3
GBS3	Finca Las Img	13.24	113	*e*P	Pn	07 37 08.0	+1.6
GB1A	Borinquen Arri	13.28	113	*e*P	Pn	07 37 10.0	+3.0
BUEV	Buena Vista	13.28	113⇓	*e*P	Pn	07 37 09.3	+2.3
BUAI	Buenos Aires	13.31	112⇑	*e*P	Pn	07 37 09.1	+1.7
GPS2	Hotel Rincn d	13.34	113	*e*P	Pn	07 37 11.7	+3.8
GUAI	GUAI	13.42	115	*e*P	Pn	07 37 11.5	+2.6
ORTG	Ortega, Santa	13.42	115		Pn	07 37 11.5	+2.5
LIM1	Limonal	13.46	113	*e*P	Pn	07 37 13.7	+4.2
GUAB	Guayabo de Bag	13.47	113	*e*P	Pn	07 37 13.7	+4.0
COLC	Colonia	13.51	113	*e*P	Pn	07 37 13.0	+2.8
HORNC	Hornillas	13.52	113	*e*P	Pn	07 37 13.2	+2.9
SLBS	Sierra La Lagu	13.52	305	Pn	Pn	07 37 11.9	+1.6
SLBS	Sierra La Lagu	13.52	305	*e*P	Pn	07 37 10.1	-0.3
VMAR	Armenia, Volca	13.52	112	*e*P	Pn	07 37 11.9	+1.5
DUNO	Dulce Nombre,	13.53	116		Pn	07 37 12.9	+2.5
CUI	Cuipilapa	13.55	113	*e*P	Pn	07 37 13.4	+2.7
INDI	Punta indio, G	13.62	117	*e*P	P	07 37 17.2	-3.2
ACAL	Aguas Claras	13.68	113	*e*P	Pn	07 37 14.9	+2.5
PTEN	Parque Tenorio	13.68	112⇑	*i*P	Pn	07 37 14.9	+2.4
HKT	Hockley	13.69	7	*i* P	Pn	07 37 10.3	-2.1
HKT	Hockley	13.69	7	Pn	Pn	07 37 09.1	-3.3
HKT	Hockley	13.69	7	P	Pn	07 37 08.2	-4.2
	baz=188						
HKT				S	Sn	07 39 40.8	-3.1
	baz=188						
ESPN	Las Esperanzas	13.75	106		Pn	07 37 14.8	+1.4
JTS	Las Juntas de	13.90	114	*i* P	Pn	07 37 16.0	+0.5
JTS	Las Juntas de	13.90	114	Pn	Pn	07 37 17.8	+2.3
JTS	Las Juntas de	13.90	114	*e*P	Pn	07 37 18.0	+2.5
TSIG	Topolobambo	13.94	313	*e*P	Pn	07 37 17.6	+1.6
TX31	Lajitas Ar. Si	14.01	339		Pn	07 37 18.1	+1.1
TX31	Lajitas Ar. Si	14.01	339	P	Pn	07 37 18.1	+1.1
	baz=156,SNR=63						
TX32	Lajitas Array	14.01	339		Pn	07 37 18.3	+1.3
TXAR	Lajitas Array	14.01	339	Pn	Pn	07 37 18.9	+1.9
	comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=72						
TXAR				LR	LR	07 43 13.2	
	comp=Z,81µm,18.2s,baz=144,slow=40						
	comp=Z,25nm,0.9s						
TXAR	Lajitas Array	14.01	339	P	Pn	07 37 17.4	+0.4
TXAR	Lajitas Array	14.01	339		Pn	07 37 17.4	+0.4
LPIG	La Paz	14.02	305	Pn	Pn	07 37 20.8	+3.8
	comp=Z,0.6nm,0.3s,baz=101,slow=3.1,SNR=3.6						
LPIG				Sn	S	07 40 09.8	-3.6
	comp=Z,1.5nm,0.3s,baz=271,slow=9.3,SNR=0.7						
LPIG				LR	LR	07 42 18.2	
	comp=Z,25µm,18.0s,baz=129,slow=35						
	comp=Z,74nm,1.2s						
CASO	Castillo	14.03	113	*e*P	Pn	07 37 19.7	+2.4
ARE1	Arenal 1	14.03	113	*e*P	Pn	07 37 19.2	+1.9
CEDE	Laguna Cedeo	14.03	113	*e*P	Pn	07 37 20.1	+2.8
CAO2	Cobano, Puntar	14.05	116		Pn	07 37 18.8	+1.3
FORC	Fortuna	14.07	113	*e*P	Pn	07 37 20.1	+2.3
JCT	Junction City	14.20	353	P	Pn	07 37 18.9	-0.7
JCT	Junction City	14.20	353	Pn	Pn	07 37 18.9	-0.7
JCT	Junction City	14.20	353	P	Pn	07 37 18.9	-0.7
	baz=172,SNR=64						
JCT				S	Sn	07 39 59.8	+3.1
	baz=172						
JCT	Junction City	14.20	353⇑	*e*P	Pn	07 37 18.4	-1.2
JCT	Junction City	14.20	353	P	Pn	07 37 19.2	-0.4
	baz=172,SNR=64						
JCT				S	Sn	07 40 02.3	+5.6
	baz=172						
CSIG	Choix	14.31	319⇑	*e*P	Pn	07 37 23.4	+2.4
435B	Jarrell	14.39	1		Pn	07 37 20.8	-1.4
435B	Jarrell	14.39	1	P	Pn	07 37 20.9	-1.2
	baz=181,SNR=18						
435B				S	Sn	07 40 02.0	+0.8
	baz=181						
435B	Jarrell	14.39	1	P	Pn	07 37 21.4	-0.7
	baz=181						
435B				S	Sn	07 40 08.2	+7.0
	baz=181						
SRA1	San Ramn	14.41	114	*e*P	Pn	07 37 24.7	+2.2
JACO	JACO, Garabito	14.45	116		Pn	07 37 24.3	+1.4
JACO	JACO, Garabito	14.45	116	*e*P	Pn	07 37 24.8	+1.9
HDC	Heredia	14.77	114		Pn	07 37 28.9	+1.4
HDC	Heredia	14.77	114	*e*P	Pn	07 37 29.2	+1.7
441A	DeRidder	14.97	16		Pn	07 37 28.7	-1.3
441A	DeRidder	14.97	16	P	Pn	07 37 28.0	-2.0
	baz=198,SNR=10						
LCR2	La Lucha 2	14.98	114	*e*P	Pn	07 37 31.8	+1.4
RIMA	Rio Macho	15.09	114		Pn	07 37 33.2	+1.3
RIMA				IAmb	IAmb	07 37 44.8	
	comp=Z,654nm,1.1s						
RIMA	Rio Macho	15.09	114	*e*P	Pn	07 37 33.4	+1.5
BATAN	Batan	15.38	112	P	Pn	07 37 37.4	+1.9
BATAN				IAmb	IAmb	07 38 14.0	
	comp=Z,1µm,1.2s						
SOR	Soroa	15.38	63	P	Pn	07 37 34.2	-1.3
SOR				pmax	pmax		
	comp=Z,178nm,0.8s						
SOR	Soroa	15.38	63		Pn	07 37 34.2	-1.3
PEZE	Perez Zeledon,	15.43	115		Pn	07 37 37.7	+1.5
PEZE				IAmb	IAmb	07 37 49.5	
	comp=Z,892nm,1.4s						
PEZE	Perez Zeledon,	15.43	115	*e*P	Pn	07 37 37.4	+1.1
WHTX	Lake Whitney,	15.60	1		Pn	07 37 37.1	-1.2
WHTX	Lake Whitney,	15.60	1	P	Pn	07 37 37.1	-1.2
	baz=181,SNR=131						
WHTX				S	Sn	07 40 30.5	-0.1
	baz=181						
WHTX	Lake Whitney,	15.60	1	P	Pn	07 37 37.1	-1.2
	baz=181,SNR=131						
WHTX				S	S	07 40 44.3	-1.4
	baz=181						
NATX	Nacogdoches	15.63	10		Pn	07 37 36.0	-2.7
NATX	Nacogdoches	15.63	10	P	Pn	07 37 35.4	-3.3
	baz=191,SNR=52						
NATX				S	Sn	07 40 32.1	+0.6
	baz=191						
NATX	Nacogdoches	15.63	10	P	Pn	07 37 35.9	-2.8
	baz=191,SNR=52						
NATX				S	S	07 40 39.6	-6.9
	baz=191						
237A	Washetta, Mont	15.71	6		Pn	07 37 37.4	-2.3
237A	Washetta, Mont	15.71	6	P	Pn	07 37 37.1	-2.6
	baz=187,SNR=72						
237A				S	Sn	07 40 30.5	-2.9
	baz=187						
SRBA	San Rafael, Bu	15.78	115		Pn	07 37 41.8	+1.0
342A	Flagon Creek P	15.80	18		Pn	07 37 38.0	-2.9
342A				IAmb	IAmb	07 37 46.3	
	comp=Z,1µm,0.9s						
342B	Flagon Creek P	15.80	18	P	Pn	07 37 38.4	-2.4
	baz=200,SNR=88						
DRK0	Durika	15.86	114	P	Pn	07 37 42.5	+0.6
DRK0				IAmb	IAmb	07 38 01.2	
	comp=Z,860nm,0.8s						
PRVC	Isla de Provid	16.20	98		Pn	07 37 44.4	-1.6
ABTX	Abilene, Hawle	16.31	355		Pn	07 37 45.7	-1.7
ABTX	Abilene, Hawle	16.31	355	P	Pn	07 37 46.5	-0.9
	baz=174,SNR=236						
ABTX	Abilene, Hawle	16.31	355	P	Pn	07 37 46.3	-1.1
	baz=174,SNR=236						
ABTX				S	S	07 40 60.0	-0.3
	baz=174						
344A	Westbrook Farm	16.39	22		Pn	07 37 45.9	-2.5
344A				IAmb	IAmb	07 38 03.0	
	comp=Z,3µm,1.4s						
344A	Westbrook Farm	16.39	22	P	Pn	07 37 46.2	-2.2
	baz=205,SNR=50						
CDITO	Canoas	16.52	116	IAmb	IAmb	07 38 25.7	
	comp=Z,2µm,1.8s						
GUYB	Guaymas	16.67	316⇑	*i*P	Pn	07 37 53.0	+1.0
MNTX	Cornudas Mount	16.77	337	P	Pn	07 37 53.0	-0.3
MNTX	Cornudas Mount	16.77	337	P	Pn	07 37 53.5	+0.3
	baz=154,SNR=289						
MNTX				S	S	07 41 07.8	-1.9
	baz=154						
MNTX	Cornudas Mount	16.77	337⇑	*i*P	Pn	07 37 53.1	-0.2
MNTX	Cornudas Mount	16.77	337	P	Pn	07 37 53.8	+0.5
	baz=154,SNR=289						
MNTX				S	S	07 41 10.0	+0.3
	baz=154						
CGIG		16.77	328	P	P	07 37 55.4	-0.2
CGIG		16.77	328⇑	*e*P	P	07 37 55.5	0.0
346A	Big Creek Wild	16.82	25	IAmb	IAmb	07 38 19.4	
	comp=Z,742nm,1.0s						
346A	Big Creek Wild	16.82	25	P	Pn	07 37 51.2	-2.7
	baz=209,SNR=50						
Z35A	Perchaven, San	16.94	2	IAmb	IAmb	07 38 07.9	
	comp=Z,1µm,0.9s						
Z35A	Perchaven, San	16.94	2	P	Pn	07 37 53.8	-1.6
	baz=182,SNR=97						
Z35A				S	Sn	07 41 04.8	+1.7
	baz=182						
Z38A	Mt. Pleasant	17.06	8	IAmb	IAmb	07 38 09.5	
	comp=Z,2µm,1.2s						
Z38A	Mt. Pleasant	17.06	8	P	Pn	07 37 54.7	-2.1
	baz=189,SNR=122						
VBMS	Vicksburg	17.16	21	P	Pn	07 37 55.7	-2.4
	baz=204,SNR=249						
VBMS	Vicksburg	17.16	21	P	Pn	07 37 55.4	-2.7
	baz=204,SNR=249						
LCCY	Blossom Villag	17.21	76	P	Pn	07 37 58.2	-0.7
LCCY				IAmb	IAmb	07 38 36.6	
	comp=Z,815nm,1.0s						
SRIG	Santa Rosalia	17.26	312	P	P	07 38 01.2	+0.5
KIDD	KIDD Seismic O	17.28	334	P	Pn	07 37 59.9	+0.2
	baz=151,SNR=20						
KIDD				S	S	07 41 18.0	-2.2
	baz=151						
143A	Socs Landing,	17.32	19	P	Pn	07 37 57.3	-2.7
	baz=201,SNR=177						
Z41A	Richland Creek	17.46	14	P	Pn	07 37 59.1	-2.7
Z41A				IAmb	IAmb	07 38 13.8	
	comp=Z,2µm,1.2s						
Z41A	Richland Creek	17.46	14	P	Pn	07 37 59.1	-2.7
	baz=196,SNR=68						
Z41A				P	Pn	07 37 59.1	-2.7
	baz=196,SNR=68						
Z41A				S	S	07 41 23.0	-0.7
	baz=196						
Z41A				S	S	07 41 23.0	-0.7
	baz=196						
Z41A	Richland Creek	17.46	14	P	Pn	07 37 58.9	-3.0
	baz=196,SNR=68						
Z41A				S	S	07 41 22.8	-0.9
	baz=196						
HSIG		17.47	319	P	P	07 38 03.9	+0.8
HSIG		17.47	319⇑	*e*P	P	07 38 03.7	+0.6
NZIG	Nacozari, Sono	17.62	325⇑	*e*P	P	07 38 05.0	+0.1
BRAL	Brewton	17.75	32	P	Pn	07 38 03.2	-2.3
BRAL	Brewton	17.75	32	P	Pn	07 38 02.3	-3.1
	baz=216,SNR=24						
BRAL	Brewton	17.75	32	P	Pn	07 38 02.4	-3.1
	baz=216,SNR=24						
WLAR	White Oak Lake	17.81	13	P	Pn	07 38 03.6	-2.5
WLAR				IAmb	IAmb	07 38 36.3	
	comp=Z,771nm,1.0s						
451A	Vernon	18.02	36	P	Pn	07 38 06.4	-2.3
451A				IAmb	IAmb	07 38 30.1	
	comp=Z,707nm,1.1s						
451A	Vernon	18.02	36	P	Pn	07 38 05.8	-3.0
	baz=221,SNR=6.9						
146A	Union	18.09	25	P	Pn	07 38 06.7	-2.9
	baz=208,SNR=218						
MSTX	Muleshoe	18.12	347		Pn	07 38 09.1	-1.1
MSTX				IAmb	IAmb	07 38 25.1	
	comp=Z,967nm,1.2s						
MSTX	Muleshoe	18.12	347	P	Pn	07 38 09.1	-1.1
	baz=165,SNR=134						
MSTX				S	Sn	07 41 33.8	+1.9
	baz=165						
MSTX	Muleshoe	18.12	347	P	Pn	07 38 09.3	-0.9
	baz=165,SNR=134						
MSTX				S	S	07 41 34.9	-2.4
	baz=165						
X34A	Smith Ranch, M	18.20	0	IAmb	IAmb	07 38 34.3	
	comp=Z,899nm,1.1s						
X37A	Clayton	18.32	6	IAmb	IAmb	07 38 24.9	
	comp=Z,1µm,1.2s						
X37A	Clayton	18.32	6	P	Pn	07 38 10.7	-1.8
	baz=188,SNR=105						
X37A				S	Sn	07 41 38.4	+1.8
	baz=188						
CCAR	Cane Creek	18.35	16	P	P	07 38 11.6	-1.1
CCAR	Cane Creek	18.35	16	P	P	07 38 10.9	-1.8
	baz=199,SNR=44						
WMOK	Wichita Mounta	18.36	358	P	P	07 38 10.8	-2.1
WMOK				pmax	pmax		
	comp=Z,465nm,1.0s						
WMOK	Wichita Mounta	18.36	358	P	P	07 38 10.8	-2.1
WMOK	Wichita Mounta	18.36	358	P	P	07 38 10.8	-2.1
	baz=177,SNR=111						
WMOK				S	Sn	07 41 31.4	-6.0
	baz=177						
WMOK	Wichita Mounta	18.36	358	P	P	07 38 11.3	-1.5
	baz=177,SNR=111						
WMOK				S	Sn	07 41 35.7	-1.7
	baz=177						
061Z	Ochoppi	18.41	56	P	P	07 38 11.5	-2.0
061Z	Ochoppi	18.41	56	P	P	07 38 11.5	-2.0
	baz=242						
061Z				S	Sn	07 41 34.2	-4.7
	baz=242						
PAYG	Puerto Ayora	18.46	155	P	Pn	07 38 15.5	+1.2
553A	Crawfordville	18.47	39	P	P	07 38 11.3	-2.9
	baz=225,SNR=14						
553A				S	Sn	07 41 37.2	-3.1
	baz=225						
121A	Cookes Peak, D	18.48	333	P	Pn	07 38 14.8	+0.2
121A	Cookes Peak, D	18.48	333	P	Pn	07 38 15.4	+0.8
	baz=148,SNR=98						
121A				S	S	07 41 48.7	+4.0
	baz=148						
121A	Cookes Peak, D	18.48	333⇑	*i*P	Pn	07 38 15.3	+0.8
121A	Cookes Peak, D	18.48	333	P	Pn	07 38 16.2	+1.6
	baz=148,SNR=98						
121A				S	S	07 41 49.3	+4.5
	baz=148						
MIAR	Mount Ida	18.54	11	P	P	07 38 12.7	-2.2
MIAR				pmax	pmax		
	comp=Z,958nm,1.3s						
MIAR	Mount Ida	18.54	11	P	P	07 38 12.7	-2.2
MIAR				IAmb	IAmb	07 38 26.6	
	comp=Z,958nm,1.2s						
MIAR	Mount Ida	18.54	11	P	P	07 38 12.6	-2.2
	baz=193,SNR=296						
MIAR				S	Sn	07 41 43.5	+1.5
	baz=193						
MIAR	Mount Ida	18.54	11	P	P	07 38 13.0	-1.8
	baz=193,SNR=296						
MIAR				S	S	07 41 44.8	-0.8
	baz=193						
X40A	Basin Creek Fa	18.64	13	P	P	07 38 13.8	-2.1
	baz=195,SNR=41						
X40A				P	P	07 38 13.8	-2.1
	baz=195,SNR=41						
X40A				S	S	07 41 47.3	-0.2
	baz=195						
X40A				S	S	07 41 47.3	-0.2
	baz=195						
X40A	Basin Creek Fa	18.64	13	P	P	07 38 13.8	-2.1
	baz=195,SNR=41						
X40A				S	S	07 41 46.5	-1.0
	baz=195						
AMTX	Amarillo	18.80	350	P	P	07 38 16.8	-1.0
AMTX	Amarillo	18.80	350	P	P	07 38 17.4	-0.4
	baz=168,SNR=178						
AMTX				S	Sn	07 41 49.3	+1.1
	baz=168						
AMTX	Amarillo	18.80	350	P	P	07 38 16.9	-1.0
	baz=168						
AMTX				S	S	07 41 52.0	+1.0
	baz=168						
250A	Grady	18.80	32	P	P	07 38 16.4	-1.3
	baz=217,SNR=44						
FNO	Franklin	18.86	1		P	07 38 17.2	-1.1
FNO				IAmb	IAmb	07 38 37.4	
	comp=Z,1µm,1.1s						
BCIP	Isla Barro Col	18.94	110	P	P	07 38 19.6	+0.2
BCIP				pmax	pmax		
	comp=Z,402nm,1.4s						
BCIP	Isla Barro Col	18.94	110	P	P	07 38 19.6	+0.2
Z47A	Carrollton	18.98	26	IAmb	IAmb	07 38 30.4	
	comp=Z,934nm,1.1s						
Z47A	Carrollton	18.98	26	P	P	07 38 18.1	-1.6
	baz=210,SNR=166						
Y45A	Yeager Farm, C	19.00	22	P	P	07 38 18.9	-1.0
	baz=205,SNR=116						
OKCFA	Oklahoma City	19.01	1	IAmb	IAmb	07 38 30.7	
	comp=Z,1µm,1.0s						
OKCFA	Oklahoma City	19.01	1	P	P	07 38 18.9	-1.2
	baz=181,SNR=122						
OKCFA				S	Sn	07 41 52.8	-0.5
	baz=181						
UALR	University of	19.02	14	IAmb	IAmb	07 38 30.5	
	comp=Z,653nm,1.1s						
352A	Blakely	19.13	36	IAmb	IAmb	07 39 02.7	
	comp=Z,722nm,1.1s						
352A	Blakely	19.13	36	P	P	07 38 18.6	-2.7
	baz=221,SNR=50						
W39A	Magazine	19.14	10	IAmb	IAmb	07 38 48.7	
	comp=Z,865nm,1.4s						
W39A	Magazine	19.14	10	P	P	07 38 20.5	-1.0
	baz=192,SNR=195						
W39A				S	S	07 41 58.2	+0.5
	baz=192						
W39A	Magazine	19.14	10	P	P	07 38 20.4	-1.0
	baz=192,SNR=195						
W39A				S	S	07 41 57.4	-0.2
	baz=192						
656A	Willston	19.14	45	P	P	07 38 19.6	-1.9
656A	Willston	19.14	45	P	P	07 38 18.3	-3.2
	baz=231,SNR=6.2						
BAHB	Baha de los	19.16	314⇑	*e*P	Pn	07 38 23.7	+1.1
DWPF	Disney Wildern	19.16	49	P	P	07 38 20.2	-1.6
DWPF	Disney Wildern	19.16	49	P	P	07 38 17.8	-3.9
	baz=236,SNR=7.3						
DWPF	Disney Wildern	19.16	49	P	P	07 38 17.8	-3.9
	baz=236						
LRAL	Lakeview Retre	19.31	29	IAmb	IAmb	07 38 45.8	
	comp=Z,716nm,1.4s						
LRAL	Lakeview Retre	19.31	29	P	P	07 38 21.8	-1.5
	baz=213,SNR=200						
LRAL	Lakeview Retre	19.31	29	P	P	07 38 22.0	-1.4
	baz=213,SNR=200						
LRAL				S	Sn	07 42 00.3	-0.2
	baz=213						
MCJ	Malvern	19.33	82	*i* P	P	07 38 24.1	+0.4
LAPR	La Primavera	19.35	319⇑	*e*P	Pn	07 38 24.6	-0.4
Y22A	Socorro	19.36	337	P	Pn	07 38 25.0	-0.3
	baz=153,SNR=262						
Y22A				S	S	07 42 03.9	+1.4
	baz=153						
060A	Indiantown	19.40	54	P	P	07 38 21.9	-2.5
	baz=240,SNR=10						
W41B	Gary Mavity, V	19.43	14	P	P	07 38 23.6	-1.0
	baz=196,SNR=113						
W41B				S	S	07 42 08.3	+4.9
	baz=196						
W41B	Gary Mavity, V	19.43	14	P	P	07 38 23.6	-1.0

	baz=196,SNR=113						
W41B				S	**S**	**07 42 09.0**	**+5.6**
	baz=196						
Y22D	**IRIS PASSCAL I**	**19.47**	**337**	IAmb	IAmb	07 38 35.7	
	comp=Z,751nm,1.1s						
Y22D	**IRIS PASSCAL I**	**19.47**	**337**	P	**Pn**	**07 38 26.3**	**-0.2**
	baz=153,SNR=118						
Y22D	**IRIS PASSCAL I**	**19.47**	**337**	P	**Pn**	**07 38 27.3**	**+0.8**
	baz=153,SNR=118						
MTDJ	**Mount Denham**	**19.48**	**81**		**P**	**07 38 25.0**	**-0.4**
WHAR	**Wooly Hollow**	**19.53**	**14**	IAmb	IAmb	07 38 39.3	
	comp=Z,711nm,1.2s						
TUL1	**Leonard**	**19.59**	**5**	P	**P**	**07 38 24.6**	**-1.7**
	baz=186,SNR=254						
TUL1				S	**S**	**07 42 04.2**	**-2.5**
	baz=186						
TUL1	**Leonard**	**19.59**	**5**	P	**P**	**07 38 24.8**	**-1.5**
	baz=186,SNR=254						
TUL1				S	**S**	**07 42 05.2**	**-1.5**
	baz=186						
OXF	**Oxford**	**19.63**	**21**	IAmb	IAmb	07 38 28.1	
	comp=Z,1µm,0.9s						
OXF	**Oxford**	**19.63**	**21**	P	**P**	**07 38 25.4**	**-1.4**
	baz=205,SNR=226						
OXF	**Oxford**	**19.63**	**21**	P	**P**	**07 38 24.6**	**-2.1**
	baz=205,SNR=226						
TUC	**Tucson**	**19.78**	**326**	P	**Pn**	**07 38 29.9**	**-0.2**
TUC				pmax	pmax		
	comp=Z,175nm,1.1s						
TUC	**Tucson**	**19.78**	**326**	P	**Pn**	**07 38 29.9**	**-0.2**
TUC	**Tucson**	**19.78**	**326**	⇓*i*P	**Pn**	**07 38 29.6**	**-0.5**
TUC	**Tucson**	**19.78**	**326**	P	**Pn**	**07 38 30.0**	**-0.1**
	baz=140						
TUC				S	**Sn**	**07 42 12.6**	**+0.7**
	baz=140						
TIGA	**Tifton**	**19.87**	**38**	IAmb	IAmb	07 38 37.0	
	comp=Z,718nm,1.0s						
TIGA	**Tifton**	**19.87**	**38**	P	**P**	**07 38 27.3**	**-2.1**
	baz=224,SNR=89						
TIGA				S	**S**	**07 42 09.5**	**-2.8**
	baz=224						
TIGA	**Tifton**	**19.87**	**38**	P	**P**	**07 38 27.2**	**-2.2**
	baz=224,SNR=89						
TIGA				S	**S**	**07 42 09.6**	**-2.8**
	baz=224						
U32A	**Winter Ranch,**	**20.00**	**357**	P	**P**	**07 38 30.3**	**-0.6**
	baz=177,SNR=43						
U32A				S	**S**	**07 42 12.7**	**-2.3**
	baz=177						
MET	**Memphis--Engin**	**20.01**	**19**	P	**P**	**07 38 30.2**	**-0.8**
MET				IAmb	IAmb	07 38 54.9	
	comp=Z,1µm,1.3s						
ANMO	**Albuquerque**	**20.09**	**339**	P	**P**	**07 38 32.6**	**+0.7**
	comp=Z,287nm,1.2s,baz=151,slow=12,SNR=174						
ANMO				LR	LR	07 46 59.2	
	comp=Z,32µm,21.6s,baz=156,slow=39						
	comp=Z,287nm,1.2s						
ANMO	**Albuquerque**	**20.09**	**339**	*i* P	**P**	**07 38 32.7**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,408nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,38µm,18.0s						
ANMO	**Albuquerque**	**20.09**	**339**	P	**P**	**07 38 32.4**	**+0.4**
ANMO				IAmb	IAmb	07 38 47.5	
	comp=Z,818nm,1.4s						
ANMO	**Albuquerque**	**20.09**	**339**	IAMs_20	IAMs_20	07 46 45.8	
	comp=Z,40µm,20.0s						
ANMO	**Albuquerque**	**20.09**	**339**	P	Pn	07 38 33.0	-0.9
	baz=155,SNR=397						
ANMO				S	**S**	**07 42 14.3**	**-2.7**
	baz=155						
ANMO	**Albuquerque**	**20.09**	**339**	P	**P**	**07 38 32.7**	**+0.7**
	baz=155						
ANMO				S	Sn	07 42 18.9	-0.5
	baz=155						
152A	**Waverly Hall**	**20.15**	**34**	IAmb	IAmb	07 38 45.7	
	comp=Z,595nm,1.2s						
152A	**Waverly Hall**	**20.15**	**34**	P	**P**	**07 38 30.9**	**-1.6**
	baz=219,SNR=87						
STH	**Stony Hill**	**20.17**	**82**	*i* P	**P**	**07 38 33.1**	**+0.3**
HHAR	**Hobbs**	**20.18**	**9**	IAmb	IAmb	07 38 39.2	
	comp=Z,499nm,1.2s						
HHAR	**Hobbs**	**20.18**	**9**	P	**P**	**07 38 31.2**	**-1.6**
	baz=191						
HHAR				S	**S**	**07 42 15.4**	**-3.1**
	baz=191						
HBAR	**Harrisburg**	**20.20**	**17**	P	**P**	**07 38 31.8**	**-1.2**
HBAR	**Harrisburg**	**20.20**	**17**	P	**P**	**07 38 32.0**	**-1.0**
	baz=200,SNR=67						
HBAR				S	Sn	07 42 24.0	+2.2
	baz=200						
HOJ	**Hope**	**20.22**	**82**	*i* P	**P**	**07 38 33.6**	**+0.1**
Y49A	**Blount Mountai**	**20.27**	**28**	P	**P**	**07 38 32.4**	**-1.4**
	baz=213,SNR=175						
Y49A				S	Sn	07 42 22.2	-1.3
	baz=213						
W45A	**Hickory Valley**	**20.29**	**21**	P	**P**	**07 38 32.8**	**-1.2**
W45A				IAmb	IAmb	07 38 49.1	
	comp=Z,800nm,1.0s						
W45A	**Hickory Valley**	**20.29**	**21**	P	**P**	**07 38 32.5**	**-1.4**
	baz=205,SNR=24						
456A	**Hilliard**	**20.36**	**42**	IAmb	IAmb	07 38 41.8	
	comp=Z,556nm,1.1s						
456A	**Hilliard**	**20.36**	**42**	P	**P**	**07 38 32.9**	**-1.8**
	baz=229,SNR=9.2						
456A				S	**S**	**07 42 22.7**	**+0.7**
	baz=229						
Z51A	**Franklin**	**20.42**	**32**	IAmb	IAmb	07 38 45.6	
	comp=Z,471nm,1.1s						
Z51A	**Franklin**	**20.42**	**32**	P	**P**	**07 38 33.7**	**-1.7**
	baz=217,SNR=79						
U40A	**Yellville**	**20.44**	**12**	IAmb	IAmb	07 38 46.1	
	comp=Z,624nm,1.0s						
U40A	**Yellville**	**20.44**	**12**	P	**P**	**07 38 34.3**	**-1.3**
	baz=194,SNR=486						
U40A				P	**P**	**07 38 34.3**	**-1.3**
	baz=194,SNR=486						
U40A				S	**S**	**07 42 22.3**	**-1.3**
	baz=194						
U40A				S	**S**	**07 42 22.3**	**-1.3**
	baz=194						
U40A	**Yellville**	**20.44**	**12**	P	**P**	**07 38 34.2**	**-1.5**
	baz=194,SNR=486						
U40A				S	**S**	**07 42 21.9**	**-1.8**
	baz=194						
X48A	**Hartselle**	**20.49**	**26**	IAmb	IAmb	07 38 46.6	
	comp=Z,1µm,1.5s						
X48A	**Hartselle**	**20.49**	**26**	P	**P**	**07 38 34.6**	**-1.5**
	baz=211,SNR=152						
X48A				S	Sn	07 42 28.1	-0.8
	baz=211						
PLAL	**Pickwick Lake**	**20.54**	**23**	IAmb	IAmb	07 38 49.1	
	comp=Z,1µm,1.2s						
T35A	**Sooner Cattle**	**20.54**	**3**		**P**	**07 38 34.5**	**-2.2**
T35A				IAmb	IAmb	07 38 52.5	
	comp=Z,1µm,1.1s						
T35B	**Sooner Cattle**	**20.54**	**3**	P	**P**	**07 38 34.7**	**-2.0**
	baz=184,SNR=292						
T35B				S	**S**	**07 42 24.6**	**-1.1**
	baz=184						
LCAR	**Lake Charles**	**20.55**	**16**	IAmb	IAmb	07 38 50.0	
	comp=Z,695nm,1.4s						
LCAR	**Lake Charles**	**20.55**	**16**	P	**P**	**07 38 35.6**	**-1.2**
	baz=199,SNR=301						
LCAR				S	**S**	**07 42 23.7**	**-2.1**
	baz=199						
CMJ	**Castle Mountai**	**20.58**	**82**	*i* P	**P**	**07 38 36.7**	**-0.6**
214A	**Organ Pipe Nat**	**20.67**	**322**	P	Pn	07 38 39.4	-1.2
214A				IAmb	IAmb	07 38 51.5	
	comp=Z,681nm,1.6s						
214A	**Organ Pipe Nat**	**20.67**	**322**	⇑*i*P	**P**	**07 38 38.9**	**+0.8**
214A	**Organ Pipe Nat**	**20.67**	**322**	P	Pn	07 38 39.4	-1.1
	baz=135,SNR=104						
214A				S	Sn	07 42 32.4	-0.8
	baz=135						
255A	**Hazlehurst**	**20.89**	**39**	P	**P**	**07 38 37.8**	**-2.7**
	baz=226,SNR=28						
255A				S	Sn	07 42 35.7	-2.8
	baz=226						
154A	**Montrose**	**21.00**	**37**	IAmb	IAmb	07 38 57.1	
	comp=Z,1µm,1.2s						
154A	**Montrose**	**21.00**	**37**	P	**P**	**07 38 38.7**	**-3.1**
	baz=223,SNR=80						
LNXT	**Lenox**	**21.05**	**19**	P	**P**	**07 38 41.1**	**-1.2**
	baz=203,SNR=28						
LNXT				S	Sn	07 42 44.9	+2.5
	baz=203						
X18A	**Snowflake**	**21.14**	**331**	IAmb	IAmb	07 38 57.5	
	comp=Z,1µm,1.4s						
FPAL	**Fort Paine**	**21.20**	**29**	IAmb	IAmb	07 38 53.6	
	comp=Z,538nm,1.1s						
GLAT	**Glass**	**21.27**	**19**	P	**P**	**07 38 43.9**	**-0.7**
PVMO	**Portageville**	**21.28**	**18**	IAmb	IAmb	07 38 60.0	
	comp=Z,830nm,0.9s						
GOGA	**Godfrey**	**21.39**	**35**	IAmb	IAmb	07 38 55.5	
	comp=Z,479nm,0.9s						
GOGA	**Godfrey**	**21.39**	**35**	P	**P**	**07 38 43.9**	**-2.0**
	baz=221,SNR=225						
GOGA				S	**S**	**07 42 45.7**	**+3.1**
	baz=221						
GOGA	**Godfrey**	**21.39**	**35**	P	**P**	**07 38 43.6**	**-2.3**
	baz=221,SNR=225						
GOGA				S	Sn	07 42 47.6	-3.0
	baz=221						
PBMO	**Poplar Bluff**	**21.41**	**16**	P	**P**	**07 38 44.6**	**-1.4**
	baz=200,SNR=800						
PBMO				S	**S**	**07 42 43.9**	**+1.1**
	baz=200						
Y52A	**Lilburn**	**21.42**	**33**	IAmb	IAmb	07 38 56.5	
	comp=Z,907nm,1.1s						
Y52A	**Lilburn**	**21.42**	**33**	P	**P**	**07 38 44.4**	**-1.9**
	baz=219,SNR=312						
Y52A				P	**P**	**07 38 44.4**	**-1.9**
	baz=219,SNR=312						
Y52A				S	**S**	**07 42 40.6**	**-2.6**
	baz=219						
Y52A				S	**S**	**07 42 40.6**	**-2.6**
	baz=219						
W18A	**Petrified Fore**	**21.53**	**333**	IAmb	IAmb	07 39 04.5	
	comp=Z,629nm,1.4s						
W18A	**Petrified Fore**	**21.53**	**333**	P	**P**	**07 38 48.8**	**+1.2**
	baz=147,SNR=74						
W18A				S	Sn	07 42 53.2	-0.9
	baz=147						
T25A	**Trinidad**	**21.53**	**346**	P	**P**	**07 38 48.2**	**+0.6**
	baz=163,SNR=1000						
T25A				S	Sn	07 42 52.7	-1.5
	baz=163						
X51A	**Calhoun**	**21.58**	**30**	IAmb	IAmb	07 39 00.5	
	comp=Z,1µm,1.4s						
X51A	**Calhoun**	**21.58**	**30**	P	**P**	**07 38 46.1**	**-1.8**
	baz=216,SNR=87						
X51A				P	**P**	**07 38 46.1**	**-1.8**
	baz=216,SNR=87						
X51A				S	**S**	**07 42 49.3**	**+3.0**
	baz=216						
X51A				S	**S**	**07 42 49.3**	**+3.0**
	baz=216						
WVT	**Waverly**	**21.64**	**22**	P	**P**	**07 38 47.0**	**-1.6**
WVT				pmax	pmax		
	comp=Z,3µm,1.8s						
WVT	**Waverly**	**21.64**	**22**	P	**P**	**07 38 47.0**	**-1.6**
WVT	**Waverly**	**21.64**	**22**	P	**P**	**07 38 46.8**	**-1.8**
	baz=207,SNR=417						
WVT				S	**S**	**07 42 44.9**	**-2.6**
	baz=207						
WVT	**Waverly**	**21.64**	**22**	P	**P**	**07 38 46.3**	**-2.3**
	baz=207						
S39A	**Bolivar**	**21.65**	**10**	P	**P**	**07 38 47.5**	**-1.2**
	baz=192,SNR=519						
S39A				S	**S**	**07 42 44.7**	**-2.9**
	baz=192						
V48A	**Smith Brothers**	**21.69**	**25**	P	**P**	**07 38 47.6**	**-1.5**
	baz=210,SNR=416						
V48A				S	**S**	**07 42 51.5**	**+3.0**
	baz=210						
SPIG	**San Pedro Mart**	**21.75**	**315**	P	**P**	**07 38 50.0**	**-0.2**
SPIG	**San Pedro Mart**	**21.75**	**315**	⇑*i*P	**P**	**07 38 51.4**	**+1.2**
257A	**Skidaway Islan**	**21.82**	**41**	IAmb	IAmb	07 38 54.4	
	comp=Z,564nm,1.1s						
257A	**Skidaway Islan**	**21.82**	**41**	P	**P**	**07 38 47.9**	**-2.6**
	baz=228						
W50A	**Signal Mountai**	**21.88**	**28**	P	**P**	**07 38 49.2**	**-2.0**
	baz=214,SNR=442						
W50A				S	Sn	07 42 59.4	-3.1
	baz=214						
GTBY	**Guantanamo Bay**	**21.89**	**77**	P	**P**	**07 38 50.8**	**-0.6**
GTBY				IAmb	IAmb	07 38 56.8	
	comp=Z,558nm,1.1s						
R32A	**Long Quarter,**	**22.03**	**358**	P	**P**	**07 38 51.4**	**-1.4**
	baz=178,SNR=138						
R32A				S	**S**	**07 42 57.8**	**+2.9**
	baz=178						
T45B	**Paducah**	**22.16**	**20**	P	**P**	**07 38 53.0**	**-1.1**
	baz=204,SNR=46						
T45B				S	**S**	**07 43 00.5**	**+3.1**
	baz=204						
CLTN	**Cedars of Leba**	**22.19**	**25**	IAmb	IAmb	07 39 04.3	
	comp=Z,661nm,1.0s						
Y14A	**Wickenburg**	**22.22**	**325**	IAmb	IAmb	07 39 07.9	
	comp=Z,705nm,1.4s						
SDCO	**Great Sand Dun**	**22.38**	**344**	P	**P**	**07 38 56.4**	**-0.5**
SDCO				IAmb	IAmb	07 39 11.3	
	comp=Z,486nm,1.1s						
SDCO	**Great Sand Dun**	**22.38**	**344**	P	**P**	**07 38 56.8**	**-0.1**
	baz=160,SNR=725						
SDCO				S	**S**	**07 43 02.9**	**+0.8**
	baz=160						
SDCO	**Great Sand Dun**	**22.38**	**344**	P	**P**	**07 38 56.8**	**-0.1**
	baz=160,SNR=725						
SDCO				S	**S**	**07 43 05.6**	**+3.5**
	baz=160						
SDCO				S	Sn	07 43 07.6	-7.1
	baz=160						
SOLC	**Bahia Solano**	**22.39**	**114**	*e*P	**P**	**07 38 59.2**	**+2.4**
HAW	**Hawthorne Fire**	**22.41**	**38**	P	**P**	**07 38 54.1**	**-2.7**
	baz=225,SNR=55						
HAW				S	**S**	**07 43 02.4**	**+0.3**
	baz=225						
CCM	**Cathedral Cave**	**22.41**	**14**	P	**P**	**07 38 55.6**	**-1.3**
CCM				pmax	pmax		
	comp=Z,2µm,1.7s						
CCM	**Cathedral Cave**	**22.41**	**14**	P	**P**	**07 38 55.6**	**-1.3**
CCM	**Cathedral Cave**	**22.41**	**14**	P	**P**	**07 38 55.0**	**-1.9**
	baz=197,SNR=219						
CCM				S	**S**	**07 43 00.2**	**-1.9**
	baz=197						
CCM	**Cathedral Cave**	**22.41**	**14**	P	**P**	**07 38 54.6**	**-2.3**
	baz=197						
CCM				S	**S**	**07 43 02.7**	**+0.6**
	baz=197						
R40A	**Maddies Statio**	**22.42**	**12**	P	**P**	**07 38 55.2**	**-1.8**
R40A				IAmb	IAmb	07 38 60.0	
	comp=Z,816nm,1.0s						
R40A	**Maddies Statio**	**22.42**	**12**	P	**P**	**07 38 55.4**	**-1.6**
	baz=194,SNR=723						
R40A				S	**S**	**07 42 57.3**	**-5.0**
	baz=194						
MBIG	**Mexicali**	**22.45**	**319**	P	**P**	**07 38 58.8**	**+1.5**
CPCT	**Cooper Cave**	**22.46**	**30**	IAmb	IAmb	07 39 07.2	
	comp=Z,801nm,1.0s						
W52A	**Murphy**	**22.46**	**31**	P	**P**	**07 38 55.5**	**-1.9**
	baz=217,SNR=384						
W52A				S	**S**	**07 43 06.4**	**+3.3**
	baz=217						
CBKS	**Cedar Bluff**	**22.46**	**356**	IAmb	IAmb	07 39 13.6	
	comp=Z,777nm,1.0s						
CBKS	**Cedar Bluff**	**22.46**	**356**	P	**P**	**07 38 56.5**	**-1.0**
	baz=175,SNR=25						
CBKS				S	**S**	**07 43 07.4**	**+4.2**
	baz=175						
CBKS	**Cedar Bluff**	**22.46**	**356**	P	**P**	**07 38 56.1**	**-1.4**
	baz=175,SNR=25						
CBKS				S	Sn	07 43 10.0	-6.3
	baz=175						
FVM	**French Village**	**22.54**	**15**	IAmb	IAmb	07 39 09.7	
	comp=Z,756nm,1.2s						
FVM	**French Village**	**22.54**	**15**	P	**P**	**07 38 55.9**	**-2.4**
	baz=199,SNR=217						
FVM				S	**S**	**07 43 05.3**	**+0.8**
	baz=199						
S44A	**Carbondale**	**22.59**	**18**	P	**P**	**07 38 57.1**	**-1.7**
	baz=202,SNR=228						
S44A				S	**S**	**07 43 09.7**	**+4.2**
	baz=202						
WUAZ	**Wupatki**	**22.61**	**330**	IAmb	IAmb	07 39 26.4	
	comp=Z,364nm,0.9s						
WUAZ				IAMs_20	IAMs_20	07 48 44.9	
	comp=Z,21µm,20.0s						
WUAZ	**Wupatki**	**22.61**	**330**	P	**P**	**07 39 00.7**	**+1.5**
	baz=144,SNR=175						
WUAZ				S	**S**	**07 43 10.7**	**+4.5**
	baz=144						
SIUC	**Southern Illin**	**22.62**	**18**	P	**P**	**07 38 57.2**	**-1.9**
GLA	**Glamis**	**22.65**	**320**	P	**P**	**07 39 00.0**	**+0.5**
GLA				pmax	pmax		
	comp=Z,401nm,1.1s						
GLA	**Glamis**	**22.65**	**320**	P	**P**	**07 39 00.0**	**+0.5**
GLA				IAmb	IAmb	07 39 03.8	
	comp=Z,401nm,1.1s						
GLA	**Glamis**	**22.65**	**320**	P	**P**	**07 39 00.8**	**+1.3**
	baz=133,SNR=79						
GLA				S	**S**	**07 43 12.7**	**+6.1**
	baz=133						
HODGE	**Hodges**	**22.67**	**35**	IAmb	IAmb	07 39 08.8	
	comp=Z,496nm,0.9s						
HODGE	**Hodges**	**22.67**	**35**	P	**P**	**07 38 57.4**	**-2.3**
	baz=222,SNR=181						
HODGE				S	**S**	**07 43 10.1**	**+3.2**
	baz=222						
T47A	**Sharon Grove**	**22.67**	**23**	P	**P**	**07 38 57.8**	**-1.8**
	baz=208,SNR=290						
T47A				S	**S**	**07 43 06.9**	**0.0**
	baz=208						
KSU1	**Kansas State U**	**22.72**	**2**	P	**P**	**07 38 58.5**	**-1.5**
KSU1				IAmb	IAmb	07 39 12.9	
	comp=Z,660nm,1.0s						
KSU1	**Kansas State U**	**22.72**	**2**	IAMs_20	IAMs_20	07 48 43.5	
	comp=Z,20µm,22.0s						
KSU1	**Kansas State U**	**22.72**	**2**	P	**P**	**07 38 58.2**	**-1.9**
	baz=183,SNR=33						
KSU1				S	**S**	**07 43 08.4**	**+0.8**
	baz=183						
KSU1	**Kansas State U**	**22.72**	**2**	P	**P**	**07 38 58.2**	**-1.9**
	baz=183,SNR=33						
KSU1				S	**S**	**07 43 09.8**	**+2.2**
	baz=183						
S22A	**4UR Ranch, Cre**	**22.76**	**341**	P	**P**	**07 39 01.2**	**+0.3**
	baz=157,SNR=346						
S22A				S	**S**	**07 43 13.3**	**+4.3**
	baz=157						
U49A	**Red Boiling Sp**	**22.78**	**26**	P	**P**	**07 38 58.7**	**-2.1**
	baz=211,SNR=436						
U49A				S	**S**	**07 43 08.4**	**-0.5**
	baz=211						
V51A	**Loudon**	**22.82**	**29**	P	**P**	**07 38 59.1**	**-2.1**
	baz=215,SNR=192						
V51A				S	**S**	**07 43 09.0**	**-0.6**
	baz=215						
MVCO	**Mesa Verde**	**22.84**	**338**	P	**P**	**07 39 01.7**	**+0.1**
	baz=153,SNR=436						
MVCO				S	**S**	**07 43 15.0**	**+4.7**
	baz=153						
BG3	**Lake Jocassee**	**22.89**	**33**	IAmb	IAmb	07 39 11.5	
	comp=Z,598nm,1.0s						
CASEE	**Lake Jocassee**	**22.89**	**33**	P	**P**	**07 39 00.1**	**-1.8**
	baz=219,SNR=97						
CASEE				S	**S**	**07 43 12.8**	**+2.1**
	baz=219						
SJCC	**San Jacinto, C**	**22.96**	**103**	P	**P**	**07 39 03.5**	**+0.5**
SJCC				IAmb	IAmb	07 39 16.6	
	comp=Z,279nm,1.0s						
SJCC	**San Jacinto, C**	**22.96**	**103**	*e*P	**P**	**07 39 02.7**	**-0.3**
TKL	**Tuckaleechee C**	**22.98**	**30**	P	**P**	**07 38 59.7**	**-3.2**
	comp=Z,208nm,1.0s,baz=210,slow=10.0,SNR=75						
TKL				S	**S**	**07 43 20.5**	**+8.2**
	comp=Z,30nm,0.9s,baz=193,slow=13,SNR=2.3						
	comp=Z,208nm,1.0s						
TKL	**Tuckaleechee C**	**22.98**	**30**	IAmb	IAmb	07 39 12.2	
	comp=Z,946nm,1.4s						
TKL	**Tuckaleechee C**	**22.98**	**30**	P	**P**	**07 39 00.9**	**-2.0**
	baz=217,SNR=184						
TKL				S	**S**	**07 43 16.1**	**+3.8**
	baz=217						
KSCO	**Kaye Shedlock’**	**22.99**	**350**	P	**P**	**07 39 02.0**	**-1.1**
KSCO				IAmb	IAmb	07 39 16.2	
	comp=Z,440nm,1.1s						
KSCO	**Kaye Shedlock’**	**22.99**	**350**	P	**P**	**07 39 02.7**	**-0.4**
	baz=168,SNR=62						
KSCO				S	**S**	**07 43 12.9**	**+0.3**
	baz=168						
KSCO	**Kaye Shedlock’**	**22.99**	**350**	P	**P**	**07 39 02.7**	**-0.4**
	baz=168,SNR=62						
PIZC	**Pizarro, Choco**	**23.05**	**117**	*e*P	**P**	**07 39 08.1**	**+4.4**
YUH	**Yuha Desert**	**23.07**	**318**	P	**P**	**07 39 04.9**	**+1.1**
CSU	**Charleston Sou**	**23.09**	**41**	P	**P**	**07 39 03.0**	**-1.0**
DBBC	**Dabeiba**	**23.09**	**111**	*e*P	**P**	**07 39 06.9**	**+2.6**
NHSC	**New Hope**	**23.11**	**40**	P	**P**	**07 39 02.8**	**-1.3**
NHSC	**New Hope**	**23.11**	**40**	P	**P**	**07 39 02.1**	**-2.0**
	baz=228,SNR=72						
NHSC				S	**S**	**07 43 19.2**	**+4.8**
	baz=228						
NHSC	**New Hope**	**23.11**	**40**	P	**P**	**07 39 02.1**	**-2.0**
	baz=228,SNR=72						
NHSC				S	**S**	**07 43 21.4**	**+7.0**
	baz=228						
PDMCI	**Parker Dam,Lak**	**23.13**	**324**	P	**P**	**07 39 05.3**	**+0.9**
	baz=137,SNR=59						
PDMCI				S	**S**	**07 43 19.7**	**+4.9**
	baz=137						
SWSC	**Sam W. Stewart**	**23.18**	**319**	P	**P**	**07 39 06.2**	**+1.2**
	baz=131,SNR=18						
SWSC				S	**S**	**07 43 23.3**	**+7.5**
	baz=131						
IKP	**In-Ko-Pah, Jac**	**23.19**	**318**	P	**P**	**07 39 06.5**	**+1.4**
	baz=130,SNR=26						
IKP				S	**S**	**07 43 22.3**	**+6.2**
	baz=130						
SLM	**Saint Louis**	**23.21**	**15**	P	**P**	**07 39 03.1**	**-2.0**
	baz=199,SNR=33						
SLM				S	**S**	**07 43 18.2**	**+2.2**
	baz=199						
V52A	**Sevierville**	**23.22**	**30**	IAmb	IAmb	07 39 15.5	
	comp=Z,1µm,1.6s						
V52A	**Sevierville**	**23.22**	**30**	P	**P**	**07 39 03.0**	**-2.3**
	baz=217,SNR=138						
V52A				S	**S**	**07 43 17.3**	**+1.0**
	baz=217						
JSC	**Jenkinsville**	**23.27**	**37**	P	**P**	**07 39 04.4**	**-1.4**
JSC				pmax	pmax		
	comp=Z,331nm,1.0s						
JSC	**Jenkinsville**	**23.27**	**37**	P	**P**	**07 39 04.4**	**-1.4**
JSC				IAmb	IAmb	07 39 17.7	
	comp=Z,331nm,1.0s						
JSC	**Jenkinsville**	**23.27**	**37**	P	**P**	**07 39 04.2**	**-1.6**
	baz=224,SNR=8.8						
CBX	**Cerro Bola**	**23.34**	**316**	P	**P**	**07 39 08.8**	**+2.1**
PAULI	**Pauline**	**23.35**	**35**	IAmb	IAmb	07 39 18.5	
	comp=Z,651nm,1.1s						
PAULI	**Pauline**	**23.35**	**35**	P	**P**	**07 39 05.0**	**-1.7**
	baz=222,SNR=193						
PAULI				S	**S**	**07 43 20.9**	**+2.4**
	baz=222						
UREC	**San Jos de Ur**	**23.40**	**109**	*e*P	**P**	**07 39 08.1**	**+0.8**
TJIG	**Tijuana**	**23.42**	**317**	P	**P**	**07 39 06.1**	**-1.3**
TJIG	**Tijuana**	**23.42**	**317**	*e*	**P**	**07 39 07.6**	**+0.2**
BC3	**Big Chuckawall**	**23.44**	**321**	P	**P**	**07 39 08.8**	**+1.1**
	baz=133,SNR=130						
BC3				S	**S**	**07 43 26.0**	**+5.7**
	baz=133						
GR1C	**Gorgona, Isla**	**23.45**	**122**	*e*P	**P**	**07 39 09.1**	**+1.4**
Q24A	**Divide**	**23.45**	**346**	IAmb	IAmb	07 39 20.5	
	comp=Z,633nm,1.1s						
Q24A	**Divide**	**23.45**	**346**	P	**P**	**07 39 08.2**	**+0.3**
	baz=162,SNR=175						
Q24A				S	**S**	**07 43 25.1**	**+4.5**
	baz=162						
V53A	**Saluda**	**23.47**	**32**	IAmb	IAmb	07 39 19.7	
	comp=Z,738nm,1.2s						
V53A	**Saluda**	**23.47**	**32**	P	**P**	**07 39 06.3**	**-1.6**
	baz=219,SNR=171						
V53A				P	**P**	**07 39 06.3**	**-1.6**
	baz=219,SNR=171						
V53A				S	**S**	**07 43 19.4**	**-1.1**
	baz=219						
V53A				S	**S**	**07 43 19.4**	**-1.1**
	baz=219						
SMRC	**Santa Marta, M**	**23.50**	**100**	*e*P	**P**	**07 39 06.9**	**-1.4**
P38A	**Dawn**	**23.52**	**8**	P	**P**	**07 39 06.5**	**-1.7**
	baz=190,SNR=246						
P38A				S	**S**	**07 43 21.8**	**+0.7**
	baz=190						
MONP2	**Monument Peak**	**23.55**	**318**	P	**P**	**07 39 09.6**	**+0.7**
	baz=130,SNR=69						
MONP2				S	**S**	**07 43 28.0**	**+5.9**
	baz=130						
MALC	**Bahia Malaga**	**23.57**	**119**	*e*P	**P**	**07 39 11.9**	**+3.0**
BAR	**Barrett**	**23.57**	**317**	P	**P**	**07 39 09.6**	**+0.7**
Y57A	**Sumter**	**23.59**	**38**	P	**P**	**07 39 06.7**	**-2.3**
	baz=226,SNR=98						
Y57A				P	**P**	**07 39 06.7**	**-2.3**
	baz=226,SNR=98						
Y57A				S	**S**	**07 43 25.7**	**+3.3**

	baz=226						
Y57A				S	S	07 43 25.7	+3.3
	baz=226						
IRM	**Iron Mountain**	23.61	322	P	P	07 39 10.4	+1.2
	baz=134,SNR=115						
IRM				S	S	07 43 27.7	+5.0
	baz=134						
T50A	**Nancy**	23.61	27	P	P	07 39 06.8	-2.4
	baz=213						
T50A				P	P	07 39 06.8	-2.4
	baz=213						
T50A				S	S	07 43 24.0	+1.3
	baz=213						
T50A				S	S	07 43 24.0	+1.3
	baz=213						
P40A	**Paris**	23.67	11	P	P	07 39 07.5	-2.2
	baz=194,SNR=354						
P40A				S	S	07 43 24.6	+1.1
	baz=194						
TUMC	**Tumaco**	23.71	126	eP	P	07 39 12.8	+2.6
NEE2	**Needles Airpor**	23.73	324	P	P	07 39 11.7	+1.3
	baz=136,SNR=16						
NEE2				S	S	07 43 30.0	+5.3
	baz=136						
CBOC	**Ciudad Bolivar**	23.78	113	eP	P	07 39 13.4	+2.2
Q44A	**Meyer Farm, Va**	23.79	17	P	P	07 39 09.0	-1.8
	baz=201,SNR=186						
Q44A				S	S	07 43 25.9	+0.5
	baz=201						
TZTN	**Tazewell**	23.80	30	IAmb	IAmb	07 39 23.3	
	comp=Z,779nm,1.2s						
TZTN	**Tazewell**	23.80	30	P	P	07 39 09.3	-1.8
	baz=216,SNR=158						
TZTN				S	S	07 43 28.9	+3.2
	baz=216						
TZTN	**Tazewell**	23.80	30	P	P	07 39 09.5	-1.5
	baz=216,SNR=158						
TZTN				S	S	07 43 28.5	+2.7
	baz=216						
PV15	**Paradox Valley**	23.84	339	IAmb	IAmb	07 39 24.8	
	comp=Z,663nm,1.1s						
ARGC	**Ariguani, Magd**	23.85	103	eP	P	07 39 12.7	+1.0
KMSC	**Kings Mountain**	23.86	35	P	P	07 39 10.0	-1.6
	baz=222,SNR=170						
KMSC				S	S	07 43 28.6	+2.0
	baz=222						
KMSC	**Kings Mountain**	23.86	35	P	P	07 39 10.0	-1.6
	baz=222,SNR=170						
KMSC				S	S	07 43 29.6	+3.0
	baz=222						
OLIL	**Olney**	23.90	19	P	P	07 39 10.1	-1.8
	baz=204,SNR=98						
OLIL				S	S	07 43 27.2	0.0
	baz=204						
Y58A	**Scranton**	23.96	40	P	P	07 39 10.8	-1.6
	baz=228,SNR=52						
Y58A				P	P	07 39 10.8	-1.6
	baz=228,SNR=52						
109C	**Camp Elliot, M**	23.99	317	P	P	07 39 14.1	+1.3
	baz=129,SNR=9.9						
109C				S	S	07 43 32.0	+3.3
	baz=129						
BIRD	**Birdtown, Kers**	23.99	37	IAmb	IAmb	07 39 14.8	
	comp=Z,708nm,1.1s						
BIRD	**Birdtown, Kers**	23.99	37	P	P	07 39 11.5	-1.3
	baz=225,SNR=200						
BIRD				S	S	07 43 29.6	+0.8
	baz=225						
PLMC	**San Jos del P**	24.00	116	eP	P	07 39 13.6	+0.4
BELC	**Belle Mtn. Jos**	24.01	320	P	P	07 39 14.3	+1.2
	baz=133,SNR=66						
BELC				S	S	07 43 35.0	+5.7
	baz=133						
TPFO	**Pinon Flats**	24.03	319	P	P	07 39 14.7	+1.4
	baz=131,SNR=45						
PFO	**Pinyon Flats O**	24.04	319	P	P	07 39 14.4	+1.0
PFO				pmax	pmax		
	comp=Z,238nm,1.4s						
PFO				MLR	MLR		
	comp=Z,12µm,19.0s						
PFO	**Pinyon Flats O**	24.04	319	P	P	07 39 14.4	+1.0
PFO	**Pinyon Flats O**	24.04	319	P	P	07 39 14.9	+1.5
	baz=131,SNR=41						
PFO				S	S	07 43 36.9	+7.1
	baz=131						
HELC	**Santa Helena**	24.06	112	eP	P	07 39 16.6	+2.5
ZARC	**Zaragoza, Cauc**	24.12	109	eP	P	07 39 14.6	+0.4
SMCO	**Snowmass**	24.13	342	P	P	07 39 14.9	+0.3
LGNH	**Logne**	24.17	81	P	P	07 39 14.9	+0.3
LGNH				IAmb	IAmb	07 39 17.6	
	comp=Z,506nm,1.2s						
JAKH	**Jacmel**	24.25	82	P	P	07 39 15.5	+0.1
JAKH				IAmb	IAmb	07 39 27.5	
	comp=Z,704nm,1.3s						
N33B	**J Bar K, Exete**	24.33	1	P	P	07 39 15.3	-0.6
	baz=181,SNR=121						
P43A	**Skaggs, Pawnee**	24.34	16	P	P	07 39 15.1	-0.9
	baz=200,SNR=75						
P43A				S	S	07 43 35.4	+1.2
	baz=200						
GMRC	**Granite Mounta**	24.35	322	P	P	07 39 17.4	+1.1
	baz=135,SNR=37						
GMRC				S	S	07 43 39.6	+4.9
	baz=135						
ISCO	**Idaho Springs**	24.35	345	IAmb	IAmb	07 39 32.3	
	comp=Z,593nm,1.1s						
ISCO				IAMs_20	IAMs_20	07 49 36.0	
	comp=Z,17µm,19.0s						
ISCO	**Idaho Springs**	24.35	345	P	P	07 39 16.9	+0.5
	baz=162,SNR=494						
ISCO				S	S	07 43 35.5	+0.5
	baz=162						
ISCO	**Idaho Springs**	24.35	345	P	P	07 39 17.0	+0.6
	baz=162,SNR=494						
ISCO				S	S	07 43 37.3	+2.3
	baz=162						
SMLC	**San Martn de**	24.36	105	eP	P	07 39 17.5	+1.1
LL5C	**La Loma 5 El P**	24.38	103	eP	P	07 39 17.6	+1.1
YOTC	**Yotoco, Valle**	24.42	118	eP	P	07 39 18.7	+1.6
V55A	**Taylorsville**	24.45	34	P	P	07 39 15.7	-1.3
	baz=222,SNR=144						
V55A				P	P	07 39 15.7	-1.3
	baz=222,SNR=144						
V55A				S	S	07 43 37.7	+1.6
	baz=222						
V55A				S	S	07 43 37.7	+1.6
	baz=222						
MURC	**Murrieta**	24.50	318	P	P	07 39 18.8	+1.2
	baz=130,SNR=43						
MURC				S	S	07 43 41.8	+4.8
	baz=130						
Y59A	**Loris**	24.50	41	P	P	07 39 15.9	-1.6
	baz=229,SNR=48						
Y59A				P	P	07 39 15.9	-1.6
	baz=229,SNR=48						
N35A	**Tabor**	24.52	4	P	P	07 39 16.7	-0.9
	baz=185,SNR=93						
R49A	**Shelbyville**	24.56	25	P	P	07 39 16.7	-1.2
	baz=210,SNR=114						
R49A				P	P	07 39 16.7	-1.2
	baz=210,SNR=114						
R49A				S	S	07 43 44.2	+6.4
	baz=210						
R49A				S	S	07 43 44.2	+6.4
	baz=210						
LL1C	**La Loma 1 Cana**	24.60	103	eP	P	07 39 20.3	+1.7
X58A	**Rowland**	24.60	39	P	P	07 39 17.2	-1.1
	baz=227,SNR=166						
X58A				P	P	07 39 17.2	-1.1
	baz=227,SNR=166						
X58A				S	S	07 43 39.0	+0.6
	baz=227						
X58A				S	S	07 43 39.0	+0.6
	baz=227						
W57A	**Gilead**	24.62	37	P	P	07 39 16.9	-1.7
	baz=225,SNR=94						
W57A				P	P	07 39 16.9	-1.7
	baz=225,SNR=94						
W57A				S	S	07 43 43.0	+4.1
	baz=225						
W57A				S	S	07 43 43.0	+4.1
	baz=225						
U54A	**Nelsons Funny**	24.64	32	P	P	07 39 18.0	-0.8
	baz=220,SNR=180						
U54A				P	P	07 39 18.0	-0.8
	baz=220,SNR=180						
U54A				S	S	07 43 42.4	+3.1
	baz=220						
U54A				S	S	07 43 42.4	+3.1
	baz=220						
S51A	**Beattyville**	24.68	28	P	P	07 39 18.1	-1.0
	baz=214,SNR=188						
S51A				P	P	07 39 18.1	-1.0
	baz=214,SNR=188						
S51A				S	S	07 43 40.6	+0.9
	baz=214						
S51A				S	S	07 43 40.6	+0.9
	baz=214						
N38A	**Joes South For**	24.70	8	P	P	07 39 18.3	-1.0
	baz=191,SNR=278						
BBRC	**Big Bear Solar**	24.75	320	P	P	07 39 21.9	+1.9
	baz=131,SNR=18						
BBRC				S	S	07 43 47.9	+6.3
	baz=131						
HEC	**Hector,Ludlow**	24.78	321	P	P	07 39 21.7	+1.6
	baz=133,SNR=40						
HEC				S	S	07 43 47.4	+5.8
	baz=133						
OGNE	**Ogallala**	24.80	352	P	P	07 39 20.4	+0.2
	baz=170,SNR=181						
OGNE	**Ogallala**	24.80	352	P	P	07 39 20.4	+0.2
	baz=170,SNR=181						
LL6C	**La Loma 6 Bece**	24.80	102	eP	P	07 39 21.0	+0.6
CRJC	**Cerrejon, Guaj**	24.81	99	eP	P	07 39 21.7	+1.1
PTBC	**PUERTO BERRIO,**	24.87	110	eP	P	07 39 22.3	+1.2
R50A	**Paris**	24.89	26	P	P	07 39 19.9	-1.1
	baz=212,SNR=96						
R50A				P	P	07 39 19.9	-1.1
	baz=212,SNR=96						
R50A				S	S	07 43 43.8	+0.6
	baz=212						
R50A				S	S	07 43 43.8	+0.6
	baz=212						
OTAV	**Otavalo**	24.93	128	P	P	07 39 22.7	+0.7
OTAV				pmax	pmax		
	comp=Z,450nm,2.0s						
OTAV	**Otavalo**	24.93	128	P	P	07 39 22.7	+0.7
OTAV				IAmb	IAmb	07 39 53.5	
	comp=Z,450nm,2.0s						
Y60A	**Bolivia**	24.93	41	P	P	07 39 19.7	-1.7
	baz=230						
Y60A				P	P	07 39 19.7	-1.7
	baz=230						
NORC	**Norcasia**	24.93	113	eP	P	07 39 22.8	+1.1
CMBC	**Cumbal**	24.96	126	eP	P	07 39 26.6	+4.3
TUQ	**Turquoise Moun**	24.96	323	P	P	07 39 23.2	+1.4
	baz=135,SNR=99						
TUQ				S	S	07 43 54.1	+9.5
	baz=135						
ANIL	**Santa Ana**	24.97	116	iP	P	07 39 25.2	+2.9
P46A	**Rosedale**	24.99	20	P	P	07 39 20.6	-1.2
P46A	**Rosedale**	24.99	20	P	P	07 39 21.1	-0.8
	baz=205,SNR=78						
P46A				S	S	07 43 45.8	+1.0
	baz=205						
BGNE	**Belgrade**	25.00	359	P	P	07 39 21.5	-0.5
	baz=179,SNR=53						
BGNE				S	S	07 43 51.1	+6.2
	baz=179						
BGNE	**Belgrade**	25.00	359	P	P	07 39 21.6	-0.3
	baz=179,SNR=53						
BGNE				S	S	07 44 02.6	+18
	baz=179						
SCI2	**San Clemente I**	25.00	315	P	P	07 39 24.1	+2.0
	baz=126,SNR=9.7						
SCI2				S	S	07 43 56.3	+11
	baz=126						
N41A	**Harden Midland**	25.04	13	P	P	07 39 21.5	-0.8
	baz=196,SNR=65						
N41A				S	S	07 43 43.5	-2.0
	baz=196						
MTPU	**Mount Pierson**	25.05	332	IAmb	IAmb	07 39 37.2	
	comp=Z,538nm,1.0s						
O44A	**Mansfield**	25.10	17	P	P	07 39 22.2	-0.7
	baz=202,SNR=82						
O44A				S	S	07 43 48.8	+2.2
	baz=202						
GCUF	**Volcan Galeras**	25.16	125	eP	P	07 39 25.8	+1.6
CIS	**Catalina Islan**	25.17	316	P	P	07 39 25.5	+1.9
	baz=128,SNR=18						
CIS				S	S	07 44 01.3	+14
	baz=128						
BFSC	**Mount Baldy Ra**	25.20	319	P	P	07 39 25.8	+1.8
	baz=130,SNR=36						
BFSC				S	S	07 43 54.4	+5.9
	baz=130						
RRX	**Edison Barstow**	25.21	321	P	P	07 39 25.8	+1.8
	baz=132,SNR=16						
SOTA	**Rioblanco**	25.21	122	eP	P	07 39 25.2	+0.5
OCAC	**Ocana**	25.25	106	eP	P	07 39 24.8	+0.1
HDIL	**Hopedale**	25.26	15	P	P	07 39 23.2	-1.1
	baz=200,SNR=147						
HDIL				S	S	07 43 51.7	+2.7
	baz=200						
HDIL	**Hopedale**	25.26	15	P	P	07 39 22.9	-1.4
	baz=200,SNR=147						
HDIL				S	S	07 43 52.0	+3.0
	baz=200						
U56A	**King**	25.27	35	P	P	07 39 23.9	-0.6
	baz=222,SNR=106						
U56A				P	P	07 39 23.9	-0.6
	baz=222,SNR=106						
CRUC	**La Cruz**	25.27	123	eP	P	07 39 29.0	+4.0
SRU	**San Rafael Swe**	25.27	336	IAmb	IAmb	07 39 37.9	
	comp=Z,463nm,1.0s						
PCON	**Cinco Dias**	25.28	121	eP	P	07 39 27.3	+1.9
FMP	**Fort Macarthur**	25.28	317	P	P	07 39 26.6	+2.1
	baz=128						
FMP				S	S	07 43 54.9	+5.5
	baz=128						
SHPR	**Sheep Range**	25.31	326	IAmb	IAmb	07 39 39.3	
	comp=Z,405nm,1.8s						
BRRC	**Barranca, Sant**	25.31	108	eP	P	07 39 27.3	+2.3
MARP	**Paez Belalcaza**	25.36	120	eP	P	07 39 28.8	+3.0
Q16A	**Castle Valley**	25.36	335	IAmb	IAmb	07 39 39.4	
	comp=Z,443nm,1.0s						
GSC	**Goldstone, Bar**	25.38	322	P	P	07 39 27.7	+2.1
	baz=133,SNR=112						
O20A	**White River Ci**	25.39	341	P	P	07 39 26.6	+0.8
	baz=156,SNR=546						
O20A				S	S	07 44 02.1	+11
	baz=156						
ORTC	**Ortega, Tolima**	25.40	117	eP	P	07 39 26.8	+0.9
SDDR	**Presa de Saban**	25.43	80	P	P	07 39 26.5	+0.3
N23A	**Red Feather La**	25.47	346	P	P	07 39 26.9	+0.4
	baz=162,SNR=360						
P48A	**Milroy**	25.47	23	IAmb	IAmb	07 39 38.7	
	comp=Z,556nm,1.1s						
P48A	**Milroy**	25.47	23	P	P	07 39 24.7	-1.6
	baz=209,SNR=60						
P48A				P	P	07 39 24.7	-1.6
	baz=209,SNR=60						
P48A				S	S	07 43 52.3	-0.1
	baz=209						
P48A				S	S	07 43 52.3	-0.1
	baz=209						
URIC	**Uribia, Colomb**	25.49	97	IAmb	IAmb	07 39 46.9	
	comp=Z,709nm,1.6s						
URIC	**Uribia, Colomb**	25.49	97	eP	P	07 39 26.2	-0.4
SHOC	**Shoshone, Teco**	25.49	323	P	P	07 39 27.4	+0.9
	baz=135,SNR=37						
SHOC				S	S	07 43 58.2	+5.4
	baz=135						
V58A	**Windy Hill, Pi**	25.58	37	P	P	07 39 26.6	-0.7
	baz=226,SNR=270						
V58A				P	P	07 39 26.6	-0.7
	baz=226,SNR=270						
V58A				S	S	07 43 56.2	+1.9
	baz=226						
V58A				S	S	07 43 56.2	+1.9
	baz=226						
L34A	**Svendsen Farm,**	25.58	3	P	P	07 39 26.4	-0.9
	baz=183,SNR=144						
SPBC	**San Pablo de B**	25.60	112	eP	P	07 39 29.9	+2.2
DECC	**Green Verdugo**	25.64	318	P	P	07 39 29.6	+1.7
	baz=129,SNR=36						
DECC				S	S	07 44 01.3	+6.0
	baz=129						
P17A	**Butcher Ranch,**	25.67	336	IAmb	IAmb	07 39 42.1	
	comp=Z,400nm,1.1s						
TMUT	**Trail Mountain**	25.70	336	IAmb	IAmb	07 39 42.3	
	comp=Z,223nm,1.0s						
SFIN	**Lafayette**	25.72	19	P	P	07 39 27.5	-0.9
	baz=204,SNR=124						
SFIN				S	S	07 44 04.0	+7.7
	baz=204						
SFIN	**Lafayette**	25.72	19	P	P	07 39 27.3	-1.1
	baz=204,SNR=124						
SFIN				S	S	07 43 59.1	+2.8
	baz=204						
PHWY	**Pilot Hill**	25.74	347	IAmb	IAmb	07 39 43.1	
	comp=Z,464nm,1.2s						
ROSC	**El Rosal**	25.75	114	P	P	07 39 32.5	+3.1
	comp=Z,135nm,1.0s,baz=320,slow=5.4,SNR=41						
ROSC				S	S	07 43 59.6	+1.7
	comp=Z,2.7nm,0.5s,baz=261,slow=19,SNR=0.8						
ROSC				LR	LR	07 49 52.8	
	comp=Z,4µm,21.8s,baz=345,slow=37						
ROSC	**El Rosal**	25.75	114	P	P	07 39 31.1	+1.7
ROSC				pmax	pmax		
	comp=Z,736nm,1.5s						
ROSC	**El Rosal**	25.75	114	P	P	07 39 31.1	+1.7
ROSC				IAmb	IAmb	07 39 51.7	
	comp=Z,736nm,1.5s						
ROSC	**El Rosal**	25.75	114	eP	P	07 39 32.1	+2.7
GRTK	**Grand Turk**	25.77	74	P	P	07 39 29.5	+0.4
GRTK				IAMs_20	IAMs_20	07 50 13.3	
	comp=Z,18µm,19.0s						
SCIA	**State Center**	25.80	8	P	P	07 39 28.1	-1.1
	baz=190,SNR=161						
SCIA				S	S	07 44 06.0	+8.4
	baz=190						
SCIA	**State Center**	25.80	8	P	P	07 39 28.2	-1.1
	baz=190,SNR=161						
SCIA				S	S	07 44 02.8	+5.2
	baz=190						
PRAC	**Prado**	25.80	117	eP	P	07 39 31.7	+2.2
P49A	**Miami Univ. Ec**	25.81	24	P	P	07 39 27.5	-1.8
	baz=210,SNR=242						
P49A				S	S	07 44 03.5	+5.8
	baz=210						
P49A	**Miami Univ. Ec**	25.81	24	P	P	07 39 27.5	-1.8
	baz=210,SNR=242						
P49A				S	S	07 44 06.3	+8.5
	baz=210						
SNCC	**San Nicolas Is**	25.82	315	P	P	07 39 31.5	+1.9
	baz=126						
EDW2	**Edwards Air Fo**	25.83	319	P	P	07 39 31.4	+1.8
	baz=131,SNR=49						
EDW2				S	S	07 44 02.5	+4.2
	baz=131						
BETC	**Betania**	25.87	119	eP	P	07 39 43.8	+14
S54A	**Dingess, Beckl**	25.88	31	P	P	07 39 29.2	-0.8
	baz=219,SNR=96						
S54A				P	P	07 39 29.2	-0.8
	baz=219,SNR=96						
S54A				S	S	07 44 02.6	+3.6
	baz=219						
S54A				S	S	07 44 02.6	+3.6
	baz=219						
PRN	**Pahroc Range**	25.93	327	IAmb	IAmb	07 39 46.5	
	comp=Z,349nm,1.4s						
Q51A	**Peebles**	25.93	26	P	P	07 39 29.2	-1.2
	baz=213,SNR=122						
Q51A				P	P	07 39 29.2	-1.2
	baz=213,SNR=122						
Q51A				S	S	07 44 04.6	+4.8
	baz=213						
Q51A				S	S	07 44 04.6	+4.8
	baz=213						
CNNC	**Cliffs of the**	25.94	40	P	P	07 39 29.6	-0.8
	baz=228,SNR=84						
CNNC	**Cliffs of the**	25.94	40	P	P	07 39 29.8	-0.7
	baz=228,SNR=84						
R53A	**Hurricane**	25.99	29	P	P	07 39 30.5	-0.5
	baz=217,SNR=172						
R53A				P	P	07 39 30.5	-0.5
	baz=217,SNR=172						
R53A				S	S	07 44 04.4	+3.7
	baz=217						
R53A				S	S	07 44 04.4	+3.7
	baz=217						
BARC	**Barichara**	26.00	109	eP	P	07 39 33.8	+2.2
LRMC	**Laurel Mtn Rad**	26.03	321	P	P	07 39 33.6	+2.1
	baz=132,SNR=84						
LRMC				S	S	07 44 06.1	+4.5
	baz=132						
GARC	**Garzon, Huila**	26.10	120	eP	P	07 39 34.5	+2.0
OSI	**Osito Audit: C**	26.12	318	P	P	07 39 34.2	+2.0
	baz=129,SNR=18						
OSI				S	S	07 44 20.5	+18
	baz=129						
PAMC	**Pamplona, Colo**	26.15	107	eP	P	07 39 34.7	+1.5
K31A	**O'Neill**	26.22	358	P	P	07 39 33.0	0.0
	baz=178,SNR=56						
FURC	**Furnace Creek,**	26.23	324	P	P	07 39 35.1	+2.0
	baz=135,SNR=49						
TPNV	**Topopah Spring**	26.23	325	P	P	07 39 35.7	+2.4
	baz=137,SNR=139						
TPNV				S	S	07 44 09.8	+5.0
	baz=137						
O48B	**Farmland**	26.27	22	P	P	07 39 32.1	-1.3
	baz=208,SNR=114						
O48B				S	S	07 44 04.5	-0.6
	baz=208						
O48B	**Farmland**	26.27	22	P	P	07 39 31.9	-1.6
	baz=208,SNR=114						
O48B				S	S	07 44 12.1	+7.0
	baz=208						
L40A	**Anamosa**	26.27	11	P	P	07 39 32.2	-1.2
	baz=194,SNR=99						
L40A				S	S	07 44 10.3	+5.2
	baz=194						
MPMC	**Manual Prospec**	26.30	322	P	P	07 39 35.1	+1.0
	baz=133,SNR=125						
MPMC				S	S	07 44 11.3	+5.3
	baz=133						
Q52A	**Bidwell**	26.36	28	P	P	07 39 33.2	-1.1
	baz=216,SNR=76						
Q52A				P	P	07 39 33.2	-1.1
	baz=216,SNR=76						
Q52A				S	S	07 44 11.1	+4.7
	baz=216						
Q52A				S	S	07 44 11.1	+4.7
	baz=216						
T57A	**Hurt**	26.36	35	IAmb	IAmb	07 39 37.8	
	comp=Z,609nm,1.2s						
T57A	**Hurt**	26.36	35	P	P	07 39 33.8	-0.6
	baz=224,SNR=161						
T57A				P	P	07 39 33.8	-0.6
	baz=224,SNR=161						
T57A				S	S	07 44 07.7	+1.1
	baz=224						
T57A				S	S	07 44 07.7	+1.1
	baz=224						
CHIC	**Chingaza**	26.36	114	eP	P	07 39 38.2	+3.2
M44A	**Midewin, Midew**	26.37	17	P	P	07 39 33.7	-0.7
	baz=202,SNR=93						
M44A				S	S	07 44 07.4	+0.8
	baz=202						
RUSC	**La Rusia**	26.38	110	eP	P	07 39 36.8	+1.6
P51A	**Williamsport**	26.44	26	P	P	07 39 33.9	-1.1
	baz=213,SNR=179						
P51A				P	P	07 39 33.9	-1.1
	baz=213,SNR=179						
P51A				S	S	07 44 13.3	+5.7
	baz=213						
P51A				S	S	07 44 13.3	+5.7
	baz=213						
S11A	**Rachel**	26.47	327	IAmb	IAmb	07 40 00.6	
	comp=Z,367nm,1.4s						
ARVC	**Arvin**	26.51	319	P	P	07 39 37.8	+2.1
	baz=130,SNR=46						
O49A	**Covington**	26.52	24	P	P	07 39 34.6	-1.1
	baz=210,SNR=42						
O49A				P	P	07 39 34.6	-1.1
	baz=210,SNR=42						
O49A				S	S	07 44 12.6	+3.7
	baz=210						
O49A				S	S	07 44 12.6	+3.7
	baz=210						
RWWY	**Rawlins**	26.53	344	IAMs_20	IAMs_20	07 50 47.9	
	comp=Z,22µm,19.0s						
L42A	**Oliver, Polo**	26.54	14	P	P	07 39 35.1	-0.8
	baz=198,SNR=126						
K38A	**Parkersburg**	26.59	8	P	P	07 39 35.4	-0.9
	baz=191,SNR=59						
NLU	**North Lily Min**	26.61	335	IAmb	IAmb	07 39 51.7	
	comp=Z,276nm,1.3s						
N47A	**Urbana**	26.63	21	P	P	07 39 35.6	-1.1
N47A	**Urbana**	26.63	21	P	P	07 39 34.8	-1.9
	baz=207,SNR=156						
N47A				P	P	07 39 34.8	-1.9

	baz=207,SNR=156						
ISA	**Isabella, Lake**	**26.63**	**320**	P	**P**	**07 39 37.6**	**+0.7**
ISA				pmax	pmax		
	comp=Z,74nm,1.1s						
ISA	**Isabella, Lake**	**26.63**	**320**	P	**P**	**07 39 37.6**	**+0.7**
ISA	**Isabella, Lake**	**26.63**	**320**	P	**P**	**07 39 39.2**	**+2.2**
	baz=131,SNR=43						
ISA				S	**S**	**07 44 17.8**	**+6.8**
	baz=131						
VILC	**Villavicencio,**	**26.64**	**114**	*e*P	**P**	**07 39 39.9**	**+2.6**
SBC	**Santa Barbara**	**26.66**	**317**	P	**P**	**07 39 39.2**	**+2.2**
	baz=127						
SDD	**Santo Domingo**	**26.73**	**81**	P	**P**	**07 39 37.1**	**-0.7**
U59A	**Littleton**	**26.74**	**38**	IAmb	IAmb	07 39 48.4	
	comp=Z,304nm,1.2s						
U59A	**Littleton**	**26.74**	**38**	P	**P**	**07 39 36.9**	**-0.9**
	baz=227,SNR=72						
U59A				P	**P**	**07 39 36.9**	**-0.9**
	baz=227,SNR=72						
U59A				S	**S**	**07 44 12.6**	**0.0**
	baz=227						
U59A				S	**S**	**07 44 12.6**	**0.0**
	baz=227						
BCW	**Bitter Crk WRg**	**26.76**	**318**	P	**P**	**07 39 37.7**	**-0.4**
R55A	**Marlinton**	**26.86**	**32**	P	**P**	**07 39 38.2**	**-0.7**
	baz=220,SNR=119						
R55A				P	**P**	**07 39 38.2**	**-0.7**
	baz=220,SNR=119						
R55A				S	**S**	**07 44 22.5**	**+8.0**
	baz=220						
R55A				S	**S**	**07 44 22.5**	**+8.0**
	baz=220						
CWC	**Cottonwood Cre**	**26.91**	**322**	P	**P**	**07 39 41.6**	**+2.1**
	baz=133						
CWC				S	**S**	**07 44 18.7**	**+3.0**
	baz=133						
R11A	**Troy Canyon, C**	**26.92**	**328**	P	**P**	**07 39 40.9**	**+1.3**
	baz=140,SNR=101						
R11A				S	**S**	**07 44 20.8**	**+5.2**
	baz=140						
P52A	**Corning**	**26.96**	**27**	P	**P**	**07 39 38.3**	**-1.4**
	baz=215,SNR=71						
P52A				S	**S**	**07 44 22.3**	**+6.3**
	baz=215						
PKM	**Mcpherson Peak**	**26.99**	**317**	P	**P**	**07 39 42.1**	**+1.9**
	baz=128,SNR=33						
Q54A	**Coxs Mills**	**27.04**	**30**	P	**P**	**07 39 40.0**	**-0.5**
	baz=218,SNR=66						
Q54A				P	**P**	**07 39 40.0**	**-0.5**
	baz=218,SNR=66						
Q54A				S	**S**	**07 44 21.2**	**+4.0**
	baz=218						
Q54A				S	**S**	**07 44 21.2**	**+4.0**
	baz=218						
S57A	**Dark Hollow, R**	**27.08**	**34**	IAmb	IAmb	07 39 53.6	
	comp=Z,386nm,0.9s						
S57A	**Dark Hollow, R**	**27.08**	**34**	P	**P**	**07 39 39.9**	**-0.9**
	baz=223,SNR=70						
S57A				P	**P**	**07 39 39.9**	**-0.9**
	baz=223,SNR=70						
S57A				S	**S**	**07 44 22.5**	**+4.6**
	baz=223						
S57A				S	**S**	**07 44 22.5**	**+4.6**
	baz=223						
ACSO	**Alum Creek Sta**	**27.10**	**26**	P	**P**	**07 39 40.5**	**-0.5**
ACSO				IAmb	IAmb	07 39 51.2	
	comp=Z,553nm,1.0s						
ACSO	**Alum Creek Sta**	**27.10**	**26**	P	**P**	**07 39 40.0**	**-0.9**
	baz=213,SNR=33						
ACSO	**Alum Creek Sta**	**27.10**	**26**	P	**P**	**07 39 39.6**	**-1.3**
	baz=213,SNR=33						
ACSO				S	**S**	**07 44 26.7**	**+8.6**
	baz=213						
V61A	**Roper**	**27.11**	**40**	P	**P**	**07 39 40.8**	**-0.2**
	baz=230,SNR=9.5						
V61A				P	**P**	**07 39 40.8**	**-0.2**
	baz=230,SNR=9.5						
DUG	**Dugway, Tooele**	**27.11**	**334**	IAMs_20	IAMs_20	07 52 00.9	
	comp=Z,14µm,19.0s						
DUG	**Dugway, Tooele**	**27.11**	**334**	P	**P**	**07 39 42.8**	**+1.6**
	baz=147,SNR=170						
DUG				S	**S**	**07 44 25.7**	**+7.0**
	baz=147						
VES	**Vestal, Richgr**	**27.13**	**320**	P	**P**	**07 39 43.6**	**+2.3**
	baz=130,SNR=40						
VES				S	**S**	**07 44 25.7**	**+7.0**
	baz=130						
L44A	**Lake County Fo**	**27.14**	**16**	P	**P**	**07 39 40.9**	**-0.4**
	baz=201,SNR=38						
L44A				S	**S**	**07 44 22.0**	**+3.3**
	baz=201						
L44A	**Lake County Fo**	**27.14**	**16**	P	**P**	**07 39 40.8**	**-0.4**
	baz=201,SNR=38						
L44A				S	**S**	**07 44 27.3**	**+8.6**
	baz=201						
P53A	**Whipple**	**27.18**	**29**	IAmb	IAmb	07 39 55.9	
	comp=Z,586nm,1.1s						
P53A	**Whipple**	**27.18**	**29**	P	**P**	**07 39 41.0**	**-0.7**
	baz=216,SNR=90						
P53A				P	**P**	**07 39 41.0**	**-0.7**
	baz=216,SNR=90						
N49A	**Columbus Grove**	**27.21**	**23**	IAmb	IAmb	07 39 55.4	
	comp=Z,694nm,1.6s						
N49A	**Columbus Grove**	**27.21**	**23**	P	**P**	**07 39 40.1**	**-1.8**
	baz=210,SNR=26						
N49A				P	**P**	**07 39 40.1**	**-1.8**
	baz=210,SNR=26						
N49A				S	**S**	**07 44 20.9**	**+1.0**
	baz=210						
N49A				S	**S**	**07 44 20.9**	**+1.0**
	baz=210						
K22A	**Casper**	**27.27**	**346**	P	**P**	**07 39 43.4**	**+0.7**
	baz=162,SNR=247						
K22A	**Casper**	**27.27**	**346**	P	**P**	**07 39 43.1**	**+0.4**
	baz=162,SNR=247						
JFWS	**Jewell Farm**	**27.28**	**12**	IAMs_20	IAMs_20	07 52 03.3	
	comp=Z,17µm,21.0s						
JFWS	**Jewell Farm**	**27.28**	**12**	P	**P**	**07 39 41.9**	**-0.7**
	baz=196,SNR=112						
JFWS				S	**S**	**07 44 19.4**	**-1.6**
	baz=196						
JFWS	**Jewell Farm**	**27.28**	**12**	P	**P**	**07 39 41.8**	**-0.8**
	baz=196,SNR=112						
JFWS				S	**S**	**07 44 28.2**	**+7.2**
	baz=196						
T59A	**Double "B" Far**	**27.30**	**37**	IAmb	IAmb	07 39 44.6	
	comp=Z,460nm,1.1s						
T59A	**Double "B" Far**	**27.30**	**37**	P	**P**	**07 39 42.0**	**-0.8**
	baz=226,SNR=124						
T59A				P	**P**	**07 39 42.0**	**-0.8**
	baz=226,SNR=124						
TAMC	**Tame, Arauca**	**27.33**	**108**	*e*P	**P**	**07 39 45.9**	**+2.5**
TAMC	**Tame, Arauca**	**27.33**	**108**	*e*P	**P**	**07 39 44.5**	**+1.2**
ECSD	**EROS Data Cent**	**27.34**	**2**	P	**P**	**07 39 41.6**	**-1.4**
ECSD				IAmb	IAmb	07 39 57.2	
	comp=Z,466nm,1.2s						
ECSD	**EROS Data Cent**	**27.34**	**2**	IAMs_20	IAMs_20	07 51 25.8	
	comp=Z,14µm,21.0s						
ECSD	**EROS Data Cent**	**27.34**	**2**	P	**P**	**07 39 41.7**	**-1.4**
	baz=183,SNR=215						
ECSD				S	**S**	**07 44 26.3**	**+4.4**
	baz=183						
ECSD	**EROS Data Cent**	**27.34**	**2**	P	**P**	**07 39 41.7**	**-1.4**
	baz=183,SNR=215						
ECSD				S	**S**	**07 44 27.6**	**+5.7**
	baz=183						
SMMC	**Simmler**	**27.37**	**318**	P	**P**	**07 39 45.7**	**+2.2**
	baz=128,SNR=56						
TIN	**Tinemaha, Big**	**27.42**	**323**	P	**P**	**07 39 46.5**	**+2.5**
	baz=133,SNR=16						
TIN				S	**S**	**07 44 30.1**	**+6.5**
	baz=133						
L46A	**Eue Claire**	**27.46**	**19**	P	**P**	**07 39 43.0**	**-1.1**
	baz=205,SNR=13						
L46A				P	**P**	**07 39 43.0**	**-1.1**
	baz=205,SNR=13						
O52A	**Adamsville**	**27.49**	**27**	IAmb	IAmb	07 39 55.2	
	comp=Z,428nm,1.1s						
O52A	**Adamsville**	**27.49**	**27**	P	**P**	**07 39 43.0**	**-1.5**
	baz=215,SNR=73						
O52A				P	**P**	**07 39 43.0**	**-1.5**
	baz=215,SNR=73						
MACC	**Macarena, Meta**	**27.50**	**118**	*e*P	**P**	**07 39 44.7**	**-0.2**
K43A	**Burlington**	**27.52**	**15**	P	**P**	**07 39 43.3**	**-1.4**
	baz=200,SNR=64						
K43A				S	**S**	**07 44 28.6**	**+3.9**
	baz=200						
SDV	**Santo Domingo**	**27.54**	**102**	P	**P**	**07 39 45.4**	**0.0**
	comp=Z,164nm,0.8s,baz=293,slow=4.6,SNR=108						
SDV				LR	LR	07 53 02.6	
	comp=Z,5µm,18.3s,baz=296,slow=42						
	comp=Z,164nm,0.8s						
SDV	**Santo Domingo**	**27.54**	**102**	P	**P**	**07 39 45.7**	**+0.3**
SDV				IAmb	IAmb	07 39 48.1	
	comp=Z,210nm,0.9s						
SDV	**Santo Domingo**	**27.54**	**102**	*e*P	**P**	**07 39 45.5**	**+0.1**
SDV	**Santo Domingo**	**27.54**	**102**	*e*P	**P**	**07 39 46.1**	**+0.8**
TPH	**Tonopah**	**27.57**	**326**	IAmb	IAmb	07 40 01.8	
	comp=Z,570nm,1.3s						
VOG	**Valley Oaks Go**	**27.62**	**320**	P	**P**	**07 39 47.3**	**+1.7**
	baz=130						
R58B	**Mineral**	**27.81**	**35**	P	**P**	**07 39 46.1**	**-1.2**
R58B				IAmb	IAmb	07 39 58.1	
	comp=Z,279nm,1.1s						
R58B	**Mineral**	**27.81**	**35**	P	**P**	**07 39 46.2**	**-1.2**
	baz=225,SNR=80						
R58B				P	**P**	**07 39 46.2**	**-1.2**
	baz=225,SNR=80						
R58B				S	**S**	**07 44 32.3**	**+2.9**
	baz=225						
R58B				S	**S**	**07 44 32.3**	**+2.9**
	baz=225						
HWUT	**Hardware Ranch**	**27.83**	**338**	IAmb	IAmb	07 40 00.6	
	comp=Z,609nm,1.8s						
I37B	**Waseca**	**27.86**	**7**	P	**P**	**07 39 46.4**	**-1.3**
	baz=189,SNR=51						
O53A	**New Philadelph**	**27.88**	**28**	P	**P**	**07 39 46.4**	**-1.5**
O53A				IAmb	IAmb	07 40 35.2	
	comp=Z,268nm,1.1s						
O53A	**New Philadelph**	**27.88**	**28**	P	**P**	**07 39 46.5**	**-1.4**
	baz=216,SNR=38						
O53A				S	S	07 44 42.3	+12
	baz=216						
T60A	**Surry**	**27.90**	**38**	P	**P**	**07 39 47.2**	**-0.9**
T60A				IAmb	IAmb	07 39 49.9	
	comp=Z,411nm,0.9s						
T60A	**Surry**	**27.90**	**38**	P	**P**	**07 39 47.6**	**-0.6**
	baz=228,SNR=30						
T60A				P	**P**	**07 39 47.6**	**-0.6**
	baz=228,SNR=30						
Q56A	**Snyder Ridge,**	**27.91**	**32**	IAmb	IAmb	07 40 01.1	
	comp=Z,344nm,1.1s						
Q56A	**Snyder Ridge,**	**27.91**	**32**	P	**P**	**07 39 48.1**	**-0.1**
	baz=221,SNR=30						
Q56A				P	**P**	**07 39 48.1**	**-0.1**
	baz=221,SNR=30						
Q56A				S	**S**	**07 44 34.6**	**+3.7**
	baz=221						
Q56A				S	**S**	**07 44 34.6**	**+3.7**
	baz=221						
N51A	**Ashland**	**27.92**	**26**	IAmb	IAmb	07 39 58.1	
	comp=Z,432nm,1.4s						
N51A	**Ashland**	**27.92**	**26**	P	**P**	**07 39 46.7**	**-1.6**
	baz=213,SNR=14						
N51A				P	**P**	**07 39 46.7**	**-1.6**
	baz=213,SNR=14						
PTGC	**Puerto Gaitan,**	**27.97**	**113**	*e*P	**P**	**07 39 49.9**	**+0.8**
L48A	**N Adams**	**28.01**	**22**	IAmb	IAmb	07 39 59.0	
	comp=Z,342nm,0.9s						
L48A	**N Adams**	**28.01**	**22**	P	**P**	**07 39 47.6**	**-1.5**
	baz=208,SNR=49						
L48A				P	**P**	**07 39 47.6**	**-1.5**
	baz=208,SNR=49						
L48A				S	**S**	**07 44 38.6**	**+6.1**
	baz=208						
L48A				S	**S**	**07 44 38.6**	**+6.1**
	baz=208						
SUSD	**Miller**	**28.04**	**358**	IAmb	IAmb	07 40 35.9	
	comp=Z,252nm,1.1s						
SUSD	**Miller**	**28.04**	**358**	P	**P**	**07 39 48.7**	**-0.7**
	baz=178,SNR=6.5						
SUSD	**Miller**	**28.04**	**358**	P	**P**	**07 39 48.9**	**-0.5**
	baz=178,SNR=6.5						
M50A	**Fremont**	**28.06**	**24**	IAmb	IAmb	07 39 59.5	
	comp=Z,442nm,1.1s						
M50A	**Fremont**	**28.06**	**24**	P	**P**	**07 39 48.1**	**-1.5**
	baz=211,SNR=13						
M50A				P	**P**	**07 39 48.1**	**-1.5**
	baz=211,SNR=13						
I40A	**Norwalk**	**28.15**	**11**	IAmb	IAmb	07 40 01.0	
	comp=Z,460nm,1.1s						
I40A	**Norwalk**	**28.15**	**11**	P	**P**	**07 39 49.4**	**-0.9**
	baz=195,SNR=79						
I40A				S	**S**	**07 44 34.0**	**-0.7**
	baz=195						
MLAC	**Mammoth, Mammo**	**28.17**	**323**	P	**P**	**07 39 52.3**	**+1.4**
	baz=133,SNR=22						
BW06	**Boulder Array**	**28.20**	**342**	IAmb	IAmb	07 40 03.3	
	comp=Z,478nm,1.4s						
BW06	**Boulder Array**	**28.20**	**342**	P	**P**	**07 39 51.3**	**+0.3**
	baz=156,SNR=193						
BW06				S	**S**	**07 44 39.8**	**+3.9**
	baz=156						
PD31	**Pinedale Array**	**28.20**	**342**	IAmb	IAmb	07 40 03.3	
	comp=Z,434nm,1.4s						
PDAR	**Pinedale Array**	**28.20**	**342**	P	**P**	**07 39 51.5**	**+0.4**
	comp=Z,38nm,0.9s,baz=140,slow=7.4,SNR=154						
PDAR				PcP	**PcP**	**07 43 04.0**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=126,slow=4.6,SNR=2.5						
PDAR				PKiKP	**PKiKP**	**07 50 38.6**	**-1.6**
	comp=Z,0.8nm,0.9s,baz=137,slow=3.1,SNR=3.5						
PDAR				LR	LR	07 52 10.6	
	comp=Z,18µm,19.2s,baz=167,slow=39						
	comp=Z,38nm,0.9s						
RSSD	**Black Hills**	**28.20**	**351**	P	**P**	**07 39 50.8**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,78nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,7µm,21.0s						
RSSD	**Black Hills**	**28.20**	**351**	P	**P**	**07 39 50.8**	**-0.2**
RSSD	**Black Hills**	**28.20**	**351**	P	**P**	**07 39 51.5**	**+0.4**
	baz=167,SNR=36						
RSSD				S	**S**	**07 44 37.7**	**+1.8**
	baz=167						
RSSD	**Black Hills**	**28.20**	**351**	P	**P**	**07 39 51.4**	**+0.4**
	baz=167						
RSSD				S	**S**	**07 44 37.8**	**+2.0**
	baz=167						
O54A	**Avella**	**28.20**	**29**	IAmb	IAmb	07 40 01.5	
	comp=Z,390nm,1.2s						
O54A	**Avella**	**28.20**	**29**	P	**P**	**07 39 50.0**	**-0.9**
	baz=218,SNR=60						
O54A				P	**P**	**07 39 50.0**	**-0.9**
	baz=218,SNR=60						
CBN	**Corbin Frederi**	**28.27**	**36**	IAmb	IAmb	07 40 02.4	
	comp=Z,521nm,1.4s						
CBN	**Corbin Frederi**	**28.27**	**36**	P	**P**	**07 39 50.6**	**-0.8**
	baz=225,SNR=28						
CBN	**Corbin Frederi**	**28.27**	**36**	P	**P**	**07 39 50.7**	**-0.8**
	baz=225,SNR=28						
CBN				S	**S**	**07 44 43.4**	**+6.9**
	baz=225						
GUVC	**San Jose del G**	**28.34**	**116**	*e*P	**P**	**07 39 55.7**	**+3.4**
NVAR	**Mina Array Bea**	**28.42**	**325**	P	**P**	**07 39 54.5**	**+1.4**
	comp=Z,124nm,1.0s,baz=147,slow=8.4,SNR=346						
NVAR				PcP	**PcP**	**07 43 06.3**	**+1.1**
	comp=Z,13nm,0.9s,baz=145,slow=3.3,SNR=3.6						
	comp=Z,124nm,1.0s						
HVU	**Hansel Valley**	**28.44**	**336**	IAmb	IAmb	07 40 07.3	
	comp=Z,219nm,1.3s						
N53A	**Lisbon**	**28.49**	**28**	IAmb	IAmb	07 40 03.8	
	comp=Z,337nm,1.2s						
N53A	**Lisbon**	**28.49**	**28**	P	**P**	**07 39 52.0**	**-1.5**
	baz=216,SNR=38						
N53A				P	**P**	**07 39 52.0**	**-1.5**
	baz=216,SNR=38						
N53A				S	**S**	**07 44 40.1**	**0.0**
	baz=216						
N53A				S	**S**	**07 44 40.1**	**0.0**
	baz=216						
I42A	**Draeger Farm,**	**28.50**	**14**	IAmb	IAmb	07 40 04.2	
	comp=Z,502nm,1.1s						
I42A	**Draeger Farm,**	**28.50**	**14**	P	**P**	**07 39 52.5**	**-0.9**
	baz=198,SNR=42						
AAM	**Ann Arbor**	**28.61**	**22**	IAmb	IAmb	07 40 04.4	
	comp=Z,220nm,0.9s						
AAM	**Ann Arbor**	**28.61**	**22**	P	**P**	**07 39 52.9**	**-1.5**
	baz=209,SNR=14						
AAM	**Ann Arbor**	**28.61**	**22**	P	**P**	**07 39 52.8**	**-1.6**
	baz=209,SNR=14						
AAM				S	**S**	**07 44 47.6**	**+5.8**
	baz=209						
ELK	**Elko**	**28.62**	**332**	P	**P**	**07 39 56.5**	**+1.7**
	comp=Z,53nm,1.1s,baz=146,slow=7.2,SNR=104						
ELK				LR	LR	07 51 11.8	
	comp=Z,18µm,19.4s,baz=148,slow=36						
	comp=Z,53nm,1.1s						
ELK	**Elko**	**28.62**	**332**	IAMs_20	IAMs_20	07 51 00.8	
	comp=Z,22µm,20.0s						
AHID	**Auburn Hatcher**	**28.69**	**339**	P	**P**	**07 39 54.6**	**-0.8**
AHID				IAmb	IAmb	07 40 07.8	
	comp=Z,537nm,1.6s						
AHID				IAMs_20	IAMs_20	07 52 57.0	
	comp=Z,15µm,20.0s						
P57A	**Homestead Farm**	**28.84**	**33**	IAmb	IAmb	07 40 11.8	
	comp=Z,408nm,1.5s						
P57A	**Homestead Farm**	**28.84**	**33**	P	**P**	**07 39 56.0**	**-0.5**
	baz=222,SNR=29						
P57A				P	**P**	**07 39 56.0**	**-0.5**
	baz=222,SNR=29						
M52A	**Chesterland**	**28.87**	**26**	IAmb	IAmb	07 40 07.6	
	comp=Z,168nm,1.0s						
M52A	**Chesterland**	**28.87**	**26**	P	**P**	**07 39 55.2**	**-1.6**
	baz=214,SNR=8.3						
M52A				P	**P**	**07 39 55.2**	**-1.6**
	baz=214,SNR=8.3						
S61A	**Accomac**	**28.89**	**38**	P	**P**	**07 39 56.2**	**-0.8**
	baz=229						
S61A				P	**P**	**07 39 56.2**	**-0.8**
	baz=229						
J47A	**Sunmer**	**29.03**	**20**	IAmb	IAmb	07 40 08.6	
	comp=Z,613nm,1.4s						
J47A	**Sunmer**	**29.03**	**20**	P	**P**	**07 39 56.4**	**-1.8**
	baz=206,SNR=17						
J47A				P	**P**	**07 39 56.4**	**-1.8**
	baz=206,SNR=17						
M53A	**WI Miller and**	**29.08**	**27**	IAmb	IAmb	07 40 57.3	
	comp=Z,423nm,1.6s						
M53A	**WI Miller and**	**29.08**	**27**	P	**P**	**07 39 57.3**	**-1.3**
	baz=216,SNR=11						
M53A				S	**S**	**07 44 54.9**	**+5.6**
	baz=216						
SPMN	**Marine on St.**	**29.12**	**7**	P	**P**	**07 39 57.5**	**-1.4**
	baz=190,SNR=101						
SPMN	**Marine on St.**	**29.12**	**7**	P	**P**	**07 39 57.8**	**-1.1**
	baz=190,SNR=101						
SPMN				S	**S**	**07 44 52.5**	**+2.6**
	baz=190						
REDW	**Red Top Meadow**	**29.14**	**340**	P	**P**	**07 39 59.7**	**+0.3**
REDW				IAMs_20	IAMs_20	07 53 22.9	
	comp=Z,16µm,19.0s						
SNOW	**Snow King Moun**	**29.20**	**341**	IAMs_20	IAMs_20	07 53 24.5	
	comp=Z,16µm,20.0s						
LOHW	**Long Hollow**	**29.28**	**341**	IAmb	IAmb	07 40 13.4	
	comp=Z,538nm,1.4s						
LOHW				IAMs_20	IAMs_20	07 52 45.8	
	comp=Z,20µm,18.0s						
H43A	**Windswept, Lux**	**29.32**	**15**	IAmb	IAmb	07 40 11.3	
	comp=Z,410nm,1.1s						
H43A	**Windswept, Lux**	**29.32**	**15**	P	**P**	**07 39 59.7**	**-1.0**
	baz=200,SNR=31						
H43A				S	**S**	**07 44 52.5**	**-0.5**
	baz=200						
I45A	**Fountain**	**29.32**	**17**	P	**P**	**07 39 59.8**	**-0.9**
	baz=203,SNR=28						
I45A				P	**P**	**07 39 59.8**	**-0.9**
	baz=203,SNR=28						
K50A	**Casco**	**29.40**	**23**	IAmb	IAmb	07 40 10.8	
	comp=Z,199nm,0.9s						
K50A	**Casco**	**29.40**	**23**	P	**P**	**07 39 59.6**	**-1.8**
	baz=211,SNR=14						
K50A				P	**P**	**07 39 59.6**	**-1.8**
	baz=211,SNR=14						
SDMD	**Soldier’s Deli**	**29.41**	**34**	P	**P**	**07 40 00.7**	**-0.9**
	baz=224,SNR=30						
MOOW	**Moose Ponds**	**29.45**	**341**	IAmb	IAmb	07 40 14.7	
	comp=Z,598nm,1.9s						
MOOW				IAMs_20	IAMs_20	07 52 51.2	
	comp=Z,15µm,19.0s						
F33A	**5 Mile Ranch,**	**29.45**	**2**	P	P	07 39 56.5	-5.4
	baz=183,SNR=37						
ALLY	**Alegheny Colle**	**29.48**	**28**	P	**P**	**07 40 00.4**	**-1.8**
ALLY				IAmb	IAmb	07 40 17.4	
	comp=Z,180nm,1.0s						
ALLY	**Alegheny Colle**	**29.48**	**28**	P	**P**	**07 40 00.7**	**-1.5**
	baz=216,SNR=10						
G40A	**Rib Lake**	**29.56**	**11**	P	**P**	**07 40 01.8**	**-1.0**
	baz=195,SNR=153						
G40A				S	**S**	**07 45 00.6**	**+3.8**
	baz=195						
F36A	**Milaca**	**29.67**	**6**	IAmb	IAmb	07 40 14.1	
	comp=Z,206nm,1.0s						
F36A	**Milaca**	**29.67**	**6**	P	**P**	**07 40 02.8**	**-1.0**
	baz=188,SNR=94						
AOPR	**Arecibo Observ**	**29.73**	**82**	IAmb	IAmb	07 40 20.5	
	comp=Z,288nm,1.6s						
FLWY	**Flagg Ranch**	**29.74**	**341**	IAmb	IAmb	07 40 18.6	
	comp=Z,364nm,1.5s						
FLWY				IAMs_20	IAMs_20	07 52 59.8	
	comp=Z,17µm,19.0s						
SSPA	**Standing Stone**	**29.76**	**32**	P	**P**	**07 40 04.1**	**-0.6**
SSPA				IAmb	IAmb	07 40 15.6	
	comp=Z,346nm,1.4s						
SSPA	**Standing Stone**	**29.76**	**32**	P	**P**	**07 40 04.2**	**-0.6**
	baz=221,SNR=26						
SSPA	**Standing Stone**	**29.76**	**32**	P	**P**	**07 40 03.9**	**-0.8**
	baz=221						
OBIP	**Obispado Ponce**	**29.87**	**82**	P	**P**	**07 40 03.5**	**-2.4**
OBIP				IAmb	IAmb	07 40 08.7	
	comp=Z,466nm,1.9s						
MIDE	**Milford**	**29.89**	**37**	P	**P**	**07 40 05.5**	**-0.4**
	baz=228,SNR=9.8						
CELP	**Cerrillos**	**29.90**	**82**	P	**P**	**07 40 04.7**	**-1.5**
ERPA	**Erie**	**29.93**	**27**	IAmb	IAmb	07 40 17.3	
	comp=Z,170nm,1.0s						
ERPA	**Erie**	**29.93**	**27**	P	**P**	**07 40 04.0**	**-2.1**
	baz=216						
ERPA	**Erie**	**29.93**	**27**	P	**P**	**07 40 03.8**	**-2.3**
	baz=216						
ERPA				S	**S**	**07 45 06.5**	**+3.9**
	baz=216						
BAUV	**El Baul**	**29.96**	**101**	IAmb	IAmb	07 40 08.3	
	comp=Z,333nm,1.2s						
M55A	**Ridgway**	**29.97**	**29**	IAmb	IAmb	07 40 17.1	
	comp=Z,293nm,0.9s						
M55A	**Ridgway**	**29.97**	**29**	P	**P**	**07 40 05.3**	**-1.3**
	baz=219,SNR=31						
M55A				P	**P**	**07 40 05.3**	**-1.3**
	baz=219,SNR=31						
H17A	**Grant Village**	**29.98**	**342**	IAmb	IAmb	07 40 22.0	
	comp=Z,431nm,1.9s						
H17A	**Grant Village**	**29.98**	**342**	P	**P**	**07 40 08.6**	**+1.7**
	baz=155,SNR=8.5						
PAGS	**Pennsylvania G**	**30.06**	**33**	IAmb	IAmb	07 40 21.7	
	comp=Z,197nm,1.2s						
LKWY	**Lake**	**30.08**	**342**	IAmb	IAmb	07 40 27.7	
	comp=Z,199nm,1.2s						
MVL	**Millersville**	**30.10**	**34**	IAmb	IAmb	07 40 20.3	
	comp=Z,224nm,1.3s						
ATAH	**Atahualpa**	**30.23**	**139**	LR	LR	07 50 20.6	
	comp=Z,8µm,18.6s,baz=325,slow=32						
E28A	**Huff**	**30.25**	**356**	P	**P**	**07 40 08.6**	**-0.4**
	baz=175,SNR=13						
RLMT	**Red Lodge**	**30.27**	**344**	P	**P**	**07 40 10.0**	**+0.6**
	baz=158,SNR=144						
RLMT				S	**S**	**07 45 16.0**	**+7.6**
	baz=158						
YNR	**Norris Junctio**	**30.30**	**342**	IAmb	IAmb	07 40 26.9	
	comp=Z,311nm,1.7s						
SJG	**San Juan**	**30.30**	**82**	LR	LR	07 54 00.4	
	comp=Z,8µm,20.6s,baz=284,slow=40						
SJG	**San Juan**	**30.30**	**82**	P	**P**	**07 40 08.9**	**-0.8**
SJG				pmax	pmax		
	comp=Z,179nm,1.0s						
SJG				MLR	MLR		
	comp=Z,7µm,20.0s						
SJG	**San Juan**	**30.30**	**82**	P	**P**	**07 40 08.9**	**-0.8**
SJG				IAmb	IAmb	07 40 10.9	
	comp=Z,179nm,0.9s						
SJG	**San Juan**	**30.30**	**82**	*e*P	**P**	**07 40 07.8**	**-1.9**
I49A	**Point Hope**	**30.33**	**22**	IAmb	IAmb	07 40 20.6	
	comp=Z,130nm,1.0s						
I49A	**Point Hope**	**30.33**	**22**	P	**P**	**07 40 07.2**	**-2.5**
	baz=210						
I49A				P	**P**	**07 40 07.2**	**-2.5**
	baz=210						
YMR	**Madison River**	**30.35**	**341**	IAmb	IAmb	07 40 23.4	
	comp=Z,434nm,1.4s						
GEDE	**Greenville**	**30.36**	**35**	P	**P**	**07 40 08.9**	**-1.0**
	baz=226,SNR=42						
GCPR	**Guaynabo City**	**30.36**	**82**	P	**P**	**07 40 09.4**	**-0.8**
G45A	**Suttons Bay**	**30.41**	**17**	P	**P**	**07 40 09.0**	**-1.4**
	baz=204,SNR=15						
G45A				P	**P**	**07 40 09.0**	**-1.4**

	baz=204,SNR=15						
YHH	Holmes Hill	30.42	342	IAmb	IAmb	07 40 23.9	
	comp=Z,212nm,1.4s						
PDPR	Patillas Dam,	30.43	82	P	P	07 40 10.7	-0.1
PDPR				IAmb	IAmb	07 40 12.2	
	comp=Z,145nm,0.8s						
N58A	Sunbury	30.51	33	P	P	07 40 10.3	-1.0
	baz=223,SNR=15						
N58A				P	P	07 40 10.3	-1.0
	baz=223,SNR=15						
N58A				S	S	07 45 15.0	+3.2
	baz=223						
N58A				S	S	07 45 15.0	+3.2
	baz=223						
GLMI	Grayling	30.52	19	IAmb	IAmb	07 40 21.7	
	comp=Z,358nm,1.0s						
GLMI	Grayling	30.52	19	P	P	07 40 10.4	-0.9
	baz=206,SNR=30						
GLMI	Grayling	30.52	19	P	P	07 40 10.1	-1.2
	baz=206,SNR=30						
COWI	Conover	30.56	12	IAmb	IAmb	07 40 22.4	
	comp=Z,255nm,1.2s						
COWI				IAMs_20	IAMs_20	07 53 53.1	
	comp=Z,12µm,22.0s						
COWI	Conover	30.56	12	P	P	07 40 10.4	-1.3
	baz=197						
CBYP	Canovanas	30.58	82	IAmb	IAmb	07 40 12.8	
	comp=Z,162nm,0.9s						
YHL	Hebgen Lake	30.58	341	IAmb	IAmb	07 40 26.5	
	comp=Z,408nm,1.4s						
HLID	Hailey	30.59	336	P	P	07 40 13.0	+0.8
	baz=148,SNR=108						
HLID				S	S	07 45 18.0	+4.7
	baz=148						
HUMP	Col San Antoni	30.59	82	IAmb	IAmb	07 40 28.5	
	comp=Z,146nm,1.0s						
E38A	The Farm, Brul	30.64	9	P	P	07 40 11.7	-0.6
	baz=192,SNR=62						
M57A	Sunshine Farm,	30.67	31	P	P	07 40 11.7	-1.0
	baz=222,SNR=18						
M57A				P	P	07 40 11.7	-1.0
	baz=222,SNR=18						
M57A				S	S	07 45 18.1	+3.8
	baz=222						
M57A				S	S	07 45 18.1	+3.8
	baz=222						
D32A	Dogwood Acres,	30.73	1	IAmb	IAmb	07 40 23.1	
	comp=Z,228nm,1.1s						
D32B	Dogwood Acres,	30.73	1	P	P	07 40 11.7	-1.5
	baz=182,SNR=17						
P61A	Hammonton	30.73	36	P	P	07 40 12.6	-0.7
P61A	Hammonton	30.73	36	P	P	07 40 12.6	-0.7
	baz=227,SNR=19						
P61A				P	P	07 40 12.6	-0.7
	baz=227,SNR=19						
WVNY	West Valley, N	30.78	28	P	P	07 40 13.1	-0.6
WVNY				IAmb	IAmb	07 40 24.3	
	comp=Z,387nm,1.4s						
WVNY	West Valley, N	30.78	28	P	P	07 40 12.6	-1.1
	baz=218,SNR=25						
TUPA	Temple Univers	30.85	35	P	P	07 40 13.4	-0.9
	baz=226,SNR=60						
MTP	Monte Pirata	30.87	82	IAmb	IAmb	07 40 17.3	
	comp=Z,311nm,0.9s						
MFID	Camas Ranch	31.04	334	P	P	07 40 16.0	-0.1
MFID				IAMs_20	IAMs_20	07 53 29.9	
	comp=Z,20µm,21.0s						
LUPA	Lehigh Univers	31.05	34	P	P	07 40 15.2	-0.9
LUPA				IAmb	IAmb	07 40 18.7	
	comp=Z,182nm,1.0s						
L56A	Greenwood	31.06	30	P	P	07 40 15.3	-0.9
	baz=220,SNR=15						
L56A				P	P	07 40 15.3	-0.9
	baz=220,SNR=15						
LAO	LASA Array	31.07	349	IAmb	IAmb	07 40 27.8	
	comp=Z,480nm,1.6s						
LAO				IAMs_20	IAMs_20	07 54 36.7	
	comp=Z,11µm,19.0s						
LAO	LASA Array	31.07	349	P	P	07 40 16.0	-0.3
	baz=164,SNR=58						
LAO	LASA Array	31.07	349	P	P	07 40 15.8	-0.4
	baz=164,SNR=58						
CUPR	Culebra, Puert	31.12	82	P	P	07 40 16.3	-0.7
PANJ	Princeton	31.26	35	P	P	07 40 17.8	-0.1
	baz=227,SNR=69						
E43A	Lone Tree Farm	31.30	15	P	P	07 40 16.9	-1.3
	baz=200,SNR=55						
E43A				S	S	07 45 25.0	+1.0
	baz=200						
MMNY	Mt. Morris Dam	31.36	29	IAmb	IAmb	07 40 29.1	
	comp=Z,228nm,1.0s						
BOZ	Bozeman (W)	31.39	341	IAmb	IAmb	07 40 32.3	
	comp=Z,299nm,1.4s						
BOZ				IAMs_20	IAMs_20	07 54 04.5	
	comp=Z,16µm,20.0s						
BOZ	Bozeman (W)	31.39	341	P	P	07 40 20.6	+1.4
	baz=154,SNR=147						
BOZ				S	S	07 45 28.1	+2.4
	baz=154						
STVI	Saint Thomas	31.43	81	IAmb	IAmb	07 40 22.3	
	comp=Z,173nm,0.9s						
MEDO	Medina	31.45	28	IAmb	IAmb	07 40 29.6	
	comp=Z,129nm,1.1s						
J54A	Appleton	31.45	27	P	P	07 40 18.7	-0.8
J54A				IAmb	IAmb	07 40 29.6	
	comp=Z,174nm,1.4s						
J54A	Appleton	31.45	27	P	P	07 40 18.0	-1.6
	baz=217						
J54A				P	P	07 40 18.0	-1.6
	baz=217						
MDND	Maddock	31.47	358	P	P	07 40 19.4	-0.3
	baz=177,SNR=105						
MDND	Maddock	31.47	358	P	P	07 40 19.7	0.0
	baz=177,SNR=105						
DLMT	Dillon	31.49	340	IAMs_20	IAMs_20	07 54 00.1	
	comp=Z,14µm,21.0s						
KSPA	Keystone Colle	31.52	33	P	P	07 40 19.3	-0.9
	baz=224,SNR=10						
WVOR	Wild Horse Val	31.53	330	IAmb	IAmb	07 40 23.8	
	comp=Z,317nm,1.1s						
BRNJ	Basking Ridge	31.55	35	P	P	07 40 19.7	-0.7
	baz=226,SNR=57						
HOPS	Hopland Field	31.58	321	IAMs_20	IAMs_20	07 52 37.4	
	comp=Z,11µm,19.0s						
D41A	Chassel	31.60	12	P	P	07 40 20.0	-0.8
	baz=197,SNR=89						
CDVI	St. Croix	31.63	83	*e*P	P	07 40 17.3	-4.2
ODNJ	Ogdensburg	31.80	34	IAmb	IAmb	07 40 24.3	
	comp=Z,165nm,1.0s						
ODNJ	Ogdensburg	31.80	34	P	P	07 40 21.7	-1.0
	baz=226,SNR=50						
J55A	Hilton	31.81	28	IAmb	IAmb	07 40 32.8	
	comp=Z,139nm,0.9s						
J55A	Hilton	31.81	28	P	P	07 40 20.7	-2.0
	baz=219						
J55A				P	P	07 40 20.7	-2.0
	baz=219						
BINY	Binghamton	31.88	32	IAmb	IAmb	07 40 37.9	
	comp=Z,187nm,1.1s						
BINY	Binghamton	31.88	32	P	P	07 40 22.7	-0.7
	baz=223,SNR=31						
BINY	Binghamton	31.88	32	P	P	07 40 22.8	-0.7
	baz=223,SNR=31						
BINY				S	S	07 45 39.6	+6.4
	baz=223						
AGMN	Agassiz Nation	31.93	2	IAMs_20	IAMs_20	07 54 08.2	
	comp=Z,10µm,21.0s						
AGMN	Agassiz Nation	31.93	2	P	P	07 40 22.5	-1.2
	baz=184,SNR=313						
AGMN				S	S	07 45 32.0	-1.8
	baz=184						
AGMN	Agassiz Nation	31.93	2	P	P	07 40 22.9	-0.8
	baz=184,SNR=313						
AGMN				S	S	07 45 31.9	-1.8
	baz=184						
CPNY	Central Park	31.96	36	IAmb	IAmb	07 40 34.7	
	comp=Z,254nm,1.4s						
EYMN	Ely	31.96	8	IAMs_20	IAMs_20	07 54 46.1	
	comp=Z,14µm,19.0s						
EYMN	Ely	31.96	8	P	P	07 40 22.6	-1.5
	baz=192,SNR=100						
EYMN				S	S	07 45 32.3	-2.0
	baz=192						
EYMN	Ely	31.96	8	P	P	07 40 22.8	-1.2
	baz=192,SNR=100						
EYMN				S	S	07 45 33.1	-1.3
	baz=192						
MOD	Modoc Plateau	31.97	327	IAmb	IAmb	07 40 27.6	
	comp=Z,235nm,1.1s						
E46A	Sault Ste Mari	32.01	18	IAmb	IAmb	07 40 34.8	
	comp=Z,271nm,1.1s						
E46A	Sault Ste Mari	32.01	18	P	P	07 40 23.2	-1.2
	baz=205,SNR=17						
E46A				S	S	07 45 40.1	+5.0
	baz=205						
K57A	Scipio Center	32.01	30	IAmb	IAmb	07 40 35.0	
	comp=Z,180nm,1.1s						
K57A	Scipio Center	32.01	30	P	P	07 40 23.5	-1.0
	baz=221,SNR=14						
FOR	Fordham	32.05	35	P	P	07 40 24.1	-0.7
	baz=227,SNR=18						
B35A	Bob, Littlefor	32.12	5	P	P	07 40 24.2	-1.3
	baz=187,SNR=163						
PAL	Palisades	32.13	35	P	P	07 40 24.4	-1.2
PAL				pmax	pmax		
	comp=Z,264nm,1.0s						
PAL				MLR	MLR		
	comp=Z,6µm,20.0s						
PAL	Palisades	32.13	35	P	P	07 40 24.4	-1.2
PAL				IAmb	IAmb	07 40 27.5	
	comp=Z,264nm,0.9s						
PAL	Palisades	32.13	35	P	P	07 40 24.2	-1.4
	baz=227,SNR=43						
PAL	Palisades	32.13	35	P	P	07 40 24.6	-1.0
	baz=227,SNR=43						
PAL				S	S	07 45 40.4	+3.3
	baz=227						
J08A	Circle Bar Ran	32.16	331	IAmb	IAmb	07 40 42.5	
	comp=Z,260nm,1.2s						
J56A	Wolcott	32.26	29	IAmb	IAmb	07 40 37.1	
	comp=Z,302nm,1.1s						
J56A	Wolcott	32.26	29	P	P	07 40 25.5	-1.2
	baz=220,SNR=13						
J56A				P	P	07 40 25.5	-1.2
	baz=220,SNR=13						
N62A	Caumsett State	32.33	36	IAmb	IAmb	07 40 38.0	
	comp=Z,259nm,1.2s						
N62A	Caumsett State	32.33	36	P	P	07 40 26.3	-1.0
	baz=228,SNR=11						
N62A				P	P	07 40 26.3	-1.0
	baz=228,SNR=11						
L59A	Walton	32.35	33	IAmb	IAmb	07 40 29.6	
	comp=Z,194nm,1.3s						
L59A	Walton	32.35	33	P	P	07 40 27.0	-0.6
	baz=224,SNR=31						
L59A				P	P	07 40 27.0	-0.6
	baz=224,SNR=31						
BRNY	Black Rk. Fore	32.36	35	P	P	07 40 26.8	-0.7
	baz=226,SNR=111						
SADO	Sadowa	32.44	25	P	P	07 40 26.0	-2.2
	comp=Z,36nm,0.9s,baz=245,slow=8.2,SNR=20						
	comp=Z,36nm,0.9s						
SADO	Sadowa	32.44	25	IAmb	IAmb	07 40 37.7	
	comp=Z,122nm,0.9s						
DGMT	Dagmar	32.48	352	P	P	07 40 28.5	0.0
	baz=169,SNR=25						
DGMT	Dagmar	32.48	352	P	P	07 40 28.8	+0.2
	baz=169,SNR=25						
PLID	Pearl Lake	32.49	336	IAmb	IAmb	07 40 31.7	
	comp=Z,162nm,1.1s						
NPNY	Mohonk Preserv	32.52	34	P	P	07 40 28.1	-0.9
	baz=226,SNR=31						
PECO	Prince Edward	32.71	28	IAmb	IAmb	07 40 40.5	
	comp=Z,103nm,0.8s						
KMRM	Mail Ridge	32.73	322	IAmb	IAmb	07 40 48.8	
	comp=Z,307nm,1.8s						
J57A	Williamstown	32.77	30	IAmb	IAmb	07 40 41.5	
	comp=Z,274nm,1.1s						
J57A	Williamstown	32.77	30	P	P	07 40 30.0	-1.2
	baz=221,SNR=24						
J57A				P	P	07 40 30.0	-1.2
	baz=221,SNR=24						
BMO	Blue Mountains	32.83	334	IAmb	IAmb	07 40 44.0	
	comp=Z,299nm,1.9s						
BMO				IAMs_20	IAMs_20	07 54 36.2	
	comp=Z,12µm,22.0s						
K05A	Summer Lake	32.87	328	IAmb	IAmb	07 40 48.6	
	comp=Z,110nm,1.0s						
DELO	Deloro Mine	32.88	27	IAmb	IAmb	07 40 42.0	
	comp=Z,130nm,1.0s						
HCNY	Howe Caverns	33.05	33	P	P	07 40 32.7	-0.9
	baz=224,SNR=8.7						
J58A	Remsen	33.09	31	IAmb	IAmb	07 40 44.3	
	comp=Z,141nm,1.1s						
J58A	Remsen	33.09	31	P	P	07 40 33.1	-0.8
	baz=222,SNR=18						
J58A				P	P	07 40 33.1	-0.8
	baz=222,SNR=18						
EGMT	Eagleton	33.10	345	P	P	07 40 34.8	+0.8
	baz=159,SNR=76						
EGMT				S	S	07 45 54.0	+1.8
	baz=159						
YBH	Yreka Blue Hor	33.14	325	P	P	07 40 33.7	-0.9
	comp=Z,15nm,0.8s,baz=123,slow=5.5,SNR=26						
YBH				LR	LR	07 54 09.0	
	comp=Z,6µm,19.4s,baz=154,slow=36						
	comp=Z,15nm,0.8s						
MSO	Missoula	33.23	340	IAmb	IAmb	07 40 47.7	
	comp=Z,447nm,1.8s						
MSO				IAMs_20	IAMs_20	07 55 03.1	
	comp=Z,18µm,21.0s						
MSO	Missoula	33.23	340	P	P	07 40 35.9	+0.7
	baz=151,SNR=64						
MSO				S	S	07 45 54.7	+0.5
	baz=151						
SMRT	St. Maarten	33.23	82	IAmb	IAmb	07 40 35.4	
	comp=Z,172nm,1.1s						
SMRT	St. Maarten	33.23	82	*e*P	P	07 40 33.2	-2.3
K04D	Chiloquin, OR	33.24	327	P	P	07 40 37.2	+1.8
	baz=135,SNR=25						
L04D	Klamath Falls	33.25	326	IAmb	IAmb	07 40 51.5	
	comp=Z,144nm,1.1s						
L04D				IAMs_20	IAMs_20	07 54 39.1	
	comp=Z,12µm,19.0s						
L04D	Klamath Falls	33.25	326	P	P	07 40 37.0	+1.4
	baz=134,SNR=14						
JCC	Jacoby Creek,	33.30	322	IAMs_20	IAMs_20	07 53 48.6	
	comp=Z,14µm,20.0s						
WCNY	West Carthage	33.37	30	P	P	07 40 35.1	-1.2
	baz=221,SNR=16						
M63A	Gales Ferry	33.45	36	P	P	07 40 36.5	-0.6
	baz=229,SNR=35						
M63A				P	P	07 40 36.5	-0.6
	baz=229,SNR=35						
J05D	Fort Rock, OR	33.45	328	P	P	07 40 37.7	+0.5
	baz=136,SNR=11						
TRY	Troy	33.46	33	P	P	07 40 36.7	-0.4
	baz=226,SNR=25						
KRPM	Rodgers	33.51	323	IAmb	IAmb	07 40 52.1	
	comp=Z,178nm,1.0s						
J59A	Piesco	33.55	31	IAmb	IAmb	07 40 50.5	
	comp=Z,240nm,1.5s						
J59A	Piesco	33.55	31	P	P	07 40 37.2	-0.7
	baz=224,SNR=28						
J59A				P	P	07 40 37.2	-0.7
	baz=224,SNR=28						
F10A	Beach Ranch, E	33.71	335	IAmb	IAmb	07 40 43.4	
	comp=Z,181nm,0.9s						
L61B	Northampton	33.79	34	P	P	07 40 38.6	-1.4
	baz=227,SNR=22						
L61B	Northampton	33.79	34	P	P	07 40 38.7	-1.4
	baz=227,SNR=22						
L61B				S	S	07 46 05.8	+3.0
	baz=227						
QUA2	Belchertown	33.85	35	P	P	07 40 39.5	-1.1
	baz=228,SNR=72						
J04D	Umpqua Nationa	33.86	327	IAMs_20	IAMs_20	07 55 54.0	
	comp=Z,13µm,20.0s						
J04D	Umpqua Nationa	33.86	327	P	P	07 40 42.1	+1.1
	baz=135,SNR=40						
J04D				S	S	07 46 14.7	+10
	baz=135						
HUMO	Hull Mountain	33.87	326	IAMs_20	IAMs_20	07 56 14.4	
	comp=Z,11µm,18.0s						
ULM	Lac du Bonnet	33.88	2	P	P	07 40 38.6	-2.1
	comp=Z,123nm,1.0s,baz=186,slow=9.0,SNR=88						
ULM				LR	LR	07 55 44.6	
	comp=Z,8µm,19.1s,baz=184,slow=39						
	comp=Z,123nm,1.0s						
ULM	Lac du Bonnet	33.88	2	*i* P	P	07 40 38.4	-2.3
ULM	Lac du Bonnet	33.88	2	IAmb	IAmb	07 40 50.9	
	comp=Z,304nm,1.2s						
L02F	Cave Junction	33.88	325	P	P	07 40 41.9	+1.0
	baz=132						
ACCN	Adirondack Com	33.92	32	IAmb	IAmb	07 40 55.7	
	comp=Z,139nm,1.2s						
ACCN	Adirondack Com	33.92	32	P	P	07 40 40.1	-1.0
	baz=225,SNR=23						
BBSR	BB Station	33.99	56	P	P	07 40 41.5	-0.3
BBSR				IAmb	IAmb	07 40 44.0	
	comp=Z,229nm,1.1s						
BBSR	BB Station	33.99	56	IAMs_20	IAMs_20	07 54 40.9	
	comp=Z,11µm,20.0s						
BBSR	BB Station	33.99	56	P	P	07 40 41.6	-0.3
	baz=250,SNR=7.5						
NCB	Newcomb	34.06	31	P	P	07 40 41.2	-1.2
	baz=223,SNR=34						
BRYW	Bryant College	34.07	36	IAMs_20	IAMs_20	07 56 41.3	
	comp=Z,9µm,20.0s						
MBFL	Flemmings, Mon	34.13	84	*e*P	P	07 40 37.8	-5.6
JTMT	Jette	34.14	340	P	P	07 40 43.0	-0.2
JTMT				IAmb	IAmb	07 40 56.5	
	comp=Z,306nm,1.5s						
MLYT	Lee's Yard	34.15	84	*e*P	P	07 40 41.7	-1.8
K62A	Royalston	34.18	35	IAmb	IAmb	07 40 46.8	
	comp=Z,121nm,0.9s						
K62A	Royalston	34.18	35	P	P	07 40 42.2	-1.3
	baz=228,SNR=38						
K62A				P	P	07 40 42.2	-1.3
	baz=228,SNR=38						
I05D	Terrebonne, OR	34.27	329	P	P	07 40 45.6	+1.4
	baz=137,SNR=38						
I05D				S	S	07 46 15.8	+5.5
	baz=137						
K02D	Willamette Mer	34.32	325	P	P	07 40 45.8	+1.1
	baz=132						
TBTG	Tabatinga, AM	34.33	124	*e*P	P	07 40 44.2	-0.9
TBTG	Tabatinga, AM	34.33	124	*e*P	P	07 40 45.0	-0.1
M65A	Busby, Falmout	34.35	37	P	P	07 40 44.1	-0.9
	baz=231						
LONY	Lake Ozonia	34.36	30	P	P	07 40 44.0	-1.0
LONY				IAmb	IAmb	07 40 57.7	
	comp=Z,111nm,1.1s						
LONY	Lake Ozonia	34.36	30	P	P	07 40 44.1	-0.9
	baz=222,SNR=25						
LONY				S	S	07 46 21.3	+10
	baz=222						
I04A	Tendick Farm,	34.41	328	P	P	07 40 46.5	+1.1
	baz=135,SNR=21						
I04A				S	S	07 46 15.3	+2.8
	baz=135						
HRV	Adam Dziewonsk	34.44	35	P	P	07 40 45.3	-0.4
HRV				pmax	pmax		
	comp=Z,170nm,1.1s						
HRV				MLR	MLR		
	comp=Z,6µm,21.0s						
HRV	Adam Dziewonsk	34.44	35	P	P	07 40 45.3	-0.4
HRV				IAmb	IAmb	07 40 47.8	
	comp=Z,170nm,1.1s						
HRV	Adam Dziewonsk	34.44	35	P	P	07 40 44.9	-0.8
	baz=229,SNR=23						
HRV	Adam Dziewonsk	34.44	35	P	P	07 40 44.5	-1.2
	baz=229						
HRV				S	S	07 46 17.9	+4.9
	baz=229						
BPA	Boggy Peak	34.45	84	*e*P	P	07 40 42.5	-3.6
J61A	Chester	34.47	33	IAmb	IAmb	07 40 48.4	
	comp=Z,182nm,1.1s						
J61A	Chester	34.47	33	P	P	07 40 45.5	-0.4
	baz=226,SNR=40						
J61A				P	P	07 40 45.5	-0.4
	baz=226,SNR=40						
ANWB	Willy Bob	34.48	82	*e*P	P	07 40 42.6	-3.7
L64A	Middleborough	34.48	37	P	P	07 40 45.1	-0.9
	baz=230,SNR=39						
L64A				P	P	07 40 45.1	-0.9
	baz=230,SNR=39						
WES	Weston	34.49	36	P	P	07 40 44.1	-2.1
	baz=229,SNR=18						
CZSB	Cruzeiro do Su	34.50	132	*e*P	P	07 40 46.9	+0.3
ANBD	Bethesda, Anti	34.53	84	*e*P	P	07 40 43.5	-3.3
BMNY	Brushton-Moira	34.56	30	P	P	07 40 45.3	-1.3
	baz=222,SNR=21						
GDHS	Morne Mazeau,	34.60	85	IAMs_20	IAMs_20	07 56 39.9	
	comp=Z,11µm,20.0s						
MCVT	Middlebury Col	34.66	32	P	P	07 40 46.4	-1.3
	baz=225,SNR=12						
TBG	Guadaloupe-3	34.75	86	*e*P	P	07 40 35.9	-13
TDBA	Terre de Bas,	34.76	86	*e*P	P	07 40 46.7	-2.1
CBE	Ff, Capester	34.77	85	IAMs_20	IAMs_20	07 56 45.3	
	comp=Z,12µm,20.0s						
CBE	Ff, Capester	34.77	85	*e*P	P	07 40 39.9	-9.0
J01E	Myrtle Point	34.77	326	IAmb	IAmb	07 41 02.1	
	comp=Z,204nm,0.9s						
J01E				IAMs_20	IAMs_20	07 55 05.3	
	comp=Z,8µm,19.0s						
J01E	Myrtle Point	34.77	326	P	P	07 40 50.9	+2.3
	baz=132,SNR=12						
J01E				S	S	07 46 24.9	+6.9
	baz=132						
I03D	Drain, OR	34.83	327	P	P	07 40 49.5	+0.4
	baz=134,SNR=23						
HNH	Hanover	34.86	33	IAMs_20	IAMs_20	07 57 21.1	
	comp=Z,10µm,20.0s						
HNH	Hanover	34.86	33	P	P	07 40 48.7	-0.6
	baz=226,SNR=17						
G05D	Wamic, OR	34.92	331	P	P	07 40 51.3	+1.4
	baz=138						
G05D				S	S	07 46 24.7	+4.3
	baz=138						
NNA	Nana	34.97	142	LR	LR	07 52 17.0	
	comp=Z,5µm,20.4s,baz=332,slow=31						
NNA	Nana	34.97	142	*i* P	P	07 40 52.0	+1.4
NNA				pmax	pmax		
	comp=Z,40nm,1.0s						
NNA				MLR	MLR		
	comp=Z,3µm,15.0s						
NNA	Nana	34.97	142	P	P	07 40 51.9	+1.3
BUCK	Buck Mountain	34.99	328	IAmb	IAmb	07 40 53.0	
	comp=Z,260nm,1.1s						
FRNY	Flat Rock	35.00	31	P	P	07 40 49.1	-1.4
FRNY	Flat Rock	35.00	31	P	P	07 40 49.4	-1.1
	baz=223,SNR=22						
DSLB	Salisbury	35.01	86	*e*P	P	07 40 49.2	-1.8
FFD	Franklin Falls	35.03	34	P	P	07 40 50.5	-0.3
	baz=228,SNR=35						
MDN	Morne-Daniel	35.05	86	*e*P	P	07 40 47.8	-3.5
MAGL	Barre de l’ile	35.09	85	IAMs_20	IAMs_20	07 56 54.9	
	comp=Z,11µm,21.0s						
H04D	Lebanon	35.09	328	IAmb	IAmb	07 40 53.5	
	comp=Z,220nm,1.1s						
H04D	Lebanon	35.09	328	P	P	07 40 52.0	+0.7
	baz=135,SNR=32						
HOOD	Mount Hood Mea	35.14	330	IAmb	IAmb	07 40 55.4	
	comp=Z,230nm,1.0s						
WALA	Waterton Lakes	35.18	342	IAmb	IAmb	07 41 04.7	
	comp=Z,308nm,1.4s						
UNH	University of	35.21	35	P	P	07 40 51.6	-0.8
	baz=229,SNR=15						
GDSD	La Dsirade Is	35.26	85	IAmb	IAmb	07 40 54.7	
	comp=Z,96nm,0.9s						
D08A	Wollman Farm,	35.27	335	P	P	07 40 53.0	+0.1
GRHS	Sauteurs	35.29	92	*e*P	P	07 40 53.2	-0.2
GRGR	Grenville	35.29	92	P	P	07 40 52.8	-0.6
GRGR	Grenville	35.29	92	*e*P	P	07 40 50.5	-2.9
GRSS	Sisters	35.30	92	*e*P	P	07 40 58.9	+5.4
FDF	Fort de France	35.36	87	IAmb	IAmb	07 41 04.4	
	comp=Z,162nm,1.1s						
FDF	Fort de France	35.36	87	*e*P	P	07 40 46.5	-7.5
I02E	Swisshome, OR	35.37	327	IAmb	IAmb	07 41 11.3	
	comp=Z,178nm,0.8s						
I02E	Swisshome, OR	35.37	327	P	P	07 40 55.2	+1.5
	baz=133,SNR=8.8						
I02E				S	S	07 46 31.8	+4.5
	baz=133						
LBNH	Lisbon	35.41	33	P	P	07 40 53.4	-0.7
LBNH				pmax	pmax		
	comp=Z,188nm,1.2s						
LBNH				MLR	MLR		
	comp=Z,9µm,20.0s						
LBNH	Lisbon	35.41	33	P	P	07 40 53.4	-0.7
LBNH				IAmb	IAmb	07 40 56.7	
	comp=Z,188nm,1.1s						
LBNH				IAMs_20	IAMs_20	07 57 48.8	
	comp=Z,9µm,20.0s						
LBNH	Lisbon	35.41	33	P	P	07 40 54.0	-0.2
	baz=226,SNR=41						
LBNH	Lisbon	35.41	33	P	P	07 40 54.2	+0.1
	baz=226,SNR=41						
LBNH				S	S	07 46 34.5	+6.5
	baz=226						
COR	Corvallis	35.42	328	P	P	07 40 54.9	+0.8
COR				pmax	pmax		

	comp=Z,343nm,1.3s						
COR				MLR	MLR		
	comp=Z,22µm,18.0s						
COR	**Corvallis**	**35.42**	**328**	P	**P**	**07 40 54.9**	**+0.8**
COR				IAmb	IAmb	07 41 11.1	
	comp=Z,343nm,1.2s						
GCMP	**Grenada, Carri**	**35.45**	**91**	*e*P	**P**	**07 40 50.5**	**-4.2**
BIM	**Bigot**	**35.46**	**88**	IAmb	IAmb	07 40 58.8	
	comp=Z,212nm,1.1s						
BIM	**Bigot**	**35.46**	**88**	*e*P	**P**	**07 40 51.8**	**-3.1**
F05D	**White Salmon**	**35.47**	**331**	P	**P**	**07 40 56.9**	**+2.3**
	baz=138,SNR=10						
F05D				S	**S**	**07 46 35.2**	**+6.5**
	baz=138						
SVB	**Belmont**	**35.48**	**90**	IAmb	IAmb	07 40 55.7	
	comp=Z,186nm,1.1s						
SVB	**Belmont**	**35.48**	**90**	*e*P	P	07 40 49.2	-5.8
I62A	**Tamworth**	**35.48**	**34**	P	**P**	**07 40 54.5**	**-0.1**
	baz=228,SNR=89						
I62A				P	**P**	**07 40 54.5**	**-0.1**
	baz=228,SNR=89						
NEW	**Newport**	**35.57**	**338**	P	**P**	**07 40 55.7**	**+0.3**
	comp=Z,51nm,1.0s,baz=148,slow=9.1,SNR=63						
NEW				PcP	**PcP**	**07 43 24.3**	**+0.1**
	comp=Z,19nm,0.9s,baz=86,slow=3.5,SNR=3.8						
NEW				S	**S**	**07 46 28.2**	**-2.0**
	comp=Z,3.7nm,1.1s,baz=162,slow=17,SNR=1.9						
NEW				LR	LR	07 57 08.9	
	comp=Z,29µm,18.5s,baz=155,slow=39						
	comp=Z,51nm,1.0s						
NEW	**Newport**	**35.57**	**338**	P	**P**	**07 40 55.4**	**0.0**
	baz=147,SNR=61						
NEW				S	**S**	**07 46 29.5**	**-0.7**
	baz=147						
TRQ	**Mont Tremblant**	**35.57**	**28**	IAmb	IAmb	07 41 08.7	
	comp=Z,267nm,1.4s						
ILAM	**Ilet Lapin Mar**	**35.62**	**87**	*e*P	**P**	**07 40 54.0**	**-2.2**
SLBI	**Saint Lucia, B**	**35.63**	**89**	*e*P	**P**	**07 40 53.2**	**-3.1**
MPOM	**Morne Pois Mar**	**35.68**	**88**	*e*P	**P**	**07 40 53.2**	**-3.5**
MCLT	**Moule a Chique**	**35.70**	**89**	*e*P	P	07 40 50.5	-6.4
TRN	**Trinidad (W)**	**35.84**	**94**	*e*P	**P**	**07 40 55.3**	**-2.8**
G03D	**McMinnville, O**	**35.84**	**329**	IAmb	IAmb	07 41 01.0	
	comp=Z,299nm,1.1s						
G03D	**McMinnville, O**	**35.84**	**329**	P	**P**	**07 40 59.6**	**+1.8**
	baz=135,SNR=14						
G03D				S	**S**	**07 46 41.1**	**+6.7**
	baz=135						
VLDQ	**Val d'Or**	**35.85**	**23**	IAmb	IAmb	07 41 06.6	
	comp=Z,229nm,2.0s						
TPP	**Pointe-a-Pierr**	**35.87**	**95**	*e*P	**P**	**07 40 56.9**	**-1.5**
I63A	**Otisfield**	**36.00**	**34**	IAmb	IAmb	07 41 01.8	
	comp=Z,222nm,1.0s						
I63A	**Otisfield**	**36.00**	**34**	P	**P**	**07 40 59.0**	**-0.1**
	baz=228,SNR=46						
I63A				P	**P**	**07 40 59.0**	**-0.1**
	baz=228,SNR=46						
H62A	**Milan**	**36.05**	**33**	IAmb	IAmb	07 41 01.9	
	comp=Z,159nm,1.1s						
H62A	**Milan**	**36.05**	**33**	P	**P**	**07 40 59.5**	**0.0**
	baz=227,SNR=38						
H62A				P	**P**	**07 40 59.5**	**0.0**
	baz=227,SNR=38						
HEBO	**Mount Hebo**	**36.09**	**328**	IAmb	IAmb	07 41 03.6	
	comp=Z,278nm,1.0s						
LTY	**Liberty**	**36.16**	**333**	IAmb	IAmb	07 41 13.3	
	comp=Z,582nm,1.9s						
F04D	**Rainier, OR**	**36.35**	**330**	P	**P**	**07 41 04.0**	**+1.9**
	baz=136						
F04D				S	**S**	**07 46 46.4**	**+4.3**
	baz=136						
B08A	**Colville Reser**	**36.48**	**336**	IAmb	IAmb	07 41 15.6	
	comp=Z,342nm,1.9s						
E04D	**Cinebar**	**36.48**	**331**	IAmb	IAmb	07 41 19.6	
	comp=Z,188nm,1.3s						
E04D				IAMs_20	IAMs_20	07 57 07.9	
	comp=Z,14µm,22.0s						
E04D	**Cinebar**	**36.48**	**331**	P	**P**	**07 41 04.2**	**+1.0**
	baz=138,SNR=12						
E04D				S	**S**	**07 46 49.0**	**+4.8**
	baz=138						
TOSP	**Speyside**	**36.53**	**93**	*e*P	**P**	**07 41 07.2**	**+3.2**
D05A	**Enumclaw**	**36.69**	**332**	IAmb	IAmb	07 41 08.0	
	comp=Z,231nm,1.0s						
C06D	**Leavenworth**	**36.78**	**334**	P	**P**	**07 41 06.6**	**+0.9**
	baz=141						
C06D				S	**S**	**07 46 51.4**	**+2.7**
	baz=141						
G62A	**West of Eustis**	**36.81**	**33**	IAmb	IAmb	07 41 09.5	
	comp=Z,365nm,1.1s						
G62A	**West of Eustis**	**36.81**	**33**	P	**P**	**07 41 06.3**	**+0.3**
	baz=227,SNR=89						
G62A				P	**P**	**07 41 06.3**	**+0.3**
	baz=227,SNR=89						
WVL	**Waterville**	**36.84**	**34**	P	**P**	**07 41 05.9**	**-0.4**
	baz=229,SNR=19						
E03A	**Lebam**	**36.95**	**330**	IAmb	IAmb	07 41 10.5	
	comp=Z,279nm,1.0s						
D04E	**Lakebay**	**37.04**	**331**	P	**P**	**07 41 09.6**	**+1.7**
	baz=138,SNR=8.9						
BBGH	**Gun Hill**	**37.12**	**90**	IAMs_20	IAMs_20	07 57 59.1	
	comp=Z,11µm,20.0s						
LATQ	**La Tuque**	**37.25**	**28**	IAmb	IAmb	07 41 22.3	
	comp=Z,534nm,1.9s						
D03D	**Eldon**	**37.45**	**332**	P	**P**	**07 41 12.1**	**+0.7**
	baz=138,SNR=36						
WISH	**Wishkah**	**37.46**	**331**	IAmb	IAmb	07 41 28.4	
	comp=Z,290nm,1.2s						
PKME	**Peaks-Kenny Pk**	**37.49**	**34**	IAmb	IAmb	07 41 24.8	
	comp=Z,329nm,1.5s						
PKME				IAMs_20	IAMs_20	07 58 49.8	
	comp=Z,8µm,22.0s						
PKME	**Peaks-Kenny Pk**	**37.49**	**34**	P	**P**	**07 41 11.5**	**-0.3**
	baz=229,SNR=17						
PKME	**Peaks-Kenny Pk**	**37.49**	**34**	P	**P**	**07 41 11.6**	**-0.3**
	baz=229,SNR=17						
PKME				S	**S**	**07 47 03.1**	**+3.5**
	baz=229						
B05A	**Bryant**	**37.55**	**333**	P	**P**	**07 41 12.0**	**-0.3**
	baz=140,SNR=6.6						
NLWA	**Neilton Lookou**	**37.70**	**331**	IAmb	IAmb	07 41 30.2	
	comp=Z,277nm,1.2s						
F63A	**Nahmakanta, Br**	**37.88**	**33**	P	**P**	**07 41 14.4**	**-0.7**
	baz=229,SNR=21						
F63A				P	**P**	**07 41 14.4**	**-0.7**
	baz=229,SNR=21						
B04A	**Port Angeles**	**38.02**	**332**	P	**P**	**07 41 16.9**	**+0.7**
B04A				IAmb	IAmb	07 41 32.6	
	comp=Z,305nm,1.2s						
EMMW	**East Machias**	**38.14**	**36**	IAMs_20	IAMs_20	07 59 37.0	
	comp=Z,7µm,18.0s						
EMMW	**East Machias**	**38.14**	**36**	P	**P**	**07 41 16.8**	**-0.5**
	baz=232,SNR=20						
A04D	**Lummi Island**	**38.16**	**333**	P	**P**	**07 41 18.7**	**+1.3**
	baz=139,SNR=20						
F64A	**Sherman**	**38.38**	**34**	P	**P**	**07 41 18.8**	**-0.6**
	baz=230,SNR=31						
F64A				P	**P**	**07 41 18.8**	**-0.6**
	baz=230,SNR=31						
G65A	**Princeton**	**38.39**	**35**	IAmb	IAmb	07 41 22.0	
	comp=Z,177nm,1.1s						
G65A	**Princeton**	**38.39**	**35**	P	**P**	**07 41 19.0**	**-0.4**
	baz=231,SNR=34						
G65A				P	**P**	**07 41 19.0**	**-0.4**
	baz=231,SNR=34						
PGC	**Sidney**	**38.44**	**333**	P	**P**	**07 41 19.8**	**+0.1**
LMQ	**La Malbaie**	**38.52**	**30**	P	**P**	**07 41 19.5**	**-0.9**
LMQ				IAmb	IAmb	07 41 33.9	
	comp=Z,300nm,1.4s						
E63A	**Oxbow**	**38.71**	**33**	P	**P**	**07 41 21.1**	**-1.0**
	baz=229,SNR=49						
E63A				P	**P**	**07 41 21.1**	**-1.0**
	baz=229,SNR=49						
GGN	**Saint George**	**38.74**	**36**	P	**P**	**07 41 21.7**	**-0.6**
D62A	**Allapoint, All**	**38.83**	**32**	IAmb	IAmb	07 41 36.8	
	comp=Z,346nm,1.1s						
D62A	**Allapoint, All**	**38.83**	**32**	P	**P**	**07 41 22.7**	**-0.4**
	baz=228,SNR=26						
D62A				P	**P**	**07 41 22.7**	**-0.4**
	baz=228,SNR=26						
BOAV	**Boa Vista**	**39.24**	**107**	*e*P	**P**	**07 41 26.7**	**-0.2**
CBB	**Campbell River**	**40.30**	**333**	P	**P**	**07 41 35.2**	**-0.1**
LMN	**Caledonia Moun**	**40.32**	**36**	IAmb	IAmb	07 41 48.0	
	comp=Z,195nm,1.1s						
HAL	**Halifax**	**40.34**	**38**	P	**P**	**07 41 35.3**	**-0.3**
HAL				pmax	pmax		
	comp=Z,127nm,1.0s						
HAL	**Halifax**	**40.34**	**38**	P	**P**	**07 41 35.3**	**-0.3**
BATG	**Bathurst New B**	**40.50**	**34**	P	**P**	**07 41 36.4**	**-0.6**
ETMB	**Extrema**	**40.67**	**128**	*e*P	**P**	**07 41 37.6**	**-1.2**
MACA	**Manacapuru-AM**	**41.51**	**115**	*e*P	**P**	**07 41 45.7**	**-0.1**
GBN	**Guysborough**	**41.99**	**39**	IAmb	IAmb	07 42 01.8	
	comp=Z,240nm,1.2s						
FCC	**Fort Churchill**	**42.46**	**3**	P	**P**	**07 41 52.8**	**0.0**
FCC				pmax	pmax		
	comp=Z,692nm,1.6s						
FCC	**Fort Churchill**	**42.46**	**3**	P	**P**	**07 41 52.8**	**0.0**
FCC				IAmb	IAmb	07 42 04.3	
	comp=Z,692nm,1.6s						
BBB	**Bella Bella**	**43.05**	**333**	P	**P**	**07 41 59.5**	**+1.7**
	comp=Z,46nm,1.1s,baz=116,slow=15,SNR=3.7						
BBB				LR	LR	08 01 28.4	
	comp=Z,4µm,19.2s,baz=146,slow=38						
	comp=Z,46nm,1.1s						
LPAZ	**La Paz**	**43.69**	**136**	P	**P**	**07 42 04.4**	**+0.3**
	comp=Z,17nm,0.8s,baz=334,slow=9.6,SNR=71						
LPAZ				LR	LR	07 58 58.5	
	comp=Z,4µm,19.6s,baz=314,slow=34						
	comp=Z,17nm,0.8s						
LPAZ	**La Paz**	**43.69**	**136**	P	**P**	**07 42 04.6**	**+0.5**
LPAZ				pmax	pmax		
	comp=Z,27nm,1.0s						
LPAZ	**La Paz**	**43.69**	**136**	P	**P**	**07 42 04.6**	**+0.5**
LPAZ	**La Paz**	**43.69**	**136**	*e*P	**P**	**07 42 03.1**	**-1.0**
PB12	**IPOC Station P**	**44.03**	**141**	P	**P**	**07 42 08.1**	**+1.9**
PB16	**IPOC Station P**	**44.32**	**140**	P	**P**	**07 42 10.4**	**+1.3**
PB16				IAmb	IAmb	07 42 20.2	
	comp=Z,396nm,2.2s						
RPN	**Rapa Nui**	**44.61**	**195**	P	P	07 42 18.1	+7.6
	comp=Z,134nm,1.0s,baz=0.0,slow=8.1,SNR=3.7						
RPN				LR	LR	07 56 18.2	
	comp=Z,4µm,21.3s,baz=20,slow=30						
SCHQ	**Schefferville**	**45.25**	**25**	P	**P**	**07 42 14.2**	**-1.2**
	comp=Z,56nm,1.0s,baz=230,slow=6.6,SNR=58						
SCHQ				LR	LR	08 05 12.9	
	comp=Z,5µm,18.5s,baz=221,slow=42						
	comp=Z,56nm,1.0s						
SCHQ	**Schefferville**	**45.25**	**25**	P	**P**	**07 42 14.3**	**-1.1**
SCHQ				IAmb	IAmb	07 42 28.7	
	comp=Z,132nm,1.0s						
PB11	**IPOC Station P**	**45.31**	**141**	IAmb	IAmb	07 42 25.7	
	comp=Z,111nm,1.1s						
TA01	**Diego Aracena**	**45.63**	**143**	IAmb	IAmb	07 42 28.2	
	comp=Z,152nm,1.1s						
DIB	**Dawson Inlet,**	**45.70**	**331**	P	**P**	**07 42 21.5**	**+2.6**
DIB				IAmb	IAmb	07 42 23.7	
	comp=Z,126nm,1.1s						
PATCX	**Punta Patache**	**45.84**	**143**	IAmb	IAmb	07 42 30.0	
	comp=Z,128nm,1.3s						
DRLN	**Deer Lake**	**46.32**	**36**	P	**P**	**07 42 23.3**	**-0.6**
DRLN				IAmb	IAmb	07 42 37.7	
	comp=Z,146nm,1.0s						
PB02	**IPOC Station P**	**46.38**	**143**	IAmb	IAmb	07 42 37.7	
	comp=Z,73nm,0.8s						
PB01	**IPOC Station P**	**46.40**	**142**	IAmb	IAmb	07 42 34.5	
	comp=Z,199nm,2.0s						
ITTB	**Itaituba**	**46.44**	**113**	*e*P	**P**	**07 42 24.0**	**-1.3**
MALB	**Monte Alegre**	**46.66**	**109**	*e*P	**P**	**07 42 27.6**	**+0.5**
PB07	**IPOC Station P**	**46.70**	**143**	IAmb	IAmb	07 42 37.0	
	comp=Z,114nm,1.3s						
PB04	**IPOC Station P**	**47.03**	**144**	IAmb	IAmb	07 42 39.6	
	comp=Z,127nm,1.3s						
PB09	**IPOC Station P**	**47.13**	**143**	IAmb	IAmb	07 42 40.8	
	comp=Z,128nm,1.3s						
VILB	**Vilhena**	**47.23**	**126**	*e*P	**P**	**07 42 31.4**	**-0.1**
CRAG	**Craig**	**47.47**	**333**	P	**P**	**07 42 33.0**	**+0.3**
	baz=131						
YKA	**Yellowknife Ar**	**47.60**	**350**	P	**P**	**07 42 32.2**	**-1.4**
	comp=Z,79nm,1.0s,baz=156,slow=7.6,SNR=259						
YKA				LR	LR	08 05 04.3	
	comp=Z,9µm,19.2s,baz=165,slow=39						
	comp=Z,79nm,1.0s						
YKA	**Yellowknife Ar**	**47.60**	**350**	P	**P**	**07 42 33.2**	**-0.5**
YKA	**Yellowknife Ar**	**47.60**	**350**	P	**P**	**07 42 33.2**	**-0.5**
PB06	**IPOC Station P**	**47.65**	**144**	IAmb	IAmb	07 42 44.4	
	comp=Z,141nm,1.3s						
WRAK	**Wrangell Islan**	**47.78**	**335**	IAMs_20	IAMs_20	08 04 00.7	
	comp=Z,7µm,19.0s						
LVC	**Limon Verde**	**47.95**	**143**	LR	LR	07 58 50.5	
	comp=Z,3µm,20.5s,baz=324,slow=31						
LVC	**Limon Verde**	**47.95**	**143**	P	**P**	**07 42 39.2**	**+1.8**
LVC				pmax	pmax		
	comp=Z,312nm,2.2s						
LVC	**Limon Verde**	**47.95**	**143**	P	**P**	**07 42 39.2**	**+1.8**
LVC				IAmb	IAmb	07 42 48.6	
	comp=Z,312nm,2.1s						
LVC	**Limon Verde**	**47.95**	**143**	*e*P	**P**	**07 42 37.3**	**0.0**
MCPB	**Macapa, AP**	**48.10**	**106**	*e*P	**P**	**07 42 38.3**	**0.0**
DLBC	**Dease Lake**	**48.31**	**338**	P	**P**	**07 42 40.6**	**+1.2**
	comp=Z,76nm,1.1s,baz=156,slow=5.6,SNR=59						
DLBC				LR	LR	08 04 49.8	
	comp=Z,16µm,18.6s,baz=133,slow=38						
	comp=Z,76nm,1.1s						
S34M	**Telegraph Cree**	**48.34**	**337**	P	**P**	**07 42 41.7**	**+2.1**
	baz=135						
S34M				S	**S**	**07 49 47.2**	**+8.6**
	baz=135						
AF01	**San Pedro de A**	**48.64**	**143**	P	**P**	**07 42 44.8**	**+2.2**
AF01				IAmb	IAmb	07 42 56.3	
	comp=Z,139nm,0.9s						
TAOE	**Nuku Hiva Isla**	**48.77**	**242**	*e*P	**P**	**07 42 48.0**	**+4.4**
	comp=Z,194nm,1.3s						
TAOE				*e*S	S	07 49 27.1	-19
	comp=Z,4µm,25.0s						
TAOE				*e*LR	LR	07 56 15.6	
	comp=Z,14µm,25.2s,baz=58						
TAOE	**Nuku Hiva Isla**	**48.77**	**242**	*e*T	T	08 34 21.3	
	comp=Z,149nm,0.3s						
PDRB	**Porto dos Gac**	**49.24**	**122**	*e*P	**P**	**07 42 45.6**	**-1.4**
PTLB	**Pontes e Lacer**	**49.56**	**128**	*e*P	**P**	**07 42 48.5**	**-0.9**
CLDB	**Colider**	**49.60**	**120**	*e*P	**P**	**07 42 48.0**	**-1.8**
JIS	**Juneau Island**	**49.85**	**336**	IAMs_20	IAMs_20	08 06 07.4	
	comp=Z,8µm,18.0s						
TGTN	**Hyland Airport**	**50.06**	**342**	P	**P**	**07 42 54.7**	**+2.0**
	baz=141,SNR=65						
TGTN				S	**S**	**07 50 06.1**	**+3.4**
	baz=141						
AC06	**Mina Casimiro**	**50.96**	**148**	P	**P**	**07 43 01.2**	**+1.3**
SKAG	**Skagway**	**51.00**	**336**	P	**P**	**07 43 01.2**	**+1.5**
	baz=131						
SKAG				S	**S**	**07 50 22.8**	**+7.1**
	baz=131						
FRB	**Frobisher Bay**	**51.49**	**16**	P	**P**	**07 43 01.6**	**-1.7**
	comp=Z,93nm,1.0s,baz=220,slow=8.3,SNR=80						
FRB				LR	LR	08 06 41.9	
	comp=Z,4µm,20.6s,baz=210,slow=38						
	comp=Z,93nm,1.0s						
NBRS	**Nobres**	**51.52**	**124**	*e*P	**P**	**07 43 03.8**	**-0.4**
WHY	**Whitehorse**	**51.64**	**338**	P	**P**	**07 43 05.5**	**+0.8**
WHY	**Whitehorse**	**51.64**	**338**	P	**P**	**07 43 06.3**	**+1.7**
	baz=132,SNR=16						
WHY				S	**S**	**07 50 30.1**	**+5.4**
	baz=132						
MMPY	**Sheldon Lake,**	**51.81**	**341**	P	**P**	**07 43 08.3**	**+2.4**
	baz=138,SNR=65						
MMPY				S	**S**	**07 50 33.2**	**+6.3**
	baz=138						
LCO	**Las Campanas**	**52.15**	**150**	P	**P**	**07 43 10.7**	**+1.7**
LCO				pmax	pmax		
	comp=Z,90nm,1.2s						
LCO	**Las Campanas**	**52.15**	**150**	P	**P**	**07 43 10.7**	**+1.7**
SALV	**Santo Antonio**	**52.49**	**126**	*e*P	**P**	**07 43 11.1**	**-0.3**
PRPB	**Parauapebas**	**52.51**	**111**	*e*P	**P**	**07 43 11.6**	**-0.1**
N31M	**Braeburn, Yuko**	**52.52**	**338**	P	**P**	**07 43 13.2**	**+2.1**
	baz=132,SNR=20						
N31M				S	**S**	**07 50 43.7**	**+7.0**
	baz=132						
TMAB	**Tom-Au,PA,Br**	**52.52**	**106**	*e*P	**P**	**07 43 12.5**	**+0.8**
M31M	**Drury Creek, Y**	**52.53**	**339**	P	**P**	**07 43 12.0**	**+0.9**
M31M				IAMs_20	IAMs_20	08 04 47.5	
	comp=Z,7µm,20.0s						
M31M	**Drury Creek, Y**	**52.53**	**339**	P	**P**	**07 43 12.4**	**+1.3**
	baz=134,SNR=12						
M31M				S	**S**	**07 50 42.2**	**+5.5**
	baz=134						
HYT	**Haines Junctio**	**52.72**	**337**	P	**P**	**07 43 14.5**	**+1.8**
	baz=130,SNR=12						
HYT				S	S	07 50 49.0	+9.5
	baz=130						
PNL	**Peninsula**	**52.74**	**335**	P	**P**	**07 43 14.8**	**+2.0**
	baz=127,SNR=5.9						
PNL				S	**S**	**07 50 46.9**	**+7.2**
	baz=127						
N30M	**Aishikik Lake**	**52.98**	**338**	P	**P**	**07 43 16.3**	**+1.8**
	baz=130						
N30M				S	**S**	**07 50 51.6**	**+8.7**
	baz=130						
BCPM	**Bancas Point**	**53.01**	**335**	IAmb	IAmb	07 43 18.4	
	comp=Z,90nm,0.9s						
BCPM				IAMs_20	IAMs_20	08 07 53.0	
	comp=Z,6µm,21.0s						
YUK6	**Outpost Mounta**	**53.12**	**337**	P	**P**	**07 43 18.4**	**+2.6**
	baz=129,SNR=7.7						
YUK6				S	**S**	**07 50 53.9**	**+8.7**
	baz=129						
CFSA	**Confresa**	**53.13**	**117**	*e*P	**P**	**07 43 17.3**	**+1.0**
PINM	**Pinnacle**	**53.35**	**335**	P	**P**	**07 43 19.1**	**+1.8**
	baz=126						
RKT	**Rikitea**	**53.44**	**224**	*e*P	P	07 43 24.1	+5.8
	comp=Z,86nm,1.2s						
RKT	**Rikitea**	**53.44**	**224**	*e*T	T	08 40 13.3	
	comp=Z,57nm,0.3s						
YUK4	**Talbot Arm**	**53.48**	**337**	P	**P**	**07 43 20.9**	**+2.5**
	baz=129,SNR=7.0						
YUK4				S	**S**	**07 50 58.0**	**+7.9**
	baz=129						
M30M	**Minto, Yukon**	**53.60**	**339**	P	**P**	**07 43 20.7**	**+1.6**
	baz=131,SNR=10						
M30M				S	**S**	**07 50 57.1**	**+5.7**
	baz=131						
CO02	**Combarbal**	**53.84**	**151**	IAmb	IAmb	07 43 30.6	
	comp=Z,145nm,1.4s						
TABL	**Table Mountain**	**53.91**	**335**	IAMs_20	IAMs_20	08 04 48.7	
	comp=Z,6µm,21.0s						
SNDB	**Serra Nova Dou**	**53.94**	**119**	*e*P	**P**	**07 43 21.8**	**-0.4**
PP1B	**Ponte de Pedra**	**54.11**	**127**	*e*P	**P**	**07 43 22.8**	**-0.6**
YUK3	**Moose Creek**	**54.43**	**337**	P	**P**	**07 43 26.5**	**+1.2**
	baz=127						
YUK3				S	**S**	**07 51 09.6**	**+6.7**
	baz=127						
BARN	**Barnard Glacie**	**54.47**	**336**	IAMs_20	IAMs_20	08 08 48.7	
	comp=Z,7µm,22.0s						
WAX	**Waxell Ridge**	**54.61**	**335**	IAMs_20	IAMs_20	08 09 00.3	
	comp=Z,6µm,19.0s						
SUCK	**Suckling Hills**	**54.79**	**334**	IAMs_20	IAMs_20	08 05 26.1	
	comp=Z,6µm,19.0s						
HPAH	**Hawaii Prepara**	**54.87**	**283**	P	**P**	**07 43 30.3**	**+1.2**
BVCY	**Beaver Creek**	**54.97**	**337**	P	**P**	**07 43 30.9**	**+1.9**
	baz=127						
BVCY				S	**S**	**07 51 16.0**	**+6.3**
	baz=127						
KAIM	**Kayak Island**	**54.99**	**333**	IAMs_20	IAMs_20	08 05 35.3	
	comp=Z,4µm,18.0s						
KAIM	**Kayak Island**	**54.99**	**333**	P	**P**	**07 43 31.8**	**+2.6**
	baz=122						
HMT	**Hamilton**	**55.14**	**334**	IAMs_20	IAMs_20	08 06 31.2	
	comp=Z,8µm,20.0s						
ZON	**Zonda**	**55.22**	**150**	IAmb	IAmb	07 43 41.2	
	comp=Z,157nm,1.5s						
AQDB	**Aquidauana**	**55.22**	**130**	*e*P	**P**	**07 43 30.2**	**-1.2**
VRDI	**Verde Repeater**	**55.29**	**335**	IAMs_20	IAMs_20	08 05 40.2	
	comp=Z,7µm,19.0s						
M27K	**Edge Creek, AK**	**55.31**	**337**	P	**P**	**07 43 33.0**	**+1.4**
	baz=126						
M27K				S	**S**	**07 51 20.2**	**+5.5**
	baz=126						
J29M	**Klondike Camp**	**55.33**	**340**	P	**P**	**07 43 32.5**	**+0.9**
	baz=131						
J29M				S	**S**	**07 51 17.6**	**+3.0**
	baz=131						
VA03	**San Esteban**	**55.35**	**152**	IAmb	IAmb	07 43 42.5	
	comp=Z,223nm,1.4s						
DAWY	**Dawson**	**55.47**	**339**	P	**P**	**07 43 32.7**	**+0.1**
	baz=129						
DAWY				S	**S**	**07 51 18.6**	**+2.2**
	baz=129						
C36M	**Paulatuk**	**55.48**	**349**	IAMs_20	IAMs_20	08 09 50.1	
	comp=Z,5µm,20.0s						
C36M	**Paulatuk**	**55.48**	**349**	P	**P**	**07 43 32.4**	**-0.1**
	baz=149,SNR=7.1						
C36M				S	**S**	**07 51 16.2**	**0.0**
	baz=149						
MT02	**Curacav**	**55.51**	**153**	IAmb	IAmb	07 43 42.7	
	comp=Z,164nm,1.4s						
GLB	**Gilahina Butte**	**55.55**	**335**	IAMs_20	IAMs_20	08 09 17.1	
	comp=Z,6µm,18.0s						
PEL	**Peldehue**	**55.62**	**152**	P	**P**	**07 43 36.5**	**+2.4**
PEL				pmax	pmax		
	comp=Z,83nm,1.2s						
PEL	**Peldehue**	**55.62**	**152**	P	**P**	**07 43 36.5**	**+2.4**
PEL				IAMs_20	IAMs_20	08 01 41.6	
	comp=Z,6µm,20.0s						
BMRM	**Bremner River**	**55.62**	**334**	IAMs_20	IAMs_20	08 09 28.9	
	comp=Z,6µm,18.0s						
BMRM	**Bremner River**	**55.62**	**334**	P	**P**	**07 43 35.2**	**+1.5**
	baz=122						
BMRM				S	**S**	**07 51 25.3**	**+6.7**
	baz=122						
SMTB	**Santa Maria do**	**55.67**	**113**	*e*P	**P**	**07 43 34.9**	**+0.1**
DVLD	**Doverlandia**	**55.69**	**124**	*e*P	**P**	**07 43 34.5**	**-0.3**
L27K	**Beaver Creek,**	**55.71**	**337**	P	**P**	**07 43 35.1**	**+0.8**
	baz=126						
L27K				S	**S**	**07 51 26.2**	**+6.5**
	baz=126						
M26K	**Nabesna, AK**	**55.77**	**336**	IAMs_20	IAMs_20	08 08 49.8	
	comp=Z,8µm,22.0s						
M26K	**Nabesna, AK**	**55.77**	**336**	P	**P**	**07 43 36.1**	**+1.3**
	baz=125						
M26K				S	**S**	**07 51 26.6**	**+6.1**
	baz=125						
EYAK	**Cordova Ski Ar**	**55.88**	**334**	P	**P**	**07 43 37.3**	**+1.8**
	baz=121,SNR=6.6						
EYAK				S	**S**	**07 51 28.1**	**+6.2**
	baz=121						
I29M	**Ogilvie Camp,**	**55.95**	**341**	P	**P**	**07 43 36.1**	**+0.1**
	baz=131						
I29M				S	**S**	**07 51 25.0**	**+2.1**
	baz=131						
N25K	**Chitina, Valde**	**55.96**	**335**	IAMs_20	IAMs_20	08 09 30.8	
	comp=Z,6µm,18.0s						
N25K	**Chitina, Valde**	**55.96**	**335**	P	**P**	**07 43 38.1**	**+1.9**
	baz=122,SNR=5.6						
N25K				S	**S**	**07 51 29.3**	**+6.2**
	baz=122						
MT03	**Universidad Ad**	**55.99**	**152**	IAmb	IAmb	07 43 46.2	
	comp=Z,171nm,1.4s						
MT09	**Talagante**	**56.02**	**153**	IAmb	IAmb	07 43 46.2	
	comp=Z,126nm,1.5s						
EPYK	**Eagle Plains**	**56.15**	**342**	P	**P**	**07 43 37.2**	**-0.2**
	baz=134						
EPYK				S	**S**	**07 51 28.6**	**+3.1**
	baz=134						
L26K	**Log Cabin Wild**	**56.26**	**337**	P	**P**	**07 43 39.7**	**+1.5**
	baz=124						
L26K				S	**S**	**07 51 33.3**	**+6.4**
	baz=124						
FID	**Port Fidalgo**	**56.29**	**334**	IAMs_20	IAMs_20	08 10 29.8	
	comp=Z,5µm,19.0s						
C2SB	**Chapadao do Su**	**56.37**	**126**	*e*P	**P**	**07 43 40.1**	**+0.5**
K27K	**Chicken**	**56.38**	**338**	P	**P**	**07 43 40.7**	**+1.7**
	baz=126						
K27K				S	**S**	**07 51 34.8**	**+6.3**
	baz=126						
ROSB	**Rosrio**	**56.39**	**105**	*e*P	**P**	**07 43 39.7**	**-0.2**
KLU	**Klutina**	**56.44**	**335**	IAMs_20	IAMs_20	08 07 01.5	
	comp=Z,7µm,21.0s						
KLU	**Klutina**	**56.44**	**335**	P	**P**	**07 43 40.9**	**+1.3**
	baz=121						
KLU				S	**S**	**07 51 35.3**	**+5.8**
	baz=121						
BO01	**Tunca**	**56.50**	**153**	IAmb	IAmb	07 43 49.6	
	comp=Z,149nm,1.4s						
EGAK	**Eagle**	**56.51**	**339**	IAMs_20	IAMs_20	08 06 21.9	
	comp=Z,4µm,20.0s						
EGAK	**Eagle**	**56.51**	**339**	P	**P**	**07 43 40.2**	**+0.2**
	baz=128						
EGAK				S	**S**	**07 51 37.7**	**+7.5**
	baz=128						
PEXB	**Peixe**	**56.55**	**117**	*e*P	**P**	**07 43 41.0**	**-0.1**
HARP	**HAARP**	**56.60**	**336**	P	**P**	**07 43 42.5**	**+1.7**
	baz=122						
HARP				S	**S**	**07 51 39.4**	**+7.8**
	baz=122						
GLI	**Glacier Island**	**56.62**	**334**	P	**P**	**07 43 41.9**	**+1.1**
	baz=119,SNR=5.8						
GLI				S	**S**	**07 51 35.6**	**+3.9**
	baz=119						
GO05	**Huala**	**56.67**	**155**	P	**P**	**07 43 42.7**	**+1.1**
GO05				IAmb	IAmb	07 43 50.5	
	comp=Z,130nm,1.4s						
INK	**Inuvik**	**56.68**	**345**	P	**P**	**07 43 39.7**	**-1.4**
	comp=Z,129nm,0.9s,baz=130,slow=8.2,SNR=81						
INK				LR	LR	08 10 52.9	

	comp=Z,10µm,18.7s,baz=144,slow=39						
	comp=Z,129nm,0.9s						
INK	**Inuvik**	**56.68**	**345**	P	**P**	**07 43 40.7**	**-0.4**
INK				pmax	pmax		
	comp=Z,155nm,1.0s						
INK	**Inuvik**	**56.68**	**345**	P	**P**	**07 43 40.7**	**-0.4**
INK				IAmb	IAmb	07 43 43.0	
	comp=Z,155nm,0.9s						
INK	**Inuvik**	**56.68**	**345**	P	**P**	**07 43 41.3**	**+0.1**
	baz=138,SNR=58						
INK				S	**S**	**07 51 33.0**	**+0.7**
	baz=138						
M24K	**Tolsona, Glenn**	**56.86**	**335**	IAMs_20	IAMs_20	08 10 20.6	
	comp=Z,7µm,20.0s						
M24K	**Tolsona, Glenn**	**56.86**	**335**	P	**P**	**07 43 44.7**	**+2.1**
	baz=121						
M24K				S	**S**	**07 51 41.1**	**+6.2**
	baz=121						
KIP	**Kipapa**	**56.88**	**285**	*i* P	**P**	**07 43 44.0**	**+0.7**
KIP				pmax	pmax		
	comp=Z,42nm,1.2s						
IVI	**Ivigtut**	**56.95**	**26**	P	**P**	**07 43 43.0**	**-0.2**
IVI				IAmb	IAmb	07 43 58.6	
	comp=Z,140nm,1.3s						
IVI	**Ivigtut**	**56.95**	**26**	*i* P	**P**	**07 43 42.3**	**-0.8**
IVI				IAmb	IAmb	07 43 46.4	
	comp=Z,2µm,0.9s						
SCRK	**Sand Creek**	**57.03**	**338**	P	**P**	**07 43 45.4**	**+1.5**
	baz=124						
SCRK				S	**S**	**07 51 43.0**	**+5.6**
	baz=124						
PAX	**Paxson**	**57.03**	**336**	P	**P**	**07 43 44.7**	**+0.8**
	baz=122						
PAX				S	**S**	**07 51 41.7**	**+4.4**
	baz=122						
J26L	**Joseph Creek**	**57.18**	**338**	P	**P**	**07 43 46.1**	**+1.2**
	baz=125						
J26L				S	**S**	**07 51 45.9**	**+6.7**
	baz=125						
SCM	**Sheep Creek Mo**	**57.19**	**335**	IAMs_20	IAMs_20	08 07 24.4	
	comp=Z,6µm,21.0s						
SCM	**Sheep Creek Mo**	**57.19**	**335**	P	**P**	**07 43 45.8**	**+0.9**
	baz=120						
SCM				S	**S**	**07 51 44.1**	**+4.7**
	baz=120						
RIDG	**Independent Ri**	**57.22**	**337**	P	**P**	**07 43 46.0**	**+0.9**
	baz=123						
RIDG				S	**S**	**07 51 44.3**	**+4.6**
	baz=123						
SEW	**Seward**	**57.28**	**332**	P	**P**	**07 43 45.8**	**+0.3**
	baz=116,SNR=10						
SEW				S	**S**	**07 51 44.2**	**+3.8**
	baz=116						
M23K	**Glacier View**	**57.33**	**334**	P	**P**	**07 43 47.0**	**+1.1**
	baz=119						
M23K				S	**S**	**07 51 45.8**	**+4.6**
	baz=119						
KNK	**Knik Glacier**	**57.45**	**334**	IAMs_20	IAMs_20	08 07 14.5	
	comp=Z,7µm,21.0s						
KNK	**Knik Glacier**	**57.45**	**334**	P	**P**	**07 43 48.0**	**+1.2**
	baz=118,SNR=5.8						
KNK				S	**S**	**07 51 47.0**	**+4.2**
	baz=118						
ML02	**Panimavida**	**57.53**	**155**	IAmb	IAmb	07 43 57.3	
	comp=Z,199nm,1.4s						
O22K	**Cooper Landing**	**57.57**	**333**	IAMs_20	IAMs_20	08 09 18.7	
	comp=Z,4µm,19.0s						
O22K	**Cooper Landing**	**57.57**	**333**	P	**P**	**07 43 48.9**	**+1.3**
	baz=116						
O22K				S	**S**	**07 51 48.2**	**+3.9**
	baz=116						
SML	**Sawmill**	**57.59**	**334**	IAMs_20	IAMs_20	08 07 48.1	
	comp=Z,5µm,21.0s						
SML	**Sawmill**	**57.59**	**334**	P	**P**	**07 43 48.8**	**+1.1**
	baz=119,SNR=7.8						
SML				S	**S**	**07 51 49.2**	**+4.6**
	baz=119						
K24K	**Donnelly Dome**	**57.60**	**337**	P	**P**	**07 43 48.6**	**+0.8**
	baz=122						
K24K				S	**S**	**07 51 48.3**	**+3.6**
	baz=122						
BRSE	**Bradley Lake S**	**57.71**	**331**	P	**P**	**07 43 49.6**	**+1.0**
	baz=115,SNR=7.7						
BRSE				S	**S**	**07 51 49.8**	**+3.6**
	baz=115						
WAT6	**Susitna Watana**	**57.73**	**335**	P	**P**	**07 43 49.7**	**+0.8**
	baz=120,SNR=10						
WAT6				S	**S**	**07 51 49.5**	**+2.9**
	baz=120						
BRLK	**Bradley Lake**	**57.78**	**331**	IAMs_20	IAMs_20	08 08 03.4	
	comp=Z,6µm,19.0s						
KDAK	**Kodiak Island**	**57.80**	**329**	P	**P**	**07 43 50.0**	**+0.8**
	comp=Z,35nm,0.9s,baz=138,slow=9.7,SNR=1.9						
KDAK				LR	LR	08 08 59.8	
	comp=Z,8µm,18.1s,baz=131,slow=36						
	comp=Z,35nm,0.9s						
KDAK	**Kodiak Island**	**57.80**	**329**	*i* P	**P**	**07 43 49.4**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,41nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,10µm,17.0s						
KDAK	**Kodiak Island**	**57.80**	**329**	P	**P**	**07 43 48.9**	**-0.4**
KDAK	**Kodiak Island**	**57.80**	**329**	P	**P**	**07 43 50.7**	**+1.4**
	baz=112						
GHO	**Glory Hole Cre**	**57.82**	**334**	IAMs_20	IAMs_20	08 07 25.2	
	comp=Z,6µm,20.0s						
PMR	**Palmer**	**57.82**	**334**	P	**P**	**07 43 50.5**	**+1.2**
	baz=118,SNR=8.7						
PMR				S	**S**	**07 51 49.6**	**+2.1**
	baz=118						
DHY	**Denali Highway**	**57.83**	**336**	P	**P**	**07 43 49.5**	**-0.1**
DHY				IAMs_20	IAMs_20	08 10 37.3	
	comp=Z,5µm,18.0s						
DHY	**Denali Highway**	**57.83**	**336**	P	**P**	**07 43 49.9**	**+0.4**
	baz=120						
DHY				S	**S**	**07 51 51.2**	**+3.2**
	baz=120						
CNPM	**China Poot**	**57.85**	**331**	IAMs_20	IAMs_20	08 09 11.9	
	comp=Z,5µm,18.0s						
RC01	**Rabbit Creek A**	**57.85**	**333**	IAMs_20	IAMs_20	08 08 47.1	
	comp=Z,4µm,20.0s						
RC01	**Rabbit Creek A**	**57.85**	**333**	P	**P**	**07 43 50.8**	**+1.2**
	baz=117,SNR=6.7						
RC01				S	**S**	**07 51 51.1**	**+3.1**
	baz=117						
CPUP	**Villa Florida**	**57.87**	**136**	P	**P**	**07 43 49.0**	**-1.1**
	comp=Z,6.5nm,0.8s,baz=327,slow=7.7,SNR=16						
CPUP				LR	LR	08 08 48.1	
	comp=Z,1µm,20.7s,baz=326,slow=36						
	comp=Z,6.5nm,0.8s						
CPUP	**Villa Florida**	**57.87**	**136**	P	**P**	**07 43 49.5**	**-0.6**
CPUP				pmax	pmax		
	comp=Z,79nm,1.8s						
CPUP	**Villa Florida**	**57.87**	**136**	P	**P**	**07 43 49.5**	**-0.6**
CPUP	**Villa Florida**	**57.87**	**136**	*e*P	**P**	**07 43 49.5**	**-0.6**
J25K	**Salcha River,**	**57.89**	**338**	P	**P**	**07 43 50.5**	**+0.7**
	baz=123						
J25K				S	**S**	**07 51 52.2**	**+3.7**
	baz=123						
A36M	**Sachs Harbour**	**57.95**	**350**	IAMs_20	IAMs_20	08 12 23.4	
	comp=Z,5µm,19.0s						
A36M	**Sachs Harbour**	**57.95**	**350**	P	**P**	**07 43 50.0**	**0.0**
	baz=149,SNR=80						
A36M				S	**S**	**07 51 48.8**	**0.0**
	baz=149						
OHAK	**Old Harbor**	**57.95**	**328**	P	**P**	**07 43 50.3**	**0.0**
OHAK				IAmb	IAmb	07 43 53.0	
	comp=Z,137nm,1.0s						
OHAK	**Old Harbor**	**57.95**	**328**	P	**P**	**07 43 51.9**	**+1.6**
	baz=111,SNR=7.7						
FIS	**Fire Island**	**58.09**	**333**	IAMs_20	IAMs_20	08 08 24.2	
	comp=Z,5µm,18.0s						
HOM	**Homer**	**58.09**	**331**	IAMs_20	IAMs_20	08 08 14.4	
	comp=Z,5µm,19.0s						
HOM	**Homer**	**58.09**	**331**	P	**P**	**07 43 53.2**	**+2.0**
	baz=114						
NRS	**Narsarsuaq**	**58.11**	**27**	IAmb	IAmb	07 43 52.5	
	comp=Z,131nm,0.9s						
NRS				IAMs_20	IAMs_20	08 10 19.9	
	comp=Z,5µm,21.0s						
NRS	**Narsarsuaq**	**58.11**	**27**	*i* P	**P**	**07 43 50.3**	**-1.0**
NRS				IAmb	IAmb	07 43 52.4	
	comp=Z,82nm,0.8s						
WAT1	**Susitna Watana**	**58.17**	**335**	P	**P**	**07 43 52.9**	**+1.1**
	baz=119						
WAT1				S	**S**	**07 51 55.2**	**+3.0**
	baz=119						
SII	**Sitkinak Islan**	**58.18**	**327**	IAMs_20	IAMs_20	08 09 04.2	
	comp=Z,6µm,18.0s						
SII	**Sitkinak Islan**	**58.18**	**327**	P	**P**	**07 43 53.4**	**+1.4**
	baz=110						
VAH	**Vaihoa**	**58.30**	**240**	*e*P	P	07 43 58.3	+5.0
	comp=Z,86nm,1.1s						
M22K	**Willow**	**58.32**	**334**	IAMs_20	IAMs_20	08 07 40.3	
	comp=Z,6µm,21.0s						
M22K	**Willow**	**58.32**	**334**	P	**P**	**07 43 54.1**	**+1.3**
	baz=117						
M22K				S	**S**	**07 51 56.9**	**+2.9**
	baz=117						
CAPN	**Captain Cook N**	**58.33**	**332**	IAMs_20	IAMs_20	08 10 32.8	
	comp=Z,4µm,18.0s						
HDA	**Harding Lake**	**58.36**	**337**	P	**P**	**07 43 53.8**	**+0.8**
	baz=122						
RES	**Resolute Bay**	**58.39**	**1**	P	**P**	**07 43 51.5**	**-1.5**
	comp=Z,42nm,1.1s,baz=186,slow=9.9,SNR=63						
RES				S	**S**	**07 51 54.5**	**0.0**
	comp=Z,3.0nm,1.1s,baz=119,slow=13,SNR=1.3						
RES				LR	LR	08 11 10.6	
	comp=Z,4µm,18.1s,baz=187,slow=38						
RES				PKP2bc		08 13 48.5	
	comp=Z,4.8nm,1.1s,baz=346,slow=5.3,SNR=6.0						
	comp=Z,42nm,1.1s						
RES	**Resolute Bay**	**58.39**	**1**	P	**P**	**07 43 52.2**	**-0.8**
RES				pmax	pmax		
	comp=Z,248nm,2.0s						
RES	**Resolute Bay**	**58.39**	**1**	P	**P**	**07 43 52.2**	**-0.8**
RES				IAmb	IAmb	07 44 04.3	
	comp=Z,248nm,1.9s						
PMOR	**Pomariorio Ree**	**58.41**	**240**	*e*P	P	07 43 59.4	+5.4
	comp=Z,212nm,1.4s						
PMOR	**Pomariorio Ree**	**58.41**	**240**	*e*T	T	08 46 18.7	
	comp=Z,7.2nm,0.3s						
ILAR	**Eielson Array**	**58.52**	**338**	P	**P**	**07 43 54.4**	**+0.2**
	comp=Z,72nm,1.1s,baz=136,slow=4.8,SNR=12						
ILAR				LR	LR	08 11 34.7	
	comp=Z,8µm,18.3s,baz=131,slow=38						
ILAR				PKP2ab		08 13 52.8	
	comp=Z,0.9nm,1.0s,baz=328,slow=4.8,SNR=4.3						
	comp=Z,72nm,1.1s						
BDFB	**Brasilia**	**58.54**	**120**	P	**P**	**07 43 55.2**	**+0.1**
	comp=Z,34nm,0.8s,baz=285,slow=7.2,SNR=52						
	comp=Z,34nm,0.8s						
BDFB	**Brasilia**	**58.54**	**120**	P	**P**	**07 43 55.6**	**+0.5**
BDFB				pmax	pmax		
	comp=Z,47nm,0.9s						
BDFB	**Brasilia**	**58.54**	**120**	P	**P**	**07 43 55.6**	**+0.5**
RND	**Reindeer**	**58.58**	**336**	IAMs_20	IAMs_20	08 11 01.1	
	comp=Z,7µm,22.0s						
CUT	**Chulitna**	**58.68**	**334**	IAMs_20	IAMs_20	08 11 29.7	
	comp=Z,6µm,19.0s						
CUT	**Chulitna**	**58.68**	**334**	P	**P**	**07 43 56.7**	**+1.5**
	baz=117						
CUT				S	**S**	**07 52 02.2**	**+3.6**
	baz=117						
CHIR	**Chirikof Islan**	**58.70**	**326**	IAMs_20	IAMs_20	08 09 00.2	
	comp=Z,4µm,18.0s						
O20K	**Slope Mountain**	**58.71**	**331**	P	**P**	**07 43 57.1**	**+1.4**
	baz=113						
O20K				S	**S**	**07 52 02.6**	**+3.2**
	baz=113						
Q19K	**Cape Douglas,**	**58.75**	**330**	P	**P**	**07 43 56.8**	**+0.9**
	baz=112						
Q19K				S	**S**	**07 52 02.7**	**+2.9**
	baz=112						
ITRB	**Iturama**	**58.82**	**126**	*e*P	**P**	**07 43 56.4**	**-0.5**
P19K	**Oil Pt**	**58.83**	**331**	IAMs_20	IAMs_20	08 08 47.9	
	comp=Z,4µm,19.0s						
P19K	**Oil Pt**	**58.83**	**331**	P	**P**	**07 43 57.2**	**+0.8**
	baz=112						
P19K				S	**S**	**07 52 04.4**	**+3.5**
	baz=112						
TRCB	**Terra Rica**	**58.89**	**130**	*e*P	**P**	**07 43 57.0**	**-0.4**
MCR1	**Marechal Candi**	**58.90**	**133**	*e*P	**P**	**07 43 57.0**	**-0.5**
POKR	**Poker Plat Res**	**58.90**	**338**	P	**P**	**07 43 57.3**	**+0.5**
	baz=121,SNR=5.3						
POKR				S	**S**	**07 52 04.1**	**+2.5**
	baz=121						
COLA	**College**	**58.93**	**338**	*i* P	**P**	**07 43 57.3**	**+0.3**
COLA				pmax	pmax		
	comp=Z,50nm,0.8s						
COLA				MLR	MLR		
	comp=Z,8µm,16.0s						
TCOL	**CIGO, UAF Yank**	**58.93**	**338**	P	**P**	**07 43 57.1**	**+0.1**
	baz=121						
TCOL				S	**S**	**07 52 02.7**	**+0.8**
	baz=121						
SPCR	**Spurr Chakacha**	**58.98**	**333**	P	**P**	**07 43 58.0**	**+0.5**
	baz=114,SNR=14						
SPCR				S	**S**	**07 52 03.5**	**+0.6**
	baz=114						
SFJD	**Kangerlussuaq**	**59.12**	**20**	P	**P**	**07 43 57.9**	**-0.4**
	comp=Z,112nm,0.9s,baz=239,slow=5.5,SNR=44						
SFJD				LR	LR	08 11 27.2	
	comp=Z,8µm,21.2s,baz=231,slow=38						
	comp=Z,112nm,0.9s						
SFJD	**Kangerlussuaq**	**59.12**	**20**	P	**P**	**07 43 58.4**	**+0.1**
SFJD				pmax	pmax		
	comp=Z,142nm,1.0s						
SFJD				MLR	MLR		
	comp=Z,8µm,21.0s						
SFJD	**Kangerlussuaq**	**59.12**	**20**	P	**P**	**07 43 58.4**	**+0.1**
SFJD				IAmb	IAmb	07 43 59.7	
	comp=Z,142nm,0.9s						
SFJD	**Kangerlussuaq**	**59.12**	**20**	*i* P	**P**	**07 43 57.4**	**-0.9**
SFJD				IAmb	IAmb	07 43 59.5	
	comp=Z,43nm,0.9s						
PCMB	**Pacaembu**	**59.21**	**128**	*e*P	**P**	**07 43 59.2**	**-0.4**
NEA2	**Nenana**	**59.24**	**337**	P	**P**	**07 43 59.6**	**+0.4**
	baz=119						
NEA2				S	**S**	**07 52 07.7**	**+1.8**
	baz=119						
NBPS	**Pedro II - PI**	**59.43**	**105**	*e*P	**P**	**07 44 01.8**	**+0.4**
H24K	**Noodor Dome**	**59.44**	**339**	IAMs_20	IAMs_20	08 09 46.7	
	comp=Z,5µm,21.0s						
H24K	**Noodor Dome**	**59.44**	**339**	P	**P**	**07 44 00.8**	**+0.2**
	baz=121						
H24K				S	**S**	**07 52 10.3**	**+1.8**
	baz=121						
O19K	**Port Alsworth**	**59.54**	**331**	IAMs_20	IAMs_20	08 10 16.7	
	comp=Z,4µm,19.0s						
O19K	**Port Alsworth**	**59.54**	**331**	P	**P**	**07 44 01.8**	**+0.5**
	baz=112,SNR=8.3						
O19K				S	**S**	**07 52 11.5**	**+1.6**
	baz=112						
IPMB	**Ipameri, GO**	**59.59**	**123**	*e*P	**P**	**07 44 02.1**	**-0.3**
I23K	**Minto, Yukon-K**	**59.62**	**337**	P	**P**	**07 44 02.3**	**+0.6**
	baz=119,SNR=15						
I23K				S	**S**	**07 52 12.6**	**+1.8**
	baz=119						
I23K	**Minto, Yukon-K**	**59.62**	**337**	P	**P**	**07 44 02.7**	**+0.9**
SDBA	**SAO DESIDERIO**	**59.62**	**115**	*e*P	**P**	**07 44 02.8**	**+0.2**
M20K	**Styx River**	**59.66**	**333**	IAMs_20	IAMs_20	08 11 22.0	
	comp=Z,5µm,18.0s						
M20K	**Styx River**	**59.66**	**333**	P	**P**	**07 44 02.8**	**+0.5**
	baz=114						
M20K				S	**S**	**07 52 14.9**	**+3.2**
	baz=114						
P18K	**Big Mountain,**	**59.68**	**330**	IAMs_20	IAMs_20	08 10 10.5	
	comp=Z,6µm,18.0s						
P18K	**Big Mountain,**	**59.68**	**330**	P	**P**	**07 44 02.0**	**-0.3**
	baz=110						
P18K				S	**S**	**07 52 12.5**	**+0.7**
	baz=110						
PPLA	**Purkeypile**	**59.69**	**334**	P	**P**	**07 44 02.4**	**-0.1**
	baz=115,SNR=6.5						
PPLA				S	**S**	**07 52 14.4**	**+2.3**
	baz=115						
BPAW	**Bear Paw Mtn.**	**59.74**	**336**	IAMs_20	IAMs_20	08 10 59.8	
	comp=Z,5µm,19.0s						
BPAW	**Bear Paw Mtn.**	**59.74**	**336**	P	**P**	**07 44 02.7**	**+0.1**
	baz=117,SNR=7.7						
BPAW				S	**S**	**07 52 14.4**	**+1.9**
	baz=117						
O18K	**Koktuh Hills**	**59.83**	**331**	P	**P**	**07 44 04.1**	**+0.7**
	baz=111						
O18K				S	**S**	**07 52 16.1**	**+2.3**
	baz=111						
N19K	**Bonanza Creek**	**59.85**	**332**	IAMs_20	IAMs_20	08 09 20.7	
	comp=Z,4µm,20.0s						
N19K	**Bonanza Creek**	**59.85**	**332**	P	**P**	**07 44 03.9**	**+0.4**
	baz=112,SNR=16						
N19K				S	**S**	**07 52 16.5**	**+2.4**
	baz=112						
CAST	**Castle Rocks**	**59.87**	**335**	P	**P**	**07 44 03.5**	**0.0**
	baz=116,SNR=19						
CAST				S	**S**	**07 52 14.7**	**+0.5**
	baz=116						
H23K	**Yukon River**	**60.02**	**338**	IAMs_20	IAMs_20	08 12 20.2	
	comp=Z,5µm,18.0s						
H23K	**Yukon River**	**60.02**	**338**	P	**P**	**07 44 05.2**	**+0.6**
	baz=120						
H23K				S	**S**	**07 52 18.9**	**+2.8**
	baz=120						
LC01	**Cunco**	**60.07**	**157**	IAmb	IAmb	07 44 14.0	
	comp=Z,190nm,1.4s						
CHUM	**Lake Minchumin**	**60.17**	**335**	P	**P**	**07 44 05.7**	**+0.1**
	baz=116						
CHUM				S	**S**	**07 52 19.6**	**+1.7**
	baz=116						
M19K	**Big River Lodg**	**60.22**	**333**	IAMs_20	IAMs_20	08 10 46.7	
	comp=Z,5µm,18.0s						
M19K	**Big River Lodg**	**60.22**	**333**	P	**P**	**07 44 06.6**	**+0.6**
	baz=113						
M19K				S	**S**	**07 52 20.7**	**+1.9**
	baz=113						
L20K	**Farewell, AK**	**60.23**	**334**	P	**P**	**07 44 06.2**	**+0.2**
	baz=113,SNR=16						
L20K				S	**S**	**07 52 20.4**	**+1.6**
	baz=113						
ILULI	**Ilulissat**	**60.27**	**17**	IAmb	IAmb	07 44 07.5	
	comp=Z,80nm,1.0s						
ILULI				IAMs_20	IAMs_20	08 13 28.7	
	comp=Z,4µm,19.0s						
ILULI	**Ilulissat**	**60.27**	**17**	*i* P	**P**	**07 44 05.1**	**-1.1**
ILULI				IAmb	IAmb	07 44 06.8	
	comp=Z,30nm,0.9s						
XMAS	**Kiritimati**	**60.30**	**263**	IAMs_20	IAMs_20	08 03 17.2	
	comp=Z,6µm,18.0s						
DY2G	**Dye2**	**60.30**	**21**	*i* P	**P**	**07 44 05.4**	**-1.4**
DY2G				IAmb	IAmb	07 44 07.5	
	comp=Z,83nm,0.9s						
NBMO	**Morrinhos-CE**	**60.34**	**104**	*e*P	**P**	**07 44 06.9**	**-0.7**
N18K	**Kilae Creek**	**60.44**	**331**	IAMs_20	IAMs_20	08 10 55.5	
	comp=Z,3µm,19.0s						
N18K	**Kilae Creek**	**60.44**	**331**	P	**P**	**07 44 08.0**	**+0.4**
	baz=110,SNR=11						
N18K				S	**S**	**07 52 23.2**	**+1.6**
	baz=110						
PTGB	**Pitanga**	**60.47**	**131**	*e*P	**P**	**07 44 07.5**	**-0.8**
L19K	**White Mountain**	**60.53**	**333**	IAMs_20	IAMs_20	08 11 56.8	
	comp=Z,5µm,18.0s						
L19K	**White Mountain**	**60.53**	**333**	P	**P**	**07 44 08.3**	**+0.2**
	baz=112,SNR=9.6						
L19K				S	**S**	**07 52 23.4**	**+0.7**
	baz=112						
FRBT	**Francisco Belt**	**60.54**	**133**	*e*P	**P**	**07 44 08.8**	**0.0**
LR03	**Panguipulli**	**60.54**	**158**	IAmb	IAmb	07 44 17.5	
	comp=Z,119nm,1.8s						
ITQB	**Itaqui**	**60.59**	**139**	P	**P**	**07 44 09.6**	**+0.7**
ITQB				IAmb	IAmb	07 44 18.3	
	comp=Z,112nm,1.4s						
ITQB	**Itaqui**	**60.59**	**139**	*e*P	**P**	**07 44 08.9**	**0.0**
CNBA	**Chernabura Isl**	**60.60**	**324**	IAMs_20	IAMs_20	08 10 56.8	
	comp=Z,4µm,18.0s						
I21K	**Tanana**	**60.62**	**337**	P	**P**	**07 44 08.8**	**+0.2**
	baz=117						
I21K				S	**S**	**07 52 24.9**	**+1.3**
	baz=117						
K20K	**Telida**	**60.66**	**335**	IAMs_20	IAMs_20	08 12 31.2	
	comp=Z,6µm,19.0s						
K20K	**Telida**	**60.66**	**335**	P	**P**	**07 44 09.2**	**+0.2**
	baz=114,SNR=14						
K20K				S	**S**	**07 52 25.2**	**+0.9**
	baz=114						
COLD	**Coldfoot**	**60.95**	**339**	P	**P**	**07 44 11.6**	**+0.8**
	baz=120						
COLD				S	**S**	**07 52 30.6**	**+2.8**
	baz=120						
BB19B	**Bebedouro**	**61.00**	**126**	*e*P	**P**	**07 44 11.9**	**-0.1**
J20K	**Nowinta River**	**61.02**	**335**	P	**P**	**07 44 11.3**	**0.0**
	baz=114,SNR=12						
J20K				S	**S**	**07 52 29.6**	**+0.8**
	baz=114						
PPT	**Papeete**	**61.09**	**239**	LR	LR	08 04 00.5	
	comp=Z,4µm,18.0s,baz=60,slow=29						
PPT2	**Papeete2**	**61.10**	**239**	*e*P	P	07 44 18.0	+5.3
	comp=Z,57nm,1.3s						
PPT2				*e*S	S	07 52 16.4	-15
	comp=Z,2µm,25.8s						
PPT2				*e*LR	LR	08 02 03.5	
	comp=Z,10µm,25.5s,baz=50						
H21K	**Melozitna Rive**	**61.14**	**337**	P	**P**	**07 44 12.0**	**-0.2**
	baz=116						
H21K				S	**S**	**07 52 29.0**	**-1.3**
	baz=116						
PAE	**Paea**	**61.14**	**239**	*e*P	P	07 44 17.9	+5.1
	comp=Z,16nm,1.3s						
NUUG	**Nuugaatsiaq**	**61.15**	**15**	*i* P	**P**	**07 44 12.4**	**+0.3**
NUUG				IAmb	IAmb	07 44 13.7	
	comp=Z,31nm,0.9s						
SDPT	**Sand Point**	**61.22**	**325**	IAmb	IAmb	07 44 28.3	
	comp=Z,253nm,1.4s						
SDPT	**Sand Point**	**61.22**	**325**	P	**P**	**07 44 12.6**	**-0.2**
	baz=103						
TTA	**Tatalina**	**61.31**	**334**	P	**P**	**07 44 13.6**	**+0.2**
	baz=112,SNR=16						
TTA				S	**S**	**07 52 31.9**	**-0.8**
	baz=112						
JANB	**Januaria**	**61.36**	**118**	*e*P	**P**	**07 44 14.3**	**-0.2**
TOLK	**Toolik Lake Re**	**61.46**	**341**	P	**P**	**07 44 14.7**	**+0.4**
	baz=121						
TOLK				S	**S**	**07 52 35.3**	**+0.9**
	baz=121						
FRTB	**Fartura**	**61.49**	**129**	*e*P	**P**	**07 44 15.0**	**-0.2**
NBPB	**Pedra_Branca-C**	**61.57**	**106**	*e*P	**P**	**07 44 16.6**	**+0.6**
LL04	**Puerto Octay**	**61.64**	**158**	IAmb	IAmb	07 44 24.6	
	comp=Z,106nm,1.4s						
LL05	**Los Muermos**	**61.71**	**159**	IAmb	IAmb	07 44 26.0	
	comp=Z,196nm,1.4s						
ITAB	**Concordia**	**61.98**	**134**	IAmb	IAmb	07 44 30.0	
	comp=Z,213nm,1.6s						
ITAB	**Concordia**	**61.98**	**134**	*e*P	**P**	**07 44 17.4**	**-0.9**
TULEG	**Thule**	**62.08**	**7**	IAmb	IAmb	07 44 35.7	
	comp=Z,159nm,1.4s						
TULEG				IAMs_20	IAMs_20	08 12 24.2	
	comp=Z,6µm,21.0s						
TULEG	**Thule**	**62.08**	**7**	*i* P	**P**	**07 44 17.5**	**-0.7**
TULEG				IAmb	IAmb	07 44 18.8	
	comp=Z,16nm,0.9s						
PLCA	**Paso Flores**	**62.17**	**157**	P	**P**	**07 44 20.1**	**+0.6**
	comp=Z,18nm,0.8s,baz=328,slow=8.0,SNR=44						
PLCA				LR	LR	08 06 05.3	
	comp=Z,5µm,18.1s,baz=332,slow=31						
PLCA				PKP2bc		08 13 36.4	
	comp=Z,2.1nm,1.1s,baz=62,slow=6.7,SNR=3.1						
	comp=Z,18nm,0.8s						
PLCA	**Paso Flores**	**62.17**	**157**	P	**P**	**07 44 20.8**	**+1.3**
PLCA				pmax	pmax		
	comp=Z,196nm,1.4s						
PLCA	**Paso Flores**	**62.17**	**157**	P	**P**	**07 44 20.8**	**+1.3**
PLCA				IAmb	IAmb	07 44 28.8	
	comp=Z,196nm,1.4s						
PLCA	**Paso Flores**	**62.17**	**157**	*e*P	**P**	**07 44 19.8**	**+0.3**
NBCL	**Cascavel-CE**	**62.30**	**104**	*e*P	**P**	**07 44 21.4**	**+0.6**
GCSA	**Galena City Sc**	**62.34**	**335**	P	**P**	**07 44 19.5**	**-0.7**
	baz=112						
GCSA				S	**S**	**07 52 49.3**	**+4.0**
	baz=112						
RCLB	**Rio Claro- Sao**	**62.52**	**127**	*e*P	**P**	**07 44 22.1**	**-0.1**
FALS	**False Pass**	**62.77**	**324**	P	**P**	**07 44 23.8**	**+0.5**
	baz=100						
LL07	**Hotel Espejo d**	**62.99**	**160**	IAmb	IAmb	07 44 34.4	
	comp=Z,234nm,1.4s						
NBMA	**Muriti-CE**	**63.01**	**107**	*e*P	**P**	**07 44 26.6**	**+1.0**
TIJ01	**Guaruva-PR**	**63.05**	**130**	*e*P	**P**	**07 44 26.1**	**+0.3**
NBPN	**Ponto Novo - B**	**63.09**	**111**	*e*P	**P**	**07 44 25.8**	**-0.3**
ANGG	**Ammassalik, Gr**	**63.11**	**24**	IAmb	IAmb	07 44 26.2	
	comp=Z,180nm,1.1s						
ANGG				IAMs_20	IAMs_20	08 15 40.0	
	comp=Z,6µm,19.0s						
ANGG	**Ammassalik, Gr**	**63.11**	**24**	*i* P	**P**	**07 44 23.9**	**-1.4**
ANGG				IAmb	IAmb	07 44 25.7	
	comp=Z,50nm,1.0s						
CPSB	**Cacapava Do Su**	**63.13**	**137**	*e*P	**P**	**07 44 25.8**	**-0.2**
SPB	**Sao Paulo**	**63.24**	**128**	*e*P	**P**	**07 44 27.4**	**+0.5**
VAO	**Valinhos**	**63.27**	**127**	*e*P	**P**	**07 44 27.2**	**0.0**
DIAM	**Diamantina, MG**	**63.46**	**121**	*e*P	**P**	**07 44 29.2**	**+0.6**
TRQA	**Tornquist**	**63.72**	**149**	P	**P**	**07 44 29.7**	**-0.1**
TRQA				pmax	pmax		
	comp=Z,140nm,1.4s						
TRQA	**Tornquist**	**63.72**	**149**	P	**P**	**07 44 29.7**	**-0.1**
TRQA				IAmb	IAmb	07 44 38.7	
	comp=Z,140nm,1.4s						

TRQA				IAMs_20	IAMs_20	08 07 06.0	
	comp=Z,6µm,21.0s						
ICESG	**Greenland Ices**	**63.74**	**20**	*i* P	**P**	**07 44 29.1**	**-0.9**
ICESG				IAmb	IAmb	07 44 31.1	
	comp=Z,136nm,1.0s						
PET01	**Itanhaem-SP**	**63.75**	**128**	*e*P	**P**	**07 44 30.5**	**+0.2**
LL02	**Futaleuf**	**63.85**	**159**	P	**P**	**07 44 32.5**	**+2.0**
LL02				IAmb	IAmb	07 44 40.0	
	comp=Z,124nm,1.4s						
PLTB	**Pedras Altas**	**63.92**	**139**	P	**P**	**07 44 30.9**	**-0.3**
PLTB	**Pedras Altas**	**63.92**	**139**	*e*P	**P**	**07 44 31.2**	**-0.1**
BSCB	**Bom Sucesso**	**63.92**	**124**	*e*P	**P**	**07 44 31.8**	**+0.2**
EUNU	**Eureka**	**63.98**	**2**	P	**P**	**07 44 30.5**	**-0.5**
EUNU				IAmb	IAmb	07 44 32.8	
	comp=Z,109nm,1.0s						
TBI	**Tubuai**	**64.03**	**233**	*e*S	**S**	**07 53 01.3**	**-6.5**
	comp=Z,1µm,25.8s						
TBI	**Tubuai**	**64.03**	**233**	*e*LR	LR	08 03 37.0	
	comp=Z,11µm,26.5s,baz=58						
TBI	**Tubuai**	**64.03**	**233**	*e*T	T	08 53 25.1	
	comp=Z,41nm,0.2s						
CNLB	**Canela**	**64.15**	**135**	*e*P	**P**	**07 44 32.7**	**-0.2**
UNV	**Unalaska Valle**	**64.40**	**322**	P	**P**	**07 44 34.2**	**+0.2**
	baz=97,SNR=12						
PARB	**Paraibuna**	**64.49**	**126**	*e*P	**P**	**07 44 35.9**	**+0.6**
AY01	**Puyuhuapi**	**64.68**	**160**	IAmb	IAmb	07 44 45.0	
	comp=Z,116nm,1.4s						
SLP01	**Ubatuba-SP**	**64.84**	**126**	*e*P	**P**	**07 44 38.1**	**+0.5**
GDU01	**Guandu, BA**	**64.85**	**114**	*e*P	**P**	**07 44 38.0**	**+0.4**
A21K	**Barrow**	**64.86**	**342**	IAMs_20	IAMs_20	08 16 28.3	
	comp=Z,3µm,19.0s						
A21K	**Barrow**	**64.86**	**342**	P	**P**	**07 44 36.8**	**0.0**
	baz=115						
TER01	**Tubaro-SC**	**64.87**	**133**	*e*P	**P**	**07 44 38.0**	**+0.5**
RCBR	**Riachuelo**	**65.09**	**105**	LR	LR	08 15 15.3	
	comp=Z,2µm,19.6s,baz=89,slow=38						
RCBR	**Riachuelo**	**65.09**	**105**	P	**P**	**07 44 39.9**	**+0.6**
RCBR				pmax	pmax		
	comp=Z,140nm,1.2s						
RCBR				MLR	MLR		
	comp=Z,2µm,19.0s						
RCBR	**Riachuelo**	**65.09**	**105**	P	**P**	**07 44 39.9**	**+0.6**
RCBR				IAmb	IAmb	07 44 42.0	
	comp=Z,140nm,1.2s						
RCBR	**Riachuelo**	**65.09**	**105**	*e*P	**P**	**07 44 40.5**	**+1.3**
ESAR	**Angra dos Reis**	**65.24**	**125**	*e*P	**P**	**07 44 40.2**	**+0.2**
NBLA	**Lagarto - SE**	**65.31**	**111**	*e*P	**P**	**07 44 40.7**	**+0.1**
MAN01	**Angra dos Reis**	**65.53**	**125**	*e*P	**P**	**07 44 41.7**	**-0.3**
SUMG	**Summit**	**65.56**	**17**	IAmb	IAmb	07 44 43.6	
	comp=Z,126nm,1.0s						
SUMG				IAMs_20	IAMs_20	08 15 13.4	
	comp=Z,3µm,18.0s						
SUMG	**Summit**	**65.56**	**17**	*i* P	**P**	**07 44 40.6**	**-1.2**
SUMG				IAmb	IAmb	07 44 43.0	
	comp=Z,55nm,0.9s						
CMC01	**Camacan, BA**	**65.61**	**116**	*e*P	**P**	**07 44 43.4**	**+0.9**
VAS01	**Vassouras-RJ**	**65.64**	**124**	*e*P	**P**	**07 44 42.8**	**+0.1**
SJMB	**Sao Joao De Ma**	**65.72**	**120**	*e*P	**P**	**07 44 44.0**	**+0.8**
RDOG	**Red Dog Mine**	**65.73**	**338**	IAmb	IAmb	07 44 42.5	
	comp=Z,113nm,1.0s						
RDOG				IAMs_20	IAMs_20	08 16 37.0	
	comp=Z,4µm,20.0s						
RDOG	**Red Dog Mine**	**65.73**	**338**	P	**P**	**07 44 40.7**	**-1.8**
	baz=107,SNR=22						
RDOG				S	**S**	**07 53 26.0**	**-1.5**
	baz=107						
ANM	**Nome**	**65.77**	**334**	IAmb	IAmb	07 44 45.3	
	comp=Z,102nm,1.0s						
ANM				IAMs_20	IAMs_20	08 15 16.2	
	comp=Z,4µm,21.0s						
ANM	**Nome**	**65.77**	**334**	P	**P**	**07 44 43.6**	**+0.8**
	baz=103,SNR=18						
ANM				S	**S**	**07 53 31.8**	**+3.8**
	baz=103						
NBCA	**Caruaru-PE**	**65.86**	**107**	*e*P	**P**	**07 44 45.4**	**+1.1**
NBPV	**Pedro Velho**	**65.87**	**105**	*e*P	**P**	**07 44 45.7**	**+1.4**
COYC	**Coyhaique**	**65.89**	**160**	P	**P**	**07 44 45.4**	**+1.7**
COYC				IAmb	IAmb	07 44 53.4	
	comp=Z,122nm,1.2s						
COYC	**Coyhaique**	**65.89**	**160**	IAMs_20	IAMs_20	08 06 36.3	
	comp=Z,3µm,20.0s						
GUA01	**Guaratinga, BA**	**65.91**	**117**	*e*P	**P**	**07 44 45.2**	**+0.8**
BSFB	**Barra de Sao F**	**66.06**	**120**	*e*P	**P**	**07 44 45.8**	**+0.4**
NBAN	**Anadia - AL**	**66.16**	**109**	*e*P	**P**	**07 44 47.1**	**+0.9**
NAN01	**Guarapari, ES**	**66.21**	**118**	*e*P	**P**	**07 44 46.5**	**+0.2**
SOEG	**Soedalen**	**66.28**	**22**	*i* P	**P**	**07 44 45.4**	**-0.6**
SOEG				IAmb	IAmb	07 44 47.0	
	comp=Z,40nm,0.8s						
DUB01	**Friburgo-RJ**	**66.39**	**124**	*e*P	**P**	**07 44 48.7**	**+1.2**
RIB01	**Linhares ES**	**66.67**	**120**	*e*P	**P**	**07 44 48.9**	**-0.3**
NBRF	**Rio Formoso -**	**66.84**	**107**	*e*P	**P**	**07 44 51.5**	**+1.0**
CAM01	**Campos-RJ**	**66.84**	**123**	*e*P	**P**	**07 44 51.5**	**+1.2**
ALF01	**Guarapari-ES**	**67.01**	**121**	*e*P	**P**	**07 44 51.5**	**+0.1**
TNA	**Tin City**	**67.04**	**335**	IAmb	IAmb	07 44 53.3	
	comp=Z,144nm,1.0s						
TNA	**Tin City**	**67.04**	**335**	P	**P**	**07 44 50.7**	**-0.1**
	baz=101,SNR=13						
TNA				S	**S**	**07 53 47.6**	**+4.3**
	baz=101						
ABR01	**Abrolhos, BA**	**67.47**	**118**	*e*P	**P**	**07 44 55.8**	**+1.4**
GAMB	**Gambell**	**68.36**	**333**	IAMs_20	IAMs_20	08 17 27.7	
	comp=Z,4µm,20.0s						
GAMB	**Gambell**	**68.36**	**333**	P	**P**	**07 44 59.7**	**+0.5**
	baz=97						
GAMB				S	**S**	**07 54 04.0**	**+4.8**
	baz=97						
BORG	**Borgarnes**	**69.61**	**26**	P	**P**	**07 45 07.2**	**+0.2**
	comp=Z,48nm,1.1s,baz=258,slow=5.7,SNR=8.1						
BORG				LR	LR	08 18 13.5	
	comp=Z,2µm,18.4s,baz=279,slow=38						
	comp=Z,48nm,1.1s						
BORG	**Borgarnes**	**69.61**	**26**	P	**P**	**07 45 06.5**	**-0.5**
BORG				pmax	pmax		
	comp=Z,105nm,1.3s						
BORG				MLR	MLR		
	comp=Z,2µm,19.0s						
BORG	**Borgarnes**	**69.61**	**26**	P	**P**	**07 45 06.5**	**-0.5**
BORG				IAmb	IAmb	07 45 09.8	
	comp=Z,105nm,1.3s						
SCO	**Scoresbysund**	**70.02**	**20**	IAmb	IAmb	07 45 12.9	
	comp=Z,115nm,1.8s						
SCO	**Scoresbysund**	**70.02**	**20**	*i* P	**P**	**07 45 08.4**	**-0.9**
SCO				IAmb	IAmb	07 45 13.3	
	comp=Z,8.1nm,0.9s						
ADK	**Adak**	**70.46**	**320**	P	**P**	**07 45 11.9**	**-0.6**
ADK				pmax	pmax		
	comp=Z,102nm,1.1s						
ADK	**Adak**	**70.46**	**320**	P	**P**	**07 45 11.9**	**-0.6**
ADK				IAmb	IAmb	07 45 27.0	
	comp=Z,102nm,1.1s						
DBG	**Daneborg**	**71.04**	**16**	*i* P	**P**	**07 45 15.0**	**-0.6**
DBG				IAmb	IAmb	07 45 17.0	
	comp=Z,16nm,0.9s						
RAR	**Rarotonga**	**71.27**	**240**	LR	LR	08 09 09.3	
	comp=Z,3µm,18.5s,baz=48,slow=30						
DAG	**Danmarks Havn**	**71.74**	**14**	*i* P	**P**	**07 45 18.4**	**-1.4**
DAG				IAmb	IAmb	07 45 20.2	
	comp=Z,30nm,0.8s						
NOR	**Nord**	**72.66**	**9**	*i* P	**P**	**07 45 25.1**	**-0.2**
NOR				IAmb	IAmb	07 45 25.9	
	comp=Z,19nm,1.0s						
PMOZ	**Porto Moniz, M**	**73.61**	**60**	*e*SKS	**SKSac**	**07 55 40.8**	**+2.8**
PMOZ	**Porto Moniz, M**	**73.61**	**60**	*e*LR	LR	08 08 21.8	
	comp=Z,5µm,22.0s						
MG03	**Isla Dawson**	**73.73**	**164**	P	**P**	**07 45 34.6**	**+2.8**
MG03				IAmb	IAmb	07 45 42.1	
	comp=Z,98nm,1.2s						
JMIC	**Jan Mayen**	**74.48**	**20**	LR	LR	08 21 32.2	
	comp=Z,3µm,18.1s,baz=259,slow=38						
JMIC	**Jan Mayen**	**74.48**	**20**	*e*P	**P**	**07 45 36.6**	**+0.5**
USHA	**Ushuaia**	**75.16**	**163**	LR	LR	08 12 34.6	
	comp=Z,4µm,19.5s,baz=336,slow=31						
EFI	**East Falkland**	**76.06**	**156**	*i* P	**P**	**07 45 47.8**	**+2.5**
EFI				pmax	pmax		
	comp=Z,100nm,1.6s						
EFI				MLR	MLR		
	comp=Z,3µm,15.0s						
IGLA	**Glengowla, Co**	**76.16**	**38**	*e*P	**P**	**07 45 45.5**	**-0.6**
BILL	**Bilibino**	**77.19**	**337**	*d i*P	**P**	**07 45 51.5**	**-0.1**
BILL				*i* *PP	**pP**	**07 45 57.8**	**-0.4**
BILL				*i*		07 45 59.3	
BILL				*i* *SP	**PcP**	**07 46 03.9**	**+1.6**
BILL				*i*		07 48 46.0	
BILL				*e*PPP	PPP	07 50 31.0	
BILL				*i* S	**S**	**07 55 40.6**	**+0.9**
BILL				*i*		07 55 53.8	
BILL				*e*PS	**PnS**	**07 56 23.0**	**+3.2**
BILL				*e*SS	**SS**	**08 00 31.6**	**-5.3**
BILL				SSS	SSS	08 04 02.0	
BILL				pmax	pmax		
	comp=Z,97nm,1.1s						
BILL				MLR	MLR		
	comp=Z,3µm,17.0s						
BILL	**Bilibino**	**77.19**	**337**	P	**P**	**07 45 51.5**	**-0.1**
BILL				IAmb	IAmb	07 45 53.8	
	comp=Z,92nm,1.1s						
BILL				IAMs_20	IAMs_20	08 23 24.9	
	comp=Z,3µm,18.0s						
MBO	**M'Bour**	**77.50**	**79**	IAmb	IAmb	07 46 07.1	
	comp=Z,274nm,1.4s						
MBO				IAMs_20	IAMs_20	08 14 45.3	
	comp=Z,4µm,22.0s						
KPL	**Plockton**	**77.59**	**34**	*e*P	**P**	**07 45 54.1**	**+0.1**
KPL				IAmb	IAmb	07 45 55.1	
	comp=Z,116nm,1.0s						
KPL				IAMs_20	IAMs_20	08 18 59.2	
	comp=Z,5µm,22.2s						
KBS	**Kingsbay**	**77.80**	**11**	*ce*P	**P**	**07 45 55.8**	**+0.9**
KBS				pmax	pmax		
	comp=Z,200nm,2.5s						
KBS				MLR	MLR		
	comp=Z,4µm,20.0s						
KBS	**Kingsbay**	**77.80**	**11**	P	**P**	**07 45 55.5**	**+0.7**
KBS	**Kingsbay**	**77.80**	**11**	IAMs_20	IAMs_20	08 22 05.8	
	comp=Z,4µm,20.0s						
KBS	**Kingsbay**	**77.80**	**11**	⇑*i*P	**P**	**07 45 55.5**	**+0.7**
KBS				IVmBBB		07 45 58.2	
	comp=Z,2µm,2.2s						
KBS				*e*S	**S**	**07 55 49.2**	**+3.1**
KBS				IVMs_BB	IVMs_BB	08 22 05.6	
	comp=Z,2µm,16.5s						
ILTH	**Belurgan, Co L**	**77.84**	**37**	*e*P	**P**	**07 45 55.2**	**-0.2**
PGBU	**Glenifferbraes**	**78.53**	**35**	*e*P	**P**	**07 45 58.8**	**-0.5**
PGBU				IAmb	IAmb	07 46 00.4	
	comp=Z,97nm,1.0s						
GAL1	**Galloway**	**78.60**	**36**	*e*P	**P**	**07 45 59.4**	**-0.3**
GAL1				IAmb	IAmb	07 46 00.2	
	comp=Z,79nm,1.2s						
GAL1				IAMs_20	IAMs_20	08 23 32.6	
	comp=Z,4µm,19.1s						
WIM	**Isle of Man**	**78.77**	**37**	*e*P	**P**	**07 46 01.1**	**+0.4**
PMAFR	**Mafra**	**78.83**	**53**	*e*P	**P**	**07 46 01.0**	**-0.3**
	comp=Z,368nm,1.5s						
PTO	**Porto**	**78.89**	**50**	*e*P	**P**	**07 46 01.9**	**+0.3**
	comp=Z,137nm,1.1s						
SPITS	**Spitsbergen Ar**	**78.92**	**11**	P	**P**	**07 46 00.8**	**-0.3**
	comp=Z,13nm,0.8s,baz=241,slow=3.0,SNR=7.5						
SPITS				LR	LR	08 23 13.5	
	comp=Z,5µm,20.0s,baz=0.5,slow=38						
	comp=Z,13nm,0.8s						
PGAV	**Gavieira, Arco**	**78.96**	**49**	*e*P	**P**	**07 46 02.8**	**+0.7**
	comp=Z,198nm,1.5s						
PGAV	**Gavieira, Arco**	**78.96**	**49**	*e*LR	LR	08 10 19.9	
	comp=Z,2µm,20.0s						
AFI	**Afiamalu**	**78.97**	**252**	LR	LR	08 14 18.9	
	comp=Z,2µm,18.1s,baz=76,slow=30						
AFI	**Afiamalu**	**78.97**	**252**	IAMs_20	IAMs_20	08 14 06.7	
	comp=Z,3µm,18.0s						
LIS	**Lisbon**	**78.98**	**53**	*e*P	**P**	**07 46 02.5**	**+0.3**
LIS				IAmb	IAmb	07 46 04.2	
	comp=Z,308nm,1.2s						
LIS	**Lisbon**	**78.98**	**53**	*e*P	**P**	**07 46 02.4**	**+0.3**
PSBE	**So Bento**	**79.08**	**52**	*e*P	**P**	**07 46 03.0**	**+0.3**
	comp=Z,196nm,1.2s						
PSBE				*i* LQ	LQ	07 46 13.3	
WLF1	**Llynfaes**	**79.12**	**38**	*e*P	**P**	**07 46 01.2**	**-1.4**
WLF1				IAmb	IAmb	07 46 04.3	
	comp=Z,128nm,1.0s						
WLF1				IAMs_20	IAMs_20	08 23 29.9	
	comp=Z,6µm,17.0s						
WME	**Myndd Eilian**	**79.15**	**37**	*e*P	**P**	**07 46 02.5**	**-0.3**
PCAB	**Cabril**	**79.19**	**50**	*e*P	**P**	**07 46 03.5**	**+0.2**
	comp=Z,171nm,1.0s						
PCAS	**Casmilo, Conde**	**79.19**	**51**	*e*P	**P**	**07 46 03.8**	**+0.5**
	comp=Z,422nm,1.1s						
PCAS				*i* LQ	LQ	07 46 14.2	
RSBS	**Rosebush, Pemb**	**79.20**	**39**	*e*P	**P**	**07 46 02.6**	**-0.5**
RSBS				IAmb	IAmb	07 46 04.1	
	comp=Z,76nm,0.9s						
RSBS				IAMs_20	IAMs_20	08 22 45.6	
	comp=Z,3µm,19.4s						
COI	**Coimbra**	**79.22**	**51**	*e*P	**P**	**07 46 03.3**	**-0.1**
	comp=Z,274nm,1.3s						
COI	**Coimbra**	**79.22**	**51**	IAmb	IAmb	07 46 05.2	
	comp=Z,196nm,1.1s						
COI				IAMs_20	IAMs_20	08 19 32.1	
	comp=Z,3µm,22.0s						
YLL	**Llanberis**	**79.28**	**38**	*e*P	**P**	**07 46 03.4**	**-0.1**
CCA1	**Carnmenellis**	**79.29**	**41**	*e*P	**P**	**07 46 03.7**	**+0.1**
CCA1				IAMs_20	IAMs_20	08 21 58.1	
	comp=Z,3µm,18.3s						
EBL	**Broad Law**	**79.33**	**35**	*e*P	**P**	**07 46 03.8**	**+0.1**
ESK	**Eskdalemuir**	**79.35**	**35**	*e*P	**P**	**07 46 03.6**	**-0.2**
ESK				IAmb	IAmb	07 46 04.7	
	comp=Z,76nm,0.9s						
ESK				IAMs_20	IAMs_20	08 18 33.9	
	comp=Z,4µm,22.8s						
ESK	**Eskdalemuir**	**79.35**	**35**	P	**P**	**07 46 03.2**	**-0.6**
ESK				pmax	pmax		
	comp=Z,86nm,1.0s						
ESK	**Eskdalemuir**	**79.35**	**35**	P	**P**	**07 46 03.2**	**-0.6**
ESK				IAmb	IAmb	07 46 05.0	
	comp=Z,86nm,0.9s						
ESK	**Eskdalemuir**	**79.35**	**35**	IAMs_20	IAMs_20	08 18 38.9	
	comp=Z,4µm,22.0s						
EKA	**Eskdalemuir Ar**	**79.37**	**35**	LR	LR	08 19 15.4	
	comp=Z,3µm,21.6s,baz=286,slow=34						
DRUM	**Mains of Drumt**	**79.37**	**34**	*e*P	**P**	**07 46 03.4**	**-0.4**
DRUM				IAmb	IAmb	07 46 05.0	
	comp=Z,77nm,0.8s						
DRUM				IAMs_20	IAMs_20	08 19 40.5	
	comp=Z,6µm,21.0s						
POLO	**Lamas de Olo**	**79.43**	**50**	*e*P	**P**	**07 46 05.0**	**+0.3**
	comp=Z,82nm,1.1s						
PVIS	**Viseu**	**79.50**	**51**	*e*P	**P**	**07 46 04.7**	**-0.3**
	comp=Z,199nm,1.2s						
PVIS				*i* LQ	LQ	07 46 15.2	
PVRL	**Vila Real**	**79.51**	**50**	*e*P	**P**	**07 46 05.1**	**0.0**
	comp=Z,107nm,1.7s						
PVRL				*i* LQ	LQ	07 46 15.3	
ESY	**Stoneypath**	**79.53**	**35**	*e*P	**P**	**07 46 05.2**	**+0.4**
PTEO	**Sao Teotonio**	**79.56**	**54**	*e*P	**P**	**07 46 05.3**	**0.0**
	comp=Z,205nm,1.2s						
PTEO				*i* LQ	LQ	07 46 15.7	
PFVI	**Vila Bisbo**	**79.56**	**54**	*e*P	**P**	**07 46 05.9**	**+0.5**
	comp=Z,358nm,1.2s						
PFVI	**Vila Bisbo**	**79.56**	**54**	P	**P**	**07 46 06.5**	**+1.2**
KESW	**Keswick, Cumbr**	**79.57**	**36**	*e*P	**P**	**07 46 04.9**	**-0.2**
KESW				IAMs_20	IAMs_20	08 24 02.6	
	comp=Z,4µm,18.0s						
HTL	**Hartland**	**79.57**	**40**	*e*P	**P**	**07 46 04.3**	**-0.7**
HTL				IAmb	IAmb	07 46 05.9	
	comp=Z,92nm,1.0s						
PNCL	**Nicolau / Gran**	**79.58**	**53**	*e*P	**P**	**07 46 05.7**	**+0.3**
	comp=Z,126nm,1.1s						
PNCL				*i* LQ	LQ	07 46 16.1	
PMTG	**Montargil**	**79.61**	**52**	*e*P	**P**	**07 46 05.0**	**-0.6**
	comp=Z,260nm,1.0s						
PMTG				*i* LQ	LQ	07 46 15.5	
LLW	**Llanuwychllyn**	**79.65**	**38**	*e*P	**P**	**07 46 04.2**	**-1.3**
MORF	**Marmelete**	**79.66**	**54**	*e*P	**P**	**07 46 06.3**	**+0.3**
MORF				IAmb	IAmb	07 46 07.4	
	comp=Z,252nm,1.3s						
MORF				*e*S	**S**	**07 56 06.6**	**-0.9**
MORF	**Marmelete**	**79.66**	**54**	*e*P	**P**	**07 46 06.8**	**+0.8**
	comp=Z,240nm,1.2s						
MORF				*i* LQ	LQ	07 46 17.0	
MORF	**Marmelete**	**79.66**	**54**	*e*P	**P**	**07 46 06.3**	**+0.3**
MORF				*e*S	**S**	**07 56 06.6**	**-0.9**
MTE	**Manteigas**	**79.83**	**51**	*e*P	**P**	**07 46 06.8**	**0.0**
	comp=Z,262nm,1.0s						
MTE				*i* LQ	LQ	07 46 17.1	
MTE	**Manteigas**	**79.83**	**51**	*e*SKS	**SKSac**	**07 56 27.1**	**+3.9**
MTE	**Manteigas**	**79.83**	**51**	*e*LR	LR	08 10 44.6	
	comp=Z,2µm,24.0s						
MTE	**Manteigas**	**79.83**	**51**	IAmb	IAmb	07 46 08.2	
	comp=Z,176nm,0.9s						
MTE				IAMs_20	IAMs_20	08 22 32.1	
	comp=Z,2µm,19.0s						
MESJ	**Messejana**	**79.88**	**54**	*e*P	**P**	**07 46 07.5**	**+0.4**
MESJ				IAmb	IAmb	07 46 09.1	
	comp=Z,107nm,1.2s						
MESJ				*e*S	**S**	**07 56 08.7**	**-1.0**
MESJ	**Messejana**	**79.88**	**54**	*e*P	**P**	**07 46 07.7**	**+0.6**
	comp=Z,96nm,1.2s						
MESJ				*i* LQ	LQ	07 46 17.6	
MESJ	**Messejana**	**79.88**	**54**	*e*P	**P**	**07 46 07.5**	**+0.4**
MESJ				*e*S	**S**	**07 56 08.7**	**-1.0**
EVO	**Evora**	**79.89**	**53**	*e*P	**P**	**07 46 07.3**	**+0.2**
	comp=Z,184nm,1.1s						
EVO				*i* LQ	LQ	07 46 17.5	
FOEL	**Foel Wylfa**	**79.91**	**38**	*e*P	**P**	**07 46 05.9**	**-1.0**
FOEL				IAmb	IAmb	07 46 07.8	
	comp=Z,54nm,0.9s						
FOEL				IAMs_20	IAMs_20	08 21 56.1	
	comp=Z,4µm,19.8s						
PCBR	**Castelo Branco**	**80.00**	**51**	*e*P	**P**	**07 46 08.3**	**+0.6**
	comp=Z,235nm,1.2s						
PCBR				*i* LQ	LQ	07 46 16.8	
DYA	**Yadsworthy**	**80.04**	**40**	*e*P	**P**	**07 46 06.8**	**-0.9**
DYA				IAMs_20	IAMs_20	08 20 19.8	
	comp=Z,2µm,19.7s						
MVO	**Moncorvo**	**80.04**	**50**	*e*P	**P**	**07 46 07.8**	**-0.2**
	comp=Z,214nm,1.1s						
MVO				*i* LQ	LQ	07 46 18.6	
MVO	**Moncorvo**	**80.04**	**50**	*e*SKS	**SKSac**	**07 56 25.1**	**+0.5**
MVO	**Moncorvo**	**80.04**	**50**	*e*LR	LR	08 10 48.6	
	comp=Z,2µm,20.0s						
PCVE	**Castro Verde**	**80.07**	**54**	*e*P	**P**	**07 46 08.1**	**0.0**
	comp=Z,106nm,1.0s						
PCVE				*i* LQ	LQ	07 46 17.9	
PBRG	**Braganca**	**80.11**	**49**	*e*P	**P**	**07 46 08.3**	**0.0**
	comp=Z,108nm,1.2s						
PESTR	**Estremoz**	**80.14**	**52**	*e*P	**P**	**07 46 08.9**	**+0.4**
	comp=Z,151nm,1.2s						
PESTR				*i* LQ	LQ	07 46 17.5	
PESTR	**Estremoz**	**80.14**	**52**	P	**P**	**07 46 08.7**	**+0.3**
EDMD	**Edmundbyers**	**80.16**	**36**	*e*P	**P**	**07 46 07.9**	**-0.3**
EDMD				IAmb	IAmb	07 46 10.0	
	comp=Z,158nm,0.9s						
EDMD				IAMs_20	IAMs_20	08 24 30.2	
	comp=Z,3µm,19.8s						
PMRV	**Marv??o**	**80.16**	**52**	*e*P	**P**	**07 46 08.2**	**-0.4**
	comp=Z,234nm,1.1s						
PMRV				*i* LQ	LQ	07 46 16.0	
PMRV	**Marv??o**	**80.16**	**52**	*e*SKS	**SKSac**	**07 56 24.3**	**-1.1**
PMRV	**Marv??o**	**80.16**	**52**	*e*LR	LR	08 10 26.9	
	comp=Z,3µm,22.0s						
HLM1	**Long Mynd**	**80.19**	**38**	*e*P	**P**	**07 46 07.1**	**-1.3**
HLM1				IAmb	IAmb	07 46 09.5	
	comp=Z,112nm,0.9s						
HLM1				IAMs_20	IAMs_20	08 24 47.8	
	comp=Z,3µm,17.1s						
PBDV	**Barranco-do-Ve**	**80.24**	**54**	*e*P	**P**	**07 46 09.5**	**+0.4**
	comp=Z,275nm,1.2s						
MCH1	**Michaelchurch**	**80.24**	**39**	*e*P	**P**	**07 46 07.5**	**-1.3**
MCH1				IAmb	IAmb	07 46 09.6	
	comp=Z,48nm,0.9s						
MCH1				IAMs_20	IAMs_20	08 18 27.3	
	comp=Z,3µm,23.6s						
PVAQ	**Vaqueiros**	**80.37**	**54**	*e*P	**P**	**07 46 10.3**	**+0.6**
	comp=Z,173nm,1.1s						
PVAQ				*i* LQ	LQ	07 46 20.3	
PVAQ	**Vaqueiros**	**80.37**	**54**	*e*SKS	**SKSac**	**07 56 26.7**	**-0.2**
PVAQ	**Vaqueiros**	**80.37**	**54**	*e*LR	LR	08 11 29.4	
	comp=Z,3µm,20.0s						
PVAQ	**Vaqueiros**	**80.37**	**54**	P	**P**	**07 46 10.8**	**+1.1**
MONM	**Monmouth**	**80.40**	**39**	*e*P	**P**	**07 46 09.1**	**-0.5**
MONM				IAmb	IAmb	07 46 10.7	
	comp=Z,131nm,1.0s						
MONM				IAMs_20	IAMs_20	08 18 31.0	
	comp=Z,4µm,23.8s						
HPK	**Haverah Park**	**80.57**	**37**	*e*P	**P**	**07 46 10.7**	**+0.3**
HPK				IAmb	IAmb	07 46 11.8	
	comp=Z,73nm,1.0s						
HPK				IAMs_20	IAMs_20	08 24 42.4	
	comp=Z,3µm,19.4s						
OLDB	**Oldbury-Upon-S**	**80.59**	**39**	*e*P	**P**	**07 46 10.0**	**-0.5**
OLDB				IAmb	IAmb	07 46 11.8	
	comp=Z,129nm,1.1s						
OLDB				IAMs_20	IAMs_20	08 19 49.1	
	comp=Z,4µm,23.1s						
LBWR	**Ladybower, Pea**	**80.65**	**37**	*e*P	**P**	**07 46 11.2**	**+0.3**
LBWR				IAmb	IAmb	07 46 13.4	
	comp=Z,130nm,1.0s						
LBWR				IAMs_20	IAMs_20	08 27 37.8	
	comp=Z,3µm,19.5s						
PBAR	**Barrancos**	**80.71**	**53**	*e*P	**P**	**07 46 11.9**	**+0.3**
	comp=Z,180nm,1.1s						
PBAR				*i* LQ	LQ	07 46 21.9	
CWF	**Charnwood Fore**	**81.06**	**38**	⇑*e*P	**P**	**07 46 12.3**	**-0.8**
CWF				IAmb	IAmb	07 46 14.3	
	comp=Z,71nm,1.0s						
CWF				IAMs_20	IAMs_20	08 25 16.1	
	comp=Z,3µm,16.7s						
SWN1	**Swindon**	**81.08**	**39**	*e*P	**P**	**07 46 13.1**	**-0.1**
SWN1				IAmb	IAmb	07 46 14.6	
	comp=Z,366nm,1.3s						
SRHM	**Skhour des Reh**	**81.37**	**59**	P	**P**	**07 46 16.0**	**+0.8**
TTIG	**Tnine Tigouga,**	**81.38**	**61**	P	**P**	**07 46 16.0**	**+0.6**
HOPEN	**Hopen**	**81.42**	**12**	⇑*i*P	**P**	**07 46 13.8**	**-0.7**
HOPEN				*e*S	**S**	**07 56 25.5**	**+1.2**
HOPEN				IVMs_BB	IVMs_BB	08 19 40.1	
	comp=Z,2µm,3.4s						
JSA	**Saint Aubin**	**81.45**	**41**	*e*P	**P**	**07 46 14.2**	**-1.0**
JSA				IAmb	IAmb	07 46 16.6	
	comp=Z,78nm,1.0s						
JSA				IVMs_BB	IVMs_BB	08 26 30.4	
	comp=Z,4.1nm,0.0s						
OUK	**Oukaimeden**	**81.70**	**60**	P	**P**	**07 46 19.0**	**+1.6**
ZHG	**ZHG**	**82.16**	**58**	P	**P**	**07 46 20.0**	**+0.6**
WACR	**West Acre**	**82.20**	**37**	*e*P	**P**	**07 46 18.9**	**-0.2**
WACR				IAmb	IAmb	07 46 21.3	
	comp=Z,340nm,1.0s						
WACR				IAMs_20	IAMs_20	08 22 06.1	
	comp=Z,3µm,25.8s						
BER	**Bergen**	**82.31**	**29**	⇑*i*P	**P**	**07 46 20.4**	**+0.9**
BER				IVmB_BB		07 46 22.4	
	comp=Z,2µm,5.3s						
BER				*e*S	**S**	**07 56 32.1**	**-1.9**
BER				IVMs_BB	IVMs_BB	08 23 42.6	
	comp=Z,807nm,3.0s						
PAB	**San Pablo**	**82.42**	**51**	P	**P**	**07 46 20.6**	**-0.1**
PAB				pmax	pmax		
	comp=Z,169nm,1.1s						
PAB	**San Pablo**	**82.42**	**51**	P	**P**	**07 46 20.6**	**-0.1**
PAB				IAmb	IAmb	07 46 22.6	
	comp=Z,169nm,1.1s						
PAB	**San Pablo**	**82.42**	**51**	IAMs_20	IAMs_20	08 17 45.6	
	comp=Z,3µm,22.0s						
PAB	**San Pablo**	**82.42**	**51**	P	**P**	**07 46 20.8**	**+0.2**
HMNX	**Herstmonceux**	**82.56**	**39**	*e*P	**P**	**07 46 20.4**	**-0.6**
HMNX				IAMs_20	IAMs_20	08 22 06.0	
	comp=Z,5µm,20.7s						
ELMS	**Elmsett, Ipswi**	**82.59**	**38**	*e*P	**P**	**07 46 20.7**	**-0.5**
ELMS				IAmb	IAmb	07 46 22.3	
	comp=Z,84nm,1.0s						
ELMS				IAMs_20	IAMs_20	08 26 03.9	
	comp=Z,4µm,17.5s						
LOF	**Lofoten**	**82.65**	**21**	⇑*i*P	**P**	**07 46 23.1**	**+1.9**
LOF				*e*S	**S**	**07 56 41.7**	**+4.4**
LOF				IVMs_BB	IVMs_BB	08 26 57.2	
	comp=Z,1µm,4.0s						
ESDC	**Sonseca Array**	**82.67**	**51**	P	**P**	**07 46 21.2**	**-0.7**
	comp=Z,59nm,1.0s,baz=297,slow=5.1,SNR=128						
ESDC				LR	LR	08 18 17.9	
	comp=Z,3µm,21.8s,baz=275,slow=32						
	comp=Z,59nm,1.0s						
ESDC	**Sonseca Array**	**82.67**	**51**	IAmb	IAmb	07 46 23.8	
	comp=Z,76nm,1.1s						
ESBB	**Sonseca Array**	**82.67**	**51**	IAmb	IAmb	07 46 23.7	
	comp=Z,100nm,1.1s						
OUZM	**OUZ**	**82.69**	**60**	P	**P**	**07 46 23.1**	**+0.8**
ELSH	**Elham, Standar**	**82.96**	**39**	*e*P	**P**	**07 46 23.3**	**+0.2**
ELSH				IAmb	IAmb	07 46 26.5	
	comp=Z,134nm,1.0s						
ELSH				IAMs_20	IAMs_20	08 23 41.9	
	comp=Z,4µm,20.6s						
BLS5	**Blasjo**	**83.17**	**30**	⇑*i*P	**P**	**07 46 25.0**	**+0.9**
BLS5				IVmB_BB		07 46 26.2	
	comp=Z,3µm,3.6s						
BLS5				*e*S	**S**	**07 56 41.6**	**-1.5**
BLS5				IVMs_BB	IVMs_BB	08 23 27.5	
	comp=Z,2µm,22.6s						
STEI	**Steigen**	**83.32**	**20**	⇑*i*P	**P**	**07 46 25.3**	**+0.8**
DOMB	**Dombas**	**83.41**	**27**	⇑*i*P	**P**	**07 46 25.5**	**+0.2**
DOMB				IVmBBB		07 46 27.2	

	comp=Z,2µm,1.1s						
DOMB				eS	S	07 56 50.7	+5.4
DOMB				IVMs_BB	IVMs_BB	08 27 20.6	
	comp=Z,714nm,17.9s						
LCRM	LCR	83.54	57	P	P	07 46 28.0	+1.3
CZD	Col de Zad	83.56	58	P	P	07 46 29.0	+2.0
SKAR	Skarslia	83.58	28	⇑iP	P	07 46 26.7	+0.5
SKAR				IVmB_BB		07 46 27.9	
	comp=Z,2µm,3.2s						
SKAR				eS	S	07 56 48.4	+1.1
SKAR				IVMs_BB	IVMs_BB	08 25 35.8	
	comp=Z,1µm,24.1s						
FAUS	Fauske	83.58	21	⇑iP	P	07 46 25.8	-0.2
FAUS				IVmBBB		07 46 28.6	
	comp=Z,1µm,2.6s						
FAUS				eS	S	07 56 49.0	+2.2
FAUS				IVMs_BB	IVMs_BB	08 22 24.5	
	comp=Z,1µm,19.4s						
TRO	Tromso	83.67	18	⇑iP	P	07 46 27.9	+1.5
TRO				eS	S	07 56 49.5	+1.9
TRO				IVMs_BB	IVMs_BB	08 26 53.3	
	comp=Z,1µm,3.8s						
TZRR	Tazzarine	83.71	60	P	P	07 46 29.0	+1.4
ZGR	Zagora	83.84	61	P	P	07 46 29.0	+0.7
PALE	Palemas	83.86	55	P	P	07 46 29.0	+0.8
MDT	Midelt	83.97	58	LR	LR	08 19 30.2	
	comp=Z,5µm,20.9s,baz=308,slow=33						
MDT	Midelt	83.97	58	P	P	07 46 29.1	+0.3
AKLM	AKL	84.11	56	P	P	07 46 30.0	+0.5
SEY	Seymchan	84.27	334	P	P	07 46 29.6	+0.1
	comp=Z,20nm,0.9s,baz=89,slow=4.9,SNR=27						
SEY				LR	LR	08 25 30.7	
	comp=Z,3µm,19.4s,baz=56,slow=37						
	comp=Z,20nm,0.9s						
SEY	Seymchan	84.27	334	ceP	P	07 46 29.9	+0.3
SEY				pmax	pmax		
	comp=Z,119nm,3.1s						
SEY				MLR	MLR		
	comp=Z,3µm,18.0s						
HAMF	Hammerfest	84.49	17	⇑iP	P	07 46 31.2	+0.6
HAMF				eS	S	07 56 56.2	+0.4
HAMF				IVMs_BB	IVMs_BB	08 24 38.8	
	comp=Z,1µm,4.0s						
KONO	Kongsberg	84.58	29	ceP	P	07 46 32.8	+1.6
KONO				pmax	pmax		
	comp=Z,195nm,1.3s						
KONO				MLR	MLR		
	comp=Z,3µm,20.0s						
KONO	Kongsberg	84.58	29	P	P	07 46 31.6	+0.4
KONO	Kongsberg	84.58	29	IAMs_20	IAMs_20	08 25 25.6	
	comp=Z,3µm,20.0s						
CLF	Chambon-Foret	84.61	42	IAMs_20	IAMs_20	08 23 40.5	
	comp=Z,3µm,21.0s						
GOG	Mont Gurugu	84.61	55	P	P	07 46 32.2	+0.2
NAO01	NORSAR Array S	84.69	28	P	P	07 46 32.0	+0.3
NB2	NORSAR Subarra	84.75	28	P	P	07 46 32.6	+0.5
	comp=Z,276nm,1.7s,baz=297,slow=5.3						
NB2	NORSAR Subarra	84.75	28	P	P	07 46 32.6	+0.5
	baz=297,slow=5.3						
NOA	NORSAR Array B	84.75	28	P	P	07 46 32.9	+0.7
	comp=Z,39nm,1.0s,baz=296,slow=5.0,SNR=75						
NOA				LR	LR	08 23 30.9	
	comp=Z,2µm,21.7s,baz=295,slow=35						
	comp=Z,39nm,1.0s						
PMSA	Palmer Station	84.86	166	LR	LR	08 16 38.6	
	comp=Z,2µm,18.1s,baz=336,slow=30						
PMSA	Palmer Station	84.86	166	IAMs_20	IAMs_20	08 15 42.2	
	comp=Z,2µm,21.0s						
PMSA	Palmer Station	84.86	166	eP	P	07 46 32.1	-0.2
NC405	NORSAR Array S	84.94	27	IAmb	IAmb	07 46 36.5	
	comp=Z,132nm,1.1s						
PET	Petropavlovsk	85.00	324	eP	P	07 46 34.2	+0.8
PET				e		07 49 53.4	
PET				i S	S	07 56 57.5	-4.0
PET				pmax	pmax		
	comp=Z,800nm,14.3s						
PET				pmax	pmax		
	comp=Z,65nm,1.1s						
PET				pmax	pmax		
	comp=Z,900nm,14.7s						
PET				pmax	pmax		
	comp=Z,300nm,17.9s						
SNF	Seneffe	85.05	39	dP	P	07 46 34.2	+0.4
	comp=Z,33nm,1.4s						
TAF	Taforalt	85.18	55	P	P	07 46 35.0	+0.1
JBK	JBK	85.19	56	P	P	07 46 35.0	-0.1
KTK1	Kautokeino	85.30	18	⇑iP	P	07 46 34.0	-0.6
KTK1				eS	S	07 56 57.3	-6.6
KTK1				IVMs_BB	IVMs_BB	08 21 45.5	
	comp=Z,768nm,3.6s						
DOU	Dourbes	85.38	39	dP	P	07 46 35.1	-0.3
	comp=Z,45nm,1.2s						
BMRD	Maredsous	85.41	39	dP	P	07 46 36.2	+0.6
	comp=Z,73nm,1.1s						
GOET	G??ttrup	85.42	32	i P	P	07 46 36.8	+1.3
CART	Cartagena	85.48	52	IAMs_20	IAMs_20	08 23 00.7	
	comp=Z,2µm,20.0s						
PEA0B	Petropavlovsk-	85.51	324	ceP	P	07 46 36.6	+0.6
PEA0B	Petropavlovsk-	85.51	324	IAmb	IAmb	07 46 52.8	
	comp=Z,182nm,1.4s						
PETK	Petropavlovsk-	85.51	324	P	P	07 46 35.9	-0.2
	comp=Z,28nm,0.9s,baz=98,slow=6.1,SNR=16						
	comp=Z,28nm,0.9s						
PETK	Petropavlovsk-	85.51	324	P	P	07 46 34.7	-1.3
PETK	Petropavlovsk-	85.51	324	P	P	07 46 34.7	-1.3
ESPZ	Base Esperanza	85.55	163	IAmb	IAmb	07 46 40.6	
	comp=Z,96nm,1.3s						
BGES	Gesves	85.58	39	dP	P	07 46 36.7	+0.3
	comp=Z,88nm,1.1s						
MUD	Monsted U'grnd	85.62	32	i P	P	07 46 37.7	+1.3
ARCES	ARCESS Array B	85.65	17	P	P	07 46 35.9	-0.5
	comp=Z,29nm,0.9s,baz=305,slow=4.3,SNR=31						
ARCES				PP	PP	07 49 58.9	+4.1
	comp=Z,11nm,1.0s,baz=311,slow=7.0,SNR=4.0						
ARCES				LR	LR	08 26 38.1	
	comp=Z,2µm,21.4s,baz=302,slow=37						
	comp=Z,29nm,0.9s						
ARCES	ARCESS Array B	85.65	17	P	P	07 46 35.9	-0.5
ARCES				pmax	pmax		
	comp=Z,436nm,2.7s						
ARCES	ARCESS Array B	85.65	17	P	P	07 46 35.9	-0.5
BCLA	Clavier	85.70	39	dP	P	07 46 37.6	+0.6
	comp=Z,51nm,1.1s						
RCHB	Rochefort	85.74	39	dP	P	07 46 36.5	-0.7
	comp=Z,62nm,1.1s						
BEBN	Eben Emael	85.79	38	dP	P	07 46 36.8	-0.6
BSTI	Sart Tilman	85.80	38	dP	P	07 46 37.1	-0.4
	comp=Z,11nm,1.1s						
KEV	Kevo	85.93	17	P	P	07 46 37.6	-0.2
KEV				pmax	pmax		
	comp=Z,36nm,1.0s						
KEV				MLR	MLR		
	comp=Z,2µm,21.0s						
KEV	Kevo	85.93	17	P	P	07 46 37.6	-0.2
KEV				IAMs_20	IAMs_20	08 28 44.7	
	comp=Z,2µm,21.0s						
TDRA	Tendrara	85.99	57	P	P	07 46 40.0	+0.9
MEM	Membach	86.05	38	dP	P	07 46 38.8	0.0
	comp=Z,47nm,1.0s						
BTNL	Ternell	86.13	38	dP	P	07 46 38.8	-0.5
	comp=Z,24nm,1.2s						
BHOU	Houvegnez	86.14	39	dP	P	07 46 39.1	-0.2
	comp=Z,28nm,1.2s						
HFS	Hagfors	86.25	28	LR	LR	08 26 16.1	
	comp=Z,2µm,20.0s,baz=280,slow=36						
MA2	Magadan	86.43	332	P	P	07 46 40.8	+0.3
	comp=Z,38nm,1.0s,baz=62,slow=4.5,SNR=22						
MA2				LR	LR	08 28 24.8	
	comp=Z,2µm,18.6s,baz=52,slow=38						
	comp=Z,38nm,1.0s						
MA2	Magadan	86.43	332	ceP	P	07 46 40.4	-0.1
MA2				pmax	pmax		
	comp=Z,40nm,1.0s						
MA2				MLR	MLR		
	comp=Z,2µm,19.0s						
MA2	Magadan	86.43	332	P	P	07 46 40.2	-0.2
MA2				IAMs_20	IAMs_20	08 28 05.4	
	comp=Z,2µm,21.0s						
WLF	Walferdange	86.47	39	P	P	07 46 40.7	-0.2
WLF				pmax	pmax		
	comp=Z,120nm,1.2s						
WLF				MLR	MLR		
	comp=Z,4µm,20.0s						
WLF	Walferdange	86.47	39	P	P	07 46 40.7	-0.2
WLF				IAmb	IAmb	07 46 43.1	
	comp=Z,120nm,1.2s						
TIXI	Tiksi	86.77	347	P	P	07 46 40.7	-1.2
	comp=Z,41nm,0.9s,baz=269,slow=22,SNR=86						
TIXI				LR	LR	08 29 11.9	
	comp=Z,1µm,21.2s,baz=359,slow=38						
	comp=Z,41nm,0.9s						
TIXI	Tiksi	86.77	347	ceP	P	07 46 40.8	-1.0
TIXI				pmax	pmax		
	comp=Z,83nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,4µm,22.0s						
TIXI	Tiksi	86.77	347	P	P	07 46 41.0	-0.9
TIXI				IAmb	IAmb	07 46 57.0	
	comp=Z,124nm,1.3s						
TIXI				IAMs_20	IAMs_20	08 32 59.2	
	comp=Z,3µm,19.0s						
FIGM	Figuig	86.87	58	P	P	07 46 44.0	+0.6
SSB	Saint Sauveur	86.99	44	IAMs_20	IAMs_20	08 24 09.9	
	comp=Z,2µm,21.0s						
SKR	Severo-Kuril's	87.32	322	eP	P	07 46 42.6	-2.3
SKR				pmax	pmax		
	comp=Z,200nm,10.5s						
COP	Copenhagen	87.60	32	i P	P	07 46 45.4	-0.8
ECH	Echery	87.62	40	IAmb	IAmb	07 46 48.4	
	comp=Z,272nm,2.5s						
UPP	Uppsala	88.12	27	eP	P	07 46 47.6	-1.0
BFO	Black Forest	88.30	40	P	P	07 46 48.7	-1.1
BFO				pmax	pmax		
	comp=Z,24nm,1.0s						
BFO				MLR	MLR		
	comp=Z,5µm,19.0s						
BFO	Black Forest	88.30	40	P	P	07 46 48.7	-1.1
VIKU	Vikbolandet	88.37	29	eP	P	07 46 49.8	-0.1
SENIN	Lac Senin/Sane	88.40	42	IAMs_20	IAMs_20	08 32 20.0	
	comp=Z,2µm,19.0s						
BNI	Bardonecchia	88.49	43	IAmb	IAmb	07 46 53.5	
	comp=Z,254nm,2.7s						
BNI				IAMs_20	IAMs_20	08 26 58.4	
	comp=Z,4µm,20.0s						
RGN	Rugen	88.56	33	IAMs_20	IAMs_20	08 25 41.3	
	comp=Z,3µm,22.0s						
STU	Stuttgart	88.66	39	IAmb	IAmb	07 46 53.6	
	comp=Z,41nm,1.0s						
TARA	Tarawa	88.89	271	IAMs_20	IAMs_20	08 21 42.3	
	comp=Z,2µm,18.0s						
AAL	Aland	88.97	26	eP	P	07 46 51.9	-0.7
LVZ	Lovozero	89.25	16	ceP	P	07 46 53.5	-0.3
LVZ				pmax	pmax		
	comp=Z,67nm,2.5s						
LVZ	Lovozero	89.25	16	IAMs_20	IAMs_20	08 29 35.3	
	comp=Z,2µm,21.0s						
RAF	Rauma	89.25	25	eP	P	07 46 53.5	-0.4
MSVF	Nonsavu	89.46	251	P	P	07 46 58.9	+3.1
	comp=Z,18nm,0.9s,baz=111,slow=7.4,SNR=7.3						
MSVF				LR	LR	08 17 44.5	
	comp=Z,3µm,20.3s,baz=69,slow=29						
	comp=Z,18nm,0.9s						
MSVF	Nonsavu	89.46	251	P	P	07 46 57.8	+2.0
MSVF				pmax	pmax		
	comp=Z,174nm,1.2s						
MSVF	Nonsavu	89.46	251	P	P	07 46 57.8	+2.0
MSVF				IAMs_20	IAMs_20	08 17 34.7	
	comp=Z,3µm,19.0s						
GRA1	Grafenberg Arr	89.50	38	IAMs_20	IAMs_20	08 26 31.5	
	comp=Z,3µm,22.0s						
GRFO	Grafenberg	89.50	38	P	P	07 46 55.3	0.0
GRFO				pmax	pmax		
	comp=Z,365nm,2.8s						
GRFO				MLR	MLR		
	comp=Z,3µm,21.0s						
GRFO	Grafenberg	89.50	38	P	P	07 46 55.3	0.0
GRFO				IAMs_20	IAMs_20	08 26 32.5	
	comp=Z,3µm,21.0s						
RAO	Raoul Island	89.50	239	LR	LR	08 17 16.4	
	comp=Z,2µm,21.5s,baz=90,slow=29						
KOWA	Kowa	89.57	75	P	P	07 46 55.8	-0.6
KOWA				IAmb	IAmb	07 47 08.0	
	comp=Z,82nm,1.2s						
KOWA				IAMs_20	IAMs_20	08 24 27.8	
	comp=Z,4µm,21.0s						
KOWA	Kowa	89.57	75	P	P	07 46 57.4	+1.1
TUE	Stuetta	89.67	41	P	P	07 46 55.8	-0.7
DAVA	Damuels	89.68	40	eP	P	07 46 56.2	-0.2
	comp=Z,58nm,1.1s,SNR=26						
DAVA				P	PP	07 50 27.0	-1.0
	comp=Z,14nm,1.5s						
WAKE	Wake Island	89.73	290	IAMs_20	IAMs_20	08 18 15.7	
	comp=Z,3µm,21.0s						
CLL	Collm	89.83	36	⇑iP	P	07 46 56.6	-0.2
CLL				e*PP	sP	07 47 05.0	-1.1
CLL				e		07 57 27.0	
CLL				pmax	pmax		
	comp=Z,33nm,1.5s						
CLL				MLR	MLR		
	comp=Z,2µm,18.3s						
CLL	Collm	89.83	36	IAMs_20	IAMs_20	08 33 46.1	
	comp=Z,2µm,18.0s						
CLL	Collm	89.83	36	⇑iP	P	07 46 56.6	-0.2
	comp=Z,33nm,1.5s						
CLL				epP	sP	07 47 05.0	-1.1
CLL				esP	pP	07 47 09.0	+5.4
CLL				ex	x	07 47 31.0	
CLL				ePP	PP	07 50 30.0	+1.1
CLL				epPP		07 50 36.0	
CLL				esPP		07 50 41.0	
CLL				ePPP	PPP	07 52 23.0	
CLL				ex	x	07 56 42.0	
CLL				eSKSac	SKSac	07 57 27.0	+0.5
CLL				eSx	Sx	07 57 54.0	
CLL				e(sS)		07 58 10.0	
CLL				ePS	PS	07 59 00.0	+4.3
CLL				ePPS	PPS	07 59 22.0	
CLL				ex	x	08 00 26.0	
CLL				eSS	SS	08 03 43.0	-1.5
CLL				ex	x	08 04 42.0	
CLL				LmV		08 33 00.0	
	comp=Z,2µm,18.3s						
DAVOX	Davos/Dischmat	89.88	41	LR	LR	08 29 32.2	
	comp=Z,3µm,18.6s,baz=270,slow=37						
NKC	Novy Kostel	89.98	37	eP	P	07 46 57.7	+0.1
NKC				AMS	AMS	08 30 50.0	
	comp=Z,4µm,17.1s						
RETA	Reutte	90.14	40	eP	P	07 46 58.3	-0.1
	comp=Z,28nm,1.1s,SNR=22						
RETA				P	PP	07 50 30.2	-1.4
	comp=Z,5.9nm,1.0s						
FETA	Feichten	90.31	40	eP	P	07 46 59.2	-0.2
	comp=Z,19nm,1.0s,SNR=11						
FETA				P	PP	07 50 32.5	-0.6
	comp=Z,3.4nm,0.9s						
MOTA	Moosalm	90.41	40	eP	P	07 46 59.5	-0.3
	comp=Z,42nm,1.1s,SNR=18						
MOTA				eP	PP	07 50 32.5	-1.4
	comp=Z,12nm,1.5s						
SQTA	Sankt Quirin	90.53	40	eP	P	07 47 00.1	-0.2
	comp=Z,37nm,1.1s,SNR=15						
SQTA				P	PP	07 50 34.0	-0.7
	comp=Z,9.4nm,1.1s						
BRG	Berggiesshubel	90.55	36	eP	P	07 47 00.3	0.0
BRG				Amp		07 47 01.7	
	comp=Z,31nm,1.3s						
BRG				ex	x	07 47 14.4	
BRG				Amp		07 47 17.3	
	comp=Z,35nm,1.5s						
BRG				PP	PP	07 50 42.4	+7.7
BRG				Amp		07 50 46.2	
	comp=Z,22nm,1.5s						
BRG	Berggiesshubel	90.55	36	PS	PS	07 59 14.0	+10
BRG	Berggiesshubel	90.55	36	SS	SS	08 04 04.0	+9.0
BRG				Amp		08 34 02.0	
	comp=E,2.1nm,17.7s						
BRG				Amp		08 34 06.0	
	comp=Z,3.1nm,17.1s						
BRG				Amp		08 34 10.0	
	comp=N,0.9nm,17.4s						
BRG	Berggiesshubel	90.55	36	eP	P	07 47 00.2	0.0
BRG						07 50 42.3	
BRG						07 57 25.0	
BRG				S	S	07 57 46.0	-8.7
BRG				SS	SS	08 04 04.0	+9.0
BRG				pmax	pmax		
	comp=Z,31nm,1.3s						
BRG				pmax	pmax		
	comp=Z,35nm,1.5s						
BRG				pmax	pmax		
	comp=Z,22nm,1.5s						
BRG				pmax	pmax		
	comp=E,2µm,17.7s						
WATA	Walderalm	90.71	40	eP	P	07 47 00.9	-0.3
	comp=E,32nm,1.2s,SNR=12						
WATA				P	PP	07 50 34.9	-1.2
	comp=E,12nm,1.5s						
FINES	FINESS Array B	90.71	24	P	P	07 46 59.0	-1.7
	comp=E,16nm,1.0s,baz=303,slow=2.8,SNR=27						
FINES				PP	PP	07 50 37.0	+1.4
	comp=E,6.0nm,1.0s,baz=306,slow=5.0,SNR=2.7						
FINES				LR	LR	08 31 24.3	
	comp=E,2µm,18.8s,baz=305,slow=38						
	comp=E,16nm,1.0s						
FINES	FINESS Array B	90.71	24	P	P	07 46 59.5	-1.2
FINES	FINESS Array B	90.71	24	P	P	07 46 59.5	-1.2
SALO	Salr	90.76	42	P	P	07 47 00.6	-0.8
SALO				IAmb	IAmb	07 47 02.4	
	comp=Z,54nm,1.0s						
WTTA	Wattenberg	90.77	40	eP	P	07 47 01.4	-0.2
	comp=Z,20nm,1.3s,SNR=8.6						
WTTA				eP	PP	07 50 35.5	-1.3
	comp=Z,16nm,1.8s						
MEF	Metsahovi	90.78	25	eP	P	07 46 58.3	-2.8
TIC	Toumodi	90.85	83	ePKP2	P	07 47 02.0	-0.3
LIC	Lamto	90.96	83	ePKP2	P	07 47 03.2	+0.4
	comp=Z,81nm,1.2s						
DBIC	Dimbokro	91.00	83	P	P	07 47 01.9	-1.1
	comp=Z,27nm,0.9s,baz=294,slow=4.4,SNR=21						
DBIC				LR	LR	08 24 35.4	
	comp=Z,2µm,21.1s,baz=299,slow=33						
	comp=Z,27nm,0.9s						
DBIC	Dimbokro	91.00	83	P	P	07 47 02.3	-0.7
DBIC				pmax	pmax		
	comp=Z,97nm,1.4s						
DBIC	Dimbokro	91.00	83	P	P	07 47 02.3	-0.7
DBIC				IAmb	IAmb	07 47 17.9	
	comp=Z,97nm,1.4s						
PVCC	Panska Ves	91.06	36	AMS	AMS	08 34 00.0	
	comp=Z,3µm,18.6s						
KHC	Kasperske Hory	91.13	38	eP	P	07 47 03.1	+0.1
KHC				ePP	PP	07 50 28.5	-11
KHC				eSKS	SKSac	07 57 27.0	-7.3
KHC				AMS	AMS	08 31 20.0	
	comp=Z,4µm,18.4s						
KIC	Kosan Boka	91.20	83	ePKP2	P	07 47 03.6	-0.3
	comp=Z,53nm,1.0s						
GKP	Gorka Klasztor	91.21	33	eP	P	07 47 03.0	-0.2
PRU	Pruhonice	91.30	37	eP	P	07 47 03.3	-0.4
PRU				ePP	PP	07 50 32.4	-8.2
PRU				eSKS	SKSac	07 57 36.5	+1.4
PRU				AMS	AMS	08 31 40.0	
	comp=Z,3µm,17.4s						
GEC2	GERESS Array S	91.33	38	IAmb	IAmb	07 47 20.1	
	comp=Z,66nm,1.7s						
GERES	GERESS Array B	91.33	38	P	P	07 47 03.3	-0.7
	comp=Z,7.4nm,1.0s,baz=357,slow=3.9,SNR=29						
GERES				PKKPbc	PKKPbc	08 04 28.7	+2.0
	comp=Z,1.7nm,1.0s,baz=73,slow=3.4,SNR=3.9						
GERES				LR	LR	08 30 19.8	
	comp=Z,3µm,18.2s,baz=294,slow=37						
	comp=Z,7.4nm,1.0s						
MTSE	Matsula	91.41	26	eP	P	07 47 00.2	-3.8
ABTA	Abfaltersbach	91.54	40	eP	P	07 47 04.3	-0.7
	comp=Z,29nm,1.0s,SNR=32						
ABTA				P	PP	07 50 42.1	-0.6
	comp=Z,13nm,1.5s						
ZCCA	Zocca	91.58	43	IAmb	IAmb	07 47 07.0	
	comp=Z,46nm,1.0s						
CKRC	Cesky Krumlov	91.70	38	eP	P	07 47 05.7	+0.1
CKRC				ePP	PP	07 50 38.9	-4.9
CKRC				eSKS	SKSac	07 57 34.3	-3.2
BIOA	Bad Ischl, Aus	91.81	39	eP	P	07 47 05.4	-0.8
	comp=Z,15nm,1.0s,SNR=13						
BIOA				P	PP	07 50 43.6	-1.2
	comp=Z,20nm,1.7s						
CHVC	Chvalec	91.87	36	AMS	AMS	08 31 30.0	
	comp=Z,3µm,18.6s						
KSP	Ksiaz	91.88	35	eP	P	07 47 06.2	-0.2
UPC	Upice	91.89	36	eP	P	07 47 06.2	-0.2
UPC				ePP	PP	07 50 38.9	-6.3
UPC				eSKS	SKSac	07 57 38.5	+0.1
UPC				AMS	AMS	08 31 30.0	
	comp=Z,3µm,18.8s						
KBA	Koelnbreinsper	91.90	40	eP	P	07 47 06.4	-0.4
	comp=Z,25nm,1.1s,SNR=21						
KBA				P	PP	07 50 45.2	-0.4
	comp=Z,29nm,1.8s						
OSTC	Ostas	91.98	36	eP	P	07 47 06.3	-0.6
OSTC				ePP	PP	07 50 40.2	-5.7
OSTC				eSKS	SKSac	07 57 35.5	-3.5
OSTC				AMS	AMS	08 31 30.0	
	comp=Z,3µm,18.4s						
MOA	Molln	92.11	39	eP	P	07 47 07.5	-0.1
	comp=Z,19nm,1.1s,SNR=12						
MOA				P	PP	07 50 45.1	-2.1
	comp=Z,23nm,1.5s						
DPC	Dobruska-Polom	92.14	36	eP	P	07 47 06.9	-0.8
DPC				ePP	PP	07 50 41.5	-5.7
DPC				eSKS	SKSac	07 57 36.9	-3.0
DPC				AMS	AMS	08 31 20.0	
	comp=Z,3µm,18.5s						
TREC	Trest	92.16	37	ePP	PP	07 50 44.1	-3.3
TREC				AMS	AMS	08 32 10.0	
	comp=Z,3µm,18.0s						
MYKA	Terra Mystica	92.29	40	eP	P	07 47 07.7	-0.8
	comp=Z,13nm,1.1s,SNR=9.1						
MYKA				P	PP	07 50 47.5	-1.1
	comp=Z,4.2nm,0.5s						
ROBS	Robic	92.38	40	eP	P	07 47 07.5	-1.2
ROBS				eSKSac	SKSac	07 57 42.3	+1.0
VSL	Villasalto	92.46	48	IAMs_20	IAMs_20	08 26 21.1	
	comp=Z,2µm,20.0s						
KRLC	Kraliky	92.53	36	eP	P	07 47 09.1	-0.4
KRLC				ePP	PP	07 50 44.1	-6.2
KRLC				eSKS	SKSac	07 57 35.9	-6.2
KRLC				AMS	AMS	08 31 20.0	
	comp=Z,3µm,19.1s						
VALR	Valaam	92.56	22	i P	P	07 47 08.6	-0.6
VALR				pmax	pmax		
	comp=Z,19nm,1.0s						
VALR				MLR	MLR		
	comp=Z,959nm,17.0s						
TRI	Trieste	92.78	41	IAmb	IAmb	07 47 12.1	
	comp=Z,59nm,1.1s						
VRAC	Vranov	92.79	37	LR	LR	08 33 05.6	
	comp=Z,2µm,18.2s,baz=296,slow=38						
VRAC	Vranov	92.79	37	⇑iP	P	07 47 09.9	-0.8
VRAC				ePP	PP	07 50 50.2	-2.2
VRAC				eSKS	SKSac	07 57 42.9	-0.7
VSU	Vasula	92.79	26	i P	P	07 47 09.7	-0.7
VSU				pmax	pmax		
	comp=Z,84nm,1.7s						
VSU				MLR	MLR		
	comp=Z,6µm,21.0s						
VSU	Vasula	92.79	26	eP	P	07 47 09.8	-0.6
KRUC	Moravsky	92.80	37	⇑iP	P	07 47 10.3	-0.4
KRUC				ePP	PP	07 50 48.6	-3.8
KRUC				eSKS	SKSac	07 57 42.7	-0.9
OBKA	Obir	92.90	40	eP	P	07 47 10.2	-1.2
	comp=Z,22nm,1.1s,SNR=19						
OBKA				P	PP	07 50 51.6	-1.8
	comp=Z,10nm,1.0s						
SKDS	Skadanscina	93.00	41	⇑iP	P	07 47 10.7	-1.0
CONA	Conrad Observa	93.03	38	eP	P	07 47 11.4	-0.5
	comp=Z,16nm,1.2s,SNR=12						
CONA				P	PP	07 50 53.3	-1.0
	comp=Z,10nm,1.5s						
LJU	Ljubljana	93.10	40	⇑iP	P	07 47 11.9	-0.2
MORC	Moravsky Berou	93.10	36	⇓P	P	07 47 12.0	-0.1
MORC	Moravsky Berou	93.10	36	⇑iP	P	07 47 11.4	-0.7
MORC				ePP	PP	07 50 51.7	-3.1
SOKA	Soboth	93.12	39	eP	P	07 47 11.6	-0.7
	comp=Z,35nm,1.0s,SNR=19						
SOKA				P	PP	07 50 53.5	-1.6
	comp=Z,9.9nm,1.2s						
ARSA	Arzberg	93.15	39	eP	P	07 47 12.0	-0.4
	comp=Z,10.0nm,1.1s,SNR=8.1						
ARSA				P	PP	07 50 53.7	-1.5
	comp=Z,7.8nm,1.6s						
CEY	Cerknica	93.18	40	⇑iP	P	07 47 11.8	-0.7
PABE	Paberze	93.33	29	IAmb	IAmb	07 47 27.4	
	comp=Z,78nm,1.7s						
PABE				IAMs_20	IAMs_20	08 30 21.2	
	comp=Z,3µm,20.0s						
PABE	Paberze	93.33	29	eP	P	07 47 13.7	+0.8
RONA	Rosalia, Austr	93.40	38	eP	P	07 47 13.2	-0.3
	comp=Z,19nm,1.1s,SNR=14						

RONA				P	**PP**	**07 50 56.5**	**-0.7**
	comp=Z,10nm,1.5s						
RIY	**Rijeka**	**93.40**	**41**	⇑*i*P	**P**	**07 47 13.2**	**-0.3**
YAK	**Yakutsk**	**93.40**	**340**	*c i*P	**P**	**07 47 13.5**	**+0.3**
YAK				*e**PP	**sP**	**07 47 22.0**	**-0.3**
YAK				*e*		07 50 55.9	
YAK				*e*PPP	PPP	07 52 58.0	
YAK				*e*S	**SKSac**	**07 57 43.9**	**-2.4**
YAK				*e**SS	**S**	**07 58 15.5**	**-4.3**
YAK				*e*SS	**SS**	**08 04 35.6**	**+0.5**
YAK				*e*SSS	SSS	08 08 14.3	
YAK				pmax	pmax		
	comp=Z,122nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,304nm,3.3s						
YAK				pmax	pmax		
	comp=N,76nm,2.5s						
YAK				pmax	pmax		
	comp=E,26nm,1.9s						
YAK				smax	smax		
	comp=E,128nm,4.8s						
YAK				smax	smax		
	comp=N,200nm,4.1s						
YAK				MLR	MLR		
	comp=Z,2µm,20.0s						
YAK				MLR	MLR		
	comp=N,1µm,20.0s						
YAK	**Yakutsk**	**93.40**	**340**	P	**P**	**07 47 13.4**	**+0.3**
YAK				IAMs_20	IAMs_20	08 34 04.8	
	comp=Z,2µm,18.0s						
VISS	**Visnje**	**93.40**	**40**	*e*P	**P**	**07 47 12.9**	**-0.6**
OKC	**Ostrava-Krasne**	**93.41**	**36**	*e*P	**P**	**07 47 13.2**	**-0.3**
OKC				*e*PP	**PP**	**07 50 50.6**	**-6.6**
OKC				*e*SKS	**SKSac**	**07 57 46.0**	**-0.9**
OKC				AMS	AMS	08 32 00.0	
	comp=Z,3µm,18.2s						
MAUC	**Maruska**	**93.47**	**36**	*e*P	**P**	**07 47 13.9**	**+0.1**
MAUC				*e*PP	**PP**	**07 50 51.9**	**-5.8**
MAUC				AMS	AMS	08 26 50.0	
	comp=Z,4µm,26.3s						
GROS	**Grobnik**	**93.50**	**39**	*e*P	**P**	**07 47 12.9**	**-1.1**
GROS				*e*PP	**PP**	**07 50 56.4**	**-1.7**
SOP	**Sopron**	**93.56**	**38**	P	**P**	**07 47 15.1**	**+1.0**
ZST	**Bratislava**	**93.63**	**37**	*e*P	**P**	**07 47 15.4**	**+0.9**
ZST				pmax	pmax		
	comp=Z,176nm,1.5s						
ZST	**Bratislava**	**93.63**	**37**	*e*P	**P**	**07 47 15.4**	**+0.9**
JAVC	**Velka Javorina**	**93.63**	**37**	⇑*i*P	**P**	**07 47 15.5**	**+0.9**
MODS	**Modra-Piesok**	**93.64**	**37**	*e*P	**P**	**07 47 15.5**	**+0.9**
MODS				pmax	pmax		
	comp=Z,99nm,1.4s						
MODS	**Modra-Piesok**	**93.64**	**37**	*e*P	**P**	**07 47 15.5**	**+0.9**
SMOL	**Smolenice**	**93.66**	**37**	*e*P	**P**	**07 47 16.0**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,21nm,1.5s						
SMOL	**Smolenice**	**93.66**	**37**	*e*P	**P**	**07 47 16.0**	**+1.3**
CRES	**Cresnjev**	**93.78**	**40**	⇑*i*P	**P**	**07 47 14.5**	**-0.8**
GOLS	**Golise**	**93.79**	**40**	*e*P	**P**	**07 47 15.0**	**-0.4**
GOLS				*e*PP	**PP**	**07 50 58.9**	**-1.5**
GOLS				*e*SKSac	**SKSac**	**07 57 49.9**	**+0.7**
BEL	**Belsk**	**93.81**	**33**	*e*P	**P**	**07 47 15.3**	**+0.1**
SUW	**Suwalki**	**93.81**	**30**	*e*P	**P**	**07 47 14.0**	**-1.2**
SUW	**Suwalki**	**93.81**	**30**	IAMs_20	IAMs_20	08 28 14.0	
	comp=Z,3µm,22.0s						
KEST	**Kesra**	**93.92**	**51**	P	**P**	**07 47 16.4**	**+0.1**
	comp=Z,23nm,1.0s,baz=276,slow=5.8,SNR=14						
KEST				LR	LR	08 28 02.3	
	comp=Z,2µm,19.6s,baz=260,slow=35						
	comp=Z,23nm,1.0s						
ZAG	**Zagreb**	**94.10**	**40**	⇑*i*P	**P**	**07 47 16.8**	**+0.1**
OJC	**Ojcow**	**94.13**	**35**	*e*P	**P**	**07 47 16.1**	**-0.7**
OJC	**Ojcow**	**94.13**	**35**	IAmb	IAmb	07 47 18.1	
	comp=Z,185nm,2.5s						
OJC				IAMs_20	IAMs_20	08 32 21.8	
	comp=Z,2µm,20.0s						
EGYH	**Egyhazaskeszo**	**94.15**	**38**	P	**P**	**07 47 17.6**	**+0.7**
MPLH	**Magyarpolny**	**94.39**	**38**	P	**P**	**07 47 18.1**	**+0.1**
NRIK	**Noril'sk**	**94.48**	**358**	P	**P**	**07 47 17.1**	**-0.8**
	comp=Z,21nm,0.9s,baz=29,slow=4.7,SNR=27						
NRIK				PP	**PP**	**07 51 01.5**	**-3.4**
	comp=Z,10nm,1.1s,baz=0.3,slow=8.1,SNR=7.2						
NRIK				LR	LR	08 33 47.3	
	comp=Z,2µm,19.8s,baz=30,slow=38						
	comp=Z,21nm,0.9s						
NRIK	**Noril'sk**	**94.48**	**358**	P	**P**	**07 47 17.4**	**-0.5**
VYHS	**Vyhne**	**94.48**	**37**	*e*P	**P**	**07 47 18.9**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,12nm,1.5s						
VYHS	**Vyhne**	**94.48**	**37**	*e*P	**P**	**07 47 18.9**	**+0.4**
LANS	**Liptovska Anna**	**94.50**	**36**	*e*P	**P**	**07 47 19.6**	**+1.0**
LANS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LANS	**Liptovska Anna**	**94.50**	**36**	*e*P	**P**	**07 47 19.6**	**+1.0**
SRO	**Srobarova**	**94.53**	**37**	*e*P	**P**	**07 47 19.5**	**+0.9**
SRO				pmax	pmax		
	comp=Z,31nm,1.3s						
SRO	**Srobarova**	**94.53**	**37**	*e*P	**P**	**07 47 19.5**	**+0.9**
NKL	**Nikolayevsk**	**94.53**	**329**	*e*P	**P**	**07 47 16.7**	**-1.8**
NKL				*e*		07 51 04.5	
NKL				*e*S	**SKSac**	**07 57 48.8**	**-4.0**
NKL				pmax	pmax		
	comp=N,1.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,2.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,42nm,1.0s						
NKL				smax	smax		
	comp=E,4.0nm,5.0s						
NKL				smax	smax		
	comp=N,400nm,5.6s						
NIE	**Niedzica**	**94.83**	**35**	*e*P	**P**	**07 47 20.8**	**+0.7**
NACGM	**Naroch**	**94.99**	**28**	⇑*e*P	**P**	**07 47 20.3**	**-0.3**
	baz=308						
MXZ	**Matakaoa Point**	**95.04**	**232**	IAMs_20	IAMs_20	08 20 52.1	
	comp=Z,3µm,20.0s						
BUD	**Budapest**	**95.11**	**37**	P	**P**	**07 47 22.3**	**+1.0**
KOVH	**Kovagotottos**	**95.26**	**39**	P	**P**	**07 47 22.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**95.27**	**75**	P	**P**	**07 47 20.6**	**-2.0**
	comp=Z,9.1nm,0.9s,baz=287,slow=3.9,SNR=37						
TORD				PKKPbc	**PKKPdf**	**08 04 16.0**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=85,slow=3.8,SNR=4.0						
TORD				LR	LR	08 28 30.4	
	comp=Z,3µm,19.8s,baz=300,slow=34						
	comp=Z,9.1nm,0.9s						
BLY	**Banja Luka**	**95.36**	**40**	⇑*i*P	**P**	**07 47 21.9**	**-0.6**
PSZ	**Piszkesteto**	**95.39**	**37**	P	**P**	**07 47 22.9**	**+0.3**
MORH	**Mrgy, Hungar**	**95.53**	**39**	⇑*i*P	**P**	**07 47 21.9**	**-1.3**
MORH	**Mrgy, Hungar**	**95.53**	**39**	P	**P**	**07 47 23.5**	**+0.3**
SRKY	**Kupres RS**	**95.68**	**41**	*e*P	**P**	**07 47 24.4**	**+0.3**
MNK	**Minsk**	**95.74**	**28**	*i* P	**P**	**07 47 21.3**	**-2.7**
MNK				*i* S	**SKSac**	**07 57 57.0**	**-2.2**
MNK				*i* SS	**SS**	**08 05 05.8**	**-3.0**
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				MLR	MLR		
	comp=Z,1µm,15.0s						
MNK				MLR	MLR		
	comp=E,212nm,20.0s						
MNK				MLR	MLR		
	comp=N,626nm,18.0s						
MNK	**Minsk**	**95.74**	**28**	*i* P	**P**	**07 47 21.4**	**-2.7**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**07 47 21.4**	**-2.7**
	comp=N,11nm,0.8s						
MNK				*i* P	**P**	**07 47 21.4**	**-2.7**
	comp=Z,7.0nm,0.9s,baz=308						
MNK				*i* PP	**PP**	**07 51 09.0**	**-6.1**
MNK				*i* PPP	PPP	07 53 13.6	
MNK				*i* SKS	S	07 57 40.8	-60
MNK				*i* S	**SKSac**	**07 57 57.1**	**-2.2**
MNK				*i* SS	**SS**	**08 05 05.8**	**-3.0**
MNK				*i* SSS	SSS	08 09 01.0	
MNK				*i* LQ	LQ	08 24 24.8	
MNK				*i* LR	LR	08 27 31.4	
MNK				*i* LRM	MLR	08 30 48.1	
	comp=Z,1µm,15.3s						
MNK				*i* LRM	MLR	08 31 07.3	
	comp=E,212nm,20.4s						
MNK				*i* LRM	MLR	08 31 13.7	
	comp=N,626nm,17.9s						
CRVS	**Cervenica-Dubn**	**95.75**	**35**	*e*P	**P**	**07 47 24.4**	**+0.2**
CRVS	**Cervenica-Dubn**	**95.75**	**35**	*e*PDIFF	**P**	**07 47 24.4**	**+0.2**
SGRT	**San Giovanni R**	**95.86**	**44**	IAmb	IAmb	07 47 25.8	
	comp=Z,42nm,1.1s						
KLMR	**Klimovskoe**	**95.86**	**19**	*e*P	**P**	**07 47 22.4**	**-2.0**
KLMR				*e*S	**SKSac**	**07 57 55.3**	**-4.3**
KLMR				*e*SS	**SS**	**08 05 05.3**	**-4.9**
KLMR				pmax	pmax		
	comp=Z,32nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,2µm,18.0s						
KLMR	**Klimovskoe**	**95.86**	**19**	*e*P	**P**	**07 47 22.5**	**-2.0**
KLMR				AMP		07 47 24.7	
	comp=Z,32nm,1.0s						
KLMR				*e*PP	PP	07 51 07.5	-8.3
KLMR				*e*S	**SKSac**	**07 57 55.3**	**-4.3**
KLMR				*e*S	**SKSac**	**07 57 55.3**	**-4.3**
KLMR				*e*SS	**SS**	**08 05 05.4**	**-4.8**
KLMR				*e*SS	**SS**	**08 05 05.4**	**-4.8**
KLMR				LQ	LQ	08 23 04.2	
KLMR				LQ	LQ	08 23 04.2	
KLMR				LR	LR	08 26 25.6	
KLMR				AMP		08 31 39.2	
	comp=Z,2µm,17.6s						
URZ	**Urewera**	**96.14**	**232**	LR	LR	08 20 48.2	
	comp=Z,2µm,21.8s,baz=32,slow=29						
URZ	**Urewera**	**96.14**	**232**	IAMs_20	IAMs_20	08 20 37.3	
	comp=Z,2µm,21.0s						
KOLS	**Kolonicke sedl**	**96.18**	**35**	*e*P	**P**	**07 47 27.3**	**+1.1**
KOLS	**Kolonicke sedl**	**96.18**	**35**	*e*PDIFF	**P**	**07 47 27.3**	**+1.1**
UZH	**Uzhgorod**	**96.36**	**35**	*e*P	**P**	**07 47 26.4**	**-0.6**
UZH				*e*		07 47 32.3	
UZH				*i*		07 58 00.0	
UZH				*e*S	**S**	**07 58 38.0**	**-8.1**
UZH				*e*		08 00 00.0	
UZH				MLR	MLR		
	comp=N,330nm,18.0s						
UZH				MLR	MLR		
	comp=E,260nm,18.0s						
UZH				MLR	MLR		
	comp=Z,170nm,18.0s						
STON	**Ston**	**96.60**	**42**	⇑*i*P	**P**	**07 47 27.8**	**-0.4**
LVV	**L'vov**	**96.64**	**34**	*e*P	**P**	**07 47 27.9**	**-0.3**
LVV				*e*		07 51 22.1	
LVV				*e*		07 58 00.1	
LVV				*e*S	**S**	**07 58 45.5**	**-3.0**
LVV				*e*PS	**PS**	**08 00 12.2**	**+1.4**
LVV				*e*SS	**SS**	**08 05 17.9**	**-3.9**
LVV				pmax	pmax		
	comp=Z,70nm,1.4s						
CUC	**Castrocucco**	**96.73**	**45**	IAmb	IAmb	07 47 29.8	
	comp=Z,37nm,1.0s						
FRGS	**Fruska Gora**	**96.77**	**39**	⇓P	**P**	**07 47 28.0**	**-1.0**
FRGS	**Fruska Gora**	**96.77**	**39**	⇑*i*P	**P**	**07 47 27.3**	**-1.7**
YSS	**Yuzh-Sakhalins**	**96.86**	**323**	*e*P	**P**	**07 47 28.5**	**-0.8**
YSS				*e*S	**S**	**07 58 42.6**	**-7.9**
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,17.0s						
YSS	**Yuzh-Sakhalins**	**96.86**	**323**	IAMs_20	IAMs_20	08 34 45.7	
	comp=Z,2µm,20.0s						
VAE	**Valguarnera**	**96.89**	**48**	LR	LR	08 29 24.1	
	comp=Z,1µm,19.4s,baz=323,slow=34						
MATE	**Matera**	**97.02**	**44**	⇓P	**P**	**07 47 29.7**	**-0.4**
PRGR	**Permogore**	**97.06**	**17**	*e*P	**P**	**07 47 28.8**	**-1.1**
PRGR				*e**PP	**sP**	**07 47 38.0**	**-1.0**
BRY	**Bratogost**	**97.12**	**42**	*e*P	**P**	**07 47 30.6**	**-0.2**
BBLS	**Lazići**	**97.18**	**40**	⇑*i*P	**P**	**07 47 30.8**	**-0.1**
UPM	**Unac-Piva**	**97.20**	**41**	*e*P	Pdif	07 47 31.3	0.0
SIRR	**Siria**	**97.28**	**37**	⇓P	Pdif	07 47 31.8	+0.5
RUDO	**Rudo**	**97.29**	**41**	⇑*i*P	**P**	**07 47 31.1**	**-0.2**
HCY	**Herceg Novi**	**97.32**	**42**	*e*P	Pdif	07 47 31.8	+0.2
DIVS	**Divibare**	**97.43**	**40**	IAMs_20	IAMs_20	08 33 41.6	
	comp=Z,2µm,19.0s						
DIVS	**Divibare**	**97.43**	**40**	⇑*i*P	**P**	**07 47 31.6**	**-0.4**
DRGR		**97.61**	**37**	⇑P	**P**	**07 47 32.7**	**-0.1**
BZS	**Buzias**	**97.61**	**38**	⇓P	**P**	**07 47 32.1**	**-0.6**
TIP	**Timpagrande**	**97.75**	**45**	⇓P	**P**	**07 47 33.0**	**-0.6**
TIP	**Timpagrande**	**97.75**	**45**	IAmb	IAmb	07 47 33.8	
	comp=Z,28nm,1.1s						
TIP				IAMs_20	IAMs_20	08 33 57.8	
	comp=Z,3µm,22.0s						
PDG	**Podgorica**	**97.82**	**42**	⇑P	**P**	**07 47 33.2**	**-0.4**
PDG	**Podgorica**	**97.82**	**42**	IAMs_20	IAMs_20	08 33 14.2	
	comp=Z,2µm,20.0s						
PDG	**Podgorica**	**97.82**	**42**	⇑*i*P	**P**	**07 47 32.7**	**-1.0**
SJES	**Sjenica**	**97.85**	**41**	⇑*i*P	**P**	**07 47 33.0**	**-1.0**
DRME	**Dracevica, Mon**	**97.89**	**42**	⇑*i*P	**P**	**07 47 33.8**	**-0.3**
GRNR	**Gornyy**	**98.06**	**329**	⇓*i*P	Pdif	07 47 35.5	+0.8
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SCTE	**Santa Cesarea**	**98.48**	**44**	IAmb	IAmb	07 47 38.5	
	comp=Z,26nm,1.0s						
SNZO	**South Karori**	**98.72**	**230**	IAMs_20	IAMs_20	08 23 43.4	
	comp=Z,3µm,19.0s						
TIR	**Tirane**	**98.76**	**42**	IAMs_20	IAMs_20	08 32 04.0	
	comp=Z,2µm,22.0s						
AKASG	**Malin Array Be**	**98.77**	**31**	P	**P**	**07 47 35.6**	**-2.1**
	comp=Z,1.5nm,0.8s,baz=290,slow=3.7,SNR=10						
AKASG				PP	**PP**	**07 51 37.8**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=304,slow=7.0,SNR=4.6						
	comp=Z,1.5nm,0.8s						
AKASG	**Malin Array Be**	**98.77**	**31**	*ce*P	**P**	**07 47 36.4**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	**Malin Array Si**	**98.77**	**31**	*i* P	**P**	**07 47 36.7**	**-1.1**
AKBB	**Malin Array Si**	**98.77**	**31**	IAmb	IAmb	07 47 51.6	
	comp=Z,64nm,2.3s						
SANVU	**Saraoutou**	**98.86**	**256**	IAMs_20	IAMs_20	08 22 37.3	
	comp=Z,2µm,20.0s						
MOS	**Moscow**	**99.02**	**24**	*e*P	**Pdif**	**07 47 34.8**	**-4.0**
OBN	**Obninsk**	**99.06**	**25**	*ce*P	**Pdif**	**07 47 38.4**	**-0.5**
OBN				*i* *PP	**sP**	**07 47 47.5**	**-0.6**
OBN				*e*		07 51 41.5	
OBN				*i* S	**SKSac**	**07 58 15.5**	**-0.7**
OBN				*e*PS	PS	08 00 35.8	-0.9
OBN				*e*SS	**SS**	**08 06 02.9**	**+7.6**
OBN				pmax	pmax		
	comp=Z,47nm,2.0s						
OBN				MLR	MLR		
	comp=Z,3µm,19.0s						
OBN	**Obninsk**	**99.06**	**25**	IAMs_20	IAMs_20	08 34 13.1	
	comp=Z,3µm,20.0s						
ARR	**Arges**	**99.51**	**37**	⇓P	**Pdif**	**07 47 40.8**	**-0.5**
NNZ	**Nelson**	**99.67**	**230**	IAMs_20	IAMs_20	08 23 39.5	
	comp=Z,3µm,21.0s						
VOIR		**99.71**	**37**	⇓P	**Pdif**	**07 47 41.2**	**-1.1**
MLR	**Muntele Rosu**	**100.20**	**36**	⇑P	**Pdif**	**07 47 44.2**	**-0.2**
MLR	**Muntele Rosu**	**100.20**	**36**	LR	LR	08 38 08.4	
	comp=Z,2µm,18.5s,baz=310,slow=38						
MLR	**Muntele Rosu**	**100.20**	**36**	IAMs_20	IAMs_20	08 38 15.4	
	comp=Z,2µm,18.0s						
QRZ	**Quartz Range**	**100.21**	**230**	IAMs_20	IAMs_20	08 23 59.8	
	comp=Z,3µm,21.0s						
VTS	**Vitosha**	**100.22**	**40**	*i* P	**Pdif**	**07 47 44.2**	**-0.4**
ZEA	**Zeya**	**100.25**	**335**	*e*P	**Pdif**	**07 47 38.6**	**-5.7**
ZEA				*e*		07 51 51.9	
ZEA				pmax	pmax		
	comp=Z,100nm,10.6s						
KKB	**Krupnik**	**100.53**	**41**	*e*P	**Pdif**	**07 47 47.7**	**+1.8**
KIRV	**Kirov**	**100.66**	**17**	*ce*P	**Pdif**	**07 47 45.4**	**-0.6**
KIS	**Kishinev**	**100.88**	**34**	*e*P	**Pdif**	**07 47 45.0**	**-2.3**
	comp=Z,100nm,4.5s						
KIS	**Kishinev**	**100.88**	**34**	*e*PS	PS	08 00 48.0	-8.7
KIS				*e*L	L	08 24 08.0	
KIS				LRM	MLR	08 36 43.0	
	comp=Z,700nm,20.0s						
KIS	**Kishinev**	**100.88**	**34**	*e*P	**Pdif**	**07 47 45.0**	**-2.3**
KIS				*e*PS	PS	08 00 48.0	-8.7
KIS				pmax	pmax		
	comp=Z,100nm,4.5s						
KIS				MLR	MLR		
	comp=Z,700nm,20.0s						
MILM	**Milestii Mici**	**100.92**	**34**	*e*P	**Pdif**	**07 47 45.0**	**-2.5**
	comp=Z,110nm,3.8s						
MILM				*e*SKS		07 58 01.0	
MILM	**Milestii Mici**	**100.92**	**34**	*e*PS	PS	08 00 45.0	-12
MILM				LRM	MLR	08 36 41.0	
	comp=Z,1µm,19.0s						
MILM	**Milestii Mici**	**100.92**	**34**	*e*P	**Pdif**	**07 47 45.0**	**-2.5**
MILM				*e*		07 51 53.0	
MILM				pmax	pmax		
	comp=Z,110nm,3.8s						
MILM				MLR	MLR		
	comp=Z,2µm,19.0s						
MILM				MLR	MLR		
	comp=N,1µm,20.0s						
MILM				MLR	MLR		
	comp=E,1µm,19.0s						
MMB	**Musomiste**	**101.09**	**41**	*e*P	**Pdif**	**07 47 47.1**	**-1.3**
DZM	**Mont Dzumac**	**101.13**	**250**	*e*LR	LR	08 20 27.5	
	comp=E,5µm,23.5s						
KDZ	**Kurdzhali**	**102.10**	**40**	*e*P	**Pdif**	**07 47 52.7**	**-0.2**
JMB	**Yambol**	**102.34**	**39**	*e*P	**Pdif**	**07 47 54.2**	**+0.3**
VORR	**Voronezh**	**102.65**	**26**	*e*P	**Pdif**	**07 47 55.2**	**+0.2**
VORR				pmax	pmax		
	comp=Z,90nm,0.4s						
KOUNC	**Koumac, New Ca**	**102.75**	**252**	IAMs_20	IAMs_20	08 26 03.7	
	comp=Z,2µm,18.0s						
ARU	**Arti**	**104.86**	**13**	*c i*P	**Pdif**	**07 48 04.2**	**-0.6**
ARU				S	**SKSac**	**07 58 41.2**	**-2.6**
ARU				SP	SP	08 01 30.6	-4.4
ARU				pmax	pmax		
	comp=Z,25nm,2.7s						
ARU				MLR	MLR		
	comp=Z,2µm,26.0s						
ARU	**Arti**	**104.86**	**13**	IAMs_20	IAMs_20	08 41 48.0	
	comp=Z,2µm,18.0s						
SIM	**Simferopol'**	**105.02**	**33**	*e*P	**Pdif**	**07 48 01.0**	**-4.7**
SIM				*e*SS	SS	08 07 11.0	-7.4
SIM				*e*SSS	SSS	08 11 09.0	
QSPA	**South Pole Qui**	**106.26**	**180**	IAMs_20	IAMs_20	08 28 47.5	
	comp=Z,2µm,20.0s						
HIA	**Hailar**	**106.70**	**335**	IAMs_20	IAMs_20	08 40 38.2	
	comp=Z,2µm,19.0s						
ANTO	**Ankara**	**107.63**	**38**	IAMs_20	IAMs_20	08 38 56.3	
	comp=Z,2µm,21.0s						
BRTR	**Keskin Array B**	**108.22**	**37**	PKiKP	**PKiKP**	**07 52 25.4**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=341,slow=2.0,SNR=5.6						
BRTR				PP	**PP**	**07 52 46.3**	**-3.2**
	comp=Z,3.6nm,1.1s,baz=310,slow=4.7,SNR=7.0						
BRTR				PKKPbc	**PKKPbc**	**08 03 44.4**	**+5.5**
	comp=Z,1.0nm,0.9s,baz=140,slow=4.7,SNR=5.6						
CN2	**Changchun**	**108.26**	**328**	Pdif	**Pdif**	**07 48 27.8**	**+7.6**
CN2				S	**Sdif**	**08 00 27.3**	**+1.1**
CN2				SS	**SS**	**08 08 05.3**	**+2.9**
CN2				LR	LR		
	comp=Z,700nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
ZALV	**Zalesovo Beam**	**109.97**	**358**	Pdiff	**Pdif**	**07 48 28.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=84,slow=4.5,SNR=4.3						
ZALV				PKiKP	**PKiKP**	**07 52 29.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=34,slow=0.5,SNR=1.3						
ZALV				PP	**PP**	**07 52 59.2**	**-2.0**
	comp=Z,13nm,1.0s,baz=354,slow=6.5,SNR=4.5						
KIV	**Kislovodsk**	**110.00**	**29**	*i* P	**Pdif**	**07 48 27.4**	**-0.7**
KIV				*e*		07 53 01.8	
KIV				*e*PPP	PPP	07 55 20.7	
KIV				*e*PS	PS	08 02 30.3	-1.4
KIV				*e*SS	SS	08 08 23.9	-2.0
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,21.0s						
KIV	**Kislovodsk**	**110.00**	**29**	IAMs_20	IAMs_20	08 39 01.1	
	comp=Z,2µm,22.0s						
KBZ	**Khabaz**	**110.27**	**29**	PP	**PP**	**07 53 01.9**	**-2.0**
	comp=Z,5.9nm,0.9s,baz=294,slow=3.7,SNR=5.8						
CSS	**Mathiatis**	**111.09**	**42**	IAMs_20	IAMs_20	08 39 54.4	
	comp=Z,1µm,22.0s						
KSRS	**Korea Array**	**111.34**	**322**	PKiKP	**PKiKP**	**07 52 31.8**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=8.2,slow=1.1,SNR=8.6						
KSRS				PP	**PP**	**07 53 11.0**	**-0.8**
	comp=Z,5.8nm,1.3s,baz=53,slow=5.8,SNR=5.2						
GROC	**Groznyy**	**112.01**	**28**	*i* PKIKP	**PKiKP**	**07 52 36.0**	**+2.4**
GROC				*e*		07 53 21.3	
GROC				pmax	pmax		
	comp=Z,17nm,0.4s						
ULN	**Ulaanbaatar**	**112.33**	**342**	*i* PKIKP	**PKiKP**	**07 52 33.7**	**-0.6**
XLT	**XiLinHaoTe**	**112.52**	**334**	*e*PKP	**PKiKP**	**07 52 34.6**	**-0.1**
XLT				PP	**PP**	**07 53 26.5**	**+6.5**
XLT				AMB	AMB		
	comp=Z,380nm,12.1s						
XLT				LR	LR		
	comp=Z,1µm,17.5s						
XLT				LR	LR		
	comp=Z,2µm,17.9s						
SONM	**Songino Array**	**112.55**	**343**	PKiKP	**PKiKP**	**07 52 33.9**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=35,slow=3.6,SNR=5.4						
SONM				PKKPbc	**PKKPbc**	**08 03 28.4**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=182,slow=3.9,SNR=4.0						
MAK	**Makhachkala**	**112.96**	**27**	*i* P	**Pdif**	**07 48 45.6**	**+4.5**
MAK				*i*		07 52 34.0	
MAK				*e*		07 53 19.3	
MAK				*e*		07 59 11.6	
MAK				*e*PS	**PS**	**08 02 57.4**	**-1.3**
MAK				*e*SSS	SSS	08 13 11.2	
MAK				pmax	pmax		
	comp=Z,171nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,21.0s						
GNI	**Garni**	**113.90**	**31**	IAMs_20	IAMs_20	08 41 59.4	
	comp=Z,2µm,21.0s						
BJT	**Baijiatuau**	**115.61**	**332**	IAMs_20	IAMs_20	08 48 13.4	
	comp=Z,1µm,20.0s						
PMG	**Port Moresby**	**116.47**	**267**	IAMs_20	IAMs_20	08 34 15.6	
	comp=Z,2µm,20.0s						
HHC	**Hu-ho-hao-te**	**116.91**	**335**	*e*PKP	**PKiKP**	**07 52 43.3**	**+0.1**
HHC				PP	**PP**	**07 53 53.1**	**+2.1**
HHC				SS	SS	08 09 55.9	-1.1
HHC				AMB	AMB		
	comp=Z,830nm,9.7s						
HHC				LR	LR		
	comp=Z,3µm,19.8s						
HHC				LR	LR		
	comp=Z,3µm,20.4s						
HHC				LR	LR		
	comp=Z,6µm,20.3s						
MAKZ	**Makanchi**	**117.16**	**0**	PKIKP	**PKPdf**	**07 52 42.7**	**-0.8**
MAKZ	**Makanchi**	**117.16**	**0**		**PKPdf**	**07 52 42.6**	**-0.8**
MAKZ				IAMs_20	IAMs_20	08 48 38.0	
	comp=Z,2µm,21.0s						
MK31	**Makanchi Array**	**117.18**	**360**	PKIKP	**PKPdf**	**07 52 42.3**	**-1.2**
MK31	**Makanchi Array**	**117.18**	**360**	PKPdf	**PKPdf**	**07 52 42.3**	**-1.2**
MKAR	**Makanchi Array**	**117.18**	**360**	PKP	**PKPdf**	**07 52 41.6**	**-1.8**
	comp=Z,4.8nm,0.9s,baz=1.8,slow=1.6,SNR=18						
MKAR				PP	**PP**	**07 53 48.4**	**-4.0**
	comp=Z,3.8nm,0.9s,baz=349,slow=3.9,SNR=5.2						
MKAR				PKKPab	**PKKPab**	**08 03 12.5**	**-1.3**
	comp=Z,1.7nm,1.0s,baz=151,slow=3.3,SNR=6.7						
MKAR	**Makanchi Array**	**117.18**	**360**	PKIKP	**PKPdf**	**07 52 42.4**	**-1.1**
MKAR	**Makanchi Array**	**117.18**	**360**	PKPdf	**PKPdf**	**07 52 42.4**	**-1.1**
BTO	**Baotou**	**117.72**	**336**	*e*PKP	**PKPdf**	**07 52 43.6**	**-1.2**
BTO				LR	LR		
	comp=Z,5µm,22.1s						
BTO				LR	LR		
	comp=Z,5µm,22.1s						
CAN	**Canberra**	**118.01**	**238**	IAMs_20	IAMs_20	08 34 54.3	
	comp=Z,2µm,20.0s						
HNS	**HongShan**	**118.40**	**331**	⇓PKP	**PKiKP**	**07 52 46.6**	**+0.6**
HNS				PP	**PP**	**07 54 06.0**	**+4.6**
HNS				SKS	**SKSdf**	**07 59 54.8**	**-2.5**
HNS				SS	**SS**	**08 10 23.0**	**+6.6**
HNS				AMB	AMB		
	comp=Z,290nm,4.3s						
HNS				LR	LR		
	comp=Z,780nm,20.6s						
HNS				LR	LR		
	comp=Z,2µm,19.7s						
HNS				LR	LR		
	comp=Z,2µm,20.2s						
BTLS	**Baital**	**118.48**	**7**	*e*PKIKP	**PKPdf**	**07 52 45.2**	**-0.7**
BTLS	**Baital**	**118.48**	**7**	*e*PKP	**PKPdf**	**07 52 45.3**	**-0.7**
	baz=6.7						
TSUM	**Tsumeb**	**118.75**	**103**	IAMs_20	IAMs_20	08 43 59.0	
	comp=Z,1µm,20.0s						
CTAO	**Charters Tower**	**119.32**	**256**	IAMs_20	IAMs_20	08 32 59.5	
	comp=Z,2µm,22.0s						
SSE	**Sheshan**	**119.75**	**322**	SS	SS	08 10 39.8	+5.3
SSE				AMB	AMB		
	comp=Z,76nm,23.5s						
SSE				LR	LR		
	comp=N,300nm,21.6s						

SSE				LR	LR		
	comp=E,670nm,20.1s						
KUU	**Kurty**	**119.84**	**5**	*e*PKIKP	**PKPdf**	**07 52 48.0**	**-0.6**
KUU	**Kurty**	**119.84**	**5**	*e*PKP	**PKPdf**	**07 52 48.1**	**-0.6**
	baz=5.0						
KUU				LR	LR	08 46 44.1	
	comp=E,784nm,16.2s,baz=5.0						
CHKK	**Chushkaly**	**119.93**	**4**	*e*PKIKP	**PKPdf**	**07 52 47.8**	**-1.0**
CHKK	**Chushkaly**	**119.93**	**4**	*e*PKP	**PKPdf**	**07 52 47.9**	**-1.0**
	baz=4.4						
WMQ	**Urumqi**	**119.93**	**355**	PKP	**PKPdf**	**07 52 48.6**	**-0.3**
WMQ				sPKP		07 53 02.9	
WMQ				PP	**PP**	**07 54 12.3**	**+0.7**
WMQ				AMB	AMB		
	comp=E,560nm,8.9s						
WMQ				LR	LR		
	comp=E,2µm,18.3s						
WMQ				LR	LR		
	comp=E,2µm,19.1s						
WMQ				LR	LR		
	comp=E,1µm,20.9s						
SGDS	**Sogindy**	**120.12**	**6**	*e*PKIKP	**PKPdf**	**07 52 48.6**	**-0.6**
SGDS				*i*		07 54 12.2	
SGDS	**Sogindy**	**120.12**	**6**	*e*PKP	**PKPdf**	**07 52 48.7**	**-0.6**
	baz=6.5						
SGDS				*i* PP	**PP**	**07 54 12.2**	**-0.6**
	baz=6.5						
DZA	**Taraz**	**120.24**	**9**	*e*PKIKP	**PKPdf**	**07 52 48.8**	**-0.6**
DZA	**Taraz**	**120.24**	**9**	*e*PKP	**PKPdf**	**07 52 48.9**	**-0.6**
	baz=9.3						
NJ2	**Nanjing**	**120.41**	**324**	*e*PKP	**PKPdf**	**07 52 49.1**	**-0.9**
NJ2				LR	LR		
	comp=E,1µm,18.5s						
NJ2				LR	LR		
	comp=E,820nm,17.0s						
NJ2				LR	LR		
	comp=E,1µm,18.0s						
KPKS	**Kokpek**	**120.42**	**3**	*e*PKIKP	**PKPdf**	**07 52 48.8**	**-1.1**
KPKS				*i*		07 54 14.7	
KPKS	**Kokpek**	**120.42**	**3**	*e*PKP	**PKPdf**	**07 52 48.8**	**-1.1**
	baz=3.1						
KPKS				*i* PP	**PP**	**07 54 14.8**	**-0.1**
	baz=3.1						
AAA	**Alma-Ata**	**120.56**	**4**	*i* PKIKP	**PKPdf**	**07 52 48.9**	**-1.2**
AAA	**Alma-Ata**	**120.56**	**4**	*i* PKP	**PKPdf**	**07 52 48.9**	**-1.2**
	baz=4.6						
MDOK	**Medeo**	**120.62**	**4**	*e*PKIKP	**PKPdf**	**07 52 49.4**	**-1.0**
MDOK				*i*		07 54 15.0	
MDOK	**Medeo**	**120.62**	**4**	*e*PKP	**PKPdf**	**07 52 49.4**	**-1.0**
	baz=4.5						
MDOK				*i* PP	**PP**	**07 54 15.0**	**-1.4**
	baz=4.5						
MDOK				LR	LR	08 46 41.2	
	comp=E,812nm,17.3s,baz=4.5						
ZHN	**Zhinishke**	**120.70**	**3**	*e*PKIKP	**PKPdf**	**07 52 49.9**	**-0.6**
ZHN	**Zhinishke**	**120.70**	**3**	*e*PKP	**PKPdf**	**07 52 50.0**	**-0.6**
	baz=3.3						
TNSS	**Tian-Shan**	**120.74**	**4**	*e*PKIKP	**PKPdf**	**07 52 50.4**	**-0.5**
TNSS	**Tian-Shan**	**120.74**	**4**	*e*PKP	**PKPdf**	**07 52 50.4**	**-0.5**
	baz=4.6						
UZB	**Uzynbulak**	**120.75**	**3**	*e*PKIKP	**PKPdf**	**07 52 49.9**	**-0.7**
UZB				*i*		07 54 16.8	
UZB	**Uzynbulak**	**120.75**	**3**	*e*PKP	**PKPdf**	**07 52 49.9**	**-0.7**
	baz=2.8						
UZB				*i* PP	**PP**	**07 54 16.9**	**-0.4**
	baz=2.8						
IUG	**Iuzhnay**	**120.75**	**10**	*e*PKIKP	**PKPdf**	**07 52 50.2**	**-0.4**
IUG	**Iuzhnay**	**120.75**	**10**	*e*PKP	**PKPdf**	**07 52 50.2**	**-0.4**
	baz=11						
SATY	**Saty**	**120.81**	**3**	*e*PKIKP	**PKPdf**	**07 52 49.8**	**-0.9**
SATY				*i*		07 54 17.3	
SATY	**Saty**	**120.81**	**3**	*e*PKP	**PKPdf**	**07 52 49.9**	**-0.9**
	baz=3.3						
SATY				*i* PP	**PP**	**07 54 17.4**	**-0.3**
	baz=3.3						
AAK	**Ala-Archa**	**120.91**	**7***c*	*i*PKIKP	**PKiKP**	**07 52 51.5**	**+0.4**
AAK				pmax	pmax		
	comp=Z,12nm,2.5s						
AAK	**Ala-Archa**	**120.91**	**7**	PKPdf	**PKiKP**	**07 52 51.2**	**+0.1**
AAK	**Ala-Archa**	**120.91**	**7**	PKPdf	**PKPdf**	**07 52 50.1**	**-0.9**
BOOM	**Boomskoye usch**	**121.20**	**5**	PKIKP	**PKPdf**	**07 52 51.5**	**0.0**
BOOM	**Boomskoye usch**	**121.20**	**5**	PKPdf	**PKPdf**	**07 52 51.5**	**0.0**
AML	**Almayashu**	**121.31**	**7**	*i* PKPdf	**PKPdf**	**07 52 51.4**	**-0.7**
	SNR=6.9						
GEYT	**Alibeck**	**121.49**	**22**	PKP	**PKPdf**	**07 52 51.9**	**-0.1**
	comp=Z,9.5nm,0.8s,baz=51,slow=15,SNR=12						
GEYT	**Alibeck**	**121.49**	**22**	PKPdf	**PKPdf**	**07 52 52.0**	**0.0**
GYA0B	**ALIBECK ARRAY**	**121.49**	**22**	PKPdf	**PKPdf**	**07 52 51.9**	**-0.2**
KDJ	**Kajisay**	**121.66**	**4**	PKIKP	**PKPdf**	**07 52 52.3**	**-0.2**
KDJ	**Kajisay**	**121.66**	**4**	PKPdf	**PKPdf**	**07 52 52.2**	**-0.2**
LYN	**LuoYang**	**121.77**	**331**	*e*PKP	**PKPdf**	**07 52 52.5**	**-0.1**
LYN				SKKS		08 01 18.4	
LYN				AMB	AMB		
	comp=Z,670nm,7.7s						
LYN				LR	LR		
	comp=Z,1µm,18.8s						
LYN				LR	LR		
	comp=Z,860nm,18.8s						
LYN				LR	LR		
	comp=Z,2µm,20.0s						
TARG	**Taragay, Kyrgy**	**122.10**	**4**		**PKPdf**	**07 52 53.6**	**0.0**
GTA	**Gaotai**	**122.15**	**344**	PKP	**PKPdf**	**07 52 53.0**	**-0.4**
GTA				PP	**PP**	**07 54 28.9**	**+1.9**
GTA				LR	LR		
	comp=Z,2µm,19.5s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,19.9s						
BTK	**Batken**	**122.92**	**10**	PKIKP	**PKiKP**	**07 52 55.1**	**+0.1**
BTK	**Batken**	**122.92**	**10**		**PKiKP**	**07 52 55.1**	**+0.1**
XAN	**Xi'an**	**123.80**	**333**	PKP	**PKPdf**	**07 52 56.2**	**-0.4**
XAN				sPKP		07 53 11.5	
XAN				SS	SS	08 11 22.8	-2.7
XAN				AMB	AMB		
	comp=Z,410nm,14.1s						
XAN				LR	LR		
	comp=Z,2µm,18.7s						
XAN				LR	LR		
	comp=Z,2µm,17.6s						
XAN				LR	LR		
	comp=Z,3µm,22.5s						
CHGR	**Chuyangaron**	**123.97**	**12**	PKPdf	**PKPdf**	**07 52 56.5**	**-0.3**
LZH	**Lanzhou**	**123.98**	**339**	*e*PKP	**PKiKP**	**07 52 57.8**	**+0.5**
LZH				sPKP		07 53 10.4	
LZH				PP	**PP**	**07 54 41.5**	**+2.0**
LZH				SS	SS	08 11 29.3	+1.5
LZH				AMB	AMB		
	comp=Z,710nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
YHNB	**Yeheng**	**124.11**	**316**	IAMs_20	IAMs_20	08 55 10.8	
	comp=Z,1µm,19.0s						
KSH	**Kashi**	**124.15**	**6**	PKP	**PKiKP**	**07 52 58.4**	**+0.9**
KSH				sPKP		07 53 12.8	
KSH				PP	**PP**	**07 54 43.2**	**+2.9**
KSH				AMB	AMB		
	comp=Z,540nm,17.8s						
KSH				LR	LR		
	comp=Z,2µm,24.1s						
KSH				LR	LR		
	comp=Z,2µm,19.3s						
KSH				LR	LR		
	comp=Z,3µm,27.3s						
STKA	**Stephens Creek**	**124.21**	**242**	PKP	**PKPdf**	**07 52 56.7**	**-0.6**
	comp=Z,11nm,0.8s,baz=69,slow=1.7,SNR=14						
STKA	**Stephens Creek**	**124.21**	**242**	PKIKP	**PKiKP**	**07 52 57.7**	**+0.2**
STKA	**Stephens Creek**	**124.21**	**242**	PKPdf	**PKiKP**	**07 52 57.7**	**+0.2**
NACB	**Ninganchiao**	**124.30**	**315**	IAMs_20	IAMs_20	08 56 50.9	
	comp=Z,1µm,19.0s						
SSLB	**Suanglung**	**124.99**	**316**	PKPdf	**PKPdf**	**07 52 58.8**	**-0.3**
SSLB				IAMs_20	IAMs_20	08 57 39.2	
	comp=Z,1µm,19.0s						
YULB	**Yu-li**	**125.03**	**315**	IAMs_20	IAMs_20	08 52 58.2	
	comp=Z,942nm,19.0s						
HRA	**Herat**	**126.12**	**20**	PKPdf	**PKPdf**	**07 53 01.3**	**+0.1**
KNMB	**Chin-men Tao**	**126.21**	**318**	IAMs_20	IAMs_20	08 53 28.7	
	comp=Z,1µm,20.0s						
GOMU	**GeErMu**	**126.41**	**347**	PKP	**PKiKP**	**07 53 02.7**	**+0.3**
GOMU				PP	**PP**	**07 54 58.2**	**+2.4**
GOMU				SS	SS	08 12 01.1	+2.7
GOMU				AMB	AMB		
	comp=Z,64nm,4.5s						
GOMU				LR	LR		
	comp=Z,700nm,19.5s						
GOMU				LR	LR		
	comp=Z,440nm,19.5s						
GOMU				LR	LR		
	comp=Z,570nm,19.2s						
BOSA	**Boshof**	**126.45**	**114**	PKP	**PKPdf**	**07 53 01.6**	**-0.2**
	comp=Z,17nm,0.9s,baz=254,slow=2.2,SNR=14						
BOSA	**Boshof**	**126.45**	**114**	PKIKP	**PKPdf**	**07 53 01.3**	**-0.5**
BOSA	**Boshof**	**126.45**	**114**	PKPdf	**PKPdf**	**07 53 01.3**	**-0.5**
RAYN	**Ar Rayn**	**126.60**	**43**	PKIKP	**PKPdf**	**07 53 02.0**	**-0.2**
RAYN				MLR	MLR		
	comp=Z,1µm,22.0s						
RAYN	**Ar Rayn**	**126.60**	**43**		**PKPdf**	**07 53 02.0**	**-0.2**
RAYN	**Ar Rayn**	**126.60**	**43**	IAMs_20	IAMs_20	08 49 47.3	
	comp=Z,1µm,22.0s						
CASY	**Casey**	**126.67**	**194**	IAMs_20	IAMs_20	08 40 39.9	
	comp=Z,1µm,19.0s						
LBTB	**Lobatse**	**126.69**	**109**	PKIKP	**PKPdf**	**07 53 02.2**	**-0.1**
LBTB	**Lobatse**	**126.69**	**109**	PKPdf	**PKPdf**	**07 53 02.2**	**-0.1**
ENH	**Enshi**	**126.72**	**330**		**PKPdf**	**07 53 01.8**	**-0.5**
ENH				IAMs_20	IAMs_20	08 57 18.4	
	comp=Z,1µm,19.0s						
MBAR	**Mbarara**	**126.99**	**78***c*	*i*PKIKP	**PKiKP**	**07 53 04.8**	**+1.0**
MBAR				pmax	pmax		
	comp=Z,13nm,1.3s						
MAW	**Mawson**	**127.25**	**171**	PKP	**PKiKP**	**07 53 02.8**	**+0.3**
	comp=Z,15nm,0.9s,baz=257,slow=2.5,SNR=5.3						
MAW	**Mawson**	**127.25**	**171**	PKIKP	**PKiKP**	**07 53 03.1**	**+0.6**
MAW	**Mawson**	**127.25**	**171**		**PKiKP**	**07 53 03.1**	**+0.6**
LSZ	**Lusaka**	**128.19**	**97**	PKIKP	**PKiKP**	**07 53 05.8**	**-0.3**
LSZ	**Lusaka**	**128.19**	**97**		**PKiKP**	**07 53 05.8**	**-0.3**
LSZ	**Lusaka**	**128.19**	**97**	IAMs_20	IAMs_20	08 52 46.0	
	comp=Z,1µm,20.0s						
CD2	**Chengdu**	**128.65**	**336**	PKP	**PKPdf**	**07 53 06.0**	**+0.1**
CD2				AMB	AMB		
	comp=Z,230nm,11.2s						
CD2				LR	LR		
	comp=Z,2µm,24.0s						
CD2				LR	LR		
	comp=Z,1µm,16.6s						
NIL	**Nilore**	**129.58**	**10**	PKIKP	**PKPdf**	**07 53 06.6**	**-1.1**
NIL	**Nilore**	**129.58**	**10**	PKPdf	**PKPdf**	**07 53 06.6**	**-1.1**
LODK	**Lodwar**	**129.76**	**71**		**PKPdf**	**07 53 08.8**	**+0.3**
FURI	**Furi**	**130.21**	**63**	IAMs_20	IAMs_20	08 47 27.0	
	comp=Z,1µm,21.0s						
WB2	**Warramunga Arr**	**130.43**	**258**	PKPdf	**PKPdf**	**07 53 09.6**	**+0.2**
WRAB	**Tennant Creek**	**130.43**	**258***c*	*i*PKIKP	**PKiKP**	**07 53 10.7**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRAB	**Tennant Creek**	**130.43**	**258**		**PKPdf**	**07 53 09.1**	**-0.4**
WRA	**Warramunga Arr**	**130.44**	**258**	PKP	**PKPdf**	**07 53 09.2**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=81,slow=2.3,SNR=30						
WRA				PP	**PP**	**07 55 26.3**	**+2.3**
	comp=Z,2.8nm,1.1s,baz=85,slow=5.1,SNR=1.6						
HKPS	**Hong Kong Po S**	**130.47**	**320**	IAMs_20	IAMs_20	08 50 01.4	
	comp=Z,1µm,22.0s						
SHME	**Shamm**	**130.86**	**31**	*i* PKiKP	**PKPdf**	**07 53 10.2**	**0.0**
	SNR=7.9						
ASAR	**Alice Springs**	**131.04**	**253**	PKP	**PKPdf**	**07 53 10.7**	**+0.1**
	comp=Z,4.1nm,0.8s,baz=107,slow=1.9,SNR=22						
ASAR				PP	**PP**	**07 55 31.0**	**+3.2**
	comp=Z,2.6nm,1.0s,baz=93,slow=4.6,SNR=4.1						
BANOM	**Banah**	**131.04**	**31**	PKPdf	**PKPdf**	**07 53 09.1**	**-1.5**
DAV	**Davao City (W)**	**131.15**	**295**	IAMs_20	IAMs_20	08 43 06.5	
	comp=Z,1µm,20.0s						
GYA	**Guiyang**	**131.25**	**330**	⇑PKP	**PKiKP**	**07 53 12.0**	**0.0**
GYA				PP	**PP**	**07 55 30.0**	**+2.3**
GYA				SKKS		08 02 21.1	
GYA				AMB	AMB		
	comp=Z,600nm,8.5s						
GYA				LR	LR		
	comp=Z,660nm,23.2s						
GYA				LR	LR		
	comp=Z,1µm,22.4s						
GYA				LR	LR		
	comp=Z,2µm,23.6s						
MSFE	**Esma-Masafi**	**131.44**	**32**	*i* PKPdf	**PKPdf**	**07 53 11.1**	**-0.3**
	SNR=10.0						
AJN	**Ajban**	**131.48**	**34**	*i* PKPdf	**PKPdf**	**07 53 11.1**	**-0.3**
	SNR=6.7						
NAZ	**Nazwa, Dubai**	**131.49**	**33**	*i* PKPdf	**PKPdf**	**07 53 11.0**	**-0.4**
	SNR=5.9						
ASUD	**Al Ashush, Dub**	**131.61**	**33**	*i* PKiKP	**PKPdf**	**07 53 11.8**	**+0.1**
	SNR=8.8						
FAQ	**Al Faqa, Dubai**	**131.65**	**33**	*i* PKPdf	**PKPdf**	**07 53 09.9**	**-1.9**
	SNR=8.1						
UOSS	**Minazif**	**131.80**	**32**	PKPdf	**PKPdf**	**07 53 11.4**	**-0.6**
UOSS	**Minazif**	**131.80**	**32**	*i* PKPdf	**PKPdf**	**07 53 11.2**	**-0.8**
	SNR=9.4						
HATD	**Hatta, Dubai**	**131.86**	**32**	*i* PKPdf	**PKPdf**	**07 53 11.7**	**-0.4**
	SNR=7.7						
MZR	**Muzera**	**131.89**	**36**	*i* PKPdf	**PKPdf**	**07 53 12.0**	**-0.3**
	SNR=6.4						
ASHO	**Ashiyiah**	**131.94**	**33**	*i* PKPdf	**PKPdf**	**07 53 11.3**	**-1.0**
	SNR=6.2						
ATD	**Arta Tunnel**	**132.27**	**57**	IAMs_20	IAMs_20	08 47 08.7	
	comp=Z,2µm,22.0s						
ALNE	**Al Ain**	**132.29**	**33**	*i* PKPdf	**PKPdf**	**07 53 12.9**	**-0.1**
	SNR=6.5						
SOHO	**SOHO**	**132.64**	**32**	*i* PKPdf	**PKPdf**	**07 53 13.0**	**-0.6**
	SNR=11						
KMBO	**Kilima Mbogo**	**133.27**	**76**	PKP	**PKiKP**	**07 53 16.8**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=272,slow=4.4,SNR=4.4						
KMBO	**Kilima Mbogo**	**133.27**	**76**	*i* PKIKP	**PKiKP**	**07 53 17.5**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KMBO	**Kilima Mbogo**	**133.27**	**76**	PKiKP	**PKiKP**	**07 53 16.1**	**-0.5**
PZH	**PanZhiHua**	**133.37**	**336**	PKP	**PKPdf**	**07 53 14.3**	**-0.8**
PZH				sPKP		07 53 28.0	
PZH				SKKS		08 02 34.7	
PZH				SS	**SS**	**08 13 28.4**	**+4.4**
PZH				AMB	AMB		
	comp=Z,360nm,5.1s						
PZH				LR	LR		
	comp=Z,880nm,21.6s						
PZH				LR	LR		
	comp=Z,960nm,20.6s						
PZH				LR	LR		
	comp=Z,1µm,22.1s						
LSA	**Lhasa**	**133.43**	**349**	IAMs_20	IAMs_20	08 57 33.0	
	comp=Z,2µm,22.0s						
LSA	**Lhasa**	**133.43**	**349**	PKiKP	**PKPdf**	**07 53 15.6**	**0.0**
KMI	**Kunming**	**134.18**	**334**	⇑PKP	**PKPdf**	**07 53 16.9**	**+0.1**
KMI				sPKP		07 53 29.8	
KMI				PP	**PP**	**07 55 48.1**	**+1.7**
KMI				PKS	**PKSdf**	**07 56 47.0**	**-6.5**
KMI				SS	SS	08 13 37.7	+3.5
KMI				AMB	AMB		
	comp=Z,440nm,5.8s						
KMI				LR	LR		
	comp=Z,1µm,21.2s						
KMI				LR	LR		
	comp=Z,1µm,22.7s						
KMI				LR	LR		
	comp=Z,2µm,24.2s						
QIZ	**Qiongzhong**	**135.55**	**321**	IAMs_20	IAMs_20	08 53 12.5	
	comp=Z,971nm,20.0s						
QIZ	**Qiongzhong**	**135.55**	**321**	PKP	**PKiKP**	**07 53 20.2**	**-0.5**
QIZ				SS	SS	08 13 52.6	+1.6
QIZ				LR	LR		
	comp=Z,530nm,20.7s						
QIZ				LR	LR		
	comp=Z,990nm,18.3s						
QIZ				LR	LR		
	comp=Z,810nm,20.7s						
MMRI	**Maumere**	**140.19**	**276**	IAMs_20	IAMs_20	08 50 13.5	
	comp=Z,875nm,20.0s						
SOCY	**Socotra**	**140.26**	**46**	IAMs_20	IAMs_20	08 55 02.7	
	comp=Z,1µm,22.0s						
CHTO	**Chiang Mai**	**141.37**	**334**	IAMs_20	IAMs_20	09 00 09.4	
	comp=Z,1µm,20.0s						
CMAR	**Chiang Mai Arr**	**141.69**	**334**	PKhKP	PKPpre	07 53 25.2	
	comp=Z,14nm,1.0s,baz=350,slow=3.8,SNR=34						
CMAR				PP	**PP**	**07 56 33.6**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=11,slow=7.1,SNR=4.4						
PSA00	**Pilbara Seismi**	**144.04**	**256**	PKPdf	PKPbc	07 53 33.2	+0.7
POO	**Poona**	**144.41**	**14**	*e*P	**PKPab**	**07 53 27.0**	**-6.4**
SBUM	**Sibu**	**144.93**	**299**	PKPdf	**PKPab**	**07 53 34.9**	**-0.5**
VOI	**Vohitsoka**	**146.18**	**105**		**PKPdf**	**07 53 38.2**	**-0.1**
VOI				IAMs_20	IAMs_20	09 02 15.5	
	comp=Z,1µm,21.0s						
VOI	**Vohitsoka**	**146.18**	**105**	PKP	**PKPab**	**07 53 40.6**	**+0.6**
HYBB	**Hyderabad (bro**	**146.28**	**6**	*e*PKPdf	**PKPdf**	**07 53 37.8**	**-0.8**
MORW	**Morawa**	**146.39**	**242**		**PKPdf**	**07 53 38.6**	**+0.3**
ABPO	**Ambohimpanom**	**146.64**	**100**	PKP2	**PKPab**	**07 53 42.4**	**+0.5**
ABPO				MLR	MLR		
	comp=Z,2µm,20.0s						
ABPO	**Ambohimpanom**	**146.64**	**100**	PKPdf	**PKPdf**	**07 53 39.6**	**+0.4**
ABPO				PKPbc	**PKPab**	**07 53 42.4**	**+0.5**
KSM	**Kuching**	**147.06**	**300**	PKPbc	**PKPab**	**07 53 42.8**	**-0.7**
KSM					**pPKPab**	**07 53 50.3**	**0.0**
SBV	**Sambava**	**148.73**	**89**	PKP	**PKPab**	**07 53 52.0**	**+2.0**
SMRI	**Semarang**	**150.85**	**285**	PKPbc	**PKiKP**	**07 53 52.7**	**+0.5**
SMRI				PKPab	**sPKPbc**	**07 54 00.8**	**-0.1**
MSEY	**Mahe Island**	**151.37**	**69**	IAMs_20	IAMs_20	09 01 17.8	
	comp=Z,1µm,21.0s						
KULM	**Kulim**	**151.79**	**318**	PKPdf	**PKPdf**	**07 53 46.8**	**-0.6**
KULM				PKPbc	**PKiKP**	**07 53 54.0**	**-0.2**
KULM				IAMs_20	IAMs_20	09 14 55.4	
	comp=Z,1µm,22.0s						
MYKOM	**Kota Tinggi**	**152.02**	**308**	IAMs_20	IAMs_20	09 16 20.0	
	comp=Z,1µm,21.0s						
IPM	**Ipoh**	**152.15**	**316**	PKPdf	**PKPdf**	**07 53 48.5**	**+0.4**
IPM					**PKPbc**	**07 53 54.8**	**+0.1**
IPM				IAMs_20	IAMs_20	09 09 44.5	
	comp=Z,1µm,22.0s						
PCHI	**Peechi**	**152.70**	**13**	*e*P	**PKPdf**	**07 53 48.1**	**-0.7**
PCHI				*e*x	x	08 04 39.4	
PMBI	**Palembang**	**154.08**	**299**	IAMs_20	IAMs_20	09 19 27.9	
	comp=Z,1µm,21.0s						
BKNI	**Bangkinang**	**155.08**	**310**	IAMs_20	IAMs_20	09 12 42.8	
	comp=Z,1µm,22.0s						
PALK	**Pallekele**	**156.51**	**4**	PKPab	**PKPab**	**07 54 22.0**	**-0.6**
	comp=Z,15nm,0.9s,baz=152,slow=1.0,SNR=6.2						
PALK	**Pallekele**	**156.51**	**4**	PKIKP	**PKPdf**	**07 53 54.2**	**+0.1**
PALK	**Pallekele**	**156.51**	**4**	PKPdf	**PKPdf**	**07 53 54.2**	**+0.1**
PALK				PKPab	**PKPab**	**07 54 22.1**	**-0.4**
PALK	**Pallekele**	**156.51**	**4**	IAMs_20	IAMs_20	09 13 09.1	
	comp=Z,1µm,22.0s						

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*IDC **08** 07:34:39.3±1.4, 3°.16S×130°.77E, h0^{km}, mb4.0/4, mbtmp4.1/6, ML4.1/2, MS3.7/1 Error ellipse: s-maj=66.7km s-min=20.5km az=88.0*

ISC 08 07:34:39.5±1.0**, 3°.30S**±0°.08×**131°.0E**±0°.4**, h10^{km}, n7, σ2^{s}.88**/8**, mb3.8**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.43**	**6**	Pn	**Pn**	**07 35 19.3**	**+0.1**
	13nm,0.3s,baz=172,slow=19,SNR=9.2						
SIJI				Sn	**Sn**	**07 35 48.2**	**-0.8**
	15nm,0.3s,baz=250,slow=23,SNR=2.3						
	34nm,0.3s						
WRA	**Warramunga Arr**	**16.86**	**169**	P	**P**	**07 38 40.8**	**+3.0**
	1.4nm,0.3s,baz=350,slow=11,SNR=2.1						
WRA				S	Sn	07 41 33.8	-9.4
	1.2nm,0.6s,baz=350,slow=23,SNR=1.5						
	3.0nm,0.4s						
ASAR	**Alice Springs**	**20.44**	**172**	P	**P**	**07 39 19.6**	**+2.4**
	11nm,0.4s,baz=352,slow=10,SNR=15						
ASAR				S	**S**	**07 43 01.1**	**-5.1**
	1.7nm,0.8s,baz=1.0,slow=26,SNR=1.9						
	11nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.29**	**306**	LR	LR	07 58 55.5	
	comp=Z,104nm,20.3s,baz=135,slow=38						
KSRS	**Korea Array**	**40.65**	**356**	P	**P**	**07 42 19.7**	**-0.1**
	1.0nm,0.5s,baz=174,slow=9.3,SNR=5.8						
	1.0nm,0.5s						
SONM	**Songino Array**	**55.31**	**340**	P	**P**	**07 44 13.6**	**+0.2**
	0.4nm,0.5s,baz=148,slow=12,SNR=3.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**65.74**	**325**	P	**P**	**07 45 24.1**	**-0.5**
	0.7nm,0.6s,baz=125,slow=8.4,SNR=4.1						
	0.7nm,0.6s						

IDC 08 07:36:09.1±1.5**, 3°.17S**×**130°.70E, h0^{km}, mb3.8**/3**, mbtmp3.8**/5**, ML2.5**/1**, Error ellipse: s-maj=53.7km s-min=21.7km az=88.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.35**	**14**	Pn	Pn	07 36 49.6	+0.7
	1.3nm,0.3s,baz=220,slow=22,SNR=1.2						
SIJI				Sn	Sn	07 37 18.4	-0.2
	5.4nm,0.3s,baz=194,slow=22,SNR=1.2						
	19nm,0.2s						
WRA	**Warramunga Arr**	**17.05**	**168**	P	P	07 40 10.1	-0.9
	2.7nm,0.7s,baz=353,slow=11,SNR=1.6						
ASAR	**Alice Springs**	**20.62**	**172**	P	P	07 40 49.6	-0.6
	5.0nm,0.5s,baz=350,slow=11,SNR=5.4						
	5.0nm,0.5s						
KSRS	**Korea Array**	**40.49**	**357**	P	P	07 43 49.9	+0.1
	0.6nm,0.5s,baz=174,slow=10.0,SNR=4.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**65.45**	**326**	P	P	07 46 53.6	-0.4
	0.3nm,0.6s,baz=113,slow=7.6,SNR=1.7						
	0.3nm,0.6s						

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*IDC **08** 07:39:06.2±3.3, 12°.25S×166°.61E, h97^{km}±27^{km}, mb3.8/8, mbtmp4.2/10, Error ellipse: s-maj=26.5km s-min=19.4km az=72.0*

ISC 08 07:39:06.6±1.1**, 12°.28S**±0°.09×**166°.6E**±0°.1**, h100^{km}, n10, σ0^{s}.85**/12**, mb4.1**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.12**	**293**	P	**Pn**	**07 40 48.9**	**+0.7**
	294nm,0.9s,baz=2.3,slow=5.0,SNR=2.0						
HNR				S	**Sn**	**07 42 06.3**	**-1.3**
	164nm,0.5s,baz=234,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**9.74**	**181**	P	**Pn**	**07 41 24.1**	**+0.2**
	5.7nm,0.6s,baz=15,slow=20,SNR=15						
DZM				S	**Sn**	**07 43 10.6**	**-0.9**
	1.9nm,0.5s,baz=3.6,slow=22,SNR=1.3						
CTA	**Charters Tower**	**21.02**	**246**	P	**P**	**07 43 43.2**	**+0.8**
	10.0nm,0.9s,baz=75,slow=9.9,SNR=3.9						
	10.0nm,0.9s						
STKA	**Stephens Creek**	**30.16**	**226**	P	**P**	**07 45 08.1**	**+0.8**
	4.1nm,0.8s,baz=52,slow=15,SNR=4.4						
	4.1nm,0.8s						
WRA	**Warramunga Arr**	**31.88**	**252**	P	**P**	**07 45 21.7**	**-0.9**
	2.4nm,0.9s,baz=84,slow=8.9,SNR=5.4						
	2.4nm,0.9s						
ASAR	**Alice Springs**	**33.02**	**245**	P	**P**	**07 45 31.9**	**-0.6**
	5.1nm,0.7s,baz=70,slow=9.7,SNR=21						
	5.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**39.89**	**256**	P	**P**	**07 46 31.4**	**+0.3**
	2.7nm,0.7s,baz=99,slow=6.9,SNR=5.3						
	2.7nm,0.7s						
SONM	**Songino Array**	**80.15**	**324**	P	**P**	**07 51 06.4**	**+0.5**
	0.3nm,0.4s,baz=134,slow=4.2,SNR=1.7						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**84.41**	**18**	P	**P**	**07 51 26.9**	**-0.6**
	0.5nm,0.6s,baz=241,slow=5.8,SNR=8.6						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**94.99**	**317**	P	**P**	**07 52 17.7**	**-0.3**
	0.4nm,0.6s,baz=90,slow=7.2,SNR=3.4						
	0.4nm,0.6s						

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*IDC **08** 07:40:28.1±1.5, 61°.72N×150°.90W, h47^{km}±27^{km}, mb3.4/2, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=48.2km s-min=9.5km az=112.0*

*NEIC **08** 07:40:29.7±1.2, 61°.65N±0°.02×150°.56W±0°.05, h48^{km}±9^{km}, Error ellipse: s-maj=3.8km s-min=3.2km az=96.0*

*AEIC **08** 07:40:30±1.3, 61°.64N±0°.03×150°.53W±0°.05, h46^{km}±5^{km}, ML3.7, ML3.9/158(NEIC), Error ellipse: s-maj=3.9km s-min=3.0km az=168.0*

ISC 08 07:40:29.3±0.9**, 61°.65N**±0°.03×**150°.56W**±0°.02**, h55^{km}**±7^{km}**, n231, σ0^{s}.76**/260**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M22K	**Willow**	**0.23**	**64**		**Pn**	**07 40 38.0**	**-0.3**
M22K					**Sn**	**07 40 45.0**	**+0.2**
M22K	**Willow**	**0.23**	**64**	P	**Pn**	**07 40 38.1**	**-0.3**
	baz=240						
M22K				S	**Sn**	**07 40 45.1**	**+0.2**
	baz=240						
FIS	**Fire Island**	**0.54**	**162**		**Pn**	**07 40 42.1**	**+0.9**
FIS				IAML		07 40 53.7	
	comp=E,7µm,0.5s						
STLK	**Strandline Lak**	**0.63**	**256**		**Pn**	**07 40 42.4**	**-0.1**
PMR	**Palmer**	**0.68**	**95**		**Pn**	**07 40 42.2**	**-0.8**
PMR					**Sn**	**07 40 52.5**	**-0.4**
PMR				IAML		07 40 54.8	

	comp=N,4µm,0.2s						
PMR	Palmer	0.68	95	P	Pn	07 40 42.2	-0.8
	baz=275						
PMR				S	Sn	07 40 52.6	-0.4
	baz=275						
RC01	Rabbit Creek A	0.69	145		Pn	07 40 42.7	-0.5
RC01					Sn	07 40 53.0	-0.2
RC01	Rabbit Creek A	0.69	145	P	Pn	07 40 42.6	-0.5
	baz=326						
RC01				S	Sn	07 40 53.0	-0.2
	baz=326						
CUT	Chulitna	0.77	10		Pn	07 40 43.6	-0.4
CUT					Sn	07 40 55.1	+0.3
CUT				IAML		07 40 55.5	
	comp=N,4µm,0.4s						
CUT				IAML		07 40 55.8	
	comp=E,4µm,0.4s						
CUT	Chulitna	0.77	10	P	Pn	07 40 43.7	-0.4
	baz=190						
CUT				S	Sn	07 40 54.8	0.0
	baz=190						
GHO	Glory Hole Cre	0.79	81		Pn	07 40 44.3	-0.1
GHO					Sn	07 40 56.3	+0.8
GHO				IAML		07 40 57.9	
	comp=E,4µm,0.4s						
GHO				IAML		07 40 58.5	
	comp=N,4µm,0.6s						
SPCG	Spurr Capps Gl	0.79	243		Pn	07 40 44.5	0.0
SPCG					Sn	07 40 55.7	+0.1
CKN	Chakachatna No	0.89	242		Pn	07 40 45.9	+0.1
SPCR	Spurr Chakacha	0.92	241		Pn	07 40 45.8	-0.2
SPCR					Sn	07 40 58.3	-0.1
SPCR	Spurr Chakacha	0.92	241	P	Pn	07 40 45.8	-0.2
	baz=60						
SPCR				S	Sn	07 40 58.3	-0.1
	baz=60						
CAPN	Captain Cook N	0.94	198		Pn	07 40 47.8	+1.6
CAPN	Captain Cook N	0.94	198	P	Pn	07 40 47.9	+1.6
	baz=19						
SPBG	Spurr Blockage	0.96	246		Pn	07 40 46.7	+0.1
SPBG					Sn	07 41 00.5	+1.1
KNK	Knik Glacier	1.03	103		Pn	07 40 47.9	+0.3
KNK					Sn	07 41 02.6	+1.4
KNK	Knik Glacier	1.03	103	P	Pn	07 40 47.8	+0.3
	baz=284						
KNK				S	Sn	07 41 02.7	+1.5
	baz=284						
SPWE	Spurr West	1.03	249		Pn	07 40 48.0	+0.4
SML	Sawmill	1.07	81		Pn	07 40 48.2	+0.1
SML					Sn	07 41 03.1	+1.1
SML				IAML		07 41 04.2	
	comp=E,3µm,0.6s						
SML				IAML		07 41 04.5	
	comp=N,4µm,0.3s						
SML	Sawmill	1.07	81	P	Pn	07 40 47.9	-0.2
	baz=262						
SML				S	Sn	07 41 03.2	+1.1
	baz=262						
SLKM	Skilak Lake	1.16	172		Pn	07 40 48.7	-0.6
O22K	Cooper Landing	1.25	161	Pn	Pn	07 40 50.4	0.0
O22K	Cooper Landing	1.25	161	P	Pn	07 40 50.4	0.0
	baz=342						
M20K	Styx River	1.25	282		Pn	07 40 50.7	+0.2
M20K					Sn	07 41 06.8	+0.5
M20K				IAML		07 41 08.0	
	comp=E,1µm,0.4s						
M20K				IAML		07 41 08.4	
	comp=N,1µm,0.3s						
M20K	Styx River	1.25	282	P	Pn	07 40 50.7	+0.2
	baz=100						
M20K				S	Sn	07 41 06.8	+0.5
	baz=100						
M23K	Glacier View	1.35	83	P	Pn	07 40 52.3	+0.4
	baz=265						
M23K				S	Sn	07 41 10.2	+1.4
	baz=265						
PPLA	Purkeypile	1.46	329		Pn	07 40 53.5	0.0
PPLA	Purkeypile	1.46	329	P	Pn	07 40 53.5	0.0
	baz=148						
DFR	Drift River	1.48	225		Pn	07 40 54.0	+0.3
DFR					Sn	07 41 13.1	+1.1
WAT1	Susitna Watana	1.51	38		Pn	07 40 54.5	+0.5
WAT1	Susitna Watana	1.51	38	P	Pn	07 40 54.5	+0.5
	baz=219						
RDJH	Redoubt Jeurge	1.53	227		Pn	07 40 54.8	+0.5
SCM	Sheep Creek Mo	1.55	82		Pn	07 40 54.9	+0.4
SCM				IAML		07 41 17.0	
	comp=N,2µm,0.9s						
SCM	Sheep Creek Mo	1.55	82	P	Pn	07 40 54.9	+0.4
	baz=264						
SCM				S	Sn	07 41 15.5	+2.0
	baz=264						
NCT	North Crescent	1.59	227		Pn	07 40 55.5	+0.3
RSO	Redoubt South	1.60	223		Pn	07 40 55.7	+0.3
RDWB	Redoubt West	1.61	224		Pn	07 40 56.0	+0.5
WAT6	Susitna Watana	1.62	54		Pn	07 40 55.9	+0.3
WAT6	Susitna Watana	1.62	54	P	Pn	07 40 55.9	+0.3
	baz=236						
RED	Redoubt Volcan	1.64	222		Pn	07 40 56.3	+0.4
SEW	Seward	1.65	160		Pn	07 40 56.2	+0.4
SEW	Seward	1.65	160	P	Pn	07 40 55.3	-0.5
	baz=342						
L20K	Farewell, AK	1.77	299		Pn	07 40 57.7	+0.2
L20K					Sn	07 41 19.0	+0.1
L20K	Farewell, AK	1.77	299	P	Pn	07 40 57.7	+0.2
	baz=117						
L20K				S	Sn	07 41 19.0	+0.1
	baz=117						
M19K	Big River Lodg	1.84	279		Pn	07 40 58.7	+0.2
M19K					Sn	07 41 21.1	+0.5
M19K				IAML		07 41 24.6	
	comp=N,666nm,0.4s						
M19K	Big River Lodg	1.84	279	P	Pn	07 40 58.6	+0.2
	baz=96						
M19K				S	Sn	07 41 20.7	+0.1
	baz=96						
GLI	Glacier Island	1.84	113		Pn	07 40 57.9	-0.5
GLI				IAML		07 41 27.5	
	comp=N,2µm,0.5s						
GLI	Glacier Island	1.84	113	P	Pn	07 40 58.0	-0.5
	baz=296						
O20K	Slope Mountain	1.88	214		Pn	07 41 00.1	+1.2
O20K	Slope Mountain	1.88	214	P	Pn	07 41 00.1	+1.2
	baz=32						
BRLK	Bradley Lake	1.90	185		Pn	07 40 59.4	0.0
BRLK				IAML		07 41 28.9	
	comp=N,1µm,0.6s						
BRLK				IAML		07 41 29.4	
	comp=E,1µm,0.6s						
CAST	Castle Rocks	1.91	339		Pn	07 40 59.7	+0.3
CAST				IAML		07 41 24.2	
	comp=E,581nm,0.7s						
CAST	Castle Rocks	1.91	339	P	Pn	07 40 59.7	+0.3
	baz=157						
KTH	Kantishna Hill	1.91	355		Pn	07 41 00.5	+0.9
KTH				IAML		07 41 24.8	
	comp=E,2µm,0.9s						
KTH				IAML		07 41 26.2	
	comp=N,902nm,0.3s						
BRSE	Bradley Lake S	1.92	183		Pn	07 40 59.2	-0.4
BRSE	Bradley Lake S	1.92	183	P	Pn	07 40 59.2	-0.4
	baz=3.0						
RND	Reindeer	1.93	23		Pn	07 41 00.4	+0.7
RND				IAML		07 41 26.7	
	comp=N,743nm,0.6s						
RND				IAML		07 41 29.3	
	comp=E,624nm,0.5s						
JPK	Jack Peak	2.00	106		Pn	07 41 00.3	-0.3
DHY	Denali Highway	2.06	45		Pn	07 41 02.0	+0.5
DHY				IAML		07 41 31.9	
	comp=E,582nm,0.5s						
DHY				IAML		07 41 32.9	
	comp=N,748nm,0.5s						
DHY	Denali Highway	2.06	45	P	Pn	07 41 02.0	+0.5
	baz=227						
HOM	Homer	2.07	195		Pn	07 41 02.5	+0.9
HOM	Homer	2.07	195	P	Pn	07 41 02.3	+0.7
	baz=15						
N19K	Bonanza Creek	2.08	248		Pn	07 41 02.1	+0.4
N19K	Bonanza Creek	2.08	248	P	Pn	07 41 02.1	+0.4
	baz=65						
L19K	White Mountain	2.10	286		Pn	07 41 02.7	+0.7
L19K				IAML		07 41 28.1	
	comp=N,841nm,0.6s						
L19K				IAML		07 41 29.3	
	comp=E,540nm,0.5s						
L19K	White Mountain	2.10	286	P	Pn	07 41 02.5	+0.5
	baz=103						
M24K	Tolsona, Glenn	2.12	76		Pn	07 41 03.6	+1.2
M24K				IAML		07 41 37.0	
	comp=E,1µm,0.5s						
M24K				IAML		07 41 44.8	
	comp=N,1µm,0.8s						
M24K	Tolsona, Glenn	2.12	76	P	Pn	07 41 03.5	+1.1
	baz=259						
CNPM	China Poot	2.16	189		Pn	07 41 02.8	0.0
CNPM				IAML		07 41 34.7	
	comp=E,1µm,0.5s						
FID	Port Fidalgo	2.17	113		Pn	07 41 02.3	-0.7
FID				IAML		07 41 40.4	
	comp=N,1µm,0.3s						
KLU	Klutina	2.22	92		Pn	07 41 03.6	-0.1
KLU				IAML		07 41 38.2	
	comp=E,654nm,0.5s						
KLU				IAML		07 41 38.8	
	comp=N,1µm,0.3s						
KLU	Klutina	2.22	92	P	Pn	07 41 03.5	-0.2
	baz=276						
O19K	Port Alsworth	2.35	233		Pn	07 41 05.7	+0.3
O19K	Port Alsworth	2.35	233	P	Pn	07 41 05.6	+0.3
	baz=50						
DIV	Divide	2.36	101		Pn	07 41 05.3	-0.3
K20K	Telida	2.36	318		Pn	07 41 05.9	+0.4
K20K				IAML		07 41 39.4	
	comp=E,518nm,0.5s						
K20K	Telida	2.36	318	P	Pn	07 41 05.6	0.0
	baz=135						
CHUM	Lake Minchumin	2.38	341		Pn	07 41 06.2	+0.5
CHUM	Lake Minchumin	2.38	341	P	Pn	07 41 06.2	+0.5
	baz=159						
OPT	Oil Point	2.40	214		Pn	07 41 07.5	+1.3
OPT	Oil Point	2.40	214	P	Pn	07 41 07.5	+1.3
	baz=32						
P19K	Oil Pt	2.40	214		Pn	07 41 07.6	+1.4
P19K	Oil Pt	2.40	214	P	Pn	07 41 07.4	+1.3
	baz=32						
PS11	TAPS Pump St11	2.45	78		Pn	07 41 07.9	+1.2
BPAW	Bear Paw Mtn.	2.46	356		Pn	07 41 07.2	+0.2
BPAW				IAML		07 41 37.4	
	comp=E,423nm,0.5s						
BPAW	Bear Paw Mtn.	2.46	356	P	Pn	07 41 07.1	+0.1
	baz=175						
SVW2	Sparrevohn	2.48	259		Pn	07 41 07.0	-0.2
BWN	Browne	2.58	11		Pn	07 41 09.8	+1.3
BWN				IAML		07 41 59.3	
	comp=E,742nm,0.8s						
BWN				IAML		07 42 01.7	
	comp=N,584nm,0.9s						
EYAK	Cordova Ski Ar	2.58	113		Pn	07 41 07.9	-0.7
EYAK	Cordova Ski Ar	2.58	113	P	Pn	07 41 07.6	-0.9
	baz=297						
PS12	TAPS Pump St12	2.60	92		Pn	07 41 08.6	-0.2
HARP	HAARP	2.65	71		Pn	07 41 10.6	+1.1
HARP	HAARP	2.65	71	P	Pn	07 41 10.6	+1.1
	baz=256						
AUQ	Augustine Qik’	2.71	213		Pn	07 41 11.9	+1.6
PAX	Paxson	2.72	59		Pn	07 41 11.4	+0.8
PAX	Paxson	2.72	59	P	Pn	07 41 11.3	+0.8
	baz=243						
N18K	Kilae Creek	2.76	252		Pn	07 41 11.1	+0.1
N18K	Kilae Creek	2.76	252	P	Pn	07 41 10.8	-0.2
	baz=67						
PS10	TAPS Pump St10	2.84	49		Pn	07 41 13.7	+1.6
N25K	Chitina, Valde	2.84	88		Pn	07 41 12.6	+0.3
N25K				IAML		07 41 56.8	
	comp=E,459nm,0.5s						
N25K	Chitina, Valde	2.84	88	P	Pn	07 41 12.1	-0.2
	baz=273						
TT01	Tatalina	2.85	299		Pn	07 41 12.3	+0.1
TTA	Tatalina	2.85	299		Pn	07 41 12.4	+0.1
TTA				IAML		07 42 02.6	
	comp=E,217nm,0.9s						
TTA	Tatalina	2.85	299	P	Pn	07 41 12.3	-0.1
	baz=114						
O18K	Koktuh Hills	2.91	234		Pn	07 41 13.4	+0.4
O18K	Koktuh Hills	2.91	234	P	Pn	07 41 13.2	+0.1
	baz=50						
BMRM	Bremner River	2.95	101		Pn	07 41 13.1	-0.6
BMRM				IAML		07 42 01.5	
	comp=E,619nm,0.5s						
BMRM				IAML		07 42 02.3	
	comp=N,586nm,0.6s						
BMRM	Bremner River	2.95	101	P	Pn	07 41 12.7	-0.9
	baz=286						
J20K	Nowinta River	3.02	329		Pn	07 41 14.8	+0.3
J20K				IAML		07 41 51.7	
	comp=N,222nm,0.5s						
J20K				IAML		07 41 52.5	
	comp=E,246nm,0.4s						
J20K	Nowinta River	3.02	329	P	Pn	07 41 14.7	+0.2
	baz=145						
NEA2	Nenana	3.03	12		Pn	07 41 15.1	+0.5
NEA2	Nenana	3.03	12	P	Pn	07 41 14.5	-0.1
	baz=193						
GOAT	Goat Mountain	3.03	108		Pn	07 41 13.7	-1.0
WRH	Wood River Hil	3.04	21	Pn	Pn	07 41 15.6	+0.7
WRH				IAML		07 42 08.4	
	comp=N,174nm,0.7s						
WRH				IAML		07 42 10.6	
	comp=E,187nm,0.7s						
Q23K	Middleton Isla	3.05	135	Pn	Pn	07 41 16.0	+1.1
Q23K				IAML		07 42 12.8	
	comp=N,194nm,0.7s						
Q23K				IAML		07 42 30.9	
	comp=E,198nm,0.8s						
MID	Middleton Isla	3.06	135	Pn	Pn	07 41 15.7	+0.7
MID				IAML		07 42 16.6	
	comp=E,218nm,1.0s						
K24K	Donnelly Dome	3.08	43	P	Pn	07 41 17.9	+2.5
	baz=227						
RAGM	Ragged Mountai	3.13	111		Pn	07 41 16.4	+0.3
Q19K	Cape Douglas,	3.14	211		Pn	07 41 17.3	+1.1
Q19K	Cape Douglas,	3.14	211	P	Pn	07 41 16.9	+0.7
	baz=28						
HDA	Harding Lake	3.22	29		Pn	07 41 18.4	+1.1
HDA				IAML		07 41 59.9	
	comp=E,414nm,0.4s						
HDA	Harding Lake	3.22	29	P	Pn	07 41 18.2	+0.9
	baz=212						
GLB	Gilahina Butte	3.24	91		Pn	07 41 18.1	+0.5
GLB				IAML		07 42 07.1	
	comp=N,323nm,0.8s						
GLB				IAML		07 42 13.2	
	comp=E,249nm,0.7s						
P18K	Big Mountain,	3.24	228		Pn	07 41 18.0	+0.4
P18K	Big Mountain,	3.24	228	P	Pn	07 41 17.7	+0.2
	baz=44						
CCB	Clear Creek Bu	3.25	21		Pn	07 41 18.4	+0.7
PS08	TAPS Pump Stn8	3.36	29		Pn	07 41 20.0	+0.9
RIDG	Independent Ri	3.36	49		Pn	07 41 20.9	+1.6
RIDG	Independent Ri	3.36	49	P	Pn	07 41 20.6	+1.3
	baz=234						
VRDI	Verde Repeater	3.44	94		Pn	07 41 19.7	-0.8
VRDI				IAML		07 42 17.6	
	comp=N,186nm,0.7s						
MENT	Mentasta	3.44	65		Pn	07 41 21.0	+0.6
MENT				IAML		07 42 15.1	
	comp=N,383nm,0.6s						
TCOL	CIGO, UAF Yank	3.45	19		Pn	07 41 21.5	+1.0
TCOL	CIGO, UAF Yank	3.45	19	P	Pn	07 41 21.3	+0.8
	baz=202						
COLA	College	3.46	20		Pn	07 41 21.1	+0.7
KAIM	Kayak Island	3.47	117	Pn	Pn	07 41 18.9	-1.8
KAIM				IAML		07 42 24.8	
	comp=N,205nm,1.3s						
KAIM				IAML		07 42 25.3	
	comp=E,242nm,1.0s						
MDM	Murphy Dome	3.48	17		Pn	07 41 21.4	+0.6
MDM				IAML		07 42 27.2	
	comp=E,130nm,1.0s						
NICHA	Nichawak Mount	3.52	111		Pn	07 41 19.8	-1.5
IL31		3.54	26		Pn	07 41 22.6	+1.0
ILAR	Eielson Array	3.54	26	P	Pn	07 41 22.0	+0.3
	comp=E,6.6nm,0.3s,baz=212,slow=14,SNR=160						
ILAR				S	Sn	07 42 01.7	-0.6
	comp=E,98nm,0.7s,baz=213,slow=23,SNR=22						
	comp=E,12nm,0.3s						
ILAR	Eielson Array	3.54	26		Pn	07 41 21.8	+0.2
I23K	Minto, Yukon-K	3.55	8		Pn	07 41 22.6	+0.9
I23K				IAML		07 42 15.8	
	comp=N,141nm,1.1s						
I23K				IAML		07 42 22.7	
	comp=E,125nm,0.9s						
I23K	Minto, Yukon-K	3.55	8	P	Pn	07 41 22.1	+0.4
	baz=189						
BERG	Berg Lake	3.57	108		Pn	07 41 20.8	-1.3
I21K	Tanana	3.60	350		Pn	07 41 23.2	+0.7
I21K				IAML		07 42 19.1	
	comp=E,126nm,0.9s						
I21K	Tanana	3.60	350	P	Pn	07 41 22.9	+0.5
	baz=169						
DOT	Dot Lake	3.60	53		Pn	07 41 23.1	+0.6
L26K	Log Cabin Wild	3.63	65		Pn	07 41 23.9	+1.0
L26K				IAML		07 42 32.3	
	comp=N,312nm,0.4s						
L26K	Log Cabin Wild	3.63	65	P	Pn	07 41 23.9	+1.0
	baz=251						
M26K	Nabesna, AK	3.64	75		Pn	07 41 23.5	+0.4
M26K				IAML		07 42 23.6	
	comp=N,219nm,0.7s						
M26K				IAML		07 42 28.8	
	comp=E,161nm,0.7s						
M26K	Nabesna, AK	3.64	75	P	Pn	07 41 23.3	+0.2
	baz=261						
SUCK	Suckling Hills	3.68	113	Pn	Pn	07 41 23.5	-0.1
SUCK				IAML		07 42 23.2	
	comp=N,249nm,0.5s						
SUCK				IAML		07 42 34.2	
	comp=E,214nm,1.0s						
POKR	Poker Plat Res	3.75	21		Pn	07 41 25.6	+1.1
POKR				IAML		07 42 34.8	
	comp=N,120nm,0.6s						
POKR	Poker Plat Res	3.75	21	P	Pn	07 41 25.5	+1.0
	baz=203						
KHIT	Khitrov Hills	3.75	106		Pn	07 41 24.4	-0.3
J25K	Salcha River,	3.79	36	Pn	Pn	07 41 26.9	+1.8
J25K	Salcha River,	3.79	36	P	Pn	07 41 26.0	+0.8
	baz=220						
PS07	TAPS Pump Stn7	3.81	15		Pn	07 41 26.5	+1.2
SCRK	Sand Creek	3.81	49		Pn	07 41 25.9	+0.5
SCRK				IAML		07 42 16.7	
	comp=N,136nm,0.6s						
SCRK				IAML		07 42 33.4	
	comp=E,142nm,0.6s						
SCRK	Sand Creek	3.81	49	P	Pn	07 41 25.8	+0.3
	baz=235						
WAX	Waxell Ridge	3.94	104		Pn	07 41 26.5	-0.6
BALM	Baldy	4.00	95		Pn	07 41 27.3	-0.8
KDAK	Kodiak Island	4.02	196	P	Pn	07 41 28.2	0.0
	comp=E,2.8nm,0.3s,baz=14,slow=8.3,SNR=39						
KDAK				S	Sn	07 42 13.4	-0.5
	comp=E,27nm,0.3s,baz=331,slow=3.5,SNR=4.3						
	comp=E,5.9nm,0.3s						
KDAK	Kodiak Island	4.02	196		Pn	07 41 27.7	-0.5
KDAK				IAML		07 42 28.4	
	comp=E,214nm,0.8s						
KDAK				IAML		07 42 29.7	
	comp=E,256nm,0.8s						
KDAK	Kodiak Island	4.02	196	P	Pn	07 41 26.8	-1.4
	baz=14						
KIAG	Kiagna River	4.02	97		Pn	07 41 27.3	-1.1
SNH	Sunshine Point	4.05	108	Pn	Pn	07 41 27.7	-1.0
SNH				IAML		07 42 36.5	
	comp=N,127nm,0.7s						
SNH				IAML		07 42 38.9	
	comp=E,155nm,1.0s						
ISLE	Juniper Island	4.12	101		Pn	07 41 29.4	-0.3
ISLE				IAML		07 42 36.9	
	comp=E,197nm,0.5s						
ISLE				IAML		07 42 38.6	
	comp=N,219nm,0.8s						
KELA	Mount Kelaz	4.14	221		Pn	07 41 31.0	+1.0
H21K	Melozitna Rive	4.14	347		Pn	07 41 30.5	+0.6
H21K	Melozitna Rive	4.14	347	P	Pn	07 41 29.9	0.0
	baz=165						
M27K	Edge Creek, AK	4.15	76		Pn	07 41 31.4	+1.2
M27K	Edge Creek, AK	4.15	76	P	Pn	07 41 31.2	+1.0
	baz=264						
H23K	Yukon River	4.21	6		Pn	07 41 31.7	+0.8
H23K				IAML		07 42 20.6	
	comp=E,80nm,0.6s						
H23K	Yukon River	4.21	6	P	Pn	07 41 31.6	+0.8
	baz=186						
GCSA	Galena City Sc	4.22	320		Pn	07 41 31.3	+0.4
GCSA	Galena City Sc	4.22	320	P	Pn	07 41 31.3	+0.4
	baz=134						
PS06	TAPS Pump Stn6	4.23	5		Pn	07 41 32.1	+1.0
J26L	Joseph Creek	4.27	45	P	Pn	07 41 32.5	+0.7
	baz=231						
BAGL	Bagley Icefiel	4.28	102		Pn	07 41 31.2	-0.5
L27K	Beaver Creek,	4.30	67		Pn	07 41 32.5	+0.4
L27K				IAML		07 42 48.5	
	comp=N,67nm,1.4s						
L27K	Beaver Creek,	4.30	67	P	Pn	07 41 32.4	+0.3
	baz=254						
BARN	Barnard Glacie	4.32	94		Pn	07 41 32.9	+0.3
BARN				IAML		07 42 45.0	
	comp=E,130nm,0.5s						
BARN				IAML		07 42 47.1	
	comp=N,102nm,0.8s						
BC03		4.33	67		Pn	07 41 32.7	+0.4
BCAR	Beaver Creek A	4.33	67		Pn	07 41 32.6	+0.1
H24K	Noodor Dome	4.36	15		Pn	07 41 34.1	+1.2
H24K	Noodor Dome	4.36	15	P	Pn	07 41 33.7	+0.7
	baz=197						
K27K	Chicken	4.56	55		Pn	07 41 36.1	+0.5
K27K				IAML		07 42 39.8	
	comp=E,79nm,0.6s						
K27K				IAML		07 42 54.0	
	comp=N,91nm,0.9s						
K27K	Chicken	4.56	55	P	Pn	07 41 35.6	+0.1
	baz=242						
IM03		4.57	343		Pn	07 41 35.9	+0.2
IMAR	Indian Mountai	4.57	343	Pn	Pn	07 41 36.2	+0.5
YUK2	White River	4.62	84		Pn	07 41 36.6	0.0
BVCY	Beaver Creek	4.63	76		Pn	07 41 37.4	+0.8
BVCY	Beaver Creek	4.63	76	P	Pn	07 41 37.4	+0.8
	baz=265						
OHAK	Old Harbor	4.66	199	Pn	Pn	07 41 36.3	-0.7
OHAK				IAML		07 42 49.0	
	comp=E,137nm,1.0s						
OHAK				IAML		07 42 50.3	
	comp=N,102nm,0.8s						
OHAK	Old Harbor	4.66	199	P	Pn	07 41 36.3	-0.7
	baz=16						
TABL	Table Mountain	4.74	101		Pn	07 41 37.6	-0.6
TABL				IAML		07 42 54.0	
	comp=N,112nm,0.7s						
TABL				IAML		07 42 56.1	
	comp=E,98nm,0.8s						
YUK3	Moose Creek	4.81	84		Pn	07 41 39.3	+0.1
YUK3	Moose Creek	4.81	84	P	Pn	07 41 39.3	+0.1
	baz=273						
PCA	Pinnacle	5.27	103		Pn	07 41 44.8	-0.6
PINM	Pinnacle	5.27	103	P	Pn	07 41 44.8	-0.6
	baz=292						
COLD	Coldfoot	5.60	1		Pn	07 41 50.8	+0.9
COLD	Coldfoot	5.60	1	P	Pn	07 41 50.7	+0.9
	baz=182						
DAWY	Dawson	5.65	60		Pn	07 41 51.0	+0.3
DAWY	Dawson	5.65	60	P	Pn	07 41 50.9	+0.2
	baz=250						
YUK4	Talbot Arm	5.71	88	P	Pn	07 41 51.9	+0.3
	baz=277						
PNL	Peninsula	5.84	105		Pn	07 41 52.6	-0.5
PNL	Peninsula	5.84	105	P	Pn	07 41 52.6	-0.5
	baz=295						
YUK6	Outpost Mounta	5.92	92		Pn	07 41 54.5	0.0
YUK6	Outpost Mounta	5.92	92	P	Pn	07 41 54.5	0.0
	baz=282						
BM03	Burnt Mountain	6.33	21		Pn	07 42 00.4	+0.6
BMAR	Burnt Mountain	6.34	21	Pn	Pn	07 42 01.3	+1.3
HYT	Haines Junctio	6.36	92		Pn	07 42 00.1	-0.2
HYT	Haines Junctio	6.36	92	P	Pn	07 42 00.3	-0.1
	baz=283						
M30M	Minto, Yukon	6.52	76		Pn	07 42 02.6	0.0
M30M	Minto, Yukon	6.52	76	P	Pn	07 42 02.5	0.0
	baz=268						
TOLK	Toolik Lake Re	7.03	3	Pn	Pn	07 42 11.8	+2.4
N31M	Braeburn, Yuko	7.06	85		Pn	07 42 10.2	+0.3
ANM	Nome	7.32	300	Pn	Pn	07 42 14.3	+0.9
M31M	Drury Creek, Y	7.65	79		Pn	07 42 17.7	-0.2
WHY	Whitehorse	7.65	91	Pn	Pn	07 42 17.6	-0.4
EPYK	Eagle Plains	7.69	46		Pn	07 42 19.4	+0.9
BESE	Bessie Mountai	8.42	104	Pn	Pn	07 42 27.6	-0.9
TNA	Tin City	8.66	304	Pn	Pn	07 42 33.1	+1.5
INK	Inuvik	9.79	40	P	Pn	07 42 46.9	-0.3

	comp=E,0.3nm,0.3s,baz=242,slow=13,SNR=13						
INK				S	Sn	07 44 36.9	+1.5
	comp=E,32nm,0.9s,baz=128,slow=3.3,SNR=1.3						
	comp=E,2.8nm,0.7s						
INK	Inuvik	9.79	40		Pn	07 42 46.7	-0.4
A21K	Barrow	10.00	349	Pn	Pn	07 42 50.7	+0.8
MKAR	Makanchi Array	63.87	322	P	P	07 50 54.4	-1.2
	comp=E,0.3nm,0.4s,baz=14,slow=6.7,SNR=4.7						
	comp=E,0.3nm,0.4s						
AKASG	Malin Array Be	67.99	0	P	P	07 51 21.2	-0.8
	comp=E,0.4nm,0.4s,baz=359,slow=6.5,SNR=2.0						
	comp=E,0.4nm,0.4s						

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*NOU **08** 07:48:46.0,37°.86S×178°.03E,h53km,MLv4.0/7,Off E. Coast of N. Island, N.Z.*

*WEL **08** 07:48:49.4±0.9,38°S±5°×17°8E±°,h31km±9km,M3.1/8, ML3.4/8,MLv3.1/8,Error ellipse: s-maj=0.0km s-min=0.0km az=6.3*

ISC 08 07:48:50.4±1.1,**37°.82S**±0°.03×**177°.56E**±0°.03,**h31**km±10km, **n125,**σ**1s.31**/129,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.17	147	P	Pn	07 48 56.7	-0.3
RUGZ				S	Sn	07 49 02.3	+1.2
HAZ	Te Kaha	0.19	69	P	Pn	07 48 56.8	-0.3
HAZ				S	Sn	07 49 02.3	+1.0
PKGZ	Pakihiroa	0.41	99	P	Pb	07 48 59.0	-0.6
PKGZ				S	Sn	07 49 10.1	+3.1
WIZ	White Island	0.42	315	P	Pb	07 48 59.3	-0.2
WSRZ	White Island S	0.43	315	P	Pb	07 49 00.0	+0.3
WHRZ	Whale Island	0.47	266	P	Pb	07 49 00.7	+0.4
WHRZ				S	Sn	07 49 09.5	+1.3
TWGZ	Tauwhareparae	0.48	137	P	Pn	07 49 01.1	-0.2
TWGZ				S	Sn	07 49 10.5	+1.7
MWZ	Matawai	0.51	183	P	Pn	07 49 00.8	-0.8
MWZ				S	Sb	07 49 09.4	+1.0
URZ	Urewera	0.56	219	P	Pn	07 49 01.6	-0.6
URZ				S	Sn	07 49 10.6	0.0
URZ	Urewera	0.56	219	P	Pn	07 49 01.7	-0.6
PUZ	Puketiti	0.60	114	P	Pn	07 49 02.3	-0.6
PUZ				S	Sn	07 49 12.9	+1.2
MXZ	Matakaoa Point	0.65	67	P	Pn	07 49 02.1	-1.3
TKGZ	Te Karaka	0.66	160	P	Pn	07 49 03.6	0.0
WMGZ	Waiomatatini S	0.68	90	P	Pn	07 49 03.2	-0.6
RAGZ	Rawiri	0.68	190	P	Pn	07 49 04.0	0.0
EDRZ	Edgecumbe	0.71	246	P	Pn	07 49 03.8	-0.6
MARZ	Manawahe	0.72	257	P	Pn	07 49 03.6	-0.9
OPRZ	Ohinepanea	0.80	268	P	Pn	07 49 04.4	-1.1
CNGZ	Carnagh Statio	0.83	142	P	Pn	07 49 05.7	-0.3
RIGZ	Rimuhau	0.90	170	P	Pn	07 49 06.4	-0.5
MUGZ	Murupara	0.90	223	P	Pn	07 49 06.1	-0.9
RTZ	Ruatahuna	0.91	210	P	Pn	07 49 06.2	-1.0
MKRZ	Makatiti	0.92	250	P	Pn	07 49 07.1	-0.2
TARZ	Mount Tarawera	0.93	243	P	Pn	07 49 07.0	-0.5
LIRZ	Lichensteins R	0.95	259	P	Pn	07 49 07.1	-0.5
RRRZ	Republican Roa	0.97	238	P	Pn	07 49 07.3	-0.7
SNGZ	Shannon Statio	0.97	190	P	Pn	07 49 08.3	+0.3
OMRZ	Omania	0.98	253	P	Pn	07 49 07.4	-0.8
TGRZ	Tauranga	1.03	275	P	Pn	07 49 07.5	-1.3
HLRZ	Highlands Stat	1.05	245	P	Pn	07 49 08.5	-0.5
KARZ	Kaharoa	1.06	259	P	Pn	07 49 08.4	-0.8
NGRZ	Ngongotaha	1.12	255	P	Pn	07 49 09.8	-0.3
PRGZ	Paritu Road	1.13	167	P	Pn	07 49 09.0	-1.1
PRRZ	Plateau Road	1.14	233	P	Pn	07 49 09.5	-0.8
HSRZ	Hossack Road	1.15	244	P	Pn	07 49 10.2	-0.1
RAHZ	Arahi	1.15	199	P	Pn	07 49 10.1	-0.3
HRRZ	Handcock Road	1.16	240	P	Pn	07 49 10.1	-0.4
MTHZ	Maungataniwha	1.17	209	P	Pn	07 49 09.8	-0.9
MYRZ	Mayor Island	1.18	297	P	Pn	07 49 09.3	-1.5
KNZ	Kokohu	1.20	176	P	Pn	07 49 09.9	-1.2
ALRZ	Allen Road	1.21	232	P	Pn	07 49 10.5	-0.8
KMRZ	Kaimai	1.28	268	P	Pn	07 49 11.0	-1.2
WPRZ	Whakapapatarin	1.30	237	P	Pn	07 49 12.1	-0.4
MRHZ	Matea Rd	1.35	221	P	Pn	07 49 12.3	-1.0
MHGZ	Mahia Peninsul	1.35	169	P	Pn	07 49 12.1	-1.1
NMHZ	Naumai	1.40	205	P	Pn	07 49 13.9	-0.1
ARHZ	Aropaoanui	1.50	197	P	Pn	07 49 15.1	-0.2
KUTZ	Kaahu Road	1.52	244	P	Pn	07 49 15.0	-0.5
BKZ	Black Stump Fm	1.58	212	P	Pn	07 49 15.4	-1.0
BKZ	Black Stump Fm	1.58	212	P	Pn	07 49 15.3	-1.0
TOZ	Tahuroa Road	1.63	273	P	Pn	07 49 15.8	-1.2
TLZ	Tolley Road	1.67	252	P	Pn	07 49 16.7	-0.9
WATZ	Wairara	1.69	238	P	Pn	07 49 17.5	-0.4
RATZ	Rangitukua	1.75	233	P	Pn	07 49 18.3	-0.4
MCHZ	McNeill Hill	1.75	202	P	Pn	07 49 20.2	+1.5
RITZ	Rihia Road	1.77	229	P	Pn	07 49 18.8	-0.1
KUZ	Kuaotunu	1.82	306	P	Pn	07 49 17.7	-1.9
KWHZ	Kaweka Forest	1.83	209	P	Pn	07 49 19.9	+0.1
KATZ	Kakaramea	1.86	231	P	Pn	07 49 20.2	-0.1
CKHZ	Cape Kidnapper	1.87	191	P	Pn	07 49 19.0	-1.3
TMVZ	Te Maari	1.95	228	P	Pn	07 49 20.9	-0.6
NTVZ	North Tongarir	1.95	229	P	Pn	07 49 21.0	-0.5
ETVZ	East Tongariro	1.96	227	P	Pn	07 49 21.0	-0.6
OTVZ	Oturere	2.00	227	P	Pn	07 49 21.7	-0.5
NNVZ	North Ngauruho	2.01	229	P	Pn	07 49 22.0	-0.4
WTVZ	West Tongariro	2.02	230	P	Pn	07 49 22.0	-0.4
SNVZ	South Ngauruho	2.03	227	P	Pn	07 49 22.1	-0.5
BHHZ	Black Hill Sta	2.04	215	P	Pn	07 49 22.7	+0.1
MKAZ	Moumakai	2.04	290	P	Pn	07 49 21.3	-1.3
KAHZ	Kahuranaki	2.04	195	P	Pn	07 49 21.4	-1.3
KRHZ	Kereru	2.04	207	P	Pn	07 49 22.3	-0.3
NGZ	Ngauruhoe	2.05	228	P	Pn	07 49 22.5	-0.3
MOVZ	Moawhango	2.12	221	P	Pn	07 49 22.8	-1.0
FWVZ	Far West T-bar	2.13	227	P	Pn	07 49 25.0	+1.0
WNVZ	Wahianoa	2.15	225	P	Pn	07 49 24.9	+0.6
WIAZ	Waiheke Island	2.19	297	P	Pn	07 49 23.5	-1.2
HIZ	Hauiti	2.24	251	P	Pn	07 49 24.7	-0.6
HIZ	Hauiti	2.24	251	P	Pn	07 49 25.4	0.0
MTVZ	Mangateitei	2.26	226	P	Pn	07 49 26.2	+0.4
ETAZ	East Tamaki Re	2.27	292	P	Pn	07 49 24.9	-0.8
PKVZ	Pokaka	2.27	229	P	Pn	07 49 25.9	0.0
PXZ	Pawanui	2.27	194	P	Pn	07 49 23.2	-2.6
GRZ	Great Barrier	2.30	312	P	Pn	07 49 24.6	-1.6
PNHZ	Pukenui	2.34	207	P	Pn	07 49 25.9	-1.0
MBAZ	Motutapu North	2.37	296	P	Pn	07 49 26.3	-0.8
WPHZ	Waipukurau	2.40	201	P	Pn	07 49 27.6	-0.1
AWAZ	Awhitu Peninsu	2.44	287	P	Pn	07 49 27.5	-0.7
HBAZ	Herne Bay Bore	2.46	292	P	Pn	07 49 27.9	-0.4
ABAZ	Army Bay	2.50	298	P	Pn	07 49 28.2	-0.7
PRHZ	Porangahau	2.54	196	P	Pn	07 49 27.2	-2.3
VRZ	Vera Road	2.55	239	P	Pn	07 49 30.2	+0.5
TSZ	Takapari Road	2.56	209	P	Pn	07 49 28.0	-1.8
RVAZ	Riverhead Bore	2.60	293	P	Pn	07 49 29.4	-0.9
DVHZ	Dannevirke	2.70	203	P	Pn	07 49 29.9	-1.8
ANWZ	Angora Road	2.77	197	P	Pn	07 49 30.6	-2.0
WAZ	Wanganui	2.79	225	P	Pn	07 49 33.1	+0.2
LREZ	Lake Rotokare	2.96	236	P	Pn	07 49 36.6	+1.3
PRWZ	Pori Road	3.00	204	P	Pn	07 49 34.9	-0.8
BFZ	Birch Farm	3.03	199	P	Pn	07 49 33.2	-3.0
BFZ	Birch Farm	3.03	199	P	Pn	07 49 33.3	-3.0
NEZ	North Egmont	3.08	241	P	Pn	07 49 39.1	+2.1
PKE	Pukeiti	3.12	243	P	Pn	07 49 39.6	+2.1
KHEZ	Kahui Hut	3.14	241	P	Pn	07 49 39.9	+2.1
WCZ	Waipu Caves	3.19	305	P	Pn	07 49 37.5	-0.9
TIWZ	Tintock	3.22	203	P	Pn	07 49 37.9	-1.0
MRZ	Mangatainoka R	3.23	208	P	Pn	07 49 36.2	-2.7
HOWZ	Holdsworth Sta	3.46	207	P	Pn	07 49 40.3	-1.9
OGWZ	Otaki Gorge	3.52	211	P	Pn	07 49 40.8	-2.1
TMWZ	Te Maipa	3.52	201	P	Pn	07 49 39.9	-3.1
KIW	Kapiti Island	3.66	213	P	Pn	07 49 42.6	-2.4
MTW	Mount Morrison	3.69	205	P	Pn	07 49 41.8	-3.5
CAW	Cannon Point	3.81	210	P	Pn	07 49 43.8	-3.1
DUWZ	D'Urville Isla	4.10	222	P	Pn	07 49 49.1	-1.9
OUZ	Omahuta	4.12	308	P	Pn	07 49 50.7	-0.5
OUZ	Omahuta	4.12	308	P	Pn	07 49 50.8	-0.4
PLWZ	Palliser	4.14	205	P	Pn	07 49 48.5	-3.0
TCW	Tory Channel	4.23	216	P	Pn	07 49 49.6	-3.1
NNZ	Nelson	4.68	222	P	Pn	07 49 58.4	-0.6
BSWZ	Blackbirch Sta	4.81	215	P	Pn	07 49 57.8	-2.9
QRZ	Quartz Range	4.92	231	P	Pn	07 49 59.9	-2.3
QRZ	Quartz Range	4.92	231	P	Pn	07 50 00.6	-1.6
THZ	Tophouse	5.32	221	P	Pn	07 50 04.3	-3.5
KHZ	Kahutara	5.53	213	P	Pn	07 50 07.0	-3.5
LTZ	Lake Taylor	6.39	218	P	Pn	07 50 19.1	-3.4
CTZ	Chatham Island	7.37	145	P	Pn	07 50 33.9	-2.0

RSNC 08 07:49:35.7±1.1,**6°.81N**×**73°.16W,h149**km±4km,**ML3.1, Mw3.7,4C-3D,Fault plane solution: NP1:**φs107.00000°, δ17.00000°,λ78.00000°.,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	187	eP	Pn	07 49 55.8	-0.4
BARC				eS	Sn	07 50 11.6	-0.2
BARC				i		07 50 13.6	
	comp=Z,359nm,0.3s						
BRRC	Barranca, Sant	0.62	298	⇑iP	Pn	07 49 57.6	0.0
BRRC				eS	Sn	07 50 14.5	+0.2
BRRC				i		07 50 18.6	
	comp=Z,219nm,0.2s						
PAMC	Pamplona, Colo	0.69	41	⇑iP	Pn	07 49 58.6	0.0
PAMC				eS	Sn	07 50 15.9	-0.2
PAMC				i		07 50 18.9	
	comp=Z,252nm,0.4s						
RUSC	La Rusia	0.92	175	⇓iP	Pn	07 49 59.8	-0.5
RUSC				eS	Sn	07 50 18.0	-1.0
RUSC				i		07 50 19.7	
	comp=Z,232nm,0.4s						
PTBC	PUERTO BERRIO,	1.32	258	eP	Pn	07 50 02.3	-1.0
PTBC				eS	Sn	07 50 23.3	-1.1
PTBC				i		07 50 27.3	
	comp=Z,126nm,0.2s						
TAMC	Tame, Arauca	1.41	105	⇑iP	Pn	07 50 04.2	0.0
TAMC				eS	Sn	07 50 25.8	-0.2
TAMC				i		07 50 27.4	
	comp=Z,82nm,0.5s						
OCAC	Ocana	1.43	353	eP	Pn	07 50 03.8	-0.9
OCAC				eS	Sn	07 50 25.9	-0.9
OCAC				i		07 50 31.2	
	comp=Z,282nm,0.2s						
SPBC	San Pablo de B	1.47	218	eP	Pn	07 50 04.6	-0.4
SPBC				eS	Sn	07 50 25.8	-1.5
SPBC				i		07 50 29.4	
	comp=Z,296nm,0.3s						
ZARC	Zaragoza, Cauc	1.82	292	eP	Pn	07 50 08.3	-0.4
ZARC				eS	Sn	07 50 33.8	-0.2
ZARC				i		07 50 42.7	
	comp=Z,161nm,0.2s						
NORC	Norcasia	2.11	234	eP	Pn	07 50 11.6	-0.5
NORC				eS	Sn	07 50 39.7	-0.4
NORC				i		07 50 45.4	
	comp=Z,112nm,0.2s						
SMLC	San Martn de	2.17	335	eP	Pn	07 50 11.9	-0.9
SMLC				eS	Sn	07 50 40.4	-1.1
SMLC				i		07 50 44.2	
	comp=Z,134nm,0.1s						
CHIC	Chingaza	2.24	195	eP	Pn	07 50 14.0	0.0
CHIC				eS	Sn	07 50 43.4	-0.2
CHIC				i		07 50 49.5	
	comp=Z,82nm,0.3s						
HELC	Santa Helena	2.44	255	eP	Pn	07 50 16.5	+0.1
HELC				eS	Sn	07 50 47.7	+0.1
HELC				i		07 50 56.0	
	comp=Z,72nm,0.4s						
UREC	San Jos de Ur	2.54	292	eP	Pn	07 50 15.8	-1.5
UREC				eS	Sn	07 50 47.4	-1.9
UREC				i		07 51 00.8	
	comp=Z,68nm,0.1s						
VILC	Villavicencio,	2.73	191	eP	Pn	07 50 19.2	-0.6
VILC				eS	Sn	07 50 53.6	-0.3
LL1C	La Loma 1 Cana	2.74	352	eP	Pn	07 50 21.3	+1.5
LL1C				eS	Sn	07 50 56.6	+2.7
PTGC	Puerto Gaitan,	2.79	159	⇓iP	Pn	07 50 19.0	-1.4
PTGC				eS	Sn	07 50 52.1	-2.8
PTGC				i		07 50 57.2	
	comp=Z,96nm,0.3s						
LL6C	La Loma 6 Bece	2.91	358	eP	Pn	07 50 21.0	-0.9
LL6C				eS	Sn	07 50 56.6	-1.0
LL6C				i		07 51 09.7	
	comp=Z,36nm,0.5s						
CBOC	Ciudad Bolivar	2.99	252	⇑eP	Pn	07 50 23.4	+0.3
CBOC				⇓eP	Pn	07 50 23.4	+0.3
CBOC				eS	Sn	07 50 59.0	-0.6
CBOC				i		07 51 16.6	
	comp=Z,19nm,0.5s						
DBBC	Dabeiba	3.04	274	eP	Pn	07 50 23.2	-0.4
DBBC				eS	Sn	07 50 59.3	-1.3
ANIL	Santa Ana	3.21	224	eP	Pn	07 50 27.0	+0.9
ANIL				eS	Sn	07 51 06.8	+1.9
ARGC	Ariguani, Magd	3.21	340	eP	Pn	07 50 25.8	0.0
ARGC				eS	Sn	07 51 05.0	+0.4
ARGC				i		07 51 11.9	
	comp=Z,21nm,0.3s						
SDV	Santo Domingo	3.24	50	eP	Pn	07 50 25.3	-1.0
SDV				eS	Sn	07 51 02.9	-2.6
SDV				i		07 51 06.4	
	comp=Z,23nm,0.6s						
PRAC	Prado	3.53	209	eP	Pn	07 50 28.8	-1.1
PRAC				eS	Sn	07 51 11.6	-0.3
PRAC				i		07 51 18.1	
	comp=Z,99nm,0.5s						
ORTC	Ortega, Tolima	3.56	216	eP	Pn	07 50 30.0	-0.3
ORTC				eS	Sn	07 51 12.9	+0.4
ORTC				i		07 51 19.7	
	comp=Z,55nm,0.3s						
PLMC	San Jos del P	3.64	239	eP	Pn	07 50 31.2	-0.1
PLMC				eS	Sn	07 51 13.8	-0.8
PLMC				i		07 51 19.4	
	comp=Z,24nm,0.4s						
SJCC	San Jacinto, C	3.66	327	eP	Pn	07 50 29.7	-1.9
SJCC				eS	Sn	07 51 10.9	-4.1
SJCC				i		07 51 15.2	
	comp=Z,23nm,0.4s						
CRJC	Cerrejon, Guaj	4.19	4	eP	Pn	07 50 36.6	-1.9
CRJC				eS	Sn	07 51 23.4	-4.1
CRJC				i		07 51 25.6	
	comp=Z,33nm,0.4s						
YOTC	Yotoco, Valle	4.24	229	eP	Pn	07 50 38.5	-0.7
YOTC				eS	Sn	07 51 29.8	+1.3
GUVC	San Jose del G	4.27	173	eP	Pn	07 50 38.6	-0.9
GUVC				eS	Sn	07 51 26.5	-2.7
GUVC				i		07 51 33.5	
	comp=Z,69nm,0.2s						
SMRC	Santa Marta, M	4.45	346	eP	Pn	07 50 40.9	-1.0
SMRC				eS	Sn	07 51 28.2	-5.3
SMRC				i		07 51 31.5	
	comp=Z,21nm,0.4s						
MACC	Macarena, Meta	4.69	188	eP	Pn	07 50 42.6	-2.4
MACC				eS	Sn	07 51 34.9	-4.1
MACC				i		07 51 40.1	
	comp=Z,29nm,0.8s						
URIC	Uribia, Colomb	4.99	13	eP	Pn	07 50 46.3	-2.7
URIC				eS	Sn	07 51 40.8	-5.5
URIC				i		07 51 48.9	
	comp=Z,6.7nm,0.5s						
PCON	Cinco Dias	5.50	216	eP	Pn	07 50 56.6	+0.2
PCON				eS	Sn	07 51 56.1	-3.1
PCON				i		07 52 12.2	
	comp=Z,5.3nm,0.4s						
SOTA	Rioblanco	5.78	217	eP	Pn	07 51 00.8	+0.9
SOTA				eS	Sn	07 52 05.9	+0.1
SOTA				i		07 52 17.3	
	comp=Z,4.7nm,0.5s						

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*IDC **08** 07:51:01.4±1.9,52°.50N×169°.65W,h0km,mb3.7/4, mbtmp3.7/7,ML3.1/3,MS3.6/1,Error ellipse: s-maj=41.4km s-min=28.4km az=172.0*

*AEIC **08** 07:51:05±3.1,52°.34N±0°.07×169°.66W±0°.10,h33km±8km, ML3.6,mb3.5/12(NEIC),Error ellipse: s-maj=10.3km s-min=8.0km az=149.0*

*NEIC **08** 07:51:06.2±2.6,52°.36N±0°.08×169°.7W±0°.1,h39km±19km, Error ellipse: s-maj=12.9km s-min=7.6km az=140.0*

ISC 08 07:51:06.5±1.0,**52°.4N**±0°.1×**169°.62W**±0°.07,**h40**km,**n52,** σ**1s.14**/43,**mb3.7**/4,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.70	41		Pn	07 51 19.8	-0.1
OKFG	Magazine Ridge	1.42	46		Pn	07 51 30.7	+1.0
MGOD	Makushin Gods	2.14	50		Pn	07 51 40.6	+0.9
MSW	Makushin Switc	2.25	48		Pn	07 51 42.5	+1.2
MTBL	Makushin Table	2.33	48		Pn	07 51 44.3	+1.8
UNV	Unalaska Valle	2.34	52		Pn	07 51 43.4	+1.0
KOFP	Korovin Flat P	2.75	268		Pn	07 51 47.9	-0.2
AKBBA	Akutan Broad B	2.76	52		Pn	07 51 50.7	+2.4
ATKA	Atka Island	2.82	267		Pn	07 51 48.2	-0.8
AKUT	Akutan	2.86	52		Pn	07 51 50.5	+1.0
AKSA	Akutan Strait	2.90	53		Pn	07 51 52.6	+2.5
GSTR	Great Sitkin T	3.97	267		Pn	07 52 05.0	+0.1
GSMY	Great Sitkin M	3.98	267		Pn	07 52 05.1	+0.2
GSTD	Great Sitkin T	4.03	267		Pn	07 52 05.6	-0.1
ADK	Adak	4.39	265		Pn	07 52 10.5	0.0
KIWB	Kanaga Island	4.68	266	Pn	Pn	07 52 14.6	+0.1
KIMD	Kanaga Island	4.75	265		Pn	07 52 15.7	+0.3
SPIA	Saint Paul Isl	4.76	356		Pn	07 52 18.0	+2.4
TAPA	Tanaga Point A	5.09	266		Pn	07 52 20.7	+0.5
SDPT	Sand Point	6.13	58	Pn	Pn	07 52 35.0	+0.5
CNBA	Chernabura Isl	6.42	64	Pn	Pn	07 52 38.4	0.0
SHEM	Shemya Is, Ala	9.92	278	LR	LR	07 56 43.3	
	comp=Z,371nm,20.6s,baz=148,slow=35						
OHAK	Old Harbor	10.55	57	Pn	Pn	07 53 34.5	-0.5
KDAK	Kodiak Island	11.11	55	Pn	Pn	07 53 42.4	-0.2
	0.4nm,0.3s,baz=239,slow=3.5,SNR=11						
KDAK				Sn	Sn	07 55 42.2	-3.1
	0.1nm,0.3s,baz=352,slow=23,SNR=1.9						
	4.1nm,0.6s						
KDAK	Kodiak Island	11.11	55		Pn	07 53 42.1	-0.5
GHO	Glory Hole Cre	14.55	42	Pn	Pn	07 54 29.5	0.0
FID	Port Fidalgo	15.14	48	Pn	Pn	07 54 35.8	-1.5
SCM	Sheep Creek Mo	15.24	43	Pn	Pn	07 54 38.3	-0.3
M24K	Tolsona, Glenn	15.85	43	Pn	Pn	07 54 46.7	+0.2
BMRM	Bremner River	16.07	48	Pn	Pn	07 54 47.9	-1.4
BMRM				IAmb	IAmb	07 54 56.0	
	comp=Z,10nm,1.1s						
N25K	Chitina, Valde	16.32	46	Pn	Pn	07 54 51.9	-0.6
N25K				IAmb	IAmb	07 55 05.3	
	comp=Z,6.5nm,1.4s						
GLB	Gilahina Butte	16.61	47	Pn	Pn	07 54 55.0	-1.0
GLB				IAmb	IAmb	07 54 56.0	
	comp=Z,5.9nm,1.2s						
VRDI	Verde Repeater	16.69	48	Pn	Pn	07 54 56.8	-0.5
VRDI				IAmb	IAmb	07 55 14.6	
	comp=Z,4.1nm,1.0s						
ILAR	Eielson Array	16.98	35	Pn	Pn	07 54 58.8	-1.9
	baz=226,slow=11,SNR=2.1						
	comp=Z,0.2nm,0.5s						
H24K	Noodor Dome	17.31	31	P	Pn	07 55 04.7	-0.1
H24K				IAmb	IAmb	07 55 05.4	
	comp=Z,4.8nm,1.4s						
M26K	Nabesna, AK	17.32	44	P	Pn	07 55 05.1	0.0
SCRK	Sand Creek	17.61	39	P	Pn	07 55 08.0	-0.6
L27K	Beaver Creek,	18.08	43	P	Pn	07 55 14.2	-0.1
L27K				IAmb	IAmb	07 55 26.9	
	comp=Z,2.9nm,1.1s						
PETK	Petropavlovsk-	19.70	285	P	P	07 55 31.0	-1.1
	comp=Z,0.3nm,0.3s,baz=97,slow=11,SNR=5.3						
	comp=Z,2.8nm,0.8s						
INK	Inuvik	23.37	34	P	P	07 56 10.6	-0.4
	comp=Z,0.7nm,0.5s,baz=253,slow=8.7,SNR=5.4						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	30.31	49	P	P	07 57 14.1	+0.5
	comp=Z,0.2nm,0.4s,baz=273,slow=7.7,SNR=13						
	comp=Z,0.2nm,0.4s						
H11N2	WAKE ISLAND Hy	37.42	218	T	T	08 38 32.6	
	baz=26						
H11N3	WAKE ISLAND Hy	37.43	218	T	T	08 38 33.2	
	baz=26						
H11N1	WAKE ISLAND Hy	37.44	218	T	T	08 38 34.4	
	baz=26						
H11S1	WAKE ISLAND Hy	38.61	218	T	T	08 39 39.7	
	baz=23,slow=76,SNR=42						
H11S2	WAKE ISLAND Hy	38.62	218	T	T	08 39 40.2	
	baz=23,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	38.63	218	T	T	08 39 34.6	
	baz=23,slow=76,SNR=30						
PDAR	Pinedale Array	40.54	79	P	P	07 58 42.9	+1.0
	comp=Z,1.7nm,0.6s,baz=298,slow=4.0,SNR=24						
	comp=Z,1.7nm,0.6s						
TXAR	Lajitas Array	52.90	89	P	P	08 00 19.3	+0.8
	comp=Z,1.1nm,0.7s,baz=295,slow=5.0,SNR=9.0						
	comp=Z,1.1nm,0.7s						
H03N2	Juan Fernandez	116.09	111	T	T	10 16 39.0	
	baz=322,slow=78,SNR=5.1						
H03N1	Juan Fernandez	116.11	111	T	T	10 16 44.7	
	baz=322,slow=78,SNR=4.2						
H03N3	Juan Fernandez	116.11	111	T	T	10 16 27.3	
	baz=322,slow=78,SNR=5.7						

MEX 08 07:52:35.8±0.6,**16°.26N**×**98°.00W,h30**km±10km,**MD3.4, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	318	i P	Pb	07 52 40.6	-1.3
PNIG				eS	Sb	07 52 44.3	-1.6
PNIG	Pinotepa	0.18	318	i P	Pb	07 52 40.6	-1.3
PNIG				i S	Sb	07 52 44.4	-1.6
YOIG	Yosondua	0.74	36	i P	Pb	07 52 47.5	-2.9
YOIG				eS	Sb	07 52 55.4	-4.8
YOIG	Yosondua	0.74	36	i P	Pb	07 52 47.5	-2.9
YOIG				i S	Sb	07 52 55.4	-4.8
PEIG	Puerto Escondi	0.86	108	eP	Pn	07 52 49.8	-2.2
PEIG				eS	Sn	07 53 00.6	-2.9
TXIG	Tlaxiaco	1.01	13	i P	Pn	07 52 52.3	-1.9
TXIG				eS	Sn	07 53 04.8	-2.8
TXIG	Tlaxiaco	1.01	13	i P	Pn	07 52 52.3	-1.9
TXIG				eS	Sn	07 53 04.8	-2.8

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*NEIC **08** 07:52:41.8±1.8,14°.36N±0°.07×91°.14W±0°.06,h114km±5km, mb4.7/296,Error ellipse: s-maj=11.6km s-min=7.5km az=212.0*

*UCR **08** 07:52:42.5±0.9,14°.35N×91°.08W,h103km±11km,ML3.8, mb4.7(NEIC)*

*IDC **08** 07:52:43.0±0.6,14°.62N×90°.66W,h126km±4km,mb3.9/24, mbtmp4.3/25,Error ellipse: s-maj=19.9km s-min=9.1km az=56.0*

*GCG **08** 07:52:42.7±0.5,14°.36N×91°.15W,h106km±7km,MD4.3*

*SNET **08** 07:52:42.6±0.8,14°.33N×91°.08W,h100km±13km,ML3.9*

*INET **08** 07:52:45.0±1.8,14°.39N×90°.88W,h11km±11km,ML3.9*

ISC 08 07:52:41.5±0.5,**14°.35N**±0°.04×**91°.12W**±0°.04,**h122**km±3km, **n468,**σ**1s.28**/414,**mb4.6**/134,**1C-8D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.28	70	eP	Pn	07 52 58.4	-0.4
PCG	Pacaya	0.49	85	⇓eP	Pn	07 53 00.1	+0.2
STG3	Santiaguito 3,	0.57	309	eP	Pn	07 53 00.2	-0.1
RTAL	Retalhuleu	0.59	287	Pn	Pn	07 52 59.1	-1.1
RTAL				Sn	Sn	07 53 12.7	-1.6
RTAL	Retalhuleu	0.59	287	i P	Pn	07 52 59.3	-0.9
NBG	Las Nubes	0.78	72	⇓iP	Pn	07 53 02.9	+0.9
NBG				i S	Sn	07 53 18.5	+1.0
HUEH	Huehuetenango	1.03	339		Pn	07 53 04.3	+0.1
HUEH	Huehuetenango	1.03	339	i P	Pn	07 53 04.6	+0.3
HUEH	Huehuetenango	1.03	339	i P	Pn	07 53 04.6	+0.3
HUEH	Huehuetenango	1.03	339	eP	Pn	07 53 04.5	+0.3
HUEH				eS	Sn	07 53 22.0	+0.5
SLOZ	Alcaldia de Sa	1.33	104	i P	Pn	07 53 06.9	-0.3
NUBE	Las Nubes	1.37	109	eP	Pn	07 53 06.9	-0.9
NUBE				IAML		07 53 34.4	
	comp=Z,1µm,0.6s						
NUBE	Las Nubes	1.37	109	eP	Pn	07 53 06.9	-0.9
NUBE				IAML		07 53 34.4	
	comp=Z,1µm,0.6s						
SBLS	San Blas	1.54	109	eP	Pn	07 53 09.2	-0.6
SBLS	San Blas	1.54	109	eP	Pn	07 53 09.2	-0.6
CEVE	Cerro Verde	1.54	110	eP	Pn	07 53 09.8	0.0
CEVE	Cerro Verde	1.54	110	eP	Pn	07 53 09.8	0.0
SNJE	San Jose	1.54	108	i P	Pn	07 53 10.0	+0.2
SNJE	San Jose	1.54	108	i P	Pn	07 53 10.0	+0.2
MRL	Marmol	1.56	62	⇑iP	Pn	07 53 11.5	+1.4
MRL				i S	Sn	07 53 33.4	+1.7
MTO3	Montecristo	1.70	88		Pn	07 53 11.6	-0.1
MTO3				Sn	Sn	07 53 35.1	+0.5
MTO3	Montecristo	1.70	88	⇓iP	Pn	07 53 11.7	+0.1
MTO3				eS	Sn	07 53 34.5	-0.1
MTO3	Montecristo	1.70	88	⇓iP	Pn	07 53 11.7	+0.1
MTO3				eS	Sn	07 53 34.5	-0.1
ESQI	Esquipulas	1.73	83		Pn	07 53 12.2	+0.3
ESQI				Sn	Sn	07 53 36.3	+1.3
ESQI	Esquipulas	1.73	83	⇓iP	Pn	07 53 12.4	+0.5
ESQI				eS	Sn	07 53 34.9	-0.1
CEDA	San Andres	1.76	108	eP	Pn	07 53 11.8	-0.3
CEDA	San Andres	1.76	108	eP	Pn	07 53 11.8	-0.3
CEDA	San Andres	1.76	108	eP	Pn	07 53 12.3	+0.1
CEDA				IAML		07 53 53.6	
	comp=N,1µm,0.5s						
JAYA	Jayaque - finc	1.76	113	eP	Pn	07 53 11.8	-0.5
JAYA	Jayaque - finc	1.76	113	eP	Pn	07 53 11.8	-0.5
BOQS	Boqueron	1.88	109	eP	Pn	07 53 14.2	+0.4

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BOQS  Boqueron           1.88 109 eP     Pn     07 53 14.2 +0.4
LALI  Alcalda de L       1.94 116 eP     Pn     07 53 14.5 +0.2
LALI                               IAML         07 53 45.3
      comp=Z,750nm,0.4s
LALI  Alcalda de L       1.94 116 eP     Pn     07 53 14.5 +0.2
LALI                               IAML         07 53 45.3
      comp=Z,750nm,0.4s
SNET  Serv Nac Est T     1.94 110        Pn     07 53 14.6 +0.2
SNET  Serv Nac Est T     1.94 110 i P    Pn     07 53 14.5  0.0
SNET                               IAML         07 53 48.7
      comp=Z,961nm,0.3s
SNET  Serv Nac Est T     1.94 110 i P    Pn     07 53 14.5  0.0
SNET                               IAML         07 53 48.7
      comp=Z,961nm,0.3s
LFRS  El Faro            2.12 110 eP     Pn     07 53 16.1 -0.5
LFRS  El Faro            2.12 110 eP     Pn     07 53 16.1 -0.5
SCLA  Alcaldia de Sa     2.41 105⇓iP     Pn     07 53 20.9 +0.7
SCLA  Alcaldia de Sa     2.41 105⇓iP     Pn     07 53 20.9 +0.7
COEB  Comit de Eme       2.65 108 eP     Pn     07 53 23.9 +0.5
PETF  Flores             2.82  25  Pn    Pn     07 53 26.4 +0.9
TGUH  Tegucigalpa,Un     3.74  94  Pn    Pn     07 53 37.0 -0.7
TGUH  Tegucigalpa,Un     3.74  94 eP     Pn     07 53 37.9 +0.2
CRIN  San Cristobal      4.28 112  Pn    Pn     07 53 46.0 +1.1
CMIG  Matias Romero      4.54 307  P     Pn     07 53 48.2 -0.1
      comp=Z,27nm,0.3s,baz=142,slow=7.7,SNR=57
CMIG                               S     Sn     07 54 38.1 -2.1
      comp=Z,42nm,0.3s,baz=148,slow=13,SNR=5.1
CNGN  Cerro Negro        4.68 113        Pn     07 53 49.9 -0.3
MOMN  Momotombo          4.85 113 eP     Pn     07 53 53.9 +1.3
COPN  Copaltepe          4.91 116 eP     Pn     07 53 54.0 +0.8
MATN  Matagalpa          5.24 105        Pn     07 53 59.6 +1.8
BOAB  BOACO BROADBAN5.63 109       Pn    Pn     07 54 04.6 +1.6
ACON  Acoyapa            6.25 112  Pn    Pn     07 54 12.1 +0.7
ACON  Acoyapa            6.25 112 eP     Pn     07 54 11.9 +0.5
HZTE  Horizontes, Gu     6.49 123        Pn     07 54 15.8 +1.2
SAJU  San Juanillo,      6.79 128 eP     Pn     07 54 20.3 +1.7
ORTG  Ortega, Santa      6.80 125        Pn     07 54 20.1 +1.2
GRZA  Playa Garza        6.94 129 eP     Pn     07 54 22.5 +1.8
DUNO  Dulce Nombre,      6.94 127        Pn     07 54 21.9 +1.2
ESPN  Las Esperanzas     6.97 107  Pn    Pn     07 54 22.2 +1.1
JTS   Las Juntas de      7.25 123  Pn    Pn     07 54 25.7 +0.8
ARE1  Arenal 1           7.35 121 eP     Pn     07 54 28.6 +2.3
CAO2  Cobano, Puntar     7.49 128        Pn     07 54 29.8 +1.7
LAFE  Finca La Fe, P     7.56 126 eP     Pn     07 54 30.6 +1.5
JACO  JACO, Garabito     7.85 126        Pn     07 54 35.1 +2.2
RIMA  Rio Macho          8.43 122        Pn     07 54 42.8 +1.8
PEZE  Perez Zeledon,     8.80 123        Pn     07 54 48.1 +2.3
SRBA  San Rafael, Bu     9.14 123        Pn     07 54 52.5 +2.0
DRK0  Durika             9.21 122        Pn     07 54 53.9 +2.2
CDITO Canoas             9.91 125  Pn    Pn     07 55 01.0 +0.2
SOR   Soroa             11.38  41  Pn    Pn     07 55 19.6 -0.9
061Z  Ochoppi           14.93  38  Pn    Pn     07 56 06.3  0.0
PAYG  Puerto Ayora      14.95 177  Pn    Pn     07 56 05.9 -0.9
833A  Chaparral WMA,    15.89 332  P     P      07 56 20.9 +1.3
833A  Chaparral WMA,    15.89 332  P     P      07 56 21.1 +1.5
      baz=150
HKT   Hockley           16.12 345        P      07 56 22.1  0.0
HKT                                IAmb  IAmb   07 56 24.1
      comp=Z,40nm,1.4s
SJCC  San Jacinto, C    16.20 104  Pn    Pn     07 56 21.9 -0.4
DWPF  Disney Wildern    16.39  32        P      07 56 24.8 -0.2
DWPF  Disney Wildern    16.39  32  P     P      07 56 26.2 +1.2
      baz=215
441A  DeRidder          16.43 354  P     P      07 56 25.9 +0.4
441A                               IAmb  IAmb   07 56 29.9
      comp=Z,54nm,0.8s
553A  Crawfordville     16.93  20        Pn     07 56 31.0  0.0
342A  Flagon Creek P    16.98 356  P     Pn     07 56 32.0 +0.3
342A                               IAmb  IAmb   07 56 40.3
      comp=Z,39nm,0.9s
346A  Big Creek Wild    17.03   5  P     Pn     07 56 33.9 +1.7
344A  Westbrook Farm    17.03   1  P     Pn     07 56 33.5 +1.2
344A                               IAmb  IAmb   07 56 41.6
      comp=Z,29nm,0.7s
ARGC  Ariguani, Magd    17.09 103 eP     Pn     07 56 33.1  0.0
BRAL  Brewton           17.15  12  P     Pn     07 56 37.1 +3.4
      baz=194,SNR=12
ZARC  Zaragoza, Cauc    17.35 111  P     Pn     07 56 36.6 +0.3
ZARC  Zaragoza, Cauc    17.35 111 eP     P      07 56 35.2 -0.6
PLMC  San Jos del P     17.36 121 eP     P      07 56 35.7 -0.3
435B  Jarrell           17.40 341  P     Pn     07 56 36.7 -0.1
435B  Jarrell           17.40 341  P     Pn     07 56 38.2 +1.4
      baz=159
SMLC  San Martn de      17.58 106 eP     P      07 56 36.3 -2.0
NATX  Nacogdoches       17.63 350  P     P      07 56 38.8 +0.1
NATX  Nacogdoches       17.63 350  P     Pn     07 56 40.6 +1.1
      baz=169
VBMS  Vicksburg         17.80   2  P     P      07 56 40.5  0.0
VBMS  Vicksburg         17.80   2  P     Pn     07 56 43.1 +1.6
      baz=182
YOTC  Yotoco, Valle     17.84 124 eP     Pn     07 56 43.0 +0.7
JCT   Junction City     17.93 335  P     P      07 56 41.6 -0.5
JCT   Junction City     17.93 335  P     Pn     07 56 44.1 +0.9
      baz=152
352A  Blakely           17.97  17  IAmb  IAmb   07 56 48.2
      comp=Z,63nm,1.1s
250A  Grady             18.10  13  IAmb  IAmb   07 56 47.8
      comp=Z,46nm,0.8s
PTBC  PUERTO BERRIO,    18.12 114 eP     P      07 56 43.7 -0.6
NORC  Norcasia          18.22 117 eP     P      07 56 45.6 +0.2
143A  Socs Landing,     18.27 359  IAmb  IAmb   07 56 57.8
      comp=Z,34nm,0.8s
TIGA  Tifton            18.36  21  IAmb  IAmb   07 57 12.8
      comp=Z,51nm,0.9s
TIGA  Tifton            18.36  21  P     Pn     07 56 48.8 +0.6
      baz=204
OCAC  Ocana             18.47 107  P     P      07 56 48.5 +0.2
OCAC  Ocana             18.47 107 eP     P      07 56 46.2 -2.1
ORTC  Ortega, Tolima    18.77 122 eP     Pn     07 56 53.4  0.0
URIC  Uribia, Colomb    18.82  96  P     P      07 56 51.7 -0.1
MARP  Paez Belalcaza    18.83 126 eP     Pn     07 56 55.0 +0.8
SPBC  San Pablo de B    18.87 116 eP     P      07 56 52.1 -0.4
Z41A  Richland Creek    18.89 356  IAmb  IAmb   07 56 57.6
      comp=Z,56nm,0.9s
Z41A  Richland Creek    18.89 356  P     Pn     07 56 54.0 -0.3
      baz=175
TXAR  Lajitas Array     18.90 324  P     Pn     07 56 55.2 +0.5
      comp=Z,5.0nm,0.7s,baz=147,slow=11,SNR=52
TXAR                               PcP   PcP    08 01 15.3 +1.2
      comp=Z,1.7nm,0.8s,baz=158,slow=2.6,SNR=9.2
TXAR  Lajitas Array     18.90 324  P     Pn     07 56 54.5 -0.2
TX31  Lajitas Ar. Si    18.90 324  P     P      07 56 52.9 +0.1
TX31                               IAmb  IAmb   07 57 00.7
      comp=Z,19nm,0.8s
TX32  Lajitas Array     18.90 324  P     Pn     07 56 54.6 -0.1
Z47A  Carrollton        18.97   8  P     P      07 56 53.9 +0.6
LRAL  Lakeview Retre    18.98  11  P     Pn     07 56 55.4  0.0
LRAL  Lakeview Retre    18.98  11  P     Pn     07 56 56.1 +0.6
      baz=192,SNR=24
ROSC  El Rosal          19.05 118  P     Pn     07 56 56.5 -0.4
      comp=Z,4.6nm,0.4s,baz=18,slow=20,SNR=4.4
ROSC  El Rosal          19.05 118  P     Pn     07 56 56.0 -0.9
ROSC  El Rosal          19.05 118 eP     Pn     07 56 56.8 -0.2
152A  Waverly Hall      19.15  17  IAmb  IAmb   07 57 03.2
      comp=Z,31nm,0.7s
Z38A  Mt. Pleasant      19.15 350  P     P      07 56 55.8 +0.5
Z38A                               IAmb  IAmb   07 56 57.4
      comp=Z,35nm,0.7s
PRAC  Prado             19.18 122 eP     P      07 56 56.9 +1.1
BARC  Barichara         19.23 112 eP     P      07 56 56.1 -0.6
WLAR  White Oak Lake    19.34 355  IAmb  IAmb   07 56 59.9
      comp=Z,47nm,0.8s
PAMC  Pamplona, Colo    19.37 109 eP     P      07 56 57.6 -0.9
CCAR  Cane Creek        19.49 358  IAmb  IAmb   07 57 01.7
      comp=Z,47nm,0.9s
SDDR  Presa de Saban    19.54  74  P     Pn     07 57 01.9 -0.4
SDDR                               IAmb  IAmb   07 57 09.4
      comp=Z,42nm,1.4s
RUSC  La Rusia          19.63 114 eP     P      07 57 00.3 -0.8
CHIC  Chingaza          19.66 118 eP     P      07 57 02.1 +0.6
Z35A  Perchaven, San    19.70 345  P     P      07 57 02.5 +1.2
Z35A                               IAmb  IAmb   07 57 03.3
      comp=Z,24nm,0.8s
ABTX  Abilene, Hawle    19.78 338  IAmb  IAmb   07 57 04.5
      comp=Z,34nm,1.1s
ABTX  Abilene, Hawle    19.78 338  P     P      07 57 03.6 +1.3
      baz=155,SNR=7.3
Y49A  Blount Mountai    19.89  12  P     Pn     07 57 05.6 -0.5
X40A  Basin Creek Fa    20.11 356  IAmb  IAmb   07 57 07.9
      comp=Z,36nm,1.4s
X40A  Basin Creek Fa    20.11 356  P     P      07 57 06.9 +1.3
      baz=175
OXF   Oxford            20.13   4  P     P      07 57 05.8 -0.1
OXF   Oxford            20.13   4  P     P      07 57 06.6 +0.7
      baz=185,SNR=6.6
GOGA  Godfrey           20.21  19  P     P      07 57 07.2 +0.5
GOGA  Godfrey           20.21  19  P     Pn     07 57 08.4 -1.4
      baz=202,SNR=21
MIAR  Mount Ida         20.23 354  P     P      07 57 07.7 +0.7
      baz=173,SNR=14
X48A  Hartselle         20.35  10  IAmb  IAmb   07 57 15.6
      comp=Z,17nm,0.8s
X37A  Clayton           20.52 350  IAmb  IAmb   07 57 37.5
      comp=Z,30nm,1.1s
TAMC  Tame, Arauca      20.56 111 eP     P      07 57 09.6 -1.1
W41B  Gary Mavity, V    20.76 357  IAmb  IAmb   07 57 14.3
      comp=Z,20nm,1.0s
W41B  Gary Mavity, V    20.76 357  P     P      07 57 13.3 +0.7
      baz=177,SNR=8.2
SDV   Santo Domingo     20.78 103  P     P      07 57 12.0 -1.3
      comp=Z,15nm,0.6s,baz=307,slow=9.5,SNR=14
      comp=Z,15nm,0.6s
SDV   Santo Domingo     20.78 103  P     P      07 57 12.0 -1.3
SDV                                IAmb  IAmb   07 57 16.1
      comp=Z,18nm,0.7s
SDV   Santo Domingo     20.78 103 eP     P      07 57 14.6 +1.3
WHAR  Wooly Hollow      20.88 357  IAmb  IAmb   07 57 15.5
      comp=Z,38nm,1.1s
W39A  Magazine          20.89 354  IAmb  IAmb   07 57 17.9
      comp=Z,29nm,1.1s
W39A  Magazine          20.89 354  P     P      07 57 15.4 +1.2
      baz=173,SNR=7.7
X51A  Calhoun           20.91  15  IAmb  IAmb   07 57 18.3
      comp=Z,40nm,1.0s
X34A  Smith Ranch, M    21.06 344  IAmb  IAmb   07 57 23.6
      comp=Z,28nm,1.0s
NHSC  New Hope          21.16  26  P     P      07 57 20.1 +3.2
      baz=211,SNR=5.9
SWET  Sewanee           21.30  12  IAmb  IAmb   07 57 21.8
      comp=Z,36nm,0.6s
HODGE Hodges            21.36  21  IAmb  IAmb   07 57 22.1
      comp=Z,37nm,0.8s
W50A  Signal Mountai    21.41  13  IAmb  IAmb   07 57 29.5
      comp=Z,24nm,0.9s
FCAR  Ozark Folk Cen    21.47 358  P     P      07 57 20.0 -0.2
FCAR                               IAmb  IAmb   07 57 21.2
      comp=Z,30nm,0.8s
FNO   Franklin          21.57 346  IAmb  IAmb   07 57 50.9
      comp=Z,41nm,0.9s
LCAR  Lake Charles      21.63 360  IAmb  IAmb   07 57 22.9
      comp=Z,21nm,0.5s
W52A  Murphy            21.65  16  IAmb  IAmb   07 57 25.1
      comp=Z,28nm,0.6s
MNTX  Cornudas Mount    21.65 325  P     P      07 57 23.5 +1.2
      baz=140,SNR=16
OKCFA Oklahoma City     21.74 346  IAmb  IAmb   07 57 51.6
      comp=Z,72nm,1.5s
CPCT  Cooper Cave       21.83  15  IAmb  IAmb   07 57 26.8
      comp=Z,21nm,0.8s
BG3   Lake Jocassee     21.84  18  IAmb  IAmb   07 57 27.2
      comp=Z,39nm,1.0s
TUL1  Leonard           21.88 350  IAmb  IAmb   07 57 52.6
      comp=Z,42nm,1.5s
TUL1  Leonard           21.88 350  P     P      07 57 23.9 -0.7
      baz=168
WVT   Waverly           21.89   7  P     P      07 57 24.4 -0.2
WVT                                IAmb  IAmb   07 57 34.6
      comp=Z,19nm,0.8s
WVT   Waverly           21.89   7  P     P      07 57 24.5 -0.2
      baz=189
U40A  Yellville         21.97 356  IAmb  IAmb   07 57 26.7
      comp=Z,32nm,0.7s
U40A  Yellville         21.97 356  P     P      07 57 25.9 +0.3
      baz=176,SNR=32
HHAR  Hobbs             21.99 354  IAmb  IAmb   07 57 27.3
      comp=Z,25nm,1.0s
PAULI Pauline           22.04  21  IAmb  IAmb   07 57 29.6
      comp=Z,31nm,1.0s
CLTN  Cedars of Leba    22.07  10  IAmb  IAmb   07 57 28.7
      comp=Z,35nm,0.8s
TKL   Tuckaleechee C    22.22  16  P     P      07 57 29.6 +1.5
      comp=Z,39nm,0.5s,baz=182,slow=13,SNR=100
BIRD  Birdtown, Kers    22.38  24  IAmb  IAmb   07 57 31.6
      comp=Z,29nm,0.9s
KMSC  Kings Mountain    22.50  21  P     P      07 57 32.3 +1.3
      baz=205,SNR=12
V53A  Saluda            22.50  18  IAmb  IAmb   07 57 33.6
      comp=Z,61nm,1.2s
AMTX  Amarillo          22.56 337  IAmb  IAmb   07 57 59.1
      comp=Z,19nm,0.8s
AMTX  Amarillo          22.56 337  P     P      07 57 31.1 -0.5
      baz=153
U49A  Red Boiling Sp    22.58  11  IAmb  IAmb   07 57 32.9
      comp=Z,32nm,0.6s
W57A  Gilead            23.01  24  IAmb  IAmb   07 57 36.7
      comp=Z,26nm,0.5s
TZTN  Tazewell          23.11  16  IAmb  IAmb   07 57 39.5
      comp=Z,59nm,1.1s
TZTN  Tazewell          23.11  16  P     P      07 57 38.0 +1.1
      baz=199,SNR=9.7
BAUV  El Baul           23.22 101  P     P      07 57 36.1 -1.9
BAUV                               IAmb  IAmb   07 57 41.6
      comp=Z,11nm,0.6s
T50A  Nancy             23.26  13  P     P      07 57 38.7 +0.5
T50A                               IAmb  IAmb   07 57 39.8
      comp=Z,23nm,0.7s
S44A  Carbondale        23.31   4  IAmb  IAmb   07 58 06.5
      comp=Z,42nm,0.9s
SIUC  Southern Illin    23.33   4  IAmb  IAmb   07 58 06.7
      comp=Z,46nm,0.9s
SRIG  Santa Rosalia     23.54 307  IAmb  IAmb   07 57 44.4
      comp=Z,24nm,0.7s
CCM   Cathedral Cave    23.61 360  P     P      07 57 41.3  0.0
CCM                                IAmb  IAmb   07 57 43.3
      comp=Z,51nm,1.2s
CCM   Cathedral Cave    23.61 360  P     P      07 57 41.2 -0.2
      baz=180
121A  Cookes Peak, D    23.64 323  IAmb  IAmb   07 57 46.2
      comp=Z,16nm,0.8s
121A  Cookes Peak, D    23.64 323  P     P      07 57 45.6 +3.7
      baz=136,SNR=12
R40A  Maddies Statio    23.87 358  IAmb  IAmb   07 57 45.0
      comp=Z,50nm,1.1s
CNNC  Cliffs of the     23.97  27  P     P      07 57 45.4 +0.8
      baz=213,SNR=7.0
S51A  Beattyville       24.14  15  IAmb  IAmb   07 57 47.8
      comp=Z,22nm,0.6s
R49A  Shelbyville       24.42  11  IAmb  IAmb   07 57 49.6
      comp=Z,15nm,0.7s
OLIL  Olney             24.43   6  IAmb  IAmb   07 57 52.9
      comp=Z,19nm,0.8s
ANMO  Albuquerque       24.73 329  P     P      07 57 52.8 +0.9
      comp=Z,1.4nm,0.8s,baz=144,slow=11,SNR=6.6
ANMO                               PcP   PcP    08 01 26.8 +1.1
      comp=Z,1.1nm,0.7s,baz=167,slow=5.0,SNR=4.9
      comp=Z,1.4nm,0.8s
ANMO  Albuquerque       24.73 329  P     P      07 57 54.0 +2.2
      baz=142
ATAH  Atahualpa         24.80 149  P     P      07 57 54.9 +2.1
      comp=Z,9.3nm,0.8s,baz=350,slow=8.2,SNR=6.9
      comp=Z,9.3nm,0.8s
T57A  Hurt              24.91  23  P     P      07 57 53.7 +0.5
T57A                               IAmb  IAmb   07 57 54.9
      comp=Z,21nm,0.8s
S54A  Dingess, Beckl    24.93  19  P     P      07 57 53.6 +0.2
S54A                               IAmb  IAmb   07 57 55.1
      comp=Z,22nm,0.7s
U59A  Littleton         24.95  26  P     P      07 57 53.7 +0.2
U59A                               IAmb  IAmb   07 57 54.3
      comp=Z,14nm,0.6s
BLO   Bloomington       25.05   8  IAmb  IAmb   07 57 55.3
      comp=Z,19nm,0.5s
P40A  Paris             25.10 358  IAmb  IAmb   07 57 56.6
      comp=Z,24nm,1.0s
KSU1  Kansas State U    25.13 350  IAmb  IAmb   07 57 57.7
      comp=Z,22nm,0.7s
KSU1  Kansas State U    25.13 350  P     P      07 57 56.6 +1.5
      baz=168
P43A  Skaggs, Pawnee    25.23   3  IAmb  IAmb   07 58 25.4
      comp=Z,23nm,1.1s
TUC   Tucson            25.33 318  P     P      07 57 59.3 +2.1
      baz=130
P46A  Rosedale          25.40   7  P     P      07 57 58.0 +0.4
P46A                               IAmb  IAmb   07 58 27.3
      comp=Z,20nm,0.8s
P48A  Milroy            25.51  10  P     P      07 57 58.3 -0.3
P48A                               IAmb  IAmb   07 57 59.1
      comp=Z,39nm,1.2s
P49A  Miami Univ. Ec    25.71  11  P     P      07 57 59.8 -0.6
      baz=194
R55A  Marlinton         25.75  20  IAmb  IAmb   07 58 03.0
      comp=Z,42nm,1.3s
HDIL  Hopedale          26.16   3  P     P      07 58 04.6 +0.3
      baz=184
SFIN  Lafayette         26.17   7  P     P      07 58 04.1 -0.4
      baz=189
R58B  Mineral           26.29  24  IAmb  IAmb   07 58 07.2
      comp=Z,26nm,1.2s
O48B  Farmland          26.33  10  P     P      07 58 04.8 -1.2
      baz=193
P52A  Corning           26.40  16  P     P      07 58 07.1 +0.5
      baz=200
214A  Organ Pipe Nat    26.46 315  IAmb  IAmb   07 58 10.9
      comp=Z,14nm,0.8s
214A  Organ Pipe Nat    26.46 315  P     P      07 58 10.1 +2.8
      baz=127,SNR=7.3
P53A  Whipple           26.46  17  IAmb  IAmb   07 58 09.1
      comp=Z,42nm,1.4s
CBN   Corbin Frederi    26.70  25  P     P      07 58 10.6 +1.3
      baz=211,SNR=6.3
N35A  Tabor             26.71 352  IAmb  IAmb   07 58 37.0
      comp=Z,13nm,0.6s
ACSO  Alum Creek Sta    26.75  14  IAmb  IAmb   07 58 10.6
      comp=Z,16nm,0.6s
ACSO  Alum Creek Sta    26.75  14  P     P      07 58 10.3 +0.6
      baz=198,SNR=5.5
Q56A  Snyder Ridge,     26.75  21  IAmb  IAmb   07 58 11.6
      comp=Z,14nm,0.8s
O53A  New Philadelph    27.22  17  IAmb  IAmb   07 58 15.4
      comp=Z,26nm,1.2s
O53A  New Philadelph    27.22  17  P     P      07 58 14.8 +0.9
      baz=201,SNR=5.2
MVCO  Mesa Verde        27.53 329  P     P      07 58 20.3 +3.2
      baz=141
P57A  Homestead Farm    27.56  22  IAmb  IAmb   07 58 19.1
      comp=Z,18nm,0.7s
L40A  Anamosa           27.61 360  IAmb  IAmb   07 58 44.9
      comp=Z,19nm,1.3s
WUAZ  Wupatki           27.85 323  P     P      07 58 23.0 +3.1
      baz=134
SDMD  Soldier’s Deli    27.95  24  IAmb  IAmb   07 58 21.8
      comp=Z,12nm,0.6s
JFWS  Jewell Farm       28.47   1  IAmb  IAmb   07 58 31.0
      comp=Z,6.4nm,0.5s
M53A  WI Miller and     28.48  17  P     P      07 58 24.8 -0.3
      baz=202
GLA   Glamis            28.48 315  P     P      07 58 28.2 +2.9
      baz=125
SSPA  Standing Stone    28.62  21  P     P      07 58 27.0 +0.6
SSPA                               IAmb  IAmb   07 58 27.9
      comp=Z,16nm,0.8s
SSPA  Standing Stone    28.62  21  P     P      07 58 27.1 +0.6
      baz=208
MVL   Millersville      28.64  24  P     P      07 58 27.5 +0.9
MVL                                IAmb  IAmb   07 58 27.9
      comp=Z,12nm,0.8s
PDMCI Parker Dam,Lak    28.77 318  P     P      07 58 30.8 +3.0
      baz=128,SNR=5.2
IKP   In-Ko-Pah, Jac    29.15 313  P     P      07 58 34.7 +3.3
      baz=123
BC3   Big Chuckawall    29.26 315  P     P      07 58 35.5 +3.2
      baz=125,SNR=10.0
IRM   Iron Mountain     29.34 316  P     P      07 58 35.8 +2.8
      baz=126
I42A  Draeger Farm,     29.50   3  IAmb  IAmb   07 58 34.9
      comp=Z,8.5nm,0.7s
MONP2 Monument Peak     29.51 313  P     P      07 58 37.6 +3.0
      baz=123
BELC  Belle Mtn. Jos    29.83 315  P     P      07 58 40.3 +2.9
      baz=125
PFO   Pinyon Flats O    29.93 314  P     P      07 58 41.1 +2.9
      baz=124
GMRC  Granite Mounta    30.06 317  P     P      07 58 42.3 +2.9
      baz=127,SNR=7.5
L56A  Greenwood         30.07  20  IAmb  IAmb   07 58 40.1
      comp=Z,13nm,0.9s
MURC  Murrieta          30.43 314  P     P      07 58 45.3 +2.8
      baz=123
PAL   Palisades         30.50  26  P     P      07 58 43.3 +0.3
      baz=214
HEC   Hector,Ludlow     30.53 316  P     P      07 58 46.8 +3.3
      baz=126
BINY  Binghamton        30.68  22  P     P      07 58 45.2 +0.6
      baz=210,SNR=8.4
SPMN  Marine on St.     30.81 358  P     P      07 58 45.7  0.0
      baz=177,SNR=9.8
GLMI  Grayling          30.87   9  P     P      07 58 46.2  0.0
      baz=192
BFSC  Mount Baldy Ra    31.10 314  P     P      07 58 51.3 +2.7
      baz=123
GSC   Goldstone, Bar    31.12 317  P     P      07 58 51.6 +2.9
      baz=126
K22A  Casper            31.17 338  P     P      07 58 50.0 +0.9
      baz=150
EDW2  Edwards Air Fo    31.68 315  P     P      07 58 56.2 +2.6
      baz=124
TPNV  Topopah Spring    31.75 320  P     P      07 58 57.3 +3.0
      baz=129
LRMC  Laurel Mtn Rad    31.81 316  P     P      07 58 57.9 +3.1
      baz=125,SNR=5.5
FURC  Furnace Creek,    31.85 318  P     P      07 58 58.0 +3.1
      baz=127
MPMC  Manual Prospec    32.01 317  P     P      07 58 59.3 +2.7
      baz=126,SNR=11
OSI   Osito Audit: C    32.05 314  P     P      07 58 59.6 +2.9
      baz=122
E38A  The Farm, Brul    32.16 359  IAmb  IAmb   07 58 57.8
      comp=Z,12nm,0.8s
L61B  Northampton       32.21  26  P     P      07 58 57.8 -0.2
      baz=215
R11A  Troy Canyon, C    32.24 322  P     P      07 59 01.7 +3.1
      baz=131,SNR=5.2
ARVC  Arvin             32.39 315  P     P      07 59 02.9 +3.1
      baz=123,SNR=8.6
ISA   Isabella, Lake    32.44 316  P     P      07 59 03.4 +3.1
      baz=124
PDAR  Pinedale Array    32.47 334  P     P      07 59 00.8 +0.2
      comp=Z,0.4nm,0.6s,baz=126,slow=10,SNR=3.9
PDAR                               PcP   PcP    08 01 44.9  0.0
      comp=Z,0.6nm,0.4s,baz=143,slow=4.8,SNR=7.3
PDAR                               ScP   ScP    08 05 18.5 +0.9
      comp=Z,0.4nm,0.7s,baz=188,slow=4.0,SNR=3.6
PDAR                               PKiKP PKiKP  08 09 11.8 -0.2
      comp=Z,0.2nm,0.4s,baz=147,slow=1.8,SNR=4.2
      comp=Z,0.4nm,0.6s
CWC   Cottonwood Cre    32.62 317  P     P      07 59 04.9 +3.0
      baz=126
HRV   Adam Dziewonsk    32.74  27  P     P      07 59 02.9 +0.3
      baz=217
NCB   Newcomb           32.86  23  IAmb  IAmb   07 59 04.6
      comp=Z,15nm,0.8s
PKM   Mcpherson Peak    32.95 313  P     P      07 59 08.1 +3.3
      baz=121,SNR=6.6
VES   Vestal, Richgr    32.96 316  P     P      07 59 08.0 +3.4
      baz=124,SNR=12
TPH   Tonopah           33.06 320  IAmb  IAmb   07 59 10.2
      comp=Z,17nm,1.1s
LONY  Lake Ozonia       33.29  22  P     P      07 59 07.7 +0.3
      baz=210,SNR=7.7
SMMC  Simmler           33.30 314  P     P      07 59 11.1 +3.4
      baz=122
EYMN  Ely               33.50 360  IAmb  IAmb   07 59 09.4
      comp=Z,6.0nm,0.6s
EYMN  Ely               33.50 360  P     P      07 59 08.5 -0.7
      baz=179,SNR=5.5
SNOW  Snow King Moun    33.54 334  IAmb  IAmb   07 59 40.0
      comp=Z,8.5nm,0.7s
PAGB  Antelope Grade    33.70 314  IAmb  IAmb   07 59 15.3
      comp=Z,13nm,0.9s
FRNY  Flat Rock         33.84  23  P     P      07 59 12.3 +0.2
FRNY                               IAmb  IAmb   07 59 13.2
      comp=Z,15nm,1.1s
NV11  Mina Array Sit    33.86 320  IAmb  IAmb   07 59 16.8
      comp=Z,7.2nm,0.8s
I62A  Tamworth          33.94  26  P     P      07 59 13.7 +0.7
I62A                               IAmb  IAmb   07 59 14.3
      comp=Z,20nm,1.0s
NVAR  Mina Array Bea    33.95 320  P     P      07 59 16.7 +3.3
      comp=Z,8.0nm,0.6s,baz=132,slow=8.3,SNR=72
NVAR                               pP    pP     07 59 44.2 +3.3
      comp=Z,3.4nm,0.9s,baz=138,slow=9.6,SNR=2.8
NVAR                               PcP   PcP    08 01 50.7 +1.6
      comp=Z,4.2nm,0.7s,baz=129,slow=2.4,SNR=22
NVAR                               ScP   ScP    08 05 25.0 +2.1
      comp=Z,0.4nm,0.6s,baz=123,slow=4.3,SNR=6.1
      comp=Z,8.0nm,0.6s
LHV   Little Huntoon    33.96 320  P     P      07 59 17.5 +4.2
LHV                                IAmb  IAmb   07 59 18.0
      comp=Z,11nm,0.6s
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LBNH  Lisbon              33.99  25   P      P      07 59 13.9 +0.4
AGMN  Agassiz Nation      34.08 354   IAmb   IAmb   07 59 14.4
      comp=Z,5.9nm,0.7s
AGMN  Agassiz Nation      34.08 354   P      P      07 59 13.9 -0.3
      baz=172,SNR=5.6
MDND  Maddock             34.13 350   P      P      07 59 14.6 -0.1
      baz=165
KVN   Kaiserville         34.20 321   IAmb   IAmb   07 59 19.5
      comp=Z,9.0nm,1.1s
RLMT  Red Lodge           34.31 337   P      P      07 59 17.6 +1.0
I63A  Otisfield           34.40  27   P      P      07 59 17.5 +0.4
I63A                                  IAmb   IAmb   07 59 18.4
      comp=Z,10nm,0.8s
H62A  Milan               34.58  25   P      P      07 59 19.1 +0.6
H62A                                  IAmb   IAmb   07 59 27.9
      comp=Z,15nm,1.2s
TRQ   Mont Tremblant      34.69  20   P      P      07 59 20.2 +0.6
TRQ                                   IAmb   IAmb   07 59 20.8
      comp=Z,16nm,1.1s
MACA  Manacapuru-AM       34.82 118  eP      P      07 59 20.2 -0.8
G62A  West of Eustis      35.36  25   P      P      07 59 25.7 +0.4
VLDQ  Val d'Or            35.52  16   P      P      07 59 26.4 -0.1
MCMT  McKenzie Canyo      35.54 333   P      P      07 59 29.1 +2.0
BOZ   Bozeman (W)         35.64 335   P      P      07 59 29.0 +1.2
      baz=144
PKME  Peaks-Kenny Pk      35.93  27   P      P      07 59 30.5 +0.5
PKME  Peaks-Kenny Pk      35.93  27   P      P      07 59 30.2 +0.2
      baz=218
ULM   Lac du Bonnet       36.01 355   P      P      07 59 29.6 -1.1
      comp=Z,6.9nm,0.5s,baz=171,slow=10.0,SNR=8.4
      comp=Z,6.9nm,0.5s
ULM   Lac du Bonnet       36.01 355   P      P      07 59 30.0 -0.8
ULM                                   IAmb   IAmb   07 59 30.3
      comp=Z,9.0nm,0.8s
BEKR  Beckworth           36.09 320   IAmb   IAmb   07 59 36.2
      comp=Z,6.9nm,1.2s
F63A  Nahmakanta, Br      36.35  26   P      P      07 59 33.6 -0.1
F63A                                  IAmb   IAmb   07 59 34.4
      comp=Z,17nm,1.2s
ORV   Oroville            36.62 319   IAmb   IAmb   07 59 41.1
      comp=Z,14nm,1.5s
F64A  Sherman             36.81  27   P      P      07 59 37.6 +0.1
F64A                                  IAmb   IAmb   07 59 38.1
      comp=Z,7.2nm,0.8s
GGN   Saint George        36.92  29   P      P      07 59 38.8 +0.4
GGN                                   IAmb   IAmb   07 59 39.2
      comp=Z,7.6nm,1.1s
LMQ   La Malbaie          37.35  23   P      P      07 59 42.3 +0.2
LPAZ  La Paz              37.98 142   P      P      07 59 49.9 +1.5
      comp=Z,1.1nm,0.7s,baz=329,slow=9.4,SNR=6.4
LPAZ                                  PcP    PcP    08 02 02.8 +0.8
      comp=Z,1.5nm,0.8s,baz=298,slow=3.9,SNR=3.7
      comp=Z,1.1nm,0.7s
LPAZ  La Paz              37.98 142  eP      P      07 59 49.2 +0.7
HAL   Halifax             38.18  32   P      P      07 59 49.6 +0.5
HAL                                   IAmb   IAmb   08 00 04.5
      comp=Z,21nm,1.3s
F10A  Beach Ranch, E      38.42 330   P      P      07 59 52.4 +1.1
F10A                                  IAmb   IAmb   07 59 53.4
      comp=Z,5.8nm,0.7s
BATG  Bathurst New B      38.90  27   P      P      07 59 55.4 +0.2
BATG                                  IAmb   IAmb   07 59 55.9
      comp=Z,14nm,1.2s
ITTB  Itaituba            39.71 115  eP      P      08 00 01.1 -1.2
H04A  Detroit Lake        40.11 325   P      P      08 00 06.6 +1.3
H04A                                  IAmb   IAmb   08 00 07.9
      comp=Z,12nm,0.7s
C09A  Chrisman Ranch      40.24 332   P      P      08 00 06.4 +0.1
VILB  Vilhena             40.91 130  eP      P      08 00 12.6 +0.5
LTY   Liberty             41.01 329   P      P      08 00 13.0 +0.3
EDM   Edmonton            42.59 340   P      P      08 00 25.6 +0.2
EDM                                   IAmb   IAmb   08 00 26.3
      comp=Z,10nm,0.9s
PDRB  Porto dos Gac       42.74 125  eP      P      08 00 25.3 -1.8
CLDB  Colider             43.06 124  eP      P      08 00 27.8 -1.9
PTLB  Pontes e Lacer      43.32 132  eP      P      08 00 31.3 -0.3
DRLN  Deer Lake           44.37  31   P      P      08 00 38.9 -0.8
DRLN                                  IAmb   IAmb   08 00 39.0
      comp=Z,12nm,0.7s
FCC   Fort Churchill      44.39 358   P      P      08 00 39.3 -0.3
FCC                                   IAmb   IAmb   08 00 40.0
      comp=Z,8.2nm,0.9s
SCHQ  Schefferville       44.60  20   P      P      08 00 40.6 -0.8
      comp=Z,9.9nm,0.7s,baz=223,slow=6.4,SNR=28
      comp=Z,9.9nm,0.7s
SCHQ  Schefferville       44.60  20   P      P      08 00 41.0 -0.4
SCHQ                                  IAmb   IAmb   08 00 41.4
      comp=Z,9.5nm,0.7s
NBRS  Nobres              45.10 128  eP      P      08 00 45.0 -1.0
SALV  Santo Antonio       46.14 129  eP      P      08 00 54.0  0.0
SMTB  Santa Maria do      48.95 116  eP      P      08 01 14.3 -1.5
AQDB  Aquidauana          49.09 134   P      P      08 01 16.7  0.0
AQDB  Aquidauana          49.09 134  eP      P      08 01 16.9 +0.1
DVLD  Doverlandia         49.27 127  eP      P      08 01 17.9 -0.3
PEXB  Peixe               49.91 120  eP      P      08 01 22.1 -1.0
YKA   Yellowknife Ar      50.89 346   P      P      08 01 29.6 -0.1
      comp=Z,3.6nm,0.6s,baz=148,slow=7.9,SNR=111
YKA                                   pP     pP     08 01 57.8 -1.1
      comp=Z,3.7nm,0.9s,baz=145,slow=8.1,SNR=7.2
YKA                                   PcP    PcP    08 02 43.7 -0.8
      comp=Z,0.3nm,0.5s,baz=149,slow=3.9,SNR=5.1
YKA                                   ScP    ScP    08 06 28.6 -1.1
      comp=Z,0.3nm,0.6s,baz=147,slow=4.6,SNR=7.2
      comp=Z,3.6nm,0.6s
YKA   Yellowknife Ar      50.89 346   P      P      08 01 29.4 -0.4
MT01  Popeta              51.55 159   P      P      08 01 36.4 +1.3
BDFB  Brasilia            51.99 123   P      P      08 01 38.2 -0.6
      comp=Z,1.7nm,0.5s,baz=292,slow=9.2,SNR=6.6
      comp=Z,1.7nm,0.5s
BDFB  Brasilia            51.99 123   P      P      08 01 38.7 -0.1
BO01  Tunca               52.08 159   P      P      08 01 41.0 +2.0
BO01                                  IAmb   IAmb   08 01 41.9
      comp=Z,6.3nm,1.1s
CPUP  Villa Florida       52.10 141   P      P      08 01 38.5 -0.8
      comp=Z,2.5nm,0.9s,baz=310,slow=9.4,SNR=4.9
CPUP                                  PcP    PcP    08 02 50.9 +1.2
      comp=Z,1.2nm,0.8s,baz=315,slow=4.4,SNR=4.1
      comp=Z,2.5nm,0.9s
CPUP  Villa Florida       52.10 141  eP      P      08 01 38.5 -0.8
GO05  Huala               52.36 160   P      P      08 01 43.0 +1.9
GO05                                  IAmb   IAmb   08 01 43.6
      comp=Z,8.4nm,0.8s
NBPS  Pedro II - PI       52.65 107  eP      P      08 01 42.6 -1.1
DLBC  Dease Lake          52.69 335   P      P      08 01 45.0 +1.7
      comp=Z,4.9nm,0.6s,baz=132,slow=4.8,SNR=17
DLBC                                  pP     pP     08 02 13.4 +0.6
      comp=Z,2.7nm,0.7s,baz=139,slow=9.2,SNR=3.0
      comp=Z,4.9nm,0.6s
DLBC  Dease Lake          52.69 335   P      P      08 01 45.4 +2.0
DLBC                                  IAmb   IAmb   08 01 45.9
      comp=Z,5.5nm,0.7s
SDBA  SAO DESIDERIO       52.94 118  eP      P      08 01 44.4 -1.4
PCMB  Pacaembu            52.97 132  eP      P      08 01 45.5 -0.3
IPMB  Ipameri, GO         53.12 126  eP      P      08 01 46.5 -0.5
PTGB  Pitanga             54.40 135  eP      P      08 01 55.8 -0.5
FRBT  Francisco Belt      54.57 137  eP      P      08 01 57.3 -0.2
BB19B Bebedouro           54.66 129  eP      P      08 01 58.2  0.0
JANB  Januaria            54.74 120  eP      P      08 01 58.2 -0.6
ITQB  Itaqui              54.98 143   P      P      08 02 01.0 +0.8
ITQB  Itaqui              54.98 143  eP      P      08 02 00.8 +0.5
NBCL  Cascavel-CE         55.53 105  eP      P      08 02 04.7 +0.2
MMPY  Sheldon Lake,       55.88 339   P      P      08 02 07.3 +1.0
      baz=131
LC01  Cunco               55.94 162   P      P      08 02 08.6 +1.6
LC01                                  IAmb   IAmb   08 02 09.3
      comp=Z,4.5nm,0.8s
WHY   Whitehorse          56.01 336   P      P      08 02 08.2 +0.9
IVI   Ivigtut             56.01  23   P      P      08 02 08.0 +0.8
ITAB  Concordia           56.04 138   P      P      08 02 08.0 +0.2
ITAB                                  IAmb   IAmb   08 02 14.0
      comp=Z,11nm,1.1s
ITAB  Concordia           56.04 138  eP      P      08 02 08.1 +0.2
NBPN  Ponto Novo - B      56.34 114  eP      P      08 02 08.4 -2.0
DIAM  Diamantina, MG      56.91 123  eP      P      08 02 14.1 -0.3
VAO   Valinhos            56.97 130  eP      P      08 02 14.8 +0.1
BSCB  Bom Sucesso         57.49 127  eP      P      08 02 18.7 +0.3
PLCA  Paso Flores         58.03 162   P      P      08 02 23.3 +1.5
      comp=Z,1.3nm,0.9s,baz=332,slow=8.8,SNR=4.4
      comp=Z,1.3nm,0.9s
PLCA  Paso Flores         58.03 162   P      P      08 02 23.6 +1.9
PLCA                                  IAmb   IAmb   08 02 24.7
      comp=Z,5.8nm,1.2s
GDU01 Guandu, BA          58.15 116  eP      P      08 02 22.8 -0.1
PLTB  Pedras Altas        58.28 142   P      P      08 02 24.1 +0.5
PLTB                                  IAmb   IAmb   08 02 24.3
      comp=Z,7.7nm,1.2s
CMC01 Camacan, BA         58.94 118  eP      P      08 02 28.1 -0.4
GUA01 Guaratinga, BA      59.26 119  eP      P      08 02 30.3 -0.3
BSFB  Barra de Sao F      59.49 122  eP      P      08 02 32.4 +0.3
DAWY  Dawson              59.68 338   P      P      08 02 33.0 +0.1
DAWY                                  IAmb   IAmb   08 02 33.7
      comp=Z,8.3nm,1.5s
BCAR  Beaver Creek A      60.06 336   P      P      08 02 36.4 +0.9
L27K  Beaver Creek,       60.08 336   P      P      08 02 36.5 +0.9
L27K  Beaver Creek,       60.08 336   P      P      08 02 36.1 +0.5
      baz=120
RIB01 Linhares ES         60.10 123  eP      P      08 02 36.1 -0.2
BMRM  Bremner River       60.24 333   P      P      08 02 38.0 +1.2
      baz=116
INK   Inuvik              60.35 343   P      P      08 02 36.9 -0.4
      comp=Z,2.9nm,0.6s,baz=124,slow=6.5,SNR=17
INK                                   pP     pP     08 03 06.9 -0.5
      comp=Z,4.9nm,1.0s,baz=116,slow=8.7,SNR=5.4
      comp=Z,2.9nm,0.6s
INK   Inuvik              60.35 343   P      P      08 02 37.5 +0.3
INK                                   IAmb   IAmb   08 02 38.2
      comp=Z,3.1nm,0.8s
INK   Inuvik              60.35 343   P      P      08 02 37.2 -0.1
      baz=131
RES   Resolute Bay        60.37 359   P      P      08 02 36.5 -0.8
RES                                   IAmb   IAmb   08 02 37.0
      comp=Z,3.2nm,0.8s
CAM01 Campos-RJ           60.38 126  eP      P      08 02 38.7 +0.6
ALF01 Guarapari-ES        60.49 124  eP      P      08 02 39.4 +0.4
N25K  Chitina, Valde      60.53 334   P      P      08 02 40.3 +1.5
N25K                                  IAmb   IAmb   08 02 43.1
      comp=Z,14nm,1.4s
N25K  Chitina, Valde      60.53 334   P      P      08 02 39.9 +1.2
      baz=117
K27K  Chicken             60.66 337   P      P      08 02 40.1 +0.6
      baz=120
KLU   Klutina             61.05 333   P      P      08 02 41.8 -0.5
      baz=115
A36M  Sachs Harbour       61.08 348   P      P      08 02 41.5 -0.6
A36M                                  IAmb   IAmb   08 02 55.8
      comp=Z,13nm,1.4s
M24K  Tolsona, Glenn      61.42 334   P      P      08 02 45.8 +1.1
      baz=115
J26L  Joseph Creek        61.46 337   P      P      08 02 46.0 +1.0
      baz=119
PAX   Paxson              61.50 335   P      P      08 02 45.4 +0.2
      baz=116
RIDG  Independent Ri      61.60 336   P      P      08 02 47.5 +1.6
      baz=117
J25K  Salcha River,       62.20 337   P      P      08 02 50.4 +0.5
      baz=117
WAT6  Susitna Watana      62.28 334   P      P      08 02 51.1 +0.5
      baz=114
GHO   Glory Hole Cre      62.47 333   IAmb   IAmb   08 02 55.5
      comp=Z,5.9nm,0.8s
PMR   Palmer              62.50 333   P      P      08 02 52.4 +0.6
PMR                                   IAmb   IAmb   08 02 53.6
      comp=Z,3.5nm,0.7s
PMR   Palmer              62.50 333   P      P      08 02 52.2 +0.4
      baz=112
ILAR  Eielson Array       62.86 337   P      P      08 02 53.9 -0.3
      comp=Z,0.8nm,0.6s,baz=166,slow=4.9,SNR=22
ILAR                                  pP     pP     08 03 25.3 +0.7
      comp=Z,1.4nm,1.0s,baz=126,slow=5.4,SNR=3.6
      comp=Z,0.8nm,0.6s
KDAK  Kodiak Island       62.87 328   P      P      08 02 55.1 +0.8
      comp=Z,6.0nm,0.5s,baz=84,slow=10,SNR=12
      comp=Z,6.0nm,0.5s
RND   Reindeer            63.08 335   IAmb   IAmb   08 02 59.9
      comp=Z,13nm,1.4s
ICESG Greenland Ices      63.47  18  i P     P      08 02 56.8 -1.8
ICESG                                 IAmb   IAmb   08 02 59.2
      comp=Z,7.9nm,0.6s
TRF   Thorofare Moun      63.69 335   P      P      08 03 00.5 +0.6
      baz=112
H24K  Noodor Dome         63.70 337   P      P      08 03 00.3 +0.6
H24K  Noodor Dome         63.70 337   P      P      08 03 00.3 +0.6
      baz=115
I23K  Minto, Yukon-K      63.97 336   P      P      08 03 01.8 +0.3
      baz=114
BPAW  Bear Paw Mtn.       64.22 335   P      P      08 03 02.8 -0.4
      baz=112
M20K  Styx River          64.38 332   IAmb   IAmb   08 03 06.8
      comp=Z,5.3nm,0.9s
M20K  Styx River          64.38 332   P      P      08 03 03.8 -0.6
      baz=108
O19K  Port Alsworth       64.43 330   P      P      08 03 04.3 -0.2
      baz=106
CAST  Castle Rocks        64.43 334   P      P      08 03 04.2 -0.4
      baz=110
N19K  Bonanza Creek       64.68 331   P      P      08 03 06.9 +0.6
N19K                                  IAmb   IAmb   08 03 09.1
      comp=Z,7.0nm,0.8s
N19K  Bonanza Creek       64.68 331   P      P      08 03 06.5 +0.1
      baz=107
CHUM  Lake Minchumin      64.69 335   P      P      08 03 06.5 +0.4
      baz=110
O18K  Koktuh Hills        64.76 330   P      P      08 03 06.7 -0.1
      baz=106
L20K  Farewell, AK        64.90 333   P      P      08 03 07.4 -0.2
      baz=108,SNR=5.7
K20K  Telida              65.26 334   P      P      08 03 09.6 -0.3
      baz=108
TOLK  Toolik Lake Re      65.49 340   P      P      08 03 11.6 +0.3
      baz=115
H21K  Melozitna Rive      65.50 336   P      P      08 03 10.7 -0.7
      baz=110
J20K  Nowinta River       65.55 335   P      P      08 03 11.0 -0.8
      baz=108
SUMG  Summit              65.67  15   P      P      08 03 12.6 -0.3
SUMG                                  IAmb   IAmb   08 03 14.1
      comp=Z,5.7nm,0.7s
SUMG  Summit              65.67  15  i P     P      08 03 11.0 -1.9
SUMG                                  IAmb   IAmb   08 03 13.7
      comp=Z,5.5nm,0.7s
EUNU  Eureka              65.77   1   P      P      08 03 12.8 -0.2
EUNU                                  IAmb   IAmb   08 03 13.3
      comp=Z,7.8nm,0.7s
TTA   Tatalina            65.97 333   P      P      08 03 14.1 -0.5
      baz=106
DAG   Danmarks Havn       72.13  13  i P     P      08 03 50.2 -2.1
DAG                                   IAmb   IAmb   08 03 51.1
      comp=Z,8.1nm,0.5s
NOR   Nord                73.63   8  i P     P      08 03 59.4 -1.7
NOR                                   IAmb   IAmb   08 04 00.4
      comp=Z,2.0nm,0.5s
ADK   Adak                76.13 320   P      P      08 04 17.1 +1.1
ESK   Eskdalemuir         77.16  36   P      P      08 04 20.1 -1.6
ESK                                   IAmb   IAmb   08 04 22.9
      comp=Z,24nm,1.2s
SFS   San Fernando        77.58  55   P      P      08 04 24.7 +0.3
KBS   Kingsbay            78.50  11   P      P      08 04 29.4 +0.6
KBS                                   IAmb   IAmb   08 04 33.2
      comp=Z,18nm,1.3s
ESDC  Sonseca Array       78.83  52   P      P      08 04 29.6 -1.8
      comp=Z,1.2nm,0.6s,baz=286,slow=4.6,SNR=11
      comp=Z,1.2nm,0.6s
ESDC  Sonseca Array       78.83  52   P      P      08 04 29.9 -1.4
ESBB  Sonseca Array       78.83  52   P      P      08 04 29.8 -1.6
ESBB                                  IAmb   IAmb   08 04 36.7
      comp=Z,15nm,1.5s
SPITS Spitsbergen Ar      79.58  12   P      P      08 04 34.0 -0.6
      comp=Z,9.3nm,1.0s,baz=225,slow=5.1,SNR=7.9
      comp=Z,9.3nm,1.0s
BILL  Bilibino            81.45 338   PPP    PPP    08 05 36.0
BILL  Bilibino            81.45 338   P      P      08 04 44.7 -0.1
BILL                                  IAmb   IAmb   08 04 46.2
      comp=Z,4.3nm,0.6s
BILL  Bilibino            81.45 338   pmax   pmax
      comp=Z,4.0nm,0.6s
BILL  Bilibino            81.45 338deP      P      08 04 44.9 +0.1
NAO01 NORSAR Array S      83.34  29   P      P      08 04 55.0 +0.3
NB2   NORSAR Subarra      83.43  29   P      P      08 04 54.3 -0.9
      comp=Z,0.7nm,0.5s,baz=289,slow=5.3
NOA   NORSAR Array B      83.43  29   P      P      08 04 54.4 -0.9
      comp=Z,0.8nm,0.6s,baz=290,slow=5.2,SNR=7.1
      comp=Z,0.8nm,0.6s
ARCES ARCESS Array B      85.54  18   P      P      08 05 04.0 -1.6
      comp=Z,0.7nm,0.4s,baz=274,slow=5.2,SNR=17
ARCES                                 pP     pP     08 05 37.5 -0.1
      comp=Z,2.0nm,0.8s,baz=297,slow=5.3,SNR=2.2
      comp=Z,0.7nm,0.4s
ARCES ARCESS Array B      85.54  18   P      P      08 05 04.7 -0.9
ARCES                                 IAmb   IAmb   08 05 29.4
      comp=Z,12nm,1.4s
TUE   Stuetta             86.77  43   P      P      08 05 11.7 -0.7
TUE                                   IAmb   IAmb   08 05 12.0
      comp=Z,3.8nm,0.7s
CLL   Collm               87.52  38  i pP    pP     08 05 48.6 +1.0
GERES GERESS Array B      88.79  40   P      P      08 05 20.5 -1.3
      comp=Z,0.3nm,0.5s,baz=317,slow=6.7,SNR=2.0
GERES                                 pP     pP     08 05 52.1 -1.8
      comp=Z,0.8nm,0.9s,baz=266,slow=2.1,SNR=3.6
      comp=Z,0.3nm,0.5s
TORD  Torodi Ar. Bea      89.46  77   P      P      08 05 22.3 -3.2
      comp=Z,0.8nm,0.9s,baz=297,slow=3.4,SNR=1.8
      comp=Z,0.8nm,0.9s
FINES FINESS Array B      89.82  25   P      P      08 05 24.4 -1.8
      comp=Z,0.4nm,0.6s,baz=276,slow=2.7,SNR=4.3
FINES                                 pP     pP     08 05 57.9 -0.5
      comp=Z,1.4nm,0.8s,baz=204,slow=4.2,SNR=3.1
      comp=Z,0.4nm,0.6s
TIXI  Tiksi               90.09 348   P      P      08 05 26.0 -1.3
      comp=Z,1.3nm,0.3s,baz=93,slow=22,SNR=7.0
      comp=Z,1.3nm,0.3s
TIXI  Tiksi               90.09 348   P      P      08 05 26.8 -0.5
TIXI                                  IAmb   IAmb   08 05 27.2
      comp=Z,1.9nm,0.5s
BELA  Belgrano 2          97.33 170   P      Pdif   08 06 01.1 +0.7
KSRS  Korea Array        116.74 326   PKP    PKiKP  08 11 12.2 +0.3
      comp=Z,1.4nm,0.7s,baz=14,slow=2.1,SNR=9.1
MKAR  Makanchi Array     118.85   5   PKP    PKPdf  08 11 14.1 -1.7
      comp=Z,0.2nm,0.4s,baz=322,slow=2.1,SNR=2.8
BOSA  Boshof             119.73 115   PKP    PKPdf  08 11 17.8 -0.2
      comp=Z,1.9nm,0.5s,baz=228,slow=3.4,SNR=5.7
LZH   Lanzhou            127.88 345  ePKP    PKiKP  08 11 49.3  +15
LZH                                   sPKP          08 12 01.9
WRA   Warramunga Arr     136.31 256   PKP    PKPdf  08 11 50.4 +0.8
      comp=Z,3.8nm,0.7s,baz=87,slow=2.7,SNR=36
ASAR  Alice Springs      136.59 251   PKhKP  PKPpre 08 11 43.4
      comp=Z,0.5nm,0.5s,baz=108,slow=3.8,SNR=9.0
ASAR                                  PKP    PKiKP  08 11 51.3 -0.6
      comp=Z,1.6nm,0.5s,baz=94,slow=2.0,SNR=21
FITZ  Fitzroy Crossi     144.55 259   PKPbc  PKPdf  08 12 05.0 +0.6
      comp=Z,4.5nm,0.6s,baz=62,slow=4.7,SNR=12
CMAR  Chiang Mai Arr     145.93 343   PKPbc  PKPdf  08 12 07.2 +0.3
      comp=Z,3.6nm,0.4s,baz=340,slow=3.9,SNR=10
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MEX 08 07:53:36.9±0.7, 16.°26N×97.°98W, h29km±13km, MD3.1, Oaxaca

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op     ISC       h  m  s     ISC
PNIG  Pinotepa            0.20 313  i P      Pb       07 53 41.7 -1.3
PNIG                                 eS      Sb       07 53 45.6 -1.6
YOIG  Yosondua            0.72  35   eP      Pb       07 53 48.3 -3.0
YOIG                                 eS      Sb       07 53 56.0 -4.9
PEIG  Puerto Escondi      0.84 108   eP      Pn       07 53 50.3 -2.4
PEIG                                 eS      Sb       07 54 01.0 -2.8
TXIG  Tlaxiaco            1.01  11   eP      Pn       07 53 53.3 -2.1
TXIG                                 eS      Sn       07 54 05.8 -3.0
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*MOS **08** 07:58:47.8±0.9, 43.°16N×145.°24E, h96km, mb4.1/5, Error ellipse: s-maj=13.8km s-min=8.9km az=77.8*

*JMA **08** 07:58:48.9±0.2, 43.°1N±0.°5×145.°3E±0.°7, h86km±1km, MV3.8/40, OFF NEMURO PENINSULA*

JMA Felt I J1 at OFF NEMURO PENINSULA .

*SKHL **08** 07:58:48.8±0.2, 43.°20N×145.°20E, h97km±5km, mb4.9/6, msha5.6/3*

*IDC **08** 07:58:49.5±2.0, 43.°17N×145.°17E, h98km±17km, mb3.5/16, mbtmp3.9/18, Error ellipse: s-maj=17.0km s-min=14.4km az=110.0*

*NEIC **08** 07:58:50.5±1.9, 43.°25N±0.°07×145.°1E±0.°1, h98km±6km, mb4.0/15, Error ellipse: s-maj=12.1km s-min=10.7km az=94.0*

ISC 08 07:58:48.7±0.6, 43.°15N±0.°04×145.°27E±0.°03, h88km±4km, n96, σ0.s85/116, mb3.8/24, 4D, Hokkaido region

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op     ISC       h  m  s     ISC
JKHN  Kushirohamanak      0.11 228   eP      Pn       07 59 01.4 +0.3
JKHN                                 eS      Sn       07 59 10.6 +0.3
AKK   Akkeshi             0.34 247   eP      Pn       07 59 02.0 -0.1
NMR   Nemuro--Hokkai      0.40  57 ⇓iPN      Pn       07 59 02.4  0.0
NMR                                 i S      Sn       07 59 12.1 -0.5
NMR   Nemuro--Hokkai      0.40  57  i P      Pn       07 59 02.5  0.0
NMR                                 i S      Sn       07 59 12.4 -0.2
NEM2  Nemuro 2            0.41  58   eP      Pn       07 59 02.4 -0.1
NEM2                                 eS      Sn       07 59 12.2 -0.5
JAK   Akkeshi             0.45 250   eP      Pn       07 59 02.8 +0.1
JAK                                  eS      Sn       07 59 13.2  0.0
JNK   Nakash              0.59 317   eP      Pn       07 59 03.7 -0.3
JNK                                  eS      Sn       07 59 14.5 -0.8
GLVR  Golovnino           0.61  17 ⇓iPN      Pn       07 59 04.3 +0.2
GLVR                                i S      Sn       07 59 16.1 +0.5
GLVR                                  pmax   pmax
      comp=Z,2µm,0.3s
GLVR                                  pmax   pmax
      comp=E,152nm,0.1s
GLVR                                  pmax   pmax
      comp=N,332nm,0.2s
GLVR                                  smax   smax
      comp=E,22µm,0.4s
GLVR                                  smax   smax
      comp=N,20µm,0.3s
GLVR  Golovnino           0.61  17  i P      Pn       07 59 04.3 +0.2
GLVR                                  AMB    AMB      07 59 05.1
      comp=N,2µm,0.5s
GLVR                                i S      Sn       07 59 16.1 +0.5
GLVR                                  A      A        07 59 17.4
      comp=N,10µm,0.4s
GLVR                                  A      A        07 59 17.4
      comp=N,11µm,0.4s
JRA   Rausu               0.79 352   eP      Pn       07 59 06.2 +0.3
JRA                                  eS      Sn       07 59 19.1 +0.4
RUSJ  Misakicho           0.95 359   ePN     Pn       07 59 08.5 +0.9
RUSJ                                i S      Sn       07 59 23.3 +1.5
YUK   Yuzh-Kuril'sk       0.98  26 ⇓iPN      Pn       07 59 08.2 +0.2
YUK                                 i S      Sn       07 59 22.4  0.0
YUK                                   pmax   pmax
      comp=Z,2µm,0.3s
YUK                                   pmax   pmax
      comp=E,188nm,0.1s
YUK                                   pmax   pmax
      comp=N,221nm,0.2s
YUK                                   smax   smax
      comp=N,5µm,0.5s
YUK                                   smax   smax
      comp=E,11µm,0.5s
YUK   Yuzh-Kuril'sk       0.98  26  i P      Pn       07 59 08.2 +0.2
YUK                                   AMB    AMB      07 59 08.9
      comp=E,1µm,0.5s
YUK                                 i S      Sn       07 59 22.4  0.0
YUK                                   A      A        07 59 23.8
      comp=E,850nm,0.6s
YUK                                   A      A        07 59 23.8
      comp=E,2µm,0.6s
JOB   Onbets              1.08 257   eP      Pn       07 59 09.5 +0.4
JOB                                  eS      Sn       07 59 24.8 +0.3
JAR   Ashorobuto          1.11 278   eP      Pn       07 59 09.8 +0.4
JAR                                  eS      Sn       07 59 25.0  0.0
JTKR  Abashiri--Toko      1.28 310   eP      Pn       07 59 12.0 +0.5
JTKR                                 eS      Sn       07 59 28.8  0.0
SHO   Shikotan            1.34  57 ⇓iPN      Pn       07 59 12.1 -0.2
SHO                                 i S      Sn       07 59 29.0 -1.1
SHO                                   pmax   pmax
      comp=N,72nm,0.3s
SHO                                   pmax   pmax
      comp=E,67nm,0.3s
SHO                                   pmax   pmax
      comp=Z,105nm,0.3s
SHO                                   smax   smax
      comp=E,2µm,0.3s
SHO                                   smax   smax
      comp=N,821nm,0.2s
SHO   Shikotan            1.34  57  i P      Pn       07 59 12.2 -0.1
SHO                                   AMB    AMB      07 59 12.8
      comp=N,1µm,0.5s
SHO                                  eS      Sn       07 59 29.4 -0.7
SHO                                   A      A        07 59 29.9
      comp=N,800nm,0.5s
SHO                                   A      A        07 59 29.9
      comp=N,2µm,0.5s
JCH   Churui              1.50 250   eP      Pn       07 59 14.4 +0.1
JCH                                  eS      Sn       07 59 33.3 -0.4
JMP   Maruseppu           1.63 302   eP      Pn       07 59 16.5 +0.5
JMP                                  eS      Sn       07 59 36.9 +0.2
ERM   Erimo               1.93 235    PN     Pn       07 59 21.6 +1.8
ERM                                                   07 59 42.6
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ERM	Erimo	1.93	235		Pn	07 59 21.6	+1.8
ERM				Sn	Sn	07 59 42.6	-1.1
JKA	Kamikawa-asahi	2.16	297		Pn	07 59 24.5	+1.6
JKA	Kamikawa-asahi	2.16	297	eP	Pn	07 59 24.2	+1.3
ASAJ	Asahikawa	2.17	297	P	Pn	07 59 24.2	+1.2
	comp=N,606nm,0.4s,baz=121,slow=9.3,SNR=797						
ASAJ				S	Sn	07 59 48.9	-0.3
	comp=N,241nm,0.8s,baz=92,slow=14,SNR=3.6						
KUR	Kuril'sk	2.79	41	PN	Pn	07 59 34.3	+3.0
KUR				eS	Sn	08 00 05.4	+1.3
KUR				smax	smax		
	comp=E,137nm,0.5s						
KUR				smax	smax		
	comp=N,100nm,0.4s						
KUR	Kuril'sk	2.79	41	eS	Sn	08 00 04.6	+0.5
KUR				eP	Pn	07 59 32.3	+1.0
KUR				A	A	08 00 06.6	
	comp=N,1μm,0.5s						
KUR				A	A	08 00 06.6	
	comp=N,140nm,0.5s						
JEW	Eniwo	2.82	265	Pn	Pn	07 59 33.4	+1.7
JTM	Tenmabayashi	3.92	234	Pn	Pn	07 59 46.9	+0.3
YSS	Yuzh-Sakhalins	4.20	336	ePN	Pn	07 59 50.7	+0.4
YSS				eS	Sn	08 00 36.1	-2.0
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS	Yuzh-Sakhalins	4.20	336	Pn	Pn	07 59 50.7	+0.4
YSS	Yuzh-Sakhalins	4.20	336	eS	Sn	08 00 37.0	-1.1
YSS				eP	Pn	07 59 50.7	+0.4
YSS				AMB	AMB	07 59 51.2	
	comp=Z,30nm,0.5s						
YSS				A	A	08 00 39.1	
	comp=Z,20nm,0.7s						
YSS				A	A	08 00 39.1	
	comp=Z,20nm,0.7s						
JMM	Marumori	6.29	214	Pn	Pn	08 00 17.5	-1.3
JSD	Sado	7.38	229	Pn	Pn	08 00 33.8	+0.1
MJAR	Matsushiro Arr	8.55	222	P	Pn	08 00 49.7	+0.1
	comp=Z,1.1nm,0.4s,baz=34,slow=12,SNR=4.6						
SONM	Songino Array	27.44	293	P	P	08 04 26.6	+0.3
	comp=Z,2.4nm,0.6s,baz=90,slow=8.7,SNR=10						
	comp=Z,2.4nm,0.6s						
SONM	Songino Array	27.44	293	P	P	08 04 26.4	+0.2
H11N2	WAKE ISLAND Hy	29.59	135	T	T	08 35 51.5	
	baz=328,slow=75						
H11N1	WAKE ISLAND Hy	29.61	135	T	T	08 35 54.7	
	baz=328,slow=75						
H11N3	WAKE ISLAND Hy	29.61	135	T	T	08 35 53.8	
	baz=328,slow=75						
H11S1	WAKE ISLAND Hy	30.52	137	T	T	08 37 02.1	
	baz=329,slow=76						
H11S3	WAKE ISLAND Hy	30.52	137	T	T	08 37 04.5	
	baz=329,slow=76						
H11S2	WAKE ISLAND Hy	30.54	137	T	T	08 37 04.0	
	baz=329,slow=76						
IMAR	Indian Mountai	39.91	34	P	P	08 06 14.4	+0.8
ZALV	Zalesovo Beam	40.27	307	P	P	08 06 15.2	-1.5
	comp=Z,0.6nm,0.5s,baz=89,slow=12,SNR=2.2						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	40.27	307	P	P	08 06 15.1	-1.6
BRLK	Bradley Lake	41.32	43	P	P	08 06 25.4	+0.1
ILAR	Eielson Array	42.77	36	P	P	08 06 37.4	+0.3
	comp=Z,0.6nm,0.7s,baz=263,slow=5.6,SNR=7.1						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	42.77	36	P	P	08 06 36.3	-0.8
BMAR	Burnt Mountain	43.56	32	P	P	08 06 43.5	0.0
MK31	Makanchi Array	43.65	298	P	P	08 06 42.2	-2.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	43.65	298	P	P	08 06 42.2	-2.2
MK31				IAmb	IAmb	08 06 45.1	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	43.65	298	P	P	08 06 44.3	-0.1
	comp=Z,1.0nm,0.6s,baz=82,slow=9.0,SNR=8.9						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	43.65	298	P	P	08 06 42.5	-1.9
SCRK	Sand Creek	44.10	37	P	P	08 06 47.9	0.0
SCRK				IAmb	IAmb	08 07 15.6	
	comp=Z,1.0nm,1.0s						
KURK	Kurchatov	44.73	304	P	P	08 06 52.8	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	44.73	304	P	P	08 06 52.8	-0.1
KURK				IAmb	IAmb	08 06 53.3	
	comp=Z,1.7nm,0.7s						
KURK	Kurchatov	44.73	304	eP	P	08 06 52.8	-0.1
VRDI	Verde Repeater	44.76	41	P	P	08 06 52.6	-0.6
K27K	Chicken	44.93	37	P	P	08 06 55.3	+0.9
K27K				IAmb	IAmb	08 07 17.2	
	comp=Z,2.8nm,1.2s						
L27K	Beaver Creek,	45.19	38	P	P	08 06 57.9	+1.4
L27K				IAmb	IAmb	08 07 02.0	
	comp=Z,4.1nm,1.4s						
BCAR	Beaver Creek A	45.21	38	P	P	08 06 58.1	+1.4
INK	Inuvik	47.60	30	P	P	08 07 15.4	+0.3
	comp=Z,0.6nm,0.4s,baz=255,slow=6.7,SNR=8.8						
	comp=Z,0.6nm,0.4s						
INK	Inuvik	47.60	30	P	P	08 07 15.2	+0.1
INK				IAmb	IAmb	08 07 38.1	
	comp=Z,3.6nm,1.4s						
EUNU	Eureka	53.68	10	P	P	08 08 00.6	-0.2
RES	Resolute Bay	55.93	16	P	P	08 08 16.6	-0.3
	comp=Z,1.4nm,0.6s,baz=284,slow=6.2						
	comp=Z,1.4nm,0.6s						
RES	Resolute Bay	55.93	16	P	P	08 08 16.9	0.0
RES	Resolute Bay	55.93	16	P	P	08 08 16.9	0.0
ABKAR	Akbulak array	56.36	308	P	P	08 08 20.5	0.0
YKA	Yellowknife Ar	57.05	33	P	P	08 08 24.3	-0.8
	comp=Z,0.3nm,0.8s,baz=308,slow=6.3,SNR=4.6						
	comp=Z,0.3nm,0.8s						
ARCES	ARCESS Array B	59.32	339	P	P	08 08 40.3	-0.5
	comp=Z,2.3nm,0.9s,baz=31,slow=7.3,SNR=4.0						
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	63.58	191	P	P	08 09 09.5	-0.6
	comp=Z,0.6nm,0.8s,baz=3.6,slow=6.4,SNR=5.2						
	comp=Z,0.6nm,0.8s						
SUMG	Summit	64.54	1	P	P	08 09 16.5	+0.3
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SUMG	Summit	64.54	1	P	P	08 09 16.5	+0.3
SUMG				IAmb	IAmb	08 09 23.2	
	comp=Z,6.3nm,1.4s						
FIA1	FINESS Array S	64.77	332	P	P	08 09 17.5	+0.2
FIA0	FINESS Array S	64.78	332	P	P	08 09 17.6	+0.2
FIA0	FINESS Array S	64.78	332	P	P	08 09 17.6	+0.2
FINES	FINESS Array B	64.78	332	P	P	08 09 16.9	-0.5
	comp=Z,2.0nm,0.5s,baz=46,slow=8.0,SNR=26						
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	64.78	332	P	P	08 09 17.4	0.0
FINES	FINESS Array B	64.78	332	P	P	08 09 17.4	0.0
FCC	Fort Churchill	67.22	29	P	P	08 09 32.9	-0.2
FCC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FCC	Fort Churchill	67.22	29	P	P	08 09 32.9	-0.2
FCC				IAmb	IAmb	08 09 33.5	
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	67.31	191	P	P	08 09 34.6	+0.6
	comp=Z,0.7nm,0.7s,baz=4.3,slow=5.8,SNR=9.8						
ASAR				PcP	pP	08 09 57.7	+1.4
	comp=Z,0.5nm,0.8s,baz=14,slow=5.0,SNR=2.5						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	67.31	191	P	P	08 09 35.1	+1.1
BOZ	Bozeman (W)	68.36	47	P	P	08 09 41.6	+0.9
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BOZ	Bozeman (W)	68.36	47	P	P	08 09 41.6	+0.9
BOZ				IAmb	IAmb	08 09 41.7	
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	69.05	57	P	P	08 09 45.7	+0.5
	comp=Z,0.5nm,0.6s,baz=287,slow=6.5,SNR=8.7						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	69.05	57	P	P	08 09 46.3	+1.1
NC204	NORSAR Array S	69.58	338	P	P	08 09 47.2	-0.7
NC204				IAmb	IAmb	08 10 11.9	
	comp=Z,7.9nm,1.2s						
NB2	NORSAR Subarra	69.65	338	P	P	08 09 47.5	-0.8
	comp=Z,1.0nm,0.7s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.65	338	P	P	08 09 46.9	-1.4
	comp=Z,0.6nm,0.6s,baz=34,slow=6.2,SNR=6.4						
	comp=Z,0.6nm,0.6s						
R11A	Troy Canyon, C	70.75	55	P	P	08 09 56.2	+0.7
AKASG	Malin Array Be	71.24	323	P	P	08 09 57.5	-0.5
	comp=Z,0.3nm,0.3s,baz=37,slow=7.2,SNR=5.2						
	comp=Z,0.3nm,0.3s						
PDAR	Pinedale Array	71.33	49	P	P	08 09 59.1	0.0
	comp=Z,0.5nm,0.4s,baz=232,slow=0.3,SNR=11						
	comp=Z,0.5nm,0.4s						
PDAR	Pinedale Array	71.33	49	P	P	08 09 59.4	+0.3
TXAR	Lajitas Array	84.12	55	P	P	08 11 10.1	0.0
	comp=Z,0.5nm,0.7s,baz=295,slow=3.1,SNR=6.4						
	comp=Z,0.5nm,0.7s						

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*NEIC **08** 08:19:42.3±2.9, 40°.42N±0°.07×126°.2W±0°.1, h8^{km}±13^{km}, Error ellipse: s-maj=16.3km s-min=9.1km az=78.0*

*NCEDC **08** 08:19:44.3±3.3, 40°.38N±0°.07×126°.2W±0°.1, h24^{km}±9^{km}, ML3.2/10, ML3.1/58(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=168.0*

*ANF **08** 08:19:49.5±1.1, 40°.77N×125°.96W, h25^{km}, ML3.3/7, Error ellipse: s-maj=14.7km s-min=8.9km az=107.0*

ISC 08 08:19:40.7±2.6**, 40°.41N**±0°.07×**126°.2W**±0°.2**, h13**^{km}**, n64,** σ**2**^{s}**37**/70**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMM	Slide Mountain	1.58	97		Pn	08 20 08.5	-0.1
KMPM	Mount Pierce	1.61	89		Pn	08 20 09.4	+0.6
JCC	Jacoby Creek,	1.72	76	Pn	Pn	08 20 10.1	-0.2
JCC					Pb	08 20 10.3	-1.8
KRPM	Rodgers	1.83	65	Pn	Pn	08 20 11.9	0.0
KRPM				IAML		08 20 35.7	
	comp=N,128nm,1.6s						
KRPM				IAML		08 20 54.6	
	comp=E,128nm,1.6s						
KCRM	Chalk Rock	1.84	89		Pn	08 20 12.9	+0.9
KMRM	Mail Ridge	1.93	95		Pn	08 20 14.5	+1.1
KHMM	Horse Mountain	1.96	75		Pn	08 20 14.3	+0.6
KHMM				IAML		08 20 38.6	
	comp=N,98nm,0.8s						
KBSM	Bell Springs	2.08	103		Pn	08 20 16.3	+1.0
KCPM	Cahto Peak	2.15	109		Pn	08 20 17.1	+0.8
KCPM				IAML		08 20 43.0	
	comp=N,161nm,0.3s						
KCPM				IAML		08 20 43.6	
	comp=E,155nm,0.3s						
KSXB	Camp Six Broad	2.27	51		Pn	08 20 18.6	+0.6
KSXB				IAML		08 20 45.0	
	comp=E,62nm,0.8s						
KOMM	Orleans Mounta	2.28	67		Pn	08 20 18.3	+0.2
GNAM	Navarro Ridge	2.34	120		Pn	08 20 18.7	-0.1
KBO	Bosley Butte	2.35	39		Pn	08 20 19.8	+0.7
KBO				IAML		08 20 48.1	
	comp=E,126nm,1.6s						
KBO				IAML		08 21 30.6	
	comp=N,109nm,1.8s						
L02F	Cave Junction	2.63	49	P	Pn	08 20 24.3	+1.4
	baz=230						
L02F				S	Sn	08 20 53.3	-1.5
	baz=230						
HOPS	Hopland Field	2.81	119	Pn	Pn	08 20 26.8	+1.5
HOPS				IAML		08 21 09.8	
	comp=E,46nm,4.4s						
HOPS				IAML		08 21 49.4	
	comp=N,36nm,2.2s						
KEBM	Edson Butte	2.84	29	Pn	Pn	08 20 26.6	+0.8
KEBM				IAML		08 21 26.8	
	comp=N,86nm,3.0s						
YBH	Yreka Blue Hor	2.97	62		Pn	08 20 28.8	+1.3
K02D	Willamette Mer	2.99	39	P	Pn	08 20 29.1	+1.4
	baz=220,SNR=760						
K02D				S	Sn	08 21 01.3	-2.2
	baz=220						
GDXM	Geysers	3.10	120	Pn	Pn	08 20 31.2	+1.9
J01E	Myrtle Point	3.24	31		Pn	08 20 32.0	+0.8
J01E				IAML		08 21 08.8	
	comp=N,48nm,0.8s						
J01E				IAML		08 21 09.8	
	comp=E,59nm,2.5s						
J01E	Myrtle Point	3.24	31	P	Pn	08 20 32.0	+0.8
	baz=212,SNR=58						
J01E				S	Sn	08 21 06.0	-3.7
	baz=212						
HUMO	Hull Mountain	3.29	47		Pn	08 20 33.8	+1.8
MCCM	Marconi Confer	3.44	130	Pn	Pn	08 20 34.1	+0.2
MCCM				IAML		08 21 18.3	
	comp=E,48nm,1.7s						
MCCM				IAML		08 21 33.8	
	comp=N,46nm,2.4s						
L04D	Klamath Falls	3.46	57		Pn	08 20 37.4	+3.0
L04D				IAML		08 20 58.5	
	comp=N,35nm,1.4s						
L04D	Klamath Falls	3.46	57	P	Pn	08 20 37.3	+2.9
	baz=239,SNR=112						
DBO	Dodson Butte	3.51	39		Pn	08 20 37.0	+2.0
DBO				IAML		08 21 22.6	
	comp=N,34nm,3.4s						
DBO				IAML		08 22 02.5	
	comp=E,30nm,3.5s						
ORV	Oroville	3.73	102		Pn	08 20 39.4	+1.5
I03D	Drain, OR	3.92	32	P	Pn	08 20 41.8	+1.2
	baz=214,SNR=89						
I03D				S	Sn	08 21 24.7	-1.7
	baz=214						
K04D	Chiloquin, OR	4.02	55	P	Pn	08 20 44.5	+2.4
	baz=238,SNR=25						
I02E	Swisshome, OR	4.10	25	Pn	Pn	08 20 44.6	+1.6
I02E	Swisshome, OR	4.10	25	P	Pn	08 20 44.5	+1.6
	baz=206,SNR=15						
I02E				S	Sn	08 21 28.6	-2.1
	baz=206						
J04D	Umpqua Nationa	4.18	46		Pn	08 20 47.2	+2.9
J04D	Umpqua Nationa	4.18	46	P	Pn	08 20 47.3	+3.0
	baz=228,SNR=10.0						
I04A	Tendick Farm,	4.42	39	P	Pn	08 20 50.0	+2.6
	baz=221,SNR=25						
BEKR	Beckworth	4.53	95		Pn	08 20 51.8	+2.6
BEKR				IAML		08 21 47.7	
	comp=E,15nm,0.6s						
BEKR				IAML		08 21 47.9	
	comp=N,18nm,1.5s						
K05A	Summer Lake	4.62	58		Pn	08 20 52.7	+2.4
K05A				IAML		08 23 43.7	
	comp=E,18nm,3.8s						
COR	Corvallis	4.70	26	Pn	Pn	08 20 53.8	+2.5
J05D	Fort Rock, OR	4.71	51	P	Pn	08 20 54.4	+2.8
	baz=234,SNR=26						
MOD	Modoc Plateau	4.71	70		Pn	08 20 53.2	+1.6
MOD				IAML		08 21 34.1	
	comp=N,8.9nm,4.2s						
MOD				IAML		08 22 36.0	
	comp=E,10nm,4.4s						
CMB	Columbia Colle	5.12	116		Pn	08 21 00.8	+3.7
PINE	Pine Mountain	5.19	48		Pn	08 21 01.2	+3.1
PINE				IAML		08 22 50.3	
	comp=E,20nm,4.0s						
H04A	Detroit Lake	5.21	34		Pn	08 21 00.7	+2.4
H04A				IAML		08 22 00.1	
	comp=N,14nm,0.5s						
H04A				IAML		08 22 43.3	
	comp=E,19nm,3.8s						
SAO	San Andreas Ge	5.22	133	Pn	Pn	08 20 58.9	+0.4
I05D	Terrebonne, OR	5.34	41	P	Pn	08 21 02.6	+2.5
	baz=224,SNR=5.8						
HAST	Hastings Reser	5.44	136		Pn	08 21 02.0	+0.5
YERR	Yerington	5.57	103		Pn	08 21 06.8	+3.4
BBGB	Big Mountain B	5.58	132		Pn	08 21 04.5	+1.0
PMPB	Monarch Peak	5.97	133	Pn	Pn	08 21 09.9	+1.1
G05D	Wamic, OR	6.03	35	P	Pn	08 21 12.4	+2.8
	baz=218						
I07A	Izee	6.19	51		Pn	08 21 15.9	+4.0
RYN	Ryan	6.22	104	Pn	Pn	08 21 15.5	+3.2
OMMB	Old Mammoth Mi	6.28	114		Pn	08 21 18.0	+4.7
KVN	Kaiserville	6.41	100		Pn	08 21 17.4	+2.4
NVAR	Mina Array Bea	6.45	105		Pn	08 21 18.8	+3.3
J08A	Circle Bar Ran	6.49	60		Pn	08 21 18.3	+2.3
NV11	Mina Array Sit	6.55	105	Pn	Pn	08 21 20.0	+3.1
PAGB	Antelope Grade	6.63	133	Pn	Pn	08 21 19.0	+1.1
G08A	Pilot Rock	7.23	45	Pn	Pn	08 21 30.5	+4.4
D05A	Enumclaw	7.44	23	Pn	Pn	08 21 32.5	+3.7
HAWA	Hanford	7.71	37	Pn	Pn	08 21 35.6	+3.0
ISA	Isabella, Lake	7.74	125	Pn	Pn	08 21 36.5	+3.5
BMO	Blue Mountains	7.93	53		Pn	08 21 39.4	+3.6
LTY	Liberty	7.94	29	Pn	Pn	08 21 39.3	+3.5
B05A	Bryant	8.39	19	P	Pn	08 21 45.8	+3.9
	baz=202,SNR=5.9						

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*IDC **08** 08:36:22.2±8.7, 13°.86N×89°.00W, h165^{km}±59^{km}, mb3.0/3, mbtmp3.4/4, Error ellipse: s-maj=95.1km s-min=59.8km az=164.0*

*SNET **08** 08:36:28.9±0.5, 14°.01N×89°.31W, h210^{km}±10^{km}, ML3.0*

ISC 08 08:36:28.8±1.1**, 14°.3N**±0°.2×**89°.4W**±0°.1**, h200**^{km}**, n15,** σ**1**^{s}**27**/15**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.48	233	i P	Pn	08 36 57.4	+1.5
CEDA	San Andres	0.51	181	i P	Pn	08 36 57.0	+0.9
CEDA				IAML		08 37 01.7	
	comp=Z,122nm,0.6s						
CEVE	Cerro Verde	0.53	205	IAML		08 37 01.4	
	comp=Z,115nm,0.4s						
NUBE	Las Nubes	0.56	223	i P	Pn	08 36 57.6	+1.2
JAYA	Jayaque - finc	0.66	185	eP	Pn	08 36 56.8	0.0
SJTE	Alcalda de S	0.79	152	eP	Pn	08 36 57.9	+0.5
LALI	Alcalda de L	0.82	175	eP	Pn	08 36 57.6	+0.1
SCLA	Alcaldia de Sa	0.88	133	eP	Pn	08 36 58.4	+0.5
PQSS	Presa 15 de Se	1.06	130	eP	Pn	08 36 59.0	+0.1
COEB	Comit de Eme	1.16	134	i P	Pn	08 36 59.8	-0.1
CMIG	Matias Romero	5.97	298	P	Pn	08 37 55.7	0.0
	comp=Z,2.0nm,0.9s,baz=228,slow=23,SNR=5.6						
CMIG				S	Sn	08 39 02.3	-2.1
	comp=Z,1.7nm,0.6s,baz=70,slow=19,SNR=2.5						
TXAR	Lajitas Array	19.95	321	P	P	08 40 48.3	+2.6
	comp=Z,0.5nm,0.6s,baz=141,slow=12,SNR=3.5						
	comp=Z,0.5nm,0.6s						
SCHQ	Schefferville	44.09	19	P	P	08 44 16.1	-0.8
	comp=Z,0.7nm,0.3s,baz=228,slow=8.2,SNR=6.1						
	comp=Z,0.7nm,0.3s						
YKA	Yellowknife Ar	51.34	345	P	P	08 45 12.8	+0.4
	comp=Z,0.2nm,0.4s,baz=147,slow=6.7,SNR=10						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	137.93	256	PKP	PKPdf	08 55 28.8	-1.6
	comp=Z,0.5nm,1.0s,baz=90,slow=3.1,SNR=1.6						

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*IDC **08** 08:53:17.6±1.9, 40°.82N×119°.18W, h0^{km}, mb2.7/1, mbtmp2.8/3, ML3.3/2, Error ellipse: s-maj=31.3km s-min=10.2km az=92.0*

*NEIC **08** 08:53:19.7±2.5, 40°.74N±0°.03×119°.33W±0°.06, h10^{km}±6^{km}, Error ellipse: s-maj=6.4km s-min=4.6km az=93.0*

*REN **08** 08:53:19.1±2.5, 40°.76N±0°.03×119°.25W±0°.05, h8^{km}±6^{km}, ML3.6/13, ML3.4/66(NEIC), Error ellipse: s-maj=5.5km s-min=4.7km az=90.0*

*ANF **08** 08:53:25.4±0.9, 40°.71N×119°.51W, h8^{km}, ML3.7/18, Error ellipse: s-maj=21.5km s-min=7.1km az=58.0*

ISC 08 08:53:18.6±0.8**, 40°.77N**±0°.02×**119°.32W**±0°.03**, h10**^{km}**, n72,** σ**1**^{s}**82**/79**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAHR	Pah Rah Range	1.06	183		Pg	08 53 38.9	-0.3
PAHR				Sg	Sg	08 53 52.8	-0.1
PAHR				IAML		08 53 56.1	
	comp=N,1μm,0.3s						
BEKR	Beckworth	1.20	222	Pn	Pb	08 53 41.6	0.0
BEKR				Sn	Sb	08 53 58.2	+0.9
BEKR				IAML		08 54 00.3	
	comp=E,729nm,0.5s						
BEKR				IAML		08 54 03.4	
	comp=N,721nm,0.4s						
MOD	Modoc Plateau	1.35	327		Pn	08 53 43.8	+0.1
MOD	Modoc Plateau	1.35	327		Pn	08 53 44.2	+0.5
MOD				IAML		08 54 05.9	
	comp=N,2μm,0.9s						
MOD				IAML		08 54 07.3	
	comp=E,1μm,0.8s						
BMN	Battle Mountai	1.63	101	Pn	Pn	08 53 46.4	-1.2
BMN				IAML		08 54 13.6	
	comp=E,530nm,0.5s						
WVOR	Wild Horse Val	1.74	17		Pn	08 53 48.8	-0.3
YERR	Yerington	1.78	178		Pn	08 53 49.4	-0.3
LCMM	Colby Mountain	1.79	250		Pn	08 53 50.2	+0.4
KVN	Kaiserville	1.96	151		Pn	08 53 51.8	-0.3
KVN				IAML		08 54 22.4	
	comp=N,417nm,0.3s						
ORV	Oroville	2.07	235		Pn	08 53 53.6	+0.2
ORV				IAML		08 54 25.4	
	comp=E,200nm,0.5s						
RYN	Ryan	2.23	164		Pn	08 53 56.1	+0.3
RYN				IAML		08 54 33.9	
	comp=N,346nm,0.5s						
NVAR	Mina Array Bea	2.47	161	Pn	Pn	08 53 58.8	-0.3
	comp=N,6.2nm,0.3s,baz=341,slow=13,SNR=136						
NVAR				Pg	Pb	08 54 02.9	-0.2
	comp=N,47nm,0.3s,baz=345,slow=16,SNR=56						
NVAR				Lg	Lg	08 54 36.9	
	comp=N,94nm,0.3s,baz=341,slow=30,SNR=14						
	comp=N,16nm,0.4s						
NVAR	Mina Array Bea	2.47	161		Pn	08 53 59.6	+0.5
NV11	Mina Array Sit	2.50	159		Pn	08 53 59.9	+0.4
NV11				IAML		08 54 38.0	
	comp=E,237nm,0.9s						
NV11				IAML		08 54 41.1	
	comp=N,182nm,0.8s						
LHV	Little Huntoon	2.59	166		Pn	08 54 01.8	+1.1
K04D	Chiloquin, OR	2.60	316	P	Pb	08 54 05.7	+0.3
	baz=134,SNR=62						
J08A	Circle Bar Ran	2.66	13		Pn	08 54 02.1	+0.4
J08A				IAML		08 54 44.2	
	comp=E,166nm,0.6s						
J08A				IAML		08 54 47.9	
	comp=N,160nm,0.7s						
L04D	Klamath Falls	2.67	304	Pn	Pn	08 54 03.7	+1.9
L04D				IAML		08 54 54.5	
	comp=N,174nm,0.9s						
L04D	Klamath Falls	2.67	304	P	Pb	08 54 06.6	0.0
	baz=122						
L04D				Sb	Sg	08 54 45.6	+1.3
	baz=122						
YBH	Yreka Blue Hor	2.73	292		Pn	08 54 03.7	+1.1
CMB	Columbia Colle	2.85	197		Pn	08 54 04.5	+0.2
CMB				IAML		08 54 50.3	
	comp=N,91nm,0.4s						
CMB				IAML		08 54 50.3	
	comp=E,94nm,0.4s						
J05D	Fort Rock, OR	2.89	331	P	Pb	08 54 11.0	+0.6
	baz=149,SNR=102						
ELK	Elko	3.10	89		Pn	08 54 07.5	-0.3
ELK				IAML		08 54 44.4	
	comp=E,82nm,0.3s						
ELK				IAML		08 54 58.3	
	comp=E,118nm,0.5s						
MDPB	Devils Postpil	3.14	177	Pn	Pn	08 54 09.9	+1.5
MLAC	Mammoth, Mammo	3.16	173	P	Pb	08 54 17.2	+2.2
	baz=354						
MLAC				S	Sg	08 55 01.2	+1.1
	baz=354						
J04D	Umpqua Nationa	3.23	321	P	Pb	08 54 16.9	+0.7
	baz=138,SNR=72						
HUMO	Hull Mountain	3.28	305	Pn	Pn	08 54 12.0	+1.9
HUMO				IAML		08 55 04.9	
	comp=N,69nm,0.8s						
I07A	Izee	3.31	358		Pn	08 54 12.5	+1.8
HOPS	Hopland Field	3.39	240	Pn	Pn	08 54 12.8	+1.2
KMRM	Mail Ridge	3.39	262		Pn	08 54 13.0	+1.3
KMRM				IAML		08 55 13.9	
	comp=N,69nm,1.8s						
KMRM				IAML		08 55 20.5	
	comp=E,88nm,2.0s						
KCPM	Cahto Peak	3.44	253		Pn	08 54 13.2	+0.8
KCPM				IAML		08 55 27.8	
	comp=E,64nm,1.7s						
KCPM				IAML		08 55 30.4	
	comp=N,52nm,1.7s						
L02F	Cave Junction	3.47	294	P	Pb	08 54 20.0	-0.1
	baz=111						
JCC	Jacoby Creek,	3.58	272		Pn	08 54 16.2	+2.1
JCC				IAML		08 55 22.7	
	comp=N,78nm,1.7s						
JCC				IAML		08 55 22.7	
	comp=E,64nm,1.8s						
KSXB	Camp Six Broad	3.59	289	Pn	Pn	08 54 16.3	+1.8
KSXB				IAML		08 55 21.4	
	comp=N,54nm,2.1s						
KSXB				IAML		08 55 24.6	
	comp=E,62nm,1.9s						
KMPM	Mount Pierce	3.67	266	Pn	Pn	08 54 16.7	+1.1
KMPM				IAML		08 55 27.4	
	comp=N,67nm,1.7s						
KMPM				IAML		08 55 29.8	
	comp=E,61nm,1.5s						
MFID	Camas Ranch	3.71	43		Pn	08 54 17.2	+1.1

MFID				IAML		08 55 17.8	
	comp=E,93nm,0.6s						
MFID				IAML		08 55 25.1	
	comp=E,104nm,0.6s						
LCH	Last Change Ra	3.77	159		Pn	08 54 19.3	+2.4
LCH				IAML		08 55 21.9	
	comp=E,70nm,1.1s						
LCH				IAML		08 55 22.9	
	comp=N,42nm,0.8s						
R11A	Troy Canyon, C	3.77	129		Pn	08 54 17.8	+0.8
R11A	Troy Canyon, C	3.77	129	P	Pb	08 54 28.1	+2.8
	baz=312						
R11A				S	Sg	08 55 16.0	-3.6
	baz=312						
K02D	Willamette Mer	3.78	302	P	Pb	08 54 24.2	-1.2
	baz=119						
I04A	Tendick Farm,	3.79	324	P	Pb	08 54 26.9	+1.2
	baz=141,SNR=9.4						
MCCM	Marconi Confer	3.80	228	Pn	Pn	08 54 17.8	+0.6
MCCM				IAML		08 55 33.8	
	comp=N,59nm,2.5s						
MCCM				IAML		08 55 42.9	
	comp=E,44nm,1.5s						
I05D	Terrebonne, OR	3.87	338	P	Pb	08 54 29.2	+2.3
	baz=156,SNR=13						
S11A	Rachel	4.18	137	Pn	Pn	08 54 22.9	+0.3
I03D	Drain, OR	4.18	316	P	Pb	08 54 33.0	+0.7
	baz=133,SNR=8.4						
J01E	Myrtle Point	4.19	306	Pb	Pg	08 54 37.5	-1.3
	baz=123						
SAO	San Andreas Ge	4.33	203	Pn	Pn	08 54 26.3	+1.8
BMO	Blue Mountains	4.34	19	Pn	Pn	08 54 28.1	+3.3
TPNV	Topopah Spring	4.50	147	P	Pn	08 54 29.3	+2.2
	baz=329						
H04D	Lebanon	4.52	327	Pb	Pg	08 54 42.8	-2.3
	baz=145						
HLID	Hailey	4.59	51	P	Pb	08 54 34.7	-4.7
	baz=234						
FURC	Furnace Creek,	4.71	155	Sb	Sg	08 55 48.0	-1.8
	baz=337						
PRN	Pahroc Range	4.72	134	Pn	Pn	08 54 31.5	+1.4
BGU	Big Grassy Mou	4.77	86		Pn	08 54 30.1	-0.6
PSUT	Pine Spring	4.77	116		Pn	08 54 32.6	+1.8
MPMC	Manual Prospec	4.92	162	Pn	Pn	08 54 35.5	+2.7
	baz=344						
MPMC				Pb	Pb	08 54 49.5	+4.5
	baz=344						
MPMC				Sb	Sg	08 55 54.5	-2.1
	baz=344						
DUG	Dugway, Tooele	5.00	94	P	Pn	08 54 35.4	+1.6
	baz=279						
HVU	Hansel Valley	5.03	76		Pn	08 54 31.3	-3.0
ISA	Isabella, Lake	5.14	172	Sb	Sg	08 56 00.4	-3.3
	baz=353						
QSM	Queen of Sheba	5.17	157		Pn	08 54 35.6	-0.5
SHOC	Shoshone, Teco	5.42	153	Sb	Sg	08 56 08.4	-4.3
	baz=335						
SMMC	Simmler	5.47	186	Sb	Sg	08 56 09.1	-5.3
	baz=5.8						
ICU	Indian Springs	5.54	129		Pn	08 54 43.5	+2.1
HWUT	Hardware Ranch	5.91	79	Pn	Pn	08 54 46.1	-0.3
TUQ	Turquoise Moun	5.96	152	Sb	Sg	08 56 28.1	-1.9
	baz=335						
EDW2	Edwards Air Fo	5.97	169	Sb	Sg	08 56 29.8	-0.5
	baz=351						
JLU	Jordanelle	5.99	89	Pn	Pn	08 54 49.7	+2.2
LCMT	Little Creek M	6.04	126		Pn	08 54 51.4	+3.1
MTPU	Mount Pierson	6.16	114		Pn	08 54 52.2	+2.2
MCMT	McKenzie Canyo	6.25	47		Pn	08 54 57.9	+6.7
PDAR	Pinedale Array	7.56	72	Pn	Pn	08 55 09.6	+0.4
	comp=E,0.1nm,0.3s,baz=255,slow=5.1,SNR=1.5						
PDAR				Pg	Pb	08 55 26.9	-3.2
	comp=E,0.1nm,0.3s,baz=250,slow=16,SNR=2.3						
PDAR				Lg	Lg	08 57 05.0	
	baz=235,slow=23,SNR=2.0						
	comp=E,0.2nm,0.5s						
YKA	Yellowknife Ar	21.94	6	P	P	08 58 13.4	+1.4
	comp=E,0.3nm,0.8s,baz=187,slow=9.7,SNR=6.6						
	comp=E,0.3nm,0.8s						

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*IDC **08** 08:58:24.8±4.6, 16°.25N×97°.87W, h0^{km}, mb3.3/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=84.0km s-min=17.4km az=4.0*

*NEIC **08** 08:58:28.5±2.6, 16°.29N±0°.10×97°.90W±0°.06, h39^{km}±23^{km}, Error ellipse: s-maj=15.3km s-min=5.9km az=200.0*

*MEX **08** 08:58:29.2±2.3, 16°.37N×97°.88W, h30^{km}, MD4.2*

ISC 08 08:58:26.4±1.3**, 16°.34N**±0°.04×**97°.87W**±0°.03**, h16**^{km}±9^{km}**,**
n41, σ1^{s}.25/63**, mb3.6**/6**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	Yosondua	0.60	31	*i* P	Pg	08 58 38.8	+0.3
YOIG				*e*S	Sg	08 58 46.4	-0.1
PEIG	Puerto Escondi	0.77	116	*i* P	Pg	08 58 41.4	-0.1
PEIG				*e*S	Sb	08 58 52.4	+0.6
TXIG	Tlaxiaco	0.91	6	*i* P	Pb	08 58 43.5	-0.6
TXIG				*e*S	Sb	08 58 54.9	-1.2
MGIG	Malinaltepec	1.15	321	*e*P	Pn	08 58 46.7	-1.4
MGIG				*e*S	Sb	08 59 01.4	-1.5
CRIG	Cruz Grande	1.27	288		Pn	08 58 48.3	-1.2
CRIG					Sb	08 59 04.3	-1.9
CRIG	Cruz Grande	1.27	288	*e*P	Pn	08 58 48.3	-1.2
CRIG				*e*S	Sb	08 59 04.3	-1.9
VHO	Vista Hermosa	1.31	56	*i* P	Pn	08 58 50.2	-0.1
VHO				*e*S	Sb	08 59 06.7	-0.8
TLIG	Tlapa	1.39	331		Pn	08 58 50.5	-0.7
TLIG	Tlapa	1.39	331	*e*P	Pn	08 58 50.6	-0.7
TLIG				*e*S	Sn	08 59 07.0	-2.3
HLIG	Huajuapan de L	1.48	2	*e*P	Pn	08 58 52.5	-0.2
HLIG				*e*S	Sb	08 59 12.5	+0.1
FTIG	Fresnillo de T	1.58	351	*e*P	Pn	08 58 53.8	-0.2
FTIG				*e*S	Sn	08 59 14.2	+0.1
HUIG	Huatulco	1.79	108		Pn	08 58 56.3	-0.4
HUIG					Sn	08 59 16.5	-2.6
HUIG	Huatulco	1.79	108	*e*P	Pn	08 58 56.3	-0.4
HUIG				*e*S	Sn	08 59 16.5	-2.6
DAIG	Los Arroyos	1.84	292		Pn	08 58 57.6	+0.3
DAIG					Sn	08 59 21.1	+0.9
DAIG	Los Arroyos	1.84	292	*e*P	Pn	08 58 57.6	+0.3
DAIG				*e*S	Sn	08 59 21.1	+0.9
TOIG	Toxpalan	1.91	24	*e*P	Pn	08 58 58.4	0.0
TOIG				*e*S	Sn	08 59 20.8	-1.4
ACP2	Acapulco	2.00	286		Pn	08 59 00.6	+0.9
ACP2					Sn	08 59 24.8	+0.3
ACP2	Acapulco	2.00	286	*e*P	Pn	08 59 00.6	+0.9
ACP2				*e*S	Sn	08 59 24.8	+0.3
MEIG	Mezcala	2.30	314		Pb	08 59 06.3	-1.3
MEIG					Sn	08 59 33.2	+1.4
MEIG	Mezcala	2.30	314	*e*P	Pb	08 59 06.3	-1.3
MEIG				*e*S	Sn	08 59 33.2	+1.4
PLIG	Platanillo	2.57	323		Pn	08 59 08.5	+1.0
PLIG					Sn	08 59 37.5	-0.9
PLIG	Platanillo	2.57	323	*e*P	Pn	08 59 08.5	+1.0
PLIG				*e*S	Sn	08 59 37.5	-0.9
YAIG	Yautepec	2.75	336		Pn	08 59 12.0	+1.9
YAIG					Sn	08 59 41.2	-1.9
YAIG	Yautepec	2.75	336	*e*P	Pn	08 59 12.0	+1.9
YAIG				*e*S	Sn	08 59 41.2	-1.9
CMIG	Matias Romero	2.96	75	Pn	Pn	08 59 12.4	-0.4
	5.3nm,0.3s,baz=255,slow=12,SNR=96						
CMIG				Pg	Pb	08 59 19.6	+0.8
	8.3nm,0.3s,baz=258,slow=14,SNR=13						
CMIG				Sn	Sn	08 59 47.0	-0.9
	10.0nm,0.3s,baz=260,slow=9.2,SNR=5.8						
CMIG				Lg	Lg	09 00 00.1	
	30nm,0.3s,baz=359,slow=14,SNR=11						
	16nm,0.4s						
UNM	Universidad Na	3.22	337		Pn	08 59 17.0	+0.4
PETF	Flores	7.69	85	Pn	Pn	09 00 18.3	+0.4
MTO3	Montecristo	8.43	102	Pn	Pn	09 00 29.5	+1.3
TXAR	Lajitas Array	13.99	339	Pn	Pn	09 01 44.9	+0.8
ANMO	Albuquerque	20.06	339	P	P	09 03 00.2	+1.0
	0.8nm,0.8s,baz=156,slow=12,SNR=2.0						
	0.8nm,0.8s						
GOGA	Godfrey	21.40	35	P	P	09 03 12.3	-1.2
GOGA				IAmb	IAmb	09 03 25.6	
	comp=Z,3.9nm,0.8s						
T25A	Trinidad	21.51	346	P	P	09 03 13.9	-1.0
T25A				IAmb	IAmb	09 03 20.5	
	comp=Z,7.3nm,1.1s						
SWET	Sewanee	21.62	27	P	P	09 03 14.9	-1.0
SWET				IAmb	IAmb	09 03 24.6	
	comp=Z,6.2nm,0.8s						
JSC	Jenkinsville	23.28	37	P	P	09 03 32.5	-0.9
ISCO	Idaho Springs	24.33	345	P	P	09 03 43.4	-0.4
PDAR	Pinedale Array	28.17	342	P	P	09 04 21.7	+3.3
	comp=Z,0.2nm,0.5s,baz=146,slow=12,SNR=1.1						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	28.39	325	P	P	09 04 22.4	+2.0
	comp=Z,0.7nm,1.0s,baz=141,slow=10,SNR=4.7						
	comp=Z,0.7nm,1.0s						
YKA	Yellowknife Ar	47.58	350	P	P	09 07 01.2	+0.1
	comp=Z,0.3nm,0.9s,baz=154,slow=7.7,SNR=4.2						
	comp=Z,0.3nm,0.9s						
H03N2	Juan Fernandez	52.70	160	T	T	10 04 06.3	
	baz=338,slow=77,SNR=56						
H03N1	Juan Fernandez	52.71	160	T	T	10 04 09.6	
	baz=338,slow=77,SNR=59						
H03N3	Juan Fernandez	52.72	160	T	T	10 04 08.0	
	baz=338,slow=77,SNR=47						

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*SLM **08** 09:09:56.0±1.5, 36°.12N±0°.02×83°.78W±0°.03, h16^{km}±6^{km}, Md2.7/17, mb_Lg2.2/16(NEIC), Error ellipse: s-maj=4.6km s-min=1.7km az=132.0*

*ANF **08** 09:09:55.6±0.3, 36°.09N×83°.77W, h16^{km}±2^{km}, ML2.0/7, Error ellipse: s-maj=2.9km s-min=2.6km az=72.0*

*NEIC **08** 09:09:55.5±1.6, 36°.11N±0°.02×83°.77W±0°.04, h13^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=0.5km az=125.0*

ISC 08 09:09:55.4±0.9**, 36°.11N**±0°.02×**83°.79W**±0°.02**, h16**^{km}±8^{km}**,**
n69, σ0^{s}.67/82**, Tennessee**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
V52A	Sevierville	0.31	150		Pg	09 10 02.2	+0.2
V52A	Sevierville	0.31	150	P	Pg	09 10 02.1	+0.2
	baz=331,SNR=407						
V52A				S	Sg	09 10 06.8	+0.4
	baz=331						
ASTN	Avondale Sprin	0.33	49		Pg	09 10 02.2	-0.1
ASTN					Sg	09 10 06.9	-0.2
TKL	Tuckaleechee C	0.45	179		Pg	09 10 04.4	-0.1
TKL	Tuckaleechee C	0.45	179	P	Pg	09 10 04.4	-0.1
	baz=359,SNR=79						
TKL				S	Sg	09 10 11.0	+0.3
	baz=359						
TZTN	Tazewell	0.47	24		Pg	09 10 04.6	-0.2
TZTN					Sg	09 10 11.3	0.0
TZTN	Tazewell	0.47	24	P	Pg	09 10 04.6	-0.2
	baz=204						
GRBT	Greenback	0.55	217		Pg	09 10 06.1	-0.2
GRBT					Sg	09 10 13.7	0.0
V51A	Loudon	0.55	236		Pg	09 10 06.2	-0.2
V51A	Loudon	0.55	236	P	Pg	09 10 06.2	-0.2
	baz=56,SNR=42						
V51A				S	Sg	09 10 14.2	+0.5
	baz=56						
CCRT	Cow Camps Rge	0.68	199		Pg	09 10 08.4	-0.4
BCRT	Bacon Ridge	0.73	242		Pg	09 10 09.2	-0.4
VHTN	Van Hill	0.84	70		Pb	09 10 11.1	-0.6
CPCT	Cooper Cave	0.89	222		Pb	09 10 12.1	-0.4
V53A	Saluda	0.91	119		Pb	09 10 12.1	-0.7
V53A	Saluda	0.91	119	P	Pb	09 10 12.4	-0.3
	baz=300,SNR=18						
V53A				P	Pb	09 10 12.4	-0.3
	baz=300,SNR=18						
V53A				S	Sb	09 10 24.1	-0.5
	baz=300						
V53A				S	Sb	09 10 24.1	-0.5
	baz=300						
WSNC	Winespring Bal	0.95	170		Pb	09 10 13.2	-0.5
ETT	Etowah	0.96	215		Pb	09 10 13.3	-0.3
W52A	Murphy	1.02	187		Pb	09 10 14.0	-0.7
W52A	Murphy	1.02	187	P	Pb	09 10 14.2	-0.5
	baz=6.5,SNR=48						
W52A				S	Sb	09 10 27.9	-0.1
	baz=6.5						
DYTN	Dayton	1.23	240		Pn	09 10 17.7	-0.3
T50A	Nancy	1.24	317		Pn	09 10 17.6	-0.5
T50A	Nancy	1.24	317	P	Pn	09 10 17.4	-0.6
	baz=137						
T50A				P	Pn	09 10 17.4	-0.6
	baz=137						
BG3	Lake Jocassee	1.32	148		Pb	09 10 19.6	-0.2
CASEE	Lake Jocassee	1.32	148	P	Pb	09 10 19.6	-0.2
	baz=329						
S51A	Beattyville	1.53	6		Pn	09 10 22.4	+0.4
S51A				IAmb_Lg		09 10 46.4	
	comp=Z,20nm,0.9s						
S51A	Beattyville	1.53	6	P	Pn	09 10 22.9	+0.8
	baz=186,SNR=18						
S51A				P	Pn	09 10 22.9	+0.8
	baz=186,SNR=18						
S51A				S	Sb	09 10 43.7	+1.1
	baz=186						
S51A				S	Sb	09 10 43.7	+1.1
	baz=186						
W50A	Signal Mountai	1.54	234		Pn	09 10 22.4	+0.2
W50A	Signal Mountai	1.54	234	P	Pb	09 10 23.2	-0.3
	baz=53,SNR=11						
U54A	Nelsons Funny	1.64	75		Pn	09 10 23.9	+0.3
U54A	Nelsons Funny	1.64	75	P	Pb	09 10 24.6	-0.6
	baz=256,SNR=11						
U54A				P	Pb	09 10 24.6	-0.6
	baz=256,SNR=11						
U49A	Red Boiling Sp	1.66	285	Pn	Pb	09 10 25.1	-0.5
U49A	Red Boiling Sp	1.66	285	P	Pb	09 10 25.3	-0.3
	baz=103,SNR=22						
X51A	Calhoun	1.77	210		Pb	09 10 26.9	-0.6
CMGA	Chestnut Mount	1.80	215		Pb	09 10 28.3	+0.3
SWET	Sewanee	1.96	244		Pb	09 10 30.8	+0.1
CLTN	Cedars of Leba	2.06	270		Pb	09 10 32.1	-0.3
PAULI	Pauline	2.06	128		Pn	09 10 30.8	+1.5
V55A	Taylorsville	2.10	96		Pn	09 10 29.2	-0.7
FPAL	Fort Paine	2.17	224		Pn	09 10 31.0	+0.2
R50A	Paris	2.21	349	Pn	Pn	09 10 33.3	+1.9
Y52A	Lilburn	2.25	186		Pn	09 10 33.3	+1.3
Y52A				IAmb_Lg		09 11 10.7	
	comp=Z,6.5nm,0.7s						
Y52A	Lilburn	2.25	186	P	Pb	09 10 34.9	-0.8
	baz=5.7						
Y52A				P	Pb	09 10 34.9	-0.8
	baz=5.7						
HODGE	Hodges	2.26	146		Pb	09 10 35.3	-0.5
R49A	Shelbyville	2.44	333	Pn	Pn	09 10 35.8	+1.2
V48A	Smith Brothers	2.49	262		Pn	09 10 37.0	+1.7
S54A	Dingess, Beckl	2.60	49	Pn	Pn	09 10 37.4	+0.5
R53A	Hurricane	2.65	33		Pn	09 10 37.9	+0.4
GOGA	Godfrey	2.71	174		Pn	09 10 38.9	+0.6
JSC	Jenkinsville	2.76	131		Pn	09 10 40.2	+1.3
U56A	King	2.76	84	Pn	Pn	09 10 39.8	+0.8
T47A	Sharon Grove	2.81	289	Pn	Pn	09 10 40.1	+0.4
Q51A	Peebles	2.93	7		Pn	09 10 40.2	-1.1
Q52A	Bidwell	3.09	23	Pn	Pn	09 10 42.6	-0.9
Y49A	Blount Mountai	3.12	225	IAmb_Lg		09 11 37.1	
	comp=Z,6.3nm,0.9s						
X48A	Hartselle	3.14	239		Pn	09 10 44.2	0.0
W57A	Gilead	3.23	106	Pn	Pn	09 10 45.4	0.0
WVT	Waverly	3.27	271	Pn	Pn	09 10 45.8	-0.2
P51A	Williamsport	3.41	9	IAmb_Lg		09 11 52.1	
	comp=Z,4.2nm,0.7s						
Y57A	Sumter	3.48	126	IAmb_Lg		09 11 54.1	
	comp=Z,7.2nm,0.8s						
152A	Waverly Hall	3.52	193		Pn	09 10 49.9	+0.4
R55A	Marlinton	3.64	52	Pn	Pn	09 10 51.7	+0.5
PLAL	Pickwick Lake	3.67	253	Pn	Pn	09 10 51.8	+0.2
P52A	Corning	3.75	20	Pn	Pn	09 10 53.0	+0.4
V58A	Windy Hill, Pi	3.80	93	Pn	Pn	09 10 52.4	-0.9
X58A	Rowland	3.95	112		Pn	09 10 56.6	+1.3
T45A	Paducah	4.01	284		Pn	09 10 56.9	+0.7
T45A				IAmb_Lg		09 12 02.4	
	comp=Z,8.8nm,0.7s						
LRAL	Lakeview Retre	4.06	222		Pn	09 10 55.7	-1.1
O49A	Covington	4.09	354		Pn	09 10 57.5	+0.2

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*TUL **08** 09:11:07.4±1.2, 36°.651N±0°.009×97°.71W±0°.01, h7^{km}±6^{km}, ML2.7, mb_Lg2.3/32(NEIC), Error ellipse: s-maj=1.6km s-min=0.9km az=221.0*

NEIC 08 09:11:07.5±0.9**, 36°.633N**±0°.008×**97°.71W**±0°.01**, h2**^{km}±7^{km}**,**
Error ellipse: s-maj=1.6km s-min=1.2km az=101.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.00	73	Pg	Pg	09 11 26.2	-0.5
T35A				Sg	Sg	09 11 39.2	-0.5
U32A	Winter Ranch,	1.07	257	Pg	Pg	09 11 27.5	-0.6
U32A				Sg	Sg	09 11 42.3	+0.3
OKCFA	Oklahoma City	1.23	170	Pn	Pg	09 11 30.7	-0.4
OKCSW	OKLAHOMA CITY	1.24	170		Pg	09 11 30.7	-0.7
FNO	Franklin	1.40	170		Pn	09 11 33.3	-0.7
TUL1	Leonard	1.71	114		Pn	09 11 38.3	-0.1
TUL1				IAmb_Lg		09 12 01.8	
	comp=Z,19nm,0.8s						
R32A	Long Quarter,	1.96	336		Pn	09 11 42.5	+0.7
X34A	Smith Ranch, M	2.03	183		Pn	09 11 43.4	+0.6
WMOK	Wichita Mounta	2.08	205	Pn	Pn	09 11 43.5	0.0
WMOK				IAmb_Lg		09 12 17.7	
	comp=Z,13nm,0.7s						
KSU1	Kansas State U	2.61	19		Pn	09 11 51.6	+0.8
CBKS	Cedar Bluff	2.71	324	IAmb_Lg		09 12 39.3	
	comp=Z,9.1nm,0.7s						
X37A	Clayton	2.79	136	Pn	Pn	09 11 54.1	+0.9
HHAR	Hobbs	3.06	95		Pn	09 11 57.5	+0.6
W39A	Magazine	3.49	113		Pb	09 12 08.1	-1.9
S39A	Bolivar	3.66	72		Pn	09 12 05.2	0.0
AMTX	Amarillo	3.67	243	IAmb_Lg		09 13 05.9	
	comp=Z,9.4nm,0.7s						
U40A	Yellville	3.92	93		Pn	09 12 08.3	-0.5
U40A				IAmb_Lg		09 13 11.3	
	comp=Z,8.3nm,0.8s						
MIAR	Mount Ida	3.96	121	IAmb_Lg		09 13 21.8	
	comp=Z,7.0nm,0.8s						
Z38A	Mt. Pleasant	4.04	146		Pn	09 12 09.6	-0.8
ABTX	Abilene, Hawle	4.31	202		Pn	09 12 14.5	+0.4
ABTX				IAmb_Lg		09 13 25.4	
	comp=Z,6.5nm,0.8s						
MGMO	Mountain Grove	4.39	82	IAmb_Lg		09 13 24.3	
	comp=Z,7.1nm,0.9s						
X40A	Basin Creek Fa	4.51	117		Pn	09 12 16.6	-0.3
X40A				IAmb_Lg		09 13 34.1	
	comp=Z,8.4nm,1.1s						
KSCO	Kaye Shedlock'	4.56	303		Pn	09 12 17.6	-0.1
KSCO				IAmb_Lg		09 13 37.6	
	comp=Z,6.1nm,0.7s						
FCAR	Ozark Folk Cen	4.57	98	IAmb_Lg		09 13 30.1	
	comp=Z,4.2nm,0.8s						
R40A	Maddies Statio	4.63	67	IAmb_Lg		09 13 38.8	
	comp=Z,7.2nm,0.8s						
W41B	Gary Mavity, V	4.67	107	IAmb_Lg		09 13 39.7	
	comp=Z,6.0nm,1.1s						
LCAR	Lake Charles	5.32	94	IAmb_Lg		09 13 55.8	
	comp=Z,5.5nm,1.1s						
L34A	Svendsen Farm,	5.42	11	IAmb_Lg		09 13 54.6	
	comp=Z,6.3nm,0.9s						
N38A	Joes South For	5.43	39	IAmb_Lg		09 14 08.0	
	comp=Z,7.1nm,0.8s						
FVM	French Village	5.96	75	IAmb_Lg		09 14 20.6	
	comp=Z,3.8nm,0.8s						

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*IDC **08** 09:29:50.0±3.4, 33°.65S×178°.74W, h0^{km}, mb3.6/2, mbtmp3.8/3, ML4.1/1, MS3.6/1, Error ellipse: s-maj=75.9km s-min=47.7km az=118.0*

*NEIC **08** 09:29:55.6±0.8, 33°.7S±0°.1×178°.9W±0°.2, h28^{km}±8^{km}, mb4.4/13, Error ellipse: s-maj=28.2km s-min=20.4km az=84.0*

*WEL **08** 09:29:55.6±1.0, 34°S±17°×17°9W±2°1, h185^{km}±30^{km}, M3.6/13, mB4.2/9, ML4.3/18, MLv4.0/13, Mw(mB)3.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=126.5*

ISC 08 09:29:57.9±1.0**, 33°.70S**±0°.08×**179°.0W**±0°.1**, h48**^{km}**, n50,**
σ1^{s}.44/71**, mb4.3**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.42	209	Pn	Pn	09 31 02.3	-0.1
MXZ	Matakaoa Point	4.42	209	P	Pn	09 31 01.5	-1.0
MXZ				S	Sn	09 31 53.5	+0.8
WMGZ	Waiomatatini S	4.61	206	P	Pn	09 31 03.4	-1.6
WMGZ				S	Sn	09 31 58.7	+1.6
PKGZ	Pakihiroa	4.80	209	P	Pn	09 31 05.5	-2.1
PKGZ				S	Sn	09 32 02.4	+0.4
HAZ	Te Kaha	4.81	212	P	Pn	09 31 06.7	-1.0
HAZ				S	Sn	09 32 05.9	+3.8
PUZ	Puketiti	4.89	206	P	Pn	09 31 07.1	-1.7
PUZ				S	Sn	09 32 06.1	+2.0
RUGZ	Raukumara Rang	5.03	211	P	Pn	09 31 09.7	-1.2
RUGZ				S	Sn	09 32 10.3	+2.6
TWGZ	Tauwhareparae	5.08	208	P	Pn	09 31 11.4	-0.2
TWGZ				S	Sn	09 32 11.4	+2.4
CNGZ	Carnagh Statio	5.27	204	P	Pn	09 31 12.5	-1.5
CNGZ				S	Sn	09 32 15.7	+2.2
TKGZ	Te Karaka	5.36	207	P	Pn	09 31 12.8	-2.6
TKGZ				S	Sn	09 32 16.3	+0.6
MWZ	Matawai	5.40	210	P	Pn	09 31 12.7	-3.2
MWZ				S	Sn	09 32 17.8	+1.0
OPRZ	Ohinepanea	5.48	220	P	Pn	09 31 18.3	+1.4
MARZ	Manawahe	5.52	218	P	Pn	09 31 17.7	+0.2
URZ	Urewera	5.52	213	Pn	Pn	09 31 16.5	-1.0
	5.3nm,0.3s,baz=302,slow=22,SNR=58						
URZ				Sn	Sn	09 32 19.7	+0.1
	2.8nm,0.3s,baz=166,slow=19,SNR=7.0						
	9.9nm,0.3s						
URZ	Urewera	5.52	213		Pn	09 31 16.7	-0.8
URZ	Urewera	5.52	213	P	Pn	09 31 16.5	-1.0
URZ				S	Sn	09 32 20.3	+0.6
RIGZ	Rimuhau	5.63	207	P	Pn	09 31 18.0	-1.1
RIGZ				S	Sn	09 32 22.6	+0.2
PRGZ	Paritu Road	5.78	205	P	Pn	09 31 20.6	-0.4
MUGZ	Murupara	5.86	214	P	Pn	09 31 21.2	-1.0
MUGZ				S	Sn	09 32 28.1	+0.2
KNZ	Kokohu	5.94	206	P	Pn	09 31 21.0	-2.2
KNZ				S	Sn	09 32 28.4	-1.6
MHGZ	Mahia Peninsul	5.98	204	P	Pn	09 31 22.5	-1.2
MTHZ	Maungataniwha	6.13	212	P	Pn	09 31 25.5	-0.4
MTHZ				S	Sn	09 32 35.4	+0.7
MRHZ	Matea Rd	6.31	214	P	Pn	09 31 26.4	-2.0
MRHZ				S	Sn	09 32 38.4	-0.7
NMHZ	Naumai	6.35	211	P	Pn	09 31 28.3	-0.6
NMHZ				S	Sn	09 32 40.3	+0.2
ARHZ	Aropaoanui	6.41	209	P	Pn	09 31 27.7	-2.0
ARHZ				S	Sn	09 32 41.1	-0.4
BKZ	Black Stump Fm	6.54	212		Pn	09 31 30.2	-1.3
BKZ	Black Stump Fm	6.54	212	P	Pn	09 31 30.0	-1.5
BKZ				S	Sn	09 32 43.1	-1.8
NTVZ	North Tongarir	6.87	217	P	Pn	09 31 35.2	-1.0
TMVZ	Te Maari	6.87	217	P	Pn	09 31 35.1	-1.1
ETVZ	East Tongariro	6.89	217	P	Pn	09 31 35.1	-1.2
KAHZ	Kahuranaki	6.91	207	P	Pn	09 31 34.1	-2.5
KAHZ				S	Sn	09 32 52.2	-1.7
RPZ	Rata Peaks	12.64	215	LR	LR	09 38 14.0	
	comp=Z,246nm,19.7s,baz=214,slow=39						
TOO	Toolangi	28.99	252	P	P	09 35 53.7	+0.6
TOO				IAmb	IAmb	09 36 06.2	
	comp=Z,6.6nm,1.1s						
COEN	Coen	39.48	291	P	P	09 37 21.9	-2.0
AS31	Alice Springs	42.18	271	P	P	09 37 46.0	-0.1
ASAR	Alice Springs	42.18	271	P	P	09 37 46.3	+0.2
	comp=Z,0.5nm,0.6s,baz=111,slow=7.3,SNR=8.4						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	42.18	271	P	P	09 37 45.6	-0.5
WR0	Warramunga Arr	43.30	276	P	P	09 37 54.6	-0.5
WR0				IAmb	IAmb	09 38 18.4	
	comp=Z,8.0nm,1.4s						
WB2	Warramunga Arr	43.46	276	P	P	09 37 56.8	+0.4
WB2				IAmb	IAmb	09 38 25.6	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	43.47	276	P	P	09 37 56.2	-0.4
WRAB				IAmb	IAmb	09 37 59.8	
	comp=Z,9.9nm,1.3s						
WRA	Warramunga Arr	43.47	276	P	P	09 37 56.7	+0.1
	comp=Z,0.5nm,0.4s,baz=120,slow=7.0,SNR=15						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	43.47	276	P	P	09 37 56.1	-0.5
WB0	Warramunga Arr	43.51	276	P	P	09 37 57.0	+0.1
WB0				IAmb	IAmb	09 38 02.8	
	comp=Z,13nm,1.4s						
VNDA	Vanda	44.73	186	P	P	09 38 06.5	+0.6
MTN	Manton Dam	49.74	282	P	P	09 38 45.7	+0.1
KNRA	Kununurra	50.18	278	P	P	09 38 47.6	-1.4
QSPA	South Pole Qui	56.42	180	P	P	09 39 34.6	+0.3
QSPA				IAmb	IAmb	09 40 00.5	
	comp=Z,3.3nm,1.1s						
SNAA	Sanae	74.89	179	P	P	09 41 33.7	+0.6
SNAA				IAmb	IAmb	09 41 43.8	
	comp=Z,8.1nm,1.3s						
FINES	FINESS Array B	147.90	337	PKPbc	PKPdf	09 49 35.9	+2.0
	comp=Z,0.7nm,0.7s,baz=50,slow=4.3,SNR=2.2						

CLL	**Collm**	160.34	337	*i* PKPab	**PKPab**	09 50 34.3	+1.8
CLL				*e*pPKPab	**pPKPab**	09 50 43.0	-2.4

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*TUL **08** 09:39:22.1±0.9, 36°.859N±0°.010×98°.15W±0°.02, h7^{km}±6^{km}, ML2.7, mb_Lg2.3/28(NEIC), Error ellipse: s-maj=2.0km s-min=1.1km az=117.0*

NEIC 08 09:39:22.5±0.8**, 36°.855N**±0°.010×**98°.15W**±0°.02**, h10**^{km}±6^{km}**, Error ellipse: s-maj=2.1km s-min=1.1km az=117.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	0.83	236	Pg	Pg	09 39 38.0	-0.5
U32A				Sg	Sg	09 39 49.2	-0.3
T35A	**Sooner Cattle**	1.31	87		Pn	09 39 46.5	-0.4
OKCFA	**Oklahoma City**	1.54	158	Pn	Pn	09 39 49.7	-0.4
OKCSW	**OKLAHOMA CITY**	1.56	158		Pb	09 39 50.9	-0.5
R32A	**Long Quarter,**	1.63	344		Pn	09 39 50.9	-0.3
FNO	**Franklin**	1.71	159	Pn	Pn	09 39 53.0	+0.7
TUL1	**Leonard**	2.12	116	Pn	Pn	09 39 58.2	+0.2
TUL1	comp=Z,17nm,0.9s			IAmb_Lg		09 40 32.0	
WMOK	**Wichita Mounta**	2.17	194	Pn	Pn	09 39 58.8	0.0
X34A	**Smith Ranch, M**	2.26	173		Pn	09 40 01.5	+1.5
CBKS	**Cedar Bluff**	2.33	328	Pn	Pn	09 40 01.2	+0.3
CBKS	comp=Z,11nm,0.9s			IAmb_Lg		09 40 40.1	
KSU1	**Kansas State U**	2.55	28	Pn	Pn	09 40 04.1	+0.1
KSU1	comp=Z,12nm,0.8s			IAmb_Lg		09 40 43.6	
X37A	**Clayton**	3.19	134		Pn	09 40 12.4	-0.4
X37A	comp=Z,14nm,0.9s			IAmb_Lg		09 41 10.4	
HHAR	**Hobbs**	3.44	98		Pn	09 40 16.5	+0.4
AMTX	**Amarillo**	3.48	237	Pn	Pn	09 40 17.8	+1.0
AMTX	comp=Z,11nm,0.8s			IAmb_Lg		09 41 18.1	
W39A	**Magazine**	3.90	114		Pn	09 40 23.4	+0.9
S39A	**Bolivar**	3.94	76		Pn	09 40 22.8	-0.2
S39A	comp=Z,6.9nm,0.8s			IAmb_Lg		09 41 29.6	
KSCO	**Kaye Shedlock'**	4.14	303		Pn	09 40 25.1	-0.8
U40A	**Yellville**	4.29	95		Pn	09 40 27.8	0.0
U40A	comp=Z,6.2nm,0.8s			IAmb_Lg		09 41 43.1	
MIAR	**Mount Ida**	4.38	120		Pn	09 40 29.7	+0.7
MIAR	comp=Z,6.5nm,0.9s			IAmb_Lg		09 41 43.7	
Z38A	**Mt. Pleasant**	4.43	143		Pn	09 40 28.2	-1.4
N35A	**Tabor**	4.45	25		Pn	09 40 29.4	-0.7
P38A	**Dawn**	4.56	51		Pn	09 40 30.9	-0.7
P38A	comp=Z,7.5nm,0.8s			IAmb_Lg		09 41 51.2	
MGMO	**Mountain Grove**	4.71	85	Pn	Pn	09 40 33.7	0.0
MSTX	**Muleshoe**	4.75	234	Pn	Pn	09 40 34.1	-0.1
R40A	**Maddies Statio**	4.88	71	Pn	Pn	09 40 36.9	+0.9
R40A	comp=Z,5.0nm,0.8s			IAmb_Lg		09 42 05.9	
X40A	**Basin Creek Fa**	4.93	117	Pn	Pn	09 40 36.8	+0.2
FCAR	**Ozark Folk Cen**	4.95	99	Pn	Pn	09 40 36.5	-0.4
WHAR	**Wooly Hollow**	5.00	106	Pn	Pn	09 40 36.9	-0.6
T25A	**Trinidad**	5.02	275	Pn	Pn	09 40 37.2	-0.9
T25A	comp=Z,5.2nm,1.0s			IAmb_Lg		09 42 06.8	
W41B	**Gary Mavity, V**	5.07	108	Pn	Pn	09 40 36.8	-1.7
P40A	**Paris**	5.50	59	Pn	Pn	09 40 43.5	-0.9
CCM	**Cathedral Cave**	5.62	76	Pn	Pn	09 40 43.8	-2.4
CCM	comp=Z,5.1nm,1.1s			IAmb_Lg		09 42 32.6	
SDCO	**Great Sand Dun**	5.93	281	Pn	Pn	09 40 51.2	+0.5
PBMO	**Poplar Bluff**	6.19	88		Pn	09 40 53.3	-0.6
N23A	**Red Feather La** comp=Z,4.0nm,0.8s	7.30	306	IAmb_Lg		09 43 22.1	

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*TAP **08** 09:45:56.0, 24°.90N×122°.99E, h123^{km}, ML3.5, C*

*JMA **08** 09:45:56.4±0.2, 25°N±2°×123°.0E±0°.7, h123^{km}±2^{km}, MV3.2/14, NW OFF ISHIGAKIJIMA IS*

ISC 08 09:45:55.7±1.3**, 24°.79N**±0°.04×**123°.00E**±0°.02**, h130**^{km}±7^{km}**, n103, σ0^{s}.85**/198**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima** baz=178	0.33	178	*i* P	**Pn**	**09 46 14.3**	**+0.3**
YOJ	baz=178			*i* S	**Sn**	**09 46 27.4**	**-0.2**
YOJ	**Yonaguni jima**	0.33	178	P	**Pn**	**09 46 14.2**	**+0.3**
YOJ				S	**Sn**	**09 46 27.5**	**-0.2**
JYNG	**Yonagunijimaku**	0.34	188	P	**Pn**	**09 46 14.3**	**+0.3**
JYNG				*e*S	**Sn**	**09 46 27.7**	**0.0**
IRIF	**Iriomote-Funau**	0.81	124	P	**Pn**	**09 46 17.1**	**+0.2**
IRIF				S	**Sn**	**09 46 32.7**	**-0.2**
TWB1	**Santiao Chiao** baz=273	0.94	283	*e*P	**Pn**	**09 46 18.5**	**+0.5**
HATJ	**Hateruma jima**	1.04	135	P	**Pn**	**09 46 19.9**	**+0.9**
HATJ				S	**Sn**	**09 46 36.5**	**0.0**
TWC	**Suao** baz=253	1.06	260	*e*P	**Pn**	**09 46 19.2**	**+0.1**
TWC	baz=253			*e*S	**Sn**	**09 46 36.2**	**-0.7**
SXI1	**Grass Mountain** baz=273	1.06	287	P	**Pn**	**09 46 19.5**	**+0.3**
SXI1	baz=273			*e*S	**Sn**	**09 46 36.9**	**-0.2**
NTC	**Toucheng** baz=262	1.06	274	*e*P	**Pn**	**09 46 19.4**	**+0.3**
NTC	baz=262			*e*S	**Sn**	**09 46 36.2**	**-0.8**
JKRS	**Kuro-shima**	1.07	121	P	**Pn**	**09 46 20.2**	**+0.9**
JKRS				S	**Sn**	**09 46 37.1**	**0.0**
TIPB	**Shuangxi** baz=267	1.08	280	*e*P	**Pn**	**09 46 20.0**	**+0.7**
TIPB	baz=267			*e*S	**Sn**	**09 46 37.1**	**-0.2**
JIJ	**Ishigaki jima**	1.13	112	P	**Pn**	**09 46 20.1**	**+0.3**
JIJ				S	**Sn**	**09 46 36.8**	**-1.2**
NWF	**Wu-fen Shan** baz=279	1.14	284	*e*P	**Pn**	**09 46 20.5**	**+0.5**
NWF	baz=279			*e*S	**Sn**	**09 46 38.7**	**+0.2**
EWUT	**Wuta** baz=242	1.16	253	*e*P	**Pn**	**09 46 20.5**	**+0.3**
EWUT	baz=242			*e*S	**Sn**	**09 46 38.5**	**-0.2**
NDS	**Dongshan** baz=259	1.18	263	*e*P	**Pn**	**09 46 20.6**	**+0.3**
NDS	baz=259			*e*S	**Sn**	**09 46 38.4**	**-0.6**
PCYT	**Pengchaiyu** baz=311	1.18	315	*e*P	**Pn**	**09 46 21.0**	**+0.6**
ENA	**Nanau** baz=241	1.20	253	*e*P	**Pn**	**09 46 21.0**	**+0.5**
ENA	baz=241			*e*S	**Sn**	**09 46 39.1**	**-0.2**
TWE	**Neicheng** baz=260	1.21	267	*e*P	**Pn**	**09 46 21.2**	**+0.6**
TWE	baz=260			*e*S	**Sn**	**09 46 38.7**	**-0.8**
FUSB	**Fushanzhiwuyua** baz=257	1.28	269	*e*P	**Pn**	**09 46 21.7**	**+0.2**
FUSB	baz=257			*e*S	**Sn**	**09 46 40.0**	**-1.0**
TWA	**Mucha** baz=268	1.30	279	*e*P	**Pn**	**09 46 21.5**	**-0.1**
TWA	baz=268			*e*S	**Sn**	**09 46 40.3**	**-1.0**
ENTT	**Nioudou** baz=254	1.31	264	*e*P	**Pn**	**09 46 22.4**	**+0.7**
ENTT	baz=254			*e*S	**Sn**	**09 46 40.9**	**-0.6**
YM01	**YM01** baz=281	1.34	285	*e*P	**Pn**	**09 46 22.8**	**+0.7**
YM01	baz=281			*e*S	**Sn**	**09 46 42.3**	**+0.2**
NHDH	**Xindian Distri** baz=268	1.35	278	*e*P	**Pn**	**09 46 22.1**	**0.0**
NHDH	baz=268			*e*S	**Sn**	**09 46 41.7**	**-0.5**
NWLT	**Wulai** baz=260	1.36	270	*e*P	**Pn**	**09 46 22.8**	**+0.5**
NWLT	baz=260			*e*S	**Sn**	**09 46 42.1**	**-0.3**
LATG	**Datong** baz=249	1.36	259	*e*P	**Pn**	**09 46 23.4**	**+1.0**
LATG	baz=249			*e*S	**Sn**	**09 46 42.7**	**0.0**
ETL	**Fush Village** baz=239	1.40	244	*e*P	**Pn**	**09 46 23.4**	**+0.7**
ETL	baz=239			*e*S	**Sn**	**09 46 42.9**	**-0.4**
NACB	**Ninganchiao** baz=240	1.42	245	*e*P	**Pn**	**09 46 22.7**	**-0.1**
NACB	baz=240			*e*S	**Sn**	**09 46 42.4**	**-1.2**
TWD	**Chiawan** baz=230	1.46	241	*e*P	**Pn**	**09 46 23.2**	**-0.1**
TWD	baz=230			*e*S	**Sn**	**09 46 43.1**	**-1.3**
TWS1	**Kuangyinshan** baz=278	1.47	282	*e*P	**Pn**	**09 46 24.2**	**+0.8**
TWS1	baz=278			*e*S	**Sn**	**09 46 44.2**	**-0.3**
YHNB	**Yeheng** baz=261	1.48	266	*e*P	**Pn**	**09 46 24.6**	**+0.9**
YHNB	baz=261			*e*S	**Sn**	**09 46 44.7**	**-0.2**
NSK	**Sanguang** baz=261	1.50	266	*e*P	**Pn**	**09 46 24.6**	**+0.8**
NSK	baz=261			*e*S	**Sn**	**09 46 44.8**	**-0.4**
ETLH	**Xiulin Townshi** baz=238	1.50	247	*e*P	**Pn**	**09 46 24.6**	**+0.7**
ETLH	baz=238			*e*S	**Sn**	**09 46 44.6**	**-0.7**
HWA	**Hwalien** baz=228	1.51	238	*e*P	**Pn**	**09 46 24.7**	**+0.8**
HWA	baz=228			*e*S	**Sn**	**09 46 45.7**	**+0.4**
NNSB	**Datong** baz=246	1.51	256	P	**Pn**	**09 46 24.5**	**+0.5**
NNSB	baz=246			S	**Sn**	**09 46 45.4**	**-0.3**
NNS	**Nan Shan** baz=246	1.52	257	*e*P	**Pn**	**09 46 25.0**	**+0.9**
NNS	baz=246			*e*S	**Sn**	**09 46 45.2**	**-0.6**
JTJ	**Tarama**	1.56	95	P	**Pn**	**09 46 25.0**	**+0.6**
JTJ				S	**Sn**	**09 46 45.7**	**-0.6**
FUSS	**Fushou** baz=243	1.69	252	P	**Pn**	**09 46 27.2**	**+1.0**
FUSS	baz=243			S	**Sn**	**09 46 47.5**	**-1.9**
WHF	**Hehuan Shan** baz=244	1.71	248	P	**Pn**	**09 46 27.1**	**+0.5**
WHF	baz=244			S	**Sn**	**09 46 49.6**	**-0.5**
NFF	**Wufeng Townshi** baz=254	1.72	265	*e*P	**Pn**	**09 46 27.2**	**+0.8**
NFF	baz=254			*e*S	**Sn**	**09 46 49.4**	**-0.4**
ESL	**Shilin** baz=232	1.73	236	P	**Pn**	**09 46 26.4**	**0.0**
ESL	baz=232			*e*S	**Sn**	**09 46 47.9**	**-2.0**
TWT	**Tachien** baz=242	1.74	252	*e*P	**Pn**	**09 46 27.3**	**+0.5**
TWT	baz=242			*e*S	**Sn**	**09 46 50.4**	**-0.1**
TDCB	**Techi** baz=242	1.76	253	*e*P	**Pn**	**09 46 27.6**	**+0.6**
TDCB	baz=242			*e*S	**Sn**	**09 46 50.7**	**0.0**
LIOB	**Emei** baz=262	1.81	266	*e*P	**Pn**	**09 46 28.0**	**+0.6**
LIOB	baz=262			*e*S	**Sn**	**09 46 51.2**	**-0.3**
CHGB	**Renai** baz=238	1.81	247	P	**Pn**	**09 46 28.6**	**+0.9**
CHGB	baz=238			*e*S	**Sn**	**09 46 51.2**	**-0.8**
EGFH	**Guangfu** baz=229	1.82	232	*e*P	**Pn**	**09 46 27.9**	**+0.4**
EGFH	baz=229			*e*S	**Sn**	**09 46 51.1**	**-0.6**
NSTT	**Nanjuang** baz=261	1.82	265	*e*P	**Pn**	**09 46 28.1**	**+0.5**
NSTT	baz=261			*e*S	**Sn**	**09 46 51.4**	**-0.4**
SBCB	**Hsinchu** baz=258	1.83	270	*e*P	**Pn**	**09 46 28.1**	**+0.5**
SBCB	baz=258			*e*S	**Sn**	**09 46 51.4**	**-0.6**
OWD	**Renai** baz=235	1.86	244	P	**Pn**	**09 46 28.6**	**+0.5**
OWD	baz=235			S	**Sn**	**09 46 51.2**	**-1.6**
WUSB	**Renai** baz=238	1.89	245	P	**Pn**	**09 46 29.5**	**+1.0**
WUSB	baz=238			S	**Sn**	**09 46 52.6**	**-0.9**
HGSD	**Ruisui** baz=224	1.94	228	*e*P	**Pn**	**09 46 29.0**	**+0.2**
HGSD	baz=224			*e*S	**Sn**	**09 46 53.8**	**-0.4**
WHP	**Taichung City** baz=248	1.94	255	P	**Pn**	**09 46 30.4**	**+1.4**
WHP	baz=248			S	**Sn**	**09 46 54.7**	**+0.2**
JIRB	**Irabujima**	1.98	89	P	**Pn**	**09 46 29.7**	**+0.4**
JIRB				*e*S	**Sn**	**09 46 55.3**	**+0.2**
VWDT	**VWDT** baz=232	1.98	239	P	**Pn**	**09 46 30.3**	**+0.8**
VWDT	baz=232			S	**Sn**	**09 46 54.7**	**-0.6**
EHY	**Hungye** baz=232	2.00	230	*e*P	**Pn**	**09 46 29.6**	**0.0**
EHY	baz=232			*e*S	**Sn**	**09 46 53.8**	**-1.8**
NMLH	**Miaoli** baz=260	2.02	263	*e*P	**Pn**	**09 46 30.4**	**+0.5**
NMLH	baz=260			*e*S	**Sn**	**09 46 56.0**	**-0.2**
WCS	**Beigang Elemen** baz=246	2.04	249	P	**Pn**	**09 46 31.9**	**+1.7**
WCS	baz=246			S	**Sn**	**09 46 57.2**	**+0.7**
JIKM	**Ikemajima**	2.05	86	*e*P	**Pn**	**09 46 30.9**	**+0.7**
JIKM				*e*S	**Sn**	**09 46 56.4**	**-0.3**
NSY	**Sanyi** baz=256	2.07	260	*e*P	**Pn**	**09 46 31.4**	**+0.9**
NSY	baz=256			*e*S	**Sn**	**09 46 56.9**	**-0.3**
TWQ1	**Liyutan** baz=254	2.07	258	*e*P	**Pn**	**09 46 31.3**	**+0.8**
TWQ1	baz=254			*e*S	**Sn**	**09 46 57.1**	**-0.1**
JMJ	**Miyako jima 2** baz=93	2.09	89	P	**Pn**	**09 46 32.0**	**+1.3**
JMJ	baz=93			S	**Sn**	**09 46 57.5**	**0.0**
YULB	**Yu-li** baz=232	2.09	228	*e*P	**Pn**	**09 46 30.7**	**-0.1**
YULB	baz=232			*e*S	**Sn**	**09 46 56.4**	**-1.3**
EYUL	**Yuli** baz=231	2.10	227	*e*P	**Pn**	**09 46 32.0**	**+1.0**
EYUL	baz=231			*e*S	**Sn**	**09 46 58.5**	**+0.5**
SMLT	**Sun Moon Lake** baz=236	2.12	245	*e*P	**Pn**	**09 46 32.6**	**+1.4**
SMLT	baz=236			*e*S	**Sn**	**09 46 59.3**	**+0.9**
SSLB	**Suanglung** baz=236	2.12	242	P	**Pn**	**09 46 32.0**	**+0.9**
SSLB	baz=236			S	**Sn**	**09 46 58.1**	**-0.2**
JMJ2	**Miyako jima3**	2.12	91	P	**Pn**	**09 46 32.2**	**+1.1**
JMJ2				*e*S	**Sn**	**09 46 58.5**	**+0.3**
TYC	**Yuchr** baz=247	2.14	246	P	**Pn**	**09 46 33.0**	**+1.6**
TYC	baz=247			S	**Sn**	**09 46 59.7**	**+1.0**
JOGS	**Gusukube**	2.19	90	P	**Pn**	**09 46 33.2**	**+1.2**
JOGS				S	**Sn**	**09 47 00.5**	**+0.7**
WDJ	**Dajia District** baz=255	2.19	259	*e*P	**Pn**	**09 46 32.8**	**+0.8**
WDJ	baz=255			*e*S	**Sn**	**09 46 59.7**	**-0.1**
TCU	**Taichung** baz=250	2.21	254	*e*P	**Pn**	**09 46 32.8**	**+0.6**
TCU	baz=250			*e*S	**Sn**	**09 46 59.5**	**-0.7**
FULB	**Fuli** baz=216	2.22	225	*e*P	**Pn**	**09 46 33.0**	**+0.5**
FULB	baz=216			*e*S	**Sn**	**09 47 01.2**	**+0.5**
CHKT	**Chengkung** baz=215	2.25	222	*e*P	**Pn**	**09 46 32.4**	**-0.4**
CHKT	baz=215			*e*S	**Sn**	**09 46 59.8**	**-1.4**
YUS	**Yu-Shan** baz=229	2.27	236	*e*P	**Pn**	**09 46 34.0**	**+0.4**
YUS	baz=229			*e*S	**Sn**	**09 47 02.2**	**-0.3**
WJS	**Zhushan** baz=252	2.29	245	*e*P	**Pn**	**09 46 35.1**	**+1.9**
WJS	baz=252			*e*S	**Sn**	**09 47 05.0**	**+3.0**
WNT	**Mingjian** baz=253	2.30	247	*e*P	**Pn**	**09 46 34.2**	**+0.8**
WNT	baz=253			*e*S	**Sn**	**09 47 02.3**	**+0.1**
WCHH	**Zhanghua** baz=250	2.33	253	*e*S	**Sn**	**09 47 02.7**	**-0.3**
ALS	**Alishan** baz=235	2.38	238	*e*P	**Pn**	**09 46 35.6**	**+1.0**
ALS	baz=235			*e*S	**Sn**	**09 47 04.4**	**-0.1**
EDH	**Donghe** baz=213	2.38	221	*e*P	**Pn**	**09 46 34.2**	**-0.3**
EDH	baz=213			*e*S	**Sn**	**09 47 03.1**	**-1.1**
ELDTW	**Lidau** baz=226	2.42	229	*e*P	**Pn**	**09 46 35.7**	**+0.8**
ELDTW	baz=226			*e*S	**Sn**	**09 47 05.0**	**0.0**
CHN5	**Tsauling** baz=231	2.43	241	*e*P	**Pn**	**09 46 37.2**	**+2.1**
CHN5	baz=231			*e*S	**Sn**	**09 47 07.1**	**+1.7**
WDLH	**Douliu** baz=242	2.50	244	*e*P	**Pn**	**09 46 37.0**	**+1.1**
WDLH	baz=242			*e*S	**Sn**	**09 47 08.2**	**+1.4**
LDUT	**Ludao** baz=210	2.53	214	*e*P	**Pn**	**09 46 36.2**	**-0.1**
LDUT	baz=210			*e*S	**Sn**	**09 47 06.3**	**-1.2**
LONT	**Longtian** baz=220	2.54	223	*e*P	**Pn**	**09 46 36.5**	**+0.1**
LONT	baz=220			*e*S	**Sn**	**09 47 07.3**	**-0.5**
WRL	**Guolierlin Hig** baz=254	2.55	250	*e*P	**Pn**	**09 46 37.4**	**+0.9**
WRL	baz=254			*e*S	**Sn**	**09 47 07.2**	**-0.7**
STYH	**Taoyuan** baz=229	2.60	232	*e*P	**Pn**	**09 46 38.8**	**+1.6**
STYH	baz=229			*e*S	**Sn**	**09 47 09.3**	**+0.4**
CHN4	**Tsaushan** baz=235	2.62	237	*e*P	**Pn**	**09 46 38.6**	**+1.1**
CHN4	baz=235			*e*S	**Sn**	**09 47 10.2**	**+0.5**
TPUB	**Ta-pu** baz=233	2.63	236	*e*P	**Pn**	**09 46 38.6**	**+1.0**
TPUB	baz=233			*e*S	**Sn**	**09 47 10.8**	**+1.0**
TWGBT	**Beinan** baz=225	2.64	222	*e*P	**Pn**	**09 46 37.7**	**0.0**
TWGBT	baz=225			*e*S	**Sn**	**09 47 09.1**	**-0.9**
TWG	**Pinlang** baz=225	2.64	222	*e*P	**Pn**	**09 46 37.7**	**0.0**
TWG	baz=225			*e*S	**Sn**	**09 47 08.8**	**-1.2**
WTP	**Ta-pu** baz=233	2.67	235	*e*P	**Pn**	**09 46 39.0**	**+0.8**
WTP	baz=233			*e*S	**Sn**	**09 47 11.0**	**+0.3**
CHY	**Chiayi** baz=249	2.68	242	*e*S	**Sn**	**09 47 10.8**	**-0.2**
TWK	**Hsinying** baz=234	2.75	237	*e*P	**Pn**	**09 46 40.1**	**+0.9**
TWK	baz=234			*e*S	**Sn**	**09 47 12.8**	**+0.2**
CHN1	**Nanshi** baz=233	2.77	235	*e*P	**Pn**	**09 46 40.7**	**+1.3**
CHN1	baz=233			*e*S	**Sn**	**09 47 13.2**	**+0.3**
SNST	**Tainan City** baz=234	2.77	236	*e*S	**Sn**	**09 47 13.3**	**+0.3**
WSF	**Szhu** baz=243	2.78	246	*e*S	**Sn**	**09 47 13.4**	**+0.2**
SSD	**Sandimen** baz=225	2.98	227	*e*P	**Pn**	**09 46 43.2**	**+1.2**
SSD	baz=225			*e*S	**Sn**	**09 47 18.3**	**+0.6**
TSMG	**Majia** baz=224	2.99	227	*e*P	**Pn**	**09 46 43.8**	**+1.6**
TSMG	baz=224			*e*S	**Sn**	**09 47 18.2**	**0.0**
LYUB	**Lan-yu** baz=198	3.07	205	*e*P	**Pn**	**09 46 42.0**	**-1.2**
LYUB	baz=198			*e*S	**Sn**	**09 47 18.4**	**-1.5**
MASBT	**Mashibuluo** baz=234	3.07	225	*e*P	**Pn**	**09 46 44.6**	**+1.4**
MASBT	baz=234			*e*S	**Sn**	**09 47 20.9**	**+1.0**
MATB	**Ma-tsu** baz=293	3.07	297	*e*P	**Pn**	**09 46 43.3**	**+0.1**
VWUC	**VWUC** baz=271	3.23	274	*e*P	**Pn**	**09 46 45.2**	**0.0**
VWUC	baz=271			*e*S	**Sn**	**09 47 22.0**	**-1.6**
PHUB	**P'eng-hu** baz=246	3.38	249	*e*P	**Pn**	**09 46 47.3**	**0.0**
PHUB	baz=246			*e*S	**Sn**	**09 47 25.0**	**-2.1**
WDGT	**Dungji** baz=242	3.41	244	*e*P	**Pn**	**09 46 48.5**	**+0.8**
WDGT	baz=242			*e*S	**Sn**	**09 47 26.7**	**-1.2**
JOW	**Kunigami** baz=69	5.17	66	*e*P	**Pn**	**09 47 09.3**	**-1.8**

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*JMA **08** 09:55:13.8±0.1, 24°N±2°×122°.9E±0°.6, h54^{km}±1^{km}, MV1.8/8, NW OFF ISHIGAKIJIMA IS*

*TAP **08** 09:55:13.5, 24°.19N×122°.95E, h44^{km}, ML2.6, C*

ISC 08 09:55:14.3±1.2**, 24°.13N**±0°.03×**122°.92E**±0°.03**, h34**^{km}±2^{km}**, n58, σ0^{s}.65**/110**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.32	3	*i* P	**Pb**	**09 55 22.2**	**-0.2**
JYNG				*e*S	**Sb**	**09 55 28.2**	**+0.2**
YOJ	**Yonaguni jima** baz=11	0.34	13	*i* P	**Pb**	**09 55 22.3**	**-0.4**
YOJ	baz=11			S	**Sn**	**09 55 28.6**	**+0.4**
YOJ	**Yonaguni jima**	0.34	13	P	**Pb**	**09 55 22.4**	**-0.2**
YOJ				*e*S	**Sb**	**09 55 28.4**	**+0.1**
IRIF	**Iriomote-Funau**	0.76	74	P	**Pn**	**09 55 28.0**	**-0.6**
IRIF				S	**Sn**	**09 55 38.5**	**-0.5**
HATJ	**Hateruma jima**	0.81	95	P	**Pn**	**09 55 29.6**	**+0.3**
HATJ				S	**Sb**	**09 55 41.9**	**+1.3**
JKRS	**Kuro-shima**	1.00	83	P	**Pn**	**09 55 32.1**	**+0.2**
JKRS				S	**Sn**	**09 55 45.6**	**+0.9**
TWC	**Suao** baz=305	1.09	296	*e*P	**Pn**	**09 55 32.5**	**-0.7**
TWC	baz=305			S	**Sn**	**09 55 46.4**	**-0.7**
ENA	**Nanau** baz=283	1.12	286	*e*P	**Pn**	**09 55 33.6**	**0.0**
ENA	baz=283			*e*S	**Sn**	**09 55 47.9**	**0.0**
JIJ	**Ishigaki jima**	1.14	78	P	**Pn**	**09 55 33.1**	**-0.7**
JIJ				S	**Sn**	**09 55 47.4**	**-0.8**
NDS	**Dongshan** baz=301	1.21	295	*e*P	**Pn**	**09 55 34.8**	**-0.1**
NDS	baz=301			*e*S	**Sn**	**09 55 50.2**	**+0.2**
TWD	**Chiawan** baz=266	1.22	268	*e*P	**Pn**	**09 55 35.0**	**+0.2**
TWD	baz=266			*e*S	**Sn**	**09 55 50.7**	**+0.5**

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NACB  Ninganchiao        1.22 272 eP      Pn      09 55 34.4 -0.5
      baz=257
NACB                              eS      Sn      09 55 49.7 -0.5
      baz=257
TWE   Neicheng           1.29 298 eP      Pn      09 55 36.0 +0.1
      baz=304
TWE                               eS      Sn      09 55 52.2 +0.2
      baz=304
TIPB  Shuangxi           1.31 310  P      Pn      09 55 35.6 -0.6
      baz=308
TIPB                              eS      Sn      09 55 50.9 -1.6
      baz=308
ETM   Tongmen            1.32 263 eP      Pn      09 55 35.9 -0.4
      baz=261
ETM                               eS      Sn      09 55 51.5 -1.2
      baz=261
ETLH  Xiulin Townshi     1.32 274 eP      Pn      09 55 36.2 -0.2
      baz=272
ETLH                              eS      Sn      09 55 52.0 -0.9
      baz=272
LATG  Datong             1.34 288 eP      Pn      09 55 36.7  0.0
      baz=274
LATG                              eS      Sn      09 55 53.8 +0.5
      baz=274
ENTT  Nioudou            1.34 293 eP      Pn      09 55 36.9 +0.3
      baz=299
ENTT                              eS      Sn      09 55 53.0 -0.3
      baz=299
SXI1  Grass Mountain     1.36 315 eP      Pn      09 55 36.6 -0.3
      baz=322
SXI1                               S      Sn      09 55 52.6 -1.1
      baz=322
FUSB  Fushanzhiwuyua     1.37 298  P      Pn      09 55 37.4 +0.3
      baz=303
FUSB                               S      Sn      09 55 54.5 +0.4
      baz=303
NDT   Datong Townshi     1.37 290 eP      Pn      09 55 37.2 +0.2
      baz=275
ESL   Shilin             1.40 257 eP      Pn      09 55 37.1 -0.3
      baz=255
ESL                               eS      Sn      09 55 54.2 -0.5
      baz=255
NWF   Wu-fen Shan        1.40 312 eP      Pn      09 55 37.5  0.0
      baz=310
NWF                                S      Sn      09 55 53.7 -1.2
      baz=310
WFSB  Wu-fen Shan        1.40 312 eP      Pn      09 55 36.7 -0.7
      baz=310
NNSB  Datong             1.44 282 eP      Pn      09 55 38.1 +0.1
      baz=269
NNSB                              eS      Sn      09 55 56.0 +0.1
      baz=269
EGFH  Guangfu            1.44 252 eP      Pn      09 55 37.9 -0.1
      baz=250
EGFH                              eS      Sn      09 55 55.4 -0.4
      baz=250
NWLT  Wulai              1.45 297 eP      Pn      09 55 38.4 +0.3
      baz=301
NWLT                              eS      Sn      09 55 55.9 -0.1
      baz=301
NNS   Nan Shan           1.45 283 eP      Pn      09 55 38.2  0.0
      baz=269
NNS                               eS      Sn      09 55 55.9 -0.3
      baz=269
YHNB  Yeheng             1.51 291 eP      Pn      09 55 39.3 +0.2
      baz=276
YHNB                              eS      Sn      09 55 58.1 +0.5
      baz=276
HGSD  Ruisui             1.51 246 eP      Pn      09 55 38.8 -0.2
      baz=244
HGSD                              eS      Sn      09 55 56.7 -0.8
      baz=244
WHF   Hehuan Shan        1.52 271  P      Pn      09 55 39.1 -0.3
      baz=257
WHF                               eS      Sn      09 55 57.1 -1.1
      baz=257
NSK   Sanguang           1.53 291 eP      Pn      09 55 39.4 +0.2
      baz=276
NSK                               eS      Sn      09 55 58.5 +0.5
      baz=276
FUSS  Fushou             1.54 275 eP      Pn      09 55 39.7 +0.1
      baz=261
FUSS                              eS      Sn      09 55 58.6 +0.1
      baz=261
EHY   Hungye             1.59 247 eP      Pn      09 55 39.7 -0.4
      baz=246
EHY                               eS      Sn      09 55 59.8 +0.3
      baz=246
YM01  YM01               1.60 310 eP      Pn      09 55 40.5 +0.4
      baz=307
YM01                              eS      Sn      09 55 59.4 -0.2
      baz=307
CHGB  Renai              1.60 268  P      Pn      09 55 40.3 -0.1
      baz=266
CHGB                               S      Sn      09 55 59.6 -0.4
      baz=266
OWD   Renai              1.61 264  P      Pn      09 55 40.3 -0.1
      baz=263
OWD                                S      Sn      09 55 59.0 -1.0
      baz=263
WUSB  Renai              1.66 266 eP      Pn      09 55 41.2 +0.1
      baz=264
WUSB                              eS      Sn      09 56 00.6 -0.7
      baz=264
YULB  Yu-li              1.66 244 eP      Pn      09 55 40.6 -0.4
      baz=234
YULB                              eS      Sn      09 56 01.2  0.0
      baz=234
EYUL  Yuli               1.66 242 eP      Pn      09 55 41.1 +0.1
      baz=232
EYUL                              eS      Sn      09 56 01.3 +0.1
      baz=232
VWDT  VWDT               1.67 258 eP      Pn      09 55 41.6 +0.4
      baz=256
VWDT                              eS      Sn      09 56 01.8 +0.4
      baz=256
FULB  Fuli               1.76 239 eP      Pn      09 55 42.2 -0.2
      baz=229
FULB                              eS      Sn      09 56 03.3 -0.3
      baz=229
CHKT  Chengkung          1.76 235 eP      Pn      09 55 41.6 -0.8
      baz=224
CHKT                              eS      Sn      09 56 01.7 -1.8
      baz=224
WHP   Taichung City      1.81 275 eP      Pn      09 55 43.6 +0.4
      baz=263
WHP                               eS      Sn      09 56 04.9 -0.2
      baz=263
NSTT  Nanjuang           1.82 286 eP      Pn      09 55 43.7 +0.4
      baz=274
NSTT                              eS      Sn      09 56 05.5 +0.3
      baz=274
SSLB  Suanglung          1.83 260 eP      Pn      09 55 43.6 +0.2
      baz=258
SSLB                              eS      Sn      09 56 05.2 -0.3
      baz=258
WCS   Beigang Elemen     1.84 268 eP      Pn      09 55 44.0 +0.5
      baz=267
WCS                               eS      Sn      09 56 05.9 +0.3
      baz=267
SMLT  Sun Moon Lake      1.87 263 eP      Pn      09 55 44.3 +0.3
      baz=261
SMLT                              eS      Sn      09 56 06.3 -0.1
      baz=261
EDH   Donghe             1.88 233 eP      Pn      09 55 43.5 -0.5
      baz=225
EDH                               eS      Sn      09 56 04.6 -1.9
      baz=225
TYC   Yuchr              1.90 264 eP      Pn      09 55 45.5 +1.2
      baz=262
ELDTW Lidau              1.98 242 eP      Pn      09 55 45.1 -0.5
      baz=241
ELDTW                             eS      Sn      09 56 09.1 -0.2
      baz=241
WJS   Zhushan            2.03 262 eP      Pn      09 55 47.2 +1.1
      baz=260
ALS   Alishan            2.04 253 eP      Pn      09 55 46.5 +0.1
      baz=252
ALS                               eS      Sn      09 56 10.3 -0.5
      baz=252
CHN5  Tsauling           2.12 256 eP      Pn      09 55 48.6 +1.2
      baz=247
CHN5                              eS      Sn      09 56 14.0 +1.3
      baz=247
STYH  Taoyuan            2.19 245 eP      Pn      09 55 48.6 +0.4
      baz=237
STYH                              eS      Sn      09 56 14.6 +0.4
      baz=237
CHN4  Tsaushan           2.27 251 eP      Pn      09 55 51.1 +1.7
      baz=249
CHN1  Nanshi             2.39 247 eP      Pn      09 55 52.8 +1.7
      baz=246
MASBT Mashibuluo         2.59 235 eP      Pn      09 55 54.4 +0.6
      baz=230
MASBT                             eS      Sn      09 56 23.4 -0.7
      baz=230
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BJI ***08*** *10:13:48.3±0.0, 34°.85N×86°.63E, h6km, mb4.4/44, mB4.6/28, Ms4.4/46, Ms7 4.1/42*

MOS ***08*** *10:13:48.9±0.8, 34°.83N×86°.61E, h10km, mb4.8/37, Error ellipse: s-maj=7.9km s-min=4.1km az=121.0*

IDC ***08*** *10:13:48.4±0.5, 34°.74N×86°.55E, h0km, mb4.3/24, mbtmp4.3/30, ML3.3/5, MS3.7/45, Error ellipse: s-maj=15.3km s-min=11.3km az=43.0*

NEIC ***08*** *10:13:50.9±1.5, 34°.79N±0°.09×86°.7E±0°.1, h10km±1km, mb4.7/94, Error ellipse: s-maj=16.0km s-min=13.9km az=42.0*

ISC 08 10:13:50.7±0.7**, 34°.74N**±0°.04×**86°.55E**±0°.04**, h11**km±4km**,**
n358, σ1°.**34**/360**, mb4.7**/119**, MS3.7**/51**, 15C-12D, Xizang**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s    ISC
LSA   Lhasa              6.36 141  Pg      Pg      10 15 50.0 -2.6
LSA   Lhasa              6.36 141  P       Pg      10 15 49.3 -3.3
LSA                                S       Sg      10 17 09.9 -5.2
LSA                                LR      LR
      comp=N,2µm,13.2s
LSA                                LR      LR
      comp=E,4µm,13.5s
LSA                                LR      LR
      comp=Z,660nm,9.6s
DANN  Dangsing           6.80 201 eP       Pn      10 15 34.6 +3.9
      comp=Z,84nm,0.5s
GUN   Gumba              6.83 185 eP       Pn      10 15 34.7 +3.5
      comp=Z,53nm,0.6s
GOMU  GeErMu             6.90  75  P       Pn      10 15 36.2 +4.1
GOMU                               S       Sn      10 16 57.4 +6.6
GOMU                               pmax    pmax
      comp=Z,7.0nm,1.3s
GOMU                               pmax    pmax
      comp=Z,160nm,6.7s
GOMU                               LR      LR
      comp=N,2µm,9.8s
GOMU                               LR      LR
      comp=E,700nm,9.0s
GOMU                               LR      LR
      comp=Z,680nm,9.1s
GKN   Gorkha             6.91 194 eP       Pn      10 15 36.3 +4.2
      comp=Z,91nm,0.9s
KKN   Kakani             7.01 189 eP       Pn      10 15 37.6 +4.0
PKIN  Phulchoki          7.21 188 eP       Pn      10 15 40.1 +3.8
      comp=Z,74nm,0.5s
PKI   Pulchoki           7.21 188 eP       Pn      10 15 40.0 +3.6
      comp=Z,61nm,0.7s
DMN   Daman              7.22 190 eP       Pn      10 15 40.2 +3.8
      comp=Z,41nm,0.6s
PYUN  Piuthan            7.29 206 eP       Pn      10 15 40.2 +2.9
      comp=Z,88nm,0.8s
KOLN  Koldanda           7.39 201 eP       Pn      10 15 42.3 +3.5
TAPN  Taplejung          7.44 172 eP       Pn      10 15 42.7 +3.3
      comp=Z,86nm,0.7s
RAMN  Ramite             7.77 180 eP       Pn      10 15 47.5 +3.6
      comp=Z,24nm,0.5s
ODAN  Odare              7.89 175 eP       Pn      10 15 48.1 +2.5
      comp=Z,76nm,0.8s
WMQ   Urumqi             9.11   5 eP       Pn      10 15 58.5 -3.6
WMQ                                LR      LR
      comp=Z,840nm,14.7s
WMQ                                LR      LR
      comp=Z,560nm,14.7s
WMQ                                LR      LR
      comp=Z,350nm,17.5s
KSH   Kashi              9.69 303  P       Pn      10 16 14.9 +4.7
KSH                                pmax    pmax
      comp=Z,5.0nm,1.3s
KSH                                LR      LR
      comp=Z,950nm,8.8s
KSH                                LR      LR
      comp=Z,870nm,9.7s
KSH                                LR      LR
      comp=Z,1µm,9.6s
TARG  Taragay, Kyrgy     9.79 318  Pn      Pn      10 16 14.4 +2.7
PRZ   Przheval'sk       10.01 323  P       Pn      10 16 16.6 +2.0
PRZ   Przheval'sk       10.01 323          Pn      10 16 16.6 +2.0
PDGK  Podgornoye        10.18 330  P       Pn      10 16 17.2 +0.4
KDJ   Kajisay           10.40 318  P       Pn      10 16 22.0 +2.0
KDJ   Kajisay           10.40 318  Pn      Pn      10 16 22.0 +2.0
NIL   Nilore            11.06 268  P       Pn      10 16 31.2 +2.3
NIL   Nilore            11.06 268  Pn      Pn      10 16 31.2 +2.3
MDOK  Medeo             11.19 322  P       Pn      10 16 31.6 +0.9
BOOM  Boomskoye usch    11.34 316  P       Pn      10 16 32.7  0.0
BOOM  Boomskoye usch    11.34 316  Pn      Pn      10 16 32.7  0.0
GTA   Gaotai            11.57  62 eP       Pn      10 16 40.0 +4.1
GTA                                pmax    pmax
      comp=Z,3.0nm,0.6s
GTA                                pmax    pmax
      comp=Z,92nm,6.0s
GTA                                LR      LR
      comp=Z,2µm,14.3s
GTA                                LR      LR
      comp=Z,640nm,13.9s
GTA                                LR      LR
      comp=Z,540nm,13.5s
CEP   Cherat            12.14 270  P       Pn      10 16 47.5 +3.7
CEP                                S       Sn      10 19 10.0  +11
AAK   Ala-Archa         12.27 314  Pn      Pn      10 16 46.2 +0.8
      comp=Z,0.3nm,0.3s,baz=141,slow=16,SNR=8.1
AAK                                LR      LR      10 22 00.5
      comp=Z,313nm,21.9s,baz=132,slow=40
      comp=Z,3.2nm,0.6s
AAK   Ala-Archa         12.27 314  Pn      Pn      10 16 46.9 +1.5
MK31  Makanchi Array    12.46 346 iP       Pn      10 16 47.0 -0.9
MK31                               pmax    pmax
      comp=Z,15nm,0.9s
MK31  Makanchi Array    12.46 346  Pn      Pn      10 16 47.5 -0.5
MKAR  Makanchi Array    12.46 346  Pn      Pn      10 16 46.8 -1.1
      comp=Z,0.2nm,0.3s,baz=158,slow=13,SNR=51
MKAR                               LR      LR      10 22 29.8
      comp=Z,211nm,20.8s,baz=162,slow=42
      comp=Z,12nm,1.0s
MKAR  Makanchi Array    12.46 346 iP       Pn      10 16 47.5 -0.4
MKAR                               pmax    pmax
      comp=Z,12nm,1.0s
MKAR  Makanchi Array    12.46 346  Pn      Pn      10 16 47.1 -0.9
THW   Thamme Wali       12.47 265  P       Pn      10 16 49.8 +1.6
MAKZ  Makanchi          12.54 345  P       Pn      10 16 48.6 -0.4
MAKZ  Makanchi          12.54 345          Pn      10 16 48.6 -0.4
BTK   Batken            13.58 298  P       Pn      10 17 04.6 +1.3
BTK   Batken            13.58 298  Pn      Pn      10 17 04.6 +1.3
KBL   Kabul             14.41 274  P       Pn      10 17 15.0 +0.1
KBL   Kabul             14.41 274  Pn      Pn      10 17 15.0 +0.1
CHGR  Chuyangaron       14.48 291  Pn      Pn      10 17 14.9 -0.8
CD2   Chengdu           14.97 100  P       Pn      10 17 22.0 -0.2
CD2                                S       Sn      10 20 07.0 -1.0
CD2                                pmax    pmax
      comp=Z,10.0nm,0.5s
CD2                                LR      LR
      comp=Z,950nm,10.4s
CD2                                LR      LR
      comp=Z,1µm,9.8s
KK31  Karatay Array     15.00 309  P       P       10 17 29.1 +1.1
KK31                               pmax    pmax
      comp=Z,12nm,1.1s
KK31  Karatay Array     15.00 309  P       P       10 17 29.1 +1.1
KKAR  Karatay Array     15.00 309  P       P       10 17 29.0 +1.0
KKAR                               pmax    pmax
      comp=Z,12nm,1.1s
KKAR  Karatay Array     15.00 309  P       P       10 17 29.9 +1.8
KKAR  Karatay Array     15.00 309  P       P       10 17 29.0 +1.0
PZH   PanZhiHua         15.43 118  P       Pn      10 17 26.4 -2.1
PZH                                S       Sn      10 20 17.8 -1.7
PZH                                pmax    pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax    pmax
      comp=Z,80nm,4.1s
PZH                                LR      LR
      comp=Z,950nm,13.2s
PZH                                LR      LR
      comp=Z,550nm,12.5s
PZH                                LR      LR
      comp=Z,1µm,13.5s
KURBB Kurchatov Arra    16.91 342  Pn      Pn      10 17 45.4 -1.8
      comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=29
KURBB                              LR      LR      10 25 09.3
      comp=Z,201nm,21.0s,baz=140,slow=40
      comp=Z,5.0nm,0.9s
KURK  Kurchatov         16.98 343ceP       Pn      10 17 46.2 -1.8
KURK                               pmax    pmax
      comp=Z,21nm,1.6s
KURK  Kurchatov         16.98 343          Pn      10 17 46.1 -1.8
XAN   Xi'an             18.48  86  P       Pn      10 18 07.5 +0.7
XAN                                pP      sP      10 18 15.3 +1.8
XAN                                S       Sn      10 21 33.2  0.0
XAN                                pmax    pmax
      comp=Z,13nm,1.5s
XAN                                pmax    pmax
      comp=Z,180nm,5.5s
XAN                                LR      LR
      comp=Z,470nm,6.7s
XAN                                LR      LR
      comp=Z,340nm,7.8s
XAN                                LR      LR
      comp=Z,270nm,8.2s
HYBB  Hyderabad (bro    18.67 205 eP       P       10 18 08.4 -0.5
GYA   Guiyang           19.16 110 ⇑P       Pn      10 18 16.7 +1.5
GYA                                S       Sn      10 21 46.8 -3.1
GYA                                pmax    pmax
      comp=Z,21nm,0.8s
GYA                                pmax    pmax
      comp=Z,160nm,4.4s
GYA                                LR      LR
      comp=Z,280nm,7.2s
GYA                                LR      LR
      comp=Z,480nm,7.2s
GYA                                LR      LR
      comp=Z,550nm,9.0s
ZAA0  Zalesovo Array    19.24 357  P       P       10 18 13.9 -0.8
ZALV  Zalesovo Beam     19.24 357  P       P       10 18 13.6 -1.2
      comp=Z,0.3nm,0.3s,baz=178,slow=11,SNR=29
ZALV                               LR      LR      10 26 57.1
      comp=Z,242nm,19.6s,baz=194,slow=41
      comp=Z,7.8nm,0.8s
ZALV  Zalesovo Beam     19.24 357 iP       P       10 18 13.8 -1.0
ZALV                               pmax    pmax
      comp=Z,8.0nm,0.8s
ZALV  Zalesovo Beam     19.24 357  P       P       10 18 13.8 -1.0
CHTO  Chiang Mai        19.32 142  P       Pn      10 18 17.0 +0.1
CHTO                               pmax    pmax
      comp=Z,8.0nm,0.8s
CHTO  Chiang Mai        19.32 142          Pn      10 18 17.0 +0.1
CMAR  Chiang Mai Arr    19.61 143  P       Pn      10 18 19.8 -0.7
      comp=Z,4.3nm,0.9s,baz=335,slow=10,SNR=18
CMAR                               PcP     PcP     10 22 38.4 -0.5
      comp=Z,0.6nm,0.4s,baz=322,slow=2.8,SNR=4.5
CMAR                               LR      LR      10 27 07.6
      comp=Z,168nm,19.1s,baz=320,slow=41
CMAR  Chiang Mai Arr    19.61 143 iP       Pn      10 18 21.8 +1.3
CMAR                               pmax    pmax
      comp=Z,7.0nm,0.7s
CMAR  Chiang Mai Arr    19.61 143  P       Pn      10 18 20.6  0.0
SONM  Songino Array     19.76  43  P       Pn      10 18 21.8 -0.5
      comp=Z,0.1nm,0.3s,baz=233,slow=14,SNR=22
SONM                               PcP     PcP     10 22 38.4 -0.4
      comp=Z,0.6nm,0.7s,baz=225,slow=1.9,SNR=6.0
SONM                               LR      LR      10 27 03.4
      comp=Z,75nm,20.1s,baz=222,slow=40
      comp=Z,3.9nm,0.9s
SONM  Songino Array     19.76  43          Pn      10 18 21.6 -0.6
ZAK   Zakamensk         19.83  33 eP       P       10 18 20.7 -0.7
ZAK                                pmax    pmax
      comp=Z,16nm,1.5s
MOY   Mondy             19.86  27 eP       P       10 18 22.2 +0.4
MOY                                pmax    pmax
      comp=Z,21nm,1.8s
HRA   Herat             20.01 276  P       P       10 18 24.6 +1.0
ULN   Ulaanbaatar       20.15  43ceP       Pn      10 18 26.1 -0.7
ULN                                pmax    pmax
      comp=Z,20nm,1.0s
ULN   Ulaanbaatar       20.15  43          P       10 18 25.4 +0.5
HHC   Hu-ho-hao-te      20.65  65 eP       Pn      10 18 31.8 -0.9
HHC                                pP      sP      10 18 37.2  0.0
HHC                                S       S       10 22 21.1  0.0
HHC                                sS      sS      10 22 27.6 -1.0
HHC                                pmax    pmax
      comp=Z,69nm,0.9s
HHC                                pmax    pmax
      comp=Z,250nm,5.7s
HHC                                LR      LR
      comp=Z,3µm,15.7s
HHC                                LR      LR
      comp=Z,610nm,14.3s
HHC                                LR      LR
      comp=Z,840nm,14.8s
IRK   Irkutsk           21.61  31 eP       P       10 18 41.3 +0.8
IRK                                pmax    pmax
      comp=Z,47nm,1.7s
BRVK  Borovoye          21.65 333ceP       P       10 18 41.9 +1.0
BRVK                               pmax    pmax
      comp=Z,47nm,2.5s
BRVK  Borovoye          21.65 333  P       P       10 18 41.9 +1.0
BRVK                               IAmb    IAmb    10 18 48.2
      comp=Z,25nm,1.1s
GULI  GuiLin            22.63 108  P       P       10 18 52.5 +0.8
GULI                               S       S       10 23 03.0 +3.6
GULI                               pmax    pmax
      comp=Z,10.0nm,0.9s
GULI                               LR      LR
      comp=Z,450nm,10.8s
GULI                               LR      LR
      comp=Z,290nm,11.9s
GULI                               LR      LR
      comp=Z,270nm,10.8s
HNS   HongShan          22.88  75 ⇑P       P       10 19 06.3  +12
HNS                                S       Sn      10 23 13.2 -5.8
HNS                                LR      LR
      comp=N,260nm,10.0s
HNS                                LR      LR
      comp=E,420nm,11.4s
HNS                                LR      LR
      comp=Z,350nm,12.2s
GEYT  Alibeck           23.09 286  P       P       10 18 56.2 -0.1
      comp=Z,11nm,1.1s,baz=137,slow=11,SNR=10
GEYT                               LR      LR      10 29 59.2
      comp=Z,130nm,19.1s,baz=97,slow=42
      comp=Z,11nm,1.1s
GEYT  Alibeck           23.09 286  P       P       10 18 58.8 +2.4
GYA0  ALIBECK ARRAY     23.09 286  P       P       10 18 58.8 +2.4
GYA0B ALIBECK ARRAY     23.09 286  P       P       10 18 58.8 +2.4
GYA0B                              IAmb    IAmb    10 19 00.3
      comp=Z,16nm,1.1s
AB31  Akbulak array     24.35 315 iP       P       10 19 08.8 +0.3
ABKAR Akbulak array     24.35 315  P       P       10 19 08.8 +0.3
ABKAR Akbulak array     24.35 315  P       P       10 19 09.3 +0.8
ABKAR                              IAmb    IAmb    10 19 10.7
      comp=Z,7.3nm,0.9s
XLT   XiLinHaoTe        24.50  59 eP       P       10 19 09.3 -0.7
XLT                                pP      sP      10 19 19.1 +2.0
XLT                                pmax    pmax
      comp=Z,17nm,0.9s
XLT                                pmax    pmax
      comp=Z,170nm,4.2s
XLT                                LR      LR
      comp=Z,53nm,12.1s
XLT                                LR      LR
      comp=Z,280nm,12.0s
XLT                                LR      LR
      comp=Z,290nm,12.9s
TIA   Tai'an            24.90  78 ⇑P       P       10 19 14.9 +1.3
TIA                                pmax    pmax
      comp=Z,10.0nm,0.7s
TIA                                LR      LR
      comp=Z,310nm,8.0s
TIA                                LR      LR
      comp=Z,170nm,10.0s
TIA                                LR      LR
      comp=Z,160nm,10.1s
PCHI  Peechi            25.84 204 eP       P       10 19 21.6 -0.6
QIZ   Qiongzhong        25.92 121  P       P       10 19 22.7 -0.2
QIZ                                S       S       10 23 51.1 -1.9
QIZ                                LR      LR
      comp=Z,280nm,15.3s
QIZ                                LR      LR
      comp=Z,360nm,7.8s
QIZ                                LR      LR
      comp=Z,400nm,10.2s
AKTO  Aktyubinsk        26.00 316  P       P       10 19 23.4  0.0
      comp=Z,4.4nm,0.8s,baz=105,slow=8.3,SNR=12
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AKTO				LR	LR	10 31 07.9	
	comp=Z,136nm,18.9s,baz=129,slow=40						
	comp=Z,4.4nm,0.8s						
WSAR	**Wadi Sarin**	**26.89**	**252**	LR	LR	10 31 45.0	
	comp=Z,101nm,19.4s,baz=86,slow=40						
NJ2	**Nanjing**	**27.05**	**87**	*e*P	**P**	**10 19 32.1**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,530nm,11.5s						
NJ2				LR	LR		
	comp=Z,370nm,18.0s						
NJ2				LR	LR		
	comp=Z,220nm,16.6s						
NJ2				LR	LR		
	comp=Z,770nm,21.7s						
PALK	**Pallekele**	**27.86**	**192**	P	**P**	**10 19 41.1**	**+0.6**
	comp=Z,4.8nm,1.0s,baz=34,slow=6.7,SNR=2.9						
PALK				LR	LR	10 31 10.3	
	comp=Z,110nm,19.4s,baz=132,slow=37						
	comp=Z,4.8nm,1.0s						
SVE	**Sverdlovsk**	**28.22**	**329**	*e*P	**P**	**10 19 43.9**	**+0.6**
SVE				pmax	pmax		
	comp=Z,26nm,1.4s						
SRIT	**Nakonsritamara**	**28.65**	**152**	P	**P**	**10 19 47.9**	**+0.4**
SRIT				IAmb	IAmb	10 19 48.7	
	comp=Z,11nm,0.8s						
ARU	**Arti**	**28.87**	**327**	P	**P**	**10 19 48.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=102,slow=7.0,SNR=5.2						
ARU				LR	LR	10 32 29.8	
	comp=Z,165nm,18.6s,baz=123,slow=39						
	comp=Z,0.8nm,0.3s						
ARU	**Arti**	**28.87**	**327**	*c i*P	**P**	**10 19 49.7**	**+0.6**
ARU						10 20 39.8	
ARU				S	**S**	**10 24 38.8**	**-0.1**
ARU				pmax	pmax		
	comp=Z,13nm,1.9s						
ARU	**Arti**	**28.87**	**327**	P	**P**	**10 19 47.7**	**-1.3**
CN2	**Changchun**	**31.20**	**61**	*e*P	**P**	**10 20 10.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
KULM	**Kulim**	**32.08**	**153**	P	**P**	**10 20 18.5**	**+0.7**
KULM				IAmb	IAmb	10 20 19.6	
	comp=Z,9.3nm,0.8s						
BELG	**Belogornoye**	**32.76**	**315**	LR	LR	10 34 37.6	
	comp=Z,131nm,21.6s,baz=149,slow=38						
BELG	**Belogornoye**	**32.76**	**315**	*i* P	**P**	**10 20 23.9**	**+0.5**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSRS	**Korea Array**	**33.35**	**73**	P	**P**	**10 20 28.2**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=280,slow=9.1,SNR=5.1						
KSRS				PcP	**PcP**	**10 23 09.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=224,slow=3.5,SNR=5.4						
KSRS				LR	LR	10 35 25.1	
	comp=Z,102nm,18.2s,baz=280,slow=39						
	comp=Z,0.9nm,0.7s						
GNI	**Garni**	**33.40**	**292**	LR	LR	10 36 13.3	
	comp=Z,85nm,20.9s,baz=98,slow=40						
PSI	**Prapat**	**33.80**	**157**	LR	LR	10 37 14.4	
	comp=Z,60nm,19.1s,baz=6.0,slow=42						
NCK	**Nalchik**	**34.13**	**298**	*i* P	**P**	**10 20 35.4**	**-0.2**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIRV	**Kirov**	**34.19**	**326**	LR	LR	10 35 48.7	
	comp=Z,131nm,18.6s,baz=123,slow=39						
KIRV	**Kirov**	**34.19**	**326**	*ce*P	**P**	**10 20 36.0**	**+0.2**
ONI	**Oni**	**34.25**	**296**	P	**P**	**10 20 38.9**	**+2.3**
ONI				pmax	pmax		
	comp=Z,15nm,0.9s						
ONI	**Oni**	**34.25**	**296**	P	**P**	**10 20 38.9**	**+2.3**
ONI				IAmb	IAmb	10 20 40.1	
	comp=Z,15nm,0.9s						
KBZ	**Khabaz**	**34.64**	**298**	*i* P	**P**	**10 20 40.3**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NRIK	**Noril'sk**	**34.65**	**1**	P	**P**	**10 20 39.3**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=171,slow=7.5,SNR=7.7						
NRIK				LR	LR	10 36 10.1	
	comp=Z,148nm,18.4s,baz=158,slow=39						
	comp=Z,4.4nm,0.7s						
NRIK	**Noril'sk**	**34.65**	**1**	*ce*P	**P**	**10 20 39.8**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,18nm,2.0s						
NRIK	**Noril'sk**	**34.65**	**1**	P	**P**	**10 20 39.9**	**+0.2**
NRIK				IAmb	IAmb	10 20 40.4	
	comp=Z,6.1nm,0.8s						
KIV	**Kislovodsk**	**34.79**	**299**	*e*P	**P**	**10 20 41.6**	**+0.3**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,33nm,16.0s						
USRK	**Ussuriysk Ar.**	**35.93**	**61**	P	**P**	**10 20 49.8**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=295,slow=5.9,SNR=4.5						
	comp=Z,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**35.93**	**61**	P	**P**	**10 20 50.9**	**-0.1**
USRK	**Ussuriysk Ar.**	**35.93**	**61**	P	**P**	**10 20 50.9**	**-0.1**
KLR	**Kul'dur**	**36.02**	**52**	*ce*P	**P**	**10 20 51.4**	**-0.3**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOW	**Kunigami**	**36.50**	**91**	LR	LR	10 36 58.8	
	comp=Z,185nm,21.2s,baz=284,slow=38						
SOC	**Sochi**	**36.95**	**298**	*e*P	**P**	**10 20 57.1**	**-2.6**
SOC				*e*		10 22 23.6	
SOC				*e*PPP	PPP	10 22 39.8	
SOC				*e*S	**S**	**10 26 39.9**	**-4.7**
SOC				*e*SS	**SnSn**	**10 29 17.7**	**+0.5**
SOC				*e*SSS	SSS	10 29 40.4	
SOC				MLR	MLR		
	comp=Z,93nm,20.0s						
PRGR	**Permogore**	**37.29**	**329**	*e*P	**P**	**10 21 01.7**	**-0.6**
VORR	**Voronezh**	**37.68**	**311**	*e*P	**P**	**10 21 07.0**	**+1.2**
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
YAK	**Yakutsk**	**38.41**	**31**	*e*P	**P**	**10 21 11.1**	**-0.7**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK	**Yakutsk**	**38.41**	**31**	P	**P**	**10 21 11.3**	**-0.5**
YAK				IAmb	IAmb	10 21 13.3	
	comp=Z,20nm,1.1s						
KLMR	**Klimovskoe**	**39.69**	**326**	*e*P	**P**	**10 21 20.8**	**-1.8**
KLMR				*e*		10 22 51.1	
KLMR				pmax	pmax		
	comp=Z,32nm,1.2s						
KLMR	**Klimovskoe**	**39.69**	**326**	*e*P	**P**	**10 21 20.8**	**-1.8**
KLMR				AMP		10 21 23.7	
	comp=Z,32nm,1.2s						
KLMR				*e*PP	**PP**	**10 22 51.1**	**-2.5**
OBN	**Obninsk**	**39.77**	**317**	⇓*e*P	**P**	**10 21 24.1**	**+0.8**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,81nm,18.0s						
MJAR	**Matsushiro Arr**	**41.61**	**72**	LR	LR	10 39 53.3	
	comp=Z,110nm,18.6s,baz=300,slow=38						
ILGA	**Ilgaz**	**41.63**	**295**	P	**P**	**10 21 38.6**	**-0.5**
ILGA				IAmb	IAmb	10 21 41.3	
	comp=Z,20nm,0.8s						
BR131	**Keskin Array S**	**41.91**	**293**	*i* P	**P**	**10 21 41.7**	**+0.3**
BR131	**Keskin Array S**	**41.91**	**293**	P	**P**	**10 21 42.1**	**+0.8**
BRTR	**Keskin Array B**	**41.91**	**293**	P	**P**	**10 21 41.6**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=92,slow=8.7,SNR=18						
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**41.91**	**293**	*i* P	**P**	**10 21 42.0**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MMAI	**Mount Meron Ar**	**42.12**	**283**	LR	LR	10 44 33.5	
	comp=Z,71nm,18.1s,baz=225,slow=44						
ANTO	**Ankara**	**42.53**	**293**	P	**P**	**10 21 47.0**	**+0.7**
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANTO	**Ankara**	**42.53**	**293**	P	**P**	**10 21 47.0**	**+0.7**
ANTO				IAmb	IAmb	10 21 48.1	
	comp=Z,9.6nm,0.8s						
TIXI	**Tiksi**	**43.03**	**18**	LR	LR	10 40 24.6	
	comp=Z,108nm,19.4s,baz=183,slow=37						
TIXI	**Tiksi**	**43.03**	**18**	*ce*P	**P**	**10 21 48.6**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**43.03**	**18**	P	**P**	**10 21 49.0**	**-0.9**
EIL	**Elat**	**43.56**	**278**	LR	LR	10 43 28.6	
	comp=Z,122nm,20.2s,baz=84,slow=41						
MDUB	**Mudurnu**	**43.62**	**295**	P	**P**	**10 21 55.3**	**+0.2**
VALR	**Valaam**	**43.87**	**325**	*i* P	**P**	**10 21 56.5**	**-0.2**
AKASG	**Malin Array Be**	**43.90**	**309**	P	**P**	**10 21 55.3**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=73,slow=6.8,SNR=10						
AKASG				LR	LR	10 42 33.8	
	comp=Z,102nm,19.3s,baz=108,slow=39						
	comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**43.90**	**309**	*i* P	**P**	**10 21 57.2**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**43.90**	**309**	P	**P**	**10 21 57.5**	**+0.4**
AKBB	**Malin Array Si**	**43.90**	**309**	*ce*P	**P**	**10 21 56.5**	**-0.6**
AKBB	**Malin Array Si**	**43.90**	**309**	P	**P**	**10 21 56.4**	**-0.6**
BORA	**Eskisehir**	**44.29**	**294**	P	**P**	**10 22 01.0**	**+0.4**
BORA				IAmb	IAmb	10 22 01.6	
	comp=Z,6.1nm,0.8s						
MNK	**Minsk**	**44.72**	**315**	*i* P	**P**	**10 22 04.1**	**+0.6**
MNK				*i*		10 23 48.7	
MNK				*i* PPP	PPP	10 24 25.3	
MNK				*i* S	**S**	**10 28 38.3**	**-1.6**
MNK				*i* SS	**ScS**	**10 32 00.7**	**-0.2**
MNK				*i* SSS	SSS	10 32 44.6	
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK	**Minsk**	**44.72**	**315**	*i* P	**P**	**10 22 04.2**	**+0.6**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**P**	**10 22 04.2**	**+0.6**
	comp=N,12nm,0.9s						
MNK				*i* P	**P**	**10 22 04.2**	**+0.6**
	comp=Z,9.0nm,0.6s,baz=91						
MNK				*i* PP	**PP**	**10 23 48.8**	**+1.0**
MNK				*i* PPP	PPP	10 24 25.3	
MNK				*i* S	**S**	**10 28 38.4**	**-1.6**
MNK				*i* SS	**ScS**	**10 32 00.8**	**-0.2**
MNK				*i* SSS	SSS	10 32 44.7	
MNK				*i* LR	LR	10 40 36.5	
DAV	**Davao City (W)**	**45.23**	**118**	LR	LR	10 43 55.8	
	comp=Z,76nm,18.4s,baz=356,slow=40						
VSU	**Vasula**	**45.55**	**320**	*i* P	**P**	**10 22 10.2**	**+0.1**
VSU				pmax	pmax		
	comp=Z,42nm,1.0s						
VSU	**Vasula**	**45.55**	**320**	*e*P	**P**	**10 22 10.6**	**+0.4**
FIA1	**FINESS Array S**	**46.17**	**325**	P	**P**	**10 22 15.0**	**0.0**
FIA1				IAmb	IAmb	10 22 16.0	
	comp=Z,18nm,1.2s						
FINES	**FINESS Array B**	**46.17**	**325**	P	**P**	**10 22 14.6**	**-0.4**
	comp=Z,6.5nm,0.9s,baz=79,slow=9.9,SNR=17						
FINES				PcP	**PcP**	**10 23 51.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=98,slow=2.8,SNR=1.4						
FINES				LR	LR	10 42 53.5	
	comp=Z,112nm,19.2s,baz=259,slow=38						
	comp=Z,6.5nm,0.9s						
FINES	**FINESS Array B**	**46.17**	**325**	P	**P**	**10 22 15.1**	**+0.1**
MLR	**Muntele Rosu**	**46.56**	**302**	LR	LR	10 45 56.1	
	comp=Z,59nm,19.1s,baz=66,slow=41						
MLR	**Muntele Rosu**	**46.56**	**302**	P	**P**	**10 22 19.2**	**+0.7**
MLR				pmax	pmax		
	comp=Z,12nm,0.8s						
MLR	**Muntele Rosu**	**46.56**	**302**	P	**P**	**10 22 19.2**	**+0.7**
BURAR	**Bucovina Array**	**46.76**	**305**	P	**P**	**10 22 20.0**	**0.0**
BUR08	**Bucovina Ar. S**	**46.77**	**305**	P	**P**	**10 22 20.1**	**0.0**
MEF	**Metsahovi**	**46.87**	**323**	*e*P	**P**	**10 22 20.9**	**+0.4**
PABE	**Paberze**	**46.98**	**316**	P	**P**	**10 22 21.1**	**-0.3**
PABE	**Paberze**	**46.98**	**316**	*e*P	**P**	**10 22 21.8**	**+0.4**
MTSE	**Matsula**	**47.09**	**321**	*e*P	**P**	**10 22 22.0**	**-0.2**
LVV	**L'vov**	**47.28**	**309**	*e*P	**P**	**10 22 24.5**	**+0.6**
JCJ	**Chichijima**	**47.83**	**83**	LR	LR	10 44 16.7	
	comp=Z,34nm,18.8s,baz=136,slow=38						
ARCES	**ARCESS Array B**	**47.83**	**335**	P	**P**	**10 22 27.5**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=111,slow=5.1,SNR=8.1						
	comp=Z,4.4nm,0.9s						
MA2	**Magadan**	**47.89**	**38**	LR	LR	10 43 03.7	
	comp=Z,62nm,18.2s,baz=265,slow=37						
RAF	**Rauma**	**48.21**	**324**	*e*P	**P**	**10 22 30.9**	**0.0**
UZH	**Uzhgorod**	**48.56**	**307**	⇓*i*P	**P**	**10 22 33.8**	**0.0**
UZH				*i*		10 22 40.4	
SEY	**Seymchan**	**48.80**	**34**	*ce*P	**P**	**10 22 35.1**	**-0.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TTSI	**Tana Toraja**	**48.88**	**133**	P	**P**	**10 22 40.4**	**+3.8**
VTS	**Vitosha**	**49.02**	**299**	P	**P**	**10 22 38.7**	**+1.0**
VTS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VTS	**Vitosha**	**49.02**	**299**	P	**P**	**10 22 38.7**	**+1.0**
IDI	**Anoyia**	**49.75**	**289**	LR	LR	10 47 53.7	
	comp=Z,45nm,19.8s,baz=96,slow=41						
OJC	**Ojcow**	**49.94**	**310**	P	**P**	**10 22 44.6**	**+0.2**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OJC	**Ojcow**	**49.94**	**310**	P	**P**	**10 22 44.6**	**+0.2**
OJC				IAmb	IAmb	10 22 45.5	
	comp=Z,7.2nm,0.9s						
PSZ	**Piszkesteto**	**50.26**	**307**	P	**P**	**10 22 48.4**	**+1.5**
PSZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PSZ	**Piszkesteto**	**50.26**	**307**	P	**P**	**10 22 48.4**	**+1.5**
UPP	**Uppsala**	**50.26**	**322**	*e*P	**P**	**10 22 46.5**	**-0.1**
KAPI	**Kappang**	**50.42**	**135**	LR	LR	10 46 17.7	
	comp=Z,50nm,18.7s,baz=299,slow=39						
VIKU	**Vikbolandet**	**50.82**	**321**	*e*P	**P**	**10 22 51.0**	**+0.2**
VYHS	**Vyhne**	**50.85**	**307**	*e*P	**P**	**10 22 51.8**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
VYHS	**Vyhne**	**50.85**	**307**	*e*P	**P**	**10 22 51.8**	**+0.5**
DIVS	**Divibare**	**50.99**	**302**	P	**P**	**10 22 52.4**	**-0.1**
DIVS				IAmb	IAmb	10 22 53.8	
	comp=Z,7.7nm,1.1s						
KOLL	**Kolacno**	**51.12**	**308**	*e*P	**P**	**10 22 54.7**	**+1.4**
SRO	**Srobarova**	**51.32**	**307**	*e*P	**P**	**10 22 55.9**	**+1.1**
SRO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SRO	**Srobarova**	**51.32**	**307**	*e*P	**P**	**10 22 55.9**	**+1.1**
MAUC	**Maruska**	**51.34**	**309**	*e*P	**P**	**10 22 55.8**	**+0.8**
MORC	**Moravsky Berou**	**51.45**	**309**	P	**P**	**10 22 56.3**	**+0.5**
MORC				pmax	pmax		
	comp=Z,12nm,1.1s						
MORC	**Moravsky Berou**	**51.45**	**309**	P	**P**	**10 22 56.3**	**+0.5**
MORC				IAmb	IAmb	10 22 57.4	
	comp=Z,12nm,1.1s						
MORC	**Moravsky Berou**	**51.45**	**309**	*e*P	**P**	**10 22 56.4**	**+0.6**
JAVC	**Velka Javorina**	**51.54**	**308**	*e*P	**P**	**10 22 58.1**	**+1.6**
SMOL	**Smolenice**	**51.76**	**308**	*e*P	**P**	**10 22 58.9**	**+0.8**
SMOL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SMOL	**Smolenice**	**51.76**	**308**	*e*P	**P**	**10 22 58.9**	**+0.8**
KOVH	**Kovagotottos**	**51.84**	**305**	P	**P**	**10 22 58.0**	**-0.7**
KRLC	**Kraliky**	**51.88**	**310**	*e*P	**P**	**10 22 59.4**	**+0.4**
KRLC	**Kraliky**	**51.88**	**310**	*e*P	**P**	**10 22 59.4**	**+0.4**
MODS	**Modra-Piesok**	**51.89**	**308**	*e*P	**P**	**10 22 59.7**	**+0.6**
MODS				pmax	pmax		
	comp=Z,12nm,1.1s						
MODS	**Modra-Piesok**	**51.89**	**308**	*e*P	**P**	**10 22 59.7**	**+0.6**
MPLH	**Magyarpolny**	**51.97**	**306**	P	**P**	**10 22 59.6**	**-0.1**
ZST	**Bratislava**	**52.04**	**307**	*e*P	**P**	**10 23 01.2**	**+1.0**
ZST	**Bratislava**	**52.04**	**307**	*e*P	**P**	**10 23 01.2**	**+1.0**
DPC	**Dobruska-Polom**	**52.11**	**310**	*e*P	**P**	**10 23 01.0**	**+0.2**
DPC	**Dobruska-Polom**	**52.11**	**310**	*e*P	**P**	**10 23 01.0**	**+0.2**
OSTC	**Ostas**	**52.14**	**310**	*e*P	**P**	**10 23 01.7**	**+0.8**
VRAC	**Vranov**	**52.14**	**309**	LR	LR	10 50 23.1	
	comp=Z,50nm,18.4s,baz=64,slow=42						
VRAC	**Vranov**	**52.14**	**309**	*e*P	**P**	**10 23 01.6**	**+0.6**
PETK	**Petropavlovsk-**	**52.19**	**46**	LR	LR	10 45 35.3	
	comp=Z,67nm,18.3s,baz=294,slow=36						
HFS	**Hagfors**	**52.22**	**323**	LR	LR	10 46 49.2	
	comp=Z,140nm,18.1s,baz=84,slow=38						
CHVC	**Chvalec**	**52.24**	**311**	*e*P	**P**	**10 23 01.5**	**-0.2**
UPC	**Upice**	**52.28**	**310**	*e*P	**P**	**10 23 02.5**	**+0.6**
UPC	**Upice**	**52.28**	**310**	*e*P	**P**	**10 23 02.5**	**+0.6**
KRUC	**Moravsky**	**52.32**	**309**	*e*P	**P**	**10 23 03.0**	**+0.7**
SOP	**Sopron**	**52.51**	**307**	P	**P**	**10 23 04.2**	**+0.5**
RONA	**Rosalia, Austr**	**52.68**	**307**	*e*P	**P**	**10 23 05.1**	**+0.1**
	comp=Z,5.7nm,0.9s						
CONA	**Conrad Observa**	**52.91**	**307**	*e*P	**P**	**10 23 07.1**	**+0.3**
	comp=Z,16nm,1.0s,SNR=11						
NC405	**NORSAR Array S**	**53.09**	**324**	P	**P**	**10 23 07.6**	**-0.2**
ARSA	**Arzberg**	**53.29**	**307**	*e*P	**P**	**10 23 09.5**	**0.0**
	comp=Z,5.3nm,1.0s,SNR=5.1						
PRU	**Pruhonice**	**53.31**	**310**	*e*P	**P**	**10 23 09.8**	**+0.3**
PRU	**Pruhonice**	**53.31**	**310**	*e*P	**P**	**10 23 09.8**	**+0.3**
NB2	**NORSAR Subarra**	**53.34**	**324**	P	**P**	**10 23 09.3**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=83,slow=7.4						
NOA	**NORSAR Array B**	**53.34**	**324**	P	**P**	**10 23 09.0**	**-0.7**
	comp=Z,6.6nm,0.8s,baz=84,slow=7.3,SNR=32						
NOA				LR	LR	10 47 15.3	
	comp=Z,109nm,19.3s,baz=85,slow=38						
	comp=Z,6.6nm,0.8s						
NOA	**NORSAR Array B**	**53.34**	**324**	P	**P**	**10 23 09.0**	**-0.7**
BRG	**Berggiesshubel**	**53.49**	**311**	*e*P	**P**	**10 23 11.5**	**+0.6**
BRG				Amp		10 23 12.4	
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**53.49**	**311**	*e*P	**P**	**10 23 11.5**	**+0.6**
BRG				pmax	pmax		
	comp=Z,12nm,1.2s						
GROS	**Grobnik**	**53.50**	**306**	*i* P	**P**	**10 23 11.0**	**-0.1**
NC204	**NORSAR Array S**	**53.53**	**324**	P	**P**	**10 23 10.4**	**-0.7**
PERS	**Pernice**	**53.71**	**306**	*i* P	**P**	**10 23 12.8**	**+0.1**
CKRC	**Cesky Krumlov**	**53.72**	**309**	*e*P	**P**	**10 23 13.3**	**+0.7**
SOKA	**Soboth**	**53.76**	**306**	*e*P	**P**	**10 23 12.8**	**-0.2**
	comp=Z,13nm,0.9s,SNR=7.3						
MOA	**Molln**	**53.98**	**308**	*e*P	**P**	**10 23 14.3**	**-0.2**
	comp=Z,6.5nm,0.9s						
CLL	**Collm**	**53.98**	**312**	⇓*i*P	**P**	**10 23 14.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL	**Collm**	**53.98**	**312**	⇓*i*P	**P**	**10 23 14.0**	**-0.4**
	comp=Z,10.0nm,1.2s						
CLL				*e*PP	**PP**	**10 25 18.0**	**+2.5**
GEC2	**GERESS Array S**	**54.10**	**309**	P	**P**	**10 23 16.4**	**+0.8**
GERES	**GERESS Array B**	**54.10**	**309**	P	**P**	**10 23 16.3**	**+0.8**
	comp=Z,8.2nm,0.8s,baz=79,slow=7.5,SNR=36						
GERES				LR	LR	10 48 42.2	
	comp=Z,70nm,18.6s,baz=87,slow=39						
	comp=Z,8.2nm,0.8s						
GERES	**GERESS Array B**	**54.10**	**309**	P	**P**	**10 23 16.0**	**+0.5**
GERES	**GERESS Array B**	**54.10**	**309**	P	**P**	**10 23 15.9**	**+0.5**
KHC	**Kasperske Hory**	**54.11**	**309**	*e*P	**P**	**10 23 15.9**	**+0.4**
KHC	**Kasperske Hory**	**54.11**	**309**	P	**P**	**10 23 15.7**	**+0.2**
KHC				IAmb	IAmb	10 23 17.0	
	comp=Z,9.8nm,1.4s						
KHC	**Kasperske Hory**	**54.11**	**309**	*e*P	**P**	**10 23 15.9**	**+0.4**
OBKA	**Obir**	**54.12**	**306**	*e*P	**P**	**10 23 15.8**	**+0.1**
	comp=Z,5.1nm,1.1s						
VNDS	**Vrh nad Dolski**	**54.13**	**305**	*i* P	**P**	**10 23 15.8**	**+0.2**
BIOA	**Bad Ischl, Aus**	**54.42**	**307**	*e*P	**P**	**10 23 17.7**	**-0.1**
	comp=Z,4.5nm,0.8s						
BILL	**Bilibino**	**54.49**	**27**	⇓*i*P	**P**	**10 23 18.4**	**+0.5**
BILL				*PP	**sP**	**10 23 26.0**	**+0.9**
BILL						10 24 19.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,71nm,16.0s						
BILL	**Bilibino**	**54.49**	**27**	P	**P**	**10 23 17.4**	**-0.5**
BILL				IAmb	IAmb	10 23 19.4	
	comp=Z,9.9nm,1.3s						
KBA	**Koelnbreinsper**	**54.77**	**307**	*e*P	**P**	**10 23 20.0**	**-0.5**
	comp=Z,7.9nm,1.2s						
ABTA	**Abfaltersbach**	**55.41**	**307**	*e*P	**P**	**10 23 23.8**	**-1.2**
	comp=Z,2.9nm,0.9s						
STAL	**STALIGIAL**	**55.42**	**306**	P	**P**	**10 23 24.2**	**-0.8**
STAL				IAmb	IAmb	10 23 25.5	
	comp=Z,8.6nm,1.0s						
GRA1	**Grafenberg Arr**	**55.47**	**310**	P	**P**	**10 23 25.7**	**+0.4**
GRF	**Grafenberg Arr**	**55.47**	**310**	P	**P**	**10 23 25.7**	**+0.4**
GRF				pmax	pmax		
	comp=Z,33nm,1.4s						
GRFO	**Grafenberg**	**55.47**	**310**	P	**P**	**10 23 26.2**	**+0.9**
GRFO				pmax	pmax		
	comp=Z,29nm,1.3s						
GRFO	**Grafenberg**	**55.47**	**310**	P	**P**	**10 23 26.2**	**+0.9**
WTTA	**Wattenberg**	**55.85**	**307**	*e*P	**P**	**10 23 27.6**	**-0.7**
	comp=Z,9.5nm,0.9s,SNR=6.1						
WATA	**Walderalm**	**55.87**	**307**	*e*P	**P**	**10 23 27.8**	**-0.6**
	comp=Z,8.4nm,1.0s						
SQTA	**Sankt Quirin**	**56.14**	**307**	*e*P	**P**	**10 23 29.5**	**-0.8**
	comp=Z,8.8nm,0.8s,SNR=5.0						
NRCA	**Norcia**	**56.15**	**302**	P	**P**	**10 23 30.1**	**-0.2**
NRCA				IAmb	IAmb	10 23 31.3	
	comp=Z,5.8nm,0.8s						
MOTA	**Moosalm**	**56.17**	**308**	*e*P	**P**	**10 23 29.7**	**-0.8**
	comp=Z,9.9nm,1.1s,SNR=5.4						
CTI	**Castel Tesino**	**56.18**	**306**	P	**P**	**10 23 30.1**	**-0.5**
CTI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTI	**Castel Tesino**	**56.18**	**306**	P	**P**	**10 23 30.1**	**-0.5**
CTI				IAmb	IAmb	10 23 30.7	
	comp=Z,6.9nm,0.9s						
RETA	**Reutte**	**56.35**	**308**	*e*P	**P**	**10 23 31.2**	**-0.5**
	comp=Z,8.7nm,0.9s						
TEOL	**Teolo**	**56.37**	**305**	P	**P**	**10 23 31.8**	**0.0**
MURB	**Monte Urbino**	**56.43**	**303**	P	**P**	**10 23 32.5**	**+0.2**
FETA	**Feichten**	**56.51**	**307**	*e*P	**P**	**10 23 32.3**	**-0.7**
	comp=Z,5.1nm,0.8s,SNR=5.9						
BATI	**Baumata**	**56.87**	**135**	LR	LR	10 53 50.6	
	comp=Z,44nm,18.2s,baz=326,slow=42						
DAVA	**Damuels**	**56.99**	**308**	*e*P	**P**	**10 23 35.4**	**-0.9**
	comp=Z,7.2nm,0.9s						
STU	**Stuttgart**	**56.99**	**310**	P	**P**	**10 23 36.4**	**+0.2**
STU				pmax	pmax		
	comp=Z,24nm,1.3s						
STU	**Stuttgart**	**56.99**	**310**	P	**P**	**10 23 36.4**	**+0.2**
DAVOX	**Davos/Dischmat**	**57.14**	**307**	LR	LR	10 50 13.1	
	comp=Z,74nm,18.1s,baz=81,slow=38						
OSSC	**Osservatorio P**	**57.23**	**303**	P	**P**	**10 23 37.5**	**-0.4**
OSSC				IAmb	IAmb	10 23 38.4	
	comp=Z,7.5nm,1.0s						
TUE	**Stuetta**	**57.58**	**307**	P	**P**	**10 23 40.1**	**-0.5**
TUE				IAmb	IAmb	10 23 52.4	
	comp=Z,9.1nm,1.1s						
KMBO	**Kilima Mbogo**	**58.27**	**243**	P	**P**	**10 23 44.8**	**-1.1**
	comp=Z,2.7nm,0.5s,baz=30,slow=16,SNR=2.1						
KMBO				LR	LR	10 47 27.0	
	comp=Z,46nm,21.8s,baz=95,slow=35						
	comp=Z,2.7nm,0.5s						
ECH	**Echery**	**58.45**	**310**	P	**P**	**10 23 46.1**	**-0.4**
ECH				pmax	pmax		
	comp=Z,13nm,1.2s						
ECH	**Echery**	**58.45**	**310**	P	**P**	**10 23 46.0**	**-0.4**
ECH				IAmb	IAmb	10 23 47.3	
	comp=Z,13nm,1.2s						
WLF	**Walferdange**	**58.63**	**311**	*d*P	**P**	**10 23 47.9**	**+0.2**
BCLA	**Clavier**	**58.92**	**312**	*d*P	**P**	**10 23 50.1**	**+0.5**
BCLA				*d*PcP	**PcP**	**10 24 37.9**	**-1.0**
SENIN	**Lac Senin/Sane**	**58.96**	**307**	P	**P**	**10 23 50.2**	**0.0**
SENIN				IAmb	IAmb	10 23 51.7	
	comp=Z,4.8nm,0.8s						
RCHB	**Rochefort**	**59.05**	**312**	*d*P	**P**	**10 23 51.0**	**+0.4**
BGES	**Gesves**	**59.06**	**312**	*d*P	**P**	**10 23 50.2**	**-0.4**
BMRD	**Maredsous**	**59.28**	**312**	*d*P	**P**	**10 23 52.2**	**+0.1**
DOU	**Dourbes**	**59.45**	**312**	*d*P	**P**	**10 23 53.7**	**+0.3**
BNI	**Bardonecchia**	**59.81**	**306**	P	**P**	**10 23 55.7**	**-0.4**
BNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BNI	**Bardonecchia**	**59.81**	**306**	P	**P**	**10 23 55.7**	**-0.4**
BNI				IAmb	IAmb	10 23 57.4	
	comp=Z,7.9nm,0.9s						
SHEM	**Shemya Is, Ala**	**61.85**	**44**	LR	LR	10 52 33.0	
	comp=Z,55nm,19.5s,baz=144,slow=38						
EKA	**Eskdalemuir Ar**	**62.10**	**320**	LR	LR	10 52 36.6	
	comp=Z,85nm,20.4s,baz=86,slow=38						
MBAR	**Mbarara**	**62.82**	**248**	*ce*P	**P**	**10 24 17.3**	**+0.4**
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MBAR	**Mbarara**	**62.82**	**248**	P	**P**	**10 24 16.7**	**-0.2**
KNRA	**Kununurra**	**64.20**	**134**	P	**P**	**10 24 24.2**	**-1.5**
PSA00	**Pilbara Seismi**	**64.32**	**145**	P	**P**	**10 24 25.9**	**-0.4**
PSA00				IAmb	IAmb	10 24 35.2	
	comp=Z,6.3nm,1.3s						
FITZ	**Fitzroy Crossi**	**64.36**	**138**	P	**P**	**10 24 25.9**	**-0.7**
FITZ				IAmb	IAmb	10 24 48.1	
	comp=Z,14nm,1.4s						
EUNU	**Eureka**	**65.38**	**359**	P	**P**	**10 24 32.7**	**0.0**
SUMG	**Summit**	**66.51**	**344**	P	**P**	**10 24 39.9**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,16nm,1.3s						
SUMG	**Summit**	**66.51**	**344**	P	**P**	**10 24 39.9**	**-0.5**
TOLK	**Toolik Lake Re**	**68.92**	**19**	P	**P**	**10 24 55.2**	**0.0**
ESDC	**Sonseca Array**	**69.20**	**304**	P	**P**	**10 24 56.8**	**-0.8**
	comp=Z,3.1nm,0.9s,baz=53,slow=6.2,SNR=12						
ESDC				LR	LR	10 57 12.7	
	comp=Z,35nm,19.1s,baz=28,slow=38						
	comp=Z,3.1nm,0.9s						

ESDC	Sonseca Array	69.20	304	P	P	10 24 56.7	-0.8
MORW	Morawa	69.31	153	P	P	10 24 57.6	-0.5
IMAR	Indian Mountai	69.48	22	P	P	10 24 58.2	-0.4
COLD	Coldfoot	69.71	20	P	P	10 25 00.3	+0.2
COLD				IAmb	IAmb	10 25 01.0	
	comp=Z,5.4nm,0.9s						
H21K	Melozitna Rive	69.98	22	P	P	10 25 02.1	+0.3
H21K				IAmb	IAmb	10 25 02.9	
	comp=Z,11nm,1.4s						
J20K	Nowinta River	70.52	24	P	P	10 25 05.1	0.0
J20K				IAmb	IAmb	10 25 06.2	
	comp=Z,6.8nm,0.9s						
WB0	Warramunga Arr	70.75	132	P	P	10 25 06.8	-0.3
WRA	Warramunga Arr	70.84	132	P	P	10 25 07.3	-0.4
	comp=Z,4.7nm,0.9s,baz=325,slow=6.7,SNR=29						
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	70.84	132	P	P	10 25 06.5	-1.1
WRAB	Tennant Creek	70.84	132	*ce*P	P	10 25 08.2	+0.6
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WRAB	Tennant Creek	70.84	132	P	P	10 25 07.7	0.0
WB2	Warramunga Arr	70.85	132	P	P	10 25 07.7	0.0
WB2				IAmb	IAmb	10 25 10.0	
	comp=Z,16nm,1.4s						
H23K	Yukon River	70.87	21	P	P	10 25 07.0	-0.3
H23K				IAmb	IAmb	10 25 08.6	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	70.98	132	P	P	10 25 07.5	-0.9
WR0				IAmb	IAmb	10 25 28.2	
	comp=Z,10nm,1.4s						
K20K	Telida	71.08	25	P	P	10 25 09.3	+0.8
K20K				IAmb	IAmb	10 25 09.7	
	comp=Z,5.7nm,0.9s						
BMAR	Burnt Mountain	71.11	19	P	P	10 25 08.7	0.0
A36M	Sachs Harbour	71.25	10	P	P	10 25 09.0	-0.4
A36M				IAmb	IAmb	10 25 10.1	
	comp=Z,16nm,1.3s						
I23K	Minto, Yukon-K	71.39	22	P	P	10 25 09.9	-0.4
I23K				IAmb	IAmb	10 25 11.5	
	comp=Z,7.1nm,1.2s						
L19K	White Mountain	71.57	26	P	P	10 25 11.9	+0.3
MDM	Murphy Dome	71.87	21	P	P	10 25 12.7	-0.6
NEA2	Nenana	71.87	22	P	P	10 25 13.2	0.0
NEA2				IAmb	IAmb	10 25 13.9	
	comp=Z,7.7nm,0.9s						
TCOL	CIGO, UAF Yank	72.04	21	P	P	10 25 13.8	-0.4
TCOL				IAmb	IAmb	10 25 14.9	
	comp=Z,6.3nm,0.8s						
COLA	College	72.04	21	*i* P	P	10 25 14.3	+0.1
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IL31		72.40	21	P	P	10 25 15.9	-0.5
IL31				IAmb	IAmb	10 25 16.3	
	comp=Z,4.2nm,0.8s						
ILAR	Eielson Array	72.40	21	P	P	10 25 15.4	-1.0
	comp=Z,3.5nm,0.9s,baz=312,slow=5.0,SNR=32						
	comp=Z,3.5nm,0.9s						
INK	Inuvik	73.00	14	P	P	10 25 18.3	-1.6
	comp=Z,1.3nm,1.0s,baz=310,slow=10,SNR=3.3						
	comp=Z,1.3nm,1.0s						
INK	Inuvik	73.00	14	P	P	10 25 19.1	-0.8
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
INK	Inuvik	73.00	14	P	P	10 25 19.1	-0.8
INK				IAmb	IAmb	10 25 24.1	
	comp=Z,6.7nm,1.5s						
ASAR	Alice Springs	73.44	135	P	P	10 25 22.8	-0.3
	comp=Z,4.0nm,1.0s,baz=314,slow=6.1,SNR=22						
	comp=Z,4.0nm,1.0s						
ASAR	Alice Springs	73.44	135	P	P	10 25 23.3	+0.2
SCRK	Sand Creek	73.84	21	P	P	10 25 24.6	-0.6
SCRK				IAmb	IAmb	10 25 25.5	
	comp=Z,8.6nm,1.0s						
EGAK	Eagle	74.03	19	P	P	10 25 25.9	-0.1
EGAK				IAmb	IAmb	10 25 26.6	
	comp=Z,5.4nm,0.9s						
K27K	Chicken	74.35	20	P	P	10 25 27.8	-0.2
K27K				IAmb	IAmb	10 25 29.2	
	comp=Z,8.4nm,0.9s						
DAWY	Dawson	75.07	19	P	P	10 25 30.6	-1.5
L27K	Beaver Creek,	75.17	21	P	P	10 25 32.7	-0.1
L27K				IAmb	IAmb	10 25 34.1	
	comp=Z,7.9nm,1.0s						
BCAR	Beaver Creek A	75.18	21	P	P	10 25 33.0	+0.2
M31M	Drury Creek, Y	77.91	18	P	P	10 25 47.8	-0.5
M31M				IAmb	IAmb	10 25 49.1	
	comp=Z,7.0nm,1.1s						
HYT	Haines Junctio	78.20	20	P	P	10 25 49.9	-0.1
HYT				IAmb	IAmb	10 25 51.1	
	comp=Z,5.6nm,0.8s						
TORD	Torodi Ar. Bea	78.45	278	P	P	10 25 51.0	-1.1
	comp=Z,2.3nm,0.6s,baz=51,slow=5.0,SNR=22						
	comp=Z,2.3nm,0.6s						
FRB	Frobisher Bay	79.87	349	LR	LR	11 05 57.4	
	comp=Z,52nm,18.5s,baz=249,slow=39						
YKA	Yellowknife Ar	81.61	10	P	P	10 26 06.8	-1.5
	comp=Z,1.3nm,0.8s,baz=337,slow=5.2,SNR=24						
YKA				LR	LR	11 06 47.0	
	comp=Z,55nm,18.0s,baz=255,slow=39						
	comp=Z,1.3nm,0.8s						
DLBC	Dease Lake	82.26	18	P	P	10 26 11.7	-0.3
	comp=Z,5.0nm,1.2s,baz=326,slow=10.0,SNR=3.1						
DLBC				LR	LR	11 07 47.5	
	comp=Z,74nm,19.1s,baz=162,slow=39						
	comp=Z,5.0nm,1.2s						
KOWA	Kowa	82.34	282	P	P	10 26 12.0	-0.9
KOWA				IAmb	IAmb	10 26 15.5	
	comp=Z,4.3nm,0.8s						
STKA	Stephens Creek	84.08	135	P	P	10 26 20.4	-1.0
	comp=Z,3.6nm,0.8s,baz=12,slow=8.0,SNR=3.4						
	comp=Z,3.6nm,0.8s						
EIDS	Eidsvold	85.49	125	P	P	10 26 29.4	+0.7
DBIC	Dimbokro	87.40	276	P	P	10 26 36.9	-1.6
	comp=Z,11nm,0.9s,baz=54,slow=3.4,SNR=7.8						
DBIC				LR	LR	11 09 55.5	
	comp=Z,63nm,19.2s,baz=44,slow=38						
	comp=Z,11nm,0.9s						
DBIC	Dimbokro	87.40	276	P	P	10 26 38.3	-0.1
DBIC				pmax	pmax		
	comp=Z,12nm,1.0s						
DBIC	Dimbokro	87.40	276	P	P	10 26 38.3	-0.1
KIC	Kosan Boka	87.48	276	*e*P	P	10 26 38.2	-0.6
	comp=Z,8.7nm,0.7s						
TIC	Toumodi	87.54	276	*e*P	P	10 26 38.4	-0.8
LIC	Lamto	87.79	276	*e*P	P	10 26 40.1	-0.2
	comp=Z,17nm,1.5s						
CPUP	Villa Florida	147.91	275	PKPbc	PKPdf	10 33 32.9	-0.3
	comp=Z,5.6nm,0.8s,baz=68,slow=2.4,SNR=10						
CPUP	Villa Florida	147.91	275	PKIKP	PKPdf	10 33 32.3	-0.9
CPUP	Villa Florida	147.91	275	PKPdf	PKPdf	10 33 32.2	-0.9
LPAZ	La Paz	150.81	303	PKP	PKPdf	10 33 38.3	-0.6
	comp=Z,1.6nm,1.0s,baz=3.5,slow=12,SNR=2.9						
LPAZ				PKPbc	pPKPdf	10 33 43.2	-1.3
	comp=Z,2.5nm,0.9s,baz=24,slow=8.5,SNR=8.1						
LPAZ	La Paz	150.81	303	PKIKP	PKPdf	10 33 37.3	-1.5
LPAZ						10 33 44.0	
LPAZ	La Paz	150.81	303		PKPdf	10 33 37.3	-1.5
LPAZ					pPKPdf	10 33 44.0	-0.5
PLCA	Paso Flores	160.95	245	PKP	PKPdf	10 33 51.0	+0.1
	comp=Z,3.6nm,1.0s,baz=135,slow=1.0,SNR=6.5						
PLCA	Paso Flores	160.95	245	PKIKP	PKPdf	10 33 51.0	+0.1

TUL ***08*** *10:30:21.9±1.1, 36°.83N±0°.01×98°.30W±0°.01, h4^{km}±7^{km}, ML2.5, mb_Lg2.3/30(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=127.0*

NEIC 08 10:30:22.1±1.0**, 36°.82N**±0°.01×**98°.30W**±0°.02**, h6**^{km}±6^{km}**, Error ellipse: s-maj=2.6km s-min=1.4km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.72	232		Pg	10 30 35.6	-0.3
U32A				Sg	Sg	10 30 42.7	-2.6
T35A	Sooner Cattle	1.44	86		Pn	10 30 48.5	-0.1
OKCFA	Oklahoma City	1.56	154		Pn	10 30 50.5	+0.1
OKCSW	OKLAHOMA CITY	1.58	154		Pn	10 30 50.5	-0.1
R32A	Long Quarter,	1.63	348		Pn	10 30 51.5	+0.2
FNO	Franklin	1.72	155		Pn	10 30 53.3	+0.8
WMOK	Wichita Mounta	2.12	191	Pn	Pn	10 30 58.8	+0.8
WMOK	Wichita Mounta	2.12	191	IAmb_Lg		10 31 31.1	
	comp=Z,14nm,0.8s						
TUL1	Leonard	2.22	113		Pn	10 31 00.6	+1.2
TUL1				IAmb_Lg		10 31 34.5	
	comp=Z,24nm,1.1s						
X34A	Smith Ranch, M	2.25	170		Pb	10 31 01.4	-1.6
CBKS	Cedar Bluff	2.29	331		Pn	10 31 01.7	+1.3
KSU1	Kansas State U	2.64	30	Pn	Pn	10 31 04.5	-0.6
KSU1				IAmb_Lg		10 31 50.5	
	comp=Z,9.8nm,0.8s						
X37A	Clayton	3.26	132		Pn	10 31 12.6	-1.1
X37A				IAmb_Lg		10 32 08.2	
	comp=Z,7.6nm,0.7s						
AMTX	Amarillo	3.36	236		Pn	10 31 14.2	-1.0
AMTX				IAmb_Lg		10 32 14.8	
	comp=Z,9.0nm,0.9s						
HHAR	Hobbs	3.55	97		Pn	10 31 18.0	+0.3
HHAR				IAmb_Lg		10 32 13.0	
	comp=Z,5.6nm,0.7s						
W39A	Magazine	4.00	113		Pn	10 31 24.7	+0.8
W39A				IAmb_Lg		10 32 33.3	
	comp=Z,12nm,1.1s						
KSCO	Kaye Shedlock'	4.06	304		Pn	10 31 25.0	+0.2
S39A	Bolivar	4.06	76	Pn	Pn	10 31 23.9	-0.8
ABTX	Abilene, Hawle	4.33	195	Pn	Pn	10 31 28.4	-0.1
U40A	Yellville	4.41	94		Pn	10 31 27.8	-1.6
U40A				IAmb_Lg		10 32 52.1	
	comp=Z,4.5nm,0.8s						
MIAR	Mount Ida	4.46	119	Pn	Pn	10 31 30.6	+0.3
MIAR				IAmb_Lg		10 32 44.8	
	comp=Z,4.8nm,0.8s						
N35A	Tabor	4.53	26		Pn	10 31 30.6	-0.6
BGNE	Belgrade	4.58	1	Pn	Pn	10 31 32.5	+0.7
MSTX	Muleshoe	4.63	233		Pn	10 31 33.4	+0.7
MSTX				IAmb_Lg		10 32 51.2	
	comp=Z,6.3nm,0.9s						
T25A	Trinidad	4.91	276	Pn	Pn	10 31 35.8	-0.7
R40A	Maddies Statio	5.01	71	Pn	Pn	10 31 36.1	-1.6
X40A	Basin Creek Fa	5.02	116	Pn	Pn	10 31 39.1	+1.2
X40A				IAmb_Lg		10 33 08.3	
	comp=Z,3.8nm,0.8s						
FCAR	Ozark Folk Cen	5.07	99	Pn	Pn	10 31 39.3	+0.8
WHAR	Wooly Hollow	5.10	106	Pn	Pn	10 31 39.3	+0.3
W41B	Gary Mavity, V	5.17	107	Pn	Pn	10 31 39.9	-0.1
W41B				IAmb_Lg		10 33 03.6	
	comp=Z,4.7nm,1.0s						
N38A	Joes South For	5.60	43		Pn	10 31 45.7	-0.2
P40A	Paris	5.62	59	Pn	Pn	10 31 44.9	-1.2
CCM	Cathedral Cave	5.75	76	Pn	Pn	10 31 46.9	-1.0
LCAR	Lake Charles	5.81	95	Pn	Pn	10 31 48.8	+0.1
SDCO	Great Sand Dun	5.82	281	Pn	Pn	10 31 47.7	-1.5
PBMO	Poplar Bluff	6.31	88	IAmb_Lg		10 33 44.1	
	comp=Z,5.0nm,0.7s						
FVM	French Village	6.37	77	Pn	Pn	10 31 56.1	-0.4
ISCO	Idaho Springs	6.47	300	Pn	Pn	10 31 56.2	-1.9
ANMO	Albuquerque	6.88	257	Pn	Pn	10 32 03.8	+0.1
ECSD	EROS Data Cent	7.02	10	Pn	Pn	10 32 04.8	-0.6
MNTX	Cornudas Mount	7.78	231	IAmb_Lg		10 34 39.0	
	comp=Z,2.1nm,0.7s						
I40A	Norwalk	9.17	37	IAmb_Lg		10 35 30.2	
	comp=Z,3.8nm,1.1s						

IDC ***08*** *10:33:06.5±0.5, 32°.60S×71°.41W, h0^{km}, mb4.3/15, mbtmp4.3/17, ML3.9/2, MS3.6/10, Error ellipse: s-maj=24.7km s-min=13.7km az=86.0*

SJA ***08*** *10:33:10.4±0.8, 32°.72S×71°.57W, h11^{km}±3^{km}, ML4.4, MW4.1*

VAO ***08*** *10:33:11.5±0.7, 32°.81S×71°.75W, h57^{km}±6^{km}, mb4.5*

NEIC ***08*** *10:33:12.5, 32°.75S×71°.49W, h43^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.07; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-2.81; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.26; $M_{\phi r}$-3.18; Fault plane solution: $M_0$4.35000×10^{15} NP1:ϕ_s178.96000°, δ68.62000°, λ93.07000°. NP2:ϕ_s350.60000°, δ21.59000°, λ82.21000°. Principal axes: T 4.4663, Plg66.0000°, Azm94.0000°; N -0.2510, Plg3.0000°, Azm358.0000°; P -4.2153, Plg24.0000°, Azm267.0000°;*

NEIC ***08*** *10:33:12.2±1.5, 32°.76S±0°.04×71°.49W±0°.08, h33^{km}±4^{km}, mb4.7/72, Mwr4.4/50, ML4.6(GUC) Error ellipse: s-maj=9.9km s-min=6.0km az=77.0*

GUC ***08*** *10:33:12.4±0.7, 32°.77S×71°.53W, h39^{km}±2^{km}, ML4.6*

ISC 08 10:33:11.8±0.7**, 32°.72S**±0°.03×**71°.62W**±0°.03**, h34**^{km}±2^{km}**, n234,** σ1**^{s}77**/261**, mb4.6**/42**, MS3.7**/7**, 2C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	0.31	185	Pg	Pb	10 33 19.5	-0.3
VA01				Sg	Sb	10 33 24.8	-0.4
VA01	Torpederas	0.31	185	⇑ *i*P	Pb	10 33 19.6	-0.1
VA01				*i* S	Sb	10 33 24.9	-0.2
VA01				IAML		10 33 25.6	
	comp=E,80µm,0.3s						
VA01	Torpederas	0.31	185	*e*P	Pn	10 33 19.0	-0.8
ROC1	El Roble	0.57	117		Pn	10 33 20.2	-3.4
ROC1	El Roble	0.57	117	*e*P	Pn	10 33 20.2	-3.4
ROCH	El Roble	0.57	117	⇓ *i*P	Pn	10 33 22.8	-0.8
ROCH				*i* S	Sb	10 33 30.6	-1.3
ROCH				IAML		10 33 31.2	
	comp=N,104µm,0.3s						
MT02	Curacav	0.68	143		Pn	10 33 24.2	-0.8
MT02	Curacav	0.68	143	⇓ *i*P	Pn	10 33 24.4	-0.6
MT02				*i* S	Sn	10 33 32.8	-1.5
MT02				IAML		10 33 33.5	
	comp=N,66µm,0.2s						
MT02	Curacav	0.68	143	*e*P	Pn	10 33 23.9	-1.0
MT02				*e*S	Sn	10 33 32.8	-1.5
MT02				IAML		10 33 33.4	
	comp=Z,51µm,0.3s						
PEL	Peldehue	0.89	119		Pn	10 33 27.3	-0.7
PEL	Peldehue	0.89	119	*e*P	Pn	10 33 27.4	-0.5
PEL				*i* S	Sn	10 33 38.7	-1.1
PEL				IAML		10 33 40.0	
	comp=E,82µm,0.2s						
PEL	Peldehue	0.89	119	*e*P	Pn	10 33 27.0	-1.0
PEL				*e*S	Sn	10 33 39.4	-0.3
VA03	San Esteban	0.90	93		Pn	10 33 27.4	-0.8
VA03	San Esteban	0.90	93	*i* P	Pn	10 33 27.6	-0.6
VA03				*i* S	Sn	10 33 38.8	-1.2
VA03				IAML		10 33 39.7	
	comp=N,48µm,0.3s						
VA03	San Esteban	0.90	93	*e*P	Pn	10 33 27.0	-1.1
VA03				*e*P		10 33 27.3	
VA03				*e*S	Sn	10 33 39.7	-0.3
VA03				IAML		10 33 40.4	
	comp=Z,17µm,0.2s						
VA05	Santo Domingo	0.94	180	⇑ *i*P	Pn	10 33 28.7	+0.1
VA05				*i* S	Sn	10 33 40.6	-0.1
MT05	Renca	1.00	133	Pn	Pn	10 33 29.2	-0.2
MT05	Renca	1.00	133	⇓ *i*P	Pn	10 33 29.3	-0.2
MT05				*i* S	Sn	10 33 42.2	-0.3
MT05				IAML		10 33 43.1	
	comp=N,72µm,0.4s						
MT05	Renca	1.00	133	*e*P	Pn	10 33 29.0	-0.5
MT05				*e*S	Sn	10 33 42.9	+0.4
MT05				IAML		10 33 43.5	
	comp=Z,14µm,0.2s						
MT09	Talagante	1.18	154	⇓ *i*P	Pn	10 33 32.3	+0.2
MT09				*i* S	Sn	10 33 47.2	+0.1
MT09				IAML		10 33 52.9	
	comp=N,23µm,0.4s						
MT01	Popeta	1.19	165	⇓ *i*P	Pn	10 33 32.2	+0.2
MT01				*i* S	Sn	10 33 46.8	-0.2
MT01				IAML		10 33 48.7	
	comp=E,14µm,0.3s						
MT01	Popeta	1.19	165	*e*P	Pn	10 33 32.0	0.0
MT01				IAML		10 33 50.2	
	comp=Z,8µm,0.3s						
MT03	Universidad Ad	1.21	130	⇓ *i*P	Pn	10 33 32.5	+0.1
MT03				*i* S	Sn	10 33 47.3	-0.4
MT03				IAML		10 33 54.1	
	comp=E,27µm,0.2s						
MT03	Universidad Ad	1.21	130	*e*P	Pn	10 33 32.0	-0.4
MT03				*e*P		10 33 32.5	
MT03				*e*S	Sn	10 33 48.9	+1.2
MT03				IAML		10 33 52.7	
	comp=Z,14µm,0.2s						
FCH	Farellones	1.27	119	⇓ *i*P	Pn	10 33 33.3	-0.1
FCH				*i* S	Sn	10 33 49.1	-0.4
BO04	La Punta	1.52	147		Pn	10 33 37.7	+1.0
BO04	La Punta	1.52	147	⇓ *i*P	Pn	10 33 37.6	+1.0
BO04				*i* S	Sn	10 33 56.5	+1.2
BO04				IAML		10 33 59.4	
	comp=N,13µm,0.4s						
CO02	Combarbal	1.60	19		Pn	10 33 39.3	+1.5
CO02	Combarbal	1.60	19	*e*P	Pn	10 33 39.2	+1.5
CO02				*i* S	Sb	10 34 00.2	-0.5
CO02				IAML		10 34 01.9	
	comp=N,12µm,0.6s						
BO01	Tunca	1.73	165	*e*P	Pn	10 33 40.2	+0.8
BO01				*i* S	Sn	10 34 01.9	+1.5
BO01	Tunca	1.73	165	*e*P	Pn	10 33 40.2	+0.8
BO01				*e*S	Sb	10 34 03.5	-0.8
BO01				IAML		10 34 05.5	
	comp=Z,4µm,0.4s						
BO03	Pichilemu	1.80	189	⇓ *i*P	Pn	10 33 40.2	-0.2
BO03				IAML		10 34 11.5	
	comp=N,3µm,0.1s						
AUSP	Uspallata	1.95	76	*e*P	Pn	10 33 45.4	+2.7
CO06	Fray Jorge	2.04	360	*e*P	Pn	10 33 44.3	+0.7
RTLS	Leoncito	2.17	66	*e*P	Pb	10 33 49.0	-1.6
RTLS				*e*S	Sn	10 34 02.8	-8.8
RTLS				IAML		10 34 33.4	
	comp=Z,1µm,0.5s						
ARCO	CERRO ARCO	2.27	94	*e*P	Pb	10 33 50.8	-1.4
ARCO				*e*S	Sn	10 34 02.9	-11
ARCO				IAML		10 34 03.1	
	comp=Z,2µm,0.6s						
GO05	Huala	2.30	186	⇓ *i*P	Pn	10 33 47.2	-0.2
GO05				IAML		10 34 36.3	
	comp=N,2µm,0.4s						
ASAL	Salagasta	2.35	88	*e*P	Pn	10 33 50.8	+2.7
ASAL				*e*P		10 33 52.0	
ASAL				*e*S	Sb	10 34 24.6	+2.3
AAGR	Agrelo	2.38	100	*e*P	Pb	10 33 52.0	-2.0
AAGR				*e*S	Sn	10 34 06.1	-10
GO04	Tololo Observa	2.63	16		Pn	10 33 53.2	+1.1
RTCV	Cerro Valdivia	2.74	73	*e*P	Pb	10 33 57.8	-2.4
RTCV				*e*S	Sb	10 34 35.2	+1.8
ZON	Zonda	2.75	66	*e*P	Pn	10 33 57.0	+3.4
ZON				*e*S	Sn	10 34 30.6	+4.9
ZON				IAML		10 34 37.8	
	comp=Z,956nm,0.6s						
CO01	Juntas del Tor	3.02	26	*e*P	Pn	10 34 00.0	+2.5
CO01				*e*S	Sb	10 34 38.6	-3.1
CO01				IAML		10 34 47.7	
	comp=Z,727nm,1.6s						
ACCO	Cerro Coronel	3.04	46	*e*P	Pn	10 34 01.5	+3.7
ACCO				*e*S	Sb	10 34 44.1	+1.9
ML02	Panimavida	3.04	177		Pn	10 33 58.1	+0.6
AROD	Rodeo	3.13	36	*e*P	Pn	10 34 02.9	+3.8
AROD				*e*S	Sb	10 34 50.1	+5.2
ACDV	Cuesta del Vie	3.32	41	*e*P	Pn	10 34 05.0	+3.6
ACDV				*e*S	Sb	10 34 48.1	-1.9
ACDV				IAML		10 35 09.7	
	comp=Z,428nm,0.7s						
RFA	San Rafael	3.33	129	*e*P	Pn	10 34 04.1	+2.6
RFA				*e*P		10 34 04.6	
RFA				*e*S	Sn	10 34 45.1	+5.1
AVFE	Valle Fertil	4.10	61	*e*P	Pn	10 34 14.5	+2.4
AVFE				*e*S	Sn	10 35 04.1	+5.2
AVFE				*e*S		10 35 04.6	
AVFE				IAML		10 35 12.2	
	comp=Z,551nm,0.6s						
BI05	Punta Hualpn	4.22	197	Pn	Pn	10 34 12.5	-1.2
ACHE	Chepes	4.49	71	*e*P	Pn	10 34 19.0	+1.5
ACHE				*e*S	Sn	10 35 14.8	+6.2
AC04	Llanos de Chal	4.52	6	Pn	Pn	10 34 18.1	+0.2
APLL	PUNTA DE LOS L	4.92	63	*e*P	Pn	10 34 25.5	+2.1
APLL				*e*S	Sn	10 35 26.7	+7.5
MRA	San Martin	4.99	88	*e*P	Pn	10 34 26.0	+1.6
ACLC	CERRO LA CRUZ	5.17	52	*e*P	Pn	10 34 29.0	+2.0
ACLC				*e*S	Sn	10 35 29.6	+4.0
ACLC				IAML		10 35 36.4	
	comp=Z,886nm,0.8s						
H03N1	Juan Fernandez	6.17	261	T	T	10 41 10.7	
	baz=90,slow=74						
LC01	Cunco	6.17	182	Pn	Pn	10 34 40.0	-0.5
H03N3	Juan Fernandez	6.18	261	T	T	10 41 07.4	
	baz=90,slow=74						
H03N2	Juan Fernandez	6.18	261	T	T	10 41 08.7	
	baz=90,slow=74						
LR03	Panguipulli	6.93	185		Pn	10 34 49.5	-1.4
PLCA	Paso Flores	8.05	174	Pn	Pn	10 35 07.5	+1.2
	comp=Z,0.7nm,0.3s,baz=339,slow=12,SNR=41						
PLCA				Sn	Sn	10 36 41.5	+5.4
	comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=1.8						
PLCA				LR	LR	10 38 19.1	
	comp=Z,233nm,18.2s,baz=360,slow=38						
	comp=Z,1.9nm,0.3s						
PLCA	Paso Flores	8.05	174		Pn	10 35 06.9	+0.6
PLCA	Paso Flores	8.05	174	*e*P	Pn	10 35 05.4	-0.9
LL07	Hotel Espejo d	10.21	188		Pn	10 35 32.9	-2.9
LVC	Limon Verde	10.35	14	Pn	Pn	10 35 34.4	-3.7
	comp=Z,0.2nm,0.3s,baz=182,slow=7.2,SNR=1.4						
LVC				Sn	Sn	10 37 27.8	-5.4
	comp=Z,0.7nm,0.3s,baz=194,slow=4.7,SNR=3.9						
LVC				LR	LR	10 39 60.0	
	comp=Z,280nm,18.1s,baz=198,slow=41						
	comp=Z,0.7nm,0.3s						
LVC	Limon Verde	10.35	14	*e*P	Pn	10 35 38.5	+0.3
ITQB	Itaqui	13.19	81	Pn	Pn	10 36 15.5	-1.2
ITQB	Itaqui	13.19	81	*e*P	Pn	10 36 15.1	-1.5
CPUP	Villa Florida	13.97	67	Pn	Pn	10 36 26.0	-1.3
	comp=Z,0.1nm,0.3s,baz=225,slow=12,SNR=3.2						
CPUP				Sn	Sn	10 38 54.5	-6.6
	comp=Z,0.1nm,0.3s,baz=43,slow=18,SNR=1.9						
CPUP				LR	LR	10 42 14.2	
	comp=Z,194nm,20.9s,baz=239,slow=40						
CPUP	Villa Florida	13.97	67		Pn	10 36 24.2	-3.1
PLTB	Pedras Altas	15.28	91	P	Pn	10 36 42.4	-2.6
PLTB	Pedras Altas	15.28	91	*e*P	Pn	10 36 44.0	-0.9
CPSB	Cacapava Do Su	15.67	86	*e*P	Pn	10 36 50.5	+0.5
LPAZ	La Paz	16.66	12	Pn	Pn	10 37 03.5	+0.2
	comp=Z,0.2nm,0.3s,baz=194,slow=6.9,SNR=12						
LPAZ	La Paz	16.66	12	P	Pn	10 37 03.7	+0.4
LPAZ	La Paz	16.66	12	*e*P	Pn	10 37 03.7	+0.4
MCR1	Marechal Candi	17.48	66	*e*P	P	10 37 14.3	+0.5
FRBT	Francisco Belt	17.50	72	*e*P	Pn	10 37 14.0	+0.7
ITAB	Concordia	17.74	77	P	P	10 37 17.6	+1.0
ITAB	Concordia	17.74	77	*e*P	Pn	10 37 16.8	+0.7
CNLB	Canela	18.12	85	*e*P	Pn	10 37 21.1	+0.2
AQDB	Aquidauana	18.71	53	P	P	10 37 26.4	-1.1
AQDB	Aquidauana	18.71	53	*e*P	P	10 37 28.4	+0.9
PTGB	Pitanga	18.89	70	*e*P	P	10 37 29.4	-0.1
TRCB	Terra Rica	19.46	64	*e*P	P	10 37 35.2	-0.5
TER01	Tubaro-SC	19.79	84	*e*P	P	10 37 38.9	-0.4
PTLB	Pontes e Lacer	20.59	36	*e*P	P	10 37 47.9	0.0
TIJ01	Guaruva-PR	21.08	75	*e*P	P	10 37 52.4	-0.9
PCMB	Pacaembu	21.19	64	*e*P	P	10 37 52.8	-1.6
PP1B	Ponte de Pedra	21.31	49	*e*P	P	10 37 54.1	-1.7
DSPA	Despedida	21.36	175	P	P	10 37 57.7	+1.7
EFI	East Falkland	21.38	156	P	P	10 37 55.7	-0.5
EFI				IAmb	IAmb	10 38 13.1	
	comp=Z,37nm,0.8s						
FRTB	Fartura	21.56	70	*e*P	P	10 37 58.2	-0.2
SALV	Santo Antonio	22.11	45	*e*P	P	10 38 02.9	-1.3
USHA	Ushuaia	22.22	175	P	P	10 38 07.2	+2.0
	comp=Z,6.6nm,0.9s,baz=349,slow=11,SNR=2.0						
	comp=Z,6.6nm,0.9s						
VILB	Vilhena	22.28	31	*e*P	P	10 38 03.9	-2.2
ITRB	Iturama	23.00	61	*e*P	P	10 38 12.9	-0.9
SPB	Sao Paulo	23.14	73	*e*P	P	10 38 14.6	-0.5
NBRS	Nobres	23.32	42	*e*P	P	10 38 15.9	-1.0
BB19B	Bebedouro	23.58	66	*e*P	P	10 38 18.5	-1.1
RCLB	Rio Claro- Sao	23.64	70	*e*P	P	10 38 18.8	-1.3
DVLD	Doverlandia	23.78	52	*e*P	P	10 38 20.6	-0.9
VAO	Valinhos	23.80	72	*e*P	P	10 38 20.4	-1.2
CZSB	Cruzeiro do Su	24.88	357	*e*P	P	10 38 30.5	-1.0
PDRB	Porto dos Gac	25.07	36	*e*P	P	10 38 32.2	-0.9
BDFB	Brasilia	27.33	57	P	P	10 38 52.2	-1.5
	comp=Z,10nm,0.9s,baz=216,slow=8.3,SNR=14						
	comp=Z,10nm,0.9s						
BDFB	Brasilia	27.33	57	P	P	10 38 52.7	-1.1
BDFB				IAmb	IAmb	10 39 06.9	
	comp=Z,20nm,1.0s						
HOPE	Hope Point	32.86	142	P	P	10 39 42.6	+0.5
RPN	Rapa Nui	33.04	270	LR	LR	10 49 26.9	
	comp=Z,114nm,18.9s,baz=35,slow=30						
PCON	Cinco Dias	35.15	352	*e*P	P	10 40 05.2	+2.2
PRAC	Prado	36.36	354	*e*P	P	10 40 14.7	+1.9
ORTC	Ortega, Tolima	36.59	354	*e*P	P	10 40 16.9	+2.2
YOTC	Yotoco, Valle	36.77	352	*e*P	P	10 40 16.2	-0.2
CHIC	Chingaza	37.19	357	*e*P	P	10 40 18.9	-1.5
PLMC	San Jos del P	37.67	352	*e*P	P	10 40 24.2	+0.2
NORC	Norcasia	38.19	355	*e*P	P	10 40 30.1	+1.7
RUSC	La Rusia	38.42	358	*e*P	P	10 40 32.5	+1.8
CBOC	Ciudad Bolivar	38.59	353	*e*P	P	10 40 33.5	+1.6
HELC	Santa Helena	38.87	354	*e*P	P	10 40 34.8	+0.3

PTBC	PUERTO BERRIO,	39.13	356	eP	P	10 40 35.9	-0.3
ZARC	Zaragoza, Cauc	40.10	355	P	P	10 40 44.6	+0.4
ZARC				IAmb	IAmb	10 40 45.5	
	comp=Z,16nm,1.3s						
ZARC	Zaragoza, Cauc	40.10	355	eP	P	10 40 44.2	-0.1
SMLC	San Martn de	41.35	356	eP	P	10 40 52.1	-2.4
BAUV	El Baul	41.57	5	P	P	10 40 55.6	-0.8
BAUV				IAmb	IAmb	10 41 19.1	
	comp=Z,9.4nm,0.9s						
MDP	Montagnes des	41.71	29	LR	LR	11 00 43.1	
	comp=Z,91nm,18.1s,baz=187,slow=40						
SJCC	San Jacinto, C	42.51	355	P	P	10 41 05.2	+1.2
SJCC				IAmb	IAmb	10 41 07.5	
	comp=Z,17nm,1.1s						
SJCC	San Jacinto, C	42.51	355	eP	P	10 41 02.2	-1.9
RCBR	Riachuelo	42.67	59	LR	LR	10 59 52.8	
	comp=Z,140nm,21.4s,baz=331,slow=38						
SRBA	San Rafael, Bu	43.19	343	P	P	10 41 11.2	+1.5
URIC	Uribia, Colomb	44.17	359	P	P	10 41 16.1	-1.3
URIC				IAmb	IAmb	10 41 28.6	
	comp=Z,20nm,1.3s						
TOSP	Speyside	45.03	15	P	P	10 41 24.7	+0.4
SNAA	Sanae	52.64	158	P	P	10 42 21.9	-0.2
	comp=Z,4.4nm,0.8s,baz=196,slow=22,SNR=6.2						
	comp=Z,4.4nm,0.8s						
SNAA	Sanae	52.64	158	P	P	10 42 22.8	+0.6
SNAA				IAmb	IAmb	10 42 23.4	
	comp=Z,12nm,1.2s						
QSPA	South Pole Qui	57.52	180	P	P	10 42 58.5	+0.9
	comp=Z,9.2nm,0.9s,baz=150,slow=1.5,SNR=44						
	comp=Z,9.2nm,0.9s						
QSPA	South Pole Qui	57.52	180	P	P	10 42 58.9	+1.4
QSPA				IAmb	IAmb	10 42 59.4	
	comp=Z,8.4nm,0.8s						
VNDA	Vanda	65.43	191	P	P	10 43 52.0	+1.4
	comp=Z,0.8nm,0.7s,baz=169,slow=5.6,SNR=4.4						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	65.43	191	P	P	10 43 51.7	+1.1
Z47A	Carrollton	67.37	345	P	P	10 44 04.2	+0.8
Y49A	Blount Mountai	67.67	347	P	P	10 44 05.6	+0.3
Y49A				IAmb	IAmb	10 44 21.1	
	comp=Z,6.1nm,1.1s						
X51A	Calhoun	68.07	348	P	P	10 44 08.5	+0.6
FPAL	Fort Paine	68.18	348	P	P	10 44 08.4	-0.2
X48A	Hartselle	68.37	346	P	P	10 44 10.4	+0.7
X48A				IAmb	IAmb	10 44 10.9	
	comp=Z,8.2nm,0.8s						
W50A	Signal Mountai	68.77	348	P	P	10 44 12.8	+0.5
TXAR	Lajitas Array	68.79	330	P	P	10 44 12.4	-0.2
	comp=Z,0.6nm,0.5s,baz=155,slow=7.5,SNR=4.2						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	68.79	330	P	P	10 44 13.6	+1.0
TX31	Lajitas Ar. Si	68.79	330	P	P	10 44 13.3	+0.7
TX31				IAmb	IAmb	10 44 25.2	
	comp=Z,4.9nm,0.9s						
CPCT	Cooper Cave	68.88	349	P	P	10 44 13.6	+0.7
CPCT				IAmb	IAmb	10 44 13.8	
	comp=Z,5.3nm,0.8s						
SWET	Sewanee	68.90	347	P	P	10 44 13.6	+0.5
OXF	Oxford	68.93	344	P	P	10 44 13.3	+0.1
TKL	Tuckaleechee C	68.97	349	P	P	10 44 13.3	-0.1
	comp=Z,3.1nm,0.7s,baz=189,slow=9.4						
	comp=Z,3.1nm,0.7s						
TKL	Tuckaleechee C	68.97	349	P	P	10 44 13.0	-0.4
TKL				IAmb	IAmb	10 44 32.0	
	comp=Z,7.7nm,1.2s						
PLAL	Pickwick Lake	69.09	346	P	P	10 44 14.2	0.0
PLAL				IAmb	IAmb	10 44 15.0	
	comp=Z,6.7nm,0.8s						
V48A	Smith Brothers	69.57	347	P	P	10 44 17.8	+0.6
CLTN	Cedars of Leba	69.82	347	P	P	10 44 19.6	+0.9
CLTN				IAmb	IAmb	10 44 30.1	
	comp=Z,6.6nm,0.8s						
WVT	Waverly	70.15	346	P	P	10 44 20.8	+0.1
WHAR	Wooly Hollow	70.38	342	P	P	10 44 22.6	+0.6
W39A	Magazine	70.69	341	P	P	10 44 25.2	+1.2
LCAR	Lake Charles	70.83	343	P	P	10 44 25.3	+0.5
FCAR	Ozark Folk Cen	70.90	342	P	P	10 44 25.7	+0.4
U40A	Yellville	71.53	342	P	P	10 44 29.3	+0.2
U40A				IAmb	IAmb	10 44 30.2	
	comp=Z,5.2nm,0.8s						
MNTX	Cornudas Mount	71.57	330	P	P	10 44 29.5	0.0
HHAR	Hobbs	71.75	341	P	P	10 44 31.0	+0.6
HHAR				IAmb	IAmb	10 44 31.5	
	comp=Z,5.3nm,0.8s						
MSTX	Muleshoe	72.52	333	P	P	10 44 36.1	+0.9
MSTX				IAmb	IAmb	10 44 36.6	
	comp=Z,5.0nm,0.8s						
CCM	Cathedral Cave	72.75	344	P	P	10 44 36.7	+0.4
CCM				IAmb	IAmb	10 44 37.9	
	comp=Z,8.9nm,0.9s						
S39A	Bolivar	72.91	342	P	P	10 44 37.3	0.0
S39A				IAmb	IAmb	10 44 38.4	
	comp=Z,12nm,1.4s						
R40A	Maddies Statio	73.21	343	P	P	10 44 39.5	+0.4
121A	Cookes Peak, D	73.32	329	P	P	10 44 41.3	+1.2
121A				IAmb	IAmb	10 44 42.8	
	comp=Z,4.7nm,0.8s						
P43A	Skaggs, Pawnee	73.88	346	P	P	10 44 43.2	+0.2
P43A				IAmb	IAmb	10 44 43.6	
	comp=Z,7.9nm,0.8s						
LIC	Lamto	74.03	72	eP	P	10 44 58.4	+14
	comp=Z,15nm,1.7s						
TIC	Toumodi	74.29	71	eP	P	10 44 59.6	+14
MAW	Mawson	74.31	164	P	P	10 44 45.3	+0.1
	comp=Z,6.7nm,0.8s,baz=247,slow=7.7,SNR=3.0						
	comp=Z,6.7nm,0.8s						
MAW	Mawson	74.31	164	P	P	10 44 44.2	-1.0
P40A	Paris	74.34	344	P	P	10 44 46.1	+0.5
KIC	Kosan Boka	74.34	72	eP	P	10 44 59.8	+13
	comp=Z,9.6nm,0.8s						
DBIC	Dimbokro	74.44	71	P	P	10 44 45.9	-1.0
	comp=Z,4.7nm,0.8s,baz=211,slow=3.6,SNR=5.1						
	comp=Z,4.7nm,0.8s						
DBIC	Dimbokro	74.44	71	P	P	10 44 46.0	-0.8
DBIC				IAmb	IAmb	10 45 01.0	
	comp=Z,6.3nm,0.8s						
ANMO	Albuquerque	74.83	331	P	P	10 44 49.7	+0.9
SUR	Sutherland	75.14	119	LR	LR	11 13 17.1	
	comp=Z,23nm,20.4s,baz=102,slow=32						
T25A	Trinidad	75.94	334	P	P	10 44 56.9	+1.6
T25A				IAmb	IAmb	10 44 57.9	
	comp=Z,8.4nm,0.9s						
L40A	Anamosa	76.57	345	P	P	10 44 58.6	+0.2
L40A				IAmb	IAmb	10 44 59.5	
	comp=Z,8.3nm,0.8s						
SDCO	Great Sand Dun	76.89	333	P	P	10 45 02.1	+1.4
U15A	North Rim	78.60	328	P	P	10 45 11.6	+1.3
I37A	Lemond, Waseca	78.91	344	P	P	10 45 11.8	+0.4
I37A				IAmb	IAmb	10 45 12.2	
	comp=Z,6.8nm,0.8s						
K31A	O'Neill	79.00	340	P	P	10 45 13.2	+1.2
TSUM	Tsumeb	79.22	106	LR	LR	11 15 52.6	
	comp=Z,35nm,19.6s,baz=153,slow=32						
ECSD	EROS Data Cent	79.44	342	P	P	10 45 14.6	+0.3
ECSD				IAmb	IAmb	10 45 15.4	
	comp=Z,6.7nm,0.8s						
CCUT	Cedar City	80.01	327	P	P	10 45 20.1	+2.2
BOSA	Boshof	80.35	118	P	P	10 45 18.6	-1.4
	comp=Z,2.1nm,0.5s,baz=231,slow=3.7,SNR=8.2						
BOSA				LR	LR	11 18 41.0	
	comp=Z,37nm,18.0s,baz=188,slow=34						
	comp=Z,2.1nm,0.5s						
BOSA	Boshof	80.35	118	P	P	10 45 17.6	-2.4
BOSA				IAmb	IAmb	10 45 21.2	
	comp=Z,20nm,1.4s						
PRN	Pahroc Range	80.67	326	P	P	10 45 23.1	+1.8
F36A	Milaca	80.69	345	P	P	10 45 20.9	-0.1
TPH	Tonopah	82.23	325	P	P	10 45 30.5	+0.9
LBTB	Lobatse	82.52	115	LR	LR	11 18 22.9	
	comp=Z,20nm,20.6s,baz=214,slow=33						
LBTB	Lobatse	82.52	115	P	P	10 45 30.9	-0.6
LBTB				IAmb	IAmb	10 45 32.7	
	comp=Z,10nm,1.2s						
PDAR	Pinedale Array	82.78	333	P	P	10 45 32.1	-0.3
	comp=Z,0.3nm,0.6s,baz=132,slow=6.2,SNR=3.7						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	83.04	325	P	P	10 45 35.0	+1.2
	comp=Z,1.1nm,0.7s,baz=154,slow=6.0,SNR=14						
	comp=Z,1.1nm,0.7s						
TORD	Torodi Ar. Bea	83.44	70	P	P	10 45 35.6	-0.6
	comp=Z,3.5nm,0.8s,baz=254,slow=4.3,SNR=20						
	comp=Z,3.5nm,0.8s						
YMR	Madison River	84.93	333	P	P	10 45 44.2	+0.9
YMR				IAmb	IAmb	10 45 56.2	
	comp=Z,3.9nm,1.0s						
YHH	Holmes Hill	84.99	333	P	P	10 45 45.1	+1.4
YHH				IAmb	IAmb	10 45 45.7	
	comp=Z,3.7nm,1.0s						
ULM	Lac du Bonnet	85.36	345	P	P	10 45 44.8	-0.2
	comp=Z,3.6nm,0.8s,baz=120,slow=3.0,SNR=4.3						
	comp=Z,3.6nm,0.8s						
MCMT	McKenzie Canyo	85.80	332	P	P	10 45 48.2	+0.5
J08A	Circle Bar Ran	86.99	328	P	P	10 45 54.3	+0.9
SCHQ	Schefferville	87.29	3	P	P	10 45 54.0	-0.5
	comp=Z,2.3nm,0.9s,baz=180,slow=6.1,SNR=3.7						
	comp=Z,2.3nm,0.9s						
YKA	Yellowknife Ar	100.96	341	P	Pdif	10 46 56.5	-0.4
	comp=Z,0.3nm,0.8s,baz=143,slow=4.5,SNR=7.0						
ASAR	Alice Springs	118.87	207	PKP	PKPdf	10 51 56.0	-1.1
	comp=Z,0.2nm,0.4s,baz=131,slow=1.7,SNR=6.4						
ASAR				PKKPbc	PKKPbc	11 02 11.2	-0.3
	comp=Z,0.2nm,0.5s,baz=337,slow=3.3,SNR=4.4						
ASAR	Alice Springs	118.87	207		PKPdf	10 51 55.5	-1.7
NACGM	Naroch	120.68	42	ePKP	PKiKP	10 52 05.1	+5.5
	baz=256						
BRTR	Keskin Array B	120.90	60	PKP	PKPdf	10 51 59.9	-0.7
	comp=Z,0.6nm,0.8s,baz=246,slow=1.4,SNR=2.7						
BRTR	Keskin Array B	120.90	60		PKPdf	10 52 00.1	-0.5
AKASG	Malin Array Be	121.06	47	PKP	PKPdf	10 51 58.8	-1.5
	comp=Z,0.3nm,0.3s,baz=270,slow=1.6,SNR=1.4						
WRA	Warramunga Arr	122.05	209	PKP	PKPdf	10 52 02.6	-0.8
	comp=Z,0.6nm,0.6s,baz=152,slow=1.8,SNR=14						
WRA				PKKPbc	PKKPbc	11 01 59.5	-0.2
	comp=Z,0.3nm,0.5s,baz=339,slow=4.2,SNR=5.9						
WRA	Warramunga Arr	122.05	209		PKPdf	10 52 03.4	+0.1
H11S2	WAKE ISLAND Hy	126.13	270	T	T	13 11 08.6	
	baz=118,slow=75,SNR=433						
H11S1	WAKE ISLAND Hy	126.15	270	T	T	13 11 10.5	
	baz=118,slow=75,SNR=627						
H11S3	WAKE ISLAND Hy	126.15	270	T	T	13 11 09.8	
	baz=118,slow=75,SNR=292						
SEY	Seymchan	139.09	331	PKP	PKPdf	10 52 35.0	+1.0
	comp=Z,1.4nm,0.3s,baz=97,slow=4.9,SNR=7.5						
EKS2	Erkin-Say	151.05	60	P	PKiKP	10 53 01.8	0.0
	SNR=5.7						
USP	Ospenovka	151.47	59	P	PKPbc	10 53 02.5	+0.4
	SNR=5.3						
AAK	Ala-Archa	151.57	60	P	PKiKP	10 53 03.2	+0.4
	SNR=6.2						
UCH	Uchtor	151.65	61	P	PKiKP	10 53 04.1	+0.6
	SNR=7.9						
TKM2	Tokmak 2	152.32	59	P	PKPbc	10 53 04.4	+0.2
	SNR=6.5						
ZALV	Zalesovo Beam	152.95	31	PKPbc	PKPbc	10 53 04.9	0.0
	comp=Z,10nm,0.7s,baz=296,slow=3.2,SNR=32						
ZALV	Zalesovo Beam	152.95	31	PKPdf	PKPdf	10 52 56.8	-0.8
ZALV					PKPbc	10 53 04.7	-0.3
ZALV				PKPab	pPKPbc	10 53 15.3	-0.6
KSH	Kashi	153.05	66	PKPbc	PKPdf	10 53 01.3	+2.8
MKAR	Makanchi Array	155.65	47	PKPbc	PKPdf	10 53 09.5	+7.7
	comp=Z,0.5nm,0.8s,baz=323,slow=3.0,SNR=4.5						
MKAR				PKPab	PKPab	10 53 27.2	-0.8
	comp=Z,1.1nm,0.8s,baz=291,slow=3.4,SNR=7.1						
MKAR	Makanchi Array	155.65	47		PKPdf	10 53 01.0	-0.7
MKAR				PKPab	PKPab	10 53 27.6	-0.5
WMQ	Urumqi	160.39	50	eP	PKPdf	10 53 07.9	+0.2
CMAR	Chiang Mai Arr	163.46	147	PKP	PKPdf	10 53 10.8	-0.7
	comp=Z,0.5nm,0.2s,baz=270,slow=2.7,SNR=1.1						
SONM	Songino Array	164.82	5	PKPab	PKPab	10 54 07.0	-0.9
	comp=Z,0.7nm,1.0s,baz=15,slow=6.3,SNR=2.8						
SONM	Songino Array	164.82	5	PKPdf	PKPdf	10 53 11.5	-0.5
SONM					PKPab	10 54 07.6	-0.3
NJ2	Nanjing	171.12	269	eP	PKPdf	10 53 17.2	+0.6
HHC	Hu-ho-hao-te	171.49	343	eP	PKPdf	10 53 16.9	+0.2
PZH	PanZhiHua	171.53	135	PKP	PKPdf	10 53 16.9	-0.3
LZH	Lanzhou	174.96	47	ePKP	PKPdf	10 53 26.4	+8.1
LZH				pP	sPKPdf	10 53 38.2	+5.0
LZH				sP	pPKPdf	10 53 42.6	+13

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*TUL **08** 10:54:45.3±0.9, 36°.88N±0°.01×98°.14W±0°.01, h6^{km}±7^{km}, ML2.7, mb_Lg2.4/29(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=137.0*

NEIC 08 10:54:45.5±1.0**, 36°.87N**±0°.01×**98°.13W**±0°.01**, h5**^{km}±1^{km}**, Error ellipse: s-maj=3.0km s-min=2.1km az=75.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.85	236		Pg	10 55 01.7	-0.1
U32A				Sg	Sg	10 55 12.6	-0.3
T35A	Sooner Cattle	1.30	87		Pn	10 55 10.0	-0.3
OKCFA	Oklahoma City	1.55	159		Pn	10 55 13.5	-0.3
OKCFA				IAmb_Lg		10 55 37.6	
	comp=Z,28nm,0.9s						
OKCSW	OKLAHOMA CITY	1.56	159		Pb	10 55 14.5	-0.4
R32A	Long Quarter,	1.62	344		Pn	10 55 14.3	-0.4
FNO	Franklin	1.71	160		Pn	10 55 16.6	+0.6
TUL1	Leonard	2.12	116		Pn	10 55 21.0	-0.5
TUL1				IAmb_Lg		10 55 55.8	
	comp=Z,20nm,0.8s						
WMOK	Wichita Mounta	2.19	194	Pn	Pn	10 55 22.4	-0.2
X34A	Smith Ranch, M	2.27	174		Pn	10 55 23.2	-0.5
CBKS	Cedar Bluff	2.32	327		Pn	10 55 23.8	-0.6
CBKS				IAmb_Lg		10 56 04.8	
	comp=Z,12nm,0.8s						
KSU1	Kansas State U	2.53	28	Pn	Pn	10 55 27.0	-0.3
X37A	Clayton	3.19	135		Pn	10 55 35.7	-0.7
X37A				IAmb_Lg		10 56 31.0	
	comp=Z,13nm,1.0s						
HHAR	Hobbs	3.42	99		Pn	10 55 39.2	-0.3
HHAR				IAmb_Lg		10 56 36.2	
	comp=Z,7.5nm,0.8s						
AMTX	Amarillo	3.50	237		Pn	10 55 39.0	-1.6
AMTX				IAmb_Lg		10 56 37.0	
	comp=Z,10nm,0.8s						
W39A	Magazine	3.90	114		Pn	10 55 45.8	-0.2
S39A	Bolivar	3.92	76		Pn	10 55 46.0	-0.3
KSCO	Kaye Shedlock'	4.15	302		Pn	10 55 48.5	-1.2
KSCO				IAmb_Lg		10 57 06.5	
	comp=Z,6.0nm,0.8s						
U40A	Yellville	4.28	95		Pn	10 55 51.8	+0.6
U40A				IAmb_Lg		10 57 01.7	
	comp=Z,9.7nm,0.8s						
MIAR	Mount Ida	4.37	121	Pn	Pn	10 55 53.1	+0.6
Z38A	Mt. Pleasant	4.43	143	IAmb_Lg		10 57 13.7	
	comp=Z,8.6nm,0.7s						
P38A	Dawn	4.55	51	Pn	Pn	10 55 53.0	-1.9
P38A				IAmb_Lg		10 57 21.1	
	comp=Z,5.9nm,0.7s						
MGMO	Mountain Grove	4.70	85	Pn	Pn	10 55 57.6	+0.5
MSTX	Muleshoe	4.77	234	Pn	Pn	10 55 58.6	+0.5
R40A	Maddies Statio	4.87	71	Pn	Pn	10 55 59.5	+0.1
X40A	Basin Creek Fa	4.92	117	IAmb_Lg		10 57 30.4	
	comp=Z,7.1nm,0.9s						
FCAR	Ozark Folk Cen	4.94	100	Pn	Pn	10 55 59.9	-0.5
WHAR	Wooly Hollow	4.99	107	Pn	Pn	10 56 00.3	-0.7
T25A	Trinidad	5.03	275	Pn	Pn	10 56 00.7	-1.2
W41B	Gary Mavity, V	5.06	108	Pn	Pn	10 56 01.1	-0.9
P40A	Paris	5.48	59	Pn	Pn	10 56 06.5	-1.2
CCM	Cathedral Cave	5.61	76	Pn	Pn	10 56 08.9	-0.5
LCAR	Lake Charles	5.68	96	Pn	Pn	10 56 09.3	-1.1
LCAR				IAmb_Lg		10 57 49.1	
	comp=Z,5.8nm,1.1s						
SDCO	Great Sand Dun	5.94	281	Pn	Pn	10 56 13.5	-0.8
435B	Jarrell	6.08	176	IAmb_Lg		10 58 00.4	
	comp=Z,6.5nm,1.0s						
PBMO	Poplar Bluff	6.18	89	Pn	Pn	10 56 17.9	+0.6
JCT	Junction City	6.52	193	IAmb_Lg		10 58 24.2	
	comp=Z,5.8nm,0.8s						
ISCO	Idaho Springs	6.57	299	Pn	Pn	10 56 20.9	-2.2

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*IDC **08** 11:02:25.4±8.9, 37°.35N×72°.26E, h198^{km}±54^{km}, mb3.1/3, mbtmp3.6/8, Error ellipse: s-maj=82.6km s-min=41.3km az=176.0*

ISC 08 11:02:27.6±2.1**, 37°.6N**±0°.2×**72°.1E**±0°.1**, h200**^{km}**, n10,** σ1^{s}.**71**/13**, mb3.6**/3**, 2C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.34	19	P	Pn	11 03 46.6	+0.1
	1.8nm,0.5s,baz=197,slow=11,SNR=6.2						
AAK				S	Sn	11 04 51.2	+2.5
	2.3nm,0.3s,baz=205,slow=23,SNR=7.1						
KK31	Karatay Array	5.63	348	⇑Pn	Pn	11 03 50.8	+0.8
	1.0nm,0.3s,baz=152,slow=13,SNR=26						
KK31				⇓Sn	Sn	11 04 53.5	-1.8
	1.3nm,0.3s,baz=155,slow=22,SNR=3.7						
TKM2	Tokmak 2	5.93	25	⇑Pn	Pn	11 03 55.0	+0.9
	1.1nm,0.6s						
TKM2				⇓Sn	Sn	11 04 59.2	-3.4
	0.9nm,0.5s						
KURBB	Kurchatov Arra	13.79	17	P	P	11 05 36.3	-0.6
	0.2nm,0.5s,baz=207,slow=10.0,SNR=2.9						
BVAR	Borovoye Array	15.47	356	P	Pn	11 05 57.6	+2.2
	0.3nm,0.3s						
AKTO	Aktyubinsk	16.32	326	P	Pn	11 06 06.1	+0.5
	1.8nm,0.4s,baz=118,slow=9.1,SNR=9.4						
ZALV	Zalesovo Beam	18.53	24	P	P	11 06 29.4	+0.4
	2.0nm,0.3s,baz=213,slow=10,SNR=12						
FINES	FINESS Array B	37.09	325	P	P	11 09 18.1	-0.2
	1.6nm,1.0s,baz=99,slow=9.7,SNR=1.7						
	1.6nm,1.0s						
ARCES	ARCESS Array B	40.48	337	P	P	11 09 46.6	+0.2
	1.9nm,0.9s,baz=101,slow=7.4,SNR=4.9						
	1.9nm,0.9s						
YKA	Yellowknife Ar	80.10	3	P	P	11 14 13.6	-1.1
	0.1nm,0.5s,baz=353,slow=5.6,SNR=4.8						
	0.1nm,0.5s						

JMA 08 11:10:00.3±0.1**, 24°.3N**±0°.4×**123°.8E**±0°.3**, h17**^{km}±1^{km}**, MV3.0**/8**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.12	317	P	Pg	11 10 04.0	-0.2
IRIF				S	Sg	11 10 07.2	+0.5
JKRS	Kuro-shima	0.17	93	P	Pg	11 10 04.9	+0.1
JKRS				S	Sb	11 10 08.4	+0.2
HATJ	Hateruma jima	0.19	184	P	Pg	11 10 04.9	-0.2
HATJ				S	Sg	11 10 08.1	-0.2
JIJ	Ishigaki jima	0.32	68	P	Pg	11 10 06.9	-0.2
JIJ				S	Sg	11 10 11.7	-0.1
YOJ	Yonaguni jima	0.77	286	P	Pg	11 10 15.4	+0.1
YOJ				S	Sg	11 10 26.2	+0.6
JYNG	Yonagunijimaku	0.82	284	P	Pb	11 10 16.0	-0.1
JYNG				eS	Sg	11 10 27.7	+0.4
JTJ	Tarama	0.90	64	P	Pb	11 10 17.5	+0.1
JTJ				S	Sg	11 10 29.8	+0.2

TAP 08 11:10:12.5, 24°.21N×121°.74E, h16^{km}**, ML1.4, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	0	eP	Pg	11 10 16.2	+0.3
	baz=4.0						
ETL	Fush Village	0.12	244	P	Pg	11 10 16.1	0.0
	baz=245						
ETL				S	Sb	11 10 18.9	-0.1
	baz=245						
NACB	Ninganchiao	0.14	255	P	Pg	11 10 16.2	-0.1
	baz=256						
NACB				S	Sg	11 10 19.1	+0.3
	baz=256						
TWD	Chiawan	0.19	225	P	Pg	11 10 17.0	+0.1
	baz=232						
TWD				S	Sb	11 10 20.5	-0.4
	baz=232						
ENA	Nanau	0.22	0	P	Pg	11 10 17.7	+0.2
ENA				S	Sg	11 10 21.2	+0.4
EWUT	Wuta	0.24	8	P	Pg	11 10 17.8	+0.1
	baz=6.0						
EWUT				eS	Sg	11 10 21.7	+0.4
	baz=6.0						
ETLH	Xiulin Townshi	0.24	269	eP	Pg	11 10 17.8	0.0
	baz=270						
ETLH				eS	Sg	11 10 21.8	+0.3
	baz=270						
LATG	Datong	0.38	329	eP	Pg	11 10 20.2	-0.1
	baz=328						
LATG				eS	Sg	11 10 26.0	+0.5
	baz=328						
NNSB	Datong	0.39	304	eP	Pg	11 10 20.6	+0.1
	baz=303						
NNSB				eS	Sg	11 10 26.5	+0.5
	baz=303						
NNS	Nan Shan	0.41	304	eP	Pg	11 10 19.0	-1.7
	baz=304						
NNS				eS	Sg	11 10 26.9	+0.4
	baz=304						
WHF	Hehuan Shan	0.44	262	eP	Pg	11 10 21.4	-0.1
	baz=262						
WHF				eS	Sg	11 10 27.9	+0.3
	baz=262						
FUSS	Fushou	0.46	275	eP	Pg	11 10 21.8	0.0
	baz=276						
FUSS				eS	Sg	11 10 27.4	-0.5
	baz=276						
ENTT	Nioudou	0.46	340	eS	Sg	11 10 28.1	+0.3
	baz=338						
CHGB	Renai	0.54	254	eP	Pg	11 10 23.1	-0.1
	baz=251						
CHGB				eS	Sg	11 10 30.8	+0.3
	baz=251						
YHNB	Yeheng	0.56	324	eP	Pb	11 10 23.9	-0.2
	baz=323						
YHNB				eS	Sb	11 10 31.9	-0.1
	baz=323						
NSK	Sanguang	0.58	323	eS	Sb	11 10 32.0	-0.3
	baz=323						
WUSB	Renai	0.61	249	eP	Pg	11 10 24.6	0.0
	baz=245						
WUSB				eS	Sb	11 10 33.3	0.0
	baz=245						

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*SOME **08** 11:25:36.7, 39°.42N×73°.48E, h15^{km}*

*NNC **08** 11:25:37.8±3.3, 39°.38N×73°.54E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=24.5km s-min=12.7km az=170.0*

*ISU **08** 11:25:38, 39°.39N×73°.36E, h27^{km}*

*KRNET **08** 11:25:38.1±0.1, 39°.45N×73°.42E, mb3.0*

ISC 08 11:25:40.1±1.6**, 39°.63N**±0°.06×**73°.31E**±0°.03**, h2**^{km}±11^{km}**, n30,** σ1^{s}.**74**/51**, 22C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.98	336	⇑eP	Pn	11 26 00.4	-0.7
	baz=36						
OHH				⇑iS	Sn	11 26 16.8	+1.2
	baz=36						
DRK	Karamyk	1.18	263	⇑iP	Pb	11 26 01.7	-1.7
	baz=72						
DRK				⇑iS	Sn	11 26 18.6	-2.1
	baz=72						
FRG	Fergana	1.39	303	P	Pg	11 26 07.2	+0.4
FRG				S	Sg	11 26 29.2	+4.4
CHMI	Chimion	1.52	296	P	Pg	11 26 09.4	+0.2
CHMI				S	Sg	11 26 32.3	+3.5
BTK	Batken	1.97	283	⇑iP	Pb	11 26 15.4	-1.3
	baz=88						
BTK				⇑iS	Sg	11 26 43.3	0.0
	baz=88						
BTK	Batken	1.97	283	P	Pb	11 26 16.5	-0.2
BTK				S	Sg	11 26 45.0	+1.7
ARLS	Aral	2.36	19	⇑iP	Pb	11 26 21.3	-2.2
	baz=16						
ARLS				⇑iS	Sb	11 26 53.3	+0.1
	baz=16						
ARK	Arkit	2.40	335	⇑iP	Pb	11 26 22.9	-1.2
	baz=35						
ARK				⇑iS	Sg	11 26 55.5	-1.7
	baz=35						
GAR	Garm	2.40	256	⇑eP	Pn	11 26 21.1	+0.5
	baz=60						
GAR				⇑iS	Sb	11 26 52.8	-1.6
	baz=60						
TRKS	Terek-Say	2.52	320	⇑iP	Pb	11 26 23.5	-2.7
	baz=20						
TRKS				⇑iS	Sb	11 26 56.6	-1.1
	baz=20						
UCH	Uchtor	2.75	19	⇓eP	Pn	11 26 27.1	+1.3
	baz=16						
UCH				⇓iS	Sb	11 27 03.0	-1.8
	baz=16						
MRKS	Merke	3.12	359	Pg	Pb	11 26 37.1	+0.7
	4.8nm,0.2s						
MRKS				Lg	Lg	11 27 21.2	
	15nm,0.4s						
BOOM	Boomskoye usch	3.48	34	⇑iP	Pn	11 26 36.9	+1.4
	baz=31						
BOOM				⇑iS	Sn	11 27 19.0	+1.5
	baz=31						

CHMS	Chumysh	3.54	17	⇑Pg	Pg	11 26 47.8	-0.1
	1.7nm,0.5s						
CHMS				⇑Lg	Lg	11 27 37.6	
	5.7nm,0.6s						
TKM2	Tokmak 2	3.71	27	⇑Pg	Pg	11 26 51.6	+0.3
	1.0nm,0.3s						
TKM2				⇑Lg	Lg	11 27 43.0	
	6.4nm,0.7s						
KST	Kastek	3.96	29	eP	Pb	11 26 50.5	-0.1
	2.2nm,0.3s						
KST				eS	Sg	11 27 44.2	-2.9
	12nm,0.7s						
KST	Kastek	3.96	29	Pg	Pb	11 26 50.5	-0.1
	2.2nm,0.3s						
KST				Lg	Lg	11 27 44.2	
	12nm,0.7s						
KK31	Karatay Array	4.06	330	⇓Pn	Pn	11 26 46.0	+2.7
	0.2nm,0.3s,baz=129,slow=13,SNR=12						
KK31				⇑Pg	Pg	11 26 57.1	-0.9
	0.7nm,0.3s,baz=147,slow=16,SNR=10						
KK31				⇓Sn	Sb	11 27 39.9	-2.0
	0.8nm,0.3s,baz=154,slow=24,SNR=5.1						
KK31				⇑Lg	Lg	11 27 56.1	
	0.7nm,0.3s,baz=152,slow=29,SNR=4.5						
BRLS	Borolday	4.29	324	eP	Pb	11 26 57.3	+1.0
	1.8nm,0.3s						
BRLS				eS	Sg	11 27 56.1	-1.7
	5.3nm,0.3s						
BRLS	Borolday	4.29	324	Pg	Pb	11 26 57.3	+1.0
	1.8nm,0.3s						
BRLS				Lg	Lg	11 27 56.1	
	5.3nm,0.3s						
TNSS	Tian-Shan	4.37	38	eP	Pb	11 26 58.6	+0.7
	2.7nm,0.4s						
TNSS				eS	Sg	11 27 58.4	-2.2
	4.1nm,0.6s						
TNSS	Tian-Shan	4.37	38	Pg	Pb	11 26 58.6	+0.7
	2.7nm,0.4s						
TNSS				Lg	Lg	11 27 58.4	
	4.1nm,0.6s						
KRBS	Karabastau	4.44	23	eP	Pb	11 27 00.5	+1.7
KRBS				eS	Sg	11 28 01.6	-1.0
KRBS	Karabastau	4.44	23	Pg	Pb	11 27 00.5	+1.7
KRBS				Lg	Lg	11 28 01.6	
MDOK	Medeo	4.52	37	eP	Pb	11 27 01.6	+1.4
	3.0nm,0.3s						
MDOK				eS	Sg	11 28 03.5	-1.7
	6.8nm,0.4s						
MDOK	Medeo	4.52	37	Pg	Pb	11 27 01.6	+1.4
	3.0nm,0.3s						
MDOK				Lg	Lg	11 28 03.4	
	6.8nm,0.4s						
KTBS	Karatobe	4.80	31	eP	Pb	11 27 07.0	+2.0
	1.6nm,0.4s						
KTBS				eS	Sg	11 28 12.8	-1.5
	8.8nm,0.3s						
KTBS	Karatobe	4.80	31	Pg	Pb	11 27 07.0	+2.0
	1.6nm,0.4s						
KTBS				Lg	Lg	11 28 12.8	
	8.8nm,0.3s						
KUU	Kurty	4.83	27	eP	Pb	11 27 07.5	+2.1
	0.8nm,0.1s						
KUU				eS	Sg	11 28 13.7	-1.5
	5.4nm,0.5s						
KUU	Kurty	4.83	27	Pg	Pb	11 27 07.5	+2.1
	0.8nm,0.1s						
KUU				Lg	Lg	11 28 13.7	
	5.4nm,0.5s						

NOU 08 11:49:29.6, 16°.19S×167°.70E, h2^{km}, MLv3.6/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.88	327	P	Pg	11 49 46.5	0.0
RTV	Rentapao	1.74	157	P	Pn	11 50 00.0	-0.8
LIFNC	LIFOU	4.58	185	P	Pn	11 50 40.4	+0.4
MARNC	Mare, Loyalty	5.27	177	P	Pn	11 50 49.6	+0.2
YATNC	Mamie plateau,	5.89	187	P	Pn	11 50 58.3	+0.4
NOUC	Port Laguerre	6.03	192	P	Pn	11 50 59.8	0.0
ONTNC	Ouen Toro	6.20	191	P	Pn	11 51 02.4	+0.2
OUENC	Ouen Island, N	6.25	187	P	Pn	11 51 03.1	+0.2
PINNC	Pines Island,	6.39	182	P	Pn	11 51 04.4	-0.5

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*TUL **08** 12:05:12.9±1.1, 36°.17N±0°.01×97°.47W±0°.01, h6^{km}±6^{km}, ML2.5, mb_Lg2.3/20(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=59.0*

NEIC 08 12:05:12.9±0.9**, 36°.181N**±0°.010×**97°.48W**±0°.01**, h3**^{km}±4^{km}**, Error ellipse: s-maj=1.6km s-min=1.4km az=90.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.76	178	Pg	Pg	12 05 27.3	-0.3
OKCFA				Sg	Sg	12 05 37.1	-0.3
OKCSW	OKLAHOMA CITY	0.77	178		Pg	12 05 27.2	-0.5
OKCSW				Sg	Sg	12 05 37.8	0.0
FNO	Franklin	0.92	176	Pg	Pg	12 05 30.3	-0.3
FNO				Sg	Sg	12 05 42.7	+0.1
T35A	Sooner Cattle	1.07	46		Pg	12 05 33.3	-0.2
T35A				Sg	Sb	12 05 47.9	-0.6
U32A	Winter Ranch,	1.25	280	Pg	Pg	12 05 36.0	-0.9
U32A				Sg	Sb	12 05 53.3	-0.3
TUL1	Leonard	1.39	101		Pn	12 05 38.0	-1.2
X34A	Smith Ranch, M	1.60	191		Pn	12 05 42.4	+0.3
WMOK	Wichita Mounta	1.79	217		Pn	12 05 44.2	-0.6
WMOK				IAmb_Lg		12 06 14.0	
	comp=Z,18nm,0.8s						
X37A	Clayton	2.34	132		Pn	12 05 52.1	-0.2
X37A				IAmb_Lg		12 06 32.9	
	comp=Z,8.2nm,0.8s						
HHAR	Hobbs	2.86	87		Pn	12 05 58.5	-1.0
KSU1	Kansas State U	3.00	13	Pn	Pn	12 06 01.1	-0.2
W39A	Magazine	3.16	107	IAmb_Lg		12 07 00.6	
	comp=Z,8.9nm,1.1s						
MIAR	Mount Ida	3.58	116		Pn	12 06 09.0	-0.4
S39A	Bolivar	3.65	64		Pn	12 06 10.7	+0.4
U40A	Yellville	3.74	86		Pn	12 06 10.6	-1.0
X40A	Basin Creek Fa	4.16	113	IAmb_Lg		12 07 35.7	
	comp=Z,4.9nm,0.8s						
MGMO	Mountain Grove	4.30	75	Pn	Pn	12 06 18.1	-1.2
MGMO				IAmb_Lg		12 07 39.4	
	comp=Z,4.4nm,0.8s						
WHAR	Wooly Hollow	4.31	100	IAmb_Lg		12 07 31.8	
	comp=Z,5.3nm,0.7s						
W41B	Gary Mavity, V	4.37	102	IAmb_Lg		12 07 34.7	
	comp=Z,8.5nm,0.7s						
P38A	Dawn	4.64	41		Pn	12 06 23.9	0.0
R40A	Maddies Statio	4.66	62	Pn	Pn	12 06 22.6	-1.5
CCM	Cathedral Cave	5.32	68	Pn	Pn	12 06 32.3	-0.9
P40A	Paris	5.44	50	Pn	Pn	12 06 34.9	0.0
T25A	Trinidad	5.66	282	Pn	Pn	12 06 36.8	-1.3
T25A				IAmb_Lg		12 08 17.2	
	comp=Z,5.3nm,1.1s						
PBMO	Poplar Bluff	5.71	82	Pn	Pn	12 06 36.4	-2.2
PBMO				IAmb_Lg		12 08 22.1	
	comp=Z,5.8nm,0.8s						
FVM	French Village	5.92	70	Pn	Pn	12 06 42.4	+0.9

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*IDC **08** 12:13:12.1±1.9, 55°.69N×164°.87E, h0^{km}, mb3.3/3, mbtmp3.2/4, ML2.1/1, Error ellipse: s-maj=134.2km s-min=30.8km az=147.0*

*KRSC **08** 12:13:13.2±1.0, 55°.94N×163°.97E, h14^{km}±23^{km}, ML3.7*

ISC 08 12:13:11.2±1.8**, 56°.16N**±0°.07×**164°.09E**±0°.04**, h3**^{km}±13^{km}**, n29, σ1^{s}77**/31**, mb3.3**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.71	274	eP	Pb	12 13 25.9	-0.3
KBTR				eS	Sn	12 13 36.8	-2.8
KBG	Krutoberegovo	0.78	277	eP	Pb	12 13 27.5	+0.2
KBG				eS	Sn	12 13 39.0	-2.2
BKI	Bering	1.44	131	eP	Pn	12 13 37.9	-0.2
BKI				eS	Sn	12 13 56.0	-1.5
SMKR	Semkarok	1.52	287	eP	Pg	12 13 40.2	0.0
BDR	Baidarnaya	1.65	285	eP	Pg	12 13 42.4	-0.4
SRKR	Sorokina	1.69	288	eP	Pg	12 13 42.9	-0.7
KLY	Klyuchi	1.92	276	eP	Pn	12 13 44.2	-0.6
KLY				eS	Sn	12 14 08.1	-1.4
MKZ	Mys Kozlova	2.10	221	eP	Pn	12 13 46.9	-0.3
MKZ				eS	Sn	12 14 11.8	-2.0
KMNR	Kamenistaya	2.20	261	eP	Pb	12 13 51.2	-0.5
TUMD	Tumrok D	2.30	247	eP	Pn	12 13 51.2	+1.2
TUMD				eS	Sn	12 14 19.3	+0.5
KOZ	Kozyrevsk	2.36	269	eP	Pb	12 13 53.4	-1.0
TUMR	Tumrok	2.40	250	eP	Pn	12 13 53.3	+1.9
SPN	Mys Shipunski	3.87	219	eS	Sn	12 14 52.8	-4.8
NLC	Nalytchevo	4.07	225	eS	Sn	12 15 00.8	-1.6
SDLR	Sedlovina	4.18	228	eP	Pn	12 14 17.2	+1.3
SDLR				eS	Sn	12 15 04.5	-0.8
SMAR	Somma	4.22	229	P	Pn	12 14 17.7	+1.1
PET	Petropavlovsk	4.46	227	eP	Pn	12 14 22.5	+2.9
PETK	Petropavlovsk-	4.81	233	Pn	Pn	12 14 27.3	+2.8
	0.4nm,0.3s,baz=81,slow=18,SNR=7.8						
PETK				Sn	Sn	12 15 22.8	+2.1
	0.3nm,0.3s,baz=102,slow=24,SNR=1.7 0.8nm,0.5s						
GRL	Gorelyy	5.04	227	eP	Pn	12 14 29.2	+1.4
MTVR	Mutnovka	5.05	226	eP	Pn	12 14 29.2	+1.3
ILAR	Eielson Array	25.03	50	P	P	12 18 37.5	+1.4
	0.6nm,0.8s,baz=262,slow=8.2,SNR=6.4 0.6nm,0.8s						
H11N2	WAKE ISLAND Hy	36.44	176	T	T	12 58 54.5	
	baz=357,slow=76,SNR=110						
H11N3	WAKE ISLAND Hy	36.45	176	T	T	12 58 57.0	
	baz=357,slow=76,SNR=135						
H11N1	WAKE ISLAND Hy	36.45	176	T	T	12 58 58.1	
	baz=357,slow=76,SNR=136						
H11S1	WAKE ISLAND Hy	37.64	176	T	T	13 00 25.6	
	baz=359						
H11S3	WAKE ISLAND Hy	37.66	176	T	T	13 00 29.2	
	baz=359						
H11S2	WAKE ISLAND Hy	37.66	176	T	T	13 00 33.9	
	baz=359						
YKA	Yellowknife Ar	39.34	46	P	P	12 20 42.3	+1.1
	0.3nm,0.5s,baz=299,slow=8.1,SNR=7.2 0.3nm,0.5s						
TXAR	Lajitas Array	67.37	71	P	P	12 24 07.3	-0.4
	0.1nm,0.5s,baz=305,slow=4.9,SNR=2.0 0.1nm,0.5s						

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*KRNET **08** 12:19:16.5±0.1, 40°.30N×71°.35E, h12^{km}, mb2.1*

*ISU **08** 12:19:17, 40°.40N×71°.19E, h19^{km}*

*SOME **08** 12:19:17.0, 40°.45N×71°.25E, h0^{km}*

*NNC **08** 12:19:19.1±3.2, 40°.41N×71°.17E, h0^{km}, mb3.0, mpv3.2, Error ellipse: s-maj=23.8km s-min=12.8km az=13.0*

ISC 08 12:19:17.5±1.0**, 40°.31N**±0°.03×**71°.22E**±0°.04**, h24**^{km}±8^{km}**, n18, σ1^{s}61**/25**, 5C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMI	Chimion	0.24	100	P	Pb	12 19 24.3	+0.7
CHMI				S	Sb	12 19 29.2	+1.5
MINT	Mingtut	0.24	310	P	Pb	12 19 22.7	-0.9
MINT				S	Sb	12 19 26.4	-1.4
BTK	Batken	0.40	231	⇓iP	Pb	12 19 25.9	-0.1
	baz=40						
BTK				⇓iS	Sb	12 19 33.0	+1.2
	baz=40						
FRG	Fergana	0.44	82	P	Pn	12 19 34.2	+5.9
DRK	Karamyk	0.94	151	⇑iP	Pb	12 19 33.5	-1.8
	baz=57						
DRK				⇑eS	Sb	12 19 46.1	-1.4
	baz=57						
OHH	Osh	1.22	79	⇓iP	Pn	12 19 38.0	-1.0
	baz=78						
OHH				⇓iS	Sn	12 19 53.7	-1.1
	baz=78						
TRKS	Terek-Say	1.22	357	⇑eP	Pb	12 19 39.0	-0.9
	baz=53						
TRKS				⇑iS	Sn	12 19 55.4	+0.4
	baz=53						
GAR	Garm	1.48	208	⇓iP	Pb	12 19 45.4	+1.0
	baz=12						
GAR				⇓iS	Sb	12 20 06.4	+3.6
	baz=12						
ARK	Arkit	1.59	21	⇓iP	Pb	12 19 46.0	-0.2
	baz=17						
ARK				⇓iS	Sb	12 20 07.6	+1.7
	baz=17						
IUG	Iuzhnay	2.04	334	eP	Pb	12 19 54.5	+0.6
	158nm,0.1s						
IUG				eS	Sb	12 20 21.1	+2.2
	11nm,0.3s						
IUG	Iuzhnay	2.04	334	Pg	Pb	12 19 54.5	+0.6
	158nm,0.1s						
IUG				Lg	Lg	12 20 21.1	
	11nm,0.3s						
KK31	Karatay Array	2.84	350	Pg	Pb	12 20 08.2	+0.7
	0.3nm,0.2s,baz=153,slow=15,SNR=12						
KK31				⇑Lg	Lg	12 20 45.5	
	2.1nm,0.5s,baz=159,slow=28,SNR=8.3						
MRKS	Merke	2.86	31	eP	Pb	12 20 08.8	+0.9
	2.5nm,0.3s						
MRKS				eS	Sb	12 20 45.6	+3.1
	5.3nm,0.6s						
MRKS	Merke	2.86	31	Pg	Pb	12 20 11.5	+3.6
	2.5nm,0.3s						
MRKS				Lg	Lg	12 20 49.7	
	5.3nm,0.6s						
BRLS	Borolday	2.91	340	eP	Pb	12 20 07.2	-1.4
	1.9nm,0.2s						
BRLS				eS	Sb	12 20 42.4	-1.4
	3.8nm,0.2s						
BRLS	Borolday	2.91	340	Pg	Pb	12 20 07.2	-1.4
	1.9nm,0.2s						
BRLS				Lg	Lg	12 20 42.3	
	3.8nm,0.2s						
KRBS	Karabastau	4.74	43	eP	Pb	12 20 43.5	+3.6
	0.4nm,0.2s						
KRBS				eS	Sb	12 21 44.4	+7.9
	0.5nm,0.3s						
KRBS	Karabastau	4.74	43	Pg	Pb	12 20 43.4	+3.6
	0.4nm,0.2s						
KRBS				Lg	Lg	12 21 44.4	
	0.5nm,0.3s						

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*ISK **08** 12:27:49.9, 40°.83N×41°.52E, h9^{km}, ML2.5/8*

*DDA **08** 12:27:49.7±0.0, 40°.80N×41°.52E, h7^{km}±1^{km}, ML2.2*

*TIF **08** 12:27:50.5, 40°.87N×41°.53E, h6^{km}±1^{km}*

ISC 08 12:27:49.9±1.1**, 40°.82N**±0°.02×**41°.48E**±0°.03**, h6**^{km}±10^{km}**, n21, σ0^{s}71**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDEM	Demirkent	0.22	70	P	Pg	12 27 54.1	-0.1
DDEM				S	Sg	12 27 57.4	+0.2
DDEM				i AML	AML	12 28 02.0	
	comp=N,1µm,0.3s						
DBAD	Bademkaya	0.26	39	P	Pg	12 27 55.7	+0.7
DBAD				S	Sg	12 27 59.0	+0.6
DBAD				i AML	AML	12 28 01.0	
	comp=E,505nm,0.3s						
DAGI	Agillar	0.42	51	P	Pg	12 27 58.1	+0.1
DAGI				S	Sg	12 28 03.7	+0.1
DAGI				i AML	AML	12 28 05.0	
	comp=N,94nm,0.3s						
DBOC	Borcka	0.55	15	P	Pg	12 28 00.5	+0.1
DBOC				S	Sg	12 28 07.8	+0.2
DBOC				i AML	AML	12 28 09.0	
	comp=E,227nm,0.2s						
HOPA	Hopa-Artvin	0.57	357	PG	Pg	12 28 01.2	+0.3
HOPA				SG	Sb	12 28 09.4	-1.2
CHOM	Cayeli-Rize	0.61	297	PG	Pb	12 28 02.7	-0.3
CHOM				SG	Sb	12 28 12.1	+0.2
KRIK	Erzurum-spir	0.64	222	P	Pg	12 28 00.1	-2.0
SENK	Senkaya-Erzuru	0.71	111	PG	Pg	12 28 03.8	+0.3
BATM	Batumi	0.80	11	P	Pb	12 28 05.5	-0.7
BATM				S	Sb	12 28 16.7	-0.7
BATM	Batumi	0.80	11	PG	Pg	12 28 05.3	0.0
BATM				SG	Sb	12 28 16.4	-0.9
HOMI	Horasan	0.84	157	P	Pg	12 28 05.4	-0.5
KOPR	Koprukoy-ERZUR	0.87	161	PG	Pb	12 28 07.3	-0.2
KOPR				SG	Sb	12 28 19.9	+0.4
EMRE	Erzurum,Aziziy	0.88	206	P	Pg	12 28 07.6	+0.9
BAYB	BAYBURT	1.09	240	P	Pg	12 28 10.9	+0.2
BAYT	Aydıntepe-Bayb	1.10	248	PN	Pg	12 28 11.6	+0.6
BAYT				SN	Sn	12 28 28.1	+0.5
EATA	Eleskirt	1.23	141	P	Pg	12 28 12.7	-0.7
KARS	Kars	1.23	98	PN	Pn	12 28 14.2	+0.5
KTUT	Trabzon	1.31	278	PN	Pn	12 28 15.0	+0.3
ABS	Abastumani	1.37	47	P	Pg	12 28 15.7	-0.5
ABS				S	Sn	12 28 35.1	+0.8
BKRG	Bakuriani	1.80	58	P	Pg	12 28 23.6	-0.8
ONI	Oni	2.31	39	P	Pb	12 28 32.3	+0.4
ONI				S	Sg	12 29 02.9	-1.1

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*SKO **08** 12:47:08.1, 41°.09N×20°.36E, h20^{km}*

*TIR **08** 12:47:09.2, 41°.25N×20°.59E, h25^{km}±3^{km}, Md3.1, Ml3.0*

*ATH **08** 12:47:09.2, 41°.24N×20°.49E, h7^{km}±4^{km}, ML3.1/2, Error ellipse: s-maj=4.3km s-min=1.1km az=348.0*

*THE **08** 12:47:09.5, 41°.21N×20°.46E, h1^{km}±2^{km}, ML2.7/7, Error ellipse: s-maj=2.1km s-min=0.7km az=253.0*

*BEO **08** 12:47:10.0±0.3, 41°.27N×20°.51E, h3^{km}±2^{km}, ML2.6/12*

*PDG **08** 12:47:10.1±0.8, 41°.22N×20°.49E, h10^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=1.0km s-min=2.0km az=0.0*

ISC 08 12:47:09.4±1.0**, 41°.22N**±0°.02×**20°.46E**±0°.02**, h8**^{km}±8^{km}**, n121, σ1^{s}17**/184**, 12C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.28	112	ePg	Pb	12 47 15.6	-1.0
OHR				eSg	Sb	12 47 20.7	-0.8
OHR	Ohrid	0.28	112	⇑iPg	Pb	12 47 15.7	-1.0
OHR				i Sg	Sb	12 47 20.7	-0.8
OHR				eLg	Lg	12 47 21.0	
	comp=N,2µm,0.3s						
OHR				eLg	Lg	12 47 21.4	
	comp=E,2µm,0.5s						
TIR	Tirane	0.46	287	ePg	Pg	12 47 17.9	-0.5
TIR				eSg	Sg	12 47 25.5	+1.0
TIR	Tirane	0.46	287	P	Pg	12 47 17.8	-0.5
TIR				S	Sg	12 47 25.4	+1.0
TIR	Tirane	0.46	287	P	Pg	12 47 17.7	-0.7
TIR				S	Sg	12 47 25.4	+1.0
	comp=E,975nm,0.4s						
TIR	Tirane	0.46	287	⇑ePg	Pg	12 47 17.7	-0.7
TIR	Tirane	0.46	287	P	Pg	12 47 18.0	-0.5
	baz=281						
TIR				S	Sg	12 47 25.7	+1.3
	baz=281						
TIR				AMP			
	comp=E,3.9nm,0.5s,baz=281						
PHP	Peshkopia	0.47	359	P	Pg	12 47 18.1	-0.4
PHP				S	Sb	12 47 26.3	-0.7
PHP	Peshkopia	0.47	359	P	Pg	12 47 18.3	-0.2
	baz=346						
PHP				S	Sg	12 47 25.8	+1.1
	baz=346						
PHP				AMP			
	comp=N,3.8nm,0.3s,baz=346						
KBN	Korca	0.64	157	P	Pg	12 47 21.7	-0.1
KBN				S	Sg	12 47 30.3	+0.1
	comp=N,855nm,0.5s						
KBN	Korca	0.64	157	P	Pg	12 47 21.5	-0.3
	baz=166						
KBN				S	Sb	12 47 31.6	-0.4
	baz=166						
KBN				AMP			
	comp=E,3.1nm,0.6s,baz=166						
FNA	Florina	0.82	121	P	Pg	12 47 24.3	-0.7
FNA				S	Sb	12 47 36.4	-0.7
FNA				AML	AML	12 47 38.8	
	comp=E,4260µm,0.4s						
FNA				AML	AML	12 47 40.9	
	comp=N,5587µm,0.8s						
FNA	Florina	0.82	121	P	Pg	12 47 24.4	-0.7
FNA				S	Sb	12 47 36.7	-0.4
	comp=N,2µm,0.6s						
FNA	Florina	0.82	121	ePg	Pg	12 47 24.4	-0.7
FNA				i Sg	Sb	12 47 36.8	-0.3
FNA	Florina	0.82	121	P	Pg	12 47 24.4	-0.7
	baz=127						
FNA				S	Sb	12 47 36.0	-1.1
	baz=127						
NEST	Nestorio	0.92	150	P	Pg	12 47 26.4	-0.6
NEST				S	Sb	12 47 39.3	-0.7
NEST				AML	AML	12 47 42.8	
	comp=E,1530µm,0.7s						
NEST				AML	AML	12 47 44.0	
	comp=N,1463µm,0.3s						
NEST	Nestorio	0.92	150	P	Pg	12 47 26.6	-0.4
NEST				S	Sb	12 47 40.1	+0.1
	comp=N,612nm,0.3s						
VLO	Vlora	1.04	225	P	Pn	12 47 31.8	+1.6
	baz=228						
VLO				S	Sn	12 47 47.5	+2.6
	baz=228						
SKO	Skopje	1.06	44	i Pg	Pn	12 47 31.3	+0.8
SKO				i Sg	Sn	12 47 44.8	-0.6
LSK	Leskovik	1.07	174	P	Pg	12 47 29.1	-0.8
LSK	Leskovik	1.07	174	P	Pb	12 47 30.1	-0.1
	baz=179						
LSK				S	Sn	12 47 45.9	+0.1
	baz=179						
LSK				AMP			
	comp=N,2.0nm,0.6s,baz=179						
PENT	Pentalofos	1.14	153	P	Pn	12 47 31.5	-0.2
PENT	Pentalofos	1.14	153	P	Pn	12 47 31.8	+0.1
ULC	Ulcinj	1.18	310	i Pg	Pg	12 47 30.1	-1.9
ULC	Ulcinj	1.18	310	⇑iPg	Pg	12 47 30.0	-1.9
ULC				i Sg	Sn	12 47 49.1	+0.7
BCI	Bajram Curri	1.19	346	P	Pg	12 47 31.9	-0.2
	baz=341						
BCI				S	Sn	12 47 50.1	+1.5
	baz=341						
BCI				AMP			
	comp=E,2.3nm,0.5s,baz=341						
KZN	Kozani	1.35	132	P	Pn	12 47 34.2	-0.4
KZN	Kozani	1.35	132	P	Pg	12 47 34.8	-0.5
KZN				S	Sn	12 47 53.5	+0.8
	comp=E,345nm,0.4s						
DRME	Dracevica, Mon	1.36	316	ePn	Pn	12 47 33.5	-1.1
DRME	Dracevica, Mon	1.36	316	⇑iPg	Pn	12 47 33.8	-0.8
DRME				i Sg	Sn	12 47 55.1	+2.3
SRN	Sarande	1.38	195	P	Pg	12 47 36.8	+1.0
	baz=199						
SRN				S	Sn	12 47 56.6	+3.4
	baz=199						
STIP	Stip	1.39	69	i Pn	Pg	12 47 37.7	+1.8
STIP				i Sg	Sn	12 48 00.7	+7.2
PVY	Plav	1.43	345	⇓iPg	Pn	12 47 35.7	0.0
KPRO	Kipourio	1.44	151	P	Pb	12 47 35.8	-0.6
KPRO	Kipourio	1.44	151	P	Pb	12 47 36.1	-0.3
KPRO				S	Sg	12 47 56.6	+1.1
	comp=E,215nm,0.5s						
GRG	Griva	1.49	99	P	Pn	12 47 36.4	-0.1
GRG	Griva	1.49	99	P	Pb	12 47 36.5	-0.9
GRG				S	Sg	12 47 57.1	-0.3
	comp=E,192nm,0.4s						
GRG	Griva	1.49	99	i Pn	Pb	12 47 36.6	-0.7
KTI	Kastanea	1.50	123	P	Pb	12 47 37.0	-0.6
PDG	Podgorica	1.51	324	ePg	Pn	12 47 36.7	0.0
PDG				eSg	Sg	12 47 58.4	+0.5
PDG	Podgorica	1.51	324	ePn	Pn	12 47 36.4	-0.2
PDG	Podgorica	1.51	324	ePn	Pn	12 47 36.5	-0.2
TTG	Podgorica	1.51	324	⇑iPg	Pn	12 47 36.9	+0.2
TTG				i Sg	Sg	12 48 00.3	+2.4
KEK	Kerkira	1.58	199	P	Pn	12 47 38.2	+0.5
KEK	Kerkira	1.58	199	P	Pn	12 47 38.2	+0.5
BUM	Brajici-Budva	1.59	313	⇑iPn	Pn	12 47 38.1	+0.2
BUM				i Sn	Sg	12 48 03.6	+3.0
VAY	Valandovo	1.60	86	ePg	Pn	12 47 37.8	-0.1
VAY				eSg	Sn	12 47 57.8	-0.9
VAY	Valandovo	1.60	86	i Pn	Pn	12 47 37.9	0.0
VAY				i Sg	Sg	12 48 00.3	-0.4
VAY				eLg	Lg	12 48 01.9	
	comp=N,87nm,0.6s						
VAY				eLg	Lg	12 48 02.1	
	comp=E,63nm,0.5s						
IGT	Igoumenitsa	1.68	183	P	Pg	12 47 40.8	-0.8
IGT	Igoumenitsa	1.68	183	P	Pb	12 47 40.7	+0.1
	baz=187						
BEY	Berane	1.71	346	i Pn	Pb	12 47 41.3	+0.3
IVA	Berane	1.71	346	⇑iPn	Pb	12 47 40.9	-0.1
IVA				i Sn	Sg	12 48 06.1	+1.9
CEME	Cevo	1.76	320	⇓iPn	Pn	12 47 41.0	+0.8
CEME				i Sn	Sg	12 48 07.5	+1.7
KOME	Kolasin	1.78	337	⇑iPn	Pb	12 47 41.7	-0.5
KOME				i Sn	Sg	12 48 07.7	+1.2
BARS	Barje	1.89	32	ePn	Pb	12 47 43.0	-1.2
BARS	Barje	1.89	32	ePn	Pg	12 47 58.1	+12
BARS				eSg	Sb	12 48 08.4	+0.4
BARS	Barje	1.89	32	ePn	Pb	12 47 44.4	+0.2
LIT	Litokhoron	1.91	125	P	Pn	12 47 42.6	+0.4
LIT	Litokhoron	1.91	125	P	Pn	12 47 42.4	+0.2

LIT	Litokhoron	1.91	125	*i* Pn	Pn	12 47 42.5	+0.2
NKME	Niksic	1.91	325	⇑*i* Pn	Pn	12 47 43.6	+1.3
NKME				*i* Sn	Sg	12 48 10.9	+0.1
HCY	Herceg Novi	1.91	311	*e*Pn	Pn	12 47 42.8	+0.5
HCY	Herceg Novi	1.91	311	⇓*i* Pn	Pb	12 47 43.8	-0.7
HCY				*i* Sn	Sg	12 48 11.2	+0.4
NKY	Niksic	1.93	326	⇑*i* Pn	Pb	12 47 44.3	-0.6
NKY				*i* Sn	Sg	12 48 11.2	-0.3
BOSS	Bosilegrad	1.98	49	*e*Pg	Pn	12 47 43.6	+0.4
BOSS				*e*Sg	Sb	12 48 10.0	-0.5
THE	Thessaloniki	1.99	106	*e*Pn	Pn	12 47 43.3	0.0
SELS	Selova	2.06	14	*e*Pg	Pn	12 47 45.3	+1.0
SJES	Sjenica	2.08	350	*e*Pg	Pb	12 47 47.1	-0.2
SJES				*e*Sg	Sb	12 48 14.1	+0.8
SJES	Sjenica	2.08	350	*e*Pn	Pb	12 47 48.1	+0.8
TREB	Trebinje	2.17	314	*e*Pn	Pn	12 47 46.6	+0.8
TREB				*e*Sg	Sg	12 48 20.5	+1.4
TREB	Trebinje	2.17	314	*e*Pn	Pn	12 47 46.5	+0.8
BRY	Bratogost	2.21	320	*e*Pn	Pn	12 47 47.5	+1.1
BRY	Bratogost	2.21	320	⇑*i* Pn	Pn	12 47 48.0	+1.6
BRY				*i* Sn	Sb	12 48 18.5	+1.4
SOH	Sokhos	2.23	99	*i* Pn	Pn	12 47 47.3	+0.6
DBRK	Dubrovnik	2.25	311	*e*Pn	Pn	12 47 47.4	+0.4
DBRK				Sn	Sb	12 48 17.5	-0.8
PLE	Pljevlja	2.26	340	⇑*i* Pn	Pn	12 47 48.7	+1.6
PLE				*i* Sn	Sb	12 48 19.3	+0.8
UPM	Unac-Piva	2.30	330	*e*Pn	Pb	12 47 49.7	-1.4
UPM	Unac-Piva	2.30	330	⇓*i* Pn	Pb	12 47 49.7	-1.4
UPM				*i* Sn	Sb	12 48 20.4	+0.7
IVAS	Ivanjica	2.37	355	*e*Pn	Pn	12 47 48.0	-0.6
IVAS				*e*Sg	Sg	12 48 25.0	-0.5
SRS	Serrai	2.37	91	*i* Pn	Pn	12 47 48.6	+0.1
VTS	Vitosha	2.50	55	*e*Pn	Pn	12 47 51.0	+0.5
VTS				*e*Sn	Sn	12 48 21.1	-0.2
VTS	Vitosha	2.50	55	*i* Pn	Pn	12 47 51.0	+0.5
VTS				*e*Sn	Sn	12 48 21.0	-0.3
RUDO	Rudo	2.53	342	*e*Pn	Pn	12 47 52.3	+1.5
STON	Ston	2.64	310	*e*Pn	Pn	12 47 52.7	+0.6
STON	Ston	2.64	310	*e*Pn	Pn	12 47 52.7	+0.6
STON				Sn	Sn	12 48 25.2	+1.0
BBLS	Lazići	2.76	344	*e*Pg	Pb	12 47 57.9	-1.1
BBLS	Lazići	2.76	344	*e*Pn	Pb	12 47 56.9	-2.1
DIVS	Divibare	2.90	353	*e*Pg	Pb	12 47 59.3	-2.1
DIVS	Divibare	2.90	353	*e*Pn	Pn	12 47 58.5	+2.6
ZAGS	Zajecar	2.91	26	*e*Pg	Pb	12 47 59.4	-2.1
TRUS	Trudelj	3.01	359	*e*Pn	Pn	12 47 58.4	+1.1
LSTV	Lastovo	3.08	301	*i* Pn	Pn	12 47 57.5	-0.7
LSTV				Sn	Sn	12 48 33.5	-1.7
MAKA	Makarska	3.29	310	*e*Pn	Pn	12 48 00.8	-0.3
MAKA				Sn	Sn	12 48 39.5	-0.8
RICI	Ricice	3.35	314	*e*Pn	Pn	12 48 02.3	+0.3
RICI				Sn	Sn	12 48 42.1	+0.1
HVAR	Hvar	3.56	305	*e*Pn	Pn	12 48 03.9	-1.1
HVAR				Sn	Sn	12 48 46.2	-1.0
SRKY	Kupres RS	3.74	321	*e*Pn	Pn	12 48 09.2	+1.7
FRGS	Fruska Gora	3.97	353	*e*Pn	Pn	12 48 06.7	-3.8
KIJV	Kijevo	4.09	314	*e*Pn	Pn	12 48 12.2	+0.1
KIJV				Sn	Sn	12 48 59.9	-0.3
ZIRJ	Zirje	4.31	306	*e*Pn	Pn	12 48 14.4	-0.8
ZIRJ				Sn	Sn	12 49 04.2	-1.5
MORI	Morici	4.39	309	*e*Pn	Pn	12 48 16.2	-0.2
MORI				Sn	Sn	12 49 07.3	-0.4
UDBI	Udbina	4.78	315	*e*Pn	Pn	12 48 21.7	0.0
UDBI				Sn	Sn	12 49 17.8	+0.6
DUGI	Dugi Otok	4.85	307	*e*Pn	Pn	12 48 22.2	-0.5
DUGI				Sn	Sn	12 49 17.9	-1.2
VIRC	Vir	5.03	310	*e*Pn	Pn	12 48 23.7	-1.3
VIRC				Sn	Sn	12 49 22.9	-0.3
MORH	Mrgy, Hungar	5.17	346	*e*Pn	Pn	12 48 28.8	+1.9
NVLJ	Novalja	5.29	311	*e*Pn	Pn	12 48 27.8	-0.9
NVLJ				Sn	Sn	12 49 29.6	-0.2
A250A	Rusevo Krmpots	5.60	315	*e*Pn	Pn	12 48 32.5	-0.5
A250A				Sn	Sn	12 49 37.6	+0.1
BOJS	Bojanci	5.72	320	*i* Pn	Pn	12 48 35.3	+0.7
CRES	Cresnjev	5.87	323	*e*Pn	Pn	12 48 37.3	+0.7
CRES	Cresnjev	5.87	323	*i* Pn	Pn	12 48 37.3	+0.7
SMRN	Sveta Marina	5.99	312	*e*Pn	Pn	12 48 37.3	-0.8
SMRN				Sn	Sn	12 49 46.0	-0.8
BRJN	Brijuni	6.14	309	*e*Pn	Pn	12 48 39.8	-0.5
BRJN				Sn	Sn	12 49 48.4	-2.3
CEY	Cerknica	6.30	318	*e*Pn	Pn	12 48 42.8	+0.3
CEY	Cerknica	6.30	318	*i* Pn	Pn	12 48 42.9	+0.4
SKDS	Skadanscina	6.38	315	*e*Pn	Pn	12 48 42.8	-0.9
OBKA	Obir	6.80	323	*e*Pn	Pn	12 48 49.5	0.0
	comp=E,1.0nm,0.3s						
ABTA	Abfaltersbach	7.96	317	*e*Pn	Pn	12 49 06.4	+1.1
	comp=E,1.0nm,0.3s						
WTTA	Wattenberg	8.75	317	*e*Pn	Pn	12 49 17.4	+1.1
	comp=E,2.6nm,0.5s						
WATA	Walderalm	8.83	317	*i* Pn	Pn	12 49 19.1	+1.8
	comp=E,1.5nm,0.3s						
SQTA	Sankt Quirin	8.95	315	*e*Pn	Pn	12 49 19.8	+0.9
	comp=E,0.8nm,0.2s						
MOTA	Moosalm	9.08	316	*e*Pn	Pn	12 49 21.4	+0.6
	comp=E,1.8nm,0.4s						
FETA	Feichten	9.09	313	*e*Pn	Pn	12 49 22.3	+1.4
	comp=E,1.1nm,0.7s						

TUL ***08*** *12:52:19.9±1.1, 36°.83N±0°.01×98°.28W±0°.02, h5^{km}±5^{km}, ML2.9, mb_Lg2.8/68(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=131.0*

ANF ***08*** *12:52:20.4±0.4, 36°.82N×98°.27W, h5^{km}, ML3.4/8, Error ellipse: s-maj=4.7km s-min=3.8km az=166.0*

NEIC ***08*** *12:52:20.4±1.0, 36°.82N±0°.01×98°.27W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=126.0*

ISC 08 12:52:20.1±0.8**, 36°.83N**±0°.03×**98°.28W**±0°.03**, h10**^{km}**, n60, σ1**^{s}**.32**/46**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.74	232		Pg	12 52 34.1	-0.3
U32A				Sg	Sg	12 52 44.5	+0.5
U32A	Winter Ranch,	0.74	232	P	Pg	12 52 34.1	-0.3
	baz=53						
U32A				S	Sg	12 52 44.4	+0.4
	baz=53						
T35A	Sooner Cattle	1.42	86	Pn	Pb	12 52 46.2	-0.4
T35B	Sooner Cattle	1.42	86	P	Pb	12 52 46.2	-0.5
	baz=266						
T35B				S	Sg	12 53 05.4	-0.3
	baz=266						
OKCFA	Oklahoma City	1.56	154		Pn	12 52 48.2	+0.2
OKCFA	Oklahoma City	1.56	154	S	Sg	12 53 10.3	-0.1
	baz=335						
OKCSW	OKLAHOMA CITY	1.58	154		Pn	12 52 48.4	+0.2
R32A	Long Quarter,	1.62	348		Pb	12 52 49.6	-0.6
R32A	Long Quarter,	1.62	348	P	Pb	12 52 50.0	-0.2
	baz=167						
R32A				S	Sg	12 53 11.8	-0.6
	baz=167						
FNO	Franklin	1.73	155		Pb	12 52 51.1	-0.7
WMOK	Wichita Mounta	2.13	191	Pn	Pb	12 52 57.5	-1.4
TUL1	Leonard	2.21	114		Pb	12 52 58.6	-1.5
TUL1				IAmb_Lg		12 53 32.6	
	comp=Z,29nm,0.9s						
TUL1	Leonard	2.21	114	P	Pb	12 52 58.9	-1.2
	baz=295						
TUL1				Sb	Sb	12 53 28.4	+0.9
	baz=295						
X34A	Smith Ranch, M	2.26	171		Pb	12 52 59.7	-1.2
X34A				IAmb_Lg		12 53 36.6	
	comp=Z,33nm,0.7s						
CBKS	Cedar Bluff	2.29	330		Pb	12 53 00.1	-1.5
CBKS	Cedar Bluff	2.29	330	P	Pb	12 53 00.9	-0.7
	baz=149						
KSU1	Kansas State U	2.62	30	Pn	Pn	12 53 03.9	+1.4
KSU1				IAmb_Lg		12 53 45.6	
	comp=Z,28nm,0.8s						
X37A	Clayton	3.25	133		Pn	12 53 12.7	+1.5
AMTX	Amarillo	3.38	236	IAmb_Lg		12 54 14.8	
	comp=Z,36nm,1.0s						
AMTX	Amarillo	3.38	236	P	Pb	12 53 21.6	+1.4
	baz=54						
HHAR	Hobbs	3.53	98		Pn	12 53 16.1	+1.0
Z35A	Perchaven, San	3.59	166	Pn	Pn	12 53 16.8	+0.9
W39A	Magazine	3.99	113		Pn	12 53 22.7	+1.4
W39A				IAmb_Lg		12 54 28.6	
	comp=Z,25nm,0.8s						
W39A	Magazine	3.99	113	P	Pn	12 53 22.7	+1.4
	baz=295						
W39A				Sb	Sg	12 54 25.7	-2.6
	baz=295						
S39A	Bolivar	4.04	76		Pn	12 53 22.6	+0.5
S39A				IAmb_Lg		12 54 29.3	
	comp=Z,14nm,0.9s						
S39A	Bolivar	4.04	76	P	Pn	12 53 22.9	+0.8
	baz=259						
KSCO	Kaye Shedlock'	4.07	304		Pn	12 53 23.9	+1.3
ABTX	Abilene, Hawle	4.35	195	Pn	Pn	12 53 26.9	+0.6
U40A	Yellville	4.39	95		Pn	12 53 28.5	+1.7
U40A				IAmb_Lg		12 54 49.0	
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	4.45	119		Pn	12 53 28.0	+0.3
MIAR				IAmb_Lg		12 54 43.2	
	comp=Z,14nm,0.7s						
Z38A	Mt. Pleasant	4.47	142	IAmb_Lg		12 54 45.3	
	comp=Z,20nm,0.8s						
BGNE	Belgrade	4.57	1		Pn	12 53 30.9	+1.6
MSTX	Muleshoe	4.65	233		Pn	12 53 30.6	0.0
MSTX				IAmb_Lg		12 54 48.0	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.66	52		Pn	12 53 31.3	+0.8
P38A				IAmb_Lg		12 54 52.7	
	comp=Z,13nm,0.8s						
MGMO	Mountain Grove	4.82	84	Pn	Pn	12 53 33.6	+0.9
MGMO				IAmb_Lg		12 54 55.4	
	comp=Z,20nm,0.8s						
T25A	Trinidad	4.92	275		Pn	12 53 36.1	+1.8
R40A	Maddies Statio	4.99	71		Pn	12 53 36.5	+1.4
X40A	Basin Creek Fa	5.01	116	Pn	Pn	12 53 35.8	+0.5
X40A				IAmb_Lg		12 55 03.4	
	comp=Z,16nm,0.8s						
OGNE	Ogallala	5.04	326	Pg	Pg	12 53 53.5	-3.2
OGNE				IAmb_Lg		12 55 00.2	
	comp=Z,13nm,0.7s						
FCAR	Ozark Folk Cen	5.05	99	Pn	Pn	12 53 37.8	+1.9
FCAR				IAmb_Lg		12 55 07.8	
	comp=Z,16nm,1.0s						
WHAR	Wooly Hollow	5.09	106	IAmb_Lg		12 55 10.4	
	comp=Z,11nm,0.8s						
P40A	Paris	5.60	59	IAmb_Lg		12 55 23.9	
	comp=Z,13nm,1.0s						
CCM	Cathedral Cave	5.73	76	Pg	Pb	12 54 03.8	+3.7
CCM				IAmb_Lg		12 55 23.4	
	comp=Z,15nm,1.1s						
Z41A	Richland Creek	5.73	127	IAmb_Lg		12 55 31.8	
	comp=Z,13nm,0.8s						
LCAR	Lake Charles	5.79	95	IAmb_Lg		12 55 27.3	
	comp=Z,20nm,0.8s						
SDCO	Great Sand Dun	5.83	281	Pg	Pg	12 54 11.2	-0.7
Q24A	Divide	5.84	293	IAmb_Lg		12 55 34.5	
	comp=Z,11nm,0.8s						
435B	Jarrell	6.06	174	IAmb_Lg		12 55 40.2	
	comp=Z,14nm,0.8s						
PBMO	Poplar Bluff	6.30	88	IAmb_Lg		12 55 41.8	
	comp=Z,18nm,0.7s						
SCIA	State Center	6.41	36	IAmb_Lg		12 55 52.4	
	comp=Z,15nm,0.8s						
ISCO	Idaho Springs	6.49	299	Pg	Pg	12 54 18.9	-5.4
SLM	Saint Louis	6.62	72	IAmb_Lg		12 55 47.9	
	comp=Z,11nm,0.8s						
ECSD	EROS Data Cent	7.01	10	IAmb_Lg		12 56 04.8	
	comp=Z,7.8nm,0.7s						
N23A	Red Feather La	7.23	306	IAmb_Lg		12 56 10.4	
	comp=Z,9.4nm,0.7s						
L40A	Anamosa	7.55	44	IAmb_Lg		12 56 26.4	
	comp=Z,13nm,0.9s						
O44A	Mansfield	8.38	64	IAmb_Lg		12 57 03.9	
	comp=Z,9.4nm,0.9s						
L42A	Oliver, Polo	8.43	50	IAmb_Lg		12 56 59.2	
	comp=Z,12nm,0.9s						
K22A	Casper	8.61	315	IAmb_Lg		12 57 08.0	
	comp=Z,8.6nm,0.9s						
JFWS	Jewell Farm	8.66	43	IAmb_Lg		12 56 57.9	
	comp=Z,9.2nm,0.7s						
I40A	Norwalk	9.15	37	IAmb_Lg		12 57 14.7	
	comp=Z,5.9nm,0.9s						

IDC ***08*** *12:52:34.6±1.3, 42°.54S×15°.10W, h0^{km}, mb3.8/3, mbtmp3.8/3, MS3.7/21, Error ellipse: s-maj=46.3km s-min=36.2km az=95.0*

NEIC ***08*** *12:52:35.8±0.9, 42°.7S±0°.1×14°.9W±0°.2, h14^{km}±3^{km}, mb4.7/8, Error ellipse: s-maj=23.7km s-min=10.7km az=118.0*

ISC 08 12:52:35.1±0.6**, 42°.7S**±0°.1×**15°.0W**±0°.1**, h10**^{km}**, n40, σ0**^{s}**.78**/21**, mb4.3**/6**, MS3.6**/21**, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIS	Tristan da Cun	5.93	21	Pn	Pn	12 54 02.7	-0.2
HOPE	Hope Point	18.34	223	P	Pn	12 56 49.7	+0.3
HOPE				IAmb	IAmb	12 57 13.8	
	comp=Z,95nm,1.4s						
SNAA	Sanae	29.70	172	P	P	12 58 40.0	-0.9
SNAA				IAmb	IAmb	12 58 59.7	
	comp=Z,17nm,1.5s						
SUR	Sutherland	29.96	82	LR	LR	13 09 28.2	
	comp=Z,101nm,18.1s,baz=226,slow=34						
BOSA	Boshof	35.21	80	LR	LR	13 11 54.2	
	comp=Z,67nm,19.0s,baz=192,slow=33						
BOSA	Boshof	35.21	80	P	P	12 59 29.8	+0.1
PMSA	Palmer Station	35.22	214	LR	LR	13 10 27.7	
	comp=Z,74nm,19.8s,baz=90,slow=30						
ITQB	Itaqui	35.70	277	P	P	12 59 33.2	-0.5
ITQB				IAmb	IAmb	12 59 47.1	
	comp=Z,12nm,1.1s						
TSUM	Tsumeb	36.05	60	LR	LR	13 11 45.8	
	comp=Z,124nm,18.8s,baz=148,slow=32						
LBTB	Lobatse	37.58	75	LR	LR	13 12 20.4	
	comp=Z,119nm,21.4s,baz=214,slow=32						
CPUP	Villa Florida	38.10	281	P	P	12 59 54.5	+0.4
	comp=Z,2.5nm,0.9s,baz=131,slow=11,SNR=4.7						
CPUP				LR	LR	13 14 04.0	
	comp=Z,76nm,18.6s,baz=140,slow=34						
	comp=Z,2.5nm,0.9s						
PLCA	Paso Flores	40.93	253	LR	LR	13 13 01.3	
	comp=Z,90nm,21.5s,baz=131,slow=30						
LSZ	Lusaka	45.87	67	LR	LR	13 17 20.8	
	comp=Z,122nm,21.2s,baz=147,slow=32						
SIV	San Ignacio	47.42	290	LR	LR	13 17 08.9	
	comp=Z,50nm,20.4s,baz=134,slow=31						
QSPA	South Pole Qui	47.61	180	LR	LR	13 19 36.0	
	comp=Z,41nm,18.9s,baz=226,slow=34						
QSPA	South Pole Qui	47.61	180	P	P	13 01 10.9	0.0
QSPA				IAmb	IAmb	13 01 19.8	
	comp=Z,6.9nm,1.1s						
LVC	Limon Verde	48.77	276	LR	LR	13 19 38.5	
	comp=Z,43nm,21.9s,baz=158,slow=33						
DBIC	Dimbokro	49.94	13	LR	LR	13 18 07.7	
	comp=Z,48nm,18.5s,baz=160,slow=31						
LPAZ	La Paz	52.21	283	LR	LR	13 22 46.0	
	comp=Z,124nm,20.2s,baz=76,slow=35						
TORD	Torodi Ar. Bea	57.59	19	P	P	13 02 26.5	+1.4
	comp=Z,0.8nm,1.0s,baz=205,slow=6.4,SNR=3.5						
	comp=Z,0.8nm,1.0s						
MBAR	Mbarara	58.51	57	LR	LR	13 25 20.9	
	comp=Z,202nm,19.1s,baz=149,slow=34						
MDP	Montagnes des	58.54	314	LR	LR	13 25 01.3	
	comp=Z,49nm,19.1s,baz=142,slow=33						
VNDA	Vanda	60.09	179	P	P	13 02 44.0	+2.2
	comp=Z,1.2nm,1.1s,baz=218,slow=2.8,SNR=4.0						
VNDA				LR	LR	13 26 49.1	
	comp=Z,37nm,19.2s,baz=177,slow=34						
	comp=Z,1.2nm,1.1s						
VNDA	Vanda	60.09	179	P	P	13 02 41.9	0.0
NNA	Nana	61.35	280	LR	LR	13 28 47.1	
	comp=Z,59nm,19.2s,baz=143,slow=36						
KMBO	Kilima Mbogo	62.27	63	LR	LR	13 27 49.9	
	comp=Z,130nm,20.1s,baz=92,slow=34						
ATAH	Atahualpa	65.76	283	LR	LR	13 31 33.8	
	comp=Z,37nm,20.9s,baz=154,slow=36						
ATD	Arta Tunnel	75.44	59	LR	LR	13 35 05.8	
	comp=Z,63nm,21.9s,baz=122,slow=34						
SOCY	Socotra	83.24	67	P	P	13 05 01.5	-0.5
WSAR	Wadi Sarin	94.19	62	LR	LR	13 47 07.1	
	comp=Z,34nm,18.1s,baz=224,slow=35						
YKA	Yellowknife Ar	130.94	323	PKP	PKPdf	13 11 45.0	-0.7
	comp=Z,0.2nm,0.7s,baz=87,slow=2.1,SNR=5.1						
YKA	Yellowknife Ar	130.94	323		PKPdf	13 11 45.3	-0.4
TOLK	Toolik Lake Re	144.88	333		PKPab	13 12 10.5	+0.2
ILAR	Eielson Array	145.21	326	PKPbc	PKPbc	13 12 10.9	-0.6
	comp=Z,1.6nm,0.8s,baz=89,slow=2.1,SNR=20						
ILAR	Eielson Array	145.21	326		PKPbc	13 12 10.7	-0.8
H24K	Noodor Dome	145.29	328		PKPbc	13 12 11.4	-0.4
HDA	Harding Lake	145.33	325		PKPbc	13 12 11.1	-0.8
MDM	Murphy Dome	145.70	327		PKPdf	13 12 12.2	-0.5
H23K	Yukon River	145.94	328		PKPdf	13 12 13.2	+0.1
I23K	Minto, Yukon-K	146.10	327		PKPdf	13 12 13.5	+0.2

IDC 08 13:14:46.2±2.9**, 32°.72S**×**179°.57E, h0**^{km}**, mb3.5**/2**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=62.1km s-min=33.6km az=98.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.88	199	Pn	Pn	13 16 14.0	-0.4
	0.4nm,0.3s,baz=301,slow=23,SNR=6.5						
URZ				Sn	Sb	13 17 32.2	-8.2
	1.8nm,0.3s,baz=306,slow=24,SNR=2.9						
	0.9nm,0.3s						
RPZ	Rata Peaks	12.85	209	Pn	Pn	13 17 49.2	-0.8
	0.7nm,0.3s,baz=59,slow=2.6,SNR=2.3						
RPZ				Sn	Sn	13 20 16.5	+2.8
	0.2nm,0.3s,baz=23,slow=22,SNR=1.5						
	3.6nm,0.5s						
ASAR	Alice Springs	40.98	271	P	P	13 22 31.2	+0.1
	0.2nm,0.5s,baz=110,slow=8.0,SNR=6.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	42.19	276	P	P	13 22 40.6	-0.3
	0.5nm,0.3s,baz=115,slow=7.7,SNR=20						
	0.5nm,0.3s						
FINES	FINESS Array B	146.54	337	PKPbc	PKPbc	13 34 28.1	-0.6
	0.7nm,0.7s,baz=45,slow=6.2,SNR=4.8						

OSPL ***08*** *13:47:56.5±2.8, 18°.33N×60°.97W, h0^{km}±261^{km}, ML5.0*

IDC ***08*** *13:47:58.5±0.4, 17°.64N×61°.58W, h0^{km}, mb4.6/24, mbtmp4.6/27, ML4.6/3, MS4.1/73, Error ellipse: s-maj=12.4km s-min=11.5km az=76.0*

TRN ***08*** *13:48:03.5, 17°.60N×61°.69W, h24^{km}, MD5.1*

TRN Felt in Antigua MMI III, St.Kitts III, MontserratI II, Guadeloupe III.

NEIC ***08*** *13:48:04.7±1.4, 17°.65N±0°.06×61°.68W±0°.06, h34^{km}±4^{km}, mb4.9/437, Error ellipse: s-maj=10.9km s-min=6.2km az=225.0*

GCMT ***08*** *13:48:05.7±0.2, 17°.85N±0°.02×61°.39W±0°.02, h40^{km}, MW5.0/93, Moment Tensor Solution. s62,c76; s93,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.20±.15; $M_{\theta\theta}$-0.98±.10; $M_{\phi\phi}$-2.22±.10; $M_{r\theta}$-0.83±.08; $M_{\theta\phi}$1.66±.07; $M_{\phi r}$1.88±.08; Best double couple: $M_0$3.87700×10^{16} NP1:ϕ_s139.00000°,δ30.00000°,λ79.00000°. NP2: ϕ_s331.00000°,δ61.00000°,λ96.00000°. Principal axes: T 3.8090, Plg73.0000°, Azm256.0000°; N 0.1360, Plg5.0000°, Azm148.0000°; P -3.9450, Plg16.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 13:48:04.1±0.3**, 17°.63N**±0°.03×**61°.65W**±0°.03**, h33**^{km}±1^{km}**, h33**^{km}**:pP-P, n938, σ1**^{s}**.23**/937**, mb4.9**/235**, MS4.2**/73**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.13	287		Pn	13 48 10.1	+2.3
ANWB					Sb	13 48 13.9	-0.4
ANWB	Willy Bob	0.13	287	*e*P	Pn	13 48 10.0	+2.1
ANWB				*e*S	Sb	13 48 14.0	-0.3
ANDO	Antigua, Disas	0.54	198	*e*P	Pn	13 48 15.6	+0.1
ANDO				*e*S	Sn	13 48 24.2	+0.8
ANBD	Bethesda, Anti	0.59	190	*e*P	Pn	13 48 16.4	+0.3
ANBD				*e*S	Sn	13 48 25.7	+1.1
BPA	Boggy Peak	0.61	198	*e*P	Pn	13 48 16.6	+0.2
BPA				*e*S	Sn	13 48 26.2	+1.0
MBFL	Flemmings, Mon	1.03	211	*e*P	Pb	13 48 23.5	0.0
MBFL				*e*S	Sb	13 48 38.6	+2.0
MLYT	Lee's Yard	1.04	210	*e*P	Pb	13 48 23.6	-0.1
MLYT				*e*S	Sb	13 48 38.8	+1.7
SKI	Saint Kitts	1.08	254	*e*P	Pb	13 48 24.1	-0.2
SKI				*e*S	Sb	13 48 39.5	+1.4
SKOC	St. Kitts, UWI	1.08	252	*e*P	Pb	13 48 23.9	-0.4
SKOC				*e*S	Sb	13 48 38.9	+0.7
ABD	La Joyeuse, An	1.16	172		Pb	13 48 24.7	-1.0
ABD	La Joyeuse, An	1.16	172	*e*P	Pb	13 48 24.7	-1.0
ABD				*e*S	Sb	13 48 42.9	+2.5
SEUS	St. Eustatius	1.27	264		Pb	13 48 26.8	-0.8
SEUS	St. Eustatius	1.27	264	*e*P	Pb	13 48 27.0	-0.6
SEUS				*e*S	Sb	13 48 44.4	+0.7
GDHS	Morne Mazeau,	1.35	185		Pb	13 48 27.7	-1.3
SMRT	St. Maarten	1.42	287		Pn	13 48 27.8	+0.2
SMRT	St. Maarten	1.42	287	*e*P	Pn	13 48 28.2	+0.6
SMRT				*e*S	Sb	13 48 47.1	-0.6
GDSD	La Dsirade Is	1.43	157		Pn	13 48 28.3	+0.6
CBE	Ff, Capester	1.55	178		Pb	13 48 30.7	-1.6
CBE	Ff, Capester	1.55	178	*e*P	Pb	13 48 30.7	-1.6
CBE				*e*S	Sb	13 48 52.0	+0.3
MAGL	Barre de l'ile	1.71	168		Pb	13 48 33.1	-1.8
MAGL	Barre de l'ile	1.71	168	*e*P	Pb	13 48 33.3	-1.6
MAGL				*e*S	Sb	13 48 54.7	-1.4
TBG	Guadaloupe-3	1.77	180	*e*P	Pb	13 48 34.7	-1.2
TDBA	Terre de Bas,	1.77	179		Pn	13 48 33.5	+1.1
TDBA	Terre de Bas,	1.77	179	*e*P	Pn	13 48 33.9	+1.5
TDBA				*e*S	Sb	13 48 56.5	-1.4
MDVC	Dominica, Viel	2.02	173	*e*P	Pn	13 48 37.8	+2.0
MDVC				*e*S	Sn	13 49 02.5	+2.5
DSLB	Salisbury	2.19	174	*e*P	Pn	13 48 40.3	+2.1
DSLB				*e*S	Sn	13 49 06.3	+2.1
MDN	Morne-Daniel	2.31	174	*e*P	Pn	13 48 41.9	+2.1
MDN				*e*S	Sn	13 49 09.3	+2.1
DLPL	La Plaine	2.32	170		Pn	13 48 41.2	+1.2
DLPL	La Plaine	2.32	170	*e*P	Pb	13 48 42.9	-2.4
DLPL				*e*S	Sn	13 49 09.9	+2.5
SVN	Savane Anatole	2.81	170		Pn	13 48 47.6	+0.8
FDF	Fort de France	2.92	170		Pn	13 48 49.3	+1.0
FDF	Fort de France	2.92	170	*e*P	Pn	13 48 49.7	+1.4
FDF				*e*S	Sn	13 49 24.4	+2.1
ILAM	Ilet Lapin Mar	2.94	165		Pn	13 48 49.3	+0.9
ILAM	Ilet Lapin Mar	2.94	165	*e*P	Pn	13 48 50.6	+2.2
ILAM				*e*S	Sn	13 49 24.3	+1.7
CDVI	St. Croix	2.97	273		Pn	13 48 48.2	-0.7
CDVI	St. Croix	2.97	273	*e*P	Pn	13 48 50.8	+1.9
BIM	Bigot	3.15	170		Pn	13 48 52.6	+1.2
BIM	Bigot	3.15	170	*e*P	Pn	13 48 53.4	+2.0
BIM				*e*S	Sn	13 49 29.6	+1.8
STVI	Saint Thomas	3.22	283		Pn	13 48 52.4	0.0
MPOM	Morne Pois Mar	3.26	166		Pn	13 48 54.1	+1.2
MPOM	Morne Pois Mar	3.26	166	*e*P	Pn	13 48 54.8	+1.9
MPOM				*e*S	Sn	13 49 32.7	+2.2
CUPR	Culebra, Puert	3.52	282		Pn	13 48 56.6	+0.1
SLBI	Saint Lucia, B	3.65	170	*e*P	Pn	13 49 00.7	+2.5
SLBI				*e*S	Sn	13 49 41.5	+1.4
SLCP	Castries, St.	3.66	170	*e*P	Pn	13 49 01.2	+2.8
SLCP				*e*S	Sn	13 49 42.8	+2.5
MTP	Monte Pirata	3.74	278		Pn	13 49 00.3	+0.8
MCLT	Moule a Chique	3.96	170		Pn	13 49 03.7	+1.2
MCLT	Moule a Chique	3.96	170	*e*P	Pn	13 49 04.8	+2.3
MCLT				*e*S	Sn	13 49 48.7	+0.8
HUMP	Col San Antoni	4.03	278	Pn	Pn	13 49 04.1	+0.7
CBYP	Canovanas	4.05	280		Pn	13 49 04.3	+0.5
PDPR	Patillas Dam,	4.18	276		Pn	13 49 06.2	+0.7
SSV	Crater Summit	4.30	174	*e*	Pn	13 49 11.6	+4.2
SJG	San Juan	4.31	277	Pn	Pn	13 49 08.2	+0.9
	240nm,0.3s,baz=107,slow=16,SNR=380						
SJG				Sn	Sn	13 49 59.0	+2.6
	306nm,0.3s,baz=192,slow=20,SNR=6.6						
SJG				LR	LR	13 51 05.3	
	comp=Z,5μm,18.5s,baz=66,slow=43						
	751nm,0.5s						
SJG	San Juan	4.31	277	*e*P	Pn	13 49 09.0	+1.7
SJG	San Juan	4.31	277	*e*P	Pn	13 49 08.7	+1.4
SJG	San Juan	4.31	277	*e*S	Sn	13 49 57.2	+0.8
SVV	Soufriere Volc	4.31	174	*e*P	Pn	13 49 08.9	+1.5
SVB	Belmont	4.35	175		Pn	13 49 09.4	+1.5
SVB	Belmont	4.35	175	*e*P	Pn	13 49 10.8	+2.8
SVOC	Richmond Hill,	4.47	175	*e*P	Pn	13 49 11.3	+1.8
ICMP	Isla Caja de M	4.65	274		Pn	13 49 13.3	+1.3
CELP	Cerrillos	4.71	276		Pn	13 49 13.8	+0.9
EMPR	Esperanza - Ma	4.71	281		Pn	13 49 12.9	0.0
OBIP	Obispado Ponce	4.74	276		Pn	13 49 14.0	+0.8
BBGH	Gun Hill	4.90	155	Pn	Pn	13 49 16.6	+1.1
BBGH	Gun Hill	4.90	155	*e*P	Pn	13 49 16.8	+1.4
BBGH	Gun Hill	4.90	155	*e*S	Sn	13 50 12.8	+1.8
AOPR	Arecibo Observ	4.91	279		Pn	13 49 15.4	-0.2
AOPR	Arecibo Observ	4.91	279	*e*P	Pn	13 49 17.0	+1.4
AOPR	Arecibo Observ	4.91	279	*e*S	Sn	13 50 12.9	+1.7

BBSP	Saint Philip	4.97 154	eP	Pn	13 49 19.4 +2.9
BBSP	Saint Philip	4.97 154	eS	Sn	13 50 14.1 +1.3
GCMP	Grenada, Carri	5.12 178	eP	Pn	13 49 20.7 +2.2
MLPR	Magueyes Islan	5.15 275		Pn	13 49 19.4 +0.6
CRPR	Cabo Rojo, PR	5.21 275		Pn	13 49 19.9 +0.1
CRPR	Cabo Rojo, PR	5.21 275	i P	Pn	13 49 20.5 +0.8
CRPR			eS	Sn	13 50 26.8 +8.1
CRPR			IAML		13 50 51.0
	comp=Z,452nm,1.0s				
AGPR	Aguadilla, PR	5.26 280		Pn	13 49 19.8 -0.6
AGPR	Aguadilla, PR	5.26 280	i P	Pn	13 49 20.0 -0.4
AGPR			eS	Sn	13 50 25.1 +5.2
AGPR			IAML		13 50 37.4
	comp=Z,603nm,1.2s				
PRSN	Puerto Rico Se	5.26 277		Pn	13 49 20.3 -0.1
GRSS	Sisters	5.30 180	eP	Pn	13 49 22.2 +1.2
GRHS	Sauteurs	5.38 180	eP	Pn	13 49 25.4 +3.3
GRGR	Grenville	5.47 180	Pn	Pn	13 49 23.1 -0.1
GRGR	Grenville	5.47 180	eP	Pn	13 49 25.2 +1.9
GRFF	Grenada Fort F	5.55 181	eP	Pn	13 49 26.0 +1.5
TOSP	Speyside	6.39 170	eP	Pn	13 49 39.0 +3.1
TOSP	Speyside	6.39 170	eS	Sn	13 50 47.2 -0.5
TRN	Trinidad (W)	6.95 178	eP	Pn	13 49 45.5 +1.9
TPP	Pointe-a-Pierr	7.27 178	e	Pn	13 49 56.6 +8.5
DR12	Loma Pena Alta	7.43 280		Pn	13 49 49.9 -0.5
BANI	BANI	8.32 277	Pn	Pn	13 50 02.6 +0.1
BIRV	Birongo	8.40 213		Pn	13 50 03.5 -0.1
HATO	Hato, Curacao	8.90 233	Pn	Pn	13 50 10.1 -0.3
LOBA2	Hotel Casa Bon	9.00 274	i P	Pn	13 50 12.4 +0.6
LOBA2			IAML		13 52 07.0
	comp=Z,57nm,1.7s				
SDDR	Presa de Saban	9.25 280		Pn	13 50 13.9 -1.3
SDDR	Presa de Saban	9.25 280	eP	Pn	13 50 14.8 -0.5
SDDR	Presa de Saban	9.25 280	eP	Pn	13 50 16.1 +0.9
SDDR	Presa de Saban	9.25 280	i P	Pn	13 50 14.7 -0.5
SDDR			eS	Sn	13 51 54.9 -3.3
SDDR			IAML		13 52 11.9
	comp=Z,107nm,1.1s				
LOPE2	Hotel El Peder	9.62 274	i P	Pn	13 50 21.1 +0.8
GRTK	Grand Turk	9.73 295	i P	Pn	13 50 18.3 -3.5
GRTK			eS	Sn	13 52 02.0 -7.9
JAKH	Jacmel	10.36 275		Pn	13 50 28.6 -1.8
LGNH	Logne	10.45 276		Pn	13 50 31.5 -0.2
BAUV	El Baul	10.64 217		Pn	13 50 34.5 +0.2
BAUV	El Baul	10.64 217	eP	Pn	13 50 36.1 +1.9
BAUV	El Baul	10.64 217	eS	Sn	13 52 28.0 -4.3
URIC	Uribia, Colomb	11.61 241		Pn	13 50 45.3 -2.2
URIC	Uribia, Colomb	11.61 241	eP	Pn	13 50 45.5 -2.0
SDV	Santo Domingo	12.32 226	Pn	Pn	13 50 59.9 +2.4
	comp=Z,1.9nm,0.3s,baz=62,slow=12,SNR=25				
SDV			Sn	Sn	13 53 10.3 -3.5
	comp=Z,2.0nm,0.3s,baz=0.0,slow=9.1,SNR=1.2				
SDV			LR	LR	13 55 54.9
	comp=Z,906nm,21.4s,baz=48,slow=38				
SDV	Santo Domingo	12.32 226	Pn	Pn	13 50 57.1 -0.3
SDV	Santo Domingo	12.32 226	eP	Pn	13 51 00.7 +3.2
SDV	Santo Domingo	12.32 226	eP	Pn	13 50 59.8 +2.4
CRJC	Cerrejon, Guaj	12.71 240	eP	Pn	13 51 02.2 -0.5
GTBY	Guantanamo Bay	12.95 282	Pn	Pn	13 51 00.9 -4.9
LL6C	La Loma 6 Bece	13.74 237	eP	Pn	13 51 19.6 +2.9
SMRC	Santa Marta, M	13.77 244	eP	Pn	13 51 18.9 +1.9
LL1C	La Loma 1 Cana	14.08 237	eP	Pn	13 51 19.9 -1.5
HOJ	Hope	14.38 274	i P	P	13 51 33.3 +1.3
STH	Stony Hill	14.44 274	i P	P	13 51 33.8 +1.2
ARGC	Ariguani, Magd	14.46 239	eP	Pn	13 51 27.6 +1.0
OCAC	Ocana	14.70 232		Pn	13 51 29.9 0.0
OCAC	Ocana	14.70 232	eP	Pn	13 51 32.0 +2.0
PAMC	Pamplona, Colo	14.85 228	eP	Pn	13 51 33.3 +1.0
TAMC	Tame, Arauca	14.89 223	eP	Pn	13 51 34.0 +1.6
SMLC	San Martn de	14.93 236	eP	Pn	13 51 32.4 -0.4
BBSR	BB Station	14.93 350	Pn	Pn	13 51 27.2 -5.5
CVJ	Coleyville	15.13 275	i P	P	13 51 41.0 +0.7
MTDJ	Mount Denham	15.13 275	P	P	13 51 40.2 -0.1
MTDJ	Mount Denham	15.13 275	eP	P	13 51 41.2 +0.8
SJCC	San Jacinto, C	15.21 241		Pn	13 51 37.0 +0.4
SJCC	San Jacinto, C	15.21 241	eP	Pn	13 51 38.5 +1.8
MDP	Montagnes des	15.26 144	Pn	Pn	13 51 33.4 -3.9
	comp=Z,2.4nm,0.3s,baz=334,slow=18,SNR=17				
MDP			Sn	Sn	13 54 12.2 -13
	comp=Z,4.8nm,0.3s,baz=46,slow=17,SNR=11				
MDP			LR	LR	13 57 31.7
	comp=Z,708nm,21.4s,baz=324,slow=38				
	comp=Z,12nm,0.5s				
BARC	Barichara	15.72 227	eP	Pn	13 51 44.7 +1.3
BRRC	Barranca, Sant	15.74 230	eP	Pn	13 51 43.8 +0.3
RUSC	La Rusia	16.15 225	eP	Pn	13 51 50.1 +0.9
ZARC	Zaragoza, Cauc	16.35 234	Pn	Pn	13 51 49.8 -1.5
ZARC			IAmb	IAmb	13 52 00.2
	comp=Z,38nm,0.6s				
ZARC	Zaragoza, Cauc	16.35 234	eP	Pn	13 51 50.8 -0.4
PTBC	PUERTO BERRIO,	16.67 230	eP	Pn	13 51 55.1 -0.2
UREC	San Jos de Ur	16.71 236	eP	Pn	13 51 56.7 +0.8
LCBC	Los crdobas,	16.76 241	eP	P	13 51 58.5 +0.2
PTGC	Puerto Gaitan,	16.84 219	eP	P	13 51 59.3 0.0
SPBC	San Pablo de B	17.00 227	eP	Pn	13 51 60.0 +0.4
CHIC	Chingaza	17.52 224	eP	P	13 52 07.0 -0.2
LCCY	Blossom Villag	17.58 280	P	Pn	13 52 06.3 -0.4
NORC	Norcasia	17.63 229	eP	Pn	13 52 07.4 +0.1
DBBC	Dabeiba	17.69 235	eP	P	13 52 08.8 0.0
HELC	Santa Helena	17.69 232	eP	P	13 52 09.4 +0.3
ROSC	El Rosal	17.76 226	P	Pn	13 52 07.9 -1.3
	comp=Z,8.8nm,0.3s,baz=37,slow=7.0,SNR=35				
ROSC			LR	LR	14 00 20.4
	comp=Z,2µm,19.7s,baz=37,slow=42				
	comp=Z,72nm,0.9s				
ROSC	El Rosal	17.76 226	P	Pn	13 52 08.7 -0.5
ROSC			IAmb	IAmb	13 52 16.9
	comp=Z,87nm,0.7s				
ROSC	El Rosal	17.76 226	eP	P	13 52 11.5 +1.7
CBOC	Ciudad Bolivar	18.27 232	eP	Pn	13 52 15.7 +0.4
GUVC	San Jose del G	18.46 217	eP	Pn	13 52 18.9 +1.4
ANIL	Santa Ana	18.76 227	eP	Pn	13 52 22.2 +0.9
PTAC	Punta Ardita,	18.89 239	eP	Pn	13 52 22.9 +0.2
PRAC	Prado	18.96 225	eP	P	13 52 22.0 -0.7
ORTC	Ortega, Tolima	19.06 226	eP	P	13 52 24.2 +0.4
PLMC	San Jos del P	19.10 230	eP	P	13 52 23.4 -1.0
SOLC	Bahia Solano	19.11 236	eP	Pn	13 52 27.7 +2.4
MACC	Macarena, Meta	19.50 219	eP	P	13 52 28.7 +0.1
BCIP	Isla Barro Col	19.57 247	P	P	13 52 28.5 -0.9
BCIP	Isla Barro Col	19.57 247	eP	Pn	13 52 30.5 -0.4
061Z	Ochoppi	19.66 298	P	P	13 52 30.3 +0.1
061Z			IAmb	IAmb	13 52 45.0
	comp=Z,95nm,1.1s				
YOTC	Yotoco, Valle	19.78 228	eP	P	13 52 30.8 -1.0
PIZC	Pizarro, Choco	19.87 233	eP	Pn	13 52 35.6 +1.3
BETC	Betania	20.09 224	eP	P	13 52 35.8 +0.7
MCPB	Macapa, AP	20.22 151	eP	Pn	13 52 38.4 -0.1
PNME	Penonome	20.32 246	eP	P	13 52 38.0 +0.5
MARP	Paez Belalcaza	20.32 225	eP	P	13 52 37.0 -0.8
MALC	Bahia Malaga	20.48 230	eP	Pn	13 52 40.6 -0.9
GARC	Garzon, Huila	20.50 223	eP	P	13 52 39.8 +0.1
AZU	Azuero	20.61 244	eP	P	13 52 41.5 +0.9
SOR	Soroa	20.68 288	P	P	13 52 40.6 -0.8
MACA	Manacapuru-AM	20.68 177	eP	P	13 52 42.7 +1.3
MALB	Monte Alegre	20.68 159	eP	Pn	13 52 44.4 +0.5
DWPF	Disney Wildern	20.97 303	P	P	13 52 43.1 -1.4
	baz=116				
PCON	Cinco Dias	21.00 225	eP	P	13 52 46.3 +0.8
SOTA	Rioblanco	21.28 225	eP	P	13 52 49.6 +1.2
GR1C	Gorgona, Isla	21.77 230	eP	P	13 52 52.7 -0.4
CRUC	La Cruz	21.93 225	eP	P	13 52 56.4 +1.2
BRU2	Volcan	22.26 249	eP	P	13 52 48.6 -10
CCUFI	Cufio, Nario	22.44 225	eP	P	13 53 00.0 -0.9
GCUF	Volcan Galeras	22.44 225	eP	P	13 53 01.1 +0.2
ESPN	Las Esperanzas	22.53 259	P	P	13 52 59.6 -1.7
CSU	Charleston Sou	22.55 316	P	P	13 53 00.1 -1.3
DRK0	Durika	22.57 251	P	P	13 53 00.8 -1.1
ITTB	Itaituba	22.62 164	eP	P	13 53 03.6 +1.3
456A	Hilliard	22.65 309	P	P	13 53 02.1 -0.3
456A			IAmb	IAmb	13 53 03.8
	comp=Z,58nm,0.8s				
SRBA	San Rafael, Bu	22.68 251	P	P	13 53 02.5 -0.6
SRBA			IAmb	IAmb	13 53 07.0
	comp=Z,38nm,0.9s				
Y58A	Scranton	22.87 319	P	P	13 53 04.9 +0.2
Y58A			IAmb	IAmb	13 53 25.2
	comp=Z,54nm,0.8s				
PEZE	Perez Zeledon,	22.91 252	P	P	13 53 05.9 +0.5
PEZE			IAmb	IAmb	13 53 10.3
	comp=Z,59nm,1.0s				
RIMA	Rio Macho	22.93 253	P	P	13 53 05.8 0.0
RIMA			IAmb	IAmb	13 53 25.0
	comp=Z,76nm,1.3s				
CMBC	Cumbal	22.98 226	eP	P	13 53 08.8 +2.3
TUMC	Tumaco	22.98 229	P	P	13 53 06.5 +0.5
X58A	Rowland	23.10 320	P	P	13 53 06.7 -0.3
JTS	Las Juntas de	23.74 255	P	P	13 53 12.7 -0.9
JTS	Las Juntas de	23.74 255	eP	P	13 53 12.0 -1.6
BOAB	BOACO BROADBAN	23.75 261	P	P	13 53 12.5 -1.1
V58A	Windy Hill, Pi	23.82 323	P	P	13 53 13.4 -0.7
T59A	Double "B" Far	23.83 327	P	P	13 53 13.7 -0.5
MATN	Matagalpa	23.87 262	P	P	13 53 14.2 -0.6
MATN			IAmb	IAmb	13 53 17.2
	comp=Z,37nm,0.9s				
W57A	Gilead	23.90 320	P	P	13 53 14.7 -0.1
TMAB	Tom-Au,PA,Br	23.95 145	eP	P	13 53 17.4 +1.9
ORTG	Ortega, Santa	24.18 256	P	P	13 53 16.0 -1.8
154A	Montrose	24.42 312	P	P	13 53 19.6 -0.1
154A			IAmb	IAmb	13 53 22.1
	comp=Z,48nm,1.2s				
JSRW	J. Sargeant Re	24.55 328	P	P	13 53 20.6 -0.2
KMSC	Kings Mountain	24.72 319	P	P	13 53 22.4 0.0
KMSC	Kings Mountain	24.72 319	P	P	13 53 22.4 0.0
	baz=130,SNR=7.4				
R58B	Mineral	24.75 328	P	P	13 53 22.4 -0.2
HODGE	Hodges	24.75 316	P	P	13 53 22.3 -0.4
T57A	Hurt	24.76 325	P	P	13 53 22.4 -0.3
PAULI	Pauline	24.82 318	P	P	13 53 22.9 -0.4
TGUH	Tegucigalpa,Un	24.89 265	P	P	13 53 24.6 +0.4
TGUH			IAmb	IAmb	13 53 26.2
	comp=Z,41nm,0.8s				
CRIN	San Cristobal	24.98 262	P	P	13 53 25.1 0.0
V55A	Taylorsville	25.10 320	P	P	13 53 26.1 +0.2
V55A			IAmb	IAmb	13 53 27.9
	comp=Z,29nm,1.2s				
GOGA	Godfrey	25.11 313	P	P	13 53 26.0 +0.1
GOGA			IAmb	IAmb	13 53 28.6
	comp=Z,30nm,1.2s				
GOGA	Godfrey	25.11 313	P	P	13 53 26.3 +0.4
	baz=124,SNR=11				
S57A	Dark Hollow, R	25.15 326	P	P	13 53 26.1 -0.1
352A	Blakely	25.19 308	P	P	13 53 26.5 -0.1
352A			IAmb	IAmb	13 53 28.1
	comp=Z,40nm,1.1s				
WUPA	West Chester U	25.30 334	P	P	13 53 26.8 -0.7
M63A	Gales Ferry	25.32 342	P	P	13 53 27.2 -0.5
M63A			IAmb	IAmb	13 53 46.4
	comp=Z,22nm,1.0s				
PAL	Palisades	25.57 338	P	P	13 53 29.6 -0.4
152A	Waverly Hall	25.61 310	P	P	13 53 30.5 0.0
152A			IAmb	IAmb	13 53 34.1
	comp=Z,30nm,1.2s				
BG3	Lake Jocassee	25.65 317	P	P	13 53 30.5 -0.4
BG3			IAmb	IAmb	13 53 55.2
	comp=Z,57nm,1.3s				
LUPA	Lehigh Univers	25.77 335	P	P	13 53 31.4 -0.5
LUPA			IAmb	IAmb	13 53 33.7
	comp=Z,26nm,0.9s				
Y52A	Lilburn	25.77 313	P	P	13 53 31.7 -0.3
ODNJ	Ogdensburg	25.89 337	P	P	13 53 33.0 +0.1
U54A	Nelsons Funny	25.91 321	P	P	13 53 33.4 +0.1
V53A	Saluda	25.99 318	P	P	13 53 33.9 0.0
R55A	Marlinton	26.16 326	P	P	13 53 35.7 +0.3
Q56A	Snyder Ridge,	26.24 328	P	P	13 53 36.1 0.0
Z51A	Franklin	26.27 311	P	P	13 53 36.3 -0.1
Z51A			IAmb	IAmb	13 53 41.3
	comp=Z,34nm,1.4s				
PRPB	Parauapebas	26.38 153	eP	P	13 53 39.0 +1.4
250A	Grady	26.43 307	P	P	13 53 37.6 -0.4
250A			IAmb	IAmb	13 53 58.8
	comp=Z,66nm,1.5s				
S54A	Dingess, Beckl	26.48 323	P	P	13 53 37.9 -0.4
N58A	Sunbury	26.52 334	P	P	13 53 38.2 -0.4
K62A	Royalston	26.53 342	P	P	13 53 38.4 -0.3
V52A	Sevierville	26.60 317	P	P	13 53 38.5 -0.9
TKL	Tuckaleechee C	26.60 317	P	P	13 53 39.0 -0.4
	comp=Z,16nm,1.2s,baz=111,slow=9.2,SNR=5.8				
TKL			LR	LR	14 03 26.2
	comp=Z,371nm,21.1s,baz=134,slow=35				
	comp=Z,16nm,1.2s				
TKL	Tuckaleechee C	26.60 317	P	P	13 53 38.9 -0.6
ROSB	Rosrio	26.74 138	eP	P	13 53 43.0 +2.2
KSPA	Keystone Colle	26.74 336	P	P	13 53 40.7 +0.1
MTO3	Montecristo	26.81 267	P	P	13 53 41.6 -0.2
MTO3			IAmb	IAmb	13 53 45.2
	comp=Z,28nm,1.0s				
SSPA	Standing Stone	26.86 332	P	P	13 53 41.3 -0.4
SSPA	Standing Stone	26.86 332	P	P	13 53 42.6 +0.9
	baz=144				
PETF	Flores	26.94 273	P	P	13 53 42.7 +0.1
CPCT	Cooper Cave	26.97 316	P	P	13 53 42.4 -0.4
HAL	Halifax	26.98 357	P	P	13 53 42.7 0.0
HAL			IAmb	IAmb	13 54 04.9
	comp=Z,27nm,1.2s				
TZTN	Tazewell	27.00 319	P	P	13 53 42.9 -0.1
TZTN	Tazewell	27.00 319	P	P	13 53 43.4 +0.4
	baz=128,SNR=5.6				
V51A	Loudon	27.07 316	P	P	13 53 42.7 -0.9
M57A	Sunshine Farm,	27.11 334	P	P	13 53 44.4 +0.5
M57A			IAmb	IAmb	13 53 45.9
	comp=Z,21nm,1.1s				
R53A	Hurricane	27.21 323	P	P	13 53 44.6 -0.3
FPAL	Fort Paine	27.21 313	P	P	13 53 44.9 -0.2
W50A	Signal Mountai	27.37 314	P	P	13 53 45.6 -0.8
BINY	Binghamton	27.38 336	P	P	13 53 46.1 -0.2
BINY	Binghamton	27.38 336	P	P	13 53 47.2 +0.8
	baz=149				
CZSB	Cruzeiro do Su	27.46 204	eP	P	13 53 47.1 -0.2
LRAL	Lakeview Retre	27.47 309	P	P	13 53 46.7 -0.5
LRAL	Lakeview Retre	27.47 309	P	P	13 53 47.8 +0.5
	baz=118,SNR=6.2				
ETMB	Extrema	27.64 190	eP	P	13 53 47.7 -1.1
S51A	Beattyville	27.72 320	P	P	13 53 49.0 -0.4
SWET	Sewanee	27.80 314	P	P	13 53 49.8 -0.4
M55A	Ridgway	27.93 332	P	P	13 53 51.6 +0.3
M55A			IAmb	IAmb	13 53 53.1
	comp=Z,17nm,0.9s				
T50A	Nancy	28.11 318	P	P	13 53 53.1 +0.1
P52A	Corning	28.22 325	P	P	13 53 53.5 -0.4
P52A	Corning	28.22 325	P	P	13 53 53.9 0.0
	baz=135				
Z47A	Carrollton	28.34 308	P	P	13 53 54.9 -0.1
Z47A			IAmb	IAmb	13 53 56.4
	comp=Z,26nm,0.8s				
U49A	Red Boiling Sp	28.42 316	P	P	13 53 54.8 -0.9
WVNY	West Valley, N	28.61 333	P	P	13 53 57.8 +0.4
WVNY			IAmb	IAmb	13 53 59.1
	comp=Z,26nm,0.8s				
346A	Big Creek Wild	28.67 304	P	P	13 53 55.6 -2.4
346A			IAmb	IAmb	13 53 59.6
	comp=Z,22nm,0.7s				
CLDB	Colider	28.91 168	eP	P	13 54 01.4 +1.2
ACSO	Alum Creek Sta	29.11 325	P	P	13 54 02.0 +0.2
ACSO	Alum Creek Sta	29.11 325	P	P	13 54 02.4 +0.6
	baz=135				
CCIG	Comitan	29.18 272	P	P	13 54 01.8 -1.0
CCIG			IAmb	IAmb	13 54 03.3
	comp=Z,25nm,0.7s				
PLAL	Pickwick Lake	29.18 311	P	P	13 54 01.8 -0.7
J54A	Appleton	29.34 334	P	P	13 54 03.6 -0.2
J54A			IAmb	IAmb	13 54 05.2
	comp=Z,31nm,0.8s				
PDRB	Porto dos Gac	29.46 170	eP	P	13 54 06.6 +1.5
WVT	Waverly	29.59 314	P	P	13 54 05.6 -0.5
WVT	Waverly	29.59 314	P	P	13 54 05.8 -0.3
	baz=122				
P49A	Miami Univ. Ec	29.61 322	P	P	13 54 05.9 -0.4
P49A	Miami Univ. Ec	29.61 322	P	P	13 54 06.9 +0.6
	baz=131				
ATAH	Atahualpa	29.65 215	P	P	13 54 07.9 +0.6
	comp=Z,59nm,0.9s,baz=37,slow=4.3,SNR=34				
ATAH			LR	LR	14 07 48.7
	comp=Z,920nm,19.9s,baz=11,slow=40				
	comp=Z,59nm,0.9s				
SMTB	Santa Maria do	29.77 151	eP	P	13 54 09.8 +2.0
NBMO	Morrinhos-CE	29.79 132	eP	P	13 54 11.2 +3.1
O49A	Covington	29.83 324	P	P	13 54 07.7 -0.5
O49A			IAmb	IAmb	13 54 09.3
	comp=Z,16nm,1.0s				
OXF	Oxford	29.93 310	P	P	13 54 08.8 -0.3
OXF	Oxford	29.93 310	P	P	13 54 09.8 +0.7
	baz=117,SNR=6.4				
P48A	Milroy	29.98 321	P	P	13 54 08.9 -0.6
P48A			IAmb	IAmb	13 54 10.3
	comp=Z,12nm,0.8s				
VILB	Vilhena	30.42 177	eP	P	13 54 15.3 +1.7
BLO	Bloomington	30.47 320	P	P	13 54 13.7 -0.2
BLO			IAmb	IAmb	13 54 15.3
	comp=Z,10nm,0.7s				
SADO	Sadowa	30.78 335	LR	LR	14 05 20.3
	comp=Z,204nm,20.7s,baz=163,slow=34				
SADO	Sadowa	30.78 335	P	P	13 54 15.9 -0.6
SADO			IAmb	IAmb	13 54 17.3
	comp=Z,19nm,0.8s				
N47A	Urbana	31.06 323	P	P	13 54 18.4 -0.6
N47A			IAmb	IAmb	13 54 20.1
	comp=Z,28nm,0.8s				
L48A	N Adams	31.09 326	P	P	13 54 18.6 -0.7
L48A			IAmb	IAmb	13 54 20.6
	comp=Z,28nm,1.1s				
SNDB	Serra Nova Dou	31.14 160	eP	P	13 54 21.5 +1.5
P46A	Rosedale	31.16 320	P	P	13 54 19.9 -0.1
P46A			IAmb	IAmb	13 54 21.7
	comp=Z,22nm,0.9s				
S44A	Carbondale	31.39 315	P	P	13 54 21.3 -0.6
S44A			IAmb	IAmb	13 54 22.8
	comp=Z,16nm,0.8s				
CCAR	Cane Creek	31.45 307	P	P	13 54 22.5 0.0
SFIN	Lafayette	31.56 321	P	P	13 54 22.4 -1.0
SFIN	Lafayette	31.56 321	P	P	13 54 24.1 +0.6
	baz=129				
CMIG	Matias Romero	31.70 274	LR	LR	14 07 13.0
	comp=Z,266nm,21.8s,baz=46,slow=36				
PBMO	Poplar Bluff	31.73 313	P	P	13 54 23.6 -1.4
Q44A	Meyer Farm, Va	31.89 317	P	P	13 54 26.1 -0.2
Q44A			IAmb	IAmb	13 54 28.6
	comp=Z,28nm,1.1s				
O44A	Mansfield	32.26 320	P	P	13 54 29.4 -0.1
NBRS	Nobres	32.27 169	eP	P	13 54 30.9 +1.0
W41B	Gary Mavity, V	32.32 309	P	P	13 54 29.4 -0.7
W41B			IAmb	IAmb	13 54 31.4
	comp=Z,29nm,1.3s				
W41B	Gary Mavity, V	32.32 309	P	P	13 54 30.4 +0.2
	baz=115,SNR=9.6				
FVM	French Village	32.33 315	P	P	13 54 29.9 -0.4
FVM			IAmb	IAmb	13 54 31.6
	comp=Z,19nm,1.4s				
PEXB	Peixe	32.36 155	eP	P	13 54 32.1 +1.5
WLAR	White Oak Lake	32.39 306	P	P	13 54 30.6 -0.2
WHAR	Wooly Hollow	32.40 309	P	P	13 54 30.2 -0.6
WHAR			IAmb	IAmb	13 54 31.9
	comp=Z,14nm,0.9s				
X40A	Basin Creek Fa	32.48 307	P	P	13 54 31.4 -0.2
X40A			IAmb	IAmb	13 54 32.8
	comp=Z,16nm,0.8s				
X40A	Basin Creek Fa	32.48 307	P	P	13 54 32.2 +0.6
	baz=113,SNR=15				
FCAR	Ozark Folk Cen	32.53 310	P	P	13 54 31.3 -0.8
FCAR			IAmb	IAmb	13 54 32.8
	comp=Z,16nm,1.1s				
P43A	Skaggs, Pawnee	32.62 318	P	P	13 54 32.7 -0.1
M44A	Midewin, Midew	32.75 322	P	P	13 54 33.9 0.0
M44A			IAmb	IAmb	13 54 35.0
	comp=Z,27nm,1.1s				
CCM	Cathedral Cave	32.92 314	P	P	13 54 34.5 -1.0
CCM			IAmb	IAmb	13 54 36.0
	comp=Z,11nm,0.8s				
CCM	Cathedral Cave	32.92 314	P	P	13 54 35.5 0.0
	baz=120				
CCM	Cathedral Cave	32.92 314	P	P	13 54 35.5 0.0
CCM			sP	sP	13 54 50.5 +2.3
PTLB	Pontes e Lacer	32.96 176	eP	P	13 54 37.0 +1.1
NATX	Nacogdoches	32.98 302	P	P	13 54 36.5 +0.6
HDIL	Hopedale	33.00 320	P	P	13 54 35.7 -0.4
HDIL			IAmb	IAmb	13 54 37.4
	comp=Z,25nm,0.9s				
HDIL	Hopedale	33.00 320	P	P	13 54 36.5 +0.4
	baz=126				
NNA	Nana	33.03 208	P	P	13 54 35.8 -0.8
NNA	Nana	33.03 208	P	P	13 54 36.5 -0.1
VLDQ	Val d'Or	33.03 340	P	P	13 54 37.1 +0.9
MIAR	Mount Ida	33.07 307	P	P	13 54 36.0 -0.7
MIAR	Mount Ida	33.07 307	P	P	13 54 36.9 +0.2
	baz=112,SNR=5.3				
L44A	Lake County Fo	33.17 323	P	P	13 54 37.3 -0.2
L44A	Lake County Fo	33.17 323	P	P	13 54 38.2 +0.7
	baz=130				
MGMO	Mountain Grove	33.20 312	P	P	13 54 37.2 -0.7
MGMO			IAmb	IAmb	13 54 38.6
	comp=Z,12nm,0.8s				
GLMI	Grayling	33.24 330	P	P	13 54 39.3 +1.1
	baz=137				
U40A	Yellville	33.27 310	P	P	13 54 37.7 -0.8
U40A			IAmb	IAmb	13 54 39.2
	comp=Z,12nm,0.9s				
U40A	Yellville	33.27 310	P	P	13 54 38.4 -0.1
	baz=116,SNR=11				
HKT	Hockley	33.46 298	P	P	13 54 39.7 -0.5
HKT			IAmb	IAmb	13 54 41.9
	comp=Z,33nm,1.4s				
W39A	Magazine	33.48 308	P	P	13 54 39.8 -0.5
W39A			IAmb	IAmb	13 54 42.2
	comp=Z,21nm,0.9s				
W39A	Magazine	33.48 308	P	P	13 54 41.2 +0.9
	baz=113,SNR=17				
PAYG	Puerto Ayora	33.55 240	P	P	13 54 41.6 +0.5
PAYG			pP	sP	13 54 51.7 -2.7
Z38A	Mt. Pleasant	33.70 304	P	P	13 54 40.8 -1.5
Z38A			IAmb	IAmb	13 54 44.0
	comp=Z,28nm,1.1s				
R40A	Maddies Statio	33.74 314	P	P	13 54 41.5 -1.1
SALV	Santo Antonio	33.83 170	eP	P	13 54 44.9 +1.4
L42A	Oliver, Polo	34.09 321	P	P	13 54 45.4 -0.1
SDBA	SAO DESIDERIO	34.12 150	eP	P	13 54 47.0 +0.8
S39A	Bolivar	34.19 312	P	P	13 54 45.6 -0.9
S39A			IAmb	IAmb	13 54 46.9
	comp=Z,13nm,1.0s				
P40A	Paris	34.21 316	P	P	13 54 45.7 -0.9
P40A			IAmb	IAmb	13 54 47.2
	comp=Z,12nm,0.8s				
E46A	Sault Ste Mari	34.25 332	P	P	13 54 46.6 -0.3
LPAZ	La Paz	34.30 191	P	P	13 54 46.6 -1.7
	comp=Z,5.3nm,0.7s,baz=354,slow=8.0,SNR=12				
LPAZ			LR	LR	14 09 36.6
	comp=Z,487nm,21.9s,baz=360,slow=38				
	comp=Z,5.3nm,0.7s				
LPAZ	La Paz	34.30 191	P	P	13 54 46.9 -1.4
LPAZ			IAmb	IAmb	13 54 48.3
	comp=Z,13nm,1.2s				
LPAZ	La Paz	34.30 191	eP	P	13 54 47.6 -0.7
LPAZ	La Paz	34.30 191	P	P	13 54 47.5 -0.7
LPAZ			pP	sP	13 54 59.1 -2.5
LPAZ			sP	pP	13 55 01.8 +3.9
X37A	Clayton	34.46 306		P	13 54 48.1 -0.8
X37A			IAmb	IAmb	13 55 02.1
	comp=Z,14nm,0.8s				
RCBR	Riachuelo	34.50 130	LR	LR	14 06 27.0
	comp=Z,206nm,21.9s,baz=102,slow=32				
H43A	Windswept, Lux	34.59 326	P	P	13 54 49.5 -0.3
I42A	Draeger Farm,	34.83 325	P	P	13 54 51.4 -0.6
I42A			IAmb	IAmb	13 54 53.2
	comp=Z,16nm,0.8s				
735A	Kenedy	34.92 295	P	P	13 54 52.6 -0.3
JFWS	Jewell Farm	34.98 322	P	P	13 54 52.6 -0.7
JFWS			IAmb	IAmb	13 54 53.6
	comp=Z,10nm,0.9s				
JFWS	Jewell Farm	34.98 322	P	P	13 54 53.5 +0.3
	baz=127				
L40A	Anamosa	35.06 320	P	P	13 54 52.9 -1.1
L40A			IAmb	IAmb	13 54 54.5
	comp=Z,22nm,0.9s				
435B	Jarrell	35.13 299	P	P	13 54 54.2 -0.5
435B	Jarrell	35.13 299	P	P	13 54 55.1 +0.4
	baz=104				
TLIG	Tlapa	35.15 276	P	P	13 54 54.9 -0.2
P38A	Dawn	35.25 315	P	P	13 54 54.9 -0.7
P38A			IAmb	IAmb	13 54 56.0
	comp=Z,13nm,0.7s				
TUL1	Leonard	35.26 308		P	13 54 55.2 -0.6
TUL1			IAmb	IAmb	13 54 56.7
	comp=Z,24nm,0.9s				
TUL1	Leonard	35.26 308	P	P	13 54 56.0 +0.2
	baz=112,SNR=8.0				
DVLD	Doverlandia	35.31 164	eP	P	13 54 58.0 +1.7
WHTX	Lake Whitney,	35.32 301	P	P	13 54 56.0 -0.3
WHTX			IAmb	IAmb	13 54 58.5
	comp=Z,27nm,1.1s				
WHTX	Lake Whitney,	35.32 301	P	P	13 54 57.0 +0.6
	baz=105				
NBPV	Pedro Velho	35.34 130	eP	P	13 54 58.0 +1.4
NBPN	Ponto Novo - B	35.35 142	eP	P	13 54 58.4 +1.7

Z35A	Perchaven, San	35.53	303	P	P	13 54 58.1	-0.1
Z35A				IAmb	IAmb	13 54 59.5	
	comp=Z,23nm,1.0s						
N38A	Joes South For	35.64	317	P	P	13 54 58.4	-0.6
PP1B	Ponte de Pedra	35.64	169	eP	P	13 55 01.4	+2.3
BDFB	Brasilia	35.69	157	P	P	13 54 59.9	+0.2
	comp=Z,4.1nm,0.7s,baz=326,slow=4.3,SNR=6.3						
BDFB				LR	LR	14 10 15.3	
	comp=Z,190nm,20.3s,baz=320,slow=38						
	comp=Z,4.1nm,0.7s						
I40A	Norwalk	35.79	323	P	P	13 54 59.9	-0.3
NBCA	Caruaru-PE	36.08	133	eP	P	13 55 04.1	+1.1
T35A	Sooner Cattle	36.18	309		P	13 55 02.9	-0.8
833A	Chaparral WMA,	36.20	294	P	P	13 55 03.1	-0.8
833A				IAmb	IAmb	13 55 04.0	
	comp=Z,21nm,0.9s						
833A	Chaparral WMA,	36.20	294	P	P	13 55 03.7	-0.2
	baz=99						
FNO	Franklin	36.26	306		P	13 55 03.6	-0.7
K38A	Parkersburg	36.34	320	P	P	13 55 04.4	-0.5
COWI	Conover	36.40	327	P	P	13 55 05.1	-0.4
COWI				IAmb	IAmb	13 55 07.0	
	comp=Z,11nm,0.9s						
JANB	Januaria	36.71	151	eP	P	13 55 09.8	+1.4
D41A	Chassel	36.77	329	P	P	13 55 08.7	+0.1
D41A				IAmb	IAmb	13 55 10.2	
	comp=Z,18nm,0.8s						
JCT	Junction City	36.93	297	P	P	13 55 09.1	-1.1
JCT	Junction City	36.93	297	P	P	13 55 10.1	-0.1
	baz=101,SNR=24						
NBAN	Anadia - AL	36.94	135	eP	P	13 55 11.4	+1.1
NBLA	Lagarto - SE	36.94	139	eP	P	13 55 12.7	+2.4
PB12	IPOC Station P	37.01	194	P	P	13 55 08.3	-2.6
PB12				IAmb	IAmb	13 55 10.6	
	comp=Z,11nm,0.7s						
KSU1	Kansas State U	37.13	312	P	P	13 55 10.8	-0.9
KSU1				IAmb	IAmb	13 55 11.8	
	comp=Z,17nm,0.7s						
KSU1	Kansas State U	37.13	312	P	P	13 55 11.0	-0.8
	baz=115						
WMOK	Wichita Mounta	37.16	305	P	P	13 55 10.0	-2.1
	baz=108						
ABTX	Abilene, Hawle	37.27	301	P	P	13 55 12.5	-0.6
ABTX	Abilene, Hawle	37.27	301	P	P	13 55 12.9	-0.2
	baz=104,SNR=7.6						
SCHQ	Schefferville	37.34	355	P	P	13 55 13.7	+0.4
	comp=Z,4.2nm,0.8s,baz=180,slow=6.9,SNR=8.4						
SCHQ				LR	LR	14 08 16.6	
	comp=Z,296nm,21.9s,baz=186,slow=33						
	comp=Z,4.2nm,0.8s						
I37A	Lemond, Waseca	37.48	321	P	P	13 55 13.4	-1.2
I37A				IAmb	IAmb	13 55 15.3	
	comp=Z,26nm,1.1s						
IPMB	Ipameri, GO	37.78	159	eP	P	13 55 19.2	+1.8
SPMN	Marine on St.	37.84	323	P	P	13 55 17.0	-0.6
SPMN				IAmb	IAmb	13 55 18.4	
	comp=Z,13nm,0.8s						
SPMN	Marine on St.	37.84	323	P	P	13 55 17.7	0.0
	baz=126						
U32A	Winter Ranch,	37.85	307	P	P	13 55 17.3	-0.7
U32A				IAmb	IAmb	13 55 19.0	
	comp=Z,24nm,0.8s						
PB11	IPOC Station P	37.98	192	P	P	13 55 16.2	-3.0
GDU01	Guandu, BA	38.02	144	eP	P	13 55 20.5	+1.1
PB08	IPOC Station P	38.25	191	P	P	13 55 18.9	-2.8
PB08				IAmb	IAmb	13 55 20.2	
	comp=Z,21nm,0.8s						
AQDB	Aquidauana	38.32	171	P	P	13 55 23.1	+1.2
AQDB	Aquidauana	38.32	171	eP	P	13 55 23.5	+1.7
R32A	Long Quarter,	38.37	310	P	P	13 55 21.5	-0.7
R32A				IAmb	IAmb	13 55 23.0	
	comp=Z,24nm,0.8s						
F36A	Milaca	38.62	324	P	P	13 55 23.3	-0.9
F36A				IAmb	IAmb	13 55 24.9	
	comp=Z,15nm,0.8s						
ITRB	Iturama	38.73	163	eP	P	13 55 27.3	+2.0
EYMN	Ely	38.83	328	P	P	13 55 25.4	-0.6
EYMN	Ely	38.83	328	P	P	13 55 26.0	0.0
	baz=131,SNR=5.8						
PATCX	Punta Patache	39.11	193	P	P	13 55 26.3	-2.3
BGNE	Belgrade	39.19	315	P	P	13 55 27.8	-1.3
BGNE	Belgrade	39.19	315	P	P	13 55 29.0	-0.1
	baz=116						
PB01	IPOC Station P	39.19	192	P	P	13 55 26.9	-2.3
PB01				IAmb	IAmb	13 55 27.8	
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	39.26	310	P	P	13 55 28.6	-1.0
CBKS				IAmb	IAmb	13 55 51.6	
	comp=Z,20nm,0.8s						
CBKS	Cedar Bluff	39.26	310	P	P	13 55 29.4	-0.2
	baz=112						
ECSD	EROS Data Cent	39.30	319	P	P	13 55 29.0	-0.9
ECSD	EROS Data Cent	39.30	319	P	P	13 55 29.2	-0.7
	baz=120,SNR=10						
CMC01	Camacan, BA	39.38	145	eP	P	13 55 32.6	+1.8
AMTX	Amarillo	39.49	304	P	P	13 55 31.0	-0.8
AMTX				IAmb	IAmb	13 55 32.5	
	comp=Z,19nm,0.9s						
AMTX	Amarillo	39.49	304	P	P	13 55 31.4	-0.3
	baz=105						
PB02	IPOC Station P	39.54	192	P	P	13 55 30.6	-1.6
PB02				IAmb	IAmb	13 55 31.0	
	comp=Z,22nm,1.0s						
DIAM	Diamantina, MG	39.84	153	eP	P	13 55 36.2	+1.4
PB07	IPOC Station P	39.94	192	P	P	13 55 33.3	-2.3
TX31	Lajitas Ar. Si	40.06	295	P	P	13 55 35.6	-1.0
TX31				IAmb	IAmb	13 55 39.7	
	comp=Z,20nm,0.7s						
TX32	Lajitas Array	40.06	295	P	P	13 55 35.2	-1.4
TXAR	Lajitas Array	40.06	295	P	P	13 55 35.5	-1.1
	comp=Z,3.7nm,0.5s,baz=128,slow=6.7,SNR=31						
TXAR				PcP	PcP	13 57 41.7	+0.6
	comp=Z,3.0nm,0.7s,baz=118,slow=6.0,SNR=8.1						
TXAR				LR	LR	14 16 00.5	
	comp=Z,63nm,22.0s,baz=78,slow=42						
	comp=Z,3.7nm,0.5s						
MSTX	Muleshoe	40.14	302	P	P	13 55 36.3	-0.9
MSTX				IAmb	IAmb	13 55 38.7	
	comp=Z,35nm,1.1s						
MSTX	Muleshoe	40.14	302	P	P	13 55 37.1	-0.1
	baz=103,SNR=12						
F33A	5 Mile Ranch,	40.20	322	P	P	13 55 36.9	-0.5
GUA01	Guaratinga, BA	40.24	146	eP	P	13 55 39.3	+1.4
B35A	Bob, Littlefor	40.25	327	P	P	13 55 37.0	-0.7
B35A				IAmb	IAmb	13 55 38.5	
	comp=Z,22nm,0.8s						
PCMB	Pacaembu	40.30	165	eP	P	13 55 39.9	+1.5
BB19B	Bebedouro	40.55	161	eP	P	13 55 42.0	+1.4
LVC	Limon Verde	40.62	190	LR	LR	14 13 50.6	
	comp=Z,636nm,21.5s,baz=350,slow=38						
LVC	Limon Verde	40.62	190	P	P	13 55 39.6	-1.8
LVC				IAmb	IAmb	13 55 40.4	
	comp=Z,19nm,1.0s						
LVC	Limon Verde	40.62	190	eP	P	13 55 39.8	-1.6
SUSD	Miller	41.11	319	P	P	13 55 43.9	-1.1
SUSD				IAmb	IAmb	13 55 45.3	
	comp=Z,37nm,0.9s						
NAN01	Guarapari, ES	41.13	148	eP	P	13 55 46.1	+0.8
TRCB	Terra Rica	41.13	167	eP	P	13 55 46.7	+1.4
SJMB	Sao Joao De Ma	41.34	150	eP	P	13 55 48.7	+1.8
AGMN	Agassiz Nation	41.35	325	P	P	13 55 45.5	-1.3
AGMN				IAmb	IAmb	13 55 47.3	
	comp=Z,22nm,0.7s						
AGMN	Agassiz Nation	41.35	325	P	P	13 55 46.5	-0.3
	baz=126,SNR=15						
HPIG		41.59	291	P	P	13 55 48.8	-0.5
HPIG				IAmb	IAmb	13 55 58.7	
	comp=Z,16nm,0.9s						
OGNE	Ogallala	41.69	312	P	P	13 55 48.8	-1.0
OGNE				IAmb	IAmb	13 55 50.9	
	comp=Z,14nm,0.7s						
OGNE	Ogallala	41.69	312	P	P	13 55 49.4	-0.4
	baz=112,SNR=5.2						
BSCB	Bom Sucesso	41.80	156	eP	P	13 55 51.6	+0.7
MNTX	Cornudas Mount	41.86	298	P	P	13 55 50.2	-1.0
MNTX				IAmb	IAmb	13 55 51.9	
	comp=Z,14nm,0.8s						
MNTX	Cornudas Mount	41.86	298	P	P	13 55 51.2	0.0
	baz=99,SNR=39						
RCLB	Rio Claro- Sao	42.13	160	eP	P	13 55 55.2	+1.7
T25A	Trinidad	42.23	306	P	P	13 55 54.2	-0.3
T25A	Trinidad	42.23	306	P	P	13 55 54.6	+0.2
	baz=106,SNR=12						
RIB01	Linhares ES	42.24	149	eP	P	13 55 55.8	+1.5
FRTB	Fartura	42.40	163	eP	P	13 55 56.9	+1.2
MCR1	Marechal Candi	42.49	170	eP	P	13 55 56.9	+0.6
ULM	Lac du Bonnet	42.52	328	P	P	13 55 55.3	-1.1
	comp=Z,15nm,0.6s,baz=129,slow=8.8,SNR=20						
ULM				LR	LR	14 12 37.5	
	comp=Z,210nm,21.1s,baz=124,slow=35						
	comp=Z,15nm,0.6s						
ULM	Lac du Bonnet	42.52	328	P	P	13 55 55.2	-1.2
ULM				IAmb	IAmb	13 55 56.4	
	comp=Z,17nm,0.7s						
MDND	Maddock	43.20	323	P	P	13 56 01.1	-0.8
MDND	Maddock	43.20	323	P	P	13 56 01.7	-0.2
	baz=121						
SDCO	Great Sand Dun	43.22	307	P	P	13 56 02.2	-0.4
SDCO	Great Sand Dun	43.22	307	P	P	13 56 02.7	+0.1
	baz=105,SNR=14						
BNM	Barren Site	43.31	301	P	P	13 56 03.3	+0.1
ANMO	Albuquerque	43.32	302	LR	LR	14 16 43.4	
	comp=Z,128nm,19.3s,baz=117,slow=40						
ANMO	Albuquerque	43.32	302	P	P	13 56 02.9	-0.5
ANMO	Albuquerque	43.32	302	P	P	13 56 03.9	+0.5
	baz=102						
ANMO	Albuquerque	43.32	302	P	P	13 56 04.1	+0.8
ANMO				pP	sP	13 56 13.8	-2.5
Y22D	IRIS PASSCAL I	43.53	301	P	P	13 56 05.0	0.0
LENM	Lemitar	43.59	301	P	P	13 56 06.6	+1.1
ISCO	Idaho Springs	43.88	310	P	P	13 56 07.6	-0.3
ISCO	Idaho Springs	43.88	310	P	P	13 56 08.3	+0.4
	baz=107,SNR=6.9						
CPUP	Villa Florida	43.90	174	P	P	13 56 06.5	-1.2
	comp=Z,5.0nm,0.5s,baz=358,slow=7.9,SNR=17						
CPUP				LR	LR	14 15 55.8	
	comp=Z,161nm,19.1s,baz=359,slow=38						
	comp=Z,5.0nm,0.5s						
CPUP	Villa Florida	43.90	174	P	P	13 56 06.9	-0.7
CPUP	Villa Florida	43.90	174	eP	P	13 56 06.9	-0.7
CPUP	Villa Florida	43.90	174	P	P	13 56 06.1	-1.5
CPUP				sP	sP	13 56 25.5	+4.2
PET01	Itanhaem-SP	43.96	161	eP	P	13 56 09.5	+1.3
121A	Cookes Peak, D	44.00	299	P	P	13 56 09.5	+0.8
121A	Cookes Peak, D	44.00	299	P	P	13 56 10.0	+1.3
	baz=98,SNR=10						
FRBT	Francisco Belt	44.14	169	eP	P	13 56 09.8	+0.1
PHWY	Pilot Hill	44.23	312	P	P	13 56 10.1	-0.6
S22A	4UR Ranch, Cre	44.24	306	P	P	13 56 10.5	-0.3
S22A	4UR Ranch, Cre	44.24	306	P	P	13 56 11.2	+0.4
	baz=104,SNR=8.1						
RSSD	Black Hills	44.26	316	P	P	13 56 10.3	-0.5
RSSD	Black Hills	44.26	316	P	P	13 56 10.7	-0.1
	baz=113						
RSSD	Black Hills	44.26	316	P	P	13 56 10.9	+0.1
RSSD				x	x	13 56 16.8	
RSSD				pP	pP	13 56 19.1	-1.4
RSSD				sP	sP	13 56 23.5	0.0
N23A	Red Feather La	44.45	311	P	P	13 56 12.9	+0.5
	baz=108						
SMCO	Snowmass	44.72	308	P	P	13 56 14.4	-0.3
AC02	Maricunga	44.79	189	P	P	13 56 14.4	-1.0
AC02				IAmb	IAmb	13 56 15.7	
	comp=Z,24nm,0.9s						
319A	Douglas	45.12	297	P	P	13 56 18.1	+0.5
MVCO	Mesa Verde	45.41	305	P	P	13 56 22.0	+2.0
	baz=102						
K22A	Casper	45.43	313	P	P	13 56 19.5	-0.5
K22A				IAmb	IAmb	13 56 21.1	
	comp=Z,15nm,1.0s						
K22A	Casper	45.43	313	P	P	13 56 20.4	+0.3
	baz=109,SNR=8.5						
PV15	Paradox Valley	45.65	307	P	P	13 56 22.0	0.0
PV15				IAmb	IAmb	13 56 34.2	
	comp=Z,13nm,0.9s						
LPIG	La Paz	45.74	287	LR	LR	14 19 47.1	
	comp=Z,67nm,18.1s,baz=76,slow=42						
PV13	Radium Mtn., P	45.87	306	P	P	13 56 23.9	+0.2
PV13				IAmb	IAmb	13 56 25.2	
	comp=Z,14nm,0.8s						
O20A	White River Ci	45.91	309	P	P	13 56 24.2	+0.3
	baz=105						
W18A	Petrified Fore	46.00	302	P	P	13 56 24.9	+0.2
W18A				IAmb	IAmb	13 56 25.8	
	comp=Z,16nm,0.8s						
W18A	Petrified Fore	46.00	302	P	P	13 56 25.2	+0.6
	baz=100,SNR=6.1						
X18A	Snowflake	46.08	301	P	P	13 56 25.6	+0.2
X18A				IAmb	IAmb	13 56 26.8	
	comp=Z,10nm,0.8s						
DGMT	Dagmar	46.19	321	P	P	13 56 25.6	-0.2
DGMT				IAmb	IAmb	13 56 26.8	
	comp=Z,16nm,0.8s						
DGMT	Dagmar	46.19	321	P	P	13 56 26.3	+0.5
	baz=117						
FRB	Frobisher Bay	46.32	356	LR	LR	14 13 42.4	
	comp=Z,161nm,21.4s,baz=194,slow=33						
HSIG		46.37	293	P	P	13 56 27.3	-0.1
HSIG				IAmb	IAmb	13 56 28.1	
	comp=Z,6.9nm,0.6s						
AC04	Llanos de Chal	46.47	191	P	P	13 56 26.4	-1.7
AC04				IAmb	IAmb	13 56 27.4	
	comp=Z,30nm,1.2s						
TUC	Tucson	46.49	298	P	P	13 56 28.8	+0.4
TUC	Tucson	46.49	298	P	P	13 56 29.5	+1.1
	baz=96						
TUC	Tucson	46.49	298	P	P	13 56 29.6	+1.2
TUC				pP	pP	13 56 38.1	-0.2
TUC				sP	sP	13 56 44.4	+2.9
LAO	LASA Array	46.68	318	P	P	13 56 29.3	-0.4
LAO				IAmb	IAmb	13 56 31.2	
	comp=Z,13nm,0.9s						
RDMU	Red Mountain	47.01	309	P	P	13 56 31.8	-0.7
ITQB	Itaqui	47.28	174	P	P	13 56 33.7	-0.6
ITQB	Itaqui	47.28	174	eP	P	13 56 34.3	0.0
P18A	Preston Nutter	47.28	308	P	P	13 56 34.5	-0.3
SRU	San Rafael Swe	47.38	307	P	P	13 56 35.1	-0.3
WUAZ	Wupatki	47.38	302	P	P	13 56 35.1	-0.4
WUAZ				IAmb	IAmb	13 56 38.3	
	comp=Z,17nm,0.8s						
WUAZ	Wupatki	47.38	302	P	P	13 56 36.6	+1.1
	baz=99,SNR=22						
FCC	Fort Churchill	47.44	338	P	P	13 56 34.1	-1.2
FCC				IAmb	IAmb	13 56 35.6	
	comp=Z,9.5nm,0.8s						
TER01	Tubaro-SC	47.46	165	eP	P	13 56 37.4	+1.5
BW06	Boulder Array	47.59	312	P	P	13 56 36.2	-0.9
BW06				IAmb	IAmb	13 56 38.0	
	comp=Z,10.0nm,0.8s						
BW06	Boulder Array	47.59	312	P	P	13 56 37.1	+0.1
	baz=107,SNR=13						
PD31	Pinedale Array	47.59	312	P	P	13 56 36.3	-0.8
PD31				IAmb	IAmb	13 56 38.0	
	comp=Z,8.6nm,0.8s						
PDAR	Pinedale Array	47.59	312	P	P	13 56 37.0	-0.1
	comp=Z,7.8nm,0.6s,baz=115,slow=9.1,SNR=83						
PDAR				PcP	PcP	13 58 06.4	-0.2
	comp=Z,2.8nm,0.7s,baz=113,slow=6.0,SNR=3.6						
PDAR				LR	LR	14 16 10.0	
	comp=Z,162nm,21.7s,baz=126,slow=36						
	comp=Z,7.8nm,0.6s						
PDAR	Pinedale Array	47.59	312	P	P	13 56 36.0	-1.1
P17A	Butcher Ranch,	47.62	308	P	P	13 56 36.1	-1.2
P17A				IAmb	IAmb	13 56 38.4	
	comp=Z,9.0nm,0.9s						
TMUT	Trail Mountain	47.94	307	P	P	13 56 39.8	-0.1
TMUT				IAmb	IAmb	13 56 41.5	
	comp=Z,8.2nm,0.9s						
CO01	Juntas del Tor	48.02	190	P	P	13 56 39.5	-1.0
RLMT	Red Lodge	48.11	315	P	P	13 56 41.6	+0.6
	baz=109						
U15A	North Rim	48.26	303	P	P	13 56 41.9	-0.5
U15A				IAmb	IAmb	13 56 44.0	
	comp=Z,8.3nm,0.9s						
JLU	Jordanelle	48.41	309	P	P	13 56 43.5	+0.1
JLU				IAmb	IAmb	13 56 45.1	
	comp=Z,13nm,0.8s						
CPSB	Cacapava Do Su	48.41	170	eP	P	13 56 42.3	-0.8
MTPU	Mount Pierson	48.44	305	P	P	13 56 44.2	+0.3
MTPU				IAmb	IAmb	13 56 53.7	
	comp=Z,9.1nm,1.0s						
Y14A	Wickenburg	48.51	300	P	P	13 56 44.7	+0.6
MSU	Marysvale	48.52	306	P	P	13 56 44.6	+0.2
LOHW	Long Hollow	48.56	313	P	P	13 56 44.1	-0.4
GCMT	Greycliff	48.59	316	P	P	13 56 44.9	+0.3
SNOW	Snow King Moun	48.63	313	P	P	13 56 44.9	-0.2
SNOW				IAmb	IAmb	13 56 47.0	
	comp=Z,6.5nm,0.6s						
CTU	Camp Tracy	48.65	309	P	P	13 56 44.8	-0.4
CTU				IAmb	IAmb	13 56 46.7	
	comp=Z,13nm,0.8s						
REDW	Red Top Meadow	48.67	313	P	P	13 56 45.0	-0.3
REDW				IAmb	IAmb	13 57 06.8	
	comp=Z,13nm,1.2s						
AHID	Auburn Hatcher	48.68	312	P	P	13 56 45.0	-0.4
AHID				IAmb	IAmb	13 56 46.5	
	comp=Z,20nm,1.2s						
MOOW	Moose Ponds	48.70	313	P	P	13 56 44.8	-0.8
HWUT	Hardware Ranch	48.73	310	P	P	13 56 45.2	-0.6
HWUT				IAmb	IAmb	13 56 46.3	
	comp=Z,6.9nm,0.8s						
NLU	North Lily Min	48.73	308	P	P	13 56 45.6	-0.3
FLWY	Flagg Ranch	48.76	314	P	P	13 56 45.1	-1.0
TPAW	Teton Pass	48.77	313	P	P	13 56 45.9	-0.3
TPAW				IAmb	IAmb	13 56 47.3	
	comp=Z,8.0nm,0.7s						
113A	Mohawk Valley,	49.04	298	P	P	13 56 48.3	+0.2
113A				IAmb	IAmb	13 56 49.9	
	comp=Z,19nm,1.1s						
SZCU	Shurtz Canyon	49.07	305	P	P	13 56 48.3	-0.2
YHH	Holmes Hill	49.07	314	P	P	13 56 48.7	+0.1
LCMT	Little Creek M	49.10	304	P	P	13 56 48.6	-0.1
CCUT	Cedar City	49.28	305	P	P	13 56 50.2	0.0
CCUT				IAmb	IAmb	13 57 01.7	
	comp=Z,8.1nm,0.9s						
YHL	Hebgen Lake	49.32	314	P	P	13 56 51.2	+0.8
YHL				IAmb	IAmb	13 56 52.7	
	comp=Z,14nm,0.8s						
DUG	Dugway, Tooele	49.34	308	P	P	13 56 50.5	+0.1
DUG				IAmb	IAmb	13 56 52.1	
	comp=Z,13nm,0.9s						
DUG	Dugway, Tooele	49.34	308	P	P	13 56 51.0	+0.6
	baz=102,SNR=16						
ZON	Zonda	49.36	188	P	P	13 56 48.8	-1.7
W13A	Hualapai Mount	49.37	301	P	P	13 56 51.0	+0.2
W13A				IAmb	IAmb	13 56 53.3	
	comp=Z,17nm,1.1s						
CO02	Combarbal	49.38	191	P	P	13 56 49.8	-0.9
CO02				IAmb	IAmb	13 56 51.2	
	comp=Z,17nm,1.1s						
EGMT	Eagleton	49.41	319	P	P	13 56 50.1	-0.7
EGMT				IAmb	IAmb	13 56 52.2	
	comp=Z,14nm,0.8s						
EGMT	Eagleton	49.41	319	P	P	13 56 51.3	+0.5
	baz=111,SNR=9.3						
QLMT	Earthquake Lak	49.48	314	P	P	13 56 52.5	+1.0
PDMCI	Parker Dam,Lak	49.49	300	P	P	13 56 52.6	+1.1
	baz=96						
HVU	Hansel Valley	49.65	310	P	P	13 56 52.5	-0.3
HVU				IAmb	IAmb	13 57 16.9	
	comp=Z,8.0nm,0.8s						
BGU	Big Grassy Mou	49.65	309	P	P	13 56 52.6	-0.2
BGU				IAmb	IAmb	13 56 54.3	
	comp=Z,13nm,0.8s						
PLTB	Pedras Altas	49.72	171	eP	P	13 56 52.3	-0.8
BLYC	Blythe	49.75	300	P	P	13 56 53.8	+0.3
BLYC				IAmb	IAmb	13 56 55.6	
	comp=Z,16nm,0.9s						
PSUT	Pine Spring	49.82	306	P	P	13 56 55.0	+0.7
PSUT				IAmb	IAmb	13 56 56.5	
	comp=Z,13nm,0.7s						
BOZ	Bozeman (W)	49.84	315	P	P	13 56 54.4	+0.2
BOZ	Bozeman (W)	49.84	315	P	P	13 56 54.7	+0.5
	baz=107,SNR=11						
SFJD	Kangerlussuaq	49.86	6	LR	LR	14 17 50.9	
	comp=Z,199nm,19.0s,baz=196,slow=36						
GLA	Glamis	49.95	299	P	P	13 56 54.9	-0.2
GLA				IAmb	IAmb	13 56 56.6	
	comp=Z,14nm,0.8s						
GLA	Glamis	49.95	299	P	P	13 56 56.5	+1.4
	baz=94,SNR=5.4						
IRM	Iron Mountain	50.30	300	P	P	13 56 59.2	+1.4
	baz=95,SNR=30						
HRY	Holter Researc	50.31	317	P	P	13 56 57.6	-0.1
MCMT	McKenzie Canyo	50.45	314	P	P	13 56 59.0	0.0
LRM	Limekiln Ridge	50.45	315	P	P	13 56 59.1	+0.2
BC3	Big Chuckawall	50.52	299	P	P	13 57 00.5	+1.0
	baz=94,SNR=28						
SHPR	Sheep Range	50.56	303	P	P	13 57 00.1	+0.2
BCYI	Bear Canyon	50.70	313	P	P	13 57 01.0	+0.2
SWSC	Sam W. Stewart	50.76	298	P	P	13 57 02.4	+1.2
	baz=94,SNR=6.0						
GMRC	Granite Mounta	50.78	301	P	P	13 57 02.5	+1.0
	baz=95,SNR=13						
VA03	San Esteban	50.83	190	P	P	13 57 01.2	-0.4
VA03				IAmb	IAmb	13 57 21.4	
	comp=Z,15nm,1.1s						
YUH	Yuha Desert	50.84	298	P	P	13 57 02.6	+0.8
BELC	Belle Mtn. Jos	51.00	300	P	P	13 57 04.2	+1.1
	baz=94,SNR=18						
IKP	In-Ko-Pah, Jac	51.00	298	P	P	13 57 04.7	+1.6
	baz=93,SNR=6.3						
TUQ	Turquoise Moun	51.06	302	P	P	13 57 04.7	+1.1
	baz=96,SNR=14						
ROC1	El Roble	51.11	190	P	P	13 57 02.6	-1.3
ROC1				IAmb	IAmb	13 57 03.7	
	comp=Z,8.2nm,0.6s						
R11A	Troy Canyon, C	51.14	305	P	P	13 57 04.6	+0.5
R11A	Troy Canyon, C	51.14	305	P	P	13 57 04.9	+0.7
	baz=98,SNR=11						
S11A	Rachel	51.17	304	P	P	13 57 04.6	+0.2
S11A				IAmb	IAmb	13 57 16.7	
	comp=Z,26nm,1.1s						
PEL	Peldehue	51.22	190	P	P	13 57 04.3	-0.2
PEL				IAmb	IAmb	13 57 05.2	
	comp=Z,10nm,1.0s						
HLID	Hailey	51.23	312	P	P	13 57 04.9	+0.1
HLID	Hailey	51.23	312	P	P	13 57 05.1	+0.4
	baz=103,SNR=14						
ELK	Elko	51.26	308	LR	LR	14 22 58.9	
	comp=Z,156nm,18.0s,baz=119,slow=41						
ELK	Elko	51.26	308	P	P	13 57 04.8	-0.3
MONP2	Monument Peak	51.28	298	P	P	13 57 06.6	+1.3
	baz=93,SNR=48						
HEC	Hector,Ludlow	51.34	301	P	P	13 57 07.0	+1.4
	baz=95						
PFO	Pinyon Flats O	51.35	299	P	P	13 57 05.3	-0.4
PFO				IAmb	IAmb	13 57 08.0	
	comp=Z,26nm,1.5s						
PFO	Pinyon Flats O	51.35	299	P	P	13 57 06.7	+0.9
	baz=94,SNR=6.1						
SHOC	Shoshone, Teco	51.39	302	P	P	13 57 07.0	+1.1
	baz=96,SNR=9.9						
MT02	Curacav	51.41	190	P	P	13 57 05.3	-0.6
MT02				IAmb	IAmb	13 57 06.4	
	comp=Z,9.7nm,0.9s						
BAR	Barrett	51.48	298	P	P	13 57 06.3	-0.3
TPNV	Topopah Spring	51.48	303	P	P	13 57 07.4	+0.7
TPNV				IAmb	IAmb	13 57 09.2	
	comp=Z,19nm,1.2s						
TPNV	Topopah Spring	51.48	303	P	P	13 57 08.0	+1.3
	baz=97,SNR=20						
GWY	Greenwater Val	51.74	302	P	P	13 57 08.2	-0.4
GWY				IAmb	IAmb	13 57 10.7	
	comp=Z,17nm,1.2s						
GSC	Goldstone, Bar	51.77	301	P	P	13 57 09.0	+0.2
GSC				IAmb	IAmb	13 57 10.9	
	comp=Z,14nm,0.9s						
GSC	Goldstone, Bar	51.77	301	P	P	13 57 09.9	+1.1
	baz=95,SNR=16						
BBRC	Big Bear Solar	51.78	300	P	P	13 57 10.8	+1.7
	baz=94,SNR=8.2						
LMEL	Las Melosas	51.84	189	P	P	13 57 09.4	+0.1
LMEL				IAmb	IAmb	13 57 15.4	
	comp=Z,11nm,1.0s						
109C	Camp Elliot, M	51.85	298	P	P	13 57 09.7	+0.4
109C	Camp Elliot, M	51.85	298	P	P	13 57 10.5	+1.2
	baz=93,SNR=8.5						
QSM	Queen of Sheba	51.88	302	P	P	13 57 09.4	-0.1
MT09	Talagante	51.89	190	P	P	13 57 08.9	-0.7
MT09				IAmb	IAmb	13 57 09.8	
	comp=Z,14nm,0.7s						
FURC	Furnace Creek,	51.92	303	P	P	13 57 11.2	+1.4
	baz=96						
MURC	Murrieta	51.96	299	P	P	13 57 11.5	+1.2
	baz=93,SNR=13						
ILULI	Ilulissat	51.98	5	P	P	13 57 10.1	+0.4
MT01	Popeta	52.02	190	P	P	13 57 09.7	-0.7
BO04	La Punta	52.04	189	P	P	13 57 10.1	-0.5
ELS	Elsinore Mount	52.16	299	P	P	13 57 12.5	+0.7
ELS				IAmb	IAmb	13 57 13.6	
	comp=Z,17nm,0.9s						
MFID	Camas Ranch	52.20	312	P	P	13 57 11.6	-0.3
JTMT	Jette	52.21	317	P	P	13 57 11.9	-0.1
WALA	Waterton Lakes	52.36	319	P	P	13 57 11.7	-1.3

TPH	Tonopah	52.38	305	P	P	13 57 12.9	-0.6
MPMC	Manual Prospec	52.38	302	P	P	13 57 14.3	+0.8
	baz=95,SNR=17						
BFSC	Mount Baldy Ra	52.39	300	P	P	13 57 14.2	+0.7
	baz=94,SNR=16						
LRMC	Laurel Mtn Rad	52.49	301	P	P	13 57 15.1	+0.8
	baz=94,SNR=18						
BO01	Tunca	52.51	190	P	P	13 57 12.9	-1.1
BO01				IAmb	IAmb	13 57 14.2	
	comp=Z,15nm,0.7s						
LCH	Last Change Ra	52.62	304	P	P	13 57 15.4	+0.2
LCH				IAmb	IAmb	13 57 17.2	
	comp=Z,14nm,1.5s						
PLID	Pearl Lake	52.68	314	P	P	13 57 14.9	-0.7
BMN	Battle Mountai	52.70	308	P	P	13 57 15.5	-0.2
BMN				IAmb	IAmb	13 57 17.2	
	comp=Z,11nm,0.8s						
EDW2	Edwards Air Fo	52.70	301	P	P	13 57 16.9	+1.1
	baz=94,SNR=19						
PASC	Pasadena Art C	52.82	300	P	P	13 57 16.5	0.0
PASC				IAmb	IAmb	13 57 18.2	
	comp=Z,24nm,1.0s						
FMP	Fort Macarthur	52.88	299	P	P	13 57 18.2	+1.2
	baz=93						
CWC	Cottonwood Cre	52.90	303	P	P	13 57 18.5	+1.2
	baz=95						
CIS	Catalina Islan	52.97	299	P	P	13 57 18.9	+1.2
	baz=92						
H10N3	ASCENSION HYDR	53.01	115	T	T	14 54 28.4	
	baz=298,slow=75,SNR=5689						
H10N2	ASCENSION HYDR	53.01	115	T	T	14 54 28.9	
	baz=298,slow=75,SNR=6012						
H10N1	ASCENSION HYDR	53.03	115	T	T	14 54 28.0	
	baz=298,slow=75,SNR=7597						
SCI2	San Clemente I	53.07	298	P	P	13 57 19.8	+1.4
	baz=92						
TIN	Tinemaha, Big	53.07	303	P	P	13 57 20.0	+1.5
	baz=95						
ISA	Isabella, Lake	53.15	302	P	P	13 57 19.2	+0.1
ISA				IAmb	IAmb	13 57 21.3	
	comp=Z,10nm,1.0s						
ISA	Isabella, Lake	53.15	302	P	P	13 57 20.4	+1.3
	baz=94,SNR=5.1						
NV11	Mina Array Sit	53.15	305	P	P	13 57 19.3	+0.2
NV11				IAmb	IAmb	13 57 31.1	
	comp=Z,23nm,1.2s						
KVN	Kaiserville	53.18	306	P	P	13 57 19.1	-0.3
MDT	Midelt	53.19	62	LR	LR	14 14 44.5	
	comp=Z,188nm,21.0s,baz=342,slow=30						
GO05	Huala	53.25	191	P	P	13 57 18.4	-1.2
GO05				IAmb	IAmb	13 57 27.8	
	comp=Z,12nm,0.8s						
NVAR	Mina Array Bea	53.27	305	P	P	13 57 20.5	+0.4
	comp=Z,4.8nm,0.7s,baz=92,slow=6.9,SNR=46						
NVAR				PcP	PcP	13 58 28.0	+0.5
	comp=Z,4.3nm,0.7s,baz=115,slow=4.2,SNR=6.4						
NVAR				LR	LR	14 20 17.8	
	comp=Z,265nm,21.7s,baz=104,slow=36						
	comp=Z,4.8nm,0.7s						
NVAR	Mina Array Bea	53.27	305	P	P	13 57 19.7	-0.3
LHV	Little Huntoon	53.40	305	P	P	13 57 21.0	+0.2
LHV				IAmb	IAmb	13 57 22.8	
	comp=Z,9.8nm,0.8s						
ARVC	Arvin	53.41	301	P	P	13 57 22.5	+1.6
	baz=94,SNR=8.7						
EDM	Edmonton	53.42	324	P	P	13 57 19.8	-0.9
RYN	Ryan	53.46	305	P	P	13 57 21.0	-0.4
BMO	Blue Mountains	53.54	313	P	P	13 57 20.6	-1.1
MLAC	Mammoth, Mammo	53.60	304	P	P	13 57 24.1	+1.6
	baz=95						
VES	Vestal, Richgr	53.66	302	P	P	13 57 23.9	+1.2
	baz=94,SNR=10						
OMMB	Old Mammoth Mi	53.73	304	P	P	13 57 23.7	+0.1
OMMB				IAmb	IAmb	13 57 25.7	
	comp=Z,24nm,1.3s						
MDPB	Devils Postpil	53.80	304	P	P	13 57 24.1	+0.1
MDPB				IAmb	IAmb	13 57 26.1	
	comp=Z,31nm,1.4s						
BCW	Bitter Crk WRg	53.87	301	P	P	13 57 24.6	+0.2
SNCC	San Nicolas Is	53.90	299	P	P	13 57 24.7	+0.3
SNCC	San Nicolas Is	53.90	299	P	P	13 57 25.7	+1.2
	baz=92						
YERR	Yerington	54.06	306	P	P	13 57 25.0	-0.8
SBC	Santa Barbara	54.10	300	P	P	13 57 27.0	+1.1
	baz=92						
NEW	Newport	54.19	317	LR	LR	14 23 17.5	
	comp=Z,150nm,18.1s,baz=110,slow=39						
NEW	Newport	54.19	317	P	P	13 57 25.7	-0.7
NEW	Newport	54.19	317	P	P	13 57 26.2	-0.2
	baz=104,SNR=16						
PKM	Mcpherson Peak	54.20	301	P	P	13 57 28.2	+1.4
	baz=93,SNR=15						
ESDC	Sonseca Array	54.21	54	P	P	13 57 26.3	-0.5
	comp=Z,2.8nm,1.1s,baz=266,slow=7.4,SNR=8.7						
ESDC				LR	LR	14 15 02.3	
	comp=Z,214nm,21.9s,baz=266,slow=30						
	comp=Z,2.8nm,1.1s						
BORG	Borgarnes	54.28	20	LR	LR	14 16 13.3	
	comp=Z,204nm,20.8s,baz=234,slow=31						
SMMC	Simmler	54.37	301	P	P	13 57 29.2	+1.3
	baz=93,SNR=24						
CMB	Columbia Colle	54.86	304	P	P	13 57 31.5	0.0
I07A	Izee	54.94	312	P	P	13 57 32.2	+0.1
I07A				IAmb	IAmb	13 57 33.0	
	comp=Z,7.1nm,0.8s						
BEKR	Beckworth	55.01	307	P	P	13 57 32.3	-0.4
BBGB	Big Mountain B	55.28	303	P	P	13 57 34.0	-0.6
KOWA	Kowa	55.30	84	P	P	13 57 34.8	-0.1
KOWA				IAmb	IAmb	13 57 35.4	
	comp=Z,10nm,0.6s						
KOWA	Kowa	55.30	84	P	P	13 57 35.1	+0.2
KOWA				pP	pP	13 57 44.2	-0.2
SAO	San Andreas Ge	55.62	303	P	P	13 57 37.0	+0.1
SAO				IAmb	IAmb	13 57 38.5	
	comp=Z,14nm,1.1s						
K05A	Summer Lake	55.74	310	P	P	13 57 38.3	+0.4
K05A				IAmb	IAmb	13 58 01.6	
	comp=Z,19nm,1.0s						
ORV	Oroville	55.86	306	P	P	13 57 38.6	+0.1
ORV				IAmb	IAmb	13 57 40.0	
	comp=Z,17nm,0.9s						
J05D	Fort Rock, OR	56.06	311	P	P	13 57 40.8	+0.6
	baz=98						
TIC	Toumodi	56.25	94	*e*P	P	13 57 41.0	-0.7
I05D	Terrebonne, OR	56.28	312	P	P	13 57 42.5	+0.9
	baz=98						
LTY	Liberty	56.30	315	P	P	13 57 41.7	0.0
LTY				IAmb	IAmb	13 57 42.5	
	comp=Z,8.5nm,0.8s						
LIC	Lamto	56.36	94	*e*P	P	13 57 42.6	+0.1
	comp=Z,15nm,1.1s						
DBIC	Dimbokro	56.40	94	P	P	13 57 42.1	-0.7
	comp=Z,7.2nm,0.6s,baz=295,slow=6.4,SNR=15						
DBIC				LR	LR	14 17 08.2	
	comp=Z,380nm,21.7s,baz=281,slow=31						
	comp=Z,7.2nm,0.6s						
DBIC	Dimbokro	56.40	94	P	P	13 57 42.5	-0.2
DBIC				IAmb	IAmb	13 57 43.5	
	comp=Z,27nm,1.4s						
SUMG	Summit	56.56	8	P	P	13 57 42.4	-1.1
SUMG				IAmb	IAmb	13 57 46.3	
	comp=Z,17nm,1.0s						
KIC	Kosan Boka	56.59	94	*e*P	P	13 57 43.8	-0.4
	comp=Z,10nm,0.5s						
J04D	Umpqua Nationa	56.69	310	P	P	13 57 45.0	+0.3
J04D	Umpqua Nationa	56.69	310	P	P	13 57 45.3	+0.6
	baz=97						
L04D	Klamath Falls	56.72	309	P	P	13 57 45.7	+0.9
	baz=96						
MCCM	Marconi Confer	56.83	304	P	P	13 57 46.4	+0.9
YBH	Yreka Blue Hor	56.97	309	P	P	13 57 45.3	-1.2
YBH				IAmb	IAmb	13 57 46.3	
	comp=Z,12nm,1.4s						
LC01	Cunco	57.04	190	P	P	13 57 45.3	-1.5
LC01				IAmb	IAmb	13 57 46.7	
	comp=Z,14nm,0.8s						
HUMO	Hull Mountain	57.24	310	P	P	13 57 46.8	-1.6
KCPM	Cahto Peak	57.47	306	P	P	13 57 50.4	+0.3
LLLB	Lillooet	57.74	319	P	P	13 57 51.0	-0.8
LLLB				IAmb	IAmb	13 57 54.1	
	comp=Z,15nm,0.8s						
G03D	McMinnville, O	57.76	313	P	P	13 57 52.4	+0.5
YKA	Yellowknife Ar	57.77	334	P	P	13 57 50.6	-1.0
	comp=Z,19nm,0.7s,baz=106,slow=7.5,SNR=317						
YKA				LR	LR	14 21 42.5	
	comp=Z,120nm,21.4s,baz=96,slow=35						
	comp=Z,19nm,0.7s						
YKA	Yellowknife Ar	57.77	334	P	P	13 57 50.4	-1.3
KSXB	Camp Six Broad	57.85	309	P	P	13 57 52.8	0.0
KSXB				IAmb	IAmb	13 58 02.3	
	comp=Z,19nm,1.2s						
EKA	Eskdalemuir Ar	57.87	35	LR	LR	14 17 19.7	
	comp=Z,226nm,21.8s,baz=196,slow=30						
KMPM	Mount Pierce	57.93	307	P	P	13 57 52.7	-0.6
KBO	Bosley Butte	58.14	309	P	P	13 57 55.3	+0.5
B04A	Port Angeles	58.33	316	P	P	13 57 55.5	-0.3
PGC	Sidney	58.39	317	P	P	13 57 55.3	-0.9
NLWA	Neilton Lookou	58.47	315	P	P	13 57 56.8	-0.1
PLCA	Paso Flores	58.65	188	P	P	13 57 57.2	-0.9
	comp=Z,5.8nm,0.7s,baz=4.3,slow=8.1,SNR=24						
PLCA				LR	LR	14 26 46.9	
	comp=Z,130nm,18.4s,baz=6.5,slow=40						
	comp=Z,5.8nm,0.7s						
PLCA	Paso Flores	58.65	188	P	P	13 57 57.7	-0.4
PLCA				IAmb	IAmb	13 57 58.3	
	comp=Z,6.7nm,0.7s						
PLCA	Paso Flores	58.65	188	*e*P	P	13 57 58.4	+0.2
CLRS	Cowichan Lake	58.86	317	P	P	13 57 59.0	-0.6
LL04	Puerto Octay	59.09	189	P	P	13 57 59.9	-1.2
LL04				IAmb	IAmb	13 58 00.5	
	comp=Z,6.3nm,0.7s						
RES	Resolute Bay	59.86	350	LR	LR	14 21 36.8	
	comp=Z,144nm,21.8s,baz=114,slow=34						
RES	Resolute Bay	59.86	350	P	P	13 58 05.5	-0.5
TORD	Torodi Ar. Bea	61.01	84	P	P	13 58 14.1	-0.7
	comp=Z,4.4nm,0.7s,baz=290,slow=6.9,SNR=30						
	comp=Z,4.4nm,0.7s						
LL02	Futaleuf	61.24	188	P	P	13 58 14.8	-0.9
LL02				IAmb	IAmb	13 58 15.7	
	comp=Z,6.9nm,0.9s						
GO07	Milladeo Hill,	61.44	190	P	P	13 58 16.9	-0.3
JMIC	Jan Mayen	61.84	17	LR	LR	14 19 12.5	
	comp=Z,134nm,21.4s,baz=258,slow=30						
BBB	Bella Bella	61.85	320	LR	LR	14 25 21.2	
	comp=Z,158nm,20.8s,baz=138,slow=36						
WLF	Walferdange	62.43	43	P	P	13 58 23.4	-0.5
WLF				IAmb	IAmb	13 58 25.0	
	comp=Z,9.0nm,1.0s						
BNI	Bardonecchia	62.49	48	P	P	13 58 23.2	-1.4
BNI				IAmb	IAmb	13 58 43.6	
	comp=Z,10.0nm,1.2s						
AY01	Puyuhuapi	62.56	189	P	P	13 58 23.8	-0.8
AY01				IAmb	IAmb	13 58 26.8	
	comp=Z,7.7nm,0.7s						
TGTN	Hyland Airport	63.54	331	P	P	13 58 32.6	+1.5
	baz=102,SNR=13						
DLBC	Dease Lake	63.84	327	LR	LR	14 26 37.9	
	comp=Z,254nm,19.6s,baz=99,slow=36						
DLBC	Dease Lake	63.84	327	P	P	13 58 33.8	+0.6
C36M	Paulatuk	64.02	340	P	P	13 58 32.2	-1.8
C36M				IAmb	IAmb	13 58 34.4	
	comp=Z,19nm,1.4s						
S34M	Telegraph Cree	64.34	326	P	P	13 58 37.1	+0.8
	baz=98						
KEST	Kesra	64.68	58	P	P	13 58 38.1	-1.0
	comp=Z,2.7nm,0.7s,baz=126,slow=7.6,SNR=2.5						
KEST				LR	LR	14 22 30.1	
	comp=Z,150nm,21.3s,baz=215,slow=32						
	comp=Z,2.7nm,0.7s						
KEST	Kesra	64.68	58	IAmb	IAmb	13 58 52.2	
	comp=Z,25nm,1.4s						
DAVOX	Davos/Dischmat	64.77	46	LR	LR	14 21 56.0	
	comp=Z,131nm,21.8s,baz=263,slow=32						
DAVA	Damuels	64.78	46	*e*P	P	13 58 40.2	+0.5
	comp=Z,7.0nm,1.2s						
A36M	Sachs Harbour	65.29	342	P	P	13 58 41.5	-0.8
A36M				IAmb	IAmb	13 58 43.6	
	comp=Z,7.8nm,0.9s						
FETA	Feichten	65.35	46	*e*P	P	13 58 43.8	+0.4
	comp=Z,6.9nm,1.2s						
RETA	Reutte	65.38	45	*e*P	P	13 58 43.6	+0.2
	comp=Z,7.1nm,1.1s						
SQTA	Sankt Quirin	65.68	46	*e*P	P	13 58 45.7	+0.2
	comp=Z,4.6nm,1.2s						
BESE	Bessie Mountai	66.37	327	P	P	13 58 50.2	+0.6
BESE				IAmb	IAmb	13 58 54.5	
	comp=Z,9.6nm,0.9s						
NB2	NORSAR Subarra	66.44	30	P	P	13 58 50.3	+0.3
	comp=Z,8.3nm,1.1s,baz=264,slow=6.5						
NOA	NORSAR Array B	66.44	30	P	P	13 58 47.9	-2.1
	comp=Z,3.4nm,1.0s,baz=264,slow=6.5,SNR=7.0						
NOA				LR	LR	14 22 16.9	
	comp=Z,241nm,21.8s,baz=265,slow=31						
	comp=Z,3.4nm,1.0s						
M31M	Drury Creek, Y	66.51	331	P	P	13 58 51.4	+1.0
M31M	Drury Creek, Y	66.51	331	P	P	13 58 51.4	+1.0
	baz=97,SNR=20						
ABTA	Abfaltersbach	66.58	46	*e*P	P	13 58 50.7	-0.5
	comp=Z,3.6nm,1.3s						
CLL	Collm	66.88	41	*e*P	P	13 58 53.0	+0.2
	comp=Z,5.0nm,1.1s						
CLL				*e*pP	sP	13 59 04.0	-3.0
CLL				*e*sP	pP	13 59 09.0	+6.6
CLL				*e*S	S	14 07 42.0	-1.3
CLL				*e*SS	SS	14 12 12.0	+10
CLL				LmV		14 24 00.0	
	comp=Z,200nm,19.2s						
INK	Inuvik	67.06	337	P	P	13 58 52.7	-1.0
	comp=Z,13nm,0.7s,baz=82,slow=5.9,SNR=50						
	comp=Z,13nm,0.7s						
INK	Inuvik	67.06	337	P	P	13 58 52.7	-1.0
INK				IAmb	IAmb	13 58 53.9	
	comp=Z,13nm,0.8s						
INK	Inuvik	67.06	337	P	P	13 58 53.2	-0.4
	baz=100,SNR=21						
N31M	Braeburn, Yuko	67.09	330	P	P	13 58 54.5	+0.4
N31M	Braeburn, Yuko	67.09	330	P	P	13 58 55.1	+1.0
	baz=95,SNR=7.2						
GEC2	GERESS Array S	67.34	44	P	P	13 58 55.5	-0.5
GERES	GERESS Array B	67.34	44	P	P	13 58 55.3	-0.7
	comp=Z,0.8nm,0.7s,baz=293,slow=5.2,SNR=3.1						
GERES				LR	LR	14 22 51.6	
	comp=Z,129nm,21.7s,baz=275,slow=31						
	comp=Z,0.8nm,0.7s						
BRG	Berggiesshubel	67.47	42	*e*P	P	13 58 56.7	+0.1
BRG				Amp		13 58 58.4	
	comp=Z,7.2nm,1.4s						
HFS	Hagfors	67.58	32	LR	LR	14 23 33.9	
	comp=Z,212nm,21.2s,baz=266,slow=32						
M30M	Minto, Yukon	67.66	331	P	P	13 58 57.5	-0.2
M30M	Minto, Yukon	67.66	331	P	P	13 58 58.4	+0.7
	baz=95,SNR=22						
N30M	Aishikik Lake	67.71	330	P	P	13 58 58.8	+0.7
	baz=94						
MOA	Molln	67.74	45	*e*P	P	13 58 58.0	-0.5
	comp=Z,4.0nm,1.4s						
HYT	Haines Junctio	67.87	329	P	P	13 58 59.6	+0.4
HYT				IAmb	IAmb	13 59 01.1	
	comp=Z,8.7nm,1.1s						
HYT	Haines Junctio	67.87	329	P	P	13 59 00.1	+1.0
	baz=93						
OBKA	Obir	67.99	46	*e*P	P	13 58 59.9	-0.2
	comp=Z,3.5nm,1.1s						
YUK6	Outpost Mounta	68.30	329	P	P	13 59 03.3	+1.3
	baz=93						
YUK4	Talbot Arm	68.46	330	P	P	13 59 03.6	+0.7
	baz=93,SNR=7.0						
VAE	Valguarnera	68.59	56	LR	LR	14 25 13.7	
	comp=Z,324nm,18.6s,baz=327,slow=33						
ARSA	Arzberg	68.62	46	*e*P	P	13 59 04.6	+0.7
	comp=Z,3.8nm,1.1s						
CONA	Conrad Observa	68.81	45	*e*P	P	13 59 05.2	-0.1
	comp=Z,2.4nm,1.2s						
DAWY	Dawson	68.94	333	P	P	13 59 05.1	-0.6
DAWY				IAmb	IAmb	13 59 06.4	
	comp=Z,8.2nm,0.8s						
DAWY	Dawson	68.94	333	P	P	13 59 05.9	+0.2
	baz=93,SNR=14						
VIKU	Vikbolandet	69.07	33	*e*P	P	13 59 06.8	+0.4
EFI	East Falkland	69.08	178	P	P	13 59 06.8	+0.3
RONA	Rosalia, Austr	69.12	45	*e*P	P	13 59 07.2	+0.1
	comp=Z,1.3nm,0.6s						
VRAC	Vranov	69.22	43	LR	LR	14 24 11.3	
	comp=Z,99nm,21.4s,baz=248,slow=31						
YUK3	Moose Creek	69.34	330	P	P	13 59 09.0	+0.6
	baz=91						
BVCY	Beaver Creek	69.54	331	P	P	13 59 10.3	+0.9
	baz=91						
TABL	Table Mountain	69.65	329	P	P	13 59 09.9	-0.4
MG05	Puerto Natales	69.66	187	P	P	13 59 10.4	+0.4
EGAK	Eagle	69.73	333	P	P	13 59 10.2	-0.3
EGAK				IAmb	IAmb	13 59 11.4	
	comp=Z,12nm,0.7s						
EGAK	Eagle	69.73	333	P	P	13 59 10.7	+0.2
	baz=92						
BARN	Barnard Glacie	69.91	329	P	P	13 59 12.6	+0.7
BARN				IAmb	IAmb	13 59 13.4	
	comp=Z,9.0nm,0.8s						
BCAR	Beaver Creek A	69.97	331	P	P	13 59 12.5	+0.4
L27K	Beaver Creek,	69.99	331	P	P	13 59 12.6	+0.4
L27K	Beaver Creek,	69.99	331	P	P	13 59 13.1	+0.9
	baz=90,SNR=24						
M27K	Edge Creek, AK	70.01	331	P	P	13 59 12.1	-0.3
M27K	Edge Creek, AK	70.01	331	P	P	13 59 13.1	+0.7
	baz=90,SNR=15						
K27K	Chicken	70.11	333	P	P	13 59 13.6	+0.7
	baz=91						
SPITS	Spitsbergen Ar	70.41	12	LR	LR	14 26 43.1	
	comp=Z,112nm,20.9s,baz=43,slow=33						
SNH	Sunshine Point	70.50	328	P	P	13 59 16.2	+0.9
WAX	Waxell Ridge	70.50	329	P	P	13 59 16.1	+0.7
WAX				IAmb	IAmb	13 59 17.1	
	comp=Z,13nm,0.8s						
M26K	Nabesna, AK	70.53	331	P	P	13 59 15.9	+0.4
	baz=89						
L26K	Log Cabin Wild	70.69	331	P	P	13 59 17.3	+0.9
L26K	Log Cabin Wild	70.69	331	P	P	13 59 17.6	+1.2
	baz=89,SNR=14						
VRDI	Verde Repeater	70.78	330	P	P	13 59 17.4	+0.2
VRDI				IAmb	IAmb	13 59 18.7	
	comp=Z,6.9nm,0.8s						
MENT	Mentasta	70.86	331	P	P	13 59 17.7	+0.3
GLB	Gilahina Butte	70.94	330	P	P	13 59 18.3	+0.3
GLB				IAmb	IAmb	13 59 19.6	
	comp=Z,7.5nm,0.8s						
SCRK	Sand Creek	70.96	332	P	P	13 59 17.9	-0.3
SCRK				IAmb	IAmb	13 59 20.4	
	comp=Z,8.1nm,0.9s						
SCRK	Sand Creek	70.96	332	P	P	13 59 18.4	+0.3
	baz=89,SNR=5.7						
BMAR	Burnt Mountain	71.15	336	P	P	13 59 18.6	-0.6
HMT	Hamilton	71.20	329	P	P	13 59 19.6	0.0
N25K	Chitina, Valde	71.31	330	P	P	13 59 20.6	+0.3
N25K	Chitina, Valde	71.31	330	P	P	13 59 20.9	+0.5
	baz=88						
RIDG	Independent Ri	71.34	332	P	P	13 59 20.9	+0.5
RIDG				IAmb	IAmb	13 59 40.4	
	comp=Z,12nm,1.0s						
RIDG	Independent Ri	71.34	332	P	P	13 59 20.7	+0.3
	baz=88						
BMRM	Bremner River	71.34	329	P	P	13 59 20.9	+0.4
BMRM	Bremner River	71.34	329	P	P	13 59 21.2	+0.7
	baz=87						
RAGM	Ragged Mountai	71.41	329	P	P	13 59 21.0	+0.2
RAGM				IAmb	IAmb	13 59 22.6	
	comp=Z,23nm,1.2s						
DSPA	Despedida	71.52	184	P	P	13 59 22.6	+1.3
HARP	HAARP	71.54	331	P	P	13 59 22.9	+1.3
	baz=87						
J25K	Salcha River,	71.54	333	P	P	13 59 19.4	-2.2
J25K	Salcha River,	71.54	333	P	P	13 59 21.4	-0.2
	baz=88,SNR=6.4						
RAF	Rauma	71.57	31	*e*P	P	13 59 21.8	+0.1
MG03	Isla Dawson	71.59	185	P	P	13 59 22.1	+0.4
MG03				IAmb	IAmb	13 59 41.4	
	comp=Z,14nm,1.0s						
PAX	Paxson	71.66	331	P	P	13 59 22.1	-0.3
PAX				IAmb	IAmb	13 59 23.4	
	comp=Z,8.5nm,0.8s						
PAX	Paxson	71.66	331	P	P	13 59 22.6	+0.2
	baz=87						
K24K	Donnelly Dome	71.75	332	P	P	13 59 22.8	0.0
	baz=87						
KLU	Klutina	71.95	330	P	P	13 59 24.0	-0.2
KLU				IAmb	IAmb	13 59 24.8	
	comp=Z,8.9nm,0.8s						
KLU	Klutina	71.95	330	P	P	13 59 24.3	+0.1
	baz=86						
SLIT	Slitere, Latvi	72.07	34	*e*P	P	13 59 25.1	+0.3
IL31		72.18	333	P	P	13 59 24.2	-1.2
IL31				IAmb	IAmb	13 59 25.8	
	comp=Z,12nm,0.9s						
ILAR	Eielson Array	72.18	333	P	P	13 59 24.6	-0.7
	comp=Z,8.7nm,0.7s,baz=101,slow=5.1,SNR=86						
ILAR				LR	LR	14 33 36.8	
	comp=Z,80nm,18.6s,baz=354,slow=38						
	comp=Z,8.7nm,0.7s						
ILAR	Eielson Array	72.18	333	P	P	13 59 24.4	-1.0
HDA	Harding Lake	72.23	333	P	P	13 59 24.6	-1.1
HDA	Harding Lake	72.23	333	P	P	13 59 25.2	-0.5
	baz=86,SNR=6.3						
FID	Port Fidalgo	72.27	329	P	P	13 59 26.2	+0.2
FID				IAmb	IAmb	13 59 51.6	
	comp=Z,16nm,1.0s						
POKR	Poker Plat Res	72.39	334	P	P	13 59 25.4	-1.2
POKR	Poker Plat Res	72.39	334	P	P	13 59 26.7	0.0
	baz=86,SNR=6.0						
USHA	Ushuaia	72.40	184	LR	LR	14 35 24.4	
	comp=Z,173nm,18.4s,baz=172,slow=39						
CRVS	Cervenica-Dubn	72.44	43	*e*P	P	13 59 28.5	+1.2
DHY	Denali Highway	72.52	332	P	P	13 59 27.1	-0.5
DHY	Denali Highway	72.52	332	P	P	13 59 27.4	-0.2
	baz=86						
H24K	Noodor Dome	72.53	334	P	P	13 59 27.2	-0.3
H24K				IAmb	IAmb	13 59 28.4	
	comp=Z,11nm,0.8s						
H24K	Noodor Dome	72.53	334	P	P	13 59 27.5	0.0
	baz=86,SNR=19						
GLI	Glacier Island	72.56	329	P	P	13 59 27.1	-0.6
GLI				IAmb	IAmb	13 59 28.3	
	comp=Z,12nm,0.8s						
GLI	Glacier Island	72.56	329	P	P	13 59 27.4	-0.3
	baz=85						
CCB	Clear Creek Bu	72.59	333	P	P	13 59 26.6	-1.1
CCB				IAmb	IAmb	13 59 27.9	
	comp=Z,8.5nm,0.7s						
COLA	College	72.59	333	P	P	13 59 26.8	-0.9
COLA				IAmb	IAmb	13 59 28.7	
	comp=Z,8.4nm,0.8s						
TCOL	CIGO, UAF Yank	72.59	333	P	P	13 59 26.8	-1.0
TCOL				IAmb	IAmb	13 59 29.9	
	comp=Z,8.4nm,0.8s						
TCOL	CIGO, UAF Yank	72.59	333	P	P	13 59 27.7	-0.1
	baz=86						
SCM	Sheep Creek Mo	72.59	330	P	P	13 59 28.2	+0.2
	baz=85						
ARCES	ARCESS Array B	72.64	22	P	P	13 59 27.5	-0.5
	comp=Z,3.3nm,0.9s,baz=261,slow=4.8,SNR=4.4						
ARCES				LR	LR	14 24 38.6	
	comp=Z,82nm,21.8s,baz=295,slow=30						
	comp=Z,3.3nm,0.9s						
WRH	Wood River Hil	72.72	333	P	P	13 59 28.3	-0.3
WRH				IAmb	IAmb	13 59 29.1	
	comp=Z,7.6nm,0.7s						
WAT6	Susitna Watana	72.72	331	P	P	13 59 28.8	-0.1
	baz=85,SNR=5.1						
MDM	Murphy Dome	72.74	334	P	P	13 59 27.8	-0.9
M23K	Glacier View	72.79	330	P	P	13 59 29.1	0.0
	baz=85						
TOLK	Toolik Lake Re	72.97	337	P	P	13 59 29.3	-0.8
TOLK	Toolik Lake Re	72.97	337	P	P	13 59 30.0	-0.1
	baz=85,SNR=8.3						
WAT1	Susitna Watana	73.07	331	P	P	13 59 30.6	-0.2
	baz=84						
NEA2	Nenana	73.13	333	P	P	13 59 30.2	-0.8
NEA2	Nenana	73.13	333	P	P	13 59 30.5	-0.5
	baz=84,SNR=34						
RND	Reindeer	73.15	332	P	P	13 59 30.7	-0.6
RND				IAmb	IAmb	13 59 32.4	
	comp=Z,11nm,0.8s						
I23K	Minto, Yukon-K	73.20	334	P	P	13 59 30.9	-0.5
I23K				IAmb	IAmb	13 59 32.1	
	comp=Z,11nm,0.7s						
I23K	Minto, Yukon-K	73.20	334	P	P	13 59 31.3	-0.1
	baz=84,SNR=14						
H23K	Yukon River	73.22	335	P	P	13 59 31.2	-0.3
H23K				IAmb	IAmb	13 59 32.6	
	comp=Z,10nm,1.0s						
H23K	Yukon River	73.22	335	P	P	13 59 31.4	-0.1
	baz=84,SNR=9.1						
COLD	Coldfoot	73.34	336	P	P	13 59 31.9	-0.3
COLD	Coldfoot	73.34	336	P	P	13 59 32.5	+0.3
	baz=84,SNR=8.1						
BWN	Browne	73.35	333	P	P	13 59 31.1	-1.2
FINES	FINESS Array B	73.61	30	P	P	13 59 33.4	-0.5
	comp=Z,2.6nm,0.6s,baz=261,slow=4.1,SNR=16						
FINES				LR	LR	14 27 01.2	
	comp=Z,226nm,21.2s,baz=288,slow=32						
	comp=Z,2.6nm,0.6s						

FINES	FINESS Array B	73.61	30	P	P	13 59 33.6	-0.3
FIA1	FINESS Array S	73.61	30	P	P	13 59 33.8	-0.1
RC01	Rabbit Creek A	73.82	330	P	P	13 59 34.5	-0.6
RC01				IAmb	IAmb	13 59 36.0	
	comp=Z,14nm,1.0s						
RC01	Rabbit Creek A	73.82	330	P	P	13 59 35.1	0.0
	baz=83						
CUT	Chulitna	73.91	331	P	P	13 59 35.8	+0.2
	baz=83						
M22K	Willow	73.92	330	P	P	13 59 36.0	+0.4
	baz=83						
BPAW	Bear Paw Mtn.	74.02	333	P	P	13 59 35.2	-1.0
BPAW				IAmb	IAmb	13 59 36.7	
	comp=Z,19nm,0.9s						
BPAW	Bear Paw Mtn.	74.02	333	P	P	13 59 35.8	-0.4
	baz=83,SNR=24						
KTH	Kantishna Hill	74.06	332	P	P	13 59 35.7	-0.8
I21K	Tanana	74.30	334	P	P	13 59 36.5	-1.3
I21K	Tanana	74.30	334	P	P	13 59 37.4	-0.4
	baz=82						
VSU	Vasula	74.32	33	*e*P	P	13 59 38.1	0.0
BRSE	Bradley Lake S	74.50	328	P	P	13 59 38.5	-0.6
	baz=82						
H21K	Melozitna Rive	74.57	335	P	P	13 59 38.8	-0.6
H21K				IAmb	IAmb	13 59 40.1	
	comp=Z,11nm,0.9s						
H21K	Melozitna Rive	74.57	335	P	P	13 59 39.0	-0.4
	baz=82,SNR=15						
CAST	Castle Rocks	74.60	332	P	P	13 59 38.6	-1.0
CAST				IAmb	IAmb	13 59 39.8	
	comp=Z,7.9nm,0.8s						
CAST	Castle Rocks	74.60	332	P	P	13 59 39.1	-0.6
	baz=82,SNR=8.4						
CHUM	Lake Minchumin	74.63	333	P	P	13 59 39.4	-0.4
	baz=82,SNR=13						
PPLA	Purkeypile	74.72	332	P	P	13 59 39.8	-0.7
PPLA				IAmb	IAmb	13 59 40.5	
	comp=Z,12nm,0.9s						
PPLA	Purkeypile	74.72	332	P	P	13 59 40.1	-0.4
	baz=81						
IMAR	Indian Mountai	74.91	335	P	P	13 59 40.7	-0.6
BUR08	Bucovina Ar. S	75.10	44	P	P	13 59 43.0	0.0
BURAR	Bucovina Array	75.11	44	P	P	13 59 43.1	+0.1
M20K	Styx River	75.32	331	P	P	13 59 42.8	-1.1
M20K	Styx River	75.32	331	P	P	13 59 43.4	-0.5
	baz=80						
J20K	Nowinta River	75.38	333	P	P	13 59 43.6	-0.5
J20K				IAmb	IAmb	13 59 44.2	
	comp=Z,7.8nm,0.6s						
J20K	Nowinta River	75.38	333	P	P	13 59 43.8	-0.3
	baz=80,SNR=9.9						
RSO	Redoubt South	75.38	329	P	P	13 59 43.5	-1.0
K20K	Telida	75.49	332	P	P	13 59 43.6	-1.2
K20K				IAmb	IAmb	13 59 45.0	
	comp=Z,12nm,0.8s						
K20K	Telida	75.49	332	P	P	13 59 44.2	-0.6
	baz=80,SNR=9.5						
L20K	Farewell, AK	75.56	331	P	P	13 59 44.7	-0.5
	baz=80						
MNK	Minsk	75.58	37	*i* P	P	13 59 46.8	+1.4
	comp=E,2.0nm,0.7s						
MNK				*i* P	P	13 59 46.8	+1.4
	comp=N,9.0nm,0.9s						
MNK				*i* P	P	13 59 46.8	+1.4
	comp=Z,11nm,0.8s,baz=280						
MNK				*i* PP	PP	14 02 36.6	+1.8
MNK				*i* PPP	PPP	14 04 48.8	
MNK				*i* S	S	14 09 25.5	+1.6
MNK				*i* SS	SS	14 14 19.8	+5.0
MNK				*i* SSS	SSS	14 17 43.0	
MNK				*i* LR	LR	14 30 45.0	
MNK				*i* LRM	MLR	14 35 08.3	
	comp=Z,82nm,15.3s						
MNK				*i* LRM	MLR	14 35 10.8	
	comp=E,15nm,25.6s						
MNK				*i* LRM	MLR	14 35 13.4	
	comp=N,51nm,17.9s						
KDAK	Kodiak Island	75.76	326	LR	LR	14 31 57.3	
	comp=N,160nm,22.0s,baz=87,slow=35						
M19K	Big River Lodg	75.90	331	P	P	13 59 47.1	-0.1
	baz=79						
MLR	Muntele Rosu	75.99	46	P	P	13 59 47.7	-0.4
MLR				IAmb	IAmb	13 59 50.7	
	comp=Z,16nm,1.3s						
L19K	White Mountain	76.06	331	P	P	13 59 47.4	-0.7
L19K				IAmb	IAmb	13 59 48.3	
	comp=Z,8.0nm,0.8s						
L19K	White Mountain	76.06	331	P	P	13 59 47.6	-0.5
	baz=79,SNR=5.6						
N19K	Bonanza Creek	76.15	330	P	P	13 59 48.0	-0.8
O19K	Port Alsworth	76.19	329	P	P	13 59 48.1	-0.7
O19K				IAmb	IAmb	13 59 49.0	
	comp=Z,9.6nm,0.7s						
O19K	Port Alsworth	76.19	329	P	P	13 59 48.4	-0.4
	baz=79						
TTA	Tatalina	76.44	332	P	P	13 59 49.0	-1.3
SVW2	Sparrevohn	76.62	330	P	P	13 59 50.4	-0.9
SVW2				IAmb	IAmb	13 59 51.4	
	comp=Z,6.9nm,0.7s						
O18K	Koktuh Hills	76.70	329	P	P	13 59 51.2	-0.5
O18K				IAmb	IAmb	13 59 51.8	
	comp=Z,13nm,0.9s						
O18K	Koktuh Hills	76.70	329	P	P	13 59 51.2	-0.5
	baz=78						
P18K	Big Mountain,	76.81	328	P	P	13 59 50.4	-2.0
P18K				IAmb	IAmb	14 00 09.2	
	comp=Z,24nm,1.4s						
N18K	Kilae Creek	76.86	330	P	P	13 59 52.0	-0.7
N18K				IAmb	IAmb	13 59 52.5	
	comp=Z,7.5nm,0.8s						
N18K	Kilae Creek	76.86	330	P	P	13 59 51.9	-0.7
	baz=78						
AKASG	Malin Array Be	77.11	41	LR	LR	14 31 22.3	
	comp=Z,255nm,19.3s,baz=336,slow=34						
IDI	Anoyia	77.28	57	LR	LR	14 31 48.5	
	comp=Z,40nm,19.1s,baz=156,slow=34						
RDOG	Red Dog Mine	77.94	338	P	P	13 59 56.9	-1.6
	baz=73						
ORCD	Orcadas	79.28	172	P	P	14 00 05.9	+0.2
KLMR	Klimovskoe	80.09	29	*e*P	P	14 00 09.8	-0.6
KLMR				AMP		14 00 12.3	
	comp=Z,5.0nm,0.6s						
TNA	Tin City	80.64	336	P	P	14 00 13.2	-0.1
TNA	Tin City	80.64	336	P	P	14 00 14.7	+1.4
	baz=68						
PMSA	Palmer Station	82.17	181	LR	LR	14 38 40.1	
	comp=Z,119nm,20.1s,baz=348,slow=37						
PMSA	Palmer Station	82.17	181	*e*P	P	14 00 23.3	+2.2
BRTR	Keskin Array B	82.89	51	P	P	14 00 25.0	-0.9
	comp=Z,0.9nm,0.7s,baz=293,slow=3.7,SNR=6.1						
BRTR				LR	LR	14 34 08.7	
	comp=Z,169nm,20.7s,baz=292,slow=33						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	82.89	51	P	P	14 00 25.1	-0.8
KIRV	Kirov	85.59	29	LR	LR	14 35 50.9	
	comp=Z,143nm,19.5s,baz=292,slow=34						
SMAI	San Martin Ant	85.61	182	P	P	14 00 39.7	+1.1
TSUM	Tsumeb	85.99	111	LR	LR	14 30 46.9	
	comp=Z,163nm,21.3s,baz=331,slow=30						
EIL	Elat	86.97	60	LR	LR	14 38 59.9	
	comp=Z,149nm,20.4s,baz=281,slow=35						
BELG	Belogornoye	87.42	35	LR	LR	14 37 21.6	
	comp=Z,225nm,19.7s,baz=327,slow=34						
KBZ	Khabaz	88.07	45	P	P	14 00 51.8	+0.5
	comp=Z,2.5nm,0.8s,baz=248,slow=6.5,SNR=6.4						
KBZ				LR	LR	14 36 14.9	
	comp=Z,49nm,21.5s,baz=270,slow=33						
	comp=Z,2.5nm,0.8s						
NRIK	Noril'sk	90.53	10	LR	LR	14 42 37.5	
	comp=Z,84nm,20.1s,baz=332,slow=36						
TIXI	Tiksi	90.66	357	LR	LR	14 39 50.7	
	comp=Z,97nm,21.5s,baz=0.0,slow=34						
GNI	Garni	90.74	47	LR	LR	14 42 22.4	
	comp=Z,56nm,19.1s,baz=322,slow=36						
ARU	Arti	90.93	29	LR	LR	14 37 19.1	
	comp=Z,156nm,21.8s,baz=303,slow=33						
MBAR	Mbarara	92.46	90	LR	LR	14 41 10.8	
	comp=Z,197nm,19.4s,baz=132,slow=35						
SUR	Sutherland	93.13	123	LR	LR	14 34 34.3	
	comp=Z,129nm,21.3s,baz=280,slow=30						
PPT	Papeete	93.29	253	LR	LR	14 36 22.0	
	comp=Z,48nm,19.8s,baz=328,slow=31						
AKTO	Aktyubinsk	94.04	34	LR	LR	14 41 43.6	
	comp=Z,101nm,19.6s,baz=316,slow=34						
LSZ	Lusaka	94.38	105	LR	LR	14 35 35.7	
	comp=Z,70nm,22.0s,baz=308,slow=30						
LBTB	Lobatse	94.88	115	LR	LR	14 35 46.8	
	comp=Z,68nm,21.6s,baz=282,slow=30						
SHEM	Shemya Is, Ala	95.01	330	LR	LR	14 43 56.2	
	comp=Z,109nm,21.8s,baz=46,slow=35						
SEY	Seymchan	95.38	345	LR	LR	14 45 18.1	
	comp=Z,80nm,21.4s,baz=8.0,slow=36						
BOSA	Boshof	95.64	118	LR	LR	14 39 18.2	
	comp=Z,34nm,18.0s,baz=292,slow=32						
MA2	Magadan	98.66	344	LR	LR	14 48 06.8	
	comp=Z,114nm,20.7s,baz=40,slow=37						
KMBO	Kilima Mbogo	98.83	88	LR	LR	14 43 28.2	
	comp=Z,223nm,20.4s,baz=286,slow=34						
ATD	Arta Tunnel	100.03	74	LR	LR	14 47 28.0	
	comp=Z,125nm,18.6s,baz=350,slow=36						
WMQ	Urumqi	112.71	24	*e*PKP	PKiKP	14 06 37.9	+0.3
WMQ				LR	LR		
	comp=Z,240nm,21.5s						
WMQ				LR	LR		
	comp=Z,200nm,21.5s						
HHC	Hu-ho-hao-te	121.48	6	*e*PKP	PKPdf	14 06 54.5	-0.1
GOMU	GeErMu	122.02	22	PKP	PKPdf	14 06 52.4	-3.7
GOMU				SS	SS	14 25 01.7	-3.1
GOMU				AMB	AMB		
	comp=Z,36nm,5.5s						
GOMU				LR	LR		
	comp=Z,150nm,16.8s						
GOMU				LR	LR		
	comp=Z,52nm,16.5s						
GOMU				LR	LR		
	comp=Z,150nm,16.6s						
MJAR	Matsushiro Arr	122.94	341	PKP	PKPdf	14 06 56.0	-1.4
	comp=Z,2.3nm,0.6s,baz=28,slow=0.8,SNR=8.9						
KSRS	Korea Array	124.47	351	PKP	PKPdf	14 06 59.2	-1.0
	comp=Z,1.4nm,0.7s,baz=48,slow=1.7,SNR=9.6						
XAN	Xi'an	127.84	10	PKP	PKPdf	14 07 04.8	-2.1
XAN				LR	LR		
	comp=Z,120nm,19.8s						
XAN				LR	LR		
	comp=Z,150nm,21.3s						
CD2	Chengdu	129.74	16	PKP	PKPdf	14 07 09.0	-1.6
NJ2	Nanjing	130.60	359	*e*PKP	PKiKP	14 07 12.8	-0.2
PZH	PanZhiHua	133.26	21	PKP	PKPdf	14 07 14.3	-3.2
CMAR	Chiang Mai Arr	139.38	29	PKP	PKPdf	14 07 27.1	-1.8
	comp=Z,0.8nm,0.6s,baz=316,slow=3.0,SNR=8.0						
CTA	Charters Tower	153.49	260	PKPab	PKPab	14 08 13.0	+0.6
	comp=Z,15nm,1.0s,baz=156,slow=10,SNR=5.0						
ASAR	Alice Springs	164.25	245	PKP	PKPdf	14 08 03.7	-1.3
	comp=Z,1.0nm,0.8s,baz=126,slow=0.9,SNR=9.9						
ASAR				PKPab	PKPab	14 08 58.5	-0.4
	comp=Z,3.8nm,0.7s,baz=112,slow=4.5,SNR=33						
WRA	Warramunga Arr	164.68	259	PKP	PKPdf	14 08 04.1	-1.3
	comp=Z,1.8nm,1.0s,baz=50,slow=1.1,SNR=7.9						
WRA				PKPab	PKPab	14 09 00.4	-0.6
	comp=Z,3.0nm,0.8s,baz=98,slow=4.3,SNR=10						
WRA	Warramunga Arr	164.68	259		PKPdf	14 08 04.3	-1.1

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*JMA **08** 13:53:33.5±0.1, 30°N±1°×13°9E±°, h447^{km}, MV3.7/16, NEAR TORISHIMA IS*

*IDC **08** 13:53:35.4±0.8, 29°94N×138°93E, h406^{km}±8^{km}, mb3.2/15, mbtmp4.1/21, Error ellipse: s-maj=18.3km s-min=9.0km az=82.0*

*NEIC **08** 13:53:36.9±1.4, 29°97N±0°09×138°9E±0°1, h417^{km}±8^{km}, mb4.0/70, Error ellipse: s-maj=17.8km s-min=13.2km az=97.0*

ISC 08 13:53:36.3±0.4**, 29°94N**±0°05×**139°06E**±0°08**, h421**^{km}**,**
n118, σ1^{s}66/125**, mb3.9**/45**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.23	11	P	P	13 54 42.4	-0.4
JHJ2	Mitsune	3.23	11	P	P	13 54 42.5	-0.3
JHJ2				*e*S	S	13 55 35.3	-1.5
JHJ	Hachijo jima 2	3.23	11	P	P	13 54 42.3	-0.5
	208nm,0.3s,baz=263,slow=21,SNR=32						
JHJ				S	S	13 55 34.0	-2.9
	131nm,0.4s,baz=242,slow=23,SNR=6.0						
CBIJ	Chichi jima	3.95	135	P	P	13 54 47.0	-2.2
CBIJ				S	S	13 55 43.9	-4.5
JCJ	Chichijima	3.95	135	P	P	13 54 46.9	-2.3
	98nm,0.4s,baz=356,slow=19,SNR=77						
JCJ				S	S	13 55 42.5	-5.9
	208nm,0.3s,baz=347,slow=22,SNR=23						
JMKN	Mikurajimanish	3.97	6	P	P	13 54 48.0	-1.1
JIE	Ise	4.87	336	P	P	13 54 58.8	+1.1
BSO1	Boso 1	4.97	19	P	P	13 54 57.6	-0.5
JOD2	Odawara 2	5.31	0	P	P	13 55 01.3	-0.9
INU	Inuyama	5.66	343	P	P	13 55 06.5	+0.7
JGF	Kuroka	5.83	346	P	P	13 55 07.9	+0.3
JRY	Ryogami san	6.06	359	P	P	13 55 09.2	-0.8
JRY				*e*S	S	13 56 24.4	-2.5
JYT	Yasato	6.34	8	P	P	13 55 10.3	-2.6
MJAR	Matsushiro Arr	6.62	354	P	P	13 55 13.9	-2.5
	2.0nm,0.4s,baz=167,slow=12,SNR=20						
MJAR				S	S	13 56 31.6	-6.2
	3.5nm,0.6s,baz=74,slow=14,SNR=5.1						
MJAR	Matsushiro Arr	6.62	354	P	P	13 55 13.7	-2.8
MAJO	Matsushiro	6.62	354	P	P	13 55 14.9	-1.6
MJB9	Matsu-Tunnel	6.63	354	P	P	13 55 14.8	-1.7
JHS	Saijyo	7.12	317	P	P	13 55 22.2	+0.4
JHS	Saijyo	7.12	317	P	P	13 55 22.5	+0.6
JSU	Suzuyama	7.57	284	P	P	13 55 27.1	+0.2
JMM	Marumori	8.04	10	P	P	13 55 30.5	-1.2
JMK	Ichinoseki	9.16	11	S	S	13 57 24.7	-4.9
JTU	Tsushima	9.37	302	P	P	13 55 44.2	-2.3
JTM	Tenmabayashi	10.95	8	P	P	13 56 04.7	+0.9
TJN	Taejon	11.71	306	P	P	13 56 10.7	-1.5
KSRS	Korea Array	11.92	312	P	P	13 56 14.6	+0.1
	4.7nm,0.8s,baz=127,slow=11,SNR=26						
ASAJ	Asahikawa	14.43	10	P	P	13 56 43.2	+1.5
	4.7nm,0.8s,baz=243,slow=6.6,SNR=5.8						
JKA	Kamikawa-asahi	14.43	10	P	P	13 56 42.8	+1.0
USRK	Ussuriysk Ar.	15.30	340	P	P	13 56 51.3	+0.1
	3.6nm,0.5s,baz=203,slow=10,SNR=6.4						
MDJ	Mudanjiang	16.45	335	P	P	13 57 02.5	-1.0
YHNB	Yeheng	16.57	256	P	P	13 57 02.9	-2.1
NACB	Ninganchiao	16.58	254	P	P	13 57 03.2	-1.8
NACB				IAmb	IAmb	13 57 07.2	
	comp=Z,10.0nm,0.8s						
YULB	Yu-li	17.15	252	P	P	13 57 09.0	-2.2
YULB				IAmb	IAmb	13 57 15.1	
	comp=Z,6.5nm,0.7s						
SSLB	Suanglung	17.27	254	P	P	13 57 11.1	-1.3
KLR	Kul'dur	20.05	346	P	P	13 57 40.4	+0.8
	comp=Z,4.4nm,0.6s,baz=151,slow=7.9,SNR=13						
	comp=Z,4.4nm,0.6s						
MA2	Magadan	30.68	12	P	P	13 59 15.3	+1.2
MA2				IAmb	IAmb	13 59 17.1	
	comp=Z,4.2nm,0.7s						
SONM	Songino Array	30.77	315	P	P	13 59 15.0	-0.2
	comp=Z,0.7nm,0.4s,baz=118,slow=10.0,SNR=7.6						
	comp=Z,0.7nm,0.4s						
TOLI2	Tolitoli	33.53	215	P	P	13 59 38.2	-0.9
TOLI2				IAmb	IAmb	13 59 50.8	
	comp=Z,8.4nm,1.1s						
PMG	Port Moresby	39.89	167	P	P	14 00 32.5	+0.6
PMG				IAmb	IAmb	14 00 54.0	
	comp=Z,14nm,0.9s						
TIXI	Tiksi	42.13	355	P	P	14 00 49.1	-0.1
MTN	Manton Dam	43.22	191	P	P	14 00 58.4	-0.1
COEN	Coen	43.82	174	P	P	14 01 04.3	+1.1
COEN				IAmb	IAmb	14 01 24.3	
	comp=Z,10.0nm,1.0s						
ZALV	Zalesovo Beam	45.54	318	P	P	14 01 15.1	-1.2
	comp=Z,0.8nm,0.4s,baz=79,slow=7.8,SNR=3.9						
	comp=Z,0.8nm,0.4s						
KNRA	Kununurra	46.42	194	P	P	14 01 23.6	+0.3
MKAR	Makanchi Array	46.56	308	P	P	14 01 23.1	-1.1
	comp=Z,0.4nm,0.4s,baz=92,slow=9.0,SNR=6.2						
MKAR				ScP	ScP	14 06 02.7	-0.2
	comp=Z,0.3nm,0.6s,baz=79,slow=7.1,SNR=3.8						
	comp=Z,0.4nm,0.4s						
NRIK	Noril'sk	49.01	338	P	P	14 01 41.7	-0.5
	comp=Z,2.2nm,0.5s,baz=99,slow=11,SNR=3.6						
	comp=Z,2.2nm,0.5s						
NRIK	Noril'sk	49.01	338	P	P	14 01 42.5	+0.3
NRIK				IAmb	IAmb	14 01 43.2	
	comp=Z,3.1nm,0.9s						
FITZ	Fitzroy Crossi	49.48	197	P	P	14 01 46.9	+0.5
FITZ				IAmb	IAmb	14 01 47.5	
	comp=Z,5.2nm,0.9s						
WB0	Warramunga Arr	49.62	186	P	P	14 01 47.3	-0.2
WB0				IAmb	IAmb	14 01 48.8	
	comp=Z,7.9nm,0.9s						
WRAB	Tennant Creek	49.79	186	P	P	14 01 48.7	0.0
WRAB				IAmb	IAmb	14 01 49.9	
	comp=Z,8.7nm,1.1s						
WB2	Warramunga Arr	49.80	186	P	P	14 01 48.9	+0.1
WB2				IAmb	IAmb	14 01 49.8	
	comp=Z,5.1nm,0.7s						
WR0	Warramunga Arr	49.80	186	P	P	14 01 48.9	+0.1
WR0				IAmb	IAmb	14 01 49.8	
	comp=Z,5.4nm,0.7s						
WRA	Warramunga Arr	49.80	186	P	P	14 01 48.9	+0.1
	comp=Z,5.5nm,0.7s,baz=4.0,slow=8.0,SNR=46						
WRA				PcP	PcP	14 03 03.3	+0.9
	comp=Z,0.3nm,0.4s,baz=0.6,slow=4.1,SNR=1.9						
	comp=Z,5.5nm,0.7s						
WRA	Warramunga Arr	49.80	186	P	P	14 01 48.8	-0.1
BOOM	Boomskoye usch	51.36	302	P	P	14 02 00.6	+0.3
SVW2	Sparrevohn	52.42	34	P	P	14 02 09.8	+2.2
SVW2				IAmb	IAmb	14 02 23.5	
	comp=Z,11nm,1.4s						
K20K	Telida	53.35	31	P	P	14 02 16.5	+2.4
K20K				IAmb	IAmb	14 02 17.2	
	comp=Z,3.4nm,0.9s						
J20K	Nowinta River	53.40	30	P	P	14 02 16.7	+2.2
AS31	Alice Springs	53.53	186	P	P	14 02 16.1	+0.1
ASAR	Alice Springs	53.53	186	P	P	14 02 16.0	0.0
	comp=Z,2.0nm,0.5s,baz=359,slow=5.6,SNR=52						
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	53.53	186	P	P	14 02 15.9	0.0
IMAR	Indian Mountai	53.79	28	P	P	14 02 17.4	+0.2
MBWA	Marble Bar	54.10	202	P	P	14 02 20.1	+0.1
H21K	Melozitna Rive	54.13	28	P	P	14 02 21.4	+1.7
BRVK	Borovoye	54.16	316	P	P	14 02 19.9	-0.1
PPLA	Purkeypile	54.16	32	P	P	14 02 22.1	+2.0
PPLA				IAmb	IAmb	14 02 35.2	
	comp=Z,12nm,1.4s						
CAST	Castle Rocks	54.24	31	P	P	14 02 22.7	+2.2
CAST				IAmb	IAmb	14 02 23.7	
	comp=Z,3.3nm,1.0s						
PSA00	Pilbara Seismi	54.45	202	P	P	14 02 22.6	+0.1
BPAW	Bear Paw Mtn.	54.77	30	P	P	14 02 26.6	+2.3
KKAR	Karatay Array	55.21	304	P	P	14 02 27.9	+0.2
TOLK	Toolik Lake Re	55.69	25	P	P	14 02 33.1	+2.4
RND	Reindeer	55.70	31	P	P	14 02 32.0	+1.1
RND				IAmb	IAmb	14 02 32.5	
	comp=Z,2.8nm,0.6s						
KNK	Knik Glacier	55.87	34	P	P	14 02 33.9	+1.8
KNK				IAmb	IAmb	14 02 48.1	
	comp=Z,8.4nm,1.2s						
SML	Sawmill	55.93	33	P	P	14 02 34.4	+1.9
SML				IAmb	IAmb	14 03 00.4	
	comp=Z,8.9nm,1.0s						
MDM	Murphy Dome	56.00	29	P	P	14 02 34.5	+1.5
MDM				IAmb	IAmb	14 02 41.2	
	comp=Z,6.0nm,1.4s						
H24K	Noodor Dome	56.18	28	P	P	14 02 36.0	+1.9
H24K				IAmb	IAmb	14 02 36.0	
	comp=Z,4.6nm,1.4s						
CCB	Clear Creek Bu	56.18	30	P	P	14 02 35.5	+1.4
SCM	Sheep Creek Mo	56.41	33	P	P	14 02 37.2	+1.4
SCM				IAmb	IAmb	14 02 53.0	
	comp=Z,7.1nm,0.8s						
HDA	Harding Lake	56.55	30	P	P	14 02 37.2	+0.6
ILAR	Eielson Array	56.57	30	P	P	14 02 37.0	+0.2
	comp=Z,0.6nm,0.8s,baz=262,slow=4.7,SNR=6.5						
	comp=Z,0.6nm,0.8s						
BMAR	Burnt Mountain	57.51	26	P	P	14 02 46.1	+2.8
BMRM	Bremner River	57.76	34	P	P	14 02 47.3	+2.2
BMRM				IAmb	IAmb	14 03 03.1	
	comp=Z,18nm,1.4s						
SCRK	Sand Creek	57.85	30	P	P	14 02 46.7	+0.9
BERG	Berg Lake	58.25	35	P	P	14 02 51.3	+2.8
BERG				IAmb	IAmb	14 03 12.2	
	comp=Z,15nm,1.0s						
M27K	Edge Creek, AK	58.93	32	P	P	14 02 54.8	+1.6
M27K				IAmb	IAmb	14 03 10.8	
	comp=Z,5.8nm,1.2s						
EGAK	Eagle	59.03	29	P	P	14 02 54.8	+1.2
EGAK				IAmb	IAmb	14 03 15.1	
	comp=Z,5.7nm,1.5s						
DAWY	Dawson	59.86	30	P	P	14 03 00.7	+1.4
DAWY				IAmb	IAmb	14 03 21.9	
	comp=Z,4.7nm,1.4s						
ARU	Arti	60.49	321	P	P	14 03 03.5	-0.1
ARU				IAmb	IAmb	14 03 03.9	
	comp=Z,2.2nm,0.6s						
ABKAR	Akbulak array	61.15	313	P	P	14 03 07.4	-0.7
ARMA	Armidale	61.21	168	P	P	14 03 10.8	+2.0
M30M	Minto, Yukon	61.24	32	P	P	14 03 10.8	+2.2
FORT	Forrest	61.28	191	P	P	14 03 09.6	+0.5
STKA	Stephens Creek	61.52	178	P	P	14 03 11.4	+0.7
	comp=Z,1.6nm,0.4s,baz=356,slow=7.0,SNR=9.4						
	comp=Z,1.6nm,0.4s						
STKA	Stephens Creek	61.52	178	P	P	14 03 11.4	+0.7
INK	Inuvik	61.61	25	P	P	14 03 12.0	+1.2
	comp=Z,0.7nm,0.4s,baz=271,slow=7.1,SNR=4.9						
	comp=Z,0.7nm,0.4s						
INK	Inuvik	61.61	25	IAmb	IAmb	14 03 37.8	
	comp=Z,5.5nm,1.5s						
N31M	Braeburn, Yuko	61.91	33	P	P	14 03 15.2	+2.2
N31M				IAmb	IAmb	14 03 15.9	
	comp=Z,12nm,1.4s						
M31M	Drury Creek, Y	62.41	32	P	P	14 03 17.9	+1.6
BBOO	Buckleboo	62.47	183	P	P	14 03 18.0	+1.1
MORW	Morawa	62.66	203	P	P	14 03 18.2	0.0
A36M	Sachs Harbour	63.57	20	P	P	14 03 25.6	+2.1
C36M	Paulatuk	64.69	23	P	P	14 03 31.6	+0.9
C36M				IAmb	IAmb	14 03 54.0	
	comp=Z,9.3nm,1.3s						
NWAO	Narrogin (SRO)	65.86	200	P	P	14 03 38.8	+0.2
TOO	Toolangi	67.43	174	P	P	14 03 49.6	+1.3
EUNU	Eureka	67.47	8	P	P	14 03 49.1	+1.0
EUNU				IAmb	IAmb	14 03 53.9	
	comp=Z,2.7nm,1.1s						
RES	Resolute Bay	69.94	13	P	P	14 04 04.7	+1.6
RES				IAmb	IAmb	14 04 24.7	
	comp=Z,3.1nm,1.3s						
ARCES	ARCESS Array B	69.95	340	P	P	14 04 03.8	+0.5
	comp=Z,1.2nm,0.5s,baz=63,slow=8.6,SNR=12						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	70.95	28	P	P	14 04 10.1	+0.8
	comp=Z,0.5nm,0.5s,baz=300,slow=6.0,SNR=9.6						
	comp=Z,0.5nm,0.5s						
FINES	FINESS Array B	74.18	333	P	P	14 04 28.0	-0.1
	comp=Z,0.8nm,0.4s,baz=67,slow=5.0,SNR=11						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	74.18	333	P	P	14 04 27.8	-0.3
BKZ	Black Stump Fm	77.09	151	P	P	14 04 45.5	+0.9
BKZ				IAmb	IAmb	14 05 09.5	
	comp=Z,7.3nm,1.2s						
PABE	Paberze	78.52	328	P	P	14 04 52.9	+0.6
NC405	NORSAR Array S	79.72	337	P	P	14 04 58.5	-0.1
NC405				IAmb	IAmb	14 05 12.9	
	comp=Z,9.0nm,1.2s						
NB201	NORSAR Array S	79.91	337	P	P	14 04 59.7	0.0
NB2	NORSAR Subarra	79.94	337	P	P	14 04 59.7	-0.2
	comp=Z,0.3nm,0.5s,baz=45,slow=5.1						
NOA	NORSAR Array B	79.94	337	P	P	14 04 59.4	-0.4
	comp=Z,0.4nm,0.6s,baz=42,slow=5.4,SNR=28						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	80.90	51	P	P	14 05 07.2	+1.6
	comp=Z,0.2nm,0.5s,baz=286,slow=7.0,SNR=3.2						
	comp=Z,0.2nm,0.5s						
BURAR	Bucovina Array	82.63	321	P	P	14 05 14.7	+0.5

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*UCR **08** 14:00:55.5±1.5, 14°90N×87°51W, h9^{km}±22^{km}, mb4.0(NEIC)*

*NEIC **08** 14:00:57.9±1.5, 14°70N±0°04×87°62W±0°06, h19^{km}±7^{km}, mb4.0/5, Md4.1(SNET), Error ellipse: s-maj=9.5km s-min=2.4km az=58.0*

*INET **08** 14:00:58.1±1.0, 14°88N×87°62W, h15^{km}, MW4.0*

ISC 08 14:00:55.9±1.6**, 14°80N**±0°06×**87°59W**±0°04**, h11**^{km}±12^{km}**,**
n60, σ0^{s}85/67**, 2C, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	0.80	157	Pg	Pg	14 01 10.9	-0.6
TGUH				Sg	Sg	14 01 21.9	-0.2
TGUH	Tegucigalpa,Un	0.80	157	*e*P	Pg	14 01 11.3	-0.2
TGUH	Tegucigalpa,Un	0.80	157	*e*P	Pg	14 01 11.3	-0.2
TGUH	Tegucigalpa,Un	0.80	157	*e*P	Pg	14 01 11.2	-0.2
CAHU	Cacacuatique	1.19	210	*e*P	Pn	14 01 18.5	-0.2
CAHU	Cacacuatique	1.19	210	*e*P	Pn	14 01 18.5	-0.2
PQSS	Presa 15 de Se	1.50	219	*e*P	Pn	14 01 23.2	+0.5
PQSS	Presa 15 de Se	1.50	219	*e*P	Pn	14 01 23.2	+0.5

PACA	Pacayal	1.51	208	*e*P	Pb	14 01 23.9	-0.1
PACA	Pacayal	1.51	208	*e*P	Pb	14 01 23.9	-0.1
LCND	La Caada	1.51	191	*e*P	Pb	14 01 23.6	-0.4
LCND				*e*S	Sg	14 01 46.0	+1.3
LCND	La Caada	1.51	191	*e*P	Pb	14 01 23.6	-0.4
LCND				*e*S	Sg	14 01 46.0	+1.3
LCY	Lacayo	1.53	207	⇑*i*P	Pb	14 01 24.1	-0.3
LCY	Lacayo	1.53	207	⇑*i*P	Pb	14 01 24.1	-0.3
CNCH	Conchagua	1.54	189	*e*P	Pn	14 01 23.8	+0.4
CNCH	Conchagua	1.54	189	*e*P	Pn	14 01 23.7	+0.4
CNCH				*e*P	Pn	14 01 23.8	+0.4
SCLA	Alcaldia de Sa	1.56	225	*e*P	Pb	14 01 24.3	-0.4
SCLA				*e*S	Sg	14 01 47.4	+1.4
SCLA	Alcaldia de Sa	1.56	225	*e*P	Pb	14 01 24.3	-0.4
SCLA				*e*S	Sg	14 01 47.4	+1.4
COEB	Comit de Eme	1.59	215	*e*P	Pb	14 01 24.8	-0.5
COEB	Comit de Eme	1.59	215	*e*P	Pb	14 01 24.8	-0.5
COEB	Comit de Eme	1.59	215	*e*P	Pn	14 01 24.6	+0.6
ESQI	Esquipulas	1.71	262	Pn	Pn	14 01 26.1	+0.3
ESQI	Esquipulas	1.71	262	*e*P	Pn	14 01 26.2	+0.5
MTO3	Montecristo	1.76	257	Pn	Pn	14 01 25.4	-1.2
MTO3	Montecristo	1.76	257	*e*P	Pn	14 01 27.2	+0.6
MTO3				*e*S	Sg	14 01 51.9	-0.7
MTO3	Montecristo	1.76	257	*e*P	Pn	14 01 27.2	+0.6
MTO3				*e*S	Sg	14 01 51.9	-0.7
LFU	La Fuente	1.81	235	*e*P	Pb	14 01 28.6	-0.5
LFU	La Fuente	1.81	235	*e*P	Pb	14 01 28.6	-0.5
SJTE	Alcalda de S	1.81	229	*e*P	Pb	14 01 28.6	-0.6
SJTE				*e*S	Sg	14 01 54.9	+0.6
SJTE	Alcalda de S	1.81	229	*e*P	Pb	14 01 28.6	-0.6
SJTE				*e*S	Sg	14 01 54.9	+0.6
LFRS	El Faro	1.85	231	*e*P	Pb	14 01 28.9	-0.8
LFRS	El Faro	1.85	231	*e*P	Pb	14 01 28.9	-0.8
SNET	Serv Nac Est T	1.94	235	Pn	Pn	14 01 28.6	-0.3
JAYA	Jayaque - finc	2.13	238	*e*P	Pb	14 01 33.4	-1.3
JAYA	Jayaque - finc	2.13	238	*e*P	Pb	14 01 33.4	-1.3
CRIN	San Cristobal	2.16	166	Pn	Pn	14 01 32.4	+0.5
CRIN	San Cristobal	2.16	166	*e*P	Pb	14 01 33.7	-1.3
SNJE	San Jose	2.16	245	*e*P	Pb	14 01 34.0	-1.2
SNJE	San Jose	2.16	245	*e*P	Pb	14 01 34.0	-1.2
SBLS	San Blas	2.19	244	*e*P	Pb	14 01 34.3	-1.4
SBLS	San Blas	2.19	244	*e*P	Pb	14 01 34.3	-1.4
CEVE	Cerro Verde	2.20	244	*e*P	Pb	14 01 34.8	-1.1
CEVE	Cerro Verde	2.20	244	*e*P	Pb	14 01 34.8	-1.1
CNGN	Cerro Negro	2.45	159	Pn	Pn	14 01 36.7	+0.8
MATN	Matagalpa	2.47	139	Pn	Pn	14 01 36.6	+0.4
MATN	Matagalpa	2.47	139	*e*P	Pn	14 01 38.0	+1.9
BOAB	BOACO BROADBAN	3.00	141	Pn	Pn	14 01 43.1	-0.2
PETF	Flores	3.04	314	Pn	Pn	14 01 46.0	+2.1
ACON	Acoyapa	3.67	140	Pn	Pn	14 01 52.3	-0.4
ESPN	Las Esperanzas	4.12	129	Pn	Pn	14 01 57.8	-1.0
HZTE	Horizontes, Gu	4.51	154	Pn	Pn	14 02 04.7	+0.6
CCIG	Comitan	4.62	289	Pn	Pn	14 02 06.8	+1.0
ORTG	Ortega, Santa	4.88	155	Pn	Pn	14 02 09.0	-0.4
SOR	Soroa	9.05	28	Pn	Pn	14 03 07.6	+1.1
735A	Kenedy	16.88	328		P	14 04 54.5	+0.2
OTAV	Otavalo	17.06	147	P	P	14 04 56.1	-0.7
TX32	Lajitas Array	20.73	317	P	Pn	14 05 37.9	-1.1
TX32	comp=Z,3.1nm,1.2s			IAmb	IAmb	14 05 38.8	
TXAR	Lajitas Array	20.73	317	P	Pn	14 05 37.9	-1.1
TX31	Lajitas Ar. Si	20.73	317	P	Pn	14 05 38.1	-0.8
TX31	comp=Z,11nm,1.4s			IAmb	IAmb	14 05 38.8	
PB08	IPOC Station P	39.17	152	P	P	14 08 24.1	-0.4
PB08	comp=Z,4.3nm,0.7s			IAmb	IAmb	14 08 25.2	

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*IDC **08** 14:03:47.4±1.2, 22°.83N×123°.28E, h0^{km}, mb3.3/5, mbtmp3.4/6, ML3.1/1, MS2.6/2, Error ellipse: s-maj=35.6km s-min=23.6km az=84.0*

*JMA **08** 14:03:49.8±0.5, 23°N±2°×12°3E±°, h61^{km}, MV3.9/14, FAR S OFF ISHIGAKIJIMA*

*NIED **08** 14:03:49.8, 22°.88N×122°.87E, h61^{km}, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.59; $M_{\theta\theta}$1.97; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.06; $M_{\theta\phi}$-2.22; $M_{\phi r}$2.39; Fault plane solution: $M_0$3.73000×10^{14} NP1: ϕ_s266.00000°, δ47.00000°, λ-154.00000°. NP2: ϕ_s158.00000°, δ71.00000°, λ-46.00000°.*

*TAP **08** 14:03:51.8, 22°.90N×122°.64E, h32^{km}±2^{km}, ML4.0, D*

ISC 08 14:03:45.7±1.3**, 22°.90N**±0°.02×**122°.76E**±0°.03**, h5**^{km}±9^{km}**, n157, σ1^{s}.43**/236**, mb3.3**/5**, 6C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=258	1.21	260	⇑P	Pg	14 04 10.6	+1.6
LDUT	baz=258			S	Sg	14 04 24.7	+0.1
ECBN	Changbin baz=290	1.27	289	*i* P	Pg	14 04 12.1	+2.0
ECBN	baz=290			*e*S	Sg	14 04 27.2	+0.6
CHKT	Chengkung baz=279	1.30	279	⇑*i*P	Pg	14 04 12.1	+1.5
CHKT	baz=279			S	Sg	14 04 26.9	-0.6
EDH	Donghe baz=273	1.34	273	P	Pg	14 04 12.9	+1.5
EDH	baz=273			S	Sg	14 04 28.5	-0.3
HGSD	Ruisui baz=297	1.36	296	P	Pg	14 04 13.0	+1.2
HGSD	baz=297			S	Sg	14 04 28.6	-0.9
TEGC	Jichi Village baz=308	1.38	306	*e*P	Pg	14 04 13.9	+1.7
FULB	Fuli baz=283	1.38	283	P	Pg	14 04 13.4	+1.2
FULB	baz=283			S	Sg	14 04 29.0	-1.1
EYUL	Yuli baz=290	1.40	289	P	Pg	14 04 14.0	+1.5
EYUL	baz=290			S	Sg	14 04 29.8	-0.8
LYUB	Lan-yu baz=227	1.41	231	⇑*i*P	Pg	14 04 13.2	+0.5
LYUB	baz=227			S	Sb	14 04 29.4	-1.2
LAY	Lan-yu baz=229	1.41	233	⇑*i*P	Pb	14 04 12.9	+0.4
LAY	baz=229			*e*S	Sn	14 04 28.9	-2.0
TWF1	Yuli baz=290	1.42	289	⇓*i*P	Pg	14 04 14.1	+1.2
TWF1	baz=290			*e*S	Sg	14 04 29.7	-1.6
ECS	Chishang baz=278	1.43	278	*e*P	Pg	14 04 14.7	+1.5
YULB	Yu-li baz=291	1.43	290	P	Pg	14 04 14.5	+1.4
YULB	baz=291			*e*S	Sg	14 04 30.8	-0.9
TEYL	Yanliau Villag baz=316	1.44	312	*e*P	Pg	14 04 15.0	+1.8
EGFH	Guangfu baz=304	1.44	302	*e*P	Pg	14 04 14.6	+1.2
EGFH	baz=304			*e*S	Sg	14 04 31.8	-0.3
EHY	Hungye baz=296	1.45	295	*e*P	Pg	14 04 14.8	+1.3
TTN	Taitung baz=263	1.49	265	*e*P	Pg	14 04 15.3	+1.0
TTN	baz=263			*e*S	Sg	14 04 32.7	-1.0
HATJ	Hateruma jima	1.50	40	P	Pn	14 04 14.4	+1.1
HATJ				S	Sn	14 04 32.0	-1.2
LONT	Longtian baz=270	1.50	271	*e*P	Pg	14 04 15.3	+0.9
HWA	Hwalien baz=318	1.51	316	*e*P	Pg	14 04 15.5	+0.9
HWA	baz=318			*e*S	Sg	14 04 33.4	-0.7
ESL	Shilin baz=309	1.52	307	P	Pg	14 04 15.3	+0.4
ESL	baz=309			S	Sb	14 04 32.3	-1.7
TWGBT	Beinan baz=266	1.55	267	P	Pg	14 04 15.9	+0.5
TWGBT	baz=266			*e*S	Sg	14 04 34.2	-1.3
JYNG	Yonagunijimaku	1.55	6	P	Pb	14 04 16.6	+1.6
JYNG				S	Sb	14 04 34.6	-0.3
TWG	Pinlang baz=266	1.56	267	*e*P	Pg	14 04 16.0	+0.4
TWG	baz=266			*e*S	Sg	14 04 34.2	-1.5
YOJ	Yonaguni jima baz=12	1.57	8	*e*P	Pb	14 04 16.5	+1.2
YOJ	baz=12			*e*S	Sb	14 04 36.0	+0.6
YOJ	Yonaguni jima	1.57	8	P	Pb	14 04 16.7	+1.5
YOJ				*e*S	Sn	14 04 35.1	+0.1
ETM	Tongmen baz=315	1.57	313	*e*P	Pg	14 04 16.3	+0.4
ETM	baz=315			*e*S	Sb	14 04 34.2	-1.3
TWD	Chiawan baz=321	1.59	318	P	Pg	14 04 16.4	+0.3
TWD	baz=321			*e*S	Sb	14 04 35.0	-0.9
ELDTW	Lidau baz=280	1.63	281	P	Pg	14 04 17.2	+0.2
ELDTW	baz=280			*e*S	Sb	14 04 35.3	-1.9
ETL	Fush Village baz=323	1.63	321	P	Pg	14 04 17.4	+0.4
ETL	baz=323			S	Sb	14 04 36.4	-0.8
NACB	Ninganchiao baz=322	1.66	320	P	Pg	14 04 17.4	-0.1
NACB	baz=322			S	Sb	14 04 36.6	-1.3
IRIF	Iriomote-Funau	1.68	32	P	Pn	14 04 17.2	+1.4
IRIF				*e*S	Sn	14 04 36.6	-1.1
ECL	Taimali baz=259	1.69	260	P	Pg	14 04 17.9	-0.2
ECL	baz=259			*e*S	Sb	14 04 37.6	-1.3
VWDT	VWDT baz=301	1.71	300	*e*P	Pg	14 04 18.5	0.0
VWDT	baz=301			*e*S	Sb	14 04 38.1	-1.4
ETLH	Xiulin Townshi baz=320	1.75	318	P	Pb	14 04 18.9	+0.5
ETLH	baz=320			*e*S	Sb	14 04 39.0	-1.7
JKRS	Kuro-shima	1.76	41	P	Pn	14 04 18.1	+1.3
JKRS				S	Sn	14 04 38.1	-1.4
YUS	Yu-Shan baz=290	1.76	290	*e*P	Pg	14 04 20.0	+0.5
EWUT	Wuta baz=332	1.78	330	*e*P	Pg	14 04 20.1	+0.2
EWUT	baz=332			S	Sb	14 04 40.6	-0.8
ENA	Nanau baz=331	1.78	329	P	Pg	14 04 19.9	0.0
ENA	baz=331			*e*S	Sb	14 04 41.3	-0.2
OWD	Renai baz=308	1.79	306	P	Pg	14 04 19.9	-0.2
OWD	baz=308			*e*S	Sb	14 04 40.4	-1.5
TAW	Tawu baz=251	1.80	253	*e*P	Pg	14 04 19.8	-0.4
TAW	baz=251			*e*S	Sb	14 04 39.8	-2.2
TAWH	Dawu Township baz=251	1.81	252	P	Pg	14 04 20.0	-0.5
TAWH	baz=251			*e*S	Sb	14 04 40.9	-1.5
EAST	Anshuo baz=252	1.84	254	P	Pg	14 04 20.4	-0.6
EAST	baz=252			*e*S	Sb	14 04 41.3	-1.8
STYH	Taoyuan baz=279	1.84	279	*e*P	Pg	14 04 20.8	-0.3
STYH	baz=279			*e*S	Sb	14 04 41.1	-2.2
WHF	Hehuan Shan baz=314	1.85	312	P	Pb	14 04 20.7	+0.5
WHF	baz=314			*e*S	Sb	14 04 41.9	-1.9
CHGB	Renai baz=310	1.86	309	P	Pg	14 04 21.1	-0.2
CHGB	baz=310			*e*S	Sb	14 04 42.2	-1.7
WUSB	Renai baz=307	1.86	306	*e*P	Pg	14 04 21.2	-0.1
WUSB	baz=307			*e*S	Sb	14 04 41.6	-2.2
STYT	Tauyuan baz=278	1.86	278	*e*P	Pg	14 04 21.2	-0.2
SSLB	Suanglung baz=299	1.88	298	*e*P	Pg	14 04 21.2	-0.5
TWC	Suao baz=337	1.89	334	*e*P	Pb	14 04 21.7	+1.0
TWC	baz=337			*e*S	Sb	14 04 43.3	-1.4
ALS	Alishan baz=289	1.90	289	*e*P	Pg	14 04 21.9	-0.2
FUSS	Fushou baz=316	1.93	314	P	Pg	14 04 22.3	-0.5
FUSS	baz=316			*e*S	Sb	14 04 43.3	-2.8
JIJ	Ishigaki jima	1.93	41	P	Pn	14 04 20.0	+0.8
JIJ				S	Sn	14 04 41.8	-2.1
SLIU	Shizi baz=248	1.93	250	*e*P	Pb	14 04 21.6	+0.1
SLIU	baz=248			*e*S	Sn	14 04 42.2	-1.7
SLGT	Liugui baz=272	1.95	273	*e*P	Pg	14 04 23.0	-0.1
TSMG	Majia baz=264	1.96	265	*e*P	Pb	14 04 22.0	+0.2
SMLT	Sun Moon Lake baz=301	1.97	300	*e*P	Pg	14 04 22.8	-0.6
SSD	Sandimen baz=265	1.97	266	*e*P	Pb	14 04 22.2	+0.3
NDS	Dongshan baz=333	1.97	331	*e*P	Pg	14 04 23.3	-0.2
NDS	baz=333			*e*S	Sb	14 04 45.5	-1.5
NNSB	Datong baz=322	1.98	321	P	Pb	14 04 22.8	+0.6
NNSB	baz=322			S	Sb	14 04 45.3	-1.9
SMST	Manzhou Townsh baz=242	1.98	244	*e*P	Pb	14 04 22.6	+0.4
SMST	baz=242			*e*S	Sb	14 04 45.0	-2.2
LATG	Datong baz=327	1.98	326	P	Pb	14 04 22.8	+0.5
LATG	baz=327			*e*S	Sb	14 04 45.0	-2.3
MASBT	Mashibuluo baz=261	1.98	262	P	Pb	14 04 22.6	+0.3
MASBT	baz=261			*e*S	Sb	14 04 43.8	-3.5
TSEB	Hengchuen, Pin baz=239	1.99	240	*e*P	Pb	14 04 22.8	+0.5
TSEB	baz=239			*e*S	Sb	14 04 46.5	-0.9
WPL	Puli Township baz=305	1.99	304	*e*P	Pg	14 04 23.1	-0.8
NNS	Nan Shan baz=323	1.99	321	*e*P	Pb	14 04 22.9	+0.5
NNS	baz=323			*e*S	Sb	14 04 46.0	-1.6
TDCB	Techi baz=314	1.99	313	*e*P	Pg	14 04 23.4	-0.5
TDCB	baz=314			*e*S	Sb	14 04 45.5	-2.1
TPUB	Ta-pu baz=282	2.00	282	*e*P	Pg	14 04 24.0	-0.1
WTP	Ta-pu baz=280	2.00	280	*e*P	Pg	14 04 23.7	-0.5
SGST	Jiashian baz=275	2.01	276	*e*P	Pb	14 04 23.1	+0.3
DPDB	Guoxing baz=305	2.02	304	*e*P	Pb	14 04 23.6	+0.6
CHN5	Tsauling baz=291	2.04	290	*e*P	Pg	14 04 24.7	0.0
TWKBT	Hengchun baz=240	2.04	242	*e*P	Pb	14 04 23.3	+0.1
TWKBT	baz=240			*e*S	Sb	14 04 46.7	-2.1
TWK1	Hengchun baz=240	2.04	243	⇑P	Pb	14 04 23.1	-0.2
NDT	Datong Townshi baz=328	2.04	326	*e*P	Pb	14 04 23.9	+0.6
SCZT	Fangliau baz=254	2.04	256	*e*P	Pb	14 04 23.8	+0.5
SCZT	baz=254			*e*S	Sb	14 04 46.9	-2.1
ENTT	Nioudou baz=330	2.05	328	*e*P	Pb	14 04 24.1	+0.8
ENTT	baz=330			*e*S	Sb	14 04 47.0	-2.1
WCS	Beigang Elemen baz=306	2.05	305	*e*P	Pg	14 04 24.2	-0.7
WCS	baz=306			*e*S	Sb	14 04 45.8	-3.4
SSPT	Xinbi baz=257	2.06	259	*e*P	Pb	14 04 24.3	+0.6
HEN	Hengchun baz=243	2.07	245	*e*P	Pb	14 04 23.7	-0.1
HEN	baz=243			*e*S	Sb	14 04 47.6	-2.1
TWE	Neicheng baz=334	2.07	331	*e*P	Pb	14 04 24.5	+0.7
TWE	baz=334			*e*S	Sb	14 04 47.8	-2.0
CHN1	Nanshi baz=278	2.07	278	*e*P	Pg	14 04 25.6	+0.1
WJS	Zhushan baz=297	2.08	297	*e*P	Pg	14 04 25.1	-0.5
SCST	Cishan baz=269	2.09	270	*e*P	Pg	14 04 25.5	-0.2
SGLT	Jiouru baz=265	2.10	266	*e*P	Pb	14 04 24.1	-0.1
SNST	Tainan City baz=279	2.11	279	*e*P	Pg	14 04 26.1	+0.1
TWK	Hsinying baz=280	2.12	280	*e*P	Pg	14 04 25.8	-0.6
NTC	Toucheng baz=339	2.12	337	*e*P	Pb	14 04 24.2	-0.5
FUSB	Fushanzhiwuyua baz=332	2.14	330	*e*P	Pb	14 04 25.5	+0.5
FUSB	baz=332			*e*S	Sb	14 04 50.3	-1.6
WNT	Mingjian baz=298	2.14	297	*e*P	Pg	14 04 26.3	-0.5
TWM1	Shoushan baz=267	2.15	268	*e*P	Pg	14 04 27.1	+0.1
WHP	Taichung City baz=311	2.15	310	*e*P	Pb	14 04 25.3	0.0
WNT1	Nantou City baz=299	2.16	298	*e*P	Pg	14 04 27.0	-0.1
WGK	Gukeng baz=292	2.17	292	*e*P	Pb	14 04 26.0	+0.6
YHNB	Yeheng baz=326	2.17	325	*e*P	Pb	14 04 26.0	+0.5
YHNB	baz=326			*e*S	Sb	14 04 49.9	-2.8
NSK	Sanguang baz=326	2.18	324	*e*P	Pb	14 04 25.9	+0.2
WDLH	Douliu baz=292	2.19	291	*e*P	Pg	14 04 26.6	-1.0
NWLT	Wulai baz=330	2.19	329	*e*P	Pb	14 04 26.3	+0.4
WWF	Wufeng baz=302	2.21	301	*e*P	Pg	14 04 27.6	-0.4
CHN3	Shinhua baz=274	2.21	275	*e*P	Pg	14 04 27.8	-0.3
TWB1	Santiao Chiao baz=344	2.21	342	*e*P	Pb	14 04 26.7	+0.5
TWB1	baz=344			*e*S	Sb	14 04 52.2	-1.8
CHY	Chiayi baz=286	2.23	286	*e*P	Pg	14 04 27.8	-0.6
TIPB	Shuangxi baz=340	2.23	338	*e*P	Pb	14 04 26.8	+0.2
TIPB	baz=340			*e*S	Sb	14 04 52.5	-2.0
WLCH	Liuqiu baz=255	2.26	257	*e*P	Pg	14 04 29.1	0.0
TCU	Taichung baz=304	2.28	303	*e*P	Pb	14 04 27.6	+0.3
NFF	Wufeng Townshi baz=321	2.29	319	*e*P	Pb	14 04 27.7	+0.2
WTK	Tuku baz=290	2.31	290	*e*P	Pb	14 04 28.4	+0.5
TWQ1	Liyutan baz=310	2.32	309	*e*P	Pb	14 04 29.0	+0.9
ICHU	Yijhu baz=281	2.33	282	*e*P	Pb	14 04 28.4	+0.2
SXI1	Grass Mountain baz=342	2.33	340	*e*P	Pb	14 04 27.8	-0.4
SXI1	baz=342			*e*S	Sb	14 04 54.7	-2.6
TWA	Mucha baz=335	2.33	333	*e*P	Pb	14 04 28.8	+0.6
TWA	baz=335			*e*S	Sb	14 04 55.2	-2.2
WCHH	Zhanghua baz=301	2.34	301	*e*P	Pb	14 04 28.6	+0.3
NWF	Wu-fen Shan baz=340	2.34	338	*e*P	Pb	14 04 28.2	-0.1
NWF	baz=340			*e*S	Sb	14 04 55.1	-2.5
WFSB	Wu-fen Shan baz=340	2.34	338	*e*P	Pb	14 04 28.9	+0.5
NHDH	Xindian Distri baz=333	2.34	331	*e*P	Pb	14 04 28.2	-0.2
NHDH	baz=333			*e*S	Sb	14 04 54.8	-2.9
NSTT	Nanjuang baz=319	2.36	317	*e*P	Pb	14 04 29.1	+0.4
NSTT	baz=319			*e*S	Sb	14 04 55.4	-2.7
LIOB	Emei baz=319	2.36	318	*e*P	Pb	14 04 29.3	+0.6
TATO	Taipei baz=333	2.37	331	*e*P	Pb	14 04 29.3	+0.4
TATO	baz=333			*e*S	Sb	14 04 56.4	-2.0
NSY	Sanyi baz=311	2.37	310	*e*P	Pb	14 04 30.0	+1.1
SCLT	Jiali baz=276	2.38	277	*e*P	Pb	14 04 29.0	0.0
WRL	Guolierlin Hig baz=295	2.40	295	*e*P	Pb	14 04 29.6	+0.1
WSL	Shuilin Townsh baz=285	2.41	285	*e*P	Pb	14 04 28.6	-0.9
WDJ	Dajia District baz=308	2.42	307	*e*P	Pb	14 04 29.6	-0.1
NMLH	Miaoli baz=313	2.43	313	*e*P	Pb	14 04 30.1	+0.2
JTJ	Tarama	2.49	45	P	Pn	14 04 27.8	+1.0
JTJ				S	Sn	14 04 55.8	-1.7
SBCB	Hsinchu baz=321	2.49	320	*e*P	Pb	14 04 30.3	-0.6
YM01	YM01 baz=336	2.49	334	*e*P	Pb	14 04 30.3	-0.6
YM01	baz=336			*e*S	Sb	14 04 58.5	-3.3
HSN	Hsinchu baz=322	2.50	320	*e*P	Pb	14 04 30.0	-1.1
TWS1	Kuangyinshan baz=333	2.51	331	*e*P	Pb	14 04 30.1	-1.2
NCUH	Zhongli baz=327	2.51	325	*e*P	Pb	14 04 30.9	-0.4
WDGT	Dungji baz=277	2.88	278	*e*P	Pb	14 04 36.0	-1.5
JIRB	Irabujima	2.93	49	P	Pn	14 04 33.6	+0.7
JIRB				S	Sn	14 05 06.7	-1.7
JMJ2	Miyako jima3	2.98	52	P	Pn	14 04 34.2	+0.6
JMJ2				*e*S	Sn	14 05 08.1	-1.7
PHUB	P'eng-hu baz=282	2.99	282	*e*P	Pb	14 04 36.8	-2.7
PNG	Penghu baz=283	3.02	283	*e*P	Pb	14 04 38.1	-1.9
JIKM	Ikemajima	3.04	48	*e*P	Pn	14 04 35.5	+1.0
JIKM				S	Sn	14 05 09.6	-1.7
JOGS	Gusukube	3.05	52	P	Pn	14 04 35.5	+0.9
JOGS				S	Sn	14 05 10.2	-1.2
VCHM	Qimei baz=275	3.08	276	*e*P	Pb	14 04 38.1	-2.9
VWUC	VWUC baz=305	3.67	305	*e*P	Pb	14 04 46.6	-4.5
VWUC	baz=305			*e*S	Sn	14 05 27.2	+0.4
PTMZ	Houxiangcun baz=303	3.95	303	*e*P	Pn	14 04 50.0	+3.0
PTMZ	baz=303			*e*S	Sn	14 05 34.0	+0.3
MATB	Ma-tsu	4.13	322	*e*P	Pn	14 04 52.6	+3.2

	baz=322						
MATB				eS	Sn	14 05 37.4	-0.7
	baz=322						
KNM	Kinmen	4.24	292	eP	Pb	14 04 55.4	-5.4
	baz=290						
KNM				eS	Sn	14 05 43.0	+2.1
	baz=290						
KNMB	Chin-men Tao	4.30	292	eP	Pn	14 04 54.3	+2.6
	baz=291						
KNMB				eS	Sn	14 05 41.7	-0.5
	baz=291						
LYJJ	Jianjiangzhen	4.54	324	eP	Pn	14 04 59.4	+4.3
	baz=324						
LYJJ				eS	Sn	14 05 46.7	-1.5
	baz=324						
XPSS	Dashiqiu	4.64	330	eP	Pn	14 04 59.8	+3.4
	baz=331						
XPSS				eS	Sn	14 05 49.9	-0.8
	baz=331						
ZPLA	Ao Xicun	4.71	284	eP	Pn	14 05 00.4	+3.0
	baz=282						
AXDP	Jialang	4.81	295	eP	Pn	14 05 00.6	+1.8
	baz=294						
AXDP				eS	Sn	14 05 51.7	-3.3
	baz=294						
DSXP	Dongshan	4.97	280	eP	Pn	14 05 04.5	+3.5
	baz=279						
APYP	Conner	5.21	196⇑	eP	Pn	14 05 06.7	+2.4
APYP				eS	Sn	14 06 04.1	-0.7
JOW	Kunigami	6.36	51	Pn	Pn	14 05 19.0	-1.1
	1.2nm,0.3s,baz=118,slow=21,SNR=6.9						
JOW				Sn	Sn	14 06 27.2	-5.9
	1.3nm,0.3s,baz=88,slow=24,SNR=1.9						
	4.4nm,0.4s						
KSRS	Korea Array	15.17	16	LR	LR	14 12 40.2	
	comp=Z,14nm,19.4s,baz=230,slow=35						
KLR	Kul'dur	27.22	13	LR	LR	14 21 58.4	
	comp=Z,17nm,19.3s,baz=228,slow=40						
SONM	Songino Array	28.11	336	P	P	14 09 43.1	+4.5
	0.4nm,0.8s,baz=134,slow=8.3,SNR=1.8						
	0.4nm,0.8s						
MKAR	Makanchi Array	40.26	316	P	P	14 11 29.1	+5.6
	0.2nm,0.7s,baz=98,slow=8.9,SNR=2.0						
	0.2nm,0.7s						
WRA	Warramunga Arr	44.06	164	P	P	14 11 55.1	+0.4
	0.7nm,0.9s,baz=346,slow=9.5,SNR=2.3						
	0.7nm,0.9s						
ASAR	Alice Springs	47.54	166	P	P	14 12 23.6	+1.4
	0.2nm,0.7s,baz=347,slow=9.4,SNR=2.2						
	0.2nm,0.7s						
YKA	Yellowknife Ar	83.58	23	P	P	14 16 16.5	+1.8
	0.3nm,0.6s,baz=304,slow=5.1,SNR=6.4						
	0.3nm,0.6s						

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*OSPL **08** 14:05:02.3±1.1, 18°.88N×64°.59W, h0km±186km, ML3.5*
*RSPR **08** 14:05:03.5, 19°.21N×64°.65W, h9km±5km, MD3.4/12*
*NEIC **08** 14:05:04.1±1.7, 19°.15N±0°.05×64°.72W±0°.05, h27km±15km,*
Error ellipse: s-maj=8.3km s-min=6.0km az=206.0
ISC 08 14:05:00.8±1.6, 19°.21N±0°.07×64°.66W±0°.03, h12km±10km,
n89, σ1.48/103, 6C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJVI	Gifft Hill Sch	0.88	187⇓	eP	Pn	14 05 19.1	+0.2
SJVI	Gifft Hill Sch	0.88	187	eS	Sn	14 05 30.5	-1.1
SJVI	Gifft Hill Sch	0.88	187		Pn	14 05 19.1	+0.2
SJVI					Sn	14 05 30.5	-1.1
STVI	Saint Thomas	0.90	198⇓	eP	Pn	14 05 19.1	-0.1
STVI	Saint Thomas	0.90	198	eS	Sn	14 05 31.0	-1.0
STVI	Saint Thomas	0.90	198		Pn	14 05 19.1	-0.1
STVI					Sn	14 05 31.0	-1.0
CUPR	Culebra, Puert	1.07	214⇓	eP	Pg	14 05 21.6	+0.1
CUPR	Culebra, Puert	1.07	214	eS	Sb	14 05 35.3	0.0
CUPR	Culebra, Puert	1.07	214		Pg	14 05 21.6	+0.1
CUPR					Sb	14 05 35.3	0.0
CUPR	Culebra, Puert	1.07	214	IAML		14 05 38.1	
	comp=N,2µm,0.4s						
MTP	Monte Pirata	1.39	218⇓	eP	Pn	14 05 26.3	+0.2
MTP	Monte Pirata	1.39	218	eS	Sn	14 05 43.6	-0.7
MTP	Monte Pirata	1.39	218		Pn	14 05 26.3	+0.2
MTP					Sn	14 05 43.6	-0.7
MTP	Monte Pirata	1.39	218	IAML		14 05 48.1	
	comp=N,1µm,0.5s						
CDVI	St. Croix	1.45	184⇑	eP	Pn	14 05 26.4	-0.4
CDVI	St. Croix	1.45	184	eS	Sn	14 05 45.1	-0.6
CDVI	St. Croix	1.45	184		Pg	14 05 28.9	+0.2
CDVI	St. Croix	1.45	184		Sn	14 05 45.1	-0.6
CDVI	St. Croix	1.45	184	eP	Pg	14 05 28.9	+0.2
CDVI				eS	Sg	14 05 49.5	+2.0
CBYP	Canovanas	1.47	231		Pn	14 05 26.8	-0.4
HUMP	Col San Antoni	1.55	227		Pn	14 05 28.0	-0.2
HUMP				IAML		14 05 54.3	
	comp=N,1µm,0.2s						
GCPR	Guaynabo City	1.62	237⇑	eP	Pn	14 05 29.1	-0.1
GCPR	Guaynabo City	1.62	237	eS	Sn	14 05 49.1	-0.9
GCPR	Guaynabo City	1.62	237		Pn	14 05 28.6	-0.6
GCPR	Guaynabo City	1.62	237		Sn	14 05 49.1	-0.9
PDPR	Patillas Dam,	1.75	228		Pn	14 05 31.0	0.0
SJG	San Juan	1.79	233	Pn	Pn	14 05 31.1	-0.3
SJG				IAML		14 05 55.7	
	comp=N,694nm,0.5s						
SJG	San Juan	1.79	233	eP	Pn	14 05 31.5	+0.1
SJG				eS	Sn	14 05 54.4	+0.3
IGPR	InterUniversit	1.85	228⇓	eP	Pn	14 05 32.5	+0.2
IGPR	InterUniversit	1.85	228	eS	Sn	14 05 55.4	-0.2
SMRT	St. Maarten	1.89	127		Pb	14 05 35.2	-0.1
SMRT				IAML		14 06 07.7	
	comp=E,1µm,0.3s						
SMRT				IAML		14 06 10.1	
	comp=N,971nm,0.6s						
SMRT	St. Maarten	1.89	127	eP	Pb	14 05 35.8	+0.6
SMRT				eS	Sg	14 06 00.9	-0.7
EMPR	Esperanza - Ma	1.92	248⇑	eP	Pn	14 05 33.5	+0.3
EMPR	Esperanza - Ma	1.92	248	eS	Sn	14 05 57.2	-0.1
EMPR	Esperanza - Ma	1.92	248		Pn	14 05 33.3	0.0
EMPR				IAML		14 06 11.1	
	comp=E,1µm,0.7s						
EMPR	Esperanza - Ma	1.92	248		Sn	14 05 57.2	-0.1
CELP	Cerrillos	2.14	239		Pn	14 05 36.3	0.0
CELP				IAML		14 06 07.3	
	comp=E,504nm,0.5s						
AOPR	Arecibo Observ	2.16	247⇓	eP	Pn	14 05 36.6	-0.1
AOPR	Arecibo Observ	2.16	247	eS	Sn	14 06 02.6	-0.8
AOPR	Arecibo Observ	2.16	247		Pn	14 05 36.4	-0.2
AOPR				IAML		14 06 11.1	
	comp=N,1µm,0.5s						
AOPR	Arecibo Observ	2.16	247		Sn	14 06 02.6	-0.8
AOPR	Arecibo Observ	2.16	247	eP	Pn	14 05 36.4	-0.2
AOPR	Arecibo Observ	2.16	247	eS	Sn	14 06 02.2	-1.2
OBIP	Obispado Ponce	2.18	238⇑	eP	Pn	14 05 37.2	+0.3
OBIP	Obispado Ponce	2.18	238	eS	Sn	14 06 03.3	-0.6
OBIP	Obispado Ponce	2.18	238		Pn	14 05 37.2	+0.3
OBIP					Sn	14 06 03.3	-0.6
ICMP	Isla Caja de M	2.21	234		Pn	14 05 37.8	+0.6
ICMP				IAML		14 06 15.6	
	comp=N,595nm,0.6s						
ICMP				IAML		14 06 16.4	
	comp=E,518nm,0.7s						
AGPR	Aguadilla, PR	2.44	253⇑	eP	Pn	14 05 40.5	+0.1
AGPR	Aguadilla, PR	2.44	253		Pn	14 05 40.4	-0.1
AGPR				IAML		14 06 23.4	
	comp=E,360nm,0.8s						
AGPR				IAML		14 06 23.7	
	comp=N,395nm,0.9s						
AGPR	Aguadilla, PR	2.44	253		Sn	14 06 09.7	-0.5
AGPR	Aguadilla, PR	2.44	253	i P	Pn	14 05 40.5	+0.1
AGPR				eS	Sn	14 06 09.9	-0.2
AGPR				IAML		14 06 18.9	
	comp=Z,211nm,0.8s						
PRSN	Puerto Rico Se	2.56	248		Pn	14 05 42.2	+0.2
PRSN				IAML		14 06 18.7	
	comp=E,718nm,0.3s						
MLPR	Magueyes Islan	2.58	242⇓	eP	Pn	14 05 43.1	+0.8
MLPR				eS	Sn	14 06 13.8	+0.2
MLPR	Magueyes Islan	2.58	242		Pn	14 05 43.1	+0.8
MLPR					Sn	14 06 13.8	+0.2
SKI	Saint Kitts	2.60	135	eP	Pb	14 05 48.3	+0.9
SKI				eS	Sg	14 06 21.7	-2.8
CRPR	Cabo Rojo, PR	2.61	243⇓	eP	Pn	14 05 43.3	+0.4
CRPR	Cabo Rojo, PR	2.61	243	eS	Sn	14 06 14.5	0.0
CRPR	Cabo Rojo, PR	2.61	243		Pn	14 05 43.3	+0.4
CRPR					Sn	14 06 14.5	0.0
CRPR	Cabo Rojo, PR	2.61	243	IAML		14 06 19.9	
	comp=N,358nm,0.8s						
CRPR				IAML		14 06 25.3	
	comp=E,312nm,0.8s						
CRPR	Cabo Rojo, PR	2.61	243	i P	Pn	14 05 43.4	+0.6
CRPR				IAML		14 06 29.5	
	comp=Z,220nm,1.2s						
IDE	Isla Desecheo	2.79	253⇑	eP	Pn	14 05 46.0	+0.7
IDE	Isla Desecheo	2.79	253	eS	Sn	14 06 19.1	+0.2
ANWB	Willy Bob	3.12	119	Pn	Pn	14 05 51.4	+1.5
ANWB				IAML		14 06 47.4	
	comp=Z,206nm,1.0s						
ANWB				IAML		14 07 03.5	
	comp=Z,192nm,1.3s						
ANWB	Willy Bob	3.12	119	eP	Pn	14 05 50.0	+0.1
ANWB	Willy Bob	3.12	119	eS	Sg	14 06 43.2	+2.0
MBFL	Flemmings, Mon	3.37	136	eP	Pb	14 05 57.2	-3.3
ANDO	Antigua, Disas	3.40	127	eP	Pn	14 05 54.3	+0.6
ANDO				eS	Sn	14 06 35.9	+2.0
BPA	Boggy Peak	3.42	128	eP	Pn	14 05 55.4	+1.4
BPA				eS	Sn	14 06 38.3	+3.8
ANBD	Bethesda, Anti	3.49	128	eP	Pn	14 05 56.3	+1.5
ANBD				eS	Sn	14 06 38.3	+2.2
GDHS	Morne Mazeau,	4.01	136	Pn	Pn	14 06 04.6	+2.4
ABD	La Joyeuse, An	4.06	131	eP	Pn	14 06 03.6	+0.9
ABD	La Joyeuse, An	4.06	131	eS	Sb	14 06 55.6	-5.7
CBE	Ff, Capester	4.26	137	Pn	Pn	14 06 08.1	+2.5
CBE	Ff, Capester	4.26	137	eP	Pn	14 06 07.7	+2.1
CBE	Ff, Capester	4.26	137	eS	Sn	14 06 59.5	+4.1
TBG	Guadaloupe-3	4.40	139	eP	Pn	14 06 11.2	+3.7
TDBA	Terre de Bas,	4.41	139	eP	Pb	14 06 14.4	-3.8
TDBA	Terre de Bas,	4.41	139	i S	Sn	14 07 00.3	+1.4
GDSD	La Dsirade Is	4.47	129	Pn	Pn	14 06 09.9	+1.5
GDSD				IAML		14 07 19.3	
	comp=N,67nm,2.5s						
DR12	Loma Pena Alta	4.49	265		Pn	14 06 09.1	+0.3
MAGL	Barre de l'ile	4.56	135	eP	Pn	14 06 13.0	+3.3
MAGL	Barre de l'ile	4.56	135	eS	Sn	14 07 04.2	+1.4
DSLB	Salisbury	4.86	140	eP	Pn	14 06 10.0	-3.7
SDDR	Presa de Saban	6.27	269	Pn	Pn	14 06 34.5	+1.3
SDDR	Presa de Saban	6.27	269	eP	Pn	14 06 34.1	+0.8
SDDR	Presa de Saban	6.27	269	eS	Sn	14 07 44.4	-0.5
SDDR	Presa de Saban	6.27	269	i P	Pn	14 06 34.8	+1.5
SDDR				eS	Sn	14 07 43.1	-1.9
URIC	Uribia, Colomb	10.28	225	Pn	Pn	14 07 28.9	+0.8
BAUV	El Baul	10.72	198	Pn	Pn	14 07 37.0	+2.8

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*NEIC **08** 14:13:34.0±0.7, 19°.14N±0°.04×64°.73W±0°.05, h38km±53km,*
Error ellipse: s-maj=8.2km s-min=2.9km az=128.0
*RSPR **08** 14:13:34.5, 19°.08N×64°.68W, h57km±7km, MD3.1/9*
ISC 08 14:13:33.6±2.4, 19°.2N±0°.1×64°.73W±0°.07, h42km, n34,
σ0.78/35, 5C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJVI	Gifft Hill Sch	0.82	183⇑	eP	Pn	14 13 47.5	-1.3
SJVI	Gifft Hill Sch	0.82	183	eS	Sn	14 13 59.6	-0.2
SJVI	Gifft Hill Sch	0.82	183		Pn	14 13 47.5	-1.3
SJVI					Sn	14 13 59.6	-0.2
STVI	Saint Thomas	0.83	195⇓	eP	Pn	14 13 48.5	-0.4
STVI	Saint Thomas	0.83	195	eS	Sn	14 13 59.6	-0.4
STVI	Saint Thomas	0.83	195		Pn	14 13 48.5	-0.4
STVI					Sn	14 13 59.6	-0.4
CUPR	Culebra, Puert	1.00	212⇓	eP	Pn	14 13 50.8	-0.4
CUPR	Culebra, Puert	1.00	212	eS	Sn	14 14 03.8	-0.2
CUPR	Culebra, Puert	1.00	212		Pn	14 13 50.8	-0.4
CUPR					Sn	14 14 03.8	-0.2
MTP	Monte Pirata	1.31	217⇑	eP	Pn	14 13 55.5	0.0
MTP	Monte Pirata	1.31	217		Pn	14 13 55.5	0.0
MTP	Monte Pirata	1.31	217	IAML		14 14 15.5	
	comp=N,50nm,0.2s						
MTP				IAML		14 14 21.8	
	comp=E,67nm,0.3s						
CBYP	Canovanas	1.39	231⇓	eP	Pn	14 13 56.8	+0.3
CBYP	Canovanas	1.39	231		Pn	14 13 56.8	+0.3
CBYP	Canovanas	1.39	231	IAML		14 14 17.7	
	comp=N,116nm,0.2s						
CDVI	St. Croix	1.40	182⇑	eP	Pn	14 13 59.4	+2.8
CDVI	St. Croix	1.40	182		Pn	14 13 58.6	+1.9
HUMP	Col San Antoni	1.47	227⇑	eP	Pn	14 13 57.5	-0.1
HUMP	Col San Antoni	1.47	227	eS	Sn	14 14 15.7	+0.1
HUMP	Col San Antoni	1.47	227		Pn	14 13 57.5	-0.1
HUMP					Sn	14 14 15.7	+0.1
GCPR	Guaynabo City	1.54	237	Pn	Pn	14 13 57.8	-0.8
PDPR	Patillas Dam,	1.67	227	Pn	Pn	14 14 00.7	+0.3
PDPR				IAML		14 14 19.1	
	comp=E,51nm,1.7s						
SJG	San Juan	1.70	233	Pn	Pn	14 14 01.4	+0.5
SJG				IAML		14 14 24.0	
	comp=E,33nm,0.3s						
IGPR	InterUniversit	1.77	228⇓	eP	Pn	14 14 01.6	-0.1
IGPR	InterUniversit	1.77	228	eS	Sn	14 14 23.0	0.0
EMPR	Esperanza - Ma	1.84	249	Pn	Pn	14 14 02.9	+0.3
SMRT	St. Maarten	1.92	125	Pn	Pn	14 14 03.5	-0.2
SMRT				IAML		14 14 33.8	
	comp=N,62nm,1.4s						
SMRT				IAML		14 14 36.5	
	comp=E,69nm,0.2s						
CELP	Cerrillos	2.06	239	Pn	Pn	14 14 05.8	0.0
CELP				IAML		14 15 12.6	
	comp=E,32nm,2.6s						
CELP				IAML		14 15 26.7	
	comp=N,26nm,2.7s						
AOPR	Arecibo Observ	2.08	248⇑	eP	Pn	14 14 06.8	+0.7
AOPR	Arecibo Observ	2.08	248		Pn	14 14 06.8	+0.7
AOPR	Arecibo Observ	2.08	248	IAML		14 14 38.0	
	comp=E,61nm,0.3s						
AOPR				IAML		14 14 59.9	
	comp=N,54nm,2.8s						
OBIP	Obispado Ponce	2.10	238	Pn	Pn	14 14 06.6	+0.3
OBIP				IAML		14 14 55.8	
	comp=N,32nm,2.8s						
MLPR	Magueyes Islan	2.50	242	Pn	Pn	14 14 12.4	+0.7
MLPR				IAML		14 14 34.4	
	comp=N,38nm,2.4s						
MLPR				IAML		14 15 32.7	
	comp=E,30nm,2.8s						
CRPR	Cabo Rojo, PR	2.53	243	Pn	Pn	14 14 11.2	-1.1
CRPR				IAML		14 15 41.5	
	comp=E,31nm,3.1s						

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*TEH **08** 14:19:12.7, 33°.01N×47°.36E, h9km, ML3.1*
*ISN **08** 14:19:13.0±0.7, 32°.97N×47°.36E, h14km±3km, ML3.0*
ISC 08 14:19:14.3±1.0, 33°.02N±0°.04×47°.34E±0°.04, h15km, n34,
σ1.18/39, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.66	40	ePg	Pg	14 19 25.2	-2.0
IKFM				eSg	Sg	14 19 35.7	-0.3
IKFM				e		14 19 38.4	
	comp=Z,10µm,0.2s						
IDOB	Doab	1.04	42	ePg	Pb	14 19 33.3	-0.8
IBDR	Badra	1.19	275	ePg	Pn	14 19 35.8	-0.6
IBDR				eSg	Sb	14 19 51.5	-0.2
KCHF	Cheshme Sefid,	1.28	349	ePg	Pn	14 19 36.9	-1.0
KCHF				e		14 19 38.3	
	comp=Z,3µm,0.2s						
KER	Kermanshah	1.38	353	ePg	Pn	14 19 38.9	-0.2
IGHG	Ghaleghazi	1.46	334	ePg	Pn	14 19 41.2	+0.8
IGHG				e		14 20 09.3	
	comp=N,5µm,0.3s						
IBZA	Bozab	1.51	16	ePg	Pn	14 19 42.5	+1.4
IBZA				e		14 19 46.5	
	comp=Z,3µm,0.4s						
HSAM	Samen	1.59	41	ePg	Pn	14 19 42.6	+0.4
HSAM				e		14 19 47.8	
	comp=Z,2µm,0.5s						
RAFI	Al-Rafai	1.66	219	ePn	Pn	14 19 43.0	+0.2
RAFI				eSn	Sb	14 20 05.2	0.0
RAFI				AML	AML	14 20 20.6	
	comp=E,183nm,0.3s						
IDHR	Dehrash	1.86	335	ePn	Pn	14 19 47.2	+1.4
IDHR				e		14 20 16.2	
	comp=Z,2µm,0.4s						
ILIN	Lien	1.92	351	ePn	Pn	14 19 47.8	+1.0
ILIN				e		14 20 23.3	
	comp=Z,878nm,0.4s						
SNGE	Sanandaj	2.07	0	ePn	Pn	14 19 49.9	+1.1
AMIS	Naft Sefid	2.13	129	ePn	Pn	14 19 50.9	+1.5
AMIS				e		14 20 34.7	
	comp=Z,2µm,0.4s						
KHMZ	Khomeyn	2.31	71	ePn	Pn	14 19 53.3	+1.3
BHD	Baghdad	2.50	277	ePn	Pn	14 19 55.0	+0.6
BHD				eSn	Sn	14 20 26.5	+1.9
ASAO	Ashtian	2.71	55	ePn	Pn	14 19 58.7	+1.2
IPIR	Pirpir	3.01	95	e		14 20 10.1	
	comp=Z,422nm,0.6s						
IPIR				ePn	Pn	14 20 02.4	+0.7
IRAZ	Razeghan	3.20	41	e		14 20 18.6	
	comp=Z,510nm,0.5s						
IRAZ				ePn	Pn	14 20 06.3	+2.0
QABG	Abgarm-Qazvin	3.26	34	ePn	Pn	14 20 06.1	+0.9
IKRK	Kirkuk	3.44	315	ePn	Pn	14 20 09.0	+1.6
IKRK				eSn	Sn	14 20 49.5	+1.6
IKRK				AML	AML	14 20 56.3	
	comp=E,59nm,0.3s						
IKRK				AML	AML	14 21 00.9	
	comp=N,66nm,0.4s						
QAMS	Qamsar	3.47	77	ePn	Pn	14 20 08.8	+0.8
QAMS				e		14 21 10.3	
	comp=Z,380nm,0.5s						
IBRJ	Brojen	3.49	107	ePn	Pn	14 20 08.4	0.0
IBRJ				e		14 21 19.6	
	comp=Z,170nm,0.9s						
IKLH	Kolahrood	3.57	84	ePn	Pn	14 20 11.3	+1.9
IKLH				e		14 21 13.8	
	comp=Z,204nm,0.4s						
IQOM	Qom	3.59	59	ePn	Pn	14 20 10.3	+0.5
IQOM				e		14 20 21.9	
	comp=Z,323nm,0.6s						
ZNJK	Zanjan	3.81	16	ePn	Pn	14 20 14.0	+1.3
IMHD	Mahdasht	3.83	45	ePn	Pn	14 20 14.6	+1.8
KRSH	Karshahi	4.12	75	ePn	Pn	14 20 17.7	+0.8
IVRN	Varamin	4.14	60	ePn	Pn	14 20 17.0	-0.1
IZEF	Zefreh	4.20	90	ePn	Pn	14 20 19.0	+1.0
ISFB	Sefidab	4.30	71	ePn	Pn	14 20 19.4	+0.2
QALM	Alamut, Qazvin	4.36	38	ePn	Pn	14 20 21.2	+0.9
IRAM	Ramesheh	4.43	104	ePn	Pn	14 20 22.2	+1.0
NASN	Na'in	4.60	91	ePn	Pn	14 20 25.0	+1.3
GRMI	Germi	5.80	4	ePn	Pn	14 20 41.1	+1.2

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*TUL **08** 14:29:08±1.2, 36°.88N±0°.01×97°.32W±0°.02, h6km±6km,*
ML2.7, mb_Lg2.3/29(NEIC), Error ellipse: s-maj=2.1km
s-min=1.7km az=47.0
NEIC 08 14:29:08.3±0.7, 36°.83N±0°.02×97°.38W±0°.02, h6km±6km,
Error ellipse: s-maj=3.9km s-min=1.2km az=217.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.70	83	Pg	Pg	14 29 20.6	-1.3
U32A	Winter Ranch,	1.38	252	Pn	Pb	14 29 34.4	-0.1
OKCFA	Oklahoma City	1.41	182	Pn	Pb	14 29 35.0	-0.1
OKCSW	OKLAHOMA CITY	1.42	182		Pb	14 29 35.1	0.0
FNO	Franklin	1.57	181	Pn	Pn	14 29 36.5	-0.1
TUL1	Leonard	1.58	125	Pn	Pn	14 29 36.5	-0.3
R32A	Long Quarter,	1.91	327		Pn	14 29 41.6	+0.2
X34A	Smith Ranch, M	2.25	189	Pn	Pn	14 29 45.6	-0.5
KSU1	Kansas State U	2.35	15		Pn	14 29 48.3	+0.8
WMOK	Wichita Mounta	2.38	209	Pn	Pn	14 29 47.8	0.0
CBKS	Cedar Bluff	2.72	317	Pn	Pn	14 29 54.9	+2.3
CBKS				IAmb_Lg		14 30 41.8	
	comp=Z,11nm,0.8s						
X37A	Clayton	2.77	143	Pn	Pn	14 29 53.1	-0.1
X37A				IAmb_Lg		14 30 40.0	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	2.83	100		Pn	14 29 54.3	+0.3
W39A	Magazine	3.34	118	Pn	Pn	14 30 00.3	-0.7
S39A	Bolivar	3.35	74		Pn	14 30 04.3	+3.1
S39A				IAmb_Lg		14 30 59.9	
	comp=Z,5.9nm,0.7s						
U40A	Yellville	3.68	96		Pn	14 30 05.5	-0.2
MIAR	Mount Ida	3.85	125	IAmb_Lg		14 31 13.0	
	comp=Z,7.1nm,0.7s						
MGMO	Mountain Grove	4.11	84	IAmb_Lg		14 31 15.8	
	comp=Z,7.2nm,0.9s						
R40A	Maddies Statio	4.32	69	IAmb_Lg		14 31 28.2	
	comp=Z,10.0nm,0.8s						
X40A	Basin Creek Fa	4.38	121	IAmb_Lg		14 31 27.4	
	comp=Z,5.8nm,0.8s						
WHAR	Wooly Hollow	4.40	109	IAmb_Lg		14 31 30.0	
	comp=Z,9.5nm,0.9s						
W41B	Gary Mavity, V	4.48	110	IAmb_Lg		14 31 33.9	
	comp=Z,7.9nm,1.1s						
P40A	Paris	5.00	56	IAmb_Lg		14 31 53.5	
	comp=Z,8.1nm,0.7s						
CCM	Cathedral Cave	5.04	74	IAmb_Lg		14 31 52.9	
	comp=Z,7.5nm,0.8s						
PBMO	Poplar Bluff	5.58	88	IAmb_Lg		14 32 01.8	
	comp=Z,4.5nm,0.8s						
T25A	Trinidad	5.63	275	IAmb_Lg		14 32 13.2	
	comp=Z,3.2nm,0.9s						
FVM	French Village	5.66	76	IAmb_Lg		14 32 12.8	
	comp=Z,7.1nm,0.9s						
ISCO	Idaho Springs	7.12	297	IAmb_Lg		14 33 02.7	
	comp=Z,3.3nm,1.1s						

DNK 08 14:34:55.3±5.0, 69°.79N×51°.75W, h30km±17km, ML1.3,
Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILULI	Ilulissat	0.63	159	i P	Pb	14 35 06.1	-1.7
ILULI				i S	Sb	14 35 16.5	+0.3
ILULI				IAML		14 35 21.0	
	comp=Z,9.4nm,0.3s						
SFJD	Kangerlussuaq	2.84	171	i P	Pn	14 35 40.7	+2.1
SFJD				i S	Sn	14 36 07.6	-4.1
DY2G	Dye2	3.91	146	i P	Pn	14 35 55.1	+1.6
DY2G				i S	Sn	14 36 34.8	-3.6
ICESG	Greenland Ices	4.32	94	i P	Pn	14 36 01.1	+1.9
SUMG	Summit	5.12	51	i P	Pn	14 36 06.9	-3.4
SUMG				i S	Sn	14 37 03.9	-4.5

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*IDC **08** 14:40:09.0±2.3, 9°.80S×112°.44E, h0km, mb3.6/5,*
mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=108.7km
s-min=21.0km az=49.0
*DJA **08** 14:40:14.4±0.5, 10°S±4°×11°3E±°, h10km, M3.5/12,*
MLv3.5/12
ISC 08 14:40:17.3±1.4, 9°.67S±0°.09×112°.84E±0°.05, h58km±16km,
n20, σ1.00/26, mb3.8/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.51	23	P	Pn	14 40 40.5	-1.6
GMJI				S	Sn	14 41 00.5	-0.3
JAGI	Jajag, Banyuwa	1.76	48	P	Pn	14 40 43.9	-1.7
JAGI				S	Sn	14 41 08.0	+1.0
PWJI	Pagerwojo	1.93	328	P	Pn	14 40 46.8	-1.0
PWJI				S	Sn	14 41 11.9	+1.0
BLJI	Banyuglugur	2.06	21	P	Pn	14 40 48.7	-0.8
BLJI				S	Sn	14 41 15.4	+1.4
PCJI	Pacitan	2.20	312	P	Pn	14 40 50.7	-0.8
PCJI				S	Sn	14 41 19.0	+1.5
ABJI	Asem Bagus	2.32	37	P	Pn	14 40 53.4	+0.3
ABJI				S	Sn	14 41 22.4	+1.9
IGBI	Denpasar	2.43	70	P	Pn	14 40 54.2	-0.5
DNP	Denpasar	2.54	67	P	Pn	14 40 55.6	-0.6
WOJI	Wonogiri, Jawa	2.62	314	P	Pn	14 40 56.6	-0.7
GRJI	Gresik	2.76	353	P	Pn	14 40 58.6	-0.6
SRBI	Singaraja	2.83	56	P	Pn	14 40 59.9	-0.2
KMMI	Kalianget	2.83	23	P	Pn	14 41 00.1	-0.1
UGM	Wanagama	2.88	307	P	Pn	14 41 00.9	+0.1
TBJI	Tambak Boyo	3.00	341	P	Pn	14 41 01.9	-0.5
FITZ	Fitzroy Crossi	14.98	125	Pn	Pn	14 43 45.4	-0.3
	0.1nm,0.3s,baz=297,slow=7.7,SNR=1.4						
FITZ				Sn	Sn	14 46 19.6	-11
	baz=188,slow=18,SNR=1.3						
	1.9nm,1.0s						
WRA	Warramunga Arr	23.13	119	P	P	14 45 19.9	+1.1
	0.4nm,0.7s,baz=291,slow=11,SNR=4.8						
	0.4nm,0.7s						
ASAR	Alice Springs	24.47	127	P	P	14 45 32.0	+0.8
	0.6nm,0.7s,baz=305,slow=8.9,SNR=13						
	0.6nm,0.7s						
SONM	Songino Array	57.53	355	P	P	14 50 00.6	-0.3
	0.4nm,0.5s,baz=179,slow=8.1,SNR=2.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	62.47	337	P	P	14 50 34.2	-0.5
	0.4nm,0.4s,baz=151,slow=8.0,SNR=6.1						
	0.4nm,0.4s						
ZALV	Zalesovo Beam	67.67	343	P	P	14 51 07.6	-0.6

0.6nm,0.4s,baz=152,slow=6.5,SNR=2.2
0.6nm,0.4s

NEIC ***08*** *14:55:24.8±2.1, 45°.5S±0°.1×167°.2E±0°.1, h82km±5km, Error ellipse: s-maj=24.5km s-min=2.3km az=144.0*
WEL ***08*** *14:55:25.5±1.1, 46°S±5°×16°7E±°, h67km±8km, M3.9/9, ML4.2/9, MLv3.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=111.8*
NOU ***08*** *14:55:33.0, 44°.99S×168°.19E, h0km, MLv4.1/6, South Island, New Zealand*
ISC 08 14:55:24.0±1.9, **45°.54S**±0°.05×**167°.05E**±0°.09, **h89**km±10km, **n77, σ1s.03**/86, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.10	42		Pn	14 55 36.4	-0.2
DCZ				Sn	Sn	14 55 44.7	-1.3
DCZ	Deep Cove	0.10	42	P	Pn	14 55 36.5	-0.1
DCZ				S	Sn	14 55 45.1	-0.9
PYZ	Puysegur Point	0.68	203		Pn	14 55 40.4	+0.2
PYZ	Puysegur Point	0.68	203	P	Pn	14 55 40.4	+0.2
PYZ				S	Sn	14 55 52.0	-0.3
WHZ	Wether Hill Ro	0.72	119		Pn	14 55 41.2	+0.6
WHZ	Wether Hill Ro	0.72	119	P	Pn	14 55 41.2	+0.6
WHZ				S	Sn	14 55 53.2	+0.1
MLZ	Mavora Lakes	0.77	77		Pn	14 55 42.1	+1.0
MLZ	Mavora Lakes	0.77	77	P	Pn	14 55 42.2	+1.0
MLZ				S	Sn	14 55 54.8	+0.8
MSZ	Milford Sound	1.07	36	P	Pn	14 55 45.3	+0.9
MSZ				S	Sn	14 56 00.4	+0.7
APZ	The Paps	1.44	154	P	Pn	14 55 49.7	+0.7
APZ				S	Sn	14 56 08.1	+0.2
WKZ	Wanaka	1.56	63		Pn	14 55 51.8	+1.3
WKZ	Wanaka	1.56	63	P	Pn	14 55 52.0	+1.5
WKZ				S	Sn	14 56 11.5	+0.9
EAZ	Earnscleugh	1.62	80	P	Pn	14 55 52.4	+1.2
EAZ				S	Sn	14 56 12.2	+0.4
SYZ	Scrubby Hill	1.76	125	P	Pn	14 55 53.7	+0.7
TUZ	Tuapeka	1.85	104	P	Pn	14 55 55.0	+0.9
JCZ	Jackson Bay	1.92	41	P	Pn	14 55 56.0	+0.8
HHSZ	Highcliff Hill	2.51	99	P	Pn	14 56 03.6	+0.8
LBZ	Lake Benmore	2.51	64	Pn	Pn	14 56 02.6	-0.2
LBZ	Lake Benmore	2.51	64	P	Pn	14 56 02.7	-0.2
ODZ	Otahua Downs	2.58	80		Pn	14 56 03.5	-0.4
ODZ	Otahua Downs	2.58	80	P	Pn	14 56 03.7	-0.1
ODZ	Otahua Downs	2.58	80	P	Pn	14 56 03.9	0.0
FOZ	Fox Glacier	2.82	45	Pn	Pn	14 56 07.0	0.0
FOZ	Fox Glacier	2.82	45	P	Pn	14 56 07.0	0.0
TMZ	Timaru	3.04	69	P	Pn	14 56 09.3	-0.7
GCSZ	Gaunt Creek Bo	3.23	48	P	Pn	14 56 11.8	-0.8
ARCZ	Arundel	3.34	63	P	Pn	14 56 13.0	-1.1
RPZ	Rata Peaks	3.39	59	Pn	Pn	14 56 13.8	-1.0
RPZ	Rata Peaks	3.39	59	P	Pn	14 56 13.9	-0.9
RPZ	Rata Peaks	3.39	59	P	Pn	14 56 14.0	-0.8
WVZ	Waitaha Valley	3.62	48	P	Pn	14 56 16.7	-1.1
WACZ	Wakanui South	3.77	67	P	Pn	14 56 18.8	-1.0
RACZ	Rakaia	4.06	65	P	Pn	14 56 22.7	-1.1
OXZ	Oxford	4.20	60		Pn	14 56 23.9	-1.8
OXZ	Oxford	4.20	60	P	Pn	14 56 24.2	-1.6
INZ	Inchbonnie	4.23	50	P	Pn	14 56 25.4	-0.8
MQZ	McQueen’s Vall	4.40	67	Pn	Pn	14 56 27.0	-1.4
MQZ	McQueen’s Vall	4.40	67	P	Pn	14 56 27.1	-1.3
AKCZ	Akaroa Harbour	4.50	70	P	Pn	14 56 28.8	-1.0
OKCZ	Okains Bay	4.66	69	P	Pn	14 56 31.1	-0.8
AMCZ	Amberley	4.66	61	P	Pn	14 56 30.8	-1.1
LTZ	Lake Taylor	4.66	56	Pn	Pn	14 56 30.2	-1.7
LTZ	Lake Taylor	4.66	56	P	Pn	14 56 30.6	-1.4
GVZ	Greta Valley S	5.01	61	P	Pn	14 56 35.4	-1.3
DSZ	Denniston Nort	5.13	44	P	Pn	14 56 37.0	-1.4
KHZ	Kahutara	5.63	59	Pn	Pn	14 56 43.4	-1.6
KHZ	Kahutara	5.63	59	P	Pn	14 56 43.5	-1.6
KHZ	Kahutara	5.63	59	P	Pn	14 56 44.3	-0.8
THZ	Tophouse	5.68	50	Pn	Pn	14 56 44.1	-1.9
THZ	Tophouse	5.68	50	P	Pn	14 56 44.3	-1.6
MRNZ	Matariki Terra	5.86	47	P	Pn	14 56 47.7	-0.7
QRZ	Quartz Range	6.18	42	Pn	Pn	14 56 51.9	-0.8
QRZ	Quartz Range	6.18	42	P	Pn	14 56 52.0	-0.7
QRZ	Quartz Range	6.18	42	P	Pn	14 56 52.4	-0.3
TKNZ	Takaka Hill	6.24	46	P	Pn	14 56 54.4	+1.0
BSWZ	Blackbirch Sta	6.26	55	Pn	Pn	14 56 54.2	+0.5
BSWZ	Blackbirch Sta	6.26	55	P	Pn	14 56 54.7	+1.1
NNZ	Nelson	6.32	49	Pn	Pn	14 56 55.1	+0.6
NNZ	Nelson	6.32	49	P	Pn	14 56 53.8	-0.7
TUWZ	Tuamarina	6.48	53	Pn	Pn	14 56 56.7	0.0
TUWZ	Tuamarina	6.48	53	P	Pn	14 56 57.2	+0.5
DUWZ	D’Urville Isla	6.90	49	P	Pn	14 57 02.7	+0.2
MSWZ	Moikau Station	7.25	58	Pn	Pn	14 57 05.5	-1.7
MSWZ	Moikau Station	7.25	58	P	Pn	14 57 05.5	-1.7
CAW	Cannon Point	7.33	56	P	Pn	14 57 06.8	-1.5
KIW	Kapiti Island	7.40	54	P	Pn	14 57 08.7	-0.6
MTW	Mount Morrison	7.56	58	P	Pn	14 57 10.4	-1.0
OGWZ	Otaki Gorge	7.58	54	P	Pn	14 57 10.7	-1.0
MRZ	Mangatainoka R	7.92	55	P	Pn	14 57 14.5	-1.8
KHEZ	Kahui Hut	8.09	42	P	Pn	14 57 19.7	+1.0
NEZ	North Egmont	8.15	42	P	Pn	14 57 21.1	+1.5
TSZ	Takapari Road	8.54	53	P	Pn	14 57 23.6	-1.2
VRZ	Vera Road	8.58	44	P	Pn	14 57 25.1	-0.3
HIZ	Hauiti	9.11	42	Pn	Pn	14 57 32.2	-0.4
HIZ	Hauiti	9.11	42	P	Pn	14 57 32.4	-0.2
OUZ	Omahuta	11.45	28	P	Pn	14 58 05.9	+1.5
OUZ	Omahuta	11.45	28	P	Pn	14 58 06.1	+1.7

SKHL ***08*** *15:18:51.3±0.1, 47°.20N×151°.90E, h101km±5km, mb4.6/7, msha5.4/4*
IDC ***08*** *15:18:54.9±2.3, 47°.42N×151°.59E, h162km±22km, mb3.2/11, mbtmp3.7/14, Error ellipse: s-maj=25.0km s-min=13.3km az=131.0*
JMA ***08*** *15:18:56.5±0.9, 46°N±6°×15°2E±°, h144km, MV3.5/12, KURILE ISLANDS REGION*
ISC 08 15:18:49.2±0.7, **46°.9N**±0°.1×**152°.1E**±0°.1, **h106**km, **n38, σ2s.31**/38, **mb3.4**/11, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	4.58	34	*e*P	Pn	15 19 58.3	+2.1
SKR				AMB	AMB	15 20 02.1	
	30nm,0.4s						
SKR				*e*S	Sn	15 20 48.5	+0.2
SKR				A	A	15 20 53.8	
	90nm,0.6s						
SKR				A	A	15 20 53.8	
	40nm,0.6s						
SHO	Shikotan	4.83	233	*e*P	Pn	15 20 01.9	+2.3
SHO				AMB	AMB	15 20 04.5	
	20nm,0.3s						
SHO				*e*S	Sn	15 20 54.9	+0.6
SHO				A	A	15 20 58.1	
	40nm,0.2s						
SHO				A	A	15 20 58.1	
	30nm,0.2s						
YUK	Yuzh-Kuril'sk	5.28	239	*e*P	Pn	15 20 08.0	+2.4
YUK				AMB	AMB	15 20 10.5	
	40nm,0.4s						
YUK				*e*S	Sn	15 21 05.4	+0.3
YUK				A	A	15 21 13.4	
	130nm,0.5s						
YUK				A	A	15 21 13.4	
	50nm,0.5s						
PAU	Pauzhetka	5.47	32	*e*P	Pn	15 20 10.5	+2.2
PAU				AMB	AMB	15 20 11.2	
	30nm,0.3s						
PAU				*e*S	Sn	15 21 09.5	-0.4
PAU				A	A	15 21 10.2	
	40nm,0.3s						
PAU				A	A	15 21 10.2	
	70nm,0.3s						
GLVR	Golovnino	5.65	238	*e*S	Sn	15 21 15.0	+0.8
NEM2	Nemuro 2	5.76	234	*e*P	Pn	15 20 13.9	+1.8
NEM2				*e*S	Sn	15 21 14.5	-2.3
NMR	Nemuro--Hokkai	5.76	234	*e*P	Pn	15 20 13.9	+1.7
NMR				*e*S	Sn	15 21 15.7	-1.2
JRA	Rausu	5.77	241	*e*P	Pn	15 20 15.8	+3.5
YSS	Yuzh-Sakhalins	6.42	274	*e*P	Pn	15 20 22.0	+0.9
YSS				AMB	AMB	15 20 25.9	
	10.0nm,0.5s						
JTKR	Abashiri--Toko	6.50	246	*e*P	Pn	15 20 26.5	+4.3
JAK	Akkeshi	6.58	236	*e*P	Pn	15 20 24.9	+1.6
JAK				*e*S	Sn	15 21 33.7	-3.1
JAR	Ashorobuto	6.94	241	*e*P	Pn	15 20 31.6	+3.3
JOB	Onbets	7.13	239	*e*P	Pn	15 20 32.6	+1.8
JOB				*e*S	Sn	15 21 48.2	-2.1
PETK	Petropavlovsk-	7.14	28	P	Pn	15 20 32.6	+1.7
	2.4nm,0.6s,baz=205,slow=16,SNR=6.8						
ASAJ	Asahikawa	7.26	251	P	Pn	15 20 37.0	+4.5
	20nm,0.6s,baz=67,slow=13,SNR=25						
JKK2	Kamakawa 2	7.28	249	*e*P	Pn	15 20 36.8	+4.0
PET	Petropavlovsk	7.40	32	*e*P	Pn	15 20 37.0	+2.6
PET				AMB	AMB	15 20 42.4	
	10.0nm,0.9s						
JCH	Churui	7.59	238	*e*P	Pn	15 20 38.4	+1.5
JCH				*e*S	Sn	15 21 57.0	-4.3
JNBK	Urakawa-nobuka	8.15	239	*e*P	Pn	15 20 44.7	+0.2
JANG	Nango	10.10	233	*e*S	Sn	15 22 52.0	-10
MJAR	Matsushiro Arr	14.67	230	P	P	15 22 16.0	+1.3
	0.7nm,0.4s,baz=42,slow=10.0,SNR=5.1						
H11N2	WAKE ISLAND Hy	29.70	151	T	T	15 56 19.5	
	baz=340,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	29.72	151	T	T	15 56 25.8	
	baz=340,slow=76,SNR=8.1						
H11N3	WAKE ISLAND Hy	29.72	151	T	T	15 56 12.8	
	baz=340,slow=76,SNR=9.4						
H11S1	WAKE ISLAND Hy	30.78	152	T	T	15 57 47.0	
	baz=341,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	30.79	152	T	T	15 57 54.4	
	baz=341,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	30.80	152	T	T	15 57 45.3	
	baz=341,slow=76,SNR=7.7						
INK	Inuvik	41.85	32	P	P	15 26 26.9	-1.3
	0.3nm,0.3s,baz=271,slow=7.1,SNR=6.5						
	0.3nm,0.3s						
MKAR	Makanchi Array	46.26	297	P	P	15 26 59.1	-4.5
	0.3nm,0.5s,baz=75,slow=10,SNR=4.2						
MKAR				PcP	PcP	15 28 34.7	-2.7
	0.2nm,0.5s,baz=62,slow=3.6,SNR=2.3						
	0.3nm,0.5s						
YKA	Yellowknife Ar	51.18	37	P	P	15 27 40.2	-0.8
	0.3nm,0.8s,baz=301,slow=7.1,SNR=2.9						
	0.3nm,0.8s						
CMAR	Chiang Mai Arr	51.76	255	P	P	15 27 44.0	-1.9
	0.4nm,0.3s,baz=20,slow=5.8,SNR=4.1						
	0.4nm,0.3s						
FINES	FINESS Array B	63.58	334	P	P	15 29 03.0	-5.0
	1.7nm,0.9s,baz=44,slow=4.6,SNR=3.8						
	1.7nm,0.9s						
PDAR	Pinedale Array	65.18	53	P	P	15 29 18.9	-0.2
	0.1nm,0.4s,baz=322,slow=8.0,SNR=2.0						
	0.1nm,0.4s						
NOA	NORSAR Array B	67.83	341	P	P	15 29 31.7	-3.7
	0.2nm,0.5s,baz=31,slow=6.8,SNR=1.3						
	0.2nm,0.5s						
WRA	Warramunga Arr	68.47	198	P	P	15 29 40.4	+0.5
	1.3nm,1.2s,baz=27,slow=9.4,SNR=2.7						
	1.3nm,1.2s						
ASAR	Alice Springs	72.18	198	P	P	15 30 04.2	+1.9
	0.2nm,0.4s,baz=9.9,slow=5.8,SNR=11						
	0.2nm,0.4s						
SCHQ	Schefferville	73.40	22	P	P	15 30 07.3	-1.9
	1.5nm,0.7s,baz=299,slow=6.3,SNR=3.6						
	1.5nm,0.7s						
TXAR	Lajitas Array	77.99	60	P	P	15 30 35.6	-0.3
	0.3nm,0.5s,baz=289,slow=4.4,SNR=5.6						
	0.3nm,0.5s						

GCG ***08*** *15:21:04.7±0.4, 14°.16N×90°.69W, h152km±5km, MD3.2*
SNET ***08*** *15:21:11.0±0.4, 13°.54N×90°.63W, h34km±5km, ML2.4*
ISC 08 15:21:05.5±3.5, **13°.2N**±0°.2×**91°.0W**±0°.1, **h35**km, **n9, σ1s.11**/11, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.22	7	*e*P	Pn	15 21 26.4	+0.3
FUG				*e*S	Sn	15 21 43.0	+1.5
NUBE	Las Nubes	1.35	60	*e*P	Pn	15 21 27.2	-0.8
NUBE				IAML		15 21 29.6	
	comp=Z,62nm,0.1s						
NUBE	Las Nubes	1.35	60	*e*P	Pn	15 21 27.2	-0.8
NUBE				IAML		15 21 29.6	
	comp=Z,62nm,0.1s						
CEVE	Cerro Verde	1.45	66	*e*P	Pn	15 21 29.5	0.0
CEVE				IAML		15 21 50.4	
	comp=Z,168nm,0.2s						
CEVE	Cerro Verde	1.45	66	*e*P	Pn	15 21 29.3	-0.1
CEVE				IAML		15 21 50.4	
	comp=Z,168nm,0.2s						
NBG	Las Nubes	1.48	25	*e*P	Pn	15 21 27.6	-2.3
JAYA	Jayaque - finc	1.56	74	*e*P	Pn	15 21 30.7	-0.1
JAYA				IAML		15 21 51.5	
	comp=Z,116nm,0.2s						
JAYA	Jayaque - finc	1.56	74	*e*P	Pn	15 21 30.5	-0.3
JAYA				IAML		15 21 51.5	
	comp=Z,116nm,0.2s						
STG3	Santiaguito 3,	1.57	339	*e*P	Pn	15 21 30.5	-0.6
STG3				*e*S	Sn	15 21 51.1	+0.7

IDC ***08*** *15:49:47.7±6.7, 3°.17N×127°.46E, h0km, mb3.5/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=104.1km s-min=70.1km az=1.0*
DJA ***08*** *15:49:56.2±0.5, 3°N±3°×12°8E±°, h10km, M3.8/8, MLv3.8/8*
ISC 08 15:49:53.8±1.5, **3°.0N**±0°.1×**128°.18E**±0°.08, **h10**km, **n10, σ2s.42**/12, **mb3.5**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.32	200	P	Pb	15 50 35.4	-0.4
TNTI				S	Sb	15 51 05.4	+0.8
SGSI	Sangihe	2.74	285	P	Pn	15 50 40.1	+2.3
LBMI	Labuha	3.64	191	P	Pn	15 50 52.6	+2.4
KMSI	Cibinong	4.82	241	P	Pn	15 51 09.0	+2.6
SWI	Sorong	4.89	141	P	Pn	15 51 10.3	+2.8
SIJI	Sorong	4.90	141	Pn	Pn	15 51 10.6	+3.0
	1.9nm,0.3s,baz=118,slow=9.1,SNR=31						
SIJI				Sn	Sn	15 52 04.6	+0.1
	1.2nm,0.3s,baz=216,slow=23,SNR=6.3						
	4.9nm,0.3s						
FITZ	Fitzroy Crossi	21.08	187	P	P	15 54 34.5	-3.8
	2.1nm,1.0s,baz=16,slow=7.4,SNR=1.9						
	2.1nm,1.0s						
WRA	Warramunga Arr	23.56	165	P	P	15 55 03.7	-0.9
	0.5nm,0.3s,baz=344,slow=10,SNR=5.8						
	0.5nm,0.3s						
ASAR	Alice Springs	27.05	168	P	P	15 55 35.4	-1.2
	0.3nm,0.7s,baz=346,slow=7.2,SNR=1.2						
	0.3nm,0.7s						
STKA	Stephens Creek	36.92	161	P	P	15 57 02.2	-0.8
	2.1nm,0.9s,baz=346,slow=12,SNR=5.2						
	2.1nm,0.9s						

NOU ***08*** *15:52:48.7, 20°.80S×178°.38W, h630km, mb4.5/20, Fiji Islands Region*
NEIC ***08*** *15:52:50.1±2.3, 20°.7S±0°.1×178°.6W±0°.1, h594km±6km, mb4.4/201, Error ellipse: s-maj=16.9km s-min=14.2km az=120.0*
IDC ***08*** *15:52:52.0±1.2, 20°.63S×178°.75W, h615km±12km, mb3.8/22, mbtmp4.7/24, Error ellipse: s-maj=15.1km s-min=10.7km az=134.0*
ISC 08 15:52:49.7±0.4, **20°.77S**±0°.07×**178°.54W**±0°.07, **h600**km, **n491, σ1s.05**/493, **mb4.4**/122, **26C-27D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.53	354	P	P	15 54 08.8	+2.3
MSVF	Nonsavu	4.41	313	P	P	15 54 19.5	+1.2
	125nm,0.7s,baz=156,slow=9.9,SNR=61						
MSVF				S	S	15 55 32.5	+2.0
	16nm,0.7s,baz=77,slow=24,SNR=0.8						
MSVF	Nonsavu	4.41	313	P	P	15 54 19.6	+1.3
MSVF	Nonsavu	4.41	313	P	P	15 54 20.1	+1.8
DGTI	Dogotuki	4.73	340	P	P	15 54 22.0	+1.3
NIUE	Niue	8.28	80	P	P	15 54 58.0	+6.3
AFI	Afiamalu	9.39	45	P	P	15 55 01.3	-1.4
	26nm,0.5s,baz=136,slow=3.5,SNR=8.4						
AFI				S	S	15 56 47.1	-4.6
	35nm,0.5s,baz=191,slow=18,SNR=7.1						
AFI	Afiamalu	9.39	45	P	P	15 55 01.5	-1.2
MARNC	Mare, Loyalty	12.55	264	P	P	15 55 33.0	-1.0
MARNC	Mare, Loyalty	12.55	264	P	P	15 55 33.5	-0.5
RTV	Rentapao	12.65	281	P	P	15 55 35.8	+0.7
DVP	Devils Point	12.89	281	P	P	15 55 37.7	+0.2
PINNC	Pines Island,	13.15	259	P	P	15 55 40.0	-0.1
PINNC	Pines Island,	13.15	259	P	P	15 55 40.3	+0.2
LIFNC	LIFOU	13.30	267	P	P	15 55 40.5	-1.2
OUENC	Ouen Island, N	13.70	260	P	P	15 55 45.3	-0.3
DZM	Mont Dzumac	14.04	262	P	P	15 55 47.7	-1.5
	11nm,0.8s,baz=138,slow=5.2,SNR=15						
DZM	Mont Dzumac	14.04	262	P	P	15 55 48.6	-0.6
DZM	Mont Dzumac	14.04	262	P	P	15 55 49.0	-0.2
ONTNC	Ouen Toro	14.04	261	P	P	15 55 47.9	-1.1
NOUC	Port Laguerre	14.17	262	P	P	15 55 50.2	-0.1
SANVU	Saraoutou	14.54	289	P	P	15 55 53.6	-0.3
SANVU	Saraoutou	14.54	289	P	P	15 55 54.6	+0.8
KOUNC	Koumac, New Ca	16.07	268	P	P	15 56 08.8	+0.9
KOUNC	Koumac, New Ca	16.07	268	P	P	15 56 08.0	+0.2
MXZ	Matakaoa Point	16.96	189	P	P	15 56 16.8	+1.1
URZ	Urewera	17.83	191	P	P	15 56 22.1	-1.5
	9.5nm,0.3s,baz=120,slow=22,SNR=34						
URZ				S	S	15 59 12.6	-4.8
	8.6nm,0.9s,baz=145,slow=22,SNR=4.7						
URZ	Urewera	17.83	191	P	P	15 56 22.5	-1.1
URZ	Urewera	17.83	191	P	P	15 56 23.1	-0.5
BKZ	Black Stump Fm	18.83	192	P	P	15 56 32.5	-0.2
BKZ				IAmb	IAmb	15 56 46.2	
	comp=Z,16nm,1.5s						
QRZ	Quartz Range	21.39	199	P	P	15 56 56.9	+1.1
QRZ	Quartz Range	21.39	199	P	P	15 56 53.3	-2.5
THZ	Tophouse	22.15	197	P	P	15 57 02.4	-0.2
THZ				IAmb	IAmb	15 57 06.1	
	comp=Z,7.7nm,0.7s						
KHZ	Kahutara	22.59	195	P	P	15 57 04.4	-2.0
LTZ	Lake Taylor	23.27	197	P	P	15 57 11.9	-0.6
LTZ				IAmb	IAmb	15 57 18.0	
	comp=Z,12nm,1.1s						
RPZ	Rata Peaks	24.48	198	P	P	15 57 23.8	+0.7
	comp=Z,2.8nm,0.4s,baz=302,slow=2.6,SNR=2.1						
	comp=Z,2.8nm,0.4s						
RPZ	Rata Peaks	24.48	198	IAmb	IAmb	15 57 40.8	
	comp=Z,22nm,1.2s						
LBZ	Lake Benmore	25.35	199	P	P	15 57 29.9	-0.8
LBZ				IAmb	IAmb	15 57 45.2	
	comp=Z,12nm,1.2s						
MLZ	Mavora Lakes	26.89	201	P	P	15 57 44.9	+0.6
WHZ	Wether Hill Ro	27.41	201	P	P	15 57 49.0	+0.2
ARMA	Armidale	28.49	244	P	P	15 57 59.3	+0.7
ARMA				IAmb	IAmb	15 58 23.3	
	comp=Z,14nm,1.2s						
CTA	Charters Tower	32.96	265	P	P	15 58 37.1	+0.4
	comp=Z,9.1nm,0.4s,baz=90,slow=10,SNR=45						
	comp=Z,9.1nm,0.4s						
CTAO	Charters Tower	32.96	265	P	P	15 58 37.0	+0.3
KRVT	Keravat (AS076	32.96	296	P	P	15 58 35.9	-0.9
	comp=Z,10nm,0.4s,baz=352,slow=2.2,SNR=8.6						
	comp=Z,10nm,0.4s						
PMG	Port Moresby	34.91	284	P	P	15 58 53.0	-0.1
	comp=Z,12nm,0.7s,baz=109,slow=6.7,SNR=5.9						
	comp=Z,12nm,0.7s						
PMG	Port Moresby	34.91	284	P	P	15 58 53.1	0.0
TOO	Toolangi	35.33	234	P	P	15 58 57.2	+0.9
TOO				IAmb	IAmb	15 59 01.3	
	comp=Z,7.1nm,0.9s						
COEN	Coen	37.09	274	P	P	15 59 11.3	+0.2
COEN				IAmb	IAmb	15 59 12.0	
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	37.21	244	P	P	15 59 11.8	-0.1
	comp=Z,6.5nm,0.7s,baz=89,slow=11,SNR=18						
	comp=Z,6.5nm,0.7s						
STKA	Stephens Creek	37.21	244	P	P	15 59 12.4	+0.6
BBOO	Buckleboo	41.97	244	P	P	15 59 49.9	+0.1
WR0	Warramunga Arr	43.87	262	P	P	16 00 04.0	-0.7
WR0				IAmb	IAmb	16 00 06.3	
	comp=Z,9.1nm,0.9s						
AS31	Alice Springs	43.96	257	P	P	16 00 05.4	-0.1
AS31				IAmb	IAmb	16 00 06.2	
	comp=Z,6.6nm,0.7s						
ASAR	Alice Springs	43.96	257	P	P	16 00 05.1	-0.3
	comp=Z,24nm,0.7s,baz=96,slow=7.5,SNR=378						
ASAR				PcP	PcP	16 01 38.0	+0.3
	comp=Z,3.6nm,0.6s,baz=105,slow=3.9,SNR=10						
	comp=Z,24nm,0.7s						
ASAR	Alice Springs	43.96	257	P	P	16 00 05.4	0.0
WB0	Warramunga Arr	44.04	263	P	P	16 00 05.5	-0.5
WB2	Warramunga Arr	44.05	262	P	P	16 00 05.5	-0.7
WB2				IAmb	IAmb	16 00 06.5	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	44.05	262	P	P	16 00 05.6	-0.5
WRAB				IAmb	IAmb	16 00 06.5	
	comp=Z,23nm,1.1s						
WRA	Warramunga Arr	44.06	262	P	P	16 00 05.6	-0.6
	comp=Z,8.9nm,0.5s,baz=97,slow=7.8,SNR=186						
WRA				PcP	PcP	16 01 38.4	+0.3
	comp=Z,2.1nm,0.9s,baz=100,slow=3.2,SNR=4.9						
	comp=Z,8.9nm,0.5s						
WRA	Warramunga Arr	44.06	262	P	P	16 00 05.4	-0.8
MTN	Manton Dam	48.66	271	P	P	16 00 40.2	-0.6
FORT	Forrest	48.72	247	P	P	16 00 40.5	-0.6
KNRA	Kununurra	50.13	267	P	P	16 00 51.1	-0.5
KNRA				IAmb	IAmb	16 00 51.9	
	comp=Z,13nm,0.7s						
FITZ	Fitzroy Crossi	52.49	263	P	P	16 01 08.4	-0.1
	comp=Z,6.0nm,0.5s,baz=91,slow=3.5,SNR=40						
	comp=Z,6.0nm,0.5s						
FITZ	Fitzroy Crossi	52.49	263	P	P	16 01 08.3	-0.3
FITZ				IAmb	IAmb	16 01 09.1	
	comp=Z,7.0nm,0.6s						
BATI	Baumata	56.42	271	P	P	16 01 37.4	+1.2
	comp=Z,20nm,0.6s,baz=122,slow=1.2,SNR=14						
	comp=Z,20nm,0.6s						
TNTI	Ternate	57.04	285	P	P	16 01 40.0	-0.3
TNTI				IAmb	IAmb	16 01 41.2	
	comp=Z,24nm,1.0s						
PSA00	Pilbara Seismi	57.11	257	P	P	16 01 40.2	-0.5
PSA00				IAmb	IAmb	16 01 41.2	
	comp=Z,27nm,0.8s						
VNDA	Vanda	57.60	185	P	P	16 01 45.8	+2.7
	comp=Z,0.7nm,0.5s,baz=12,slow=7.0,SNR=7.9						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	57.60	185	P	P	16 01 45.6	+2.5
NWAO	Narrogin (SRO)	57.79	244	P	P	16 01 45.3	+0.1
NWAO				IAmb	IAmb	16 01 53.6	
	comp=Z,37nm,1.4s						
MMRI	Maumere	58.26	273	P	P	16 01 48.0	-0.6
MMRI				IAmb	IAmb	16 01 48.9	
	comp=Z,31nm,1.1s						
MORW	Morawa	59.26	248	P	P	16 01 54.8	-0.3
MORW				IAmb	IAmb	16 01 59.6	
	comp=Z,32nm,1.3s						
JCJ	Chichijima	60.91	320	P	P	16 02 05.5	-0.3
GIRL	Giralia	61.99	255	P	P	16 02 14.2	+1.1
TOLI2	Tolitoli	63.16	282	P	P	16 02 20.1	-0.6
TOLI2				IAmb	IAmb	16 02 21.2	
	comp=Z,11nm,0.9s						
CASY	Casey	63.51	205	P	P	16 02 21.8	-0.1
JAGI	Jajag, Banyuwa	65.87	270	P	P	16 02 35.8	-2.0
JAGI				IAmb	IAmb	16 02 43.1	
	comp=Z,16nm,0.9s						
JHJ2	Mitsune	66.71	323	P	P	16 02 42.8	+0.3
UGM	Wanagama	69.45	269	P	P	16 02 59.4	-0.2
JMM	Marumori	69.73	327	P	P	16 03 00.8	+0.2
JMM				IAmb	IAmb	16 03 02.2	
	comp=Z,27nm,1.5s						
JGF	Kuroka	69.92	323	P	P	16 03 01.8	-0.1
MJAR	Matsushiro Arr	70.12	324	P	P	16 03 02.0	-1.0
	comp=Z,4.0nm,0.7s,baz=156,slow=5.9,SNR=14						
	comp=Z,4.0nm,0.7s						
MJAR	Matsushiro Arr	70.12	324	P	P	16 03 02.1	-1.0
MAJO	Matsushiro	70.12	324	P	P	16 03 02.6	-0.5
MJB9	Matsu-Tunnel	70.13	324	P	P	16 03 02.6	-0.4
JSU	Suzuyama	71.35	316	P	P	16 03 10.5	+0.2
JHS	Saijyo	71.97	320	P	P	16 03 14.2	+0.3
JHS				IAmb	IAmb	16 03 15.3	
	comp=Z,17nm,1.0s						
KIWB	Kanaga Island	72.31	1	P	P	16 03 16.2	+0.8
ADK	Adak	72.35	1	P	P	16 03 15.3	-0.3
LEM	Lembang	72.53	269	P	P	16 03 17.0	-0.7
	comp=Z,28nm,0.8s,baz=84,slow=8.0,SNR=7.8						
	comp=Z,28nm,0.8s						
KSM	Kuching	72.94	278	P	P	16 03 19.6	-0.3
KSM				IAmb	IAmb	16 03 21.4	
	comp=Z,14nm,0.8s						
TWG	Pinlang	73.10	303	P	P	16 03 18.6	-1.9
TWG				IAmb	IAmb	16 03 19.7	
	comp=Z,12nm,0.6s						
YULB	Yu-li	73.22	304	P	P	16 03 20.1	-1.2
TPUB	Ta-pu	73.69	303	P	P	16 03 22.5	-1.5
SSLB	Suanglung	73.70	304	P	P	16 03 22.3	-1.6
SSLB				IAmb	IAmb	16 03 23.5	
	comp=Z,15nm,0.7s						

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NIKH  Nikolski High   73.91   6 P     P     16 03 24.2 -0.2
UNV   Unalaska Valle  75.03   7 P     P     16 03 30.0 -0.7
AKUT  Akutan          75.40   8 P     P     16 03 32.1 -0.6
PEA0B Petropavlovsk-  76.40 346 P     P     16 03 38.9 +0.6
PETK  Petropavlovsk-  76.40 346 P     P     16 03 38.2 -0.1
      comp=Z,7.0nm,0.7s,baz=134,slow=6.4,SNR=6.3
      comp=Z,7.0nm,0.7s
PETK  Petropavlovsk-  76.40 346 P     P     16 03 38.8 +0.4
KSRS  Korea Array     76.75 319 P     P     16 03 40.5 -0.1
      comp=Z,2.4nm,0.7s,baz=131,slow=5.7,SNR=15
      comp=Z,2.4nm,0.7s
KSAR  Wonju Array Be  76.77 319 P     P     16 03 40.7  0.0
KS19  Wonju Array Si  76.81 319 P     P     16 03 40.8 -0.2
USA0B Ussuriysk Arra  78.90 326 P     P     16 03 52.4 +0.5
USRK  Ussuriysk Ar.   78.90 326 P     P     16 03 52.5 +0.5
      comp=Z,5.5nm,0.7s,baz=149,slow=4.3,SNR=8.9
      comp=Z,5.5nm,0.7s
HOPS  Hopland Field   78.90  41 P     P     16 03 54.1 +2.0
MYKOM Kota Tinggi     79.06 276 P     P     16 03 53.6 +0.1
MYKOM                           IAmb  IAmb  16 03 55.0
      comp=Z,12nm,0.8s
BELA  Belgrano 2      79.36 173 P     P     16 03 55.1 +1.2
MONP2 Monument Peak   79.77  49 P     P     16 03 59.2 +2.2
      baz=237
EDW2  Edwards Air Fo  79.77  47 P     P     16 03 58.8 +1.9
      baz=236
ISA   Isabella, Lake  79.88  46 P     P     16 03 59.6 +2.2
      baz=235
CMB   Columbia Colle  80.00  43 P     P     16 03 59.0 +1.1
TPFO  Pinon Flats     80.13  48 P     P     16 04 00.8 +2.0
      baz=237
MDJ   Mudanjiang      80.44 325 P     P     16 04 01.0 +1.0
OHAK  Old Harbor      80.53  14 P     P     16 04 00.7 +0.6
OHAK                            IAmb  IAmb  16 04 16.4
      comp=Z,20nm,1.2s
CWC   Cottonwood Cre  80.59  45 P     P     16 04 03.2 +2.1
      baz=236
MDPB  Devils Postpil  80.61  44 P     P     16 04 03.1 +1.7
OMMB  Old Mammoth Mi  80.65  44 P     P     16 04 03.3 +1.7
BELC  Belle Mtn. Jos  80.66  48 P     P     16 04 03.9 +2.3
      baz=237
YBH   Yreka Blue Hor  80.81  39 P     P     16 04 04.3 +2.1
YBH                             IAmb  IAmb  16 04 05.4
      comp=Z,12nm,1.0s
TIN   Tinemaha, Big   80.83  45 P     P     16 04 04.8 +2.4
      baz=235
BC3   Big Chuckawall  80.86  49 P     P     16 04 04.6 +2.0
      baz=238
GLA   Glamis          80.98  50 P     P     16 04 05.4 +2.2
GLA                             IAmb  IAmb  16 04 06.7
      comp=Z,7.8nm,0.8s
BEKR  Beckworth       81.10  41 P     P     16 04 05.0 +1.3
KDAK  Kodiak Island   81.19  14 P     P     16 04 05.6 +2.0
KDAK                            IAmb  IAmb  16 04 11.3
      comp=Z,19nm,1.2s
HUMO  Hull Mountain   81.22  38 P     P     16 04 06.4 +2.3
YERR  Yerington       81.29  43 P     P     16 04 06.5 +1.8
YERR                            IAmb  IAmb  16 04 07.5
      comp=Z,14nm,1.2s
GMRC  Granite Mounta  81.32  48 P     P     16 04 06.9 +1.9
      baz=237
LCH   Last Change Ra  81.32  45 P     P     16 04 06.6 +1.7
LHV   Little Huntoon  81.34  44 P     P     16 04 07.0 +2.3
LHV                             IAmb  IAmb  16 04 08.0
      comp=Z,13nm,1.2s
IRM   Iron Mountain   81.34  49 P     P     16 04 07.2 +2.2
      baz=238
L04D  Klamath Falls   81.35  39 P     P     16 04 06.8 +1.9
L04D                            IAmb  IAmb  16 04 07.8
      comp=Z,22nm,1.1s
L04D  Klamath Falls   81.35  39 P     P     16 04 07.0 +2.0
      baz=232
RYN   Ryan            81.54  43 P     P     16 04 07.7 +1.7
NVAR  Mina Array Bea  81.57  44 P     P     16 04 07.8 +1.6
      comp=Z,3.4nm,0.7s,baz=224,slow=7.9,SNR=33
      comp=Z,3.4nm,0.7s
BLYC  Blythe          81.57  49 P     P     16 04 08.1 +2.0
113A  Mohawk Valley,  81.60  50 P     P     16 04 08.4 +2.2
PAHR  Pah Rah Range   81.62  42 P     P     16 04 08.0 +1.6
NV11  Mina Array Sit  81.66  44 P     P     16 04 08.2 +1.5
KVN   Kaiserville     82.05  43 P     P     16 04 09.7 +1.1
KVN                             IAmb  IAmb  16 04 11.2
      comp=Z,12nm,1.2s
TPH   Tonopah         82.07  44 P     P     16 04 10.2 +1.4
TPNV  Topopah Spring  82.09  46 P     P     16 04 10.6 +1.7
TPNV  Topopah Spring  82.09  46 P     P     16 04 11.0 +2.1
      baz=237
J04D  Umpqua Nationa  82.10  38 P     P     16 04 10.8 +2.1
J04D                            IAmb  IAmb  16 04 11.9
      comp=Z,15nm,0.8s
J04D  Umpqua Nationa  82.10  38 P     P     16 04 11.1 +2.3
      baz=232
PDMCI Parker Dam,Lak  82.13  49 P     P     16 04 11.3 +2.4
      baz=238
P18K  Big Mountain,   82.13  12 P     P     16 04 08.3  0.0
P18K                            IAmb  IAmb  16 04 08.7
      comp=Z,10nm,0.8s
P18K  Big Mountain,   82.13  12 P     P     16 04 08.0 -0.4
      baz=202
CN2   Changchun       82.20 323 eP    P     16 04 09.4 +0.4
CN2                             pmax  pmax
      comp=Z,10.0nm,1.1s
MOD   Modoc Plateau   82.35  40 P     P     16 04 11.8 +1.8
MOD                             IAmb  IAmb  16 04 12.3
      comp=Z,7.1nm,0.8s
BNX   BinXian         82.35 325 ⇑P    P     16 04 09.9 +0.2
BNX                             pmax  pmax
      comp=Z,20nm,0.8s
BNX                             pmax  pmax
      comp=Z,310nm,3.9s
K05A  Summer Lake     82.49  39 P     P     16 04 12.7 +2.0
K05A                            IAmb  IAmb  16 04 13.9
      comp=Z,16nm,1.0s
O18K  Koktuh Hills    82.56  12 P     P     16 04 10.5  0.0
O18K  Koktuh Hills    82.56  12 P     P     16 04 10.7 +0.2
      baz=202,SNR=6.6
SHPR  Sheep Range     82.59  47 P     P     16 04 13.0 +1.6
J05D  Fort Rock, OR   82.63  38 P     P     16 04 13.6 +2.2
      baz=233
Y14A  Wickenburg      82.75  50 P     P     16 04 13.6 +1.5
H04A  Detroit Lake    82.94  37 P     P     16 04 14.0 +1.2
H04A                            IAmb  IAmb  16 04 14.7
      comp=Z,7.6nm,0.6s
O19K  Port Alsworth   83.05  12 P     P     16 04 12.6 -0.2
O19K  Port Alsworth   83.05  12 P     P     16 04 13.0 +0.2
      baz=203,SNR=9.7
CNPM  China Poot      83.08  14 P     P     16 04 13.2 +0.2
CNPM                            IAmb  IAmb  16 04 24.6
      comp=Z,18nm,1.2s
PINE  Pine Mountain   83.11  38 P     P     16 04 15.8 +2.0
PINE                            IAmb  IAmb  16 04 17.0
      comp=Z,18nm,0.9s
PRN   Pahroc Range    83.14  46 P     P     16 04 16.2 +2.1
I05D  Terrebonne, OR  83.21  37 P     P     16 04 15.7 +1.6
      baz=232
N18K  Kilae Creek     83.21  11 P     P     16 04 13.6 -0.1
R11A  Troy Canyon, C  83.30  45 P     P     16 04 15.6 +0.7
      baz=237
KULM  Kulim           83.30 278 P     P     16 04 15.4 +0.2
KULM                            IAmb  IAmb  16 04 16.9
      comp=Z,5.9nm,0.7s
E03A  Lebam           83.36  35 P     P     16 04 16.6 +1.9
BRLK  Bradley Lake    83.37  14 P     P     16 04 14.3 -0.2
BRLK                            IAmb  IAmb  16 04 15.3
      comp=Z,13nm,0.8s
BRSE  Bradley Lake S  83.38  14 P     P     16 04 14.7 +0.1
      baz=206
TUC   Tucson          83.54  52 P     P     16 04 18.5 +2.4
TUC   Tucson          83.54  52 P     P     16 04 19.1 +3.0
      baz=241
N19K  Bonanza Creek   83.59  12 P     P     16 04 15.2 -0.4
N19K                            IAmb  IAmb  16 04 38.3
      comp=Z,12nm,1.4s
N19K  Bonanza Creek   83.59  12 P     P     16 04 15.2 -0.4
      baz=203
SVW2  Sparrevohn      83.65  11 P     P     16 04 15.7 -0.2
WVOR  Wild Horse Val  83.66  40 P     P     16 04 18.2 +1.7
SEW   Seward          84.00  14 P     P     16 04 18.3 +0.8
SEW                             IAmb  IAmb  16 04 18.5
      comp=Z,14nm,1.0s
PSI   Prapat          84.01 275 P     P     16 04 18.1 -0.8
      comp=Z,6.2nm,0.8s,baz=159,slow=18,SNR=4.9
      comp=Z,6.2nm,0.8s
I07A  Izee            84.11  38 P     P     16 04 20.5 +1.8
LCMT  Little Creek M  84.16  47 P     P     16 04 21.0 +1.8
319A  Douglas         84.22  54 P     P     16 04 21.1 +1.6
319A                            IAmb  IAmb  16 04 23.2
      comp=Z,17nm,1.2s
J08A  Circle Bar Ran  84.29  39 P     P     16 04 21.5 +1.9
J08A                            IAmb  IAmb  16 04 22.4
      comp=Z,8.4nm,1.2s
CCUT  Cedar City      84.36  46 P     P     16 04 22.2 +2.0
U15A  North Rim       84.52  48 P     P     16 04 22.9 +1.8
U15A                            IAmb  IAmb  16 04 24.1
      comp=Z,6.2nm,0.7s
PSUT  Pine Spring     84.54  45 P     P     16 04 21.5 +0.5
M19K  Big River Lodg  84.62  11 P     P     16 04 20.6  0.0
M19K  Big River Lodg  84.62  11 P     P     16 04 20.9 +0.3
      baz=203
GSI   Gunungsitoli    84.73 273 P     P     16 04 23.3 +1.0
L19K  White Mountain  84.79  11 P     P     16 04 22.2 +0.7
L19K  White Mountain  84.79  11 P     P     16 04 22.0 +0.6
      baz=202
ELK   Elko            84.82  43 P     P     16 04 23.7 +1.3
PKCU  Pink Cliffs     85.02  47 P     P     16 04 25.5 +1.9
PKCU                            IAmb  IAmb  16 04 27.2
      comp=Z,6.8nm,1.0s
G08A  Pilot Rock      85.14  38 P     P     16 04 25.2 +1.6
G08A                            IAmb  IAmb  16 04 26.4
      comp=Z,9.0nm,1.0s
GLI   Glacier Island  85.23  15 P     P     16 04 23.7 +0.1
GLI   Glacier Island  85.23  15 P     P     16 04 23.9 +0.4
      baz=209
L20K  Farewell, AK    85.24  11 P     P     16 04 23.9 +0.3
      baz=203
KNK   Knik Glacier    85.39  14 P     P     16 04 24.6 +0.3
KNK                             IAmb  IAmb  16 04 25.5
      comp=Z,10nm,0.9s
KNK   Knik Glacier    85.39  14 P     P     16 04 24.8 +0.5
      baz=208
PMR   Palmer          85.39  14 P     P     16 04 24.4 +0.1
PMR   Palmer          85.39  14 P     P     16 04 24.3 +0.1
      baz=208
GHO   Glory Hole Cre  85.60  14 P     P     16 04 25.2 -0.2
ENH   Enshi           85.77 304 P     P     16 04 27.4 +0.6
ENH                             IAmb  IAmb  16 04 28.6
      comp=Z,13nm,0.9s
DIV   Divide          85.77  15 P     P     16 04 26.3 +0.1
DIV                             IAmb  IAmb  16 04 27.6
      comp=Z,11nm,1.0s
BMO   Blue Mountains  85.84  39 P     P     16 04 27.6 +0.7
CUT   Chulitna        85.88  13 P     P     16 04 26.3 -0.2
      baz=206
M23K  Glacier View    85.89  14 P     P     16 04 26.8 +0.1
      baz=209
MFID  Camas Ranch     85.92  40 P     P     16 04 28.9 +1.4
MFID                            IAmb  IAmb  16 04 30.1
      comp=Z,5.7nm,1.0s
BMRM  Bremner River   85.93  16 P     P     16 04 27.2 +0.3
BMRM                            IAmb  IAmb  16 04 28.3
      comp=Z,9.8nm,1.0s
BMRM  Bremner River   85.93  16 P     P     16 04 27.6 +0.6
      baz=212
PPLA  Purkeypile      85.94  12 P     P     16 04 26.6 -0.4
PPLA                            IAmb  IAmb  16 04 45.6
      comp=Z,12nm,1.3s
WAX   Waxell Ridge    85.95  17 P     P     16 04 27.9 +0.8
SCM   Sheep Creek Mo  86.02  14 P     P     16 04 27.6 +0.2
SCM   Sheep Creek Mo  86.02  14 P     P     16 04 28.0 +0.7
      baz=209
K20K  Telida          86.02  11 P     P     16 04 27.4 +0.1
K20K                            IAmb  IAmb  16 04 28.6
      comp=Z,16nm,1.4s
K20K  Telida          86.02  11 P     P     16 04 27.7 +0.4
      baz=203,SNR=5.6
KLU   Klutina         86.05  15 P     P     16 04 28.0 +0.5
KLU   Klutina         86.05  15 P     P     16 04 28.1 +0.5
      baz=210
D08A  Wollman Farm,   86.20  36 P     P     16 04 30.1 +1.6
D08A                            IAmb  IAmb  16 04 31.2
      comp=Z,13nm,1.0s
TABL  Table Mountain  86.42  18 P     P     16 04 29.9 +0.4
TABL                            IAmb  IAmb  16 04 45.1
      comp=Z,15nm,1.1s
CAST  Castle Rocks    86.44  12 P     P     16 04 28.0 -1.3
CAST                            IAmb  IAmb  16 04 29.1
      comp=Z,8.2nm,0.8s
CAST  Castle Rocks    86.44  12 P     P     16 04 28.2 -1.1
      baz=205,SNR=8.6
VRDI  Verde Repeater  86.45  16 P     P     16 04 29.6 +0.1
VRDI                            IAmb  IAmb  16 04 30.5
      comp=Z,6.6nm,0.9s
N25K  Chitina, Valde  86.47  16 P     P     16 04 30.0 +0.5
N25K                            IAmb  IAmb  16 04 30.6
      comp=Z,7.0nm,0.6s
N25K  Chitina, Valde  86.47  16 P     P     16 04 30.3 +0.7
      baz=212
F10A  Beach Ranch, E  86.52  38 P     P     16 04 30.9 +0.7
M24K  Tolsona, Glenn  86.52  15 P     P     16 04 30.6 +0.8
M24K  Tolsona, Glenn  86.52  15 P     P     16 04 30.5 +0.8
      baz=210
GLB   Gilahina Butte  86.53  16 P     P     16 04 30.2 +0.4
GLB                             IAmb  IAmb  16 04 30.7
      comp=Z,4.6nm,0.6s
WAT6  Susitna Watana  86.58  14 P     P     16 04 30.4 +0.2
      baz=209
WAT1  Susitna Watana  86.62  13 P     P     16 04 30.1  0.0
      baz=208
TMUT  Trail Mountain  86.70  46 P     P     16 04 33.4 +2.0
PLID  Pearl Lake      86.74  39 P     P     16 04 32.2 +0.8
PLID                            IAmb  IAmb  16 04 33.7
      comp=Z,15nm,1.4s
B08A  Colville Reser  86.74  35 P     P     16 04 31.4 +0.3
B08A                            IAmb  IAmb  16 04 32.8
      comp=Z,6.1nm,0.8s
J20K  Nowinta River   86.77  10 P     P     16 04 31.0 +0.2
J20K  Nowinta River   86.77  10 P     P     16 04 31.2 +0.4
      baz=203
KTH   Kantishna Hill  86.78  12 P     P     16 04 30.2 -0.7
KTH                             IAmb  IAmb  16 04 30.9
      comp=Z,11nm,1.0s
BARN  Barnard Glacie  86.78  17 P     P     16 04 31.9 +0.7
BARN                            IAmb  IAmb  16 04 32.9
      comp=Z,8.9nm,0.8s
CHUM  Lake Minchumin  86.82  11 P     P     16 04 30.4 -0.6
      baz=204
HLID  Hailey          86.86  41 P     P     16 04 33.6 +1.7
HLID                            IAmb  IAmb  16 04 34.9
      comp=Z,6.6nm,1.0s
HLID  Hailey          86.86  41 P     P     16 04 33.7 +1.8
      baz=238
GCSA  Galena City Sc  86.86   9 P     P     16 04 31.5 +0.4
      baz=200
HARP  HAARP           87.02  15 P     P     16 04 31.8 -0.2
      baz=211
RND   Reindeer        87.07  13 P     P     16 04 32.2  0.0
SRU   San Rafael Swe  87.07  46 P     P     16 04 33.8 +0.8
SRU                             IAmb  IAmb  16 04 35.5
      comp=Z,5.0nm,0.9s
DHY   Denali Highway  87.09  14 P     P     16 04 32.2 -0.3
DHY   Denali Highway  87.09  14 P     P     16 04 32.5  0.0
      baz=209
BPAW  Bear Paw Mtn.   87.27  12 P     P     16 04 32.5 -0.6
MNTX  Cornudas Mount  87.32  55 P     P     16 04 35.2 +1.0
MNTX                            IAmb  IAmb  16 04 37.3
      comp=Z,5.6nm,1.1s
MNTX  Cornudas Mount  87.32  55 P     P     16 04 36.1 +1.9
      baz=244
BNM   Barren Site     87.48  52 P     P     16 04 36.5 +1.3
M26K  Nabesna, AK     87.55  16 P     P     16 04 35.0 +0.5
M26K                            IAmb  IAmb  16 04 36.3
      comp=Z,7.8nm,1.1s
M26K  Nabesna, AK     87.55  16 P     P     16 04 35.4 +0.9
      baz=213,SNR=5.4
BWN   Browne          87.63  12 P     P     16 04 34.4 -0.3
TX31  Lajitas Ar. Si  87.63  58 P     P     16 04 37.4 +1.7
TX32  Lajitas Array   87.63  58 P     P     16 04 37.9 +2.1
TX32                            IAmb  IAmb  16 04 39.2
      comp=Z,7.3nm,1.1s
TXAR  Lajitas Array   87.63  58 P     P     16 04 38.3 +2.5
      comp=Z,3.7nm,0.9s,baz=217,slow=6.1,SNR=29
      comp=Z,3.7nm,0.9s
TXAR  Lajitas Array   87.63  58 P     P     16 04 37.6 +1.9
YUK3  Moose Creek     87.70  17 P     P     16 04 36.4 +1.0
      baz=215,SNR=12
HYT   Haines Junctio  87.79  19 P     P     16 04 36.7 +0.9
HYT                             IAmb  IAmb  16 04 37.3
      comp=Z,7.3nm,1.0s
HYT   Haines Junctio  87.79  19 P     P     16 04 36.8 +0.9
      baz=218
M27K  Edge Creek, AK  87.80  16 P     P     16 04 36.7 +0.9
M27K  Edge Creek, AK  87.80  16 P     P     16 04 37.1 +1.2
      baz=214
MENT  Mentasta        87.83  15 P     P     16 04 36.4 +0.6
MENT                            IAmb  IAmb  16 04 37.4
      comp=Z,5.0nm,1.0s
YUK4  Talbot Arm      87.87  18 P     P     16 04 37.3 +1.1
      baz=217
BCYI  Bear Canyon     87.88  41 P     P     16 04 38.0 +1.3
NEW   Newport         87.89  36 P     P     16 04 37.4 +1.0
      baz=235
XAN   Xi'an           87.89 308 P     P     16 04 38.0 +1.2
XAN                             pP    pP    16 06 37.4 -7.4
XAN                             pmax  pmax
      comp=Z,12nm,0.9s
ANMO  Albuquerque     87.97  51 P     P     16 04 38.5 +1.2
ANMO  Albuquerque     87.97  51 P     P     16 04 39.0 +1.6
      baz=243
L26K  Log Cabin Wild  87.99  15 P     P     16 04 37.4 +0.9
      baz=213
I21K  Tanana          88.06  11 P     P     16 04 36.8  0.0
I21K                            IAmb  IAmb  16 04 37.8
      comp=Z,9.3nm,0.9s
I21K  Tanana          88.06  11 P     P     16 04 37.1 +0.3
      baz=205
NEA2  Nenana          88.08  12 P     P     16 04 36.0 -0.9
NEA2                            IAmb  IAmb  16 04 37.0
      comp=Z,3.4nm,0.8s
NEA2  Nenana          88.08  12 P     P     16 04 36.3 -0.6
      baz=208,SNR=5.5
K24K  Donnelly Dome   88.08  14 P     P     16 04 37.5 +0.5
      baz=210,SNR=9.0
BVCY  Beaver Creek    88.12  17 P     P     16 04 38.3 +1.1
      baz=215,SNR=7.5
WRH   Wood River Hil  88.17  13 P     P     16 04 36.8 -0.5
RIDG  Independent Ri  88.24  14 P     P     16 04 37.8 +0.1
RIDG                            IAmb  IAmb  16 04 39.1
      comp=Z,9.4nm,1.1s
RIDG  Independent Ri  88.24  14 P     P     16 04 38.2 +0.5
      baz=211,SNR=5.1
HDA   Harding Lake    88.36  13 P     P     16 04 37.9 -0.3
HDA   Harding Lake    88.36  13 P     P     16 04 38.0 -0.2
      baz=209,SNR=16
H21K  Melozitna Rive  88.36  10 P     P     16 04 38.2 +0.1
H21K                            IAmb  IAmb  16 04 39.5
      comp=Z,5.7nm,1.0s
H21K  Melozitna Rive  88.36  10 P     P     16 04 38.8 +0.6
      baz=204
CCB   Clear Creek Bu  88.39  13 P     P     16 04 37.5 -0.7
L27K  Beaver Creek,   88.40  16 P     P     16 04 38.8 +0.3
L27K                            IAmb  IAmb  16 04 40.1
      comp=Z,5.3nm,1.1s
L27K  Beaver Creek,   88.40  16 P     P     16 04 39.2 +0.7
      baz=214
N30M  Aishikik Lake   88.41  19 P     P     16 04 39.5 +0.9
      baz=218
BCAR  Beaver Creek A  88.42  16 P     P     16 04 38.9 +0.4
WHY   Whitehorse      88.47  20 P     P     16 04 40.3 +1.4
      baz=220
MCMT  McKenzie Canyo  88.48  40 P     P     16 04 41.2 +1.6
DLBC  Dease Lake      88.49  23 P     P     16 04 40.1 +1.0
DLBC                            IAmb  IAmb  16 05 06.9
      comp=Z,10.0nm,1.4s
IMAR  Indian Mountai  88.50  10 P     P     16 04 39.0 +0.2
AHID  Auburn Hatcher  88.52  43 P     P     16 04 39.7  0.0
AHID                            IAmb  IAmb  16 04 43.0
      comp=Z,6.8nm,1.0s
I23K  Minto, Yukon-K  88.52  12 P     P     16 04 38.1 -0.8
I23K                            IAmb  IAmb  16 04 39.5
      comp=Z,3.6nm,0.8s
I23K  Minto, Yukon-K  88.52  12 P     P     16 04 38.5 -0.3
      baz=207
MDM   Murphy Dome     88.57  12 P     P     16 04 38.4 -0.8
TCOL  CIGO, UAF Yank  88.57  13 P     P     16 04 38.7 -0.4
TCOL  CIGO, UAF Yank  88.57  13 P     P     16 04 39.0 -0.2
      baz=209
COLA  College         88.58  13 P     P     16 04 38.7 -0.4
SCRK  Sand Creek      88.64  14 P     P     16 04 39.6 -0.1
SCRK                            IAmb  IAmb  16 04 42.3
      comp=Z,3.6nm,0.9s
SCRK  Sand Creek      88.64  14 P     P     16 04 39.9 +0.2
      baz=212,SNR=5.6
IL31                  88.69  13 P     P     16 04 39.2 -0.5
IL31                            IAmb  IAmb  16 04 40.9
      comp=Z,4.6nm,0.9s
ILAR  Eielson Array   88.69  13 P     P     16 04 39.2 -0.5
      comp=Z,3.7nm,0.8s,baz=221,slow=5.3,SNR=34
      comp=Z,3.7nm,0.8s
ILAR  Eielson Array   88.69  13 P     P     16 04 38.8 -0.9
N31M  Braeburn, Yuko  88.83  19 P     P     16 04 41.8 +1.3
      baz=220
J25K  Salcha River,   88.88  14 P     P     16 04 40.4 -0.2
J25K                            IAmb  IAmb  16 04 41.7
      comp=Z,5.4nm,0.9s
J25K  Salcha River,   88.88  14 P     P     16 04 41.1 +0.4
      baz=211,SNR=6.0
POKR  Poker Plat Res  88.88  13 P     P     16 04 39.8 -0.8
POKR                            IAmb  IAmb  16 04 40.9
      comp=Z,5.5nm,0.8s
REDW  Red Top Meadow  88.97  42 P     P     16 04 42.8 +0.9
S22A  4UR Ranch, Cre  88.97  49 P     P     16 04 43.5 +1.4
      baz=243
TPAW  Teton Pass      88.97  42 P     P     16 04 43.3 +1.4
TPAW                            IAmb  IAmb  16 04 44.7
      comp=Z,3.2nm,0.9s
SNOW  Snow King Moun  89.08  42 P     P     16 04 43.8 +1.4
SNOW                            IAmb  IAmb  16 04 45.2
      comp=Z,6.8nm,0.9s
H23K  Yukon River     89.09  12 P     P     16 04 41.3 -0.3
H23K  Yukon River     89.09  12 P     P     16 04 41.6  0.0
      baz=207
O20A  White River Ci  89.11  46 P     P     16 04 43.9 +1.3
O20A                            IAmb  IAmb  16 04 44.4
      comp=Z,5.5nm,1.1s
O20A  White River Ci  89.11  46 P     P     16 04 43.9 +1.3
      baz=242
K27K  Chicken         89.15  15 P     P     16 04 43.1 +1.3
      baz=214
HHC   Hu-ho-hao-te    89.17 315 eP    P     16 04 41.9 -0.8
HHC                             pmax  pmax
      comp=Z,36nm,0.9s
HHC                             pmax  pmax
      comp=Z,160nm,6.1s
J26L  Joseph Creek    89.19  14 P     P     16 04 43.0 +0.9
      baz=212,SNR=15
MOOW  Moose Ponds     89.23  42 P     P     16 04 44.3 +1.3
MOOW                            IAmb  IAmb  16 04 45.0
      comp=Z,5.1nm,1.4s
LOHW  Long Hollow     89.25  42 P     P     16 04 44.5 +1.3
LOHW                            IAmb  IAmb  16 04 45.1
      comp=Z,3.2nm,0.9s
M30M  Minto, Yukon    89.38  18 P     P     16 04 43.7 +0.7
M30M  Minto, Yukon    89.38  18 P     P     16 04 43.9 +0.8
      baz=219
FLWY  Flagg Ranch     89.43  42 P     P     16 04 45.2 +1.3
FLWY                            IAmb  IAmb  16 04 46.9
      comp=Z,5.8nm,1.0s
BW06  Boulder Array   89.50  43 P     P     16 04 45.1 +0.8
BW06                            IAmb  IAmb  16 04 46.3
      comp=Z,3.5nm,0.8s
BW06  Boulder Array   89.50  43 P     P     16 04 45.6 +1.2
      baz=241
PD31  Pinedale Array  89.50  43 P     P     16 04 45.2 +0.9
PD31                            IAmb  IAmb  16 04 46.3
      comp=Z,3.3nm,0.8s
PDAR  Pinedale Array  89.50  43 P     P     16 04 45.5 +1.2
      comp=Z,2.5nm,0.6s,baz=214,slow=3.6,SNR=31
      comp=Z,2.5nm,0.6s
PDAR  Pinedale Array  89.50  43 P     P     16 04 44.9 +0.6
YHL   Hebgen Lake     89.51  41 P     P     16 04 46.3 +1.9
YHL                             IAmb  IAmb  16 04 48.4
      comp=Z,6.7nm,1.2s
SMCO  Snowmass        89.53  48 P     P     16 04 45.7 +0.9
BOZ   Bozeman (W)     89.62  40 P     P     16 04 46.0 +1.3
BOZ   Bozeman (W)     89.62  40 P     P     16 04 46.2 +1.5
      baz=239
H17A  Grant Village   89.66  42 P     P     16 04 48.1 +3.0
      baz=240
CM31  Chiang Mai Arr  89.72 290 P     P     16 04 46.6 +1.0
CMAR  Chiang Mai Arr  89.72 290 P     P     16 04 46.8 +1.2
      comp=Z,5.0nm,0.9s,baz=123,slow=2.8,SNR=38
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr  89.72 290 P     P     16 04 46.6 +1.0
CHTO  Chiang Mai      89.86 290 P     P     16 04 46.8 +0.6
DAWY  Dawson          89.86  16 P     P     16 04 45.6 +0.4
DAWY                            IAmb  IAmb  16 04 46.8
```

	comp=Z,6.3nm,0.9s						
DAWY	Dawson	89.86	16	P	P	16 04 45.9	+0.7
	baz=216						
SDCO	Great Sand Dun	89.91	49	P	P	16 04 47.4	+1.0
SDCO	Great Sand Dun	89.91	49	P	P	16 04 47.9	+1.5
	baz=244						
EGAK	Eagle	89.99	15	P	P	16 04 46.1	+0.4
EGAK				IAmb	IAmb	16 04 47.2	
	comp=Z,5.9nm,0.9s						
EGAK	Eagle	89.99	15	P	P	16 04 46.3	+0.5
	baz=215						
COLD	Coldfoot	90.23	11	P	P	16 04 47.2	+0.4
COLD				IAmb	IAmb	16 04 48.5	
	comp=Z,4.8nm,0.9s						
COLD	Coldfoot	90.23	11	P	P	16 04 47.8	+1.0
	baz=206						
PZH	PanZhiHua	90.38	298	P	P	16 04 49.6	+1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,5.5s						
T25A	Trinidad	90.43	50	P	P	16 04 50.1	+1.4
	baz=244						
N23A	Red Feather La	91.02	46	P	P	16 04 52.2	+0.8
	baz=243						
I29M	Ogilvie Camp,	91.18	16	P	P	16 04 51.4	+0.1
	baz=217						
BMAR	Burnt Mountain	91.46	12	P	P	16 04 53.4	+0.9
INK	Inuvik	94.66	15	P	P	16 05 07.1	+0.1
	baz=222						
YKA	Yellowknife Ar	96.97	25	P	P	16 05 17.4	-0.1
	comp=Z,0.6nm,0.8s,baz=246,slow=4.8,SNR=6.6						
	comp=Z,0.6nm,0.8s						
ZALV	Zalesovo Beam	110.38	321	PKiKP	PKiKP	16 10 13.5	-0.9
	comp=Z,1.2nm,0.5s,baz=88,slow=1.2,SNR=6.1						
MKAR	Makanchi Array	111.01	313	PKiKP	PKiKP	16 10 14.9	-0.9
	comp=Z,0.7nm,0.4s,baz=106,slow=1.2,SNR=16						
GAR	Garm	118.94	304		PKPdf	16 10 30.7	-0.7
KK31	Karatay Array	119.01	309		PKPdf	16 10 30.5	-0.8
KKAR	Karatay Array	119.01	309		PKPdf	16 10 30.3	-1.0
KKAR	Karatay Array	119.01	309		PKPdf	16 10 30.6	-0.8
BRVK	Borovoye	119.02	320	PKPdf	PKPdf	16 10 30.1	-0.8
ARU	Arti	125.13	325		PKPdf	16 10 42.4	-0.2
ABKAR	Akbulak array	125.93	316		PKPdf	16 10 43.8	-0.5
ARCES	ARCESS Array B	129.09	349	PKP	PKPdf	16 10 49.5	-0.2
	comp=Z,2.5nm,0.6s,baz=22,slow=1.3,SNR=13						
FINES	FINESS Array B	135.88	343	PKhKP	PKPpre	16 10 52.6	
	comp=Z,0.7nm,0.6s,baz=329,slow=2.2,SNR=6.5						
FINES				PKP	PKPdf	16 11 01.6	-1.2
	comp=Z,1.1nm,0.3s,baz=37,slow=2.2,SNR=8.2						
NB2	NORSAR Subarra	139.18	353	PKP	PKPdf	16 11 00.4	-8.5
	comp=Z,1.6nm,0.9s,baz=9.1,slow=3.7						
NOA	NORSAR Array B	139.18	353	PKhKP	PKPpre	16 10 59.9	
	comp=Z,0.7nm,0.6s,baz=13,slow=2.4,SNR=4.8						
NOA				PKP	PKPdf	16 11 09.4	+0.5
	comp=Z,0.3nm,0.4s,baz=14,slow=3.8,SNR=3.7						
LODK	Lodwar	142.77	247		PKPdf	16 11 15.4	-1.4
KAC	Achnashellach	142.98	6	eP	PKPdf	16 11 13.8	-2.0
AKASG	Malin Array Be	143.00	331	PKhKP	PKPpre	16 11 13.1	
	comp=Z,8.0nm,0.4s,baz=43,slow=4.4,SNR=94						
AKASG	Malin Array Be	143.00	331	PKPpre	PKPpre	16 11 12.6	
AKBB	Malin Array Si	143.00	331		PKPpre	16 11 12.7	
MCD	Coleburn Disti	143.07	4	eP	PKPab	16 11 13.3	-0.4
KPL	Plockton	143.10	6	eP	PKPab	16 11 13.8	-0.1
INVG	Invergeldie, C	144.15	5	eP	PKPbc	16 11 17.5	-0.1
LAWE	Loch Awe, Argy	144.19	7	eP	PKPbc	16 11 17.6	-0.1
EAB	Aberfoyle	144.37	6	eP	PKPdf	16 11 17.8	-0.4
EBL	Broad Law	144.88	4	eP	PKPbc	16 11 19.9	+0.1
SORM	Soroca	145.16	328	⇑P	PKPbc	16 11 20.8	-0.1
EDMD	Edmundbyers	145.89	4	eP	PKPbc	16 11 22.3	-0.5
WIM	Isle of Man	146.35	7	eP	PKPbc	16 11 24.4	+0.3
VASR	Vaslui	146.44	326	⇑P	PKPbc	16 11 25.2	+0.7
BR131	Keskin Array S	146.64	312		PKPbc	16 11 25.1	-0.4
BRTR	Keskin Array B	146.64	312	PKPbc	PKPbc	16 11 25.1	-0.3
	comp=Z,5.5nm,0.8s,baz=135,slow=4.3,SNR=30						
BRTR	Keskin Array B	146.64	312		PKPbc	16 11 24.9	-0.6
HPK	Haverah Park	146.78	3	eP	PKPbc	16 11 25.5	+0.3
VLDR	Vladesti	146.81	325	⇓P	PKPbc	16 11 26.3	+0.8
TLCR		146.82	324	⇑P	PKPbc	16 11 25.8	+0.2
GHRR		147.02	326	⇑P	PKiKP	16 11 27.5	-0.4
BUR08	Bucovina Ar. S	147.03	330		PKPbc	16 11 26.6	+0.3
BURAR	Bucovina Array	147.04	330	⇓P	PKPbc	16 11 26.8	+0.5
BURAR	Bucovina Array	147.04	330		PKPbc	16 11 26.5	+0.3
TESR	Tescani	147.11	327	⇓P	PKPbc	16 11 26.3	0.0
CFR	Carcaliu	147.20	324	⇓P	PKPbc	16 11 26.9	+0.3
OJC	Ojcow	147.22	338		PKPbc	16 11 25.2	-1.3
WLF1	Llynfaes	147.22	6	eP	PKPbc	16 11 26.1	-0.2
TPGR	Topolog	147.25	323	⇓P	PKPbc	16 11 27.3	+0.5
KOLS	Kolonicke sedl	147.33	334	ePKP	PKiKP	16 11 27.6	-0.8
TIRR	Tirgusor	147.50	323	⇓P	PKPbc	16 11 27.4	+0.1
VRI	Vrincioaia	147.51	326	⇓P	PKPbc	16 11 27.5	+0.1
PLOR	Plostina	147.56	326	⇓P	PKPbc	16 11 27.6	+0.1
HARR	Harsova	147.62	324	⇑P	PKPbc	16 11 28.1	+0.4
CRVS	Cervenica-Dubn	147.68	335	ePKP	PKiKP	16 11 28.4	-0.8
BISRR	Bisoca	147.73	326	⇓P	PKPdf	16 11 21.6	-2.7
FOEL	Foel Wylfa	147.73	5	eP	PKPbc	16 11 27.8	+0.1
MANR	Mangalia	147.79	322	⇑P	PKiKP	16 11 29.0	-0.5
COVR	Voineasa-Covas	147.79	327	⇑P	PKPbc	16 11 28.2	+0.1
CWF	Charnwood Fore	148.01	3	eP	PKPbc	16 11 27.8	-0.6
OSTC	Ostas	148.07	342	⇑ePKP	PKPbc	16 11 29.0	+0.3
CHVC	Chvalec	148.09	342	⇑ePKP	PKPbc	16 11 29.2	+0.5
OKC	Ostrava-Krasne	148.10	339	⇑ePKP	PKPbc	16 11 29.1	+0.4
DOPR	Dopca	148.12	328	⇑P	PKiKP	16 11 30.0	-0.2
HLM1	Long Mynd	148.13	5	eP	PKPbc	16 11 28.6	-0.1
MLR	Muntele Rosu	148.17	326	⇑P	PKPbc	16 11 29.3	+0.1
MLR	Muntele Rosu	148.17	326	PKPbc	PKPbc	16 11 28.9	-0.3
UPC	Upice	148.17	342	⇑ePKP	PKiKP	16 11 29.4	-0.7
UPC				ePKPAB	PKPab	16 11 34.7	+0.5
CLL	Collm	148.20	346		PKPbc	16 11 28.8	-0.1
CLL	Collm	148.20	346	ePKPdf	PKPdf	16 11 25.0	+0.3
CLL				⇓iPKPbc	PKPbc	16 11 29.2	+0.3
	comp=Z,22nm,0.8s						
CLL				⇑iPKPab	PKPab	16 11 34.1	-0.1
	comp=Z,12nm,0.8s						
DPC	Dobruska-Polom	148.22	342	⇑ePKP	PKPbc	16 11 29.0	-0.1
DPC				ePKPAB	PKPab	16 11 34.2	-0.2
LANS	Liptovska Anna	148.23	337	ePKP	PKiKP	16 11 30.6	+0.3
LANS				e		16 11 35.8	
KRLC	Kraliky	148.33	341	⇑ePKP	PKPbc	16 11 29.1	-0.3
KRLC				ePKPAB	PKPab	16 11 35.1	+0.2
MORC	Moravsky Berou	148.35	340	⇓P	PKiKP	16 11 30.2	-0.4
MORC	Moravsky Berou	148.35	340		PKPbc	16 11 28.9	-0.5
MORC	Moravsky Berou	148.35	340	ePKP	PKPbc	16 11 29.3	-0.1
BRG	Berggiesshubel	148.39	345	i PKP	PKiKP	16 11 30.1	-0.4
BRG				Amp		16 11 31.0	
	comp=Z,8.7nm,0.8s						
BRG				ex	x	16 11 35.3	
BRG				Amp		16 11 35.9	
	comp=Z,5.0nm,0.8s						
SECR		148.41	326	⇓P	PKiKP	16 11 30.5	-0.3
CJR	Cluj-Napoca	148.45	330	⇓P	PKiKP	16 11 30.6	-0.3
MAUC	Maruska	148.62	339	⇑ePKP	PKiKP	16 11 30.9	-0.2
CSS	Mathiatis	148.63	304		PKPbc	16 11 29.7	-0.8
VOIR		148.66	327	⇓P	PKiKP	16 11 31.2	-0.2
DRGR		148.80	331	⇑P	PKPbc	16 11 31.0	+0.3
ARR	Arges	148.92	327	⇑P	PKiKP	16 11 32.2	+0.3
VYHS	Vyhne	149.01	337	ePKP	PKiKP	16 11 31.7	-0.2
VYHS				e		16 11 38.6	
PRU	Pruhonice	149.05	343	⇑ePKP	PKiKP	16 11 31.5	-0.4
PRU				ePKPAB	PKPab	16 11 38.1	+0.3
VRAC	Vranov	149.06	341	ePKP	PKPbc	16 11 31.3	+0.2
PSZ	Piszkesteto	149.09	336	⇑P	PKiKP	16 11 31.7	-0.5
PSZ	Piszkesteto	149.09	336		PKPbc	16 11 31.1	-0.2
PSZ	Piszkesteto	149.09	336	PKP	PKiKP	16 11 32.2	+0.1
KOLL	Kolacno	149.09	338	ePKP	PKiKP	16 11 31.6	-0.5
JAVC	Velka Javorina	149.11	339	ePKP	PKiKP	16 11 32.4	+0.2
NKC	Novy Kostel	149.33	346	⇑ePKP	PKiKP	16 11 32.5	0.0
KRUC	Moravsky	149.34	341	ePKP	PKPbc	16 11 31.6	-0.2
MODS	Modra-Piesok	149.66	339	ePKP	PKiKP	16 11 33.6	+0.3
MODS				e		16 11 41.6	
SIRR	Siria	149.67	332	⇓P	PKiKP	16 11 33.1	-0.3
GZR	Gura Zlata	149.81	329	⇓P	PKPbc	16 11 33.1	0.0
MEM	Membach	150.00	354	dPKPbc	PKiKP	16 11 33.6	-0.3
BTNL	Ternell	150.01	354	dPKPbc	PKiKP	16 11 33.6	-0.3
KHC	Kasperske Hory	150.08	344		PKPbc	16 11 33.2	-0.4
KHC	Kasperske Hory	150.08	344	⇑ePKP	PKPbc	16 11 33.0	-0.6
KHC				ePKPAB	PKPab	16 11 42.2	0.0
CSKK	Cskako	150.17	337	PKP	PKiKP	16 11 34.9	+0.6
CKRC	Cesky Krumlov	150.17	343	⇑ePKP	PKiKP	16 11 34.1	-0.2
BZS	Buzias	150.19	331	⇓P	PKPbc	16 11 33.8	0.0
GEC2	GERESS Array S	150.31	344		PKPbc	16 11 34.0	-0.3
GERES	GERESS Array B	150.31	344	PKPbc	PKiKP	16 11 34.4	-0.4
	comp=Z,3.2nm,0.7s,baz=54,slow=2.3,SNR=19						
GERES	GERESS Array B	150.31	344		PKPbc	16 11 33.9	-0.3
HERR	Herculane	150.36	329	⇓P	PKPbc	16 11 34.4	+0.1
BMRD	Maredsous	150.41	356	dPKPbc	PKiKP	16 11 34.7	0.0
CONA	Conrad Observa	150.51	340	i P	PKiKP	16 11 35.0	-0.1
	comp=Z,4.0nm,0.6s,SNR=5.9						
RCHB	Rochefort	150.52	355	dPKPbc	PKiKP	16 11 34.8	-0.2
RONA	Rosalia, Austr	150.57	339	eP	PKiKP	16 11 35.0	-0.2
	comp=Z,8.8nm,0.5s,SNR=9.6						
MPLH	Magyarpolny	150.60	337	PKP	PKiKP	16 11 35.3	+0.1
DOU	Dourbes	150.63	356	dPKPbc	PKiKP	16 11 35.2	0.0
MDVR	Moldovita	150.77	330	⇓P	PKPbc	16 11 35.2	-0.1
WLF	Walferdange	150.92	354	dPKP	PKiKP	16 11 36.5	+0.7
MORH	Mrgy, Hungar	150.98	335	⇑P	PKiKP	16 11 35.8	-0.3
MORH	Mrgy, Hungar	150.98	335	PKP	PKiKP	16 11 35.7	-0.3
MOA	Molln	151.06	342	eP	PKPbc	16 11 35.9	0.0
	comp=Z,3.9nm,0.9s						
ARSA	Arzberg	151.22	340	i P	PKPbc	16 11 35.9	-0.3
	comp=Z,1.5nm,0.6s						
KOVH	Kovagotottos	151.30	335	PKP	PKPbc	16 11 36.3	-0.1
FRGS	Fruska Gora	151.35	332	⇓P	PKPbc	16 11 36.1	-0.5
VTS	Vitosha	151.55	325	⇓P	PKiKP	16 11 37.6	+0.1
VTS	Vitosha	151.55	325		PKPbc	16 11 36.9	-0.4
SOKA	Soboth	151.88	340	i P	PKPbc	16 11 37.4	-0.4
	comp=Z,4.6nm,0.9s						
BFO	Black Forest	151.95	350		PKPbc	16 11 37.4	-0.4
KBA	Koelnbreinsper	152.03	343	i P	PKPbc	16 11 37.6	-0.6
	comp=Z,5.5nm,0.9s						
DIVS	Divibare	152.09	331		PKPbc	16 11 37.7	-0.7
WATA	Walderalm	152.25	345	eP	PKPbc	16 11 38.4	-0.3
	comp=Z,2.7nm,0.5s						
RETA	Reutte	152.30	346	eP	PKiKP	16 11 38.7	-0.1
	comp=Z,1.8nm,0.6s						
WTTA	Wattenberg	152.30	345	eP	PKiKP	16 11 38.8	-0.2
	comp=Z,4.0nm,0.4s						
MYKA	Terra Mystica	152.35	342	eP	PKPbc	16 11 38.3	-0.5
	comp=Z,3.2nm,0.4s						
MOTA	Moosalm	152.35	346	eP	PKPbc	16 11 38.5	-0.4
	comp=Z,6.0nm,1.2s						
SQTA	Sankt Quirin	152.45	346	eP	PKiKP	16 11 39.1	-0.1
	comp=Z,2.4nm,0.5s						
ABTA	Abfaltersbach	152.56	343	i P	PKPbc	16 11 38.9	-0.4
	comp=Z,7.0nm,0.6s,SNR=5.2						
DAVA	Damuels	152.67	347	i P	PKiKP	16 11 40.7	+1.0
	comp=Z,3.8nm,0.8s						
FETA	Feichten	152.74	346	i P	PKiKP	16 11 40.0	+0.1
	comp=Z,5.8nm,0.9s						
TUE	Stuetta	153.56	348		PKiKP	16 11 41.5	-0.1
LIT	Litokhoron	153.65	322		PKPab	16 11 57.0	-0.6
ESDC	Sonseca Array	160.59	13	PKPab	PKPab	16 12 26.9	-0.8
	comp=Z,2.5nm,1.1s,baz=338,slow=5.5,SNR=5.8						
ESDC	Sonseca Array	160.59	13		PKPab	16 12 27.6	-0.1
TORD	Torodi Ar. Bea	172.42	182	PKP	PKPdf	16 11 50.8	-0.8
	comp=Z,1.4nm,0.8s,baz=304,slow=2.3,SNR=8.2						
TORD				PKPab	PKPab	16 13 21.2	+0.9
	comp=Z,0.9nm,1.0s,baz=191,slow=2.9,SNR=3.7						

NOU 08 16:17:54.8, 15°.48S×167°.22E, h6^{km}, MLv4.2/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	2.42	158	P	Pn	16 18 35.1	+0.2
YATNC	Mamie plateau,	6.55	183	P	Pn	16 19 31.0	-0.8
DZM	Mont Dzumac	6.60	186	P	Pn	16 19 31.7	-0.8
NOUC	Port Laguerre	6.64	187	P	Pn	16 19 33.7	+0.7
ONTNC	Ouen Toro	6.83	186	P	Pn	16 19 36.4	+0.8
OUENC	Ouen Island, N	6.91	183	P	Pn	16 19 37.0	+0.3
PINNC	Pines Island,	7.10	178	P	Pn	16 19 38.7	-0.6

IDC ***08*** *16:31:53.6±1.4, 8°.73N×72°.24W, h0^{km}, mb3.4/2, mbtmp3.6/3, ML2.2/1, MS3.4/2, Error ellipse: s-maj=24.7km s-min=14.3km az=161.0*

FUNV ***08*** *16:31:55.0, 8°.26N×72°.09W, h5^{km}, MW3.9*

RSNC ***08*** *16:31:56.0±1.5, 8°.31N×72°.16W, h4^{km}±6^{km}, ML3.5, Mw3.8*

ISC 08 16:31:53.0±1.2, **8°.39N**±0°.02×**72°.12W**±0°.02, **h3**^{km}±9^{km}, **n50, σ2^{s}.24**/90, **3C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	0.56	201	⇑iPg	Pg	16 32 03.2	-0.6
CAPV				eS	Sg	16 32 09.8	-1.2
PAMC	Pamplona, Colo	1.19	209	⇑iPg	Pg	16 32 14.9	-1.0
PAMC				ePn	Pb	16 32 17.7	+1.2
PAMC				eSg	Sg	16 32 29.9	-1.6
PAMC				eSn	Sn	16 32 35.2	+1.2
PAMC				i		16 32 36.7	
	comp=Z,1μm,0.3s						
OCAC	Ocana	1.20	263	⇓iPg	Pg	16 32 16.2	+0.1
OCAC				ePn	Pn	16 32 16.9	+0.1
OCAC				eSg	Sb	16 32 32.0	-0.4
OCAC				eSn	Sn	16 32 33.6	-0.1
OCAC				i		16 32 35.5	
	comp=Z,2μm,0.2s						
SOCV	Socops	1.25	95	eP	Pg	16 32 17.4	+0.3
SOCV				eS	Sg	16 32 34.0	+0.6
SDV	Santo Domingo	1.55	71	Pg	Pg	16 32 23.9	+1.1
	comp=Z,61nm,0.3s,baz=262,slow=11,SNR=49						
SDV				Lg	Lg	16 32 43.2	
	comp=Z,74nm,0.3s,baz=250,slow=17,SNR=4.4						
SDV	Santo Domingo	1.55	71	eP	Pg	16 32 23.5	+0.8
SDV				eS	Sn	16 32 43.0	+0.6
SDV				i		16 32 47.3	
	comp=Z,570nm,0.5s						
MCQV	Machiques	1.70	346	eP	Pg	16 32 26.6	+0.9
MCQV				eS	Sg	16 32 50.3	+2.5
LL6C	La Loma 6 Bece	1.76	320	eP	Pg	16 32 27.1	+0.4
LL6C				eS	Sg	16 32 49.3	-0.2
LL6C				i		16 32 54.0	
	comp=Z,880nm,0.3s						
LL1C	La Loma 1 Cana	1.82	309	eP	Pg	16 32 28.4	+0.3
TAMC	Tame, Arauca	1.97	171	⇑eP	Pn	16 32 27.7	+0.3
TAMC				eS	Sn	16 32 52.9	+0.3
TAMC				i		16 32 58.8	
	comp=Z,392nm,0.3s						
SMLC	San Martn de	1.98	282	eP	Pb	16 32 28.8	-0.8
SMLC				eS	Sg	16 32 56.5	-0.1
BRRC	Barranca, Sant	2.03	231	eP	Pb	16 32 30.6	0.0
BRRC				eS	Sb	16 32 56.8	+0.5
BRRC				i		16 33 01.7	
	comp=Z,283nm,0.5s						
BARC	Barichara	2.08	211	eP	Pn	16 32 30.6	+1.7
BARC				eS	Sn	16 32 56.6	+1.1
BARC				i		16 33 02.6	
	comp=Z,525nm,0.3s						
ARGC	Ariguani, Magd	2.56	305	eP	Pb	16 32 37.9	-1.7
ARGC				eS	Sb	16 33 09.6	-1.9
ARGC				i		16 33 38.3	
	comp=Z,159nm,0.5s						
RUSC	La Rusia	2.66	201	eP	Pn	16 32 38.9	+1.7
RUSC				eS	Sb	16 33 15.3	+0.4
RUSC				i		16 33 17.9	
	comp=Z,122nm,0.3s						
CRJC	Cerrejon, Guaj	2.72	344	eP	Pn	16 32 39.5	+1.8
CRJC				eS	Sb	16 33 16.4	+0.2
CRJC				i		16 33 22.1	
	comp=Z,626nm,0.4s						
SANV	Sanarito	2.78	66	eP	Pn	16 32 40.0	+1.5
SANV				eS	Sn	16 33 13.2	+0.6
ZARC	Zaragoza, Cauc	2.86	252	eP	Pn	16 32 41.0	+1.5
ZARC				eS	Sb	16 33 20.8	+0.7
ZARC				i		16 33 24.8	
	comp=Z,250nm,0.3s						
DABV	Dabajuro	2.91	30	eP	Pn	16 32 42.5	+2.3
DABV				eS	Sn	16 33 17.8	+2.1
ELOV	Elorza	2.95	118	eP	Pn	16 32 40.8	0.0
ELOV				eS	Sn	16 33 14.5	-2.3
PTBC	PUERTO BERRIO,	2.96	232	eP	Pn	16 32 41.2	+0.2
PTBC				eS	Sn	16 33 16.3	-0.7
PTBC				i		16 33 26.2	
	comp=Z,174nm,0.3s						
SIQV	Siquisique	3.20	45	eP	Pn	16 32 46.3	+2.0
SIQV				eS	Sn	16 33 23.9	+1.0
URIC	Uribia, Colomb	3.29	2	eP	Pn	16 32 46.1	+0.6
URIC				i		16 33 50.5	
	comp=Z,139nm,0.5s						
SPBC	San Pablo de B	3.34	216	eP	Pn	16 32 47.9	+1.6
SPBC				eS	Sn	16 33 29.7	+3.1
SPBC				i		16 33 48.2	
	comp=Z,107nm,0.5s						
SJCC	San Jacinto, C	3.37	297	eP	Pb	16 32 49.9	-3.6
SJCC				eS	Sb	16 33 32.1	-2.9
SJCC				i		16 33 48.7	
	comp=Z,114nm,0.4s						
UREC	San Jos de Ur	3.44	260	eP	Pn	16 32 49.5	+1.9
UREC				eS	Sb	16 33 34.2	-2.7
UREC				i		16 33 44.3	
	comp=Z,108nm,0.2s						
SMRC	Santa Marta, M	3.45	323	eP	Pn	16 32 47.9	+0.2
MAPV	Macapo	3.89	68	eP	Pn	16 32 54.8	+1.1
MAPV				eS	Sn	16 33 38.8	-1.1
NORC	Norcasia	3.92	224	eP	Pn	16 32 55.6	+1.4
NORC				eS	Sn	16 33 44.2	+3.5
NORC				i		16 33 54.8	
	comp=Z,95nm,0.4s						
HELC	Santa Helena	4.03	237	eP	Pn	16 32 59.0	+3.0
HELC				eS	Sn	16 33 45.5	+1.6
HELC				i		16 33 60.0	
	comp=Z,74nm,0.4s						
CHIC	Chingaza	4.07	203	eP	Pn	16 32 57.5	+0.9
CHIC				eS	Sn	16 33 49.7	+4.8
BAUV	El Baul	4.07	82	eP	Pn	16 32 56.5	+0.3
BAUV				eS	Sn	16 33 42.1	-2.2
ROSC	El Rosal	4.15	212	Pn	Pn	16 33 01.9	+4.2
	comp=Z,2.7nm,0.3s,baz=18,slow=19,SNR=2.7						
ROSC				Pg	Pg	16 33 13.7	+1.0
	comp=Z,7.9nm,0.3s,baz=8.7,slow=17,SNR=5.7						
ROSC				Sn	Sb	16 33 54.5	-3.3
	comp=Z,9.1nm,0.3s,baz=196,slow=22,SNR=3.6						
ROSC				Lg	Lg	16 34 07.0	
	comp=Z,6.8nm,0.3s,baz=176,slow=23,SNR=4.2						
	comp=Z,8.8nm,0.3s						
DBBC	Dabeiba	4.28	252	eP	Pn	16 33 03.5	+4.3
DBBC				eS	Sb	16 33 57.2	-4.0
CBOC	Ciudad Bolivar	4.61	237	eP	Pn	16 33 05.8	+2.0
CBOC				eS	Sn	16 33 59.3	+1.4
CBOC				i		16 34 30.1	
	comp=Z,29nm,0.6s						
TURV	Turiamo	4.69	64	eP	Pn	16 33 05.5	+0.8
TURV				eS	Sn	16 33 57.8	-1.9
BENV	Beln	4.73	70	eP	Pn	16 33 05.5	+0.2
BENV				eS	Sn	16 33 58.2	-2.4
ANIL	Santa Ana	5.07	220	eP	Pn	16 33 12.7	+2.5
ANIL				eS	Sn	16 34 11.7	+2.3
ANIL				i		16 34 18.0	
	comp=Z,58nm,0.5s						
PAYV	Puerto Ayacuch	5.32	123	eP	Pn	16 33 12.3	-1.1
PAYV				eS	Sn	16 34 09.9	-5.4
PLMC	San Jos del P	5.39	230	eP	Pn	16 33 05.7	-8.8
PLMC				i		16 34 38.0	
	comp=Z,12nm,0.6s						
PRAC	Prado	5.40	211	eP	Pn	16 33 15.7	+1.1
PRAC				i		16 34 56.1	
	comp=Z,23nm,0.6s						
ORTC	Ortega, Tolima	5.43	215	eP	Pn	16 33 16.6	+1.6
ORTC				i		16 34 46.0	
	comp=Z,30nm,0.6s						
CACV	CAICARA DEL OR	5.58	98	eP	Pn	16 33 23.6	+6.6
CACV				eS	Sn	16 34 29.9	+8.1
FUNV	FUNVISIS	5.63	68	eP	Pn	16 33 17.9	+0.2
FUNV				eS	Sn	16 34 19.7	-3.3
BIRV	Birongo	6.13	70	eP	Pn	16 33 24.3	-0.3
BIRV				eS	Sn	16 34 30.9	-4.3
PCRV	Puerto La Cruz	7.59	76	eP	Pn	16 33 44.8	+0.1
PCRV				eS	Sn	16 35 05.9	-5.5
SJG	San Juan	11.27	30	LR	LR	16 39 44.5	
	comp=Z,64nm,18.7s,baz=230,slow=43						
LPAZ	La Paz	24.84	171	P	P	16 37 21.5	+4.1
	comp=Z,0.5nm,0.5s,baz=356,slow=8.3,SNR=1.6						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	62.15	339	P	P	16 42 13.7	-1.5
	comp=Z,0.3nm,0.7s,baz=134,slow=7.0,SNR=6.1						
	comp=Z,0.3nm,0.7s						
PMSA	Palmer Station	73.21	176	LR	LR	17 16 39.3	
	comp=Z,59nm,19.5s,baz=352,slow=36						

MOS ***08*** *16:41:30.4±0.8, 21°.73S×179°.43W, h590^{km}, mb5.0/16, Error ellipse: s-maj=7.5km s-min=7.0km az=88.5*

NOU ***08*** *16:41:31.6, 21°.76S×179°.32W, h597^{km}, ML5.1/122, Fiji Islands Region*

IDC ***08*** *16:41:31.9±0.3, 21°.77S×179°.42W, h597^{km}±2^{km}, mb4.5/40, mbtmp5.4/43, Error ellipse: s-maj=7.9km s-min=6.7km az=171.0*

NEIC ***08*** *16:41:31.6±1.8, 21°.77S±0°.08×179°.41W±0°.09, h590^{km}±4^{km}, mb4.9/362, Error ellipse: s-maj=12.0km s-min=11.1km az=93.0*

GCMT ***08*** *16:41:34.6±0.2, 21°.91S±0°.02×179°.41W±0°.02, h599^{km}±1^{km}, MW5.5/116, Moment Tensor Solution. s116,c174; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.08±.03; $M_{\theta\theta}$-0.19±.05; $M_{\phi\phi}$0.26±.05; $M_{r\theta}$-0.72±.05; $M_{\theta\phi}$-0.56±.04; $M_{\phi r}$-2.06±.04; Best double couple: $M_0$2.26100×10^{17} NP1:ϕ_s107.00000°,δ15.00000°, λ-180.00000°. NP2:ϕ_s17.00000°,δ90.00000°, λ-75.00000°. Principal axes: T 2.1650, Plg43.0000°, Azm93.0000°; N 0.1930, Plg15.0000°, Azm197.0000°; P -2.3570, Plg43.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 08 16:41:31.6±0.2, **21°.83S**±0°.03×**179°.38W**±0°.03, **h600**^{km}±2^{km}, **h601**^{km}**:pP-P, n1414, σ1^{s}.20**/1628, **mb5.0**/336, **171C-168D, Fault plane solution: NP1:**ϕ_s189.45456°, δ82.44772°, λ46.13493°. **NP2:**ϕ_s91.66802°, δ44.37978°, λ169.16879°. **Principal axes:** T Plg36.7496°, Azm61.7539°; N Plg43.3892°, Azm196.6543°; P Plg24.3587°, Azm311.9940°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	3.62	9	P	P	16 42 55.1	+0.5
MSVF	Nonsavu	4.74	329	P	P	16 43 02.6	-0.1
	3μm,0.5s,baz=184,slow=4.4,SNR=811						
MSVF				S	S	16 44 17.2	+0.3
	542nm,0.9s,baz=118,slow=17,SNR=4.2						
MSVF	Nonsavu	4.74	329	P	P	16 43 02.9	+0.2
MSVF	Nonsavu	4.74	329	P	P	16 43 03.2	+0.5
DGTI	Dogotuki	5.56	351	P	P	16 43 09.3	+0.1
RIZ	Raoul Island	7.50	170	P	P	16 43 24.6	-1.5
RIZ				S	S	16 44 57.6	-2.4
RAO	Raoul Island	7.51	170	P	P	16 43 25.4	-0.8
	2μm,0.4s,baz=77,slow=23,SNR=19						
RAO				S	S	16 44 56.7	-3.4
	4μm,0.7s,baz=98,slow=24,SNR=14						
RAO	Raoul Island	7.51	170	P	P	16 43 24.8	-1.4
RAO	Raoul Island	7.51	170	P	P	16 43 25.9	-0.3
GLKZ	Green Lake	7.52	170	P	P	16 43 24.2	-2.0
GLKZ				S	S	16 44 56.0	-4.3
NIUE	Niue	9.27	75	P	P	16 43 42.4	-0.9
	baz=9.2,SNR=14						
NIUE				S	S	16 45 28.9	-2.4
	baz=9.2						
NIUE	Niue	9.27	75	P	P	16 43 41.6	-1.7
NIUE	Niue	9.27	75	P	P	16 43 42.9	-0.4
AFI	Afiamalu	10.69	44	P	P	16 43 54.1	-3.4
	38nm,0.3s,baz=97,slow=2.0,SNR=13						
AFI				S	S	16 45 46.0	-11
	220nm,0.8s,baz=197,slow=22,SNR=7.6						
AFI	Afiamalu	10.69	44	P	P	16 43 53.9	-3.6
AFI	Afiamalu	10.69	44	P	P	16 43 53.9	-3.6
AFI	Afiamalu	10.69	44	P	P	16 43 55.7	-1.8
MARNC	Mare, Loyalty	11.71	269	P	P	16 44 06.7	-0.8
MARNC	Mare, Loyalty	11.71	269	P	P	16 44 08.0	+0.5
RTV	Rentapao	12.16	287	P	P	16 44 13.1	+1.1
PINNC	Pines Island,	12.23	264	P	P	16 44 12.3	-0.4
PINNC	Pines Island,	12.23	264	P	P	16 44 13.1	+0.4
DVP	Devils Point	12.40	287	P	P	16 44 15.5	+1.1
LIFNC	LIFOU	12.52	272	P	P	16 44 14.2	-1.4
LIFNC	LIFOU	12.52	272	P	P	16 44 14.8	-0.8
YATNC	Mamie plateau,	12.75	266	P	P	16 44 18.8	+0.9
OUENC	Ouen Island, N	12.79	265	P	P	16 44 17.5	-0.8
OUENC	Ouen Island, N	12.79	265	P	P	16 44 18.8	+0.5
ONTNC	Ouen Toro	13.15	265	P	P	16 44 20.8	-1.2
ONTNC	Ouen Toro	13.15	265	P	P	16 44 22.5	+0.6
DZM	Mont Dzumac	13.16	266	eP	P	16 44 21.4	-0.8
	236nm,1.1s						
DZM				eS	S	16 46 42.5	+0.2
	336nm,1.6s						
DZM	Mont Dzumac	13.16	266	P	P	16 44 21.8	-0.5
	53nm,0.5s,baz=81,slow=19,SNR=85						
DZM				S	S	16 46 40.3	-2.0
	50nm,1.1s,baz=121,slow=16,SNR=2.9						
DZM				ScP	ScP	16 51 40.7	+0.8
	25nm,0.8s,baz=43,slow=20,SNR=16						

DZM	Mont Dzumac	13.16	266	P	P	16 44 20.8	-1.4
DZM	Mont Dzumac	13.16	266	P	P	16 44 22.1	-0.1
NOUC	Port Laguerre	13.29	266	P	P	16 44 23.0	-0.4
FUNA	Funafuti	13.30	354	P	P	16 44 21.4	-2.2
NFK	Norfolk Island	13.52	235	P	P	16 44 27.2	+1.6
	baz=14,SNR=4.0						
NFK	Norfolk Island	13.52	235	P	P	16 44 27.2	+1.6
SANVU	Saraoutou	14.21	294	P	P	16 44 30.9	-1.7
SANVU	Saraoutou	14.21	294	P	P	16 44 32.1	-0.5
OUZ	Omahuta	14.69	203	P	P	16 44 38.5	+1.7
OUZ	Omahuta	14.69	203	P	P	16 44 38.2	+1.4
OUZ	Omahuta	14.69	203	P	P	16 44 39.0	+2.2
WCZ	Waipu Caves	15.09	200	P	P	16 44 41.8	+1.4
KOUNC	Koumac, New Ca	15.29	272	P	P	16 44 42.4	-0.1
KOUNC	Koumac, New Ca	15.29	272	P	P	16 44 43.8	+1.3
KUZ	Kuaotunu	15.46	195	P	P	16 44 44.5	+0.7
MXZ	Matakaoa Point	15.81	187	P	P	16 44 45.5	-1.5
MXZ				IAmb	IAmb	16 45 12.7	
	comp=Z,45nm,1.0s						
MKAZ	Moumakai	15.94	196	P	P	16 44 50.5	+2.2
HAZ	Te Kaha	16.06	188	P	P	16 44 48.6	-0.7
HAZ				S	S	16 47 24.8	-5.6
RUGZ	Raukumara Rang	16.28	188	P	P	16 44 49.7	-1.8
RUGZ				S	S	16 47 31.0	-3.3
PUZ	Puketiti	16.32	187	P	P	16 44 50.3	-1.4
PUZ				S	S	16 47 31.8	-2.8
TWGZ	Tauwhareparae	16.45	187	P	P	16 44 52.0	-1.0
TWGZ				S	S	16 47 36.2	-0.8
URZ	Urewera	16.65	190	P	P	16 44 52.9	-1.8
	comp=Z,22nm,0.5s,baz=121,slow=22,SNR=36						
URZ				S	S	16 47 33.5	-6.6
	comp=Z,35nm,0.5s,baz=216,slow=22,SNR=9.8						
URZ	Urewera	16.65	190	P	P	16 44 53.0	-1.8
URZ				IAmb	IAmb	16 45 07.3	
	comp=Z,59nm,0.9s						
URZ	Urewera	16.65	190	P	P	16 44 52.3	-2.5
URZ				S	S	16 47 34.4	-5.6
URZ	Urewera	16.65	190	P	P	16 44 53.4	-1.3
MWZ	Matawai	16.66	189	P	P	16 44 52.3	-2.6
MWZ				S	S	16 47 35.3	-5.1
TKGZ	Te Karaka	16.73	188	P	P	16 44 54.6	-0.8
TKGZ				S	S	16 47 39.6	-1.7
CNGZ	Carnagh Statio	16.73	187	P	P	16 44 53.4	-2.0
CNGZ				S	S	16 47 38.8	-2.6
RIGZ	Rimuhau	17.00	188	P	P	16 44 59.8	+1.9
RIGZ				S	S	16 47 42.2	-3.6
TLZ	Tolley Road	17.02	194	P	P	16 44 59.3	+1.1
RTZ	Ruatahuna	17.02	190	P	P	16 44 59.0	+0.7
RTZ				S	S	16 47 44.8	-1.5
SNGZ	Shannon Statio	17.13	189	P	P	16 44 56.9	-2.2
SNGZ				S	S	16 47 43.9	-4.0
PRGZ	Paritu Road	17.20	187	P	P	16 44 58.9	-0.9
PRGZ				S	S	16 47 46.5	-2.5
MTHZ	Maungataniwha	17.28	190	P	P	16 44 58.0	-2.4
MTHZ				S	S	16 47 47.4	-2.9
RAHZ	Arahi	17.30	189	P	P	16 45 00.7	0.0
RAHZ				S	S	16 47 48.3	-2.4
HIZ	Hauiti	17.35	195	P	P	16 45 01.7	+0.5
HIZ				IAmb	IAmb	16 45 21.5	
	comp=Z,50nm,0.9s						
HIZ	Hauiti	17.35	195	P	P	16 45 03.1	+2.0
MHGZ	Mahia Peninsul	17.42	187	P	P	16 45 03.3	+1.5
MHGZ				S	S	16 47 54.3	+1.7
BKZ	Black Stump Fm	17.64	191	P	P	16 45 01.9	-1.9
BKZ				IAmb	IAmb	16 45 18.1	
	comp=Z,17nm,0.5s						
BKZ	Black Stump Fm	17.64	191	P	P	16 45 02.8	-1.0
ARHZ	Aropaoanui	17.65	189	P	P	16 45 04.1	+0.3
ARHZ				S	S	16 47 53.4	-2.9
MCHZ	McNeill Hill	17.88	190	P	P	16 45 04.9	-1.0
KWHZ	Kaweka Forest	17.90	191	P	P	16 45 00.5	-5.8
KWHZ				P	S	16 47 55.8	-4.7
BHHZ	Black Hill Sta	18.03	191	P	P	16 45 05.2	-2.2
KAHZ	Kahuranaki	18.19	189	P	P	16 45 08.2	-0.6
RAR	Rarotonga	18.25	92	P	P	16 45 09.8	+0.2
	comp=Z,175nm,1.0s,baz=231,slow=6.0,SNR=14						
RAR	Rarotonga	18.25	92	P	P	16 45 08.8	-0.8
RAR	Rarotonga	18.25	92	P	P	16 45 10.5	+0.9
PNHZ	Pukenui	18.42	191	P	P	16 45 09.2	-1.7
PXZ	Pawanui	18.43	189	P	P	16 45 09.8	-1.1
ANWZ	Angora Road	18.91	190	P	P	16 45 15.2	-0.1
ANWZ				S	S	16 48 13.5	-3.0
BFZ	Birch Farm	19.16	190	P	P	16 45 17.0	-0.5
BFZ	Birch Farm	19.16	190	P	P	16 45 15.5	-2.1
BFZ				S	S	16 48 16.7	-3.8
SNZO	South Karori	20.06	193	P	P	16 45 23.8	-1.8
SNZO	South Karori	20.06	193	P	P	16 45 25.8	+0.2
BHW	Baring Head	20.12	193	P	P	16 45 25.5	-0.7
QRZ	Quartz Range	20.14	198	P	P	16 45 26.9	+0.4
QRZ	Quartz Range	20.14	198	P	P	16 45 27.4	+1.0
NNZ	Nelson	20.28	196	P	P	16 45 27.0	-0.6
KNTN	Kanton	20.35	23	P	P	16 45 27.5	-1.2
	comp=Z,53nm,1.0s						
BSWZ	Blackbirch Sta	20.63	194	P	P	16 45 30.8	0.0
THZ	Tophouse	20.91	196	P	P	16 45 32.3	-1.1
KHZ	Kahutara	21.37	195	P	P	16 45 36.0	-1.3
KHZ	Kahutara	21.37	195	P	P	16 45 36.7	-0.7
LHI	Lord Howe Isla	21.51	239	P	P	16 45 41.7	+2.8
	baz=22,SNR=5.1						
LHI	Lord Howe Isla	21.51	239	P	P	16 45 36.7	-2.2
LTZ	Lake Taylor	22.03	197	P	P	16 45 41.7	-1.7
OXZ	Oxford	22.60	196	P	P	16 45 46.9	-1.4
MQZ	McQueen’s Vall	22.80	195	P	P	16 45 48.4	-1.7
MQZ				IAmb	IAmb	16 46 00.9	
	comp=Z,23nm,0.7s						
RPZ	Rata Peaks	23.23	198	P	P	16 45 54.1	+0.1
	comp=Z,11nm,0.7s,baz=303,slow=2.0,SNR=14						
RPZ				S	S	16 49 39.5	+15
	comp=Z,3.9nm,0.4s,baz=118,slow=22,SNR=1.5						
RPZ				ScP	ScP	16 52 01.8	+0.4
	comp=Z,4.7nm,0.5s,baz=321,slow=11,SNR=2.3						
	comp=Z,11nm,0.7s						
RPZ	Rata Peaks	23.23	198	P	P	16 45 53.4	-0.5
RPZ				IAmb	IAmb	16 46 09.7	
	comp=Z,25nm,0.7s						
RPZ	Rata Peaks	23.23	198	P	P	16 45 55.3	+1.3
HNR	Honiara	23.38	299	P	P	16 45 54.8	-0.9
	comp=Z,124nm,0.6s,baz=215,slow=7.7,SNR=12						
	comp=Z,124nm,0.6s						
HNR	Honiara	23.38	299	P	P	16 45 53.9	-1.8
HNR	Honiara	23.38	299	P	P	16 45 55.1	-0.6
FOZ	Fox Glacier	23.43	200	P	P	16 45 55.0	-0.8
FOZ				IAmb	IAmb	16 45 57.9	
	comp=Z,39nm,0.8s						
ODZ	Otahua Downs	24.57	197	P	P	16 46 06.3	+0.5
	comp=Z,21nm,1.3s						
WHZ	Wether Hill Ro	26.14	200	P	P	16 46 19.7	+0.1
EIDS	Eidsvold	27.27	257	P	P	16 46 30.4	+0.6
	baz=27,SNR=57						
EIDS	Eidsvold	27.27	257	P	P	16 46 30.1	+0.3
EIDS	Eidsvold	27.27	257	P	P	16 46 30.5	+0.6
ARMA	Armidale	27.34	246	P	P	16 46 32.2	+1.7
	baz=28,SNR=67						
ARMA	Armidale	27.34	246	P	P	16 46 31.7	+1.2
ARMA	Armidale	27.34	246	P	P	16 46 32.3	+1.7
TBI	Tubuai	27.64	99	*e*P	P	16 46 33.6	+0.5
	comp=Z,570nm,1.3s						
TBI				*e*LR	LR	16 53 12.5	
	comp=Z,526nm,33.8s						
RK1H	Rockhampton Ha	27.83	261	P	P	16 46 35.3	+0.6
NTLH	Newcastle Hard	27.86	241	P	P	16 46 37.0	+2.1
PAE	Paea	28.33	87	*e*P	P	16 46 39.3	+0.2
	comp=Z,38nm,1.2s						
PPT2	Papeete2	28.35	87	*e*P	P	16 46 39.9	+0.5
	comp=Z,230nm,1.3s						
PPT2				*e*pP	pP	16 48 11.0	-1.2
PPT	Papeete	28.35	87	P	P	16 46 39.5	+0.1
	comp=Z,116nm,0.9s,baz=90,slow=3.4,SNR=9.8						
	comp=Z,116nm,0.9s						
PPTF	Pamatai, Papee	28.36	87	P	P	16 46 39.6	+0.2
PPTF	Pamatai, Papee	28.36	87	P	P	16 46 40.4	+1.0
MGCD	Mangrove Creek	28.43	240	P	P	16 46 41.4	+1.7
	baz=29,SNR=74						
MGCD	Mangrove Creek	28.43	240	P	P	16 46 41.9	+2.1
RIV	Riverview	28.57	239	P	P	16 46 42.4	+1.4
	baz=29,SNR=5.8						
SYDH	Sydney Hard Ro	28.88	239	P	P	16 46 45.3	+1.7
RMQ	Roma	29.40	255	P	P	16 46 49.7	+1.5
	baz=30,SNR=154						
RMQ	Roma	29.40	255	P	P	16 46 49.8	+1.5
CNB	Canberra Magne	30.42	237	P	P	16 46 58.6	+1.6
	baz=31,SNR=32						
CNB	Canberra Magne	30.42	237	P	P	16 46 58.6	+1.6
PMOR	Pomariorio Ree	30.59	83	*e*P	P	16 46 58.9	+0.3
	comp=Z,551nm,1.2s						
PMOR				*e*pP	pP	16 48 30.7	-2.2
CAN	Canberra	30.71	237	P	P	16 46 59.4	-0.1
CAN				pmax	pmax		
	comp=Z,225nm,1.1s						
CAN	Canberra	30.71	237	P	P	16 46 59.4	-0.1
CAN	Canberra	30.71	237	P	P	16 47 01.0	+1.6
VAH	Vaihoa	30.77	83	*e*P	P	16 47 00.0	-0.1
	comp=Z,335nm,1.1s						
XMAS	Kiritimati	31.98	45	P	P	16 47 10.3	0.0
CTA	Charters Tower	32.10	267	P	P	16 47 11.9	+0.4
	comp=Z,99nm,0.4s,baz=90,slow=9.6,SNR=555						
CTA				ScP	ScP	16 52 30.2	+0.7
	comp=Z,12nm,0.8s,baz=92,slow=1.4,SNR=5.0						
	comp=Z,99nm,0.4s						
CTA	Charters Tower	32.10	267	P	P	16 47 12.0	+0.6
CTAO	Charters Tower	32.10	267	P	P	16 47 11.6	+0.2
CTAO				pmax	pmax		
	comp=Z,346nm,1.3s						
CTAO	Charters Tower	32.10	267	P	P	16 47 11.6	+0.2
CTAO	Charters Tower	32.10	267	P	P	16 47 12.0	+0.6
CMSA	Cobar Meteorol	32.56	245	P	P	16 47 16.0	+1.0
	baz=33,SNR=390						
CMSA	Cobar Meteorol	32.56	245	P	P	16 47 16.1	+1.0
RABL	Rabaul	32.69	298	P	P	16 47 13.8	-2.7
RABL	Rabaul	32.69	298	P	P	16 47 15.4	-1.1
KWAJ	Kwajalein Atol	33.01	336	P	P	16 47 18.5	-0.6
KWAJ				pmax	pmax		
	comp=Z,295nm,1.0s						
KWAJ	Kwajalein Atol	33.01	336	P	P	16 47 18.4	-0.6
QLP	Quilpie	33.45	255	P	P	16 47 23.2	+0.5
	baz=34,SNR=92						
QLP	Quilpie	33.45	255	P	P	16 47 23.2	+0.5
GLAD	Gladstone	33.48	228	P	P	16 47 23.3	+0.6
	comp=Z,32nm,1.1s						
TOO	Toolangi	34.08	235	P	P	16 47 28.9	+1.1
	baz=34,SNR=34						
TOO	Toolangi	34.08	235	P	P	16 47 28.3	+0.5
TOO				pmax	pmax		
	comp=Z,208nm,1.2s						
TOO	Toolangi	34.08	235	P	P	16 47 28.3	+0.5
TOO	Toolangi	34.08	235	P	P	16 47 28.9	+1.1
MTSU	Mount Surprise	34.27	270	P	P	16 47 30.1	+0.5
	baz=34,SNR=140						
MTSU	Mount Surprise	34.27	270	P	P	16 47 30.1	+0.5
CORO	Coronation Par	34.27	227	P	P	16 47 30.4	+1.1
PMG	Port Moresby	34.42	286	P	P	16 47 31.1	+0.2
	comp=Z,270nm,0.9s,baz=73,slow=6.8,SNR=57						
PMG				ScP	ScP	16 52 38.2	+0.4
	comp=Z,26nm,0.9s,baz=95,slow=4.2,SNR=5.0						
	comp=Z,270nm,0.9s						
PMG	Port Moresby	34.42	286	P	P	16 47 30.7	-0.3
PMG	Port Moresby	34.42	286	P	P	16 47 30.9	0.0
PMG	Port Moresby	34.42	286	P	P	16 47 31.1	+0.2
MOO	Moorlands	34.66	226	P	P	16 47 33.8	+1.3
	comp=Z,61nm,1.4s						
TAU	Tasmania Unive	34.78	225	P	P	16 47 34.2	+0.7
TAU				pmax	pmax		
	comp=Z,45nm,1.2s						
TAU	Tasmania Unive	34.78	225	P	P	16 47 34.2	+0.7
TAU				IAmb	IAmb	16 47 43.1	
	comp=Z,45nm,1.1s						
TAU	Tasmania Unive	34.78	225	P	P	16 47 33.8	+0.3
	comp=Z,35nm,1.4s						
PATS	Pohnpei	35.92	320	P	P	16 47 43.3	+0.1
STKA	Stephens Creek	36.06	246	P	P	16 47 45.4	+1.1
	comp=Z,94nm,0.6s,baz=96,slow=11,SNR=333						
STKA				ScP	S	16 52 42.0	-0.1
	comp=Z,20nm,1.1s,baz=294,slow=20,SNR=3.5						
	comp=Z,94nm,0.6s						
STKA	Stephens Creek	36.06	246	P	P	16 47 45.4	+1.1
	baz=36,SNR=242						
STKA	Stephens Creek	36.06	246	P	P	16 47 44.7	+0.5
STKA				IAmb	IAmb	16 47 46.5	
	comp=Z,58nm,1.2s						
STKA	Stephens Creek	36.06	246	P	P	16 47 45.5	+1.2
COEN	Coen	36.41	276	P	P	16 47 48.1	+0.7
	baz=36,SNR=60						
COEN	Coen	36.41	276	P	P	16 47 47.2	-0.1
COEN	Coen	36.41	276	P	P	16 47 48.1	+0.7
INKA	Innaminka	36.56	253	P	P	16 47 50.1	+1.7
ARPS	Mount Arapiles	36.69	237	P	P	16 47 49.8	+0.6
	baz=37,SNR=20						
ARPS	Mount Arapiles	36.69	237	P	P	16 47 49.9	+0.6
MANU	Manus Island	37.85	297	P	P	16 47 58.3	-0.8
QIS	Mount Isa	38.19	264	P	P	16 48 01.5	-0.2
	baz=38,SNR=32						
QIS	Mount Isa	38.19	264	P	P	16 48 01.4	-0.4
HTT	Hallett	38.48	243	P	P	16 48 04.6	+0.6
	baz=39,SNR=59						
HTT	Hallett	38.48	243	P	P	16 48 04.6	+0.6
LCRK	Leigh Creek	38.84	248	P	P	16 48 07.7	+0.8
TWOA	Tennyson Woods	38.97	241	P	P	16 48 08.2	+0.4
NAPP	Napperby	39.09	244	P	P	16 48 09.8	+0.9
PTPS	Port Pirie	39.22	244	P	P	16 48 11.2	+1.3
	comp=Z,419nm,0.7s						
WHYH	Whyalla	39.56	244	P	P	16 48 13.7	+1.1
TAOE	Nuku Hiva Isla	39.84	77	*e*P	P	16 48 15.8	+0.6
	comp=Z,591nm,1.1s						
TAOE	Nuku Hiva Isla	39.84	77	P	P	16 48 14.9	-0.3
BBOO	Buckleboo	40.81	245	P	P	16 48 22.8	+0.3
	baz=41,SNR=83						
BBOO	Buckleboo	40.81	245	P	P	16 48 22.5	-0.1
BBOO	Buckleboo	40.81	245	P	P	16 48 22.8	+0.3
MMPI	Merauke	40.91	283	P	P	16 48 22.9	-0.7
	comp=Z,7µmcomp=Z,679nm,0.7s						
RKT	Rikitea	40.94	101	*e*P	P	16 48 24.4	+0.8
	comp=Z,128nm,1.2s						
OOD	Oodnadatta	41.04	252	P	P	16 48 25.7	+1.3
MULG	Mulgathing	42.43	249	P	P	16 48 35.8	+0.5
WR0	Warramunga Arr	42.97	264	P	P	16 48 39.0	-0.7
AS31	Alice Springs	42.98	258	P	P	16 48 39.7	0.0
AS31				IAmb	IAmb	16 48 41.4	
	comp=Z,56nm,0.8s						
ASAR	Alice Springs	42.98	258	P	P	16 48 39.9	+0.2
	comp=Z,269nm,0.9s,baz=99,slow=7.9,SNR=1481						
ASAR				PcP	PcP	16 50 16.7	+0.5
	comp=Z,16nm,0.6s,baz=107,slow=3.7,SNR=8.2						
ASAR				ScP	ScP	16 53 12.4	+1.5
	comp=Z,9.3nm,0.9s,baz=104,slow=3.8,SNR=6.9						
ASAR				S	S	16 54 20.9	-2.1
	comp=Z,14nm,0.9s,baz=94,slow=15,SNR=14						
ASAR				ScS	ScS	16 57 34.0	+0.4
	comp=Z,2.3nm,0.8s,baz=91,slow=7.7,SNR=6.7						
	comp=Z,269nm,0.9s						
ASAR	Alice Springs	42.98	258	P	P	16 48 39.5	-0.1
ASPA	Alice Springs	42.98	258	P	P	16 48 39.4	-0.3
	baz=43						
WAKE	Wake Island	43.08	340	P	P	16 48 39.6	-0.8
WB0	Warramunga Arr	43.14	264	P	P	16 48 40.3	-0.7
WB2	Warramunga Arr	43.15	264	P	P	16 48 40.2	-0.8
	baz=43						
WB2	Warramunga Arr	43.15	264	P	P	16 48 40.4	-0.6
WRAB	Tennant Creek	43.15	264	*ce*P	P	16 48 40.7	-0.4
WRAB				pmax	pmax		
	comp=Z,384nm,1.1s						
WRAB	Tennant Creek	43.15	264	P	P	16 48 40.4	-0.7
WRAB	Tennant Creek	43.15	264	P	P	16 48 40.7	-0.4
WRA	Warramunga Arr	43.16	264	P	P	16 48 40.7	-0.5
	comp=Z,154nm,0.8s,baz=96,slow=7.8,SNR=1228						
WRA				PcP	PcP	16 50 17.3	+0.5
	comp=Z,11nm,0.7s,baz=104,slow=3.1,SNR=5.4						
WRA				ScP	ScP	16 53 11.9	+0.3
	comp=Z,9.6nm,0.9s,baz=93,slow=4.5,SNR=6.8						
WRA				S	S	16 54 21.9	-3.7
	comp=Z,9.8nm,0.9s,baz=97,slow=13,SNR=9.2						
	comp=Z,154nm,0.8s						
WRA	Warramunga Arr	43.16	264	P	P	16 48 40.4	-0.8
WRA				IAmb	IAmb	16 48 41.8	
	comp=Z,36nm,1.1s						
SMPI	Sarmi	45.27	290	P	P	16 48 57.0	-0.3
	comp=Z,2µmcomp=Z,144nm,1.3s						
KDU	Kakadu	46.71	273	P	P	16 49 08.0	-0.3
	baz=47,SNR=130						
KDU	Kakadu	46.71	273	P	P	16 49 08.1	-0.1
KHLU	Kahalu`u	47.14	31	P	P	16 49 11.5	+0.1
HMH	Humu‘ula Sheep	47.34	31	P	P	16 49 13.5	+0.3
SRPI	Serui, Papua	47.49	289	P	P	16 49 14.2	+0.1
	comp=Z,135nm,1.4s						
FORT	Forrest	47.60	248	P	P	16 49 14.6	0.0
	baz=48,SNR=61						
FORT	Forrest	47.60	248	P	P	16 49 14.1	-0.6
FORT	Forrest	47.60	248	P	P	16 49 14.6	0.0
HPAH	Hawaii Prepara	47.61	31	P	P	16 49 14.9	0.0
WRKA	Warakurna	47.88	255	P	P	16 49 16.6	-0.3
	baz=48,SNR=513						
WRKA	Warakurna	47.88	255	P	P	16 49 17.0	+0.1
MTN	Manton Dam	47.91	272	P	P	16 49 16.4	-0.8
	baz=48,SNR=202						
MTN	Manton Dam	47.91	272	P	P	16 49 16.2	-0.9
MTN	Manton Dam	47.91	272	P	P	16 49 16.6	-0.6
BAKI	Biak	47.93	289	P	P	16 49 17.8	+0.4
	comp=Z,4µmcomp=Z,310nm,1.2s						
KNRA	Kununurra	49.30	268	P	P	16 49 27.6	+0.1
	baz=49,SNR=76						
KNRA	Kununurra	49.30	268	P	P	16 49 27.3	-0.2
KNRA	Kununurra	49.30	268	P	P	16 49 27.6	+0.1
SAUI	Saumlaki	49.40	278	P	P	16 49 28.4	+0.3
GUMO	Guam	49.69	312	P	P	16 49 30.3	0.0
	comp=Z,136nm,0.7s,baz=155,slow=16,SNR=5.1						
	comp=Z,136nm,0.7s						
GUMO	Guam	49.69	312	P	P	16 49 30.8	+0.6
FITZ	Fitzroy Crossi	51.59	264	P	P	16 49 44.0	0.0
	comp=Z,106nm,0.9s,baz=94,slow=8.5						
FITZ				S	S	16 56 18.2	-3.3
	comp=Z,4.7nm,0.9s,baz=89,slow=24,SNR=3.2						
	comp=Z,106nm,0.9s						
FITZ	Fitzroy Crossi	51.59	264	P	P	16 49 43.9	-0.2
SIJI	Sorong	52.36	287	P	P	16 49 49.7	+0.1
	comp=Z,529nm,0.9s,baz=62,slow=6.2,SNR=370						
SIJI				pP	pP	16 51 40.0	+0.3
	comp=Z,78nm,1.2s,baz=88,slow=6.3,SNR=8.0						
	comp=Z,529nm,0.9s						
SWI	Sorong	52.37	287	P	P	16 49 49.3	-0.3
	comp=Z,6µmcomp=Z,838nm,1.1s						
AAI	Ambon	53.91	282	P	P	16 50 00.0	-0.6
	comp=Z,3µmcomp=Z,290nm,1.4s						
BATI	Baumata	55.68	272	P	P	16 50 13.9	+0.9
	comp=Z,205nm,0.6s,baz=163,slow=1.2,SNR=139						
BATI				pP	pP	16 52 06.1	+0.6
	comp=Z,52nm,0.9s,baz=65,slow=6.2,SNR=4.5						
	comp=Z,205nm,0.6s						
BATI	Baumata	55.68	272	P	P	16 50 14.0	+1.1
	comp=Z,2µmcomp=Z,198nm,0.7s						
LBMI	Labuha	55.83	285	P	P	16 50 14.2	+0.3
	comp=Z,2µmcomp=Z,166nm,1.0s						
PSA00	Pilbara Seismi	56.12	258	P	P	16 50 15.2	-0.7
PSA00	Pilbara Seismi	56.12	258	P	P	16 50 14.9	-0.9
PSA00				IAmb	IAmb	16 50 16.8	
	comp=Z,111nm,1.1s						
PSA00	Pilbara Seismi	56.12	258	P	P	16 50 15.8	-0.1
MEEK	Meekatharra	56.28	252	P	P	16 50 16.3	-0.6
	baz=56,SNR=40						
MEEK	Meekatharra	56.28	252	P	P	16 50 16.4	-0.5
MBWA	Marble Bar	56.32	259	P	P	16 50 16.5	-0.7
MBWA	Marble Bar	56.32	259	P	P	16 50 17.1	-0.1
MBWA	Marble Bar	56.32	259	P	P	16 50 16.9	-0.3
KLBR	Kellerberrin	56.34	246	P	P	16 50 17.2	+0.1
	baz=56,SNR=56						
KLBR	Kellerberrin	56.34	246	P	P	16 50 17.4	+0.2
SBA	Scott Base	56.47	183	P	P	16 50 20.3	+3.0
SBA				pmax	pmax		
	comp=Z,37nm,1.0s						
SBA	Scott Base	56.47	183	P	P	16 50 20.2	+3.0
VNDA	Vanda	56.48	185	P	P	16 50 19.6	+2.3
	comp=Z,7.8nm,0.8s,baz=353,slow=7.7,SNR=26						
	comp=Z,7.8nm,0.8s						
VNDA	Vanda	56.48	185	P	P	16 50 19.4	+2.1
TNTI	Ternate	56.57	286	P	P	16 50 18.7	-0.4
TNTI	Ternate	56.57	286	P	P	16 50 18.8	-0.2
	comp=Z,3µmcomp=Z,242nm,1.2s						
SANI	Sanana	56.59	283	P	P	16 50 18.5	-0.7
	comp=Z,2µmcomp=Z,218nm,1.1s						
SANI	Sanana	56.59	283	P	P	16 50 19.0	-0.2
NWAO	Narrogin (SRO)	56.63	244	P	P	16 50 18.8	-0.4
NWAO				pmax	pmax		
	comp=Z,79nm,1.0s						
NWAO	Narrogin (SRO)	56.63	244	P	P	16 50 18.8	-0.4
NWAO				IAmb	IAmb	16 50 20.6	
	comp=Z,79nm,0.9s						
NWAO	Narrogin (SRO)	56.63	244	P	P	16 50 19.4	+0.2
NWAO	Narrogin (SRO)	56.63	244	P	P	16 50 19.8	+0.6
RKGY	Rocky Gully	56.69	242	P	P	16 50 19.9	+0.4
	baz=57,SNR=8.6						
RKGY	Rocky Gully	56.69	242	P	P	16 50 20.6	+1.1
BLDU	Ballidu	57.34	247	P	P	16 50 24.0	0.0
	baz=57,SNR=80						
BLDU	Ballidu	57.34	247	P	P	16 50 24.1	0.0
MMRI	Maumere	57.53	274	P	P	16 50 24.7	-0.9
MMRI	Maumere	57.53	274	P	P	16 50 24.9	-0.7
	comp=Z,3µmcomp=Z,210nm,1.2s						
MMRI	Maumere	57.53	274	P	P	16 50 25.5	-0.1
MUN	Mundaring	57.60	245	P	P	16 50 26.1	+0.3
	baz=58,SNR=24						
MUN	Mundaring	57.60	245	P	P	16 50 26.0	+0.3
MTKN	Mount Kenneth	57.97	245	P	P	16 50 30.5	+2.3
EDFI	Ende, Flores	58.00	273	P	P	16 50 28.1	-0.8
	comp=Z,2µmcomp=Z,156nm,1.5s						
MORW	Morawa	58.14	249	P	P	16 50 29.5	0.0
	baz=58,SNR=37						
MORW	Morawa	58.14	249	P	P	16 50 29.1	-0.4
MORW				IAmb	IAmb	16 50 30.7	
	comp=Z,231nm,1.4s						
MORW	Morawa	58.14	249	P	P	16 50 29.8	+0.3
BBSI	Bau Bau	58.36	277	P	P	16 50 32.0	+0.8
	comp=Z,117nmcomp=Z,14nm,1.1s						
BASI	Baing, Sumba	58.54	271	P	P	16 50 33.2	+0.8
	comp=Z,4µmcomp=Z,267nm,1.2s						
H01W1	Cape Leeuwin H	58.97	242	P	P	16 50 35.7	+1.1
	baz=109,slow=7.4,SNR=6.2						
H01W2	Cape Leeuwin H	58.99	242	P	P	16 50 34.4	-0.4
	baz=109,slow=7.4,SNR=3.9						
H01W3	Cape Leeuwin H	58.99	242	P	P	16 50 35.5	+0.7
	baz=109,slow=7.4,SNR=3.4						
KMSI	Cibinong	59.52	284	P	P	16 50 39.1	+0.2
	comp=Z,1µmcomp=Z,144nm,1.1s						
WBSI	Waikabubak, Su	59.84	271	P	P	16 50 40.8	-0.2
	comp=Z,138nm,1.0s						
LUWI	Luwuk	59.93	282	P	P	16 50 41.2	-0.4
LUWI	Luwuk	59.93	282	P	P	16 50 42.3	+0.7
	comp=Z,4µmcomp=Z,309nm,1.2s						
LUWI	Luwuk	59.93	282	P	P	16 50 42.6	+1.0
BSSI	Bau Bau, Buton	60.04	276	P	P	16 50 41.5	-0.8
	comp=Z,1µmcomp=Z,73nm,1.6s						
GTOI	Gorontalo	60.42	284	P	P	16 50 45.5	+0.7
	comp=Z,1µmcomp=Z,81nm,0.9s						
BKSI	Bulukumba	60.68	276	P	P	16 50 45.8	-0.7
	comp=Z,1µmcomp=Z,102nm,1.6s						
GIRL	Giralia	60.97	256	P	P	16 50 49.5	+1.2
	baz=61,SNR=4.3						
GIRL	Giralia	60.97	256	P	P	16 50 49.4	+1.2
GIRL	Giralia	60.97	256	P	P	16 50 49.0	+0.7
	comp=Z,290nm,1.1s						
APSI	Ampana	61.01	282	P	P	16 50 49.4	+0.7
	comp=Z,2µmcomp=Z,146nm,1.2s						
BNSI	Bone	61.04	277	P	P	16 50 49.2	+0.3
	comp=Z,2µmcomp=Z,144nm,1.3s						
DAV	Davao City (W)	61.11	292	P	P	16 50 49.3	0.0
	comp=Z,95nm,0.6s,baz=68,slow=4.2,SNR=11						
	comp=Z,95nm,0.6s						
DAV	Davao City (W)	61.11	292	P	P	16 50 49.0	-0.3
DAV	Davao City (W)	61.11	292	P	P	16 50 49.8	+0.5
KAPI	Kappang	61.14	276	P	P	16 50 48.4	-1.1
	comp=Z,16nm,0.7s,baz=156,slow=0.8,SNR=16						
	comp=Z,16nm,0.7s						
KAPI	Kappang	61.14	276	*i* P	P	16 50 49.4	-0.1
KAPI				pmax	pmax		
	comp=Z,90nm,1.3s						
KAPI	Kappang	61.14	276	P	P	16 50 48.3	-1.2
KAPI				IAmb	IAmb	16 50 50.9	
	comp=Z,94nm,1.3s						
KAPI	Kappang	61.14	276	P	P	16 50 49.5	0.0
KAPI	Kappang	61.14	276	P	P	16 50 49.9	+0.4
JCJ	Chichijima	61.23	321	P	P	16 50 49.5	-0.2
	comp=Z,69nm,0.5s,baz=254,slow=6.8,SNR=22						
	comp=Z,69nm,0.5s						
JCJ	Chichijima	61.23	321	P	P	16 50 49.0	-0.8
JCJ	Chichijima	61.23	321	P	P	16 50 50.1	+0.3
MRSI	Marisa	61.32	283	P	P	16 50 50.1	-0.6
	comp=Z,1µmcomp=Z,83nm,1.1s						
SPSI	Sidrap Palu	61.52	278	P	P	16 50 50.9	-1.1
	comp=Z,989nmcomp=Z,89nm,1.2s						
PLAI	Plampang	61.61	272	P	P	16 50 52.0	-0.6
	comp=Z,4µmcomp=Z,334nm,1.2s						
PLAI	Plampang	61.61	272	P	P	16 50 52.8	+0.2
TTSI	Tana Toraja	61.83	279	P	P	16 50 54.0	0.0
	comp=Z,755nmcomp=Z,54nm,1.1s						
CASY	Casey	62.22	205	P	P	16 50 55.2	-0.4
CASY				IAmb	IAmb	16 50 57.5	
	comp=Z,70nm,1.1s						

TOLI2	Tolitoli	62.64	283	P	P	16 50 58.3	-0.9
TOLI2				IAmb	IAmb	16 50 60.0	
	comp=Z,136nm,1.1s						
TOLI2	Tolitoli	62.64	283	P	P	16 50 59.1	-0.1
MPSI	Mapaga	63.12	282	P	P	16 51 01.7	-0.6
	comp=Z,2µmcomp=Z,170nm,1.1s						
IGBI	Denpasar	64.06	271	P	P	16 51 08.6	+0.3
	comp=Z,5µmcomp=Z,341nm,0.9s						
SRBI	Singaraja	64.25	271	P	P	16 51 09.0	-0.5
	comp=Z,3µmcomp=Z,241nm,1.3s						
JAGI	Jajag, Banyuwa	65.10	271	P	P	16 51 13.2	-1.6
JAGI	Jajag, Banyuwa	65.10	271	P	P	16 51 13.7	-1.2
	comp=Z,3µmcomp=Z,236nm,1.2s						
JAGI	Jajag, Banyuwa	65.10	271	P	P	16 51 14.0	-0.9
SMKI	Samarinda	65.25	280	P	P	16 51 18.0	+2.2
	comp=Z,214nm,1.6s						
ABJI	Asem Bagus	65.25	271	P	P	16 51 15.7	-0.1
	comp=Z,2µmcomp=Z,207nm,1.2s						
KMMI	Kalianget	65.76	272	P	P	16 51 18.6	-0.4
	comp=Z,3µmcomp=Z,154nm,1.5s						
GMJI	Gumukmas	65.82	271	P	P	16 51 18.9	-0.5
	comp=Z,2µmcomp=Z,154nm,1.3s						
BLJI	Banyuglugur	65.87	271	P	P	16 51 19.5	-0.1
	comp=Z,2µmcomp=Z,129nm,0.6s						
BBKI	Banjar Baru	66.25	276	P	P	16 51 22.7	+0.6
	comp=Z,5µmcomp=Z,87nm,1.2s						
MYLDM	Lahad Datu	66.45	286	P	P	16 51 24.3	+1.1
MYLDM				IAmb	IAmb	16 51 43.5	
	comp=Z,66nm,1.1s						
JHJ2	Mitsune	67.09	323	P	P	16 51 27.0	+0.3
JHJ2	Mitsune	67.09	323	P	P	16 51 27.4	+0.7
	comp=Z,490nm,1.4s						
JHJ	Hachijo jima 2	67.11	323	P	P	16 51 26.8	-0.1
	comp=Z,162nm,0.5s,baz=240,slow=22,SNR=8.4						
	comp=Z,162nm,0.5s						
MTKI	Muara Teweh, K	67.17	279	P	P	16 51 27.6	-0.1
	comp=Z,3µmcomp=Z,64nm,0.9s						
GRJI	Gresik	67.19	272	P	P	16 51 28.5	+0.7
	comp=Z,2µmcomp=Z,216nm,0.9s						
PWJI	Pagerwojo	67.43	270	P	P	16 51 29.1	-0.2
	comp=Z,246nm,0.7s						
TBJI	Tambak Boyo	67.81	271	P	P	16 51 32.6	+1.0
	comp=Z,2µmcomp=Z,166nm,1.3s						
PCJI	Pacitan	67.96	270	P	P	16 51 32.7	+0.3
	comp=Z,9µmcomp=Z,906nm,0.8s						
WOJI	Wonogiri, Jawa	68.32	270	P	P	16 51 34.8	+0.2
	comp=Z,215nm,1.2s						
TGY	Tagaytay City	68.56	296	P	P	16 51 36.3	+0.2
	comp=Z,103nm,0.5s,baz=69,slow=1.0,SNR=7.7						
	comp=Z,103nm,0.5s						
UGM	Wanagama	68.66	270	P	P	16 51 36.5	-0.2
UGM	Wanagama	68.66	270	P	P	16 51 36.5	-0.2
	comp=Z,295nm,1.0s						
UGM	Wanagama	68.66	270	P	P	16 51 37.2	+0.5
UWJI	Ujung Watu	68.79	272	P	P	16 51 37.5	0.0
	comp=Z,262nm,0.7s						
YOGI	Yogyakarta	68.91	270	P	P	16 51 38.0	-0.2
	comp=Z,198nm,0.7s						
SMRI	Semarang	69.04	271	P	P	16 51 39.2	+0.3
SMRI	Semarang	69.04	271	P	P	16 51 39.6	+0.6
	comp=Z,210nm,0.7s						
JYT	Yasato	69.25	326	P	P	16 51 39.1	-0.6
PBKI	Pangkalan Bun	69.47	275	P	P	16 51 42.5	+0.9
	comp=Z,2µmcomp=Z,228nm,1.2s						
JOW	Kunigami	70.05	311	P	P	16 51 45.3	+0.6
	comp=Z,65nm,0.8s,baz=162,slow=6.2,SNR=16						
	comp=Z,65nm,0.8s						
JOW	Kunigami	70.05	311	P	P	16 51 44.6	-0.1
JOW				IAmb	IAmb	16 51 46.3	
	comp=Z,72nm,0.8s						
JMM	Marumori	70.20	327	P	P	16 51 45.0	-0.3
JGF	Kuroka	70.30	324	P	P	16 51 45.2	-0.7
JGF				IAmb	IAmb	16 51 46.6	
	comp=Z,26nm,0.8s						
INU	Inuyama	70.30	323	P	P	16 51 45.3	-0.6
INU				IAmb	IAmb	16 51 47.5	
	comp=Z,64nm,1.3s						
KPJI	Karang Pucung	70.34	270	P	P	16 51 46.5	-0.2
	comp=Z,2µmcomp=Z,187nm,0.5s						
MJAR	Matsushiro Arr	70.53	325	P	P	16 51 46.4	-0.9
	comp=Z,24nm,0.8s,baz=151,slow=6.8,SNR=75						
MJAR				pP	pP	16 53 48.0	-0.8
	comp=Z,2.9nm,0.8s,baz=157,slow=6.5,SNR=3.5						
	comp=Z,24nm,0.8s						
MJAR	Matsushiro Arr	70.53	325	P	P	16 51 46.3	-1.0
MJAR				IAmb	IAmb	16 51 48.5	
	comp=Z,45nm,1.2s						
MAJO	Matsushiro	70.53	325	⇓*i*P	P	16 51 47.4	+0.1
MAJO				pmax	pmax		
	comp=Z,46nm,0.8s						
MAJO	Matsushiro	70.53	325	P	P	16 51 46.7	-0.7
MAJO				IAmb	IAmb	16 51 48.0	
	comp=Z,41nm,0.8s						
MAJO	Matsushiro	70.53	325	P	P	16 51 47.6	+0.3
MJB9	Matsu-Tunnel	70.54	325	P	P	16 51 46.7	-0.7
MJB9				IAmb	IAmb	16 51 47.9	
	comp=Z,41nm,0.8s						
CMJI	Cimerak	70.63	269	P	P	16 51 48.3	-0.1
	comp=Z,114nm,1.1s						
STKI	Sintang	70.71	278	P	P	16 51 49.5	+0.6
	comp=Z,2µmcomp=Z,88nm,1.1s						
JSU	Suzuyama	71.57	316	P	P	16 51 53.2	-0.3
JSD	Sado	71.62	326	P	P	16 51 53.8	+0.2
LEM	Lembang	71.74	270	P	P	16 51 55.6	+0.5
	comp=Z,218nm,0.7s,baz=66,slow=4.3,SNR=67						
LEM				pP	pP	16 53 56.3	+0.5
	comp=Z,45nm,0.8s,baz=142,slow=4.3,SNR=5.0						
	comp=Z,218nm,0.7s						
LEM	Lembang	71.74	270	P	P	16 51 55.6	+0.5
	comp=Z,2µmcomp=Z,226nm,1.0s						
CNJI	Cibinong	72.02	269	P	P	16 51 56.0	-0.5
	comp=Z,2µmcomp=Z,232nm,1.1s						
JHS	Saijyo	72.29	321	P	P	16 51 57.6	0.0
KSM	Kuching	72.33	279	P	P	16 51 57.9	-0.4
KSM					pP	16 53 58.2	-1.1
KSM	Kuching	72.33	279	P	P	16 51 59.0	+0.7
JTM	Tenmabayashi	72.34	330	P	P	16 51 57.9	+0.3
ERM	Erimo	72.36	332	*ce*P	P	16 51 58.1	+0.4
ERM				pmax	pmax		
	comp=Z,95nm,2.5s						
YOJ	Yonaguni jima	72.46	306	P	P	16 51 58.7	-0.1
YOJ				pmax	pmax		
	comp=Z,102nm,1.1s						
YOJ	Yonaguni jima	72.46	306	P	P	16 51 58.7	-0.1
YOJ	Yonaguni jima	72.46	306	P	P	16 51 59.1	+0.4
CBJI	Citeko	72.59	270	P	P	16 51 58.7	-1.1
	comp=Z,3µmcomp=Z,131nm,1.1s						
DBJI	Dramaga	72.64	270	P	P	16 51 59.9	-0.2
	comp=Z,2µmcomp=Z,137nm,1.2s						
SKJI	Sukabumi	72.66	269	P	P	16 52 00.8	+0.6
	comp=Z,100nm,0.6s						
TWG	Pinlang	73.03	304	P	P	16 52 00.6	-1.5
YULB	Yu-li	73.17	304	P	P	16 52 01.6	-1.2
YULB				IAmb	IAmb	16 52 05.1	
	comp=Z,109nm,1.5s						
TPI	Tanjungpandan	73.17	274	P	P	16 52 03.6	+0.5
	comp=Z,475nmcomp=Z,34nm,1.3s						
NACB	Ninganchiao	73.37	305	P	P	16 52 03.0	-0.9
KIWB	Kanaga Island	73.39	1	P	P	16 52 03.2	-0.2
ADK	Adak	73.43	2	P	P	16 52 03.4	-0.2
ADK				pmax	pmax		
	comp=Z,81nm,1.3s						
ADK	Adak	73.43	2	P	P	16 52 03.4	-0.2
ADK				IAmb	IAmb	16 52 31.0	
	comp=Z,81nm,1.3s						
ADK	Adak	73.43	2	P	P	16 52 03.9	+0.3
TPUB	Ta-pu	73.63	304	P	P	16 52 04.2	-1.3
TPUB	Ta-pu	73.63	304	P	P	16 52 04.7	-0.8
SSLB	Suanglung	73.65	305	P	P	16 52 04.3	-1.3
SSLB	Suanglung	73.65	305	P	P	16 52 05.0	-0.6
JEW	Eniwo	73.78	331	P	P	16 52 06.3	+0.5
YHNB	Yeheng	73.81	305	P	P	16 52 06.0	-0.6
YHNB				IAmb	IAmb	16 52 07.6	
	comp=Z,82nm,0.9s						
YHNB	Yeheng	73.81	305	P	P	16 52 07.0	+0.5
ATKA	Atka Island	73.85	3	P	P	16 52 05.3	-0.7
	comp=Z,78nm,1.1s						
TATO	Taipei	73.89	306	P	P	16 52 06.5	-0.4
TATO	Taipei	73.89	306	P	P	16 52 06.9	0.0
JTU	Tsushima	74.22	318	P	P	16 52 08.1	-0.4
JTU				IAmb	IAmb	16 52 23.0	
	comp=Z,58nm,1.4s						
JKA	Kamikawa-asahi	74.29	333	P	P	16 52 10.4	+1.7
JKA				IAmb	IAmb	16 52 11.3	
	comp=Z,55nm,0.9s						
ASAJ	Asahikawa	74.29	333	P	P	16 52 10.3	+1.6
	comp=Z,36nm,0.8s,baz=220,slow=5.0,SNR=23						
ASAJ				pP	pP	16 54 11.8	+0.5
	comp=Z,1.6nm,0.6s,baz=271,slow=29,SNR=0.6						
	comp=Z,36nm,0.8s						
SMY	Shemya	74.46	356	P	P	16 52 09.6	+0.2
SMY				pmax	pmax		
	comp=Z,149nm,1.2s						
SMY	Shemya	74.46	356	P	P	16 52 09.6	+0.2
BLSI	Bandar Lampung	74.46	270	P	P	16 52 10.9	+0.5
PPBI	Pangkal Pinang	74.80	274	P	P	16 52 12.7	+0.4
	comp=Z,84nm,1.6s						
NIKH	Nikolski High	75.04	7	P	P	16 52 12.6	-0.1
NIKH				IAmb	IAmb	16 52 13.5	
	comp=Z,75nm,0.8s						
KASI	Kota Agung	75.10	270	P	P	16 52 13.3	-0.6
	comp=Z,1µmcomp=Z,121nm,1.1s						
LWLI	Liwa	75.69	270	P	P	16 52 16.9	-0.4
	comp=Z,2µmcomp=Z,131nm,0.8s						
KNMB	Chin-men Tao	75.98	304	P	P	16 52 19.2	+0.7
KNMB				IAmb	IAmb	16 52 19.8	
	comp=Z,58nm,0.8s						
QZH	Quanzhou	76.08	304	⇓*i*P	P	16 52 19.8	+0.7
QZH				S	S	17 01 17.0	+1.8
QZH				SKS	ScS	17 01 37.3	-1.9
QZH				pmax	pmax		
	comp=Z,57nm,0.8s						
QZH				pmax	pmax		
	comp=Z,220nm,4.1s						
UNV	Unalaska Valle	76.18	8	P	P	16 52 18.2	-0.6
UNV				IAmb	IAmb	16 52 20.0	
	comp=Z,66nm,1.5s						
YSS	Yuzh-Sakhalins	76.52	334	*e*P	P	16 52 21.4	+0.5
YSS				*e**PP	pwP	16 54 27.1	-0.9
YSS				*e*S	S	17 01 18.3	-0.6
YSS				pmax	pmax		
	comp=Z,300nm,6.6s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	Yuzh-Sakhalins	76.52	334	P	P	16 52 20.8	-0.1
YSS				IAmb	IAmb	16 52 23.6	
	comp=Z,42nm,0.8s						
YSS	Yuzh-Sakhalins	76.52	334	P	P	16 52 22.8	+1.9
AKUT	Akutan	76.55	8	P	P	16 52 20.3	-0.7
AKUT				IAmb	IAmb	16 52 25.2	
	comp=Z,77nm,1.1s						
TJN	Taejon	76.69	318	*ce*P	P	16 52 23.0	+0.9
TJN	Taejon	76.69	318	P	P	16 52 22.5	+0.4
DSRI	Dabo	76.87	275	P	P	16 52 24.4	+0.7
	comp=Z,629nmcomp=Z,41nm,1.4s						
PET	Petropavlovsk	76.94	347	P	P	16 52 22.8	-0.2
PET				IAmb	IAmb	16 52 23.5	
	comp=Z,45nm,1.0s						
PET	Petropavlovsk	76.94	347	P	P	16 52 22.9	-0.2
	comp=Z,196nm,1.5s						
MNAI	Manna	76.95	271	P	P	16 52 24.0	-0.1
MNAI	Manna	76.95	271	P	P	16 52 25.2	+1.1
	comp=Z,211nm,1.1s						
KSRS	Korea Array	77.04	319	P	P	16 52 25.0	+1.0
	comp=Z,11nm,1.0s,baz=142,slow=6.0,SNR=50						
KSRS				pP	pP	16 54 28.9	+1.5
	comp=Z,2.3nm,1.1s,baz=134,slow=6.0,SNR=3.1						
	comp=Z,11nm,1.0s						
KSAR	Wonju Array Be	77.06	319	P	P	16 52 24.4	+0.3
KSAR	Wonju Array Be	77.06	319	P	P	16 52 24.4	+0.3
KS19	Wonju Array Si	77.11	319	P	P	16 52 23.5	-0.9
KS19				IAmb	IAmb	16 52 25.8	
	comp=Z,47nm,1.2s						
PEA0B	Petropavlovsk-	77.23	346	*ce*P	P	16 52 24.0	-0.7
PEA0B	Petropavlovsk-	77.23	346	P	P	16 52 24.3	-0.4
PETK	Petropavlovsk-	77.23	346	P	P	16 52 25.0	+0.3
	comp=Z,40nm,0.8s,baz=157,slow=4.8,SNR=35						
PETK				pP	pP	16 54 28.6	+0.3
	comp=Z,5.9nm,0.9s,baz=157,slow=7.8,SNR=3.6						
	comp=Z,40nm,0.8s						
PETK	Petropavlovsk-	77.23	346	P	P	16 52 24.1	-0.6
JMBI	JAMBI	77.31	273	P	P	16 52 28.0	+2.0
	comp=Z,146nm,1.2s						
SMAI	San Martin Ant	77.83	159	P	P	16 52 29.1	+1.3
INCN	Inchon	77.84	319	P	P	16 52 28.1	-0.3
INCN				pmax	pmax		
	comp=Z,67nm,1.2s						
INCN	Inchon	77.84	319	P	P	16 52 28.1	-0.3
INCN				IAmb	IAmb	16 52 30.6	
	comp=Z,67nm,1.2s						
INCN	Inchon	77.84	319	P	P	16 52 29.1	+0.7
HKPS	Hong Kong Po S	78.22	300	P	P	16 52 30.1	-0.6
MYKOM	Kota Tinggi	78.40	277	P	P	16 52 32.1	+0.2
MYKOM				IAmb	IAmb	16 52 33.0	
	comp=Z,38nm,0.9s						
BELA	Belgrano 2	78.41	173	P	P	16 52 31.3	+0.5
BELA				IAmb	IAmb	16 52 32.7	
	comp=Z,33nm,0.8s						
BELA					pP	16 54 37.3	+1.7
SDPT	Sand Point	78.54	11	P	P	16 52 31.4	-0.2
SDPT				IAmb	IAmb	16 52 54.2	
	comp=Z,121nm,1.3s						
VLA	Vladivostok	78.64	326	*i* P	P	16 52 33.6	+1.1
VLA				pmax	pmax		
	comp=Z,39nm,1.0s						
MSHR	Mys Shultsa	78.65	325	*ce*P	P	16 52 33.5	+1.0
MSHR				pmax	pmax		
	comp=Z,61nm,1.5s						
KRJI	Kerinci	79.16	272	P	P	16 52 36.1	0.0
	comp=Z,147nm,1.2s						
USA0B	Ussuriysk Arra	79.35	327	P	P	16 52 36.8	+0.6
USA0B				pmax	pmax		
	comp=Z,127nm,1.4s						
USA0B	Ussuriysk Arra	79.35	327	P	P	16 52 36.8	+0.6
USA0B				IAmb	IAmb	16 52 38.8	
	comp=Z,127nm,1.4s						
USRK	Ussuriysk Ar.	79.35	327	P	P	16 52 36.5	+0.4
	comp=Z,38nm,1.0s,baz=131,slow=3.4,SNR=64						
USRK				pP	pP	16 54 41.7	+0.9
	comp=Z,6.1nm,0.9s,baz=145,slow=4.7,SNR=4.6						
	comp=Z,38nm,1.0s						
USRK	Ussuriysk Ar.	79.35	327	P	P	16 52 36.8	+0.6
USRK	Ussuriysk Ar.	79.35	327	P	pP	16 54 42.0	+1.2
TYV	Tymovskoe	79.73	337	*e*P	P	16 52 40.1	+2.1
TYV				*e*S	S	17 01 46.9	-5.3
TYV				pmax	pmax		
	comp=Z,58nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,2.1s						
TYV				smax	smax		
	comp=N,600nm,4.2s						
TYV				smax	smax		
	comp=E,500nm,4.2s						
NJ2	Nanjing	79.75	311	*e*P	P	16 52 39.5	+0.9
NJ2				pmax	pmax		
	comp=Z,51nm,1.1s						
MCCM	Marconi Confer	79.81	42	P	P	16 52 39.9	+1.2
PKM	Mcpherson Peak	79.84	46	P	P	16 52 41.7	+2.5
	baz=234						
SAO	San Andreas Ge	79.87	44	P	P	16 52 40.3	+1.1
SAO				pmax	pmax		
	comp=Z,19nm,1.2s						
SAO	San Andreas Ge	79.87	44	P	P	16 52 40.3	+1.1
MAW	Mawson	79.88	200	P	P	16 52 39.9	+1.2
	comp=Z,17nm,0.8s,baz=115,slow=7.4,SNR=8.7						
MAW				pP	pP	16 54 44.2	+0.7
	comp=Z,2.9nm,0.6s,baz=70,slow=16,SNR=1.5						
	comp=Z,17nm,0.8s						
MAW	Mawson	79.88	200	P	P	16 52 39.8	+1.1
	baz=80						
MAW	Mawson	79.88	200	P	P	16 52 39.4	+0.7
CIS	Catalina Islan	79.94	48	P	P	16 52 41.3	+1.7
	baz=236						
PMPB	Monarch Peak	79.96	44	P	P	16 52 40.4	+0.7
SMMC	Simmler	79.96	46	P	P	16 52 41.6	+1.9
	baz=234						
BBGB	Big Mountain B	80.02	44	P	P	16 52 40.7	+0.6
BBGB				IAmb	IAmb	16 52 43.5	
	comp=Z,76nm,1.5s						
BCW	Bitter Crk WRg	80.14	46	P	P	16 52 41.4	+0.7
HOPS	Hopland Field	80.21	41	P	P	16 52 42.1	+1.3
HOPS				IAmb	IAmb	16 52 43.9	
	comp=Z,83nm,1.5s						
KCPM	Cahto Peak	80.33	40	P	P	16 52 42.7	+1.1
KCPM				IAmb	IAmb	16 52 44.1	
	comp=Z,25nm,0.9s						
KMPM	Mount Pierce	80.47	40	P	P	16 52 43.2	+0.9
KMPM				IAmb	IAmb	16 52 46.4	
	comp=Z,93nm,1.3s						
DECC	Green Verdugo	80.47	47	P	P	16 52 44.8	+2.4
	baz=236						
PASC	Pasadena Art C	80.53	47	P	P	16 52 42.6	-0.1
109C	Camp Elliot, M	80.56	49	P	P	16 52 43.4	+0.6
109C	Camp Elliot, M	80.56	49	P	P	16 52 44.4	+1.6
	baz=236						
PMSA	Palmer Station	80.58	157	P	P	16 52 43.3	+0.9
PMSA				IAmb	IAmb	16 52 45.2	
	comp=Z,31nm,0.8s						
PMSA	Palmer Station	80.58	157	*e*P	P	16 52 42.5	+0.2
KMRM	Mail Ridge	80.59	40	P	P	16 52 44.3	+1.4
KMRM				IAmb	IAmb	16 52 47.6	
	comp=Z,64nm,0.9s						
ARVC	Arvin	80.64	46	P	P	16 52 44.7	+1.6
	baz=235						
PPI	Padang Panjang	80.75	273	P	P	16 52 44.1	-0.1
	comp=Z,14nm,0.4s						
BAR	Barrett	80.75	49	P	P	16 52 44.3	+0.4
ELS	Elsinore Mount	80.76	48	P	P	16 52 44.4	+0.4
JCC	Jacoby Creek,	80.78	39	P	P	16 52 45.2	+1.5
JCC				IAmb	IAmb	16 52 53.7	
	comp=Z,105nm,1.4s						
VES	Vestal, Richgr	80.87	46	P	P	16 52 45.6	+1.3
	baz=235,SNR=12						
MDJ	Mudanjiang	80.88	326	P	P	16 52 44.8	+0.7
MDJ				IAmb	IAmb	16 52 46.7	
	comp=Z,98nm,1.5s						
MDJ	Mudanjiang	80.88	326	P	P	16 52 45.2	+1.1
MDJ				S	S	17 02 08.7	+4.6
MDJ				pmax	pmax		
	comp=Z,45nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,430nm,5.6s						
MURC	Murrieta	80.89	48	P	P	16 52 46.1	+1.6
	baz=236,SNR=9.6						
BFSC	Mount Baldy Ra	80.93	48	P	P	16 52 45.8	+1.0
	baz=236,SNR=7.7						
SII	Sitkinak Islan	80.93	14	P	P	16 52 45.0	+0.9
SII				IAmb	IAmb	16 53 06.1	
	comp=Z,96nm,1.4s						
KHMM	Horse Mountain	80.99	39	P	P	16 52 46.9	+1.8
KHMM				IAmb	IAmb	16 52 49.0	
	comp=Z,34nm,1.2s						
KRPM	Rodgers	81.00	39	P	P	16 52 45.3	+0.4
KRPM				IAmb	IAmb	16 52 47.8	
	comp=Z,80nm,1.2s						
MONP2	Monument Peak	81.05	49	P	P	16 52 47.2	+1.6
	baz=237,SNR=19						
EDW2	Edwards Air Fo	81.06	47	P	P	16 52 46.6	+1.2
	baz=236,SNR=18						
IKP	In-Ko-Pah, Jac	81.14	50	P	P	16 52 47.4	+1.6
	baz=237,SNR=14						
ISA	Isabella, Lake	81.18	46	P	P	16 52 47.4	+1.4
ISA				pmax	pmax		
	comp=Z,33nm,1.1s						
ISA	Isabella, Lake	81.18	46	P	P	16 52 47.4	+1.4
ISA				IAmb	IAmb	16 52 49.4	
	comp=Z,33nm,1.1s						
ISA	Isabella, Lake	81.18	46	P	P	16 52 47.4	+1.4
	baz=235,SNR=19						
SRIG	Santa Rosalia	81.23	56	P	P	16 52 47.1	+0.7
SRIG				IAmb	IAmb	16 52 49.2	
	comp=Z,139nm,1.5s						
YUH	Yuha Desert	81.27	50	P	P	16 52 47.4	+0.9
SLBS	Sierra La Lagu	81.28	60	P	P	16 52 47.0	+0.1
SLBS				IAmb	IAmb	16 52 50.0	
	comp=Z,26nm,0.9s						
CMB	Columbia Colle	81.31	43	P	P	16 52 47.2	+0.6
CMB				pmax	pmax		
	comp=Z,14nm,0.9s						
CMB	Columbia Colle	81.31	43	P	P	16 52 47.2	+0.6
PFO	Pinyon Flats O	81.41	49	P	P	16 52 48.0	+0.7
PFO				pmax	pmax		
	comp=Z,21nm,1.2s						
PFO	Pinyon Flats O	81.41	49	P	P	16 52 48.0	+0.7
PFO	Pinyon Flats O	81.41	49	P	P	16 52 48.5	+1.2
	baz=237,SNR=9.5						
TPFO	Pinon Flats	81.41	49	P	P	16 52 48.7	+1.4
	baz=237,SNR=9.7						
KSXB	Camp Six Broad	81.51	39	P	P	16 52 49.5	+1.9
KSXB				IAmb	IAmb	16 52 51.6	
	comp=Z,43nm,1.4s						
SWSC	Sam W. Stewart	81.52	50	P	P	16 52 49.0	+1.4
	baz=237,SNR=9.7						
ORV	Oroville	81.52	41	P	P	16 52 48.2	+0.6
ORV				pmax	pmax		
	comp=Z,21nm,1.2s						
ORV	Oroville	81.52	41	P	P	16 52 48.2	+0.6
LRMC	Laurel Mtn Rad	81.61	47	P	P	16 52 49.4	+1.1
	baz=236,SNR=20						
SISI	Saibi	81.65	272	P	P	16 52 49.2	+0.4
	comp=Z,27nm,1.1s						
OHAK	Old Harbor	81.74	14	P	P	16 52 48.7	+0.6
OHAK				IAmb	IAmb	16 52 55.7	
	comp=Z,33nm,1.2s						
L02F	Cave Junction	81.87	38	P	P	16 52 51.4	+2.2
	baz=231						
CWC	Cottonwood Cre	81.88	46	P	P	16 52 50.8	+1.1
	baz=235						
MDPB	Devils Postpil	81.91	44	P	P	16 52 50.8	+0.9
BELC	Belle Mtn. Jos	81.95	49	P	P	16 52 51.6	+1.6
	baz=237,SNR=28						
OMMB	Old Mammoth Mi	81.95	44	P	P	16 52 51.2	+1.0
MPMC	Manual Prospec	82.06	46	P	P	16 52 51.9	+1.3
	baz=236,SNR=29						
MLAC	Mammoth, Mammo	82.07	44	P	P	16 52 52.6	+1.9
	baz=235						
GRNR	Gornyy	82.10	333	⇓*i*P	P	16 52 51.7	+1.5
GRNR				pmax	pmax		
	comp=E,5.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,8.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
GRNR				MLR	MLR		
	comp=E,150nm,16.0s						
GSC	Goldstone, Bar	82.10	47	P	P	16 52 51.4	+0.7
GSC				pmax	pmax		
	comp=Z,13nm,0.9s						
GSC	Goldstone, Bar	82.10	47	P	P	16 52 51.4	+0.7
GSC	Goldstone, Bar	82.10	47	P	P	16 52 51.8	+1.0
	baz=236,SNR=17						
YBH	Yreka Blue Hor	82.13	39	P	P	16 52 52.2	+1.5
	comp=Z,8.9nm,0.7s,baz=186,slow=4.4,SNR=8.4						
YBH				pP	pP	16 54 57.1	+0.4
	comp=Z,3.2nm,1.0s,baz=158,slow=4.9,SNR=3.4						
	comp=Z,8.9nm,0.7s						
YBH	Yreka Blue Hor	82.13	39	P	P	16 52 52.2	+1.5
YBH				pmax	pmax		
	comp=Z,16nm,0.9s						
YBH	Yreka Blue Hor	82.13	39	P	P	16 52 52.1	+1.5
TIN	Tinemaha, Big	82.13	45	P	P	16 52 52.4	+1.5
	baz=235						
BC3	Big Chuckawall	82.14	49	P	P	16 52 52.7	+1.7
	baz=237,SNR=18						
HEC	Hector,Ludlow	82.17	48	P	P	16 52 52.2	+1.2
	baz=237,SNR=12						
K02D	Willamette Mer	82.18	38	P	P	16 52 53.8	+2.9
	baz=231						
WHN	Wuhan	82.20	307	⇓*i*P	P	16 52 52.2	+1.0
WHN				S	S	17 02 17.3	-0.7
WHN				pmax	pmax		
	comp=Z,70nm,1.0s						
WHN				pmax	pmax		
	comp=Z,590nm,2.7s						
GLA	Glamis	82.26	50	P	P	16 52 52.7	+1.2
GLA				pmax	pmax		
	comp=Z,42nm,1.1s						
GLA	Glamis	82.26	50	P	P	16 52 52.7	+1.2
GLA				IAmb	IAmb	16 52 55.5	
	comp=Z,42nm,1.1s						
GLA	Glamis	82.26	50	P	P	16 52 53.8	+2.2
	baz=238,SNR=9.2						
BEKR	Beckworth	82.41	42	P	P	16 52 53.1	+0.9
BEKR					pP	16 54 56.7	-1.6
QSM	Queen of Sheba	82.43	47	P	P	16 52 52.8	+0.6
HUMO	Hull Mountain	82.53	38	P	P	16 52 54.5	+1.9
CN2	Changchun	82.58	323	*e*P	P	16 52 53.2	+0.4
CN2				*e*pP	pP	16 54 59.2	+0.7
CN2				*e*S	S	17 02 21.1	0.0
CN2				pmax	pmax		
	comp=Z,70nm,1.4s						
CN2				pmax	pmax		
	comp=Z,400nm,2.0s						
YERR	Yerington	82.59	43	P	P	16 52 54.0	+0.8
YERR				IAmb	IAmb	16 52 55.0	
	comp=Z,20nm,0.8s						
GMRC	Granite Mounta	82.61	48	P	P	16 52 54.7	+1.4
	baz=237,SNR=17						

LCH	**Last Change Ra**	**82.62**	**45**	P	**P**	**16 52 54.0**	**+0.7**
IRM	**Iron Mountain**	**82.63**	**49**	P	**P**	**16 52 55.1**	**+1.7**
	baz=238,SNR=31						
LHV	**Little Huntoon**	**82.64**	**44**	P	**P**	**16 52 53.5**	**+0.3**
LHV				IAmb	IAmb	16 52 56.9	
	comp=Z,31nm,1.2s						
L04D	**Klamath Falls**	**82.66**	**39**	P	**P**	**16 52 54.7**	**+1.2**
L04D				IAmb	IAmb	16 52 56.9	
	comp=Z,78nm,1.4s						
L04D	**Klamath Falls**	**82.66**	**39**	P	**P**	**16 52 55.1**	**+1.6**
	baz=232						
GWY	**Greenwater Val**	**82.68**	**46**	P	**P**	**16 52 54.3**	**+0.6**
GWY				pP	**pP**	**16 55 00.5**	**+0.7**
KULM	**Kulim**	**82.69**	**279**	P	**P**	**16 52 54.0**	**0.0**
KULM				IAmb	IAmb	16 52 55.5	
	comp=Z,44nm,0.8s						
FURC	**Furnace Creek,**	**82.71**	**46**	P	**P**	**16 52 55.1**	**+1.6**
	baz=236,SNR=7.8						
BNX	**BinXian**	**82.78**	**326**	⇓P	**P**	**16 52 53.9**	**+0.2**
BNX				pP	**pP**	**16 55 00.6**	**+0.9**
BNX				sP	**sP**	**16 55 59.4**	**-0.1**
BNX				PP	**PP**	**16 56 16.1**	**+0.4**
BNX				S	**S**	**17 02 16.8**	**-6.2**
BNX	**BinXian**	**82.78**	**326**	sS	sS	17 06 16.4	+8.2
BNX				pmax	pmax		
	comp=Z,90nm,1.0s						
BNX				pmax	pmax		
	comp=Z,3µm,4.2s						
TUQ	**Turquoise Moun**	**82.78**	**47**	P	**P**	**16 52 55.6**	**+1.4**
	baz=237,SNR=14						
SHOC	**Shoshone, Teco**	**82.79**	**47**	P	**P**	**16 52 55.6**	**+1.5**
	baz=237,SNR=10.0						
RYN	**Ryan**	**82.84**	**44**	P	**P**	**16 52 55.2**	**+0.7**
RYN				IAmb	IAmb	16 52 57.0	
	comp=Z,34nm,1.4s						
BLYC	**Blythe**	**82.85**	**49**	P	**P**	**16 52 55.1**	**+0.8**
BLYC				pP	**pP**	**16 55 01.1**	**+0.4**
NVAR	**Mina Array Bea**	**82.87**	**44**	P	**P**	**16 52 55.6**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=221,slow=8.1,SNR=68						
NVAR				pP	**pwP**	**16 55 03.3**	**-0.9**
	comp=Z,6.7nm,0.9s,baz=226,slow=9.0,SNR=16						
NVAR				PKKPbc	**PKKPbc**	**17 11 15.2**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=102,slow=3.6,SNR=3.8						
NVAR				PKPPKP		17 19 19.7	
	comp=Z,1.4nm,1.1s,baz=83,slow=2.1,SNR=3.7						
	comp=Z,5.3nm,0.6s						
NVAR	**Mina Array Bea**	**82.87**	**44**	P	**P**	**16 52 55.3**	**+0.6**
113A	**Mohawk Valley,**	**82.87**	**51**	P	**P**	**16 52 55.5**	**+1.0**
113A				IAmb	IAmb	16 52 58.3	
	comp=Z,46nm,1.4s						
PAHR	**Pah Rah Range**	**82.92**	**42**	P	**P**	**16 52 55.6**	**+0.8**
NV11	**Mina Array Sit**	**82.97**	**44**	P	**P**	**16 52 55.8**	**+0.7**
I03D	**Drain, OR**	**82.99**	**37**	P	**P**	**16 52 56.4**	**+1.6**
	baz=231						
KLR	**Kul'dur**	**83.02**	**330**	P	**P**	**16 52 56.1**	**+1.2**
	comp=Z,11nm,0.8s,baz=107,slow=3.4,SNR=36						
	comp=Z,11nm,0.8s						
KLR	**Kul'dur**	**83.02**	**330**	*ce*P	**P**	**16 52 56.0**	**+1.1**
KLR				pmax	pmax		
	comp=Z,32nm,1.1s						
MG05	**Puerto Natales**	**83.03**	**143**	P	**P**	**16 52 55.9**	**+0.9**
MG05				IAmb	IAmb	16 52 58.0	
	comp=Z,40nm,1.1s						
HSIG		**83.06**	**55**	P	**P**	**16 52 56.4**	**+0.9**
HSIG				IAmb	IAmb	16 52 57.6	
	comp=Z,19nm,0.7s						
214A	**Organ Pipe Nat**	**83.14**	**52**	P	**P**	**16 52 57.3**	**+1.3**
214A	**Organ Pipe Nat**	**83.14**	**52**	P	**P**	**16 52 57.8**	**+1.9**
	baz=239						
MG03	**Isla Dawson**	**83.15**	**146**	P	**P**	**16 52 56.6**	**+1.1**
MG03				IAmb	IAmb	16 53 21.5	
	comp=Z,51nm,1.5s						
Q19K	**Cape Douglas,**	**83.22**	**13**	P	**P**	**16 52 56.0**	**+0.4**
Q19K				IAmb	IAmb	16 52 56.4	
	comp=Z,38nm,0.9s						
TIA	**Tai'an**	**83.23**	**313**	⇓P	**P**	**16 52 57.1**	**+0.9**
TIA				S	SKSac	17 02 04.3	-18
TIA				pmax	pmax		
	comp=Z,70nm,1.1s						
TIA				LR	LR		
	comp=N,170nm,14.5s						
TIA				LR	LR		
	comp=E,200nm,17.8s						
TIA				LR	LR		
	comp=Z,190nm,24.1s						
RPSI	**Rantau Prapat**	**83.30**	**276**	P	**P**	**16 52 56.3**	**-0.8**
GO09	**Cerro Castillo**	**83.31**	**143**	P	**P**	**16 52 57.5**	**+1.1**
P18K	**Big Mountain,**	**83.33**	**12**	P	**P**	**16 52 55.9**	**-0.3**
P18K	**Big Mountain,**	**83.33**	**12**	P	**P**	**16 52 56.2**	**0.0**
	baz=202						
PSI	**Prapat**	**83.33**	**276**	P	**P**	**16 52 56.3**	**-1.1**
	comp=Z,39nm,0.9s,baz=147,slow=4.5,SNR=41						
PSI				pP	**pP**	**16 55 02.4**	**-0.9**
	comp=Z,3.4nm,0.3s,baz=179,slow=3.1,SNR=2.8						
PSI				PP	**PP**	**16 56 19.9**	**-0.9**
	comp=Z,27nm,1.2s,baz=183,slow=7.0,SNR=3.9						
	comp=Z,39nm,0.9s						
KVN	**Kaiserville**	**83.36**	**43**	P	**P**	**16 52 57.5**	**+0.5**
KVN	**Kaiserville**	**83.36**	**43**	P	**P**	**16 52 57.5**	**+0.5**
TPH	**Tonopah**	**83.37**	**45**	P	**P**	**16 52 57.4**	**+0.3**
TPH				pmax	pmax		
	comp=Z,199nm,1.4s						
TPH	**Tonopah**	**83.37**	**45**	P	**P**	**16 52 57.4**	**+0.3**
TPNV	**Topopah Spring**	**83.39**	**46**	P	**P**	**16 52 57.5**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,21nm,1.2s						
TPNV	**Topopah Spring**	**83.39**	**46**	P	**P**	**16 52 57.5**	**+0.3**
TPNV	**Topopah Spring**	**83.39**	**46**	P	**P**	**16 52 58.4**	**+1.2**
	baz=236,SNR=19						
PDMCI	**Parker Dam,Lak**	**83.41**	**49**	P	**P**	**16 52 58.8**	**+1.7**
	baz=238,SNR=8.2						
J04D	**Umpqua Nationa**	**83.41**	**38**	P	**P**	**16 52 57.7**	**+0.5**
J04D				IAmb	IAmb	16 53 00.9	
	comp=Z,78nm,1.1s						
J04D	**Umpqua Nationa**	**83.41**	**38**	P	**P**	**16 52 59.1**	**+1.8**
	baz=232,SNR=8.3						
BUCK	**Buck Mountain**	**83.51**	**37**	P	**P**	**16 52 58.5**	**+1.0**
BUCK				IAmb	IAmb	16 53 01.4	
	comp=Z,61nm,1.2s						
I04A	**Tendick Farm,**	**83.58**	**38**	P	**P**	**16 52 59.1**	**+1.2**
	baz=232						
MOD	**Modoc Plateau**	**83.66**	**40**	P	**P**	**16 52 59.4**	**+0.9**
O18K	**Koktuh Hills**	**83.76**	**12**	P	**P**	**16 52 58.3**	**0.0**
O18K				IAmb	IAmb	16 52 59.4	
	comp=Z,25nm,0.9s						
O18K	**Koktuh Hills**	**83.76**	**12**	P	**P**	**16 52 58.8**	**+0.5**
	baz=202,SNR=6.6						
K05A	**Summer Lake**	**83.80**	**39**	P	**P**	**16 53 00.2**	**+1.1**
K05A				IAmb	IAmb	16 53 01.5	
	comp=Z,26nm,1.0s						
Q09A	**Carvers**	**83.82**	**44**	P	**P**	**16 52 59.6**	**+0.3**
Q09A				IAmb	IAmb	16 53 02.4	
	comp=Z,17nm,0.9s						
H04D	**Lebanon**	**83.85**	**37**	P	**P**	**16 53 00.4**	**+1.3**
	baz=231						
SHPR	**Sheep Range**	**83.88**	**47**	P	**P**	**16 53 00.4**	**+0.8**
SHPR				IAmb	IAmb	16 53 02.5	
	comp=Z,31nm,1.4s						
TSI	**Tuntungan**	**83.93**	**276**	P	**P**	**16 53 00.6**	**+0.4**
	comp=Z,34nm,0.4s						
J05D	**Fort Rock, OR**	**83.94**	**39**	P	**P**	**16 53 01.6**	**+1.8**
	baz=232,SNR=16						
W13A	**Hualapai Mount**	**84.01**	**49**	P	**P**	**16 53 01.1**	**+0.7**
Y14A	**Wickenburg**	**84.02**	**50**	P	**P**	**16 53 01.1**	**+0.9**
GSI	**Gunungsitoli**	**84.02**	**274**	P	**P**	**16 53 01.4**	**+0.7**
GSI	**Gunungsitoli**	**84.02**	**274**	P	**P**	**16 53 01.8**	**+1.1**
	comp=Z,2µmcomp=Z,194nm,1.2s						
GSI	**Gunungsitoli**	**84.02**	**274**	P	**P**	**16 53 02.2**	**+1.5**
S11A	**Rachel**	**84.10**	**46**	P	**P**	**16 53 01.4**	**+0.7**
DSPA	**Despedida**	**84.24**	**146**	P	**P**	**16 53 02.1**	**+1.2**
O19K	**Port Alsworth**	**84.25**	**12**	P	**P**	**16 53 00.6**	**0.0**
O19K				IAmb	IAmb	16 53 01.6	
	comp=Z,40nm,0.9s						
O19K	**Port Alsworth**	**84.25**	**12**	P	**P**	**16 53 00.9**	**+0.3**
	baz=203,SNR=7.1						
H04A	**Detroit Lake**	**84.26**	**37**	P	**P**	**16 53 01.5**	**+0.3**
H04A				IAmb	IAmb	16 53 03.5	
	comp=Z,21nm,0.9s						
CNPM	**China Poot**	**84.29**	**14**	P	**P**	**16 53 01.4**	**+0.5**
MG02	**Cerro Sombrero**	**84.31**	**145**	P	**P**	**16 53 02.0**	**+0.7**
N18K	**Kilae Creek**	**84.40**	**11**	P	**P**	**16 53 01.2**	**-0.2**
PINE	**Pine Mountain**	**84.42**	**38**	P	**P**	**16 53 03.5**	**+1.3**
PINE				IAmb	IAmb	16 53 04.6	
	comp=Z,16nm,0.8s						
PRN	**Pahroc Range**	**84.44**	**46**	P	**P**	**16 53 03.4**	**+1.1**
PRN				IAmb	IAmb	16 53 05.4	
	comp=Z,19nm,1.0s						
I05D	**Terrebonne, OR**	**84.52**	**38**	P	**P**	**16 53 04.1**	**+1.6**
	baz=232						
BRLK	**Bradley Lake**	**84.58**	**14**	P	**P**	**16 53 02.6**	**+0.3**
BRSE	**Bradley Lake S**	**84.59**	**14**	P	**P**	**16 53 03.4**	**+1.0**
	baz=207						
R11A	**Troy Canyon, C**	**84.59**	**45**	P	**P**	**16 53 03.4**	**+0.2**
R11A	**Troy Canyon, C**	**84.59**	**45**	P	**P**	**16 53 03.6**	**+0.5**
	baz=237,SNR=6.0						
KCSI	**Kotacane, Aceh**	**84.67**	**276**	P	**P**	**16 53 05.2**	**+1.3**
	comp=Z,680nmcomp=Z,34nm,1.4s						
BMN	**Battle Mountai**	**84.70**	**43**	P	**P**	**16 53 04.0**	**+0.5**
BMN				pmax	pmax		
	comp=Z,16nm,0.9s						
BMN	**Battle Mountai**	**84.70**	**43**	P	**P**	**16 53 04.0**	**+0.5**
MA2	**Magadan**	**84.73**	**345**	*ce*P	**P**	**16 53 02.8**	**-0.2**
MA2				pmax	pmax		
	comp=Z,77nm,1.4s						
MA2	**Magadan**	**84.73**	**345**	P	**P**	**16 53 02.4**	**-0.6**
MA2				IAmb	IAmb	16 53 04.1	
	comp=Z,73nm,1.3s						
N19K	**Bonanza Creek**	**84.78**	**12**	P	**P**	**16 53 02.9**	**-0.5**
N19K	**Bonanza Creek**	**84.78**	**12**	P	**P**	**16 53 02.9**	**-0.5**
	baz=203						
TUC	**Tucson**	**84.81**	**52**	P	**P**	**16 53 05.1**	**+0.9**
TUC				pmax	pmax		
	comp=Z,20nm,1.1s						
TUC	**Tucson**	**84.81**	**52**	P	**P**	**16 53 05.1**	**+0.9**
TUC				IAmb	IAmb	16 53 06.8	
	comp=Z,20nm,1.1s						
TUC	**Tucson**	**84.81**	**52**	P	**P**	**16 53 06.2**	**+2.0**
	baz=240						
SVW2	**Sparrevohn**	**84.84**	**11**	P	**P**	**16 53 03.4**	**-0.1**
F04A	**Amboy**	**84.91**	**36**	P	**P**	**16 53 04.8**	**+0.6**
F04A				IAmb	IAmb	16 53 06.8	
	comp=Z,26nm,0.9s						
SRIT	**Nakonsritamara**	**84.92**	**281**		**P**	**16 53 06.8**	**+1.8**
WISH	**Wishkah**	**84.93**	**34**	P	**P**	**16 53 05.9**	**+1.6**
WVOR	**Wild Horse Val**	**84.97**	**40**	P	**P**	**16 53 05.4**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,21nm,1.4s						
WVOR	**Wild Horse Val**	**84.97**	**40**	P	**P**	**16 53 05.4**	**+0.6**
NLWA	**Neilton Lookou**	**85.05**	**34**	P	**P**	**16 53 06.0**	**+1.1**
NLWA				IAmb	IAmb	16 53 31.6	
	comp=Z,43nm,1.4s						
E04D	**Cinebar**	**85.21**	**35**	P	**P**	**16 53 07.5**	**+1.8**
	baz=231						
I07A	**Izee**	**85.42**	**39**	P	**P**	**16 53 07.6**	**+0.7**
I07A				IAmb	IAmb	16 53 09.9	
	comp=Z,33nm,1.3s						
LCMT	**Little Creek M**	**85.45**	**47**	P	**P**	**16 53 08.2**	**+1.0**
319A	**Douglas**	**85.47**	**54**	P	**P**	**16 53 08.8**	**+1.4**
319A				IAmb	IAmb	16 53 10.9	
	comp=Z,82nm,1.4s						
HNS	**HongShan**	**85.50**	**313**	⇓P	**P**	**16 53 08.6**	**+1.3**
HNS				pmax	pmax		
	comp=Z,40nm,1.2s						
LYN	**LuoYang**	**85.60**	**310**	⇓*i*P	**P**	**16 53 09.2**	**+1.4**
LYN				pP	pP	16 55 15.8	+1.1
LYN				SKS	**SKSac**	**17 02 36.3**	**-0.4**
LYN				S	**ScS**	**17 02 54.5**	**-2.5**
LYN				pmax	pmax		
	comp=Z,50nm,1.3s						
J08A	**Circle Bar Ran**	**85.60**	**40**	P	**P**	**16 53 08.2**	**+0.4**
J08A				IAmb	IAmb	16 53 10.5	
	comp=Z,25nm,1.2s						
J08A				pP	**pP**	**16 55 15.8**	**+0.8**
CCUT	**Cedar City**	**85.65**	**47**	P	**P**	**16 53 08.6**	**+0.3**
ENH	**Enshi**	**85.73**	**305**	P	**P**	**16 53 08.4**	**-0.2**
U15A	**North Rim**	**85.80**	**48**		**P**	**16 53 10.7**	**+1.6**
U15A				IAmb	IAmb	16 53 11.4	
	comp=Z,18nm,0.8s						
M19K	**Big River Lodg**	**85.81**	**12**	P	**P**	**16 53 08.2**	**0.0**
M19K	**Big River Lodg**	**85.81**	**12**	P	**P**	**16 53 08.0**	**-0.2**
	baz=203						
PSUT	**Pine Spring**	**85.84**	**46**	P	**P**	**16 53 09.7**	**+0.6**
SZCU	**Shurtz Canyon**	**85.86**	**47**	P	**P**	**16 53 09.8**	**+0.5**
SZCU				IAmb	IAmb	16 53 12.2	
	comp=Z,23nm,1.4s						
D05A	**Enumclaw**	**85.92**	**35**	P	**P**	**16 53 10.4**	**+1.4**
BJT	**Baijiatuau**	**85.93**	**316**	P	**P**	**16 53 09.4**	**+0.1**
BJT				pmax	pmax		
	comp=Z,26nm,0.9s						
BJT	**Baijiatuau**	**85.93**	**316**	P	**P**	**16 53 09.4**	**+0.1**
BJT				IAmb	IAmb	16 53 10.8	
	comp=Z,26nm,0.9s						
BJI	**Beijing**	**85.94**	**316**	P	**P**	**16 53 10.2**	**+0.9**
BJI				pP	**pP**	**16 55 18.5**	**+2.1**
BJI				SKS	**SKSac**	**17 02 36.5**	**-1.9**
BJI				S	**ScS**	**17 02 58.2**	**-1.3**
BJI				pmax	pmax		
	comp=Z,29nm,2.0s						
BJI				pmax	pmax		
	comp=Z,320nm,4.4s						
BJI				LR	LR		
	comp=N,110nm,21.4s						
BJI				LR	LR		
	comp=E,120nm,22.5s						
BJI				LR	LR		
	comp=Z,160nm,23.6s						
L19K	**White Mountain**	**85.98**	**11**	P	**P**	**16 53 09.5**	**+0.5**
L19K				IAmb	IAmb	16 53 10.7	
	comp=Z,18nm,0.9s						
L19K	**White Mountain**	**85.98**	**11**	P	**P**	**16 53 09.9**	**+0.9**
	baz=203,SNR=9.4						
WUAZ	**Wupatki**	**85.98**	**49**	P	**P**	**16 53 09.1**	**-0.8**
WUAZ				IAmb	IAmb	16 53 13.5	
	comp=Z,28nm,1.5s						
WUAZ	**Wupatki**	**85.98**	**49**	P	**P**	**16 53 11.5**	**+1.7**
	baz=240						
RC01	**Rabbit Creek A**	**86.03**	**14**	P	**P**	**16 53 09.4**	**+0.2**
RC01				IAmb	IAmb	16 53 10.5	
	comp=Z,25nm,1.2s						
RC01	**Rabbit Creek A**	**86.03**	**14**	P	**P**	**16 53 09.4**	**+0.2**
	baz=207,SNR=5.4						
M20K	**Styx River**	**86.03**	**12**	P	**P**	**16 53 09.3**	**0.0**
	baz=204						
COYC	**Coyhaique**	**86.04**	**138**	P	**P**	**16 53 10.7**	**+0.9**
COYC				IAmb	IAmb	16 53 12.6	
	comp=Z,31nm,0.8s						
LHMI	**Lhok Sumawe**	**86.07**	**277**	P	**P**	**16 53 09.8**	**-0.7**
LHMI	**Lhok Sumawe**	**86.07**	**277**	P	**P**	**16 53 12.0**	**+1.5**
	comp=Z,2µmcomp=Z,130nm,1.5s						
ELK	**Elko**	**86.12**	**43**	P	**P**	**16 53 11.1**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=225,slow=4.8,SNR=11						
ELK				pP	**pwP**	**16 55 20.2**	**-1.2**
	comp=Z,6.7nm,1.0s,baz=256,slow=6.5,SNR=6.9						
	comp=Z,3.1nm,0.8s						
ELK	**Elko**	**86.12**	**43**	P	**P**	**16 53 10.7**	**+0.2**
GYA	**Guiyang**	**86.20**	**300**	⇓P	**P**	**16 53 11.8**	**+0.8**
GYA				pP	pP	16 55 16.3	-1.9
GYA				SKS	**SKSac**	**17 02 41.7**	**+0.8**
GYA				S	**ScS**	**17 03 00.6**	**-2.0**
GYA				pmax	pmax		
	comp=Z,32nm,1.3s						
GYA				pmax	pmax		
	comp=Z,280nm,6.0s						
AY01	**Puyuhuapi**	**86.20**	**137**	P	**P**	**16 53 11.7**	**+1.1**
AY01				IAmb	IAmb	16 53 13.6	
	comp=Z,37nm,1.3s						
HPIG		**86.21**	**59**	P	**P**	**16 53 11.4**	**+0.2**
HPIG				IAmb	IAmb	16 53 13.0	
	comp=Z,14nm,0.8s						
F07A	**Phinny Hill Vi**	**86.26**	**37**	P	**P**	**16 53 11.8**	**+1.1**
F07A				IAmb	IAmb	16 53 14.1	
	comp=Z,15nm,0.9s						
PKCU	**Pink Cliffs**	**86.31**	**47**		**P**	**16 53 13.3**	**+1.8**
PKCU				IAmb	IAmb	16 53 14.3	
	comp=Z,25nm,1.0s						
KAIM	**Kayak Island**	**86.32**	**17**	P	**P**	**16 53 11.7**	**+1.0**
TROLL	**Troll, Antarti**	**86.40**	**181**	P	**P**	**16 53 11.3**	**+0.1**
TROLL	**Troll, Antarti**	**86.40**	**181**	pP	pP	16 55 20.8	+1.8
L20K	**Farewell, AK**	**86.43**	**12**	P	**P**	**16 53 10.8**	**-0.4**
	baz=204,SNR=5.7						
G08A	**Pilot Rock**	**86.45**	**38**	P	**P**	**16 53 12.5**	**+0.8**
G08A				IAmb	IAmb	16 53 13.7	
	comp=Z,13nm,0.8s						
GLI	**Glacier Island**	**86.46**	**15**	P	**P**	**16 53 11.3**	**+0.1**
GLI				IAmb	IAmb	16 53 12.3	
	comp=Z,22nm,0.8s						
GLI	**Glacier Island**	**86.46**	**15**	P	**P**	**16 53 11.7**	**+0.5**
	baz=210,SNR=6.3						
TTA	**Tatalina**	**86.47**	**10**	P	**P**	**16 53 11.5**	**+0.1**
TTA				pmax	pmax		
	comp=Z,12nm,1.2s						
TTA	**Tatalina**	**86.47**	**10**	P	**P**	**16 53 11.5**	**+0.1**
TTA	**Tatalina**	**86.47**	**10**	P	**P**	**16 53 12.0**	**+0.7**
	baz=202,SNR=6.0						
X18A	**Snowflake**	**86.50**	**51**		**P**	**16 53 13.6**	**+1.3**
B05A	**Bryant**	**86.53**	**34**	P	**P**	**16 53 13.2**	**+1.3**
	baz=232						
M22K	**Willow**	**86.53**	**13**	P	**P**	**16 53 11.7**	**+0.2**
	baz=207						
KNK	**Knik Glacier**	**86.60**	**14**	P	**P**	**16 53 12.0**	**+0.1**
KNK	**Knik Glacier**	**86.60**	**14**	P	**P**	**16 53 12.5**	**+0.5**
	baz=209						
PMR	**Palmer**	**86.61**	**14**	P	**P**	**16 53 11.9**	**0.0**
PMR				pmax	pmax		
	comp=Z,14nm,1.1s						
PMR	**Palmer**	**86.61**	**14**	P	**P**	**16 53 11.9**	**0.0**
PMR	**Palmer**	**86.61**	**14**	P	**P**	**16 53 12.0**	**0.0**
	baz=208,SNR=5.7						
LTY	**Liberty**	**86.67**	**36**	P	**P**	**16 53 13.1**	**+0.5**
LTY				IAmb	IAmb	16 53 15.1	
	comp=Z,18nm,1.2s						
E07A	**Sunnyside**	**86.70**	**37**	P	**P**	**16 53 13.7**	**+1.0**
E07A				IAmb	IAmb	16 53 16.3	
	comp=Z,22nm,1.0s						
MTPU	**Mount Pierson**	**86.70**	**47**	P	**P**	**16 53 13.2**	**-0.2**
MTPU				IAmb	IAmb	16 53 16.1	
	comp=Z,18nm,1.2s						
HMT	**Hamilton**	**86.71**	**17**	P	**P**	**16 53 13.2**	**+0.7**
HMT				IAmb	IAmb	16 53 38.8	
	comp=Z,40nm,1.5s						
SNAA	**Sanae**	**86.72**	**179**	P	**P**	**16 53 12.2**	**-0.4**
SNAA	**Sanae**	**86.72**	**179**	PKKPbc	PKKPbc	17 11 01.9	-3.8
SNAA	**Sanae**	**86.72**	**179**	pP	pP	16 55 23.4	+2.7
SNAA	**Sanae**	**86.72**	**179**	P	**P**	**16 53 13.1**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,19nm,1.4s						
SNAA	**Sanae**	**86.72**	**179**	P	**P**	**16 53 13.1**	**+0.5**
HAWA	**Hanford**	**86.78**	**37**	P	**P**	**16 53 13.7**	**+0.6**
HAWA				IAmb	IAmb	16 53 16.6	
	comp=Z,32nm,1.1s						
GHO	**Glory Hole Cre**	**86.81**	**14**	P	**P**	**16 53 13.2**	**+0.2**
GHO				IAmb	IAmb	16 53 14.2	
	comp=Z,27nm,0.7s						
VNA3	**Neumayer Olymp**	**86.90**	**177**	P	**P**	**16 53 13.5**	**+0.2**
VNA3	**Neumayer Olymp**	**86.90**	**177**	PKKPbc	PKKPbc	17 11 02.4	-2.8
VNA3	**Neumayer Olymp**	**86.90**	**177**	pP	pP	16 55 22.1	+0.6
W18A	**Petrified Fore**	**86.95**	**50**	P	**P**	**16 53 15.2**	**+0.8**
W18A				IAmb	IAmb	16 53 17.1	
	comp=Z,40nm,1.4s						
MSU	**Marysvale**	**86.95**	**46**	P	**P**	**16 53 14.9**	**+0.5**
MSU	**Marysvale**	**86.95**	**46**	P	**P**	**16 53 14.9**	**+0.5**
SML	**Sawmill**	**86.98**	**14**	P	**P**	**16 53 13.8**	**+0.1**
DIV	**Divide**	**87.00**	**16**	P	**P**	**16 53 13.6**	**-0.3**
CUT	**Chulitna**	**87.08**	**13**	P	**P**	**16 53 13.6**	**-0.5**
CUT				IAmb	IAmb	16 53 14.9	
	comp=Z,59nm,1.2s						
CUT	**Chulitna**	**87.08**	**13**	P	**P**	**16 53 14.3**	**+0.2**
	baz=207,SNR=8.2						
M23K	**Glacier View**	**87.11**	**14**	P	**P**	**16 53 13.2**	**-1.0**
	baz=209						
121A	**Cookes Peak, D**	**87.14**	**53**	P	**P**	**16 53 15.8**	**+0.5**
121A				IAmb	IAmb	16 53 18.7	
	comp=Z,48nm,1.4s						
121A	**Cookes Peak, D**	**87.14**	**53**	P	**P**	**16 53 16.9**	**+1.6**
	baz=242						
PPLA	**Purkeypile**	**87.14**	**12**	P	**P**	**16 53 13.8**	**-0.8**
BMO	**Blue Mountains**	**87.15**	**39**	P	**P**	**16 53 15.7**	**+0.7**
BMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BMO	**Blue Mountains**	**87.15**	**39**	P	**P**	**16 53 15.7**	**+0.7**
BMRM	**Bremner River**	**87.16**	**16**	P	**P**	**16 53 15.1**	**+0.4**
BMRM				IAmb	IAmb	16 53 16.0	
	comp=Z,12nm,0.8s						
BMRM	**Bremner River**	**87.16**	**16**	P	**P**	**16 53 15.4**	**+0.8**
	baz=212						
WAX	**Waxell Ridge**	**87.19**	**17**	P	**P**	**16 53 15.7**	**+0.9**
WAX				IAmb	IAmb	16 53 16.7	
	comp=Z,13nm,0.6s						
K20K	**Telida**	**87.21**	**11**	P	**P**	**16 53 14.9**	**+0.2**
K20K	**Telida**	**87.21**	**11**	P	**P**	**16 53 15.2**	**+0.5**
	baz=203,SNR=6.8						
MFID	**Camas Ranch**	**87.23**	**41**	P	**P**	**16 53 16.0**	**+0.6**
MFID				IAmb	IAmb	16 53 18.7	
	comp=Z,20nm,1.1s						
MFID				pP	**pP**	**16 55 21.8**	**-1.6**
SCM	**Sheep Creek Mo**	**87.23**	**15**	P	**P**	**16 53 15.3**	**+0.4**
SCM				pmax	pmax		
	comp=Z,26nm,0.7s						
SCM	**Sheep Creek Mo**	**87.23**	**15**	P	**P**	**16 53 15.3**	**+0.4**
SCM				IAmb	IAmb	16 53 16.3	
	comp=Z,26nm,0.7s						
SCM	**Sheep Creek Mo**	**87.23**	**15**	P	**P**	**16 53 15.6**	**+0.6**
	baz=210,SNR=9.7						
KLU	**Klutina**	**87.28**	**15**	P	**P**	**16 53 15.5**	**+0.4**
KLU	**Klutina**	**87.28**	**15**	P	**P**	**16 53 15.8**	**+0.6**
	baz=211						
LL02	**Futaleuf**	**87.28**	**136**	P	**P**	**16 53 17.0**	**+1.3**
LL02					**pP**	**16 55 23.5**	**-0.4**
VNA2	**Neumayer--Watz**	**87.33**	**177**	P	**P**	**16 53 12.4**	**-2.9**
VNA2	**Neumayer--Watz**	**87.33**	**177**	PKKPdf	PKKPdf	17 10 52.6	-2.5
VNA2				S	**S**	**17 03 10.5**	**+4.6**
VNA2	**Neumayer--Watz**	**87.33**	**177**	pP	pP	16 55 24.0	+0.3
SEY	**Seymchan**	**87.38**	**347**	*ce*P	**P**	**16 53 15.9**	**+0.4**
SEY				pmax	pmax		
	comp=Z,78nm,1.4s						
DUG	**Dugway, Tooele**	**87.40**	**45**	P	**P**	**16 53 17.4**	**+1.0**
	baz=239						
ISLE	**Juniper Island**	**87.46**	**17**	P	**P**	**16 53 16.6**	**+0.5**
ISLE				IAmb	IAmb	16 53 18.1	
	comp=Z,13nm,1.0s						
D08A	**Wollman Farm,**	**87.51**	**37**	P	**P**	**16 53 17.3**	**+0.8**
D08A				IAmb	IAmb	16 53 19.9	
	comp=Z,17nm,0.9s						
VNA1	**Neumayer--Stat**	**87.56**	**177**	P	**P**	**16 53 17.3**	**+0.9**
VNA1	**Neumayer--Stat**	**87.56**	**177**	pP	pP	16 55 24.5	-0.4
E09A	**Wood Farm, Sta**	**87.62**	**37**	P	**P**	**16 53 17.4**	**+0.3**
E09A				IAmb	IAmb	16 53 20.1	
	comp=Z,49nm,1.4s						
CAST	**Castle Rocks**	**87.63**	**12**	P	**P**	**16 53 15.7**	**-1.0**
CAST				IAmb	IAmb	16 53 16.6	
	comp=Z,19nm,0.9s						
CAST	**Castle Rocks**	**87.63**	**12**	P	**P**	**16 53 15.8**	**-0.9**
	baz=205,SNR=18						
TABL	**Table Mountain**	**87.66**	**18**	P	**P**	**16 53 17.6**	**+0.5**
TABL				IAmb	IAmb	16 53 18.7	
	comp=Z,15nm,0.8s						
VRDI	**Verde Repeater**	**87.68**	**17**	P	**P**	**16 53 17.3**	**+0.1**
N25K	**Chitina, Valde**	**87.70**	**16**	P	**P**	**16 53 17.4**	**+0.2**
N25K				IAmb	IAmb	16 53 18.7	
	comp=Z,10nm,0.8s						
N25K	**Chitina, Valde**	**87.70**	**16**	P	**P**	**16 53 17.7**	**+0.5**
	baz=212,SNR=6.5						
GLB	**Gilahina Butte**	**87.77**	**16**	P	**P**	**16 53 18.0**	**+0.6**
GLB				IAmb	IAmb	16 53 18.9	
	comp=Z,9.4nm,0.7s						
WAT6	**Susitna Watana**	**87.79**	**14**	P	**P**	**16 53 17.8**	**+0.1**
	baz=209,SNR=12						
WAT1	**Susitna Watana**	**87.83**	**14**	P	**P**	**16 53 17.7**	**0.0**
	baz=208						
Q16A	**Castle Valley**	**87.83**	**46**	P	**P**	**16 53 19.9**	**+1.4**
Q16A				IAmb	IAmb	16 53 22.5	
	comp=Z,25nm,1.0s						
F10A	**Beach Ranch, E**	**87.84**	**38**	P	**P**	**16 53 18.9**	**+0.8**
F10A				IAmb	IAmb	16 53 20.9	
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**87.92**	**308**	P	**P**	**16 53 20.0**	**+1.2**
XAN				pP	pwP	16 55 30.3	-0.9
XAN				SKS	**SKSac**	**17 02 50.0**	**-0.7**
XAN				S	**S**	**17 03 14.0**	**+1.3**
XAN	**Xi'an**	**87.92**	**308**	sS	sS	17 07 09.1	+8.3
XAN				pmax	pmax		
	comp=Z,55nm,0.9s						
XAN				pmax	pmax		
	comp=Z,270nm,3.7s						
J20K	**Nowinta River**	**87.95**	**11**	P	**P**	**16 53 18.8**	**+0.6**
J20K				IAmb	IAmb	16 53 19.5	
	comp=Z,24nm,1.4s						
J20K	**Nowinta River**	**87.95**	**11**	P	**P**	**16 53 18.6**	**+0.5**
	baz=203,SNR=9.3						
LL04	**Puerto Octay**	**87.96**	**134**	P	**P**	**16 53 19.8**	**+0.9**
LL04				IAmb	IAmb	16 53 21.6	
	comp=Z,37nm,1.3s						
KTH	**Kantishna Hill**	**87.98**	**12**	P	**P**	**16 53 17.5**	**-0.9**
KTH				IAmb	IAmb	16 53 19.0	
	comp=Z,15nm,0.9s						

TMUT	Trail Mountain	88.00	46		P	16 53 21.0	+1.6
TMUT				IAmb	IAmb	16 53 21.7	
	comp=Z,17nm,0.9s						
TMUT				pP	pP	16 55 26.3	-1.3
CHUM	Lake Minchumin	88.01	12	P	P	16 53 18.0	-0.4
	baz=205,SNR=8.1						
BARN	Barnard Glacie	88.02	17	P	P	16 53 19.4	+0.6
BARN				IAmb	IAmb	16 53 20.6	
	comp=Z,13nm,0.8s						
GCSA	Galena City Sc	88.03	9	P	P	16 53 19.2	+0.7
	baz=201,SNR=5.8						
PLID	Pearl Lake	88.05	39	P	P	16 53 19.3	-0.1
PLID				IAmb	IAmb	16 53 21.7	
	comp=Z,24nm,1.1s						
B08A	Colville Reser	88.05	35	P	P	16 53 19.3	+0.2
B08A				IAmb	IAmb	16 53 21.6	
	comp=Z,11nm,0.8s						
JIS	Juneau Island	88.09	22	P	P	16 53 19.5	+0.6
XLT	XiLinHaoTe	88.09	319	⇓ *i*P	P	16 53 20.0	+0.6
XLT				pP	pP	16 55 27.8	+0.3
XLT				sP	sP	16 56 29.5	+2.5
XLT				PP	PP	16 57 00.4	+2.3
XLT				SKS	SKSac	17 02 49.4	-2.0
XLT				S	ScS	17 03 15.9	-1.6
XLT	XiLinHaoTe	88.09	319	sS	sS	17 07 05.3	+2.9
XLT	XiLinHaoTe	88.09	319	SS	SS	17 09 29.0	+7.2
XLT				pmax	pmax		
	comp=Z,27nm,1.5s						
XLT				pmax	pmax		
	comp=Z,200nm,6.2s						
LLLB	Lillooet	88.10	33	P	P	16 53 19.7	+0.5
LLLB				IAmb	IAmb	16 53 21.6	
	comp=Z,10nm,0.9s						
HLID	Hailey	88.17	41	P	P	16 53 20.9	+1.0
HLID				IAmb	IAmb	16 53 23.4	
	comp=Z,19nm,1.2s						
HLID	Hailey	88.17	41	P	P	16 53 21.4	+1.5
	baz=237,SNR=26						
ZEA	Zeya	88.17	332	*e*P	P	16 53 20.4	+1.0
ZEA				*e*		16 55 28.6	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
HVU	Hansel Valley	88.25	43	P	P	16 53 20.9	+0.6
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	88.25	43	P	P	16 53 20.9	+0.6
HVU				IAmb	IAmb	16 53 22.0	
	comp=Z,11nm,0.9s						
RND	Reindeer	88.28	13	P	P	16 53 19.5	-0.3
RND				pmax	pmax		
	comp=Z,26nm,0.8s						
RND	Reindeer	88.28	13	P	P	16 53 19.5	-0.3
RND				IAmb	IAmb	16 53 20.8	
	comp=Z,26nm,0.8s						
DHY	Denali Highway	88.31	14	P	P	16 53 20.0	0.0
DHY	Denali Highway	88.31	14	P	P	16 53 20.4	+0.3
	baz=210						
CTU	Camp Tracy	88.35	45	P	P	16 53 21.1	+0.3
CTU				IAmb	IAmb	16 53 23.9	
	comp=Z,15nm,1.1s						
SRU	San Rafael Swe	88.37	47	P	P	16 53 21.5	+0.5
SRU				pmax	pmax		
	comp=Z,51nm,1.3s						
SRU	San Rafael Swe	88.37	47	P	P	16 53 21.5	+0.5
SRU				IAmb	IAmb	16 53 24.1	
	comp=Z,51nm,1.3s						
BPAW	Bear Paw Mtn.	88.46	12	P	P	16 53 19.7	-0.9
LENM	Lemitar	88.50	52	P	P	16 53 22.0	+0.4
JLU	Jordanelle	88.50	45	P	P	16 53 22.0	+0.4
JLU				IAmb	IAmb	16 53 24.1	
	comp=Z,27nm,1.3s						
MNTX	Cornudas Mount	88.56	55	P	P	16 53 22.7	+0.9
MNTX				IAmb	IAmb	16 53 23.9	
	comp=Z,16nm,0.8s						
MNTX	Cornudas Mount	88.56	55	P	P	16 53 23.2	+1.4
	baz=243						
PAX	Paxson	88.66	15	P	P	16 53 21.5	-0.1
PAX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PAX	Paxson	88.66	15	P	P	16 53 21.5	-0.1
PAX	Paxson	88.66	15	P	P	16 53 21.1	-0.5
	baz=211						
BNM	Barren Site	88.74	52	P	P	16 53 23.0	+0.1
M26K	Nabesna, AK	88.78	16	P	P	16 53 22.7	+0.6
M26K	Nabesna, AK	88.78	16	P	P	16 53 23.1	+0.9
	baz=214,SNR=5.8						
P18A	Preston Nutter	88.81	46	P	P	16 53 23.3	+0.2
P18A				IAmb	IAmb	16 53 26.4	
	comp=Z,12nm,1.1s						
KMI	Kunming	88.81	298	⇓P	P	16 53 25.1	+1.7
KMI				pmax	pmax		
	comp=Z,45nm,1.3s						
KMI				pmax	pmax		
	comp=Z,280nm,3.8s						
BWN	Browne	88.83	13	P	P	16 53 21.7	-0.5
BWN				IAmb	IAmb	16 53 23.5	
	comp=Z,40nm,1.4s						
TX31	Lajitas Ar. Si	88.85	58	P	P	16 53 24.4	+1.1
TX32	Lajitas Array	88.85	58	P	P	16 53 24.7	+1.4
TX32				IAmb	IAmb	16 53 25.7	
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	88.85	58	P	P	16 53 24.0	+0.7
	comp=Z,5.8nm,0.7s,baz=218,slow=5.9,SNR=47						
TXAR				pP	pP	16 55 32.6	+0.7
	comp=Z,5.6nm,1.1s,baz=217,slow=6.1,SNR=8.2						
TXAR				PKKPbc	PKKPbc	17 10 59.4	+0.2
	comp=Z,0.9nm,0.6s,baz=66,slow=2.5,SNR=8.3						
	comp=Z,5.8nm,0.7s						
TXAR	Lajitas Array	88.85	58	P	P	16 53 24.6	+1.3
TXAR				*PP	pP	16 55 32.3	+0.4
TXAR	Lajitas Array	88.85	58	P	P	16 53 24.6	+1.3
TXAR				pP	pP	16 55 32.3	+0.4
HWUT	Hardware Ranch	88.94	44	P	P	16 53 23.6	0.0
HWUT				IAmb	IAmb	16 53 25.7	
	comp=Z,10.0nm,0.8s						
YUK3	Moose Creek	88.94	17	P	P	16 53 24.3	+1.1
	baz=216,SNR=10.0						
M27K	Edge Creek, AK	89.04	16	P	P	16 53 24.4	+0.9
M27K				IAmb	IAmb	16 53 26.8	
	comp=Z,11nm,1.1s						
M27K	Edge Creek, AK	89.04	16	P	P	16 53 24.6	+1.1
	baz=214,SNR=6.5						
MENT	Mentasta	89.05	15	P	P	16 53 24.0	+0.6
PV23	Carpenter Ridg	89.07	48	P	P	16 53 24.5	+0.1
PV23				IAmb	IAmb	16 53 25.9	
	comp=Z,8.4nm,0.9s						
BCYI	Bear Canyon	89.18	41	P	P	16 53 25.0	+0.3
NEW	Newport	89.20	36	pP	pP	16 55 33.7	+0.7
	comp=Z,1.1nm,0.6s,baz=234,slow=3.8,SNR=2.2						
L26K	Log Cabin Wild	89.22	16	P	P	16 53 25.0	+0.8
	baz=213						
ANMO	Albuquerque	89.23	52	P	P	16 53 25.2	+0.1
	comp=Z,8.9nm,0.9s,baz=226,slow=5.2,SNR=8.1						
ANMO				pP	pP	16 55 34.7	+1.0
	comp=Z,4.4nm,1.0s,baz=204,slow=4.9,SNR=5.6						
	comp=Z,8.9nm,0.9s						
ANMO	Albuquerque	89.23	52	*i* P	P	16 53 26.0	+0.9
ANMO				pmax	pmax		
	comp=Z,21nm,1.2s						
ANMO	Albuquerque	89.23	52	P	P	16 53 25.2	+0.1
ANMO				IAmb	IAmb	16 53 28.1	
	comp=Z,17nm,1.1s						
ANMO	Albuquerque	89.23	52	P	P	16 53 26.1	+0.9
	baz=243						
LC01	Cunco	89.25	132	P	P	16 53 25.6	+0.6
LC01				IAmb	IAmb	16 53 28.0	
	comp=Z,19nm,0.8s						
LC01				pP	pP	16 55 32.1	-1.6
I21K	Tanana	89.25	11	P	P	16 53 23.9	-0.3
I21K				IAmb	IAmb	16 53 25.2	
	comp=Z,12nm,0.9s						
I21K	Tanana	89.25	11	P	P	16 53 24.5	+0.3
	baz=205,SNR=11						
NEA2	Nenana	89.28	13	P	P	16 53 23.2	-1.1
	baz=208						
PLCA	Paso Flores	89.29	134	P	P	16 53 26.9	+1.7
	comp=Z,7.9nm,0.7s,baz=241,slow=4.6,SNR=46						
PLCA				pP	pP	16 55 34.8	+0.8
	comp=Z,3.0nm,1.0s,baz=215,slow=17,SNR=4.1						
	comp=Z,7.9nm,0.7s						
PLCA	Paso Flores	89.29	134	P	P	16 53 26.1	+0.9
PLCA				IAmb	IAmb	16 53 27.5	
	comp=Z,10nm,0.8s						
PLCA	Paso Flores	89.29	134	*e*P	P	16 53 27.2	+2.0
PLCA				*e*pP	pP	16 55 33.5	-0.5
K24K	Donnelly Dome	89.30	14	P	P	16 53 25.1	+0.6
	baz=211,SNR=7.0						
PV07	Paradox Valley	89.32	48	P	P	16 53 25.8	+0.4
PV07				IAmb	IAmb	16 53 26.8	
	comp=Z,16nm,1.5s						
CM31	Chiang Mai Arr	89.35	290	P	P	16 53 26.9	+1.1
CM31	Chiang Mai Arr	89.35	290	P	P	16 53 27.9	+2.1
CMAR	Chiang Mai Arr	89.35	290	P	P	16 53 27.7	+1.9
	comp=Z,38nm,0.9s,baz=126,slow=3.1,SNR=195						
CMAR				pP	pP	16 55 33.2	-0.8
	comp=Z,4.6nm,1.1s,baz=126,slow=3.6,SNR=5.3						
CMAR				PP	PP	16 57 09.6	+1.3
	comp=Z,3.3nm,0.9s,baz=130,slow=7.0,SNR=4.5						
CMAR				PKKPbc	PKKPbc	17 10 58.7	+1.2
	comp=Z,0.7nm,0.6s,baz=280,slow=4.4,SNR=8.3						
CMAR				SKKPbc	SKKPbc	17 13 40.4	+0.1
	comp=Z,0.7nm,0.9s,baz=286,slow=5.2,SNR=5.2						
	comp=Z,38nm,0.9s						
CMAR	Chiang Mai Arr	89.35	290	P	P	16 53 26.9	+1.2
CMAR					pP	16 55 32.4	-1.6
BVCY	Beaver Creek	89.36	17	P	P	16 53 25.8	+1.1
	baz=215						
HHC	Hu-ho-hao-te	89.37	315	*e*P	P	16 53 26.9	+1.4
HHC				PP	PP	16 57 10.3	+2.2
HHC				SKS	SKSac	17 03 00.4	+1.5
HHC	Hu-ho-hao-te	89.37	315	S	S	17 03 29.3	+3.7
HHC				pmax	pmax		
	comp=Z,90nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,6.8s						
WRH	Wood River Hil	89.38	13	P	P	16 53 24.4	-0.4
WRH				IAmb	IAmb	16 53 25.5	
	comp=Z,15nm,1.0s						
WRH					pP	16 55 33.3	-0.3
PV15	Paradox Valley	89.39	48	P	P	16 53 25.7	-0.1
PV15				IAmb	IAmb	16 53 27.1	
	comp=Z,11nm,1.1s						
RIDG	Independent Ri	89.46	15	P	P	16 53 25.3	0.0
RIDG	Independent Ri	89.46	15	P	P	16 53 26.1	+0.8
	baz=212						
CHTO	Chiang Mai	89.49	290	P	P	16 53 27.5	+1.1
CHTO				*PP	pP	16 55 33.3	-1.4
CHTO				pmax	pmax		
	comp=Z,162nm,1.5s						
CHTO	Chiang Mai	89.49	290		PcP	16 53 27.7	+0.4
CHTO					pP	16 55 33.3	-1.4
CHTO	Chiang Mai	89.49	290	P	P	16 53 27.5	+1.1
CHTO				IAmb	IAmb	16 53 29.2	
	comp=Z,162nm,1.5s						
CHTO	Chiang Mai	89.49	290	P	P	16 53 28.1	+1.7
CHTO	Chiang Mai	89.49	290	P	P	16 53 28.3	+1.9
H21K	Melozitna Rive	89.54	11	P	P	16 53 25.8	+0.3
H21K	Melozitna Rive	89.54	11	P	P	16 53 26.1	+0.6
	baz=205,SNR=8.4						
HDA	Harding Lake	89.56	13	P	P	16 53 25.5	-0.2
HDA				IAmb	IAmb	16 53 27.4	
	comp=Z,11nm,1.2s						
HDA				pP	pP	16 55 34.1	-0.5
HDA	Harding Lake	89.56	13	P	P	16 53 25.7	0.0
	baz=210,SNR=7.9						
CCB	Clear Creek Bu	89.59	13	P	P	16 53 25.1	-0.7
CCB				IAmb	IAmb	16 53 26.2	
	comp=Z,15nm,1.2s						
CCB					pP	16 55 32.9	-1.8
L27K	Beaver Creek,	89.63	16	P	P	16 53 26.1	+0.1
L27K	Beaver Creek,	89.63	16	P	P	16 53 26.9	+0.8
	baz=214						
BCAR	Beaver Creek A	89.65	16	P	P	16 53 26.0	-0.1
IMAR	Indian Mountai	89.68	10	P	P	16 53 26.0	-0.1
I23K	Minto, Yukon-K	89.72	12	P	P	16 53 25.5	-0.8
I23K	Minto, Yukon-K	89.72	12	P	P	16 53 26.3	0.0
	baz=208						
MDM	Murphy Dome	89.78	13	P	P	16 53 25.8	-0.9
MDM				IAmb	IAmb	16 53 27.1	
	comp=Z,12nm,1.0s						
TCOL	CIGO, UAF Yank	89.78	13	P	P	16 53 25.8	-0.8
TCOL				IAmb	IAmb	16 53 27.1	
	comp=Z,10nm,0.8s						
COLA	College	89.78	13	*i* P	P	16 53 25.9	-0.7
COLA				pmax	pmax		
	comp=Z,14nm,1.2s						
MCMT	McKenzie Canyo	89.79	41	P	P	16 53 27.7	+0.2
AHID	Auburn Hatcher	89.82	43	P	P	16 53 28.1	+0.5
AHID				IAmb	IAmb	16 53 30.1	
	comp=Z,16nm,0.8s						
SCRK	Sand Creek	89.86	15	P	P	16 53 27.4	+0.2
SCRK	Sand Creek	89.86	15	P	P	16 53 27.8	+0.6
	baz=213,SNR=5.6						
IL31		89.89	13	P	P	16 53 26.7	-0.4
ILAR	Eielson Array	89.89	13	P	P	16 53 26.9	-0.3
	comp=Z,2.3nm,0.7s,baz=215,slow=5.0,SNR=25						
ILAR				pP	pP	16 55 37.4	+1.2
	comp=Z,1.6nm,0.9s,baz=218,slow=5.7,SNR=4.0						
	comp=Z,2.3nm,0.7s						
ILAR	Eielson Array	89.89	13	P	P	16 53 26.6	-0.6
ORCD	Orcadas	89.93	160	P	P	16 53 28.1	+0.5
ORCD				IAmb	IAmb	16 53 30.2	
	comp=Z,17nm,1.0s						
J25K	Salcha River,	90.09	14	P	P	16 53 28.0	-0.2
J25K	Salcha River,	90.09	14	P	P	16 53 28.4	+0.3
	baz=211,SNR=6.7						
PZH	PanZhiHua	90.20	298	⇓P	P	16 53 30.7	+1.0
PZH				pP	pP	16 55 38.3	+0.1
PZH				SKS	SKSac	17 03 02.9	-1.5
PZH	PanZhiHua	90.20	298	S	S	17 03 36.3	+2.5
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH				pmax	pmax		
	comp=Z,130nm,5.4s						
MSO	Missoula	90.20	39	P	P	16 53 29.9	+0.8
DLMT	Dillon	90.22	40	P	P	16 53 29.6	+0.2
BILL	Bilibino	90.23	355	*c i*P	P	16 53 28.9	+0.3
BILL				*i* *PP	pP	16 55 38.0	+0.5
BILL				*e*S	SKSac	17 03 05.1	+2.7
BILL				*e*		17 03 36.4	
BILL				SS	SS	17 09 58.0	+6.9
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	90.23	355	P	P	16 53 28.6	0.0
BILL				IAmb	IAmb	16 53 30.1	
	comp=Z,17nm,0.9s						
S22A	4UR Ranch, Cre	90.26	49	P	P	16 53 30.2	+0.3
S22A				IAmb	IAmb	16 53 32.5	
	comp=Z,31nm,1.4s						
S22A	4UR Ranch, Cre	90.26	49	P	P	16 53 31.4	+1.5
	baz=242						
BTO	Baotou	90.27	314	*e*P	P	16 53 31.5	+1.9
REDW	Red Top Meadow	90.28	43	P	P	16 53 30.1	+0.3
REDW				IAmb	IAmb	16 53 32.9	
	comp=Z,21nm,1.1s						
TPAW	Teton Pass	90.28	43	P	P	16 53 30.6	+0.8
TPAW				IAmb	IAmb	16 53 33.1	
	comp=Z,7.1nm,0.8s						
K27K	Chicken	90.37	15	P	P	16 53 30.6	+1.2
	baz=214						
SNOW	Snow King Moun	90.39	43	P	P	16 53 30.0	-0.3
SNOW				IAmb	IAmb	16 53 32.2	
	comp=Z,21nm,1.2s						
O20A	White River Ci	90.40	47	P	P	16 53 30.8	+0.4
O20A				IAmb	IAmb	16 53 33.3	
	comp=Z,8.6nm,0.8s						
O20A	White River Ci	90.40	47	P	P	16 53 31.2	+0.8
	baz=242						
J26L	Joseph Creek	90.41	15	P	P	16 53 30.8	+1.1
	baz=213,SNR=11						
CD2	Chengdu	90.43	303	*e*P	P	16 53 31.0	+0.5
MOOW	Moose Ponds	90.54	42	P	P	16 53 31.4	+0.5
LRM	Limekiln Ridge	90.55	40	pP	pP	16 55 38.6	-1.2
LOHW	Long Hollow	90.56	43	P	P	16 53 31.4	+0.3
M30M	Minto, Yukon	90.63	18	P	P	16 53 31.4	+0.7
	baz=219						
FLWY	Flagg Ranch	90.73	42	P	P	16 53 32.5	+0.6
FLWY				IAmb	IAmb	16 53 34.7	
	comp=Z,12nm,0.9s						
BW06	Boulder Array	90.81	44	P	P	16 53 31.9	-0.3
BW06				IAmb	IAmb	16 53 34.0	
	comp=Z,21nm,1.5s						
BW06	Boulder Array	90.81	44	P	P	16 53 32.7	+0.5
	baz=241						
PD31	Pinedale Array	90.81	44	P	P	16 53 31.9	-0.3
PD31				IAmb	IAmb	16 53 34.0	
	comp=Z,19nm,1.5s						
PDAR	Pinedale Array	90.81	44	P	P	16 53 32.6	+0.4
	comp=Z,3.1nm,0.6s,baz=220,slow=3.7,SNR=28						
PDAR				pP	pP	16 55 42.0	+0.9
	comp=Z,0.1nm,0.4s,baz=342,slow=37,SNR=1.8						
PDAR				PP	PP	16 57 19.1	-0.3
	comp=Z,0.7nm,0.9s,baz=251,slow=4.5,SNR=3.9						
PDAR				PKKP	PKKPdf	17 10 52.5	+0.9
	comp=Z,0.1nm,0.4s,baz=92,slow=4.6,SNR=5.5						
	comp=Z,3.1nm,0.6s						
PDAR	Pinedale Array	90.81	44	P	P	16 53 32.2	-0.1
SMCO	Snowmass	90.82	48	P	P	16 53 33.1	+0.5
SMCO				IAmb	IAmb	16 53 39.8	
	comp=Z,7.7nm,0.9s						
YHL	Hebgen Lake	90.82	41	P	P	16 53 33.4	+1.1
YHL				IAmb	IAmb	16 53 36.0	
	comp=Z,6.0nm,0.7s						
BOZ	Bozeman (W)	90.93	41	P	P	16 53 33.2	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOZ	Bozeman (W)	90.93	41	P	P	16 53 33.2	+0.6
BOZ	Bozeman (W)	90.93	41	P	P	16 53 33.8	+1.2
	baz=239,SNR=9.1						
H17A	Grant Village	90.97	42	P	P	16 53 35.5	+2.5
	baz=240,SNR=6.3						
GO05	Huala	91.01	128	P	P	16 53 33.5	+0.3
GO05				IAmb	IAmb	16 53 34.5	
	comp=Z,14nm,0.9s						
DAWY	Dawson	91.09	16	P	P	16 53 33.1	+0.4
DAWY	Dawson	91.09	16	P	P	16 53 33.4	+0.7
	baz=217						
SDCO	Great Sand Dun	91.19	50	P	P	16 53 34.2	0.0
SDCO	Great Sand Dun	91.19	50	P	P	16 53 35.1	+0.9
	baz=243						
EGAK	Eagle	91.22	15	P	P	16 53 33.4	+0.1
EGAK	Eagle	91.22	15	P	P	16 53 33.9	+0.6
	baz=215,SNR=5.3						
HRY	Holter Researc	91.38	40	P	P	16 53 34.6	0.0
COLD	Coldfoot	91.42	11	P	P	16 53 34.6	+0.5
COLD	Coldfoot	91.42	11	P	P	16 53 35.0	+0.8
	baz=207,SNR=5.3						
MSTX	Muleshoe	91.53	54	P	P	16 53 36.4	+0.8
	baz=245						
T25A	Trinidad	91.70	51	P	P	16 53 36.6	+0.2
T25A	Trinidad	91.70	51	P	P	16 53 36.9	+0.4
	baz=244						
RWWY	Rawlins	91.82	46	P	P	16 53 36.1	-0.9
RWWY				IAmb	IAmb	16 53 38.5	
	comp=Z,31nm,1.5s						
833A	Chaparral WMA,	91.83	60	P	P	16 53 37.2	+0.2
833A				IAmb	IAmb	16 53 38.6	
	comp=Z,21nm,1.1s						
833A	Chaparral WMA,	91.83	60	P	P	16 53 38.2	+1.2
	baz=246						
Q24A	Divide	91.98	49	P	P	16 53 39.0	+1.1
	baz=243						
MT01	Popeta	92.03	128	P	P	16 53 38.1	+0.1
MT01				IAmb	IAmb	16 53 39.3	
	comp=Z,23nm,0.8s						
MT01				pP	pP	16 55 45.8	-1.2
ISCO	Idaho Springs	92.04	48	P	P	16 53 37.8	-0.3
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ISCO	Idaho Springs	92.04	48	P	P	16 53 37.8	-0.3
ISCO	Idaho Springs	92.04	48	P	P	16 53 38.4	+0.4
	baz=243						
RLMT	Red Lodge	92.14	42	P	P	16 53 39.6	+1.3
	baz=241						
MT09	Talagante	92.27	128	P	P	16 53 39.3	+0.1
MT09				IAmb	IAmb	16 53 41.6	
	comp=Z,12nm,0.9s						
N23A	Red Feather La	92.31	47	P	P	16 53 40.8	+1.6
	baz=243						
JCT	Junction City	92.38	58	P	P	16 53 39.6	+0.1
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JCT	Junction City	92.38	58	P	P	16 53 39.6	+0.1
JCT				IAmb	IAmb	16 53 40.4	
	comp=Z,5.8nm,0.8s						
JCT	Junction City	92.38	58	P	P	16 53 40.1	+0.6
	baz=246						
BO04	La Punta	92.45	128	P	P	16 53 40.0	+0.1
BO04				IAmb	IAmb	16 53 42.4	
	comp=Z,7.6nm,0.9s						
LZH	Lanzhou	92.56	308	*e*P	P	16 53 42.1	+1.7
LZH				pP	pwP	16 55 52.0	-1.9
LZH				sP	sP	16 56 53.1	+4.9
LZH				SKS	SKSac	17 03 17.0	-0.1
LZH	Lanzhou	92.56	308	*e*S	S	17 03 58.8	+4.6
LZH	Lanzhou	92.56	308	sS	sS	17 07 38.4	-7.4
LZH				pmax	pmax		
	comp=Z,46nm,1.1s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
K22A	Casper	92.72	45	P	P	16 53 42.3	+1.4
	baz=243						
PEL	Peldehue	92.79	127	P	P	16 53 41.7	+0.2
PEL				pmax	pmax		
	comp=Z,14nm,0.8s						
PEL	Peldehue	92.79	127	P	P	16 53 41.7	+0.2
PEL				IAmb	IAmb	16 53 43.0	
	comp=Z,14nm,0.8s						
YAK	Yakutsk	92.86	338	*d i*P	P	16 53 40.1	-0.8
YAK				*e**PP	pP	16 55 45.5	-4.2
YAK				*e*		16 57 31.2	
YAK				*e*S	SKSac	17 03 17.9	+0.7
YAK				*e*		17 03 53.1	
YAK				*e*SS	SS	17 10 25.0	-3.6
YAK				pmax	pmax		
	comp=Z,32nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,106nm,3.7s						
YAK				pmax	pmax		
	comp=N,47nm,3.5s						
YAK				pmax	pmax		
	comp=E,81nm,4.5s						
YAK				smax	smax		
	comp=E,41nm,2.8s						
YAK				smax	smax		
	comp=N,47nm,2.7s						
YAK	Yakutsk	92.86	338	P	P	16 53 40.1	-0.8
YAK					pP	16 55 48.1	-1.6
ABTX	Abilene, Hawle	93.36	56	P	P	16 53 43.4	-0.6
ABTX				IAmb	IAmb	16 53 45.0	
	comp=Z,10nm,1.1s						
ABTX					pP	16 55 53.2	+0.1
ABTX	Abilene, Hawle	93.36	56	P	P	16 53 44.6	+0.6
	baz=246						
CO02	Combarbal	93.47	125	P	P	16 53 45.0	+0.3
CO02				IAmb	IAmb	16 53 47.5	
	comp=Z,20nm,0.9s						
KSCO	Kaye Shedlock’	93.78	49	P	P	16 53 46.1	+0.3
KSCO	Kaye Shedlock’	93.78	49	P	P	16 53 47.0	+1.2
	baz=245						
ZON	Zonda	95.05	127	P	P	16 53 52.1	+0.3
ZON				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZON	Zonda	95.05	127	P	P	16 53 52.0	+0.3
ZON				IAmb	IAmb	16 53 54.6	
	comp=Z,7.4nm,0.8s						
ULN	Ulaanbaatar	95.53	320	*i* P	P	16 53 53.2	-0.4
ULN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULN	Ulaanbaatar	95.53	320	P	P	16 53 52.8	-0.7
INK	Inuvik	95.89	16	P	P	16 53 54.1	-0.3
	comp=Z,1.1nm,0.9s,baz=295,slow=2.8,SNR=3.6						
INK				pP	pP	16 56 04.4	+0.2
	comp=Z,0.9nm,0.9s,baz=301,slow=2.4,SNR=2.1						
	comp=Z,1.1nm,0.9s						
INK	Inuvik	95.89	16	P	P	16 53 54.2	-0.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
INK	Inuvik	95.89	16	P	P	16 53 54.2	-0.2
SONM	Songino Array	95.91	319	P	P	16 53 54.7	-0.5
	comp=Z,1.5nm,0.8s,baz=112,slow=4.7,SNR=8.8						
SONM				pP	pP	16 56 03.8	-0.6
	comp=Z,2.6nm,1.1s,baz=126,slow=4.0,SNR=5.3						
SONM				PP	PP	16 57 55.4	-3.0
	comp=Z,1.6nm,0.8s,baz=132,slow=6.6,SNR=5.2						
SONM				PKKP	PKKPdf	17 10 42.5	-0.1
	comp=Z,0.6nm,0.6s,baz=249,slow=2.2,SNR=4.1						
	comp=Z,1.5nm,0.8s						
SONM	Songino Array	95.91	319	P	P	16 53 54.5	-0.7
SONM				pP	pP	16 56 03.0	-1.4

GTA	Gaotai	96.82	310	⇓P	P	16 53 59.9	+0.4
GTA				pP	PcP	16 54 05.8	+6.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
YKA	Yellowknife Ar	98.25	25	P	Pdif	16 54 04.9	-0.2
	comp=Z,0.5nm,0.8s,baz=245,slow=4.6,SNR=6.0						
YKA				pP	pP	16 56 15.7	+0.4
	comp=Z,1.2nm,0.9s,baz=240,slow=4.4,SNR=6.8						
YKA				PKKPbc	PKKPbc	17 10 33.3	-2.6
	comp=Z,0.2nm,0.5s,baz=35,slow=2.6,SNR=6.6						
YKA				SKKP		17 13 17.7	
	comp=Z,0.3nm,0.6s,baz=44,slow=4.4,SNR=4.2						
	comp=Z,0.5nm,0.8s						
GOMU	GeErMu	99.35	305	Pdif	Pdif	16 54 10.9	-0.3
GOMU				PP	PP	16 58 12.9	-12
GOMU				SKS		17 03 52.7	
GOMU	GeErMu	99.35	305	SS	SS	17 11 55.2	-5.6
GOMU				AMB	AMB		
	comp=Z,59nm,4.6s						
TIXI	Tiksi	99.70	345	i P	Pdif	16 54 09.4	-2.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ECSD	EROS Data Cent	99.78	47		pP	16 56 23.1	+1.0
LSA	Lhasa	100.07	298	P	Pdif	16 54 14.9	+0.3
LPAZ	La Paz	102.73	113	PP	PP	16 58 49.9	0.0
	comp=Z,0.9nm,0.4s,baz=237,slow=7.2,SNR=7.1						
LPAZ				PKKPbc	PKKPbc	17 10 22.0	-0.9
	comp=Z,0.8nm,0.7s,baz=42,slow=0.8,SNR=6.7						
RES	Resolute Bay	109.43	16	PKiKP	PKiKP	16 58 52.8	-1.0
	comp=Z,0.6nm,0.6s,baz=300,slow=6.8,SNR=4.3						
ZALV	Zalesovo Beam	110.72	321	PKiKP	PKiKP	16 58 55.7	-1.1
	comp=Z,3.2nm,0.6s,baz=211,slow=1.2,SNR=14						
ZALV				PP	PP	16 59 50.3	+3.9
	comp=Z,1.1nm,0.6s,baz=66,slow=3.6,SNR=4.5						
ZALV	Zalesovo Beam	110.72	321	i PKIKP	PKiKP	16 58 56.1	-0.7
ZALV	Zalesovo Beam	110.72	321	PKiKP	PKiKP	16 58 56.1	-0.7
MKAR	Makanchi Array	111.17	313	Pdiff	Pdif	16 55 06.2	+3.2
	comp=Z,0.4nm,0.6s,baz=88,slow=6.2,SNR=5.3						
MKAR				PKiKP	PKiKP	16 58 57.1	-0.9
	comp=Z,1.9nm,0.8s,baz=70,slow=3.5,SNR=18						
MKAR				PP	PP	16 59 46.7	-3.1
	comp=Z,2.3nm,1.0s,baz=95,slow=7.4,SNR=5.4						
MKAR				PKKPbc	PKKPbc	17 09 56.5	-0.4
	comp=Z,1.0nm,0.6s,baz=280,slow=3.3,SNR=8.9						
NRIK	Noril'sk	111.30	338	PP	PP	16 59 46.9	-3.1
	comp=Z,3.8nm,0.9s,baz=114,slow=9.9,SNR=7.3						
KURK	Kurchatov	114.09	317	c iPKIKP	PKPdf	16 59 03.0	-0.4
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK	Kurchatov	114.09	317	PKiKP	PKPdf	16 59 02.3	-1.0
KURK	Kurchatov	114.09	317	P	PKPdf	16 59 03.0	-0.4
KURBB	Kurchatov Arra	114.14	317	PKP	PKPdf	16 59 02.5	-0.9
	comp=Z,3.0nm,0.6s,baz=111,slow=1.7,SNR=24						
KURBB				PP	PP	17 00 08.7	-1.7
	comp=Z,4.4nm,1.1s,baz=95,slow=6.5,SNR=6.9						
KURBB				pPKP		17 01 21.5	
	comp=Z,0.8nm,0.8s,baz=86,slow=2.4,SNR=2.1						
KURBB				PKKPbc	PKKPbc	17 09 46.8	-0.3
	comp=Z,0.7nm,0.7s,baz=274,slow=4.2,SNR=7.6						
ULHL	Ulahol	114.77	308	P	PKiKP	16 59 05.3	0.0
	SNR=5.4						
BOOM	Boomskoye usch	115.02	308	PKIKP	PKPdf	16 59 05.1	-0.6
BOOM	Boomskoye usch	115.02	308	PKPdf	PKPdf	16 59 05.1	-0.6
TKM2	Tokmak 2	115.33	308	P	PKPdf	16 59 05.7	-0.6
	SNR=8.3						
UCH	Uchtor	116.04	307	P	PKiKP	16 59 08.3	+0.2
	SNR=7.4						
AAK	Ala-Archa	116.10	308	PKP	PKPdf	16 59 07.1	-0.7
	comp=Z,3.0nm,0.7s,baz=164,slow=5.7,SNR=8.1						
AAK	Ala-Archa	116.10	308	c iPKIKP	PKPdf	16 59 07.6	-0.2
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	116.10	308	P	PKiKP	16 59 08.0	+0.2
USP	Ospenovka	116.16	309	P	PKPdf	16 59 07.2	-0.5
	SNR=6.0						
AML	Almayashu	116.64	307	P	PKPdf	16 59 09.1	-0.1
	SNR=14						
AML	Almayashu	116.64	307	P	PKPdf	16 59 09.1	-0.1
FRB	Frobisher Bay	118.56	28	PKP	PKPdf	16 59 10.5	-1.0
	comp=Z,0.9nm,0.4s,baz=275,slow=3.6,SNR=4.8						
KK31	Karatay Array	119.06	308	PKIKP	PKPdf	16 59 12.5	-0.8
KK31	Karatay Array	119.06	308		PKPdf	16 59 12.5	-0.8
KKAR	Karatay Array	119.06	308	PKIKP	PKPdf	16 59 12.1	-1.2
KKAR	Karatay Array	119.06	308		PKPdf	16 59 12.4	-0.9
KKAR	Karatay Array	119.06	308	PKPdf	PKPdf	16 59 12.1	-1.2
BVAR	Borovoye Array	119.26	319	PKP	PKPdf	16 59 11.8	-1.5
BRVK	Borovoye	119.32	320	c iPKIKP	PKPdf	16 59 13.0	-0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	119.32	320		PKPdf	16 59 12.2	-1.1
BRVK	Borovoye	119.32	320	P	PKPdf	16 59 12.9	-0.5
KBL	Kabul	119.39	298	PKIKP	PKPdf	16 59 14.1	-0.3
KBL	Kabul	119.39	298		PKPdf	16 59 14.1	-0.3
KBL	Kabul	119.39	298	P	PKiKP	16 59 14.8	+0.3
BDFB	Brasilia	119.51	124	PKP	PKPdf	16 59 15.0	0.0
	comp=Z,2.6nm,0.7s,baz=4.4,slow=7.3,SNR=4.0						
BDFB				PKKPbc	PKKPbc	17 09 28.0	-0.5
	comp=Z,2.1nm,0.7s,baz=110,slow=3.6,SNR=3.5						
BDFB	Brasilia	119.51	124	PKIKP	PKiKP	16 59 15.2	+0.1
BDFB	Brasilia	119.51	124	PKPdf	PKiKP	16 59 15.2	+0.1
CHGR	Chuyangaron	119.75	303	PKIKP	PKPdf	16 59 14.2	-0.6
CHGR	Chuyangaron	119.75	303		PKPdf	16 59 14.2	-0.6
SJMB	Sao Joao De Ma	122.59	131	eP	PKPdf	16 59 20.7	-0.1
KBS	Kingsbay	122.61	357	i P	PKPdf	16 59 17.6	-1.5
JANB	Januaria	122.69	126	eP	PKiKP	16 59 22.6	+1.2
SUR	Sutherland	122.74	200	P	PKiKP	16 59 22.2	+0.9
SPA0	Spitsbergen Ar	123.10	356	ePKPdf	PKiKP	16 59 20.2	-0.1
SPITS	Spitsbergen Ar	123.10	356	PKIKP	PKPdf	16 59 19.8	-0.3
SPB2	Spitsbergen Ar	123.11	356		PKPdf	16 59 19.8	-0.2
ILULI	Ilulissat	123.42	20	i P	PKPdf	16 59 19.1	-1.7
MCPB	Macapa, AP	124.13	106	eP	PKiKP	16 59 25.4	+1.1
DAG	Danmarks Havn	124.18	5	i P	PKPdf	16 59 20.3	-1.8
SVE	Sverdlovsk	124.34	325	ePKIKP	PKPdf	16 59 22.7	-0.2
SVE				pmax	pmax		
	comp=Z,22nm,1.0s						
BOSA	Boshof	124.50	206	PKP	PKPdf	16 59 24.4	0.0
	comp=Z,4.9nm,0.9s,baz=157,slow=5.4,SNR=5.8						
SUMG	Summit	124.74	13	i P	PKPdf	16 59 23.0	-0.8
ARU	Arti	125.55	325	i PKIKP	PKPdf	16 59 25.2	0.0
ARU						17 01 23.4	
ARU						17 05 39.9	
ARU	Arti	125.55	325		PKPdf	16 59 24.9	-0.4
JLN	Jalan Bani Buh	125.80	282	P	PKPdf	16 59 27.0	+0.2
CMC01	Camacan, BA	126.01	130	eP	PKiKP	16 59 28.9	+1.0
ABKAR	Akbulak array	126.15	316		PKPdf	16 59 25.9	-0.7
ABKAR	Akbulak array	126.15	316		PKPdf	16 59 26.0	-0.7
DBG	Daneborg	126.30	7	i P	PKPdf	16 59 25.1	-1.2
DY2G	Dye2	126.41	21	i P	PKPdf	16 59 26.8	-0.1
TMAB	Tom-Au,PA,Br	126.68	111	eP	PKiKP	16 59 29.9	+0.6
WSAR	Wadi Sarin	126.71	283	PKP	PKPdf	16 59 28.4	-0.1
	comp=Z,4.7nm,0.9s,baz=286,slow=22,SNR=3.9						
WSAR	Wadi Sarin	126.71	283	P	PKPdf	16 59 28.6	+0.1
ICESG	Greenland Ices	126.84	17	i P	PKPdf	16 59 26.2	-1.6
MHTO	MHTO	126.88	280	P	PKPdf	16 59 28.9	0.0
JMDO	Jabal Madar	127.03	282	P	PKPdf	16 59 28.9	-0.2
GDU01	Guandu, BA	127.06	128	eP	PKiKP	16 59 30.0	0.0
AKTO	Aktyubinsk	127.19	317	PKP	PKPdf	16 59 28.2	-0.3
	comp=Z,5.5nm,0.7s,baz=89,slow=2.5,SNR=19						
AKTO				PP	PP	17 01 37.9	+0.1
	comp=Z,1.3nm,0.8s,baz=67,slow=11,SNR=4.1						
SMDO	Samad	127.21	283	P	PKPdf	16 59 29.3	-0.3
BIDO	Bidbid	127.22	284	P	PKPdf	16 59 29.0	-0.4
BSY	Bisya	127.92	282	P	PKPdf	16 59 30.8	0.0
HOQ	Hoqain	127.97	283	P	PKPdf	16 59 30.8	-0.1
GEYT	Alibeck	128.40	302	PKP	PKiKP	16 59 31.8	-0.2
	comp=Z,6.9nm,0.7s,baz=67,slow=8.7,SNR=12						
GEYT				PP	PP	17 01 47.7	+1.5
	comp=Z,1.4nm,0.7s,baz=59,slow=8.6,SNR=1.4						
GEYT	Alibeck	128.40	302	PKPdf	PKPdf	16 59 31.2	-0.1
GYA0B	ALIBECK ARRAY	128.40	302	PKPdf	PKPdf	16 59 31.2	-0.1
ARQ	Araqi	128.64	283	P	PKPdf	16 59 31.0	-1.2
UOSS	Minazif	129.18	285		PKPdf	16 59 32.7	-0.5
UOSS	Minazif	129.18	285	P	PKPdf	16 59 33.1	-0.1
HATD	Hatta, Dubai	129.23	285	P	PKiKP	16 59 34.0	-0.1
ASHO	Ashiyiah	129.28	285	P	PKPdf	16 59 33.7	+0.3
MASF	Masafi	129.29	285	P	PKiKP	16 59 34.3	+0.1
ALNE	Al Ain	129.46	284	P	PKPdf	16 59 33.9	+0.2
	SNR=5.2						
KIRV	Kirov	129.46	329	c iPKIKP	PKiKP	16 59 33.0	-0.4
NAZ	Nazwa, Dubai	129.68	285	P	PKPdf	16 59 34.2	+0.1
PRGR	Permogore	129.68	334	ePKIKP	PKPdf	16 59 32.6	-0.3
PRGR				e		17 01 50.7	
UMZA	Um Al Zommool	129.77	282	P	PKPdf	16 59 34.0	-0.2
DOK	Doka	129.89	276	P	PKPdf	16 59 34.7	+0.1
ASUD	Al Ashush, Dub	129.92	284	P	PKiKP	16 59 35.4	0.0
ARA0	ARCESS Array S	129.98	349	ePKPdf	PKPdf	16 59 33.4	0.0
ARCES	ARCESS Array B	129.98	349	PKP	PKPdf	16 59 33.0	-0.4
	comp=Z,6.6nm,0.6s,baz=343,slow=3.8,SNR=4.6						
ARCES				pPKP	pPKPdf	17 01 51.6	+0.2
	comp=Z,4.4nm,0.9s,baz=29,slow=2.8,SNR=1.7						
ABTO	Aybut	130.37	275	P	PKPdf	16 59 35.7	0.0
KTK1	Kautokeino	130.83	349	ePKPdf	PKPdf	16 59 35.4	+0.4
KLMR	Klimovskoe	132.56	335	ePKIKP	PKPdf	16 59 37.6	-0.8
KLMR				e		17 02 09.6	
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLMR	Klimovskoe	132.56	335	ePKPdf	PKPdf	16 59 37.7	-0.7
KLMR				AMP		16 59 39.5	
	comp=Z,7.0nm,0.7s						
KLMR				ePP	PP	17 02 09.7	-1.8
STEI	Steigen	133.00	353	ePKPdf	PKPdf	16 59 39.2	+0.2
SHMA	Al-Shehemyia	134.00	285	P	PKPdf	16 59 42.2	0.0
LSZ	Lusaka	134.28	219	pPKP	pPKPdf	17 02 01.7	+0.8
	comp=Z,0.7nm,0.3s,baz=117,slow=8.5,SNR=1.6						
LSZ				SKPbc	SKPbc	17 02 18.0	+0.5
	comp=Z,4.3nm,0.6s,baz=175,slow=0.7,SNR=4.0						
NSS	Namsos	136.66	353	ePKPdf	PKPdf	16 59 45.6	-0.3
FIA1	FINESS Array S	136.66	342		PKiKP	16 59 47.0	-0.9
FINES	FINESS Array B	136.66	342	PKhKP	PKPpre	16 59 33.9	
	comp=Z,1.5nm,0.6s,baz=121,slow=3.3,SNR=11						
FINES				PKP	PKPdf	16 59 44.9	-1.1
	comp=Z,7.1nm,0.7s,baz=64,slow=3.2,SNR=10						
FINES				SKP		17 02 24.4	
	comp=Z,9.2nm,0.8s,baz=50,slow=3.0,SNR=13						
GROC	Groznyy	136.98	311	ePKIKP	PKPdf	16 59 46.4	-0.8
GROC				e		17 03 03.3	
GROC				pmax	pmax		
	comp=Z,13nm,0.4s						
OBN	Obninsk	137.29	330	⇑ePKIKP	PKPdf	16 59 44.9	-2.5
OBN				e		17 02 37.8	
OBN						17 03 00.0	
OBN				i SS	SS	17 20 06.3	+5.3
OBN				i SSS	SSS	17 25 20.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN				pmax	pmax		
	comp=Z,33nm,1.7s						
KMBO	Kilima Mbogo	137.59	242	PKP	PKPdf	16 59 49.8	+0.2
	comp=Z,3.7nm,0.6s,baz=27,slow=2.9,SNR=4.6						
KMBO				SKP		17 02 28.4	
	comp=Z,2.1nm,0.3s,baz=90,slow=2.0,SNR=4.8						
VORR	Voronezh	137.86	325	ePKIKP	PKiKP	16 59 51.0	+0.3
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
MEF	Metsahovi	138.14	342	eP	PKiKP	16 59 51.4	+0.3
RAF	Rauma	138.15	345	eP	PKPpre	16 59 42.0	
ZEI	Tsey	138.43	310	i PKIKP	PKPdf	16 59 50.8	+0.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GNI	Garni	138.48	306	PP	PP	17 02 49.5	+0.2
	comp=Z,3.6nm,0.6s,baz=206,slow=9.5,SNR=4.5						
GNI	Garni	138.48	306	c iPKIKP	PKiKP	16 59 51.9	-0.7
GNI				pmax	pmax		
	comp=Z,32nm,1.7s						
GNI	Garni	138.48	306	P	PKiKP	16 59 51.8	-0.8
VSU	Vasula	138.85	339	eP	PKPpre	16 59 41.6	
KBZ	Khabaz	138.85	312	PKP	PKPdf	16 59 51.0	+0.5
	comp=Z,3.6nm,0.9s,baz=270,slow=4.0,SNR=6.7						
KBZ				SKPbc	SKPbc	17 02 30.4	+0.6
	comp=Z,2.5nm,0.8s,baz=40,slow=5.3,SNR=3.8						
KBZ				PP	PP	17 02 50.7	-0.4
	comp=Z,2.7nm,0.9s,baz=42,slow=17,SNR=2.4						
KBZ	Khabaz	138.85	312	c iPKIKP	PKiKP	16 59 55.0	+2.0
KIV	Kislovodsk	138.93	313	i PKIKP	PKiKP	16 59 52.6	-0.7
KIV				e		17 02 49.7	
KIV				eSS	SS	17 20 17.9	-3.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DOMB	Dombas	139.39	354	ePKPdf	PKPpre	16 59 44.5	
AKN	Aaknes	139.44	355	ePKPdf	PKiKP	16 59 53.6	-0.1
MTSE	Matsula	139.56	342	eP	PKPpre	16 59 43.8	
NC303	NORSAR Array S	139.93	352		PKPpre	16 59 44.6	
NC204	NORSAR Array S	139.95	352		PKPpre	16 59 44.9	
NC405	NORSAR Array S	139.99	352		PKPpre	16 59 45.5	
NB201	NORSAR Array S	140.11	352		PKPpre	16 59 45.7	
NB2	NORSAR Subarra	140.13	352	PKP	PKPpre	16 59 45.9	
	comp=Z,5.7nm,1.2s,baz=10,slow=3.2						
NB2	NORSAR Subarra	140.13	352	PKPab	PKPpre	16 59 45.9	
	baz=10,slow=3.2						
NOA	NORSAR Array B	140.13	352	PKhKP	PKPpre	16 59 45.5	
	comp=Z,6.6nm,1.0s,baz=14,slow=4.6,SNR=20						
NOA				pPKP	pPKPdf	17 02 12.5	+1.9
	comp=Z,1.0nm,0.8s,baz=14,slow=3.9,SNR=3.4						
NOA				SKPbc	SKPbc	17 02 32.9	+0.1
	comp=Z,1.4nm,0.6s,baz=15,slow=4.3,SNR=7.3						
UPP	Uppsala	140.14	347	eP	PKPpre	16 59 47.1	
NBO00	NORSAR Array S	140.19	352		PKPpre	16 59 45.9	
BATM	Batumi	140.34	309	⇑P	PKiKP	17 00 09.6	+13
NAO01	NORSAR Array S	140.36	352		PKPpre	16 59 46.5	
NC602	NORSAR Array S	140.38	352		PKPpre	16 59 46.1	
NC602	NORSAR Array S	140.38	352	ePKPdf	PKPdf	16 59 47.2	-5.7
HYA	Hoyanger	140.50	356	ePKPdf	PKPdf	16 59 53.3	+0.2
SKAR	Skarslia	140.81	354	ePKPdf	PKPdf	16 59 53.4	-0.4
OSL	Oslo	141.26	352	ePKPdf	PKPdf	16 59 54.3	-0.1
VIKU	Vikbolandet	141.57	346	eP	PKPpre	16 59 50.5	
NACGM	Naroch	141.58	336	⇓ePKP	PKPdf	16 59 51.2	-3.9
	comp=Z,16nm,0.7s,baz=40						
LODK	Lodwar	141.64	246		PKPdf	16 59 53.3	-3.4
LODK	Lodwar	141.64	246	P	PKPdf	16 59 54.6	-2.1
KONO	Kongsberg	141.68	353	PKHKP	PKPpre	16 59 50.4	
KONO	Kongsberg	141.68	353		PKPpre	16 59 50.4	
KONO	Kongsberg	141.68	353	ePKPdf	PKPpre	16 59 51.2	
VSVD	Vaisvydziai	141.76	339	eP	PKPdf	16 59 51.5	-3.9
KTUT	Trabzon	141.91	309	⇓P	PKPdf	16 59 52.9	-3.3
ANN	Anapa	142.11	316	i PKHKP	PKPpre	16 59 52.3	
ANN				pmax	pmax		
	comp=Z,98nm,1.8s						
ANN				pmax	pmax		
	comp=Z,129nm,1.6s						
MARD	Mardin	142.12	303	PKPpre	PKPpre	16 59 53.4	
PABE	Paberze	142.13	338	PKPpre	PKPpre	16 59 52.5	
PABE	Paberze	142.13	338	eP	PKPdf	16 59 53.0	-3.1
BLS5	Blasjo	142.21	355	ePKPdf	PKPdf	16 59 54.0	-2.2
PBUR	Paburge	142.37	340	eP	PKPdf	16 59 53.6	-2.9
KMY	Karmoy	142.51	356	ePKPdf	PKPdf	16 59 54.9	-1.8
MBAR	Mbarara	143.11	237	c iPKIKP	PKPdf	16 59 58.9	-0.5
MBAR				pmax	pmax		
	comp=Z,189nm,1.3s						
MBAR	Mbarara	143.11	237		PKPdf	16 59 58.6	-0.8
MBAR	Mbarara	143.11	237	P	PKPdf	16 59 59.0	-0.5
HOMB	Homborsund	143.15	353	ePKPab	PKPbc	16 59 56.1	-0.1
SNART	Snartemo	143.22	354	ePKPab	PKPab	16 59 56.2	0.0
AKASG	Malin Array Be	143.52	329	PKP	PKPab	16 59 56.9	-0.7
	comp=Z,39nm,0.5s,baz=42,slow=4.6,SNR=333						
AKASG				pPKP	pPKPdf	17 02 18.3	+1.8
	comp=Z,2.3nm,0.6s,baz=40,slow=4.7,SNR=3.3						
AKASG	Malin Array Be	143.52	329	PKIKP	PKPab	16 59 56.8	-0.8
AKASG	Malin Array Be	143.52	329		PKPab	16 59 56.8	-0.8
AKBB	Malin Array Si	143.52	329	PKIKP	PKPab	16 59 56.8	-0.8
AKBB	Malin Array Si	143.52	329		PKPab	16 59 56.8	-0.8
SUW	Suwalki	143.60	338	ePKPdf	PKPab	16 59 57.6	-0.2
SUW	Suwalki	143.60	338	PKIKP	PKPab	16 59 57.1	-0.7
SUW	Suwalki	143.60	338		PKPab	16 59 57.1	-0.7
SUW	Suwalki	143.60	338	eP	PKPab	16 59 57.7	-0.1
DEL	Delary	144.04	347	eP	PKPbc	16 59 58.9	-0.2
KAC	Achnashellach	144.11	5	eP	PKPbc	16 59 59.3	0.0
SIM	Simferopol'	144.15	318	d iPKIKP	PKPab	17 00 01.0	+0.8
SIM				pmax	pmax		
	comp=Z,172nm,1.7s						
MCD	Coleburn Disti	144.18	4	eP	PKPbc	16 59 59.0	-0.4
KPL	Plockton	144.24	6	eP	PKPbc	16 59 59.1	-0.5
MDO	Dochfour	144.24	5	eP	PKPab	17 00 00.4	+0.3
MUD	Monsted U'grnd	144.84	352	i P	PKPdf	17 00 00.2	-0.6
DRUM	Mains of Drumt	144.88	3	eP	PKPbc	17 00 01.3	-0.3
COP	Copenhagen	145.06	348	i P	PKPdf	17 00 00.8	-0.4
BSD	Bornholm Skovb	145.07	346	eP	PKPbc	17 00 02.0	-0.2
BSD	Bornholm Skovb	145.07	346	i P	PKPdf	17 00 01.5	+0.2
EDU	Dundee	145.22	4	eP	PKPbc	17 00 02.5	-0.2
INVG	Invergeldie, C	145.27	5	eP	PKPdf	17 00 02.0	+0.4
LAWE	Loch Awe, Argy	145.32	6	eP	PKPbc	17 00 02.4	-0.6
BNN	Bunyan	145.45	307	PKPdf	PKPdf	17 00 02.2	-0.4
EAB	Aberfoyle	145.49	5	eP	PKPdf	17 00 02.6	+0.7
BZK	Bozkurt	145.58	313	⇓P	PKPbc	17 00 03.8	-0.3
SORM	Soroca	145.63	326	⇓P	PKPbc	17 00 03.9	-0.2
SORM	Soroca	145.63	326	⇓PKIKP	PKPbc	17 00 03.9	-0.2
PURM	Purcari	145.81	323	⇑P	PKPbc	17 00 04.9	+0.3
PGBU	Gleniffferbraes	145.85	5	eP	PKPbc	17 00 04.1	-0.3
ESY	Stoneypath	145.87	3	eP	PKPbc	17 00 04.3	-0.2
EBL	Broad Law	145.99	4	eP	PKPbc	17 00 05.2	+0.3
KIS	Kishinev	146.10	325	⇓iPKP	PKPbc	17 00 05.0	-0.4
	comp=Z,130nm,1.5s						
KIS				epPKP		18 02 20.0	
KIS	Kishinev	146.10	325	d iPKIKP	PKPbc	17 00 05.0	-0.4
KIS				e		17 02 20.0	
KIS				pmax	pmax		
	comp=Z,130nm,1.5s						
GKP	Gorka Klasztor	146.13	342	ePKPdf	PKPbc	17 00 05.6	+0.2
GKP	Gorka Klasztor	146.13	342	eP	PKPbc	17 00 06.0	+0.7
MILM	Milestii Mici	146.15	324	⇓iPKP	PKPbc	17 00 05.0	-0.6
	comp=Z,160nm,1.1s						
MILM				i pPKP	pPKPab	17 02 20.0	-0.3
MILM				i sPKP		17 03 17.0	
MILM	Milestii Mici	146.15	324	⇓P	PKPbc	17 00 05.2	-0.4
MILM	Milestii Mici	146.15	324	d iPKIKP	PKPbc	17 00 05.0	-0.6
MILM				i		17 02 20.0	
MILM				i		17 03 17.0	
MILM				pmax	pmax		
	comp=Z,160nm,1.1s						
ILGA	Ilgaz	146.16	312	PKPdf	PKPdf	17 00 04.0	+0.1
BEL	Belsk	146.21	337	ePKPdf	PKPbc	17 00 06.2	+0.7
BEL				epPKPdf	pPKPdf	17 02 26.7	+5.1
ASF	Jabal al Asfar	146.22	296	PKPbc	PKPbc	17 00 06.9	+0.5
	comp=Z,30nm,0.8s,baz=122,slow=2.2,SNR=42						
ASF				pPKPbc	pPKPdf	17 02 22.2	+0.5
	comp=Z,17nm,1.1s,baz=338,slow=10.0,SNR=5.2						
EKA	Eskdalemuir Ar	146.42	4	PKPbc	PKPbc	17 00 04.9	-1.1
	comp=Z,14nm,0.8s,baz=348,slow=2.7,SNR=16						
EKA				pPKPbc	pPKPab	17 02 21.2	-0.2
	comp=Z,7.1nm,1.0s,baz=343,slow=3.1,SNR=4.0						
ESK	Eskdalemuir	146.44	4	eP	PKPbc	17 00 05.9	-0.2
DRBR	Darabani	146.46	328	⇓P	PKPbc	17 00 06.3	-0.1
LVV	L'vov	146.51	332	ePKP2	PKPbc	17 00 06.3	-0.2
NEWG	New Galloway	146.56	5	eP	PKPbc	17 00 05.4	-1.0
HWQ	Hawqa	146.62	300	eP	PKPbc	17 00 07.5	+0.1
BR131	Keskin Array S	146.74	310	PKIKP	PKPdf	17 00 04.7	-0.1
BR131	Keskin Array S	146.74	310		PKPdf	17 00 04.7	-0.1
BR131				PKPbc	PKPbc	17 00 07.2	-0.4
BR131	Keskin Array S	146.74	310	P	PKPdf	17 00 04.8	+0.1
	SNR=20						
BRTR	Keskin Array B	146.74	310	PKPbc	PKPbc	17 00 07.2	-0.4
	comp=Z,20nm,0.7s,baz=103,slow=3.1,SNR=71						
BRTR				pPKPbc	pPKPdf	17 02 21.7	-0.8
	comp=Z,1.6nm,0.6s,baz=87,slow=4.4,SNR=3.2						
BRTR				SKKPbc	SKKPbc	17 10 39.6	-0.6
	comp=Z,0.6nm,0.7s,baz=242,slow=3.6,SNR=4.5						
BRTR	Keskin Array B	146.74	310	PKPdf	PKPdf	17 00 04.2	-0.6
BRTR				PKPbc	PKPbc	17 00 07.2	-0.4
GAL1	Galloway	146.77	6	eP	PKPbc	17 00 05.9	-1.0
VASR	Vaslui	146.88	325	⇑P	PKPbc	17 00 08.0	+0.4
BHL	Bhannes	146.93	299	eP	PKPbc	17 00 08.6	+0.3
SHBL	Chebaa	146.97	298	eP	PKPbc	17 00 09.2	+0.8
EDMD	Edmundbyers	146.99	3	eP	PKPbc	17 00 06.8	-0.7
DQRL	Deir Qamar	147.04	299	eP	PKPbc	17 00 09.2	+0.6
KESW	Keswick, Cumbr	147.17	4	eP	PKPbc	17 00 07.4	-0.7
TLCR		147.19	322	⇑P	PKPbc	17 00 08.8	+0.4
TLCR		147.19	322	⇑PKP2	PKPbc	17 00 08.8	+0.4
ANTO	Ankara	147.28	311	PKP2	PKPbc	17 00 09.0	+0.1
ANTO	Ankara	147.28	311		PKPbc	17 00 09.0	+0.1
MMAI	Mount Meron Ar	147.32	297	PKPbc	PKPdf	17 00 07.4	+1.5
	comp=Z,7.1nm,0.6s,baz=72,slow=24,SNR=16						
MMAI				pPKPbc	pPKPdf	17 02 22.8	-0.8
	comp=Z,0.4nm,0.3s,baz=9.8,slow=40,SNR=1.7						
SCTR	Scanteiesti	147.36	323	⇓P	PKPbc	17 00 09.5	+0.7
JURR	Jurilovca	147.40	321	⇑P	PKPbc	17 00 09.5	+0.6
GHRR		147.45	324	⇓P	PKiKP	17 00 10.2	-0.4
GHRR				⇓P	pPKPab	17 02 30.8	+5.8
GHAJ	Ghor Haditha	147.47	294	PKPbc	PKPbc	17 00 10.0	+0.4
WIM	Isle of Man	147.48	6	eP	PKPbc	17 00 09.1	+0.2
BURAR	Bucovina Array	147.55	328	⇑P	PKPbc	17 00 09.9	+0.4
BURAR				⇑P	pPKPab	17 02 30.9	+5.4
BURAR	Bucovina Array	147.55	328	⇑PKP2	PKPbc	17 00 09.9	+0.4
BURAR	Bucovina Array	147.55	328	PKPdf	PKPdf	17 00 05.9	+0.1
BURAR					PKPbc	17 00 09.8	+0.4
TESR	Tescani	147.56	326	⇑P	PKPbc	17 00 09.5	+0.1
TESR				⇑P	pPKPdf	17 02 22.6	-1.1
IZVR	Izvoarele	147.57	323	⇓P	PKPbc	17 00 10.0	+0.7
CFR	Carcaliu	147.59	322	⇑P	PKPbc	17 00 09.5	+0.1
CFR				⇑P	pPKPab	17 02 30.6	+5.0
CFR	Carcaliu	147.59	322	⇑PKP2	PKPbc	17 00 09.5	+0.1
TPGR	Topolog	147.61	322	⇓P	PKPbc	17 00 09.9	+0.4
TPGR				⇑P	pPKPdf	17 02 23.7	-0.1
PANC	Panciu	147.71	324	⇓P	PKiKP	17 00 10.5	-0.6
RUE	Ruedersdorf	147.76	345	eP	PKPbc	17 00 09.8	+0.2
ODBI	Odobesti	147.82	324	⇓P	PKiKP	17 00 11.0	-0.4
TIRR	Tirgusor	147.85	321	⇓P	PKPbc	17 00 10.2	+0.1
TIRR				⇓P	pPKPdf	17 02 24.1	0.0
TIRR	Tirgusor	147.85	321	⇓PKP2	PKPbc	17 00 10.2	+0.1
TIRR	Tirgusor	147.85	321		PKPbc	17 00 09.8	-0.3
HPK	Haverah Park	147.88	2	eP	PKPbc	17 00 09.6	-0.3
OJC	Ojcow	147.90	337	ePKPdf	PKPbc	17 00 10.3	+0.2
OJC				ePKPbc	PKPab	17 00 15.1	+0.2
OJC				epPKPdf	pPKPab	17 02 31.8	+5.2
OJC	Ojcow	147.90	337	PKP2	PKPbc	17 00 09.9	-0.2
OJC	Ojcow	147.90	337		PKPbc	17 00 09.9	-0.2
KOLS	Kolonicke sedl	147.93	333	ePKP2	PKiKP	17 00 11.4	-0.1
KOLS	Kolonicke sedl	147.93	333	ePKP	PKiKP	17 00 11.4	-0.1
VRI	Vrincioaia	147.94	325	⇓P	PKPbc	17 00 10.3	-0.1
VRI				⇑P	pPKPdf	17 02 24.9	+0.6
VRI	Vrincioaia	147.94	325	⇓PKP2	PKPbc	17 00 10.3	-0.1
PLOR	Plostina	147.99	325	⇑P	PKPbc	17 00 10.2	-0.3
HARR	Harsova	147.99	322	⇑P	PKPbc	17 00 10.9	+0.4
HARR				⇓P	pPKPdf	17 02 24.8	+0.4
HARR	Harsova	147.99	322	⇑PKP2	PKPbc	17 00 10.9	+0.4
MDUB	Mudurnu	148.13	313		PKPbc	17 00 10.9	-0.3
UZH	Uzhgorod	148.15	332	i		17 00 15.5	
UZH				⇓iPKHKP	PKPbc	17 00 10.3	-0.4
EIL	Elat	148.20	291	PKPbc	PKiKP	17 00 12.2	-0.4
	comp=Z,26nm,0.7s,baz=126,slow=2.4,SNR=23						
EIL				pPKPbc	pPKPbc	17 02 27.2	+0.1
	comp=Z,12nm,1.0s,baz=117,slow=4.6,SNR=3.3						
COVR	Voineasa-Covas	148.23	325	⇑P	PKPbc	17 00 11.1	0.0
CRVS	Cervenica-Dubn	148.30	333	ePKP2	PKiKP	17 00 12.0	-0.3
CRVS	Cervenica-Dubn	148.30	333	ePKP	PKiKP	17 00 12.0	-0.3
CRVS				e		17 02 29.5	
CRVS				e		17 02 33.9	
BMR	Baia Mare	148.32	330	⇑P	PKPbc	17 00 11.6	+0.4
BMR	Baia Mare	148.32	330	⇑PKP2	PKPbc	17 00 11.6	+0.4
NIE	Niedzica	148.35	335	ePKPdf	PKiKP	17 00 13.0	+0.6
NIE				epPKPdf	pPKPab	17 02 34.3	+5.8
YLL	Llanberis	148.53	6	eP	PKPbc	17 00 10.6	-1.0
CSS	Mathiatis	148.54	302		PKPbc	17 00 11.6	-0.6
KSP	Ksiaz	148.55	341	ePKPdf	PKiKP	17 00 12.5	-0.2
KSP				ePKPbc	PKPab	17 00 18.6	+1.0
KSP				epPKPdf	pPKPab	17 02 34.0	+5.0
DOPR	Dopca	148.58	326	⇑P	PKiKP	17 00 12.7	-0.3
DOPR				⇓P	pPKPab	17 02 30.7	+1.4
MLR	Muntele Rosu	148.60	325	⇓P	PKPbc	17 00 12.0	-0.2
MLR				⇑P	pPKPab	17 02 29.0	-0.6
MLR	Muntele Rosu	148.60	325	PKPbc	PKPbc	17 00 12.1	0.0
	comp=Z,19nm,0.7s,baz=36,slow=3.1,SNR=12						
MLR				pPKPbc	pPKPbc	17 02 28.8	+0.7
	comp=Z,5.5nm,0.9s,baz=128,slow=9.2,SNR=3.5						
MLR	Muntele Rosu	148.60	325	⇓PKHKP	PKPbc	17 00 12.0	-0.2
MLR	Muntele Rosu	148.60	325	PKPdf	PKPdf	17 00 07.5	-0.2
MLR				PKPbc	PKPbc	17 00 11.5	-0.7
RASA	Rasa	148.73	322	⇓P	PKPbc	17 00 12.7	+0.4
OKC	Ostrava-Krasne	148.81	338	⇑ePKP	PKPbc	17 00 12.7	+0.4
OKC				ePKPAB	PKPab	17 00 19.0	+0.3
OKC				epPKP	pPKPab	17 02 35.3	+5.2
OSTC	Ostas	148.82	341	ePKPDF	PKPdf	17 00 08.4	+0.7
OSTC				⇑ePKP	PKiKP	17 00 13.0	-0.3
OSTC				ePKPAB	PKPab	17 00 19.7	+0.9
OSTC				epPKP	pPKPab	17 02 30.8	+0.6
SECR		148.82	324	⇓P	PKPbc	17 00 12.8	+0.3
CHVC	Chvalec	148.84	341	ePKP	PKPbc	17 00 12.8	+0.3
CHVC				ex	x	17 00 19.6	
CHVC				ex	x	17 02 35.2	
FOEL	Foel Wylfa	148.85	4	eP	PKPbc	17 00 12.4	0.0
LANS	Liptovska Anna	148.89	336	ePKP2	PKiKP	17 00 14.3	+0.7
LANS	Liptovska Anna	148.89	336	ePKP	PKiKP	17 00 14.3	+0.7
LANS				e		17 00 20.1	
BORA	Eskisehir	148.91	312		PKPbc	17 00 12.4	-0.6
UPC	Upice	148.93	341	⇑ePKP	PKPbc	17 00 13.0	+0.4
UPC				ePKPAB	PKPab	17 00 19.4	+0.2
UPC				epPKP	pPKPab	17 02 34.8	+4.2
SULR		148.95	323	⇓P	PKPbc	17 00 13.0	+0.2
CBBR	Cluj-Babes-Bol	148.95	329	⇑P	PKiKP	17 00 13.5	-0.2
CJR	Cluj-Napoca	148.97	329	⇓P	PKiKP	17 00 13.4	-0.4

DPC	Dobruska-Polom	148.97	340	ePKP2	PKiKP	17 00 13.4	-0.3
DPC	Dobruska-Polom	148.97	340	⇑ePKP	PKiKP	17 00 13.4	-0.3
DPC				ePKPAB	PKPab	17 00 20.0	+0.6
DPC				epPKP	pPKPab	17 02 33.6	+2.8
MDB	Medias	148.98	327	⇑P	PKiKP	17 00 13.8	0.0
MDB	Medias	148.98	327	⇑PKP2	PKiKP	17 00 13.8	0.0
KECS	Kecovo	149.03	334	ePKP2	PKiKP	17 00 14.3	+0.5
KECS	Kecovo	149.03	334	ePKP	PKiKP	17 00 14.3	+0.5
KECS				e		17 02 37.0	
CLL	Collm	149.03	345	⇓ePKHKP	PKPpre	17 00 08.0	
CLL				i		17 00 19.7	
CLL				pmax	pmax		
	comp=Z,89nm,1.1s						
CLL				pmax	pmax		
	comp=Z,29nm,0.8s						
CLL	Collm	149.03	345		PKPbc	17 00 12.6	-0.2
CLL	Collm	149.03	345	ePKPdf	PKPdf	17 00 08.0	+0.1
CLL				⇓iPKPbc	PKPbc	17 00 13.2	+0.4
	comp=Z,89nm,1.1s						
CLL				i PKPab	PKPab	17 00 19.7	+0.2
	comp=Z,29nm,0.8s						
CLL				epPKPbc	pPKPbc	17 02 28.0	-1.2
CLL				eSKPdf	SKPdf	17 02 44.0	-1.5
	comp=Z,27nm,1.0s						
CLL	Collm	149.03	345	i (PKPbc)		17 02 34.6	
	comp=Z,57nm,0.9s						
CLL				i x	x	17 03 04.6	
	comp=Z,18nm,0.9s						
KRLC	Kraliky	149.06	340	⇑ePKP	PKPbc	17 00 13.4	+0.4
KRLC				ePKPAB	PKPab	17 00 20.2	+0.4
KRLC				epPKP	pPKPab	17 02 34.9	+3.7
MORC	Moravsky Berou	149.07	338	⇓P	PKiKP	17 00 13.6	-0.3
MORC	Moravsky Berou	149.07	338	ePKP	PKPbc	17 00 13.4	+0.4
MORC				e		17 02 34.7	
CWF	Charnwood Fore	149.11	2	eP	PKPbc	17 00 12.9	0.0
VOIR		149.11	325	⇓P	PKPbc	17 00 13.4	+0.1
VOIR				⇑P	pPKPbc	17 02 29.8	+0.3
BRG	Berggiesshubel	149.19	343	⇓PKPf		17 00 08.6	
BRG				⇑PKP	PKiKP	17 00 13.8	-0.2
BRG				Amp		17 00 14.9	
	comp=Z,7.5nm,1.5s						
BRG				Amp		17 00 14.9	
	comp=Z,48nm,0.8s						
BRG				PKPab	PKPab	17 00 20.8	+0.5
BRG				Amp		17 00 21.6	
	comp=Z,32nm,1.0s						
BRG				pPKP	pPKPab	17 02 31.7	+0.1
BRG				Amp		17 02 33.2	
	comp=Z,7.3nm,1.0s						
BRG				i x	x	17 02 36.0	
BRG				Amp		17 02 38.1	
	comp=Z,22nm,0.9s						
BRG				i x	x	17 03 05.8	
BRG				Amp		17 03 06.5	
	comp=Z,14nm,1.1s						
BRG	Berggiesshubel	149.19	343	PKP2	PKPab	17 00 20.7	+0.5
BRG				pmax	pmax		
	comp=Z,32nm,1.0s						
BRG				pmax	pmax		
	comp=Z,22nm,1.0s						
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
HLM1	Long Mynd	149.25	4	eP	PKPbc	17 00 12.9	-0.4
LTVH	Ltavrtes, Hu	149.27	331	⇑P	PKiKP	17 00 14.4	+0.1
MAUC	Maruska	149.32	338	⇑ePKP	PKiKP	17 00 14.2	-0.2
MAUC				epPKP	pPKPab	17 02 33.3	+1.1
PVCC	Panska Ves	149.33	342	ePKHKP	PKiKP	17 00 14.3	-0.1
PVCC	Panska Ves	149.33	342	⇑ePKP	PKiKP	17 00 14.3	-0.1
DRGR		149.33	330	⇑P	PKPbc	17 00 14.0	+0.1
DRGR				⇑P	pPKPbc	17 02 28.9	-1.1
DRGR		149.33	330	⇑PKHKP	PKPpre	17 00 14.0	
ARR	Arges	149.38	326	⇑P	PKiKP	17 00 14.7	0.0
ARR				⇑P	pPKPab	17 02 37.8	+5.3
BORR	Bors	149.54	331	⇑P	PKiKP	17 00 15.4	+0.6
VYHS	Vyhne	149.67	336	ePKHKP	PKPpre	17 00 15.0	
VYHS				e		17 00 23.3	
VYHS	Vyhne	149.67	336	ePKP	PKiKP	17 00 15.0	-0.1
VYHS				e		17 00 23.3	
VYHS				e		17 02 32.8	
VYHS				e		17 02 37.3	
PSZ	Piszkesteto	149.72	334	⇑P	PKPbc	17 00 14.7	0.0
PSZ				⇓P	pPKPab	17 02 32.7	-1.2
PSZ	Piszkesteto	149.72	334	⇑PKHKP	PKPbc	17 00 14.7	0.0
PSZ	Piszkesteto	149.72	334		PKPbc	17 00 14.3	-0.4
ISP	Isparta	149.72	308		PKPbc	17 00 13.8	-1.3
HUMR	Humele	149.74	324	⇓P	PKPbc	17 00 14.3	-0.4
MCH1	Michaelchurch	149.75	4	eP	PKPbc	17 00 13.8	-0.7
KOLL	Kolacno	149.76	336	ePKP	PKiKP	17 00 15.7	+0.4
KOLL				e		17 02 37.4	
LOT	Lotru	149.77	327	⇑P	PKPbc	17 00 14.7	-0.2
VRAC	Vranov	149.79	339	PKPbc	PKPbc	17 00 14.6	-0.1
VRAC				PKPab	PKPab	17 00 23.1	+0.3
	comp=Z,17nm,0.7s,baz=40,slow=1.3,SNR=6.5						
VRAC				pPKPbc	pPKPbc	17 02 31.4	+0.3
	comp=Z,2.6nm,0.8s,baz=10,slow=2.6,SNR=2.4						
VRAC	Vranov	149.79	339	ePKP	PKPbc	17 00 14.7	0.0
VRAC				e		17 02 36.9	
JAVC	Velka Javorina	149.80	337	ePKP	PKiKP	17 00 16.3	+0.8
PRU	Pruhonice	149.82	342	ePKPDF	PKPdf	17 00 09.8	+0.6
PRU				⇑ePKP	PKPbc	17 00 14.7	-0.1
PRU				epPKP	pPKPbc	17 02 32.2	+1.0
MONM	Monmouth	149.93	4	eP	PKPbc	17 00 14.5	-0.4
KRUC	Moravsky	150.07	339	ePKP	PKPbc	17 00 15.4	0.0
KRUC				e		17 02 34.7	
JMB	Yambol	150.09	319	i P	PKiKP	17 00 15.9	-0.3
TREC	Trest	150.16	340	ePKIKP	PKPbc	17 00 15.3	-0.3
TREC	Trest	150.16	340	⇑ePKP	PKPbc	17 00 15.3	-0.3
NKC	Novy Kostel	150.16	345	ePKIKP	PKiKP	17 00 15.9	-0.2
NKC				e		17 00 24.4	
NKC	Novy Kostel	150.16	345	⇑ePKP	PKiKP	17 00 15.9	-0.2
NKC				ePKPAB	PKPab	17 00 24.4	+0.1
SIRR	Siria	150.21	330	⇑P	PKiKP	17 00 16.1	-0.2
SIRR				⇓P	pPKPbc	17 02 32.0	-0.3
GZR	Gura Zlata	150.31	328	⇑P	PKPbc	17 00 16.1	0.0
GZR				⇑P	pPKPdf	17 02 30.0	+1.5
GZR	Gura Zlata	150.31	328	⇑PKIKP	PKPbc	17 00 16.1	0.0
SWN1	Swindon	150.31	3	eP	PKPbc	17 00 15.7	-0.1
MODS	Modra-Piesok	150.35	337	ePKIKP	PKiKP	17 00 17.0	+0.4
MODS				e		17 00 26.4	
MODS				e		17 02 33.6	
MODS	Modra-Piesok	150.35	337	ePKP	PKiKP	17 00 17.0	+0.4
MODS				e		17 00 26.4	
MODS				e		17 02 33.6	
MODS				e		17 02 39.4	
SRO	Srobarova	150.43	335	ePKIKP	PKiKP	17 00 16.9	+0.2
SRO	Srobarova	150.43	335	ePKP	PKiKP	17 00 16.9	+0.2
ZST	Bratislava	150.56	337	ePKIKP	PKiKP	17 00 17.3	+0.3
ZST	Bratislava	150.56	337	ePKP	PKiKP	17 00 17.3	+0.3
ZST				e		17 00 27.5	
ZST				e		17 02 36.9	
BZS	Buzias	150.71	329	⇓P	PKPbc	17 00 17.0	0.0
BZS	Buzias	150.71	329	⇓PKIKP	PKPbc	17 00 17.0	0.0
ELSH	Elham, Standar	150.73	359	eP	PKPbc	17 00 16.8	0.0
KULA	Kula-Manisa	150.76	311	P	PKPbc	17 00 17.4	0.0
HERR	Herculane	150.85	327	⇓P	PKPbc	17 00 17.3	0.0
HERR				⇓P	pPKPbc	17 02 33.7	-0.1
KHC	Kasperske Hory	150.87	342	ePKIKP	PKPdf	17 00 10.9	0.0
KHC				e		17 00 27.6	
KHC	Kasperske Hory	150.87	342	PKPdf	PKPdf	17 00 10.4	-0.5
KHC				PKPbc	PKPbc	17 00 17.3	0.0
KHC	Kasperske Hory	150.87	342	ePKPDF	PKPdf	17 00 10.9	0.0
KHC				⇑ePKP	PKPbc	17 00 17.2	0.0
KHC				ePKPAB	PKPab	17 00 27.6	+0.2
KHC				epPKP	pPKPbc	17 02 34.4	+0.5
CKRC	Cesky Krumlov	150.94	341	ePKPDF	PKPdf	17 00 11.6	+0.6
CKRC				⇑ePKP	PKPbc	17 00 17.4	0.0
CKRC				ePKPAB	PKPab	17 00 28.0	+0.3
CKRC				epPKP	pPKPbc	17 02 34.0	-0.1
GRA1	Grafenberg Arr	150.96	346	PKPbc	PKPbc	17 00 17.4	0.0
GRA1					PKPab	17 00 28.0	+0.3
GRF	Grafenberg Arr	150.96	346	PKIKP	PKPbc	17 00 17.4	0.0
GRF						17 00 28.0	
MEM	Membach	150.97	353	dPKP	PKiKP	17 00 17.8	+0.1
BTNL	Ternell	150.97	353	dPcP	PKiKP	17 00 17.6	-0.1
BSTI	Sart Tilman	151.04	353	dPKP	PKiKP	17 00 17.8	0.0
BSTI				dPKPab	PKPab	17 00 28.2	+0.2
GEC2	GERESS Array S	151.09	342		PKPbc	17 00 17.6	-0.2
GEC2				PKPab	PKPab	17 00 28.4	0.0
GERES	GERESS Array B	151.09	342	PKP	PKPdf	17 00 11.4	0.0
	comp=Z,1.2nm,0.9s,baz=103,slow=5.8,SNR=4.0						
GERES				PKPbc	PKiKP	17 00 18.1	-0.1
	comp=Z,15nm,0.9s,baz=64,slow=3.1,SNR=41						
GERES				pPKPbc	pPKPbc	17 02 35.0	+0.4
	comp=Z,4.8nm,0.9s,baz=41,slow=4.3,SNR=6.9						
GERES	GERESS Array B	151.09	342		PKPbc	17 00 17.3	-0.6
GERES				PKPab	PKPab	17 00 28.1	-0.3
BANR	Banloc	151.11	329	⇓P	PKiKP	17 00 18.6	+0.4
EGYH	Egyhazaskeszo	151.13	336	PKP	PKiKP	17 00 18.4	+0.3
SOP	Sopron	151.19	337	PKP	PKiKP	17 00 18.3	+0.1
BHOU	Houvegnez	151.22	353	dPKP	PKiKP	17 00 18.6	+0.3
BHOU				dPKPab	PKPab	17 00 28.5	-0.2
CONA	Conrad Observa	151.22	338	i P	PKiKP	17 00 18.6	+0.1
	comp=Z,16nm,0.7s,SNR=16						
CONA				i P	PKPab	17 00 29.9	+0.9
	comp=Z,16nm,0.8s						
CONA				eP	pPKPbc	17 02 33.1	-1.9
	comp=Z,15nm,0.9s						
DYA	Yadsworthy	151.23	6	eP	PKPbc	17 00 17.5	-0.5
BCLA	Clavier	151.23	354	dPKP	PKPbc	17 00 17.8	-0.2
BCLA				dPKPab	PKPab	17 00 28.6	-0.2
SNF	Seneffe	151.23	355	dPKP	PKiKP	17 00 18.1	-0.1
SNF				dPKPab	PKPab	17 00 28.1	-0.6
MPLH	Magyarpolny	151.26	336	PKP	PKPbc	17 00 18.2	+0.1
RONA	Rosalia, Austr	151.27	338	eP	PKiKP	17 00 18.6	+0.1
	comp=Z,19nm,0.6s,SNR=21						
RONA				i P	PKPab	17 00 30.0	+0.9
	comp=Z,24nm,0.8s						
RONA				eP	pPKPbc	17 02 34.5	-0.3
	comp=Z,5.1nm,0.9s						
MDVR	Moldovita	151.27	328	⇓P	PKPbc	17 00 18.4	0.0
KDZ	Kurdzhali	151.27	319	i P	PKPbc	17 00 18.1	-0.3
BGES	Gesves	151.28	354	dPKP	PKPbc	17 00 17.9	-0.2
BGES				dPKPab	PKPab	17 00 28.6	-0.4
ALN	Alexandroupoli	151.31	317	P	PKPbc	17 00 17.4	-1.0
ALN	Alexandroupoli	151.31	317	PKIKP	PKPbc	17 00 17.4	-1.0
ALN						17 00 29.5	
ALN	Alexandroupoli	151.31	317		PKPbc	17 00 17.4	-1.0
ALN				PKPab	PKPab	17 00 29.5	0.0
BMRD	Maredsous	151.40	354	dPKP	PKPbc	17 00 18.4	+0.1
BMRD				dPKPab	PKPab	17 00 29.3	-0.2
RDO	Rodhopi	151.49	318	P	PKPbc	17 00 17.2	-1.6
RDO	Rodhopi	151.49	318		PKPbc	17 00 18.2	-0.6
RCHB	Rochefort	151.50	354	dPKP	PKiKP	17 00 18.7	-0.1
BLKB	Belogradchik	151.59	325	⇑P	PKPdf	17 00 11.7	-0.5
BLKB				⇑P	pPKPbc	17 02 35.5	-0.2
MORH	Mrgy, Hungar	151.59	333	⇑P	PKPbc	17 00 18.8	-0.1
MORH	Mrgy, Hungar	151.59	333	eP	PKPbc	17 00 18.8	-0.1
MORH	Mrgy, Hungar	151.59	333	PKP	PKPdf	17 00 12.5	+0.5
DOU	Dourbes	151.62	355	dPKP	PKiKP	17 00 19.2	+0.2
DOU				dPKPab	PKPab	17 00 30.4	0.0
MOA	Molln	151.81	340	eP	PKPbc	17 00 19.3	-0.1
	comp=Z,4.6nm,0.7s,SNR=6.1						
MOA				eP	PKPab	17 00 32.3	+0.9
	comp=Z,12nm,1.1s						
MOA				eP	pPKPbc	17 02 36.9	+0.6
	comp=Z,18nm,1.4s						
SMTH	Samothraki Isl	151.87	317	P	PKPbc	17 00 18.2	-1.6
WLF	Walferdange	151.88	352	PKIKP	PKiKP	17 00 19.8	+0.2
WLF						17 00 31.8	
WLF	Walferdange	151.88	352		PKiKP	17 00 19.8	+0.2
WLF				PKPab	PKPab	17 00 31.8	+0.3
WLF	Walferdange	151.88	352	dPKP	PKiKP	17 00 20.0	+0.4
WLF				dPKPab	PKPab	17 00 31.1	-0.4
FRGS	Fruska Gora	151.90	330	⇓P	PKPbc	17 00 18.9	-0.7
FRGS	Fruska Gora	151.90	330	eP	PKPbc	17 00 18.4	-1.3
KOVH	Kovagotottos	151.92	334	PKP	PKPdf	17 00 13.0	+0.5
ARSA	Arzberg	151.92	338	eP	PKPbc	17 00 19.4	-0.3
	comp=Z,7.4nm,1.1s						
ARSA				eP	PKPab	17 00 32.3	+0.4
	comp=Z,13nm,0.8s						
ARSA				eP	pPKPbc	17 02 37.3	+0.7
	comp=Z,7.4nm,0.9s						
VTS	Vitosha	151.95	323	⇓P	PKPbc	17 00 20.1	0.0
VTS				⇑P	pPKPdf	17 02 33.9	+2.9
VTS	Vitosha	151.95	323	PKIKP	PKPdf	17 00 11.9	-1.0
VTS						17 00 33.1	
VTS	Vitosha	151.95	323	PKPdf	PKPdf	17 00 11.9	-1.0
VTS				PKPbc	PKPbc	17 00 19.7	-0.4
VTS				PKPab	PKPab	17 00 33.1	+0.8
VTS	Vitosha	151.95	323	i P	PKPbc	17 00 20.1	0.0
PRK	Paraskevi	152.05	314	P	PKPab	17 00 34.0	+1.3
BIOA	Bad Ischl, Aus	152.15	341	eP	PKPbc	17 00 19.7	-0.5
	comp=Z,14nm,1.1s,SNR=5.6						
BIOA				eP	PKPab	17 00 33.8	+1.0
	comp=Z,19nm,0.8s						
KAVA	Kavala	152.21	319	P	PKPbc	17 00 19.3	-1.1
THAS	Thassos island	152.31	318	P	PKPbc	17 00 19.1	-1.6
SIGR	SIGRI	152.34	314	P	PKPab	17 00 32.9	-1.0
SOKA	Soboth	152.59	338	i P	PKPbc	17 00 20.8	-0.5
	comp=Z,6.6nm,0.7s						
SOKA				eP	PKPab	17 00 35.1	+0.3
	comp=Z,12nm,0.7s						
SOKA				eP	pPKPbc	17 02 37.8	-0.3
	comp=Z,4.4nm,0.9s						
DIVS	Divibare	152.61	329	PKPdf	PKPdf	17 00 12.6	-1.2
DIVS					PKPbc	17 00 20.9	-0.5
DIVS	Divibare	152.61	329	eP	PKPbc	17 00 21.2	-0.2
CHOS	Chios island	152.63	313	P	PKPbc	17 00 21.3	-0.3
SRS	Serrai	152.69	320	P	PKPab	17 00 34.2	-1.2
KBA	Koelnbreinsper	152.79	341	eP	PKPbc	17 00 21.1	-0.6
	comp=Z,7.7nm,0.8s,SNR=5.4						
KBA				eP	PKPab	17 00 36.5	+0.8
	comp=Z,10.0nm,0.5s,SNR=4.8						
KBA				eP	pPKPbc	17 02 37.3	-1.3
	comp=Z,9.1nm,0.9s						
BFO	Black Forest	152.84	349	PKIKP	PKPbc	17 00 21.1	-0.5
BFO						17 00 35.1	
BFO	Black Forest	152.84	349		PKPbc	17 00 21.1	-0.5
BFO					PKPab	17 00 35.1	-0.7
OBKA	Obir	152.90	339	eP	PKPbc	17 00 21.3	-0.6
	comp=Z,2.3nm,0.7s						
OBKA				eP	PKPab	17 00 35.9	-0.2
	comp=Z,9.1nm,0.8s						
OBKA				eP	pPKPbc	17 02 38.2	-0.7
	comp=Z,5.5nm,1.1s						
WATA	Walderalm	153.06	343	i P	PKPbc	17 00 21.8	-0.4
	comp=Z,5.4nm,0.7s,SNR=5.5						
WATA				eP	PKPab	17 00 37.3	+0.5
	comp=Z,15nm,1.0s						
WATA				eP	pPKPbc	17 02 38.6	-0.8
	comp=Z,7.5nm,1.0s						
BBLS	Lazići	153.07	329	eP	PKPbc	17 00 22.3	0.0
MYKA	Terra Mystica	153.09	340	eP	PKPbc	17 00 21.4	-0.9
	comp=Z,6.6nm,0.6s						
MYKA				i P	PKPab	17 00 36.6	-0.3
	comp=Z,11nm,0.6s						
MYKA				eP	pPKPbc	17 02 38.3	-1.0
	comp=Z,2.1nm,0.5s						
WTTA	Wattenberg	153.11	343	eP	PKPbc	17 00 22.3	-0.2
	comp=Z,9.9nm,0.7s,SNR=6.7						
WTTA				eP	PKPab	17 00 37.8	+0.7
	comp=Z,20nm,0.7s						
WTTA				eP	pPKPbc	17 02 39.1	-0.5
	comp=Z,10nm,1.1s						
RETA	Reutte	153.12	345	eP	PKPab	17 00 37.5	+0.5
	comp=Z,10.0nm,0.7s						
RETA				eP	pPKPbc	17 02 43.4	+4.0
	comp=Z,7.4nm,1.1s						
ECH	Echery	153.15	350	PKIKP	PKPdf	17 00 13.8	-0.5
ECH						17 00 36.3	
ECH	Echery	153.15	350	PKPdf	PKPdf	17 00 13.8	-0.5
ECH					PKPab	17 00 36.3	-0.7
CRES	Cresnjev	153.17	337	eP	PKPbc	17 00 21.8	-0.6
CRES	Cresnjev	153.17	337	ePKPbc	PKPbc	17 00 22.3	-0.1
CRES				ePKPab	PKPab	17 00 37.3	+0.1
MOTA	Moosalm	153.17	344	i P	PKPbc	17 00 22.3	-0.3
	comp=Z,9.8nm,1.0s						
MOTA				eP	PKPab	17 00 37.7	+0.4
	comp=Z,14nm,0.8s						
MOTA				eP	pPKPdf	17 02 35.9	+2.6
	comp=Z,8.3nm,1.0s						
PLG	Polygyros	153.23	319	P	PKPab	17 00 38.1	+0.4
SJES	Sjenica	153.24	327	eP	PKPbc	17 00 22.4	-0.4
SQTA	Sankt Quirin	153.26	344	eP	PKPbc	17 00 22.4	-0.3
	comp=Z,8.5nm,0.8s						
SQTA				eP	PKPab	17 00 38.2	+0.5
	comp=Z,12nm,0.9s						
SQTA				eP	pPKPdf	17 02 36.6	+3.2
	comp=Z,7.2nm,0.9s						
RUDO	Rudo	153.27	329	eP	PKPbc	17 00 21.9	-0.8
LJU	Ljubljana	153.31	338	eP	PKPbc	17 00 22.6	-0.1
LJU	Ljubljana	153.31	338	ePKPdf	PKPdf	17 00 14.6	0.0
LJU				i PKPbc	PKPbc	17 00 22.6	-0.1
LJU				i PKPab	PKPab	17 00 37.8	0.0
ABTA	Abfaltersbach	153.33	342	eP	PKPbc	17 00 22.2	-0.6
	comp=Z,11nm,0.7s						
ABTA				eP	PKPab	17 00 37.3	-0.7
	comp=Z,17nm,0.9s						
ABTA				eP	pPKPdf	17 02 35.6	+2.2
	comp=Z,13nm,1.1s						
CRNS	Crni Vrh	153.37	339	i PKPbc	PKPbc	17 00 22.5	-0.4
BLY	Banja Luka	153.38	333	eP	PKiKP	17 00 23.0	+0.1
BOJS	Bojanci	153.52	337	i PKPbc	PKiKP	17 00 23.4	+0.3
DAVA	Damuels	153.52	346	eP	PKPab	17 00 39.2	+0.3
	comp=Z,12nm,0.8s						
DAVA				eP	pPKPbc	17 02 39.8	-0.9
	comp=Z,6.1nm,1.1s						
FETA	Feichten	153.57	344	eP	PKPdf	17 00 15.3	+0.2
	comp=Z,8.1nm,0.9s,SNR=10.0						
FETA				eP	PKPab	17 00 38.7	-0.3
	comp=Z,20nm,1.4s						
FETA				eP	pPKPbc	17 02 42.3	+1.7
	comp=Z,11nm,1.2s						
CEY	Cerknica	153.61	338	eP	PKPbc	17 00 23.1	-0.3
MGRS	Mrkonjic Grad	153.69	333	eP	PKiKP	17 00 26.6	+3.0
STAL	STALIGIAL	153.71	341		PKPdf	17 00 14.2	-1.0
STAL				PKPbc	PKPbc	17 00 22.7	-0.9
STAL				PKPab	PKPab	17 00 38.0	-1.5
UPM	Unac-Piva	153.81	329	eP	PKPbc	17 00 20.0	-4.1
KYMI	Kymi, Euboea I	153.81	315	P	PKPab	17 00 38.0	-2.2
CLF	Chambon-Foret	153.83	358	PKPab	PKPab	17 00 39.7	-0.2
SKDS	Skadanscina	153.92	338	eP	PKPbc	17 00 22.9	-1.1
LIT	Litokhoron	153.97	319	P	PKPab	17 00 38.8	-2.1
LIT	Litokhoron	153.97	319	PKP2	PKPab	17 00 40.5	-0.4
LIT	Litokhoron	153.97	319	PKPab	PKPab	17 00 40.5	-0.4
XOR	Xorichti	153.98	317	P	PKPab	17 00 39.8	-1.2
DAVOX	Davos/Dischmat	154.00	345	PKP	PKPdf	17 00 15.1	-0.7
	comp=Z,4.5nm,0.9s,baz=76,slow=1.5,SNR=7.2						
DAVOX				PKPbc	PKiKP	17 00 24.8	+0.5
	comp=Z,7.2nm,0.6s,baz=203,slow=3.9,SNR=15						
DAVOX				PKPab	PKPab	17 00 41.4	+0.5
	comp=Z,9.6nm,0.7s,baz=36,slow=1.7,SNR=10						
DAVOX				pPKPbc	pPKPbc	17 02 41.0	-0.8
	comp=Z,5.1nm,0.6s,baz=12,slow=16,SNR=3.1						
FNA	Florina	154.20	322	PKP2	PKPab	17 00 41.5	-0.4
FNA	Florina	154.20	322		PKiKP	17 00 23.4	-1.4
FNA				PKPab	PKPab	17 00 41.5	-0.4
PDG	Podgorica	154.20	327		PKiKP	17 00 24.1	-0.6
PDG				PKPab	PKPab	17 00 41.5	-0.2
PDG	Podgorica	154.20	327	eP	PKiKP	17 00 24.2	-0.4
BRY	Bratogost	154.21	329	eP	PKiKP	17 00 24.0	-0.9
CTI	Castel Tesino	154.22	342	PKP2	PKPab	17 00 41.2	-0.6
CTI	Castel Tesino	154.22	342	PKPab	PKPab	17 00 41.2	-0.6
TUE	Stuetta	154.41	346	PKPdf	PKPdf	17 00 16.0	-0.3
TUE				PKPab	PKPab	17 00 42.8	+0.1
HCY	Herceg Novi	154.57	328	eP	PKPbc	17 00 27.7	+2.2
STON	Ston	154.63	330	eP	PKPbc	17 00 26.1	+0.6
TEOL	Teolo	154.84	341	PKPdf	PKPdf	17 00 16.5	-0.2
TEOL					PKPab	17 00 43.8	-0.6
IDI	Anoyia	154.90	308	PKP	PKPdf	17 00 16.9	-0.2
	comp=Z,5.8nm,0.9s,baz=83,slow=5.0,SNR=2.1						
IDI				PKPbc	PKPbc	17 00 27.7	+1.3
	comp=Z,8.1nm,0.7s,baz=223,slow=9.5,SNR=4.1						
IDI				PKPab	PKPab	17 00 44.4	-0.7
	comp=Z,6.5nm,0.7s,baz=194,slow=7.8,SNR=2.4						
IDI				pPKPbc	pPKPbc	17 02 44.0	+0.6
	comp=Z,6.4nm,0.9s,baz=183,slow=14,SNR=2.5						
SALO	Salr	154.92	343	PKPab	PKPab	17 00 44.4	-0.3
SENIN	Lac Senin/Sane	154.93	349	PKPab	PKPab	17 00 44.9	0.0
KLV	Kalavryta, Ach	155.41	316	P	PKPab	17 00 45.6	-1.6
BNI	Bardonecchia	156.31	349	PKIKP	PKPdf	17 00 18.4	-0.4
BNI						17 00 51.1	
BNI	Bardonecchia	156.31	349	PKPdf	PKPdf	17 00 18.4	-0.4
BNI				PKPab	PKPab	17 00 51.1	+0.2
SCTE	Santa Cesarea	156.31	324		PKPab	17 00 50.4	-0.5
NRCA	Norcia	156.60	336		PKPab	17 00 52.1	0.0
OSSC	Osservatorio P	156.63	340		PKPab	17 00 51.4	-0.8
TIP	Timpagrande	157.87	325	⇓P	PKPab	17 00 57.3	-0.5
TIP	Timpagrande	157.87	325	PKPab	PKPab	17 00 57.2	-0.5
ESDC	Sonseca Array	161.78	11	PKPab	PKPab	17 01 15.0	+0.2
	comp=Z,3.5nm,1.0s,baz=339,slow=3.7,SNR=7.9						
ESDC				pPKPab	pPKPab	17 03 25.7	+0.2
	comp=Z,0.2nm,0.5s,baz=323,slow=40,SNR=1.5						
ESDC	Sonseca Array	161.78	11		PKPab	17 01 14.9	+0.2
LIC	Lamto	163.55	160	ePKIKP	PKPdf	17 00 28.0	+0.5
	comp=Z,12nm,0.9s						
LIC	Lamto	163.55	160	ePKP1	PKPab	17 01 24.7	+1.6
	comp=Z,22nm,0.7s						
LIC	Lamto	163.55	160	ePKP1	pPKPab	17 03 38.2	+4.7
	comp=Z,35nm,1.9s						
KIC	Kosan Boka	163.77	161	ePKIKP	PKPdf	17 00 27.6	-0.1
	comp=Z,6.6nm,0.8s						
KIC	Kosan Boka	163.77	161	ePKP1	PKPab	17 01 25.1	+1.1
	comp=Z,14nm,0.6s						
KIC	Kosan Boka	163.77	161	ePKP1	pPKPab	17 03 38.9	+4.6
	comp=Z,7.1nm,0.8s						
TIC	Toumodi	163.95	159	ePKIKP	PKPdf	17 00 27.8	-0.1
TIC	Toumodi	163.95	159	ePKP1	PKPab	17 01 25.8	+0.9
TIC	Toumodi	163.95	159	ePKP1	pPKPab	17 03 39.4	+4.2
DBIC	Dimbokro	164.03	160	PKP	PKPdf	17 00 27.9	0.0
	comp=Z,8.0nm,0.9s,baz=152,slow=2.9,SNR=7.5						
DBIC				PKPab	PKPab	17 01 25.9	+0.8
	comp=Z,5.8nm,0.6s,baz=210,slow=6.2,SNR=8.2						
DBIC	Dimbokro	164.03	160		PKPdf	17 00 27.5	-0.4
KEST	Kesra	164.19	333	PKPab	PKPab	17 01 25.7	+0.1
	comp=Z,13nm,0.9s,baz=304,slow=1.8,SNR=9.9						
KEST	Kesra	164.19	333	PKPab	PKPab	17 01 25.3	-0.3
TOA0	Torodi Ar. Sit	171.31	187	P	PKPdf	17 00 32.2	-0.7
TORD	Torodi Ar. Bea	171.31	187	PKP	PKPdf	17 00 32.3	-0.6
	comp=Z,3.9nm,0.8s,baz=46,slow=1.2,SNR=20						
TORD				PKPab	PKPab	17 01 57.2	-0.1
	comp=Z,3.5nm,0.8s,baz=169,slow=3.9,SNR=12						
TORD				pPKP	pPKPdf	17 02 52.1	-0.3
	comp=Z,2.3nm,0.9s,baz=288,slow=1.4,SNR=2.7						
TORD				pPKPab	pPKPab	17 04 08.5	+1.2
	comp=Z,1.4nm,0.8s,baz=168,slow=4.5,SNR=3.5						
TORD				PP	PP	17 05 49.4	+1.8
	comp=Z,1.6nm,0.9s,baz=155,slow=5.9,SNR=4.0						

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*IDC **08** 16:41:58.3±2.3, 0°.03N×126°.07E, h0^{km}, mb3.4/3, mbtmp3.5/3 Error ellipse: s-maj=235.9km s-min=28.5km az=65.0*

*DJA **08** 16:42:04.7±0.2, 0°S±2°×12°6E±°, h10^{km}, M3.5/13, mb3.4/1, MLv3.5/13*

ISC 08 16:42:03.7±1.0, **0°.28S**±0°.06×**125°.74E**±0°.04, **h10**^{km}, **n12**, σ**1**^{s}**55**/16, **mb3.5**/3, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	1.78	172	P	Pn	16 42 34.9	+0.4
SANI				S	Sb	16 42 59.8	+1.1
LBMI	Labuha	1.79	101	P	Pn	16 42 35.0	+0.3
LBMI				S	Sn	16 42 59.4	+1.8
TNTI	Ternate	1.93	57	P	Pn	16 42 37.9	+1.3
KMSI	Cibinong	1.95	296	P	Pn	16 42 37.4	+0.5
KMSI				S	Sn	16 43 03.4	+1.9
GTOI	Gorontalo	2.88	288	P	Pb	16 42 53.4	-1.7
GTOI				S	Sb	16 43 30.5	0.0
LUWI	Luwuk	3.06	256	P	Pn	16 42 53.2	+1.0
LUWI				S	Sn	16 43 30.6	+1.6
MRSI	Marisa	3.88	281	P	Pn	16 43 04.5	+1.2
APSI	Ampana	4.14	261	P	Pn	16 43 08.4	+1.4
AAI	Ambon	4.18	144	P	Pn	16 43 08.7	+1.2
WRA	Warramunga Arr	21.28	157	P	P	16 46 48.2	-2.3
	1.4nm,0.7s,baz=337,slow=11,SNR=2.6						
	1.4nm,0.7s						
ASAR	Alice Springs	24.56	162	P	P	16 47 21.9	-2.1
	0.7nm,0.9s,baz=346,slow=8.4,SNR=8.4						
	0.7nm,0.9s						
MKAR	Makanchi Array	60.31	327	P	P	16 52 08.4	-4.3
	0.3nm,0.5s,baz=108,slow=8.3,SNR=3.5						
	0.3nm,0.5s						

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*NEIC **08** 16:47:13.6±2.0, 53°.21N±0°.09×167°.0W±0°.1, h56^{km}±7^{km}, mb3.7/24, ML3.7/6, ML3.5(AEIC), Error ellipse: s-maj=15.4km s-min=6.2km az=149.0*

AEIC 08 16:47:13±1.9, **53°.20N**±0°.07×**167°.06W**±0°.08, **h53**^{km}±6^{km}, **Error ellipse: s-maj=10.7km s-min=6.3km az=163.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	0.56	293		Pn	16 47 25.8	+0.7
MGOD	Makushin Gods	0.61	10		Pn	16 47 26.6	+0.7
UNV	Unalaska Valle	0.73	27		Pn	16 47 27.5	+0.3
MSW	Makushin Switc	0.74	13		Pn	16 47 28.2	+0.8

MTBL	Makushin Table	0.81	16		Pn	16 47 29.4	+1.1
NIKH	Nikolski High	1.11	259	Pn	Pn	16 47 32.6	+0.4
AKBBA	Akutan Broad B	1.13	36		Pn	16 47 33.4	+0.9
AHB	Akutan Harbor	1.18	38		Pn	16 47 33.9	+0.6
AKUT	Akutan	1.21	39		Pn	16 47 34.3	+0.6
AKUT	Akutan	1.21	39	IAML		16 47 51.5	
	comp=E,1µm,0.2s						
AKSA	Akutan Strait	1.24	40		Pn	16 47 34.3	+0.3
WESE	West Dahl East	1.95	48		Pn	16 47 44.5	+0.8
ISLZ	Isanotski Laza	2.50	51		Pn	16 47 51.7	+0.5
FALS	False Pass	2.72	51	Pn	Pn	16 47 55.0	+0.9
SPIA	Saint Paul Isl	4.39	337		Pn	16 48 17.8	+0.8
SDPT	Sand Point	4.42	58	Pn	Pn	16 48 17.6	+0.1
SDPT				IAML		16 49 45.5	
	comp=E,89nm,2.3s						
SDPT				IAML		16 50 24.5	
	comp=N,72nm,3.0s						
ADK	Adak	6.02	261	Pn	Pn	16 48 42.6	+3.3
OHAK	Old Harbor	8.84	57	Pn	Pn	16 49 16.1	-1.9
P18K	Big Mountain,	9.04	42	Pn	Pn	16 49 22.6	+1.9
O18K	Koktuh Hills	9.34	40	Pn	Pn	16 49 27.2	+2.4
KDAK	Kodiak Island	9.41	55	Pn	Pn	16 49 23.3	-2.4
Q19K	Cape Douglas,	9.44	47	Pn	Pn	16 49 26.0	-0.2
M19K	Big River Lodg	11.05	33	Pn	Pn	16 49 48.4	+0.3
BRLK	Bradley Lake	11.08	47	Pn	Pn	16 49 48.9	+0.2
L19K	White Mountain	11.11	31	Pn	Pn	16 49 50.0	+1.2
TTA	Tatalina	11.36	26	Pn	Pn	16 49 53.3	+0.9
ANM	Nome	11.44	4	Pn	Pn	16 49 55.4	+2.0
K20K	Telida	12.24	29	Pn	Pn	16 50 03.6	-0.7
RC01	Rabbit Creek A	12.26	43	Pn	Pn	16 50 02.7	-1.8
J20K	Nowinta River	12.86	26	Pn	Pn	16 50 13.2	+0.4
FID	Port Fidalgo	13.49	48	Pn	Pn	16 50 17.2	-4.2
SCM	Sheep Creek Mo	13.63	43	Pn	Pn	16 50 20.5	-2.9
BPAW	Bear Paw Mtn.	13.71	31	P	P	16 50 30.9	-0.6
KLU	Klutina	14.06	45	Pn	Pn	16 50 25.5	-3.7
M24K	Tolsona, Glenn	14.24	43	Pn	Pn	16 50 28.8	-2.8
H21K	Melozitna Rive	14.39	24	P	P	16 50 38.4	-0.7
IMAR	Indian Mountai	14.44	22	P	P	16 50 39.6	0.0
N25K	Chitina, Valde	14.68	46	Pn	Pn	16 50 34.5	-2.8
GLB	Gilahina Butte	14.96	47	Pn	Pn	16 50 37.8	-3.1
VRDI	Verde Repeater	15.03	48	Pn	Pn	16 50 39.0	-3.0
VRDI				IAmb	IAmb	16 50 43.6	
	comp=Z,6.5nm,1.3s						
WAX	Waxell Ridge	15.04	52	Pn	Pn	16 50 39.2	-2.8
ISLE	Juniper Island	15.33	51	P	P	16 50 50.7	+1.1
H23K	Yukon River	15.39	28	P	P	16 50 50.2	+0.2
H23K				IAmb	IAmb	16 51 04.8	
	comp=Z,5.0nm,1.4s						
IL31		15.48	34	P	P	16 50 50.1	-1.0
RIDG	Independent Ri	15.60	39	Pn	Pn	16 50 48.0	-1.2
RIDG				IAmb	IAmb	16 51 03.4	
	comp=Z,7.1nm,1.5s						
M26K	Nabesna, AK	15.70	45	Pn	Pn	16 50 47.9	-2.6
M26K				IAmb	IAmb	16 50 56.1	
	comp=Z,5.1nm,1.4s						
BARN	Barnard Glacie	15.79	50	Pn	Pn	16 50 50.1	-1.7
BARN				IAmb	IAmb	16 51 11.3	
	comp=Z,7.8nm,1.2s						
H24K	Noodor Dome	15.88	30	Pn	Pn	16 50 51.5	-1.2
H24K				IAmb	IAmb	16 51 14.3	
	comp=Z,5.7nm,1.4s						
J25K	Salcha River,	15.90	36	Pn	Pn	16 50 51.9	-1.2
J25K				IAmb	IAmb	16 51 06.0	
	comp=Z,5.3nm,1.4s						
SCRK	Sand Creek	16.05	39	Pn	Pn	16 50 54.1	-0.9
M27K	Edge Creek, AK	16.16	45	P	P	16 50 58.7	-0.1
L27K	Beaver Creek,	16.47	43	Pn	Pn	16 50 59.3	-0.9
BCAR	Beaver Creek A	16.49	43	Pn	Pn	16 51 00.3	-0.1
HYT	Haines Junctio	17.69	53	P	P	16 51 17.0	+1.3
HYT				IAmb	IAmb	16 51 20.3	
	comp=Z,6.0nm,0.9s						
DAWY	Dawson	17.88	42	P	P	16 51 18.8	+1.1
BMAR	Burnt Mountain	17.93	29	P	Pn	16 51 16.4	-1.8
M30M	Minto, Yukon	18.45	47	P	Pn	16 51 24.3	-0.3
M30M				IAmb	IAmb	16 51 44.4	
	comp=Z,5.5nm,1.4s						
N31M	Braeburn, Yuko	18.64	51	Pn	Pn	16 51 27.8	+0.9
M31M	Drury Creek, Y	19.44	49	P	P	16 51 35.1	+0.3
M31M				IAmb	IAmb	16 51 37.5	
	comp=Z,5.9nm,0.8s						
HG4B	Hotspring	21.59	78	P	P	16 51 56.5	-1.5
INK	Inuvik	21.88	33	P	P	16 51 58.1	-2.8
INK				IAmb	IAmb	16 52 02.4	
	comp=Z,5.6nm,1.4s						
YKA	Yellowknife Ar	28.64	50	P	P	16 53 03.6	-0.4
EUNU	Eureka	36.53	17	P	P	16 54 11.8	-0.9
FCC	Fort Churchill	39.33	52	P	P	16 54 36.1	-0.3
FCC				IAmb	IAmb	16 54 53.8	
	comp=Z,1.9nm,0.9s						
SCHQ	Schefferville	53.87	45	P	P	16 56 28.0	-2.2
FIA0	FINESS Array S	65.23	353	P	P	16 57 49.3	+1.0

IDC 08 16:48:53.1±2.9**, 17°.50S**×**178°.82W, h612**^{km}±21^{km}**,**
mb2.9/6**, mbtmp3.8**/7**, Error ellipse: s-maj=138.1km**
s-min=20.5km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.99	265	P	P	16 50 13.4	+0.1
	12nm,0.7s,baz=133,slow=3.8,SNR=6.5						
CTA	Charters Tower	33.13	260	P	P	16 54 39.4	-1.5
	3.1nm,0.8s,baz=108,slow=5.4,SNR=1.6 3.1nm,0.8s						
WRA	Warramunga Arr	44.32	259	P	P	16 56 11.0	+0.2
	0.8nm,0.5s,baz=97,slow=7.3,SNR=6.2 0.8nm,0.5s						
ASAR	Alice Springs	44.52	254	P	P	16 56 12.8	+0.4
	2.9nm,0.5s,baz=87,slow=9.4,SNR=12 2.9nm,0.5s						
NVAR	Mina Array Bea	79.41	44	P	P	16 59 57.4	-0.1
	0.3nm,0.6s,baz=234,slow=7.7,SNR=3.0 0.3nm,0.6s						
ILAR	Eielson Array	85.58	13	P	P	17 00 27.6	+0.1
	0.2nm,0.4s,baz=212,slow=5.4,SNR=6.8 0.2nm,0.4s						
PDAR	Pinedale Array	87.33	44	P	P	17 00 36.4	-0.2
	0.3nm,0.5s,baz=206,slow=3.9,SNR=2.6 0.3nm,0.5s						

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*MAN **08** 17:03:10.9, 9°.26N×125°.58E, h8^{km}, mb4.5, ML3.3, MS3.1,*
Hypocentre not reviewed by the ISC
ISC 08 17:03:11.8±1.1**, 9°.28N**±0°.03×**125°.62E**±0°.07**, h11**^{km}±10^{km}**,**
n10, σ**2**^{s}**.03**/13**, 3C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.31	180	⇓*e*P	Pg	17 03 17.5	-0.6
BUTP				*e*S	Sg	17 03 24.1	+1.8
SCPH	Surigao	0.51	345	⇑*e*P	Pg	17 03 21.9	+0.1
SCPH				*i* S	Sg	17 03 25.6	-2.9
GLSP	General Luna,	0.71	45	⇓*e*P	Pg	17 03 25.2	-0.3
GLSP				*e*S	Sg	17 03 36.0	+1.3
MSLP	Maasin	1.13	319	⇓*e*P	Pg	17 03 32.9	-0.7
MSLP				*e*S	Sg	17 03 49.0	+0.8
BIPH	Bislig	1.31	146	⇑*i*P	Pn	17 03 33.9	-2.2
BIPH				*i* S	Sb	17 03 50.8	-2.6
TBP	Tagbilaran	1.78	283	*e*P	Pn	17 03 41.4	-1.1
TBP				*i* S	Sn	17 04 03.9	-1.3
LLP	Lapu-Lapu	1.93	302	⇓*i*P	Pn	17 03 43.7	-0.9
LLP				*i* S	Sn	17 04 07.7	-1.1
OCLP	Ormoc	2.02	331	⇓*e*P	Pn	17 03 46.6	+0.8
OCLP				*e*S	Sn	17 04 13.6	+2.6
KCP	Kidapawan	2.32	193	⇓*e*P	Pn	17 03 49.8	-0.2
CTBH	Cotabato--PC H	2.46	214	⇑*i*P	Pn	17 03 54.2	+2.3

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*DDA **08** 17:14:47.6±0.0, 36°.02N×30°.87E, h48^{km}, ML3.2*
*ISK **08** 17:14:47.9, 36°.07N×30°.91E, h25^{km}, ML3.2/13*
*NIC **08** 17:14:49.3±0.0, 36°.04N×30°.86E, h28^{km}±2^{km}, Ml3.5/4*
ISC 08 17:14:48.4±1.1**, 36°.07N**±0°.03×**30°.88E**±0°.02**, h29**^{km}±12^{km}**,**
n58, σ**1**^{s}**.07**/95**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUM	Antalya-Kumluc	0.50	300	P	Pn	17 15 00.1	+0.6
AKUM				S	Sn	17 15 08.9	+1.8
AKUM				*i* AML	AML	17 15 11.0	
	comp=E,1µm,0.4s						
AKUM				*i* AML	AML	17 15 16.0	
	comp=N,1µm,0.3s						
KEMT	Kemer-ANTALYA	0.59	334	PG	Pn	17 15 00.6	-0.2
KEMT				SG	Sn	17 15 10.1	+0.7
DEMR	Demre-Antalya	0.80	282	PG	Pn	17 15 04.4	+0.7
DEMR				SG	Sn	17 15 16.6	+1.9
ANTB	Antalya	0.84	348	PG	Pb	17 15 04.7	+0.2
ANTB				SG	Sn	17 15 16.5	+0.8
KORT	Korkueli	1.02	336	PG	Pb	17 15 07.2	-0.3
KORT	Korkueli	1.02	336	P	Pb	17 15 07.2	-0.3
KORT				S	Sb	17 15 22.6	+2.0
ELL	Elmali	1.03	311	PG	Pb	17 15 07.5	-0.2
ELL	Elmali	1.03	311	P	Pb	17 15 07.7	0.0
ELL				S	Sb	17 15 22.2	+1.3
AKAS	Kas	1.04	279	PG	Pb	17 15 07.7	-0.2
AKAS	Kas	1.04	279	P	Pb	17 15 07.4	-0.4
AKAS				S	Sb	17 15 20.8	-0.4
AKAS				*i* AML	AML	17 15 23.0	
	comp=E,492nm,0.7s						
AKAS				*i* AML	AML	17 15 31.0	
	comp=N,677nm,0.5s						
KSL	Kastellorizon	1.05	275	P	Pb	17 15 08.0	0.0
KSL				S	Sb	17 15 22.1	+0.8
GAZI	Gazipasa	1.18	82	PN	Pn	17 15 08.9	0.0
GAZI	Gazipasa	1.18	82	P	Pn	17 15 09.1	+0.3
GAZI				S	Sb	17 15 24.4	-0.6
GAZI				*i* AML	AML	17 15 25.0	
	comp=N,643nm,0.4s						
GAZI				*i* AML	AML	17 15 26.0	
	comp=E,530nm,0.5s						
BCK	Bucak	1.40	351	PN	Pn	17 15 12.5	+0.4
CAME	Cameli-Denizli	1.54	305	PN	Pn	17 15 14.7	+0.7
SEYD	Seydisehir-KON	1.54	30	PN	Pn	17 15 14.4	+0.5
FETY	Fethiye	1.55	292	PN	Pn	17 15 14.9	+0.8
FETY	Fethiye	1.55	292	P	Pb	17 15 15.0	-1.4
FETY				S	Sb	17 15 35.6	-0.1
GOLH	Golhisar	1.57	318	P	Pb	17 15 16.2	-0.7
GOLH				S	Sb	17 15 35.6	-0.7
HDMB	Hadim	1.57	55	PN	Pn	17 15 14.8	+0.3
AKMS	Akamas	1.59	131	P	Pb	17 15 15.9	-1.2
AKMS				S	Sb	17 15 35.9	-0.8
AKMS				AML	AML	17 15 44.8	
	1.5nm,0.3s						
AKMS				AML	AML	17 15 44.8	
	1.5nm,0.3s						
CAEL	Denizli, Camel	1.63	310	P	Pb	17 15 16.6	-1.3
CAEL				S	Sb	17 15 37.7	-0.5
CAEL				*i* AML	AML	17 15 42.0	
	comp=N,273nm,0.6s						
CAEL				*i* AML	AML	17 15 55.0	
	comp=E,242nm,0.7s						
CAEL				*i* AML	AML	17 15 59.0	
	comp=Z,245nm,0.6s						
ALFC	Alefka	1.68	123	P	Pn	17 15 16.5	+0.7
ALFC				S	Sb	17 15 37.9	-1.4
ALFC				AML	AML	17 15 45.1	
	1.6nm,0.2s						
ALFC				AML	AML	17 15 45.1	
	1.6nm,0.2s						
ALFC				AML	AML	17 15 46.3	
	1.9nm,0.2s						
ALFC				AML	AML	17 15 46.3	
	1.9nm,0.2s						
BRDR	BURDUR-Merkez	1.75	338	P	Pn	17 15 17.7	+0.9
BRDR				S	Sn	17 15 37.4	-0.7
ISP	Isparta	1.77	351	PN	Pn	17 15 17.8	+0.7
LEF	Lefka	1.90	120	P	Pb	17 15 20.3	-2.0
LEF				S	Sn	17 15 41.5	-0.2
BAGO	Egridir - ISPA	1.91	358	P	Pn	17 15 19.6	+0.5
BAGO				S	Sn	17 15 41.4	-0.8
DALY	Dalyan (Mula)	1.94	293	PN	Pn	17 15 20.0	+0.7
BASM	Basmaki-Afyon	1.96	340	PN	Pn	17 15 20.1	+0.4
KKBE	Karaman, Kazim	2.02	55	P	Pn	17 15 22.3	+1.8
KKBE				S	Sn	17 15 46.8	+1.9
KMER	Konya-Meram	2.07	35	P	Pn	17 15 22.3	+1.0
KMER				S	Sn	17 15 46.7	+0.5
KMER				*i* AML	AML	17 15 53.0	
	comp=N,132nm,0.4s						
TAVA	DENIZLI_Tavas	2.10	312	P	Pn	17 15 22.6	+0.9
TAVA				S	Sn	17 15 46.1	-0.8
DOGA	KONYA_Doganhis	2.12	17	P	Pn	17 15 23.2	+1.2
DOGA				S	Sn	17 15 47.6	+0.1
YVAC	Isparta, Yalva	2.21	7	P	Pn	17 15 23.6	+0.4
YVAC				S	Sn	17 15 48.3	-1.3
KONT	Konya--Tatoy	2.21	32	P	Pn	17 15 24.1	+0.9
KONT				S	Sn	17 15 50.1	+0.5
TURN	Turunc	2.23	289	P	Pn	17 15 24.1	+0.7
TURN				S	Sn	17 15 47.9	-2.1
ATHAL	Athalassa	2.25	114	P	Pn	17 15 24.5	+0.8
KZIL	AFYON_Kizioren	2.26	345	P	Pn	17 15 23.9	+0.1
KZIL				S	Sn	17 15 50.4	-0.4
CSS	Mathiatis	2.29	118	P	Pn	17 15 24.6	+0.4
CSS				S	Sn	17 15 50.4	-1.0
MULA	Mugla, Merkez-	2.37	301	P	Pn	17 15 26.0	+0.7
MULA				S	Sn	17 15 52.3	-1.2
PASA	Karahalli, USA	2.53	334	P	Pn	17 15 27.7	+0.2
PASA				S	Sn	17 15 56.2	-1.1
OSC1	CSNet OBS 1	2.59	173	P	Pb	17 15 34.1	0.0
OSC1				S	Sn	17 15 59.6	+0.9
KDHN	Kadinhani	2.63	22	P	Pn	17 15 29.1	+0.1
KDHN				S	Sn	17 15 58.6	-1.5
EREN	Erenkoy	2.73	101	P	Pn	17 15 32.1	+1.9
EREN				S	Sn	17 16 02.0	-0.2
EREN				*i* AML	AML	17 16 07.0	
	comp=E,79nm,0.8s						
EREN				*i* AML	AML	17 16 08.0	
	comp=N,77nm,0.7s						
EREN				*i* AML	AML	17 16 25.0	
	comp=Z,74nm,0.5s						
DAT	Datca	2.74	285	P	Pn	17 15 30.9	+0.4
DAT				*i* AML	AML	17 16 05.0	
	comp=N,87nm,0.3s						
AYDN	Tasoluk	2.88	304	P	Pn	17 15 32.6	+0.3
KERG	Konya-Eregli	2.93	62	P	Pn	17 15 34.9	+1.7
KERG				S	Sn	17 16 08.2	+0.8
USAK	Uak-Merkez	3.02	331	P	Pn	17 15 34.2	-0.1
USAK				S	Sn	17 16 08.1	-1.4
USAK				*i* AML	AML	17 17 18.0	
	comp=E,83nm,3.5s						
KARP	Karpathos	3.06	261	P	Pn	17 15 36.1	+1.2
GDZ	Gediz	3.21	340	P	Pn	17 15 37.1	+0.1
GDZ				S	Sn	17 16 11.6	-2.7
DED	Mersin	3.28	73	P	Pn	17 15 39.8	+1.9
DED				S	Sn	17 16 16.1	+0.1
GULE	Gulek	3.36	68	P	Pn	17 15 42.3	+3.2
GULE				S	Sn	17 16 19.9	+1.8
ANDZ	Kutahya, Merke	3.52	348	P	Pn	17 15 41.5	+0.3
BORA	Eskisehir	3.81	355	P	Pn	17 15 45.2	0.0
AUMIH	MIHALICIK	3.82	7	P	Pn	17 15 45.2	-0.1
KIRS	Kirsehir-Merke	3.89	37	P	Pn	17 15 46.2	0.0
YURE	YUREGIR	3.91	78	P	Pn	17 15 47.5	+1.0
AKO	Adana	3.92	68	P	Pn	17 15 49.1	+2.4
AKO				S	Sn	17 16 31.8	+0.1

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*NEIC **08** 17:29:34.6±3.0, 8°.36S±0°.08×108°.98E±0°.04, h76^{km}±8^{km},*
mb4.3/21, Error ellipse: s-maj=12.0km s-min=5.7km
az=174.0
*DJA **08** 17:29:34.2±0.5, 8°S±2°×10°9E±°, h27^{km}±5^{km}, M4.5/30,*
mb4.5/30, mB5.1/8, MLv4.6/26, Mw(mB)4.4/8, MwMwp6.1/1,
Mwp6.1/1
*IDC **08** 17:29:38.2±1.1, 7°.80S×109°.26E, h98^{km}±9^{km}, mb3.9/16,*
mbtmp4.2/18, MS3.1/7, Error ellipse: s-maj=20.7km
s-min=9.3km az=37.0
ISC 08 17:29:34.2±0.4**, 8°.34S**±0°.06×**108°.98E**±0°.04**, h76**^{km}**, n110,**
σ**1**^{s}**.68**/111**, mb4.2**/22**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.76	316	P	Pn	17 29 49.9	-0.4
CMJI				S	Sn	17 30 00.4	-1.8
KPJI	Karang Pucung	1.00	357	P	Pn	17 29 53.7	+0.6
KPJI				S	Sn	17 30 07.7	+0.6
YOGI	Yogyakarta	1.40	68	P	Pn	17 29 57.8	-0.4
UGM	Wanagama	1.59	75		Pn	17 30 00.5	-0.1
UGM	Wanagama	1.59	75	P	Pn	17 30 00.2	-0.4
SMRI	Semarang	1.94	49		Pn	17 30 06.5	+1.3
SMRI	Semarang	1.94	49	P	Pn	17 30 06.5	+1.3
SMRI				S	Sn	17 30 30.5	+1.7
WOJI	Wonogiri, Jawa	1.99	76	P	Pn	17 30 04.9	-1.0
LEM	Lembang	2.02	318	P	Pn	17 30 08.7	+2.2
	236nm,0.5s,baz=130,slow=7.5,SNR=65						
LEM				S	Sn	17 30 34.0	+3.0
	636nm,0.6s,baz=352,slow=20,SNR=14						
LEM				LR	LR	17 31 12.7	
	comp=Z,318nm,19.5s,baz=124,slow=50						
CNJI	Cibinong	2.10	299	P	Pn	17 30 07.8	+0.4
PCJI	Pacitan	2.18	86	P	Pn	17 30 09.2	+0.7
UWJI	Ujung Watu	2.73	46	P	Pn	17 30 16.6	+0.7
SKJI	Sukabumi	2.74	299	P	Pn	17 30 18.4	+2.3
PWJI	Pagerwojo	2.81	84	P	Pn	17 30 17.2	+0.2
DBJI	Dramaga	2.83	309	P	Pn	17 30 19.7	+2.4
GRJI	Gresik	3.75	68	P	Pn	17 30 31.0	+1.3
XMIS	Christmas Isla	3.91	237	Pn	Pn	17 30 31.4	-0.6
BWJI	Bawean	4.41	56	P	Pn	17 30 39.1	+0.3
GMJI	Gumukmas	4.42	89	P	Pn	17 30 40.1	+1.2
BLJI	Banyuglugur	4.61	83	P	Pn	17 30 42.3	+0.8
KMMI	Kalianget	5.11	76	P	Pn	17 30 48.3	0.0
	0.2nm35nm,0.8s						
JAGI	Jajag, Banyuwa	5.12	92		Pn	17 30 49.3	+0.9
JAGI	Jajag, Banyuwa	5.12	92	P	Pn	17 30 49.5	+1.0
	1.1nm2µm65nm,0.6s						
ABJI	Asem Bagus	5.23	84	P	Pn	17 30 51.8	+1.8
	0.5nm40nm,0.5s						
KASI	Kota Agung	5.25	302	P	Pn	17 30 53.3	+3.0
	0.3nm53nm,1.0s						
TPI	Tanjungpandan	5.70	347	P	Pn	17 30 58.6	+2.2
	0.1nm483nm18nm,1.0s						
LWLI	Liwa	5.90	304	P	Pn	17 31 00.2	+1.0
	0.4nm144µm4µm62nm,0.7s						
IGBI	Denpasar	6.12	95	P	Pn	17 31 02.1	0.0
	0.3nm17nm,0.7s						
SRBI	Singaraja	6.18	88	P	Pn	17 31 04.3	+1.4
	0.3nm40nm,0.7s						
PBKI	Pangkalan Bun	6.21	26	P	Pn	17 31 03.3	0.0
	0.5nm2µm107nm,1.0s						
PPBI	Pangkal Pinang	6.76	335	P	Pn	17 31 13.3	+2.4
	0.5nm5µm46nm,0.7s						
MNAI	Manna	7.17	303	Pn	Pn	17 31 18.8	+2.3
BBKI	Banjar Baru	7.58	51	P	Pn	17 31 24.3	+2.2
	0.1nm7.4nm,0.5s						
PLAI	Plampang	8.71	94	P	Pn	17 31 39.1	+1.5
	31nm,0.9s						
STKI	Sintang	8.71	17	P	Pn	17 31 40.0	+2.4
	0.1nm14nm,0.7s						
DSRI	Dabo	8.96	330	P	Pn	17 31 43.2	+2.3
	306nm17nm,0.9s						
KSM	Kuching	9.84	8		Pn	17 31 53.1	+0.2
PPSI	Pulau Pagai	10.50	301	P	Pn	17 32 02.9	+0.9
	71nm,1.5s						
KAPI	Kappang	11.20	74	LR	LR	17 36 43.3	
	comp=Z,54nm,19.4s,baz=252,slow=39						
BKSI	Bulukumba	11.46	76	P	Pn	17 32 16.6	+1.5
	10nm,1.0s						
SPSI	Sidrap Palu	11.57	69	P	Pn	17 32 18.7	+2.1
	431nm9.2nm,1.1s						
BSSI	Bau Bau, Buton	11.63	80	P	Pn	17 32 18.0	+0.6
EDFI	Ende, Flores	12.58	93	P	Pn	17 32 30.4	0.0
	5.4nm,0.7s						
MMRI	Maumere	13.12	92	Pn	Pn	17 32 33.6	-4.0
MMRI	Maumere	13.12	92	P	Pn	17 32 37.4	-0.2
	774nm22nm,0.6s						
MPSI	Mapaga	13.88	52	P	P	17 32 57.1	+3.7
BATI	Baumata	14.61	98	P	Pn	17 32 58.8	+1.6
	6.4nm,0.4s,baz=298,slow=4.4,SNR=5.7						
BATI				S	Sn	17 35 27.9	-10
	3.2nm,0.3s,baz=198,slow=20,SNR=1.6						
BATI	Baumata	14.61	98	P	Pn	17 32 58.5	+1.3
	18nm,0.7s						
APSI	Ampana	14.62	60	P	P	17 33 00.6	-1.0
	22nm,1.2s						
GSI	Gunungsitoli	14.87	310	Pn	Pn	17 32 56.3	-4.1
PSI	Prapat	14.93	317	LR	LR	17 38 47.3	
	comp=Z,41nm,20.2s,baz=166,slow=38						
GIRL	Giralia	15.09	161	Pn	Pn	17 33 00.2	-3.1
MRSI	Marisa	15.61	56	P	P	17 33 12.9	+0.3
	14nm,0.7s						
KULM	Kulim	15.88	328	Pn	Pn	17 33 12.6	-0.8
MBWA	Marble Bar	16.43	142	Pn	Pn	17 33 18.2	-2.0
MBWA				IAmb	IAmb	17 33 47.2	
	comp=Z,56nm,1.4s						
PSA00	Pilbara Seismi	16.82	143	Pn	Pn	17 33 23.8	-1.2
PSA00				IAmb	IAmb	17 33 50.6	
	comp=Z,26nm,1.2s						
SANI	Sanana	18.05	71	P	Pn	17 33 42.1	+2.0
	comp=Z,10nm,1.4s						
FITZ	Fitzroy Crossi	18.88	123	P	Pn	17 33 51.8	+1.8
	comp=Z,1.1nm,0.5s,baz=297,slow=7.0,SNR=6.4						
FITZ				S	S	17 37 08.5	-11
	comp=Z,2.3nm,0.9s,baz=50,slow=14,SNR=2.5						
FITZ	Fitzroy Crossi	18.88	123	P	P	17 33 46.7	-2.0
BSI	Banda Aceh	19.37	315	P	Pn	17 33 58.7	+2.8
	comp=Z,2µm,0.5s						
AAI	Ambon	19.66	78	P	Pn	17 33 59.8	+0.5
	comp=Z,42nm,0.7s						
LBMI	Labuha	19.98	68	P	Pn	17 34 03.7	+0.7
	comp=Z,25nm,0.8s						
TNTI	Ternate	20.44	65	P	P	17 34 04.5	-1.2
TNTI				IAmb	IAmb	17 34 11.4	
	comp=Z,21nm,0.8s						
TNTI	Ternate	20.44	65	P	Pn	17 34 10.4	+1.9
	comp=Z,421nmcomp=Z,34nm,0.8s						
KNRA	Kununurra	20.67	113	P	P	17 34 07.7	-0.5
KNRA				IAmb	IAmb	17 34 28.6	
	comp=Z,27nm,1.2s						
MTN	Manton Dam	22.23	104	P	P	17 34 26.6	+1.8
MTN				IAmb	IAmb	17 34 45.0	
	comp=Z,28nm,1.4s						
SIJI	Sorong	23.41	73	P	P	17 34 35.6	-1.3
	comp=Z,4.8nm,0.7s,baz=292,slow=5.9,SNR=7.0 comp=Z,4.8nm,0.7s						
WB0	Warramunga Arr	27.10	117	P	P	17 35 12.4	+2.2
WRA	Warramunga Arr	27.12	118	P	P	17 35 12.5	+2.2
	comp=Z,3.1nm,0.8s,baz=290,slow=12,SNR=35						
WRA				PcP	PcP	17 38 31.2	+1.6
	comp=Z,0.8nm,0.5s,baz=299,slow=2.1,SNR=10 comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	27.12	118	P	P	17 35 09.2	-1.2
WRAB	Tennant Creek	27.12	118	P	P	17 35 12.7	+2.3
WRAB				IAmb	IAmb	17 35 13.6	
	comp=Z,4.7nm,0.8s						
WB2	Warramunga Arr	27.13	118	P	P	17 35 12.5	+2.1
WB2				IAmb	IAmb	17 35 13.5	
	comp=Z,4.7nm,0.8s						
WR0	Warramunga Arr	27.30	118	P	P	17 35 14.0	+2.0
WR0				IAmb	IAmb	17 35 15.3	
	comp=Z,13nm,1.4s						
ASAR	Alice Springs	28.32	125	P	P	17 35 23.5	+2.4
	comp=Z,2.4nm,0.8s,baz=306,slow=9.4,SNR=30						
ASAR				PcP	PcP	17 38 34.2	+1.7
	comp=Z,1.0nm,0.4s,baz=306,slow=1.9,SNR=17						
ASAR				ScP	ScP	17 42 06.2	-0.8
	comp=Z,0.4nm,0.6s,baz=301,slow=3.1,SNR=5.2 comp=Z,2.4nm,0.8s						
ASAR	Alice Springs	28.32	125	P	P	17 35 23.1	+2.0
AS31	Alice Springs	28.32	125	P	P	17 35 21.3	+0.2
CMAR	Chiang Mai Arr	28.41	340	P	P	17 35 20.3	-1.5
	comp=Z,0.6nm,0.3s,baz=175,slow=8.9,SNR=7.1						
CMAR				PcP	PcP	17 38 33.5	+0.8
	comp=Z,0.4nm,0.5s,baz=196,slow=3.0,SNR=4.7						
CMAR				LR	LR	17 48 21.4	
	comp=Z,35nm,18.7s,baz=165,slow=40 comp=Z,0.6nm,0.3s						
PALK	Pallekele	32.17	298	P	P	17 35 55.5	+0.3
COEN	Coen	33.99	103	P	P	17 36 12.2	+1.3
H08S2	Diego Garcia H	36.13	268	T	T	18 14 29.3	
	baz=93,slow=76,SNR=72						
H08S3	Diego Garcia H	36.14	268	T	T	18 14 27.9	
	baz=93,slow=76,SNR=96						
H08S1	Diego Carcia H	36.15	268	T	T	18 14 28.0	
	baz=93,slow=76,SNR=47						
PMG	Port Moresby	37.73	95	P	P	17 36 43.0	0.0
CTA	Charters Tower	37.88	112	P	P	17 36 44.7	+0.5
	comp=Z,4.0nm,0.9s,baz=262,slow=8.9,SNR=5.1 comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	38.29	132	P	P	17 36 49.9	+2.4
	comp=Z,2.3nm,0.4s,baz=302,slow=8.7,SNR=8.6						
STKA				PcP	PcP	17 39 02.4	+2.1
	comp=Z,3.0nm,0.7s,baz=355,slow=2.4,SNR=4.9 comp=Z,2.3nm,0.4s						
STKA	Stephens Creek	38.29	132	P	P	17 36 49.6	+2.0
STKA				IAmb	IAmb	17 37 07.9	
	comp=Z,3.7nm,1.4s						
GOMU	GeErMu	46.26	344	P	P	17 38 00.6	+8.0
GOMU				pP	pP	17 38 04.3	-7.0
GOMU				sP	sP	17 38 08.4	-12
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,49nm,5.4s						

MJAR	**Matsushiro Arr**	**52.41**	**30**	P	**P**	**17 38 35.2**	**-3.8**
	comp=Z,2.1nm,0.7s,baz=177,slow=8.9,SNR=9.8						
MJAR				LR	LR	18 00 34.2	
	comp=Z,16nm,20.4s,baz=257,slow=36						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**55.98**	**358**	P	**P**	**17 39 02.3**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=174,slow=8.3,SNR=5.5						
SONM				PcP	**PcP**	**17 40 02.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=170,slow=4.5,SNR=5.0						
SONM				LR	LR	18 05 36.2	
	comp=Z,21nm,19.2s,baz=145,slow=39						
	comp=Z,0.6nm,0.6s						
BOOM	**Boomskoye usch**	**58.90**	**332**	P	**P**	**17 39 25.0**	**-0.6**
BOOM				IAmb	IAmb	17 39 26.8	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**59.82**	**339**	P	**P**	**17 39 30.3**	**-1.4**
	comp=Z,1.7nm,0.4s,baz=154,slow=7.5,SNR=30						
MKAR				PcP	**PcP**	**17 40 18.7**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=126,slow=6.2,SNR=4.1						
	comp=Z,1.7nm,0.4s						
MKAR	**Makanchi Array**	**59.82**	**339**	P	**P**	**17 39 29.9**	**-1.7**
ASAJ	**Asahikawa**	**60.42**	**27**	LR	LR	18 06 29.5	
	comp=Z,19nm,19.5s,baz=162,slow=37						
ZALV	**Zalesovo Beam**	**65.33**	**345**	P	**P**	**17 40 06.1**	**-2.1**
	comp=Z,1.3nm,0.4s,baz=151,slow=6.0,SNR=7.5						
	comp=Z,1.3nm,0.4s						
GEYT	**Alibeck**	**66.06**	**318**	P	**P**	**17 40 13.1**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=208,slow=23,SNR=4.9						
	comp=Z,2.7nm,0.5s						
ABKAR	**Akbulak array**	**71.57**	**329**	P	**P**	**17 40 46.4**	**-0.8**
KBZ	**Khabaz**	**78.95**	**318**	P	**P**	**17 41 30.1**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=163,slow=2.9,SNR=7.6						
	comp=Z,2.3nm,0.7s						
BOSA	**Boshof**	**80.57**	**242**	P	**P**	**17 41 42.5**	**+3.4**
	comp=Z,3.3nm,0.9s,baz=133,slow=4.3,SNR=6.2						
	comp=Z,3.3nm,0.9s						
TIXI	**Tiksi**	**80.91**	**6**	LR	LR	18 21 11.3	
	comp=Z,15nm,18.8s,baz=351,slow=38						
TIXI	**Tiksi**	**80.91**	**6**	P	**P**	**17 41 38.1**	**-1.6**
BR131	**Keskin Array S**	**84.18**	**311**	P	**P**	**17 41 57.5**	**-0.1**
BR131				IAmb	IAmb	17 41 59.8	
	comp=Z,5.4nm,0.8s						
BRTR	**Keskin Array B**	**84.18**	**311**	P	**P**	**17 41 58.4**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=140,slow=6.5,SNR=18						
	comp=Z,2.8nm,0.7s						
BRTR	**Keskin Array B**	**84.18**	**311**	P	**P**	**17 41 56.0**	**-1.6**
KLMR	**Klimovskoe**	**87.46**	**333**	*e*P	**P**	**17 42 12.7**	**-0.4**
KLMR				AMP		17 42 17.6	
	comp=Z,13nm,1.5s						
AKASG	**Malin Array Be**	**89.96**	**321**	P	**P**	**17 42 24.4**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=86,slow=4.8,SNR=4.6						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**93.88**	**331**	P	**P**	**17 42 42.5**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=97,slow=6.3,SNR=5.0						
	comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**93.88**	**331**	P	**P**	**17 42 42.2**	**-0.8**
YKA	**Yellowknife Ar**	**117.42**	**21**	PKP	**PKPdf**	**17 48 10.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=331,slow=1.9,SNR=5.3						
TXAR	**Lajitas Array**	**142.92**	**51**	PKhKP	PKPpre	17 48 55.3	
	comp=Z,0.6nm,0.5s,baz=318,slow=1.2,SNR=3.3						
BDFB	**Brasilia**	**147.03**	**224**	PKPbc	**PKPab**	**17 49 11.5**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=151,slow=6.3,SNR=4.6						

JMA 08 17:32:12.0±0.1**,24°.2N**±0°.3×**123°.8E**±0°.3**,h12**^{km}±1^{km}**,**
MV2.1/9**,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.11**	**342**	P	Pg	17 32 15.1	0.0
IRIF				S	Sg	17 32 17.4	+0.2
HATJ	**Hateruma jima**	**0.18**	**169**	P	Pg	17 32 15.9	-0.1
HATJ				*e*S	Sg	17 32 19.1	+0.3
JKRS	**Kuro-shima**	**0.22**	**88**	P	Pg	17 32 17.0	+0.2
JKRS				S	Sg	17 32 20.2	+0.2
JIJ	**Ishigaki jima**	**0.37**	**69**	P	Pg	17 32 19.2	-0.2
JIJ				S	Sg	17 32 24.8	+0.4
JISG	**Ishigakijimahi**	**0.61**	**54**	*e*P	Pg	17 32 23.9	0.0
YOJ	**Yonaguni jima**	**0.73**	**289**	P	Pg	17 32 26.1	0.0
YOJ				*e*S	Sb	17 32 36.5	0.0
JYNG	**Yonagunijimaku**	**0.78**	**287**	P	Pg	17 32 27.0	-0.1
JYNG				*e*S	Sb	17 32 38.0	0.0
JTJ	**Tarama**	**0.94**	**64**	P	Pg	17 32 30.1	-0.2
JTJ				S	Sb	17 32 43.4	+0.6

TAP 08 17:32:58.1,24°.21N×121°.80E,h9^{km}±1^{km}**,ML1.5,C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.17**	**251**	P	Pg	17 33 01.5	-0.3
	baz=252						
ETL				*e*S	Sg	17 33 04.8	+0.6
	baz=252						
NACB	**Ninganchiao**	**0.19**	**258**	*i* P	Pg	17 33 02.0	0.0
	baz=259						
NACB				S	Sg	17 33 04.8	+0.1
	baz=259						
ENA	**Nanau**	**0.22**	**347**	P	Pg	17 33 02.8	+0.1
	baz=348						
ENA				*e*S	Sg	17 33 06.3	+0.6
	baz=348						
TWD	**Chiawan**	**0.23**	**234**	*e*P	Pg	17 33 02.4	-0.3
	baz=240						
EWUT	**Wuta**	**0.23**	**356**	P	Pg	17 33 03.0	+0.1
	baz=356						
EWUT				*e*S	Sg	17 33 06.7	+0.7
	baz=356						
ETLH	**Xiulin Townshi**	**0.29**	**269**	*e*P	Pb	17 33 04.7	-0.8
	baz=270						
ETLH				*e*S	Sg	17 33 07.8	0.0
	baz=270						
LATG	**Datong**	**0.41**	**322**	*e*P	Pg	17 33 06.3	+0.2
	baz=329						
NDS	**Dongshan**	**0.42**	**350**	*e*P	Pg	17 33 06.7	+0.3
	baz=350						
NDS				*e*S	Sg	17 33 12.8	+0.7
	baz=350						
NNSB	**Datong**	**0.43**	**300**	*e*P	Pg	17 33 06.7	+0.1
	baz=299						
NNSB				*e*S	Sg	17 33 12.5	+0.1
	baz=299						
ENTT	**Nioudou**	**0.47**	**334**	P	Pg	17 33 07.9	+0.6
	baz=334						
ENTT				*e*S	Sb	17 33 14.8	-1.0
	baz=334						
WHF	**Hehuan Shan**	**0.49**	**262**	*e*P	Pg	17 33 07.7	0.0
	baz=263						
WHF				*e*S	Sg	17 33 14.2	-0.1
	baz=263						
FUSS	**Fushou**	**0.51**	**274**	*e*S	Sg	17 33 14.4	-0.3
	baz=276						
FUSB	**Fushanzhiwuyua**	**0.58**	**341**	*e*P	Pg	17 33 09.8	+0.5
	baz=340						
CHGB	**Renai**	**0.59**	**255**	*e*P	Pg	17 33 09.9	+0.3
	baz=248						
CHGB				*e*S	Sg	17 33 18.1	+0.7
	baz=248						
NSK	**Sanguang**	**0.61**	**319**	*e*P	Pg	17 33 10.2	+0.2
	baz=319						
HGSD	**Ruisui**	**0.80**	**206**	*e*P	Pn	17 33 15.0	-0.4
	baz=198						

MAN ***08*** *17:44:43.4,11°.83N×124°.35E,h24*^{km}*,mb4.3,ML3.1, MS2.8,Hypocentre not reviewed by the ISC*

ISC 08 17:44:49.8±1.6**,11°.54N**±0°.09×**124°.19E**±0°.08**,h35**^{km}**,n6,** σ**2**^{s}**.81**/10**,4D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.64**	**139**	⇓*e*P	**Pn**	**17 44 58.8**	**-3.5**
OCLP				*e*S	**Sn**	**17 45 11.5**	**+0.2**
LLP	**Lapu-Lapu**	**1.23**	**190**	⇓*i*P	**Pn**	**17 45 09.1**	**-1.5**
LLP				*i* S	**Sn**	**17 45 29.4**	**+3.5**
RCP	**Roxas**	**1.41**	**271**	⇓*e*P	**Pn**	**17 45 09.8**	**-3.2**
RCP				*e*S	**Sn**	**17 45 30.1**	**-0.3**
MSLP	**Maasin**	**1.54**	**155**	⇓*e*P	**Pn**	**17 45 14.1**	**-0.7**
MSLP				*e*S	**Sn**	**17 45 37.4**	**+3.8**
TBP	**Tagbilaran**	**1.86**	**190**	*e*P	**Pn**	**17 45 18.2**	**-1.0**
LQP	**Lukban**	**3.64**	**315**	*e*P	**Pn**	**17 45 45.3**	**+1.5**

NOU 08 17:47:53.5,14°.76S×167°.50E,h117^{km}**,MLv4.3**/12**, Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.74**	**203**	P	Pn	17 48 13.2	+0.3
DVP	**Devils Point**	**3.02**	**167**	P	Pn	17 48 39.8	-0.2
YATNC	**Mamie plateau,**	**7.28**	**184**	P	Pn	17 49 36.9	-0.4
DZM	**Mont Dzumac**	**7.34**	**188**	P	Pn	17 49 37.4	-0.7
NOUC	**Port Laguerre**	**7.39**	**189**	P	Pn	17 49 39.4	+0.7
ONTNC	**Ouen Toro**	**7.57**	**187**	P	Pn	17 49 41.1	-0.1
OUENC	**Ouen Island, N**	**7.64**	**185**	P	Pn	17 49 42.3	+0.2
PINNC	**Pines Island,**	**7.81**	**180**	P	Pn	17 49 44.6	+0.2

SCB ***08*** *17:51:16.6±1.2,22°.11S×67°.49W,h182*^{km}*±23*^{km}*,ML3.3/12, MW3.4,Error ellipse: s-maj=7.8km s-min=6.0km az=0.0*

IDC ***08*** *17:51:17.1±1.0,22°.04S×68°.01W,h215*^{km}*±18*^{km}*,mb3.1/2, mbtmp3.6/3,Error ellipse: s-maj=58.5km s-min=32.1km az=91.0*

GUC ***08*** *17:51:17.8±0.6,22°.08S×67°.56W,h188*^{km}*±6*^{km}*,ML3.7*

ISC 08 17:51:15.7±1.0**,22°.04S**±0°.05×**67°.55W**±0°.06**,h196**^{km}±8^{km}**, n37,**σ**1**^{s}**.26**/52**,7C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.38**	**246**	P	**Pn**	**17 51 49.3**	**+0.8**
	88nm,0.3s,baz=57,slow=8.2,SNR=406						
LVC				S	**Sn**	**17 52 13.8**	**0.0**
	35nm,0.4s,baz=251,slow=22,SNR=37						
LVC	**Limon Verde**	**1.38**	**246**	*e*P	**Pn**	**17 51 48.7**	**+0.2**
LVC				*e*S	**Sn**	**17 52 13.3**	**-0.6**
LVC	**Limon Verde**	**1.38**	**246**	P	**Pn**	**17 51 49.3**	**+0.8**
PB09	**IPOC Station P**	**1.59**	**279**	⇑*i*P	**Pn**	**17 51 51.3**	**+1.2**
PB09				*e*S	**Sn**	**17 52 17.1**	**+0.3**
PB09				IAML		17 52 19.9	
	comp=N,122nm,0.0s						
PB09	**IPOC Station P**	**1.59**	**279**	P	**Pn**	**17 51 51.5**	**+1.4**
PB09				IAML		17 52 18.7	
	comp=N,86nm,0.3s						
YJA	**Yavi**	**1.89**	**94**	P	**Pn**	**17 51 53.1**	**-0.2**
YJA				IAML		17 52 23.5	
	comp=N,49nm,0.4s						
MOCB	**Mochara**	**1.95**	**66**	P	**Pn**	**17 51 53.7**	**-0.2**
MOCB				IAML		17 52 20.7	
	comp=N,313nm,0.4s						
PB06	**IPOC Station P**	**1.98**	**250**	⇑*i*P	**Pn**	**17 51 54.7**	**+0.7**
PB06				*e*S	**Sn**	**17 52 23.2**	**-0.5**
PB06				IAML		17 52 26.1	
	comp=E,196nm,0.2s						
PB06	**IPOC Station P**	**1.98**	**250**	P	**Pn**	**17 51 55.0**	**+1.0**
PB06				IAML		17 52 27.2	
	comp=E,84nm,0.4s						
PB01	**IPOC Station P**	**2.06**	**299**	⇑*i*P	**Pn**	**17 51 55.5**	**+0.8**
PB01				*e*S	**Sn**	**17 52 24.5**	**-0.5**
PB01				IAML		17 52 25.5	
	comp=N,402nm,0.2s						
PB01	**IPOC Station P**	**2.06**	**299**	P	**Pn**	**17 51 55.9**	**+1.2**
PB01				IAML		17 52 26.1	
	comp=N,222nm,0.2s						
PB15	**IPOC Station P**	**2.12**	**236**	*i* P	**Pn**	**17 51 56.4**	**+1.0**
PB15				*e*S	**Sn**	**17 52 26.7**	**+0.3**
PB15	**IPOC Station P**	**2.12**	**236**	P	**Pn**	**17 51 56.6**	**+1.2**
PB07	**IPOC Station P**	**2.19**	**278**	*e*P	**Pn**	**17 51 57.0**	**+0.8**
PB07				*e*S	**Sn**	**17 52 26.8**	**-0.8**
PB07				IAML		17 52 29.5	
	comp=E,303nm,0.1s						
PB07	**IPOC Station P**	**2.19**	**278**	P	**Pn**	**17 51 57.4**	**+1.2**
PB07				IAML		17 52 28.2	
	comp=E,99nm,0.2s						
PB02	**IPOC Station P**	**2.30**	**288**	⇑*i*P	**Pn**	**17 51 57.9**	**+0.6**
PB02				*i* S	**Sn**	**17 52 28.6**	**-1.0**
PB02				IAML		17 52 30.0	
	comp=N,451nm,0.2s						
PB02	**IPOC Station P**	**2.30**	**288**	P	**Pn**	**17 51 58.2**	**+0.9**
PB02				IAML		17 52 30.2	
	comp=N,275nm,0.1s						
PB08	**IPOC Station P**	**2.41**	**321**	⇑*i*P	**Pn**	**17 52 00.6**	**+1.7**
PB08				*e*S	**Sn**	**17 52 32.8**	**+0.4**
PB08				IAML		17 52 34.8	
	comp=N,309nm,0.4s						
PB08	**IPOC Station P**	**2.41**	**321**	P	**Pn**	**17 52 00.8**	**+1.9**
PB08				IAML		17 52 34.1	
	comp=N,126nm,0.7s						
PB04	**IPOC Station P**	**2.43**	**263**	⇑*i*P	**Pn**	**17 51 59.6**	**+0.8**
PB04				*e*S	**Sn**	**17 52 30.6**	**-1.6**
PB04				IAML		17 52 34.4	
	comp=E,199nm,0.2s						
PB04	**IPOC Station P**	**2.43**	**263**	P	**Pn**	**17 51 59.7**	**+1.0**
PB04				IAML		17 52 37.7	
	comp=E,132nm,0.2s						
PATCX	**Punta Patache**	**2.71**	**296**	*e*P	**Pn**	**17 52 02.3**	**+0.4**
PATCX				*i* S	**Sn**	**17 52 37.0**	**-0.9**
PATCX				IAML		17 52 39.2	
	comp=N,357nm,0.4s						
HMBC	**Humberstone**	**2.80**	**308**	⇑*i*P	**Pn**	**17 52 03.1**	**+0.1**
HMBC				*e*S	**Sn**	**17 52 38.3**	**-1.6**
HMBC				IAML		17 52 41.9	
	comp=N,343nm,0.6s						
TA01	**Diego Aracena**	**2.86**	**300**	*i* P	**Pn**	**17 52 03.7**	**+0.2**
TA01				*i* S	**Sn**	**17 52 39.5**	**-1.3**
PB11	**IPOC Station P**	**3.00**	**319**	*i* P	**Pn**	**17 52 05.6**	**+0.2**
PB11				*e*S	**Sn**	**17 52 43.0**	**-1.2**
PB11	**IPOC Station P**	**3.00**	**319**	P	**Pn**	**17 52 06.1**	**+0.7**
PB11				IAML		17 52 45.5	
	comp=N,134nm,0.2s						
PB10	**IPOC Station P**	**3.13**	**242**	*i* P	**Pn**	**17 52 07.2**	**+0.5**
PB10				IAML		17 52 51.2	
	comp=E,66nm,0.3s						
PB10	**IPOC Station P**	**3.13**	**242**	P	**Pn**	**17 52 07.6**	**+0.8**
PB10				IAML		17 52 51.4	
	comp=E,28nm,0.2s						
PB16	**IPOC Station P**	**4.12**	**333**	*e*P	**Pn**	**17 52 20.7**	**+1.2**
PB16				*e*S	**Sn**	**17 53 06.2**	**-3.3**
PB16	**IPOC Station P**	**4.12**	**333**	P	**Pn**	**17 52 21.3**	**+1.8**
PB16				IAML		17 53 12.0	
	comp=E,25nm,0.5s						
PB12	**IPOC Station P**	**4.29**	**322**	*e*P	**Pn**	**17 52 20.1**	**-1.1**
BBOE	**La Paz, Chanca**	**5.22**	**355**	P	**Pn**	**17 52 35.6**	**+2.2**
BBOD	**La Paz, Gloria**	**5.47**	**349**	P	**Pn**	**17 52 39.0**	**+2.4**
LPAZ	**La Paz**	**5.75**	**354**	P	**Pn**	**17 52 42.0**	**+1.6**
	comp=E,3.3nm,0.4s,baz=176,slow=7.1,SNR=22						
LPAZ	**La Paz**	**5.75**	**354**	P	**Pn**	**17 52 42.4**	**+2.0**
TORD	**Torodi Ar. Bea**	**76.35**	**70**	P	**P**	**18 02 45.3**	**+1.6**
	comp=E,0.5nm,0.4s,baz=258,slow=6.2,SNR=6.1						
	comp=E,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**92.12**	**340**	P	**P**	**18 04 00.2**	**-2.0**
	comp=E,0.1nm,0.4s,baz=133,slow=5.1,SNR=1.6						
	comp=E,0.1nm,0.4s						

IDC 08 18:08:51.2±2.9**,31°.32N×140°.71E,h0**^{km}**,mb3.4**/4**, mbtmp3.4**/6**,ML2.4**/1**,Error ellipse: s-maj=119.9km s-min=20.1km az=70.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.40**	**163**	Pn	Pn	18 09 59.6	+0.2
	26nm,0.8s,baz=16,slow=20						
JCJ				Sn	Sn	18 10 47.0	-4.3
	1.3nm,0.3s,baz=291,slow=21,SNR=1.3						
MJAR	**Matsushiro Arr**	**5.61**	**339**	Pn	Pn	18 10 15.5	-0.4
	0.1nm,0.3s,baz=159,slow=13,SNR=7.4						
MJAR				Sn	Sn	18 11 19.3	-1.7
	baz=272,slow=11						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**46.86**	**307**	P	P	18 17 23.7	+0.6
	0.2nm,0.5s,baz=80,slow=9.5,SNR=2.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**49.22**	**312**	P	P	18 17 41.1	-0.1
	0.2nm,0.4s,baz=88,slow=6.6,SNR=6.3						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**51.34**	**188**	P	P	18 17 57.6	+0.1
	0.2nm,0.5s,baz=4.0,slow=7.5,SNR=1.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**55.06**	**188**	P	P	18 18 24.2	-0.8
	0.4nm,1.0s,baz=7.8,slow=7.5,SNR=1.9						
	0.4nm,1.0s						

JMA 08 18:28:56.8±0.1**,24°.3N**±0°.3×**123°.8E**±0°.3**,h16**^{km}±1^{km}**, MV1.9**/8**,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.12**	**316**	P	Pg	18 29 00.3	-0.1
IRIF				S	Sb	18 29 03.2	0.0
JKRS	**Kuro-shima**	**0.17**	**94**	P	Pg	18 29 01.3	+0.1
JKRS				S	Sb	18 29 04.7	-0.1
HATJ	**Hateruma jima**	**0.19**	**184**	P	Pg	18 29 01.2	-0.2
HATJ				S	Sg	18 29 04.6	0.0
JIJ	**Ishigaki jima**	**0.32**	**69**	P	Pg	18 29 03.4	-0.1
JIJ				S	Sg	18 29 07.9	-0.1
YOJ	**Yonaguni jima**	**0.77**	**286**	P	Pg	18 29 11.9	+0.1
YOJ				S	Sb	18 29 21.9	0.0
JYNG	**Yonagunijimaku**	**0.82**	**284**	P	Pb	18 29 12.7	0.0
JYNG				*e*S	Sb	18 29 23.6	+0.1
JTJ	**Tarama**	**0.89**	**64**	P	Pb	18 29 13.9	0.0
JTJ				*e*S	Sg	18 29 26.0	+0.1

TAP 08 18:29:35.4,24°.19N×121°.75E,h12^{km}**,ML2.0,7D,C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.12**	**257**	*i* P	Pg	18 29 38.6	+0.1
	baz=257						
ETL				*i* S	Sg	18 29 41.0	+0.2
	baz=257						
EHP	**Heping Village**	**0.12**	**356**	*e*P	Pg	18 29 38.7	+0.2
	baz=358						
NACB	**Ninganchiao**	**0.14**	**265**	⇓*i*P	Pg	18 29 38.9	+0.1
	baz=258						
NACB				*i* S	Sg	18 29 41.5	+0.2
	baz=258						
TWD	**Chiawan**	**0.18**	**233**	P	Pg	18 29 39.5	+0.1
	baz=240						
TWD				*i* S	Sg	18 29 42.6	+0.5
	baz=240						
ENA	**Nanau**	**0.24**	**358**	⇓*i*P	Pg	18 29 40.6	+0.1
	baz=359						
ENA				*i* S	Sg	18 29 44.4	+0.5
	baz=359						
ETLH	**Xiulin Townshi**	**0.25**	**275**	P	Pg	18 29 40.9	+0.3
	baz=276						
ETLH				*e*S	Sg	18 29 44.8	+0.6
	baz=276						
HWA	**Hwalien**	**0.25**	**213**	*e*P	Pb	18 29 41.9	0.0
	baz=223						
EWUT	**Wuta**	**0.26**	**6**	*i* P	Pg	18 29 41.0	+0.2
	baz=5.0						
EWUT				S	Sg	18 29 45.1	+0.7
	baz=5.0						
LATG	**Datong**	**0.40**	**330**	⇓*i*P	Pg	18 29 43.9	+0.4
	baz=329						
LATG				S	Sg	18 29 49.8	+0.9
	baz=329						
NNSB	**Datong**	**0.41**	**306**	P	Pg	18 29 44.0	+0.4
	baz=306						
NNSB				S	Sg	18 29 49.8	+0.6
	baz=306						
NNS	**Nan Shan**	**0.43**	**306**	P	Pg	18 29 44.0	+0.1
	baz=307						
NNS				S	Sg	18 29 50.4	+0.7
	baz=307						
TWC	**Suao**	**0.43**	**12**	P	Pg	18 29 44.1	+0.1
	baz=9.0						
WHF	**Hehuan Shan**	**0.45**	**265**	P	Pg	18 29 44.6	+0.3
	baz=266						
WHF				*i* S	Sg	18 29 50.8	+0.4
	baz=266						
NDS	**Dongshan**	**0.45**	**356**	P	Pg	18 29 44.6	+0.4
	baz=355						
NDS				S	Sb	18 29 51.4	-0.6
	baz=355						
FUSS	**Fushou**	**0.47**	**278**	P	Pb	18 29 45.4	-0.4
	baz=278						
FUSS				S	Sb	18 29 51.9	-0.8
	baz=278						
ESL	**Shilin**	**0.47**	**218**	*e*P	Pg	18 29 45.1	+0.4
	baz=229						
ENTT	**Nioudou**	**0.48**	**340**	⇓*i*P	Pg	18 29 45.4	+0.5
	baz=340						
ENTT				S	Sb	18 29 52.6	-0.4
	baz=340						
TWE	**Neicheng**	**0.54**	**352**	P	Pg	18 29 46.4	+0.4
	baz=353						
TWE				S	Sb	18 29 54.0	-0.6
	baz=353						
CHGB	**Renai**	**0.54**	**257**	⇓P	Pb	18 29 46.6	-0.4
	baz=251						
CHGB				S	Sg	18 29 54.1	+0.8
	baz=251						
OWD	**Renai**	**0.57**	**246**	*e*P	Pb	18 29 47.3	-0.2
	baz=248						
FUSB	**Fushanzhiwuyua**	**0.59**	**345**	⇓*i*P	Pb	18 29 47.5	-0.3
	baz=345						
FUSB				S	Sb	18 29 55.5	-0.7
	baz=345						
EGFH	**Guangfu**	**0.59**	**210**	*e*P	Pb	18 29 47.5	-0.3
	baz=219						
NSK	**Sanguang**	**0.60**	**324**	⇓*i*P	Pb	18 29 47.7	-0.4
	baz=324						
NSK				S	Sb	18 29 56.1	-0.5
	baz=324						
NWLT	**Wulai**	**0.63**	**339**	*e*P	Pb	18 29 48.1	-0.4
	baz=339						
NWLT				*e*S	Sb	18 29 56.9	-0.4
	baz=339						
EGS		**0.68**	**14**	*e*P	Pn	18 29 50.8	-0.1
	baz=21						
VWDT	**VWDT**	**0.70**	**232**	*e*P	Pb	18 29 50.0	+0.4
	baz=241						
NFF	**Wufeng Townshi**	**0.73**	**308**	*e*P	Pb	18 29 50.0	-0.1
	baz=308						
EHY	**Hungye**	**0.78**	**210**	*e*P	Pg	18 29 50.7	+0.1
	baz=223						
TIPB	**Shuangxi**	**0.79**	**5**	*e*P	Pb	18 29 51.2	+0.1
	baz=4.0						
NHDH	**Xindian Distri**	**0.80**	**345**	*e*P	Pn	18 29 52.5	-0.1
	baz=345						
LIOB	**Emei**	**0.81**	**304**	*e*P	Pn	18 29 53.7	+0.9
	baz=305						
NSTT	**Nanjuang**	**0.81**	**303**	*e*P	Pn	18 29 52.5	-0.3
	baz=304						
NWF	**Wu-fen Shan**	**0.88**	**2**	*e*P	Pn	18 29 53.8	0.0
	baz=1.0						
SXI1	**Grass Mountain**	**0.91**	**7**	*e*P	Pb	18 29 53.4	+0.1
	baz=13						
ELDTW	**Lidau**	**1.20**	**214**	*e*P	Pn	18 29 57.7	-0.5
	baz=217						

IDC ***08*** *18:49:59.6±0.9,24°.02N×121°.92E,h0*^{km}*,mb3.6/8, mbtmp3.6/10,ML3.3/2,MS3.2/9,Error ellipse: s-maj=26.4km s-min=19.8km az=81.0*

NIED ***08*** *18:50:01.6,24°.12N×121°.72E,h17*^{km}*,MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*-0.13;* $M_{\theta\theta}$*-0.85;* $M_{\phi\phi}$*0.98;* $M_{r\theta}$*1.35;* $M_{\theta\phi}$*-0.58;* $M_{\phi r}$*0.49; Fault plane solution:* $M_0 1.62000\times10^{15}$ *NP1:* ϕ_s*309.00000°,δ54.00000°,λ-162.00000°. NP2:* ϕ_s*209.00000°,δ76.00000°,λ-38.00000°.*

BJI ***08*** *18:50:01.4±0.0,24°.18N×121°.82E,h5*^{km}*,mb4.0/10, mB4.1/8,ML3.8/4,Ms3.9/15,Ms7 3.7/14*

TAP ***08*** *18:50:01.5,24°.17N×121°.78E,h11*^{km}*,ML4.3,C*

JMA ***08*** *18:50:01.6±0.1,24°.1N±0°.7×121°.7E±0°.8,h17*^{km}*±1*^{km}*, MV3.8/10,TAIWAN REGION*

ASIES ***08*** *18:50:01.3,24°.19N×121°.75E,h19*^{km}*,MW3.9*

ISC 08 18:50:01.6±0.9**,24°.17N**±0°.01×**121°.81E**±0°.02**,h7**^{km}±6^{km}**, n176,**σ**1**^{s}**.25**/288**,mb3.6**/10**,MS3.3**/7**,21C-26D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.16**	**338**	⇓*i*P	**Pg**	**18 50 05.0**	**+0.2**
	baz=347						
EHP				S	**Sg**	**18 50 07.5**	**+0.5**
	baz=347						
ETL	**Fush Village**	**0.17**	**268**	⇓*i*P	**Pg**	**18 50 05.2**	**+0.1**
	baz=265						
ETL				*i* S	**Sg**	**18 50 08.0**	**+0.7**
	baz=265						
NACB	**Ninganchiao**	**0.19**	**273**	⇓*i*P	**Pg**	**18 50 05.5**	**0.0**
	baz=271						
NACB				*i* S	**Sg**	**18 50 08.1**	**0.0**
	baz=271						
TWD	**Chiawan**	**0.21**	**246**	⇓*i*P	**Pg**	**18 50 05.9**	**+0.2**
	baz=249						
TWD				*i* S	**Sg**	**18 50 09.3**	**+0.7**
	baz=249						

HWA	**Hwalien** baz=230	0.26	225	⇑*i*P	Pb	18 50 07.8	-0.8
HWA	baz=230			*e*S	Sb	18 50 13.4	0.0
ENA	**Nanau** baz=353	0.27	347	⇓*i*P	Pg	18 50 07.0	+0.1
ENA	baz=353			*i* S	Sg	18 50 10.9	+0.4
EWUT	**Wuta** baz=359	0.28	355	⇓*i*P	Pg	18 50 07.3	+0.2
EWUT	baz=359			*i* S	Sg	18 50 11.3	+0.4
ETLH	**Xiulin Townshi** baz=278	0.30	278	⇓*i*P	Pg	18 50 07.3	-0.2
ETLH	baz=278			*i* S	Sg	18 50 11.7	+0.3
ETM	**Tongmen** baz=234	0.35	235	⇑*i*P	Pg	18 50 08.6	+0.2
ETM	baz=234			S	Sg	18 50 13.7	+0.7
TEYL	**Yanliau Villag** baz=226	0.35	213	*e*P	Pb	18 50 09.3	-0.9
TWC	**Suao** baz=8.0	0.44	5	⇓*i*P	Pg	18 50 10.4	+0.2
TWC	baz=8.0			*i* S	Sb	18 50 17.1	-1.6
LATG	**Datong** baz=327	0.45	325	⇓*i*P	Pg	18 50 10.3	-0.1
LATG	baz=327			*i* S	Sg	18 50 16.1	-0.1
NNSB	**Datong** baz=306	0.47	304	⇓*i*P	Pg	18 50 10.7	0.0
NNSB	baz=306			*i* S	Sg	18 50 16.7	-0.1
NDS	**Dongshan** baz=352	0.47	350	⇓*i*P	Pg	18 50 10.9	+0.2
NDS	baz=352			*i* S	Sb	18 50 17.8	-1.7
NNS	**Nan Shan** baz=307	0.48	305	⇓*i*P	Pg	18 50 10.9	-0.1
NNS	baz=307			*i* S	Sg	18 50 17.4	+0.1
ESL	**Shilin** baz=232	0.49	224	⇑*i*P	Pg	18 50 11.2	+0.2
ESL	baz=232			*i* S	Sb	18 50 19.6	-0.3
WHF	**Hehuan Shan** baz=268	0.49	268	⇓*i*P	Pg	18 50 11.1	-0.1
WHF	baz=268			*i* S	Sb	18 50 18.5	-2.0
TEGC	**Jichi Village** baz=209	0.52	208	*e*P	Pb	18 50 12.9	-0.1
TEGC	baz=209			*e*S	Sn	18 50 22.8	-1.7
FUSS	**Fushou** baz=280	0.52	279	P	Pg	18 50 11.7	0.0
FUSS	baz=280			S	Sg	18 50 18.3	-0.2
ENTT	**Nioudou** baz=338	0.52	335	⇓*i*P	Pg	18 50 11.8	+0.1
ENTT	baz=338			*i* S	Sb	18 50 19.5	-1.4
TWE	**Neicheng** baz=350	0.57	347	⇓*i*P	Pg	18 50 12.8	+0.2
TWE	baz=350			*i* S	Sg	18 50 20.3	+0.3
TWT	**Tachien** baz=279	0.58	279	⇑*i*P	Pb	18 50 13.4	-0.9
TWT	baz=279			*i* S	Sb	18 50 21.3	-1.5
CHGB	**Renai** baz=252	0.59	260	⇑*i*P	Pg	18 50 13.1	+0.2
CHGB	baz=252			S	Sb	18 50 21.2	-1.8
TDCB	**Techi** baz=279	0.60	279	⇓P	Pb	18 50 13.3	-1.2
TDCB	baz=279			S	Sg	18 50 20.6	-0.4
ILA	**Ilan** baz=352	0.60	355	⇓*i*P	Pb	18 50 13.5	-0.9
ILA	baz=352			S	Sb	18 50 22.2	-0.9
EGFH	**Guangfu** baz=231	0.60	215	⇑*i*P	Pb	18 50 13.9	-0.6
EGFH	baz=231			S	Sb	18 50 22.6	-0.7
OWD	**Renai** baz=250	0.61	250	⇑P	Pg	18 50 13.4	0.0
OWD	baz=250			S	Sg	18 50 21.6	+0.2
FUSB	**Fushanzhiwuyua** baz=343	0.62	341	⇓*i*P	Pb	18 50 13.9	-1.0
FUSB	baz=343			*i* S	Sg	18 50 21.9	+0.1
NSK	**Sanguang** baz=323	0.65	321	⇓*i*P	Pb	18 50 14.3	-1.1
NSK	baz=323			*i* S	Sb	18 50 23.0	-1.8
NWLT	**Wulai** baz=337	0.67	336	P	Pb	18 50 14.6	-1.1
NWLT	baz=337			S	Sb	18 50 23.7	-1.5
EGS	baz=11	0.69	10	*e*P	Pb	18 50 15.2	-0.7
NTC	**Toucheng** baz=2.0	0.69	2	*e*P	Pg	18 50 14.8	0.0
NTC	baz=2.0			*e*S	Sb	18 50 24.7	-1.0
VWDT	**VWDT** baz=237	0.73	236	⇑*i*P	Pb	18 50 15.8	-0.9
VWDT	baz=237			S	Sb	18 50 26.9	-0.1
HGSD	**Ruisui** baz=199	0.76	208	⇓*i*P	Pb	18 50 16.7	-0.4
HGSD	baz=199			S	Sn	18 50 29.9	-0.5
NFF	**Wufeng Townshi** baz=308	0.78	307	P	Pb	18 50 16.8	-0.8
NFF	baz=308			*e*S	Sb	18 50 26.7	-1.7
WPL	**Puli Township** baz=260	0.79	259	P	Pb	18 50 17.2	-0.5
WPL	baz=260			S	Sn	18 50 29.1	-2.2
EHY	**Hungye** baz=226	0.79	214	⇓*i*P	Pg	18 50 16.2	-0.6
EHY	baz=226			*e*S	Sb	18 50 27.6	-1.1
WHP	**Taichung City** baz=279	0.79	278	⇑P	Pb	18 50 17.2	-0.6
WHP	baz=279			S	Sb	18 50 27.1	-1.7
TIPB	**Shuangxi** baz=2.0	0.80	1	P	Pb	18 50 17.2	-0.8
TIPB	baz=2.0			S	Sg	18 50 26.9	-0.6
WCS	**Beigang Elemen** baz=256	0.82	263	⇑P	Pb	18 50 17.6	-0.7
WCS	baz=256			S	Sb	18 50 28.2	-1.4
NHDH	**Xindian Distri** baz=343	0.83	342	⇑*i*P	Pb	18 50 17.9	-0.5
NHDH	baz=343			*e*S	Sb	18 50 29.4	-0.6
TWA	**Mucha** baz=348	0.84	346	⇓*i*P	Pb	18 50 17.8	-0.7
TWA	baz=348			S	Sb	18 50 28.9	-1.1
TWB1	**Santiao Chiao** baz=11	0.86	11	⇓*i*P	Pb	18 50 18.2	-0.6
TWB1	baz=11			S	Sb	18 50 29.7	-0.8
LIOB	**Emei** baz=305	0.86	304	P	Pb	18 50 18.8	-0.2
LIOB	baz=305			S	Sb	18 50 29.7	-1.1
SSLB	**Suanglung** baz=254	0.86	244	⇑*i*P	Pg	18 50 18.1	-0.1
SSLB	baz=254			*i* S	Sg	18 50 29.2	-0.2
NSTT	**Nanjuang** baz=304	0.87	302	⇑*i*P	Pb	18 50 18.5	-0.6
NSTT	baz=304			S	Sb	18 50 29.8	-1.1
SMLT	**Sun Moon Lake** baz=252	0.88	251	⇑*i*P	Pb	18 50 18.4	-0.8
SMLT	baz=252			*i* S	Sb	18 50 30.6	-0.5
BACT	**New Taipei Cit** baz=339	0.89	338	P	Pn	18 50 19.3	-1.3
BACT	baz=339			*e*S	Sn	18 50 32.5	-1.3
NWF	**Wu-fen Shan** baz=353	0.90	359	⇓*i*P	Pb	18 50 19.3	-0.4
NWF	baz=353			*i* S	Sb	18 50 31.0	-0.9
TYC	**Yuchr** baz=255	0.91	254	*e*P	Pb	18 50 18.9	-0.8
TYC	baz=255			*e*S	Sg	18 50 30.5	-0.3
TAP	**Taipei** baz=344	0.91	343	P	Pn	18 50 19.8	-1.1
TAP	baz=344			S	Sb	18 50 31.1	-1.0
EYUL	**Yuli** baz=227	0.93	209	*e*P	Pb	18 50 19.7	-0.4
EYUL	baz=227			*e*S	Sn	18 50 33.1	-1.5
SXI1	**Grass Mountain** baz=10.0	0.93	4	⇓P	Pb	18 50 19.6	-0.5
SXI1	baz=10.0			S	Sb	18 50 31.6	-1.1
TWF1	**Yuli** baz=224	0.93	210	P	Pb	18 50 19.6	-0.5
TWF1	baz=224			*e*S	Sn	18 50 34.2	-0.6
HSN1	**Hsinchu** baz=312	0.94	311	*e*P	Pb	18 50 19.6	-0.7
HSN1	baz=312			S	Sn	18 50 35.0	-0.1
NTY	**Taoyuan** baz=332	0.95	331	P	Pn	18 50 20.7	-0.7
NTY	baz=332			*e*S	Sn	18 50 34.3	-0.9
TWQ1	**Liyutan** baz=282	0.96	281	⇑*i*P	Pn	18 50 20.7	-0.8
TWQ1	baz=282			*e*S	Sn	18 50 33.5	-2.0
SBCB	**Hsinchu** baz=311	0.97	310	P	Pn	18 50 21.7	0.0
SBCB	baz=311			S	Sn	18 50 34.2	-1.6
NCU	**National Centr** baz=326	0.98	325	⇑P	Pn	18 50 21.4	-0.4
NCU	baz=326			S	Sn	18 50 36.0	+0.1
NCUH	**Zhongli** baz=326	0.98	325	*e*P	Pn	18 50 21.1	-0.7
NCUH	baz=326			*e*S	Sn	18 50 34.6	-1.4
TNOU	**National Taiwa** baz=353	0.98	358	P	Pb	18 50 20.4	-0.5
TNOU	baz=353			*e*S	Sn	18 50 35.3	-0.7
NSY	**Sanyi** baz=286	0.99	285	⇑*i*P	Pn	18 50 21.6	-0.3
NSY	baz=286			S	Sn	18 50 34.9	-1.2
HSN	**Hsinchu** baz=304	0.99	310	*e*P	Pn	18 50 21.2	-0.8
HSN	baz=304			*e*S	Sn	18 50 34.7	-1.5
TWS1	**Kuangyinshan** baz=341	1.00	339	⇑P	Pn	18 50 21.4	-0.6
TWS1	baz=341			*e*S	Sn	18 50 34.9	-1.5
NJN	**Zhunan** baz=303	1.00	301	*e*P	Pb	18 50 20.6	-0.6
NJN	baz=303			*e*S	Sn	18 50 35.7	-0.6
NMLH	**Miaoli** baz=293	1.00	292	⇑P	Pn	18 50 21.8	-0.3
NMLH	baz=293			S	Sb	18 50 34.1	-0.5
WWF	**Wufeng** baz=260	1.02	263	*e*P	Pb	18 50 21.1	-0.5
WWF	baz=260			*e*S	Sn	18 50 36.6	-0.4
YUS	**Yu-Shan** baz=231	1.03	230	P	Pg	18 50 21.4	-0.1
YUS	baz=231			*e*S	Sb	18 50 35.3	-0.8
TCU	**Taichung** baz=271	1.03	269	P	Pn	18 50 22.9	+0.4
TCU	baz=271			S	Sn	18 50 39.0	+1.8
WJS	**Zhushan** baz=253	1.04	251	P	Pn	18 50 22.4	-0.3
WJS	baz=253			S	Sn	18 50 37.3	-0.2
NTST	**Danshui** baz=343	1.05	342	*e*P	Pb	18 50 21.4	-0.6
NTST	baz=343			*e*S	Sn	18 50 37.3	-0.3
ANP	**Anpu** baz=347	1.05	346	*e*P	Pn	18 50 21.9	-0.9
ANP	baz=347			*e*S	Sn	18 50 36.1	-1.8
WNT1	**Nantou City** baz=253	1.06	256	*e*P	Pg	18 50 21.8	-0.2
WNT1	baz=253			*e*S	Sn	18 50 37.9	-0.1
WNT	**Mingjian** baz=252	1.06	255	P	Pn	18 50 22.7	-0.3
WNT	baz=252			S	Sn	18 50 38.7	+0.6
FULB	**Fuli** baz=224	1.07	206	*e*P	Pb	18 50 21.9	-0.5
FULB	baz=224			*e*S	Sn	18 50 40.1	+1.9
JYNG	**Yonagunijimaku**	1.08	74	P	Pn	18 50 23.0	-0.1
JYNG				*e*S	Sn	18 50 38.7	+0.4
WDJ	**Dajia District** baz=282	1.08	280	P	Pn	18 50 23.3	+0.1
WDJ	baz=282			S	Sn	18 50 38.2	-0.2
NHW	**Xinwu Township** baz=322	1.09	321	*e*P	Pg	18 50 22.1	-0.4
NHW	baz=322			*e*S	Sn	18 50 38.4	-0.2
TWY	**Chenhua** baz=345	1.12	350	P	Pn	18 50 23.6	-0.1
TWY	baz=345			*e*S	Sn	18 50 39.4	-0.1
ALS	**Alishan** baz=237	1.12	235	P	Pn	18 50 23.2	-0.9
ALS	baz=237			S	Sn	18 50 39.3	-0.7
CHKT	**Chengkung** baz=219	1.14	201	*e*P	Pb	18 50 21.7	-1.8
CHKT	baz=219			*e*S	Sn	18 50 40.4	+0.6
YOJ	**Yonaguni jima**	1.14	75	*e*P	Pg	18 50 23.9	+0.5
YOJ				*e*S	Sn	18 50 40.7	+0.9
WYL	**Yuanlin Townsh** baz=262	1.14	260	*e*P	Pn	18 50 23.1	-0.8
WYL	baz=262			*e*S	Sn	18 50 40.2	+0.3
WCHH	**Zhanghua** baz=268	1.14	266	*e*P	Pn	18 50 23.9	-0.1
WCHH	baz=268			*e*S	Sn	18 50 41.8	+1.8
CHN5	**Tsauling** baz=244	1.18	242	*e*P	Pg	18 50 24.3	+0.1
CHN5	baz=244			*e*S	Sn	18 50 41.5	+0.5
ELDTW	**Lidau** baz=209	1.21	217	*e*P	Pn	18 50 22.7	-2.4
ELDTW	baz=209			*e*S	Sg	18 50 40.3	-0.3
WGK	**Gukeng** baz=251	1.23	248	*e*P	Pg	18 50 26.1	+0.9
WDLH	**Douliu** baz=251	1.25	248	*e*P	Pg	18 50 25.8	+0.1
WDLH	baz=251			*e*S	Sn	18 50 45.5	+2.8
EDH	**Donghe** baz=205	1.27	201	*e*P	Pn	18 50 24.0	-1.8
EDH	baz=205			*e*S	Sg	18 50 43.8	+1.2
WRL	**Guolierlin Hig** baz=262	1.33	259	*e*P	Pg	18 50 26.7	-0.4
WRL	baz=262			*e*S	Sg	18 50 46.5	+2.0
STYH	**Taoyuan** baz=227	1.37	224	P	Pb	18 50 26.8	-0.7
STYH	baz=227			*e*S	Sg	18 50 45.0	-0.6
CHN2	**Minshiung** baz=246	1.37	243	*e*P	Pg	18 50 27.5	-0.4
CHN2	baz=246			*e*S	Sg	18 50 48.1	+2.4
CHN4	**Tsaushan** baz=238	1.38	234	P	Pg	18 50 27.6	-0.4
CHN4	baz=238			*e*S	Sg	18 50 46.5	+0.7
TPUB	**Ta-pu** baz=223	1.38	232	P	Pb	18 50 27.0	-0.7
TPUB	baz=223			S	Sg	18 50 46.4	+0.4
WTK	**Tuku** baz=253	1.38	250	*e*P	Pg	18 50 27.9	-0.1
WTK	baz=253			*e*S	Sg	18 50 48.2	+2.2
STYT	**Tauyuan** baz=227	1.39	224	P	Pb	18 50 27.2	-0.7
STYT	baz=227			*e*S	Sg	18 50 47.1	+0.9
LONT	**Longtian** baz=211	1.40	207	P	Pn	18 50 25.6	-2.0
LONT	baz=211			*e*S	Sg	18 50 48.1	+1.5
WTP	**Ta-pu** baz=234	1.43	230	*e*P	Pb	18 50 27.8	-0.8
WTP	baz=234			*e*S	Sg	18 50 48.0	+0.6
CHY	**Chiayi** baz=246	1.43	243	*e*P	Pb	18 50 27.7	-0.9
PCYT	**Pengchaiyu** baz=8.0	1.48	9	*e*P	Pb	18 50 28.9	-0.5
TWG	**Pinlang** baz=211	1.50	207	*e*P	Pn	18 50 26.4	-2.5
TWG	baz=211			*e*S	Sg	18 50 50.0	+0.3
TWGBT	**Beinan** baz=210	1.50	207	*e*P	Pn	18 50 26.2	-2.8
TWK	**Hsinying** baz=237	1.50	234	*e*P	Pb	18 50 29.4	-0.5
TWK	baz=237			*e*S	Sg	18 50 49.6	-0.3
LDUT	**Ludao** baz=180	1.52	192	*e*P	Pn	18 50 26.4	-2.8
CHN1	**Nanshi** baz=234	1.52	230	*e*P	Pb	18 50 29.8	-0.4
CHN1	baz=234			*e*S	Sg	18 50 50.5	-0.1
SNST	**Tainan City** baz=236	1.52	232	*e*P	Pg	18 50 30.1	-0.7
SNST	baz=236			*e*S	Sg	18 50 51.0	+0.4
TTN	**Taitung** baz=198	1.53	203	*e*P	Pn	18 50 28.7	-0.6
WSF	**Szhu** baz=254	1.54	250	*e*P	Pb	18 50 30.1	-0.3
WSF	baz=254			S	Sg	18 50 52.6	+1.4
SGST	**Jiashian** baz=230	1.56	226	*e*P	Pb	18 50 29.7	-1.0
SGST	baz=230			*e*S	Sg	18 50 50.8	-0.8
ICHU	**Yijhu** baz=244	1.61	241	*e*P	Pb	18 50 31.4	-0.3
ICHU	baz=244			*e*S	Sg	18 50 53.8	+0.4
CHN8	**Yiju** baz=244	1.67	241	*e*P	Pb	18 50 31.6	-1.1
CHN8	baz=244			*e*S	Sg	18 50 55.6	+0.2
CHN3	**Shinhua** baz=235	1.71	231	*e*P	Pg	18 50 34.2	-0.2
ECL	**Taimali** baz=194	1.75	207	*e*P	Pn	18 50 29.7	-2.6
SCST	**Cishan** baz=227	1.75	224	*e*P	Pb	18 50 34.0	-0.1
SCST	baz=227			*e*S	Sg	18 50 58.2	+0.3
SHHT	**Tainan City** baz=234	1.76	230	*e*P	Pb	18 50 34.3	+0.1
IRIF	**Iriomote-Funau**	1.76	84	*e*P	Pb	18 50 33.3	-1.0
IRIF				S	Sb	18 50 56.4	-0.3
SCLT	**Jiali** baz=240	1.78	237	*e*P	Pn	18 50 32.6	-0.1
SCLT	baz=240			*e*S	Sb	18 50 56.7	-0.3
SSD	**Sandimen** baz=234	1.78	218	*e*P	Pn	18 50 32.8	0.0
SSD	baz=234			*e*S	Sb	18 50 56.7	-0.4
TSMG	**Majia** baz=219	1.80	217	*e*P	Pn	18 50 33.1	0.0
TSMG	baz=219			*e*S	Sb	18 50 57.5	-0.2
HATJ	**Hateruma jima**	1.83	93	P	Pn	18 50 33.6	+0.2
HATJ				*e*S	Sb	18 50 57.6	-0.9
TWM1	**Shoushan** baz=228	1.84	224	⇑P	Pb	18 50 35.7	0.0
MASBT	**Mashibuluo** baz=218	1.89	215	*e*P	Pn	18 50 34.2	-0.1
MASBT	baz=218			*e*S	Sb	18 50 59.3	-0.8
EAST	**Anshuo** baz=196	1.98	207	*e*P	Pn	18 50 34.3	-1.3
TAW	**Tawu** baz=209	1.98	205	*e*P	Pb	18 50 37.8	-0.3
TAWH	**Dawu Township** baz=195	2.00	205	*e*P	Pn	18 50 36.1	+0.3
JKRS	**Kuro-shima**	2.01	87	P	Pn	18 50 36.5	+0.5
SSPT	**Xinbi** baz=218	2.02	214	*e*P	Pb	18 50 37.3	-1.4
SCZT	**Fangliau** baz=214	2.09	212	*e*P	Pn	18 50 37.3	+0.2
SCZT	baz=214			*e*S	Sb	18 51 04.7	-1.4
LAY	**Lan-yu** baz=188	2.13	186	*e*P	Pn	18 50 34.7	-3.0
JIJ	**Ishigaki jima**	2.14	84	P	Pn	18 50 37.5	-0.3
JIJ				*e*S	Sn	18 51 05.2	+0.6
PNG	**Penghu** baz=258	2.15	254	P	Pn	18 50 38.4	+0.6
PNG	baz=258			*e*S	Sb	18 51 05.7	-2.0
PHUB	**P'eng-hu** baz=257	2.15	253	*e*P	Pn	18 50 37.2	-0.6
PHUB	baz=257			*e*S	Sn	18 51 05.0	+0.2
SLIU	**Shizi** baz=196	2.15	206	*e*P	Pb	18 50 39.7	-1.2
LYUB	**Lan-yu** baz=187	2.16	185	*e*P	Pn	18 50 34.1	-3.9
WDGT	**Dungji** baz=249	2.16	246	*e*P	Pn	18 50 38.1	+0.1
WDGT	baz=249			*e*S	Sn	18 51 04.9	-0.3
WLCH	**Liuqiu** baz=220	2.23	216	*e*P	Pb	18 50 40.1	-2.1
VWUC	**VWUC** baz=294	2.30	291	*e*P	Pn	18 50 39.0	-0.9
HEN	**Hengchun** baz=197	2.36	205	*e*P	Pb	18 50 42.8	-1.7
TWKBT	**Hengchun** baz=192	2.40	203	*e*P	Pn	18 50 40.6	-0.7
TWK1	**Hengchun** baz=192	2.40	203	*e*P	Pn	18 50 41.0	-0.2
TSEB	**Hengchuen, Pin** baz=204	2.40	201	*e*P	Pn	18 50 41.2	-0.1
PTMZ	**Houxiangcun** baz=292	2.60	290	*e*P	Pn	18 50 43.1	-0.9
MATB	**Ma-tsu** baz=320	2.60	320	*e*P	Pn	18 50 43.1	-1.0
JTJ	**Tarama**	2.68	79	P	Pn	18 50 46.7	+1.5
LYJJ	**Jianjiangzhen** baz=322	3.01	322	*e*P	Pn	18 50 48.8	-0.9
QZH	**Quanzhou**	3.03	285	⇑*i*Pn	Pn	18 50 48.8	-1.2
QZH				Sn	Sn	18 51 22.5	-4.0
QZH	comp=N,810nm,3.8s			LR	LR		
QZH	comp=Z,650nm,11.4s			LR	LR		
KNM	**Kinmen** baz=278	3.09	275	*e*P	Pn	18 50 52.2	+1.4
KNMB	**Chin-men Tao** baz=279	3.13	276	*e*P	Pn	18 50 50.7	-0.7
AXDP	**Jialang** baz=285	3.57	283	*e*P	Pn	18 50 56.9	-0.6

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JOW   Kunigami           6.42  64  Pn     Pn     18 51 35.5  -1.1
      1.7nm,0.3s,baz=112,slow=22,SNR=14
JOW                                Sn     Sn     18 52 47.5  -2.7
      0.3nm,0.3s,baz=30,slow=18,SNR=1.3
      5.3nm,0.2s
WHN   Wuhan              9.18 315 ⇓P      Pn     18 52 17.5  +3.0
WHN                                S      Sn     18 54 03.7  +5.6
WHN                                LR     LR
      comp=N,880nm,9.2s
WHN                                LR     LR
      comp=E,660nm,9.4s
WHN                                LR     LR
      comp=Z,1µm,11.8s
QIZ   Qiongzhong        12.24 248  P      Pn     18 52 56.6  +0.1
QIZ                                S      Sn     18 55 17.0  +3.6
QIZ                                LR     LR
      comp=N,230nm,17.8s
QIZ                                LR     LR
      comp=E,130nm,14.5s
QIZ                                LR     LR
      comp=Z,73nm,11.2s
KSRS  Korea Array       14.24  20  Pn     Pn     18 53 24.9  +1.2
      0.1nm,0.3s,baz=206,slow=14,SNR=10.0
KSRS                               LR     LR     18 59 28.9
      comp=Z,62nm,18.4s,baz=195,slow=40
      0.4nm,0.7s
HNS   HongShan          14.53 337 eP      P      18 53 32.2  -2.1
HNS                                S      Sn     18 56 15.8  +6.9
HNS                                LR     LR
      comp=N,210nm,14.4s
HNS                                LR     LR
      comp=E,160nm,12.9s
HNS                                LR     LR
      comp=Z,230nm,13.2s
XAN   Xi'an             14.94 314 i P     Pn     18 53 35.0  +1.6
XAN                                pP     P      18 53 39.5  +0.4
XAN                                S      Sn     18 56 18.1  -1.1
XAN                                pmax   pmax
      comp=Z,4.0nm,0.7s
XAN                                LR     LR
      comp=N,140nm,9.6s
XAN                                LR     LR
      comp=E,250nm,13.1s
XAN                                LR     LR
      comp=Z,320nm,11.6s
MJAR  Matsushiro Arr    18.74  45  LR     LR     19 02 17.1
      comp=Z,39nm,19.9s,baz=222,slow=39
CMAR  Chiang Mai Arr    22.03 259  P      P      18 54 57.1  +0.2
      0.6nm,0.4s,baz=66,slow=8.2,SNR=5.9
CMAR                               LR     LR     19 04 05.0
      comp=Z,32nm,20.3s,baz=115,slow=38
      0.6nm,0.4s
GOMU  GeErMu            26.14 304  P      P      18 55 41.4  +4.5
GOMU                               pP     sP     18 55 44.9  +5.7
GOMU                               sP     pP     18 55 48.8   +10
GOMU                               pmax   pmax
      comp=Z,2.0nm,0.6s
GOMU                               pmax   pmax
      comp=Z,87nm,4.8s
ASAJ  Asahikawa         26.18  35  LR     LR     19 07 24.5
      comp=Z,44nm,18.1s,baz=178,slow=40
KLR   Kul'dur           26.21  15  P      P      18 55 37.0   0.0
      0.6nm,0.4s,baz=199,slow=5.6,SNR=3.1
      0.6nm,0.4s
SONM  Songino Array     26.61 336  P      P      18 55 41.4  +0.6
      0.7nm,0.8s,baz=158,slow=9.5,SNR=5.2
SONM                               LR     LR     19 07 14.7
      comp=Z,106nm,18.2s,baz=146,slow=39
      0.7nm,0.8s
WMQ   Urumqi            34.08 314 eP      P      18 56 48.9  +2.1
WMQ                                pP     sP     18 56 52.7  +3.6
WMQ                                sP     pP     18 56 55.1  +6.7
WMQ                                S      S      19 02 11.5  -1.4
MKAR  Makanchi Array    38.75 316  P      P      18 57 26.5  -0.1
      1.6nm,1.0s,baz=108,slow=7.2,SNR=4.1
      1.6nm,1.0s
ZALV  Zalesovo Beam     40.57 327  P      P      18 57 39.5  -2.2
      0.4nm,0.4s,baz=108,slow=9.3,SNR=1.9
ZALV                               LR     LR     19 15 39.3
      comp=Z,42nm,18.6s,baz=74,slow=38
H11N1 WAKE ISLAND Hy    41.92  87  T      T      19 43 13.2
      baz=283
H11N2 WAKE ISLAND Hy    41.92  87  T      T      19 43 12.2
      baz=283
H11N3 WAKE ISLAND Hy    41.94  87  T      T      19 43 10.1
      baz=283
H11S3 WAKE ISLAND Hy    42.05  89  T      T      19 43 49.1
      baz=284
H11S1 WAKE ISLAND Hy    42.06  89  T      T      19 43 30.6
      baz=284
H11S2 WAKE ISLAND Hy    42.07  89  T      T      19 43 50.2
      baz=284
AAK   Ala-Archa         42.97 307  LR     LR     19 18 24.8
      comp=Z,36nm,18.5s,baz=107,slow=40
WRA   Warramunga Arr    45.51 163  P      P      18 58 19.7  -2.3
      0.6nm,0.5s,baz=343,slow=8.7,SNR=4.1
      0.6nm,0.5s
ASAR  Alice Springs     48.98 165  P      P      18 58 46.6  -2.3
      0.3nm,0.6s,baz=343,slow=7.6,SNR=8.3
      0.3nm,0.6s
FINES FINESS Array B    71.75 330  P      P      19 01 24.9  +0.6
      1.2nm,0.9s,baz=7.0,slow=17,SNR=4.2
FINES                              LR     LR     19 35 45.7
      comp=Z,37nm,19.2s,baz=40,slow=38
      1.2nm,0.9s
NOA   NORSAR Array B    78.51 332  LR     LR     19 38 59.4
      comp=Z,14nm,20.8s,baz=225,slow=37
YKA   Yellowknife Ar    82.77  23  P      P      19 02 25.1  -1.0
      0.2nm,0.5s,baz=312,slow=4.7,SNR=4.6
      0.2nm,0.5s
```

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*GCG **08** 18:56:59.8±0.3, 13°.70N×89°.75W, h181km±38km, MD3.7*

*SNET **08** 18:57:04.4±1.1, 13°.92N×89°.83W, h141km±5km, ML2.8*

ISC 08 18:57:07.4±2.2**, 13°.9N**±0°.1×**89°.76W**±0°.07**, h128**km±13km**,**
n17,σ1s.**35**/26**, El Salvador**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
NUBE  Las Nubes          0.04 328 eP      Pn     18 57 23.7  -1.4
NUBE                              eS      Sn     18 57 38.9  +0.6
NUBE                               IAML          18 57 51.8
      comp=N,166nm,0.2s
SBLS  San Blas           0.13 102 eP      Pn     18 57 24.4  -0.8
SBLS                               IAML          18 57 48.4
      comp=Z,196nm,0.4s
CEVE  Cerro Verde        0.13 106 eP      Pn     18 57 24.2  -1.0
CEVE                              eS      Sn     18 57 39.7  +1.1
SNJE  San Jose           0.15  89 eP      Pn     18 57 24.1  -1.0
SLOZ  Alcaldia de Sa     0.16 351 eP      Pn     18 57 23.8  -1.3
SLOZ                              eS      Sn     18 57 38.7  +0.3
SLOZ                               IAML          18 57 41.7
      comp=Z,125nm,0.5s
JAYA  Jayaque - finc     0.37 125 eP      Pn     18 57 24.6  -1.2
JAYA                              eS      Sn     18 57 40.6  +0.9
BOQS  Boqueron           0.48 106 eP      Pn     18 57 25.6  -0.9
BOQS                               IAML          18 57 53.6
      comp=Z,135nm,0.2s
LFU   La Fuente          0.64 100 eP      Pn     18 57 26.4  -0.8
LFRS  El Faro            0.72 110 eP      Pn     18 57 27.0  -0.9
SJTE  Alcalda de S       0.77 109 eP      Pn     18 57 27.3  -0.9
SJTE                              eS      Sn     18 57 45.4  +1.4
SJTE                               IAML          18 57 51.0
      comp=Z,111nm,0.3s
ESQI  Esquipulas         0.80  30 eP      Pn     18 57 27.5  -1.1
ESQI                              eS      Sn     18 57 44.6  +0.1
NBG   Las Nubes          0.92 321 eP      Pn     18 57 29.3  -0.5
FUG   Fuego 3            1.20 299 eP      Pn     18 57 30.9  -1.4
FUG                               eS      Sn     18 57 55.1  +3.9
MRL   Marmol             1.21   3 eP      Pn     18 57 31.9  -0.7
COEB  Comit de Eme       1.25 107 eP      Pn     18 57 31.9  -0.8
COEB                              eS      Sn     18 57 52.8  +0.8
LCND  La Caada           1.90 107 eP      Pn     18 57 39.1  -0.9
LCND                              eS      Sn     18 58 07.0  +2.0
STG3  Santiaguito 3,     1.95 296 eS      Sn     18 58 06.4   0.0
```

IDC 08 19:01:38.5±6.9**, 21°.74S**×**177°.34W, h679**km±45km**,**
mb3.0/3**, mbtmp4.1**/4**, Error ellipse: s-maj=133.4km**
s-min=62.6km az=128.0, Fiji Islands region

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
MSVF  Nonsavu            5.89 312  P      P      19 03 22.9  -0.1
      3.8nm,0.3s,baz=269,slow=22,SNR=8.9
DZM   Mont Dzumac       15.06 266  P      P      19 04 41.6  -3.3
      1.8nm,0.6s,baz=84,slow=22,SNR=6.7
STKA  Stephens Creek    37.83 246  P      P      19 08 00.9  -0.3
      1.6nm,0.4s,baz=98,slow=11,SNR=8.0
      1.6nm,0.4s
ASAR  Alice Springs     44.85 258  P      P      19 08 56.5  +0.3
      3.0nm,0.7s,baz=99,slow=7.9,SNR=43
      3.0nm,0.7s
WRA   Warramunga Arr    45.05 263  P      P      19 08 57.7   0.0
      0.9nm,0.4s,baz=95,slow=8.1,SNR=70
WRA                                PcP    PcP    19 10 22.7  -0.4
      0.2nm,0.5s,baz=106,slow=2.1,SNR=1.2
      0.9nm,0.4s
```

IDC 08 19:03:57.1±3.5**, 62°.12S**×**166°.15E, h0**km**, mb3.9**/2**,**
mbtmp3.8/3**, ML3.6**/1**, MS3.3**/1**, Error ellipse:**
s-maj=161.8km s-min=42.2km az=72.0, Balleny Islands region

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
VNDA  Vanda             15.54 183  Pn     Pn     19 07 37.1  +0.1
      0.2nm,0.3s,baz=14,slow=16,SNR=20
VNDA                               LR     LR     19 12 24.0
      comp=Z,111nm,18.4s,baz=164,slow=33
      1.1nm,0.6s
H01W1 Cape Leeuwin H    42.22 285  T      T      19 56 43.3
      baz=146,slow=75,SNR=48
H01W2 Cape Leeuwin H    42.23 285  T      T      19 56 43.6
      baz=146,slow=75,SNR=46
H01W3 Cape Leeuwin H    42.24 285  T      T      19 56 44.5
      baz=146,slow=75,SNR=46
ASAR  Alice Springs     44.20 315  P      P      19 12 08.0  +0.3
      2.7nm,0.9s,baz=160,slow=7.9,SNR=20
ASAR                               PcP    PcP    19 13 52.2  -0.2
      0.2nm,0.6s,baz=153,slow=4.1,SNR=5.6
      2.7nm,0.9s
WRA   Warramunga Arr    47.54 318  P      P      19 12 33.1  -0.9
      1.0nm,1.0s,baz=161,slow=6.6,SNR=4.7
WRA                                PcP    PcP    19 14 03.8  -0.2
      0.2nm,0.7s,baz=155,slow=3.5,SNR=3.1
      1.0nm,1.0s
H03S2 Juan Fernandez    71.08 127  T      T      20 33 55.1
      baz=204,SNR=402
H03S1 Juan Fernandez    71.08 127  T      T      20 33 56.5
      baz=204,SNR=420
H03S3 Juan Fernandez    71.09 127  T      T      20 33 55.9
      baz=204,SNR=378
H03N3 Juan Fernandez    71.42 127  T      T      20 34 19.1
      baz=187,slow=74,SNR=3.8
H03N2 Juan Fernandez    71.43 127  T      T      20 34 20.4
      baz=187,slow=74,SNR=13
H03N1 Juan Fernandez    71.44 127  T      T      20 34 21.0
      baz=187
H08S2 Diego Garcia H    85.01 263  T      T      20 50 22.8
      baz=150,slow=76,SNR=9.4
H08S1 Diego Carcia H    85.02 263  T      T      20 50 20.7
      baz=150
H08S3 Diego Garcia H    85.03 263  T      T      20 50 24.3
      baz=150,slow=76,SNR=14
```

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*SJA **08** 19:05:57.6±0.7, 24°.74S×69°.79W, h145km±8km, ML5.1, MW4.7*

*NEIC **08** 19:05:59.8±2.6, 24°.81S±0°.05×69°.41W±0°.06, h88km±4km, mb4.9/45, Mwr4.7/64, ML5.0(GUC), Error ellipse: s-maj=8.1km s-min=6.7km az=72.0*

*NEIC **08** 19:06:00, 24°.80S×69°.55W, h94km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.20; Mθθ0.25; Mφφ0.95; Mrθ0.07; Mθφ-0.75; Mφr-0.77; Fault plane solution: M0 1.54000×10¹⁶ NP1:φs130.62000°, δ33.48000°, λ-117.43000°. NP2:φs342.51000°, δ60.68000°, λ-73.05000°. Principal axes: T 1.6035, Plg14.0000°, Azm60.0000°; N -0.1338, Plg15.0000°, Azm154.0000°; P -1.4697, Plg69.0000°, Azm288.0000°;*

*GUC **08** 19:06:01.4±0.8, 24°.71S×69°.47W, h88km±14km, ML5.0*

*IDC **08** 19:06:02.0±0.3, 24°.78S×69°.23W, h93km±3km, mb4.4/17, mbtmp4.7/23, MS3.4/14, Error ellipse: s-maj=12.9km s-min=7.0km az=88.0*

*VAO **08** 19:06:05.1±0.5, 24°.46S×68°.87W, h97km±3km, mb5.0*

ISC 08 19:06:00.5±0.3**, 24°.73S**±0°.03×**69°.41W**±0°.04**, h89**km±3km**,**
n344,σ1s.**78**/360**, mb4.9**/37**, 46C-35D, Fault plane solution: NP1:**φs317.58792°, δ48.87604°, λ-87.05309°. **NP2:**φs133.11238°, δ41.21067°, λ-93.36988°. **Principal axes:** T Plg3.8356°, Azm45.4999°; N Plg2.2195°, Azm135.6488°; P Plg85.5669°, Azm255.6425°; **Northern Chile**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
PB14  IPOC Station P     0.92 277         Pn     19 06 19.9  +0.4
PB14  IPOC Station P     0.92 277⇑iP      Pn     19 06 20.3  +0.8
PB14                              i S     Sn     19 06 34.4  +0.6
PB14  IPOC Station P     0.92 277 eP      Pn     19 06 20.0  +0.4
PB14                              eS      Sn     19 06 35.1  +1.3
PB14                               IAML          19 06 36.1
      comp=Z,23µm,0.5s
PB15  IPOC Station P     1.52 358         Pn     19 06 28.3  +1.6
PB15  IPOC Station P     1.52 358 i P     Pn     19 06 28.4  +1.6
PB15                              eS      Sn     19 06 48.7  +2.2
PB15  IPOC Station P     1.52 358 eP      Pn     19 06 28.4  +1.6
PB15                              eS      Sn     19 06 49.7  +3.2
PB10  IPOC Station P     1.61 319         Pn     19 06 28.3  +0.7
PB10  IPOC Station P     1.61 319⇑iP      Pn     19 06 28.9  +1.3
PB10                              eS      Sn     19 06 46.1  -2.0
PB10  IPOC Station P     1.61 319 eP      Pn     19 06 29.0  +1.3
PB10                              eS      Sn     19 06 47.9  -0.2
PB10                              eS      Sn     19 06 48.2   0.0
AC01  Pan de Azucar      1.77 217  Pn     Pn     19 06 29.8   0.0
PB06  IPOC Station P     2.02 356         Pn     19 06 34.5  +1.3
PB06  IPOC Station P     2.02 356⇑iP      Pn     19 06 34.6  +1.3
PB06                              eS      Sn     19 06 59.6  +1.5
PB06                               IAML          19 07 06.0
      comp=E,6µm,0.4s
PB06  IPOC Station P     2.02 356 eP      Pn     19 06 34.0  +0.8
PB06                              eS      Sn     19 07 00.7  +2.6
PB06                               IAML          19 07 05.8
      comp=Z,6µm,0.3s
AF01  San Pedro de A     2.10  33         Pn     19 06 36.4  +2.1
AF01  San Pedro de A     2.10  33⇑iP      Pn     19 06 36.7  +2.3
AF01                              eS      Sn     19 07 02.9  +2.9
AC02  Maricunga          2.11 173  Pn     Pn     19 06 36.0  +1.4
LVC   Limon Verde        2.16  12  P      Pn     19 06 36.7  +1.5
      comp=Z,692nm,0.4s,baz=165,slow=10,SNR=1331
LVC                                S      Sn     19 07 04.4  +2.7
      comp=Z,2µm,0.3s,baz=4.5,slow=20,SNR=9.4
LVC   Limon Verde        2.16  12 eP      Pn     19 06 36.4  +1.2
LVC                               eS      Sn     19 07 03.5  +1.8
LVC   Limon Verde        2.16  12 eP      Pn     19 06 36.8  +1.5
LVC                               eS      Sn     19 07 01.7   0.0
LVC   Limon Verde        2.16  12 eP      Pn     19 06 37.0  +1.7
PB04  IPOC Station P     2.48 344         Pn     19 06 39.7  +0.3
PB04  IPOC Station P     2.48 344⇑iP      Pn     19 06 39.8  +0.5
PB04                               IAML          19 07 24.8
      comp=N,7µm,0.6s
PB04  IPOC Station P     2.48 344 eP      Pn     19 06 39.7  +0.3
PB04                              eS      Sn     19 07 07.9  -1.1
PB04                               IAML          19 07 29.2
      comp=Z,5µm,0.6s
AC06  Mina Casimiro      2.75 198         Pn     19 06 41.8  -0.9
AC06  Mina Casimiro      2.75 198⇑iP      Pn     19 06 41.6  -1.0
AC06                               IAML          19 07 27.1
      comp=E,6µm,0.6s
PB09  IPOC Station P     2.93   3         Pn     19 06 46.8  +1.5
PB09  IPOC Station P     2.93   3⇑iP      Pn     19 06 46.6  +1.3
PB09                              eS      Sn     19 07 11.1  -8.6
PB09                               IAML          19 07 34.2
      comp=N,5µm,0.3s
PB09  IPOC Station P     2.93   3 eS      Sn     19 07 23.7  +4.0
PB09                               IAML          19 07 36.0
      comp=Z,7µm,0.8s
PB07  IPOC Station P     3.03 351         Pn     19 06 46.9  +0.3
PB07  IPOC Station P     3.03 351⇑iP      Pn     19 06 46.8  +0.3
PB07                               IAML          19 07 40.7
      comp=E,5µm,0.6s
FSA   Cafayete           3.39 115 eP      Pn     19 06 48.2  -3.3
FSA                               eP      Pn     19 06 54.0  +2.6
PB02  IPOC Station P     3.43 352         Pn     19 06 52.0  +0.1
PB02  IPOC Station P     3.43 352 i P     Pn     19 06 52.0  +0.1
SLA   San Lorenzo        3.55  91 eP      Pn     19 06 58.1  +4.5
PB01  IPOC Station P     3.67 359         Pn     19 06 54.5  -0.8
PB01  IPOC Station P     3.67 359⇑iP      Pn     19 06 55.4  +0.1
PB01                              eS      Sn     19 07 37.4  -0.2
AC04  Llanos de Chal     3.77 203  Pn     Pn     19 06 53.9  -2.5
AC04  Llanos de Chal     3.77 203 eP      Pn     19 06 53.6  -2.8
AC04  Llanos de Chal     3.77 203 eP      Pn     19 06 54.0  -2.4
AC04                              eS      Sn     19 07 43.2  +3.5
AC04                               IAML          19 07 50.9
      comp=Z,4µm,0.8s
PATCX Punta Patache      3.96 350         Pn     19 06 58.2  -0.9
PATCX Punta Patache      3.96 350 eP      Pn     19 06 58.2  -0.9
PATCX Punta Patache      3.96 350 eP      Pn     19 06 55.9  -3.2
PATCX                              IAML          19 08 01.1
      comp=Z,4µm,0.8s
HJA   Humahuaca          3.96  68 eP      Pn     19 07 03.0  +3.6
TA01  Diego Aracena      4.21 350  Pn     Pn     19 07 01.0  -1.4
TA01  Diego Aracena      4.21 350 i P     Pn     19 07 01.0  -1.4
TA01  Diego Aracena      4.21 350 eP      Pn     19 07 01.0  -1.4
TA01                               IAML          19 08 15.6
      comp=Z,2µm,0.8s
YJA   Yavi               4.39  55 eP      Pn     19 07 08.0  +2.8
LCO   Las Campanas       4.41 195  Pn     Pn     19 07 03.3  -2.1
LCO   Las Campanas       4.41 195 eP      Pn     19 07 03.0  -2.4
HMBC  Humberstone        4.46 354 eP      Pn     19 07 04.7  -1.2
HMBC                              i P     Pn     19 07 04.7  -1.2
PB08  IPOC Station P     4.58   3         Pn     19 07 07.8   0.0
PB08  IPOC Station P     4.58   3 eP      Pn     19 07 07.5  -0.3
PB11  IPOC Station P     4.96 357  Pn     Pn     19 07 11.7  -1.0
ACLC  CERRO LA CRUZ      5.16 155 eP      Pn     19 07 16.0  +0.5
CO01  Juntas del Tor     5.26 187         Pn     19 07 16.6  -0.3
CO05  La Serena          5.42 197         Pn     19 07 15.3  -3.5
GO04  Tololo Observa     5.56 193         Pn     19 07 18.6  -2.4
PB12  IPOC Station P     6.15 352  Pn     Pn     19 07 26.7  -2.2
CO06  Fray Jorge         6.24 198         Pn     19 07 25.6  -4.4
PB16  IPOC Station P     6.37 359         Pn     19 07 31.4  -1.0
CO02  Combarbal          6.60 192         Pn     19 07 31.7  -3.3
VA03  San Esteban        8.06 187         Pn     19 07 52.0  -2.9
ROC1  El Roble           8.33 189         Pn     19 07 52.1  -6.7
PEL   Peldehue           8.45 187  Pn     Pn     19 07 58.0  -2.3
LPAZ  La Paz             8.49   8  P      Pn     19 08 01.6  +0.3
      comp=Z,15nm,0.6s,baz=182,slow=6.8,SNR=53
LPAZ                               LR     LR     19 12 06.9
      comp=Z,184nm,20.0s,baz=195,slow=43
LPAZ  La Paz             8.49   8 eP      Pn     19 08 01.4  +0.1
VA01  Torpederas         8.49 193  Pn     Pn     19 07 58.5  -2.1
MT02  Curacav            8.63 190         Pn     19 07 57.5  -5.0
MT05  Renca              8.71 187         Pn     19 08 01.1  -2.6
MT03  Universidad Ad     8.78 186         Pn     19 08 03.6  -1.1
VA05  Santo Domingo      9.10 192         Pn     19 08 03.6  -5.4
MT09  Talagante          9.12 188         Pn     19 08 04.9  -4.5
MT01  Popeta             9.24 190         Pn     19 08 05.5  -5.4
BO04  La Punta           9.28 186         Pn     19 08 06.5  -5.0
BO01  Tunca              9.73 188  Pn     Pn     19 08 11.9  -5.8
GO05  Huala             10.47 191         Pn     19 08 21.1  -6.6
CPUP  Villa Florida     11.02 101  P      Pn     19 08 33.0  -2.2
      comp=Z,5.3nm,0.5s,baz=278,slow=11,SNR=15
CPUP                               LR     LR     19 13 22.0
      comp=Z,164nm,21.6s,baz=268,slow=40
CPUP  Villa Florida     11.02 101  Pn     Pn     19 08 29.0  -6.2
H03N1 Juan Fernandez    12.01 222  P      Pn     19 08 46.4  -1.9
      baz=110,slow=16,SNR=29
H03N1                              T      T      19 20 44.2
      baz=45,slow=74,SNR=399
H03N2 Juan Fernandez    12.02 222  P      Pn     19 08 46.0  -2.3
      baz=110,slow=16,SNR=22
H03N2                              T      T      19 20 44.2
      baz=45,slow=74,SNR=396
H03N3 Juan Fernandez    12.03 222  P      Pn     19 08 46.4  -2.1
      baz=110,slow=16,SNR=31
H03N3                              T      T      19 20 56.2
      baz=45
H03S3 Juan Fernandez    12.28 220  P      Pn     19 08 48.7  -3.2
      SNR=93
H03S3                              T      T      19 21 07.2
      baz=36
H03S1 Juan Fernandez    12.29 220  P      Pn     19 08 47.9  -4.0
      SNR=50
H03S1                              T      T      19 21 06.2
      baz=36,SNR=3.9
H03S2 Juan Fernandez    12.29 220  P      Pn     19 08 48.7  -3.4
      SNR=60
H03S2                              T      T      19 21 05.3
      baz=36,SNR=4.3
AQDB  Aquidauana        13.35  74  Pn     Pn     19 09 06.2  -0.2
AQDB  Aquidauana        13.35  74 eP      Pn     19 09 04.9  -1.5
PTLB  Pontes e Lacer    13.35  48 eP      Pn     19 09 01.9  -4.5
LC01  Cunco             14.28 188  Pn     Pn     19 09 14.4  -4.0
NNA   Nana              14.50 330  P      P      19 09 25.9  +0.3
      comp=Z,12nm,0.7s,baz=179,slow=14,SNR=7.0
NNA                                LR     LR     19 14 27.9
      comp=Z,34nm,21.7s,baz=188,slow=35
VILB  Vilhena           14.59  38 eP      Pn     19 09 20.5  -2.2
FRBT  Francisco Belt    14.83  98 eP      Pn     19 09 24.5  -1.2
PP1B  Ponte de Pedra    15.29  65 eP      Pn     19 09 27.9  -3.6
TRCB  Terra Rica        15.48  86 eP      Pn     19 09 32.5  -1.4
SALV  Santo Antonio     15.56  58 eP      Pn     19 09 31.7  -3.3
ITAB  Concordia         15.73 103  Pn     Pn     19 09 36.0  -1.0
ITAB  Concordia         15.73 103 eP      Pn     19 09 36.1  -0.9
PTGB  Pitanga           15.76  94 eP      P      19 09 38.4  -1.2
PLCA  Paso Flores       15.98 183  P      P      19 09 42.0  +0.1
      comp=Z,6.9nm,0.8s,baz=7.8,slow=12,SNR=16
PLCA                               LR     LR     19 15 51.2
      comp=Z,90nm,20.3s,baz=355,slow=37
PLCA  Paso Flores       15.98 183  Pn     Pn     19 09 35.4  -4.7
PCMB  Pacaembu          16.97  83 eP      Pn     19 09 50.3  -2.1
PDRB  Porto dos Gac     17.74  45 eP      P      19 09 57.7  -3.8
FRTB  Fartura           18.18  90 eP      P      19 10 04.8  -1.5
ITRB  Iturama           18.33  78 eP      P      19 10 06.5  -1.4
CLDB  Colider           18.89  46 eP      P      19 10 12.7  -1.4
ATAH  Atahualpa         19.50 332  P      Pn     19 10 24.2  +1.0
      comp=Z,12nm,0.8s,baz=169,slow=7.1,SNR=5.6
BB19B Bebedouro         19.57  83 eP      P      19 10 19.6  -2.0
AY01  Puyuhuapi         19.82 187  Pn     P      19 10 23.8   0.0
AY01                               IAmb   IAmb   19 10 25.1
      comp=Z,34nm,0.6s
PET01 Itanhaem-SP       20.14  93 eP      P      19 10 25.8  -1.8
RCLB  Rio Claro- Sao    20.18  88 eP      P      19 10 26.4  -1.8
TBTG  Tabatinga, AM     20.43 359 eP      P      19 10 31.5  +0.7
VAO   Valinhos          20.59  90 eP      P      19 10 31.5  -1.1
IPMB  Ipameri, GO       20.84  75 eP      P      19 10 33.5  -1.8
SNDB  Serra Nova Dou    21.33  57 eP      P      19 10 37.9  -2.6
PARB  Paraibuna         21.76  91 eP      P      19 10 45.8  +0.7
BDFB  Brasilia          22.00  70  P      P      19 10 46.2  -1.5
      comp=Z,44nm,0.8s,baz=237,slow=12,SNR=67
      comp=Z,44nm,0.8s
BDFB  Brasilia          22.00  70  P      P      19 10 45.0  -2.6
BDFB                               IAmb   IAmb   19 10 48.5
      comp=Z,48nm,0.8s
MACA  Manacapuru-AM     23.04  23 eP      P      19 10 57.5  -0.8
PEXB  Peixe             23.59  62 eP      P      19 11 02.6  -0.9
ITTB  Itaituba          24.15  35 eP      P      19 11 08.0  -0.4
JANB  Januaria          25.45  72 eP      P      19 11 19.3  -1.0
SMTB  Santa Maria do    26.11  57 eP      P      19 11 26.0  -0.3
SDBA  SAO DESIDERIO     26.21  67 eP      P      19 11 25.7  -1.5
PRPB  Parauapebas       26.33  49 eP      P      19 11 26.4  -1.9
MALB  Monte Alegre      27.04  35 eP      P      19 11 34.8  +0.2
SOTA  Rioblanco         27.61 344 eP      P      19 11 42.8  +2.6
BOAV  Boa Vista         28.31  19 eP      P      19 11 47.0  +1.1
GUA01 Guaratinga, BA    28.81  79 eP      P      19 11 48.7  -1.7
ORTC  Ortega, Tolima    29.03 348 eP      P      19 11 54.2  +1.8
ROSC  El Rosal          29.78 350  LR     LR     19 25 33.3
      comp=Z,123nm,21.4s,baz=213,slow=39
USHA  Ushuaia           30.07 179  P      P      19 12 02.0  +0.9
      comp=Z,4.9nm,0.9s,baz=329,slow=5.9,SNR=1.6
USHA                               LR     LR     19 26 34.0
      comp=Z,66nm,18.6s,baz=66,slow=41
      comp=Z,4.9nm,0.9s
TMAB  Tom-Au,PA,Br      30.28  46 eP      P      19 12 03.5   0.0
NBPN  Ponto Novo - B    30.96  69 eP      P      19 12 08.5  -1.0
HELC  Santa Helena      31.31 348 eP      P      19 12 14.5  +1.6
PTBC  PUERTO BERRIO,    31.47 350 eP      P      19 12 13.6  -0.2
DBBC  Dabeiba           32.25 347 eP      P      19 12 23.4  +2.7
ZARC  Zaragoza, Cauc    32.47 350 eP      P      19 12 23.1  +0.6
NBLA  Lagarto - SE      32.95  71 eP      P      19 12 25.1  -1.7
BAUV  El Baul           33.50   2  P      P      19 12 30.3  -1.3
NBPS  Pedro II - PI     33.64  58 eP      P      19 12 32.3  -0.6
SMLC  San Martn de      33.64 352 eP      P      19 12 31.5  -1.2
MDP   Montagnes des     33.85  31  LR     LR     19 26 58.1
      comp=Z,152nm,21.5s,baz=208,slow=37
NBMA  Muriti-CE         34.01  65 eP      P      19 12 33.7  -2.4
SJCC  San Jacinto, C    34.88 350  P      P      19 12 39.5  -4.1
SJCC                               IAmb   IAmb   19 12 45.9
      comp=Z,14nm,1.0s
RPN   Rapa Nui          35.89 257  LR     LR     19 25 00.2
      comp=Z,105nm,18.8s,baz=209,slow=32
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RCBR Riachuelo 37.22 65 P **P 19 13 04.2 +0.6**
comp=Z,31nm,1.1s,baz=17,slow=12,SNR=6.2
RCBR LR LR 19 28 25.7
comp=Z,38nm,21.7s,baz=324,slow=36
comp=Z,31nm,1.1s
CRPR Cabo Rojo, PR 42.54 3 P **P 19 13 44.9 -2.5**
CRPR IAmb IAmb 19 13 47.6
comp=Z,19nm,0.9s
OBIP Obispado Ponce 42.60 4 P **P 19 13 46.2 -1.8**
OBIP IAmb IAmb 19 13 48.6
comp=Z,18nm,0.7s
PDPR Patillas Dam, 42.62 5 P **P 19 13 46.3 -1.8**
PDPR IAmb IAmb 19 13 47.8
comp=Z,16nm,0.8s
SJG San Juan 42.70 5 LR LR 19 33 52.0
comp=Z,26nm,21.4s,baz=282,slow=39
SJG San Juan 42.70 5 P **P 19 13 47.3 -1.5**
SJG IAmb IAmb 19 13 48.1
comp=Z,14nm,0.7s
CMIG Matias Romero 48.43 327 LR LR 19 30 35.4
comp=Z,27nm,19.9s,baz=199,slow=30
VNA1 Neumayer--Stat 57.41 160 P **P 19 15 40.0 +0.6**
BRAL Brewton 58.10 342 P **P 19 15 45.6 +1.0**
baz=161
NHSC New Hope 58.43 349 P **P 19 15 48.2 +1.3**
baz=169
H06E1 SOCORRO T-PHAS59.21 313 T T 20 20 03.4
GOGA Godfrey 59.35 346 P **P 19 15 51.4 -1.9**
GOGA Godfrey 59.35 346 P **P 19 15 53.5 +0.2**
baz=165
SNAA Sanae 59.39 160 P **P 19 15 53.3 0.0**
SNAA Sanae 59.39 160 P **P 19 15 53.2 0.0**
comp=Z,6.1nm,0.7s,baz=314,slow=5.0,SNR=8.6
SNAA pP **pP 19 16 16.9 0.0**
comp=Z,4.6nm,0.7s,baz=278,slow=8.0,SNR=4.5
comp=Z,6.1nm,0.7s
LRAL Lakeview Retre 59.84 343 P **P 19 15 56.8 +0.1**
baz=162,SNR=5.0
833A Chaparral WMA, 60.14 329 P **P 19 16 00.7 +1.9**
baz=149,SNR=11
KMSC Kings Mountain 60.61 349 P **P 19 16 02.8 +0.9**
baz=168
TROLL Troll, Antarti 61.11 160 P **P 19 16 05.1 +0.1**
TKL Tuckaleechee C 61.58 347 P **P 19 16 07.5 -1.0**
TKL IAmb IAmb 19 16 09.6
comp=Z,13nm,0.9s
SWET Sewanee 61.65 345 P **P 19 16 07.7 -1.2**
PLAL Pickwick Lake 61.97 343 P **P 19 16 09.9 -1.1**
PLAL IAmb IAmb 19 16 11.8
comp=Z,12nm,0.9s
JCT Junction City 62.15 330 P **P 19 16 12.5 +0.1**
JCT Junction City 62.15 330 P **P 19 16 14.2 +1.7**
baz=149,SNR=12
TZTN Tazewell 62.39 347 P **P 19 16 14.2 +0.3**
baz=166
WVT Waverly 62.99 343 P **P 19 16 17.8 0.0**
WVT Waverly 62.99 343 P **P 19 16 17.9 +0.1**
baz=161
TXAR Lajitas Array 63.04 327 P **P 19 16 20.1 +1.7**
comp=Z,2.9nm,0.7s,baz=151,slow=9.1,SNR=15
comp=Z,2.9nm,0.7s
TXAR Lajitas Array 63.04 327 P **P 19 16 17.1 -1.4**
S54A Dingess, Beckl 63.20 349 P **P 19 16 18.8 -0.5**
S54A IAmb IAmb 19 16 20.6
comp=Z,11nm,0.9s
MIAR Mount Ida 63.26 338 P **P 19 16 20.6 +0.9**
baz=156,SNR=17
W41B Gary Mavity, V 63.39 339 P **P 19 16 21.3 +0.8**
baz=157,SNR=6.4
ABTX Abilene, Hawle 63.92 332 P **P 19 16 25.3 +1.2**
baz=150,SNR=5.0
W39A Magazine 63.92 338 P **P 19 16 25.2 +1.2**
W39A IAmb IAmb 19 16 26.3
comp=Z,16nm,0.8s
W39A Magazine 63.92 338 P **P 19 16 25.4 +1.4**
baz=156,SNR=13
PBMO Poplar Bluff 64.31 341 P **P 19 16 26.3 -0.2**
PBMO IAmb IAmb 19 16 27.7
comp=Z,16nm,0.7s
U40A Yellville 64.67 339 P **P 19 16 29.4 +0.5**
U40A Yellville 64.67 339 P **P 19 16 29.6 +0.8**
baz=157,SNR=17
SIUC Southern Illin 64.85 343 P **P 19 16 29.5 -0.5**
SIUC IAmb IAmb 19 16 31.1
comp=Z,18nm,0.8s
P52A Corning 65.13 349 P **P 19 16 31.8 0.0**
baz=167
TUL1 Leonard 65.27 337 P **P 19 16 34.1 +1.4**
baz=154,SNR=5.2
QSPA South Pole Qui 65.47 180 P **P 19 16 35.1 +1.1**
comp=Z,13nm,0.7s,baz=191,slow=0.7,SNR=144
QSPA pP **pP 19 16 58.6 +0.9**
comp=Z,17nm,0.8s,baz=145,slow=1.6,SNR=9.8
comp=Z,13nm,0.7s
QSPA South Pole Qui 65.47 180 P **P 19 16 33.9 0.0**
QSPA IAmb IAmb 19 16 35.3
comp=Z,11nm,0.6s
P49A Miami Univ. Ec 65.52 347 P **P 19 16 33.9 -0.3**
baz=165
O53A New Philadelph 65.58 350 P **P 19 16 35.2 +0.5**
baz=168
CCM Cathedral Cave 65.74 341 P **P 19 16 36.1 +0.4**
CCM IAmb IAmb 19 16 37.1
comp=Z,21nm,0.8s
CCM Cathedral Cave 65.74 341 P **P 19 16 36.3 +0.5**
baz=158
MNTX Cornudas Mount 65.81 327 P **P 19 16 36.8 +0.4**
baz=144
ACSO Alum Creek Sta 65.86 349 P **P 19 16 36.8 +0.3**
baz=167,SNR=6.9
S39A Bolivar 66.04 339 P **P 19 16 38.4 +0.8**
O48B Farmland 66.30 347 P **P 19 16 39.3 0.0**
baz=164
MSTX Muleshoe 66.44 330 P **P 19 16 42.0 +1.6**
baz=147,SNR=5.6
N49A Columbus Grove 66.75 348 P **P 19 16 41.9 -0.2**
SFIN Lafayette 66.84 345 P **P 19 16 42.3 -0.4**
baz=163
L61B Northampton 66.92 357 P **P 19 16 44.6 +1.4**
baz=177
HRV Adam Dziewonsk 66.93 358 P **P 19 16 45.1 +1.9**
baz=178
P40A Paris 67.34 341 P **P 19 16 46.4 +0.6**
HDIL Hopedale 67.54 344 P **P 19 16 47.2 +0.1**
baz=161
121A Cookes Peak, D 67.70 325 P **P 19 16 51.3 +2.7**
baz=143
L44A Lake County Fo 68.74 345 P **P 19 16 55.4 +0.8**
baz=162
ANMO Albuquerque 68.97 328 P **P 19 16 59.0 +2.6**
baz=144
TUC Tucson 69.12 323 P **P 19 17 00.1 +2.8**
baz=140
LONY Lake Ozonia 69.18 356 P **P 19 16 58.8 +1.5**
baz=175
CBKS Cedar Bluff 69.30 335 P **P 19 17 00.2 +1.9**
baz=151,SNR=7.9
K43A Burlington 69.34 345 P **P 19 16 58.5 +0.2**
SADO Sadowa 69.74 353 P **P 19 16 59.8 -0.9**
LIC Lamto 69.75 73 *e*P **P 19 17 05.0 +3.5**
comp=Z,13nm,0.9s
T25A Trinidad 69.81 331 P **P 19 17 03.9 +2.2**
baz=146,SNR=7.1
TIC Toumodi 69.96 72 *e*P **P 19 17 03.3 +0.5**
214A Organ Pipe Nat 69.98 322 P **P 19 17 05.5 +2.9**
baz=139
JFWS Jewell Farm 70.00 344 P **P 19 17 03.0 +0.7**
baz=160,SNR=6.0
KIC Kosan Boka 70.06 73 *e*P **P 19 17 03.9 +0.5**
comp=Z,20nm,0.6s
DBIC Dimbokro 70.11 73 P **P 19 17 03.7 0.0**
comp=Z,14nm,0.7s,baz=242,slow=7.0,SNR=16
DBIC pP **pP 19 17 28.4 +0.7**
comp=Z,11nm,0.7s,baz=247,slow=5.6,SNR=6.8
DBIC LR LR 19 46 17.6
comp=Z,32nm,19.2s,baz=228,slow=34
comp=Z,14nm,0.7s
DBIC Dimbokro 70.11 73 P **P 19 17 03.0 -0.7**
DBIC IAmb IAmb 19 17 07.9
comp=Z,15nm,0.7s
I42A Draeger Farm, 70.60 345 P **P 19 17 05.9 -0.1**
KSCO Kaye Shedlock' 70.62 333 P **P 19 17 08.6 +2.1**
baz=148
W18A Petrified Fore 70.73 326 P **P 19 17 10.2 +2.9**
baz=142,SNR=5.9
SDCO Great Sand Dun 70.80 330 P **P 19 17 10.1 +2.3**
baz=146,SNR=18
BGNE Belgrade 71.00 338 P **P 19 17 10.2 +1.7**
baz=153
S22A 4UR Ranch, Cre 71.41 329 P **P 19 17 13.8 +2.4**
baz=145,SNR=5.6
Q24A Divide 71.65 331 P **P 19 17 15.3 +2.4**
baz=146
WUAZ Wupatki 71.89 325 P **P 19 17 17.1 +2.9**
baz=140
IKP In-Ko-Pah, Jac 72.38 320 P **P 19 17 19.8 +2.7**
baz=136
ISCO Idaho Springs 72.55 332 P **P 19 17 18.0 -0.2**
ISCO Idaho Springs 72.55 332 P **P 19 17 20.3 +2.1**
baz=146,SNR=9.1
ECSD EROS Data Cent 72.57 340 P **P 19 17 18.8 +0.9**
baz=154,SNR=9.8
BC3 Big Chuckawall 72.73 321 P **P 19 17 21.6 +2.5**
baz=137,SNR=7.0
MONP2 Monument Peak 72.74 320 P **P 19 17 22.3 +2.9**
baz=136
SPMN Marine on St. 72.82 343 P **P 19 17 19.7 +0.4**
baz=158
IRM Iron Mountain 72.92 322 P **P 19 17 22.3 +2.2**
baz=137
PFO Pinyon Flats O 73.28 320 P **P 19 17 25.1 +2.6**
baz=136
BELC Belle Mtn. Jos 73.29 321 P **P 19 17 25.1 +2.6**
baz=137
N23A Red Feather La 73.59 332 P **P 19 17 26.6 +2.4**
baz=146,SNR=6.7
VNDA Vanda 73.60 190 P **P 19 17 24.7 +1.1**
comp=Z,2.7nm,0.9s,baz=132,slow=4.1,SNR=12
comp=Z,2.7nm,0.9s
VNDA Vanda 73.60 190 P **P 19 17 22.3 -1.3**
GMRC Granite Mounta 73.67 322 P **P 19 17 27.6 +2.9**
baz=137,SNR=12
MURC Murrieta 73.70 320 P **P 19 17 27.2 +2.5**
baz=136
O20A White River Ci 73.99 330 P **P 19 17 29.0 +2.5**
baz=144,SNR=14
HEC Hector,Ludlow 74.08 321 P **P 19 17 30.0 +3.0**
baz=137,SNR=13
TUQ Turquoise Moun 74.29 322 P **P 19 17 31.0 +2.7**
baz=137
DRLN Deer Lake 74.42 8 P **P 19 17 28.6 +0.1**
DRLN IAmb IAmb 19 17 30.6
comp=Z,15nm,0.8s
BFSC Mount Baldy Ra 74.42 320 P **P 19 17 31.6 +2.5**
baz=136,SNR=7.4
GSC Goldstone, Bar 74.69 321 P **P 19 17 33.3 +2.8**
baz=136,SNR=8.6
KOWA Kowa 74.73 66 P **P 19 17 31.7 +0.5**
KOWA IAmb IAmb 19 17 32.4
comp=Z,12nm,0.5s
EYMN Ely 75.02 345 P **P 19 17 31.5 -0.6**
EYMN IAmb IAmb 19 17 33.4
comp=Z,9.3nm,0.7s
EYMN Ely 75.02 345 P **P 19 17 32.3 +0.2**
baz=159,SNR=6.5
EDW2 Edwards Air Fo 75.07 320 P **P 19 17 34.8 +2.1**
baz=135,SNR=5.8
K22A Casper 75.28 333 P **P 19 17 35.9 +2.0**
baz=146,SNR=5.2
RSSD Black Hills 75.51 335 P **P 19 17 34.7 -0.5**
RSSD Black Hills 75.51 335 P **P 19 17 37.0 +1.8**
baz=148
FURC Furnace Creek, 75.56 322 P **P 19 17 38.5 +3.1**
baz=136,SNR=6.0
TPNV Topopah Spring 75.57 323 P **P 19 17 38.7 +3.0**
baz=137,SNR=23
MPMC Manual Prospec 75.62 322 P **P 19 17 38.2 +2.2**
baz=136,SNR=7.3
ISA Isabella, Lake 75.90 321 P **P 19 17 40.1 +2.6**
baz=135,SNR=8.6
B35A Bob, Littlefor 75.96 344 P **P 19 17 37.7 +0.3**
B35A IAmb IAmb 19 17 38.9
comp=Z,11nm,0.8s
PKM Mcpherson Peak 76.14 319 P **P 19 17 41.6 +2.6**
baz=134,SNR=12
DUG Dugway, Tooele 76.20 327 P **P 19 17 41.7 +2.5**
baz=140,SNR=16
CWC Cottonwood Cre 76.22 321 P **P 19 17 42.0 +2.6**
baz=136
R11A Troy Canyon, C 76.23 324 P **P 19 17 42.2 +2.8**
baz=138,SNR=23
VES Vestal, Richgr 76.38 320 P **P 19 17 42.9 +2.8**
baz=135
AGMN Agassiz Nation 76.47 342 P **P 19 17 41.4 +1.1**
baz=156,SNR=5.2
PDAR Pinedale Array 76.69 331 P **P 19 17 43.2 +1.2**
comp=Z,1.5nm,0.5s,baz=132,slow=7.8,SNR=20
comp=Z,1.5nm,0.5s
PDAR Pinedale Array 76.69 331 P **P 19 17 42.4 +0.4**
BW06 Boulder Array 76.69 331 P **P 19 17 43.2 +1.3**
baz=143
AHID Auburn Hatcher 77.38 330 P **P 19 17 46.5 +0.7**
AHID IAmb IAmb 19 17 48.6
comp=Z,20nm,0.8s
NVAR Mina Array Bea 77.76 323 P **P 19 17 50.4 +2.2**
comp=Z,3.9nm,0.8s,baz=155,slow=6.1,SNR=41
NVAR pP **pP 19 18 14.0 +2.0**
comp=Z,0.8nm,0.8s,baz=142,slow=7.5,SNR=3.0
comp=Z,3.9nm,0.8s
ULM Lac du Bonnet 78.26 343 P **P 19 17 51.0 +0.8**
comp=Z,14nm,0.6s,baz=153,slow=5.6,SNR=13
comp=Z,14nm,0.6s
H17A Grant Village 78.43 331 P **P 19 17 54.5 +2.8**
baz=142
RLMT Red Lodge 78.45 332 P **P 19 17 53.9 +2.2**
baz=144
LAO LASA Array 78.50 335 P **P 19 17 53.6 +1.8**
baz=146
TORD Torodi Ar. Bea 78.88 70 P **P 19 17 54.8 +0.3**
comp=Z,14nm,0.5s,baz=259,slow=5.2,SNR=197
TORD pP **pP 19 18 18.9 +0.1**
comp=Z,55nm,0.7s,baz=254,slow=5.1,SNR=34
comp=Z,14nm,0.5s
DGMT Dagmar 79.26 337 P **P 19 17 57.8 +2.0**
baz=148
SCHQ Schefferville 79.27 2 P **P 19 17 56.5 +0.8**
comp=Z,3.2nm,0.7s,baz=192,slow=5.4,SNR=7.0
SCHQ pP **pP 19 18 20.6 +0.8**
comp=Z,1.8nm,0.6s,baz=252,slow=3.3,SNR=2.3
comp=Z,3.2nm,0.7s
SCHQ Schefferville 79.27 2 P **P 19 17 55.9 +0.2**
HLID Hailey 79.54 328 P **P 19 18 00.4 +2.7**
baz=139,SNR=29
BOZ Bozeman (W) 79.83 331 P **P 19 18 01.0 +1.8**
baz=142,SNR=7.3
EGMT Eagleton 80.98 334 P **P 19 18 06.7 +1.5**
baz=144,SNR=6.5
MAW Mawson 81.38 163 P **P 19 18 07.9 +0.9**
comp=Z,15nm,0.8s,baz=218,slow=7.3,SNR=6.2
MAW pP **pP 19 18 31.6 0.0**
comp=Z,9.9nm,0.8s,baz=54,slow=21,SNR=3.1
comp=Z,15nm,0.8s
MSO Missoula 81.81 331 P **P 19 18 11.7 +2.1**
baz=140
BOSA Boshof 82.34 118 P **P 19 18 13.5 +0.5**
comp=Z,5.4nm,0.6s,baz=274,slow=2.2,SNR=15
BOSA pP **pP 19 18 38.1 +0.3**
comp=Z,6.8nm,1.0s,baz=240,slow=2.6,SNR=3.4
comp=Z,5.4nm,0.6s
BOSA Boshof 82.34 118 P **P 19 18 12.9 -0.1**
BOSA IAmb IAmb 19 18 14.1
comp=Z,18nm,1.1s
J05D Fort Rock, OR 82.75 325 P **P 19 18 16.3 +1.6**
baz=134
J04D Umpqua Nationa 83.19 324 P **P 19 18 19.0 +2.0**
baz=133
L02F Cave Junction 83.22 323 P **P 19 18 19.3 +2.4**
baz=132
I05D Terrebonne, OR 83.54 325 P **P 19 18 20.9 +2.3**
baz=134,SNR=5.3
K02D Willamette Mer 83.66 323 P **P 19 18 21.8 +2.5**
baz=132
I04A Tendick Farm, 83.73 324 P **P 19 18 20.9 +1.3**
baz=133
LBTB Lobatse 84.09 115 P **P 19 18 20.7 -1.3**
LBTB IAmb IAmb 19 18 23.3
comp=Z,12nm,0.8s
MDT Midelt 84.17 50 LR LR 19 54 19.6
comp=Z,34nm,19.2s,baz=182,slow=34
NEW Newport 84.31 330 P P 19 18 27.4 +5.1
baz=138
FCC Fort Churchill 85.67 347 P **P 19 18 28.1 -0.7**
B05A Bryant 86.64 328 P **P 19 18 34.7 +0.9**
baz=134
ESDC Sonseca Array 88.45 45 P **P 19 18 43.5 +0.6**
comp=Z,1.1nm,0.9s,baz=238,slow=4.5,SNR=3.7
comp=Z,1.1nm,0.9s
URZ Urewera 91.64 226 LR LR 19 51 28.8
comp=Z,142nm,20.1s,baz=31,slow=30
YKA Yellowknife Ar 94.07 341 P **P 19 19 08.9 +0.6**
comp=Z,3.3nm,0.8s,baz=137,slow=4.8,SNR=32
YKA pP **pP 19 19 33.2 +0.3**
comp=Z,1.6nm,0.7s,baz=140,slow=4.3,SNR=5.7
comp=Z,3.3nm,0.8s
YKA Yellowknife Ar 94.07 341 P **P 19 19 07.3 -1.0**
BRTR Keskin Array B 115.03 56 PKP **PKPdf 19 24 31.1 -0.4**
comp=Z,1.0nm,0.8s,baz=126,slow=1.1,SNR=6.7
BRTR pPKP **pPKiKP 19 24 57.0 -0.4**
comp=Z,0.4nm,0.7s,baz=116,slow=2.9,SNR=3.0
KLMR Klimovskoe 120.48 33 *e*PKPdf **PKPdf 19 24 40.9 -0.1**
KLMR AMP 19 24 43.0
comp=Z,7.0nm,1.4s
KBZ Khabaz 122.47 53 PKP **PKiKP 19 24 46.5 +1.0**
comp=Z,3.7nm,0.8s,baz=132,slow=0.9,SNR=9.4
KBZ pPKP **pPKPdf 19 25 10.7 -0.5**
comp=Z,3.5nm,0.9s,baz=148,slow=3.0,SNR=4.2
ASAR Alice Springs 126.84 207 PKP **PKPdf 19 24 54.6 +0.1**
comp=Z,3.5nm,0.7s,baz=138,slow=1.9,SNR=36
ASAR pPKP **pPKPdf 19 25 19.8 -0.4**
comp=Z,2.8nm,0.6s,baz=131,slow=1.7,SNR=8.3
H11S2 WAKE ISLAND Hy127.76 275 T T 21 44 59.7
baz=108,slow=75,SNR=245
H11S1 WAKE ISLAND Hy127.77 275 T T 21 45 00.2
baz=108,slow=75,SNR=312
H11S3 WAKE ISLAND Hy127.78 275 T T 21 45 02.1
baz=108,slow=75,SNR=294
H11N3 WAKE ISLAND Hy127.93 276 T T 21 45 13.8
baz=107,slow=74,SNR=70
H11N1 WAKE ISLAND Hy127.94 276 T T 21 45 17.0
baz=107,slow=74,SNR=54
H11N2 WAKE ISLAND Hy127.94 276 T T 21 45 14.9
baz=107,slow=74,SNR=34
WRA Warramunga Arr 129.94 210 PKP **PKPdf 19 25 00.8 +0.3**
comp=Z,3.9nm,0.8s,baz=154,slow=1.7,SNR=33
WRA pPKP **pPKPdf 19 25 26.1 0.0**
comp=Z,2.2nm,0.7s,baz=162,slow=1.8,SNR=6.2
ABKAR Akbulak array 133.80 45 PKPdf **PKiKP 19 25 08.8 +0.7**
EKS2 Erkin-Say 144.88 50 P **PKPdf 19 25 28.4 +1.0**
SNR=16
AML Almayashu 144.98 51 P **PKPdf 19 25 28.8 +0.8**
SNR=22
ZALV Zalesovo Beam 145.05 27 PKPbc **PKPdf 19 25 27.9 +0.8**
comp=Z,25nm,0.7s,baz=312,slow=4.4,SNR=97
ZALV pPKPbc **pPKPdf 19 25 53.1 +0.4**
comp=Z,19nm,0.7s,baz=309,slow=4.4,SNR=9.9
USP Ospenovka 145.17 49 P **PKPdf 19 25 28.9 +1.2**
SNR=9.6
AAK Ala-Archa 145.38 50 P **PKPab 19 25 30.3 +1.7**
SNR=26
CHMS Chumysh 145.44 49 P **PKPab 19 25 29.9 +1.3**
SNR=12
UCH Uchtor 145.53 51 P **PKPab 19 25 31.0 +1.5**
SNR=35
KBK Karagaybulak 145.69 50 P **PKPab 19 25 31.2 +1.4**
SNR=14
TKM2 Tokmak 2 146.05 49 P **PKPab 19 25 31.4 +0.3**
SNR=20
BOOM Boomskoye usch146.44 50 PKPdf **PKPbc 19 25 32.0 +0.5**
ULHL Ulahol 146.73 50 P **PKPbc 19 25 32.8 +0.3**
SNR=22
KDJ Kajisay 147.43 50 PKPbc **PKPbc 19 25 33.9 -0.5**
ASAJ Asahikawa 147.57 315 PKPbc **PKiKP 19 25 36.4 -0.1**
comp=Z,11nm,0.8s,baz=126,slow=6.5,SNR=5.6
SIJI Sorong 147.61 221 PKPbc **PKPbc 19 25 36.2 +0.8**
comp=Z,12nm,0.8s,baz=360,slow=4.0,SNR=13
MK31 Makanchi Array 148.47 39 **PKiKP 19 25 38.0 -0.4**
MKAR Makanchi Array 148.47 39 PKPbc **PKiKP 19 25 37.7 -0.6**
comp=Z,11nm,0.7s,baz=338,slow=2.4,SNR=58
MKAR pPKPbc **pPKPbc 19 26 02.6 +0.2**
comp=Z,8.5nm,0.9s,baz=16,slow=2.7,SNR=5.5
MKAR Makanchi Array 148.47 39 **PKiKP 19 25 38.0 -0.4**
HYBB Hyderabad (bro 149.28 97 *e*PKPab **PKiKP 19 25 40.4 -0.4**
KLR Kul'dur 150.47 331 PKPbc **PKiKP 19 25 42.2 -0.1**
comp=Z,7.1nm,0.8s,baz=48,slow=2.1,SNR=5.1
KLR pPKPbc **sPKPdf 19 26 10.0 -1.3**
comp=Z,1.8nm,0.6s,baz=37,slow=5.6,SNR=2.6
WMQ Urumqi 153.31 39 *e*P **PKPdf 19 25 38.2 -2.5**
MJAR Matsushiro Arr 153.58 303 PKPbc **PKiKP 19 25 49.5 +0.3**
comp=Z,4.7nm,0.9s,baz=110,slow=2.5,SNR=13
MJAR PKPab **PKPab 19 26 02.7 +0.8**
comp=Z,3.9nm,0.8s,baz=126,slow=4.1,SNR=6.5
MJAR pPKPbc **pPKPbc 19 26 14.5 -0.1**
comp=Z,2.6nm,0.9s,baz=90,slow=6.3,SNR=2.8
BNX BinXian 155.04 331 ⇓P **PKPdf 19 25 43.6 +0.6**
BNX pmax pmax
comp=Z,10.0nm,0.9s
BNX pmax pmax
comp=Z,140nm,3.9s
SONM Songino Array 156.71 7 PKP **PKPdf 19 25 46.6 +1.2**
comp=Z,2.2nm,1.1s,baz=265,slow=0.8,SNR=12
SONM PKPab **PKPab 19 26 16.6 +1.6**
comp=Z,2.7nm,0.7s,baz=331,slow=4.2,SNR=14
SONM pPKPab **pPKPab 19 26 41.0 +1.3**
comp=Z,1.0nm,0.7s,baz=332,slow=4.0,SNR=3.1
KSRS Korea Array 160.52 315 PKP **PKPdf 19 25 51.5 +1.5**
comp=Z,1.8nm,0.8s,baz=100,slow=1.1,SNR=12
KSRS PKPab **PKPab 19 26 34.2 +2.5**
comp=Z,2.5nm,0.8s,baz=61,slow=4.3,SNR=10.0
GOMU GeErMu 162.26 46 PKP **PKPdf 19 25 54.0 +1.6**
GOMU AMB AMB
comp=Z,45nm,4.2s
GTA Gaotai 162.77 29 *e*P **PKPdf 19 25 54.2 +1.7**
GTA pmax pmax
comp=Z,3.0nm,1.1s
HHC Hu-ho-hao-te 163.91 357 *e*P **PKPdf 19 25 48.1 -5.4**
CMAR Chiang Mai Arr 167.50 118 PKP **PKPdf 19 25 58.0 +1.1**
comp=Z,1.0nm,0.9s,baz=273,slow=2.4,SNR=5.0
CMAR PKPab **PKPab 19 27 02.8 -0.1**
comp=Z,0.4nm,0.8s,baz=268,slow=6.1,SNR=4.0
NJ2 Nanjing 169.71 317 *e*P **PKPdf 19 25 55.3 -2.6**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
XAN Xi'an 170.61 9 PKP **PKPdf 19 26 00.0 +1.5**
XAN pPKP pPKPdf 19 26 26.1 +1.7
CD2 Chengdu 171.37 43 PKP **PKPdf 19 25 55.0 -4.0**
PZH PanZhiHua 171.82 76 PKP **PKPdf 19 25 55.7 -3.7**

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*NNC **08** 19:15:29.1±4.5, 37°.24N×69°.89E, h0km, mb3.8, mpv3.5*
Error ellipse: s-maj=48.1km s-min=29.9km az=116.0
ISC 08 19:15:19.2±1.9**, 36°.5N**±0°.2×**70°.7E**±0°.2**, h100km, n14,**
σ**1s.97**/16**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array** 1.7nm,0.3s,baz=178,slow=12,SNR=68	**6.65**	**359**	⇓P	**Pn**	**19 16 57.8**	**+3.5**
KK31	1.7nm,0.3s,baz=148,slow=26,SNR=3.5			⇑S	**Sn**	**19 18 06.4**	**-2.1**
PYUN	**Piuthan** 11nm,0.4s	**13.29**	**125**	*e*P	**Pn**	**19 18 22.9**	**-1.3**
DANN	**Dangsing** 7.1nm,0.3s	**13.64**	**123**	*e*P	**Pn**	**19 18 27.5**	**-1.4**
KOLN	**Koldanda**	**13.91**	**125**	*e*P	**Pn**	**19 18 31.4**	**-0.9**
GKN	**Gorkha** 8.0nm,0.3s	**14.46**	**122**	*e*P	**Pn**	**19 18 38.5**	**-0.8**
AB31	**Akbulak array** 0.3nm,0.3s,baz=143,slow=13,SNR=21	**15.02**	**332**	P	**P**	**19 18 49.8**	**+0.7**
AB31	0.9nm,0.5s,baz=148,slow=22,SNR=3.2			⇑S	**Sn**	**19 21 27.0**	**-4.8**
DMN	**Daman**	**15.03**	**122**	*e*P	**Pn**	**19 18 45.7**	**-0.9**
KKN	**Kakani** 4.7nm,0.3s	**15.04**	**121**	*e*P	**Pn**	**19 18 45.9**	**-0.8**
PKIN	**Phulchoki**	**15.25**	**121**	*e*P	**Pn**	**19 18 48.8**	**-0.6**
PKI	**Pulchoki**	**15.27**	**121**	*e*P	**Pn**	**19 18 48.8**	**-0.8**
GUN	**Gumba** 8.3nm,0.4s	**15.38**	**119**	*e*P	**Pn**	**19 18 50.3**	**-0.8**
RAMN	**Ramite** 4.8nm,0.3s	**16.48**	**121**	*e*P	**Pn**	**19 19 04.1**	**-0.6**
AKTO	**Aktyubinsk** 1.3nm,0.4s	**16.72**	**331**	⇓P	**P**	**19 19 09.2**	**+1.4**
TAPN	**Taplejung** 6.1nm,0.3s	**17.02**	**117**	*e*P	**Pn**	**19 19 11.2**	**-0.2**

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*NOU **08** 19:20:51.4, 13°.21S×166°.76E, h0km, MLv5.2/15, Vanuatu Islands*
*IDC **08** 19:21:07.3±3.3, 14°.21S×166°.68E, h42km±28km, mb3.9/12, mbtmp4.1/14, ML4.5/2, MS3.4/4, Error ellipse: s-maj=29.3km s-min=14.9km az=82.0*
ISC 08 19:21:07.3±0.6**, 14°.17S**±0°.07×**166°.7E**±0°.1**, h43km, n32,**

σ0s.80/30,mb4.1/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.36**	**159**	P	**Pn**	**19 21 29.7**	**-0.2**
DVP	**Devils Point**	**3.81**	**158**	P	**Pn**	**19 22 03.8**	**+0.2**
RTV	**Rentapao**	**3.96**	**155**	P	**Pn**	**19 22 06.5**	**+0.8**
KOUNC	**Koumac, New Ca**	**6.75**	**200**	P	**Pn**	**19 22 44.4**	**+0.5**
MARNC	**Mare, Loyalty**	**7.38**	**170**	P	**Pn**	**19 22 53.1**	**+0.5**
YATNC	**Mamie plateau,**	**7.85**	**179**	P	**Pn**	**19 22 59.9**	**+0.9**
DZM	**Mont Dzumac**	**7.86**	**182**	P	**Pn**	**19 22 58.8**	**-0.4**
	2.0nm,0.3s,baz=314,slow=10,SNR=22						
DZM				S	**Sn**	**19 24 26.4**	**-0.6**
	6.5nm,0.5s,baz=313,slow=20,SNR=1.8						
DZM				LR	LR	19 25 49.1	
	comp=Z,252nm,18.5s,baz=22,slow=36						
	4.5nm,0.3s						
DZM	**Mont Dzumac**	**7.86**	**182**	P	**Pn**	**19 22 59.4**	**+0.1**
NOUC	**Port Laguerre**	**7.90**	**183**	P	**Pn**	**19 23 01.2**	**+1.6**
ONTNC	**Ouen Toro**	**8.10**	**182**	P	**Pn**	**19 23 03.4**	**+1.0**
HNR	**Honiara**	**8.12**	**305**	P	**Pn**	**19 23 02.7**	**0.0**
	18nm,0.3s,baz=162,slow=5.3,SNR=7.2						
	53nm,0.4s						
OUENC	**Ouen Island, N**	**8.20**	**179**	P	**Pn**	**19 23 04.6**	**+0.7**
MSVF	**Nonsavu**	**11.48**	**109**	LR	LR	19 27 14.5	
	comp=Z,250nm,19.2s,baz=179,slow=32						
CTA	**Charters Tower**	**20.40**	**250**	LR	LR	19 32 36.0	
	comp=Z,104nm,19.1s,baz=89,slow=34						
STKA	**Stephens Creek**	**28.94**	**228**	P	**P**	**19 27 03.0**	**+0.4**
	4.9nm,1.0s,baz=50,slow=5.8,SNR=5.5						
	4.9nm,1.0s						
WRA	**Warramunga Arr**	**31.43**	**255**	P	**P**	**19 27 23.8**	**-1.1**
	0.5nm,0.8s,baz=87,slow=9.2,SNR=4.6						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**32.36**	**248**	P	**P**	**19 27 31.9**	**-1.1**
	0.8nm,0.5s,baz=75,slow=8.8,SNR=17						
	0.8nm,0.5s						
JHJ	**Hachijo jima 2**	**53.59**	**332**	LR	LR	19 51 17.3	
	comp=Z,26nm,21.9s,baz=38,slow=34						
MJAR	**Matsushiro Arr**	**57.16**	**333**	P	**P**	**19 30 48.9**	**-1.0**
	0.7nm,0.4s,baz=162,slow=10,SNR=4.6						
	0.7nm,0.4s						
ASAJ	**Asahikawa**	**62.03**	**341**	P	**P**	**19 31 24.9**	**+1.6**
	3.3nm,0.5s,baz=235,slow=4.5,SNR=7.4						
	3.3nm,0.5s						
KSRS	**Korea Array**	**62.97**	**326**	P	**P**	**19 31 30.8**	**+1.1**
	0.6nm,0.6s,baz=131,slow=7.3,SNR=4.1						
	0.6nm,0.6s						
VNDA	**Vanda**	**63.40**	**181**	P	**P**	**19 31 32.7**	**+0.7**
	1.2nm,0.6s,baz=328,slow=11,SNR=13						
	1.2nm,0.6s						
PETK	**Petropavlovsk-**	**67.45**	**354**	P	**P**	**19 31 58.6**	**+0.2**
	2.5nm,0.8s,baz=187,slow=6.3,SNR=4.6						
	2.5nm,0.8s						
QSPA	**South Pole Qui**	**75.85**	**180**	P	**P**	**19 32 48.6**	**-0.5**
	1.4nm,0.6s,baz=243,slow=0.9,SNR=6.5						
	1.4nm,0.6s						
SONM	**Songino Array**	**81.72**	**324**	P	**P**	**19 33 22.5**	**+1.0**
	0.8nm,0.9s,baz=116,slow=3.4,SNR=5.5						
	0.8nm,0.9s						
ILAR	**Eielson Array**	**86.17**	**18**	P	**P**	**19 33 42.5**	**-1.1**
	1.0nm,0.6s,baz=240,slow=5.2,SNR=20						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**96.42**	**317**	P	**P**	**19 34 32.2**	**+0.3**
	0.9nm,0.8s,baz=79,slow=6.5,SNR=4.4						
	0.9nm,0.8s						
ARCES	**ARCESS Array B**	**119.58**	**345**	PKP	**PKPdf**	**19 39 51.5**	**-0.4**
	1.4nm,0.5s,baz=74,slow=1.9,SNR=23						
FINES	**FINESS Array B**	**125.00**	**338**	PKP	**PKPdf**	**19 40 02.1**	**-0.3**
	0.6nm,0.4s,baz=44,slow=2.5,SNR=10						
NOA	**NORSAR Array B**	**129.94**	**345**	PKP	**PKPdf**	**19 40 11.7**	**-0.3**
	0.3nm,0.6s,baz=28,slow=2.0,SNR=2.3						
KEST	**Kesra**	**150.43**	**321**	PKPbc	**PKPbc**	**19 40 54.6**	**-0.1**
	3.1nm,0.9s,baz=5.1,slow=3.0,SNR=4.3						
ESDC	**Sonseca Array**	**153.30**	**344**	PKPbc	**PKiKP**	**19 41 01.3**	**0.0**
	0.7nm,0.6s,baz=6.4,slow=4.0,SNR=3.5						

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*IDC **08** 19:22:52.2±5.7, 25°.35N×141°.27E, h162^{km}±112^{km}, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=179.6km s-min=45.3km az=68.0*

*JMA **08** 19:22:55.3±0.3, 26°N±2°×14°1E±°, h128^{km}, MV4.3/15, IOTO ISLANDS REGION*

ISC 08 19:22:50.2±1.2**, 25°.55N**±0°.09×**140°.6E**±0°.1**, h150**^{km}**, n10, σ2s.40**/14**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.82**	**53**	P	**Pn**	**19 23 24.4**	**+1.2**
JHH2				S	**Sn**	**19 23 46.6**	**-2.0**
CBIJ	**Chichi jima**	**2.13**	**43**	P	**Pn**	**19 23 28.8**	**+2.0**
CBIJ				*e*S	**Sn**	**19 23 54.0**	**-1.0**
JCJ	**Chichijima**	**2.13**	**43**	P	**Pn**	**19 23 28.7**	**+1.9**
	136nm,0.4s,baz=273,slow=17,SNR=70						
JCJ				S	**Sn**	**19 23 54.3**	**-0.7**
	326nm,0.3s,baz=251,slow=23,SNR=14						
BSO3	**Boso 3**	**9.22**	**360**	*e*P	**Pn**	**19 25 03.5**	**+4.0**
BSO4	**Boso 4**	**9.41**	**359**	*e*P	**Pn**	**19 25 06.5**	**+4.3**
JAG	**Ashikaga**	**10.88**	**355**	P	**Pn**	**19 25 23.2**	**+1.4**
JAG				*e*S	**Sn**	**19 27 20.1**	**-1.9**
JHO	**Hitachi**	**11.02**	**0**	P	**Pn**	**19 25 25.2**	**+1.6**
MJAR	**Matsushiro Arr**	**11.14**	**350**	P	**P**	**19 25 31.1**	**-2.4**
	0.5nm,0.3s,baz=162,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**45.62**	**188**	P	**P**	**19 30 55.7**	**0.0**
	1.0nm,0.6s,baz=8.6,slow=8.7,SNR=13						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**49.35**	**188**	P	**P**	**19 31 23.6**	**-0.9**
	0.3nm,0.8s,baz=2.5,slow=6.5,SNR=2.2						
	0.3nm,0.8s						

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*IDC **08** 19:32:47.8±1.4, 34°.91N×86°.26E, h0^{km}, mb3.5/3, mbtmp3.4/8, ML3.0/5, MS2.8/4, Error ellipse: s-maj=36.9km s-min=26.4km az=63.0*

ISC 08 19:32:49.1±0.8**, 35°.00N**±0°.08×**86°.6E**±0°.1**, h10**^{km}**, n23, σ0s.88**/20**, mb3.5**/3**, MS2.8**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	**Dangsing**	**7.04**	**201**	*e*P	**Pn**	**19 34 32.9**	**+0.4**
	21nm,0.5s						
GUN	**Gumba**	**7.09**	**185**	*e*P	**Pn**	**19 34 33.9**	**+0.7**
	8.0nm,0.4s						
GKN	**Gorkha**	**7.17**	**194**	*e*P	**Pn**	**19 34 35.0**	**+0.9**
	8.2nm,0.4s						
KKN	**Kakani**	**7.27**	**189**	*e*P	**Pn**	**19 34 36.7**	**+1.1**
	7.8nm,0.5s						
PKIN	**Phulchoki**	**7.47**	**188**	*e*P	**Pn**	**19 34 39.3**	**+1.0**
	20nm,0.5s						
PKI	**Pulchoki**	**7.47**	**188**	*e*P	**Pn**	**19 34 39.3**	**+0.9**
	11nm,0.4s						
DMN	**Daman**	**7.47**	**190**	*e*P	**Pn**	**19 34 39.6**	**+1.2**
	6.5nm,0.4s						
PYUN	**Piuthan**	**7.52**	**205**	*e*P	**Pn**	**19 34 39.2**	**+0.2**
	7.2nm,0.4s						
KOLN	**Koldanda**	**7.64**	**200**	*e*P	**Pn**	**19 34 41.3**	**+0.7**
	32nm,0.6s						
TAPN	**Taplejung**	**7.69**	**172**	*e*P	**Pn**	**19 34 40.3**	**-1.1**
	6.6nm,0.6s						
RAMN	**Ramite**	**8.02**	**180**	*e*P	**Pn**	**19 34 46.0**	**0.0**
	5.4nm,0.4s						
ODAN	**Odare**	**8.14**	**175**	*e*P	**Pn**	**19 34 47.5**	**-0.1**
	9.1nm,0.6s						
AAK	**Ala-Archa**	**12.10**	**313**	LR	LR	19 41 27.5	
	comp=Z,26nm,18.7s,baz=168,slow=43						
MKAR	**Makanchi Array**	**12.21**	**346**	Pn	**Pn**	**19 35 44.0**	**+0.9**
	0.1nm,0.3s,baz=157,slow=15,SNR=4.0						
	1.3nm,0.9s						
KURBB	**Kurchatov Arra**	**16.67**	**342**	Pn	**Pn**	**19 36 42.9**	**+0.2**
	baz=143,slow=12,SNR=3.2						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**18.99**	**357**	P	**P**	**19 37 10.9**	**+0.3**
	0.1nm,0.3s,baz=193,slow=12,SNR=4.7						
	0.8nm,0.5s						
SONM	**Songino Array**	**19.57**	**43**	P	**Pn**	**19 37 18.8**	**+0.3**
	0.1nm,0.3s,baz=224,slow=12,SNR=4.5						
	0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.81**	**143**	P	**Pn**	**19 37 22.0**	**+0.6**
	0.1nm,0.3s,baz=321,slow=10,SNR=7.0						
	0.9nm,0.7s						
KSRS	**Korea Array**	**33.27**	**73**	LR	LR	19 55 12.0	
	comp=Z,14nm,18.4s,baz=110,slow=40						
GNI	**Garni**	**33.31**	**291**	LR	LR	19 56 57.1	
	comp=Z,16nm,19.0s,baz=139,slow=44						
NOA	**NORSAR Array B**	**53.14**	**324**	P	**P**	**19 42 06.5**	**-0.2**
	0.4nm,0.7s,baz=84,slow=7.4,SNR=3.4						
NOA				LR	LR	20 04 48.1	
	comp=Z,16nm,18.1s,baz=225,slow=36						
	0.4nm,0.7s						
GERES	**GERESS Array B**	**53.95**	**309**	P	**P**	**19 42 12.9**	**-0.1**
	0.4nm,0.7s,baz=64,slow=9.1,SNR=3.7						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.42**	**278**	P	**P**	**19 44 48.4**	**-2.0**
	0.2nm,0.6s,baz=66,slow=5.1,SNR=2.0						
	0.2nm,0.6s						

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*NEIC **08** 19:35:56.7±1.5, 14°.1S±0°.1×167°.0E±0°.2, h35^{km}±13^{km}, mb4.3/9, Error ellipse: s-maj=25.5km s-min=10.7km az=58.0*

*IDC **08** 19:35:58.2±6.7, 14°.20S×166°.76E, h33^{km}±49^{km}, mb3.9/15, mbtmp4.2/17, ML4.6/2, MS3.9/3, Error ellipse: s-maj=27.1km s-min=18.4km az=89.0*

ISC 08 19:35:59.6±0.7**, 14°.22S**±0°.07×**166°.7E**±0°.1**, h43**^{km}**, n46, σ1s.25**/43**, mb4.1**/18**, MS3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.31**	**158**		**Pn**	**19 36 19.2**	**-2.3**
DVP	**Devils Point**	**3.77**	**158**	P	**Pn**	**19 36 56.4**	**+1.2**
RTV	**Rentapao**	**3.92**	**155**	P	**Pn**	**19 36 59.6**	**+2.3**
KOUNC	**Koumac, New Ca**	**6.70**	**200**		**Pn**	**19 37 36.0**	**+0.6**
MARNC	**Mare, Loyalty**	**7.33**	**170**		**Pn**	**19 37 44.5**	**+0.4**
MARNC	**Mare, Loyalty**	**7.33**	**170**	P	**Pn**	**19 37 45.3**	**+1.2**
DZM	**Mont Dzumac**	**7.81**	**182**	*e*Pn	**Pn**	**19 37 49.5**	**-1.3**
DZM				*e*LR	LR	19 38 57.6	
DZM				*e*Sn	**Sn**	**19 39 17.3**	**-0.7**
DZM	**Mont Dzumac**	**7.81**	**182**	Pn	**Pn**	**19 37 50.8**	**0.0**
	3.4nm,0.3s,baz=6.9,slow=7.3,SNR=35						
DZM				Sn	**Sn**	**19 39 17.3**	**-0.7**
	7.4nm,0.3s,baz=112,slow=22,SNR=3.1						
	8.4nm,0.3s						
DZM	**Mont Dzumac**	**7.81**	**182**		**Pn**	**19 37 50.1**	**-0.7**
ONTNC	**Ouen Toro**	**8.04**	**182**	P	**Pn**	**19 37 56.7**	**+2.8**
HNR	**Honiara**	**8.14**	**305**	Pn	**Pn**	**19 37 54.8**	**-0.5**
	20nm,0.3s,baz=163,slow=6.2,SNR=4.0						
	88nm,0.5s						
HNR	**Honiara**	**8.14**	**305**		**Pn**	**19 37 54.3**	**-1.0**
OUENC	**Ouen Island, N**	**8.15**	**179**		**Pn**	**19 37 56.3**	**+0.8**
PINNC	**Pines Island,**	**8.38**	**175**		**Pn**	**19 37 56.7**	**-1.8**
MSVF	**Nonsavu**	**11.46**	**109**	LR	LR	19 42 07.0	
	comp=Z,1µm,19.0s,baz=338,slow=32						
CTA	**Charters Tower**	**20.37**	**251**	P	**P**	**19 40 33.6**	**+0.8**
	6.1nm,0.9s,baz=103,slow=9.9,SNR=4.1						
	6.1nm,0.9s						
AFI	**Afiamalu**	**20.89**	**92**	LR	LR	19 46 49.2	
	comp=Z,295nm,18.7s,baz=169,slow=31						
STKA	**Stephens Creek**	**28.90**	**228**	P	**P**	**19 41 55.8**	**+1.2**
	4.0nm,0.5s,baz=50,slow=8.8,SNR=16						
	4.0nm,0.5s						
STKA	**Stephens Creek**	**28.90**	**228**	P	**P**	**19 41 55.0**	**+0.4**
WR0	**Warramunga Arr**	**31.22**	**255**	P	**P**	**19 42 14.1**	**-1.2**
WR0				IAmb	IAmb	19 42 35.9	
	comp=Z,6.1nm,1.2s						
WB0	**Warramunga Arr**	**31.34**	**255**	P	**P**	**19 42 14.9**	**-1.5**
WB0				IAmb	IAmb	19 42 18.0	
	comp=Z,5.1nm,1.1s						
WRAB	**Tennant Creek**	**31.40**	**255**	P	**P**	**19 42 16.4**	**-0.4**
WRAB				IAmb	IAmb	19 42 23.4	
	comp=Z,7.8nm,1.1s						
WRA	**Warramunga Arr**	**31.41**	**255**	P	**P**	**19 42 15.5**	**-1.4**
	comp=Z,1.4nm,1.0s,baz=86,slow=8.4,SNR=8.0						
	comp=Z,1.4nm,1.0s						
WRA	**Warramunga Arr**	**31.41**	**255**	P	**P**	**19 42 16.4**	**-0.5**
AS31	**Alice Springs**	**32.34**	**248**	P	**P**	**19 42 23.6**	**-1.4**
AS31				IAmb	IAmb	19 42 37.7	
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**32.34**	**248**	P	**P**	**19 42 24.1**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=76,slow=9.2,SNR=36						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**32.34**	**248**	P	**P**	**19 42 23.6**	**-1.5**
KNRA	**Kununurra**	**36.64**	**263**	P	**P**	**19 43 01.7**	**-0.6**
SIJI	**Sorong**	**37.46**	**288**	P	**P**	**19 43 08.2**	**-1.1**
	comp=Z,2.2nm,0.4s,baz=186,slow=24,SNR=5.0						
	comp=Z,2.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**39.56**	**259**	P	**P**	**19 43 25.5**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=96,slow=10,SNR=2.3						
	comp=Z,1.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.56**	**259**	P	**P**	**19 43 25.6**	**-1.3**
FITZ				IAmb	IAmb	19 43 38.0	
	comp=Z,15nm,1.2s						
BATI	**Baumata**	**42.20**	**270**	P	**P**	**19 43 50.3**	**+1.6**
	comp=Z,5.2nm,0.5s,baz=241,slow=5.3,SNR=5.1						
	comp=Z,5.2nm,0.5s						
TBI	**Tubuai**	**42.35**	**109**	*e*LR	LR	19 55 56.4	
	comp=Z,317nm,25.0s						
TAOE	**Nuku Hiva Isla**	**52.27**	**90**	*e*LR	LR	20 00 09.0	
	comp=Z,365nm,24.1s						
MJAR	**Matsushiro Arr**	**57.20**	**333**	P	**P**	**19 45 41.5**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=112,slow=10,SNR=6.7						
	comp=Z,0.9nm,0.4s						
ASAJ	**Asahikawa**	**62.08**	**341**	P	**P**	**19 46 16.5**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=222,slow=7.0,SNR=6.5						
	comp=Z,2.9nm,0.5s						
KSRS	**Korea Array**	**63.01**	**326**	P	**P**	**19 46 23.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=138,slow=6.5,SNR=4.6						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**63.35**	**181**	P	**P**	**19 46 24.4**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=329,slow=9.0,SNR=4.6						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**74.23**	**294**	P	**P**	**19 47 34.3**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=133,slow=5.0,SNR=1.5						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**75.80**	**180**	P	**P**	**19 47 41.1**	**+0.1**
SONM	**Songino Array**	**81.76**	**324**	P	**P**	**19 48 14.6**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=135,slow=5.8,SNR=7.8						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**86.22**	**18**	P	**P**	**19 48 34.6**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=236,slow=5.0,SNR=24						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**96.45**	**317**	P	**P**	**19 49 24.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=68,slow=7.2,SNR=4.1						
	comp=Z,0.5nm,0.7s						
NRIK	**Noril'sk**	**99.40**	**339**	LR	LR	20 32 12.6	
	comp=Z,28nm,21.3s,baz=110,slow=34						
ARCES	**ARCESS Array B**	**119.62**	**345**	PKP	**PKPdf**	**19 54 42.0**	**-2.2**
	comp=Z,0.8nm,0.4s,baz=41,slow=2.1,SNR=9.0						
FINES	**FINESS Array B**	**125.05**	**338**	PKP	**PKPdf**	**19 54 54.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=38,slow=2.3,SNR=11						

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*IDC **08** 19:36:41.7±0.8, 14°.00S×166°.44E, h0^{km}, mb4.4/15, mbtmp4.4/16, ML4.6/1, MS3.9/3, Error ellipse: s-maj=22.3km s-min=16.3km az=84.0*

*NEIC **08** 19:36:44.1±1.4, 14°.04S±0°.09×166°.8E±0°.1, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=21.7km s-min=14.9km az=88.0*

ISC 08 19:36:46.9±0.7**, 14°.21S**±0°.07×**166°.6E**±0°.1**, h43**^{km}**, n44, σ1s.43**/41**, mb4.3**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.36**	**155**		**Sn**	**19 37 24.4**	**-1.8**
KOUNC	**Koumac, New Ca**	**6.69**	**199**	Pn	**Pn**	**19 38 23.1**	**+0.4**
MARNC	**Mare, Loyalty**	**7.36**	**170**	Pn	**Pn**	**19 38 31.0**	**-0.8**
DZM	**Mont Dzumac**	**7.82**	**181**	Pn	**Pn**	**19 38 37.8**	**-0.5**
	8.0nm,0.3s,baz=172,slow=22,SNR=5.7						
DZM				Sn	**Sn**	**19 40 05.0**	**-0.7**
	3.1nm,0.3s,baz=1.5,slow=21,SNR=1.0						
	19nm,0.3s						
KRVT	**Keravat (AS076**	**17.43**	**303**	LR	LR	19 47 20.8	
	comp=Z,540nm,21.5s,baz=263,slow=37						
EIDS	**Eidsvold**	**18.34**	**230**	P	**P**	**19 40 57.9**	**+0.1**
PMG	**Port Moresby**	**19.63**	**282**	LR	LR	19 47 47.9	
	comp=Z,576nm,18.0s,baz=79,slow=34						
CTA	**Charters Tower**	**20.31**	**250**	P	**P**	**19 41 20.4**	**+1.0**
	14nm,1.0s,baz=63,slow=11,SNR=5.9						
	14nm,1.0s						
OUZ	**Omahuta**	**21.85**	**164**	P	**P**	**19 41 33.9**	**-1.9**
COEN	**Coen**	**22.74**	**268**	P	**P**	**19 41 44.3**	**-1.2**
COEN				IAmb	IAmb	19 41 48.2	
	comp=Z,12nm,0.9s						
URZ	**Urewera**	**25.70**	**161**	P	**P**	**19 42 16.6**	**+3.6**
	comp=Z,7.6nm,0.8s,baz=300,slow=22,SNR=3.8						
	comp=Z,7.6nm,0.8s						
STKA	**Stephens Creek**	**28.86**	**228**	P	**P**	**19 42 42.1**	**+0.6**
	comp=Z,15nm,0.5s,baz=48,slow=8.6,SNR=30						
	comp=Z,15nm,0.5s						
STKA	**Stephens Creek**	**28.86**	**228**	P	**P**	**19 42 42.4**	**+0.9**
STKA				IAmb	IAmb	19 42 42.6	
	comp=Z,3.2nm,0.6s						
RPZ	**Rata Peaks**	**29.65**	**173**	P	**P**	**19 42 50.8**	**+2.4**
	comp=Z,7.5nm,0.6s,baz=73,slow=12,SNR=3.6						
	comp=Z,7.5nm,0.6s						
WR0	**Warramunga Arr**	**31.16**	**255**	P	**P**	**19 42 59.9**	**-2.1**
WR0				IAmb	IAmb	19 43 02.1	
	comp=Z,5.6nm,1.1s						
WB0	**Warramunga Arr**	**31.28**	**255**	P	**P**	**19 43 01.1**	**-2.0**
WB0				IAmb	IAmb	19 43 02.8	
	comp=Z,7.1nm,0.8s						
WB2	**Warramunga Arr**	**31.33**	**255**	P	**P**	**19 43 01.7**	**-1.8**
WB2				IAmb	IAmb	19 43 03.0	
	comp=Z,5.4nm,0.9s						
WRAB	**Tennant Creek**	**31.33**	**255**	P	**P**	**19 43 01.3**	**-2.2**
WRAB				IAmb	IAmb	19 43 13.6	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**31.34**	**255**	P	**P**	**19 43 02.4**	**-1.2**
	comp=Z,4.1nm,0.8s,baz=84,slow=8.5,SNR=13						
	comp=Z,4.1nm,0.8s						
WRA	**Warramunga Arr**	**31.34**	**255**	P	**P**	**19 43 04.0**	**+0.4**
AS31	**Alice Springs**	**32.27**	**248**	P	**P**	**19 43 10.8**	**-1.0**
ASAR	**Alice Springs**	**32.27**	**248**	P	**P**	**19 43 10.7**	**-1.2**
	comp=Z,4.4nm,0.6s,baz=75,slow=9.2,SNR=16						
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**32.27**	**248**	P	**P**	**19 43 10.5**	**-1.3**
BBOO	**Buckleboo**	**33.41**	**231**	P	**P**	**19 43 21.2**	**-0.4**
SIJI	**Sorong**	**37.38**	**288**	P	**P**	**19 43 55.1**	**-0.8**
	comp=Z,3.6nm,0.6s,baz=81,slow=7.5,SNR=4.2						
	comp=Z,3.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.49**	**259**	P	**P**	**19 44 12.6**	**-1.0**
	comp=Z,3.8nm,0.9s,baz=79,slow=2.9,SNR=3.9						
	comp=Z,3.8nm,0.9s						
BATI	**Baumata**	**42.13**	**270**	P	**P**	**19 44 37.0**	**+1.6**
	comp=Z,20nm,0.7s,baz=191,slow=3.3,SNR=7.6						
MJAR	**Matsushiro Arr**	**57.15**	**333**	P	**P**	**19 46 29.2**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=164,slow=9.5,SNR=4.5						
	comp=Z,0.8nm,0.5s						
KSRS	**Korea Array**	**62.95**	**326**	P	**P**	**19 47 09.4**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=136,slow=7.3,SNR=5.7						
	comp=Z,1.1nm,0.8s						
VNDA	**Vanda**	**63.37**	**181**	P	**P**	**19 47 14.9**	**+3.6**
	comp=Z,2.7nm,0.6s,baz=354,slow=8.5,SNR=16						
	comp=Z,2.7nm,0.6s						
VNDA	**Vanda**	**63.37**	**181**	P	**P**	**19 47 10.9**	**-0.5**
VNDA				IAmb	IAmb	19 47 16.6	
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**70.28**	**337**	LR	LR	20 14 53.5	
	comp=Z,26nm,20.6s,baz=134,slow=33						
CMAR	**Chiang Mai Arr**	**74.16**	**294**	P	**P**	**19 48 20.6**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=120,slow=4.7,SNR=6.3						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**75.82**	**180**	P	**P**	**19 48 27.9**	**-0.5**
SONM	**Songino Array**	**81.70**	**324**	P	**P**	**19 48 60.0**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=143,slow=7.1,SNR=5.9						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**86.23**	**18**	P	**P**	**19 49 23.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=230,slow=6.0,SNR=6.7						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**96.39**	**317**	P	**P**	**19 50 10.6**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=87,slow=4.1,SNR=3.7						
	comp=Z,1.3nm,0.9s						
ARCES	**ARCESS Array B**	**119.59**	**345**	PKP	**PKPdf**	**19 55 30.3**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=48,slow=1.6,SNR=6.2						
FINES	**FINESS Array B**	**125.00**	**338**	PKP	**PKPdf**	**19 55 41.7**	**-0.3**
	comp=Z,4.4nm,1.0s,baz=64,slow=4.4,SNR=6.4						
NB2	**NORSAR Subarra**	**129.96**	**345**	SKPb		19 59 13.1	
	comp=Z,1.8nm,0.8s,baz=31,slow=3.2						
NOA	**NORSAR Array B**	**129.96**	**345**	PKP	**PKiKP**	**19 55 54.0**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=32,slow=2.1,SNR=3.3						
GERES	**GERESS Array B**	**138.89**	**333**	PKP	**PKiKP**	**19 56 11.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=57,slow=4.9,SNR=5.1						
KEST	**Kesra**	**150.41**	**320**	PKPbc	**PKiKP**	**19 56 34.8**	**-0.2**
	comp=Z,8.8nm,1.0s,baz=316,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**165.31**	**268**	PKPab	**PKPab**	**19 57 45.4**	**-0.1**
	comp=Z,1.6nm,1.0s,baz=129,slow=2.0,SNR=4.1						

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*TAP **08** 19:58:27.8, 24°.17N×121°.78E, h10^{km}, ML3.3, C*

*JMA **08** 19:58:27.2±0.1, 24°.1N±0°.6×121°.7E±0°.9, h20^{km}, MV2.5/8, TAIWAN REGION*

ISC 08 19:58:28.2±0.8**, 24°.18N**±0°.01×**121°.78E**±0°.02**, h10**^{km}±5^{km}**, n109, σ0s.86**/195**, 5C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**345**	P	**Pg**	**19 58 31.3**	**+0.1**
	baz=349						
EHP				S	**Sg**	**19 58 33.9**	**+0.5**
	baz=349						
ETL	**Fush Village**	**0.14**	**260**	⇓*i*P	**Pg**	**19 58 31.4**	**-0.1**
	baz=265						
ETL				S	**Sg**	**19 58 34.1**	**+0.3**
	baz=265						
NACB	**Ninganchiao**	**0.17**	**267**	⇓*i*P	**Pg**	**19 58 31.7**	**-0.2**
	baz=271						
NACB				*i* S	**Sg**	**19 58 34.4**	**0.0**
	baz=271						
TWD	**Chiawan**	**0.20**	**238**	⇓*i*P	**Pg**	**19 58 32.2**	**-0.2**
	baz=248						
TWD				S	**Sg**	**19 58 35.2**	**+0.1**
	baz=248						
ENA	**Nanau**	**0.24**	**352**	⇓*i*P	**Pg**	**19 58 33.3**	**0.0**
	baz=354						
ENA				*i* S	**Sg**	**19 58 37.1**	**+0.5**
	baz=354						
EWUT	**Wuta**	**0.26**	**360**	⇓*i*P	**Pg**	**19 58 33.6**	**+0.1**
	baz=360						
EWUT				S	**Sg**	**19 58 37.6**	**+0.5**
	baz=360						
HWA	**Hwalien**	**0.26**	**218**	P	**Pg**	**19 58 34.2**	**+0.8**
	baz=229						
HWA				*e*S	**Sb**	**19 58 39.5**	**0.0**
	baz=229						
ETLH	**Xiulin Townshi**	**0.27**	**275**	P	**Pg**	**19 58 33.6**	**-0.2**
	baz=278						
ETLH				S	**Sg**	**19 58 37.5**	**0.0**
	baz=278						
ETM	**Tongmen**	**0.34**	**230**	⇑*i*P	**Pg**	**19 58 34.8**	**-0.2**
	baz=233						
ETM				*e*S	**Sg**	**19 58 38.9**	**-0.7**
	baz=233						
TEYL	**Yanliau Villag**	**0.35**	**208**	*e*P	**Pg**	**19 58 35.9**	**+0.7**
	baz=226						
LATG	**Datong**	**0.42**	**327**	⇓*i*P	**Pg**	**19 58 36.6**	**+0.1**
	baz=328						
LATG				*i* S	**Sg**	**19 58 42.8**	**+0.7**
	baz=328						
TWC	**Suao**	**0.43**	**9**	⇓*i*P	**Pg**	**19 58 36.7**	**+0.1**
	baz=6.0						
TWC				*i* S	**Sg**	**19 58 43.0**	**+0.7**
	baz=6.0						
NNSB	**Datong**	**0.44**	**304**	⇓*i*P	**Pg**	**19 58 37.0**	**+0.1**
	baz=306						
NNSB				S	**Sg**	**19 58 42.9**	**+0.3**
	baz=306						
NNS	**Nan Shan**	**0.45**	**305**	⇓*i*P	**Pg**	**19 58 37.1**	**+0.1**
	baz=307						
NNS				*i* S	**Sb**	**19 58 43.5**	**-1.7**
	baz=307						
NDS	**Dongshan**	**0.45**	**353**	*i* P	**Pg**	**19 58 37.1**	**+0.1**
	baz=353						
NDS				S	**Sg**	**19 58 43.6**	**+0.5**
	baz=353						
WHF	**Hehuan Shan**	**0.47**	**265**	⇑*i*P	**Pg**	**19 58 37.4**	**-0.1**
	baz=268						
WHF				*i* S	**Sg**	**19 58 44.4**	**+0.6**
	baz=268						
ESL	**Shilin**	**0.48**	**221**	⇑*i*P	**Pg**	**19 58 37.4**	**-0.3**
	baz=232						
ESL				*e*S	**Sg**	**19 58 44.8**	**+0.7**
	baz=232						
FUSS	**Fushou**	**0.49**	**278**	P	**Pg**	**19 58 38.1**	**+0.2**
	baz=280						
FUSS				*e*S	**Sb**	**19 58 45.0**	**-1.5**
	baz=280						
ENTT	**Nioudou**	**0.49**	**337**	⇓*i*P	**Pg**	**19 58 38.1**	**+0.2**
	baz=338						
ENTT				S	**Sg**	**19 58 45.0**	**+0.6**
	baz=338						
TEGC	**Jichi Village**	**0.52**	**205**	*e*P	**Pg**	**19 58 39.2**	**+0.8**
	baz=207						
TEGC				*e*S	**Sn**	**19 58 49.5**	**-1.1**
	baz=207						
TWE	**Neicheng**	**0.54**	**349**	⇓*i*P	**Pg**	**19 58 39.1**	**+0.2**
	baz=351						
TWE				*i* S	**Sg**	**19 58 46.9**	**+0.9**
	baz=351						
CHGB	**Renai**	**0.57**	**258**	P	**Pg**	**19 58 39.2**	**-0.1**
	baz=254						
CHGB				S	**Sg**	**19 58 46.8**	**0.0**
	baz=254						
TDCB	**Techi**	**0.57**	**277**	P	**Pg**	**19 58 39.3**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=279						
TDCB				S	Sg	19 58 46.9	0.0
	baz=279						
ILA	Ilan	0.58	357	P	Pg	19 58 39.5	0.0
	baz=350						
ILA				i S	Sg	19 58 48.2	+1.1
	baz=350						
OWD	Renai	0.60	248	eP	Pg	19 58 39.7	-0.1
	baz=250						
OWD				eS	Sg	19 58 47.4	-0.3
	baz=250						
FUSB	Fushanzhiwuyua	0.60	343	⇓iP	Pg	19 58 40.1	+0.3
	baz=343						
FUSB				S	Sg	19 58 47.9	+0.1
	baz=343						
EGFH	Guangfu	0.60	212	eP	Pg	19 58 40.3	+0.3
	baz=231						
EGFH				eS	Sg	19 58 49.0	+1.1
	baz=231						
NSK	Sanguang	0.62	322	⇓iP	Pg	19 58 40.6	+0.3
	baz=323						
NSK				S	Sb	19 58 49.1	-1.0
	baz=323						
NWLT	Wulai	0.64	337	P	Pg	19 58 40.9	+0.2
	baz=337						
NWLT				eS	Sg	19 58 49.4	+0.3
	baz=337						
NTC	Toucheng	0.67	4	eP	Pg	19 58 39.9	-1.3
	baz=14						
EGS		0.67	12	eP	Pg	19 58 41.6	+0.3
	baz=21						
VWDT	VWDT	0.72	234	eP	Pg	19 58 42.3	+0.1
	baz=245						
VWDT				eS	Sg	19 58 51.7	0.0
	baz=245						
NFF	Wufeng Townshi	0.75	307	eP	Pg	19 58 43.0	+0.3
	baz=308						
NFF				eS	Sb	19 58 52.9	-0.9
	baz=308						
HGSD	Ruisui	0.76	205	eP	Pg	19 58 43.3	+0.4
	baz=197						
HGSD				eS	Sb	19 58 54.5	+0.5
	baz=197						
WHP	Taichung City	0.77	277	P	Pb	19 58 43.6	-0.1
	baz=279						
WHP				S	Sb	19 58 53.7	-0.6
	baz=279						
WPL	Puli Township	0.77	257	P	Pg	19 58 43.2	+0.2
	baz=260						
WPL				S	Sb	19 58 54.6	+0.4
	baz=260						
TIPB	Shuangxi	0.79	3	P	Pg	19 58 43.5	+0.2
	baz=3.0						
TIPB				S	Sg	19 58 53.8	+0.1
	baz=3.0						
EHY	Hungye	0.79	212	P	Pg	19 58 43.1	-0.4
	baz=215						
WCS	Beigang Elemen	0.80	261	eP	Pb	19 58 44.1	-0.2
	baz=256						
WCS				eS	Sb	19 58 54.5	-0.7
	baz=256						
NHDH	Xindian Distri	0.81	343	eP	Pg	19 58 44.2	+0.4
	baz=344						
NHDH				eS	Sg	19 58 54.8	+0.4
	baz=344						
TWA	Mucha	0.81	347	P	Pg	19 58 44.4	+0.5
	baz=348						
TWA				eS	Sb	19 58 55.3	-0.2
	baz=348						
LIOB	Emei	0.83	304	eP	Pb	19 58 45.1	+0.3
	baz=305						
LIOB				eS	Sn	19 58 56.3	-2.1
	baz=305						
NSTT	Nanjuang	0.84	302	⇓iP	Pb	19 58 45.0	+0.1
	baz=304						
NSTT				i S	Sn	19 58 56.3	-2.2
	baz=304						
TWB1	Santiao Chiao	0.84	13	P	Pg	19 58 44.5	0.0
	baz=13						
TWB1				eS	Sb	19 58 56.7	+0.4
	baz=13						
SSLB	Suanglung	0.85	243	⇑iP	Pg	19 58 44.3	-0.3
	baz=254						
SSLB				S	Sg	19 58 54.4	-1.4
	baz=254						
SMLT	Sun Moon Lake	0.86	250	⇑iP	Pg	19 58 44.6	-0.1
	baz=252						
SMLT				eS	Sg	19 58 55.9	-0.1
	baz=252						
NWF	Wu-fen Shan	0.88	0	⇓iP	Pg	19 58 45.6	+0.4
	baz=353						
NWF				S	Sg	19 58 57.1	+0.3
	baz=353						
TAP	Taipei	0.89	344	eP	Pb	19 58 45.9	+0.2
	baz=344						
TAP				eS	Sb	19 58 57.8	+0.2
	baz=344						
TYC	Yuchr	0.89	252	P	Pg	19 58 45.5	+0.2
	baz=254						
TYC				S	Sb	19 58 57.2	-0.4
	baz=254						
SXI1	Grass Mountain	0.91	6	P	Pb	19 58 45.9	-0.3
	baz=12						
SXI1				S	Sb	19 58 57.9	-0.5
	baz=12						
TWQ1	Liyutan	0.93	280	eP	Pb	19 58 46.2	-0.3
	baz=282						
TWQ1				eS	Sn	19 58 59.7	-1.1
	baz=282						
EYUL	Yuli	0.93	207	eP	Pb	19 58 46.6	+0.2
	baz=222						
TWF1	Yuli	0.94	208	eP	Pb	19 58 46.8	+0.2
	baz=223						
TWF1				eS	Sn	19 59 01.0	0.0
	baz=223						
SBCB	Hsinchu	0.94	310	eP	Pn	19 58 48.1	+0.6
	baz=311						
SBCB				eS	Sn	19 59 01.4	+0.3
	baz=311						
NCU	National Centr	0.95	326	eP	Pb	19 58 46.7	0.0
	baz=327						
NCU				eS	Sn	19 59 02.8	+1.6
	baz=327						
NCUH	Zhongli	0.95	325	eP	Pn	19 58 47.5	-0.1
	baz=326						
NCUH				eS	Sn	19 59 00.3	-1.0
	baz=326						
NSY	Sanyi	0.96	284	eP	Pn	19 58 47.7	-0.1
	baz=286						
NSY				eS	Sn	19 59 00.4	-1.1
	baz=286						
HSN	Hsinchu	0.96	310	P	Pn	19 58 48.0	+0.3
	baz=304						
HSN				S	Sn	19 59 02.1	+0.6
	baz=304						
NMLH	Miaoli	0.97	292	eP	Pn	19 58 47.9	0.0
	baz=293						
NMLH				eS	Sn	19 59 00.5	-1.2
	baz=293						
TWS1	Kuangyinshan	0.97	340	eP	Pg	19 58 47.6	+0.7
	baz=341						
TWS1				eS	Sn	19 59 00.9	-0.8
	baz=341						
TCU	Taichung	1.01	268	eP	Pb	19 58 47.5	-0.3
	baz=271						
TCU				eS	Sn	19 59 02.4	-0.2
	baz=271						
NTST	Danshui	1.02	343	eP	Pb	19 58 47.7	-0.3
	baz=343						
NTST				eS	Sn	19 59 02.5	-0.5
	baz=343						
YUS	Yu-Shan	1.02	228	P	Pb	19 58 47.8	-0.5
	baz=231						
YUS				eS	Sg	19 59 02.4	+1.0
	baz=231						
ANP	Anpu	1.03	347	eP	Pb	19 58 48.1	0.0
	baz=348						
WJS	Zhushan	1.03	250	eP	Pn	19 58 48.7	+0.1
	baz=252						
WJS				eS	Sn	19 59 03.1	0.0
	baz=252						
WNT	Mingjian	1.05	253	eP	Pn	19 58 48.9	-0.1
	baz=251						
WNT				eS	Sn	19 59 03.5	-0.2
	baz=251						
WDJ	Dajia District	1.05	279	eP	Pn	19 58 49.2	+0.2
	baz=282						
WDJ				eS	Sn	19 59 05.4	+1.6
	baz=282						
FULB	Fuli	1.08	204	P	Pb	19 58 49.4	+0.4
	baz=224						
FULB				eS	Sn	19 59 04.3	-0.1
	baz=224						
JYNG	Yonagunijimaku	1.10	76	P	Pb	19 58 49.2	0.0
ALS	Alishan	1.12	233	P	Pb	19 58 49.6	-0.2
	baz=237						
ALS				eS	Sn	19 59 05.0	-0.7
	baz=237						
WCHH	Zhanghua	1.12	265	eP	Pb	19 58 49.5	-0.1
	baz=268						
WCHH				eS	Sn	19 59 06.0	+0.5
	baz=268						
CHKT	Chengkung	1.14	199	eP	Pb	19 58 49.6	-0.5
	baz=202						
CHKT				eS	Sn	19 59 06.2	+0.1
	baz=202						
YOJ	Yonaguni jima	1.16	76	P	Pn	19 58 50.1	-0.4
ELDTW	Lidau	1.21	215	P	Pn	19 58 51.4	+0.1
	baz=207						
ELDTW				eS	Sb	19 59 04.0	-3.0
	baz=207						
WGK	Gukeng	1.22	246	eP	Pn	19 58 51.3	0.0
	baz=250						
WGK				eS	Sg	19 59 08.8	+1.3
	baz=250						
WDLH	Douliu	1.24	247	eP	Pg	19 58 52.1	+0.1
	baz=251						
WDLH				eS	Sg	19 59 11.6	+3.5
	baz=251						
EDH	Donghe	1.28	200	eP	Pn	19 58 52.7	+0.5
	baz=203						
EDH				eS	Sg	19 59 11.2	+1.7
	baz=203						
WRL	Guolierlin Hig	1.31	258	eP	Pb	19 58 53.2	+0.3
	baz=261						
WRL				eS	Sg	19 59 11.8	+1.3
	baz=261						
CHN2	Minshiung	1.36	242	eP	Pb	19 58 54.3	+0.5
	baz=246						
CHN2				eS	Sg	19 59 15.8	+3.8
	baz=246						
STYH	Taoyuan	1.36	223	eP	Pn	19 58 53.7	+0.4
	baz=227						
STYH				eS	Sg	19 59 12.4	+0.3
	baz=227						
WTK	Tuku	1.36	249	eP	Pb	19 58 53.8	-0.1
	baz=253						
WTK				eS	Sg	19 59 13.1	+1.0
	baz=253						
TPUB	Ta-pu	1.37	230	P	Pb	19 58 54.0	+0.1
	baz=223						
TPUB				S	Sg	19 59 12.3	-0.1
	baz=223						
CHY	Chiayi	1.42	241	eP	Pg	19 58 55.6	+0.2
	baz=246						
CHY				eS	Sg	19 59 16.0	+2.2
	baz=246						
WTP	Ta-pu	1.42	229	⇓P	Pb	19 58 54.9	+0.1
	baz=233						
WTP				S	Sb	19 59 13.4	+0.4
	baz=233						
TWK	Hsinying	1.49	233	eP	Pn	19 58 55.4	+0.3
	baz=237						
TWK				eS	Sg	19 59 15.9	-0.4
	baz=237						
TWG	Pinlang	1.50	206	eP	Pn	19 58 55.9	+0.6
	baz=210						
TWG				eS	Sn	19 59 12.3	-2.6
	baz=210						
TWGBT	Beinan	1.50	205	eP	Pn	19 58 53.2	-2.1
	baz=211						
SNST	Tainan City	1.52	231	eP	Pb	19 58 56.9	+0.5
	baz=236						
SNST				eS	Sg	19 59 18.6	+1.6
	baz=236						
CHN1	Nanshi	1.52	229	eP	Pb	19 58 56.8	+0.3
	baz=234						
CHN1				S	Sg	19 59 17.7	+0.7
	baz=234						
WSF	Szhu	1.52	249	P	Pb	19 58 56.8	+0.2
	baz=253						
WSF				S	Sg	19 59 18.3	+1.0
	baz=253						
LDUT	Ludao	1.53	191	eP	Pn	19 58 52.5	-3.1
	baz=179						
SGST	Jiashian	1.55	225	eP	Pb	19 58 57.1	0.0
	baz=230						
SGST				eS	Sg	19 59 17.6	-0.5
	baz=230						
ICHU	Yijhu	1.60	239	eP	Pb	19 58 58.5	+0.6
	baz=245						
CHN8	Yiju	1.66	240	eP	Pg	19 59 00.0	-0.1
	baz=245						
CHN8				eS	Sg	19 59 22.6	+0.9
	baz=245						
ECL	Taimali	1.75	206	eP	Pb	19 59 00.2	-0.3
	baz=194						
SSD	Sandimen	1.78	217	eP	Pn	19 59 00.1	+1.1
	baz=234						
SSD				eS	Sb	19 59 24.2	+1.0
	baz=234						
IRIF	Iriomote-Funau	1.79	85	eP	Pn	19 58 59.3	+0.1
TSMG	Majia	1.80	216	eP	Pn	19 59 00.2	+0.9
	baz=211						
MASBT	Mashibuluo	1.89	214	eP	Pn	19 59 00.9	+0.4
	baz=219						
MASBT				eS	Sb	19 59 26.1	-0.3
	baz=219						
EAST	Anshuo	1.99	206	eP	Pn	19 59 02.9	+1.0
	baz=196						
JKRS	Kuro-shima	2.04	88	P	Pn	19 59 02.7	+0.2
SCZT	Fangliau	2.10	211	eP	Pn	19 59 04.4	+1.0
	baz=198						
PNG	Penghu	2.13	254	eP	Pn	19 59 03.9	+0.1
	baz=259						
PHUB	P'eng-hu	2.13	252	eP	Pn	19 59 04.1	+0.3
	baz=258						
PHUB				eS	Sb	19 59 31.5	-1.8
	baz=258						
JIJ	Ishigaki jima	2.17	85	P	Pn	19 59 03.9	-0.4
VWUC	VWUC	2.27	291	eP	Pn	19 59 05.5	-0.3
	baz=294						
PTMZ	Houxiangcun	2.57	290	eP	Pn	19 59 09.4	-0.4
	baz=293						
MATB	Ma-tsu	2.57	320	eP	Pn	19 59 09.5	-0.3
	baz=321						
LYJJ	Jianjiangzhen	2.98	323	eP	Pn	19 59 18.0	+2.4
	baz=323						

IDC 08 19:59:45.6±3.6**, 30°.10S**×**177°.96W, h0^{km}, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=80.4km s-min=21.7km az=114.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.85	3	Pn	Pn	20 00 05.8	+1.0
	61nm,0.3s,baz=130,slow=23,SNR=2.1						
RAO				Sn	Sn	20 00 17.3	-0.6
	224nm,0.3s,baz=58,slow=22,SNR=6.2						
ASAR	Alice Springs	43.16	267	P	P	20 07 47.6	-0.7
	0.4nm,0.9s,baz=107,slow=7.5,SNR=1.6						
	0.4nm,0.9s						
WRA	Warramunga Arr	44.12	272	P	P	20 07 56.4	+0.3
	0.3nm,0.5s,baz=111,slow=8.1,SNR=9.1						
	0.3nm,0.5s						
FINES	FINESS Array B	144.88	340	PKP	PKPab	20 19 22.7	-0.4
	0.4nm,0.5s,baz=38,slow=2.5,SNR=5.1						

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*MDD **08** 20:10:17.3±0.4, 35°.54N×3°.62W, h19^{km}±6^{km}, mb_Lg2.5/17, Error ellipse: s-maj=6.3km s-min=2.3km az=165.0*

*SFS **08** 20:10:17.0, 35°.53N×3°.61W, h19^{km}, ML2.5, ALBORAN SUR*

*CNRM **08** 20:10:17.3, 35°.69N×3°.61W, h14km*

*INMG **08** 20:10:18.1±1.4, 35°.58N×3°.57W, h24^{km}±10^{km}, ML1.8, Error ellipse: s-maj=5.1km s-min=3.6km az=153.0*

*IGIL **08** 20:10:18.3, 35°.54N×3°.62W, h19^{km}*

ISC 08 20:10:17.3±3.1**, 35°.67N**±0°.02×**3°.61W**±0°.02**, h17^{km}**±23^{km}**, n45, σ1^{s}.11**/79**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.53	211	P	Pb	20 10 28.7	+0.5
PALE				S	Sb	20 10 35.0	-0.6
EALB	Alboran	0.54	60	Pg	Pb	20 10 28.5	+0.2
EALB				Sg	Sb	20 10 36.7	+1.0
EALB				i Vmb_Lg		20 10 38.1	
WMELI	Melilla	0.64	124	P	Pb	20 10 29.8	-0.3
WMELI				S	Sb	20 10 38.1	-0.6
EMEL	Melilla	0.65	125	Pg	Pb	20 10 29.9	-0.3
EMEL				Sg	Sb	20 10 37.3	-1.7
GOG	Mont Gurugu	0.67	132	P	Pb	20 10 30.2	-0.4
GOG				S	Sb	20 10 39.6	-0.1
PVLZ	Peæn de	0.76	229	P	Pn	20 10 33.5	+0.3
PVLZ				S	Sn	20 10 43.0	-1.3
CHAS	Isla Isabel II	1.08	117	P	Pb	20 10 35.7	-1.8
CHAS				S	Sb	20 10 49.4	-2.0
AKLM	AKL	1.18	190	P	Pb	20 10 39.3	0.0
AKLM				S	Sn	20 10 55.5	+0.6
ELGU	Los Guajares,	1.19	359	Pn	Pn	20 10 38.5	-0.9
ELGU				Sn	Sn	20 10 56.3	+1.1
ELGU				i Vmb_Lg		20 10 58.6	
EMIJ	Mijas	1.30	314	Pn	Pn	20 10 39.3	-1.4
EMIJ				Sn	Sn	20 10 56.2	-1.6
EMIJ				i Vmb_Lg		20 10 57.2	
TAF	Taforalt	1.30	131	P	Pn	20 10 39.9	-0.9
TAF				S	Sb	20 11 01.1	+3.3
EBER	Berja	1.35	25	Pn	Pn	20 10 40.3	-1.3
EBER				Sn	Sn	20 10 59.3	0.0
EBER				i Vmb_Lg		20 11 00.9	
EGOR	Sierra Gorda,	1.49	344	Pn	Pn	20 10 43.7	+0.2
EGOR				Sn	Sb	20 11 04.0	+0.7
EGOR				i Vmb_Lg		20 11 10.5	
CHEFC	Chefchaouen	1.52	249	P	Pn	20 10 44.3	+0.4
CHEFC				S	Sb	20 11 05.4	+1.1
EQUE	Quentar	1.53	5	Pn	Pn	20 10 44.2	+0.2
EQUE				Sn	Sn	20 11 03.1	-0.6
EJIF	Jimena Fronter	1.70	298	Pn	Pn	20 10 45.8	-0.4
EJIF				Sn	Sn	20 11 07.4	-0.2
ENIJ	Nijar	1.72	41	Pn	Pn	20 10 46.6	+0.1
ENIJ				Sn	Sn	20 11 06.6	-1.6
ENIJ				i Vmb_Lg		20 11 24.0	
EQES	Quesada	2.17	11	Pn	Pn	20 10 54.6	+1.8
EQES				Sn	Sn	20 11 21.4	+2.0
EQES				i Vmb_Lg		20 11 24.3	
ESPR	Espera	2.17	304	Pn	Pn	20 10 51.5	-1.2
ESPR				Sn	Sn	20 11 18.5	-0.8
ESPR				i Vmb_Lg		20 11 27.0	
LCRM	LCR	2.24	208	P	Pb	20 10 56.1	-1.2
LCRM				S	Sn	20 11 22.3	+1.2
EADA	Adamuz	2.61	343	Pn	Pn	20 11 00.5	+1.7
EADA				Sn	Sn	20 11 31.5	+1.4
EADA				i Vmb_Lg		20 11 45.1	
EZAR	Zarzadilla de	2.68	34	Pn	Pn	20 10 59.7	-0.1
EZAR				Sn	Sn	20 11 32.7	+0.8
ECAB	El Cabril	2.80	329	Pn	Pn	20 11 01.9	+0.5
ECAB				Sn	Sn	20 11 34.4	-0.5
ECAB				i Vmb_Lg		20 12 58.6	
EMUR	La Murta	2.88	41	Sn	Sn	20 11 35.1	-1.7
EMUR				i Vmb_Lg		20 12 50.9	
MD31	MD31	2.96	199	P	Pn	20 11 05.3	+1.7
MDT	Midelt	2.97	196	P	Pn	20 11 05.6	+1.8
EMIN	Mina Concepcio	3.23	311	Pn	Pn	20 11 06.4	-0.8
EMIN				Sn	Sn	20 11 43.9	-1.5
EMIN				i Vmb_Lg		20 12 05.4	
ETOB	Tobarra	3.39	28	Pn	Pn	20 11 11.2	+1.7
ETOB				Sn	Sn	20 11 50.3	+0.8
ETOB				i Vmb_Lg		20 12 51.6	
EGRO	El Granado	3.63	302	Pn	Pn	20 11 12.5	-0.2
EGRO				Sn	Sn	20 11 53.8	-1.4
EGRO				i Vmb_Lg		20 13 11.1	
PBAR	Barrancos	3.71	313	ePn	Pn	20 11 14.3	+0.4
PBAR				eSn	Sn	20 11 56.4	-0.9
PBAR				A	A	20 11 58.2	
	2.3nm,1.0s						
PVAQ	Vaqueiros	3.73	299	ePn	Pn	20 11 14.5	+0.3
PVAQ				eSn	Sn	20 11 56.7	-1.1
PVAQ	Vaqueiros	3.73	299	P	Pn	20 11 13.7	-0.5
PBDV	Barranco-do-Ve	3.82	295	ePn	Pn	20 11 15.6	+0.2
PAB	San Pablo	3.91	352	Pn	Pn	20 11 17.5	+0.8
PAB				Sn	Sn	20 12 01.7	-0.6
PAB				i Vmb_Lg		20 12 31.9	
ESDC	Sonseca Array	4.00	356	Pn	Pn	20 11 19.1	+1.1
ESDC				Sn	Sn	20 12 03.4	-1.1
PCVE	Castro Verde	4.07	300	ePn	Pn	20 11 18.4	-0.3
EBAD	Badajoz	4.11	320	Pn	Pn	20 11 19.2	-0.1
EBAD				Sn	Sn	20 12 06.4	-0.6
MESJ	Messejana	4.29	302	eP	Pn	20 11 21.8	0.0
MESJ	Messejana	4.29	302	ePn	Pn	20 11 22.0	+0.2
MESJ				eSn	Sn	20 12 12.3	+0.8
PESTR	Estremoz	4.50	316	eSn	Sn	20 12 16.6	-0.1
EVO	Evora	4.53	310	ePn	Pn	20 11 25.9	+0.7
PNCL	Nicolau / Gran	4.63	303	ePn	Pn	20 11 27.0	+0.4
PNCL				eSn	Sn	20 12 18.9	-1.1
PMRV	Marv??o	4.80	322	ePn	Pn	20 11 31.1	+2.2
PMRV				eSn	Sn	20 12 23.5	-0.7
PMTG	Montargil	5.00	314	ePn	Pn	20 11 32.9	+1.3
PCBR	Castelo Branco	5.17	325	ePn	Pn	20 11 35.2	+1.3

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*IDC **08** 20:16:24.7±9.2, 21°.34S×179°.77E, h598^{km}±67^{km}, mb2.9/5, mbtmp3.9/6, Error ellipse: s-maj=206.8km s-min=98.5km az=95.0*

ISC 08 20:16:21.6±8.6**, 21°.6S**±0°.6×**18°0W**±°**, h600^{km}, n6, σ0^{s}.38**/6**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.34	331	P	P	20 17 49.7	0.0
	8.8nm,0.5s,baz=90,slow=23,SNR=16						
CTA	Charters Tower	31.78	266	P	P	20 21 58.9	+0.2
	2.6nm,0.9s,baz=83,slow=12,SNR=1.6						
	2.6nm,0.9s						
STKA	Stephens Creek	35.86	245	P	P	20 22 32.5	-0.1
	3.9nm,1.1s,baz=99,slow=15,SNR=1.9						
	3.9nm,1.1s						
ASAR	Alice Springs	42.70	258	P	P	20 23 27.6	+0.1
	1.4nm,0.8s,baz=99,slow=8.0,SNR=14						
	1.4nm,0.8s						
WRA	Warramunga Arr	42.85	264	P	P	20 23 28.1	-0.6
	0.4nm,0.3s,baz=96,slow=7.7,SNR=27						
	0.4nm,0.3s						
FITZ	Fitzroy Crossi	51.28	264	P	P	20 24 31.9	+0.1
	2.1nm,1.0s,baz=117,slow=7.2,SNR=5.9						
	2.1nm,1.0s						

TAP 08 20:17:06.2, 23°.08N×120°.79E, h6^{km}, ML1.5, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan	0.09	340	⇑iP	Pg	20 17 08.6	+0.2
	baz=348						
STYT				S	Sg	20 17 09.9	+0.1
	baz=348						
STYH	Taoyuan	0.09	352	P	Pg	20 17 08.8	+0.4
	baz=355						
STYH				S	Sg	20 17 10.4	+0.6
	baz=355						
SGST	Jiashian	0.19	271	eP	Pg	20 17 10.2	+0.1
	baz=270						
SGST				eS	Sg	20 17 13.4	+0.7
	baz=270						
WTP	Ta-pu	0.23	316	eP	Pg	20 17 11.9	+1.0
	baz=318						
WTP				eS	Sg	20 17 15.9	+1.9
	baz=318						
ELDTW	Lidau	0.24	62	eP	Pg	20 17 11.6	+0.7
	baz=63						
ELDTW				eS	Sg	20 17 14.8	+0.7
	baz=63						
CHN1	Nanshi	0.26	294	eP	Pb	20 17 12.8	-0.5
	baz=294						
CHN1				eS	Sb	20 17 17.5	-0.7
	baz=294						
TPUB	Ta-pu	0.27	326	eP	Pb	20 17 12.5	-0.9
	baz=328						
CHN4	Tsaushan	0.33	326	eP	Pb	20 17 13.8	-0.6
	baz=332						
TWK	Hsinying	0.34	304	eP	Pb	20 17 14.3	-0.3
	baz=305						
TWK				eS	Sb	20 17 19.6	-0.7
	baz=305						
LONT	Longtian	0.36	119	eP	Pb	20 17 14.2	-0.8
	baz=119						
SSD	Sandimen	0.36	204	eP	Pg	20 17 13.8	+0.5
	baz=194						

TWG	**Pinlang**	**0.37**	**135**	*e*P	Pb	20 17 14.4	-0.7
	baz=126						
TWG				*e*S	Sg	20 17 19.3	+1.1
	baz=126						
TWGBT	**Beinan**	**0.37**	**134**	*e*P	Pg	20 17 14.3	+0.8
	baz=126						
TWGBT				*e*S	Sg	20 17 19.4	+1.0
	baz=126						
TSMG	**Majia**	**0.40**	**200**	*e*P	Pg	20 17 14.2	+0.3
	baz=195						
ALS	**Alishan**	**0.43**	**2**	*e*P	Pg	20 17 15.3	+0.7
	baz=5.0						
ALS				*e*S	Sg	20 17 21.4	+1.0
	baz=5.0						
YUS	**Yu-Shan**	**0.43**	**20**	*e*P	Pg	20 17 15.4	+0.5
	baz=31						
FULB	**Fuli**	**0.48**	**76**	*e*P	Pb	20 17 16.5	-0.6
	baz=67						
EDH	**Donghe**	**0.48**	**103**	*e*P	Pb	20 17 16.6	-0.6
	baz=111						
MASBT	**Mashibuluo**	**0.49**	**197**	*e*P	Pg	20 17 16.0	+0.4
	baz=196						
ECL	**Taimali**	**0.50**	**162**	*e*P	Pg	20 17 16.6	+0.7
	baz=153						
ECL				*e*S	Sg	20 17 23.0	+0.5
	baz=153						
TWF1	**Yuli**	**0.54**	**60**	P	Pb	20 17 17.4	-0.7
	baz=68						
EYUL	**Yuli**	**0.56**	**61**	*e*P	Pg	20 17 17.2	+0.2
	baz=61						
HGSD	**Ruisui**	**0.71**	**55**	*e*P	Pb	20 17 20.6	-0.5
	baz=55						

IDC 08 20:35:24.2±29.0**,22°.83S×177°.06W,h0^{km},mb3.9**/4**,**
mbtmp3.9/4**,Error ellipse: s-maj=557.6km**
s-min=151.8km az=90.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.63**	**247**	P	P	20 42 40.2	-0.7
	3.1nm,1.0s,baz=102,slow=12,SNR=4.4						
	3.1nm,1.0s						
ASAR	**Alice Springs**	**44.88**	**259**	P	P	20 43 40.6	-0.1
	0.3nm,0.3s,baz=89,slow=6.4,SNR=20						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**45.19**	**264**	P	P	20 43 43.0	-0.3
	0.6nm,0.5s,baz=102,slow=7.9,SNR=22						
	0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.62**	**264**	P	P	20 44 48.5	+0.9
	2.2nm,1.0s,baz=111,slow=8.6,SNR=1.8						
	2.2nm,1.0s						
H03S2	**Juan Fernandez**	**83.97**	**124**	T	T	22 20 05.9	
	baz=245,SNR=7.0						
H03S1	**Juan Fernandez**	**83.98**	**124**	T	T	22 20 09.9	
	baz=245,SNR=8.4						
H03S3	**Juan Fernandez**	**83.98**	**124**	T	T	22 20 02.1	
	baz=245,SNR=7.0						

*IDC **08** 20:37:07.7±2.3,36°.38N×70°.84E,h158^{km}±22^{km},mb3.5/12,*
mbtmp4.0/16,Error ellipse: s-maj=17.8km s-min=12.3km
az=44.0
*NEIC **08** 20:37:08.9±1.8,36°.54N±0°.07×70°.9E±0°.1,h176^{km}±7^{km},*
mb4.2/5,Error ellipse: s-maj=12.0km s-min=10.1km
az=92.0
*NNC **08** 20:37:11.6±4.5,37°.16N×70°.93E,h0^{km},mb4.6,mpv4.2,*
Error ellipse: s-maj=36.4km s-min=25.6km az=171.0
ISC 08 20:37:09.4±0.5**,36°.54N**±0°.04×**70°.98E**±0°.05**,h188^{km},n85,**
σ**2^s.03**/101**,mb3.8**/11**,4C-6D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.51**	**348**		**Pn**	**20 37 51.6**	**-1.1**
KBL	**Kabul**	**2.55**	**219**	Pn	**Pn**	**20 37 51.9**	**-1.4**
CHGR	**Chuyangaron**	**2.56**	**326**	Pn	**Pn**	**20 37 51.7**	**-1.5**
CEP	**Cherat**	**2.82**	**164**	P	**Pn**	**20 37 56.1**	**-0.3**
CEP				S	**Sn**	**20 38 31.0**	**-2.1**
CHCP	**Chirah Chowk**	**3.43**	**146**	P	**Pn**	**20 38 03.8**	**+0.1**
NIL	**Nilore**	**3.43**	**147**	Pn	**Pn**	**20 38 03.3**	**-0.5**
BTK	**Batken**	**3.51**	**358**	Pn	**Pn**	**20 38 04.9**	**+0.2**
THW	**Thamme Wali**	**3.79**	**170**	P	**Pn**	**20 38 07.7**	**-0.5**
SARP	**Sargodha**	**4.82**	**163**	P	**Pn**	**20 38 20.1**	**-1.1**
JMU	**Jammu**	**5.00**	**139**	*e*P	**Pn**	**20 38 22.3**	**-1.2**
JMU				*e*S	**Sn**	**20 39 18.6**	**-3.2**
THN	**Thein Dam**	**5.66**	**135**	*e*P	**Pn**	**20 38 31.8**	**-0.2**
THN				*e*S	**Sn**	**20 39 34.7**	**-2.5**
AML	**Almayashu**	**5.96**	**20**	P	**Pn**	**20 38 35.9**	**-0.3**
	SNR=72						
UCH	**Uchtor**	**6.30**	**25**	P	**Pn**	**20 38 40.4**	**-0.3**
	SNR=13						
EKS2	**Erkin-Say**	**6.48**	**19**	P	**Pn**	**20 38 42.7**	**0.0**
	SNR=32						
KK31	**Karatay Array**	**6.56**	**357**		**Pn**	**20 38 43.1**	**-0.6**
KK31	**Karatay Array**	**6.56**	**357**	⇓P	**Pn**	**20 38 42.8**	**-0.9**
	32nm,0.6s,baz=192,slow=19,SNR=380						
KK31				⇓S	**Sn**	**20 39 52.5**	**-5.9**
	40nm,0.5s,baz=186,slow=22,SNR=16						
KKAR	**Karatay Array**	**6.56**	**357**		**Pn**	**20 38 42.9**	**-0.8**
KKAR	**Karatay Array**	**6.56**	**357**	Pn	**Pn**	**20 38 42.9**	**-0.8**
AAK	**Ala-Archa**	**6.66**	**23**	P	**Pn**	**20 38 45.3**	**+0.1**
	SNR=18						
AAK	**Ala-Archa**	**6.66**	**23**	P	**Pn**	**20 38 45.4**	**+0.2**
	10nm,0.3s,baz=213,slow=6.1,SNR=47						
AAK				S	**Sn**	**20 39 58.1**	**-2.8**
	36nm,0.6s,baz=1.9,slow=20,SNR=20						
AAK	**Ala-Archa**	**6.66**	**23**	Pn	**Pn**	**20 38 44.9**	**-0.2**
BHK	**Bhakra**	**6.82**	**137**	*e*P	**Pn**	**20 38 46.0**	**-1.2**
BHK				*e*P	**Pn**	**20 38 46.2**	**-1.0**
BHK				*e*S	**Sn**	**20 40 00.6**	**-4.0**
KBK	**Karagaybulak**	**6.83**	**25**	P	**Pn**	**20 38 48.1**	**+0.7**
	SNR=9.6						
FRU1	**Bishkek**	**6.86**	**23**		**Pn**	**20 38 47.6**	**-0.1**
BOOM	**Boomskoye usch**	**7.07**	**31**	Pn	**Pn**	**20 38 49.9**	**-0.5**
CHMS	**Chumysh**	**7.07**	**23**	P	**Pn**	**20 38 50.4**	**0.0**
	SNR=12						
CHMS	**Chumysh**	**7.07**	**23**	⇓P	**Pn**	**20 38 50.0**	**-0.4**
	20nm,0.8s						
CHMS				⇑S	**Sn**	**20 40 07.2**	**-3.1**
	46nm,1.1s						
USP	**Ospenovka**	**7.24**	**21**	P	**Pn**	**20 38 51.8**	**-0.8**
	SNR=13						
TKM2	**Tokmak 2**	**7.29**	**28**	P	**Pn**	**20 38 53.8**	**+0.3**
	SNR=29						
TKM2	**Tokmak 2**	**7.29**	**28**	⇓P	**Pn**	**20 38 53.4**	**-0.1**
	17nm,0.9s						
TKM2				⇑S	**Sn**	**20 40 07.7**	**-8.2**
	13nm,0.9s						
KDJ	**Kajisay**	**7.36**	**39**		**Pn**	**20 38 53.4**	**-0.9**
SMLA	**Simla**	**7.46**	**135**	*e*P	**Pn**	**20 38 54.5**	**-1.0**
SMLA				*e*S	**Sn**	**20 40 14.7**	**-4.9**
SMLA				IAML		20 40 18.4	
	comp=N,152nm,0.3s						
SMLA				IAML		20 40 19.5	
	comp=E,167nm,0.2s						
MDOK	**Medeo**	**8.09**	**33**	⇑P	**Pn**	**20 39 04.5**	**+0.6**
	comp=E,4.7nm,0.8s						
MDOK				S	**Sn**	**20 40 31.5**	**-3.3**
	comp=E,8.4nm,0.9s						
KHET	**Khetri**	**9.38**	**153**	*e*P	**Pn**	**20 39 18.2**	**-2.5**
KUDL	**Kundal**	**9.58**	**149**	*e*P	**Pn**	**20 39 21.5**	**-1.9**
KUDL				*e*S	Sn	20 41 00.6	-10
GEYT	**Alibeck**	**10.35**	**282**	P	**Pn**	**20 39 30.7**	**-2.7**
	comp=E,1.8nm,0.3s,baz=103,slow=13,SNR=11						
GEYT				S	**Sn**	**20 41 24.6**	**-4.1**
	comp=E,2.9nm,0.3s,baz=290,slow=43,SNR=2.8						
GEYT	**Alibeck**	**10.35**	**282**		**Pn**	**20 39 30.1**	**-3.3**
PTH	**Pithoragarh**	**10.42**	**129**	*e*x	**Pn**	**20 39 32.7**	**-1.7**
AJM	**Ajmer**	**10.51**	**162**	*e*P	**Pn**	**20 39 35.0**	**-0.5**
LGTI	**Lohaghat**	**10.51**	**130**	*e*P	**Pn**	**20 39 32.8**	**-2.5**
LGTI				*i* pP	P	20 39 55.0	+12
MAKZ	**Makanchi**	**13.13**	**35**	P	**P**	**20 40 11.1**	**-1.0**
PYUN	**Piuthan**	**13.18**	**126**	*e*P	**Pn**	**20 40 07.7**	**-2.0**
	comp=E,20nm,0.3s						
PYUN				*e*S	Sn	20 42 25.7	-11
MK31	**Makanchi Array**	**13.26**	**36**		**P**	**20 40 13.0**	**-0.6**
MKAR	**Makanchi Array**	**13.26**	**36**	P	**Pn**	**20 40 11.3**	**+0.9**
	comp=E,1.9nm,0.7s,baz=228,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**13.26**	**36**	P	**P**	**20 40 15.5**	**+1.9**
DANN	**Dangsing**	**13.52**	**124**	*e*P	**Pn**	**20 40 12.4**	**-1.7**
	comp=E,32nm,0.3s						
DANN				*e*S	Sn	20 42 34.4	-11
KOLN	**Koldanda**	**13.80**	**126**	*e*P	**Pn**	**20 40 15.9**	**-1.6**
	comp=E,18nm,0.3s						
GKN	**Gorkha**	**14.34**	**123**	*e*P	**Pn**	**20 40 23.2**	**-0.9**
	comp=E,28nm,0.3s						
BHPL	**Bhopal**	**14.38**	**155**	*e*P	**P**	**20 40 26.0**	**-0.3**
BHPL				*e*S	Sn	20 42 54.9	-10
DMN	**Daman**	**14.91**	**123**	*e*P	**Pn**	**20 40 30.1**	**-1.1**
KKN	**Kakani**	**14.91**	**122**	*e*P	**Pn**	**20 40 30.6**	**-0.6**
	comp=E,23nm,0.4s						
AB31	**Akbulak array**	**15.04**	**331**	P	**P**	**20 40 35.2**	**+2.0**
	comp=E,6.4nm,0.6s,baz=146,slow=11,SNR=110						
AB31				S	**Sn**	**20 43 18.2**	**-2.2**
	comp=E,7.9nm,0.8s,baz=149,slow=23,SNR=8.7						
ABKAR	**Akbulak array**	**15.04**	**331**	P	**Pn**	**20 40 31.7**	**-0.6**
ABKAR	**Akbulak array**	**15.04**	**331**	P	**Pn**	**20 40 31.7**	**-0.6**
ABKAR				IAmb	IAmb	20 40 34.2	
	comp=Z,10nm,0.6s						
KURBB	**Kurchatov Arra**	**15.09**	**19**	P	**Pn**	**20 40 30.3**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=212,slow=11,SNR=3.7						
PKIN	**Phulchoki**	**15.13**	**122**	*e*P	**Pn**	**20 40 33.4**	**-0.5**
	comp=Z,38nm,0.5s						
PKI	**Pulchoki**	**15.14**	**122**	*e*P	**Pn**	**20 40 33.3**	**-0.8**
	comp=Z,48nm,0.8s						
GUN	**Gumba**	**15.25**	**120**	*e*P	**Pn**	**20 40 35.7**	**+0.2**
	comp=Z,22nm,0.4s						
RAMN	**Ramite**	**16.35**	**121**	*e*P	**Pn**	**20 40 48.7**	**0.0**
	comp=Z,17nm,0.3s						
BRVK	**Borovoye**	**16.52**	**359**	P	**Pn**	**20 40 50.2**	**-0.1**
BRVK				IAmb	IAmb	20 40 52.6	
	comp=Z,6.2nm,0.8s						
BRVK	**Borovoye**	**16.52**	**359**	⇑P	**Pn**	**20 40 53.6**	**+3.4**
	comp=Z,4.2nm,0.6s						
AKTO	**Aktyubinsk**	**16.74**	**330**	P	**Pn**	**20 40 53.4**	**+0.5**
	comp=Z,18nm,0.7s,baz=138,slow=9.1,SNR=56						
AKTO				S	**S**	**20 43 56.2**	**-0.6**
	comp=Z,3.8nm,0.6s,baz=191,slow=17,SNR=5.7						
AKTO	**Aktyubinsk**	**16.74**	**330**	⇓P	**Pn**	**20 40 57.0**	**+4.2**
	comp=Z,18nm,0.7s						
AKTO				⇓S	**Sn**	**20 44 00.2**	**-0.6**
	comp=Z,6.6nm,0.7s						
TAPN	**Taplejung**	**16.88**	**118**	*e*P	**Pn**	**20 40 56.4**	**+1.3**
	comp=Z,20nm,0.3s						
ODAN	**Odare**	**16.95**	**120**	*e*P	**Pn**	**20 40 57.4**	**+1.5**
	comp=Z,20nm,0.6s						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**20 41 27.8**	**+1.8**
	comp=Z,4.0nm,0.4s,baz=221,slow=11,SNR=22						
	comp=Z,4.0nm,0.4s						
ARU	**Arti**	**21.59**	**341**	P	**P**	**20 41 45.8**	**+1.7**
	comp=Z,1.2nm,0.4s,baz=143,slow=10,SNR=7.2						
	comp=Z,1.2nm,0.4s						
ARU	**Arti**	**21.59**	**341**	P	**P**	**20 41 45.9**	**+1.8**
ARU				IAmb	IAmb	20 41 46.7	
	comp=Z,5.8nm,0.9s						
PALK	**Pallekele**	**30.46**	**161**	P	**P**	**20 43 06.1**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=98,slow=9.9,SNR=4.3						
	comp=Z,1.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.49**	**119**	P	**P**	**20 43 07.6**	**+2.8**
	comp=Z,1.0nm,0.8s,baz=302,slow=8.0,SNR=8.0						
	comp=Z,1.0nm,0.8s						
ELL	**Elmali**	**32.78**	**283**	P	**P**	**20 43 25.0**	**+0.2**
FIA1	**FINESS Array S**	**37.44**	**326**	P	**P**	**20 44 06.5**	**+2.4**
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**20 44 06.4**	**+2.3**
	comp=Z,1.5nm,0.6s,baz=119,slow=10,SNR=19						
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**20 44 05.8**	**+1.7**
ARCES	**ARCESS Array B**	**41.10**	**338**	P	**P**	**20 44 37.0**	**+2.7**
	comp=Z,1.3nm,0.5s,baz=112,slow=9.3,SNR=17						
	comp=Z,1.3nm,0.5s						
NB2	**NORSAR Subarra**	**44.34**	**323**	P	**P**	**20 45 02.4**	**+1.9**
	comp=Z,0.5nm,0.4s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**	**20 45 02.2**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=104,slow=7.3,SNR=8.5						
	comp=Z,0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.70**	**269**	P	**P**	**20 47 33.9**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=48,slow=6.0,SNR=7.4						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**74.74**	**16**	P	**P**	**20 48 30.8**	**+2.6**
	comp=Z,0.4nm,0.8s,baz=309,slow=5.7,SNR=4.5						
	comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**20 49 06.6**	**+2.9**
	comp=Z,0.6nm,0.4s,baz=352,slow=5.4,SNR=9.1						
YKA				pP	**pP**	**20 49 48.8**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=357,slow=4.9,SNR=3.7						
	comp=Z,0.6nm,0.4s						
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**20 49 05.3**	**+1.6**
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**20 49 09.2**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=324,slow=4.9,SNR=19						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**20 49 08.9**	**+0.2**
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**20 49 21.1**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=311,slow=5.1,SNR=21						
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**20 49 20.7**	**+0.5**

RSNC 08 20:38:37.8±0.8**,6°.81N×73°.15W,h146^{km}**±3^{km}**,ML3.1,**
Mw3.5,4C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**188**	⇑*i*P	Pn	20 38 57.4	-0.6
BARC				*e*S	Sn	20 39 12.4	-0.8
BARC				*i*		20 39 13.7	
	comp=Z,440nm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**298**	⇑*i*P	Pn	20 38 59.3	-0.1
BRRC				*e*S	Sn	20 39 16.1	+0.3
BRRC				*i*		20 39 17.1	
	comp=Z,127nm,0.2s						
PAMC	**Pamplona, Colo**	**0.69**	**41**	⇓*i*P	Pn	20 39 00.2	-0.2
PAMC				*e*S	Sn	20 39 17.4	-0.2
PAMC				*i*		20 39 19.7	
	comp=Z,147nm,0.6s						
RUSC	**La Rusia**	**0.92**	**176**	⇑*i*P	Pn	20 39 01.4	-0.7
RUSC				*e*S	Sn	20 39 19.8	-0.7
RUSC				*i*		20 39 21.2	
	comp=Z,97nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	*e*P	Pn	20 39 04.4	-0.9
PTBC				*e*S	Sn	20 39 25.2	-1.0
PTBC				*i*		20 39 29.4	
	comp=Z,132nm,0.7s						
TAMC	**Tame, Arauca**	**1.40**	**105**	*e*P	Pn	20 39 05.8	-0.3
TAMC				*e*S	Sn	20 39 27.4	-0.3
TAMC				*i*		20 39 27.8	
	comp=Z,66nm,0.3s						
OCAC	**Ocana**	**1.43**	**353**	*e*P	Pn	20 39 05.8	-0.7
OCAC				*e*S	Sn	20 39 27.9	-0.6
OCAC				*i*		20 39 30.6	
	comp=Z,345nm,0.2s						
SPBC	**San Pablo de B**	**1.47**	**218**	*e*P	Pn	20 39 06.4	-0.4
SPBC				*e*S	Sn	20 39 28.9	-0.1
SPBC				*i*		20 39 35.4	
	comp=Z,209nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*e*P	Pn	20 39 10.2	-0.5
ZARC				*e*S	Sn	20 39 35.6	-0.2
ZARC				*i*		20 39 41.0	
	comp=Z,130nm,0.6s						
NORC	**Norcasia**	**2.11**	**234**	*e*P	Pn	20 39 13.4	-0.6
NORC				*e*S	Sn	20 39 41.2	-0.7
NORC				*i*		20 39 46.6	
	comp=Z,120nm,0.4s						
SMLC	**San Martn de**	**2.18**	**335**	*e*P	Pn	20 39 13.9	-0.9
SMLC				*e*S	Sn	20 39 42.8	-0.5
SMLC				*i*		20 39 50.9	
	comp=Z,76nm,0.1s						
CHIC	**Chingaza**	**2.24**	**195**	*e*P	Pn	20 39 15.7	-0.3
CHIC				*e*S	Sn	20 39 44.9	-0.4
CHIC				*i*		20 39 52.0	
	comp=Z,60nm,0.4s						
ROSC	**El Rosal**	**2.28**	**211**	⇑*i*P	Pn	20 39 17.2	+0.8
ROSC				*e*S	Sn	20 39 47.8	+1.7
ROSC				*i*		20 39 52.3	
	comp=Z,94nm,0.5s						
HELC	**Santa Helena**	**2.44**	**256**	*e*P	Pn	20 39 18.2	-0.1
HELC				*e*S	Sn	20 39 51.9	+2.4
HELC				*i*		20 39 56.9	
	comp=Z,52nm,0.6s						
UREC	**San Jos de Ur**	**2.54**	**292**	*e*P	Pn	20 39 18.2	-1.0
UREC				*e*S	Sn	20 39 48.6	-2.6
UREC				*i*		20 39 57.9	
	comp=Z,71nm,0.2s						
VILC	**Villavicencio,**	**2.73**	**191**	*e*P	Pn	20 39 21.2	-0.6
VILC				*e*S	Sn	20 39 55.6	-0.2
LL1C	**La Loma 1 Cana**	**2.74**	**352**	*e*P	Pn	20 39 22.8	+1.0
LL1C				*e*S	Sn	20 39 58.2	+2.5
LL1C				*i*		20 40 04.9	
	comp=Z,154nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*e*P	Pn	20 39 20.5	-1.8
PTGC				*e*S	Sn	20 39 53.7	-3.0
PTGC				*i*		20 39 55.1	
	comp=Z,56nm,0.4s						
CBOC	**Ciudad Bolivar**	**2.99**	**252**	*e*P	Pn	20 39 25.2	+0.1
CBOC				*e*S	Sn	20 40 00.5	-1.1
CBOC				*i*		20 40 18.4	
	comp=Z,23nm,0.5s						
DBBC	**Dabeiba**	**3.04**	**274**	*e*P	Pn	20 39 25.1	-0.6
DBBC				*e*S	Sn	20 40 00.5	-2.0
DBBC				*i*		20 40 10.1	
	comp=Z,102nm,0.3s						
ANIL	**Santa Ana**	**3.21**	**224**	*e*P	Pn	20 39 28.9	+0.9
ANIL				*e*S	Sn	20 40 08.4	+1.5
ANIL				*i*		20 40 13.8	
	comp=Z,116nm,0.3s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	Pn	20 39 27.7	-0.1
ARGC				*e*S	Sn	20 40 05.8	-0.7
ARGC				*i*		20 40 19.4	
	comp=Z,15nm,0.3s						
SDV	**Santo Domingo**	**3.24**	**50**	*e*P	Pn	20 39 27.0	-1.2
SDV				*e*S	Sn	20 40 04.3	-3.0
SDV				*i*		20 40 08.6	
	comp=Z,13nm,0.7s						
PRAC	**Prado**	**3.53**	**209**	*e*P	Pn	20 39 31.0	-0.9
PRAC				*e*S	Sn	20 40 13.5	-0.3
PRAC				*i*		20 40 20.0	
	comp=Z,60nm,0.4s						
ORTC	**Ortega, Tolima**	**3.56**	**216**	*e*P	Pn	20 39 32.3	+0.1
ORTC				*e*S	Sn	20 40 14.9	+0.5
ORTC				*i*		20 40 20.8	
	comp=Z,37nm,0.6s						
PLMC	**San Jos del P**	**3.64**	**239**	*e*P	Pn	20 39 33.2	-0.2
PLMC				*e*S	Sn	20 40 15.2	-1.3
PLMC				*i*		20 40 23.2	
	comp=Z,23nm,0.3s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*e*P	Pn	20 39 31.9	-1.8
SJCC				*e*S	Sn	20 40 12.9	-4.1
SJCC				*i*		20 40 16.3	
	comp=Z,18nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.19**	**4**	*e*P	Pn	20 39 38.1	-2.5
CRJC				*e*S	Sn	20 40 25.6	-3.8
CRJC				*i*		20 40 29.7	
	comp=Z,16nm,0.2s						
YOTC	**Yotoco, Valle**	**4.24**	**229**	*e*P	Pn	20 39 41.0	-0.3
YOTC				*e*S	Sn	20 40 30.5	-0.1
GARC	**Garzon, Huila**	**5.15**	**207**	*e*P	Pn	20 39 51.8	-1.6
GARC				*e*S	Sn	20 40 48.3	-4.1
GARC				*i*		20 40 53.9	
	comp=Z,22nm,0.3s						

TAP 08 20:39:03.9,24°.14N×121°.08E,h10^{km}±2^{km}**,ML0.8,1D,B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGB	**Renai**	**0.12**	**133**	⇓*i*P	Pb	20 39 07.9	-0.5
	baz=132						
CHGB				*i* S	Sg	20 39 10.1	+0.8
	baz=132						
TDCB	**Techi**	**0.13**	**35**	*e*P	Pg	20 39 07.3	+0.2
	baz=35						
WUSB	**Renai**	**0.16**	**166**	*i* P	Pb	20 39 08.4	-0.5
	baz=165						
WUSB				*i* S	Sg	20 39 10.7	+0.8
	baz=165						
WCS	**Beigang Elemen**	**0.17**	**240**	*e*P	Pb	20 39 08.5	-0.7
	baz=239						
DPDB	**Guoxing**	**0.17**	**231**	*e*P	Pb	20 39 08.6	-0.6
	baz=230						
WHP	**Taichung City**	**0.18**	**318**	P	Pg	20 39 08.2	+0.4
	baz=318						
WHP				*e*S	Sg	20 39 12.2	+1.7
	baz=318						
FUSS	**Fushou**	**0.18**	**56**	P	Pg	20 39 08.5	+0.5
	baz=56						
OWD	**Renai**	**0.21**	**154**	*e*P	Pb	20 39 09.4	-0.4
	baz=153						
OWD				*e*S	Sg	20 39 12.6	+1.2
	baz=153						
SMLT	**Sun Moon Lake**	**0.30**	**212**	*e*P	Pb	20 39 11.1	-0.4
	baz=210						
NNSB	**Datong**	**0.40**	**45**	*e*P	Pb	20 39 13.0	-0.1
	baz=44						
NFF	**Wufeng Townshi**	**0.49**	**5**	*e*P	Pb	20 39 14.4	-0.1
	baz=4.0						
NFF				*e*S	Sb	20 39 21.1	-0.8
	baz=4.0						

*MAN **08** 20:43:35.2,15°.51N×119°.19E,h17^{km},mb4.3,ML3.1,*
MS2.9,Hypocentre not reviewed by the ISC
*IDC **08** 20:43:36.1±13.0,14°.90N×119°.40E,h0^{km},mb3.6/2,*
mbtmp3.5/3,ML3.6/1,Error ellipse: s-maj=434.0km
s-min=33.1km az=37.0
ISC 08 20:43:32.5±2.7**,15°.8N**±0°.4×**119°.8E**±0°.3**,h10^{km},n5,**
σ**1^s.22**/6**,1C-1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	**Maragondon, Ca**	**1.79**	**150**	⇓*e*P	**Pg**	**20 44 06.7**	**-0.2**
MACP				*e*S	Sg	20 44 32.3	+2.2
LQP	**Lukban**	**2.39**	**135**	⇑*e*P	**Pg**	**20 44 18.4**	**-0.1**
LQP				*e*S	**Sg**	**20 44 50.7**	**+1.2**
CMAR	**Chiang Mai Arr**	**20.10**	**280**	P	**Pn**	**20 48 09.5**	**+1.1**
	0.1nm,0.3s,baz=94,slow=8.4,SNR=5.0						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**38.31**	**158**	P	**P**	**20 50 52.4**	**-1.2**
	0.8nm,0.7s,baz=336,slow=9.5,SNR=5.7						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**41.60**	**160**	P	**P**	**20 51 20.4**	**-0.5**
	0.3nm,0.4s,baz=335,slow=6.9,SNR=9.7						
	0.3nm,0.4s						

IDC 08 21:11:48.8±1.6**,3°.17S×130°.76E,h0^{km},mb3.3**/2**,**
mbtmp3.2/4**,ML3.0**/2**,MS3.3**/1**,Error ellipse:**
s-maj=72.5km s-min=21.7km az=89.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.34**	**12**	Pn	Pn	21 12 29.4	+0.8
	1.1nm,0.3s,baz=243,slow=23,SNR=8.6						
SIJI				Sn	Sn	21 12 57.5	-0.6
	1.5nm,0.3s,baz=228,slow=22,SNR=6.8						
	2.4nm,0.3s						
WRA	**Warramunga Arr**	**17.03**	**168**	P	Pn	21 15 48.4	-0.1
	0.1nm,0.3s,baz=350,slow=12,SNR=5.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**20.60**	**172**	P	P	21 16 29.6	-0.1
	1.1nm,0.5s,baz=351,slow=11,SNR=20						
	1.1nm,0.5s						
DZM	**Mont Dzumac**	**39.39**	**122**	LR	LR	21 35 37.7	
	comp=Z,35nm,18.4s,baz=338,slow=36						
MKAR	**Makanchi Array**	**65.49**	**326**	P	P	21 22 33.8	-0.1
	0.1nm,0.4s,baz=121,slow=7.2,SNR=2.1						
	0.1nm,0.4s						

*IDC **08** 21:19:44.2±1.1,36°.40N×97°.71W,h0^{km},mbtmp3.3/5,*
ML3.8/3,Error ellipse: s-maj=14.7km s-min=12.1km
az=157.0
*NEIC **08** 21:19:44.9±0.7,36°.27N±0°.01×97°.59W±0°.02,h6^{km}±7^{km},*
Error ellipse: s-maj=2.7km s-min=2.1km az=79.0
*ANF **08** 21:19:45.0±0.3,36°.26N×97°.59W,h7^{km},ML4.1/14,Error*
ellipse: s-maj=2.9km s-min=2.6km az=25.0
*TUL **08** 21:19:45±0.7,36°.27N±0°.02×97°.57W±0°.02,h6^{km}±7^{km},*
ML3.8,mb_Lg3.6/110(NEIC),Mwr3.3/11(SLM),Error
ellipse: s-maj=3.1km s-min=2.2km az=53.0
*NEIC **08** 21:19:45,36°.27N×97°.58W,h5^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.04;
$M_{\theta\theta}$0.87; $M_{\phi\phi}$-0.90; $M_{r\theta}$-0.17; $M_{\theta\phi}$-0.72; $M_{\phi r}$0.14; Fault
plane solution: $M_0$1.16000×10^{14} NP1:ϕ_s244.00000°,
δ80.00000°,λ175.00000°. NP2:ϕ_s335.00000°,δ85.00000°,
λ10.00000°. Principal axes: T 1.1617, Plg11.0000°,
Azm200.0000°; N 0.0001, Plg79.0000°, Azm1.0000°; P
-1.1618, Plg3.0000°, Azm109.0000°;
ISC 08 21:19:44.3±0.6**,36°.30N**±0°.02×**97°.60W**±0°.02**,h10^{km},n130,**
σ**1^s.65**/123**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.73**	**169**		**Pg**	**21 19 58.3**	**-0.1**
OKCFA	**Oklahoma City**	**0.89**	**172**	Pg	**Pg**	**21 20 01.1**	**-0.3**
OKCFA	**Oklahoma City**	**0.89**	**172**	P	**Pg**	**21 20 01.3**	**-0.2**
	baz=353,SNR=21						
OKCFA				S	**Sg**	**21 20 13.0**	**0.0**

	baz=353						
OKCSW	OKLAHOMA CITY	0.90	172		Pg	21 20 01.5	-0.1
FNO	Franklin	1.05	171		Pg	21 20 04.2	-0.3
T35A	Sooner Cattle	1.07	54	Pg	Pg	21 20 05.2	+0.3
T35B	Sooner Cattle	1.07	54	P	Pg	21 20 05.2	+0.3
	baz=233,SNR=247						
U32A	Winter Ranch,	1.14	275	Pg	Pb	21 20 06.5	+0.4
U32A	Winter Ranch,	1.14	275	P	Pb	21 20 06.4	+0.4
	baz=95						
U32A				S	Sg	21 20 22.6	+1.7
	baz=95						
TUL1	Leonard	1.51	104		Pn	21 20 11.9	+0.4
TUL1				IAmb_Lg		21 20 34.1	
	comp=Z,208nm,0.8s						
TUL1	Leonard	1.51	104	P	Pn	21 20 11.8	+0.4
	baz=284,SNR=451						
TUL1				S	Sb	21 20 32.3	+0.5
	baz=284						
TUL1	Leonard	1.51	104	P	Pn	21 20 11.8	+0.4
	baz=284,SNR=257						
TUL1				S	Sb	21 20 32.2	+0.5
	baz=284						
X34A	Smith Ranch, M	1.70	186		Pb	21 20 15.7	0.0
X34A				IAmb_Lg		21 20 41.5	
	comp=Z,400nm,0.8s						
WMOK	Wichita Mounta	1.83	212		Pn	21 20 17.0	+1.2
WMOK	Wichita Mounta	1.83	212	P	Pn	21 20 17.0	+1.2
	baz=32,SNR=196						
WMOK	Wichita Mounta	1.83	212	P	Pn	21 20 17.0	+1.2
	baz=32						
WMOK				S	Sb	21 20 41.7	+0.8
	baz=32						
R32A	Long Quarter,	2.30	338		Pn	21 20 23.8	+1.5
R32A	Long Quarter,	2.30	338	S	Sn	21 20 53.8	+3.1
	baz=157						
X37A	Clayton	2.49	132		Pn	21 20 25.7	+0.8
X37A				IAmb_Lg		21 21 09.3	
	comp=Z,254nm,0.9s						
X37A	Clayton	2.49	132	P	Pn	21 20 26.5	+1.5
	baz=314,SNR=38						
KSU1	Kansas State U	2.91	15	Pn	Pn	21 20 32.3	+1.6
KSU1	Kansas State U	2.91	15	P	Pn	21 20 32.9	+2.3
	baz=195,SNR=17						
KSU1	Kansas State U	2.91	15	Pn	Pn	21 20 32.8	+2.1
	baz=195,SNR=15						
KSU1				Pg	Pg	21 20 39.9	-0.1
	baz=195						
HHAR	Hobbs	2.96	89		Pn	21 20 32.4	+1.0
Z35A	Perchaven, San	2.97	174		Pn	21 20 32.4	+0.8
CBKS	Cedar Bluff	3.03	327	IAmb_Lg		21 21 24.6	
	comp=Z,110nm,0.8s						
CBKS	Cedar Bluff	3.03	327	Sb	Sb	21 21 20.1	+4.6
	baz=145						
W39A	Magazine	3.29	108		Pn	21 20 36.8	+0.9
W39A				IAmb_Lg		21 21 34.3	
	comp=Z,107nm,0.8s						
W39A	Magazine	3.29	108	P	Pn	21 20 37.1	+1.2
	baz=290,SNR=71						
W39A	Magazine	3.29	108	Pn	Pn	21 20 37.1	+1.2
	baz=290,SNR=122						
W39A				Pb	Pb	21 20 44.0	+1.2
	baz=290						
W39A				S	Sn	21 21 16.9	+1.8
	baz=290						
AMTX	Amarillo	3.61	248	Pn	Pn	21 20 41.6	+1.2
AMTX				IAmb_Lg		21 21 44.4	
	comp=Z,160nm,0.7s						
AMTX	Amarillo	3.61	248	Sb	Sg	21 21 37.7	-2.7
	baz=66						
S39A	Bolivar	3.69	67		Pn	21 20 43.0	+1.6
S39A				IAmb_Lg		21 21 46.5	
	comp=Z,209nm,0.7s						
S39A	Bolivar	3.69	67	P	Pn	21 20 43.2	+1.7
	baz=249,SNR=37						
Z38A	Mt. Pleasant	3.72	144		Pn	21 20 42.5	+0.7
MIAR	Mount Ida	3.72	117		Pn	21 20 42.8	+1.0
MIAR				IAmb_Lg		21 21 52.8	
	comp=Z,142nm,1.1s						
MIAR	Mount Ida	3.72	117	P	Pn	21 20 43.2	+1.4
	baz=299,SNR=90						
MIAR	Mount Ida	3.72	117	P	Pn	21 20 43.2	+1.4
	baz=299,SNR=38						
MIAR				S	Sn	21 21 26.7	+1.0
	baz=299						
U40A	Yellville	3.83	88		Pn	21 20 43.8	+0.4
U40A	Yellville	3.83	88	P	Pn	21 20 44.6	+1.2
	baz=270,SNR=19						
U40A				Sb	Sg	21 21 43.9	-3.5
	baz=270						
ABTX	Abilene, Hawle	4.04	205	Pn	Pn	21 20 47.1	+0.9
ABTX	Abilene, Hawle	4.04	205	Pb	Pb	21 20 56.6	+1.1
	baz=24						
X40A	Basin Creek Fa	4.29	114		Pn	21 20 50.4	+0.7
X40A				IAmb_Lg		21 22 02.5	
	comp=Z,98nm,0.8s						
X40A	Basin Creek Fa	4.29	114	P	Pn	21 20 51.2	+1.5
	baz=296,SNR=22						
X40A				P	Pn	21 20 51.2	+1.5
	baz=296,SNR=22						
X40A	Basin Creek Fa	4.29	114	Pn	Pn	21 20 50.8	+1.1
	baz=296,SNR=7.0						
X40A				Pb	Pb	21 21 01.2	+1.4
	baz=296						
WHTX	Lake Whitney,	4.30	178	Pn	Pn	21 20 50.0	+0.2
WHTX	Lake Whitney,	4.30	178	P	Pn	21 20 51.3	+1.5
	baz=359						
WHTX				Sn	Sn	21 21 40.5	+0.6
	baz=359						
WHTX				Sb	Sb	21 21 55.4	+3.5
	baz=359						
MGMO	Mountain Grove	4.37	77		Pn	21 20 50.8	+0.1
MGMO				IAmb_Lg		21 22 03.8	
	comp=Z,213nm,0.8s						
WHAR	Wooly Hollow	4.43	102		Pn	21 20 52.3	+0.7
WHAR				IAmb_Lg		21 22 13.3	
	comp=Z,70nm,0.7s						
N33A	J Bar K, Exete	4.43	1	Pn	Pn	21 20 52.4	+0.7
N33A				IAmb_Lg		21 22 12.6	
	comp=Z,77nm,0.7s						
FCAR	Ozark Folk Cen	4.45	94		Pn	21 20 52.4	+0.5
W41B	Gary Mavity, V	4.50	103		Pn	21 20 52.4	0.0
W41B				IAmb_Lg		21 22 06.9	
	comp=Z,62nm,0.8s						
W41B	Gary Mavity, V	4.50	103	P	Pn	21 20 54.1	+1.6
	baz=286,SNR=8.8						
W41B				S	Sn	21 21 45.1	+0.4
	baz=286						
WLAR	White Oak Lake	4.51	124		Pn	21 20 53.0	+0.3
WLAR				IAmb_Lg		21 22 19.4	
	comp=Z,70nm,0.7s						
237A	Washetta, Mont	4.54	160	IAmb_Lg		21 22 05.0	
	comp=Z,74nm,0.9s						
237A	Washetta, Mont	4.54	160	S	Sn	21 21 45.1	-0.7
	baz=342						
UALR	University of	4.55	108	Pn	Pn	21 20 53.3	+0.2
UALR				IAmb_Lg		21 22 16.3	
	comp=Z,132nm,1.2s						
P38A	Dawn	4.62	43		Pn	21 20 54.7	+0.5
P38A				IAmb_Lg		21 22 19.1	
	comp=Z,100nm,0.7s						
R40A	Maddies Statio	4.69	63		Pn	21 20 55.8	+0.6
R40A	Maddies Statio	4.69	63	P	Pn	21 20 56.8	+1.6
	baz=246,SNR=39						
N35A	Tabor	4.81	18		Pn	21 20 57.9	+1.1
KSCO	Kaye Shedlock’	4.82	306		Pn	21 20 58.3	+1.2
KSCO				IAmb_Lg		21 22 22.4	
	comp=Z,59nm,0.8s						
KSCO	Kaye Shedlock’	4.82	306	P	Pn	21 20 59.7	+2.6
	baz=123						
KSCO				Sb	Sg	21 22 17.2	-1.9
	baz=123						
MSTX	Muleshoe	4.83	243	Pn	Pn	21 20 58.5	+1.3
MSTX	Muleshoe	4.83	243	Sb	Sg	21 22 15.7	-3.8
	baz=60						
Z41A	Richland Creek	4.98	126	Pn	Pn	21 20 59.3	+0.2
Z41A				IAmb_Lg		21 22 31.4	
	comp=Z,92nm,0.8s						
Z41A	Richland Creek	4.98	126	P	Pn	21 20 59.9	+0.8
	baz=309						
Z41A				S	Sn	21 21 56.6	0.0
	baz=309						
BGNE	Belgrade	5.12	355	Pn	Pn	21 21 01.7	+0.6
BGNE				IAmb_Lg		21 22 39.4	
	comp=Z,107nm,0.8s						
BGNE	Belgrade	5.12	355	P	Pn	21 21 02.2	+1.1
	baz=175						
NATX	Nacogdoches	5.14	151	IAmb_Lg		21 22 36.2	
	comp=Z,66nm,0.8s						
NATX	Nacogdoches	5.14	151	S	Sn	21 22 00.2	-0.6
	baz=333						
LCAR	Lake Charles	5.22	91	IAmb_Lg		21 22 37.8	
	comp=Z,80nm,0.9s						
CCAR	Cane Creek	5.33	115	Pn	Pn	21 21 04.5	+0.5
CCAR				IAmb_Lg		21 22 45.3	
	comp=Z,74nm,0.9s						
CCM	Cathedral Cave	5.37	69	Pn	Pn	21 21 05.7	+1.2
CCM				IAmb_Lg		21 22 36.9	
	comp=Z,142nm,0.8s						
CCM	Cathedral Cave	5.37	69	P	Pn	21 21 06.1	+1.6
	baz=252						
CCM				S	Sn	21 22 07.0	+0.7
	baz=252						
P40A	Paris	5.45	52		Pn	21 21 06.2	+0.7
435B	Jarrell	5.50	180		Pn	21 21 06.6	+0.3
435B				IAmb_Lg		21 22 49.5	
	comp=Z,88nm,1.0s						
435B	Jarrell	5.50	180	P	Pn	21 21 07.6	+1.3
	baz=0.1						
435B				S	Sn	21 22 09.3	-0.3
	baz=0.1						
T25A	Trinidad	5.54	281	Pn	Pn	21 21 08.5	+1.6
T25A				IAmb_Lg		21 22 43.0	
	comp=Z,53nm,0.7s						
T25A	Trinidad	5.54	281	P	Pn	21 21 08.9	+1.9
	baz=97						
T25A				Sb	Sg	21 22 37.9	-4.2
	baz=97						
N38A	Joes South For	5.64	36	Pn	Pn	21 21 08.6	+0.4
N38A				IAmb_Lg		21 22 47.6	
	comp=Z,161nm,0.9s						
HBAR	Harrisburg	5.68	95	IAmb_Lg		21 22 47.8	
	comp=Z,156nm,0.8s						
L34A	Svendsen Farm,	5.74	9	IAmb_Lg		21 22 53.2	
	comp=Z,139nm,0.9s						
PBMO	Poplar Bluff	5.79	83	IAmb_Lg		21 22 57.3	
	comp=Z,106nm,0.8s						
OGNE	Ogallala	5.79	325	Pn	Pn	21 21 11.7	+1.3
OGNE				IAmb_Lg		21 22 59.7	
	comp=Z,138nm,0.8s						
OGNE	Ogallala	5.79	325	P	Pn	21 21 13.5	+3.1
	baz=142						
OGNE				S	Sn	21 22 16.8	-0.1
	baz=142						
JCT	Junction City	6.09	198	Pn	Pn	21 21 15.1	+0.7
JCT				IAmb_Lg		21 23 10.2	
	comp=Z,72nm,0.7s						
JCT	Junction City	6.09	198	P	Pn	21 21 15.1	+0.7
	baz=17,SNR=5.3						
143A	Socs Landing,	6.25	123	IAmb_Lg		21 23 05.3	
	comp=Z,48nm,0.8s						
PARMO	Parma	6.33	84	IAmb_Lg		21 23 16.2	
	comp=Z,146nm,0.9s						
SDCO	Great Sand Dun	6.49	285	P	Pn	21 21 23.5	+3.4
	baz=101						
Q24A	Divide	6.56	296	IAmb_Lg		21 23 17.1	
	comp=Z,39nm,0.7s						
Q24A	Divide	6.56	296	Pg	Pg	21 21 47.2	-2.6
	baz=112						
SCIA	State Center	6.56	30	IAmb_Lg		21 23 24.8	
	comp=Z,122nm,0.8s						
SCIA	State Center	6.56	30	Pn	Pn	21 21 22.3	+1.5
	baz=212						
SCIA				Pg	Pg	21 21 48.0	-1.8
	baz=212						
HALT	Halls	6.70	91	IAmb_Lg		21 23 22.1	
	comp=Z,113nm,0.8s						
S44A	Carbondale	6.82	76	Pn	Pn	21 21 24.9	+0.5
W45A	Hickory Valley	6.94	97	IAmb_Lg		21 23 31.9	
	comp=Z,81nm,0.7s						
Y45A	Yeager Farm, C	7.04	108	IAmb_Lg		21 23 41.6	
	comp=Z,51nm,0.9s						
ISCO	Idaho Springs	7.22	301	P	Pn	21 21 33.3	+3.1
	baz=117,SNR=8.2						
ANMO	Albuquerque	7.34	262	Pn	Pn	21 21 32.1	+0.4
	comp=Z,0.3nm,0.4s,baz=298,slow=20,SNR=1.3						
ANMO				Pg	Pb	21 21 58.2	+6.3
	comp=Z,0.8nm,0.3s,baz=74,slow=16,SNR=12						
ANMO				Lg	Lg	21 23 33.2	
	comp=Z,3.4nm,0.3s,baz=1.8,slow=14,SNR=10						
ANMO	Albuquerque	7.34	262	Sb	Sg	21 23 34.0	-5.8
	baz=77						
735A	Kenedy	7.42	181	IAmb_Lg		21 23 58.5	
	comp=Z,46nm,0.9s						
ECSD	EROS Data Cent	7.46	6	Pn	Pn	21 21 33.5	+0.3
ECSD	EROS Data Cent	7.46	6	P	Pn	21 21 33.6	+0.3
	baz=186						
ECSD				S	Sn	21 22 56.1	-1.9
	baz=186						
L40A	Anamosa	7.59	39	IAmb_Lg		21 23 49.4	
	comp=Z,69nm,0.9s						
HDIL	Hopedale	7.78	54	P	Pn	21 21 39.6	+2.0
	baz=239						
HDIL				S	Sn	21 23 03.8	-1.9
	baz=239						
PLAL	Pickwick Lake	7.86	97	IAmb_Lg		21 23 55.6	
	comp=Z,30nm,1.0s						
PHWY	Pilot Hill	7.91	312	IAmb_Lg		21 24 03.7	
	comp=Z,37nm,0.8s						
N23A	Red Feather La	7.98	308	Pn	Pn	21 21 40.7	+0.1
N23A				IAmb_Lg		21 24 08.2	
	comp=Z,68nm,0.8s						
N23A	Red Feather La	7.98	308	Pg	Pg	21 22 14.2	-2.9
	baz=123						
O44A	Mansfield	8.15	59	IAmb_Lg		21 24 08.0	
	comp=Z,90nm,0.7s						
I37A	Lemond, Waseca	8.35	21	IAmb_Lg		21 24 21.8	
	comp=Z,66nm,1.2s						
L42A	Oliver, Polo	8.39	45	IAmb_Lg		21 24 18.5	
	comp=Z,63nm,0.8s						
TXAR	Lajitas Array	8.62	218	Pn	Pn	21 21 49.1	0.0
	comp=Z,0.3nm,0.3s,baz=45,slow=12,SNR=7.9						
TXAR				Lg	Lg	21 24 10.8	
	comp=Z,1.1nm,0.3s,baz=22,slow=20,SNR=2.3						
	comp=Z,0.4nm,0.4s						
TXAR	Lajitas Array	8.62	218		Pn	21 21 48.5	-0.7
JFWS	Jewell Farm	8.71	38	IAmb_Lg		21 24 22.2	
	comp=Z,66nm,0.7s						
JFWS	Jewell Farm	8.71	38	S	Sn	21 23 25.9	-2.6
	baz=223						
M44A	Midewin, Midew	9.02	53	IAmb_Lg		21 24 37.5	
	comp=Z,41nm,0.8s						
SFIN	Lafayette	9.20	61	S	Sn	21 23 36.6	-4.0
	baz=247						
RWWY	Rawlins	9.21	309	IAmb_Lg		21 24 41.9	
	comp=Z,32nm,1.0s						
RSSD	Black Hills	9.23	330	IAmb_Lg		21 24 48.3	
	comp=Z,25nm,0.8s						
I40A	Norwalk	9.28	33	IAmb_Lg		21 24 44.6	
	comp=Z,37nm,0.9s						
L44A	Lake County Fo	9.53	49	IAmb_Lg		21 24 54.4	
	comp=Z,66nm,0.8s						
F33A	5 Mile Ranch,	9.58	5	IAmb_Lg		21 25 05.7	
	comp=Z,22nm,0.9s						
K43A	Burlington	9.60	45	IAmb_Lg		21 25 03.7	
	comp=Z,71nm,1.0s						
TKL	Tuckaleechee C	11.22	89	Pn	Pn	21 22 26.7	+1.9
	comp=Z,0.1nm,0.3s,baz=286,slow=18,SNR=1.2						
TKL				Lg	Lg	21 25 31.7	
	comp=Z,0.5nm,0.3s,baz=347,slow=21,SNR=4.8						
	comp=Z,0.6nm,0.3s						
PDAR	Pinedale Array	11.26	309	Pn	Pn	21 22 25.8	+0.3
	comp=Z,0.2nm,0.3s,baz=124,slow=16,SNR=4.9						
PDAR				Lg	Lg	21 25 29.6	
	comp=Z,0.3nm,0.3s,baz=109,slow=28,SNR=2.7						
	comp=Z,0.4nm,0.4s						
ULM	Lac du Bonnet	14.00	5	Pn	Pn	21 22 57.7	-5.0
	comp=Z,1.0nm,0.3s,baz=182,slow=13,SNR=1.7						
ULM				Lg	Lg	21 26 53.6	
	comp=Z,0.3nm,0.3s,baz=128,slow=19,SNR=1.3						
SADO	Sadowa	16.36	53	Lg	Lg	21 28 06.4	
	comp=Z,0.3nm,0.3s,baz=322,slow=21,SNR=1.4						

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*WEL **08** 21:21:31.7±0.4, 42˚S±3˚×17˚4E±˚, h26^{km}±3^{km}, M3.1/25, ML3.4/25, MLv3.1/25, Error ellipse: s-maj=0.0km s-min=0.0km az=140.9*

*NOU **08** 21:21:31.4, 42˚.22S×174˚.00E, h46^{km}, MLv3.6/7, Off E. Coast of S. Island, N.Z.*

ISC 08 21:21:31.7±1.1**, 42˚.10S**±0˚.03×**173˚.94E**±0˚.03**, h30**^{km}±10^{km}**, n77,** σ1^{s}**03**/94**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.39	352	P	Pb	21 21 40.5	+0.1
BSWZ				S	Sb	21 21 46.3	0.0
CMWZ	Cape Campbell	0.41	30	P	Pn	21 21 42.5	+1.0
CMWZ				S	Sn	21 21 49.6	+1.5
KHZ	Kahutara	0.43	224	P	Pn	21 21 42.6	+0.8
KHZ				S	Sn	21 21 50.0	+1.2
KHZ	Kahutara	0.43	224	P	Pn	21 21 42.7	+0.8
TUWZ	Tuamarina	0.67	360	P	Pn	21 21 44.6	-0.5
TUWZ				S	Sn	21 21 53.3	-1.3
THZ	Tophouse	0.85	293	P	Pn	21 21 46.5	-1.1
THZ				S	Sn	21 21 57.7	-1.3
TCW	Tory Channel	0.93	16	P	Pn	21 21 48.7	0.0
TCW				S	Sn	21 22 00.0	-0.8
SNZO	South Karori	0.97	36	P	Pn	21 21 50.0	+0.7
NNZ	Nelson	0.98	334	P	Pn	21 21 48.5	-0.8
BHW	Baring Head	0.98	45	P	Pn	21 21 50.1	+0.7
BHW				S	Sn	21 22 03.2	+1.0
WEL	Wellington	1.02	37	P	Pn	21 21 50.8	+0.8
GVZ	Greta Valley S	1.09	218	P	Pb	21 21 52.0	0.0
PLWZ	Palliser	1.11	62	P	Pn	21 21 51.8	+0.5
MRNZ	Matariki Terra	1.13	308	P	Pn	21 21 51.2	-0.3
MSWZ	Moikau Station	1.19	55	P	Pn	21 21 52.9	+0.6
MSWZ				S	Sn	21 22 08.5	+1.0
TKNZ	Takaka Hill	1.30	325	P	Pn	21 21 53.6	-0.2
DUWZ	D’Urville Isla	1.30	359	P	Pn	21 21 53.7	-0.1
DUWZ				S	Sn	21 22 09.3	-0.8
CAW	Cannon Point	1.30	41	P	Pn	21 21 54.3	+0.5
CAW				S	Sn	21 22 10.6	+0.4
PAWZ	Paruwai Farm	1.32	58	P	Pn	21 21 54.4	+0.2
PAWZ				S	Sn	21 22 11.8	+1.1
LTZ	Lake Taylor	1.41	241	P	Pn	21 21 56.0	+0.7
LTZ				S	Sn	21 22 13.0	-0.1
AMCZ	Amberley	1.44	221	P	Pn	21 21 56.3	+0.6
KIW	Kapiti Island	1.44	31	P	Pn	21 21 56.3	+0.6
KIW				S	Sn	21 22 13.5	0.0
TRWZ	Traveller	1.48	62	P	Pn	21 21 56.4	+0.1
TRWZ				S	Sn	21 22 14.2	-0.5
MTW	Mount Morrison	1.50	52	P	Pn	21 21 56.6	+0.1
MTW				S	Sn	21 22 15.1	-0.1
OGWZ	Otaki Gorge	1.58	36	P	Pn	21 21 58.1	+0.4
OGWZ				S	Sn	21 22 17.5	+0.4
DSZ	Denniston Nort	1.64	282	P	Pn	21 21 59.4	+0.9
DSZ				S	Sn	21 22 19.2	+0.7
QRZ	Quartz Range	1.66	320	P	Pn	21 21 59.3	+0.6
QRZ	Quartz Range	1.66	320	P	Pn	21 21 59.4	+0.6
HOWZ	Holdsworth Sta	1.69	45	P	Pn	21 21 59.0	-0.1
OKCZ	Okains Bay	1.75	202	P	Pn	21 22 00.5	+0.5
TMWZ	Te Maipa	1.77	56	P	Pn	21 22 00.1	-0.1
MQZ	McQueen’s Vall	1.86	210	P	Pn	21 22 01.1	-0.4
OXZ	Oxford	1.86	228	P	Pn	21 22 02.8	+1.3
MRZ	Mangatainoka R	1.89	41	P	Pn	21 22 02.0	0.0
AKCZ	Akaroa Harbour	1.93	203	P	Pn	21 22 02.6	+0.2
INZ	Inchbonnie	1.95	251	P	Pn	21 22 03.7	+1.0
RACZ	Rakaia	2.10	219	P	Pn	21 22 04.3	-0.4
PRWZ	Pori Road	2.17	45	P	Pn	21 22 05.5	-0.3
BFZ	Birch Farm	2.24	51	P	Pn	21 22 06.1	-0.6
BFZ	Birch Farm	2.24	51	P	Pn	21 22 06.2	-0.5
WACZ	Wakanui South	2.40	219	P	Pn	21 22 09.2	+0.3
DVHZ	Dannevirke	2.46	44	P	Pn	21 22 08.9	-0.9
WAZ	Wanganui	2.47	19	P	Pn	21 22 12.1	+2.2
TSZ	Takapari Road	2.55	37	P	Pn	21 22 10.6	-0.4
WVZ	Waitaha Valley	2.56	247	P	Pb	21 22 16.3	-0.5
RPZ	Rata Peaks	2.67	232	P	Pn	21 22 11.1	-1.5
NMEZ	Namu Road	2.69	359	P	Pb	21 22 17.3	-1.7
ARCZ	Arundel	2.74	227	P	Pn	21 22 13.7	0.0
PNHZ	Pukenui	2.77	39	P	Pn	21 22 13.4	-0.7
KHEZ	Kahui Hut	2.81	1	P	Pn	21 22 18.4	+3.8
NBEZ	Newall Road No	2.83	359	P	Pb	21 22 21.8	+0.3
PKE	Pukeiti	2.91	1	P	Pn	21 22 19.3	+3.4
MTVZ	Mangateitei	2.95	24	P	Pn	21 22 17.8	+1.2
PKVZ	Pokaka	3.00	21	P	Pn	21 22 18.7	+1.4
MOVZ	Moawhango	3.02	28	P	Pn	21 22 18.1	+0.5
VRZ	Vera Road	3.04	12	P	Pn	21 22 19.4	+1.7
WNVZ	Wahianoa	3.04	25	P	Pn	21 22 18.9	+1.0
BHHZ	Black Hill Sta	3.07	32	P	Pn	21 22 18.1	-0.1
KRHZ	Kereru	3.07	38	P	Pn	21 22 17.3	-0.8
TUVZ	Tukino	3.12	25	P	Pn	21 22 19.7	+0.8
TMZ	Timaru	3.13	222	P	Pn	21 22 19.3	+0.3
NGZ	Ngauruhoe	3.18	24	P	Pn	21 22 20.9	+1.0
SNVZ	South Ngauruho	3.19	24	P	Pn	21 22 21.2	+1.3
OTVZ	Oturere	3.21	25	P	Pn	21 22 21.0	+0.8
NNVZ	North Ngauruho	3.23	24	P	Pn	21 22 21.4	+0.9
WTVZ	West Tongariro	3.24	23	P	Pn	21 22 21.3	+0.8
ETVZ	East Tongariro	3.25	25	P	Pn	21 22 21.8	+1.0
TMVZ	Te Maari	3.27	25	P	Pn	21 22 21.6	+0.6
NTVZ	North Tongarir	3.28	24	P	Pn	21 22 21.9	+0.8
FOZ	Fox Glacier	3.36	243	P	Pn	21 22 23.1	+1.0
HIZ	Hauiti	3.65	11	P	Pn	21 22 27.9	+1.7
HIZ	Hauiti	3.65	11	P	Pn	21 22 27.3	+1.2
MRHZ	Matea Rd	3.77	31	P	Pn	21 22 26.6	-1.2
ODZ	Otahua Downs	3.79	218	P	Pn	21 22 27.5	-0.6
ODZ	Otahua Downs	3.79	218	P	Pn	21 22 26.6	-1.5
RTZ	Ruatahuna	4.18	35	P	Pn	21 22 33.3	-0.2
URZ	Urewera	4.54	33	P	Pn	21 22 36.1	-2.2

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*TIR **08** 21:54:07.7, 38˚.72N×21˚.89E, h17^{km}, Md3.3*

*IASPEI **08** 21:54:10.1±0.8, 38˚.89N±0˚.02×21˚.76E±0˚.02, h9^{km}±5^{km}, mb3.1/4, Error ellipse: s-maj=3.1km s-min=2.7km az=147.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*IDC **08** 21:54:10.1±1.3, 38˚.92N×21˚.75E, h0^{km}, mb3.0/4, mbtmp3.1/8, ML3.5/3, Error ellipse: s-maj=24.0km s-min=19.1km az=107.0*

*ATH **08** 21:54:10.3, 38˚.89N×21˚.74E, h11^{km}±1^{km}, ML2.9/13, Error ellipse: s-maj=1.5km s-min=0.8km az=77.0*

*THE **08** 21:54:10.5, 38˚.91N×21˚.75E, h0^{km}±1^{km}, ML3.0/12, Error ellipse: s-maj=1.6km s-min=0.5km az=117.0*

ISC 08 21:54:10.4±0.8**, 38˚.87N**±0˚.02×**21˚.80E**±0˚.02**, h7**^{km}±5^{km}**, n106,** σ1^{s}**66**/136**, mb3.1**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.04	8	P	Pg	21 54 12.0	0.0
EVR				S	Sg	21 54 13.3	+0.2
EVR				AML	AML	21 54 13.6	
	comp=N,84652µm,0.5s						
EVR				AML	AML	21 54 13.6	
	comp=E,59271µm,0.5s						
EVR	Evrytania	0.04	8	P	Pg	21 54 12.0	0.0
EVR				S	Sg	21 54 13.1	-0.1
	comp=E,40µm,0.6s						
MAKR	Makrakomi, Fth	0.29	61	P	Pb	21 54 17.1	-1.0
MAKR				S	Sb	21 54 21.7	-1.5
MAKR				AML	AML	21 54 23.1	
	comp=N,8170µm,0.3s						
MAKR				AML	AML	21 54 23.1	
	comp=E,12128µm,0.3s						
AGG	Agios Georgios	0.44	70	P	Pb	21 54 19.6	-0.9
AGG				S	Sb	21 54 26.7	-0.7
AGG				AML	AML	21 54 27.5	
	comp=N,7166µm,0.4s						
AGG				AML	AML	21 54 27.9	
	comp=E,4156µm,0.3s						
AGG	Agios Georgios	0.44	70	P	Pb	21 54 19.5	-1.1
AGG				S	Sb	21 54 27.1	-0.3
	comp=E,3µm,0.5s						
LAKA	Lakka	0.65	167	P	Pb	21 54 23.2	-0.9
ALIK	Aliki, Aigiali	0.66	158	P	Pb	21 54 23.5	-0.7
ALIK				S	Sn	21 54 34.9	-1.9
DLFA	Delphi	0.67	126	P	Pb	21 54 23.3	-1.2
DLFA				S	Sb	21 54 34.4	+0.4
THL	Klokotos Trika	0.71	13	P	Pg	21 54 23.4	-0.8
THL				S	Sg	21 54 33.3	0.0
THL				AML	AML	21 54 37.6	
	comp=E,1248µm,0.8s						
THL				AML	AML	21 54 41.5	
	comp=N,1763µm,0.8s						
THL	Klokotos Trika	0.71	13	P	Pg	21 54 23.3	-0.8
THL				S	Sg	21 54 33.3	0.0
	comp=N,850nm,0.6s						
RLS	Riolos of Patr	0.85	198	P	Pb	21 54 27.3	-0.3
RLS				AML	AML	21 54 46.6	
	comp=E,1394µm,0.8s						
RLS				AML	AML	21 54 52.0	
	comp=N,1292µm,0.7s						

RLS	**Riolos of Patr**	**0.85**	**198**	P	**Pb**	**21 54 27.0**	**-0.6**
RLS				S	**Sn**	**21 54 40.5**	**-1.1**
	comp=N,1µm,0.7s						
KLV	**Kalavryta, Ach**	**0.87**	**162**	P	**Pb**	**21 54 26.8**	**-1.1**
KLV				S	**Sb**	**21 54 39.7**	**-0.1**
KLV				AML	AML	21 54 42.9	
	comp=N,801µm,0.4s						
KLV				AML	AML	21 54 45.5	
	comp=E,885µm,0.7s						
KLV	**Kalavryta, Ach**	**0.87**	**162**	P	**Pb**	**21 54 27.4**	**-0.5**
KLV				S	**Sn**	**21 54 40.8**	**-1.4**
	comp=E,332nm,0.4s						
TSLK	**Tsoukalades, L**	**0.90**	**267**	P	**Pg**	**21 54 27.0**	**-0.6**
TSLK				AML	AML	21 54 51.2	
	comp=N,1771µm,0.5s						
TSLK				AML	AML	21 54 54.2	
	comp=E,1971µm,0.5s						
TSLK	**Tsoukalades, L**	**0.90**	**267**	P	**Pg**	**21 54 27.3**	**-0.3**
TSLK				S	**Sn**	**21 54 42.4**	**-0.3**
TYRN	**Tyrnavos**	**0.90**	**22**	P	**Pg**	**21 54 27.3**	**-0.4**
TYRN	**Tyrnavos**	**0.90**	**22**	P	**Pg**	**21 54 27.4**	**-0.4**
TYRN				S	**Sb**	**21 54 40.5**	**-0.2**
	comp=E,2µm,0.5s						
LRSO	**Larissa Observ**	**0.92**	**30**	P	**Pg**	**21 54 27.5**	**-0.5**
LRSO	**Larissa Observ**	**0.92**	**30**	P	**Pg**	**21 54 27.6**	**-0.5**
EVGI	**Lefkada island**	**0.93**	**255**	P	**Pg**	**21 54 27.2**	**-1.1**
EVGI	**Lefkada island**	**0.93**	**255**	P	**Pg**	**21 54 27.2**	**-1.1**
ATAL	**Atalanti**	**0.97**	**100**	P	**Pn**	**21 54 30.0**	**-0.5**
ATAL				AML	AML	21 54 47.1	
	comp=N,668µm,0.7s						
ATAL				AML	AML	21 54 49.5	
	comp=E,400µm,0.9s						
DRAG	**Dragano-Lefkad**	**0.98**	**259**	P	**Pg**	**21 54 27.9**	**-1.3**
DRAG	**Dragano-Lefkad**	**0.98**	**259**	P	**Pg**	**21 54 27.8**	**-1.3**
DRAG				S	**Sb**	**21 54 43.1**	**+0.3**
FSK	**Fiskardo**	**1.05**	**247**	P	**Pg**	**21 54 29.7**	**-0.9**
FSK				AML	AML	21 54 52.7	
	comp=E,1622µm,0.5s						
FSK				AML	AML	21 54 54.0	
	comp=N,1346µm,0.5s						
THAL	**Thalero**	**1.07**	**141**	P	**Pn**	**21 54 31.8**	**-0.1**
JAN	**Janina**	**1.08**	**317**	P	**Pg**	**21 54 28.8**	**-2.2**
JAN				AML	AML	21 54 55.9	
	comp=N,1240µm,0.5s						
JAN				AML	AML	21 54 56.6	
	comp=E,1612µm,0.4s						
JAN	**Janina**	**1.08**	**317**	P	**Pg**	**21 54 28.9**	**-2.2**
JAN				S	**Sg**	**21 54 44.8**	**-0.2**
	comp=E,645nm,0.4s						
KPRO	**Kipourio**	**1.13**	**343**	P	**Pg**	**21 54 30.4**	**-1.7**
KPRO	**Kipourio**	**1.13**	**343**	P	**Pg**	**21 54 30.5**	**-1.7**
KPRO				S	**Sg**	**21 54 47.4**	**+0.5**
	comp=E,558nm,0.4s						
VLS	**Valsamata**	**1.18**	**234**	P	**Pg**	**21 54 30.7**	**-2.3**
VLS				AML	AML	21 54 55.5	
	comp=N,1332µm,0.4s						
VLS				AML	AML	21 55 00.2	
	comp=E,929µm,0.6s						
NEO	**Neokhori**	**1.19**	**68**	P	**Pn**	**21 54 33.4**	**-0.2**
NEO				AML	AML	21 54 55.3	
	comp=N,1310µm,0.7s						
NEO				AML	AML	21 54 56.9	
	comp=E,799µm,0.4s						
NEO	**Neokhori**	**1.19**	**68**	P	**Pn**	**21 54 33.5**	**-0.1**
NEO				S	**Sn**	**21 54 50.0**	**0.0**
	comp=E,528nm,0.8s						
XOR	**Xorichti**	**1.19**	**65**	P	**Pg**	**21 54 32.8**	**-0.4**
XOR	**Xorichti**	**1.19**	**65**	P	**Pg**	**21 54 32.6**	**-0.6**
PSDA	**Pessada-Kefalo**	**1.22**	**232**	P	**Pg**	**21 54 32.1**	**-1.7**
KEF4	**Livadi, Kephal**	**1.24**	**241**	P	**Pg**	**21 54 32.5**	**-1.7**
KEF4	**Livadi, Kephal**	**1.24**	**241**	P	**Pg**	**21 54 33.1**	**-1.1**
DMLN	**Damoulianata-K**	**1.29**	**241**	P	**Pg**	**21 54 33.1**	**-1.9**
DMLN	**Damoulianata-K**	**1.29**	**241**	P	**Pg**	**21 54 33.7**	**-1.4**
IGT	**Igoumenitsa**	**1.32**	**300**	P	**Pn**	**21 54 34.4**	**-0.9**
IGT	**Igoumenitsa**	**1.32**	**300**	P	**Pn**	**21 54 35.1**	**-0.2**
	baz=305						
IGT				S	**Sn**	**21 54 55.7**	**+2.6**
	baz=305						
KEF3	**Kipouria, Keph**	**1.32**	**240**	P	**Pn**	**21 54 33.6**	**-1.7**
VIL2	**Platees**	**1.33**	**119**	P	**Pg**	**21 54 36.6**	**+0.8**
LIT	**Litokhoron**	**1.34**	**23**	P	**Pn**	**21 54 34.9**	**-0.7**
PENT	**Pentalofos**	**1.42**	**339**	P	**Pn**	**21 54 34.9**	**-1.8**
KZN	**Kozani**	**1.43**	**359**	P	**Pn**	**21 54 35.8**	**-1.1**
KZN				AML	AML	21 54 59.0	
	comp=E,1556µm,0.5s						
KZN				AML	AML	21 55 04.0	
	comp=N,944µm,0.5s						
KZN	**Kozani**	**1.43**	**359**	P	**Pn**	**21 54 35.9**	**-1.1**
KZN				S	**Sn**	**21 54 56.7**	**+0.6**
	comp=N,418nm,0.5s						
KTI	**Kastanea**	**1.54**	**9**	P	**Pn**	**21 54 38.4**	**-0.1**
LSK	**Leskovik**	**1.58**	**324**	P	**Pn**	**21 54 38.9**	**-0.1**
LSK	**Leskovik**	**1.58**	**324**	P	**Pn**	**21 54 38.8**	**-0.1**
	baz=326						
LSK				S	**Sg**	**21 55 06.1**	**+4.9**
	baz=326						
EPID	**Epidavros**	**1.63**	**140**	P	**Pg**	**21 54 41.0**	**-0.6**
NEST	**Nestorio**	**1.65**	**340**	P	**Pn**	**21 54 40.2**	**+0.3**
SRN	**Sarande**	**1.72**	**306**	P	**Pb**	**21 54 42.8**	**+0.4**
	baz=310						
SRN				S	**Sg**	**21 55 10.2**	**+4.5**
	baz=310						
ATHU	**Athens Univers**	**1.80**	**120**	P	**Pb**	**21 54 42.8**	**-1.0**
ATHU	**Athens Univers**	**1.80**	**120**	P	**Pb**	**21 54 42.6**	**-1.2**
KYMI	**Kymi, Euboea I**	**1.81**	**97**	P	**Pb**	**21 54 42.7**	**-1.3**
KYMI	**Kymi, Euboea I**	**1.81**	**97**	P	**Pb**	**21 54 42.9**	**-1.1**
KRND	**KRANIDI**	**1.83**	**144**	P	**Pb**	**21 54 43.7**	**-0.5**
KRND	**KRANIDI**	**1.83**	**144**	P	**Pb**	**21 54 43.8**	**-0.4**
DION	**Dionisos Attik**	**1.85**	**115**	P	**Pb**	**21 54 43.6**	**-1.0**
VLY	**Voula,Athens**	**1.87**	**122**	P	**Pb**	**21 54 43.7**	**-1.2**
KBN	**Korca**	**1.92**	**336**	P	**Pg**	**21 54 46.6**	**-0.6**
	baz=337						
KBN				S	**Sg**	**21 55 15.0**	**+3.0**
	baz=337						
FNA	**Florina**	**1.94**	**350**	P	**Pn**	**21 54 44.0**	**+0.1**
FNA	**Florina**	**1.94**	**350**	P	**Pn**	**21 54 44.2**	**+0.3**
FNA	**Florina**	**1.94**	**350**	P	**Pn**	**21 54 44.4**	**+0.5**
	baz=350						
FNA				S	**Sg**	**21 55 13.5**	**+0.8**
	baz=350						
PLG	**Polygyros**	**1.97**	**40**	P	**Pn**	**21 54 43.3**	**-0.9**
SOH	**Sokhos**	**2.29**	**31**	P	**Pn**	**21 54 48.5**	**-0.1**
OHR	**Ohrid**	**2.37**	**341**	*e*Pn	**Pb**	**21 54 53.9**	**+0.5**
OHR				*e*Sn	**Sg**	**21 55 25.4**	**-1.0**
VLO	**Vlora**	**2.39**	**313**	P	**Pb**	**21 54 54.3**	**+0.5**
	baz=315						
VLO				S	**Sb**	**21 55 24.9**	**+1.5**
	baz=315						
VAY	**Valandovo**	**2.52**	**13**	*e*Pn	**Pn**	**21 54 52.0**	**+0.3**
STIP	**Stip**	**2.83**	**6**	*e*Pn	**Pn**	**21 54 57.3**	**+1.2**
SCTE	**Santa Cesarea**	**2.84**	**296**	P	**Pn**	**21 54 58.2**	**+1.9**
	baz=299						
TIR	**Tirane**	**2.88**	**330**	P	**Pb**	**21 54 59.8**	**-2.4**
	baz=331						
TIR				S	**Sb**	**21 55 38.5**	**+0.8**
	baz=331						
PHP	**Peshkopia**	**3.00**	**340**	P	**Pb**	**21 55 02.0**	**-2.2**
	baz=340						
PHP				S	**Sb**	**21 55 40.8**	**-0.2**
	baz=340						
BCI	**Bajram Curri**	**3.73**	**340**	P	**Pn**	**21 55 12.5**	**+4.0**
	baz=340						
BCI				S	**Sb**	**21 55 58.4**	**-3.7**
	baz=340						
DRME	**Dracevica, Mon**	**3.87**	**330**	*e*Pn	**Pn**	**21 55 12.6**	**+2.3**
PDG	**Podgorica**	**4.05**	**332**	*e*Pn	**Pn**	**21 55 14.2**	**+1.4**
IDI	**Anoyia**	**4.35**	**144**	Pn	**Pn**	**21 55 19.9**	**+2.9**
	comp=N,4.0nm,0.8s,baz=229,slow=20,SNR=1.9						
IDI				Sn	**Sn**	**21 56 10.5**	**+2.5**
	comp=N,0.6nm,0.3s,baz=234,slow=17,SNR=1.7						
HCY	**Herceg Novi**	**4.37**	**326**	*e*Pn	**Pn**	**21 55 18.3**	**+1.1**
SJES	**Sjenica**	**4.60**	**343**	*e*Pn	**Pn**	**21 55 23.7**	**+3.2**
TREB	**Trebinje**	**4.65**	**327**	*e*Pn	**Pn**	**21 55 21.2**	**+0.1**
BRY	**Bratogost**	**4.72**	**329**	*e*Pn	**Pn**	**21 55 23.4**	**+1.2**
UPM	**Unac-Piva**	**4.85**	**334**	*e*Pn	**Pn**	**21 55 24.3**	**+0.3**
STON	**Ston**	**5.06**	**323**	*e*Pn	**Pn**	**21 55 27.1**	**+0.4**
RUDO	**Rudo**	**5.08**	**340**	*e*Pn	**Pn**	**21 55 27.4**	**+0.3**
DIVS	**Divibare**	**5.39**	**346**	*e*Pn	**Pn**	**21 55 32.0**	**+0.6**
HVAR	**Hvar**	**5.91**	**318**	Sg	**Sg**	**21 57 23.0**	**+3.0**
VAE	**Valguarnera**	**5.99**	**259**	Sn	**Sn**	**21 56 52.2**	**+3.9**
	comp=N,1.0nm,0.3s,baz=29,slow=18,SNR=1.8						
SRKY	**Kupres RS**	**6.25**	**328**	*e*Pn	**Pn**	**21 55 44.1**	**+0.9**
ZIRJ	**Zirje**	**6.66**	**318**	Sg	**Sb**	**21 57 26.3**	**0.0**
MORI	**Morici**	**6.77**	**319**	Sg	**Sb**	**21 57 23.3**	**-6.2**
BLY	**Banja Luka**	**6.81**	**331**	*e*Pn	**Pn**	**21 55 50.6**	**-0.1**
DUGI	**Dugi Otok**	**7.20**	**317**	Sg	**Sb**	**21 57 39.2**	**-2.5**
MLR	**Muntele Rosu**	**7.29**	**24**	Pn	**Pn**	**21 55 59.4**	**+1.9**
	comp=N,0.7nm,0.3s,baz=180,slow=10,SNR=7.4						
	comp=N,2.1nm,0.5s						
VIRC	**Vir**	**7.41**	**319**	Sg	**Sb**	**21 57 40.8**	**-7.0**
CRES	**Cresnjev**	**8.38**	**328**	*e*Pn	**Pn**	**21 56 11.9**	**-0.5**
CEY	**Cerknica**	**8.77**	**324**	*e*Pn	**Pn**	**21 56 15.9**	**-1.7**
BRTR	**Keskin Array B**	**9.22**	**81**	Pn	**Pn**	**21 56 26.7**	**+2.8**
	comp=N,0.1nm,0.3s,baz=278,slow=13,SNR=2.4						
	comp=N,0.4nm,0.8s						
ESDC	**Sonseca Array**	**19.95**	**280**	P	**Pn**	**21 58 44.0**	**-0.7**
	baz=76,slow=11,SNR=4.0						
	comp=N,0.4nm,0.6s						
FINES	**FINESS Array B**	**22.75**	**5**	P	**P**	**21 59 11.6**	**-1.3**
	comp=N,0.3nm,0.6s,baz=131,slow=31,SNR=1.5						
	comp=N,0.3nm,0.6s						
NB2	**NORSAR Subarra**	**23.15**	**347**	P	**P**	**21 59 18.0**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=158,slow=11						
NOA	**NORSAR Array B**	**23.15**	**347**	P	**P**	**21 59 17.3**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=158,slow=9.4,SNR=4.0						
	comp=Z,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**31.20**	**220**	P	**P**	**22 00 30.6**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=32,slow=9.2,SNR=2.4						
	comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	**44.08**	**59**	P	**P**	**22 02 19.8**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=272,slow=7.8,SNR=1.9						
	comp=Z,0.2nm,0.5s						

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*IDC **08** 21:56:22.5±5.2, 17°.49S×177°.49W, h409km±31km, mb3.2/4, mbtmp4.0/6, Error ellipse: s-maj=107.6km s-min=30.2km az=137.0*

ISC 08 21:56:21.1±1.9**, 17°.6S**±0°.4×**177°.3W**±0°.2**, h400**km**, n6,** σ**0^{s}.59**/7**, mb3.4**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**268**	P	**Pn**	**21 57 37.9**	**+0.6**
	19nm,0.8s,baz=109,slow=16,SNR=14						
MSVF				S	**S**	**21 58 39.0**	**-0.1**
	4.8nm,0.7s,baz=146,slow=18,SNR=1.8						
DZM	**Mont Dzumac**	**15.90**	**251**	P	**P**	**21 59 42.9**	**-0.5**
	3.5nm,1.0s,baz=63,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**39.67**	**241**	P	**P**	**22 03 16.9**	**+0.4**
	4.2nm,1.0s,baz=97,slow=8.1,SNR=4.2						
	4.2nm,1.0s						
WRA	**Warramunga Arr**	**45.70**	**259**	P	**P**	**22 04 03.7**	**-0.8**
	0.5nm,0.5s,baz=97,slow=7.1,SNR=10						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**45.86**	**254**	P	**P**	**22 04 05.7**	**-0.1**
	3.9nm,0.5s,baz=89,slow=8.3,SNR=70						
	3.9nm,0.5s						
ILAR	**Eielson Array**	**85.38**	**13**	P	**P**	**22 08 14.1**	**0.0**
	0.1nm,0.4s,baz=222,slow=5.5,SNR=5.5						
	0.1nm,0.4s						

ASRS 08 22:03:45.4±0.6**, 50°N**±4°×**9°8E**±°**, h10**km**, MLh3.5**/6**, Error ellipse: s-maj=9.2km s-min=3.4km az=6.0, confirmed, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.02**	**335**	Pg	Pg	22 04 04.8	-0.2
KNGR				Sg	Sb	22 04 19.2	+0.5
ERNS	**Erzin**	**2.05**	**288**	Pg	Pb	22 04 21.4	-1.2
ERNS				Sg	Sb	22 04 49.6	+1.4
MOY	**Mondy**	**2.67**	**41**	Pg	Pb	22 04 33.1	-0.2
MOY				Sg	Sg	22 05 09.8	-1.1
KZLR	**Kyzyl**	**3.12**	**312**	Pg	Pb	22 04 40.6	-0.4
KZLR				Sg	Sg	22 05 24.4	-1.3
ZAK	**Zakamensk**	**3.35**	**76**	Pg	Pb	22 04 45.6	+0.6
ZAK				Sg	Sg	22 05 30.9	-2.1
ARDR	**Aradan**	**4.17**	**316**	Pg	Pb	22 05 01.9	+3.0
ARDR				Sg	Sg	22 05 55.0	-4.2
DJOS	**Djoyskaya Sosn**	**5.28**	**309**	Pg	Pg	22 05 22.3	-4.2
DJOS				Sg	Sg	22 06 33.0	-1.9

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*KRNET **08** 22:27:15.1±0.1, 42°.52N×79°.79E, h20km, mb2.6*

*SOME **08** 22:27:15.3, 42°.58N×79°.77E, h15km*

*NNC **08** 22:27:15.8±1.0, 42°.59N×79°.78E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=6.3km s-min=4.1km az=121.0*

ISC 08 22:27:14.4±1.9**, 42°.53N**±0°.05×**79°.78E**±0°.06**, h2**km±11km**, n38,** σ**1^{s}.18**/66**, 15C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**0.82**	**345**	P	**Pb**	**22 27 30.7**	**-0.8**
	0.7nm,0.1s						
PDGK				S	**Sb**	**22 27 41.6**	**-1.6**
	5.6nm,0.2s						
PDGK	**Podgornoye**	**0.82**	**345**	⇑P	**Pb**	**22 27 30.5**	**-1.0**
	1.3nm,0.6s						
PDGK				⇑S	**Sb**	**22 27 41.6**	**-1.6**
	3.4nm,0.3s						
UZB	**Uzynbulak**	**0.83**	**318**	*e*P	**Pb**	**22 27 31.1**	**-0.6**
	8.7nm,0.1s						
UZB				*e*S	**Sb**	**22 27 42.2**	**-1.1**
	21nm,0.2s						
UZB	**Uzynbulak**	**0.83**	**318**	P	**Pb**	**22 27 31.1**	**-0.6**
	8.7nm,0.1s						
UZB				S	**Sb**	**22 27 42.2**	**-1.1**
	21nm,0.2s						
UZB	**Uzynbulak**	**0.83**	**318**	*e*P	**Pb**	**22 27 31.1**	**-0.6**
	baz=18						
UZB				*e*S	**Sb**	**22 27 42.2**	**-1.1**
	baz=18						
PRZ	**Przheval'sk**	**1.02**	**268**	⇑*i*P	**Pb**	**22 27 34.3**	**-0.7**
	baz=69						
PRZ				⇑*i*S	**Sb**	**22 27 48.2**	**-0.7**
	baz=69						
SATY	**Saty**	**1.14**	**298**	*e*P	**Pg**	**22 27 37.7**	**+1.4**
	1.6nm,0.1s						
SATY				*e*S	**Sn**	**22 27 53.5**	**-0.3**
	22nm,0.1s						
SATY	**Saty**	**1.14**	**298**	P	**Pg**	**22 27 37.7**	**+1.4**
	1.6nm,0.1s						
SATY				S	**Sn**	**22 27 53.5**	**-0.3**
	22nm,0.1s						
KPKS	**Kokpek**	**1.23**	**320**	*e*P	**Pg**	**22 27 38.2**	**+0.2**
	5.7nm,0.2s						
KPKS				*e*S	**Sg**	**22 27 54.5**	**+0.5**
	32nm,0.3s						
KPKS	**Kokpek**	**1.23**	**320**	*e*P	**Pg**	**22 27 38.3**	**+0.2**
	baz=20						
KPKS				*e*S	**Sg**	**22 27 54.6**	**+0.5**
	baz=20						
KURS	**Kuram**	**1.52**	**309**	*e*P	**Pg**	**22 27 43.5**	**-0.1**
	3.1nm,0.3s						
KURS				*e*S	**Sg**	**22 28 03.8**	**+0.5**
	4.7nm,0.3s						
KURS	**Kuram**	**1.52**	**309**	P	**Pg**	**22 27 43.5**	**-0.1**
	3.1nm,0.3s						
KURS				S	**Sg**	**22 28 03.8**	**+0.5**
	4.7nm,0.3s						
KURS	**Kuram**	**1.52**	**309**	*e*P	**Pg**	**22 27 43.5**	**-0.1**
	baz=10.0						
KURS				*e*S	**Sg**	**22 28 03.8**	**+0.5**
	baz=10.0						
ANVS	**Anan'yevo**	**1.58**	**280**	⇑*i*P	**Pb**	**22 27 44.3**	**-0.2**
	baz=80						
ANVS				⇑*i*S	**Sg**	**22 28 05.7**	**+0.5**
	baz=80						
TARG	**Taragay, Kyrgy**	**1.68**	**242**	⇑*i*P	**Pn**	**22 27 45.5**	**+0.4**
	baz=42						
TARG				⇑*i*S	**Sb**	**22 28 08.1**	**+0.2**
	baz=42						
DJR	**Jarkent**	**1.80**	**0**	*e*P	**Pb**	**22 27 48.0**	**-0.2**
	2.6nm,0.2s						
DJR				*e*S	**Sg**	**22 28 11.7**	**-0.6**
	9.0nm,0.3s						
DJR	**Jarkent**	**1.80**	**0**	P	**Pb**	**22 27 48.0**	**-0.2**
	2.6nm,0.2s						
DJR				S	**Sg**	**22 28 11.7**	**-0.6**
	9.0nm,0.3s						
KDJ	**Kajisay**	**1.97**	**259**	⇑*i*P	**Pb**	**22 27 50.1**	**-1.0**
	baz=59						
KDJ				⇑*i*S	**Sb**	**22 28 15.9**	**-0.3**
	baz=59						
MDOK	**Medeo**	**2.11**	**288**	*e*P	**Pg**	**22 27 55.0**	**+0.2**
	2.3nm,0.1s						
MDOK				*e*S	**Sg**	**22 28 23.5**	**+1.4**
	6.6nm,0.4s						
MDOK	**Medeo**	**2.11**	**288**	⇓Pg	**Pb**	**22 27 53.2**	**-0.2**
	1.9nm,0.4s						
MDOK				Lg	Lg	22 28 23.0	
	4.5nm,0.5s						
MDOK	**Medeo**	**2.11**	**288**	Pg	**Pg**	**22 27 55.0**	**+0.2**
	2.3nm,0.1s						
MDOK				Lg	Lg	22 28 23.5	
	6.6nm,0.4s						
CHKK	**Chushkaly**	**2.43**	**304**	*e*P	**Pb**	**22 27 58.4**	**-0.5**
	1.4nm,0.1s						
CHKK				*e*S	**Sb**	**22 28 29.5**	**+0.2**
	8.3nm,0.2s						
CHKK	**Chushkaly**	**2.43**	**304**	Pg	**Pb**	**22 27 58.4**	**-0.5**
	1.4nm,0.1s						
CHKK				Lg	Lg	22 28 29.7	
	8.3nm,0.2s						
KTBS	**Karatobe**	**2.56**	**298**	*e*P	**Pb**	**22 28 01.6**	**+0.6**
	0.8nm,0.2s						
KTBS				*e*S	**Sg**	**22 28 34.7**	**-1.9**
	12nm,0.3s						
KTBS	**Karatobe**	**2.56**	**298**	Pg	**Pb**	**22 28 01.6**	**+0.6**
	0.8nm,0.2s						
KTBS				Lg	Lg	22 28 34.7	
	12nm,0.3s						
ULHL	**Ulahol**	**2.64**	**265**	⇑*e*P	**Pn**	**22 27 59.8**	**+1.6**
	baz=65						
ULHL				⇑*e*S	**Sb**	**22 28 32.3**	**-3.1**
	baz=65						
KAPS	**Kapalarasan**	**2.77**	**354**	*e*P	**Pb**	**22 28 04.5**	**-0.1**
	0.8nm,0.1s						
KAPS				*e*S	**Sb**	**22 28 39.6**	**+0.5**
	5.0nm,0.3s						
KAPS	**Kapalarasan**	**2.77**	**354**	Pg	**Pb**	**22 28 04.5**	**-0.1**
	0.8nm,0.1s						
KAPS				Lg	Lg	22 28 39.6	
	5.0nm,0.3s						
BOOM	**Boomskoye usch**	**2.84**	**270**	⇑*i*P	**Pn**	**22 28 02.5**	**+1.6**
	baz=71						
BOOM				⇑*i*S	**Sb**	**22 28 37.4**	**-3.8**
	baz=71						
KST	**Kastek**	**2.86**	**282**	*e*P	**Pb**	**22 28 07.6**	**+1.4**
	1.2nm,0.2s						
KST				*e*S	**Sg**	**22 28 44.8**	**-1.4**
	3.2nm,0.4s						
KST	**Kastek**	**2.86**	**282**	Pg	**Pg**	**22 28 08.2**	**-0.9**
	1.2nm,0.2s						
KST				Lg	Lg	22 28 46.7	
	3.2nm,0.4s						
KUU	**Kurty**	**2.86**	**300**	*e*P	**Pg**	**22 28 09.5**	**+0.3**
	0.5nm,0.1s						
KUU				*e*S	**Sg**	**22 28 48.4**	**+2.1**
	2.2nm,0.2s						
KUU	**Kurty**	**2.86**	**300**	Pg	**Pg**	**22 28 09.5**	**+0.3**
	0.5nm,0.1s						
KUU				Lg	Lg	22 28 48.4	
	2.2nm,0.2s						
TKM2	**Tokmak 2**	**3.11**	**279**	⇓Pg	**Pb**	**22 28 10.8**	**+0.3**
	1.8nm,1.0s						
TKM2				⇓Lg	Lg	22 28 50.6	
	0.9nm,0.3s						
TKM2	**Tokmak 2**	**3.11**	**279**	⇓*i*P	**Pn**	**22 28 06.3**	**+1.7**
	baz=79						
TKM2				⇓*i*S	**Sn**	**22 28 43.9**	**+1.5**
	baz=79						
KRBS	**Karabastau**	**3.22**	**293**	*e*P	**Pb**	**22 28 13.1**	**+0.7**
	0.5nm,0.2s						
KRBS				*e*S	**Sg**	**22 28 54.6**	**-3.4**
	1.8nm,0.2s						
KRBS	**Karabastau**	**3.22**	**293**	Pg	**Pg**	**22 28 14.5**	**-1.7**
	0.5nm,0.2s						
KRBS				Lg	Lg	22 28 57.6	
	1.8nm,0.2s						
MK31	**Makanchi Array**	**4.62**	**22**	Pn	**Pn**	**22 28 26.0**	**+0.7**
	0.1nm,0.2s,baz=205,slow=13,SNR=14						
MK31				⇑Lg	Lg	22 29 40.3	
	0.3nm,0.5s,baz=210,slow=26						

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*JMA **08** 22:28:46.4±0.1, 24°.4N±0°.7×12°2E±°, h31km±2km, MV2.4/7, TAIWAN REGION*

*TAP **08** 22:28:46.4, 24°.41N×121°.78E, h19km, ML3.1, C*

ISC 08 22:28:45.9±0.8**, 24°.38N**±0°.02×**121°.85E**±0°.02**, h17**km±4km**, n79,** σ**0^{s}.80**/136**, 9C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.10**	**317**	⇑*i*P	**Pb**	**22 28 50.0**	**+0.6**
	baz=352						
EWUT				*i* S	**Sb**	**22 28 52.2**	**+0.5**
	baz=352						
ENA	**Nanau**	**0.11**	**298**	⇑*i*P	**Pb**	**22 28 49.9**	**+0.3**
	baz=303						
ENA				*i* S	**Sb**	**22 28 52.1**	**0.0**
	baz=303						
EHP	**Heping Village**	**0.12**	**237**	P	**Pb**	**22 28 50.3**	**+0.6**
	baz=198						
EHP				S	**Sb**	**22 28 53.0**	**+0.8**
	baz=198						
TWC	**Suao**	**0.23**	**360**	⇑*i*P	**Pb**	**22 28 51.8**	**+0.1**
	baz=13						
TWC				*i* S	**Sb**	**22 28 55.1**	**-0.4**
	baz=13						
NDS	**Dongshan**	**0.28**	**335**	P	**Pb**	**22 28 52.2**	**-0.4**
	baz=350						
NDS				S	**Sg**	**22 28 56.1**	**-0.2**
	baz=350						
ETL	**Fush Village**	**0.30**	**224**	⇑P	**Pb**	**22 28 52.7**	**-0.1**
	baz=211						
ETL				S	**Sb**	**22 28 57.2**	**-0.3**
	baz=211						
NACB	**Ninganchiao**	**0.31**	**229**	⇓*i*P	**Pb**	**22 28 52.6**	**-0.3**
	baz=217						
NACB				*i* S	**Sb**	**22 28 57.1**	**-0.5**
	baz=217						
LATG	**Datong**	**0.34**	**298**	⇑*i*P	**Pg**	**22 28 52.8**	**-0.1**
	baz=299						
LATG				*i* S	**Sg**	**22 28 56.6**	**-1.2**
	baz=299						
ENTT	**Nioudou**	**0.37**	**316**	⇑*i*P	**Pg**	**22 28 53.5**	**-0.1**
	baz=312						
ENTT				*i* S	**Sg**	**22 28 58.2**	**-0.5**
	baz=312						
TWD	**Chiawan**	**0.37**	**218**	P	**Pb**	**22 28 53.9**	**-0.1**
	baz=211						
TWD				S	**Sb**	**22 28 59.0**	**-0.5**
	baz=211						
ETLH	**Xiulin Townshi**	**0.38**	**244**	⇓*i*P	**Pg**	**22 28 53.7**	**0.0**
	baz=235						
ETLH				S	**Sg**	**22 28 58.4**	**-0.6**
	baz=235						
TWE	**Neicheng**	**0.38**	**334**	⇑*i*P	**Pb**	**22 28 53.9**	**-0.4**
	baz=344						
TWE				*i* S	**Sg**	**22 28 58.3**	**-0.9**
	baz=344						
ILA	**Ilan**	**0.40**	**347**	*e*P	**Pb**	**22 28 54.4**	**-0.1**
	baz=356						
ILA				S	**Sb**	**22 29 00.1**	**-0.3**
	baz=356						
NNSB	**Datong**	**0.43**	**277**	⇓*i*P	**Pg**	**22 28 54.5**	**-0.2**
	baz=274						
NNSB				S	**Sg**	**22 28 59.3**	**-1.3**
	baz=274						
NNS	**Nan Shan**	**0.44**	**279**	⇓*i*P	**Pg**	**22 28 54.6**	**-0.3**
	baz=276						
NNS				*i* S	**Sg**	**22 28 59.6**	**-1.2**
	baz=276						
FUSB	**Fushanzhiwuyua**	**0.45**	**328**	⇑*i*P	**Pg**	**22 28 55.1**	**0.0**
	baz=327						
FUSB				*i* S	**Sg**	**22 29 00.3**	**-0.9**
	baz=327						
HWA	**Hwalien**	**0.46**	**209**	*e*P	**Pb**	**22 28 56.0**	**+0.5**
	baz=207						
HWA				*e*S	**Sn**	**22 29 04.3**	**-1.1**
	baz=207						
EGS		**0.47**	**9**	P	**Pb**	**22 28 56.3**	**+0.5**
	baz=22						
EGS				S	**Sb**	**22 29 02.3**	**-0.2**
	baz=22						
NTC	**Toucheng**	**0.48**	**358**	*e*P	**Pb**	**22 28 56.1**	**+0.2**
	baz=5.0						
NTC				*e*S	**Sb**	**22 29 02.4**	**-0.2**
	baz=5.0						
NWLT	**Wulai**	**0.51**	**322**	P	**Pg**	**22 28 56.0**	**-0.1**
	baz=323						
NWLT				S	**Sg**	**22 29 01.9**	**-1.1**
	baz=323						
ETM	**Tongmen**	**0.52**	**219**	*e*P	**Pb**	**22 28 56.4**	**-0.2**
	baz=212						
NSK	**Sanguang**	**0.54**	**304**	⇑*i*P	**Pg**	**22 28 56.3**	**-0.4**
	baz=306						

NSK				*i* S	Sg	22 29 02.6	-1.3
	baz=306						
TEYL	**Yanliau Villag**	0.56	205	*e*P	Pn	22 28 58.3	-0.7
	baz=205						
TEYL				*e*S	Sn	22 29 08.1	+0.2
	baz=205						
FUSS	**Fushou**	0.57	257	⇓P	Pg	22 28 57.2	0.0
	baz=253						
FUSS				*e*S	Sg	22 29 04.0	-0.8
	baz=253						
WHF	**Hehuan Shan**	0.58	247	⇓*i*P	Pg	22 28 57.3	-0.2
	baz=242						
WHF				*i* S	Sg	22 29 04.6	-0.8
	baz=242						
TIPB	**Shuangxi**	0.59	358	P	Pb	22 28 58.0	+0.1
	baz=11						
TIPB				S	Sg	22 29 05.1	-0.6
	baz=11						
TWT	**Tachien**	0.63	259	P	Pb	22 28 58.4	-0.1
	baz=250						
TWT				*e*S	Sg	22 29 05.6	-1.1
	baz=250						
TDCB	**Techi**	0.64	259	*e*P	Pg	22 28 58.3	-0.3
	baz=251						
TDCB				*e*S	Sg	22 29 05.6	-1.6
	baz=251						
TWB1	**Santiao Chiao**	0.64	11	*e*P	Pb	22 28 59.0	+0.4
	baz=18						
TWB1				*e*S	Sg	22 29 06.6	-0.5
	baz=18						
TWA	**Mucha**	0.65	338	P	Pb	22 28 58.8	0.0
	baz=343						
TWA				S	Sg	22 29 06.7	-0.6
	baz=343						
NHDH	**Xindian Distri**	0.66	333	*e*P	Pg	22 28 58.6	-0.1
	baz=337						
NHDH				*e*S	Sg	22 29 06.7	-0.8
	baz=337						
ESL	**Shilin**	0.68	214	*e*P	Pb	22 28 59.3	0.0
	baz=213						
ESL				*e*S	Sb	22 29 08.2	-0.1
	baz=213						
TATO	**Taipei**	0.68	331	*e*P	Pg	22 28 58.6	-0.6
	baz=335						
TATO				*e*S	Sg	22 29 07.5	-0.9
	baz=335						
CHGB	**Renai**	0.69	243	P	Pb	22 28 59.5	-0.1
	baz=239						
CHGB				*e*S	Sb	22 29 09.1	+0.1
	baz=239						
NWF	**Wu-fen Shan**	0.70	355	P	Pb	22 29 00.0	+0.4
	baz=360						
NWF				S	Sg	22 29 08.8	-0.1
	baz=360						
WFSB	**Wu-fen Shan**	0.70	355	*e*P	Pb	22 28 60.0	+0.4
	baz=360						
WFSB				*e*S	Sg	22 29 08.5	-0.3
	baz=360						
NFF	**Wufeng Townshi**	0.71	291	*e*P	Pb	22 29 00.5	+0.6
	baz=298						
NFF				S	Sg	22 29 07.3	-2.1
	baz=298						
SXI1	**Grass Mountain**	0.72	2	*e*P	Pb	22 29 00.2	+0.3
	baz=11						
SXI1				*e*S	Sg	22 29 08.6	-0.9
	baz=11						
OWD	**Renai**	0.74	236	*e*P	Pg	22 29 00.1	-0.4
	baz=238						
OWD				*e*S	Sg	22 29 09.5	-0.9
	baz=238						
EGFH	**Guangfu**	0.80	209	*e*P	Pn	22 29 01.9	-0.5
	baz=217						
LIOB	**Emei**	0.81	290	P	Pn	22 29 02.2	-0.3
	baz=282						
LIOB				*e*S	Sg	22 29 11.4	-0.8
	baz=282						
NSTT	**Nanjuang**	0.81	288	P	Pg	22 29 01.7	0.0
	baz=280						
NSTT				S	Sg	22 29 11.1	-1.4
	baz=280						
TWS1	**Kuangyinshan**	0.82	332	*e*P	Pn	22 29 02.4	-0.3
	baz=335						
TWS1				*e*S	Sb	22 29 13.6	+1.0
	baz=335						
WHP	**Taichung City**	0.83	263	*e*P	Pb	22 29 02.0	+0.1
	baz=261						
WHP				*e*S	Sg	22 29 12.1	-0.9
	baz=261						
ANP	**Anpu**	0.86	340	*e*P	Pg	22 29 02.9	+0.2
	baz=343						
NTST	**Danshui**	0.87	335	*e*P	Pn	22 29 03.1	-0.2
	baz=347						
NTST				*e*S	Sn	22 29 15.1	-0.4
	baz=347						
SBCB	**Hsinchu**	0.89	298	*e*P	Pn	22 29 04.0	+0.4
	baz=291						
SBCB				*e*S	Sg	22 29 15.4	+0.5
	baz=291						
VWDT	**VWDT**	0.90	226	*e*P	Pg	22 29 03.2	-0.1
	baz=228						
VWDT				*e*S	Sn	22 29 16.2	0.0
	baz=228						
WCS	**Beigang Elemen**	0.91	250	*e*P	Pg	22 29 03.5	-0.1
	baz=247						
TWY	**Chenhua**	0.93	346	P	Pn	22 29 04.3	+0.2
	baz=350						
TWY				S	Sg	22 29 15.9	-0.1
	baz=350						
HGSD	**Ruisui**	0.96	204	*e*P	Pn	22 29 04.9	+0.3
	baz=188						
HGSD				*e*S	Sn	22 29 20.1	+2.2
	baz=188						
NMLH	**Miaoli**	0.98	280	*e*P	Pn	22 29 06.1	+1.2
	baz=278						
TWQ1	**Liyutan**	0.98	269	*e*P	Pn	22 29 06.1	+1.2
	baz=267						
EHY	**Hungye**	0.99	209	*e*P	Pb	22 29 04.4	-0.2
	baz=206						
NSY	**Sanyi**	0.99	273	*e*P	Pn	22 29 06.7	+1.6
	baz=271						
SMLT	**Sun Moon Lake**	1.00	241	P	Pn	22 29 05.1	-0.1
	baz=237						
JYNG	**Yonagunijimaku**	1.00	85	P	Pn	22 29 06.4	+1.3
JYNG				*e*S	Sn	22 29 20.3	+1.4
SSLB	**Suanglung**	1.01	235	*e*P	Pg	22 29 05.1	-0.3
	baz=232						
SSLB				*e*S	Sb	22 29 17.9	+0.1
	baz=232						
TYC	**Yuchr**	1.02	243	*e*P	Pg	22 29 05.9	+0.2
	baz=240						
YOJ	**Yonaguni jima**	1.06	85	P	Pg	22 29 07.6	+1.2
YOJ				*e*S	Sn	22 29 23.1	+2.7
WDJ	**Dajia District**	1.10	269	*e*P	Pg	22 29 07.8	+0.6
	baz=274						
EYUL	**Yuli**	1.13	206	*e*P	Pg	22 29 08.3	+0.5
	baz=212						
YUS	**Yu-Shan**	1.21	223	*e*P	Pg	22 29 08.8	-0.5
	baz=209						
FULB	**Fuli**	1.28	204	*e*P	Pg	22 29 09.6	-0.9
	baz=212						
ALS	**Alishan**	1.29	228	P	Pg	22 29 10.4	-0.4
	baz=212						
CHN5	**Tsauling**	1.32	234	P	Pg	22 29 11.1	-0.3
	baz=235						
CHN5				*e*S	Sg	22 29 30.6	+2.0
	baz=235						
CHKT	**Chengkung**	1.34	199	*e*P	Pb	22 29 10.2	-0.4
	baz=183						
WDLH	**Douliu**	1.38	241	*e*P	Pg	22 29 12.3	-0.1
	baz=252						
WDLH				*e*S	Sg	22 29 32.7	+2.2
	baz=252						
WRL	**Guolierlin Hig**	1.43	251	*e*P	Pg	22 29 12.6	-0.7
	baz=263						
EDH	**Donghe**	1.48	200	*e*P	Pn	22 29 11.5	-0.3
	baz=185						
CHN4	**Tsaushan**	1.54	229	*e*P	Pg	22 29 14.6	-0.8
	baz=216						
CHN4				*e*S	Sg	22 29 37.2	+1.7
	baz=216						
TPUB	**Ta-pu**	1.55	226	*e*P	Pb	22 29 14.5	+0.4
	baz=213						
TPUB				*e*S	Sg	22 29 36.0	+0.2
	baz=213						
STYH	**Taoyuan**	1.55	220	*e*P	Pb	22 29 13.8	-0.4
	baz=207						
WTP	**Ta-pu**	1.59	225	*e*P	Pb	22 29 14.9	-0.1
	baz=209						
TWK	**Hsinying**	1.67	229	*e*P	Pg	22 29 17.3	-0.6
	baz=215						
TWK				*e*S	Sg	22 29 40.0	+0.4
	baz=215						
SNST	**Tainan City**	1.69	227	*e*P	Pb	22 29 17.0	+0.5
	baz=211						
CHN1	**Nanshi**	1.69	226	*e*P	Pg	22 29 17.3	-1.2
	baz=214						
CHN1				*e*S	Sg	22 29 40.1	-0.4
	baz=214						
IRIF	**Iriomote-Funau**	1.71	91	*e*P	Pg	22 29 17.1	-1.7
JIJ	**Ishigaki jima**	2.09	90	P	Pb	22 29 21.6	-1.7
JIJ				*e*S	Sb	22 29 48.2	-0.9

*IGIL **08** 22:38:24.6, 36°.53N×9°.90W, h28^{km}, ML1.6*
*MDD **08** 22:38:24.5±1.0, 36°.62N×9°.81W, h19^{km}±4^{km}, mb_Lg2.2/4, Error ellipse: s-maj=8.9km s-min=7.3km az=137.0*
*INMG **08** 22:38:25.3±0.9, 36°.54N×9°.87W, h31^{km}, ML1.9, Error ellipse: s-maj=4.3km s-min=3.2km az=101.0*
*CNRM **08** 22:38:30.9, 36°.41N×8°.95W, h110^{km}, ml2.7*
ISC 08 22:38:20.7±2.2**, 36°.42N**±0°.06×**9°.9W**±0°.1**, h30^{km}, n33, σ1^s.84**/58**, 3C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	1.13	50	⇑*i*P	Pn	22 38 42.0	+1.5
PFVI				*e*S	Sn	22 38 54.9	-0.1
PFVI				A	A	22 38 55.4	
	13nm,0.1s						
MORF	**Marmelete**	1.35	48	*e*P	Pn	22 38 45.0	+1.5
MORF				*e*S	Sn	22 39 00.0	-0.5
MORF				IAML		22 39 00.3	
	comp=N,13nm,0.1s						
MORF	**Marmelete**	1.35	48	*e*P	Pn	22 38 45.0	+1.5
MORF				*e*S	Sn	22 39 00.0	-0.5
MORF				A	A	22 39 04.4	
	comp=N,9.2nm,0.3s						
PTEO	**Sao Teotonio**	1.48	40	*e*P	Pn	22 38 46.9	+1.6
PTEO				*e*S	Sn	22 39 03.0	-0.6
PTEO				A	A	22 39 08.4	
	comp=N,8.0nm,0.7s						
PBDV	**Barranco-do-Ve**	1.79	62	⇑*i*Pn	Pn	22 38 51.5	+1.9
PBDV				*e*Sn	Sn	22 39 11.0	-0.4
PBDV				A	A	22 39 14.9	
	comp=N,8.1nm,0.8s						
PCVE	**Castro Verde**	1.93	50	*e*Pn	Pn	22 38 53.3	+1.8
PCVE				*e*Sn	Sn	22 39 14.7	-0.1
PCVE				A	A	22 39 16.1	
	comp=N,6.2nm,0.5s						
MESJ	**Messejana**	1.96	43	*e*P	Pn	22 38 53.3	+1.3
MESJ				*e*S	Sn	22 39 14.4	-1.1
MESJ				IAML		22 39 15.3	
	comp=N,2.8nm,0.1s						
MESJ	**Messejana**	1.96	43	*e*Pn	Pn	22 38 53.3	+1.3
MESJ				*e*Sn	Sn	22 39 14.5	-1.1
MESJ				A	A	22 39 15.9	
	comp=N,5.6nm,0.8s						
PVAQ	**Vaqueiros**	2.02	60	⇑*e*Pn	Pn	22 38 54.5	+1.8
PVAQ				*e*Sn	Sn	22 39 16.5	-0.4
PVAQ				A	A	22 39 19.1	
	comp=N,5.7nm,0.1s						
PVAQ	**Vaqueiros**	2.02	60	P	Pn	22 38 54.5	+1.8
PVAQ				S	Sn	22 39 17.5	+0.6
PNCL	**Nicolau / Gran**	2.02	33	*e*Pn	Pn	22 38 54.0	+1.2
PNCL				*e*Sn	Sn	22 39 15.6	-1.4
PNCL				A	A	22 39 16.7	
	comp=N,4.6nm,0.8s						
EGRO	**El Granado**	2.24	59	Pn	Pn	22 38 57.6	+1.7
EGRO				Sn	Sn	22 39 21.5	-0.9
EGRO				*i* Vmb_Lg		22 39 23.9	
PBEJ	**Beja**	2.29	45	*e*Sn	Sn	22 39 22.3	-1.4
EVO	**Evora**	2.60	35	*e*Pn	Pn	22 39 01.6	+0.9
EVO				*e*Sn	Sn	22 39 29.3	-1.9
EVO				A	A	22 39 30.4	
	comp=N,5.1nm,0.1s						
PBAR	**Barrancos**	2.89	52	*e*Pn	Pn	22 39 06.2	+1.5
PBAR				*e*Sn	Sn	22 39 37.1	-1.3
PBAR				A	A	22 39 38.3	
	comp=N,3.6nm,0.9s						
EMIN	**Mina Concepcio**	2.92	61	Pn	Pn	22 39 06.5	+1.3
EMIN				Sn	Sn	22 39 37.6	-1.6
EMIN				*i* Vmb_Lg		22 39 40.8	
PMTG	**Montargil**	2.97	26	*e*Pn	Pn	22 39 06.5	+0.7
PMTG				*e*Sn	Sn	22 39 37.8	-2.6
PMTG				A	A	22 39 38.6	
	comp=N,4.8nm,0.6s						
PESTR	**Estremoz**	3.06	36	*e*Sn	Sn	22 39 40.9	-1.9
PESTR				A	A	22 39 46.3	
	comp=N,2.5nm,0.7s						
PSBE	**So Bento**	3.22	16	*e*Pn	Pn	22 39 10.7	+1.4
PSBE				*e*Sn	Sn	22 39 45.3	-1.3
EBAD	**Badajoz**	3.28	44	Pn	Pn	22 39 10.3	+0.2
EBAD				Sn	Sn	22 39 45.3	-2.8
EBAD				*i* Vmb_Lg		22 39 47.9	
ESPR	**Espera**	3.29	81	Pn	Pn	22 39 12.4	+2.2
ESPR				*i* Vmb_Lg		22 39 16.8	
ESPR				Sn	Sn	22 39 48.0	-0.4
PMRV	**Marv??o**	3.61	33	*e*Pn	Pn	22 39 15.9	+1.3
PMRV				*e*Sn	Sn	22 39 53.2	-3.0
PMRV				A	A	22 39 56.5	
	comp=N,2.2nm,0.8s						
ECAB	**El Cabril**	3.95	64	Pn	Pn	22 39 20.6	+1.2
ECAB				Sn	Sn	22 40 01.7	-2.9
EADA	**Adamuz**	4.60	66	Pn	Pn	22 39 29.7	+1.4
EADA				Sn	Sn	22 40 17.5	-3.1
LCRM	**LCR**	4.96	122	P	Pn	22 39 35.5	+2.2
LCRM				S	Sn	22 40 22.1	-7.6
AKLM	**AKL**	5.29	109	S	Sn	22 40 27.6	-10
PAB	**San Pablo**	5.39	53	Pn	Pn	22 39 40.3	+1.1
PAB				Sn	Sn	22 40 36.6	-3.7
MD31	**MD31**	5.53	128	P	Pn	22 39 43.6	+2.6
MD31				S	Sn	22 40 40.4	-3.3
EQES	**Quesada**	5.64	74	Pn	Pn	22 39 44.3	+1.7
EQES				Sn	Sn	22 40 44.1	-2.3
MDT	**Midelt**	5.66	128	P	Pn	22 39 45.3	+2.4
MDT				S	Sn	22 40 44.2	-2.7
ESDC	**Sonseca Array**	5.71	53	Pn	Pn	22 39 44.9	+1.4
EAGO	**Agolada(Pontev**	6.53	12	Pn	Pn	22 39 58.5	+3.7
ETOB	**Tobarra**	7.01	69	Pn	Pn	22 40 02.6	+1.2

*NNC **08** 22:44:37.2±0.9, 47°.23N×82°.57E, h0^{km}, mb3.6, mpv2.5, Error ellipse: s-maj=7.8km s-min=4.2km az=135.0*
*SOME **08** 22:44:38.2, 47°.27N×82°.43E, h10^{km}*
ISC 08 22:44:32.9±1.9**, 47°.3N**±0°.1×**82°.56E**±0°.08**, h9^{km}**±12^{km}**, n18, σ0^s.91**/34**, 14C-8D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK05	**Makanchi Array**	0.53	200	⇑P	Pn	22 44 45.8	-0.8
MK05				⇑S	Sb	22 44 53.3	+1.2
MK31	**Makanchi Array**	0.53	200	⇑P	Pn	22 44 45.8	-0.8
	0.7nm,0.2s,baz=316,slow=6.9,SNR=763						
MK31				⇓S	Sb	22 44 53.4	+1.3
	32nm,0.5s,baz=54,slow=14,SNR=43						
MK06	**Makanchi Array**	0.54	198	⇑P	Pn	22 44 46.0	-0.8
MK06				⇑S	Sb	22 44 53.5	+1.1
MK02	**Makanchi Array**	0.55	198	⇓P	Pn	22 44 46.0	-0.9
MK02				⇑S	Sb	22 44 53.3	+0.6
MK01	**Makanchi Array**	0.55	199	⇑P	Pn	22 44 46.2	-0.7
MK01				⇑S	Sb	22 44 53.5	+0.8
MK04	**Makanchi Array**	0.55	199	⇓P	Pn	22 44 46.2	-0.7
MK04				⇑S	Sb	22 44 53.6	+0.9
MK09	**Makanchi Array**	0.55	201	⇑P	Pn	22 44 46.3	-0.7
MK09				⇑S	Sb	22 44 54.0	+1.3
MK03	**Makanchi Array**	0.55	199	⇓P	Pn	22 44 46.2	-0.8
MK03				⇓S	Sb	22 44 53.4	+0.7
MK07	**Makanchi Array**	0.56	197	⇓P	Pn	22 44 46.2	-0.9
MK07				⇑S	Sb	22 44 53.9	+0.9
MK08	**Makanchi Array**	0.56	199	⇑P	Pn	22 44 46.5	-0.6
MK08				⇓S	Sb	22 44 54.3	+1.1
MAKZ	**Makanchi**	0.62	220	⇑P	Pn	22 44 48.2	+0.3
	1.3nm,0.4s						
MAKZ				⇓S	Sn	22 44 57.6	-0.5
	8.5nm,0.3s						
ZSN	**Zaisan**	1.58	83	*e*P	Pg	22 45 03.6	+0.4
	1.7nm,0.1s						
ZSN				*e*S	Sn	22 45 21.4	-0.1
	5.1nm,0.3s						
ZSN	**Zaisan**	1.58	83	P	Pg	22 45 03.6	+0.4
	1.7nm,0.1s						
ZSN				S	Sn	22 45 21.4	-0.1
	5.1nm,0.3s						
KAPS	**Kapalarasan**	2.99	229	*e*P	Pg	22 45 30.9	+0.7
	0.5nm,0.2s						
KAPS				*e*S	Sg	22 46 08.1	-0.8
	3.1nm,0.3s						
KAPS	**Kapalarasan**	2.99	229	Pg	Pg	22 45 30.9	+0.7
	0.5nm,0.2s						
KAPS				Lg	Lg	22 46 08.1	
	3.1nm,0.3s						
DJR	**Jarkent**	3.54	214	*e*P	Pg	22 45 41.6	+1.0
	0.5nm,0.1s						
DJR				*e*S	Sg	22 46 26.3	-0.1
	2.3nm,0.3s						
DJR	**Jarkent**	3.54	214	Pg	Pg	22 45 41.6	+1.0
	0.5nm,0.1s						
DJR				Lg	Lg	22 46 26.3	
	2.3nm,0.3s						
KPKS	**Kokpek**	4.70	217	*e*P	Pg	22 46 02.3	-0.5
	1.1nm,0.3s						
KPKS				*e*S	Sg	22 47 01.7	-2.0
	5.6nm,0.3s						

IDC 08 22:53:41.7±1.0**, 28°.86N**×**106°.81E, h0^{km}, mb3.6**/6**, mbtmp3.6**/7**, ML3.1**/1**, Error ellipse: s-maj=83.7km s-min=19.3km az=60.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	18.95	359	P	Pn	22 58 05.1	+0.2
	0.1nm,0.3s,baz=179,slow=10,SNR=4.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	26.20	320	P	P	22 59 19.0	+0.9
	0.8nm,0.8s,baz=116,slow=11,SNR=6.5						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	29.76	334	P	P	22 59 49.6	-0.2
	1.0nm,0.4s,baz=128,slow=9.5,SNR=5.0						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	55.32	148	P	P	23 03 17.4	0.0
	0.9nm,0.9s,baz=334,slow=8.4,SNR=9.5						
	0.9nm,0.9s						
ASAR	**Alice Springs**	58.38	151	P	P	23 03 39.0	0.0
	0.5nm,0.7s,baz=334,slow=6.7,SNR=4.3						
	0.5nm,0.7s						
AKASG	**Malin Array Be**	60.63	315	P	P	23 03 54.5	+0.2
	0.1nm,0.3s,baz=60,slow=8.7,SNR=2.3						
	0.1nm,0.3s						
NOA	**NORSAR Array B**	67.80	328	P	P	23 04 39.7	-1.5
	0.2nm,0.6s,baz=237,slow=3.2,SNR=2.0						
	0.2nm,0.6s						

*IDC **08** 22:58:19.3±1.7, 14°.02S×166°.39E, h0^{km}, mb3.8/5, mbtmp3.9/6, ML3.7/1, MS3.2/4, Error ellipse: s-maj=47.6km s-min=28.5km az=136.0*
*NEIC **08** 22:58:23.7±1.0, 14°.09S±0°.06×166°.5E±0°.1, h27^{km}±6^{km}, mb4.4/6, Error ellipse: s-maj=15.7km s-min=8.5km az=78.0*
ISC 08 22:58:24.9±1.1**, 14°.12S**±0°.10×**166°.5E**±0°.1**, h43^{km}, n19, σ0^s.96**/20**, mb4.1**/8**, MS3.2**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	1.47	154	Pn	Pn	22 58 46.8	-2.3
SANVU				Sn	Sn	22 59 07.8	+0.6
KOUNC	**Koumac, New Ca**	6.74	198		Pn	23 00 01.0	-0.4
KOUNC				Sn	Sn	23 01 17.4	+0.5
DZM	**Mont Dzumac**	7.91	181	Pn	Pn	23 00 16.8	-0.7
	1.0nm,0.3s,baz=7.6,slow=18,SNR=12						
DZM				Sn	Sn	23 01 46.4	+0.7
	baz=301,slow=22						
DZM				LR	LR	23 03 02.7	
	comp=Z,120nm,19.0s,baz=26,slow=35						
	3.7nm,0.5s						
OUENC	**Ouen Island, N**	8.26	178	Pn	Pn	23 00 21.4	-0.8
PINNC	**Pines Island,**	8.49	174	Pn	Pn	23 00 25.2	-0.2
CTA	**Charters Tower**	20.25	250	P	P	23 02 56.4	-0.5
	3.0nm,0.8s,baz=61,slow=13,SNR=2.2						
CTA				LR	LR	23 09 54.6	
	comp=Z,27nm,20.5s,baz=87,slow=34						
	3.0nm,0.8s						
BKZ	**Black Stump Fm**	26.45	162	P	P	23 03 58.7	+0.8
BKZ				IAmb	IAmb	23 04 04.2	
	comp=Z,8.9nm,1.3s						
STKA	**Stephens Creek**	28.85	228	LR	LR	23 14 56.2	
	comp=Z,62nm,19.6s,baz=25,slow=35						
WB0	**Warramunga Arr**	31.21	255	P	P	23 04 39.9	-0.6
WB0				IAmb	IAmb	23 05 09.3	
	comp=Z,4.2nm,1.2s						
WB2	**Warramunga Arr**	31.27	255	P	P	23 04 40.6	-0.4
WB2				IAmb	IAmb	23 05 17.3	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	31.28	255	P	P	23 04 40.4	-0.7
	comp=Z,0.9nm,0.8s,baz=86,slow=9.3,SNR=8.0						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	32.22	248	P	P	23 04 49.0	-0.4
	comp=Z,0.6nm,0.6s,baz=72,slow=9.5,SNR=8.9						
	comp=Z,0.6nm,0.6s						
FITZ	**Fitzroy Crossi**	39.42	259	P	P	23 05 49.5	-1.6
	comp=Z,3.0nm,0.9s,baz=109,slow=11,SNR=2.8						
	comp=Z,3.0nm,0.9s						
FITZ	**Fitzroy Crossi**	39.42	259	P	P	23 05 50.2	-0.9
VNDA	**Vanda**	63.45	181	P	P	23 08 51.1	+1.2
SBA	**Scott Base**	63.74	180	P	P	23 08 52.3	+0.5
SBA				IAmb	IAmb	23 08 54.5	
	comp=Z,4.8nm,1.1s						
ILAR	**Eielson Array**	86.17	18	P	P	23 11 01.9	+0.7
	comp=Z,0.7nm,0.7s,baz=240,slow=5.3,SNR=12						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	86.17	18	P	P	23 11 02.2	+1.0
NVAR	**Mina Array Bea**	87.42	49	LR	LR	23 43 55.0	
	comp=Z,32nm,18.7s,baz=192,slow=31						

*IDC **08** 22:59:22.1±7.8, 56°.00S×27°.59W, h83^{km}±72^{km}, mb3.7/5, mbtmp4.1/6, ML4.6/1, Error ellipse: s-maj=35.4km s-min=18.5km az=64.0*
*NEIC **08** 22:59:23.3±1.8, 56°.1S±0°.1×27°.9W±0°.2, h90^{km}±9^{km}, mb4.4/18, Error ellipse: s-maj=24.2km s-min=13.9km az=216.0*
ISC 08 22:59:23.7±0.8**, 56°.1S**±0°.1×**27°.9W**±0°.1**, h100^{km}, n30, σ0^s.94**/28**, mb4.2**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	5.23	286	Pn	Pn	23 00 39.6	+0.2
HOPE				Sn	Sn	23 01 36.4	-2.0
EFI	**East Falkland**	18.23	271		P	23 03 28.8	0.0
SNAA	**Sanae**	18.89	156	P	P	23 03 34.6	-1.3
SNAA	**Sanae**	18.89	156	P	P	23 03 35.0	-0.9
	1.7nm,0.3s,baz=299,slow=11,SNR=45						
	11nm,0.6s						
SNAA	**Sanae**	18.89	156	P	P	23 03 34.9	-1.0
SNAA				IAmb	IAmb	23 03 36.1	
	comp=Z,10nm,0.6s						
PMSA	**Palmer Station**	19.58	229	P	P	23 03 43.0	-0.3
PMSA				IAmb	IAmb	23 03 46.2	
	comp=Z,32nm,1.1s						
TROLL	**Troll, Antarti**	20.41	153	P	P	23 03 51.1	-1.3
BELA	**Belgrano 2**	22.02	184	P	P	23 04 09.2	-0.3
DSPA	**Despedida**	23.01	258	P	P	23 04 20.3	+0.6
MG02	**Cerro Sombrero**	24.00	260	P	P	23 04 29.9	+1.2
TRQA	**Tornquist**	28.96	294	P	P	23 05 13.2	-0.2
PLTB	**Pedras Altas**	30.21	313	P	P	23 05 25.3	+0.7
PLTB				IAmb	IAmb	23 05 28.8	
	comp=Z,5.6nm,1.0s						
QSPA	**South Pole Qui**	34.18	180	P	P	23 05 59.7	+0.6
	comp=Z,0.8nm,0.3s,baz=209,slow=22,SNR=18						
	comp=Z,0.8nm,0.3s						
QSPA	**South Pole Qui**	34.18	180	P	P	23 06 00.0	+0.9
QSPA				IAmb	IAmb	23 06 29.9	
	comp=Z,6.7nm,1.4s						
CPUP	**Villa Florida**	36.52	312	P	P	23 06 19.2	-0.1
	comp=Z,1.7nm,0.6s,baz=151,slow=7.7,SNR=7.0						
	comp=Z,1.7nm,0.6s						
CPUP	**Villa Florida**	36.52	312	P	P	23 06 19.5	+0.1
CPUP				IAmb	IAmb	23 06 22.1	
	comp=Z,4.0nm,1.1s						
VNDA	**Vanda**	46.53	183	P	P	23 07 41.2	+0.9
	comp=Z,0.9nm,0.6s,baz=189,slow=6.9,SNR=11						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	46.53	183	P	P	23 07 41.1	+0.7
PB02	**IPOC Station P**	46.53	301	P	P	23 07 42.0	+0.8
PB01	**IPOC Station P**	46.58	301	P	P	23 07 42.2	+0.7
PB01				IAmb	IAmb	23 07 43.5	

	comp=Z,5.2nm,0.6s						
PB08	IPOC Station P	47.19	302	P	P	23 07 47.9	+1.2
PB08				IAmb	IAmb	23 07 48.7	
	comp=Z,9.4nm,1.5s						
H10N1	ASCENSION HYDR	49.26	18	T	T	00 01 15.4	
	baz=188						
H10N3	ASCENSION HYDR	49.26	18	T	T	00 01 21.1	
	baz=188,slow=74						
H10N2	ASCENSION HYDR	49.28	18	T	T	00 01 25.6	
	baz=188,slow=74						
LPAZ	La Paz	50.06	306	P	P	23 08 10.3	+1.4
	comp=Z,4.0nm,0.5s,baz=103,slow=6.3,SNR=24						
	comp=Z,4.0nm,0.5s						
LPAZ	La Paz	50.06	306	P	P	23 08 09.8	+0.9
LPAZ				IAmb	IAmb	23 08 10.8	
	comp=Z,3.6nm,0.6s						
TORD	Torodi Ar. Bea	73.28	30	P	P	23 10 43.8	-0.2
	comp=Z,0.2nm,0.4s,baz=199,slow=6.1,SNR=12						
	comp=Z,0.2nm,0.4s						
ILAR	Eielson Array	149.83	312	PKPbc	PKiKP	23 19 00.4	-1.0
	comp=Z,2.1nm,0.7s,baz=128,slow=2.8,SNR=33						
ILAR	Eielson Array	149.83	312		PKPbc	23 18 60.0	-0.5
SONM	Songino Array	151.13	87	PKPbc	PKPbc	23 19 03.5	-0.8
	comp=Z,0.3nm,0.3s,baz=211,slow=2.6,SNR=3.7						

*NEIC **08** 23:20:53.8±2.3, 23°.6S±0°.1×179°.9W±0°.1, h554^{km}±9^{km}, mb4.3/34, Error ellipse: s-maj=19.4km s-min=14.2km az=120.0*

*IDC **08** 23:20:56.6±4.5, 23°.19S×179°.76E, h569^{km}±35^{km}, mb3.1/7, mbtmp4.0/8, Error ellipse: s-maj=88.3km s-min=18.1km az=148.0*

ISC 08 23:20:53.5±0.5**, 23°.66S**±0°.07×**179°.97W**±0°.09**, h550**^{km}**, n71,** σ1^{s}**60**/73**, mb4.2**/21**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.88	162	P	P	23 22 31.9	+1.1
MSVF	Nonsavu	6.18	342	P	P	23 22 33.3	-0.6
	6.2nm,0.4s,baz=276,slow=23,SNR=9.8						
MSVF	Nonsavu	6.18	342	P	P	23 22 33.2	-0.8
NIUE	Niue	10.41	66	P	P	23 23 17.2	+1.5
PINNC	Pines Island,	11.63	273	P	P	23 23 29.8	+1.7
WIAZ	Waiheke Island	13.76	197	P	P	23 23 56.4	+6.4
HAZ	Te Kaha	14.19	187	P	P	23 23 50.8	-3.6
HAZ				S	S	23 26 19.9	-3.4
PKGZ	Pakihiroa	14.29	186	P	P	23 23 52.8	-2.6
RUGZ	Raukumara Rang	14.40	187	P	P	23 23 56.2	-0.5
PUZ	Puketiti	14.45	186	P	P	23 23 56.8	-0.3
TWGZ	Tauwhareparae	14.58	186	P	P	23 23 59.5	+1.0
URZ	Urewera	14.77	189	P	P	23 23 59.7	-0.7
URZ	Urewera	14.77	189	P	P	23 23 58.2	-2.1
MWZ	Matawai	14.79	188	P	P	23 23 58.8	-1.8
MUGZ	Murupara	15.03	190	P	P	23 24 01.0	-2.1
RTZ	Ruatahuna	15.14	189	P	P	23 24 03.4	-0.9
RTZ				S	S	23 26 36.6	-4.6
BKZ	Black Stump Fm	15.75	190	P	P	23 24 08.4	-2.1
BKZ				IAmb	IAmb	23 24 27.6	
	comp=Z,6.3nm,1.1s						
BKZ					S	23 26 52.0	+0.4
TMVZ	Te Maari	15.84	192	P	P	23 24 10.7	-0.8
ETVZ	East Tongariro	15.86	192	P	P	23 24 10.3	-1.3
OTVZ	Oturere	15.90	192	P	P	23 24 12.0	0.0
KAHZ	Kahuranaki	16.31	189	P	P	23 24 13.7	-2.1
KAHZ				S	S	23 26 57.6	-3.2
BFZ	Birch Farm	17.27	190	P	P	23 24 23.8	-0.7
MSWZ	Moikau Station	18.16	192	P	P	23 24 31.2	-1.4
BHW	Baring Head	18.22	192	P	P	23 24 32.3	-0.8
QRZ	Quartz Range	18.24	198	P	P	23 24 34.1	+0.7
PLWZ	Palliser	18.30	191	P	P	23 24 32.7	-1.2
NNZ	Nelson	18.38	196	P	P	23 24 34.6	0.0
NNZ				IAmb	IAmb	23 24 44.6	
	comp=Z,21nm,1.1s						
TUWZ	Tuamarina	18.44	195	P	P	23 24 35.4	+0.3
CMWZ	Cape Campbell	18.68	194	P	P	23 24 41.0	+3.7
BSWZ	Blackbirch Sta	18.73	194	P	P	23 24 38.8	+1.1
THZ	Tophouse	19.01	197	P	P	23 24 41.1	+0.7
THZ				IAmb	IAmb	23 24 41.5	
	comp=Z,6.3nm,0.7s						
LTZ	Lake Taylor	20.13	197	P	P	23 24 49.6	-0.9
LTZ				IAmb	IAmb	23 24 52.2	
	comp=Z,7.3nm,0.6s						
RPZ	Rata Peaks	21.33	198	P	P	23 25 04.3	+2.9
RPZ				IAmb	IAmb	23 25 18.4	
	comp=Z,15nm,1.2s						
FOZ	Fox Glacier	21.54	201	P	P	23 25 03.0	-0.2
LBZ	Lake Benmore	22.20	199	P	P	23 25 07.2	-1.9
LBZ				IAmb	IAmb	23 25 10.5	
	comp=Z,14nm,1.0s						
KNTN	Kanton	22.24	22	P	P	23 25 08.3	-1.6
WKZ	Wanaka	22.95	200	P	P	23 25 15.0	-0.8
MLZ	Mavora Lakes	23.73	201	P	P	23 25 24.2	+1.5
MLZ				IAmb	IAmb	23 25 25.1	
	comp=Z,5.7nm,0.4s						
WHZ	Wether Hill Ro	24.25	201	P	P	23 25 28.6	+1.3
EIDS	Eidsvold	26.37	260	P	P	23 25 47.5	+1.1
EIDS				IAmb	IAmb	23 25 47.7	
	comp=Z,3.4nm,0.5s						
CTA	Charters Tower	31.50	270	P	P	23 26 31.7	+0.7
	comp=Z,4.8nm,0.4s,baz=94,slow=10,SNR=15						
	comp=Z,4.8nm,0.4s						
TOO	Toolangi	32.60	237	P	P	23 26 40.1	0.0
TOO				IAmb	IAmb	23 26 59.7	
	comp=Z,3.8nm,0.9s						
STKA	Stephens Creek	34.84	248	P	P	23 26 59.0	+0.1
AS31	Alice Springs	42.10	260	P	P	23 27 58.1	+0.2
ASAR	Alice Springs	42.10	260	P	P	23 27 58.0	0.0
	comp=Z,1.6nm,0.6s,baz=99,slow=7.0,SNR=18						
	comp=Z,1.6nm,0.6s						
WR0	Warramunga Arr	42.26	266	P	P	23 27 58.7	-0.5
WB2	Warramunga Arr	42.44	266	P	P	23 28 00.3	-0.3
WB2				IAmb	IAmb	23 28 00.5	
	comp=Z,3.7nm,0.6s						
WB0	Warramunga Arr	42.44	266	P	P	23 28 00.3	-0.3
WB0				IAmb	IAmb	23 28 00.8	
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	42.45	266	P	P	23 28 00.2	-0.5
	comp=Z,2.4nm,0.6s,baz=92,slow=8.3,SNR=46						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	42.45	266	IAmb	IAmb	23 28 00.9	
	comp=Z,0.2nm,0.7s						
FORT	Forrest	46.42	249	P	P	23 28 30.5	-0.6
SBA	Scott Base	54.62	183	P	P	23 29 32.8	+2.8
NWAO	Narrogin (SRO)	55.36	245	P	P	23 29 35.3	-0.7
NWAO				IAmb	IAmb	23 29 52.9	
	comp=Z,16nm,1.1s						
CASY	Casey	60.34	206	P	P	23 30 08.8	-0.2
QSPA	South Pole Qui	66.42	180	P	P	23 30 50.0	+1.8
QSPA				IAmb	IAmb	23 30 53.2	
	comp=Z,5.7nm,1.1s						
ADK	Adak	75.27	2	P	P	23 31 40.1	+0.1
ADK				IAmb	IAmb	23 31 40.5	
	comp=Z,27nm,0.8s						
BELA	Belgrano 2	76.67	173	P	P	23 31 48.0	+0.5
NIKH	Nikolski High	76.92	7	P	P	23 31 49.2	+0.2
UNV	Unalaska Valle	78.05	8	P	P	23 31 53.2	-2.0
UNV				IAmb	IAmb	23 32 09.0	
	comp=Z,29nm,1.2s						
PEA0B	Petropavlovsk-	78.87	346	P	P	23 31 59.4	-0.2
PEA0B				IAmb	IAmb	23 32 16.0	
	comp=Z,21nm,1.1s						
PETK	Petropavlovsk-	78.87	346	P	P	23 31 57.9	-1.7
	comp=Z,2.0nm,0.8s,baz=131,slow=5.9,SNR=1.6						
	comp=Z,2.0nm,0.8s						
CBX	Cerro Bola	82.15	50	P	P	23 32 18.1	+0.8
LCH	Last Change Ra	84.29	45	P	P	23 32 31.2	+3.3
LCH				IAmb	IAmb	23 32 32.7	
	comp=Z,4.7nm,0.7s						
NVAR	Mina Array Bea	84.56	44	P	P	23 32 30.5	+1.2
	comp=Z,0.4nm,0.6s,baz=229,slow=8.9,SNR=4.0						
	comp=Z,0.4nm,0.6s						
TMUT	Trail Mountain	89.65	46	P	P	23 32 50.7	-2.7
TMUT				IAmb	IAmb	23 32 56.1	
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	91.79	14	P	P	23 33 01.4	-0.9
	comp=Z,0.2nm,0.8s,baz=203,slow=6.7,SNR=1.5						
	comp=Z,0.2nm,0.8s						
PDAR	Pinedale Array	92.50	44	P	P	23 33 06.2	-0.1
	comp=Z,0.5nm,0.8s,baz=201,slow=2.9,SNR=4.5						
	comp=Z,0.5nm,0.8s						
HRY	Holter Researc	93.13	40	P	P	23 33 08.1	-0.9
AKASG	Malin Array Be	144.78	327	PKP	PKPdf	23 39 27.8	+0.1
	comp=Z,0.5nm,0.3s,baz=43,slow=4.2,SNR=6.3						
BRTR	Keskin Array B	147.45	307	PKPbc	PKPbc	23 39 36.1	-0.1
	comp=Z,0.2nm,0.6s,baz=112,slow=6.4,SNR=2.1						
CLL	Collm	150.63	343	*i* PKPbc	PKPbc	23 39 43.1	-0.2

*IDC **08** 23:22:52.4±8.8, 23°.03S×179°.85W, h576^{km}±61^{km}, mb3.7/3, mbtmp4.5/5, Error ellipse: s-maj=180.7km s-min=31.7km az=146.0*

*NEIC **08** 23:22:53.3±1.6, 23°.2S±0°.1×179°.9W±0°.2, h578^{km}±12^{km}, mb4.4/22, Error ellipse: s-maj=22.4km s-min=14.0km az=124.0*

ISC 08 23:22:52.2±0.8**, 23°.2S**±0°.1×**180°.0E**±0°.1**, h550**^{km}**, n40,** σ1^{s}**37**/36**, mb4.3**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.73	341	P	P	23 24 28.8	+0.1
	5.9nm,0.5s,baz=95,slow=22,SNR=4.4						
NIUE	Niue	10.29	68	P	P	23 25 15.5	+2.3
PINNC	Pines Island,	11.55	270	P	P	23 25 27.7	+1.5
DZM	Mont Dzumac	12.53	273	P	P	23 25 39.6	+3.1
	3.0nm,0.6s,baz=78,slow=15,SNR=6.3						
OUZ	Omahuta	13.20	203	P	P	23 25 44.4	+1.5
BHW	Baring Head	18.65	192	P	P	23 26 35.2	-0.7
QRZ	Quartz Range	18.66	198	P	P	23 26 36.4	+0.4
QRZ				IAmb	IAmb	23 26 37.4	
	comp=Z,15nm,0.6s						
PLWZ	Palliser	18.74	191	P	P	23 26 35.0	-1.7
NNZ	Nelson	18.80	196	P	P	23 26 36.4	-0.7
NNZ				IAmb	IAmb	23 26 38.2	
	comp=Z,17nm,1.2s						
BSWZ	Blackbirch Sta	19.15	194	P	P	23 26 40.2	-0.2
THZ	Tophouse	19.43	196	P	P	23 26 42.9	-0.2
THZ				IAmb	IAmb	23 26 52.5	
	comp=Z,6.2nm,0.9s						
LTZ	Lake Taylor	20.55	196	P	P	23 26 51.8	-1.3
LTZ				IAmb	IAmb	23 26 54.1	
	comp=Z,18nm,1.0s						
OXZ	Oxford	21.12	196	P	P	23 27 00.3	+2.1
MQZ	McQueen’s Vall	21.32	195	P	P	23 27 02.8	+2.8
ODZ	Otahua Downs	23.08	197	P	P	23 27 13.1	-2.6
ODZ				IAmb	IAmb	23 27 19.2	
	comp=Z,20nm,1.2s						
WHZ	Wether Hill Ro	24.65	200	P	P	23 27 29.6	-0.1
WHZ				IAmb	IAmb	23 27 42.6	
	comp=Z,12nm,1.2s						
CTA	Charters Tower	31.44	269	P	P	23 28 29.9	+0.7
	comp=Z,17nm,0.3s,baz=94,slow=10,SNR=57						
	comp=Z,17nm,0.3s						
CTAO	Charters Tower	31.44	269	P	P	23 28 30.0	+0.7
COEN	Coen	35.97	278	P	P	23 29 07.6	+0.2
COEN				IAmb	IAmb	23 29 22.3	
	comp=Z,5.7nm,1.0s						
AS31	Alice Springs	42.12	260	P	P	23 29 57.0	+0.1
ASAR	Alice Springs	42.12	260	P	P	23 29 56.5	-0.4
	comp=Z,4.5nm,0.8s,baz=95,slow=8.0,SNR=28						
	comp=Z,4.5nm,0.8s						
ASAR	Alice Springs	42.12	260	P	P	23 29 56.7	-0.2
WR0	Warramunga Arr	42.23	265	P	P	23 29 56.9	-0.9
WB2	Warramunga Arr	42.41	265	P	P	23 29 58.5	-0.7
WB2				IAmb	IAmb	23 29 58.7	
	comp=Z,5.3nm,0.7s						
WB0	Warramunga Arr	42.41	266	P	P	23 29 58.4	-0.8
WB0				IAmb	IAmb	23 29 59.0	
	comp=Z,7.7nm,0.8s						
WRA	Warramunga Arr	42.42	265	P	P	23 29 58.3	-0.9
	comp=Z,4.2nm,0.7s,baz=103,slow=7.7,SNR=62						
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	42.42	265	P	P	23 29 58.5	-0.7
FORT	Forrest	46.52	249	P	P	23 30 29.8	-0.9
MTN	Manton Dam	47.37	274	P	P	23 30 36.0	-1.2
MTN				IAmb	IAmb	23 30 40.6	
	comp=Z,12nm,1.1s						
KNRA	Kununurra	48.66	269	P	P	23 30 46.5	-0.3
KNRA				IAmb	IAmb	23 30 46.7	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	50.85	265	P	P	23 31 02.7	-0.2
MBWA	Marble Bar	55.46	260	P	P	23 31 34.6	-1.0
MBWA				IAmb	IAmb	23 31 36.4	
	comp=Z,8.3nm,0.9s						
MORW	Morawa	57.08	250	P	P	23 31 45.9	-0.8
Q19K	Cape Douglas,	84.69	13	P	P	23 34 25.7	-2.2
WVOR	Wild Horse Val	86.41	41		pP	23 36 38.3	+2.4
CO01	Juntas del Tor	94.45	125		pP	23 37 15.5	+0.8
PB14	IPOC Station P	96.84	120		pwP	23 37 31.6	+2.6
AKASG	Malin Array Be	144.36	328	PKP	PKPbc	23 41 22.7	-3.0
	comp=Z,0.8nm,0.3s,baz=44,slow=3.6,SNR=8.4						
BRTR	Keskin Array B	147.12	308	PKPbc	PKPdf	23 41 31.3	+0.3
	comp=Z,0.5nm,0.7s,baz=152,slow=7.2,SNR=3.7						
CLL	Collm	150.18	343	*e*PKPbc	PKPbc	23 41 39.0	-2.0

*TUL **08** 23:28:01.1±1.5, 36°.270N±0°.007×97°.57W±0°.02, h6^{km}±6^{km}, ML2.8, mb_Lg2.8/73(NEIC), Error ellipse: s-maj=1.8km s-min=1.1km az=89.0*

NEIC 08 23:28:01.0±1.4**, 36°.26N**±0°.01×**97°.61W**±0°.02**, h6**^{km}±4km**, Error ellipse: s-maj=2.0km s-min=1.5km az=61.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.85	172		Pg	23 28 17.4	0.0
OKCSW	OKLAHOMA CITY	0.87	171		Pg	23 28 17.7	+0.1
FNO	Franklin	1.02	170		Pg	23 28 20.2	-0.4
T35A	Sooner Cattle	1.09	53	Pg	Pg	23 28 21.6	-0.4
U32A	Winter Ranch,	1.13	276		Pg	23 28 22.4	-0.4
TUL1	Leonard	1.51	103		Pn	23 28 27.6	-1.1
X34A	Smith Ranch, M	1.67	186		Pn	23 28 31.2	+0.4
X34A				IAmb_Lg		23 28 57.6	
	comp=Z,76nm,0.7s						
WMOK	Wichita Mounta	1.80	213		Pn	23 28 32.9	+0.2
R32A	Long Quarter,	2.33	338		Pb	23 28 44.0	+0.5
X37A	Clayton	2.47	132		Pg	23 28 48.0	-0.5
X37A				IAmb_Lg		23 29 24.5	
	comp=Z,34nm,0.8s						
Z35A	Perchaven, San	2.94	174	Pn	Pn	23 28 47.5	-0.7
KSU1	Kansas State U	2.94	15	Pg	Pg	23 28 55.9	-1.5
HHAR	Hobbs	2.96	89		Pn	23 28 48.8	+0.2
CBKS	Cedar Bluff	3.06	327	IAmb_Lg		23 29 43.4	
	comp=Z,19nm,0.7s						
W39A	Magazine	3.29	108	Pg	Pb	23 29 01.2	+1.4
AMTX	Amarillo	3.59	249	IAmb_Lg		23 30 01.7	
	comp=Z,25nm,0.9s						
Z38A	Mt. Pleasant	3.69	143	Pn	Pn	23 28 59.5	+0.8
MIAR	Mount Ida	3.71	116		Pn	23 28 59.6	+0.7
MIAR				IAmb_Lg		23 30 03.7	
	comp=Z,17nm,0.8s						
S39A	Bolivar	3.71	66	IAmb_Lg		23 30 03.4	
	comp=Z,25nm,0.7s						
U40A	Yellville	3.84	87	IAmb_Lg		23 30 05.8	
	comp=Z,31nm,0.7s						
ABTX	Abilene, Hawle	4.00	205	Pn	Pn	23 29 02.2	-0.7
WHTX	Lake Whitney,	4.26	178	Pn	Pn	23 29 07.0	+0.5
X40A	Basin Creek Fa	4.28	113	Pn	Pn	23 29 07.5	+0.8
X40A				IAmb_Lg		23 30 18.6	
	comp=Z,20nm,0.8s						
MGMO	Mountain Grove	4.38	77	IAmb_Lg		23 30 20.4	
	comp=Z,33nm,0.9s						
WHAR	Wooly Hollow	4.43	101	Pn	Pn	23 29 08.4	-0.4
WHAR					Pg	23 29 23.0	-2.9
WHAR				IAmb_Lg		23 30 33.1	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	4.46	93	Pn	Pn	23 29 05.4	-3.8
W41B	Gary Mavity, V	4.49	102		Pn	23 29 09.9	+0.3
W41B				Pg	Pg	23 29 24.8	-2.3
W41B				IAmb_Lg		23 30 31.8	
	comp=Z,12nm,0.8s						
WLAR	White Oak Lake	4.50	124	Pn	Pn	23 29 09.2	-0.5
WLAR				IAmb_Lg		23 30 28.0	
	comp=Z,21nm,1.2s						
UALR	University of	4.54	108	Pn	Pn	23 29 08.8	-1.5
UALR				IAmb_Lg		23 30 32.3	
	comp=Z,10nm,1.0s						
P38A	Dawn	4.65	43		Pn	23 29 12.0	+0.2
P38A				IAmb_Lg		23 30 38.3	
	comp=Z,19nm,0.8s						
MSTX	Muleshoe	4.81	243	IAmb_Lg		23 30 34.3	
	comp=Z,9.7nm,0.8s						
KSCO	Kaye Shedlock’	4.84	306	Pn	Pn	23 29 13.7	-0.8
KSCO					Pg	23 29 32.6	-1.1
Z41A	Richland Creek	4.96	126	IAmb_Lg		23 30 47.5	
	comp=Z,16nm,0.8s						
BGNE	Belgrade	5.16	355	IAmb_Lg		23 30 58.5	
	comp=Z,20nm,0.8s						
CCM	Cathedral Cave	5.39	69	IAmb_Lg		23 30 59.3	
	comp=Z,22nm,0.8s						
435B	Jarrell	5.47	180	IAmb_Lg		23 31 02.9	
	comp=Z,9.7nm,0.7s						
P40A	Paris	5.47	52	IAmb_Lg		23 30 57.5	
	comp=Z,22nm,0.8s						
T25A	Trinidad	5.54	281	IAmb_Lg		23 31 12.8	
	comp=Z,8.0nm,0.8s						
N38A	Joes South For	5.67	36	IAmb_Lg		23 31 15.8	
	comp=Z,24nm,0.8s						
PBMO	Poplar Bluff	5.80	83	IAmb_Lg		23 31 10.9	
	comp=Z,16nm,0.9s						
OGNE	Ogallala	5.82	325	IAmb_Lg		23 31 16.2	
	comp=Z,19nm,0.8s						
FVM	French Village	5.99	71	IAmb_Lg		23 31 15.1	
	comp=Z,25nm,0.9s						
JCT	Junction City	6.05	198	IAmb_Lg		23 31 21.2	
	comp=Z,13nm,0.9s						
SCIA	State Center	6.59	30	IAmb_Lg		23 31 40.9	
	comp=Z,21nm,0.7s						
L40A	Anamosa	7.62	39	IAmb_Lg		23 32 06.0	
	comp=Z,11nm,0.8s						
PHWY	Pilot Hill	7.93	312	IAmb_Lg		23 32 19.4	
	comp=Z,6.8nm,1.0s						
N23A	Red Feather La	8.00	308	IAmb_Lg		23 32 21.2	
	comp=Z,9.9nm,0.8s						
833A	Chaparral WMA,	8.06	191	IAmb_Lg		23 32 24.6	
	comp=Z,12nm,1.2s						
O44A	Mansfield	8.17	59	IAmb_Lg		23 32 24.9	
	comp=Z,15nm,0.7s						
L42A	Oliver, Polo	8.42	45	IAmb_Lg		23 32 39.1	
	comp=Z,16nm,1.1s						
JFWS	Jewell Farm	8.74	38	IAmb_Lg		23 32 38.6	
	comp=Z,9.6nm,0.8s						
I40A	Norwalk	9.31	33	IAmb_Lg		23 33 13.8	
	comp=Z,9.4nm,1.2s						
K22A	Casper	9.39	315	IAmb_Lg		23 33 13.8	
	comp=Z,13nm,1.1s						

*IDC **09** 00:10:23.7±2.2, 36°.36N×97°.18W, h0^{km}, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=31.2km s-min=13.4km az=105.0*

*ANF **09** 00:10:27.2±0.3, 36°.26N×97°.57W, h2^{km}, ML4.0/15, Error ellipse: s-maj=3.5km s-min=3.0km az=178.0*

*TUL **09** 00:10:27.3±1.2, 36°.27N±0°.01×97°.57W±0°.02, h5^{km}±7^{km}, ML3.4, mb_Lg3.4/105(NEIC), Error ellipse: s-maj=2.1km s-min=1.5km az=82.0*

*NEIC **09** 00:10:27.4±1.1, 36°.26N±0°.02×97°.58W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.6km s-min=1.2km az=215.0*

ISC 09 00:10:27.2±0.6**, 36°.27N**±0°.02×**97°.56W**±0°.02**, h10**^{km}**, n130,** σ1^{s}**64**/125**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.70	171		Pg	00 10 40.5	-0.3
OK001	Jones High Sch	0.74	163	Pg	Pg	00 10 40.5	-1.1
OKCFA	Oklahoma City	0.86	174		Pg	00 10 43.6	-0.2
OKCFA	Oklahoma City	0.86	174	P	Pg	00 10 43.6	-0.2
	baz=354,SNR=31						
OKCSW	OKLAHOMA CITY	0.87	173		Pg	00 10 43.8	-0.2
T35A	Sooner Cattle	1.06	53		Pb	00 10 47.6	-0.1
T35B	Sooner Cattle	1.06	53	P	Pb	00 10 47.6	-0.1
	baz=233,SNR=149						
T35B				S	Sb	00 11 01.7	0.0
	baz=233						
U32A	Winter Ranch,	1.17	276		Pb	00 10 48.9	-0.6
U32A	Winter Ranch,	1.17	276	P	Pb	00 10 48.8	-0.6
	baz=95						
U32A				S	Sg	00 11 04.7	0.0
	baz=95						
TUL1	Leonard	1.48	104		Pb	00 10 54.2	-0.6
TUL1				IAmb_Lg		00 11 16.5	
	comp=Z,143nm,0.8s						
TUL1	Leonard	1.48	104	P	Pb	00 10 54.2	-0.6
	baz=284						
TUL1				S	Sg	00 11 14.9	+0.1
	baz=284						
TUL1	Leonard	1.48	104	P	Pb	00 10 54.2	-0.6
	baz=284,SNR=162						
TUL1				S	Sg	00 11 14.8	0.0
	baz=284						
X34A	Smith Ranch, M	1.68	188		Pb	00 10 58.0	-0.3
WMOK	Wichita Mounta	1.83	213		Pn	00 10 59.0	+0.3
WMOK	Wichita Mounta	1.83	213	P	Pb	00 10 59.4	-1.3
	baz=32,SNR=109						
WMOK	Wichita Mounta	1.83	213	P	Pb	00 10 59.4	-1.3
	baz=32						
WMOK				S	Sb	00 11 23.9	+0.3
	baz=32						
R32A	Long Quarter,	2.33	337		Pb	00 11 07.3	-2.0
R32A	Long Quarter,	2.33	337	S	Sb	00 11 39.4	+1.1
	baz=157						
X37A	Clayton	2.46	133		Pn	00 11 07.9	+0.6
X37A				IAmb_Lg		00 11 50.8	
	comp=Z,145nm,0.7s						
X37A	Clayton	2.46	133	P	Pn	00 11 08.8	+1.5
	baz=314,SNR=58						
X37A				Sb	Sg	00 11 44.9	-1.2
	baz=314						
KSU1	Kansas State U	2.92	15		Pn	00 11 15.1	+1.3
KSU1	Kansas State U	2.92	15	Pg	Pg	00 11 22.2	-1.0
KSU1	Kansas State U	2.92	15	P	Pn	00 11 15.3	+1.6
	baz=195						
KSU1	Kansas State U	2.92	15	P	Pn	00 11 15.0	+1.3
	baz=195,SNR=29						
KSU1				Sb	Sg	00 12 00.4	-0.7
	baz=195						
HHAR	Hobbs	2.93	89		Pn	00 11 14.9	+1.1
Z35A	Perchaven, San	2.95	175		Pn	00 11 14.5	+0.4
Z35A	Perchaven, San	2.95	175	S	Sb	00 11 52.9	-3.0
	baz=355						
CBKS	Cedar Bluff	3.07	326	Pg	Pb	00 11 23.3	+1.4
CBKS	Cedar Bluff	3.07	326	P	Pn	00 11 17.3	+1.5
	baz=145						
CBKS				S	Sb	00 11 55.8	-3.7
	baz=145						
W39A	Magazine	3.26	108		Pn	00 11 19.2	+0.9
W39A				IAmb_Lg		00 12 18.2	
	comp=Z,76nm,0.9s						
W39A	Magazine	3.26	108	P	Pn	00 11 19.9	+1.6
	baz=290,SNR=23						
W39A	Magazine	3.26	108	P	Pn	00 11 19.2	+0.9
	baz=290,SNR=24						
W39A				S	Sn	00 11 58.8	+1.6
	baz=290						
AMTX	Amarillo	3.63	249	Pn	Pn	00 11 24.7	+1.1
AMTX				IAmb_Lg		00 12 28.0	
	comp=Z,103nm,0.8s						
AMTX	Amarillo	3.63	249	P	Pn	00 11 25.1	+1.5
	baz=66						
AMTX				Sb	Sb	00 12 19.3	+3.6
	baz=66						
S39A	Bolivar	3.68	66	Pn	Pn	00 11 25.0	+0.9
S39A	Bolivar	3.68	66	P	Pn	00 11 25.4	+1.3
	baz=248,SNR=24						
Z38A	Mt. Pleasant	3.68	144	Pg	Pg	00 11 35.0	-2.7
MIAR	Mount Ida	3.69	117		Pn	00 11 25.6	+1.4
MIAR				IAmb_Lg		00 12 29.9	
	comp=Z,61nm,0.8s						
MIAR	Mount Ida	3.69	117	P	Pn	00 11 25.5	+1.4
	baz=299,SNR=75						
MIAR	Mount Ida	3.69	117	P	Pn	00 11 25.4	+1.2
	baz=299,SNR=23						
MIAR				S	Sn	00 12 09.3	+1.6
	baz=299						
U40A	Yellville	3.81	87	IAmb_Lg		00 12 36.9	
	comp=Z,59nm,0.7s						
U40A	Yellville	3.81	87	P	Pn	00 11 26.4	+0.5
	baz=270,SNR=22						
ABTX	Abilene, Hawle	4.03	206	Pg	Pb	00 11 39.0	+0.8
ABTX	Abilene, Hawle	4.03	206	Pb	Pb	00 11 38.4	+0.2
	baz=25						
ABTX				S	Sn	00 12 17.0	+0.8
	baz=25						
X40A	Basin Creek Fa	4.25	113		Pn	00 11 33.2	+1.2
X40A				IAmb_Lg		00 12 43.9	
	comp=Z,88nm,0.9s						
X40A	Basin Creek Fa	4.25	113	P	Pn	00 11 34.1	+2.1
	baz=296,SNR=14						
X40A				P	Pn	00 11 34.1	+2.1
	baz=296,SNR=14						
X40A	Basin Creek Fa	4.25	113	P	Pn	00 11 33.2	+1.2
	baz=296,SNR=9.8						
X40A				S	Sn	00 12 23.0	+1.2
	baz=296						
WHTX	Lake Whitney,	4.27	179	Pn	Pn	00 11 33.0	+0.7

WHTX					Pg	00 11 45.7	-3.4
WHTX	Lake Whitney,	4.27	179	P	Pn	00 11 33.1	+0.7
	baz=359						
WHTX				S	Sn	00 12 23.0	+0.8
	baz=359						
MGMO	Mountain Grove	4.34	77	IAmb_Lg		00 12 47.4	
	comp=Z,116nm,0.8s						
WHAR	Wooly Hollow	4.40	101	Pg	Pg	00 11 48.6	-2.8
WHAR				IAmb_Lg		00 12 52.4	
	comp=Z,89nm,1.1s						
N33A	J Bar K, Exete	4.46	1		Pb	00 11 48.5	+2.9
N33A				IAmb_Lg		00 12 54.9	
	comp=Z,52nm,0.8s						
W41B	Gary Mavity, V	4.46	103		Pn	00 11 36.0	+1.2
W41B				Pg	Pg	00 11 50.7	-2.0
W41B				IAmb_Lg		00 12 59.4	
	comp=Z,60nm,0.9s						
W41B	Gary Mavity, V	4.46	103	S	Sn	00 12 28.0	+1.2
	baz=286						
W41B	Gary Mavity, V	4.46	103	P	Pn	00 11 35.8	+0.9
	baz=286,SNR=6.8						
W41B				S	Sn	00 12 27.8	+0.9
	baz=286						
WLAR	White Oak Lake	4.47	124	Pn	Pn	00 11 35.0	-0.1
WLAR				IAmb_Lg		00 12 50.7	
	comp=Z,50nm,0.7s						
237A	Washetta, Mont	4.50	161	Pn	Pn	00 11 36.4	+0.9
237A				IAmb_Lg		00 12 53.0	
	comp=Z,44nm,0.8s						
237A	Washetta, Mont	4.50	161	S	Sn	00 12 27.7	-0.2
	baz=342						
UALR	University of	4.51	108	Pn	Pn	00 11 36.5	+0.9
UALR				IAmb_Lg		00 12 60.0	
	comp=Z,60nm,1.0s						
P38A	Dawn	4.62	42	Pn	Pn	00 11 37.6	+0.6
P38A				IAmb_Lg		00 13 04.0	
	comp=Z,86nm,0.8s						
R40A	Maddies Statio	4.68	63	P	Pn	00 11 39.0	+1.1
	baz=246,SNR=35						
N35A	Tabor	4.82	18		Pg	00 11 56.7	-2.8
KSCO	Kaye Shedlock’	4.86	306		Pg	00 11 57.0	-3.2
KSCO				IAmb_Lg		00 13 10.5	
	comp=Z,45nm,0.7s						
KSCO	Kaye Shedlock’	4.86	306	P	Pn	00 11 41.9	+1.4
	baz=123						
Z41A	Richland Creek	4.94	126	IAmb_Lg		00 13 13.7	
	comp=Z,73nm,0.7s						
Z41A	Richland Creek	4.94	126	P	Pn	00 11 41.9	+0.4
	baz=309						
Z41A				S	Sn	00 12 38.7	0.0
	baz=309						
NATX	Nacogdoches	5.11	151	Pn	Pn	00 11 44.7	+1.0
NATX				IAmb_Lg		00 13 19.0	
	comp=Z,46nm,0.8s						
NATX	Nacogdoches	5.11	151	S	Sn	00 12 41.8	-0.9
	baz=333						
BGNE	Belgrade	5.15	355	Pn	Pn	00 11 44.4	+0.1
BGNE				Pg	Pg	00 12 03.4	-2.4
BGNE				IAmb_Lg		00 13 23.9	
	comp=Z,86nm,0.7s						
BGNE	Belgrade	5.15	355	P	Pn	00 11 44.8	+0.4
	baz=175						
LCAR	Lake Charles	5.19	90	IAmb_Lg		00 13 15.9	
	comp=Z,54nm,1.1s						
CCAR	Cane Creek	5.30	115	Pn	Pn	00 11 48.5	+2.1
CCAR				IAmb_Lg		00 13 25.7	
	comp=Z,68nm,0.9s						
CCM	Cathedral Cave	5.35	69	IAmb_Lg		00 13 22.3	
	comp=Z,101nm,0.9s						
CCM	Cathedral Cave	5.35	69	P	Pn	00 11 48.0	+0.9
	baz=252						
CCM				S	Sn	00 12 48.2	-0.6
	baz=252						
P40A	Paris	5.44	52	IAmb_Lg		00 13 23.4	
	comp=Z,92nm,0.7s						
435B	Jarrell	5.48	180	Pn	Pn	00 11 49.6	+0.7
435B				IAmb_Lg		00 13 31.3	
	comp=Z,58nm,1.0s						
435B	Jarrell	5.48	180	P	Pn	00 11 49.5	+0.6
	baz=0.1						
T25A	Trinidad	5.57	281	Pg	Pg	00 12 09.8	-4.1
T25A	Trinidad	5.57	281	P	Pn	00 11 51.2	+0.9
	baz=97						
N38A	Joes South For	5.65	36	Pg	Pg	00 12 11.7	-3.6
L34A	Svendsen Farm,	5.76	9	Pg	Pb	00 12 12.1	+4.3
L34A				IAmb_Lg		00 13 42.0	
	comp=Z,79nm,0.8s						
PBMO	Poplar Bluff	5.77	83	IAmb_Lg		00 13 39.9	
	comp=Z,70nm,0.7s						
OGNE	Ogallala	5.83	324	IAmb_Lg		00 13 42.5	
	comp=Z,78nm,0.8s						
OGNE	Ogallala	5.83	324	P	Pn	00 11 55.6	+1.8
	baz=142						
FVM	French Village	5.95	71	IAmb_Lg		00 13 41.6	
	comp=Z,78nm,0.8s						
JCT	Junction City	6.07	199		Pg	00 12 18.9	-4.6
JCT				IAmb_Lg		00 13 44.7	
	comp=Z,54nm,0.9s						
JCT	Junction City	6.07	199	P	Pn	00 11 56.8	-0.3
	baz=17						
GNAR	Gosnell	6.12	91	Pn	Pn	00 11 58.1	+0.5
GNAR				IAmb_Lg		00 13 47.3	
	comp=Z,87nm,0.8s						
143A	Socs Landing,	6.21	123	IAmb_Lg		00 13 46.5	
	comp=Z,40nm,0.8s						
PARMO	Parma	6.31	84	IAmb_Lg		00 13 51.2	
	comp=Z,89nm,0.8s						
SCIA	State Center	6.56	30	P	Pn	00 12 05.1	+1.3
	baz=212						
Q24A	Divide	6.59	296	IAmb_Lg		00 13 59.9	
	comp=Z,41nm,0.8s						
Q24A	Divide	6.59	296	P	Pn	00 12 05.9	+1.5
	baz=112						
HALT	Halls	6.67	91	IAmb_Lg		00 14 04.4	
	comp=Z,71nm,0.8s						
GLAT	Glass	6.69	88	IAmb_Lg		00 14 01.6	
	comp=Z,80nm,0.8s						
OXF	Oxford	6.89	102	Pn	Pn	00 12 08.2	0.0
OXF				IAmb_Lg		00 14 13.7	
	comp=Z,32nm,0.8s						
OXF	Oxford	6.89	102	P	Pn	00 12 08.2	0.0
	baz=287						
W45A	Hickory Valley	6.91	97	IAmb_Lg		00 14 11.5	
	comp=Z,61nm,1.0s						
Y45A	Yeager Farm, C	7.00	108	Pn	Pn	00 12 09.3	-0.5
P43A	Skaggs, Pawnee	7.19	60	Pn	Pn	00 12 13.6	+1.3
T45A	Paducah	7.21	81	Pn	Pn	00 12 12.5	-0.1
ISCO	Idaho Springs	7.26	301	Pn	Pn	00 12 15.0	+1.3
ISCO				Pg	Pg	00 12 43.3	-3.0
ISCO				IAmb_Lg		00 14 17.2	
	comp=Z,22nm,0.8s						
ISCO	Idaho Springs	7.26	301	P	Pn	00 12 15.2	+1.5
	baz=117						
Q44A	Meyer Farm, Va	7.28	66	Pn	Pn	00 12 14.9	+1.4
ANMO	Albuquerque	7.36	262	Pg	Pg	00 12 42.0	-6.2
735A	Kenedy	7.40	182	Pn	Pn	00 12 16.1	+0.8
ECSD	EROS Data Cent	7.49	5	P	Pn	00 12 15.7	-0.8
	baz=186						
S22A	4UR Ranch, Cre	7.56	284	Pg	Pg	00 12 50.9	-1.0
L40A	Anamosa	7.59	38	Pg	Pg	00 12 48.4	-4.1
L40A				IAmb_Lg		00 14 35.8	
	comp=Z,43nm,0.8s						
BNM	Barren Site	7.71	257	Pg	Pg	00 12 47.9	-7.0
HDIL	Hopedale	7.77	54	P	Pn	00 12 20.8	+0.5
	baz=239						
PLAL	Pickwick Lake	7.83	97	Pn	Pn	00 12 22.7	+1.5
PLAL				IAmb_Lg		00 14 43.4	
	comp=Z,21nm,1.1s						
WVT	Waverly	7.87	88	Pn	Pn	00 12 22.9	+1.1
MNTX	Cornudas Mount	7.93	237	Pn	Pn	00 12 23.7	+1.1
PHWY	Pilot Hill	7.95	312	Pn	Pn	00 12 23.7	+0.6
PHWY				Pg	Pg	00 12 55.7	-3.7
PHWY				IAmb_Lg		00 14 45.7	
	comp=Z,29nm,0.9s						
Y22D	IRIS PASSCAL I	7.97	257	IAmb_Lg		00 14 57.3	
	comp=Z,62nm,0.8s						
N23A	Red Feather La	8.02	308	IAmb_Lg		00 15 01.1	
	comp=Z,44nm,0.8s						
N23A	Red Feather La	8.02	308	P	Pn	00 12 26.1	+2.1
	baz=123						
O44A	Mansfield	8.14	59	IAmb_Lg		00 14 51.4	
	comp=Z,58nm,0.7s						
SUSD	Miller	8.23	353	IAmb_Lg		00 14 55.6	
	comp=Z,27nm,0.8s						
I37A	Lemond, Waseca	8.36	21	IAmb_Lg		00 15 07.4	
	comp=Z,41nm,1.0s						
L42A	Oliver, Polo	8.39	45	IAmb_Lg		00 14 55.4	
	comp=Z,57nm,0.9s						
TXAR	Lajitas Array	8.62	218	Pn	Pn	00 12 31.8	-0.2
	comp=Z,0.2nm,0.3s,baz=47,slow=12,SNR=4.3						
TXAR				Lg	Lg	00 14 55.9	
	comp=Z,1.0nm,0.3s,baz=32,slow=31,SNR=4.0						
	comp=Z,0.4nm,0.4s						
JFWS	Jewell Farm	8.71	38	IAmb_Lg		00 15 10.7	
	comp=Z,41nm,0.7s						
JFWS	Jewell Farm	8.71	38	P	Pn	00 12 34.5	+1.4
	baz=223						
RWWY	Rawlins	9.25	309	IAmb_Lg		00 15 47.5	
	comp=Z,20nm,0.9s						
RSSD	Black Hills	9.27	330	IAmb_Lg		00 15 47.4	
	comp=Z,17nm,0.8s						
I40A	Norwalk	9.28	33	IAmb_Lg		00 15 20.2	
	comp=Z,24nm,0.8s						
PDAR	Pinedale Array	11.30	309	Pn	Pn	00 13 11.3	+2.4
	comp=Z,0.1nm,0.3s,baz=122,slow=13,SNR=2.3						
PDAR				Pg		00 13 54.1	
	comp=Z,0.3nm,0.3s,baz=115,slow=14,SNR=6.3						
PDAR				Lg	Lg	00 16 20.1	
	comp=Z,0.3nm,0.3s,baz=123,slow=33,SNR=3.3						
	comp=Z,0.2nm,0.5s						
ULM	Lac du Bonnet	14.02	4	Pn	Pn	00 13 35.7	-10
	comp=Z,0.2nm,0.3s,baz=194,slow=10,SNR=1.5						
ULM				Sn	Sn	00 16 06.2	-15
	comp=Z,0.3nm,0.3s,baz=253,slow=1.7,SNR=1.5						
ULM				Lg	Lg	00 17 32.8	
	comp=Z,0.2nm,0.3s,baz=79,slow=13,SNR=1.2						
	comp=Z,1.7nm,0.5s						

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*TUL **09** 00:19:01.6±1.5, 36.°86N±0.°01×98.°15W±0.°02, h6^{km}±5^{km}, ML2.7, mb_Lg2.2/16(NEIC), Error ellipse: s-maj=2.0km s-min=1.2km az=130.0*

NEIC 09 00:19:01.9±0.8**, 36.°85N**±0.°01×**98.°14W**±0.°02**, h12**^{km}±1^{km}**, Error ellipse: s-maj=2.2km s-min=1.3km az=129.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	1.30	87		Pn	00 19 26.1	+0.1
OKCFA	Oklahoma City	1.54	159	Pn	Pn	00 19 27.7	-1.5
OKCSW	OKLAHOMA CITY	1.55	158	Pn	Pn	00 19 29.0	-0.4
R32A	Long Quarter,	1.63	344		Pn	00 19 30.4	-0.1
FNO	Franklin	1.70	159	Pn	Pn	00 19 31.4	0.0
TUL1	Leonard	2.11	116		Pn	00 19 37.3	+0.2
TUL1				IAmb_Lg		00 20 13.5	
	comp=Z,8.8nm,0.8s						
X34A	Smith Ranch, M	2.26	174	Pn	Pn	00 19 39.7	+0.6
CBKS	Cedar Bluff	2.33	328	Pn	Pn	00 19 41.1	+1.0
KSU1	Kansas State U	2.55	28	Pn	Pn	00 19 43.0	-0.1
X37A	Clayton	3.19	134	IAmb_Lg		00 20 50.0	
	comp=Z,9.6nm,0.8s						
W39A	Magazine	3.90	114	IAmb_Lg		00 21 09.6	
	comp=Z,5.0nm,0.7s						
S39A	Bolivar	3.93	76	IAmb_Lg		00 21 09.1	
	comp=Z,5.5nm,0.8s						
KSCO	Kaye Shedlock’	4.15	303	IAmb_Lg		00 21 23.7	
	comp=Z,5.3nm,0.8s						
U40A	Yellville	4.28	95	IAmb_Lg		00 21 20.9	
	comp=Z,5.5nm,0.8s						
MGMO	Mountain Grove	4.71	85	IAmb_Lg		00 21 33.4	
	comp=Z,6.5nm,0.7s						

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*MOS **09** 00:24:13.8±0.0, 42.°59N×45.°43E, h22^{km}, MPVA3.5*
*NORS **09** 00:24:14.2±0.0, 42.°50N×45.°40E, h15^{km}, MPVA3.7*
*DRS **09** 00:24:15.2±0.0, 42.°57N×45.°40E, h14^{km}*
*TIF **09** 00:24:15.7, 42.°65N×45.°25E, h18^{km}±2^{km}*

ISC 09 00:24:15.4±1.0**, 42.°61N**±0.°02×**45.°42E**±0.°02**, h13**^{km}±9^{km}**, n38,** σ1$\overset{s}{.}$**13**/70**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.59	85	*e*Pg	Pg	00 24 26.6	-0.4
BTLR				*e*Sg	Sg	00 24 34.7	-0.2
KMGR	Komgaron	0.60	318	*e*Pg	Pg	00 24 27.3	+0.1
KMGR				*e*Sg	Sb	00 24 37.4	+1.1
GROC	Groznyy	0.65	25	*i* Pg	Pb	00 24 28.7	0.0
GROC				*e*Sg	Sn	00 24 39.3	-1.3
VLKR	Vladikavkaz	0.70	309	*e*Pg	Pg	00 24 28.8	-0.1
VLKR				*e*Sg	Sb	00 24 39.9	+0.8
GUDG	Gudauri	0.71	259	P	Pg	00 24 28.1	-1.1
GUDG				S	Sg	00 24 37.1	-1.5
LACR	Lac	0.85	285	*e*Pg	Pb	00 24 30.4	-1.8
LACR				*e*Sg	Sg	00 24 41.6	-1.6
XNZR	Khunzakh	0.95	94	*e*Pg	Pb	00 24 33.1	-0.8
XNZR				*e*Sg	Sb	00 24 46.0	-0.4
LGD	Lagodekhi	0.99	141	P	Pb	00 24 33.2	-1.1
BTKR	Batakoyurt	1.00	320	*e*Pg	Pn	00 24 35.5	+0.3
DLMR	Dylym	1.00	62	*e*Pg	Pb	00 24 34.0	-0.6
DLMR				*e*Sg	Sg	00 24 48.3	+0.5
UNCR	Uncukul	1.02	84	*e*Pg	Pb	00 24 34.4	-0.5
UNCR				*e*Sg	Sb	00 24 48.1	-0.2
BTNK	Botanikuri	1.03	207	P	Pb	00 24 29.4	-5.7
BTNK				S	Sb	00 24 43.8	-4.8
KORR	Kora	1.10	296	*e*Pg	Pn	00 24 36.4	-0.2
KORR				*e*Sg	Sn	00 24 51.6	0.0
DBC	Dubki	1.12	68	*e*Pg	Pb	00 24 36.5	-0.1
DBC				*e*Sg	Sn	00 24 52.0	-0.1
KRNR	Karanay	1.12	78	*e*Pg	Pb	00 24 36.2	-0.4
KRNR				*e*Sg	Sb	00 24 51.4	+0.2
DGRG	David-gareji	1.16	182	P	Pg	00 24 38.2	+0.6
DGRG				S	Sg	00 24 55.7	+3.0
ARKR	Arakani	1.16	90	*e*Pg	Pn	00 24 37.2	-0.3
ARKR				*e*Sg	Sn	00 24 53.2	0.0
GNBR	Gunib	1.16	100	*e*Pg	Pn	00 24 36.8	-0.7
GNBR				*e*Sg	Sb	00 24 51.9	-0.5
STDR	Stavd-Durt	1.25	308	*e*Pg	Pg	00 24 39.6	+0.2
STDR				*e*Sg	Sg	00 24 58.0	+2.3
BUJR	Buynaksk	1.26	80	*e*Pg	Pn	00 24 36.5	-2.2
BUJR				*e*Sg	Sg	00 24 56.6	+0.5
DDFL	Dedoflistskaro	1.27	156	P	Pg	00 24 41.4	+1.5
KMKR	Kumukh	1.33	110	*e*Pg	Pn	00 24 39.6	-0.3
KMKR				*e*Sg	Sg	00 24 58.7	+0.3
LSNR	Lesken	1.35	300	*e*Pg	Pb	00 24 40.9	+0.4
LSNR				*e*Sg	Sg	00 25 00.1	+1.4
DIGR	Digorskoe uzhe	1.38	283	*e*Pg	Pn	00 24 40.1	-0.5
TRLG	Trialeti	1.45	223	P	Pb	00 24 42.0	-0.4
TRLG				S	Sb	00 25 01.0	+0.2
ONI	Oni	1.45	270	P	Pb	00 24 42.2	-0.1
ONI	Oni	1.45	270	*e*Pg	Pn	00 24 41.8	+0.4
ONI				*e*Sg	Sb	00 25 00.3	-0.4
DMNI	Dmanisi	1.57	216	P	Pn	00 24 43.6	+0.4
DMNI				S	Sb	00 25 04.3	0.0
MAK	Makhachkala	1.57	76	*e*Pg	Pn	00 24 42.9	-0.1
MAK				*e*Sg	Sb	00 25 03.9	-0.3
BKRG	Bakuriani	1.65	240	P	Pn	00 24 44.8	+0.7
BKRG				S	Sb	00 25 07.3	+0.9
SGKR	Sergokala	1.66	94	*e*Pg	Pb	00 24 46.5	+0.6
SGKR				*e*Sg	Sn	00 25 04.5	-1.0
URKR	Urkarakh	1.70	104	*e*Pg	Pn	00 24 44.5	-0.4
URKR				*i* Sg	Sb	00 25 09.0	+1.1
KBTC	Kuba-Taba	1.90	310	*e*Pg	Pb	00 24 48.8	-1.2
KBTC				*e*Sg	Sb	00 25 12.9	-0.7
AKT	Akhty	2.06	122	*e*Pg	Pb	00 24 52.5	-0.2
AKT				*e*Sg	Sn	00 25 16.4	+1.0
ABS	Abastumani	2.12	247	P	Pb	00 24 52.8	-0.9
ABS				S	Sb	00 25 19.9	0.0
SHA1	Shidzhatmaz	2.31	300	*e*Pn	Pb	00 24 55.7	-1.4
SHA1				*e*Sn	Sb	00 25 24.6	-1.1
KIV0	Kislovodsk Arr	2.40	305	*i* Pn	Pn	00 24 55.3	+0.8
KIV0				*e*Sn	Sn	00 25 25.4	+1.5
KIV	Kislovodsk	2.41	305	*e*Pn	Pn	00 24 55.8	+1.2
KIV				*e*Sn	Sn	00 25 25.5	+1.6

WEL 09 00:29:54.0±1.2**, 39°S**±10°×**17°5E**±1°4**, h201**^{km}±12^{km}**, M2.4**/6**, ML2.6**/8**, MLv2.4**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	Pokaka	0.42	147	P	Pn	00 30 22.0	+1.0
PKVZ				S	S	00 30 44.0	+1.7
BHHZ	Black Hill Sta	0.96	125	P	Pn	00 30 24.4	+0.7
BHHZ				S	S	00 30 47.3	+0.7
BKZ	Black Stump Fm	1.15	102	P	Pn	00 30 25.6	+0.6
BKZ				S	S	00 30 50.0	+1.2
TSZ	Takapari Road	1.32	148	P	Pn	00 30 27.2	+0.9
TSZ				S	S	00 30 53.2	+2.0
MTHZ	Maungataniwha	1.40	87	P	Pn	00 30 27.2	+0.2
MTHZ				S	S	00 30 52.0	-0.1
KAHZ	Kahuranaki	1.66	122	P	Pn	00 30 30.1	+0.9
KAHZ				S	S	00 30 58.3	+2.1
MRZ	Mangatainoka R	1.77	167	P	Pn	00 30 30.3	0.0
MRZ				S	S	00 30 58.0	-0.2
MRZ	Mangatainoka R	1.77	167	S	S	00 30 58.2	+0.1
OGWZ	Otaki Gorge	1.88	177	P	Pn	00 30 31.4	+0.1
OGWZ				S	S	00 31 00.4	+0.4
KIW	Kapiti Island	1.93	183	P	Pn	00 30 31.5	-0.2
KIW				S	S	00 31 00.9	0.0
HOWZ	Holdsworth Sta	1.99	170	P	Pn	00 30 32.1	-0.4
HOWZ				S	S	00 31 01.9	-0.2
MWZ	Matawai	2.03	74	P	Pn	00 30 31.9	-1.0
MWZ				S	S	00 31 02.1	-0.5
DUWZ	D’Urville Isla	2.06	205	P	Pn	00 30 32.6	-0.5
DUWZ				S	S	00 31 01.8	-1.4
TCW	Tory Channel	2.35	194	P	Pn	00 30 35.7	-0.5
TCW				S	S	00 31 07.4	-1.3
NNZ	Nelson	2.61	209	P	Pn	00 30 37.8	-1.3
NNZ				S	S	00 31 12.4	-1.5
TUWZ	Tuamarina	2.63	198	P	Pn	00 30 38.6	-0.8
TUWZ				S	S	00 31 12.3	-1.9
PLWZ	Palliser	2.63	177	P	Pn	00 30 38.2	-1.3
PLWZ				S	S	00 31 12.8	-1.7
QRZ	Quartz Range	2.71	225	P	Pn	00 30 38.0	-2.2
BSWZ	Blackbirch Sta	2.92	198	P	Pn	00 30 41.7	-1.0
BSWZ				S	S	00 31 19.0	-1.2
MRNZ	Matariki Terra	3.02	215	P	Pn	00 30 41.6	-2.3
THZ	Tophouse	3.26	209	P	Pn	00 30 44.7	-2.1
THZ				S	S	00 31 26.4	-1.2
DSZ	Denniston Nort	3.75	220	P	Pn	00 30 49.6	-3.0
DSZ				S	S	00 31 34.8	-3.3
GVZ	Greta Valley S	4.31	200	P	Pn	00 30 57.1	-2.4
LTZ	Lake Taylor	4.38	208	P	Pn	00 30 57.6	-2.9
INZ	Inchbonnie	4.67	215	P	Pn	00 31 01.2	-2.9

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*ATH **09** 00:35:20.0, 35.°97N×28.°73E, h58^{km}±7^{km}, ML2.8/3, Error ellipse: s-maj=8.7km s-min=1.2km az=356.0*
*ISK **09** 00:35:20.8, 36.°00N×28.°71E, h57^{km}±3^{km}, ML2.8/22*
*DDA **09** 00:35:20.1±0.0, 36.°00N×28.°71E, h47^{km}, ML2.7*
*NIC **09** 00:35:20.8±0.0, 35.°72N×28.°84E, h39^{km}±12^{km}, Ml3.5/4*
*THE **09** 00:35:22.0, 35.°98N×28.°72E, h52^{km}±3^{km}, ML2.5/5, Error ellipse: s-maj=3.3km s-min=0.9km az=305.0*
*GII **09** 00:35:23.2±0.5, 35.°74N×29.°08E, h50^{km}, Mm2.8/4*
*HLW **09** 00:35:28.3, 35.°12N×28.°79E, h22^{km}±25^{km}, Md4.2*

ISC 09 00:35:19.2±1.1**, 35.°90N**±0.°03×**28.°76E**±0.°02**, h65**^{km}±9^{km}**, n114,** σ1$\overset{s}{.}$**69**/183**, 1C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.60	302	P	Pn	00 35 33.2	+0.6
ARG				S	Sn	00 35 42.4	-0.1
ARG				AML	AML	00 35 43.9	
	comp=N,693µm,0.2s						
ARG				AML	AML	00 35 45.1	
	comp=E,1367µm,0.2s						
ARG	Arkhangelos	0.60	302	P	Pn	00 35 33.2	+0.6
ARG				S	Sn	00 35 42.2	-0.3
	comp=E,520nm,0.2s						
ARG	Arkhangelos	0.60	302	PG	Pn	00 35 33.2	+0.6
ARG				SG	Sn	00 35 42.6	+0.1
KSL	Kastellorizon	0.71	69	P	Pn	00 35 35.1	+1.3
KSL				S	Sn	00 35 45.7	+1.0
KSL				AML	AML	00 35 46.6	
	comp=N,893µm,0.3s						
KSL				AML	AML	00 35 46.8	
	comp=E,2071µm,0.4s						
KSL	Kastellorizon	0.71	69	P	Pn	00 35 35.2	+1.3
KSL	Kastellorizon	0.71	69	⇑*i*P	Pn	00 35 35.2	+1.3
KSL				S	Sn	00 35 45.7	+1.0
AKAS	Kas	0.76	64	PG	Pn	00 35 36.1	+1.5
AKAS				SG	Sn	00 35 47.1	+1.2
AKAS	Kas	0.76	64	P	Pn	00 35 36.0	+1.5
AKAS				S	Sn	00 35 47.2	+1.3
AKAS				*i* AML	AML	00 35 48.0	
	comp=E,402nm,0.3s						
AKAS				*i* AML	AML	00 35 48.0	
	comp=E,419nm,0.4s						
AKAS				*i* AML	AML	00 35 49.0	
	comp=E,269nm,0.3s						
FETY	Fethiye	0.78	19	PG	Pn	00 35 35.0	+0.3
FETY				SG	Sn	00 35 46.3	+0.1
FETY	Fethiye	0.78	19	P	Pn	00 35 35.0	+0.3
FETY				S	Sn	00 35 46.1	-0.1
DALY	Dalyan (Mula)	0.92	355	PG	Pn	00 35 36.8	+0.4
DALY				SG	Sn	00 35 48.7	-0.5
TURN	Turunc	0.97	335	PG	Pn	00 35 37.9	+0.9
TURN				SG	Sn	00 35 50.1	-0.1
TURN	Turunc	0.97	335	P	Pn	00 35 37.8	+0.7
TURN				S	Sn	00 35 50.2	0.0
TURN				*i* AML	AML	00 35 51.0	
	comp=E,198nm,0.3s						
TURN				*i* AML	AML	00 35 51.0	
	comp=E,210nm,0.3s						
CAME	Cameli-Denizli	1.13	23	PG	Pn	00 35 40.4	+1.1
ELL	Elmali	1.26	47	PN	Pn	00 35 42.6	+1.7
ELL	Elmali	1.26	47	P	Pn	00 35 42.9	+2.1
ELL				S	Sn	00 36 00.7	+3.6
DAT	Datca	1.27	311	P	Pn	00 35 42.0	+1.0
DAT				S	Sn	00 35 56.7	-0.6
DAT	Datca	1.27	311	PN	Pn	00 35 42.0	+1.0
DAT	Datca	1.27	311	P	Pn	00 35 41.7	+0.8
DAT				S	Sn	00 35 56.8	-0.6
DAT				*i* AML	AML	00 35 58.0	
	comp=E,141nm,0.2s						
DAT				*i* AML	AML	00 35 58.0	
	comp=E,151nm,0.8s						
YER	Yerkesik	1.29	343	P	Pn	00 35 42.8	+1.5
YER	Yerkesik	1.29	343	PN	Pn	00 35 42.8	+1.5
YER				SN	Sn	00 35 57.5	-0.4
CAEL	Denizli, Camel	1.30	20	P	Pn	00 35 43.1	+1.6
CAEL				S	Sn	00 35 58.0	-0.3
KARP	Karpathos	1.35	255	P	Pn	00 35 43.9	+1.9
KARP				S	Sn	00 36 00.5	+1.4
KARP				AML	AML	00 36 02.2	
	comp=N,1012µm,0.2s						
KARP				AML	AML	00 36 02.5	
	comp=E,830µm,0.2s						
KARP	Karpathos	1.35	255	P	Pn	00 35 44.0	+2.0
KARP				S	Sn	00 36 00.6	+1.5
	comp=E,465nm,0.1s						
KARP	Karpathos	1.35	255	PN	Pn	00 35 44.4	+2.4
KARP				SN	Sn	00 36 00.7	+1.6
KARP	Karpathos	1.35	255	P	Pn	00 35 43.9	+1.9
KARP				S	Sn	00 36 01.3	+2.2
KARP				AML	AML	00 36 01.8	
	comp=E,1.0nm,0.2s						
KARP				AML	AML	00 36 01.8	
	comp=E,1.0nm,0.2s						
KARP				AML	AML	00 36 02.1	
	comp=E,0.8nm,0.2s						
KARP				AML	AML	00 36 02.1	
	comp=E,0.8nm,0.2s						
AKUM	Antalya-Kumluc	1.35	71	P	Pn	00 35 43.9	+2.0
AKUM				S	Sn	00 35 58.2	-0.8
MULA	Mugla, Merkez-	1.40	345	P	Pn	00 35 44.5	+1.8
MULA				S	Sn	00 35 59.1	-1.3
MULA				*i* AML	AML	00 36 03.0	
	comp=E,135nm,0.2s						
GOLH	Golhisar	1.48	26	P	Pn	00 35 46.1	+2.3
GOLH				S	Sn	00 36 03.8	+1.3
NISR	Nisiros	1.50	299	P	Pn	00 35 44.8	+0.9
NISR	Nisiros	1.50	299	P	Pn	00 35 44.6	+0.7
NISR				S	Sn	00 36 02.9	+0.3
	comp=E,100nm,0.4s						
TAVA	DENIZLI_Tavas	1.57	4	P	Pn	00 35 46.1	+1.1
TAVA				S	Sn	00 36 02.9	-1.6
BDRM	Kayabasi	1.58	318	P	Pn	00 35 45.7	+0.7
BDRM				S	Sn	00 36 03.2	-1.3
BDRM				*i* AML	AML	00 36 04.0	
	comp=E,140nm,1.0s						
MLSB	Milas	1.60	331	PN	Pn	00 35 46.9	+1.5
MLSB				SN	Sn	00 36 05.3	+0.1
BODT	Bodrum	1.65	315	P	Pn	00 35 46.7	+0.8
BODT	Bodrum	1.65	315	PN	Pn	00 35 46.8	+0.8
BODT				SN	Sn	00 36 05.5	-0.7
KOSK	Kos Island	1.67	301	PN	Pn	00 35 47.9	+1.7
KOSK				SN	Sn	00 36 07.1	+0.3

KORT	Korkueli	1.69	49	PN	Pn	00 35 48.9	+2.2
KORT	Korkueli	1.69	49	P	Pn	00 35 48.8	+2.2
KORT				S	Sn	00 36 10.1	+2.7
KORT				*i* AML	AML	00 36 12.0	
	comp=E,89nm,0.4s						
ANTB	Antalya	1.82	56	PN	Pn	00 35 51.1	+2.8
AYDN	Tasoluk	1.90	338	P	Pn	00 35 50.4	+1.1
AYDN				S	Sn	00 36 11.8	-0.5
AYDN				*i* AML	AML	00 36 14.0	
	comp=E,75nm,0.4s						
AYDN				*i* AML	AML	00 36 14.0	
	comp=E,180nm,0.6s						
AYDN				*i* AML	AML	00 36 14.0	
	comp=E,165nm,0.6s						
DDIM	Aydin, Didim	1.98	322	P	Pn	00 35 51.3	+0.9
DDIM				S	Sn	00 36 12.2	-1.9
BRDR	BURDUR-Merkez	2.08	30	P	Pn	00 35 53.7	+1.9
BRDR				S	Sn	00 36 16.9	+0.3
BCK	Bucak	2.14	43	PN	Pn	00 35 55.2	+2.5
AYDB	Zeytinkoy-Aydi	2.16	341	PN	Pn	00 35 53.2	+0.2
GCAM	G?zelcaml?	2.18	326	PN	Pn	00 35 54.4	+1.3
GCAM	G?zelcaml?	2.18	326	P	Pn	00 35 53.7	+0.7
GCAM				S	Sn	00 36 17.7	-1.3
GCAM				*i* AML	AML	00 36 19.0	
	comp=E,63nm,0.4s						
GCAM				*i* AML	AML	00 36 19.0	
	comp=E,52nm,0.4s						
ZKR	Zakros	2.22	250	P	Pn	00 35 55.9	+2.3
ZKR	Zakros	2.22	250	P	Pn	00 35 55.9	+2.3
ZKR	Zakros	2.22	250	PN	Pn	00 35 56.5	+2.9
ZKR	Zakros	2.22	250	P	Pn	00 35 55.9	+2.3
ZKR				S	Sn	00 36 21.6	+1.6
BASM	Basmaki-Afyon	2.27	27	PN	Pn	00 35 55.4	+1.0
SMG	Samos	2.38	320	P	Pn	00 35 56.3	+0.5
SMG	Samos	2.38	320	P	Pn	00 35 56.5	+0.7
SMG				S	Sn	00 36 22.6	-1.3
	comp=E,55nm,0.3s						
PASA	Karahalli, USA	2.51	13	P	Pn	00 35 57.9	+0.1
PASA				S	Sn	00 36 24.2	-3.1
MANT	Manisa	2.59	356	P	Pn	00 35 59.1	+0.1
MANT				S	Sn	00 36 25.9	-3.6
KZIL	AFYON_Kizioren	2.60	25	P	Pn	00 35 59.6	+0.7
KULA	Kula-Manisa	2.61	358	P	Pn	00 35 59.3	+0.2
KULA	Kula-Manisa	2.61	358	PN	Pn	00 35 59.7	+0.6
DGB	zmir	2.62	326	P	Pn	00 35 59.8	+0.7
DGB				S	Sn	00 36 27.0	-2.8
BAGO	Egridir - ISPA	2.65	37	P	Pn	00 36 01.3	+1.7
THR3	Thira Island,	2.77	282	P	Pn	00 36 02.4	+1.3
THR3	Thira Island,	2.77	282	P	Pn	00 36 02.4	+1.3
USAK	Uak-Merkez	2.82	4	P	Pn	00 36 02.5	+0.7
USAK				S	Sn	00 36 32.1	-2.6
USAK				*i* AML	AML	00 37 43.0	
	comp=E,32nm,3.3s						
BLCB	Balcova	2.84	332	P	Pn	00 36 02.6	+0.5
BLCB	Balcova	2.84	332	PN	Pn	00 36 02.8	+0.7
SEDI	Konya, Seydise	2.86	56	P	Pn	00 36 06.0	+3.5
SEDI				S	Sn	00 36 38.9	+3.0
SEDI				*i* AML	AML	00 36 41.0	
	comp=E,27nm,0.4s						
GAZI	Gazipasa	2.90	82	P	Pn	00 36 03.7	+0.8
GAZI				S	Sn	00 36 35.3	-1.3
ZEYE	Izmir, Urla-Ze	2.95	323	P	Pn	00 36 04.0	+0.3
ZEYE				S	Sn	00 36 35.5	-2.4
URLA	Izmir	3.01	325	PN	Pn	00 36 05.4	+1.0
URLA	Izmir	3.01	325	P	Pn	00 36 04.7	+0.3
URLA				S	Sn	00 36 36.0	-3.2
AKMS	Akamas	3.05	106	P	Pn	00 36 06.0	+1.1
AKMS				AML	AML	00 36 41.0	
	comp=E,0.5nm,0.5s						
AKMS				AML	AML	00 36 41.5	
	comp=E,0.3nm,0.3s						
KSTL	Kastelli Herak	3.06	260	P	Pn	00 36 03.8	-1.4
KSTL				S	Sn	00 36 37.0	-3.6
AKHS	Akhisar	3.07	346	P	Pn	00 36 04.9	-0.4
AKHS				S	Sn	00 36 36.3	-4.5
YVAC	Isparta, Yalva	3.09	39	P	Pn	00 36 07.2	+1.6
YVAC				S	Sn	00 36 42.1	+0.7
DEMI	Demirci	3.14	359	P	Pn	00 36 06.3	+0.1
DEMI				S	Sn	00 36 39.8	-2.8
OSC1	CSNet OBS 1	3.17	138	P	Pn	00 36 07.3	+0.8
DOGA	KONYA_Doganhis	3.21	46	P	Pn	00 36 09.7	+2.5
DOGA				S	Sn	00 36 44.5	+0.2
DOGA				*i* AML	AML	00 38 06.0	
	comp=E,22nm,4.0s						
ALFC	Alefka	3.22	102	P	Pn	00 36 08.0	+0.7
ALFC				AML	AML	00 36 44.9	
	comp=E,0.6nm,0.2s						
ALFC				AML	AML	00 36 45.2	
	comp=E,0.4nm,0.2s						
GDZ	Gediz	3.24	10	P	Pn	00 36 08.2	+0.5
GDZ				S	Sn	00 36 42.0	-3.1
CHOS	Chios island	3.29	320	P	Pn	00 36 08.5	+0.1
CHOS				S	Sn	00 36 45.2	-1.2
	comp=E,15nm,0.3s						
NATA	Nata	3.31	109	P	Pn	00 36 09.4	+0.9
ZEDA	zmir-Bergama	3.34	337	P	Pn	00 36 09.2	+0.2
ZEDA				S	Sn	00 36 44.3	-3.1
ERMK	Ermenek	3.44	76	P	Pn	00 36 14.0	+3.6
ERMK				S	Sn	00 36 51.4	+1.4
ERMK				*i* AML	AML	00 36 55.0	
	comp=E,30nm,0.4s						
ERMK				*i* AML	AML	00 36 56.0	
	comp=E,48nm,0.4s						
ERMK				*i* AML	AML	00 36 56.0	
	comp=E,36nm,0.3s						
KMER	Konya-Meram	3.44	56	P	Pn	00 36 13.4	+2.9
KMER				S	Sn	00 36 52.5	+2.4
LEF	Lefka	3.46	102	P	Pn	00 36 11.3	+0.7
LEF				S	Sn	00 36 46.6	-3.6
KONT	Konya--Tatoy	3.54	54	P	Pn	00 36 14.7	+3.0
SZAC	Souni	3.56	108	P	Pn	00 36 12.9	+1.0
SZAC				AML	AML	00 36 53.8	
	comp=E,0.3nm,0.2s						
SZAC				AML	AML	00 36 54.3	
	comp=E,0.4nm,0.4s						
STEP	BALIKESIR_Sava	3.57	347	P	Pn	00 36 11.9	-0.2
STEP				S	Sn	00 36 47.9	-5.2
KKBE	Karaman, Kazim	3.61	67	P	Pn	00 36 15.9	+3.1
KKBE				S	Sn	00 36 54.9	+0.6
DURS	Dursunbey	3.70	357	P	Pn	00 36 14.3	+0.4
DURS				S	Sn	00 36 53.8	-2.7
ANDZ	Kutahya, Merke	3.72	14	P	Pn	00 36 14.7	+0.6
KDHN	Kadinhani	3.75	45	P	Pn	00 36 15.5	+1.0
KDHN				S	Sn	00 36 56.1	-1.4
ASGA	Asgata	3.83	106	P	Pn	00 36 16.5	+0.8
CSS	Mathiatis	3.85	103	P	Pn	00 36 16.5	+0.6
OSC2	CSNet OBS 4	4.04	133	P	Pn	00 36 18.6	+0.1
MVOU	Mavrovouni	4.07	101	P	Pn	00 36 19.5	+0.5
MATC	Matruh	4.72	196	PN	Pn	00 36 26.1	-1.7
	baz=200						
SLUM	Salum	5.30	215	PN	Pn	00 36 36.3	+0.6
	baz=221						
SLUM				SN	Sn	00 37 25.6	-10
	baz=221						
MMA0B	Mount Meron ar	6.19	116	Pn	Pn	00 36 49.5	+1.4
MMA0B				Sn	Sn	00 37 55.6	-1.9
GEM	Giv'at Ha'Em	6.29	113	Pn	Pn	00 36 50.2	+0.8
GEM				Sn	Sn	00 37 56.4	-3.5
NATI	Neve Ativ	6.33	113	Pn	Pn	00 36 50.2	+0.4
NATI				Sn	Sn	00 37 57.8	-2.8
MMLI	Mount Malkishu	6.51	120	Pn	Pn	00 36 53.1	+0.8
MMLI				Sn	Sn	00 38 03.0	-2.2
GLL	Jalalah	6.77	158	PN	Pn	00 36 55.1	-0.9
	baz=155						
KZIT	Kziot	6.85	135	Pn	Pn	00 36 57.8	+0.8
KZIT				Sn	Sn	00 38 11.1	-2.5
RYAN	Fayoum	6.92	169	PN	Pn	00 36 56.9	-0.9
	baz=167						
YTIR	Yattir	6.97	129	Pn	Pn	00 36 58.8	+0.2
YTIR				Sn	Sn	00 38 14.7	-1.8
NBNS	Bani Suef	7.56	163	PN	Pn	00 37 05.4	-1.3
	baz=161						
PRNI	Paran	7.62	135	Pn	Pn	00 37 07.3	-0.2
PRNI				Sn	Sn	00 38 30.4	-1.9
KRMI	Paran Flat	7.63	137	Pn	Pn	00 37 08.1	+0.4
KRMI				Sn	Sn	00 38 30.4	-2.4
HRFI	Mount Harif	7.87	136	Pn	Pn	00 37 11.4	+0.4
HRFI				Sn	Sn	00 38 36.2	-2.4
MBRI	Mt Berech	7.99	138	Pn	Pn	00 37 12.8	+0.2
HKAT	Jabal Katrina	8.58	147	PN	Pn	00 37 20.8	-0.1
	baz=144						
TR2	Tor 2	8.59	149	PN	Pn	00 37 20.9	+0.2
	baz=146						

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*IDC **09** 00:44:25.3±1.3, 6°.77N×72°.89W, h163^{km}±19^{km}, mb3.2/1, mbtmp3.9/3, Error ellipse: s-maj=73.2km s-min=14.8km az=130.0*

*RSNC **09** 00:44:26.3±1.1, 6°.83N×73°.14W, h147^{km}±4^{km}, ML3.3, Mw3.6*

ISC 09 00:44:24.7±1.0**, 6°.86N**±0°.03×**73°.10W**±0°.04**, h156**^{km}±6^{km}**, n35,** σ**1^{s}32**/66**, 5C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.28	197	⇑*i*P	Pn	00 44 46.3	+0.1
BARC				*e*S	Sn	00 45 00.9	-1.7
BARC				*i*		00 45 02.7	
	comp=Z,516nm,0.2s						
PAMC	Pamplona, Colo	0.62	40	*e*P	Pn	00 44 49.2	+1.2
PAMC				*e*S	Sn	00 45 06.0	+0.4
PAMC				*i*		00 45 06.8	
	comp=Z,300nm,0.2s						
BRRC	Barranca, Sant	0.66	292	⇑*i*P	Pn	00 44 48.1	+0.5
BRRC				*e*S	Sn	00 45 05.0	0.0
BRRC				*i*		00 45 08.7	
	comp=Z,400nm,0.4s						
RUSC	La Rusia	0.96	179	⇑*e*P	Pn	00 44 50.3	0.0
RUSC				*e*S	Sn	00 45 08.4	-1.5
RUSC				*i*		00 45 10.1	
	comp=Z,94nm,0.2s						
TAMC	Tame, Arauca	1.37	108	*e*P	Pn	00 44 54.5	+1.0
TAMC				*i*		00 45 15.3	
	comp=Z,148nm,0.3s						
TAMC				*e*S	Sn	00 45 16.2	+0.8
OCAC	Ocana	1.39	351	*e*P	Pn	00 44 54.4	+0.6
OCAC				*e*S	Sn	00 45 16.2	+0.1
OCAC				*i*		00 45 21.8	
	comp=Z,439nm,0.2s						
PTBC	PUERTO BERRIO,	1.39	257	*e*P	Pn	00 44 52.9	-0.7
PTBC				*e*S	Sn	00 45 14.1	-1.6
PTBC				*i*		00 45 16.5	
	comp=Z,279nm,0.4s						
SPBC	San Pablo de B	1.54	219	*e*P	Pn	00 44 55.4	0.0
SPBC				*e*S	Sn	00 45 17.9	-0.8
SPBC				*i*		00 45 23.3	
	comp=Z,454nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	290	*e*P	Pn	00 44 59.0	+0.5
ZARC				*e*S	Sn	00 45 24.8	+0.2
ZARC				*i*		00 45 30.1	
	comp=Z,374nm,0.5s						
SMLC	San Martn de	2.15	334	*e*P	Pn	00 45 02.4	+0.3
SMLC				*e*S	Sn	00 45 31.1	+0.3
SMLC				*i*		00 45 33.6	
	comp=Z,341nm,0.3s						
NORC	Norcasia	2.18	234	*e*P	Pn	00 45 02.5	+0.1
NORC				*e*S	Sn	00 45 30.1	-1.3
NORC				*i*		00 45 32.3	
	comp=Z,189nm,0.2s						
CHIC	Chingaza	2.31	196	*e*P	Pn	00 45 04.5	+0.3
CHIC				*e*S	Sn	00 45 33.5	-1.2
CHIC				*i*		00 45 39.2	
	comp=Z,91nm,0.3s						
ROSC	El Rosal	2.35	211	P	Pn	00 45 06.1	+1.4
	comp=Z,58nm,0.2s,baz=107,slow=20,SNR=140						
ROSC				S	Sn	00 45 33.1	-2.4
	comp=Z,74nm,0.4s,baz=107,slow=20,SNR=4.4						
ROSC	El Rosal	2.35	211	⇑*e*P	Pn	00 45 06.3	+1.6
ROSC				*e*S	Sn	00 45 36.7	+1.2
ROSC				*i*		00 45 40.3	
	comp=Z,178nm,0.5s						
HELC	Santa Helena	2.50	255	*e*P	Pn	00 45 07.0	+0.5
HELC				*e*S	Sn	00 45 38.0	-0.8
HELC				*i*		00 45 44.5	
	comp=Z,113nm,0.3s						
UREC	San Jos de Ur	2.57	290	*e*P	Pn	00 45 06.2	-0.8
UREC				*e*S	Sn	00 45 37.0	-2.6
UREC				*i*		00 45 51.2	
	comp=Z,144nm,0.3s						
VILC	Villavicencio,	2.79	192	*e*P	Pn	00 45 09.8	-0.2
VILC				*e*S	Sn	00 45 44.9	0.0
PTGC	Puerto Gaitan,	2.81	160	⇑*i*P	Pn	00 45 09.6	-0.5
PTGC				*e*S	Sn	00 45 42.6	-2.5
PTGC				*i*		00 45 46.6	
	comp=Z,54nm,0.3s						
LL6C	La Loma 6 Bece	2.86	357	*e*P	Pn	00 45 11.1	+0.4
LL6C				*e*S	Sn	00 45 46.0	-0.2
CBOC	Ciudad Bolivar	3.06	251	*e*P	Pn	00 45 14.3	+1.0
CBOC				*e*S	Sn	00 45 52.1	+1.3
CBOC				*i*		00 45 59.8	
	comp=Z,37nm,0.3s						
SDV	Santo Domingo	3.17	50	P	Pn	00 45 15.6	+1.0
	comp=Z,51nm,0.3s,baz=232,slow=9.8,SNR=18						
SDV				S	Sn	00 45 52.1	-1.1
	comp=Z,25nm,0.5s,baz=294,slow=20,SNR=8.0						
ARGC	Ariguani, Magd	3.19	339	*e*P	Pn	00 45 16.9	+2.2
ARGC				*e*S	Sn	00 45 55.8	+2.3
ANIL	Santa Ana	3.29	224	*e*P	Pn	00 45 18.1	+1.8
ANIL				*e*S	Sn	00 45 58.5	+2.3
ANIL				*i*		00 46 03.9	
	comp=Z,219nm,0.3s						
PRAC	Prado	3.60	210	*e*P	Pn	00 45 20.1	0.0
PRAC				*e*S	Sn	00 46 02.0	-1.0
PRAC				*i*		00 46 08.9	
	comp=Z,123nm,0.3s						
ORTC	Ortega, Tolima	3.63	216	*e*P	Pn	00 45 20.7	+0.3
ORTC				*e*S	Sn	00 46 03.9	+0.2
ORTC				*i*		00 46 10.4	
	comp=Z,73nm,0.5s						
SJCC	San Jacinto, C	3.65	326	*e*P	Pn	00 45 20.6	-0.1
SJCC				*e*S	Sn	00 46 01.9	-2.3
SJCC				*i*		00 46 06.0	
	comp=Z,42nm,0.5s						
PLMC	San Jos del P	3.71	239	*e*P	Pn	00 45 22.1	+0.6
PLMC				*e*S	Sn	00 46 02.9	-2.8
PLMC				*i*		00 46 20.7	
	comp=Z,33nm,0.6s						
CRJC	Cerrejon, Guaj	4.14	3	*e*P	Pn	00 45 26.7	-0.3
CRJC				*e*S	Sn	00 46 12.8	-2.8
CRJC				*i*		00 46 17.3	
	comp=Z,31nm,0.2s						
YOTC	Yotoco, Valle	4.31	229	*e*P	Pn	00 45 29.2	-0.2
YOTC				*e*S	Sn	00 46 19.8	0.0
SMRC	Santa Marta, M	4.42	346	*e*P	Pn	00 45 31.7	+1.1
SMRC				*e*S	Sn	00 46 19.7	-2.3
SMRC				*i*		00 46 22.0	
	comp=Z,17nm,0.3s						
URIC	Uribia, Colomb	4.93	13	*e*P	Pn	00 45 36.7	-0.7
URIC				*e*S	Sn	00 46 31.4	-2.7
URIC				*i*		00 46 38.3	
	comp=Z,6.7nm,0.5s						
PCON	Cinco Dias	5.58	216	*e*P	Pn	00 45 47.7	+1.3
SOTA	Rioblanco	5.85	217	*e*P	Pn	00 45 51.5	+1.4
SOTA				*i*		00 47 06.2	
	comp=Z,4.6nm,0.6s						
YKA	Yellowknife Ar	63.23	340	P	P	00 54 37.1	+0.8
	comp=Z,0.5nm,0.6s,baz=137,slow=6.5,SNR=4.8						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPbc	01 03 58.3	-0.4
	comp=Z,0.2nm,0.4s,baz=108,slow=2.7,SNR=6.5						

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*IDC **09** 00:49:27.8±48.0, 35°.56N×70°.90E, h196^{km}±190^{km}, mb3.3/3, mbtmp3.8/4, ML3.1/1, Error ellipse: s-maj=839.0km s-min=103.1km az=162.0*

*NEIC **09** 00:49:34.2±2.3, 36°.52N±0°.06×70°.34E±0°.05, h219^{km}±9^{km}, mb4.0/4, Error ellipse: s-maj=9.3km s-min=5.2km az=161.0*

*NNC **09** 00:49:39.0±14.0, 36°.80N×70°.62E, h196^{km}±243^{km}, mb2.5, mpv3.4, Error ellipse: s-maj=154.1km s-min=74.0km az=4.0*

ISC 09 00:49:34.3±0.7**, 36°.51N**±0°.05×**70°.44E**±0°.06**, h204**^{km}**, n30,** σ**1^{s}60**/37**, mb4.0**/4**, 2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.27	211	Pn	Pn	00 50 16.9	+0.6
KBL				Sn	S	00 50 47.6	-0.7
CHGR	Chuyangaron	2.38	335	Pn	Pn	00 50 17.8	+0.7
CHGR				Sn	S	00 50 47.8	-2.4
GAR	Garm	2.49	358		Pn	00 50 19.4	+1.0
GAR				Sn	S	00 50 51.5	-1.0
BTK	Batken	3.56	5	Pn	Pn	00 50 32.4	+1.5
BTK				Sn	S	00 51 15.6	+0.8
NIL	Nilore	3.67	140	Pn	Pn	00 50 33.5	+1.3
NIL				Sn	S	00 51 17.5	+0.5
TAS	Tashkent	4.89	350	Pn	Pn	00 50 47.9	+0.5
THN	Thein Dam	5.96	131	*e*S	S	00 52 09.2	-0.3
KK31	Karatay Array	6.59	0		Pn	00 51 09.5	+0.3
KK31				Sn	S	00 52 21.4	-2.8
KK31	Karatay Array	6.59	0	P	Pn	00 51 10.2	+1.0
	0.8nm,0.3s,baz=173,slow=12,SNR=62						
KK31				⇑S	S	00 52 21.6	-2.6
	1.6nm,0.3s,baz=181,slow=23,SNR=7.8						
KKAR	Karatay Array	6.59	0	Pn	Pn	00 51 09.5	+0.3
KKAR	Karatay Array	6.59	0	Sn	S	00 52 21.1	-3.2
AAK	Ala-Archa	6.88	26		Pn	00 51 13.8	+0.8
AAK				Sn	S	00 52 30.7	-0.5
BHK	Bhakra	7.10	134	*e*S	S	00 52 34.3	-2.2
TKM2	Tokmak 2	7.54	30	⇑P	Pn	00 51 21.7	+0.1
	1.4nm,0.5s						
TKM2				⇓S	S	00 52 45.0	-2.0
	4.8nm,0.7s						
SMLA	Simla	7.75	132	*e*P	Pn	00 51 24.4	+0.1
SMLA				IAML		00 52 50.3	
	comp=N,30nm,0.1s						
SMLA				IAML		00 52 53.1	
	comp=E,37nm,0.3s						
KUDL	Kundal	9.78	147	*e*S	S	00 53 26.7	-14
MAKZ	Makanchi	13.41	36	Pn	Pn	00 52 35.9	-0.8
MK31	Makanchi Array	13.55	37	Pn	Pn	00 52 37.0	-1.4
MKAR	Makanchi Array	13.55	37	P	Pn	00 52 39.0	+0.6
	comp=E,0.1nm,0.3s,baz=220,slow=12,SNR=8.9						
	comp=E,0.8nm,0.4s						
MKAR	Makanchi Array	13.55	37	Pn	Pn	00 52 37.8	-0.6
AB31	Akbulak array	14.87	332	P	P	00 52 57.2	+2.0
	comp=E,0.4nm,0.3s,baz=149,slow=11,SNR=24						
ABKAR	Akbulak array	14.87	332	P	P	00 52 57.0	+1.8
ZAA0	Zalesovo Array	20.10	25	P	P	00 53 53.4	+1.2
ZALV	Zalesovo Beam	20.10	25	P	P	00 53 53.8	+1.6
	comp=E,1.2nm,0.3s,baz=215,slow=11,SNR=9.8						
	comp=E,1.2nm,0.3s						
GNI	Garni	20.46	288	P	P	00 53 55.2	-1.2
GNI				IAmb	IAmb	00 54 07.8	
	comp=Z,1.9nm,0.7s						
XAN	Xi'an	31.37	83	P	P	00 55 30.6	-5.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	FINESS Array B	37.23	326	P	P	00 56 28.3	+2.5
	comp=Z,0.8nm,0.8s,baz=127,slow=8.8,SNR=1.7						
	comp=Z,0.8nm,0.8s						
LVZ	Lovozero	37.29	339	P	P	00 56 26.7	+0.4
ITM	Ithomi	38.49	286	P	P	00 56 33.7	-3.0
ITM				IAmb	IAmb	00 56 47.5	
	comp=Z,9.5nm,1.1s						
ARCES	ARCESS Array B	40.97	338	P	P	00 56 59.0	+2.3
	comp=Z,1.9nm,0.9s,baz=114,slow=9.0,SNR=3.6						
	comp=Z,1.9nm,0.9s						

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*IDC **09** 00:53:48.9±33.0, 46°.21N×151°.18E, h106^{km}±78^{km}, mb3.3/3, mbtmp3.6/4, ML1.9/1, Error ellipse: s-maj=618.2km s-min=66.6km az=152.0*

*SKHL **09** 00:53:57.5±0.1, 44°.90N×151°.00E, h33^{km}±5^{km}, mb4.3/2*

ISC 09 00:53:45.9±2.5**, 45°.8N**±0°.3×**151°.5E**±0°.3**, h100**^{km}**, n13,** σ**2^{s}75**/8**, mb3.4**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.60	258	*e*S	Sn	00 54 58.7	+1.4
KUR				A	A	00 54 59.8	
	210nm,0.5s						
KUR				A	A	00 54 59.8	
	100nm,0.5s						
SHO	Shikotan	3.84	241	*e*P	Pn	00 54 45.9	+3.1
SHO				AMB	AMB	00 54 47.5	
	40nm,0.5s						
SHO				*e*S	Sn	00 55 22.3	-4.6
SHO				A	A	00 55 26.5	
	30nm,0.3s						
SHO				A	A	00 55 26.5	
	60nm,0.3s						
YUK	Yuzh-Kuril'sk	4.37	248	*e*S	Sn	00 55 37.9	-1.8
YUK				A	A	00 55 40.0	
	90nm,0.5s						
YUK				A	A	00 55 40.0	
	30nm,0.5s						
PETK	Petropavlovsk-	8.34	27	P	Pn	00 55 43.5	-0.4
	0.1nm,0.3s,baz=192,slow=10.0,SNR=1.9						
	3.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.97	149	T	T	01 31 21.2	
	baz=337,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	28.99	149	T	T	01 31 23.3	
	baz=337,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	28.99	149	T	T	01 31 22.3	
	baz=337,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	30.03	150	T	T	01 32 42.7	
	baz=338,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	30.04	150	T	T	01 32 41.5	
	baz=338,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	30.05	150	T	T	01 32 43.5	
	baz=338,slow=76,SNR=48						
MKAR	Makanchi Array	46.35	297	P	P	01 02 01.3	-0.5
	0.4nm,0.7s,baz=65,slow=7.9,SNR=3.9						
	0.4nm,0.7s						
FINES	FINESS Array B	64.38	334	P	P	01 04 09.5	-1.2
	1.2nm,0.9s,baz=52,slow=5.6,SNR=4.2						
	1.2nm,0.9s						
NOA	NORSAR Array B	68.72	340	P	P	01 04 38.7	+0.3
	0.2nm,0.4s,baz=27,slow=6.4,SNR=3.6						
	0.2nm,0.4s						

IDC 09 01:02:58.0±2.3**, 6°.19S**×**129°.85E, h0**^{km}**, mb3.9**/1**, mbtmp4.1**/3**, ML3.5**/2**, Error ellipse: s-maj=154.2km s-min=31.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.35	163	Pn	Pn	01 06 22.2	-0.3
	0.3nm,0.3s,baz=345,slow=13,SNR=14						
WRA				Sn	Sn	01 08 48.6	-14
	0.7nm,0.3s,baz=333,slow=24,SNR=14						
	0.3nm,0.3s						
ASAR	Alice Springs	17.81	168	P	Pn	01 07 07.5	+0.1
	0.1nm,0.3s,baz=352,slow=10,SNR=3.2						
	9.7nm,0.3s						
MKAR	Makanchi Array	67.47	327	P	P	01 13 55.8	0.0
	0.6nm,0.4s,baz=119,slow=8.0,SNR=10						
	0.6nm,0.4s						

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*NEIC **09** 01:22:44.9±2.2, 7°.23S±0°.07×74°.89W±0°.07, h131^{km}±6^{km}, mb4.5/60, Error ellipse: s-maj=10.7km s-min=10.0km az=196.0*

*IDC **09** 01:22:45.1±0.7, 7°.15S×74°.87W, h138^{km}±6^{km}, mb3.7/13, mbtmp4.1/16, Error ellipse: s-maj=17.4km s-min=13.5km az=66.0*

*VAO **09** 01:22:52.6±1.0, 7°.30S×74°.18W, h145^{km}±5^{km}, mbR4.0*

ISC 09 01:22:45.6±0.4**, 7°.28S**±0°.05×**74°.96W**±0°.06**, h150**^{km}**, n117,** σ**1^{s}50**/118**, mb4.4**/36**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.28	101	*e*P	Pn	01 23 23.6	-0.4
ATAH	Atahualpa	3.41	272	P	Pn	01 23 37.8	-0.8
	79nm,0.3s,baz=66,slow=19,SNR=628						
ATAH				S	Sn	01 24 17.9	-1.7
	156nm,0.4s,baz=18,slow=20,SNR=11						
NNA	Nana	5.03	202	P	Pn	01 23 59.4	-0.1
	14nm,0.3s,baz=57,slow=8.0,SNR=19						
NNA				S	Sn	01 24 54.3	-2.9
	59nm,0.3s,baz=311,slow=22,SNR=13						
NNA	Nana	5.03	202	Pn	Pn	01 23 59.2	-0.3
TBTG	Tabatinga, AM	5.89	59	*e*P	Pn	01 24 09.2	-1.6
OTAV	Otavalo	8.24	335	Pn	Pn	01 24 41.6	-1.1
ETMB	Extrema	9.01	107	*e*P	Pn	01 24 48.6	-3.8
LPAZ	La Paz	11.17	144	P	Pn	01 25 19.2	-2.4
	2.3nm,0.3s,baz=333,slow=9.8,SNR=23						
LPAZ	La Paz	11.17	144	*e*P	Pn	01 25 19.6	-2.0
PB16	IPOC Station P	12.20	155	Pn	Pn	01 25 35.4	+0.3
PB11	IPOC Station P	13.43	158	Pn	Pn	01 25 50.0	-0.5
PB08	IPOC Station P	13.97	157	Pn	Pn	01 25 56.2	-1.3
ZARC	Zaragoza, Cauc	14.68	0	P	P	01 26 09.2	+0.8
MACA	Manacapuru-AM	14.79	75	*e*P	Pn	01 26 04.1	-3.4
PB07	IPOC Station P	15.17	162	P	P	01 26 15.7	+1.7
PB07				IAmb	IAmb	01 26 17.4	
	comp=Z,22nm,1.5s						
OCAC	Ocana	15.51	6	P	Pn	01 26 16.2	-0.3

VILB	Vilhena	15.58	112	*e*P	Pn	01 26 15.9	-1.4
LVC	Limon Verde	16.32	160	P	P	01 26 28.4	+1.6
	comp=Z,1.2nm,0.3s,baz=358,slow=9.9,SNR=2.1						
LVC	Limon Verde	16.32	160		P	01 26 27.2	+0.4
LVC	Limon Verde	16.32	160	*e*P	P	01 26 31.0	+4.3
SDV	Santo Domingo	16.63	15	*e*P	Pn	01 26 34.7	+4.4
SJCC	San Jacinto, C	17.07	359	P	Pn	01 26 35.3	-0.1
SJCC				IAmb	IAmb	01 26 37.3	
	comp=Z,14nm,0.9s						
BOAV	Boa Vista	17.32	57	*e*P	Pn	01 26 37.8	-0.6
PTLB	Pontes e Lacer	17.50	119	*e*P	Pn	01 26 40.0	-0.5
BAUV	El Baul	17.53	23		Pn	01 26 40.2	-0.8
PDRB	Porto dos Gac	18.48	105	*e*P	P	01 26 50.0	-0.3
URIC	Uribia, Colomb	19.09	9	P	P	01 26 54.3	-2.5
URIC				IAmb	IAmb	01 26 58.8	
	comp=Z,15nm,1.0s						
CLDB	Colider	19.25	102	*e*P	P	01 26 58.1	-0.6
ITTB	Itaituba	19.34	82	*e*P	P	01 26 59.1	-0.5
BIRV	Birongo	19.65	26	P	Pn	01 27 05.9	+0.1
BIRV				IAmb	IAmb	01 27 07.4	
	comp=Z,45nm,1.5s						
AC02	Maricunga	20.22	165	P	Pn	01 27 11.3	-1.7
PP1B	Ponte de Pedra	22.10	120	*e*P	P	01 27 29.5	+0.5
AQDB	Aquidauana	22.80	127	P	P	01 27 37.4	+1.8
AQDB	Aquidauana	22.80	127	*e*P	P	01 27 37.4	+1.8
SNDB	Serra Nova Dou	23.78	103	*e*P	P	01 27 44.8	+0.1
MCPB	Macapa, AP	23.85	74	*e*P	P	01 27 46.2	+0.9
CPUP	Villa Florida	25.31	141	P	P	01 28 00.2	+1.9
	comp=Z,0.9nm,0.5s,baz=335,slow=11,SNR=5.5						
	comp=Z,0.9nm,0.5s						
CPUP	Villa Florida	25.31	141	P	P	01 27 56.2	-2.2
CPUP	Villa Florida	25.31	141	*e*P	P	01 28 01.6	+3.2
MDP	Montagnes des	25.44	62	P	P	01 27 59.7	0.0
	comp=Z,25nm,1.3s,baz=216,slow=8.7,SNR=1.4						
	comp=Z,25nm,1.3s						
TRCB	Terra Rica	26.44	128	*e*P	P	01 28 10.2	+1.5
CELP	Cerrillos	26.52	18	P	P	01 28 08.9	-0.4
PDPR	Patillas Dam,	26.64	19	P	P	01 28 09.9	-0.5
PDPR				IAmb	IAmb	01 28 10.6	
	comp=Z,10.0nm,0.8s						
SJG	San Juan	26.69	19	P	P	01 28 10.2	-0.6
	comp=Z,6.9nm,0.5s,baz=202,slow=7.4,SNR=7.0						
	comp=Z,6.9nm,0.5s						
SJG	San Juan	26.69	19	P	P	01 28 10.5	-0.3
HUMP	Col San Antoni	26.82	19	P	P	01 28 12.9	+0.9
HUMP				IAmb	IAmb	01 28 40.1	
	comp=Z,27nm,1.4s						
CBYP	Canovanas	26.93	19	P	P	01 28 12.6	-0.5
CUPR	Culebra, Puert	27.16	20	P	P	01 28 13.5	-1.6
CUPR				IAmb	IAmb	01 28 37.5	
	comp=Z,12nm,0.9s						
STVI	Saint Thomas	27.32	21	P	P	01 28 15.3	-1.2
STVI				IAmb	IAmb	01 28 18.9	
	comp=Z,15nm,0.8s						
ITQB	Itaqui	28.17	145	P	P	01 28 23.4	-0.5
ITQB				IAmb	IAmb	01 28 44.0	
	comp=Z,12nm,1.3s						
W57A	Gilead	42.47	354	P	P	01 30 26.7	+0.9
W57A				IAmb	IAmb	01 30 27.4	
	comp=Z,5.5nm,0.8s						
FPAL	Fort Paine	42.80	347	P	P	01 30 29.0	+0.5
W50A	Signal Mountai	43.37	348	P	P	01 30 33.2	0.0
W50A				IAmb	IAmb	01 30 34.0	
	comp=Z,6.3nm,0.8s						
CPCT	Cooper Cave	43.45	349	P	P	01 30 33.8	0.0
V52A	Sevierville	43.66	350	P	P	01 30 35.5	+0.1
T59A	Double "B" Far	44.09	357	P	P	01 30 39.6	+0.8
T59A				IAmb	IAmb	01 30 52.6	
	comp=Z,7.8nm,1.1s						
V48A	Smith Brothers	44.23	346	P	P	01 30 40.0	0.0
V48A				IAmb	IAmb	01 30 40.4	
	comp=Z,7.3nm,0.6s						
T57A	Hurt	44.23	355	P	P	01 30 41.1	+1.1
TZTN	Tazewell	44.33	350	P	P	01 30 40.9	+0.1
TZTN				IAmb	IAmb	01 30 53.8	
	comp=Z,9.4nm,1.2s						
R55A	Marlinton	45.58	354	P	P	01 30 51.8	+1.1
R55A				IAmb	IAmb	01 30 52.9	
	comp=Z,8.4nm,0.8s						
TXAR	Lajitas Array	45.70	324	P	P	01 30 53.0	+1.2
	comp=Z,0.6nm,0.5s,baz=148,slow=8.8,SNR=6.0						
	comp=Z,0.6nm,0.5s						
TXAR	Lajitas Array	45.70	324	P	P	01 30 53.7	+1.9
TX31	Lajitas Ar. Si	45.70	324	P	P	01 30 53.6	+1.8
P53A	Whipple	46.91	353	P	P	01 31 01.6	+0.7
P53A				IAmb	IAmb	01 31 10.4	
	comp=Z,15nm,1.4s						
BLO	Bloomington	47.45	348	P	P	01 31 04.8	-0.3
BLO				IAmb	IAmb	01 31 05.3	
	comp=Z,5.7nm,0.7s						
SSPA	Standing Stone	47.76	357	P	P	01 31 08.6	+1.1
SSPA				IAmb	IAmb	01 31 13.1	
	comp=Z,16nm,1.4s						
N58A	Sunbury	47.91	358	P	P	01 31 10.3	+1.7
M57A	Sunshine Farm,	48.42	358	P	P	01 31 13.9	+1.4
M55A	Ridgway	48.64	356	P	P	01 31 15.0	+0.8
N47A	Urbana	48.93	349	P	P	01 31 15.8	-0.7
BINY	Binghamton	49.25	359	P	P	01 31 19.8	+0.9
HDIL	Hopedale	49.40	346	P	P	01 31 19.6	-0.4
WVNY	West Valley, N	49.56	356	P	P	01 31 22.2	+1.0
K57A	Scipio Center	49.79	358	P	P	01 31 23.8	+0.8
DELO	Deloro Mine	51.62	358	P	P	01 31 36.9	+0.3
SADO	Sadowa	51.95	356	P	P	01 31 38.8	-0.3
SADO				IAmb	IAmb	01 31 48.2	
	comp=Z,5.5nm,1.2s						
I42A	Draeger Farm,	52.48	347	P	P	01 31 42.9	-0.1
F36A	Milaca	55.45	344	P	P	01 32 04.1	-0.4
F36A				IAmb	IAmb	01 32 04.9	
	comp=Z,4.1nm,0.7s						
DUG	Dugway, Tooele	58.73	327	P	P	01 32 29.6	+1.7
PDAR	Pinedale Array	58.93	331	P	P	01 32 29.6	+0.3
	comp=Z,0.2nm,0.4s,baz=120,slow=6.8,SNR=3.9						
PDAR				sP	PcP	01 33 17.4	+0.4
	comp=Z,0.2nm,0.4s,baz=133,slow=8.3,SNR=2.5						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	58.93	331	P	P	01 32 29.0	-0.3
HWUT	Hardware Ranch	59.08	329	P	P	01 32 31.2	+0.9
HWUT				IAmb	IAmb	01 32 31.9	
	comp=Z,3.0nm,0.7s						
ULM	Lac du Bonnet	60.11	345	P	P	01 32 36.5	-0.5
	comp=Z,3.2nm,0.6s,baz=135,slow=4.6,SNR=4.1						
	comp=Z,3.2nm,0.6s						
ULM	Lac du Bonnet	60.11	345	P	P	01 32 35.8	-1.1
ULM				IAmb	IAmb	01 32 37.1	
	comp=Z,3.7nm,0.6s						
NVAR	Mina Array Bea	60.75	322	P	P	01 32 42.1	+0.3
	comp=Z,0.3nm,0.6s,baz=144,slow=6.7,SNR=2.3						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	60.75	322	P	P	01 32 40.8	-1.0
YHL	Hebgen Lake	61.27	331	P	P	01 32 47.8	+2.5
YHL				IAmb	IAmb	01 32 48.2	
	comp=Z,4.9nm,0.7s						
SCHQ	Schefferville	62.26	5	P	P	01 32 51.3	-0.1
	comp=Z,3.2nm,0.7s,baz=206,slow=7.1,SNR=6.8						
	comp=Z,3.2nm,0.7s						
SCHQ	Schefferville	62.26	5	P	P	01 32 51.6	+0.3
SCHQ				IAmb	IAmb	01 32 51.9	
	comp=Z,4.9nm,0.8s						
DBIC	Dimbokro	71.28	80	P	P	01 33 48.7	-0.6
	comp=Z,1.6nm,0.6s,baz=263,slow=5.7,SNR=1.8						
	comp=Z,1.6nm,0.6s						
DBIC	Dimbokro	71.28	80	P	P	01 33 48.9	-0.4
DBIC				IAmb	IAmb	01 34 03.6	
	comp=Z,11nm,1.4s						
KOWA	Kowa	73.59	73	P	P	01 34 02.9	-0.1
YKA	Yellowknife Ar	75.93	342	P	P	01 34 15.6	+0.2
	comp=Z,1.1nm,0.7s,baz=139,slow=6.0,SNR=7.2						
YKA				pP	pP	01 34 50.9	-1.4
	comp=Z,0.4nm,0.5s,baz=139,slow=6.4,SNR=3.9						
	comp=Z,1.1nm,0.7s						
YKA	Yellowknife Ar	75.93	342	P	P	01 34 19.0	+3.6
SNAA	Sanae	77.54	162	P	P	01 34 25.9	+1.4
SNAA				IAmb	IAmb	01 34 34.1	
	comp=Z,11nm,1.5s						
TORD	Torodi Ar. Bea	78.78	75	P	P	01 34 31.6	-0.7
	comp=Z,0.7nm,0.3s,baz=269,slow=5.3,SNR=42						
TORD				pP	pP	01 35 07.1	-2.4
	comp=Z,0.3nm,0.8s,baz=261,slow=5.7,SNR=1.5						
	comp=Z,0.7nm,0.3s						
QSPA	South Pole Qui	82.82	180	P	P	01 34 55.0	+2.0
	comp=Z,1.7nm,0.7s,baz=223,slow=1.9,SNR=10						
	comp=Z,1.7nm,0.7s						
QSPA	South Pole Qui	82.82	180	P	P	01 34 55.0	+2.0
SUMG	Summit	83.10	10	P	P	01 34 55.4	+0.9
SUMG				IAmb	IAmb	01 34 57.1	
	comp=Z,13nm,1.5s						
M30M	Minto, Yukon	83.96	336	P	P	01 34 59.5	+0.8
J25K	Salcha River,	88.30	336	P	P	01 35 20.9	+1.0
J25K				IAmb	IAmb	01 35 21.6	
	comp=Z,3.5nm,0.8s						
ILAR	Eielson Array	88.96	336	P	P	01 35 23.2	+0.4
	comp=Z,0.7nm,0.8s,baz=127,slow=3.5,SNR=8.6						
	comp=Z,0.7nm,0.8s						
MDM	Murphy Dome	89.57	336	P	P	01 35 26.6	+0.8
MDM				IAmb	IAmb	01 35 27.4	
	comp=Z,3.7nm,0.6s						
BPAW	Bear Paw Mtn.	90.45	335		P	01 35 30.6	+0.7
BPAW				IAmb	IAmb	01 35 31.3	
	comp=Z,3.7nm,0.8s						
ABKAR	Akbulak array	123.64	34	PKPdf	PKiKP	01 41 26.7	+1.0
ZALV	Zalesovo Beam	130.68	16	PKP	PKiKP	01 41 39.8	+0.2
	comp=Z,0.7nm,0.4s,baz=330,slow=2.3,SNR=4.9						
MKAR	Makanchi Array	136.06	23	PKP	PKiKP	01 41 50.0	-0.8
	comp=Z,0.3nm,0.6s,baz=302,slow=3.2,SNR=2.7						
WR0	Warramunga Arr	140.31	226	PKPpre	PKPpre	01 41 51.5	
WB2	Warramunga Arr	140.46	226	PKPpre	PKPpre	01 41 51.9	
WRA	Warramunga Arr	140.46	226	PKhKP	PKPpre	01 41 52.2	
	comp=Z,0.2nm,0.3s,baz=126,slow=2.9,SNR=11						
WRA				PKP	PKiKP	01 42 00.8	+0.3
	comp=Z,0.6nm,0.4s,baz=125,slow=1.8,SNR=13						
WRA				pPKP	pPKPdf	01 42 35.9	-1.9
	comp=Z,0.7nm,0.9s,baz=127,slow=1.9,SNR=1.9						
WB0	Warramunga Arr	140.54	227	PKPpre	PKPpre	01 41 52.4	
FITZ	Fitzroy Crossi	147.60	219	PKPbc	PKiKP	01 42 13.9	-1.3
	comp=Z,2.0nm,0.5s,baz=146,slow=4.8,SNR=3.2						
PSA00	Pilbara Seismi	147.85	207	PKPbc	PKiKP	01 42 14.8	-0.9
MBWA	Marble Bar	148.27	207	PKPbc	PKiKP	01 42 15.7	-0.8
LZH	Lanzhou	151.31	2	*e*PKPbc	PKPbc	01 42 21.4	-0.7
LZH				pPKP	pPKPdf	01 42 49.4	-6.6
LZH				sPKP		01 43 00.5	
XAN	Xi'an	153.13	353	*i* PKPbc	PKPab	01 42 31.9	-6.2
XAN				pPKP	pPKPdf	01 42 59.0	+0.3
XAN				LR	LR		
	comp=N,210nm,23.4s						
XAN				LR	LR		
	comp=E,80nm,23.4s						
XAN				LR	LR		
	comp=Z,340nm,24.7s						
PZH	PanZhiHua	160.63	9	PKP	PKPdf	01 42 27.8	-0.7

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*ECX **09** 01:33:24.6±0.6, 32°.17N×115°.25W, h12km±3km, MD2.5, ML2.7*

*MEX **09** 01:33:27.3±0.9, 32°.14N×115°.18W, h10km, MD4.0*

ISC 09 01:33:25.4±1.0**, 32°.16N**±0°.03×**115°.22W**±0°.04**, h27**km±6km**, n21, σ0^{s}56**/35**, 5C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUVIX	Guadalupe Vict	0.18	41	⇑*i*P	Pb	01 33 30.6	-0.6
GUVIX				*i* S	Sb	01 33 34.4	-0.7
RITX	Riito Sonora	0.22	89	⇑*i*P	Pb	01 33 31.4	-0.2
MBIG	Mexicali	0.24	4	*e*P	Pb	01 33 31.5	-0.4
MBIG				*i* P	Pb	01 33 31.8	-0.1
MBIG				*i* S	Sb	01 33 37.0	+0.7
MBIG				*e*S	Sn	01 33 37.1	+0.9
MBIG	Mexicali	0.24	4	*e*P	Pb	01 33 31.7	-0.1
CPBX	Cerro Prieto	0.27	344	*e*P	Pb	01 33 31.3	-0.9
CPBX				*e*S	Sb	01 33 36.4	-0.4
CPBX				IAML		01 33 37.7	
	comp=E,4μm,0.3s						
CPBX				⇑*e*		01 33 37.7	
CPBX				⇓*e*		01 33 39.7	
CPBX				IAML		01 33 39.7	
	comp=N,3μm,0.1s						
CTLX	Tlaxcala, TLX	0.31	11	*e*P	Pb	01 33 32.4	-0.4
CTLX				*e*S	Sb	01 33 38.1	+0.2
ALAMX	Rancho Alamar	0.44	250	⇑*i*P	Pb	01 33 35.0	+0.1
ALAMX				*e*S	Sb	01 33 41.4	+0.1
ALAMX				IAML		01 33 41.9	
	comp=E,876nm,0.2s						
ALAMX				⇑*e*		01 33 41.9	
EMSC	East Mesa	0.61	19	*e*P	Pb	01 33 37.3	-0.3
YMD	Yuma Desert	0.69	55	*e*P	Pb	01 33 38.3	-0.6
COA	Coachella	0.70	7	*e*P	Pb	01 33 38.5	-0.6
COA				*e*S	Sn	01 33 50.2	+0.7
ECBX	El Chinero	0.70	168	*e*P	Pb	01 33 39.5	+0.3
ECBX				*e*S	Sn	01 33 49.4	-0.1
YUH2	Yuha Desert	0.77	309	*e*P	Pb	01 33 39.9	-0.3
YUH2				*e*S	Sb	01 33 50.2	-0.1
COK2	Cook Ranch 2	0.81	328	*e*P	Pb	01 33 40.7	-0.2
RMX	La Rumorosa	0.85	301	*e*P	Pb	01 33 40.4	-1.3
RMX				IAML		01 33 52.1	
	comp=E,160nm,0.1s						
RMX				*e*		01 33 52.1	
IKP	In-Ko-Pah, Jac	0.90	303	*e*P	Pb	01 33 41.8	-0.6
CRR	Carrizo Plain	0.96	319	*e*P	Pb	01 33 43.3	-0.1
SPIG	San Pedro Mart	1.14	191	*e*P	Pn	01 33 46.1	+0.3
SPIG				*e*S	Sb	01 33 59.7	-1.4
CBX	Cerro Bola	1.23	277	*e*P	Pn	01 33 47.2	+0.2
CBX				*e*S	Sb	01 34 03.7	-0.1
CBX	Cerro Bola	1.23	277	*e*P	Pn	01 33 47.2	+0.2
TJIG	Tijuana	1.26	283	*e*P	Pn	01 33 47.5	+0.2
TJIG				*i* S	Sn	01 34 03.7	+0.4
BAR	Barrett	1.33	293	*e*P	Pn	01 33 48.4	+0.2
BAR				*e*S	Sn	01 34 05.6	+0.5

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*IDC **09** 01:33:29.1±0.7, 62°.20S×164°.60E, h0km, mb4.4/7, mbtmp4.5/8, ML5.0/1, MS4.7/42, Error ellipse: s-maj=37.5km s-min=17.8km az=67.0*

*NEIC **09** 01:33:33.9±3.0, 62°.58S±0°.05×165°.3E±0°.4, h10km±1km, mb4.8/19, Ms_20 5.0/109, Mwb5.5/14, Error ellipse: s-maj=33.3km s-min=7.7km az=92.0*

*GCMT **09** 01:33:33.9±0.1, 62°.25S±0°.01×165°.32E±0°.02, h14km, MW5.5/141, Moment Tensor Solution. s117,c204; s141,c251; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$2.08±.03; $M_{\phi\phi}$-1.89±.03; $M_{r\theta}$-0.60±.06; $M_{\theta\phi}$-0.45±.02; $M_{\phi r}$-0.15±.04; Best double couple: $M_0$2.11700×10^{17} NP1:ϕ_s322.00000°, δ75.00000°, λ4.00000°. NP2:ϕ_s231.00000°, δ86.00000°, λ165.00000°. Principal axes: T 2.2670, Plg13.0000°, Azm186.0000°; N -0.2980, Plg75.0000°, Azm36.0000°; P -1.9680, Plg7.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 01:33:34.6, 62°.64S×165°.63E, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.58; $M_{\theta\theta}$1.69; $M_{\phi\phi}$-2.28; $M_{r\theta}$0.63; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.01; Fault plane solution: $M_0$2.20000×10^{17} NP1:ϕ_s35.37000°, δ72.41000°, λ164.40000°. NP2:ϕ_s130.20000°, δ75.15000°, λ18.22000°. Principal axes: T 2.0279, Plg23.0000°, Azm353.0000°; N 0.3165, Plg67.0000°, Azm168.0000°; P -2.3444, Plg2.0000°, Azm262.0000°;*

ISC 09 01:33:32.8±0.5**, 62°.54S**±0°.07×**165°.0E**±0°.2**, h10**km**, n139, σ1^{s}80**/39**, mb4.7**/13**, MS5.0**/84**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	15.09	183	Pn	Pn	01 37 06.1	+0.4
	5.4nm,0.3s,baz=358,slow=13,SNR=133						
VNDA				LR	LR	01 42 08.8	
	comp=Z,11μm,18.1s,baz=10.0,slow=34						
	31nm,0.5s						
VNDA	Vanda	15.09	183		Pn	01 37 06.5	+0.8
SBA	Scott Base	15.40	179	Pn	Pn	01 37 10.2	+0.4
WHZ	Wether Hill Ro	16.76	7	Pn	Pn	01 37 27.7	+0.3
RPZ	Rata Peaks	19.18	13	LR	LR	01 44 04.3	
	comp=Z,6μm,20.5s,baz=214,slow=34						
RPZ	Rata Peaks	19.18	13	P	P	01 37 56.5	+0.1
RPZ				IAmb	IAmb	01 37 58.2	
	comp=Z,46nm,1.1s						
OXZ	Oxford	19.68	15	P	Pn	01 38 04.6	+1.4
LTZ	Lake Taylor	20.25	16	P	Pn	01 38 09.9	-0.1
LTZ				IAmb	IAmb	01 38 32.4	
	comp=Z,42nm,1.4s						
MSWZ	Moikau Station	22.02	21	P	P	01 38 29.3	+2.2
SNZO	South Karori	22.03	20	IAMs_20	IAMs_20	01 45 27.3	
	comp=Z,4μm,19.0s						
QRZ	Quartz Range	22.21	15	IAMs_20	IAMs_20	01 45 55.2	
	comp=Z,4μm,19.0s						
BFZ	Birch Farm	22.90	22	IAMs_20	IAMs_20	01 45 28.3	
	comp=Z,5μm,20.0s						
BKZ	Black Stump Fm	24.42	22	IAMs_20	IAMs_20	01 46 29.5	
	comp=Z,5μm,20.0s						
HIZ	Hauiti	24.80	19	IAMs_20	IAMs_20	01 46 46.3	
	comp=Z,4μm,22.0s						
URZ	Urewera	25.41	23	P	P	01 38 54.5	-5.7
	comp=Z,9.3nm,0.9s,baz=144,slow=19,SNR=5.3						
URZ				LR	LR	01 48 39.3	
	comp=Z,4μm,18.7s,baz=211,slow=36						
	comp=Z,9.3nm,0.9s						
URZ	Urewera	25.41	23	IAMs_20	IAMs_20	01 47 19.6	
	comp=Z,4μm,20.0s						
QSPA	South Pole Qui	27.55	180	P	P	01 39 19.8	+0.2
	comp=Z,13nm,1.0s,baz=20,slow=3.9,SNR=21						
QSPA				LR	LR	01 48 54.0	
	comp=Z,3μm,18.9s,baz=30,slow=33						
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	27.55	180	P	P	01 39 19.4	-0.2
QSPA				IAmb	IAmb	01 39 31.3	
	comp=Z,24nm,1.2s						
QSPA	South Pole Qui	27.55	180	IAMs_20	IAMs_20	01 49 18.4	
	comp=Z,5μm,18.0s						
STKA	Stephens Creek	34.14	323	P	P	01 40 12.2	-5.5
	comp=Z,4.4nm,0.8s,baz=149,slow=12,SNR=3.7						
STKA				LR	LR	01 51 41.9	
	comp=Z,1μm,19.4s,baz=155,slow=32						
	comp=Z,4.4nm,0.8s						
RAO	Raoul Island	35.11	27	LR	LR	01 53 49.6	
	comp=Z,622nm,18.7s,baz=146,slow=35						
RAO	Raoul Island	35.11	27	IAMs_20	IAMs_20	01 55 20.2	
	comp=Z,2μm,18.0s						
MAW	Mawson	38.64	217	LR	LR	01 57 03.2	
	comp=Z,4μm,18.8s,baz=125,slow=36						
MAW	Mawson	38.64	217	P	P	01 40 57.7	+2.0
PINNC	Pines Island,	39.94	4	P	P	01 41 08.8	+1.9
PINNC				IAmb	IAmb	01 41 08.8	
	comp=Z,22nm,1.2s						
DZM	Mont Dzumac	40.45	2	LR	LR	01 56 46.7	
	comp=Z,548nm,18.1s,baz=201,slow=35						
H01W1	Cape Leeuwin H	41.82	287	T	T	02 26 10.3	
	baz=146,slow=75,SNR=238						
H01W2	Cape Leeuwin H	41.83	287	T	T	02 26 14.3	
	baz=146,slow=75,SNR=299						
H01W3	Cape Leeuwin H	41.84	287	T	T	02 26 11.5	
	baz=146,slow=75,SNR=231						
ASAR	Alice Springs	44.14	317	P	P	01 41 35.9	-5.5
	comp=Z,3.7nm,0.9s,baz=160,slow=8.3,SNR=15						
ASAR				PcP	PP	01 43 22.1	-2.0
	comp=Z,0.6nm,0.8s,baz=152,slow=4.2,SNR=1.7						
ASAR				LR	LR	01 58 51.2	
	comp=Z,480nm,18.3s,baz=168,slow=35						
	comp=Z,3.7nm,0.9s						
ASAR	Alice Springs	44.14	317	P	P	01 41 37.2	-4.1
AS31	Alice Springs	44.14	317	P	P	01 41 41.2	-0.1
CTA	Charters Tower	44.34	334	LR	LR	01 57 20.1	
	comp=Z,1μm,19.6s,baz=161,slow=33						
CTAO	Charters Tower	44.34	334	P	P	01 41 45.4	+2.5
CTAO				IAmb	IAmb	01 41 49.6	
	comp=Z,21nm,1.4s						
CTAO	Charters Tower	44.34	334	IAMs_20	IAMs_20	01 55 20.6	
	comp=Z,2μm,21.0s						
TROLL	Troll, Antarti	45.19	188	P	P	01 41 49.0	-0.3
MSVF	Nonsavu	45.68	18	LR	LR	01 58 44.3	
	comp=Z,2μm,19.0s,baz=195,slow=33						
MSVF	Nonsavu	45.68	18	IAMs_20	IAMs_20	01 57 54.0	
	comp=Z,2μm,20.0s						
SNAA	Sanae	45.80	185	P	P	01 41 53.9	-0.2
SNAA	Sanae	45.80	185	LR	LR	02 00 19.3	
	comp=Z,3μm,20.1s,baz=184,slow=35						
SNAA	Sanae	45.80	185	P	P	01 41 54.0	-0.2
SNAA				IAmb	IAmb	01 41 56.2	
	comp=Z,11nm,0.9s						
VNA3	Neumayer Olymp	46.45	182	P	P	01 41 59.8	+0.7
VNA1	Neumayer--Stat	47.01	183	P	P	01 42 04.1	+0.6
WRA	Warramunga Arr	47.50	319	PcP	PcP	01 43 34.0	-4.0
	comp=Z,0.6nm,0.8s,baz=147,slow=3.4,SNR=2.4						
WB0	Warramunga Arr	47.65	320	P	P	01 42 11.6	+2.6
WB0				IAmb	IAmb	01 42 23.2	
	comp=Z,10nm,1.4s						
RAR	Rarotonga	47.77	47	LR	LR	01 56 49.0	
	comp=Z,860nm,21.4s,baz=199,slow=29						
PMSA	Palmer Station	47.91	154	LR	LR	01 59 00.8	
	comp=Z,804nm,20.4s,baz=222,slow=32						
PMSA	Palmer Station	47.91	154	P	P	01 42 09.1	-1.4
FITZ	Fitzroy Crossi	52.08	310	LR	LR	02 01 25.6	
	comp=Z,420nm,21.6s,baz=160,slow=32						
HNR	Honiara	53.13	354	LR	LR	02 01 07.6	
	comp=Z,804nm,21.8s,baz=152,slow=31						
PMG	Port Moresby	54.59	338	LR	LR	02 02 22.7	
	comp=Z,757nm,19.9s,baz=152,slow=32						
PMG	Port Moresby	54.59	338	IAMs_20	IAMs_20	02 02 01.2	
	comp=Z,1μm,18.0s						
PPT	Papeete	54.81	56	LR	LR	02 00 02.8	
	comp=Z,585nm,20.4s,baz=204,slow=29						
USHA	Ushuaia	55.75	146	LR	LR	02 01 01.4	
	comp=Z,855nm,20.8s,baz=201,slow=29						
BATI	Baumata	60.09	311	LR	LR	02 09 04.6	
	comp=Z,565nm,18.5s,baz=179,slow=36						
COYC	Coyhaique	63.02	139	IAMs_20	IAMs_20	02 04 40.2	
	comp=Z,1μm,20.0s						
RPN	Rapa Nui	64.34	100	LR	LR	02 04 32.4	
	comp=Z,620nm,21.0s,baz=206,slow=29						
KAPI	Kappang	66.29	309	LR	LR	02 12 30.2	
	comp=Z,266nm,19.4s,baz=149,slow=36						
SIJI	Sorong	66.49	323	P	P	01 44 17.6	-4.9
	baz=210,slow=20,SNR=6.8						
SIJI				LR	LR	02 13 46.1	
	comp=Z,480nm,18.8s,baz=126,slow=37						
PLCA	Paso Flores	67.88	137	P	P	01 44 31.5	+0.4
	comp=Z,2.0nm,1.0s,baz=201,slow=4.2,SNR=3.9						
	comp=Z,2.0nm,1.0s						
PLCA	Paso Flores	67.88	137	P	P	01 44 32.8	+1.7
PLCA				IAmb	IAmb	01 44 40.8	
	comp=Z,6.8nm,1.2s						
LEM	Lembang	69.34	297	LR	LR	02 10 12.3	
	comp=Z,176nm,21.5s,baz=158,slow=32						
H03S2	Juan Fernandez	71.25	128	T	T	03 03 24.7	
	baz=204						
H03S1	Juan Fernandez	71.25	128	T	T	03 03 25.9	
	baz=204						
H03S3	Juan Fernandez	71.27	128	T	T	03 03 25.4	
	baz=204						
BO01	Tunca	73.49	134	P	P	01 45 05.5	+0.3
BO01				IAmb	IAmb	01 45 15.9	
	comp=Z,12nm,1.1s						
DAV	Davao City (W)	75.69	319	LR	LR	02 18 34.6	
	comp=Z,137nm,18.2s,baz=132,slow=36						
GUMO	Guam	77.50	340	LR	LR	02 15 36.2	
	comp=Z,73nm,21.9s,baz=118,slow=33						
SUR	Sutherland	81.14	210	LR	LR	02 20 07.4	
	comp=Z,985nm,19.5s,baz=163,slow=34						
PSI	Prapat	81.67	293	LR	LR	02 16 22.7	
	comp=Z,222nm,21.3s,baz=148,slow=32						
BOSA	Boshof	83.63	215	LR	LR	02 19 55.7	
	comp=Z,480nm,21.8s,baz=164,slow=33						
H08S2	Diego Garcia H	84.43	264	T	T	03 19 53.5	
	baz=152,slow=76,SNR=36						
H08S1	Diego Carcia H	84.44	264	T	T	03 19 48.2	
	baz=152,slow=76,SNR=34						
H08S3	Diego Garcia H	84.45	264	T	T	03 19 55.0	
	baz=152,slow=76,SNR=46						
LVC	Limon Verde	85.05	131	LR	LR	02 16 20.2	
	comp=Z,475nm,20.2s,baz=203,slow=30						
CPUP	Villa Florida	85.22	143	P	P	01 46 09.6	+0.3
	comp=Z,2.3nm,1.0s,baz=197,slow=6.7,SNR=3.8						
CPUP				LR	LR	02 20 34.9	
	comp=Z,530nm,19.3s,baz=198,slow=33						
	comp=Z,2.3nm,1.0s						
LBTB	Lobatse	86.95	216	LR	LR	02 23 17.9	
	comp=Z,603nm,18.9s,baz=162,slow=34						
PB11	IPOC Station P	87.41	130	P	P	01 46 21.9	+1.5
PB16	IPOC Station P	88.78	129	P	P	01 46 27.5	+0.1
PB16				IAmb	IAmb	01 46 53.8	
	comp=Z,9.7nm,1.3s						
LPAZ	La Paz	91.16	130	P	P	01 46 37.0	-1.6
	comp=Z,2.0nm,0.9s,baz=219,slow=6.5,SNR=4.7						
LPAZ				LR	LR	02 19 20.1	
	comp=Z,284nm,20.3s,baz=194,slow=30						
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	91.16	130	P	P	01 46 36.5	-2.1
LPAZ				IAmb	IAmb	01 46 54.4	
	comp=Z,8.0nm,1.2s						
NNA	Nana	91.79	120	LR	LR	02 18 39.0	
	comp=Z,541nm,20.1s,baz=202,slow=29						
NNA	Nana	91.79	120	IAMs_20	IAMs_20	02 18 27.5	
	comp=Z,562nm,19.0s						
PALK	Pallekele	93.77	278	LR	LR	02 22 31.4	
	comp=Z,272nm,18.6s,baz=254,slow=32						
JOW	Kunigami	93.77	328	LR	LR	02 25 46.4	
	comp=Z,188nm,21.0s,baz=131,slow=34						

TSUM	Tsumeb	94.56	211	LR	LR	02 26 51.6	
	comp=Z,1µm,21.9s,baz=168,slow=34						
LSZ	Lusaka	95.41	222	LR	LR	02 28 27.0	
	comp=Z,208nm,19.9s,baz=162,slow=34						
ATAH	Atahualpa	95.55	117	LR	LR	02 20 12.1	
	comp=Z,475nm,21.8s,baz=221,slow=29						
CMAR	Chiang Mai Arr	95.75	299	LR	LR	02 28 00.4	
	comp=Z,165nm,18.8s,baz=160,slow=34						
JHJ	Hachijo jima 2	97.46	339	LR	LR	02 29 09.3	
	comp=Z,132nm,18.5s,baz=68,slow=34						
BDFB	Brasilia	97.88	148	LR	LR	02 30 37.4	
	comp=Z,313nm,18.0s,baz=154,slow=35						
H06S1	SOCORRO T	103.72	76	T	T	03 43 16.4	
	SNR=12						
SOCY	Socotra	110.39	257	IAMs_20	IAMs_20	02 29 11.7	
	comp=Z,365nm,20.0s						
TUC	Tucson	115.58	69	IAMs_20	IAMs_20	02 34 52.3	
	comp=Z,341nm,20.0s						
ORV	Oroville	117.40	57	IAMs_20	IAMs_20	02 31 14.8	
	comp=Z,381nm,20.0s						
NIL	Nilore	120.03	286	IAMs_20	IAMs_20	02 33 58.0	
	comp=Z,266nm,21.0s						
WVOR	Wild Horse Val	120.98	57	IAMs_20	IAMs_20	02 30 49.5	
	comp=Z,433nm,21.0s						
NATX	Nacogdoches	122.34	83	IAMs_20	IAMs_20	02 43 08.2	
	comp=Z,278nm,20.0s						
MFID	Camas Ranch	122.91	58	IAMs_20	IAMs_20	02 41 21.6	
	comp=Z,310nm,19.0s						
WMOK	Wichita Mounta	122.95	77	IAMs_20	IAMs_20	02 35 14.7	
	comp=Z,274nm,19.0s						
BMO	Blue Mountains	123.54	56	IAMs_20	IAMs_20	02 40 21.4	
	comp=Z,364nm,18.0s						
SEUS	St. Eustatius	124.12	121	IAMs_20	IAMs_20	02 42 42.2	
	comp=Z,331nm,18.0s						
PLID	Pearl Lake	124.24	57	IAMs_20	IAMs_20	02 37 08.9	
	comp=Z,436nm,20.0s						
PDAR	Pinedale Array	124.91	64	PKP	PKPdf	01 52 32.2	-0.1
	comp=Z,0.1nm,0.4s,baz=160,slow=2.9,SNR=2.0						
PDAR	Pinedale Array	124.91	64		PKPdf	01 52 31.7	-0.6
FLWY	Flagg Ranch	125.53	62	IAMs_20	IAMs_20	02 38 32.7	
	comp=Z,394nm,19.0s						
BOZ	Bozeman (W)	126.39	60	IAMs_20	IAMs_20	02 36 00.7	
	comp=Z,400nm,20.0s						
KSU1	Kansas State U	127.53	76	IAMs_20	IAMs_20	02 39 09.9	
	comp=Z,404nm,20.0s						
TORD	Torodi Ar. Bea	129.26	201	PKP	PKPdf	01 52 40.0	-1.1
	comp=Z,0.5nm,0.9s,baz=207,slow=2.9,SNR=2.7						
CAST	Castle Rocks	129.68	23	IAMs_20	IAMs_20	02 43 27.7	
	comp=Z,335nm,21.0s						
BARN	Barnard Glacie	129.75	30	IAMs_20	IAMs_20	02 40 11.3	
	comp=Z,373nm,21.0s						
J20K	Nowinta River	130.01	22	IAMs_20	IAMs_20	02 40 53.6	
	comp=Z,401nm,21.0s						
KTH	Kantishna Hill	130.02	24	IAMs_20	IAMs_20	02 37 46.8	
	comp=Z,417nm,21.0s						
BPAW	Bear Paw Mtn.	130.51	24	IAMs_20	IAMs_20	02 44 03.6	
	comp=Z,352nm,20.0s						
BWN	Browne	130.86	24	IAMs_20	IAMs_20	02 40 36.8	
	comp=Z,372nm,20.0s						
I21K	Tanana	131.31	23	IAMs_20	IAMs_20	02 44 29.9	
	comp=Z,302nm,20.0s						
NEA2	Nenana	131.32	24	IAMs_20	IAMs_20	02 42 13.0	
	comp=Z,321nm,20.0s						
RIDG	Independent Ri	131.41	27	IAMs_20	IAMs_20	02 38 46.8	
	comp=Z,315nm,22.0s						
H21K	Melozitna Rive	131.60	22	IAMs_20	IAMs_20	02 41 50.6	
	comp=Z,330nm,21.0s						
CCB	Clear Creek Bu	131.61	25	IAMs_20	IAMs_20	02 44 12.6	
	comp=Z,319nm,20.0s						
I23K	Minto, Yukon-K	131.76	24	IAMs_20	IAMs_20	02 44 31.7	
	comp=Z,360nm,20.0s						
ILAR	Eielson Array	131.90	25	PKP	PKPdf	01 52 43.5	-1.1
	comp=Z,0.6nm,1.0s,baz=207,slow=1.0,SNR=3.9						
ILAR	Eielson Array	131.90	25	PKPdf	PKPdf	01 52 44.7	+0.1
POKR	Poker Plat Res	132.10	25	IAMs_20	IAMs_20	02 41 24.7	
	comp=Z,274nm,20.0s						
H23K	Yukon River	132.34	23	IAMs_20	IAMs_20	02 48 32.8	
	comp=Z,380nm,20.0s						
H24K	Noodor Dome	132.66	24	IAMs_20	IAMs_20	02 43 24.4	
	comp=Z,281nm,20.0s						
TOLK	Toolik Lake Re	134.85	22	IAMs_20	IAMs_20	02 43 15.5	
	comp=Z,336nm,20.0s						
GHAJ	Ghor Haditha	135.25	250	IAMs_20	IAMs_20	02 59 47.1	
	comp=Z,362nm,20.0s						
GNI	Garni	138.43	266	IAMs_20	IAMs_20	02 46 04.2	
	comp=Z,258nm,22.0s						
YKA	Yellowknife Ar	138.49	44	PKhKP	PKPpre	01 52 51.0	
	comp=Z,0.5nm,0.7s,baz=214,slow=0.6,SNR=4.1						
YKA	Yellowknife Ar	138.49	44		PKPpre	01 52 48.6	
CSS	Mathiatis	139.34	250	IAMs_20	IAMs_20	03 03 08.4	
	comp=Z,234nm,20.0s						
ISP	Isparta	142.97	250	IAMs_20	IAMs_20	03 04 09.0	
	comp=Z,270nm,19.0s						
BRTR	Keskin Array B	143.16	255	PKP	PKPdf	01 53 05.2	-1.0
	comp=Z,0.5nm,0.9s,baz=122,slow=2.7,SNR=3.0						
BRTR	Keskin Array B	143.16	255		PKPdf	01 53 06.5	+0.2
MLR	Muntele Rosu	151.18	253	IAMs_20	IAMs_20	03 08 57.9	
	comp=Z,263nm,21.0s						
VSL	Villasalto	152.63	224	IAMs_20	IAMs_20	02 59 34.7	
	comp=Z,292nm,21.0s						
OBN	Obninsk	152.97	278	IAMs_20	IAMs_20	03 08 14.6	
	comp=Z,203nm,22.0s						
ALE	Alert	156.87	14	IAMs_20	IAMs_20	03 19 42.5	
	comp=Z,259nm,19.0s						

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*IDC **09** 01:41:37.6±0.8, 8°.17N×125°.92E, h0^{km}, mb4.1/10, mbtmp4.1/10, MS3.5/11, Error ellipse: s-maj=30.5km s-min=10.4km az=89.0*

*DJA **09** 01:41:39.7±0.5, 8°N±4°×12°6E±°, h10^{km}, M4.7/8, mB5.4/2, mb4.6/8, MLv4.8/5, Mw(mB)4.8/2*

*MAN **09** 01:41:40.5, 8°.07N×125°.20E, h4^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

MAN INTENSITY II - VALENCIA CITY AND MALAYBALAY BUKIDNON.

*NEIC **09** 01:41:44.6±1.7, 8°.01N±0°.04×125°.6E±0°.1, h39^{km}±8^{km}, mb4.5/31, Error ellipse: s-maj=18.5km s-min=3.4km az=76.0*

ISC 09 01:41:40.4±1.1**, 7°.98N**±0°.03×**125°.29E**±0°.03**, h10**^{km}±7^{km}**, n87,** σ1^{s}.**42**/88**, mb4.4**/25**, MS3.4**/9**, 3C-12D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.25	245	⇓eP	Pg	01 41 46.1	+0.6
BUKP				eS	Sg	01 42 18.7	+30
DAV	Davao City (W)	0.95	162	Pg	Pn	01 42 00.6	+0.7
	213nm,0.3s,baz=12,slow=6.8,SNR=25						
DAV				Lg	Lg	01 42 14.9	
	297nm,0.3s,baz=356,slow=19,SNR=4.7						
DAV	Davao City (W)	0.95	162		Pn	01 42 01.5	+1.6
KCP	Kidapawan	0.99	191	⇑iP	Pg	01 41 58.9	-0.6
KCP				i S	Sg	01 42 10.2	-2.1
BUTP	Butuan	1.03	19	⇓eP	Pg	01 41 59.7	-0.7
BIPH	Bislig	1.08	79	⇓eP	Pb	01 41 59.7	-1.5
BIPH				eS	Sn	01 42 16.2	-0.5
CTBH	Cotabato--PC H	1.28	234	⇑iP	Pn	01 42 03.9	-0.5
CTBH				i S	Sg	01 42 22.8	+1.1
MATI	Mati	1.41	137	⇓eP	Pg	01 42 08.1	+0.6
MATI				eS	Sg	01 42 53.5	+28
SCPH	Surigao	1.80	6	⇓eP	Pn	01 42 09.8	-1.7
PAGZ	Pagadian	1.89	266	⇓eP	Pb	01 42 14.6	-0.5
PAGZ				eS	Sg	01 42 41.6	+0.2
DDMP	Don Marcelino,	1.91	167	⇓eP	Pb	01 42 14.3	-1.1
DDMP				eS	Sg	01 42 44.5	+2.5
GSPH	General Santos	1.91	190	⇓eP	Pb	01 42 16.3	+0.8
GSPH				eS	Sg	01 43 03.6	+22
GLSP	General Luna,	1.97	25	⇓eP	Pn	01 42 13.7	-0.2
GLSP				eS	Sn	01 42 39.5	+0.8
MSLP	Maasin	2.18	349	⇓eP	Pn	01 42 15.0	-1.8
MSLP				eS	Sg	01 42 53.8	+3.2
TBP	Tagbilaran	2.21	320	eP	Pn	01 42 16.0	-1.1
TBP				i S	Sn	01 42 45.8	+1.2
SNPH	Sibulan	2.44	304	eP	Pn	01 42 19.9	-0.4
SNPH				eS	Sg	01 42 59.3	+0.5
LLP	Lapu-Lapu	2.66	331	⇑iP	Pn	01 42 23.7	+0.3
LLP				i S	Sb	01 43 01.0	+0.1
ZCP	Zamboanga City	3.35	252	⇓iP	Pb	01 42 36.6	-3.4
ZCP				i S	Sb	01 43 19.6	-1.3
RCP	Roxas	4.35	325	⇓eP	Pn	01 42 47.4	+0.7
MYLDM	Lahad Datu	7.30	248	Pn	Pn	01 43 33.3	+6.1
TNTI	Ternate	7.46	164	P	Pn	01 43 27.5	-1.9
	0.2nm2µm44nm,0.8s						
GTOI	Gorontalo	7.64	197	P	Pn	01 43 31.1	-0.8
	0.1nm18nm,0.7s						
LUWI	Luwuk	9.31	196	Pn	Pn	01 43 57.9	+3.1
BNSI	Bone	13.34	203	P	P	01 44 58.4	-1.3
	25nm,1.1s						
KAPI	Kappang	14.04	203	LR	LR	01 50 40.1	
	comp=Z,120nm,21.4s,baz=75,slow=38						
KAPI	Kappang	14.04	203	Pn	Pn	01 45 01.9	+2.3
SBUM	Sibu	14.12	248	Pn	P	01 45 06.3	-2.1
BKSI	Bulukumba	14.19	201	P	P	01 45 09.1	0.0
	9.9nm,1.3s						
PLAI	Plampang	18.30	204	P	P	01 45 57.2	+2.5
	25nm,1.7s						
JOW	Kunigami	18.96	8	LR	LR	01 55 07.9	
	comp=Z,42nm,18.2s,baz=140,slow=43						
MTN	Manton Dam	21.49	164	P	P	01 46 31.4	+1.9
MTN				IAmb	IAmb	01 46 37.2	
	comp=Z,25nm,1.4s						
KNRA	Kununurra	23.76	172	P	P	01 46 52.6	-0.5
KNRA				IAmb	IAmb	01 47 17.3	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	25.92	179	P	P	01 47 12.7	-0.2
	comp=Z,4.0nm,0.6s,baz=8.0,slow=7.6,SNR=9.1						
	comp=Z,4.0nm,0.6s						
FITZ	Fitzroy Crossi	25.92	179	P	P	01 47 12.5	-0.5
FITZ				IAmb	IAmb	01 47 17.7	
	comp=Z,16nm,1.4s						
JTU	Tsushima	26.68	8	P	P	01 47 19.5	-0.3
CMAR	Chiang Mai Arr	27.64	295	P	P	01 47 30.4	+1.9
	comp=Z,0.5nm,0.3s,baz=105,slow=6.9,SNR=1.5						
	comp=Z,0.5nm,0.3s						
JHJ	Hachijo jima 2	28.39	26	LR	LR	01 59 00.8	
	comp=Z,43nm,19.6s,baz=82,slow=37						
WB0	Warramunga Arr	29.00	162	P	P	01 47 38.7	-1.9
WRA	Warramunga Arr	29.14	162	P	P	01 47 40.2	-1.7
	comp=Z,1.6nm,0.8s,baz=339,slow=9.4,SNR=7.6						
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	29.14	162	P	P	01 47 40.5	-1.5
WB2	Warramunga Arr	29.15	162	P	P	01 47 40.3	-1.6
WR0	Warramunga Arr	29.22	162	P	P	01 47 42.6	0.0
WR0				IAmb	IAmb	01 48 03.5	
	comp=Z,12nm,1.4s						
KSRS	Korea Array	29.44	4	LR	LR	01 58 55.7	
	comp=Z,52nm,21.9s,baz=180,slow=36						
PSA00	Pilbara Seismi	29.85	190	P	P	01 47 50.7	+2.5
PSA00				IAmb	IAmb	01 47 52.4	
	comp=Z,14nm,1.4s						
MJAR	Matsushiro Arr	30.77	21	LR	LR	02 00 48.4	
	comp=Z,35nm,19.1s,baz=178,slow=38						
ASAR	Alice Springs	32.56	165	P	P	01 48 10.9	-1.1
	comp=Z,1.5nm,0.5s,baz=344,slow=7.0,SNR=14						
	comp=Z,1.5nm,0.5s						
ASAJ	Asahikawa	39.03	20	LR	LR	02 03 43.0	
	comp=Z,36nm,21.9s,baz=140,slow=34						
BBOO	Buckleboo	41.84	166	P	P	01 49 30.5	-0.2
STKA	Stephens Creek	42.59	159	P	P	01 49 35.4	-1.5
	comp=Z,4.4nm,0.9s,baz=339,slow=11,SNR=1.6						
	comp=Z,4.4nm,0.9s						
STKA	Stephens Creek	42.59	159	P	P	01 49 35.3	-1.5
SONM	Songino Array	42.84	341	P	P	01 49 37.7	-1.1
	comp=Z,0.6nm,0.5s,baz=158,slow=9.2,SNR=5.7						
SONM				LR	LR	02 07 19.0	
	comp=Z,57nm,21.8s,baz=130,slow=36						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	42.84	341	P	P	01 49 38.7	-0.1
MK31	Makanchi Array	53.28	324	P	P	01 51 00.4	+0.9
MK31				IAmb	IAmb	01 51 02.5	
	comp=Z,3.3nm,1.1s						
MKAR	Makanchi Array	53.28	324	P	P	01 50 59.4	-0.1
	comp=Z,2.1nm,0.7s,baz=131,slow=8.3,SNR=19						
MKAR				LR	LR	02 15 04.9	
	comp=Z,40nm,19.0s,baz=134,slow=38						
	comp=Z,2.1nm,0.7s						
MKAR	Makanchi Array	53.28	324	P	P	01 51 00.6	+1.1
MAKZ	Makanchi	53.47	324	P	P	01 51 02.5	+1.6
MAKZ				IAmb	IAmb	01 51 04.5	
	comp=Z,3.3nm,1.1s						
NIL	Nilore	54.24	306	P	P	01 51 08.8	+1.9
KDJ	Kajisay	54.26	317	P	P	01 51 09.3	+2.3
KDJ				IAmb	IAmb	01 51 10.8	
	comp=Z,6.2nm,0.8s						
ULHL	Ulahol	54.94	317	P	P	01 51 13.8	+1.8
	SNR=8.8						
BOOM	Boomskoye usch	55.24	317	P	P	01 51 14.6	+0.4
TKM2	Tokmak 2	55.65	317	P	P	01 51 18.6	+1.5
	SNR=7.1						
UCH	Uchtor	56.11	316	P	P	01 51 22.8	+2.1
	SNR=8.4						
ZAA0	Zalesovo Array	56.17	332	P	P	01 51 20.1	-0.2
ZALV	Zalesovo Beam	56.17	332	P	P	01 51 20.1	-0.2
	comp=Z,1.8nm,0.7s,baz=122,slow=6.2,SNR=7.1						
	comp=Z,1.8nm,0.7s						
AAK	Ala-Archa	56.28	317	P	P	01 51 23.1	+1.5
AAK				IAmb	IAmb	01 51 25.8	
	comp=Z,4.9nm,1.1s						
USP	Ospenovka	56.52	317	P	P	01 51 25.0	+1.9
	SNR=5.6						
AML	Almayashu	56.64	316	P	P	01 51 26.7	+2.3
	SNR=9.1						
EKS2	Erkin-Say	56.78	316	P	P	01 51 26.9	+1.8
	SNR=6.6						
KURK	Kurchatov	57.41	327	P	P	01 51 29.5	+0.3
KURK				IAmb	IAmb	01 51 35.4	
	comp=Z,5.7nm,0.9s						
BTK	Batken	57.98	313	P	P	01 51 34.1	+0.5
BTK				IAmb	IAmb	01 51 37.9	
	comp=Z,5.7nm,1.0s						
GAR	Garm	58.03	311	P	P	01 51 34.7	+0.7
CHGR	Chuyangaron	58.80	311	P	P	01 51 39.5	+0.2
KK31	Karatay Array	59.18	316	P	P	01 51 42.2	+0.4
KKAR	Karatay Array	59.18	316	P	P	01 51 41.4	-0.4
KKAR				IAmb	IAmb	01 51 45.0	
	comp=Z,12nm,1.4s						
BRVK	Borovoye	63.07	326	P	P	01 52 07.8	-0.2
BRVK				IAmb	IAmb	01 52 14.9	
	comp=Z,6.3nm,0.9s						
NRIK	Noril'sk	65.98	346	P	P	01 52 25.8	-0.9
	comp=Z,1.1nm,0.3s,baz=130,slow=6.9,SNR=1.3						
	comp=Z,1.1nm,0.3s						
ABKAR	Akbulak array	67.98	320	P	P	01 52 39.4	-0.4
ARU	Arti	70.60	327	P	P	01 52 57.9	+2.1
ARU				IAmb	IAmb	01 53 10.7	
	comp=Z,5.4nm,1.2s						
RAYN	Ar Rayn	77.53	292	P	P	01 53 37.9	+0.8
RAYN				IAmb	IAmb	01 53 39.7	
	comp=Z,3.0nm,0.8s						
BPAW	Bear Paw Mtn.	80.12	26	P	P	01 53 50.5	0.0
BPAW				IAmb	IAmb	01 54 12.7	
	comp=Z,3.5nm,1.1s						
MAW	Mawson	87.23	200	LR	LR	02 30 36.4	
	comp=Z,55nm,20.5s,baz=243,slow=34						
FINES	FINESS Array B	87.43	332	P	P	01 54 29.3	+1.4
	comp=Z,0.9nm,0.8s,baz=94,slow=4.6,SNR=2.2						
	comp=Z,0.9nm,0.8s						
KMBO	Kilima Mbogo	88.21	269	LR	LR	02 31 17.0	
	comp=Z,139nm,20.9s,baz=152,slow=34						
MBAR	Mbarara	94.59	270	LR	LR	02 33 22.5	
	comp=Z,172nm,22.0s,baz=147,slow=33						
TORD	Torodi Ar. Bea	120.17	290	PKP	PKPdf	02 00 32.2	-0.5
	comp=Z,0.6nm,0.9s,baz=34,slow=3.6,SNR=2.8						
PLCA	Paso Flores	144.47	159	PKP	PKPab	02 01 14.4	-1.4
	comp=Z,1.4nm,0.9s,baz=276,slow=0.3,SNR=4.0						
PLCA	Paso Flores	144.47	159		PKPab	02 01 14.6	-1.2

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*GII **09** 01:47:32.9±0.8, 33°.60N×35°.60E, h1^{km}±1^{km}, Mm1.2/4*

*GRAL **09** 01:47:33.1±0.3, 33°.64N×35°.58E, h15^{km}±2^{km}, MD2.6*

ISC 09 01:47:32.1±1.5**, 33°.67N**±0°.05×**35°.7E**±0°.1**, h14**^{km}±10^{km}**, n10,** σ**0^{s}.35**/16**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.11	290	eP	Pb	01 47 36.0	-0.2
DQRL				eS	Sg	01 47 38.0	+0.1
QRWL	Qaraoun	0.12	187	eP	Pb	01 47 36.5	+0.2
BHL	Bhannes	0.24	351	eP	Pb	01 47 38.4	+0.1
SHBL	Chebaa	0.32	173	eP	Pb	01 47 39.4	-0.3
SHBL				eS	Sb	01 47 44.1	-0.7
NATI	Neve Ativ	0.41	176	Pg	Pb	01 47 40.8	-0.2
NATI				Sg	Sb	01 47 47.3	+0.2
GEM	Giv'at Ha'Em	0.46	184	Pg	Pb	01 47 41.7	-0.2
GEM				Sg	Sg	01 47 47.8	+0.4
MMC7	Mount Meron ar	0.69	202	Pg	Pg	01 47 45.2	-0.5
MMA0B	Mount Meron ar	0.70	201	Pg	Pg	01 47 45.6	-0.1
MMA0B				Sg	Sb	01 47 56.0	+0.5
MMLI	Mount Malkishu	1.25	191	Pg	Pg	01 47 56.2	0.0
HMDT	Nahal Hemdat	1.42	186	Pn	Pb	01 47 58.5	+0.2
HMDT				Sn	Sg	01 48 18.1	+0.3

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*IDC **09** 01:57:59.3±0.6, 52°.61N×132°.16W, h0^{km}, mb4.3/24, mbtmp4.2/34, ML3.7/10, MS3.7/13, Error ellipse: s-maj=12.6km s-min=6.3km az=56.0*

*PGC **09** 01:58:00.9±0.1, 52°.66N×132°.08W, h23^{km}, ML4.4/25, Mw4.3, 67km Ssw of Sandspit, Bc Haida Gwaii Region*

*AEIC **09** 01:58:00±3.2, 52°.64N±0°.03×132°.17W±0°.06, h15^{km}±1^{km}, Error ellipse: s-maj=5.8km s-min=4.1km az=130.0*

*NEIC **09** 01:58:01.9±2.7, 52°.65N±0°.04×132°.10W±0°.05, h10^{km}±1^{km}, mb4.2/172, ML4.4/20, ML4.7/14(AEIC), ML4.4(OTT), Error ellipse: s-maj=6.3km s-min=5.5km az=206.0*

ISC 09 01:58:01.3±0.8**, 52°.64N**±0°.03×**132°.15W**±0°.03**, h13**^{km}±4^{km}**, n649,** σ**1^{s}.55**/666**, mb4.4**/78**, MS4.1**/8**, 14C-4D, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	Barry Inlet	0.25	104		Pg	01 58 06.4	-0.2
BNB					Sg	01 58 10.4	+0.2
BNB	Barry Inlet	0.25	104	P	Pg	01 58 06.4	-0.2
BNB				S	Sg	01 58 10.5	+0.2
HG1B	Mitchell Dam	0.30	2		Pg	01 58 07.1	-0.3
HG1B					Sg	01 58 11.2	-0.4
HG1B	Mitchell Dam	0.30	2	P	Pg	01 58 07.1	-0.3
HG1B				S	Sg	01 58 11.2	-0.4
MOBC	Moresby Island	0.52	12		Pg	01 58 11.0	-0.6
MOBC					Sg	01 58 17.4	-1.1
MOBC	Moresby Island	0.52	12		Pg	01 58 10.9	-0.6
MOBC					Sg	01 58 18.1	-0.4
MOBC				IAML		01 58 18.5	
	comp=N,26µm,0.2s						
MOBC				IAML		01 58 19.0	
	comp=E,31µm,0.5s						
MOBC	Moresby Island	0.52	12	P	Pg	01 58 11.0	-0.6
MOBC				S	Sg	01 58 17.4	-1.1
DIB	Dawson Inlet,	0.60	341	Pg	Pg	01 58 12.2	-0.8
DIB				Sg	Sg	01 58 20.2	-0.8
DIB	Dawson Inlet,	0.60	341	P	Pg	01 58 12.1	-0.8
DIB				S	Sg	01 58 20.1	-0.9
H02S1	DAWSON INLET T	0.60	341	Pg	Pg	01 58 12.1	-0.9
H02S1				Lg	Lg	01 58 20.4	
HG4B	Hotspring	0.68	120		Pg	01 58 13.2	-1.2
HG4B				Sg	Sg	01 58 22.7	-0.7
HG4B				IAML		01 58 25.6	
	comp=E,29µm,0.3s						
HG4B	Hotspring	0.68	120		Pg	01 58 13.2	-1.2
HG4B					Sg	01 58 22.3	-1.1
HG4B	Hotspring	0.68	120	P	Pg	01 58 13.2	-1.2
HG4B				S	Sg	01 58 22.3	-1.1
BNAB	Bonilla	1.25	46		Pn	01 58 22.2	-2.3
BNAB					Sb	01 58 39.0	-1.7
BNAB	Bonilla	1.25	46		Pn	01 58 23.1	-1.4
BNAB					Sb	01 58 39.2	-1.6
BNAB	Bonilla	1.25	46	P	Pn	01 58 22.2	-2.3
BNAB				S	Sb	01 58 39.0	-1.7
MASB	Masset	1.38	3		Pn	01 58 24.0	-2.3
MASB	Masset	1.38	3		Pn	01 58 25.4	-0.9
MASB	Masset	1.38	3	P	Pn	01 58 24.0	-2.3
NDB	Naden	1.40	340	P	Pn	01 58 25.1	-1.5
NDB				S	Sn	01 58 42.6	-2.4
BNKB	Banks Island	1.53	62		Pn	01 58 25.6	-2.7
BNKB					Sn	01 58 44.2	-3.8
BNKB	Banks Island	1.53	62	P	Pn	01 58 25.6	-2.7
BNKB				S	Sn	01 58 44.2	-3.8
LIB	Langara Island	1.71	342	Pn	Pn	01 58 28.6	-2.2
GRNB	Grenville Isla	1.79	47	Pn	Pn	01 58 29.8	-2.2
GRNB	Grenville Isla	1.79	47	Pn	Pn	01 58 29.7	-2.2
GRNB					Sn	01 58 54.6	+0.1
GRNB	Grenville Isla	1.79	47	Pn	Pn	01 58 29.7	-2.2
GRNB				Sg	Sn	01 58 54.6	+0.1
RUBB	Prince Rupert	2.04	33		Pn	01 58 33.2	-2.0
RUBB					Sn	01 59 01.7	+1.2
RUBB				IAML		01 59 03.8	
	comp=E,4µm,0.7s						
RUBB	Prince Rupert	2.04	33	Pn	Pn	01 58 33.5	-1.8
RUBB					Sn	01 59 02.0	+1.5
RUBB	Prince Rupert	2.04	33	Pn	Pn	01 58 33.5	-1.8
RUBB				Sg	Sn	01 59 02.0	+1.5
HWKB	Hawksbury Isla	2.04	61	Pn	Pn	01 58 33.2	-2.2
HWKB				Sn	Sn	01 58 57.1	-3.8
HWKB	Hawksbury Isla	2.04	61	Pn	Pn	01 58 33.2	-2.2
HWKB				Sn	Sn	01 58 57.1	-3.8
BUTB	Butedale	2.27	78	Pn	Pn	01 58 36.5	-2.2
BUTB				Sn	Sn	01 59 03.3	-3.3
BUTB	Butedale	2.27	78	Pn	Pn	01 58 36.5	-2.2
BUTB				Sn	Sn	01 59 03.3	-3.3
BBB	Bella Bella	2.51	99	Pn	Pn	01 58 39.4	-2.4
	comp=E,17nm,0.3s,baz=279,slow=7.4,SNR=137						
BBB				Sn	Sn	01 59 08.9	-3.3
	comp=E,147nm,0.3s,baz=195,slow=20,SNR=21						
BBB				Lg	Lg	01 59 16.0	
	comp=E,701nm,0.3s,baz=27,slow=18,SNR=11						
BBB				LR	LR	01 59 40.8	
	comp=E,856nm,18.1s,baz=330,slow=40						
	comp=E,136nm,0.3s						
BBB	Bella Bella	2.51	99		Pn	01 58 39.7	-2.1
BBB				IAML		01 59 23.7	
	comp=E,2µm,1.0s						
BBB	Bella Bella	2.51	99	Pn	Pn	01 58 39.4	-2.4
BBB				Sn	Sn	01 59 08.3	-4.0
BBB				Sg	Sb	01 59 16.1	-0.9
MBLB	Minette Bay Lo	2.54	55	Pn	Pn	01 58 40.4	-1.7
MBLB					Sn	01 59 12.2	-0.6
MBLB	Minette Bay Lo	2.54	55	Pn	Pn	01 58 40.4	-1.7
MBLB				Sg	Sn	01 59 12.2	-0.6
KITB	Kitimat	2.55	54	Pn	Pn	01 58 40.4	-1.9
KITB				Sn	Sn	01 59 11.1	-2.1
KITB	Kitimat	2.55	54	Pn	Pn	01 58 40.4	-1.9
KITB				Sn	Sn	01 59 11.1	-2.1
CRAG	Craig	2.90	349	Pn	Pn	01 58 45.2	-1.8
CRAG				IAML		01 59 41.8	
	comp=E,1µm,0.9s						
CRAG	Craig	2.90	349	P	Pn	01 58 45.4	-1.6
	baz=167,SNR=8.8						
CRAG				S	Sn	01 59 19.9	-1.8
	baz=167						
HOLB	Holberg	3.20	127	Pn	Pn	01 58 48.3	-3.1
HOLB				Sn	Sn	01 59 25.6	-3.7
HOLB	Holberg	3.20	127	Pn	Pn	01 58 48.3	-3.1
HOLB				Sn	Sn	01 59 25.6	-3.7
PHC	Port Hardy	3.52	122	Pn	Pn	01 58 52.6	-3.0
PHC				Sn	Sn	01 59 31.9	-5.1
PACB	Port Alice, BC	3.65	125	Pn	Pn	01 58 55.1	-2.3
PACB	Port Alice, BC	3.65	125	Pn	Pn	01 58 55.1	-2.3
BPBC	Brooks Peninsu	3.70	130	Pn	Pn	01 58 56.6	-1.5
WRAK	Wrangell Islan	3.79	358		Pn	01 58 59.0	-0.4
WRAK				IAML		01 59 46.8	
	comp=E,938nm,0.6s						
WRAK	Wrangell Islan	3.79	358	P	Pn	01 58 59.1	-0.3
	baz=178,SNR=30						
WRAK				S	Sn	01 59 43.1	-0.7
	baz=178						
MAYB	Maynard	3.83	124	Pn	Pn	01 58 57.2	-2.8
MAYB	Maynard	3.83	124	Pn	Pn	01 58 57.2	-2.8
EDB	Eliza Dome	4.20	129	Pn	Pn	01 59 03.9	-1.1
WOSB	Woss	4.28	123	Pn	Pn	01 59 04.4	-1.9
WOSB	Woss	4.28	123	Pn	Pn	01 59 04.4	-1.9
NCRB	Newcastle Ridg	4.41	118	Pn	Pn	01 59 06.9	-1.1
NCRB	Newcastle Ridg	4.41	118	Pn	Pn	01 59 06.9	-1.1
GDR	Gold River	4.79	124	Pn	Pn	01 59 12.8	-0.3
SIT	Sitka	4.79	339	Pn	Pn	01 59 12.2	-1.0
SIT				IAML		02 00 40.9	
	comp=N,321nm,1.1s						
SIT	Sitka	4.79	339	P	Pn	01 59 12.6	-0.5
	baz=156						
SIT				S	Sn	02 00 06.4	-2.1
	baz=156						
UBRB	Upper Baezaeko	4.91	84	Pn	Pn	01 59 14.8	0.0
UBRB				Sn	Sn	02 00 10.8	-0.6
UBRB				Sg	Sb	02 00 30.7	+4.7
UBRB	Upper Baezaeko	4.91	84	Pn	Pn	01 59 14.8	0.0
UBRB				Sn	Sn	02 00 10.8	-0.6
UBRB				Sg	Sb	02 00 30.7	+4.7
SPLB	Strathcona Par	4.92	121	Sn	Sn	02 00 11.6	0.0
SPLB	Strathcona Par	4.92	121	Sn	Sn	02 00 11.6	0.0
CBB	Campbell River	4.99	119	Pn	Pn	01 59 15.4	-0.4
CBB				IAML		02 00 44.7	
	comp=E,222nm,0.9s						
CBB				IAML		02 00 44.7	
	comp=N,234nm,0.9s						
CBB	Campbell River	4.99	119	Pn	Pn	01 59 15.4	-0.4

CBB				Sn	Sn	02 00 10.5	-2.8
FSB	Fort Saint Jam	5.01	65	Pn	Pn	01 59 15.1	-1.1
FSJB	Fort St James	5.03	66	Pn	Pn	01 59 15.1	-1.2
FSJB				Sn	Sn	02 00 10.9	-3.4
FSJB				Sg	Sb	02 00 35.2	+5.8
FSJB	Fort St James	5.03	66	Pn	Pn	01 59 15.1	-1.2
FSJB				Sn	Sn	02 00 10.9	-3.4
FSJB				Sg	Sb	02 00 35.2	+5.8
BTB	Buttle Lake	5.25	125	Pn	Pn	01 59 19.8	+0.3
OZB	Mount Ozzard	5.60	128	Pn	Pn	01 59 25.4	+1.1
OZB	Mount Ozzard	5.60	128	Pn	Pn	01 59 25.3	+1.1
TXB	Texada	5.67	118	Pn	Pn	01 59 24.7	-0.6
JIS	Juneau Island	5.79	348	Pn	Pn	01 59 26.2	-0.6
DLBC	Dease Lake	5.94	11	Pn	Pn	01 59 29.8	+0.9
	comp=N,4.9nm,0.3s,baz=205,slow=10,SNR=52						
DLBC				Sn	Sn	02 00 37.4	+0.6
	comp=N,4.9nm,0.3s,baz=254,slow=21,SNR=2.2						
DLBC				Lg	Lg	02 01 00.3	
	comp=N,5.3nm,0.3s,baz=115,slow=18,SNR=5.3						
	comp=N,19nm,0.5s						
DLBC	Dease Lake	5.94	11	Pn	Pn	01 59 29.5	+0.6
DLBC	Dease Lake	5.94	11	Pn	Pn	01 59 30.1	+1.2
DLBC				Sg	Sb	02 01 02.7	+7.2
MGB	Mount Grey	5.96	125	Pn	Pn	01 59 29.9	+0.5
SHB	Sechelt	6.03	117	Pn	Pn	01 59 30.2	-0.1
BESE	Bessie Mountai	6.15	347	Pn	Pn	01 59 31.9	+0.1
BESE	Bessie Mountai	6.15	347	Pn	Pn	01 59 30.4	-1.4
NLLB	Nanaimo Lost L	6.18	120	Pn	Pn	01 59 32.8	+0.5
NLLB	Nanaimo Lost L	6.18	120	Pn	Pn	01 59 32.8	+0.5
B926	Mesachie Lake	6.36	124	Pn	Pn	01 59 37.0	+2.3
B926	Mesachie Lake	6.36	124	Pn	Pn	01 59 37.0	+2.3
CLRS	Cowichan Lake	6.36	124	Pn	Pn	01 59 36.5	+1.8
CLRS	Cowichan Lake	6.36	124	Pn	Pn	01 59 36.9	+2.2
CLRS	Cowichan Lake	6.36	124	Pn	Pn	01 59 36.9	+2.2
PFB	Port Renfrew	6.37	127	Pn	Pn	01 59 36.1	+1.2
LLLB	Lillooet	6.71	104	Pn	Pn	01 59 40.2	+0.7
LLLB	Lillooet	6.71	104	Pn	Pn	01 59 40.9	+1.4
LLLB	Lillooet	6.71	104	Pn	Pn	01 59 40.9	+1.4
C03A	Quillayute Air	6.75	131	Pn	Pn	01 59 43.3	+3.2
BMBC	Bull Mountain	6.78	56	Pn	Pn	01 59 40.8	+0.3
BMBC	Bull Mountain	6.78	56	Pn	Pn	01 59 40.8	+0.3
B010	North Saanich	6.82	122	Pn	Pn	01 59 43.8	+2.8
B010	North Saanich	6.82	122	Pn	Pn	01 59 43.8	+2.8
PGC	Sidney	6.82	122	Pn	Pn	01 59 42.1	+1.2
PGC	Sidney	6.82	122	Pn	Pn	01 59 43.2	+2.3
B009	North Saanich	6.82	122	Pn	Pn	01 59 44.4	+3.5
B009	North Saanich	6.82	122	Pn	Pn	01 59 44.4	+3.5
B011	North Saanich	6.82	122	Pn	Pn	01 59 45.2	+4.2
B011	North Saanich	6.82	122	Pn	Pn	01 59 45.2	+4.2
HNBB	Haney	6.91	115	Pn	Pn	01 59 44.4	+2.1
HNBB	Haney	6.91	115	Pn	Pn	01 59 44.4	+2.1
SKAG	Skagway	7.07	347	Pn	Pn	01 59 45.4	+1.1
SKAG	Skagway	7.07	347	P	Pn	01 59 44.4	+0.1
	baz=164						
MCW	Mount Constitu	7.12	120	Pn	Pn	01 59 47.5	+2.3
A04D	Lummi Island	7.17	119	P	Pn	01 59 46.2	+0.5
	baz=307						
B04A	Port Angeles	7.18	126	Pn	Pn	01 59 48.1	+2.1
NBC5	NorthernBC 5	7.31	44	Pn	Pn	01 59 48.0	+0.2
NBC5	NorthernBC 5	7.31	44	Pn	Pn	01 59 48.0	+0.2
VDB	Vedder Mountai	7.32	116	Pn	Pn	01 59 49.2	+1.4
NLWA	Neilton Lookou	7.48	131	Pn	Pn	01 59 51.7	+1.6
MBW	Mount Baker	7.56	117	Pn	Pn	01 59 53.1	+1.8
CMW	Cultus Mountai	7.66	119	Pn	Pn	01 59 54.5	+1.9
WISH	Wishkah	7.73	132	Pn	Pn	01 59 54.8	+1.3
D03D	Eldon	7.75	128	P	Pn	01 59 55.5	+1.8
	baz=315						
B05A	Bryant	7.76	120	P	Pn	01 59 55.1	+1.2
	baz=308						
BLBC	Blue River	7.93	89	Pn	Pn	01 59 57.9	+1.4
BLBC	Blue River	7.93	89	Pn	Pn	01 59 57.9	+1.4
FNBB	Fort Nelson	8.11	36	Pn	Pn	01 59 58.4	-0.2
FNBB	Fort Nelson	8.11	36	Pn	Pn	01 59 58.4	-0.2
PNL	Peninsula	8.12	333	P	Pn	01 59 59.4	+0.6
	baz=147						
BDMTA	Bald Mountain	8.15	69	Pn	Pn	01 59 58.6	-0.6
D04E	Lakebay	8.15	128	P	Pn	02 00 00.9	+1.7
	baz=316						
WHY	Whitehorse	8.18	351	Pn	Pn	02 00 00.4	+0.7
WHY	Whitehorse	8.18	351	Pn	Pn	01 59 59.9	+0.2
WHY	Whitehorse	8.18	351	P	Pn	02 00 00.1	+0.3
	baz=168,SNR=23						
WHY				S	Sn	02 01 30.8	-1.2
	baz=168						
E03A	Lebam	8.26	134	Pn	Pn	02 00 03.0	+2.4
NBC1	NorthernBC 1	8.43	30	Pn	Pn	02 00 04.5	+1.5
NBC1	NorthernBC 1	8.43	30	Pn	Pn	02 00 04.5	+1.5
BCPM	Bancas Point	8.43	333	Pn	Pn	02 00 04.3	+1.4
MNB	Mounoet Dainar	8.43	88	Pn	Pn	02 00 04.8	+1.5
YUK7	Dusty Glacier	8.57	340	Pn	Pn	02 00 07.6	+2.5
YUK7	Dusty Glacier	8.57	340	Pn	Pn	02 00 07.6	+2.5
E04D	Cinebar	8.70	131	Pn	Pn	02 00 09.0	+2.2
E04D	Cinebar	8.70	131	P	Pn	02 00 07.1	+0.3
	baz=318						
HYT	Haines Junctio	8.72	342	Pn	Pn	02 00 07.3	+0.2
HYT	Haines Junctio	8.72	342	Pn	Pn	02 00 09.2	+2.1
HYT	Haines Junctio	8.72	342	P	Pn	02 00 07.2	+0.2
	baz=158						
PINM	Pinnacle	8.72	332	P	Pn	02 00 07.0	0.0
	baz=145						
PINM				S	Sn	02 01 43.4	-1.7
	baz=145						
PCA	Pinnacle	8.72	332	Pn	Pn	02 00 07.4	+0.3
PCA	Pinnacle	8.72	332	Pn	Pn	02 00 07.6	+0.5
SLEB	Sale Mountain	8.79	94	Pn	Pn	02 00 09.5	+1.3
SLEB	Sale Mountain	8.79	94	Pn	Pn	02 00 09.5	+1.3
FMW	Mount Fremont	8.86	126	Pn	Pn	02 00 11.9	+2.8
F04D	Rainier, OR	8.86	134	P	Pn	02 00 10.0	+1.0
	baz=322						
BRLDA	Berland Lookou	8.94	75	Pn	Pn	02 00 12.1	+2.0
YUK6	Outpost Mounta	8.99	340	Pn	Pn	02 00 15.3	+4.4
YUK6	Outpost Mounta	8.99	340	Pn	Pn	02 00 15.3	+4.4
YUK6	Outpost Mounta	8.99	340	P	Pn	02 00 10.9	0.0
	baz=155						
N31M	Braeburn, Yuko	9.09	349	Pn	Pn	02 00 12.6	+0.5
N31M	Braeburn, Yuko	9.09	349	Pn	Pn	02 00 13.7	+1.6
N31M	Braeburn, Yuko	9.09	349	P	Pn	02 00 11.7	-0.4
	baz=166						
LTY	Liberty	9.15	122		Pn	02 00 14.3	+1.3
LTY	Liberty	9.15	122	Pn	Pn	02 00 15.5	+2.5
TGTN	Hyland Airport	9.16	12	Pn	Pn	02 00 14.5	+1.5
TGTN	Hyland Airport	9.16	12	P	Pn	02 00 12.5	-0.5
	baz=195						
B08A	Colville Reser	9.22	113	Pn	Pn	02 00 14.2	+0.2
B08A	Colville Reser	9.22	113	Pn	Pn	02 00 16.1	+2.1
F04A	Amboy	9.24	133	Pn	Pn	02 00 16.1	+2.0
TABL	Table Mountain	9.26	331	Pn	Pn	02 00 15.4	+0.9
TABL	Table Mountain	9.26	331	Pn	Pn	02 00 18.6	+4.1
YUK4	Talbot Arm	9.42	341	Pn	Pn	02 00 23.9	+7.2
YUK4	Talbot Arm	9.42	341	Pn	Pn	02 00 23.9	+7.2
YUK4	Talbot Arm	9.42	341	P	Pn	02 00 17.5	+0.8
	baz=155						
G03D	McMinnville, O	9.45	138	Pn	Pn	02 00 20.4	+3.3
G03D	McMinnville, O	9.45	138	P	Pn	02 00 18.0	+0.9
	baz=325						
YUK8	Steele Glacier	9.61	337	Pn	Pn	02 00 22.5	+3.1
FARO	Faro, Yukon	9.64	357	Pn	Pn	02 00 21.4	+1.8
M31M	Drury Creek, Y	9.67	354	Pn	Pn	02 00 20.9	+0.9
M31M	Drury Creek, Y	9.67	354	Pn	Pn	02 00 21.5	+1.5
M31M	Drury Creek, Y	9.67	354	P	Pn	02 00 18.8	-1.2
	baz=172,SNR=32						
ISLE	Juniper Island	9.75	329	Pn	Pn	02 00 21.7	+0.5
WAX	Waxell Ridge	9.80	327	Pn	Pn	02 00 23.0	+1.2
BARN	Barnard Glacie	9.91	332		Pn	02 00 24.8	+1.4
COR	Corvallis	9.95	141	Pn	Pn	02 00 25.4	+1.5
KAIM	Kayak Island	9.98	322	P	Pn	02 00 25.1	+0.9
	baz=131						
MMPY	Sheldon Lake,	10.02	2	Pn	Pn	02 00 26.8	+1.9
MMPY	Sheldon Lake,	10.02	2	P	Pn	02 00 23.6	-1.3
	baz=183,SNR=17						
E07A	Sunnyside	10.03	122	Pn	Pn	02 00 25.6	+0.6
BERG	Berg Lake	10.04	325	Pn	Pn	02 00 27.0	+1.8
HOOD	Mount Hood Mea	10.05	133	Pn	Pn	02 00 25.2	-0.2
D08A	Wollman Farm,	10.20	118	Pn	Pn	02 00 29.2	+1.9
YUK3	Moose Creek	10.20	337	P	Pn	02 00 27.9	+0.5
	baz=150						
HMT	Hamilton	10.20	324	Pn	Pn	02 00 28.7	+1.4
H04D	Lebanon	10.23	139	Pn	Pn	02 00 31.2	+3.5
H04D	Lebanon	10.23	139	P	Pn	02 00 30.1	+2.4
	baz=326						
M30M	Minto, Yukon	10.27	348		Pn	02 00 29.0	+0.7
M30M	Minto, Yukon	10.27	348	Pn	Pn	02 00 28.6	+0.3
M30M	Minto, Yukon	10.27	348	P	Pn	02 00 27.8	-0.4
	baz=164						
YUK2	White River	10.30	336	Pn	Pn	02 00 32.5	+3.8
YUK2	White River	10.30	336	Pn	Pn	02 00 32.5	+3.8
H04A	Detroit Lake	10.32	136	Pn	Pn	02 00 32.1	+3.1
RAGM	Ragged Mountai	10.39	323	Pn	Pn	02 00 31.6	+1.8
BUCK	Buck Mountain	10.40	141	Pn	Pn	02 00 33.6	+3.5
NEW	Newport	10.53	109	Pn	Pn	02 00 33.0	+1.1
	comp=N,0.2nm,0.3s,baz=333,slow=9.3,SNR=3.8						
NEW				Lg	Lg	02 03 30.1	
	comp=N,0.2nm,0.3s,baz=40,slow=19,SNR=7.6						
NEW				LR	LR	02 04 31.0	
	comp=N,355nm,20.3s,baz=324,slow=37						
	comp=N,2.5nm,0.8s						
NEW	Newport	10.53	109	Pn	Pn	02 00 34.2	+2.4
NEW	Newport	10.53	109	P	Pn	02 00 33.0	+1.1
	baz=300						
VRDI	Verde Repeater	10.58	329		Pn	02 00 34.2	+1.6
BMRM	Bremner River	10.77	326	Pn	Pn	02 00 34.5	-0.5
BMRM	Bremner River	10.77	326	P	Pn	02 00 35.2	+0.1
	baz=135						
GLB	Gilahina Butte	10.86	329	Pn	Pn	02 00 37.2	+0.9
EYAK	Cordova Ski Ar	10.89	322	P	Pn	02 00 37.8	+1.1
	baz=130						
I04A	Tendick Farm,	10.97	140	P	Pn	02 00 40.2	+2.3
	baz=328						
M27K	Edge Creek, AK	11.05	336		Pn	02 00 40.7	+1.7
M27K	Edge Creek, AK	11.05	336	P	Pn	02 00 39.6	+0.7
	baz=147						
PRDA	Priddis	11.21	92	Pn	Pn	02 00 42.8	+1.6
PRDA	Priddis	11.21	92	Pn	Pn	02 00 42.8	+1.6
N25K	Chitina, Valde	11.23	328		Pn	02 00 42.7	+1.3
N25K	Chitina, Valde	11.23	328	P	Pn	02 00 41.1	-0.3
	baz=137						
M26K	Nabesna, AK	11.37	334	P	Pn	02 00 43.3	0.0
	baz=144						
KLU	Klutina	11.59	325	Pn	Pn	02 00 46.4	+0.1
KLU	Klutina	11.59	325	P	Pn	02 00 47.3	+1.0
	baz=134						
GLI	Glacier Island	11.61	321	P	Pn	02 00 47.0	+0.5
	baz=128						
L27K	Beaver Creek,	11.64	338	P	Pn	02 00 47.6	+0.7
	baz=149						
HUMO	Hull Mountain	11.79	145	Pn	Pn	02 00 51.9	+2.8
F10A	Beach Ranch, E	11.79	119		Pn	02 00 50.6	+1.5
J05D	Fort Rock, OR	11.86	138	P	Pn	02 00 53.3	+3.1
	baz=326						
L26K	Log Cabin Wild	11.98	335	P	Pn	02 00 52.4	+0.8
	baz=145						
I07A	Izee	11.98	131	Pn	Pn	02 00 54.4	+2.5
HARP	HAARP	12.00	330	P	Pn	02 00 52.6	+0.8
	baz=138						
DAWY	Dawson	12.06	345		Pn	02 00 54.3	+1.5
DAWY	Dawson	12.06	345	Pn	Pn	02 00 57.4	+4.7
DAWY	Dawson	12.06	345	P	Pn	02 00 53.5	+0.8
	baz=158						
WALA	Waterton Lakes	12.06	100	Pn	Pn	02 00 53.9	+0.9
BSMT	Bassoo Peak	12.09	106	Pn	Pn	02 00 58.1	+4.7
BSMT	Bassoo Peak	12.09	106	Pn	Pn	02 00 58.1	+4.7
SCM	Sheep Creek Mo	12.32	324		Pn	02 00 57.9	+1.6
SCM	Sheep Creek Mo	12.32	324	P	Pn	02 00 57.1	+0.9
	baz=131						
L04D	Klamath Falls	12.36	144	P	Pn	02 00 59.9	+2.9
	baz=331						
M23K	Glacier View	12.43	324	P	Pn	02 00 58.6	+0.8
	baz=130						
JTMT	Jette	12.44	106	Pn	Pn	02 01 00.4	+2.4
KNK	Knik Glacier	12.46	321	P	Pn	02 00 59.0	+0.8
	baz=127						
PAX	Paxson	12.53	331	P	Pn	02 01 00.3	+1.2
	baz=140						
K27K	Chicken	12.54	340	P	Pn	02 00 59.6	+0.4
	baz=151						
BRLK	Bradley Lake	12.61	312	Pn	Pn	02 00 59.0	-1.2
YBH	Yreka Blue Hor	12.64	146	LR	LR	02 05 07.9	
	comp=N,233nm,18.2s,baz=310,slow=34						
SML	Sawmill	12.66	323	Pn	Pn	02 01 02.4	+1.4
SML	Sawmill	12.66	323	P	Pn	02 01 01.7	+0.8
	baz=129						
CNPM	China Poot	12.66	311	Pn	Pn	02 01 00.8	-0.2
KDAK	Kodiak Island	12.73	302	Pn	Pn	02 01 00.4	-1.4
	comp=N,0.2nm,0.3s,baz=76,slow=19,SNR=2.6						
	comp=N,9.7nm,0.9s						
KDAK	Kodiak Island	12.73	302		Pn	02 01 00.6	-1.3
PMR	Palmer	12.83	321	Pn	Pn	02 01 04.5	+1.4
PMR	Palmer	12.83	321	P	Pn	02 01 02.3	-0.9
	baz=126						
SCRK	Sand Creek	12.93	336	Pn	Pn	02 01 05.8	+1.2
SCRK	Sand Creek	12.93	336	P	Pn	02 01 05.3	+0.6
	baz=146						
RIDG	Independent Ri	12.96	334	Pn	Pn	02 01 06.3	+1.3
RIDG	Independent Ri	12.96	334	P	Pn	02 01 03.4	-1.5
	baz=143						
WAT6	Susitna Watana	12.96	326	P	Pn	02 01 04.2	-0.9
	baz=133						
J08A	Circle Bar Ran	13.02	130	Pn	Pn	02 01 08.3	+2.4
EGAK	Eagle	13.02	343		Pn	02 01 07.7	+1.9
EGAK	Eagle	13.02	343	P	Pn	02 01 05.7	-0.1
	baz=155,SNR=6.5						
MSO	Missoula	13.12	109		Pn	02 01 10.0	+2.7
MSO	Missoula	13.12	109	P	Pn	02 01 06.6	-0.7
	baz=303,SNR=6.1						
I29M	Ogilvie Camp,	13.14	349		Pn	02 01 09.4	+2.0
I29M	Ogilvie Camp,	13.14	349	Pn	Pn	02 01 10.8	+3.3
I29M	Ogilvie Camp,	13.14	349	P	Pn	02 01 08.6	+1.2
	baz=163						
DHY	Denali Highway	13.19	328	P	Pn	02 01 08.3	0.0
	baz=135						
J26L	Joseph Creek	13.27	338	P	Pn	02 01 10.4	+1.1
	baz=148						
O20K	Slope Mountain	13.54	311	P	Pn	02 01 13.9	+1.0
	baz=114						
OVMT	Ovando	13.54	107	Pn	Pn	02 01 16.4	+3.3
OVMT	Ovando	13.54	107	Pn	Pn	02 01 16.4	+3.3
YKA	Yellowknife Ar	13.59	37	Pn	Pn	02 01 11.1	-2.4
	comp=N,0.6nm,0.3s,baz=224,slow=12,SNR=40						
YKA				Lg	Lg	02 05 03.2	
	comp=N,0.1nm,0.3s,baz=222,slow=28,SNR=4.6						
YKA				LR	LR	02 06 07.7	
	comp=N,52nm,21.4s,baz=300,slow=36						
	comp=N,8.6nm,0.9s						
YKA	Yellowknife Ar	13.59	37	Pn	Pn	02 01 11.8	-1.7
CUT	Chulitna	13.75	322	Pn	Pn	02 01 16.9	+1.3
CUT	Chulitna	13.75	322	P	Pn	02 01 17.0	+1.3
	baz=127						
J25K	Salcha River,	13.80	336	Pn	Pn	02 01 18.3	+1.9
J25K	Salcha River,	13.80	336	P	Pn	02 01 16.8	+0.4
	baz=144						
SPCR	Spurr Chakacha	13.86	316	P	Pn	02 01 18.7	+1.4
	baz=119						
RND	Reindeer	13.90	327		Pn	02 01 19.4	+1.6
HDA	Harding Lake	14.06	333	P	Pn	02 01 20.9	+1.0
	baz=140						
CHIR	Chirikof Islan	14.07	292	P	P	02 01 28.1	+0.2
IL31		14.32	334	P	P	02 01 29.5	-1.1
ILAR	Eielson Array	14.32	334	Pn	Pn	02 01 25.2	+1.7
	comp=N,0.1nm,0.3s,baz=155,slow=13,SNR=6.3						
ILAR				Lg	Lg	02 05 28.2	
	baz=120,slow=27,SNR=4.0						
ILAR				LR	LR	02 06 49.2	
	comp=N,316nm,19.9s,baz=172,slow=37						
	comp=N,0.4nm,0.8s						
ILAR	Eielson Array	14.32	334	P	P	02 01 31.0	+0.4
O19K	Port Alsworth	14.36	311	P	P	02 01 31.9	+0.8
O19K	Port Alsworth	14.36	311	P	Pn	02 01 25.4	+1.3
	baz=112						
HRY	Holter Researc	14.41	106	Pn	Pn	02 01 27.4	+2.5
WRH	Wood River Hil	14.43	331	P	P	02 01 32.7	+0.9
CCB	Clear Creek Bu	14.48	332	P	P	02 01 33.2	+0.9
LRM	Limekiln Ridge	14.54	110	Pn	Pn	02 01 28.0	+1.2
M20K	Styx River	14.58	318	P	Pn	02 01 26.8	-0.4
	baz=120,SNR=7.6						
COLA	College	14.66	333	P	P	02 01 35.9	+1.5
TCOL	CIGO, UAF Yank	14.67	333	P	P	02 01 35.5	+1.0
N19K	Bonanza Creek	14.68	313	Pn	Pn	02 01 30.7	+2.2
DLMT	Dillon	14.72	112	Pn	Pn	02 01 30.4	+1.1
POKR	Poker Plat Res	14.74	334	Pn	Pn	02 01 31.4	+2.2
PPLA	Purkeypile	14.76	322	P	P	02 01 37.9	+2.3
PPLA	Purkeypile	14.76	322	P	Pn	02 01 29.2	-0.4
	baz=125,SNR=6.8						
NEA2	Nenana	14.81	331	P	Pn	02 01 28.7	-1.4
	baz=136,SNR=10						
MDM	Murphy Dome	14.83	333		Pn	02 01 31.9	+1.4
HLID	Hailey	14.89	121		Pn	02 01 33.2	+1.6
HLID	Hailey	14.89	121	P	Pn	02 01 33.9	+2.3
	baz=314						
MCMT	McKenzie Canyo	14.91	114		Pn	02 01 33.2	+1.3
BCYI	Bear Canyon	14.93	116	Pn	Pn	02 01 34.0	+1.9
ORV	Oroville	15.00	147		Pn	02 01 35.5	+2.6
EGMT	Eagleton	15.01	99		Pn	02 01 33.7	+0.7
EGMT	Eagleton	15.01	99	P	Pn	02 01 31.8	-1.2
	baz=296,SNR=5.3						
CAST	Castle Rocks	15.03	324	Pn	Pn	02 01 33.8	+0.7
CAST				IAmb	IAmb	02 01 41.1	
	comp=Z,24nm,1.0s						
CAST	Castle Rocks	15.03	324	P	Pn	02 01 32.7	-0.4
	baz=127,SNR=19						
BPAW	Bear Paw Mtn.	15.07	327	IAmb	IAmb	02 01 41.5	
	comp=Z,14nm,0.8s						
BPAW	Bear Paw Mtn.	15.07	327	P	Pn	02 01 34.2	+0.5
	baz=131,SNR=9.7						
M19K	Big River Lodg	15.11	317	P	Pn	02 01 33.9	-0.4
	baz=118						
BOZ	Bozeman (W)	15.14	110		Pn	02 01 36.0	+1.2
BOZ				IAmb	IAmb	02 01 47.2	
	comp=Z,8.2nm,1.3s						
BOZ	Bozeman (W)	15.14	110	P	Pn	02 01 34.5	-0.3
	baz=305,SNR=6.3						
L20K	Farewell, AK	15.19	319	P	Pn	02 01 34.3	-1.0
	baz=120,SNR=13						
N18K	Kilae Creek	15.26	311	Pn	Pn	02 01 35.8	-0.5
N18K				IAmb	IAmb	02 01 43.8	
	comp=Z,16nm,0.9s						
N18K	Kilae Creek	15.26	311	P	Pn	02 01 35.6	-0.7
	baz=111						
SVW2	Sparrevohn	15.28	313	IAmb	IAmb	02 01 43.9	
	comp=Z,24nm,1.0s						
I23K	Minto, Yukon-K	15.30	332	IAmb	IAmb	02 01 46.0	
	comp=Z,4.9nm,0.8s						
I23K	Minto, Yukon-K	15.30	332	P	Pn	02 01 36.7	+0.1
	baz=137						
CHUM	Lake Minchumin	15.39	325	P	Pn	02 01 37.8	-0.1
	baz=128,SNR=16						
H24K	Noodor Dome	15.42	335	P	P	02 01 44.0	+1.1
H24K				IAmb	IAmb	02 01 47.4	
	comp=Z,10nm,1.1s						
H24K	Noodor Dome	15.42	335	P	Pn	02 01 37.1	-1.2
	baz=141,SNR=11						
L19K	White Mountain	15.44	317	Pn	Pn	02 01 39.5	+0.9
L19K	White Mountain	15.44	317	P	Pn	02 01 38.4	-0.1
	baz=118,SNR=15						
K20K	Telida	15.72	322	P	Pn	02 01 42.4	+0.1
	baz=123,SNR=28						
INK	Inuvik	15.74	358	Pn	Pn	02 01 41.6	-0.7
	baz=170,slow=8.4,SNR=6.9						
INK				Sn	Sn	02 04 31.8	-4.5
	baz=112,slow=22,SNR=1.2						
INK				Lg	Lg	02 06 10.1	
	baz=98,slow=19,SNR=1.1						
	comp=Z,2.1nm,0.6s						
INK	Inuvik	15.74	358		Pn	02 01 42.0	-0.3
INK				IAmb	IAmb	02 01 58.4	
	comp=Z,13nm,1.4s						
INK	Inuvik	15.74	358	Pn	Pn	02 01 41.7	-0.7
INK	Inuvik	15.74	358	P	Pn	02 01 41.4	-1.0
	baz=177						
YHL	Hebgen Lake	15.83	111	Pn	Pn	02 01 45.5	+1.5
YHL				IAmb	IAmb	02 02 04.8	
	comp=Z,23nm,1.2s						
H23K	Yukon River	15.85	333	P	P	02 01 49.4	+1.8
H23K	Yukon River	15.85	333	P	Pn	02 01 43.4	-0.5
	baz=138						
BMN	Battle Mountai	15.91	134	P	P	02 01 51.1	+2.5
BMAR	Burnt Mountain	16.03	342		Pn	02 01 46.2	0.0
YHH	Holmes Hill	16.06	111		Pn	02 01 47.2	+0.2
YMR	Madison River	16.07	111	Pn	Pn	02 01 47.9	+0.9
YMR				IAmb	IAmb	02 02 06.0	
	comp=Z,16nm,1.0s						
I21K	Tanana	16.11	329	P	Pn	02 01 48.7	+1.5
I21K				IAmb	IAmb	02 01 53.9	
	comp=Z,35nm,1.0s						
I21K	Tanana	16.11	329	P	Pn	02 01 47.7	+0.5
	baz=132,SNR=15						
GCMT	Greycliff	16.17	106	P	Pn	02 01 49.3	+1.1
YNR	Norris Junctio	16.20	111	Pn	Pn	02 01 49.1	+0.4
J20K	Nowinta River	16.21	324	IAmb	IAmb	02 02 05.1	
	comp=Z,21nm,0.9s						
J20K	Nowinta River	16.21	324	P	Pn	02 01 48.1	-0.4
	baz=125,SNR=8.0						
TTA	Tatalina	16.26	319		P	02 01 53.8	+1.5
TTA				IAmb	IAmb	02 01 55.5	
	comp=Z,29nm,0.8s						
TTA	Tatalina	16.26	319	P	Pn	02 01 48.1	-1.1
	baz=118,SNR=23						
LKWY	Lake	16.45	111		P	02 01 53.7	-0.9
LKWY				IAmb	IAmb	02 02 13.6	
	comp=Z,13nm,0.9s						
H17A	Grant Village	16.45	111	Pn	Pn	02 01 53.3	+1.3
H17A	Grant Village	16.45	111	P	Pn	02 01 53.1	+1.2
	baz=308						
ELK	Elko	16.56	129	Pn	P	02 01 55.9	-0.1
	baz=324,slow=10.0,SNR=6.7						
ELK				LR	LR	02 08 25.8	
	comp=Z,254nm,19.5s,baz=298,slow=38						
	comp=Z,1.7nm,0.9s						
ELK	Elko	16.56	129	P	P	02 01 56.5	+0.5
FLWY	Flagg Ranch	16.58	113	P	Pn	02 01 54.6	+1.1
FLWY				IAmb	IAmb	02 02 12.9	
	comp=Z,11nm,0.9s						
H21K	Melozitna Rive	16.69	329		Pn	02 01 54.8	+0.2
H21K				IAmb	IAmb	02 02 00.9	
	comp=Z,11nm,0.8s						
H21K	Melozitna Rive	16.69	329	P	Pn	02 01 54.4	-0.2
	baz=131,SNR=14						
KVN	Kaiserville	16.70	139	P	P	02 01 57.9	+0.5
CMB	Columbia Colle	16.75	146		P	02 01 57.4	-0.4
MOOW	Moose Ponds	16.76	114	Pn	Pn	02 01 56.5	+0.6
RLMT	Red Lodge	16.77	107	P	Pn	02 01 56.3	+0.3
	baz=305						
TPAW	Teton Pass	16.81	115		Pn	02 01 57.5	+0.9
TPAW				IAmb	IAmb	02 02 03.4	
	comp=Z,9.6nm,0.8s						
LOHW	Long Hollow	16.93	114	P	P	02 01 59.9	0.0
SNOW	Snow King Moun	16.94	114	Pn	Pn	02 01 59.1	+1.0
REDW	Red Top Meadow	16.95	115	Pn	Pn	02 01 59.3	+1.0
REDW				IAmb	IAmb	02 02 26.8	
	comp=Z,18nm,1.4s						
COLD	Coldfoot	17.09	336		Pn	02 01 59.4	-0.1
COLD	Coldfoot	17.09	336	Pn	P	02 02 01.9	+0.6
COLD	Coldfoot	17.09	336	P	P	02 02 01.8	+0.6
	baz=140						
NVAR	Mina Array Bea	17.16	140	Pn	P	02 02 03.2	+0.7
	baz=306,slow=11,SNR=3.4						
	comp=Z,0.9nm,0.8s						
C36M	Paulatuk	17.19	10		P	02 02 03.3	+1.0
C36M	Paulatuk	17.19	10		Pn	02 02 00.8	0.0
C36M				IAmb	IAmb	02 02 22.1	
	comp=Z,9.0nm,1.1s						
C36M	Paulatuk	17.19	10	Pn	P	02 02 03.3	+1.0
C36M	Paulatuk	17.19	10	P	Pn	02 02 01.4	+0.6
	baz=197						
IMAR	Indian Mountai	17.20	329		P	02 02 01.9	-0.5
AHID	Auburn Hatcher	17.21	117		P	02 02 03.0	0.0
AHID				IAmb	IAmb	02 02 24.7	
	comp=Z,12nm,0.9s						
NV11	Mina Array Sit	17.21	140	P	P	02 02 03.4	+0.3
LHV	Little Huntoon	17.23	141		P	02 02 03.0	0.0
KUKN	Kugluktuk,NWT	17.32	22	Pn	Pn	02 02 00.7	-1.7
KUKN	Kugluktuk,NWT	17.32	22	Pn	Pn	02 02 00.7	-1.7
BGU	Big Grassy Mou	17.50	124	P	P	02 02 06.2	0.0
GCSA	Galena City Sc	17.52	323	P	P	02 02 06.9	+0.9
	baz=122						
MDPB	Devils Postpil	17.57	144		P	02 02 07.3	+0.3
OMMB	Old Mammoth Mi	17.61	143	P	P	02 02 09.8	+2.2
LAO	LASA Array	17.75	99		Pn	02 02 08.3	+0.3
HWUT	Hardware Ranch	17.76	120	P	P	02 02 09.6	+0.5
BBGB	Big Mountain B	17.86	150	P	P	02 02 10.2	+0.1
BBGB				IAmb	IAmb	02 02 31.0	
	comp=Z,21nm,1.2s						
TPH	Tonopah	17.89	139	P	P	02 02 10.8	+0.2
TPH				IAmb	IAmb	02 02 25.5	
	comp=Z,15nm,1.0s						
BW06	Boulder Array	18.06	114	P	P	02 02 13.0	+0.6
BW06	Boulder Array	18.06	114	P	Pn	02 02 11.8	-0.2
	baz=311						
PD31	Pinedale Array	18.06	114	P	P	02 02 13.8	+1.4
PDAR	Pinedale Array	18.06	114	Pn	P	02 02 15.1	+2.6
	comp=Z,0.2nm,0.3s,baz=301,slow=7.3,SNR=17						
PDAR				LR	LR	02 09 13.7	
	comp=Z,72nm,20.2s,baz=317,slow=37						
	comp=Z,1.4nm,0.7s						

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PDAR  Pinedale Array    18.06 114  P      P      02 02 13.6 +1.2
TOLK  Toolik Lake Re    18.06 339  P      P      02 02 12.8 +0.8
TOLK  Toolik Lake Re    18.06 339  P      Pn     02 02 10.0 -1.7
      baz=144
DUG   Dugway, Tooele    18.16 126  P      P      02 02 15.1 +1.6
DUG   Dugway, Tooele    18.16 126  P      P      02 02 14.4 +0.9
      baz=320
DGMT  Dagmar            18.19  92         P      02 02 14.6 +1.0
DGMT                               IAmb   IAmb   02 02 32.0
      comp=Z,21nm,0.9s
PMPB  Monarch Peak      18.27 150         P      02 02 16.6 +2.0
PMPB                               IAmb   IAmb   02 02 32.8
      comp=Z,17nm,1.2s
R11A  Troy Canyon, C    18.34 135  P      P      02 02 15.9 +0.4
R11A  Troy Canyon, C    18.34 135  P      P      02 02 16.7 +1.2
      baz=327
LCH   Last Change Ra    18.45 141  P      Pn     02 02 18.4 +1.7
JLU   Jordanelle        18.55 122  P      Pn     02 02 18.5 +0.4
NLU   North Lily Min    18.71 125  P      P      02 02 19.9 +0.3
S11A  Rachel            18.87 136  P      Pn     02 02 22.2 +0.4
S11A                               IAmb   IAmb   02 02 38.4
      comp=Z,14nm,1.3s
PAGB  Antelope Grade    18.89 149  P      Pn     02 02 22.4 +0.4
PSUT  Pine Spring       18.97 131  P      Pn     02 02 23.4 +0.3
CWC   Cottonwood Cre    18.99 143  P      Pn     02 02 24.7 +1.4
      baz=333
TPNV  Topopah Spring    19.25 138  P      Pn     02 02 27.0 +0.5
TPNV                               IAmb   IAmb   02 02 30.1
      comp=Z,9.9nm,0.9s
TPNV  Topopah Spring    19.25 138  P      P      02 02 26.1 +0.6
      baz=330,SNR=10
PRN   Pahroc Range      19.36 135  P      Pn     02 02 28.8 +1.0
FURC  Furnace Creek,    19.43 140  P      Pn     02 02 29.1 +0.8
      baz=331
ISA   Isabella, Lake    19.54 145  P      Pn     02 02 31.2 +1.3
ISA                                IAmb   IAmb   02 02 34.8
      comp=Z,9.7nm,1.1s
ISA   Isabella, Lake    19.54 145  P      Pn     02 02 30.8 +1.0
      baz=335
MPMC  Manual Prospec    19.55 142  P      Pn     02 02 30.0  0.0
      baz=333
RDMU  Red Mountain      19.56 119  P      P      02 02 29.8 +0.9
TMUT  Trail Mountain    19.65 124  P      Pn     02 02 32.6 +1.3
A36M  Sachs Harbour     19.66   6         Pn     02 02 30.7 -0.1
A36M  Sachs Harbour     19.66   6  P      P      02 02 29.9 +0.5
A36M                               IAmb   IAmb   02 02 37.6
      comp=Z,17nm,0.8s
A36M  Sachs Harbour     19.66   6  Pn     Pn     02 02 30.7 -0.1
A36M  Sachs Harbour     19.66   6  P      P      02 02 27.8 -1.6
      baz=192,SNR=7.3
GWY   Greenwater Val    19.75 140  P      P      02 02 31.8 +0.9
P17A  Butcher Ranch,    19.75 123  P      Pn     02 02 32.4 -0.1
MSU   Marysvale         19.78 128  P      Pn     02 02 32.9 +0.1
PKM   Mcpherson Peak    19.80 149  P      Pn     02 02 36.3 +3.2
      baz=338
K22A  Casper            19.85 110  P      P      02 02 32.5 +0.5
K22A                               IAmb   IAmb   02 02 58.4
      comp=Z,13nm,1.1s
K22A  Casper            19.85 110  P      P      02 02 32.0  0.0
      baz=309
QSM   Queen of Sheba    19.86 141  P      Pn     02 02 34.3 +0.7
QSM                                IAmb   IAmb   02 02 36.1
      comp=Z,11nm,1.1s
Q16A  Castle Valley     19.96 125  P      Pn     02 02 35.6 +0.7
LRMC  Laurel Mtn Rad    19.99 143  P      Pn     02 02 35.4 +0.2
      baz=334
CCUT  Cedar City        19.99 132  P      Pn     02 02 34.9 -0.5
CCUT                               IAmb   IAmb   02 02 37.0
      comp=Z,9.0nm,1.1s
RWWY  Rawlins           20.08 113  P      P      02 02 34.5 -0.1
RWWY                               IAmb   IAmb   02 02 58.1
      comp=Z,10nm,1.1s
SHPR  Sheep Range       20.08 137  P      Pn     02 02 36.3 -0.1
SZCU  Shurtz Canyon     20.08 131  P      Pn     02 02 36.0 -0.4
SZCU                               IAmb   IAmb   02 02 37.8
      comp=Z,9.2nm,1.0s
SRU   San Rafael Swe    20.14 124  P      Pn     02 02 37.6 +0.6
SRU                                IAmb   IAmb   02 02 42.4
      comp=Z,12nm,1.1s
MTPU  Mount Pierson     20.15 128  P      P      02 02 36.4 +0.9
SHOC  Shoshone, Teco    20.15 140  P      Pn     02 02 37.3 +0.3
      baz=331
RSSD  Black Hills       20.42 103  P      Pn     02 02 40.3  0.0
RSSD                               IAmb   IAmb   02 02 44.6
      comp=Z,6.8nm,0.8s
RSSD  Black Hills       20.42 103  P      Pn     02 02 40.7 +0.4
      baz=305
GSC   Goldstone, Bar    20.47 142  P      Pn     02 02 41.3 +0.4
GSC                                IAmb   IAmb   02 02 45.6
      comp=Z,9.7nm,1.1s
GSC   Goldstone, Bar    20.47 142  P      P      02 02 38.6 -0.1
      baz=333
LCMT  Little Creek M    20.49 132  IAmb   IAmb   02 02 42.4
      comp=Z,12nm,1.1s
PKCU  Pink Cliffs       20.57 130  P      Pn     02 02 41.4 -0.8
PKCU                               IAmb   IAmb   02 02 43.6
      comp=Z,13nm,1.2s
O20A  White River Ci    20.58 118  IAmb   IAmb   02 02 46.1
      comp=Z,21nm,0.9s
O20A  White River Ci    20.58 118  P      P      02 02 38.8 -1.2
      baz=316,SNR=8.0
ANM   Nome              20.73 318  P      Pn     02 02 42.8 -0.8
ANM   Nome              20.73 318  P      P      02 02 40.9 -0.3
      baz=109
BFSC  Mount Baldy Ra    21.11 145  P      P      02 02 44.9 -0.8
      baz=335
MDND  Maddock           21.25  90  P      P      02 02 47.6 +0.8
N23A  Red Feather La    21.32 113  P      P      02 02 49.0 +0.9
N23A                               IAmb   IAmb   02 02 53.3
      comp=Z,12nm,1.1s
N23A  Red Feather La    21.32 113  P      P      02 02 48.6 +0.6
      baz=312
PHWY  Pilot Hill        21.32 111  P      P      02 02 48.1 +0.1
PHWY                               IAmb   IAmb   02 02 54.0
      comp=Z,18nm,1.3s
RDOG  Red Dog Mine      21.32 328  P      P      02 02 46.6 -1.0
RDOG                               IAmb   IAmb   02 02 47.5
      comp=Z,12nm,0.8s
RDOG  Red Dog Mine      21.32 328  P      P      02 02 47.0 -0.5
      baz=121
GMRC  Granite Mounta    21.37 140  P      P      02 02 47.8 -0.7
      baz=332,SNR=6.0
U15A  North Rim         21.40 131  P      P      02 02 49.8 +0.8
U15A                               IAmb   IAmb   02 02 52.2
      comp=Z,8.9nm,0.9s
PV23  Carpenter Ridg    21.41 122  P      P      02 02 49.7 +0.7
PV23                               IAmb   IAmb   02 03 01.9
      comp=Z,9.8nm,0.9s
PV04  Paradox Valley    21.50 122  P      P      02 02 49.5 -0.5
PV04                               IAmb   IAmb   02 03 10.1
      comp=Z,6.7nm,0.9s
PV20  West Nyswonger    21.51 122  P      P      02 02 50.8 +0.8
PV20                               IAmb   IAmb   02 03 02.9
      comp=Z,8.7nm,0.9s
ELS   Elsinore Mount    21.73 145  P      P      02 02 52.5 +0.3
W13A  Hualapai Mount    21.82 136  P      P      02 02 54.9 +1.5
BELC  Belle Mtn. Jos    21.93 142  P      P      02 02 54.9 +0.4
      baz=333
SMCO  Snowmass          21.95 118  P      P      02 02 56.0 +1.1
SMCO                               IAmb   IAmb   02 02 57.4
      comp=Z,9.9nm,1.1s
FCC   Fort Churchill    22.07  59  P      P      02 02 55.5 -0.1
FCC   Fort Churchill    22.07  59  Pn     P      02 02 56.1 +0.5
IRM   Iron Mountain     22.12 140  P      P      02 02 58.1 +1.6
      baz=332
ISCO  Idaho Springs     22.25 115  P      P      02 02 59.4 +1.3
      baz=314
ULM   Lac du Bonnet     22.59  81  P      P      02 03 02.5 +1.3
      comp=Z,4.4nm,0.8s,baz=297,slow=10,SNR=4.3
      comp=Z,4.4nm,0.8s
ULM   Lac du Bonnet     22.59  81  P      P      02 03 01.9 +0.7
ULM   Lac du Bonnet     22.59  81  Pn     P      02 03 02.5 +1.3
MVCO  Mesa Verde        22.61 124  P      P      02 03 02.9 +1.0
MVCO                               IAmb   IAmb   02 03 20.4
      comp=Z,5.7nm,1.0s
MVCO  Mesa Verde        22.61 124  P      P      02 03 00.1 -1.8
      baz=321,SNR=6.2
MONP2 Monument Peak     22.77 144  P      P      02 03 03.6 +0.1
      baz=335
S22A  4UR Ranch, Cre    23.07 120  IAmb   IAmb   02 03 09.8
      comp=Z,14nm,1.2s
S22A  4UR Ranch, Cre    23.07 120  P      P      02 03 04.7 -2.1
      baz=318,SNR=10
IKP   In-Ko-Pah, Jac    23.10 144  P      P      02 03 07.3 +0.5
      baz=335
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Y14A  Wickenburg        23.18 136  P      P      02 03 09.3 +1.7
Y14A                               IAmb   IAmb   02 03 11.5
      comp=Z,4.1nm,0.9s
GAMB  Gambell           23.21 314  P      P      02 03 10.5 +2.9
GAMB  Gambell           23.21 314  P      P      02 03 05.6 -2.0
      baz=100
AGMN  Agassiz Nation    23.34  86  IAmb   IAmb   02 03 31.8
      comp=Z,24nm,1.2s
AGMN  Agassiz Nation    23.34  86  P      P      02 03 08.3 -0.7
      baz=294
W18A  Petrified Fore    23.67 129  P      P      02 03 14.1 +1.5
W18A                               IAmb   IAmb   02 03 15.3
      comp=Z,5.5nm,0.8s
SDCO  Great Sand Dun    23.78 118  P      P      02 03 15.1 +1.3
SDCO                               IAmb   IAmb   02 03 16.4
      comp=Z,6.2nm,1.2s
SDCO  Great Sand Dun    23.78 118  P      P      02 03 12.0 -1.8
      baz=318,SNR=5.6
X18A  Snowflake         24.05 130  IAmb   IAmb   02 03 20.4
      comp=Z,13nm,1.0s
F33A  5 Mile Ranch,     24.19  92  P      P      02 03 17.3 +0.1
F33A                               IAmb   IAmb   02 03 19.4
      comp=Z,20nm,1.4s
B35A  Bob, Littlefor    24.61  85  P      P      02 03 20.8 -0.3
B35A                               IAmb   IAmb   02 03 38.2
      comp=Z,8.3nm,1.0s
214A  Organ Pipe Nat    24.98 138  IAmb   IAmb   02 03 28.4
      comp=Z,6.2nm,0.9s
214A  Organ Pipe Nat    24.98 138  P      P      02 03 26.0 +1.4
      baz=332
ECSD  EROS Data Cent    25.09  96  P      P      02 03 22.6 -2.8
      baz=304,SNR=15
ANMO  Albuquerque       25.41 124  P      P      02 03 29.9 +1.3
      comp=Z,1.7nm,0.8s,baz=327,slow=13,SNR=8.0
      comp=Z,1.7nm,0.8s
ANMO  Albuquerque       25.41 124  P      P      02 03 29.3 +0.6
ANMO  Albuquerque       25.41 124  P      P      02 03 28.5 -0.1
      baz=322
TUC   Tucson            25.53 134  P      P      02 03 30.6 +0.9
      baz=329
F36A  Milaca            25.86  90  IAmb   IAmb   02 03 35.9
      comp=Z,12nm,1.0s
BNM   Barren Site       25.96 125  P      P      02 03 34.4 +0.7
EYMN  Ely               26.13  84  P      P      02 03 35.7 +0.9
      baz=296
121A  Cookes Peak, D    26.71 129  IAmb   IAmb   02 03 43.0
      comp=Z,4.8nm,0.9s
121A  Cookes Peak, D    26.71 129  P      P      02 03 41.0 +0.6
      baz=326
RES   Resolute Bay      26.71  21  P      P      02 03 39.7 -0.1
      comp=Z,1.2nm,0.8s,baz=246,slow=12,SNR=5.8
      comp=Z,1.2nm,0.8s
RES   Resolute Bay      26.71  21  P      P      02 03 39.9 +0.1
RES                                IAmb   IAmb   02 04 01.1
      comp=Z,11nm,1.5s
AMTX  Amarillo          27.97 117  P      P      02 03 52.1 +0.6
AMTX  Amarillo          27.97 117  P      P      02 03 50.6 -1.0
      baz=319
MSTX  Muleshoe          28.08 120  P      P      02 03 53.4 +0.9
MSTX                               IAmb   IAmb   02 03 54.5
      comp=Z,7.0nm,1.1s
MNTX  Cornudas Mount    28.55 127  IAmb   IAmb   02 03 59.1
      comp=Z,2.2nm,0.8s
MNTX  Cornudas Mount    28.55 127  P      P      02 03 56.7  0.0
      baz=325
TUL1  Leonard           30.53 109  P      P      02 04 15.3 +1.2
TUL1                               IAmb   IAmb   02 04 16.1
      comp=Z,5.7nm,1.0s
EUNU  Eureka            31.27  14  P      P      02 04 21.0 +0.7
EUNU                               IAmb   IAmb   02 04 31.6
      comp=Z,6.4nm,1.2s
TX32  Lajitas Array     31.33 127  IAmb   IAmb   02 04 23.6
      comp=Z,4.1nm,0.8s
TXAR  Lajitas Array     31.33 127  P      P      02 04 22.9 +1.6
      comp=Z,4.0nm,0.9s,baz=332,slow=7.6,SNR=19
      comp=Z,4.0nm,0.9s
TXAR  Lajitas Array     31.33 127  P      P      02 04 21.9 +0.5
CCM   Cathedral Cave    31.75 101  P      P      02 04 24.5 -0.4
CCM                                IAmb   IAmb   02 04 25.9
      comp=Z,5.8nm,0.9s
CCM   Cathedral Cave    31.75 101  P      P      02 04 24.2 -0.7
      baz=311
U40A  Yellville         31.93 105  P      P      02 04 24.1 -2.4
      baz=313,SNR=6.0
W39A  Magazine          32.19 107  P      P      02 04 28.3 -0.5
      baz=315
JCT   Junction City     32.37 120  P      P      02 04 30.7 +0.2
      baz=323
WHTX  Lake Whitney,     32.46 116  P      P      02 04 32.5 +1.3
      baz=320
BILL  Bilibino          32.47 322  P      P      02 04 31.0 +0.1
MIAR  Mount Ida         32.77 108  P      P      02 04 31.4 -2.5
      baz=316,SNR=8.7
KILO  Kirkland Lake     32.94  76         P      02 04 36.4 +1.1
KILO  Kirkland Lake     32.94  76  Pn     P      02 04 36.4 +1.1
X40A  Basin Creek Fa    33.24 107  IAmb   IAmb   02 04 40.7
      comp=Z,3.6nm,0.9s
X40A  Basin Creek Fa    33.24 107  P      P      02 04 37.7 -0.2
      baz=315
LG4Q  La Grande 4       34.01  65         P      02 04 44.6 +0.1
LG4Q  La Grande 4       34.01  65  Pn     P      02 04 44.6 +0.1
833A  Chaparral WMA,    34.30 122  P      P      02 04 47.4 +0.1
      baz=324
SADO  Sadowa            35.15  81  LR     LR     02 20 16.1
      comp=Z,110nm,21.0s,baz=104,slow=38
OXF   Oxford            35.24 104  P      P      02 04 52.9 -2.4
      baz=314
PLAL  Pickwick Lake     35.70 102  IAmb   IAmb   02 04 59.9
      comp=Z,6.9nm,0.9s
SCHQ  Schefferville     37.45  60  P      P      02 05 14.1 +0.1
      comp=Z,4.1nm,1.0s,baz=317,slow=14,SNR=3.4
      comp=Z,4.1nm,1.0s
SCHQ  Schefferville     37.45  60  P      P      02 05 14.0 +0.1
SCHQ                               IAmb   IAmb   02 05 18.8
      comp=Z,7.4nm,1.1s
CPCT  Cooper Cave       37.52  98  IAmb   IAmb   02 05 21.5
      comp=Z,13nm,1.3s
TKL   Tuckaleechee C    37.83  97  IAmb   IAmb   02 05 19.4
      comp=Z,8.7nm,1.1s
W52A  Murphy            38.12  98  P      P      02 05 19.4 -0.5
250A  Grady             38.88 104  IAmb   IAmb   02 05 28.3
      comp=Z,11nm,0.8s
SEY   Seymchan          39.20 316  P      P      02 05 29.7 +1.1
      comp=Z,8.0nm,1.0s,baz=80,slow=8.1,SNR=15
      comp=Z,8.0nm,1.0s
GOGA  Godfrey           39.55  99  P      P      02 05 31.0 -0.8
      baz=314
SFJD  Kangerlussuaq     40.15  37  LR     LR     02 23 08.4
      comp=Z,215nm,18.1s,baz=329,slow=38
MA2   Magadan           41.25 311  P      P      02 05 45.6 -0.1
      comp=Z,5.3nm,0.9s,baz=37,slow=11,SNR=4.0
      comp=Z,5.3nm,0.9s
SUMG  Summit            41.91  27  P      P      02 05 51.7 +0.3
TIXI  Tiksi             43.79 333  P      P      02 06 06.5 +0.4
      comp=Z,1.1nm,0.3s,baz=90,slow=20,SNR=6.4
      comp=Z,1.1nm,0.3s
TIXI  Tiksi             43.79 333  P      P      02 06 06.1  0.0
TIXI                               IAmb   IAmb   02 06 06.9
      comp=Z,2.2nm,0.6s
YAK   Yakutsk           48.83 322  P      P      02 06 46.5 +0.8
NRIK  Noril'sk          54.91 344  P      P      02 07 30.8 -0.3
      comp=Z,3.7nm,0.6s,baz=64,slow=5.5,SNR=5.9
      comp=Z,3.7nm,0.6s
H11N2 WAKE ISLAND Hy    56.99 259  T      T      03 09 39.0
      baz=39,slow=76,SNR=928
H11N3 WAKE ISLAND Hy    56.99 259  T      T      03 09 34.6
      baz=39,slow=76,SNR=897
H11N1 WAKE ISLAND Hy    57.01 259  T      T      03 09 40.4
      baz=39,slow=76,SNR=1013
H11S1 WAKE ISLAND Hy    58.05 258  T      T      03 10 59.2
      baz=39,slow=76,SNR=59
H11S2 WAKE ISLAND Hy    58.06 258  T      T      03 10 57.4
      baz=39,slow=76,SNR=53
H11S3 WAKE ISLAND Hy    58.07 258  T      T      03 10 57.3
      baz=39,slow=76,SNR=58
USRK  Ussuriysk Ar.     59.60 304  LR     LR     02 33 47.7
      comp=Z,138nm,21.5s,baz=153,slow=36
MAJO  Matsushiro        61.77 294  P      P      02 08 19.2 -0.3
MJAR  Matsushiro Arr    61.77 294  P      P      02 08 18.9 -0.5
      comp=Z,1.2nm,0.3s,baz=72,slow=7.9,SNR=5.1
      comp=Z,1.2nm,0.3s
MJB9  Matsu-Tunnel      61.77 294  P      P      02 08 18.5 -1.0
NC300 NORSAR Array S    62.80  19  P      P      02 08 26.3 +0.4
NC303 NORSAR Array S    62.82  19  P      P      02 08 25.9 -0.2
NB2   NORSAR Subarra    62.96  19  P      P      02 08 27.3 +0.2
      comp=Z,5.0nm,0.9s,baz=338,slow=6.5
NOA   NORSAR Array B    62.96  19  P      P      02 08 27.1  0.0
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      comp=Z,2.1nm,0.8s,baz=338,slow=6.6,SNR=12
      comp=Z,2.1nm,0.8s
NB201 NORSAR Array S    62.97  19  P      P      02 08 27.9 +0.8
RAF   Rauma             64.79  14  eP     P      02 08 39.2 +0.3
FIA1  FINESS Array S    64.95  11  P      P      02 08 39.7 -0.3
FINES FINESS Array B    64.95  11  P      P      02 08 40.1  0.0
      comp=Z,3.8nm,0.8s,baz=5.7,slow=5.6,SNR=14
      comp=Z,3.8nm,0.8s
UPP   Uppsala           65.25  16  eP     P      02 08 42.7 +0.7
AAL   Aland             65.33  15  eP     P      02 08 42.7 +0.2
MEF   Metsahovi         65.93  13  eP     P      02 08 46.9 +0.5
VIKU  Vikbolandet       66.36  17  eP     P      02 08 50.1 +0.9
KLMR  Klimovskoe        66.66   4  eP     P      02 08 49.9 -1.2
KLMR                               AMP           02 08 51.6
      comp=Z,6.0nm,0.8s
MTSE  Matsula           67.30  13  eP     P      02 08 55.8 +0.6
XLT   XiLinHaoTe        67.39 313  eP     P      02 08 56.7 +0.5
XLT                                pmax   pmax
      comp=Z,11nm,0.8s
XLT                                pmax   pmax
      comp=Z,120nm,4.3s
DEL   Delary            67.72  20  eP     P      02 08 57.7 -0.2
VSU   Vasula            67.93  12  eP     P      02 08 59.8 +0.6
SLIT  Slitere, Latvi    68.13  14  eP     P      02 08 60.0 -0.4
SONM  Songino Array     68.19 322  P      P      02 09 01.2  0.0
      comp=Z,0.3nm,0.3s,baz=32,slow=5.8,SNR=4.8
SONM                               LR     LR     02 39 56.7
      comp=Z,200nm,21.6s,baz=148,slow=37
      comp=Z,0.3nm,0.3s
SONM  Songino Array     68.19 322  P      P      02 09 01.6 +0.5
SONM                               IAmb   IAmb   02 09 02.8
      comp=Z,2.6nm,1.3s
ZALV  Zalesovo Beam     69.41 338  P      P      02 09 08.1 -0.4
      comp=Z,5.7nm,0.6s,baz=17,slow=5.7,SNR=29
      comp=Z,5.7nm,0.6s
PABE  Paberze           70.43  14  P      P      02 09 14.6 -0.1
PABE  Paberze           70.43  14  eP     P      02 09 14.8 +0.1
ARU   Arti              70.94 354  P      P      02 09 16.8 -1.0
IDID  Didziasalis       71.00  13  eP     P      02 09 17.8 -0.4
NACGM Naroch            71.41  13⇓eP     P      02 09 21.1 +0.4
      baz=347
SUW   Suwalki           71.75  15  P      P      02 09 22.3 -0.4
SUW   Suwalki           71.75  15  eP     P      02 09 22.6 -0.1
HHC   Hu-ho-hao-te      71.83 314  eP     P      02 09 24.0 +0.4
HHC                                pmax   pmax
      comp=Z,22nm,1.0s
HHC                                pmax   pmax
      comp=Z,95nm,5.5s
HHC                                LR     LR
      comp=N,190nm,16.5s
HHC                                LR     LR
      comp=E,180nm,15.9s
HHC                                LR     LR
      comp=Z,410nm,15.9s
MNK   Minsk             71.94  12  i P    P      02 09 23.4 -0.5
      comp=E,1.0nm,0.9s
MNK                                i P    P      02 09 23.4 -0.5
      comp=N,13nm,1.2s
MNK                                i P    P      02 09 23.4 -0.5
      comp=Z,16nm,0.9s,baz=167
MNK                                i PcP  PcP    02 09 42.0 -0.6
MNK                                i PP   PP     02 12 02.1 -0.8
MNK                                i PPP  PPP    02 13 46.5
MNK                                i S    S      02 18 44.2 -0.1
MNK                                i SS   SS     02 23 21.7 +2.1
MNK                                i SSS  SSS    02 26 40.2
MNK                                i LQ   LQ     02 36 00.4
MNK                                i LR   LR     02 41 28.2
MNK                                i LRM  MLR    02 44 20.6
      comp=Z,57nm,11.3s
MNK                                i LRM  MLR    02 44 28.6
      comp=E,11nm,17.4s
MNK                                i LRM  MLR    02 44 30.6
      comp=N,60nm,10.0s
CLL   Collm             72.35  22  eP     P      02 09 28.0 +1.6
BRG   Berggiesshubel    72.97  22  eP     P      02 09 31.6 +1.5
BRG                                Amp           02 09 36.9
      comp=Z,4.0nm,1.2s
BRVK  Borovoye          73.02 346  P      P      02 09 30.3  0.0
ECH   Echery            73.72  27  P      P      02 09 34.9 +0.3
ECH                                IAmb   IAmb   02 09 44.3
      comp=Z,6.1nm,1.1s
KURK  Kurchatov         73.79 340  P      P      02 09 34.5 -0.4
GERES GERESS Array B    74.81  23  P      P      02 09 41.1 +0.1
      comp=Z,0.4nm,0.5s,baz=332,slow=8.0,SNR=4.0
      comp=Z,0.4nm,0.5s
GERES GERESS Array B    74.81  23  P      P      02 09 40.9 -0.1
DAVA  Damuels           75.31  26  eP     P      02 09 45.8 +1.8
      comp=Z,2.1nm,0.8s
MOTA  Moosalm           75.57  25  eP     P      02 09 46.5 +1.0
      comp=Z,5.6nm,1.7s
WATA  Walderalm         75.70  25  eP     P      02 09 45.0 -1.2
      comp=Z,7.4nm,1.6s
SQTA  Sankt Quirin      75.71  25  eP     P      02 09 45.7 -0.6
      comp=Z,6.1nm,1.3s
DAVOX Davos/Dischmat    75.77  26  P      P      02 09 45.9 -0.8
      comp=Z,2.0nm,0.9s,baz=324,slow=8.7,SNR=4.5
      comp=Z,2.0nm,0.9s
FETA  Feichten          75.77  25  eP     P      02 09 47.7 +1.0
      comp=Z,4.8nm,1.2s
WTTA  Wattenberg        75.78  25  eP     P      02 09 47.6 +0.9
      comp=Z,4.5nm,0.9s
AKASG Malin Array Be    75.84  12  P      P      02 09 46.4 -0.4
      comp=Z,2.6nm,0.6s,baz=351,slow=5.8,SNR=15
      comp=Z,2.6nm,0.6s
AKBB  Malin Array Si    75.84  12  P      P      02 09 45.7 -1.1
MODS  Modra-Piesok      76.05  20  eP     P      02 09 48.1  0.0
CONA  Conrad Observa    76.17  22  eP     P      02 09 49.7 +0.9
      comp=Z,2.8nm,0.8s
VYHS  Vyhne             76.26  19  eP     P      02 09 50.3 +1.0
KBA   Koelnbreinsper    76.38  23  eP     P      02 09 51.2 +1.1
      comp=Z,5.0nm,1.3s
KOLS  Kolonicke sedl    76.50  17  eP     P      02 09 52.7 +2.1
MK31  Makanchi Array    76.66 336  P      P      02 09 50.8 -0.8
MK31                               IAmb   IAmb   02 09 52.3
      comp=Z,2.8nm,0.8s
MKAR  Makanchi Array    76.66 336  P      P      02 09 51.3 -0.3
      comp=Z,2.7nm,0.7s,baz=35,slow=5.1,SNR=24
MKAR                               LR     LR     02 47 42.5
      comp=Z,73nm,18.9s,baz=116,slow=39
      comp=Z,2.7nm,0.7s
MKAR  Makanchi Array    76.66 336  P      P      02 09 50.8 -0.8
MAKZ  Makanchi          76.72 337  P      P      02 09 51.0 -0.9
PSZ   Piszkesteto       77.02  19 ⇑P      P      02 09 54.7 +1.1
PSZ   Piszkesteto       77.02  19  P      P      02 09 54.4 +0.7
SOKA  Soboth            77.15  23  eP     P      02 09 54.7 +0.3
      comp=Z,5.2nm,1.0s
OBKA  Obir              77.20  23  eP     P      02 09 53.0 -1.6
      comp=Z,3.3nm,1.0s
ESDC  Sonseca Array     77.68  38  P      P      02 09 57.6 +0.2
      comp=Z,1.7nm,0.8s,baz=322,slow=5.0,SNR=12
      comp=Z,1.7nm,0.8s
ABKAR Akbulak array     77.97 352  P      P      02 09 58.5 -0.3
WMQ   Urumqi            77.97 332  eP     P      02 10 02.7 +3.7
SORM  Soroca            78.24  13 ⇑P      P      02 09 59.8 -0.4
BUR08 Bucovina Ar. S    78.24  15  P      P      02 10 01.2 +0.7
BUR08                              IAmb   IAmb   02 10 02.2
      comp=Z,2.9nm,1.2s
BURAR Bucovina Array    78.27  15 ⇑P      P      02 10 01.4 +0.7
MILM  Milestii Mici     79.49  13 ⇑P      P      02 10 06.8 -0.4
TESR  Tescani           79.57  15 ⇓P      P      02 10 08.2 +0.5
GZR   Gura Zlata        80.00  18 ⇓P      P      02 10 10.8 +0.7
PURM  Purcari           80.02  12 ⇑P      P      02 10 09.8 -0.2
GHRR                    80.13  14 ⇑P      P      02 10 11.5 +0.8
COVR  Voineasa-Covas    80.15  15 ⇑P      P      02 10 11.7 +0.8
VRI   Vrincioaia        80.21  15 ⇑P      P      02 10 12.5 +1.3
PLOR  Plostina          80.22  15 ⇑P      P      02 10 11.9 +0.6
VOIR                    80.36  16 ⇑P      P      02 10 12.4 +0.4
MLR   Muntele Rosu      80.46  15 ⇑P      P      02 10 13.9 +1.3
CFR   Carcaliu          81.10  14 ⇑P      P      02 10 15.8  0.0
TPGR  Topolog           81.46  14 ⇑P      P      02 10 18.2 +0.4
HARR  Harsova           81.55  14 ⇓P      P      02 10 18.7 +0.5
PRZ   Przheval'sk       81.65 338  P      P      02 10 18.7 -0.4
BOOM  Boomskoye usch    82.19 339  P      P      02 10 21.7 -0.2
BOOM                               IAmb   IAmb   02 10 23.1
      comp=Z,3.2nm,1.1s
KDJ   Kajisay           82.26 338  P      P      02 10 21.7 -0.7
KDJ                                IAmb   IAmb   02 10 23.2
      comp=Z,3.2nm,0.9s
AAK   Ala-Archa         82.35 340  P      P      02 10 22.8 +0.1
AAK                                IAmb   IAmb   02 10 24.0
      comp=Z,3.7nm,0.9s
KK31  Karatay Array     82.65 343  P      P      02 10 23.9 -0.2
KK31                               IAmb   IAmb   02 10 24.4
      comp=Z,3.1nm,0.9s
```

KKAR	**Karatay Array**	**82.65**	**343**	P	**P**	**02 10 23.7**	**-0.5**
KKAR	**Karatay Array**	**82.65**	**343**	P	**P**	**02 10 23.4**	**-0.8**
KKAR				IAmb	IAmb	02 10 24.4	
	comp=Z,3.1nm,0.9s						
VTS	**Vitosha**	**82.77**	**18**	⇑P	**P**	**02 10 25.5**	**+0.6**
VTS	**Vitosha**	**82.77**	**18**	P	**P**	**02 10 24.3**	**-0.6**
VTS				IAmb	IAmb	02 10 25.9	
	comp=Z,2.7nm,0.8s						
KIV	**Kislovodsk**	**83.68**	**4**	P	**P**	**02 10 29.1**	**-0.4**
KBZ	**Khabaz**	**83.92**	**4**	P	**P**	**02 10 31.1**	**+0.5**
	comp=Z,5.8nm,0.9s,baz=336,slow=6.5,SNR=14						
	comp=Z,5.8nm,0.9s						
FNA	**Florina**	**84.17**	**20**	P	**P**	**02 10 31.8**	**-0.2**
RDO	**Rodhopi**	**84.61**	**17**	P	**P**	**02 10 34.3**	**+0.2**
KSH	**Kashi**	**85.03**	**339**	P	**P**	**02 10 39.2**	**+2.7**
LIT	**Litokhoron**	**85.05**	**19**	P	**P**	**02 10 36.4**	**0.0**
KEST	**Kesra**	**85.82**	**31**	P	**P**	**02 10 40.9**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=336,slow=10.0,SNR=2.1						
	comp=Z,2.4nm,0.8s						
KEST	**Kesra**	**85.82**	**31**	P	**P**	**02 10 41.6**	**+1.1**
BRTR	**Keskin Array B**	**87.19**	**11**	P	**P**	**02 10 46.7**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=7.9,slow=2.1,SNR=12						
BRTR				LR	LR	02 51 28.1	
	comp=Z,77nm,21.3s,baz=178,slow=37						
	comp=Z,1.8nm,0.9s						
LPAZ	**La Paz**	**87.97**	**120**	P	**P**	**02 10 50.6**	**-1.1**
	comp=Z,4.3nm,0.8s,baz=328,slow=4.3,SNR=15						
	comp=Z,4.3nm,0.8s						
PZH	**PanZhiHua**	**88.28**	**314**	P	**P**	**02 10 53.7**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
CMAR	**Chiang Mai Arr**	**96.54**	**312**	P	**P**	**02 11 30.6**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=12,slow=4.6,SNR=4.9						
	comp=Z,1.6nm,0.3s						
MATP	**Matopo**	**144.52**	**32**	PKP	**PKPab**	**02 17 35.3**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=270,slow=1.0,SNR=3.6						
VNA3	**Neumayer Olymp**	**148.88**	**148**	PKPdf	**PKPbc**	**02 17 45.6**	**-1.5**
BOSA	**Boshof**	**150.74**	**44**	PKPbc	**PKPbc**	**02 17 52.4**	**-0.7**
	comp=Z,4.7nm,0.8s,baz=360,slow=2.8,SNR=7.2						
BOSA	**Boshof**	**150.74**	**44**	PKPdf	**PKPdf**	**02 17 49.2**	**+1.6**
BOSA				PKPbc	**sPKPdf**	**02 17 52.8**	**-0.1**
SNAA	**Sanae**	**150.96**	**150**	PKPdf	**PKPdf**	**02 17 48.4**	**+1.9**
SNAA				x	x	02 17 50.6	
SNAA	**Sanae**	**150.96**	**150**	PKPbc	**PKPbc**	**02 17 52.1**	**-0.1**
SUR	**Sutherland**	**151.87**	**55**	PKPbc	**PKPbc**	**02 17 55.8**	**+0.1**
TROLL	**Troll, Antarti**	**152.47**	**151**	PKPdf	**PKPbc**	**02 17 53.1**	**-2.6**

IDC ***09*** *02:22:28.2±1.3, 5°.72S×155°.10E, h0km, mb3.8/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=44.0km s-min=26.7km az=134.0*

NEIC ***09*** *02:22:45.1±0.8, 6°.1S±0°.2×155°.3E±0°.1, h133km±10km, mb4.2/10, Error ellipse: s-maj=25.3km s-min=11.5km az=214.0*

ISC 09 02:22:42.5±0.8**, 6°.1S**±0°.1×**155°.3E**±0°.1**, h100**km**, n19, σ2s.06**/17**, mb4.1**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.69**	**301**	Pn	**Pn**	**02 23 40.0**	**+2.4**
HNR	**Honiara**	**5.63**	**126**	Pn	**Pn**	**02 24 07.3**	**+3.4**
COEN	**Coen**	**14.27**	**236**	P	**P**	**02 26 04.6**	**+0.4**
CTAO	**Charters Tower**	**16.44**	**212**	P	**P**	**02 26 30.8**	**+2.5**
CTAO				IAmb	IAmb	02 26 59.8	
	comp=Z,15nm,1.5s						
DZM	**Mont Dzumac**	**19.15**	**147**	P	**P**	**02 26 57.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=336,slow=20,SNR=6.5						
	comp=Z,1.3nm,0.4s						
DZM	**Mont Dzumac**	**19.15**	**147**	P	**P**	**02 26 57.1**	**-1.0**
WR0	**Warramunga Arr**	**24.43**	**234**	P	**P**	**02 27 50.5**	**-1.6**
WR0				IAmb	IAmb	02 27 53.1	
	comp=Z,8.2nm,1.0s						
WB0	**Warramunga Arr**	**24.45**	**234**	P	**P**	**02 27 50.6**	**-1.6**
WRAB	**Tennant Creek**	**24.57**	**234**	P	**P**	**02 27 51.7**	**-1.6**
WRAB				IAmb	IAmb	02 27 53.9	
	comp=Z,6.7nm,0.7s						
WB2	**Warramunga Arr**	**24.57**	**234**	P	**P**	**02 27 52.0**	**-1.4**
WB2				IAmb	IAmb	02 27 54.0	
	comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**24.58**	**234**	P	**P**	**02 27 51.5**	**-2.0**
	comp=Z,4.4nm,0.6s,baz=58,slow=10,SNR=61						
	comp=Z,4.4nm,0.6s						
WRA	**Warramunga Arr**	**24.58**	**234**	P	**P**	**02 27 50.8**	**-2.7**
ASAR	**Alice Springs**	**26.99**	**228**	P	**P**	**02 28 12.6**	**-2.6**
	comp=Z,0.2nm,0.4s,baz=55,slow=10,SNR=5.2						
	comp=Z,0.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**31.31**	**245**	P	P	02 28 50.7	-2.8
BKZ	**Black Stump Fm**	**38.04**	**153**	P	**P**	**02 29 49.6**	**-1.7**
BKZ				IAmb	IAmb	02 29 52.2	
	comp=Z,10nm,1.4s						
IMAR	**Indian Mountai**	**80.81**	**19**	P	**P**	**02 34 43.9**	**-0.9**
ILAR	**Eielson Array**	**82.45**	**21**	P	P	02 34 50.4	-3.2
	comp=Z,0.3nm,0.7s,baz=248,slow=4.8,SNR=4.6						
	comp=Z,0.3nm,0.7s						
J25K	**Salcha River,**	**82.93**	**22**	P	**P**	**02 34 54.8**	**-1.3**
J25K				IAmb	IAmb	02 34 55.3	
	comp=Z,4.3nm,1.5s						
NVAR	**Mina Array Bea**	**90.93**	**52**	P	**P**	**02 35 34.8**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=243,slow=6.0,SNR=2.1						
	comp=Z,0.5nm,0.8s						

RHSSO 09 02:40:47.8±0.6**, 43°.90N**×**16°.74E, h5**km**, ML1.2**/4**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.27**	**294**	*e*Pg	Pg	02 40 52.3	-0.6
KIJV				Sg	Sg	02 40 56.7	+0.2
SRKY	**Kupres RS**	**0.35**	**61**	*e*Pg	Pg	02 40 54.1	-0.5
SRKY				*e*Sg	Sg	02 40 59.8	+0.6
RICI	**Ricice**	**0.49**	**145**	*e*Pg	Pg	02 40 55.8	-1.5
RICI				Sg	Sg	02 41 03.4	-0.3
MGRS	**Mrkonjic Grad**	**0.57**	**25**	*e*Pg	Pg	02 40 57.6	-1.2
MGRS				*e*Sg	Sg	02 41 06.7	+0.4
A050A	**Klekovaca**	**0.60**	**345**	*e*Pg	Pg	02 40 58.4	-1.0
A050A				*e*Sg	Sg	02 41 07.6	+0.4
MAKA	**Makarska**	**0.64**	**162**	*e*Pg	Pg	02 40 57.4	-2.7
MAKA				Sg	Sg	02 41 07.3	-1.2
MORI	**Morici**	**0.75**	**268**	*e*Pg	Pg	02 41 00.3	-1.9
MORI				Sg	Sg	02 41 11.7	-0.2
HVAR	**Hvar**	**0.75**	**197**	*e*Pg	Pg	02 40 59.2	-3.0
HVAR				Sg	Sg	02 41 09.8	-2.2
ZIRJ	**Zirje**	**0.83**	**253**	*e*Pg	Pg	02 41 01.6	-2.1
ZIRJ				Sg	Sg	02 41 14.0	-0.6
BLY	**Banja Luka**	**0.91**	**20**	*e*Pg	Pg	02 41 04.5	-0.7
BLY				*e*Sg	Sg	02 41 16.8	-0.2
A051A	**Mrakovica**	**1.12**	**6**	*e*Pg	Pg	02 41 08.1	-1.2
A051A				*e*Sg	Sg	02 41 23.0	-0.8
LSTV	**Lastovo**	**1.14**	**174**	*e*Pg	Pg	02 41 07.2	-2.3
LSTV				Sg	Sg	02 41 21.7	-2.5
DUGI	**Dugi Otok**	**1.22**	**275**	*e*Pg	Pg	02 41 08.8	-2.4
DUGI				Sg	Sg	02 41 27.0	0.0
STON	**Ston**	**1.24**	**145**	*e*Pg	Pg	02 41 10.5	-1.1
STON				*e*Sg	Sg	02 41 27.0	-0.7
VIRC	**Vir**	**1.28**	**289**	*e*Pg	Pn	02 41 09.8	-2.5
VIRC				Sg	Sg	02 41 28.5	-0.3
NVLJ	**Novalja**	**1.50**	**297**	*e*Pn	Pn	02 41 13.8	-1.5
NVLJ				Sg	Sn	02 41 34.4	-0.9

BUC 09 02:42:43.7±0.7**, 45°.34N**×**26°.18E, h127**km±4km**, ml2.7**/3**, 30C-16D, Error ellipse: s-maj=5.4km s-min=3.0km az=27.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.12**	**43**	⇑P	Pn	02 43 01.9	+0.9
NEHR				⇑S	Sn	02 43 14.8	+0.6
NEHR	**Nehoiu**	**0.12**	**43**	⇑P	Pn	02 43 01.9	+0.9
NEHR				⇑S	Sn	02 43 14.8	+0.6
MLR	**Muntele Rosu**	**0.22**	**312**	⇑P	Pn	02 43 02.2	+0.8
MLR				⇑S	Sn	02 43 15.7	+1.0
MLR	**Muntele Rosu**	**0.22**	**312**	⇑P	Pn	02 43 02.2	+0.8
MLR				⇑S	Sn	02 43 15.7	+1.0
BISRR	**Bisoca**	**0.42**	**61**	⇑P	Pn	02 43 02.9	+0.8
BISRR				⇓S	Sn	02 43 16.0	+0.1
BISRR	**Bisoca**	**0.42**	**61**	⇑P	Pn	02 43 02.9	+0.8
BISRR				⇓S	Sn	02 43 16.0	+0.1
COVR	**Voineasa-Covas**	**0.51**	**2**	⇑S	Sn	02 43 16.6	-0.1
COVR	**Voineasa-Covas**	**0.51**	**2**	⇑S	Sn	02 43 16.6	-0.1
PLOR	**Plostina**	**0.61**	**33**	⇑P	Pn	02 43 03.8	+0.7
PLOR				⇑S	Sn	02 43 18.8	+1.0
PLOR	**Plostina**	**0.61**	**33**	⇑P	Pn	02 43 03.8	+0.7
PLOR				⇑S	Sn	02 43 18.8	+1.0
VRI	**Vrincioaia**	**0.65**	**36**	⇑P	Pn	02 43 04.2	+0.8
VRI				⇑S	Sn	02 43 19.1	+0.8
VRI	**Vrincioaia**	**0.65**	**36**	⇑P	Pn	02 43 04.2	+0.8
VRI				⇑S	Sn	02 43 19.1	+0.8
VOIR		**0.80**	**277**	⇓P	Pn	02 43 04.4	-0.2
VOIR				⇓S	Sn	02 43 20.1	-0.4
VOIR		**0.80**	**277**	⇓P	Pn	02 43 04.4	-0.2
VOIR				⇓S	Sn	02 43 20.1	-0.4
DOPR	**Dopca**	**0.84**	**319**	⇑P	Pn	02 43 04.6	-0.2
DOPR				⇓S	Sn	02 43 20.6	-0.4
DOPR	**Dopca**	**0.84**	**319**	⇑P	Pn	02 43 04.6	-0.2
DOPR				⇓S	Sn	02 43 20.6	-0.4
TESR	**Tescani**	**1.22**	**15**	⇑P	Pn	02 43 08.6	+0.1
TESR				⇓S	Sn	02 43 26.9	-0.4
TESR	**Tescani**	**1.22**	**15**	⇑P	Pn	02 43 08.6	+0.1
TESR				⇓S	Sn	02 43 26.9	-0.4
CFR	**Carcaliu**	**1.39**	**96**	⇓P	Pn	02 43 10.3	0.0
CFR				⇓S	Sn	02 43 30.4	-0.1
CFR	**Carcaliu**	**1.39**	**96**	⇓P	Pn	02 43 10.3	0.0
CFR				⇓S	Sn	02 43 30.4	-0.1
TLBR	**Topalu**	**1.54**	**120**	⇑S	Sn	02 43 34.5	+0.9
TLBR	**Topalu**	**1.54**	**120**	⇑S	Sn	02 43 34.5	+0.9
TPGR	**Topolog**	**1.66**	**106**	⇑S	Sn	02 43 35.7	-0.3
TPGR	**Topolog**	**1.66**	**106**	⇑S	Sn	02 43 35.7	-0.3
TIRR	**Tirgusor**	**1.81**	**118**	⇓P	Pn	02 43 15.0	-0.2
TIRR				⇑S	Sn	02 43 39.0	-0.3
TIRR	**Tirgusor**	**1.81**	**118**	⇓P	Pn	02 43 15.0	-0.2
TIRR				⇑S	Sn	02 43 39.0	-0.3

IDC 09 02:47:50.0±1.3**, 56°.23S**×**25°.72W, h0**km**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=47.8km s-min=35.9km az=91.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**18.25**	**157**	P	P	02 52 10.1	+5.5
VNDA	**Vanda**	**46.43**	**182**	P	P	02 56 17.7	0.0
	0.4nm,0.5s,baz=188,slow=7.1,SNR=2.2						
	0.4nm,0.5s						
LPAZ	**La Paz**	**51.16**	**304**	P	P	02 56 55.5	0.0
	0.5nm,0.3s,baz=155,slow=6.1,SNR=8.2						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**72.82**	**28**	P	P	02 59 20.4	+0.1
	0.6nm,0.8s,baz=197,slow=6.0,SNR=9.0						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**150.85**	**311**	PKPbc	PKPbc	03 07 42.2	-0.7
	0.3nm,0.8s,baz=90,slow=2.7,SNR=3.5						

IDC ***09*** *03:02:36.7±1.5, 1°.39N×121°.63E, h0km, mb3.8/3, mbtmp3.9/5, ML4.1/2, MS3.0/2, Error ellipse: s-maj=69.6km s-min=24.2km az=67.0*

DJA ***09*** *03:02:41.4±0.5, 1°N±4°×12°1E±°, h11km±3km, M4.3/12, mb4.5/5, MLv4.2/12*

NEIC ***09*** *03:02:41.8±2.2, 1°.14N±0°.08×120°.99E±0°.08, h25km±7km, mb4.4/13, Error ellipse: s-maj=13.8km s-min=9.5km az=46.0*

ISC 09 03:02:41.8±0.9**, 1°.20N**±0°.08×**120°.97E**±0°.05**, h29**km**, n34, σ1s.78**/35**, mb4.5**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**0.21**	**246**	Pg	**Pb**	**03 02 47.3**	**-0.7**
TOLI2				Sg	**Sb**	**03 02 51.6**	**-0.6**
MRSI	**Marisa**	**1.20**	**126**	P	**Pn**	**03 03 02.5**	**-0.1**
MRSI				S	**Sb**	**03 03 19.5**	**+0.4**
MPSI	**Mapaga**	**1.37**	**232**	P	**Pn**	**03 03 05.2**	**+0.2**
APSI	**Ampana**	**2.20**	**162**	P	**Pn**	**03 03 18.2**	**+1.8**
LUWI	**Luwuk**	**2.86**	**141**	Pn	**Pn**	**03 03 25.9**	**+0.4**
LUWI	**Luwuk**	**2.86**	**141**	P	**Pn**	**03 03 27.0**	**+1.5**
KMSI	**Cibinong**	**3.07**	**102**	P	**Pn**	**03 03 30.4**	**+2.1**
TTSI	**Tana Toraja**	**4.37**	**195**	P	**Pn**	**03 03 47.7**	**+1.5**
MYLDM	**Lahad Datu**	**4.67**	**328**	Pn	**Pn**	**03 03 51.9**	**+1.6**
SPSI	**Sidrap Palu**	**5.27**	**193**	P	**Pn**	**03 04 01.7**	**+3.1**
	0.2nm39nm,0.6s						
BNSI	**Bone**	**5.63**	**189**	P	**Pn**	**03 04 04.4**	**+0.9**
	0.2nm27nm,0.5s						
SANI	**Sanana**	**5.96**	**123**	P	**Pn**	**03 04 10.0**	**+1.9**
	0.1nm13nm,0.5s						
KAPI	**Kappang**	**6.29**	**191**	Pn	**Pn**	**03 04 15.7**	**+3.0**
	0.9nm,0.3s,baz=12,slow=14,SNR=1.8						
KAPI				LR	LR	03 07 14.6	
	comp=Z,62nm,18.2s,baz=338,slow=42						
	2.6nm,0.4s						
KAPI	**Kappang**	**6.29**	**191**	Pn	**Pn**	**03 04 12.6**	**-0.1**
BKSI	**Bulukumba**	**6.53**	**187**	P	**Pn**	**03 04 18.9**	**+2.9**
BATI	**Baumata**	**11.64**	**167**	LR	LR	03 10 03.6	
	comp=Z,116nm,21.4s,baz=341,slow=38						
PMBI	**Palembang**	**16.71**	**256**		**Pn**	**03 06 35.2**	**+1.3**
MTN	**Manton Dam**	**17.21**	**144**		**Pn**	**03 06 39.3**	**-0.9**
MTN				IAmb	IAmb	03 06 44.6	
	comp=Z,14nm,1.2s						
KNRA	**Kununurra**	**18.45**	**156**	P	**P**	**03 06 54.3**	**-1.0**
KNRA				IAmb	IAmb	03 07 14.6	
	comp=Z,26nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.72**	**167**	P	**P**	**03 07 08.6**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=358,slow=11,SNR=38						
	comp=Z,4.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.72**	**167**	P	**P**	**03 07 08.7**	**-0.5**
FITZ				IAmb	IAmb	03 07 09.5	
	comp=Z,4.9nm,0.6s						
GSI	**Gunungsitoli**	**23.39**	**271**	P	**P**	**03 07 49.2**	**+0.7**
GSI				IAmb	IAmb	03 07 49.5	
	comp=Z,18nm,0.8s						
WB0	**Warramunga Arr**	**24.64**	**148**	P	**P**	**03 07 57.6**	**-2.5**
WB0				IAmb	IAmb	03 07 59.2	
	comp=Z,28nm,1.5s						
WRAB	**Tennant Creek**	**24.76**	**149**	P	**P**	**03 07 58.7**	**-2.4**
WRAB				IAmb	IAmb	03 08 26.1	
	comp=Z,18nm,1.4s						
WRA	**Warramunga Arr**	**24.76**	**149**	P	**P**	**03 07 58.7**	**-2.5**
	comp=Z,1.8nm,0.4s,baz=326,slow=11,SNR=66						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**24.76**	**149**	P	**P**	**03 07 57.4**	**-3.8**
WB2	**Warramunga Arr**	**24.77**	**149**	P	**P**	**03 07 59.3**	**-1.9**
WB2				IAmb	IAmb	03 07 59.8	
	comp=Z,21nm,1.4s						
WR0	**Warramunga Arr**	**24.88**	**148**	P	**P**	**03 07 59.9**	**-2.4**
AS31	**Alice Springs**	**27.73**	**154**	P	**P**	**03 08 28.1**	**+0.1**
ASAR	**Alice Springs**	**27.73**	**154**	P	**P**	**03 08 26.2**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=344,slow=16,SNR=23						
	comp=Z,0.8nm,0.5s						
ASAR	**Alice Springs**	**27.73**	**154**	P	**P**	**03 08 27.6**	**-0.3**
FORT	**Forrest**	**32.51**	**169**	P	**P**	**03 09 08.0**	**-2.1**
MK31	**Makanchi Array**	**56.55**	**329**	P	**P**	**03 12 21.9**	**+0.2**
MKAR	**Makanchi Array**	**56.55**	**329**	P	**P**	**03 12 22.1**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=5.0						
	comp=Z,0.2nm,0.4s						

IDC ***09*** *03:06:36.5±1.7, 38°.00N×20°.82E, h0km, mb3.3/3, mbtmp3.2/4, ML2.6/1, Error ellipse: s-maj=52.8km s-min=28.6km az=133.0*

ATH ***09*** *03:06:37.9, 37°.74N×21°.17E, h9km±2km, ML2.9/15, Error ellipse: s-maj=2.8km s-min=0.8km az=328.0*

THE ***09*** *03:06:39.3, 37°.84N×21°.19E, h0km±1km, ML3.0/13, Error ellipse: s-maj=1.9km s-min=0.6km az=204.0*

ISC 09 03:06:39.0±1.0**, 37°.83N**±0°.04×**21°.19E**±0°.02**, h12**km±7km**, n56, σ1s.02**/87**, mb3.3**/3**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAK2	**Zakynthos**	**0.23**	**259**	P	**Pg**	**03 06 44.3**	**+0.4**
ZAK2				S	**Sg**	**03 06 48.6**	**+1.4**
	14µm,0.3s						
RLS	**Riolos of Patr**	**0.32**	**45**	P	**Pg**	**03 06 45.2**	**-0.2**
RLS				S	**Sb**	**03 06 50.9**	**-0.8**
RLS				AML	AML	03 06 51.3	
	comp=N,18345µm,0.2s						
RLS				AML	AML	03 06 52.8	
	comp=E,4800µm,0.2s						
RLS	**Riolos of Patr**	**0.32**	**45**	P	**Pb**	**03 06 45.4**	**-1.2**
RLS				S	**Sb**	**03 06 50.7**	**-0.9**
	comp=E,6µm,0.2s						
PSDA	**Pessada-Kefalo**	**0.55**	**301**	P	**Pg**	**03 06 49.0**	**-0.8**
PSDA				S	**Sb**	**03 06 57.6**	**-0.8**
VLS	**Valsamata**	**0.58**	**306**	P	**Pg**	**03 06 49.4**	**-1.0**
VLS				S	**Sb**	**03 06 58.4**	**-1.0**
VLS				AML	AML	03 07 02.2	
	comp=E,1354µm,0.2s						
VLS				AML	AML	03 07 04.2	
	comp=N,1497µm,0.2s						
VLS	**Valsamata**	**0.58**	**306**	P	**Pg**	**03 06 49.6**	**-0.8**
ARGA	**Argostoli. Kep**	**0.66**	**302**	P	**Pb**	**03 06 52.1**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.69**	**302**	P	**Pb**	**03 06 52.0**	**-1.1**
LXRA				AML	AML	03 07 11.9	
	comp=E,3193µm,0.3s						
LXRA				AML	AML	03 07 19.8	
	comp=N,3704µm,0.4s						
KEF4	**Livadi, Kephal**	**0.73**	**305**	P	**Pg**	**03 06 52.3**	**-1.0**
KEF4				S	**Sb**	**03 07 04.4**	**+0.7**
KEF4	**Livadi, Kephal**	**0.73**	**305**	P	**Pg**	**03 06 52.3**	**-1.0**
KEF4				S	**Sb**	**03 07 04.4**	**+0.7**
	comp=N,5µm,0.2s						
LAKA	**Lakka**	**0.75**	**57**	P	**Pg**	**03 06 53.0**	**-0.4**
LAKA				S	**Sb**	**03 07 05.5**	**+1.4**
LAKA				AML	AML	03 07 06.9	
	comp=N,4406µm,0.5s						
LAKA				AML	AML	03 07 08.7	
	comp=E,8738µm,0.8s						
LAKA	**Lakka**	**0.75**	**57**	P	**Pg**	**03 06 53.1**	**-0.4**
LAKA				S	**Sb**	**03 07 05.0**	**+0.9**
	comp=E,3µm,0.6s						
KEF3	**Kipouria, Keph**	**0.76**	**299**	P	**Pg**	**03 06 52.4**	**-1.3**
KEF3	**Kipouria, Keph**	**0.76**	**299**	P	**Pg**	**03 06 52.6**	**-1.1**
DMLN	**Damoulianata-K**	**0.76**	**303**	P	**Pb**	**03 06 53.6**	**-0.5**
DMLN	**Damoulianata-K**	**0.76**	**303**	P	**Pb**	**03 06 53.5**	**-0.6**
DMLN				S	**Sb**	**03 07 04.5**	**+0.1**
	comp=E,1µm,0.4s						
KLV	**Kalavryta, Ach**	**0.79**	**74**	P	**Pg**	**03 06 53.2**	**-1.2**
KLV				AML	AML	03 07 12.7	
	comp=E,941µm,0.4s						
KLV				AML	AML	03 07 14.2	
	comp=N,1473µm,0.5s						
KLV	**Kalavryta, Ach**	**0.79**	**74**	P	**Pg**	**03 06 53.4**	**-1.0**
FSK	**Fiskardo**	**0.80**	**322**	P	**Pb**	**03 06 53.9**	**-0.8**
FSK				S	**Sb**	**03 07 06.7**	**+1.3**
FSK				AML	AML	03 07 11.4	
	comp=N,755µm,0.4s						
FSK				AML	AML	03 07 16.1	
	comp=E,1398µm,0.2s						
EFP	**Efpalio**	**0.82**	**44**	P	**Pg**	**03 06 54.2**	**-0.7**
EFP				S	**Sb**	**03 07 07.0**	**+0.8**
EFP				AML	AML	03 07 10.7	
	comp=N,2102µm,0.4s						
EFP				AML	AML	03 07 12.4	
	comp=E,2014µm,0.5s						
ALIK	**Aliki, Aigiali**	**0.85**	**59**	P	**Pg**	**03 06 54.9**	**-0.5**
ALIK				S	**Sb**	**03 07 07.3**	**+0.4**
EVGI	**Lefkada island**	**0.89**	**332**	P	**Pg**	**03 06 55.0**	**-1.2**
EVGI				S	**Sb**	**03 07 08.5**	**+0.3**
EVGI	**Lefkada island**	**0.89**	**332**	P	**Pg**	**03 06 55.2**	**-1.0**
EVGI				S	**Sb**	**03 07 09.3**	**+1.1**
	comp=E,295nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.98**	**331**	P	**Pg**	**03 06 56.6**	**-1.3**
DRAG				S	**Sn**	**03 07 12.9**	**+0.7**
DRAG	**Dragano-Lefkad**	**0.98**	**331**	P	**Pg**	**03 06 56.5**	**-1.3**
DRAG				S	**Sb**	**03 07 11.7**	**+1.0**
TSLK	**Tsoukalades, L**	**1.07**	**337**	P	**Pg**	**03 06 58.4**	**-1.4**
TSLK				S	**Sn**	**03 07 15.6**	**+0.9**
TSLK				AML	AML	03 07 21.8	
	comp=N,2088µm,0.7s						
TSLK				AML	AML	03 07 24.4	
	comp=E,1116µm,0.8s						
TSLK	**Tsoukalades, L**	**1.07**	**337**	P	**Pg**	**03 06 58.5**	**-1.2**
TSLK				S	**Sn**	**03 07 15.6**	**+0.9**
	comp=E,792nm,0.6s						
THAL	**Thalero**	**1.19**	**80**	P	**Pg**	**03 07 00.8**	**-1.0**
THAL				S	**Sg**	**03 07 16.2**	**-1.1**
THAL				AML	AML	03 07 22.5	
	comp=N,2073µm,0.4s						
THAL				AML	AML	03 07 31.7	
	comp=E,2618µm,0.4s						
THAL	**Thalero**	**1.19**	**80**	P	**Pg**	**03 07 01.0**	**-0.8**
THAL				S	**Sb**	**03 07 18.0**	**+1.3**
	comp=E,145nm,0.4s						
EVR	**Evrytania**	**1.19**	**24**	P	**Pg**	**03 07 00.8**	**-1.0**
EVR				S	**Sb**	**03 07 17.6**	**+0.8**
EVR				AML	AML	03 07 23.1	
	comp=E,797µm,0.3s						
EVR				AML	AML	03 07 23.9	
	comp=N,793µm,0.6s						
EVR	**Evrytania**	**1.19**	**24**	P	**Pg**	**03 07 00.9**	**-1.0**
EVR				S	**Sn**	**03 07 18.9**	**+1.3**
	comp=N,445nm,0.4s						
DLFA	**Delphi**	**1.22**	**58**	P	**Pg**	**03 07 00.9**	**-1.5**
DLFA				S	**Sn**	**03 07 19.7**	**+1.5**
MAKR	**Makrakomi, Fth**	**1.39**	**32**	P	**Pb**	**03 07 05.0**	**0.0**
MAKR	**Makrakomi, Fth**	**1.39**	**32**	P	**Pb**	**03 07 04.9**	**-0.1**
MAKR				S	**Sn**	**03 07 24.7**	**+2.1**
	comp=N,718nm,0.4s						
AGG	**Agios Georgios**	**1.49**	**37**	P	**Pb**	**03 07 07.4**	**+0.7**
AGG				AML	AML	03 07 36.4	
	comp=E,340µm,0.4s						
AGG				AML	AML	03 07 37.8	
	comp=N,366µm,0.6s						
AGG	**Agios Georgios**	**1.49**	**37**	P	**Pn**	**03 07 05.9**	**+0.3**
EPID	**Epidavros**	**1.55**	**98**	P	**Pg**	**03 07 07.9**	**-0.9**
EPID				S	**Sg**	**03 07 29.3**	**+0.4**
ATAL	**Atalanti**	**1.68**	**59**	P	**Pb**	**03 07 09.4**	**-0.4**
ATAL				S	**Sg**	**03 07 32.0**	**-1.1**
ATAL				AML	AML	03 07 38.3	
	comp=E,263µm,0.6s						
ATAL				AML	AML	03 07 40.6	
	comp=N,398µm,0.5s						
ATAL	**Atalanti**	**1.68**	**59**	P	**Pb**	**03 07 09.4**	**-0.4**
ATAL				S	**Sg**	**03 07 32.6**	**-0.5**
	comp=N,165nm,0.6s						
VIL2	**Platees**	**1.69**	**76**	P	**Pb**	**03 07 10.1**	**+0.1**
VIL2				AML	AML	03 07 42.7	
	comp=N,335µm,0.4s						
VIL2				AML	AML	03 07 43.7	
	comp=E,529µm,0.6s						
VILL	**Villia**	**1.71**	**78**	P	**Pb**	**03 07 10.4**	**0.0**
VILL				S	**Sb**	**03 07 32.7**	**+0.8**
THL	**Klokotos Trika**	**1.85**	**20**	P	**Pn**	**03 07 10.9**	**+0.4**
THL				S	**Sb**	**03 07 36.4**	**+0.7**
	comp=E,110nm,0.6s						
ATHU	**Athens Univers**	**2.06**	**86**	P	**Pb**	**03 07 15.2**	**-1.1**
ATHU				AML	AML	03 07 49.4	
	comp=N,78µm,0.7s						
ATHU				AML	AML	03 07 52.7	
	comp=E,46µm,0.8s						
VLY	**Voula,Athens**	**2.06**	**89**	P	**Pb**	**03 07 15.4**	**-1.0**
VLY	**Voula,Athens**	**2.06**	**89**	P	**Pb**	**03 07 15.4**	**-1.0**
KPRO	**Kipourio**	**2.12**	**4**	P	**Pn**	**03 07 15.7**	**+1.4**
DION	**Dionisos Attik**	**2.19**	**83**	P	**Pb**	**03 07 17.8**	**-0.7**
DION				S	**Sb**	**03 07 46.0**	**+0.5**
DION				AML	AML	03 07 55.1	
	comp=E,468µm,0.5s						
DION				AML	AML	03 07 57.4	
	comp=N,276µm,0.6s						
DION	**Dionisos Attik**	**2.19**	**83**	P	**Pn**	**03 07 16.6**	**+1.4**
DION				S	**Sb**	**03 07 45.8**	**+0.3**
	comp=N,280nm,0.5s						
XOR	**Xorichti**	**2.19**	**45**	P	**Pn**	**03 07 16.2**	**+0.9**
LIT	**Litokhoron**	**2.48**	**24**	P	**Pn**	**03 07 19.5**	**+0.3**
OHR	**Ohrid**	**3.29**	**355**	*e*Pn	**Pb**	**03 07 37.6**	**+0.3**
STIP	**Stip**	**3.93**	**11**	*e*Pn	**Pn**	**03 07 42.3**	**+3.1**
BRTR	**Keskin Array B**	**9.91**	**75**	Pn	Pn	03 09 07.8	+6.5
	baz=266,slow=13,SNR=1.4						
	comp=N,0.3nm,0.6s						
FINES	**FINESS Array B**	**23.83**	**6**	P	**P**	**03 11 49.7**	**-1.9**
	comp=N,0.3nm,0.4s,baz=181,slow=9.0,SNR=5.1						
	comp=N,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**30.10**	**220**	P	**P**	**03 12 47.4**	**-1.1**
	comp=N,0.6nm,1.2s,baz=39,slow=8.8,SNR=2.5						
	comp=N,0.6nm,1.2s						
MKAR	**Makanchi Array**	**45.03**	**58**	P	**P**	**03 14 54.8**	**+0.4**
	comp=N,0.2nm,0.5s,baz=266,slow=8.2,SNR=2.4						
	comp=N,0.2nm,0.5s						

CRAAG ***09*** *03:09:52.0, 36°.36N×3°.52E, Ml2.9*

MDD ***09*** *03:09:53.8±0.9, 36°.25N×3°.51E, h8km±9km, Mb4.0/10, M_mb3.3/8, Error ellipse: s-maj=10.1km s-min=3.8km az=156.0*

ISC 09 03:09:52.6±1.3**, 36°.27N**±0°.06×**3°.57E**±0°.05**, h24**km±12km**, n13, σ1s.93**/22**, 9C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.15**	**225**	P	**Pb**	**03 09 57.4**	**-0.4**

AKET	**Djebel Ketaf**	**0.33**	**131**	P	**Pn**	**03 10 02.4**	**+0.3**
ABMS	**Boumerdes**	**0.49**	**351**	P	**Pb**	**03 10 01.4**	**-1.2**
EIBI	**Ibiza**	**3.27**	**328**	Pn	**Pn**	**03 10 44.1**	**+1.7**
EIBI				⇑*i*Vmb_V		03 10 47.2	
	394nm,SNR=1.3						
EIBI				Sn	**Sn**	**03 11 18.1**	**-2.5**
ETOS	**Mallorca**	**3.55**	**351**	Pn	**Pn**	**03 10 47.1**	**+0.9**
ETOS				⇑*i*Vmb_V		03 10 48.4	
	342nm,SNR=0.7						
ETOS				Sn	**Sn**	**03 11 26.9**	**-0.5**
EMUR	**La Murta**	**4.16**	**294**	Pn	**Pn**	**03 10 55.8**	**+1.2**
EMUR				⇑*i*Vmb_V		03 10 59.6	
	83nm,SNR=0.9						
EMUR				Sn	**Sn**	**03 11 41.7**	**-0.8**
ETOB	**Tobarra**	**4.71**	**302**	Pn	**Pn**	**03 11 04.1**	**+1.8**
ETOB				⇑*i*Vmb_V		03 11 08.1	
	46nm,SNR=0.4						
ETOB				Sn	**Sn**	**03 11 56.0**	**-0.3**
ECHE	**Chera**	**4.89**	**314**	Pn	**Pn**	**03 11 06.5**	**+1.9**
ECHE				⇑*i*Vmb_V		03 11 10.2	
	53nm,SNR=0.3						
ECHE				Sn	**Sn**	**03 11 58.6**	**-1.8**
EMOS	**Mosqueruela**	**5.18**	**323**	Pn	**Pn**	**03 11 10.6**	**+1.8**
EMOS				⇑*i*Vmb_V		03 11 10.9	
	201nm,SNR=1.0						
EMOS				Sn	**Sn**	**03 12 05.7**	**-2.2**
ERTA	**Horta de San J**	**5.33**	**333**	Pn	**Pn**	**03 11 13.0**	**+2.4**
ERTA				⇑*i*Vmb_V		03 11 17.4	
	73nm,SNR=0.4						
ERTA				Sn	**Sn**	**03 12 08.4**	**-2.8**
EQES	**Quesada**	**5.53**	**288**	Pn	**Pn**	**03 11 15.9**	**+2.4**
EQES				⇑*i*Vmb_V		03 11 18.1	
	62nm,SNR=0.6						
EQES				Sn	**Sn**	**03 12 14.6**	**-1.8**
VSL	**Villasalto**	**5.61**	**53**	Pn	**Pn**	**03 11 17.1**	**+2.5**
VSL				Sn	**Sn**	**03 12 18.0**	**-0.2**
EJON	**La Jonquera**	**6.20**	**355**	Pn	**Pn**	**03 11 25.2**	**+2.6**
EJON				⇑*i*Vmb_V		03 11 26.1	
	133nm,SNR=0.5						

*NOU **09** 03:50:58.9, 16°.92S×173°.82W, h135^{km}, MLv4.7/8, Tonga Islands*

*IDC **09** 03:51:00.6±8.8, 16°.34S×174°.02W, h164^{km}±217^{km}, mb3.8/3, mbtmp4.3/4, ML4.2/1, Error ellipse: s-maj=296.0km s-min=96.2km az=105.0*

ISC 09 03:50:56.1±1.1**, 16°.87S**±0°.10×**174°.1W**±0°.1**, h100^{km}, n6, σ1^{s}67**/7**, mb4.2**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.68**	**37**	P	**Pn**	**03 51 52.4**	**+1.3**
	26nm,0.3s,baz=198,slow=2.5,SNR=9.1						
AFI				S	**Sn**	**03 52 31.4**	**-2.2**
	234nm,0.5s,baz=60,slow=20,SNR=12						
	66nm,0.3s						
AFI	**Afiamalu**	**3.68**	**37**	P	**Pn**	**03 51 52.8**	**+1.7**
NIUE	**Niue**	**4.51**	**120**	P	**Pn**	**03 52 02.8**	**+0.7**
STKA	**Stephens Creek**	**42.76**	**241**	P	**P**	**03 58 44.2**	**+0.4**
	1.4nm,0.4s,baz=89,slow=11,SNR=4.2						
	1.4nm,0.4s						
WRA	**Warramunga Arr**	**48.90**	**258**	P	**P**	**03 59 31.4**	**-0.9**
	0.7nm,0.4s,baz=96,slow=7.0,SNR=20						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**49.06**	**253**	P	**P**	**03 59 33.0**	**-0.5**
	6.4nm,0.5s,baz=87,slow=8.8,SNR=107						
	6.4nm,0.5s						

*ISK **09** 03:57:19.9, 39°.94N×39°.85E, h5^{km}, ML4.0/25*

*DDA **09** 03:57:20.7±0.0, 39°.91N×39°.85E, h14^{km}, MW4.1*

*IDC **09** 03:57:22.8±0.8, 40°.09N×39°.66E, h0^{km}, mb3.4/7, mbtmp3.5/15, ML3.4/7, MS3.0/15, Error ellipse: s-maj=13.3km s-min=8.0km az=163.0*

ISC 09 03:57:21.5±1.0**, 39°.95N**±0°.02×**39°.83E**±0°.01**, h5^{km}**±8^{km}**, n94, σ1^{s}85**/128**, mb3.5**/6**, MS2.9**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUZM	**Uzumlu**	**0.26**	**203**	P	**Pg**	**03 57 26.2**	**-0.4**
EUZM				S	**Sg**	**03 57 30.4**	**+0.4**
EUZM				*i* AML	AML	03 57 32.0	
	comp=Z,8µm,0.6s						
ERZN	**Erzincan**	**0.37**	**193**	PG	**Pg**	**03 57 28.4**	**-0.2**
ERZN				SG	**Sg**	**03 57 34.1**	**+0.6**
BAYB	**BAYBURT**	**0.45**	**46**	P	**Pg**	**03 57 30.0**	**-0.3**
BAYB				S	**Sg**	**03 57 36.7**	**+0.6**
BAYB				*i* AML	AML	03 57 40.0	
	comp=Z,4µm,0.3s						
KELT	**Kelkit**	**0.49**	**295**	P	**Pb**	**03 57 31.2**	**-1.4**
KELT				S	**Sb**	**03 57 38.6**	**-1.5**
KELT				*i* AML	AML	03 57 40.0	
	comp=Z,4µm,1.0s						
BAYT	**Aydıntepe-Bayb**	**0.51**	**28**	PG	**Pg**	**03 57 31.0**	**-0.2**
BAYT				SG	**Sb**	**03 57 38.9**	**-1.8**
KOPT	**Kop Dagi**	**0.52**	**82**	P	**Pg**	**03 57 31.1**	**-0.3**
KOPT				S	**Sb**	**03 57 40.1**	**-0.9**
KOPT				*i* AML	AML	03 57 44.0	
	comp=Z,3µm,0.3s						
GUMT	**Gumushane**	**0.58**	**332**	PG	**Pg**	**03 57 32.8**	**+0.2**
YEDI	**Yedisu-Bingol**	**0.75**	**133**	PG	**Pg**	**03 57 34.9**	**-0.9**
REFA	**Refahiye_ERZN**	**0.82**	**268**	P	**Pg**	**03 57 36.9**	**-0.4**
REFA				S	**Sb**	**03 57 49.8**	**+0.1**
REFA				*i* AML	AML	03 58 05.0	
	comp=Z,371nm,0.6s						
TNCL	**Tunceli-Merkez**	**0.86**	**195**	P	**Pg**	**03 57 36.7**	**-1.3**
TNCL				S	**Sg**	**03 57 48.9**	**-0.2**
TNCL				*i* AML	AML	03 57 50.0	
	comp=Z,2µm,0.5s						
EMRE	**Erzurum,Aziziy**	**0.88**	**84**	P	**Pg**	**03 57 37.9**	**-0.5**
EMRE				S	**Sn**	**03 57 53.4**	**-0.6**
EMRE				*i* AML	AML	03 58 03.0	
	comp=Z,1µm,0.6s						
ALUC	**Giresun/Alucra**	**0.91**	**296**	P	**Pb**	**03 57 38.8**	**-0.9**
ALUC				S	**Sb**	**03 57 52.1**	**-0.1**
ALUC				*i* AML	AML	03 58 04.0	
	comp=Z,3µm,0.8s						
KRIK	**Erzurum-spir**	**0.93**	**65**	P	**Pg**	**03 57 35.2**	**-4.0**
KRIK				S	**Sg**	**03 57 49.7**	**-1.6**
ECAT	**Cat-ERZURUM**	**0.94**	**111**	P	**Pg**	**03 57 38.0**	**-1.6**
ECAT				S	**Sn**	**03 57 53.5**	**-2.0**
ECAT				*i* AML	AML	03 58 11.0	
	comp=Z,425nm,1.0s						
MACK	**Trabzon**	**1.00**	**357**	P	**Pg**	**03 57 40.2**	**-0.4**
MACK				S	**Sb**	**03 57 54.1**	**-0.6**
MACK				*i* AML	AML	03 57 58.0	
	comp=Z,2µm,0.2s						
KTUT	**Trabzon**	**1.04**	**357**	PG	**Pb**	**03 57 41.4**	**-0.6**
KTUT				SG	**Sb**	**03 57 55.9**	**0.0**
ILIC	**ilic-Erzincan**	**1.09**	**244**	PN	**Pg**	**03 57 41.3**	**-1.1**
BNGB	**Bingl**	**1.16**	**145**	PN	**Pg**	**03 57 42.3**	**-1.4**
KEMA	**Kemaliye**	**1.24**	**237**	P	**Pg**	**03 57 43.2**	**-1.9**
KEMA				S	**Sb**	**03 58 01.2**	**-0.4**
KOVA	**Elazig, Kovanc**	**1.24**	**181**	P	**Pg**	**03 57 43.9**	**-1.3**
KOVA				S	**Sg**	**03 58 00.3**	**-1.0**
SUSE	**Susehri**	**1.28**	**282**	P	**Pg**	**03 57 45.2**	**-0.7**
SUSE				S	**Sn**	**03 58 02.9**	**-0.8**
SUSE				*i* AML	AML	03 58 05.0	
	comp=Z,599nm,0.7s						
ESPY	**Espiye-Giresun**	**1.28**	**319**	PN	**Pb**	**03 57 45.8**	**-0.3**
CHAY	**Cayeli-Rize**	**1.33**	**31**	PN	**Pn**	**03 57 45.9**	**-0.7**
CHOM	**Cayeli-Rize**	**1.35**	**31**	PN	**Pg**	**03 57 46.6**	**-0.8**
SLHN	**Bingol, Solhan**	**1.35**	**137**	P	**Pn**	**03 57 45.7**	**-1.4**
SLHN				S	**Sn**	**03 58 05.1**	**-0.4**
SLHN				*i* AML	AML	03 58 12.0	
	comp=Z,630nm,0.8s						
ARPR	**Arapgir-MALATY**	**1.44**	**234**	PN	**Pn**	**03 57 47.9**	**-0.4**
VRTB	**Varto-Mus**	**1.48**	**121**	PN	**Pg**	**03 57 49.2**	**-0.7**
VRTB	**Varto-Mus**	**1.48**	**121**	P	**Pg**	**03 57 49.1**	**-0.7**
VRTB				S	**Sg**	**03 58 15.1**	**+6.0**
VRTB				*i* AML	AML	03 58 46.0	
	comp=Z,2µm,1.4s						
KOPR	**Koprukoy-ERZUR**	**1.55**	**88**	PN	**Pb**	**03 57 49.6**	**-1.2**
CUZAR	**Zara_SIVAS**	**1.59**	**269**	P	**Pb**	**03 57 50.3**	**-1.0**
CUZAR				S	**Sg**	**03 58 13.1**	**+0.7**
ELZG	**Elazig**	**1.59**	**205**	P	**Pn**	**03 57 49.8**	**-0.6**
ELZG				S	**Sg**	**03 58 13.3**	**+0.7**
HANI	**Diyarbakir_Han**	**1.59**	**164**	P	**Pb**	**03 57 50.0**	**-1.4**
HANI				S	**Sg**	**03 58 12.3**	**-0.3**
HOMI	**Horasan**	**1.60**	**86**	P	**Pn**	**03 57 50.0**	**-0.5**
HOMI				S	**Sg**	**03 58 18.1**	**+5.4**
HOMI				*i* AML	AML	03 58 41.0	
	comp=Z,614nm,1.5s						
SVRC	**Sivrice-ELAZID**	**1.62**	**195**	PN	**Pb**	**03 57 50.9**	**-1.0**
DDEM	**Demirkent**	**1.74**	**57**	P	**Pn**	**03 57 52.3**	**-0.1**
DDEM				S	**Sg**	**03 58 16.9**	**-0.6**
DDEM				*i* AML	AML	03 58 19.0	
	comp=Z,318nm,0.2s						
DBAD	**Bademkaya**	**1.78**	**52**	P	**Pb**	**03 57 53.0**	**-1.7**
DBAD				S	**Sg**	**03 58 17.6**	**-1.0**
MUSM	**Mu-Merkez**	**1.79**	**133**	P	**Pn**	**03 57 52.7**	**-0.4**
MUSM				S	**Sg**	**03 58 17.1**	**-1.7**
HEKM	**Malatya_Hekimh**	**1.80**	**234**	P	**Pb**	**03 57 53.9**	**-1.1**
HEKM				S	**Sg**	**03 58 20.9**	**+1.6**
CUKAN	**kangal_SIVAS**	**1.93**	**252**	P	**Pb**	**03 57 55.7**	**-1.5**
CUKAN				S	**Sg**	**03 58 28.2**	**+4.7**
PRSB	**Persembe-Ordu**	**1.95**	**307**	PN	**Pb**	**03 57 56.3**	**-1.1**
DAGI	**Agillar**	**1.95**	**54**	P	**Pb**	**03 57 56.2**	**-1.3**
DAGI				S	**Sg**	**03 58 22.8**	**-1.3**
DAGI				*i* AML	AML	03 58 32.0	
	comp=Z,251nm,0.5s						
MALT	**Malatya**	**1.96**	**214**	PN	**Pb**	**03 57 56.3**	**-1.4**
RSDY	**Resadiye-TOKAT**	**1.97**	**284**	PN	**Pn**	**03 57 56.1**	**+0.6**
DBOC	**Borcka**	**1.98**	**44**	P	**Pb**	**03 57 56.6**	**-1.3**
DBOC				*i* AML	AML	03 58 31.0	
	comp=Z,409nm,0.9s						
DYBB	**Diyarbakir**	**2.00**	**173**	PN	**Pb**	**03 57 56.5**	**-1.9**
SENK	**Senkaya-Erzuru**	**2.02**	**72**	PN	**Pn**	**03 57 56.5**	**+0.1**
DIYA	**Diyarbakir**	**2.03**	**174**	P	**Pb**	**03 57 57.2**	**-1.7**
DIYA				S	**Sg**	**03 58 27.7**	**+1.0**
EATA	**Eleskirt**	**2.05**	**91**	P	**Pb**	**03 57 59.0**	**-0.3**
EATA				S	**Sg**	**03 58 33.5**	**+6.3**
SVAN	**Silvan-Diyarba**	**2.08**	**149**	PN	**Pn**	**03 57 57.3**	**+0.2**
SVAN	**Silvan-Diyarba**	**2.08**	**149**	P	**Pn**	**03 57 57.4**	**+0.3**
SVAN				S	**Sb**	**03 58 25.5**	**-0.5**
BATM	**Batumi**	**2.18**	**40**	PN	**Pn**	**03 57 58.9**	**+0.6**
SVSK	**Karacayir**	**2.18**	**270**	PN	**Pn**	**03 57 59.2**	**+0.9**
GURO	**Guroymak-BITLI**	**2.20**	**129**	PN	**Pb**	**03 57 59.8**	**-2.1**
AKCD	**Akcadag**	**2.22**	**223**	P	**Pn**	**03 57 59.8**	**+0.7**
AKCD				S	**Sg**	**03 58 35.3**	**+2.6**
MLAZ	**Malazgirt-MUS**	**2.25**	**110**	PN	**Pn**	**03 57 59.9**	**+0.4**
DARE	**Darende-Malaty**	**2.28**	**234**	PN	**Pn**	**03 58 00.8**	**+0.9**
CUGUR	**Gurin_SVAS**	**2.33**	**239**	P	**Pb**	**03 58 03.0**	**-1.0**
CUGUR				S	**Sg**	**03 58 35.3**	**-1.0**
BTMN	**Batman**	**2.34**	**151**	P	**Pb**	**03 58 02.2**	**-1.9**
BLIS	**Bitlis-Merkez**	**2.34**	**130**	P	**Pb**	**03 58 01.7**	**-2.6**
AGRB	**Hanur-Agry**	**2.46**	**98**	PN	**Pn**	**03 58 02.7**	**+0.3**
ERBA	**Erbaa**	**2.46**	**288**	P	**Pb**	**03 58 04.9**	**-1.4**
ERBA				S	**Sg**	**03 58 39.4**	**-1.3**
CUAYA	**Sivas-Altinyay**	**2.48**	**255**	P	**Pb**	**03 58 06.2**	**-0.4**
CUAYA				S	**Sg**	**03 58 43.5**	**+2.4**
MAZI	**Mazidag**	**2.53**	**169**	PN	**Pn**	**03 58 03.9**	**+0.6**
TOKT	**Tokat**	**2.55**	**279**	PN	**Pn**	**03 58 04.4**	**+0.9**
KOTA	**Agri, Merkez-K**	**2.60**	**92**	P	**Pn**	**03 58 05.3**	**+1.0**
KOTA				S	**Sg**	**03 58 49.5**	**+4.5**
ELBS	**KAHRAMANMARAS**	**2.65**	**233**	P	**Pn**	**03 58 06.3**	**+1.3**
EPOS	**Posof**	**2.69**	**54**	P	**Pn**	**03 58 06.3**	**+0.7**
EPOS				S	**Sg**	**03 58 45.1**	**-3.0**
MARD	**Mardin**	**2.73**	**164**	P	**Pn**	**03 58 05.5**	**-0.6**
EAK	**Akyaka**	**2.98**	**74**	P	**Pg**	**03 58 21.8**	**+3.2**
SAMS	**Samsun-Alacam**	**3.11**	**298**	P	**Pb**	**03 58 14.5**	**-2.7**
SAMS				S	**Sg**	**03 58 58.6**	**-2.8**
GNI	**Garni**	**3.77**	**85**	Pn	**Pb**	**03 58 28.0**	**-0.7**
	2.7nm,0.5s,baz=3.2,slow=18,SNR=3.1						
GNI				Sn	**Sb**	**03 59 12.4**	**-2.3**
	1.5nm,0.3s,baz=153,slow=19,SNR=2.1						
GNI				LR	LR	04 00 22.5	
	comp=Z,231nm,21.3s,baz=270,slow=46						
KBZ	**Khabaz**	**4.42**	**30**	Pn	**Pn**	**03 58 31.5**	**+2.4**
	0.5nm,0.3s,baz=221,slow=12,SNR=10						
KBZ				Sn	**Sn**	**03 59 22.8**	**+1.9**
	0.4nm,0.3s,baz=272,slow=9.6,SNR=3.7						
KBZ				LR	LR	04 00 34.4	
	comp=Z,246nm,18.6s,baz=180,slow=44						
	3.2nm,0.8s						
KVAR	**Kislovodsk Arr**	**4.54**	**27**	Pn	**Pn**	**03 58 34.0**	**+3.2**
	baz=229,slow=15						
KVAR				Sn	**Sn**	**03 59 24.0**	**-0.1**
	baz=83,slow=21						
KVAR				LR	LR	04 00 34.7	
	comp=Z,237nm,19.4s,baz=88,slow=43						
	3.9nm,0.4s						
BRTR	**Keskin Array B**	**4.77**	**269**	Pn	**Pn**	**03 58 35.8**	**+1.6**
	0.4nm,0.3s,baz=94,slow=14,SNR=21						
BRTR				Lg	Lg	03 59 50.3	
	baz=85,slow=32						
BRTR				LR	LR	04 00 56.2	
	comp=Z,95nm,21.5s,baz=98,slow=46						
	3.2nm,0.7s						
MMAI	**Mount Meron Ar**	**7.78**	**209**	Lg	Lg	04 01 32.2	
	baz=40,slow=38						
ASF	**Jabal al Asfar**	**8.11**	**198**	Pn	**Pn**	**03 59 21.4**	**+1.5**
	0.3nm,0.3s,baz=337,slow=13,SNR=2.0						
ASF				Lg	Lg	04 01 42.2	
	0.1nm,0.3s,baz=355,slow=20,SNR=1.7						
	1.0nm,0.4s						
EIL	**Elat**	**11.01**	**203**	LR	LR	04 04 20.0	
	comp=Z,101nm,19.2s,baz=360,slow=38						
MLR	**Muntele Rosu**	**11.62**	**303**	Pn	**Pn**	**04 00 09.7**	**+1.8**
	0.2nm,0.3s,baz=177,slow=18,SNR=3.9						
	1.2nm,0.6s						
IDI	**Anoyia**	**12.72**	**253**	LR	LR	04 05 04.1	
	comp=Z,26nm,19.1s,baz=78,slow=36						
AKASG	**Malin Array Be**	**13.07**	**329**	Pn	**Pn**	**04 00 26.2**	**-1.5**
	0.7nm,0.3s,baz=136,slow=13,SNR=8.2						
AKASG				Sn	**Sn**	**04 02 46.2**	**-7.2**
	1.1nm,0.3s,baz=142,slow=23,SNR=2.4						
	1.3nm,0.5s						
AKTO	**Aktyubinsk**	**16.52**	**45**	Pn	**P**	**04 01 14.3**	**-2.1**
	0.1nm,0.3s,baz=246,slow=14,SNR=2.2						
AKTO				LR	LR	04 09 39.1	
	comp=Z,35nm,18.6s,baz=258,slow=45						
	0.8nm,0.5s						
ARU	**Arti**	**20.57**	**31**	LR	LR	04 11 22.1	
	comp=Z,44nm,20.9s,baz=226,slow=41						
GERES	**GERESS Array B**	**20.60**	**304**	P	**P**	**04 02 01.6**	**+0.3**
	0.2nm,0.5s,baz=118,slow=12,SNR=2.1						
GERES				LR	LR	04 10 32.3	
	comp=Z,28nm,20.0s,baz=80,slow=39						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**23.12**	**343**	P	**P**	**04 02 30.0**	**+2.0**
	1.7nm,0.8s,baz=148,slow=11,SNR=6.0						
FINES				LR	LR	04 13 26.6	
	comp=Z,28nm,18.3s,baz=162,slow=42						
	1.7nm,0.8s						
HFS	**Hagfors**	**25.96**	**330**	LR	LR	04 14 56.7	
	comp=Z,41nm,18.7s,baz=116,slow=41						
AAK	**Ala-Archa**	**26.07**	**73**	LR	LR	04 14 18.7	
	comp=Z,39nm,18.2s,baz=292,slow=39						
NOA	**NORSAR Array B**	**27.49**	**330**	LR	LR	04 15 31.8	
	comp=Z,19nm,20.7s,baz=120,slow=40						
KURBB	**Kurchatov Arra**	**28.93**	**55**	P	**P**	**04 03 22.9**	**+1.5**
	0.6nm,0.8s,baz=268,slow=9.5,SNR=4.6						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**31.31**	**63**	P	**P**	**04 03 44.8**	**+2.4**
	0.3nm,0.8s,baz=255,slow=10,SNR=2.0						
	0.3nm,0.8s						
ESDC	**Sonseca Array**	**33.39**	**284**	P	**P**	**04 04 01.2**	**+0.4**
	1.4nm,1.1s,baz=61,slow=7.9,SNR=4.7						
	1.4nm,1.1s						
NRIK	**Noril'sk**	**38.61**	**25**	LR	LR	04 22 24.5	
	comp=Z,43nm,20.6s,baz=256,slow=39						
TORD	**Torodi Ar. Bea**	**42.81**	**242**	P	**P**	**04 05 22.6**	**+2.2**
	0.8nm,1.0s,baz=54,slow=7.3,SNR=3.7						
	0.8nm,1.0s						
KSRS	**Korea Array**	**65.94**	**61**	LR	LR	04 40 18.9	
	comp=Z,24nm,18.0s,baz=200,slow=39						
YKA	**Yellowknife Ar**	**75.85**	**348**	P	**P**	**04 09 09.7**	**+1.4**
	0.4nm,0.8s,baz=31,slow=5.1,SNR=2.9						
	0.4nm,0.8s						

*IDC **09** 04:10:54.5±3.5, 51°.20N×178°.31W, h0^{km}, mb3.1/4, mbtmp3.3/5, ML2.0/1, MS2.8/1, Error ellipse: s-maj=98.3km s-min=30.6km az=177.0*

*AEIC **09** 04:11:01±2.1, 51°.30N±0°.09×177°.95W±0°.10, h37^{km}±9^{km}, Error ellipse: s-maj=13.0km s-min=8.7km az=185.0*

*NEIC **09** 04:11:02.2±1.7, 51°.36N±0°.10×177°.98W±0°.09, h44^{km}±16^{km}, mb3.6/30, ML3.2(AEIC), Error ellipse: s-maj=14.4km s-min=7.8km az=172.0*

ISC 09 04:11:00.9±1.3**, 51°.3N**±0°.1×**178°.04W**±0°.05**, h50^{km}, n60, σ1^{s}23**/53**, mb3.5**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAFL	**Tanaga Flats**	**0.50**	**10**		**Pn**	**04 11 12.0**	**-0.2**
TAPA	**Tanaga Point A**	**0.57**	**14**		**Pn**	**04 11 13.0**	**-0.1**
TASE	**Tanaga Southea**	**0.57**	**0**		**Pn**	**04 11 13.4**	**+0.3**
TAFP	**Tanaga Falls P**	**0.64**	**3**		**Pn**	**04 11 14.1**	**+0.2**
GALAA	**Gareloi Lava P**	**0.68**	**318**		**Pn**	**04 11 15.2**	**+0.8**
GAEA	**Gareloi East**	**0.68**	**320**		**Pn**	**04 11 15.3**	**+0.8**
KIMD	**Kanaga Island**	**0.71**	**45**		**Pn**	**04 11 14.3**	**-0.4**
GASW	**Gareloi Southw**	**0.73**	**316**		**Pn**	**04 11 15.6**	**+0.6**
KIWB	**Kanaga Island**	**0.81**	**43**		**Pn**	**04 11 15.7**	**-0.4**
KIWB				Sn	**Sn**	**04 11 27.3**	**+0.1**
KIKV	**Kanaga Island**	**0.82**	**41**		**Pn**	**04 11 16.1**	**-0.2**
KICM	**Kanaga Island**	**0.84**	**38**		**Pn**	**04 11 16.7**	**+0.2**
ADK	**Adak**	**1.05**	**53**		**Pn**	**04 11 18.8**	**-0.5**
ADK				Sn	**Sn**	**04 11 32.2**	**-0.6**
GSTD	**Great Sitkin T**	**1.42**	**55**		**Pn**	**04 11 24.6**	**+0.2**
GSMY	**Great Sitkin M**	**1.46**	**57**		**Pn**	**04 11 25.4**	**+0.6**
GSTR	**Great Sitkin T**	**1.49**	**55**		**Pn**	**04 11 25.8**	**+0.5**
ATKA	**Atka Island**	**2.57**	**67**		**Pn**	**04 11 40.4**	**+0.4**
KOKL	**Mount Kliuchef**	**2.61**	**64**		**Pn**	**04 11 42.2**	**+1.6**
UNV	**Unalaska Valle**	**7.49**	**65**	Pn	**Pn**	**04 12 46.7**	**-0.8**
PETK	**Petropavlovsk-**	**14.98**	**287**	Pn	**Pn**	**04 14 27.0**	**-2.2**
	baz=92,slow=21,SNR=3.6						
	5.0nm,0.9s						
N18K	**Kilae Creek**	**15.50**	**44**	Pn	**Pn**	**04 14 33.9**	**-2.0**
N18K				IAmb	IAmb	04 14 55.1	
	comp=Z,6.6nm,1.1s						
OHAK	**Old Harbor**	**15.60**	**58**	Pn	**Pn**	**04 14 34.6**	**-2.5**
SVW2	**Sparrevohn**	**15.83**	**43**	P	**P**	**04 14 43.6**	**+0.4**
SVW2				IAmb	IAmb	04 14 58.3	
	comp=Z,6.1nm,1.2s						
Q19K	**Cape Douglas,**	**15.86**	**52**	P	**P**	**04 14 43.5**	**0.0**
KDAK	**Kodiak Island**	**16.09**	**56**	Pn	**Pn**	**04 14 41.7**	**-1.7**
TTA	**Tatalina**	**16.62**	**37**	P	**P**	**04 14 52.0**	**0.0**
TTA				IAmb	IAmb	04 15 08.9	
	comp=Z,4.8nm,1.5s						
L19K	**White Mountain**	**16.67**	**40**	P	**P**	**04 14 53.5**	**+1.1**
L19K				IAmb	IAmb	04 15 13.2	
	comp=Z,6.5nm,1.4s						
CNPM	**China Poot**	**17.22**	**51**	P	**P**	**04 14 58.1**	**-0.5**
K20K	**Telida**	**17.59**	**37**	P	**P**	**04 15 02.8**	**+0.2**
SEW	**Seward**	**18.25**	**50**	P	**P**	**04 15 08.9**	**-1.0**
CAST	**Castle Rocks**	**18.39**	**39**	P	**Pn**	**04 15 12.8**	**+1.0**
KTH	**Kantishna Hill**	**18.91**	**39**	P	**P**	**04 15 16.7**	**-0.5**
KTH				IAmb	IAmb	04 15 33.2	
	comp=Z,6.4nm,1.4s						
TRF	**Thorofare Moun**	**19.11**	**40**	P	**P**	**04 15 19.7**	**+0.2**
TRF				IAmb	IAmb	04 15 37.0	
	comp=Z,2.9nm,1.1s						
SML	**Sawmill**	**19.30**	**45**	P	**Pn**	**04 15 23.2**	**+0.4**
SML				IAmb	IAmb	04 15 26.6	
	comp=Z,13nm,1.4s						
MA2	**Magadan**	**19.40**	**307**	LR	LR	04 22 52.1	
	comp=Z,27nm,18.4s,baz=114,slow=37						
GLI	**Glacier Island**	**19.59**	**49**	P	**P**	**04 15 23.9**	**-0.6**
GLI				IAmb	IAmb	04 15 31.0	
	comp=Z,5.0nm,0.8s						
RND	**Reindeer**	**19.68**	**41**	P	**P**	**04 15 25.7**	**+0.2**
RND				IAmb	IAmb	04 15 48.5	
	comp=Z,3.7nm,1.2s						
SCM	**Sheep Creek Mo**	**19.76**	**46**	P	**P**	**04 15 23.3**	**-3.1**
FID	**Port Fidalgo**	**19.85**	**49**	P	**P**	**04 15 25.2**	**-2.1**
DHY	**Denali Highway**	**20.16**	**42**	P	**P**	**04 15 30.7**	**-0.2**
DHY				IAmb	IAmb	04 15 32.4	
	comp=Z,3.0nm,0.6s						
I23K	**Minto, Yukon-K**	**20.28**	**36**	P	Pn	04 15 33.5	-0.8
PAX	**Paxson**	**20.94**	**43**	P	Pn	04 15 40.8	-1.5
PAX				IAmb	IAmb	04 15 54.6	
	comp=Z,3.2nm,1.3s						
ILAR	**Eielson Array**	**21.04**	**38**	P	**P**	**04 15 40.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=236,slow=9.7,SNR=1.6						
	comp=Z,0.2nm,0.6s						
H24K	**Noodor Dome**	**21.15**	**35**	P	**P**	**04 15 41.9**	**+0.4**
GLB	**Gilahina Butte**	**21.27**	**48**	P	**P**	**04 15 43.8**	**+1.0**
GLB				IAmb	IAmb	04 16 07.5	
	comp=Z,4.9nm,1.2s						
RIDG	**Independent Ri**	**21.46**	**42**	P	**P**	**04 15 42.6**	**-2.2**
RIDG				IAmb	IAmb	04 15 59.1	
	comp=Z,1.6nm,0.7s						
J25K	**Salcha River,**	**21.57**	**39**	P	**P**	**04 15 46.1**	**+0.1**
SCRK	**Sand Creek**	**21.90**	**41**	P	**P**	**04 15 47.0**	**-2.5**
TOLK	**Toolik Lake Re**	**22.15**	**28**	P	**P**	**04 15 53.8**	**+1.7**
TOLK				IAmb	IAmb	04 15 60.0	
	comp=Z,3.0nm,1.3s						
M27K	**Edge Creek, AK**	**22.37**	**46**	P	**P**	**04 15 54.6**	**0.0**
M27K				IAmb	IAmb	04 15 56.9	
	comp=Z,3.0nm,1.1s						
EGAK	**Eagle**	**23.33**	**41**	P	**P**	**04 16 02.3**	**-1.9**
EGAK				IAmb	IAmb	04 16 23.1	
	comp=Z,6.9nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**33.63**	**206**	T	T	04 54 15.3	
	baz=17,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**33.64**	**206**	T	T	04 54 13.9	
	baz=17,slow=76,SNR=17						
H11N1	**WAKE ISLAND Hy**	**33.65**	**206**	T	T	04 54 16.7	
	baz=17,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**34.85**	**206**	T	T	04 55 00.1	
	baz=17,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**34.86**	**206**	T	T	04 54 58.9	
	baz=17,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**34.87**	**206**	T	T	04 54 56.5	
	baz=17,slow=76,SNR=8.8						
YKA	**Yellowknife Ar**	**34.97**	**46**	P	**P**	**04 17 50.0**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=288,slow=10,SNR=2.3						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**34.97**	**46**	P	**P**	**04 17 49.9**	**+2.2**
PDAR	**Pinedale Array**	**45.89**	**73**	P	**P**	**04 19 19.8**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=308,slow=4.4,SNR=3.8						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.48**	**309**	P	**P**	**04 21 04.7**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=39,slow=5.0,SNR=1.7						
	comp=Z,0.1nm,0.4s						

*DDA **09** 04:16:51.5±0.0, 39°.90N×39°.87E, h7^{km}±2^{km}, ML1.8*

*ISK **09** 04:16:51.8, 39°.94N×39°.83E, h11^{km}, ML2.5/4*

ISC 09 04:16:51.6±1.0**, 39°.92N**±0°.02×**39°.88E**±0°.03**, h12^{km}**±9^{km}**, n17, σ1^{s}16**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUZM	**Uzumlu**	**0.25**	**214**	P	**Pg**	**04 16 57.3**	**+0.3**
EUZM				S	**Sg**	**04 17 00.6**	**0.0**
EUZM				*i* AML	AML	04 17 02.0	
	comp=E,180nm,0.7s						
ERZN	**Erzincan**	**0.35**	**200**	PG	**Pb**	**04 16 59.6**	**-0.3**
ERZN				SG	**Sb**	**04 17 05.3**	**-0.1**
BAYB	**BAYBURT**	**0.45**	**40**	P	**Pg**	**04 17 01.1**	**+0.5**
BAYB				S	**Sg**	**04 17 07.3**	**+0.7**
BAYB				*i* AML	AML	04 17 08.0	
	comp=E,86nm,0.5s						
BAYB				*i* AML	AML	04 17 11.0	
	comp=N,73nm,0.6s						
KOPT	**Kop Dagi**	**0.48**	**78**	P	**Pb**	**04 17 02.3**	**+0.1**
KOPT				S	**Sn**	**04 17 12.6**	**+4.8**
KOPT				*i* AML	AML	04 17 13.0	
	comp=E,64nm,0.6s						
KOPT				*i* AML	AML	04 17 15.0	
	comp=N,66nm,0.5s						
BAYT	**Aydıntepe-Bayb**	**0.52**	**23**	PG	**Pb**	**04 17 02.6**	**-0.1**
BAYT				SG	**Sb**	**04 17 10.0**	**-0.2**
KELT	**Kelkit**	**0.53**	**296**	P	**Pb**	**04 17 02.4**	**-0.6**
KELT				S	**Sb**	**04 17 09.8**	**-1.0**
KELT				*i* AML	AML	04 17 12.0	
	comp=N,50nm,0.4s						
YEDI	**Yedisu-Bingol**	**0.70**	**133**	PG	**Pb**	**04 17 06.1**	**+0.3**
TNCL	**Tunceli-Merkez**	**0.84**	**198**	P	**Pg**	**04 17 07.3**	**-0.6**
TNCL				S	**Sb**	**04 17 19.5**	**0.0**
TNCL				*i* AML	AML	04 17 21.0	
	comp=Z,25nm,0.7s						
TNCL				*i* AML	AML	04 17 24.0	
	comp=E,34nm,0.3s						
KRIK	**Erzurum-spir**	**0.91**	**62**	P	**Pg**	**04 17 06.6**	**-2.6**
KRIK				S	**Sg**	**04 17 21.1**	**+0.1**
ALUC	**Giresun/Alucra**	**0.95**	**297**	P	**Pb**	**04 17 10.1**	**0.0**
ALUC				S	**Sb**	**04 17 23.1**	**+0.3**
ALUC				*i* AML	AML	04 17 24.0	
	comp=N,24nm,0.3s						
ALUC				*i* AML	AML	04 17 26.0	
	comp=E,37nm,0.4s						
KTUT	**Trabzon**	**1.07**	**355**	PG	**Pb**	**04 17 12.5**	**+0.4**
KTUT				SG	**Sb**	**04 17 26.6**	**+0.6**
KEMA	**Kemaliye**	**1.25**	**239**	P	**Pg**	**04 17 15.6**	**-0.1**
KEMA				S	**Sg**	**04 17 31.5**	**-0.6**
SUSE	**Susehri**	**1.32**	**283**	P	**Pb**	**04 17 16.3**	**-0.1**
SUSE				S	**Sn**	**04 17 34.8**	**+1.2**
ESPY	**Espiye-Giresun**	**1.33**	**319**	PN	**Pb**	**04 17 16.4**	**-0.1**
ESPY				SN	**Sg**	**04 17 34.1**	**-0.4**

CHOM	**Cayeli-Rize**	**1.36**	**29**	PN	**Pb**	**04 17 17.3**	**+0.4**
CHOM				SN	**Sg**	**04 17 35.6**	**+0.3**
ELZG	**Elazig**	**1.58**	**206**	P	**Pb**	**04 17 21.1**	**+0.2**
ELZG				S	**Sg**	**04 17 43.6**	**+1.1**
ELZG				*i* AML	AML	04 17 47.0	
	comp=E,14nm,0.6s						
DBAD	**Bademkaya**	**1.77**	**51**	P	**Pb**	**04 17 24.2**	**+0.2**
DBAD				S	**Sb**	**04 17 47.7**	**+1.5**

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*DJA **09** 04:21:15.9±0.3, 9°S±4°×11°8E±°, h107km±4km, M4.8/26, mb5.0/20, mB5.2/9, MLv5.0/26, Mw(mB)4.5/9*

*IDC **09** 04:21:16.2±0.6, 8°.64S×117°.57E, h124km±4km, mb4.1/17, mbtmp4.6/21, MS3.1/8, Error ellipse: s-maj=14.3km s-min=9.4km az=65.0*

*NEIC **09** 04:21:16.9±2.4, 8°.76S±0°.07×117°.59E±0°.07, h117km±4km, mb4.8/44, Error ellipse: s-maj=10.4km s-min=9.4km az=185.0*

ISC 09 04:21:16.8±0.3**, 8°.76S**±0°.04×**117°.60E**±0°.05**, h129km, n198, σ1^{s}60**/208**, mb4.7**/42**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.19**	**111**	P	**Pn**	**04 21 32.8**	**-1.6**
PLAI				S	**Sn**	**04 21 44.2**	**-3.6**
PLAI	**Plampang**	**0.19**	**111**	P	**Pn**	**04 21 32.8**	**-1.6**
DNP	**Denpasar**	**2.36**	**272**	P	**Pn**	**04 21 54.8**	**-0.4**
IGBI	**Denpasar**	**2.43**	**268**	P	**Pn**	**04 21 55.0**	**-1.0**
SRBI	**Singaraja**	**2.46**	**286**	P	**Pn**	**04 21 55.7**	**-0.6**
JAGI	**Jajag, Banyuwa**	**3.42**	**275**	Pn	**Pn**	**04 22 07.6**	**-1.3**
JAGI	**Jajag, Banyuwa**	**3.42**	**275**	P	**Pn**	**04 22 06.9**	**-2.0**
JAGI	**Jajag, Banyuwa**	**3.42**	**275**	P	**Pn**	**04 22 07.9**	**-1.0**
ABJI	**Asem Bagus**	**3.47**	**286**	P	**Pn**	**04 22 10.3**	**+0.9**
BSSI	**Bau Bau, Buton**	**3.87**	**48**	P	**Pn**	**04 22 15.0**	**+0.2**
BSSI				S	**Sn**	**04 22 58.7**	**-1.1**
KMMI	**Kalianget**	**3.98**	**295**	P	**Pn**	**04 22 16.6**	**+0.4**
BKSI	**Bulukumba**	**4.23**	**36**	P	**Pn**	**04 22 20.2**	**+0.6**
KAPI	**Kappang**	**4.29**	**30**	P	**Pn**	**04 22 19.4**	**-0.9**
	22nm,0.4s,baz=198,slow=7.2,SNR=25						
KAPI				S	**Sn**	**04 23 07.5**	**-2.3**
	95nm,0.5s,baz=187,slow=17,SNR=16						
KAPI	**Kappang**	**4.29**	**30**	Pn	**Pn**	**04 22 20.8**	**+0.4**
KAPI	**Kappang**	**4.29**	**30**	P	**Pn**	**04 22 22.2**	**+1.8**
MMRI	**Maumere**	**4.59**	**89**	Pn	**Pn**	**04 22 23.7**	**-0.7**
MMRI	**Maumere**	**4.59**	**89**	P	**Pn**	**04 22 23.6**	**-0.7**
MMRI	**Maumere**	**4.59**	**89**	P	**Pn**	**04 22 24.5**	**+0.2**
BNSI	**Bone**	**5.00**	**30**	P	**Pn**	**04 22 32.1**	**+2.3**
	0.9nm1µm113nm,0.7s						
SPSI	**Sidrap Palu**	**5.23**	**24**	P	**Pn**	**04 22 33.7**	**+0.8**
	0.5nm864nm44nm,0.7s						
GRJI	**Gresik**	**5.39**	**289**	P	**Pn**	**04 22 36.2**	**+1.1**
	2.6nm8µm836nm,0.6s						
BWJI	**Bawean**	**5.69**	**300**	P	**Pn**	**04 22 36.6**	**-2.5**
	1.3nm262nm,0.6s						
PWJI	**Pagerwojo**	**5.78**	**277**	P	**Pn**	**04 22 37.0**	**-3.3**
	1.1nm373nm,0.6s						
BBSI	**Bau Bau**	**5.91**	**57**	P	**Pn**	**04 22 43.8**	**+1.7**
	0.2nm47nm,1.2s						
BBKI	**Banjar Baru**	**5.93**	**332**	P	**Pn**	**04 22 42.0**	**-0.4**
TBJI	**Tambak Boyo**	**6.02**	**288**	P	**Pn**	**04 22 44.4**	**+0.9**
	1.5nm3µm497nm,0.7s						
TTSI	**Tana Toraja**	**6.09**	**21**	P	**Pn**	**04 22 47.2**	**+2.7**
	0.3nm701nm38nm,0.6s						
BATI	**Baumata**	**6.15**	**104**	P	**Pn**	**04 22 44.2**	**-1.2**
	658nm,0.5s,baz=272,slow=1.1,SNR=76						
BATI				S	**Sn**	**04 23 50.4**	**-4.1**
	445nm,0.6s,baz=22,slow=20,SNR=6.4						
BATI	**Baumata**	**6.15**	**104**	P	**Pn**	**04 22 44.0**	**-1.4**
	1.7nm5µm490nm,0.5s						
PCJI	**Pacitan**	**6.38**	**275**	P	**Pn**	**04 22 46.8**	**-1.6**
	1.1nm311nm,0.9s						
WOJI	**Wonogiri, Jawa**	**6.67**	**277**	P	**Pn**	**04 22 51.2**	**-1.1**
	1.2nm7µm105nm,0.6s						
UWJI	**Ujung Watu**	**6.99**	**289**	P	**Pn**	**04 22 55.3**	**-1.4**
	0.7nm225nm,0.8s						
UGM	**Wanagama**	**7.05**	**276**	Pn	**Pn**	**04 22 55.9**	**-1.6**
UGM	**Wanagama**	**7.05**	**276**	P	**Pn**	**04 22 55.1**	**-2.4**
	1.7nm294nm,0.6s						
UGM	**Wanagama**	**7.05**	**276**	P	**Pn**	**04 22 59.7**	**+2.2**
YOGI	**Yogyakarta**	**7.29**	**277**	P	**Pn**	**04 23 00.0**	**-0.7**
	0.8nm149nm,0.7s						
SMRI	**Semarang**	**7.29**	**283**	Pn	**Pn**	**04 23 01.7**	**+1.0**
SMRI	**Semarang**	**7.29**	**283**	P	**Pn**	**04 22 59.7**	**-1.0**
	0.8nm179nm,0.7s						
SMRI	**Semarang**	**7.29**	**283**	P	**Pn**	**04 23 02.4**	**+1.7**
SMKI	**Samarinda**	**8.27**	**357**	P	**Pn**	**04 23 13.9**	**0.0**
	55nm,0.5s						
KPJI	**Karang Pucung**	**8.70**	**279**	P	**Pn**	**04 23 17.3**	**-2.4**
	134nm,0.7s						
LEM	**Lembang**	**10.07**	**280**	P	**Pn**	**04 23 37.7**	**-0.6**
	38nm,0.5s,baz=98,slow=23,SNR=3.3						
LEM	**Lembang**	**10.07**	**280**	P	**Pn**	**04 23 38.2**	**-0.1**
	36nm,0.7s						
CNJI	**Cibinong**	**10.47**	**277**	P	**Pn**	**04 23 40.1**	**-3.4**
	94nm,0.6s						
SANI	**Sanana**	**10.68**	**52**	P	**Pn**	**04 23 48.7**	**+2.4**
	36nm,1.1s						
SANI	**Sanana**	**10.68**	**52**	P	**Pn**	**04 23 49.7**	**+3.4**
TPI	**Tanjungpandan**	**11.55**	**300**	P	**Pn**	**04 23 56.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**12.13**	**141**	P	**Pn**	**04 24 02.9**	**-2.6**
	20nm,0.7s,baz=316,slow=9.0,SNR=74						
FITZ				S	Sn	04 26 09.7	-10
	26nm,0.4s,baz=300,slow=20,SNR=13						
FITZ				LR	LR	04 29 37.0	
	comp=Z,73nm,18.8s,baz=318,slow=41						
FITZ	**Fitzroy Crossi**	**12.13**	**141**		**Pn**	**04 24 02.4**	**-3.1**
MBWA	**Marble Bar**	**12.50**	**171**	Pn	**Pn**	**04 24 07.5**	**-2.7**
KNRA	**Kununurra**	**12.89**	**123**	Pn	**Pn**	**04 24 13.7**	**-1.7**
KNRA	**Kununurra**	**12.89**	**123**	P	**Pn**	**04 24 14.2**	**-1.2**
PSA00	**Pilbara Seismi**	**12.92**	**171**	Pn	**Pn**	**04 24 13.4**	**-2.3**
PSA00	**Pilbara Seismi**	**12.92**	**171**	Pn	**Pn**	**04 24 11.7**	**-4.0**
MTN	**Manton Dam**	**13.90**	**108**	Pn	**Pn**	**04 24 25.4**	**-2.9**
GIRL	**Giralia**	**14.18**	**193**	Pn	**Pn**	**04 24 30.5**	**-1.4**
KDU	**Kakadu**	**15.12**	**106**	P	**Pn**	**04 24 42.8**	**-1.0**
MNAI	**Manna**	**15.19**	**286**		**Pn**	**04 24 45.9**	**+1.2**
FAKI	**Fak Fak**	**15.68**	**69**	Pn	**Pn**	**04 24 49.4**	**-1.3**
FAKI				IAmb	IAmb	04 25 00.3	
	comp=Z,18nm,0.6s						
FAKI	**Fak Fak**	**15.68**	**69**	P	**Pn**	**04 24 52.0**	**+1.2**
SIJI	**Sorong**	**15.70**	**61**	P	**Pn**	**04 24 49.0**	**-2.0**
	comp=Z,6.2nm,0.4s,baz=216,slow=19,SNR=2.4						
SIJI				S	**Sn**	**04 27 45.3**	**-0.2**
	comp=Z,4.6nm,0.3s,baz=235,slow=22,SNR=1.6						
WRKA	**Warakurna**	**19.13**	**149**	P	**P**	**04 25 30.8**	**+0.8**
WB0	**Warramunga Arr**	**19.59**	**126**	P	**P**	**04 25 35.2**	**+0.2**
WRA	**Warramunga Arr**	**19.64**	**126**	P	**P**	**04 25 35.7**	**+0.2**
	comp=Z,46nm,0.7s,baz=300,slow=12,SNR=706						
WRA				S	**S**	**04 29 04.6**	**-5.7**
	comp=Z,11nm,0.9s,baz=297,slow=24,SNR=7.0						
WRA	**Warramunga Arr**	**19.64**	**126**	P	**P**	**04 25 35.5**	**-0.1**
WRAB	**Tennant Creek**	**19.64**	**126**	P	**P**	**04 25 36.0**	**+0.4**
WRAB				IAmb	IAmb	04 25 36.6	
	comp=Z,49nm,0.8s						
WRAB	**Tennant Creek**	**19.64**	**126**	P	**P**	**04 25 36.2**	**+0.6**
WB2	**Warramunga Arr**	**19.65**	**126**	P	**P**	**04 25 36.0**	**+0.3**
WB2				IAmb	IAmb	04 25 36.6	
	comp=Z,45nm,0.8s						
WR0	**Warramunga Arr**	**19.81**	**126**	P	**P**	**04 25 37.9**	**+0.6**
MORW	**Morawa**	**20.26**	**184**	P	**P**	**04 25 42.8**	**+0.8**
AS31	**Alice Springs**	**21.52**	**135**	P	**P**	**04 25 55.8**	**0.0**
ASAR	**Alice Springs**	**21.52**	**135**	P	**P**	**04 25 56.0**	**+0.2**
	comp=Z,10nm,0.6s,baz=308,slow=9.4,SNR=118						
ASAR				S	**S**	**04 29 45.4**	**-1.4**
	comp=Z,5.6nm,1.0s,baz=337,slow=25,SNR=8.5						
ASAR				LR	LR	04 35 25.2	
	comp=Z,35nm,19.3s,baz=331,slow=39						
	comp=Z,10nm,0.6s						
ASAR	**Alice Springs**	**21.52**	**135**	P	**P**	**04 25 56.0**	**+0.2**
PSI	**Prapat**	**21.88**	**301**	P	**P**	**04 25 58.0**	**-1.6**
	comp=Z,2.9nm,0.4s,baz=181,slow=21,SNR=3.2						
	comp=Z,2.9nm,0.4s						
FORT	**Forrest**	**23.99**	**157**	P	**P**	**04 26 20.0**	**+0.5**
FORT	**Forrest**	**23.99**	**157**	P	**P**	**04 26 21.5**	**+2.1**
NWAO	**Narrogin (SRO)**	**24.05**	**181**	P	**P**	**04 26 20.1**	**0.0**
NWAO				IAmb	IAmb	04 26 22.3	
	comp=Z,33nm,0.8s						
QIS	**Mount Isa**	**24.27**	**121**	P	**P**	**04 26 23.0**	**+0.8**
OOD	**Oodnadatta**	**25.50**	**140**	P	**P**	**04 26 34.4**	**+1.2**
COEN	**Coen**	**25.59**	**104**	P	**P**	**04 26 34.4**	**+0.2**
COEN				IAmb	IAmb	04 27 01.8	
	comp=Z,18nm,0.8s						
MTSU	**Mount Surprise**	**27.57**	**113**	P	**P**	**04 26 53.7**	**+1.7**
BBOO	**Buckleboo**	**29.40**	**147**	P	**P**	**04 27 08.4**	**+0.4**
CTA	**Charters Tower**	**29.89**	**115**	P	**P**	**04 27 13.3**	**+0.8**
	comp=Z,4.4nm,0.6s,baz=292,slow=6.6,SNR=6.6						
CTA				PcP	**PcP**	**04 30 13.1**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=27,slow=1.9,SNR=3.5						
CTA				LR	LR	04 41 03.8	
	comp=Z,43nm,18.3s,baz=262,slow=40						
	comp=Z,4.4nm,0.6s						
CTAO	**Charters Tower**	**29.89**	**115**	P	**P**	**04 27 14.3**	**+1.7**
CTAO				IAmb	IAmb	04 27 14.6	
	comp=Z,20nm,1.4s						
QLP	**Quilpie**	**30.84**	**128**	P	**P**	**04 27 22.9**	**+2.1**
STKA	**Stephens Creek**	**32.03**	**139**	P	**P**	**04 27 31.9**	**+0.8**
	comp=Z,16nm,0.7s,baz=311,slow=9.7,SNR=36						
	comp=Z,16nm,0.7s						
STKA	**Stephens Creek**	**32.03**	**139**	P	**P**	**04 27 32.1**	**+1.0**
STKA	**Stephens Creek**	**32.03**	**139**	P	**P**	**04 27 32.6**	**+1.5**
CMAR	**Chiang Mai Arr**	**32.72**	**326**	P	**P**	**04 27 37.9**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=152,slow=4.0,SNR=1.6						
CMAR				pP	**pP**	**04 28 04.0**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=153,slow=6.6,SNR=2.6						
CMAR				PcP	**PcP**	**04 30 20.1**	**0.0**
	comp=Z,1.4nm,0.3s,baz=186,slow=3.2,SNR=6.8						
CMAR				ScP	**ScP**	**04 33 52.4**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=170,slow=2.9,SNR=16						
CMAR				LR	LR	04 42 45.9	
	comp=Z,36nm,18.9s,baz=150,slow=40						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**32.72**	**326**	P	**P**	**04 27 37.6**	**+0.3**
RMQ	**Roma**	**34.39**	**125**	P	**P**	**04 27 54.0**	**+2.2**
	comp=Z,14nm,0.8s						
TOO	**Toolangi**	**38.18**	**143**	P	**P**	**04 28 25.8**	**+1.9**
TOO				IAmb	IAmb	04 28 27.0	
	comp=Z,20nm,0.8s						
PZH	**PanZhiHua**	**38.28**	**337**	P	**P**	**04 28 28.6**	**+3.7**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.6s						
ARMA	**Armidale**	**38.38**	**129**	P	**P**	**04 28 27.4**	**+1.6**
ARMA				IAmb	IAmb	04 28 29.2	
	comp=Z,9.2nm,0.7s						
CAN	**Canberra**	**39.01**	**137**	P	**P**	**04 28 32.0**	**+1.1**
CAN				IAmb	IAmb	04 28 36.8	
	comp=Z,23nm,1.3s						
PALK	**Pallekele**	**40.08**	**292**	LR	LR	04 46 08.7	
	comp=Z,20nm,18.1s,baz=238,slow=37						
NJ2	**Nanjing**	**40.60**	**2**	*e*P	**P**	**04 28 46.9**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JHS	**Saijyo**	**45.93**	**18**	P	**P**	**04 29 26.7**	**0.0**
JHS				IAmb	IAmb	04 29 27.8	
	comp=Z,19nm,0.9s						
KSAR	**Wonju Array Be**	**46.96**	**11**	P	**P**	**04 29 34.3**	**-0.3**
KSRS	**Korea Array**	**46.98**	**11**	P	**P**	**04 29 34.7**	**0.0**
	comp=Z,8.8nm,0.8s,baz=187,slow=7.7,SNR=48						
KSRS				pP	**pP**	**04 30 03.1**	**-1.1**
	comp=Z,3.5nm,0.9s,baz=189,slow=8.9,SNR=2.7						
	comp=Z,8.8nm,0.8s						
DZM	**Mont Dzumac**	**48.70**	**112**	P	**P**	**04 29 49.2**	**+0.6**
DZM				IAmb	IAmb	04 29 51.3	
	comp=Z,7.5nm,0.8s						
DZM	**Mont Dzumac**	**48.70**	**112**	P	**P**	**04 29 50.6**	**+2.0**
SANVU	**Saraoutou**	**48.87**	**103**	P	**P**	**04 29 49.0**	**-0.7**
SANVU	**Saraoutou**	**48.87**	**103**	P	**P**	**04 29 52.3**	**+2.6**
	comp=Z,44nm,1.1s						
MJAR	**Matsushiro Arr**	**49.05**	**22**	P	**P**	**04 29 48.6**	**-2.1**
	comp=Z,2.1nm,0.4s,baz=173,slow=7.3,SNR=7.8						
	comp=Z,2.1nm,0.4s						
MJAR	**Matsushiro Arr**	**49.05**	**22**	P	**P**	**04 29 50.1**	**-0.7**
YATNC	**Mamie plateau,**	**49.11**	**112**	P	**P**	**04 29 55.1**	**+3.5**
OUENC	**Ouen Island, N**	**49.12**	**112**	P	**P**	**04 29 54.5**	**+2.9**
OUENC				IAmb	IAmb	04 29 54.7	
	comp=Z,8.2nm,0.8s						
GOMU	**GeErMu**	**49.59**	**336**	P	P	04 30 04.2	+8.8
GOMU				pP	pP	04 30 07.3	-18
GOMU				sP	sP	04 30 11.9	-28
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,50nm,5.0s						
HHC	**Hu-ho-hao-te**	**49.67**	**354**	*e*P	P	04 30 01.1	+5.5
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
JSD	**Sado**	**50.39**	**21**	P	**P**	**04 29 59.8**	**-1.1**
XLT	**XiLinHaoTe**	**52.43**	**359**	*e*P	**P**	**04 30 19.3**	**+3.2**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,61nm,3.5s						
JTM	**Tenmabayashi**	**53.84**	**22**	P	**P**	**04 30 25.0**	**-1.3**
MDJ	**Mudanjiang**	**54.22**	**11**	P	**P**	**04 30 28.3**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,17nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,94nm,3.8s						
USA0B	**Ussuriysk Arra**	**54.30**	**13**	P	**P**	**04 30 29.4**	**-0.2**
USRK	**Ussuriysk Ar.**	**54.30**	**13**	P	**P**	**04 30 29.4**	**-0.2**
	comp=Z,22nm,0.6s,baz=192,slow=7.2,SNR=26						
	comp=Z,22nm,0.6s						
MLZ	**Mavora Lakes**	**56.61**	**139**	P	**P**	**04 30 47.7**	**+1.4**
SONM	**Songino Array**	**57.21**	**351**	P	**P**	**04 30 49.8**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=170,slow=8.0,SNR=13						
SONM				pP	**pP**	**04 31 18.9**	**-2.2**
	comp=Z,1.5nm,0.6s,baz=169,slow=9.3,SNR=3.1						
	comp=Z,3.0nm,0.5s						
SONM	**Songino Array**	**57.21**	**351**	P	**P**	**04 30 50.3**	**-0.2**
ASAJ	**Asahikawa**	**57.29**	**21**	LR	LR	04 57 00.1	
	comp=Z,18nm,20.0s,baz=112,slow=38						
JKA	**Kamikawa-asahi**	**57.29**	**21**	P	**P**	**04 30 50.7**	**-0.3**
JKA				IAmb	IAmb	04 30 51.6	
	comp=Z,17nm,0.9s						
RPZ	**Rata Peaks**	**57.93**	**137**	P	**P**	**04 30 56.6**	**+1.0**
WMQ	**Urumqi**	**58.95**	**335**	*e*P	**P**	**04 31 02.8**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
KLR	**Kul'dur**	**59.06**	**11**	LR	LR	04 59 17.1	
	comp=Z,20nm,18.2s,baz=268,slow=39						
BKZ	**Black Stump Fm**	**60.52**	**130**	P	**P**	**04 31 14.4**	**+0.8**
BKZ				IAmb	IAmb	04 31 15.2	
	comp=Z,6.9nm,0.8s						
MK31	**Makanchi Array**	**63.62**	**334**	P	**P**	**04 31 32.4**	**-1.5**
MKAR	**Makanchi Array**	**63.62**	**334**	P	**P**	**04 31 32.6**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=148,slow=7.7,SNR=32						
MKAR				pP	**pP**	**04 32 03.8**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=150,slow=7.3,SNR=4.9						
	comp=Z,3.4nm,0.7s						
MKAR	**Makanchi Array**	**63.62**	**334**	P	**P**	**04 31 32.2**	**-1.8**
AAK	**Ala-Archa**	**64.50**	**326**	LR	LR	05 03 02.9	
	comp=Z,21nm,18.8s,baz=132,slow=39						
AAK	**Ala-Archa**	**64.50**	**326**	P	**P**	**04 31 38.9**	**-1.1**
GAR	**Garm**	**64.68**	**321**	P	**P**	**04 31 41.1**	**-0.1**
GAR				IAmb	IAmb	04 31 42.0	
	comp=Z,8.1nm,0.8s						
KURK	**Kurchatov**	**68.18**	**334**	P	**P**	**04 32 01.8**	**-1.2**
ZAA0	**Zalesovo Array**	**68.33**	**340**	P	**P**	**04 32 02.1**	**-1.7**
ZAA0				IAmb	IAmb	04 32 02.6	
	comp=Z,4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**68.33**	**340**	P	**P**	**04 32 01.7**	**-2.2**
	comp=Z,4.7nm,0.6s,baz=144,slow=5.2,SNR=23						
ZALV				pP	**pP**	**04 32 34.4**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=145,slow=4.6,SNR=3.8						
	comp=Z,4.7nm,0.6s						
MAW	**Mawson**	**68.99**	**200**	P	**P**	**04 32 09.1**	**+1.3**
	comp=Z,11nm,0.7s,baz=86,slow=6.2,SNR=10						
	comp=Z,11nm,0.7s						
MAW	**Mawson**	**68.99**	**200**	P	**P**	**04 32 09.7**	**+1.8**
VNDA	**Vanda**	**72.44**	**171**	P	**P**	**04 32 29.9**	**+1.3**
	comp=Z,2.7nm,0.7s,baz=312,slow=6.6,SNR=45						
	comp=Z,2.7nm,0.7s						
VNDA	**Vanda**	**72.44**	**171**	P	**P**	**04 32 30.4**	**+1.8**
SBA	**Scott Base**	**73.45**	**170**	P	**P**	**04 32 37.3**	**+2.8**
SBA				IAmb	IAmb	04 32 37.4	
	comp=Z,5.6nm,0.8s						
ABKAR	**Akbulak array**	**76.57**	**325**	P	**P**	**04 32 50.5**	**-2.4**
QSPA	**South Pole Qui**	**81.23**	**180**	P	**P**	**04 33 19.6**	**+1.3**
QSPA				IAmb	IAmb	04 33 21.2	
	comp=Z,22nm,1.4s						
KBZ	**Khabaz**	**85.13**	**315**	P	**P**	**04 33 37.1**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=78,slow=3.4,SNR=2.5						
	comp=Z,1.3nm,0.8s						
BOSA	**Boshof**	**87.91**	**242**	P	**P**	**04 33 52.4**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=97,slow=8.6,SNR=4.3						
BOSA				pP	**pP**	**04 34 23.3**	**-2.4**
	comp=Z,6.8nm,1.0s,baz=115,slow=4.7,SNR=4.3						
	comp=Z,2.9nm,0.8s						
BOSA	**Boshof**	**87.91**	**242**	P	**P**	**04 33 52.7**	**+0.1**
BOSA				IAmb	IAmb	04 33 59.6	
	comp=Z,20nm,1.4s						
TROLL	**Troll, Antarti**	**89.22**	**196**	P	**P**	**04 33 59.7**	**+1.8**
SNAA	**Sanae**	**90.86**	**196**	P	**P**	**04 34 07.0**	**+1.6**
SNAA	**Sanae**	**90.86**	**196**	P	**P**	**04 34 07.4**	**+2.0**
SNAA				IAmb	IAmb	04 34 08.2	
	comp=Z,9.1nm,0.9s						
BRTR	**Keskin Array B**	**90.92**	**310**	P	**P**	**04 34 04.9**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=144,slow=5.2,SNR=2.3						
	comp=Z,0.4nm,0.7s						
BELA	**Belgrano 2**	**92.12**	**186**	P	**P**	**04 34 12.5**	**+1.4**
BELA				IAmb	IAmb	04 34 13.0	
	comp=Z,5.0nm,0.7s						
VNA3	**Neumayer Olymp**	**92.89**	**195**	P	**P**	**04 34 16.7**	**+2.0**
VNA3	**Neumayer Olymp**	**92.89**	**195**	pP	pP	04 34 45.0	-2.8
FINES	**FINESS Array B**	**98.35**	**331**	P	**P**	**04 34 37.3**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=79,slow=7.5,SNR=2.8						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**114.53**	**24**	PKiKP	PKPdf	04 39 40.5	-0.8
	comp=Z,1.6nm,0.5s,baz=306,slow=1.8,SNR=23						
TORD	**Torodi Ar. Bea**	**117.06**	**280**	PKP	**PKPdf**	**04 39 46.8**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=64,slow=1.7,SNR=40						
TORD				pPKP	**pPKPdf**	**04 40 17.9**	**-4.3**
	comp=Z,0.9nm,0.7s,baz=54,slow=1.8,SNR=3.5						
TORD				SKP		04 43 11.2	
	comp=Z,0.6nm,0.7s,baz=23,slow=1.4,SNR=4.4						
HUMO	**Hull Mountain**	**117.44**	**46**	PKPdf	**PKiKP**	**04 39 48.3**	**+0.8**
YBH	**Yreka Blue Hor**	**117.83**	**47**	PKPdf	**PKiKP**	**04 39 49.2**	**+0.8**
L04D	**Klamath Falls**	**118.00**	**47**	PKPdf	**PKPdf**	**04 39 48.7**	**-0.1**
PINE	**Pine Mountain**	**118.55**	**45**	PKPdf	**PKiKP**	**04 39 50.6**	**+0.8**
K05A	**Summer Lake**	**118.88**	**46**	PKPdf	**PKPdf**	**04 39 51.2**	**+0.7**
BEKR	**Beckworth**	**120.01**	**49**	PKPdf	**PKPdf**	**04 39 52.6**	**-0.1**
J08A	**Circle Bar Ran**	**120.39**	**45**	PKPdf	**PKPdf**	**04 39 53.0**	**-0.3**
KVN	**Kaiserville**	**121.92**	**49**	PKPdf	**PKPdf**	**04 39 56.7**	**+0.3**
NVAR	**Mina Array Bea**	**121.93**	**50**	PKP	**PKiKP**	**04 39 57.4**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=258,slow=1.9,SNR=24						
MSO	**Missoula**	**122.15**	**39**	PKPdf	**PKPdf**	**04 39 56.1**	**-0.4**
KOWA	**Kowa**	**122.65**	**282**	PKPdf	**PKPdf**	**04 39 57.8**	**-0.4**
DBIC	**Dimbokro**	**122.98**	**272**	PKP	**PKPdf**	**04 39 58.1**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=113,slow=1.3,SNR=7.1						
DBIC	**Dimbokro**	**122.98**	**272**		**PKPdf**	**04 39 58.4**	**-0.5**
HLID	**Hailey**	**123.10**	**43**	PKPdf	**PKiKP**	**04 39 59.7**	**+0.9**
ELK	**Elko**	**123.51**	**47**	PKPdf	**PKPdf**	**04 40 00.3**	**+0.8**
QSM	**Queen of Sheba**	**123.68**	**52**	PKPdf	**PKPdf**	**04 40 00.4**	**+0.7**
EGMT	**Eagleton**	**124.17**	**37**	PKPdf	**PKPdf**	**04 40 00.6**	**+0.2**
PRN	**Pahroc Range**	**124.68**	**50**	PKPdf	**PKiKP**	**04 40 03.5**	**+1.4**
DUG	**Dugway, Tooele**	**125.43**	**46**	PKPdf	**PKPdf**	**04 40 03.9**	**+0.7**
PDAR	**Pinedale Array**	**126.68**	**42**	PKP	**PKPdf**	**04 40 05.6**	**0.0**
	comp=Z,0.3nm,0.4s,baz=108,slow=0.7,SNR=4.1						
O20A	**White River Ci**	**128.69**	**45**	PKPdf	**PKPdf**	**04 40 09.6**	**+0.2**
PV01	**Paradox Valley**	**129.26**	**47**	PKPdf	**PKiKP**	**04 40 12.0**	**+0.7**
PLCA	**Paso Flores**	**130.19**	**172**	PKP	**PKPdf**	**04 40 12.5**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=288,slow=3.2,SNR=5.8						
SCHQ	**Schefferville**	**133.91**	**4**	PKP	**PKPdf**	**04 40 18.7**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=338,slow=6.8,SNR=3.7						
MNTX	**Cornudas Mount**	**134.07**	**54**	PKPdf	**PKiKP**	**04 40 21.3**	**+0.4**
TXAR	**Lajitas Array**	**136.26**	**56**	PKhKP	PKPpre	04 40 12.5	
	comp=Z,0.5nm,0.6s,baz=276,slow=2.6,SNR=6.8						
TXAR				PKP	**PKPdf**	**04 40 24.7**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=196,slow=1.5,SNR=8.1						
TXAR				SKPbc	**SKPbc**	**04 43 40.9**	**-3.3**
	comp=Z,0.6nm,0.9s,baz=316,slow=3.5,SNR=3.9						
TXAR	**Lajitas Array**	**136.26**	**56**		PKPpre	04 40 13.0	
TXAR				PKPdf	**PKiKP**	**04 40 25.4**	**-0.1**
CCM	**Cathedral Cave**	**140.93**	**37**	PKPpre	PKPpre	04 40 25.3	
FCAR	**Ozark Folk Cen**	**141.75**	**41**	PKPpre	PKPpre	04 40 27.2	
AC02	**Maricunga**	**144.02**	**170**	PKPdf	PKPbc	04 40 37.1	+0.4
R49A	**Shelbyville**	**144.15**	**31**	PKPdf	**PKPab**	**04 40 35.8**	**+0.2**
O52A	**Adamsville**	**144.29**	**26**	PKPdf	**PKPab**	**04 40 35.9**	**-0.2**
P52A	**Corning**	**144.55**	**27**	PKPdf	**PKPab**	**04 40 36.4**	**-0.7**
CPUP	**Villa Florida**	**144.78**	**188**	PKP	**PKPdf**	**04 40 39.5**	**+0.3**
	comp=Z,33nm,0.7s,baz=186,slow=1.9,SNR=109						
CPUP				pPKP	**pPKPdf**	**04 41 10.9**	**-3.2**
	comp=Z,7.1nm,0.8s,baz=170,slow=2.4,SNR=4.0						
CPUP	**Villa Florida**	**144.78**	**188**	PKPbc	**PKPdf**	**04 40 40.1**	**+0.9**
PLAL	**Pickwick Lake**	**144.87**	**38**		PKPbc	04 40 37.2	-1.3
Q56A	**Snyder Ridge,**	**146.29**	**24**	PKPdf	**PKPdf**	**04 40 41.7**	**+0.3**
V53A	**Saluda**	**147.37**	**32**	PKPbc	**PKPbc**	**04 40 45.7**	**-0.3**
Y52A	**Lilburn**	**148.03**	**35**	PKPbc	**PKPbc**	**04 40 47.6**	**-0.1**
X58A	**Rowland**	**149.98**	**29**	PKPbc	**PKPbc**	**04 40 52.4**	**-0.2**
AQDB	**Aquidauana**	**150.21**	**193**	PKPbc	**PKPbc**	**04 40 54.4**	**+0.9**
BDFB	**Brasilia**	**151.88**	**211**	PKPbc	**PKPbc**	**04 40 57.9**	**+0.3**
	comp=Z,5.2nm,0.5s,baz=161,slow=1.7,SNR=16						
BDFB				PKPab	**PKPab**	**04 41 07.5**	**+0.5**
	comp=Z,5.2nm,0.8s,baz=107,slow=5.2,SNR=4.3						
LPAZ	**La Paz**	**154.48**	**167**	PKPbc	**PKiKP**	**04 41 05.2**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=227,slow=5.8,SNR=6.3						
LPAZ				PKPab	**PKPab**	**04 41 19.7**	**+1.2**
	comp=Z,3.5nm,0.6s,baz=203,slow=0.4,SNR=5.1						
LPAZ	**La Paz**	**154.48**	**167**		**PKPbc**	**04 41 04.0**	**+0.1**
LPAZ					**PKPab**	**04 41 20.6**	**+2.0**

ASRS 09 04:51:11.3±0.2**, 52°N**±1°×**9°6E**±°**, h5km, MLh3.9**/14**, Error ellipse: s-maj=3.3km s-min=2.0km az=27.4, confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.99**	**260**	Pg	Pn	04 51 32.8	+0.9
KZLR				Sg	Sb	04 51 44.7	+0.4
KNGR	**Kungurtug, Tuv**	**1.59**	**143**	Pg	Pg	04 51 43.0	+1.4
KNGR				Sg	Sg	04 52 02.9	+0.7
ERNS	**Erzin**	**1.71**	**199**	Pg	Pb	04 51 43.6	+0.4
ERNS				Sg	Sg	04 52 07.9	+1.7
ARDR	**Aradan**	**1.74**	**295**	Pn	Pn	04 51 41.8	-0.4
ARDR				Pg	Pg	04 51 49.0	+4.4
ARDR				Sg	Sg	04 52 11.0	+3.8
CERR	**Cheremushki**	**2.99**	**291**	Pg	Pg	04 52 09.3	+0.7
CERR				Sg	Sg	04 52 49.5	+2.3
DJO	**Djoy, Khakassi**	**3.08**	**289**	Pn	Pn	04 52 02.1	+1.5
DJO				Pg	Pg	04 52 11.3	+1.0
DJO				Sg	Sg	04 52 52.7	+2.4
MOY	**Mondy**	**3.09**	**92**	Pg	Pg	04 52 10.8	+0.3
MOY				Sg	Sg	04 52 53.8	+3.2
MINR	**Mina**	**3.21**	**341**	Pg	Pg	04 52 16.0	+3.2
MINR				Sg	Sg	04 52 59.7	+5.2
ABNR	**Abakan**	**3.34**	**305**	Pg	Pb	04 52 12.8	+1.9
ABNR				Sg	Sg	04 53 01.9	+3.4
GZL	**Zheleznogorsk**	**4.63**	**343**	Sg	Sg	04 53 43.1	+3.3
LUZB	**Luzhba, Kemero**	**4.68**	**295**	Pn	Pn	04 52 23.5	+1.0
LUZB				Pg	Pg	04 52 42.6	+1.7
LUZB				Sg	Sg	04 53 46.1	+4.6
ZAK	**Zakamensk**	**4.81**	**105**	Pn	Pn	04 52 24.3	-0.1
ZAK				Pg	Pg	04 52 42.9	-0.4
ZAK				Sg	Sg	04 53 46.4	+0.8
TASR	**Tashtagol**	**5.07**	**283**	Pg	Pg	04 52 47.9	-0.5
TASR				Sg	Sg	04 53 55.5	+1.5
CUR	**Chagan-Uzun**	**5.17**	**253**	Pn	Pn	04 52 34.3	+5.0
CUR				Pg	Pg	04 52 53.1	+2.9
CUR				Sg	Sg	04 53 53.5	-3.6
ARTR	**Artybash**	**5.42**	**273**	Pg	Pg	04 52 57.6	+2.5
ARTR				Sg	Sg	04 54 09.7	+4.4
AKAR	**Aktash**	**5.52**	**257**	Pn	Pn	04 52 39.4	+5.2
AKAR				Pg	Pg	04 52 56.0	-1.0
AKAR				Sg	Sg	04 54 04.6	-3.9
CHBI	**Chibit, Altay**	**5.59**	**257**	Pn	Pn	04 52 40.4	+5.2
CHBI				Pg	Pg	04 52 58.5	+0.1
CHBI				Sg	Sg	04 54 11.9	+1.1
BRCR	**Berchikul'**	**5.92**	**313**	Pg	Pg	04 53 03.6	-1.0
BRCR				Sg	Sg	04 54 25.9	+4.7
ELT	**Eltsovka**	**6.12**	**287**	Sg	Sg	04 54 29.7	+1.9
SALR	**Pechorkino, Sa**	**6.71**	**296**	Sg	Sg	04 54 49.1	+2.6
UKR	**Ust'-Kan**	**7.10**	**267**	Sg	Sg	04 55 05.5	+6.3

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*IDC **09** 05:17:49.0±0.9, 28°.29N×85°.80E, h0km, mb4.0/13, mbtmp3.9/15, ML4.3/2, MS3.3/2, Error ellipse: s-maj=29.3km s-min=16.9km az=54.0*

*NDI **09** 05:17:53.7±3.4, 28°.38N×85°.88E, h10km, ML3.8, mb4.2(NEIC)*

*NEIC **09** 05:17:54.8±1.6, 28°.21N±0°.08×85°.76E±0°.08, h39km±6km, mb4.2/32, Error ellipse: s-maj=12.3km s-min=9.2km az=136.0*

ISC 09 05:17:54.5±0.5**, 28°.32N**±0°.05×**85°.87E**±0°.05**, h35km, n66, σ1^{s}27**/69**, mb4.1**/22**, 1D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLK	**Valmikinagar**	**2.04**	**241**	*e*P	**Pn**	**05 18 28.6**	**+2.3**
VLK				*e*S	**Sn**	**05 18 52.9**	**+2.5**
GTK	**Tadong**	**2.62**	**112**	*e*P	**Pn**	**05 18 38.1**	**+3.7**

GTK				eS	Sn	05 19 09.3	+4.2
GTK				IAML		05 19 14.1	
	comp=N,457nm,0.2s						
GTK				IAML		05 19 14.9	
	comp=E,577nm,0.1s						
BOK	Bokaro	4.51	180	eP	Pn	05 19 01.8	+1.5
BOK				eS	Sn	05 19 54.1	+2.6
ALBI	Allahabad	4.71	231	eP	Pn	05 19 04.4	+1.4
LSA	Lhasa	4.83	72	Pn	Pn	05 19 05.8	+0.7
TURI	Tura	4.85	124	eP	Pn	05 19 04.6	-0.4
TURI				eS	Sn	05 19 57.1	-2.8
TURI				IAML		05 20 01.5	
	comp=E,186nm,0.1s						
LGTI	Lohaghat	5.05	284	eP	Pn	05 19 11.4	+3.7
PTH	Pithoragarh	5.10	285	eP	Pn	05 19 09.4	+0.8
GUWA	GUWAHATI	5.60	111	eP	Pn	05 19 16.1	+0.8
GUWA				eS	Sn	05 20 20.6	+2.2
SHL	Shillong	6.03	116	eP	Pn	05 19 20.9	-0.4
JHNI	Jhansi	7.13	248	eP	Pn	05 19 36.5	+0.2
JHNI				ex	x	05 20 50.1	
JBP	Jabalpur	7.38	227	eP	Pn	05 19 41.1	+1.4
JBP				ex	x	05 19 41.1	
JBP				⇓eS	Sn	05 21 03.6	+1.4
AZL	Aizawl	7.65	125	eP	Pn	05 19 43.7	+0.2
AZL				eS	Sn	05 21 08.3	-0.7
SMLA	Simla	8.07	292	eP	Pn	05 19 49.6	+0.5
SMLA				eS	Sn	05 21 17.6	-1.4
SMLA				IAML		05 21 22.8	
	comp=N,59nm,0.6s						
SMLA				IAML		05 21 22.9	
	comp=E,68nm,0.2s						
NIL	Nilore	12.05	299		Pn	05 20 43.8	0.0
HYBB	Hyderabad (bro	12.77	213	eP	Pn	05 20 51.6	-2.1
HYBB				e		05 23 06.0	
TARG	Taragay, Kyrgy	14.91	336	Pn	Pn	05 21 23.6	+0.6
CMAR	Chiang Mai Arr	15.49	126	Pn	Pn	05 21 30.2	-0.2
	comp=E,1.0nm,0.3s,baz=318,slow=9.1,SNR=1.1						
	comp=E,1.3nm,0.3s						
CMAR	Chiang Mai Arr	15.49	126	Pn	Pn	05 21 29.4	-1.0
GAR	Garm	16.74	314	Pn	Pn	05 21 46.3	0.0
AAK	Ala-Archa	17.00	330	Pn	Pn	05 21 49.6	0.0
BTK	Batken	17.06	317	Pn	Pn	05 21 48.8	-1.6
BTK				IAmb	IAmb	05 21 55.0	
	comp=Z,3.8nm,0.5s						
CHGR	Chuyangaron	17.31	311	Pn	Pn	05 21 52.3	-1.2
CHGR				IAmb	IAmb	05 21 56.2	
	comp=Z,12nm,0.7s						
MK31	Makanchi Array	18.65	352	P	P	05 22 08.5	-0.8
MKAR	Makanchi Array	18.65	352	P	P	05 22 09.1	-0.2
	comp=Z,0.2nm,0.3s,baz=176,slow=11,SNR=12						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	18.65	352	P	P	05 22 08.6	-0.6
MAKZ	Makanchi	18.71	352	P	P	05 22 09.4	-0.4
KKAR	Karatay Array	19.27	324	P	P	05 22 16.0	-0.1
KURBB	Kurchatov Arra	22.96	348	P	P	05 22 54.9	-0.7
	comp=Z,1.2nm,0.6s,baz=168,slow=9.5,SNR=12						
	comp=Z,1.2nm,0.6s						
KURK	Kurchatov	23.03	348	P	P	05 22 56.8	+0.4
KURK				IAmb	IAmb	05 22 58.3	
	comp=Z,3.6nm,0.9s						
SONM	Songino Array	25.17	34	P	P	05 23 17.3	+0.6
	comp=Z,5.0nm,0.6s,baz=221,slow=9.7,SNR=9.2						
	comp=Z,5.0nm,0.6s						
SONM	Songino Array	25.17	34	IAmb	IAmb	05 23 18.2	
	comp=Z,3.3nm,0.7s						
ULN	Ulaanbaatar	25.52	34	P	P	05 23 19.6	-0.2
ULN				IAmb	IAmb	05 23 20.9	
	comp=Z,4.7nm,0.6s						
ZAA0	Zalesovo Array	25.62	359	P	P	05 23 20.1	-0.3
ZALV	Zalesovo Beam	25.62	359	P	P	05 23 20.6	+0.2
	comp=Z,1.6nm,0.4s,baz=187,slow=9.8,SNR=11						
	comp=Z,1.6nm,0.4s						
ABKAR	Akbulak array	28.83	324	P	P	05 23 48.9	-0.4
AKTO	Aktyubinsk	30.54	324	LR	LR	05 37 46.7	
	comp=Z,19nm,21.3s,baz=126,slow=39						
ARU	Arti	34.15	333	P	P	05 24 36.7	+0.8
ARU				IAmb	IAmb	05 24 36.9	
	comp=Z,4.1nm,0.7s						
AKASG	Malin Array Be	47.74	314	P	P	05 26 27.4	-0.5
	comp=Z,1.4nm,0.5s,baz=84,slow=6.5,SNR=18						
	comp=Z,1.4nm,0.5s						
AKASG	Malin Array Be	47.74	314	IAmb	IAmb	05 26 55.4	
	comp=Z,2.4nm,1.3s						
AKBB	Malin Array Si	47.74	314	P	P	05 26 27.6	-0.2
AKBB				IAmb	IAmb	05 26 28.5	
	comp=Z,2.2nm,0.6s						
BURAR	Bucovina Array	50.22	310	P	P	05 26 47.3	+0.3
BUR08	Bucovina Ar. S	50.23	310	P	P	05 26 47.1	0.0
BUR08				IAmb	IAmb	05 27 06.1	
	comp=Z,1.0nm,1.2s						
FIA1	FINESS Array S	51.17	328	P	P	05 26 53.7	-0.1
FIA1				IAmb	IAmb	05 26 54.4	
	comp=Z,4.4nm,0.8s						
FINES	FINESS Array B	51.17	328	P	P	05 26 53.5	-0.3
	comp=Z,2.2nm,0.6s,baz=109,slow=8.5,SNR=16						
	comp=Z,2.2nm,0.6s						
ARCES	ARCESS Array B	53.48	338	P	P	05 27 11.0	+0.2
	comp=Z,0.7nm,0.3s,baz=76,slow=5.1,SNR=17						
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	53.48	338	P	P	05 27 11.3	+0.5
NC405	NORSAR Array S	58.03	327	P	P	05 27 43.5	-0.1
NB2	NORSAR Subarra	58.27	327	P	P	05 27 44.3	-1.1
	comp=Z,0.7nm,0.6s,baz=88,slow=6.9						
NOA	NORSAR Array B	58.27	327	P	P	05 27 45.0	-0.4
	comp=Z,1.4nm,0.8s,baz=87,slow=7.0,SNR=6.4						
	comp=Z,1.4nm,0.8s						
NC204	NORSAR Array S	58.49	327	P	P	05 27 46.7	-0.1
FITZ	Fitzroy Crossi	60.08	135	P	P	05 27 58.0	-0.3
MORW	Morawa	63.95	151	P	P	05 28 23.6	-0.6
WB0	Warramunga Arr	66.97	130	P	P	05 28 44.4	+0.5
WB0				IAmb	IAmb	05 29 07.5	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	67.05	130	P	P	05 28 44.7	+0.3
	comp=Z,1.6nm,0.6s,baz=325,slow=6.5,SNR=23						
	comp=Z,1.6nm,0.6s						
WRAB	Tennant Creek	67.06	130	P	P	05 28 43.8	-0.6
WB2	Warramunga Arr	67.06	130	P	P	05 28 44.5	0.0
WR0	Warramunga Arr	67.20	130	P	P	05 28 45.9	+0.6
WR0				IAmb	IAmb	05 29 00.5	
	comp=Z,8.9nm,1.5s						
ASAR	Alice Springs	69.38	133	P	P	05 28 59.0	0.0
	comp=Z,0.3nm,0.3s,baz=315,slow=6.4,SNR=3.2						
	comp=Z,0.3nm,0.3s						
EUNU	Eureka	71.77	359	P	P	05 29 13.7	+0.9
EUNU				IAmb	IAmb	05 29 14.7	
	comp=Z,3.5nm,1.1s						
ILAR	Eielson Array	78.60	20	P	P	05 29 51.9	-0.4
	comp=Z,0.4nm,0.6s,baz=318,slow=5.3,SNR=7.6						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	78.82	279	P	P	05 29 54.4	+0.1
	comp=Z,0.5nm,0.6s,baz=51,slow=4.3,SNR=6.0						
	comp=Z,0.5nm,0.6s						
INK	Inuvik	79.35	14	P	P	05 29 56.3	+0.1
	comp=Z,1.1nm,0.9s,baz=320,slow=4.5,SNR=3.8						
	comp=Z,1.1nm,0.9s						
INK	Inuvik	79.35	14	IAmb	IAmb	05 29 56.9	
	comp=Z,4.5nm,1.2s						
YKA	Yellowknife Ar	88.02	9	P	P	05 30 40.5	-0.2
	comp=Z,0.4nm,0.7s,baz=340,slow=4.9,SNR=4.8						
	comp=Z,0.4nm,0.7s						
BBB	Bella Bella	94.49	20	LR	LR	06 19 51.4	
	comp=Z,37nm,19.4s,baz=342,slow=39						

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*IDC **09** 05:18:16.6±1.9, 59°.72N×152°.64W, h60^{km}±18^{km}, mb3.2/5, mbtmp3.6/9, MS3.2/1, Error ellipse: s-maj=36.4km s-min=9.7km az=100.0*

*NEIC **09** 05:18:17.3±1.2, 59°.63N±0°.03×152°.55W±0°.06, h71^{km}±2^{km}, Error ellipse: s-maj=4.9km s-min=3.8km az=154.0*

*AEIC **09** 05:18:18±1.3, 59°.61N±0°.03×152°.57W±0°.06, h70^{km}±4^{km}, ML3.5, mb4.0/11(NEIC), ML3.7/118(NEIC), Error ellipse: s-maj=5.0km s-min=3.7km az=150.0*

ISC 09 05:18:17.4±0.7**, 59°.63N**±0°.03×**152°.54W**±0°.03**, h74**^{km}±5^{km}**, n294, σ0^{s}.81**/303**, mb3.7**/12**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P19K	Oil Pt	0.35	274		Pn	05 18 29.1	-0.3
P19K	Oil Pt	0.35	274		Sn	05 18 37.7	-0.6
P19K	Oil Pt	0.35	274	IAML		05 18 30.4	
	comp=N,2µm,0.2s						
P19K	Oil Pt	0.35	274	P	Pn	05 18 29.1	-0.3
	baz=97,SNR=194						
P19K				S	Sn	05 18 37.8	-0.4
	baz=97						
OPT	Oil Point	0.35	274		Pn	05 18 29.1	-0.3
O20K	Slope Mountain	0.46	355		Pn	05 18 30.3	0.0
O20K					Sn	05 18 40.4	+0.6
O20K	Slope Mountain	0.46	355	P	Pn	05 18 30.2	0.0
	baz=177,SNR=202						
O20K				S	Sn	05 18 40.4	+0.6
	baz=177						
HOM	Homer	0.46	86		Pn	05 18 30.1	-0.1
HOM					Sn	05 18 39.6	0.0
HOM	Homer	0.46	86	IAML		05 18 41.0	
	comp=N,8µm,0.4s						
HOM	Homer	0.46	86	P	Pn	05 18 30.1	-0.1
	baz=265,SNR=25						
HOM				S	Sn	05 18 39.7	+0.1
	baz=265						
AU22	Augustine Moun	0.49	238		Pn	05 18 30.1	-0.4
AU22					Sn	05 18 40.5	+0.4
AU2	Augustine Isla	0.50	239		Pn	05 18 30.2	-0.3
AUL	Augustine Lava	0.52	242		Pn	05 18 30.5	-0.3
AUQ	Augustine Qik'	0.52	239		Pn	05 18 30.5	-0.3
AUQ					Sn	05 18 41.2	+0.5
AUH	Augustine H	0.53	240		Pn	05 18 30.6	-0.3
CNPM	China Poot	0.67	98		Pn	05 18 31.9	-0.3
CNPM					Sn	05 18 43.0	-0.4
CNPM	China Poot	0.67	98	IAML		05 18 45.5	
	comp=E,5µm,0.5s						
CNPM				IAML		05 18 45.6	
	comp=N,4µm,0.5s						
RED	Redoubt Volcan	0.80	352		Pn	05 18 33.4	-0.4
RED					Sn	05 18 45.8	-0.1
RSO	Redoubt South	0.84	353		Pn	05 18 34.1	-0.3
BRLK	Bradley Lake	0.85	80		Pn	05 18 33.8	-0.5
BRLK				IAML		05 18 47.5	
	comp=N,3µm,0.7s						
BRLK				IAML		05 18 48.4	
	comp=E,3µm,0.3s						
RDWB	Redoubt West	0.87	350		Pn	05 18 34.3	-0.5
RDWB					Sn	05 18 47.2	-0.4
Q19K	Cape Douglas,	0.90	219		Pn	05 18 34.3	-0.6
Q19K					Sn	05 18 47.7	-0.2
Q19K	Cape Douglas,	0.90	219	IAML		05 18 49.5	
	comp=E,2µm,0.7s						
Q19K	Cape Douglas,	0.90	219	P	Pn	05 18 34.3	-0.6
	baz=38,SNR=187						
Q19K				S	Sn	05 18 47.4	-0.6
	baz=38						
BRSE	Bradley Lake S	0.92	82		Pn	05 18 34.7	-0.5
BRSE	Bradley Lake S	0.92	82	P	Pn	05 18 34.6	-0.5
	baz=263,SNR=72						
RDJH	Redoubt Jeurge	0.97	352		Pn	05 18 35.7	-0.2
RDJH					Sn	05 18 49.8	+0.2
O19K	Port Alsworth	1.06	303		Pn	05 18 36.1	-0.7
O19K	Port Alsworth	1.06	303	P	Pn	05 18 36.2	-0.6
	baz=123,SNR=81						
O19K				S	Sn	05 18 50.8	-0.5
	baz=123						
CAPN	Captain Cook N	1.34	31		Pn	05 18 41.8	+1.6
CAPN	Captain Cook N	1.34	31	P	Pn	05 18 41.8	+1.6
	baz=212,SNR=15						
P18K	Big Mountain,	1.39	261		Pn	05 18 39.8	-1.2
P18K	Big Mountain,	1.39	261		Sn	05 18 57.4	-1.5
P18K	Big Mountain,	1.39	261	P	Pn	05 18 39.9	-1.2
	baz=80						
P18K				S	Sn	05 18 57.3	-1.5
	baz=80						
SLKM	Skilak Lake	1.46	52		Pn	05 18 41.5	-0.4
N19K	Bonanza Creek	1.53	322		Pn	05 18 42.6	-0.4
N19K	Bonanza Creek	1.53	322	P	Pn	05 18 42.6	-0.4
	baz=141,SNR=25						
N19K				S	Sn	05 19 01.4	-0.9
	baz=141						
SPU	Mount Spurr	1.58	9		Pn	05 18 43.7	+0.2
SPCR	Spurr Chakacha	1.58	6		Pn	05 18 43.7	0.0
SPCR					Sn	05 19 04.4	+1.0
SPCR	Spurr Chakacha	1.58	6	P	Pn	05 18 43.6	0.0
	baz=186,SNR=35						
SPCR				S	Sn	05 19 03.6	+0.2
	baz=186						
CKN	Chakachatna No	1.61	6		Pn	05 18 44.4	+0.5
SEW	Seward	1.63	72		Pn	05 18 44.9	+0.8
SEW	Seward	1.63	72	P	Pn	05 18 43.4	-0.6
	baz=254,SNR=58						
SPBG	Spurr Blockage	1.64	3		Pn	05 18 44.5	+0.2
SPBG					Sn	05 19 06.5	+1.8
SPWE	Spurr West	1.65	360		Pn	05 18 44.9	+0.3
O22K	Cooper Landing	1.65	58		Pn	05 18 44.5	+0.2
O22K	Cooper Landing	1.65	58	P	Pn	05 18 44.1	-0.3
	baz=240,SNR=75						
SPCG	Spurr Capps Gl	1.69	9		Pn	05 18 45.3	+0.3
SPCG					Sn	05 19 07.6	+1.6
KDAK	Kodiak Island	1.85	181	P	Pn	05 18 46.2	-0.8
	comp=E,110nm,0.3s,baz=58,slow=15,SNR=304						
KDAK				S	Sn	05 19 11.2	+1.5
	comp=E,211nm,0.7s,baz=0.8,slow=20,SNR=5.9						
KDAK	Kodiak Island	1.85	181	IAML		05 19 17.4	
	comp=E,581nm,0.3s						
KDAK				IAML		05 19 17.8	
	comp=E,736nm,0.8s						
KDAK	Kodiak Island	1.85	181	P	Pn	05 18 46.2	-0.8
	baz=0.2						
KCG	Knife Ck. Glac	1.88	226		Pn	05 18 47.3	-0.1
FIS	Fire Island	1.91	36	Pn	Pn	05 18 48.6	+0.8
STLK	Strandline Lak	1.91	10		Pn	05 18 48.2	+0.3
N18K	Kilae Creek	1.98	304		Pn	05 18 48.1	-0.6
N18K					Sn	05 19 11.8	-1.0
N18K	Kilae Creek	1.98	304	P	Pn	05 18 48.4	-0.4
	baz=122,SNR=54						
N18K				S	Sn	05 19 11.7	-1.0
	baz=122						
RC01	Rabbit Creek A	2.02	42		Pn	05 18 49.2	-0.2
RC01				IAML		05 19 18.1	
	comp=E,474nm,0.4s						
RC01				IAML		05 19 19.4	
	comp=N,676nm,0.4s						
RC01	Rabbit Creek A	2.02	42	P	Pn	05 18 49.2	-0.2
	baz=225,SNR=16						
KELA	Mount Kelaz	2.04	236		Pn	05 18 49.1	-0.6
ANCK	Angle Creek	2.10	228		Pn	05 18 50.4	-0.1
SVW2	Sparrevohn	2.11	316		Pn	05 18 49.9	-0.6
CAHL	Cahill	2.13	223		Pn	05 18 51.2	+0.2
KJL	Kejulik	2.23	226		Pn	05 18 52.6	+0.4
M20K	Styx River	2.28	353		Pn	05 18 53.2	+0.3
M20K	Styx River	2.28	353	P	Pn	05 18 53.2	+0.3
	baz=173,SNR=19						
M22K	Willow	2.44	28		Pn	05 18 55.3	+0.4
M22K					Sn	05 19 24.7	+0.9
M22K	Willow	2.44	28	P	Pn	05 18 54.5	-0.4
	baz=210,SNR=35						
OHAK	Old Harbor	2.45	190		Pn	05 18 53.7	-1.3
OHAK	Old Harbor	2.45	190	IAML		05 19 33.2	
	comp=N,307nm,0.4s						
OHAK				IAML		05 19 33.3	
	comp=E,312nm,0.3s						
OHAK	Old Harbor	2.45	190	P	Pn	05 18 53.8	-1.3
	baz=8.7,SNR=18						
M19K	Big River Lodg	2.46	339		Pn	05 18 55.1	-0.1
M19K	Big River Lodg	2.46	339	P	Pn	05 18 55.2	0.0
	baz=158,SNR=9.3						
M19K				S	Sn	05 19 24.2	0.0
	baz=158						
PMR	Palmer	2.59	39		Pn	05 18 56.2	-0.7
PMR	Palmer	2.59	39	IAML		05 19 35.1	
	comp=N,257nm,0.7s						
PMR				IAML		05 19 35.1	
	comp=E,270nm,0.6s						
PMR	Palmer	2.59	39	P	Pn	05 18 56.2	-0.7
	baz=222,SNR=43						
KNK	Knik Glacier	2.70	47		Pn	05 18 57.6	-0.8
KNK					Sn	05 19 28.8	-1.3
KNK	Knik Glacier	2.70	47	IAML		05 19 41.3	
	comp=E,431nm,0.5s						
KNK	Knik Glacier	2.70	47	P	Pn	05 18 57.6	-0.8
	baz=230,SNR=55						
GHO	Glory Hole Cre	2.79	38		Pn	05 18 59.2	-0.5
GHO	Glory Hole Cre	2.79	38	IAML		05 19 41.9	
	comp=N,397nm,0.6s						
L19K	White Mountain	2.80	337		Pn	05 18 60.0	+0.1
L19K	White Mountain	2.80	337		Sn	05 19 32.4	-0.1
L19K	White Mountain	2.80	337	P	Pn	05 18 59.9	+0.1
	baz=156,SNR=38						
PLK1	Peulik 1	2.80	231		Pn	05 19 00.2	+0.4
L20K	Farewell, AK	2.93	348		Pn	05 19 01.9	+0.2
L20K	Farewell, AK	2.93	348	P	Pn	05 19 01.8	+0.2
	baz=167,SNR=14						
GLI	Glacier Island	2.99	63		Pn	05 19 00.6	-1.9
GLI				IAML		05 19 53.3	
	comp=N,289nm,0.7s						
GLI				IAML		05 19 53.4	
	comp=E,321nm,0.7s						
GLI	Glacier Island	2.99	63	P	Pn	05 19 00.2	-2.2
	baz=247						
GLI				S	Sn	05 19 33.1	-4.1
	baz=247						
CUT	Chulitna	3.00	21		Pn	05 19 02.8	+0.3
CUT	Chulitna	3.00	21	P	Pn	05 19 02.6	+0.1
	baz=203,SNR=24						
SML	Sawmill	3.01	42		Pn	05 19 02.2	-0.5
SML				IAML		05 19 49.9	
	comp=N,268nm,0.6s						
SML				IAML		05 19 55.0	
	comp=E,178nm,0.9s						
SML	Sawmill	3.01	42	P	Pn	05 19 02.0	-0.7
	baz=225,SNR=18						
Q23K	Middleton Isla	3.16	91		Pn	05 19 04.2	-0.4
Q23K	Middleton Isla	3.16	91	IAML		05 19 43.1	
	comp=E,140nm,1.6s						
Q23K				IAML		05 19 54.3	
	comp=N,106nm,1.3s						
Q23K	Middleton Isla	3.16	91	P	Pn	05 19 03.9	-0.8
	baz=276						
MID	Middleton Isla	3.17	91		Pn	05 19 04.1	-0.6
MID	Middleton Isla	3.17	91	IAML		05 19 43.1	
	comp=E,142nm,1.5s						
MID				IAML		05 19 54.2	
	comp=N,108nm,1.4s						
SII	Sitkinak Islan	3.20	197		Pn	05 19 04.2	-1.1
SII	Sitkinak Islan	3.20	197	P	Pn	05 19 04.2	-1.1
	baz=15						
M23K	Glacier View	3.21	45	P	Pn	05 19 04.9	-0.5
	baz=230,SNR=33						
FID	Port Fidalgo	3.23	67		Pn	05 19 03.5	-2.2
FID				IAML		05 19 40.7	
	comp=E,259nm,0.5s						
FID				IAML		05 19 40.8	
	comp=N,187nm,0.4s						
JPK	Jack Peak	3.28	62		Pn	05 19 05.0	-1.5
PPLA	Purkeypile	3.28	3		Pn	05 19 07.5	+1.0
PPLA	Purkeypile	3.28	3	P	Pn	05 19 07.4	+0.8
	baz=183,SNR=19						
SCM	Sheep Creek Mo	3.38	47		Pn	05 19 07.3	-0.5
SCM				IAML		05 20 03.6	
	comp=N,202nm,1.0s						
SCM				IAML		05 20 05.8	
	comp=E,217nm,0.7s						
SCM	Sheep Creek Mo	3.38	47	P	Pn	05 19 07.3	-0.5
	baz=231,SNR=12						
EYAK	Cordova Ski Ar	3.52	72		Pn	05 19 09.1	-0.6
EYAK	Cordova Ski Ar	3.52	72	P	Pn	05 19 08.1	-1.5
	baz=258						
DIV	Divide	3.68	63		Pn	05 19 11.3	-0.6
TT01	Tatalina	3.69	334		Pn	05 19 11.8	-0.1
TTA	Tatalina	3.71	335		Pn	05 19 12.0	-0.3
TTA	Tatalina	3.71	335	P	Pn	05 19 11.7	-0.5
	baz=152,SNR=8.6						
WAT1	Susitna Watana	3.75	29		Pn	05 19 12.7	0.0
WAT1	Susitna Watana	3.75	29	P	Pn	05 19 12.8	+0.1
	baz=213						
KLU	Klutina	3.76	57		Pn	05 19 11.9	-1.1
KLU	Klutina	3.76	57	IAML		05 19 54.6	
	comp=N,167nm,0.6s						
KLU				IAML		05 20 01.2	
	comp=E,106nm,0.4s						
KLU	Klutina	3.76	57	P	Pn	05 19 11.9	-1.1
	baz=243,SNR=42						
WAT6	Susitna Watana	3.77	36		Pn	05 19 12.6	-0.5
WAT6	Susitna Watana	3.77	36	P	Pn	05 19 12.7	-0.5
	baz=220,SNR=58						
CAST	Castle Rocks	3.81	3		Pn	05 19 13.7	+0.2
CAST	Castle Rocks	3.81	3	P	Pn	05 19 13.5	0.0
	baz=184,SNR=57						
K20K	Telida	3.81	350		Pn	05 19 13.8	+0.2
K20K	Telida	3.81	350	P	Pn	05 19 13.8	+0.2
	baz=168,SNR=13						
M24K	Tolsona, Glenn	3.98	49		Pn	05 19 15.4	-0.6
M24K	Tolsona, Glenn	3.98	49	P	Pn	05 19 15.4	-0.6
	baz=234,SNR=13						
TRF	Thorofare Moun	3.98	15		Pn	05 19 16.7	+0.6
TRF				IAML		05 20 10.8	
	comp=E,116nm,0.7s						
KTH	Kantishna Hill	4.01	10		Pn	05 19 17.2	+0.8
KTH	Kantishna Hill	4.01	10	IAML		05 20 32.0	
	comp=E,96nm,1.1s						
RAGM	Ragged Mountai	4.02	76		Pn	05 19 16.4	0.0
RAGM				IAML		05 20 28.3	
	comp=E,84nm,0.5s						
GOAT	Goat Mountain	4.03	73		Pn	05 19 16.5	-0.1
KAIM	Kayak Island	4.12	82	Pn	Pn	05 19 17.9	+0.2
KAIM				IAML		05 20 07.4	
	comp=E,60nm,2.4s						
KAIM				IAML		05 20 10.1	
	comp=N,70nm,0.8s						
KAIM	Kayak Island	4.12	82	P	Pn	05 19 17.3	-0.5
	baz=269						
CHIR	Chirikof Islan	4.16	205	Pn	Pn	05 19 16.7	-1.6
CHIR	Chirikof Islan	4.16	205	P	Pn	05 19 17.0	-1.3
	baz=22						
BMRM	Bremner River	4.17	68		Pn	05 19 18.2	-0.3
BMRM				IAML		05 20 26.4	
	comp=N,77nm,0.5s						
BMRM				IAML		05 20 29.2	
	comp=E,69nm,0.8s						
BMRM	Bremner River	4.17	68	P	Pn	05 19 17.9	-0.6
	baz=254,SNR=7.8						
RND	Reindeer	4.18	23		Pn	05 19 18.8	+0.1
RND				IAML		05 20 07.9	
	comp=E,68nm,0.6s						
RND				IAML		05 20 27.7	
	comp=N,57nm,0.6s						
HMT	Hamilton	4.22	77		Pn	05 19 19.1	-0.1
HMT				IAML		05 20 05.7	
	comp=N,114nm,0.5s						
DHY	Denali Highway	4.26	34		Pn	05 19 19.6	-0.3
DHY				IAML		05 20 13.1	
	comp=N,75nm,0.5s						
DHY				IAML		05 20 13.8	
	comp=E,103nm,0.4s						
DHY	Denali Highway	4.26	34	P	Pn	05 19 19.5	-0.3
	baz=218,SNR=27						
CHUM	Lake Minchumin	4.27	1		Pn	05 19 20.1	+0.3
CHUM	Lake Minchumin	4.27	1	P	Pn	05 19 20.1	+0.3
	baz=182,SNR=15						
NICHA	Nichawak Mount	4.36	78		Pn	05 19 20.9	-0.1
N25K	Chitina, Valde	4.39	60		Pn	05 19 20.5	-1.0
N25K	Chitina, Valde	4.39	60	IAML		05 20 10.7	
	comp=N,59nm,0.7s						
N25K				IAML		05 20 12.4	
	comp=E,43nm,0.6s						
N25K	Chitina, Valde	4.39	60	P	Pn	05 19 20.3	-1.2
	baz=246,SNR=8.7						
SUCK	Suckling Hills	4.44	80	Pn	Pn	05 19 22.3	+0.1
BERG	Berg Lake	4.50	76		Pn	05 19 22.2	-0.8
HARP	HAARP	4.54	49	P	Pn	05 19 22.7	-0.9
	baz=236,SNR=12						
BPAW	Bear Paw Mtn.	4.55	9		Pn	05 19 22.8	-0.8
BPAW				IAML		05 20 17.2	
	comp=N,48nm,0.7s						
BPAW	Bear Paw Mtn.	4.55	9	P	Pn	05 19 23.4	-0.2
	baz=190,SNR=34						
J20K	Nowinta River	4.63	351		Pn	05 19 24.8	+0.1
J20K	Nowinta River	4.63	351	P	Pn	05 19 24.7	+0.1
	baz=170,SNR=27						
GLB	Gilahina Butte	4.68	63		Pn	05 19 23.9	-1.6
GLB	Gilahina Butte	4.68	63	IAML		05 20 40.7	
	comp=N,34nm,0.9s						
GLB				IAML		05 20 43.0	
	comp=E,33nm,0.8s						
BGLC	Bering Glacier	4.69	80	P	Pn	05 19 25.9	+0.4
	baz=268						
KHIT	Khitrov Hills	4.73	76		Pn	05 19 25.5	-0.6
PAX	Paxson	4.78	42		Pn	05 19 26.4	-0.4
PAX	Paxson	4.78	42	P	Pn	05 19 26.2	-0.6
	baz=229,SNR=19						
VRDI	Verde Repeater	4.78	67		Pn	05 19 25.5	-1.5
BWN	Browne	4.79	16		Pn	05 19 27.8	+1.0
SNH	Sunshine Point	4.92	79	Pn	Pn	05 19 28.9	+0.3
SNH				IAML		05 20 23.0	
	comp=N,43nm,1.2s						
SNH				IAML		05 20 40.1	
	comp=E,38nm,1.9s						
WAX	Waxell Ridge	4.93	76		Pn	05 19 28.5	-0.4
ISLE	Juniper Island	5.20	75		Pn	05 19 32.1	-0.5

ISLE	Juniper Island	5.20	75	IAML		05 20 31.4	
	comp=E,31nm,0.5s						
ISLE				IAML		05 20 33.5	
	comp=N,37nm,0.5s						
KIAG	Kiagna River	5.23	71		Pn	05 19 32.9	-0.2
NEA2	Nenana	5.24	17		Pn	05 19 32.8	-0.2
NEA2	Nenana	5.24	17	IAML		05 20 33.2	
	comp=N,23nm,0.8s						
NEA2				IAML		05 20 38.1	
	comp=E,28nm,0.8s						
NEA2	Nenana	5.24	17	P	Pn	05 19 32.8	-0.2
	baz=200,SNR=85						
BALM	Baldy	5.26	70		Pn	05 19 33.5	+0.1
K24K	Donnelly Dome	5.28	35	P	Pn	05 19 33.9	+0.3
	baz=220,SNR=26						
WRH	Wood River Hil	5.29	21		Pn	05 19 33.5	-0.2
WRH	Wood River Hil	5.29	21	IAML		05 20 37.2	
	comp=N,29nm,0.7s						
WRH				IAML		05 21 07.7	
	comp=E,24nm,0.9s						
BAGL	Bagley Icefiel	5.31	76		Pn	05 19 34.0	0.0
MENT	Mentasta	5.39	48		Pn	05 19 35.6	+0.4
M26K	Nabesna, AK	5.41	55		Pn	05 19 34.8	-0.5
M26K	Nabesna, AK	5.41	55	P	Pn	05 19 34.9	-0.5
	baz=243,SNR=12						
HDA	Harding Lake	5.47	26		Pn	05 19 36.1	-0.1
HDA	Harding Lake	5.47	26	P	Pn	05 19 35.9	-0.2
	baz=211,SNR=55						
CCB	Clear Creek Bu	5.50	22		Pn	05 19 36.0	-0.6
RIDG	Independent Ri	5.51	38		Pn	05 19 36.5	-0.3
RIDG	Independent Ri	5.51	38	P	Pn	05 19 36.6	-0.2
	baz=225,SNR=25						
GCSA	Galena City Sc	5.52	340	P	Pn	05 19 36.8	-0.1
	baz=157						
I21K	Tanana	5.58	2		Pn	05 19 37.9	+0.3
I21K	Tanana	5.58	2	P	Pn	05 19 37.8	+0.1
	baz=183,SNR=48						
L26K	Log Cabin Wild	5.58	48		Pn	05 19 38.1	+0.3
L26K	Log Cabin Wild	5.58	48	P	Pn	05 19 37.4	-0.4
	baz=236						
BARN	Barnard Glacie	5.59	70		Pn	05 19 38.4	+0.3
PS08	TAPS Pump Stn8	5.61	26		Pn	05 19 37.9	-0.3
TCOL	CIGO, UAF Yank	5.70	21		Pn	05 19 39.3	0.0
TCOL	CIGO, UAF Yank	5.70	21	P	Pn	05 19 39.2	0.0
	baz=205,SNR=28						
COLA	College	5.70	21		Pn	05 19 39.2	0.0
COLA	College	5.70	21	P	Pn	05 19 39.1	-0.2
	baz=205						
DOT	Dot Lake	5.71	41		Pn	05 19 40.1	+0.6
MDM	Murphy Dome	5.71	19		Pn	05 19 39.5	0.0
I23K	Minto, Yukon-K	5.73	14		Pn	05 19 39.7	0.0
I23K	Minto, Yukon-K	5.73	14	P	Pn	05 19 39.6	-0.1
	baz=196,SNR=94						
TABL	Table Mountain	5.77	77		Pn	05 19 40.4	-0.1
IL31		5.80	25		Pn	05 19 40.1	-0.5
ILAR	Eielson Array	5.80	25	P	Pn	05 19 39.9	-0.7
	comp=E,14nm,0.5s,baz=212,slow=14,SNR=189						
ILAR				S	Sn	05 20 43.1	-2.5
	comp=E,15nm,0.6s,baz=201,slow=24,SNR=9.7						
ILAR	Eielson Array	5.80	25		Pn	05 19 40.3	-0.4
M27K	Edge Creek, AK	5.87	58		Pn	05 19 41.3	-0.4
M27K	Edge Creek, AK	5.87	58	P	Pn	05 19 41.1	-0.6
	baz=247						
SAMH	Samovar Hills	5.95	80		Pn	05 19 42.9	+0.2
SCRK	Sand Creek	5.95	39		Pn	05 19 41.8	-1.1
SCRK	Sand Creek	5.95	39	P	Pn	05 19 41.7	-1.1
	baz=227,SNR=12						
POKR	Poker Plat Res	6.00	21		Pn	05 19 43.1	-0.2
POKR	Poker Plat Res	6.00	21	P	Pn	05 19 43.1	-0.2
	baz=206,SNR=10.0						
J25K	Salcha River,	6.02	31		Pn	05 19 43.2	-0.6
J25K	Salcha River,	6.02	31	P	Pn	05 19 43.2	-0.6
	baz=217,SNR=36						
H21K	Melozitna Rive	6.05	359		Pn	05 19 44.1	0.0
H21K	Melozitna Rive	6.05	359	P	Pn	05 19 43.6	-0.5
	baz=179,SNR=29						
SDPT	Sand Point	6.06	228	Pn	Pn	05 19 45.2	+1.0
CHNA	Chernabura Isl	6.14	222	P	Pn	05 19 45.1	-0.3
	baz=36						
L27K	Beaver Creek,	6.20	52	Pn	Pn	05 19 47.1	+1.0
L27K	Beaver Creek,	6.20	52	P	Pn	05 19 45.7	-0.4
	baz=241						
PCA	Pinnacle	6.21	80		Pn	05 19 46.0	-0.3
PINM	Pinnacle	6.21	80	P	Pn	05 19 45.6	-0.7
	baz=271						
BC03		6.21	52		Pn	05 19 46.0	-0.2
BCAR	Beaver Creek A	6.21	52		Pn	05 19 46.5	+0.1
YUK3	Moose Creek	6.31	65		Pn	05 19 47.8	0.0
YUK3	Moose Creek	6.31	65	P	Pn	05 19 47.0	-0.8
	baz=255,SNR=16						
BVCY	Beaver Creek	6.33	59	P	Pn	05 19 47.5	-0.4
	baz=249,SNR=5.7						
H23K	Yukon River	6.37	11	Pn	Pn	05 19 48.8	+0.4
H23K	Yukon River	6.37	11	P	Pn	05 19 48.6	+0.1
	baz=194,SNR=45						
IM03		6.40	356		Pn	05 19 48.8	0.0
IMAR	Indian Mountai	6.40	356	Pn	Pn	05 19 48.8	-0.1
J26L	Joseph Creek	6.45	37	P	Pn	05 19 49.3	-0.4
	baz=225,SNR=28						
BCPM	Bancas Point	6.52	82	Pn	Pn	05 19 50.0	-0.6
H24K	Noodor Dome	6.59	17		Pn	05 19 51.4	0.0
H24K	Noodor Dome	6.59	17	P	Pn	05 19 51.1	-0.3
	baz=201,SNR=32						
K27K	Chicken	6.63	44	Pn	Pn	05 19 52.1	+0.1
K27K	Chicken	6.63	44	P	Pn	05 19 51.0	-1.0
	baz=233						
PNL	Peninsula	6.66	84		Pn	05 19 51.8	-0.7
PNL	Peninsula	6.66	84	P	Pn	05 19 51.6	-0.9
	baz=275						
YUK4	Talbot Arm	7.08	70	P	Pn	05 19 58.6	+0.3
	baz=261						
YUK6	Outpost Mounta	7.17	73		Pn	05 19 59.6	0.0
YUK6	Outpost Mounta	7.17	73	P	Pn	05 19 59.3	-0.3
	baz=266						
YUK7	Dusty Glacier	7.26	77		Pn	05 20 00.7	-0.1
EGAK	Eagle	7.41	41		Pn	05 20 01.6	-1.0
EGAK	Eagle	7.41	41	P	Pn	05 20 01.4	-1.2
	baz=231,SNR=7.5						
YUK5	Granite Creek	7.43	72		Pn	05 20 03.5	+0.4
HYT	Haines Junctio	7.58	74	Pn	Pn	05 20 04.8	-0.3
HYT	Haines Junctio	7.58	74	P	Pn	05 20 04.5	-0.6
	baz=267						
DAWY	Dawson	7.64	49		Pn	05 20 05.2	-0.7
DAWY	Dawson	7.64	49	P	Pn	05 20 05.2	-0.7
	baz=240						
COLD	Coldfoot	7.70	7		Pn	05 20 06.8	+0.2
COLD	Coldfoot	7.70	7	P	Pn	05 20 06.5	0.0
	baz=189,SNR=14						
M30M	Minto, Yukon	8.18	62		Pn	05 20 12.5	-0.7
M30M	Minto, Yukon	8.18	62	P	Pn	05 20 12.9	-0.2
	baz=256						
N31M	Braeburn, Yuko	8.46	70	Pn	Pn	05 20 16.7	-0.3
BM03	Burnt Mountain	8.58	21		Pn	05 20 17.2	-1.3
BMAR	Burnt Mountain	8.59	21	Pn	Pn	05 20 17.0	-1.7
I29M	Ogilvie Camp,	8.73	43	Pn	Pn	05 20 20.6	-0.1
SKAG	Skagway	8.74	84	Pn	Pn	05 20 21.5	+0.6
WHY	Whitehorse	8.87	76	Pn	Pn	05 20 21.4	-1.2
WHY	Whitehorse	8.87	76	P	Pn	05 20 21.4	-1.2
	baz=271						
AKUT	Akutan	9.09	238	Pn	Pn	05 20 25.0	-0.5
TOLK	Toolik Lake Re	9.14	7	Pn	Pn	05 20 27.0	+0.8
TOLK	Toolik Lake Re	9.14	7	P	Pn	05 20 25.9	-0.4
	baz=190,SNR=8.9						
BESE	Bessie Mountai	9.16	89	Pn	Pn	05 20 27.8	+1.2
M31M	Drury Creek, Y	9.20	66	Pn	Pn	05 20 26.0	-1.1
TNA	Tin City	9.24	317	Pn	Pn	05 20 28.6	+1.1
SIT	Sitka	9.41	98	Pn	Pn	05 20 28.9	-1.0
JIS	Juneau Island	9.48	90	Pn	Pn	05 20 32.1	+1.3
UNV	Unalaska Valle	9.60	239	Pn	Pn	05 20 31.7	-0.9
WRAK	Wrangell Islan	11.17	98	Pn	Pn	05 20 52.5	-1.3
DLBC	Dease Lake	11.65	86	P	Pn	05 21 01.4	+0.9
	comp=E,0.8nm,0.3s,baz=239,slow=10,SNR=6.2						
INK	Inuvik	12.00	36	P	Pn	05 21 04.3	-0.8
	comp=E,1.3nm,0.6s,baz=232,slow=13,SNR=2.8						
INK	Inuvik	12.00	36	Pn	Pn	05 21 04.7	-0.4
INK	Inuvik	12.00	36	P	Pn	05 21 04.3	-0.8
	baz=233						
C36M	Paulatuk	15.48	39	P	Pn	05 21 49.4	-1.5
	baz=245						
A36M	Sachs Harbour	16.46	30	P	Pn	05 21 59.7	-3.5
	baz=235,SNR=6.9						
YKA	Yellowknife Ar	18.40	65	P	P	05 22 26.2	+0.2
	comp=E,1.6nm,0.6s,baz=278,slow=9.4,SNR=28						
YKA	Yellowknife Ar	18.40	65	P	P	05 22 25.8	-0.3
NEW	Newport	23.44	103	P	P	05 23 21.3	+1.5
	comp=E,1.1nm,0.5s,baz=307,slow=10,SNR=2.8						
	comp=E,1.1nm,0.5s						
RES	Resolute Bay	25.50	31	P	P	05 23 37.9	-0.2
	comp=E,0.9nm,0.7s,baz=281,slow=12,SNR=6.4						
	comp=E,0.9nm,0.7s						
RES	Resolute Bay	25.50	31	P	P	05 23 37.8	-0.3
BOZ	Bozeman (W)	28.00	102	P	P	05 24 00.5	-0.7
	baz=315						
YHH	Holmes Hill	28.97	102	P	P	05 24 11.5	+1.7
YHH				IAmb	IAmb	05 24 12.0	
	comp=Z,1.3nm,0.6s						
TPAW	Teton Pass	29.86	104	P	P	05 24 20.0	+2.3
TPAW				IAmb	IAmb	05 24 20.5	
	comp=Z,2.3nm,0.7s						
SNOW	Snow King Moun	29.98	104	P	P	05 24 21.1	+2.3
SNOW				IAmb	IAmb	05 24 21.6	
	comp=Z,3.1nm,0.7s						
RYN	Ryan	30.08	119	P	P	05 24 18.6	-0.9
RYN				IAmb	IAmb	05 24 38.9	
	comp=Z,1.9nm,1.1s						
NVAR	Mina Array Bea	30.34	119	P	P	05 24 23.8	+1.8
	comp=Z,0.4nm,0.8s,baz=318,slow=6.0,SNR=3.7						
	comp=Z,0.4nm,0.8s						
HWUT	Hardware Ranch	30.97	107	P	P	05 24 27.4	0.0
HWUT				IAmb	IAmb	05 24 30.1	
	comp=Z,5.3nm,1.4s						
PDAR	Pinedale Array	31.08	103	P	P	05 24 29.5	+1.0
	comp=Z,0.5nm,0.7s,baz=344,slow=3.7,SNR=5.0						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	31.08	103	P	P	05 24 28.0	-0.5
TPNV	Topopah Spring	32.48	118	P	P	05 24 41.4	+0.8
TPNV				IAmb	IAmb	05 24 45.9	
	comp=Z,1.5nm,1.2s						
RSSD	Black Hills	32.86	96	P	P	05 24 42.5	-1.5
	baz=316						
G40A	Rib Lake	39.07	83	P	P	05 25 37.2	+0.5
E43A	Lone Tree Farm	39.91	79	P	P	05 25 44.1	+0.5
SUMG	Summit	40.64	25	P	P	05 25 50.0	+0.1
SUMG				IAmb	IAmb	05 26 01.1	
	comp=Z,5.5nm,1.3s						
SCHQ	Schefferville	43.57	57	LR	LR	05 43 59.3	
	comp=Z,29nm,18.9s,baz=116,slow=35						
TXAR	Lajitas Array	44.63	111	P	P	05 26 23.7	+1.4
	comp=Z,0.2nm,0.6s,baz=305,slow=6.3,SNR=2.1						
	comp=Z,0.2nm,0.6s						

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*TIF **09** 05:35:03.0, 41°.42N×41°.37E, h25km±1km*
*ISK **09** 05:35:03.2, 41°.48N×41°.30E, h16km, ML2.6/4*
*DDA **09** 05:35:04.4±0.0, 41°.34N×41°.34E, h7km±2km, ML2.2*

ISC 09 05:35:03.0±1.2, **41°.38N**±0°.04×**41°.33E**±0°.04, **h22**km±4km, **n13**, σ**0ˢ.72**/24, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPA	Hopa-Artvin	0.09	87	PG	Pb	05 35 07.5	+0.4
HOPA				SG	Sb	05 35 10.4	+0.5
DBOC	Borcka	0.26	98	P	Pb	05 35 09.7	+0.4
DBOC				S	Sb	05 35 13.8	+0.2
BATM	Batumi	0.35	51	P	Pb	05 35 10.5	-0.1
BATM				S	Sb	05 35 15.6	-0.2
BATM	Batumi	0.35	51	PG	Pb	05 35 10.6	0.0
DBAD	Bademkaya	0.46	142	P	Pb	05 35 12.9	+0.5
DBAD				*i* AML	AML	05 35 19.0	
	comp=N,158nm,0.6s						
DBAD				S	Sb	05 35 19.3	+0.5
DBAD				*i* AML	AML	05 35 20.0	
	comp=Z,167nm,0.4s						
CHOM	Cayeli-Rize	0.51	236	PG	Pb	05 35 14.4	+1.1
CHOM				SG	Sn	05 35 23.5	+0.4
DAGI	Agillar	0.54	124	P	Pb	05 35 14.2	+0.3
DAGI				S	Sb	05 35 21.6	+0.4
DAGI				*i* AML	AML	05 35 22.0	
	comp=N,202nm,0.1s						
DAGI				*i* AML	AML	05 35 22.0	
	comp=E,229nm,0.3s						
CHAY	Cayeli-Rize	0.54	237	PG	Pb	05 35 14.9	+1.1
CHAY				SG	Sn	05 35 23.9	+0.1
DDEM	Demirkent	0.59	147	P	Pb	05 35 15.3	+0.6
DDEM				S	Sb	05 35 23.3	+0.7
DDEM				*i* AML	AML	05 35 24.0	
	comp=N,198nm,0.2s						
DDEM				*i* AML	AML	05 35 24.0	
	comp=E,146nm,0.2s						
KRIK	Erzurum-spir	1.09	196	P	Pn	05 35 21.5	-1.6
KRIK				S	Sb	05 35 35.3	-1.7
ABS	Abastumani	1.18	71	P	Pn	05 35 24.3	0.0
ABS				S	Sn	05 35 40.0	+0.2
BAYT	Aydıntepe-Bayb	1.33	223	PN	Pb	05 35 27.9	+0.5
TKB	Tkibuli	1.58	52	P	Pb	05 35 31.9	+0.4
TKB				S	Sb	05 35 51.2	+0.2

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*DJA **09** 05:44:09.5±0.7, 0°S±6°×12°3E±°, h160km±7km, M4.0/8, MLv4.0/8*
*NEIC **09** 05:44:09.9±1.3, 0°.03N±0°.08×123°.25E±0°.04, h153km±8km, mb4.0/11, Error ellipse: s-maj=11.7km s-min=5.0km az=188.0*
*IDC **09** 05:44:10.2±5.8, 0°.07N×123°.30E, h161km±55km, mb3.5/6, mbtmp4.0/7, MS2.8/1, Error ellipse: s-maj=71.9km s-min=14.7km az=62.0*

ISC 09 05:44:09.2±0.6, **0°.05S**±0°.06×**123°.16E**±0°.06, **h150**km, **n34**, σ**1ˢ.17**/35, **mb3.9**/10, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.70	348	P	Pn	05 44 34.6	+2.8
KMSI	Cibinong	1.03	53	P	Pn	05 44 37.2	+3.0
LUWI	Luwuk	1.06	202		Pn	05 44 35.9	+1.4
LUWI	Luwuk	1.06	202	P	Pn	05 44 35.9	+1.4
LUWI				S	Sn	05 44 54.5	+0.7
MRSI	Marisa	1.33	293	P	Pn	05 44 38.0	+1.0
APSI	Ampana	1.74	241	P	Pn	05 44 42.5	+1.2
APSI				S	Sn	05 45 06.0	0.0
TOLI2	Tolitoli	2.65	296		Pn	05 44 53.2	+1.0
MPSI	Mapaga	3.29	277	P	Pn	05 45 01.4	+1.1
SANI	Sanana	3.45	125	P	Pn	05 45 01.8	-0.6
TNTI	Ternate	4.28	79	Pn	Pn	05 45 12.1	-1.1
LBMI	Labuha	4.38	98	P	Pn	05 45 13.9	-0.5
KAPI	Kappang	5.99	215	Pn	Pn	05 45 37.1	+1.3
MYLDM	Lahad Datu	6.98	318	Pn	Pn	05 45 50.3	+1.3
MTN	Manton Dam	14.96	148	Pn	Pn	05 47 32.5	-0.8
KNRA	Kununurra	16.48	161		P	05 47 53.0	+1.2
FITZ	Fitzroy Crossi	18.10	172	P	P	05 48 10.7	+1.1
	3.8nm,0.4s,baz=11,slow=10,SNR=34						
FITZ	Fitzroy Crossi	18.10	172	IAmb	IAmb	05 48 17.4	
	comp=Z,16nm,1.4s						
WB0	Warramunga Arr	22.47	151	P	P	05 48 56.2	0.0
WRAB	Tennant Creek	22.59	152	P	P	05 48 57.8	+0.5
WRAB				IAmb	IAmb	05 49 07.8	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	22.60	152	P	P	05 48 57.6	+0.2
	comp=Z,2.8nm,0.5s,baz=330,slow=10,SNR=86						
	comp=Z,2.8nm,0.5s						
WRA	Warramunga Arr	22.60	152	P	P	05 48 56.4	-0.9
WB2	Warramunga Arr	22.60	152	P	P	05 48 57.7	+0.3
WB2				IAmb	IAmb	05 49 08.8	
	comp=Z,4.8nm,1.1s						
WR0	Warramunga Arr	22.71	151	P	P	05 48 58.7	+0.3
WR0				IAmb	IAmb	05 49 00.1	
	comp=Z,5.8nm,0.7s						
ASAR	Alice Springs	25.68	157	P	P	05 49 26.1	+0.6
	comp=Z,0.9nm,0.8s,baz=343,slow=14,SNR=11						
ASAR				PcP	PcP	05 52 52.2	+0.1
	comp=Z,0.5nm,0.3s,baz=349,slow=2.3,SNR=7.5						
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	30.08	309	P	P	05 50 05.2	+0.6
	comp=Z,2.0nm,0.4s,baz=128,slow=6.0,SNR=6.0						
CMAR				LR	LR	06 03 19.4	
	comp=Z,15nm,18.1s,baz=65,slow=38						
	comp=Z,2.0nm,0.4s						
SONM	Songino Array	49.88	345	P	P	05 52 46.9	-0.5
	comp=Z,1.2nm,0.4s,baz=154,slow=9.2,SNR=2.2						
	comp=Z,1.2nm,0.4s						
SONM	Songino Array	49.88	345	IAmb	IAmb	05 53 02.8	
	comp=Z,1.9nm,0.9s						
MK31	Makanchi Array	58.74	328	P	P	05 53 51.1	-0.3
MKAR	Makanchi Array	58.74	328	P	P	05 53 51.0	-0.4
	comp=Z,0.5nm,0.3s,baz=123,slow=8.7,SNR=16						
MKAR				PcP	PcP	05 54 37.9	-1.7
	comp=Z,0.3nm,0.5s,baz=145,slow=3.1,SNR=4.1						
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	63.10	330	P	P	05 54 20.0	-0.7
KURK				IAmb	IAmb	05 54 20.2	
	comp=Z,2.1nm,0.7s						
ABKAR	Akbulak array	72.87	322	P	P	05 55 20.1	-1.6
VNDA	Vanda	80.17	172	P	P	05 56 02.9	+0.6
	comp=Z,0.2nm,0.5s,baz=315,slow=6.8,SNR=1.5						
	comp=Z,0.2nm,0.5s						
VNDA	Vanda	80.17	172	IAmb	IAmb	05 56 11.4	
	comp=Z,2.6nm,1.3s						
TORD	Torodi Ar. Bea	120.58	285	PKP	PKPdf	06 02 43.4	-0.8
	comp=Z,0.2nm,0.3s,baz=86,slow=1.9,SNR=1.9						

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*NEIC **09** 05:48:31.4±2.0, 31°.45N±0°.06×140°.3E±0°.1, h57km±7km, mb4.3/7, Error ellipse: s-maj=12.6km s-min=8.3km az=88.0*
*JMA **09** 05:48:33.9±0.2, 32°.0N±0°.9×140°.9E±0°.7, h21km, MV4.1/24, NEAR TORISHIMA IS*
*IDC **09** 05:48:33.0±1.8, 31°.60N×139°.90E, h62km±17km, mb3.6/8, mbtmp3.9/9, Error ellipse: s-maj=41.4km s-min=13.7km az=80.0*

ISC 09 05:48:35.0±0.7, **31°.76N**±0°.05×**140°.62E**±0°.09, **h100**km, **n44**, σ**1ˢ.88**/40, **mb3.9**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.01	314	P	Pn	05 48 53.6	-2.0
JHJ2	Mitsune	1.51	333	Pn	Pn	05 48 59.6	-1.8
JHJ2				Sn	Sn	05 49 17.9	-3.5
JHJ2	Mitsune	1.51	333	P	Pn	05 48 59.4	-1.9
JHJ	Hachijo jima 2	1.53	333	P	Pn	05 48 59.5	-2.1
	148nm,0.3s,baz=104,slow=17,SNR=130						
JHJ				S	Sn	05 49 16.4	-5.4
	261nm,0.3s,baz=62,slow=21,SNR=12						
JMKN	Mikurajimanish	2.29	338	P	Pn	05 49 10.5	-0.9
JMKN				*e*S	Sn	05 49 36.5	-2.7
JKO	Kozu shima	2.72	333	*e*P	Pn	05 49 17.0	-0.1
BSO1	Boso 1	2.90	6	*e*P	Pn	05 49 17.7	-1.2
BSO1				S	Sn	05 49 49.7	-3.0
TK02	Tokai 2	3.25	313	P	Pn	05 49 24.8	+0.9
JOD2	Odawara 2	3.72	340	P	Pn	05 49 30.6	+0.1
JOD2				S	Sn	05 50 11.0	-2.2
TTO1	TONANKAI O.B.S	3.73	301	P	Pn	05 49 30.6	+0.4
JIE	Ise	4.20	310	P	Pn	05 49 37.3	+0.4
JRY	Ryogami san	4.48	342	*e*P	Pn	05 49 41.5	+0.8
JTNC	Tanabenakahech	4.69	297	P	Pn	05 49 44.3	+0.8
JCJ	Chichijima	4.85	163	P	Pn	05 49 43.9	-1.8
	14nm,0.3s,baz=343,slow=20,SNR=11						
JCJ				S	Sn	05 50 36.7	-3.9
	17nm,0.3s,baz=277,slow=23,SNR=1.7						
JCJ	Chichijima	4.85	163		Pn	05 49 38.8	-6.9
MJAR	Matsushiro Arr	5.17	338	P	Pn	05 49 51.1	+1.1
	1.8nm,0.3s,baz=155,slow=16,SNR=3.1						
MJAR	Matsushiro Arr	5.17	338		Pn	05 49 49.6	-0.4
MAJO	Matsushiro	5.17	338	Pn	Pn	05 49 49.4	-0.7
MJB9	Matsu-Tunnel	5.17	338	Pn	Pn	05 49 49.4	-0.7
H11N2	WAKE ISLAND Hy	26.45	111	T	T	06 23 03.6	
	baz=304,slow=75,SNR=4.0						
H11N1	WAKE ISLAND Hy	26.46	111	T	T	06 23 13.1	
	baz=304,slow=75,SNR=3.9						
H11N3	WAKE ISLAND Hy	26.47	111	T	T	06 23 09.5	
	baz=304,slow=75,SNR=5.2						
H11S3	WAKE ISLAND Hy	26.96	113	T	T	06 23 21.8	
	baz=304,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	26.96	113	T	T	06 23 21.9	
	baz=304,slow=75,SNR=16						
H11S2	WAKE ISLAND Hy	26.98	113	T	T	06 23 23.0	
	baz=304,slow=75,SNR=16						
GSTR	Great Sitkin T	37.38	44	P	P	05 55 41.4	+3.4
MK31	Makanchi Array	46.54	306	P	P	05 56 52.6	+0.2
MK31				IAmb	IAmb	05 57 16.4	
	comp=Z,1.6nm,1.2s						
MKAR	Makanchi Array	46.54	306	P	P	05 56 51.5	-1.0
	comp=Z,0.2nm,0.3s,baz=87,slow=7.7,SNR=6.5						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	46.54	306	P	P	05 56 52.5	0.0
WB0	Warramunga Arr	51.58	187	P	P	05 57 31.1	0.0
WB0				IAmb	IAmb	05 57 36.2	
	comp=Z,4.7nm,1.1s						
WR0	Warramunga Arr	51.76	187	P	P	05 57 30.1	-2.3
WR0				IAmb	IAmb	05 57 42.7	
	comp=Z,7.1nm,1.3s						
WB2	Warramunga Arr	51.76	188	P	P	05 57 32.2	-0.2
WB2				IAmb	IAmb	05 57 33.4	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	51.76	188	P	P	05 57 32.1	-0.3
	comp=Z,0.2nm,0.3s,baz=1.0,slow=7.7,SNR=18						
	comp=Z,0.2nm,0.3s						
ILAR	Eielson Array	54.33	30	P	P	05 57 56.7	+5.9
	comp=Z,0.7nm,1.1s,baz=262,slow=12,SNR=4.2						
	comp=Z,0.7nm,1.1s						
ILAR	Eielson Array	54.33	30	P	P	05 57 55.6	+4.8
KK31	Karatay Array	55.32	303	P	P	05 57 57.8	-0.6
KK31				IAmb	IAmb	05 58 14.4	
	comp=Z,1.1nm,0.9s						
KKAR	Karatay Array	55.32	303	P	P	05 57 57.7	-0.7
ABKAR	Akbulak array	60.91	312	P	P	05 58 37.5	+0.3
ARCES	ARCESS Array B	68.70	340	P	P	05 59 28.8	+1.4
	comp=Z,7.1nm,1.1s,baz=52,slow=7.3,SNR=2.7						
	comp=Z,7.1nm,1.1s						
ARCES	ARCESS Array B	68.70	340	IAmb	IAmb	05 59 30.1	
	comp=Z,14nm,1.2s						
FINES	FINESS Array B	73.18	333	P	P	05 59 55.9	+1.3
	comp=Z,1.1nm,0.6s,baz=68,slow=5.1,SNR=11						
	comp=Z,1.1nm,0.6s						
KBZ	Khabaz	73.87	312	P	P	05 59 59.7	+0.8
	comp=Z,1.4nm,0.7s,baz=217,slow=5.1,SNR=4.7						
	comp=Z,1.4nm,0.7s						
NOA	NORSAR Array B	78.79	337	P	P	06 00 27.9	+1.4
	comp=Z,0.3nm,0.4s,baz=46,slow=5.1,SNR=2.6						
	comp=Z,0.3nm,0.4s						
BRTR	Keskin Array B	81.86	312	P	P	06 00 44.5	+1.0
	comp=Z,1.1nm,0.8s,baz=101,slow=5.8,SNR=7.4						
	comp=Z,1.1nm,0.8s						

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*NEIC **09** 05:49:24.2±0.7, 55°.94S±0°.06×27°.8W±0°.2, h109km±8km, mb4.2/11, Error ellipse: s-maj=16.0km s-min=8.4km az=75.0*
*IDC **09** 05:49:27.3±6.7, 55°.98S×27°.76W, h144km±63km, mb3.8/4, mbtmp4.4/6, Error ellipse: s-maj=28.3km s-min=23.5km az=65.0*

ISC 09 05:49:24.8±0.6, **55°.93S**±0°.09×**27°.8W**±0°.1, **h121**km, **n31**, σ**0ˢ.65**/26, **mb4.2**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.23	285	Pn	Pn	05 50 40.0	-0.7
ORCD	Orcadas	10.10	235	Pn	Pn	05 51 45.9	-0.3
SNAA	Sanae	19.01	156	P	P	05 53 36.3	-0.4
SNAA	Sanae	19.01	156	P	P	05 53 36.4	-0.4
	14nm,0.4s,baz=312,slow=12,SNR=209						
SNAA	Sanae	19.01	156	P	P	05 53 36.4	-0.4
PMSA	Palmer Station	19.71	229	P	P	05 53 45.0	+0.7
	25nm,0.9s,baz=87,slow=14,SNR=4.7						
PMSA	Palmer Station	19.71	229	IAmb	IAmb	05 53 48.8	
	comp=Z,31nm,1.0s						
TROLL	Troll, Antarti	20.52	153	P	P	05 53 52.5	-0.6
BELA	Belgrano 2	22.18	184	P	P	05 54 09.6	-0.9
QSPA	South Pole Qui	34.33	180	P	P	05 55 59.7	+0.3
	comp=Z,0.6nm,0.3s,baz=206,slow=2.2,SNR=8.6						
	comp=Z,0.6nm,0.3s						
QSPA	South Pole Qui	34.33	180	IAmb	IAmb	05 56 01.1	
	comp=Z,5.7nm,1.4s						
PB07	IPOC Station P	46.14	300	P	P	05 57 37.5	+0.3
PB07				IAmb	IAmb	05 57 46.5	
	comp=Z,10nm,1.4s						
SBA	Scott Base	46.18	184	P	P	05 57 37.6	+1.0
BOSA	Boshof	46.30	77	P	P	05 57 38.4	+0.1
BOSA				IAmb	IAmb	05 57 45.0	
	comp=Z,7.5nm,1.3s						
PB08	IPOC Station P	47.14	302	P	P	05 57 45.8	+0.6
PB08				IAmb	IAmb	05 58 09.9	
	comp=Z,3.5nm,1.2s						
PB16	IPOC Station P	48.87	303	P	P	05 57 59.2	+0.5
PB16				IAmb	IAmb	05 58 11.4	
	comp=Z,4.6nm,1.4s						
H10N1	ASCENSION HYDR	49.11	18	T	T	06 51 23.6	
	baz=189						
H10N3	ASCENSION HYDR	49.11	18	T	T	06 51 24.8	
	baz=189,slow=74,SNR=6.0						
H10N2	ASCENSION HYDR	49.12	18	T	T	06 51 30.2	
	baz=189,slow=74						
LBTB	Lobatse	49.32	74	P	P	05 58 01.7	+0.1
LPAZ	La Paz	50.01	306	P	P	05 58 08.0	+0.5
	comp=Z,0.8nm,0.5s,baz=127,slow=6.3,SNR=7.5						
	comp=Z,0.8nm,0.5s						

LPAZ	La Paz	50.01	306	P	P	05 58 07.4	0.0
LPAZ				IAmb	IAmb	05 58 08.6	
	comp=Z,1.3nm,0.8s						
DBIC	Dimbokro	65.21	25	P	P	05 59 53.2	+0.2
	comp=Z,1.9nm,0.6s,baz=218,slow=10,SNR=3.1						
	comp=Z,1.9nm,0.6s						
TORD	Torodi Ar. Bea	73.13	30	P	P	06 00 42.2	+0.4
	comp=Z,5.8nm,0.6s,baz=198,slow=6.5,SNR=40						
	comp=Z,5.8nm,0.6s						
ARCES	ARCESS Array B	130.96	22	PKP	PKPdf	06 08 19.3	-1.0
	comp=Z,3.2nm,1.0s,baz=223,slow=2.2,SNR=6.0						
ARCES	ARCESS Array B	130.96	22		PKPdf	06 08 19.7	-0.6
YKA	Yellowknife Ar	135.83	318	PKP	PKPdf	06 08 28.6	-1.0
	comp=Z,0.3nm,0.5s,baz=126,slow=2.1,SNR=3.5						
YKA	Yellowknife Ar	135.83	318		PKPdf	06 08 30.7	+1.1
ILAR	Eielson Array	149.76	312	PKPbc	PKPbc	06 08 58.4	-0.4
	comp=Z,3.2nm,0.8s,baz=107,slow=1.7,SNR=3.6						
SONM	Songino Array	151.09	87	PKPbc	PKPbc	06 09 01.8	-0.9
	comp=Z,4.1nm,0.5s,baz=215,slow=4.1,SNR=5.7						
SONM	Songino Array	151.09	87	PKPdf	PKPdf	06 08 57.1	+0.4

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*ANF **09** 06:05:05.1±0.1, 60.°67N×150.°55W, $h52^{km}\pm4^{km}$, ML3.7/66, Error ellipse: s-maj=1.5km s-min=1.1km az=147.0*

*NEIC **09** 06:05:05.3±1.5, 60.°72N±0.°03×150.°60W±0.°06, $h41^{km}\pm14^{km}$, Error ellipse: s-maj=4.4km s-min=3.9km az=115.0*

*AEIC **09** 06:05:05±1.6, 60.°72N±0.°03×150.°58W±0.°06, $h45^{km}\pm7^{km}$, ML3.2, ML3.4/158(NEIC), Error ellipse: s-maj=4.1km s-min=3.6km az=106.0*

ISC 09 06:05:05.2±1.1**, 60.°69N**±0.°03×**150.°54W**±0.°02**, $h53^{km}\pm7^{km}$, n223, $\sigma 0^{s}70$**/235**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLKM	Skilak Lake	0.24	140		Pn	06 05 13.8	-0.4
SLKM					Sn	06 05 20.4	-0.2
CAPN	Captain Cook N	0.31	284		Pn	06 05 14.9	+0.2
CAPN	Captain Cook N	0.31	284	IAML		06 05 19.3	
	comp=E,380nm,0.2s						
CAPN	Captain Cook N	0.31	284	P	Pn	06 05 14.9	+0.2
	baz=98,SNR=11						
O22K	Cooper Landing	0.46	117		Pn	06 05 15.9	-0.2
O22K					Sn	06 05 24.2	+0.3
O22K	Cooper Landing	0.46	117	P	Pn	06 05 16.1	-0.1
	baz=301,SNR=230						
FIS	Fire Island	0.48	19		Pn	06 05 16.0	-0.4
FIS				IAML		06 05 25.9	
	comp=N,5µm,0.7s						
FIS				IAML		06 05 25.9	
	comp=E,4µm,0.6s						
RC01	Rabbit Creek A	0.56	44		Pn	06 05 16.5	-0.8
RC01					Sn	06 05 25.4	-0.7
RC01	Rabbit Creek A	0.56	44	P	Pn	06 05 16.6	-0.8
	baz=228,SNR=393						
RC01				S	Sn	06 05 25.8	-0.3
	baz=228						
SEW	Seward	0.80	137		Pn	06 05 20.3	0.0
SEW					Sn	06 05 31.7	+0.3
SEW	Seward	0.80	137	P	Pn	06 05 20.3	0.0
	baz=319,SNR=74						
SPU	Mount Spurr	0.89	304		Pn	06 05 20.2	-1.4
SPCG	Spurr Capps Gl	0.94	310		Pn	06 05 21.1	-1.2
BRLK	Bradley Lake	0.95	191		Pn	06 05 22.2	-0.1
BRLK				IAML		06 05 37.5	
	comp=E,1µm,0.3s						
BRLK				IAML		06 05 39.5	
	comp=N,1µm,0.2s						
BRSE	Bradley Lake S	0.96	186		Pn	06 05 22.4	-0.1
BRSE					Sn	06 05 36.1	+1.0
BRSE	Bradley Lake S	0.96	186	P	Pn	06 05 22.4	-0.1
	baz=4.9,SNR=172						
SPCR	Spurr Chakacha	0.96	303		Pn	06 05 21.2	-1.4
SPCR	Spurr Chakacha	0.96	303	P	Pn	06 05 21.1	-1.4
	baz=120,SNR=63						
SPCR				S	Sn	06 05 34.1	-1.2
	baz=120						
CKN	Chakachatna No	0.96	304		Pn	06 05 21.6	-0.9
STLK	Strandline Lak	1.02	323		Pn	06 05 22.4	-0.9
SPBG	Spurr Blockage	1.06	303		Pn	06 05 22.8	-1.0
SPBG					Sn	06 05 36.8	-0.9
DFR	Drift River	1.06	265		Pn	06 05 22.6	-1.3
M22K	Willow	1.08	11		Pn	06 05 23.4	-0.6
M22K	Willow	1.08	11	IAML		06 05 40.3	
	comp=N,1µm,0.4s						
M22K	Willow	1.08	11	P	Pn	06 05 23.5	-0.6
	baz=192,SNR=84						
M22K				S	Sn	06 05 38.1	+0.1
	baz=192						
RSO	Redoubt South	1.12	259		Pn	06 05 23.9	-0.9
RDJH	Redoubt Jeurge	1.12	266		Pn	06 05 23.6	-1.1
PMR	Palmer	1.13	37		Pn	06 05 24.3	-0.4
PMR					Sn	06 05 39.3	+0.1
PMR	Palmer	1.13	37	IAML		06 05 41.1	
	comp=N,778nm,0.5s						
PMR				IAML		06 05 41.2	
	comp=E,1µm,0.4s						
PMR	Palmer	1.13	37	P	Pn	06 05 24.3	-0.4
	baz=219,SNR=109						
PMR				S	Sn	06 05 39.5	+0.3
	baz=219						
RED	Redoubt Volcan	1.14	257		Pn	06 05 23.9	-1.0
RED					Sn	06 05 38.8	-0.7
SPWE	Spurr West	1.14	302		Pn	06 05 24.1	-0.9
RDWB	Redoubt West	1.15	261		Pn	06 05 24.1	-1.0
HOM	Homer	1.18	208		Pn	06 05 25.4	+0.1
HOM					Sn	06 05 41.7	+1.4
HOM	Homer	1.18	208	P	Pn	06 05 25.7	+0.4
	baz=26,SNR=7.7						
NCT	North Crescent	1.19	265		Pn	06 05 24.5	-1.1
O20K	Slope Mountain	1.20	240		Pn	06 05 26.0	+0.3
O20K	Slope Mountain	1.20	240	P	Pn	06 05 25.6	-0.1
	baz=57,SNR=11						
CNPM	China Poot	1.22	197		Pn	06 05 25.9	-0.1
CNPM				IAML		06 05 45.7	
	comp=N,1µm,0.4s						
CNPM				IAML		06 05 46.2	
	comp=E,1µm,0.5s						
CNPM	China Poot	1.22	197		Sn	06 05 42.4	+0.9
KNK	Knik Glacier	1.24	54		Pn	06 05 26.3	0.0
KNK					Sn	06 05 42.6	+0.6
KNK	Knik Glacier	1.24	54	P	Pn	06 05 26.1	-0.2
	baz=237,SNR=80						
KNK				S	Sn	06 05 42.5	+0.5
	baz=237						
GHO	Glory Hole Cre	1.33	35		Pn	06 05 27.3	-0.3
GHO					Sn	06 05 45.3	+1.0
GHO				IAML		06 05 48.2	
	comp=N,1µm,0.7s						
SML	Sawmill	1.55	43		Pn	06 05 30.1	-0.2
SML	Sawmill	1.55	43	IAML		06 05 54.3	
	comp=E,522nm,0.9s						
SML				IAML		06 05 54.7	
	comp=N,562nm,0.6s						
SML	Sawmill	1.55	43	P	Pn	06 05 30.2	-0.2
	baz=226,SNR=68						
SML				S	Sn	06 05 49.7	+0.3
	baz=226						
GLI	Glacier Island	1.70	82		Pn	06 05 31.3	-1.2
GLI	Glacier Island	1.70	82	P	Pn	06 05 31.4	-1.0
	baz=266,SNR=22						
GLI				S	Sn	06 05 52.9	-0.2
	baz=266						
OPT	Oil Point	1.70	233		Pn	06 05 33.3	+0.8
P19K	Oil Pt	1.70	233		Pn	06 05 33.1	+0.6
P19K	Oil Pt	1.70	233	IAML		06 05 56.7	
	comp=N,654nm,0.5s						
P19K	Oil Pt	1.70	233	P	Pn	06 05 32.9	+0.4
	baz=50						
CUT	Chulitna	1.72	4		Pn	06 05 32.6	-0.1
CUT					Sn	06 05 54.7	+1.2
CUT	Chulitna	1.72	4	IAML		06 06 02.0	
	comp=E,559nm,0.5s						
CUT	Chulitna	1.72	4	P	Pn	06 05 32.4	-0.3
	baz=185,SNR=32						
M20K	Styx River	1.73	315		Pn	06 05 33.0	0.0
M20K					Sn	06 05 54.3	+0.4
M20K				IAML		06 05 56.3	
	comp=E,264nm,1.0s						
M20K	Styx River	1.73	315	P	Pn	06 05 32.9	0.0
	baz=132						
M20K				S	Sn	06 05 53.9	0.0
	baz=132						
M23K	Glacier View	1.75	50	P	Pn	06 05 32.9	-0.2
	baz=233,SNR=46						
SCM	Sheep Creek Mo	1.93	52		Pn	06 05 35.5	-0.2
SCM					Sn	06 05 59.0	+0.2
SCM				IAML		06 06 08.7	
	comp=E,447nm,0.6s						
SCM	Sheep Creek Mo	1.93	52	P	Pn	06 05 35.4	-0.2
	baz=236,SNR=29						
O19K	Port Alsworth	1.94	257		Pn	06 05 35.4	-0.2
O19K	Port Alsworth	1.94	257	P	Pn	06 05 35.3	-0.3
	baz=72						
N19K	Bonanza Creek	1.94	275		Pn	06 05 35.2	-0.6
N19K	Bonanza Creek	1.94	275	P	Pn	06 05 35.2	-0.6
	baz=91,SNR=36						
JPK	Jack Peak	1.96	78		Pn	06 05 35.5	-0.6
FID	Port Fidalgo	2.00	87		Pn	06 05 35.0	-1.4
FID	Port Fidalgo	2.00	87	IAML		06 06 08.9	
	comp=E,438nm,0.4s						
FID				IAML		06 06 09.5	
	comp=N,408nm,0.5s						
M19K	Big River Lodg	2.22	305		Pn	06 05 39.5	0.0
M19K					Sn	06 06 05.8	0.0
M19K	Big River Lodg	2.22	305	P	Pn	06 05 39.6	0.0
	baz=121						
M19K				S	Sn	06 06 06.2	+0.4
	baz=121						
WAT6	Susitna Watana	2.32	34		Pn	06 05 41.4	+0.3
WAT6	Susitna Watana	2.32	34	P	Pn	06 05 40.5	-0.5
	baz=217,SNR=58						
WAT1	Susitna Watana	2.34	23		Pn	06 05 41.9	+0.6
WAT1	Susitna Watana	2.34	23	P	Pn	06 05 40.9	-0.3
	baz=205						
PPLA	Purkeypile	2.35	341		Pn	06 05 41.5	+0.1
PPLA					Sn	06 06 07.2	-1.8
PPLA	Purkeypile	2.35	341	P	Pn	06 05 41.3	-0.1
	baz=160,SNR=20						
PPLA				S	Sn	06 06 09.6	+0.5
	baz=160						
Q19K	Cape Douglas,	2.37	223		Pn	06 05 42.4	+0.9
Q19K	Cape Douglas,	2.37	223	P	Pn	06 05 41.6	+0.1
	baz=39,SNR=15						
EYAK	Cordova Ski Ar	2.37	91		Pn	06 05 40.5	-1.0
EYAK	Cordova Ski Ar	2.37	91	P	Pn	06 05 40.6	-1.0
	baz=276,SNR=27						
DIV	Divide	2.37	77		Pn	06 05 40.9	-0.8
KLU	Klutina	2.38	68		Pn	06 05 41.7	-0.2
KLU	Klutina	2.38	68	IAML		06 06 19.1	
	comp=E,196nm,0.5s						
KLU	Klutina	2.38	68	P	Pn	06 05 41.5	-0.4
	baz=253,SNR=50						
L20K	Farewell, AK	2.40	320		Pn	06 05 41.9	-0.1
L20K					Sn	06 06 12.8	+2.6
L20K	Farewell, AK	2.40	320	P	Pn	06 05 41.7	-0.4
	baz=137,SNR=13						
Q23K	Middleton Isla	2.45	119	Pn	Pn	06 05 42.5	-0.1
Q23K				IAML		06 06 37.3	
	comp=E,159nm,1.2s						
Q23K				IAML		06 06 42.2	
	comp=N,165nm,1.2s						
MID	Middleton Isla	2.46	119	Pn	Pn	06 05 42.5	-0.2
MID				IAML		06 06 47.6	
	comp=N,142nm,1.6s						
MID				IAML		06 06 47.9	
	comp=E,150nm,1.0s						
SVW2	Sparrevohn	2.50	282		Pn	06 05 42.3	-1.1
M24K	Tolsona, Glenn	2.53	54		Pn	06 05 44.3	+0.4
M24K	Tolsona, Glenn	2.53	54	P	Pn	06 05 44.2	+0.4
	baz=239,SNR=68						
L19K	White Mountain	2.56	308		Pn	06 05 44.3	+0.2
L19K					Sn	06 06 14.7	+0.6
L19K	White Mountain	2.56	308	P	Pn	06 05 44.4	+0.2
	baz=124,SNR=93						
N18K	Kilae Creek	2.63	272		Pn	06 05 44.3	-0.9
N18K	Kilae Creek	2.63	272	P	Pn	06 05 44.3	-0.9
	baz=87,SNR=11						
P18K	Big Mountain,	2.69	243		Pn	06 05 46.1	+0.1
P18K	Big Mountain,	2.69	243	P	Pn	06 05 45.7	-0.3
	baz=58						
TRF	Thorofare Moun	2.77	2		Pn	06 05 47.0	-0.2
TRF				IAML		06 06 27.2	
	comp=N,152nm,0.7s						
TRF				IAML		06 06 28.7	
	comp=E,103nm,0.6s						
DHY	Denali Highway	2.82	31		Pn	06 05 48.1	+0.2
DHY				IAML		06 06 28.3	
	comp=E,170nm,0.7s						
DHY				IAML		06 06 32.2	
	comp=N,125nm,0.9s						
DHY	Denali Highway	2.82	31	P	Pn	06 05 48.2	+0.3
	baz=214,SNR=52						
CAST	Castle Rocks	2.83	346		Pn	06 05 47.8	-0.1
CAST					Sn	06 06 20.8	0.0
CAST	Castle Rocks	2.83	346	IAML		06 06 24.3	
	comp=E,97nm,0.6s						
CAST	Castle Rocks	2.83	346	P	Pn	06 05 48.0	+0.1
	baz=165,SNR=62						
RND	Reindeer	2.84	16		Pn	06 05 47.8	-0.3
RND				IAML		06 06 33.6	
	comp=N,87nm,1.0s						
RND				IAML		06 06 38.4	
	comp=E,110nm,0.8s						
GOAT	Goat Mountain	2.87	90		Pn	06 05 47.3	-1.1
KTH	Kantishna Hill	2.88	357		Pn	06 05 49.4	+0.9
KTH					Sn	06 06 22.8	+0.8
KTH	Kantishna Hill	2.88	357	IAML		06 06 28.0	
	comp=E,160nm,0.8s						
RAGM	Ragged Mountai	2.92	93		Pn	06 05 47.5	-1.6
BMRM	Bremner River	2.92	82		Pn	06 05 47.7	-1.5
BMRM				IAML		06 06 35.8	
	comp=N,195nm,0.8s						
BMRM				IAML		06 06 40.0	
	comp=E,160nm,0.7s						
BMRM	Bremner River	2.92	82	P	Pn	06 05 48.1	-1.0
	baz=268,SNR=20						
N25K	Chitina, Valde	3.02	70		Pn	06 05 50.5	-0.1
N25K	Chitina, Valde	3.02	70	IAML		06 06 36.3	
	comp=E,118nm,0.6s						
N25K				IAML		06 06 36.7	
	comp=N,186nm,0.6s						
N25K	Chitina, Valde	3.02	70	P	Pn	06 05 50.5	-0.1
	baz=256,SNR=13						
HARP	HAARP	3.09	54	P	Pn	06 05 52.0	+0.5
	baz=239						
KDAK	Kodiak Island	3.10	201		Pn	06 05 51.0	-0.6
KDAK	Kodiak Island	3.10	201	IAML		06 06 42.6	
	comp=N,75nm,0.7s						
KDAK				IAML		06 06 46.2	
	comp=N,88nm,0.8s						
KDAK	Kodiak Island	3.10	201	P	Pn	06 05 50.8	-0.8
	baz=18						
HMT	Hamilton	3.13	94		Pn	06 05 50.3	-1.7
KAIM	Kayak Island	3.14	101	Pn	Pn	06 05 53.3	+1.1
KAIM				IAML		06 06 55.3	
	comp=N,70nm,1.9s						
KAIM				IAML		06 07 06.3	
	comp=E,69nm,2.6s						
MCK	McKinley	3.14	13		Pn	06 05 51.8	-0.3
MCK				IAML		06 06 40.9	
	comp=N,78nm,0.7s						
MCK				IAML		06 06 45.6	
	comp=E,100nm,0.6s						
MCK	McKinley	3.14	13	P	Pn	06 05 52.6	+0.4
	baz=195						
K20K	Telida	3.15	330		Pn	06 05 52.1	-0.1
K20K	Telida	3.15	330	P	Pn	06 05 52.0	-0.2
	baz=146,SNR=19						
CHUM	Lake Minchumin	3.31	346		Pn	06 05 54.5	+0.1
CHUM	Lake Minchumin	3.31	346	P	Pn	06 05 54.3	-0.1
	baz=165,SNR=58						
PAX	Paxson	3.32	44		Pn	06 05 55.3	+0.7
PAX	Paxson	3.32	44	P	Pn	06 05 55.1	+0.5
	baz=229,SNR=23						
GLB	Gilahina Butte	3.36	74		Pn	06 05 54.8	-0.3
GLB	Gilahina Butte	3.36	74	IAML		06 06 44.4	
	comp=E,122nm,0.8s						
BERG	Berg Lake	3.39	92	Pn	Pn	06 05 53.5	-2.1
BERG				IAML		06 06 54.9	
	comp=N,125nm,0.7s						
BERG				IAML		06 07 01.9	
	comp=E,137nm,0.7s						
SUCK	Suckling Hills	3.42	98	Pn	Pn	06 05 54.3	-1.6
SUCK				IAML		06 07 03.9	
	comp=N,56nm,0.6s						
TT01	Tatalina	3.42	313		Pn	06 05 55.8	-0.1
BPAW	Bear Paw Mtn.	3.43	357		Pn	06 05 55.8	-0.2
BPAW	Bear Paw Mtn.	3.43	357	IAML		06 06 38.5	
	comp=E,67nm,0.8s						
BPAW				IAML		06 06 38.6	
	comp=N,90nm,0.7s						
BPAW	Bear Paw Mtn.	3.43	357	P	Pn	06 05 56.4	+0.4
	baz=176,SNR=57						
TTA	Tatalina	3.43	313		Pn	06 05 55.9	-0.3
TTA	Tatalina	3.43	313	P	Pn	06 05 55.8	-0.3
	baz=128						
VRDI	Verde Repeater	3.50	78		Pn	06 05 56.5	-0.7
VRDI	Verde Repeater	3.50	78	IAML		06 06 48.2	
	comp=N,61nm,0.6s						
VRDI				IAML		06 06 53.8	
	comp=E,70nm,0.7s						
BWN	Browne	3.53	8		Pn	06 05 58.9	+1.5
BWN				IAML		06 07 18.2	
	comp=N,117nm,1.1s						
CAHL	Cahill	3.60	225		Pn	06 05 59.5	+1.0
OHAK	Old Harbor	3.76	203		Pn	06 05 59.5	-1.1
OHAK	Old Harbor	3.76	203	IAML		06 06 59.5	
	comp=N,58nm,0.6s						
OHAK				IAML		06 07 01.5	
	comp=E,75nm,1.1s						
OHAK	Old Harbor	3.76	203	P	Pn	06 05 59.4	-1.1
	baz=21						
WAX	Waxell Ridge	3.80	90		Pn	06 05 59.5	-1.8
WAX				IAML		06 07 07.9	
	comp=E,68nm,0.7s						
K24K	Donnelly Dome	3.83	33	P	Pn	06 06 02.1	+0.5
	baz=218,SNR=59						
J20K	Nowinta River	3.88	336		Pn	06 06 02.4	+0.2
J20K				IAML		06 06 49.0	
	comp=E,51nm,0.7s						
J20K				IAML		06 07 01.6	
	comp=N,72nm,1.3s						
J20K	Nowinta River	3.88	336	P	Pn	06 06 02.5	+0.2
	baz=153,SNR=43						
WRH	Wood River Hil	3.96	16		Pn	06 06 04.0	+0.7
NEA2	Nenana	3.97	9		Pn	06 06 03.0	-0.5
NEA2	Nenana	3.97	9	P	Pn	06 06 03.6	+0.1
	baz=191,SNR=17						
M26K	Nabesna, AK	4.00	61		Pn	06 06 04.0	+0.1
M26K				IAML		06 07 18.9	
	comp=N,69nm,0.6s						
M26K	Nabesna, AK	4.00	61	P	Pn	06 06 04.0	+0.1
	baz=248,SNR=9.7						
BALM	Baldy	4.02	82		Pn	06 06 03.5	-0.8
ISLE	Juniper Island	4.04	88		Pn	06 06 03.2	-1.3
ISLE				IAML		06 07 13.3	
	comp=E,54nm,0.8s						
ISLE				IAML		06 07 24.1	
	comp=N,78nm,1.0s						
RIDG	Independent Ri	4.05	39		Pn	06 06 04.8	+0.1
RIDG				IAML		06 07 15.9	
	comp=N,69nm,0.7s						
RIDG	Independent Ri	4.05	39	P	Pn	06 06 05.3	+0.6
	baz=224,SNR=36						
HDA	Harding Lake	4.08	22		Pn	06 06 05.7	+0.7
HDA				IAML		06 07 12.7	
	comp=E,65nm,1.1s						
HDA				IAML		06 07 25.1	
	comp=N,46nm,0.9s						
HDA	Harding Lake	4.08	22	P	Pn	06 06 05.7	+0.7
	baz=206,SNR=38						
L26K	Log Cabin Wild	4.13	52		Pn	06 06 05.8	+0.1
L26K				IAML		06 07 17.1	
	comp=N,70nm,0.5s						
L26K	Log Cabin Wild	4.13	52	P	Pn	06 06 06.1	+0.4
	baz=239						
CCB	Clear Creek Bu	4.16	16		Pn	06 06 05.4	-0.7
CCB				IAML		06 07 20.8	
	comp=E,31nm,1.0s						
PS08	TAPS Pump Stn8	4.23	22		Pn	06 06 08.0	+1.0
DOT	Dot Lake	4.24	43		Pn	06 06 07.0	-0.3
TCOL	CIGO, UAF Yank	4.37	15		Pn	06 06 09.0	0.0
TCOL	CIGO, UAF Yank	4.37	15	P	Pn	06 06 09.2	+0.3
	baz=198,SNR=22						
COLA	College	4.37	15		Pn	06 06 09.1	+0.2
COLA	College	4.37	15	P	Pn	06 06 09.3	+0.4
	baz=198						
MDM	Murphy Dome	4.41	13		Pn	06 06 09.2	-0.3
MDM				IAML		06 07 27.1	
	comp=E,25nm,0.9s						
IL31		4.42	21		Pn	06 06 10.4	+0.8
ILAR	Eielson Array	4.42	21		Pn	06 06 08.6	-1.1
M27K	Edge Creek, AK	4.47	64	Pn	Pn	06 06 11.2	+0.7
M27K	Edge Creek, AK	4.47	64	P	Pn	06 06 10.4	-0.1
	baz=252						
SCRK	Sand Creek	4.49	40		Pn	06 06 10.5	-0.2
SCRK	Sand Creek	4.49	40	P	Pn	06 06 10.3	-0.5
	baz=226,SNR=9.4						
I23K	Minto, Yukon-K	4.50	6		Pn	06 06 10.4	-0.4
I23K				IAML		06 07 32.9	
	comp=N,23nm,0.8s						
I23K	Minto, Yukon-K	4.50	6	P	Pn	06 06 10.8	0.0
	baz=188,SNR=22						
I21K	Tanana	4.55	352		Pn	06 06 12.0	+0.6
I21K	Tanana	4.55	352	IAML		06 07 26.5	
	comp=E,28nm,0.9s						
I21K				IAML		06 07 39.4	
	comp=N,22nm,1.8s						
I21K	Tanana	4.55	352	P	Pn	06 06 11.8	+0.4
	baz=171,SNR=31						
SII	Sitkinak Islan	4.56	206	Pn	Pn	06 06 13.3	+1.6
J25K	Salcha River,	4.60	29		Pn	06 06 12.5	+0.3
J25K				IAML		06 07 16.6	
	comp=N,35nm,0.7s						
J25K	Salcha River,	4.60	29	P	Pn	06 06 12.8	+0.6
	baz=214,SNR=93						
TABL	Table Mountain	4.64	89	Pn	Pn	06 06 14.0	+1.0
TABL				IAML		06 07 31.5	
	comp=E,32nm,1.0s						
TABL				IAML		06 07 32.2	
	comp=N,32nm,1.2s						
POKR	Poker Plat Res	4.66	16	Pn	Pn	06 06 12.3	-0.7
POKR	Poker Plat Res	4.66	16	IAML		06 07 36.0	
	comp=E,21nm,1.0s						
POKR	Poker Plat Res	4.66	16	P	Pn	06 06 13.2	+0.3
	baz=199						
L27K	Beaver Creek,	4.76	56		Pn	06 06 14.5	+0.2
L27K				IAML		06 07 34.7	
	comp=N,21nm,1.3s						
L27K	Beaver Creek,	4.76	56	P	Pn	06 06 14.4	+0.1
	baz=244						
BCAR	Beaver Creek A	4.78	56	Pn	Pn	06 06 14.5	-0.1
BVCY	Beaver Creek	4.94	65	P	Pn	06 06 17.0	+0.2
	baz=254						
J26L	Joseph Creek	5.00	37	P	Pn	06 06 17.5	-0.1
	baz=224,SNR=54						
GCSA	Galena City Sc	5.00	327	P	Pn	06 06 17.7	+0.1
	baz=141						
H21K	Melozitna Rive	5.09	349		Pn	06 06 19.5	+0.7
H21K	Melozitna Rive	5.09	349	P	Pn	06 06 19.0	+0.2
	baz=167,SNR=26						
PINM	Pinnacle	5.14	92	P	Pn	06 06 19.4	-0.2
	baz=282						
K27K	Chicken	5.17	46		Pn	06 06 21.0	+1.1
K27K				IAML		06 07 46.4	
	comp=N,26nm,1.0s						
K27K				IAML		06 07 46.9	
	comp=E,19nm,1.5s						
K27K	Chicken	5.17	46	P	Pn	06 06 20.0	+0.1
	baz=234						
H23K	Yukon River	5.17	5		Pn	06 06 20.4	+0.5
H23K	Yukon River	5.17	5	P	Pn	06 06 20.0	+0.1
	baz=186,SNR=12						
H24K	Noodor Dome	5.30	12		Pn	06 06 22.3	+0.5
H24K	Noodor Dome	5.30	12	P	Pn	06 06 22.0	+0.2
	baz=194,SNR=11						
IM03		5.50	346		Pn	06 06 24.6	+0.2
IMAR	Indian Mountai	5.50	346	Pn	Pn	06 06 24.2	-0.3
PNL	Peninsula	5.66	96	P	Pn	06 06 26.2	-0.4
	baz=286						
YUK4	Talbot Arm	5.82	78	P	Pn	06 06 29.6	+0.6
	baz=268						
EGAK	Eagle	5.95	42		Pn	06 06 30.4	-0.1
EGAK	Eagle	5.95	42	P	Pn	06 06 30.2	-0.3
	baz=231,SNR=8.3						
DAWY	Dawson	6.19	52		Pn	06 06 34.0	+0.1
DAWY	Dawson	6.19	52	P	Pn	06 06 33.8	-0.1
	baz=242						
COLD	Coldfoot	6.56	1		Pn	06 06 38.3	-0.6
COLD	Coldfoot	6.56	1	P	Pn	06 06 39.1	+0.2
	baz=182,SNR=9.4						
M30M	Minto, Yukon	6.82	68	Pn	Pn	06 06 42.0	-0.5
M30M	Minto, Yukon	6.82	68	P	Pn	06 06 42.5	0.0
	baz=260						
BM03	Burnt Mountain	7.23	18		Pn	06 06 48.1	-0.1

BMAR	Burnt Mountain	7.25	19	Pn	Pn	06 06 47.1	-1.2
I29M	Ogilvie Camp,	7.26	45		Pn	06 06 48.5	-0.1
I29M	Ogilvie Camp,	7.26	45	P	Pn	06 06 47.9	-0.7
	baz=236						
M31M	Drury Creek, Y	7.88	72	Pn	Pn	06 06 56.4	-0.7
TOLK	Toolik Lake Re	7.99	3	Pn	Pn	06 06 59.9	+1.4
TOLK	Toolik Lake Re	7.99	3	P	Pn	06 06 59.0	+0.5
	baz=184,SNR=13						
TNA	Tin City	9.24	309	P	Pn	06 07 16.7	+1.2
	baz=114						
INK	Inuvik	10.55	36	P	Pn	06 07 33.8	+0.4
	baz=232						
A36M	Sachs Harbour	15.03	31	P	P	06 08 37.9	-0.4
	baz=234						

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*NOU **09** 06:45:23.1, 13.°00S×167.°33E, h197^{km}, MLv5.3/9, Vanuatu Islands*

*IDC **09** 06:45:31.3±3.8, 13.°78S×167.°21E, h179^{km}±35^{km}, mb3.8/11, mbtmp4.3/12, Error ellipse: s-maj=27.3km s-min=19.7km az=144.0*

*NEIC **09** 06:45:31.5±1.9, 13.°8S±0.°1×167.°3E±0.°2, h176^{km}±7^{km}, mb4.4/25, Error ellipse: s-maj=22.6km s-min=16.5km az=97.0*

ISC 09 06:45:33.0±0.7, **13.°85S**±0.°09×**167.°3E**±0.°1, **h200**^{km}, **n59**, σ**1.^{s}02**/60, **mb4.3**/23, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.59	183	Pn	Pn	06 46 04.9	-2.6
SANVU	Saraoutou	1.59	183	P	Pn	06 46 06.3	-1.2
LIFNC	LIFOU	6.89	180	Pn	Pn	06 47 09.6	-2.2
KOUNC	Koumac, New Ca	7.26	203		Pn	06 47 15.4	-1.2
KOUNC	Koumac, New Ca	7.26	203	P	Pn	06 47 16.7	+0.1
	29nm,0.6s						
MARNC	Mare, Loyalty	7.62	175		Pn	06 47 20.3	-1.0
DZM	Mont Dzumac	8.22	186	P	Pn	06 47 29.0	-0.2
	4.1nm,0.4s,baz=244,slow=16,SNR=20						
DZM	Mont Dzumac	8.22	186		Pn	06 47 28.8	-0.4
DZM	Mont Dzumac	8.22	186	P	Pn	06 47 30.0	+0.8
NOUC	Port Laguerre	8.27	186	P	Pn	06 47 29.9	+0.2
ONTNC	Ouen Toro	8.45	185		Pn	06 47 29.7	-2.4
ONTNC	Ouen Toro	8.45	185	P	Pn	06 47 33.8	+1.7
OUENC	Ouen Island, N	8.54	183		Pn	06 47 32.0	-1.2
OUENC	Ouen Island, N	8.54	183	P	Pn	06 47 35.1	+1.9
PINNC	Pines Island,	8.72	179		Pn	06 47 34.6	-1.0
EIDS	Eidsvold	19.08	231	P	P	06 49 41.5	+1.0
CTA	Charters Tower	21.05	250	P	P	06 50 01.7	0.0
	2.4nm,0.4s,baz=80,slow=12,SNR=7.6						
	2.4nm,0.4s						
CTAO	Charters Tower	21.05	250	P	P	06 50 01.4	-0.3
CTAO				IAmb	IAmb	06 50 04.0	
	comp=Z,12nm,1.5s						
ARMA	Armidale	21.93	219	P	P	06 50 11.4	+0.8
ARMA				IAmb	IAmb	06 50 20.7	
	comp=Z,12nm,1.2s						
COEN	Coen	23.42	267	P	P	06 50 25.3	+1.0
COEN				IAmb	IAmb	06 50 25.7	
	comp=Z,7.2nm,0.7s						
BKZ	Black Stump Fm	26.50	164	P	P	06 50 52.8	+0.9
BKZ				IAmb	IAmb	06 51 09.5	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	29.59	228	P	P	06 51 20.1	+0.7
	comp=Z,5.3nm,0.4s,baz=48,slow=9.1,SNR=15						
	comp=Z,5.3nm,0.4s						
STKA	Stephens Creek	29.59	228	P	P	06 51 20.3	+0.9
WR0	Warramunga Arr	31.89	254	P	P	06 51 38.5	-1.3
WR0				IAmb	IAmb	06 51 55.4	
	comp=Z,6.2nm,1.1s						
WB0	Warramunga Arr	32.01	255	P	P	06 51 39.5	-1.3
WB0				IAmb	IAmb	06 51 40.0	
	comp=Z,7.4nm,0.6s						
WB2	Warramunga Arr	32.07	255	P	P	06 51 40.0	-1.4
WB2				IAmb	IAmb	06 51 40.6	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	32.07	255	P	P	06 51 39.8	-1.5
WRA	Warramunga Arr	32.08	255	P	P	06 51 39.9	-1.5
	comp=Z,2.4nm,0.5s,baz=85,slow=9.7,SNR=66						
WRA				PcP	PcP	06 54 26.3	+0.2
	comp=Z,0.6nm,0.6s,baz=85,slow=3.4,SNR=3.3						
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	32.08	255	IAmb	IAmb	06 51 48.6	
	comp=Z,0.2nm,1.1s						
AS31	Alice Springs	33.02	248	P	P	06 51 48.4	-1.2
ASAR	Alice Springs	33.02	248	P	P	06 51 48.2	-1.4
	comp=Z,4.4nm,0.5s,baz=74,slow=9.4,SNR=108						
ASAR				PcP	PcP	06 54 28.6	-0.1
	comp=Z,0.5nm,0.5s,baz=59,slow=1.6,SNR=5.7						
	comp=Z,4.4nm,0.5s						
BBOO	Buckleboo	34.15	231	P	P	06 51 59.3	+0.1
FORT	Forrest	39.78	238	P	P	06 52 46.5	-0.1
FITZ	Fitzroy Crossi	40.21	258	P	P	06 52 50.4	+0.1
FITZ				IAmb	IAmb	06 53 16.9	
	comp=Z,9.0nm,1.4s						
PSA00	Pilbara Seismi	45.71	253	P	P	06 53 35.0	+0.6
MBWA	Marble Bar	45.81	254	P	P	06 53 36.6	+1.4
TOLI2	Tolitoli	48.42	284	P	P	06 53 54.4	-1.0
TOLI2				IAmb	IAmb	06 53 55.1	
	comp=Z,8.4nm,1.0s						
NWAO	Narrogin (SRO)	49.23	238	P	P	06 54 00.8	-0.6
JGF	Kuroka	56.76	331	P	P	06 54 56.5	+0.3
JGF				IAmb	IAmb	06 55 19.8	
	comp=Z,20nm,1.5s						
MJAR	Matsushiro Arr	57.14	332	P	P	06 54 58.0	-0.9
	comp=Z,1.2nm,0.3s,baz=227,slow=14,SNR=4.1						
	comp=Z,1.2nm,0.3s						
MJAR	Matsushiro Arr	57.14	332	P	P	06 54 58.1	-0.8
MAJO	Matsushiro	57.14	332	P	P	06 54 58.9	0.0
MAJO				IAmb	IAmb	06 55 00.1	
	comp=Z,4.7nm,0.5s						
MJB9	Matsu-Tunnel	57.15	332	P	P	06 54 58.9	-0.1
MJB9				IAmb	IAmb	06 55 00.1	
	comp=Z,4.5nm,0.5s						
JHS	Saijyo	58.41	327	P	P	06 55 08.2	+0.5
JHS				IAmb	IAmb	06 55 08.5	
	comp=Z,22nm,1.5s						
TPUB	Ta-pu	58.72	309	P	P	06 55 09.8	-0.3
KSRS	Korea Array	63.03	325	P	P	06 55 39.1	+0.3
	comp=Z,1.6nm,0.8s,baz=137,slow=7.6,SNR=7.1						
	comp=Z,1.6nm,0.8s						
KSAR	Wonju Array Be	63.04	325	P	P	06 55 38.2	-0.7
CMAR	Chiang Mai Arr	74.62	294	P	P	06 56 51.8	+1.1
	comp=Z,1.6nm,0.5s,baz=129,slow=4.2,SNR=12						
	comp=Z,1.6nm,0.5s						
CMAR	Chiang Mai Arr	74.62	294	P	P	06 56 50.7	-0.1
ILAR	Eielson Array	85.68	18	P	P	06 57 48.9	+0.1
	comp=Z,0.5nm,0.7s,baz=248,slow=4.7,SNR=14						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	86.67	49	P	P	06 57 54.9	+0.4
	comp=Z,0.3nm,0.8s,baz=225,slow=7.3,SNR=4.2						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	96.59	316	P	P	06 58 40.4	+0.4
	comp=Z,2.1nm,0.7s,baz=94,slow=6.1,SNR=19						
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	96.70	324	P	P	06 58 39.7	-0.6
	comp=Z,0.9nm,0.5s,baz=117,slow=5.3,SNR=3.7						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	119.41	346	PKP	PKPdf	07 03 58.1	+0.1
	comp=Z,1.6nm,0.5s,baz=68,slow=1.9,SNR=17						
FINES	FINESS Array B	124.92	338	PKP	PKiKP	07 04 09.3	+0.2
	comp=Z,1.0nm,0.6s,baz=54,slow=2.4,SNR=3.3						
NOA	NORSAR Array B	129.78	345	PKP	PKiKP	07 04 18.8	-0.1
	comp=Z,0.1nm,0.4s,baz=30,slow=2.7,SNR=1.7						
GERES	GERESS Array B	138.87	333	PKP	PKPdf	07 04 36.8	+1.2
	comp=Z,0.3nm,0.4s,baz=247,slow=2.8,SNR=3.4						
KEST	Kesra	150.54	322	PKPbc	PKiKP	07 05 02.4	+0.2
	comp=Z,6.0nm,0.6s,baz=167,slow=0.9,SNR=7.4						
TORD	Torodi Ar. Bea	165.98	269	PKPab	PKPab	07 06 16.4	+0.2
	comp=Z,0.6nm,0.5s,baz=73,slow=4.4,SNR=5.7						

IDC 09 06:47:21.1±5.4, **23.°11S**×**175.°85W**, **h0**^{km}, **mb3.9**/4, **mbtmp3.9**/4, **Error ellipse: s-maj=334.2km s-min=31.1km az=157.0**, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.30	268	P	P	06 54 18.8	+0.7
	1.9nm,0.5s,baz=105,slow=11,SNR=3.9						
	1.9nm,0.5s						
ASAR	Alice Springs	45.92	259	P	P	06 55 46.1	+0.2
	1.5nm,0.6s,baz=97,slow=7.2,SNR=8.3						
	1.5nm,0.6s						
WRA	Warramunga Arr	46.27	264	P	P	06 55 47.6	-1.1
	0.5nm,0.3s,baz=98,slow=11,SNR=7.8						
	0.5nm,0.3s						
NVAR	Mina Array Bea	81.58	42	P	P	06 59 41.2	+0.1
	0.5nm,0.7s,baz=224,slow=9.7,SNR=5.3						
	0.5nm,0.7s						

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*KRNET **09** 06:49:31.8±0.1, 41.°15N×73.°39E, h16^{km}, mb2.2*

*ISU **09** 06:49:32, 41.°01N×73.°24E, h5^{km}*

*NNC **09** 06:49:33.8±2.5, 41.°12N×73.°33E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=20.1km s-min=10.8km az=173.0*

*SOME **09** 06:49:35.2, 41.°28N×73.°28E, h20^{km}*

ISC 09 06:49:31.8±1.4, **41.°11N**±0.°05×**73.°44E**±0.°03, **h14**^{km}±12^{km}, **n30**, σ**1.^{s}59**/51, **14C-3D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	1.00	41	⇑*i*P	Pb	06 49 50.8	-0.2
	baz=45						
ARLS				⇑*i*S	Sn	06 50 05.0	-0.6
	baz=45						
ARK	Arkit	1.30	302	⇓*i*P	Pb	06 49 55.8	-0.4
	baz=2.0						
ARK				⇓*i*S	Sg	06 50 13.2	-0.8
	baz=2.0						
UCH	Uchtor	1.37	35	⇑*i*P	Pg	06 49 57.9	-0.4
	baz=38						
UCH				⇑*i*S	Sg	06 50 17.3	+1.0
	baz=38						
FRG	Fergana	1.46	240	P	Sn	06 50 16.0	-0.7
EKS2	Erkin-Say	1.57	9	⇑*i*P	Pb	06 50 00.3	-0.4
	baz=11						
EKS2				⇑*i*S	Sg	06 50 21.5	-0.9
	baz=11						
MRKS	Merke	1.64	354	*e*P	Pg	06 50 05.0	+1.7
	4.4nm,0.2s						
MRKS				*e*S	Sg	06 50 27.0	+2.3
	15nm,0.3s						
MRKS	Merke	1.64	354	P	Pg	06 50 05.0	+1.7
	4.4nm,0.2s						
MRKS				S	Sg	06 50 27.0	+2.3
	15nm,0.3s						
AAK	Ala-Archa	1.71	27	⇑*i*P	Pb	06 50 03.5	+0.3
	baz=29						
AAK				⇑*i*S	Sg	06 50 27.1	0.0
	baz=29						
SHAK	Shakhimardan	1.74	229	S	Sb	06 50 25.0	-0.4
SHAK				S	Pb	06 49 58.3	-5.3
SHAK				P	Pb	06 50 03.0	-0.6
TRKS	Terek-Say	1.78	284	⇑*i*P	Pb	06 50 03.7	-0.7
	baz=81						
TRKS				⇑*i*S	Sb	06 50 27.0	+0.4
	baz=81						
MINT	Mingtut	1.98	252	P	Sn	06 50 32.5	+3.0
BOOM	Boomskoye usch	2.32	53	⇑*i*P	Pb	06 50 13.6	0.0
	baz=54						
BOOM				⇑*i*S	Sg	06 50 44.8	-1.7
	baz=54						
TKM2	Tokmak 2	2.42	41	⇓P	Pb	06 50 15.9	+0.6
	0.8nm,0.3s						
TKM2				⇑S	Sg	06 50 50.1	+0.5
	2.3nm,0.4s						
SGDS	Sogindy	2.50	20	*e*P	Pg	06 50 18.8	-0.9
	3.2nm,0.4s						
SGDS				*e*S	Sg	06 50 50.0	-2.1
	5.3nm,0.6s						
KST	Kastek	2.69	43	*e*P	Pg	06 50 23.5	+0.1
	1.5nm,0.3s						
KST				*e*S	Sg	06 50 58.3	-0.1
	4.2nm,0.6s						
KST	Kastek	2.69	43	Pg	Pg	06 50 23.5	+0.1
	1.5nm,0.3s						
KST				Lg	Lg	06 50 58.3	
	4.2nm,0.6s						
IUG	Iuzhnay	2.76	293	*e*P	Pb	06 50 21.6	+0.6
	59nm,0.3s						
IUG				*e*S	Sb	06 50 54.9	+0.3
	15nm,0.4s						
IUG	Iuzhnay	2.76	293	Pg	Pb	06 50 21.6	+0.6
	59nm,0.3s						
IUG				Lg	Lg	06 50 54.9	
	15nm,0.4s						
KK31	Karatay Array	2.95	313	P	Pb	06 50 22.0	-2.2
	1.0nm,0.6s,baz=129,slow=14,SNR=7.6						
KK31				⇑S	Sb	06 50 59.6	-0.6
	0.5nm,0.3s,baz=128,slow=28,SNR=4.0						
KRBS	Karabastau	3.07	32	*e*P	Pg	06 50 29.1	-1.5
	1.0nm,0.4s						
KRBS				*e*S	Sg	06 51 07.7	-2.6
	1.8nm,0.5s						
KRBS	Karabastau	3.07	32	Pg	Pg	06 50 29.1	-1.5
	1.0nm,0.4s						
KRBS				Lg	Lg	06 51 08.4	
	1.8nm,0.5s						
TNSS	Tian-Shan	3.24	52	*e*P	Pg	06 50 34.9	+0.9
	1.2nm,0.3s						
TNSS				*e*S	Sg	06 51 18.2	+2.2
	1.4nm,0.5s						
TNSS	Tian-Shan	3.24	52	Pg	Pg	06 50 34.9	+0.9
	1.2nm,0.3s						
TNSS				Lg	Lg	06 51 18.2	
	1.4nm,0.5s						
MDOK	Medeo	3.38	51	*e*P	Pg	06 50 37.3	+0.7
	0.9nm,0.1s						
MDOK				*e*S	Sg	06 51 21.6	+1.4
	2.6nm,0.7s						
KUU	Kurty	3.51	37	*e*P	Pg	06 50 37.6	-1.5
	0.5nm,0.3s						
KUU				*e*S	Sg	06 51 22.4	-2.1
	3.7nm,0.4s						
KUU	Kurty	3.51	37	Pg	Pg	06 50 37.6	-1.5
	0.5nm,0.3s						
KUU				Lg	Lg	06 51 22.4	
	3.7nm,0.4s						
KTBS	Karatobe	3.54	42	*e*P	Pg	06 50 39.0	-0.6
	0.5nm,0.3s						
KTBS				*e*S	Sg	06 51 24.9	-0.5
	2.1nm,0.4s						
KTBS	Karatobe	3.54	42	Pg	Pg	06 50 39.0	-0.6
	0.5nm,0.3s						
KTBS				Lg	Lg	06 51 24.9	
	2.1nm,0.4s						
BTLS	Baital	3.95	6	*e*P	Pb	06 50 43.8	+2.6
	1.5nm,0.5s						
BTLS				*e*S	Sg	06 51 33.3	-5.4
	1.5nm,0.4s						
BTLS	Baital	3.95	6	Pg	Pb	06 50 43.8	+2.6
	1.5nm,0.5s						
BTLS				Lg	Lg	06 51 33.3	
	1.5nm,0.4s						

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*IDC **09** 07:01:25.0±1.4, 32.°24S×91.°73E, h0^{km}, mb4.0/5, mbtmp4.0/5, MS3.3/7, Error ellipse: s-maj=43.7km s-min=30.4km az=42.0*

ISC 09 07:01:26.4±1.4, **32.°2S**±0.°2×**91.°8E**±0.°3, **h10**^{km}, **n20**, σ**0.^{s}67**/8, **mb4.0**/5, **MS3.5**/7, **Broken Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	18.84	104	T	T	07 25 13.6	
	baz=272,slow=74						
H01W3	Cape Leeuwin H	18.84	104	T	T	07 25 02.3	
	baz=272,slow=74						
H01W1	Cape Leeuwin H	18.86	104	T	T	07 25 03.0	
	baz=272						
LEM	Lembang	29.29	34	LR	LR	07 18 32.8	
	comp=Z,23nm,19.5s,baz=193,slow=35						
H08S2	Diego Garcia H	30.32	320	T	T	07 39 47.3	
	baz=147,slow=76,SNR=10.0						
H08S1	Diego Carcia H	30.33	320	T	T	07 39 39.7	
	baz=147,slow=76,SNR=9.1						
H08S3	Diego Garcia H	30.34	320	T	T	07 39 54.8	
	baz=147,slow=76,SNR=13						
KAPI	Kappang	37.67	50	LR	LR	07 20 32.8	
	comp=Z,24nm,21.5s,baz=231,slow=30						
ASAR	Alice Springs	38.01	88	P	P	07 08 45.0	0.0
	2.4nm,0.7s,baz=247,slow=8.7,SNR=22						
ASAR				PcP	PcP	07 10 59.5	-1.0
	0.5nm,0.7s,baz=262,slow=2.2,SNR=2.9						
	2.4nm,0.7s						
WRA	Warramunga Arr	39.92	83	P	P	07 09 01.1	+0.1
	3.3nm,0.9s,baz=247,slow=9.1,SNR=20						
	3.3nm,0.9s						
CMAR	Chiang Mai Arr	50.87	9	LR	LR	07 29 13.7	
	comp=Z,13nm,21.0s,baz=205,slow=33						
VNDA	Vanda	54.49	165	P	P	07 10 53.9	+0.2
	1.0nm,1.1s,baz=299,slow=7.8,SNR=2.4						
	1.0nm,1.1s						
PMG	Port Moresby	55.88	79	LR	LR	07 35 26.6	
	comp=Z,43nm,18.2s,baz=149,slow=36						
BOSA	Boshof	56.62	255	LR	LR	07 29 24.6	
	comp=Z,76nm,18.8s,baz=187,slow=30						
SUR	Sutherland	58.86	249	LR	LR	07 30 24.0	
	comp=Z,43nm,19.3s,baz=134,slow=30						
TSUM	Tsumeb	66.91	261	LR	LR	07 35 33.5	
	comp=Z,32nm,20.8s,baz=358,slow=31						
MKAR	Makanchi Array	79.13	353	P	P	07 13 31.0	+0.1
	0.4nm,0.5s,baz=193,slow=5.1,SNR=4.2						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	86.04	356	P	P	07 14 07.1	+0.4
	1.9nm,0.6s,baz=172,slow=2.9,SNR=8.1						
	1.9nm,0.6s						
YKA	Yellowknife Ar	145.36	21	PKPbc	PKPbc	07 21 03.0	-0.6
	0.5nm,0.8s,baz=317,slow=3.2,SNR=5.5						
NVAR	Mina Array Bea	154.79	67	PKPab	PKPab	07 21 44.1	+0.7
	1.2nm,0.7s,baz=260,slow=4.5,SNR=10.0						

NOU 09 07:01:46.4, 15.°98S×**167.°54E, h25**^{km}**, MLv4.2**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.62	328	P	Pb	07 01 58.9	+0.2
YATNC	Mamie plateau,	6.08	186	P	Pn	07 03 14.3	-0.4
DZM	Mont Dzumac	6.15	190	P	Pn	07 03 15.6	-0.1
NOUC	Port Laguerre	6.20	191	P	Pn	07 03 16.2	-0.2
OUENC	Ouen Island, N	6.44	186	P	Pn	07 03 20.7	+1.0

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*IDC **09** 07:06:11.2±1.0, 4.°30S×153.°16E, h0^{km}, mb4.1/4, mbtmp4.1/4, MS3.1/6, Error ellipse: s-maj=33.0km s-min=12.8km az=175.0*

*NEIC **09** 07:06:17.5±1.9, 4.°1S±0.°2×152.°97E±0.°07, h35^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=29.1km s-min=11.0km az=171.0*

ISC 09 07:06:17.3±0.9, **4.°2S**±0.°1×**153.°0E**±0.°1, **h35**^{km}, **n31**, σ**1.^{s}30**/25, **mb4.2**/9, **MS3.1**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.79	270		Pn	07 06 33.2	+1.3
KRVT	Keravat (AS076	0.93	263	Pg	Pn	07 06 34.7	+0.9
	64nm,0.3s,baz=322,slow=1.2,SNR=28						
KRVT				Lg	Lg	07 06 47.5	
	343nm,0.3s,baz=238,slow=22,SNR=18						
PMG	Port Moresby	7.74	228	LR	LR	07 11 17.5	
	comp=Z,77nm,20.8s,baz=344,slow=39						
COEN	Coen	13.68	224	Pn	Pn	07 09 31.0	+2.1
CTA	Charters Tower	17.10	202	P	P	07 10 14.7	-0.4
	2.0nm,0.7s,baz=24,slow=12,SNR=2.4						
CTA				LR	LR	07 15 45.5	
	comp=Z,55nm,21.8s,baz=76,slow=34						
CTAO	Charters Tower	17.10	202		P	07 10 14.9	-0.2
SANVU	Saraoutou	17.94	130	P	Pn	07 10 25.0	+0.9
SANVU				IAmb	IAmb	07 10 25.7	
	comp=Z,31nm,1.3s						
DZM	Mont Dzumac	22.07	145	P	P	07 11 09.8	+0.4
DZM				IAmb	IAmb	07 11 24.1	
	comp=Z,9.2nm,1.2s						
WB0	Warramunga Arr	23.81	228	P	P	07 11 26.7	-0.5
WB0				IAmb	IAmb	07 11 28.2	
	comp=Z,6.3nm,0.8s						
WR0	Warramunga Arr	23.82	227	P	P	07 11 26.6	-0.7
WR0				IAmb	IAmb	07 11 39.0	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	23.95	228	P	P	07 11 27.9	-0.5
WRAB				IAmb	IAmb	07 11 29.6	
	comp=Z,7.9nm,0.9s						
WB2	Warramunga Arr	23.95	228	P	P	07 11 28.2	-0.3
WRA	Warramunga Arr	23.96	228	P	P	07 11 28.0	-0.6
	comp=Z,3.9nm,0.5s,baz=52,slow=10,SNR=39						
WRA				S	S	07 15 39.0	-4.2
	comp=Z,1.5nm,0.8s,baz=49,slow=16,SNR=7.6						
	comp=Z,3.9nm,0.5s						
WRA	Warramunga Arr	23.96	228	P	P	07 11 26.8	-1.8
H11S3	WAKE ISLAND Hy	26.29	31	T	T	07 39 20.3	
	baz=210,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	26.30	31	T	T	07 39 24.8	
	baz=210,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	26.31	31	T	T	07 39 18.1	
	baz=210,slow=76,SNR=22						
KNRA	Kununurra	26.38	243		P	07 11 50.4	-0.2
AS31	Alice Springs	26.70	222	P	P	07 11 53.1	-0.4
ASAR	Alice Springs	26.70	222	P	P	07 11 52.7	-0.8
	comp=Z,1.6nm,0.6s,baz=56,slow=8.7,SNR=4.1						
ASAR				LR	LR	07 22 15.9	
	comp=Z,53nm,20.5s,baz=287,slow=36						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	26.70	222	P	P	07 11 52.0	-1.4
MSVF	Nonsavu	28.02	121	LR	LR	07 22 06.5	
	comp=Z,35nm,21.9s,baz=227,slow=34						
FITZ	Fitzroy Crossi	30.08	241	P	P	07 12 22.5	-1.1
	comp=Z,0.8nm,0.4s,baz=60,slow=9.7,SNR=1.9						
	comp=Z,0.8nm,0.4s						
FITZ	Fitzroy Crossi	30.08	241	P	P	07 12 22.6	-1.1
RAR	Rarotonga	48.89	115	LR	LR	07 32 40.0	
	comp=Z,86nm,18.3s,baz=316,slow=33						
ILAR	Eielson Array	81.54	22	P	P	07 18 30.1	-0.8
	comp=Z,0.9nm,0.7s,baz=240,slow=5.3,SNR=14						
	comp=Z,0.9nm,0.7s						
J25K	Salcha River,	82.04	23	P	P	07 18 33.7	0.0
J25K				IAmb	IAmb	07 18 34.6	
	comp=Z,2.3nm,0.7s						
AKTO	Aktyubinsk	96.35	320	LR	LR	08 03 29.5	
	comp=Z,6.8nm,21.0s,baz=64,slow=36						
LPAZ	La Paz	134.57	118	PKP	PKPdf	07 25 33.8	0.0
	comp=Z,1.1nm,0.7s,baz=269,slow=1.7,SNR=6.6						
TORD	Torodi Ar. Bea	150.25	289	PKPbc	PKPbc	07 26 05.3	-0.5
	comp=Z,1.3nm,0.4s,baz=69,slow=2.2,SNR=24						
BDFB	Brasilia	151.38	134	PKPbc	PKPbc	07 26 08.6	0.0
	comp=Z,4.9nm,0.7s,baz=266,slow=3.7,SNR=9.2						

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*WEL **09** 07:26:00, 36.°79S×177.°68E, h56^{km}, ML4.2, Mw4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-1.28; M$_{\theta\theta}$0.48; M$_{\phi\phi}$0.80; M$_{r\theta}$0.48; M$_{\theta\phi}$0.76; M$_{\phi r}$0.94; Fault plane solution: M$_0$1.71000×10^{15} NP1: φ$_s$48.00000°, δ27.00000°, λ-75.00000°. NP2: φ$_s$211.00000°, δ64.00000°, λ-97.00000°. Principal axes: T 176.5700, Plg19.0000°, Azm307.0000°; N -10.8000, Plg7.0000°, Azm214.0000°; P -165.7600, Plg70.0000°, Azm105.0000°;*

*NOU **09** 07:26:47.3, 36.°76S×178.°46E, h202^{km}, mb4.1/9, Off E. Coast of N. Island, N.Z.*

*IDC **09** 07:26:57.9±3.6, 36.°84S×177.°73E, h86^{km}±26^{km}, mb4.0/7, mbtmp4.3/7, MS3.0/3, Error ellipse: s-maj=40.4km s-min=20.0km az=53.0*

*NEIC **09** 07:26:58.6±1.8, 37.°17S±0.°08×177.°5E±0.°1, h83^{km}±4^{km}, mb4.6/16, Error ellipse: s-maj=13.9km s-min=10.3km az=48.0*

*WEL **09** 07:26:59.0±0.8, 37°S±6°×17°8E±°, h77^{km}±8^{km}, M4.1/31, ML4.4/31, MLv4.1/31, Error ellipse: s-maj=0.0km s-min=0.0km az=33.8*

ISC 09 07:26:58.6±0.5, **37.°11S**±0.°05×**177.°54E**±0.°05, **h83**^{km}, **n179**, σ**2.^{s}61**/164, **mb4.6**/16, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.50	215	P	Pn	07 27 15.4	+2.7
WSRZ				S	Sn	07 27 27.4	+4.3
WIZ	White Island	0.50	214	P	Pn	07 27 15.2	+2.5
WIZ				S	Sn	07 27 27.2	+4.2
HAZ	Te Kaha	0.67	163	P	Pn	07 27 16.1	+1.8
HAZ				S	Sn	07 27 29.2	+3.3
MXZ	Matakaoa Point	0.76	127	Pn	Pn	07 27 15.8	+0.7
MXZ	Matakaoa Point	0.76	127	P	Pn	07 27 15.9	+0.7
MXZ				S	Sn	07 27 32.0	+4.6
RUGZ	Raukumara Rang	0.86	173	P	Pn	07 27 18.5	+2.1
RUGZ				S	Sn	07 27 33.9	+4.2
WHRZ	Whale Island	0.87	211	P	Pn	07 27 19.7	+3.3
WHRZ				S	Sn	07 27 37.1	+7.4
PKGZ	Pakihiroa	0.89	151	P	Pn	07 27 18.9	+2.2
PKGZ				S	Sn	07 27 35.3	+5.3
WMGZ	Waiomatatini S	0.99	136	P	Pn	07 27 19.7	+1.9
WMGZ				S	Sn	07 27 36.5	+4.5
MYRZ	Mayor Island	1.05	260	P	Pn	07 27 21.6	+3.1
OPRZ	Ohinepanea	1.07	227	P	Pn	07 27 21.7	+3.0
MARZ	Manawahe	1.11	218	P	Pn	07 27 22.2	+2.9
PUZ	Puketiti	1.12	149	P	Pn	07 27 20.9	+1.6
TWGZ	Tauwhareparae	1.12	162	P	Pn	07 27 22.4	+3.0

TWGZ				S	Sn	07 27 40.6	+5.7
EDRZ	Edgecumbe	1.18	212	P	Pn	07 27 23.1	+3.0
TGRZ	Tauranga	1.19	238	P	Pn	07 27 23.3	+3.1
URZ	Urewera	1.20	196	P	Pn	07 27 23.3	+3.1
	436nm,0.5s,baz=301,slow=24,SNR=1258						
URZ				S	Sn	07 27 42.8	+6.3
	2µm,0.4s,baz=25,slow=21,SNR=13						
URZ				LR	LR	07 28 19.1	
	comp=Z,98nm,20.2s,baz=31,slow=54						
URZ	Urewera	1.20	196	P	Pn	07 27 23.0	+2.7
URZ	Urewera	1.20	196	P	Pn	07 27 23.5	+3.3
MWZ	Matawai	1.22	180	P	Pn	07 27 23.2	+2.6
LIRZ	Lichensteins R	1.28	226	P	Pn	07 27 24.6	+3.3
MKRZ	Makatiti	1.33	219	P	Pn	07 27 25.8	+3.8
TKGZ	Te Karaka	1.35	170	P	Pn	07 27 24.5	+2.3
OMRZ	Omania	1.36	223	P	Pn	07 27 25.4	+3.1
KARZ	Kaharoa	1.37	228	P	Pn	07 27 25.6	+3.2
RAGZ	Rawiri	1.39	184	P	Pn	07 27 25.7	+3.0
RAGZ				S	Sn	07 27 46.9	+6.0
TARZ	Mount Tarawera	1.39	216	P	Pn	07 27 26.2	+3.4
NGRZ	Ngongotaha	1.46	227	P	Pn	07 27 27.0	+3.4
KMRZ	Kaimai	1.47	240	P	Pn	07 27 26.7	+3.1
CNGZ	Carnagh Statio	1.47	159	P	Pn	07 27 25.8	+2.1
RRRZ	Republican Roa	1.47	213	P	Pn	07 27 27.0	+3.3
HLRZ	Highlands Stat	1.48	219	P	Pn	07 27 27.4	+3.6
MUGZ	Murupara	1.49	204	P	Pn	07 27 26.8	+2.8
KUZ	Kuaotunu	1.50	284	P	Pn	07 27 26.3	+2.2
UTU	Utuhina	1.51	225	P	Pn	07 27 28.0	+3.9
RTZ	Ruatahuna	1.57	196	P	Pn	07 27 27.6	+2.6
HSRZ	Hossack Road	1.58	220	P	Pn	07 27 29.2	+4.1
RIGZ	Rimuhau	1.60	174	P	Pn	07 27 27.3	+1.9
HRRZ	Handcock Road	1.62	218	P	Pn	07 27 29.9	+4.2
PRRZ	Plateau Road	1.66	213	P	Pn	07 27 29.5	+3.4
SNGZ	Shannon Statio	1.68	185	P	Pn	07 27 28.8	+2.4
GRRZ	Galatos Road	1.68	222	P	Pn	07 27 30.2	+3.8
ALRZ	Allen Road	1.73	213	P	Pn	07 27 30.3	+3.3
TOZ	Tahuroa Road	1.74	248	P	Pn	07 27 30.2	+3.1
WPRZ	Whakapapatarin	1.78	217	P	Pn	07 27 31.4	+3.7
MTHZ	Maungataniwha	1.82	197	P	Pn	07 27 30.7	+2.3
PRGZ	Paritu Road	1.83	172	P	Pn	07 27 29.6	+1.2
RAHZ	Arahi	1.84	191	P	Pn	07 27 31.0	+2.5
GRZ	Great Barrier	1.88	297	P	Pn	07 27 30.5	+1.5
MKAZ	Moumakai	1.90	269	P	Pn	07 27 32.1	+2.8
KNZ	Kokohu	1.91	177	P	Pn	07 27 30.6	+1.2
KUTZ	Kaahu Road	1.93	224	P	Pn	07 27 33.4	+3.7
MRHZ	Matea Rd	1.94	207	P	Pn	07 27 32.7	+2.8
WIAZ	Waiheke Island	1.95	279	P	Pn	07 27 32.6	+2.6
WHTZ	Whakaora	1.99	218	P	Pn	07 27 35.3	+4.7
TLZ	Tolley Road	2.00	232	P	Pn	07 27 34.0	+3.3
MHGZ	Mahia Peninsul	2.06	172	P	Pn	07 27 32.7	+1.3
NMHZ	Naumai	2.07	196	P	Pn	07 27 34.3	+2.8
ETAZ	East Tamaki Re	2.10	274	P	Pn	07 27 34.9	+3.0
HATZ	Hinemaiaia	2.11	212	P	Pn	07 27 35.4	+3.2
WATZ	Wairara	2.14	221	P	Pn	07 27 36.2	+3.7
MBAZ	Motutapu North	2.14	278	P	Pn	07 27 35.3	+2.8
ARHZ	Aropaoanui	2.19	191	P	Pn	07 27 35.1	+1.9
BKZ	Black Stump Fm	2.21	202	P	Pn	07 27 35.5	+2.0
BKZ	Black Stump Fm	2.21	202	P	Pn	07 27 36.1	+2.6
ABAZ	Army Bay	2.23	282	P	Pn	07 27 36.5	+2.9
RATZ	Rangitukua	2.24	218	P	Pn	07 27 37.8	+3.9
EPAZ	Eden Park BICE	2.25	275	P	Pn	07 27 37.1	+3.2
HBAZ	Herne Bay Bore	2.26	276	P	Pn	07 27 37.4	+3.3
RITZ	Rihia Road	2.29	215	P	Pn	07 27 38.4	+3.9
AWAZ	Awhitu Peninsu	2.32	270	P	Pn	07 27 38.3	+3.5
KATZ	Kakaramea	2.36	217	P	Pn	07 27 39.2	+3.6
WTAZ	Waiatarua	2.38	273	P	Pn	07 27 38.9	+3.2
RVAZ	Riverhead Bore	2.40	277	P	Pn	07 27 39.0	+3.1
MCHZ	McNeill Hill	2.42	196	P	Pn	07 27 38.1	+1.9
NTVZ	North Tongarir	2.47	216	P	Pn	07 27 40.6	+3.6
TMVZ	Te Maari	2.47	215	P	Pn	07 27 40.4	+3.4
KWHZ	Kaweka Forest	2.47	200	P	Pn	07 27 38.6	+1.7
ETVZ	East Tongariro	2.48	215	P	Pn	07 27 40.6	+3.5
WTVZ	West Tongariro	2.52	217	P	Pn	07 27 41.2	+3.5
NNVZ	North Ngauruho	2.52	216	P	Pn	07 27 41.3	+3.6
OTVZ	Oturere	2.53	215	P	Pn	07 27 40.9	+3.1
HIZ	Hauiti	2.54	236	P	Pn	07 27 41.8	+3.9
HIZ	Hauiti	2.54	236	P	Pn	07 27 41.7	+3.8
SNVZ	South Ngauruho	2.56	215	P	Pn	07 27 41.5	+3.3
NGZ	Ngauruhoe	2.57	216	P	Pn	07 27 41.8	+3.5
CKHZ	Cape Kidnapper	2.57	188	P	Pn	07 27 38.9	+0.7
TUVZ	Tukino	2.62	214	P	Pn	07 27 41.9	+2.9
BHHZ	Black Hill Sta	2.64	206	P	Pn	07 27 41.0	+1.7
FWVZ	Far West T-bar	2.65	216	P	Pn	07 27 42.7	+3.1
WHVZ	Whangaehu Hut	2.66	215	P	Pn	07 27 42.6	+3.0
MOVZ	Moawhango	2.69	211	P	Pn	07 27 41.9	+2.0
KRHZ	Kereru	2.69	200	P	Pn	07 27 40.8	+0.9
TRVZ	Turoa	2.69	215	P	Pn	07 27 43.6	+3.5
WNVZ	Wahianoa	2.69	214	P	Pn	07 27 42.7	+2.7
KAHZ	Kahuranaki	2.73	191	P	Pn	07 27 41.2	+0.8
PKVZ	Pokaka	2.78	218	P	Pn	07 27 44.4	+3.4
MTVZ	Mangateitei	2.79	215	P	Pn	07 27 44.0	+2.7
WCZ	Waipu Caves	2.83	293	P	Pn	07 27 43.7	+2.1
PXZ	Pawanui	2.96	190	P	Pn	07 27 43.3	-0.2
VRZ	Vera Road	2.98	227	P	Pn	07 27 48.0	+4.3
PNHZ	Pukenui	2.99	200	P	Pn	07 27 44.2	+0.3
WPHZ	Waipukurau	3.07	196	P	Pn	07 27 45.4	+0.4
TSZ	Takapari Road	3.19	202	P	Pn	07 27 46.7	0.0
WAZ	Wanganui	3.31	216	P	Pn	07 27 51.1	+2.8
DREZ	Durham Road	3.35	231	P	Pn	07 27 54.1	+5.4
DVHZ	Dannevirke	3.36	198	P	Pn	07 27 48.4	-0.5
LREZ	Lake Rotokare	3.41	226	P	Pn	07 27 53.4	+4.0
ANWZ	Angora Road	3.45	194	P	Pn	07 27 49.7	-0.3
NEZ	North Egmont	3.46	230	P	Pn	07 27 55.5	+5.1
PKE	Pukeiti	3.49	232	P	Pn	07 27 55.5	+4.9
KHEZ	Kahui Hut	3.53	231	P	Pn	07 27 56.2	+4.9
OHWZ	Ohakea	3.55	209	P	Pn	07 27 53.4	+2.0
POWZ	Post Office Ro	3.56	202	P	Pn	07 27 51.5	0.0
NBEZ	Newall Road No	3.61	232	P	Pn	07 27 57.4	+5.2
PRWZ	Pori Road	3.65	199	P	Pn	07 27 52.5	-0.3
NMEZ	Namu Road	3.69	230	P	Pn	07 27 58.9	+5.6
BFZ	Birch Farm	3.71	195		Pn	07 27 52.8	-0.8
BFZ	Birch Farm	3.71	195	P	Pn	07 27 52.4	-1.2
BFZ	Birch Farm	3.71	195	P	Pn	07 27 52.8	-0.8
OUZ	Omahuta	3.71	299	Pn	Pn	07 27 54.7	+1.1
OUZ	Omahuta	3.71	299	P	Pn	07 27 55.8	+2.2
TIWZ	Tintock	3.88	199	P	Pn	07 27 55.3	-0.7
CPWZ	Castlepoint	3.93	195	P	Pn	07 27 56.2	-0.4
MSWZ	Moikau Station	4.65	202	Pn	Pn	07 28 04.7	-1.7
SNZO	South Karori	4.74	207	Pn	Pn	07 28 06.2	-1.4
SNZO	South Karori	4.74	207	P	Pn	07 28 06.1	-1.4
BHW	Baring Head	4.76	205	Pn	Pn	07 28 06.8	-1.1
TUWZ	Tuamarina	5.14	212		Pn	07 28 11.4	-1.6
NNZ	Nelson	5.22	217	Pn	Pn	07 28 13.4	-0.8
QRZ	Quartz Range	5.38	225	Pn	Pn	07 28 15.0	-1.4
QRZ	Quartz Range	5.38	225	P	Pn	07 28 15.7	-0.7
BSWZ	Blackbirch Sta	5.40	211	Pn	Pn	07 28 15.0	-1.7
THZ	Tophouse	5.87	216	Pn	Pn	07 28 21.4	-1.7
KHZ	Kahutara	6.13	209	P	Pn	07 28 24.3	-2.2
LTZ	Lake Taylor	6.96	214	Pn	Pn	07 28 35.5	-2.5
CTZ	Chatham Island	7.98	148	P	Pn	07 28 50.9	-0.8
RPZ	Rata Peaks	8.24	215	P	Pn	07 28 52.8	-2.5
	8.9nm,0.4s,baz=43,slow=1.7,SNR=18						
RPZ				S	Sn	07 30 21.2	-5.6
	17nm,0.3s,baz=115,slow=23,SNR=14						
RPZ	Rata Peaks	8.24	215	P	Pn	07 28 52.7	-2.7
ODZ	Otahua Downs	9.48	211	P	Pn	07 29 09.0	-3.2
MSVF	Nonsavu	19.31	1	LR	LR	07 36 50.7	
	comp=Z,59nm,19.8s,baz=170,slow=31						
STKA	Stephens Creek	29.96	269	LR	LR	07 45 32.7	
	comp=Z,31nm,18.1s,baz=12,slow=37						
CTA	Charters Tower	32.09	293	LR	LR	07 44 12.6	
	comp=Z,17nm,20.8s,baz=99,slow=32						
COEN	Coen	38.31	298	P	P	07 34 10.8	-0.5
COEN				IAmb	IAmb	07 34 12.5	
	comp=Z,8.5nm,1.1s						
AS31	Alice Springs	39.62	277	P	P	07 34 20.5	-1.8
ASAR	Alice Springs	39.62	277	P	P	07 34 22.2	0.0
	comp=Z,4.1nm,0.7s,baz=123,slow=8.4,SNR=56						
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	39.62	277	P	P	07 34 21.3	-1.0
WR0	Warramunga Arr	41.08	282	P	P	07 34 34.0	-0.3
WR0				IAmb	IAmb	07 35 00.3	
	comp=Z,9.7nm,1.4s						
VNDA	Vanda	41.08	185	P	P	07 34 34.9	+1.3
	comp=Z,0.7nm,1.0s,baz=1.1,slow=3.1,SNR=2.4						
	comp=Z,0.7nm,1.0s						
VNDA	Vanda	41.08	185	IAmb	IAmb	07 34 39.0	
	comp=Z,3.2nm,1.3s						
WB2	Warramunga Arr	41.23	282	P	P	07 34 35.2	-0.4
WRAB	Tennant Creek	41.24	282	P	P	07 34 33.9	-1.8
WRAB				IAmb	IAmb	07 34 50.9	
	comp=Z,20nm,1.5s						
WRA	Warramunga Arr	41.24	282	P	P	07 34 35.1	-0.5
	comp=Z,2.8nm,0.4s,baz=123,slow=7.0,SNR=71						
	comp=Z,2.8nm,0.4s						
WRA	Warramunga Arr	41.24	282	P	P	07 34 35.2	-0.5
WB0	Warramunga Arr	41.30	283	P	P	07 34 35.4	-0.7
MTN	Manton Dam	47.91	288	P	P	07 35 27.8	-0.9
MTN				IAmb	IAmb	07 35 30.5	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	49.10	278	P	P	07 35 37.4	-0.5
	comp=Z,7.2nm,1.0s,baz=166,slow=11,SNR=7.8						
	comp=Z,7.2nm,1.0s						
FITZ	Fitzroy Crossi	49.10	278	IAmb	IAmb	07 35 39.5	
	comp=Z,6.4nm,0.8s						
MORW	Morawa	51.37	260	P	P	07 35 52.9	-2.0
PSA00	Pilbara Seismi	51.88	270	P	P	07 35 56.7	-2.1
MBWA	Marble Bar	52.19	271	P	P	07 35 59.1	-2.0
QSPA	South Pole Qui	53.01	180	P	P	07 36 07.7	+1.0
	comp=Z,1.7nm,0.5s,baz=272,slow=0.4,SNR=22						
	comp=Z,1.7nm,0.5s						
QSPA	South Pole Qui	53.01	180	P	P	07 36 06.7	0.0
QSPA				IAmb	IAmb	07 36 08.9	
	comp=Z,8.5nm,1.5s						
BELA	Belgrano 2	63.63	173	P	P	07 37 19.7	-0.6
BELA				IAmb	IAmb	07 37 20.4	
	comp=Z,4.9nm,0.7s						
SNAA	Sanae	71.52	180	P	P	07 38 11.5	+1.4
SNAA				IAmb	IAmb	07 38 32.6	
	comp=Z,10.0nm,1.3s						
KSRS	Korea Array	87.23	323	P	P	07 39 34.7	-0.8
	comp=Z,0.5nm,0.4s,baz=155,slow=5.9,SNR=4.3						
	comp=Z,0.5nm,0.4s						
NJ2	Nanjing	87.96	313	*e*P	P	07 39 43.6	+4.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	92.24	291	P	P	07 39 59.1	-0.4
	comp=Z,1.5nm,0.3s,baz=154,slow=3.8,SNR=6.5						
	comp=Z,1.5nm,0.3s						
PZH	PanZhiHua	95.22	299	P	P	07 40 16.6	+3.4
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
HHC	Hu-ho-hao-te	98.31	316	*e*P	Pdif	07 40 30.7	+3.8
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,4.8s						
NRIK	Noril'sk	124.17	335	PKP	PKPdf	07 45 44.5	-1.9
	comp=Z,1.0nm,0.6s,baz=200,slow=0.3,SNR=3.8						
ARCES	ARCESS Array B	144.17	344	PKP	PKPab	07 46 20.4	-1.2
	comp=Z,1.6nm,0.6s,baz=76,slow=5.1,SNR=7.6						
ARCES	ARCESS Array B	144.17	344		PKPab	07 46 21.3	-0.3
KBZ	Khabaz	145.19	295	PKPbc	PKPbc	07 46 23.7	-2.2
	comp=Z,2.5nm,0.9s,baz=108,slow=5.3,SNR=5.5						
FINES	FINESS Array B	149.81	333	PKPbc	PKPbc	07 46 36.3	-1.8
	comp=Z,3.3nm,0.6s,baz=45,slow=4.1,SNR=10.0						
BRTR	Keskin Array B	151.71	286	PKPbc	PKPbc	07 46 41.5	-2.0
	comp=Z,1.0nm,0.7s,baz=123,slow=4.6,SNR=5.8						
BRTR	Keskin Array B	151.71	286	PKPdf	PKPdf	07 46 35.6	-1.5
BRTR					PKPbc	07 46 41.4	-2.2
BRTR				PKPab	PKPab	07 46 49.4	-3.3
NOA	NORSAR Array B	154.54	344	PKPbc	PKPbc	07 46 46.8	-2.0
	comp=Z,0.8nm,0.8s,baz=30,slow=2.1,SNR=3.8						
TORD	Torodi Ar. Bea	155.85	190	PKPbc	PKPbc	07 46 51.6	
	comp=Z,0.2nm,0.3s,baz=148,slow=3.2,SNR=5.2						
TORD				PKPab	PKPab	07 47 10.2	-0.2
	comp=Z,0.5nm,0.5s,baz=181,slow=3.9,SNR=6.9						

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*NEIC **09** 07:39:02.5±1.4, 7°.86N±0°.09×126°.4E±0°.1, h140^{km}±1^{km}, mb4.6/50, Error ellipse: s-maj=17.4km s-min=13.5km az=87.0*

*MAN **09** 07:39:03.0, 7°.86N×126°.44E, h110^{km}, mb4.8, ML3.8, MS3.7, Hypocentre not reviewed by the ISC*

*IDC **09** 07:39:03.4±0.8, 7°.78N×126°.30E, h150^{km}±6^{km}, mb3.8/16, mbtmp4.2/17, Error ellipse: s-maj=23.0km s-min=11.1km az=82.0*

ISC 09 07:39:01.8±0.6**, 7°.83N**±0°.04×**126°.48E**±0°.06**, h138**^{km}±5^{km}**, n95, σ0^s.97**/105**, mb4.5**/37**, 4C-10D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.37	342	⇑*i*P	Pn	07 39 21.0	-0.1
BIPH				*i* S	Sn	07 39 34.0	-1.8
MATI	Mati	0.91	194	⇓*e*P	Pn	07 39 24.8	+0.1
MATI				*e*S	Sn	07 39 41.8	-0.1
DAV	Davao City (W)	1.17	230	P	Pn	07 39 28.1	+1.1
	447nm,0.3s,baz=53,slow=6.4,SNR=12						
DAV				S	Sn	07 39 47.6	+1.4
	1µm,0.5s,baz=256,slow=20,SNR=29						
DAV	Davao City (W)	1.17	230	Pn	Pn	07 39 27.6	+0.6
BUKP	Musuan	1.40	272	⇓*e*P	Pn	07 39 29.8	+0.3
BUKP				*e*S	Sn	07 39 52.6	+2.1
BUTP	Butuan	1.41	323	⇓*e*P	Pn	07 39 30.6	+1.2
KCP	Kidapawan	1.60	239	⇓*i*P	Pn	07 39 31.6	0.0
KCP				*i* S	Sn	07 39 52.9	-1.5
DDMP	Don Marcelino,	1.88	204	⇓*e*P	Pn	07 39 34.8	0.0
DDMP				*e*S	Sn	07 39 59.2	-0.8
GLSP	General Luna,	1.97	350	⇓*e*P	Pn	07 39 36.3	+0.5
GLSP				*e*S	Sn	07 40 00.1	-1.9
SCPH	Surigao	2.17	333	⇑*i*P	Pn	07 39 39.6	+1.4
SCPH				*i* S	Sn	07 40 08.1	+1.8
CTBH	Cotabato--PC H	2.29	255	⇓*i*P	Pn	07 39 39.7	-0.1
CTBH				*i* S	Sn	07 40 07.9	-1.0
GSPH	General Santos	2.30	221	⇑*e*P	Pn	07 39 39.8	-0.2
GSPH				*i* S	Sn	07 40 08.6	-0.8
MSLP	Maasin	2.79	325	⇑*e*P	Pn	07 39 46.9	+0.9
MSLP				*e*S	Sn	07 40 16.1	-4.0
PAGZ	Pagadian	3.07	270	⇓*e*P	Pn	07 39 50.1	+0.5
TBP	Tagbilaran	3.18	306	⇓*e*P	Pn	07 39 51.1	+0.1
TBP				*i* S	Sn	07 40 26.5	-2.5
LLP	Lapu-Lapu	3.50	315	⇓*i*P	Pn	07 39 55.9	+0.7
LLP				*i* S	Sn	07 40 37.4	+0.8
MYLDM	Lahad Datu	8.35	252	Pn	Pn	07 41 02.3	+2.3
TOLI2	Tolitoli	8.76	221	Pn	Pn	07 41 04.4	-1.2
JOW	Kunigami	18.97	5	P	Pn	07 43 14.7	-0.1
	14nm,0.6s,baz=109,slow=21,SNR=5.7						
JOW	Kunigami	18.97	5	P	P	07 43 13.8	+1.2
JOW				IAmb	IAmb	07 43 35.9	
	comp=Z,55nm,1.2s						
QIZ	Qiongzhong	19.62	306	P	P	07 43 19.9	+0.2
QIZ				IAmb	IAmb	07 43 45.7	
	comp=Z,31nm,1.2s						
MTN	Manton Dam	21.06	167	P	P	07 43 36.3	+1.2
MTN				IAmb	IAmb	07 43 50.7	
	comp=Z,19nm,1.4s						
KNRA	Kununurra	23.47	174	P	P	07 43 58.0	-1.1
KNRA				IAmb	IAmb	07 44 16.3	
	comp=Z,21nm,1.2s						
JSU	Suzuyama	23.84	8	P	P	07 44 01.7	-0.7
JSU				IAmb	IAmb	07 44 03.3	
	comp=Z,15nm,0.7s						
JCJ	Chichijima	24.27	36	P	P	07 44 06.2	-0.1
FITZ	Fitzroy Crossi	25.78	182	P	P	07 44 20.6	+0.6
	comp=Z,4.1nm,1.0s,baz=15,slow=6.0,SNR=2.5						
	comp=Z,4.1nm,1.0s						
FITZ	Fitzroy Crossi	25.78	182	IAmb	IAmb	07 44 49.1	
	comp=Z,18nm,1.4s						
COEN	Coen	27.26	142	P	P	07 44 33.8	+0.4
COEN				IAmb	IAmb	07 44 38.2	
	comp=Z,7.4nm,0.7s						
WB0	Warramunga Arr	28.51	164	P	P	07 44 42.5	-1.9
WRAB	Tennant Creek	28.66	164	P	P	07 44 45.5	-0.3
WRA	Warramunga Arr	28.66	164	P	P	07 44 45.7	-0.1
	comp=Z,0.4nm,0.6s,baz=347,slow=9.4,SNR=9.4						
WRA				ScP	ScP	07 51 20.7	-1.3
	comp=Z,0.2nm,0.5s,baz=346,slow=3.5,SNR=5.3						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	28.66	164	P	P	07 44 45.6	-0.2
WB2	Warramunga Arr	28.67	164	P	P	07 44 45.8	-0.1
WB2				IAmb	IAmb	07 44 50.0	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	28.74	164	P	P	07 44 45.9	-0.6
CMAR	Chiang Mai Arr	28.77	294	P	P	07 44 46.8	-0.1
	comp=Z,1.4nm,0.3s,baz=116,slow=6.4,SNR=5.2						
	comp=Z,1.4nm,0.3s						
INU	Inuyama	29.04	18	P	P	07 44 48.8	-0.2
JGF	Kuroka	29.38	18	P	P	07 44 51.2	-0.9
JGF				IAmb	IAmb	07 45 11.7	
	comp=Z,17nm,1.5s						
KSRS	Korea Array	29.52	2	P	P	07 44 54.0	+0.9
	comp=Z,1.2nm,0.6s,baz=178,slow=10,SNR=7.1						
	comp=Z,1.2nm,0.6s						
MBWA	Marble Bar	29.56	193	P	P	07 44 54.2	+0.4
PSA00	Pilbara Seismi	29.94	192	P	P	07 44 56.8	-0.3
PSA00	Pilbara Seismi	29.94	192	P	P	07 44 56.0	-1.0
PSA00				IAmb	IAmb	07 44 59.4	
	comp=Z,9.1nm,1.4s						
MAJO	Matsushiro	30.51	19	P	P	07 45 01.3	-0.7
MAJO				IAmb	IAmb	07 45 02.0	
	comp=Z,10.0nm,1.1s						
MJB9	Matsu-Tunnel	30.52	19	P	P	07 45 01.4	-0.6
MJB9				IAmb	IAmb	07 45 01.9	
	comp=Z,9.8nm,1.1s						
JYT	Yasato	30.91	22	P	P	07 45 04.5	-1.1
ASAR	Alice Springs	32.14	167	P	P	07 45 16.2	-0.2
	comp=Z,0.3nm,0.3s,baz=345,slow=7.4,SNR=7.2						
ASAR				PcP	PcP	07 48 03.0	+0.6
	comp=Z,1.0nm,0.7s,baz=354,slow=2.4,SNR=7.9						
ASAR				ScP	ScP	07 51 32.5	-0.9
	comp=Z,0.6nm,0.8s,baz=343,slow=2.9,SNR=2.6						
	comp=Z,0.3nm,0.3s						
JMM	Marumori	32.59	21	P	P	07 45 19.8	-0.3
JTM	Tenmabayashi	35.30	19	P	P	07 45 43.8	+0.3
USRK	Ussuriysk Ar.	36.55	7	P	P	07 45 55.1	+1.0
	comp=Z,1.9nm,0.7s,baz=186,slow=7.2,SNR=4.0						
	comp=Z,1.9nm,0.7s						
ERM	Erimo	37.10	21	P	P	07 45 58.8	0.0
ERM				IAmb	IAmb	07 46 10.1	
	comp=Z,17nm,1.1s						
MORW	Morawa	38.04	195	P	P	07 46 06.9	0.0
MORW				IAmb	IAmb	07 46 15.7	
	comp=Z,12nm,1.2s						
H11N1	WAKE ISLAND Hy	40.88	69	T	T	08 30 43.3	
	baz=265,slow=74,SNR=7.8						
H11N2	WAKE ISLAND Hy	40.89	69	T	T	08 30 50.0	
	baz=265,slow=74,SNR=5.5						
H11N3	WAKE ISLAND Hy	40.90	69	T	T	08 30 44.2	
	baz=265,slow=74,SNR=8.9						
BBOO	Buckleboo	41.43	168	P	P	07 46 35.6	+0.7
STKA	Stephens Creek	42.05	161	P	P	07 46 39.5	-0.5
PEA0B	Petropavlovsk-	51.77	23	P	P	07 47 57.0	+1.9
PETK	Petropavlovsk-	51.77	23	P	P	07 47 56.7	+1.5
	comp=Z,2.4nm,0.5s,baz=207,slow=3.6,SNR=12						
	comp=Z,2.4nm,0.5s						
MK31	Makanchi Array	54.09	324	P	P	07 48 11.7	-0.7
MKAR	Makanchi Array	54.09	324	P	P	07 48 12.6	+0.2
	comp=Z,3.7nm,0.4s,baz=112,slow=7.1,SNR=69						
MKAR				PcP	PcP	07 49 15.3	-0.2
	comp=Z,4.1nm,0.8s,baz=109,slow=4.4,SNR=14						
	comp=Z,3.7nm,0.4s						
MKAR	Makanchi Array	54.09	324	P	P	07 48 12.2	-0.1
NIL	Nilore	55.29	306	P	P	07 48 20.9	-0.3
TKM2	Tokmak 2	56.56	317	P	P	07 48 30.6	+0.2
	SNR=7.3						
ZAA0	Zalesovo Array	56.85	332	P	P	07 48 30.9	-1.0
ZALV	Zalesovo Beam	56.85	332	P	P	07 48 31.0	-0.9
	comp=Z,1.4nm,0.3s,baz=136,slow=6.8,SNR=6.2						
	comp=Z,1.4nm,0.3s						
UCH	Uchtor	57.04	316	P	P	07 48 34.9	+0.8
	SNR=9.9						
AAK	Ala-Archa	57.20	316	P	P	07 48 34.4	-0.5
USP	Ospenovka	57.43	317	P	P	07 48 36.5	+0.2
	SNR=6.0						
AML	Almayashu	57.57	315	P	P	07 48 38.7	+1.0
	SNR=8.8						
EKS2	Erkin-Say	57.70	316	P	P	07 48 39.0	+0.7
	SNR=8.5						
KURK	Kurchatov	58.19	326	P	P	07 48 40.1	-1.2
KURK				IAmb	IAmb	07 48 41.6	
	comp=Z,4.4nm,0.6s						
BTK	Batken	58.95	312	P	P	07 48 46.5	-0.4
BTK				IAmb	IAmb	07 49 01.2	
	comp=Z,5.1nm,0.6s						
GAR	Garm	59.02	311	P	P	07 48 47.5	0.0
CHGR	Chuyangaron	59.80	310	P	P	07 48 52.3	-0.5
CHGR				IAmb	IAmb	07 48 54.1	
	comp=Z,9.7nm,0.8s						
KK31	Karatay Array	60.11	316	P	P	07 48 54.7	-0.1
KK31				IAmb	IAmb	07 48 55.4	
	comp=Z,7.5nm,0.7s						
KKAR	Karatay Array	60.11	316	P	P	07 48 54.5	-0.3
KKAR	Karatay Array	60.11	316	P	P	07 48 54.6	-0.2
KKAR				IAmb	IAmb	07 48 55.4	
	comp=Z,7.5nm,0.7s						
TIXI	Tiksi	63.77	1	P	P	07 49 18.4	-0.2
TIXI				IAmb	IAmb	07 49 18.9	
	comp=Z,4.1nm,0.5s						
BRVK	Borovoye	63.85	326	P	P	07 49 19.1	-0.4
URZ	Urewera	65.72	138	P	P	07 49 32.7	+0.9
URZ				IAmb	IAmb	07 49 56.9	
	comp=Z,16nm,1.3s						
BKZ	Black Stump Fm	65.81	139	P	P	07 49 32.8	+0.3
BKZ				IAmb	IAmb	07 49 56.5	
	comp=Z,12nm,1.2s						
ABKAR	Akbulak array	68.85	320	P	P	07 49 50.7	-0.7
RAYN	Ar Rayn	78.67	292	P	P	07 50 49.5	+0.1
RAYN				IAmb	IAmb	07 50 49.8	
	comp=Z,5.7nm,0.7s						
KBZ	Khabaz	80.00	313	P	P	07 50 56.0	0.0
	comp=Z,2.1nm,0.7s,baz=119,slow=4.5,SNR=5.7						
	comp=Z,2.1nm,0.7s						
M26K	Nabesna, AK	83.36	28	P	P	07 51 14.2	+0.8
M26K				IAmb	IAmb	07 51 15.1	
	comp=Z,6.5nm,0.7s						
ARCES	ARCESS Array B	86.54	340	P	P	07 51 28.9	-0.1
	comp=Z,3.1nm,0.9s,baz=86,slow=6.7,SNR=3.9						
	comp=Z,3.1nm,0.9s						
ARCES	ARCESS Array B	86.54	340	IAmb	IAmb	07 51 41.2	
	comp=Z,12nm,1.2s						
BRTR	Keskin Array B	87.23	310	P	P	07 51 32.2	-1.0
	comp=Z,1.2nm,0.7s,baz=124,slow=5.4,SNR=6.5						
	comp=Z,1.2nm,0.7s						
VNDA	Vanda	87.50	173	P	P	07 51 33.9	+0.5
	comp=Z,0.7nm,0.5s,baz=315,slow=6.6,SNR=10						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	87.50	173	IAmb	IAmb	07 51 36.6	
	comp=Z,3.1nm,1.2s						
FINES	FINESS Array B	88.12	332	P	P	07 51 36.2	-0.5
	comp=Z,1.6nm,0.4s,baz=76,slow=5.1,SNR=8.5						
	comp=Z,1.6nm,0.4s						
AKASG	Malin Array Be	88.57	321	P	P	07 51 38.2	-0.9
	comp=Z,0.7nm,0.4s,baz=71,slow=6.6,SNR=5.6						
	comp=Z,0.7nm,0.4s						
AKASG	Malin Array Be	88.57	321	IAmb	IAmb	07 51 39.7	
	comp=Z,1.5nm,0.8s						
YKA	Yellowknife Ar	95.89	24	P	P	07 52 13.0	+0.4
	comp=Z,0.4nm,0.6s,baz=306,slow=4.6,SNR=3.6						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	95.89	24	P	P	07 52 13.0	+0.4
TORD	Torodi Ar. Bea	121.33	291	PKP	PKPdf	07 57 39.4	-0.4
	comp=Z,0.8nm,0.7s,baz=50,slow=2.0,SNR=5.9						

NOU 09 07:56:42.3, 16°.37S×167°.35E, h6^{km}, MLv4.5/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.93	351	P	Pb	07 57 00.5	-0.3
DVP	Devils Point	1.57	149	P	Pn	07 57 10.9	+0.2
RTV	Rentapao	1.75	144	P	Pn	07 57 13.5	+0.3
LIFNC	LIFOU	4.38	181	P	Pn	07 57 49.7	+0.2
KOUNC	Koumac, New Ca	5.07	214	P	Pn	07 57 58.8	-0.1
	33nm,0.7s						
YATNC	Mamie plateau,	5.68	184	P	Pn	07 58 06.0	-1.2
	22nm,0.7s						
DZM	Mont Dzumac	5.74	188	P	Pn	07 58 07.3	-0.8
	22nm,0.7s						
NOUC	Port Laguerre	5.79	190	P	Pn	07 58 08.3	-0.4
	32nm,0.9s						
OUENC	Ouen Island, N	6.04	184	P	Pn	07 58 12.4	+0.2
	20nm,0.7s						

IDC 09 07:59:59.4±2.4**, 3°.03S×128°.31E, h0^{km}, mb3.2**/2**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=177.9km s-min=29.8km az=67.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.81	161	P	Pn	08 04 08.5	-0.4
	0.1nm,0.3s,baz=343,slow=13,SNR=7.3						
	0.7nm,0.6s						
ASAR	Alice Springs	21.22	166	P	P	08 04 47.6	+0.6
	0.3nm,0.4s,baz=345,slow=11,SNR=4.3						
	0.3nm,0.4s						
MKAR	Makanchi Array	64.00	327	P	P	08 10 34.6	-0.2
	0.2nm,0.5s,baz=115,slow=7.1,SNR=2.2						
	0.2nm,0.5s						

*TUL **09** 08:05:14.1±1.2, 36°.79N±0°.01×97°.630W±0°.007, h5^{km}±7^{km}, ML2.8, mb_Lg2.7/52(NEIC), Error ellipse: s-maj=1.8km s-min=0.8km az=185.0*

NEIC 09 08:05:14.3±0.5**, 36°.77N**±0°.01×**97°.63W**±0°.01**, h4**^{km}±6^{km}**, Error ellipse: s-maj=1.8km s-min=1.3km az=175.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.91	80	Pg	Pg	08 05 31.4	-0.3
U32A	Winter Ranch,	1.17	251	Pg	Pg	08 05 36.4	-0.4
OKCFA	Oklahoma City	1.36	174	Pn	Pn	08 05 39.8	-0.3
OKCSW	OKLAHOMA CITY	1.37	174		Pn	08 05 40.0	-0.3
FNO	Franklin	1.52	173		Pn	08 05 42.3	0.0
TUL1	Leonard	1.71	120	Pn	Pn	08 05 45.4	+0.5
TUL1				IAmb_Lg		08 06 09.2	
	comp=Z,46nm,0.8s						
X34A	Smith Ranch, M	2.17	185	Pn	Pn	08 05 50.6	-0.7
X34A				IAmb_Lg		08 06 28.7	
	comp=Z,21nm,0.9s						
HHAR	Hobbs	3.01	98	Pn	Pn	08 06 02.8	0.0
HHAR				IAmb_Lg		08 06 56.8	
	comp=Z,17nm,0.8s						
W39A	Magazine	3.49	116	IAmb_Lg		08 07 08.6	
	comp=Z,16nm,0.8s						
S39A	Bolivar	3.56	74	IAmb_Lg		08 07 09.4	
	comp=Z,22nm,0.9s						
AMTX	Amarillo	3.79	241	IAmb_Lg		08 07 17.3	
	comp=Z,22nm,0.8s						
U40A	Yellville	3.86	95		Pn	08 06 14.3	-0.2
Z38A	Mt. Pleasant	4.12	147	IAmb_Lg		08 07 32.8	
	comp=Z,19nm,0.8s						
MGMO	Mountain Grove	4.31	83	Pn	Pn	08 06 22.7	+2.0
MGMO				IAmb_Lg		08 07 28.6	
	comp=Z,15nm,0.7s						
N35A	Tabor	4.37	20	Pn	Pn	08 06 21.1	-0.3
X40A	Basin Creek Fa	4.52	119	Pn	Pn	08 06 23.6	+0.1
R40A	Maddies Statio	4.52	69	Pn	Pn	08 06 23.5	-0.1
R40A				IAmb_Lg		08 07 40.2	
	comp=Z,16nm,0.9s						
KSCO	Kaye Shedlock'	4.54	301	Pn	Pn	08 06 24.4	+0.4
KSCO				IAmb_Lg		08 07 44.7	
	comp=Z,13nm,0.8s						
W41B	Gary Mavity, V	4.64	108	Pn	Pn	08 06 25.4	+0.2
W41B				IAmb_Lg		08 07 50.6	
	comp=Z,9.4nm,0.9s						
BGNE	Belgrade	4.65	355	IAmb_Lg		08 07 50.7	
	comp=Z,16nm,0.7s						
WLAR	White Oak Lake	4.81	128	IAmb_Lg		08 07 52.5	
	comp=Z,11nm,0.8s						
P40A	Paris	5.19	56	IAmb_Lg		08 08 00.7	
	comp=Z,9.3nm,0.7s						
CCM	Cathedral Cave	5.24	74	IAmb_Lg		08 08 05.2	
	comp=Z,14nm,0.7s						
L34A	Svendsen Farm,	5.28	10	IAmb_Lg		08 07 58.5	
	comp=Z,8.1nm,0.7s						
OGNE	Ogallala	5.40	322	IAmb_Lg		08 08 16.9	
	comp=Z,15nm,0.7s						
T25A	Trinidad	5.45	276	Pn	Pn	08 06 35.9	-0.5
T25A				IAmb_Lg		08 08 14.8	
	comp=Z,14nm,1.3s						
PBMO	Poplar Bluff	5.78	88	IAmb_Lg		08 08 20.5	
	comp=Z,9.7nm,0.8s						
FVM	French Village	5.86	76	IAmb_Lg		08 08 20.8	
	comp=Z,10nm,0.9s						
K31A	O'Neill	5.91	352	IAmb_Lg		08 08 26.7	
	comp=Z,15nm,0.7s						
Q24A	Divide	6.34	292	IAmb_Lg		08 08 41.8	
	comp=Z,6.8nm,0.7s						
JCT	Junction City	6.53	197	IAmb_Lg		08 08 57.2	
	comp=Z,9.2nm,1.1s						
T45A	Paducah	7.20	85	IAmb_Lg		08 09 14.9	
	comp=Z,10nm,0.7s						
N23A	Red Feather La	7.69	305	IAmb_Lg		08 09 35.5	
	comp=Z,9.4nm,1.0s						
JFWS	Jewell Farm	8.36	40	IAmb_Lg		08 09 38.8	
	comp=Z,6.4nm,0.8s						

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*MOS **09** 08:18:30.6±1.0, 38°.36N×141°.84E, h46^{km}, mb4.6/32, Error ellipse: s-maj=8.1km s-min=5.1km az=90.8*

*JMA **09** 08:18:32.3±0.1, 38°.3N±0°.3×141°.8E±0°.6, h47^{km}, MD4.2/39, MV4.5/39, E OFF MIYAGI PREF*

JMA Felt II J1 at E OFF MIYAGI PREF .

*NIED **09** 08:18:32.3, 38°.32N×141°.84E, h47^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.10; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-1.94; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.27; $M_{\phi r}$1.45; Fault plane solution: $M_0$2.53000×10^{15} NP1: ϕ_s185.00000°, δ27.00000°, λ84.00000°. NP2: ϕ_s12.00000°, δ63.00000°, λ93.00000°.*

*NEIC **09** 08:18:32.5, 38°.31N×141°.84E, h46^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.33; $M_{\theta\theta}$0.16; $M_{\phi\phi}$-1.50; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.06; $M_{\phi r}$1.41; Fault plane solution: $M_0$2.01000×10^{15} NP1: ϕ_s177.02000°, δ22.66000°, λ81.76000°. NP2: ϕ_s5.93000°, δ67.58000°, λ93.42000°. Principal axes: T 1.9257, Plg67.0000°, Azm282.0000°; N 0.1589, Plg3.0000°, Azm185.0000°; P -2.0846, Plg23.0000°, Azm93.0000°;*

*NEIC **09** 08:18:32.5±1.5, 38°.31N±0°.05×141°.81E±0°.09, h43^{km}±5^{km}, mb4.6/61, Mwr4.1/18 Error ellipse: s-maj=10.9km s-min=6.3km az=120.0*

*IDC **09** 08:18:33.5±1.7, 38°.30N×141°.80E, h57^{km}±14^{km}, mb4.0/21, mbtmp4.2/27, MS3.3/18, Error ellipse: s-maj=15.5km s-min=9.1km az=118.0*

ISC 09 08:18:32.4±0.7**, 38°.30N**±0°.04×**141°.90E**±0°.05**, h51**^{km}±5^{km}**, n230, σ1^{s}33**/225**, mb4.5**/70**, MS3.5**/14**, 33C-35D, Fault plane solution: NP1:** ϕ_s169.46994°**,** δ23.72671°**,** λ68.92451°. **NP2:** ϕ_s12.29900°**,** δ67.94733°**,** λ98.98144°. **Principal axes:** T Plg65.8991°**,** Azm297.9832°**;** N Plg8.3195°**,** Azm188.9029°**;** P Plg22.4483°**,** Azm95.4392°**;**

Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.34	272	⇓iP	Pn	08 18 41.1	-0.8
JIKH				⇓S	Sn	08 18 47.2	-1.5
JIKH	Ishinomakikobu	0.34	272	A	A	08 18 41.1	
	comp=E,89nm,0.4s,comp=E,33nm,0.3s						
JIO	Ouri	0.46	290	⇓iP	Pn	08 18 42.4	-0.8
JIO				⇓S	Sn	08 18 49.2	-1.7
JIO	Ouri	0.46	290	A	A	08 18 42.4	
	comp=E,31nm,1.7s,comp=E,32nm,0.4s						
JKMT	Kesennumamotoy	0.61	327	⇓iP	Pn	08 18 44.3	-0.7
JKMT				⇓iS	Sn	08 18 52.6	-1.5
JKMT	Kesennumamotoy	0.61	327	A	A	08 18 44.3	
	comp=E,37nm,0.8s,comp=E,22nm,0.9s						
OFUJ	Ofunato	0.80	347	⇓iP	Pn	08 18 46.8	-0.7
OFUJ				⇓S	Sn	08 18 57.1	-1.4
OFUJ	Ofunato	0.80	347	A	A	08 18 46.8	
	comp=E,21nm,0.8s,comp=E,13nm,2.2s						
JOFO	Osakifurukawao	0.83	292	A	A	08 18 47.1	
	comp=E,45nm,0.6s,comp=E,33nm,4.6s						
JMK	Ichinoseki	0.84	321	⇓iP	Pn	08 18 47.5	-0.5
JMK				⇓S	Sn	08 18 58.2	-1.2
JMK	Ichinoseki	0.84	321	A	A	08 18 47.5	
	comp=E,10.0nm,2.0s,comp=E,16nm,3.0s						
JMM	Marumori	0.97	244		Pn	08 18 48.7	-1.0
JMM	Marumori	0.97	244	⇓iP	Pn	08 18 48.7	-1.0
JMM				⇓S	Sn	08 19 00.2	-2.2
JMM	Marumori	0.97	244	A	A	08 18 48.7	
	comp=E,7.0nm,0.6s,comp=E,6.0nm,5.6s						
JOU	Okura	0.97	274	⇓iP	Pn	08 18 49.3	-0.5
JOU				⇓S	Sn	08 19 01.8	-0.8
JOU	Okura	0.97	274	A	A	08 18 49.3	
	comp=E,17nm,1.0s,comp=E,19nm,0.4s						
JMST	Minamisoumatoc	0.98	235	A	A	08 18 49.6	
	comp=E,15nm,0.4s,comp=E,12nm,0.6s						
JFK	Kawauchi	1.23	221	⇓iP	Pn	08 18 52.5	-0.8
JFK				⇓S	Sn	08 19 07.4	-1.4
JFK	Kawauchi	1.23	221	A	A	08 18 52.5	
	comp=E,7.0nm,0.8s,comp=E,6.0nm,2.9s						
JOM	Ohasama	1.27	338	⇓iP	Pn	08 18 53.5	-0.2
JOM	Ohasama	1.27	338	A	A	08 18 53.5	
	comp=E,7.0nm,0.3s,comp=E,6.0nm,0.3s						
JYK	Kaneyama	1.35	298	⇓iP	Pn	08 18 54.6	-0.3
JYK	Kaneyama	1.35	298	A	A	08 18 54.6	
	comp=E,5.0nm,0.7s,comp=E,5.0nm,3.7s						
JYAR	Yonezawaarcadi	1.43	255	A	A	08 18 55.9	
	comp=E,10.0nm,0.6s,comp=E,14nm,1.2s						
JYS	Shirataka	1.44	268	⇓iP	Pn	08 18 55.8	-0.3
JYS	Shirataka	1.44	268	A	A	08 18 55.8	
	comp=E,6.0nm,2.8s,comp=E,7.0nm,1.3s						
JFT	Otama	1.46	238	⇓iP	Pn	08 18 56.2	-0.1
JFT				⇓eS	Sn	08 19 13.8	-0.5
JRG	Rokugo	1.47	318	⇓iP	Pn	08 18 56.4	-0.2
JRG	Rokugo	1.47	318	A	A	08 18 56.4	
	comp=E,8.0nm,0.5s,comp=E,8.0nm,1.2s						
ONAJ	Iwakimizuishiy	1.48	216	A	A	08 18 56.9	
	comp=E,6.0nm,0.3s,comp=E,5.0nm,0.3s						
JYYZ	Yamagatayuza	1.70	296	A	A	08 18 59.5	
	comp=E,7.0nm,6.0s,comp=E,9.0nm,2.0s						
JYA	Atsumi	1.74	280	A	A	08 19 00.2	
	comp=E,9.0nm,0.5s,comp=E,6.0nm,5.2s						
JYW	Yuwa	1.81	314	A	A	08 19 01.2	
	comp=E,11nm,1.4s,comp=E,11nm,1.2s						
JKEN	Kujiedanarisaw	1.91	356	A	A	08 19 02.9	
	comp=E,12nm,0.7s,comp=E,10.0nm,0.6s						
JSB	Shiboa	2.05	230	A	A	08 19 05.0	
	comp=E,5.0nm,1.1s,comp=E,5.0nm,1.3s						
JYT	Yasato	2.47	214	Pn	Pn	08 19 09.3	-0.9
JTM	Tenmabayashi	2.57	346	Pn	Pn	08 19 11.9	+0.5
JSD	Sado	2.88	266	Pn	Pn	08 19 15.1	-0.6
MJA0	Matsu Arr-Jizo	3.39	240	eP	Pn	08 19 23.6	+0.8
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	3.42	240	P	Pn	08 19 23.6	+0.4
	comp=Z,52nm,0.6s,baz=59,slow=11,SNR=46						
MJAR				S	Sn	08 20 02.2	-0.2
	comp=Z,48nm,0.9s,baz=260,slow=14,SNR=5.6						
MJAR				LR	LR	08 21 06.7	
	comp=Z,370nm,19.4s,baz=61,slow=46						
MJAR	Matsushiro Arr	3.42	240	P	Pn	08 19 24.0	+0.8
MJAR	Matsushiro Arr	3.42	240		Pn	08 19 24.0	+0.8
MAJO	Matsushiro	3.42	240	diP	Pn	08 19 24.4	+1.2
MAJO	Matsushiro	3.42	240	Pn	Pn	08 19 23.8	+0.6
MJB9	Matsu-Tunnel	3.42	240		Pn	08 19 23.2	0.0
ERM	Erimo	3.84	14	ceP	Pn	08 19 29.1	+0.2
ERM	Erimo	3.84	14	Pn	Pn	08 19 29.7	+0.8
JGF	Kuroka	4.52	235	Pn	Pn	08 19 37.7	-0.7
JEW	Eniwo	4.55	356		Pn	08 19 38.6	-0.1
INU	Inuyama	4.90	235	Pn	Pn	08 19 45.6	+2.1
JHJ2	Mitsune	5.44	199	Pn	Pn	08 19 49.8	-1.2
JHJ	Hachijo jima 2	5.45	199	P	Pn	08 19 51.8	+0.8
	comp=Z,42nm,0.3s,baz=352,slow=23,SNR=9.5						
JHJ				S	Sn	08 20 49.7	-2.6
	comp=Z,77nm,0.3s,baz=50,slow=22,SNR=2.0						
JKA	Kamikawa-asahi	5.84	5	Pn	Pn	08 19 55.8	-0.5
JKA	Kamikawa-asahi	5.84	5		Sn	08 21 03.4	+1.5
ASAJ	Asahikawa	5.84	5	P	Pn	08 19 56.1	-0.2
	comp=Z,13nm,0.3s,baz=226,slow=10,SNR=12						
ASAJ				S	Sn	08 21 03.4	+1.5
	comp=Z,31nm,0.7s,baz=268,slow=28,SNR=3.9						
ASAJ				LR	LR	08 22 07.9	
	comp=Z,88nm,21.2s,baz=196,slow=37						
NMR	Nemuro--Hokkai	5.84	29	eP	Pn	08 19 53.9	-2.4
NMR				eS	Sn	08 20 56.0	-5.9
GLVR	Golovnino	6.09	26	eP	Pn	08 19 58.3	-1.4
GLVR				eS	Sn	08 21 03.9	-4.1
GLVR				smax	smax		
	comp=N,381nm,0.4s						
GLVR				smax	smax		
	comp=E,283nm,0.3s						
RUSJ	Misakicho	6.33	22	eP	Pn	08 20 03.0	0.0
RUSJ				eS	Sn	08 21 12.3	-1.6
YUK	Yuzh-Kuril'sk	6.46	26	eP	Pn	08 20 03.6	-1.3
YUK				eS	Sn	08 21 13.2	-4.1
YUK				smax	smax		
	comp=E,304nm,0.5s						
YUK				smax	smax		
	comp=N,476nm,0.4s						
JHS	Saijyo	7.79	248	Pn	Pn	08 20 24.4	+1.3
YSS	Yuzh-Sakhalins	8.67	4	⇑eP	Pn	08 20 35.7	+0.6
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	8.67	4	Pn	Pn	08 20 35.9	+0.7
USA0B	Ussuriysk Arra	9.51	311	P	Pn	08 20 47.4	+0.8
USA0B	Ussuriysk Arra	9.51	311	Pn	Pn	08 20 47.4	+0.8
USRK	Ussuriysk Ar.	9.51	311	P	Pn	08 20 47.3	+0.7
	comp=Z,20nm,0.7s,baz=124,slow=13,SNR=19						
USRK				LR	LR	08 24 24.6	
	comp=Z,117nm,18.1s,baz=137,slow=37						
KSRS	Korea Array	11.08	270	P	Pn	08 21 11.0	+2.9
	comp=Z,1.7nm,0.5s,baz=79,slow=14,SNR=9.5						
KSRS				LR	LR	08 25 03.3	
	comp=Z,110nm,20.7s,baz=85,slow=35						
KSAR	Wonju Array Be	11.11	270	P	Pn	08 21 06.7	-1.8
KSAR	Wonju Array Be	11.11	270	Pn	Pn	08 21 06.7	-1.8
MDJ	Mudanjiang	11.18	308	P	Pn	08 21 13.5	+4.1
MDJ				pmax	pmax		
	comp=Z,14nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,78nm,4.1s						
KLR	Kul'dur	13.14	329	P	Pn	08 21 36.5	+0.3
	comp=Z,0.7nm,0.5s,baz=138,slow=15,SNR=2.3						
KLR				LR	LR	08 26 33.3	
	comp=Z,104nm,19.8s,baz=141,slow=37						
KLR	Kul'dur	13.14	329	⇓eP	Pn	08 21 34.3	-1.9
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PETK	Petropavlovsk-	18.41	31	P	Pn	08 22 44.5	+0.9
	comp=Z,1.3nm,0.7s,baz=292,slow=12,SNR=1.6						
ZEA	Zeya	18.43	332	eP	P	08 22 42.8	-0.6
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
TIA	Tai'an	19.82	272	⇓P	P	08 22 56.8	-1.9
TIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MA2	Magadan	22.04	12	P	P	08 23 24.1	+1.6
	comp=Z,8.0nm,0.6s,baz=202,slow=9.0,SNR=8.0						
MA2				LR	LR	08 31 08.4	
	comp=Z,37nm,21.2s,baz=84,slow=34						
	comp=Z,8.0nm,0.6s						
MA2	Magadan	22.04	12	ceP	P	08 23 24.3	+1.9
MA2				pmax	pmax		
	comp=Z,17nm,1.3s						
MA2	Magadan	22.04	12	P	P	08 23 21.8	-0.7
MA2				IAmb	IAmb	08 23 25.3	
	comp=Z,10nm,0.7s						
NACB	Ninganchiao	22.28	237	P	P	08 23 23.2	-2.1
NACB				IAmb	IAmb	08 23 25.2	
	comp=Z,17nm,1.0s						
HHC	Hu-ho-hao-te	23.46	286	eP	P	08 23 37.7	+0.3
HHC				pmax	pmax		
	comp=Z,53nm,0.8s						
HHC				pmax	pmax		
	comp=Z,92nm,4.5s						
YAK	Yakutsk	24.93	346	eP	P	08 23 48.9	-1.6
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK	Yakutsk	24.93	346	P	P	08 23 49.5	-0.9
YAK				IAmb	IAmb	08 23 53.1	
	comp=Z,15nm,0.7s						
SEY	Seymchan	25.48	11	P	P	08 23 56.5	+1.0
	comp=Z,3.7nm,0.8s,baz=206,slow=6.7,SNR=12						
	comp=Z,3.7nm,0.8s						
SEY	Seymchan	25.48	11	⇑eP	P	08 23 56.3	+0.8
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN	Xi'an	26.87	271	P	P	08 24 07.6	-0.8
XAN				pP	pP	08 24 15.7	-5.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULN	Ulaanbaatar	26.98	302	⇑eP	P	08 24 09.6	+0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ENH	Enshi	27.84	263	P	P	08 24 16.0	-1.1
ENH				IAmb	IAmb	08 24 17.6	
	comp=Z,20nm,0.8s						
H11N2	WAKE ISLAND Hy	28.49	123	T	T	08 54 36.3	
	baz=316,slow=75,SNR=1028						
H11N1	WAKE ISLAND Hy	28.50	123	T	T	08 54 36.9	
	baz=316,slow=75,SNR=1101						
H11N3	WAKE ISLAND Hy	28.51	123	T	T	08 54 37.6	
	baz=316,slow=75,SNR=1378						
H11S1	WAKE ISLAND Hy	29.25	125	T	T	08 55 36.6	
	baz=318,slow=76,SNR=304						
H11S3	WAKE ISLAND Hy	29.25	125	T	T	08 55 31.6	
	baz=318,slow=76,SNR=687						
H11S2	WAKE ISLAND Hy	29.27	125	T	T	08 55 33.7	
	baz=318,slow=76,SNR=335						
BILL	Bilibino	32.71	17	eP	P	08 25 00.5	+0.9
BILL				e		08 26 09.9	
BILL				e		08 27 48.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KNGR	Kungurtug, Tuv	33.49	306	⇓eP	P	08 25 07.8	+1.0
PZH	PanZhiHua	35.62	263	P	P	08 25 27.1	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
GOMU	GeErMu	37.22	282	P	P	08 25 39.1	-0.3
GOMU				pP	pP	08 25 42.9	-10
GOMU				sP	sP	08 25 46.6	-12
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,34nm,4.5s						
WMQ	Urumqi	40.62	296	eP	P	08 26 08.7	+1.3
WMQ				pP	pP	08 26 20.5	-0.2
WMQ				sP	sP	08 26 24.7	-1.9
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
ZAA0	Zalesovo Array	41.36	311	P	P	08 26 13.2	0.0
ZAA0				IAmb	IAmb	08 26 13.6	
	comp=Z,6.0nm,0.8s						
ZALV	Zalesovo Beam	41.36	311	P	P	08 26 13.2	0.0
	comp=Z,5.8nm,0.5s,baz=86,slow=7.7,SNR=20						
ZALV				PcP	PcP	08 28 10.4	-0.1
	comp=Z,1.1nm,0.4s,baz=112,slow=3.4,SNR=3.6						
ZALV				LR	LR	08 44 06.5	
	comp=Z,37nm,18.4s,baz=56,slow=37						
	comp=Z,5.8nm,0.5s						
CHTO	Chiang Mai	41.98	255	P	P	08 26 18.5	-0.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	Chiang Mai	41.98	255	P	P	08 26 18.5	-0.2
CMAR	Chiang Mai Arr	42.20	254	P	P	08 26 20.8	+0.4
	comp=Z,1.5nm,0.4s,baz=42,slow=6.8,SNR=4.8						
CMAR				LR	LR	08 44 10.1	
	comp=Z,10nm,20.4s,baz=45,slow=36						
	comp=Z,1.5nm,0.4s						
CMAR	Chiang Mai Arr	42.20	254	i P	P	08 26 21.6	+1.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NRIK	Noril'sk	42.29	335	P	P	08 26 20.3	-0.2
	comp=Z,0.9nm,0.3s,baz=106,slow=10,SNR=4.6						
	comp=Z,0.9nm,0.3s						
NRIK	Noril'sk	42.29	335	eP	P	08 26 21.9	+1.4
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NRIK	Noril'sk	42.29	335	P	P	08 26 20.6	+0.1
MK31	Makanchi Array	43.78	301	ceP	P	08 26 32.7	-0.3
MK31	Makanchi Array	43.78	301	P	P	08 26 33.1	+0.2
MK31				IAmb	IAmb	08 26 34.3	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	43.78	301	P	P	08 26 32.8	-0.2
	comp=Z,5.1nm,0.7s,baz=85,slow=9.7,SNR=39						
	comp=Z,5.1nm,0.7s						
MAKZ	Makanchi	43.99	301	P	P	08 26 34.7	+0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAKZ	Makanchi	43.99	301	P	P	08 26 34.7	+0.1
MAKZ				IAmb	IAmb	08 26 36.1	
	comp=Z,5.9nm,0.7s						
KURK	Kurchatov	45.46	307	c iP	P	08 26 45.8	-0.4
KURK				pmax	pmax		
	comp=Z,16nm,0.6s						
KURK	Kurchatov	45.46	307	P	P	08 26 46.0	-0.3
KURBB	Kurchatov Arra	45.54	307	P	P	08 26 46.5	-0.4
	comp=Z,15nm,0.7s,baz=82,slow=8.2,SNR=105						
	comp=Z,15nm,0.7s						
H23K	Yukon River	47.09	32	P	P	08 27 01.1	+2.3
BWN	Browne	47.13	34	P	P	08 27 01.5	+2.4
I23K	Minto, Yukon-K	47.16	32	P	P	08 27 00.5	+1.1
TOLK	Toolik Lake Re	47.17	28	P	P	08 27 01.1	+1.6
PMR	Palmer	47.39	37	P	P	08 27 03.1	+2.0
PMR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PMR	Palmer	47.39	37	P	P	08 27 03.1	+2.0
H24K	Noodor Dome	47.78	32	P	P	08 27 05.3	+1.1
CCB	Clear Creek Bu	47.84	33	P	P	08 27 06.4	+1.8
TARG	Taragay, Kyrgy	48.19	295	P	P	08 27 08.6	+0.3
TARG				IAmb	IAmb	08 27 10.0	
	comp=Z,4.9nm,0.7s						
IL31		48.23	33	P	P	08 27 08.7	+1.2
ILAR	Eielson Array	48.23	33	P	P	08 27 08.3	+0.7
	comp=Z,0.9nm,0.7s,baz=268,slow=6.2,SNR=16						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	48.23	33	P	P	08 27 08.2	+0.6
SCM	Sheep Creek Mo	48.23	37	P	P	08 27 09.2	+1.4
SCM				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SCM	Sheep Creek Mo	48.23	37	P	P	08 27 09.2	+1.4
SCM				IAmb	IAmb	08 27 31.2	
	comp=Z,8.4nm,1.1s						
BMAR	Burnt Mountain	49.04	29	P	P	08 27 15.7	+1.7
EYAK	Cordova Ski Ar	49.12	39	P	P	08 27 16.2	+1.7
EYAK				IAmb	IAmb	08 27 29.9	
	comp=Z,12nm,1.2s						
BOOM	Boomskoye usch	49.27	297	P	P	08 27 15.5	-0.7
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BOOM	Boomskoye usch	49.27	297	P	P	08 27 15.5	-0.7
BOOM				IAmb	IAmb	08 27 33.6	
	comp=Z,7.2nm,1.1s						
SCRK	Sand Creek	49.54	34	P	P	08 27 18.9	+1.0
BRVK	Borovoye	50.07	312	ceP	P	08 27 21.4	-0.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BRVK	Borovoye	50.07	312	P	P	08 27 20.8	-1.0
BRVK				IAmb	IAmb	08 27 22.7	
	comp=Z,4.4nm,1.1s						
AAK	Ala-Archa	50.23	298	LR	LR	08 49 37.4	
	comp=Z,27nm,19.8s,baz=68,slow=37						
AAK	Ala-Archa	50.23	298	⇑eP	P	08 27 21.9	-1.6
AAK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KK31	Karatay Array	52.83	299	P	P	08 27 42.5	-0.2
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	Karatay Array	52.83	299	P	P	08 27 42.5	-0.2
KKAR	Karatay Array	52.83	299	P	P	08 27 42.0	-0.7
KKAR	Karatay Array	52.83	299	P	P	08 27 42.0	-0.7
INK	Inuvik	53.09	28	P	P	08 27 45.1	+1.0
	comp=Z,1.5nm,0.8s,baz=264,slow=8.3,SNR=4.1						
	comp=Z,1.5nm,0.8s						
INK	Inuvik	53.09	28	P	P	08 27 45.7	+1.5
INK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
INK	Inuvik	53.09	28	P	P	08 27 45.7	+1.5
INK				IAmb	IAmb	08 28 09.2	
	comp=Z,6.1nm,1.4s						
SMRI	Semarang	53.77	220	P	P	08 27 48.9	-1.0
SVE	Sverdlovsk	54.46	318	eP	P	08 27 54.7	+0.3
SVE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GAR	Garm	54.51	295	P	P	08 27 54.1	-1.1
GAR				IAmb	IAmb	08 28 16.3	
	comp=Z,4.3nm,0.6s						
NIL	Nilore	54.59	288	P	P	08 27 55.7	-0.1
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NIL	Nilore	54.59	288	P	P	08 27 55.6	-0.1
A36M	Sachs Harbour	54.95	22	P	P	08 27 59.1	+1.4
A36M				IAmb	IAmb	08 27 59.9	
	comp=Z,3.2nm,0.8s						
KNRA	Kununurra	55.09	195	P	P	08 28 00.2	+1.0
CHGR	Chuyangaron	55.48	295	P	P	08 28 01.8	-0.4
ARU	Arti	55.67	318	LR	LR	08 54 22.8	
	comp=Z,48nm,18.1s,baz=124,slow=39						
ARU	Arti	55.67	318	c iP	P	08 28 02.8	-0.3
ARU				*PP	pP	08 28 17.2	+0.3
ARU				S	S	08 35 45.9	+0.5
ARU				SS	SS	08 39 30.1	-0.5
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU	Arti	55.67	318	P	P	08 28 03.1	0.0
ARU				IAmb	IAmb	08 28 21.4	
	comp=Z,3.9nm,0.5s						
C36M	Paulatuk	56.12	25	P	P	08 28 07.0	+0.9
C36M				IAmb	IAmb	08 28 07.9	
	comp=Z,4.8nm,0.9s						
ABKAR	Akbulak array	57.42	310	P	P	08 28 15.3	-0.4
ABKAR				IAmb	IAmb	08 28 21.5	
	comp=Z,2.6nm,0.6s						
FITZ	Fitzroy Crossi	58.14	198	P	P	08 28 21.5	+0.6

FITZ				IAmb	IAmb	08 28 50.0	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	58.18	188	P	P	08 28 21.1	-0.1
CTAO	Charters Tower	58.22	175	P	P	08 28 22.0	+0.5
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.5s						
CTAO	Charters Tower	58.22	175	P	P	08 28 22.0	+0.5
CTAO				IAmb	IAmb	08 28 41.6	
	comp=Z,7.1nm,1.4s						
WRAB	Tennant Creek	58.35	188	P	P	08 28 22.4	0.0
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRAB	Tennant Creek	58.35	188	P	P	08 28 22.4	0.0
WRAB				IAmb	IAmb	08 28 41.2	
	comp=Z,5.1nm,0.8s						
WR0	Warramunga Arr	58.36	188	P	P	08 28 22.4	-0.1
WR0				IAmb	IAmb	08 28 41.3	
	comp=Z,7.5nm,0.9s						
WB2	Warramunga Arr	58.36	188	P	P	08 28 22.3	-0.2
WB2				IAmb	IAmb	08 28 41.3	
	comp=Z,5.1nm,0.8s						
WRA	Warramunga Arr	58.36	188	P	P	08 28 22.2	-0.2
	comp=Z,3.1nm,0.5s,baz=5.4,slow=7.2,SNR=67						
	comp=Z,3.1nm,0.5s						
WRA	Warramunga Arr	58.36	188	P	P	08 28 22.5	0.0
WRA	Warramunga Arr	58.36	188	P	P	08 28 22.5	0.0
KIRV	Kirov	59.48	323	⇓eP	P	08 28 30.2	+0.4
RES	Resolute Bay	61.28	15	P	P	08 28 42.2	+0.3
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RES	Resolute Bay	61.28	15	P	P	08 28 42.2	+0.3
RES				IAmb	IAmb	08 28 42.7	
	comp=Z,2.6nm,0.8s						
AS31	Alice Springs	62.09	188	P	P	08 28 47.8	-0.1
ASAR	Alice Springs	62.09	188	P	P	08 28 48.0	0.0
	comp=Z,2.1nm,0.7s,baz=7.8,slow=4.7,SNR=27						
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	62.09	188	P	P	08 28 48.1	+0.2
ASAR	Alice Springs	62.09	188	P	P	08 28 48.1	+0.2
YKA	Yellowknife Ar	62.53	31	P	P	08 28 51.0	+0.6
	comp=Z,1.0nm,0.7s,baz=302,slow=6.4,SNR=6.7						
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	62.53	31	eP	P	08 28 50.7	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	62.95	339	P	P	08 28 53.3	+0.1
	comp=Z,1.2nm,0.5s,baz=49,slow=7.5,SNR=15						
ARCES				LR	LR	09 01 12.8	
	comp=Z,24nm,18.4s,baz=292,slow=41						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	62.95	339	P	P	08 28 53.6	+0.4
ARCES				pmax	pmax		
	comp=Z,16nm,1.4s						
ARCES	ARCESS Array B	62.95	339	P	P	08 28 53.6	+0.4
BELG	Belogornoye	63.14	317	⇑eP	P	08 28 55.3	+0.7
BELG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EIDS	Eidsvold	63.91	171	P	P	08 29 01.0	+1.0
EIDS				IAmb	IAmb	08 29 15.1	
	comp=Z,13nm,1.5s						
OBN	Obninsk	67.31	323	eP	P	08 29 21.2	-0.4
OBN				e		08 29 48.8	
OBN				e		08 31 50.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FIA1	FINESS Array S	67.88	332	P	P	08 29 25.2	+0.2
FIA1				IAmb	IAmb	08 29 25.8	
	comp=Z,8.1nm,0.8s						
FIA0	FINESS Array S	67.88	332	P	P	08 29 25.7	+0.6
FIA0	FINESS Array S	67.88	332	P	P	08 29 25.7	+0.6
FINES	FINESS Array B	67.88	332	P	P	08 29 25.1	0.0
	comp=Z,8.5nm,0.9s,baz=46,slow=8.2,SNR=18						
FINES				LR	LR	09 01 12.7	
	comp=Z,25nm,18.6s,baz=30,slow=38						
	comp=Z,8.5nm,0.9s						
FINES	FINESS Array B	67.88	332	P	P	08 29 24.8	-0.3
SUMG	Summit	69.42	0	P	P	08 29 35.8	+0.8
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUMG	Summit	69.42	0	P	P	08 29 35.8	+0.8
SUMG				IAmb	IAmb	08 29 36.3	
	comp=Z,5.4nm,0.6s						
VSU	Vasula	69.56	329	⇑eP	P	08 29 35.6	0.0
VSU				pmax	pmax		
	comp=Z,20nm,0.8s						
RAF	Rauma	69.71	333	eP	P	08 29 36.6	+0.1
KIV	Kislovodsk	70.37	311	eP	P	08 29 41.8	+0.8
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV	Kislovodsk	70.37	311	P	P	08 29 41.9	+0.8
KIV				IAmb	IAmb	08 29 43.6	
	comp=Z,6.7nm,0.7s						
KBZ	Khabaz	70.37	311	P	P	08 29 41.1	+0.3
	comp=Z,3.9nm,0.9s,baz=48,slow=4.9,SNR=9.1						
	comp=Z,3.9nm,0.9s						
KBZ	Khabaz	70.37	311	eP	P	08 29 41.5	+0.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MTSE	Matsula	70.54	331	eP	P	08 29 41.9	+0.3
AAL	Aland	70.93	333	eP	P	08 29 43.5	-0.4
MNK	Minsk	71.67	326	i P	P	08 29 44.6	-3.8
MNK				i		08 32 23.0	
MNK				i PPP	PPP	08 34 08.4	
MNK				i S	S	08 39 01.0	-3.1
MNK				i SS	SS	08 43 36.8	-2.5
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				MLR	MLR		
	comp=Z,72nm,12.0s						
MNK				MLR	MLR		
	comp=E,6.0nm,18.0s						
MNK				MLR	MLR		
	comp=N,39nm,19.0s						
MNK	Minsk	71.67	326	i P	P	08 29 44.7	-3.8
	comp=E,2.0nm,0.9s						
MNK				i P	P	08 29 44.7	-3.8
	comp=N,16nm,1.0s						
MNK				i P	P	08 29 44.7	-3.8
	comp=Z,11nm,0.9s,baz=49						
MNK				i PP	PP	08 32 23.1	-4.4
MNK				i PPP	PPP	08 34 08.5	
MNK				i S	S	08 39 01.0	-3.1
MNK				i SS	SS	08 43 36.8	-2.5
MNK				i SSS	SSS	08 46 58.7	
MNK				i LQ	LQ	08 56 23.7	
MNK				i LR	LR	09 01 50.8	
MNK				i LRM	MLR	09 04 39.2	
	comp=Z,72nm,12.2s						
MNK				i LRM	MLR	09 04 52.0	
	comp=E,6.0nm,17.9s						
MNK				i LRM	MLR	09 05 11.2	
	comp=N,39nm,19.2s						
NACGM	Naroch	71.88	327	⇓eP	P	08 29 49.5	-0.3
	baz=49						
NC300	NORSAR Array S	72.94	337	P	P	08 29 55.6	-0.4
NC300				IAmb	IAmb	08 29 57.5	
	comp=Z,10nm,1.4s						
NC405	NORSAR Array S	72.96	337	P	P	08 29 56.5	+0.3
HFS	Hagfors	73.09	336	LR	LR	09 05 08.9	
	comp=Z,31nm,19.3s,baz=17,slow=38						
NC204	NORSAR Array S	73.12	338	P	P	08 29 57.6	+0.4
NB201	NORSAR Array S	73.14	337	P	P	08 29 57.5	+0.3
NB2	NORSAR Subarra	73.17	337	P	P	08 29 57.6	+0.2
	comp=Z,2.7nm,0.7s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.17	337	P	P	08 29 57.5	0.0
	comp=Z,4.5nm,0.8s,baz=38,slow=6.0,SNR=21						
NOA				LR	LR	09 04 39.8	
	comp=Z,23nm,21.4s,baz=250,slow=38						
	comp=Z,4.5nm,0.8s						
NBO00	NORSAR Array S	73.31	337	P	P	08 29 58.6	+0.4
VIKU	Vikbolandet	73.31	333	eP	P	08 29 58.2	0.0
AKASG	Malin Array Be	73.53	322	P	P	08 29 59.5	-0.1
	comp=Z,1.9nm,0.4s,baz=45,slow=5.8,SNR=13						
AKASG				LR	LR	09 05 51.5	
	comp=Z,22nm,18.2s,baz=356,slow=39						
	comp=Z,1.9nm,0.4s						
AKASG	Malin Array Be	73.53	322	eP	P	08 29 59.3	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	73.53	322	P	P	08 29 59.7	0.0
AKBB	Malin Array Si	73.53	322	⇑eP	P	08 29 59.1	-0.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	73.53	322	P	P	08 29 59.2	-0.5
AKBB				IAmb	IAmb	08 30 00.1	
	comp=Z,7.1nm,0.8s						
PDAR	Pinedale Array	76.51	46	P	P	08 30 18.2	+0.9
	comp=Z,0.7nm,0.7s,baz=243,slow=0.8,SNR=6.6						
	comp=Z,0.7nm,0.7s						
BUR08	Bucovina Ar. S	77.55	322	P	P	08 30 23.0	+0.1
BUR08				IAmb	IAmb	08 30 24.6	
	comp=Z,6.7nm,1.4s						
BRTR	Keskin Array B	78.30	312	P	P	08 30 27.6	+0.3
	comp=Z,0.7nm,0.5s,baz=111,slow=3.7,SNR=8.4						
	comp=Z,0.7nm,0.5s						
BRTR	Keskin Array B	78.30	312	i P	P	08 30 30.3	+3.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	78.67	320	LR	LR	09 07 52.9	
	comp=Z,34nm,18.7s,baz=48,slow=38						
CLL	Collm	80.19	330	i P	P	08 30 37.2	+0.1
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	80.19	330	i P	P	08 30 37.2	+0.1
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	81.67	329	⇑eP	P	08 30 44.6	-0.5
KHC				pmax	pmax		
	comp=Z,11nm,1.0s						
GERES	GERESS Array B	81.84	328	P	P	08 30 45.8	-0.3
	comp=Z,1.1nm,0.6s,baz=46,slow=5.8,SNR=7.0						
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	81.84	328	eP	P	08 30 46.0	-0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	84.02	16	LR	LR	09 10 33.9	
	comp=Z,22nm,19.8s,baz=105,slow=37						
TXAR	Lajitas Array	89.05	53	P	P	08 31 22.9	+0.5
	comp=Z,0.6nm,0.7s,baz=305,slow=3.9,SNR=6.3						
TXAR				pP	pP	08 31 38.0	+1.1
	comp=Z,0.7nm,0.6s,baz=295,slow=3.5,SNR=8.6						
	comp=Z,0.6nm,0.7s						
ESDC	Sonseca Array	96.32	334	LR	LR	09 21 44.5	
	comp=Z,22nm,18.9s,baz=14,slow=39						
LPAZ	La Paz	145.72	59	PKPbc	PKPdf	08 38 06.9	+0.5
	comp=Z,1.7nm,0.6s,baz=310,slow=3.0,SNR=7.9						
LPAZ	La Paz	145.72	59	PKP2	PKPdf	08 38 07.0	+0.6

IDC ***09*** *08:27:48.3±2.7, 44°.03N×87°.27E, h0^{km}, mb3.6/1, mbtmp3.5/4, ML2.9/3 Error ellipse: s-maj=46.8km s-min=25.2km az=59.0*

NNC ***09*** *08:27:52.7±3.4, 44°.14N×87°.01E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=25.6km s-min=14.6km az=121.0*

ISC 09 08:27:50.8±2.3, **43°.96N**±0°.09×**86°.9E**±0°.1, **h10^{km}, n22,** σ**1ˢ68**/25, **6C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.78	338	Pg	Pg	08 29 05.0	+1.8
	29nm,0.8s						
ZSN				Lg	Lg	08 29 56.3	
	75nm,0.8s						
MK31	Makanchi Array	4.33	313	⇓Pn	Pn	08 28 59.5	+2.9
	0.2nm,0.1s,baz=132,slow=14,SNR=12						
MK31				⇓Pg	Pg	08 29 12.1	-1.6
	5.0nm,0.6s,baz=126,slow=16,SNR=4.3						
MK31				⇑Lg	Lg	08 30 08.6	
	19nm,0.7s,baz=119,slow=28,SNR=5.0						
MKAR	Makanchi Array	4.33	313	Pn	Pn	08 28 59.4	+2.7
	1.2nm,0.3s,baz=127,slow=14,SNR=25						
MKAR				Sn	Sn	08 29 50.5	+3.4
	2.4nm,0.3s,baz=137,slow=21,SNR=6.0						
MKAR				Lg	Lg	08 30 08.5	
	5.3nm,0.3s,baz=124,slow=30,SNR=9.7						
	1.5nm,0.3s						
DJR	Jarkent	5.15	277	Pg	Pg	08 29 29.0	-0.4
	8.0nm,0.5s						
DJR				Lg	Lg	08 30 36.9	
	19nm,0.6s						
PDGK	Podgornoye	5.43	266	Pg	Pg	08 29 34.3	-0.6
	4.4nm,0.5s						
PDGK				Lg	Lg	08 30 46.0	
	12nm,0.8s						
PDGK	Podgornoye	5.43	266	⇓Pn	Pn	08 29 11.0	-1.0
	1.1nm,0.4s						
PDGK				⇓Pg	Pg	08 29 34.0	-0.9
	10nm,0.8s						
PDGK				⇑Lg	Lg	08 30 40.5	
	31nm,0.8s						
KAPS	Kapalarasan	5.56	286	Pg	Pg	08 29 36.6	-0.7
	7.6nm,0.6s						
KAPS				Lg	Lg	08 30 49.9	
	17nm,0.5s						
UZB	Uzynbulak	5.80	265	Pg	Pb	08 29 39.3	+7.2
	4.3nm,0.3s						
UZB				Lg	Lg	08 30 55.4	
	16nm,0.7s						
TDK	Taldyqorghan	6.18	283	Pg	Pg	08 29 49.4	+0.2
	50nm,0.4s						
TDK				Lg	Lg	08 31 13.6	
	40nm,0.6s						
SATY	Saty	6.26	265	Pg	Pg	08 29 51.4	+0.7
	6.2nm,0.5s						
SATY				Lg	Lg	08 31 15.5	
	12nm,0.4s						
KURS	Kuram	6.36	269	Pg	Pg	08 29 54.7	+2.1
	4.9nm,0.8s						
KURS				Lg	Lg	08 31 20.6	
	9.3nm,0.9s						
TNSS	Tian-Shan	7.32	266	Pg	Pg	08 30 08.6	-2.3
	1.7nm,0.4s						
TNSS				Lg	Lg	08 31 44.9	
	3.5nm,0.6s						
KTBS	Karatobe	7.41	272	Pg	Pg	08 30 11.9	-0.8
	2.1nm,0.6s						
KTBS				Lg	Lg	08 31 50.1	
	10.0nm,0.9s						
KUU	Kurty	7.64	273	Pg	Pg	08 30 16.5	-0.7
	2.8nm,0.6s						
KUU				Lg	Lg	08 31 57.9	
	7.8nm,0.5s						
KST	Kastek	8.02	267	Pg	Pg	08 30 21.3	-3.1
	2.5nm,0.5s						
KST				Lg	Lg	08 32 07.4	
	6.5nm,0.6s						
KRBS	Karabastau	8.14	272	Pg	Pg	08 30 25.0	-1.7
	1.6nm,0.7s						
KRBS				Lg	Lg	08 32 12.6	
	3.9nm,0.8s						
TKM2	Tokmak 2	8.31	267	⇓Pg	Pg	08 30 35.8	+5.9
	1.8nm,0.6s						
TKM2				⇑Lg	Lg	08 32 16.0	
	4.2nm,0.7s						
KURBB	Kurchatov Arra	8.77	322	Pn	Pn	08 29 59.0	+1.4
	0.1nm,0.3s,baz=133,slow=13,SNR=5.8						
KURBB				Sn	Sn	08 31 36.5	0.0
	0.2nm,0.3s,baz=130,slow=30,SNR=2.7						
	0.8nm,0.4s						
KURBB	Kurchatov Arra	8.77	322	Pn	Pn	08 29 56.2	-1.4
KURBB				⇑Sn	Sn	08 31 36.2	-0.2
	4.3nm,0.5s						
KURBB				⇑Lg	Lg	08 32 26.9	
	24nm,0.7s						
KURK	Kurchatov	8.80	323	Pn	Pn	08 29 56.2	-1.8
KURK				⇓Sn	Sn	08 31 35.3	-1.9
	2.8nm,0.6s						
KURK				⇑Lg	Lg	08 32 26.2	
	5.7nm,0.6s						
ZALV	Zalesovo Beam	10.10	353	Pn	Pn	08 30 14.8	-0.9
	0.2nm,0.3s,baz=165,slow=13,SNR=3.0						
ZALV				Sn	Sn	08 32 06.5	-2.4
	0.4nm,0.3s,baz=169,slow=23,SNR=7.1						
	0.9nm,0.4s						
TORD	Torodi Ar. Bea	77.59	276	P	P	08 39 47.3	-0.1
	0.3nm,0.5s,baz=29,slow=4.4,SNR=4.7						
	0.3nm,0.5s						

JMA ***09*** *08:30:44.7±0.2, 34°N±3°×13°7E±°, h360^{km}, MV3.0/33, SE OFF KII PENINSULA*

IDC ***09*** *08:30:44.2±2.2, 33°.25N×137°.12E, h294^{km}±37^{km}, mb2.6/2, mbtmp3.4/4, Error ellipse: s-maj=61.3km s-min=29.0km az=48.0*

ISC 09 08:30:45.6±1.2, **33°.4N**±0°.1×**137°.2E**±0°.1, **h300^{km}, n16,** σ**2ˢ88**/15, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	1.04	336	P	Pn	08 31 31.6	+5.5
JKN2	Miekihoku	1.12	315	P	Pn	08 31 31.9	+5.4
JTNC	Tanabenakahech	1.40	286	eP	Pn	08 31 33.8	+5.7
JYTA	Yamagatataniai	2.19	349	eP	Pn	08 31 36.8	+3.0
JAI	Aioi	2.34	279	eP	Pn	08 31 39.5	+4.3
JWT	Wachi	2.38	321	P	Pn	08 31 38.4	+2.9
JRY	Ryogami san	2.92	28	P	Pn	08 31 42.9	+2.4
JRY				S	S	08 32 27.5	+3.2
JHU	Hanno	2.94	35	P	Pn	08 31 42.6	+1.9
JHU				eS	S	08 32 26.0	+1.3
BSO4	Boso 4	3.00	58	P	Pn	08 31 43.7	+2.5
BSO4				eS	S	08 32 29.0	+3.4
MJAR	Matsushiro Arr	3.20	14	P	Pn	08 31 43.6	+0.3
	2.3nm,0.5s,baz=193,slow=9.4,SNR=5.3						
JAG	Ashikaga	3.49	31	P	Pn	08 31 46.2	-0.1
JHO	Hitachi	4.18	40	P	Pn	08 31 52.9	-0.9
JFK	Kawauchi	4.92	36	S	S	08 32 57.7	-5.9
KSRS	Korea Array	8.58	300	P	Pn	08 32 45.5	-0.8
	5.2nm,0.6s,baz=111,slow=12,SNR=24						
MKAR	Makanchi Array	43.23	305	P	P	08 38 17.2	-0.6
	0.2nm,0.5s,baz=83,slow=9.2,SNR=1.9						
	0.2nm,0.5s						
WRA	Warramunga Arr	53.15	183	P	P	08 39 31.0	-2.3
	0.1nm,0.3s,baz=0.4,slow=7.5,SNR=4.8						
	0.1nm,0.3s						

TUL ***09*** *08:41:54.3±1.4, 36°.82N±0°.01×97°.70W±0°.02, h5^{km}±6^{km}, ML3.1, mb_Lg2.8/64(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=115.0*

NEIC 09 08:41:54.5±1.1, **36°.81N**±0°.01×**97°.70W**±0°.01, **h8^{km}**±5^{km}, **Error ellipse: s-maj=1.8km s-min=0.8km az=153.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.95	83	Pg	Pg	08 42 12.3	-0.5
U32A	Winter Ranch,	1.14	248	Pg	Pg	08 42 15.5	-0.8
OKCFA	Oklahoma City	1.41	172		Pn	08 42 20.5	+0.1
OKCSW	OKLAHOMA CITY	1.42	172		Pb	08 42 21.1	-0.1
FNO	Franklin	1.57	171		Pn	08 42 22.7	+0.1
TUL1	Leonard	1.78	120		Pn	08 42 25.6	+0.1
TUL1				IAmb_Lg		08 42 54.7	
	comp=Z,65nm,0.8s						
R32A	Long Quarter,	1.80	334		Pn	08 42 26.0	+0.2
X34A	Smith Ranch, M	2.21	183		Pn	08 42 30.9	-0.6
WMOK	Wichita Mounta	2.25	203	Pn	Pn	08 42 32.3	+0.3
WMOK				IAmb_Lg		08 43 05.0	
	comp=Z,30nm,0.8s						
KSU1	Kansas State U	2.44	20		Pn	08 42 33.9	-0.7
CBKS	Cedar Bluff	2.57	322	Pn	Pn	08 42 36.1	-0.4
X37A	Clayton	2.92	139	Pn	Pn	08 42 40.6	-0.5
X37A				IAmb_Lg		08 43 34.1	
	comp=Z,31nm,0.8s						
HHAR	Hobbs	3.07	99	Pn	Pn	08 42 42.0	-1.2
W39A	Magazine	3.56	116	IAmb_Lg		08 43 50.5	
	comp=Z,17nm,0.7s						
S39A	Bolivar	3.60	75	IAmb_Lg		08 43 54.4	
	comp=Z,18nm,0.7s						
AMTX	Amarillo	3.77	240	Pn	Pn	08 42 52.3	-0.6
U40A	Yellville	3.92	95		Pn	08 42 55.5	+0.5
Z38A	Mt. Pleasant	4.18	147	Pn	Pn	08 42 57.1	-1.4
Z38A				IAmb_Lg		08 44 14.2	
	comp=Z,39nm,0.7s						
P38A	Dawn	4.32	48	Pn	Pn	08 42 59.4	-0.9
N35A	Tabor	4.35	21	Pn	Pn	08 43 00.9	+0.1
MGMO	Mountain Grove	4.36	84	Pn	Pn	08 43 00.9	0.0
MGMO				IAmb_Lg		08 44 11.4	
	comp=Z,28nm,0.8s						
KSCO	Kaye Shedlock’	4.47	301	Pn	Pn	08 43 01.5	-1.2
KSCO				IAmb_Lg		08 44 22.0	
	comp=Z,13nm,0.9s						
R40A	Maddies Statio	4.56	69	Pn	Pn	08 43 04.3	+0.6
R40A				IAmb_Lg		08 44 31.4	
	comp=Z,12nm,0.7s						
X40A	Basin Creek Fa	4.59	119	Pn	Pn	08 43 04.6	+0.5
WHAR	Wooly Hollow	4.64	108	Pn	Pn	08 43 06.7	+1.9
W41B	Gary Mavity, V	4.71	109	Pn	Pn	08 43 06.0	+0.2
WLAR	White Oak Lake	4.88	128	IAmb_Lg		08 44 42.1	
	comp=Z,14nm,1.0s						
MSTX	Muleshoe	5.03	237	Pn	Pn	08 43 09.4	-0.9
P40A	Paris	5.21	57	Pn	Pn	08 43 11.2	-1.5
P40A				IAmb_Lg		08 44 40.8	
	comp=Z,16nm,0.8s						
L34A	Svendsen Farm,	5.25	11	IAmb_Lg		08 44 54.1	
	comp=Z,28nm,0.7s						
N38A	Joes South For	5.28	40	Pn	Pn	08 43 12.6	-1.1
OGNE	Ogallala	5.34	322	Pn	Pn	08 43 13.5	-1.0
OGNE				IAmb_Lg		08 44 58.0	
	comp=Z,15nm,0.8s						
Z41A	Richland Creek	5.36	130	IAmb_Lg		08 44 54.0	
	comp=Z,15nm,1.0s						
T25A	Trinidad	5.39	275	IAmb_Lg		08 44 55.2	
	comp=Z,13nm,1.0s						
HBAR	Harrisburg	5.83	100	IAmb_Lg		08 44 59.7	
	comp=Z,19nm,0.7s						
PBMO	Poplar Bluff	5.83	88	IAmb_Lg		08 45 04.7	
	comp=Z,12nm,0.8s						
K31A	O'Neill	5.86	352	IAmb_Lg		08 45 12.6	
	comp=Z,24nm,0.8s						
FVM	French Village	5.90	76	IAmb_Lg		08 45 00.3	
	comp=Z,24nm,1.1s						
435B	Jarrell	6.01	179	IAmb_Lg		08 45 18.5	
	comp=Z,18nm,1.0s						
SCIA	State Center	6.16	33	IAmb_Lg		08 45 14.8	
	comp=Z,22nm,1.0s						
Q24A	Divide	6.27	292	IAmb_Lg		08 45 17.7	
	comp=Z,8.2nm,0.7s						
143A	Socs Landing,	6.60	127	IAmb_Lg		08 45 28.6	
	comp=Z,14nm,0.8s						
S44A	Carbondale	6.79	80	IAmb_Lg		08 45 30.4	
	comp=Z,20nm,0.7s						
K38A	Parkersburg	6.95	32	IAmb_Lg		08 45 42.5	
	comp=Z,13nm,0.9s						
ECSD	EROS Data Cent	6.96	6	Pn	Pn	08 43 35.8	-0.9
P43A	Skaggs, Pawnee	7.03	64	IAmb_Lg		08 45 50.8	
	comp=Z,14nm,0.7s						
W45A	Hickory Valley	7.09	101	IAmb_Lg		08 45 48.4	
	comp=Z,11nm,0.7s						
L40A	Anamosa	7.25	42	IAmb_Lg		08 45 48.1	
	comp=Z,11nm,0.9s						
N23A	Red Feather La	7.62	305	IAmb_Lg		08 46 01.3	
	comp=Z,10nm,0.9s						
JFWS	Jewell Farm	8.36	41	IAmb_Lg		08 46 21.5	
	comp=Z,7.7nm,0.8s						
K43A	Burlington	9.30	48	IAmb_Lg		08 46 49.3	
	comp=Z,13nm,0.7s						

ISK 09 08:49:43.3, 37°.18N×27°.91E, h0^{km}, ML1.2/4, **Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	Milas	0.16	318	PG	Pg	08 49 47.3	+0.9
YER	Yerkesik	0.30	98	PG	Pg	08 49 49.9	+0.8
YER				SG	Sb	08 49 55.1	-2.0
TURN	Turunc	0.48	146	PG	Pg	08 49 53.5	+1.0
BODT	Bodrum	0.49	257	PG	Pg	08 49 52.9	+0.2
BODT				SG	Sb	08 50 01.4	-1.2

ISK 09 08:50:06.1, 40°.49N×29°.28E, h0^{km}, ML1.2/3, **Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEMT	Gemlik	0.08	234	PG	Pg	08 50 08.6	+0.9
GEMT				SG	Sg	08 50 10.4	+1.6
YLV	Yalova	0.11	42	PG	Pg	08 50 09.1	+0.9
YLV				SG	Sg	08 50 11.3	+1.7
TRML	Termal-Yalova	0.15	328	PG	Pg	08 50 09.8	+0.9
TRML				SG	Sg	08 50 12.4	+1.5
ARMT	Armutlu	0.33	284	PG	Pg	08 50 13.0	+0.6
ARMT				SG	Sg	08 50 18.1	+1.5

TIR ***09*** *08:51:37.6, 41°.90N×19°.36E, h14^{km}, Md2.4, Ml2.0*

PDG ***09*** *08:51:38.5±0.1, 41°.89N×19°.38E, h16^{km}, MD2.3/1, ML2.2/12, Error ellipse: s-maj=0.3km s-min=0.2km az=90.0*

RHSSO ***09*** *08:51:38.3±0.8, 41°.82N×19°.46E, h4^{km}±2^{km}, ML2.1/6*

ISC 09 08:51:38.4±1.0, **41°.86N**±0°.03×**19°.40E**±0°.02, **h12^{km}**±7^{km}, **n37,** σ**0ˢ80**/74, **7C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.16	311	⇓*i*Pg	Pg	08 51 42.1	0.0
ULC				*i* Sg	Sg	08 51 45.0	+0.3
DRME	Dracevica, Mon	0.36	334	⇑*i*Pg	Pg	08 51 45.8	+0.1
DRME				*e*Sg	Sb	08 51 51.8	-0.6
DRME	Dracevica, Mon	0.36	334	⇑*i*Pg	Pg	08 51 45.1	-0.6
DRME				*i* Sg	Sg	08 51 51.0	+0.4
PDG	Podgorica	0.58	349	*e*Pg	Pg	08 51 49.3	-0.4
PDG				*e*Sg	Sb	08 51 58.4	-0.2
TTG	Podgorica	0.58	349	⇑*i*Pg	Pg	08 51 48.8	-0.9
TTG				*i* Sg	Sg	08 51 57.9	+0.5
BUM	Brajici-Budva	0.58	319	⇑*i*Pg	Pg	08 51 49.1	-0.6
BUM				*i* Sg	Sb	08 51 58.1	-0.6
TIR	Tirane	0.62	146	P	Pb	08 51 50.6	-0.4
	baz=145						
TIR				S	Sn	08 52 01.3	-1.4
	baz=145						
TIR				AMP			
	comp=E,0.1nm,0.1s,baz=145						
BCI	Bajram Curri	0.71	44	P	Pg	08 51 52.2	+0.1
	baz=48						
BCI				S	Sb	08 52 02.4	+0.1
	baz=48						
BCI				AMP			
	comp=N,0.6nm,0.3s,baz=48						
CEME	Cevo	0.78	332	⇑*i*Pg	Pg	08 51 52.8	-0.6
CEME				*i* Sg	Sb	08 52 04.3	0.0
PHP	Peshkopia	0.80	102	P	Pb	08 51 54.2	+0.1
	baz=104						
PHP				S	Sn	08 52 06.7	-0.5
	baz=104						
PHP				AMP			
	comp=N,0.2nm,0.4s,baz=104						
PVY	Plav	0.84	29	⇑*i*Pg	Pg	08 51 53.8	-0.9
PVY				*i* Sg	Sb	08 52 07.3	+1.0
HCY	Herceg Novi	0.90	311	*e*Pg	Pg	08 51 54.7	-0.9
HCY				*e*Sg	Sb	08 52 08.6	+0.9
HCY	Herceg Novi	0.90	311	⇓*i*Pg	Pg	08 51 54.7	-0.9
HCY				*i* Sg	Sb	08 52 08.3	+0.6
NKME	Niksic	0.96	340	⇑*i*Pg	Pg	08 51 55.8	-1.2
NKME				*i* Sg	Sn	08 52 10.8	-0.6
KOME	Kolasin	0.99	5	⇓*i*Pg	Pg	08 51 56.8	-0.7
KOME				*i* Sg	Sn	08 52 11.9	-0.2
NKY	Niksic	1.00	342	⇓*i*Pg	Pb	08 51 56.4	-1.2
NKY				*i* Sg	Sn	08 52 12.0	-0.3
IVA	Berane	1.07	20	⇓*i*Pg	Pb	08 51 58.1	-0.8
IVA				*i* Sg	Sn	08 52 14.8	+0.7
TREB	Trebinje	1.16	318	*e*Pg	Pb	08 52 00.0	-0.3
TREB				*e*Sg	Sn	08 52 16.9	+0.8
BRY	Bratogost	1.22	329	*e*Pg	Pb	08 52 01.4	0.0
BRY				*e*Sg	Sn	08 52 19.2	+1.4
BRY	Bratogost	1.22	329	⇓*i*Pg	Pn	08 52 00.7	-0.6
BRY				*i* Sg	Sn	08 52 19.4	+1.6
DBRK	Dubrovnik	1.23	311	*e*Pg	Pn	08 52 00.8	-0.6
DBRK				Sg	Sg	08 52 18.4	+0.3
UPM	Unac-Piva	1.39	345	*e*Pg	Pb	08 52 04.1	-0.3
UPM				*e*Sg	Sg	08 52 24.3	+1.1
UPM	Unac-Piva	1.39	345	⇓*i*Pg	Pn	08 52 03.7	0.0
UPM				*i* Sg	Sg	08 52 24.1	+0.9
SJES	Sjenica	1.46	17	*e*Pn	Pb	08 52 05.5	0.0
SJES				*e*Sn	Sg	08 52 26.0	+0.5
STON	Ston	1.62	309	*e*Pn	Pb	08 52 08.4	+0.3
STON				*e*Sn	Sg	08 52 29.9	-0.5
STON	Ston	1.62	309	*e*Pn	Pn	08 52 06.8	+0.2
STON				Sn	Sg	08 52 29.5	-0.8
RUDO	Rudo	1.76	359	*e*Pn	Pn	08 52 09.4	+0.8
RUDO				*e*Sn	Sb	08 52 32.8	+0.3
FNA	Florina	1.83	125	P	Pg	08 52 12.8	-0.8
	baz=125						
FNA				S	Sg	08 52 39.3	+1.9
	baz=125						
BBLS	Lazići	2.00	0	*e*Pn	Pb	08 52 13.5	-1.3
BBLS				*e*Sn	Sb	08 52 38.9	-0.8
LSTV	Lastovo	2.07	297	*e*Pn	Pn	08 52 13.5	+0.7
LSTV				Sn	Sn	08 52 38.8	+0.2
MAKA	Makarska	2.27	310	*e*Pn	Pn	08 52 16.4	+0.9
MAKA				Sn	Sn	08 52 44.0	+0.6
DIVS	Divibare	2.28	11	*e*Pn	Pb	08 52 17.7	-1.7
DIVS				*e*Sn	Sn	08 52 45.5	+1.7
HVAR	Hvar	2.55	302	*e*Pn	Pn	08 52 19.9	+0.4
HVAR				Sn	Sn	08 52 50.6	+0.2
KIJV	Kijevo	3.07	315	*e*Pn	Pn	08 52 27.5	+0.9
KIJV				Sn	Sn	08 53 05.0	+1.7
ZIRJ	Zirje	3.30	304	*e*Pn	Pn	08 52 30.2	+0.5
ZIRJ				Sn	Sn	08 53 09.0	+0.2
MORI	Morici	3.38	308	*e*Pn	Pn	08 52 30.6	-0.2
MORI				Sn	Sn	08 53 11.5	+0.8
DUGI	Dugi Otok	3.84	305	*e*Pn	Pn	08 52 37.4	+0.3
DUGI				Sn	Sn	08 53 22.3	+0.2

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*VAO **09** 09:04:32.1±0.6, 16°.78S×69°.97W, h181^{km}±4^{km}, mb4.3*

*IDC **09** 09:04:35.3±0.9, 16°.94S×69°.57W, h171^{km}±7^{km}, mb3.6/10, mbtmp4.2/13, Error ellipse: s-maj=14.9km s-min=12.0km az=89.0*

*NEIC **09** 09:04:35.3±2.1, 16°.91S±0°.06×69°.65W±0°.08, h172^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=12.2km s-min=8.6km az=116.0*

*GUC **09** 09:04:36.2±0.8, 17°.01S×69°.78W, h190^{km}±6^{km}, ML4.5*

ISC 09 09:04:34.2±0.6**, 16°.86S**±0°.05×**69°.71W**±0°.06**, h171**^{km}±6^{km}**, n95,** σ**1^{s}.26**/94**, mb3.7**/9**, 1C-2D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	1.48	173	Pn	Pn	09 05 08.2	+2.3
PB16	IPOC Station P	1.48	173	⇓*i*P	Pn	09 05 08.2	+2.3
PB16				*i* S	Sn	09 05 32.5	+2.2
LPAZ	La Paz	1.62	70	P	Pn	09 05 08.7	+1.4
	2µm,0.5s,baz=278,slow=8.2,SNR=9938						
LPAZ				S	Sn	09 05 32.0	-0.6
	173nm,0.7s,baz=48,slow=16,SNR=1.6						
LPAZ				LR	LR	09 05 34.7	
	comp=Z,78nm,21.9s,baz=216,slow=39						
LPAZ	La Paz	1.62	70	*e*P	Pn	09 05 08.5	+1.2
AP01	Chacalluta	1.62	202		Pn	09 05 07.8	+1.2
AP01	Chacalluta	1.62	202	*e*P	Pn	09 05 07.6	+1.0
AP01				*e*S	Sn	09 05 32.2	+0.4
PB12	IPOC Station P	1.84	199		Pn	09 05 09.7	+0.7
PB12	IPOC Station P	1.84	199	⇑*i*P	Pn	09 05 09.8	+0.8
PB12				*i* S	Sn	09 05 35.5	-0.7
PB12				IAML		09 05 36.8	
	comp=E,3µm,0.5s						
PB11	IPOC Station P	2.89	179		Pn	09 05 22.1	+0.9
PB11	IPOC Station P	2.89	179	⇓*i*P	Pn	09 05 22.1	+0.9
PB11				*i* S	Sn	09 05 56.5	-1.4
PB11				IAML		09 06 00.0	
	comp=E,740nm,0.3s						
PB08	IPOC Station P	3.31	171		Pn	09 05 27.6	+1.0
PB08	IPOC Station P	3.31	171	*e*P	Pn	09 05 28.3	+1.6
PB08				IAML		09 06 08.9	
	comp=E,380nm,0.1s						
TA01	Diego Aracena	3.71	187	Pn	Pn	09 05 31.3	-0.1
TA01	Diego Aracena	3.71	187	*e*P	Pn	09 05 31.3	-0.1
PATCX	Punta Patache	3.96	186	Pn	Pn	09 05 35.1	+0.4
PATCX	Punta Patache	3.96	186	*e*P	Pn	09 05 35.0	+0.4
PB01	IPOC Station P	4.17	177		Pn	09 05 37.5	+0.2
PB02	IPOC Station P	4.44	182		Pn	09 05 41.5	+0.7
PB09	IPOC Station P	4.93	175		Pn	09 05 48.2	+0.9
PB04	IPOC Station P	5.46	184		Pn	09 05 54.1	-0.1
LVC	Limon Verde	5.77	173	P	Pn	09 05 59.4	+1.0
	comp=E,19nm,0.2s,baz=3.4,slow=6.0,SNR=19						
LVC				S	Sn	09 07 00.9	-3.7
	comp=E,67nm,0.3s,baz=152,slow=22,SNR=22						
LVC	Limon Verde	5.77	173	*e*P	Pn	09 05 58.5	0.0
PB06	IPOC Station P	5.82	179		Pn	09 05 58.6	-0.3
AF01	San Pedro de A	6.23	167		Pn	09 06 05.5	+1.1
PB15	IPOC Station P	6.32	178		Pn	09 06 05.4	-0.2
PB10	IPOC Station P	6.67	187	Pn	Pn	09 06 09.2	-0.8
ETMB	Extrema	7.78	26	*e*P	Pn	09 06 23.4	-1.4
NNA	Nana	8.44	304	P	Pn	09 06 34.8	+1.4
	comp=E,70nm,0.3s,baz=130,slow=12,SNR=59						
NNA				S	Sn	09 08 02.8	-4.9
	comp=E,32nm,0.3s,baz=45,slow=17,SNR=6.4						
NNA	Nana	8.44	304	Pn	Pn	09 06 34.6	+1.2
CZSB	Cruzeiro do Su	9.53	342	*e*P	Pn	09 06 42.6	-5.3
VILB	Vilhena	9.98	68	*e*P	Pn	09 06 52.0	-1.8
PTLB	Pontes e Lacer	10.26	84	*e*P	Pn	09 06 59.0	+1.7
SALV	Santo Antonio	13.49	88	*e*P	P	09 07 41.1	-1.2
PDRB	Porto dos Gac	13.62	69	*e*P	Pn	09 07 40.1	-0.6
NBRS	Nobres	13.66	81	*e*P	Pn	09 07 41.2	+0.1
AQDB	Aquidauana	13.76	107	Pn	Pn	09 07 41.2	-1.1
AQDB	Aquidauana	13.76	107	*e*P	Pn	09 07 42.3	0.0
PP1B	Ponte de Pedra	14.19	95	*e*P	P	09 07 49.8	-0.3
CLDB	Colider	14.76	68	*e*P	Pn	09 07 54.7	-0.2
CPUP	Villa Florida	14.87	131	P	Pn	09 07 54.5	-1.6
	comp=E,2.3nm,0.6s,baz=305,slow=10,SNR=8.5						
CPUP	Villa Florida	14.87	131	*e*P	Pn	09 07 54.0	-2.1
MCR1	Marechal Candi	16.49	120	*e*P	P	09 08 15.0	-0.6
DVLD	Doverlandia	16.81	92	*e*P	Pn	09 08 19.7	-0.1
TRCB	Terra Rica	17.11	113	*e*P	Pn	09 08 23.6	+0.2
ITQB	Itaqui	17.51	139		Pn	09 08 27.0	-1.0
ITQB	Itaqui	17.51	139	*e*P	P	09 08 26.5	-0.2
FRBT	Francisco Belt	17.94	123	*e*P	P	09 08 30.7	-0.8
PCMB	Pacaembu	18.05	108	*e*P	P	09 08 32.6	-0.1
PTGB	Pitanga	18.25	118	*e*P	P	09 08 34.4	-0.4
H03N1	Juan Fernandez	18.48	205	T	T	09 28 00.9	
	baz=2.3,slow=74,SNR=11						
SNDB	Serra Nova Dou	18.48	77	*e*P	P	09 08 36.3	-1.1
H03N2	Juan Fernandez	18.48	205	T	T	09 27 26.3	
	SNR=11						
H03N3	Juan Fernandez	18.49	205	T	T	09 27 31.1	
	baz=27,slow=74,SNR=13						
ITTB	Itaituba	18.50	49	*e*P	P	09 08 36.7	-0.8
ITRB	Iturama	18.59	102	*e*P	P	09 08 38.9	+0.3
CFSA	Confresa	19.17	72	*e*P	P	09 08 44.8	-0.2
ITAB	Concordia	19.27	125	P	P	09 08 45.7	-0.1
ITAB				IAmb	IAmb	09 08 48.0	
	comp=Z,23nm,1.0s						
ITAB	Concordia	19.27	125	*e*P	P	09 08 46.0	+0.2
FRTB	Fartura	19.98	112	*e*P	P	09 08 53.3	-0.3
BB19B	Bebedouro	20.46	105	*e*P	P	09 08 58.2	-0.5
IPMB	Ipameri, GO	20.55	96	*e*P	P	09 08 58.6	-1.1
PLTB	Pedras Altas	20.83	138	P	P	09 09 01.8	-0.8
PLTB				IAmb	IAmb	09 09 05.0	
	comp=Z,18nm,0.7s						
PLTB	Pedras Altas	20.83	138	*e*P	P	09 09 01.3	-1.3
BDFB	Brasilia	20.87	90	P	P	09 09 01.8	-1.4
	comp=Z,5.4nm,0.4s,baz=263,slow=13,SNR=9.9						
	comp=Z,5.4nm,0.4s						
BDFB	Brasilia	20.87	90	P	P	09 09 02.5	-0.7
BDFB				IAmb	IAmb	09 09 05.7	
	comp=Z,9.2nm,0.6s						
PEXB	Peixe	21.26	80	*e*P	P	09 09 06.6	-0.7
RCLB	Rio Claro- Sao	21.60	108	*e*P	P	09 09 11.0	+0.1
SPB	Sao Paulo	21.94	111	*e*P	P	09 09 12.0	-2.3
PRPB	Parauapebas	22.17	64	*e*P	P	09 09 15.7	-1.0
SMTB	Santa Maria do	22.97	73	*e*P	P	09 09 23.4	-0.7
PARB	Paraibuna	23.50	110	*e*P	P	09 09 29.2	+0.3
PLCA	Paso Flores	23.80	182	P	P	09 09 33.5	+2.0
	comp=Z,2.1nm,0.6s,baz=1.8,slow=11,SNR=6.4						
	comp=Z,2.1nm,0.6s						
PLCA	Paso Flores	23.80	182	IAmb	IAmb	09 09 58.8	
	comp=Z,7.5nm,1.4s						
SDBA	SAO DESIDERIO	24.40	83	*e*P	P	09 09 36.2	-0.9
JANB	Januaria	24.48	89	*e*P	P	09 09 37.2	-0.7
ZARC	Zaragoza, Cauc	24.72	348	P	P	09 09 38.3	-1.6
DIAM	Diamantina, MG	24.86	97	*e*P	P	09 09 40.6	-0.8
NBPN	Ponto Novo - B	29.25	82	*e*P	P	09 10 19.1	-1.4
NBPS	Pedro II - PI	30.36	69	*e*P	P	09 10 29.9	-0.5
NBAN	Anadia - AL	33.28	82	*e*P	P	09 10 54.6	-1.2
TXAR	Lajitas Array	56.42	324	P	P	09 13 59.8	+1.6
	comp=Z,0.3nm,0.6s,baz=152,slow=8.8,SNR=6.4						
	comp=Z,0.3nm,0.6s						
DBIC	Dimbokro	68.23	76	P	P	09 15 16.7	-0.3
	comp=Z,3.8nm,0.5s,baz=250,slow=6.9,SNR=7.4						
	comp=Z,3.8nm,0.5s						
DBIC	Dimbokro	68.23	76	IAmb	IAmb	09 15 18.2	
	comp=Z,26nm,1.4s						
PDAR	Pinedale Array	69.73	330	P	P	09 15 27.6	+1.7
	comp=Z,0.2nm,0.5s,baz=130,slow=10,SNR=2.6						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	71.40	322	P	P	09 15 37.7	+1.6
	comp=Z,0.3nm,0.7s,baz=152,slow=4.1,SNR=2.7						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	76.57	72	P	P	09 16 05.8	-0.5
	comp=Z,7.0nm,0.6s,baz=263,slow=5.5,SNR=74						
	comp=Z,7.0nm,0.6s						
ESDC	Sonseca Array	83.09	45	P	P	09 16 42.5	+1.6
	comp=Z,1.1nm,0.9s,baz=256,slow=3.1,SNR=4.7						
	comp=Z,1.1nm,0.9s						
BOSA	Boshof	86.31	119	P	P	09 16 59.0	+1.5
	comp=Z,1.2nm,0.5s,baz=244,slow=3.5,SNR=5.6						
	comp=Z,1.2nm,0.5s						
BOSA	Boshof	86.31	119	IAmb	IAmb	09 17 01.6	
	comp=Z,13nm,1.4s						
YKA	Yellowknife Ar	86.58	341	P	P	09 16 59.7	+2.0
	comp=Z,0.6nm,0.5s,baz=133,slow=5.0,SNR=10						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	133.58	210	PKP	PKiKP	09 23 32.7	+0.2
	comp=Z,0.8nm,1.1s,baz=111,slow=1.6,SNR=2.0						
ZALV	Zalesovo Beam	138.03	22	PKP	PKiKP	09 23 40.7	+0.2
	comp=Z,2.2nm,0.7s,baz=292,slow=3.2,SNR=8.9						
MKAR	Makanchi Array	142.22	32	PKhKP	PKPpre	09 23 43.4	
	comp=Z,0.4nm,0.6s,baz=324,slow=4.7,SNR=4.4						
SONM	Songino Array	148.94	5	PKPbc	PKiKP	09 24 04.1	+0.8
	comp=Z,2.6nm,0.4s,baz=322,slow=1.9,SNR=4.5						
CMAR	Chiang Mai Arr	169.07	80	PKPab	PKPab	09 25 34.8	+0.4
	comp=Z,2.3nm,0.3s,baz=260,slow=4.3,SNR=1.9						

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*IDC **09** 09:17:43.4±0.8, 15°.10S×173°.36W, h0^{km}, mb3.9/9, mbtmp3.9/10, ML4.4/1, MS3.7/31, Error ellipse: s-maj=39.8km s-min=17.9km az=140.0*

*NEIC **09** 09:17:45.5±1.4, 15°.13S±0°.06×173°.25W±0°.07, h10^{km}±1^{km}, mb4.5/22, Error ellipse: s-maj=14.7km s-min=5.8km az=129.0*

ISC 09 09:17:48.2±0.7**, 15°.0S**±0°.1×**173°.5W**±0°.1**, h30**^{km}**, n71,** σ**1^{s}.10**/34**, mb4.3**/20**, MS3.8**/29**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.98	57	Pn	Pn	09 18 14.0	-5.8
	56nm,0.3s,baz=199,slow=3.9,SNR=123						
AFI				Sn	Sn	09 18 32.3	-11
	598nm,0.3s,baz=51,slow=22,SNR=33						
AFI				LR	LR	09 18 55.7	
	comp=Z,951nm,18.3s,baz=198,slow=37						
NIUE	Niue	5.31	140		Pn	09 18 58.0	-7.5
MSVF	Nonsavu	8.56	250	Pn	Pn	09 19 47.9	-2.3
	0.1nm,0.3s,baz=198,slow=20,SNR=2.4						
MSVF				LR	LR	09 22 55.5	
	comp=Z,319nm,19.8s,baz=89,slow=36						
	5.8nm,0.8s						
FUNA	Funafuti	9.61	311	Pn	Pn	09 20 05.8	+1.3
KNTN	Kanton	12.26	8	Pn	Pn	09 20 38.7	-2.2
RAR	Rarotonga	14.44	117	LR	LR	09 25 39.5	
	comp=Z,81nm,20.9s,baz=300,slow=33						
DZM	Mont Dzumac	20.27	247	LR	LR	09 28 58.5	
	comp=Z,166nm,20.4s,baz=48,slow=33						
DZM	Mont Dzumac	20.27	247		Pn	09 22 25.4	+1.8
URZ	Urewera	24.62	198	LR	LR	09 31 13.1	
	comp=Z,257nm,21.8s,baz=31,slow=33						
URZ	Urewera	24.62	198	P	P	09 23 06.2	+0.3
URZ				IAmb	IAmb	09 23 11.9	
	comp=Z,15nm,1.2s						
RPZ	Rata Peaks	31.52	202	LR	LR	09 36 34.3	
	comp=Z,181nm,18.0s,baz=42,slow=36						
H11S2	WAKE ISLAND Hy	38.56	329	T	T	10 05 50.6	
	SNR=14						
H11S3	WAKE ISLAND Hy	38.58	329	T	T	10 06 34.7	
	baz=300,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	38.58	329	T	T	10 06 39.5	
	baz=146,slow=74,SNR=8.9						
H11N3	WAKE ISLAND Hy	39.51	330	T	T	10 07 59.0	
	baz=149,slow=76,SNR=8.9						
H11N1	WAKE ISLAND Hy	39.51	330	T	T	10 07 45.7	
	baz=149,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	39.53	330	T	T	10 08 02.1	
	baz=149,slow=76,SNR=7.1						
STKA	Stephens Creek	44.16	240	P	P	09 25 54.2	-0.1
	comp=Z,2.3nm,0.8s,baz=111,slow=9.5,SNR=3.7						
STKA				LR	LR	09 41 35.6	
	comp=Z,66nm,19.4s,baz=23,slow=32						
	comp=Z,2.3nm,0.8s						
WR0	Warramunga Arr	49.65	256	P	P	09 26 38.5	+0.9
WB0	Warramunga Arr	49.80	257	P	P	09 26 39.5	+0.8
WB0				IAmb	IAmb	09 26 51.2	
	comp=Z,2.8nm,0.9s						
WB2	Warramunga Arr	49.83	256	P	P	09 26 39.8	+0.9
WB2				IAmb	IAmb	09 26 45.5	
	comp=Z,9.9nm,1.3s						
WRAB	Tennant Creek	49.83	256	P	P	09 26 39.6	+0.7
WRAB				IAmb	IAmb	09 26 52.5	
	comp=Z,4.9nm,1.2s						
WRA	Warramunga Arr	49.84	256	P	P	09 26 38.8	-0.2
	comp=Z,0.7nm,0.7s,baz=96,slow=6.1,SNR=6.6						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	49.84	256	IAmb	IAmb	09 26 47.3	
	comp=Z,0.3nm,1.2s						
AS31	Alice Springs	50.15	252	P	P	09 26 41.4	+0.1
ASAR	Alice Springs	50.15	252	P	P	09 26 41.3	0.0
	comp=Z,0.9nm,0.3s,baz=90,slow=7.6,SNR=40						
ASAR				LR	LR	09 46 47.0	
	comp=Z,82nm,18.3s,baz=140,slow=35						
	comp=Z,0.9nm,0.3s						
JCJ	Chichijima	60.00	314	LR	LR	09 49 03.7	
	comp=Z,34nm,19.8s,baz=126,slow=31						
VNDA	Vanda	63.77	186	P	P	09 28 16.9	0.0
	comp=Z,2.8nm,1.1s,baz=354,slow=6.3,SNR=8.0						
VNDA				LR	LR	09 53 43.0	
	comp=Z,22nm,18.3s,baz=270,slow=34						
	comp=Z,2.8nm,1.1s						
VNDA	Vanda	63.77	186	P	P	09 28 17.5	+0.6
VNDA				IAmb	IAmb	09 28 29.5	
	comp=Z,3.3nm,1.2s						
SHEM	Shemya Is, Ala	68.28	352	LR	LR	09 52 10.8	
	comp=Z,99nm,21.8s,baz=278,slow=30						
MJAR	Matsushiro Arr	68.56	320	LR	LR	09 53 24.5	
	comp=Z,48nm,21.8s,baz=190,slow=31						
LPIG	La Paz	72.91	59	LR	LR	09 52 00.9	
	comp=Z,47nm,19.7s,baz=210,slow=28						
YBH	Yreka Blue Hor	73.33	37	LR	LR	09 52 35.0	
	comp=Z,80nm,19.6s,baz=242,slow=28						
NVAR	Mina Array Bea	74.09	42	P	P	09 29 21.6	-0.3
	comp=Z,0.5nm,0.8s,baz=233,slow=7.5,SNR=4.7						
NVAR				LR	LR	09 55 37.0	
	comp=Z,62nm,19.8s,baz=224,slow=31						
	comp=Z,0.5nm,0.8s						
KDAK	Kodiak Island	74.54	11	LR	LR	09 56 01.2	
	comp=Z,56nm,20.4s,baz=233,slow=31						
QSPA	South Pole Qui	75.05	180	LR	LR	09 59 30.6	
	comp=Z,33nm,19.3s,baz=20,slow=34						
QSPA	South Pole Qui	75.05	180	P	P	09 29 26.9	-0.1
BBB	Bella Bella	77.56	27	LR	LR	09 58 14.5	
	comp=Z,49nm,18.0s,baz=70,slow=31						
GLB	Gilahina Butte	79.75	14	P	P	09 29 54.1	+1.1
GLB				IAmb	IAmb	09 29 55.4	
	comp=Z,6.3nm,1.2s						
MA2	Magadan	79.75	342	LR	LR	09 57 32.4	
	comp=Z,25nm,21.4s,baz=148,slow=30						
J20K	Nowinta River	80.31	8	P	P	09 29 57.3	+1.4
J20K				IAmb	IAmb	09 29 59.7	
	comp=Z,9.4nm,1.4s						
NEW	Newport	80.42	34	LR	LR	09 58 05.3	
	comp=Z,40nm,18.8s,baz=221,slow=30						
TXAR	Lajitas Array	80.47	56	P	P	09 29 56.1	-1.6
	comp=Z,0.7nm,1.0s,baz=232,slow=6.2,SNR=6.2						
	comp=Z,0.7nm,1.0s						
ANMO	Albuquerque	80.61	50	LR	LR	09 57 26.6	
	comp=Z,40nm,20.8s,baz=256,slow=30						
DLBC	Dease Lake	81.36	21	LR	LR	10 00 50.7	
	comp=Z,49nm,18.3s,baz=253,slow=32						
WRH	Wood River Hil	81.57	11	P	P	09 30 04.2	+1.5
DOT	Dot Lake	81.63	13	P	P	09 30 04.1	+1.1
DOT				IAmb	IAmb	09 30 05.4	
	comp=Z,3.7nm,1.0s						
HDA	Harding Lake	81.72	11	P	P	09 30 04.0	+0.6
HDA				IAmb	IAmb	09 30 06.1	
	comp=Z,3.7nm,0.9s						
CCB	Clear Creek Bu	81.78	11	P	P	09 30 04.3	+0.6
TCOL	CIGO, UAF Yank	81.98	11	P	P	09 30 05.7	+0.9
COLA	College	81.98	11	P	P	09 30 06.1	+1.3
PDAR	Pinedale Array	82.03	42	P	P	09 30 05.0	-0.8
	comp=Z,0.6nm,0.8s,baz=191,slow=2.4,SNR=5.0						
PDAR				LR	LR	10 02 39.2	
	comp=Z,38nm,18.7s,baz=278,slow=33						
	comp=Z,0.6nm,0.8s						
YHL	Hebgen Lake	82.03	39	P	P	09 30 06.8	+0.9
YHL				IAmb	IAmb	09 30 08.7	
	comp=Z,5.2nm,1.1s						
ILAR	Eielson Array	82.06	11	P	P	09 30 05.8	+0.5
	comp=Z,0.8nm,0.8s,baz=230,slow=6.3,SNR=10.0						
ILAR				LR	LR	09 58 15.7	
	comp=Z,31nm,21.3s,baz=170,slow=30						
	comp=Z,0.8nm,0.8s						
J25K	Salcha River,	82.21	12	P	P	09 30 07.4	+1.3
J25K				IAmb	IAmb	09 30 08.6	
	comp=Z,3.5nm,1.0s						
DAWY	Dawson	83.05	14	P	P	09 30 12.2	+1.8
DAWY				IAmb	IAmb	09 30 13.3	
	comp=Z,5.2nm,1.2s						
PMSA	Palmer Station	84.59	156	LR	LR	09 58 11.9	
	comp=Z,37nm,21.1s,baz=235,slow=29						
H03S2	Juan Fernandez	85.51	124	T	T	11 05 49.8	
	SNR=7.5						
H03S1	Juan Fernandez	85.52	124	T	T	11 05 53.9	
	SNR=7.3						
H03S3	Juan Fernandez	85.53	124	T	T	11 05 52.1	
	SNR=6.3						
INK	Inuvik	87.89	14	LR	LR	10 01 51.1	
	comp=Z,47nm,21.7s,baz=145,slow=30						
MAW	Mawson	88.15	199	LR	LR	10 07 59.9	
	comp=Z,72nm,18.4s,baz=182,slow=34						
YKA	Yellowknife Ar	89.76	23	P	P	09 30 43.7	+0.4
	comp=Z,0.9nm,0.9s,baz=240,slow=4.1,SNR=6.3						
	comp=Z,0.9nm,0.9s						
NNA	Nana	93.25	103	LR	LR	10 03 44.6	
	comp=Z,34nm,20.7s,baz=140,slow=30						
SNAA	Sanae	93.32	177	LR	LR	10 12 15.5	
	comp=Z,40nm,18.4s,baz=190,slow=35						
ULM	Lac du Bonnet	93.68	39	LR	LR	10 06 53.6	
	comp=Z,64nm,20.2s,baz=312,slow=32						
TIXI	Tiksi	94.58	344	LR	LR	10 10 29.8	
	comp=Z,39nm,19.3s,baz=181,slow=33						
TKL	Tuckaleechee C	98.36	55	LR	LR	10 10 48.2	
	comp=Z,26nm,18.2s,baz=292,slow=32						
MLR	Muntele Rosu	145.46	336	PKPbc	PKPab	09 37 25.2	+1.3
	comp=Z,3.6nm,0.7s,baz=74,slow=11,SNR=2.8						
GERES	GERESS Array B	145.72	352	PKPbc	PKPab	09 37 25.5	+0.8
	comp=Z,0.4nm,0.5s,baz=316,slow=5.5,SNR=2.2						
BRTR	Keskin Array B	145.78	321	PKPbc	PKPab	09 37 26.2	+1.0
	comp=Z,4.4nm,1.0s,baz=191,slow=2.5,SNR=9.3						

NOU 09 09:22:34.1, 16°.34S×167°.36E, h6^{km}**, MLv4.0**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.90	350	P	Pg	09 22 51.7	+0.3
DVP	Devils Point	1.59	150	P	Pn	09 23 02.6	-0.2
RTV	Rentapao	1.77	145	P	Pn	09 23 05.9	+0.7
KOUNC	Koumac, New Ca	5.10	214	P	Pn	09 23 50.5	-0.7
YATNC	Mamie plateau,	5.71	184	P	Pn	09 24 00.2	+0.8
DZM	Mont Dzumac	5.77	188	P	Pn	09 23 59.1	-1.3

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*IDC **09** 09:51:49.8±0.8, 29°.41N×130°.55E, h0^{km}, mb3.8/16, mbtmp3.8/21, ML3.2/5, MS3.4/17, Error ellipse: s-maj=22.7km s-min=16.2km az=90.0*

*NIED **09** 09:51:54.4, 29°.34N×130°.68E, h58^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.61; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-0.74; $M_{r\theta}$1.06; $M_{\theta\phi}$-1.66; $M_{\phi r}$1.46; Fault plane solution: $M_0$2.24000×10^{15} NP1: ϕ_s252.00000°, δ23.00000°, λ135.00000°. NP2: ϕ_s24.00000°, δ74.00000°, λ73.00000°.*

*NEIC **09** 09:51:54.7±1.6, 29°.42N±0°.07×130°.5E±0°.1, h26^{km}±5^{km}, mb4.6/19 Error ellipse: s-maj=14.5km s-min=8.7km az=110.0*

*JMA **09** 09:51:54.4±0.1, 29°.3N±0°.4×130°.7E±0°.8, h58^{km}±3^{km}, MV3.6/28, NEAR AMAMI-OSHIMA ISLAND*

ISC 09 09:51:54.4±1.5**, 29°.36N**±0°.05×**130°.56E**±0°.08**, h30**^{km}±10^{km}**, n74,** σ**0^{s}.82**/65**, mb4.0**/25**, MS3.5**/12**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.76	309	*e*P	Pn	09 52 10.8	+1.6
JYAK	Yakushimahirau	0.87	357	P	Pn	09 52 11.4	+0.7
JYAK				*e*S	Sn	09 52 23.6	+1.2
JMTN	Minamitane	1.07	16	P	Pn	09 52 13.4	0.0
JKC	Kuchinoerabu	1.14	344	P	Pb	09 52 15.3	-0.2
JZK	Kikaishima	1.16	206	*e*P	Pn	09 52 15.4	+0.7
JTAJ	Takarajima	1.20	260	P	Pb	09 52 17.2	+0.6
JAM	Amami Oshima	1.26	222	*e*P	Pn	09 52 16.6	+0.6
JAM				*e*S	Sb	09 52 33.4	-0.2
JTN	Tanegashima 3	1.34	16	P	Pn	09 52 17.3	+0.2
JAMN	Amaminishikomi	1.65	228	*e*P	Pn	09 52 22.2	+0.8
JAMN				*e*S	Sb	09 52 44.0	-0.6
JTK	Tokunoshima	2.11	222	*e*P	Pn	09 52 28.7	+1.0

JSU	Suzuyama	2.14	358		Pn	09 52 28.5	+0.4
JSU	Suzuyama	2.14	358	eP	Pn	09 52 28.6	+0.4
JNAR	Kushima--Naru	2.24	16	eP	Pn	09 52 30.4	+0.9
JNAR				eS	Sn	09 52 57.6	+1.4
JOKE	Okinoerabujima	2.65	222	eP	Pn	09 52 36.4	+1.2
JYRO	Yoronjima	2.98	219	eP	Pn	09 52 40.1	+0.4
JYRO				eS	Sn	09 53 14.5	+0.1
JOW	Kunigami	3.23	219	Pn	Pn	09 52 43.8	+0.7
	4.9nm,0.3s,baz=142,slow=18,SNR=19						
JOW				Sn	Sn	09 53 20.0	-0.5
	8.8nm,0.3s,baz=133,slow=28,SNR=7.4						
	15nm,0.5s						
JOW	Kunigami	3.23	219	Pn	Pn	09 52 43.6	+0.6
JNU	Nakatsue	3.76	4	Pn	Pn	09 52 49.6	-0.8
	4.3nm,0.3s,baz=144,slow=2.6,SNR=20						
	78nm,0.8s						
JNU	Nakatsue	3.76	4	Pn	Pn	09 52 49.7	-0.7
JTU	Tsushima	5.24	349	Pn	Pn	09 53 11.6	+0.9
JHS	Saijyo	6.02	20	Pn	Pn	09 53 21.4	-0.2
INU	Inuyama	8.09	41	Pn	Pn	09 53 51.1	+1.2
KSRS	Korea Array	8.37	345	Pn	Pn	09 53 53.0	-0.6
	0.1nm,0.3s,baz=159,slow=14,SNR=16						
KSRS				LR	LR	09 57 28.3	
	comp=Z,158nm,19.8s,baz=165,slow=41						
	2.3nm,0.7s						
JGF	Kuroka	8.46	41	Pn	Pn	09 53 55.7	+0.7
MJAR	Matsushiro Arr	9.62	40	Pn	Pn	09 54 09.3	-1.5
	0.1nm,0.3s,baz=258,slow=34,SNR=2.3						
	1.2nm,0.6s						
JCJ	Chichijima	10.50	100	LR	LR	09 57 46.7	
	comp=Z,99nm,20.8s,baz=263,slow=34						
USRK	Ussuriysk Ar.	14.85	4	LR	LR	10 00 16.2	
	comp=Z,61nm,21.7s,baz=178,slow=34						
ASAJ	Asahikawa	17.57	30	LR	LR	10 02 58.9	
	comp=Z,109nm,20.3s,baz=258,slow=38						
KLR	Kul'dur	19.86	2	P	P	09 56 22.2	-0.8
	0.3nm,0.3s,baz=191,slow=6.3,SNR=22						
KLR				LR	LR	10 04 43.0	
	comp=Z,43nm,18.4s,baz=170,slow=39						
	4.5nm,0.7s						
SONM	Songino Array	26.22	321	P	P	09 57 24.8	-1.9
	1.7nm,0.5s,baz=141,slow=9.3,SNR=3.4						
	1.7nm,0.5s						
CMAR	Chiang Mai Arr	30.78	256	LR	LR	10 12 17.7	
	comp=Z,74nm,18.1s,baz=80,slow=40						
MA2	Magadan	33.19	19	LR	LR	10 13 28.5	
	comp=Z,55nm,18.2s,baz=151,slow=39						
SEY	Seymchan	36.44	17	LR	LR	10 14 00.8	
	comp=Z,53nm,21.5s,baz=340,slow=37						
MKAR	Makanchi Array	41.09	309	P	P	09 59 35.3	-0.2
	1.7nm,0.8s,baz=93,slow=10,SNR=11						
MKAR				LR	LR	10 18 58.9	
	comp=Z,36nm,18.2s,baz=76,slow=40						
	1.7nm,0.8s						
ZALV	Zalesovo Beam	41.10	320	P	P	09 59 34.9	-0.5
	1.3nm,0.6s,baz=125,slow=7.8,SNR=6.2						
	1.3nm,0.6s						
TIXI	Tiksi	42.35	359	LR	LR	10 18 52.1	
	comp=Z,53nm,18.4s,baz=181,slow=38						
KURK	Kurchatov	44.05	314	P	P	09 59 59.9	+0.5
KNRA	Kununurra	44.81	182	P	P	10 00 06.0	+0.3
AAK	Ala-Archa	46.46	302	LR	LR	10 22 15.2	
	comp=Z,52nm,18.4s,baz=96,slow=39						
NRIK	Noril'sk	46.95	341	P	P	10 00 21.4	-0.7
	3.0nm,0.7s,baz=107,slow=10,SNR=5.4						
	3.0nm,0.7s						
NRIK	Noril'sk	46.95	341	IAmb	IAmb	10 00 22.2	
	comp=Z,3.9nm,0.8s						
NIL	Nilore	48.52	290	P	P	10 00 33.9	-0.9
WB0	Warramunga Arr	48.98	175	P	P	10 00 37.9	-0.4
WB0				IAmb	IAmb	10 01 04.4	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	49.15	175	P	P	10 00 39.1	-0.5
	comp=Z,0.7nm,0.8s,baz=355,slow=8.3,SNR=2.8						
	comp=Z,0.7nm,0.8s						
WB2	Warramunga Arr	49.15	175	P	P	10 00 39.9	+0.3
KK31	Karatay Array	49.35	303	P	P	10 00 42.6	+1.5
KK31				IAmb	IAmb	10 00 43.1	
	comp=Z,3.7nm,0.7s						
KKAR	Karatay Array	49.35	303	P	P	10 00 41.8	+0.8
BRVK	Borovoye	49.44	316	P	P	10 00 41.5	0.0
BRVK				IAmb	IAmb	10 00 42.7	
	comp=Z,7.6nm,0.8s						
ASAR	Alice Springs	52.82	176	P	P	10 01 07.2	0.0
	comp=Z,0.2nm,0.7s,baz=11,slow=12,SNR=9.0						
	comp=Z,0.2nm,0.7s						
ABKAR	Akbulak array	56.06	312	P	P	10 01 30.8	+0.3
ABKAR				IAmb	IAmb	10 01 31.7	
	comp=Z,7.2nm,0.8s						
ABKAR	Akbulak array	56.06	312	P	P	10 01 30.8	+0.3
ARU	Arti	56.25	321	LR	LR	10 28 14.9	
	comp=Z,123nm,18.3s,baz=136,slow=39						
ARU	Arti	56.25	321	P	P	10 01 31.7	-0.1
AKTO	Aktyubinsk	57.14	313	LR	LR	10 28 18.3	
	comp=Z,164nm,18.1s,baz=73,slow=38						
IMAR	Indian Mountai	57.77	28	P	P	10 01 43.1	+0.8
MDM	Murphy Dome	60.12	29	P	P	10 01 58.6	-0.1
MDM				IAmb	IAmb	10 02 12.1	
	comp=Z,10nm,1.4s						
ILAR	Eielson Array	60.71	29	P	P	10 02 02.0	-0.7
	comp=Z,0.4nm,0.7s,baz=264,slow=5.3,SNR=7.7						
	comp=Z,0.4nm,0.7s						
SCRK	Sand Creek	62.08	30	P	P	10 02 12.0	-0.1
SCRK				IAmb	IAmb	10 02 24.9	
	comp=Z,4.3nm,1.2s						
DOT	Dot Lake	62.10	30	IAmb	IAmb	10 02 24.1	
	comp=Z,3.1nm,0.8s						
INK	Inuvik	65.20	24	LR	LR	10 32 14.1	
	comp=Z,18nm,19.7s,baz=162,slow=37						
ARCES	ARCESS Array B	67.86	338	P	P	10 02 49.1	-0.3
	comp=Z,1.6nm,0.7s,baz=34,slow=13,SNR=1.1						
ARCES				LR	LR	10 37 49.8	
	comp=Z,64nm,18.5s,baz=275,slow=41						
	comp=Z,1.6nm,0.7s						
ARCES	ARCESS Array B	67.86	338	IAmb	IAmb	10 02 49.7	
	comp=Z,9.8nm,1.2s						
C36M	Paulatuk	68.04	22	P	P	10 02 50.8	+0.3
C36M				IAmb	IAmb	10 02 51.7	
	comp=Z,2.3nm,0.7s						
KBZ	Khabaz	68.78	309	P	P	10 02 56.2	+0.6
	comp=Z,4.4nm,0.9s,baz=117,slow=1.5,SNR=11						
	comp=Z,4.4nm,0.9s						
GEVA	Gevas	70.66	304	P	P	10 03 09.0	+1.4
FINES	FINESS Array B	71.16	331	P	P	10 03 07.9	-2.0
	comp=Z,0.6nm,0.7s,baz=32,slow=6.6,SNR=1.5						
	comp=Z,0.6nm,0.7s						
RES	Resolute Bay	72.09	11	P	P	10 03 15.4	+0.1
RES				IAmb	IAmb	10 03 27.0	
	comp=Z,6.1nm,0.9s						
AKASG	Malin Array Be	74.49	320	P	P	10 03 29.6	-0.3
	comp=Z,0.9nm,0.6s,baz=61,slow=7.0,SNR=4.6						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	74.82	26	P	P	10 03 31.1	-0.4
	comp=Z,0.5nm,0.8s,baz=311,slow=5.8,SNR=3.7						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	76.74	308	P	P	10 03 43.4	+0.2
	comp=Z,1.3nm,0.8s,baz=272,slow=32,SNR=4.4						
BRTR				LR	LR	10 40 47.1	
	comp=Z,38nm,18.2s,baz=62,slow=38						
	comp=Z,1.3nm,0.8s						
NOA	NORSAR Array B	77.41	334	P	P	10 03 45.4	-1.0
	comp=Z,0.2nm,0.5s,baz=31,slow=8.0,SNR=1.8						
	comp=Z,0.2nm,0.5s						
FRB	Frobisher Bay	85.98	8	LR	LR	10 47 04.6	
	comp=Z,20nm,18.4s,baz=326,slow=39						
NVAR	Mina Array Bea	86.86	47	P	P	10 04 38.0	+1.3
	comp=Z,0.3nm,0.6s,baz=296,slow=5.3,SNR=4.5						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	89.44	40	P	P	10 04 49.6	+0.8
	comp=Z,0.2nm,0.6s,baz=336,slow=2.0,SNR=2.6						
	comp=Z,0.2nm,0.6s						

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*TEH **09** 10:04:17.1, 26°.74N×53°.46E, h13^{km}, ML3.5*

*DSN **09** 10:04:20.2±1.0, 26°.97N×53°.76E, h10^{km}, ML3.0/6, Error ellipse: s-maj=13.4km s-min=9.2km az=26.0*

ISC 09 10:04:18.7±1.1**, 26°.75N**±0°.05×**53°.54E**±0°.06**, h10**^{km}**, n38, σ1^{s}46**/40**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LMD1	Lamerd	0.67	331	ePg	Pg	10 04 30.8	-0.9
LMD1				eSg	Sg	10 04 40.1	-0.4
LAR1	LAR	1.18	39	ePg	Pn	10 04 41.9	+0.6
JHRM	Jahrom	1.75	1	ePn	Pb	10 04 50.7	-0.2
JHRM				e		10 05 22.0	
	comp=Z,10μm,0.3s						
QIR1	Qir	1.77	346	ePn	Pb	10 04 50.4	-0.9
QIR1				e		10 05 20.6	
	comp=N,7μm,0.8s						
JRN	Qarnain Island	1.91	199	ePn	Pn	10 04 51.8	+0.6
GENO	Geno	2.44	74	ePn	Pb	10 05 00.4	-2.3
GENO				e		10 05 50.4	
	comp=N,1μm,0.3s						
SHME	Shamm	2.44	106	ePn	Pn	10 04 58.2	-0.4
SHME	Shamm	2.44	106	P	Pn	10 04 58.4	-0.2
BANOM	Banah	2.61	108	ePn	Pn	10 05 02.0	+1.0
BANOM	Banah	2.61	108	P	Pn	10 05 01.3	+0.3
ASUD	Al Ashush, Dub	2.67	142	ePn	Pn	10 05 04.0	+2.4
ASUD	Al Ashush, Dub	2.67	142	P	Pn	10 05 04.0	+2.4
FAQ	Al Faqa, Dubai	2.73	137	ePn	Pn	10 05 04.6	+2.1
MSFE	Esma-Masafi	2.74	120	ePn	Pn	10 05 03.9	+1.2
MSFE	Esma-Masafi	2.74	120	P	Pn	10 05 03.7	+1.0
MSFE				S	Sn	10 05 37.2	+1.3
MZWR	Madinat Zayed	2.99	174	ePn	Pn	10 05 07.8	+1.6
UOSS	Minazif	3.00	126	ePn	Pn	10 05 07.7	+1.4
UOSS	Minazif	3.00	126	P	Pn	10 05 07.1	+0.7
HATD	Hatta, Dubai	3.03	129	ePn	Pn	10 05 08.1	+1.4
HATD	Hatta, Dubai	3.03	129	P	Pn	10 05 09.1	+2.5
ASHO	Ashiyiah	3.07	132	ePn	Pn	10 05 09.0	+1.7
ASHO	Ashiyiah	3.07	132	P	Pn	10 05 09.1	+1.8
ALNE	Al Ain	3.35	143	ePn	Pn	10 05 11.4	+0.3
MZR	Muzera	3.73	181	ePn	Pn	10 05 17.3	+0.9
SOHO	SOHO	3.76	133	ePn	Pn	10 05 17.3	+0.6
NGRK	Negar Kerman	4.03	44	ePn	Pn	10 05 23.2	+2.4
NGRK				e		10 05 25.6	
	comp=Z,279nm,0.2s						
UMZA	Um Al Zommool	4.28	159	ePn	Pn	10 05 24.7	+0.8
TVBK	TV Kerman	4.30	41	ePn	Pn	10 05 26.6	+2.2
TVBK				e		10 05 36.1	
	comp=Z,393nm,0.2s						
KHGB	Koh Gabri	4.44	35	ePn	Pn	10 05 28.3	+2.0
KLNJ	Kolanjah	4.57	339	ePn	Pn	10 05 28.6	+0.4
IMEH	Mehriz	4.72	11	ePn	Pn	10 05 31.7	+1.6
IMEH				e		10 05 32.8	
	comp=Z,618nm,0.3s						
KBAM	BAM	4.96	60	ePn	Pn	10 05 35.3	+2.0
KBAM				e		10 05 36.9	
	comp=Z,315nm,0.3s						
IRAM	Ramesheh	5.14	349	ePn	Pn	10 05 36.9	+1.0
ISAD	Sadrabad	5.15	1	ePn	Pn	10 05 37.4	+1.3
BIDO	Bidbid	5.26	127	ePn	Pn	10 05 38.0	+0.6
ANAR	Anarak	6.42	1	ePn	Pn	10 05 53.6	+0.2
ISFB	Sefidab	7.66	352	ePn	Pn	10 06 09.5	-0.9
SRVN	Saravan	7.93	83	ePn	Pn	10 06 16.1	+1.9

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*IDC **09** 10:14:55.5±3.9, 33°.79S×175°.62E, h0^{km}, mb3.6/2, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=109.8km s-min=33.9km az=46.0*

*WEL **09** 10:15:01.9±0.9, 35°S±13°×17°9E±2°0, h319^{km}±8^{km}, M3.7/12, mB4.3/8, ML4.5/12, MLv4.0/12, Mw(mB)3.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=121.6*

ISC 09 10:15:00.4±1.7**, 34°.8S**±0°.1×**179°.2E**±0°.1**, h300**^{km}**, n60, σ1^{s}28**/96**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.85	194	P	Pn	10 15 54.3	-0.2
MXZ				S	S	10 16 37.7	-0.1
MXZ	Matakaoa Point	2.85	194	P	Pn	10 15 54.6	+0.1
MXZ				S	S	10 16 37.9	+0.2
WMGZ	Waiomatatini S	3.08	191	P	Pn	10 15 56.7	0.0
HAZ	Te Kaha	3.16	200	P	Pn	10 15 56.9	-0.7
HAZ				S	S	10 16 44.2	+0.9
HAZ	Te Kaha	3.16	200	P	Pn	10 15 57.5	0.0
HAZ				S	S	10 16 43.8	+0.6
PKGZ	Pakihiroa	3.21	195	P	Pn	10 15 59.1	+0.9
PKGZ				S	S	10 16 43.5	-0.9
PUZ	Puketiti	3.35	192	P	Pn	10 15 59.0	-0.6
PUZ				S	S	10 16 46.2	-0.7
PUZ	Puketiti	3.35	192	P	Pn	10 16 00.6	+1.0
PUZ				S	S	10 16 46.5	-0.4
RUGZ	Raukumara Rang	3.38	200	P	Pn	10 16 00.3	+0.3
RUGZ				S	S	10 16 46.0	-1.7
TWGZ	Tauwhareparae	3.51	195	P	Pn	10 16 02.9	+1.6
TWGZ				S	S	10 16 52.3	+2.3
TWGZ	Tauwhareparae	3.51	195	P	Pn	10 16 03.2	+2.0
TWGZ				S	S	10 16 52.7	+2.8
OPRZ	Ohinepanea	3.70	214	P	Pn	10 16 05.1	+1.9
CNGZ	Carnagh Statio	3.76	191	P	Pn	10 16 04.1	+0.3
CNGZ	Carnagh Statio	3.76	191	P	Pn	10 16 04.3	+0.4
MWZ	Matawai	3.77	200	P	Pn	10 16 03.2	-0.8
MWZ				S	S	10 16 56.3	+1.3
MWZ	Matawai	3.77	200	P	Pn	10 16 04.5	+0.5
MWZ				S	S	10 16 56.5	+1.5
TKGZ	Te Karaka	3.79	196	P	Pn	10 16 03.8	-0.4
TKGZ				S	S	10 16 56.9	+1.7
URZ	Urewera	3.83	205	Pn	Pn	10 16 05.4	+0.7
	3.8nm,0.3s,baz=301,slow=23,SNR=61						
URZ				Sn	S	10 16 53.2	-2.9
	6.2nm,0.3s,baz=303,slow=23,SNR=7.4						
	8.6nm,0.3s						
URZ	Urewera	3.83	205	P	Pn	10 16 05.4	+0.7
URZ				S	S	10 16 56.6	+0.6
URZ	Urewera	3.83	205	P	Pn	10 16 05.3	+0.7
URZ				S	S	10 16 56.7	+0.6
RAGZ	Rawiri	3.95	200	P	Pn	10 16 07.8	+1.7
RIGZ	Rimuhau	4.06	196	P	Pn	10 16 08.4	+1.2
RIGZ				S	S	10 17 02.3	+1.6
MUGZ	Murupara	4.15	207	P	Pn	10 16 08.8	+0.7
MUGZ				S	S	10 17 04.4	+2.0
RTZ	Ruatahuna	4.20	204	P	Pn	10 16 09.2	+0.4
RTZ				S	S	10 17 04.5	+1.0
SNGZ	Shannon Statio	4.24	200	P	Pn	10 16 10.9	+1.8
SNGZ				S	S	10 17 06.5	+2.2
KNZ	Kokohu	4.38	195	P	Pn	10 16 11.7	+1.0
KNZ				S	S	10 17 05.6	-1.6
MHGZ	Mahia Peninsul	4.46	193	P	Pn	10 16 13.8	+2.2
MHGZ				S	S	10 17 07.9	-0.9
MRHZ	Matea Rd	4.59	208	P	Pn	10 16 14.5	+1.3
NMHZ	Naumai	4.69	203	P	Pn	10 16 16.0	+1.7
NMHZ				S	S	10 17 14.7	+1.1
HATZ	Hinemaiaia	4.77	210	P	Pn	10 16 17.0	+1.8
ARHZ	Aropaoanui	4.78	201	P	Pn	10 16 16.6	+1.4
ARHZ				S	S	10 17 17.1	+1.6
MCHZ	McNeill Hill	5.04	202	P	Pn	10 16 20.6	+2.4
MCHZ				S	S	10 17 22.3	+1.5
KWHZ	Kaweka Forest	5.11	205	P	Pn	10 16 19.5	+0.4
CKHZ	Cape Kidnapper	5.13	198	P	Pn	10 16 20.8	+1.5
CKHZ				S	S	10 17 24.6	+1.8
BHHZ	Black Hill Sta	5.30	207	P	Pn	10 16 22.3	+1.0
BHHZ				S	S	10 17 28.2	+1.8
KRHZ	Kereru	5.33	204	P	Pn	10 16 22.2	+0.6
KRHZ				S	S	10 17 27.1	+0.1
MOVZ	Moawhango	5.35	210	P	Pn	10 16 22.7	+0.8
MOVZ				S	S	10 17 28.6	+1.1
TSZ	Takapari Road	5.84	205	P	Pn	10 16 28.8	+1.1
TSZ				S	S	10 17 36.5	-1.4
WAZ	Wanganui	5.96	213	P	Pn	10 16 30.5	+1.3
WAZ				S	S	10 17 42.9	+2.2
BFZ	Birch Farm	6.31	201	P	Pn	10 16 34.3	+1.0
BFZ				S	S	10 17 47.3	-1.0
TIWZ	Tintock	6.51	202	P	Pn	10 16 36.1	+0.4
TIWZ				S	S	10 17 52.1	-0.6
HOWZ	Holdsworth Sta	6.74	204	P	Pn	10 16 38.2	-0.3
HOWZ				S	S	10 17 55.6	-2.1
OGWZ	Otaki Gorge	6.79	207	P	Pn	10 16 37.9	-1.2
OGWZ				S	S	10 17 57.6	-1.1
TMWZ	Te Maipa	6.81	201	P	Pn	10 16 40.6	+1.3
TMWZ				S	S	10 17 58.3	-1.0
KIW	Kapiti Island	6.92	208	P	Pn	10 16 40.5	-0.2
KIW				S	S	10 18 00.3	-1.6
MTW	Mount Morrison	6.98	203	P	Pn	10 16 41.5	+0.2
MTW				S	S	10 18 01.5	-1.5
CAW	Cannon Point	7.08	206	P	Pn	10 16 41.1	-1.5
CAW				S	S	10 18 04.6	-0.7
TRWZ	Traveller	7.14	202	P	Pn	10 16 44.0	+0.7
TRWZ				S	S	10 18 06.0	-0.5
MSWZ	Moikau Station	7.29	204	P	Pn	10 16 45.1	-0.1
MSWZ				S	S	10 18 08.7	-1.3
BHW	Baring Head	7.42	206	P	Pn	10 16 46.3	-0.3
TUWZ	Tuamarina	7.79	210	P	Pn	10 16 49.5	-1.7
TUWZ				S	S	10 18 19.8	-1.3
ASAR	Alice Springs	40.72	273	P	P	10 22 13.0	+0.3
	0.6nm,0.7s,baz=112,slow=7.8,SNR=9.3						
	0.6nm,0.7s						
WRA	Warramunga Arr	42.12	279	P	P	10 22 23.9	-0.1
	0.5nm,0.4s,baz=115,slow=7.5,SNR=14						
	0.5nm,0.4s						
H03S2	Juan Fernandez	80.01	124	T	T	12 00 05.6	
	SNR=9.4						
H03S1	Juan Fernandez	80.02	124	T	T	12 00 08.3	
	SNR=8.8						
H03S3	Juan Fernandez	80.03	124	T	T	12 00 07.3	
	SNR=9.1						
H03N3	Juan Fernandez	80.23	124	T	T	12 00 20.8	
	baz=234,slow=71,SNR=13						
H03N2	Juan Fernandez	80.24	124	T	T	12 00 22.1	
	baz=234,slow=71,SNR=17						
H03N1	Juan Fernandez	80.25	124	T	T	12 00 16.8	
	baz=234,slow=71,SNR=19						
TORD	Torodi Ar. Bea	158.32	187	PKP	PKPab	10 34 56.6	-1.5
	0.3nm,0.8s,baz=155,slow=4.3,SNR=1.3						

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*ANF **09** 10:40:24.8±0.4, 59°.28N×144°.92W, h18^{km}±3^{km}, ML3.5/44, ML3.5/43, Error ellipse: s-maj=3.5km s-min=1.6km az=171.0*

*NEIC **09** 10:40:24.9±1.4, 59°.27N±0°.06×144°.93W±0°.06, h19^{km}±8^{km}, Error ellipse: s-maj=9.1km s-min=3.0km az=155.0*

*AEIC **09** 10:40:24±1.4, 59°.25N±0°.04×144°.92W±0°.05, h6^{km}±4^{km}, ML3.1, ML3.2/110(NEIC), Error ellipse: s-maj=5.9km s-min=2.7km az=149.0*

ISC 09 10:40:24.8±2.0**, 59°.26N**±0°.06×**144°.93W**±0°.03**, h18**^{km}±5^{km}**, n201, σ0^{s}61**/199**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAIM	Kayak Island	0.72	21		Pb	10 40 38.4	-0.3
KAIM					Sg	10 40 49.1	+0.7
KAIM	Kayak Island	0.72	21	IAML		10 40 59.3	
	comp=N,798nm,1.0s						
KAIM				IAML		10 41 02.4	
	comp=E,1μm,0.8s						
KAIM	Kayak Island	0.72	21	P	Pb	10 40 38.4	-0.3
	baz=201						
MID	Middleton Isla	0.74	284		Pn	10 40 40.1	-0.2
MID					Sn	10 40 50.9	-0.1
MID	Middleton Isla	0.74	284	IAML		10 40 54.1	
	comp=E,1μm,0.7s						
MID				IAML		10 40 56.0	
	comp=N,852nm,0.5s						
Q23K	Middleton Isla	0.75	284		Pn	10 40 40.1	-0.2
Q23K					Sn	10 40 51.0	-0.2
Q23K	Middleton Isla	0.75	284	IAML		10 40 54.1	
	comp=E,1μm,0.7s						
Q23K				IAML		10 40 56.0	
	comp=N,920nm,0.5s						
Q23K	Middleton Isla	0.75	284	P	Pb	10 40 39.1	-0.1
	baz=99						
SUCK	Suckling Hills	1.00	35		Pb	10 40 42.9	-0.6
SUCK					Sb	10 40 56.0	-0.3
SUCK	Suckling Hills	1.00	35	IAML		10 40 59.3	
	comp=N,1μm,0.5s						
SUCK				IAML		10 41 01.4	
	comp=E,891nm,0.9s						
NICHA	Nichawak Mount	1.09	26		Pb	10 40 44.3	-0.8
NICHA					Sg	10 41 00.5	+0.2
HMT	Hamilton	1.13	17		Pn	10 40 45.0	-0.6
HMT					Sg	10 41 01.4	0.0
RAGM	Ragged Mountai	1.14	6		Pn	10 40 45.0	-0.7
BGLC	Bering Glacier	1.20	43		Pn	10 40 46.1	-0.5
BGLC	Bering Glacier	1.20	43	P	Pn	10 40 45.9	-0.6
	baz=226						
BERG	Berg Lake	1.29	28		Pn	10 40 47.0	-0.8
GRIN	Grindle Hills	1.31	38		Pn	10 40 47.9	-0.2
GOAT	Goat Mountain	1.33	4		Pn	10 40 48.1	-0.3
GOAT					Sg	10 41 06.9	-0.9
EYAK	Cordova Ski Ar	1.36	343		Pn	10 40 48.2	-0.4
EYAK	Cordova Ski Ar	1.36	343	P	Pn	10 40 48.3	-0.4
	baz=161,SNR=101						
SNH	Sunshine Point	1.40	48		Pn	10 40 49.0	-0.5
KHIT	Khitrov Hills	1.46	35		Pn	10 40 49.5	-0.7
KHIT					Sb	10 41 09.6	0.0
CYK	Cape Yakataga	1.49	55		Pn	10 40 50.1	-0.4
CYK					Sb	10 41 10.6	+0.3
WAX	Waxell Ridge	1.59	40		Pn	10 40 51.3	-0.6
FID	Port Fidalgo	1.68	333		Pn	10 40 53.1	-0.1
FID	Port Fidalgo	1.68	333	IAML		10 41 21.6	
	comp=N,417nm,0.6s						
FID				IAML		10 41 21.7	
	comp=E,447nm,1.4s						
BMRM	Bremner River	1.72	5		Pn	10 40 53.5	-0.3
BMRM					Sn	10 41 15.2	0.0
BMRM	Bremner River	1.72	5	IAML		10 41 30.4	
	comp=E,299nm,1.0s						
BMRM	Bremner River	1.72	5	P	Pn	10 40 53.5	-0.3
	baz=185,SNR=195						
ISLE	Juniper Island	1.87	43		Pn	10 40 55.4	-0.6
ISLE	Juniper Island	1.87	43	IAML		10 41 33.6	
	comp=N,297nm,0.9s						
ISLE				IAML		10 41 37.3	
	comp=E,293nm,1.2s						
BAGL	Bagley Icefiel	1.89	48		Pn	10 40 55.5	-0.5
DIV	Divide	1.92	348		Pn	10 40 56.5	-0.1
GLI	Glacier Island	1.95	327		Pn	10 40 56.8	-0.2
GLI					Sn	10 41 20.9	0.0
GLI	Glacier Island	1.95	327	IAML		10 41 32.4	
	comp=N,242nm,1.1s						
GLI	Glacier Island	1.95	327	P	Pn	10 40 56.4	-0.5
	baz=144,SNR=28						
GLI				S	Sn	10 41 20.1	-0.9
	baz=144						
JPK	Jack Peak	1.98	336		Pn	10 40 57.1	-0.3
VRDI	Verde Repeater	2.11	20		Pn	10 40 58.9	-0.3
VRDI	Verde Repeater	2.11	20	IAML		10 41 30.5	
	comp=E,141nm,0.9s						
VRDI				IAML		10 41 32.9	
	comp=N,143nm,0.8s						
KIAG	Kiagna River	2.11	37		Pn	10 40 58.6	-0.6
KIAG					Sn	10 41 24.7	-0.3
BALM	Baldy	2.20	35		Pn	10 40 60.0	-0.5
PS12	TAPS Pump St12	2.22	357		Pn	10 41 00.7	0.0
TABL	Table Mountain	2.25	57		Pn	10 41 00.7	-0.5
TABL	Table Mountain	2.25	57	IAML		10 41 29.6	
	comp=E,221nm,0.7s						
TABL				IAML		10 41 32.4	
	comp=N,179nm,0.7s						
GLB	Gilahina Butte	2.26	14		Pn	10 41 00.9	-0.2
GLB					Sn	10 41 29.0	+0.5
KLU	Klutina	2.29	348		Pn	10 41 01.5	-0.2
KLU	Klutina	2.29	348	IAML		10 41 58.3	
	comp=N,125nm,0.9s						
KLU	Klutina	2.29	348	P	Pn	10 41 01.4	-0.2
	baz=166,SNR=96						
N25K	Chitina, Valde	2.36	4		Pn	10 41 02.8	+0.2
N25K					Sn	10 41 33.0	+2.0
N25K	Chitina, Valde	2.36	4	P	Pn	10 41 02.8	+0.2
	baz=184,SNR=135						
N25K				S	Sn	10 41 30.6	-0.5
	baz=184						
BARN	Barnard Glacie	2.43	41		Pn	10 41 03.6	-0.1
BARN	Barnard Glacie	2.43	41	IAML		10 41 34.9	
	comp=E,216nm,0.5s						
BARN				IAML		10 41 38.8	
	comp=N,170nm,0.6s						
SEW	Seward	2.44	292		Pn	10 41 01.6	-2.0
SEW	Seward	2.44	292	P	Pn	10 41 02.4	-1.3
	baz=107						
PCA	Pinnacle	2.51	69	Pn	Pn	10 41 04.7	0.0
PINM	Pinnacle	2.52	69	P	Pn	10 41 04.1	-0.6
	baz=253						
O22K	Cooper Landing	2.71	299		Pn	10 41 07.2	-0.1
O22K	Cooper Landing	2.71	299	P	Pn	10 41 06.4	-0.9
	baz=114						
O22K				S	Sn	10 41 40.2	+0.7
	baz=114						
KNK	Knik Glacier	2.78	322		Pn	10 41 08.8	+0.5
KNK					Sn	10 41 41.7	+0.3
KNK	Knik Glacier	2.78	322	IAML		10 42 03.9	
	comp=N,122nm,1.3s						
KNK				IAML		10 42 04.6	
	comp=E,93nm,1.4s						
KNK	Knik Glacier	2.78	322	P	Pn	10 41 08.8	+0.5
	baz=139,SNR=32						
KNK				S	Sn	10 41 42.2	+0.9
	baz=139						
SCM	Sheep Creek Mo	2.84	336		Pn	10 41 09.2	0.0
SCM	Sheep Creek Mo	2.84	336	IAML		10 41 55.4	
	comp=N,99nm,1.1s						

SCM	Sheep Creek Mo	2.84	336	P	Pn	10 41 09.2	0.0
	baz=154,SNR=55						
SCM				S	Sn	10 41 43.0	+0.1
	baz=154						
PNL	Peninsula	2.85	79	P	Pn	10 41 08.7	-0.6
	baz=265						
M23K	Glacier View	2.89	333	P	Pn	10 41 10.0	+0.1
	baz=150,SNR=53						
M23K				S	Sn	10 41 45.5	+1.4
	baz=150						
M24K	Tolsona, Glenn	2.92	348		Pn	10 41 10.9	+0.6
M24K	Tolsona, Glenn	2.92	348	P	Pn	10 41 10.7	+0.4
	baz=167,SNR=37						
BRSE	Bradley Lake S	3.00	282		Pn	10 41 11.8	+0.4
BRSE	Bradley Lake S	3.00	282	P	Pn	10 41 11.8	+0.4
	baz=96						
RC01	Rabbit Creek A	3.02	309		Pn	10 41 10.8	-0.8
RC01	Rabbit Creek A	3.02	309	IAML		10 42 21.0	
	comp=E,56nm,1.2s						
RC01				IAML		10 42 21.5	
	comp=N,60nm,1.3s						
RC01	Rabbit Creek A	3.02	309	P	Pn	10 41 10.6	-1.0
	baz=124						
SML	Sawmill	3.06	328		Pn	10 41 12.5	+0.3
SML	Sawmill	3.06	328	IAML		10 42 07.2	
	comp=E,92nm,0.8s						
SML				IAML		10 42 12.1	
	comp=N,109nm,0.8s						
SML	Sawmill	3.06	328	P	Pn	10 41 11.9	-0.2
	baz=144,SNR=15						
PMR	Palmer	3.13	320		Pn	10 41 13.4	+0.3
PMR				IAML		10 42 19.9	
	comp=N,49nm,1.3s						
PMR	Palmer	3.13	320	P	Pn	10 41 13.2	+0.2
	baz=136						
HARP	HAARP	3.15	358		Pn	10 41 14.2	+0.8
HARP	HAARP	3.15	358	P	Pn	10 41 12.7	-0.7
	baz=178,SNR=14						
GHO	Glory Hole Cre	3.20	324		Pn	10 41 14.8	+0.6
GHO	Glory Hole Cre	3.20	324	IAML		10 42 03.9	
	comp=N,111nm,1.1s						
CNPM	China Poot	3.24	277	Pn	Pn	10 41 15.1	+0.5
YUK2	White River	3.24	37		Pn	10 41 15.4	+0.7
M26K	Nabesna, AK	3.29	16		Pn	10 41 15.5	+0.2
M26K	Nabesna, AK	3.29	16	P	Pn	10 41 15.4	0.0
	baz=198,SNR=23						
YUK3	Moose Creek	3.35	39		Pn	10 41 17.3	+0.9
YUK3	Moose Creek	3.35	39	P	Pn	10 41 17.3	+0.9
	baz=223,SNR=53						
YUK3				S	Sn	10 41 55.9	+0.2
	baz=223						
M27K	Edge Creek, AK	3.45	24		Pn	10 41 17.9	+0.4
M27K	Edge Creek, AK	3.45	24	IAML		10 42 19.7	
	comp=E,39nm,1.1s						
M27K				IAML		10 42 22.5	
	comp=N,38nm,2.0s						
M27K	Edge Creek, AK	3.45	24	P	Pn	10 41 17.7	+0.1
	baz=207,SNR=23						
M22K	Willow	3.58	316		Pn	10 41 20.7	+1.5
M22K	Willow	3.58	316	P	Pn	10 41 19.3	0.0
	baz=131						
WAT6	Susitna Watana	3.60	339		Pn	10 41 19.7	0.0
WAT6	Susitna Watana	3.60	339	P	Pn	10 41 19.7	0.0
	baz=156,SNR=50						
YUK7	Dusty Glacier	3.65	67		Pn	10 41 21.1	+0.7
YUK6	Outpost Mounta	3.69	60	P	Pn	10 41 21.2	+0.2
	baz=246						
PAX	Paxson	3.73	356		Pn	10 41 21.6	+0.2
PAX	Paxson	3.73	356	P	Pn	10 41 21.3	-0.1
	baz=175,SNR=18						
MENT	Mentasta	3.74	9		Pn	10 41 21.6	+0.1
MENT				IAML		10 42 06.7	
	comp=N,31nm,0.9s						
MENT				IAML		10 42 55.7	
	comp=E,38nm,1.0s						
BVCY	Beaver Creek	3.74	30		Pn	10 41 22.1	+0.7
BVCY	Beaver Creek	3.74	30	P	Pn	10 41 22.0	+0.6
	baz=214,SNR=17						
YUK4	Talbot Arm	3.76	54	P	Pn	10 41 23.3	+1.3
	baz=239,SNR=21						
L26K	Log Cabin Wild	3.85	11		Pn	10 41 23.9	+0.8
L26K	Log Cabin Wild	3.85	11	P	Pn	10 41 23.1	+0.1
	baz=192						
WAT1	Susitna Watana	3.99	335	P	Pn	10 41 25.0	+0.1
	baz=152						
DHY	Denali Highway	4.01	344		Pn	10 41 25.3	0.0
DHY	Denali Highway	4.01	344	IAML		10 42 38.3	
	comp=E,34nm,1.3s						
DHY	Denali Highway	4.01	344	P	Pn	10 41 25.1	-0.2
	baz=161,SNR=23						
HYT	Haines Junctio	4.04	64		Pn	10 41 26.7	+1.0
HYT	Haines Junctio	4.04	64	P	Pn	10 41 26.5	+0.8
	baz=251						
SPU	Mount Spurr	4.04	302		Pn	10 41 24.7	-1.0
L27K	Beaver Creek,	4.10	20		Pn	10 41 26.7	+0.3
L27K	Beaver Creek,	4.10	20	P	Pn	10 41 26.4	-0.1
	baz=203						
BC03		4.11	20		Pn	10 41 26.7	+0.2
BCAR	Beaver Creek A	4.11	20		Pn	10 41 26.9	+0.3
P19K	Oil Pt	4.25	279	P	Pn	10 41 29.8	+1.3
	baz=91						
KDAK	Kodiak Island	4.28	253	Pn	Pn	10 41 29.3	+0.5
KDAK				IAML		10 41 59.2	
	comp=E,20nm,2.5s						
KDAK				IAML		10 42 09.2	
	comp=E,22nm,3.4s						
KDAK	Kodiak Island	4.28	253	P	Pn	10 41 29.8	+1.0
	baz=66						
DOT	Dot Lake	4.42	5		Pn	10 41 31.5	+0.7
RIDG	Independent Ri	4.50	0		Pn	10 41 32.8	+0.9
RIDG	Independent Ri	4.50	0	IAML		10 42 43.9	
	comp=E,31nm,2.3s						
RIDG				IAML		10 43 22.5	
	comp=N,25nm,1.3s						
RIDG	Independent Ri	4.50	0	P	Pn	10 41 32.5	+0.6
	baz=180,SNR=36						
Q19K	Cape Douglas,	4.51	269		Pn	10 41 32.6	+0.6
Q19K	Cape Douglas,	4.51	269	P	Pn	10 41 32.7	+0.7
	baz=82						
RND	Reindeer	4.57	337		Pn	10 41 33.5	+0.6
RND	Reindeer	4.57	337	IAML		10 42 55.9	
	comp=E,33nm,1.1s						
RND				IAML		10 43 03.9	
	comp=N,31nm,1.3s						
K24K	Donnelly Dome	4.58	355	P	Pn	10 41 33.7	+0.8
	baz=174,SNR=43						
SCRK	Sand Creek	4.75	5		Pn	10 41 35.8	+0.3
SCRK	Sand Creek	4.75	5	P	Pn	10 41 35.4	0.0
	baz=186,SNR=23						
M20K	Styx River	4.82	307		Pn	10 41 38.3	+1.9
M20K				IAML		10 43 14.1	
	comp=N,17nm,1.4s						
M20K	Styx River	4.82	307	P	Pn	10 41 36.9	+0.5
	baz=119						
OHAK	Old Harbor	4.87	249		Pn	10 41 36.8	-0.1
OHAK	Old Harbor	4.87	249	IAML		10 42 34.7	
	comp=E,22nm,2.5s						
OHAK				IAML		10 44 02.9	
	comp=N,25nm,3.6s						
OHAK	Old Harbor	4.87	249	P	Pn	10 41 37.5	+0.6
	baz=61						
TRF	Thorofare Moun	4.93	331		Pn	10 41 38.5	+0.6
K27K	Chicken	4.97	15		Pn	10 41 38.9	+0.5
K27K	Chicken	4.97	15	P	Pn	10 41 38.6	+0.2
	baz=197						
N19K	Bonanza Creek	5.04	292	P	Pn	10 41 39.2	-0.1
	baz=103						
N31M	Braeburn, Yuko	5.06	60	Pn	Pn	10 41 40.5	+0.9
N31M				IAML		10 43 16.1	
	comp=N,21nm,2.1s						
N31M				IAML		10 43 29.6	
	comp=E,26nm,1.4s						
N31M	Braeburn, Yuko	5.06	60	P	Pn	10 41 40.5	+0.9
	baz=248						
PPLA	Purkeypile	5.07	319	Pn	Pn	10 41 41.0	+1.1
PPLA	Purkeypile	5.07	319	P	Pn	10 41 40.3	+0.5
	baz=132						
M30M	Minto, Yukon	5.18	47		Pn	10 41 41.2	-0.1
M30M	Minto, Yukon	5.18	47	IAML		10 43 29.9	
	comp=E,11nm,1.3s						
M30M				IAML		10 43 32.2	
	comp=N,11nm,1.6s						
M30M	Minto, Yukon	5.18	47	P	Pn	10 41 41.1	-0.1
	baz=234,SNR=6.3						
KTH	Kantishna Hill	5.18	329		Pn	10 41 42.2	+0.9
WHY	Whitehorse	5.24	70		Pn	10 41 42.7	+0.5
WHY				IAML		10 43 06.4	
	comp=N,11nm,4.0s						
WHY	Whitehorse	5.24	70	P	Pn	10 41 43.1	+0.9
	baz=259						
HDA	Harding Lake	5.25	350		Pn	10 41 41.9	-0.4
HDA				IAML		10 43 26.6	
	comp=E,22nm,1.6s						
HDA				IAML		10 43 36.0	
	comp=N,18nm,1.3s						
HDA	Harding Lake	5.25	350	P	Pn	10 41 41.6	-0.6
	baz=168						
O18K	Koktuh Hills	5.26	281	Pn	Pn	10 41 42.9	+0.5
O18K				IAML		10 43 54.1	
	comp=E,12nm,2.6s						
O18K				IAML		10 44 06.1	
	comp=N,11nm,3.2s						
J26L	Joseph Creek	5.30	6	P	Pn	10 41 43.1	+0.2
	baz=188,SNR=37						
M19K	Big River Lodg	5.36	304	P	Pn	10 41 44.3	+0.5
	baz=115						
J25K	Salcha River,	5.38	358		Pn	10 41 43.8	-0.1
J25K	Salcha River,	5.38	358	IAML		10 43 22.2	
	comp=N,9.2nm,1.9s						
J25K				IAML		10 43 27.1	
	comp=E,9.6nm,3.1s						
J25K	Salcha River,	5.38	358	P	Pn	10 41 43.6	-0.4
	baz=177,SNR=32						
BWN	Browne	5.38	338		Pn	10 41 43.8	-0.2
CAST	Castle Rocks	5.41	324		Pn	10 41 45.6	+1.2
CAST	Castle Rocks	5.41	324	P	Pn	10 41 44.7	+0.3
	baz=137						
L20K	Farewell, AK	5.43	310	P	Pn	10 41 45.1	+0.4
	baz=122						
WRH	Wood River Hil	5.44	345		Pn	10 41 43.9	-0.9
DAWY	Dawson	5.49	26		Pn	10 41 45.9	+0.3
DAWY	Dawson	5.49	26	P	Pn	10 41 45.6	+0.1
	baz=211						
CCB	Clear Creek Bu	5.57	347		Pn	10 41 46.0	-0.6
JIS	Juneau Island	5.58	96	Pn	Pn	10 41 46.9	+0.2
IL31		5.61	351		Pn	10 41 46.0	-1.0
BPAW	Bear Paw Mtn.	5.64	332		Pn	10 41 47.6	-0.1
BPAW	Bear Paw Mtn.	5.64	332	P	Pn	10 41 47.2	-0.4
	baz=146						
L19K	White Mountain	5.68	305		Pn	10 41 48.4	+0.3
L19K	White Mountain	5.68	305	P	Pn	10 41 47.9	-0.2
	baz=116						
N18K	Kilae Creek	5.69	289	P	Pn	10 41 48.1	-0.1
	baz=99						
NEA2	Nenana	5.70	342	P	Pn	10 41 47.3	-1.0
	baz=158						
EGAK	Eagle	5.81	16		Pn	10 41 50.5	+0.6
EGAK	Eagle	5.81	16	P	Pn	10 41 50.1	+0.3
	baz=199,SNR=18						
CHUM	Lake Minchumin	5.82	326		Pn	10 41 50.5	+0.5
CHUM	Lake Minchumin	5.82	326	P	Pn	10 41 50.2	+0.2
	baz=139,SNR=20						
MDM	Murphy Dome	5.92	346		Pn	10 41 50.8	-0.7
M31M	Drury Creek, Y	5.95	56		Pn	10 41 51.9	+0.1
M31M	Drury Creek, Y	5.95	56	P	Pn	10 41 51.9	+0.1
	baz=245						
K20K	Telida	6.02	317		Pn	10 41 53.2	+0.4
K20K	Telida	6.02	317	P	Pn	10 41 53.1	+0.4
	baz=128						
I23K	Minto, Yukon-K	6.26	343	P	Pn	10 41 55.5	-0.5
	baz=158						
TTA	Tatalina	6.51	309	Pn	Pn	10 41 58.9	-0.7
J20K	Nowinta River	6.59	322		Pn	10 42 00.8	+0.2
J20K	Nowinta River	6.59	322	P	Pn	10 42 00.3	-0.3
	baz=134						
H24K	Noodor Dome	6.74	350	Pn	Pn	10 42 01.8	-0.9
H24K	Noodor Dome	6.74	350	P	Pn	10 42 02.3	-0.3
	baz=167						
I21K	Tanana	6.79	334		Pn	10 42 03.3	+0.1
I21K	Tanana	6.79	334	P	Pn	10 42 03.2	0.0
	baz=148,SNR=12						
I29M	Ogilvie Camp,	6.85	24		Pn	10 42 04.5	+0.3
I29M	Ogilvie Camp,	6.85	24	P	Pn	10 42 04.2	0.0
	baz=210						
H21K	Melozitna Rive	7.38	334		Pn	10 42 11.1	-0.3
H21K	Melozitna Rive	7.38	334	P	Pn	10 42 10.8	-0.6
	baz=146						
MMPY	Sheldon Lake,	7.46	57	P	Pn	10 42 11.7	-0.8
	baz=250						
GCSA	Galena City Sc	7.86	319	P	Pn	10 42 18.3	+0.4
	baz=129						
IM03		7.87	333		Pn	10 42 17.9	-0.1
EPYK	Eagle Plains	8.06	24	P	Pn	10 42 21.2	+0.5
	baz=212						
BM03	Burnt Mountain	8.19	1		Pn	10 42 22.4	-0.1
COLD	Coldfoot	8.34	346	P	Pn	10 42 24.0	-0.5
	baz=161						
TOLK	Toolik Lake Re	9.63	350	P	Pn	10 42 40.5	-1.8
	baz=166						

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*IDC **09** 11:01:53.0±1.1, 5°.63S×148°.55E, h0^{km}, mb4.0/10, mbtmp4.0/13, ML0.9/1, MS3.3/22, Error ellipse: s-maj=31.4km s-min=12.8km az=112.0*

ISC 09 11:02:01.3±1.3**, 5°.81S**±0°.09×**148°.5E**±0°.3**, h65^{km}, n29, σ2^{s}.23**/14**, mb4.0**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.79	200	Pn	Pn	11 02 55.0	-2.3
	0.7nm,0.3s,baz=133,slow=15,SNR=2.4						
PMG				Sn	Sn	11 03 36.7	-4.0
	2.2nm,0.3s,baz=32,slow=6.6,SNR=3.1						
PMG				LR	LR	11 03 55.3	
	comp=Z,173nm,19.9s,baz=44,slow=31						
	8.3nm,0.7s						
PMG	Port Moresby	3.79	200	P	Pn	11 03 01.7	+4.4
KRVT	Keravat (AS076	3.86	67	Pn	Pn	11 02 52.1	-6.2
	24nm,0.5s,baz=123,slow=4.2,SNR=3.2						
CTA	Charters Tower	14.35	188	LR	LR	11 10 57.8	
	comp=Z,255nm,20.1s,baz=16,slow=38						
SIJI	Sorong	17.84	285	LR	LR	11 14 51.6	
	comp=Z,47nm,21.0s,baz=22,slow=44						
GUMO	Guam	19.60	350	LR	LR	11 12 40.0	
	comp=Z,57nm,21.7s,baz=82,slow=33						
WRA	Warramunga Arr	19.63	223	P	P	11 06 25.2	+0.4
	2.8nm,0.4s,baz=48,slow=11,SNR=15						
WRA				LR	LR	11 13 32.5	
	comp=Z,89nm,20.1s,baz=58,slow=35						
ASAR	Alice Springs	22.61	217	P	P	11 06 57.3	+0.5
	5.2nm,0.7s,baz=55,slow=9.0,SNR=47						
ASAR				S	Sn	11 11 10.2	-7.9
	1.7nm,1.0s,baz=28,slow=24,SNR=6.5						
ASAR				LR	LR	11 16 23.7	
	comp=Z,119nm,18.6s,baz=88,slow=38						
	5.2nm,0.7s						
BATI	Baumata	24.92	258	LR	LR	11 19 31.2	
	comp=Z,132nm,18.4s,baz=82,slow=42						
FITZ	Fitzroy Crossi	25.39	239	P	P	11 07 22.7	-0.2
	11nm,0.7s,baz=68,slow=7.6,SNR=16						
FITZ				LR	LR	11 18 49.0	
	comp=Z,59nm,19.3s,baz=70,slow=40						
	11nm,0.7s						
STKA	Stephens Creek	26.71	193	P	P	11 07 37.5	+3.0
	7.8nm,1.1s,baz=304,slow=5.7,SNR=3.6						
STKA				LR	LR	11 19 19.9	
	comp=Z,231nm,18.2s,baz=25,slow=39						
	7.8nm,1.1s						
KAPI	Kappang	28.58	270	LR	LR	11 21 37.9	
	comp=Z,28nm,18.2s,baz=98,slow=41						
JCJ	Chichijima	33.27	350	LR	LR	11 21 49.9	
	comp=Z,18nm,18.2s,baz=104,slow=36						
JOW	Kunigami	37.88	330	LR	LR	11 22 08.6	
	comp=Z,49nm,19.9s,baz=322,slow=32						
RPZ	Rata Peaks	42.67	156	LR	LR	11 27 57.5	
	comp=Z,34nm,18.7s,baz=313,slow=37						
MJAR	Matsushiro Arr	43.21	348	P	P	11 09 55.8	-0.2
	1.7nm,0.7s,baz=246,slow=24,SNR=5.4						
MJAR				LR	LR	11 24 56.1	
	comp=Z,33nm,19.6s,baz=150,slow=32						
	1.7nm,0.7s						
KSRS	Korea Array	47.11	338	P	P	11 10 25.6	-1.3
	1.0nm,0.8s,baz=149,slow=8.6,SNR=6.9						
	1.0nm,0.8s						
ASAJ	Asahikawa	49.98	354	LR	LR	11 32 31.0	
	comp=Z,15nm,18.6s,baz=184,slow=37						
CMAR	Chiang Mai Arr	54.44	297	P	P	11 11 23.2	+0.8
	0.7nm,0.3s,baz=125,slow=6.2,SNR=10.0						
	0.7nm,0.3s						
KLR	Kul'dur	56.72	347	LR	LR	11 34 13.3	
	comp=Z,22nm,19.0s,baz=124,slow=34						
PETK	Petropavlovsk-	59.22	6	LR	LR	11 33 24.3	
	comp=Z,45nm,21.9s,baz=173,slow=32						
SONM	Songino Array	64.95	330	P	P	11 12 34.9	+0.6
	1.0nm,0.6s,baz=144,slow=5.3,SNR=7.0						
	1.0nm,0.6s						
MA2	Magadan	65.21	1	LR	LR	11 42 06.8	
	comp=Z,14nm,18.5s,baz=128,slow=37						
MKAR	Makanchi Array	78.28	320	P	P	11 13 54.1	-0.2
	0.5nm,0.8s,baz=108,slow=7.8,SNR=4.4						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	79.63	327	P	P	11 14 00.9	-0.6
	0.5nm,0.3s,baz=121,slow=5.5,SNR=3.7						
	0.5nm,0.3s						
ILAR	Eielson Array	84.75	23	P	P	11 14 26.6	-1.4
	0.5nm,0.8s,baz=255,slow=5.4,SNR=5.8						
ILAR				LR	LR	11 45 00.6	
	comp=Z,18nm,20.9s,baz=252,slow=31						
	0.5nm,0.8s						
BBB	Bella Bella	90.53	38	LR	LR	11 51 48.5	
	comp=Z,32nm,19.9s,baz=32,slow=33						
YBH	Yreka Blue Hor	92.96	49	LR	LR	11 48 14.8	
	comp=Z,34nm,21.8s,baz=248,slow=30						
YKA	Yellowknife Ar	98.33	28	LR	LR	11 56 36.3	
	comp=Z,15nm,19.2s,baz=302,slow=33						

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*IDC **09** 11:18:17.2±0.9, 32°.52S×71°.70W, h0^{km}, mb4.1/7, mbtmp4.0/11, ML4.0/4, MS3.5/9, Error ellipse: s-maj=30.3km s-min=19.1km az=94.0*

*NEIC **09** 11:18:20.1±2.1, 32°.56S±0°.04×71°.92W±0°.07, h21^{km}±4^{km}, Error ellipse: s-maj=8.5km s-min=5.4km az=83.0*

*GUC **09** 11:18:20.9±0.8, 32°.58S×71°.85W, h24^{km}±7^{km}, ML4.0*

*NEIC **09** 11:18:20, 32°.58S×71°.85W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.21; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-1.06; $M_{r\theta}$-0.04; $M_{\theta\phi}$0.42; $M_{\phi r}$-1.81; Fault plane solution: $M_0$2.18000×10^{15} NP1:ϕ_s176.79000°, δ73.69000°, λ100.33000°. NP2:ϕ_s323.81000°, δ19.23000°, λ58.51000°. Principal axes: T 2.2343, Plg60.0000°, Azm101.0000°; N -0.1104, Plg10.0000°, Azm354.0000°; P -2.1239, Plg28.0000°, Azm259.0000°;*

ISC 09 11:18:19.7±0.6**, 32°.55S**±0°.03×**71°.87W**±0°.06**, h20^{km}**±5^{km}**, n78, σ0^{s}.94**/80**, mb4.4**/11**, MS3.6**/9**, 1C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.51	159	Pg	Pb	11 18 30.3	+0.4
VA01				Sg	Sb	11 18 37.1	+0.1
VA01	Torpederas	0.51	159	*e*P	Pb	11 18 30.4	+0.4
VA01				*i* S	Sb	11 18 36.8	-0.2
VA01				IAML		11 18 38.0	
	comp=N,17µm,0.1s						
ROC1	El Roble	0.84	121		Pb	11 18 34.0	-1.6
ROCH	El Roble	0.84	121	⇓*i*P	Pb	11 18 35.8	+0.1
ROCH				IAML		11 18 46.0	
	comp=N,8µm,0.1s						
ROCH				*i* S	Sb	11 18 47.1	+0.5
ROCH				IAML		11 18 47.8	
	comp=N,9µm,0.5s						
MT02	Curacav	0.94	139		Pb	11 18 37.3	+0.1
MT02	Curacav	0.94	139	*e*P	Pb	11 18 37.0	-0.3
MT02				*i* S	Sb	11 18 49.0	-0.3
VA05	Santo Domingo	1.13	169		Pb	11 18 40.6	+0.1
VA05	Santo Domingo	1.13	169	*e*P	Pn	11 18 40.5	+0.1
VA05				*i* S	Sb	11 18 54.5	-0.2
VA05				IAML		11 19 00.1	
	comp=E,4µm,0.2s						
VA03	San Esteban	1.13	101	*e*P	Pn	11 18 40.1	-0.3
VA03				IAML		11 18 57.1	
	comp=N,5µm,0.1s						
PEL	Peldehue	1.16	121	Pn	Pb	11 18 41.7	+0.6
PEL	Peldehue	1.16	121	⇓*i*P	Pb	11 18 41.0	-0.1
PEL				*i* S	Sn	11 18 56.2	+0.2
PEL				IAML		11 18 59.2	
	comp=N,7µm,0.4s						
MT05	Renca	1.27	132	Pn	Pb	11 18 43.1	+0.1
MT05	Renca	1.27	132	*e*P	Pb	11 18 42.8	-0.2
MT05				*i* S	Sb	11 18 59.3	+0.4
MT05				IAML		11 19 02.6	
	comp=E,8µm,0.3s						
MT01	Popeta	1.41	159	*e*P	Pn	11 18 44.5	+0.3
MT01				*i* S	Sn	11 19 02.4	+0.1
MT01				IAML		11 19 06.9	
	comp=E,3µm,0.4s						
MT09	Talagante	1.43	149	⇓*i*P	Pb	11 18 45.5	-0.3
MT09				*i* S	Sb	11 19 03.1	-0.5
MT09				IAML		11 19 05.8	
	comp=N,4µm,0.2s						
MT03	Universidad Ad	1.48	130	⇓*i*P	Pb	11 18 46.4	-0.2
MT03				IAML		11 19 13.8	
	comp=E,7µm,0.3s						
CO02	Combarbal	1.53	29	Pn	Pn	11 18 46.9	+1.0
CO02	Combarbal	1.53	29	⇑*i*P	Pb	11 18 47.4	0.0
CO02				*i* S	Sb	11 19 07.9	+1.6
FCH	Farellones	1.54	121	*e*P	Pn	11 18 47.0	+0.7
FCH				*i* S	Sb	11 19 06.9	0.0
FCH				IAML		11 19 09.5	
	comp=E,3µm,0.5s						
BO04	La Punta	1.78	144	*i* P	Pb	11 18 50.9	-0.8
BO04				*i* S	Sb	11 19 13.6	-0.1
BO04				IAML		11 19 21.0	
	comp=N,3µm,0.7s						
CO06	Fray Jorge	1.88	6	*e*P	Pn	11 18 50.9	+0.3
CO06				*i* S	Sn	11 19 13.1	-0.6
CO06				IAML		11 19 25.3	
	comp=N,2µm,0.3s						
GO05	Huala	2.46	181		Pn	11 18 57.9	-0.8
CO05	La Serena	2.67	12		Pn	11 19 01.1	-0.4
CO01	Juntas del Tor	2.98	31	*e*P	Pn	11 19 09.0	+3.0
CO01				IAML		11 19 56.6	
	comp=N,729nm,0.5s						
ML02	Panimavida	3.23	174		Pn	11 19 09.2	-0.1
LCO	Las Campanas	3.66	16	Pn	Pn	11 19 16.0	+0.6
BI05	Punta Hualpn	4.33	194	Pn	Pn	11 19 23.5	-0.8
AC04	Llanos de Chal	4.38	9	Pn	Pn	11 19 25.2	+0.2
GO03	Copiap	5.13	16		Pn	11 19 36.0	+0.5
H03N1	Juan Fernandez	5.99	260	T	T	11 26 17.7	
	baz=88,slow=74,SNR=353						
H03N3	Juan Fernandez	6.00	259	T	T	11 26 24.7	
	baz=88,slow=74,SNR=310						
H03N2	Juan Fernandez	6.00	260	T	T	11 26 18.4	
	baz=88,slow=74,SNR=324						
H03S1	Juan Fernandez	6.04	256	T	T	11 26 19.0	
	SNR=33						
H03S3	Juan Fernandez	6.04	256	T	T	11 26 09.2	
	SNR=32						
H03S2	Juan Fernandez	6.06	256	T	T	11 26 15.4	
	SNR=40						
LC01	Cunco	6.34	180	Pn	Pn	11 19 51.7	-0.2
GO02	Mina Guanaco	7.62	16		Pn	11 20 08.8	-1.0
PLCA	Paso Flores	8.24	173	Pn	Pn	11 20 18.6	+0.5
	comp=N,1.0nm,0.3s,baz=335,slow=11,SNR=17						
PLCA				Sn	Sn	11 21 40.5	-10
	baz=267,slow=20						
	comp=N,2.7nm,0.4s						
PLCA	Paso Flores	8.24	173	Pn	Pn	11 20 19.4	+1.3
LVC	Limon Verde	10.24	16	Pn	Pn	11 20 44.0	-1.8
	comp=N,0.4nm,0.3s,baz=260,slow=14,SNR=2.1						
LVC				Sn	Sn	11 22 38.4	-1.8
	comp=N,0.4nm,0.3s,baz=108,slow=13,SNR=1.5						
	comp=N,1.2nm,0.3s						
LVC	Limon Verde	10.24	16		Pn	11 20 43.4	-2.4
CPUP	Villa Florida	14.10	68	Pn	Pn	11 21 37.0	-1.2
	comp=N,0.1nm,0.3s,baz=230,slow=16,SNR=1.7						
	comp=N,0.5nm,0.4s						
LPAZ	La Paz	16.54	13	Pn	Pn	11 22 11.4	+0.4
	comp=N,0.3nm,0.3s,baz=181,slow=8.2,SNR=12						
	comp=N,3.1nm,0.7s						
LPAZ	La Paz	16.54	13		Pn	11 22 12.4	+1.3
AQDB	Aquidauana	18.78	54	P	Pn	11 22 39.0	+0.8
ATAH	Atahualpa	26.00	345	LR	LR	11 33 19.1	
	comp=N,32nm,18.0s,baz=221,slow=35						
BDFB	Brasilia	27.42	58	P	P	11 24 02.9	-1.4
	comp=N,5.3nm,0.8s,baz=239,slow=9.9,SNR=6.4						
	comp=N,5.3nm,0.8s						
BDFB	Brasilia	27.42	58	P	P	11 24 03.5	-0.8
BDFB				IAmb	IAmb	11 24 04.4	
	comp=Z,7.7nm,0.9s						
PMSA	Palmer Station	32.61	174	LR	LR	11 38 07.9	
	comp=Z,105nm,19.3s,baz=320,slow=36						
RPN	Rapa Nui	32.83	270	LR	LR	11 34 21.4	
	comp=Z,106nm,18.2s,baz=156,slow=29						
ORCD	Orcadas	33.32	156	P	P	11 24 54.5	-1.3
ORCD				IAmb	IAmb	11 25 09.1	
	comp=Z,5.2nm,1.1s						
SJCC	San Jacinto, C	42.32	355	P	P	11 26 12.8	+0.5

SJCC				IAmb	IAmb	11 26 17.5	
	comp=Z,8.8nm,1.1s						
BELA	Belgrano 2	48.28	170	P	P	11 27 00.2	+1.3
SJG	San Juan	50.67	7	LR	LR	11 49 39.1	
	comp=Z,31nm,21.4s,baz=188,slow=37						
SNAA	Sanae	52.88	158	P	P	11 27 34.3	+0.6
	comp=Z,1.3nm,0.6s,baz=243,slow=9.7,SNR=10						
	comp=Z,1.3nm,0.6s						
SNAA	Sanae	52.88	158	P	P	11 27 34.6	+1.0
SNAA				IAmb	IAmb	11 27 36.9	
	comp=Z,12nm,1.5s						
QSPA	South Pole Qui	57.69	180	P	P	11 28 09.0	+0.5
	comp=Z,2.8nm,1.0s,baz=134,slow=23,SNR=6.8						
	comp=Z,2.8nm,1.0s						
QSPA	South Pole Qui	57.69	180	P	P	11 28 09.6	+1.0
QSPA				IAmb	IAmb	11 28 24.1	
	comp=Z,7.1nm,1.1s						
TXAR	Lajitas Array	68.54	330	P	P	11 29 22.1	+1.3
	comp=Z,0.5nm,0.6s,baz=147,slow=7.4,SNR=5.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	68.54	330	P	P	11 29 21.6	+0.7
WVT	Waverly	69.93	346	P	P	11 29 29.7	+0.5
DBIC	Dimbokro	74.58	72	P	P	11 29 57.9	+0.4
	comp=Z,4.9nm,0.7s,baz=225,slow=8.3,SNR=5.8						
	comp=Z,4.9nm,0.7s						
DBIC	Dimbokro	74.58	72	P	P	11 29 57.6	0.0
SUR	Sutherland	75.41	119	LR	LR	11 59 54.2	
	comp=Z,24nm,19.1s,baz=176,slow=33						
SUR	Sutherland	75.41	119	P	P	11 30 02.6	+0.2
SADO	Sadowa	77.23	355	LR	LR	12 09 09.7	
	comp=Z,30nm,18.2s,baz=120,slow=40						
ECSD	EROS Data Cent	79.21	342	P	P	11 30 22.2	-0.7
ECSD				IAmb	IAmb	11 30 37.5	
	comp=Z,3.7nm,0.9s						
TSUM	Tsumeb	79.47	106	LR	LR	12 01 28.0	
	comp=Z,44nm,20.0s,baz=158,slow=33						
KOWA	Kowa	79.91	66	P	P	11 30 27.7	+0.3
KOWA				IAmb	IAmb	11 30 28.6	
	comp=Z,4.0nm,0.8s						
BOSA	Boshof	80.62	118	LR	LR	12 03 51.3	
	comp=Z,41nm,18.1s,baz=188,slow=34						
NVAR	Mina Array Bea	82.78	325	P	P	11 30 43.7	+1.3
	comp=Z,0.1nm,0.4s,baz=152,slow=5.8,SNR=1.9						
	comp=Z,0.1nm,0.4s						
MCQ	Macquarie Isla	82.90	207	P	P	11 30 41.1	-1.6
TORD	Torodi Ar. Bea	83.58	70	P	P	11 30 47.1	+0.4
	comp=Z,3.2nm,0.7s,baz=263,slow=4.6,SNR=22						
	comp=Z,3.2nm,0.7s						
LSZ	Lusaka	90.12	108	LR	LR	12 08 48.9	
	comp=Z,45nm,18.8s,baz=180,slow=34						
ZALV	Zalesovo Beam	152.91	31	PKPbc	PKiKP	11 38 15.4	+0.4
	comp=Z,2.5nm,0.5s,baz=306,slow=2.8,SNR=12						
ZALV	Zalesovo Beam	152.91	31	PKPdf	PKPdf	11 38 05.8	-1.8
ZALV					PKPbc	11 38 14.9	+0.1
ZALV				PKPab	pPKPbc	11 38 22.3	+1.3
MKAR	Makanchi Array	155.68	47	PKPab	PKPab	11 38 38.2	+0.1
	comp=Z,0.9nm,0.5s,baz=290,slow=2.3,SNR=11						
MKAR	Makanchi Array	155.68	47	PKPdf	PKPdf	11 38 09.5	-2.3
MKAR					PKPab	11 38 37.5	-0.6

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*IDC **09** 11:51:40.5±1.6, 53°.12N×165°.41W, h0^{km}, mb3.6/6, mbtmp3.6/8, ML3.4/2, MS3.2/1, Error ellipse: s-maj=31.7km s-min=24.2km az=178.0*

*NEIC **09** 11:51:40.5±2.9, 52°.88N±0°.05×165°.63W±0°.08, h13^{km}±7^{km}, mb3.6/12, ML3.2/16(AEIC), Error ellipse: s-maj=9.5km s-min=3.2km az=134.0*

*AEIC **09** 11:51:42.7±3.7, 52°.91N±0°.04×165°.64W±0°.07, h6^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=5.4km az=223.0*

ISC 09 11:51:41.1±0.8**, 52°.89N**±0°.07×**165°.58W**±0°.05**, h14^{km}, n65, σ1^s.46**/62**, mb3.6**/6**, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	1.10	330		Pb	11 52 01.5	-0.3
MGOD	Makushin Gods	1.19	320		Pn	11 52 03.2	-0.1
AKBBA	Akutan Broad B	1.23	350		Pn	11 52 03.7	-0.1
AKBBA					Sg	11 52 20.3	-0.3
AKSA	Akutan Strait	1.25	357		Pn	11 52 03.8	-0.2
AKSA					Sn	11 52 20.1	-0.5
AKUT	Akutan	1.25	355		Pn	11 52 03.8	-0.2
MSW	Makushin Switc	1.25	325		Pn	11 52 03.9	-0.2
MSW					Sg	11 52 20.4	-0.9
MTBL	Makushin Table	1.26	329		Pb	11 52 04.5	-0.2
OKFG	Magazine Ridge	1.50	291		Pn	11 52 07.6	+0.1
NIKH	Nikolski High	1.98	274		Pn	11 52 13.9	-0.3
NIKH					Sn	11 52 37.7	-1.1
SSLN	Shishaldin Nor	2.14	25		Pn	11 52 17.2	+0.8
FALS	False Pass	2.35	32		Pn	11 52 19.3	+0.2
SDPT	Sand Point	3.88	49	Pn	Pn	11 52 39.6	-0.6
CNBA	Chernabura Isl	4.04	59	Pn	Pn	11 52 41.5	-0.9
CHIR	Chirikof Islan	6.52	59	Pn	Pn	11 53 15.4	-1.0
ADK	Adak	6.87	266	Pn	Pn	11 53 22.7	+1.4
SII	Sitkinak Islan	7.55	56	Pn	Pn	11 53 29.6	-1.0
OHAK	Old Harbor	8.28	54	Pn	Pn	11 53 39.2	-1.4
P18K	Big Mountain,	8.70	37	Pn	Pn	11 53 47.7	+1.3
KDAK	Kodiak Island	8.88	51	Pn	Pn	11 53 46.3	-2.4
	0.8nm,0.3s,baz=243,slow=5.7,SNR=22						
KDAK				Sn	Sn	11 55 14.7	-14
	baz=195,slow=5.3						
	2.5nm,0.3s						
KDAK	Kodiak Island	8.88	51		Pn	11 53 46.7	-2.0
Q19K	Cape Douglas,	9.02	43	Pn	Pn	11 53 50.4	-0.4
O18K	Koktuh Hills	9.04	35	Pn	Pn	11 53 52.9	+1.9
M20K	Styx River	11.22	32	Pn	Pn	11 54 22.3	+1.4
PPLA	Purkeypile	12.27	30	Pn	Pn	11 54 37.1	+1.8
GHO	Glory Hole Cre	12.61	39	Pn	Pn	11 54 39.5	-0.4
CAST	Castle Rocks	12.70	29	Pn	Pn	11 54 42.5	+1.5
SCM	Sheep Creek Mo	13.27	40	Pn	Pn	11 54 46.7	-2.1
EYAK	Cordova Ski Ar	13.27	47	Pn	Pn	11 54 46.0	-2.8
BPAW	Bear Paw Mtn.	13.53	28	Pn	Pn	11 54 52.5	0.0
KLU	Klutina	13.65	43	Pn	Pn	11 54 50.9	-3.2
HMT	Hamilton	13.86	49	Pn	Pn	11 54 54.6	-2.2
M24K	Tolsona, Glenn	13.87	41	Pn	Pn	11 54 53.9	-3.1
DHY	Denali Highway	13.99	36	Pn	Pn	11 54 57.4	-1.3
N25K	Chitina, Valde	14.26	44	Pn	Pn	11 55 00.1	-2.4
I23K	Minto, Yukon-K	14.79	28	Pn	Pn	11 55 08.0	-1.5
H23K	Yukon River	15.26	26	Pn	Pn	11 55 15.3	-0.4
H23K				IAmb	IAmb	11 55 29.1	
	comp=Z,7.2nm,1.5s						
ILAR	Eielson Array	15.26	31	Pn	Pn	11 55 13.7	-2.1
	comp=Z,0.1nm,0.3s,baz=227,slow=12,SNR=4.7						
	comp=Z,0.2nm,0.6s						
RIDG	Independent Ri	15.30	37	Pn	Pn	11 55 14.6	-1.8
RIDG				IAmb	IAmb	11 55 43.0	
	comp=Z,7.1nm,1.4s						
M26K	Nabesna, AK	15.30	43	Pn	Pn	11 55 14.2	-2.2
M26K				IAmb	IAmb	11 55 24.4	
	comp=Z,5.2nm,1.2s						
J25K	Salcha River,	15.65	34	Pn	Pn	11 55 19.9	-1.0
J25K				IAmb	IAmb	11 55 40.1	
	comp=Z,1.4nm,0.6s						
BCAR	Beaver Creek A	16.11	41	P	Pn	11 55 25.5	-1.4
EGAK	Eagle	17.21	37	P	Pn	11 55 39.9	-0.9
TOLK	Toolik Lake Re	17.52	20	P	P	11 55 46.2	+0.5
DAWY	Dawson	17.53	40	P	P	11 55 47.0	+1.2
DAWY				IAmb	IAmb	11 55 52.0	
	comp=Z,2.3nm,0.8s						
BMAR	Burnt Mountain	17.78	27	P	Pn	11 55 47.6	-0.2
M30M	Minto, Yukon	18.01	46	P	P	11 55 52.1	+1.0
M31M	Drury Creek, Y	18.97	48	P	Pn	11 56 04.4	+2.0
EPYK	Eagle Plains	19.62	35	P	P	11 56 07.6	-1.2
INK	Inuvik	21.65	32	P	P	11 56 28.2	-2.4
	comp=Z,1.2nm,0.4s,baz=261,slow=11,SNR=23						
	comp=Z,1.2nm,0.4s						
INK	Inuvik	21.65	32	P	P	11 56 28.3	-2.4
PETK	Petropavlovsk-	21.95	285	P	P	11 56 35.7	+1.7
	comp=Z,2.1nm,0.9s,baz=95,slow=12,SNR=12						
	comp=Z,2.1nm,0.9s						
YKA	Yellowknife Ar	28.15	50	P	P	11 57 32.8	+0.4
	comp=Z,0.8nm,0.6s,baz=271,slow=7.4,SNR=10						
	comp=Z,0.8nm,0.6s						
YKA	Yellowknife Ar	28.15	50	P	P	11 57 33.1	+0.8
NVAR	Mina Array Bea	35.38	95	P	P	11 58 38.1	+1.7
	comp=Z,0.7nm,0.6s,baz=302,slow=9.0,SNR=8.9						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	35.38	95	P	P	11 58 37.8	+1.4
PDAR	Pinedale Array	38.04	82	P	P	11 58 58.3	-0.6
	comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=1.5						
	comp=Z,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	39.36	223	T	T	12 41 50.4	
	baz=25,slow=76,SNR=8.4						
H11N3	WAKE ISLAND Hy	39.37	223	T	T	12 42 07.1	
	baz=25,slow=76,SNR=9.1						
H11N1	WAKE ISLAND Hy	39.38	223	T	T	12 41 43.0	
	baz=25,slow=76,SNR=6.5						
H11S1	WAKE ISLAND Hy	40.54	223	T	T	12 43 01.8	
	baz=25,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	40.55	223	T	T	12 43 02.7	
	baz=25,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	40.55	223	T	T	12 42 50.0	
	baz=25,slow=76,SNR=6.5						
TXAR	Lajitas Array	50.45	92	P	P	12 00 38.6	+0.4
	comp=Z,0.9nm,0.6s,baz=299,slow=4.0,SNR=9.2						
	comp=Z,0.9nm,0.6s						
TXAR	Lajitas Array	50.45	92	P	P	12 00 38.3	0.0
TKL	Tuckaleechee C	57.86	72	LR	LR	12 25 47.8	
	comp=Z,20nm,18.1s,baz=342,slow=36						

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*IDC **09** 11:55:24.8±1.2, 32°.74N×130°.64E, h0^{km}, mb3.6/4, mbtmp3.5/8, ML3.0/4, MS2.9/2, Error ellipse: s-maj=21.3km s-min=9.1km az=122.0*

*JMA **09** 11:55:26.7±0.0, 32°.8N±0°.1×130°.7E±0°.1, h7^{km}, MV3.5/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

*NIED **09** 11:55:26.7, 32°.80N×130°.70E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.58; M$_{\theta\theta}$3.30; M$_{\phi\phi}$0.28; M$_{r\theta}$0.10; M$_{\theta\phi}$-0.69; M$_{\phi r}$0.95; Fault plane solution: M$_0$3.63000×10^{14} NP1: ϕ_s269.00000°, δ46.00000°, λ-109.00000°. NP2: ϕ_s115.00000°, δ47.00000°, λ-71.00000°.*

ISC 09 11:55:27.2±0.7**, 32°.78N**±0°.04×**130°.67E**±0°.07**, h12^{km}, n13, σ1^s.17**/17**, mb3.6**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.22	327	P	Pg	11 55 31.2	-0.7
JTA				*e*S	Sg	11 55 34.6	-0.5
JIU3	Izumi3	0.26	153	*i* P	Pg	11 55 32.3	-0.4
JIU3				*e*S	Sg	11 55 36.4	+0.1
JNU	Nakatsue	0.38	27	Pg	Pg	11 55 33.3	-1.6
	407nm,0.3s,baz=313,slow=9.6,SNR=568						
JNU				Lg	Lg	11 55 38.3	
JTZ	Takazaki	0.94	158	*i* P	Pg	11 55 45.3	-0.2
JTZ				S	Sg	11 55 58.0	+0.2
KSRS	Korea Array	5.18	335	Pn	Pn	11 56 45.2	+0.7
	0.3nm,0.3s,baz=153,slow=14,SNR=5.6						
KSRS				Pg	Pb	11 56 59.7	+2.0
	1.0nm,0.3s,baz=150,slow=17,SNR=12						
KSRS				Sn	Sn	11 57 45.5	+1.3
	0.6nm,0.3s,baz=147,slow=18,SNR=5.8						
KSRS				Lg	Lg	11 58 09.1	
	1.6nm,0.3s,baz=160,slow=30,SNR=5.8						
	0.8nm,0.5s						
JOW	Kunigami	6.28	200	Pn	Pn	11 56 59.6	-0.1
	1.4nm,0.3s,baz=52,slow=12,SNR=2.4						
	5.2nm,0.5s						
MJAR	Matsushiro Arr	7.25	57	Pn	Pn	11 57 14.6	+1.5
	0.1nm,0.3s,baz=242,slow=13,SNR=4.8						
	2.2nm,0.5s						
KLR	Kul'dur	16.45	2	Pn	Pn	11 59 18.9	+1.0
	0.1nm,0.3s,baz=169,slow=11,SNR=1.5						
KLR				LR	LR	12 04 49.7	
	comp=Z,24nm,20.4s,baz=219,slow=34						
	0.3nm,0.3s						
SONM	Songino Array	23.71	316	P	P	12 00 39.6	+0.5
	0.3nm,0.4s,baz=118,slow=8.6,SNR=3.8						
	0.3nm,0.4s						
WRA	Warramunga Arr	52.54	176	P	P	12 04 38.6	-1.9
	0.7nm,1.1s,baz=354,slow=8.0,SNR=2.2						
	0.7nm,1.1s						
GNI	Garni	66.93	304	LR	LR	12 39 27.3	
	comp=Z,17nm,18.7s,baz=249,slow=40						
FINES	FINESS Array B	68.25	330	P	P	12 06 26.4	-1.1
	0.5nm,0.4s,baz=77,slow=4.1,SNR=5.8						
	0.5nm,0.4s						
AKASG	Malin Array Be	71.97	319	P	P	12 06 49.5	-1.1
	0.2nm,0.3s,baz=53,slow=7.0,SNR=2.0						
	0.2nm,0.3s						

VIE 09 11:55:48.2±0.2**, 47°.72N×15°.86E, h0^{km}, ml1.1**/2**, Error ellipse: s-maj=2.0km s-min=1.3km az=8.0 7 km NW of Gloggnitz Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	Conrad Observa	0.21	360	*e*Pg	Pg	11 55 52.1	-0.1
	2.3nm,0.2s						
CONA				*e*Sg	Sg	11 55 55.3	+0.5
	18nm,0.3s						
RONA	Rosalia, Austr	0.29	94	*e*Pg	Pg	11 55 54.1	+0.3
RONA				*e*Sg	Sg	11 55 57.9	+0.3

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*IDC **09** 12:03:55.5±2.2, 5°.20S×102°.79E, h0^{km}, mb4.0/8, mbtmp4.0/8, MS2.8/4, Error ellipse: s-maj=88.6km s-min=16.9km az=57.0*

*DJA **09** 12:03:58.2±0.4, 6°S±5°×10°3E±°, h10^{km}, M4.4/12, mb4.5/7, mB5.4/1, MLv4.4/12, Mw(mB)4.8/1*

*NEIC **09** 12:04:02.3±1.6, 5°.25S±0°.08×102°.7E±0°.1, h52^{km}±7^{km}, mb4.2/19, Error ellipse: s-maj=20.2km s-min=10.1km az=67.0*

ISC 09 12:04:01.4±0.6**, 5°.32S**±0°.08×**102°.72E**±0°.09**, h50^{km}, n65, σ1^s.04**/56**, mb4.1**/19**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.98	14		Pn	12 04 18.5	-0.5
MNAI	Manna	0.98	14	P	Pn	12 04 18.4	-0.5
LWLI	Liwa	1.37	77	P	Pn	12 04 23.2	-1.0
KASI	Kota Agung	1.78	96	P	Pn	12 04 29.1	-0.7
MASI	Maura Aman, Be	2.22	348	P	Pn	12 04 37.4	+1.6
BLSI	Bandar Lampung	2.52	91	P	Pn	12 04 40.0	+0.2
PMBI	Palembang	3.14	41	Pn	Pn	12 04 49.4	+1.0
KRJI	Kerinci	3.45	339	P	Pn	12 04 55.2	+2.5
PPSI	Pulau Pagai	3.71	313	P	Pn	12 04 57.7	+1.5
SKJI	Sukabumi	4.17	114	P	Pn	12 05 04.2	+1.7
CNJI	Cibinong	4.81	114	P	Pn	12 05 10.8	-0.5
LEM	Lembang	5.10	107	LR	LR	12 07 46.1	
	comp=Z,68nm,18.1s,baz=228,slow=46						
DSRI	Dabo	5.16	21	P	Pn	12 05 18.3	+2.2
	0.2nm3μm17nm,0.5s						
SISI	Saibi	5.37	318	P	Pn	12 05 19.7	+0.6
	0.1nm14nm,0.6s						
UGM	Wanagama	8.17	109	Pn	Pn	12 05 58.5	+1.0
UGM	Wanagama	8.17	109	P	Pn	12 05 57.7	+0.2
	97nm,1.9s						
PCJI	Pacitan	8.87	109	P	Pn	12 06 07.1	+0.1
	44nm,1.1s						
PSI	Prapat	8.92	335	LR	LR	12 10 10.9	
	comp=Z,70nm,18.1s,baz=142,slow=43						
GMJI	Gumukmas	11.05	106	P	Pn	12 06 38.0	+1.2
	21nm,1.5s						
JAGI	Jajag, Banyuwa	11.77	106	Pn	Pn	12 06 46.2	-0.6
JAGI	Jajag, Banyuwa	11.77	106	P	Pn	12 06 46.6	-0.2
	32nm,2.4s						
SRBI	Singaraja	12.71	103	P	Pn	12 07 00.2	+0.7
KAPI	Kappang	16.97	90	LR	LR	12 14 41.3	
	comp=Z,29nm,18.2s,baz=260,slow=38						
CM31	Chiang Mai Arr	23.92	351	P	P	12 09 10.1	-0.8
CM31				IAmb	IAmb	12 09 12.6	
	comp=Z,5.3nm,1.0s						
CMAR	Chiang Mai Arr	23.92	351	P	P	12 09 10.3	-0.6
	comp=Z,2.3nm,0.4s,baz=181,slow=9.1,SNR=20						
CMAR				LR	LR	12 18 50.4	
	comp=Z,15nm,18.5s,baz=150,slow=38						
	comp=Z,2.3nm,0.4s						
CMAR	Chiang Mai Arr	23.92	351	P	P	12 09 09.5	-1.4
CHTO	Chiang Mai	24.27	351	P	P	12 09 13.3	-0.8
CHTO				IAmb	IAmb	12 09 14.9	
	comp=Z,3.3nm,0.7s						
FITZ	Fitzroy Crossi	25.74	121	P	P	12 09 27.5	0.0
FITZ				IAmb	IAmb	12 09 43.9	
	comp=Z,6.0nm,1.2s						
KNRA	Kununurra	27.56	114	P	P	12 09 43.0	-1.0
KNRA				IAmb	IAmb	12 09 55.9	
	comp=Z,16nm,1.1s						
MTN	Manton Dam	29.01	107	P	P	12 09 56.0	-0.9
MTN				IAmb	IAmb	12 10 09.2	
	comp=Z,12nm,1.3s						
H08S2	Diego Garcia H	30.12	264	T	T	12 41 16.2	
	baz=87,slow=76,SNR=16						
H08S3	Diego Garcia H	30.12	264	T	T	12 41 13.6	
	baz=87,slow=76,SNR=20						
H08S1	Diego Carcia H	30.14	264	T	T	12 41 17.1	
	baz=87,slow=76,SNR=12						
H01W3	Cape Leeuwin H	31.25	162	T	T	12 43 11.4	
	baz=338,slow=76,SNR=4.9						
H01W2	Cape Leeuwin H	31.27	162	T	T	12 43 24.6	
	baz=338,slow=76,SNR=6.3						
H01W1	Cape Leeuwin H	31.27	162	T	T	12 43 14.9	
	baz=338,slow=76,SNR=6.4						
WB0	Warramunga Arr	34.00	118	P	P	12 10 41.4	+0.7
WRA	Warramunga Arr	34.01	118	P	P	12 10 40.0	-0.8
	comp=Z,1.4nm,0.8s,baz=308,slow=8.9,SNR=27						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	34.01	118	P	P	12 10 40.3	-0.6
WB2	Warramunga Arr	34.02	118	P	P	12 10 41.0	+0.1
WB2				IAmb	IAmb	12 10 42.7	
	comp=Z,4.4nm,1.1s						
WR0	Warramunga Arr	34.19	118	P	P	12 10 42.5	+0.1
ASAR	Alice Springs	35.13	124	P	P	12 10 51.5	+1.0
	comp=Z,0.6nm,0.7s,baz=298,slow=8.0,SNR=16						
	comp=Z,0.6nm,0.7s						
ASAR	Alice Springs	35.13	124	P	P	12 10 50.7	+0.2
AS31	Alice Springs	35.13	124	P	P	12 10 51.1	+0.6
STKA	Stephens Creek	44.93	131	P	P	12 12 13.3	+1.7
	comp=Z,2.6nm,0.7s,baz=304,slow=15,SNR=5.1						
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	44.93	131	P	P	12 12 12.8	+1.2
KSRS	Korea Array	48.61	27	P	P	12 12 40.1	-0.1
	comp=Z,0.6nm,0.6s,baz=226,slow=7.1,SNR=2.6						
	comp=Z,0.6nm,0.6s						
SONM	Songino Array	53.03	3	P	P	12 13 13.7	+0.3
	comp=Z,0.6nm,0.5s,baz=189,slow=8.6,SNR=4.2						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	53.03	3	P	P	12 13 10.6	-2.9
MK31	Makanchi Array	54.96	343	P	P	12 13 27.7	+0.3
MK31				IAmb	IAmb	12 13 28.2	
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	54.96	343	P	P	12 13 27.5	+0.1
	comp=Z,1.9nm,0.4s,baz=145,slow=8.6,SNR=26						
	comp=Z,1.9nm,0.4s						
KK31	Karatay Array	56.34	332	P	P	12 13 37.8	+0.5
KK31				IAmb	IAmb	12 13 40.6	
	comp=Z,1.2nm,0.7s						
KKAR	Karatay Array	56.34	332	P	P	12 13 37.8	+0.5
KURK	Kurchatov	59.56	342	P	P	12 13 59.5	-0.2
KURK				IAmb	IAmb	12 14 00.7	
	comp=Z,1.9nm,0.7s						
ZAA0	Zalesovo Array	60.94	348	P	P	12 14 09.2	+0.1
ZALV	Zalesovo Beam	60.94	348	P	P	12 14 09.0	-0.1
	comp=Z,3.2nm,0.4s,baz=162,slow=5.6,SNR=17						
	comp=Z,3.2nm,0.4s						
ZALV	Zalesovo Beam	60.94	348	P	P	12 14 08.8	-0.3
ABKAR	Akbulak array	65.84	331	P	P	12 14 41.7	0.0
VNDA	Vanda	78.40	169	P	P	12 15 56.1	-0.2
VNDA				IAmb	IAmb	12 15 57.6	
	comp=Z,2.4nm,1.3s						
TIXI	Tiksi	78.71	8	P	P	12 15 55.4	-2.6
TIXI				IAmb	IAmb	12 16 06.1	
	comp=Z,5.1nm,1.5s						
QSPA	South Pole Qui	84.66	180	P	P	12 16 30.6	+0.9
FINES	FINESS Array B	88.30	332	P	P	12 16 47.7	+0.4
SNAA	Sanae	89.83	198	P	P	12 16 53.4	-1.1
TXAR	Lajitas Array	145.47	43	PKPbc	PKPbc	12 23 35.6	+0.7
	comp=Z,1.1nm,0.6s,baz=318,slow=1.2,SNR=13						
TXAR	Lajitas Array	145.47	43		PKPab	12 23 35.9	+0.8

TAP 09 12:20:17.0, 23°.15N×120°.75E, h13^{km}, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan	0.01	22	*i* P	Pg	12 20 19.8	+0.4
	baz=57						
STYT				*i* S	Sg	12 20 21.7	+0.6
	baz=57						
STYH	Taoyuan	0.03	52	*i* P	Pg	12 20 19.9	+0.5
	baz=44						
STYH				S	Sg	12 20 21.7	+0.8
	baz=44						
WTP	Ta-pu	0.16	306	P	Pb	12 20 21.4	-0.4
	baz=306						
WTP				*e*S	Sb	12 20 24.9	-0.2
	baz=306						
SGST	Jiashian	0.17	245	P	Pb	12 20 21.6	-0.5
	baz=244						
SGST				S	Sb	12 20 24.9	-0.6
	baz=244						
TPUB	Ta-pu	0.18	322	*e*P	Pg	12 20 21.7	+0.5
	baz=322						
TPUB				*e*S	Sb	12 20 25.3	-0.5
	baz=322						
CHN1	Nanshi	0.21	279	P	Pb	12 20 22.4	-0.3
	baz=278						
CHN1				S	Sb	12 20 26.6	+0.1
	baz=278						
CHN4	Tsaushan	0.24	323	P	Pb	12 20 22.9	-0.5
	baz=323						
CHN4				S	Sb	12 20 27.5	0.0
	baz=323						

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*IDC **09** 12:37:01.4±3.8, 15°.80S×175°.81W, h0^{km}, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=168.8km s-min=78.8km az=155.0*

*NEIC **09** 12:38:25.9±1.0, 17°.8S±0°.3×179°.4W±0°.3, h608^{km}±27^{km}, mb4.1/15, Error ellipse: s-maj=46.6km s-min=32.8km az=224.0*

ISC 09 12:38:18.8±3.6**, 17°.4S**±0°.3×**178°.6W**±0°.4**, h600^{km}, n72, σ2^s.89**/71**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.24	263	P	P	12 39 41.7	+2.3
MKAZ	Moumakai	20.43	194	P	P	12 42 32.4	+16
TOZ	Tahuroa Road	20.95	193	P	P	12 42 28.1	+7.1
MWZ	Matawai	21.18	189	P	P	12 42 33.3	+10
RTZ	Ruatahuna	21.54	190	P	P	12 42 30.5	+4.2
MTHZ	Maungataniwha	21.79	190	P	P	12 42 30.6	+2.2
RAHZ	Arahi	21.81	189	P	P	12 42 32.6	+3.9
MRHZ	Matea Rd	21.84	191	P	P	12 42 28.8	-0.2
NMHZ	Naumai	22.03	190	P	P	12 42 32.4	+1.7
BKZ	Black Stump Fm	22.15	190	P	P	12 42 30.6	-1.1
ARHZ	Aropaoanui	22.17	189	P	P	12 42 33.7	+1.9
OTVZ	Oturere	22.30	192	P	P	12 42 29.8	-3.4
SNVZ	South Ngauruho	22.33	192	P	P	12 42 29.9	-3.5
TUVZ	Tukino	22.40	192	P	P	12 42 30.7	-3.4
KWHZ	Kaweka Forest	22.42	190	P	P	12 42 32.5	-1.6
VRZ	Vera Road	22.45	194	P	P	12 42 32.0	-2.4
MOVZ	Moawhango	22.52	192	P	P	12 42 31.1	-3.9
BHHZ	Black Hill Sta	22.54	191	P	P	12 42 31.8	-3.4
KAHZ	Kahuranaki	22.70	189	P	P	12 42 36.8	+0.2
NEZ	North Egmont	22.75	195	P	P	12 42 36.5	-0.6
PNHZ	Pukenui	22.93	190	P	P	12 42 35.6	-3.1
WAZ	Wanganui	23.01	193	P	P	12 42 35.1	-4.2
WPHZ	Waipukurau	23.04	190	P	P	12 42 37.4	-2.1
TSZ	Takapari Road	23.11	191	P	P	12 42 36.5	-3.7
DVHZ	Dannevirke	23.31	190	P	P	12 42 38.9	-3.1
MRZ	Mangatainoka R	23.77	191	P	P	12 42 42.0	-4.0
TIWZ	Tintock	23.82	190	P	P	12 42 43.6	-2.9
OGWZ	Otaki Gorge	24.00	192	P	P	12 42 44.2	-3.8
HOWZ	Holdsworth Sta	24.01	191	P	P	12 42 44.3	-3.8
KIW	Kapiti Island	24.09	192	P	P	12 42 44.8	-4.1
DUWZ	D’Urville Isla	24.25	194	P	P	12 42 47.3	-3.0
MTW	Mount Morrison	24.26	191	P	P	12 42 46.8	-3.5
CAW	Cannon Point	24.30	192	P	P	12 42 47.1	-3.5
WEL	Wellington	24.52	192	P	P	12 42 49.5	-3.1
TCW	Tory Channel	24.56	193	P	P	12 42 50.2	-2.7
MSWZ	Moikau Station	24.56	191	P	P	12 42 49.8	-3.2
QRZ	Quartz Range	24.62	196	P	P	12 42 54.2	+0.7
BHW	Baring Head	24.62	192	P	P	12 42 50.5	-3.0
PLWZ	Palliser	24.71	191	P	P	12 42 51.5	-2.8
NNZ	Nelson	24.77	195	P	P	12 42 52.7	-2.0
TUWZ	Tuamarina	24.84	193	P	P	12 42 54.1	-1.3
TUWZ	Tuamarina	24.84	193	P	P	12 42 53.3	-2.1
MRNZ	Matariki Terra	25.09	195	P	P	12 42 58.6	+0.9
BSWZ	Blackbirch Sta	25.13	193	P	P	12 42 57.0	-0.9
THZ	Tophouse	25.40	195	P	P	12 43 00.8	+0.3
DSZ	Denniston Nort	25.67	197	P	P	12 43 06.2	+3.4
KHZ	Kahutara	25.87	193	P	P	12 43 06.0	+1.5
KHZ	Kahutara	25.87	193	P	P	12 43 05.9	+1.4
LTZ	Lake Taylor	26.52	195	P	P	12 43 14.4	+4.2
INZ	Inchbonnie	26.68	197	P	P	12 43 18.0	+6.5
OXZ	Oxford	27.09	195	P	P	12 43 21.0	+5.8
OKCZ	Okains Bay	27.22	193	P	P	12 43 22.1	+5.7
MQZ	McQueen’s Vall	27.30	194	P	P	12 43 18.4	+1.4
MQZ	McQueen’s Vall	27.30	194	P	P	12 43 22.5	+5.6
TMZ	Timaru	28.34	196	P	P	12 43 37.4	+11

CTAO	Charters Tower	33.38	260	P	P	12 44 08.4	-1.0
CTAO				IAmb	IAmb	12 44 09.2	
	comp=Z,5.2nm,1.1s						
COEN	Coen	36.94	270	P	P	12 44 38.1	-0.9
COEN				IAmb	IAmb	12 45 07.2	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	38.76	241	P	P	12 44 53.0	-0.4
	comp=Z,1.1nm,0.4s,baz=90,slow=6.1,SNR=4.1						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	38.76	241	P	P	12 44 52.5	-0.9
BBOO	Buckleboo	43.53	240	P	P	12 45 30.3	-0.8
WR0	Warramunga Arr	44.38	259	P	P	12 45 37.4	-0.4
WB0	Warramunga Arr	44.54	259	P	P	12 45 38.8	-0.2
WB0				IAmb	IAmb	12 45 43.6	
	comp=Z,5.1nm,1.1s						
WB2	Warramunga Arr	44.56	259	P	P	12 45 38.4	-0.7
WB2				IAmb	IAmb	12 45 57.8	
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	44.57	259	P	P	12 45 38.1	-1.1
WRAB				IAmb	IAmb	12 45 39.0	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	44.58	259	P	P	12 45 38.8	-0.5
	comp=Z,1.5nm,0.5s,baz=92,slow=7.1,SNR=63						
WRA				PcP	PcP	12 47 09.4	+0.5
	comp=Z,0.2nm,0.7s,baz=91,slow=3.6,SNR=1.9						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	44.58	259	P	P	12 45 38.2	-1.0
AS31	Alice Springs	44.79	254	P	P	12 45 40.6	-0.2
AS31				IAmb	IAmb	12 45 41.2	
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	44.79	254	P	P	12 45 40.6	-0.2
	comp=Z,7.4nm,0.6s,baz=86,slow=8.6,SNR=207						
ASAR				PcP	PcP	12 47 09.3	-0.4
	comp=Z,0.5nm,0.6s,baz=107,slow=3.7,SNR=5.7						
	comp=Z,7.4nm,0.6s						
ASAR	Alice Springs	44.79	254	P	P	12 45 40.2	-0.7
KNRA	Kununurra	50.38	264	P	P	12 46 22.6	0.0
KNRA				IAmb	IAmb	12 46 34.8	
	comp=Z,27nm,1.4s						
FITZ	Fitzroy Crossi	52.96	260	P	P	12 46 41.0	0.0
FITZ				IAmb	IAmb	12 46 42.0	
	comp=Z,15nm,1.4s						
MBWA	Marble Bar	58.05	256	P	P	12 47 15.9	-0.3
MBWA				IAmb	IAmb	12 47 34.6	
	comp=Z,23nm,1.3s						

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*SOF **09** 12:52:03.2, 41°.69N×23°.79E, h17km, MD2.9*
*ATH **09** 12:52:03.8, 41°.66N×23°.79E, h24km±1km, ML2.4/7, Error ellipse: s-maj=2.7km s-min=1.2km az=176.0*
*THE **09** 12:52:04.6, 41°.65N×23°.80E, h10km, ML2.2/9, Error ellipse: s-maj=1.2km s-min=0.7km az=165.0*
*SKO **09** 12:52:05.2, 41°.69N×23°.73E, h1km*
*BEO **09** 12:52:08.5±0.9, 41°.75N×23°.63E, h0km, ML2.2/5*
ISC 09 12:52:03.1±1.0, **41°.71N**±0°.02×**23°.77E**±0°.02, **h11**km±8km, **n41**, σ**0s.98**/72, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.12	195	P	Pg	12 52 07.4	+1.3
NVR	Nevrokopi	0.36	169	P	Pb	12 52 10.6	-1.0
NVR				S	Sb	12 52 15.8	-1.5
	288nm,0.1s						
KKB	Krupnik	0.54	288	P	Pg	12 52 14.0	+0.5
SRS	Serrai	0.60	193	P	Pb	12 52 15.4	-0.2
SRS				S	Sb	12 52 23.8	-0.4
SRS				AML	AML	12 52 24.5	
	comp=E,558µm,0.1s						
SRS				AML	AML	12 52 29.3	
	comp=N,578µm,0.2s						
SRS	Serrai	0.60	193	P	Pb	12 52 15.4	-0.2
SRS				S	Sb	12 52 23.8	-0.4
	comp=N,265nm,0.1s						
SRS	Serrai	0.60	193	*i* Pg	Pb	12 52 15.4	-0.2
SRS				*i* Sg	Sb	12 52 23.9	-0.2
RZN	Rozhen	0.71	91	P	Pb	12 52 17.3	-0.3
PLD	Plovdiv	0.80	60	*i* Sg	Sn	12 52 32.1	-0.2
KAVA	Kavala	0.90	141	P	Pb	12 52 20.5	-0.3
KAVA				S	Sb	12 52 32.4	-0.4
KAVA				AML	AML	12 52 36.5	
	comp=E,814µm,0.2s						
KAVA				AML	AML	12 52 37.2	
	comp=N,1140µm,0.2s						
KAVA	Kavala	0.90	141	P	Pb	12 52 20.5	-0.3
KAVA				S	Sb	12 52 32.4	-0.4
	comp=N,390nm,0.1s						
KOKK	Kokkinochori,	0.90	169	P	Pb	12 52 20.4	-0.4
KOKK				S	Sb	12 52 33.3	+0.5
KOKK	Kokkinochori,	0.90	169	P	Pb	12 52 20.4	-0.4
KOKK				S	Sb	12 52 33.3	+0.5
	comp=N,265nm,0.2s						
SOH	Sokhos	0.94	200	P	Pb	12 52 21.2	-0.1
SOH				S	Sb	12 52 34.0	+0.2
SOH				AML	AML	12 52 36.3	
	comp=E,395µm,0.4s						
SOH				AML	AML	12 52 37.7	
	comp=N,573µm,0.4s						
SOH	Sokhos	0.94	200	P	Pb	12 52 21.2	-0.1
SOH				S	Sb	12 52 34.0	+0.2
	comp=N,195nm,0.4s						
SOH	Sokhos	0.94	200	*i* Pg	Pb	12 52 21.2	-0.1
SOH				*i* Sg	Sb	12 52 34.0	+0.2
VAY	Valandovo	0.98	247	*e*Pg	Pn	12 52 24.9	+2.1
VAY				*e*Sg	Sn	12 52 37.7	+1.1
VAY	Valandovo	0.98	247	*i* Pg	Pn	12 52 23.4	+0.6
VAY				*i* Sg	Sg	12 52 35.0	+0.4
VAY				*e*Lg	Lg	12 52 36.4	
	comp=E,8.9nm,0.2s						
VTS	Vitosha	0.99	337	*e*Pg	Pg	12 52 22.5	+0.2
VTS				*e*Sg	Sn	12 52 38.8	+1.5
VTS	Vitosha	0.99	337	*i* Pg	Pg	12 52 22.5	+0.2
VTS	Vitosha	0.99	337	P	Pg	12 52 22.4	+0.2
STIP	Stip	1.19	270	*i* Pg	Pb	12 52 22.8	-2.8
STIP				*i* Sg	Sg	12 52 35.6	-5.6
STIP				*e*Lg	Lg	12 52 36.1	
	comp=N,80nm,0.2s						
HORT	Hortiatis	1.22	205	P	Pn	12 52 26.5	+0.4
HORT				S	Sn	12 52 43.1	+0.5
HORT				AML	AML	12 52 44.2	
	comp=E,178µm,0.3s						
HORT				AML	AML	12 52 45.1	
	comp=N,180µm,0.4s						
HORT	Hortiatis	1.22	205	P	Pn	12 52 26.5	+0.4
HORT				S	Sn	12 52 43.1	+0.5
	comp=N,90nm,0.3s						
THE	Thessaloniki	1.23	210	P	Pg	12 52 26.6	-0.1
THE				S	Sg	12 52 42.6	-0.1
THE	Thessaloniki	1.23	210	P	Pg	12 52 26.6	-0.1
THE				S	Sn	12 52 43.4	+0.5
	comp=N,82nm,0.3s						
THE	Thessaloniki	1.23	210	*i* Pg	Pg	12 52 26.9	+0.1
THE				*i* Sg	Sn	12 52 43.4	+0.5
KDZ	Kurdzhali	1.23	92	P	Pb	12 52 25.8	-0.6
BOSS	Bosilegrad	1.24	310	*e*Pg	Pg	12 52 27.9	+1.0
BOSS				*e*Sg	Sn	12 52 44.3	+1.1
GRG	Griva	1.27	234	*i* Pg	Pg	12 52 27.8	+0.3
THAS	Thassos island	1.31	147	P	Pb	12 52 27.4	-0.3
THAS				S	Sn	12 52 45.0	+0.2
THAS				AML	AML	12 52 47.6	
	comp=N,233µm,0.4s						
THAS				AML	AML	12 52 49.7	
	comp=E,262µm,0.2s						
THAS	Thassos island	1.31	147	P	Pb	12 52 27.4	-0.3
THAS				S	Sn	12 52 45.0	+0.2
	comp=E,120nm,0.3s						
PLG	Polygyros	1.35	191	P	Pg	12 52 28.9	-0.1
PLG				S	Sn	12 52 47.2	+1.2
PLG				AML	AML	12 52 49.1	
	comp=E,184µm,0.3s						
PLG				AML	AML	12 52 49.7	
	comp=N,275µm,0.5s						
PLG	Polygyros	1.35	191	P	Pg	12 52 28.9	-0.1
PLG				S	Sn	12 52 46.8	+0.9
	comp=N,115nm,0.4s						
OUR	Ouranopolis	1.38	173	P	Pb	12 52 28.5	-0.4
OUR	Ouranopolis	1.38	173	P	Pb	12 52 28.5	-0.4
OUR				S	Sg	12 52 46.9	-0.5
RDO	Rodhopi	1.44	112	P	Pg	12 52 30.4	-0.4
RDO				S	Sg	12 52 48.9	-0.5
RDO				AML	AML	12 52 52.4	
	comp=N,365µm,0.2s						
RDO				AML	AML	12 52 53.4	
	comp=E,352µm,0.2s						
RDO	Rodhopi	1.44	112	P	Pg	12 52 30.1	-0.6
RDO				S	Sg	12 52 48.9	-0.5
PAIG	Paliouri	1.78	182	P	Pn	12 52 34.2	+0.4
BARS	Barje	1.83	308	*e*Pn	Pg	12 52 38.6	+0.5
BARS				*e*Sn	Sg	12 53 02.1	+0.3
ZAGS	Zajecar	2.39	332	*e*Pn	Pg	12 52 49.1	+0.2
ZAGS				*e*Sn	Sb	12 53 16.8	+1.2
SELS	Selova	2.48	309	*e*Pn	Pg	12 52 49.6	-0.9
SELS				*e*Sn	Sb	12 53 18.5	+0.3

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*IDC **09** 12:56:31.3±5.0, 53°.90N×169°.13W, h144km±45km, mb3.3/8, mbtmp3.7/10, MS3.5/1, Error ellipse: s-maj=33.2km s-min=17.9km az=12.0*
*NEIC **09** 12:56:34.3±3.0, 53°.91N±0°.09×169°.1W±0°.1, h167km±9km, mb3.6/24, ML3.3/26(AEIC), Error ellipse: s-maj=14.1km s-min=7.5km az=153.0*
*AEIC **09** 12:56:35±3.6, 53°.68N±0°.09×169°.0W±0°.1, h180km±6km, Error ellipse: s-maj=13.5km s-min=7.7km az=153.0*
ISC 09 12:56:33.1±0.7, **53°.96N**±0°.08×**169°.11W**±0°.05, **h150**km, **n103**, σ**2s.17**/109, **mb3.6**/8, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	0.90	127		Pn	12 57 00.1	+3.1
OKFG					Sn	12 57 20.9	+5.6
NIKH	Nikolski High	1.00	171		Pn	12 57 00.1	+2.2
NIKH					Sn	12 57 20.0	+3.2
NIKH	Nikolski High	1.00	171	P	Pn	12 57 00.1	+2.2
	baz=354						
NIKH				S	Sn	12 57 20.0	+3.2
	baz=354						
MGOD	Makushin Gods	1.33	96		Pn	12 57 04.2	+3.2
MSW	Makushin Switc	1.37	91		Pn	12 57 04.5	+3.1
MTBL	Makushin Table	1.43	89		Pn	12 57 05.4	+3.3
UNV	Unalaska Valle	1.54	93		Pn	12 57 06.1	+3.0
UNV					Sn	12 57 30.6	+4.6
UNV	Unalaska Valle	1.54	93	P	Pn	12 57 06.1	+3.0
	baz=264						
UNV				S	Sn	12 57 30.6	+4.6
	baz=264						
ZRO	Akutan Zero	1.85	85		Pn	12 57 09.8	+3.3
AKBBA	Akutan Broad B	1.88	85		Pn	12 57 10.0	+3.2
AKUT	Akutan	1.97	84		Pn	12 57 11.8	+4.0
AKSA	Akutan Strait	2.02	84		Pn	12 57 12.0	+3.6
AKSA					Sn	12 57 40.4	+4.8
ISLZ	Isanotski Laza	3.25	74		Pn	12 57 26.8	+3.2
SPIA	Saint Paul Isl	3.29	349	Pn	Pn	12 57 25.9	+1.9
FALS	False Pass	3.44	73	Pn	Pn	12 57 29.1	+3.1
ATKA	Atka Island	3.54	242		Pn	12 57 29.5	+2.2
GSTR	Great Sitkin T	4.59	249	Pn	Pn	12 57 43.9	+2.7
GSMY	Great Sitkin M	4.62	248		Pn	12 57 43.8	+2.4
GSTD	Great Sitkin T	4.66	249		Pn	12 57 43.6	+1.6
ADK	Adak	5.04	249	Pn	Pn	12 57 48.7	+1.8
SDPT	Sand Point	5.20	71		Pn	12 57 50.4	+1.4
SDPT	Sand Point	5.20	71	P	Pn	12 57 50.4	+1.4
	baz=255						
KIWB	Kanaga Island	5.31	250		Pn	12 57 52.6	+2.1
CNBA	Chernabura Isl	5.63	77	Pn	Pn	12 57 55.3	+0.5
TAFP	Tanaga Falls P	5.75	253		Pn	12 57 58.6	+2.1
CHIR	Chirikof Islan	8.00	71	Pn	Pn	12 58 26.8	+0.5
P18K	Big Mountain,	9.37	49	Pn	Pn	12 58 47.3	+2.7
OHAK	Old Harbor	9.53	64	Pn	Pn	12 58 45.3	-1.4
O18K	Koktuh Hills	9.61	47	Pn	Pn	12 58 50.3	+2.5
N18K	Kilae Creek	9.81	41	Pn	Pn	12 58 53.9	+3.5
Q19K	Cape Douglas,	9.89	54	Pn	Pn	12 58 51.8	+0.3
KDAK	Kodiak Island	10.04	61	P	Pn	12 58 52.2	-1.2
	3.6nm,0.4s,baz=215,slow=2.2,SNR=44						
KDAK				S	Sn	13 00 39.1	-5.3
	9.0nm,1.0s,baz=90,slow=14,SNR=2.0						
N19K	Bonanza Creek	10.44	43	Pn	Pn	12 59 02.2	+3.4
L19K	White Mountain	11.15	37	Pn	Pn	12 59 12.0	+4.0
CNPM	China Poot	11.27	53	Pn	Pn	12 59 10.2	+0.5
TTA	Tatalina	11.28	32	Pn	Pn	12 59 11.6	+1.8
BRLK	Bradley Lake	11.52	52	Pn	Pn	12 59 13.5	+0.5
M20K	Styx River	11.60	40	Pn	Pn	12 59 18.1	+4.1
K20K	Telida	12.21	34	Pn	Pn	12 59 20.8	-1.1
SEW	Seward	12.32	52	Pn	Pn	12 59 22.4	-0.8
O22K	Cooper Landing	12.34	50	Pn	Pn	12 59 23.3	-0.2
PPLA	Purkeypile	12.56	38	P	P	12 59 35.4	+3.3
RC01	Rabbit Creek A	12.59	48	Pn	Pn	12 59 27.1	+0.4
J20K	Nowinta River	12.77	31	Pn	Pn	12 59 30.4	+1.4
PMR	Palmer	13.07	46	Pn	Pn	12 59 34.4	+1.5
GHO	Glory Hole Cre	13.24	46	Pn	Pn	12 59 34.8	-0.4
KNK	Knik Glacier	13.28	48	Pn	Pn	12 59 36.6	+0.9
KTH	Kantishna Hill	13.41	37	Pn	Pn	12 59 37.8	+0.4
SML	Sawmill	13.51	46	Pn	Pn	12 59 39.5	+0.9
TRF	Thorofare Moun	13.58	38		Pn	12 59 41.9	+2.3
BPAW	Bear Paw Mtn.	13.73	35	P	P	12 59 45.0	0.0
FID	Port Fidalgo	13.93	52	P	Pn	12 59 41.7	-2.1
SCM	Sheep Creek Mo	13.95	47	P	Pn	12 59 44.2	0.0
RND	Reindeer	14.09	40	P	Pn	12 59 48.1	+2.1
EYAK	Cordova Ski Ar	14.20	53	P	Pn	12 59 46.2	-1.1
H21K	Melozitna Rive	14.24	28	P	Pn	12 59 50.0	+2.2
KLU	Klutina	14.44	49	P	Pn	12 59 49.6	-0.7
DHY	Denali Highway	14.49	42	P	Pn	12 59 53.0	+1.9
M24K	Tolsona, Glenn	14.56	47	P	Pn	12 59 52.7	+0.9
RAGM	Ragged Mountai	14.67	54	P	Pn	12 59 54.5	+1.4
HMT	Hamilton	14.86	55	P	Pn	12 59 55.7	+0.3
BMRM	Bremner River	14.86	52	P	Pn	12 59 55.6	0.0
I23K	Minto, Yukon-K	14.94	34	P	P	12 59 59.0	+0.7
WRH	Wood River Hil	14.96	37	P	Pn	12 59 58.0	+1.2
N25K	Chitina, Valde	15.07	50	P	Pn	12 59 57.9	-0.3
N25K				IAmb	IAmb	13 00 01.0	
	comp=Z,2.3nm,0.8s						
CCB	Clear Creek Bu	15.17	37	P	Pn	12 59 59.6	+0.3
PAX	Paxson	15.22	44	P	Pn	12 59 58.9	-1.1
H23K	Yukon River	15.32	31	P	Pn	13 00 03.5	+2.2
GLB	Gilahina Butte	15.38	51	P	Pn	13 00 00.4	-1.5
VRDI	Verde Repeater	15.48	52	P	Pn	13 00 02.6	-0.7
VRDI				IAmb	IAmb	13 00 23.2	
	comp=Z,6.1nm,1.4s						
WAX	Waxell Ridge	15.56	55	P	Pn	13 00 04.4	+0.2
IL31		15.56	37	P	Pn	13 00 04.4	+0.3
ILAR	Eielson Array	15.56	37	P	Pn	13 00 03.8	-0.4
	comp=Z,0.2nm,0.4s,baz=230,slow=11,SNR=13						
ILAR	Eielson Array	15.56	37	P	Pn	13 00 04.0	-0.2
RIDG	Independent Ri	15.81	42	P	Pn	13 00 07.4	+0.1
RIDG				IAmb	IAmb	13 00 25.4	
	comp=Z,7.1nm,1.4s						
ISLE	Juniper Island	15.84	54	P	P	13 00 09.9	+1.4
H24K	Noodor Dome	15.86	33	P	Pn	13 00 09.1	+1.3
H24K				IAmb	IAmb	13 00 24.1	
	comp=Z,3.3nm,1.4s						
J25K	Salcha River,	16.03	39	P	Pn	13 00 09.6	-0.4
J25K				IAmb	IAmb	13 00 11.1	
	comp=Z,3.0nm,0.7s						
M26K	Nabesna, AK	16.05	48	P	Pn	13 00 09.4	-0.8
M26K				IAmb	IAmb	13 00 12.4	
	comp=Z,4.9nm,1.2s						
DOT	Dot Lake	16.08	43	P	Pn	13 00 08.8	-1.7
DOT				IAmb	IAmb	13 00 29.1	
	comp=Z,4.8nm,1.4s						
SCRK	Sand Creek	16.26	42	P	Pn	13 00 12.3	-0.5
SCRK				IAmb	IAmb	13 00 14.0	
	comp=Z,2.0nm,0.9s						
M27K	Edge Creek, AK	16.53	49	P	P	13 00 15.9	-0.1
M27K				IAmb	IAmb	13 00 18.3	
	comp=Z,3.0nm,1.0s						
L27K	Beaver Creek,	16.78	46	P	P	13 00 19.4	+0.6
BCAR	Beaver Creek A	16.80	46	P	P	13 00 19.4	+0.4
TOLK	Toolik Lake Re	17.32	24	P	P	13 00 24.5	0.0
TOLK				IAmb	IAmb	13 00 29.9	
	comp=Z,2.3nm,1.1s						
EGAK	Eagle	17.71	41	P	P	13 00 29.8	+0.9
EGAK				IAmb	IAmb	13 00 33.5	
	comp=Z,2.9nm,1.1s						
BMAR	Burnt Mountain	17.88	31	P	P	13 00 31.3	+0.6
HYT	Haines Junctio	18.22	55	P	P	13 00 34.0	-0.6
HYT				IAmb	IAmb	13 00 54.7	
	comp=Z,4.6nm,1.2s						
SEY	Seymchan	21.74	310	P	P	13 01 12.7	+0.4
	comp=Z,1.6nm,0.7s,baz=90,slow=14,SNR=7.0						
	comp=Z,1.6nm,0.7s						
MOBC	Moresby Island	21.92	77	P	P	13 01 12.3	-2.0
INK	Inuvik	21.94	35	P	P	13 01 13.2	-1.0
	comp=Z,1.5nm,0.5s,baz=245,slow=6.5,SNR=17						
	comp=Z,1.5nm,0.5s						
INK	Inuvik	21.94	35	P	P	13 01 12.7	-1.5
EDM	Edmonton	32.38	68	P	P	13 02 47.5	-0.6
NVAR	Mina Array Bea	37.56	93	P	P	13 03 33.0	+0.1
	comp=Z,0.4nm,0.7s,baz=293,slow=7.9,SNR=4.7						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	39.97	81	P	P	13 03 52.3	-0.7
	comp=Z,0.6nm,0.7s,baz=300,slow=2.9,SNR=5.5						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	39.97	81	P	P	13 03 52.2	-0.8
TXAR	Lajitas Array	52.58	90	P	P	13 05 30.1	-1.1
	comp=Z,0.5nm,0.5s,baz=304,slow=5.8,SNR=7.7						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	52.58	90	P	P	13 05 29.4	-1.9
LPIG	La Paz	52.60	100	LR	LR	13 23 52.7	
	comp=Z,43nm,18.7s,baz=188,slow=31						
FINES	FINESS Array B	64.31	352	P	P	13 06 50.5	-1.4
	comp=Z,0.5nm,0.4s,baz=15,slow=8.7,SNR=5.3						
	comp=Z,0.5nm,0.4s						
FINES	FINESS Array B	64.31	352	P	P	13 06 50.4	-1.5
WRA	Warramunga Arr	88.12	232	P	P	13 09 03.6	-2.9
	comp=Z,0.4nm,0.6s,baz=31,slow=5.5,SNR=5.4						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	91.54	230	P	P	13 09 20.6	-1.9
	comp=Z,0.6nm,0.8s,baz=25,slow=5.3,SNR=6.3						
	comp=Z,0.6nm,0.8s						

GUC 09 12:58:12.4±0.7, **29°.29S**×**71°.41W**, **h55**km±3km, **ML3.5**, **4D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.64	167	*e*P	Pn	12 58 25.9	+0.3
CO05				*i* S	Sn	12 58 35.3	0.0
CO05				IAML		12 58 36.3	
	comp=E,4µm,0.2s						
LCO	Las Campanas	0.68	66	*e*P	Pn	12 58 26.4	0.0
LCO				*e*S	Sn	12 58 36.9	+0.3
GO04	Tololo Observa	1.03	149	⇓*i*P	Pn	12 58 31.6	+0.7
GO04				*i* S	Sn	12 58 45.6	+1.1
AC04	Llanos de Chal	1.12	15	⇓*e*P	Pn	12 58 32.4	+0.5
AC04				*e*S	Sn	12 58 47.1	+0.7
AC04				IAML		12 58 50.2	
	comp=E,794nm,0.2s						
CO01	Juntas del Tor	1.33	121	⇓*i*P	Pn	12 58 36.8	+1.8
CO01				*e*S	Sn	12 58 54.4	+2.5
CO06	Fray Jorge	1.39	188	⇓*i*P	Pn	12 58 35.7	+0.1
CO02	Combarbal	1.94	170	*e*P	Pn	12 58 43.9	+0.8
CO02				*i* S	Sn	12 59 07.5	+1.1
CO02				IAML		12 59 17.2	
	comp=N,865nm,0.3s						
AC06	Mina Casimiro	2.14	26	*e*P	Pn	12 58 46.9	+1.1
AC06				*e*S	Sn	12 59 12.3	+1.1
AC02	Maricunga	3.17	40	IAML		12 59 56.8	
	comp=E,100nm,0.2s						
AC01	Pan de Azucar	3.21	13	IAML		12 59 55.5	
	comp=E,37nm,0.4s						
VA03	San Esteban	3.54	168	IAML		13 00 04.4	
	comp=N,148nm,0.4s						
ROCH	El Roble	3.69	175	*e*P	Pn	12 59 05.9	-1.1
MT02	Curacav	3.96	177	*e*P	Pn	12 59 11.4	+0.7
MT09	Talagante	4.49	176	*e*P	Pn	12 59 18.9	+1.0

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*IDC **09** 13:08:58.8±2.0, 7°.70S×128°.54E, h148km±23km, mb3.4/4, mbtmp4.1/9, MS2.5/2, Error ellipse: s-maj=27.7km s-min=20.2km az=96.0*
ISC 09 13:08:57.6±0.8, **7°.81S**±0°.06×**128°.66E**±0°.09, **h150**km, **n10**, σ**2s.81**/14, **mb3.7**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.47	244	P	Pn	13 10 18.3	+1.0
	73nm,0.4s,baz=129,slow=1.0,SNR=44						
BATI				S	Sn	13 11 16.2	-3.4
	92nm,0.4s,baz=75,slow=23,SNR=13						
SIJI	Sorong	7.37	21	P	Pn	13 10 43.0	+0.3
	7.7nm,0.3s,baz=58,slow=20,SNR=19						
SIJI				S	Sn	13 12 00.8	-4.3
	3.0nm,0.3s,baz=223,slow=22,SNR=2.1						
FITZ	Fitzroy Crossi	10.64	196	P	Pn	13 11 26.9	+0.9
	10nm,0.3s,baz=14,slow=11,SNR=203						
FITZ				S	Sn	13 13 21.8	-2.0
	7.5nm,0.8s,baz=20,slow=23,SNR=1.8						
FITZ				LR	LR	13 16 60.0	
	comp=Z,21nm,19.9s,baz=136,slow=45						
WRA	Warramunga Arr	13.26	156	P	Pn	13 12 03.0	+2.9
	2.1nm,0.5s,baz=320,slow=14,SNR=57						
WRA				S	Sn	13 14 23.5	-3.5
	7.4nm,0.5s,baz=332,slow=22,SNR=12						
ASAR	Alice Springs	16.55	163	P	Pn	13 12 45.6	+4.5
	2.6nm,0.7s,baz=333,slow=9.8,SNR=52						
ASAR				S	S	13 15 42.3	-2.8
	1.2nm,0.7s,baz=343,slow=27,SNR=4.8						
PMG	Port Moresby	18.36	96	LR	LR	13 20 36.7	
	comp=Z,20nm,21.3s,baz=295,slow=38						
CMAR	Chiang Mai Arr	39.25	312	P	P	13 16 12.4	+0.6
	0.6nm,0.6s,baz=131,slow=6.5,SNR=5.0						
	0.6nm,0.6s						
PETK	Petropavlovsk-	65.51	19	P	P	13 19 25.9	+1.3
	0.7nm,0.5s,baz=202,slow=7.3,SNR=4.2						
	0.7nm,0.5s						
MKAR	Makanchi Array	68.18	328	P	P	13 19 42.0	+0.3
	0.5nm,0.4s,baz=121,slow=7.8,SNR=17						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	71.73	334	P	P	13 20 02.9	-0.2
	0.8nm,0.5s,baz=142,slow=7.5,SNR=4.0						
	0.8nm,0.5s						

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*IDC **09** 13:34:49.0±1.1, 8°.11S×124°.05E, h191km±13km, mb3.3/7, mbtmp4.0/12, MS2.7/3, Error ellipse: s-maj=30.4km s-min=13.3km az=69.0*
*NEIC **09** 13:34:48.5±1.7, 8°.02S±0°.08×124°.09E±0°.09, h185km±7km, mb4.1/15, Error ellipse: s-maj=13.8km s-min=10.9km az=54.0*
*DJA **09** 13:34:49.7±0.3, 8°S±3°×12°4E±°, h188km±4km, M4.2/13, mb4.5/7, mB4.9/4, MLv4.0/13, Mw(mB)4.2/4*
ISC 09 13:34:49.1±0.5, **8°.25S**±0°.05×**124°.01E**±0°.06, **h200**km, **n50**, σ**1s.59**/56, **mb3.7**/11, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.79	258	Pn	Pn	13 35 25.3	-0.3
MMRI	Maumere	1.79	258	P	Pn	13 35 25.4	-0.1
MMRI				S	Sn	13 35 53.1	-0.7
BATI	Baumata	1.97	190	P	Pn	13 35 28.9	+1.5
	351nm,0.5s,baz=79,slow=2.3,SNR=134						
BATI				S	Sn	13 35 58.9	+1.6
	2µm,0.6s,baz=136,slow=20,SNR=20						
BATI				LR	LR	13 36 22.7	
	comp=Z,273nm,20.6s,baz=318,slow=44						
BATI	Baumata	1.97	190	P	Pn	13 35 28.7	+1.3
BATI				S	Sn	13 35 56.5	-0.8
EDFI	Ende, Flores	2.34	258	P	Pn	13 35 31.4	0.0
EDFI				S	Sn	13 36 03.7	-0.6
BBSI	Bau Bau	3.09	332	P	Pn	13 35 39.8	-0.1
BSSI	Bau Bau, Buton	4.07	301	P	Pn	13 35 51.3	-0.5
WBSI	Waikabubak, Su	4.76	253	P	Pn	13 35 59.4	-1.2
BKSI	Bulukumba	4.83	307	P	Pn	13 36 00.2	-1.2
KAPI	Kappang	5.31	307	P	Pn	13 36 07.4	-0.1
	5.2nm,0.3s,baz=129,slow=9.8,SNR=10						
KAPI	Kappang	5.31	307		Pn	13 36 05.7	-1.8
BNSI	Bone	5.45	314	P	Pn	13 36 09.1	-0.2
	0.2nm68nm,1.0s						
PLAI	Plampang	6.19	264	P	Pn	13 36 17.6	-1.2
	0.5nm1µm88nm,0.6s						
SAUI	Saumlaki	7.23	88	Pn	Pn	13 36 30.1	-2.2
LBMI	Labuha	8.33	25	P	Pn	13 36 49.4	+2.7
	10nm,1.2s						
MTN	Manton Dam	8.36	124		Pn	13 36 47.7	+0.6
KNRA	Kununurra	8.72	148		Pn	13 36 52.4	+0.6
FITZ	Fitzroy Crossi	9.92	171	P	Pn	13 37 07.3	0.0
	1.8nm,0.3s,baz=352,slow=10,SNR=13						
FITZ				S	Sn	13 38 54.8	-3.4
	62nm,0.6s,baz=92,slow=5.1,SNR=24						
FITZ				LR	LR	13 41 22.9	
	comp=Z,34nm,19.2s,baz=358,slow=39						
UGM	Wanagama	13.36	270	Pn	Pn	13 37 50.9	-0.3
MBWA	Marble Bar	13.48	197	Pn	P	13 37 54.5	-0.7
WB0	Warramunga Arr	15.24	140		P	13 38 15.3	+0.5
WB0				IAmb	IAmb	13 38 18.6	
	comp=Z,9.3nm,0.7s						
WRA	Warramunga Arr	15.34	140	P	P	13 38 16.3	+0.5
	comp=Z,7.6nm,0.6s,baz=317,slow=14,SNR=81						
WRA				S	S	13 40 59.0	-6.8
	comp=Z,4.1nm,0.6s,baz=310,slow=24,SNR=8.4						
WRA	Warramunga Arr	15.34	140		P	13 38 16.4	+0.6
WRAB	Tennant Creek	15.34	140		P	13 38 16.2	+0.5
WRAB				IAmb	IAmb	13 38 37.9	

	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	15.34	140		P	13 38 16.4	+0.5
WB2				IAmb	IAmb	13 38 38.4	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	15.48	140		P	13 38 18.2	+0.9
AS31	Alice Springs	18.02	149		Pn	13 38 48.8	+1.2
AS31				IAmb	IAmb	13 38 51.6	
	comp=Z,5.3nm,0.5s						
ASAR	Alice Springs	18.02	149	P	Pn	13 38 48.6	+1.1
	comp=Z,9.9nm,0.6s,baz=329,slow=12,SNR=122						
ASAR				S	S	13 42 03.5	+1.9
	comp=Z,2.9nm,0.7s,baz=318,slow=20,SNR=8.0						
ASAR				LR	LR	13 46 25.0	
	comp=Z,20nm,21.8s,baz=28,slow=38						
ASAR				ScP	ScP	13 46 26.9	-0.3
	comp=Z,0.3nm,0.5s,baz=325,slow=2.3,SNR=1.9						
ASAR	Alice Springs	18.02	149	Pn	Pn	13 38 49.0	+1.5
COEN	Coen	19.64	108	P	Pn	13 39 05.0	-1.7
CMAR	Chiang Mai Arr	36.28	317	P	P	13 41 34.1	+0.5
	comp=Z,0.7nm,0.7s,baz=140,slow=7.1,SNR=2.5						
	comp=Z,0.7nm,0.7s						
JCJ	Chichijima	39.31	26	P	P	13 41 58.5	-0.3
KSRS	Korea Array	45.61	4	P	P	13 42 49.1	-0.3
	comp=Z,0.2nm,0.3s,baz=181,slow=9.7,SNR=2.3						
	comp=Z,0.2nm,0.3s						
MJAR	Matsushiro Arr	46.51	16	P	P	13 42 54.7	-1.8
	comp=Z,2.2nm,0.8s,baz=200,slow=8.4,SNR=5.9						
	comp=Z,2.2nm,0.8s						
MJAR	Matsushiro Arr	46.51	16	IAmb	IAmb	13 43 00.8	
	comp=Z,4.9nm,1.4s						
SONM	Songino Array	57.98	346	P	P	13 44 20.7	-0.1
	comp=Z,0.6nm,0.4s,baz=173,slow=7.4,SNR=4.6						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	57.98	346	IAmb	IAmb	13 44 22.2	
	comp=Z,2.2nm,1.4s						
MK31	Makanchi Array	66.17	330	P	P	13 45 14.9	-0.3
MKAR	Makanchi Array	66.17	330	P	P	13 45 15.2	0.0
	comp=Z,0.5nm,0.5s,baz=127,slow=7.6,SNR=10						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	66.17	330	P	P	13 45 14.8	-0.4
PETK	Petropavlovsk-	67.50	21	P	P	13 45 24.3	+0.9
	comp=Z,2.7nm,0.9s,baz=228,slow=5.6,SNR=4.4						
	comp=Z,2.7nm,0.9s						
ZAA0	Zalesovo Array	70.22	337	P	P	13 45 39.1	-1.1
ZAA0				IAmb	IAmb	13 45 41.2	
	comp=Z,1.7nm,1.0s						
ZALV	Zalesovo Beam	70.22	337	P	P	13 45 39.1	-1.1
	comp=Z,0.5nm,0.4s,baz=145,slow=5.3,SNR=1.5						
	comp=Z,0.5nm,0.4s						
MAW	Mawson	71.65	201	P	P	13 45 52.6	+4.0
MAW				IAmb	IAmb	13 46 11.7	
	comp=Z,3.7nm,1.4s						
VNDA	Vanda	71.99	172	P	P	13 45 53.0	+2.6
VNDA				IAmb	IAmb	13 46 03.7	
	comp=Z,3.3nm,1.4s						
TIXI	Tiksi	79.80	2	P	P	13 46 33.7	-0.9
TIXI				IAmb	IAmb	13 46 35.1	
	comp=Z,2.3nm,0.7s						
ABKAR	Akbulak array	79.87	323	P	P	13 46 34.5	-0.9
NVAR	Mina Array Bea	116.71	51	PKP	PKiKP	13 53 10.4	+0.2
	comp=Z,0.2nm,0.6s,baz=272,slow=2.3,SNR=2.2						
TORD	Torodi Ar. Bea	123.20	280	PKP	PKiKP	13 53 23.0	-0.3
	comp=Z,0.3nm,0.7s,baz=100,slow=3.1,SNR=2.0						
CPUP	Villa Florida	145.60	178	PKPbc	PKiKP	13 54 06.9	-1.5
	comp=Z,2.9nm,0.7s,baz=155,slow=0.9,SNR=6.8						

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*IDC **09** 13:36:22.9±0.5, 16°.17N×60°.65W, h0^{km}, mb4.5/24, mbtmp4.5/26, ML4.1/2, MS3.7/43, Error ellipse: s-maj=12.7km s-min=12.4km az=90.0*

*TRN **09** 13:36:26.8, 16°.13N×60°.74W, h30^{km}, MD4.7*

TRN Felt Guadeloupe and Dominica, MMI III.

*NEIC **09** 13:36:27.3±1.2, 16°.14N±0°.04×60°.67W±0°.03, h24^{km}±3^{km}, mb4.9/402, Mwr4.4/40, Error ellipse: s-maj=5.6km s-min=4.5km az=161.0*

*NEIC **09** 13:36:27.5, 16°.13N×60°.68W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.68; M$_{\theta\theta}$5.25; M$_{\phi\phi}$-2.57; M$_{r\theta}$-1.51; M$_{\theta\phi}$0.51; M$_{\phi r}$-2.24; Fault plane solution: M$_0$5.31000×10^{15} NP1:ϕ_s52.72000°, δ68.30000°, λ-134.45000°. NP2:ϕ_s302.07000°, δ48.45000°, λ-29.60000°. Principal axes: T 5.6335, Plg12.0000°, Azm173.0000°; N -0.7149, Plg41.0000°, Azm73.0000°; P -4.9186, Plg47.0000°, Azm276.0000°;*

ISC 09 13:36:26.1±1.2**, 16°.18N**±0°.02×**60°.63W**±0°.04**, h20**^{km}±8^{km}**, n834, σ0^s.85**/857**, mb4.9**/209**, MS3.8**/40**, 5C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDSD	La Dsirade Is	0.44	288	Pg	Pb	13 36 36.1	+0.8
GDSD				Sg	Sb	13 36 41.9	+0.5
MAGL	Barre de l'ile	0.67	250		Pn	13 36 40.2	-0.3
MAGL				Sn	Sb	13 36 49.0	+1.0
MAGL	Barre de l'ile	0.67	250	⇓*i*P	Pn	13 36 40.2	-0.3
MAGL				*e*S	Sn	13 36 49.8	-0.6
ABD	La Joyeuse, An	0.88	290		Pb	13 36 42.8	+0.1
ABD				Sn	Sb	13 36 53.7	-0.2
ABD	La Joyeuse, An	0.88	290	*e*P	Pb	13 36 42.9	+0.1
ABD				*e*S	Sb	13 36 54.2	+0.2
MDVC	Dominica, Viel	0.94	233	*e*P	Pn	13 36 44.0	-0.1
MDVC				*e*S	Sn	13 36 56.6	-0.4
CBE	Ff, Capester	0.95	264		Pn	13 36 44.6	+0.3
CBE	Ff, Capester	0.95	264	*e*P	Pn	13 36 44.8	+0.4
CBE				*e*S	Sb	13 36 56.2	+0.1
TDBA	Terre de Bas,	1.02	252		Pn	13 36 45.4	0.0
TDBA	Terre de Bas,	1.02	252	*e*P	Pn	13 36 45.4	0.0
TDBA				*e*S	Sn	13 36 59.0	-0.1
DLPL	La Plaine	1.03	215		Pb	13 36 45.1	-0.2
DLPL	La Plaine	1.03	215	*e*P	Pb	13 36 45.1	-0.2
DLPL				*e*S	Sb	13 36 58.3	-0.1
DSLB	Salisbury	1.06	226	*e*P	Pb	13 36 45.7	-0.1
DSLB				*e*S	Sb	13 36 59.1	-0.1
GDHS	Morne Mazeau,	1.10	275		Pb	13 36 46.6	+0.1
MDN	Morne-Daniel	1.13	221	*e*P	Pn	13 36 46.6	-0.1
MDN				*e*S	Sb	13 37 00.9	-0.3
ANBD	Bethesda, Anti	1.39	309	⇑*i*P	Pn	13 36 50.4	0.0
ANBD				*e*S	Sn	13 37 08.0	-0.3
ILAM	Ilet Lapin Mar	1.42	190	Pn	Pn	13 36 50.6	-0.1
ILAM	Ilet Lapin Mar	1.42	190	*e*P	Pn	13 36 50.6	-0.1
ILAM				*e*S	Sn	13 37 08.7	-0.1
SVN	Savane Anatole	1.43	201		Pn	13 36 50.8	-0.1
SVN	Savane Anatole	1.43	201	*e*P	Pn	13 36 50.8	-0.1
SVN				*e*S	Sn	13 37 08.6	-0.5
BAMF	Morne Balai	1.45	200	*e*P	Pn	13 36 51.1	-0.1
CXM	Morne La Croix	1.46	201	*e*P	Pn	13 36 50.8	-0.7
CXM				*e*S	Sn	13 37 08.4	-1.6
BPA	Boggy Peak	1.46	306	*e*P	Pn	13 36 51.6	+0.2
BPA				*e*S	Sn	13 37 09.9	-0.1
GBMF	Grand Be	1.47	201	*e*P	Pn	13 36 51.4	-0.1
PCM	Pelee Case Pet	1.47	203	*e*P	Pn	13 36 51.0	-0.4
PCM	Pelee Case Pet	1.47	203	*e*P	Pn	13 36 51.6	+0.2
ANDO	Antigua, Disas	1.48	309	*e*P	Pn	13 36 51.7	+0.1
ANDO				*e*S	Sn	13 37 10.3	-0.1
PML	Morne Lenard	1.49	201	*e*P	Pn	13 36 51.6	-0.2
FDF	Fort de France	1.52	199		Pn	13 36 52.2	-0.1
FDF	Fort de France	1.52	199	⇑*i*P	Pn	13 36 52.2	-0.1
FDF				*e*S	Sn	13 37 10.6	-1.0
MLYT	Lee's Yard	1.59	290	*e*P	Pb	13 36 54.6	-0.3
MLYT				*e*S	Sn	13 37 13.5	+0.2
MBFL	Flemmings, Mon	1.62	291	*e*P	Pb	13 36 54.6	-0.8
MBFL				*e*S	Sn	13 37 14.4	+0.4
LPMF	Morne Lapointe	1.63	192	*e*P	Pn	13 36 53.5	-0.2
LPMF				*e*S	Sn	13 37 13.1	-0.9
MVM	Montagne Vaucl	1.64	189	*e*P	Pn	13 36 54.1	+0.3
MVM				*e*S	Sn	13 37 13.8	-0.5
ZAM	Aeronautique	1.64	194	*e*P	Pn	13 36 53.8	-0.1
ZAM				*e*S	Sn	13 37 13.7	-0.7
TRMF	Trois Ilets	1.68	194	*e*P	Pn	13 36 54.4	0.0
TRMF				*e*S	Sn	13 37 14.5	-0.9
BIM	Bigot	1.71	195		Pn	13 36 55.1	+0.3
BIM	Bigot	1.71	195	⇑*i*P	Pn	13 36 55.0	+0.3
BIM				*e*S	Sn	13 37 16.3	+0.2
MPOM	Morne Pois Mar	1.74	187	Pn	Pn	13 36 55.1	-0.1
MPOM	Morne Pois Mar	1.74	187	⇑*i*P	Pn	13 36 55.0	-0.1
MPOM				*e*S	Sn	13 37 16.4	-0.3
ANWB	Willy Bob	1.85	323		Pn	13 36 56.6	-0.1
ANWB	Willy Bob	1.85	323	⇑*i*P	Pn	13 36 56.7	-0.1
ANWB				*e*S	Sn	13 37 20.3	+0.7
SLBI	Saint Lucia, B	2.17	189	*e*P	Pn	13 37 01.3	+0.2
SLBI				*e*S	Sn	13 37 27.2	-0.2
SLCP	Castries, St.	2.18	189	*e*P	Pn	13 37 02.1	+0.8
SLCP				*e*S	Sn	13 37 27.5	-0.3
SKOC	St. Kitts, UWI	2.30	299	*e*P	Pb	13 37 05.2	-1.8
SKOC				*e*S	Sn	13 37 30.4	-0.3
SKI	Saint Kitts	2.33	300	*e*P	Pb	13 37 05.6	-1.8
SKI				*e*S	Sn	13 37 32.0	+0.7
MCLT	Moule a Chique	2.47	187	Pn	Pn	13 37 05.0	-0.4
MCLT	Moule a Chique	2.47	187	*e*P	Pn	13 37 05.9	+0.6
MCLT				*e*S	Sn	13 37 35.7	+0.8
SEUS	St. Eustatius	2.61	300		Pn	13 37 08.1	+1.0
SEUS	St. Eustatius	2.61	300	*e*P	Pn	13 37 07.1	0.0
SEUS				*e*S	Sn	13 37 38.5	+0.2
SVV	Soufriere Volc	2.90	191	*e*P	Pn	13 37 13.5	+2.3
SVV				*e*S	Sn	13 37 46.2	+0.7
SVB	Belmont	2.95	192		Pn	13 37 12.9	+1.0
SVB	Belmont	2.95	192	*e*P	Pn	13 37 13.2	+1.3
SVB				*e*S	Sn	13 37 47.0	+0.2
SMRT	St. Maarten	2.99	309	Pn	Pn	13 37 13.3	+0.8
SMRT	St. Maarten	2.99	309	*e*P	Pn	13 37 13.2	+0.8
SMRT				*e*S	Sn	13 37 46.0	-1.7
BBGH	Gun Hill	3.19	161	Pn	Pn	13 37 15.1	-0.1
BBGH	Gun Hill	3.19	161	*e*P	Pn	13 37 17.7	+2.5
BBSP	Saint Philip	3.26	160	*e*P	Pn	13 37 18.6	+2.5
GCMP	Grenada, Carri	3.75	192	*e*P	Pn	13 37 23.7	+0.9
GCMP				*e*S	Sn	13 38 06.1	-0.4
GRGR	Grenville	4.14	194	Pn	Pn	13 37 29.7	+1.4
GRGR	Grenville	4.14	194	*e*P	Pn	13 37 29.4	+1.2
GRGR	Grenville	4.14	194	*e*S	Sn	13 38 15.2	-1.0
GRFF	Grenada Fort F	4.24	195	*e*P	Pn	13 37 30.6	+0.9
CDVI	St. Croix	4.26	292	Pn	Pn	13 37 32.1	+2.2
STVI	Saint Thomas	4.67	298	Pn	Pn	13 37 36.5	+1.1
TOSP	Speyside	4.85	179	Pn	Pn	13 37 38.5	+0.5
TOSP	Speyside	4.85	179	*e*P	Pn	13 37 40.3	+2.3
TOSP	Speyside	4.85	179	*e*S	Sn	13 38 33.2	-0.4
CUPR	Culebra, Puert	4.93	296	Pn	Pn	13 37 40.8	+1.7
MTP	Monte Pirata	5.08	293	Pn	Pn	13 37 42.8	+1.7
CBYP	Canovanas	5.41	293		Pn	13 37 47.8	+1.9
PDPR	Patillas Dam,	5.47	290		Pn	13 37 48.2	+1.6
TRN	Trinidad (W)	5.55	188	*e*P	Pn	13 37 49.3	+1.7
TRN	Trinidad (W)	5.55	188	*e*S	Sn	13 38 48.2	-2.7
SJG	San Juan	5.62	291	Pn	Pn	13 37 49.1	+0.5
	25nm,0.3s,baz=126,slow=14,SNR=26						
SJG				Sn	Sn	13 38 52.2	-0.4
	9.2nm,0.3s,baz=3.4,slow=21,SNR=1.6						
SJG				LR	LR	13 40 11.0	
	comp=Z,1μm,21.8s,baz=104,slow=41						
	106nm,0.5s						
SJG	San Juan	5.62	291		Pn	13 37 50.2	+1.6
GCPR	Guaynabo City	5.63	293		Pn	13 37 50.5	+1.8
ICMP	Isla Caja de M	5.89	288		Pn	13 37 53.2	+0.8
CELP	Cerrillos	6.00	289	Pn	Pn	13 37 55.0	+1.2
OBIP	Obispado Ponce	6.01	289		Pn	13 37 55.0	+1.0
EMPR	Esperanza - Ma	6.08	293		Pn	13 37 56.3	+1.4
AOPR	Arecibo Observ	6.24	291		Pn	13 37 58.2	+1.1
MLPR	Magueyes Islan	6.39	287		Pn	13 37 59.7	+0.5
CRPR	Cabo Rojo, PR	6.46	287		Pn	13 38 00.9	+0.7
PRSN	Puerto Rico Se	6.55	289	Pn	Pn	13 38 02.0	+0.6
AGPR	Aguadilla, PR	6.60	291	Pn	Pn	13 38 02.4	+0.4
BIRV	Birongo	7.89	225	Pn	Pn	13 38 19.4	-0.4
DR12	Loma Pena Alta	8.75	289	Pn	Pn	13 38 32.9	+1.3
BAUV	El Baul	10.20	226		Pn	13 38 51.2	-0.3
SDDR	Presa de Saban	10.54	287	Pn	Pn	13 38 56.8	+0.6
SDDR	Presa de Saban	10.54	287	*e*P	Pn	13 38 58.6	+2.4
JAKH	Jacmel	11.55	282	Pn	Pn	13 39 10.4	+0.5
URIC	Uribia, Colomb	11.89	249	Pn	Pn	13 39 12.0	-2.7
SDV	Santo Domingo	12.16	235	Pn	Pn	13 39 18.7	+0.2
	3.1nm,0.3s,baz=49,slow=8.4,SNR=2.7						
SDV				Sn	Sn	13 41 32.0	-1.7
	1.3nm,0.3s,baz=326,slow=9.1,SNR=1.4						
SDV				LR	LR	13 44 18.9	
	comp=Z,290nm,21.3s,baz=58,slow=39						
	7.9nm,0.4s						
SDV	Santo Domingo	12.16	235		Pn	13 39 18.9	+0.4
MDP	Montagnes des	13.51	144	Pn	Pn	13 39 32.6	-4.2
	2.4nm,0.3s,baz=328,slow=17,SNR=13						
MDP				Sn	Sn	13 41 54.2	-12
	3.1nm,0.3s,baz=80,slow=18,SNR=8.0						
MDP				LR	LR	13 45 40.7	
	comp=Z,214nm,19.9s,baz=324,slow=41						
BOAV	Boa Vista	13.70	180	*e*P	Pn	13 39 37.2	-2.1
GTBY	Guantanamo Bay	14.27	287	Pn	Pn	13 39 48.0	+0.8
TAMC	Tame, Arauca	14.61	230	*e*P	P	13 39 59.6	+1.5
TAMC	Tame, Arauca	14.61	230	*e*P	P	13 40 00.0	+1.9
OCAC	Ocana	14.70	239	Pn	Pn	13 39 52.2	-0.9
OCAC	Ocana	14.70	239	*e*P	Pn	13 39 55.4	+2.3
PAMC	Pamplona, Colo	14.72	235	*e*P	P	13 40 00.0	+0.2
SMLC	San Martn de	15.03	242	*e*P	Pn	13 39 56.2	-1.3
SJCC	San Jacinto, C	15.49	248	Pn	Pn	13 40 02.4	-1.2
SJCC				P	P	13 40 07.1	-0.8
SJCC				IAmb	IAmb	13 40 08.2	
	comp=Z,56nm,0.6s						
SJCC	San Jacinto, C	15.49	248	*e*P	P	13 40 06.1	-1.8
BARC	Barichara	15.55	234	*e*P	P	13 40 09.9	+1.0
RUSC	La Rusia	15.92	231	*e*P	P	13 40 14.1	+0.9
MTDJ	Mount Denham	16.28	280	P	P	13 40 16.1	-0.7
MTDJ				IAmb	IAmb	13 40 17.7	
	comp=Z,193nm,1.3s						
ZARC	Zaragoza, Cauc	16.38	240	P	P	13 40 17.1	-0.6
ZARC	Zaragoza, Cauc	16.38	240	*e*P	P	13 40 16.9	-0.8
PTBC	PUERTO BERRIO,	16.59	236	*e*P	Pn	13 40 16.4	-1.3
UREC	San Jos de Ur	16.80	242	*e*P	P	13 40 22.5	0.0
SPBC	San Pablo de B	16.83	233	*e*P	P	13 40 23.7	+0.8
CHIC	Chingaza	17.24	230	*e*P	P	13 40 29.2	+1.5
NORC	Norcasia	17.50	235	*e*P	P	13 40 31.7	+1.4
ROSC	El Rosal	17.54	232	P	P	13 40 33.0	+2.0
	comp=Z,29nm,0.4s,baz=56,slow=15,SNR=7.7						
ROSC				S	S	13 43 56.2	+3.4
	comp=Z,12nm,0.5s,baz=271,slow=24,SNR=1.9						
ROSC				LR	LR	13 48 51.6	
	comp=Z,222nm,18.4s,baz=42,slow=43						
ROSC	El Rosal	17.54	232	*e*P	P	13 40 33.2	+2.2
VILC	Villavicencio,	17.57	228	*e*P	P	13 40 34.1	+3.0
HELC	Santa Helena	17.66	237	*e*P	P	13 40 32.8	+0.6
CBOC	Ciudad Bolivar	18.23	238	*e*P	P	13 40 38.9	+0.4
MCPB	Macapa, AP	18.48	152	*e*P	P	13 40 38.8	-2.2
ANIL	Santa Ana	18.59	233	*e*P	Pn	13 40 47.7	+5.0
PRAC	Prado	18.70	230	*e*P	Pn	13 40 44.3	+0.3
ORTC	Ortega, Tolima	18.84	231	*e*P	Pn	13 40 45.4	-0.2
PLMC	San Jos del P	19.02	236	*e*P	P	13 40 47.3	+0.4
PTAC	Punta Ardita,	19.05	244	*e*P	Pn	13 40 50.8	+2.6
MACC	Macarena, Meta	19.08	224	*e*P	P	13 40 47.3	-0.3
MACA	Manacapuru-AM	19.22	180	*e*P	Pn	13 40 49.7	-0.4
YOTC	Yotoco, Valle	19.63	234	*e*P	P	13 40 52.0	-1.8
BCIP	Isla Barro Col	19.98	252	P	P	13 40 57.6	+0.1
BCIP				IAmb	IAmb	13 41 12.8	
	comp=Z,63nm,1.1s						
BCIP	Isla Barro Col	19.98	252	*e*P	P	13 40 57.1	-0.4
MARP	Paez Belalcaza	20.08	230	*e*P	P	13 40 58.4	-0.4
PRVC	Isla de Provid	20.24	265	P	P	13 40 59.8	-0.5
PCON	Cinco Dias	20.75	230	*e*P	P	13 41 06.8	+0.4
AZU	Azuero	20.93	249	*e*P	P	13 41 08.5	+0.7
ITTB	Itaituba	20.98	166	*e*P	Pn	13 41 09.9	-0.9
SOTA	Rioblanco	21.03	230	*e*P	P	13 41 10.6	+1.2
CACAO	El Cacao, Vera	21.65	248	*e*P	P	13 41 17.9	+2.4
SOR	Soroa	22.09	291	P	P	13 41 18.6	-1.6
GCUF	Volcan Galeras	22.19	230	*e*P	P	13 41 20.5	-1.3
TMAB	Tom-Au,PA,Br	22.20	145	*e*P	P	13 41 22.9	+1.4
DWPF	Disney Wildern	22.59	305	P	P	13 41 26.0	+0.4
DWPF	Disney Wildern	22.59	305	P	P	13 41 25.6	+0.1
	baz=118						
BATAN	Batan	22.95	258	P	P	13 41 28.5	-0.9
SRBA	San Rafael, Bu	23.21	255	P	P	13 41 32.7	+0.5
SRBA				IAmb	IAmb	13 41 35.1	
	comp=Z,27nm,0.8s						
PEZE	Perez Zeledon,	23.46	256	P	P	13 41 34.1	-0.5
PEZE				IAmb	IAmb	13 41 38.1	
	comp=Z,34nm,1.0s						
RIMA	Rio Macho	23.51	257	P	P	13 41 35.9	+0.7
RIMA				IAmb	IAmb	13 41 38.0	
	comp=Z,34nm,0.8s						
Y60A	Bolivia	23.78	322	P	P	13 41 37.5	0.0
ACON	Acoyapa	24.17	263	P	P	13 41 40.2	-1.0
Y59A	Loris	24.17	321	P	P	13 41 41.5	+0.4
JACO	JACO, Garabito	24.29	257	P	P	13 41 41.2	-1.2
JACO				IAmb	IAmb	13 41 47.0	
	comp=Z,22nm,0.7s						
JTS	Las Juntas de	24.38	259	P	P	13 41 41.2	-2.1
JTS	Las Juntas de	24.38	259	*e*P	P	13 41 40.4	-2.9
BOAB	BOACO BROADBAN	24.54	265	P	P	13 41 44.2	-0.4
BOAB				IAmb	IAmb	13 41 47.0	
	comp=Z,31nm,0.9s						
PRPB	Parauapebas	24.65	153	*e*P	P	13 41 46.9	+1.2
MATN	Matagalpa	24.69	266	P	P	13 41 46.2	0.0
X58A	Rowland	24.84	321	P	P	13 41 47.0	-0.2
X58A				IAmb	IAmb	13 41 50.3	
	comp=Z,15nm,0.6s						
ORTG	Ortega, Santa	24.84	260	P	P	13 41 46.0	-1.5
ORTG				IAmb	IAmb	13 41 49.0	
	comp=Z,37nm,0.9s						
ROSB	Rosrio	25.01	138	*e*P	P	13 41 51.2	+2.3
255A	Hazlehurst	25.30	312	P	P	13 41 51.6	+0.2
255A				IAmb	IAmb	13 41 53.6	
	comp=Z,30nm,0.7s						
CNGN	Cerro Negro	25.51	265	P	P	13 41 52.3	-1.3
V58A	Windy Hill, Pi	25.56	323	P	P	13 41 53.5	-0.2
V58A				IAmb	IAmb	13 41 56.3	
	comp=Z,16nm,0.8s						
BIRD	Birdtown, Kers	25.59	320	P	P	13 41 53.6	-0.4
BIRD				IAmb	IAmb	13 41 56.6	
	comp=Z,19nm,0.8s						
W57A	Gilead	25.64	321	P	P	13 41 54.2	-0.2
W57A				IAmb	IAmb	13 41 57.1	
	comp=Z,21nm,0.8s						
CRIN	San Cristobal	25.81	266	P	P	13 41 55.8	-0.6
TIGA	Tifton	25.85	310	P	P	13 41 56.3	0.0
TIGA				IAmb	IAmb	13 42 00.1	
	comp=Z,36nm,0.8s						
TIGA	Tifton	25.85	310	P	P	13 41 56.6	+0.2
	baz=121						
JSC	Jenkinsville	25.86	318	P	P	13 41 56.4	-0.1
JSRW	J. Sargeant Re	26.29	328	P	P	13 42 00.2	-0.1
ETMB	Extrema	26.41	192	*e*P	P	13 42 02.3	+0.7
KMSC	Kings Mountain	26.45	319	P	P	13 42 01.8	-0.1
KMSC	Kings Mountain	26.45	319	P	P	13 42 02.0	+0.1
	baz=131						
T57A	Hurt	26.50	325	P	P	13 42 02.0	-0.3
PAULI	Pauline	26.55	318	P	P	13 42 02.9	+0.2
PAULI				IAmb	IAmb	13 42 03.8	
	comp=Z,16nm,0.7s						
CZSB	Cruzeiro do Su	26.59	208	*e*P	P	13 42 06.0	+2.8
GOGA	Godfrey	26.81	314	P	P	13 42 05.2	+0.1
GOGA	Godfrey	26.81	314	P	P	13 42 05.2	+0.1
	baz=124						
V55A	Taylorsville	26.84	321	P	P	13 42 05.6	+0.2
PAL	Palisades	27.28	338	P	P	13 42 11.2	+2.0
	baz=151						
152A	Waverly Hall	27.30	311	P	P	13 42 09.6	+0.1
152A				IAmb	IAmb	13 42 10.9	
	comp=Z,19nm,0.7s						
CLDB	Colider	27.30	170	*e*P	P	13 42 11.1	+1.5
BG3	Lake Jocassee	27.38	317	P	P	13 42 10.8	+0.5
V53A	Saluda	27.72	319	P	P	13 42 13.3	0.0
MTO3	Montecristo	27.76	270	P	P	13 42 13.9	-0.1
MTO3				IAmb	IAmb	13 42 16.4	
	comp=Z,12nm,0.6s						
PDRB	Porto dos Gac	27.88	172	*e*P	P	13 42 17.1	+2.3
NBPS	Pedro II - PI	27.89	136	*e*P	P	13 42 16.9	+1.9
R55A	Marlinton	27.91	326	P	P	13 42 15.5	+0.6
SMTB	Santa Maria do	28.03	152	*e*P	P	13 42 17.4	+1.3
S54A	Dingess, Beckl	28.22	324	P	P	13 42 18.1	+0.3
TKL	Tuckaleechee C	28.33	318	P	P	13 42 18.6	-0.1
	comp=Z,4.1nm,0.7s,baz=148,slow=11,SNR=6.0						
TKL				LR	LR	13 52 45.7	
	comp=Z,215nm,21.5s,baz=125,slow=35						
	comp=Z,4.1nm,0.7s						
TKL	Tuckaleechee C	28.33	318	P	P	13 42 18.2	-0.5
SSPA	Standing Stone	28.60	332	P	P	13 42 22.0	+0.9
SSPA				IAmb	IAmb	13 42 40.6	
	comp=Z,25nm,0.8s						
SSPA	Standing Stone	28.60	332	P	P	13 42 21.9	+0.9
	baz=144						
CPCT	Cooper Cave	28.70	316	P	P	13 42 22.0	+0.1
TZTN	Tazewell	28.73	319	P	P	13 42 22.7	+0.4
TZTN	Tazewell	28.73	319	P	P	13 42 22.6	+0.4
	baz=129						
V51A	Loudon	28.79	317	P	P	13 42 22.4	-0.4
Q54A	Coxs Mills	28.80	326	P	P	13 42 23.9	+1.1
M57A	Sunshine Farm,	28.84	334	P	P	13 42 24.3	+1.2
FPAL	Fort Paine	28.92	314	P	P	13 42 24.2	+0.2
VILB	Vilhena	28.95	179	*e*P	P	13 42 26.9	+2.6
R53A	Hurricane	28.95	324	P	P	13 42 24.8	+0.6
R53A				IAmb	IAmb	13 42 25.9	
	comp=Z,14nm,0.7s						
W50A	Signal Mountai	29.08	315	P	P	13 42 25.8	+0.4
ATAH	Atahualpa	29.08	219	P	P	13 42 26.7	+0.7
	comp=Z,8.2nm,0.7s,baz=39,slow=7.6,SNR=14						
ATAH				LR	LR	13 54 41.4	
	comp=Z,232nm,21.7s,baz=40,slow=38						
	comp=Z,8.2nm,0.7s						
BINY	Binghamton	29.10	336	P	P	13 42 26.5	+1.1
	baz=149						
LRAL	Lakeview Retre	29.14	310	P	P	13 42 26.0	+0.1
LRAL	Lakeview Retre	29.14	310	P	P	13 42 26.1	+0.2
	baz=119						
S51A	Beattyville	29.46	321	P	P	13 42 28.2	-0.5
SNDB	Serra Nova Dou	29.46	161	*e*P	P	13 42 30.0	+1.2
SWET	Sewanee	29.51	315	P	P	13 42 29.4	+0.2
LBNH	Lisbon	29.57	343	P	P	13 42 30.8	+1.2
	baz=158						
M55A	Ridgway	29.67	332	P	P	13 42 31.2	+0.7
M55A				IAmb	IAmb	13 42 32.7	
	comp=Z,17nm,0.9s						
L56A	Greenwood	29.68	334	P	P	13 42 31.8	+1.2
T50A	Nancy	29.84	319	P	P	13 42 32.3	+0.2
T50A				IAmb	IAmb	13 42 33.6	
	comp=Z,12nm,0.8s						
PKME	Peaks-Kenny Pk	29.90	348	P	P	13 42 33.7	+1.3
	baz=163						
O53A	New Philadelph	29.92	327	P	P	13 42 33.7	+0.9
	baz=138						
P52A	Corning	29.97	325	P	P	13 42 33.7	+0.5
	baz=135						
NBPB	Pedra_Branca-C	29.99	134	*e*P	P	13 42 34.6	+1.0
NCB	Newcomb	30.01	340	P	P	13 42 33.7	+0.1
Z47A	Carrollton	30.01	309	P	P	13 42 33.8	+0.2
U49A	Red Boiling Sp	30.14	317	P	P	13 42 35.0	+0.2
CCIG	Comitan	30.24	275	P	P	13 42 34.6	-1.4
F63A	Nahmakanta, Br	30.28	348	P	P	13 42 36.8	+0.9
F64A	Sherman	30.30	349	P	P	13 42 37.6	+1.6
F64A				IAmb	IAmb	13 42 46.7	
	comp=Z,32nm,1.3s						
WVNY	West Valley, N	30.35	333	P	P	13 42 37.7	+1.2
M53A	Wl Miller and	30.54	330	P	P	13 42 39.0	+0.8
	baz=140						
PEXB	Peixe	30.63	156	*e*P	P	13 42 41.7	+2.4
LONY	Lake Ozonia	30.71	340	P	P	13 42 40.3	+0.7
	baz=153						
ERPA	Erie	30.74	331	P	P	13 42 40.7	+0.7
	baz=142						
ACSO	Alum Creek Sta	30.85	325	P	P	13 42 41.5	+0.5
	baz=135						
PLAL	Pickwick Lake	30.88	312	P	P	13 42 41.5	+0.2
PLAL				IAmb	IAmb	13 42 42.7	
	comp=Z,19nm,0.8s						
J54A	Appleton	31.07	334	P	P	13 42 43.5	+0.7
J54A				IAmb	IAmb	13 42 44.5	
	comp=Z,18nm,0.8s						
T47A	Sharon Grove	31.29	317	P	P	13 42 44.9	+0.1
WVT	Waverly	31.30	315	P	P	13 42 45.0	-0.1
WVT				IAmb	IAmb	13 42 46.0	
	comp=Z,13nm,0.7s						
WVT	Waverly	31.30	315	P	P	13 42 44.9	-0.1
	baz=122						
P49A	Miami Univ. Ec	31.36	323	P	P	13 42 45.3	-0.1
P49A				IAmb	IAmb	13 42 46.5	
	comp=Z,13nm,0.6s						
P49A	Miami Univ. Ec	31.36	323	P	P	13 42 45.8	+0.4
	baz=131						
PTLB	Pontes e Lacer	31.46	177	*e*P	P	13 42 48.1	+1.7
O49A	Covington	31.57	324	P	P	13 42 47.6	+0.2
O49A				IAmb	IAmb	13 42 48.2	
	comp=Z,9.7nm,0.6s						
D62A	Allapoint, All	31.60	349	P	P	13 42 48.3	+0.8
D62A				IAmb	IAmb	13 43 04.3	
	comp=Z,27nm,1.4s						
OXF	Oxford	31.61	311	P	P	13 42 47.7	0.0
OXF	Oxford	31.61	311	P	P	13 42 47.4	-0.3
	baz=118						
P48A	Milroy	31.73	322	P	P	13 42 48.7	0.0
P48A				IAmb	IAmb	13 42 49.5	
	comp=Z,12nm,0.7s						
O48B	Farmland	32.09	323	P	P	13 42 52.3	+0.4
	baz=132						
SALV	Santo Antonio	32.24	171	*e*P	P	13 42 55.4	+2.0
NNA	Nana	32.26	211	LR	LR	13 57 23.4	
	comp=Z,158nm,18.4s,baz=24,slow=39						
LMQ	La Malbaie	32.29	348	P	P	13 42 54.6	+1.0
LMQ				IAmb	IAmb	13 43 07.2	

	comp=Z,29nm,1.1s						
SDBA	SAO DESIDERIO	32.38	150	*e*P	P	13 42 55.4	+0.7
SADO	Sadowa	32.50	335	P	P	13 42 55.8	+0.4
	comp=Z,17nm,0.6s,baz=177,slow=10,SNR=14						
SADO				LR	LR	13 54 28.6	
	comp=Z,232nm,21.6s,baz=161,slow=33						
	comp=Z,17nm,0.6s						
SADO	Sadowa	32.50	335	P	P	13 42 55.6	+0.2
SADO				IAmb	IAmb	13 42 56.5	
	comp=Z,18nm,0.7s						
342A	Flagon Creek P	32.57	303	P	P	13 42 56.9	+0.7
AAM	Ann Arbor	32.68	327	P	P	13 42 57.1	+0.1
AAM	Ann Arbor	32.68	327	P	P	13 42 57.5	+0.5
	baz=136						
PEBM	Pemiscott Bayo	32.71	313	P	P	13 42 56.8	-0.5
N47A	Urbana	32.81	324	P	P	13 42 58.4	+0.2
CMIG	Matias Romero	32.81	277	LR	LR	13 57 39.9	
	comp=Z,61nm,19.1s,baz=40,slow=39						
P46A	Rosedale	32.90	320	P	P	13 42 59.8	+0.8
P46A				IAmb	IAmb	13 43 00.8	
	comp=Z,19nm,0.8s						
DRLN	Deer Lake	33.09	4	P	P	13 43 01.1	+0.6
SIUC	Southern Illin	33.09	316	P	P	13 43 01.2	+0.5
LPAZ	La Paz	33.10	193	P	P	13 43 01.2	-0.3
	comp=Z,3.5nm,0.9s,baz=19,slow=6.7,SNR=11						
LPAZ				LR	LR	13 57 25.3	
	comp=Z,230nm,20.6s,baz=36,slow=38						
	comp=Z,3.5nm,0.9s						
LPAZ	La Paz	33.10	193	P	P	13 43 00.8	-0.7
LPAZ	La Paz	33.10	193	*e*P	P	13 43 02.2	+0.6
CCAR	Cane Creek	33.10	308	P	P	13 43 01.2	+0.4
S44A	Carbondale	33.11	316	P	P	13 43 01.0	+0.2
SFIN	Lafayette	33.30	322	P	P	13 43 02.7	+0.2
SFIN				IAmb	IAmb	13 43 03.5	
	comp=Z,11nm,0.6s						
SFIN	Lafayette	33.30	322	P	P	13 43 03.1	+0.7
	baz=129						
NBPN	Ponto Novo - B	33.61	142	*e*P	P	13 43 06.6	+1.1
Q44A	Meyer Farm, Va	33.62	318	P	P	13 43 05.6	+0.3
Q44A				IAmb	IAmb	13 43 06.7	
	comp=Z,17nm,0.8s						
NBPV	Pedro Velho	33.66	130	*e*P	P	13 43 08.9	+3.1
W41B	Gary Mavity, V	33.99	310	P	P	13 43 08.2	-0.4
W41B				IAmb	IAmb	13 43 09.8	
	comp=Z,42nm,1.4s						
W41B	Gary Mavity, V	33.99	310	P	P	13 43 08.9	+0.3
	baz=116,SNR=8.3						
WLAR	White Oak Lake	34.03	307	P	P	13 43 09.0	+0.1
PP1B	Ponte de Pedra	34.04	170	*e*P	P	13 43 11.5	+2.4
FVM	French Village	34.05	315	P	P	13 43 08.9	-0.1
FVM				IAmb	IAmb	13 43 10.0	
	comp=Z,10.0nm,0.6s						
WHAR	Wooly Hollow	34.07	310	P	P	13 43 09.3	0.0
WHAR				IAmb	IAmb	13 43 10.3	
	comp=Z,14nm,1.0s						
X40A	Basin Creek Fa	34.14	308	P	P	13 43 10.1	+0.2
X40A				IAmb	IAmb	13 43 11.0	
	comp=Z,20nm,0.7s						
X40A	Basin Creek Fa	34.14	308	P	P	13 43 09.9	0.0
	baz=114,SNR=12						
FCAR	Ozark Folk Cen	34.22	311	P	P	13 43 10.2	-0.3
FCAR				IAmb	IAmb	13 43 11.3	
	comp=Z,20nm,1.0s						
P43A	Skaggs, Pawnee	34.36	319	P	P	13 43 12.0	+0.4
M44A	Midewin, Midew	34.49	322	P	P	13 43 12.3	-0.5
M44A				IAmb	IAmb	13 43 13.9	
	comp=Z,18nm,1.1s						
NATX	Nacogdoches	34.58	303	P	P	13 43 13.8	+0.1
NATX	Nacogdoches	34.58	303	P	P	13 43 13.6	-0.1
	baz=109						
CCM	Cathedral Cave	34.64	315	P	P	13 43 13.6	-0.5
CCM				IAmb	IAmb	13 43 14.9	
	comp=Z,19nm,0.7s						
CCM	Cathedral Cave	34.64	315	P	P	13 43 14.0	-0.2
	baz=121						
MIAR	Mount Ida	34.73	308	P	P	13 43 14.6	-0.4
MIAR	Mount Ida	34.73	308	P	P	13 43 14.5	-0.4
	baz=114						
HDIL	Hopedale	34.74	320	P	P	13 43 14.5	-0.5
HDIL	Hopedale	34.74	320	P	P	13 43 15.3	+0.3
	baz=126						
MGMO	Mountain Grove	34.90	313	P	P	13 43 16.0	-0.5
MGMO				IAmb	IAmb	13 43 17.3	
	comp=Z,9.9nm,0.9s						
L44A	Lake County Fo	34.91	323	P	P	13 43 16.8	+0.3
	baz=130						
U40A	Yellville	34.95	311	P	P	13 43 16.5	-0.5
U40A				IAmb	IAmb	13 43 17.7	
	comp=Z,13nm,0.8s						
U40A	Yellville	34.95	311	P	P	13 43 16.4	-0.5
	baz=117,SNR=10						
JANB	Januaria	34.97	152	*e*P	P	13 43 17.9	+0.7
GLMI	Grayling	34.99	330	P	P	13 43 17.4	+0.3
	baz=137						
W39A	Magazine	35.14	309	P	P	13 43 18.7	+0.1
W39A	Magazine	35.14	309	P	P	13 43 18.4	-0.1
	baz=114,SNR=19						
NBLA	Lagarto - SE	35.21	139	*e*P	P	13 43 20.3	+1.0
NBAN	Anadia - AL	35.22	135	*e*P	P	13 43 21.9	+2.5
Z38A	Mt. Pleasant	35.33	305	P	P	13 43 20.4	+0.2
R40A	Maddies Statio	35.45	315	P	P	13 43 20.5	-0.7
R40A				IAmb	IAmb	13 43 21.6	
	comp=Z,8.9nm,0.8s						
237A	Washetta, Mont	35.58	303	P	P	13 43 21.8	-0.6
HHAR	Hobbs	35.71	311	P	P	13 43 22.9	-0.5
HHAR				IAmb	IAmb	13 43 24.3	
	comp=Z,18nm,0.8s						
N41A	Harden Midland	35.80	319	P	P	13 43 23.6	-0.5
L42A	Oliver, Polo	35.83	322	P	P	13 43 24.2	-0.2
S39A	Bolivar	35.90	313	P	P	13 43 24.3	-0.7
S39A				IAmb	IAmb	13 43 25.5	
	comp=Z,15nm,0.9s						
P40A	Paris	35.93	317	P	P	13 43 24.9	-0.4
P40A				IAmb	IAmb	13 43 25.9	
	comp=Z,20nm,0.9s						
E46A	Sault Ste Mari	35.99	332	P	P	13 43 26.1	+0.5
E46A				IAmb	IAmb	13 43 27.5	
	comp=Z,23nm,0.8s						
IPMB	Ipameri, GO	36.08	160	*e*P	P	13 43 28.3	+1.6
X37A	Clayton	36.11	307	P	P	13 43 26.7	-0.1
X37A				IAmb	IAmb	13 43 27.9	
	comp=Z,16nm,0.8s						
GDU01	Guandu, BA	36.27	144	*e*P	P	13 43 29.4	+1.1
TLIG	Tlapa	36.30	278	P	P	13 43 28.2	-0.6
TLIG				IAmb	IAmb	13 43 29.4	
	comp=Z,17nm,0.6s						
735A	Kenedy	36.44	297	P	P	13 43 29.6	-0.1
I42A	Draeger Farm,	36.58	325	P	P	13 43 30.4	-0.3
I42A				IAmb	IAmb	13 43 31.6	
	comp=Z,9.1nm,0.8s						
435B	Jarrell	36.70	300	P	P	13 43 31.5	-0.4
	baz=105						
JFWS	Jewell Farm	36.72	323	P	P	13 43 31.8	-0.2
JFWS	Jewell Farm	36.72	323	P	P	13 43 31.8	-0.2
	baz=128						
AQDB	Aquidauana	36.74	172	*e*P	P	13 43 34.9	+2.6
L40A	Anamosa	36.80	321	P	P	13 43 31.9	-0.7
L40A				IAmb	IAmb	13 43 33.2	
	comp=Z,19nm,0.8s						
WHTX	Lake Whitney,	36.91	302	P	P	13 43 33.0	-0.8
WHTX				IAmb	IAmb	13 43 34.3	
	comp=Z,26nm,0.7s						
WHTX	Lake Whitney,	36.91	302	P	P	13 43 33.2	-0.6
	baz=107,SNR=6.1						
TUL1	Leonard	36.93	309	P	P	13 43 33.1	-0.7
TUL1	Leonard	36.93	309	P	P	13 43 33.4	-0.4
	baz=113,SNR=7.2						
P38A	Dawn	36.97	316	P	P	13 43 33.4	-0.8
P38A				IAmb	IAmb	13 43 34.8	
	comp=Z,15nm,0.7s						
PB08	IPOC Station P	37.05	193	P	P	13 43 33.9	-1.5
Z35A	Perchaven, San	37.15	304	P	P	13 43 35.0	-0.7
E43A	Lone Tree Farm	37.26	329	P	P	13 43 35.6	-0.9
N38A	Joes South For	37.37	318	P	P	13 43 36.5	-0.9
N38A				IAmb	IAmb	13 43 38.8	
	comp=Z,26nm,1.0s						
I40A	Norwalk	37.53	324	P	P	13 43 38.7	-0.2
I40A				IAmb	IAmb	13 43 40.0	
	comp=Z,22nm,1.0s						
CMC01	Camacan, BA	37.63	145	*e*P	P	13 43 41.7	+1.8
833A	Chaparral WMA,	37.70	295	P	P	13 43 39.0	-1.5
833A				IAmb	IAmb	13 43 40.8	
	comp=Z,21nm,0.8s						
833A	Chaparral WMA,	37.70	295	P	P	13 43 39.4	-1.1
	baz=100						
T35A	Sooner Cattle	37.86	310		P	13 43 41.2	-0.5
FNO	Franklin	37.91	307		P	13 43 41.5	-0.6
SCIA	State Center	37.95	319	P	P	13 43 42.3	-0.1
	baz=123						
X34A	Smith Ranch, M	38.02	306	P	P	13 43 42.8	-0.3
X34A				IAmb	IAmb	13 43 43.7	
	comp=Z,20nm,0.8s						
K38A	Parkersburg	38.08	320	P	P	13 43 42.9	-0.6
K38A				IAmb	IAmb	13 43 44.1	
	comp=Z,27nm,0.9s						
DIAM	Diamantina, MG	38.11	153	*e*P	P	13 43 46.0	+1.9
COWI	Conover	38.15	327	P	P	13 43 44.2	+0.1
JCT	Junction City	38.48	299	P	P	13 43 45.9	-1.2
JCT	Junction City	38.48	299	P	P	13 43 46.2	-0.9
	baz=103,SNR=10						
GUA01	Guaratinga, BA	38.49	147	*e*P	P	13 43 47.9	+0.7
D41A	Chassel	38.51	329	P	P	13 43 48.2	+1.1
D41A				IAmb	IAmb	13 43 49.1	
	comp=Z,15nm,0.8s						
PB07	IPOC Station P	38.75	194	P	P	13 43 47.4	-2.1
WMOK	Wichita Mounta	38.80	306	P	P	13 43 48.8	-0.9
WMOK				IAmb	IAmb	13 43 50.4	
	comp=Z,21nm,0.7s						
WMOK	Wichita Mounta	38.80	306	P	P	13 43 48.5	-1.2
	baz=109,SNR=10.0						
KSU1	Kansas State U	38.84	313	P	P	13 43 48.9	-1.0
KSU1				IAmb	IAmb	13 43 49.8	
	comp=Z,24nm,0.8s						
KSU1	Kansas State U	38.84	313	P	P	13 43 48.8	-1.1
	baz=116						
ABTX	Abilene, Hawle	38.87	302	P	P	13 43 49.5	-0.8
ABTX	Abilene, Hawle	38.87	302	P	P	13 43 49.5	-0.8
	baz=106,SNR=9.7						
SCHQ	Schefferville	38.87	354	P	P	13 43 50.7	+0.7
	comp=Z,4.1nm,0.4s,baz=169,slow=7.2,SNR=23						
SCHQ				LR	LR	13 58 24.4	
	comp=Z,103nm,20.0s,baz=160,slow=34						
	comp=Z,4.1nm,0.4s						
SCHQ	Schefferville	38.87	354	P	P	13 43 50.7	+0.7
LVC	Limon Verde	39.39	192	LR	LR	14 01 39.1	
	comp=Z,200nm,19.7s,baz=348,slow=38						
U32A	Winter Ranch,	39.52	308		P	13 43 55.4	-0.3
SPMN	Marine on St.	39.59	324	P	P	13 43 56.0	-0.1
SPMN	Marine on St.	39.59	324	P	P	13 43 55.4	-0.6
	baz=127						
SJMB	Sao Joao De Ma	39.59	150	*e*P	P	13 43 57.9	+1.6
R32A	Long Quarter,	40.05	311	P	P	13 44 00.0	-0.1
R32A				IAmb	IAmb	13 44 00.9	
	comp=Z,37nm,0.8s						
F36A	Milaca	40.37	324	P	P	13 44 02.1	-0.4
EYMN	Ely	40.58	328	P	P	13 44 04.2	-0.2
	baz=131						
FRTB	Fartura	40.74	164	*e*P	P	13 44 07.8	+2.0
BGNE	Belgrade	40.91	316	P	P	13 44 06.8	-0.4
BGNE	Belgrade	40.91	316	P	P	13 44 06.8	-0.4
	baz=117,SNR=8.9						
CBKS	Cedar Bluff	40.95	311	P	P	13 44 07.1	-0.5
CBKS				IAmb	IAmb	13 44 08.3	
	comp=Z,35nm,0.8s						
CBKS	Cedar Bluff	40.95	311	P	P	13 44 07.1	-0.5
	baz=112,SNR=7.2						
ECSD	EROS Data Cent	41.03	320	P	P	13 44 07.6	-0.4
ECSD	EROS Data Cent	41.03	320	P	P	13 44 07.7	-0.4
	baz=121,SNR=6.4						
AMTX	Amarillo	41.12	305	P	P	13 44 08.0	-1.0
AMTX				IAmb	IAmb	13 44 10.0	
	comp=Z,27nm,0.9s						
AMTX	Amarillo	41.12	305	P	P	13 44 08.5	-0.5
	baz=106						
TX32	Lajitas Array	41.57	296	P	P	13 44 11.9	-0.9
TXAR	Lajitas Array	41.57	296	P	P	13 44 11.9	-0.9
	comp=Z,2.8nm,0.5s,baz=120,slow=8.8,SNR=48						
TXAR				PcP	PcP	13 46 10.8	+0.8
	comp=Z,2.5nm,0.7s,baz=124,slow=5.9,SNR=8.7						
TXAR				LR	LR	14 03 34.9	
	comp=Z,42nm,20.9s,baz=98,slow=39						
	comp=Z,2.8nm,0.5s						
TXAR	Lajitas Array	41.57	296	P	P	13 44 11.6	-1.2
TX31	Lajitas Ar. Si	41.57	296	P	P	13 44 11.8	-1.0
TX31				IAmb	IAmb	13 44 15.6	
	comp=Z,14nm,0.6s						
MSTX	Muleshoe	41.75	303	P	P	13 44 13.3	-0.9
MSTX				IAmb	IAmb	13 44 14.5	
	comp=Z,36nm,0.8s						
MSTX	Muleshoe	41.75	303	P	P	13 44 13.3	-0.9
	baz=105,SNR=12						
K31A	O'Neill	41.86	317	P	P	13 44 14.3	-0.6
K31A				IAmb	IAmb	13 44 17.0	
	comp=Z,30nm,0.8s						
B35A	Bob, Littlefor	42.00	327	P	P	13 44 15.6	-0.3
CPUP	Villa Florida	42.38	176	P	P	13 44 18.3	-0.8
	comp=Z,4.7nm,0.8s,baz=356,slow=8.9,SNR=8.7						
	comp=Z,4.7nm,0.8s						
CPUP	Villa Florida	42.38	176	P	P	13 44 18.4	-0.7
SUSD	Miller	42.85	319	P	P	13 44 22.3	-0.6
	baz=119						
HPIG		43.03	292	P	P	13 44 24.1	-0.9
HPIG				IAmb	IAmb	13 44 25.4	
	comp=Z,26nm,0.6s						
AGMN	Agassiz Nation	43.10	326	P	P	13 44 24.2	-0.7
AGMN				IAmb	IAmb	13 44 25.3	
	comp=Z,15nm,0.6s						
AGMN	Agassiz Nation	43.10	326	P	P	13 44 24.5	-0.3
	baz=126,SNR=8.5						
KSCO	Kaye Shedlock'	43.12	310	P	P	13 44 24.8	-0.6
KSCO				IAmb	IAmb	13 44 26.1	
	comp=Z,32nm,0.9s						
KSCO	Kaye Shedlock'	43.12	310	P	P	13 44 25.1	-0.3
	baz=110						
OGNE	Ogallala	43.39	313	P	P	13 44 27.2	-0.2
OGNE				IAmb	IAmb	13 44 30.1	
	comp=Z,20nm,0.7s						
OGNE	Ogallala	43.39	313	P	P	13 44 27.1	-0.4
	baz=112						
MNTX	Cornudas Mount	43.41	299	P	P	13 44 27.1	-0.6
MNTX				IAmb	IAmb	13 44 28.6	
	comp=Z,14nm,0.7s						
MNTX	Cornudas Mount	43.41	299	P	P	13 44 27.3	-0.4
	baz=100,SNR=46						
AC02	Maricunga	43.55	191	P	P	13 44 28.7	-0.6
AC02				IAmb	IAmb	13 44 31.0	
	comp=Z,15nm,0.8s						
T25A	Trinidad	43.88	307	P	P	13 44 31.2	-0.4
T25A				IAmb	IAmb	13 44 32.4	
	comp=Z,25nm,1.0s						
T25A	Trinidad	43.88	307	P	P	13 44 31.5	-0.1
	baz=107,SNR=18						
ULM	Lac du Bonnet	44.27	328	P	P	13 44 33.5	-0.8
	comp=Z,10nm,0.6s,baz=130,slow=8.4,SNR=14						
ULM				LR	LR	14 02 29.8	
	comp=Z,73nm,21.1s,baz=116,slow=35						
	comp=Z,10nm,0.6s						
ULM	Lac du Bonnet	44.27	328	P	P	13 44 33.2	-1.1
ULM				IAmb	IAmb	13 44 34.4	
	comp=Z,12nm,0.7s						
SDCO	Great Sand Dun	44.88	308	P	P	13 44 38.9	-0.8
SDCO				IAmb	IAmb	13 44 40.4	
	comp=Z,10nm,0.8s						
SDCO	Great Sand Dun	44.88	308	P	P	13 44 39.6	-0.2
	baz=106,SNR=26						
BNM	Barren Site	44.91	302	P	P	13 44 39.6	-0.3
ANMO	Albuquerque	44.93	303	P	P	13 44 39.9	-0.1
	comp=Z,8.3nm,0.9s,baz=105,slow=8.1,SNR=16						
ANMO				LR	LR	14 06 56.3	
	comp=Z,53nm,19.0s,baz=102,slow=41						
	comp=Z,8.3nm,0.9s						
ANMO	Albuquerque	44.93	303	P	P	13 44 39.4	-0.7
ANMO	Albuquerque	44.93	303	P	P	13 44 40.0	-0.1
	baz=103						
Q24A	Divide	44.97	309	P	P	13 44 39.8	-0.6
	baz=108						
121A	Cookes Peak, D	45.56	300	P	P	13 44 46.0	+0.9
	baz=100						
ISCO	Idaho Springs	45.56	310	P	P	13 44 44.6	-0.5
ISCO				IAmb	IAmb	13 44 46.4	
	comp=Z,9.9nm,0.8s						
ISCO	Idaho Springs	45.56	310	P	P	13 44 45.5	+0.4
	baz=108,SNR=12						
S22A	4UR Ranch, Cre	45.89	307	P	P	13 44 47.3	-0.4
S22A	4UR Ranch, Cre	45.89	307	P	P	13 44 47.7	0.0
	baz=105,SNR=10						
PHWY	Pilot Hill	45.93	312	P	P	13 44 47.8	-0.2
PHWY				IAmb	IAmb	13 44 49.2	
	comp=Z,18nm,0.8s						
RSSD	Black Hills	45.98	317	P	P	13 44 48.2	0.0
RSSD	Black Hills	45.98	317	P	P	13 44 48.3	0.0
	baz=114						
N23A	Red Feather La	46.15	312	P	P	13 44 49.0	-0.7
N23A				IAmb	IAmb	13 44 52.5	
	comp=Z,8.5nm,0.8s						
N23A	Red Feather La	46.15	312	P	P	13 44 49.6	0.0
	baz=109						
SMCO	Snowmass	46.39	309	P	P	13 44 51.6	-0.2
319A	Douglas	46.65	298	P	P	13 44 53.8	+0.1
SLBS	Sierra La Lagu	46.78	287	P	P	13 44 55.0	+0.4
MVCO	Mesa Verde	47.05	306	P	P	13 44 57.9	+1.1
	baz=103						
LPIG	La Paz	47.11	288	LR	LR	14 06 39.7	
	comp=Z,46nm,21.1s,baz=80,slow=39						
K22A	Casper	47.13	314	P	P	13 44 57.2	0.0
K22A	Casper	47.13	314	P	P	13 44 57.4	+0.1
	baz=110,SNR=14						
RWWY	Rawlins	47.30	312	P	P	13 44 58.4	-0.4
PV15	Paradox Valley	47.31	308	P	P	13 44 58.9	+0.1
PV07	Paradox Valley	47.46	308	P	P	13 44 59.5	-0.4
PV07				IAmb	IAmb	13 45 01.0	
	comp=Z,11nm,0.7s						
PV13	Radium Mtn., P	47.52	307	P	P	13 45 00.3	-0.2
PV13				IAmb	IAmb	13 45 01.8	
	comp=Z,16nm,0.7s						
O20A	White River Ci	47.59	310	P	P	13 45 00.9	0.0
O20A	White River Ci	47.59	310	P	P	13 45 01.3	+0.3
	baz=106						
PV11	David Mesa, Pa	47.59	307	P	P	13 45 01.1	+0.1
PV11				IAmb	IAmb	13 45 02.1	
	comp=Z,15nm,0.7s						
W18A	Petrified Fore	47.60	303	P	P	13 45 01.2	+0.1
W18A	Petrified Fore	47.60	303	P	P	13 45 01.1	+0.1
	baz=100						
X18A	Snowflake	47.68	302	P	P	13 45 01.5	-0.1
FRB	Frobisher Bay	47.83	355	LR	LR	14 03 39.8	
	comp=Z,96nm,20.7s,baz=188,slow=34						
DGMT	Dagmar	47.93	322	P	P	13 45 03.7	+0.5
	baz=117						
TUC	Tucson	48.04	299	P	P	13 45 03.7	-0.7
TUC				IAmb	IAmb	13 45 05.7	
	comp=Z,12nm,0.9s						
TUC	Tucson	48.04	299	P	P	13 45 04.6	+0.2
	baz=97						
LAO	LASA Array	48.42	319	P	P	13 45 07.1	+0.1
LAO				IAmb	IAmb	13 45 08.1	
	comp=Z,14nm,0.9s						
LAO	LASA Array	48.42	319	P	P	13 45 07.5	+0.4
	baz=114						
RDMU	Red Mountain	48.69	310	P	P	13 45 09.2	-0.2
RDMU				IAmb	IAmb	13 45 10.4	
	comp=Z,8.6nm,0.9s						
P18A	Preston Nutter	48.95	309	P	P	13 45 11.6	+0.1
P18A				IAmb	IAmb	13 45 12.8	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	48.99	303	P	P	13 45 11.8	0.0
WUAZ	Wupatki	48.99	303	P	P	13 45 12.4	+0.6
	baz=100,SNR=16						
SRU	San Rafael Swe	49.04	308	P	P	13 45 11.9	-0.2
SRU				IAmb	IAmb	13 45 13.1	
	comp=Z,9.5nm,0.6s						
FCC	Fort Churchill	49.15	338	P	P	13 45 11.8	-0.5
FCC				IAmb	IAmb	13 45 13.0	
	comp=Z,8.0nm,0.7s						
P17A	Butcher Ranch,	49.29	308	P	P	13 45 13.6	-0.3
BW06	Boulder Array	49.29	313	P	P	13 45 13.8	-0.2
BW06	Boulder Array	49.29	313	P	P	13 45 14.1	+0.1
	baz=107,SNR=45						
PD31	Pinedale Array	49.29	313	P	P	13 45 13.8	-0.2
PDAR	Pinedale Array	49.29	313	P	P	13 45 14.1	+0.1
	comp=Z,23nm,0.7s,baz=115,slow=9.4,SNR=198						
PDAR				LR	LR	14 05 39.1	
	comp=Z,100nm,22.0s,baz=118,slow=36						
	comp=Z,23nm,0.7s						
PDAR	Pinedale Array	49.29	313	P	P	13 45 13.8	-0.2
Q16A	Castle Valley	49.49	308	P	P	13 45 15.4	-0.1
Q16A				IAmb	IAmb	13 45 17.9	
	comp=Z,8.3nm,0.8s						
TMUT	Trail Mountain	49.60	308	P	P	13 45 16.6	+0.1
TMUT				IAmb	IAmb	13 45 17.9	
	comp=Z,16nm,0.7s						
214A	Organ Pipe Nat	49.71	298	P	P	13 45 17.5	+0.3
	baz=96						
RLMT	Red Lodge	49.83	316	P	P	13 45 17.9	-0.2
RLMT				IAmb	IAmb	13 45 19.6	
	comp=Z,23nm,1.0s						
RLMT	Red Lodge	49.83	316	P	P	13 45 18.4	+0.3
	baz=109,SNR=16						
U15A	North Rim	49.88	304	P	P	13 45 19.0	+0.4
U15A				IAmb	IAmb	13 45 20.4	
	comp=Z,13nm,0.8s						
PKCU	Pink Cliffs	50.07	305	P	P	13 45 20.2	+0.1
PKCU				IAmb	IAmb	13 45 21.5	
	comp=Z,8.3nm,0.8s						
JLU	Jordanelle	50.08	310	P	P	13 45 20.3	+0.2
MTPU	Mount Pierson	50.09	306	P	P	13 45 20.2	-0.2
MTPU				IAmb	IAmb	13 45 22.0	
	comp=Z,20nm,1.2s						
MSU	Marysvale	50.17	307	P	P	13 45 21.1	+0.3
LOHW	Long Hollow	50.27	314	P	P	13 45 21.2	-0.2
LOHW				IAmb	IAmb	13 45 22.6	
	comp=Z,9.0nm,0.7s						
GCMT	Greycliff	50.32	317	P	P	13 45 21.9	+0.3
SNOW	Snow King Moun	50.33	313	P	P	13 45 22.1	+0.1
SNOW				IAmb	IAmb	13 45 24.0	
	comp=Z,14nm,0.7s						
REDW	Red Top Meadow	50.37	313	P	P	13 45 22.2	-0.1
REDW				IAmb	IAmb	13 45 24.2	
	comp=Z,28nm,1.4s						
AHID	Auburn Hatcher	50.38	312	P	P	13 45 22.2	-0.1
NLU	North Lily Min	50.40	309	P	P	13 45 22.5	+0.1
MOOW	Moose Ponds	50.41	314	P	P	13 45 21.9	-0.6
HWUT	Hardware Ranch	50.41	311	P	P	13 45 21.8	-0.7
HWUT				IAmb	IAmb	13 45 23.4	
	comp=Z,12nm,0.9s						
FLWY	Flagg Ranch	50.47	314	P	P	13 45 23.2	+0.3
FLWY				IAmb	IAmb	13 45 24.4	
	comp=Z,7.1nm,0.8s						
TPAW	Teton Pass	50.48	313	P	P	13 45 23.1	+0.1
TPAW				IAmb	IAmb	13 45 24.3	
	comp=Z,17nm,0.8s						
H17A	Grant Village	50.48	315	P	P	13 45 23.1	0.0
	baz=108						
113A	Mohawk Valley,	50.59	299	P	P	13 45 23.4	-0.3
YPP	Pitchstone Pla	50.60	314	P	P	13 45 23.8	-0.2
ECR	Eagle Creek	50.65	313	P	P	13 45 24.2	-0.1
SZCU	Shurtz Canyon	50.71	306	P	P	13 45 24.5	-0.4
SZCU				IAmb	IAmb	13 45 25.9	
	comp=Z,10.0nm,1.0s						
LCMT	Little Creek M	50.73	305	P	P	13 45 24.7	-0.2
BO04	La Punta	50.79	191	P	P	13 45 24.7	-0.4
BO04				IAmb	IAmb	13 45 27.1	
	comp=Z,9.3nm,0.6s						
YHH	Holmes Hill	50.79	315	P	P	13 45 25.3	-0.2
YHH				IAmb	IAmb	13 45 27.1	
	comp=Z,10nm,0.8s						
CCUT	Cedar City	50.91	305	P	P	13 45 26.5	+0.1
W13A	Hualapai Mount	50.96	302	P	P	13 45 27.3	+0.5
DUG	Dugway, Tooele	51.00	309	P	P	13 45 27.1	+0.2
DUG				IAmb	IAmb	13 45 28.4	
	comp=Z,16nm,0.9s						
DUG	Dugway, Tooele	51.00	309	P	P	13 45 26.9	0.0
	baz=102,SNR=12						
YHL	Hebgen Lake	51.03	315	P	P	13 45 27.9	+0.6
PDMCI	Parker Dam,Lak	51.07	301	P	P	13 45 27.5	+0.1
	baz=97						
EGMT	Eagleton	51.15	319	P	P	13 45 28.4	+0.6
EGMT				IAmb	IAmb	13 45 29.4	
	comp=Z,12nm,0.8s						
EGMT	Eagleton	51.15	319	P	P	13 45 28.1	+0.2
	baz=111,SNR=7.3						
DY2G	Dye2	51.15	7	*i*P	P	13 45 27.3	-0.3
DY2G				IAmb	IAmb	13 45 28.7	
	comp=Z,23nm,0.5s						
QLMT	Earthquake Lak	51.20	315	P	P	13 45 29.8	+1.4
SFJD	Kangerlussuaq	51.20	5	LR	LR	14 04 54.5	
	comp=Z,60nm,21.5s,baz=190,slow=33						
BGU	Big Grassy Mou	51.32	310	P	P	13 45 29.2	-0.1
BLYC	Blythe	51.33	300	P	P	13 45 29.4	+0.1
HVU	Hansel Valley	51.33	311	P	P	13 45 29.0	-0.4
HVU				IAmb	IAmb	13 45 30.3	
	comp=Z,17nm,0.8s						
PSUT	Pine Spring	51.47	307	P	P	13 45 31.1	+0.6
PSUT				IAmb	IAmb	13 45 32.5	
	comp=Z,18nm,0.9s						
GLA	Glamis	51.51	300	P	P	13 45 30.7	0.0

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          baz=95
H10N3 ASCENSION HYDR51.52 114   T        T        14 41 13.8
          baz=297,slow=75,SNR=711
H10N2 ASCENSION HYDR51.52 114   T        T        14 41 11.3
          baz=297,slow=75,SNR=1195
H10N1 ASCENSION HYDR51.54 114   T        T        14 41 15.2
          baz=297,slow=75,SNR=1115
BOZ   Bozeman (W)    51.56 316   P        P        13 45 30.9 -0.2
BOZ                              IAmb     IAmb     13 45 32.5
          comp=Z,8.8nm,0.8s
BOZ   Bozeman (W)    51.56 316   P        P        13 45 31.4 +0.4
          baz=108,SNR=14
IRM   Iron Mountain  51.88 301   P        P        13 45 34.0 +0.5
          baz=96,SNR=13
H10S3 ASCENSION HYDR51.90 115   T        T        14 41 31.3
          baz=295,slow=74,SNR=38
H10S2 ASCENSION HYDR51.91 115   T        T        14 41 32.2
          baz=285,slow=74,SNR=8.4
HRY   Holter Researc 52.03 317   P        P        13 45 34.6 +0.1
BC3   Big Chuckawall 52.09 300   P        P        13 45 35.3 +0.2
          baz=96,SNR=8.1
MCMT  McKenzie Canyo 52.16 315   P        P        13 45 36.0 +0.3
LRM   Limekiln Ridge 52.17 316   P        P        13 45 35.8 +0.1
SHPR  Sheep Range    52.18 304   P        P        13 45 35.5 -0.3
PRN   Pahroc Range   52.22 305   P        P        13 45 36.6 +0.5
SWSC  Sam W. Stewart 52.32 299   P        P        13 45 36.9 +0.2
          baz=95
GMRC  Granite Mounta 52.37 302   P        P        13 45 37.4 +0.2
          baz=96
YUH   Yuha Desert    52.40 299   P        P        13 45 37.6 +0.3
IKP   In-Ko-Pah, Jac 52.55 299   P        P        13 45 38.7 +0.2
          baz=94
BELC  Belle Mtn. Jos 52.57 301   P        P        13 45 39.0 +0.3
          baz=95
TUQ   Turquoise Moun 52.66 302   P        P        13 45 39.7 +0.3
          baz=97,SNR=5.7
R11A  Troy Canyon, C 52.78 306   P        P        13 45 40.1 -0.1
R11A  Troy Canyon, C 52.78 306   P        P        13 45 40.7 +0.5
          baz=99,SNR=8.7
MONP2 Monument Peak  52.83 299   P        P        13 45 41.3 +0.5
          baz=94,SNR=12
TPFO  Pinon Flats    52.92 300   P        P        13 45 41.8 +0.5
          baz=95
PFO   Pinyon Flats O 52.92 300   P        P        13 45 41.7 +0.4
          baz=95
ELK   Elko           52.93 309   LR       LR       14 08 24.3
          comp=Z,90nm,21.5s,baz=92,slow=36
ELK   Elko           52.93 309   P        P        13 45 40.9 -0.5
HLID  Hailey         52.93 313   P        P        13 45 41.4 +0.1
HLID                             IAmb     IAmb     13 45 42.8
          comp=Z,10.0nm,0.8s
HLID  Hailey         52.93 313   P        P        13 45 41.7 +0.4
          baz=104,SNR=17
HEC   Hector,Ludlow  52.93 302   P        P        13 45 41.8 +0.5
          baz=96
SHOC  Shoshone, Teco 53.00 303   P        P        13 45 42.0 +0.3
          baz=97
CBX   Cerro Bola     53.00 298   P        P        13 45 42.2 +0.3
MDT   Midelt         53.02  61   LR       LR       14 05 41.3
          comp=Z,38nm,18.1s,baz=351,slow=33
TPNV  Topopah Spring 53.10 304   P        P        13 45 43.0 +0.4
TPNV                             IAmb     IAmb     13 45 44.5
          comp=Z,12nm,0.8s
TPNV  Topopah Spring 53.10 304   P        P        13 45 43.3 +0.6
          baz=98,SNR=20
GWY   Greenwater Val 53.34 303   P        P        13 45 44.5 +0.1
GWY                              IAmb     IAmb     13 45 45.4
          comp=Z,6.8nm,0.7s
ILULI Ilulissat      53.35   4   P        P        13 45 44.1 +0.4
ILULI                            IAmb     IAmb     13 45 44.6
          comp=Z,12nm,0.7s
ILULI Ilulissat      53.35   4 i P        P        13 45 43.1 -0.6
ILULI                            IAmb     IAmb     13 45 44.7
          comp=Z,12nm,0.6s
GSC   Goldstone, Bar 53.36 302   P        P        13 45 44.9 +0.4
GSC   Goldstone, Bar 53.36 302   P        P        13 45 45.0 +0.5
          baz=96
MSO   Missoula       53.45 317   P        P        13 45 45.0  0.0
MSO   Missoula       53.45 317   P        P        13 45 45.0  0.0
          baz=106
QSM   Queen of Sheba 53.48 303   P        P        13 45 45.1 -0.2
QSM                              IAmb     IAmb     13 45 46.7
          comp=Z,13nm,1.2s
MURC  Murrieta       53.53 300   P        P        13 45 45.7  0.0
          baz=94
FURC  Furnace Creek, 53.53 304   P        P        13 45 45.9 +0.4
          baz=97
ELS   Elsinore Mount 53.73 300   P        P        13 45 46.9 -0.3
MFID  Camas Ranch    53.90 312   P        P        13 45 48.0 -0.3
JTMT  Jette          53.94 318   P        P        13 45 48.8 +0.2
JTMT                             IAmb     IAmb     13 45 51.3
          comp=Z,27nm,1.2s
BFSC  Mount Baldy Ra 53.97 301   P        P        13 45 49.0  0.0
          baz=95
MPMC  Manual Prospec 53.99 303   P        P        13 45 49.4 +0.2
          baz=96,SNR=7.0
TPH   Tonopah        54.02 305   P        P        13 45 49.7 +0.3
LRMC  Laurel Mtn Rad 54.09 302   P        P        13 45 49.6 -0.3
          baz=96
LCH   Last Change Ra 54.24 304   P        P        13 45 51.0  0.0
LCH                              IAmb     IAmb     13 45 52.4
          comp=Z,12nm,1.4s
EDW2  Edwards Air Fo 54.29 302   P        P        13 45 51.4 +0.1
          baz=95,SNR=6.6
ESDC  Sonseca Array  54.29  53   P        P        13 45 51.6 +0.4
          comp=Z,1.7nm,0.9s,baz=259,slow=9.6,SNR=7.3
          comp=Z,1.7nm,0.9s
CCAC  Calif City Air 54.33 302   P        P        13 45 52.0 +0.5
CCAC                             IAmb     IAmb     13 45 53.0
          comp=Z,14nm,0.7s
BMN   Battle Mountai 54.36 308   P        P        13 45 51.6 -0.2
BMN                              IAmb     IAmb     13 45 53.1
          comp=Z,19nm,0.9s
PLID  Pearl Lake     54.39 314   P        P        13 45 51.5 -0.5
PLID                             IAmb     IAmb     13 45 52.8
          comp=Z,11nm,0.8s
CWC   Cottonwood Cre 54.51 303   P        P        13 45 53.1 +0.2
          baz=96
ICESG Greenland Ices 54.51   9 i P        P        13 45 50.8 -1.9
ICESG                            IAmb     IAmb     13 45 53.0
          comp=Z,7.5nm,0.6s
SCI2  San Clemente I 54.62 299   P        P        13 45 52.9 -0.8
          baz=93
ISA   Isabella, Lake 54.75 302   P        P        13 45 54.9 +0.3
          baz=95
NV11  Mina Array Sit 54.79 306   P        P        13 45 54.6 -0.3
NV11                             IAmb     IAmb     13 45 56.3
          comp=Z,19nm,1.1s
KVN   Kaiserville    54.83 307   P        P        13 45 54.4 -0.9
NVAR  Mina Array Bea 54.91 306   P        P        13 45 56.0 +0.2
          comp=Z,6.3nm,0.8s,baz=99,slow=6.5,SNR=59
NVAR                             PcP      PcP      13 46 58.9 +1.1
          comp=Z,2.0nm,0.8s,baz=130,slow=4.0,SNR=4.0
NVAR                             LR       LR       14 10 08.2
          comp=Z,90nm,21.9s,baz=69,slow=37
          comp=Z,6.3nm,0.8s
NVAR  Mina Array Bea 54.91 306   P        P        13 45 55.4 -0.5
ARVC  Arvin          55.00 302   P        P        13 45 56.8 +0.5
          baz=94
LHV   Little Huntoon 55.04 306   P        P        13 45 56.4 -0.1
LHV                              IAmb     IAmb     13 45 57.8
          comp=Z,6.2nm,0.7s
RYN   Ryan           55.10 306   P        P        13 45 56.8 -0.4
EDM   Edmonton       55.17 324   P        P        13 45 56.5 -0.8
EDM                              IAmb     IAmb     13 45 57.2
          comp=Z,13nm,0.6s
TIC   Toumodi        55.18  93  eP        P        13 45 58.6 +0.7
MLAC  Mammoth, Mammo55.23 305   P        P        13 45 58.9 +0.6
          baz=96
BMO   Blue Mountains 55.24 314   P        P        13 45 57.3 -0.8
LIC   Lamto          55.28  94  eP        P        13 45 59.9 +1.3
          comp=Z,5.3nm,0.5s
BORG  Borgarnes      55.31  19   LR       LR       14 04 31.2
          comp=Z,56nm,21.8s,baz=192,slow=30
DBIC  Dimbokro       55.33  93   P        P        13 45 59.1 +0.1
          comp=Z,3.7nm,0.5s,baz=293,slow=6.5,SNR=9.4
DBIC                             LR       LR       14 08 01.8
          comp=Z,56nm,18.1s,baz=311,slow=34
          comp=Z,3.7nm,0.5s
DBIC  Dimbokro       55.33  93   P        P        13 45 59.4 +0.4
DBIC                             IAmb     IAmb     13 46 24.6
          comp=Z,14nm,1.4s
OMMB  Old Mammoth Mi 55.36 305   P        P        13 45 59.6 +0.3
OMMB                             IAmb     IAmb     13 46 00.8
          comp=Z,13nm,0.8s
MDPB  Devils Postpil 55.42 305   P        P        13 46 00.4 +0.7
MDPB                             IAmb     IAmb     13 46 01.2
          comp=Z,9.8nm,0.8s
KIC   Kosan Boka     55.52  93  eP        P        13 46 00.8 +0.4
          comp=Z,6.6nm,0.5s
YERR  Yerington      55.70 306   P        P        13 46 01.1 -0.5
J08A  Circle Bar Ran 55.78 312   P        P        13 46 01.4 -0.5
J08A                             IAmb     IAmb     13 46 02.7
          comp=Z,15nm,1.0s
PKM   Mcpherson Peak 55.78 301   P        P        13 46 02.5 +0.2
          baz=94
LC01  Cunco          55.79 191   P        P        13 46 01.2 -0.6
NEW   Newport        55.91 318   LR       LR       14 09 11.9
          comp=Z,104nm,21.9s,baz=99,slow=35
NEW   Newport        55.91 318   P        P        13 46 02.2 -0.6
NEW   Newport        55.91 318   P        P        13 46 02.7 -0.1
          baz=105,SNR=17
SMMC  Simmler        55.96 302   P        P        13 46 03.4  0.0
          baz=94,SNR=5.3
G08A  Pilot Rock     56.48 314   P        P        13 46 06.2 -0.8
CMB   Columbia Colle 56.49 305   P        P        13 46 06.8 -0.3
I07A  Izee           56.64 312   P        P        13 46 07.5 -0.6
I07A                             IAmb     IAmb     13 46 09.1
          comp=Z,13nm,0.8s
BEKR  Beckworth      56.66 307   P        P        13 46 07.7 -0.8
MOD   Modoc Plateau  56.88 310   P        P        13 46 09.2 -0.7
PLCA  Paso Flores    57.36 189   P        P        13 46 13.5 +0.5
          comp=Z,3.2nm,0.6s,baz=16,slow=10.0,SNR=7.2
PLCA                             LR       LR       14 12 28.9
          comp=Z,41nm,19.0s,baz=6.0,slow=38
          comp=Z,3.2nm,0.6s
PLCA  Paso Flores    57.36 189   P        P        13 46 13.6 +0.6
PLCA                             IAmb     IAmb     13 46 21.3
          comp=Z,13nm,1.2s
PLCA  Paso Flores    57.36 189  eP        P        13 46 16.1 +3.0
K05A  Summer Lake    57.43 311   P        P        13 46 14.3 +0.5
ORV   Oroville       57.51 307   P        P        13 46 14.3 +0.2
ORV                              IAmb     IAmb     13 46 15.3
          comp=Z,17nm,1.1s
PINE  Pine Mountain  57.62 312   P        P        13 46 15.2 +0.1
J05D  Fort Rock, OR  57.75 311   P        P        13 46 16.5 +0.5
          baz=98,SNR=5.8
SUMG  Summit         57.85   8   P        P        13 46 15.9 -0.6
SUMG                             IAmb     IAmb     13 46 17.7
          comp=Z,16nm,1.2s
SUMG  Summit         57.85   8 i P        P        13 46 16.2 -0.3
SUMG                             IAmb     IAmb     13 46 18.1
          comp=Z,15nm,1.1s
I05D  Terrebonne, OR 57.98 312   P        P        13 46 18.3 +0.8
          baz=99
LTY   Liberty        58.02 316   P        P        13 46 17.9 +0.1
LTY                              IAmb     IAmb     13 46 18.7
          comp=Z,13nm,0.8s
K04D  Chiloquin, OR  58.04 310   P        P        13 46 18.4 +0.4
          baz=98
J04D  Umpqua Nationa 58.38 311   P        P        13 46 20.6 +0.2
J04D  Umpqua Nationa 58.38 311   P        P        13 46 20.7 +0.2
          baz=98,SNR=7.3
L04D  Klamath Falls  58.40 310   P        P        13 46 20.4 -0.2
L04D  Klamath Falls  58.40 310   P        P        13 46 20.1 -0.4
          baz=97
EKA   Eskdalemuir Ar 58.50  34   LR       LR       14 09 05.0
          comp=Z,69nm,18.3s,baz=179,slow=34
H04A  Detroit Lake   58.63 313   P        P        13 46 21.4 -0.6
H04A                             IAmb     IAmb     13 46 23.4
          comp=Z,14nm,1.0s
YBH   Yreka Blue Hor 58.64 309   LR       LR       14 12 30.3
          comp=Z,57nm,21.0s,baz=78,slow=37
YBH   Yreka Blue Hor 58.64 309   P        P        13 46 20.9 -1.3
YBH                              IAmb     IAmb     13 46 42.6
          comp=Z,8.2nm,1.1s
I04A  Tendick Farm,  58.67 312   P        P        13 46 22.3  0.0
          baz=98
H04D  Lebanon        59.00 312   P        P        13 46 24.0 -0.5
          baz=98
B05A  Bryant         59.16 317   P        P        13 46 24.4 -1.1
          baz=101
E04D  Cinebar        59.18 315   P        P        13 46 24.1 -1.6
          baz=99
L02F  Cave Junction  59.32 310   P        P        13 46 25.7 -1.1
          baz=96
I03D  Drain, OR      59.33 311   P        P        13 46 25.9 -1.0
          baz=97
K02D  Willamette Mer 59.45 310   P        P        13 46 27.9 +0.1
          baz=96
LLLB  Lillooet       59.48 320   P        P        13 46 26.8 -0.9
LLLB                             IAmb     IAmb     13 46 28.8
          comp=Z,15nm,1.0s
YKA   Yellowknife Ar 59.49 334   P        P        13 46 27.0 -0.6
          comp=Z,9.3nm,0.7s,baz=107,slow=7.4,SNR=65
YKA                              PcP      PcP      13 47 14.0 -1.0
          comp=Z,1.9nm,0.8s,baz=111,slow=3.8,SNR=6.0
YKA                              LR       LR       14 10 49.5
          comp=Z,127nm,21.9s,baz=320,slow=35
          comp=Z,9.3nm,0.7s
YKA   Yellowknife Ar 59.49 334   P        P        13 46 26.6 -1.0
KSXB  Camp Six Broad 59.52 309   P        P        13 46 28.1 -0.2
JCC   Jacoby Creek,  59.55 308   P        P        13 46 28.9 +0.6
KMPM  Mount Pierce   59.59 308   P        P        13 46 29.5 +0.8
J01E  Myrtle Point   59.70 311   P        P        13 46 29.8 +0.5
J01E  Myrtle Point   59.70 311   P        P        13 46 28.8 -0.6
          baz=96
I02E  Swisshome, OR  59.74 312   P        P        13 46 30.0 +0.4
HEBO  Mount Hebo     59.81 313   P        P        13 46 30.6 +0.4
KBO   Bosley Butte   59.82 310   P        P        13 46 30.9 +0.6
E03A  Lebam          59.86 315   P        P        13 46 30.6 +0.2
B04A  Port Angeles   60.05 316   P        P        13 46 31.7  0.0
TORD  Torodi Ar. Bea 60.17  84   P        P        13 46 32.7 -0.4
          comp=Z,0.7nm,0.6s,baz=274,slow=5.7,SNR=6.5
          comp=Z,0.7nm,0.6s
NLWA  Neilton Lookou 60.19 316   P        P        13 46 33.2 +0.5
AY01  Puyuhuapi      61.30 190   P        P        13 46 39.8 -0.2
AY01                             IAmb     IAmb     13 46 48.1
          comp=Z,8.5nm,1.1s
RES   Resolute Bay   61.45 350   LR       LR       14 12 17.8
          comp=Z,102nm,20.4s,baz=118,slow=35
RES   Resolute Bay   61.45 350   P        P        13 46 40.8  0.0
DBG   Daneborg       62.25  11 i P        P        13 46 45.9 -0.2
DBG                              IAmb     IAmb     13 46 48.7
          comp=Z,1.4nm,0.6s
JMIC  Jan Mayen      62.94  17   LR       LR       14 08 11.0
          comp=Z,50nm,21.7s,baz=256,slow=30
BBB   Bella Bella    63.59 321   LR       LR       14 15 22.9
          comp=Z,128nm,19.8s,baz=100,slow=37
DAG   Danmarks Havn  64.28  10 i P        P        13 46 58.0 -1.5
DAG                              IAmb     IAmb     13 46 59.9
          comp=Z,6.5nm,1.1s
KEST  Kesra          64.61  58   P        P        13 47 03.6 +1.1
          comp=Z,8.9nm,0.9s,baz=265,slow=5.7,SNR=6.3
          comp=Z,8.9nm,0.9s
KEST  Kesra          64.61  58   P        P        13 47 03.5 +0.9
KEST                             IAmb     IAmb     13 47 04.8
          comp=Z,9.2nm,0.8s
EUNU  Eureka         64.97 355   P        P        13 47 04.7 +0.6
TGTN  Hyland Airport 65.28 331   P        P        13 47 07.7 +1.3
          baz=102,SNR=16
DLBC  Dease Lake     65.59 327   LR       LR       14 14 58.5
          comp=Z,149nm,21.0s,baz=101,slow=35
DLBC  Dease Lake     65.59 327   P        P        13 47 09.1 +0.6
DLBC                             IAmb     IAmb     13 47 10.4
          comp=Z,8.6nm,0.9s
MMPY  Sheldon Lake,  66.87 332   P        P        13 47 16.3 -0.3
          baz=100
A36M  Sachs Harbour  66.97 342   P        P        13 47 16.4 -0.5
A36M                             IAmb     IAmb     13 47 17.4
          comp=Z,9.6nm,0.8s
A36M  Sachs Harbour  66.97 342   P        P        13 47 16.5 -0.5
          baz=109,SNR=7.5
NB2   NORSAR Subarra 67.19  30   P        P        13 47 18.9 +0.2
          comp=Z,1.6nm,1.0s,baz=262,slow=6.5
NOA   NORSAR Array B 67.19  30   P        P        13 47 18.4 -0.3
          comp=Z,0.5nm,0.6s,baz=266,slow=5.9,SNR=3.6
NOA                              LR       LR       14 11 11.0
          comp=Z,38nm,21.3s,baz=275,slow=31
          comp=Z,0.5nm,0.6s
CLL   Collm          67.32  41  eP        P        13 47 20.0 +0.4
GERES GERESS Array B 67.71  43   P        P        13 47 22.2 -0.1
          comp=Z,0.2nm,0.3s,baz=251,slow=3.0,SNR=4.3
          comp=Z,0.2nm,0.3s
NOR   Nord           67.94   6 i P        P        13 47 21.2 -1.8
NOR                              IAmb     IAmb     13 47 23.6
          comp=Z,3.6nm,0.8s
BESE  Bessie Mountai 68.12 327   P        P        13 47 24.7 +0.1
BESE                             IAmb     IAmb     13 47 51.9
          comp=Z,7.6nm,0.9s
M31M  Drury Creek, Y 68.25 331   P        P        13 47 26.0 +0.7
M31M  Drury Creek, Y 68.25 331   P        P        13 47 26.3 +1.0
          baz=97,SNR=30
HFS   Hagfors        68.30  31   LR       LR       14 12 52.2
          comp=Z,16nm,20.9s,baz=304,slow=32
WHY   Whitehorse     68.32 329   P        P        13 47 25.9 +0.1
WHY   Whitehorse     68.32 329   P        P        13 47 26.0 +0.1
          baz=96
INK   Inuvik         68.77 338   P        P        13 47 27.7 -0.7
          comp=Z,15nm,0.9s,baz=87,slow=6.5,SNR=37
INK                              LR       LR       14 17 25.5
          comp=Z,60nm,19.6s,baz=100,slow=36
          comp=Z,15nm,0.9s
INK   Inuvik         68.77 338   P        P        13 47 27.6 -0.8
INK   Inuvik         68.77 338   P        P        13 47 27.9 -0.4
          baz=100,SNR=20
N31M  Braeburn, Yuko 68.83 330   P        P        13 47 29.2 +0.2
N31M  Braeburn, Yuko 68.83 330   P        P        13 47 29.7 +0.7
          baz=95,SNR=10
M30M  Minto, Yukon   69.40 331   P        P        13 47 32.6 +0.1
M30M  Minto, Yukon   69.40 331   P        P        13 47 33.1 +0.6
          baz=95,SNR=29
KRUC  Moravsky       69.48  43  eP        P        13 47 34.1 +0.9
VRAC  Vranov         69.61  43  eP        P        13 47 34.9 +0.9
HYT   Haines Junctio 69.62 329   P        P        13 47 33.5 -0.5
          baz=93
EPYK  Eagle Plains   69.73 335   P        P        13 47 33.9 -0.6
EPYK                             IAmb     IAmb     13 47 35.2
          comp=Z,8.3nm,0.9s
EPYK  Eagle Plains   69.73 335   P        P        13 47 33.9 -0.6
          baz=96,SNR=6.0
YUK6  Outpost Mounta 70.04 330   P        P        13 47 37.6 +0.9
          baz=93
YUK4  Talbot Arm     70.20 330   P        P        13 47 38.2 +0.5
          baz=93,SNR=7.3
MORC  Moravsky Berou 70.21  42  eP        P        13 47 36.3 -1.4
I29M  Ogilvie Camp,  70.28 334   P        P        13 47 37.4 -0.4
I29M                             IAmb     IAmb     13 47 38.6
          comp=Z,8.6nm,1.1s
I29M  Ogilvie Camp,  70.28 334   P        P        13 47 37.4 -0.4
          baz=94
PNL   Peninsula      70.52 328   P        P        13 47 40.0 +0.6
          baz=91
DAWY  Dawson         70.67 333   P        P        13 47 39.5 -0.7
DAWY                             IAmb     IAmb     13 47 41.7
          comp=Z,12nm,0.7s
DAWY  Dawson         70.67 333   P        P        13 47 40.9 +0.6
          baz=93,SNR=26
YUK3  Moose Creek    71.08 330   P        P        13 47 43.5 +0.5
          baz=91
BVCY  Beaver Creek   71.28 331   P        P        13 47 44.4 +0.5
          baz=91,SNR=6.7
EGAK  Eagle          71.46 334   P        P        13 47 44.7 -0.2
EGAK                             IAmb     IAmb     13 47 46.1
          comp=Z,15nm,0.8s
EGAK  Eagle          71.46 334   P        P        13 47 45.2 +0.3
          baz=92
SPB2  Spitsbergen Ar 71.61  12   P        P        13 47 46.7 +1.1
SPB2                             IAmb     IAmb     13 47 55.2
          comp=Z,11nm,1.1s
BARN  Barnard Glacie 71.65 330   P        P        13 47 47.4 +0.9
BCAR  Beaver Creek A 71.71 332   P        P        13 47 47.2 +0.6
L27K  Beaver Creek,  71.73 332   P        P        13 47 47.3 +0.6
L27K  Beaver Creek,  71.73 332   P        P        13 47 47.6 +0.9
          baz=90,SNR=35
M27K  Edge Creek, AK 71.75 331   P        P        13 47 47.5 +0.6
M27K                             IAmb     IAmb     13 47 48.9
          comp=Z,13nm,0.9s
M27K  Edge Creek, AK 71.75 331   P        P        13 47 47.6 +0.6
          baz=90,SNR=16
M26K  Nabesna, AK    72.27 331   P        P        13 47 50.2 +0.2
M26K  Nabesna, AK    72.27 331   P        P        13 47 50.3 +0.4
          baz=89,SNR=5.5
L26K  Log Cabin Wild 72.42 332   P        P        13 47 51.5 +0.6
L26K  Log Cabin Wild 72.42 332   P        P        13 47 51.6 +0.8
          baz=89,SNR=27
BGLC  Bering Glacier 72.47 329   P        P        13 47 52.9 +1.8
          baz=88
J26L  Joseph Creek   72.50 333   P        P        13 47 51.2 -0.1
          baz=89,SNR=11
VRDI  Verde Repeater 72.52 330   P        P        13 47 51.6  0.0
VRDI                             IAmb     IAmb     13 47 53.2
          comp=Z,7.5nm,0.8s
MENT  Mentasta       72.60 332   P        P        13 47 52.3 +0.5
BERG  Berg Lake      72.67 329   P        P        13 47 52.8 +0.5
BERG                             IAmb     IAmb     13 47 54.2
          comp=Z,10nm,0.6s
GLB   Gilahina Butte 72.68 330   P        P        13 47 52.5 +0.1
SCRK  Sand Creek     72.69 333   P        P        13 47 52.5  0.0
SCRK  Sand Creek     72.69 333   P        P        13 47 52.7 +0.2
          baz=89,SNR=11
DOT   Dot Lake       72.73 332   P        P        13 47 52.6 -0.1
DOT                              IAmb     IAmb     13 47 54.8
          comp=Z,8.9nm,1.0s
BMAR  Burnt Mountain 72.87 336   P        P        13 47 53.2 -0.3
HMT   Hamilton       72.95 329   P        P        13 47 54.5 +0.5
HMT                              IAmb     IAmb     13 47 56.7
          comp=Z,9.7nm,1.0s
KAIM  Kayak Island   73.05 328   P        P        13 47 55.0 +0.5
          baz=87
N25K  Chitina, Valde 73.06 330   P        P        13 47 54.8 +0.1
N25K  Chitina, Valde 73.06 330   P        P        13 47 55.2 +0.5
          baz=87,SNR=6.0
RIDG  Independent Ri 73.08 332   P        P        13 47 54.7  0.0
RIDG                             IAmb     IAmb     13 47 56.0
          comp=Z,9.4nm,0.8s
RIDG  Independent Ri 73.08 332   P        P        13 47 54.9 +0.2
          baz=88,SNR=8.3
BMRM  Bremner River  73.09 330   P        P        13 47 55.2 +0.4
BMRM                             IAmb     IAmb     13 47 56.3
          comp=Z,14nm,0.6s
BMRM  Bremner River  73.09 330   P        P        13 47 55.3 +0.4
          baz=87,SNR=10
RAGM  Ragged Mountai 73.15 329   P        P        13 47 56.1 +0.9
RAGM                             IAmb     IAmb     13 47 57.1
          comp=Z,13nm,0.9s
J25K  Salcha River,  73.27 333   P        P        13 47 55.1 -0.8
J25K                             IAmb     IAmb     13 47 56.6
          comp=Z,6.8nm,0.8s
J25K  Salcha River,  73.27 333   P        P        13 47 55.6 -0.3
          baz=88,SNR=8.8
HARP  HAARP          73.28 331   P        P        13 47 56.5 +0.6
          baz=87,SNR=6.2
PAX   Paxson         73.39 332   P        P        13 47 56.5 -0.2
PAX                              IAmb     IAmb     13 47 57.7
          comp=Z,9.5nm,0.7s
PAX   Paxson         73.39 332   P        P        13 47 56.2 -0.5
          baz=87,SNR=9.4
K24K  Donnelly Dome  73.49 333   P        P        13 47 57.0 -0.2
          baz=87
ARCES ARCESS Array B 73.62  21   P        P        13 47 57.9 +0.2
          comp=Z,6.0nm,1.0s,baz=253,slow=6.2,SNR=7.9
ARCES                            LR       LR       14 12 41.2
          comp=Z,36nm,21.5s,baz=313,slow=30
          comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 73.62  21   IAmb     IAmb     13 48 09.2
          comp=Z,12nm,1.2s
KLU   Klutina        73.69 330   P        P        13 47 58.5  0.0
KLU                              IAmb     IAmb     13 47 59.6
          comp=Z,6.8nm,0.8s
KLU   Klutina        73.69 330   P        P        13 47 58.7 +0.3
          baz=86,SNR=5.3
M24K  Tolsona, Glenn 73.77 331   P        P        13 47 58.6 -0.2
M24K  Tolsona, Glenn 73.77 331   P        P        13 47 59.1 +0.2
          baz=86
IL31                 73.92 334   P        P        13 47 58.9 -0.6
IL31                             IAmb     IAmb     13 47 59.8
          comp=Z,8.8nm,0.6s
ILAR  Eielson Array  73.92 334   P        P        13 47 59.5  0.0
          comp=Z,9.7nm,0.8s,baz=109,slow=4.5,SNR=112
ILAR                             LR       LR       14 20 00.0
          comp=Z,74nm,21.6s,baz=83,slow=35
          comp=Z,9.7nm,0.8s
ILAR  Eielson Array  73.92 334   P        P        13 47 58.8 -0.8
HDA   Harding Lake   73.97 333   P        P        13 47 59.1 -0.8
HDA   Harding Lake   73.97 333   P        P        13 47 59.3 -0.6
          baz=86,SNR=7.7
FID   Port Fidalgo   74.02 329   P        P        13 48 00.3  0.0
POKR  Poker Plat Res 74.12 334   P        P        13 48 00.6 -0.2
POKR  Poker Plat Res 74.12 334   P        P        13 48 00.7 -0.1
          baz=86,SNR=5.6
DHY   Denali Highway 74.25 332   P        P        13 48 01.3 -0.5
DHY   Denali Highway 74.25 332   P        P        13 48 01.4 -0.5
          baz=85
H24K  Noodor Dome    74.26 335   P        P        13 48 01.3 -0.3
H24K                             IAmb     IAmb     13 48 02.8
          comp=Z,13nm,0.8s
H24K  Noodor Dome    74.26 335   P        P        13 48 01.9 +0.3
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	baz=86,SNR=16						
GLI	Glacier Island	74.31	330	P	P	13 48 01.6	-0.4
	baz=85						
CCB	Clear Creek Bu	74.32	333	P	P	13 48 01.1	-0.8
CCB				IAmb	IAmb	13 48 02.3	
	comp=Z,9.8nm,0.7s						
COLA	College	74.32	334	P	P	13 48 01.6	-0.2
COLA				IAmb	IAmb	13 48 03.5	
	comp=Z,10nm,0.8s						
COLA	College	74.32	334	P	P	13 48 01.7	-0.2
	baz=86						
TCOL	CIGO, UAF Yank	74.33	334	P	P	13 48 01.5	-0.4
TCOL				IAmb	IAmb	13 48 03.5	
	comp=Z,10nm,0.8s						
TCOL	CIGO, UAF Yank	74.33	334	P	P	13 48 01.6	-0.4
	baz=86,SNR=5.4						
SCM	Sheep Creek Mo	74.34	331	P	P	13 48 01.9	-0.3
SCM				IAmb	IAmb	13 48 03.2	
	comp=Z,14nm,0.8s						
SCM	Sheep Creek Mo	74.34	331	P	P	13 48 02.2	0.0
	baz=85,SNR=5.8						
FINES	FINESS Array B	74.37	30	P	P	13 48 02.3	+0.1
	comp=Z,0.8nm,0.4s,baz=268,slow=3.8,SNR=13						
FINES				LR	LR	14 15 14.5	
	comp=Z,27nm,21.6s,baz=326,slow=31						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	74.37	30	P	P	13 48 01.9	-0.3
FIA1	FINESS Array S	74.37	30	P	P	13 48 02.0	-0.2
WRH	Wood River Hil	74.46	333	P	P	13 48 02.6	-0.1
WRH				IAmb	IAmb	13 48 03.9	
	comp=Z,11nm,0.8s						
WAT6	Susitna Watana	74.46	331	P	P	13 48 02.9	-0.1
	baz=85,SNR=9.4						
MDM	Murphy Dome	74.47	334	P	P	13 48 02.6	-0.3
M23K	Glacier View	74.53	331	P	P	13 48 03.2	0.0
	baz=85,SNR=5.2						
TOLK	Toolik Lake Re	74.69	338	P	P	13 48 03.8	-0.2
TOLK	Toolik Lake Re	74.69	338	P	P	13 48 03.9	-0.2
	baz=85,SNR=7.5						
WAT1	Susitna Watana	74.81	332	P	P	13 48 04.9	0.0
	baz=84						
SML	Sawmill	74.81	331	P	P	13 48 04.8	-0.1
	baz=84						
NEA2	Nenana	74.87	333	P	P	13 48 04.6	-0.5
NEA2	Nenana	74.87	333	P	P	13 48 04.9	-0.2
	baz=84,SNR=35						
RND	Reindeer	74.89	332	P	P	13 48 05.9	+0.5
RND				IAmb	IAmb	13 48 06.7	
	comp=Z,13nm,0.8s						
KNK	Knik Glacier	74.92	330	P	P	13 48 05.6	+0.1
	baz=84						
I23K	Minto, Yukon-K	74.93	334	P	P	13 48 05.2	-0.2
I23K				IAmb	IAmb	13 48 06.4	
	comp=Z,15nm,0.9s						
I23K	Minto, Yukon-K	74.93	334	P	P	13 48 05.4	-0.1
	baz=84,SNR=10						
H23K	Yukon River	74.94	335	P	P	13 48 05.3	-0.3
H23K				IAmb	IAmb	13 48 07.5	
	comp=Z,14nm,1.3s						
H23K	Yukon River	74.94	335	P	P	13 48 05.8	+0.3
	baz=84,SNR=8.9						
COLD	Coldfoot	75.06	336	P	P	13 48 06.5	+0.3
	baz=84,SNR=6.6						
BWN	Browne	75.08	333	P	P	13 48 05.7	-0.6
GHO	Glory Hole Cre	75.10	331	P	P	13 48 06.2	-0.3
GHO				IAmb	IAmb	13 48 07.7	
	comp=Z,11nm,0.8s						
PMR	Palmer	75.22	330	P	P	13 48 07.0	-0.2
	baz=84						
SEW	Seward	75.55	329	P	P	13 48 08.6	-0.4
	baz=83						
RC01	Rabbit Creek A	75.57	330	P	P	13 48 09.0	-0.2
	baz=83						
CUT	Chulitna	75.65	331	P	P	13 48 09.7	0.0
	baz=83						
M22K	Willow	75.67	331	P	P	13 48 09.7	0.0
	baz=83						
BPAW	Bear Paw Mtn.	75.75	333	P	P	13 48 09.5	-0.8
BPAW	Bear Paw Mtn.	75.75	333	P	P	13 48 09.9	-0.3
	baz=82,SNR=21						
KTH	Kantishna Hill	75.80	332	P	P	13 48 10.0	-0.6
I21K	Tanana	76.03	334	P	P	13 48 11.3	-0.4
I21K	Tanana	76.03	334	P	P	13 48 11.5	-0.2
	baz=82						
MNK	Minsk	76.14	37	*i* P	P	13 48 10.9	-1.7
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	13 48 10.9	-1.7
	comp=N,24nm,0.9s						
MNK				*i* P	P	13 48 10.9	-1.7
	comp=Z,5.0nm,0.6s,baz=278						
MNK				*i* PP	PP	13 51 01.0	-2.3
MNK				*i* PPP	PPP	13 52 48.0	
MNK				*i* S	S	13 57 53.0	-2.4
MNK				*i* SS	SS	14 02 49.3	+0.9
MNK				*i* SSS	SSS	14 06 12.9	
MNK				*i* LQ	LQ	14 16 45.9	
MNK				*i* LR	LR	14 22 33.8	
MNK				*i* LRM	MLR	14 24 52.8	
	comp=Z,84nm,15.3s						
MNK				*i* LRM	MLR	14 25 05.6	
	comp=N,130nm,17.9s						
MNK				*i* LRM	MLR	14 25 06.9	
	comp=E,22nm,19.2s						
BRSE	Bradley Lake S	76.24	329	P	P	13 48 13.2	+0.1
	baz=82						
H21K	Melozitna Rive	76.30	335	P	P	13 48 12.8	-0.5
H21K				IAmb	IAmb	13 48 14.3	
	comp=Z,13nm,1.2s						
H21K	Melozitna Rive	76.30	335	P	P	13 48 13.0	-0.3
	baz=81,SNR=7.7						
CAST	Castle Rocks	76.33	332	P	P	13 48 12.5	-1.0
CAST				IAmb	IAmb	13 48 13.8	
	comp=Z,6.8nm,0.8s						
CAST	Castle Rocks	76.33	332	P	P	13 48 12.9	-0.7
	baz=81,SNR=10.0						
CHUM	Lake Minchumin	76.36	333	P	P	13 48 13.2	-0.4
	baz=81,SNR=11						
PPLA	Purkeypile	76.46	332	P	P	13 48 13.7	-0.7
PPLA				IAmb	IAmb	13 48 22.5	
	comp=Z,13nm,1.0s						
PPLA	Purkeypile	76.46	332	P	P	13 48 14.0	-0.5
	baz=81,SNR=6.4						
CNPM	China Poot	76.53	328	P	P	13 48 14.8	+0.1
CNPM				IAmb	IAmb	13 48 40.0	
	comp=Z,21nm,1.1s						
IMAR	Indian Mountai	76.63	335	P	P	13 48 14.7	-0.4
HOM	Homer	76.71	329	P	P	13 48 16.0	+0.3
	baz=81						
SPCR	Spurr Chakacha	76.74	330	P	P	13 48 15.6	-0.4
	baz=81						
M20K	Styx River	77.06	331	P	P	13 48 17.0	-0.7
M20K				IAmb	IAmb	13 48 18.1	
	comp=Z,6.0nm,0.7s						
M20K	Styx River	77.06	331	P	P	13 48 17.1	-0.6
	baz=80,SNR=6.2						
J20K	Nowinta River	77.11	333	P	P	13 48 17.4	-0.5
J20K				IAmb	IAmb	13 48 18.2	
	comp=Z,9.4nm,0.5s						
J20K	Nowinta River	77.11	333	P	P	13 48 17.4	-0.5
	baz=80,SNR=12						
RSO	Redoubt South	77.12	329	P	P	13 48 17.8	-0.6
K20K	Telida	77.22	333	P	P	13 48 18.0	-0.6
K20K				IAmb	IAmb	13 48 19.0	
	comp=Z,13nm,0.9s						
K20K	Telida	77.22	333	P	P	13 48 18.0	-0.6
	baz=80,SNR=9.9						
L20K	Farewell, AK	77.30	332	P	P	13 48 18.4	-0.6
	baz=80,SNR=7.0						
P19K	Oil Pt	77.50	329	P	P	13 48 20.3	0.0
	baz=80						
KDAK	Kodiak Island	77.51	327	LR	LR	14 22 31.5	
	comp=Z,112nm,20.9s,baz=134,slow=36						
KDAK	Kodiak Island	77.51	327	P	P	13 48 20.4	+0.2
KDAK				IAmb	IAmb	13 48 39.1	
	comp=Z,21nm,1.3s						
KDAK	Kodiak Island	77.51	327	P	P	13 48 19.8	-0.4
	baz=80						
M19K	Big River Lodg	77.64	331	P	P	13 48 20.5	-0.4
	baz=79						
ORCD	Orcadas	77.71	172	P	P	13 48 21.3	+0.3
ORCD				IAmb	IAmb	13 48 22.8	
	comp=Z,12nm,1.2s						
L19K	White Mountain	77.80	331	P	P	13 48 21.2	-0.6
L19K				IAmb	IAmb	13 48 22.2	
	comp=Z,8.7nm,0.9s						
L19K	White Mountain	77.80	331	P	P	13 48 21.3	-0.6
	baz=79,SNR=6.4						
Q19K	Cape Douglas,	77.85	328	P	P	13 48 22.1	-0.1
Q19K	Cape Douglas,	77.85	328	P	P	13 48 21.6	-0.5
	baz=79						
N19K	Bonanza Creek	77.90	330	P	P	13 48 21.8	-0.7
N19K				IAmb	IAmb	13 48 22.5	
	comp=Z,6.0nm,0.7s						
N19K	Bonanza Creek	77.90	330	P	P	13 48 22.0	-0.5
	baz=79						
O19K	Port Alsworth	77.94	329	P	P	13 48 22.2	-0.3
O19K				IAmb	IAmb	13 48 23.0	
	comp=Z,9.4nm,0.7s						
O19K	Port Alsworth	77.94	329	P	P	13 48 22.2	-0.3
	baz=79						
OHAK	Old Harbor	77.99	326	P	P	13 48 22.4	-0.5
OHAK				IAmb	IAmb	13 48 51.4	
	comp=Z,18nm,1.1s						
GCSA	Galena City Sc	78.16	334	P	P	13 48 23.8	+0.1
	baz=78						
TTA	Tatalina	78.17	332	P	P	13 48 23.1	-0.8
TTA	Tatalina	78.17	332	P	P	13 48 22.9	-1.0
	baz=78						
SVW2	Sparrevohn	78.36	330	P	P	13 48 23.9	-1.0
SVW2				IAmb	IAmb	13 48 25.3	
	comp=Z,7.7nm,0.6s						
O18K	Koktuh Hills	78.44	329	P	P	13 48 25.1	-0.4
O18K				IAmb	IAmb	13 48 26.3	
	comp=Z,11nm,0.8s						
O18K	Koktuh Hills	78.44	329	P	P	13 48 25.3	-0.2
	baz=78						
P18K	Big Mountain,	78.55	329	P	P	13 48 25.5	-0.6
P18K	Big Mountain,	78.55	329	P	P	13 48 25.6	-0.4
	baz=78						
N18K	Kilae Creek	78.60	330	P	P	13 48 24.8	-1.5
N18K				IAmb	IAmb	13 48 26.8	
	comp=Z,7.1nm,0.8s						
N18K	Kilae Creek	78.60	330	P	P	13 48 25.9	-0.4
	baz=78						
RDOG	Red Dog Mine	79.64	338	P	P	13 48 30.4	-1.5
	baz=73						
KLMR	Klimovskoe	80.88	29	*e*P	P	13 48 37.8	-0.8
KLMR				AMP		13 48 48.6	
	comp=Z,10.0nm,1.2s						
ANM	Nome	81.71	335	P	P	13 48 43.5	+0.5
SDPT	Sand Point	82.33	325	P	P	13 48 45.5	-0.9
	baz=73						
TSUM	Tsumeb	84.55	112	LR	LR	14 18 10.7	
	comp=Z,66nm,21.6s,baz=333,slow=30						
KIRV	Kirov	86.37	30	LR	LR	14 24 03.5	
	comp=Z,24nm,19.6s,baz=251,slow=33						
KBZ	Khabaz	88.41	45	P	P	13 49 18.2	+1.3
	comp=Z,3.3nm,0.8s,baz=294,slow=1.4,SNR=8.1						
	comp=Z,3.3nm,0.8s						
MHA	Mahukona	89.31	291	P	P	13 49 21.0	-0.6
BILL	Bilibino	89.45	344	P	P	13 49 21.6	+0.2
BILL				IAmb	IAmb	13 49 22.1	
	comp=Z,5.2nm,0.6s						
NRIK	Noril'sk	91.77	11	LR	LR	14 31 00.9	
	comp=Z,66nm,20.4s,baz=326,slow=36						
TIXI	Tiksi	92.15	357	P	P	13 49 33.8	0.0
TIXI				IAmb	IAmb	13 49 34.7	
	comp=Z,4.4nm,0.9s						
PZH	PanZhiHua	134.24	22	PKP	PKPdf	13 55 42.8	-0.6
CMAR	Chiang Mai Arr	140.14	31	PKP	PKPdf	13 55 54.5	+0.1
	comp=Z,0.6nm,0.7s,baz=304,slow=2.4,SNR=4.9						
KRVT	Keravat (AS076	145.84	287	PKPbc	PKPdf	13 56 04.2	-0.2
	comp=Z,24nm,0.5s,baz=298,slow=1.1,SNR=12						
CTA	Charters Tower	154.17	257	PKPbc	PKPbc	13 56 24.8	-0.8
	comp=Z,2.3nm,0.7s,baz=13,slow=6.4,SNR=5.2						
ASAR	Alice Springs	164.45	239	PKP	PKPdf	13 56 27.8	-1.5
	comp=Z,0.9nm,0.7s,baz=99,slow=1.3,SNR=16						
ASAR				PKPab	PKPab	13 57 22.6	-1.2
	comp=Z,0.8nm,0.7s,baz=115,slow=4.1,SNR=7.7						
WRA	Warramunga Arr	165.28	253	PKP	PKPdf	13 56 28.6	-1.4
	comp=Z,2.0nm,0.8s,baz=61,slow=0.4,SNR=12						
WRA				PKPab	PKPab	13 57 26.9	-0.7
	comp=Z,0.6nm,0.5s,baz=96,slow=4.2,SNR=6.0						
WRA	Warramunga Arr	165.28	253		PKPdf	13 56 29.0	-1.0

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*IDC **09** 13:42:30.5±1.5, 14°.07S×166°.14E, h0km, mb3.8/4, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=42.5km s-min=27.5km az=111.0*

*NEIC **09** 13:42:36.1±2.1, 14°.2S±0°.1×166°.4E±0°.1, h35km±2km, mb4.3/7, Error ellipse: s-maj=23.2km s-min=18.8km az=62.0*

ISC 09 13:42:36.0±1.0, 14°.10S±0°.10×166°.4E±0°.1, h43km, n15, σ1ˢ.36/16, mb3.9/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.57	149	Pn	Pn	13 43 00.1	-1.3
KOUNC	Koumac, New Ca	6.72	197	Pn	Pn	13 44 12.8	+0.7
DZM	Mont Dzumac	7.93	179	Pn	Pn	13 44 27.4	-1.5
	0.7nm,0.3s,baz=355,slow=12,SNR=15						
DZM				Sn	Sn	13 45 59.2	+1.8
	baz=146,slow=15						
	1.7nm,0.4s						
ONTNC	Ouen Toro	8.17	179	Pn	Pn	13 44 31.4	-0.6
OUENC	Ouen Island, N	8.29	177	Pn	Pn	13 44 33.2	-0.5
WR0	Warramunga Arr	30.94	255	P	P	13 48 48.3	-0.9
WB0	Warramunga Arr	31.06	255	P	P	13 48 49.2	-1.0
WB0				IAmb	IAmb	13 49 01.3	
	comp=Z,6.4nm,1.2s						
WRA	Warramunga Arr	31.13	255	P	P	13 48 49.4	-1.4
	comp=Z,0.4nm,0.6s,baz=86,slow=9.4,SNR=3.1						
	comp=Z,0.4nm,0.6s						
AS31	Alice Springs	32.08	248	P	P	13 48 58.5	-0.6
AS31				IAmb	IAmb	13 49 01.4	
	comp=Z,1.8nm,1.1s						
ASAR	Alice Springs	32.08	248	P	P	13 48 58.3	-0.9
	comp=Z,0.9nm,0.6s,baz=73,slow=9.3,SNR=16						
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	75.93	180	P	P	13 54 18.3	+0.2
QSPA				IAmb	IAmb	13 54 35.1	
	comp=Z,4.1nm,1.4s						
RND	Reindeer	84.62	19	P	P	13 55 07.0	+2.4
RND				IAmb	IAmb	13 55 17.2	
	comp=Z,3.5nm,1.3s						
WRH	Wood River Hil	85.62	18	P	P	13 55 10.8	+1.3
WRH				IAmb	IAmb	13 55 17.7	
	comp=Z,3.0nm,1.4s						
ILAR	Eielson Array	86.20	18	P	P	13 55 14.0	+1.6
	comp=Z,0.4nm,0.5s,baz=240,slow=4.6,SNR=11						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	96.14	317	P	P	13 55 58.2	-1.1
	comp=Z,0.3nm,0.7s,baz=112,slow=6.4,SNR=2.3						
	comp=Z,0.3nm,0.7s						

TAP 09 13:47:27.0, 23°.59N×121°.55E, h33km, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.12	354	*e*P	Pb	13 47 33.4	+0.5
	baz=357						
TEGC				*e*S	Sb	13 47 38.3	+1.4
	baz=357						
EGFH	Guangfu	0.14	303	P	Pb	13 47 33.5	+0.4
	baz=303						
EGFH				S	Sb	13 47 38.0	+0.8
	baz=303						
HGSD	Ruisui	0.15	230	*e*P	Pb	13 47 33.7	+0.5
	baz=229						
HGSD				*e*S	Sb	13 47 38.9	+1.5
	baz=229						
EHY	Hungye	0.23	248	P	Pb	13 47 34.0	+0.1
	baz=246						
EHY				S	Sb	13 47 38.9	+0.3
	baz=246						
ESL	Shilin	0.25	333	P	Pb	13 47 34.3	+0.1
	baz=334						
ESL				S	Sb	13 47 39.7	+0.7
	baz=334						
YULB	Yu-li	0.31	230	P	Pb	13 47 34.7	-0.2
	baz=229						
YULB				S	Sb	13 47 40.4	+0.2
	baz=229						
EYUL	Yuli	0.33	221	*e*P	Pn	13 47 35.6	+0.2
	baz=221						
EYUL				*e*S	Sn	13 47 41.8	+1.1
	baz=221						
VWDT	VWDT	0.41	293	P	Pn	13 47 36.9	+0.3
	baz=292						
VWDT				S	Sn	13 47 43.9	+0.8
	baz=292						
FULB	Fuli	0.46	211	*e*P	Pb	13 47 37.1	+0.1
	baz=211						
FULB				*e*S	Sn	13 47 45.1	+0.8
	baz=211						
TWD	Chiawan	0.49	5	*e*P	Pn	13 47 37.9	+0.3
	baz=5.0						
TWD				*e*S	Sn	13 47 45.7	+0.7
	baz=5.0						
OWD	Renai	0.50	316	*e*P	Pb	13 47 37.8	+0.1
	baz=316						
OWD				*e*S	Sb	13 47 45.0	0.0
	baz=316						
CHKT	Chengkung	0.52	199	*e*P	Pn	13 47 38.1	0.0
	baz=198						
CHKT				*e*S	Sn	13 47 46.5	+0.7
	baz=198						
YUS	Yu-Shan	0.56	260	*e*P	Pb	13 47 38.8	-0.2
	baz=259						
YUS				*e*S	Sn	13 47 47.6	0.0
	baz=259						
WUSB	Renai	0.56	315	P	Pn	13 47 38.9	+0.1
	baz=314						
WUSB				*e*S	Sn	13 47 47.3	+0.3
	baz=314						
ETL	Fush Village	0.57	6	*e*S	Sn	13 47 47.6	+0.6
	baz=6.0						
NACB	Ninganchiao	0.58	4	*e*S	Sn	13 47 48.2	+0.9
	baz=3.0						
CHGB	Renai	0.58	323	P	Pn	13 47 39.4	+0.2
	baz=323						
CHGB				*e*S	Sn	13 47 47.9	+0.2
	baz=323						
SSLB	Suanglung	0.58	290	*e*P	Pn	13 47 39.5	+0.5
	baz=289						
SSLB				*e*S	Sn	13 47 48.1	+0.7
	baz=289						
WHF	Hehuan Shan	0.61	334	P	Pb	13 47 39.4	-0.3
	baz=334						
WHF				S	Sn	13 47 48.6	-0.1
	baz=334						
ETLH	Xiulin Townshi	0.61	354	*e*P	Pn	13 47 39.0	-0.5
	baz=353						
ETLH				*e*S	Sn	13 47 48.3	0.0
	baz=353						
ELDTW	Lidau	0.64	231	*e*P	Pn	13 47 39.0	-0.8
	baz=230						
ELDTW				*e*S	Sn	13 47 49.4	+0.6
	baz=230						
EDH	Donghe	0.66	200	*e*P	Pn	13 47 40.0	0.0
	baz=200						
EDH				*e*S	Sn	13 47 50.1	+0.8
	baz=200						
SMLT	Sun Moon Lake	0.66	296	*e*P	Pn	13 47 40.2	0.0
	baz=295						
SMLT				*e*S	Sn	13 47 49.8	+0.2
	baz=295						
ALS	Alishan	0.69	263	*e*P	Pb	13 47 41.5	+0.6
	baz=262						
ALS				*e*S	Sn	13 47 51.4	+0.9
	baz=262						
TYC	Yuchr	0.71	296	*e*P	Pb	13 47 41.4	+0.4
	baz=296						
TYC				*e*S	Sb	13 47 50.8	+0.3
	baz=296						
FUSS	Fushou	0.71	337	*e*P	Pn	13 47 41.0	0.0
	baz=336						
FUSS				*e*S	Sn	13 47 51.1	+0.2
	baz=336						
WCS	Beigang Elemen	0.75	308	*e*P	Pb	13 47 41.7	+0.1
	baz=308						
WCS				*e*S	Sb	13 47 51.8	+0.2
	baz=308						
TDCB	Techi	0.75	331	*e*P	Pn	13 47 41.4	0.0
	baz=331						
TDCB				*e*S	Sb	13 47 51.9	0.0
	baz=331						
LONT	Longtian	0.79	210	*e*P	Pn	13 47 42.0	+0.2
	baz=209						
LONT				*e*S	Sb	13 47 53.2	+0.5
	baz=209						
WJS	Zhushan	0.79	287	*e*P	Pn	13 47 42.0	+0.2
	baz=286						
WJS				*e*S	Sb	13 47 53.4	+0.6
	baz=286						
CHN5	Tsauling	0.80	270	*e*S	Sb	13 47 54.3	+1.1
	baz=270						
STYH	Taoyuan	0.83	240	*e*S	Sb	13 47 54.0	+0.1
	baz=239						
NNSB	Datong	0.85	349	*e*P	Pn	13 47 42.9	+0.1
	baz=349						
NNSB				*e*S	Sn	13 47 53.9	-0.2
	baz=349						
NNS	Nan Shan	0.86	349	*e*S	Sn	13 47 54.6	+0.2
	baz=349						
WHP	Taichung City	0.88	321	*e*P	Pn	13 47 43.4	+0.3
	baz=320						
WHP				*e*S	Sb	13 47 55.4	0.0
	baz=320						
TWGBT	Beinan	0.89	210	*e*P	Pb	13 47 43.7	-0.3
	baz=209						
TWGBT				*e*S	Sb	13 47 55.4	-0.1
	baz=209						
TWG	Pinlang	0.89	210	*e*P	Pb	13 47 43.6	-0.4
	baz=209						
TWG				*e*S	Sb	13 47 55.6	+0.1
	baz=209						
TPUB	Ta-pu	0.90	251	*e*S	Sb	13 47 56.1	+0.2
	baz=251						
WTP	Ta-pu	0.93	248	*e*P	Pn	13 47 43.9	+0.1
	baz=247						
WTP				*e*S	Sn	13 47 56.3	+0.3
	baz=247						
LATG	Datong	0.94	359	*e*S	Sb	13 47 57.1	0.0
	baz=358						
CHN1	Nanshi	1.03	247	*e*S	Sb	13 47 59.2	-0.3
	baz=246						
TWK	Hsinying	1.03	252	*e*S	Sn	13 47 58.7	+0.2
	baz=251						
NSK	Sanguang	1.09	351	*e*P	Pn	13 47 46.3	+0.2
	baz=350						
NSK				*e*S	Sn	13 48 00.3	+0.2
	baz=350						
FUSB	Fushanzhiwuyua	1.16	2	*e*P	Pn	13 47 47.6	+0.6
	baz=1.0						
FUSB				*e*S	Sn	13 48 02.1	+0.3
	baz=1.0						
NWLT	Wulai	1.18	358	*e*P	Pn	13 47 47.7	+0.5
	baz=357						
NWLT				*e*S	Sn	13 48 02.9	+0.7
	baz=357						

IDC 09 13:58:27.7±4.2, 16°.90S×179°.24W, h538km±18km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=123.0km s-min=76.1km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.72	252	P	P	13 59 40.1	0.0
	19nm,0.7s,baz=133,slow=11,SNR=14						
STKA	Stephens Creek	38.43	240	P	P	14 05 03.2	-0.3
	2.8nm,1.0s,baz=61,slow=10,SNR=4.3						
	2.8nm,1.0s						
WRA	Warramunga Arr	44.04	259	P	P	14 05 47.8	-0.3
	0.2nm,0.3s,baz=92,slow=7.6,SNR=9.1						
	0.2nm,0.3s						
ASAR	Alice Springs	44.31	253	P	P	14 05 50.2	+0.1
	3.4nm,0.6s,baz=89,slow=7.9,SNR=72						
ASAR				PcP	PcP	14 07 22.4	-0.4
	0.6nm,1.1s,baz=105,slow=4.2,SNR=4.1						
	3.4nm,0.6s						

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*IDC **09** 14:15:53.7±1.9, 6°.41S×129°.58E, h0km, mb4.1/2, mbtmp4.0/4, ML4.0/2, Error ellipse: s-maj=141.7km s-min=29.0km az=69.0*

*DJA **09** 14:16:09.5±0.2, 7°S±3°×13°0E±°, h156km±6km, M4.2/12, mB4.9/6, mb4.3/12, MLv4.2/10, Mw(mB)4.1/6*

*NEIC **09** 14:16:10.6±1.1, 6°.9S±0°.1×130°.3E±0°.1, h179km±10km, mb4.1/7, Error ellipse: s-maj=18.6km s-min=17.4km az=73.0*

ISC 09 14:16:07.6±0.7, 6°.90S±0°.06×130°.21E±0°.08, h150km, n32, σ2ˢ.47/32, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.52	135		Pn	14 16 42.8	+5.3
SAUI	Saumlaki	1.52	135	P	Pn	14 16 43.5	+6.1

MSAI	Masohi	3.76	340	P	Pn	14 17 04.4	-0.3
AAI	Ambon	3.77	328	P	Pn	14 17 04.2	-0.7
MTN	Manton Dam	5.97	171		Pn	14 17 38.2	+4.2
SWI	Sorong	6.09	10	P	Pn	14 17 33.0	-2.6
	0.2nm1µm20nm,0.6s						
LBMI	Labuha	6.79	336	P	Pn	14 17 43.5	-1.4
	0.1nm490nm22nm,0.9s						
BATI	Baumata	7.25	243	P	Pn	14 17 52.9	+1.8
	0.2nm42nm,0.5s						
MMRI	Maumere	8.08	257	P	Pn	14 18 04.9	+2.7
	20nm,0.6s						
BAKI	Biak	8.18	46	P	Pn	14 18 04.6	+1.2
	2µm229nm,0.8s						
EDFI	Ende, Flores	8.63	257	P	Pn	14 18 11.5	+1.9
	3.4nm,0.7s						
KNRA	Kununurra	8.83	189		Pn	14 18 14.6	+2.5
MRSI	Marisa	11.04	311	P	Pn	14 18 41.6	+0.2
	23nm,0.8s						
WBSI	Waikabubak, Su	11.04	255	P	Pn	14 18 41.6	+0.1
	22nm,0.9s						
FITZ	Fitzroy Crossi	11.98	201	Sn	Sn	14 21 00.3	-6.0
	1.1nm,0.3s,baz=85,slow=12,SNR=2.6						
FITZ	Fitzroy Crossi	11.98	201	Pn	Pn	14 18 55.0	+1.2
WB0	Warramunga Arr	13.42	163	Pn	Pn	14 19 13.4	+1.2
WRAB	Tennant Creek	13.56	163	Pn	Pn	14 19 15.1	+1.1
WRA	Warramunga Arr	13.57	163	Pn	Pn	14 19 15.7	+1.5
	0.6nm,0.3s,baz=343,slow=13,SNR=34						
WRA				Sn	Sn	14 21 38.9	-5.6
	1.7nm,0.3s,baz=343,slow=22,SNR=12						
	1.5nm,0.6s						
WB2	Warramunga Arr	13.57	163	Pn	Pn	14 19 15.6	+1.4
WR0	Warramunga Arr	13.64	162	Pn	Pn	14 19 16.4	+1.4
AS31	Alice Springs	17.04	168	P	P	14 19 56.9	+0.5
AS31				IAmb	IAmb	14 20 17.9	
	comp=Z,5.5nm,1.5s						
ASAR	Alice Springs	17.04	168	P	Pn	14 20 01.7	+4.6
	comp=Z,0.7nm,0.3s,baz=350,slow=11,SNR=74						
ASAR				S	S	14 23 02.2	-4.3
	comp=Z,0.6nm,0.6s,baz=345,slow=25,SNR=2.7						
	comp=Z,2.4nm,0.6s						
MBWA	Marble Bar	17.42	215	Pn	Pn	14 20 03.6	+2.0
MBWA				IAmb	IAmb	14 20 26.1	
	comp=Z,34nm,1.5s						
PSA00	Pilbara Seismi	17.69	213	Pn	Pn	14 20 07.1	+2.3
PSA00				IAmb	IAmb	14 20 29.2	
	comp=Z,28nm,1.3s						
DZM	Mont Dzumac	38.05	117	P	P	14 23 11.1	-0.8
MK31	Makanchi Array	68.26	327	P	P	14 26 52.0	-0.2
MK31				IAmb	IAmb	14 27 08.0	
	comp=Z,2.7nm,1.4s						
MKAR	Makanchi Array	68.26	327	P	P	14 26 52.3	0.0
	comp=Z,1.5nm,0.5s,baz=123,slow=8.2,SNR=23						
	comp=Z,1.5nm,0.5s						
MAKZ	Makanchi	68.44	327	P	P	14 26 53.3	-0.1
MAKZ				IAmb	IAmb	14 26 56.8	
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	71.59	334	P	P	14 27 11.6	-0.8
	comp=Z,0.7nm,0.6s,baz=126,slow=7.4,SNR=2.3						
	comp=Z,0.7nm,0.6s						
KURK	Kurchatov	72.54	329	P	P	14 27 17.8	-0.4
ABKAR	Akbulak array	82.56	322	P	P	14 28 12.9	-0.9

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*NEIC **09** 14:19:38.2±2.0, 21°.07S±0°.09×178°.9W±0°.1, h600^{km}±5^{km}, mb4.7/249, Error ellipse: s-maj=14.1km s-min=12.9km az=117.0*

*NOU **09** 14:19:39.1, 21°.09S×178°.71W, h626^{km}, mb4.9/85, Fiji Islands Region*

*IDC **09** 14:19:41.5±1.0, 20°.94S×179°.04W, h629^{km}±11^{km}, mb4.1/29, mbtmp5.0/32, Error ellipse: s-maj=11.4km s-min=10.0km az=101.0*

ISC 09 14:19:39.8±0.3, **21°.10S**±0°.04×**178°.88W**±0°.05, **h619**^{km}, **n813**, σ**1^s.25**/851, **mb4.7**/196, **49C-22D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.86	1	P	P	14 21 00.7	+0.8
MSVF	Nonsavu	4.43	319	P	P	14 21 10.3	+0.5
	904nm,0.8s,baz=153,slow=4.5,SNR=493						
MSVF				S	S	14 22 24.4	+1.2
	193nm,1.0s,baz=141,slow=20,SNR=6.4						
MSVF	Nonsavu	4.43	319	P	P	14 21 10.0	+0.1
MSVF	Nonsavu	4.43	319	P	P	14 21 10.5	+0.6
RAO	Raoul Island	8.16	174	P	P	14 21 44.7	+3.6
	268nm,0.4s,baz=278,slow=22,SNR=1.9						
RAO				S	S	14 23 18.5	-2.2
	176nm,0.3s,baz=113,slow=20,SNR=1.7						
RAO	Raoul Island	8.16	174	P	P	14 21 40.5	-0.6
GLKZ	Green Lake	8.17	174	P	P	14 21 39.5	-1.7
GLKZ				S	S	14 23 19.4	-1.5
NIUE	Niue	8.65	78	P	P	14 21 42.2	-3.7
	baz=8.4,SNR=4.0						
NIUE	Niue	8.65	78		P	14 21 44.6	-1.4
AFI	Afiamalu	9.85	45	P	P	14 21 55.0	-2.7
	76nm,0.4s,baz=173,slow=2.2,SNR=27						
AFI				S	S	14 23 42.4	-8.4
	39nm,0.7s,baz=221,slow=20,SNR=2.8						
AFI	Afiamalu	9.85	45	P	P	14 21 54.8	-2.9
MARNC	Mare, Loyalty	12.21	266	P	P	14 22 19.2	-1.4
MARNC	Mare, Loyalty	12.21	266	P	P	14 22 21.1	+0.5
RTV	Rentapao	12.42	283	P	P	14 22 24.0	+1.3
DVP	Devils Point	12.66	283	P	P	14 22 25.8	+0.8
PINNC	Pines Island,	12.79	261	P	P	14 22 25.6	-0.6
PINNC	Pines Island,	12.79	261	P	P	14 22 27.4	+1.2
LIFNC	LIFOU	12.97	269	P	P	14 22 26.2	-1.9
LIFNC	LIFOU	12.97	269	P	P	14 22 28.4	+0.3
YATNC	Mamie plateau,	13.27	263	P	P	14 22 32.0	+1.0
OUENC	Ouen Island, N	13.33	262	P	P	14 22 34.1	+2.5
DZM	Mont Dzumac	13.69	263	P	P	14 22 35.4	+0.2
	7.8nm,0.4s,baz=128,slow=6.5,SNR=44						
DZM				S	S	14 24 59.2	+0.6
	15nm,1.1s,baz=291,slow=20,SNR=3.5						
DZM	Mont Dzumac	13.69	263	P	P	14 22 35.6	+0.4
DZM	Mont Dzumac	13.69	263	P	P	14 22 36.2	+1.0
SANVU	Saraoutou	14.36	291	P	P	14 22 40.8	-0.7
SANVU	Saraoutou	14.36	291	P	P	14 22 42.3	+0.8
OUZ	Omahuta	15.54	204	P	P	14 22 54.4	+2.5
OUZ	Omahuta	15.54	204	P	P	14 22 52.1	+0.2
KOUNC	Koumac, New Ca	15.75	269	P	P	14 22 54.7	+0.6
GRZ	Great Barrier	15.88	197	P	P	14 22 57.5	+2.5
WCZ	Waipu Caves	15.93	200	P	P	14 22 59.5	+4.0
KUZ	Kuaotunu	16.28	196	P	P	14 23 01.0	+2.3
WIAZ	Waiheke Island	16.48	197	P	P	14 23 03.2	+2.7
MXZ	Matakaoa Point	16.58	188	P	P	14 23 01.2	-0.2
MXZ				S	S	14 25 42.8	-2.6
ETAZ	East Tamaki Re	16.69	198	P	P	14 23 05.3	+2.9
MKAZ	Moumakai	16.77	197	P	P	14 23 05.6	+2.5
WMGZ	Waiomatatini S	16.82	187	P	P	14 23 03.6	0.0
WMGZ				S	S	14 25 49.4	+0.1
HAZ	Te Kaha	16.84	189	P	P	14 23 03.7	-0.1
HAZ				S	S	14 25 43.6	-6.1
PKGZ	Pakihiroa	16.93	188	P	P	14 23 04.2	-0.5
PKGZ				S	S	14 25 45.7	-5.5
RUGZ	Raukumara Rang	17.07	189	P	P	14 23 05.5	-0.5
RUGZ				S	S	14 25 48.7	-4.8
PUZ	Puketiti	17.09	188	P	P	14 23 06.4	+0.3
PUZ				S	S	14 25 48.8	-5.0
TWGZ	Tauwhareparae	17.23	188	P	P	14 23 08.2	+0.8
TWGZ				S	S	14 25 50.6	-5.5
MARZ	Manawahe	17.26	192	P	P	14 23 08.7	+1.1
TOZ	Tahuroa Road	17.27	195	P	P	14 23 10.0	+2.3
KMRZ	Kaimai	17.28	194	P	P	14 23 10.4	+2.6
KARZ	Kaharoa	17.38	193	P	P	14 23 11.1	+2.4
OMRZ	Omania	17.43	193	P	P	14 23 11.2	+1.9
URZ	Urewera	17.44	191	P	P	14 23 08.0	-1.2
	39nm,0.3s,baz=121,slow=24,SNR=83						
URZ				S	S	14 25 55.1	-4.3
	8.6nm,0.5s,baz=121,slow=23,SNR=2.8						
URZ	Urewera	17.44	191	P	P	14 23 07.1	-2.2
URZ	Urewera	17.44	191	P	P	14 23 07.4	-1.9
URZ				S	S	14 25 53.2	-6.2
URZ	Urewera	17.44	191	P	P	14 23 08.8	-0.5
MWZ	Matawai	17.45	189	P	P	14 23 08.1	-1.3
MWZ				S	S	14 25 57.3	-2.3
NGRZ	Ngongotaha	17.47	193	P	P	14 23 13.6	+4.0
CNGZ	Carnagh Statio	17.50	188	P	P	14 23 10.1	+0.3
CNGZ				S	S	14 26 01.0	+0.6
TKGZ	Te Karaka	17.51	189	P	P	14 23 10.6	+0.7
RAGZ	Rawiri	17.62	190	P	P	14 23 11.2	+0.2
MUGZ	Murupara	17.72	191	P	P	14 23 10.4	-1.4
MUGZ				S	S	14 26 08.0	+4.2
HRRZ	Handcock Road	17.73	193	P	P	14 23 12.9	+0.9
RIGZ	Rimuhau	17.78	189	P	P	14 23 12.7	+0.3
RIGZ				S	S	14 25 58.5	-6.5
PRRZ	Plateau Road	17.81	192	P	P	14 23 12.9	+0.2
RTZ	Ruatahuna	17.81	191	P	P	14 23 11.4	-1.4
RTZ				S	S	14 25 59.7	-5.9
SNGZ	Shannon Statio	17.92	190	P	P	14 23 12.2	-1.4
SNGZ				S	S	14 26 04.8	-2.4
HIZ	Hauiti	18.17	196	P	P	14 23 16.5	+0.6
HATZ	Hinemaiaia	18.25	193	P	P	14 23 16.3	-0.3
NMHZ	Naumai	18.31	191	P	P	14 23 17.7	+0.5
NMHZ				S	S	14 26 14.5	+1.0
BKZ	Black Stump Fm	18.44	191	P	P	14 23 16.6	-1.7
BKZ				IAmb	IAmb	14 23 22.0	
	comp=Z,17nm,0.9s						
BKZ	Black Stump Fm	18.44	191	P	P	14 23 17.5	-0.9
KNTN	Kanton	19.51	22	P	P	14 23 27.2	-1.2
	comp=Z,39nm,1.2s						
BFZ	Birch Farm	19.95	191	P	P	14 23 31.3	-0.7
BFZ	Birch Farm	19.95	191	P	P	14 23 31.8	-0.2
MSWZ	Moikau Station	20.85	192	P	P	14 23 39.6	-0.5
SNZO	South Karori	20.86	194	P	P	14 23 39.4	-0.7
SNZO	South Karori	20.86	194	P	P	14 23 40.1	0.0
BHW	Baring Head	20.92	193	P	P	14 23 40.0	-0.6
QRZ	Quartz Range	20.97	198	P	P	14 23 41.7	+0.5
QRZ	Quartz Range	20.97	198	P	P	14 23 42.3	+1.1
PLWZ	Palliser	21.00	192	P	P	14 23 40.3	-1.2
TUWZ	Tuamarina	21.16	195	P	P	14 23 41.7	-1.1
THZ	Tophouse	21.73	197	P	P	14 23 47.3	-0.7
KHZ	Kahutara	22.18	195	P	P	14 23 51.0	-0.9
KHZ	Kahutara	22.18	195	P	P	14 23 51.5	-0.4
LTZ	Lake Taylor	22.85	197	P	P	14 23 56.6	-1.3
OXZ	Oxford	23.42	197	P	P	14 24 02.5	-0.5
RPZ	Rata Peaks	24.06	198	P	P	14 24 09.5	+1.0
	comp=Z,16nm,0.6s,baz=256,slow=2.4,SNR=5.8						
	comp=Z,16nm,0.6s						
RPZ	Rata Peaks	24.06	198	P	P	14 24 07.7	-0.8
RPZ				IAmb	IAmb	14 24 14.1	
	comp=Z,17nm,0.7s						
RPZ	Rata Peaks	24.06	198	P	P	14 24 08.4	-0.1
FOZ	Fox Glacier	24.27	200	P	P	14 24 09.5	-0.9
WKZ	Wanaka	25.69	200	P	P	14 24 22.0	-0.9
MLZ	Mavora Lakes	26.46	201	P	P	14 24 29.2	-0.4
DCZ	Deep Cove	26.88	202	P	P	14 24 33.2	0.0
WHZ	Wether Hill Ro	26.98	201	P	P	14 24 34.4	+0.2
PYZ	Puysegur Point	27.65	202	P	P	14 24 39.6	-0.4
EIDS	Eidsvold	27.90	255	P	P	14 24 43.1	+0.6
	baz=28,SNR=5.3						
EIDS	Eidsvold	27.90	255	P	P	14 24 41.6	-0.8
EIDS				IAmb	IAmb	14 24 44.4	
	comp=Z,15nm,0.8s						
EIDS	Eidsvold	27.90	255	P	P	14 24 43.4	+0.9
	comp=Z,27nm,0.7s						
ARMA	Armidale	28.07	245	P	P	14 24 45.4	+1.4
	baz=28,SNR=5.8						
ARMA	Armidale	28.07	245	P	P	14 24 45.1	+1.1
ARMA				IAmb	IAmb	14 24 47.5	
	comp=Z,25nm,1.5s						
ARMA	Armidale	28.07	245	P	P	14 24 44.4	+0.4
RMQ	Roma	30.04	253	P	P	14 25 02.8	+1.8
	baz=30,SNR=20						
RMQ	Roma	30.04	253	P	P	14 25 02.5	+1.5
	comp=Z,28nm,1.0s						
CNB	Canberra Magne	31.21	236	P	P	14 25 12.0	+1.2
CTA	Charters Tower	32.62	265	P	P	14 25 22.9	+0.1
	comp=Z,53nm,0.6s,baz=94,slow=9.9,SNR=126						
	comp=Z,53nm,0.6s						
CTA	Charters Tower	32.62	265	P	P	14 25 23.0	+0.1
CTAO	Charters Tower	32.62	265	P	P	14 25 22.8	-0.1
CTAO	Charters Tower	32.62	265	P	P	14 25 23.1	+0.2
KRVT	Keravat (AS076	32.82	297	P	P	14 25 23.6	-1.1
	comp=Z,43nm,0.6s,baz=170,slow=1.9,SNR=12						
	comp=Z,43nm,0.6s						
CMSA	Cobar Meteorol	33.28	244	P	P	14 25 28.8	+0.5
	baz=34,SNR=12						
CMSA	Cobar Meteorol	33.28	244	P	P	14 25 29.1	+0.8
QLP	Quilpie	34.10	254	P	P	14 25 35.5	+0.3
	baz=34,SNR=22						
QLP	Quilpie	34.10	254	P	P	14 25 36.8	+1.6
PMG	Port Moresby	34.69	284	P	P	14 25 39.6	-0.5
	comp=Z,71nm,0.8s,baz=88,slow=7.6,SNR=24						
	comp=Z,71nm,0.8s						
PMG	Port Moresby	34.69	284	P	P	14 25 39.0	-1.1
PMG	Port Moresby	34.69	284	P	P	14 25 40.1	-0.1
MTSU	Mount Surprise	34.75	268	P	P	14 25 40.7	0.0
	baz=35,SNR=25						
MTSU	Mount Surprise	34.75	268	P	P	14 25 41.2	+0.5
TOO	Toolangi	34.88	234	P	P	14 25 42.4	+0.8
	baz=35,SNR=6.0						
TOO	Toolangi	34.88	234	P	P	14 25 41.4	-0.1
TOO				IAmb	IAmb	14 25 43.9	
	comp=Z,13nm,0.8s						
TOO	Toolangi	34.88	234	P	P	14 25 41.8	+0.3
TAU	Tasmania Unive	35.62	225	P	P	14 25 47.7	+0.2
PATS	Pohnpei	35.67	319	P	P	14 25 48.7	+0.4
STKA	Stephens Creek	36.79	245	P	P	14 25 57.6	+0.3
	comp=Z,5.5nm,0.6s,baz=96,slow=12,SNR=11						
	comp=Z,5.5nm,0.6s						
STKA	Stephens Creek	36.79	245	P	P	14 25 58.1	+0.8
	baz=37,SNR=9.2						
STKA	Stephens Creek	36.79	245	P	P	14 25 57.6	+0.3
STKA	Stephens Creek	36.79	245	P	P	14 25 57.1	-0.1
COEN	Coen	36.81	275	P	P	14 25 57.8	+0.2
	baz=37,SNR=17						
COEN	Coen	36.81	275	P	P	14 25 57.1	-0.5
COEN	Coen	36.81	275	P	P	14 25 58.1	+0.5
INKA	Innaminka	37.23	252	P	P	14 26 01.4	+0.5
MANU	Manus Island	37.95	295	P	P	14 26 06.8	-0.2
MANU				IAmb	IAmb	14 26 09.4	
	comp=Z,39nm,1.2s						
QIS	Mount Isa	38.73	263	P	P	14 26 12.6	-0.5
	baz=39,SNR=8.3						
QIS	Mount Isa	38.73	263	P	P	14 26 12.7	-0.5
HTT	Hallett	39.22	243	P	P	14 26 17.7	+0.7
	baz=39,SNR=4.2						
HTT	Hallett	39.22	243	P	P	14 26 17.6	+0.7
LCRK	Leigh Creek	39.55	247	P	P	14 26 20.1	+0.6
TWOA	Tennyson Woods	39.73	240	P	P	14 26 21.1	+0.2
	comp=Z,21nm,1.0s						
NAPP	Napperby	39.83	243	P	P	14 26 22.2	+0.5
	comp=Z,13nm,0.9s						
BBOO	Buckleboo	41.54	244	P	P	14 26 35.5	+0.2
	baz=42,SNR=7.3						
BBOO	Buckleboo	41.54	244	P	P	14 26 35.1	-0.2
BBOO				IAmb	IAmb	14 26 35.8	
	comp=Z,59nm,1.4s						
BBOO	Buckleboo	41.54	244	P	P	14 26 34.8	-0.5
	comp=Z,65nm,2.4s						
OOD	Oodnadatta	41.71	252	P	P	14 26 35.8	-0.8
WAKE	Wake Island	42.56	340	P	P	14 26 41.7	-1.6
MULG	Mulgathing	43.13	248	P	P	14 26 47.9	+0.2
WR0	Warramunga Arr	43.52	263	P	P	14 26 50.0	-0.8
WR0				IAmb	IAmb	14 26 52.7	
	comp=Z,35nm,0.9s						
AS31	Alice Springs	43.58	257	P	P	14 26 51.0	-0.3
AS31				IAmb	IAmb	14 26 52.9	
	comp=Z,16nm,0.5s						
ASAR	Alice Springs	43.58	257	P	P	14 26 51.2	-0.1
	comp=Z,64nm,0.8s,baz=90,slow=8.2,SNR=179						
ASAR				PcP	PcP	14 28 25.4	+0.8
	comp=Z,6.4nm,0.8s,baz=102,slow=3.9,SNR=6.9						
ASAR				ScP	ScP	14 31 19.5	+1.4
	comp=Z,1.7nm,0.7s,baz=104,slow=4.4,SNR=5.2						
ASAR				S	S	14 32 34.8	-2.7
	comp=Z,16nm,0.7s,baz=97,slow=15,SNR=37						
	comp=Z,64nm,0.8s						
ASAR	Alice Springs	43.58	257	P	P	14 26 51.0	-0.3
WB0	Warramunga Arr	43.69	263	P	P	14 26 51.3	-0.9
WB2	Warramunga Arr	43.70	263	P	P	14 26 51.2	-1.0
WRAB	Tennant Creek	43.70	263	P	P	14 26 50.8	-1.4
WRAB	Tennant Creek	43.70	263	P	P	14 26 52.2	0.0
WRA	Warramunga Arr	43.71	263	P	P	14 26 51.4	-0.9
	comp=Z,35nm,0.6s,baz=96,slow=7.7,SNR=145						
WRA				PcP	PcP	14 28 26.1	+1.1
	comp=Z,3.7nm,0.9s,baz=88,slow=4.8,SNR=3.2						
WRA				S	S	14 32 35.5	-3.7
	comp=Z,7.8nm,0.9s,baz=98,slow=12,SNR=12						
	comp=Z,35nm,0.6s						
WRA	Warramunga Arr	43.71	263	P	P	14 26 51.0	-1.3
SMPI	Sarmi	45.47	289	P	P	14 27 05.4	-0.3
	comp=Z,3µmcomp=Z,44nm,1.3s						
HMH	Humu'ula Sheep	46.49	31	P	P	14 27 14.0	+0.3
KDU	Kakadu	47.15	272	P	P	14 27 17.6	-0.8
	baz=47,SNR=25						
KDU	Kakadu	47.15	272	P	P	14 27 18.2	-0.2
BAKI	Biak	48.14	288	P	P	14 27 26.5	+0.7
	comp=Z,109nm,1.0s						
FORT	Forrest	48.30	247	P	P	14 27 26.1	-0.6
FORT				IAmb	IAmb	14 27 34.6	
	comp=Z,38nm,0.9s						
FORT	Forrest	48.30	247	P	P	14 27 26.9	+0.1
	comp=Z,52nm,0.8s						
MTN	Manton Dam	48.35	271	P	P	14 27 27.4	+0.1
	baz=48,SNR=8.4						
MTN	Manton Dam	48.35	271	P	P	14 27 26.1	-1.2
MTN	Manton Dam	48.35	271	P	P	14 27 27.0	-0.3
WRKA	Warakurna	48.51	255	P	P	14 27 28.3	-0.2
	baz=49,SNR=28						
WRKA	Warakurna	48.51	255	P	P	14 27 28.5	0.0
KNRA	Kununurra	49.80	267	P	P	14 27 37.5	-0.4
	baz=50,SNR=31						
KNRA	Kununurra	49.80	267	P	P	14 27 37.3	-0.6
KNRA	Kununurra	49.80	267	P	P	14 27 38.0	0.0
FITZ	Fitzroy Crossi	52.13	263	P	P	14 27 54.9	+0.1
	comp=Z,13nm,0.7s,baz=101,slow=4.6,SNR=26						
	comp=Z,13nm,0.7s						
FITZ	Fitzroy Crossi	52.13	263	P	P	14 27 54.4	-0.4
SWI	Sorong	52.61	286	P	P	14 27 57.9	-0.3
	comp=Z,3µmcomp=Z,311nm,0.8s						
MSAI	Masohi	53.69	282	P	P	14 28 05.7	-0.1
	comp=Z,14nm,0.6s						
AAI	Ambon	54.23	281	P	P	14 28 08.9	-0.7
	comp=Z,85nm,1.1s						
LBMI	Labuha	56.10	284	P	P	14 28 22.4	-0.2
	comp=Z,511nmcomp=Z,58nm,1.0s						
BATI	Baumata	56.12	272	P	P	14 28 24.0	+1.3
	comp=Z,63nm,0.7s,baz=170,slow=1.1,SNR=16						
	comp=Z,63nm,0.7s						
BATI	Baumata	56.12	272	P	P	14 28 24.2	+1.5
	comp=Z,51nm,0.7s						
PSA00	Pilbara Seismi	56.73	257	P	P	14 28 25.7	-1.1
PSA00				IAmb	IAmb	14 28 28.1	
	comp=Z,25nm,0.9s						
PSA00	Pilbara Seismi	56.73	257	P	P	14 28 26.5	-0.3
TNTI	Ternate	56.82	286	P	P	14 28 26.7	-0.8
TNTI				IAmb	IAmb	14 28 29.0	
	comp=Z,72nm,0.9s						
TNTI	Ternate	56.82	286	P	P	14 28 27.3	-0.2
	comp=Z,1µmcomp=Z,100nm,0.9s						
SANI	Sanana	56.90	282	P	P	14 28 26.8	-1.2
	comp=Z,660nmcomp=Z,67nm,1.1s						
SANI	Sanana	56.90	282	P	P	14 28 28.9	+0.9
MBWA	Marble Bar	56.92	258	P	P	14 28 27.2	-0.9
MBWA				IAmb	IAmb	14 28 29.3	
	comp=Z,35nm,0.7s						
MBWA	Marble Bar	56.92	258	P	P	14 28 28.6	+0.5
MEEK	Meekatharra	56.95	251	P	P	14 28 27.6	-0.6
	baz=57,SNR=6.0						
MEEK	Meekatharra	56.95	251	P	P	14 28 27.5	-0.7
	comp=Z,29nm,1.4s						
KLBR	Kellerberrin	57.06	245	P	P	14 28 29.2	+0.3
	baz=57,SNR=14						
SBA	Scott Base	57.22	184	P	P	14 28 29.4	+0.4
VNDA	Vanda	57.24	185	P	P	14 28 31.8	+2.5
	comp=Z,3.4nm,0.5s,baz=7.1,slow=6.4,SNR=28						
	comp=Z,3.4nm,0.5s						
VNDA	Vanda	57.24	185	P	P	14 28 29.8	+0.6
MMRI	Maumere	57.96	273	P	P	14 28 34.0	-1.1
MMRI				IAmb	IAmb	14 28 36.7	
	comp=Z,50nm,0.7s						
MMRI	Maumere	57.96	273	P	P	14 28 34.7	-0.5
	comp=Z,80nm,0.9s						
BLDU	Ballidu	58.06	246	P	P	14 28 36.2	+0.6
	baz=58,SNR=11						
BLDU	Ballidu	58.06	246	P	P	14 28 35.7	+0.1
	comp=Z,24nm,0.7s						
MUN	Mundaring	58.33	245	P	P	14 28 38.2	+0.8
	baz=58,SNR=4.0						
MUN	Mundaring	58.33	245	P	P	14 28 38.4	+1.0
	comp=Z,38nm,1.3s						
EDFI	Ende, Flores	58.43	273	P	P	14 28 37.5	-1.0
	comp=Z,612nmcomp=Z,44nm,0.8s						
BBSI	Bau Bau	58.74	277	P	P	14 28 41.0	+0.6
	comp=Z,4.3nm,1.0s						
MORW	Morawa	58.84	248	P	P	14 28 40.8	0.0
	baz=59,SNR=5.5						
MORW	Morawa	58.84	248	P	P	14 28 40.3	-0.6
MORW	Morawa	58.84	248	P	P	14 28 41.1	+0.2
	comp=Z,31nm,1.9s						
BSSI	Bau Bau, Buton	60.44	275	P	P	14 28 50.8	-0.9
	comp=Z,18nm,1.1s						
GTOI	Gorontalo	60.71	283	P	P	14 28 54.0	+0.6
	comp=Z,232nmcomp=Z,31nm,0.8s						
JCJ	Chichijima	60.97	320	P	P	14 28 53.7	-1.1
	comp=Z,53nm,0.6s,baz=112,slow=19,SNR=11						
	comp=Z,53nm,0.6s						
JCJ	Chichijima	60.97	320	P	P	14 28 53.7	-1.1
JCJ				IAmb	IAmb	14 28 55.3	
	comp=Z,46nm,0.7s						
JCJ	Chichijima	60.97	320	P	P	14 28 53.8	-1.1
	comp=Z,68nm,0.7s						
BKSI	Bulukumba	61.07	276	P	P	14 28 55.2	-0.6
	comp=Z,346nmcomp=Z,26nm,1.0s						
APSI	Ampana	61.32	281	P	P	14 28 58.7	+1.3
	comp=Z,579nmcomp=Z,46nm,1.2s						
BNSI	Bone	61.42	277	P	P	14 28 58.8	+0.8
	comp=Z,40nm,1.0s						
GIRL	Giralia	61.60	255	P	P	14 28 59.9	+0.8
	baz=62,SNR=4.6						
GIRL	Giralia	61.60	255	P	P	14 28 60.0	+0.8
GIRL	Giralia	61.60	255	P	P	14 28 59.7	+0.6
	comp=Z,191nm,1.9s						
MRSI	Marisa	61.61	283	P	P	14 28 58.8	-0.5
	comp=Z,31nm,1.1s						
SPSI	Sidrap Palu	61.89	277	P	P	14 29 00.1	-1.0
	comp=Z,27nm,0.8s						
PLAI	Plampang	62.06	271	P	P	14 29 01.8	-0.4
	comp=Z,858nmcomp=Z,92nm,0.9s						
PLAI	Plampang	62.06	271	P	P	14 29 02.1	-0.1
TOLI2	Tolitoli	62.93	283	P	P	14 29 06.8	-1.0
TOLI2				IAmb	IAmb	14 29 08.9	
	comp=Z,29nm,0.8s						
TOLI2	Tolitoli	62.93	283	P	P	14 29 07.4	-0.4
CASY	Casey	63.07	205	P	P	14 29 08.5	+0.8
MPSI	Mapaga	63.42	281	P	P	14 29 10.1	-0.8
	comp=Z,49nm,1.1s						
SRBI	Singaraja	64.70	271	P	P	14 29 19.0	0.0
	comp=Z,59nm,0.9s						
JAGI	Jajag, Banyuwa	65.56	270	P	P	14 29 23.2	-1.2
	comp=Z,50nm,0.9s						
ABJI	Asem Bagus	65.71	271	P	P	14 29 25.5	+0.2
	comp=Z,37nm,1.3s						
KMMI	Kalianget	66.21	272	P	P	14 29 27.9	-0.5
	comp=Z,33nm,0.9s						
BBKI	Banjar Baru	66.65	275	P	P	14 29 31.7	+0.6
MYLDM	Lahad Datu	66.70	286	P	P	14 29 33.2	+1.8
MYLDM				IAmb	IAmb	14 29 52.1	
	comp=Z,20nm,0.8s						
MTKI	Muara Teweh, K	67.53	278	P	P	14 29 36.9	+0.4
	comp=Z,25nm,0.7s						
PWJI	Pagerwojo	67.90	270	P	P	14 29 38.8	+0.1
	comp=Z,42nm,2.2s						
PCJI	Pacitan	68.43	269	P	P	14 29 42.2	+0.3
	comp=Z,108nm,0.7s						
JYT	Yasato	68.91	325	P	P	14 29 44.2	0.0
JYT				IAmb	IAmb	14 29 46.0	
	comp=Z,33nm,1.0s						
UGM	Wanagama	69.13	269	P	P	14 29 45.8	-0.3
UGM	Wanagama	69.13	269	P	P	14 29 45.9	-0.3
	comp=Z,154nm,1.8s						
JMM	Marumori	69.84	327	P	P	14 29 48.6	-1.2
JMM				IAmb	IAmb	14 29 55.6	
	comp=Z,16nm,0.9s						
JOW	Kunigami	69.93	311	P	P	14 29 50.4	-0.2
	comp=Z,21nm,0.6s,baz=122,slow=16,SNR=7.4						
	comp=Z,21nm,0.6s						
JOW	Kunigami	69.93	311	P	P	14 29 50.7	+0.1
JOW				IAmb	IAmb	14 29 53.2	
	comp=Z,34nm,1.1s						
JGF	Kuroka	70.00	323	P	P	14 29 50.1	-0.8
JGF				IAmb	IAmb	14 29 52.0	
	comp=Z,17nm,0.8s						
MJAR	Matsushiro Arr	70.21	324	P	P	14 29 50.9	-1.2
	comp=Z,13nm,0.8s,baz=153,slow=6.3,SNR=30						
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	70.21	324	P	P	14 29 51.1	-1.0
MAJO	Matsushiro	70.22	324	P	P	14 29 51.3	-0.8
MAJO				IAmb	IAmb	14 29 53.2	
	comp=Z,18nm,0.7s						
MAJO	Matsushiro	70.22	324	P	P	14 29 52.2	+0.1
MJB9	Matsu-Tunnel	70.22	324	P	P	14 29 51.2	-0.9
MJB9				IAmb	IAmb	14 29 53.2	
	comp=Z,18nm,0.7s						
STKI	Sintang	71.07	278	P	P	14 29 58.6	+1.0

	comp=Z,27nm,0.9s						
JSD	Sado	71.29	325	P	P	14 29 57.9	-0.4
JSD				IAmb	IAmb	14 30 00.7	
	comp=Z,29nm,0.9s						
JSU	Suzuyama	71.38	316	P	P	14 29 58.5	-0.5
JSU				IAmb	IAmb	14 30 00.6	
	comp=Z,30nm,0.9s						
ERM	Erimo	71.95	331	P	P	14 30 01.6	-0.4
ERM	Erimo	71.95	331	P	P	14 30 01.3	-0.7
JTM	Tenmabayashi	71.95	329	P	P	14 30 02.0	-0.1
JTM				IAmb	IAmb	14 30 04.0	
	comp=Z,23nm,1.0s						
JHS	Saijyo	72.03	320	P	P	14 30 02.5	-0.2
YOJ	Yonaguni jima	72.42	306	P	P	14 30 04.3	-0.8
KIWB	Kanaga Island	72.66	1	P	P	14 30 05.2	-0.6
KSM	Kuching	72.69	279	P	P	14 30 05.8	-1.1
KSM				IAmb	IAmb	14 30 08.9	
	comp=Z,44nm,0.9s						
ADK	Adak	72.70	1	P	P	14 30 05.0	-1.1
ADK	Adak	72.70	1	P	P	14 30 05.6	-0.4
GSTR	Great Sitkin T	72.92	2	P	P	14 30 06.0	-1.4
TWG	Pinlang	73.02	303	P	P	14 30 06.3	-2.3
ATKA	Atka Island	73.11	3	P	P	14 30 08.0	-0.4
YULB	Yu-li	73.15	304	P	P	14 30 07.4	-1.9
YULB				IAmb	IAmb	14 30 09.9	
	comp=Z,15nm,0.8s						
NACB	Ninganchiao	73.34	305	P	P	14 30 08.9	-1.4
NACB				IAmb	IAmb	14 30 11.7	
	comp=Z,43nm,0.9s						
TPI	Tanjungpandan	73.59	273	P	P	14 30 12.6	+0.5
	comp=Z,302nmcomp=Z,14nm,1.1s						
TPUB	Ta-pu	73.62	303	P	P	14 30 10.0	-2.0
TPUB	Ta-pu	73.62	303	P	P	14 30 11.8	-0.2
SSLB	Suanglung	73.62	304	P	P	14 30 10.2	-1.9
SSLB				IAmb	IAmb	14 30 12.7	
	comp=Z,40nm,0.9s						
SSLB	Suanglung	73.62	304	P	P	14 30 11.4	-0.6
JKA	Kamikawa-asahi	73.87	332	P	P	14 30 13.1	+0.2
JKA				IAmb	IAmb	14 30 16.1	
	comp=Z,31nm,1.0s						
ASAJ	Asahikawa	73.87	332	P	P	14 30 13.8	+0.8
	comp=Z,19nm,0.8s,baz=211,slow=7.4,SNR=17						
	comp=Z,19nm,0.8s						
JTU	Tsushima	74.00	318	P	P	14 30 13.6	-0.3
JTU				IAmb	IAmb	14 30 24.6	
	comp=Z,53nm,1.5s						
NIKH	Nikolski High	74.28	6	P	P	14 30 14.9	-0.1
NIKH	Nikolski High	74.28	6	P	P	14 30 13.8	-1.2
	baz=190						
BLSI	Bandar Lampung	74.92	270	P	P	14 30 19.8	+0.3
PPBI	Pangkal Pinang	75.22	273	P	P	14 30 22.8	+1.6
UNV	Unalaska Valle	75.40	8	P	P	14 30 20.0	-1.2
UNV	Unalaska Valle	75.40	8	P	P	14 30 19.7	-1.4
	baz=192						
KASI	Kota Agung	75.57	270	P	P	14 30 22.8	-0.3
	comp=Z,56nm,1.1s						
AKUT	Akutan	75.78	8	P	P	14 30 22.1	-1.1
YSS	Yuzh-Sakhalins	76.07	334	P	P	14 30 25.0	0.0
YSS				IAmb	IAmb	14 30 27.5	
	comp=Z,43nm,1.4s						
LWLI	Liwa	76.15	270	P	P	14 30 27.8	+1.3
	comp=Z,67nm,0.8s						
PMBI	Palembang	76.22	272	P	P	14 30 28.8	+2.1
PET	Petropavlovsk	76.35	346	P	P	14 30 25.7	-0.7
PET				IAmb	IAmb	14 30 53.4	
	comp=Z,30nm,1.2s						
PET	Petropavlovsk	76.35	346	P	P	14 30 25.7	-0.7
PEA0B	Petropavlovsk-	76.65	346	P	P	14 30 27.4	-0.7
PETK	Petropavlovsk-	76.65	346	P	P	14 30 27.6	-0.5
	comp=Z,13nm,0.6s,baz=116,slow=2.8,SNR=47						
	comp=Z,13nm,0.6s						
PETK	Petropavlovsk-	76.65	346	P	P	14 30 26.9	-1.2
KSRS	Korea Array	76.80	319	P	P	14 30 29.6	+0.3
	comp=Z,3.7nm,0.8s,baz=136,slow=6.1,SNR=18						
	comp=Z,3.7nm,0.8s						
KSAR	Wonju Array Be	76.81	319	P	P	14 30 28.6	-0.7
DSRI	Dabo	77.28	274	P	P	14 30 32.5	+0.1
	comp=Z,18nm,1.0s						
CNBA	Chernabura Isl	77.40	11	P	P	14 30 31.4	-0.7
CNBA				IAmb	IAmb	14 30 33.4	
	comp=Z,56nm,1.1s						
CHNA	Chernabura Isl	77.41	11	P	P	14 30 31.9	-0.3
	baz=198						
SDPT	Sand Point	77.75	11	P	P	14 30 33.1	-0.8
SDPT				IAmb	IAmb	14 30 43.5	
	comp=Z,57nm,1.0s						
SDPT	Sand Point	77.75	11	P	P	14 30 32.9	-1.0
	baz=198						
SMAI	San Martin Ant	78.34	159	P	P	14 30 38.9	+1.9
MYKOM	Kota Tinggi	78.78	276	P	P	14 30 40.1	-0.4
MYKOM				IAmb	IAmb	14 30 42.7	
	comp=Z,26nm,0.8s						
USA0B	Ussuriysk Arra	79.00	326	P	P	14 30 41.0	+0.1
USA0B				IAmb	IAmb	14 30 43.5	
	comp=Z,27nm,0.9s						
USRK	Ussuriysk Ar.	79.00	326	P	P	14 30 41.9	+1.0
	comp=Z,24nm,0.9s,baz=103,slow=2.8,SNR=20						
	comp=Z,24nm,0.9s						
USRK	Ussuriysk Ar.	79.00	326	P	P	14 30 41.1	+0.2
BELA	Belgrano 2	79.07	173	P	P	14 30 41.1	+0.3
CHIR	Chirikof Islan	79.13	13	P	P	14 30 41.1	-0.2
BCW	Bitter Crk WRg	79.30	46	P	P	14 30 42.9	+0.1
HOPS	Hopland Field	79.36	41	P	P	14 30 44.3	+1.3
HOPS				IAmb	IAmb	14 30 56.6	
	comp=Z,44nm,1.4s						
NJ2	Nanjing	79.64	310	*e*P	P	14 30 44.6	+0.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
MURC	Murrieta	80.07	48	P	P	14 30 48.1	+1.3
	baz=236						
BFSC	Mount Baldy Ra	80.10	47	P	P	14 30 48.1	+1.0
	baz=236						
VOG	Valley Oaks Go	80.11	45	P	P	14 30 47.6	+0.7
	baz=235						
SII	Sitkinak Islan	80.12	14	P	P	14 30 46.7	+0.2
MONP2	Monument Peak	80.22	49	P	P	14 30 47.7	-0.2
	baz=237,SNR=8.1						
EDW2	Edwards Air Fo	80.23	47	P	P	14 30 48.6	+0.9
	baz=236,SNR=8.6						
IKP	In-Ko-Pah, Jac	80.31	50	P	P	14 30 48.1	0.0
	baz=237						
ISA	Isabella, Lake	80.34	46	P	P	14 30 49.4	+1.2
ISA	Isabella, Lake	80.34	46	P	P	14 30 49.5	+1.3
	baz=235,SNR=8.7						
YUH	Yuha Desert	80.45	50	P	P	14 30 49.1	+0.4
CMB	Columbia Colle	80.46	43	P	P	14 30 49.6	+0.8
MDJ	Mudanjiang	80.54	325	P	P	14 30 49.1	+0.2
MDJ				IAmb	IAmb	14 30 51.5	
	comp=Z,22nm,0.9s						
MDJ	Mudanjiang	80.54	325	P	P	14 30 50.0	+1.1
MDJ				pmax	pmax		
	comp=Z,30nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,340nm,3.9s						
PFO	Pinyon Flats O	80.59	49	P	P	14 30 50.5	+0.9
	baz=237						
TPFO	Pinon Flats	80.59	49	P	P	14 30 50.7	+1.1
	baz=237						
KSXB	Camp Six Broad	80.65	38	P	P	14 30 51.5	+1.8
KSXB				IAmb	IAmb	14 30 52.2	
	comp=Z,37nm,1.3s						
SWSC	Sam W. Stewart	80.69	49	P	P	14 30 51.1	+1.1
	baz=237						
MAW	Mawson	80.72	200	P	P	14 30 51.9	+2.4
	comp=Z,2.2nm,0.5s,baz=126,slow=7.3,SNR=1.5						
	comp=Z,2.2nm,0.5s						
MAW	Mawson	80.72	200	P	P	14 30 50.7	+1.2
LRMC	Laurel Mtn Rad	80.77	46	P	P	14 30 51.8	+1.2
	baz=236,SNR=5.3						
OHAK	Old Harbor	80.93	14	P	P	14 30 50.3	-0.3
OHAK				IAmb	IAmb	14 31 06.6	
	comp=Z,39nm,1.5s						
OHAK	Old Harbor	80.93	14	P	P	14 30 50.4	-0.2
	baz=204						
L02F	Cave Junction	81.02	38	P	P	14 30 53.0	+1.5
	baz=231						
CWC	Cottonwood Cre	81.05	45	P	P	14 30 52.7	+0.8
	baz=236						
PMSA	Palmer Station	81.06	157	P	P	14 30 53.2	+1.9
PMSA				IAmb	IAmb	14 31 18.9	
	comp=Z,56nm,1.2s						
MDPB	Devils Postpil	81.07	44	P	P	14 30 52.9	+0.7
OMMB	Old Mammoth Mi	81.11	44	P	P	14 30 53.2	+0.7
BELC	Belle Mtn. Jos	81.12	48	P	P	14 30 53.5	+1.1
	baz=237,SNR=9.3						
MPMC	Manual Prospec	81.23	46	P	P	14 30 53.7	+0.8
	baz=236,SNR=13						
GSC	Goldstone, Bar	81.27	47	P	P	14 30 53.9	+0.8
GSC	Goldstone, Bar	81.27	47	P	P	14 30 54.2	+1.1
	baz=236,SNR=5.3						
TIN	Tinemaha, Big	81.29	45	P	P	14 30 54.3	+1.2
	baz=235						
BC3	Big Chuckawall	81.32	49	P	P	14 30 54.2	+0.8
	baz=238						
K02D	Willamette Mer	81.32	38	P	P	14 30 54.7	+1.6
	baz=231						
HEC	Hector,Ludlow	81.34	48	P	P	14 30 54.3	+0.9
	baz=237,SNR=8.0						
GLA	Glamis	81.44	50	P	P	14 30 55.3	+1.4
GLA				IAmb	IAmb	14 30 57.6	
	comp=Z,12nm,0.8s						
GLA	Glamis	81.44	50	P	P	14 30 55.5	+1.6
	baz=238						
J01E	Myrtle Point	81.47	37	P	P	14 30 54.6	+0.9
	baz=230						
BEKR	Beckworth	81.56	42	P	P	14 30 55.0	+0.5
QSM	Queen of Sheba	81.59	46	P	P	14 30 54.9	+0.3
KDAK	Kodiak Island	81.59	14	P	P	14 30 54.1	+0.1
KDAK	Kodiak Island	81.59	14	P	P	14 30 54.4	+0.4
	baz=205						
HUMO	Hull Mountain	81.67	38	P	P	14 30 56.5	+1.7
HUMO				IAmb	IAmb	14 30 59.2	
	comp=Z,21nm,1.1s						
YERR	Yerington	81.75	43	P	P	14 30 56.0	+0.5
YERR				IAmb	IAmb	14 30 58.4	
	comp=Z,13nm,0.8s						
GMRC	Granite Mounta	81.78	48	P	P	14 30 56.4	+0.7
	baz=237,SNR=6.3						
LCH	Last Change Ra	81.78	45	P	P	14 30 56.3	+0.7
LHV	Little Huntoon	81.80	44	P	P	14 30 56.2	+0.8
IRM	Iron Mountain	81.80	49	P	P	14 30 56.6	+0.9
	baz=238,SNR=6.5						
L04D	Klamath Falls	81.81	39	P	P	14 30 56.5	+0.8
L04D				IAmb	IAmb	14 30 58.2	
	comp=Z,26nm,0.8s						
L04D	Klamath Falls	81.81	39	P	P	14 30 56.7	+1.0
	baz=232						
DBO	Dodson Butte	81.83	38	P	P	14 30 56.0	+0.3
GWY	Greenwater Val	81.85	46	P	P	14 30 56.2	+0.2
FURC	Furnace Creek,	81.87	46	P	P	14 30 57.2	+1.3
	baz=236						
TUQ	Turquoise Moun	81.95	47	P	P	14 30 57.2	+0.7
	baz=237,SNR=5.4						
RYN	Ryan	82.00	43	P	P	14 30 56.6	-0.2
NVAR	Mina Array Bea	82.03	44	P	P	14 30 58.1	+1.1
	comp=Z,7.0nm,0.7s,baz=222,slow=8.9,SNR=74						
	comp=Z,7.0nm,0.7s						
NVAR	Mina Array Bea	82.03	44	P	P	14 30 56.6	-0.3
113A	Mohawk Valley,	82.05	51	P	P	14 30 58.0	+1.1
PAHR	Pah Rah Range	82.08	42	P	P	14 30 58.0	+0.9
NV11	Mina Array Sit	82.12	44	P	P	14 30 58.0	+0.7
I03D	Drain, OR	82.13	37	P	P	14 30 58.8	+1.7
	baz=231						
214A	Organ Pipe Nat	82.33	52	P	P	14 30 59.9	+1.5
	baz=239						
MNSI	Mandailing Nat	82.39	274	P	P	14 30 58.3	-0.8
	comp=Z,41nm,0.8s						
Q19K	Cape Douglas,	82.41	13	P	P	14 30 58.1	-0.1
Q19K				IAmb	IAmb	14 31 05.3	
	comp=Z,43nm,1.1s						
Q19K	Cape Douglas,	82.41	13	P	P	14 30 58.1	-0.1
	baz=204						
BNX	BinXian	82.45	325	⇓P	P	14 30 59.4	+0.8
BNX				pmax	pmax		
	comp=Z,50nm,0.7s						
BNX				pmax	pmax		
	comp=Z,450nm,3.8s						
KVN	Kaiserville	82.51	43	P	P	14 30 59.3	0.0
P18K	Big Mountain,	82.52	12	P	P	14 30 58.2	-0.5
P18K				IAmb	IAmb	14 30 59.9	
	comp=Z,23nm,0.9s						
P18K	Big Mountain,	82.52	12	P	P	14 30 58.3	-0.5
	baz=202						
TPH	Tonopah	82.53	44	P	P	14 30 59.7	+0.2
TPNV	Topopah Spring	82.55	46	P	P	14 31 00.0	+0.4
TPNV				IAmb	IAmb	14 31 02.6	
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	82.55	46	P	P	14 31 00.5	+1.0
	baz=237,SNR=19						
J04D	Umpqua Nationa	82.56	38	P	P	14 30 60.0	+0.5
J04D	Umpqua Nationa	82.56	38	P	P	14 31 00.5	+1.0
	baz=232						
PDMCI	Parker Dam,Lak	82.58	49	P	P	14 31 01.0	+1.4
	baz=238						
KLR	Kul'dur	82.63	330	P	P	14 30 59.8	+0.3
	comp=Z,7.7nm,0.8s,baz=97,slow=1.5,SNR=24						
	comp=Z,7.7nm,0.8s						
I04A	Tendick Farm,	82.72	37	P	P	14 31 01.4	+1.3
	baz=232						
GULI	GuiLin	82.73	301	P	P	14 31 01.5	+1.0
MOD	Modoc Plateau	82.81	40	P	P	14 31 01.2	+0.5
K05A	Summer Lake	82.95	39	P	P	14 31 02.3	+0.8
K05A				IAmb	IAmb	14 31 04.9	
	comp=Z,23nm,0.9s						
O18K	Koktuh Hills	82.96	12	P	P	14 31 00.1	-0.7
O18K				IAmb	IAmb	14 31 02.3	
	comp=Z,26nm,0.7s						
Q09A	Carvers	82.98	44	P	P	14 31 01.9	+0.3
Q09A				IAmb	IAmb	14 31 04.6	
	comp=Z,33nm,0.8s						
H04D	Lebanon	82.99	37	P	P	14 31 02.4	+1.0
	baz=231						
KULM	Kulim	83.04	278	P	P	14 31 01.0	-1.3
KULM				IAmb	IAmb	14 31 04.8	
	comp=Z,20nm,0.9s						
J05D	Fort Rock, OR	83.09	38	P	P	14 31 03.3	+1.3
	baz=232						
G03D	McMinnville, O	83.13	36	P	P	14 31 03.2	+1.2
	baz=231						
P19K	Oil Pt	83.16	13	P	P	14 31 01.3	-0.6
S11A	Rachel	83.27	45	P	P	14 31 04.2	+1.2
H04A	Detroit Lake	83.40	37	P	P	14 31 03.9	+0.5
H04A				IAmb	IAmb	14 31 10.5	
	comp=Z,15nm,0.9s						
O19K	Port Alsworth	83.44	12	P	P	14 31 02.7	-0.5
O19K	Port Alsworth	83.44	12	P	P	14 31 02.5	-0.7
	baz=203,SNR=16						
CNPM	China Poot	83.48	14	P	P	14 31 03.2	-0.2
CNPM				IAmb	IAmb	14 31 05.1	
	comp=Z,18nm,0.8s						
MG03	Isla Dawson	83.48	146	P	P	14 31 05.3	+1.6
HOM	Homer	83.51	14	P	P	14 31 03.8	+0.3
	baz=205						
PINE	Pine Mountain	83.56	38	P	P	14 31 06.0	+1.5
PINE				IAmb	IAmb	14 31 07.9	
	comp=Z,21nm,0.8s						
N18K	Kilae Creek	83.60	11	P	P	14 31 03.5	-0.5
N18K	Kilae Creek	83.60	11	P	P	14 31 03.6	-0.4
	baz=202						
I05D	Terrebonne, OR	83.67	38	P	P	14 31 06.1	+1.3
	baz=232						
R11A	Troy Canyon, C	83.76	45	P	P	14 31 06.4	+0.8
	baz=237						
BRLK	Bradley Lake	83.77	14	P	P	14 31 04.3	-0.5
BRLK				IAmb	IAmb	14 31 06.5	
	comp=Z,19nm,0.8s						
BRSE	Bradley Lake S	83.78	14	P	P	14 31 04.7	-0.2
	baz=206						
E03A	Lebam	83.82	35		P	14 31 07.2	+1.9
BMN	Battle Mountai	83.85	43		P	14 31 07.3	+1.4
N19K	Bonanza Creek	83.98	12	P	P	14 31 05.3	-0.7
N19K	Bonanza Creek	83.98	12	P	P	14 31 04.9	-1.1
	baz=203						
TUC	Tucson	84.00	52	P	P	14 31 07.3	+0.6
	baz=240						
RSO	Redoubt South	84.00	13	P	P	14 31 06.0	-0.2
SVW2	Sparrevohn	84.05	11	P	P	14 31 05.5	-0.7
WVOR	Wild Horse Val	84.12	40		P	14 31 08.5	+1.4
MA2	Magadan	84.15	345	P	P	14 31 06.3	-0.3
	comp=Z,7.5nm,0.7s,baz=136,slow=3.2,SNR=9.6						
	comp=Z,7.5nm,0.7s						
MA2	Magadan	84.15	345	P	P	14 31 05.8	-0.9
MA2				IAmb	IAmb	14 31 07.8	
	comp=Z,13nm,0.9s						
G05D	Wamic, OR	84.23	37	P	P	14 31 08.2	+0.7
	baz=232						
SEW	Seward	84.40	14	P	P	14 31 07.9	+0.1
SEW				IAmb	IAmb	14 31 09.8	
	comp=Z,17nm,1.0s						
SEW	Seward	84.40	14	P	P	14 31 06.2	-1.7
	baz=207						
GSI	Gunungsitoli	84.44	274		P	14 31 10.2	+1.0
GSI	Gunungsitoli	84.44	274	P	P	14 31 09.7	+0.5
GSI	Gunungsitoli	84.44	274	P	P	14 31 09.4	+0.2
I07A	Izee	84.57	39	P	P	14 31 08.8	-0.5
I07A				IAmb	IAmb	14 31 12.5	
	comp=Z,18nm,1.2s						
DSPA	Despedida	84.58	146		P	14 31 10.8	+1.7
LCMT	Little Creek M	84.62	47		P	14 31 10.9	+1.2
D03D	Eldon	84.69	34	P	P	14 31 10.4	+0.8
	baz=231						
J08A	Circle Bar Ran	84.75	40	P	P	14 31 10.5	+0.3
J08A				IAmb	IAmb	14 31 14.0	
	comp=Z,14nm,1.1s						
GAMB	Gambell	84.78	3	P	P	14 31 08.4	-1.2
	baz=187						
SPCR	Spurr Chakacha	84.79	13	P	P	14 31 09.0	-0.9
	baz=205						
CCUT	Cedar City	84.82	47		P	14 31 11.7	+0.9
U15A	North Rim	84.97	48		P	14 31 13.4	+1.8
U15A				IAmb	IAmb	14 31 15.0	
	comp=Z,16nm,0.7s						
M19K	Big River Lodg	85.01	11	P	P	14 31 10.6	-0.2
	baz=203						
L19K	White Mountain	85.18	11	P	P	14 31 12.0	+0.3
L19K	White Mountain	85.18	11	P	P	14 31 11.1	-0.6
	baz=202,SNR=15						
RC01	Rabbit Creek A	85.21	14	P	P	14 31 10.5	-1.3
	baz=207						
M20K	Styx River	85.23	12	P	P	14 31 11.5	-0.5
M20K	Styx River	85.23	12	P	P	14 31 10.8	-1.1
	baz=204						
ELK	Elko	85.28	43	P	P	14 31 13.3	+0.4
HNS	HongShan	85.35	313	⇑P	P	14 31 14.9	+1.9
HNS				pmax	pmax		
	comp=Z,25nm,1.0s						
KAIM	Kayak Island	85.50	17	P	P	14 31 13.5	+0.3
	baz=212						
LYN	LuoYang	85.50	310	⇑*i*P	P	14 31 15.8	+2.0
LYN				sP	sP	14 34 26.0	+0.2
LYN				pmax	pmax		
	comp=Z,30nm,0.9s						
G08A	Pilot Rock	85.59	38	P	P	14 31 14.9	+0.7
G08A				IAmb	IAmb	14 31 17.9	
	comp=Z,13nm,0.9s						
CRAG	Craig	85.60	24	P	P	14 31 14.5	+0.8
	baz=222						
L20K	Farewell, AK	85.64	11	P	P	14 31 13.3	-0.6
	baz=203						
GLI	Glacier Island	85.64	15	P	P	14 31 13.4	-0.5
GLI	Glacier Island	85.64	15	P	P	14 31 12.8	-1.1
	baz=210						
A04D	Lummi Island	85.64	33	P	P	14 31 14.4	+0.3
	baz=231						
B05A	Bryant	85.67	34	P	P	14 31 14.7	+0.4
	baz=232						
TTA	Tatalina	85.68	10	P	P	14 31 13.5	-0.6
TTA				IAmb	IAmb	14 31 16.7	
	comp=Z,16nm,1.2s						
TTA	Tatalina	85.68	10	P	P	14 31 12.4	-1.7
	baz=201,SNR=8.1						
EYAK	Cordova Ski Ar	85.69	16	P	P	14 31 14.0	0.0
EYAK				IAmb	IAmb	14 31 16.3	
	comp=Z,17nm,1.0s						
EYAK	Cordova Ski Ar	85.69	16	P	P	14 31 13.7	-0.3
	baz=211						
ENH	Enshi	85.70	305	P	P	14 31 14.6	-0.4
M22K	Willow	85.72	13	P	P	14 31 13.8	-0.4
M22K	Willow	85.72	13	P	P	14 31 13.4	-0.7
	baz=207						
KNK	Knik Glacier	85.79	14	P	P	14 31 13.7	-0.9
KNK				IAmb	IAmb	14 31 16.1	
	comp=Z,16nm,0.8s						
KNK	Knik Glacier	85.79	14	P	P	14 31 13.8	-0.8
	baz=208,SNR=7.9						
PMR	Palmer	85.80	14	P	P	14 31 13.9	-0.7
PMR	Palmer	85.80	14	P	P	14 31 13.8	-0.8
	baz=208,SNR=7.7						
LTY	Liberty	85.81	35	P	P	14 31 15.3	+0.2
LTY				IAmb	IAmb	14 31 17.7	
	comp=Z,11nm,1.1s						
HMT	Hamilton	85.89	16	P	P	14 31 14.6	-0.5
HMT				IAmb	IAmb	14 31 17.0	
	comp=Z,15nm,0.8s						
RUBB	Prince Rupert	85.91	26	P	P	14 31 14.9	-0.3
RUBB				IAmb	IAmb	14 31 17.0	
	comp=Z,25nm,1.3s						
HAWA	Hanford	85.92	37	P	P	14 31 15.5	-0.1
HAWA				IAmb	IAmb	14 31 19.3	
	comp=Z,17nm,1.1s						
GHO	Glory Hole Cre	86.00	14	P	P	14 31 15.2	-0.5
BERG	Berg Lake	86.09	17	P	P	14 31 16.2	+0.2
BERG				IAmb	IAmb	14 31 18.1	
	comp=Z,26nm,1.1s						
W18A	Petrified Fore	86.13	50	P	P	14 31 17.3	+0.3
	baz=241						
SNH	Sunshine Point	86.14	17	P	P	14 31 16.4	+0.1
SML	Sawmill	86.17	14	P	P	14 31 16.0	-0.4
SML				IAmb	IAmb	14 31 17.6	
	comp=Z,26nm,1.5s						
SML	Sawmill	86.17	14	P	P	14 31 15.6	-0.8
	baz=208						
DIV	Divide	86.18	15	P	P	14 31 16.2	-0.3
DIV				IAmb	IAmb	14 31 18.8	
	comp=Z,28nm,1.2s						
CUT	Chulitna	86.28	13	P	P	14 31 16.1	-0.7
CUT	Chulitna	86.28	13	P	P	14 31 15.9	-0.9
	baz=207,SNR=9.2						
M23K	Glacier View	86.29	14	P	P	14 31 15.7	-1.2
	baz=209,SNR=6.5						
121A	Cookes Peak, D	86.33	53	P	P	14 31 17.8	-0.2
	baz=242						
PPLA	Purkeypile	86.34	12	P	P	14 31 15.8	-1.5
PPLA	Purkeypile	86.34	12	P	P	14 31 15.8	-1.5
	baz=205						
BMRM	Bremner River	86.34	16	P	P	14 31 16.9	-0.3
BMRM				IAmb	IAmb	14 31 18.9	
	comp=Z,14nm,0.8s						
BMRM	Bremner River	86.34	16	P	P	14 31 15.7	-1.5
	baz=212,SNR=9.0						
WAX	Waxell Ridge	86.36	17	P	P	14 31 17.5	+0.1
WAX				IAmb	IAmb	14 31 19.6	
	comp=Z,24nm,0.8s						
K20K	Telida	86.41	11	P	P	14 31 16.7	-0.8
K20K				IAmb	IAmb	14 31 19.7	
	comp=Z,20nm,1.1s						
K20K	Telida	86.41	11	P	P	14 31 15.4	-2.1
	baz=203,SNR=11						
SCM	Sheep Creek Mo	86.42	14	P	P	14 31 17.4	-0.3
SCM	Sheep Creek Mo	86.42	14	P	P	14 31 16.4	-1.2
	baz=209,SNR=18						
KLU	Klutina	86.46	15	P	P	14 31 17.5	-0.3
KLU				IAmb	IAmb	14 31 19.5	
	comp=Z,10nm,0.6s						
KLU	Klutina	86.46	15	P	P	14 31 16.5	-1.3
	baz=211,SNR=7.3						
DUG	Dugway, Tooele	86.56	45	P	P	14 31 19.3	+0.4
	baz=239						
WRAK	Wrangell Islan	86.60	24	P	P	14 31 18.5	0.0
	baz=223						
ISLE	Juniper Island	86.63	17	P	P	14 31 18.4	-0.3
ISLE				IAmb	IAmb	14 31 20.7	
	comp=Z,19nm,0.8s						
D08A	Wollman Farm,	86.65	36	P	P	14 31 19.1	+0.2
D08A				IAmb	IAmb	14 31 22.0	
	comp=Z,19nm,0.9s						
PNL	Peninsula	86.71	19	P	P	14 31 18.7	-0.3
	baz=216						
SEY	Seymchan	86.78	347	P	P	14 31 19.1	-0.1
	comp=Z,13nm,0.8s,baz=154,slow=5.4,SNR=67						
	comp=Z,13nm,0.8s						
TNA	Tin City	86.80	5	P	P	14 31 17.5	-1.7
	baz=190						
PCA	Pinnacle	86.81	18	P	P	14 31 19.5	+0.1
PCA				IAmb	IAmb	14 31 21.5	
	comp=Z,13nm,0.8s						
PINM	Pinnacle	86.81	18	P	P	14 31 18.6	-0.8
	baz=216						
TABL	Table Mountain	86.83	18	P	P	14 31 19.6	-0.1
CAST	Castle Rocks	86.83	12	P	P	14 31 17.7	-1.7
CAST				IAmb	IAmb	14 31 19.7	
	comp=Z,21nm,0.8s						
CAST	Castle Rocks	86.83	12	P	P	14 31 17.9	-1.5
	baz=205,SNR=27						
VRDI	Verde Repeater	86.86	16	P	P	14 31 19.4	-0.5
VRDI				IAmb	IAmb	14 31 20.5	
	comp=Z,17nm,1.2s						

N25K	**Chitina, Valde**	**86.88**	**16**	P	**P**	**14 31 19.4**	**-0.3**
N25K				IAmb	IAmb	14 31 21.6	
	comp=Z,19nm,0.7s						
N25K	**Chitina, Valde**	**86.88**	**16**	P	**P**	**14 31 19.5**	**-0.3**
	baz=212,SNR=20						
M24K	**Tolsona, Glenn**	**86.93**	**15**	P	**P**	**14 31 20.1**	**+0.1**
M24K				IAmb	IAmb	14 31 22.2	
	comp=Z,15nm,0.7s						
M24K	**Tolsona, Glenn**	**86.93**	**15**	P	**P**	**14 31 19.3**	**-0.7**
	baz=210,SNR=6.4						
GLB	**Gilahina Butte**	**86.94**	**16**	P	**P**	**14 31 19.8**	**-0.3**
GLB				IAmb	IAmb	14 31 21.8	
	comp=Z,14nm,0.7s						
WAT6	**Susitna Watana**	**86.98**	**14**	P	**P**	**14 31 19.4**	**-1.0**
	baz=209,SNR=27						
F10A	**Beach Ranch, E**	**86.98**	**38**	P	**P**	**14 31 20.9**	**+0.3**
F10A				IAmb	IAmb	14 31 23.2	
	comp=Z,21nm,0.8s						
WAT1	**Susitna Watana**	**87.02**	**13**	P	**P**	**14 31 19.0**	**-1.3**
	baz=208						
TROLL	**Troll, Antarti**	**87.12**	**180**	P	**P**	**14 31 21.3**	**+0.3**
TROLL	**Troll, Antarti**	**87.12**	**180**	pP	pP	14 33 36.3	+3.3
J20K	**Nowinta River**	**87.16**	**11**	P	**P**	**14 31 20.8**	**-0.1**
J20K				IAmb	IAmb	14 31 22.5	
	comp=Z,7.0nm,0.8s						
J20K	**Nowinta River**	**87.16**	**11**	P	**P**	**14 31 19.9**	**-1.0**
	baz=203,SNR=9.3						
KTH	**Kantishna Hill**	**87.18**	**12**	P	**P**	**14 31 19.8**	**-1.4**
KTH				IAmb	IAmb	14 31 22.1	
	comp=Z,19nm,0.8s						
B08A	**Colville Reser**	**87.19**	**35**	P	**P**	**14 31 21.4**	**-0.2**
B08A				IAmb	IAmb	14 31 23.7	
	comp=Z,14nm,0.8s						
BARN	**Barnard Glacie**	**87.20**	**17**	P	**P**	**14 31 21.3**	**-0.1**
BARN				IAmb	IAmb	14 31 23.6	
	comp=Z,17nm,0.7s						
TRF	**Thorofare Moun**	**87.21**	**12**	P	**P**	**14 31 20.4**	**-1.0**
	baz=206						
CHUM	**Lake Minchumin**	**87.21**	**11**	P	**P**	**14 31 19.8**	**-1.4**
	baz=205,SNR=10						
LLLB	**Lillooet**	**87.24**	**32**	P	**P**	**14 31 21.8**	**+0.1**
LLLB				IAmb	IAmb	14 31 23.1	
	comp=Z,11nm,1.0s						
GCSA	**Galena City Sc**	**87.25**	**9**	P	**P**	**14 31 19.6**	**-1.7**
	baz=200,SNR=8.0						
HLID	**Hailey**	**87.32**	**41**	P	**P**	**14 31 22.2**	**-0.2**
	baz=237,SNR=9.2						
HARP	**HAARP**	**87.42**	**15**	P	**P**	**14 31 21.5**	**-0.8**
	baz=211,SNR=7.0						
SNAA	**Sanae**	**87.43**	**179**	P	**P**	**14 31 22.2**	**-0.3**
SNAA	**Sanae**	**87.43**	**179**	P	**P**	**14 31 22.1**	**-0.3**
RND	**Reindeer**	**87.47**	**13**	P	**P**	**14 31 21.6**	**-0.9**
DHY	**Denali Highway**	**87.50**	**14**	P	**P**	**14 31 21.7**	**-1.0**
DHY	**Denali Highway**	**87.50**	**14**	P	**P**	**14 31 21.8**	**-1.0**
	baz=209,SNR=7.6						
P17A	**Butcher Ranch,**	**87.57**	**46**	P	**P**	**14 31 23.9**	**+0.2**
VNA3	**Neumayer Olymp**	**87.59**	**177**	P	**P**	**14 31 23.3**	**+0.2**
VNA3	**Neumayer Olymp**	**87.59**	**177**	pP	pP	14 33 39.7	+4.7
BPAW	**Bear Paw Mtn.**	**87.66**	**12**	P	**P**	**14 31 21.7**	**-1.6**
BPAW	**Bear Paw Mtn.**	**87.66**	**12**	P	**P**	**14 31 21.6**	**-1.6**
	baz=206,SNR=6.4						
MNTX	**Cornudas Mount**	**87.77**	**55**	P	**P**	**14 31 25.0**	**+0.4**
	baz=244						
PAX	**Paxson**	**87.84**	**15**	P	**P**	**14 31 23.6**	**-0.7**
PAX	**Paxson**	**87.84**	**15**	P	**P**	**14 31 23.7**	**-0.5**
	baz=211,SNR=5.8						
XAN	**Xi'an**	**87.85**	**308**	P	**P**	**14 31 25.6**	**+0.7**
XAN				sP	sP	14 34 34.3	-3.2
XAN				pmax	pmax		
	comp=Z,30nm,1.0s						
M26K	**Nabesna, AK**	**87.96**	**16**	P	**P**	**14 31 24.5**	**-0.3**
M26K				IAmb	IAmb	14 31 27.5	
	comp=Z,14nm,0.9s						
M26K	**Nabesna, AK**	**87.96**	**16**	P	**P**	**14 31 24.6**	**-0.2**
	baz=213,SNR=10						
P18A	**Preston Nutter**	**87.97**	**46**	P	**P**	**14 31 25.4**	**-0.4**
YUK6	**Outpost Mounta**	**88.05**	**19**	P	**P**	**14 31 25.4**	**-0.1**
	baz=217						
TX31	**Lajitas Ar. Si**	**88.07**	**58**	P	**P**	**14 31 25.6**	**-0.6**
TX32	**Lajitas Array**	**88.07**	**58**	P	**P**	**14 31 25.6**	**-0.6**
TX32				IAmb	IAmb	14 31 29.9	
	comp=Z,8.1nm,0.8s						
TXAR	**Lajitas Array**	**88.07**	**58**	P	**P**	**14 31 28.3**	**+2.1**
	comp=Z,6.7nm,0.8s,baz=220,slow=5.8,SNR=55						
	comp=Z,6.7nm,0.8s						
TXAR	**Lajitas Array**	**88.07**	**58**	P	**P**	**14 31 25.3**	**-0.9**
HWUT	**Hardware Ranch**	**88.09**	**44**	P	**P**	**14 31 26.0**	**-0.1**
HWUT				IAmb	IAmb	14 31 28.5	
	comp=Z,6.9nm,0.8s						
YUK3	**Moose Creek**	**88.12**	**17**	P	**P**	**14 31 25.2**	**-0.5**
	baz=215,SNR=32						
S34M	**Telegraph Cree**	**88.14**	**23**	P	**P**	**14 31 26.1**	**+0.4**
	baz=224						
HYT	**Haines Junctio**	**88.21**	**19**	P	**P**	**14 31 26.0**	**-0.1**
HYT				IAmb	IAmb	14 31 28.4	
	comp=Z,9.7nm,0.9s						
HYT	**Haines Junctio**	**88.21**	**19**	P	**P**	**14 31 25.9**	**-0.2**
	baz=218,SNR=7.3						
M27K	**Edge Creek, AK**	**88.22**	**16**	P	**P**	**14 31 25.9**	**-0.2**
M27K				IAmb	IAmb	14 31 27.3	
	comp=Z,16nm,1.1s						
M27K	**Edge Creek, AK**	**88.22**	**16**	P	**P**	**14 31 26.1**	**0.0**
	baz=214,SNR=9.6						
MENT	**Mentasta**	**88.23**	**15**	P	**P**	**14 31 26.2**	**+0.1**
MENT				IAmb	IAmb	14 31 28.0	
	comp=Z,8.3nm,0.7s						
VNA1	**Neumayer--Stat**	**88.26**	**177**	pP	pP	14 33 43.5	+5.2
YUK4	**Talbot Arm**	**88.28**	**18**	P	**P**	**14 31 26.0**	**-0.5**
	baz=217,SNR=5.8						
NEW	**Newport**	**88.34**	**36**	P	**P**	**14 31 27.2**	**+0.3**
	baz=235						
L26K	**Log Cabin Wild**	**88.40**	**15**	P	**P**	**14 31 27.1**	**+0.3**
L26K				IAmb	IAmb	14 31 29.4	
	comp=Z,4.8nm,0.7s						
L26K	**Log Cabin Wild**	**88.40**	**15**	P	**P**	**14 31 26.2**	**-0.6**
	baz=213						
ANMO	**Albuquerque**	**88.42**	**52**	P	**P**	**14 31 27.9**	**+0.1**
	baz=243						
I21K	**Tanana**	**88.45**	**11**	P	**P**	**14 31 26.4**	**-0.6**
I21K				IAmb	IAmb	14 31 28.9	
	comp=Z,26nm,1.1s						
I21K	**Tanana**	**88.45**	**11**	P	**P**	**14 31 25.8**	**-1.2**
	baz=205,SNR=21						
NEA2	**Nenana**	**88.48**	**12**	P	**P**	**14 31 25.9**	**-1.2**
	baz=208						
K24K	**Donnelly Dome**	**88.49**	**14**	P	**P**	**14 31 26.7**	**-0.5**
	baz=211,SNR=17						
BVCY	**Beaver Creek**	**88.53**	**17**	P	**P**	**14 31 27.1**	**-0.3**
	baz=215,SNR=12						
WRH	**Wood River Hil**	**88.57**	**13**	P	**P**	**14 31 26.6**	**-0.9**
RIDG	**Independent Ri**	**88.65**	**14**	P	**P**	**14 31 27.4**	**-0.5**
RIDG				IAmb	IAmb	14 31 29.5	
	comp=Z,10nm,0.9s						
RIDG	**Independent Ri**	**88.65**	**14**	P	**P**	**14 31 27.1**	**-0.9**
	baz=212,SNR=9.5						
H21K	**Melozitna Rive**	**88.75**	**10**	P	**P**	**14 31 27.8**	**-0.5**
H21K				IAmb	IAmb	14 31 30.0	
	comp=Z,11nm,0.8s						
H21K	**Melozitna Rive**	**88.75**	**10**	P	**P**	**14 31 27.8**	**-0.5**
	baz=204,SNR=18						
HDA	**Harding Lake**	**88.75**	**13**	P	**P**	**14 31 27.8**	**-0.6**
HDA	**Harding Lake**	**88.75**	**13**	P	**P**	**14 31 27.3**	**-1.1**
	baz=210,SNR=27						
CCB	**Clear Creek Bu**	**88.78**	**13**	P	**P**	**14 31 27.6**	**-0.9**
CCB				IAmb	IAmb	14 31 29.3	
	comp=Z,14nm,0.8s						
L27K	**Beaver Creek,**	**88.81**	**16**	P	**P**	**14 31 28.3**	**-0.4**
L27K	**Beaver Creek,**	**88.81**	**16**	P	**P**	**14 31 28.8**	**+0.1**
	baz=214,SNR=8.7						
BCAR	**Beaver Creek A**	**88.83**	**16**	P	**P**	**14 31 28.1**	**-0.7**
N30M	**Aishikik Lake**	**88.83**	**19**	P	**P**	**14 31 28.4**	**-0.5**
	baz=218						
IMAR	**Indian Mountai**	**88.89**	**10**	P	**P**	**14 31 28.1**	**-0.9**
KMI	**Kunming**	**88.89**	**297**	⇓P	**P**	**14 31 32.3**	**+2.1**
KMI				pmax	pmax		
	comp=Z,19nm,1.2s						
WHY	**Whitehorse**	**88.90**	**20**	P	**P**	**14 31 29.8**	**+0.5**
WHY				IAmb	IAmb	14 31 31.7	
	comp=Z,8.7nm,0.8s						
WHY	**Whitehorse**	**88.90**	**20**	P	**P**	**14 31 29.0**	**-0.2**
	baz=220,SNR=7.3						
I23K	**Minto, Yukon-K**	**88.91**	**12**	P	**P**	**14 31 27.9**	**-1.2**
I23K	**Minto, Yukon-K**	**88.91**	**12**	P	**P**	**14 31 27.9**	**-1.2**
	baz=207,SNR=8.8						
DLBC	**Dease Lake**	**88.93**	**23**	P	**P**	**14 31 29.5**	**+0.1**
DLBC				IAmb	IAmb	14 31 32.0	
	comp=Z,5.6nm,0.8s						
MDM	**Murphy Dome**	**88.97**	**13**	P	**P**	**14 31 27.8**	**-1.6**
MDM				IAmb	IAmb	14 31 30.7	
	comp=Z,19nm,1.0s						
TCOL	**CIGO, UAF Yank**	**88.97**	**13**	P	**P**	**14 31 28.4**	**-0.9**
TCOL	**CIGO, UAF Yank**	**88.97**	**13**	P	**P**	**14 31 28.4**	**-0.9**
	baz=209,SNR=7.2						
COLA	**College**	**88.97**	**13**	P	**P**	**14 31 28.4**	**-0.9**
COLA	**College**	**88.97**	**13**	P	**P**	**14 31 28.4**	**-0.9**
	baz=209						
SCRK	**Sand Creek**	**89.05**	**15**	P	**P**	**14 31 29.6**	**-0.3**
SCRK				IAmb	IAmb	14 31 31.7	
	comp=Z,8.8nm,0.8s						
SCRK	**Sand Creek**	**89.05**	**15**	P	**P**	**14 31 29.1**	**-0.8**
	baz=212,SNR=17						
IL31		**89.08**	**13**	P	**P**	**14 31 28.8**	**-1.0**
IL31				IAmb	IAmb	14 31 31.5	
	comp=Z,7.7nm,0.9s						
ILAR	**Eielson Array**	**89.08**	**13**	P	**P**	**14 31 28.9**	**-1.0**
	comp=Z,3.3nm,0.4s,baz=216,slow=5.2,SNR=64						
	comp=Z,3.3nm,0.4s						
ILAR	**Eielson Array**	**89.08**	**13**	P	**P**	**14 31 28.6**	**-1.3**
HHC	**Hu-ho-hao-te**	**89.19**	**315**	*e*P	**P**	**14 31 32.7**	**+1.6**
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.5s						
N31M	**Braeburn, Yuko**	**89.25**	**19**	P	**P**	**14 31 30.2**	**-0.6**
	baz=220						
POKR	**Poker Plat Res**	**89.27**	**13**	P	**P**	**14 31 29.8**	**-0.9**
POKR				IAmb	IAmb	14 31 31.4	
	comp=Z,12nm,1.1s						
POKR	**Poker Plat Res**	**89.27**	**13**	P	**P**	**14 31 29.7**	**-1.1**
	baz=209						
J25K	**Salcha River,**	**89.28**	**14**	P	**P**	**14 31 30.0**	**-0.8**
J25K				IAmb	IAmb	14 31 31.6	
	comp=Z,6.0nm,0.6s						
J25K	**Salcha River,**	**89.28**	**14**	P	**P**	**14 31 30.2**	**-0.6**
	baz=211,SNR=11						
S22A	**4UR Ranch, Cre**	**89.43**	**49**	P	**P**	**14 31 32.5**	**0.0**
	baz=243						
REDW	**Red Top Meadow**	**89.43**	**43**	P	**P**	**14 31 32.7**	**+0.4**
REDW				IAmb	IAmb	14 31 35.2	
	comp=Z,7.6nm,1.0s						
TPAW	**Teton Pass**	**89.43**	**42**	P	**P**	**14 31 33.0**	**+0.6**
TPAW				IAmb	IAmb	14 31 35.3	
	comp=Z,5.8nm,0.9s						
PLCA	**Paso Flores**	**89.45**	**134**	P	**P**	**14 31 34.6**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=248,slow=9.4,SNR=5.1						
	comp=Z,1.7nm,0.7s						
PLCA	**Paso Flores**	**89.45**	**134**	P	**P**	**14 31 31.0**	**-1.5**
H23K	**Yukon River**	**89.48**	**12**	P	**P**	**14 31 30.9**	**-0.9**
H23K				IAmb	IAmb	14 31 32.6	
	comp=Z,5.1nm,0.9s						
H23K	**Yukon River**	**89.48**	**12**	P	**P**	**14 31 30.9**	**-0.9**
	baz=207						
CMAR	**Chiang Mai Arr**	**89.54**	**290**	P	**P**	**14 31 34.8**	**+1.6**
	comp=Z,12nm,0.9s,baz=126,slow=3.0,SNR=61						
CMAR				PP	**PP**	**14 35 18.0**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=122,slow=6.1,SNR=4.1						
	comp=Z,12nm,0.9s						
BILL	**Bilibino**	**89.55**	**354**	P	**P**	**14 31 31.1**	**-0.8**
BILL				IAmb	IAmb	14 31 33.7	
	comp=Z,8.9nm,0.9s						
O20A	**White River Ci**	**89.57**	**46**	P	**P**	**14 31 33.3**	**+0.3**
	baz=242						
J26L	**Joseph Creek**	**89.59**	**14**	P	**P**	**14 31 31.8**	**-0.6**
	baz=213,SNR=28						
CHTO	**Chiang Mai**	**89.68**	**290**	P	**P**	**14 31 33.7**	**-0.1**
CHTO				IAmb	IAmb	14 31 36.6	
	comp=Z,15nm,0.8s						
M30M	**Minto, Yukon**	**89.80**	**18**	P	**P**	**14 31 33.0**	**-0.2**
M30M				IAmb	IAmb	14 31 35.9	
	comp=Z,11nm,0.7s						
M30M	**Minto, Yukon**	**89.80**	**18**	P	**P**	**14 31 33.1**	**-0.2**
	baz=219,SNR=14						
H24K	**Noodor Dome**	**89.82**	**12**	P	**P**	**14 31 31.7**	**-1.6**
H24K	**Noodor Dome**	**89.82**	**12**	P	**P**	**14 31 32.5**	**-0.8**
	baz=209						
BW06	**Boulder Array**	**89.96**	**44**	P	**P**	**14 31 34.3**	**-0.5**
BW06	**Boulder Array**	**89.96**	**44**	P	**P**	**14 31 35.2**	**+0.4**
	baz=241						
PD31	**Pinedale Array**	**89.96**	**44**	P	**P**	**14 31 34.5**	**-0.3**
PDAR	**Pinedale Array**	**89.96**	**44**	P	**P**	**14 31 35.4**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=206,slow=3.0,SNR=46						
	comp=Z,3.9nm,0.7s						
PDAR	**Pinedale Array**	**89.96**	**44**	P	**P**	**14 31 34.3**	**-0.5**
BOZ	**Bozeman (W)**	**90.08**	**40**	P	**P**	**14 31 35.5**	**+0.3**
	baz=239,SNR=7.0						
BTO	**Baotou**	**90.10**	**314**	*e*P	**P**	**14 31 38.5**	**+3.2**
H17A	**Grant Village**	**90.12**	**42**	P	**P**	**14 31 36.3**	**+0.7**
	baz=240						
M31M	**Drury Creek, Y**	**90.22**	**19**	P	**P**	**14 31 35.1**	**-0.1**
M31M	**Drury Creek, Y**	**90.22**	**19**	P	**P**	**14 31 35.1**	**-0.1**
	baz=221						
DAWY	**Dawson**	**90.27**	**16**	P	**P**	**14 31 35.4**	**-0.1**
DAWY				IAmb	IAmb	14 31 38.0	
	comp=Z,8.2nm,0.9s						
DAWY	**Dawson**	**90.27**	**16**	P	**P**	**14 31 35.3**	**-0.1**
	baz=216,SNR=9.7						
PZH	**PanZhiHua**	**90.27**	**298**	P	**P**	**14 31 37.2**	**+0.8**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
SDCO	**Great Sand Dun**	**90.37**	**49**	P	**P**	**14 31 35.7**	**-1.2**
SDCO	**Great Sand Dun**	**90.37**	**49**	P	**P**	**14 31 37.1**	**+0.2**
	baz=243						
EGAK	**Eagle**	**90.40**	**15**	P	**P**	**14 31 35.8**	**-0.2**
EGAK				IAmb	IAmb	14 31 37.7	
	comp=Z,7.2nm,0.8s						
EGAK	**Eagle**	**90.40**	**15**	P	**P**	**14 31 36.0**	**0.0**
	baz=215,SNR=8.7						
COLD	**Coldfoot**	**90.62**	**11**	P	**P**	**14 31 36.5**	**-0.5**
COLD				IAmb	IAmb	14 31 39.7	
	comp=Z,16nm,1.4s						
COLD	**Coldfoot**	**90.62**	**11**	P	**P**	**14 31 36.4**	**-0.5**
	baz=207,SNR=10						
MSTX	**Muleshoe**	**90.73**	**54**	P	**P**	**14 31 38.2**	**-0.2**
	baz=245						
T25A	**Trinidad**	**90.88**	**50**	P	**P**	**14 31 39.4**	**+0.3**
	baz=244						
833A	**Chaparral WMA,**	**91.07**	**60**	P	**P**	**14 31 39.9**	**0.0**
	baz=247						
ISCO	**Idaho Springs**	**91.21**	**48**	P	**P**	**14 31 41.0**	**+0.3**
	baz=243						
N23A	**Red Feather La**	**91.47**	**46**	P	**P**	**14 31 42.6**	**+0.8**
	baz=243						
MMPY	**Sheldon Lake,**	**91.51**	**20**	P	**P**	**14 31 41.4**	**+0.2**
	baz=224						
I29M	**Ogilvie Camp,**	**91.58**	**16**	P	**P**	**14 31 41.0**	**-0.5**
I29M				IAmb	IAmb	14 31 42.7	
	comp=Z,4.3nm,0.8s						
I29M	**Ogilvie Camp,**	**91.58**	**16**	P	**P**	**14 31 41.4**	**-0.1**
	baz=217,SNR=5.8						
JCT	**Junction City**	**91.60**	**58**	P	**P**	**14 31 42.6**	**+0.2**
	baz=246						
BMAR	**Burnt Mountain**	**91.86**	**13**	P	**P**	**14 31 42.7**	**0.0**
K22A	**Casper**	**91.88**	**45**	P	**P**	**14 31 44.0**	**+0.4**
	baz=243						
TOLK	**Toolik Lake Re**	**91.99**	**10**	P	**P**	**14 31 43.3**	**0.0**
TOLK	**Toolik Lake Re**	**91.99**	**10**	P	**P**	**14 31 43.0**	**-0.3**
	baz=207						
YAK	**Yakutsk**	**92.37**	**338**	P	**P**	**14 31 44.1**	**-0.9**
LZH	**Lanzhou**	**92.48**	**308**	*e*P	**P**	**14 31 47.9**	**+1.4**
LZH				pP	pP	14 33 49.5	-9.1
LZH				sP	sP	14 34 48.1	-11
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
EPYK	**Eagle Plains**	**92.78**	**16**	P	**P**	**14 31 46.4**	**-0.6**
EPYK				IAmb	IAmb	14 31 48.5	
	comp=Z,4.6nm,0.8s						
EPYK	**Eagle Plains**	**92.78**	**16**	P	**P**	**14 31 46.2**	**-0.7**
	baz=219						
LAO	**LASA Array**	**93.90**	**41**	P	**P**	**14 31 53.3**	**+0.8**
	baz=243						
RSSD	**Black Hills**	**94.16**	**44**	P	**P**	**14 31 53.2**	**-0.8**
RSSD				IAmb	IAmb	14 31 55.9	
	comp=Z,4.5nm,0.8s						
RSSD	**Black Hills**	**94.16**	**44**	P	**P**	**14 31 54.2**	**+0.2**
	baz=245						
INK	**Inuvik**	**95.07**	**15**	P	**P**	**14 31 56.4**	**-0.8**
INK				IAmb	IAmb	14 32 01.4	
	comp=Z,5.2nm,1.2s						
INK	**Inuvik**	**95.07**	**15**	P	**P**	**14 31 56.8**	**-0.4**
	baz=222						
SONM	**Songino Array**	**95.67**	**319**	P	**P**	**14 32 01.2**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=190,slow=0.9,SNR=4.0						
	comp=Z,0.8nm,0.8s						
GTA	**Gaotai**	**96.72**	**310**	*e*P	**P**	**14 32 08.1**	**+2.6**
GTA				pP	PcP	14 32 13.4	+7.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YKA	**Yellowknife Ar**	**97.40**	**25**	P	Pdif	14 32 07.4	-0.4
	comp=Z,0.9nm,0.7s,baz=247,slow=4.4,SNR=7.6						
	comp=Z,0.9nm,0.7s						
C36M	**Paulatuk**	**98.27**	**17**	P	Pdif	14 32 11.0	-0.5
	baz=230						
A36M	**Sachs Harbour**	**99.67**	**15**	P	**Pdif**	**14 32 16.9**	**-0.8**
	baz=230						
ZALV	**Zalesovo Beam**	**110.45**	**321**	PKiKP	**PKiKP**	**14 37 01.9**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=158,slow=1.0,SNR=7.6						
MKAR	**Makanchi Array**	**111.01**	**313**	PKiKP	**PKiKP**	**14 37 03.0**	**-1.0**
	comp=Z,3.5nm,1.1s,baz=70,slow=1.4,SNR=9.7						
GAR	**Garm**	**118.87**	**304**		**PKPdf**	**14 37 18.7**	**-0.8**
KK31	**Karatay Array**	**118.98**	**308**		**PKPdf**	**14 37 18.7**	**-0.7**
KKAR	**Karatay Array**	**118.98**	**308**		**PKPdf**	**14 37 18.9**	**-0.5**
KKAR	**Karatay Array**	**118.98**	**308**		**PKPdf**	**14 37 18.2**	**-1.2**
KBL	**Kabul**	**119.46**	**299**		**PKPdf**	**14 37 20.2**	**-0.7**
SPB2	**Spitsbergen Ar**	**122.42**	**356**		**PKPdf**	**14 37 24.3**	**-0.7**
ARU	**Arti**	**125.23**	**325**		**PKPdf**	**14 37 30.1**	**-0.8**
ABKAR	**Akbulak array**	**125.95**	**316**		**PKPdf**	**14 37 31.7**	**-0.8**
ABKAR	**Akbulak array**	**125.95**	**316**		**PKPdf**	**14 37 32.0**	**-0.5**
GEYT	**Alibeck**	**128.41**	**302**	PKP	**PKPdf**	**14 37 39.0**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=76,slow=6.7,SNR=7.6						
ARCES	**ARCESS Array B**	**129.36**	**349**	PKP	**PKPdf**	**14 37 37.9**	**-0.6**
	comp=Z,8.0nm,0.8s,baz=30,slow=1.4,SNR=22						
ARCES				SKPbc	SKPbc	14 40 05.1	+1.7
	comp=Z,8.7nm,1.0s,baz=22,slow=3.3,SNR=6.3						
KLMR	**Klimovskoe**	**132.10**	**336**	*e*PKPdf	**PKPdf**	**14 37 42.9**	**-0.9**
KLMR				AMP		14 37 44.6	
	comp=Z,16nm,1.2s						
KLMR				*e*PP	**pPKPdf**	**14 40 11.2**	**+5.6**
FINES	**FINESS Array B**	**136.11**	**343**	PKP	**PKPdf**	**14 37 49.7**	**-1.6**
	comp=Z,3.9nm,0.6s,baz=52,slow=2.3,SNR=5.9						
FINES				SKP		14 40 26.8	
	comp=Z,1.8nm,0.4s,baz=51,slow=2.2,SNR=15						
MTSE	**Matsula**	**139.02**	**342**	*e*P	PKPdf	14 37 50.1	-6.6
NC303	**NORSAR Array S**	**139.28**	**352**		PKPpre	14 37 48.4	
NB2	**NORSAR Subarra**	**139.47**	**352**	PKP	PKPdf	14 37 49.5	-8.1
	comp=Z,1.8nm,0.8s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.47**	**352**	PKhKP	PKPpre	14 37 49.1	
	comp=Z,1.6nm,0.6s,baz=16,slow=4.7,SNR=14						
NOA				SKPbc	**SKPbc**	**14 40 37.6**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=7.0,slow=4.0,SNR=4.3						
VIKU	**Vikbolandet**	**140.98**	**347**	*e*P	**PKPdf**	**14 37 54.3**	**-6.0**
NACGM	**Naroch**	**141.11**	**337**	⇓*e*PKP	**PKPdf**	**14 37 56.7**	**-3.9**
	baz=41						
STRU	**Stroemstad**	**141.42**	**352**	*i* P	**PKPdf**	**14 37 55.0**	**-6.0**
TJOU	**Tjoern**	**142.33**	**351**	*i* P	**PKPdf**	**14 37 58.6**	**-4.0**
LODK	**Lodwar**	**142.35**	**247**		**PKPdf**	**14 38 02.0**	**-2.2**
HOMB	**Homborsund**	**142.49**	**354**	*i* P	**PKPdf**	**14 37 59.1**	**-3.8**
BORU	**Boraas**	**142.53**	**350**	*i* P	**PKPdf**	**14 37 57.8**	**-5.3**
SNART	**Snartemo**	**142.55**	**355**	*i* P	**PKPdf**	**14 38 00.1**	**-3.0**
ONAU	**Onsala**	**142.90**	**350**	*i* P	**PKPdf**	**14 37 60.0**	**-3.7**
SUW	**Suwalki**	**143.10**	**338**		**PKPdf**	**14 38 01.8**	**-2.4**
SUW	**Suwalki**	**143.10**	**338**	*e*P	**PKPdf**	**14 38 02.8**	**-1.4**
AKASG	**Malin Array Be**	**143.13**	**330**	PKhKP	PKPpre	14 38 01.5	
	comp=Z,30nm,0.5s,baz=44,slow=4.4,SNR=174						
AKASG				SKPbc	**SKPbc**	**14 40 44.8**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=65,slow=2.6,SNR=4.3						
AKASG	**Malin Array Be**	**143.13**	**330**	PKPpre	PKPpre	14 38 01.2	
AKBB	**Malin Array Si**	**143.13**	**330**	PKPpre	PKPpre	14 38 00.9	
FABU	**Falkenberg**	**143.14**	**349**	*i* P	PKPab	14 38 01.0	-1.3
BLEU	**Blekinge**	**143.19**	**346**	*i* P	PKPab	14 38 00.5	-2.0
DEL	**Delary**	**143.44**	**348**	*e*P	PKPab	14 38 02.1	-1.4
DEL	**Delary**	**143.44**	**348**	*i* P	PKPab	14 38 01.8	-1.7
BJUU	**Bjuv**	**143.97**	**349**	*i* P	PKPbc	14 38 03.8	-1.4
MUD	**Monsted U'grnd**	**144.19**	**352**	*e*P	PKPbc	14 38 05.3	-0.6
BSD	**Bornholm Skovb**	**144.49**	**346**	*i* P	**PKPdf**	**14 38 06.2**	**-0.3**
SORM	**Soroca**	**145.28**	**327**	⇑P	**PKPdf**	**14 38 09.2**	**+1.0**
PURM	**Purcari**	**145.50**	**324**	⇑P	**PKPbc**	**14 38 10.7**	**+0.7**
ESK	**Eskdalemuir**	**145.68**	**4**		**PKPdf**	**14 38 09.8**	**+1.2**
KIS	**Kishinev**	**145.78**	**326**	⇓*i*PKP	**PKPdf**	**14 38 10.0**	**+1.0**
	comp=Z,50nm,0.8s						
KIS				*e*L	L	04 45 20.0	
KIS				LRM	MLR	04 49 42.0	
	comp=Z,300nm,15.0s						
MILM	**Milestii Mici**	**145.83**	**325**	⇓*i*PKP	**PKPdf**	**14 38 10.0**	**+0.9**
	comp=Z,80nm,1.1s						
MILM	**Milestii Mici**	**145.83**	**325**	⇑P	**PKPdf**	**14 38 10.4**	**+1.4**
VASR	**Vaslui**	**146.55**	**326**	⇓P	**PKPbc**	**14 38 13.3**	**+0.3**
BRTR	**Keskin Array B**	**146.63**	**311**	PKPbc	**PKPdf**	**14 38 12.6**	**+1.7**
	comp=Z,7.3nm,0.6s,baz=138,slow=4.6,SNR=18						
BRTR	**Keskin Array B**	**146.63**	**311**		**PKPdf**	**14 38 12.1**	**+1.2**
TLCR		**146.91**	**323**	⇑P	**PKPbc**	**14 38 14.2**	**+0.2**
JURR	**Jurilovca**	**147.12**	**322**	⇑P	**PKPdf**	**14 38 13.1**	**+1.8**
GHRR		**147.13**	**325**	⇑P	**PKPbc**	**14 38 15.7**	**+1.1**
ANTO	**Ankara**	**147.16**	**312**	PKPbc	**PKPdf**	**14 38 14.6**	**+2.9**
BURAR	**Bucovina Array**	**147.17**	**329**	⇑P	**PKPbc**	**14 38 15.5**	**+0.7**
TESR	**Tescani**	**147.22**	**327**	⇑P	**PKPdf**	**14 38 14.4**	**+2.9**
CFR	**Carcaliu**	**147.29**	**324**	⇑P	**PKPbc**	**14 38 15.2**	**+0.2**
TPGR	**Topolog**	**147.33**	**323**	⇓P	**PKPbc**	**14 38 15.4**	**+0.2**
OJC	**Ojcow**	**147.41**	**338**		**PKPdf**	**14 38 14.6**	**+3.0**
KOLS	**Kolonicke sedl**	**147.50**	**334**	*e*PKP	**PKPbc**	**14 38 16.8**	**+1.3**
TIRR	**Tirgusor**	**147.57**	**322**	⇑P	**PKPbc**	**14 38 15.9**	**+0.2**
VRI	**Vrincioaia**	**147.61**	**326**	⇑P	**PKPbc**	**14 38 15.8**	**0.0**
VRI				⇑P	**PKPdf**	**14 38 15.9**	**+3.8**
PLOR	**Plostina**	**147.66**	**326**	⇑P	**PKPbc**	**14 38 15.9**	**-0.1**
HARR	**Harsova**	**147.71**	**323**	⇑P	**PKPbc**	**14 38 16.6**	**+0.5**
TLBR	**Topalu**	**147.73**	**323**	⇑P	**PKPdf**	**14 38 14.7**	**+2.3**
CRVS	**Cervenica-Dubn**	**147.85**	**334**	*e*PKP	**PKPbc**	**14 38 16.9**	**+0.5**
COVR	**Voineasa-Covas**	**147.90**	**326**	⇑P	**PKPbc**	**14 38 16.3**	**-0.3**
NEHR	**Nehoiu**	**148.13**	**325**	⇑P	**PKPbc**	**14 38 17.8**	**+0.6**
ISR	**Istrita**	**148.20**	**325**	⇓P	**PKPbc**	**14 38 16.9**	**-0.5**
DOPR	**Dopca**	**148.24**	**327**	⇑P	**PKPbc**	**14 38 18.3**	**+0.9**
MLR	**Muntele Rosu**	**148.27**	**326**	⇑P	**PKPbc**	**14 38 17.3**	**-0.4**
MLR	**Muntele Rosu**	**148.27**	**326**	PKPdf	**PKPdf**	**14 38 12.4**	**-0.9**
OSTC	**Ostas**	**148.29**	**342**	⇑*e*PKP	**PKPbc**	**14 38 18.1**	**+0.7**
UPC	**Upice**	**148.40**	**342**	⇑*e*PKP	**PKPbc**	**14 38 18.8**	**+1.2**
UPC				*e*PKPAB	**PKPab**	**14 38 24.7**	**+1.3**
LANS	**Liptovska Anna**	**148.42**	**337**	*e*PKP	**PKPbc**	**14 38 18.9**	**+1.1**
DPC	**Dobruska-Polom**	**148.44**	**341**	⇑*e*PKP	**PKPbc**	**14 38 18.5**	**+0.7**
DPC				*e*PKPAB	**PKPab**	**14 38 24.9**	**+1.2**
CLL	**Collm**	**148.45**	**346**		**PKPbc**	**14 38 17.1**	**-0.6**
CLL	**Collm**	**148.45**	**346**	⇓*i*PKPbc	**PKPbc**	**14 38 17.6**	**-0.1**
	comp=Z,36nm,1.0s						
CLL				*i* PKPab	**PKPab**	**14 38 23.0**	**-0.6**
	comp=Z,11nm,0.6s						
CLL				*e*SKPdf	**SKPdf**	**14 40 47.0**	**-2.4**
SECR		**148.51**	**325**	⇑P	**PKPbc**	**14 38 18.3**	**+0.1**
KRLC	**Kraliky**	**148.54**	**341**	⇑*e*PKP	**PKPbc**	**14 38 19.0**	**+0.9**
KRLC				*e*PKPAB	**PKPab**	**14 38 25.0**	**+0.9**
MORC	**Moravsky Berou**	**148.56**	**339**	⇑P	**PKPbc**	**14 38 19.5**	**+1.3**
MORC	**Moravsky Berou**	**148.56**	**339**	*e*PKP	**PKPbc**	**14 38 18.0**	**-0.1**
CJR	**Cluj-Napoca**	**148.59**	**330**	⇑P	**PKPbc**	**14 38 19.7**	**+1.4**
BRG	**Berggiesshubel**	**148.63**	**344**	*e*PKP	**PKPdf**	**14 38 15.0**	**+1.4**
BRG				Amp		14 38 16.1	
	comp=Z,3.2nm,1.1s						
BRG				*e*x	x	14 38 18.9	
BRG				Amp		14 38 20.9	
	comp=Z,19nm,1.2s						
VOIR		**148.77**	**327**	⇑P	**PKPbc**	**14 38 19.5**	**+0.7**
PVCC	**Panska Ves**	**148.78**	**343**	⇑*e*PKP	**PKPbc**	**14 38 19.7**	**+1.1**
MAUC	**Maruska**	**148.82**	**339**	⇑*e*PKP	**PKPbc**	**14 38 20.0**	**+1.2**
ARR	**Arges**	**149.03**	**327**	⇑P	**PKPbc**	**14 38 20.6**	**+1.2**
VYHS	**Vyhne**	**149.20**	**337**	*e*PKP	**PKPbc**	**14 38 20.0**	**+0.3**
VYHS				*e*		14 38 27.9	
RAZG	**Razgrad**	**149.21**	**323**	⇑P	**PKPbc**	**14 38 19.9**	**+0.1**
VRAC	**Vranov**	**149.28**	**340**	⇑P	**PKPbc**	**14 38 20.4**	**+0.5**
VRAC	**Vranov**	**149.28**	**340**	*e*PKP	**PKPbc**	**14 38 20.1**	**+0.3**
VRAC				*e*		14 38 27.5	
PRU	**Pruhonice**	**149.28**	**343**	⇑*e*PKP	**PKPbc**	**14 38 20.2**	**+0.4**
KOLL	**Kolacno**	**149.29**	**337**	*e*PKP	**PKPbc**	**14 38 20.4**	**+0.6**
JAVC	**Velka Javorina**	**149.31**	**338**	*e*PKP	**PKPbc**	**14 38 21.2**	**+1.2**
LOT	**Lotru**	**149.41**	**328**	⇑P	**PKPbc**	**14 38 19.6**	**-0.8**
DEV	**Deva**	**149.52**	**329**	⇓P	**PKPbc**	**14 38 19.9**	**-0.5**
KRUC	**Moravsky**	**149.55**	**340**	*e*PKP	**PKPbc**	**14 38 20.2**	**-0.3**
KRUC				*e*		14 38 28.1	
NKC	**Novy Kostel**	**149.58**	**346**	⇑*e*PKP	**PKPbc**	**14 38 21.3**	**+0.8**
SIRR	**Siria**	**149.81**	**331**	⇑P	**PKPbc**	**14 38 21.7**	**+0.5**
MODS	**Modra-Piesok**	**149.86**	**338**	*e*PKP	**PKPbc**	**14 38 22.2**	**+1.0**
GZR	**Gura Zlata**	**149.94**	**329**	⇑P	**PKPbc**	**14 38 21.1**	**-0.5**
SRE	**Strehaia**	**150.25**	**327**	⇑P	**PKPbc**	**14 38 23.0**	**+0.8**
MEM	**Membach**	**150.30**	**354**	*d*PKP	**PKPbc**	**14 38 22.6**	**+0.4**
BTNL	**Ternell**	**150.31**	**354**	*d*PKP	**PKPbc**	**14 38 22.0**	**-0.2**
KHC	**Kasperske Hory**	**150.32**	**343**	*e*PKPDF	**PKPdf**	**14 38 17.5**	**+1.1**
KHC				⇑*e*PKP	**PKPbc**	**14 38 22.4**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**14 38 32.7**	**+1.2**

BSTI	Sart Tilman	150.37	354	dPKP	PKPbc	14 38 22.4	+0.1
CKRC	Cesky Krumlov	150.40	342	⇑ePKP	PKPbc	14 38 22.5	0.0
HERR	Herculane	150.49	328	⇑P	PKPbc	14 38 22.7	-0.1
GERES	GERESS Array B	150.55	343	PKPbc	PKPbc	14 38 22.7	-0.2
	comp=Z,11nm,0.8s,baz=47,slow=2.4,SNR=35						
GERES				SKP		14 40 49.4	
	comp=Z,1.3nm,0.9s,baz=98,slow=4.0,SNR=4.0						
GERES	GERESS Array B	150.55	343		PKPbc	14 38 22.3	-0.6
SNF	Seneffe	150.55	356	dPKP	PKPbc	14 38 23.1	+0.5
BHOU	Houvegnez	150.56	354	dPKP	PKPbc	14 38 22.8	0.0
BCLA	Clavier	150.56	355	dPKPab	PKPab	14 38 32.3	-0.1
BGES	Gesves	150.61	355	dPKP	PKPbc	14 38 22.9	+0.1
BGES				dPKPab	PKPab	14 38 31.7	-0.9
EGYH	Egyhazaskeszo	150.65	337	PKP	PKiKP	14 38 24.8	+1.4
SOP	Sopron	150.70	338	PKP	PKPbc	14 38 23.9	+0.8
CONA	Conrad Observa	150.72	340	i P	PKPbc	14 38 23.4	+0.1
	comp=Z,14nm,0.6s,SNR=11						
BMRD	Maredsous	150.72	355	dPKP	PKPbc	14 38 23.5	+0.4
RONA	Rosalia, Austr	150.77	339	i P	PKPbc	14 38 23.4	0.0
	comp=Z,28nm,0.7s,SNR=13						
MPLH	Magyarpolny	150.78	337	PKP	PKPbc	14 38 23.9	+0.6
RCHB	Rochefort	150.83	355	dPKP	PKPbc	14 38 23.2	-0.2
TIH	Tihany	150.88	336	PKP	PKPdf	14 38 20.0	+2.8
MDVR	Moldovita	150.90	329	⇑P	PKPbc	14 38 23.9	+0.1
MORH	Mrgy, Hungar	151.15	334	⇑P	PKPbc	14 38 24.1	-0.1
MORH	Mrgy, Hungar	151.15	334	PKP	PKPbc	14 38 23.9	-0.3
WLF	Walferdange	151.22	353		PKPbc	14 38 23.9	-0.4
WLF	Walferdange	151.22	353	dPKP	PKPbc	14 38 24.9	+0.6
RDO	Rodhopi	151.25	320		PKPbc	14 38 23.4	-1.2
BLKB	Belogradchik	151.25	326	⇓P	PKPbc	14 38 24.4	-0.2
MOA	Molln	151.29	341	eP	PKPbc	14 38 24.0	-0.5
	comp=Z,5.4nm,0.7s						
MOA				i P	PKPab	14 38 35.2	-0.4
	comp=Z,13nm,1.5s						
ARSA	Arzberg	151.42	339	i P	PKPbc	14 38 24.7	-0.2
	comp=Z,3.5nm,0.8s						
ARSA				i P	PKPab	14 38 35.7	-0.5
	comp=Z,7.4nm,0.9s						
FRGS	Fruska Gora	151.50	332	⇑P	PKPbc	14 38 24.5	-0.6
BIOA	Bad Ischl, Aus	151.61	342	i P	PKPbc	14 38 24.9	-0.4
	comp=Z,5.8nm,0.5s						
VTS	Vitosha	151.65	324	⇑P	PKPbc	14 38 25.7	0.0
VTS	Vitosha	151.65	324		PKPbc	14 38 24.8	-0.9
BOVS	Bovan	151.74	327	⇑P	PKPbc	14 38 24.9	-0.7
SOKA	Soboth	152.09	339	i P	PKPbc	14 38 25.7	-0.8
	comp=Z,8.0nm,0.8s,SNR=7.1						
SOKA				eP	PKPab	14 38 39.0	-0.1
	comp=Z,8.2nm,1.0s						
PERS	Pernice	152.09	339	i PKPbc	PKPbc	14 38 25.6	-0.8
PERS				i PKPab	PKPab	14 38 39.0	-0.1
BFO	Black Forest	152.22	350		PKPbc	14 38 25.9	-0.7
BFO				PKPab	PKPab	14 38 39.0	-0.5
DIVS	Divibare	152.23	330		PKPbc	14 38 26.1	-0.7
KBA	Koelnbreinsper	152.25	342	i P	PKPbc	14 38 26.0	-0.9
	comp=Z,8.1nm,0.7s						
KBA				i P	PKPab	14 38 39.8	-0.1
	comp=Z,7.4nm,0.8s						
OBKA	Obir	152.39	340	i P	PKPbc	14 38 26.5	-0.6
	comp=Z,6.0nm,0.7s						
OBKA				i P	PKPab	14 38 39.6	-0.8
	comp=Z,7.8nm,0.9s						
WATA	Walderalm	152.49	344	i P	PKPbc	14 38 27.0	-0.4
	comp=Z,10.0nm,0.8s						
WATA				i P	PKPab	14 38 40.6	-0.3
	comp=Z,21nm,1.4s						
WTTA	Wattenberg	152.54	344	i P	PKPbc	14 38 27.2	-0.3
	comp=Z,14nm,0.8s						
WTTA				i P	PKPab	14 38 40.4	-0.8
	comp=Z,9.2nm,0.8s						
RETA	Reutte	152.55	346	i P	PKPbc	14 38 27.2	-0.2
	comp=Z,6.6nm,1.1s						
RETA				i P	PKPab	14 38 41.0	0.0
	comp=Z,4.7nm,0.6s						
MYKA	Terra Mystica	152.57	341	i P	PKPbc	14 38 27.0	-0.5
	comp=Z,6.8nm,0.7s						
MYKA				i P	PKPab	14 38 40.4	-0.7
	comp=Z,4.1nm,0.6s						
MOTA	Moosalm	152.60	345	eP	PKPbc	14 38 27.5	-0.1
	comp=Z,15nm,1.0s						
MOTA				i P	PKPab	14 38 40.7	-0.7
	comp=Z,17nm,1.2s						
SQTA	Sankt Quirin	152.69	345	i P	PKPbc	14 38 27.5	-0.3
	comp=Z,13nm,1.0s						
SQTA				i P	PKPab	14 38 41.6	-0.1
	comp=Z,2.8nm,0.5s						
ABTA	Abfaltersbach	152.79	343	i P	PKPbc	14 38 27.4	-0.6
	comp=Z,13nm,0.6s,SNR=5.2						
ABTA				i P	PKPab	14 38 42.1	0.0
	comp=Z,6.7nm,0.6s						
LJU	Ljubljana	152.81	339	i PKPbc	PKPbc	14 38 27.5	-0.4
VISS	Visnje	152.92	339	i PKPbc	PKPbc	14 38 27.8	-0.3
VISS				i PKPab	PKPab	14 38 42.3	-0.3
DAVA	Damuels	152.93	347	i P	PKPbc	14 38 28.2	-0.1
	comp=Z,11nm,1.2s						
DAVA				i P	PKPab	14 38 42.9	+0.2
	comp=Z,10.0nm,0.6s						
FETA	Feichten	152.99	345	i P	PKPbc	14 38 28.5	0.0
	comp=Z,11nm,1.3s						
FETA				i P	PKPab	14 38 43.0	0.0
	comp=Z,7.2nm,0.9s						
STAL	STALIGIAL	153.18	342		PKPbc	14 38 27.5	-1.2
STAL					PKPab	14 38 42.2	-1.5
LIT	Litokhoron	153.72	321		PKPbc	14 38 28.5	-1.6
LIT				PKPab	PKPab	14 38 45.4	-0.8
TUE	Stuetta	153.82	347		PKPbc	14 38 29.2	-1.1
PDG	Podgorica	153.84	328	⇑P	PKPbc	14 38 27.9	-2.3
PDG	Podgorica	153.84	328		PKPbc	14 38 29.0	-1.2
FNA	Florina	153.91	323		PKPbc	14 38 29.0	-1.5
ESDC	Sonseca Array	160.99	12	PKPab	PKPab	14 39 17.7	0.0
	comp=Z,2.2nm,0.9s,baz=346,slow=4.3,SNR=8.4						
KEST	Kesra	163.74	335	PKPab	PKPab	14 39 30.7	+0.6
	comp=Z,8.7nm,0.8s,baz=300,slow=4.0,SNR=8.1						
DBIC	Dimbokro	164.53	157	PKP	PKPdf	14 38 34.4	-0.2
	comp=Z,3.1nm,0.8s,baz=267,slow=6.8,SNR=3.5						
DBIC				PKPab	PKPab	14 39 35.9	+2.0
	comp=Z,1.4nm,0.4s,baz=166,slow=4.5,SNR=5.2						
TORD	Torodi Ar. Bea	172.07	184	PKP	PKPdf	14 38 38.6	-0.9
	comp=Z,2.2nm,0.8s,baz=277,slow=2.3,SNR=14						

NEIC ***09*** *14:46:03.8±1.3, 56°.19S±0°.08×27°.7W±0°.2, h124^{km}±4^{km}, mb4.9/98, Error ellipse: s-maj=12.3km s-min=11.2km az=72.0*

IDC ***09*** *14:46:05.1±1.4, 56°.23S×27°.54W, h135^{km}±11^{km}, mb4.5/18, mbtmp4.9/20, MS3.3/5, Error ellipse: s-maj=13.4km s-min=9.2km az=49.0*

ISC 09 14:46:02.4±0.3, **56°.21S**±0°.06×**27°.61W**±0°.07, **h112**^{km}, **n334,** σ0ˢ.**94**/339, **mb4.9**/56, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.43	287	Pn	Pn	14 47 21.7	+0.8
ORCD	Orcadas	10.04	236	Pn	Pn	14 48 24.1	+0.9
ESPZ	Base Esperanza	16.32	232		Pn	14 49 44.2	-0.4
ESPZ				IAmb	IAmb	14 50 13.2	
	comp=Z,85nm,1.4s						
VNA1	Neumayer--Stat	16.74	157	P	P	14 49 50.5	+0.4
VNA1	Neumayer--Stat	16.74	157	PcP	PcP	14 54 30.4	-0.7
VNA1	Neumayer--Stat	16.74	157	ScP	ScP	14 57 53.9	-1.3
VNA3	Neumayer Olymp	16.93	160	P	Pn	14 49 52.1	+0.1
VNA3	Neumayer Olymp	16.93	160	PcP	PcP	14 54 31.9	+0.4
VNA3				S	S	14 53 16.4	+14
VNA3	Neumayer Olymp	16.93	160	ScP	ScP	14 57 54.1	-1.5
EFI	East Falkland	18.40	271		P	14 50 08.7	+0.3
EFI				IAmb	IAmb	14 50 11.1	
	comp=Z,53nm,0.8s						
SNAA	Sanae	18.70	156	P	P	14 50 12.4	+0.8
SNAA	Sanae	18.70	156	PcP	PcP	14 54 35.3	+0.8
SNAA				S	S	14 53 35.1	-3.3
SNAA	Sanae	18.70	156	ScP	ScP	14 57 57.4	-2.0
SNAA	Sanae	18.70	156	P	P	14 50 12.3	+0.8
	comp=Z,49nm,0.5s,baz=305,slow=11,SNR=528						
SNAA				S	S	14 53 34.3	-4.1
	comp=Z,4.6nm,1.0s,baz=229,slow=18,SNR=2.8						
SNAA				ScP	ScP	14 57 56.9	-2.5
	comp=Z,3.9nm,0.7s,baz=220,slow=6.2,SNR=12						
SNAA	Sanae	18.70	156	P	P	14 50 12.4	+0.8
SNAA				IAmb	IAmb	14 50 16.1	
	comp=Z,58nm,0.7s						
PMSA	Palmer Station	19.62	229	P	Pn	14 50 24.3	+0.4
	comp=Z,162nm,0.8s,baz=69,slow=7.8,SNR=38						
PMSA				LR	LR	14 56 17.2	
	comp=Z,151nm,20.5s,baz=88,slow=31						
PMSA	Palmer Station	19.62	229	Pn	Pn	14 50 24.0	0.0
TROLL	Troll, Antarti	20.21	153	P	P	14 50 28.6	+0.5
TROLL				S	S	14 54 09.1	+0.6
TROLL	Troll, Antarti	20.21	153	ScP	ScP	14 58 01.1	-1.8
SMAI	San Martin Ant	21.49	221	P	P	14 50 42.8	+1.2
BELA	Belgrano 2	21.91	184	P	P	14 50 46.3	+0.3
USHA	Ushuaia	22.92	256	P	P	14 50 56.4	0.0
	comp=Z,5.9nm,0.5s,baz=116,slow=13,SNR=6.4						
	comp=Z,5.9nm,0.5s						
DSPA	Despedida	23.14	258	P	P	14 50 57.6	-0.9
MG02	Cerro Sombrero	24.14	261	P	P	14 51 06.8	-0.8
MG03	Isla Dawson	24.38	257	P	P	14 51 09.3	-0.5
GO09	Cerro Castillo	26.54	262	P	P	14 51 28.0	-1.3
GO09				IAmb	IAmb	14 51 56.1	
	comp=Z,25nm,0.9s						
GO08	Villa O'Higgin	28.09	267	P	P	14 51 43.1	-0.1
GO08				IAmb	IAmb	14 51 44.1	
	comp=Z,24nm,0.7s						
PLTB	Pedras Altas	30.43	313	P	P	14 52 04.1	+0.1
PLTB				IAmb	IAmb	14 52 05.0	
	comp=Z,24nm,0.6s						
PLTB	Pedras Altas	30.43	313	eP	P	14 52 04.2	+0.2
ITQB	Itaqui	33.51	310	P	P	14 52 30.5	-0.5
ITQB				IAmb	IAmb	14 52 31.6	
	comp=Z,12nm,0.6s						
ITQB	Itaqui	33.51	310	eP	P	14 52 30.8	-0.2
ITAB	Concordia	33.88	318	P	P	14 52 34.4	+0.2
ITAB				IAmb	IAmb	14 53 03.0	
	comp=Z,30nm,1.5s						
ITAB	Concordia	33.88	318	eP	P	14 52 34.5	+0.2
PTGB	Pitanga	36.15	320	eP	P	14 52 53.6	-0.2
CPUP	Villa Florida	36.74	312	P	P	14 52 58.2	-0.4
	comp=Z,17nm,0.8s,baz=152,slow=7.6,SNR=28						
CPUP				PcP	PcP	14 55 18.1	-0.5
	comp=Z,2.7nm,0.5s,baz=156,slow=2.2,SNR=7.5						
CPUP				ScP	ScP	14 58 53.7	-1.1
	comp=Z,3.2nm,0.8s,baz=133,slow=5.9,SNR=5.2						
CPUP				LR	LR	15 06 47.6	
	comp=Z,12nm,20.6s,baz=150,slow=34						
	comp=Z,17nm,0.8s						
CPUP	Villa Florida	36.74	312	P	P	14 52 58.0	-0.6
CPUP				IAmb	IAmb	14 52 59.1	
	comp=Z,17nm,0.9s						
CPUP	Villa Florida	36.74	312	eP	P	14 52 58.3	-0.4
BO04	La Punta	36.77	289	P	P	14 52 58.2	-0.8
MCR1	Marechal Candi	37.11	318	eP	P	14 53 01.6	-0.3
MT09	Talagante	37.13	289	P	P	14 52 59.7	-2.4
MT09				IAmb	IAmb	14 53 01.5	
	comp=Z,11nm,0.8s						
MT01	Popeta	37.20	288	P	P	14 53 00.2	-2.4
BSCB	Bom Sucesso	37.41	333	eP	P	14 53 05.3	+0.8
PEL	Peldehue	37.46	290	P	P	14 53 03.4	-1.4
PEL				IAmb	IAmb	14 53 05.1	
	comp=Z,17nm,0.9s						
MT02	Curacav	37.61	289	P	P	14 53 04.5	-1.5
VA03	San Esteban	37.69	290	P	P	14 53 06.1	-0.7
VA03				IAmb	IAmb	14 53 07.0	
	comp=Z,16nm,0.5s						
ROC1	El Roble	37.77	289	P	P	14 53 04.0	-3.6
ROC1				IAmb	IAmb	14 53 08.4	
	comp=Z,12nm,0.7s						
TRCB	Terra Rica	38.12	321	eP	P	14 53 10.8	+0.5
BB19B	Bebedouro	38.38	328	eP	P	14 53 13.6	+1.0
BSFB	Barra de Sao F	38.62	340	eP	P	14 53 14.9	+0.3
SJMB	Sao Joao De Ma	38.81	339	eP	P	14 53 16.9	+0.8
CO02	Combarbal	39.15	291	P	P	14 53 18.0	-1.0
NAN01	Guarapari, ES	39.45	341	eP	P	14 53 22.0	+0.5
CO01	Juntas del Tor	39.66	293	P	P	14 53 23.4	0.0
CO01				IAmb	IAmb	14 53 24.2	
	comp=Z,11nm,0.6s						
CO01					PcP	14 55 27.8	-0.2
DIAM	Diamantina, MG	39.74	336	eP	P	14 53 24.8	+0.7
GO04	Tololo Observa	39.87	292	P	P	14 53 24.0	-1.1
GO04				IAmb	IAmb	14 53 51.9	
	comp=Z,25nm,1.5s						
CO06	Fray Jorge	39.90	291	P	P	14 53 23.8	-1.3
MAW	Mawson	40.16	144	P	P	14 53 27.6	+0.8
	comp=Z,4.6nm,0.5s,baz=218,slow=6.6,SNR=10						
	comp=Z,4.6nm,0.5s						
MAW	Mawson	40.16	144	P	P	14 53 27.3	+0.4
ITRB	Iturama	40.23	326	eP	P	14 53 28.5	+0.6
CO05	La Serena	40.30	292	P	P	14 53 28.1	-0.3
LCO	Las Campanas	40.75	294	P	P	14 53 31.5	-0.9
SUR	Sutherland	40.91	75	P	P	14 53 34.2	+0.6
	comp=Z,6.2nm,0.9s,baz=210,slow=10,SNR=5.7						
SUR				LR	LR	15 07 36.5	
	comp=Z,69nm,19.6s,baz=200,slow=32						
	comp=Z,6.2nm,0.9s						
SUR	Sutherland	40.91	75	P	P	14 53 34.3	+0.7
SUR				IAmb	IAmb	14 53 57.9	
	comp=Z,35nm,1.5s						
IPMB	Ipameri, GO	41.21	329	eP	P	14 53 37.0	+1.0
AQDB	Aquidauana	41.36	318	P	P	14 53 35.8	-1.4
AQDB	Aquidauana	41.36	318	eP	P	14 53 36.4	-0.7
AC04	Llanos de Chal	41.59	294	P	P	14 53 38.2	-0.9
AC04				IAmb	IAmb	14 53 39.3	
	comp=Z,33nm,1.0s						
GO03	Copiap	41.66	295	P	P	14 53 38.7	-1.0
AC02	Maricunga	41.73	297	P	P	14 53 39.2	-1.6
AC02				IAmb	IAmb	14 53 42.1	
	comp=Z,38nm,1.0s						
C2SB	Chapadao do Su	41.91	323	eP	P	14 53 42.6	+0.9
AC06	Mina Casimiro	41.92	295	P	P	14 53 40.3	-1.4
AC06				IAmb	IAmb	14 53 42.2	
	comp=Z,24nm,1.1s						
JANB	Januaria	43.01	336	eP	P	14 53 50.9	+0.2
AC01	Pan de Azucar	43.04	296	P	P	14 53 49.4	-1.4
GO02	Mina Guanaco	43.35	298	P	P	14 53 53.1	-0.5
BDFB	Brasilia	43.38	331	P	P	14 53 54.2	+0.5
	comp=Z,2.7nm,0.4s,baz=144,slow=4.1,SNR=5.8						
	comp=Z,2.7nm,0.4s						
BDFB	Brasilia	43.38	331	IAmb	IAmb	14 54 01.5	
	comp=Z,5.6nm,0.9s						
DVLD	Doverlandia	43.68	325	eP	P	14 53 56.6	+0.6
PP1B	Ponte de Pedra	43.70	321	eP	P	14 53 56.0	-0.1
PB15	IPOC Station P	44.94	300	P	P	14 54 05.7	-0.5
LVC	Limon Verde	45.17	301	P	P	14 54 08.7	+0.4
	comp=Z,44nm,0.5s,baz=154,slow=5.0,SNR=30						
	comp=Z,44nm,0.5s						
LVC	Limon Verde	45.17	301	P	P	14 54 08.2	-0.1
LVC	Limon Verde	45.17	301	eP	P	14 54 08.4	+0.2
PB10	IPOC Station P	45.21	298	P	P	14 54 07.3	-0.9
PB10				IAmb	IAmb	14 54 08.5	
	comp=Z,16nm,0.9s						
PB06	IPOC Station P	45.41	300	P	P	14 54 09.3	-0.6
PB06				IAmb	IAmb	14 54 16.7	
	comp=Z,17nm,0.6s						
SALV	Santo Antonio	45.56	321	eP	P	14 54 10.6	-0.2
SDBA	SAO DESIDERIO	45.71	336	eP	P	14 54 12.3	+0.2
NBLA	Lagarto - SE	45.80	346	eP	P	14 54 13.0	+0.2
SBA	Scott Base	45.91	184	P	P	14 54 14.7	+1.7
PB04	IPOC Station P	46.01	300	P	P	14 54 13.4	-1.2
PB09	IPOC Station P	46.03	301	P	P	14 54 15.0	+0.2
BOSA	Boshof	46.24	76	P	P	14 54 16.0	-0.3
	comp=Z,6.8nm,0.9s,baz=193,slow=7.1,SNR=13						
BOSA				LR	LR	15 10 50.5	
	comp=Z,85nm,19.0s,baz=204,slow=32						
	comp=Z,6.8nm,0.9s						
BOSA	Boshof	46.24	76	P	P	14 54 15.9	-0.3
NBPN	Ponto Novo - B	46.31	343	eP	P	14 54 16.5	-0.3
PB07	IPOC Station P	46.40	300	P	P	14 54 17.2	-0.4
VNDA	Vanda	46.41	183	P	P	14 54 18.6	+1.7
	comp=Z,11nm,0.6s,baz=192,slow=7.0,SNR=71						
	comp=Z,11nm,0.6s						
VNDA	Vanda	46.41	183	P	P	14 54 18.3	+1.4
VNDA				IAmb	IAmb	14 54 19.6	
	comp=Z,13nm,0.7s						
PB02	IPOC Station P	46.75	301	P	P	14 54 19.9	-0.4
PB01	IPOC Station P	46.79	301	P	P	14 54 20.6	0.0
PEXB	Peixe	46.84	332	eP	P	14 54 19.3	-1.6
NBRS	Nobres	47.05	321	eP	P	14 54 22.3	-0.3
PTLB	Pontes e Lacer	47.24	317	eP	P	14 54 23.1	-0.9
PATCX	Punta Patache	47.30	301	P	P	14 54 23.9	-0.6
PB08	IPOC Station P	47.40	302	P	P	14 54 26.0	+0.3
TA01	Diego Aracena	47.53	301	P	P	14 54 25.2	-1.0
TA01				IAmb	IAmb	14 54 26.9	
	comp=Z,49nm,1.4s						
SNDB	Serra Nova Dou	47.80	328	eP	P	14 54 28.8	+0.4
PB11	IPOC Station P	47.97	302	P	P	14 54 29.4	-0.4
PB16	IPOC Station P	49.12	303	P	P	14 54 39.5	+0.3
PB12	IPOC Station P	49.27	302	P	P	14 54 39.0	-0.7
PB12				IAmb	IAmb	14 54 40.0	
	comp=Z,12nm,0.7s						
LBTB	Lobatse	49.28	73	LR	LR	15 14 02.6	
	comp=Z,21nm,18.1s,baz=186,slow=34						
LBTB	Lobatse	49.28	73	P	P	14 54 39.4	-0.4
LBTB				IAmb	IAmb	14 54 40.6	
	comp=Z,19nm,0.8s						
H10N1	ASCENSION HYDR	49.34	17	T	T	15 48 46.1	
	baz=194						
H10N3	ASCENSION HYDR	49.34	17	T	T	15 48 47.4	
	baz=194,slow=74						
H10N2	ASCENSION HYDR	49.35	17	T	T	15 48 47.2	
	baz=194,slow=74						
NBMA	Muriti-CE	49.50	345	eP	P	14 54 41.9	+0.5
SMTB	Santa Maria do	49.77	334	eP	P	14 54 44.2	+0.8
PDRB	Porto dos Gac	49.90	321	eP	P	14 54 43.8	-0.6
VILB	Vilhena	49.93	317	eP	P	14 54 44.2	-0.5
TSUM	Tsumeb	49.97	61	P	P	14 54 44.9	-0.1
NBPV	Pedro Velho	50.02	350	eP	P	14 54 46.0	+0.7
CLDB	Colider	50.26	323	eP	P	14 54 46.5	-0.7
LPAZ	La Paz	50.27	306	P	P	14 54 48.5	+0.5
	comp=Z,28nm,0.5s,baz=144,slow=5.8,SNR=114						
	comp=Z,28nm,0.5s						
LPAZ	La Paz	50.27	306	P	P	14 54 48.1	+0.1
LPAZ	La Paz	50.27	306	eP	P	14 54 48.4	+0.5
PRPB	Parauapebas	52.92	332	eP	P	14 55 07.5	+0.6
CASY	Casey	53.84	160	P	P	14 55 14.0	+1.0
ETMB	Extrema	55.19	312	eP	P	14 55 22.7	-0.7
TMAB	Tom-Au,PA,Br	56.14	335	eP	P	14 55 30.7	+0.5
ITTB	Itaituba	56.35	326	eP	P	14 55 31.3	-0.3
NNA	Nana	58.12	299	P	P	14 55 44.2	0.0
	comp=Z,6.1nm,0.4s,baz=144,slow=8.7,SNR=5.0						
	comp=Z,6.1nm,0.4s						
NNA	Nana	58.12	299	IAmb	IAmb	14 55 45.0	
	comp=Z,18nm,1.0s						
MALB	Monte Alegre	58.28	328	eP	P	14 55 45.5	+0.3
MCPB	Macapa, AP	59.08	331	eP	P	14 55 51.5	+0.8
CZSB	Cruzeiro do Su	59.88	306	eP	P	14 55 55.2	-1.1
ATAH	Atahualpa	63.07	300	P	P	14 56 19.5	+1.3
	comp=Z,14nm,0.6s,baz=172,slow=5.8,SNR=12						
	comp=Z,14nm,0.6s						
VOI	Vohitsoka	63.44	90	P	P	14 56 21.4	+1.1
BOAV	Boa Vista	64.26	323	eP	P	14 56 24.2	-1.3
LIC	Lamto	64.94	25	eP	P	14 56 30.8	+0.9
	comp=Z,11nm,0.7s						
KIC	Kosan Boka	65.14	25	eP	P	14 56 31.4	+0.3
	comp=Z,6.7nm,0.8s						
TIC	Toumodi	65.34	25	eP	P	14 56 32.9	+0.4
DBIC	Dimbokro	65.41	25	P	P	14 56 33.0	+0.2
	comp=Z,4.2nm,0.7s,baz=216,slow=5.6,SNR=5.7						
	comp=Z,4.2nm,0.7s						
DBIC	Dimbokro	65.41	25	P	P	14 56 32.5	-0.3
GARC	Garzon, Huila	69.94	308	eP	P	14 57 01.0	-0.7
SOTA	Rioblanco	70.38	307	eP	P	14 57 05.9	+1.2
PCON	Cinco Dias	70.46	307	eP	P	14 57 07.1	+1.8
PRAC	Prado	71.03	309	eP	P	14 57 07.5	-0.6
CHIC	Chingaza	71.36	311	eP	P	14 57 09.6	-0.9
ORTC	Ortega, Tolima	71.36	309	eP	P	14 57 09.7	-0.4
ROSC	El Rosal	71.80	310	P	P	14 57 13.9	+0.8
	comp=Z,7.2nm,0.4s,baz=192,slow=19,SNR=3.7						
	comp=Z,7.2nm,0.4s						
ROSC	El Rosal	71.80	310	IAmb	IAmb	14 57 15.3	
	comp=Z,11nm,0.9s						
GR1C	Gorgona, Isla	71.86	306	eP	P	14 57 07.5	-5.5
YOTC	Yotoco, Valle	71.91	308	eP	P	14 57 12.1	-1.4
RUSC	La Rusia	72.23	312	eP	P	14 57 14.3	-1.5
SPBC	San Pablo de B	72.42	311	eP	P	14 57 14.4	-2.0
NORC	Norcasia	72.68	310	eP	P	14 57 15.6	-2.3
PLMC	San Jos del P	72.71	308	eP	P	14 57 17.2	-0.9
BAUV	El Baul	73.01	318	P	P	14 57 19.2	-0.6
BAUV				IAmb	IAmb	14 57 20.5	
	comp=Z,28nm,0.9s						
TORD	Torodi Ar. Bea	73.31	30	P	P	14 57 21.9	+0.5
	comp=Z,8.2nm,0.5s,baz=200,slow=6.6,SNR=92						
	comp=Z,8.2nm,0.5s						
PTBC	PUERTO BERRIO,	73.39	311	eP	P	14 57 19.7	-2.3
CBOC	Ciudad Bolivar	73.44	309	eP	P	14 57 21.1	-1.5
BIRV	Birongo	73.78	320	P	P	14 57 24.2	-0.1
BIRV				IAmb	IAmb	14 57 26.7	
	comp=Z,55nm,1.4s						
SDV	Santo Domingo	73.95	315	P	P	14 57 25.3	-0.2
	comp=Z,16nm,0.8s,baz=281,slow=5.2,SNR=6.7						
	comp=Z,16nm,0.8s						
SDV	Santo Domingo	73.95	315	P	P	14 57 25.0	-0.5
SDV				IAmb	IAmb	14 57 26.2	
	comp=Z,15nm,0.9s						
SDV	Santo Domingo	73.95	315	eP	P	14 57 25.3	-0.2
ZARC	Zaragoza, Cauc	74.41	311	P	P	14 57 25.7	-2.3
ZARC	Zaragoza, Cauc	74.41	311	eP	P	14 57 25.7	-2.3
SMLC	San Martn de	75.26	312	eP	P	14 57 30.6	-2.3
SJCC	San Jacinto, C	76.71	312	P	P	14 57 40.2	-0.9
SJCC				IAmb	IAmb	14 57 42.4	
	comp=Z,26nm,1.1s						
MLZ	Mavora Lakes	77.94	191	P	P	14 57 48.3	+0.7
BCIP	Isla Barro Col	78.07	307	P	P	14 57 47.3	-1.3
BCIP				IAmb	IAmb	14 58 04.9	
	comp=Z,37nm,1.1s						
RPZ	Rata Peaks	79.21	194	P	P	14 57 54.6	-0.1
RPZ				IAmb	IAmb	14 58 17.2	
	comp=Z,21nm,1.3s						
SRBA	San Rafael, Bu	79.73	304	P	P	14 57 58.1	+0.2
LTZ	Lake Taylor	79.96	195	P	P	14 57 59.4	+0.7
LTZ				IAmb	IAmb	14 58 00.7	
	comp=Z,24nm,1.4s						
KHZ	Kahutara	80.13	196	P	P	14 57 59.4	-0.2
KHZ				IAmb	IAmb	14 58 27.0	
	comp=Z,45nm,1.4s						
MTP	Monte Pirata	80.61	324	P	P	14 58 01.6	-0.7
MTP				IAmb	IAmb	14 58 24.2	
	comp=Z,44nm,1.5s						
STVI	Saint Thomas	80.65	324	P	P	14 58 01.8	-0.7
STVI				IAmb	IAmb	14 58 04.4	
	comp=Z,13nm,0.7s						
CUPR	Culebra, Puert	80.72	324	P	P	14 58 02.6	-0.3
THZ	Tophouse	80.86	195	P	P	14 58 03.4	-0.2
CBYP	Canovanas	80.88	323	P	P	14 58 03.1	-0.7
MLPR	Magueyes Islan	81.00	322	P	P	14 58 04.1	-0.3
MLPR				IAmb	IAmb	14 58 14.3	
	comp=Z,34nm,1.2s						
SNZO	South Karori	81.03	197	P	P	14 58 04.5	+0.1
TAU	Tasmania Unive	81.16	176	P	P	14 58 05.0	-0.1
TAU				IAmb	IAmb	14 58 30.7	
	comp=Z,53nm,1.3s						
AOPR	Arecibo Observ	81.25	323	P	P	14 58 05.1	-0.6
AOPR				IAmb	IAmb	14 58 06.0	
	comp=Z,42nm,1.3s						
NNZ	Nelson	81.33	196	P	P	14 58 05.4	-0.6
NNZ				IAmb	IAmb	14 58 06.3	
	comp=Z,35nm,1.1s						
JTS	Las Juntas de	81.40	303	P	P	14 58 06.5	-0.1
JTS				IAmb	IAmb	14 58 08.1	
	comp=Z,35nm,1.4s						
ORTG	Ortega, Santa	81.70	303	P	P	14 58 08.4	+0.1
ORTG				IAmb	IAmb	14 58 09.5	
	comp=Z,16nm,0.8s						
ACON	Acoyapa	82.97	304	P	P	14 58 14.2	-0.6
BOAB	BOACO BROADBAN	83.62	303	P	P	14 58 17.3	-0.8
TOO	Toolangi	86.40	175	P	P	14 58 32.9	+1.0
TOO				IAmb	IAmb	14 58 35.6	
	comp=Z,38nm,1.4s						
MTO3	Montecristo	87.05	301	P	P	14 58 34.9	-0.6
MTO3				IAmb	IAmb	14 58 35.8	
	comp=Z,19nm,0.7s						
STKA	Stephens Creek	91.79	171	P	P	14 58 58.8	+1.5
	comp=Z,2.3nm,0.6s,baz=175,slow=3.5,SNR=5.4						
	comp=Z,2.3nm,0.6s						
CMIG	Matias Romero	92.05	298	P	P	14 58 58.6	0.0
	comp=Z,5.3nm,0.8s,baz=178,slow=2.1,SNR=6.8						
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	98.91	163	P	P	14 59 29.5	-0.5
	comp=Z,2.4nm,0.7s,baz=183,slow=4.1,SNR=39						
ASAR				PP	PP	15 03 30.1	-1.8
	comp=Z,0.3nm,0.7s,baz=191,slow=6.7,SNR=4.0						
ASAR				PKiKP	PKiKP	15 03 60.0	-0.2
	comp=Z,0.2nm,0.4s,baz=165,slow=1.3,SNR=8.0						
ASAR				PKKPbc	PKKPbc	15 15 54.6	+1.2
	comp=Z,0.2nm,0.5s,baz=16,slow=2.4,SNR=6.7						
	comp=Z,2.4nm,0.7s						
WRA	Warramunga Arr	102.63	163	P	Pdif	14 59 46.2	-0.3
	comp=Z,0.3nm,0.5s,baz=193,slow=4.3,SNR=4.8						
WRA				PKKPbc	PKKPbc	15 15 44.4	+1.5
	comp=Z,0.5nm,0.3s,baz=354,slow=3.0,SNR=28						
LONY	Lake Ozonia	107.95	327	P	PKiKP	15 04 17.0	+1.3
	baz=155						
N23A	Red Feather La	117.08	304	P	PKiKP	15 04 34.2	+0.6
	baz=142						
GMRC	Granite Mounta	117.08	292	P	PKiKP	15 04 34.2	+0.5
	baz=141						

SCI2	San Clemente I	117.19	289	P	PKiKP	15 04 34.5	+0.8
	baz=141						
O20A	White River Ci	117.56	301	P	PKiKP	15 04 35.1	+0.6
	baz=142						
FMP	Fort Macarthur	117.62	290	P	PKiKP	15 04 35.4	+0.9
	baz=141						
RRX	Edison Barstow	117.85	292	P	PKiKP	15 04 35.8	+0.8
	baz=141						
P18A	Preston Nutter	118.13	300		PKPdf	15 04 35.5	-0.2
EDW2	Edwards Air Fo	118.37	291	P	PKPdf	15 04 36.3	+0.3
	baz=141						
RSSD	Black Hills	118.74	307	P	PKiKP	15 04 37.4	+0.7
	baz=142						
MPMC	Manual Prospec	119.01	292	P	PKPdf	15 04 37.6	+0.2
	baz=140						
TPNV	Topopah Spring	119.06	294		PKPdf	15 04 37.3	-0.1
TPNV	Topopah Spring	119.06	294	P	PKiKP	15 04 37.8	+0.3
	baz=140						
ISA	Isabella, Lake	119.22	291	P	PKiKP	15 04 38.2	+0.5
	baz=140						
PKM	Mcpherson Peak	119.33	290	P	PKPdf	15 04 38.2	+0.2
	baz=140						
CWC	Cottonwood Cre	119.61	292	P	PKPdf	15 04 38.6	+0.1
	baz=140						
R11A	Troy Canyon, C	119.79	295	P	PKPdf	15 04 38.9	+0.1
	baz=140						
DUG	Dugway, Tooele	119.82	298	P	PKPdf	15 04 39.0	+0.3
	baz=140						
BW06	Boulder Array	120.22	302	P	PKiKP	15 04 40.0	+0.3
	baz=140						
PDAR	Pinedale Array	120.22	302	PKP	PKPdf	15 04 38.0	-1.5
	comp=Z,0.5nm,0.5s,baz=133,slow=6.4,SNR=7.0						
HWUT	Hardware Ranch	120.29	300		PKPdf	15 04 38.8	-0.8
NVAR	Mina Array Bea	121.24	293	PKP	PKPdf	15 04 41.9	+0.2
	comp=Z,0.8nm,0.5s,baz=134,slow=2.6,SNR=9.0						
ELK	Elko	121.44	297		PKPdf	15 04 41.1	-0.9
MOOW	Moose Ponds	121.53	302		PKPdf	15 04 41.6	-0.4
LAO	LASA Array	121.70	308		PKPdf	15 04 41.3	-0.7
HLID	Hailey	123.15	300	P	PKiKP	15 04 45.7	+0.4
	baz=138						
EGMT	Eagleton	124.29	306	P	PKiKP	15 04 47.8	+0.5
	baz=138						
FINES	FINESS Array B	124.63	28	PKP	PKPdf	15 04 46.5	-0.6
	comp=Z,2.5nm,0.6s,baz=182,slow=2.5,SNR=16						
PLID	Pearl Lake	125.04	300		PKPdf	15 04 48.5	-0.2
CMAR	Chiang Mai Arr	125.23	111	PKP	PKPdf	15 04 49.7	+0.1
	comp=Z,1.0nm,0.8s,baz=234,slow=4.2,SNR=6.8						
MSO	Missoula	125.33	303		PKPdf	15 04 48.8	-0.2
MSO	Missoula	125.33	303	P	PKiKP	15 04 49.8	+0.4
	baz=137						
G08A	Pilot Rock	126.63	298		PKPdf	15 04 51.7	+0.1
J04D	Umpqua Nationa	126.73	295	P	PKiKP	15 04 52.6	+0.2
	baz=136						
I05D	Terrebonne, OR	127.13	296	P	PKiKP	15 04 53.5	+0.4
	baz=136						
D04E	Lakebay	129.84	298	P	PKiKP	15 04 59.0	+0.8
	baz=134						
D03D	Eldon	130.24	298	P	PKiKP	15 04 59.9	+0.8
	baz=133						
B05A	Bryant	130.25	299	P	PKiKP	15 04 59.7	+0.7
	baz=133						
ARCES	ARCESS Array B	131.18	22	PKP	PKPdf	15 04 59.2	-0.2
	comp=Z,1.6nm,0.6s,baz=217,slow=2.6,SNR=9.5						
PZH	PanZhiHua	133.28	108	PKP	PKPdf	15 05 05.7	+0.9
YKA	Yellowknife Ar	136.13	318	PKP	PKPdf	15 05 08.4	-0.3
	comp=Z,5.2nm,0.5s,baz=125,slow=2.3,SNR=31						
YKA				SKPbc	SKPbc	15 08 27.1	-3.1
	comp=Z,3.3nm,0.7s,baz=130,slow=3.2,SNR=19						
MKAR	Makanchi Array	137.16	72	PKP	PKPdf	15 05 10.7	-0.6
	comp=Z,0.3nm,0.6s,baz=234,slow=4.8,SNR=2.4						
MKAR				SKPbc	SKPbc	15 08 30.1	-3.8
	comp=Z,0.8nm,0.6s,baz=242,slow=2.6,SNR=7.8						
ZALV	Zalesovo Beam	142.65	64	PKhKP	PKPpre	15 05 15.9	
	comp=Z,0.9nm,0.3s,baz=232,slow=3.6,SNR=6.3						
ZALV				SKPbc	SKPbc	15 08 44.8	-3.5
	comp=Z,0.4nm,0.5s,baz=251,slow=4.4,SNR=2.9						
HYT	Haines Junctio	144.69	307		PKPab	15 05 23.7	+0.1
HYT	Haines Junctio	144.69	307	P	PKPab	15 05 24.0	+0.3
	baz=115,SNR=19						
N30M	Aishikik Lake	144.77	308	P	PKPbc	15 05 24.2	+0.3
	baz=114						
PNL	Peninsula	145.06	305	P	PKPdf	15 05 25.3	+0.2
	baz=115						
M30M	Minto, Yukon	145.09	310	P	PKPbc	15 05 25.1	+0.3
	baz=113,SNR=23						
YUK6	Outpost Mounta	145.13	307	P	PKPab	15 05 25.9	+0.5
	baz=114						
YUK4	Talbot Arm	145.41	308	P	PKPbc	15 05 26.4	+0.3
	baz=113,SNR=14						
PINM	Pinnacle	145.63	305	P	PKPbc	15 05 26.7	+0.1
	baz=114						
INK	Inuvik	145.77	321	PKPbc	PKPbc	15 05 26.6	0.0
	comp=Z,28nm,0.6s,baz=67,slow=3.5,SNR=111						
INK				SKPbc	SKPbc	15 08 53.0	-2.2
	comp=Z,8.6nm,0.8s,baz=50,slow=2.2,SNR=10						
INK	Inuvik	145.77	321		PKPdf	15 05 26.1	+0.2
INK	Inuvik	145.77	321	P	PKPbc	15 05 27.0	+0.3
	baz=107						
EPYK	Eagle Plains	146.37	317	P	PKPdf	15 05 28.2	+1.1
	baz=108						
YUK3	Moose Creek	146.38	308	P	PKPdf	15 05 28.5	+1.0
	baz=112,SNR=10.0						
I29M	Ogilvie Camp,	146.69	314	P	PKPdf	15 05 28.7	+1.1
	baz=108,SNR=22						
DAWY	Dawson	146.72	312	P	PKPdf	15 05 28.9	+1.1
	baz=109,SNR=25						
BVCY	Beaver Creek	146.79	309	P	PKPbc	15 05 29.4	-0.5
	baz=110,SNR=11						
M27K	Edge Creek, AK	147.21	308	P	PKPbc	15 05 30.5	-0.8
	baz=110,SNR=10						
L27K	Beaver Creek,	147.42	310	P	PKPbc	15 05 31.4	-0.3
	baz=109,SNR=14						
KAIM	Kayak Island	147.50	303	P	PKPbc	15 05 31.3	-0.6
	baz=112						
EGAK	Eagle	147.67	313	P	PKPbc	15 05 31.6	-0.6
	baz=107,SNR=8.2						
M26K	Nabesna, AK	147.72	308	P	PKPbc	15 05 32.4	-0.1
	baz=109						
BMRM	Bremner River	147.96	305	P	PKPbc	15 05 32.7	-0.4
	baz=110,SNR=8.4						
L26K	Log Cabin Wild	148.07	309	P	PKPbc	15 05 32.9	-0.5
	baz=108,SNR=13						
N25K	Chitina, Valde	148.17	306	P	PKPbc	15 05 33.7	0.0
	baz=109,SNR=8.5						
Q23K	Middleton Isla	148.22	302	P	PKPbc	15 05 34.2	+0.5
	baz=112						
EYAK	Cordova Ski Ar	148.34	304	P	PKPbc	15 05 34.1	0.0
	baz=110						
J26L	Joseph Creek	148.59	312	P	PKPbc	15 05 34.7	-0.1
	baz=106,SNR=32						
SCRK	Sand Creek	148.62	311	P	PKPbc	15 05 34.8	-0.1
	baz=106,SNR=17						
HARP	HAARP	148.67	307	P	PKPbc	15 05 34.9	0.0
	baz=108						
KLU	Klutina	148.73	306	P	PKPbc	15 05 35.3	+0.1
	baz=109,SNR=17						
RIDG	Independent Ri	148.92	310	P	PKPbc	15 05 35.8	+0.3
	baz=106,SNR=39						
PAX	Paxson	148.98	308	P	PKPbc	15 05 35.2	-0.5
	baz=107,SNR=25						
M24K	Tolsona, Glenn	149.04	307	P	PKPbc	15 05 36.1	+0.2
	baz=108,SNR=9.6						
GLI	Glacier Island	149.07	304	P	PKPbc	15 05 35.5	-0.4
	baz=109						
K24K	Donnelly Dome	149.34	310	P	PKPbc	15 05 36.4	-0.2
	baz=105						
J25K	Salcha River,	149.37	312	P	PKPbc	15 05 36.6	0.0
	baz=104,SNR=14						
SCM	Sheep Creek Mo	149.48	306	P	PKPbc	15 05 37.3	+0.3
	baz=107,SNR=19						
M23K	Glacier View	149.65	306	P	PKPbc	15 05 37.2	-0.1
	baz=107,SNR=15						
DHY	Denali Highway	149.84	308	P	PKPbc	15 05 37.7	-0.2
	baz=105,SNR=11						
KNK	Knik Glacier	149.87	305	P	PKPbc	15 05 37.8	-0.1
	baz=107,SNR=8.4						
WAT6	Susitna Watana	149.87	307	P	PKPbc	15 05 38.0	-0.1
	baz=106,SNR=21						
SML	Sawmill	149.93	305	P	PKPbc	15 05 37.8	-0.3
	baz=107,SNR=14						
SEW	Seward	149.93	302	P	PKPbc	15 05 37.7	-0.3
	baz=109						
HDA	Harding Lake	149.99	311	P	PKPbc	15 05 37.8	-0.3
	baz=103,SNR=11						
JCJ	Chichijima	150.00	162	PKPbc	PKPbc	15 05 37.8	-1.5
	comp=Z,18nm,0.4s,baz=272,slow=7.6,SNR=8.8						
ILAR	Eielson Array	150.04	312	PKPbc	PKPbc	15 05 37.8	-0.4
	comp=Z,19nm,0.7s,baz=134,slow=2.2,SNR=206						
ILAR	Eielson Array	150.04	312		PKPbc	15 05 37.7	-0.5
PMR	Palmer	150.23	305	P	PKPbc	15 05 38.3	-0.3
	baz=106,SNR=5.5						
WAT1	Susitna Watana	150.30	307	P	PKPbc	15 05 38.3	-0.6
	baz=105						
POKR	Poker Plat Res	150.34	312	P	PKPbc	15 05 38.2	-0.7
	baz=102,SNR=7.7						
RC01	Rabbit Creek A	150.37	304	P	PKPbc	15 05 38.9	-0.2
	baz=107						
BRSE	Bradley Lake S	150.43	301	P	PKPbc	15 05 39.0	-0.3
	baz=109						
COLA	College	150.47	312	P	PKPbc	15 05 38.8	-0.4
	baz=102						
TCOL	CIGO, UAF Yank	150.47	312	P	PKPbc	15 05 39.0	-0.1
	baz=102						
H24K	Noodor Dome	150.66	313	P	PKPbc	15 05 39.5	-0.2
	baz=100,SNR=14						
KDAK	Kodiak Island	150.67	296	P	PKPbc	15 05 39.5	-0.3
	baz=111						
M22K	Willow	150.73	305	P	PKPbc	15 05 39.9	0.0
	baz=106,SNR=16						
OHAK	Old Harbor	150.83	295	P	PKPbc	15 05 39.8	-0.4
	baz=111						
HOM	Homer	150.84	300	P	PKPbc	15 05 40.1	-0.1
	baz=108						
NEA2	Nenana	150.92	311	P	PKPbc	15 05 39.9	-0.4
	baz=101,SNR=19						
CUT	Chulitna	150.96	306	P	PKPbc	15 05 40.3	-0.1
	baz=104,SNR=9.4						
SONM	Songino Array	150.97	87	PKPbc	PKPbc	15 05 40.9	-0.2
	comp=Z,1.6nm,0.5s,baz=223,slow=3.4,SNR=11						
SII	Sitkinak Islan	151.04	293	P	PKPbc	15 05 40.7	-0.2
	baz=112						
I23K	Minto, Yukon-K	151.15	312	P	PKPbc	15 05 39.7	-1.0
	baz=100,SNR=12						
TRF	Thorofare Moun	151.21	308	P	PKPbc	15 05 40.9	-0.3
	baz=102						
H23K	Yukon River	151.33	313	P	PKPbc	15 05 40.8	-0.4
	baz=99,SNR=7.7						
O20K	Slope Mountain	151.44	301	P	PKPbc	15 05 41.5	-0.2
	baz=107						
CHIR	Chirikof Islan	151.50	291	P	PKPbc	15 05 41.9	0.0
	baz=113						
SPCR	Spurr Chakacha	151.55	303	P	PKPbc	15 05 41.2	-0.8
	baz=105						
Q19K	Cape Douglas,	151.59	298	P	PKPbc	15 05 41.5	-0.5
	baz=108						
P19K	Oil Pt	151.60	300	P	PKPbc	15 05 41.6	-0.5
	baz=107						
TOLK	Toolik Lake Re	151.64	319	P	PKPbc	15 05 42.1	+0.2
	baz=94						
BPAW	Bear Paw Mtn.	151.65	309	P	PKPbc	15 05 41.4	-0.6
	baz=101,SNR=47						
COLD	Coldfoot	151.77	316	P	PKPbc	15 05 42.6	+0.5
	baz=96,SNR=13						
PPLA	Purkeypile	151.94	307	P	PKPbc	15 05 41.8	-1.0
	baz=102,SNR=7.8						
CAST	Castle Rocks	152.00	308	P	PKPbc	15 05 42.0	-0.8
	baz=101,SNR=21						
M20K	Styx River	152.15	304	P	PKPbc	15 05 42.4	-0.9
	baz=103,SNR=13						
CHUM	Lake Minchumin	152.18	309	P	PKPbc	15 05 42.7	-0.5
	baz=100,SNR=22						
I21K	Tanana	152.25	312	P	PKPbc	15 05 42.6	-0.6
	baz=98,SNR=8.7						
O19K	Port Alsworth	152.28	301	P	PKPbc	15 05 42.6	-0.9
	baz=106,SNR=6.5						
P18K	Big Mountain,	152.50	299	P	PKPbc	15 05 43.0	-1.1
	baz=107,SNR=7.6						
N19K	Bonanza Creek	152.52	302	P	PKPbc	15 05 43.1	-1.0
	baz=104,SNR=6.2						
L20K	Farewell, AK	152.62	305	P	PKPbc	15 05 44.0	-0.3
	baz=102,SNR=7.0						
O18K	Koktuh Hills	152.62	300	P	PKPbc	15 05 43.9	-0.4
	baz=106						
H21K	Melozitna Rive	152.65	313	P	PKPbc	15 05 44.0	-0.2
	baz=96,SNR=14						
M19K	Big River Lodg	152.73	304	P	PKPbc	15 05 43.9	-0.6
	baz=102						
K20K	Telida	152.87	307	P	PKPbc	15 05 44.2	-0.5
	baz=100,SNR=8.4						
L19K	White Mountain	153.00	305	P	PKPbc	15 05 44.7	-0.4
	baz=102						
J20K	Nowinta River	153.03	309	P	PKPbc	15 05 44.9	-0.2
	baz=98						
N18K	Kilae Creek	153.16	301	P	PKPbc	15 05 45.4	0.0
	baz=104						
CHNA	Chernabura Isl	153.21	287	P	PKPbc	15 05 45.5	-0.2
	baz=113						
TTA	Tatalina	153.66	306	P	PKPbc	15 05 46.8	+0.2
	baz=99						
SDPT	Sand Point	153.88	288	P	PKiKP	15 05 47.7	+0.6
	baz=112						
A21K	Barrow	153.95	325	P	PKiKP	15 05 48.7	+1.9
	baz=82						
GCSA	Galena City Sc	154.27	310	P	PKPab	15 06 03.5	+1.2
	baz=95						
FALS	False Pass	155.27	286	P	PKPab	15 06 08.0	+1.2
	baz=112						
RDOG	Red Dog Mine	156.60	318	P	PKPab	15 06 11.0	-1.2
	baz=82						
PETK	Petropavlovsk-	175.62	227	PKPab	PKPab	15 07 35.4	-1.0
	comp=Z,3.8nm,0.9s,baz=108,slow=9.4,SNR=5.1						

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*IDC **09** 14:46:13.5±11.0, 36°.30N×70°.43E, h186^{km}±109^{km}, mb3.1/6, mbtmp3.6/7, Error ellipse: s-maj=59.6km s-min=25.1km az=26.0*

*NNC **09** 14:46:21.8±1.8, 37°.10N×70°.42E, h227^{km}±21^{km}, mb2.7, mpv3.8, Error ellipse: s-maj=18.7km s-min=11.7km az=0.0*

ISC 09 14:46:16.0±1.1**, 36°.7N**±0°.1×**70°.4E**±0°.1**, h204**^{km}**, n11, σ1^{s}78**/13**, mb3.0**/5**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.45	1	P	Pn	14 47 49.5	+0.4
	1.1nm,0.3s,baz=182,slow=11,SNR=36						
KK31				⇑S	S	14 48 59.5	-3.2
	4.9nm,0.4s,baz=31,slow=75,SNR=5.0						
TKM2	Tokmak 2	7.43	31	⇓P	Pn	14 48 02.7	+0.8
	6.2nm,0.4s						
TKM2				⇓S	S	14 49 24.1	-2.0
	2.4nm,0.5s						
MKAR	Makanchi Array	13.46	37	P	Pn	14 49 20.7	+1.8
	1.2nm,0.8s,baz=216,slow=12,SNR=9.1						
AB31	Akbulak array	14.73	332	P	Pn	14 49 34.2	-0.4
	0.2nm,0.3s,baz=153,slow=11,SNR=22						
AKTO	Aktyubinsk	16.42	331	⇑P	Pn	14 49 54.5	-0.5
	3.7nm,0.8s						
ZALV	Zalesovo Beam	19.98	25	P	P	14 50 34.3	+1.6
	1.5nm,0.3s,baz=209,slow=10,SNR=13						
	1.5nm,0.3s						
FINES	FINESS Array B	37.10	326	P	P	14 53 08.1	+1.6
	0.7nm,0.6s,baz=123,slow=12,SNR=3.8						
	0.7nm,0.6s						
ARCES	ARCESS Array B	40.83	338	P	P	14 53 39.0	+1.7
	2.9nm,1.1s,baz=95,slow=8.4,SNR=3.6						
	2.9nm,1.1s						
TORD	Torodi Ar. Bea	65.25	268	P	P	14 56 35.3	-0.9
	0.2nm,0.7s,baz=54,slow=6.8,SNR=1.6						
	0.2nm,0.7s						
WRA	Warramunga Arr	82.47	122	P	P	14 58 14.2	-1.6
	0.3nm,0.9s,baz=314,slow=5.9,SNR=1.6						
	0.3nm,0.9s						
ASAR	Alice Springs	84.72	125	P	P	14 58 26.0	-1.3
	0.1nm,0.6s,baz=316,slow=4.7,SNR=1.1						
	0.1nm,0.6s						

IDC 09 14:46:44.9±9.9**, 19°.67S**×**178°.35W, h550**^{km}±49^{km}**, mb2.6**/3**, mbtmp3.5**/4**, Error ellipse: s-maj=249.2km s-min=33.6km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.92	299	P	P	14 48 06.3	0.0
	4.4nm,0.4s,baz=122,slow=21,SNR=18						
ASAR	Alice Springs	44.39	256	P	P	14 54 07.0	-0.2
	0.6nm,0.7s,baz=90,slow=8.1,SNR=18						
	0.6nm,0.7s						
WRA	Warramunga Arr	44.39	261	P	P	14 54 07.1	-0.1
	0.7nm,1.0s,baz=97,slow=7.1,SNR=8.9						
	0.7nm,1.0s						
ILAR	Eielson Array	87.58	13	P	P	14 58 34.1	-0.1
	0.2nm,0.6s,baz=220,slow=5.4,SNR=2.0						
	0.2nm,0.6s						

IDC 09 15:03:25.2±3.6**, 6°.86S**×**127°.52E, h395**^{km}±41^{km}**, mb2.6**/1**, mbtmp3.6**/4**, Error ellipse: s-maj=58.3km s-min=18.9km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.06	229	P	Pn	15 04 48.1	+0.5
	10.0nm,0.3s,baz=62,slow=0.6,SNR=11						
BATI				S	S	15 05 54.4	-0.2
	16nm,0.5s,baz=24,slow=5.6,SNR=9.8						
WRA	Warramunga Arr	14.59	154	P	P	15 06 33.9	+0.4
	0.3nm,0.3s,baz=334,slow=11,SNR=22						
WRA				S	S	15 09 05.5	-3.9
	0.3nm,0.9s,baz=342,slow=25,SNR=1.7						
ASAR	Alice Springs	17.80	161	P	P	15 07 08.6	+0.7
	0.5nm,0.3s,baz=345,slow=11,SNR=22						
ASAR				S	S	15 10 12.4	0.0
	0.3nm,0.8s,baz=342,slow=20,SNR=0.7						
MKAR	Makanchi Array	66.78	328	P	P	15 13 35.5	-0.2
	0.3nm,0.7s,baz=123,slow=10,SNR=2.3						
	0.3nm,0.7s						

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*IDC **09** 15:13:49.4±1.5, 9°.60S×122°.02E, h0^{km}, mb4.0/2, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=150.2km s-min=24.2km az=59.0*

*DJA **09** 15:13:55.5±0.4, 10°S±4°×12°2E±°, h10^{km}, M3.7/6, mb4.2/2, MLv3.5/6*

ISC 09 15:13:55.2±0.9**, 9°.96S**±0°.08×**122°.2E**±0°.1**, h50**^{km}**, n10, σ3^{s}18**/12**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.30	338	P	Pn	15 14 15.4	-1.7
MMRI	Maumere	1.32	2	P	Pn	15 14 18.0	+0.8
BATI	Baumata	1.47	100	P	Pn	15 14 27.3	+8.0
BSSI	Bau Bau, Buton	4.15	336	P	Pn	15 14 57.3	+1.2
PLAI	Plampang	4.50	284	P	Pn	15 15 00.0	-0.9
FITZ	Fitzroy Crossi	8.75	158	Pn	Pn	15 16 02.8	+3.6
	0.1nm,0.3s,baz=333,slow=8.9,SNR=8.7						
FITZ				Sn	Sn	15 17 35.4	-1.0
	0.4nm,0.3s,baz=160,slow=20,SNR=7.7						
	1.4nm,0.8s						
WRA	Warramunga Arr	15.36	132	Pn	P	15 17 31.6	-1.0
	0.1nm,0.3s,baz=307,slow=14,SNR=1.4						
WRA				Sn	Sn	15 20 13.1	-4.8
	0.1nm,0.3s,baz=312,slow=23,SNR=3.1						
	0.2nm,0.6s						
ASAR	Alice Springs	17.63	142	P	P	15 18 02.2	+4.5
	baz=317,slow=12,SNR=4.8						
ASAR				S	Sn	15 21 08.1	-4.9
	0.3nm,0.7s,baz=316,slow=21,SNR=1.6						
	0.3nm,0.7s						
MKAR	Makanchi Array	66.78	331	P	P	15 24 40.6	-0.8
	0.9nm,0.6s,baz=143,slow=7.8,SNR=9.5						
	0.9nm,0.6s						
ZALV	Zalesovo Beam	71.09	338	P	P	15 25 06.2	-1.7
	0.5nm,0.3s,baz=136,slow=4.3,SNR=4.3						
	0.5nm,0.3s						

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*BJI **09** 15:18:59.5±0.0, 7°.17S×129°.98E, h160^{km}, mb5.0/70, mB4.8/40*

*MOS **09** 15:19:03.4±0.9, 6°.66S×129°.59E, h153^{km}, mb5.0/45, Error ellipse: s-maj=8.9km s-min=4.9km az=110.9*

*NEIC **09** 15:19:04±1.5, 6°.67S±0°.05×129°.63E±0°.06, h141^{km}±4^{km}, mb5.0/172, Error ellipse: s-maj=9.1km s-min=6.8km az=95.0*

*IDC **09** 15:19:05.3±0.7, 6°.67S×129°.66E, h155^{km}±5^{km}, mb4.7/29, mbtmp5.1/35, MS3.6/12, Error ellipse: s-maj=10.4km s-min=8.2km az=71.0*

*DJA **09** 15:19:05.3±0.2, 7°S±2°×13°0E±°, h160^{km}±2^{km}, M4.8/91, mb5.2/91, mB5.3/60, MLv5.4/14, Mw(mB)4.8/60, MwMwp4.5/7, Mwp4.9/7*

*GCMT **09** 15:19:07.0±0.2, 6°.79S±0°.02×129°.70E±0°.02, h159^{km}±2^{km}, MW5.0/104, Moment Tensor Solution. s33,c38; s104,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.44±.12; M$_{\theta\theta}$-1.73±.14; M$_{\phi\phi}$0.29±.15; M$_{r\theta}$1.02±.09; M$_{\theta\phi}$-1.23±.12; M$_{\phi r}$2.85±.10; Best double couple: M$_0$3.63200×10^{16} NP1:ϕ$_s$275.00000°, δ28.00000°, λ153.00000°. NP2:ϕ$_s$29.00000°, δ78.00000°, λ64.00000°. Principal axes: T 3.7720, Plg51.0000°, Azm270.0000°; N -0.2810, Plg25.0000°, Azm35.0000°; P -3.4920, Plg28.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 15:19:04.4±0.3**, 6°.79S**±0°.03×**129°.66E**±0°.04**, h154**^{km}±2^{km}**, h154**^{km}**:pP-P, n861, σ1^{s}35**/915**, mb5.0**/183**, 91C-48D, Fault plane solution: NP1:**ϕ$_s$48.73050°**,**δ89.34271°**,** λ56.76688°. **NP2:**ϕ$_s$317.72745°**,**δ33.23887°**,**λ178.80080°. **Principal axes:** T Plg36.8363°**,** Azm289.7707°**;** N Plg33.2306°**,** Azm49.1611°**;** P Plg35.6835°**,** Azm167.2269°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.02	126		Pn	15 19 40.6	+0.7
SAUI	Saumlaki	2.02	126	P	Pn	15 19 41.1	+1.1
SAUI	Saumlaki	2.02	126	P	Pn	15 19 41.6	+1.6
BNDI	Bandanaira	2.26	6	P	Pn	15 19 44.5	+1.6
AAI	Ambon	3.41	335	P	Pn	15 19 58.7	+1.6
MSAI	Masohi	3.49	348	P	Pn	15 19 58.2	-0.1
SANI	Sanana	5.96	322	P	Pn	15 20 32.8	+2.1
	1.0nm5µm3µm347nm,1.1s						
SANI	Sanana	5.96	322	P	Pn	15 20 33.2	+2.5
SIJI	Sorong	6.09	15	P	Pn	15 20 30.8	-1.6
	50nm,0.3s,baz=203,slow=10,SNR=122						
SIJI				S	Sn	15 21 33.8	-7.6
	207nm,0.2s,baz=51,slow=21,SNR=13						
SIJI				LR	LR	15 23 08.5	
	comp=Z,868nm,18.1s,baz=188,slow=41						
SWI	Sorong	6.10	15	P	Pn	15 20 30.9	-1.6
	2.2nm2µm5µm230nm,0.7s						
MTN	Manton Dam	6.19	167	P	Pn	15 20 32.7	-1.1
	baz=6.2,SNR=1000						
MTN				S	Sn	15 21 39.5	-4.2
	baz=6.2						
MTN	Manton Dam	6.19	167	Pn	Pn	15 20 32.9	-0.8
MTN	Manton Dam	6.19	167	P	Pn	15 20 34.0	+0.3
LBMI	Labuha	6.47	341	P	Pn	15 20 39.2	+1.7
	1.3nm2µm3µm304nm,0.7s						
KDU	Kakadu	6.49	155	P	Pn	15 20 36.8	-0.9
	baz=6.5,SNR=1000						
KDU				S	Sn	15 21 46.4	-4.4
	baz=6.5						
KDU	Kakadu	6.49	155	P	Pn	15 20 37.4	-0.3
BATI	Baumata	6.83	240	P	Pn	15 20 43.2	+0.9
	353nm,0.4s,baz=112,slow=2.9,SNR=134						
BATI				S	Sn	15 21 58.3	-0.8
	1µm,0.4s,baz=117,slow=23,SNR=21						
BATI	Baumata	6.83	240	P	Pn	15 20 43.2	+0.9
	4.9nm2µm5µm473nm,0.8s						
BBSI	Bau Bau	7.16	280	P	Pn	15 20 50.5	+3.8
	0.2nm399nm56nm,0.9s						
MMRI	Maumere	7.58	255	Pn	Pn	15 20 53.0	+0.7
MMRI	Maumere	7.58	255	P	Pn	15 20 54.2	+2.0
	1.7nm3µm194nm,1.1s						
MMRI	Maumere	7.58	255	P	Pn	15 20 53.9	+1.7
TNTI	Ternate	7.85	343	Pn	Pn	15 20 55.0	-0.8
TNTI	Ternate	7.85	343	P	Pn	15 20 56.7	+0.9
	0.2nm787nm86nm,1.1s						
TNTI	Ternate	7.85	343	P	Pn	15 20 57.6	+1.8
EDFI	Ende, Flores	8.13	256	P	Pn	15 21 01.5	+1.8
	1µm104nm,1.0s						
SRPI	Serui, Papua	8.18	54	P	Pn	15 20 59.0	-1.3
	2µm64nm,0.7s						
BAKI	Biak	8.50	49	P	Pn	15 21 05.0	+0.5
	412nm,1.2s						
KNRA	Kununurra	8.88	186	P	Pn	15 21 07.8	-1.7
	baz=8.9,SNR=954						
KNRA				S	Sn	15 22 41.3	-7.0
	baz=8.9						
KNRA	Kununurra	8.88	186	Pn	Pn	15 21 08.2	-1.4
KNRA	Kununurra	8.88	186	P	Pn	15 21 08.5	-1.0
LUWI	Luwuk	8.93	309	P	Pn	15 21 13.0	+2.8
	144nm,1.2s						
LUWI	Luwuk	8.93	309	P	Pn	15 21 12.7	+2.5
BSSI	Bau Bau, Buton	9.13	273	P	Pn	15 21 15.0	+2.1
	844nm53nm,1.1s						
KMSI	Cibinong	9.25	322	P	Pn	15 21 16.5	+2.0
	2µm200nm,1.0s						
WAMI	Wamena	9.46	73	P	Pn	15 21 21.1	+3.8

	4µm380nm,0.7s						
BKSI	Bulukumba	9.59	278	P	Pn	15 21 21.4	+2.4
	1µm844nm84nm,0.7s						
BNSI	Bone	9.80	284	P	Pn	15 21 25.2	+3.5
	1µm149nm,0.8s						
APSI	Ampana	9.89	306	P	Pn	15 21 26.9	+3.9
	2µm154nm,1.3s						
KAPI	Kappang	10.01	280	P	Pn	15 21 26.7	+2.2
	13nm,0.7s,baz=93,slow=8.4,SNR=14						
KAPI	Kappang	10.01	280	Pn	Pn	15 21 25.0	+0.4
KAPI	Kappang	10.01	280	P	Pn	15 21 26.4	+1.8
SMPI	Sarmi	10.21	63	P	Pn	15 21 26.7	-0.4
SPSI	Sidrap Palu	10.23	285	P	Pn	15 21 29.7	+2.2
	1µm118nm,1.0s						
WBSI	Waikabubak, Su	10.55	254	P	Pn	15 21 30.7	-1.0
	3µm277nm,0.6s						
MRSI	Marisa	10.55	313	P	Pn	15 21 34.3	+2.6
	2µm304nm,1.0s						
MMPI	Merauke	10.76	100	P	Pn	15 21 33.8	-0.7
	494nm,0.6s						
TOLI2	Tolitoli	11.83	311	Pn	Pn	15 21 47.8	-0.7
TOLI2	Tolitoli	11.83	311	P	Pn	15 21 51.6	+3.1
FITZ	Fitzroy Crossi	11.91	199	P	Pn	15 21 46.6	-2.8
	24nm,0.5s,baz=30,slow=8.9,SNR=59						
FITZ				S	Sn	15 23 53.2	-7.9
	baz=104,slow=19						
FITZ				LR	LR	15 27 48.0	
	comp=Z,209nm,18.7s,baz=24,slow=44						
FITZ	Fitzroy Crossi	11.91	199	Pn	Pn	15 21 47.1	-2.3
PLAI	Plampang	11.94	259	P	Pn	15 21 48.6	-1.4
	3µm219nm,0.9s						
PLAI	Plampang	11.94	259	P	Pn	15 21 48.8	-1.2
MPSI	Mapaga	12.04	306	P	P	15 21 55.8	-1.7
	753nm48nm,1.4s						
WB0	Warramunga Arr	13.70	161	Pn	Pn	15 22 08.7	-3.7
WRAB	Tennant Creek	13.84	161	P	Pn	15 22 10.9	-3.4
WRAB	Tennant Creek	13.84	161	Pn	Pn	15 22 10.8	-3.4
WRA	Warramunga Arr	13.85	161	P	Pn	15 22 11.7	-2.6
	104nm,0.5s,baz=342,slow=13,SNR=178						
WRA				S	Sn	15 24 36.4	-11
	197nm,0.7s,baz=345,slow=22,SNR=19						
WRA				LR	LR	15 28 21.5	
	comp=Z,470nm,20.2s,baz=20,slow=40						
WRA	Warramunga Arr	13.85	161	P	Pn	15 22 09.5	-4.8
WRA	Warramunga Arr	13.85	161	Pn	Pn	15 22 09.4	-4.9
WB2	Warramunga Arr	13.85	161	Pn	Pn	15 22 10.9	-3.5
SMKI	Samarinda	13.92	296	P	P	15 22 18.7	+0.2
	197nm,0.4s						
WR0	Warramunga Arr	13.93	161	Pn	Pn	15 22 11.4	-3.9
DAV	Davao City (W)	14.35	343	P	Pn	15 22 21.4	+0.7
	60nm,0.3s,baz=247,slow=7.7,SNR=1.5						
DAV				S	Sn	15 25 00.9	+0.8
	52nm,0.3s,baz=262,slow=5.0,SNR=1.3						
SRBI	Singaraja	14.38	264	P	Pn	15 22 22.1	+1.0
	1µm92nm,1.0s						
DNP	Denpasar	14.44	262	P	P	15 22 24.3	+0.1
	30µm273nm,0.7s						
IGBI	Denpasar	14.52	261	P	Pn	15 22 22.7	-0.1
	3µm149nm,0.4s						
COEN	Coen	15.08	119	P	Pn	15 22 27.5	-2.2
	baz=15,SNR=46						
COEN				S	Sn	15 25 06.2	-11
	baz=15						
COEN	Coen	15.08	119	Pn	Pn	15 22 27.3	-2.5
BBKI	Banjar Baru	15.12	282	P	P	15 22 33.5	+1.7
	8µm784nm,1.4s						
ABJI	Asem Bagus	15.33	265	P	P	15 22 33.9	-0.2
	241nm,0.9s						
JAGI	Jajag, Banyuwa	15.46	263	P	Pn	15 22 31.2	-3.2
JAGI				IAmb	IAmb	15 22 36.1	
	comp=Z,90nm,0.7s						
JAGI	Jajag, Banyuwa	15.46	263	P	Pn	15 22 33.5	-1.0
	comp=Z,2µmcomp=Z,125nm,0.7s						
JAGI	Jajag, Banyuwa	15.46	263	P	Pn	15 22 33.8	-0.7
KMMI	Kalianget	15.58	268	P	P	15 22 37.5	+0.6
	comp=Z,2µmcomp=Z,195nm,1.1s						
MTKI	Muara Teweh, K	15.82	291	P	P	15 22 41.4	+1.8
	comp=Z,148nm,0.8s						
BLJI	Banyuglugur	15.96	266	P	Pn	15 22 40.9	+0.3
	comp=Z,2µmcomp=Z,261nm,0.7s						
GMJI	Gumukmas	16.14	264	P	P	15 22 43.9	+0.8
	comp=Z,105nm,1.0s						
QIS	Mount Isa	16.75	146	P	P	15 22 49.1	-0.6
	baz=17,SNR=395						
QIS				S	S	15 25 44.4	-12
	baz=17						
QIS	Mount Isa	16.75	146	P	P	15 22 49.5	-0.2
BWJI	Bawean	16.92	272	P	Pn	15 22 54.8	+2.5
	comp=Z,5µmcomp=Z,217nm,1.5s						
GRJI	Gresik	17.06	269	P	Pn	15 22 55.5	+1.6
	comp=Z,1µmcomp=Z,152nm,1.1s						
MBWA	Marble Bar	17.22	213	P	P	15 22 55.5	+0.6
MBWA				IAmb	IAmb	15 22 59.0	
	comp=Z,69nm,0.9s						
MBWA	Marble Bar	17.22	213	P	Pn	15 22 56.1	+0.3
MBWA	Marble Bar	17.22	213	P	Pn	15 22 55.7	-0.1
AS31	Alice Springs	17.27	167	P	P	15 22 55.8	+0.2
ASAR	Alice Springs	17.27	167	P	Pn	15 22 56.7	+0.2
	comp=Z,212nm,0.6s,baz=348,slow=10,SNR=1358						
ASAR				S	S	15 26 00.5	-7.3
	comp=Z,43nm,0.7s,baz=346,slow=21,SNR=6.8						
ASAR				ScP	ScP	15 30 50.5	-0.6
	comp=Z,19nm,0.8s,baz=357,slow=1.7,SNR=4.4						
ASAR	Alice Springs	17.27	167	P	P	15 22 55.5	-0.1
PSA00	Pilbara Seismi	17.49	212	P	P	15 22 58.8	+0.8
PSA00	Pilbara Seismi	17.49	212	P	P	15 22 58.2	+0.3
PSA00				IAmb	IAmb	15 23 00.4	
	comp=Z,32nm,0.6s						
PSA00	Pilbara Seismi	17.49	212	P	Pn	15 22 59.7	+0.6
PMG	Port Moresby	17.52	100	P	Pn	15 22 59.0	-0.4
	comp=Z,169nm,0.8s,baz=299,slow=3.3,SNR=41						
PMG				S	S	15 26 07.1	-5.8
	comp=Z,28nm,0.4s,baz=189,slow=23,SNR=8.5						
PMG	Port Moresby	17.52	100	*d i*P	Pn	15 23 01.4	+1.9
PMG	Port Moresby	17.52	100	Pn	Pn	15 23 00.8	+1.3
PMG	Port Moresby	17.52	100	P	Pn	15 23 01.4	+1.9
TBJI	Tambak Boyo	17.68	269	P	Pn	15 23 01.5	+0.1
	comp=Z,142nm,1.0s						
PWJI	Pagerwojo	17.75	265	P	P	15 23 00.7	-0.1
	comp=Z,84nm,0.8s						
WRKA	Warakurna	18.20	184	P	P	15 23 06.7	+1.1
	baz=18,SNR=380						
WRKA	Warakurna	18.20	184	P	Pn	15 23 07.5	+0.1
MTSU	Mount Surprise	18.20	130	P	Pn	15 23 07.4	-0.2
	baz=18,SNR=110						
MTSU	Mount Surprise	18.20	130	P	Pn	15 23 07.7	+0.1
MANU	Manus Island	18.27	76		Pn	15 23 08.7	+0.4
MANU				IAmb	IAmb	15 23 10.3	
	comp=Z,84nm,0.8s						
PBKI	Pangkalan Bun	18.38	282	P	Pn	15 23 09.0	-0.6
	comp=Z,5µmcomp=Z,608nm,1.1s						
PCJI	Pacitan	18.38	264	P	P	15 23 07.2	-0.5
	comp=Z,4µmcomp=Z,200nm,0.6s						
UWJI	Ujung Watu	18.59	270	P	Pn	15 23 12.3	+0.2
	comp=Z,92nm,0.8s						
WOJI	Wonogiri, Jawa	18.61	266	P	P	15 23 09.9	-0.3
	comp=Z,114nm,1.1s						
SMRI	Semarang	19.08	268	P	P	15 23 15.8	+0.5
SMRI				IAmb	IAmb	15 23 21.3	
	comp=Z,89nm,0.6s						
SMRI	Semarang	19.08	268	P	P	15 23 15.9	+0.6
	comp=Z,127nm,0.9s						
SMRI	Semarang	19.08	268	P	P	15 23 16.3	+1.0
STKI	Sintang	19.37	290	P	P	15 23 18.6	+0.1
	comp=Z,53nm,1.5s						
KPJI	Karang Pucung	20.58	267	P	P	15 23 30.5	-0.9
	comp=Z,2µmcomp=Z,208nm,0.8s						
CTA	Charters Tower	20.84	131	P	P	15 23 35.8	+1.6
	comp=Z,60nm,0.9s,baz=301,slow=11,SNR=61						
	comp=Z,60nm,0.9s						
CTA	Charters Tower	20.84	131	P	P	15 23 36.0	+1.8
CTAO	Charters Tower	20.84	131	P	P	15 23 35.5	+1.3
CTAO				pmax	pmax		
	comp=Z,121nm,1.1s						
CTAO	Charters Tower	20.84	131	P	P	15 23 35.5	+1.3
CTAO				IAmb	IAmb	15 23 38.9	
	comp=Z,121nm,1.1s						
CTAO	Charters Tower	20.84	131	P	P	15 23 36.0	+1.8
KSM	Kuching	20.98	292	P	P	15 23 34.6	-1.1
KSM					PcP	15 27 36.2	-0.9
KSM	Kuching	20.98	292	P	P	15 23 35.8	0.0
JCJI	Jatiwangi	21.25	270	P	P	15 23 38.7	+0.1
	comp=Z,337nm,0.4s						
OOD	Oodnadatta	21.66	165	P	P	15 23 43.6	+0.7
GIRL	Giralia	21.67	222	P	P	15 23 43.6	+0.6
	baz=22,SNR=9.4						
GIRL	Giralia	21.67	222	P	P	15 23 43.7	+0.8
GIRL	Giralia	21.67	222	P	P	15 23 44.5	+1.5
LEM	Lembang	21.89	269	P	P	15 23 45.2	-0.3
	comp=Z,186nm,0.8s,baz=58,slow=7.5,SNR=20						
LEM				LR	LR	15 32 60.0	
	comp=Z,121nm,19.5s,baz=36,slow=38						
	comp=Z,186nm,0.8s						
LEM	Lembang	21.89	269	P	P	15 23 44.8	-0.7
	comp=Z,1µmcomp=Z,149nm,0.9s						
TPI	Tanjungpandan	22.29	279	P	P	15 23 48.6	-0.7
	comp=Z,800nmcomp=Z,84nm,0.8s						
CNJI	Cibinong	22.36	267	P	P	15 23 47.6	-2.5
	comp=Z,7µmcomp=Z,754nm,0.8s						
MEEK	Meekatharra	22.37	207	P	P	15 23 50.4	+0.4
	baz=22,SNR=31						
MEEK	Meekatharra	22.37	207	P	P	15 23 50.6	+0.6
KRVT	Keravat (AS076	22.40	85	P	P	15 23 51.0	+0.6
	comp=Z,52nm,0.8s,baz=188,slow=3.1,SNR=5.7						
	comp=Z,52nm,0.8s						
TGY	Tagaytay City	22.48	337	P	P	15 23 52.6	+1.3
	comp=Z,1µm,0.7s,baz=187,slow=3.7,SNR=39						
CBJI	Citeko	22.66	270	P	P	15 23 50.6	-2.3
	comp=Z,3µmcomp=Z,409nm,0.8s						
DBJI	Dramaga	22.75	269	P	P	15 23 51.9	-1.9
	comp=Z,69nm,0.9s						
SKJI	Sukabumi	22.93	268	P	P	15 23 54.1	-1.3
	comp=Z,3µmcomp=Z,278nm,0.5s						
INKA	Innaminka	23.34	155	P	P	15 24 00.8	+1.8
MULG	Mulgathing	23.74	171	P	P	15 24 03.7	+1.1
PPBI	Pangkal Pinang	23.89	280	P	P	15 24 04.9	+0.8
	comp=Z,4µmcomp=Z,180nm,0.8s						
FORT	Forrest	23.92	183	P	P	15 24 05.9	+1.7
	baz=24,SNR=16						
FORT	Forrest	23.92	183	P	P	15 24 05.4	+1.2
FORT	Forrest	23.92	183	P	P	15 24 05.6	+1.4
QLP	Quilpie	24.09	146	P	P	15 24 06.9	+1.1
	baz=24,SNR=73						
QLP	Quilpie	24.09	146	P	P	15 24 07.1	+1.3
LCRK	Leigh Creek	24.87	162	P	P	15 24 14.3	+1.4
KASI	Kota Agung	25.05	271	P	P	15 24 13.1	-1.5
	comp=Z,83nm,0.8s						
PMBI	Palembang	25.09	278	P	P	15 24 17.6	+2.6
	comp=Z,444nm,1.2s						
PMBI	Palembang	25.09	278	P	P	15 24 17.9	+2.9
LWLI	Liwa	25.52	273	P	P	15 24 19.2	+0.1
	comp=Z,3µmcomp=Z,73nm,0.8s						
MORW	Morawa	25.62	208	P	P	15 24 20.5	+0.8
	baz=26,SNR=15						
MORW	Morawa	25.62	208	P	P	15 24 18.9	-0.7
MORW	Morawa	25.62	208	P	P	15 24 20.5	+0.8
DSRI	Dabo	25.79	283	P	P	15 24 21.6	+0.2
	comp=Z,34nm,1.2s						
RK1H	Rockhampton Ha	25.96	132	P	P	15 24 24.1	+1.3
TPRI	Tanjung Pinang	26.22	286	P	P	15 24 27.9	+2.6
	comp=Z,2µmcomp=Z,80nm,1.3s						
JMBI	JAMBI	26.44	280	P	P	15 24 30.2	+3.0
BBOO	Buckleboo	26.57	168	P	P	15 24 29.1	+0.9
	baz=27,SNR=24						
BBOO	Buckleboo	26.57	168	P	P	15 24 27.7	-0.5
BBOO				IAmb	IAmb	15 24 33.0	
	comp=Z,62nm,0.9s						
BBOO	Buckleboo	26.57	168	P	P	15 24 29.2	+1.0
BLDU	Ballidu	26.64	206	P	P	15 24 29.9	+1.1
	baz=27,SNR=6.9						
RMQ	Roma	26.73	139	P	P	15 24 31.1	+1.3
	baz=27,SNR=11						
RMQ	Roma	26.73	139	P	P	15 24 31.3	+1.6
KLBR	Kellerberrin	27.07	203	P	P	15 24 33.9	+1.2
	baz=27,SNR=22						
KLBR	Kellerberrin	27.07	203	P	P	15 24 33.9	+1.2
MYKOM	Kota Tinggi	27.13	287	P	P	15 24 33.3	-0.1
WHYH	Whyalla	27.13	165	P	P	15 24 34.2	+1.0
STKA	Stephens Creek	27.34	157	P	P	15 24 36.0	+0.9
	comp=Z,47nm,0.7s,baz=336,slow=8.5,SNR=78						
	comp=Z,47nm,0.7s						
STKA	Stephens Creek	27.34	157	P	P	15 24 36.0	+0.9
	baz=27,SNR=74						
STKA	Stephens Creek	27.34	157	P	P	15 24 35.7	+0.7
STKA	Stephens Creek	27.34	157	P	P	15 24 36.1	+1.1
NAPP	Napperby	27.42	164	P	P	15 24 37.1	+1.3
EIDS	Eidsvold	27.58	134	P	P	15 24 38.6	+1.3
	baz=28,SNR=4.6						
EIDS	Eidsvold	27.58	134	P	P	15 24 36.9	-0.4
HTT	Hallett	27.87	163	P	P	15 24 40.9	+1.1
	baz=28,SNR=21						
MUN	Mundaring	28.03	205	P	P	15 24 42.2	+1.0
	baz=28,SNR=11						
NWAO	Narrogin (SRO)	28.46	202	P	P	15 24 45.8	+0.8
NWAO				pmax	pmax		
	comp=Z,58nm,1.5s						
NWAO	Narrogin (SRO)	28.46	202	P	P	15 24 45.8	+0.8
NWAO				IAmb	IAmb	15 24 46.9	
	comp=Z,58nm,1.5s						
CMSA	Cobar Meteorol	28.83	151	P	P	15 24 49.5	+1.2
	baz=29,SNR=83						
CMSA	Cobar Meteorol	28.83	151	P	P	15 24 49.5	+1.2
BKNI	Bangkinang	29.41	283	P	P	15 24 52.7	-1.0
BKNI	Bangkinang	29.41	283	P	P	15 24 55.9	+2.2
	comp=Z,159nm,0.9s						
BKNI	Bangkinang	29.41	283	P	P	15 24 56.3	+2.6
	comp=Z,162nm,1.0s						
PPI	Padang Panjang	29.86	281	P	P	15 24 56.6	-1.0
	comp=Z,64nm,1.0s						
RKGY	Rocky Gully	30.06	201	P	P	15 24 59.4	+0.3
	baz=30,SNR=5.8						
HNR	Honiara	30.10	97	P	P	15 24 59.5	-0.2
	comp=Z,79nm,0.7s,baz=219,slow=4.2,SNR=4.8						
HNR				LR	LR	15 38 11.4	
	comp=Z,65nm,18.4s,baz=152,slow=38						
	comp=Z,79nm,0.7s						
HNR	Honiara	30.10	97	P	P	15 24 59.8	+0.1
HNR				pmax	pmax		
	comp=Z,100nm,0.8s						
HNR	Honiara	30.10	97	P	P	15 24 59.8	+0.1
TWG	Pinlang	30.60	344	P	P	15 25 02.2	-1.8
TWG				IAmb	IAmb	15 25 14.3	
	comp=Z,63nm,1.5s						
MNSI	Mandailing Nat	30.95	283	P	P	15 25 06.2	-1.0
	comp=Z,125nm,0.8s						
SISI	Saibi	30.96	279	P	P	15 25 06.2	-1.1
	comp=Z,21nm,0.9s						
YULB	Yu-li	31.09	345	P	P	15 25 06.2	-2.1
YULB				IAmb	IAmb	15 25 26.6	
	comp=Z,33nm,1.5s						
TPUB	Ta-pu	31.18	344	P	P	15 25 07.4	-1.7
TPUB				IAmb	IAmb	15 25 09.0	
	comp=Z,17nm,0.8s						
ARMA	Armidale	31.27	141	P	P	15 25 11.2	+1.2
	baz=31,SNR=21						
ARMA	Armidale	31.27	141	P	P	15 25 11.7	+1.7
ARMA				IAmb	IAmb	15 25 12.9	
	comp=Z,27nm,0.9s						
ARMA	Armidale	31.27	141	P	P	15 25 12.0	+2.0
KULM	Kulim	31.34	292	P	P	15 25 10.1	-0.5
SSLB	Suanglung	31.55	345	P	P	15 25 10.0	-2.3
PATS	Pohnpei	31.63	65	P	P	15 25 13.2	0.0
YOJ	Yonaguni jima	31.73	348	P	P	15 25 13.0	-0.8
YOJ				pmax	pmax		
	comp=Z,83nm,1.0s						
YOJ	Yonaguni jima	31.73	348	P	P	15 25 13.0	-0.8
ARPS	Mount Arapiles	31.85	161	P	P	15 25 16.7	+1.9
	baz=32,SNR=73						
ARPS	Mount Arapiles	31.85	161	P	P	15 25 16.9	+2.1
RPSI	Rantau Prapat	32.09	286	P	P	15 25 16.5	-0.7
PSI	Prapat	32.12	286	P	P	15 25 16.5	-1.1
	comp=Z,55nm,0.8s,baz=94,slow=5.3,SNR=25						
PSI				LR	LR	15 39 47.2	
	comp=Z,114nm,19.9s,baz=104,slow=39						
	comp=Z,55nm,0.8s						
KNMB	Chin-men Tao	32.95	341	P	P	15 25 23.4	-1.1
MGCD	Mangrove Creek	32.98	146	P	P	15 25 25.9	+1.2
	baz=33,SNR=11						
MGCD	Mangrove Creek	32.98	146	P	P	15 25 27.5	+2.8
GSI	Gunungsitoli	33.01	283	P	P	15 25 23.3	-2.0
GSI	Gunungsitoli	33.01	283	P	P	15 25 23.7	-1.6
	comp=Z,1µmcomp=Z,136nm,0.9s						
GSI	Gunungsitoli	33.01	283	P	P	15 25 24.3	-1.0
JOW	Kunigami	33.45	358	P	P	15 25 28.8	0.0
JOW				IAmb	IAmb	15 25 30.3	
	comp=Z,40nm,1.0s						
CAN	Canberra	33.51	151	P	P	15 25 31.3	+2.0
CAN				pmax	pmax		
	comp=Z,95nm,0.9s						
CAN	Canberra	33.51	151	P	P	15 25 31.3	+2.0
CAN	Canberra	33.51	151	P	P	15 25 31.7	+2.4
SRIT	Nakonsritamara	33.63	297	P	P	15 25 30.0	-0.6
SRIT				IAmb	IAmb	15 25 31.9	
	comp=Z,54nm,1.2s						
CNB	Canberra Magne	33.68	150	P	P	15 25 31.6	+0.8
	baz=34,SNR=14						
CNB	Canberra Magne	33.68	150	P	P	15 25 33.0	+2.1
TOO	Toolangi	33.86	157	P	P	15 25 33.7	+1.4
	baz=34,SNR=9.3						
TOO	Toolangi	33.86	157	P	P	15 25 34.7	+2.3
TOO				pmax	pmax		
	comp=Z,20nm,0.9s						
TOO	Toolangi	33.86	157	P	P	15 25 34.7	+2.3
TOO				IAmb	IAmb	15 25 35.6	
	comp=Z,20nm,0.8s						
GEXS	Deakin Univers	33.97	159	P	P	15 25 33.1	-0.1
LHMI	Lhok Sumawe	34.76	289	P	P	15 25 39.5	-0.8
LHMI	Lhok Sumawe	34.76	289	P	P	15 25 39.9	-0.5
	comp=Z,185nm,0.7s						
LHMI	Lhok Sumawe	34.76	289	P	P	15 25 41.1	+0.7
JCJ	Chichijima	35.80	19	LR	LR	15 38 12.1	
	comp=Z,74nm,21.4s,baz=110,slow=32						
JCJ	Chichijima	35.80	19	P	P	15 25 46.6	-2.4
KOUNC	Koumac, New Ca	36.22	116	P	P	15 25 53.3	+0.6
LHI	Lord Howe Isla	36.88	136	P	P	15 25 58.8	+0.6
	baz=37,SNR=3.4						
SLVN	Son La	37.68	318	P	P	15 26 05.1	-0.1
SLVN				IAmb	IAmb	15 26 06.9	
	comp=Z,16nm,0.6s						
SANVU	Saraoutou	37.78	106	P	P	15 26 07.1	+1.2
SANVU	Saraoutou	37.78	106	P	P	15 26 07.6	+1.6
SANVU	Saraoutou	37.78	106	P	P	15 26 07.6	+1.6
SANVU				x	x	15 26 20.6	
SANVU				pP	pP	15 26 32.0	-6.6
SANVU				sP	pwP	15 26 47.4	+5.6
JSU	Suzuyama	38.08	1	P	P	15 26 07.6	-0.7
JSU				IAmb	IAmb	15 26 09.2	
	comp=Z,28nm,1.0s						
NOUC	Port Laguerre	38.48	117	P	P	15 26 12.7	+0.9
NOUC	Port Laguerre	38.48	117	P	P	15 26 12.7	+0.9
DZM	Mont Dzumac	38.59	117	P	P	15 26 13.4	+0.6
DZM				IAmb	IAmb	15 26 14.7	
	comp=Z,22nm,0.7s						
DZM	Mont Dzumac	38.59	117	P	P	15 26 14.1	+1.3
DZM	Mont Dzumac	38.59	117	P	P	15 26 14.1	+1.3
ONTNC	Ouen Toro	38.67	117	P	P	15 26 14.3	+0.9
ONTNC				IAmb	IAmb	15 26 14.9	
	comp=Z,26nm,0.7s						
ONTNC	Ouen Toro	38.67	117	P	P	15 26 14.8	+1.4
MOO	Moorlands	38.75	159	P	P	15 26 16.7	+2.9
	baz=39,SNR=5.6						
LIFNC	LIFOU	38.94	115	P	P	15 26 16.1	+0.5
LIFNC	LIFOU	38.94	115	P	P	15 26 16.8	+1.2
YATNC	Mamie plateau,	38.98	117	P	P	15 26 18.0	+2.0
OUENC	Ouen Island, N	39.05	117	P	P	15 26 17.2	+0.7
OUENC				IAmb	IAmb	15 26 18.6	
	comp=Z,23nm,0.6s						
OUENC	Ouen Island, N	39.05	117	P	P	15 26 18.3	+1.8
TAU	Tasmania Unive	39.21	159	P	P	15 26 19.6	+2.1
TAU				pmax	pmax		
	comp=Z,125nm,1.5s						
TAU	Tasmania Unive	39.21	159	P	P	15 26 19.6	+2.1
CM31	Chiang Mai Arr	39.33	310	P	P	15 26 19.2	+0.3
CM31	Chiang Mai Arr	39.33	310	P	P	15 26 19.8	+0.9
	SNR=27						
CMAR	Chiang Mai Arr	39.33	310	P	P	15 26 19.5	+0.6
	comp=Z,41nm,0.9s,baz=140,slow=7.4,SNR=228						
CMAR				PcP	PcP	15 28 23.9	-0.6
	comp=Z,5.3nm,0.7s,baz=168,slow=2.9,SNR=8.5						
CMAR				ScP	ScP	15 31 59.9	+1.0
	comp=Z,2.9nm,1.1s,baz=157,slow=3.3,SNR=8.9						
CMAR				LR	LR	15 43 53.1	
	comp=Z,32nm,18.2s,baz=120,slow=38						
	comp=Z,41nm,0.9s						
CMAR	Chiang Mai Arr	39.33	310	P	P	15 26 19.2	+0.3
CMAR					PcP	15 28 26.2	+1.7
CMAR					ScP	15 31 58.7	-0.1
CHTO	Chiang Mai	39.55	311	P	P	15 26 20.7	0.0
CHTO				pmax	pmax		
	comp=Z,79nm,0.8s						
CHTO	Chiang Mai	39.55	311	P	P	15 26 20.7	0.0
CHTO	Chiang Mai	39.55	311	P	P	15 26 21.6	+0.9
CHTO	Chiang Mai	39.55	311	P	P	15 26 21.4	+0.7
CHTO	Chiang Mai	39.55	311	P	P	15 26 21.2	+0.6
PINNC	Pines Island,	39.64	117	P	P	15 26 22.3	+0.9
PINNC	Pines Island,	39.64	117	P	P	15 26 23.4	+2.0
MARNC	Mare, Loyalty	39.84	116	P	P	15 26 24.0	+0.9
MARNC	Mare, Loyalty	39.84	116	P	P	15 26 25.0	+1.9
GYA	Guiyang	39.87	327	⇑P	P	15 26 23.3	-0.1
GYA				pP	pwP	15 26 59.9	-1.7
GYA				pmax	pmax		
	comp=Z,26nm,1.0s						
GYA				pmax	pmax		
	comp=Z,170nm,3.5s						
WHN	Wuhan	39.91	339	⇑P	P	15 26 23.9	+0.4
WHN				pmax	pmax		
	comp=Z,150nm,1.2s						
NJ2	Nanjing	39.97	346	⇑*i*P	P	15 26 24.6	+0.7
NJ2				pmax	pmax		
	comp=Z,37nm,0.7s						
KMI	Kunming	41.14	321	⇑P	P	15 26 34.8	+0.9
KMI				pmax	pmax		
	comp=Z,29nm,1.6s						
ENH	Enshi	41.62	333	P	P	15 26 36.5	-1.1
ENH				IAmb	IAmb	15 26 37.7	
	comp=Z,23nm,0.6s						
JHS	Saijyo	41.69	4	P	P	15 26 37.4	-0.6
JHS				IAmb	IAmb	15 26 38.5	
	comp=Z,37nm,1.5s						
INU	Inuyama	42.48	9	P	P	15 26 43.8	-0.6
PZH	PanZhiHua	42.76	322	P	P	15 26 46.7	-0.2
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,120nm,5.6s						
JGF	Kuroka	42.78	9	P	P	15 26 46.3	-0.6
TJN	Taejon	42.99	357	*de*P	P	15 26 49.1	+0.7
TJN	Taejon	42.99	357	P	P	15 26 50.6	+2.2
	comp=Z,68nm,1.3s						
MAJO	Matsushiro	43.84	10	*c i*P	P	15 26 53.9	-1.4
MAJO	Matsushiro	43.84	10	P	P	15 26 53.7	-1.6
MAJO				IAmb	IAmb	15 26 55.5	
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	43.84	10	P	P	15 26 54.7	-0.6
MAJO	Matsushiro	43.84	10	P	P	15 26 54.4	-0.9
MAJO				pP	pP	15 27 27.6	-0.8
MJAR	Matsushiro Arr	43.84	10	P	P	15 26 53.6	-1.7
	comp=Z,17nm,0.8s,baz=184,slow=9.4,SNR=36						
MJAR				pP	pP	15 27 28.2	-0.2
	comp=Z,6.9nm,0.8s,baz=176,slow=10,SNR=4.0						
MJAR				LR	LR	15 42 21.8	
	comp=Z,66nm,20.9s,baz=196,slow=32						
	comp=Z,17nm,0.8s						
MJAR	Matsushiro Arr	43.84	10	P	P	15 26 53.5	-1.7
MJB9	Matsu-Tunnel	43.84	10	P	P	15 26 53.9	-1.4
MJB9				IAmb	IAmb	15 26 55.4	
	comp=Z,26nm,0.9s						
JYT	Yasato	43.92	12	P	P	15 26 54.4	-1.4
JYT				IAmb	IAmb	15 26 56.2	
	comp=Z,32nm,0.5s						
KSAR	Wonju Array Be	44.03	358	P	P	15 26 55.8	-1.0
KSAR	Wonju Array Be	44.03	358	P	P	15 26 55.8	-1.0
KSRS	Korea Array	44.04	358	P	P	15 26 57.4	+0.5
	comp=Z,3.4nm,0.7s,baz=175,slow=8.9,SNR=25						
KSRS				pP	pP	15 27 31.6	+1.8
	comp=Z,1.8nm,0.6s,baz=172,slow=10,SNR=2.4						
KSRS				PcP	PcP	15 28 39.7	+0.1
	comp=Z,2.0nm,0.7s,baz=181,slow=3.7,SNR=6.0						
KSRS				ScP	ScP	15 32 17.2	+0.1
	comp=Z,1.2nm,0.8s,baz=178,slow=3.8,SNR=6.1						
	comp=Z,3.4nm,0.7s						
KS19	Wonju Array Si	44.09	358	P	P	15 26 57.0	-0.2
TIA	Tai'an	44.36	345	⇑P	P	15 26 58.8	-0.6
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
CD2	Chengdu	44.94	328	⇑*i*P	P	15 27 03.6	-0.6
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
XAN	Xi'an	45.10	335	P	P	15 27 04.5	-0.9
XAN				ScP	ScP	15 32 22.3	+0.6
XAN				pmax	pmax		
	comp=Z,57nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,5.8s						
XAN				LR	LR		
	comp=Z,120nm,18.6s						
XAN				LR	LR		

	comp=Z,160nm,15.8s						
XAN				LR	LR		
	comp=Z,180nm,19.9s						
JSD	**Sado**	**45.31**	**10**	P	**P**	**15 27 06.1**	**-0.8**
JMM	**Marumori**	**45.62**	**12**	P	**P**	**15 27 08.8**	**-0.5**
JMM				IAmb	IAmb	15 27 13.8	
	comp=Z,33nm,0.8s						
HNS	**HongShan**	**46.12**	**343**	⇑P	**P**	**15 27 13.2**	**-0.1**
HNS				pmax	pmax		
	comp=Z,50nm,0.9s						
BJT	**Baijiatuau**	**48.21**	**346**	P	**P**	**15 27 29.1**	**-0.3**
BJT				pmax	pmax		
	comp=Z,39nm,0.6s						
BJT	**Baijiatuau**	**48.21**	**346**	P	**P**	**15 27 29.1**	**-0.3**
BJI	**Beijing**	**48.23**	**346**	P	**P**	**15 27 29.6**	**+0.1**
BJI				pP	**pP**	**15 28 02.4**	**-0.5**
BJI				PcP	**PcP**	**15 28 55.5**	**+1.2**
BJI				S	**S**	**15 34 16.5**	**-0.7**
BJI				pmax	pmax		
	comp=Z,52nm,0.6s						
MSVF	**Nonsavu**	**48.39**	**108**	P	**P**	**15 27 33.0**	**+1.6**
MSVF				pmax	pmax		
	comp=Z,17nm,0.9s						
MSVF	**Nonsavu**	**48.39**	**108**	P	**P**	**15 27 33.0**	**+1.6**
MSVF	**Nonsavu**	**48.39**	**108**	P	**P**	**15 27 33.8**	**+2.5**
JTM	**Tenmabayashi**	**48.49**	**12**	P	**P**	**15 27 30.8**	**-0.8**
JTM				IAmb	IAmb	15 27 32.7	
	comp=Z,29nm,1.0s						
LZH	**Lanzhou**	**49.06**	**332**	*e*P	**P**	**15 27 37.3**	**+1.1**
LZH				pP	pP	15 28 08.3	-1.3
LZH				*e*S	**S**	**15 34 26.6**	**-2.8**
LZH				SS	**SS**	**15 38 03.6**	**+0.9**
LZH				pmax	pmax		
	comp=Z,56nm,1.3s						
LZH				pmax	pmax		
	comp=Z,160nm,5.2s						
MSHR	**Mys Shultsa**	**49.15**	**1**	⇑*e*P	**P**	**15 27 37.7**	**+1.2**
MSHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OUZ	**Omahuta**	**49.24**	**131**	P	**P**	**15 27 39.9**	**+2.5**
OUZ				IAmb	IAmb	15 27 41.0	
	comp=Z,64nm,1.3s						
VLA	**Vladivostok**	**49.71**	**2**	*c i*P	**P**	**15 27 41.1**	**+0.3**
VLA				pmax	pmax		
	comp=Z,21nm,0.8s						
DGTI	**Dogotuki**	**49.85**	**106**	P	**P**	**15 27 44.4**	**+2.0**
	comp=Z,39nm,1.0s						
ERM	**Erimo**	**50.11**	**13**	⇓*e*P	**P**	**15 27 43.3**	**-0.5**
ERM				pmax	pmax		
	comp=Z,13nm,0.9s						
ERM	**Erimo**	**50.11**	**13**	P	**P**	**15 27 44.3**	**+0.5**
HHC	**Hu-ho-hao-te**	**50.24**	**342**	*e*P	**P**	**15 27 45.2**	**+0.3**
HHC				pmax	pmax		
	comp=Z,52nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
DCZ	**Deep Cove**	**50.37**	**146**	P	**P**	**15 27 47.5**	**+1.8**
DCZ				IAmb	IAmb	15 27 48.7	
	comp=Z,37nm,1.1s						
CN2	**Changchun**	**50.49**	**356**	*e*P	**P**	**15 27 46.0**	**-0.7**
CN2				*e*S	**S**	**15 34 55.6**	**+6.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,14.4s						
BTO	**Baotou**	**50.50**	**341**	*e*P	**P**	**15 27 47.7**	**+0.7**
PYZ	**Puysegur Point**	**50.55**	**147**	P	**P**	**15 27 48.3**	**+1.2**
FOZ	**Fox Glacier**	**50.76**	**143**	P	**P**	**15 27 49.6**	**+0.9**
FOZ				IAmb	IAmb	15 27 51.3	
	comp=Z,24nm,0.8s						
PALK	**Pallekele**	**50.79**	**285**	*de*P	**P**	**15 27 48.2**	**-1.3**
PALK	**Pallekele**	**50.79**	**285**	P	**P**	**15 27 48.4**	**-1.1**
PALK	**Pallekele**	**50.79**	**285**	P	**P**	**15 27 48.8**	**-0.7**
USA0B	**Ussuriysk Arra**	**50.79**	**2**	P	**P**	**15 27 48.9**	**0.0**
USA0B				pmax	pmax		
	comp=Z,32nm,1.4s						
USA0B	**Ussuriysk Arra**	**50.79**	**2**	P	**P**	**15 27 48.9**	**0.0**
USA0B				IAmb	IAmb	15 27 50.0	
	comp=Z,32nm,1.4s						
USRK	**Ussuriysk Ar.**	**50.79**	**2**	P	**P**	**15 27 49.4**	**+0.5**
	comp=Z,12nm,0.6s,baz=178,slow=6.6,SNR=17						
USRK				PcP	**PcP**	**15 29 02.1**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=214,slow=3.9,SNR=1.6						
	comp=Z,12nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.79**	**2**	P	**P**	**15 27 48.7**	**-0.2**
WKZ	**Wanaka**	**51.03**	**145**	P	**P**	**15 27 51.9**	**+1.1**
WKZ				IAmb	IAmb	15 27 60.0	
	comp=Z,42nm,1.2s						
QRZ	**Quartz Range**	**51.04**	**138**	P	**P**	**15 27 52.6**	**+1.7**
QRZ	**Quartz Range**	**51.04**	**138**	P	**P**	**15 27 53.6**	**+2.6**
WHZ	**Wether Hill Ro**	**51.07**	**146**	P	**P**	**15 27 51.8**	**+0.8**
MDJ	**Mudanjiang**	**51.16**	**360**	P	**P**	**15 27 51.4**	**-0.2**
MDJ	**Mudanjiang**	**51.16**	**360**	P	**P**	**15 27 52.1**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,17nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,86nm,6.3s						
MDJ	**Mudanjiang**	**51.16**	**360**	P	**P**	**15 27 52.3**	**+0.6**
	comp=Z,16nm,0.9s						
LBZ	**Lake Benmore**	**51.46**	**143**	P	**P**	**15 27 55.3**	**+1.3**
RPZ	**Rata Peaks**	**51.61**	**142**	LR	LR	15 49 46.5	
	comp=Z,94nm,19.4s,baz=295,slow=36						
RPZ	**Rata Peaks**	**51.61**	**142**	P	**P**	**15 27 56.8**	**+1.7**
THZ	**Tophouse**	**51.75**	**139**	P	**P**	**15 27 57.8**	**+1.6**
THZ				IAmb	IAmb	15 27 59.4	
	comp=Z,25nm,0.7s						
NNZ	**Nelson**	**51.79**	**138**	P	**P**	**15 27 57.6**	**+1.1**
LSA	**Lhasa**	**51.81**	**316**	P	**P**	**15 27 57.8**	**+0.5**
LTZ	**Lake Taylor**	**51.87**	**141**	P	**P**	**15 27 58.2**	**+1.2**
LTZ				IAmb	IAmb	15 28 01.3	
	comp=Z,18nm,0.9s						
XLT	**XiLinHaoTe**	**51.92**	**348**	*e*P	**P**	**15 27 56.7**	**-0.7**
XLT				pP	pP	15 28 33.4	+2.1
XLT				sP	sP	15 28 46.9	-0.9
XLT				PcP	**PcP**	**15 29 05.9**	**-2.0**
XLT				PcS	**PcS**	**15 33 04.5**	**-1.7**
XLT				S	**S**	**15 35 09.4**	**+0.9**
XLT				pmax	pmax		
	comp=Z,35nm,1.1s						
XLT				pmax	pmax		
	comp=Z,110nm,4.1s						
ASAJ	**Asahikawa**	**52.00**	**12**	LR	LR	15 48 48.6	
	comp=Z,42nm,20.8s,baz=194,slow=34						
ASAJ	**Asahikawa**	**52.00**	**12**	P	**P**	**15 27 57.5**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,16nm,0.8s						
JKA	**Kamikawa-asahi**	**52.00**	**12**	P	**P**	**15 27 57.5**	**-0.4**
JKA				IAmb	IAmb	15 27 59.1	
	comp=Z,16nm,0.8s						
OXZ	**Oxford**	**52.01**	**141**	P	**P**	**15 27 58.9**	**+0.8**
OXZ				IAmb	IAmb	15 28 02.1	
	comp=Z,21nm,0.7s						
ODZ	**Otahua Downs**	**52.10**	**144**	P	**P**	**15 27 59.9**	**+1.2**
ODZ				IAmb	IAmb	15 28 01.0	
	comp=Z,38nm,1.2s						
WAZ	**Wanganui**	**52.19**	**136**	P	**P**	**15 28 02.8**	**+3.3**
TUWZ	**Tuamarina**	**52.27**	**138**	P	**P**	**15 28 00.8**	**+0.8**
TUWZ	**Tuamarina**	**52.27**	**138**	P	**P**	**15 28 01.0**	**+1.0**
NNVZ	**North Ngauruho**	**52.36**	**135**	P	**P**	**15 28 04.2**	**+3.3**
KHZ	**Kahutara**	**52.49**	**140**	P	**P**	**15 28 02.8**	**+1.2**
KHZ				IAmb	IAmb	15 28 04.0	
	comp=Z,36nm,0.9s						
KHZ	**Kahutara**	**52.49**	**140**	P	**P**	**15 28 03.2**	**+1.6**
CMWZ	**Cape Campbell**	**52.60**	**139**	P	**P**	**15 28 04.0**	**+1.6**
KIW	**Kapiti Island**	**52.64**	**137**	P	**P**	**15 28 04.4**	**+1.6**
BHHZ	**Black Hill Sta**	**52.82**	**135**	P	**P**	**15 28 05.7**	**+1.5**
ODAN	**Odare**	**52.86**	**311**	*e*P	**P**	**15 28 04.8**	**-0.1**
	comp=Z,46nm,0.4s						
CAW	**Cannon Point**	**52.86**	**138**	P	**P**	**15 28 05.4**	**+1.0**
TAPN	**Taplejung**	**52.89**	**312**	*e*P	**P**	**15 28 05.1**	**-0.1**
	comp=Z,50nm,0.4s						
BKZ	**Black Stump Fm**	**52.99**	**135**	P	**P**	**15 28 06.1**	**+0.7**
BKZ				IAmb	IAmb	15 28 07.7	
	comp=Z,32nm,0.9s						
BKZ	**Black Stump Fm**	**52.99**	**135**	P	**P**	**15 28 06.7**	**+1.3**
HOWZ	**Holdsworth Sta**	**53.07**	**137**	P	**P**	**15 28 07.1**	**+1.2**
MSWZ	**Moikau Station**	**53.13**	**138**	P	**P**	**15 28 06.8**	**+0.4**
PLWZ	**Palliser**	**53.20**	**138**	P	**P**	**15 28 07.3**	**+0.4**
PLWZ	**Palliser**	**53.20**	**138**	P	**P**	**15 28 07.6**	**+0.7**
RAMN	**Ramite**	**53.50**	**311**	*e*P	**P**	**15 28 09.9**	**+0.3**
	comp=Z,131nm,0.4s						
GTA	**Gaotai**	**53.62**	**331**	⇑P	**P**	**15 28 10.5**	**+0.4**
GTA				pP	pP	15 28 44.9	+0.8
GTA				sP	sP	15 29 02.7	+2.1
GTA				pmax	pmax		
	comp=Z,28nm,0.8s						
GOMU	**GeErMu**	**53.83**	**325**	P	**P**	**15 28 11.9**	**0.0**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,41nm,5.5s						
JIRN	**Jiri**	**54.19**	**311**	*e*P	**P**	**15 28 14.7**	**0.0**
PKIN	**Phulchoki**	**54.74**	**311**	*e*P	**P**	**15 28 18.3**	**-0.3**
YSS	**Yuzh-Sakhalins**	**54.76**	**11**	⇑*e*P	**P**	**15 28 17.8**	**-0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**54.76**	**11**	P	**P**	**15 28 17.4**	**-0.5**
YSS				IAmb	IAmb	15 28 19.1	
	comp=Z,14nm,0.5s						
YSS	**Yuzh-Sakhalins**	**54.76**	**11**	P	**P**	**15 28 18.3**	**+0.4**
KKN	**Kakani**	**54.94**	**311**	*e*P	**P**	**15 28 19.9**	**0.0**
	comp=Z,41nm,0.6s						
GKN	**Gorkha**	**55.54**	**311**	*e*P	**P**	**15 28 24.0**	**-0.1**
	comp=Z,93nm,0.3s						
PCHI	**Peechi**	**55.80**	**288**	⇓*e*P	**P**	**15 28 25.8**	**-0.2**
KLR	**Kul'dur**	**55.81**	**2**	*c i*P	**P**	**15 28 25.5**	**+0.1**
KLR				pmax	pmax		
	comp=Z,25nm,1.7s						
HYBB	**Hyderabad (bro**	**55.92**	**296**	*e*P	**P**	**15 28 26.3**	**-0.5**
HYBB				IAmb	IAmb	15 28 27.2	
	comp=Z,17nm,0.7s						
KOLN	**Koldanda**	**56.20**	**310**	*e*P	**P**	**15 28 29.2**	**+0.3**
DANN	**Dangsing**	**56.38**	**311**	*e*P	**P**	**15 28 30.0**	**-0.3**
PYUN	**Piuthan**	**56.84**	**310**	*e*P	**P**	**15 28 33.5**	**+0.1**
GRNR	**Gornyy**	**57.62**	**5**	⇑*i*P	**P**	**15 28 38.7**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AFI	**Afiamalu**	**57.93**	**102**	LR	LR	15 52 50.1	
	comp=Z,70nm,18.0s,baz=139,slow=35						
ULN	**Ulaanbaatar**	**57.96**	**342**	*c i*P	**P**	**15 28 41.7**	**+0.9**
ULN				pmax	pmax		
	comp=Z,48nm,0.7s						
ULN	**Ulaanbaatar**	**57.96**	**342**	P	**P**	**15 28 41.4**	**+0.6**
ULN	**Ulaanbaatar**	**57.96**	**342**	P	**P**	**15 28 42.1**	**+1.3**
ULN				pP	**pP**	**15 29 12.5**	**-2.9**
ULN				sP	**PcP**	**15 29 30.1**	**-1.1**
SONM	**Songino Array**	**58.13**	**342**	P	**P**	**15 28 43.0**	**+1.0**
	comp=Z,14nm,0.5s,baz=155,slow=6.2,SNR=53						
SONM				pP	**pP**	**15 29 18.1**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=318,slow=19,SNR=2.3						
	comp=Z,14nm,0.5s						
SONM	**Songino Array**	**58.13**	**342**	P	**P**	**15 28 42.3**	**+0.3**
SONM				IAmb	IAmb	15 28 44.1	
	comp=Z,36nm,1.2s						
TYV	**Tymovskoe**	**58.51**	**10**	*e*P	**P**	**15 28 48.7**	**+4.4**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
ZEA	**Zeya**	**60.33**	**358**	*e*P	**P**	**15 28 57.2**	**+0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
CASY	**Casey**	**60.86**	**189**	P	**P**	**15 29 01.3**	**+1.1**
ZAK	**Zakamensk**	**61.35**	**341**	*e*P	**P**	**15 29 04.0**	**+0.1**
ZAK				*e*		15 29 44.4	
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	**Urumqi**	**63.03**	**327**	⇑*i*P	**P**	**15 29 16.0**	**+0.8**
WMQ				pP	PcP	15 29 51.3	-0.4
WMQ				S	**S**	**15 37 31.7**	**-1.9**
WMQ				pmax	pmax		
	comp=Z,50nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
MOY	**Mondy**	**63.20**	**340**	*e*P	**P**	**15 29 17.4**	**+1.2**
MOY				pmax	pmax		
	comp=Z,53nm,1.4s						
KNGR	**Kungurtug, Tuv**	**63.55**	**338**	*c i*P	**P**	**15 29 19.7**	**+1.1**
PEA0B	**Petropavlovsk-**	**64.23**	**18**	⇓*e*P	**P**	**15 29 23.7**	**+0.9**
PEA0B	**Petropavlovsk-**	**64.23**	**18**	P	**P**	**15 29 23.4**	**+0.6**
PEA0B				IAmb	IAmb	15 29 24.2	
	comp=Z,28nm,0.9s						
PETK	**Petropavlovsk-**	**64.23**	**18**	P	**P**	**15 29 23.1**	**+0.4**
	comp=Z,16nm,1.0s,baz=178,slow=5.1,SNR=32						
PETK				PcP	**PcP**	**15 29 56.0**	**-0.3**
	comp=Z,5.3nm,0.5s,baz=223,slow=3.4,SNR=16						
	comp=Z,16nm,1.0s						
PETK	**Petropavlovsk-**	**64.23**	**18**	P	**P**	**15 29 22.6**	**-0.1**
PET	**Petropavlovsk**	**64.46**	**19**	*e*P	**P**	**15 29 25.0**	**+0.8**
PET				*e**PP	**pP**	**15 29 59.4**	**-0.4**
PET				*e*S	**S**	**15 37 50.3**	**-0.4**
PET				*e*SS	**SS**	**15 42 07.9**	**+3.9**
PET				pmax	pmax		
	comp=Z,46nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,22.0s						
PET	**Petropavlovsk**	**64.46**	**19**	P	**P**	**15 29 24.5**	**+0.3**
BOD	**Bodaibo**	**65.63**	**351**	*e*P	**P**	**15 29 32.3**	**+0.6**
NIL	**Nilore**	**66.82**	**311**	P	**P**	**15 29 38.9**	**-1.0**
NIL				pmax	pmax		
	comp=Z,33nm,1.0s						
NIL	**Nilore**	**66.82**	**311**	P	**P**	**15 29 38.9**	**-1.0**
NIL				IAmb	IAmb	15 29 40.9	
	comp=Z,33nm,0.9s						
NIL	**Nilore**	**66.82**	**311**	P	**P**	**15 29 40.5**	**+0.6**
PDGK	**Podgornoye**	**67.42**	**323**	P	**P**	**15 29 43.8**	**+0.2**
KSH	**Kashi**	**67.63**	**318**	P	**P**	**15 29 46.1**	**+1.1**
KSH				PcP	**PcP**	**15 30 13.1**	**+2.2**
KSH				pmax	pmax		
	comp=Z,26nm,1.0s						
MK31	**Makanchi Array**	**67.86**	**327**	*c i*P	**P**	**15 29 46.7**	**+0.6**
MK31	**Makanchi Array**	**67.86**	**327**	P	**P**	**15 29 46.4**	**+0.2**
MK31				IAmb	IAmb	15 29 48.0	
	comp=Z,35nm,1.1s						
MKAR	**Makanchi Array**	**67.86**	**327**	P	**P**	**15 29 46.8**	**+0.6**
	comp=Z,26nm,0.3s,baz=116,slow=8.2,SNR=499						
	comp=Z,26nm,0.3s						
MKAR	**Makanchi Array**	**67.86**	**327**	*i* P	**P**	**15 29 46.7**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,27nm,0.3s						
MKAR	**Makanchi Array**	**67.86**	**327**	P	**P**	**15 29 46.5**	**+0.3**
MAKZ	**Makanchi**	**68.04**	**327**	P	**P**	**15 29 47.5**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,42nm,1.1s						
MAKZ	**Makanchi**	**68.04**	**327**	P	**P**	**15 29 47.5**	**+0.3**
MAKZ				IAmb	IAmb	15 29 49.1	
	comp=Z,42nm,1.1s						
MAKZ	**Makanchi**	**68.04**	**327**	P	**P**	**15 29 47.8**	**+0.6**
MAKZ				pP	**PcP**	**15 30 12.8**	**+0.5**
KDJ	**Kajisay**	**68.19**	**321**	P	**P**	**15 29 48.4**	**-0.1**
KDJ				pmax	pmax		
	comp=Z,11nm,0.7s						
KDJ	**Kajisay**	**68.19**	**321**	P	**P**	**15 29 48.4**	**-0.1**
MA2	**Magadan**	**68.26**	**11**	*c i*P	**P**	**15 29 48.9**	**+0.6**
MA2				pmax	pmax		
	comp=Z,26nm,1.7s						
MA2	**Magadan**	**68.26**	**11**	P	**P**	**15 29 48.8**	**+0.5**
MA2				IAmb	IAmb	15 29 50.2	
	comp=Z,19nm,1.0s						
YAK	**Yakutsk**	**68.61**	**0**	*c i*P	**P**	**15 29 50.5**	**+0.1**
YAK				*e*		15 30 14.2	
YAK				*e**PP	**pP**	**15 30 26.7**	**+0.4**
YAK				*e*		15 32 21.6	
YAK				*e*S	**S**	**15 38 39.2**	**-1.1**
YAK				*e*SSS	SSS	15 46 05.1	
YAK				pmax	pmax		
	comp=Z,80nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,20nm,2.7s						
YAK				pmax	pmax		
	comp=N,15nm,2.0s						
YAK				smax	smax		
	comp=E,41nm,1.6s						
YAK				smax	smax		
	comp=N,38nm,2.2s						
YAK	**Yakutsk**	**68.61**	**0**	P	**P**	**15 29 49.9**	**-0.5**
YAK	**Yakutsk**	**68.61**	**0**	P	**P**	**15 29 51.0**	**+0.6**
YAK				x	x	15 30 11.4	
YAK				pP	**pP**	**15 30 27.0**	**+0.7**
MDOK	**Medeo**	**68.82**	**321**	P	**P**	**15 29 53.0**	**+0.6**
BOOM	**Boomskoye usch**	**69.17**	**320**	P	**P**	**15 29 55.4**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,17nm,1.1s						
BOOM	**Boomskoye usch**	**69.17**	**320**	P	**P**	**15 29 55.4**	**+0.9**
TKM2	**Tokmak 2**	**69.60**	**321**	P	**P**	**15 29 58.0**	**+0.8**
	SNR=15						
TKM2	**Tokmak 2**	**69.60**	**321**	*i* P	**P**	**15 29 57.5**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBK	**Karagaybulak**	**69.88**	**320**	P	**P**	**15 30 00.1**	**+1.2**
	SNR=10						
UCH	**Uchtor**	**69.94**	**320**	P	**P**	**15 30 00.5**	**+0.9**
	SNR=10						
AAK	**Ala-Archa**	**70.16**	**320**	P	**P**	**15 30 01.9**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**70.16**	**320**	*c i*P	**P**	**15 30 01.5**	**+0.9**
AAK				pmax	pmax		
	comp=Z,33nm,1.7s						
AAK	**Ala-Archa**	**70.16**	**320**	P	**P**	**15 30 01.0**	**+0.4**
AAK				IAmb	IAmb	15 30 03.1	
	comp=Z,24nm,1.2s						
AAK	**Ala-Archa**	**70.16**	**320**	P	**P**	**15 30 01.0**	**+0.4**
AAK	**Ala-Archa**	**70.16**	**320**	*i* P	**P**	**15 30 02.0**	**+1.4**
	SNR=13						
KBL	**Kabul**	**70.37**	**310**	P	**P**	**15 30 01.8**	**-0.3**
KBL				pmax	pmax		
	comp=Z,15nm,0.7s						
KBL	**Kabul**	**70.37**	**310**	P	**P**	**15 30 01.8**	**-0.3**
KBL				IAmb	IAmb	15 30 12.1	
	comp=Z,15nm,0.7s						
KBL	**Kabul**	**70.37**	**310**	P	**P**	**15 30 02.7**	**+0.6**
	SNR=7.3						
AML	**Almayashu**	**70.43**	**319**	P	**P**	**15 30 03.8**	**+1.2**
	SNR=15						
AML	**Almayashu**	**70.43**	**319**	P	**P**	**15 30 03.2**	**+0.6**
AML	**Almayashu**	**70.43**	**319**	*i* P	**P**	**15 30 03.8**	**+1.2**
	SNR=15						
DRK	**Karamyk**	**70.45**	**316**	P	**P**	**15 30 02.2**	**-0.4**
DRK				IAmb	IAmb	15 30 04.9	
	comp=Z,21nm,1.1s						
USP	**Ospenovka**	**70.47**	**320**	P	**P**	**15 30 03.3**	**+0.9**
	SNR=17						
EKS2	**Erkin-Say**	**70.63**	**320**	P	**P**	**15 30 04.6**	**+1.2**
	SNR=18						
ZAA0	**Zalesovo Array**	**71.24**	**334**	P	**P**	**15 30 06.2**	**-0.5**
ZALV	**Zalesovo Beam**	**71.24**	**334**	P	**P**	**15 30 06.4**	**-0.2**
	comp=Z,33nm,0.6s,baz=119,slow=5.0,SNR=151						
	comp=Z,33nm,0.6s						
ZALV	**Zalesovo Beam**	**71.24**	**334**	P	**P**	**15 30 06.1**	**-0.5**
GAR	**Garm**	**71.28**	**315**	P	**P**	**15 30 07.0**	**-0.4**
BTK	**Batken**	**71.39**	**316**	P	**P**	**15 30 08.4**	**+0.4**
BTK				pmax	pmax		
	comp=Z,14nm,1.1s						
BTK	**Batken**	**71.39**	**316**	P	**P**	**15 30 08.4**	**+0.4**
SEY	**Seymchan**	**71.66**	**11**	⇑*i*P	**P**	**15 30 09.9**	**+0.9**
SEY				pmax	pmax		
	comp=Z,60nm,1.7s						
CHGR	**Chuyangaron**	**71.95**	**314**	P	**P**	**15 30 11.3**	**0.0**
KURK	**Kurchatov**	**72.16**	**329**	*c i*P	**P**	**15 30 12.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,108nm,1.3s						
KURK	**Kurchatov**	**72.16**	**329**	P	**P**	**15 30 12.3**	**+0.1**
KURK	**Kurchatov**	**72.16**	**329**	P	**P**	**15 30 13.0**	**+0.8**
VNDA	**Vanda**	**72.70**	**173**	P	**P**	**15 30 16.2**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=320,slow=6.5,SNR=14						
	comp=Z,2.1nm,0.5s						
VNDA	**Vanda**	**72.70**	**173**	P	**P**	**15 30 15.7**	**+0.6**
KK31	**Karatay Array**	**72.96**	**319**	*i* P	**P**	**15 30 17.4**	**+0.3**
KK31	**Karatay Array**	**72.96**	**319**	P	**P**	**15 30 16.9**	**-0.2**
KK31				IAmb	IAmb	15 30 18.9	
	comp=Z,32nm,1.3s						
KKAR	**Karatay Array**	**72.96**	**319**	P	**P**	**15 30 17.1**	**0.0**
KKAR				pmax	pmax		
	comp=Z,32nm,1.3s						
KKAR	**Karatay Array**	**72.96**	**319**	P	**P**	**15 30 16.9**	**-0.2**
KKAR	**Karatay Array**	**72.96**	**319**	P	**P**	**15 30 17.1**	**0.0**
KKAR				IAmb	IAmb	15 30 18.9	
	comp=Z,32nm,1.3s						
SBA	**Scott Base**	**73.59**	**172**	P	**P**	**15 30 22.3**	**+2.1**
SBA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SBA	**Scott Base**	**73.59**	**172**	P	**P**	**15 30 22.3**	**+2.1**
KIWB	**Kanaga Island**	**73.92**	**31**	P	**P**	**15 30 22.7**	**+0.1**
OTUK	**Ortayu**	**74.27**	**324**	P	**P**	**15 30 25.3**	**+0.6**
JLN	**Jalan Bani Buh**	**74.50**	**295**	P	**P**	**15 30 29.0**	**+2.4**
	SNR=5.4						
GSTR	**Great Sitkin T**	**74.62**	**31**	P	**P**	**15 30 27.4**	**+0.8**
WBK	**Wadi Bani Khal**	**75.01**	**295**	P	**P**	**15 30 32.0**	**+2.4**
	SNR=8.8						
MAW	**Mawson**	**75.02**	**201**	P	**P**	**15 30 30.4**	**+1.8**
	comp=Z,9.0nm,0.6s,baz=86,slow=5.5,SNR=14						
	comp=Z,9.0nm,0.6s						
MAW	**Mawson**	**75.02**	**201**	P	**P**	**15 30 30.4**	**+1.8**
	baz=75,SNR=11						
MAW	**Mawson**	**75.02**	**201**	P	**P**	**15 30 30.1**	**+1.4**
WSAR	**Wadi Sarin**	**75.47**	**296**	P	**P**	**15 30 33.1**	**+1.0**
	SNR=9.0						
MHTO	**MHTO**	**75.54**	**294**	P	**P**	**15 30 34.0**	**+1.5**
	SNR=9.5						
HRA	**Herat**	**75.56**	**308**	P	**P**	**15 30 32.4**	**-0.2**
DQM	**DQM**	**75.69**	**292**	P	**P**	**15 30 33.7**	**+0.3**
JMDO	**Jabal Madar**	**75.73**	**295**	P	**P**	**15 30 35.1**	**+1.5**
SMDO	**Samad**	**75.94**	**296**	P	**P**	**15 30 37.0**	**+2.1**
	SNR=14						
BIDO	**Bidbid**	**75.98**	**296**	P	**P**	**15 30 37.0**	**+2.0**
	SNR=28						
BSY	**Bisya**	**76.63**	**295**	P	**P**	**15 30 41.0**	**+2.3**
	SNR=6.8						
HOQ	**Hoqain**	**76.73**	**296**	P	**P**	**15 30 41.0**	**+1.8**
	SNR=20						
SHAO	**Shalim**	**77.06**	**290**	P	**P**	**15 30 42.2**	**+1.0**
ARQ	**Araqi**	**77.38**	**296**	P	**P**	**15 30 44.0**	**+1.1**
SOCY	**Socotra**	**77.54**	**284**	P	**P**	**15 30 43.7**	**-0.3**
SOCY	**Socotra**	**77.54**	**284**	P	**P**	**15 30 44.7**	**+0.7**
DMTO	**DMTO**	**77.64**	**290**	P	**P**	**15 30 44.7**	**+0.4**
BRVK	**Borovoye**	**77.77**	**328**	*c i*P	**P**	**15 30 44.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,77nm,1.3s						
BRVK	**Borovoye**	**77.77**	**328**	P	**P**	**15 30 44.4**	**0.0**
BRVK				IAmb	IAmb	15 30 45.8	
	comp=Z,47nm,0.8s						
BRVK	**Borovoye**	**77.77**	**328**	P	**P**	**15 30 45.1**	**+0.7**
UOSS	**Minazif**	**78.02**	**297**	P	**P**	**15 30 46.9**	**+0.5**
UOSS	**Minazif**	**78.02**	**297**	*i* P	**P**	**15 30 47.4**	**+1.0**
	SNR=7.3						
HATD	**Hatta, Dubai**	**78.06**	**297**	P	**P**	**15 30 49.0**	**+2.4**
	SNR=5.7						
HATD	**Hatta, Dubai**	**78.06**	**297**	*i* P	**P**	**15 30 47.4**	**+0.8**
	SNR=10						
ASHO	**Ashiyiah**	**78.09**	**297**	P	**P**	**15 30 50.1**	**+3.2**
	SNR=6.0						
ASHO	**Ashiyiah**	**78.09**	**297**	*i* P	**P**	**15 30 47.8**	**+1.0**
	SNR=15						
MSFE	**Esma-Masafi**	**78.16**	**298**	*i* P	**P**	**15 30 48.1**	**+0.9**
	SNR=13						
MASF	**Masafi**	**78.16**	**298**	P	**P**	**15 30 48.5**	**+1.3**
BANOM	**Banah**	**78.17**	**298**	P	**P**	**15 30 48.0**	**+0.8**
BANOM	**Banah**	**78.17**	**298**	*i* P	**P**	**15 30 48.3**	**+1.1**
	SNR=8.0						
ALNE	**Al Ain**	**78.22**	**296**	P	**P**	**15 30 48.5**	**+1.0**
	SNR=11						
ALNE	**Al Ain**	**78.22**	**296**	*i* P	**P**	**15 30 48.3**	**+0.8**
	SNR=16						
TIXI	**Tiksi**	**78.28**	**360**	*ce*P	**P**	**15 30 45.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,20nm,0.6s						
TIXI	**Tiksi**	**78.28**	**360**	P	**P**	**15 30 45.7**	**-1.1**
TIXI				IAmb	IAmb	15 30 47.6	
	comp=Z,24nm,0.6s						
RBK	**Rabkut**	**78.29**	**289**	P	**P**	**15 30 48.3**	**+0.3**
SHME	**Shamm**	**78.33**	**298**	*i* P	**P**	**15 30 48.8**	**+0.8**
	SNR=12						
UMZA	**Um Al Zommool**	**78.46**	**295**	P	**P**	**15 30 49.1**	**+0.3**
NAZ	**Nazwa, Dubai**	**78.51**	**297**	*i* P	**P**	**15 30 49.9**	**+0.8**
	SNR=8.5						
FAQ	**Al Faqa, Dubai**	**78.52**	**297**	P	**P**	**15 30 52.0**	**+2.9**
	SNR=5.7						
FAQ	**Al Faqa, Dubai**	**78.52**	**297**	*i* P	**P**	**15 30 49.7**	**+0.6**

	SNR=23						
DOK	Doka	78.58	290	P	P	15 30 50.6	+1.1
ASUD	Al Ashush, Dub	78.73	297	P	P	15 30 51.1	+0.9
ASUD	Al Ashush, Dub	78.73	297	i P	P	15 30 51.1	+0.9
	SNR=14						
WHFO	Wadi Hawf	78.78	290	P	P	15 30 51.0	+0.3
NIKH	Nikolski High	78.86	33	P	P	15 30 51.1	+0.8
	baz=243						
BILL	Bilibino	78.98	13	eP	P	15 30 51.6	+0.9
BILL				e		15 30 59.3	
BILL				e*PP	pP	15 31 30.0	+2.3
BILL				e*SP	sP	15 31 45.2	+1.5
BILL				e		15 33 49.6	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL	Bilibino	78.98	13	P	P	15 30 49.8	-0.9
ABTO	Aybut	79.11	289	P	P	15 30 53.2	+0.6
GEYT	Alibeck	79.82	310	P	P	15 30 56.8	+0.8
	comp=Z,4.7nm,0.4s,baz=158,slow=5.9,SNR=16						
	comp=Z,4.7nm,0.4s						
GEYT	Alibeck	79.82	310	P	P	15 30 56.0	+0.1
GYA0	ALIBECK ARRAY	79.82	310	P	P	15 30 56.1	+0.1
GYA0B	ALIBECK ARRAY	79.82	310	P	P	15 30 56.1	+0.2
GYA0B				IAmb	IAmb	15 30 57.9	
	comp=Z,32nm,1.3s						
MZR	Muzera	80.04	295	P	P	15 30 59.2	+1.8
	SNR=6.4						
MZR	Muzera	80.04	295	i P	P	15 30 58.2	+0.8
	SNR=21						
SPIA	Saint Paul Isl	80.14	29	P	P	15 30 57.9	+0.7
	baz=241						
UNV	Unalaska Valle	80.51	33	P	P	15 30 59.8	+0.6
	baz=245						
GHWR	Ruwais	80.77	296	P	P	15 31 02.5	+1.2
VOI	Vohitsoka	80.90	249	P	P	15 31 03.0	+0.7
VOI				IAmb	IAmb	15 31 04.2	
	comp=Z,31nm,0.7s						
VOI	Vohitsoka	80.90	249	P	P	15 31 03.3	+1.0
VOI	Vohitsoka	80.90	249	P	P	15 31 08.6	+6.4
JRN	Qarnain Island	81.00	297	P	P	15 31 02.3	-0.2
NRIK	Noril'sk	81.27	346	P	P	15 31 03.5	+0.6
	comp=Z,26nm,0.9s,baz=127,slow=5.7,SNR=32						
	comp=Z,26nm,0.9s						
NRIK	Noril'sk	81.27	346	c iP	P	15 31 03.4	+0.4
NRIK				pmax	pmax		
	comp=Z,35nm,1.0s						
NRIK	Noril'sk	81.27	346	P	P	15 31 03.4	+0.4
NRIK				IAmb	IAmb	15 31 04.6	
	comp=Z,34nm,1.1s						
AB31	Akbulak array	82.13	322	i P	P	15 31 07.7	-0.2
ABKAR	Akbulak array	82.13	322	P	P	15 31 07.7	-0.2
ABKAR				IAmb	IAmb	15 31 10.5	
	comp=Z,23nm,0.7s						
ABKAR	Akbulak array	82.13	322	P	P	15 31 07.7	-0.2
AKTO	Aktyubinsk	83.70	322	P	P	15 31 15.7	-0.2
SDPT	Sand Point	84.33	33	P	P	15 31 19.1	+0.1
SDPT	Sand Point	84.33	33	P	P	15 31 18.9	0.0
	baz=250						
SVE	Sverdlovsk	84.41	329	deP	P	15 31 19.9	+0.5
SVE				pmax	pmax		
	comp=Z,96nm,1.1s						
CNBA	Chernabura Isl	84.62	33	P	P	15 31 20.3	-0.1
CNBA				IAmb	IAmb	15 31 24.9	
	comp=Z,49nm,1.1s						
CHNA	Chernabura Isl	84.63	33	P	P	15 31 20.4	-0.1
	baz=250						
TNA	Tin City	85.15	22	P	P	15 31 23.8	+0.9
	baz=242						
ARU	Arti	85.35	328	c iP	P	15 31 24.1	0.0
ARU						15 34 37.3	
ARU				S	S	15 41 34.5	-7.2
ARU				SS	SS	15 47 20.9	+0.7
ARU				pmax	pmax		
	comp=Z,54nm,0.8s						
ARU	Arti	85.35	328	P	P	15 31 23.3	-0.8
ANM	Nome	85.67	23	P	P	15 31 26.2	+0.7
	baz=244						
RDOG	Red Dog Mine	88.03	20	P	P	15 31 35.2	-1.6
RDOG				IAmb	IAmb	15 31 35.9	
	comp=Z,11nm,0.6s						
P18K	Big Mountain,	88.30	30	P	P	15 31 38.1	-0.3
P18K				IAmb	IAmb	15 31 39.2	
	comp=Z,14nm,1.3s						
P18K	Big Mountain,	88.30	30	P	P	15 31 38.3	0.0
	baz=254						
N18K	Kilae Creek	88.35	28	P	P	15 31 38.9	+0.4
	baz=253						
O18K	Koktuh Hills	88.44	29	P	P	15 31 39.2	+0.2
O18K	Koktuh Hills	88.44	29	P	P	15 31 39.1	+0.2
	baz=254						
SVW2	Sparrevohn	88.61	28	P	P	15 31 40.2	+0.5
OHAK	Old Harbor	88.71	32	P	P	15 31 40.7	+0.5
OHAK				IAmb	IAmb	15 31 43.0	
	comp=Z,26nm,1.3s						
OHAK	Old Harbor	88.71	32	P	P	15 31 40.3	+0.1
	baz=256						
TTA	Tatalina	88.95	26	P	P	15 31 41.4	0.0
TTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TTA	Tatalina	88.95	26	P	P	15 31 41.4	0.0
TTA	Tatalina	88.95	26	P	P	15 31 41.3	-0.1
	baz=253,SNR=7.8						
O19K	Port Alsworth	88.96	29	P	P	15 31 41.8	+0.5
	baz=255						
Q19K	Cape Douglas,	88.96	30	P	P	15 31 41.7	+0.2
	baz=255						
N19K	Bonanza Creek	89.05	28	P	P	15 31 42.1	+0.2
N19K	Bonanza Creek	89.05	28	P	P	15 31 42.1	+0.2
	baz=254						
GCSA	Galena City Sc	89.13	24	P	P	15 31 42.2	+0.2
	baz=252,SNR=5.9						
KDAK	Kodiak Island	89.22	32	P	P	15 31 43.3	+0.8
	comp=Z,5.9nm,0.7s,baz=270,slow=4.9,SNR=8.5						
	comp=Z,5.9nm,0.7s						
KDAK	Kodiak Island	89.22	32	P	P	15 31 43.0	+0.4
KDAK				IAmb	IAmb	15 32 07.2	
	comp=Z,15nm,1.2s						
KDAK	Kodiak Island	89.22	32	P	P	15 31 42.9	+0.3
	baz=256						
L19K	White Mountain	89.25	27	P	P	15 31 43.3	+0.6
L19K	White Mountain	89.25	27	P	P	15 31 42.9	+0.2
	baz=254,SNR=5.1						
P19K	Oil Pt	89.35	30	P	P	15 31 43.5	+0.2
	baz=256						
M19K	Big River Lodg	89.39	27	P	P	15 31 43.7	+0.3
M19K	Big River Lodg	89.39	27	P	P	15 31 44.4	+1.1
	baz=254						
O20K	Slope Mountain	89.75	29	P	P	15 31 45.1	-0.1
	baz=256						
L20K	Farewell, AK	89.77	27	P	P	15 31 45.5	+0.4
	baz=255						
K20K	Telida	89.92	26	P	P	15 31 46.2	+0.5
K20K	Telida	89.92	26	P	P	15 31 46.1	+0.3
	baz=255,SNR=5.4						
M20K	Styx River	89.96	28	P	P	15 31 46.2	+0.2
M20K	Styx River	89.96	28	P	P	15 31 46.3	+0.2
	baz=256						
J20K	Nowinta River	90.10	25	P	P	15 31 47.1	+0.6
J20K	Nowinta River	90.10	25	P	P	15 31 47.2	+0.6
	baz=255,SNR=17						
GROC	Groznyy	90.14	313	eP	P	15 31 45.3	-2.0
GROC				pmax	pmax		
	comp=Z,18nm,0.5s						
BELG	Belogornoye	90.48	323	⇓eP	P	15 31 47.6	-1.0
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PPLA	Purkeypile	90.63	27	P	P	15 31 49.4	+0.1
	baz=256						
KIRV	Kirov	90.68	329	c iP	P	15 31 47.9	-1.5
CAST	Castle Rocks	90.80	26	P	P	15 31 49.8	-0.1
CAST	Castle Rocks	90.80	26	P	P	15 31 50.2	+0.3
	baz=257						
CHUM	Lake Minchumin	90.81	26	P	P	15 31 50.2	+0.3
	baz=256						
H21K	Melozitna Rive	91.03	24	P	P	15 31 50.9	0.0
H21K	Melozitna Rive	91.03	24	P	P	15 31 51.1	+0.2
	baz=256						
I21K	Tanana	91.25	24	P	P	15 31 52.2	+0.3
I21K	Tanana	91.25	24	P	P	15 31 52.2	+0.3
	baz=257						
KTH	Kantishna Hill	91.34	26	P	P	15 31 51.8	-0.6
KTH				IAmb	IAmb	15 31 53.3	
	comp=Z,11nm,1.2s						
RC01	Rabbit Creek A	91.37	29	P	P	15 31 52.5	0.0
	baz=259						
BPAW	Bear Paw Mtn.	91.43	26	P	P	15 31 52.3	-0.5
BPAW	Bear Paw Mtn.	91.43	26	P	P	15 31 52.7	-0.1
	baz=258						
ZEI	Tsey	91.45	313	eP	P	15 31 53.5	-0.2
ZEI				pmax	pmax		
	comp=Z,21nm,1.4s						
TRF	Thorofare Moun	91.59	26	P	P	15 31 53.2	-0.5
	baz=258						
PMR	Palmer	91.75	28	P	P	15 31 54.3	0.0
	baz=259						
NCK	Nalchik	91.77	313	⇑eP	P	15 31 55.2	+0.3
NCK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KNK	Knik Glacier	92.03	28	P	P	15 31 55.5	-0.1
KNK				IAmb	IAmb	15 32 00.8	
	comp=Z,8.5nm,1.0s						
KNK	Knik Glacier	92.03	28	P	P	15 31 55.8	+0.2
	baz=260						
SML	Sawmill	92.16	28	P	P	15 31 56.1	-0.3
SML				IAmb	IAmb	15 31 57.6	
	comp=Z,8.2nm,0.8s						
SML	Sawmill	92.16	28	P	P	15 31 56.0	-0.3
	baz=260,SNR=5.9						
RND	Reindeer	92.22	26	P	P	15 31 55.6	-0.9
RND				pmax	pmax		
	comp=Z,15nm,0.7s						
RND	Reindeer	92.22	26	P	P	15 31 55.6	-0.9
RND				IAmb	IAmb	15 31 56.4	
	comp=Z,15nm,0.7s						
MCK	McKinley	92.24	26	P	P	15 31 56.1	-0.5
	baz=259						
WAT1	Susitna Watana	92.25	27	P	P	15 31 56.6	-0.1
	baz=260						
KMBO	Kilima Mbogo	92.26	269	P	P	15 31 59.1	+1.1
	comp=Z,3.8nm,0.8s,baz=37,slow=13,SNR=4.8						
	comp=Z,3.8nm,0.8s						
KMBO	Kilima Mbogo	92.26	269	IAmb	IAmb	15 32 00.1	
	comp=Z,10nm,1.1s						
KBZ	Khabaz	92.30	314	P	P	15 31 57.5	+0.3
	comp=Z,2.9nm,0.7s,baz=143,slow=2.3,SNR=8.3						
	comp=Z,2.9nm,0.7s						
KBZ	Khabaz	92.30	314	ceP	P	15 31 57.2	0.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
I23K	Minto, Yukon-K	92.33	25	P	P	15 31 56.8	-0.1
I23K				IAmb	IAmb	15 31 57.8	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	92.33	25	P	P	15 31 56.9	-0.1
	baz=259,SNR=17						
NEA2	Nenana	92.34	25	P	P	15 31 57.2	+0.2
	baz=259,SNR=5.4						
H23K	Yukon River	92.38	24	P	P	15 31 57.2	0.0
H23K				IAmb	IAmb	15 31 58.2	
	comp=Z,8.3nm,0.7s						
H23K	Yukon River	92.38	24	P	P	15 31 57.4	+0.2
	baz=259,SNR=11						
COLD	Coldfoot	92.40	23	P	P	15 31 57.4	+0.2
COLD				IAmb	IAmb	15 31 58.5	
	comp=Z,8.5nm,0.8s						
COLD	Coldfoot	92.40	23	P	P	15 31 57.4	+0.2
	baz=258						
M23K	Glacier View	92.44	28	P	P	15 31 57.3	-0.3
	baz=260						
KIV	Kislovodsk	92.48	314	eP	P	15 31 58.5	+0.3
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WAT6	Susitna Watana	92.57	27	P	P	15 31 58.3	0.0
	baz=260						
GLI	Glacier Island	92.59	29	P	P	15 31 58.4	+0.2
	baz=261						
SCM	Sheep Creek Mo	92.64	28	P	P	15 31 58.8	+0.3
	baz=261						
WRH	Wood River Hil	92.74	25	P	P	15 31 57.6	-1.2
WRH				IAmb	IAmb	15 31 58.7	
	comp=Z,9.0nm,0.8s						
MDM	Murphy Dome	92.76	25	P	P	15 31 58.0	-1.0
MDM				IAmb	IAmb	15 32 00.2	
	comp=Z,10nm,1.4s						
DHY	Denali Highway	92.82	27	P	P	15 31 58.8	-0.7
DHY				IAmb	IAmb	15 32 00.2	
	comp=Z,8.8nm,1.0s						
DHY	Denali Highway	92.82	27	P	P	15 31 59.3	-0.1
	baz=261,SNR=7.2						
CCB	Clear Creek Bu	92.89	25	P	P	15 31 58.0	-1.5
CCB				IAmb	IAmb	15 31 59.2	
	comp=Z,11nm,0.7s						
TCOL	CIGO, UAF Yank	92.90	25	P	P	15 31 59.2	-0.3
	baz=260						
COLA	College	92.91	25	⇓eP	P	15 31 58.4	-1.2
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TOLK	Toolik Lake Re	92.92	21	P	P	15 31 59.3	-0.3
TOLK	Toolik Lake Re	92.92	21	P	P	15 31 59.6	0.0
	baz=259						
H24K	Noodor Dome	93.06	24	P	P	15 32 00.3	0.0
H24K				IAmb	IAmb	15 32 01.4	
	comp=Z,11nm,0.8s						
H24K	Noodor Dome	93.06	24	P	P	15 32 00.4	+0.1
	baz=260,SNR=14						
PRGR	Permogore	93.08	332	eP	P	15 31 58.1	-2.3
EYAK	Cordova Ski Ar	93.20	30	P	P	15 32 00.7	-0.3
	baz=262						
HDA	Harding Lake	93.22	26	P	P	15 31 59.8	-1.2
HDA				IAmb	IAmb	15 32 01.0	
	comp=Z,7.6nm,0.8s						
HDA	Harding Lake	93.22	26	P	P	15 31 59.6	-1.4
	baz=261,SNR=11						
M24K	Tolsona, Glenn	93.22	28	P	P	15 32 01.8	+0.6
M24K				IAmb	IAmb	15 32 04.4	
	comp=Z,13nm,0.9s						
M24K	Tolsona, Glenn	93.22	28	P	P	15 32 01.0	-0.1
	baz=262						
KLU	Klutina	93.25	29	P	P	15 32 01.1	-0.3
	baz=262						
DIV	Divide	93.27	29	P	P	15 32 02.1	+0.7
DIV				IAmb	IAmb	15 32 02.5	
	comp=Z,7.8nm,1.0s						
IL31		93.30	25	P	P	15 31 59.6	-1.8
IL31				IAmb	IAmb	15 32 00.5	
	comp=Z,5.1nm,0.8s						
ILAR	Eielson Array	93.30	25	P	P	15 31 59.8	-1.6
	comp=Z,4.2nm,0.7s,baz=256,slow=4.4,SNR=58						
ILAR				PKKP	PKKPdf	15 49 08.8	-0.4
	comp=Z,0.6nm,0.7s,baz=354,slow=0.8,SNR=8.0						
	comp=Z,4.2nm,0.7s						
ILAR	Eielson Array	93.30	25	P	P	15 31 59.0	-2.4
K24K	Donnelly Dome	93.64	26	P	P	15 32 02.8	-0.2
	baz=262						
PAX	Paxson	93.66	27	P	P	15 32 03.2	-0.1
PAX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PAX	Paxson	93.66	27	P	P	15 32 03.2	-0.1
PAX	Paxson	93.66	27	P	P	15 32 03.1	-0.1
	baz=262,SNR=5.6						
BMRM	Bremner River	93.81	29	P	P	15 32 03.6	-0.3
	baz=263						
N25K	Chitina, Valde	93.89	29	P	P	15 32 04.1	-0.2
N25K	Chitina, Valde	93.89	29	P	P	15 32 04.3	0.0
	baz=263						
J25K	Salcha River,	93.92	25	P	P	15 32 03.0	-1.4
J25K	Salcha River,	93.92	25	P	P	15 32 03.7	-0.7
	baz=263,SNR=5.1						
RIDG	Independent Ri	94.04	26	P	P	15 32 04.2	-0.7
RIDG				IAmb	IAmb	15 32 05.4	
	comp=Z,9.5nm,0.8s						
RIDG	Independent Ri	94.04	26	P	P	15 32 04.4	-0.5
	baz=263,SNR=7.8						
TROLL	Troll, Antarti	94.28	194	P	P	15 32 07.0	+1.0
BGLC	Bering Glacier	94.36	30	P	P	15 32 05.8	-0.5
	baz=264						
DOT	Dot Lake	94.38	27	P	P	15 32 05.8	-0.6
DOT				IAmb	IAmb	15 32 07.1	
	comp=Z,7.3nm,0.7s						
SCRK	Sand Creek	94.45	26	P	P	15 32 06.6	-0.2
SCRK	Sand Creek	94.45	26	P	P	15 32 06.6	-0.2
	baz=264						
BMAR	Burnt Mountain	94.59	23	P	P	15 32 07.4	+0.1
L26K	Log Cabin Wild	94.63	27	P	P	15 32 07.2	-0.4
	baz=264						
J26L	Joseph Creek	94.69	26	P	P	15 32 07.9	0.0
	baz=264,SNR=25						
M26K	Nabesna, AK	94.73	28	P	P	15 32 08.6	+0.5
	baz=265						
M27K	Edge Creek, AK	95.25	28	P	P	15 32 10.5	-0.1
	baz=266						
L27K	Beaver Creek,	95.32	27	P	P	15 32 11.1	+0.3
L27K				IAmb	IAmb	15 32 12.2	
	comp=Z,7.7nm,0.9s						
L27K	Beaver Creek,	95.32	27	P	P	15 32 11.4	+0.6
	baz=266						
BCAR	Beaver Creek A	95.34	27	P	P	15 32 11.2	+0.3
VORR	Voronezh	95.55	321	eP	P	15 32 11.2	-0.8
VORR				pmax	pmax		
	comp=Z,40nm,0.4s						
BVCY	Beaver Creek	95.72	28	P	P	15 32 13.2	+0.6
	baz=266						
EGAK	Eagle	95.74	26	P	P	15 32 12.8	+0.2
	baz=266						
SNAA	Sanae	95.79	194	P	P	15 32 12.8	-0.1
SNAA	Sanae	95.79	194	P	P	15 32 14.3	+1.5
	comp=Z,4.3nm,1.0s,baz=185,slow=5.6,SNR=12						
	comp=Z,4.3nm,1.0s						
SNAA	Sanae	95.79	194	⇓iP	P	15 32 14.1	+1.3
KLMR	Klimovskoe	95.94	331	eP	P	15 32 10.5	-3.0
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	Klimovskoe	95.94	331	eP	P	15 32 10.6	-3.0
KLMR				AMP		15 32 12.2	
	comp=Z,12nm,0.8s						
DAWY	Dawson	96.47	26	P	P	15 32 16.2	+0.3
DAWY				IAmb	IAmb	15 32 17.7	
	comp=Z,9.5nm,1.0s						
DAWY	Dawson	96.47	26	P	P	15 32 16.6	+0.6
	baz=268						
I29M	Ogilvie Camp,	96.97	25	P	P	15 32 17.8	-0.4
I29M				IAmb	IAmb	15 32 19.1	
	comp=Z,7.0nm,0.8s						
I29M	Ogilvie Camp,	96.97	25	P	P	15 32 18.6	+0.4
	baz=269						
HYT	Haines Junctio	97.26	30	P	Pdif	15 32 20.2	+0.4
	baz=269						
OBN	Obninsk	97.29	325	eP	P	15 32 18.6	-1.1
OBN				e*PP	pP	15 32 58.5	+0.6
OBN				e*SP	sP	15 33 13.4	-0.3
OBN				e		15 36 16.4	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
N30M	Aishikik Lake	97.47	29	P	Pdif	15 32 21.0	+0.4
	baz=270						
M30M	Minto, Yukon	97.61	28	P	Pdif	15 32 21.1	-0.1
	baz=270						
VNA3	Neumayer Olymp	97.62	192	P	Pdif	15 32 21.6	+0.6
EPYK	Eagle Plains	97.63	24	P	Pdif	15 32 21.2	0.0
	baz=271						
MATP	Matopo	98.02	248	P	Pdif	15 32 24.5	+0.4
	comp=Z,1.9nm,0.7s,baz=43,slow=1.3,SNR=4.4						
	comp=Z,1.9nm,0.7s						
WHY	Whitehorse	98.55	30	P	Pdif	15 32 25.8	+0.3
	baz=272						
M31M	Drury Creek, Y	98.74	28	P	Pdif	15 32 26.4	+0.2
	baz=272						
INK	Inuvik	98.79	22	P	P	15 32 25.8	-0.4
	comp=Z,1.4nm,0.5s,baz=310,slow=6.4,SNR=6.6						
INK				PKKP	PKKPbc	15 48 53.0	-3.5
	comp=Z,1.2nm,0.6s,baz=331,slow=3.1,SNR=4.9						
	comp=Z,1.4nm,0.5s						
INK	Inuvik	98.79	22	P	Pdif	15 32 26.2	0.0
	baz=274						
BRTR	Keskin Array B	98.92	309	P	P	15 32 26.6	-1.1
	comp=Z,1.5nm,0.7s,baz=156,slow=6.4,SNR=6.2						
	comp=Z,1.5nm,0.7s						
LSZ	Lusaka	99.20	253	P	Pdif	15 32 28.3	-1.1
	comp=Z,2.0nm,0.3s,baz=117,slow=4.5,SNR=2.2						
	comp=Z,2.0nm,0.3s						
BOSA	Boshof	99.28	240	P	Pdif	15 32 29.3	-0.3
	comp=Z,1.6nm,0.7s,baz=194,slow=4.2,SNR=1.8						
	comp=Z,1.6nm,0.7s						
BOSA	Boshof	99.28	240	IAmb	IAmb	15 32 35.5	
	comp=Z,2.7nm,0.8s						
LBTB	Lobatse	99.76	243	P	Pdif	15 32 32.0	+0.3
	comp=Z,4.0nm,0.8s,baz=206,slow=2.9,SNR=4.2						
	comp=Z,4.0nm,0.8s						
MMPY	Sheldon Lake,	100.17	28	P	Pdif	15 32 32.8	+0.2
	baz=275						
S34M	Telegraph Cree	100.61	32	P	Pdif	15 32 34.8	+0.2
	baz=274						
A36M	Sachs Harbour	101.07	18	P	Pdif	15 32 36.6	+0.3
	baz=282						
ARCES	ARCESS Array B	101.26	340	P	Pdif	15 32 36.6	-0.7
	comp=Z,2.3nm,0.5s,baz=83,slow=5.8,SNR=19						
AKASG	Malin Array Be	101.83	320	P	Pdif	15 32 39.0	-1.1
	comp=Z,1.0nm,0.6s,baz=77,slow=5.9,SNR=4.1						
C36M	Paulatuk	102.03	20	P	Pdif	15 32 40.7	+0.1
	baz=283						
MNK	Minsk	102.33	324	i P	Pdif	15 32 39.6	-2.6
MNK				i		15 36 53.8	
MNK				i SS	SS	15 51 21.1	-0.8
MNK				i SSS	SSS	15 55 16.3	
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,158nm,18.0s						
MNK				MLR	MLR		
	comp=N,97nm,17.0s						
MNK				MLR	MLR		
	comp=E,9.0nm,15.0s						
MNK	Minsk	102.33	324	i P	Pdif	15 32 39.7	-2.6
	comp=E,1.0nm,0.8s						
MNK				i P	Pdif	15 32 39.7	-2.6
	comp=N,12nm,0.8s						
MNK				i P	Pdif	15 32 39.7	-2.6
	comp=Z,5.0nm,0.7s,baz=84						
MNK				i PP	PP	15 36 53.9	-2.6
MNK				i PPP	PPP	15 39 03.4	
MNK				i SS	SS	15 51 21.1	-0.7
MNK				i SSS	SSS	15 55 16.4	
MNK				i LRM	MLR	16 21 11.2	
	comp=Z,158nm,17.9s						
MNK				i LRM	MLR	16 21 24.6	
	comp=N,97nm,16.6s						
MNK				i LRM	MLR	16 21 28.4	
	comp=E,9.0nm,15.3s						
FINES	FINESS Array B	102.42	331	P	Pdif	15 32 41.2	-1.3
	comp=E,1.3nm,0.5s,baz=85,slow=4.8,SNR=9.5						
FINES				PKiKP	PKiKP	15 37 03.1	-0.1
	comp=E,1.0nm,0.6s,baz=122,slow=1.8,SNR=5.0						
I02E	Swisshome, OR	106.53	46	P	PKiKP	15 37 11.8	+0.5
	baz=277						
D03D	Eldon	106.61	42	P	PKiKP	15 37 11.9	+0.6
	baz=278						
H04D	Lebanon	107.27	46	P	PKiKP	15 37 12.6	-0.1
	baz=278						
RES	Resolute Bay	107.53	11	Pdiff	Pdif	15 33 05.0	0.0
	comp=E,1.3nm,0.8s,baz=295,slow=4.2,SNR=7.5						
RES				PKiKP	PKiKP	15 37 12.0	-0.3
	comp=E,0.8nm,0.6s,baz=217,slow=4.9,SNR=2.3						
YKA	Yellowknife Ar	107.71	26	PKiKP	PKiKP	15 37 12.9	0.0
	comp=E,1.1nm,0.6s,baz=293,slow=1.5,SNR=8.8						
YKA				PKKPbc	PKKPbc	15 48 27.1	-2.7
	comp=E,1.3nm,0.6s,baz=107,slow=3.0,SNR=8.7						
NB2	NORSAR Subarra	109.44	333	P	Pdif	15 33 12.5	-1.3
	comp=Z,0.8nm,0.6s,baz=67,slow=4.4						
NOA	NORSAR Array B	109.44	333	Pdiff	Pdif	15 33 12.6	-1.3
	comp=Z,1.0nm,0.7s,baz=68,slow=4.5,SNR=5.6						
NOA				PKiKP	PKiKP	15 37 16.2	-0.1
	comp=Z,1.1nm,0.8s,baz=262,slow=3.2,SNR=4.3						
NVAR	Mina Array Bea	111.43	51	PKiKP	PKiKP	15 37 22.6	+1.6
	comp=Z,0.5nm,0.5s,baz=282,slow=1.6,SNR=6.1						
NVAR				PKKPbc	PKKPbc	15 48 18.1	+0.7
	comp=Z,0.4nm,0.5s,baz=112,slow=4.4,SNR=5.2						
GERES	GERESS Array B	112.04	320	PKiKP	PKiKP	15 37 22.0	+0.4
	comp=Z,1.8nm,0.6s,baz=82,slow=2.8,SNR=10						
EDW2	Edwards Air Fo	112.17	55	P	PKiKP	15 37 22.9	+0.6
	baz=278						
LRMC	Laurel Mtn Rad	112.34	55	P	PKiKP	15 37 22.8	+0.1
	baz=278						
MPMC	Manual Prospec	112.42	54	P	PKiKP	15 37 23.3	+0.4
	baz=278						
TPNV	Topopah Spring	113.27	53	P	PKiKP	15 37 24.1	-0.3
	baz=280						
HLID	Hailey	113.34	45	P	PKiKP	15 37 24.6	+0.1
	baz=284,SNR=6.4						
ELK	Elko	113.36	49	PKiKP	PKiKP	15 37 26.0	+1.4
	comp=Z,1.2nm,0.5s,baz=86,slow=1.4,SNR=5.4						
ABTA	Abfaltersbach	113.38	318	i P	PKiKP	15 37 24.2	-0.1
	comp=Z,2.7nm,0.6s						
HEC	Hector,Ludlow	113.52	55	P	PKiKP	15 37 25.3	+0.4
	baz=278						
R11A	Troy Canyon, C	113.55	51	P	PKiKP	15 37 25.5	+0.5
	baz=280						
PFO	Pinyon Flats O	113.59	56	P	PKiKP	15 37 25.2	+0.1
	baz=278						

TPFO	Pinon Flats	113.60	56	P	PKiKP	15 37 25.5	+0.3
	baz=278						
MONP2	Monument Peak	113.72	57	P	PKiKP	15 37 25.6	+0.1
	baz=278						
WTTA	Wattenberg	113.81	319	*i* P	PKiKP	15 37 25.7	+0.5
	comp=Z,7.8nm,0.5s						
BELC	Belle Mtn. Jos	113.92	56	P	PKiKP	15 37 26.3	+0.5
	baz=278						
IKP	In-Ko-Pah, Jac	114.01	57	P	PKiKP	15 37 26.0	+0.1
	baz=278						
GMRC	Granite Mounta	114.08	55	P	PKiKP	15 37 27.0	+0.9
	baz=279						
BC3	Big Chuckawall	114.42	56	P	PKiKP	15 37 27.0	+0.3
	baz=278						
IRM	Iron Mountain	114.60	56	P	PKiKP	15 37 27.9	+1.0
	baz=279						
BOZ	Bozeman (W)	114.74	43	P	PKPdf	15 37 27.5	+0.4
	baz=287						
DAVA	Damuels	114.94	319	*i* P	PKPdf	15 37 27.8	+0.4
	comp=Z,4.8nm,0.5s						
EGMT	Eagleton	115.23	40		PKPdf	15 37 28.1	+0.3
EGMT	Eagleton	115.23	40	P	PKPdf	15 37 27.9	+0.1
	baz=289						
DUG	Dugway, Tooele	115.28	49	PKIKP	PKPdf	15 37 28.4	+0.2
DUG	Dugway, Tooele	115.28	49		PKPdf	15 37 28.4	+0.2
DUG	Dugway, Tooele	115.28	49	P	PKPdf	15 37 28.5	+0.3
	baz=283						
PDMCI	Parker Dam,Lak	115.39	55	P	PKPdf	15 37 29.0	+0.6
	baz=280						
H17A	Grant Village	115.80	44	P	PKiKP	15 37 29.7	+0.5
	baz=287						
REDW	Red Top Meadow	115.90	45		PKiKP	15 37 29.7	+0.3
LOHW	Long Hollow	116.01	45		PKPdf	15 37 29.1	-0.5
214A	Organ Pipe Nat	116.87	58	P	PKiKP	15 37 32.0	+0.6
	baz=279						
BW06	Boulder Array	116.98	45		PKiKP	15 37 31.8	+0.2
BW06	Boulder Array	116.98	45	P	PKiKP	15 37 31.6	+0.1
	baz=287						
PD31	Pinedale Array	116.98	45		PKiKP	15 37 31.7	+0.2
PDAR	Pinedale Array	116.98	45	PKP	PKiKP	15 37 32.3	+0.8
	comp=Z,1.9nm,0.6s,baz=268,slow=1.0,SNR=22						
PDAR				PKKPbc	PKKPbc	15 47 57.9	-0.7
	comp=Z,0.6nm,0.6s,baz=109,slow=5.4,SNR=6.0						
PDAR	Pinedale Array	116.98	45		PKiKP	15 37 31.6	0.0
PDAR				PKKPbc	PKKPbc	15 47 56.7	-1.9
WUAZ	Wupatki	117.41	54	P	PKiKP	15 37 33.0	+0.5
	baz=282						
LAO	LASA Array	117.94	40	P	PKiKP	15 37 34.2	+1.2
	baz=292						
LAO	LASA Array	117.94	40	P	PKiKP	15 37 33.6	+0.5
	baz=292,SNR=6.8						
KEST	Kesra	118.43	307	PKP	PKiKP	15 37 35.3	+0.9
	comp=Z,3.0nm,0.8s,baz=155,slow=3.2,SNR=3.5						
TUC	Tucson	118.51	57	P	PKiKP	15 37 34.9	+0.2
	baz=281						
O20A	White River Ci	118.68	48	P	PKPdf	15 37 34.8	-0.1
	baz=287						
W18A	Petrified Fore	118.80	54	P	PKiKP	15 37 35.8	+0.6
	baz=283						
K22A	Casper	119.14	45	P	PKiKP	15 37 35.8	+0.2
	baz=289						
K22A	Casper	119.14	45	P	PKiKP	15 37 36.1	+0.4
	baz=289						
MVCO	Mesa Verde	119.28	51	P	PKiKP	15 37 36.3	+0.1
	baz=285						
N23A	Red Feather La	120.12	46	P	PKiKP	15 37 38.4	+0.7
	baz=289						
RSSD	Black Hills	120.33	42	PKIKP	PKPdf	15 37 37.5	-0.4
RSSD	Black Hills	120.33	42	PKPdf	PKPdf	15 37 37.5	-0.4
RSSD	Black Hills	120.33	42	P	PKiKP	15 37 38.1	+0.1
	baz=292						
RSSD	Black Hills	120.33	42	P	PKiKP	15 37 38.3	+0.3
	baz=292						
S22A	4UR Ranch, Cre	120.41	50	P	PKiKP	15 37 39.5	+1.0
	baz=286						
ISCO	Idaho Springs	120.71	47	P	PKiKP	15 37 39.5	+0.4
	baz=288						
121A	Cookes Peak, D	120.95	56	P	PKiKP	15 37 40.6	+1.1
	baz=283						
121A	Cookes Peak, D	120.95	56	P	PKiKP	15 37 40.1	+0.6
	baz=283						
Y22A	Socorro	121.30	54	P	PKiKP	15 37 40.9	+0.8
	baz=284						
Q24A	Divide	121.31	48	P	PKPdf	15 37 39.0	-1.1
	baz=288						
SDCO	Great Sand Dun	121.42	50	P	PKiKP	15 37 41.3	+0.9
	baz=287						
SDCO	Great Sand Dun	121.42	50	P	PKiKP	15 37 41.0	+0.6
	baz=287						
ANMO	Albuquerque	121.45	53	PKP	PKPdf	15 37 40.0	-0.3
	comp=Z,2.7nm,0.6s,baz=150,slow=3.8,SNR=6.3						
ANMO	Albuquerque	121.45	53	P	PKiKP	15 37 41.0	+0.6
	baz=285						
FRB	Frobisher Bay	121.65	9	PKP	PKPdf	15 37 37.9	-1.6
	comp=Z,4.0nm,0.5s,baz=7.1,slow=2.5,SNR=6.2						
T25A	Trinidad	122.43	50	P	PKiKP	15 37 42.7	+0.4
	baz=288						
ULM	Lac du Bonnet	122.45	33	PKP	PKPdf	15 37 41.4	-0.1
	comp=Z,4.7nm,0.5s,baz=329,slow=1.1,SNR=6.4						
OGNE	Ogallala	122.89	45	P	PKiKP	15 37 43.1	+0.2
	baz=292						
MNTX	Cornudas Mount	123.12	57	P	PKiKP	15 37 44.6	+1.0
	baz=284						
MNTX	Cornudas Mount	123.12	57	P	PKiKP	15 37 44.0	+0.4
	baz=284						
TXAR	Lajitas Array	125.11	59	PKP	PKiKP	15 37 48.6	+0.9
	comp=Z,1.2nm,0.5s,baz=234,slow=1.1,SNR=13						
AMTX	Amarillo	125.23	52	P	PKPdf	15 37 46.7	-0.7
	baz=288						
CBKS	Cedar Bluff	125.33	47	P	PKiKP	15 37 47.9	+0.1
	baz=293						
ECSD	EROS Data Cent	125.34	40	PKPdf	PKPdf	15 37 47.2	-0.1
ECSD	EROS Data Cent	125.34	40	P	PKiKP	15 37 47.9	+0.2
	baz=299						
BGNE	Belgrade	125.39	43	PKPdf	PKPdf	15 37 47.5	0.0
BGNE	Belgrade	125.39	43	P	PKPdf	15 37 47.1	-0.3
	baz=296						
BGNE	Belgrade	125.39	43	P	PKiKP	15 37 48.4	+0.6
	baz=296						
EYMN	Ely	126.13	33	P	PKiKP	15 37 49.5	+0.5
	baz=306						
F36A	Milaca	126.16	36		PKPdf	15 37 48.9	+0.1
F36A	Milaca	126.16	36	P	PKiKP	15 37 49.1	0.0
	baz=303						
ESDC	Sonseca Array	127.11	316	PKP	PKiKP	15 37 52.4	+1.0
	comp=Z,1.1nm,0.8s,baz=1.4,slow=5.9,SNR=5.2						
ESDC				PP	PP	15 39 51.5	+0.3
	comp=Z,0.7nm,0.5s,baz=49,slow=6.7,SNR=5.8						
KSU1	Kansas State U	127.44	45	P	PKiKP	15 37 52.2	+0.3
	baz=296						
WMOK	Wichita Mounta	127.53	51	P	PKiKP	15 37 53.0	+0.7
	baz=291						
ABTX	Abilene, Hawle	127.55	54	P	PKiKP	15 37 52.7	+0.3
	baz=288						
JCT	Junction City	128.06	56	P	PKPdf	15 37 52.7	-0.2
	baz=287						
JCT	Junction City	128.06	56	P	PKiKP	15 37 54.0	+0.5
	baz=287						
SCIA	State Center	128.42	40	P	PKiKP	15 37 54.6	+0.8
	baz=301						
TORD	Torodi Ar. Bea	128.43	281	PKP	PKiKP	15 37 54.9	+0.3
	comp=Z,8.4nm,0.7s,baz=66,slow=1.5,SNR=45						
COWI	Conover	128.53	34	P	PKPdf	15 37 53.5	+0.2
	baz=308						
833A	Chaparral WMA,	128.99	59	P	PKiKP	15 37 55.8	+0.5
	baz=285						
PLCA	Paso Flores	129.19	160	PKP	PKiKP	15 37 57.8	+2.2
	comp=Z,1.1nm,0.6s,baz=207,slow=2.7,SNR=6.5						
PLCA				SKP		15 41 02.1	
	comp=Z,4.4nm,0.7s,baz=212,slow=3.4,SNR=14						
PLCA	Paso Flores	129.19	160	PKIKP	PKiKP	15 37 56.2	+0.6
PLCA	Paso Flores	129.19	160		PKiKP	15 37 56.2	+0.6
P38A	Dawn	129.33	43	PKPdf	PKPdf	15 37 55.1	+0.1
TUL1	Leonard	129.35	48	P	PKiKP	15 37 56.3	+0.4
	baz=294						
WHTX	Lake Whitney,	129.51	54	P	PKiKP	15 37 56.5	+0.2
	baz=290						
SCHQ	Schefferville	130.29	12	PKP	PKPdf	15 37 56.7	+0.4
	comp=Z,1.7nm,0.6s,baz=27,slow=2.3,SNR=1.4						
SCHQ				SKPbc	SKPab	15 41 04.5	-0.8
	comp=Z,6.5nm,0.9s,baz=329,slow=8.0,SNR=4.5						
SCHQ	Schefferville	130.29	12		SKPab	15 41 04.3	-1.0
S39A	Bolivar	130.38	45	PKPdf	PKPdf	15 37 56.6	-0.4
S39A	Bolivar	130.38	45	P	PKPdf	15 37 57.3	+0.3
	baz=298						
HHAR	Hobbs	130.56	47	P	PKiKP	15 37 57.9	-0.4
	baz=296						
R40A	Maddies Statio	130.83	44		PKPdf	15 37 57.5	-0.4
W39A	Magazine	131.14	48	P	PKiKP	15 37 59.7	+0.2
	baz=295						
U40A	Yellville	131.32	47	P	PKiKP	15 37 59.6	-0.2
	baz=297						
MIAR	Mount Ida	131.57	49	P	PKiKP	15 38 00.7	+0.3
	baz=295						
L44A	Lake County Fo	131.58	37	P	PKiKP	15 38 00.3	+0.1
	baz=306						
HDIL	Hopedale	131.64	40	P	PKiKP	15 38 00.9	+0.5
	baz=304						
CCM	Cathedral Cave	131.65	44	PKIKP	PKPdf	15 37 59.0	-0.4
CCM	Cathedral Cave	131.65	44	PKPdf	PKPdf	15 37 59.0	-0.4
CCM	Cathedral Cave	131.65	44	P	PKiKP	15 38 00.7	+0.3
	baz=300						
GLMI	Grayling	131.79	33	P	PKiKP	15 38 01.0	+0.5
	baz=312						
W41B	Gary Mavity, V	132.28	48	P	PKiKP	15 38 02.0	+0.2
	baz=296						
SFIN	Lafayette	133.12	39	P	PKiKP	15 38 03.3	0.0
	baz=306						
O48B	Farmland	134.39	38	P	PKiKP	15 38 05.6	-0.3
	baz=308						
SADO	Sadowa	134.61	29	PKP	PKiKP	15 38 05.9	-0.3
	comp=Z,7.4nm,1.0s,baz=333,slow=4.5,SNR=3.6						
SADO				SKPbc	SKPbc	15 41 17.9	-2.8
	comp=Z,1.6nm,0.2s,baz=70,slow=2.9,SNR=3.3						
OXF	Oxford	134.66	47	P	PKiKP	15 38 06.1	-0.5
	baz=299						
KIC	Kosan Boka	134.71	272	*e*PKP1	PKiKP	15 38 07.9	+0.6
	comp=Z,17nm,0.5s						
DBIC	Dimbokro	134.84	273	PKP	PKPdf	15 38 06.4	+0.3
	comp=Z,12nm,0.5s,baz=95,slow=2.3,SNR=18						
DBIC				SKPbc	SKPbc	15 41 21.6	-0.8
	comp=Z,12nm,1.0s,baz=148,slow=2.9,SNR=8.1						
DBIC	Dimbokro	134.84	273	PKPdf	PKPdf	15 38 05.7	-0.4
DBIC				SKPbc	SKPbc	15 41 21.2	-1.1
WVT	Waverly	134.98	44	P	PKiKP	15 38 07.0	-0.2
	baz=302						
LIC	Lamto	134.99	272	*e*PKP1	PKiKP	15 38 08.9	+1.0
	comp=Z,35nm,0.9s						
TIC	Toumodi	135.00	273	*e*PKP1	PKiKP	15 38 08.4	+0.5
P49A	Miami Univ. Ec	135.10	38	P	PKiKP	15 38 07.3	-0.1
	baz=308						
CMIG	Matias Romero	135.34	73	PKP	PKPdf	15 38 07.2	+0.3
	comp=Z,1.3nm,0.4s,baz=72,slow=6.4,SNR=2.0						
CMIG				SKPbc	SKPbc	15 41 23.6	-0.2
	comp=Z,7.6nm,1.0s,baz=283,slow=3.5,SNR=6.9						
ACSO	Alum Creek Sta	135.70	36	P	PKiKP	15 38 08.2	-0.4
	baz=310						
ERPA	Erie	136.10	32	P	PKiKP	15 38 09.1	-0.2
	baz=315						
M53A	WI Miller and	136.21	33	P	PKiKP	15 38 09.2	-0.4
	baz=314						
P52A	Corning	136.59	36	P	PKiKP	15 38 09.9	-0.5
	baz=311						
O53A	New Philadelph	136.72	35	P	PKiKP	15 38 10.0	-0.6
	baz=312						
LONY	Lake Ozonia	136.79	25	P	PKiKP	15 38 10.5	-0.1
	baz=324						
LRAL	Lakeview Retre	137.13	47	P	PKiKP	15 38 11.3	-0.4
	baz=300						
TZTN	Tazewell	137.62	41	P	PKPdf	15 38 11.6	+0.9
	baz=306						
TKL	Tuckaleechee C	137.99	42	PKP	PKPdf	15 38 12.2	+0.9
	comp=Z,7.9nm,0.5s,baz=144,slow=6.2,SNR=13						
TKL				SKP		15 41 31.2	
	comp=Z,4.0nm,0.8s,baz=85,slow=3.3,SNR=5.4						
BINY	Binghamton	138.06	29	P	PKiKP	15 38 12.8	-0.6
	baz=320						
SSPA	Standing Stone	138.27	32	P	PKiKP	15 38 13.1	-0.7
	baz=317						
L61B	Northampton	139.36	26	P	PKiKP	15 38 15.1	-0.9
	baz=325						
GOGA	Godfrey	139.46	45	P	PKiKP	15 38 15.4	-1.0
	baz=304						
HRV	Adam Dziewonsk	139.78	24	P	PKiKP	15 38 16.4	-0.4
	baz=326						
BIRD	Birdtown, Kers	140.77	41		PKPdf	15 38 15.2	-1.2
GO02	Mina Guanaco	143.13	150		PKPdf	15 38 20.1	-1.3
DWPF	Disney Wildern	143.73	50	P	PKiKP	15 38 24.0	-1.3
	baz=300						
LVC	Limon Verde	145.59	149	PKPbc	PKPab	15 38 28.2	+1.6
	comp=Z,9.4nm,0.4s,baz=255,slow=2.3,SNR=11						
LVC				SKPbc	SKiKP	15 41 52.5	+0.7
	comp=Z,5.2nm,0.8s,baz=229,slow=4.7,SNR=4.5						
LVC	Limon Verde	145.59	149	*e*P	PKPdf	15 38 25.3	-0.5
ITAB	Concordia	146.14	177	*e*P	PKPdf	15 38 25.8	-0.3
CPUP	Villa Florida	146.39	169	PKPbc	PKPab	15 38 29.2	+0.2
	comp=Z,12nm,0.6s,baz=196,slow=2.1,SNR=45						
CPUP				SKPbc	SKPbc	15 41 52.6	0.0
	comp=Z,7.7nm,0.9s,baz=188,slow=1.1,SNR=6.0						
CPUP	Villa Florida	146.39	169	PKP2	PKPab	15 38 29.0	-0.1
CPUP	Villa Florida	146.39	169		PKPab	15 38 29.0	-0.1
PB08	IPOC Station P	147.47	146		PKPbc	15 38 30.8	-0.9
PB11	IPOC Station P	147.48	145		PKPdf	15 38 30.1	+1.4
PB12	IPOC Station P	147.97	142	PKPab	PKiKP	15 38 33.9	-0.5
PTGB	Pitanga	148.64	177	*e*P	PKPdf	15 38 31.0	+0.6
ESAR	Angra dos Reis	149.82	191	*e*P	PKPdf	15 38 32.3	+0.1
FRTB	Fartura	150.04	181	*e*P	PKPdf	15 38 32.5	-0.2
DUB01	Friburgo-RJ	150.27	195	*e*P	PKPdf	15 38 33.2	+0.2
CAM01	Campos-RJ	150.32	196	*e*P	PKPdf	15 38 33.5	+0.5
LPAZ	La Paz	151.09	143	PKP	PKPdf	15 38 35.6	+0.5
	comp=Z,10nm,0.4s,baz=275,slow=8.6,SNR=20						
LPAZ				PKPbc	PKiKP	15 38 42.8	+1.2
	comp=Z,10nm,0.4s,baz=17,slow=2.8,SNR=50						
LPAZ	La Paz	151.09	143	PKPdf	PKPdf	15 38 33.4	-1.7
AQDB	Aquidauana	152.40	169	*e*P	PKPdf	15 38 36.4	+0.1
DIAM	Diamantina, MG	154.22	195	*e*P	PKPdf	15 38 38.9	-0.2
PP1B	Ponte de Pedra	155.36	170	*e*P	PKPdf	15 38 40.6	+0.1
SALV	Santo Antonio	156.84	167	*e*P	PKPdf	15 38 42.0	-0.4
RCBR	Riachuelo	160.90	229	PKP	PKPdf	15 38 48.6	+1.2
	comp=Z,11nm,1.1s,baz=268,slow=2.2,SNR=1.9						
RCBR				PKPab	PKPab	15 39 32.3	+1.7
	comp=Z,16nm,0.8s,baz=296,slow=5.4,SNR=6.7						
RCBR	Riachuelo	160.90	229		PKPab	15 39 31.2	+0.6

MOS ***09*** *15:23:50.2±1.0, 23°.61S×13°.42W, h10^{km}, mb4.9/20 Error ellipse: s-maj=15.1km s-min=9.9km az=61.8*

IDC ***09*** *15:23:50.2±0.4, 23°.61S×13°.46W, h0^{km}, mb4.4/26, mbtmp4.4/26, MS4.1/35, Error ellipse: s-maj=15.1km s-min=12.5km az=176.0*

NEIC ***09*** *15:23:51.8±1.4, 23°.7S±0°.1×13°.4W±0°.1, h10^{km}±1^{km}, mb5.0/80, Error ellipse: s-maj=17.7km s-min=15.6km az=167.0*

GCMT ***09*** *15:23:51.8±0.3, 23°.39S±0°.03×13°.53W±0°.02, h18^{km}±1^{km}, MW5.0/100, Moment Tensor Solution. s25,c30; s100,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.81±.19; M$_{\theta\theta}$0.14±.12; M$_{\phi\phi}$2.67±.14; M$_{r\theta}$2.56±.38; M$_{\theta\phi}$-0.39±.09; M$_{\phi r}$1.93±.32; Best double couple: M$_0$4.05700×10^{16} NP1:φ$_s$337.00000°,δ31.00000°, λ-138.00000°. NP2:φ$_s$209.00000°,δ70.00000°, λ-66.00000°. Principal axes: T 3.3530, Plg21.0000°, Azm281.0000°; N 1.4120, Plg22.0000°, Azm20.0000°; P -4.7620, Plg58.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 15:23:51.7±0.3, **23°.65S**±0°.08×**13°.45W**±0°.06, **h10**^{km}, **n257**, σ**1**^{s}**.06**/234, **mb4.9**/66, **MS4.1**/36, **18C-20D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABR01	Abrolhos, BA	24.25	279	*e*P	P	15 29 09.4	+0.2
ALF01	Guarapari-ES	25.43	271	*e*P	P	15 29 20.9	+1.1
NAN01	Guarapari, ES	25.59	278	*e*P	P	15 29 21.5	+0.3
GUA01	Guaratinga, BA	25.70	281	*e*P	P	15 29 22.2	-0.1
NBAN	Anadia - AL	25.86	299	*e*P	P	15 29 24.1	+0.3
CMC01	Camacan, BA	25.89	284	*e*P	P	15 29 25.9	+1.9
BSFB	Barra de Sao F	25.96	275	*e*P	P	15 29 25.2	+0.5
SJMB	Sao Joao De Ma	26.31	275	*e*P	P	15 29 28.1	+0.3
GDU01	Guandu, BA	26.61	287	*e*P	P	15 29 31.2	+0.7
DUB01	Friburgo-RJ	26.68	268	*e*P	P	15 29 31.3	+0.1
RCBR	Riachuelo	27.95	306	P	P	15 29 43.5	+0.9
	6.3nm,0.8s,baz=169,slow=5.2,SNR=2.2						
RCBR				LR	LR	15 37 57.5	
	comp=Z,328nm,20.3s,baz=270,slow=30						
	6.3nm,0.8s						
RCBR	Riachuelo	27.95	306	P	P	15 29 43.5	+0.9
RCBR				pmax	pmax		
	comp=Z,33nm,1.2s						
RCBR	Riachuelo	27.95	306	IAmb	IAmb	15 29 51.6	
	comp=Z,33nm,1.2s						
NBPN	Ponto Novo - B	28.48	292	*e*P	P	15 29 47.1	-0.2
SLP01	Ubatuba-SP	29.06	264	*e*P	P	15 29 53.8	+1.3
TSUM	Tsumeb	29.19	87	P	P	15 29 55.2	+1.4
	comp=Z,2.9nm,0.7s,baz=253,slow=4.3,SNR=3.3						
TSUM				LR	LR	15 39 41.7	
	comp=Z,709nm,19.6s,baz=310,slow=33						
	comp=Z,2.9nm,0.7s						
TSUM	Tsumeb	29.19	87	P	P	15 29 51.8	-1.9
PARB	Paraibuna	29.48	264	*e*P	P	15 29 56.2	0.0
JANB	Januaria	30.30	281	*e*P	P	15 30 02.4	-1.1
LIC	Lamto	30.81	17	*e*P	P	15 30 08.7	+0.8
	comp=Z,27nm,1.6s						
KIC	Kosan Boka	31.01	17	*e*P	P	15 30 09.8	+0.1
	comp=Z,16nm,1.1s						
TIC	Toumodi	31.21	16	*e*P	P	15 30 10.9	-0.6
DBIC	Dimbokro	31.28	17	P	P	15 30 11.8	-0.3
	comp=Z,2.9nm,0.6s,baz=198,slow=11,SNR=4.4						
DBIC				LR	LR	15 39 40.0	
	comp=Z,318nm,20.9s,baz=192,slow=30						
	comp=Z,2.9nm,0.6s						
DBIC	Dimbokro	31.28	17	P	P	15 30 12.0	0.0
DBIC				pmax	pmax		
	comp=Z,21nm,1.4s						
DBIC	Dimbokro	31.28	17	P	P	15 30 12.0	0.0
DBIC				IAmb	IAmb	15 30 19.2	
	comp=Z,21nm,1.4s						
SUR	Sutherland	31.36	114	P	P	15 30 13.3	+0.3
	comp=Z,27nm,1.3s,baz=306,slow=6.7,SNR=3.1						
SUR				LR	LR	15 39 54.2	
	comp=Z,382nm,20.8s,baz=271,slow=31						
	comp=Z,27nm,1.3s						
SUR	Sutherland	31.36	114	P	P	15 30 11.2	-1.8
SUR				IAmb	IAmb	15 30 22.5	
	comp=Z,47nm,1.4s						
SDBA	SAO DESIDERIO	31.86	285	*e*P	P	15 30 17.0	-0.3
IPMB	Ipameri, GO	32.93	273	*e*P	P	15 30 26.1	-0.5
BDFB	Brasilia	33.45	277	P	P	15 30 31.0	-0.3
	comp=Z,13nm,0.8s,baz=111,slow=5.7,SNR=14						
BDFB				LR	LR	15 41 52.9	
	comp=Z,899nm,20.3s,baz=132,slow=32						
	comp=Z,13nm,0.8s						
BDFB	Brasilia	33.45	277	P	P	15 30 31.3	0.0
BDFB				pmax	pmax		
	comp=Z,31nm,1.1s						
BDFB	Brasilia	33.45	277	P	P	15 30 31.3	0.0
BDFB				IAmb	IAmb	15 30 38.4	
	comp=Z,31nm,1.1s						
BOSA	Boshof	34.99	107	P	P	15 30 44.5	-0.1
	comp=Z,4.2nm,0.7s,baz=280,slow=9.4,SNR=9.2						
BOSA				LR	LR	15 42 07.9	
	comp=Z,382nm,21.6s,baz=254,slow=31						
	comp=Z,4.2nm,0.7s						
BOSA	Boshof	34.99	107	P	P	15 30 44.0	-0.6
BOSA				pmax	pmax		
	comp=Z,26nm,1.1s						
BOSA	Boshof	34.99	107	P	P	15 30 44.0	-0.6
BOSA				IAmb	IAmb	15 30 52.2	
	comp=Z,26nm,1.1s						
PEXB	Peixe	35.01	283	*e*P	P	15 30 44.6	-0.1
ITAB	Concordia	35.02	256	P	P	15 30 45.4	+0.7
ITAB	Concordia	35.02	256	*e*P	P	15 30 45.9	+1.2
LBTB	Lobatse	35.52	100	P	P	15 30 49.5	+0.4
	comp=Z,15nm,1.1s,baz=256,slow=11,SNR=8.8						
LBTB				LR	LR	15 42 51.3	
	comp=Z,349nm,20.9s,baz=258,slow=32						
	comp=Z,15nm,1.1s						
LBTB	Lobatse	35.52	100	P	P	15 30 48.9	-0.2
LBTB				pmax	pmax		
	comp=Z,18nm,1.1s						
LBTB	Lobatse	35.52	100	P	P	15 30 48.9	-0.2
LBTB				IAmb	IAmb	15 30 51.4	
	comp=Z,18nm,1.1s						
SMTB	Santa Maria do	35.80	289	*e*P	P	15 30 51.7	+0.2
PLTB	Pedras Altas	36.30	248	P	P	15 30 56.1	+0.5
PLTB				IAmb	IAmb	15 31 04.5	
	comp=Z,31nm,1.3s						
PLTB	Pedras Altas	36.30	248	*e*P	P	15 30 55.9	+0.2
DVLD	Doverlandia	36.93	274	*e*P	P	15 31 01.3	+0.1
SNDB	Serra Nova Dou	37.74	281	*e*P	P	15 31 08.2	+0.2
ITQB	Itaqui	38.88	252	P	P	15 31 18.1	+0.6
ITQB				IAmb	IAmb	15 31 19.6	
	comp=Z,38nm,0.8s						
ITQB	Itaqui	38.88	252	*e*P	P	15 31 18.8	+1.3
MATP	Matopo	38.91	94	P	P	15 31 17.1	-1.0
	comp=Z,5.0nm,1.0s,baz=265,slow=10,SNR=4.5						
	comp=Z,5.0nm,1.0s						
KOWA	Kowa	39.02	15	P	P	15 31 18.6	0.0
PRPB	Parauapebas	39.03	291	*e*P	P	15 31 20.5	+1.5
PP1B	Ponte de Pedra	39.14	271	*e*P	P	15 31 20.5	+0.6
AQDB	Aquidauana	39.19	266	P	P	15 31 20.8	+0.6
AQDB	Aquidauana	39.19	266	*e*P	P	15 31 20.6	+0.5
TORD	Torodi Ar. Bea	39.45	24	P	P	15 31 22.1	-0.3
	comp=Z,13nm,1.0s,baz=198,slow=7.8,SNR=43						
TORD				LR	LR	15 44 26.1	
	comp=Z,377nm,20.9s,baz=208,slow=31						
	comp=Z,13nm,1.0s						
CPUP	Villa Florida	39.73	257	P	P	15 31 25.5	+0.9
	comp=Z,6.8nm,0.9s,baz=96,slow=6.8,SNR=10						
CPUP				LR	LR	15 45 25.6	
	comp=Z,352nm,18.8s,baz=99,slow=33						
	comp=Z,6.8nm,0.9s						
CPUP	Villa Florida	39.73	257	P	P	15 31 25.1	+0.5
CPUP				pmax	pmax		
	comp=Z,33nm,1.3s						
CPUP	Villa Florida	39.73	257	P	P	15 31 25.1	+0.5
CPUP				IAmb	IAmb	15 31 32.8	
	comp=Z,33nm,1.2s						
CPUP	Villa Florida	39.73	257	*e*P	P	15 31 25.5	+0.9
LSZ	Lusaka	40.01	86	P	P	15 31 28.9	+1.6
	comp=Z,2.6nm,0.6s,baz=251,slow=12,SNR=5.6						
LSZ				LR	LR	15 46 13.1	
	comp=Z,814nm,20.0s,baz=253,slow=34						
	comp=Z,2.6nm,0.6s						
SALV	Santo Antonio	40.38	273	*e*P	P	15 31 31.2	+1.0
NBRS	Nobres	40.96	275	*e*P	P	15 31 36.1	+1.1
CLDB	Colider	42.23	280	*e*P	P	15 31 45.9	+0.5
PDRB	Porto dos Gac	42.79	279	*e*P	P	15 31 50.5	+0.5
PTLB	Pontes e Lacer	43.67	272	*e*P	P	15 31 58.1	+1.1
MCPB	Macapa, AP	44.02	296	*e*P	P	15 32 00.5	+0.6
EFI	East Falkland	44.06	219	⇓*e*P	P	15 32 01.8	+2.1
EFI				pmax	pmax		
	comp=Z,267nm,3.8s						
EFI	East Falkland	44.06	219	P	P	15 31 59.6	-0.1
ITTB	Itaituba	45.04	289	*e*P	P	15 32 08.3	+0.3
VILB	Vilhena	45.47	275	*e*P	P	15 32 12.6	+1.1
VNA1	Neumayer--Stat	47.12	178	P	P	15 32 23.5	-0.1
MDP	Montagnes des	47.73	302	LR	LR	15 50 40.9	
	comp=Z,154nm,20.0s,baz=104,slow=34						
SNAA	Sanae	48.43	176	P	P	15 32 33.8	-0.1
	comp=Z,3.9nm,0.8s,baz=326,slow=8.2,SNR=5.1						
	comp=Z,3.9nm,0.8s						
SNAA	Sanae	48.43	176	⇓*e*P	P	15 32 34.1	+0.2
SNAA				pmax	pmax		
	comp=Z,20nm,1.6s						
SNAA	Sanae	48.43	176	P	P	15 32 33.9	0.0
SNAA				IAmb	IAmb	15 32 42.9	
	comp=Z,23nm,1.5s						
MBAR	Mbarara	48.57	68	LR	LR	15 50 55.9	
	comp=Z,133nm,18.9s,baz=234,slow=34						
MBAR	Mbarara	48.57	68	⇓*e*P	P	15 32 39.0	+3.1
PLCA	Paso Flores	50.38	236	P	P	15 32 49.4	+0.1
	comp=Z,3.7nm,0.9s,baz=77,slow=7.6,SNR=8.4						
PLCA				LR	LR	15 50 33.7	
	comp=Z,219nm,21.7s,baz=89,slow=32						
	comp=Z,3.7nm,0.9s						
PLCA	Paso Flores	50.38	236	P	P	15 32 49.4	+0.1
PLCA				pmax	pmax		
	comp=Z,14nm,1.3s						
PLCA	Paso Flores	50.38	236	P	P	15 32 49.4	+0.1
CO01	Juntas del Tor	50.53	250	P	P	15 32 51.8	+1.1
CO01				IAmb	IAmb	15 32 53.2	
	comp=Z,13nm,0.8s						
BO04	La Punta	50.57	245	P	P	15 32 50.2	-0.6
LVC	Limon Verde	50.74	259	LR	LR	15 53 09.4	
	comp=Z,180nm,19.6s,baz=114,slow=35						
GO02	Mina Guanaco	50.83	256	P	P	15 32 53.0	-0.2
GO02				IAmb	IAmb	15 33 01.7	
	comp=Z,22nm,0.9s						
MT09	Talagante	50.90	245	P	P	15 32 52.4	-1.1
MT09				IAmb	IAmb	15 32 59.7	
	comp=Z,17nm,0.8s						
BO01	Tunca	50.94	244	P	P	15 32 52.6	-0.9
BO01				IAmb	IAmb	15 33 00.5	
	comp=Z,22nm,1.1s						
USHA	Ushuaia	50.97	218	LR	LR	15 55 06.7	

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      comp=Z,120nm,18.0s,baz=259,slow=37
ROC1  El Roble          50.99 246  P        P        15 32 51.9  -2.3
ROC1                               IAmb     IAmb     15 32 55.5
      comp=Z,11nm,0.8s
MT02  Curacav           51.07 246  P        P        15 32 53.4  -1.2
MT02                               IAmb     IAmb     15 33 01.7
      comp=Z,25nm,1.2s
GO04  Tololo Observa    51.11 250  P        P        15 32 54.0  -1.2
MT01  Popeta            51.11 245  P        P        15 32 54.2  -0.7
AC06  Mina Casimiro     51.12 253  P        P        15 32 54.9  -0.2
AC06                               IAmb     IAmb     15 33 02.8
      comp=Z,21nm,1.2s
CO02  Combarbal         51.16 248  P        P        15 32 55.0  -0.3
CO02                               IAmb     IAmb     15 32 56.1
      comp=Z,15nm,0.7s
LC01  Cunco             51.39 238  P        P        15 32 55.8  -1.0
LL02  Futaleuf          51.43 233  P        P        15 32 56.2  -0.9
LL02                               IAmb     IAmb     15 33 04.5
      comp=Z,20nm,1.4s
PB08  IPOC Station P    51.54 262  P        P        15 32 58.0  -0.7
PB08                               IAmb     IAmb     15 33 06.5
      comp=Z,13nm,0.9s
AC01  Pan de Azucar     51.55 255  P        P        15 32 57.6  -0.6
AC04  Llanos de Chal    51.62 252  P        P        15 32 58.8  +0.1
AC04                               IAmb     IAmb     15 33 08.1
      comp=Z,20nm,1.0s
LPAZ  La Paz            51.66 268  P        P        15 32 58.8  -1.1
      comp=Z,2.3nm,0.8s,baz=98,slow=13,SNR=6.9
LPAZ                               LR       LR       15 54 28.7
      comp=Z,80nm,18.1s,baz=97,slow=36
      comp=Z,2.3nm,0.8s
LPAZ  La Paz            51.66 268  P        P        15 32 58.4  -1.5
LPAZ                               pmax     pmax
      comp=Z,10.0nm,1.3s
LPAZ  La Paz            51.66 268  P        P        15 32 58.4  -1.5
LPAZ  La Paz            51.66 268 eP        P        15 32 59.2  -0.7
PB07  IPOC Station P    51.82 260  P        P        15 32 59.8  -0.7
MG03  Isla Dawson       51.90 219  P        P        15 33 00.8  +0.5
MG03                               IAmb     IAmb     15 33 02.8
      comp=Z,24nm,1.3s
PB04  IPOC Station P    51.92 259  P        P        15 33 00.7  -0.5
PB02  IPOC Station P    51.92 261  P        P        15 33 00.6  -0.6
PB02                               IAmb     IAmb     15 33 09.3
      comp=Z,15nm,0.9s
AY01  Puyuhuapi         52.07 231  P        P        15 33 01.5  -0.3
AY01                               IAmb     IAmb     15 33 09.2
      comp=Z,21nm,1.2s
ETMB  Extrema           52.09 276 eP        P        15 33 02.7  +0.3
PB16  IPOC Station P    52.34 265  P        P        15 33 03.8  -1.0
PMSA  Palmer Station    52.42 205  LR       LR       15 51 11.5
      comp=Z,129nm,19.4s,baz=60,slow=31
GO09  Cerro Castillo    52.56 223  P        P        15 33 05.2  -0.1
GO09                               IAmb     IAmb     15 33 30.1
      comp=Z,22nm,1.4s
BOAV  Boa Vista         52.60 293 eP        P        15 33 07.0  +0.9
PB12  IPOC Station P    53.01 264  P        P        15 33 07.7  -1.6
PB12                               IAmb     IAmb     15 33 16.0
      comp=Z,35nm,1.3s
KMBO  Kilima Mbogo      53.95  73  LR       LR       15 53 56.6
      comp=Z,266nm,20.0s,baz=272,slow=34
LODK  Lodwar            54.60  67  P        P        15 33 19.3  -1.6
LODK                               IAmb     IAmb     15 33 25.7
      comp=Z,15nm,1.2s
SMAI  San Martin Ant    55.01 202  P        P        15 33 23.0   0.0
SMAI                               IAmb     IAmb     15 33 30.8
      comp=Z,14nm,0.9s
BELA  Belgrano 2        55.21 185  P        P        15 33 24.0  -0.3
BELA                               IAmb     IAmb     15 33 26.9
      comp=Z,11nm,1.0s
MDT   Midelt            56.78   9  LR       LR       15 56 05.3
      comp=Z,171nm,19.1s,baz=163,slow=34
NNA   Nana              61.05 269  LR       LR       15 59 57.9
      comp=Z,177nm,18.6s,baz=126,slow=36
BIRV  Birongo           61.77 297  P        P        15 34 11.2  +0.2
BAUV  El Baul           62.40 295  P        P        15 34 14.1  -1.1
KEST  Kesra             62.88  21  P        P        15 34 18.2  +0.1
      comp=Z,5.9nm,1.0s,baz=206,slow=6.2,SNR=3.7
KEST                               LR       LR       15 59 36.2
      comp=Z,173nm,20.2s,baz=205,slow=34
      comp=Z,5.9nm,1.0s
KEST  Kesra             62.88  21  IAmb     IAmb     15 34 33.2
      comp=Z,22nm,1.4s
MAW   Mawson            63.16 155  P        P        15 34 20.9  +1.4
      comp=Z,14nm,0.9s,baz=262,slow=7.9,SNR=5.6
      comp=Z,14nm,0.9s
MAW   Mawson            63.16 155  P        P        15 34 19.3  -0.1
MAW   Mawson            63.16 155  P        P        15 34 19.3  -0.1
ESDC  Sonseca Array     63.61   8  P        P        15 34 23.0  +0.2
      comp=Z,1.3nm,0.8s,baz=197,slow=8.1,SNR=6.4
ESDC                               LR       LR       15 59 06.4
      comp=Z,62nm,21.9s,baz=166,slow=33
      comp=Z,1.3nm,0.8s
ATAH  Atahualpa         64.24 273  LR       LR       16 01 57.9
      comp=Z,339nm,18.8s,baz=109,slow=36
SDV   Santo Domingo     64.54 293  LR       LR       16 00 19.2
      comp=Z,316nm,21.5s,baz=123,slow=34
SDV   Santo Domingo     64.54 293  P        P        15 34 29.7  +0.1
CHIC  Chingaza          65.10 287 eP        P        15 34 33.3  -0.2
RUSC  La Rusia          65.14 289 eP        P        15 34 34.3  +0.4
STVI  Saint Thomas      65.34 305  P        P        15 34 34.0  -0.4
PAMC  Pamplona, Colo    65.52 290 eP        P        15 34 36.6  +0.2
BARC  Barichara         65.57 290 eP        P        15 34 31.5  -4.9
PRAC  Prado             65.68 286 eP        P        15 34 36.1  -0.8
ROSC  El Rosal          65.71 287  P        P        15 34 38.8  +1.3
      comp=Z,8.8nm,0.7s,baz=45,slow=5.7,SNR=4.6
ROSC                               LR       LR       16 02 15.9
      comp=Z,431nm,19.1s,baz=234,slow=35
      comp=Z,8.8nm,0.7s
CBYP  Canovanas         65.97 304  P        P        15 34 38.0  -0.6
VAE   Valguarnera       66.21  24  LR       LR       16 02 44.2
      comp=Z,163nm,18.0s,baz=156,slow=35
SOTA  Rioblanco         66.49 283 eP        P        15 34 42.7   0.0
NORC  Norcasia          66.53 288 eP        P        15 34 41.0  -1.4
PTBC  PUERTO BERRIO,    66.64 289 eP        P        15 34 41.5  -1.5
YOTC  Yotoco, Valle     67.09 285 eP        P        15 34 44.0  -2.1
URIC  Uribia, Colomb    67.15 295  P        P        15 34 44.4  -1.8
URIC                               IAmb     IAmb     15 34 52.2
      comp=Z,17nm,0.9s
SMLC  San Martn de      67.42 291 eP        P        15 34 45.4  -2.5
ZARC  Zaragoza, Cauc    67.45 289  P        P        15 34 46.5  -1.6
ZARC  Zaragoza, Cauc    67.45 289 eP        P        15 34 47.2  -1.0
CBOC  Ciudad Bolivar    67.68 287 eP        P        15 34 45.4  -4.5
UREC  San Jos de Ur     68.16 289 eP        P        15 34 51.0  -1.7
SJCC  San Jacinto, C    68.91 292  P        P        15 34 57.1  -0.2
SJCC  San Jacinto, C    68.91 292 eP        P        15 34 56.8  -0.6
IDI   Anoyia            68.96  33  LR       LR       16 04 59.3
      comp=Z,41nm,18.6s,baz=264,slow=36
LIT   Litokhoron        71.72  28  P        P        15 35 13.6  -0.4
LIT                                pmax     pmax
      comp=Z,7.0nm,1.0s
LIT   Litokhoron        71.72  28  P        P        15 35 13.6  -0.4
DAVOX Davos/Dischmat    73.20  17  LR       LR       16 06 15.0
      comp=Z,98nm,18.9s,baz=246,slow=35
DIVS  Divibare          74.05  24  P        P        15 35 27.7  -0.1
VTS   Vitosha           74.11  27  P        P        15 35 27.3  -1.0
VTS                                pmax     pmax
      comp=Z,3.0nm,0.7s
VTS   Vitosha           74.11  27  P        P        15 35 27.2  -1.0
MDVR  Moldovita         75.29  25⇑ P        P        15 35 35.5  +0.6
MORH  Mrgy, Hungar      75.38  22⇓ P        P        15 35 34.9  -0.4
HERR  Herculane         75.65  25⇑ P        P        15 35 37.2  +0.3
GERES GERESS Array B    76.14  18  P        P        15 35 39.4  -0.3
      comp=Z,0.3nm,0.5s,baz=208,slow=5.6,SNR=2.0
      comp=Z,0.3nm,0.5s
GZR   Gura Zlata        76.22  25⇑ P        P        15 35 39.5  -0.7
GZR   Gura Zlata        76.22  25⇑ P        P        15 35 39.5  -0.7
SIRR  Siria             76.52  24⇑ P        P        15 35 42.2  +0.3
BR131 Keskin Array S    76.84  35⇓eP        P        15 35 45.3  +1.2
BRTR  Keskin Array B    76.84  35  P        P        15 35 44.3  +0.3
      comp=Z,4.8nm,1.1s,baz=189,slow=5.7,SNR=10
      comp=Z,4.8nm,1.1s
BRTR  Keskin Array B    76.84  35 i P       P        15 35 45.2  +1.2
BRTR                               pmax     pmax
      comp=Z,5.0nm,1.1s
BRTR  Keskin Array B    76.84  35  P        P        15 35 43.8  -0.2
ARR   Arges             76.94  27⇑ P        P        15 35 44.6  +0.3
VOIR                    77.17  27⇑ P        P        15 35 45.4  -0.2
VOIR                    77.17  27⇑ P        P        15 35 45.4  -0.2
PSZ   Piszkesteto       77.28  22  P        P        15 35 46.1  -0.1
PSZ                                pmax     pmax
      comp=Z,7.0nm,1.0s
PSZ   Piszkesteto       77.28  22  P        P        15 35 46.0  -0.1
DRGR                    77.36  25⇓ P        P        15 35 46.4  -0.3
DRGR                    77.36  25⇓ P        P        15 35 46.4  -0.3
VRAC  Vranov            77.41  20  LR       LR       16 08 15.9
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      comp=Z,153nm,21.3s,baz=216,slow=34
MLR   Muntele Rosu      77.58  27⇓ P        P        15 35 47.9  -0.1
MLR   Muntele Rosu      77.58  27⇓ P        P        15 35 47.9  -0.1
MLR   Muntele Rosu      77.58  27  P        P        15 35 47.0  -1.1
MLR                                IAmb     IAmb     15 35 48.7
      comp=Z,12nm,1.0s
COVR  Voineasa-Covas    77.98  27⇑ P        P        15 35 42.7  -7.4
OZUR                    78.00  27⇑ P        P        15 35 50.6  +0.3
TPGR  Topolog           78.15  29⇑ P        P        15 35 50.4  -0.6
CLL   Collm             78.18  17 eP        P        15 35 53.0  +2.0
VRI   Vrincioaia        78.21  27⇓ P        P        15 35 50.8  -0.6
VRI   Vrincioaia        78.21  27⇓ P        P        15 35 50.8  -0.6
SBA   Scott Base        78.72 180  P        P        15 35 54.5  +0.7
SBA                                pmax     pmax
      comp=Z,13nm,1.4s
SBA   Scott Base        78.72 180  P        P        15 35 54.5  +0.7
UZH   Uzhgorod          78.74  23 eP        P        15 35 53.5  -0.6
UZH                               e                  15 35 59.7
BURAR Bucovina Array    79.00  26⇓ P        P        15 36 02.6  +6.8
BURAR Bucovina Array    79.00  26⇓ P        P        15 36 02.6  +6.8
VNDA  Vanda             79.02 179  P        P        15 35 56.4  +0.9
      comp=Z,1.8nm,0.9s,baz=230,slow=4.0,SNR=3.8
VNDA                               LR       LR       16 08 22.8
      comp=Z,60nm,18.5s,baz=191,slow=34
      comp=Z,1.8nm,0.9s
VNDA  Vanda             79.02 179  P        P        15 35 56.4  +0.9
VNDA                               pmax     pmax
      comp=Z,4.0nm,1.1s
VNDA  Vanda             79.02 179  IAmb     IAmb     15 36 03.6
      comp=Z,3.9nm,1.1s
SORM  Soroca            80.69  27⇑ P        P        15 36 03.3  -1.4
SORM  Soroca            80.69  27⇑ P        P        15 36 03.3  -1.4
AKASG Malin Array Be    83.05  26  P        P        15 36 16.1  -1.1
      comp=Z,1.1nm,0.6s,baz=216,slow=4.5,SNR=6.7
      comp=Z,1.1nm,0.6s
AKASG Malin Array Be    83.05  26 i P       P        15 36 17.1  -0.1
AKASG Malin Array Be    83.05  26  P        P        15 36 15.2  -2.0
AKBB  Malin Array Si    83.05  26⇑eP        P        15 36 16.6  -0.6
AKBB                               pmax     pmax
      comp=Z,8.0nm,1.3s
AKBB  Malin Array Si    83.05  26  P        P        15 36 16.1  -1.1
RPN   Rapa Nui          84.43 243  LR       LR       16 08 13.0
      comp=Z,84nm,19.0s,baz=129,slow=32
KBZ   Khabaz            84.62  37  P        P        15 36 25.4   0.0
      comp=Z,1.4nm,0.6s,baz=225,slow=5.3,SNR=2.7
      comp=Z,1.4nm,0.6s
KBZ   Khabaz            84.62  37⇓eP        P        15 36 25.8  +0.4
KBZ                                pmax     pmax
      comp=Z,5.0nm,1.5s
KIV   Kislovodsk        84.65  37 eP        P        15 36 26.0  +0.3
KIV                                pmax     pmax
      comp=Z,4.0nm,1.0s
NACGM Naroch            85.48  22⇓eP        P        15 36 28.3  -1.1
      baz=216
D62A  Allapoint, All    86.40 326  P        P        15 36 34.2  +0.1
D62A                               IAmb     IAmb     15 36 41.8
      comp=Z,23nm,1.3s
NOA   NORSAR Array B    86.72  12  P        P        15 36 36.0  +0.6
      comp=Z,0.5nm,0.6s,baz=196,slow=5.1,SNR=2.4
      comp=Z,0.5nm,0.6s
V55A  Taylorsville      87.18 311  P        P        15 36 37.9  -0.4
V55A                               IAmb     IAmb     15 36 47.0
      comp=Z,10.0nm,0.9s
Q56A  Snyder Ridge,     87.53 315  P        P        15 36 40.1  +0.3
BG3   Lake Jocassee     87.93 310  P        P        15 36 42.4  +0.5
U54A  Nelsons Funny     87.94 311  P        P        15 36 42.2  +0.2
VORR  Voronezh          88.03  30 eP        P        15 36 40.0  -1.9
VORR                               pmax     pmax
      comp=Z,80nm,0.4s
V53A  Saluda            88.19 310  P        P        15 36 42.6  -0.5
V53A                               IAmb     IAmb     15 36 51.4
      comp=Z,16nm,1.2s
L56A  Greenwood         88.21 318  P        P        15 36 43.2   0.0
VSU   Vasula            88.34  20⇓eP        P        15 36 44.0  +0.8
VSU                                pmax     pmax
      comp=Z,32nm,1.4s
TRQ   Mont Tremblant    88.82 323  P        P        15 36 45.6  -0.4
TRQ                                IAmb     IAmb     15 36 53.5
      comp=Z,13nm,1.0s
250A  Grady             88.86 306  P        P        15 36 46.1  -0.2
TKL   Tuckaleechee C    88.86 310  LR       LR       16 07 36.6
      comp=Z,34nm,21.0s,baz=156,slow=30
CMIG  Matias Romero     89.19 289  LR       LR       16 15 25.2
      comp=Z,123nm,21.8s,baz=67,slow=35
OBN   Obninsk           89.31  26 eP        P        15 36 47.8   0.0
OBN                               e                  15 40 17.7
OBN                               ePPP      PPP      15 42 13.3
OBN                                pmax     pmax
      comp=Z,9.0nm,0.7s
O53A  New Philadelph    89.49 315  P        P        15 36 49.4  +0.3
O53A                               IAmb     IAmb     15 36 50.9
      comp=Z,12nm,0.9s
FPAL  Fort Paine        89.61 308  P        P        15 36 49.8  -0.1
FPAL                               IAmb     IAmb     15 36 50.9
      comp=Z,7.6nm,0.8s
SCHQ  Schefferville     90.51 332  P        P        15 36 53.4  -0.1
      comp=Z,4.5nm,0.9s,baz=293,slow=5.6,SNR=3.7
SCHQ                               LR       LR       16 10 36.7
      comp=Z,42nm,18.2s,baz=105,slow=31
      comp=Z,4.5nm,0.9s
FINES FINESS Array B    90.57  18  P        P        15 36 54.0  +0.4
      comp=Z,4.5nm,1.1s,baz=151,slow=4.4,SNR=4.8
      comp=Z,4.5nm,1.1s
SADO  Sadowa            90.64 320  LR       LR       16 10 16.0
      comp=Z,34nm,21.0s,baz=116,slow=31
WMQ   Urumqi           113.80  51  PKP      PKiKP    15 42 30.9  +0.1
WMQ                                PP       PP       15 43 28.3  +4.2
WMQ                                PKS      PKSdf    15 46 05.3  -2.1
WMQ                                AMB      AMB
      comp=Z,100nm,5.9s
WMQ                                LR       LR
      comp=Z,360nm,16.1s
CMAR  Chiang Mai Arr   117.20  81  PKP      PKPdf    15 42 37.6  -0.3
      comp=Z,0.6nm,0.7s,baz=259,slow=4.4,SNR=5.3
PZH   PanZhiHua        121.79  73  PKP      PKPdf    15 42 46.8  +0.1
ASAR  Alice Springs    123.28 144  PKP      PKPdf    15 42 48.6  -1.1
      comp=Z,2.1nm,1.1s,baz=214,slow=3.1,SNR=8.3
WRA   Warramunga Arr   126.49 141  PKP      PKPdf    15 42 53.6  -2.3
      comp=Z,1.0nm,1.0s,baz=236,slow=2.2,SNR=3.0
SONM  Songino Array    127.03  47  PKP      PKPdf    15 42 55.4  -0.8
      comp=Z,2.1nm,0.9s,baz=239,slow=2.4,SNR=7.5
ULN   Ulaanbaatar      127.46  47⇓iPKIKP    PKPdf    15 42 57.2  +0.2
XAN   Xi'an            129.04  65  PKP      PKiKP    15 43 03.0  +2.0
ILAR  Eielson Array    129.09 336  PKP      PKPdf    15 42 57.2  -2.2
      comp=Z,0.9nm,0.7s,baz=360,slow=1.5,SNR=12
HHC   Hu-ho-hao-te     131.22  56 ePKP      PKPdf    15 42 58.7  -5.6
XLT   XiLinHaoTe       134.23  51 ePKP      PKPdf    15 43 10.5  +0.6
BILL  Bilibino         135.60   0 ePKIKP    PKPdf    15 43 10.9  -0.7
BILL                               pmax     pmax
      comp=Z,2.0nm,1.3s
NJ2   Nanjing          137.28  68 ePKP      PKPdf    15 43 16.3  +0.5
ZEA   Zeya             137.94  34 ePKIKP    PKPdf    15 43 16.9  +0.6
SEY   Seymchan         139.59  10⇑ePKIKP    PKPdf    15 43 19.8  +0.7
PMG   Port Moresby     142.07 148d iPKIKP   PKiKP    15 43 30.3  +2.3
KLR   Kul'dur          142.64  38⇑ePKIKP    PKPdf    15 43 23.9  -1.1
KSAR  Wonju Array Be   144.23  58  PKIKP    PKPab    15 43 25.3  -0.6
KSAR  Wonju Array Be   144.23  58  PKPdf    PKPab    15 43 25.3  -0.6
KSRS  Korea Array      144.25  58  PKP      PKPab    15 43 25.6  -0.4
      comp=Z,3.6nm,0.9s,baz=273,slow=2.8,SNR=20
USRK  Ussuriysk Ar.    145.11  46  PKPbc    PKPab    15 43 28.9  -0.1
      comp=Z,4.3nm,0.8s,baz=46,slow=8.2,SNR=6.5
USRK  Ussuriysk Ar.    145.11  46  PKP2     PKPbc    15 43 27.3  -1.6
USRK  Ussuriysk Ar.    145.11  46           PKPbc    15 43 27.3  -1.6
MSHR  Mys Shultsa      145.19  49⇓ePKIKP    PKPab    15 43 29.2  -0.1
VLA   Vladivostok      145.48  47⇑ePKIKP    PKPbc    15 43 29.4  -0.7
YSS   Yuzh-Sakhalins   149.92  33 ePKP2     PKPbc    15 43 41.7  -0.5
YSS                                pmax     pmax
      comp=Z,10.0nm,1.1s
PET   Petropavlovsk    150.06  10⇑iPKIKP    PKPab    15 43 46.8  -1.3
MAJO  Matsushiro       152.42  56⇓iPKIKP    PKPbc    15 43 47.8  -0.6
MJAR  Matsushiro Arr   152.43  56  PKPbc    PKPbc    15 43 48.0  -0.5
      comp=Z,7.0nm,1.0s,baz=304,slow=0.4,SNR=11
MJAR  Matsushiro Arr   152.43  56  PKIKP    PKPbc    15 43 47.3  -1.1
MJAR  Matsushiro Arr   152.43  56           PKPbc    15 43 47.3  -1.1
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*IDC **09** 15:44:42.2±2.3, 5°.64N×126°.64E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=141.9km s-min=25.5km az=69.0*

*MAN **09** 15:44:48.9, 5°.54N×126°.55E, h16^{km}, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*

ISC 09 15:44:50.2±1.1, **5°.30N**±0°.08×**126°.32E**±0°.09, **h50^{km}, n10, σ2^{s}.29**/15, **mb3.3**/4, **3C-3D, Mindanao**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time       Res
                                   Op       ISC       h  m  s     ISC
DDMP  Don Marcelino,     1.00 323⇓eP        Pn       15 45 07.0  -1.0
DDMP                              eS        Sn       15 45 21.1  +0.1
GSPH  General Santos     1.57 300⇑iP        Pn       15 45 13.5  -2.2
GSPH                              i S       Sn       15 45 33.7  -1.3
MATI  Mati               1.64 358⇓eP        Pn       15 45 17.0  +0.4
MATI                              eS        Sn       15 45 37.7  +1.2
KCP   Kidapawan          2.09 324⇑eP        Pn       15 45 24.5  +1.6
KCP                               i S       Sn       15 45 53.8  +6.1
BIPH  Bislig             2.87   1⇑eP        Pn       15 45 31.8  -1.6
BIPH                              i S       Sn       15 46 04.9  -1.8
GLSP  General Luna,      4.46 358⇓eP        Pn       15 45 54.3  -1.0
GLSP                              eS        Sn       15 46 29.1   -17
FITZ  Fitzroy Crossi    23.26 182  P        P        15 49 53.9  +0.4
      1.6nm,0.5s,baz=11,slow=11,SNR=1.8
      1.6nm,0.5s
WRA   Warramunga Arr    26.30 163  P        P        15 50 22.1  +0.8
      0.2nm,0.5s,baz=346,slow=10,SNR=1.5
      0.2nm,0.5s
ASAR  Alice Springs     29.73 166  P        P        15 50 53.6  +1.7
      0.1nm,0.4s,baz=346,slow=8.4,SNR=1.6
      0.1nm,0.4s
MKAR  Makanchi Array    56.04 325  P        P        15 54 22.2  -1.8
      0.5nm,0.5s,baz=126,slow=7.4,SNR=7.6
      0.5nm,0.5s
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*IDC **09** 15:47:25.0±0.6, 69°.14N×53°.60W, h0^{km}, mb3.8/20, mbtmp3.9/25, ML3.6/5, MS3.3/17, Error ellipse: s-maj=15.4km s-min=11.1km az=172.0*

*NEIC **09** 15:47:27.0±1.9, 69°.19N±0°.05×53°.56W±0°.06, h10^{km}±1^{km}, mb4.4/79, Error ellipse: s-maj=8.9km s-min=3.3km az=176.0*

*DNK **09** 15:47:27.1±2.2, 69°.12N×53°.70W, h9^{km}±14^{km}, ML3.6*

ISC 09 15:47:26.6±1.6, **69°.10N**±0°.04×**53°.50W**±0°.04, **h13^{km}**±10^{km}, **n169, σ1^{s}.66**/180, **mb4.4**/59, **MS3.4**/13, **4C-2D, Western Kalaallit Nunaat**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time       Res
                                   Op       ISC       h  m  s     ISC
ILULI Ilulissat          0.86  81  Pg       Pg       15 47 44.0  +0.7
ILULI                              Sn       Sb       15 47 56.4  +1.5
ILULI Ilulissat          0.86  81 i P       Pb       15 47 44.1  +0.6
ILULI                              IAML              15 48 02.1
      comp=Z,3µm,0.3s
ILULI Ilulissat          0.86  81⇑iP        Pb       15 47 44.0  +0.6
ILULI                             i S       Sb       15 47 56.6  +1.7
ILULI                              IAML              15 48 02.1
      comp=Z,3µm,0.3s
SFJD  Kangerlussuaq      2.38 152  Pn       Pn       15 48 05.8  +0.7
      comp=Z,30nm,0.3s,baz=337,slow=17,SNR=212
SFJD                               Sn       Sn       15 48 36.0  +1.9
      comp=Z,444nm,0.3s,baz=33,slow=10,SNR=16
      comp=Z,163nm,0.3s
SFJD  Kangerlussuaq      2.38 152  Pn       Pn       15 48 05.8  +0.7
SFJD  Kangerlussuaq      2.38 152           Sn       15 48 36.0  +1.9
SFJD  Kangerlussuaq      2.38 152 i P       Pn       15 48 05.9  +0.7
SFJD                              eS        Sn       15 48 36.1  +2.0
SFJD                               IAML              15 48 43.4
      comp=Z,1µm,0.6s
SFJD  Kangerlussuaq      2.38 152⇑iP        Pn       15 48 05.9  +0.7
SFJD                              eS        Sn       15 48 36.1  +2.0
SFJD                               IAML              15 48 43.4
      comp=Z,1µm,0.6s
NUUG  Nuugaatsiaq        2.45   2 i P       Pn       15 48 04.8  -1.4
NUUG                              i S       Sn       15 48 35.7  -0.3
DY2G  Dye2               3.81 130 i P       Pn       15 48 25.6  +0.5
DY2G                              i S       Sn       15 49 10.9  +1.1
DY2G                               IAML              15 49 26.7
      comp=Z,581nm,0.5s
DY2G  Dye2               3.81 130⇑iP        Pn       15 48 25.5  +0.5
DY2G                              eS        Sn       15 49 09.8  +0.1
DY2G                               IAML              15 49 26.7
      comp=Z,581nm,0.5s
ICESG Greenland Ices     4.96  84 i P       Pn       15 48 41.8  +0.8
ICESG                              IAML              15 50 03.0
      comp=Z,327nm,0.4s
ICESG Greenland Ices     4.96  84⇑iP        Pn       15 48 41.8  +0.8
ICESG                             i S       Sn       15 49 37.0  -1.3
ICESG                              IAML              15 50 03.0
      comp=Z,327nm,0.4s
NUUK  Nuuk               4.99 171 i P       Pn       15 48 41.4  +0.3
NUUK                               IAML              15 50 06.3
      comp=Z,418nm,0.9s
NUUK  Nuuk               4.99 171 i P       Pn       15 48 40.9  -0.2
NUUK                              eS        Sn       15 49 37.1  -1.5
NUUK                               IAML              15 50 06.3
      comp=Z,418nm,0.9s
SUMG  Summit             6.05  48           Pn       15 48 55.4  -0.5
SUMG  Summit             6.05  48⇓iP        Pn       15 48 55.5  -0.4
SUMG                              i S       Sn       15 50 02.2  -2.8
ISOG  Isortoq, Green     6.64 116 i P       Pn       15 49 06.4  +2.6
ISOG  Isortoq, Green     6.64 116 i P       Pn       15 49 04.1  +0.4
ISOG                              e                  15 49 05.5
ISOG                              i S       Sn       15 50 17.3  -1.8
ANGG  Ammassalik, Gr     7.04 112  Pn       Pn       15 49 08.5  -0.7
ANGG  Ammassalik, Gr     7.04 112 i P       Pn       15 49 09.2   0.0
ANGG                              i S       Sn       15 50 24.8  -4.1
ANGG                               IAML              15 51 13.4
      comp=Z,204nm,1.2s
ANGG  Ammassalik, Gr     7.04 112 i P       Pn       15 49 09.1   0.0
ANGG                              i S       Sn       15 50 24.8  -4.1
ANGG                               IAML              15 51 13.4
      comp=Z,204nm,1.2s
FRB   Frobisher Bay      8.06 235  Pn       Pn       15 49 20.6  -2.6
      comp=Z,8.8nm,0.3s,baz=34,slow=12,SNR=39
FRB                                Sn       Sn       15 50 45.6  -8.3
      comp=Z,8.4nm,0.3s,baz=26,slow=10.0,SNR=5.3
FRB                                LR       LR       15 52 19.2
      comp=Z,185nm,20.4s,baz=46,slow=36
      comp=Z,19nm,0.4s
FRB   Frobisher Bay      8.06 235           Pn       15 49 20.6  -2.6
FRB                                         Sn       15 50 45.6  -8.3
SOEG  Soedalen           8.11  86 i P       Pn       15 49 22.1  -1.6
SOEG                               IAML              15 51 42.0
      comp=Z,161nm,0.5s
SOEG  Soedalen           8.11  86 i P       Pn       15 49 22.1  -1.6
SOEG                              i S       Sn       15 50 48.4  -6.7
SOEG                               IAML              15 51 42.0
      comp=Z,161nm,0.5s
IVI   Ivigtut            8.23 162  Pn       Pn       15 49 25.3  -0.2
IVI   Ivigtut            8.23 162 i P       Pn       15 49 25.0  -0.6
IVI                               i S       Sn       15 50 54.1  -4.2
NRS   Narsarsuaq         8.66 153  Pn       Pn       15 49 30.4  -1.0
NRS   Narsarsuaq         8.66 153 i P       Pn       15 49 31.1  -0.3
NRS                                IAML              15 52 01.0
      comp=Z,115nm,0.8s
NRS   Narsarsuaq         8.66 153 i P       Pn       15 49 31.1  -0.3
NRS                               i S       Sn       15 51 03.7  -5.1
NRS                                IAML              15 52 01.0
      comp=Z,115nm,0.8s
TULEG Thule              8.70 336  Pn       Pn       15 49 29.4  -2.4
TULEG Thule              8.70 336 i P       Pn       15 49 28.6  -3.2
TULEG                             eS        Sn       15 50 55.0   -14
SCO   Scoresbysund      10.92  68  Pn       Pn       15 49 59.8  -2.5
SCO   Scoresbysund      10.92  68⇓iP        Pn       15 50 00.7  -1.6
SCO                               eS        Sn       15 51 45.9   -18
DBG   Daneborg          11.53  48 i P       Pn       15 50 08.8  -1.8
DBG                                IAML              15 53 46.7
      comp=Z,35nm,2.2s
DBG   Daneborg          11.53  48 i P       Pn       15 50 08.8  -1.8
DBG                               eS        Sn       15 52 07.3   -12
DBG                                IAML              15 53 46.7
      comp=Z,35nm,2.2s
DAG   Danmarks Havn     12.54  37 i P       Pn       15 50 21.1  -3.3
DAG                                IAML              15 54 06.2
      comp=Z,32nm,1.2s
DAG   Danmarks Havn     12.54  37 i P       Pn       15 50 20.4  -4.0
DAG                               i S       Sn       15 52 27.8   -16
DAG                                IAML              15 54 06.2
      comp=Z,32nm,1.2s
BORG  Borgarnes         13.23  94  Pn       Pn       15 50 32.5  -1.4
      comp=Z,0.2nm,0.3s,baz=224,slow=3.0,SNR=2.0
BORG                               LR       LR       15 55 25.7
      comp=Z,174nm,19.1s,baz=320,slow=36
      comp=Z,8.0nm,0.9s
BORG  Borgarnes         13.23  94  Pn       Pn       15 50 35.1  +1.3
EUNU  Eureka            13.70 336  Pn       Pn       15 50 36.7  -3.5
RES   Resolute Bay      13.74 312  Pn       Pn       15 50 38.5  -2.2
      comp=Z,0.6nm,0.3s,baz=94,slow=8.4,SNR=15
RES                                Sn       Sn       15 53 00.6   -12
      comp=Z,0.3nm,0.3s,baz=52,slow=13,SNR=2.1
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RES				LR	LR	15 55 24.7	
	comp=Z,59nm,20.7s,baz=50,slow=35						
	comp=Z,1.4nm,0.4s						
RES	**Resolute Bay**	**13.74**	**312**	Pn	**Pn**	**15 50 37.8**	**-2.9**
JMIC	**Jan Mayen**	**15.20**	**62**	LR	LR	15 56 11.8	
	comp=Z,55nm,19.5s,baz=292,slow=35						
SCHQ	**Schefferville**	**15.57**	**210**	Pn	**Pn**	**15 51 04.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=359,slow=8.5,SNR=12						
SCHQ				Sn	**Sn**	**15 53 49.8**	**-7.8**
	comp=Z,0.3nm,0.3s,baz=105,slow=10.0,SNR=1.9						
SCHQ				LR	LR	15 56 48.7	
	comp=Z,39nm,20.5s,baz=138,slow=36						
	comp=Z,5.5nm,0.8s						
SCHQ	**Schefferville**	**15.57**	**210**	Pn	**Pn**	**15 51 04.0**	**-1.5**
KBS	**Kingsbay**	**19.16**	**32**	P	**P**	**15 51 46.9**	**-2.2**
KBS				IAmb	IAmb	15 52 11.3	
	comp=Z,22nm,1.1s						
DRLN	**Deer Lake**	**20.00**	**188**	P	**P**	**15 51 58.5**	**-0.1**
DRLN				IAmb	IAmb	15 52 27.4	
	comp=Z,15nm,1.1s						
SPITS	**Spitsbergen Ar**	**20.15**	**34**	P	**P**	**15 52 00.1**	**+0.1**
	comp=Z,6.4nm,1.0s,baz=176,slow=14,SNR=2.3						
	comp=Z,6.4nm,1.0s						
SPITS	**Spitsbergen Ar**	**20.15**	**34**	P	**P**	**15 52 00.1**	**+0.1**
SPB2	**Spitsbergen Ar**	**20.15**	**34**	P	Pn	15 52 01.4	-0.5
SPB2				IAmb	IAmb	15 52 18.6	
	comp=Z,20nm,1.3s						
FCC	**Fort Churchill**	**20.18**	**259**	P	**P**	**15 52 01.1**	**+0.7**
FCC				IAmb	IAmb	15 52 05.5	
	comp=Z,15nm,1.1s						
D62A	**Allapoint, All**	**23.41**	**207**	P	**P**	**15 52 36.7**	**+1.8**
LMN	**Caledonia Moun**	**24.01**	**200**	P	**P**	**15 52 40.2**	**-0.5**
F64A	**Sherman**	**24.49**	**206**	P	**P**	**15 52 44.4**	**-0.7**
F63A	**Nahmakanta, Br**	**24.76**	**207**	P	**P**	**15 52 46.9**	**-0.7**
F63A				IAmb	IAmb	15 52 51.4	
	comp=Z,12nm,1.1s						
YKA	**Yellowknife Ar**	**24.88**	**285**	P	**P**	**15 52 47.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=51,slow=10.0,SNR=5.1						
YKA				LR	LR	16 02 25.4	
	comp=Z,119nm,18.1s,baz=352,slow=36						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**24.88**	**285**	P	**P**	**15 52 47.9**	**-0.6**
PKME	**Peaks-Kenny Pk**	**25.22**	**207**	P	**P**	**15 52 51.6**	**0.0**
PKME				IAmb	IAmb	15 53 09.7	
	comp=Z,14nm,1.1s						
ARCES	**ARCESS Array B**	**26.12**	**52**	P	**P**	**15 53 00.6**	**+0.9**
	comp=Z,6.7nm,0.7s,baz=307,slow=7.8,SNR=12						
ARCES				LR	LR	16 02 25.9	
	comp=Z,32nm,19.2s,baz=332,slow=34						
	comp=Z,6.7nm,0.7s						
ARCES	**ARCESS Array B**	**26.12**	**52**	P	**P**	**15 53 00.6**	**+0.9**
ARCES				IAmb	IAmb	15 53 05.6	
	comp=Z,9.3nm,0.9s						
EKA	**Eskdalemuir Ar**	**26.25**	**96**	P	**P**	**15 53 01.1**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=328,slow=9.3,SNR=1.9						
EKA				LR	LR	16 02 08.0	
	comp=Z,90nm,20.5s,baz=350,slow=34						
	comp=Z,0.9nm,0.6s						
KEV	**Kevo**	**26.41**	**51**	P	**P**	**15 53 03.4**	**+1.1**
LBNH	**Lisbon**	**26.67**	**210**	P	**P**	**15 53 05.9**	**+1.1**
LBNH				IAmb	IAmb	15 53 12.2	
	comp=Z,9.7nm,0.8s						
NOA	**NORSAR Array B**	**27.13**	**75**	P	**P**	**15 53 07.7**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=308,slow=8.7,SNR=2.9						
NOA				LR	LR	16 02 55.7	
	comp=Z,36nm,21.2s,baz=310,slow=34						
	comp=Z,0.3nm,0.7s						
INK	**Inuvik**	**27.18**	**307**	P	**P**	**15 53 07.9**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=344,slow=7.0,SNR=5.4						
INK				LR	LR	16 04 17.5	
	comp=Z,59nm,18.8s,baz=45,slow=37						
	comp=Z,0.9nm,0.5s						
INK	**Inuvik**	**27.18**	**307**	P	**P**	**15 53 07.5**	**-1.7**
E46A	**Sault Ste Mari**	**27.52**	**230**	P	**P**	**15 53 12.4**	**-0.1**
E46A				IAmb	IAmb	15 53 25.2	
	comp=Z,14nm,1.2s						
ULM	**Lac du Bonnet**	**27.64**	**249**	P	**P**	**15 53 13.8**	**+0.2**
ULM				IAmb	IAmb	15 53 14.3	
	comp=Z,10.0nm,1.3s						
M55A	**Ridgway**	**30.72**	**219**	P	**P**	**15 53 41.9**	**+0.9**
M55A				IAmb	IAmb	15 53 44.9	
	comp=Z,3.1nm,0.7s						
BMAR	**Burnt Mountain**	**30.86**	**311**	P	**P**	**15 53 42.4**	**+0.4**
TOLK	**Toolik Lake Re**	**31.28**	**315**	P	**P**	**15 53 45.8**	**+0.1**
TOLK				IAmb	IAmb	15 54 05.5	
	comp=Z,4.8nm,1.4s						
FINES	**FINESS Array B**	**31.81**	**64**	P	**P**	**15 53 51.2**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=323,slow=7.5,SNR=12						
	comp=Z,0.9nm,0.4s						
FINES	**FINESS Array B**	**31.81**	**64**	P	**P**	**15 53 51.0**	**+0.7**
EGAK	**Eagle**	**31.82**	**306**	P	**P**	**15 53 50.7**	**+0.3**
EGAK				IAmb	IAmb	15 53 51.6	
	comp=Z,4.3nm,1.1s						
DAWY	**Dawson**	**31.83**	**304**	P	**P**	**15 53 51.3**	**+0.8**
DAWY				IAmb	IAmb	15 53 52.6	
	comp=Z,5.5nm,0.8s						
N31M	**Braeburn, Yuko**	**32.64**	**298**	P	**P**	**15 53 58.7**	**+1.1**
N31M				IAmb	IAmb	15 54 00.0	
	comp=Z,5.9nm,1.0s						
H24K	**Noodor Dome**	**32.92**	**311**	P	**P**	**15 54 01.2**	**+1.0**
H24K				IAmb	IAmb	15 54 04.8	
	comp=Z,9.3nm,1.5s						
DLBC	**Dease Lake**	**33.09**	**290**	LR	LR	16 07 11.5	
	comp=Z,80nm,21.7s,baz=266,slow=36						
SCRK	**Sand Creek**	**33.24**	**306**	P	**P**	**15 54 03.4**	**+0.4**
SCRK				IAmb	IAmb	15 54 05.9	
	comp=Z,4.1nm,1.2s						
BCAR	**Beaver Creek A**	**33.29**	**304**	P	**P**	**15 54 05.3**	**+1.9**
L27K	**Beaver Creek,**	**33.31**	**304**	P	**P**	**15 54 04.6**	**+1.1**
L27K				IAmb	IAmb	15 54 09.0	
	comp=Z,5.1nm,1.1s						
H23K	**Yukon River**	**33.38**	**312**	P	**P**	**15 54 05.7**	**+1.6**
H23K				IAmb	IAmb	15 54 08.5	
	comp=Z,8.4nm,1.3s						
ILAR	**Eielson Array**	**33.46**	**309**	P	**P**	**15 54 05.5**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=36,slow=8.1,SNR=12						
ILAR				LR	LR	16 08 11.2	
	comp=Z,46nm,19.1s,baz=93,slow=37						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**33.46**	**309**	P	**P**	**15 54 05.5**	**+0.7**
RIDG	**Independent Ri**	**33.67**	**307**	P	**P**	**15 54 07.8**	**+1.1**
RIDG				IAmb	IAmb	15 54 11.6	
	comp=Z,8.2nm,1.3s						
HYT	**Haines Junctio**	**33.69**	**299**	P	**P**	**15 54 07.7**	**+0.8**
HYT				IAmb	IAmb	15 54 34.9	
	comp=Z,3.1nm,0.9s						
MDM	**Murphy Dome**	**33.69**	**310**	P	**P**	**15 54 08.0**	**+1.2**
MDM				IAmb	IAmb	15 54 11.3	
	comp=Z,9.1nm,1.3s						
S61A	**Accomac**	**33.72**	**213**	P	**P**	**15 54 07.9**	**+0.7**
HDA	**Harding Lake**	**33.76**	**309**	P	**P**	**15 54 07.9**	**+0.6**
HDA				IAmb	IAmb	15 54 11.1	
	comp=Z,8.6nm,1.2s						
L26K	**Log Cabin Wild**	**33.78**	**305**	P	**P**	**15 54 09.2**	**+1.6**
L26K				IAmb	IAmb	15 54 12.1	
	comp=Z,5.1nm,1.1s						
SFIN	**Lafayette**	**33.83**	**229**	P	**P**	**15 54 08.7**	**+0.5**
I23K	**Minto, Yukon-K**	**33.85**	**311**	P	**P**	**15 54 09.0**	**+0.9**
I23K				IAmb	IAmb	15 54 15.9	
	comp=Z,8.9nm,1.5s						
M27K	**Edge Creek, AK**	**33.86**	**303**	P	**P**	**15 54 09.9**	**+1.5**
M27K				IAmb	IAmb	15 54 25.4	
	comp=Z,7.7nm,1.4s						
LAO	**LASA Array**	**34.25**	**257**	P	**P**	**15 54 12.5**	**+0.7**
LAO				IAmb	IAmb	15 54 17.0	
	comp=Z,8.2nm,1.2s						
EGMT	**Eagleton**	**34.35**	**262**	P	**P**	**15 54 13.1**	**+0.4**
EGMT				IAmb	IAmb	15 54 17.6	
	comp=Z,3.2nm,0.8s						
IMAR	**Indian Mountai**	**34.36**	**314**	P	**P**	**15 54 13.3**	**+0.8**
RND	**Reindeer**	**35.07**	**309**	P	**P**	**15 54 18.0**	**-0.7**
RND				IAmb	IAmb	15 54 22.3	
	comp=Z,5.7nm,1.1s						
N25K	**Chitina, Valde**	**35.26**	**304**	P	**P**	**15 54 21.8**	**+1.4**
N25K				IAmb	IAmb	15 54 22.8	
	comp=Z,4.3nm,0.8s						
CLL	**Collm**	**35.27**	**85**	P	**P**	**15 54 21.7**	**+1.2**
CLL	**Collm**	**35.27**	**85**	*e*P	**P**	**15 54 22.0**	**+1.5**
	comp=Z,5.0nm,0.7s						
RSSD	**Black Hills**	**35.73**	**252**	P	**P**	**15 54 24.8**	**0.0**
RSSD				IAmb	IAmb	15 54 29.7	
	comp=Z,4.6nm,0.6s						
SCM	**Sheep Creek Mo**	**35.88**	**306**	P	**P**	**15 54 23.8**	**-1.9**
HMT	**Hamilton**	**36.16**	**303**	P	**P**	**15 54 29.7**	**+1.6**
SML	**Sawmill**	**36.19**	**307**	P	**P**	**15 54 29.5**	**+1.1**
GCMT	**Greycliff**	**36.23**	**260**	P	**P**	**15 54 29.4**	**+0.4**
PPLA	**Purkeypile**	**36.40**	**310**	P	**P**	**15 54 30.7**	**+0.5**
T50A	**Nancy**	**36.40**	**225**	P	**P**	**15 54 31.2**	**+0.8**
T50A				IAmb	IAmb	15 54 32.1	
	comp=Z,4.0nm,0.7s						
K20K	**Telida**	**36.53**	**312**	P	**P**	**15 54 32.5**	**+1.2**
K20K				IAmb	IAmb	15 54 34.8	
	comp=Z,10nm,1.4s						
NEW	**Newport**	**36.78**	**269**	LR	LR	16 09 55.4	
	comp=Z,71nm,18.7s,baz=12,slow=37						
BOZ	**Bozeman (W)**	**37.09**	**261**	P	**P**	**15 54 37.6**	**+1.2**
V53A	**Saluda**	**37.19**	**221**	P	**P**	**15 54 38.0**	**+0.8**
V53A				IAmb	IAmb	15 54 57.1	
	comp=Z,9.8nm,1.4s						
KHC	**Kasperske Hory**	**37.29**	**87**	*e*P	**P**	**15 54 40.5**	**+2.7**
BBB	**Bella Bella**	**37.43**	**282**	LR	LR	16 10 25.6	
	comp=Z,106nm,18.2s,baz=19,slow=37						
YHH	**Holmes Hill**	**37.52**	**260**	P	**P**	**15 54 41.4**	**+1.3**
GERES	**GERESS Array B**	**37.57**	**87**	P	**P**	**15 54 42.4**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=316,slow=7.6,SNR=5.7						
	comp=Z,0.6nm,0.5s						
GERES	**GERESS Array B**	**37.57**	**87**	P	**P**	**15 54 42.4**	**+2.1**
YPP	**Pitchstone Pla**	**37.95**	**259**	P	**P**	**15 54 45.5**	**+1.8**
YPP				IAmb	IAmb	15 54 47.6	
	comp=Z,7.9nm,1.1s						
SWET	**Sewanee**	**38.39**	**225**	P	**P**	**15 54 47.4**	**+0.2**
BW06	**Boulder Array**	**38.83**	**257**	P	**P**	**15 54 51.2**	**+0.1**
PD31	**Pinedale Array**	**38.83**	**257**	P	**P**	**15 54 51.1**	**0.0**
PDAR	**Pinedale Array**	**38.83**	**257**	P	**P**	**15 54 51.7**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=48,slow=8.3,SNR=17						
PDAR				LR	LR	16 11 01.3	
	comp=Z,82nm,18.4s,baz=67,slow=36						
	comp=Z,1.8nm,0.6s						
PDAR	**Pinedale Array**	**38.83**	**257**	P	**P**	**15 54 51.1**	**0.0**
PLID	**Pearl Lake**	**39.09**	**265**	P	**P**	**15 54 53.6**	**+0.4**
N23A	**Red Feather La**	**39.24**	**252**	P	**P**	**15 54 55.7**	**+1.1**
N23A				IAmb	IAmb	15 54 57.9	
	comp=Z,13nm,1.2s						
ESDC	**Sonseca Array**	**39.35**	**112**	P	**P**	**15 54 56.7**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=334,slow=9.4,SNR=4.9						
	comp=Z,0.7nm,0.6s						
TIXI	**Tiksi**	**39.48**	**359**	P	**P**	**15 54 56.9**	**+0.9**
HWUT	**Hardware Ranch**	**40.55**	**258**	P	**P**	**15 55 06.8**	**+1.3**
O20A	**White River Ci**	**40.70**	**254**	P	**P**	**15 55 07.4**	**+0.7**
O20A				IAmb	IAmb	15 55 08.5	
	comp=Z,5.1nm,0.8s						
RDMU	**Red Mountain**	**40.77**	**255**	P	**P**	**15 55 07.3**	**0.0**
AKASG	**Malin Array Be**	**41.47**	**72**	P	**P**	**15 55 12.7**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=334,slow=9.0,SNR=6.9						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**41.47**	**72**	P	**P**	**15 55 12.7**	**+0.1**
AKASG	**Malin Array Be**	**41.47**	**72**	IAmb	IAmb	15 55 13.4	
	comp=Z,1.8nm,1.2s						
P18A	**Preston Nutter**	**41.85**	**255**	P	**P**	**15 55 16.3**	**0.0**
DUG	**Dugway, Tooele**	**42.24**	**258**	P	**P**	**15 55 18.2**	**-1.0**
SRU	**San Rafael Swe**	**42.41**	**255**	P	**P**	**15 55 21.0**	**+0.4**
NRCA	**Norcia**	**42.52**	**92**	P	**P**	**15 55 22.2**	**+0.8**
NRCA				IAmb	IAmb	15 55 25.5	
	comp=Z,5.3nm,0.5s						
ELK	**Elko**	**42.61**	**261**	LR	LR	16 13 00.1	
	comp=Z,82nm,21.1s,baz=83,slow=36						
Q16A	**Castle Valley**	**42.80**	**256**	P	**P**	**15 55 24.3**	**+0.4**
LCMT	**Little Creek M**	**45.23**	**257**	P	**P**	**15 55 44.5**	**+1.2**
LCMT				IAmb	IAmb	15 55 45.8	
	comp=Z,4.5nm,0.9s						
NVAR	**Mina Array Bea**	**45.75**	**263**	P	**P**	**15 55 47.9**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=30,slow=6.4,SNR=3.6						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**45.75**	**263**	P	**P**	**15 55 46.8**	**-0.7**
FNA	**Florina**	**47.28**	**86**	P	**P**	**15 55 59.6**	**+0.4**
TXAR	**Lajitas Array**	**49.03**	**243**	P	**P**	**15 56 13.8**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=56,slow=6.7,SNR=4.8						
TXAR				LR	LR	16 17 07.7	
	comp=Z,62nm,21.1s,baz=28,slow=36						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**49.03**	**243**	P	**P**	**15 56 13.8**	**+0.9**
MLPR	**Magueyes Islan**	**51.81**	**196**	P	**P**	**15 56 35.1**	**+1.2**
ABKAR	**Akbulak array**	**52.29**	**49**	P	**P**	**15 56 38.2**	**+1.1**
BRTR	**Keskin Array B**	**52.56**	**76**	P	**P**	**15 56 41.3**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=298,slow=6.2,SNR=2.9						
	comp=Z,1.1nm,0.6s						
ZAA0	**Zalesovo Array**	**53.52**	**29**	P	**P**	**15 56 45.4**	**-0.8**
ZALV	**Zalesovo Beam**	**53.52**	**29**	P	**P**	**15 56 46.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=347,slow=6.1,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**53.52**	**29**	P	**P**	**15 56 45.3**	**-0.9**
MAKZ	**Makanchi**	**59.83**	**34**	P	**P**	**15 57 31.1**	**0.0**
MAKZ				IAmb	IAmb	15 57 34.8	
	comp=Z,5.1nm,1.3s						
MKAR	**Makanchi Array**	**59.90**	**34**	P	**P**	**15 57 32.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=347,slow=5.3,SNR=6.3						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**59.90**	**34**	P	**P**	**15 57 31.6**	**0.0**
KKAR	**Karatay Array**	**60.76**	**44**	P	**P**	**15 57 38.4**	**+0.8**
SONM	**Songino Array**	**62.44**	**15**	P	**P**	**15 57 49.8**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=326,slow=4.4,SNR=5.9						
	comp=Z,0.8nm,0.5s						
SONM	**Songino Array**	**62.44**	**15**	P	**P**	**15 57 49.7**	**+0.8**
SONM				IAmb	IAmb	15 57 53.0	
	comp=Z,3.0nm,1.2s						
ULN	**Ulaanbaatar**	**62.47**	**15**	P	**P**	**15 57 50.3**	**+1.2**
YSS	**Yuzh-Sakhalins**	**63.64**	**348**	P	**P**	**15 57 57.8**	**+1.1**
WMQ	**Urumqi**	**63.79**	**30**	*e*P	**P**	**15 57 58.4**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=N,990nm,16.7s						
WMQ				LR	LR		
	comp=Z,850nm,21.7s						
GAR	**Garm**	**64.57**	**46**	P	**P**	**15 58 04.7**	**+1.5**
KSH	**Kashi**	**65.47**	**41**	P	**P**	**15 58 13.5**	**+4.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.77**	**119**	P	**P**	**15 58 10.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=342,slow=6.5,SNR=7.2						
	comp=Z,0.5nm,0.5s						
HHC	**Hu-ho-hao-te**	**69.81**	**12**	*e*P	**P**	**15 58 36.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
PZH	**PanZhiHua**	**82.97**	**22**	P	**P**	**15 59 51.6**	**+0.4**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
CMAR	**Chiang Mai Arr**	**90.47**	**26**	P	**P**	**16 00 27.9**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=328,slow=5.6,SNR=9.8						
	comp=Z,1.4nm,0.9s						
ASAR	**Alice Springs**	**134.33**	**350**	PKP	**PKPdf**	**16 06 41.4**	**-2.2**
	comp=Z,2.2nm,0.8s,baz=347,slow=4.4,SNR=18						
ASAR	**Alice Springs**	**134.33**	**350**		**PKPdf**	**16 06 41.4**	**-2.2**

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*IDC **09** 15:55:46.6±1.8, 38.°08N×142.°51E, h0^{km}, mb3.2/2, mbtmp3.3/5, ML2.8/3, Error ellipse: s-maj=36.9km s-min=24.6km az=76.0*

*JMA **09** 15:55:55.8±0.1, 38.°3N±0.°3×141.°8E±0.°5, h47^{km}, MV3.5/39, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

ISC 09 15:55:50.9±1.1**, 38.°22N**±0.°05×**142.°13E**±0.°09**, h21**^{km}±5^{km}**, n25, σ1.^{s}66**/31**, 13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.53**	**280**	⇓*i*P	**Pn**	**15 56 04.6**	**+1.2**
JIKH				⇓S	**Sn**	**15 56 10.6**	**-1.1**
JIO	**Ouri**	**0.66**	**291**	⇓*i*P	**Pn**	**15 56 05.8**	**+0.8**
JIO				⇓S	**Sb**	**15 56 12.8**	**+0.2**
JKMT	**Kesennumamotoy**	**0.78**	**319**	⇓*i*P	**Pn**	**15 56 07.8**	**+1.0**
JKMT				⇓S	**Sb**	**15 56 16.1**	**+0.1**
OFUJ	**Ofunato**	**0.93**	**337**	*i* P	**Pn**	**15 56 10.4**	**+1.6**
OFUJ				*e*S	**Sb**	**15 56 20.6**	**+0.3**
JMK	**Ichinoseki**	**1.02**	**316**	*i* P	**Pn**	**15 56 11.0**	**+1.0**
JMK				S	**Sb**	**15 56 21.5**	**-1.4**
JMM	**Marumori**	**1.12**	**252**	⇓*i*P	**Pb**	**15 56 12.2**	**+0.7**
JMM				⇓*e*S	**Sb**	**15 56 24.1**	**-1.4**
JOU	**Okura**	**1.17**	**278**	⇓*i*P	**Pb**	**15 56 12.8**	**+0.4**
JOU				⇓S	**Sb**	**15 56 25.2**	**-1.8**
JFK	**Kawauchi**	**1.31**	**230**	P	**Pb**	**15 56 16.0**	**+1.1**
JFK				*e*S	**Sn**	**15 56 30.6**	**-0.4**
JOM	**Ohasama**	**1.41**	**333**	⇓P	**Pb**	**15 56 17.0**	**+0.4**
JOM				⇓*e*S	**Sn**	**15 56 32.8**	**-0.7**
JYK	**Kaneyama**	**1.56**	**297**	⇓*i*P	**Pn**	**15 56 18.1**	**+0.7**
JFT	**Otama**	**1.58**	**244**	*i* P	**Pb**	**15 56 19.7**	**+0.2**
JFT				S	**Sn**	**15 56 37.1**	**-0.6**
JYS	**Shirataka**	**1.63**	**271**	*i* P	**Pn**	**15 56 19.3**	**+0.9**
JRG	**Rokugo**	**1.66**	**316**	P	**Pb**	**15 56 20.1**	**-0.7**
MJAR	**Matsushiro Arr**	**3.55**	**243**	Pn	**Pn**	**15 56 47.1**	**+2.3**
	0.2nm,0.3s,baz=61,slow=10,SNR=8.0						
MJAR				Sn	**Sn**	**15 57 30.6**	**+4.5**
	0.2nm,0.3s,baz=182,slow=27,SNR=1.5						
	2.4nm,0.5s						
ASAJ	**Asahikawa**	**5.90**	**3**	Pn	**Pn**	**15 57 18.5**	**+1.4**
	0.6nm,0.3s,baz=204,slow=12,SNR=8.6						
ASAJ				Sn	**Sn**	**15 58 24.9**	**+0.8**
	0.5nm,0.3s,baz=216,slow=26,SNR=1.8						
	1.5nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.70**	**311**	Pn	**Pn**	**15 58 11.8**	**+2.7**
	0.2nm,0.3s,baz=134,slow=14,SNR=2.6						
	1.3nm,0.5s						
GUMO	**Guam**	**24.65**	**174**	P	**P**	**16 01 05.8**	**-4.4**
	130nm,1.0s,baz=41,slow=11,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	16 32 01.3	
	baz=316,slow=76						
H11N1	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	16 32 02.0	
	baz=316,slow=76						
H11N3	**WAKE ISLAND Hy**	**28.31**	**124**	T	T	16 32 02.7	
	baz=316,slow=76						
H11S1	**WAKE ISLAND Hy**	**29.05**	**126**	T	T	16 32 58.6	
	baz=318,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.06**	**126**	T	T	16 32 58.4	
	baz=318,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.07**	**126**	T	T	16 32 59.9	
	baz=318,slow=76						
MKAR	**Makanchi Array**	**43.98**	**301**	P	**P**	**16 03 56.7**	**0.0**
	0.2nm,0.5s,baz=85,slow=12,SNR=2.8						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**58.31**	**189**	P	**P**	**16 05 44.2**	**-0.1**
	0.2nm,0.6s,baz=5.2,slow=7.0,SNR=1.0						
	0.2nm,0.6s						

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*JMA **09** 15:59:14.0±0.1, 36.°7N±0.°3×141.°8E±0.°7, h50^{km}±2^{km}, MV3.0/26, E OFF FUKUSHIMA PREF*

*IDC **09** 15:59:19.1±3.3, 36.°41N×141.°17E, h0^{km}, mb3.3/2, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=54.0km s-min=30.0km az=36.0*

ISC 09 15:59:15.7±1.9**, 36.°72N**±0.°05×**141.°7E**±0.°1**, h35**^{km}**, n13, σ0.^{s}62**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.81**	**298**	P	**Pn**	**15 59 30.0**	**-0.7**
JHO	**Hitachi**	**0.91**	**263**	P	**Pn**	**15 59 31.1**	**-0.9**
JHO				*e*S	**Sn**	**15 59 43.9**	**+0.1**
JFK	**Kawauchi**	**0.91**	**315**	P	**Pn**	**15 59 31.4**	**-0.7**
JFK				S	**Sn**	**15 59 44.1**	**-0.1**
JHYU	**Hitachinakayam**	**0.97**	**247**	P	**Pn**	**15 59 32.1**	**-0.7**
JHYU				S	**Sn**	**15 59 45.2**	**-0.1**
JFFD	**Fukushimafurud**	**0.97**	**292**	P	**Pn**	**15 59 32.3**	**-0.7**
JFT	**Otama**	**1.34**	**307**	P	**Pn**	**15 59 38.0**	**0.0**
JMM	**Marumori**	**1.34**	**328**	P	**Pn**	**15 59 37.6**	**-0.4**
JIO	**Ouri**	**1.75**	**351**	P	**Pn**	**15 59 43.7**	**+0.2**
JAG	**Ashikaga**	**1.82**	**261**	P	**Pn**	**15 59 44.7**	**+0.1**
JAG				S	**Sn**	**16 00 07.3**	**+0.8**
MJAR	**Matsushiro Arr**	**2.81**	**267**	Pn	**Pn**	**15 59 58.5**	**+0.3**
	0.7nm,0.3s,baz=92,slow=12,SNR=34						
MJAR				Sn	**Sn**	**16 00 31.9**	**+1.1**
	0.6nm,0.3s,baz=325,slow=28,SNR=4.8						
	7.6nm,0.4s						
JHJ	**Hachijo jima 2**	**3.92**	**204**	Pn	**Pn**	**16 00 13.3**	**-0.2**
	10nm,0.3s,baz=18,slow=14,SNR=1.8						
JHJ				Sn	**Sn**	**16 00 58.5**	**+0.2**
	11nm,0.3s,baz=38,slow=16,SNR=0.9						
	216nm,1.1s						
WRA	**Warramunga Arr**	**56.79**	**188**	P	P	16 09 02.5	+6.1
	0.2nm,0.5s,baz=360,slow=7.5,SNR=1.6						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**60.51**	**188**	P	P	16 09 28.8	+6.4
	0.5nm,1.1s,baz=13,slow=8.7,SNR=2.2						
	0.5nm,1.1s						

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*IDC **09** 16:00:20.3±1.1, 11.°27N×91.°55E, h0^{km}, mb3.8/7, mbtmp3.7/9, ML3.6/2, MS4.6/1, Error ellipse: s-maj=31.7km s-min=19.3km az=62.0*

*NEIC **09** 16:00:22.1±2.4, 11.°27N±0.°02×91.°40E±0.°08, h10^{km}±1^{km}, mb4.3/19, Error ellipse: s-maj=14.1km s-min=2.9km az=282.0*

*NDI **09** 16:00:24.7±2.4, 11.°33N×91.°48E, h24^{km}±27^{km}, ML4.5, mb4.3(NEIC)*

ISC 09 16:00:21.9±0.6**, 11.°38N**±0.°07×**91.°40E**±0.°05**, h10**^{km}**, n52, σ1.^{s}79**/50**, mb4.1**/17**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.34**	**78**	*e*P	**Pn**	**16 00 46.7**	**-0.1**
PBA				*e*S	**Sb**	**16 01 05.5**	**+1.0**
PBA				IAML		16 01 07.2	
	comp=N,16μm,0.3s						
PBA				IAML		16 01 07.5	
	comp=E,7μm,0.3s						
DGPR	**DIGLIPUR**	**2.33**	**40**	*e*P	**Pn**	**16 01 00.7**	**+0.4**
DGPR				*e*S	**Sn**	**16 01 28.6**	**-0.4**
LHMI	**Lhok Sumawe**	**8.22**	**138**	Pn	**Pn**	**16 02 21.9**	**+0.6**
SRIT	**Nakonsritamara**	**8.54**	**108**	Pn	**Pn**	**16 02 24.9**	**-0.8**
CM31	**Chiang Mai Arr**	**10.13**	**45**	Pn	**Pn**	**16 02 49.4**	**+1.9**
CMAR	**Chiang Mai Arr**	**10.13**	**45**	Pn	**Pn**	**16 02 47.0**	**-0.5**
	comp=E,0.1nm,0.3s,baz=238,slow=15,SNR=3.5						
CMAR				Sn	**Sn**	**16 04 37.3**	**-4.0**
	comp=E,0.1nm,0.3s,baz=238,slow=27,SNR=1.7						
	comp=E,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**10.13**	**45**	Pn	**Pn**	**16 02 49.7**	**+2.2**
BWNR	**Bhubaneshwar**	**10.37**	**329**	*e*P	**Pn**	**16 02 52.1**	**+1.4**
BWNR				*e*S	Sn	16 04 38.2	-8.9
RAGD	**RAYAGADA**	**10.94**	**317**	*e*P	**Pn**	**16 03 01.1**	**+2.4**
RAGD				*e*S	**Sn**	**16 04 54.8**	**-6.5**
PALK	**Pallekele**	**11.32**	**250**	Pn	**Pn**	**16 03 04.1**	**+0.3**
	comp=E,0.8nm,0.3s,baz=165,slow=10,SNR=6.4						
PALK				Sn	Sn	16 05 00.1	-10
	comp=E,3.1nm,0.3s,baz=275,slow=19,SNR=7.5						
	comp=E,1.8nm,0.3s						
VJD	**Vijayawada**	**11.61**	**297**	*e*x	x	16 03 20.1	
VJD				*e*S	Sn	16 05 08.1	-10
GSI	**Gunungsitoli**	**11.74**	**148**	Pn	**Pn**	**16 03 09.1**	**-0.5**
BLSP	**Bilaspur**	**13.88**	**322**	*e*P	**Pn**	**16 03 40.1**	**+1.2**
ODAN	**Odare**	**15.85**	**347**	*e*P	**Pn**	**16 04 07.4**	**+1.9**
RAMN	**Ramite**	**16.13**	**344**	*e*P	**Pn**	**16 04 11.1**	**+2.0**
TAPN	**Taplejung**	**16.26**	**348**	*e*P	**Pn**	**16 04 12.1**	**+1.3**
PKIN	**Phulchoki**	**17.07**	**342**	*e*P	**Pn**	**16 04 23.0**	**+1.9**
GKN	**Gorkha**	**17.71**	**340**	*e*P	**P**	**16 04 31.9**	**+2.1**
KOLN	**Koldanda**	**17.87**	**337**	*e*P	**P**	**16 04 34.3**	**+2.7**
DANN	**Dangsing**	**18.34**	**338**	*e*P	**Pn**	**16 04 39.3**	**+2.5**
ENH	**Enshi**	**25.21**	**39**	P	**P**	**16 05 48.1**	**+0.1**
ENH				IAmb	IAmb	16 06 05.9	
	comp=Z,8.3nm,0.7s						
H08S3	**Diego Garcia H**	**26.66**	**226**	T	T	16 33 53.1	
	baz=46						
H08S2	**Diego Garcia H**	**26.67**	**226**	T	T	16 34 09.1	
	baz=46						
H08S1	**Diego Carcia H**	**26.68**	**226**	T	T	16 34 15.0	
	baz=46						
TPUB	**Ta-pu**	**30.25**	**63**	P	**P**	**16 06 34.1**	**+0.9**
AAK	**Ala-Archa**	**34.45**	**338**	P	**P**	**16 07 11.5**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=232,slow=7.7,SNR=3.7						
	comp=Z,0.7nm,0.3s						
AAK	**Ala-Archa**	**34.45**	**338**	IAmb	IAmb	16 07 13.4	
	comp=Z,1.7nm,0.9s						
MK31	**Makanchi Array**	**36.13**	**349**	P	**P**	**16 07 25.5**	**+1.3**
MK31				IAmb	IAmb	16 07 27.1	
	comp=Z,4.1nm,1.5s						
MKAR	**Makanchi Array**	**36.13**	**349**	P	**P**	**16 07 25.5**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=162,slow=8.0,SNR=11						
	comp=Z,1.1nm,0.6s						
MAKZ	**Makanchi**	**36.20**	**349**	P	**P**	**16 07 26.2**	**+1.4**
MAKZ				IAmb	IAmb	16 07 40.2	
	comp=Z,2.7nm,1.0s						
KKAR	**Karatay Array**	**36.44**	**334**	P	**P**	**16 07 29.0**	**+2.0**
JOW	**Kunigami**	**37.91**	**61**	P	**P**	**16 07 39.0**	**-0.7**
SONM	**Songino Array**	**38.46**	**16**	P	**P**	**16 07 43.4**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=216,slow=7.1,SNR=4.3						
	comp=Z,0.6nm,0.4s						
GEYT	**Alibeck**	**39.80**	**317**	P	**P**	**16 07 54.1**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**39.80**	**317**	P	**P**	**16 07 54.0**	**-1.4**
GYA0B				IAmb	IAmb	16 08 14.5	
	comp=Z,3.4nm,0.7s						
KURBB	**Kurchatov Arra**	**40.53**	**347**	P	**P**	**16 08 02.7**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=158,slow=7.7,SNR=4.6						
	comp=Z,0.8nm,0.8s						

KURK	**Kurchatov**	**40.60**	**348**	P	**P**	**16 08 02.7**	**+1.0**
KSRS	**Korea Array**	**41.77**	**45**	P	**P**	**16 08 11.2**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=224,slow=6.8,SNR=1.8						
	comp=Z,0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**44.73**	**130**	P	**P**	**16 08 34.4**	**-1.3**
FITZ				IAmb	IAmb	16 09 01.6	
	comp=Z,8.0nm,1.0s						
ABKAR	**Akbulak array**	**45.88**	**332**	P	**P**	**16 08 43.6**	**-0.8**
MTN	**Manton Dam**	**46.20**	**120**	P	**P**	**16 08 45.1**	**-2.4**
WB0	**Warramunga Arr**	**52.44**	**126**	P	**P**	**16 09 33.4**	**-1.7**
WB0				IAmb	IAmb	16 09 47.3	
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**52.49**	**126**	P	**P**	**16 09 34.1**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=307,slow=8.1,SNR=26						
	comp=Z,1.3nm,0.6s						
WB2	**Warramunga Arr**	**52.50**	**126**	P	**P**	**16 09 34.2**	**-1.4**
WB2				IAmb	IAmb	16 09 47.5	
	comp=Z,6.3nm,1.0s						
WR0	**Warramunga Arr**	**52.66**	**126**	P	**P**	**16 09 35.5**	**-1.3**
WR0				IAmb	IAmb	16 10 02.6	
	comp=Z,10nm,1.4s						
OPO	**Ambohidratompo**	**52.80**	**236**	LR	LR	16 28 01.1	
	comp=Z,644nm,20.8s,baz=198,slow=31						
ASAR	**Alice Springs**	**54.23**	**130**	P	**P**	**16 09 46.9**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=305,slow=6.9,SNR=14						
	comp=Z,0.7nm,0.7s						
TIXI	**Tiksi**	**64.37**	**12**	P	**P**	**16 10 57.5**	**-0.2**
TIXI				IAmb	IAmb	16 11 20.4	
	comp=Z,5.3nm,1.5s						
ITM	**Ithomi**	**66.88**	**306**	P	**P**	**16 11 13.8**	**-0.7**
FINES	**FINESS Array B**	**68.37**	**332**	P	**P**	**16 11 23.9**	**+0.5**
EUNU	**Eureka**	**88.70**	**360**	P	**P**	**16 13 15.9**	**+0.7**
EUNU				IAmb	IAmb	16 13 18.3	
	comp=Z,2.1nm,0.9s						
IMAR	**Indian Mountai**	**89.41**	**22**	P	**P**	**16 13 19.5**	**+0.8**

*BJI **09** 16:03:44.7±0.0, 11°.08N×91°.54E, h14^{km}, mb4.9/78, mB5.0/64, Ms5.1/88, Ms7 4.8/80*

*IDC **09** 16:03:45.1±0.4, 11°.30N×91°.46E, h0^{km}, mb4.7/44, mbtmp4.6/48, ML4.3/4, MS4.6/60, Error ellipse: s-maj=11.1km s-min=9.6km az=26.0*

*MOS **09** 16:03:45.0±1.0, 11°.28N×91°.51E, h10^{km}, mb5.2/86, MS4.7/16, Error ellipse: s-maj=6.7km s-min=3.7km az=110.4*

*NEIC **09** 16:03:47.2±1.6, 11°.35N±0°.07×91°.51E±0°.07, h10^{km}±1^{km}, mb5.2/155, Error ellipse: s-maj=12.1km s-min=11.0km az=343.0*

*DJA **09** 16:03:47.8±0.5, 11°N±4°×9°1E±°, h10^{km}, M4.8/24, mb5.1/24, mB5.4/19, Mw(mB)4.8/19, MwMwp4.8/6, Mwp5.1/6*

*NDI **09** 16:03:49.0±3.0, 11°.40N×91°.49E, h10^{km}, mb5.2, mb5.2(NEIC)*

*GCMT **09** 16:03:50.2±0.1, 11°.29N±0°.01×91°.56E±0°.01, h19^{km}, MW5.3/130, Moment Tensor Solution. s89,c126; s130,c240; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.25±.02; M$_{\theta\theta}$-0.88±.02; M$_{\phi\phi}$1.13±.02; M$_{r\theta}$0.13±.03; M$_{\theta\phi}$0.22±.01; M$_{\phi r}$-0.39±.04; Best double couple: M$_0$1.10100×10^{17} NP1:φ$_s$232.00000°, δ69.00000°, λ-1.00000°. NP2:φ$_s$322.00000°, δ89.00000°, λ-159.00000°. Principal axes: T 1.2460, Plg14.0000°, Azm95.0000°; N -0.2940, Plg69.0000°, Azm324.0000°; P -0.9560, Plg15.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 16:03:48.4±0.4**, 11°.29N**±0°.03×**91°.49E**±0°.03**, h18^{km}**±2^{km}**, h18^{km}:pP-P, n729,** σ1^{s}**74**/763**, mb5.0**/218**, MS4.7**/106**, 41C-43D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.28**	**73**	*e*P	**Pb**	**16 04 11.9**	**-0.1**
PBA				*e*S	**Sg**	**16 04 30.5**	**+0.6**
DGPR	**DIGLIPUR**	**2.35**	**37**	*e*P	**Pn**	**16 04 26.0**	**-0.1**
LHMI	**Lhok Sumawe**	**8.09**	**138**	Pn	**Pn**	**16 05 45.2**	**+0.1**
LHMI	**Lhok Sumawe**	**8.09**	**138**	P	**Pn**	**16 05 46.3**	**+1.3**
	5µm4µm217nm,0.7s						
LHMI	**Lhok Sumawe**	**8.09**	**138**	P	**Pn**	**16 05 46.4**	**+1.4**
SRIT	**Nakonsritamara**	**8.43**	**108**	Pn	**Pn**	**16 05 49.4**	**-0.4**
KCSI	**Kotacane, Aceh**	**9.91**	**141**	P	**Pn**	**16 06 08.9**	**-1.2**
	1µm43nm,0.8s						
CM31	**Chiang Mai Arr**	**10.13**	**44**		**Pn**	**16 06 11.7**	**-1.5**
CMAR	**Chiang Mai Arr**	**10.13**	**44**	Pn	**Pn**	**16 06 11.4**	**-1.7**
	1.8nm,0.3s,baz=239,slow=15,SNR=35						
CMAR				Sn	**Sn**	**16 07 58.8**	**-7.7**
	1.5nm,0.3s,baz=296,slow=19,SNR=1.2						
	8.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**10.13**	**44**	*i* P	**Pn**	**16 06 13.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,34nm,0.8s						
CHTO	**Chiang Mai**	**10.38**	**43**	P	**Pn**	**16 06 14.7**	**-1.9**
CHTO	**Chiang Mai**	**10.38**	**43**		**Pn**	**16 06 14.7**	**-1.9**
CHTO	**Chiang Mai**	**10.38**	**43**	P	**Pn**	**16 06 18.5**	**+1.9**
TSI	**Tuntungan**	**10.44**	**137**	P	Pn	16 06 33.8	+16
BWNR	**Bhubaneshwar**	**10.49**	**329**	*e*P	**Pn**	**16 06 15.4**	**-2.6**
KULM	**Kulim**	**10.85**	**123**	Pn	**Pn**	**16 06 22.4**	**-0.5**
RAGD	**RAYAGADA**	**11.07**	**317**	*e*P	**Pn**	**16 06 25.4**	**-0.6**
PSI	**Prapat**	**11.20**	**138**	Pn	**Pn**	**16 06 27.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=342,slow=15,SNR=2.3						
PSI				Sn	**Sn**	**16 08 28.9**	**-3.9**
	comp=Z,1.7nm,0.3s,baz=163,slow=19,SNR=1.7						
PSI				LR	LR	16 11 32.0	
	comp=Z,5µm,21.9s,baz=313,slow=41						
	comp=Z,2.7nm,0.4s						
BRDH	**Bariadhala**	**11.33**	**1**	Pn	**Pn**	**16 06 26.9**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=1.5						
BRDH				Sn	**Sn**	**16 08 28.2**	**-7.5**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=1.3						
	comp=Z,1.0nm,0.3s						
PALK	**Pallekele**	**11.37**	**250**	Pn	**Pn**	**16 06 28.6**	**-1.5**
	comp=Z,9.4nm,0.3s,baz=178,slow=13,SNR=14						
PALK				Sn	Sn	16 08 26.9	-10
	comp=Z,35nm,0.3s,baz=258,slow=17,SNR=3.0						
PALK				LR	LR	16 10 23.0	
	comp=Z,4µm,19.0s,baz=171,slow=35						
	comp=Z,20nm,0.3s						
PALK	**Pallekele**	**11.37**	**250**	*de*P	**Pn**	**16 06 29.8**	**-0.3**
PALK	**Pallekele**	**11.37**	**250**	Pn	**Pn**	**16 06 29.4**	**-0.7**
GSI	**Gunungsitoli**	**11.61**	**148**	Pn	**Pn**	**16 06 30.5**	**-2.9**
GSI	**Gunungsitoli**	**11.61**	**148**	P	**Pn**	**16 06 36.7**	**+3.3**
VJD	**Vijayawada**	**11.73**	**298**	*e*P	**Pn**	**16 06 34.8**	**-0.2**
JHSG	**JHARSUGUGA**	**12.77**	**326**	*e*P	**Pn**	**16 06 50.1**	**+0.9**
SALM	**Salem**	**13.03**	**273**	*e*P	**Pn**	**16 06 54.2**	**+1.5**
MNSI	**Mandailing Nat**	**13.16**	**142**	P	**P**	**16 07 05.9**	**+1.4**
BOK	**Bokaro**	**13.54**	**338**	*e*P	**Pn**	**16 06 56.2**	**-3.4**
KOD	**Kodaikanal**	**13.82**	**267**	*e*P	**Pn**	**16 07 04.4**	**+0.6**
HYBB	**Hyderabad (bro**	**13.93**	**297**	*e*P	**Pn**	**16 07 05.4**	**+0.2**
HYBB				*e*S	**Sn**	**16 09 39.4**	**-0.1**
BLSP	**Bilaspur**	**14.01**	**321**	*e*P	**Pn**	**16 07 04.7**	**-1.5**
TRD	**Trivandrum**	**14.58**	**260**	*e*P	**Pn**	**16 07 14.3**	**+0.3**
SISI	**Saibi**	**14.63**	**148**	P	**P**	**16 07 22.4**	**+1.5**
	comp=Z,844nmcomp=Z,86nm,1.1s						
PCHI	**Peechi**	**14.89**	**269**	⇓*e*P	**Pn**	**16 07 18.4**	**+0.2**
PCHI				*e*S	Sn	16 09 48.3	-15
MYKOM	**Kota Tinggi**	**15.48**	**127**	Pn	**Pn**	**16 07 25.5**	**-0.5**
ODAN	**Odare**	**15.97**	**347**	*e*P	**Pn**	**16 07 30.9**	**-1.6**
	comp=Z,105nm,0.4s						
ODAN				*e*S	**Sn**	**16 10 18.7**	**-11**
LATR	**Latur**	**16.07**	**298**	*e*P	**Pn**	**16 07 32.8**	**-0.8**
JBP	**Jabalpur**	**16.12**	**319**	*e*x	x	16 07 35.3	
JBP				*e*P	**P**	**16 07 35.3**	**-2.1**
JBP				IAmb	IAmb	16 07 41.0	
	comp=Z,117nm,0.5s						
JBP				*e*S	**Sn**	**16 10 37.2**	**+4.4**
RAMN	**Ramite**	**16.25**	**344**	*e*P	**Pn**	**16 07 35.3**	**-0.8**
	comp=Z,235nm,0.5s						
PPSI	**Pulau Pagai**	**16.33**	**148**	P	**P**	**16 07 41.2**	**+1.4**
	comp=Z,3µmcomp=Z,202nm,0.8s						
TAPN	**Taplejung**	**16.37**	**348**	*e*P	**Pn**	**16 07 36.9**	**-0.8**
MNGI	**Mangalore**	**16.38**	**277**	*e*P	**P**	**16 07 41.0**	**+0.7**
KRJI	**Kerinci**	**16.58**	**143**	P	**P**	**16 07 43.9**	**+1.2**
	comp=Z,3µmcomp=Z,271nm,0.8s						
ALBI	**Allahabad**	**16.69**	**328**	*e*P	**P**	**16 07 43.1**	**-0.7**
AKL	**Akola**	**16.76**	**306**	*e*P	**Pn**	**16 07 41.5**	**-0.9**
PKI	**Pulchoki**	**17.18**	**341**	*e*P	**Pn**	**16 07 46.3**	**-1.6**
PKIN	**Phulchoki**	**17.19**	**341**	*e*P	**Pn**	**16 07 46.3**	**-1.7**
PKIN				*e*S	**Sn**	**16 10 48.6**	**-10**
KMI	**Kunming**	**17.41**	**36**	⇑P	**P**	**16 07 51.8**	**-0.1**
KMI				pP	Pn	16 07 52.9	+2.2
KMI				S	**Sn**	**16 11 05.9**	**+1.6**
KMI				SS	**SnSn**	**16 11 26.5**	**+8.5**
KMI				pmax	pmax		
	comp=Z,40nm,1.0s						
KMI				pmax	pmax		
	comp=Z,650nm,9.2s						
KMI				LR	LR		
	comp=Z,2µm,20.9s						
KMI				LR	LR		
	comp=Z,2µm,16.4s						
KMI				LR	LR		
	comp=Z,4µm,18.8s						
KKN	**Kakani**	**17.42**	**341**	*e*P	**Pn**	**16 07 50.8**	**-0.1**
KKN				*e*S	**Sn**	**16 10 54.7**	**-10**
VLK	**Valmikinagar**	**17.48**	**337**	*e*P	**Pn**	**16 07 51.0**	**-0.4**
DSRI	**Dabo**	**17.49**	**131**	P	**P**	**16 07 52.3**	**-0.3**
	comp=Z,19nm,0.6s						
GOA	**Goa**	**17.68**	**286**	*e*P	**P**	**16 07 58.0**	**+3.3**
KAD	**Karad**	**17.80**	**292**	⇓*i*P	**Pn**	**16 07 55.5**	**0.0**
KAD				*e*P	**P**	**16 07 55.7**	**-0.4**
KAD				*i* S	Sn	16 10 57.9	-16
GKN	**Gorkha**	**17.83**	**340**	*e*P	**Pn**	**16 07 56.1**	**+0.2**
BHPL	**Bhopal**	**17.92**	**313**	*e*P	**P**	**16 07 57.6**	**+0.2**
BHPL				IAmb	IAmb	16 08 16.0	
	comp=Z,85nm,0.7s						
PZH	**PanZhiHua**	**17.96**	**31**	⇓P	**P**	**16 07 59.0**	**+1.1**
PZH				sP	**pwP**	**16 08 06.5**	**+0.2**
PZH				PP	sP	16 08 13.3	+9.4
PZH				S	**Sn**	**16 11 17.8**	**+0.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,130nm,5.6s						
PZH				LR	LR		
	comp=Z,5µm,18.4s						
PZH				LR	LR		
	comp=Z,7µm,17.1s						
PZH				LR	LR		
	comp=Z,6µm,17.9s						
KOLN	**Koldanda**	**17.99**	**337**	*e*P	**P**	**16 07 58.4**	**0.0**
LSA	**Lhasa**	**18.32**	**359**	P	**Pn**	**16 07 59.9**	**-2.3**
LSA				pmax	pmax		
	comp=Z,142nm,1.0s						
LSA	**Lhasa**	**18.32**	**359**		**Pn**	**16 07 59.9**	**-2.3**
LSA				IAmb	IAmb	16 08 21.5	
	comp=Z,142nm,1.0s						
LSA	**Lhasa**	**18.32**	**359**	P	**Pn**	**16 08 01.0**	**-1.2**
LSA				S	**Sn**	**16 11 25.4**	**-1.4**
LSA				LR	LR		
	comp=Z,2µm,14.2s						
LSA				LR	LR		
	comp=Z,3µm,13.5s						
LSA				LR	LR		
	comp=Z,2µm,15.3s						
LSA	**Lhasa**	**18.32**	**359**	P	**Pn**	**16 08 02.1**	**-0.1**
DANN	**Dangsing**	**18.46**	**338**	*e*P	**Pn**	**16 08 04.2**	**+0.5**
POO	**Poona**	**18.49**	**295**	*e*P	**Pn**	**16 08 04.9**	**+0.9**
POO				IAmb	IAmb	16 08 22.3	
	comp=Z,44nm,0.7s						
PYUN	**Piuthan**	**18.53**	**336**	*e*P	**Pn**	**16 08 05.4**	**+0.9**
JHNI	**Jhansi**	**18.68**	**321**	*e*P	**Pn**	**16 08 06.3**	**+0.1**
MNAI	**Manna**	**19.28**	**143**	P	**P**	**16 08 11.3**	**-1.2**
MNAI				IAmb	IAmb	16 08 16.0	
	comp=Z,127nm,0.8s						
MNAI	**Manna**	**19.28**	**143**	P	**Pn**	**16 08 13.1**	**-0.4**
QIZ	**Qiongzhong**	**19.30**	**64**	P	**P**	**16 08 11.7**	**-1.0**
QIZ	**Qiongzhong**	**19.30**	**64**	P	**P**	**16 08 12.7**	**+0.1**
QIZ				S	**Sn**	**16 11 47.8**	**-2.1**
QIZ				pmax	pmax		
	comp=Z,44nm,0.8s						
QIZ				LR	LR		
	comp=Z,3µm,19.1s						
QIZ				LR	LR		
	comp=Z,2µm,16.2s						
QIZ				LR	LR		
	comp=Z,3µm,19.8s						
QIZ	**Qiongzhong**	**19.30**	**64**	P	**Pn**	**16 08 13.9**	**+0.2**
PPBI	**Pangkal Pinang**	**19.77**	**132**	P	**P**	**16 08 18.1**	**+0.4**
	comp=Z,5µmcomp=Z,32nm,1.6s						
LWLI	**Liwa**	**20.46**	**142**	P	Pn	16 08 32.9	+5.3
	comp=Z,89nm,0.8s						
GYA	**Guiyang**	**20.80**	**41**	⇑*i*P	**P**	**16 08 29.4**	**+0.4**
GYA				S	**S**	**16 12 18.1**	**-2.5**
GYA				pmax	pmax		
	comp=Z,45nm,0.8s						
GYA				pmax	pmax		
	comp=Z,270nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,20.7s						
GYA				LR	LR		
	comp=Z,2µm,15.7s						
GYA				LR	LR		
	comp=Z,4µm,17.4s						
LGTI	**Lohaghat**	**20.89**	**332**	*e*P	Pn	16 08 32.3	-0.1
PTH	**Pithoragarh**	**20.99**	**332**	*e*P	Pn	16 08 33.5	-0.3
KSM	**Kuching**	**21.07**	**116**	P	**P**	**16 08 30.1**	**-1.8**
KSM				IAmb	IAmb	16 08 48.0	
	comp=Z,66nm,0.9s						
KSM	**Kuching**	**21.07**	**116**	P	**P**	**16 08 36.2**	**+4.3**
KASI	**Kota Agung**	**21.13**	**142**	P	**P**	**16 08 35.0**	**+2.5**
	comp=Z,52nm,0.7s						
TPI	**Tanjungpandan**	**21.29**	**130**	P	**P**	**16 08 33.3**	**-0.9**
	comp=Z,582nmcomp=Z,46nm,0.8s						
BLSI	**Bandar Lampung**	**21.47**	**140**	P	**P**	**16 08 30.4**	**-5.8**
SONA	**Sohna**	**21.61**	**323**	*e*P	**P**	**16 08 39.2**	**+1.7**
KUDL	**Kundal**	**21.88**	**322**	*e*P	**P**	**16 08 41.3**	**+0.8**
AJM	**Ajmer**	**21.92**	**316**	*e*P	**P**	**16 08 42.1**	**+1.1**
KHET	**Khetri**	**22.25**	**321**	*e*P	**P**	**16 08 45.7**	**+1.3**
CD2	**Chengdu**	**22.60**	**28**	⇑*i*P	**P**	**16 08 48.9**	**+0.7**
CD2				S	**S**	**16 12 56.2**	**+1.0**
CD2				sS	pS	16 12 59.1	-1.6
CD2				SS	**SnSn**	**16 13 32.0**	**+6.9**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,380nm,8.8s						
CD2				LR	LR		
	comp=Z,2µm,15.0s						
CD2				LR	LR		
	comp=Z,2µm,21.3s						
GULI	**GuiLin**	**22.66**	**49**	⇑P	**P**	**16 08 47.4**	**-1.4**
GULI				S	**S**	**16 12 54.6**	**-1.7**
GULI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GULI				LR	LR		
	comp=Z,2µm,14.1s						
GULI				LR	LR		
	comp=Z,3µm,15.2s						
GULI				LR	LR		
	comp=Z,3µm,19.1s						
DDI	**Dehra Dun**	**22.68**	**329**	*e*P	**P**	**16 08 50.9**	**+1.7**
DDI				IAmb	IAmb	16 08 56.4	
	comp=Z,159nm,0.7s						
STKI	**Sintang**	**22.77**	**118**	P	**P**	**16 08 51.4**	**+1.2**
	comp=Z,47nm,1.0s						
SMLA	**Simla**	**23.79**	**328**	*e*P	**P**	**16 09 02.2**	**+2.1**
SMLA				IAmb	IAmb	16 09 18.3	
	comp=Z,65nm,0.7s						
LEM	**Lembang**	**24.11**	**138**	LR	LR	16 20 34.8	
	comp=Z,2µm,20.3s,baz=303,slow=42						
HKPS	**Hong Kong Po S**	**24.25**	**60**	P	**P**	**16 09 03.3**	**-1.3**
HKPS				IAmb	IAmb	16 09 06.9	
	comp=Z,59nm,0.9s						
BHK	**Bhakra**	**24.41**	**327**	*e*P	**P**	**16 09 08.6**	**+2.7**
GOMU	**GeErMu**	**24.98**	**6**	P	**P**	**16 09 12.1**	**+0.5**
GOMU				pP	pP	16 09 15.9	-0.1
GOMU				sP	pwP	16 09 19.6	-0.7
GOMU				S	**S**	**16 13 42.7**	**+7.8**
GOMU				pmax	pmax		
	comp=Z,54nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,590nm,4.6s						
GOMU				LR	LR		
	comp=Z,900nm,15.7s						
GOMU				LR	LR		
	comp=Z,550nm,16.0s						
GOMU				LR	LR		
	comp=Z,770nm,15.3s						
ENH	**Enshi**	**25.23**	**39**	P	**P**	**16 09 11.7**	**-1.7**
THN	**Thein Dam**	**25.57**	**328**	*e*P	**P**	**16 09 17.3**	**+0.9**
MTKI	**Muara Teweh, K**	**26.25**	**116**	P	**P**	**16 09 24.3**	**+1.5**
	comp=Z,24nm,0.9s						
H08S3	**Diego Garcia H**	**26.66**	**226**	T	T	16 37 17.9	
	baz=46,slow=75,SNR=214						
H08S2	**Diego Garcia H**	**26.66**	**226**	T	T	16 37 24.5	
	baz=46,slow=75,SNR=198						
H08S1	**Diego Carcia H**	**26.68**	**226**	T	T	16 37 31.0	
	baz=46,slow=75,SNR=201						
LZH	**Lanzhou**	**27.11**	**22**	*e*P	**P**	**16 09 34.4**	**+3.9**
LZH				pP	pwP	16 09 37.6	-1.7
LZH				sP	sP	16 09 40.1	+3.4
LZH				PP	**PnPn**	**16 10 17.4**	**+3.7**
LZH				*e*S	**S**	**16 14 08.9**	**+0.8**
LZH				sS	sS	16 14 18.1	+2.8
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				LR	LR		
	comp=Z,2µm,14.4s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,20.9s						
MYLDM	**Lahad Datu**	**27.40**	**101**	P	**P**	**16 09 32.5**	**-0.7**
MYLDM				IAmb	IAmb	16 09 55.0	
	comp=Z,90nm,1.2s						
XAN	**Xi'an**	**27.69**	**32**	P	**P**	**16 09 35.3**	**-0.4**
XAN				pP	pwP	16 09 46.9	+2.5
XAN				S	**S**	**16 14 13.2**	**-4.0**
XAN				SS	SS	16 15 38.3	-36
XAN				PcS	**PcS**	**16 16 34.7**	**+0.1**
XAN				pmax	pmax		
	comp=Z,56nm,0.7s						
XAN				pmax	pmax		
	comp=Z,260nm,9.2s						
XAN				LR	LR		
	comp=Z,3µm,19.0s						
XAN				LR	LR		
	comp=Z,3µm,17.5s						
XAN				LR	LR		
	comp=Z,2µm,23.0s						
NIL	**Nilore**	**27.82**	**326**	P	**P**	**16 09 35.0**	**-1.9**
NIL				pmax	pmax		
	comp=Z,31nm,0.8s						
NIL	**Nilore**	**27.82**	**326**	P	**P**	**16 09 35.0**	**-1.9**
NIL				IAmb	IAmb	16 09 55.2	
	comp=Z,31nm,0.8s						
WHN	**Wuhan**	**28.59**	**44**	⇑P	**P**	**16 09 40.8**	**-2.8**
WHN				S	S	16 14 21.0	-10
WHN				LR	LR		
	comp=Z,2µm,12.4s						
WHN				LR	LR		
	comp=Z,5µm,15.3s						
WHN				LR	LR		
	comp=Z,8µm,15.4s						
TGY	**Tagaytay City**	**28.86**	**81**	P	**P**	**16 09 46.4**	**+0.1**
	comp=Z,62nm,0.3s,baz=171,slow=19,SNR=1.2						
GTA	**Gaotai**	**28.97**	**13**	⇑P	**P**	**16 09 48.0**	**+0.9**
GTA				pP	sP	16 09 51.7	-1.6
GTA				sP	pwP	16 09 54.5	-1.4
GTA				S	**S**	**16 14 37.1**	**-0.3**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,4.0s						
GTA				LR	LR		
	comp=Z,900nm,18.7s						
GTA				LR	LR		
	comp=Z,990nm,21.1s						
GTA				LR	LR		
	comp=Z,1µm,20.3s						
QZH	**Quanzhou**	**29.05**	**58**	⇑*i*P	**P**	**16 09 48.0**	**+0.2**
QZH				S	**S**	**16 14 40.1**	**+1.5**
QZH				pmax	pmax		
	comp=Z,110nm,5.5s						
QZH				LR	LR		
	comp=Z,1µm,14.1s						
QZH				LR	LR		
	comp=Z,1µm,14.6s						
QZH				LR	LR		
	comp=Z,2µm,14.9s						
LQP	**Lukban**	**29.44**	**81**	⇓*e*P	**P**	**16 09 50.5**	**-1.1**
APYP	**Conner**	**29.50**	**74**	⇓*e*P	**P**	**16 09 51.9**	**0.0**
ABJI	**Asem Bagus**	**29.52**	**129**	P	P	16 10 05.7	+14
JAGI	**Jajag, Banyuwa**	**29.89**	**130**	P	**P**	**16 09 54.9**	**-0.5**
JAGI	**Jajag, Banyuwa**	**29.89**	**130**	P	**P**	**16 09 55.3**	**-0.1**
LYN	**LuoYang**	**30.03**	**36**	⇑*i*P	P	16 10 01.3	+4.9
LYN				S	**S**	**16 14 51.3**	**-2.6**
LYN				pmax	pmax		
	comp=Z,30nm,0.5s						
LYN				LR	LR		
	comp=Z,4µm,19.0s						
LYN				LR	LR		
	comp=Z,3µm,17.3s						
LYN				LR	LR		
	comp=Z,5µm,19.2s						
TPUB	**Ta-pu**	**30.21**	**63**	P	**P**	**16 09 58.1**	**-0.1**
TPUB				IAmb	IAmb	16 10 07.2	
	comp=Z,27nm,0.8s						
MPSI	**Mapaga**	**30.24**	**109**	P	P	16 10 11.0	+12
SRBI	**Singaraja**	**30.45**	**128**	P	**P**	**16 10 01.5**	**+1.2**
	comp=Z,1µmcomp=Z,94nm,0.9s						
TWG	**Pinlang**	**30.45**	**64**	P	**P**	**16 09 59.0**	**-1.3**
TWG				IAmb	IAmb	16 10 04.7	
	comp=Z,42nm,0.8s						
SSLB	**Suanglung**	**30.65**	**62**	P	**P**	**16 10 02.2**	**+0.2**
SSLB				IAmb	IAmb	16 10 16.5	
	comp=Z,49nm,0.9s						
SSLB	**Suanglung**	**30.65**	**62**	P	**P**	**16 10 05.4**	**+3.3**
TOLI2	**Tolitoli**	**30.79**	**107**	P	**P**	**16 10 02.5**	**-0.8**
TOLI2	**Tolitoli**	**30.79**	**107**	P	**P**	**16 10 04.6**	**+1.3**
YULB	**Yu-li**	**30.82**	**63**	P	**P**	**16 10 04.5**	**+0.9**
KBL	**Kabul**	**30.89**	**322**	P	**P**	**16 10 02.5**	**-1.8**
KBL				pmax	pmax		
	comp=Z,21nm,1.3s						
KBL	**Kabul**	**30.89**	**322**	P	**P**	**16 10 02.5**	**-1.8**
KSH	**Kashi**	**31.31**	**337**	P	**P**	**16 10 07.2**	**-0.6**
KSH				S	**S**	**16 15 22.6**	**+8.5**
KSH				pmax	pmax		
	comp=Z,26nm,0.8s						
KSH				LR	LR		
	comp=Z,770nm,16.5s						
KSH				LR	LR		
	comp=Z,2µm,15.4s						
KSH				LR	LR		
	comp=Z,1µm,22.1s						
TTSI	**Tana Toraja**	**31.57**	**115**	P	**P**	**16 10 13.0**	**+2.7**
	comp=Z,665nmcomp=Z,70nm,1.0s						
PAGZ	**Pagadian**	**31.62**	**93**	⇓*e*P	**P**	**16 10 12.2**	**+1.5**
TBP	**Tagbilaran**	**31.86**	**90**	*e*P	**P**	**16 10 12.8**	**0.0**
SPSI	**Sidrap Palu**	**31.96**	**117**	P	P	16 10 18.9	+5.3
	comp=Z,582nmcomp=Z,34nm,1.4s						
MRSI	**Marisa**	**32.09**	**107**	P	**P**	**16 10 19.4**	**+4.6**
	comp=Z,638nmcomp=Z,43nm,1.5s						
KAPI	**Kappang**	**32.45**	**118**	*c i*P	**P**	**16 10 17.9**	**-0.1**
KAPI	**Kappang**	**32.45**	**118**	P	**P**	**16 10 17.3**	**-0.7**
KAPI				IAmb	IAmb	16 10 30.8	
	comp=Z,25nm,0.8s						
BNSI	**Bone**	**32.46**	**117**	P	**P**	**16 10 18.6**	**+0.6**
	comp=Z,680nmcomp=Z,56nm,0.8s						
WMQ	**Urumqi**	**32.58**	**355**	*e*P	**P**	**16 10 20.2**	**+1.3**
WMQ				sP	pwP	16 10 31.3	+3.7
WMQ				PP	**PnPn**	**16 11 24.8**	**-1.8**
WMQ				PcP	**PcP**	**16 13 05.6**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,28nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,20.5s						
WMQ				LR	LR		
	comp=Z,3µm,20.5s						
WMQ				LR	LR		
	comp=Z,940nm,21.5s						
NJ2	**Nanjing**	**32.60**	**46**	*e*P	**P**	**16 10 19.6**	**+0.5**
NJ2				pP	**pwP**	**16 10 26.0**	**-1.9**
NJ2				sP	**sP**	**16 10 29.6**	**+4.3**
NJ2				S	**S**	**16 15 31.1**	**-3.1**
NJ2				sS	**sS**	**16 15 40.6**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,19.7s						
NJ2				LR	LR		
	comp=Z,2µm,22.1s						
NJ2				LR	LR		
	comp=Z,2µm,19.6s						
YOJ	**Yonaguni jima**	**32.64**	**62**	P	**P**	**16 10 19.6**	**0.0**
YOJ				pmax	pmax		
	comp=Z,161nm,1.2s						

YOJ	**Yonaguni jima**	**32.64**	**62**	P	**P**	**16 10 19.6**	**0.0**
PLAI	**Plampang**	**32.91**	**126**	P	P	16 10 31.3	+9.3
PLAI	**Plampang**	**32.91**	**126**	P	**P**	**16 10 21.5**	**-0.5**
GTOI	**Gorontalo**	**33.04**	**107**	P	**P**	**16 10 23.3**	**+0.1**
	comp=Z,354nmcomp=Z,25nm,0.7s						
PRZ	**Przheval'sk**	**33.11**	**342**	P	**P**	**16 10 22.4**	**-1.3**
PRZ				pmax	pmax		
	comp=Z,32nm,0.9s						
PRZ	**Przheval'sk**	**33.11**	**342**	P	**P**	**16 10 22.4**	**-1.3**
PRZ				IAmb	IAmb	16 10 28.0	
	comp=Z,32nm,0.8s						
KDJ	**Kajisay**	**33.18**	**340**	P	**P**	**16 10 23.7**	**-0.5**
KDJ				pmax	pmax		
	comp=Z,26nm,0.9s						
KDJ	**Kajisay**	**33.18**	**340**	P	**P**	**16 10 23.7**	**-0.5**
KDJ				IAmb	IAmb	16 10 28.1	
	comp=Z,26nm,0.8s						
HNS	**HongShan**	**33.33**	**35**	⇑P	**P**	**16 10 26.1**	**+0.7**
HNS				PP	**PP**	**16 11 42.9**	**+2.0**
HNS				S	**S**	**16 15 44.2**	**-1.1**
HNS				pmax	pmax		
	comp=Z,37nm,0.7s						
HNS				LR	LR		
	comp=Z,2µm,19.4s						
HNS				LR	LR		
	comp=Z,2µm,19.6s						
HNS				LR	LR		
	comp=Z,3µm,19.8s						
LUWI	**Luwuk**	**33.42**	**110**	P	**P**	**16 10 25.8**	**-0.7**
LUWI	**Luwuk**	**33.42**	**110**	P	**P**	**16 10 27.7**	**+1.2**
LUWI	**Luwuk**	**33.42**	**110**	P	**P**	**16 10 29.0**	**+2.5**
GAR	**Garm**	**33.42**	**329**	P	**P**	**16 10 24.9**	**-1.5**
GAR				IAmb	IAmb	16 10 50.2	
	comp=Z,29nm,0.9s						
WSAR	**Wadi Sarin**	**33.47**	**295**	P	**P**	**16 10 26.5**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=141,slow=6.5,SNR=2.5						
	comp=Z,3.4nm,0.9s						
BTO	**Baotou**	**33.47**	**26**	*e*P	**P**	**16 10 28.0**	**+1.3**
BTO				S	**S**	**16 15 48.2**	**+0.5**
BTO				LR	LR		
	comp=Z,4µm,21.8s						
BTO				LR	LR		
	comp=Z,5µm,19.2s						
UZB	**Uzynbulak**	**33.54**	**343**	*d i*P	**P**	**16 10 28.3**	**+1.0**
UZB				*e*S	**S**	**16 15 51.1**	**+2.3**
UZB				pmax	pmax		
	comp=Z,14nm,1.0s						
UZB	**Uzynbulak**	**33.54**	**343**	⇓*i*P	**P**	**16 10 28.3**	**+1.0**
	comp=Z,14nm,1.0s,baz=343						
UZB				*e*S	**S**	**16 15 51.1**	**+2.3**
	baz=343						
PDGK	**Podgornoye**	**33.58**	**344**	P	**P**	**16 10 27.8**	**+0.1**
SATY	**Saty**	**33.64**	**343**	*d i*P	**P**	**16 10 29.2**	**+1.1**
SATY				pmax	pmax		
	comp=Z,17nm,0.9s						
SATY	**Saty**	**33.64**	**343**	⇓*i*P	**P**	**16 10 29.3**	**+1.1**
	comp=Z,17nm,0.9s,baz=343						
ZHN	**Zhinishke**	**33.73**	**343**	*e*P	**P**	**16 10 29.5**	**+0.6**
ZHN				*e*S	**S**	**16 15 54.2**	**+2.6**
ZHN	**Zhinishke**	**33.73**	**343**	*e*P	**P**	**16 10 29.5**	**+0.6**
	baz=343						
ZHN				*e*S	**S**	**16 15 54.2**	**+2.6**
	baz=343						
CHGR	**Chuyangaron**	**33.76**	**328**	P	**P**	**16 10 26.4**	**-2.9**
CHGR	**Chuyangaron**	**33.76**	**328**	P	**P**	**16 10 26.4**	**-2.9**
SSE	**Sheshan**	**33.81**	**50**	P	**P**	**16 10 29.8**	**+0.1**
SSE				S	**S**	**16 15 53.2**	**+0.2**
SSE				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SSE				pmax	pmax		
	comp=Z,62nm,5.6s						
SSE				LR	LR		
	comp=Z,570nm,16.3s						
SSE				LR	LR		
	comp=Z,650nm,16.5s						
DAV	**Davao City (W)**	**33.90**	**94**	LR	LR	16 25 46.0	
	comp=Z,468nm,19.3s,baz=270,slow=39						
KPKS	**Kokpek**	**33.93**	**343**	*i* P	**P**	**16 10 31.2**	**+0.6**
KPKS				pmax	pmax		
	comp=Z,16nm,0.9s						
KPKS	**Kokpek**	**33.93**	**343**	*i* P	**P**	**16 10 31.3**	**+0.6**
	comp=Z,16nm,0.9s,baz=343						
TIA	**Tai'an**	**33.95**	**39**	⇑P	**P**	**16 10 30.3**	**-0.5**
TIA				S	**S**	**16 15 48.8**	**-6.2**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,80nm,3.5s						
TIA				LR	LR		
	comp=Z,2µm,15.5s						
TIA				LR	LR		
	comp=Z,2µm,15.9s						
TIA				LR	LR		
	comp=Z,3µm,16.9s						
BTK	**Batken**	**34.00**	**331**	P	**P**	**16 10 32.0**	**+0.7**
BTK				pmax	pmax		
	comp=Z,82nm,1.3s						
BTK	**Batken**	**34.00**	**331**	P	**P**	**16 10 32.0**	**+0.7**
TNSS	**Tian-Shan**	**34.07**	**341**	*i* P	**P**	**16 10 33.2**	**+1.0**
TNSS	**Tian-Shan**	**34.07**	**341**	*i* P	**P**	**16 10 33.2**	**+1.0**
	baz=341						
MDOK	**Medeo**	**34.15**	**341**	P	**P**	**16 10 33.8**	**+1.2**
MDOK	**Medeo**	**34.15**	**341**	*i* P	**P**	**16 10 34.0**	**+1.3**
	baz=341						
MDOK				*e*S	**S**	**16 16 01.2**	**+3.0**
	baz=341						
UCH	**Uchtor**	**34.21**	**337**	P	**P**	**16 10 33.5**	**0.0**
	SNR=13						
AAA	**Alma-Ata**	**34.23**	**341**	*e*P	**P**	**16 10 34.2**	**+1.0**
AAA				pmax	pmax		
	comp=Z,30nm,0.8s						
AAA	**Alma-Ata**	**34.23**	**341**	*e*P	**P**	**16 10 34.2**	**+1.0**
	comp=Z,30nm,0.8s,baz=341						
HHC	**Hu-ho-hao-te**	**34.35**	**27**	*e*P	**P**	**16 10 36.1**	**+1.7**
HHC				S	**S**	**16 16 00.6**	**-0.7**
HHC				pmax	pmax		
	comp=Z,71nm,0.9s						
HHC				LR	LR		
	comp=Z,1µm,16.5s						
HHC				LR	LR		
	comp=Z,2µm,16.5s						
HHC				LR	LR		
	comp=Z,2µm,16.7s						
KBK	**Karagaybulak**	**34.42**	**338**	P	**P**	**16 10 36.9**	**+1.9**
	SNR=15						
TKM2	**Tokmak 2**	**34.42**	**339**	P	**P**	**16 10 36.0**	**+1.0**
	SNR=6.7						
TKM2	**Tokmak 2**	**34.42**	**339**	*i* P	**P**	**16 10 35.5**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,13nm,1.0s						
AML	**Almayashu**	**34.44**	**336**	P	**P**	**16 10 36.7**	**+1.2**
	SNR=26						
AML	**Almayashu**	**34.44**	**336**	P	**P**	**16 10 36.4**	**+0.9**
AAK	**Ala-Archa**	**34.57**	**338**	P	**P**	**16 10 38.0**	**+1.8**
	SNR=14						
AAK	**Ala-Archa**	**34.57**	**338**	P	**P**	**16 10 36.4**	**+0.1**
	comp=Z,16nm,0.8s,baz=168,slow=5.2,SNR=32						
	comp=Z,16nm,0.8s						
AAK	**Ala-Archa**	**34.57**	**338**	*d i*P	**P**	**16 10 37.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,21nm,1.0s						
AAK	**Ala-Archa**	**34.57**	**338**	P	**P**	**16 10 36.5**	**+0.2**
AAK	**Ala-Archa**	**34.57**	**338**	P	**P**	**16 10 37.6**	**+1.3**
CHMS	**Chumysh**	**34.79**	**338**	P	**P**	**16 10 39.1**	**+1.1**
	SNR=11						
CHMS	**Chumysh**	**34.79**	**338**	*i* P	**P**	**16 10 38.4**	**+0.4**
CHMS				pmax	pmax		
	comp=Z,16nm,0.8s						
CHKK	**Chushkaly**	**34.79**	**341**	*e*P	**P**	**16 10 37.8**	**-0.2**
CHKK	**Chushkaly**	**34.79**	**341**	*e*P	**P**	**16 10 37.9**	**-0.2**
	baz=342						
EKS2	**Erkin-Say**	**34.86**	**337**	P	**P**	**16 10 40.4**	**+1.6**
	SNR=24						
KUU	**Kurty**	**35.03**	**341**	*d i*P	**P**	**16 10 40.0**	**-0.1**
KUU				*e*S	**S**	**16 16 13.1**	**+1.6**
KUU				pmax	pmax		
	comp=Z,21nm,0.9s						
KUU	**Kurty**	**35.03**	**341**	⇓*i*P	**P**	**16 10 40.0**	**-0.1**
	comp=Z,21nm,0.9s,baz=341						
KUU				*e*S	**S**	**16 16 13.1**	**+1.6**
	baz=341						
USP	**Ospenovka**	**35.11**	**338**	P	**P**	**16 10 42.2**	**+1.3**
	SNR=23						
SGDS	**Sogindy**	**35.22**	**339**	*e*P	**P**	**16 10 42.3**	**+0.5**
SGDS	**Sogindy**	**35.22**	**339**	*e*P	**P**	**16 10 42.4**	**+0.5**
	baz=339						
TDK	**Taldyqorghan**	**35.42**	**344**	*e*P	**P**	**16 10 43.7**	**+0.3**
TDK	**Taldyqorghan**	**35.42**	**344**	*e*P	**P**	**16 10 43.8**	**+0.3**
	baz=344						
BJT	**Baijiatuau**	**36.00**	**33**	P	**P**	**16 10 47.8**	**-0.7**
BJT				pmax	pmax		
	comp=Z,42nm,1.3s						
BJT	**Baijiatuau**	**36.00**	**33**	P	**P**	**16 10 47.8**	**-0.7**
BJT				IAmb	IAmb	16 11 00.6	
	comp=Z,42nm,1.3s						
IUG	**Iuzhnay**	**36.01**	**332**	*d i*P	**P**	**16 10 49.8**	**+1.1**
IUG	**Iuzhnay**	**36.01**	**332**	⇓*i*P	**P**	**16 10 49.8**	**+1.1**
	baz=332						
BJI	**Beijing**	**36.02**	**33**	P	**P**	**16 10 48.9**	**+0.3**
BJI				S	**S**	**16 16 29.1**	**+2.4**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,190nm,6.1s						
BJI				LR	LR		
	comp=Z,2µm,17.2s						
BJI				LR	LR		
	comp=Z,2µm,18.1s						
BJI				LR	LR		
	comp=Z,2µm,19.3s						
DZA	**Taraz**	**36.04**	**335**	*e*P	**P**	**16 10 49.2**	**+0.4**
DZA	**Taraz**	**36.04**	**335**	*e*P	**P**	**16 10 49.3**	**+0.4**
	baz=334						
HATD	**Hatta, Dubai**	**36.09**	**297**	P	**P**	**16 10 52.6**	**+3.2**
ASHO	**Ashiyiah**	**36.12**	**297**	P	**P**	**16 10 51.2**	**+1.5**
MK31	**Makanchi Array**	**36.24**	**349**	*d i*P	**P**	**16 10 50.7**	**+0.3**
MK31	**Makanchi Array**	**36.24**	**349**	P	**P**	**16 10 50.1**	**-0.3**
MK31				IAmb	IAmb	16 11 06.4	
	comp=Z,22nm,0.9s						
MKAR	**Makanchi Array**	**36.24**	**349**	P	**P**	**16 10 50.7**	**+0.3**
	comp=Z,26nm,0.8s,baz=167,slow=7.8,SNR=64						
MKAR				PcP	**PcP**	**16 13 15.8**	**+0.4**
	comp=Z,4.1nm,0.8s,baz=138,slow=3.1,SNR=2.1						
	comp=Z,26nm,0.8s						
MKAR	**Makanchi Array**	**36.24**	**349**	P	**P**	**16 10 50.2**	**-0.2**
MAKZ	**Makanchi**	**36.31**	**349**	P	**P**	**16 10 50.8**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,23nm,1.0s						
MAKZ	**Makanchi**	**36.31**	**349**	P	**P**	**16 10 50.8**	**-0.3**
MMRI	**Maumere**	**36.43**	**122**	P	**P**	**16 10 50.9**	**-1.5**
MMRI				IAmb	IAmb	16 11 02.7	
	comp=Z,35nm,0.8s						
ZSN	**Zaisan**	**36.48**	**352**	*e*P	**P**	**16 10 53.0**	**+0.5**
ZSN	**Zaisan**	**36.48**	**352**	*e*P	**P**	**16 10 53.0**	**+0.5**
	baz=352						
KK31	**Karatay Array**	**36.56**	**334**	*i* P	**P**	**16 10 53.7**	**+0.4**
KK31	**Karatay Array**	**36.56**	**334**	P	**P**	**16 10 52.1**	**-1.2**
KKAR	**Karatay Array**	**36.56**	**334**	P	**P**	**16 10 53.3**	**0.0**
KKAR	**Karatay Array**	**36.56**	**334**	P	**P**	**16 10 53.3**	**0.0**
KKAR	**Karatay Array**	**36.56**	**334**	P	**P**	**16 10 52.7**	**-0.5**
KKAR				IAmb	IAmb	16 10 56.8	
	comp=Z,20nm,0.8s						
SOCY	**Socotra**	**36.71**	**275**	P	**P**	**16 10 53.8**	**-1.1**
SANI	**Sanana**	**36.78**	**109**	P	**P**	**16 10 56.1**	**+0.7**
BTLS	**Baital**	**36.81**	**339**	*d i*P	**P**	**16 10 56.0**	**+0.7**
BTLS				pmax	pmax		
	comp=Z,11nm,0.8s						
BTLS	**Baital**	**36.81**	**339**	⇓*i*P	**P**	**16 10 56.1**	**+0.7**
	comp=Z,11nm,0.8s,baz=339						
JOW	**Kunigami**	**37.88**	**61**	P	**P**	**16 11 05.3**	**+0.6**
	comp=Z,19nm,0.3s,baz=141,slow=24,SNR=17						
JOW				LR	LR	16 28 03.0	
	comp=Z,668nm,20.9s,baz=216,slow=38						
	comp=Z,19nm,0.3s						
JOW	**Kunigami**	**37.88**	**61**	P	**P**	**16 11 07.8**	**+3.1**
MZR	**Muzera**	**38.03**	**293**	P	**P**	**16 11 07.8**	**+1.9**
DL2	**Dalian**	**38.42**	**39**	P	P	16 11 13.9	+4.9
DL2				pmax	pmax		
	comp=Z,46nm,1.4s						
DL2				pmax	pmax		
	comp=Z,200nm,3.6s						
DL2				LR	LR		
	comp=Z,2µm,19.0s						
DL2				LR	LR		
	comp=Z,1µm,15.9s						
DL2				LR	LR		
	comp=Z,2µm,18.1s						
SONM	**Songino Array**	**38.52**	**16**	P	**P**	**16 11 10.7**	**+0.7**
	comp=Z,8.7nm,0.6s,baz=200,slow=8.2,SNR=46						
SONM				LR	LR	16 29 36.4	
	comp=Z,2µm,20.6s,baz=198,slow=40						
	comp=Z,8.7nm,0.6s						
SONM	**Songino Array**	**38.52**	**16**	P	**P**	**16 11 09.8**	**-0.1**
SONM				pmax	pmax		
	comp=Z,129nm,1.4s						
SONM	**Songino Array**	**38.52**	**16**	P	**P**	**16 11 09.8**	**-0.1**
ULN	**Ulaanbaatar**	**38.74**	**17**	*ce*P	**P**	**16 11 13.1**	**+1.4**
ULN				pmax	pmax		
	comp=Z,23nm,1.7s						
ULN	**Ulaanbaatar**	**38.74**	**17**	P	**P**	**16 11 11.3**	**-0.4**
ULN				IAmb	IAmb	16 11 23.9	
	comp=Z,78nm,1.4s						
XLT	**XiLinHaoTe**	**38.82**	**29**	*e*P	**P**	**16 11 13.8**	**+1.4**
XLT				PP	**PP**	**16 12 40.3**	**-1.2**
XLT				S	**S**	**16 17 08.8**	**-0.7**
XLT				pmax	pmax		
	comp=Z,28nm,1.0s						
XLT				pmax	pmax		
	comp=Z,200nm,4.3s						
XLT				LR	LR		
	comp=Z,1µm,15.6s						
XLT				LR	LR		
	comp=Z,2µm,13.9s						
KNGR	**Kungurtug, Tuv**	**39.52**	**6**	⇓*e*P	**P**	**16 11 19.0**	**+0.8**
GEYT	**Alibeck**	**39.93**	**317**	P	**P**	**16 11 22.5**	**+0.7**
	comp=Z,9.4nm,0.6s,baz=141,slow=9.6,SNR=16						
GEYT				LR	LR	16 31 08.8	
	comp=Z,534nm,18.5s,baz=142,slow=41						
	comp=Z,9.4nm,0.6s						
GEYT	**Alibeck**	**39.93**	**317**	P	**P**	**16 11 20.6**	**-1.1**
GYA0	**ALIBECK ARRAY**	**39.93**	**317**	P	**P**	**16 11 23.1**	**+1.3**
GYA0B	**ALIBECK ARRAY**	**39.93**	**317**	P	**P**	**16 11 20.7**	**-1.1**
SEM	**Semipalatinsk**	**40.09**	**349**	*e*P	**P**	**16 11 22.5**	**-0.6**
SEM	**Semipalatinsk**	**40.09**	**349**	*e*P	**P**	**16 11 22.5**	**-0.6**
	baz=349						
ZAK	**Zakamensk**	**40.17**	**12**	*e*P	P	16 11 29.5	+5.9
ZAK				pmax	pmax		
	comp=Z,47nm,1.6s						
OTUK	**Ortayu**	**40.18**	**340**	P	**P**	**16 11 23.9**	**+0.3**
HJU	**Haeju**	**40.57**	**43**	S	**S**	**16 17 30.1**	**-5.6**
HJU	**Haeju**	**40.57**	**43**	AmB			
	comp=Z,148nm,2.0s						
HJU	**Haeju**	**40.57**	**43**	AMS	AMS		
	comp=N,161nm,4.1s						
HJU	**Haeju**	**40.57**	**43**	AMS	AMS		
	comp=E,179nm,4.6s						
HJU	**Haeju**	**40.57**	**43**	AMS	AMS		
	comp=Z,168nm,4.3s						
HJU	**Haeju**	**40.57**	**43**	P	**P**	**16 11 27.2**	**+0.3**
HJU	**Haeju**	**40.57**	**43**	pP	pP	16 11 36.7	+5.3
KURBB	**Kurchatov Arra**	**40.64**	**347**	P	**P**	**16 11 27.6**	**+0.2**
	comp=Z,17nm,0.9s,baz=162,slow=7.5,SNR=58						
KURBB				PcP	**PcP**	**16 13 29.2**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=159,slow=2.7,SNR=1.7						
	comp=Z,17nm,0.9s						
KURK	**Kurchatov**	**40.71**	**347**	*de*P	**P**	**16 11 27.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**40.71**	**347**	P	**P**	**16 11 27.6**	**-0.3**
KURK				IAmb	IAmb	16 11 40.2	
	comp=Z,57nm,1.4s						
TJN	**Taejon**	**40.86**	**46**	*de*P	**P**	**16 11 29.2**	**-0.2**
TJN	**Taejon**	**40.86**	**46**	P	**P**	**16 11 27.1**	**-2.3**
SUJ	**Sinuiju**	**40.91**	**40**	P	**P**	**16 11 30.0**	**+0.2**
SUJ				pP	**pwP**	**16 11 36.5**	**-2.1**
SUJ				S	**S**	**16 17 37.8**	**-2.9**
SUJ				AmB			
	comp=Z,169nm,1.6s						
SUJ				AMS	AMS		
	comp=N,91nm,3.7s						
SUJ				AMS	AMS		
	comp=E,67nm,2.8s						
SUJ				AMS	AMS		
	comp=Z,87nm,3.6s						
MOY	**Mondy**	**41.01**	**9**	*e*P	P	16 11 42.0	+11
MOY				pmax	pmax		
	comp=Z,49nm,2.5s						
PYAG	**Pyongyang**	**41.13**	**42**	S	**S**	**16 17 39.7**	**-4.3**
PYAG	**Pyongyang**	**41.13**	**42**	AmB			
	comp=Z,182nm,3.5s						
PYAG	**Pyongyang**	**41.13**	**42**	AMS	AMS		
	comp=Z,25nm,3.1s						
PYAG	**Pyongyang**	**41.13**	**42**	AMS	AMS		
	comp=E,35nm,4.2s						
PYAG	**Pyongyang**	**41.13**	**42**	AMS	AMS		
	comp=N,18nm,2.2s						
PYAG	**Pyongyang**	**41.13**	**42**	P	**P**	**16 11 29.7**	**-1.8**
PYAG	**Pyongyang**	**41.13**	**42**	pP	pP	16 11 38.6	+2.5
JSU	**Suzuyama**	**41.19**	**55**	P	**P**	**16 11 31.4**	**-0.8**
SIJI	**Sorong**	**41.34**	**104**	P	**P**	**16 11 32.7**	**-0.9**
	comp=N,16nm,0.4s,baz=305,slow=7.5,SNR=22						
SIJI				LR	LR	16 30 57.1	
	comp=N,235nm,21.0s,baz=258,slow=39						
	comp=N,16nm,0.4s						
SNY	**Shenyang**	**41.38**	**37**	⇑P	**P**	**16 11 33.9**	**+0.3**
SNY				S	**S**	**16 17 45.0**	**-2.6**
SNY				pmax	pmax		
	comp=N,31nm,0.5s						
SNY				pmax	pmax		
	comp=N,300nm,4.4s						
SNY				LR	LR		
	comp=N,1µm,16.4s						
SNY				LR	LR		
	comp=N,1µm,17.5s						
SNY				LR	LR		
	comp=N,3µm,15.8s						
KSAR	**Wonju Array Be**	**41.74**	**45**	P	**P**	**16 11 35.7**	**-0.9**
KSAR	**Wonju Array Be**	**41.74**	**45**	P	**P**	**16 11 35.7**	**-0.9**
KS19	**Wonju Array Si**	**41.76**	**45**	P	**P**	**16 11 35.4**	**-1.4**
KSRS	**Korea Array**	**41.77**	**45**	P	**P**	**16 11 36.0**	**-0.8**
	comp=N,6.2nm,0.8s,baz=245,slow=8.7,SNR=23						
	comp=N,6.2nm,0.8s						
JNU	**Nakatsue**	**42.10**	**53**	P	**P**	**16 11 39.3**	**-0.4**
	comp=N,16nm,0.8s,baz=235,slow=1.0,SNR=1.8						
	comp=N,16nm,0.8s						
MBWA	**Marble Bar**	**42.54**	**139**	P	**P**	**16 11 42.7**	**-0.6**
MBWA	**Marble Bar**	**42.54**	**139**	P	**P**	**16 11 43.9**	**+0.6**
HHU	**Hamhung**	**42.76**	**42**	P	**P**	**16 11 45.6**	**+0.7**
HHU				pP	**pwP**	**16 11 53.7**	**0.0**
HHU				S	**S**	**16 18 04.8**	**-3.2**
HHU				AmB			
	comp=Z,146nm,1.4s						
HHU				AMS	AMS		
	comp=N,63nm,4.3s						
HHU				AMS	AMS		
	comp=E,59nm,4.0s						
HHU				AMS	AMS		
	comp=Z,21nm,1.5s						
ZAA0	**Zalesovo Array**	**42.88**	**354**	P	**P**	**16 11 44.4**	**-1.2**
ZALV	**Zalesovo Beam**	**42.88**	**354**	P	**P**	**16 11 45.4**	**-0.3**
	comp=Z,15nm,0.8s,baz=177,slow=7.4,SNR=48						
ZALV				LR	LR	16 32 51.3	
	comp=Z,1µm,20.4s,baz=178,slow=41						
	comp=Z,15nm,0.8s						
ZALV	**Zalesovo Beam**	**42.88**	**354**	P	**P**	**16 11 45.1**	**-0.6**
PSA00	**Pilbara Seismi**	**42.91**	**140**	P	**P**	**16 11 45.1**	**-1.3**
PSA00				IAmb	IAmb	16 12 00.5	
	comp=Z,28nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.60**	**130**	LR	LR	16 31 42.9	
	comp=Z,325nm,21.7s,baz=302,slow=38						
FITZ	**Fitzroy Crossi**	**44.60**	**130**	P	**P**	**16 11 58.9**	**-1.0**
BRVK	**Borovoye**	**45.01**	**342**	*de*P	**P**	**16 12 02.5**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	**Borovoye**	**45.01**	**342**	P	**P**	**16 12 01.5**	**-1.3**
KNRA	**Kununurra**	**45.60**	**125**	P	**P**	**16 12 07.5**	**-0.5**
	baz=46,SNR=14						
KNRA	**Kununurra**	**45.60**	**125**	P	**P**	**16 12 07.5**	**-0.5**
KNRA				IAmb	IAmb	16 12 21.8	
	comp=Z,24nm,0.9s						
BNX	**BinXian**	**45.96**	**35**	⇓P	**P**	**16 12 10.5**	**+0.1**
BNX				pmax	pmax		
	comp=Z,12nm,0.6s						
BNX				pmax	pmax		
	comp=Z,160nm,4.2s						
MEEK	**Meekatharra**	**46.00**	**145**	P	**P**	**16 12 10.8**	**-0.1**
	baz=46,SNR=3.2						
AB31	**Akbulak array**	**46.00**	**332**	*i* P	**P**	**16 12 11.0**	**+0.3**
ABKAR	**Akbulak array**	**46.00**	**332**	P	**P**	**16 12 11.2**	**+0.5**
ABKAR	**Akbulak array**	**46.00**	**332**	P	**P**	**16 12 11.3**	**+0.5**
ABKAR				IAmb	IAmb	16 12 23.4	
	comp=Z,19nm,0.9s						
MTN	**Manton Dam**	**46.08**	**120**	P	**P**	**16 12 10.9**	**-0.8**
	baz=46,SNR=4.7						
MTN	**Manton Dam**	**46.08**	**120**	P	**P**	**16 12 10.1**	**-1.6**
MTN				IAmb	IAmb	16 12 23.5	
	comp=Z,16nm,0.7s						
MDJ	**Mudanjiang**	**46.58**	**37**	P	P	16 12 21.0	+5.7
MDJ				PP	**PP**	**16 14 08.6**	**+3.7**
MDJ				S	**S**	**16 19 06.2**	**+2.8**
MDJ				SS	**ScS**	**16 22 18.4**	**+8.7**
MDJ				pmax	pmax		
	comp=Z,11nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,180nm,6.3s						
MDJ				LR	LR		
	comp=N,1µm,16.5s						
MDJ				LR	LR		
	comp=E,2µm,17.3s						
LKRN	**Lenkeran, Azer**	**46.76**	**313**	P	**P**	**16 12 19.3**	**+2.5**
KDU	**Kakadu**	**47.14**	**119**	P	**P**	**16 12 19.5**	**-0.5**
	baz=47,SNR=8.0						
ATD	**Arta Tunnel**	**47.63**	**275**	LR	LR	16 30 25.8	
	comp=E,195nm,18.8s,baz=102,slow=34						
AKTO	**Aktyubinsk**	**47.72**	**332**	P	**P**	**16 12 24.0**	**-0.1**
USRK	**Ussuriysk Ar.**	**47.81**	**39**	P	**P**	**16 12 23.9**	**-1.0**
	comp=E,2.0nm,0.6s,baz=248,slow=7.6,SNR=3.7						
USRK				LR	LR	16 35 50.6	
	comp=E,2µm,18.1s,baz=225,slow=40						
	comp=E,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**47.81**	**39**	P	**P**	**16 12 23.6**	**-1.3**
USRK	**Ussuriysk Ar.**	**47.81**	**39**	P	**P**	**16 12 23.6**	**-1.3**
JGF	**Kuroka**	**47.99**	**52**	P	**P**	**16 12 25.2**	**-1.3**
JGF				IAmb	IAmb	16 12 45.9	
	comp=Z,31nm,1.2s						
BLDU	**Ballidu**	**48.20**	**150**	P	**P**	**16 12 27.8**	**-0.2**
	baz=48,SNR=6.5						
MNGR	**Mingechevir, A**	**48.80**	**315**	P	**P**	**16 12 35.0**	**+2.4**
SEKA	**Sheki**	**48.90**	**316**	P	**P**	**16 12 34.9**	**+1.4**
MAJO	**Matsushiro**	**48.94**	**51**	⇓*e*P	**P**	**16 12 34.9**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAJO	**Matsushiro**	**48.94**	**51**	P	**P**	**16 12 33.2**	**-0.6**
MAJO				IAmb	IAmb	16 12 50.6	
	comp=Z,18nm,0.8s						
MJAR	**Matsushiro Arr**	**48.94**	**51**	P	**P**	**16 12 33.4**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=222,slow=6.0,SNR=9.0						
MJAR				LR	LR	16 35 22.4	
	comp=Z,925nm,19.4s,baz=247,slow=39						
	comp=Z,3.4nm,0.7s						
MJAR	**Matsushiro Arr**	**48.94**	**51**	P	**P**	**16 12 32.8**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,28nm,1.5s						
MJAR	**Matsushiro Arr**	**48.94**	**51**	P	**P**	**16 12 32.8**	**-1.0**
MJAR				IAmb	IAmb	16 12 46.5	
	comp=Z,28nm,1.5s						
MUN	**Mundaring**	**49.10**	**152**	P	**P**	**16 12 35.2**	**+0.3**
	baz=49,SNR=9.9						
GANJ	**Ganja**	**49.28**	**315**	P	**P**	**16 12 37.9**	**+1.6**
NAX	**Nakhchivan**	**49.30**	**312**	P	**P**	**16 12 38.5**	**+1.9**
MAK	**Makhachkala**	**49.45**	**318**	*e*P	P	16 12 32.3	-5.2
MAK				*e*S	**S**	**16 19 37.9**	**-6.1**
MAK				pmax	pmax		
	comp=Z,42nm,0.8s						
JSD	**Sado**	**49.47**	**49**	P	**P**	**16 12 37.1**	**-0.7**
JSD				IAmb	IAmb	16 12 50.6	
	comp=Z,26nm,1.0s						
KLBR	**Kellerberrin**	**49.51**	**150**	P	**P**	**16 12 38.1**	**-0.1**
	baz=50,SNR=12						
BOD	**Bodaibo**	**49.52**	**16**	*e*P	**P**	**16 12 39.3**	**+1.5**
GNI	**Garni**	**50.20**	**313**	LR	LR	16 38 10.1	
	comp=Z,286nm,18.8s,baz=108,slow=41						
GNI	**Garni**	**50.20**	**313**	*de*P	**P**	**16 12 45.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,29nm,1.0s						
GNI	**Garni**	**50.20**	**313**	P	**P**	**16 12 43.3**	**-0.2**
GNI	**Garni**	**50.20**	**313**	P	**P**	**16 12 44.9**	**+1.3**
NWAO	**Narrogin (SRO)**	**50.37**	**152**	P	**P**	**16 12 44.1**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,37nm,1.1s						
NWAO	**Narrogin (SRO)**	**50.37**	**152**	P	**P**	**16 12 44.1**	**-0.5**
NWAO				IAmb	IAmb	16 12 45.7	
	comp=Z,37nm,1.1s						
NWAO	**Narrogin (SRO)**	**50.37**	**152**	P	**P**	**16 12 44.8**	**+0.2**
KLR	**Kul'dur**	**50.39**	**33**	P	**P**	**16 12 44.3**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=243,slow=8.6,SNR=7.4						
KLR				LR	LR	16 37 41.4	
	comp=Z,2µm,18.4s,baz=231,slow=40						

	comp=Z,1.9nm,0.8s						
KLR	Kul'dur	50.39	33	⇓eP	P	16 12 44.9	+0.3
KLR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GROC	Groznyy	50.68	317	eP	P	16 12 44.1	-2.8
GROC				e		16 14 01.9	
GROC				e		16 14 39.4	
GROC				eS	S	16 19 59.7	-1.6
GROC				pmax	pmax		
	comp=Z,40nm,0.7s						
WRKA	Warakurna	50.91	136	P	P	16 12 48.7	-0.1
	baz=51,SNR=22						
ZEA	Zeya	51.00	27	eP	P	16 12 49.7	+0.6
ZEA				e		16 23 38.0	
ZEA				pmax	pmax		
	comp=Z,100nm,6.6s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=E,400nm,19.0s						
ZEA				MLR	MLR		
	comp=N,200nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,18.0s						
SVE	Sverdlovsk	51.29	339	⇓eP	P	16 12 52.1	+0.9
SVE				eS	S	16 20 20.4	+11
SVE				pmax	pmax		
	comp=Z,35nm,1.0s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
JMM	Marumori	51.31	50	P	P	16 12 51.0	-0.8
ARU	Arti	51.75	337	LR	LR	16 38 22.6	
	comp=Z,2µm,20.1s,baz=136,slow=40						
ARU	Arti	51.75	337	c iP	P	16 12 55.0	+0.3
ARU						16 14 06.2	
ARU						16 14 51.0	
ARU				PPP	PPP	16 15 52.5	
ARU				S	S	16 20 19.5	+3.9
ARU				SSS	SSS	16 25 26.5	
ARU				pmax	pmax		
	comp=Z,23nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,19.0s						
ARU	Arti	51.75	337	P	P	16 12 54.0	-0.7
ARU				IAmb	IAmb	16 13 06.7	
	comp=Z,31nm,1.1s						
ZEI	Tsey	51.78	316	eP	P	16 12 55.7	+0.2
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
GUMO	Guam	52.10	82	LR	LR	16 32 53.7	
	comp=Z,209nm,20.9s,baz=280,slow=34						
WB0	Warramunga Arr	52.31	126	P	P	16 12 58.2	-1.3
WB0				IAmb	IAmb	16 13 12.0	
	comp=Z,32nm,0.9s						
WRA	Warramunga Arr	52.37	126	P	P	16 12 59.0	-0.9
	comp=Z,11nm,0.8s,baz=300,slow=10,SNR=106						
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	52.37	126	P	P	16 12 59.1	-0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	Warramunga Arr	52.37	126	P	P	16 12 59.1	-0.8
WRAB	Tennant Creek	52.37	126	deP	P	16 12 59.4	-0.5
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s						
WRAB	Tennant Creek	52.37	126	P	P	16 12 59.0	-0.9
WRAB				IAmb	IAmb	16 13 12.9	
	comp=Z,34nm,0.7s						
WRAB	Tennant Creek	52.37	126	P	P	16 13 00.9	+1.0
WB2	Warramunga Arr	52.38	126	P	P	16 12 58.8	-1.1
WB2				IAmb	IAmb	16 13 12.5	
	comp=Z,42nm,0.9s						
JTM	Tenmabayashi	52.45	47	P	P	16 12 57.1	-3.1
WR0	Warramunga Arr	52.53	126	P	P	16 13 00.1	-1.0
OPO	Ambohidratompo	52.82	236	P	P	16 13 02.4	-1.0
	comp=Z,6.7nm,0.6s,baz=18,slow=7.1,SNR=7.5						
	comp=Z,6.7nm,0.6s						
KBZ	Khabaz	52.82	317	P	P	16 13 02.0	-0.8
	comp=Z,6.0nm,0.8s,baz=108,slow=8.9,SNR=12						
	comp=Z,6.0nm,0.8s						
KBZ	Khabaz	52.82	317	d iP	P	16 13 03.3	+0.4
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KVAR	Kislovodsk Arr	53.05	317	LR	LR	16 38 59.4	
	comp=Z,347nm,20.8s,baz=146,slow=40						
KIV	Kislovodsk	53.05	317	eP	P	16 13 05.3	+0.6
KIV				eS	S	16 20 36.0	+1.9
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,320nm,17.0s						
KIV	Kislovodsk	53.05	317	P	P	16 13 04.6	-0.1
KIV				IAmb	IAmb	16 13 29.5	
	comp=Z,28nm,0.7s						
KIV	Kislovodsk	53.05	317	P	P	16 13 05.1	+0.4
GOF	Gofitskoye	53.25	319	⇑eP	P	16 13 17.5	+11
JEW	Eniwo	53.42	45	P	P	16 13 05.5	-1.8
GRNR	Gornyy	53.76	34	⇓iP	P	16 13 11.4	+1.7
GRNR				eS	S	16 20 50.7	+7.4
GRNR				pmax	pmax		
	comp=E,2.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				smax	smax		
	comp=E,5.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,510nm,17.0s						
GRNR				MLR	MLR		
	comp=N,590nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,940nm,16.0s						
BELG	Belogornoye	54.05	328	d iP	P	16 13 11.5	-0.2
BELG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AS31	Alice Springs	54.10	130	P	P	16 13 11.6	-1.0
ASAR	Alice Springs	54.10	130	P	P	16 13 12.3	-0.2
	comp=Z,4.5nm,0.7s,baz=305,slow=6.6,SNR=59						
ASAR				LR	LR	16 37 20.2	
	comp=Z,212nm,20.3s,baz=310,slow=37						
	comp=Z,4.5nm,0.7s						
ASAR	Alice Springs	54.10	130	P	P	16 13 11.5	-1.1
ASAR	Alice Springs	54.10	130	P	P	16 13 11.5	-1.1
ASF	Jabal al Asfar	54.20	302	LR	LR	16 39 35.4	
	comp=Z,369nm,18.6s,baz=95,slow=40						
ERM	Erimo	54.34	46	P	P	16 13 15.4	+1.4
ASAJ	Asahikawa	54.66	43	LR	LR	16 39 02.4	
	comp=Z,785nm,18.5s,baz=255,slow=39						
KIBK	Kibwezi	54.84	259	P	P	16 13 18.1	-0.1
VOI	Vohitsoka	54.87	233	P	P	16 13 19.8	+1.5
VOI				IAmb	IAmb	16 13 44.1	
	comp=Z,36nm,1.2s						
SOC	Sochi	54.92	316	eP	P	16 13 14.7	-3.6
SOC				e		16 15 19.3	
SOC				ePPP	PPP	16 16 28.8	
SOC				eS	S	16 20 56.0	-3.2
SOC				eSS	SS	16 24 43.4	+0.6
SOC				MLR	MLR		
	comp=Z,298nm,21.0s						
KMBO	Kilima Mbogo	55.29	261	P	P	16 13 22.2	+0.6
	comp=Z,2.4nm,0.6s,baz=40,slow=23,SNR=4.2						
KMBO				LR	LR	16 33 43.1	
	comp=Z,697nm,20.6s,baz=88,slow=32						
	comp=Z,2.4nm,0.6s						
KMBO	Kilima Mbogo	55.29	261	i P	P	16 13 23.0	+1.3
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KMBO	Kilima Mbogo	55.29	261	IAmb	IAmb	16 13 25.1	
	comp=Z,11nm,1.2s						
EIL	Elat	55.49	298	P	P	16 13 23.0	+0.4
	comp=Z,3.7nm,0.6s,baz=103,slow=15						
EIL				LR	LR	16 40 18.8	
	comp=Z,238nm,18.4s,baz=102,slow=40						
	comp=Z,3.7nm,0.6s						
MMAI	Mount Meron Ar	55.58	302	LR	LR	16 39 54.0	
	comp=Z,528nm,20.0s,baz=242,slow=39						
YSS	Yuzh-Sakhalins	55.80	40	eP	P	16 13 23.9	-0.6
YSS				e		16 15 34.4	
YSS				eS	S	16 21 03.7	-7.1
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,600nm,19.0s						
YSS				MLR	MLR		
	comp=N,800nm,20.0s						
YSS	Yuzh-Sakhalins	55.80	40	P	P	16 13 24.0	-0.5
YSS				IAmb	IAmb	16 13 38.2	
	comp=Z,36nm,0.9s						
LODK	Lodwar	56.13	267	P	P	16 13 26.5	-1.0
VRH	Novokhopyorsk	56.65	325	eP	P	16 13 30.1	-0.4
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
KIRV	Kirov	56.84	335	P	P	16 13 31.0	-0.6
	baz=143,slow=3.9						
KIRV	Kirov	56.84	335	d iP	P	16 13 31.6	-0.1
ANN	Anapa	56.87	317	eP	P	16 13 29.5	-2.7
ANN				e*PP	pP	16 13 33.2	-3.6
ANN				eS	S	16 21 23.8	-1.3
ANN				pmax	pmax		
	comp=Z,17nm,0.9s						
QIS	Mount Isa	56.92	124	P	P	16 13 32.6	-0.3
	baz=57,SNR=8.3						
COEN	Coen	57.06	115	P	P	16 13 33.8	-0.2
TYV	Tymovskoe	57.30	36	eP	P	16 13 46.8	+12
TYV				eS	S	16 21 55.6	+25
TYV				pmax	pmax		
	comp=Z,27nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
TYV				smax	smax		
	comp=N,8.0nm,1.5s						
TYV				smax	smax		
	comp=E,8.0nm,1.5s						
TYV				smax	smax		
	comp=N,500nm,7.9s						
TYV				smax	smax		
	comp=E,300nm,7.9s						
YAK	Yakutsk	57.66	20	eP	P	16 13 38.0	+0.6
YAK				e*PP	pwP	16 13 47.2	+0.8
YAK				e		16 15 48.9	
YAK				eS	S	16 21 40.4	+5.5
YAK				e*SS	sS	16 21 44.9	+2.5
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,32nm,1.5s						
YAK				pmax	pmax		
	comp=N,19nm,1.6s						
YAK				smax	smax		
	comp=N,44nm,2.8s						
YAK				smax	smax		
	comp=E,37nm,2.3s						
YAK				MLR	MLR		
	comp=Z,639nm,15.0s						
YAK				MLR	MLR		
	comp=E,352nm,13.0s						
YAK				MLR	MLR		
	comp=N,218nm,12.0s						
YAK	Yakutsk	57.66	20	P	P	16 13 35.6	-1.8
VORD	Divnogorie	57.94	324	eP	P	16 13 38.6	-1.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NRIK	Noril'sk	58.05	358	P	P	16 13 39.5	-0.6
	comp=Z,8.4nm,0.8s,baz=149,slow=6.0,SNR=20						
NRIK				LR	LR	16 40 24.2	
	comp=Z,576nm,21.4s,baz=182,slow=38						
	comp=Z,8.4nm,0.8s						
NRIK	Noril'sk	58.05	358	deP	P	16 13 40.1	0.0
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NRIK	Noril'sk	58.05	358	P	P	16 13 38.7	-1.4
NRIK				IAmb	IAmb	16 13 56.1	
	comp=Z,22nm,1.2s						
VSR	Storozhevoye	58.11	324	eP	P	16 13 39.6	-1.2
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BR131	Keskin Array S	58.24	310	deP	P	16 13 40.9	-1.2
BR131	Keskin Array S	58.24	310	P	P	16 13 40.2	-1.9
BR131				IAmb	IAmb	16 13 53.9	
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	58.24	310	P	P	16 13 41.1	-1.0
	comp=Z,8.5nm,0.8s,baz=116,slow=7.7,SNR=28						
	comp=Z,8.5nm,0.8s						
BRTR	Keskin Array B	58.24	310	i P	P	16 13 41.4	-0.8
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRTR	Keskin Array B	58.24	310	P	P	16 13 40.3	-1.9
VORR	Voronezh	58.27	325	eP	P	16 13 42.1	+0.2
VORR				eS	S	16 21 54.7	+11
VORR				pmax	pmax		
	comp=Z,45nm,1.4s						
BZK	Bozkurt	58.48	312	⇑P	P	16 13 43.9	+0.3
LPSR	Galich'ya Gora	58.81	326	eP	P	16 13 44.8	-0.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
PMG	Port Moresby	59.05	108	P	P	16 13 46.8	-1.2
PMG				pmax	pmax		
	comp=Z,20nm,0.8s						
PMG	Port Moresby	59.05	108	P	P	16 13 46.8	-1.2
PMG				IAmb	IAmb	16 14 02.4	
	comp=Z,20nm,0.8s						
SIM	Simferopol'	59.17	316	eP	P	16 13 47.6	-0.7
SIM				S	S	16 21 54.0	-1.2
SIM				pmax	pmax		
	comp=Z,14nm,0.9s						
MTSU	Mount Surprise	59.77	119	P	P	16 13 52.2	-0.7
	baz=60,SNR=5.6						
PRGR	Permogore	60.20	337	eP	P	16 13 54.8	-0.2
MOS	Moscow	60.82	328	eP	P	16 14 02.5	+3.1
MOS				e		16 14 43.7	
MOS				e		16 16 19.6	
MOS				eS	S	16 22 22.1	+6.1
MOS				pmax	pmax		
	comp=Z,51nm,0.9s						
BBOO	Buckleboo	61.08	138	P	P	16 14 02.6	+1.0
	baz=61,SNR=4.8						
BBOO	Buckleboo	61.08	138	P	P	16 14 00.7	-0.9
BBOO	Buckleboo	61.08	138	P	P	16 14 02.1	+0.5
OBN	Obninsk	61.12	328	P	P	16 14 00.3	-1.1
	comp=Z,2.2nm,0.4s,baz=35,slow=23,SNR=4.9						
OBN				LR	LR	16 43 12.7	
	comp=Z,134nm,21.5s,baz=132,slow=39						
	comp=Z,2.2nm,0.4s						
OBN	Obninsk	61.12	328	eP	P	16 14 00.1	-1.3
OBN				e		16 16 14.1	
OBN				ePPP	PPP	16 17 39.8	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
OBN				MLR	MLR		
	comp=Z,532nm,20.0s						
LCRK	Leigh Creek	61.14	134	P	P	16 14 02.9	+0.9
INKA	Innaminka	61.48	130	P	P	16 14 06.6	+2.2
CTA	Charters Tower	62.26	120	LR	LR	16 42 25.0	
	comp=Z,331nm,21.9s,baz=286,slow=37						
CTA	Charters Tower	62.26	120	P	P	16 14 11.3	+1.5
CTAO	Charters Tower	62.26	120	P	P	16 14 08.6	-1.1
CTAO				pmax	pmax		
	comp=Z,42nm,1.2s						
CTAO	Charters Tower	62.26	120	P	P	16 14 08.6	-1.1
CTAO	Charters Tower	62.26	120	P	P	16 14 10.5	+0.7
KLMR	Klimovskoe	62.27	334	eP	P	16 14 08.5	-0.6
KLMR				pmax	pmax		
	comp=Z,37nm,1.2s						
KLMR	Klimovskoe	62.27	334	eP	P	16 14 08.5	-0.6
KLMR				AMP		16 14 21.1	
	comp=Z,37nm,1.2s						
KLMR				LQ	LQ	16 35 43.9	
KLMR				LQ	LQ	16 35 43.9	
KLMR				LR	LR	16 39 57.1	
KARP	Karpathos	62.67	304	P	P	16 14 11.7	-0.7
NAPP	Napperby	62.70	137	P	P	16 14 12.9	+0.5
	comp=Z,44nm,0.8s						
TIRR	Tirgusor	63.01	314	P	P	16 14 14.2	-0.2
TIRR				pmax	pmax		
	comp=Z,22nm,0.9s						
TIRR	Tirgusor	63.01	314	P	P	16 14 14.2	-0.2
TIRR				IAmb	IAmb	16 14 41.3	
	comp=Z,22nm,0.9s						
PAF	Port-aux-Franc	63.22	195	P	P	16 14 16.8	+1.3
PAF				pmax	pmax		
	comp=Z,128nm,1.2s						
PAF	Port-aux-Franc	63.22	195	P	P	16 14 16.8	+1.3
MILM	Milestii Mici	63.24	317	eP	P	16 14 13.0	-2.9
MILM				eS	S	16 22 43.0	-3.9
MILM	Milestii Mici	63.24	317	eP	P	16 14 13.0	-2.9
MILM				eS	S	16 22 43.0	-3.9
MILM				MLR	MLR		
	comp=Z,300nm,21.0s						
CFR	Carcaliu	63.34	315	⇑P	P	16 14 16.5	0.0
HTT	Hallett	63.37	136	P	P	16 14 17.8	+0.8
	baz=64,SNR=4.2						
HTT	Hallett	63.37	136	P	P	16 14 18.4	+1.4
QLP	Quilpie	63.56	127	P	P	16 14 18.5	+0.2
	baz=64,SNR=8.5						
SORM	Soroca	63.81	318	⇑P	P	16 14 19.1	-0.6
AKASG	Malin Array Be	63.87	321	P	P	16 14 18.3	-1.7
	comp=Z,1.5nm,0.5s,baz=78,slow=6.0,SNR=11						
AKASG				LR	LR	16 46 26.8	
	comp=Z,328nm,18.2s,baz=108,slow=40						
	comp=Z,1.5nm,0.5s						
AKASG	Malin Array Be	63.87	321	i P	P	16 14 18.6	-1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	63.87	321	⇓eP	P	16 14 18.8	-1.2
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AKBB	Malin Array Si	63.87	321	P	P	16 14 18.4	-1.6
STKA	Stephens Creek	64.34	134	P	P	16 14 23.0	-0.4
	comp=Z,6.5nm,0.7s,baz=318,slow=5.7,SNR=16						
STKA				LR	LR	16 44 05.1	
	comp=Z,550nm,21.2s,baz=299,slow=38						
	comp=Z,6.5nm,0.7s						
STKA	Stephens Creek	64.34	134	P	P	16 14 23.8	+0.4
	baz=64,SNR=9.4						
STKA	Stephens Creek	64.34	134	⇓eP	P	16 14 24.8	+1.5
STKA	Stephens Creek	64.34	134	P	P	16 14 23.1	-0.2
STKA	Stephens Creek	64.34	134	P	P	16 14 24.2	+0.9
BISRR	Bisoca	64.40	315	⇑P	P	16 14 23.3	-0.4
VRI	Vrincioaia	64.45	316	⇑P	P	16 14 23.6	-0.3
TIXI	Tiksi	64.45	12	LR	LR	16 45 58.7	
	comp=Z,486nm,18.5s,baz=182,slow=39						
TIXI	Tiksi	64.45	12	⇓eP	P	16 14 22.5	-0.9
TIXI				pmax	pmax		
	comp=Z,19nm,1.3s						
TIXI	Tiksi	64.45	12	P	P	16 14 22.2	-1.2
PLOR	Plostina	64.50	316	⇑P	P	16 14 24.1	-0.1
IDI	Anoyia	64.50	304	⇑P	P	16 14 24.0	-0.5
IDI	Anoyia	64.50	304	P	P	16 14 23.6	-0.9
	comp=Z,7.6nm,0.6s,baz=76,slow=6.4,SNR=13						
IDI				LR	LR	16 45 35.7	
	comp=Z,118nm,21.6s,baz=94,slow=39						
	comp=Z,7.6nm,0.6s						
IDI	Anoyia	64.50	304	P	P	16 14 24.0	-0.5
IDI				IAmb	IAmb	16 14 36.2	
	comp=Z,10nm,0.8s						
TESR	Tescani	64.62	316	⇓P	P	16 14 25.0	0.0
COVR	Voineasa-Covas	64.80	315	⇓P	P	16 14 26.2	-0.1
MLR	Muntele Rosu	64.92	315	⇑P	P	16 14 27.1	-0.1
MLR	Muntele Rosu	64.92	315	P	P	16 14 26.7	-0.4
	comp=Z,15nm,0.9s,baz=127,slow=3.0,SNR=14						
	comp=Z,15nm,0.9s						
MLR	Muntele Rosu	64.92	315	P	P	16 14 26.8	-0.4
MLR				pmax	pmax		
	comp=Z,23nm,0.9s						
MLR	Muntele Rosu	64.92	315	P	P	16 14 26.8	-0.4
MLR				IAmb	IAmb	16 14 45.5	
	comp=Z,23nm,0.9s						
MA2	Magadan	65.01	29	P	P	16 14 27.1	-0.1
	comp=Z,14nm,0.8s,baz=238,slow=5.9,SNR=23						
MA2				LR	LR	16 46 34.8	
	comp=Z,616nm,19.7s,baz=242,slow=40						
	comp=Z,14nm,0.8s						
MA2	Magadan	65.01	29	c iP	P	16 14 28.2	+0.9
MA2				pmax	pmax		
	comp=Z,14nm,0.7s						
MA2	Magadan	65.01	29	P	P	16 14 27.2	-0.1
DOPR	Dopca	65.38	315	⇑P	P	16 14 30.2	+0.2
VOIR		65.53	315	⇑P	P	16 14 31.1	0.0
MNK	Minsk	65.65	325	i P	P	16 14 30.0	-1.4
MNK				i		16 16 53.2	
MNK				i S	S	16 23 16.6	+0.2
MNK				i SS	SS	16 27 31.4	+1.0
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				MLR	MLR		
	comp=Z,665nm,22.0s						
MNK				MLR	MLR		
	comp=E,93nm,27.0s						
MNK	Minsk	65.65	325	i P	P	16 14 30.1	-1.4
	comp=E,2.0nm,0.8s						
MNK				i P	P	16 14 30.1	-1.4
	comp=N,14nm,0.8s						
MNK				i P	P	16 14 30.1	-1.4
	comp=Z,19nm,0.8s,baz=105						
MNK				i PP	PP	16 16 53.2	-2.7
MNK				i PPP	PPP	16 18 25.7	
MNK				i S	S	16 23 16.6	+0.2
MNK				i SS	SS	16 27 31.5	+1.0
MNK				i SSS	SSS	16 30 37.6	
MNK				i LQ	LQ	16 38 31.6	
MNK				i LR	LR	16 43 31.5	
MNK				i LRM	MLR	16 47 27.1	
	comp=Z,665nm,21.9s						
MNK				i LRM	MLR	16 48 18.6	
	comp=E,93nm,27.1s						
MNK				i LRM	MLR	16 48 53.4	
	comp=N,541nm,20.6s						
BURAR	Bucovina Array	65.78	317	⇑P	P	16 14 33.1	+0.5
BURAR	Bucovina Array	65.78	317	P	P	16 14 32.2	-0.5
BUR08	Bucovina Ar. S	65.80	317	P	P	16 14 32.3	-0.4
PUL	Pulkovo	65.98	331	⇓eP	P	16 14 33.4	-0.1
PUL				pmax	pmax		
	comp=Z,42nm,0.7s						
VALR	Valaam	66.27	333	ceP	P	16 14 35.7	+0.3
VALR				pmax	pmax		
	comp=Z,33nm,0.9s						
NACGM	Naroch	66.37	325	⇑eP	P	16 14 36.1	0.0
	baz=104						
VTS	Vitosha	66.46	312	⇑P	P	16 14 36.7	-0.4
VTS	Vitosha	66.46	312	P	P	16 14 34.4	-2.7
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VTS	Vitosha	66.46	312	P	P	16 14 34.4	-2.7
LIT	Litokhoron	66.77	309	P	P	16 14 37.2	-1.8
LIT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LIT	Litokhoron	66.77	309	P	P	16 14 37.2	-1.8
LIT				IAmb	IAmb	16 14 53.2	
	comp=Z,9.0nm,0.8s						
IIGN	Ignalina	66.80	326	eP	P	16 14 39.2	+0.3
PETK	Petropavlovsk-	66.82	37	P	P	16 14 39.1	0.0
	comp=Z,4.8nm,1.0s,baz=227,slow=3.2,SNR=2.2						
PETK				LR	LR	16 48 09.8	
	comp=Z,677nm,18.2s,baz=247,slow=40						
	comp=Z,4.8nm,1.0s						
ISAL	Salakas	66.90	326	eP	P	16 14 40.4	+0.9
SEY	Seymchan	66.97	26	P	P	16 14 39.4	-0.5
	comp=Z,4.2nm,0.8s,baz=81,slow=23,SNR=16						
SEY				LR	LR	16 46 56.5	
	comp=Z,798nm,20.1s,baz=249,slow=39						
	comp=Z,4.2nm,0.8s						
SEY	Seymchan	66.97	26	⇓eP	P	16 14 40.7	+0.9
SEY				pmax	pmax		
	comp=Z,22nm,1.3s						
ITM	Ithomi	67.01	306	P	P	16 14 38.9	-1.7
ITM				IAmb	IAmb	16 14 41.0	
	comp=Z,40nm,1.5s						
RMQ	Roma	67.10	125	P	P	16 14 37.4	-3.9
	baz=67,SNR=4.4						
RMQ	Roma	67.10	125	P	P	16 14 42.1	+0.8
CMSA	Cobar Meteorol	67.13	131	P	P	16 14 42.0	+0.7
	baz=67,SNR=16						
CMSA	Cobar Meteorol	67.13	131	P	P	16 14 43.0	+1.7
HERR	Herculane	67.30	314	⇑P	P	16 14 42.3	0.0
VSU	Vasula	67.34	329	⇑iP	P	16 14 42.2	0.0
VSU				pmax	pmax		
	comp=Z,46nm,1.0s						
VSU	Vasula	67.34	329	eP	P	16 14 42.9	+0.7
DRGR		67.34	316	⇑P	P	16 14 42.8	+0.2
PET	Petropavlovsk	67.36	37	eP	P	16 14 45.4	+2.9
PET				eS	S	16 23 37.5	+0.3
PET				ePPS	PPS	16 24 10.9	
PET				eSS	SS	16 27 54.5	-2.5
PET				MLR	MLR		

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      comp=Z,900nm,19.0s
LVZ   Lovozero          67.48 340  P      P      16 14 41.8 -1.2
LVZ                                pmax   pmax
      comp=Z,55nm,1.5s
LVZ   Lovozero          67.48 340  P      P      16 14 41.8 -1.2
FNA   Florina           67.67 309  P      P      16 14 43.1 -1.7
FNA                                pmax   pmax
      comp=Z,10.0nm,1.2s
FNA   Florina           67.67 309  P      P      16 14 43.1 -1.7
BOVS  Bovan             67.68 313 ⇑P      P      16 14 44.4 -0.3
KWP   Kalwaria Pacla    67.75 319  P      P      16 14 44.2 -0.9
KWP                                pmax   pmax
      comp=Z,122nm,0.9s
KWP   Kalwaria Pacla    67.75 319  P      P      16 14 44.2 -0.9
APA   Apatity           67.75 339⇓iP      P      16 14 43.5 -1.2
APA                                pmax   pmax
      comp=Z,14nm,0.8s
APA                                MLR    MLR
      comp=Z,1μm,20.0s
MDVR  Moldovita         67.79 314 ⇑P      P      16 14 45.4  0.0
KOLS  Kolonicke sedl    67.93 318 eP      P      16 14 47.8 +1.6
KOLS  Kolonicke sedl    67.93 318 eP      P      16 14 47.8 +1.6
SIRR  Siria             67.99 315 ⇑P      P      16 14 47.0 +0.3
LSZ   Lusaka            68.01 248  LR     LR     16 40 05.0
      comp=Z,491nm,21.3s,baz=82,slow=32
PABE  Paberze           68.08 325  P      P      16 14 46.6 -0.3
SUW   Suwalki           68.23 324  P      P      16 14 47.2 -0.7
SUW                                pmax   pmax
      comp=Z,42nm,1.0s
SUW   Suwalki           68.23 324  P      P      16 14 47.2 -0.7
CRVS  Cervenica-Dubn    68.46 318 eP      P      16 14 49.8 +0.3
CRVS  Cervenica-Dubn    68.46 318 eP      P      16 14 49.8 +0.3
FIA1  FINESS Array S    68.49 332  P      P      16 14 48.3 -1.1
FIA1                               IAmb   IAmb   16 15 01.3
      comp=Z,20nm,1.1s
FINES FINESS Array B    68.49 332  P      P      16 14 48.4 -1.1
      comp=Z,7.1nm,0.6s,baz=104,slow=8.0,SNR=22
FINES                              LR     LR     16 48 34.3
      comp=Z,355nm,19.5s,baz=110,slow=39
      comp=Z,7.1nm,0.6s
FINES FINESS Array B    68.49 332 i P     P      16 14 49.2 -0.2
FINES                              pmax   pmax
      comp=Z,7.0nm,0.6s
FINES FINESS Array B    68.49 332  P      P      16 14 48.8 -0.6
MTSE  Matsula           68.88 329 eP      P      16 14 52.4 +0.6
DIVS  Divibare          68.95 313  P      P      16 14 51.4 -1.4
MEF   Metsahovi         68.95 330 eP      P      16 14 52.8 +0.5
PBUR  Paburge           69.31 326 eP      P      16 14 55.8 +1.1
PDG   Podgorica         69.37 311 ⇑P      P      16 14 55.1 -0.2
PDG   Podgorica         69.37 311  P      P      16 14 53.7 -1.6
PDG                                IAmb   IAmb   16 15 19.7
      comp=Z,10.0nm,0.8s
PSZ   Piszkesteto       69.38 317  P      P      16 14 53.9 -1.4
PSZ                                pmax   pmax
      comp=Z,7.0nm,0.9s
PSZ   Piszkesteto       69.38 317  P      P      16 14 53.9 -1.4
SLIT  Slitere, Latvi    69.43 328 eP      P      16 14 56.0 +0.7
OJC   Ojcow             69.70 319  P      P      16 14 56.2 -1.0
OJC                                pmax   pmax
      comp=Z,8.0nm,0.7s
OJC   Ojcow             69.70 319  P      P      16 14 56.2 -1.0
OJC                                IAmb   IAmb   16 15 19.0
      comp=Z,8.3nm,0.7s
MORH  Mrgy, Hungar      70.07 315 ⇑P      P      16 14 58.9 -0.6
TOO   Toolangi          70.12 137  P      P      16 14 59.9 -0.1
TOO                                pmax   pmax
      comp=Z,45nm,1.4s
TOO   Toolangi          70.12 137  P      P      16 14 59.9 -0.1
TOO                                IAmb   IAmb   16 15 02.0
      comp=Z,44nm,1.4s
OKC   Ostrava-Krasne    70.72 319  AMS    AMS    16 50 40.0
      comp=Z,300nm,19.5s
KEV   Kevo              70.77 341  P      P      16 15 03.4 +0.1
KEV                                pmax   pmax
      comp=Z,81nm,1.5s
KEV   Kevo              70.77 341  P      P      16 15 03.4 +0.1
JAVC  Velka Javorina    70.94 318 eP      P      16 15 05.0 +0.1
AAL   Aland             71.09 330 eP      P      16 15 06.3 +0.8
MORC  Moravsky Berou    71.10 319 ⇑P      P      16 15 04.7 -1.1
MORC  Moravsky Berou    71.10 319  P      P      16 15 04.8 -1.0
MORC                               pmax   pmax
      comp=Z,19nm,1.5s
MORC  Moravsky Berou    71.10 319  P      P      16 15 04.8 -1.0
MORC                               IAmb   IAmb   16 15 17.3
      comp=Z,19nm,1.5s
MORC  Moravsky Berou    71.10 319 eP      P      16 15 05.4 -0.4
MODS  Modra-Piesok      71.16 317 eP      P      16 15 06.7 +0.5
MODS  Modra-Piesok      71.16 317 eP      P      16 15 06.7 +0.5
ARA0  ARCESS Array S    71.19 340 eP      P      16 15 06.2 +0.3
ARCES ARCESS Array B    71.19 340  P      P      16 15 04.7 -1.3
      comp=Z,7.8nm,0.7s,baz=93,slow=5.9,SNR=23
ARCES                              LR     LR     16 50 41.0
      comp=Z,816nm,19.4s,baz=112,slow=40
      comp=Z,7.8nm,0.7s
ARCES ARCESS Array B    71.19 340  P      P      16 15 05.9  0.0
ARCES                              pmax   pmax
      comp=Z,61nm,1.5s
ARCES ARCESS Array B    71.19 340  P      P      16 15 05.9  0.0
CAN   Canberra          71.40 133  P      P      16 15 07.7 -0.1
CAN                                pmax   pmax
      comp=Z,19nm,0.9s
CAN   Canberra          71.40 133  P      P      16 15 07.7 -0.1
CAN                                IAmb   IAmb   16 15 26.0
      comp=Z,19nm,0.9s
KRLC  Kraliky           71.61 319 eP      P      16 15 09.1 +0.2
KRLC                              e              16 15 26.9
KRLC                               MLR    MLR
      comp=Z,300nm,19.7s
KRLC  Kraliky           71.61 319 eP      P      16 15 09.1 +0.2
KRLC                              ePCP    PcP    16 15 26.9 -1.2
KRLC                               AMS    AMS    16 51 00.0
      comp=Z,300nm,19.7s
VRAC  Vranov            71.68 318  LR     LR     16 51 59.9
      comp=Z,308nm,19.4s,baz=97,slow=40
VRAC  Vranov            71.68 318 eP      P      16 15 08.8 -0.5
RONA  Rosalia, Austr    71.78 317 i P     P      16 15 09.4 -0.6
      comp=Z,3.0nm,1.0s
KRUC  Moravsky          71.79 318 eP      P      16 15 09.5 -0.4
KTK1  Kautokeino        71.80 339 eP      P      16 15 09.8 +0.2
DPC   Dobruska-Polom    71.93 319 eP      P      16 15 09.2 -1.6
DPC                               e              16 15 29.1
DPC                                MLR    MLR
      comp=Z,300nm,15.3s
DPC   Dobruska-Polom    71.93 319 eP      P      16 15 09.2 -1.6
DPC                               ePCP    PcP    16 15 29.1 -0.4
DPC                                AMS    AMS    16 51 10.0
      comp=Z,300nm,15.3s
SGRT  San Giovanni R    71.96 310  P      P      16 15 09.8 -1.3
OSTC  Ostas             72.01 320 eP      P      16 15 11.8 +0.5
OSTC                              ePCP    PcP    16 15 28.4 -1.4
OSTC                               AMS    AMS    16 52 10.0
      comp=Z,400nm,18.8s
CONA  Conrad Observa    72.08 317 eP      P      16 15 11.1 -0.7
      comp=Z,4.7nm,1.5s
CHVC  Chvalec           72.12 320 eP      P      16 15 12.5 +0.6
CHVC                              ePCP    PcP    16 15 30.4 +0.2
CHVC                               AMS    AMS    16 52 00.0
      comp=Z,500nm,14.0s
HAMF  Hammerfest        72.13 341 eP      P      16 15 11.9 +0.4
UPC   Upice             72.14 320  AMS    AMS    16 52 10.0
      comp=Z,400nm,18.5s
UPP   Uppsala           72.21 329 eP      P      16 15 12.4 +0.3
TREC  Trest             72.40 318  AMS    AMS    16 51 50.0
      comp=Z,300nm,15.7s
VIKU  Vikbolandet       72.51 328 eP      P      16 15 13.7 -0.3
SOKA  Soboth            72.59 315 eP      P      16 15 14.9  0.0
      comp=Z,8.1nm,1.3s
JETT  Jettan, Norway    72.91 340 eP      P      16 15 15.7 -0.6
OBKA  Obir              72.92 315 eP      P      16 15 16.8  0.0
      comp=Z,4.9nm,0.9s
PRU   Pruhonice         73.05 319 ePCP    PcP    16 15 35.6 +1.4
PRU                                AMS    AMS    16 51 40.0
      comp=Z,400nm,17.9s
MOA   Molln             73.15 317 eP      P      16 15 16.9 -1.2
      comp=Z,8.8nm,1.3s
CKRC  Cesky Krumlov     73.16 318 ePCP    PcP    16 15 36.2 +1.5
CKRC                               AMS    AMS    16 57 10.0
      comp=Z,300nm,19.3s
BRG   Berggiesshubel    73.47 320 eP      P      16 15 20.2 +0.2
BRG                                Amp           16 15 22.9
      comp=Z,3.8nm,0.9s
BRG                               ex      x      16 15 31.2
BRG                                Amp           16 15 39.0
      comp=Z,12nm,1.3s
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BRG                                Amp           16 53 27.0
      comp=E,0.5nm,19.4s
BRG                                Amp           16 53 31.0
      comp=Z,0.5nm,19.9s
BRG                                Amp           16 53 43.0
      comp=N,0.3nm,19.4s
BRG   Berggiesshubel    73.47 320 eP      P      16 15 20.1 +0.2
BRG                               e              16 15 31.2
BRG                                pmax   pmax
      comp=Z,4.0nm,0.9s
BRG                                pmax   pmax
      comp=Z,12nm,1.3s
BRG                                MLR    MLR
      comp=E,470nm,19.4s
BRG                                MLR    MLR
      comp=Z,450nm,19.9s
BRG                                MLR    MLR
      comp=N,270nm,19.4s
MYKA  Terra Mystica     73.55 315 i P     P      16 15 20.1 -0.4
      comp=N,2.0nm,0.6s
GEC2  GERESS Array S    73.56 318  P      P      16 15 20.1 -0.5
GERES GERESS Array B    73.56 318  P      P      16 15 19.6 -1.0
      comp=N,2.5nm,0.8s,baz=83,slow=4.4,SNR=12
GERES                              LR     LR     16 53 00.2
      comp=N,225nm,19.2s,baz=85,slow=40
      comp=N,2.5nm,0.8s
GERES GERESS Array B    73.56 318  P      P      16 15 19.9 -0.7
GERES GERESS Array B    73.56 318  P      P      16 15 19.9 -0.7
BIOA  Bad Ischl, Aus    73.57 316 eP      P      16 15 20.0 -0.6
      comp=N,1.6nm,0.5s
LBTB  Lobatse           73.64 240  LR     LR     16 43 05.1
      comp=N,619nm,20.9s,baz=64,slow=32
LBTB  Lobatse           73.64 240  P      P      16 15 22.4 +1.0
LBTB                               pmax   pmax
      comp=Z,8.0nm,0.7s
LBTB  Lobatse           73.64 240  P      P      16 15 22.4 +1.0
KHC   Kasperske Hory    73.65 318⇑eP      P      16 15 20.8 -0.2
KHC                                pmax   pmax
      comp=Z,38nm,2.9s
KHC   Kasperske Hory    73.65 318  P      P      16 15 20.1 -0.9
KHC   Kasperske Hory    73.65 318 eP      P      16 15 20.5 -0.5
KHC                               ePCP    PcP    16 15 38.0 +1.2
KHC                                AMS    AMS    16 57 50.0
      comp=Z,300nm,18.7s
KBA   Koelnbreinsper    73.76 316 eP      P      16 15 21.0 -0.9
      comp=Z,6.2nm,1.1s
BILL  Bilibino          73.92  22 eP      P      16 15 21.3 -0.9
BILL                              e              16 15 38.0
BILL                              e              16 18 07.1
BILL                              ePPP    PPP    16 19 51.4
BILL                               pmax   pmax
      comp=Z,4.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,240nm,18.0s
BILL  Bilibino          73.92  22  P      P      16 15 22.0 -0.2
BILL                               IAmb   IAmb   16 15 36.6
      comp=Z,18nm,1.0s
CLL   Collm             74.08 320 eP      P      16 15 23.0 -0.4
CLL                               i *PP   pwP    16 15 34.3 +1.7
CLL                               eS      SKiKP  16 24 50.0 -1.0
CLL                                MLR    MLR
      comp=Z,400nm,18.8s
CLL   Collm             74.08 320 eP      P      16 15 23.0 -0.4
CLL                               i x     x      16 15 34.3
      comp=Z,18nm,1.5s
CLL                               i PcP   PcP    16 15 38.6  0.0
CLL                               ex      x      16 16 09.0
CLL                               ePP     PP     16 18 07.0 -1.7
CLL                               eS      S      16 24 58.0 +2.5
CLL                               eSS     SS     16 29 42.0 +1.6
CLL                               eSSS    SSS    16 33 00.0
CLL                               eSSSS          16 34 54.0
CLL                                LmH           16 52 00.0
      comp=N,300nm,21.4s
CLL                                LmH           16 52 00.0
      comp=E,300nm,21.3s
CLL                                LmV           16 53 00.0
      comp=Z,400nm,18.8s
STAL  STALIGIAL         74.19 315  P      P      16 15 23.1 -1.1
STAL                               IAmb   IAmb   16 15 43.7
      comp=Z,22nm,1.1s
HFS   Hagfors           74.21 329  P      P      16 15 22.2 -1.9
      comp=Z,4.8nm,1.0s,baz=29,slow=9.9,SNR=8.5
HFS                                LR     LR     16 51 13.4
      comp=Z,316nm,18.2s,baz=89,slow=38
      comp=Z,4.8nm,1.0s
ABTA  Abfaltersbach     74.33 315 eP      P      16 15 24.0 -1.1
      comp=Z,3.8nm,0.8s
FAUS  Fauske            74.35 337 eP      P      16 15 24.9 +0.3
NKC   Novy Kostel       74.41 319  AMS    AMS    16 53 20.0
      comp=Z,500nm,20.5s
STEI  Steigen           74.44 338 eP      P      16 15 25.1 -0.1
WTTA  Wattenberg        74.92 316 eP      P      16 15 27.7 -1.0
      comp=Z,3.2nm,0.6s
WATA  Walderalm         74.97 316 i P     P      16 15 27.6 -1.3
      comp=Z,2.4nm,0.6s
LOF   Lofoten           75.11 338 eP      P      16 15 28.8 -0.2
SQTA  Sankt Quirin      75.22 316 i P     P      16 15 29.1 -1.2
      comp=Z,1.9nm,0.6s
BOSA  Boshof            75.23 236  P      P      16 15 30.0 -0.6
      comp=Z,11nm,0.8s,baz=70,slow=5.2,SNR=21
BOSA                               LR     LR     16 45 11.0
      comp=Z,441nm,18.3s,baz=72,slow=33
      comp=Z,11nm,0.8s
BOSA  Boshof            75.23 236  P      P      16 15 30.7 +0.1
BOSA                               pmax   pmax
      comp=Z,18nm,1.0s
BOSA  Boshof            75.23 236  P      P      16 15 30.7 +0.1
BOSA                               IAmb   IAmb   16 15 44.8
      comp=Z,18nm,0.9s
NC405 NORSAR Array S    75.25 330  P      P      16 15 29.4 -0.7
NC405                              IAmb   IAmb   16 15 47.2
      comp=Z,22nm,0.9s
MOTA  Moosalm           75.29 316 i P     P      16 15 29.0 -1.8
      comp=Z,7.2nm,1.1s
NC602 NORSAR Array S    75.32 330  P      P      16 15 29.2 -1.2
NC602                              IAmb   IAmb   16 15 45.1
      comp=Z,25nm,1.1s
NSS   Namsos            75.38 334 eP      P      16 15 30.6 -0.1
NC303 NORSAR Array S    75.43 330  P      P      16 15 29.5 -1.6
NB201 NORSAR Array S    75.45 330  P      P      16 15 30.4 -0.8
NB201                              IAmb   IAmb   16 15 50.5
      comp=Z,21nm,1.1s
NB2   NORSAR Subarra    75.49 330  P      P      16 15 30.2 -1.3
      comp=Z,17nm,1.2s,baz=94,slow=5.3
NB2   NORSAR Subarra    75.49 330  P      P      16 15 30.2 -1.3
      baz=94,slow=5.3
NOA   NORSAR Array B    75.49 330  P      P      16 15 30.1 -1.4
      comp=Z,2.4nm,0.6s,baz=94,slow=5.7,SNR=20
NOA                                LR     LR     16 51 55.5
      comp=Z,524nm,20.4s,baz=120,slow=38
      comp=Z,2.4nm,0.6s
RETA  Reutte            75.52 316 i P     P      16 15 31.2 -0.8
      comp=Z,11nm,1.2s
FETA  Feichten          75.55 316 eP      P      16 15 30.9 -1.3
      comp=Z,6.6nm,1.7s
NAO01 NORSAR Array S    75.64 330  P      P      16 15 30.8 -1.5
NAO01                              IAmb   IAmb   16 15 33.3
      comp=Z,54nm,1.4s
NC204 NORSAR Array S    75.72 331  P      P      16 15 32.0 -0.8
NC204                              IAmb   IAmb   16 15 55.3
      comp=Z,23nm,1.1s
SPB2  Spitsbergen Ar    75.98 348  P      P      16 15 33.7 -0.2
SPB2                               IAmb   IAmb   16 15 46.4
      comp=Z,40nm,1.1s
SPA0  Spitsbergen Ar    75.98 348 eP      P      16 15 34.3 +0.3
SPITS Spitsbergen Ar    75.98 348  P      P      16 15 33.5 -0.5
      comp=Z,6.6nm,0.6s,baz=112,slow=11,SNR=8.3
SPITS                              LR     LR     16 58 45.1
      comp=Z,423nm,18.5s,baz=187,slow=43
      comp=Z,6.6nm,0.6s
SPITS Spitsbergen Ar    75.98 348  P      P      16 15 34.1 +0.1
SPITS                              pmax   pmax
      comp=Z,51nm,1.4s
DAVA  Damuels           76.12 316 i P     P      16 15 34.4 -1.1
      comp=Z,9.5nm,1.2s
DAVOX Davos/Dischmat    76.14 316  P      P      16 15 34.5 -1.2
      comp=Z,2.5nm,0.5s,baz=0.0,slow=11,SNR=2.7
DAVOX                              LR     LR     16 56 48.9
      comp=Z,255nm,18.5s,baz=83,slow=42
      comp=Z,2.5nm,0.5s
KONO  Kongsberg         76.25 329ceP      P      16 15 36.4 +0.7
KONO                               pmax   pmax
      comp=Z,20nm,2.5s
KONO  Kongsberg         76.25 329  P      P      16 15 35.9 +0.2
SHEM  Shemya Is, Ala    76.64  38  LR     LR     16 54 44.9
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      comp=Z,154nm,18.1s,baz=289,slow=40
KEST  Kesra             77.16 304  P      P      16 15 40.3 -1.3
      comp=Z,6.2nm,1.0s,baz=329,slow=8.7,SNR=4.1
      comp=Z,6.2nm,1.0s
KEST  Kesra             77.16 304  IAmb   IAmb   16 16 00.3
      comp=Z,16nm,1.1s
MOL   Molde             77.27 332 eP      P      16 15 41.0 -0.5
AKN   Aaknes            77.53 331 eP      P      16 15 41.4 -1.6
BLS5  Blasjo            77.85 329 eP      P      16 15 45.2 +0.4
SENIN Lac Senin/Sane    77.93 315  P      P      16 15 44.9 -0.9
SENIN                              IAmb   IAmb   16 16 06.0
      comp=Z,14nm,0.8s
HYA   Hoyanger          77.94 330 eP      P      16 15 45.2 +0.1
BER   Bergen            78.38 330 eP      P      16 15 49.0 +1.3
ASK   Askoy             78.44 330 eP      P      16 15 48.7 +0.7
FOO   Floro             78.47 331 eP      P      16 15 48.2 +0.1
CASY  Casey             78.62 172  P      P      16 15 48.5 -0.2
CASY                               IAmb   IAmb   16 15 50.3
      comp=Z,24nm,1.4s
TSUM  Tsumeb            78.85 248  LR     LR     16 48 12.6
      comp=Z,612nm,18.1s,baz=72,slow=34
SSB   Saint Sauveur     79.94 314  P      P      16 15 56.3 -0.4
SSB                                pmax   pmax
      comp=Z,19nm,1.2s
SSB   Saint Sauveur     79.94 314  P      P      16 15 56.3 -0.4
SUR   Sutherland        80.15 234  LR     LR     16 46 02.5
      comp=Z,701nm,21.0s,baz=74,slow=32
DZM   Mont Dzumac       80.59 115  LR     LR     16 54 05.1
      comp=Z,145nm,21.4s,baz=277,slow=38
MAW   Mawson            81.35 191  P      P      16 16 04.2 +0.8
      comp=Z,6.9nm,0.6s,baz=23,slow=4.9,SNR=11
MAW                                LR     LR     16 45 00.6
      comp=Z,230nm,20.9s,baz=15,slow=30
      comp=Z,6.9nm,0.6s
NOR   Nord              81.53 352 i P     P      16 16 03.1 -1.3
NOR                                IAmb   IAmb   16 16 18.7
      comp=Z,42nm,1.4s
JMIC  Jan Mayen         82.65 341  LR     LR     16 56 34.6
      comp=Z,343nm,19.6s,baz=74,slow=38
GSTR  Great Sitkin T    82.70  38  P      P      16 16 10.3 -0.8
EKA   Eskdalemuir Ar    83.44 325  P      P      16 16 14.7 -0.2
      comp=Z,2.2nm,0.6s,baz=88,slow=5.2,SNR=10
EKA                                LR     LR     16 55 21.6
      comp=Z,222nm,22.0s,baz=72,slow=37
      comp=Z,2.2nm,0.6s
DAG   Danmarks Havn     83.60 347 i P     P      16 16 13.7 -1.5
DAG                                IAmb   IAmb   16 16 27.5
      comp=Z,34nm,1.6s
DBG   Daneborg          84.93 345 i P     P      16 16 21.1 -0.9
DBG                                IAmb   IAmb   16 16 34.1
      comp=Z,89nm,2.2s
ESDC  Sonseca Array     87.03 310  P      P      16 16 33.0 -0.3
      comp=Z,1.1nm,0.7s,baz=63,slow=5.1,SNR=7.4
      comp=Z,1.1nm,0.7s
TORD  Torodi Ar. Bea    87.28 283  P      P      16 16 34.5 -0.4
      comp=Z,1.4nm,0.9s,baz=86,slow=5.0,SNR=8.6
      comp=Z,1.4nm,0.9s
EUNU  Eureka            88.79 360  P      P      16 16 40.9 +0.1
BORG  Borgarnes         89.28 337  LR     LR     17 00 10.6
      comp=Z,276nm,18.8s,baz=65,slow=38
IMAR  Indian Mountai    89.47  22  P      P      16 16 44.3 +0.1
TOLK  Toolik Lake Re    89.60  19  P      P      16 16 44.6 -0.2
TOLK                               IAmb   IAmb   16 17 00.8
      comp=Z,9.2nm,0.8s
TOLK  Toolik Lake Re    89.60  19  P      P      16 16 45.4 +0.6
      baz=301
TTA   Tatalina          89.93  25  P      P      16 16 46.0 -0.5
TTA                                pmax   pmax
      comp=Z,35nm,1.5s
TTA   Tatalina          89.93  25  P      P      16 16 46.0 -0.5
TTA                                IAmb   IAmb   16 17 02.4
      comp=Z,35nm,1.5s
H21K  Melozitna Rive    89.97  22  P      P      16 16 46.9 +0.3
H21K                               IAmb   IAmb   16 17 00.3
      comp=Z,24nm,1.2s
H21K  Melozitna Rive    89.97  22  P      P      16 16 47.7 +1.2
      baz=298
J20K  Nowinta River     90.14  24  P      P      16 16 47.9 +0.6
J20K  Nowinta River     90.14  24  P      P      16 16 48.8 +1.5
      baz=297
MSVF  Nonsavu           90.16 108  LR     LR     17 00 11.8
      comp=Z,134nm,19.9s,baz=247,slow=38
SUMG  Summit            90.25 347  P      P      16 16 47.6 -0.6
SUMG                               pmax   pmax
      comp=Z,14nm,0.9s
SUMG  Summit            90.25 347  P      P      16 16 47.6 -0.6
SUMG                               IAmb   IAmb   16 16 51.7
      comp=Z,14nm,0.9s
I21K  Tanana            90.50  22  P      P      16 16 49.6 +0.7
I21K                               IAmb   IAmb   16 17 02.0
      comp=Z,22nm,1.1s
K20K  Telida            90.54  24  P      P      16 16 50.1 +0.8
K20K  Telida            90.54  24  P      P      16 16 50.8 +1.6
      baz=297
L19K  White Mountain    90.74  25  P      P      16 16 51.0 +0.8
CHUM  Lake Minchumin    90.99  23  P      P      16 16 52.5 +1.2
      baz=298
L20K  Farewell, AK      91.02  25  P      P      16 16 53.5 +2.0
      baz=297
H23K  Yukon River       91.06  21  P      P      16 16 52.0 +0.4
H23K                               IAmb   IAmb   16 17 04.6
      comp=Z,12nm,1.1s
H23K  Yukon River       91.06  21  P      P      16 16 53.3 +1.7
      baz=301
CAST  Castle Rocks      91.30  24  P      P      16 16 53.1 +0.3
CAST  Castle Rocks      91.30  24  P      P      16 16 54.6 +1.8
      baz=299
BPAW  Bear Paw Mtn.     91.40  23  P      P      16 16 53.2  0.0
BPAW  Bear Paw Mtn.     91.40  23  P      P      16 16 54.7 +1.4
      baz=300
I23K  Minto, Yukon-K    91.47  22  P      P      16 16 55.9 +2.4
      baz=301
N19K  Bonanza Creek     91.51  27  P      P      16 16 53.1 -0.8
N19K  Bonanza Creek     91.51  27  P      P      16 16 55.3 +1.4
      baz=296
M20K  Styx River        91.60  25  P      P      16 16 55.5 +1.1
      baz=298
O18K  Koktuh Hills      91.61  28  P      P      16 16 55.2 +0.9
O18K  Koktuh Hills      91.61  28  P      P      16 16 56.1 +1.9
      baz=296
H24K  Noodor Dome       91.64  21  P      P      16 16 54.8 +0.5
H24K                               IAmb   IAmb   16 17 12.2
      comp=Z,11nm,1.4s
BMAR  Burnt Mountain    91.83  19  P      P      16 16 55.6 +0.4
TRF   Thorofare Moun    91.99  23  P      P      16 16 57.2 +1.1
      baz=300
WRH   Wood River Hil    92.29  22  P      P      16 16 56.3 -1.1
WRH                                IAmb   IAmb   16 17 09.8
      comp=Z,12nm,1.3s
IL31                    92.56  21  P      P      16 16 57.7 -0.9
IL31                               IAmb   IAmb   16 17 10.5
      comp=Z,12nm,1.4s
ILAR  Eielson Array     92.56  21  P      P      16 16 57.5 -1.0
      comp=Z,1.6nm,0.7s,baz=293,slow=4.4,SNR=11
ILAR                               LR     LR     17 04 30.1
      comp=Z,406nm,18.7s,baz=304,slow=39
      comp=Z,1.6nm,0.7s
ILAR  Eielson Array     92.56  21  P      P      16 16 57.3 -1.3
ILAR  Eielson Array     92.56  21  P      P      16 16 57.3 -1.3
HDA   Harding Lake      92.74  22  P      P      16 16 58.4 -1.0
HDA                                IAmb   IAmb   16 17 10.1
      comp=Z,6.4nm,1.0s
J25K  Salcha River,     93.19  21  P      P      16 17 00.9 -0.7
J25K                               IAmb   IAmb   16 17 12.8
      comp=Z,7.1nm,1.1s
URZ   Urewera           93.50 128  LR     LR     17 01 30.9
      comp=Z,275nm,19.6s,baz=211,slow=37
SML   Sawmill           93.62  24  P      P      16 17 02.7 -0.9
SML                                IAmb   IAmb   16 17 25.8
      comp=Z,14nm,0.9s
KDAK  Kodiak Island     93.76  29  LR     LR     17 02 38.0
      comp=Z,340nm,21.0s,baz=315,slow=38
RIDG  Independent Ri    93.88  22  P      P      16 17 04.5 -0.3
RIDG                               IAmb   IAmb   16 17 16.4
      comp=Z,9.7nm,1.0s
SCRK  Sand Creek        94.06  21  P      P      16 17 04.8 -0.8
SCRK                               IAmb   IAmb   16 17 17.8
      comp=Z,9.9nm,0.9s
RES   Resolute Bay      94.11   2  LR     LR     17 04 09.0
      comp=Z,280nm,18.9s,baz=34,slow=38
RES   Resolute Bay      94.11   2  P      P      16 17 05.2 -0.3
RES                                pmax   pmax
      comp=Z,28nm,1.5s
RES   Resolute Bay      94.11   2  P      P      16 17 05.2 -0.3
RES                                IAmb   IAmb   16 17 18.0
      comp=Z,28nm,1.5s
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INK	Inuvik	94.43	15	P	P	16 17 05.8	-1.3
INK				pmax	pmax		
	comp=Z,28nm,1.5s						
INK	Inuvik	94.43	15	P	P	16 17 05.8	-1.3
DBIC	Dimbokro	94.89	278	LR	LR	16 57 38.0	
	comp=Z,110nm,19.7s,baz=70,slow=34						
C36M	Paulatuk	95.81	12	P	P	16 17 12.5	-0.8
C36M				IAmb	IAmb	16 17 28.6	
	comp=Z,13nm,1.1s						
C36M	Paulatuk	95.81	12	P	P	16 17 13.0	-0.4
	baz=325						
RAO	Raoul Island	95.94	119	LR	LR	17 03 37.9	
	comp=Z,120nm,18.7s,baz=288,slow=37						
PLID	Pearl Lake	118.63	22	PKPdf	PKPdf	16 22 35.2	-0.8
PDAR	Pinedale Array	122.86	18	PKP	PKPdf	16 22 43.4	-0.8
	comp=Z,0.9nm,0.6s,baz=47,slow=0.4,SNR=11						
NVAR	Mina Array Bea	123.25	28	PKP	PKPdf	16 22 44.2	-0.8
	comp=Z,1.5nm,0.6s,baz=311,slow=2.3,SNR=13						
NVAR	Mina Array Bea	123.25	28	PKPdf	PKPdf	16 22 44.9	-0.1
R11A	Troy Canyon, C	124.51	26	PKPdf	PKPdf	16 22 46.7	-0.7
R11A	Troy Canyon, C	124.51	26	P	PKiKP	16 22 48.0	+0.3
	baz=327						
ECSD	EROS Data Cent	124.75	7	PKPdf	PKPdf	16 22 46.6	-0.9
ECSD	EROS Data Cent	124.75	7	P	PKPdf	16 22 47.5	0.0
	baz=350						
S39A	Bolivar	131.07	5	PKPdf	PKPdf	16 22 58.3	-1.3
GDU01	Guandu, BA	132.22	262	*e*P	PKiKP	16 23 04.0	+0.6
TXAR	Lajitas Array	137.05	20	PKP	PKPdf	16 23 11.8	+0.5
	comp=Z,0.7nm,0.5s,baz=59,slow=0.6,SNR=10						
ITAB	Concordia	142.34	240	*e*P	PKPdf	16 23 20.5	-0.2
PCMB	Pacaembu	142.92	249	*e*P	PKPdf	16 23 22.8	+0.9
SNDB	Serra Nova Dou	143.56	265	*e*P	PKPbc	16 23 21.1	+0.6
DVLD	Doverlandia	144.36	257	*e*P	PKPdf	16 23 25.2	+0.6
LL02	Futaleuf	145.07	201	PKPbc	PKPbc	16 23 23.6	-0.9
PLCA	Paso Flores	146.67	205	PKPbc	PKPbc	16 23 29.8	+0.3
	comp=Z,11nm,0.7s,baz=160,slow=3.4,SNR=23						
PLCA	Paso Flores	146.67	205	PKP2	PKPbc	16 23 29.5	0.0
PLCA	Paso Flores	146.67	205	PKPbc	PKPbc	16 23 29.5	0.0
PLCA	Paso Flores	146.67	205	*e*P	PKPab	16 23 30.3	-0.3
CPUP	Villa Florida	147.02	239	PKPbc	PKPbc	16 23 30.2	-0.7
	comp=Z,3.9nm,0.8s,baz=94,slow=3.7,SNR=7.4						
CPUP	Villa Florida	147.02	239	PKIKP	PKPdf	16 23 28.2	-0.7
CPUP	Villa Florida	147.02	239	PKPdf	PKPdf	16 23 28.1	-0.7
AQDB	Aquidauana	147.20	250	PKPbc	PKPdf	16 23 30.2	+0.9
LL04	Puerto Octay	147.26	203	PKPbc	PKPbc	16 23 30.7	-0.4
BO04	La Punta	152.10	213		PKPbc	16 23 43.0	-0.4
MT09	Talagante	152.46	213		PKPab	16 23 54.4	-0.1
CO01	Juntas del Tor	154.71	220	PKPab	PKPab	16 24 04.5	+0.2
GO04	Tololo Observa	155.01	219		PKPab	16 24 05.1	-0.5

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*TUL **09** 16:07:02.8±0.6, 36°.86N±0°.02×98°.15W±0°.02, h7^{km}±6^{km}, ML2.8, mb_Lg2.4/17(NEIC), Error ellipse: s-maj=3.2km s-min=1.8km az=137.0*

NEIC 09 16:07:03.0±0.7**, 36°.85N**±0°.01×**98°.15W**±0°.02**, h9**^{km}±6^{km}**, Error ellipse: s-maj=2.7km s-min=0.8km az=128.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.83	236	Pg	Pg	16 07 18.8	-0.1
T35A	Sooner Cattle	1.32	86		Pn	16 07 27.0	-0.6
R32A	Long Quarter,	1.64	344		Pn	16 07 32.5	+0.5
FNO	Franklin	1.70	159	Pn	Pb	16 07 34.0	-0.4
TUL1	Leonard	2.12	115	Pn	Pn	16 07 39.7	+1.1
TUL1				IAmb_Lg		16 08 12.7	
	comp=Z,17nm,0.9s						
WMOK	Wichita Mounta	2.16	194	Pn	Pn	16 07 40.0	+0.8
CBKS	Cedar Bluff	2.33	328	Pn	Pn	16 07 42.1	+0.6
KSU1	Kansas State U	2.56	28	IAmb_Lg		16 08 24.3	
	comp=Z,9.2nm,0.8s						
X37A	Clayton	3.19	134	IAmb_Lg		16 08 47.1	
	comp=Z,10nm,0.8s						
S39A	Bolivar	3.94	76	Pn	Pn	16 08 04.0	+0.4
U40A	Yellville	4.29	95	IAmb_Lg		16 09 18.8	
	comp=Z,6.0nm,0.8s						
Z38A	Mt. Pleasant	4.42	143	IAmb_Lg		16 09 29.8	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.58	51	IAmb_Lg		16 09 31.9	
	comp=Z,6.8nm,0.8s						
MGMO	Mountain Grove	4.72	85	Pn	Pn	16 08 15.0	+0.6
R40A	Maddies Statio	4.89	71	Pn	Pn	16 08 16.9	+0.2
L34A	Svendsen Farm,	5.30	15	IAmb_Lg		16 09 58.5	
	comp=Z,9.0nm,0.7s						
P40A	Paris	5.50	59	IAmb_Lg		16 09 58.5	
	comp=Z,7.7nm,0.9s						

JMA 09 16:09:16.0±0.1**, 32°.6N**±0°.2×**130°.7E**±0°.2**, h3**^{km}±1^{km}**, MV3.0**/20**, SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.06	110	P	Pg	16 09 17.5	+0.1
JIU3				S	Sg	16 09 18.8	+0.4
JTA	Tamana	0.43	336	*i* P	Pg	16 09 24.8	+0.5
JTA				S	Sg	16 09 30.9	+1.0
JZO	Okuchi	0.45	196	*i* P	Pg	16 09 24.8	+0.2
JZO				S	Sg	16 09 30.9	+0.5
JTZ	Takazaki	0.73	156	*i* P	Pb	16 09 30.7	-0.6
JTZ				S	Sg	16 09 40.4	+0.9

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*TUL **09** 16:10:04.7±0.8, 36°.86N±0°.02×98°.15W±0°.02, h7^{km}±6^{km}, ML3.0, mb_Lg2.7/47(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=139.0*

*NEIC **09** 16:10:04.7±0.5, 36°.84N±0°.03×98°.15W±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=6.4km s-min=1.1km az=138.0*

*ANF **09** 16:10:04.8±0.3, 36°.85N×98°.13W, h7^{km}, ML3.3/9, Error ellipse: s-maj=2.9km s-min=2.5km az=175.0*

ISC 09 16:10:04.8±0.9**, 36°.85N**±0°.03×**98°.14W**±0°.04**, h10**^{km}**, n45, σ0^{s}.69**/35**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.84	236	Pg	Pg	16 10 20.5	-0.4
U32A	Winter Ranch,	0.84	236	P	Pg	16 10 20.7	-0.3
	baz=55						
U32A				S	Sb	16 10 32.0	-0.8
	baz=55						
T35A	Sooner Cattle	1.31	87	Pn	Pn	16 10 29.0	-0.2
T35B	Sooner Cattle	1.31	87	P	Pn	16 10 29.0	-0.2
	baz=268						
T35B				S	Sn	16 10 46.7	0.0
	baz=268						
OKCFA	Oklahoma City	1.54	158	S	Sg	16 10 54.0	-0.2
	baz=339						
R32A	Long Quarter,	1.63	344		Pn	16 10 34.3	+0.7
R32A	Long Quarter,	1.63	344	P	Pb	16 10 34.5	-0.6
	baz=164						
R32A				S	Sb	16 10 56.1	+0.4
	baz=164						
FNO	Franklin	1.70	159	Pn	Pb	16 10 35.3	-0.9
TUL1	Leonard	2.12	116		Pn	16 10 40.4	+0.1
TUL1				IAmb_Lg		16 11 14.5	
	comp=Z,41nm,0.9s						
TUL1	Leonard	2.12	116	P	Pb	16 10 41.9	-1.3
	baz=297						
TUL1				Sb	Sb	16 11 10.9	+1.4
	baz=297						
WMOK	Wichita Mounta	2.17	194	Pn	Pn	16 10 41.1	+0.1
WMOK	Wichita Mounta	2.17	194	P	Pn	16 10 41.9	+0.8
	baz=13						
X37A	Clayton	3.19	134	IAmb_Lg		16 11 52.9	
	comp=Z,27nm,0.8s						
X37A	Clayton	3.19	134	S	Sn	16 11 34.3	+1.2
	baz=316						
HHAR	Hobbs	3.43	98	Pn	Pn	16 10 58.6	+0.3
HHAR	Hobbs	3.43	98	P	Pn	16 10 59.4	+1.0
	baz=281						
AMTX	Amarillo	3.48	237	IAmb_Lg		16 12 00.2	
	comp=Z,21nm,0.9s						
Z35A	Perchaven, San	3.59	168	P	Pn	16 11 01.7	+1.2
	baz=348						
Z35A				S	Sn	16 11 44.3	+1.4
	baz=348						
W39A	Magazine	3.90	114	Pn	Pn	16 11 05.0	+0.2
W39A	Magazine	3.90	114	S	Sn	16 11 50.6	0.0
	baz=296						
S39A	Bolivar	3.93	76	Pn	Pn	16 11 05.6	+0.4
S39A				IAmb_Lg		16 12 13.4	
	comp=Z,12nm,0.7s						
S39A	Bolivar	3.93	76	P	Pn	16 11 06.0	+0.7
	baz=259						
KSCO	Kaye Shedlock’	4.15	303	IAmb_Lg		16 12 26.7	
	comp=Z,12nm,0.8s						
U40A	Yellville	4.28	95	Pn	Pn	16 11 10.3	+0.2
U40A				IAmb_Lg		16 12 25.0	
	comp=Z,14nm,0.7s						
MIAR	Mount Ida	4.37	120	Pn	Pn	16 11 11.6	+0.4
MIAR				IAmb_Lg		16 12 27.3	
	comp=Z,12nm,0.9s						
ABTX	Abilene, Hawle	4.39	197	Pn	Pn	16 11 11.8	+0.1
BGNE	Belgrade	4.55	360	Pn	Pn	16 11 14.3	+0.5
BGNE				IAmb_Lg		16 12 38.4	
	comp=Z,19nm,0.8s						
P38A	Dawn	4.56	51	Pn	Pn	16 11 14.5	+0.6
P38A				IAmb_Lg		16 12 37.3	
	comp=Z,14nm,0.8s						
WHTX	Lake Whitney,	4.88	173	Pn	Pn	16 11 18.6	+0.3
R40A	Maddies Statio	4.88	71	Pn	Pn	16 11 18.6	+0.3
R40A				IAmb_Lg		16 12 43.4	
	comp=Z,11nm,0.9s						
X40A	Basin Creek Fa	4.92	117	Pn	Pn	16 11 19.4	+0.6
X40A				IAmb_Lg		16 12 45.9	
	comp=Z,12nm,0.8s						
T25A	Trinidad	5.03	275	IAmb_Lg		16 12 48.3	
	comp=Z,18nm,1.2s						
W41B	Gary Mavity, V	5.06	108	IAmb_Lg		16 12 59.7	
	comp=Z,9.6nm,1.1s						
OGNE	Ogallala	5.09	325	IAmb_Lg		16 12 45.2	
	comp=Z,16nm,0.8s						
L34A	Svendsen Farm,	5.29	14	IAmb_Lg		16 13 00.4	
	comp=Z,13nm,0.8s						
N38A	Joes South For	5.49	43	Pn	Pn	16 11 26.9	+0.2
N38A				IAmb_Lg		16 13 12.4	
	comp=Z,16nm,0.8s						
K31A	O'Neill	5.78	356	IAmb_Lg		16 13 12.7	
	comp=Z,14nm,0.7s						
PBMO	Poplar Bluff	6.19	88	IAmb_Lg		16 13 31.4	
	comp=Z,8.4nm,0.9s						
FVM	French Village	6.25	77	Pn	Pn	16 11 36.8	-0.2
FVM				IAmb_Lg		16 13 20.9	
	comp=Z,8.1nm,0.9s						
SCIA	State Center	6.33	36	IAmb_Lg		16 13 38.4	
	comp=Z,14nm,0.9s						
JCT	Junction City	6.50	193	IAmb_Lg		16 13 39.5	
	comp=Z,6.8nm,0.9s						
PHWY	Pilot Hill	7.22	310	IAmb_Lg		16 13 55.0	
	comp=Z,6.4nm,0.8s						
P43A	Skaggs, Pawnee	7.33	65	IAmb_Lg		16 14 07.9	
	comp=Z,12nm,0.7s						
L40A	Anamosa	7.46	44	IAmb_Lg		16 14 03.4	
	comp=Z,10.0nm,0.9s						
K22A	Casper	8.67	314	IAmb_Lg		16 14 48.0	
	comp=Z,5.2nm,0.8s						

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*IDC **09** 16:25:54.5±1.4, 6°.55S×81°.95W, h0^{km}, mb3.7/6, mbtmp3.7/9, ML3.5/3, MS3.2/5, Error ellipse: s-maj=56.8km s-min=22.3km az=39.0*

ISC 09 16:25:59.3±0.9**, 6°.7S**±0°.2×**81°.9W**±0°.1**, h35**^{km}**, n17, σ0^{s}.72**/12**, mb3.7**/6**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.52	98	Pn	Pn	16 26 51.9	0.0
	4.7nm,0.3s,baz=359,slow=4.5,SNR=52						
ATAH				Sn	Sn	16 27 32.3	-0.3
	10nm,0.3s,baz=132,slow=17,SNR=7.9						
ATAH				LR	LR	16 28 11.1	
	comp=Z,226nm,21.8s,baz=315,slow=38						
	10nm,0.3s						
NNA	Nana	7.29	137	Pn	Pn	16 27 44.0	+0.6
	1.4nm,0.3s,baz=297,slow=18,SNR=1.7						
NNA				Sn	Sn	16 28 55.2	-10
	2.0nm,0.3s,baz=259,slow=16,SNR=1.9						
	5.3nm,0.3s						
ROSC	El Rosal	13.70	34	LR	LR	16 34 25.4	
	comp=Z,135nm,21.0s,baz=248,slow=37						
LPAZ	La Paz	16.55	127	Pn	Pn	16 29 48.4	-1.0
	0.1nm,0.3s,baz=338,slow=5.4,SNR=2.1						
LPAZ				LR	LR	16 35 29.3	
	comp=Z,21nm,21.5s,baz=262,slow=35						
	0.6nm,0.5s						
H03N2	Juan Fernandez	26.80	174	T	T	17 00 21.6	
	baz=355,slow=76						
H03N1	Juan Fernandez	26.81	174	T	T	17 00 21.6	
	baz=355,slow=76						
H03N3	Juan Fernandez	26.82	174	T	T	17 00 26.8	
	baz=355,slow=76						
SJG	San Juan	29.11	32	LR	LR	16 45 52.9	
	comp=Z,43nm,20.4s,baz=244,slow=41						
PDAR	Pinedale Array	55.24	335	P	P	16 35 28.5	-0.7
	0.4nm,0.6s,baz=128,slow=12,SNR=3.2						
	0.4nm,0.6s						
NVAR	Mina Array Bea	56.16	326	P	P	16 35 35.8	-0.1
	0.4nm,0.6s,baz=122,slow=6.7,SNR=2.8						
	0.4nm,0.6s						
FRB	Frobisher Bay	70.92	6	LR	LR	17 11 41.2	
	comp=Z,150nm,19.0s,baz=19,slow=39						
YKA	Yellowknife Ar	73.36	345	P	P	16 37 26.8	-0.4
	0.5nm,0.7s,baz=139,slow=5.7,SNR=3.7						
	0.5nm,0.7s						
ESDC	Sonseca Array	85.01	49	P	P	16 38 32.4	+0.9
	1.1nm,1.0s,baz=261,slow=5.1,SNR=3.3						
	1.1nm,1.0s						
TORD	Torodi Ar. Bea	85.31	76	P	P	16 38 34.2	+0.8
	1.1nm,1.0s,baz=235,slow=1.3,SNR=4.2						
	1.1nm,1.0s						
ILAR	Eielson Array	85.63	337	P	P	16 38 34.4	+0.5
	0.5nm,0.8s,baz=141,slow=3.1,SNR=4.5						
	0.5nm,0.8s						
ASAR	Alice Springs	133.84	228	PKP	PKiKP	16 45 14.2	-0.7
	0.3nm,0.7s,baz=143,slow=1.7,SNR=5.2						
WRA	Warramunga Arr	135.62	233	PKP	PKiKP	16 45 17.8	-0.8
	0.7nm,0.6s,baz=117,slow=2.0,SNR=5.0						

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*IDC **09** 16:30:25.6±1.7, 4°.90N×126°.08E, h0^{km}, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=81.7km s-min=25.7km az=65.0*

*DJA **09** 16:30:46.3±0.3, 4°N±3°×12°6E±°, h10^{km}, M4.2/13, mb4.2/11, mB5.0/4, MLv4.3/13, Mw(mB)4.3/4*

ISC 09 16:30:34.2±0.9**, 4°.93N**±0°.07×**126°.6E**±0°.1**, h71**^{km}**, n20, σ1^{s}.18**/22**, mb3.4**/4**, 4C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.61	220	P	Pn	16 31 01.5	+0.8
GSPH	General Santos	1.99	306	⇑*i*P	Pn	16 31 04.1	-1.7
GSPH				*i* S	Sn	16 31 58.0	+28
KCP	Kidapawan	2.54	325	⇑*e*P	Pn	16 31 14.4	+1.1
KCP				*i* S	Sn	16 31 44.4	+1.1
BIPH	Bislig	3.24	356	⇑*e*P	Pn	16 31 28.1	+5.4
BIPH				*e*S	Sn	16 31 59.6	-0.7
CTBH	Cotabato--PC H	3.25	315	⇑*e*P	Pn	16 31 24.9	+2.1
TNTI	Ternate	4.20	169	P	Pn	16 31 37.1	+1.2
GTOI	Gorontalo	5.55	220	P	Pn	16 31 54.6	+0.3
LBMI	Labuha	5.60	170	P	Pn	16 31 55.5	+0.5
MRSI	Marisa	6.40	226	P	Pn	16 32 06.7	+0.8
	0.2nm842nm18nm,0.8s						
SANI	Sanana	6.95	185	P	Pn	16 32 11.4	-2.1
	0.5nm4µm16nm,0.6s						
LUWI	Luwuk	7.04	213	P	Pn	16 32 14.8	+0.1
	0.2nm36nm,1.0s						
SIJI	Sorong	7.42	141	Pn	Pn	16 32 19.8	-0.2
	0.4nm,0.3s,baz=330,slow=20,SNR=1.3						
	1.4nm,0.3s						
APSI	Ampana	7.61	220	P	Pn	16 32 23.6	+1.2
	0.1nm445nm15nm,1.0s						
AAI	Ambon	8.71	169	P	Pn	16 32 37.9	+0.4
	0.2nm12nm,0.5s						
BNSI	Bone	11.29	215	P	Pn	16 33 13.4	+0.6
	6.0nm,1.0s						
WBSI	Waikabubak, Su	16.14	206	P	P	16 34 18.6	-0.3
	16nm,1.0s						
FITZ	Fitzroy Crossi	22.90	182	P	P	16 35 30.9	-1.4
	0.9nm,0.5s,baz=1.2,slow=10,SNR=5.9						
	0.9nm,0.5s						
WRA	Warramunga Arr	25.87	163	P	P	16 36 01.4	+2.0
	0.4nm,0.5s,baz=341,slow=10,SNR=12						
	0.4nm,0.5s						
ASAR	Alice Springs	29.30	166	P	P	16 36 30.2	0.0
	0.4nm,0.5s,baz=346,slow=7.0,SNR=17						
ASAR				PcP	PcP	16 39 35.7	+0.2
	0.5nm,0.9s,baz=335,slow=4.1,SNR=2.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	56.49	325	P	P	16 40 08.1	-1.0
	0.2nm,0.5s,baz=125,slow=7.2,SNR=2.0						
	0.2nm,0.5s						

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*IDC **09** 16:31:06.1±1.5, 4°.88N×126°.39E, h84^{km}±15^{km}, mb3.7/7, mbtmp4.1/10, Error ellipse: s-maj=45.3km s-min=11.1km az=71.0*

*NEIC **09** 16:31:06.5±1.0, 4°.88N±0°.07×126°.45E±0°.05, h80^{km}±8^{km}, mb4.3/27, Error ellipse: s-maj=11.0km s-min=3.8km az=211.0*

ISC 09 16:31:05.1±0.5**, 4°.89N**±0°.05×**126°.51E**±0°.08**, h71**^{km}**, n43, σ0^{s}.96**/45**, mb4.2**/18**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.36	337	P	Pn	16 31 42.4	+0.7
	84nm,0.4s,baz=311,slow=19,SNR=2.0						
DAV				S	Sn	16 32 10.9	+1.3
	343nm,0.6s,baz=96,slow=18,SNR=3.7						
TNTI	Ternate	4.17	168	Pn	Pn	16 32 07.8	+1.4
TOLI2	Tolitoli	6.84	237	Pn	Pn	16 32 42.3	-0.5
SIJI	Sorong	7.43	140	P	Pn	16 32 53.3	+2.3
	3.8nm,0.3s,baz=338,slow=23,SNR=7.6						
SIJI				S	Sn	16 34 13.3	-0.6
	4.7nm,0.4s,baz=192,slow=21,SNR=4.5						
MYLDM	Lahad Datu	7.98	272	Pn	Pn	16 33 00.3	+1.8
BATI	Baumata	15.26	191	P	Pn	16 34 37.5	+1.0
	7.3nm,0.3s,baz=34,slow=3.6,SNR=2.4						
KSM	Kuching	16.52	259	P	P	16 34 55.4	+1.4
KSM				IAmb	IAmb	16 34 56.8	
	comp=Z,7.9nm,0.5s						
JAGI	Jajag, Banyuwa	18.11	223	P	Pn	16 35 12.4	+0.5
JAGI				IAmb	IAmb	16 35 22.4	
	comp=Z,20nm,1.0s						
MTN	Manton Dam	18.20	165	P	P	16 35 11.8	-0.7
MTN				IAmb	IAmb	16 35 35.4	
	comp=Z,30nm,1.4s						
KNRA	Kununurra	20.55	174	P	P	16 35 39.2	+1.2
KNRA				IAmb	IAmb	16 35 39.7	
	comp=Z,19nm,0.7s						
MYKOM	Kota Tinggi	22.82	263	P	P	16 36 01.6	-0.9
MYKOM				IAmb	IAmb	16 36 09.7	
	comp=Z,9.3nm,1.1s						
FITZ	Fitzroy Crossi	22.85	182	P	P	16 36 02.3	-0.4
	comp=Z,2.9nm,0.5s,baz=7.9,slow=8.4,SNR=11						
	comp=Z,2.9nm,0.5s						
FITZ	Fitzroy Crossi	22.85	182	IAmb	IAmb	16 36 11.4	
	comp=Z,5.9nm,0.8s						
WB0	Warramunga Arr	25.70	163	P	P	16 36 28.8	0.0
WB0				IAmb	IAmb	16 36 31.2	
	comp=Z,8.2nm,1.0s						
WRAB	Tennant Creek	25.84	163	P	P	16 36 29.8	-0.3
WRAB				IAmb	IAmb	16 36 54.4	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	25.85	163	P	P	16 36 29.3	-0.9
	comp=Z,2.1nm,0.6s,baz=341,slow=10,SNR=18						
	comp=Z,2.1nm,0.6s						
WRA	Warramunga Arr	25.85	163	IAmb	IAmb	16 36 33.8	
	comp=Z,0.4nm,1.2s						
WB2	Warramunga Arr	25.85	163	P	P	16 36 29.7	-0.5
WB2				IAmb	IAmb	16 36 33.0	
	comp=Z,21nm,1.4s						
MBWA	Marble Bar	26.72	194	P	P	16 36 37.5	-0.5
PSA00	Pilbara Seismi	27.09	194	P	P	16 36 41.1	-0.2
PSA00				IAmb	IAmb	16 37 00.8	
	comp=Z,23nm,1.2s						
GSI	Gunungsitoli	29.10	264	P	P	16 36 58.6	-0.8
GSI				IAmb	IAmb	16 37 11.8	
	comp=Z,23nm,1.2s						
AS31	Alice Springs	29.28	166	P	P	16 37 00.5	-0.3
ASAR	Alice Springs	29.28	166	P	P	16 37 00.9	+0.1
	comp=Z,1.6nm,0.6s,baz=346,slow=7.1,SNR=28						
ASAR				PcP	PcP	16 40 06.2	-0.2
	comp=Z,0.3nm,0.6s,baz=343,slow=2.7,SNR=4.2						
	comp=Z,1.6nm,0.6s						
JHS	Saijyo	30.58	11	P	P	16 37 12.2	-0.1
JHS				IAmb	IAmb	16 37 38.0	
	comp=Z,12nm,1.4s						
MORW	Morawa	35.23	196	P	P	16 37 52.0	-0.8
BBOO	Buckleboo	38.57	167	P	P	16 38 21.5	+0.3
NWAO	Narrogin (SRO)	38.62	193	P	P	16 38 21.2	-0.3
STKA	Stephens Creek	39.28	160	P	P	16 38 27.4	+0.3
	comp=Z,2.8nm,0.7s,baz=334,slow=8.5,SNR=4.2						
	comp=Z,2.8nm,0.7s						
SANVU	Saraoutou	45.08	117	P	P	16 39 12.8	-1.8
PETK	Petropavlovsk-	54.45	23	P	P	16 40 25.2	+0.1
	comp=Z,1.7nm,0.8s,baz=222,slow=1.9,SNR=2.1						
	comp=Z,1.7nm,0.8s						
PETK	Petropavlovsk-	54.45	23	P	P	16 40 25.4	+0.3
MK31	Makanchi Array	56.49	325	P	P	16 40 39.4	-0.6
MKAR	Makanchi Array	56.49	325	P	P	16 40 39.4	-0.5
	comp=Z,0.2nm,0.3s,baz=124,slow=7.3,SNR=5.8						
MKAR				PcP	PcP	16 41 35.2	-0.8
	comp=Z,0.6nm,0.5s,baz=118,slow=3.4,SNR=4.0						
	comp=Z,0.2nm,0.3s						
MAKZ	Makanchi	56.67	325	P	P	16 40 40.4	-0.9
MAKZ				IAmb	IAmb	16 40 45.5	
	comp=Z,4.1nm,1.3s						
KURK	Kurchatov	60.66	327	P	P	16 41 07.3	-1.4
IMAR	Indian Mountai	81.39	24	P	P	16 43 14.6	+0.7
PPLA	Purkeypile	81.71	27	P	P	16 43 16.3	+0.4
PPLA				IAmb	IAmb	16 43 42.3	
	comp=Z,8.4nm,1.3s						
H24K	Noodor Dome	83.77	24	P	P	16 43 27.5	+1.1
H24K				IAmb	IAmb	16 43 41.2	
	comp=Z,3.2nm,1.4s						
GLI	Glacier Island	84.01	29	P	P	16 43 28.2	+0.6
VNDA	Vanda	84.59	173	P	P	16 43 30.2	+0.1
VNDA				IAmb	IAmb	16 43 46.3	
	comp=Z,4.1nm,1.4s						
BMAR	Burnt Mountain	85.11	23	P	P	16 43 34.3	+1.3
FINES	FINESS Array B	90.72	332	P	P	16 43 57.9	-2.1
	comp=Z,0.8nm,0.7s,baz=48,slow=5.7,SNR=5.5						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	122.34	289	PKP	PKPdf	16 49 52.3	-0.9
	comp=Z,0.3nm,0.8s,baz=95,slow=3.3,SNR=2.1						

IDC 09 16:38:51.1±5.9**, 17°.45N**×**146°.68E, h0**^{km}**, mb3.8**/3**, mbtmp3.8**/3**, Error ellipse: s-maj=262.5km s-min=108.4km az=40.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	25.87	324	P	P	16 44 24.6	+0.1
	0.6nm,0.5s,baz=149,slow=9.8,SNR=8.4						
	0.6nm,0.5s						
MKAR	Makanchi Array	59.99	314	P	P	16 48 59.8	+0.1
	0.4nm,0.6s,baz=96,slow=8.2,SNR=4.2						
	0.4nm,0.6s						
FINES	FINESS Array B	88.40	336	P	P	16 51 44.8	-0.1
	1.6nm,1.0s,baz=56,slow=3.5,SNR=5.8						
	1.6nm,1.0s						

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*IDC **09** 16:43:41.6±2.7, 18°.68S×177°.64W, h602^{km}±30^{km}, mb3.1/3, mbtmp4.1/5, Error ellipse: s-maj=128.8km s-min=31.5km az=158.0*

*NEIC **09** 16:43:41.5±0.8, 18°.8S±0°.3×177°.5W±0°.2, h604^{km}±13^{km}, mb4.1/13, Error ellipse: s-maj=40.6km s-min=22.8km az=154.0*

ISC 09 16:43:41.3±1.0**, 18°.6S**±0°.3×**177°.6W**±0°.2**, h600**^{km}**, n19, σ0^{s}.91**/20**, mb4.0**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.26	281	P	P	16 45 09.6	+0.8
	3.3nm,0.3s,baz=217,slow=23,SNR=16						
AFI	Afiamalu	7.27	51	P	P	16 45 34.6	+0.5
	28nm,0.7s,baz=129,slow=4.3,SNR=5.0						
AFI				S	S	16 47 05.2	-1.0
	19nm,0.7s,baz=344,slow=18,SNR=1.8						
COEN	Coen	37.91	271	P	P	16 50 10.7	+1.3
COEN				IAmb	IAmb	16 50 11.1	
	comp=Z,6.0nm,1.0s						
STKA	Stephens Creek	38.99	242	P	P	16 50 16.9	-0.9
	comp=Z,3.7nm,0.9s,baz=74,slow=8.1,SNR=2.9						
	comp=Z,3.7nm,0.9s						
STKA	Stephens Creek	38.99	242	IAmb	IAmb	16 50 18.9	
	comp=Z,4.1nm,1.4s						
BBOO	Buckleboo	43.77	242	P	P	16 50 53.7	-1.6
WR0	Warramunga Arr	45.10	260	P	P	16 51 05.2	-0.6
WR0				IAmb	IAmb	16 51 22.2	
	comp=Z,9.2nm,1.4s						
WB0	Warramunga Arr	45.26	260	P	P	16 51 06.5	-0.5
WB0				IAmb	IAmb	16 51 12.1	
	comp=Z,7.2nm,1.2s						
WB2	Warramunga Arr	45.28	260	P	P	16 51 06.6	-0.6

WB2				IAmb	IAmb	16 51 22.3	
	comp=Z,6.2nm,1.3s						
WRA	Warramunga Arr	45.29	260	P	P	16 51 06.2	-1.1
	comp=Z,1.3nm,0.6s,baz=97,slow=7.5,SNR=21						
	comp=Z,1.3nm,0.6s						
AS31	Alice Springs	45.37	255	P	P	16 51 07.2	-0.6
ASAR	Alice Springs	45.37	255	P	P	16 51 07.5	-0.3
	comp=Z,1.2nm,0.4s,baz=87,slow=8.3,SNR=70						
ASAR				PcP	PcP	16 52 35.0	+0.7
	comp=Z,0.4nm,0.8s,baz=112,slow=4.2,SNR=1.8						
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	45.37	255	P	P	16 51 07.0	-0.9
MTN	Manton Dam	49.58	269	P	P	16 51 39.1	-0.1
KNRA	Kununurra	51.21	265	P	P	16 51 51.0	-0.1
FITZ	Fitzroy Crossi	53.70	261	P	P	16 52 07.7	-1.1
MBWA	Marble Bar	58.68	256	P	P	16 52 42.4	-0.5
MBWA				IAmb	IAmb	16 52 55.9	
	comp=Z,30nm,1.2s						
BERG	Berg Lake	83.37	16	P	P	16 55 05.8	-0.3
BERG				IAmb	IAmb	16 55 07.1	
	comp=Z,7.8nm,0.9s						
MAW	Mawson	83.46	200	P	P	16 55 07.8	+1.2
MAW				IAmb	IAmb	16 55 10.5	
	comp=Z,4.0nm,1.2s						

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*NEIC **09** 16:53:39.7±2.0, 14.°42S±0.°07×166.°9E±0.°1, h35^{km}±6^{km}, mb4.5/43, Error ellipse: s-maj=17.3km s-min=8.1km az=66.0*

*IDC **09** 16:53:39.7±3.8, 14.°47S×166.°83E, h40^{km}±33^{km}, mb3.8/9, mbtmp4.0/11, ML4.2/2, MS3.4/1, Error ellipse: s-maj=28.2km s-min=22.7km az=93.0*

ISC 09 16:53:39.3±0.5**, 14.°40S**±0.°06×**166.°79E**±0.°09**, h35^{km}, n63, σ0.^{s}96**/66**, mb4.4**/31**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.12	159	Pn	Pn	16 53 56.7	-1.8
SANVU				Sn	Sn	16 54 11.3	-1.4
LIFNC	LIFOU	6.36	176	Pn	Pn	16 55 12.6	+2.1
KOUNC	Koumac, New Ca	6.57	201	Pn	Pn	16 55 14.0	+0.6
MARNC	Mare, Loyalty	7.14	171	Pn	Pn	16 55 21.3	0.0
DZM	Mont Dzumac	7.64	182	P	Pn	16 55 28.0	-0.2
	1.2nm,0.3s,baz=305,slow=19,SNR=27						
DZM				S	Sn	16 56 52.1	-1.6
	9.3nm,0.6s,baz=311,slow=23,SNR=4.9						
	2.4nm,0.3s						
DZM	Mont Dzumac	7.64	182		Pn	16 55 28.3	0.0
ONTNC	Ouen Toro	7.88	182	Pn	Pn	16 55 32.9	+1.5
OUENC	Ouen Island, N	7.98	180		Pn	16 55 34.1	+1.3
PINNC	Pines Island,	8.20	176	Pn	Pn	16 55 37.7	+2.0
HNR	Honiara	8.32	306	P	Pn	16 55 38.5	+1.1
	8.9nm,0.3s,baz=175,slow=12,SNR=2.0						
HNR				S	Sn	16 57 08.2	-2.0
	34nm,0.5s,baz=54,slow=19,SNR=1.5						
	20nm,0.3s						
HNR	Honiara	8.32	306	Pn	Pn	16 55 36.3	-1.1
CTA	Charters Tower	20.41	251	P	P	16 58 14.5	+1.0
	3.5nm,0.8s,baz=90,slow=12,SNR=5.9						
	3.5nm,0.8s						
CTAO	Charters Tower	20.41	251	P	P	16 58 14.5	+1.0
BKZ	Black Stump Fm	26.11	163	P	P	16 59 10.5	+0.5
BKZ				IAmb	IAmb	16 59 30.1	
	comp=Z,15nm,1.4s						
LTZ	Lake Taylor	28.68	172	P	P	16 59 33.6	+0.6
LTZ				IAmb	IAmb	16 59 49.0	
	comp=Z,29nm,1.4s						
STKA	Stephens Creek	28.86	229	P	P	16 59 35.0	+0.3
	comp=Z,1.7nm,0.5s,baz=61,slow=7.1,SNR=4.8						
	comp=Z,1.7nm,0.5s						
STKA	Stephens Creek	28.86	229	IAmb	IAmb	16 59 37.9	
	comp=Z,2.2nm,1.2s						
WR0	Warramunga Arr	31.27	255	P	P	16 59 55.1	-1.1
WR0				IAmb	IAmb	17 00 20.0	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	31.39	256	P	P	16 59 55.8	-1.4
WB0				IAmb	IAmb	17 00 20.6	
	comp=Z,8.5nm,1.5s						
WRA	Warramunga Arr	31.46	255	P	P	16 59 57.4	-0.5
	comp=Z,0.9nm,0.9s,baz=85,slow=9.3,SNR=4.9						
	comp=Z,0.9nm,0.9s						
AS31	Alice Springs	32.36	248	P	P	17 00 04.8	-0.9
ASAR	Alice Springs	32.36	248	P	P	17 00 04.8	-0.9
	comp=Z,1.1nm,0.6s,baz=71,slow=8.5,SNR=18						
ASAR				PcP	PcP	17 02 52.8	-0.3
	comp=Z,0.3nm,0.5s,baz=83,slow=2.4,SNR=6.3						
ASAR				LR	LR	17 11 14.7	
	comp=Z,60nm,19.0s,baz=337,slow=33						
	comp=Z,1.1nm,0.6s						
BBOO	Buckleboo	33.42	231	P	P	17 00 15.1	+0.3
KNRA	Kununurra	36.72	263	P	P	17 00 43.1	-0.3
PSA00	Pilbara Seismi	45.09	254	P	P	17 01 52.9	+0.5
PSA00				IAmb	IAmb	17 02 14.1	
	comp=Z,8.6nm,1.1s						
MORW	Morawa	49.00	244	P	P	17 02 22.4	-0.4
MJAR	Matsushiro Arr	57.40	333	P	P	17 03 24.0	-0.4
MJAR				IAmb	IAmb	17 03 37.6	
	comp=Z,4.5nm,1.4s						
MAJO	Matsushiro	57.40	333	P	P	17 03 24.6	+0.2
MJB9	Matsu-Tunnel	57.40	333	P	P	17 03 24.5	0.0
VNDA	Vanda	63.18	181	P	P	17 04 02.1	-1.3
VNDA				IAmb	IAmb	17 04 04.5	
	comp=Z,3.4nm,1.0s						
SBA	Scott Base	63.47	180	P	P	17 04 07.2	+1.9
CASY	Casey	63.66	202	P	P	17 04 06.9	+0.2
CASY				IAmb	IAmb	17 04 18.6	
	comp=Z,8.0nm,1.4s						
PEA0B	Petropavlovsk-	67.68	354	P	P	17 04 33.6	+0.9
CMAR	Chiang Mai Arr	74.39	294	P	P	17 05 14.3	+0.1
	comp=Z,0.4nm,0.7s,baz=117,slow=5.8,SNR=1.8						
	comp=Z,0.4nm,0.7s						
QSPA	South Pole Qui	75.63	180	P	P	17 05 20.8	+0.2
QSPA				IAmb	IAmb	17 05 36.6	
	comp=Z,10nm,1.5s						
HIA	Hailar	75.77	330	P	P	17 05 19.9	-1.6
P18K	Big Mountain,	79.71	19	P	P	17 05 43.2	0.0
P18K				IAmb	IAmb	17 06 04.8	
	comp=Z,7.7nm,1.2s						
SONM	Songino Array	81.96	324	P	P	17 05 56.6	+1.0
	comp=Z,0.3nm,0.3s,baz=145,slow=9.3,SNR=2.4						
	comp=Z,0.3nm,0.3s						
L19K	White Mountain	82.05	17	P	P	17 05 57.5	+1.9
L19K				IAmb	IAmb	17 06 01.2	
	comp=Z,4.0nm,1.2s						
BILL	Bilibino	82.21	360	P	P	17 05 56.6	+0.3
BILL				IAmb	IAmb	17 06 08.4	
	comp=Z,2.5nm,0.8s						
CAST	Castle Rocks	83.81	17	P	P	17 06 04.6	-0.1
CAST				IAmb	IAmb	17 06 18.3	
	comp=Z,6.2nm,1.4s						
J20K	Nowinta River	83.83	16	P	P	17 06 06.1	+1.3
J20K				IAmb	IAmb	17 06 17.4	
	comp=Z,4.9nm,1.4s						
SCM	Sheep Creek Mo	84.11	20	P	P	17 06 07.0	+0.6
KTH	Kantishna Hill	84.26	18	P	P	17 06 06.6	-0.4
KTH				IAmb	IAmb	17 06 12.4	
	comp=Z,4.9nm,1.2s						
TRF	Thorofare Moun	84.36	18	P	P	17 06 07.6	-0.1
TRF				IAmb	IAmb	17 06 08.7	
	comp=Z,5.3nm,1.2s						
RND	Reindeer	84.77	18	P	P	17 06 10.3	+0.7
DHY	Denali Highway	84.99	19	P	P	17 06 11.3	+0.5
H21K	Melozitna Rive	85.35	16	P	P	17 06 13.8	+1.3
H21K				IAmb	IAmb	17 06 14.7	
	comp=Z,3.0nm,1.0s						
IMAR	Indian Mountai	85.37	15	P	P	17 06 12.8	+0.3
WRH	Wood River Hil	85.78	18	P	P	17 06 14.1	-0.5
WRH				IAmb	IAmb	17 06 16.0	
	comp=Z,5.1nm,1.2s						
CCB	Clear Creek Bu	85.99	18	P	P	17 06 15.0	-0.5
HDA	Harding Lake	86.08	18	P	P	17 06 16.4	+0.3
MDM	Murphy Dome	86.09	18	P	P	17 06 15.2	-1.0
MDM				IAmb	IAmb	17 06 27.5	
	comp=Z,5.3nm,1.2s						
RIDG	Independent Ri	86.27	19	P	P	17 06 17.7	+0.6
RIDG				IAmb	IAmb	17 06 39.4	
	comp=Z,3.5nm,1.2s						
IL31		86.35	18	P	P	17 06 16.8	-0.5
IL31				IAmb	IAmb	17 06 18.2	
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	86.35	18	P	P	17 06 17.2	-0.2
	comp=Z,1.7nm,0.8s,baz=243,slow=5.2,SNR=18						
	comp=Z,1.7nm,0.8s						
J25K	Salcha River,	86.71	19	P	P	17 06 19.4	+0.2
J25K				IAmb	IAmb	17 06 24.4	
	comp=Z,1.7nm,0.8s						
SCRK	Sand Creek	86.71	20	P	P	17 06 19.6	+0.3
BELA	Belgrano 2	87.09	176	P	P	17 06 20.1	-0.9
TOLK	Toolik Lake Re	88.45	15	P	P	17 06 28.6	+1.2
TOLK				IAmb	IAmb	17 06 57.3	
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	96.64	316	P	P	17 07 06.0	+0.2
	comp=Z,0.4nm,0.5s,baz=86,slow=6.1,SNR=3.8						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	97.46	27	P	P	17 07 08.7	-0.4
	comp=Z,0.3nm,0.5s,baz=267,slow=4.0,SNR=2.9						
	comp=Z,0.3nm,0.5s						
ARCES	ARCESS Array B	119.81	345	PKP	PKPdf	17 12 24.9	-0.4
	comp=Z,1.9nm,0.6s,baz=48,slow=1.3,SNR=8.9						

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*NOU **09** 17:11:05.5, 41.°82S×174.°29E, h25^{km}, MLv3.6/7, Cook Strait, New Zealand*

*WEL **09** 17:11:05.4±0.3, 42°S±2°×17°4E±°, h11^{km}±2^{km}, M3.0/25, ML3.3/24, MLv3.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=160.1*

ISC 09 17:11:05.3±0.8**, 41.°77S**±0.°03×**174.°15E**±0.°02**, h17^{km}**±5^{km}**, n95, σ1.^{s}16**/110**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.05	71	P	Pg	17 11 08.7	+0.3
CMWZ				S	Sg	17 11 11.6	+1.2
BSWZ	Blackbirch Sta	0.21	284	P	Pg	17 11 09.6	-0.6
BSWZ				S	Sg	17 11 13.3	-0.3
TUWZ	Tuamarina	0.37	335	P	Pg	17 11 12.3	-0.6
TUWZ				S	Sg	17 11 17.6	-0.5
TCW	Tory Channel	0.56	10	P	Pg	17 11 15.8	-0.7
TCW				S	Sg	17 11 23.7	-0.3
SNZO	South Karori	0.62	43	P	Pb	17 11 17.6	0.0
BHW	Baring Head	0.65	57	P	Pg	17 11 18.5	+0.5
WEL	Wellington	0.67	44	P	Pg	17 11 18.6	+0.2
KHZ	Kahutara	0.79	215	P	Pg	17 11 21.7	+0.9
KHZ				S	Sn	17 11 35.0	+1.8
KHZ	Kahutara	0.79	215	P	Pn	17 11 22.1	+0.4
NNZ	Nelson	0.80	313	P	Pb	17 11 19.7	-1.0
NNZ				S	Sb	17 11 29.8	-1.4
PLWZ	Palliser	0.85	77	P	Pn	17 11 22.4	-0.1
MSWZ	Moikau Station	0.90	67	P	Pn	17 11 23.2	0.0
MSWZ				S	Sn	17 11 37.5	+1.7
THZ	Tophouse	0.93	270	P	Pb	17 11 22.6	-0.4
CAW	Cannon Point	0.95	47	P	Pn	17 11 23.6	-0.3
CAW				S	Sn	17 11 38.0	+0.8
DUWZ	D'Urville Isla	0.98	350	P	Pb	17 11 22.8	-1.0
DUWZ				S	Sb	17 11 36.7	+0.2
PAWZ	Paruwai Farm	1.03	69	P	Pg	17 11 24.9	-0.4
KIW	Kapiti Island	1.07	33	P	Pb	17 11 25.0	-0.4
KIW				S	Sg	17 11 39.8	-0.2
MRNZ	Matariki Terra	1.11	289	P	Pn	17 11 25.8	-0.2
TKNZ	Takaka Hill	1.16	309	P	Pn	17 11 26.2	-0.6
MTW	Mount Morrison	1.19	60	P	Pb	17 11 26.8	-0.5
MTW				S	Sg	17 11 43.9	+0.2
TRWZ	Traveller	1.21	73	P	Pn	17 11 27.1	-0.5
OGWZ	Otaki Gorge	1.22	39	P	Pb	17 11 28.0	0.0
OGWZ				S	Sg	17 11 44.8	-0.1
HOWZ	Holdsworth Sta	1.35	50	P	Pn	17 11 29.1	-0.3
HOWZ				S	Sg	17 11 48.2	-0.6
GVZ	Greta Valley S	1.46	214	P	Pn	17 11 31.4	+0.5
TMWZ	Te Maipa	1.47	64	P	Pn	17 11 30.4	-0.6
QRZ	Quartz Range	1.54	307	P	Pn	17 11 32.8	+0.8
QRZ				S	Sn	17 11 52.1	+0.5
QRZ	Quartz Range	1.54	307	P	Pn	17 11 33.0	+1.0
MRZ	Mangatainoka R	1.54	45	P	Pn	17 11 32.0	-0.1
TIWZ	Tintock	1.64	54	P	Pn	17 11 32.8	-0.7
LTZ	Lake Taylor	1.72	233	P	Pn	17 11 34.9	+0.4
LTZ				S	Sn	17 11 57.0	+0.8
DSZ	Denniston Nort	1.75	270	P	Pn	17 11 36.3	+1.4
CPWZ	Castlepoint	1.77	62	P	Pn	17 11 34.6	-0.5
AMCZ	Amberley	1.79	218	P	Pb	17 11 39.1	+1.4
OHWZ	Ohakea	1.79	30	P	Pb	17 11 37.1	-0.6
PRWZ	Pori Road	1.83	49	P	Pn	17 11 35.6	-0.4
POWZ	Post Office Ro	1.84	42	P	Pn	17 11 36.0	-0.1
BFZ	Birch Farm	1.92	56	P	Pn	17 11 36.0	-1.2
BFZ	Birch Farm	1.92	56	P	Pn	17 11 36.2	-1.0
WAZ	Wanganui	2.11	18	P	Pb	17 11 42.0	-1.1
OKCZ	Okains Bay	2.11	202	P	Pn	17 11 39.1	-0.8
DVHZ	Dannevirke	2.12	47	P	Pn	17 11 38.9	-1.0
ANWZ	Angora Road	2.19	54	P	Pn	17 11 39.9	-1.0
TSZ	Takapari Road	2.19	39	P	Pn	17 11 40.6	-0.4
OXZ	Oxford	2.20	224	P	Pn	17 11 40.8	-0.3
INZ	Inchbonnie	2.22	244	P	Pn	17 11 42.8	+1.4
MQZ	McQueen's Vall	2.23	209	P	Pn	17 11 40.0	-1.5
LREZ	Lake Rotokare	2.31	5	P	Pn	17 11 44.5	+1.9
NMEZ	Namu Road	2.36	355	P	Pb	17 11 47.1	-0.2
PRHZ	Porangahau	2.41	52	P	Pn	17 11 42.6	-1.3
PNHZ	Pukenui	2.42	41	P	Pn	17 11 43.5	-0.7
PREZ	Palmer Road	2.42	0	P	Pb	17 11 46.8	-1.6
WPHZ	Waipukurau	2.43	46	P	Pn	17 11 43.5	-0.7
KHEZ	Kahui Hut	2.47	358	P	Pb	17 11 47.8	-1.6
NEZ	North Egmont	2.49	359	P	Pb	17 11 47.9	-1.8
NBEZ	Newall Road No	2.50	355	P	Pb	17 11 48.2	-1.6
PKE	Pukeiti	2.57	357	P	Pn	17 11 48.4	+2.2
MTVZ	Mangateitei	2.58	23	P	Pb	17 11 50.9	-0.3
PKVZ	Pokaka	2.64	21	P	Pb	17 11 49.6	-2.5
MOVZ	Moawhango	2.66	28	P	Pb	17 11 51.1	-1.4
WNVZ	Wahianoa	2.68	25	P	Pb	17 11 51.1	-1.7
VRZ	Vera Road	2.68	10	P	Pn	17 11 49.3	+1.6
TRVZ	Turoa	2.69	24	P	Pb	17 11 53.7	+0.6
PXZ	Pawanui	2.69	51	P	Pn	17 11 46.1	-1.8
BHHZ	Black Hill Sta	2.70	33	P	Pn	17 11 48.1	+0.1
KRHZ	Kereru	2.71	39	P	Pn	17 11 46.1	-2.0
WHVZ	Whangaehu Hut	2.71	24	P	Pb	17 11 52.4	-1.1
FWVZ	Far West T-bar	2.73	24	P	Pb	17 11 53.2	-0.5
TUVZ	Tukino	2.75	25	P	Pn	17 11 50.0	+1.3
WACZ	Wakanui South	2.76	217	P	Pn	17 11 48.7	-0.1
NGZ	Ngauruhoe	2.81	24	P	Pn	17 11 52.3	+2.6
SNVZ	South Ngauruho	2.82	24	P	Pn	17 11 51.3	+1.5
WVZ	Waitaha Valley	2.84	242	P	Pb	17 11 54.6	-1.0
OTVZ	Oturere	2.85	24	P	Pn	17 11 51.4	+1.3
KAHZ	Kahuranaki	2.86	47	P	Pn	17 11 49.2	-1.0
NNVZ	North Ngauruho	2.86	24	P	Pn	17 11 52.5	+2.2
WTVZ	West Tongariro	2.87	23	P	Pn	17 11 52.8	+2.5
ETVZ	East Tongariro	2.89	25	P	Pn	17 11 52.1	+1.4
TMVZ	Te Maari	2.90	25	P	Pn	17 11 52.4	+1.6
NTVZ	North Tongarir	2.91	24	P	Pn	17 11 52.3	+1.3
KWHZ	Kaweka Forest	2.91	37	P	Pb	17 11 58.0	+1.2
RPZ	Rata Peaks	3.00	228	P	Pn	17 11 52.3	+0.3
RPZ	Rata Peaks	3.00	228	P	Pn	17 11 52.1	0.0
KATZ	Kakaramea	3.03	23	P	Pb	17 11 59.4	+0.5
ARCZ	Arundel	3.09	224	P	Pn	17 11 53.3	0.0
RATZ	Rangitukua	3.15	24	P	Pb	17 12 01.3	+0.5
BKZ	Black Stump Fm	3.15	35	P	Pn	17 11 53.1	-1.2
GCSZ	Gaunt Creek Bo	3.22	240	P	Pb	17 11 59.2	-2.8
HIZ	Hauiti	3.29	10	P	Pn	17 11 57.8	+1.7
HIZ	Hauiti	3.29	10	P	Pn	17 11 55.9	-0.2
TMZ	Timaru	3.48	220	P	Pn	17 11 58.5	-0.2
TLZ	Tolley Road	3.59	18	P	Pn	17 12 02.0	+1.7
ODZ	Otahua Downs	4.15	217	P	Pn	17 12 07.0	-0.9
ODZ	Otahua Downs	4.15	217	P	Pn	17 12 06.6	-1.3
AWAZ	Awhitu Peninsu	4.71	5	P	Pn	17 12 18.5	+2.9
MKAZ	Moumakai	4.72	10	P	Pn	17 12 17.4	+1.7

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*TUL **09** 17:11:53±0.5, 36.°86N±0.°01×98.°16W±0.°02, h7^{km}±3^{km}, ML2.5, mb_Lg2.2/8(NEIC), Error ellipse: s-maj=2.4km s-min=1.2km az=120.0*

NEIC 09 17:11:52.9±0.2**, 36.°84N**±0.°01×**98.°16W**±0.°01**, h11^{km}**±1^{km}**, Error ellipse: s-maj=2.1km s-min=1.3km az=150.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.82	236	Pg	Pg	17 12 08.8	+0.1
T35A	Sooner Cattle	1.32	86	Pn	Pn	17 12 17.3	0.0
R32A	Long Quarter,	1.64	345	Pn	Pn	17 12 21.9	+0.3
TUL1	Leonard	2.12	115	IAmb_Lg		17 13 03.2	
	comp=Z,15nm,1.0s						
X37A	Clayton	3.19	134	IAmb_Lg		17 13 43.4	
	comp=Z,9.8nm,1.1s						
S39A	Bolivar	3.95	76	IAmb_Lg		17 14 00.5	
	comp=Z,4.1nm,0.9s						
R40A	Maddies Statio	4.90	71	IAmb_Lg		17 14 31.7	
	comp=Z,3.7nm,1.0s						

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*ISK **09** 17:29:13.4, 38.°85N×23.°26E, h1^{km}, ML3.7/31*

*IDC **09** 17:29:17.9±0.9, 38.°84N×23.°53E, h0^{km}, mb3.5/8, mbtmp3.5/12, ML3.4/4, MS3.2/3, Error ellipse: s-maj=19.7km s-min=12.4km az=92.0*

*NEIC **09** 17:29:19.8±1.5, 38.°87N±0.°04×23.°59E±0.°05, h10^{km}±1^{km}, Error ellipse: s-maj=7.9km s-min=5.5km az=235.0*

*TIR **09** 17:29:19.4, 39.°11N×23.°69E, h24^{km}±11^{km}, Ml3.9*

*ATH **09** 17:29:19.4, 38.°85N×23.°62E, h19^{km}, Mw3.7, Moment Tensor Solution. s8 Moment tensor: M_{rr}-1.43; $M_{\theta\theta}$3.59; $M_{\phi\phi}$-2.16; $M_{r\theta}$2.34; $M_{\theta\phi}$-3.12; $M_{\phi r}$1.51; Fault plane solution: NP1:ϕ_s154.00000°, δ56.00000°, λ-16.00000°. NP2:ϕ_s254.00000°, δ77.00000°, λ-145.00000°.*

*THE **09** 17:29:19.6, 38.°85N×23.°62E, h13^{km}, ML3.9/18 Error ellipse: s-maj=0.7km s-min=0.3km az=66.0*

ISC 09 17:29:19.4±1.0**, 38.°87N**±0.°02×**23.°63E**±0.°02**, h9^{km}**±7^{km}**, n171, σ1.^{s}06**/209**, mb3.5**/8**, 17C-15D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALNA	Alonissos	0.33	34	P	Pb	17 29 27.0	-0.5
ALNA				S	Sb	17 29 32.1	-0.9
KYMI	Kymi, Euboea I	0.44	122	P	Pg	17 29 28.4	+0.3
KYMI				S	Sg	17 29 34.5	+0.7
KYMI				AML	AML	17 29 35.3	
	comp=N,13187µm,0.4s						
KYMI				AML	AML	17 29 35.8	
	comp=E,17494µm,0.4s						
KYMI	Kymi, Euboea I	0.44	122	P	Pg	17 29 28.1	+0.1
KYMI				S	Sg	17 29 34.1	+0.3
	comp=E,8µm,0.4s						
ATAL	Atalanti	0.51	250	P	Pg	17 29 29.2	-0.1
ATAL				S	Sg	17 29 36.5	+0.6
ATAL				AML	AML	17 29 38.2	
	comp=N,16335µm,0.3s						
ATAL				AML	AML	17 29 39.0	
	comp=E,12169µm,0.3s						
ATAL	Atalanti	0.51	250	P	Pg	17 29 29.1	-0.1
ATAL				S	Sg	17 29 36.8	+0.9
	comp=E,7µm,0.3s						
NEO	Neokhori	0.54	324	P	Pb	17 29 30.7	-0.3
NEO				S	Sb	17 29 38.1	-0.8
NEO				AML	AML	17 29 38.5	
	comp=E,75676µm,0.3s						
NEO				AML	AML	17 29 38.9	
	comp=N,81455µm,0.3s						
NEO	Neokhori	0.54	324	P	Pb	17 29 30.7	-0.3
NEO				S	Sb	17 29 38.0	-0.8
	comp=N,39µm,0.3s						
XOR	Xorichti	0.60	326	P	Pb	17 29 31.8	-0.3
XOR				S	Sg	17 29 39.8	+0.8
XOR				AML	AML	17 29 41.8	
	comp=E,17574µm,0.4s						
XOR				AML	AML	17 29 41.8	
	comp=N,38856µm,0.3s						
XOR	Xorichti	0.60	326	P	Pg	17 29 31.4	+0.3
XOR				S	Sb	17 29 40.0	-0.7
	comp=N,14µm,0.4s						
VIL2	Platees	0.71	203	P	Pg	17 29 33.1	-0.1
VIL2				S	Sb	17 29 44.6	+0.7
VIL2				AML	AML	17 29 46.9	
	comp=N,17383µm,0.5s						
VIL2				AML	AML	17 29 47.3	
	comp=E,34732µm,0.3s						
SKY	Skiros Island	0.72	89	P	Pb	17 29 34.1	-0.1
SKY				S	Sb	17 29 44.2	+0.1
SKY				AML	AML	17 29 46.8	
	comp=N,68564µm,0.3s						
SKY				AML	AML	17 29 46.8	
	comp=E,83774µm,0.8s						
SKY	Skiros Island	0.72	89	P	Pb	17 29 33.8	-0.3
SKY				S	Sb	17 29 44.4	+0.3
	comp=E,38µm,0.5s						
VILL	Villia	0.75	199	P	Pg	17 29 32.9	-0.9
VILL				S	Sg	17 29 44.1	+0.5
	comp=E,15µm,0.4s						
DION	Dionisos Attik	0.83	163	P	Pg	17 29 35.2	-0.2
DION				S	Sg	17 29 46.4	+0.3
DION				AML	AML	17 29 48.6	
	comp=N,52921µm,0.3s						
DION				AML	AML	17 29 49.9	
	comp=E,32198µm,0.5s						
DION	Dionisos Attik	0.83	163	P	Pg	17 29 35.0	-0.3
DION				S	Sg	17 29 46.3	+0.2
	comp=E,33µm,0.4s						
PTL	Penteli	0.84	167	P	Pg	17 29 35.1	-0.5
PTL				S	Sb	17 29 47.7	+0.1
	comp=E,18µm,0.4s						
ATH	Athens Observa	0.90	175	P	Pg	17 29 36.4	-0.3
ATH				S	Sb	17 29 49.1	-0.1
ATH				AML	AML	17 29 50.3	
	comp=E,88081µm,0.3s						
ATH				AML	AML	17 29 51.9	
	comp=N,41924µm,0.2s						
ATH	Athens Observa	0.90	175	P	Pg	17 29 36.1	-0.6
ATH				S	Sb	17 29 49.2	0.0
	comp=N,33µm,0.2s						
ATHU	Athens Univers	0.91	172	P	Pg	17 29 36.4	-0.6
ATHU				S	Sg	17 29 49.1	+0.3
ATHU				AML	AML	17 29 49.8	
	comp=E,8578µm,0.5s						
ATHU				AML	AML	17 29 51.8	
	comp=N,12159µm,0.3s						
ATHU	Athens Univers	0.91	172	P	Pg	17 29 36.3	-0.6
ATHU				S	Sb	17 29 49.6	0.0
	comp=N,5µm,0.5s						
DLFA	Delphi	0.97	247	P	Pg	17 29 36.8	-1.2
DLFA				S	Sb	17 29 51.3	+0.1
AGG	Agios Georgios	1.02	279	P	Pg	17 29 38.5	-0.6
AGG				S	Sb	17 29 53.6	+0.8
AGG				AML	AML	17 29 57.1	
	comp=E,3731µm,1.0s						
AGG				AML	AML	17 30 02.7	
	comp=N,1868µm,0.3s						
AGG	Agios Georgios	1.02	279	P	Pg	17 29 38.1	-1.0
AGG				S	Sb	17 29 53.4	+0.6
	comp=N,2µm,0.8s						
AGG	Agios Georgios	1.02	279		Pg	17 29 38.4	-0.7
VLY	Voula,Athens	1.02	173	P	Pg	17 29 38.3	-0.8
VLY				S	Sg	17 29 52.1	-0.3
	comp=N,19µm,0.4s						
KARY	Karystos	1.05	142	P	Pg	17 29 39.1	-0.5
PAIG	Paliouri	1.06	2	P	Pb	17 29 39.9	0.0
PAIG				S	Sn	17 29 55.2	+0.1
PAIG				AML	AML	17 29 56.5	
	comp=E,10647µm,0.5s						
PAIG				AML	AML	17 29 57.5	
	comp=N,9060µm,0.5s						
PAIG	Paliouri	1.06	2	P	Pg	17 29 39.7	0.0
PAIG				S	Sn	17 29 55.3	+0.1
	comp=N,5µm,0.5s						
THAL	Thalero	1.12	223	P	Pg	17 29 39.7	-1.3
THAL				S	Sg	17 29 55.4	-0.2
	comp=N,9µm,0.4s						
MAKR	Makrakomi, Fth	1.18	277	P	Pg	17 29 41.4	-0.6
MAKR				AML	AML	17 30 05.2	
	comp=E,4397µm,0.3s						
MAKR				AML	AML	17 30 06.3	
	comp=N,3078µm,0.5s						
MAKR	Makrakomi, Fth	1.18	277	P	Pg	17 29 40.9	-1.1
MAKR				S	Sb	17 29 57.7	+0.5
	comp=N,2µm,0.5s						
EPID	Epidavros	1.32	198	P	Pn	17 29 44.0	0.0
EPID				S	Sn	17 30 02.2	+0.6
TYRN	Tyrnavos	1.37	308	P	Pn	17 29 45.1	+0.4
TYRN				S	Sn	17 30 04.4	+1.5
TYRN				AML	AML	17 30 08.0	
	comp=E,2504µm,0.5s						
TYRN				AML	AML	17 30 10.1	
	comp=N,1907µm,0.5s						
KLV	Kalavryta, Ach	1.42	235	P	Pn	17 29 45.4	-0.1
LAKA	Lakka	1.44	245	P	Pn	17 29 46.1	+0.5
LAKA				S	Sn	17 30 06.5	+1.9
LAKA				AML	AML	17 30 11.2	
	comp=E,650µm,0.5s						
LAKA				AML	AML	17 30 13.7	
	comp=N,1207µm,0.5s						
OUR	Ouranopolis	1.49	11	P	Pn	17 29 46.1	-0.2
OUR				S	Sn	17 30 05.1	-0.7
	comp=N,2µm,0.4s						
PLG	Polygyros	1.51	355	P	Pn	17 29 46.4	-0.2
PLG				S	Sn	17 30 05.7	-0.7
	comp=N,1µm,0.6s						
LIT	Litokhoron	1.51	325	P	Pn	17 29 46.3	-0.4

LIT				S	Sn	17 30 06.3	-0.2
	comp=N,3µm,0.3s						
LIT	**Litokhoron**	**1.51**	**325**		**Pn**	**17 29 46.4**	**-0.3**
THE	**Thessaloniki**	**1.83**	**344**	P	**Pn**	**17 29 50.8**	**-0.3**
	baz=341						
THE				S	**Sn**	**17 30 12.3**	**-2.0**
	baz=341						
CHOS	**Chios island**	**1.96**	**103**	PN	**Pn**	**17 29 52.9**	**0.0**
CHOS				SN	**Sg**	**17 30 21.7**	**-0.8**
GPNR	**Gulpinar-Canak**	**2.03**	**72**	PN	**Pn**	**17 29 53.9**	**+0.1**
BOZC	**Bozcaada**	**2.12**	**62**	PN	**Pn**	**17 29 54.5**	**-0.4**
BOZC				SN	**Sb**	**17 30 25.1**	**+0.8**
ITM	**Ithomi**	**2.16**	**219**		**Pn**	**17 29 56.0**	**+0.5**
GADA	**Gvkgeada**	**2.20**	**52**	PN	**Pn**	**17 29 55.6**	**-0.4**
GADA				SN	**Sb**	**17 30 26.7**	**+0.1**
EZN	**Ezine**	**2.30**	**65**	PN	**Pn**	**17 29 57.7**	**+0.2**
APE	**Apeiranthos**	**2.34**	**139**	PN	**Pn**	**17 29 56.9**	**-1.2**
URLA	**Izmir**	**2.38**	**101**	PN	**Pn**	**17 29 58.9**	**+0.3**
DKL	**Dikili**	**2.56**	**84**	PN	**Pn**	**17 30 01.5**	**+0.4**
VAY	**Valandovo**	**2.58**	**342**	*i* Pn	**Pn**	**17 30 02.3**	**+1.0**
FNA	**Florina**	**2.58**	**319**	Pn	**Pn**	**17 30 02.1**	**+0.7**
FNA	**Florina**	**2.58**	**319**	P	**Pn**	**17 30 02.1**	**+0.7**
	baz=315						
FNA				S	**Sn**	**17 30 33.1**	**+0.2**
	baz=315						
LSK	**Leskovik**	**2.67**	**300**	P	**Pn**	**17 30 04.4**	**+1.8**
	baz=295						
LSK				S	**Sn**	**17 30 37.9**	**+2.8**
	baz=295						
LSK				AMP			
	comp=N,1.6nm,0.6s,baz=295						
GELI	**Tayfur-Gelibol**	**2.68**	**54**	PN	**Pn**	**17 30 02.7**	**+0.1**
ENEZ	**Enez**	**2.69**	**45**	PN	**Pn**	**17 30 02.6**	**-0.3**
RDO	**Rodhopi**	**2.71**	**32**	PN	**Pn**	**17 30 02.0**	**-1.0**
RDO	**Rodhopi**	**2.71**	**32**		**Pn**	**17 30 02.3**	**-0.8**
BLCB	**Balcova**	**2.72**	**99**	PN	**Pn**	**17 30 03.7**	**+0.5**
ALN	**Alexandroupoli**	**2.75**	**42**	PN	**Pn**	**17 30 03.2**	**-0.4**
ALN	**Alexandroupoli**	**2.75**	**42**	Pn	**Pn**	**17 30 02.7**	**-0.9**
KBN	**Korca**	**2.80**	**310**		**Pn**	**17 30 05.6**	**+1.1**
KBN	**Korca**	**2.80**	**310**	P	**Pn**	**17 30 05.0**	**+0.6**
	baz=306						
KBN				S	**Sn**	**17 30 40.3**	**+1.8**
	baz=306						
KBN				AMP			
	comp=N,1.7nm,1.5s,baz=306						
ERIK	**Erikli-Kesan**	**2.86**	**50**	PN	**Pn**	**17 30 05.1**	**-0.1**
SRN	**Sarande**	**2.99**	**291**	P	**Pn**	**17 30 09.6**	**+2.7**
	baz=287						
SRN				S	**Sn**	**17 30 46.6**	**+3.8**
	baz=287						
SRN				AMP			
	comp=E,0.3nm,0.9s,baz=287						
STIP	**Stip**	**3.03**	**339**	*i* Pn	**Pn**	**17 30 07.9**	**+0.4**
GCAM	**G?zelcaml?**	**3.07**	**111**	PN	**Pn**	**17 30 08.6**	**+0.6**
KEK	**Kerkira**	**3.09**	**287**		**Pn**	**17 30 08.2**	**-0.1**
OHR	**Ohrid**	**3.12**	**317**	*i* Pn	**Pn**	**17 30 10.7**	**+1.9**
KRBG	**Karabiga-Canak**	**3.22**	**61**	PN	**Pn**	**17 30 10.6**	**+0.5**
UKOP	**Uzunkopru-Edir**	**3.23**	**45**	PN	**Pn**	**17 30 10.1**	**-0.1**
RKY	**Sarkoy-Tekirda**	**3.28**	**55**	PN	**Pn**	**17 30 11.3**	**+0.3**
MAR6	**Marsite Statio**	**3.35**	**56**	PN	**Pn**	**17 30 12.1**	**+0.2**
GONE	**Gonen-Balikesi**	**3.35**	**68**	PN	**Pn**	**17 30 12.5**	**+0.5**
MAR3	**Marsite Statio**	**3.39**	**55**	PN	**Pn**	**17 30 12.6**	**+0.2**
GZKV	**Gazikoy-Tekird**	**3.41**	**55**	PN	**Pn**	**17 30 12.9**	**+0.2**
BODT	**Bodrum**	**3.42**	**121**	PN	**Pn**	**17 30 12.8**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**3.47**	**104**	PN	**Pn**	**17 30 14.5**	**+0.8**
EDC	**Edincik**	**3.59**	**64**	PN	**Pn**	**17 30 16.8**	**+1.6**
MLSB	**Milas**	**3.63**	**114**	PN	**Pn**	**17 30 15.9**	**+0.1**
IDI	**Anoyia**	**3.71**	**164**	⇑P	**Pn**	**17 30 14.9**	**-2.1**
IDI	**Anoyia**	**3.71**	**164**	Pn	**Pn**	**17 30 16.9**	**-0.1**
	comp=E,3.4nm,0.3s,baz=343,slow=13,SNR=31						
IDI				Sn	**Sn**	**17 31 00.9**	**0.0**
	comp=E,7.2nm,0.3s,baz=356,slow=16,SNR=3.0						
IDI				Lg	Lg	17 31 15.7	
	comp=E,8.9nm,0.3s,baz=312,slow=19,SNR=3.1						
IDI				LR	LR	17 31 45.8	
	comp=E,117nm,18.0s,baz=336,slow=40						
	comp=E,12nm,0.4s						
PHP	**Peshkopia**	**3.72**	**320**	P	**Pn**	**17 30 17.9**	**+0.9**
	baz=318						
PHP				S	**Sn**	**17 31 01.2**	**+0.2**
	baz=318						
PHP				AMP			
	comp=N,0.4nm,1.1s,baz=318						
VTS	**Vitosha**	**3.76**	**356**	⇓P	**Pn**	**17 30 18.4**	**+0.8**
VTS	**Vitosha**	**3.76**	**356**	Pn	**Pn**	**17 30 17.8**	**+0.1**
DAT	**Datca**	**3.79**	**123**	PN	**Pn**	**17 30 17.8**	**-0.3**
TIR	**Tirane**	**3.80**	**312**	⇑P	Pg	17 30 44.1	+12
CRLT	**Corlu**	**3.88**	**53**	PN	**Pn**	**17 30 20.1**	**+0.9**
KCTX	**Karacabey (Bur**	**3.91**	**68**	PN	**Pn**	**17 30 20.8**	**+1.1**
KULA	**Kula-Manisa**	**3.96**	**94**	PN	**Pn**	**17 30 21.4**	**+1.1**
YER	**Yerkesik**	**4.07**	**114**	PN	**Pn**	**17 30 22.2**	**+0.4**
SCTE	**Santa Cesarea**	**4.17**	**288**	Pn	**Pn**	**17 30 22.1**	**-1.1**
SIMA	**Simav-Kutahya**	**4.18**	**85**	PN	**Pn**	**17 30 24.9**	**+1.5**
TURN	**Turunc**	**4.21**	**118**	PN	**Pn**	**17 30 24.1**	**+0.4**
SLVT	**Silivri**	**4.23**	**55**	PN	**Pn**	**17 30 25.0**	**+1.0**
MDNY	**Mudanya-Bursa**	**4.33**	**68**	PN	**Pn**	**17 30 26.7**	**+1.4**
KARP	**Karpathos**	**4.35**	**139**	PN	**Pn**	**17 30 25.9**	**+0.1**
KARP	**Karpathos**	**4.35**	**139**	Pn	**Pn**	**17 30 26.6**	**+0.8**
ARMT	**Armutlu**	**4.38**	**66**	PN	**Pn**	**17 30 27.0**	**+0.9**
CTYL	**Yalikoy Yolu**	**4.42**	**52**	PN	**Pn**	**17 30 27.3**	**+0.7**
BCI	**Bajram Curri**	**4.42**	**323**	P	**Pn**	**17 30 28.4**	**+1.7**
	baz=321						
CTKS	**Kestanelik-??a**	**4.43**	**56**	PN	**Pn**	**17 30 28.3**	**+1.6**
DRME	**Dracevica, Mon**	**4.74**	**316**	*e*Pn	**Pn**	**17 30 32.6**	**+1.6**
BLKB	**Belogradchik**	**4.80**	**352**	⇑P	**Pn**	**17 30 32.7**	**+0.8**
PDG	**Podgorica**	**4.87**	**318**	⇑P	**Pn**	**17 30 34.6**	**+1.9**
PDG	**Podgorica**	**4.87**	**318**	Pn	**Pn**	**17 30 33.5**	**+0.7**
PDG	**Podgorica**	**4.87**	**318**	*e*Pn	**Pn**	**17 30 34.7**	**+1.9**
VLAD	**Vladila**	**5.16**	**6**	⇓P	**Pg**	**17 30 59.6**	**+1.4**
HCY	**Herceg Novi**	**5.29**	**314**	*e*Pn	**Pn**	**17 30 37.8**	**-0.8**
TIP	**Timpagrande**	**5.36**	**275**	⇓P	Pn	17 30 44.5	+4.9
TIP	**Timpagrande**	**5.36**	**275**		**Pn**	**17 30 38.9**	**-0.7**
COPA	**Copaceanca**	**5.39**	**12**	⇓P	**Pn**	**17 30 37.9**	**-2.1**
AKAS	**Kas**	**5.43**	**117**	Pn	**Pn**	**17 30 40.7**	**0.0**
TREB	**Trebinje**	**5.55**	**316**	*e*Pn	**Pn**	**17 30 42.4**	**+0.3**
BRY	**Bratogost**	**5.58**	**318**	*e*Pn	**Pn**	**17 30 43.6**	**+1.0**
UPM	**Unac-Piva**	**5.61**	**322**	*e*Pn	**Pn**	**17 30 44.9**	**+1.8**
MATE	**Matera**	**5.62**	**291**	⇑P	**Pn**	**17 30 42.4**	**-0.7**
DJES	**Djerdap**	**5.85**	**352**	⇑P	**Pn**	**17 30 45.0**	**-1.3**
DIVS	**Divibare**	**5.89**	**334**		**Pn**	**17 30 46.9**	**-0.1**
DIVS	**Divibare**	**5.89**	**334**	*e*Pn	**Pn**	**17 30 48.9**	**+2.0**
BBLS	**Lazići**	**5.92**	**329**	*e*Pn	**Pn**	**17 30 49.1**	**+1.9**
HERR	**Herculane**	**6.07**	**352**	⇓P	**Pn**	**17 30 48.8**	**-0.6**
MDVR	**Moldovita**	**6.08**	**347**	⇑P	**Pn**	**17 30 49.0**	**-0.5**
SULR		**6.13**	**18**	⇑P	**Pn**	**17 30 50.5**	**+0.4**
CUC	**Castrocucco**	**6.15**	**283**		**Pn**	**17 30 52.0**	**+1.5**
MTUR	**Matau**	**6.44**	**9**	⇑P	**Pn**	**17 30 52.0**	**-2.5**
ARR	**Arges**	**6.54**	**6**	⇑P	**Pn**	**17 30 56.2**	**+0.5**
GZR	**Gura Zlata**	**6.55**	**355**	⇓P	**Pn**	**17 30 54.4**	**-1.6**
TLBR	**Topalu**	**6.56**	**29**	⇓P	**Pn**	**17 30 55.2**	**-0.8**
TIRR	**Tirgusor**	**6.63**	**31**	⇓P	Pn	17 30 52.2	-4.8
TIRR	**Tirgusor**	**6.63**	**31**	⇓P	Pn	17 30 52.2	-4.8
TIRR	**Tirgusor**	**6.63**	**31**	Pn	**Pn**	**17 30 56.8**	**-0.2**
HARR	**Harsova**	**6.64**	**28**	⇓P	**Pn**	**17 30 57.1**	**-0.1**
VOIR		**6.65**	**9**	⇓P	**Pn**	**17 30 57.9**	**+0.7**
SGRT	**San Giovanni R**	**6.68**	**298**	Pn	**Pn**	**17 30 57.7**	**0.0**
SGRT					**Sn**	**17 32 10.9**	**-3.1**
MLR	**Muntele Rosu**	**6.84**	**14**	⇓P	**Pn**	**17 31 01.3**	**+1.4**
MLR	**Muntele Rosu**	**6.84**	**14**	Pn	**Pn**	**17 31 00.6**	**+0.7**
	comp=N,0.5nm,0.3s,baz=119,slow=22,SNR=7.9						
MLR				Sn	**Sn**	**17 32 19.4**	**+1.5**
	comp=N,0.6nm,0.3s,baz=131,slow=20,SNR=1.2						
	comp=N,3.0nm,0.3s						
MLR	**Muntele Rosu**	**6.84**	**14**	Pn	**Pn**	**17 31 00.0**	**+0.1**
FRGS	**Fruska Gora**	**6.89**	**337**	*e*Pn	**Pn**	**17 31 02.8**	**+2.2**
TPGR	**Topolog**	**6.97**	**29**	⇑P	Pn	17 31 08.7	+7.1
SRKY	**Kupres RS**	**7.11**	**319**	*e*Pn	**Pn**	**17 31 04.0**	**+0.4**
DOPR	**Dopca**	**7.21**	**10**	⇓P	**Pn**	**17 31 05.7**	**+0.7**
COVR	**Voineasa-Covas**	**7.23**	**14**	⇑P	**Pn**	**17 31 06.7**	**+1.5**
PLOR	**Plostina**	**7.33**	**17**	⇑P	**Pn**	**17 31 08.5**	**+1.9**
VRI	**Vrincioaia**	**7.36**	**17**	⇑P	**Pn**	**17 31 08.7**	**+1.7**
OZUR		**7.39**	**12**	⇓P	Pn	17 31 02.9	-4.6
TLCR		**7.40**	**30**	⇑P	**Pn**	**17 31 07.6**	**+0.1**
BLY	**Banja Luka**	**7.59**	**323**	*e*Pn	**Pn**	**17 31 11.0**	**+0.8**
BR131	**Keskin Array S**	**7.81**	**81**	Pn	**Pn**	**17 31 14.8**	**+1.5**
BRTR	**Keskin Array B**	**7.81**	**81**	Pn	**Pn**	**17 31 15.5**	**+2.2**
	comp=N,0.2nm,0.3s,baz=252,slow=12,SNR=6.3						
	comp=N,0.7nm,0.5s						
TESR	**Tescani**	**7.95**	**15**	⇑P	**Pn**	**17 31 12.5**	**-2.6**
MORH	**Mrgy, Hungar**	**8.21**	**335**	⇓P	**Pn**	**17 31 19.5**	**+1.0**
MORH	**Mrgy, Hungar**	**8.21**	**335**	*e*Pn	**Pn**	**17 31 19.7**	**+1.1**
BURAR	**Bucovina Array**	**8.82**	**7**	⇑P	**Pn**	**17 31 28.3**	**+1.2**
BURAR	**Bucovina Array**	**8.82**	**7**	Pn	**Pn**	**17 31 27.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**8.85**	**7**	Pn	**Pn**	**17 31 28.3**	**+0.8**
NRCA	**Norcia**	**8.89**	**300**	Pn	**Pn**	**17 31 24.8**	**-3.4**
CRES	**Cresnjev**	**9.21**	**322**	*e*Pn	**Pn**	**17 31 32.0**	**-0.4**
CEY	**Cerknica**	**9.67**	**318**	*e*Pn	**Pn**	**17 31 36.8**	**-1.8**
SKDS	**Skadanscina**	**9.76**	**316**	*e*Pn	**Pn**	**17 31 41.4**	**+1.5**
AKASG	**Malin Array Be**	**12.47**	**17**	Pn	**Pn**	**17 32 16.7**	**-0.3**
	comp=N,0.3nm,0.3s,baz=202,slow=12,SNR=1.8						
	comp=N,0.2nm,0.2s						
ESDC	**Sonseca Array**	**21.35**	**281**	P	**P**	**17 34 07.4**	**+0.5**
	comp=N,0.9nm,0.8s,baz=76,slow=11,SNR=2.9						
	comp=N,0.9nm,0.8s						
FINES	**FINESS Array B**	**22.65**	**3**	P	**P**	**17 34 20.0**	**-0.5**
	comp=N,1.5nm,1.0s,baz=170,slow=11,SNR=5.2						
	comp=N,1.5nm,1.0s						
NB2	**NORSAR Subarra**	**23.50**	**345**	P	**P**	**17 34 29.2**	**-0.2**
	comp=Z,2.0nm,1.1s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.50**	**345**	P	**P**	**17 34 28.1**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=153,slow=11,SNR=5.3						
	comp=Z,0.5nm,0.7s						
MDT	**Midelt**	**23.62**	**264**	LR	LR	17 44 10.0	
	comp=Z,42nm,18.9s,baz=358,slow=38						
EKA	**Eskdalemuir Ar**	**24.34**	**321**	P	**P**	**17 34 36.4**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=117,slow=10,SNR=3.8						
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**32.15**	**223**	P	**P**	**17 35 46.7**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=33,slow=9.2,SNR=8.8						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**42.86**	**60**	P	**P**	**17 37 18.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=268,slow=8.6,SNR=4.2						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**43.41**	**49**	P	**P**	**17 37 24.3**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=272,slow=8.9,SNR=3.5						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**67.39**	**84**	P	**P**	**17 40 14.9**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=303,slow=8.4,SNR=2.8						
	comp=Z,0.3nm,0.7s						
PSI	**Prapat**	**76.81**	**97**	LR	LR	18 18 13.7	
	comp=Z,52nm,18.2s,baz=250,slow=38						

IDC ***09*** *17:35:29.5±0.9, 52.°53N×167.°52W, h0^{km}, mb3.8/19, mbtmp3.8/20, ML3.3/1, MS3.1/2, Error ellipse: s-maj=23.4km s-min=15.1km az=7.0*

AEIC ***09*** *17:35:33±2.8, 52.°43N±0.°04×167.°42W±0.°08, h33^{km}±5^{km}, Error ellipse: s-maj=7.2km s-min=5.4km az=105.0*

NEIC ***09*** *17:35:35.0±2.3, 52.°54N±0.°04×167.°45W±0.°08, h33^{km}±5^{km}, mb4.1/62, ML3.6/6, ML3.3(AEIC), Error ellipse: s-maj=7.4km s-min=4.7km az=124.0*

ISC 09 17:35:33.6±0.6, **52.°40N**±0.°07×**167.°37W**±0.°05, **h35**^{km}, **n229,** σ1^{s}.**75**/201, **mb4.1**/33, **MS3.4**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKFG	**Magazine Ridge**	**1.07**	**342**		**Pn**	**17 35 52.1**	**+0.1**
OKFG					**Sn**	**17 36 05.7**	**+0.1**
NIKH	**Nikolski High**	**1.07**	**303**		**Pn**	**17 35 51.5**	**-0.5**
NIKH					**Sn**	**17 36 05.1**	**-0.7**
NIKH	**Nikolski High**	**1.07**	**303**	P	**Pn**	**17 35 51.7**	**-0.3**
	baz=121						
MGOD	**Makushin Gods**	**1.43**	**12**		**Pn**	**17 35 57.2**	**+0.1**
UNV	**Unalaska Valle**	**1.54**	**19**		**Pn**	**17 35 58.4**	**-0.1**
UNV					**Sn**	**17 36 18.7**	**+1.4**
UNV	**Unalaska Valle**	**1.54**	**19**	P	**Pn**	**17 35 58.6**	**+0.1**
	baz=202						
MSW	**Makushin Switc**	**1.56**	**13**		**Pn**	**17 35 58.9**	**0.0**
AKBBA	**Akutan Broad B**	**1.91**	**26**		**Pn**	**17 36 04.0**	**+0.4**
AKUT	**Akutan**	**1.99**	**28**		**Pn**	**17 36 05.1**	**+0.5**
AKUT					**Sn**	**17 36 30.4**	**+2.1**
AKUT	**Akutan**	**1.99**	**28**	IAML		17 36 46.1	
	comp=E,150nm,2.2s						
FALS	**False Pass**	**3.41**	**42**		**Pn**	**17 36 24.9**	**+0.7**
FALS	**False Pass**	**3.41**	**42**	P	**Pn**	**17 36 23.1**	**-1.0**
	baz=226						
ATKA	**Atka Island**	**4.20**	**270**		**Pn**	**17 36 36.1**	**+1.1**
SDPT	**Sand Point**	**5.04**	**51**		**Pn**	**17 36 47.0**	**+0.4**
SDPT	**Sand Point**	**5.04**	**51**	IAML		17 39 23.2	
	comp=N,58nm,2.0s						
GSTD	**Great Sitkin T**	**5.41**	**270**		**Pn**	**17 36 53.0**	**+1.4**
ADK	**Adak**	**5.76**	**269**		**Pn**	**17 36 58.1**	**+1.6**
CHIR	**Chirikof Islan**	**7.71**	**59**	P	**Pn**	**17 37 21.5**	**-1.7**
	baz=249						
SII	**Sitkinak Islan**	**8.73**	**56**	P	**Pn**	**17 37 35.5**	**-1.7**
	baz=247						
OHAK	**Old Harbor**	**9.45**	**54**	P	**Pn**	**17 37 45.8**	**-1.2**
	baz=245						
P18K	**Big Mountain,**	**9.77**	**39**	Pn	**Pn**	**17 37 54.3**	**+2.9**
KDAK	**Kodiak Island**	**10.04**	**52**	Pn	**Pn**	**17 37 53.8**	**-1.2**
	comp=N,0.5nm,0.3s,baz=222,slow=9.7,SNR=8.1						
KDAK				Sn	Sn	17 39 35.7	-11
	comp=N,0.1nm,0.3s,baz=357,slow=21,SNR=6.6						
KDAK	**Kodiak Island**	**10.04**	**52**	P	**Pn**	**17 37 53.4**	**-1.7**
	baz=244						
O18K	**Koktuh Hills**	**10.08**	**37**	P	**Pn**	**17 37 54.3**	**-1.4**
	baz=228						
Q19K	**Cape Douglas,**	**10.13**	**44**	Pn	**Pn**	**17 37 57.0**	**+0.6**
Q19K	**Cape Douglas,**	**10.13**	**44**	P	**Pn**	**17 37 54.5**	**-1.9**
	baz=236						
N18K	**Kilae Creek**	**10.43**	**33**	P	**Pn**	**17 37 58.5**	**-1.9**
	baz=222						
P19K	**Oil Pt**	**10.73**	**42**	P	**Pn**	**17 38 02.4**	**-2.1**
	baz=234						
N19K	**Bonanza Creek**	**11.01**	**35**	P	**Pn**	**17 38 06.8**	**-1.6**
	baz=226						
O20K	**Slope Mountain**	**11.23**	**41**	P	**Pn**	**17 38 10.3**	**-1.1**
	baz=233						
GAMB	**Gambell**	**11.64**	**350**	P	**Pn**	**17 38 15.3**	**-1.5**
	baz=167						
M19K	**Big River Lodg**	**11.82**	**31**	P	**Pn**	**17 38 17.1**	**-2.4**
	baz=222						
BRSE	**Bradley Lake S**	**11.83**	**45**	P	**Pn**	**17 38 16.8**	**-2.7**
	baz=239						
L19K	**White Mountain**	**11.89**	**30**	Pn	**Pn**	**17 38 20.1**	**-0.3**
L19K	**White Mountain**	**11.89**	**30**	P	**Pn**	**17 38 18.7**	**-1.7**
	baz=220						
TTA	**Tatalina**	**12.16**	**25**	P	**Pn**	**17 38 22.6**	**-1.5**
	baz=215						
M20K	**Styx River**	**12.22**	**33**	P	**Pn**	**17 38 22.9**	**-2.1**
	baz=226						
ANM	**Nome**	**12.25**	**4**	P	**Pn**	**17 38 24.3**	**-0.9**
	baz=186						
L20K	**Farewell, AK**	**12.41**	**30**	P	**Pn**	**17 38 25.6**	**-2.0**
	baz=222						
SEW	**Seward**	**12.57**	**45**	P	**Pn**	**17 38 27.9**	**-1.7**
	baz=240						
K20K	**Telida**	**13.03**	**27**	P	**Pn**	**17 38 33.7**	**-2.3**
	baz=219						
TNA	**Tin City**	**13.21**	**359**	P	**Pn**	**17 38 36.5**	**-1.8**
	baz=179						
PPLA	**Purkeypile**	**13.25**	**32**	P	**Pn**	**17 38 37.4**	**-1.7**
	baz=225						
CUT	**Chulitna**	**13.57**	**36**	P	**Pn**	**17 38 42.8**	**-0.4**
	baz=230						
J20K	**Nowinta River**	**13.66**	**25**	Pn	**Pn**	**17 38 45.8**	**+1.2**
J20K	**Nowinta River**	**13.66**	**25**	P	**Pn**	**17 38 42.7**	**-1.8**
	baz=216						
CAST	**Castle Rocks**	**13.66**	**30**		**Pn**	**17 38 45.6**	**+1.0**
CAST	**Castle Rocks**	**13.66**	**30**	P	**Pn**	**17 38 42.8**	**-1.8**
	baz=223						
KNK	**Knik Glacier**	**13.67**	**41**	P	**Pn**	**17 38 42.2**	**-2.5**
	baz=237						
SML	**Sawmill**	**13.94**	**40**	Pn	**Pn**	**17 38 48.1**	**-0.3**
SML	**Sawmill**	**13.94**	**40**	P	**Pn**	**17 38 46.5**	**-1.9**
	baz=236						
CHUM	**Lake Minchumin**	**13.94**	**29**	P	**Pn**	**17 38 47.1**	**-1.3**
	baz=222						
GLI	**Glacier Island**	**13.97**	**45**	P	**Pn**	**17 38 46.9**	**-1.8**
	baz=242						
KTH	**Kantishna Hill**	**14.12**	**31**		**Pn**	**17 38 49.9**	**-1.0**
M23K	**Glacier View**	**14.17**	**41**	P	**Pn**	**17 38 50.0**	**-1.5**
	baz=237,SNR=5.2						
FID	**Port Fidalgo**	**14.18**	**46**	Pn	**Pn**	**17 38 50.3**	**-1.3**
TRF	**Thorofare Moun**	**14.26**	**32**	Pn	**Pn**	**17 38 53.4**	**+0.5**
TRF	**Thorofare Moun**	**14.26**	**32**	P	**Pn**	**17 38 50.6**	**-2.2**
	baz=227						
SCM	**Sheep Creek Mo**	**14.35**	**41**		**Pn**	**17 38 53.3**	**-0.8**
SCM	**Sheep Creek Mo**	**14.35**	**41**	P	**Pn**	**17 38 52.4**	**-1.6**
	baz=238						
EYAK	**Cordova Ski Ar**	**14.41**	**47**	P	**Pn**	**17 38 53.3**	**-1.5**
	baz=245						
WAT1	**Susitna Watana**	**14.46**	**36**	P	**Pn**	**17 38 53.9**	**-1.5**
	baz=232						
BPAW	**Bear Paw Mtn.**	**14.50**	**30**	Pn	**Pn**	**17 38 57.3**	**+1.4**
BPAW	**Bear Paw Mtn.**	**14.50**	**30**	P	**Pn**	**17 38 54.9**	**-1.1**
	baz=224						
WAT6	**Susitna Watana**	**14.61**	**38**	P	**Pn**	**17 38 56.0**	**-1.6**
	baz=235						
KLU	**Klutina**	**14.76**	**44**		**Pn**	**17 38 58.0**	**-1.5**
KLU	**Klutina**	**14.76**	**44**	P	**Pn**	**17 38 57.8**	**-1.7**
	baz=242						
I21K	**Tanana**	**15.03**	**26**	P	**P**	**17 39 08.9**	**+0.9**
I21K	**Tanana**	**15.03**	**26**	P	**Pn**	**17 39 01.5**	**-1.6**
	baz=219						
DHY	**Denali Highway**	**15.03**	**37**	P	**Pn**	**17 39 00.8**	**-2.5**
	baz=234						
BMRM	**Bremner River**	**15.10**	**46**	P	**Pn**	**17 39 02.5**	**-1.5**
	baz=246						
H21K	**Melozitna Rive**	**15.20**	**23**	P	**Pn**	**17 39 05.3**	**0.0**
	baz=216,SNR=24						
IMAR	**Indian Mountai**	**15.25**	**21**		**P**	**17 39 10.0**	**-0.5**
N25K	**Chitina, Valde**	**15.38**	**44**	Pn	**Pn**	**17 39 07.4**	**-0.3**
N25K				IAmb	IAmb	17 39 19.4	
	comp=Z,19nm,1.9s						
N25K	**Chitina, Valde**	**15.38**	**44**	P	**Pn**	**17 39 05.8**	**-1.9**
	baz=244						
BGLC	**Bering Glacier**	**15.38**	**50**	P	**Pn**	**17 39 06.5**	**-1.2**
	baz=251						
GLB	**Gilahina Butte**	**15.64**	**45**	Pn	**Pn**	**17 39 11.1**	**0.0**
WRH	**Wood River Hil**	**15.67**	**32**	Pn	**Pn**	**17 39 11.8**	**+0.4**
PAX	**Paxson**	**15.69**	**39**	P	**Pn**	**17 39 10.5**	**-1.4**
	baz=238						
WAX	**Waxell Ridge**	**15.70**	**49**	Pn	**Pn**	**17 39 11.8**	**-0.1**
WAX				IAmb	IAmb	17 39 30.3	
	comp=Z,16nm,1.2s						
VRDI	**Verde Repeater**	**15.71**	**46**		**Pn**	**17 39 11.8**	**-0.4**
VRDI				IAmb	IAmb	17 39 19.5	
	comp=Z,5.9nm,0.8s						
I23K	**Minto, Yukon-K**	**15.74**	**29**	Pn	**Pn**	**17 39 12.3**	**+0.1**
I23K	**Minto, Yukon-K**	**15.74**	**29**	P	**Pn**	**17 39 11.4**	**-0.9**
	baz=224						
MDM	**Murphy Dome**	**15.95**	**31**	Pn	**Pn**	**17 39 14.6**	**-0.4**
ISLE	**Juniper Island**	**15.99**	**49**	Pn	**Pn**	**17 39 15.9**	**+0.2**
ISLE				IAmb	IAmb	17 39 31.0	
	comp=Z,9.5nm,1.1s						
HDA	**Harding Lake**	**16.00**	**33**	P	**Pn**	**17 39 14.7**	**-1.0**
	baz=231						
K24K	**Donnelly Dome**	**16.04**	**36**	P	**Pn**	**17 39 14.9**	**-1.3**
	baz=235						
H23K	**Yukon River**	**16.18**	**27**	P	**Pn**	**17 39 17.4**	**-0.6**
	baz=222						
ILAR	**Eielson Array**	**16.26**	**32**	Pn	**Pn**	**17 39 16.9**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=229,slow=9.5,SNR=7.2						
	comp=Z,0.2nm,0.5s						
POKR	**Poker Plat Res**	**16.31**	**31**	P	**Pn**	**17 39 18.4**	**-1.2**
	baz=228						
RIDG	**Independent Ri**	**16.35**	**37**	Pn	**Pn**	**17 39 19.8**	**-0.3**
RIDG	**Independent Ri**	**16.35**	**37**	P	**Pn**	**17 39 19.5**	**-0.6**
	baz=237						
M26K	**Nabesna, AK**	**16.41**	**43**		**Pn**	**17 39 19.9**	**-1.1**
M26K	**Nabesna, AK**	**16.41**	**43**	P	**Pn**	**17 39 20.2**	**-0.7**
	baz=244						
BARN	**Barnard Glacie**	**16.46**	**48**		**Pn**	**17 39 20.3**	**-1.4**
BARN				IAmb	IAmb	17 39 31.6	
	comp=Z,35nm,1.9s						
TABL	**Table Mountain**	**16.50**	**51**	Pn	**Pn**	**17 39 20.8**	**-1.4**
TABL				IAmb	IAmb	17 39 59.9	
	comp=Z,28nm,1.7s						
L26K	**Log Cabin Wild**	**16.56**	**41**	P	**P**	**17 39 25.5**	**+0.5**
L26K				IAmb	IAmb	17 39 26.0	
	comp=Z,6.3nm,0.6s						
L26K	**Log Cabin Wild**	**16.56**	**41**	P	**Pn**	**17 39 21.9**	**-0.8**
	baz=241						
H24K	**Noodor Dome**	**16.67**	**29**	Pn	**Pn**	**17 39 23.1**	**-1.1**
H24K	**Noodor Dome**	**16.67**	**29**	P	**Pn**	**17 39 21.9**	**-2.3**
	baz=226						
J25K	**Salcha River,**	**16.67**	**34**		**Pn**	**17 39 24.2**	**+0.1**
J25K	**Salcha River,**	**16.67**	**34**	P	**Pn**	**17 39 21.7**	**-2.5**
	baz=233						
SCRK	**Sand Creek**	**16.80**	**37**	Pn	**Pn**	**17 39 26.5**	**+0.6**
SCRK	**Sand Creek**	**16.80**	**37**	P	**Pn**	**17 39 23.4**	**-2.5**
	baz=237,SNR=7.5						
PINM	**Pinnacle**	**16.83**	**52**	P	**Pn**	**17 39 24.0**	**-2.2**
	baz=255						
M27K	**Edge Creek, AK**	**16.86**	**44**		**Pn**	**17 39 27.2**	**+0.5**
M27K				IAmb	IAmb	17 39 35.3	
	comp=Z,21nm,1.8s						
M27K	**Edge Creek, AK**	**16.86**	**44**	P	**Pn**	**17 39 25.0**	**-1.7**
	baz=246						
COLD	**Coldfoot**	**17.09**	**23**	P	**P**	**17 39 32.6**	**+1.8**
COLD	**Coldfoot**	**17.09**	**23**	P	**Pn**	**17 39 27.4**	**-2.0**
	baz=218						
L27K	**Beaver Creek,**	**17.19**	**42**	Pn	**Pn**	**17 39 30.8**	**+0.1**
L27K	**Beaver Creek,**	**17.19**	**42**	P	**Pn**	**17 39 28.5**	**-2.1**
	baz=244						
BCAR	**Beaver Creek A**	**17.20**	**42**	Pn	**Pn**	**17 39 30.0**	**-0.9**
J26L	**Joseph Creek**	**17.24**	**36**	P	**Pn**	**17 39 28.8**	**-2.5**
	baz=237,SNR=12						
YUK3	**Moose Creek**	**17.25**	**47**	P	**Pn**	**17 39 28.8**	**-2.8**
	baz=249						
BVCY	**Beaver Creek**	**17.32**	**44**	P	**Pn**	**17 39 29.4**	**-2.8**
	baz=247						
YUK4	**Talbot Arm**	**17.93**	**49**	P	**Pn**	**17 39 38.1**	**-2.0**
	baz=253						
YUK6	**Outpost Mounta**	**17.95**	**50**	P	**Pn**	**17 39 37.2**	**-3.2**
	baz=255,SNR=5.4						
EGAK	**Eagle**	**18.27**	**37**	P	**Pn**	**17 39 43.0**	**-0.9**
EGAK	**Eagle**	**18.27**	**37**	P	**Pn**	**17 39 41.1**	**-2.8**
	baz=240						
HYT	**Haines Junctio**	**18.33**	**51**	P	**Pn**	**17 39 48.4**	**+3.6**
HYT	**Haines Junctio**	**18.33**	**51**	P	**P**	**17 39 41.9**	**-2.8**
	baz=256						
TOLK	**Toolik Lake Re**	**18.37**	**21**	P	**Pn**	**17 39 46.0**	**+0.8**
TOLK	**Toolik Lake Re**	**18.37**	**21**	P	**P**	**17 39 42.3**	**-2.6**
	baz=217,SNR=6.0						
DAWY	**Dawson**	**18.61**	**40**	P	**P**	**17 39 45.0**	**-2.6**
	baz=244						
BMAR	**Burnt Mountain**	**18.72**	**28**		**Pn**	**17 39 50.5**	**+1.0**
SIT	**Sitka**	**18.97**	**63**	P	**P**	**17 39 48.4**	**-3.2**
	baz=270						
M30M	**Minto, Yukon**	**19.14**	**46**	P	**Pn**	**17 39 55.3**	**+0.8**
M30M				IAmb	IAmb	17 39 59.1	
	comp=Z,12nm,1.7s						
M30M	**Minto, Yukon**	**19.14**	**46**	P	**P**	**17 39 50.8**	**-2.7**
	baz=252						
N31M	**Braeburn, Yuko**	**19.30**	**50**		**Pn**	**17 39 58.9**	**+2.4**
N31M				IAmb	IAmb	17 40 12.4	
	comp=Z,8.0nm,0.8s						
N31M	**Braeburn, Yuko**	**19.30**	**50**	P	**P**	**17 39 52.6**	**-2.6**
	baz=256						
WHY	**Whitehorse**	**19.55**	**52**		**Pn**	**17 40 00.9**	**+1.3**
WHY				IAmb	IAmb	17 40 22.8	
	comp=Z,5.4nm,0.9s						
WHY	**Whitehorse**	**19.55**	**52**	P	**P**	**17 39 55.4**	**-2.7**
	baz=260						
I29M	**Ogilvie Camp,**	**19.61**	**37**	P	**P**	**17 39 59.4**	**+0.8**
I29M				IAmb	IAmb	17 40 10.8	
	comp=Z,5.5nm,0.7s						
M31M	**Drury Creek, Y**	**20.11**	**48**	P	Pn	17 40 06.7	+0.7
M31M	**Drury Creek, Y**	**20.11**	**48**	P	**P**	**17 40 02.3**	**-1.7**
	baz=256,SNR=20						
EPYK	**Eagle Plains**	**20.66**	**36**	P	**P**	**17 40 09.6**	**-0.3**
EPYK				IAmb	IAmb	17 40 14.6	
	comp=Z,7.5nm,0.8s						
EPYK	**Eagle Plains**	**20.66**	**36**	P	**P**	**17 40 08.1**	**-1.8**
	baz=242,SNR=8.6						
PETK	**Petropavlovsk-**	**21.03**	**286**	P	**P**	**17 40 14.4**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=83,slow=13,SNR=16						
	comp=Z,1.3nm,0.4s						
MMPY	**Sheldon Lake,**	**21.62**	**48**	P	**P**	**17 40 18.0**	**-2.4**
	baz=259,SNR=9.4						
INK	**Inuvik**	**22.66**	**33**	P	**P**	**17 40 29.9**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=222,slow=13,SNR=11						
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**22.66**	**33**	P	**P**	**17 40 30.5**	**-0.8**
INK	**Inuvik**	**22.66**	**33**	P	**P**	**17 40 28.7**	**-2.5**
	baz=242						
SEY	**Seymchan**	**23.55**	**312**	P	**P**	**17 40 39.5**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=98,slow=13,SNR=4.5						
	comp=Z,1.5nm,0.8s						
MA2	**Magadan**	**24.14**	**304**	P	**P**	**17 40 46.5**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=127,slow=20,SNR=1.8						
	comp=Z,1.2nm,0.5s						
MA2	**Magadan**	**24.14**	**304**	IAmb	IAmb	17 41 25.7	
	comp=Z,5.9nm,1.1s						
C36M	**Paulatuk**	**26.22**	**33**	P	**P**	**17 41 01.9**	**-2.8**
	baz=252						
A36M	**Sachs Harbour**	**26.82**	**28**	P	**P**	**17 41 07.7**	**-2.3**
	baz=246						
YKA	**Yellowknife Ar**	**29.30**	**49**	P	**P**	**17 41 33.6**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=261,slow=8.0,SNR=3.9						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**29.30**	**49**	P	**P**	**17 41 34.9**	**+2.6**
K02D	**Willamette Mer**	**30.63**	**91**	P	**P**	**17 41 41.6**	**-2.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=304						
J04D	Umpqua Nationa	31.28	89	P	P	17 41 46.5	-3.7
	baz=303						
L04D	Klamath Falls	31.73	90	P	P	17 41 50.9	-3.2
	baz=305						
NEW	Newport	31.81	77	P	P	17 41 51.7	-2.9
	baz=297						
MOD	Modoc Plateau	33.13	89	P	P	17 42 07.8	+1.4
MOD				IAmb	IAmb	17 42 10.8	
	comp=Z,2.9nm,0.8s						
TIXI	Tiksi	33.34	329	P	P	17 42 08.0	+0.3
	comp=Z,0.2nm,0.2s,baz=90,slow=20,SNR=1.5						
	comp=Z,0.2nm,0.2s						
PAHR	Pah Rah Range	34.99	92	P	P	17 42 22.8	+0.3
RYN	Ryan	36.18	93	P	P	17 42 35.8	+3.1
EGMT	Eagleton	36.29	73	P	P	17 42 31.0	-2.5
	baz=299						
NVAR	Mina Array Bea	36.44	93	P	P	17 42 38.5	+3.5
	comp=Z,2.5nm,0.7s,baz=300,slow=8.8,SNR=7.0						
	comp=Z,2.5nm,0.7s						
NVAR	Mina Array Bea	36.44	93	P	P	17 42 37.6	+2.6
MDPB	Devils Postpil	36.47	94	P	P	17 42 38.6	+3.2
OMMB	Old Mammoth Mi	36.53	94	P	P	17 42 39.6	+3.7
YHH	Holmes Hill	37.29	79	P	P	17 42 44.6	+2.2
YHH				IAmb	IAmb	17 42 45.5	
	comp=Z,6.5nm,1.5s						
TPH	Tonopah	37.32	92	P	P	17 42 44.8	+2.3
LCH	Last Change Ra	37.60	94	P	P	17 42 48.5	+3.6
LCH				IAmb	IAmb	17 42 49.2	
	comp=Z,5.0nm,1.2s						
H17A	Grant Village	37.67	79	P	P	17 42 41.3	-4.2
	baz=303						
ISA	Isabella, Lake	38.12	96	P	P	17 42 50.2	+1.1
ISA				IAmb	IAmb	17 42 52.7	
	comp=Z,4.0nm,1.1s						
ISA	Isabella, Lake	38.12	96	P	P	17 42 46.1	-3.0
	baz=312						
R11A	Troy Canyon, C	38.16	91	P	P	17 42 45.9	-3.6
	baz=309						
SBC	Santa Barbara	38.19	99	P	P	17 42 46.5	-3.0
	baz=313						
H11N2	WAKE ISLAND Hy	38.26	221	T	T	18 24 05.9	
	baz=24,slow=76,SNR=9.9						
H11N3	WAKE ISLAND Hy	38.27	221	T	T	18 24 06.4	
	baz=24,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	38.28	221	T	T	18 24 08.1	
	baz=24,slow=76,SNR=8.9						
FURC	Furnace Creek,	38.57	94	P	P	17 42 50.7	-2.0
	baz=311						
TPNV	Topopah Spring	38.64	93	P	P	17 42 56.5	+2.9
TPNV				IAmb	IAmb	17 42 57.6	
	comp=Z,4.1nm,0.8s						
TPNV	Topopah Spring	38.64	93	P	P	17 42 49.2	-4.4
	baz=310						
GWY	Greenwater Val	38.88	94	P	P	17 42 55.4	-0.1
GWY				IAmb	IAmb	17 42 59.3	
	comp=Z,2.6nm,0.8s						
QSM	Queen of Sheba	38.90	95	P	P	17 42 55.4	-0.2
QSM				IAmb	IAmb	17 42 59.4	
	comp=Z,2.7nm,0.9s						
EDW2	Edwards Air Fo	38.93	97	P	P	17 42 53.2	-2.8
	baz=312						
LAO	LASA Array	39.03	73	P	P	17 42 52.9	-3.8
	baz=302						
PRN	Pahroc Range	39.08	91	P	P	17 42 60.0	+2.8
PRN				IAmb	IAmb	17 43 00.8	
	comp=Z,3.3nm,0.8s						
SNCC	San Nicolas Is	39.12	100	P	P	17 42 55.0	-2.4
	baz=314						
BW06	Boulder Array	39.19	80	P	P	17 42 59.2	+0.9
BW06				IAmb	IAmb	17 44 21.2	
	comp=Z,4.5nm,1.1s						
PD31	Pinedale Array	39.19	80	P	P	17 42 58.9	+0.6
PD31				IAmb	IAmb	17 43 10.3	
	comp=Z,4.8nm,1.8s						
PDAR	Pinedale Array	39.19	80	P	P	17 42 59.7	+1.5
	comp=Z,0.5nm,0.7s,baz=316,slow=6.2,SNR=6.1						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	39.19	80	P	P	17 42 59.5	+1.2
DGMT	Dagmar	39.30	70	P	P	17 42 55.7	-3.1
	baz=300						
GSC	Goldstone, Bar	39.38	95	P	P	17 43 02.2	+2.6
GSC				IAmb	IAmb	17 43 04.1	
	comp=Z,4.2nm,0.8s						
H11S1	WAKE ISLAND Hy	39.44	221	T	T	18 25 46.7	
	baz=24,slow=76,SNR=4.5						
H11S2	WAKE ISLAND Hy	39.45	221	T	T	18 25 48.9	
	baz=24,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	39.46	221	T	T	18 25 50.9	
	baz=24,slow=76,SNR=4.1						
GMRC	Granite Mounta	40.42	95	P	P	17 43 04.9	-3.5
	baz=312						
RDMU	Red Mountain	40.47	83	P	P	17 43 11.0	+2.1
RDMU				IAmb	IAmb	17 43 25.8	
	comp=Z,4.2nm,1.0s						
Q16A	Castle Valley	40.50	86	P	P	17 43 10.8	+1.6
Q16A				IAmb	IAmb	17 43 13.2	
	comp=Z,7.8nm,1.4s						
P18A	Preston Nutter	40.63	85	P	P	17 43 12.5	+2.2
P18A				IAmb	IAmb	17 43 14.2	
	comp=Z,6.2nm,1.3s						
PFO	Pinyon Flats O	40.73	97	P	P	17 43 06.4	-4.5
	baz=313						
TPFO	Pinon Flats	40.73	97	P	P	17 43 06.5	-4.5
	baz=313						
BELC	Belle Mtn. Jos	40.74	96	P	P	17 43 06.3	-4.7
	baz=313						
109C	Camp Elliot, M	40.83	98	P	P	17 43 07.5	-4.1
	baz=314						
NEE2	Needles Airpor	41.07	94	P	P	17 43 11.7	-1.9
	baz=312						
K22A	Casper	41.09	79	P	P	17 43 09.1	-4.7
	baz=306						
O20A	White River Ci	41.54	83	P	P	17 43 19.2	+1.5
O20A	White River Ci	41.54	83	P	P	17 43 16.0	-1.7
	baz=308						
RSSD	Black Hills	41.73	75	P	P	17 43 16.2	-3.0
	baz=305						
BLYC	Blythe	41.81	95	P	P	17 43 22.5	+2.8
PV13	Radium Mtn., P	42.42	86	P	P	17 43 27.2	+2.4
PV13				IAmb	IAmb	17 43 27.9	
	comp=Z,5.9nm,0.9s						
WUAZ	Wupatki	42.56	91	P	P	17 43 21.7	-4.2
	baz=312						
W18A	Petrified Fore	43.82	90	P	P	17 43 31.9	-4.3
	baz=312						
OGNE	Ogallala	44.80	78	P	P	17 43 39.3	-4.5
	baz=308						
KSRS	Korea Array	46.62	278	LR	LR	18 03 48.8	
	comp=Z,13nm,19.8s,baz=180,slow=36						
EYMN	Ely	46.72	64	P	P	17 43 55.0	-3.8
	baz=305						
I37A	Lemond, Waseca	47.99	69	P	P	17 44 09.2	+0.5
TX31	Lajitas Ar. Si	51.52	91	P	P	17 44 37.9	+2.0
TX32	Lajitas Array	51.52	91	P	P	17 44 38.1	+2.3
TXAR	Lajitas Array	51.52	91	P	P	17 44 37.5	+1.6
	comp=Z,1.3nm,0.7s,baz=302,slow=5.7,SNR=12						
	comp=Z,1.3nm,0.7s						
P40A	Paris	51.61	73	P	P	17 44 36.8	+0.6
ARCES	ARCESS Array B	58.02	355	P	P	17 45 22.3	+0.1
	comp=Z,2.5nm,0.8s,baz=28,slow=6.0,SNR=8.8						
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	58.22	319	P	P	17 45 23.8	0.0
	comp=Z,0.4nm,0.4s,baz=50,slow=7.7,SNR=2.0						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	64.67	315	P	P	17 46 08.2	+0.7
	comp=Z,0.2nm,0.5s,baz=36,slow=7.5,SNR=2.8						
	comp=Z,0.2nm,0.5s						
ARU	Arti	65.14	334	P	P	17 46 10.6	+0.2
	comp=Z,0.9nm,0.4s,baz=55,slow=7.9,SNR=4.1						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	66.00	353	P	P	17 46 15.9	+0.1
	comp=Z,2.3nm,0.5s,baz=18,slow=7.1,SNR=31						
	comp=Z,2.3nm,0.5s						
NOA	NORSAR Array B	66.91	1	P	P	17 46 22.5	+0.8
	comp=Z,0.6nm,0.8s,baz=0.0,slow=6.1,SNR=2.8						
	comp=Z,0.6nm,0.8s						
AKTO	Aktyubinsk	70.59	331	LR	LR	18 20 04.5	
	comp=Z,19nm,19.3s,baz=343,slow=38						
AKASG	Malin Array Be	76.32	349	P	P	17 47 18.5	0.0
	comp=Z,0.4nm,0.4s,baz=15,slow=5.5,SNR=4.2						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	76.32	349	IAmb	IAmb	17 48 04.3	
	comp=Z,2.6nm,1.3s						
ESDC	Sonseca Array	87.17	13	P	P	17 48 16.4	+0.5
	comp=Z,0.5nm,0.7s,baz=352,slow=7.2,SNR=2.6						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	87.99	233	P	P	17 48 20.3	+0.5
	comp=Z,1.0nm,1.0s,baz=45,slow=6.9,SNR=4.2						
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	91.36	232	P	P	17 48 36.1	+0.5
	comp=Z,0.7nm,0.9s,baz=18,slow=6.2,SNR=3.4						
	comp=Z,0.7nm,0.9s						
RPN	Rapa Nui	93.97	131	LR	LR	18 21 53.4	
	comp=Z,356nm,18.9s,baz=204,slow=30						

*GCG **09** 18:46:12.4±0.5, 12°.81N×90°.47W, h7^{km}±5^{km}, MD3.9*
*UCR **09** 18:46:13.2±1.6, 12°.93N×90°.53W, h28^{km}, ML3.8, mb4.4(NEIC)*
*SNET **09** 18:46:13.0±1.7, 12°.92N×90°.53W, h28^{km}, ML3.8*
*IDC **09** 18:46:14.5±9.8, 13°.82N×89°.74W, h0^{km}, mb3.7/5, mbtmp3.7/6, ML2.9/1, MS3.1/1, Error ellipse: s-maj=198.9km s-min=43.7km az=0.0*
ISC 09 18:46:08.9±2.0, **12°.77N**±0°.08×**90°.55W**±0°.06, **h9**^{km}±11^{km}, **n36,** σ**1§14**/47, **mb3.9**/4, **2C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	1.35	33	*e*P	Pg	18 46 34.3	-0.6
NUBE				*e*S	Sb	18 46 50.0	-2.0
NUBE				IAML		18 46 53.6	
	comp=Z,724nm,0.6s						
NUBE	Las Nubes	1.35	33	*e*P	Pg	18 46 34.3	-0.6
NUBE				*e*S	Sb	18 46 50.0	-2.0
NUBE				IAML		18 46 53.6	
	comp=Z,724nm,0.6s						
CEVE	Cerro Verde	1.39	40	*e*P	Pb	18 46 35.0	-0.1
CEVE				*e*S	Sb	18 46 51.8	-1.2
CEVE				IAML		18 46 56.0	
	comp=Z,4µm,0.5s						
CEVE	Cerro Verde	1.39	40	*e*P	Pb	18 46 35.0	-0.1
CEVE				*e*S	Sb	18 46 51.8	-1.2
CEVE				IAML		18 46 56.0	
	comp=Z,4µm,0.5s						
JAYA	Jayaque - finc	1.39	50	*e*P	Pn	18 46 34.3	-0.2
JAYA				IAML		18 46 54.1	
	comp=Z,2µm,0.7s						
JAYA	Jayaque - finc	1.39	50	*e*P	Pn	18 46 34.3	-0.2
JAYA				IAML		18 46 54.1	
	comp=Z,2µm,0.7s						
SBLS	San Blas	1.39	40	*e*P	Pb	18 46 35.1	-0.2
SBLS	San Blas	1.39	40	*e*P	Pb	18 46 35.1	-0.2
SNJE	San Jose	1.43	40	*e*P	Pb	18 46 35.6	-0.2
SNJE	San Jose	1.43	40	*e*P	Pb	18 46 35.6	-0.2
SLOZ	Alcaldia de Sa	1.46	31	*e*P	Pg	18 46 36.1	-0.7
SLOZ				*e*S	Sb	18 46 53.4	-1.5
SLOZ				IAML		18 46 59.5	
	comp=Z,1µm,0.5s						
BOQS	Boqueron	1.56	52	*e*P	Pn	18 46 37.7	+0.6
BOQS	Boqueron	1.56	52	*e*P	Pn	18 46 37.7	+0.6
PCG	Pacaya	1.62	358	*e*P	Pg	18 46 41.0	+1.1
PCG				*e*S	Sg	18 47 03.6	+2.6
LFRS	El Faro	1.68	59	⇑*i*P	Pn	18 46 38.7	+0.2
LFRS	El Faro	1.68	59	⇑*i*P	Pn	18 46 38.7	+0.2
FUG	Fuego 3	1.70	350	*e*P	Pg	18 46 41.9	+0.4
FUG				*e*S	Sg	18 47 05.2	+1.7
NBG	Las Nubes	1.82	6	*e*P	Pg	18 46 44.3	+0.4
NBG				*e*S	Sg	18 47 08.5	+1.0
MTO3	Montecristo	1.99	35	*e*P	Pn	18 46 44.0	+1.0
MTO3				*e*S	Sn	18 47 08.4	+0.3
MTO3	Montecristo	1.99	35	*e*P	Pn	18 46 44.0	+1.0
MTO3				*e*S	Sn	18 47 08.4	+0.3
SCLA	Alcaldia de Sa	2.00	62	*e*P	Pn	18 46 44.2	+1.3
SCLA				*e*S	Sn	18 47 08.9	+0.8
SCLA	Alcaldia de Sa	2.00	62	*e*P	Pn	18 46 44.2	+1.3
SCLA				*e*S	Sn	18 47 08.9	+0.8
ESQI	Esquipulas	2.13	33	*e*P	Pb	18 46 46.8	-1.0
STG3	Santiaguito 3,	2.17	333	*e*P	Pg	18 46 49.3	-1.3
STG3				*e*S	Sg	18 47 18.0	-0.8
PACA	Pacayal	2.27	72	*e*P	Pb	18 46 49.4	-0.8
PACA				IAML		18 47 23.9	
	comp=Z,4µm,0.4s						
PACA	Pacayal	2.27	72	*e*P	Pb	18 46 49.4	-0.8
PACA				IAML		18 47 23.9	
	comp=Z,4µm,0.4s						
MRL	Marmol	2.45	20	*e*P	Pb	18 46 52.2	-1.1
LCND	La Caada	2.64	78	*e*P	Pn	18 46 52.2	+0.4
LCND				*e*S	Sn	18 47 25.9	+2.0
LCND	La Caada	2.64	78	*e*P	Pn	18 46 52.2	+0.4
LCND				*e*S	Sn	18 47 25.9	+2.0
CMIG	Matias Romero	6.00	316	Pn	Pn	18 47 43.9	+5.9
	comp=Z,0.3nm,0.3s,baz=60,slow=15,SNR=2.2						
	comp=Z,1.6nm,0.4s						
TXAR	Lajitas Array	20.50	326	P	Pn	18 50 49.1	-0.5
	comp=Z,0.8nm,0.7s,baz=141,slow=12,SNR=7.4						
	comp=Z,0.8nm,0.7s						
TKL	Tuckaleechee C	23.60	14	LR	LR	19 00 24.9	
	comp=Z,49nm,21.4s,baz=201,slow=38						
NVAR	Mina Array Bea	35.51	321	P	P	18 53 12.1	+5.7
	comp=Z,1.4nm,0.7s,baz=133,slow=8.2,SNR=13						
	comp=Z,1.4nm,0.7s						
SCHQ	Schefferville	45.90	19	P	P	18 54 29.5	-2.2
	comp=Z,2.4nm,0.6s,baz=220,slow=9.0,SNR=5.3						
	comp=Z,2.4nm,0.6s						
YKA	Yellowknife Ar	52.55	346	P	P	18 55 22.8	+0.4
	comp=Z,0.5nm,0.4s,baz=145,slow=7.6,SNR=5.8						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	64.52	337	P	P	18 56 47.4	+1.5
	comp=Z,0.5nm,0.8s,baz=116,slow=2.1,SNR=4.4						
	comp=Z,0.5nm,0.8s						

*IDC **09** 18:48:38.7±0.8, 17°.76N×94°.69W, h102^{km}±22^{km}, mb3.6/5, mbtmp4.0/5, MS3.2/2, Error ellipse: s-maj=46.9km s-min=24.6km az=38.0*
*NEIC **09** 18:48:38.5±1.9, 17°.43N±0°.06×95°.10W±0°.06, h125^{km}±6^{km}, Error ellipse: s-maj=9.2km s-min=7.8km az=170.0*
*MEX **09** 18:48:40.4±2.0, 17°.54N×95°.13W, h124^{km}±17^{km}, MD4.4*
ISC 09 18:48:38.7±0.7, **17°.46N**±0°.04×**95°.15W**±0°.03, **h132**^{km}±6^{km}, **n115,** σ**1§41**/165, **mb4.4**/18, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.45	145	P	Pn	18 48 57.2	-0.5
	770nm,0.3s,baz=316,slow=3.2,SNR=1472						
CMIG				S	Sn	18 49 10.7	-1.5
	1µm,0.3s,baz=54,slow=22,SNR=19						
CMIG	Matias Romero	0.45	145		Pn	18 48 57.4	-0.3
CMIG					Sn	18 49 10.8	-1.4
CMIG	Matias Romero	0.45	145	*e*P	Pn	18 48 57.4	-0.3
CMIG				*e*S	Sn	18 49 10.8	-1.4
NEUV	Arroyo Zacate	0.67	292	*e*P	Pn	18 48 57.8	-1.2
NEUV				*i* S	Sn	18 49 12.4	-2.0
TUIG	Tuzandepetl	0.90	51		Pn	18 49 00.2	-0.6
TUIG					Sn	18 49 16.3	-1.4
TUIG	Tuzandepetl	0.90	51	*e*P	Pn	18 49 00.2	-0.6
TUIG				*e*S	Sn	18 49 16.3	-1.4
UXUV	UXUV	0.97	98	*e*P	Pn	18 49 01.3	-0.2
UXUV				*e*S	Sn	18 49 17.0	-1.8
OXBJ	Oaxaca	1.55	256		Pn	18 49 08.2	+0.5
OXBJ					Sn	18 49 30.3	+0.5
OXBJ	Oaxaca	1.55	256	*e*P	Pn	18 49 08.2	+0.5
OXBJ				*e*S	Sn	18 49 30.3	+0.5
VHO	Vista Hermosa	1.56	256	*e*P	Pn	18 49 08.3	+0.5
VHO				*e*S	Sn	18 49 30.7	+0.7
CARR	Arriaga	1.69	135	*i* P	Pn	18 49 09.5	+0.4
CARR				*e*S	Sn	18 49 32.0	-0.4
HUIG	Huatulco	1.92	209		Pn	18 49 10.6	-1.2
HUIG					Sn	18 49 35.9	-1.3
HUIG	Huatulco	1.92	209	*e*P	Pn	18 49 10.6	-1.2
HUIG				*e*S	Sn	18 49 35.9	-1.3
TOIG	Toxpalan	1.93	289	*e*P	Pn	18 49 12.2	+0.3
TOIG				*e*P		18 49 12.2	
TOIG				*e*S	Sn	18 49 36.3	-1.2
TOIG				*e*S		18 49 36.3	
TGIG		2.06	109		Pn	18 49 13.7	+0.2
TGIG					Sn	18 49 38.8	-1.4
TGIG		2.06	109	*e*P	Pn	18 49 13.7	+0.2
TGIG				*e*S	Sn	18 49 38.8	-1.4
PANG	Puerto Angel	2.19	216		Pn	18 49 14.2	-0.9
PANG					Sn	18 49 42.2	-0.8
PANG	Puerto Angel	2.19	216	*i* P	Pn	18 49 14.2	-0.9
PANG				*i* S	Sn	18 49 42.2	-0.8
OZST	Orizaba	2.31	307	*i* P	Pn	18 49 15.3	-1.4
OZST				*i* S	Sn	18 49 43.8	-2.1
YOIG	Yosondua	2.37	256	*e*P	Pn	18 49 17.2	-0.4
YOIG				*e*S	Sn	18 49 47.9	+0.5
PEIG	Puerto Escondi	2.40	233	*e*P	Pn	18 49 16.2	-1.5
PEIG				*e*S	Sn	18 49 47.6	-0.2
TXIG	Tlaxiaco	2.50	266	*e*P	Pn	18 49 19.4	+0.1
TXIG				*e*S	Sn	18 49 50.5	0.0
PCIG		2.55	133		Pn	18 49 20.2	+0.6
PCIG					Sn	18 49 47.9	-3.2
PCIG		2.55	133	*e*P	Pn	18 49 20.1	+0.6
PCIG				*e*P		18 49 20.2	
PCIG				*e*S	Sn	18 49 47.3	-3.8
PCIG				*i* S		18 49 47.9	
HLIG	Huajuapan de L	2.55	279	*e*P	Pn	18 49 20.1	+0.2
HLIG				*e*S	Sn	18 49 49.8	-1.7
FTIG	Fresnillo de T	2.87	279	*e*P	Pn	18 49 24.3	+0.5
FTIG				*i* S	Sn	18 49 57.0	-1.7
PNIG	Pinotepa	3.04	250		Pn	18 49 24.1	-1.8
PNIG					Sn	18 50 00.4	-1.9
PNIG	Pinotepa	3.04	250	*e*P	Pn	18 49 24.1	-1.8
PNIG				*e*S	Sn	18 50 00.4	-1.9
CCIG	Comitan	3.12	112		Pn	18 49 27.4	+0.4
CCIG					Sn	18 50 03.8	-0.6
CCIG	Comitan	3.12	112	*e*P	Pn	18 49 27.4	+0.4
CCIG				*e*S	Sn	18 50 03.8	-0.6
TLIG	Tlapa	3.26	272		Pn	18 49 28.9	+0.1
TLIG					Sn	18 50 05.2	-2.4
TLIG	Tlapa	3.26	272	*e*P	Pn	18 49 28.9	+0.1
TLIG				*e*S	Sn	18 50 05.2	-2.4
MGIG	Malinaltepec	3.33	267	*e*P	Pn	18 49 29.7	-0.2
MGIG				*e*S	Sn	18 50 07.5	-1.9
PAVE	Pavencul	3.64	128	*e*P	Pn	18 49 34.8	+0.8
PAVE				*i* S	Sn	18 50 13.8	-2.9
PATR	El Naranjo	3.65	129	*e*P	Pn	18 49 35.5	+1.5
PATR				*i* S	Sn	18 50 18.9	+1.9
CHUJ	Union Juarez	3.75	128	*i* P	Pn	18 49 36.5	+1.0
CHUJ				*e*P	Pn	18 49 36.5	+1.0
CHUJ				*i* S	Sn	18 50 20.9	+1.5
CRIG	Cruz Grande	3.87	260		Pn	18 49 35.1	-1.7
CRIG					Sn	18 50 19.4	-2.4
CRIG	Cruz Grande	3.87	260	*e*P	Pn	18 49 35.1	-1.7
CRIG				*e*S	Sn	18 50 19.4	-2.4
YAIG	Yautepec	3.97	291		Pn	18 49 39.4	+1.1
YAIG					Sn	18 50 22.4	-2.0
YAIG	Yautepec	3.97	291	*e*P	Pn	18 49 39.4	+1.1
YAIG				*e*S	Sn	18 50 22.4	-2.0
HUEH	Huehuetenango	4.10	121	Pn	Pn	18 49 40.3	+0.3
PLIG	Platanillo	4.24	283		Pn	18 49 42.2	+0.4
PLIG					Sn	18 50 26.5	-4.2
PLIG	Platanillo	4.24	283	*e*P	Pn	18 49 42.2	+0.4
PLIG				*e*S	Sn	18 50 26.5	-4.2
DAIG	Los Arroyos	4.32	265		Pn	18 49 41.6	-1.1
DAIG					Sn	18 50 30.3	-2.2
DAIG	Los Arroyos	4.32	265	*e*P	Pn	18 49 41.6	-1.1
DAIG				*i* S	Sn	18 50 30.3	-2.2
CAIG	El Cayaco	4.90	266		Pn	18 49 49.4	-1.1
CAIG					Sn	18 50 43.0	-3.4
CAIG	El Cayaco	4.90	266	*e*P	Pn	18 49 49.4	-1.1
CAIG				*e*S	Sn	18 50 43.0	-3.4
ARIG	Puente Sto Nin	5.01	280		Pn	18 49 53.2	+1.2
ARIG					Sn	18 50 45.8	-3.3
ARIG	Puente Sto Nin	5.01	280	*e*P	Pn	18 49 53.2	+1.2
ARIG				*e*P		18 49 53.2	
ARIG				*e*S	Sn	18 50 45.8	-3.3
ARIG				*e*S		18 50 45.8	
PETF	Flores	5.08	95	Pn	Pn	18 49 51.8	-1.2
ZIIG	Zihuatanejo	6.02	272		Pn	18 50 05.7	+0.2
ZIIG					Sn	18 51 14.1	+0.8
ZIIG	Zihuatanejo	6.02	272	*e*P	Pn	18 50 05.7	+0.2
ZIIG				*e*S	Sn	18 51 14.1	+0.8
MTO3	Montecristo	6.35	118	Pn	Pn	18 50 08.6	-1.5
MMIG	Aquila	7.84	277		Pn	18 50 31.0	+1.0
MMIG					Sn	18 51 57.3	0.0
MMIG	Aquila	7.84	277	*e*P	Pn	18 50 31.0	+1.0
MMIG				*e*S	Sn	18 51 57.3	0.0
HZTE	Horizontes, Gu	11.44	125	Pn	Pn	18 51 19.9	+1.7
ORTG	Ortega, Santa	11.76	126		Pn	18 51 23.8	+1.3
DUNO	Dulce Nombre,	11.91	127		Pn	18 51 25.6	+1.2
JTS	Las Juntas de	12.20	124		Pn	18 51 28.9	+0.7
RIMA	Rio Macho	13.37	123		Pn	18 51 44.6	+1.1
SRBA	San Rafael, Bu	14.09	124	Pn	Pn	18 51 53.2	+0.6
DRK0	Durika	14.16	124	Pn	Pn	18 51 53.1	-0.5
MIAR	Mount Ida	17.07	4	P	Pn	18 52 28.9	-0.4
UALR	University of	17.42	8	P	Pn	18 52 33.4	-0.2
UALR				IAmb	IAmb	18 52 34.9	
	comp=Z,11nm,0.7s						
W41B	Gary Mavity, V	17.83	8	P	Pn	18 52 38.2	-0.2
WHAR	Wooly Hollow	17.94	8	P	Pn	18 52 39.2	-0.4
PLAL	Pickwick Lake	18.56	19	P	Pn	18 52 45.7	-1.3
U40A	Yellville	18.93	6	P	P	18 52 49.8	+0.5
U40A				IAmb	IAmb	18 52 50.6	
	comp=Z,15nm,0.7s						
T35A	Sooner Cattle	19.42	357	P	P	18 52 54.3	-0.3
T35A				IAmb	IAmb	18 52 55.3	
	comp=Z,15nm,0.8s						
PBMO	Poplar Bluff	19.69	11	P	P	18 52 57.0	-0.4
PBMO				IAmb	IAmb	18 53 01.4	
	comp=Z,13nm,0.6s						
WVT	Waverly	19.70	18	P	P	18 52 56.7	-0.9
MGMO	Mountain Grove	19.78	7	P	P	18 52 58.8	+0.2
MGMO				IAmb	IAmb	18 53 02.2	
	comp=Z,6.1nm,0.5s						
S39A	Bolivar	20.22	4	P	P	18 53 03.5	+0.3
V51A	Loudon	20.63	26	P	P	18 53 07.4	-0.3
T47A	Sharon Grove	20.71	18	P	Pn	18 53 10.0	-2.2
T47A				IAmb	IAmb	18 53 11.0	
	comp=Z,15nm,0.7s						
U49A	Red Boiling Sp	20.71	22	P	P	18 53 06.1	-2.4
U49A				IAmb	IAmb	18 53 10.6	
	comp=Z,8.4nm,0.4s						
TKL	Tuckaleechee C	20.75	27	P	P	18 53 06.7	-2.3
	comp=Z,2.7nm,0.6s,baz=192,slow=11,SNR=6.3						
	comp=Z,2.7nm,0.6s						
TKL	Tuckaleechee C	20.75	27	P	P	18 53 08.7	-0.3
CCM	Cathedral Cave	20.80	9	P	P	18 53 08.2	-1.2
CCM				IAmb	IAmb	18 53 09.7	
	comp=Z,8.5nm,0.7s						
S44A	Carbondale	20.81	13	P	P	18 53 08.7	-0.8
S44A				IAmb	IAmb	18 53 12.3	
	comp=Z,11nm,0.8s						
SIUC	Southern Illin	20.84	13	P	P	18 53 10.7	+0.9
SIUC				IAmb	IAmb	18 53 12.5	
	comp=Z,14nm,0.7s						
R40A	Maddies Statio	20.91	6	P	P	18 53 10.7	+0.2
KMSC	Kings Mountain	21.49	32	P	P	18 53 15.4	-1.5
KMSC				IAmb	IAmb	18 53 16.6	
	comp=Z,11nm,0.8s						
T50A	Nancy	21.50	23	P	P	18 53 15.8	-1.2
Q44A	Meyer Farm, Va	22.02	13	P	P	18 53 21.2	-1.2
Q44A				IAmb	IAmb	18 53 22.2	
	comp=Z,21nm,0.9s						
OLIL	Olney	22.07	15	P	P	18 53 22.4	-0.5
W57A	Gilead	22.20	35	P	P	18 53 22.6	-1.6
W57A				IAmb	IAmb	18 53 25.1	
	comp=Z,12nm,1.1s						
U54A	Nelsons Funny	22.35	29	P	P	18 53 24.1	-1.8
U54A				IAmb	IAmb	18 53 25.6	
	comp=Z,9.9nm,0.6s						
S51A	Beattyville	22.52	25	P	P	18 53 26.7	-0.7
P43A	Skaggs, Pawnee	22.64	11	P	P	18 53 27.7	-0.7
P46A	Rosedale	23.13	16	P	P	18 53 32.8	-0.3
P46A				IAmb	IAmb	18 53 34.6	
	comp=Z,13nm,0.9s						
V58A	Windy Hill, Pi	23.16	35	P	P	18 53 32.6	-0.8
N38A	Joes South For	23.31	4	P	P	18 53 34.6	-0.2
N38A				IAmb	IAmb	18 53 35.9	
	comp=Z,12nm,0.6s						
O44A	Mansfield	23.34	13	P	P	18 53 33.8	-1.3
HDIL	Hopedale	23.56	11	P	P	18 53 36.9	-0.2
HDIL				IAmb	IAmb	18 53 37.1	
	comp=Z,16nm,0.9s						
SFIN	Lafayette	23.88	15	P	P	18 53 39.9	0.0
SFIN				IAmb	IAmb	18 53 40.7	
	comp=Z,10.0nm,0.7s						
T57A	Hurt	23.99	33	P	P	18 53 41.5	+0.5
T57A				IAmb	IAmb	18 53 42.2	
	comp=Z,11nm,0.8s						
Q52A	Bidwell	24.19	25	P	P	18 53 42.1	-0.7
Q52A				IAmb	IAmb	18 53 43.3	
	comp=Z,15nm,0.8s						
SCIA	State Center	24.42	4	P	P	18 53 45.0	+0.2
O49A	Covington	24.51	20	P	P	18 53 45.1	-0.6
R55A	Marlinton	24.57	29	P	P	18 53 45.8	-0.5
R55A				IAmb	IAmb	18 53 47.2	
	comp=Z,10nm,0.6s						
M44A	Midewin, Midew	24.62	13	P	P	18 53 46.4	-0.3
N47A	Urbana	24.72	17	P	P	18 53 47.2	-0.4

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L40A  Anamosa           24.75   7 P      P      18 53 48.0 +0.2
L40A                              IAmb   IAmb   18 53 49.0
      comp=Z,9.6nm,0.8s
P53A  Whipple           25.00  26 P      P      18 53 49.2 -0.9
P53A                              IAmb   IAmb   18 53 51.3
      comp=Z,8.7nm,0.6s
K38A  Parkersburg       25.18   4 P      P      18 53 51.4 -0.4
SDV   Santo Domingo     25.33 107 P      P      18 53 53.4 -0.2
      comp=Z,5.2nm,0.7s,baz=313,slow=6.1,SNR=7.5
      comp=Z,5.2nm,0.7s
SDV   Santo Domingo     25.33 107 P      P      18 53 53.7 +0.1
O52A  Adamsville        25.35  24 P      P      18 53 52.9 -0.5
O52A                              IAmb   IAmb   18 53 53.8
      comp=Z,9.3nm,0.8s
NVAR  Mina Array Bea    29.08 321 P      P      18 54 30.1 +3.1
      comp=Z,0.8nm,0.6s,baz=128,slow=9.8,SNR=5.5
      comp=Z,0.8nm,0.6s
SCHQ  Schefferville     43.16  24 P      P      18 56 24.5 -1.5
      comp=Z,2.9nm,0.5s,baz=236,slow=6.0,SNR=5.8
      comp=Z,2.9nm,0.5s
YKA   Yellowknife Ar    47.00 348 P      P      18 56 58.3 +2.1
      comp=Z,0.3nm,0.4s,baz=155,slow=8.1,SNR=2.5
      comp=Z,0.3nm,0.4s
FRB   Frobisher Bay     49.71  15 LR     LR     19 18 41.1
      comp=Z,22nm,21.4s,baz=249,slow=37
BCPM  Bancas Point      53.10 334 P      P      18 57 42.7 +0.5
JMIC  Jan Mayen         72.54  20 LR     LR     19 32 28.3
      comp=Z,15nm,19.2s,baz=110,slow=36
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*NEIC **09** 19:12:27.8±2.0, 35.°62S±0.°09×178.°1E±0.°1, h274^{km}±2^{km}, mb4.3/27, Error ellipse: s-maj=16.7km s-min=12.1km az=59.0*

*NOU **09** 19:12:29.0, 36.°05S×178.°05E, h286^{km}, mb4.5/40, Off E. Coast of N. Island, N.Z.*

*WEL **09** 19:12:30.3±0.8, 36°S±6°×17°8E±°, h268^{km}±8^{km}, M4.5/20, MLv4.5/20, Error ellipse: s-maj=0.0km s-min=0.0km az=98.3*

*IDC **09** 19:12:33.4±3.2, 35.°54S×178.°05E, h331^{km}±29^{km}, mb3.9/13, mbtmp4.6/14, Error ellipse: s-maj=23.5km s-min=12.7km az=62.0*

ISC 09 19:12:28.8±0.7**, 35.°86S**±0.°06×**177.°96E**±0.°06**, h285**^{km}±6^{km}**, n177, σ1.^{s}75**/199**, mb4.3**/41**, Off east coast of North Island**

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Code  Station Name      Δ°    AZ°  Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
MXZ   Matakaoa Point     1.72 171 Pn     Pn     19 13 10.7 -1.3
MXZ   Matakaoa Point     1.72 171 P      Pn     19 13 10.8 -1.2
MXZ                               S      S      19 13 43.4 -3.0
HAZ   Te Kaha            1.90 184 P      Pn     19 13 12.8 -0.5
HAZ                               S      S      19 13 46.0 -2.7
WMGZ  Waiomatatini S     1.99 169 P      Pn     19 13 13.4 -0.7
WMGZ                              S      S      19 13 47.7 -2.4
KUZ   Kuaotunu           2.01 243 P      Pn     19 13 14.1 -0.2
PKGZ  Pakihiroa          2.02 177 P      Pn     19 13 13.8 -0.7
PKGZ                              S      S      19 13 47.5 -3.3
GRZ   Great Barrier      2.06 258 P      Pn     19 13 14.1 -0.6
RUGZ  Raukumara Rang     2.11 186 P      Pn     19 13 14.1 -1.2
RUGZ                              S      S      19 13 49.6 -2.6
PUZ   Puketiti           2.22 174 P      Pn     19 13 15.3 -0.8
PUZ                               S      S      19 13 50.3 -3.5
TWGZ  Tauwhareparae      2.31 180 P      Pn     19 13 16.1 -0.8
TWGZ                              S      S      19 13 53.6 -1.6
URZ   Urewera            2.49 196 P      Pn     19 13 18.1 -0.3
      221nm,0.4s,baz=119,slow=24,SNR=328
URZ                               S      S      19 13 55.9 -2.0
      126nm,0.2s,baz=140,slow=10,SNR=4.2
URZ   Urewera            2.49 196 P      Pn     19 13 18.0 -0.4
URZ                               S      S      19 13 55.5 -2.5
URZ   Urewera            2.49 196 P      Pn     19 13 18.2 -0.3
MWZ   Matawai            2.49 188 P      Pn     19 13 18.2 -0.4
MWZ                               S      S      19 13 56.1 -2.1
MKAZ  Moumakai           2.57 240 P      Pn     19 13 19.9 +0.7
TKGZ  Te Karaka          2.58 182 P      Pn     19 13 18.7 -0.6
TKGZ                              S      S      19 13 56.9 -2.6
CNGZ  Carnagh Statio     2.62 176 P      Pn     19 13 19.9 +0.1
CNGZ                              S      S      19 14 00.0 -0.3
TOZ   Tahuroa Road       2.71 226 P      Pn     19 13 21.4 +0.8
RIGZ  Rimuhau            2.84 183 P      Pn     19 13 21.2 -0.7
RIGZ                              P      S      19 14 01.5 -2.8
SNGZ  Shannon Statio     2.96 189 P      Pn     19 13 22.1 -1.0
SNGZ                              S      S      19 14 05.7 -0.6
PRGZ  Paritu Road        3.06 181 P      Pn     19 13 24.8 +0.8
PRGZ                              P      S      19 14 04.6 -3.5
RAHZ  Arahi              3.13 193 P      Pn     19 13 24.4 -0.4
RAHZ                              S      S      19 14 07.4 -2.1
TLZ   Tolley Road        3.13 217 P      Pn     19 13 26.6 +1.8
KNZ   Kokohu             3.16 184 P      Pn     19 13 24.4 -0.7
KNZ                               P      S      19 14 07.4 -2.6
BKZ   Black Stump Fm     3.50 199        Pn     19 13 27.7 -1.0
BKZ   Black Stump Fm     3.50 199 P      Pn     19 13 28.2 -0.5
OUZ   Omahuta            3.61 279        Pn     19 13 29.3 -0.7
OUZ   Omahuta            3.61 279 P      Pn     19 13 29.6 -0.4
HIZ   Hauiti             3.62 222        Pn     19 13 31.9 +1.8
HIZ   Hauiti             3.62 222 P      Pn     19 13 31.3 +1.3
MCHZ  McNeill Hill       3.71 195 P      Pn     19 13 30.7 -0.2
MCHZ                              S      S      19 14 21.3 +0.6
KWHZ  Kaweka Forest      3.76 198 P      Pn     19 13 31.0 -0.5
KWHZ                              P      S      19 14 21.8 +0.1
CKHZ  Cape Kidnapper     3.85 190 P      Pn     19 13 31.9 -0.6
CKHZ                              P      S      19 14 21.8 -1.6
PXZ   Pawanui            4.25 191 P      Pn     19 13 36.0 -1.0
PXZ                               P      S      19 14 27.8 -3.7
TSZ   Takapari Road      4.48 200 P      Pn     19 13 38.2 -1.4
TSZ                               P      S      19 14 34.0 -2.3
BFZ   Birch Farm         5.00 195        Pn     19 13 44.4 -1.2
BFZ   Birch Farm         5.00 195 P      Pn     19 13 44.3 -1.3
MSWZ  Moikau Station     5.94 200 Pn     Pn     19 13 54.2 -2.6
SNZO  South Karori       6.01 204 Pn     Pn     19 13 55.1 -2.5
SNZO  South Karori       6.01 204 P      Pn     19 13 55.5 -2.1
BHW   Baring Head        6.04 203 Pn     Pn     19 13 55.3 -2.7
PLWZ  Palliser           6.08 200 Pn     Pn     19 13 56.4 -2.2
TUWZ  Tuamarina          6.38 208 Pn     Pn     19 13 59.4 -2.9
NNZ   Nelson             6.44 212 Pn     Pn     19 14 00.2 -2.7
QRZ   Quartz Range       6.54 219 Pn     Pn     19 14 01.9 -2.2
QRZ   Quartz Range       6.54 219 P      Pn     19 14 02.2 -1.9
CMWZ  Cape Campbell      6.56 205 Pn     Pn     19 14 04.0 -0.4
BSWZ  Blackbirch Sta     6.66 207 Pn     Pn     19 14 04.5 -1.1
THZ   Tophouse           7.09 212 Pn     Pn     19 14 09.4 -1.5
KHZ   Kahutara           7.39 206 Pn     Pn     19 14 12.1 -2.4
KHZ   Kahutara           7.39 206 P      Pn     19 14 12.8 -1.7
LTZ   Lake Taylor        8.19 211 Pn     Pn     19 14 21.9 -2.6
OXZ   Oxford             8.74 210 Pn     Pn     19 14 28.2 -3.1
MQZ   McQueen's Vall     8.83 206 Pn     Pn     19 14 29.6 -2.8
RPZ   Rata Peaks         9.47 212 P      Pn     19 14 38.0 -2.2
      22nm,0.3s,baz=31,slow=2.4,SNR=20
RPZ                               S      S      19 16 19.0 -8.4
      34nm,0.5s,baz=126,slow=19,SNR=11
RPZ   Rata Peaks         9.47 212 Pn     Pn     19 14 37.4 -2.9
RPZ   Rata Peaks         9.47 212 P      Pn     19 14 38.1 -2.2
FOZ   Fox Glacier        9.90 217 Pn     Pn     19 14 42.5 -3.0
LBZ   Lake Benmore      10.38 213 Pn     Pn     19 14 48.4 -3.2
ODZ   Otahua Downs      10.73 209 Pn     Pn     19 14 53.5 -2.3
ODZ   Otahua Downs      10.73 209 P      Pn     19 14 54.4 -1.4
WKZ   Wanaka            11.25 215 Pn     Pn     19 14 58.2 -4.1
MLZ   Mavora Lakes      12.07 215        Pn     19 15 10.5 -1.9
WHZ   Wether Hill Ro    12.55 214 Pn     Pn     19 15 15.8 -2.3
LHI   Lord Howe Isla    16.31 280 P      Pn     19 16 03.8 +0.8
DZM   Mont Dzumac       17.02 321 P      P      19 16 09.4 +0.6
      3.7nm,0.7s,baz=141,slow=14,SNR=6.7
ARMA  Armidale          22.67 276 P      P      19 17 07.5 +1.3
GLAD  Gladstone         23.95 249 P      P      19 17 16.2 -1.3
      24nm,1.1s
RMQ   Roma              26.59 282 P      P      19 17 42.9 +1.5
CMSA  Cobar Meteorol    27.12 270 P      P      19 17 48.1 +2.1
      29nm,0.8s
QLP   Quilpie           30.16 278 P      P      19 18 13.9 +1.0
STKA  Stephens Creek    30.34 267 P      P      19 18 16.1 +1.6
      6.9nm,0.8s,baz=110,slow=12,SNR=7.0
      6.9nm,0.8s
STKA  Stephens Creek    30.34 267 IAmb   IAmb   19 18 17.5
      comp=Z,1.7nm,0.9s
STKA  Stephens Creek    30.34 267 P      P      19 18 16.6 +2.2
CTA   Charters Tower    31.93 291 P      P      19 18 29.8 +1.4
      comp=Z,13nm,0.8s,baz=125,slow=9.9,SNR=25
      comp=Z,13nm,0.8s
CTA   Charters Tower    31.93 291 P      P      19 18 29.8 +1.4
CTAO  Charters Tower    31.93 291 P      P      19 18 28.7 +0.3
CTAO                              IAmb   IAmb   19 18 30.7
      comp=Z,16nm,0.9s
CTAO  Charters Tower    31.93 291 P      P      19 18 29.9 +1.5
HTT   Hallett           32.06 263 P      P      19 18 31.3 +1.8
      comp=Z,30nm,2.2s
INKA  Innaminka         32.49 274 P      P      19 18 33.3 +0.1
LCRK  Leigh Creek       33.54 268 P      P      19 18 42.6 +0.4
BBOO  Buckleboo         34.54 263 P      P      19 18 50.9 +0.1
BBOO  Buckleboo         34.54 263 P      P      19 18 51.3 +0.5
MTSU  Mount Surprise    34.56 292 P      P      19 18 51.8 +0.7
      comp=Z,7.8nm,0.7s
OOD   Oodnadatta        36.58 271 P      P      19 19 09.2 +1.2
      comp=Z,29nm,1.5s
QIS   Mount Isa         36.82 284 P      P      19 19 11.3 +1.1
MULG  Mulgathing        36.97 266 P      P      19 19 11.9 +0.6
      comp=Z,22nm,2.7s
COEN  Coen              38.05 296 P      P      19 19 18.4 -2.1
COEN                              IAmb   IAmb   19 19 21.9
      comp=Z,14nm,0.8s
COEN  Coen              38.05 296 P      P      19 19 20.4  0.0
      comp=Z,25nm,0.8s
AS31  Alice Springs     39.82 275 P      P      19 19 35.6 +0.6
ASAR  Alice Springs     39.82 275 P      P      19 19 35.5 +0.4
      comp=Z,8.5nm,0.8s,baz=115,slow=7.5,SNR=136
ASAR                              PcP    PcP    19 21 34.0 -0.9
      comp=Z,0.5nm,0.5s,baz=120,slow=4.4,SNR=1.5
ASAR                              ScP    ScP    19 24 53.3 -2.8
      comp=Z,0.4nm,0.9s,baz=121,slow=4.4,SNR=2.2
ASAR                              S      S      19 25 21.2 +3.5
      comp=Z,0.2nm,0.6s,baz=116,slow=15,SNR=1.6
      comp=Z,8.5nm,0.8s
ASAR  Alice Springs     39.82 275 P      P      19 19 35.0  0.0
WR0   Warramunga Arr    41.15 281 P      P      19 19 45.9  0.0
WR0                               IAmb   IAmb   19 19 46.7
      comp=Z,13nm,1.1s
WB2   Warramunga Arr    41.31 281 P      P      19 19 47.2  0.0
WRAB  Tennant Creek     41.32 281 P      P      19 19 47.7 +0.4
WRA   Warramunga Arr    41.32 281 P      P      19 19 47.3  0.0
      comp=Z,12nm,0.5s,baz=119,slow=7.7,SNR=248
WRA                               PcP    PcP    19 21 38.4 -1.5
      comp=Z,0.5nm,0.5s,baz=106,slow=3.0,SNR=2.7
      comp=Z,12nm,0.5s
WRA   Warramunga Arr    41.32 281 P      P      19 19 46.2 -1.1
WB0   Warramunga Arr    41.37 281 P      P      19 19 47.5 -0.2
WB0                               IAmb   IAmb   19 19 48.5
      comp=Z,13nm,0.8s
FORT  Forrest           41.64 262 P      P      19 19 50.1 +0.4
VNDA  Vanda             42.35 185 P      P      19 19 58.7 +4.0
      comp=Z,3.5nm,0.7s,baz=3.6,slow=8.4,SNR=25
      comp=Z,3.5nm,0.7s
VNDA  Vanda             42.35 185 P      P      19 19 58.4 +3.6
SBA   Scott Base        42.37 184 P      P      19 20 00.0 +5.1
SBA                               IAmb   IAmb   19 20 01.1
      comp=Z,13nm,0.8s
WRKA  Warakurna         43.74 270 P      P      19 20 05.9 -0.7
MTN   Manton Dam        47.86 286 P      P      19 20 37.9 -0.8
MTN                               IAmb   IAmb   19 20 51.3
      comp=Z,26nm,1.2s
KNRA  Kununurra         48.09 282 P      P      19 20 40.3 -0.1
KNRA                              IAmb   IAmb   19 20 41.0
      comp=Z,11nm,0.9s
KNRA  Kununurra         48.09 282 P      P      19 20 41.9 +1.5
CASY  Casey             48.73 210 P      P      19 20 45.3 +0.7
FITZ  Fitzroy Crossi    49.28 277 P      P      19 20 48.9 -0.4
FITZ                              IAmb   IAmb   19 20 59.0
      comp=Z,20nm,1.5s
NWAO  Narrogin (SRO)    49.49 255 P      P      19 20 50.6 -0.2
NWAO                              IAmb   IAmb   19 20 55.5
      comp=Z,34nm,1.4s
NWAO  Narrogin (SRO)    49.49 255 P      P      19 20 49.9 -0.9
KLBR  Kellerberrin      49.57 257 P      P      19 20 51.6 +0.2
      comp=Z,26nm,0.8s
MUN   Mundaring         50.64 256 P      P      19 21 00.1 +0.7
MEEK  Meekatharra       50.89 263 P      P      19 21 01.1 -0.3
      comp=Z,20nm,1.8s
MORW  Morawa            51.93 259 P      P      19 21 08.1 -0.8
MORW                              IAmb   IAmb   19 21 29.5
      comp=Z,10nm,1.2s
MORW  Morawa            51.93 259 P      P      19 21 08.7 -0.3
      comp=Z,21nm,2.7s
PSA00 Pilbara Seismi    52.22 269 P      P      19 21 10.0 -1.2
PSA00 Pilbara Seismi    52.22 269 P      P      19 21 12.4 +1.2
      comp=Z,25nm,2.0s
MBWA  Marble Bar        52.52 270 P      P      19 21 12.9 -0.5
MBWA  Marble Bar        52.52 270 P      P      19 21 14.3 +0.9
QSPA  South Pole Qui    54.26 180 P      P      19 21 28.9 +3.4
      comp=Z,26nm,0.6s,baz=51,slow=6.1,SNR=3.8
      comp=Z,26nm,0.6s
QSPA  South Pole Qui    54.26 180 P      P      19 21 29.0 +3.5
SWI   Sorong            55.54 298 P      P      19 21 35.2 +0.1
      comp=Z,11nm,1.0s
WAKE  Wake Island       55.88 347 P      P      19 21 35.7 -1.6
MMRI  Maumere           57.36 284 P      P      19 21 49.8 +1.9
      comp=Z,20nm,1.1s
EDFI  Ende, Flores      57.72 284 P      P      19 21 51.6 +1.0
      comp=Z,2.8nm,0.8s
SANI  Sanana            58.61 293 P      P      19 21 56.1 -0.4
      comp=Z,13nm,1.0s
MPSI  Mapaga            64.77 290 P      P      19 22 38.2 +0.8
      comp=Z,6.8nm,1.5s
BELA  Belgrano 2        64.83 173 P      P      19 22 38.6 +1.7
BELA                              IAmb   IAmb   19 22 39.0
      comp=Z,3.8nm,0.6s
SMAI  San Martin Ant    65.64 158 P      P      19 22 45.2 +3.0
SMAI                              IAmb   IAmb   19 22 46.1
      comp=Z,7.4nm,0.9s
MAW   Mawson            66.00 202 P      P      19 22 45.8 +1.3
      comp=Z,2.2nm,0.5s,baz=124,slow=7.3,SNR=1.2
      comp=Z,2.2nm,0.5s
TROLL Troll, Antarti    72.38 181 P      P      19 23 23.1 -0.5
SNAA  Sanae             72.76 180 P      P      19 23 26.9 +1.1
SNAA  Sanae             72.76 180 P      P      19 23 26.8 +1.1
SNAA                              IAmb   IAmb   19 23 28.0
      comp=Z,17nm,1.2s
VNA3  Neumayer Olymp    73.06 177 P      P      19 23 28.1 +0.7
VNA1  Neumayer--Stat    73.70 178 P      P      19 23 31.9 +0.9
MJAR  Matsushiro Arr    80.95 329 P      P      19 24 09.6 -2.0
      comp=Z,2.5nm,0.8s,baz=144,slow=6.1,SNR=7.0
      comp=Z,2.5nm,0.8s
MJAR  Matsushiro Arr    80.95 329 IAmb   IAmb   19 24 11.5
      comp=Z,4.4nm,1.3s
PLCA  Paso Flores       81.20 134 P      P      19 24 13.8 +0.7
      comp=Z,1.3nm,0.6s,baz=227,slow=2.9,SNR=5.2
      comp=Z,1.3nm,0.6s
PLCA  Paso Flores       81.20 134 IAmb   IAmb   19 24 24.8
      comp=Z,6.2nm,1.4s
KSRS  Korea Array       86.44 322 P      P      19 24 39.9 +0.8
      comp=Z,5.1nm,0.7s,baz=140,slow=5.6,SNR=26
      comp=Z,5.1nm,0.7s
USRK  Ussuriysk Ar.     89.95 329 P      P      19 24 55.6 +0.1
      comp=Z,3.3nm,0.7s,baz=87,slow=13,SNR=4.8
      comp=Z,3.3nm,0.7s
PETK  Petropavlovsk-    90.34 348 P      P      19 24 56.0 -1.1
      comp=Z,2.6nm,0.9s,baz=133,slow=5.3,SNR=5.4
      comp=Z,2.6nm,0.9s
CMAR  Chiang Mai Arr    92.10 291 P      P      19 25 06.8 +0.8
      comp=Z,0.6nm,0.5s,baz=141,slow=3.5,SNR=6.9
      comp=Z,0.6nm,0.5s
PZH   PanZhiHua         94.90 299 P      P      19 25 20.6 +1.7
PZH                               pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                               pmax   pmax
      comp=Z,100nm,4.8s
CD2   Chengdu           96.20 304 P      P      19 25 24.7 +0.1
CD2                               LR     LR
      comp=N,30nm,12.1s
CD2                               LR     LR
      comp=E,170nm,12.6s
CD2                               LR     LR
      comp=Z,130nm,9.7s
HHC   Hu-ho-hao-te      97.66 315 eP     P      19 25 30.9 -0.1
HHC                               pmax   pmax
      comp=Z,29nm,0.8s
HHC                               pmax   pmax
      comp=Z,130nm,4.3s
MKAR  Makanchi Array   118.61 309 PKP    PKPdf  19 30 40.5 -1.9
      comp=Z,0.7nm,0.5s,baz=139,slow=1.0,SNR=14
ZALV  Zalesovo Beam    119.78 317 PKP    PKPdf  19 30 42.0 -2.3
      comp=Z,0.5nm,0.3s,baz=145,slow=4.5,SNR=2.6
KSH   Kashi            120.01 299 PKP    PKPdf  19 30 44.4 -1.1
SPA0  Spitsbergen Ar   136.85 355 ePKPdf PKPdf  19 31 16.2  0.0
ARA0  ARCESS Array S   143.06 344 ePKPdf PKPab  19 31 24.6 +0.8
ARCES ARCESS Array B   143.06 344 PKhKP  PKPpre 19 31 23.5
      comp=Z,1.3nm,0.4s,baz=37,slow=3.6,SNR=2.7
ARCES                             PKP    PKPab  19 31 24.1 +0.3
      comp=Z,1.3nm,0.4s,baz=36,slow=3.4,SNR=35
KTK1  Kautokeino       143.97 345 ePKPdf PKPab  19 31 26.6 -0.8
JETT  Jettan, Norway   144.08 347 ePKPdf PKPbc  19 31 28.8 +0.5
TRO   Tromso           144.28 348 ePKPbc PKPab  19 31 27.7 -0.8
STEI  Steigen          146.42 348 ePKPdf PKPdf  19 31 33.8 +0.4
FAUS  Fauske           146.91 348 ePKPdf PKPdf  19 31 34.9 +0.6
KONS  Konsvik          148.07 349 ePKPbc PKPbc  19 31 38.5 -1.2
STOK  Stokkvaagen      148.24 349 ePKPdf PKPdf  19 31 35.7 -0.7
FINES FINESS Array B   148.84 334 PKPbc  PKPbc  19 31 40.3 -1.5
      comp=Z,7.4nm,0.6s,baz=44,slow=3.4,SNR=80
NSS   Namsos           150.08 348 ePKPbc PKPbc  19 31 43.7 -1.0
LIC   Lamto            150.38 174 ePKIKP PKiKP  19 31 47.5 -0.2
      comp=Z,20nm,0.6s
KIC   Kosan Boka       150.53 175 ePKIKP PKPbc  19 31 47.2 -0.2
      comp=Z,9.7nm,0.3s
TIC   Toumodi          150.79 174 ePKIKP PKPbc  19 31 48.0  0.0
DBIC  Dimbokro         150.83 174 PKPbc  PKiKP  19 31 48.1 -0.5
      comp=Z,9.9nm,0.5s,baz=211,slow=0.9,SNR=28
BRTR  Keskin Array B   151.66 289 PKPbc  PKPbc  19 31 48.5 -0.9
      comp=Z,0.8nm,0.4s,baz=128,slow=2.9,SNR=6.6
AKN   Aaknes           153.06 351 ePKPdf PKPdf  19 31 44.2 +0.2
AKASG Malin Array Be   153.08 313 PKPbc  PKPbc  19 31 50.0 -1.9
      comp=Z,1.8nm,0.5s,baz=50,slow=3.5,SNR=15
AKASG                             PKPab  PKPab  19 32 03.7 -1.1
      comp=Z,0.2nm,0.3s,baz=41,slow=4.7,SNR=5.7
AKASG Malin Array Be   153.08 313        PKPbc  19 31 50.5 -1.5
NB2   NORSAR Subarra153.42 346   PKPdf  PKPbc  19 31 50.1 -2.4
      comp=Z,0.4nm,0.5s,baz=2.9,slow=1.8
NOA   NORSAR Array B 153.42 346   PKPbc  PKPbc  19 31 50.8 -1.7
      comp=Z,0.9nm,0.8s,baz=30,slow=2.1,SNR=4.6
NOA                               PKPab  PKPab  19 32 04.0 -2.0
      comp=Z,0.8nm,0.6s,baz=24,slow=3.3,SNR=4.9
FOO   Floro            153.85 352 ePKPdf PKPdf  19 31 46.9 +1.8
SUE   Sulen            154.41 352 ePKPdf PKPdf  19 31 46.6 +0.7
BER   Bergen           155.00 351 ePKPdf PKPdf  19 31 47.8 +1.0
KMY   Karmoy           156.15 351 ePKPdf PKPdf  19 31 49.6 +1.4
TORD  Torodi Ar. Bea   157.13 189 PKPab  PKPab  19 32 23.1 +0.1
      comp=Z,4.8nm,0.5s,baz=169,slow=3.7,SNR=26
GERES GERESS Array B   162.62 323 PKPab  PKPab  19 32 44.6 -1.7
      comp=Z,1.4nm,0.7s,baz=52,slow=5.2,SNR=14
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*IDC **09** 19:41:17.8±1.1, 32.°32N×130.°46E, h0^{km}, mb3.4/3, mbtmp3.4/6, ML2.8/3, MS3.3/11, Error ellipse: s-maj=24.1km s-min=9.5km az=109.0*

*JMA **09** 19:41:17.4±0.1, 32.°3N±0.°2×130.°4E±0.°2, h8^{km}±1^{km}, MV3.8/20, AMAKUSA REGION*

JMA Felt II J1 at AMAKUSA REGION .

*NIED **09** 19:41:17.4, 32.°30N×130.°43E, h8^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.03; $M_{\theta\theta}$0.69; $M_{\phi\phi}$-0.72; $M_{r\theta}$-0.61; $M_{\theta\phi}$0.50; $M_{\phi r}$-0.21; Fault plane solution: $M_0$1.05000×10^{15} NP1: ϕ_s301.00000°, δ69.00000°, λ20.00000°. NP2: ϕ_s204.00000°, δ71.00000°, λ158.00000°.*

ISC 09 19:41:18.9±1.6**, 32.°30N**±0.°04×**130.°47E**±0.°09**, h2**^{km}±13^{km}**, n19, σ1.^{s}58**/15**, mb3.5**/3**, MS3.3**/9**, 2D, Kyushu**

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Code  Station Name      Δ°    AZ°  Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
JZO   Okuchi             0.19 145 P      Pg     19 41 21.8 -0.8
JZO                               S      Sg     19 41 25.1  0.0
JIU3  Izumi3             0.38  49 ⇓P     Pg     19 41 25.1 -1.2
JIU3                             ⇓eS     Sg     19 41 31.8 +0.5
JTA   Tamana             0.67   4 i P    Pg     19 41 30.4 -1.3
JNU   Nakatsue           0.89  23 Pg     Pg     19 41 34.4 -1.7
      114nm,0.3s,baz=204,slow=1.8,SNR=766
JNU                               Lg     Lg     19 41 47.3
      488nm,0.3s,baz=180,slow=20,SNR=27
KSRS  Korea Array        5.55 339 Pn     Pn     19 42 40.6 -2.0
      0.2nm,0.3s,baz=155,slow=14,SNR=4.3
KSRS                              Pg     Pb     19 42 59.9 +3.3
      0.6nm,0.3s,baz=155,slow=17,SNR=8.4
KSRS                              Sn     Sn     19 43 46.5 -0.5
      0.4nm,0.3s,baz=152,slow=29,SNR=5.1
KSRS                              LR     LR     19 44 09.6
      comp=Z,24nm,20.6s,baz=160,slow=31
KSRS                              Lg     Lg     19 44 11.5
      0.7nm,0.3s,baz=157,slow=31,SNR=4.9
      0.6nm,0.4s
JOW   Kunigami           5.77 200 Pn     Pn     19 42 46.3 +0.7
      0.6nm,0.3s,baz=61,slow=13,SNR=1.8
      5.8nm,0.6s
MJAR  Matsushiro Arr     7.67  54 Pn     Pn     19 43 11.7  0.0
      0.1nm,0.3s,baz=244,slow=14,SNR=7.9
MJAR                              Lg     Lg     19 45 24.7
      baz=129,slow=8.9,SNR=1.7
MJAR                              LR     LR     19 46 36.2
      comp=Z,174nm,18.4s,baz=227,slow=42
      2.1nm,0.5s
KLR   Kul'dur           16.94   3 Pn     P      19 45 20.6 +1.6
      0.2nm,0.3s,baz=169,slow=8.0,SNR=17
KLR                               LR     LR     19 51 20.8
      comp=Z,36nm,18.1s,baz=182,slow=36
SONM  Songino Array     23.95 317 LR     LR     19 56 13.2
      comp=Z,61nm,18.9s,baz=104,slow=37
CMAR  Chiang Mai Arr    31.51 252 P      P      19 47 42.0 -0.5
      0.4nm,0.7s,baz=51,slow=7.3,SNR=2.4
CMAR                              LR     LR     20 01 15.0
      comp=Z,30nm,19.1s,baz=55,slow=38
      0.4nm,0.7s
SIJI  Sorong            33.00 179 LR     LR     20 01 05.5
      comp=Z,23nm,18.6s,baz=101,slow=36
ZALV  Zalesovo Beam     38.84 318 LR     LR     20 05 47.4
      comp=Z,50nm,18.1s,baz=78,slow=38
AAK   Ala-Archa         44.88 300 LR     LR     20 07 32.7
      comp=Z,32nm,18.6s,baz=74,slow=35
WRA   Warramunga Arr    52.08 175 P      P      19 50 29.5 -0.8
      0.2nm,0.5s,baz=355,slow=7.9,SNR=1.9
      0.2nm,0.5s
PALK  Pallekele         52.45 253 LR     LR     20 14 49.9
      comp=Z,29nm,18.8s,baz=206,slow=38
ASAR  Alice Springs     55.75 176 P      P      19 50 55.9 -1.3
      0.2nm,0.4s,baz=349,slow=4.4,SNR=6.5
      0.2nm,0.4s
BELG  Belogornoye       61.00 316 LR     LR     20 19 42.2
      comp=Z,58nm,18.6s,baz=126,slow=38
KVAR  Kislovodsk Arr    66.95 308 LR     LR     20 24 35.2
      comp=Z,46nm,21.1s,baz=65,slow=39
FINES FINESS Array B    68.58 330 LR     LR     20 24 00.7
      comp=Z,25nm,18.6s,baz=43,slow=37
```

IDC 09 19:53:38.4±2.4**, 7.°22S**×**128.°08E, h0**^{km}**, mb3.6**/1**, mbtmp3.6**/3**, ML3.8**/2**, Error ellipse: s-maj=281.2km s-min=31.3km az=65.0, Banda Sea**

```
Code  Station Name      Δ°    AZ°  Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
MTN   Manton Dam         6.35 152 P      Pn     19 55 18.3 +5.0
KDU   Kakadu             6.95 142 P      Pn     19 55 25.7 +4.2
KNRA  Kununurra          8.43 175 P      Pn     19 55 48.1 +6.2
WRA   Warramunga Arr    14.03 155 Pn     Pn     19 56 57.7 -0.9
      0.5nm,0.3s,baz=332,slow=14,SNR=11
WRA                               Sn     Sn     19 59 22.0  -13
      1.3nm,0.3s,baz=325,slow=25,SNR=10
      0.4nm,0.3s
COEN  Coen              16.28 116 P      P      19 57 32.0 +0.2
      12nm,1.3s
ASAR  Alice Springs     17.28 162 P      Pn     19 57 42.0 +0.7
      0.2nm,0.3s,baz=341,slow=11,SNR=17
ASAR                              S      Sn     20 00 42.1  -12
      1.1nm,0.6s,baz=343,slow=26,SNR=8.2
      0.9nm,0.6s
QIS   Mount Isa         17.33 141 P      P      19 57 43.8 +0.3
WRKA  Warakurna         17.72 179 P      P      19 57 48.7 +1.0
MORW  Morawa            24.52 206 P      P      19 59 01.2 +1.5
MKAR  Makanchi Array    67.38 328 P      P      20 04 35.6  0.0
      0.3nm,0.5s,baz=127,slow=6.6,SNR=6.8
      0.3nm,0.5s
```

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*IDC **09** 20:01:43.1±2.3, 9.°20S×119.°00E, h0^{km}, mb3.6/3, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=207.0km s-min=27.7km az=52.0*

*DJA **09** 20:01:47.9±0.4, 9°S±4°×11°9E±°, h10^{km}±4^{km}, M4.1/18, mb4.2/5, mB4.9/2, MLv4.0/18, Mw(mB)4.2/2*

ISC 09 20:01:46.6±0.9**, 9.°23S**±0.°07×**119.°20E**±0.°05**, h10**^{km}**, n20, σ1.^{s}38**/21**, Sumba region**

```
Code  Station Name      Δ°    AZ°  Phase ID          Time      Res
                                   Op     ISC      h  m  s     ISC
WBSI  Waikabubak, Su     0.45 155 P      Pb     20 01 58.2 +1.5
WBSI                              S      Sb     20 02 04.0 +0.4
PLAI  Plampang           1.46 286 P      Pn     20 02 13.2 +0.2
EDFI  Ende, Flores       2.51  79 P      Pn     20 02 27.1 -0.4
MMRI  Maumere            3.06  79 P      Pn     20 02 35.8 +0.7
BSSI  Bau Bau, Buton     3.32  23 P      Pn     20 02 40.0 +1.4
DNP   Denpasar           3.98 278 P      Pn     20 02 49.5 +1.9
```

BKSI	Bulukumba	3.99	13	P	Pn	20 02 49.8	+2.0
IGBI	Denpasar	4.02	275	P	Pn	20 02 49.6	+1.3
SRBI	Singaraja	4.10	286	P	Pn	20 02 50.0	+0.7
BATI	Baumata	4.51	103	P	Pn	20 02 56.9	+1.9
BNSI	Bone	4.88	11	P	Pn	20 03 01.5	+1.4
BBSI	Bau Bau	5.00	42	P	Pn	20 03 03.2	+1.5
	0.0nm1.8nm,0.9s						
JAGI	Jajag, Banyuwa	5.04	278	P	Pn	20 03 02.9	+0.6
ABJI	Asem Bagus	5.11	286	P	Pn	20 03 04.3	+1.1
	0.2nm33nm,0.4s						
GMJI	Gumukmas	5.76	279	P	Pn	20 03 13.0	+0.8
	0.2nm22nm,0.6s						
TTSI	Tana Toraja	6.17	6	P	Pn	20 03 18.9	+1.1
WRA	Warramunga Arr	18.10	128	P	Pn	20 05 57.7	-0.6
	0.1nm,0.3s,baz=300,slow=13,SNR=2.2						
WRA				S	Sn	20 09 05.3	-15
	0.2nm,0.4s,baz=302,slow=17,SNR=1.9						
	0.5nm,0.7s						
ASAR	Alice Springs	20.10	137	P	P	20 06 20.1	-0.6
	0.6nm,0.5s,baz=311,slow=9.9,SNR=10						
ASAR				S	S	20 09 55.3	-11
	0.3nm,0.7s,baz=307,slow=22,SNR=1.3						
	0.6nm,0.5s						
STKA	Stephens Creek	30.66	141	P	P	20 08 01.2	-0.2
	2.2nm,0.7s,baz=335,slow=9.4,SNR=3.7						
	2.2nm,0.7s						
MKAR	Makanchi Array	64.75	333	P	P	20 12 22.4	-2.8
	0.2nm,0.7s,baz=137,slow=5.3,SNR=1.7						
	0.2nm,0.7s						

*IDC **09** 20:06:01.9±1.3, 32°.29N×130°.47E, h0^{km}, mb3.5/3, mbtmp3.4/5, ML2.6/2, MS3.1/4, Error ellipse: s-maj=25.8km s-min=10.9km az=106.0*

*JMA **09** 20:06:02.6±0.0, 32°.3N±0°.1×130°.4E±0°.1, h7^{km}±1^{km}, MV3.4/20, AMAKUSA REGION*

JMA Felt III J1 at AMAKUSA REGION .

ISC 09 20:06:03.3±0.7, **32°.25N**±0°.03×**130°.43E**±0°.03, **h11**^{km}, **n18, σ1^{s}.37**/21, **mb3.5**/3, **MS3.3**/3, **5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZO	Okuchi	0.18	127	P	Pg	20 06 07.0	-0.3
JZO				S	Sg	20 06 10.3	+0.2
JHD	Hondo	0.33	311	i P	Pg	20 06 08.8	-1.1
JHD				S	Sg	20 06 13.6	-0.8
JIU3	Izumi3	0.44	47	⇓iP	Pg	20 06 10.2	-1.9
JTZ	Takazaki	0.66	121	i P	Pg	20 06 16.0	-0.1
JTA	Tamana	0.72	7	i P	Pg	20 06 15.6	-1.7
JSU	Suzuyama	0.74	178	i P	Pb	20 06 17.7	-0.6
JSJ	Shimokoshiki	0.83	227	⇓iP	Pg	20 06 18.4	-1.0
JSJ				⇓S	Sb	20 06 30.2	-0.8
JTSN	Tsuno	0.91	90	⇓iP	Pg	20 06 20.1	-0.8
JTSN				⇓S	Sg	20 06 31.9	-0.9
JNU	Nakatsue	0.95	23	Pg	Pg	20 06 19.4	-2.3
	114nm,0.3s,baz=191,slow=10,SNR=198						
JNU				Lg	Lg	20 06 31.4	
	176nm,0.3s,baz=146,slow=3.6,SNR=19						
KSRS	Korea Array	5.59	339	Pn	Pn	20 07 25.8	-0.6
	0.2nm,0.3s,baz=155,slow=14,SNR=3.0						
KSRS				Pg	Pb	20 07 44.7	+3.8
	0.4nm,0.3s,baz=154,slow=16,SNR=6.8						
KSRS				Sn	Sn	20 08 30.2	-0.3
	0.3nm,0.3s,baz=154,slow=23,SNR=1.3						
KSRS				Lg	Lg	20 08 56.9	
	0.6nm,0.3s,baz=158,slow=29,SNR=6.8						
	0.8nm,0.5s						
MJAR	Matsushiro Arr	7.72	54	Pn	Pn	20 07 55.8	0.0
	0.1nm,0.3s,baz=245,slow=14,SNR=5.5						
MJAR				LR	LR	20 11 21.4	
	comp=Z,106nm,18.8s,baz=228,slow=42						
	1.8nm,0.6s						
KLR	Kul'dur	17.00	3	Pn	P	20 10 03.2	+0.4
	0.1nm,0.3s,baz=179,slow=5.2,SNR=7.7						
CMAR	Chiang Mai Arr	31.46	252	LR	LR	20 24 57.9	
	comp=Z,24nm,20.2s,baz=85,slow=36						
WRA	Warramunga Arr	52.03	175	P	P	20 15 13.7	+0.7
	0.4nm,0.7s,baz=353,slow=7.8,SNR=1.6						
	0.4nm,0.7s						
ASAR	Alice Springs	55.70	176	P	P	20 15 39.3	-0.6
	0.3nm,0.8s,baz=359,slow=6.0,SNR=1.6						
	0.3nm,0.8s						
GNI	Garni	67.05	304	LR	LR	20 49 44.8	
	comp=Z,21nm,18.6s,baz=94,slow=39						
FINES	FINESS Array B	68.61	330	P	P	20 17 06.7	+0.7
	1.2nm,1.0s,baz=64,slow=6.3,SNR=4.0						
	1.2nm,1.0s						
HFS	Hagfors	74.40	332	LR	LR	20 54 51.3	
	comp=Z,16nm,19.8s,baz=288,slow=39						

*IDC **09** 20:13:34.3±3.7, 61°.17N×152°.23W, h78^{km}±38^{km}, mb3.1/1, mbtmp3.4/5, ML3.3/4, MS2.4/3, Error ellipse: s-maj=88.6km s-min=13.2km az=105.0*

*ANF **09** 20:13:36.5±0.1, 61°.08N×151°.34W, h77^{km}±4^{km}, ML3.7/65, ML3.7/66, Error ellipse: s-maj=1.9km s-min=1.4km az=133.0*

*NEIC **09** 20:13:36.8±1.6, 61°.14N±0°.02×151°.39W±0°.05, h72^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=1.9km az=62.0*

*AEIC **09** 20:13:37±1.4, 61°.13N±0°.02×151°.34W±0°.05, h67^{km}±5^{km}, ML3.3, ML3.5/152(NEIC), Error ellipse: s-maj=3.9km s-min=2.1km az=58.0*

ISC 09 20:13:36.9±0.9, **61°.11N**±0°.02×**151°.34W**±0°.02, **h77**^{km}±6^{km}, **n272, σ0^{s}.87**/272, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPN	Captain Cook N	0.35	165		Pn	20 13 50.0	+0.9
CAPN	Captain Cook N	0.35	165	IAML		20 13 56.8	
	comp=E,539nm,0.3s						
CAPN				IAML		20 13 57.5	
	comp=N,615nm,0.5s						
CAPN	Captain Cook N	0.35	165	P	Pn	20 13 50.0	+0.9
	baz=346,SNR=8.5						
SPU	Mount Spurr	0.35	282		Pn	20 13 48.2	-1.0
SPCG	Spurr Capps Gl	0.38	300		Pn	20 13 48.5	-1.0
SPCG					Sn	20 13 57.3	-1.5
CKN	Chakachatna No	0.42	286		Pn	20 13 49.1	-0.7
CKT	Bend	0.43	283		Pn	20 13 48.9	-0.9
SPCR	Spurr Chakacha	0.43	283		Pn	20 13 48.8	-1.0
SPCR					Sn	20 13 57.8	-1.6
SPCR	Spurr Chakacha	0.43	283	P	Pn	20 13 48.8	-1.0
	baz=99,SNR=198						
SPCR				S	Sn	20 13 57.9	-1.4
	baz=99						
STLK	Strandline Lak	0.46	329		Pn	20 13 49.2	-0.8
SPBG	Spurr Blockage	0.52	287		Pn	20 13 49.8	-0.8
SPBG					Sn	20 13 59.7	-1.1
FIS	Fire Island	0.55	86		Pn	20 13 51.1	+0.5
FIS	Fire Island	0.55	86	IAML		20 14 02.9	
	comp=E,2µm,0.4s						
FIS				IAML		20 14 05.6	
	comp=N,2µm,0.3s						
SPWE	Spurr West	0.61	286		Pn	20 13 51.0	-0.5
RC01	Rabbit Creek A	0.78	91		Pn	20 13 52.7	-0.4
RC01					Sn	20 14 05.2	0.0
RC01	Rabbit Creek A	0.78	91	IAML		20 14 06.1	
	comp=N,2µm,0.6s						
RC01				IAML		20 14 07.3	
	comp=E,1µm,0.4s						
RC01	Rabbit Creek A	0.78	91	P	Pn	20 13 52.8	-0.4
	baz=274,SNR=166						
RC01				S	Sn	20 14 05.2	0.0
	baz=274						
SLKM	Skilak Lake	0.81	137		Pn	20 13 53.1	-0.5
SLKM					Sn	20 14 06.1	+0.1
DFR	Drift River	0.84	232		Pn	20 13 53.4	-0.5
M22K	Willow	0.87	42		Pn	20 13 54.2	0.0
M22K					Sn	20 14 07.4	+0.3
M22K	Willow	0.87	42	P	Pn	20 13 54.2	0.0
	baz=224,SNR=142						
M22K				S	Sn	20 14 07.8	+0.8
	baz=224						
RDJH	Redoubt Jeurge	0.89	235		Pn	20 13 54.0	-0.5
RSO	Redoubt South	0.95	228		Pn	20 13 54.7	-0.6
NCT	North Crescent	0.95	236		Pn	20 13 54.9	-0.3
NCT					Sn	20 14 09.4	+0.5
RDWB	Redoubt West	0.96	230		Pn	20 13 55.1	-0.3
RED	Redoubt Volcan	0.99	226		Pn	20 13 55.3	-0.3
RED					Sn	20 14 10.0	+0.3
O22K	Cooper Landing	1.01	128		Pn	20 13 55.9	0.0
O22K					Sn	20 14 10.2	+0.2
O22K	Cooper Landing	1.01	128	P	Pn	20 13 55.7	-0.1
	baz=310,SNR=86						
M20K	Styx River	1.16	313		Pn	20 13 57.4	-0.4
M20K					Sn	20 14 12.6	-0.8
M20K	Styx River	1.16	313	P	Pn	20 13 57.4	-0.4
	baz=130,SNR=132						
M20K				S	Sn	20 14 12.4	-1.0
	baz=130						
PMR	Palmer	1.17	65		Pn	20 13 57.4	-0.3
PMR					Sn	20 14 13.3	-0.1
PMR	Palmer	1.17	65	IAML		20 14 15.5	
	comp=E,932nm,0.3s						
PMR				IAML		20 14 16.4	
	comp=N,1µm,0.4s						
PMR	Palmer	1.17	65	P	Pn	20 13 57.4	-0.3
	baz=247,SNR=77						
PMR				S	Sn	20 14 13.4	-0.1
	baz=247						
O20K	Slope Mountain	1.21	212		Pn	20 13 58.7	+0.3
O20K					Sn	20 14 16.1	+1.7
O20K	Slope Mountain	1.21	212	P	Pn	20 13 58.7	+0.3
	baz=30,SNR=19						
GHO	Glory Hole Cre	1.34	59		Pn	20 13 59.9	-0.1
GHO					Sn	20 14 17.5	+0.1
GHO	Glory Hole Cre	1.34	59	IAML		20 14 21.6	
	comp=N,978nm,0.3s						
BRLK	Bradley Lake	1.37	170		Pn	20 14 00.5	+0.1
BRLK					Sn	20 14 18.3	+0.3
BRLK	Bradley Lake	1.37	170	IAML		20 14 22.7	
	comp=N,920nm,0.3s						
BRLK				IAML		20 14 22.8	
	comp=E,898nm,0.3s						
SEW	Seward	1.37	136		Pn	20 13 59.8	-0.5
SEW	Seward	1.37	136	P	Pn	20 13 58.9	-1.4
	baz=319,SNR=74						
CUT	Chulitna	1.40	21		Pn	20 14 00.5	-0.1
CUT	Chulitna	1.40	21	P	Pn	20 14 00.6	-0.1
	baz=202,SNR=11						
CUT				S	Sn	20 14 18.8	+0.2
	baz=202						
BRSE	Bradley Lake S	1.40	168		Pn	20 14 00.7	-0.1
BRSE	Bradley Lake S	1.40	168	P	Pn	20 14 00.7	-0.1
	baz=348,SNR=33						
KNK	Knik Glacier	1.43	76		Pn	20 14 00.9	-0.1
KNK	Knik Glacier	1.43	76	IAML		20 14 24.9	
	comp=N,976nm,0.4s						
KNK				IAML		20 14 26.2	
	comp=E,1µm,0.6s						
KNK	Knik Glacier	1.43	76	P	Pn	20 14 00.9	-0.1
	baz=260,SNR=185						
HOM	Homer	1.46	186		Pn	20 14 02.4	+0.8
HOM	Homer	1.46	186	IAML		20 14 26.1	
	comp=N,1µm,0.5s						
HOM	Homer	1.46	186	P	Pn	20 14 01.8	+0.3
	baz=5.9						
N19K	Bonanza Creek	1.56	260		Pn	20 14 02.3	-0.6
N19K					Sn	20 14 21.7	-0.9
N19K	Bonanza Creek	1.56	260	IAML		20 14 22.7	
	comp=N,444nm,0.6s						
N19K				IAML		20 14 23.9	
	comp=E,377nm,0.5s						
N19K	Bonanza Creek	1.56	260	P	Pn	20 14 02.3	-0.6
	baz=77,SNR=73						
N19K				S	Sn	20 14 21.6	-1.0
	baz=77						
CNPM	China Poot	1.59	178		Pn	20 14 03.4	+0.1
CNPM					Sn	20 14 24.3	+1.1
CNPM	China Poot	1.59	178	IAML		20 14 26.5	
	comp=E,819nm,0.4s						
CNPM				IAML		20 14 27.9	
	comp=N,767nm,0.4s						
SML	Sawmill	1.61	63		Pn	20 14 03.1	-0.3
SML	Sawmill	1.61	63	IAML		20 14 26.6	
	comp=E,406nm,0.8s						
SML				IAML		20 14 28.3	
	comp=N,463nm,0.4s						
SML	Sawmill	1.61	63	P	Pn	20 14 03.2	-0.3
	baz=246,SNR=152						
SML				S	Sn	20 14 23.5	-0.1
	baz=246						
M19K	Big River Lodg	1.67	300		Pn	20 14 04.0	-0.2
M19K	Big River Lodg	1.67	300	IAML		20 14 25.5	
	comp=N,491nm,0.7s						
M19K	Big River Lodg	1.67	300	P	Pn	20 14 04.0	-0.2
	baz=117						
M19K				S	Sn	20 14 24.7	-0.3
	baz=117						
O19K	Port Alsworth	1.73	239		Pn	20 14 04.2	-0.8
O19K	Port Alsworth	1.73	239	IAML		20 14 27.3	
	comp=E,826nm,0.4s						
O19K	Port Alsworth	1.73	239	P	Pn	20 14 04.2	-0.8
	baz=56						
OPT	Oil Point	1.74	214		Pn	20 14 05.8	+0.7
P19K	Oil Pt	1.74	214		Pn	20 14 05.8	+0.6
P19K					Sn	20 14 28.1	+1.4
P19K	Oil Pt	1.74	214	P	Pn	20 14 05.8	+0.6
	baz=32,SNR=25						
L20K	Farewell, AK	1.83	320		Pn	20 14 05.9	-0.5
L20K	Farewell, AK	1.83	320	P	Pn	20 14 05.9	-0.5
	baz=137,SNR=36						
PPLA	Purkeypile	1.84	348		Pn	20 14 06.3	-0.4
PPLA					Sn	20 14 29.7	+0.5
PPLA	Purkeypile	1.84	348	P	Pn	20 14 06.3	-0.4
	baz=167,SNR=20						
M23K	Glacier View	1.87	67	P	Pn	20 14 06.5	-0.4
	baz=251,SNR=17						
M23K				S	Sn	20 14 29.3	-0.4
	baz=251						
L19K	White Mountain	1.99	304		Pn	20 14 08.6	0.0
L19K					Sn	20 14 32.3	-0.4
L19K	White Mountain	1.99	304	IAML		20 14 33.7	
	comp=N,289nm,0.6s						
L19K				IAML		20 14 33.9	
	comp=E,353nm,0.7s						
L19K	White Mountain	1.99	304	P	Pn	20 14 08.5	0.0
	baz=121,SNR=118						
L19K				S	Sn	20 14 32.8	0.0
	baz=121						
AU22	Augustine Moun	2.01	211		Pn	20 14 09.3	+0.5
AU22					Sn	20 14 34.4	+1.3
AU2	Augustine Isla	2.02	211		Pn	20 14 09.6	+0.7
AUL	Augustine Lava	2.02	212		Pn	20 14 09.8	+0.8
AUH	Augustine H	2.04	212		Pn	20 14 10.3	+1.0
AUQ	Augustine Qik’	2.04	211		Pn	20 14 10.3	+1.1
SCM	Sheep Creek Mo	2.06	68		Pn	20 14 09.1	-0.4
SCM	Sheep Creek Mo	2.06	68	IAML		20 14 40.8	
	comp=N,480nm,0.8s						
SCM	Sheep Creek Mo	2.06	68	P	Pn	20 14 09.1	-0.4
	baz=252,SNR=82						
SCM				S	Sn	20 14 34.1	-0.3
	baz=252						
SVW2	Sparrevohn	2.06	272		Pn	20 14 08.6	-0.8
SVW2	Sparrevohn	2.06	272	IAML		20 14 33.6	
	comp=N,201nm,0.3s						
GLI	Glacier Island	2.08	94		Pn	20 14 08.1	-1.7
GLI	Glacier Island	2.08	94	IAML		20 14 41.6	
	comp=N,430nm,0.8s						
GLI				IAML		20 14 43.7	
	comp=E,432nm,0.3s						
GLI	Glacier Island	2.08	94	P	Pn	20 14 08.0	-1.7
	baz=279,SNR=23						
GLI				S	Sn	20 14 33.7	-1.1
	baz=279						
WAT1	Susitna Watana	2.17	36		Pn	20 14 11.0	0.0
WAT1	Susitna Watana	2.17	36	P	Pn	20 14 10.9	0.0
	baz=219						
WAT1				S	Sn	20 14 37.0	0.0
	baz=219						
WAT6	Susitna Watana	2.26	48		Pn	20 14 12.0	-0.2
WAT6	Susitna Watana	2.26	48	P	Pn	20 14 12.0	-0.2
	baz=231,SNR=55						
WAT6				S	Sn	20 14 38.5	-0.7
	baz=231						
N18K	Kilae Creek	2.27	261		Pn	20 14 11.2	-1.0
N18K	Kilae Creek	2.27	261	IAML		20 14 38.8	
	comp=N,166nm,0.8s						
N18K	Kilae Creek	2.27	261	P	Pn	20 14 11.4	-0.8
	baz=76,SNR=72						
N18K				S	Sn	20 14 37.6	-1.6
	baz=76						
O18K	Koktuh Hills	2.29	238		Pn	20 14 11.7	-0.8
O18K	Koktuh Hills	2.29	238	P	Pn	20 14 11.8	-0.8
	baz=54						
JPK	Jack Peak	2.31	89		Pn	20 14 11.6	-1.1
CAST	Castle Rocks	2.34	352		Pn	20 14 12.9	-0.4
CAST	Castle Rocks	2.34	352	P	Pn	20 14 12.9	-0.4
	baz=171,SNR=42						
FID	Port Fidalgo	2.40	96		Pn	20 14 11.8	-2.2
FID	Port Fidalgo	2.40	96	IAML		20 14 42.3	
	comp=E,385nm,0.3s						
FID				IAML		20 14 43.5	
	comp=N,310nm,0.5s						
TRF	Thorofare Moun	2.40	11		Pn	20 14 14.4	+0.3
TRF				IAML		20 14 46.1	
	comp=N,320nm,0.7s						
TRF				IAML		20 14 48.0	
	comp=E,266nm,0.4s						
VMT	TAPS Tl Valdez	2.42	88		Pn	20 14 13.2	-0.9
KTH	Kantishna Hill	2.46	4		Pn	20 14 15.2	+0.4
KTH	Kantishna Hill	2.46	4	IAML		20 14 47.5	
	comp=E,230nm,0.6s						
KTH				IAML		20 14 47.9	
	comp=N,154nm,0.2s						
Q19K	Cape Douglas,	2.47	209		Pn	20 14 15.5	+0.5
Q19K	Cape Douglas,	2.47	209	P	Pn	20 14 15.1	+0.1
	baz=27						
RND	Reindeer	2.58	26		Pn	20 14 16.8	+0.2
RND	Reindeer	2.58	26	IAML		20 15 01.8	
	comp=E,148nm,0.8s						
RND				IAML		20 15 04.4	
	comp=N,157nm,0.7s						
P18K	Big Mountain,	2.59	230		Pn	20 14 15.7	-0.9
P18K	Big Mountain,	2.59	230	P	Pn	20 14 16.0	-0.6
	baz=46						
K20K	Telida	2.59	332		Pn	20 14 16.4	-0.2
K20K	Telida	2.59	332	P	Pn	20 14 16.4	-0.2
	baz=149,SNR=33						
KLU	Klutina	2.64	79		Pn	20 14 16.4	-1.0
KLU	Klutina	2.64	79	IAML		20 14 49.4	
	comp=E,139nm,0.3s						
KLU				IAML		20 15 03.7	
	comp=N,207nm,0.4s						
KLU	Klutina	2.64	79	P	Pn	20 14 16.4	-1.0
	baz=264,SNR=83						
M24K	Tolsona, Glenn	2.66	66		Pn	20 14 17.9	+0.3
M24K	Tolsona, Glenn	2.66	66	P	Pn	20 14 17.9	+0.3
	baz=251,SNR=140						
DIV	Divide	2.70	87		Pn	20 14 17.1	-1.1
DIV					Sn	20 14 48.7	-1.2
DHY	Denali Highway	2.71	42		Pn	20 14 18.3	-0.1
DHY	Denali Highway	2.71	42	IAML		20 14 57.3	
	comp=E,214nm,0.8s						
DHY				IAML		20 15 05.7	
	comp=N,191nm,0.6s						
DHY	Denali Highway	2.71	42	P	Pn	20 14 18.2	-0.1
	baz=225,SNR=22						
EYAK	Cordova Ski Ar	2.79	99		Pn	20 14 17.6	-1.7
EYAK	Cordova Ski Ar	2.79	99	P	Pn	20 14 17.6	-1.7
	baz=284,SNR=8.8						
CHUM	Lake Minchumin	2.82	351		Pn	20 14 19.6	-0.1
CHUM	Lake Minchumin	2.82	351	P	Pn	20 14 19.5	-0.1
	baz=170,SNR=19						
TT01	Tatalina	2.85	311		Pn	20 14 19.6	-0.4
TTA	Tatalina	2.86	312		Pn	20 14 19.7	-0.6
TTA	Tatalina	2.86	312	P	Pn	20 14 19.7	-0.6
	baz=127,SNR=13						
PS11	TAPS Pump St11	2.97	68		Pn	20 14 21.9	+0.2
Q23K	Middleton Isla	3.00	122	Pn	Pn	20 14 21.0	-1.1
Q23K				IAML		20 14 58.7	
	comp=E,147nm,1.2s						
Q23K				IAML		20 15 50.8	
	comp=N,135nm,1.0s						
BPAW	Bear Paw Mtn.	3.01	3		Pn	20 14 21.6	-0.6
BPAW	Bear Paw Mtn.	3.01	3	IAML		20 14 58.9	
	comp=N,126nm,0.5s						
BPAW				IAML		20 14 59.0	
	comp=E,165nm,0.3s						
BPAW	Bear Paw Mtn.	3.01	3	P	Pn	20 14 21.9	-0.3
	baz=183,SNR=38						
MID	Middleton Isla	3.01	122	Pn	Pn	20 14 20.9	-1.3
MID				IAML		20 14 57.5	
	comp=E,163nm,0.4s						
MID				IAML		20 15 28.5	
	comp=N,117nm,1.1s						
PS12	TAPS Pump St12	3.01	80		Pn	20 14 21.6	-0.7
HARP	HAARP	3.21	64		Pn	20 14 25.3	+0.3
HARP	HAARP	3.21	64	P	Pn	20 14 25.3	+0.3
	baz=249,SNR=29						
BMRM	Bremner River	3.28	90		Pn	20 14 24.2	-1.8
BMRM	Bremner River	3.28	90	IAML		20 15 18.0	
	comp=N,140nm,0.8s						
BMRM				IAML		20 15 18.9	
	comp=E,148nm,0.6s						
BMRM	Bremner River	3.28	90	P	Pn	20 14 24.3	-1.6
	baz=276,SNR=18						
GOAT	Goat Mountain	3.28	96		Pn	20 14 24.2	-1.7
N25K	Chitina, Valde	3.29	78		Pn	20 14 24.9	-1.1
N25K	Chitina, Valde	3.29	78	IAML		20 15 18.5	
	comp=N,99nm,0.7s						
N25K				IAML		20 15 23.4	
	comp=E,85nm,0.6s						
N25K	Chitina, Valde	3.29	78	P	Pn	20 14 25.0	-1.1
	baz=265,SNR=17						
PAX	Paxson	3.34	53		Pn	20 14 27.1	+0.3
PAX	Paxson	3.34	53	P	Pn	20 14 27.2	+0.5
	baz=239,SNR=42						
J20K	Nowinta River	3.34	338		Pn	20 14 26.3	-0.4
J20K	Nowinta River	3.34	338	IAML		20 15 08.0	
	comp=N,78nm,0.8s						
J20K	Nowinta River	3.34	338	P	Pn	20 14 26.4	-0.4
	baz=156,SNR=33						
RAGM	Ragged Mountai	3.35	100		Pn	20 14 24.8	-2.1
KDAK	Kodiak Island	3.40	191	P	Pn	20 14 26.2	-1.2
	comp=N,1.5nm,0.3s,baz=57,slow=9.3,SNR=208						
KDAK				S	Sn	20 15 04.3	-2.3
	comp=N,20nm,0.3s,baz=82,slow=8.6,SNR=12						
	comp=N,10nm,0.3s						
KDAK	Kodiak Island	3.40	191		Pn	20 14 26.4	-1.0
KDAK	Kodiak Island	3.40	191	IAML		20 15 20.0	
	comp=N,106nm,0.9s						
KDAK				IAML		20 15 24.1	
	comp=N,137nm,0.7s						
KDAK	Kodiak Island	3.40	191	P	Pn	20 14 26.2	-1.2
	baz=10						
KELA	Mount Kelaz	3.48	222		Pn	20 14 29.0	+0.3
HMT	Hamilton	3.56	99		Pn	20 14 27.7	-2.1
KAIM	Kayak Island	3.62	106	Pn	Pn	20 14 30.2	-0.3
KAIM					Sn	20 15 09.6	-2.5
KAIM				IAML		20 15 15.8	
	comp=N,88nm,0.5s						
KAIM				IAML		20 15 17.8	
	comp=E,80nm,0.3s						
NEA2	Nenana	3.65	16		Pn	20 14 31.0	+0.1
NEA2	Nenana	3.65	16	P	Pn	20 14 30.9	0.0
	baz=198,SNR=27						
GLB	Gilahina Butte	3.65	81		Pn	20 14 29.9	-1.1
GLB	Gilahina Butte	3.65	81	IAML		20 15 29.8	
	comp=N,88nm,0.9s						
GLB				IAML		20 15 30.1	
	comp=E,54nm,0.6s						
WRH	Wood River Hil	3.69	22		Pn	20 14 31.3	-0.2
WRH	Wood River Hil	3.69	22	IAML		20 15 40.4	
	comp=N,49nm,0.7s						
K24K	Donnelly Dome	3.74	41	P	Pn	20 14 34.4	+2.2
	baz=226,SNR=24						
BERG	Berg Lake	3.82	97		Pn	20 14 30.9	-2.3
VRDI	Verde Repeater	3.82	85		Pn	20 14 31.9	-1.5
VRDI	Verde Repeater	3.82	85	IAML		20 15 34.3	
	comp=N,62nm,0.6s						
SUCK	Suckling Hills	3.87	102	Pn	Pn	20 14 33.1	-0.8
SUCK				IAML		20 15 17.6	
	comp=N,67nm,0.4s						
HDA	Harding Lake	3.88	29		Pn	20 14 34.2	+0.2
HDA	Harding Lake	3.88	29	IAML		20 15 37.8	
	comp=E,84nm,0.5s						
HDA	Harding Lake	3.88	29	P	Pn	20 14 34.2	+0.2
	baz=214,SNR=34						
CCB	Clear Creek Bu	3.90	23		Pn	20 14 34.0	-0.4
CCB				IAML		20 15 46.5	
	comp=E,45nm,0.9s						
RIDG	Independent Ri	4.01	46	Pn	Pn	20 14 36.6	+0.7
RIDG	Independent Ri	4.01	46	P	Pn	20 14 36.7	+0.9
	baz=232,SNR=38						
PS08	TAPS Pump Stn8	4.02	29		Pn	20 14 35.8	-0.2
KHIT	Khitrov Hills	4.02	96		Pn	20 14 34.0	-2.1
OHAK	Old Harbor	4.03	195	P	Pn	20 14 34.4	-1.6
	baz=14						
GRIN	Grindle Hills	4.03	98		Pn	20 14 33.9	-2.2
MENT	Mentasta	4.03	60		Pn	20 14 35.8	-0.3
I21K	Tanana	4.10	356		Pn	20 14 36.5	-0.5
I21K	Tanana	4.10	356	P	Pn	20 14 36.5	-0.5
	baz=176,SNR=22						
TCOL	CIGO, UAF Yank	4.10	21		Pn	20 14 36.8	-0.2
TCOL	CIGO, UAF Yank	4.10	21	P	Pn	20 14 36.8	-0.2

	baz=204						
COLA	College	4.10	21	Pn	Pn	20 14 36.5	-0.5
COLA	College	4.10	21	P	Pn	20 14 37.1	+0.1
	baz=204						
MDM	Murphy Dome	4.12	19	Pn	Pn	20 14 38.2	+0.9
I23K	Minto, Yukon-K	4.15	12		Pn	20 14 37.9	+0.2
I23K	Minto, Yukon-K	4.15	12	P	Pn	20 14 38.2	+0.5
	baz=193,SNR=23						
M26K	Nabesna, AK	4.17	68		Pn	20 14 38.1	0.0
M26K	Nabesna, AK	4.17	68	IAML		20 15 51.6	
	comp=E,56nm,0.4s						
M26K				IAML		20 15 52.4	
	comp=N,70nm,0.7s						
M26K	Nabesna, AK	4.17	68	P	Pn	20 14 38.0	0.0
	baz=256,SNR=28						
IL31		4.20	27		Pn	20 14 38.2	-0.1
ILAR	Eielson Array	4.20	27	P	Pn	20 14 38.5	+0.1
	comp=N,3.7nm,0.3s,baz=218,slow=14,SNR=100						
ILAR				S	Sn	20 15 23.6	-2.5
	comp=N,6.8nm,0.4s,baz=194,slow=15,SNR=2.5						
ILAR				LR	LR	20 16 35.7	
	comp=N,36nm,18.7s,baz=172,slow=42						
	comp=N,8.0nm,0.3s						
ILAR	Eielson Array	4.20	27		Pn	20 14 38.0	-0.4
WAX	Waxell Ridge	4.21	95		Pn	20 14 36.9	-1.8
L26K	Log Cabin Wild	4.22	59		Pn	20 14 39.1	+0.4
L26K	Log Cabin Wild	4.22	59	P	Pn	20 14 38.9	+0.2
	baz=247,SNR=30						
DOT	Dot Lake	4.24	50	Pn	Pn	20 14 37.8	-1.2
BALM	Baldy	4.37	87		Pn	20 14 39.5	-1.3
KIAG	Kiagna River	4.38	88		Pn	20 14 39.5	-1.4
POKR	Poker Plat Res	4.40	22		Pn	20 14 41.2	+0.1
POKR	Poker Plat Res	4.40	22	IAML		20 15 54.6	
	comp=N,32nm,0.7s						
POKR				IAML		20 16 04.1	
	comp=E,40nm,0.8s						
POKR	Poker Plat Res	4.40	22	P	Pn	20 14 41.9	+0.8
	baz=206						
ISLE	Juniper Island	4.43	93		Pn	20 14 40.0	-1.7
ISLE	Juniper Island	4.43	93	IAML		20 15 58.3	
	comp=N,63nm,1.0s						
ISLE				IAML		20 15 59.1	
	comp=E,62nm,1.0s						
GCSA	Galena City Sc	4.44	328	P	Pn	20 14 41.9	+0.2
	baz=143						
J25K	Salcha River,	4.45	35		Pn	20 14 42.8	+0.9
J25K				IAML		20 15 42.1	
	comp=N,64nm,0.8s						
J25K	Salcha River,	4.45	35	P	Pn	20 14 42.6	+0.7
	baz=221,SNR=53						
SCRK	Sand Creek	4.46	47		Pn	20 14 41.9	-0.1
SCRK	Sand Creek	4.46	47	IAML		20 15 43.4	
	comp=E,61nm,0.6s						
SCRK				IAML		20 15 44.3	
	comp=N,46nm,0.7s						
SCRK	Sand Creek	4.46	47	P	Pn	20 14 41.7	-0.3
	baz=233,SNR=26						
BAGL	Bagley Icefiel	4.58	94		Pn	20 14 42.0	-1.5
H21K	Melozitna Rive	4.61	352		Pn	20 14 43.4	-0.7
H21K	Melozitna Rive	4.61	352	P	Pn	20 14 44.1	0.0
	baz=171,SNR=35						
M27K	Edge Creek, AK	4.67	70		Pn	20 14 45.4	+0.4
M27K	Edge Creek, AK	4.67	70	IAML		20 16 11.4	
	comp=E,26nm,1.0s						
M27K				IAML		20 16 13.2	
	comp=N,26nm,1.2s						
M27K	Edge Creek, AK	4.67	70	P	Pn	20 14 45.6	+0.7
	baz=259,SNR=22						
BARN	Barnard Glacie	4.70	86		Pn	20 14 44.5	-0.9
BARN	Barnard Glacie	4.70	86	IAML		20 16 11.4	
	comp=E,32nm,0.9s						
BARN				IAML		20 16 16.3	
	comp=N,29nm,1.0s						
SII	Sitkinak Islan	4.80	199	P	Pn	20 14 45.8	-0.8
	baz=17						
H23K	Yukon River	4.80	9		Pn	20 14 47.1	+0.4
H23K	Yukon River	4.80	9	P	Pn	20 14 47.0	+0.4
	baz=190,SNR=9.6						
L27K	Beaver Creek,	4.88	62		Pn	20 14 47.6	-0.2
L27K	Beaver Creek,	4.88	62	IAML		20 16 07.7	
	comp=N,20nm,1.4s						
L27K	Beaver Creek,	4.88	62	P	Pn	20 14 47.5	-0.2
	baz=251,SNR=23						
BC03		4.90	62		Pn	20 14 47.9	0.0
BCAR	Beaver Creek A	4.90	62		Pn	20 14 47.9	-0.1
J26L	Joseph Creek	4.93	43	P	Pn	20 14 48.5	0.0
	baz=230,SNR=34						
H24K	Noodor Dome	4.99	17	Pn	Pn	20 14 50.0	+0.8
H24K	Noodor Dome	4.99	17	P	Pn	20 14 50.0	+0.8
	baz=200,SNR=13						
IM03		5.01	349		Pn	20 14 49.0	-0.4
IMAR	Indian Mountai	5.01	349	Pn	Pn	20 14 48.9	-0.5
YUK2	White River	5.08	78		Pn	20 14 49.9	-0.6
BVCY	Beaver Creek	5.15	71	P	Pn	20 14 51.3	-0.1
	baz=260,SNR=6.2						
YUK3	Moose Creek	5.26	78		Pn	20 14 52.4	-0.7
YUK3	Moose Creek	5.26	78	P	Pn	20 14 52.4	-0.7
	baz=268,SNR=18						
PCA	Pinnacle	5.55	96		Pn	20 14 55.2	-1.8
PINM	Pinnacle	5.56	96	P	Pn	20 14 55.3	-1.7
	baz=286						
EGAK	Eagle	5.93	47		Pn	20 15 01.5	-0.4
EGAK	Eagle	5.93	47	P	Pn	20 15 01.7	-0.2
	baz=236,SNR=10						
PNL	Peninsula	6.09	98	P	Pn	20 15 03.0	-1.3
	baz=289						
YUK4	Talbot Arm	6.14	82	P	Pn	20 15 04.7	-0.3
	baz=273						
COLD	Coldfoot	6.17	4	Pn	Pn	20 15 05.5	+0.3
COLD	Coldfoot	6.17	4	P	Pn	20 15 06.6	+1.5
	baz=185,SNR=8.4						
DAWY	Dawson	6.26	57		Pn	20 15 06.6	+0.1
DAWY	Dawson	6.26	57	P	Pn	20 15 06.4	-0.1
	baz=247						
YUK6	Outpost Mounta	6.31	86		Pn	20 15 07.3	-0.1
YUK6	Outpost Mounta	6.31	86	P	Pn	20 15 06.8	-0.6
	baz=277						
YUK7	Dusty Glacier	6.48	89		Pn	20 15 09.4	-0.3
HYT	Haines Junctio	6.74	86	Pn	Pn	20 15 12.5	-0.6
HYT	Haines Junctio	6.74	86	P	Pn	20 15 12.7	-0.5
	baz=279						
BMAR	Burnt Mountain	6.99	22	Pn	Pn	20 15 16.5	+0.1
M30M	Minto, Yukon	7.04	72	Pn	Pn	20 15 16.4	-0.7
M30M	Minto, Yukon	7.04	72	P	Pn	20 15 16.5	-0.7
	baz=265						
I29M	Ogilvie Camp,	7.26	48		Pn	20 15 19.6	-0.6
I29M	Ogilvie Camp,	7.26	48	P	Pn	20 15 19.9	-0.2
	baz=240						
N31M	Braeburn, Yuko	7.50	80	Pn	Pn	20 15 23.0	-0.4
N31M	Braeburn, Yuko	7.50	80	P	Pn	20 15 22.9	-0.5
	baz=274						
TOLK	Toolik Lake Re	7.60	5	Pn	Pn	20 15 24.8	+0.1
TOLK	Toolik Lake Re	7.60	5	P	Pn	20 15 25.8	+1.1
	baz=186						
WHY	Whitehorse	8.04	86		Pn	20 15 29.7	-1.2
WHY	Whitehorse	8.04	86	P	Pn	20 15 29.7	-1.2
	baz=281						
M31M	Drury Creek, Y	8.14	75	Pn	Pn	20 15 31.4	-0.7
M31M	Drury Creek, Y	8.14	75	P	Pn	20 15 31.5	-0.6
	baz=270						
INK	Inuvik	10.46	39	P	Pn	20 16 03.5	-0.1
	comp=N,0.1nm,0.3s,baz=270,slow=11,SNR=3.6						
INK				S	Sn	20 18 01.6	+2.9
	comp=N,3.3nm,1.0s,baz=316,slow=3.0,SNR=3.2						
	comp=N,0.7nm,0.5s						
DLBC	Dease Lake	11.06	95	LR	LR	20 20 46.5	
	comp=N,25nm,20.1s,baz=194,slow=38						
YKA	Yellowknife Ar	17.27	69	P	P	20 17 32.6	-0.4
	comp=N,0.1nm,0.3s,baz=281,slow=10,SNR=2.2						
	comp=N,0.4nm,0.6s						
PDAR	Pinedale Array	30.90	107	P	P	20 19 47.7	+1.6
	comp=N,0.2nm,0.5s,baz=314,slow=4.6,SNR=4.1						
	comp=N,0.2nm,0.5s						
KSRS	Korea Array	53.73	283	LR	LR	20 47 29.1	
	comp=N,3.9nm,18.1s,baz=170,slow=38						

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*IDC **09** 20:37:03.9±1.5, 11°.62N×86°.36W, h0^{km}, mb3.9/8, mbtmp4.0/10, ML3.6/2, MS3.3/12, Error ellipse: s-maj=41.7km s-min=29.4km az=34.0*

*NEIC **09** 20:37:03.7±2.0, 11°.00N±0°.06×86°.83W±0°.07, h14^{km}±5^{km}, mb4.6/65, Error ellipse: s-maj=11.3km s-min=6.6km az=53.0*

*UCR **09** 20:37:05.8±1.7, 10°.94N×86°.92W, h35^{km}±999^{km}, ML3.7, MW4.6, mb4.6(NEIC)*

*INET **09** 20:37:06.5±0.8, 11°.03N×86°.86W, h15^{km}±12^{km}, MW4.0*

*SNET **09** 20:37:08.6±1.1, 11°.32N×87°.15W, h0^{km}±38^{km}, ML3.8*

*SSS **09** 20:37:08.6, 11°.32N×87°.15W, h0^{km}, ML3.8*

ISC 09 20:37:04.0±1.0**, 10°.93N**±0°.04×**86°.85W**±0°.05**, h22**^{km}±8^{km}**, n169,** σ1^{s}**37**/169**, mb4.6**/41**, MS3.4**/11**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	1.25	100		Pb	20 37 27.7	+0.8
HZTE	Horizontes, Gu	1.25	100	*e*P	Pb	20 37 27.9	+1.0
COPN	Copaltepe	1.27	11	*e*P	Pb	20 37 27.4	+0.2
MGAN	Managua	1.34	26	*e*P	Pb	20 37 28.5	0.0
MGAN				*e*P	Pb	20 37 28.6	0.0
CONN	Concepcion	1.35	62	*e*P	Pb	20 37 28.5	-0.2
GBS3	Finca Las Img	1.38	96	*i* P	Pb	20 37 29.5	+0.4
GBS3				*i* S	Sb	20 37 47.9	+1.6
APYN	Apoyeque	1.38	21	*e*P	Pb	20 37 28.2	-1.0
SAJU	San Juanillo,	1.41	127	*e*P	Pb	20 37 28.9	-0.8
BUEV	Buena Vista	1.42	95	*i* P	Pb	20 37 30.3	+0.4
BUEV				*i* S	Sb	20 37 49.1	+1.5
ORTG	Ortega, Santa	1.48	112		Pb	20 37 30.6	-0.3
GPS2	Hotel Rincn d	1.48	97	*i* P	Pb	20 37 31.1	+0.2
MOMN	Momotombo	1.50	12	*e*P	Pb	20 37 30.2	-1.0
HUEN		1.54	25	*e*P	Pb	20 37 31.2	-0.8
CNGN	Cerro Negro	1.56	5	Pn	Pn	20 37 30.0	-0.6
DUNO	Dulce Nombre,	1.58	122	Pn	Pb	20 37 31.8	-0.7
HORNC	Hornillas	1.65	97	*i* P	Pb	20 37 33.7	-0.2
HORNC				*i* S	Sb	20 37 55.4	+1.0
INDI	Punta indio, G	1.69	129	*e*P	Pb	20 37 33.5	-1.1
CRIN	San Cristobal	1.77	354		Pn	20 37 33.9	+0.5
CRIN	San Cristobal	1.77	354	*e*P	Pn	20 37 34.1	+0.7
ACAL	Aguas Claras	1.81	99	*i* P	Pb	20 37 36.4	0.0
PTEN	Parque Tenorio	1.84	97	*i* P	Pb	20 37 36.7	-0.4
BOAB	BOACO BROADBAN	1.90	37	Pn	Pb	20 37 35.9	-2.2
ACON	Acoyapa	1.94	58		Pn	20 37 34.9	-0.8
JTS	Las Juntas de	1.97	109	Pn	Pb	20 37 37.1	-2.1
JTS	Las Juntas de	1.97	109	*e*P	Pb	20 37 38.5	-0.7
CAO2	Cobano, Puntar	2.11	126	Pn	Pb	20 37 39.0	-2.6
ARE1	Arenal 1	2.14	102	*e*P	Pb	20 37 40.9	-1.4
CSGN	Cosiguina Volc	2.15	341	*e*P	Pn	20 37 39.2	+0.6
MATN	Matagalpa	2.18	24		Pn	20 37 39.8	+0.7
MATN	Matagalpa	2.18	24	*e*P	Pn	20 37 39.9	+0.7
LAFE	Finca La Fe, P	2.21	120	*e*P	Pb	20 37 40.2	-3.1
JACO	JACO, Garabito	2.50	120	Pn	Pb	20 37 45.7	-2.4
CNCH	Conchagua	2.52	338	*e*P	Pn	20 37 44.2	+0.4
CNCH	Conchagua	2.52	338	*e*P	Pn	20 37 44.2	+0.4
LCND	La Caada	2.57	337	*e*P	Pn	20 37 45.0	+0.6
LCND				*e*S	Sn	20 38 14.0	-1.0
LCND				IAML		20 38 16.5	
	comp=Z,447nm,0.3s						
LCND	La Caada	2.57	337	*e*P	Pn	20 37 45.0	+0.6
LCND				*e*S	Sn	20 38 14.0	-1.0
LCND				IAML		20 38 16.5	
	comp=Z,447nm,0.3s						
JUCU	Jucuar¡n	2.68	329	*e*P	Pn	20 37 45.7	-0.3
JUCU				IAML		20 38 20.2	
	comp=Z,383nm,0.3s						
JUCU	Jucuar¡n	2.68	329	*e*P	Pn	20 37 45.7	-0.3
JUCU				IAML		20 38 20.2	
	comp=Z,383nm,0.3s						
ESPN	Las Esperanzas	2.79	63	Pn	Pn	20 37 46.8	-0.6
ESPN	Las Esperanzas	2.79	63	*e*P	Pn	20 37 48.8	+1.4
HDC	Heredia	2.84	109	Pn	Pn	20 37 48.6	+0.4
LCY	Lacayo	2.85	330	*e*P	Pn	20 37 49.0	+0.7
LCY	Lacayo	2.85	330	*e*P	Pn	20 37 49.0	+0.7
RANC	El Ranchito	2.86	331	*e*P	Pn	20 37 49.1	+0.7
RANC				IAML		20 38 24.6	
	comp=Z,388nm,0.4s						
RANC	El Ranchito	2.86	331	*e*P	Pn	20 37 49.1	+0.7
RANC				*e*S	Sn	20 38 20.4	-1.9
RANC				IAML		20 38 24.6	
	comp=Z,388nm,0.4s						
PACA	Pacayal	2.91	330	*e*P	Pn	20 37 50.1	+1.0
PACA				*e*S	Sn	20 38 22.5	-0.9
PACA	Pacayal	2.91	330	*e*P	Pn	20 37 50.1	+1.0
PACA				*e*S	Sn	20 38 22.5	-0.9
TGUH	Tegucigalpa,Un	3.13	352	Pn	Pn	20 37 52.1	-0.2
TGUH	Tegucigalpa,Un	3.13	352	*e*P	Pn	20 37 53.5	+1.3
TGUH	Tegucigalpa,Un	3.13	352	*e*P	Pn	20 37 53.5	+1.3
RIMA	Rio Macho	3.16	111		Pb	20 37 55.0	-4.6
CVTR	Volcan Turrial	3.17	106	Pn	Pn	20 37 52.5	-0.4
SCLA	Alcaldia de Sa	3.31	326	*e*P	Pn	20 37 55.6	+1.1
SCLA	Alcaldia de Sa	3.31	326	*e*P	Pn	20 37 55.6	+1.1
SCLA				*e*S	Sn	20 38 32.3	-1.0
LFRS	El Faro	3.44	321	*e*P	Pn	20 37 57.1	+0.7
LFRS				IAML		20 38 43.6	
	comp=Z,664nm,0.4s						
LFRS	El Faro	3.44	321	*e*P	Pn	20 37 57.1	+0.7
LFRS				IAML		20 38 43.6	
	comp=Z,664nm,0.4s						
PEZE	Perez Zeledon,	3.48	116	Pn	Pn	20 37 58.6	+1.7
BATAN	Batan	3.51	103	Pn	Pn	20 37 55.4	-1.9
SNET	Serv Nac Est T	3.59	320	Pn	Pn	20 37 55.3	-3.3
JAYA	Jayaque - finc	3.71	317	*e*P	Pn	20 38 01.0	+0.8
JAYA	Jayaque - finc	3.71	317	*e*P	Pn	20 38 01.0	+0.8
JAYA				*e*S	Sn	20 38 40.9	-2.5
SRBA	San Rafael, Bu	3.83	116		Pn	20 38 02.3	+0.6
DRK0	Durika	3.92	115	Pn	Pn	20 38 03.9	+0.9
NUBE	Las Nubes	4.11	316	*e*P	Pn	20 38 07.0	+1.2
NUBE	Las Nubes	4.11	316	*e*P	Pn	20 38 07.0	+1.2
NUBE				*e*S	Sn	20 38 50.4	-2.9
MTO3	Montecristo	4.23	325		Pn	20 38 06.8	-0.5
MTO3	Montecristo	4.23	325	*e*P	Pn	20 38 08.6	+1.2
MTO3	Montecristo	4.23	325	*e*P	Pn	20 38 08.6	+1.2
ESQI	Esquipulas	4.35	326	Pn	Pn	20 38 08.5	-0.4
CDITO	Canoas	4.56	121	Pn	Pn	20 38 11.6	-0.2
BRU2	Volcan	4.61	117	Pn	Pn	20 38 13.4	+0.8
CMIG	Matias Romero	9.91	309	Pn	Pn	20 39 26.9	+1.7
	comp=Z,1.1nm,0.3s,baz=125,slow=9.6,SNR=9.9						
	comp=Z,5.1nm,0.6s						
TLIG	Tlapa	13.13	301	Pn	Pn	20 40 12.9	+3.5
SDV	Santo Domingo	16.10	96	Pn	Pn	20 40 48.6	-0.7
	comp=Z,1.0nm,0.3s,baz=281,slow=7.3,SNR=2.0						
	comp=Z,4.0nm,0.2s						
SDV	Santo Domingo	16.10	96		Pn	20 40 48.5	-0.9
BAUV	El Baul	18.63	94	P	Pn	20 41 21.1	+0.4
ATAH	Atahualpa	19.82	155	LR	LR	20 48 21.6	
	comp=Z,127nm,19.0s,baz=334,slow=34						
GOGA	Godfrey	22.59	7	P	P	20 42 01.3	-1.8
Y49A	Blount Mountai	22.82	1	P	P	20 42 03.2	-2.3
X51A	Calhoun	23.59	4	P	P	20 42 13.5	+0.2
X51A				IAmb	IAmb	20 42 14.9	
	comp=Z,9.2nm,0.7s						
TXAR	Lajitas Array	24.12	322	P	P	20 42 19.4	+0.9
	comp=Z,2.3nm,0.8s,baz=139,slow=9.5,SNR=24						
TXAR				PcP	PcP	20 46 03.5	+4.1
	comp=Z,1.1nm,0.8s,baz=152,slow=5.5,SNR=5.4						
	comp=Z,2.3nm,0.8s						
TXAR	Lajitas Array	24.12	322	P	P	20 42 18.3	-0.2
TX31	Lajitas Ar. Si	24.12	322	P	P	20 42 19.2	+0.7
TX31				IAmb	IAmb	20 42 31.5	
	comp=Z,13nm,0.8s						
TX32	Lajitas Array	24.12	322	P	P	20 42 19.0	+0.5
W50A	Signal Mountai	24.20	3	P	P	20 42 17.0	-2.1
W50A				IAmb	IAmb	20 42 20.9	
	comp=Z,12nm,0.7s						
CPCT	Cooper Cave	24.50	5	P	P	20 42 21.1	-0.7
CPCT				IAmb	IAmb	20 42 31.5	
	comp=Z,10nm,0.7s						
V48A	Smith Brothers	24.70	0	P	P	20 42 22.5	-1.0
V48A				IAmb	IAmb	20 42 26.7	
	comp=Z,7.1nm,0.7s						
TKL	Tuckaleechee C	24.77	6	P	P	20 42 20.3	-3.9
	comp=Z,1.4nm,0.3s,baz=254,slow=20,SNR=2.0						
	comp=Z,1.4nm,0.3s						
X37A	Clayton	24.80	343	P	P	20 42 23.9	-0.6
X37A				IAmb	IAmb	20 42 27.6	
	comp=Z,23nm,1.4s						
V51A	Loudon	24.86	5	P	P	20 42 24.1	-0.9
V51A				IAmb	IAmb	20 42 28.2	
	comp=Z,7.1nm,0.6s						
V53A	Saluda	24.90	8	P	P	20 42 25.0	-0.4
CLTN	Cedars of Leba	25.05	1	P	P	20 42 27.4	+0.7
CLTN				IAmb	IAmb	20 42 29.2	
	comp=Z,9.0nm,0.7s						
V58A	Windy Hill, Pi	25.73	15	P	P	20 42 33.3	+0.5
V58A				IAmb	IAmb	20 42 34.2	
	comp=Z,11nm,0.7s						
LPIG	La Paz	25.87	304	LR	LR	20 52 02.9	
	comp=Z,25nm,21.5s,baz=38,slow=35						
T47A	Sharon Grove	25.94	360	P	P	20 42 34.0	-0.8
T47A				IAmb	IAmb	20 42 59.7	
	comp=Z,8.4nm,0.9s						
S39A	Bolivar	27.27	349	P	P	20 42 45.6	-1.2
Q51A	Peebles	28.15	6	P	P	20 42 54.3	-0.3
Q52A	Bidwell	28.21	8	P	P	20 42 54.9	-0.3
Q52A				IAmb	IAmb	20 42 57.2	
	comp=Z,10nm,0.8s						
Q54A	Coxs Mills	28.45	10	P	P	20 42 57.2	0.0
Q54A				IAmb	IAmb	20 42 58.5	
	comp=Z,9.6nm,0.7s						
Q56A	Snyder Ridge,	28.81	12	P	P	20 43 01.6	+1.0
Q56A				IAmb	IAmb	20 43 02.6	
	comp=Z,10nm,0.8s						
P53A	Whipple	28.85	9	P	P	20 43 01.0	+0.1
P52A	Corning	28.89	8	P	P	20 43 00.3	-0.9
P38A	Dawn	29.19	349	P	P	20 43 02.8	-1.0
O52A	Adamsville	29.40	8	P	P	20 43 05.3	-0.5
P57A	Homestead Farm	29.50	14	P	P	20 43 08.0	+1.4
P57A				IAmb	IAmb	20 43 08.6	
	comp=Z,12nm,0.8s						
O53A	New Philadelph	29.62	9	P	P	20 43 07.7	0.0
N49A	Columbus Grove	29.96	4	P	P	20 43 10.0	-0.7
N53A	Lisbon	30.23	9	P	P	20 43 12.7	-0.3
PAGS	Pennsylvania G	30.52	15	P	P	20 43 16.1	+0.4
SSPA	Standing Stone	30.63	13	P	P	20 43 16.9	+0.3
SSPA				IAmb	IAmb	20 43 18.2	
	comp=Z,9.3nm,0.7s						
M53A	WI Miller and	30.87	9	P	P	20 43 18.5	-0.3
L42A	Oliver, Polo	31.05	356	P	P	20 43 18.8	-1.5
L42A				IAmb	IAmb	20 43 19.9	
	comp=Z,12nm,0.9s						
N58A	Sunbury	31.10	15	P	P	20 43 20.6	-0.2
N58A				IAmb	IAmb	20 43 22.8	
	comp=Z,12nm,0.8s						
N33A	J Bar K, Exete	31.13	344	P	P	20 43 20.6	-0.4
M55A	Ridgway	31.24	12	P	P	20 43 21.4	-0.6
M55A				IAmb	IAmb	20 43 22.8	
	comp=Z,6.9nm,0.8s						
LUPA	Lehigh Univers	31.24	17	P	P	20 43 22.2	+0.2
LUPA				IAmb	IAmb	20 43 23.6	
	comp=Z,8.3nm,0.8s						
M57A	Sunshine Farm,	31.47	14		P	20 43 24.1	+0.1
ERPA	Erie	31.64	10	P	P	20 43 25.4	-0.2
L56A	Greenwood	32.13	13	P	P	20 43 29.2	-0.7
L56A				IAmb	IAmb	20 43 31.5	
	comp=Z,8.5nm,0.8s						
BINY	Binghamton	32.57	15	P	P	20 43 32.6	-1.1
L59A	Walton	32.81	16	P	P	20 43 36.2	+0.4
L59A				IAmb	IAmb	20 43 37.0	
	comp=Z,10nm,0.8s						
I42A	Draeger Farm,	32.89	357	P	P	20 43 35.2	-1.2
I42A				IAmb	IAmb	20 43 36.9	
	comp=Z,6.7nm,0.7s						
I40A	Norwalk	33.00	355	P	P	20 43 36.2	-1.2
I40A				IAmb	IAmb	20 43 37.2	
	comp=Z,10nm,1.1s						
PV13	Radium Mtn., P	33.50	328	P	P	20 43 42.8	+0.6
PV03	Paradox Valley	33.59	328	P	P	20 43 43.7	+0.8
PV12	Saucer Basin,	33.61	328	P	P	20 43 43.5	+0.4
PV12				IAmb	IAmb	20 43 56.4	
	comp=Z,5.2nm,0.8s						
PV18	Skein Mesa, Pa	33.61	328	P	P	20 43 42.4	-0.7
PV18				IAmb	IAmb	20 43 52.0	
	comp=Z,5.2nm,0.8s						
PV11	David Mesa, Pa	33.63	328	P	P	20 43 43.3	0.0
PV11				IAmb	IAmb	20 43 52.2	
	comp=Z,4.3nm,0.7s						
PV16	Nyswonger Mesa	33.66	328	P	P	20 43 44.0	+0.4
PV17	East Wray Mesa	33.66	328	P	P	20 43 43.6	0.0
PV17				IAmb	IAmb	20 43 52.7	
	comp=Z,5.4nm,0.9s						
L61B	Northampton	33.75	19	P	P	20 43 43.5	-0.5
ECSD	EROS Data Cent	33.76	347	P	P	20 43 43.3	-0.8
PV14	Lion Creek, Pa	33.77	328	P	P	20 43 44.2	-0.3
J58A	Remsen	33.83	15	P	P	20 43 44.6	-0.1
J58A				IAmb	IAmb	20 43 45.4	
	comp=Z,7.1nm,0.8s						
MDP	Montagnes des	34.34	97	LR	LR	20 59 12.1	
	comp=Z,30nm,18.2s,baz=270,slow=39						
SADO	Sadowa	34.36	10	LR	LR	20 58 22.5	
	comp=Z,18nm,21.1s,baz=208,slow=38						
SADO	Sadowa	34.36	10	P	P	20 43 47.0	-2.2
SADO				IAmb	IAmb	20 43 59.3	
	comp=Z,19nm,1.4s						
SPMN	Marine on St.	34.55	353	P	P	20 43 49.2	-1.6
SPMN				IAmb	IAmb	20 43 50.6	
	comp=Z,10.0nm,0.9s						
F42A	Maple Grove Fa	34.72	358	P	P	20 43 51.4	-1.0
COWI	Conover	35.10	357	P	P	20 43 54.0	-1.7
COWI				IAmb	IAmb	20 43 55.6	
	comp=Z,6.7nm,0.9s						
F36A	Milaca	35.27	352	P	P	20 43 55.8	-1.3
E43A	Lone Tree Farm	35.32	360	P	P	20 43 55.7	-1.8
E43A				IAmb	IAmb	20 43 57.0	
	comp=Z,10nm,0.8s						
BW06	Boulder Array	37.38	332	P	P	20 44 13.2	-2.3
PDAR	Pinedale Array	37.38	332	P	P	20 44 15.7	+0.3
	comp=Z,0.6nm,0.7s,baz=124,slow=11,SNR=7.1						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	37.38	332	P	P	20 44 15.0	-0.4
HWUT	Hardware Ranch	37.47	329	P	P	20 44 17.5	+1.3
NVAR	Mina Array Bea	39.23	320	P	P	20 44 34.3	+3.2
	comp=Z,0.5nm,0.6s,baz=157,slow=7.5,SNR=4.7						
NVAR				PcP	PcP	20 46 42.4	+2.3
	comp=Z,1.2nm,0.8s,baz=141,slow=3.5,SNR=6.0						
	comp=Z,0.5nm,0.6s						
ULM	Lac du Bonnet	39.90	351	P	P	20 44 34.6	-1.6
	comp=Z,3.8nm,0.5s,baz=188,slow=5.7,SNR=3.7						
	comp=Z,3.8nm,0.5s						
ULM	Lac du Bonnet	39.90	351	P	P	20 44 32.4	-3.8
RPN	Rapa Nui	43.67	210	LR	LR	20 58 43.4	
	comp=Z,33nm,19.1s,baz=166,slow=29						
H03N2	Juan Fernandez	44.76	171	T	T	21 33 12.1	
	baz=349,slow=76,SNR=3.3						
H03N1	Juan Fernandez	44.77	171	T	T	21 33 20.0	
	baz=349,slow=76,SNR=2.8						
H03N3	Juan Fernandez	44.78	171	T	T	21 33 10.4	
	baz=349,slow=76,SNR=3.7						
SCHQ	Schefferville	46.56	16	P	P	20 45 27.6	-2.4
	comp=Z,4.8nm,0.9s,baz=230,slow=4.2,SNR=5.7						
SCHQ				LR	LR	21 04 53.8	
	comp=Z,58nm,18.0s,baz=202,slow=36						
	comp=Z,4.8nm,0.9s						
CPUP	Villa Florida	46.86	143	LR	LR	21 05 59.6	
	comp=Z,30nm,18.2s,baz=158,slow=37						
FRB	Frobisher Bay	54.31	10	LR	LR	21 11 23.0	
	comp=Z,54nm,19.5s,baz=209,slow=38						
YKA	Yellowknife Ar	55.22	345	P	P	20 46 34.2	-0.9
	comp=Z,0.5nm,0.6s,baz=129,slow=8.4,SNR=4.3						
	comp=Z,0.5nm,0.6s						
BCAR	Beaver Creek A	64.87	336	P	P	20 47 39.2	-2.1
ILAR	Eielson Array	67.64	336	P	P	20 47 58.9	-0.1
	comp=Z,0.4nm,0.7s,baz=140,slow=5.3,SNR=6.1						
	comp=Z,0.4nm,0.7s						
MDT	Midelt	77.69	59	LR	LR	21 19 45.6	
	comp=Z,26nm,19.4s,baz=290,slow=33						
DBIC	Dimbokro	80.93	85	LR	LR	21 22 13.4	
	comp=Z,18nm,19.7s,baz=156,slow=34						
NOA	NORSAR Array B	84.40	29	LR	LR	21 23 51.9	
	comp=Z,14nm,20.1s,baz=295,slow=34						
TIXI	Tiksi	94.23	349	P	P	20 50 20.3	-0.7
TIXI				IAmb	IAmb	20 50 21.3	
	comp=Z,1.3nm,0.5s						
AKASG	Malin Array Be	97.42	35	LR	LR	21 31 34.7	
	comp=Z,28nm,19.9s,baz=3.5,slow=34						
KSRS	Korea Array	121.86	328	PKP	PKiKP	20 55 59.3	+2.2
	comp=Z,1.1nm,0.7s,baz=62,slow=2.0,SNR=5.0						
ASAR	Alice Springs	139.23	246	PKP	PKiKP	20 56 36.5	+4.0
	comp=Z,0.4nm,0.9s,baz=101,slow=2.0,SNR=1.8						
PZH	PanZhiHua	141.86	347	PKP	PKPdf	20 56 33.8	-1.2
CMAR	Chiang Mai Arr	150.24	349	PKPbc	PKiKP	20 56 54.8	-0.4
	comp=Z,1.6nm,0.8s,baz=354,slow=3.3,SNR=14						
CMAR	Chiang Mai Arr	150.24	349		PKPbc	20 56 54.5	+0.1

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*NIED **09** 20:37:39.1, 31°.07N×129°.03E, h14^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.50; $M_{\theta\theta}$4.25; $M_{\phi\phi}$-2.76; $M_{r\theta}$-0.30; $M_{\theta\phi}$3.55; $M_{\phi r}$4.21; Fault plane solution: $M_0$6.59000×10^{14} NP1: ϕ_s106.00000°, δ55.00000°, λ-18.00000°. NP2: ϕ_s207.00000°, δ75.00000°, λ-144.00000°.*

JMA 09 20:37:39.1±0.2**, 31°.1N**±0°.3×**129°.0E**±0°.7**, h14**^{km}±1^{km}**, MV3.9**/36**, 2D, SW OFF KYUSHU, Kyushu**

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

JSJ	**Shimokoshiki**	0.84	44	P	Pg	20 37 55.0	-0.5
JSJ				*e*S	Sb	20 38 06.7	0.0
JKC	**Kuchinoerabu**	1.17	121	*e*P	Pn	20 38 00.9	-0.2
JKC				S	Sb	20 38 16.4	+0.2
JSU	**Suzuyama**	1.30	70	⇓P	Pn	20 38 02.6	-0.2
JSU				⇓*e*S	Sb	20 38 19.5	-0.3
JNN	**Nakanoshima**	1.43	149	*e*P	Pn	20 38 04.9	+0.3
JYAK	**Yakushimahirau**	1.52	123	P	Pn	20 38 05.6	-0.3
JFU	**Fukue jima 2**	1.60	352	P	Pn	20 38 07.6	+0.7
JTN	**Tanegashima 3**	1.73	103	P	Pn	20 38 08.8	+0.1
JMTN	**Minamitane**	1.75	112	P	Pn	20 38 09.1	+0.2
JMTN				*e*S	Sn	20 38 30.6	-0.4
JTZ	**Takazaki**	1.94	64	P	Pn	20 38 12.2	+0.5
JIU3	**Izumi3**	2.12	45	P	Pn	20 38 14.6	+0.5

IDC 09 20:51:35.2±1.2,1°.67N×127°.48E,h0^{km},mb3.7/4, mbtmp3.7/6,ML3.2/2,Error ellipse: s-maj=59.3km s-min=19.0km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	4.55	124	Pn	Pn	20 52 46.0	+0.6
	1.8nm,0.3s,baz=330,slow=20,SNR=8.3						
SIJI				Sn	Sn	20 53 31.7	-7.4
	0.9nm,0.3s,baz=321,slow=14,SNR=2.3						
	4.5nm,0.2s						
FITZ	**Fitzroy Crossi**	19.73	185	P	Pn	20 56 07.5	-0.5
	baz=5.2,slow=11,SNR=2.4						
	2.9nm,0.9s						
WRA	**Warramunga Arr**	22.51	163	P	P	20 56 36.1	-0.5
	0.6nm,0.5s,baz=341,slow=11,SNR=10						
	0.6nm,0.5s						
ASAR	**Alice Springs**	25.95	166	P	P	20 57 09.2	-0.3
	0.3nm,0.3s,baz=342,slow=10,SNR=6.6						
	0.3nm,0.3s						
SONM	**Songino Array**	49.48	341	P	P	21 00 26.7	-0.7
	0.7nm,0.5s,baz=134,slow=6.2,SNR=2.6						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	59.66	326	P	P	21 01 41.7	+0.3
	1.3nm,0.4s,baz=115,slow=8.1,SNR=34						
	1.3nm,0.4s						

IDC 09 20:52:51.6±2.0,1°.46N×126°.15E,h0^{km},mb3.3/3, mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=122.0km s-min=26.8km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	19.45	181	P	P	20 57 20.3	+0.4
	0.1nm,0.3s,baz=349,slow=10,SNR=1.4						
FITZ				S	Sn	21 00 45.1	-15
	2.4nm,0.9s,baz=1.0,slow=20,SNR=1.7						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	22.74	160	P	P	20 57 55.2	-0.3
	0.6nm,0.3s,baz=338,slow=11,SNR=13						
	0.6nm,0.3s						
ASAR	**Alice Springs**	26.09	164	P	P	20 58 27.3	+0.1
	0.2nm,0.4s,baz=346,slow=12,SNR=8.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	59.09	326	P	P	21 02 53.8	-0.1
	0.2nm,0.4s,baz=111,slow=7.4,SNR=2.0						
	0.2nm,0.4s						

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*IDC **09** 20:56:59.7±4.8,35°.89S×178°.34E,h195^{km}±36^{km},mb3.1/2, mbtmp3.6/3,MS3.3/1,Error ellipse: s-maj=64.4km s-min=36.0km az=34.0*

*WEL **09** 20:57:04.6±1.0,36°S±11°×17°8E±1°0,h192^{km}±14^{km}, M3.4/13,ML3.8/7,MLv3.4/13,Error ellipse: s-maj=0.0km s-min=0.0km az=25.6*

ISC 09 20:57:02.8±1.2,36°.19S±0°.09×178°.1E±0°.1,h225^{km}±8^{km}, n39,σ1^s.10/57,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	1.38	173	P	Pn	20 57 37.4	-0.4
MXZ				S	S	20 58 03.4	-1.8
HAZ	**Te Kaha**	1.58	189	P	Pn	20 57 39.0	-0.4
HAZ				S	S	20 58 06.9	-1.0
WMGZ	**Waiomatatini S**	1.64	171	P	Pn	20 57 40.2	+0.2
WMGZ				S	S	20 58 08.6	-0.4
PKGZ	**Pakihiroa**	1.69	180	P	Pn	20 57 40.5	+0.1
PKGZ				S	S	20 58 08.8	-1.0
RUGZ	**Raukumara Rang**	1.80	190	P	Pn	20 57 41.0	-0.5
RUGZ				S	S	20 58 10.1	-1.6
PUZ	**Puketiti**	1.88	176	P	Pn	20 57 42.5	+0.5
PUZ				S	S	20 58 11.5	-1.3
TWGZ	**Tauwhareparae**	1.98	182	P	Pn	20 57 44.2	+1.1
TWGZ				S	S	20 58 15.6	+1.0
OPRZ	**Ohinepanea**	2.05	216	P	Pn	20 57 45.3	+1.7
GRZ	**Great Barrier**	2.12	268	P	Pn	20 57 43.3	-1.1
MWZ	**Matawai**	2.18	192	P	Pn	20 57 46.0	+0.9
MWZ				S	S	20 58 17.8	-0.3
URZ	**Urewera**	2.20	200	P	Pn	20 57 45.3	+0.1
	20nm,0.4s,baz=300,slow=24,SNR=100						
URZ				S	S	20 58 18.5	+0.2
	42nm,0.3s,baz=72,slow=20,SNR=11						
URZ	**Urewera**	2.20	200	P	Pn	20 57 45.6	+0.4
URZ				S	S	20 58 18.2	-0.2
TKGZ	**Te Karaka**	2.25	185	P	Pn	20 57 46.2	+0.6
TKGZ				S	S	20 58 19.5	+0.3
CNGZ	**Carnagh Statio**	2.29	178	P	Pn	20 57 47.0	+0.9
MUGZ	**Murupara**	2.51	204	P	Pn	20 57 49.2	+0.9
MUGZ				S	S	20 58 24.2	+0.1
RIGZ	**Rimuhau**	2.52	186	P	Pn	20 57 49.0	+0.5
RIGZ				S	S	20 58 24.8	+0.5
RTZ	**Ruatahuna**	2.57	200	P	Pn	20 57 49.5	+0.3
TOZ	**Tahuroa Road**	2.58	233	P	Pn	20 57 50.5	+1.4
PRGZ	**Paritu Road**	2.73	183	P	Pn	20 57 52.0	+1.3
MCHZ	**McNeill Hill**	3.42	198	P	Pn	20 57 59.7	+1.0
MCHZ				S	S	20 58 44.6	+2.1
TMVZ	**Te Maari**	3.47	212	P	Pn	20 58 00.7	+1.4
ETVZ	**East Tongariro**	3.49	212	P	Pn	20 58 00.6	+1.1
BHHZ	**Black Hill Sta**	3.66	205	P	Pn	20 58 01.6	+0.1
KAHZ	**Kahuranaki**	3.72	195	P	Pn	20 58 02.7	+0.6
PXZ	**Pawanui**	3.95	194	P	Pn	20 58 04.1	-0.7
PXZ				S	S	20 58 53.3	-0.4
PNHZ	**Pukenui**	4.00	201	P	Pn	20 58 05.4	-0.1
PNHZ				S	S	20 58 54.2	-0.8
TSZ	**Takapari Road**	4.21	203	P	Pn	20 58 07.8	-0.2
PRHZ	**Porangahau**	4.22	195	P	Pn	20 58 08.6	+0.4
DVHZ	**Dannevirke**	4.37	200	P	Pn	20 58 09.6	-0.4
ANWZ	**Angora Road**	4.44	196	P	Pn	20 58 10.9	+0.1
BFZ	**Birch Farm**	4.71	197	P	Pn	20 58 13.5	-0.6
BFZ				S	S	20 59 09.2	-1.3
MRZ	**Mangatainoka R**	4.87	203	P	Pn	20 58 15.5	-0.7
MRZ				S	S	20 59 11.6	-2.7
TIWZ	**Tintock**	4.89	200	P	Pn	20 58 16.0	-0.4
HOWZ	**Holdsworth Sta**	5.11	202	P	Pn	20 58 18.1	-1.0
HOWZ				S	S	20 59 16.4	-3.2
RAR	**Rarotonga**	24.41	58	LR	LR	21 09 45.8	
	comp=Z,77nm,21.0s,baz=260,slow=32						
ASAR	**Alice Springs**	39.95	276	P	P	21 04 16.8	+1.3
	0.6nm,0.7s,baz=120,slow=8.2,SNR=9.4						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	41.49	281	P	P	21 04 28.8	+0.7
	0.6nm,0.5s,baz=119,slow=7.9,SNR=7.9						
	0.6nm,0.5s						
FINES	**FINESS Array B**	149.19	334	PKPbc	PKiKP	21 16 22.8	-2.0
	1.1nm,1.0s,baz=34,slow=8.4,SNR=2.2						
TORD	**Torodi Ar. Bea**	156.82	189	PKPab	PKPab	21 17 03.8	+1.4
	0.5nm,0.9s,baz=158,slow=3.7,SNR=2.9						

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*IDC **09** 21:00:21.9±1.4,14°.48S×179°.28W,h0^{km},mb3.7/5, mbtmp3.7/6,ML4.6/1,MS3.5/26,Error ellipse: s-maj=68.9km s-min=23.5km az=137.0*

ISC 09 21:00:27.2±1.0,14°.5S±0°.2×179°.3W±0°.3,h35^{km},n29, σ1^s.90/7,mb3.7/5,MS3.6/23,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.11	218	Pn	Pn	21 01 25.0	-2.5
	1.2nm,0.3s,baz=37,slow=20,SNR=6.8						
MSVF				Sn	Sn	21 02 17.0	+2.6
	baz=29,slow=4.4						
MSVF				LR	LR	21 02 58.5	
	comp=Z,155nm,21.0s,baz=117,slow=38						
	2.5nm,0.4s						
RAO	**Raoul Island**	14.75	175	LR	LR	21 07 41.9	
	comp=Z,136nm,21.9s,baz=325,slow=30						
DZM	**Mont Dzumac**	15.48	239	LR	LR	21 09 05.8	
	comp=Z,100nm,21.1s,baz=9.5,slow=34						
HNR	**Honiara**	20.90	282	LR	LR	21 12 30.9	
	comp=Z,456nm,20.9s,baz=126,slow=35						
URZ	**Urewera**	23.89	187	LR	LR	21 12 42.5	
	comp=Z,93nm,19.4s,baz=31,slow=31						
RPZ	**Rata Peaks**	30.27	194	LR	LR	21 16 30.9	
	comp=Z,72nm,21.8s,baz=42,slow=32						
PMG	**Port Moresby**	33.17	275	LR	LR	21 19 16.4	
	comp=Z,78nm,18.7s,baz=108,slow=34						
CTA	**Charters Tower**	33.31	255	LR	LR	21 19 10.3	
	comp=Z,45nm,18.0s,baz=85,slow=34						
STKA	**Stephens Creek**	39.63	237	LR	LR	21 23 07.8	
	comp=Z,63nm,20.0s,baz=35,slow=34						
ASAR	**Alice Springs**	44.98	251	P	P	21 08 40.0	+0.6
	0.9nm,0.6s,baz=84,slow=8.6,SNR=20						
ASAR				LR	LR	21 26 17.8	
	comp=Z,67nm,18.4s,baz=133,slow=35						
	0.9nm,0.6s						
MJAR	**Matsushiro Arr**	64.67	323	LR	LR	21 34 06.4	
	comp=Z,17nm,21.7s,baz=146,slow=31						
RPN	**Rapa Nui**	65.90	113	LR	LR	21 33 09.6	
	comp=Z,24nm,20.2s,baz=174,slow=30						
ASAJ	**Asahikawa**	67.88	331	LR	LR	21 35 46.5	
	comp=Z,52nm,21.8s,baz=152,slow=31						
KDAK	**Kodiak Island**	75.31	14	LR	LR	21 36 55.6	
	comp=Z,40nm,20.3s,baz=228,slow=29						
YBH	**Yreka Blue Hor**	76.45	40	LR	LR	21 38 19.9	
	comp=Z,48nm,19.9s,baz=266,slow=30						
KLR	**Kul'dur**	76.74	329	LR	LR	21 40 43.0	
	comp=Z,31nm,19.8s,baz=136,slow=32						
BBB	**Bella Bella**	79.76	29	LR	LR	21 43 11.4	
	comp=Z,32nm,18.2s,baz=228,slow=32						
ELK	**Elko**	80.78	44	LR	LR	21 44 28.7	
	comp=Z,42nm,19.2s,baz=252,slow=33						
ILAR	**Eielson Array**	82.77	13	P	P	21 12 46.5	-0.7
	0.8nm,1.1s,baz=209,slow=3.3,SNR=3.6						
	0.8nm,1.1s						
DLBC	**Dease Lake**	83.06	24	LR	LR	21 42 31.2	
	comp=Z,61nm,19.4s,baz=266,slow=30						
NEW	**Newport**	83.28	37	LR	LR	21 45 14.7	
	comp=Z,33nm,18.7s,baz=101,slow=32						
ANMO	**Albuquerque**	84.67	52	LR	LR	21 41 44.4	
	comp=Z,31nm,20.5s,baz=276,slow=29						
TXAR	**Lajitas Array**	84.92	58	P	P	21 12 59.7	+0.5
	0.3nm,0.7s,baz=232,slow=5.5,SNR=2.1						
TXAR				LR	LR	21 43 47.0	
	comp=Z,21nm,18.2s,baz=284,slow=31						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	85.49	44	P	P	21 13 02.5	+0.7
	0.2nm,0.6s,baz=201,slow=4.7,SNR=2.1						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	86.92	290	LR	LR	21 49 09.7	
	comp=Z,13nm,21.5s,baz=145,slow=34						
SONM	**Songino Array**	90.41	320	P	P	21 13 25.3	+0.1
	0.4nm,0.5s,baz=150,slow=6.7,SNR=2.2						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	91.61	25	LR	LR	21 48 49.9	
	comp=Z,58nm,19.4s,baz=286,slow=32						
PLCA	**Paso Flores**	94.31	134	LR	LR	21 47 35.6	
	comp=Z,23nm,19.8s,baz=187,slow=30						
ATAH	**Atahualpa**	98.70	100	LR	LR	21 48 03.8	
	comp=Z,29nm,19.4s,baz=260,slow=29						

WEL 09 21:21:57.7±0.8,35°S±12°×18°0E±1°9,h275^{km}±9^{km}, M3.7/13,mB4.0/4,ML4.2/15,MLv3.9/13,Mw(mB)3.0/4, Error ellipse: s-maj=0.0km s-min=0.0km az=119.4,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	2.73	202	P	Pn	21 22 47.2	-1.7
MXZ				S	S	21 23 29.7	-0.1
WMGZ	**Waiomatatini S**	2.94	199	P	Pn	21 22 51.3	+0.2
WMGZ				S	S	21 23 35.2	+1.7
HAZ	**Te Kaha**	3.09	208	P	Pn	21 22 52.3	-0.2
HAZ				S	S	21 23 36.5	+0.2
PKGZ	**Pakihiroa**	3.10	203	P	Pn	21 22 53.0	+0.2
PKGZ				S	S	21 23 35.0	-1.7
PUZ	**Puketiti**	3.22	199	P	Pn	21 22 53.8	-0.1
PUZ				S	S	21 23 39.5	+0.6
RUGZ	**Raukumara Rang**	3.31	207	P	Pn	21 22 54.9	-0.2
RUGZ				S	S	21 23 38.9	-1.9
TWGZ	**Tauwhareparae**	3.40	202	P	Pn	21 22 57.9	+2.0
TWGZ				S	S	21 23 44.0	+1.7
MWZ	**Matawai**	3.69	206	P	Pn	21 22 59.0	-0.1
MWZ				S	S	21 23 48.3	+0.1
URZ	**Urewera**	3.79	211	P	Pn	21 22 59.8	-0.3
URZ				S	S	21 23 50.5	+0.4
MUGZ	**Murupara**	4.12	213	P	Pn	21 23 03.9	0.0
MUGZ				S	S	21 23 58.4	+1.5
MTHZ	**Maungataniwha**	4.41	209	P	Pn	21 23 07.5	+0.3
MTHZ				S	S	21 24 05.2	+2.3
BKZ	**Black Stump Fm**	4.82	210	P	Pn	21 23 12.6	+0.6
BKZ				S	S	21 24 11.0	-0.7
KWHZ	**Kaweka Forest**	5.07	209	P	Pn	21 23 14.7	-0.3
KWHZ				S	S	21 24 18.7	+1.7
NTVZ	**North Tongarir**	5.13	217	P	Pn	21 23 15.8	-0.1
TMVZ	**Te Maari**	5.13	216	P	Pn	21 23 15.5	-0.4
ETVZ	**East Tongariro**	5.14	216	P	Pn	21 23 15.5	-0.5
HIZ	**Hauiti**	5.16	226	P	Pn	21 23 17.7	+1.7
OTVZ	**Oturere**	5.19	216	P	Pn	21 23 15.8	-0.8
SNVZ	**South Ngauruho**	5.22	216	P	Pn	21 23 15.9	-1.0
KAHZ	**Kahuranaki**	5.23	204	P	Pn	21 23 17.1	+0.2
KAHZ				S	S	21 24 22.5	+2.1
BHHZ	**Black Hill Sta**	5.27	211	P	Pn	21 23 17.3	-0.1
BHHZ				S	S	21 24 23.4	+2.0
KRHZ	**Kereru**	5.27	208	P	Pn	21 23 16.6	-0.9
KRHZ				S	S	21 24 21.4	-0.1
PNHZ	**Pukenui**	5.57	208	P	Pn	21 23 20.2	-0.9
PNHZ				S	S	21 24 26.5	-1.6
TSZ	**Takapari Road**	5.79	209	P	Pn	21 23 22.8	-1.0
TSZ				S	S	21 24 32.5	-0.4
DVHZ	**Dannevirke**	5.92	206	P	Pn	21 23 26.0	+0.7
DVHZ				S	S	21 24 34.2	-1.5
ANWZ	**Angora Road**	5.96	204	P	Pn	21 23 26.7	+1.0
ANWZ				S	S	21 24 38.1	+1.7
PRWZ	**Pori Road**	6.22	206	P	Pn	21 23 29.5	+0.6
PRWZ				S	S	21 24 41.4	-0.9
BFZ	**Birch Farm**	6.23	204	P	Pn	21 23 29.1	0.0
BFZ				S	S	21 24 42.0	-0.6
TIWZ	**Tintock**	6.44	206	P	Pn	21 23 31.1	-0.6
TIWZ				S	S	21 24 46.2	-1.2
MRZ	**Mangatainoka R**	6.46	208	P	Pn	21 23 30.4	-1.4
MRZ				S	S	21 24 45.3	-2.3
HOWZ	**Holdsworth Sta**	6.69	208	P	Pn	21 23 33.7	-1.0
TMWZ	**Te Maipa**	6.73	205	P	Pn	21 23 35.3	0.0
TMWZ				S	S	21 24 52.3	-1.5
CAW	**Cannon Point**	7.04	209	P	Pn	21 23 37.5	-1.6
TRWZ	**Traveller**	7.06	205	P	Pn	21 23 38.6	-0.7
TRWZ				S	S	21 25 00.5	-0.7
PAWZ	**Paruwai Farm**	7.14	206	P	Pn	21 23 39.2	-1.1
PAWZ				S	S	21 25 00.5	-2.5
MSWZ	**Moikau Station**	7.24	207	P	Pn	21 23 40.4	-1.0
MSWZ				S	S	21 25 02.4	-2.8
PLWZ	**Palliser**	7.37	206	P	Pn	21 23 42.1	-1.1
PLWZ				S	S	21 25 06.2	-2.0
BHW	**Baring Head**	7.37	209	P	Pn	21 23 41.7	-1.4
BHW				S	S	21 25 06.2	-2.0
TCW	**Tory Channel**	7.46	213	P	Pn	21 23 42.2	-2.0
TCW				S	S	21 25 06.9	-3.3
TUWZ	**Tuamarina**	7.79	213	P	Pn	21 23 45.7	-2.5
TKNZ	**Takaka Hill**	7.96	219	P	Pn	21 23 51.1	+0.7
BSWZ	**Blackbirch Sta**	8.04	212	P	Pn	21 23 49.4	-2.0
THZ	**Tophouse**	8.53	216	P	Pn	21 23 56.5	-1.1
KHZ	**Kahutara**	8.76	211	P	Pn	21 23 58.2	-2.1

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*IDC **09** 21:24:33.7±1.0,6°.97N×73°.22W,h150^{km}±18^{km},mb3.4/1, mbtmp4.4/4,Error ellipse: s-maj=62.3km s-min=8.8km az=130.0*

*RSNC **09** 21:24:34.8±0.8,6°.81N×73°.15W,h148^{km}±3^{km},ML3.5, Mw3.7*

ISC 09 21:24:32.5±0.8,6°.83N±0°.03×73°.13W±0°.04,h161^{km}±6^{km}, n39,σ1^s.41/73,2C-2D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.24	192	⇓*i*P	Pn	21 24 54.6	0.0
BARC				*e*S	Sn	21 25 09.8	-1.6
BARC				*i*		21 25 11.3	
	comp=Z,700nm,0.2s						
BRRC	**Barranca, Sant**	0.64	296	⇑*i*P	Pn	21 24 56.5	+0.6
BRRC				*e*S	Sn	21 25 13.5	-0.3
BRRC				*i*		21 25 17.7	
	comp=Z,449nm,0.3s						
PAMC	**Pamplona, Colo**	0.67	40	⇑*i*P	Pn	21 24 57.5	+0.8
PAMC				*e*S	Sn	21 25 14.6	-0.5
PAMC				*i*		21 25 15.4	
	comp=Z,268nm,0.2s						
RUSC	**La Rusia**	0.93	177	⇓*i*P	Pn	21 24 58.5	+0.1
RUSC				*e*S	Sn	21 25 17.4	-0.9
RUSC				*i*		21 25 18.3	
	comp=Z,211nm,0.2s						
PTBC	**PUERTO BERRIO,**	1.35	258	*e*P	Pn	21 25 01.3	-0.2
PTBC				*e*S	Sn	21 25 22.4	-1.3
PTBC				*i*		21 25 29.1	
	comp=Z,265nm,0.3s						
TAMC	**Tame, Arauca**	1.39	106	*e*P	Pn	21 25 03.0	+1.2
TAMC				*i*		21 25 24.0	
	comp=Z,164nm,0.4s						
TAMC				*e*S	Sn	21 25 24.8	+0.4
OCAC	**Ocana**	1.42	352	*e*P	Pn	21 25 02.7	+0.4
OCAC				*i* S	Sn	21 25 24.6	-0.7
OCAC				*e*S	Sn	21 25 24.6	-0.7
OCAC				*i*		21 25 28.3	
	comp=Z,510nm,0.2s						
SPBC	**San Pablo de B**	1.50	219	*e*P	Pn	21 25 03.5	+0.5
SPBC				*e*S	Sn	21 25 25.9	-0.6
SPBC				*i*		21 25 30.0	
	comp=Z,456nm,0.4s						
ZARC	**Zaragoza, Cauc**	1.84	291	*e*P	Pn	21 25 07.4	+0.9
ZARC				*e*S	Sn	21 25 32.8	+0.1
ZARC				*i*		21 25 37.9	
	comp=Z,363nm,0.3s						
NORC	**Norcasia**	2.13	234	*e*P	Pn	21 25 10.6	+0.7
NORC				*e*S	Sn	21 25 38.5	-0.3
NORC				*i*		21 25 48.3	
	comp=Z,130nm,0.2s						
SMLC	**San Martn de**	2.17	335	*e*P	Pn	21 25 11.1	+0.7
SMLC				*e*S	Sn	21 25 39.1	-0.5
SMLC				*i*		21 25 41.9	
	comp=Z,287nm,0.1s						
CHIC	**Chingaza**	2.26	195	*e*P	Pn	21 25 12.8	+1.0
CHIC				*e*S	Sn	21 25 42.1	0.0
CHIC				*i*		21 25 46.0	
	comp=Z,182nm,0.5s						
ROSC	**El Rosal**	2.30	211	P	Pn	21 25 14.1	+1.9
	comp=Z,86nm,0.3s,baz=68,slow=16,SNR=49						
ROSC				S	Sn	21 25 45.0	+2.1
	comp=Z,368nm,0.5s,baz=57,slow=19,SNR=7.5						
ROSC	**El Rosal**	2.30	211	*e*P	Pn	21 25 14.4	+2.2
ROSC				*e*S	Sn	21 25 42.1	-0.7
ROSC				*i*		21 25 49.4	
	comp=Z,543nm,0.4s						
HELC	**Santa Helena**	2.46	255	*e*P	Pn	21 25 15.3	+1.2
HELC				*e*S	Sn	21 25 46.9	+0.6
HELC				*i*		21 25 52.8	
	comp=Z,146nm,0.3s						
UREC	**San Jos de Ur**	2.55	291	*e*P	Pn	21 25 13.3	-1.6
UREC				*e*S	Sn	21 25 45.1	-2.5
UREC				*i*		21 25 53.0	
	comp=Z,131nm,0.2s						
LL1C	**La Loma 1 Cana**	2.73	351	*e*P	Pn	21 25 19.6	+2.6
LL1C				*e*S	Sn	21 25 53.8	+2.2
LL1C				*i*		21 26 01.9	
	comp=Z,506nm,0.5s						
VILC	**Villavicencio,**	2.75	192	*e*P	Pn	21 25 18.4	+0.9
VILC				*e*S	Sn	21 25 52.3	0.0
PTGC	**Puerto Gaitan,**	2.79	159	*e*P	Pn	21 25 17.8	0.0
PTGC				*e*S	Sn	21 25 51.5	-1.4
PTGC				*i*		21 25 54.0	
	comp=Z,72nm,0.2s						
CBOC	**Ciudad Bolivar**	3.02	252	*e*P	Pn	21 25 22.2	+1.5
CBOC				*e*S	Sn	21 25 59.8	+1.7
DBBC	**Dabeiba**	3.06	274	*e*P	Pn	21 25 21.9	+0.7
DBBC				*e*S	Sn	21 25 58.2	-0.8
DBBC				*i*		21 26 02.6	
	comp=Z,342nm,0.3s						
ARGC	**Ariguani, Magd**	3.21	340	*e*P	Pn	21 25 24.7	+1.7
ARGC				*e*S	Sn	21 26 04.5	+2.3
ARGC				*i*		21 26 10.6	
	comp=Z,40nm,0.6s						
SDV	**Santo Domingo**	3.21	50	P	Pn	21 25 24.2	+1.0
	comp=Z,75nm,0.3s,baz=238,slow=12,SNR=44						
SDV				S	Sn	21 26 02.8	+0.3
	comp=Z,24nm,0.4s,baz=270,slow=20,SNR=4.5						
SDV	**Santo Domingo**	3.21	50	*e*P	Pn	21 25 24.2	+1.0
ANIL	**Santa Ana**	3.24	224	*e*P	Pn	21 25 25.5	+1.8
ANIL				*e*S	Sn	21 26 05.1	+1.8
PRAC	**Prado**	3.55	210	*e*P	Pn	21 25 28.2	+0.8
PRAC				*e*S	Sn	21 26 10.4	+0.4
PRAC				*i*		21 26 17.0	
	comp=Z,199nm,0.4s						
ORTC	**Ortega, Tolima**	3.58	216	*e*P	Pn	21 25 28.9	+1.2
ORTC				*e*S	Sn	21 26 11.0	+0.2
ORTC				*i*		21 26 16.1	
	comp=Z,102nm,0.2s						
SJCC	**San Jacinto, C**	3.66	327	*e*P	Pn	21 25 28.3	-0.5
SJCC				*e*S	Sn	21 26 09.8	-2.8
SJCC				*i*		21 26 24.5	
	comp=Z,47nm,0.6s						
PLMC	**San Jos del P**	3.67	239	*e*P	Pn	21 25 30.0	+1.1
PLMC				*e*S	Sn	21 26 11.7	-1.1
PLMC				*i*		21 26 18.1	
	comp=Z,29nm,0.4s						
CRJC	**Cerrejon, Guaj**	4.17	3	*e*P	Pn	21 25 34.9	-0.6
CRJC				*e*S	Sn	21 26 22.2	-2.4
CRJC				*i*		21 26 30.0	
	comp=Z,79nm,0.3s						
YOTC	**Yotoco, Valle**	4.27	229	*e*P	Pn	21 25 37.0	+0.3
YOTC				*e*S	Sn	21 26 23.9	-2.8
GUVC	**San Jose del G**	4.28	173	*e*P	Pn	21 25 36.7	-0.1
GUVC				*e*S	Sn	21 26 26.2	-0.7
GUVC				*i*		21 26 33.5	
	comp=Z,75nm,0.3s						
SMRC	**Santa Marta, M**	4.44	346	*e*P	Pn	21 25 39.2	+0.4
SMRC				*e*S	Sn	21 26 26.9	-3.8
SMRC				*i*		21 26 30.5	
	comp=Z,25nm,0.3s						
MACC	**Macarena, Meta**	4.70	189	*e*P	Pn	21 25 41.7	-0.6
MACC				*e*S	Sn	21 26 33.1	-3.7
MACC				*i*		21 26 39.6	
	comp=Z,27nm,0.3s						
GARC	**Garzon, Huila**	5.17	207	*e*P	Pn	21 25 48.7	0.0
GARC				*i*		21 26 53.0	
	comp=Z,44nm,0.2s						
SJG	**San Juan**	13.12	31	P	Pn	21 27 32.1	-0.8
	comp=Z,19nm,0.3s,baz=310,slow=22,SNR=2.6						
YKA	**Yellowknife Ar**	63.26	340	P	P	21 34 45.2	+1.6
	comp=Z,0.6nm,0.5s,baz=132,slow=6.7,SNR=5.5						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	149.10	234	PKPbc	PKPab	21 44 05.6	-1.7
	comp=Z,0.4nm,0.8s,baz=112,slow=2.5,SNR=3.3						
WRA	**Warramunga Arr**	150.33	241	PKPbc	PKiKP	21 44 06.9	+0.5
	comp=Z,0.4nm,1.1s,baz=104,slow=3.4,SNR=1.4						

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*MOS **09** 21:35:05.6±0.8,51°.89N×158°.11E,h133^{km},mb3.9/6,Error ellipse: s-maj=13.7km s-min=5.0km az=84.6*

*KRSC **09** 21:35:06.2±1.1,51°.87N×158°.49E,h116^{km}±8^{km},ML4.3*

*NEIC **09** 21:35:06.8±1.0,51°.91N±0°.10×157°.8E±0°.2,h118^{km}±7^{km}, mb4.1/17,Error ellipse: s-maj=15.4km s-min=12.7km az=131.0*

*IDC **09** 21:35:07.5±1.5,51°.93N×157°.85E,h124^{km}±9^{km},mb3.4/14, mbtmp3.8/16,Error ellipse: s-maj=21.7km s-min=14.7km az=158.0*

ISC 09 21:35:06.7±0.6,51°.90N±0°.04×158°.31E±0°.05,h125^{km}±4^{km}, n119,σ1^s.17/156,mb3.9/20,4C-2D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	0.17	238	PN	Pn	21 35 23.9	+0.1
KDTR				S	Sn	21 35 35.6	-1.1
KDTR	**Khodutka, Kamc**	0.17	238	*e*P	Pn	21 35 23.9	+0.1
KDTR				*e*S	Sn	21 35 35.6	-1.1
ASAK	**Asacha**	0.55	332	PN	Pn	21 35 26.1	+0.5
ASAK				S	Sn	21 35 40.3	+0.4
ASAK	**Asacha**	0.55	332	*e*P	Pn	21 35 26.1	+0.5
ASAK				*e*S	Sn	21 35 40.3	+0.4
RUS	**Russkaya**	0.55	13	PN	Pn	21 35 25.4	0.0
RUS				S	Sn	21 35 38.6	-1.1
RUS	**Russkaya**	0.55	13	*e*P	Pn	21 35 25.4	0.0
RUS				*e*S	Sn	21 35 38.6	-1.1
MTVR	**Mutnovka**	0.59	352	PN	Pn	21 35 26.1	+0.2

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MTVR                                 S     Sn     21 35 40.7 +0.2
MTVR  Mutnovka             0.59 352 eP     Pn     21 35 26.1 +0.2
MTVR                                eS     Sn     21 35 40.7 +0.2
GRL   Gorelyy              0.67 347  PN    Pn     21 35 27.4 +1.0
GRL                                  S     Sn     21 35 42.3 +0.9
GRL   Gorelyy              0.67 347 eP     Pn     21 35 27.4 +1.0
GRL                                 eS     Sn     21 35 42.3 +0.9
KRMR  Karymshinskiy        0.94 353  PN    Pn     21 35 29.0 +0.5
KRMR                                 S     Sn     21 35 45.2 +0.1
KRMR  Karymshinskiy        0.94 353 eP     Pn     21 35 29.0 +0.5
KRMR                                eS     Sn     21 35 45.2 +0.1
MIPR  Malaya Ipel'ka       1.03 292  PN    Pn     21 35 30.0 +0.6
MIPR  Malaya Ipel'ka       1.03 292 eP     Pn     21 35 30.0 +0.6
PAU   Pauzhetka            1.03 246  PN    Pn     21 35 30.4 +1.0
PAU                                  S     Sn     21 35 47.8 +1.2
PAU   Pauzhetka            1.03 246 eP     Pn     21 35 30.4 +1.0
PAU                                 eS     Sn     21 35 47.8 +1.2
PET   Petropavlovsk        1.14  10 ePN    Pn     21 35 30.9 +0.4
PET                                 eS     Sn     21 35 47.7 -0.9
PET                                  pmax  pmax
      comp=Z,67nm,0.4s
PET                                  smax  smax
      comp=N,860nm,0.7s
PET                                  smax  smax
      comp=E,793nm,0.4s
PET   Petropavlovsk        1.14  10  Pn    Pn     21 35 30.2 -0.3
PET   Petropavlovsk        1.14  10 eP     Pn     21 35 31.0 +0.4
PET                                 eS     Sn     21 35 47.9 -0.7
DALK  Dalny                1.16  13  PN    Pn     21 35 31.1 +0.4
DALK                                 S     Sn     21 35 48.2 -0.8
DALK  Dalny                1.16  13 eP     Pn     21 35 31.1 +0.4
DALK                                eS     Sn     21 35 48.2 -0.8
APC   Apacha               1.25 326  PN    Pn     21 35 32.2 +0.6
APC                                  S     Sn     21 35 50.6 +0.1
APC   Apacha               1.25 326 eP     Pn     21 35 32.2 +0.6
APC                                 eS     Sn     21 35 50.6 +0.1
PEA0B Petropavlovsk-       1.27 343c iPN   Pn     21 35 32.6 +0.8
PEA0B                               i S    Sn     21 35 51.7 +0.7
PEA0B Petropavlovsk-       1.27 343        Pn     21 35 32.5 +0.6
PETK  Petropavlovsk-       1.27 343  P     Pn     21 35 31.6 -0.2
      comp=E,78nm,0.4s,baz=143,slow=14,SNR=486
PETK                                 S     Sn     21 35 50.2 -0.8
      comp=E,15nm,0.5s,baz=114,slow=16,SNR=5.4
PETK  Petropavlovsk-       1.27 343  Pn    Pn     21 35 30.9 -0.9
UGLR  Uglovaya             1.35  13  PN    Pn     21 35 33.5 +0.7
UGLR                                 S     Sn     21 35 52.9 +0.2
UGLR  Uglovaya             1.35  13 eP     Pn     21 35 33.5 +0.7
UGLR                                eS     Sn     21 35 52.9 +0.2
AVH   Avacha               1.39  11  PN    Pn     21 35 34.5 +1.2
AVH                                  S     Sn     21 35 54.4 +0.9
AVH   Avacha               1.39  11 eP     Pn     21 35 34.5 +1.2
AVH                                 eS     Sn     21 35 54.4 +0.9
SMAR  Somma                1.40  12  PN    Pn     21 35 34.3 +0.8
SMAR                                 S     Sn     21 35 53.7 -0.2
SMAR  Somma                1.40  12 eP     Pn     21 35 34.3 +0.8
SMAR                                eS     Sn     21 35 53.7 -0.2
KOK   Koryaka              1.41   8  PN    Pn     21 35 34.7 +1.2
KOK                                  S     Sn     21 35 54.5 +0.6
KOK   Koryaka              1.41   8 eP     Pn     21 35 34.7 +1.2
KOK                                 eS     Sn     21 35 54.5 +0.6
NLC   Nalytchevo           1.42  26  PN    Pn     21 35 33.3 -0.2
NLC                                  S     Sn     21 35 51.9 -2.0
NLC   Nalytchevo           1.42  26 eP     Pn     21 35 33.3 -0.2
NLC                                 eS     Sn     21 35 51.9 -2.0
SDLR  Sedlovina            1.42  14  PN    Pn     21 35 34.1 +0.4
SDLR  Sedlovina            1.42  14 eP     Pn     21 35 34.1 +0.4
KRER  Koryakskii           1.43  11  PN    Pn     21 35 34.9 +1.1
KRER                                 S     Sn     21 35 55.3 +0.8
KRER  Koryakskii           1.43  11 eP     Pn     21 35 34.9 +1.1
KRER                                eS     Sn     21 35 55.3 +0.8
KRX   Arik                 1.48   8  PN    Pn     21 35 35.2 +0.9
KRX                                  S     Sn     21 35 55.3  0.0
KRX   Arik                 1.48   8 eP     Pn     21 35 35.2 +0.9
KRX                                 eS     Sn     21 35 55.3  0.0
SPN   Mys Shipunski        1.59  40  PN    Pn     21 35 35.9 +0.5
SPN                                  S     Sn     21 35 56.1 -1.3
SPN   Mys Shipunski        1.59  40 eP     Pn     21 35 35.9 +0.5
SPN                                 eS     Sn     21 35 56.1 -1.3
GNL   Ganaly               1.81 353  PN    Pn     21 35 38.7 +0.5
GNL   Ganaly               1.81 353 eP     Pn     21 35 38.7 +0.5
SKR   Severo-Kuril's       1.84 229 ePN    Pn     21 35 39.6 +1.2
SKR                                 eS     Sn     21 36 03.0 +0.4
SKR                                  pmax  pmax
      comp=Z,219nm,0.5s
SKR                                  smax  smax
      comp=E,3µm,0.5s
SKR                                  smax  smax
      comp=N,2µm,0.3s
SKR   Severo-Kuril's       1.84 229 eP     Pn     21 35 39.3 +0.9
SKR                                 eS     Sn     21 36 02.9 +0.4
KII   Karymskiy            2.25  17  PN    Pn     21 35 44.1 +0.6
KII   Karymskiy            2.25  17 eP     Pn     21 35 44.1 +0.6
MKZ   Mys Kozlova          3.36  36  PN    Pn     21 35 57.8 +0.1
MKZ                                  S     Sn     21 36 34.3 -2.9
MKZ   Mys Kozlova          3.36  36 eP     Pn     21 35 57.8 +0.1
MKZ                                 eS     Sn     21 36 34.3 -2.9
TUMD  Tumrok D             3.54  20 eP     Pn     21 36 01.2 +1.1
TUMD                                eS     Sn     21 36 41.2 -0.2
TUMR  Tumrok               3.56  17  PN    Pn     21 36 01.2 +0.7
TUMR                                 S     Sn     21 36 41.2 -1.0
TUMR  Tumrok               3.56  17 eP     Pn     21 36 02.2 +1.7
ESO   Esso                 4.04   3  PN    Pn     21 36 06.8  0.0
ESO   Esso                 4.04   3 eP     Pn     21 36 06.8  0.0
SEY   Seymchan            11.51 346  P     Pn     21 37 47.8 +0.9
      comp=N,1.9nm,0.8s,baz=156,slow=11,SNR=5.4
ASAJ  Asahikawa           13.07 240  P     Pn     21 38 03.5 -4.0
      comp=N,0.9nm,0.2s,baz=96,slow=19,SNR=1.2
ERM   Erimo               14.29 232 i P    Pn     21 38 21.2 -1.9
ERM   Erimo               14.29 232  Pn    Pn     21 38 19.4 -3.6
BILL  Bilibino            16.65  10 eP     P      21 38 53.2 +0.8
BILL                                 pmax  pmax
      comp=Z,2.0nm,1.0s
BILL  Bilibino            16.65  10        P      21 38 53.8 +1.4
YAK   Yakutsk             18.45 314⇓eP     P      21 39 11.0 -1.2
YAK                                  pmax  pmax
      comp=Z,10.0nm,0.6s
MAJO  Matsushiro          20.95 231  P     Pn     21 39 41.6 -1.8
MAJO                                 pmax  pmax
      comp=Z,5.0nm,0.7s
MAJO  Matsushiro          20.95 231  P     Pn     21 39 41.6 -1.8
MAJO                                 IAmb  IAmb   21 39 45.9
      comp=Z,5.2nm,0.7s
MJAR  Matsushiro Arr      20.95 231  P     P      21 39 37.8 -1.7
      comp=Z,1.1nm,0.6s,baz=21,slow=12,SNR=2.4
      comp=Z,1.1nm,0.6s
TIXI  Tiksi               23.73 337  P     P      21 40 06.1 -0.8
      comp=Z,3.3nm,0.3s,baz=132,slow=8.6,SNR=19
      comp=Z,3.3nm,0.3s
TIXI  Tiksi               23.73 337⇑eP     P      21 40 05.8 -1.1
TIXI                                 pmax  pmax
      comp=Z,8.0nm,1.6s
TIXI  Tiksi               23.73 337  P     P      21 40 06.3 -0.5
TIXI                                 IAmb  IAmb   21 40 08.9
      comp=Z,5.3nm,1.0s
ILAR  Eielson Array       30.43  44  P     P      21 41 08.3 +1.5
      comp=Z,0.4nm,0.7s,baz=255,slow=7.6,SNR=5.0
      comp=Z,0.4nm,0.7s
BMAR  Burnt Mountain      31.35  39  P     P      21 41 21.3 +6.4
H11N2 WAKE ISLAND Hy      32.80 165  T     T      22 15 48.6
      baz=349,slow=76,SNR=21
L27K  Beaver Creek,       32.81  47  P     P      21 41 29.9 +2.2
H11N3 WAKE ISLAND Hy      32.82 165  T     T      22 15 43.0
      baz=349,slow=76,SNR=16
H11N1 WAKE ISLAND Hy      32.82 165  T     T      22 15 52.4
      baz=349,slow=76,SNR=17
SONM  Songino Array       33.12 284  P     P      21 41 30.1 -0.6
      comp=Z,0.4nm,0.4s,baz=73,slow=5.0,SNR=1.5
      comp=Z,0.4nm,0.4s
H11S1 WAKE ISLAND Hy      33.97 166  T     T      22 17 13.9
      baz=350,slow=76,SNR=15
H11S3 WAKE ISLAND Hy      33.98 166  T     T      22 17 17.6
      baz=350,SNR=13
H11S2 WAKE ISLAND Hy      33.99 166  T     T      22 17 19.1
      baz=350,slow=76,SNR=9.6
ZALV  Zalesovo Beam       42.51 303  P     P      21 42 47.3 -1.9
      comp=Z,0.6nm,0.5s,baz=52,slow=10,SNR=2.8
      comp=Z,0.6nm,0.5s
ZALV  Zalesovo Beam       42.51 303  P     P      21 42 49.1 -0.1
ZALV  Zalesovo Beam       42.51 303  P     P      21 42 49.1 -0.1
EUNU  Eureka              43.37  13  P     P      21 42 57.2 +1.3
EUNU                                 IAmb  IAmb   21 42 58.6
      comp=Z,5.6nm,1.2s
KURK  Kurchatov           47.44 302d iP    P      21 43 27.1 -1.1
KURK                                 pmax  pmax
      comp=Z,3.0nm,0.9s
KURK  Kurchatov           47.44 302  P     P      21 43 26.7 -1.5
KURK                                 IAmb  IAmb   21 43 28.0
      comp=Z,3.0nm,0.8s
MK31  Makanchi Array      47.69 296⇑iP     P      21 43 29.0 -1.3
MK31  Makanchi Array      47.69 296  P     P      21 43 29.0 -1.3
MKAR  Makanchi Array      47.69 296  P     P      21 43 29.0 -1.3
      comp=Z,0.3nm,0.4s,baz=50,slow=7.1,SNR=12
      comp=Z,0.3nm,0.4s
MKAR  Makanchi Array      47.69 296  P     P      21 43 28.7 -1.5
MAKZ  Makanchi            47.85 296  P     P      21 43 30.4 -1.2
MAKZ                                 pmax  pmax
      comp=Z,6.0nm,1.4s
MAKZ  Makanchi            47.85 296  P     P      21 43 30.4 -1.2
MAKZ                                 IAmb  IAmb   21 43 31.8
      comp=Z,5.6nm,1.4s
SPITS Spitsbergen Ar      48.13 350  P     P      21 43 33.4 +0.2
SPITS                                pmax  pmax
      comp=Z,13nm,1.4s
SPB2  Spitsbergen Ar      48.13 350  P     P      21 43 33.4 +0.2
BRVK  Borovoye            50.31 308⇑eP     P      21 43 48.4 -1.7
BRVK                                 pmax  pmax
      comp=Z,4.0nm,1.7s
BRVK  Borovoye            50.31 308  P     P      21 43 48.9 -1.2
BRVK                                 IAmb  IAmb   21 43 49.4
      comp=Z,1.5nm,0.6s
ARCES ARCESS Array B      54.08 341  P     P      21 44 16.9 -0.8
      comp=Z,1.1nm,0.6s,baz=57,slow=8.8,SNR=4.2
      comp=Z,1.1nm,0.6s
ARCES ARCESS Array B      54.08 341  P     P      21 44 17.2 -0.5
CMAR  Chiang Mai Arr      56.86 257  P     P      21 44 37.5 -0.8
      comp=Z,0.7nm,0.8s,baz=19,slow=5.9,SNR=3.5
      comp=Z,0.7nm,0.8s
NVAR  Mina Array Bea      57.19  68  P     P      21 44 43.8 +3.2
      comp=Z,0.4nm,0.5s,baz=291,slow=7.6,SNR=3.9
      comp=Z,0.4nm,0.5s
NVAR  Mina Array Bea      57.19  68  P     P      21 44 43.2 +2.6
ABKAR Akbulak array       57.73 310  P     P      21 44 43.0 -1.0
PDAR  Pinedale Array      59.06  59  P     P      21 44 56.1 +2.4
      comp=Z,0.2nm,0.6s,baz=260,slow=5.9,SNR=3.6
      comp=Z,0.2nm,0.6s
PDAR  Pinedale Array      59.06  59  P     P      21 44 55.9 +2.2
FIA1  FINESS Array S      60.77 336  P     P      21 45 03.5 -1.1
FINES FINESS Array B      60.77 336  P     P      21 45 04.1 -0.6
      comp=Z,0.7nm,0.4s,baz=35,slow=8.0,SNR=18
      comp=Z,0.7nm,0.4s
FINES FINESS Array B      60.77 336  P     P      21 45 03.8 -0.9
OBN   Obninsk             62.92 327 eP     P      21 45 16.7 -2.5
OBN                                 e*PP   pP     21 45 47.8 -1.8
OBN                                 e             21 45 54.9
OBN                                 e*SP   sP     21 46 05.2 +1.8
OBN                                  pmax  pmax
      comp=Z,2.0nm,0.9s
NC204 NORSAR Array S      64.23 343  P     P      21 45 27.1 -0.7
NB2   NORSAR Subarra      64.37 343  P     P      21 45 28.6 -0.1
      comp=Z,0.9nm,0.6s,baz=21,slow=6.9
NOA   NORSAR Array B      64.37 343  P     P      21 45 28.9 +0.3
      comp=Z,1.7nm,0.7s,baz=21,slow=6.7,SNR=12
      comp=Z,1.7nm,0.7s
TXAR  Lajitas Array       72.12  65  P     P      21 46 20.0 +2.5
      comp=Z,0.5nm,0.5s,baz=307,slow=5.2,SNR=6.3
      comp=Z,0.5nm,0.5s
BUR08 Bucovina Ar. S      73.03 329  P     P      21 46 23.0 +0.4
BUR08                                IAmb  IAmb   21 46 33.2
      comp=Z,3.0nm,1.4s
BURAR Bucovina Array      73.05 329  P     P      21 46 22.7 -0.1
CLL   Collm               73.07 338 eP     P      21 46 24.0 +1.4
GEC2  GERESS Array S      75.19 337  P     P      21 46 35.8 +0.7
GEC2                                 IAmb  IAmb   21 46 36.3
      comp=Z,1.3nm,0.6s
GERES GERESS Array B      75.19 337  P     P      21 46 35.9 +0.7
      comp=Z,1.1nm,0.5s,baz=35,slow=5.4,SNR=11
      comp=Z,1.1nm,0.5s
NRCA  Norcia              80.94 335  P     P      21 47 08.3 +1.4
NRCA                                 IAmb  IAmb   21 47 09.2
      comp=Z,4.3nm,0.8s
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*JMA **09** 21:36:18.4±0.2, 31.°1N±0.°4×129.°1E±0.°8, h8^{km}±1^{km}, MV3.7/34, SW OFF KYUSHU*

*NIED **09** 21:36:18.4, 31.°12N×129.°07E, h8^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.98; $M_{\theta\theta}$4.46; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.57; $M_{\theta\phi}$2.35; $M_{\phi r}$1.83; Fault plane solution: $M_0$5.17000×10^{14} NP1:ϕ_s91.00000°, δ43.00000°, λ-54.00000°. NP2:ϕ_s227.00000°, δ57.00000°, λ-118.00000°.*

*IDC **09** 21:36:22.8±3.8, 31.°18N×128.°88E, h0^{km}, mb3.5/3, mbtmp3.5/6, ML3.1/3 Error ellipse: s-maj=73.5km s-min=29.9km az=151.0*

ISC 09 21:36:19.1±1.6, **31.°08N**±0.°04×**129.°14E**±0.°07, **h1**^{km}±12^{km}, **n17**, σ**1^{s}84**/20, **mb3.6**/3, **Kyushu**

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Code  Station Name          Δ°  AZ°    Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
JSJ   Shimokoshiki         0.77  40  P     Pg     21 36 33.2 -0.7
JKC   Kuchinoerabu         1.10 124  P     Pg     21 36 40.4 +0.3
JKC                                 eS     Sg     21 36 55.8 +1.4
JSU   Suzuyama             1.20  69  P     Pn     21 36 41.7 -1.3
JNN   Nakanoshima          1.39 153  P     Pg     21 36 45.8  0.0
JYAK  Yakushimahirau       1.45 125  P     Pn     21 36 45.4 -1.0
JYAK                                eS     Sn     21 37 04.1 -1.9
JFU   Fukue jima 2         1.60 348  P     Pn     21 36 46.5 -2.1
JFU                                 eS     Sn     21 37 06.6 -3.2
JTN   Tanegashima 3        1.64 105  P     Pn     21 36 48.5 -0.6
JMTN  Minamitane           1.66 114  P     Pn     21 36 48.7 -0.6
JMTN                                eS     Sn     21 37 09.9 -1.4
JTZ   Takazaki             1.85  63  P     Pn     21 36 51.3 -0.7
JTAJ  Takarajima           1.92 178  P     Pb     21 36 53.2 -1.7
JIU3  Izumi3               2.04  44  P     Pn     21 36 53.7 -0.8
JNU   Nakatsue             2.51  36  Pn    Pg     21 37 06.2 -1.0
      7.2nm,0.3s,baz=220,slow=13,SNR=23
JNU                                  Sn    Sb     21 37 38.2 +1.8
      10nm,0.3s,baz=228,slow=21,SNR=7.6
      47nm,0.6s
KSRS  Korea Array          6.43 351  Pn    Pn     21 37 56.8 +1.8
      0.2nm,0.3s,baz=177,slow=14,SNR=4.7
      1.1nm,0.5s
KLR   Kul'dur             18.23   5  P     P      21 40 37.4 +3.8
      0.1nm,0.3s,baz=192,slow=7.4,SNR=3.2
      1.6nm,0.7s
MKAR  Makanchi Array      39.06 307  P     P      21 43 50.9 +3.4
      0.3nm,0.6s,baz=79,slow=7.5,SNR=1.9
      0.3nm,0.6s
FINES FINESS Array B      69.06 330  P     P      21 47 27.2 +1.0
      0.6nm,0.6s,baz=79,slow=7.2,SNR=4.3
      0.6nm,0.6s
NOA   NORSAR Array B      75.33 334  P     P      21 48 07.0 +3.2
      0.4nm,0.7s,baz=55,slow=5.4,SNR=3.7
      0.4nm,0.7s
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*IDC **09** 22:16:11.9±1.1, 10.°24S×161.°46E, h99^{km}±8^{km}, mb3.6/11, mbtmp4.1/13, MS3.2/8, Error ellipse: s-maj=18.8km s-min=11.5km az=52.0*

*NEIC **09** 22:16:12.2±2.7, 10.°19S±0.°09×161.°52E±0.°10, h91^{km}±7^{km}, mb4.4/19, Error ellipse: s-maj=17.8km s-min=6.9km az=48.0*

ISC 09 22:16:10.7±0.5, **10.°17S**±0.°07×**161.°56E**±0.°07, **h85**^{km}, **n78**, σ**1^{s}57**/70, **mb4.2**/20, **Bougainville-Solomon Islands region**

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Code  Station Name          Δ°  AZ°    Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
HNR   Honiara              1.75 295  P     Pn     22 16 39.8 +0.4
      1µm,0.5s,baz=153,slow=2.9,SNR=48
HNR                                  S     Sn     22 17 02.6 +1.4
      6µm,0.6s,baz=181,slow=23,SNR=13
HNR   Honiara              1.75 295  P     Pn     22 16 40.2 +0.8
SANVU Saraoutou            7.61 134  Pn    Pn     22 17 59.0 +0.1
SANVU Saraoutou            7.61 134  P     Pn     22 17 59.7 +0.8
DVP   Devils Point         9.89 140  P     Pn     22 18 31.4 +1.4
      916nm,0.7s
RTV   Rentapao            10.09 139  P     Pn     22 18 34.5 +1.7
      215nm,0.9s
KOUNC Koumac, New Ca      10.66 166  Pn    Pn     22 18 41.5 +1.0
KOUNC Koumac, New Ca      10.66 166  P     Pn     22 18 41.7 +1.2
LIFNC LIFOU               11.88 153  Pn    Pn     22 18 56.3 -0.9
LIFNC LIFOU               11.88 153  P     Pn     22 18 57.5 +0.4
NOUC  Port Laguerre       12.71 160  P     Pn     22 19 10.3 +2.0
DZM   Mont Dzumac         12.73 159  P     Pn     22 19 09.1 +0.4
      12nm,0.4s,baz=25,slow=7.7,SNR=111
DZM                                  LR    LR     22 23 36.9
      comp=Z,104nm,18.4s,baz=3.5,slow=35
DZM   Mont Dzumac         12.73 159  Pn    Pn     22 19 10.0 +1.3
DZM   Mont Dzumac         12.73 159  P     Pn     22 19 10.9 +2.2
MARNC Mare, Loyalty       12.86 152        Pn     22 19 10.9 +0.7
MARNC Mare, Loyalty       12.86 152  P     Pn     22 19 12.1 +1.9
YATNC Mamie plateau,      12.89 157  P     Pn     22 19 12.5 +1.9
ONTNC Ouen Toro           12.95 159  Pn    Pn     22 19 13.1 +1.5
ONTNC Ouen Toro           12.95 159  P     Pn     22 19 13.9 +2.4
OUENC Ouen Island, N      13.20 158  Pn    Pn     22 19 16.6 +1.9
OUENC Ouen Island, N      13.20 158  P     Pn     22 19 16.6 +1.9
PINNC Pines Island,       13.60 156  Pn    Pn     22 19 21.3 +1.3
PINNC Pines Island,       13.60 156  P     Pn     22 19 22.3 +2.2
PMG   Port Moresby        14.21 272  P     P      22 19 31.9 -0.9
      7.0nm,0.5s,baz=38,slow=5.5,SNR=2.1
PMG   Port Moresby        14.21 272        P      22 19 31.3 -1.5
PATS  Pohnpei             17.20 349        P      22 20 07.4 +1.5
PATS  Pohnpei             17.20 349  P     P      22 20 09.5 +3.6
CTA   Charters Tower      17.75 234  P     P      22 20 10.8 -1.2
      7.4nm,0.6s,baz=68,slow=11,SNR=15
CTA                                  LR    LR     22 27 07.0
      comp=Z,36nm,18.3s,baz=78,slow=37
CTA   Charters Tower      17.75 234  P     Pn     22 20 14.4 +2.1
CTAO  Charters Tower      17.75 234  P     Pn     22 20 13.8 +1.4
CTAO                                 IAmb  IAmb   22 20 33.2
      comp=Z,14nm,0.8s
CTAO  Charters Tower      17.75 234  P     Pn     22 20 14.5 +2.1
EIDS  Eidsvold            18.10 212  P     Pn     22 20 18.2 +1.7
EIDS  Eidsvold            18.10 212  P     Pn     22 20 19.7 +3.2
COEN  Coen                18.36 256  P     Pn     22 20 21.9 +2.0
COEN                                 IAmb  IAmb   22 20 24.2
      comp=Z,27nm,1.1s
COEN  Coen                18.36 256  P     Pn     22 20 22.6 +2.8
MTSU  Mount Surprise      18.49 243  P     Pn     22 20 21.7 +0.4
RMQ   Roma                20.25 215  P     Pn     22 20 42.2 +0.2
WR0   Warramunga Arr      27.80 246  P     P      22 21 51.1 -1.0
WR0                                  IAmb  IAmb   22 22 14.7
      comp=Z,5.4nm,0.7s
WB0   Warramunga Arr      27.89 247  P     P      22 21 52.4 -0.5
WB0                                  IAmb  IAmb   22 22 15.8
      comp=Z,9.4nm,0.7s
WB2   Warramunga Arr      27.97 246  P     P      22 21 51.6 -2.0
WB2                                  IAmb  IAmb   22 22 16.3
      comp=Z,8.3nm,0.9s
WRA   Warramunga Arr      27.98 246  P     P      22 21 52.3 -1.4
      comp=Z,2.4nm,0.8s,baz=74,slow=9.7,SNR=10
WRA                                  pP    pwP    22 22 14.9 -0.8
      comp=Z,5.8nm,0.7s,baz=76,slow=9.3,SNR=15
      comp=Z,2.4nm,0.8s
WRA   Warramunga Arr      27.98 246  P     P      22 21 52.8 -0.9
STKA  Stephens Creek      28.43 218  LR    LR     22 31 54.2
      comp=Z,80nm,20.7s,baz=32,slow=33
H11S2 WAKE ISLAND Hy      28.92  10  T     T      22 53 18.7
      baz=188,slow=76,SNR=27
H11S3 WAKE ISLAND Hy      28.92  10  T     T      22 53 18.5
      baz=188,slow=76,SNR=24
H11S1 WAKE ISLAND Hy      28.94  10  T     T      22 53 19.6
      baz=188,slow=76,SNR=28
ASAR  Alice Springs       29.59 240  P     P      22 22 05.9 -2.1
      comp=Z,0.7nm,0.8s,baz=80,slow=9.7,SNR=6.1
ASAR                                 pP    pwP    22 22 29.3 -2.1
      comp=Z,1.7nm,0.7s,baz=64,slow=9.9,SNR=6.7
ASAR                                 LR    LR     22 33 18.9
      comp=Z,36nm,19.2s,baz=116,slow=35
      comp=Z,0.7nm,0.8s
H11N1 WAKE ISLAND Hy      30.15  10  T     T      22 54 50.8
      baz=188,slow=76,SNR=17
H11N3 WAKE ISLAND Hy      30.16  10  T     T      22 54 51.7
      baz=188,slow=76,SNR=17
H11N2 WAKE ISLAND Hy      30.17  10  T     T      22 54 52.6
      baz=188,slow=76,SNR=18
URZ   Urewera             31.27 156  LR    LR     22 34 04.0
      comp=Z,38nm,18.4s,baz=31,slow=34
SIJI  Sorong              31.50 285  LR    LR     22 35 47.6
      comp=Z,26nm,18.1s,baz=107,slow=37
BKZ   Black Stump Fm      31.81 158  P     P      22 22 26.4 -0.9
BKZ                                  IAmb  IAmb   22 22 29.0
      comp=Z,7.5nm,0.8s
FITZ  Fitzroy Crossi      35.66 253  P     P      22 23 00.1 -0.8
FITZ                                 IAmb  IAmb   22 23 28.6
      comp=Z,6.5nm,1.1s
MBWA  Marble Bar          41.61 250  P     P      22 23 50.2 -0.6
MJAR  Matsushiro Arr      51.39 336  P     P      22 25 05.6 -1.3
      comp=Z,1.4nm,0.7s,baz=173,slow=7.3,SNR=4.3
      comp=Z,1.4nm,0.7s
MJAR  Matsushiro Arr      51.39 336  P     P      22 25 05.9 -1.1
KSRS  Korea Array         56.90 328  P     P      22 25 47.0 +0.2
      comp=Z,1.1nm,0.7s,baz=138,slow=9.6,SNR=5.1
      comp=Z,1.1nm,0.7s
USRK  Ussuriysk Ar.       60.39 336  P     P      22 26 11.4 +0.4
      comp=Z,2.7nm,0.7s,baz=134,slow=11,SNR=5.0
      comp=Z,2.7nm,0.7s
PSI   Prapat              63.67 278  LR    LR     22 57 19.2
      comp=Z,62nm,18.1s,baz=252,slow=39
VNDA  Vanda               67.34 180  P     P      22 26 56.2  0.0
      comp=Z,0.7nm,0.8s,baz=343,slow=7.7,SNR=4.1
      comp=Z,0.7nm,0.8s
VNDA  Vanda               67.34 180  P     P      22 26 56.2  0.0
CMAR  Chiang Mai Arr      68.00 295  LR    LR     22 57 25.7
      comp=Z,5.7nm,19.2s,baz=175,slow=36
SONM  Songino Array       75.56 325  P     P      22 27 45.9 -0.4
      comp=Z,1.5nm,0.5s,baz=119,slow=5.1,SNR=2.8
      comp=Z,1.5nm,0.5s
M19K  Big River Lodg      79.60  20  P     P      22 28 10.9 +2.6
M19K                                 IAmb  IAmb   22 28 36.6
      comp=Z,12nm,1.3s
L19K  White Mountain      79.65  19  P     P      22 28 10.6 +2.0
L19K                                 IAmb  IAmb   22 28 15.0
      comp=Z,9.5nm,1.4s
TTA   Tatalina            79.83  18  P     P      22 28 11.7 +2.1
TTA                                  IAmb  IAmb   22 28 27.2
      comp=Z,9.4nm,1.5s
CAST  Castle Rocks        81.43  19  P     P      22 28 18.5 +0.4
CAST                                 IAmb  IAmb   22 28 42.4
      comp=Z,3.1nm,0.8s
IMAR  Indian Mountai      82.73  17  P     P      22 28 25.9 +1.1
ILAR  Eielson Array       84.03  20  P     P      22 28 32.1 +0.6
      comp=Z,0.7nm,0.9s,baz=242,slow=5.0,SNR=3.8
      comp=Z,0.7nm,0.9s
NVAR  Mina Array Bea      88.63  51  P     P      22 28 55.1 +0.2
      comp=Z,0.2nm,0.3s,baz=222,slow=4.9,SNR=2.0
      comp=Z,0.2nm,0.3s
MKAR  Makanchi Array      90.08 318  P     P      22 29 00.0 -1.2
      comp=Z,0.4nm,0.8s,baz=75,slow=8.2,SNR=3.6
MKAR                                 pP    pwP    22 29 25.8 -0.3
      comp=Z,0.8nm,0.7s,baz=92,slow=7.3,SNR=4.6
      comp=Z,0.4nm,0.8s
MKAR  Makanchi Array      90.08 318  P     P      22 28 59.4 -1.8
214A  Organ Pipe Nat      91.64  58  P     P      22 29 09.2 +0.4
PV11  David Mesa, Pa      95.88  52  P     P      22 29 25.0 -3.4
YKA   Yellowknife Ar      96.10  28  P     P      22 29 28.9 +0.4
      comp=Z,0.3nm,0.5s,baz=232,slow=3.6,SNR=2.4
      comp=Z,0.3nm,0.5s
YKA   Yellowknife Ar      96.10  28  P     P      22 29 27.4 -1.1
NOA   NORSAR Array B     124.72 343  PKP   PKPdf  22 35 00.3  0.0
      comp=Z,0.1nm,0.5s,baz=31,slow=7.8,SNR=1.2
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*DJA **09** 22:25:18.8±0.7, 4°N±4°×9°7E±°, h46^{km}±17^{km}, M3.7/8, MLv3.7/8*

*IDC **09** 22:25:20.8±4.7, 4.°03N×97.°62E, h88^{km}±24^{km}, mb3.3/4, mbtmp3.6/4, Error ellipse: s-maj=171.7km s-min=21.2km az=55.0*

ISC 09 22:25:15.5±1.2, **3.°50N**±0.°08×**96.°83E**±0.°10, **h50**^{km}, **n10**, σ**2^{s}14**/12, **mb3.6**/4, **Northern Sumatera**

```
Code  Station Name          Δ°  AZ°    Phase ID         Time       Res
                                     Op     ISC      h  m  s     ISC
KCSI  Kotacane, Aceh       0.94  89  P     Pn     22 25 34.6 +2.1
KCSI                                 S     Sn     22 25 46.4 +1.5
LHMI  Lhok Sumawe          1.72   4  P     Pn     22 25 45.9 +2.8
TSI   Tuntungan            1.73  90  P     Pn     22 25 44.1 +0.9
PSI   Prapat               2.20 108  P     Pn     22 25 51.6 +1.8
      8.8nm,0.3s,baz=318,slow=12,SNR=11
PSI                                  S     Sn     22 26 14.6 -1.4
      22nm,0.4s,baz=327,slow=16,SNR=4.9
GSI   Gunungsitoli         2.31 161  P     Pn     22 25 53.5 +2.3
MNSI  Mandailing Nat       3.84 134  P     Pn     22 26 14.9 +2.7
WRA   Warramunga Arr      43.59 124  P     P      22 33 13.8 -1.3
      0.8nm,0.6s,baz=303,slow=9.1,SNR=10.0
      0.8nm,0.6s
MKAR  Makanchi Array      44.93 346  P     P      22 33 23.9 -1.6
      0.2nm,0.4s,baz=162,slow=9.1,SNR=5.2
      0.2nm,0.4s
ASAR  Alice Springs       45.09 129  P     P      22 33 26.0 -1.2
      0.3nm,0.4s,baz=297,slow=8.2,SNR=4.1
      0.3nm,0.4s
ZALV  Zalesovo Beam       51.24 351  P     P      22 34 12.7 -1.3
```

0.6nm,0.5s,baz=151,slow=6.5,SNR=2.6
0.6nm,0.5s

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*IPEC **09** 22:26:28.9±0.3, 51°.60N×16°.21E, h1^{km}, ML2.5/3, Error ellipse: s-maj=2.1km s-min=1.2km az=36.0*
*VIE **09** 22:26:29.4±0.9, 51°.52N×16°.23E, h0^{km}, mb2.5/9, ml2.7/8, Error ellipse: s-maj=10.3km s-min=3.5km az=59.0   73 km NW of Wroclaw Suspected Mining induced.*
*PRU **09** 22:26:30.2±0.0, 51°.55N×16°.12E, h0^{km}*
ISC 09 22:26:29.8±1.1, **51°.52N**±0°.05×**16°.09E**±0°.02, **h0**^{km}, **n36**, σ**0.^{s}76**/79, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.69	169	*e*Pg	Pg	22 26 43.7	+0.6
KSP				*e*Sg	Sb	22 26 53.4	-1.4
CHVC	**Chvalec**	0.94	181	*e*PG	Pb	22 26 48.6	-0.3
CHVC				*e*SG	Sb	22 27 01.5	-0.4
	comp=Z,54nm,0.5s						
OSTC	**Ostas**	0.97	175	*e*PG	Pb	22 26 49.2	-0.3
OSTC				*e*SG	Sb	22 27 02.6	-0.3
	comp=Z,65nm,0.5s						
UPC	**Upice**	1.02	183	*e*PG	Pb	22 26 49.8	-0.5
UPC				*e*SG	Sb	22 27 03.8	-0.4
	comp=Z,84nm,0.2s						
DPC	**Dobruska-Polom**	1.19	173	*e*PG	Pg	22 26 52.5	0.0
DPC				*e*SG	Sb	22 27 08.9	-0.1
	comp=Z,43nm,0.5s						
PVCC	**Panska Ves**	1.38	225	*e*PN	Pn	22 26 56.2	-0.2
PVCC				*e*PG	Pb	22 26 56.9	+0.4
PVCC				*e*SG	Sn	22 27 16.1	+0.8
	comp=Z,130nm,0.2s						
BRG	**Berggiesshubel**	1.50	245	Pg	Pb	22 26 58.4	-0.1
BRG				Sg	Sn	22 27 19.0	+0.8
BRG				Amp		22 27 20.5	
	comp=Z,53nm,0.4s						
BRG	**Berggiesshubel**	1.50	245	*e*Pn	Pb	22 26 58.3	-0.1
	baz=62						
BRG				*e*Sg	Sn	22 27 19.0	+0.8
	baz=62						
KRLC	**Kraliky**	1.52	163	*e*PN	Pn	22 26 57.7	-0.5
KRLC				*e*PG	Pg	22 26 58.2	-0.6
KRLC				*e*SG	Sn	22 27 18.6	-0.1
	comp=Z,43nm,0.3s						
PRU	**Pruhonice**	1.82	213	*e*PN	Pn	22 27 01.9	-0.5
PRU				*e*PG	Pb	22 27 03.9	-0.1
PRU				*e*x	x	22 27 21.0	
PRU				*e*SG	Sg	22 27 29.0	+0.6
	comp=Z,22nm,0.4s						
CLL	**Collm**	1.94	265	*i* Pn	Pn	22 27 02.9	-1.2
CLL				*e*Pg	Pb	22 27 06.0	-0.1
CLL				*i* x	x	22 27 10.0	
CLL				*e*x	x	22 27 13.0	
CLL				*e*Sg	Sg	22 27 32.0	-0.2
	comp=Z,35nm,0.4s						
MORC	**Moravsky Berou**	1.98	152	*e*Pn	Pn	22 27 03.8	-0.8
	baz=336						
MORC				*e*Sg	Sb	22 27 32.0	+0.2
	comp=Z,36nm,0.6s,baz=336						
MORC	**Moravsky Berou**	1.98	152	*e*PN	Pn	22 27 03.8	-0.8
MORC				*e*SG	Sb	22 27 32.1	+0.2
OKC	**Ostrava-Krasne**	2.14	141	*e*PN	Pn	22 27 05.9	-0.8
OKC				*e*PG	Pb	22 27 09.5	+0.2
OKC				*e*SG	Sg	22 27 37.7	-0.7
	comp=Z,33nm,0.4s						
VRAC	**Vranov**	2.24	172	*e*Pn	Pn	22 27 08.1	-0.1
	baz=354						
VRAC				*e*Sg	Sg	22 27 41.1	-0.7
	comp=Z,26nm,0.5s,baz=354						
VRAC	**Vranov**	2.24	172	*e*PN	Pn	22 27 08.2	0.0
VRAC				*e*SG	Sg	22 27 41.2	-0.6
TREC	**Trest**	2.27	190	*e*PN	Pn	22 27 08.5	0.0
TREC				*e*PG	Pg	22 27 12.6	-0.6
TREC				*e*SG	Sg	22 27 42.5	0.0
	comp=Z,25nm,0.6s						
KRUC	**Moravsky**	2.47	175	*e*Pn	Pn	22 27 11.3	0.0
	baz=357						
KRUC				*e*Sg	Sg	22 27 48.3	-0.9
	comp=Z,24nm,0.5s,baz=357						
KRUC	**Moravsky**	2.47	175	*e*PN	Pn	22 27 11.4	+0.1
KRUC				*e*SG	Sg	22 27 48.4	-0.8
NKC	**Novy Kostel**	2.64	242	*e*PN	Pn	22 27 13.6	-0.1
NKC				*e*PG	Pg	22 27 20.2	-0.2
NKC				*e*SG	Sg	22 27 56.0	+1.3
	comp=Z,39nm,0.4s						
OJC	**Ojcow**	2.69	118	*e*Pg	Pb	22 27 20.1	+1.3
OJC				*e*Sg	Sg	22 27 54.6	-1.5
JAVC	**Velka Javorina**	2.85	159	*e*PN	Pn	22 27 16.7	+0.1
KHC	**Kasperske Hory**	2.89	215	*e*PN	Pn	22 27 16.7	-0.3
KHC				*e*PG	Pg	22 27 24.1	-1.0
KHC				*e*SN	Sn	22 27 51.8	-0.7
KHC				*e*SG	Sg	22 28 03.1	+0.6
	comp=Z,12nm,0.4s						
CKRC	**Cesky Krumlov**	2.94	204	*e*PN	Pn	22 27 18.3	+0.5
CKRC				*e*PG	Pg	22 27 24.5	-1.6
SMOL	**Smolenice**	3.13	163	*e*PG	Pg	22 27 31.4	+1.6
SMOL				*e*SG	Sg	22 28 11.1	+0.7
LANS	**Liptovska Anna**	3.21	136	*e*PN	Pn	22 27 21.4	-0.2
LANS				*e*PG	Pg	22 27 31.5	+0.1
LANS				*e*SG	Sg	22 28 12.2	-0.8
KOLL	**Kolacno**	3.30	152	*e*PN	Pn	22 27 23.5	+0.8
KOLL				*e*PG	Pg	22 27 32.9	-0.2
KOLL				*e*SG	Sg	22 28 14.6	-1.3
NIE	**Niedzica**	3.42	126	*e*P	Pg	22 27 36.0	+0.8
NIE				*e*S	Sg	22 28 20.4	+0.8
VYHS	**Vyhne**	3.51	149	*e*SG	Sg	22 28 21.4	-1.2
CONA	**Conrad Observa**	3.60	182	*i* Pn	Pn	22 27 27.2	+0.2
	comp=Z,1.1nm,0.2s,SNR=6.3						
CONA				Sg	Sg	22 28 25.8	+0.3
	comp=Z,9.4nm,0.3s						
MOA	**Molln**	3.86	199	*i* Pn	Pn	22 27 30.7	+0.3
	comp=Z,3.0nm,0.2s,SNR=13						
MOA				*e*Sg	Sg	22 28 33.8	0.0
	comp=Z,5.9nm,0.3s						
ARSA	**Arzberg**	4.29	185	*i* Pn	Pn	22 27 37.6	+1.2
	comp=Z,1.7nm,0.3s						
ARSA				*e*Sg	Sg	22 28 47.8	+0.1
	comp=Z,4.5nm,0.4s						
KBA	**Koelnbreinsper**	4.80	203	*i* Pn	Pn	22 27 44.0	+0.6
	comp=Z,2.3nm,0.4s,SNR=6.6						
KBA				*e*Sg	Sg	22 29 04.0	+0.1
	comp=Z,3.5nm,0.4s						
OBKA	**Obir**	5.12	192	*e*Sg	Sg	22 29 17.1	+2.9
	comp=Z,1.8nm,0.4s						
ABTA	**Abfaltersbach**	5.33	208	*i* Pn	Pn	22 27 51.2	+0.6
	comp=Z,1.3nm,0.5s						
ABTA				Sg	Sg	22 29 21.5	+0.7
	comp=Z,2.1nm,0.4s						
SQTA	**Sankt Quirin**	5.36	218	*i* Pn	Pn	22 27 51.0	-0.1
	comp=Z,1.4nm,0.2s						

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*DDA **09** 22:56:54.9±0.0, 39°.35N×23°.85E, h5^{km}±3^{km}, MW3.8*
*IDC **09** 22:56:60.0±1.0, 39°.15N×24°.18E, h0^{km}, mb3.3/9, mbtmp3.5/14, ML3.4/4, MS2.9/4, Error ellipse: s-maj=16.5km s-min=14.2km az=122.0*
*ATH **09** 22:57:01.6, 39°.14N×24°.15E, h15^{km}±1^{km}, ML3.8/19, Error ellipse: s-maj=1.7km s-min=0.8km az=232.0*
*ISK **09** 22:57:01.1, 39°.18N×24°.21E, h15^{km}, ML3.7/25*
*THE **09** 22:57:01.5, 39°.14N×24°.18E, h11^{km}, ML3.8/12, Error ellipse: s-maj=0.7km s-min=0.3km az=277.0*
*SOF **09** 22:57:02.4, 39°.36N×24°.26E, h11^{km}, MD3.8*
*TIR **09** 22:57:03.9, 39°.31N×24°.02E, h15^{km}±35^{km}, Ml3.8*
ISC 09 22:57:01.5±0.9, **39°.15N**±0°.02×**24°.16E**±0°.02, **h11**^{km}±6^{km}, **n190**, σ**0.^{s}92**/233, **mb3.2**/9, **32C-7D**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALNA	**Alonissos**	0.23	271	P	Pg	22 57 06.3	+0.1
ALNA				S	Sg	22 57 09.3	-0.2
ALNA				AML	AML	22 57 12.5	
	comp=N,85506µm,0.7s						
ALNA				AML	AML	22 57 13.5	
	comp=E,96061µm,0.4s						
SKY	**Skiros Island**	0.40	131	P	Pg	22 57 09.4	-0.1
SKY				S	Sg	22 57 14.7	-0.1
SKY				AML	AML	22 57 15.9	
SKY				AML	AML	22 57 15.9	
SKY	**Skiros Island**	0.40	131	P	Pg	22 57 09.4	-0.1
SKY				S	Sg	22 57 14.7	-0.1
	comp=E,95µm,0.2s						
KYMI	**Kymi, Euboea I**	0.51	185	P	Pg	22 57 11.2	-0.3
KYMI				S	Sg	22 57 18.4	+0.1
KYMI				AML	AML	22 57 20.4	
	comp=E,12543µm,0.5s						
KYMI				AML	AML	22 57 20.4	
	comp=N,10396µm,0.4s						
KYMI	**Kymi, Euboea I**	0.51	185	P	Pg	22 57 11.2	-0.3
KYMI				S	Sg	22 57 18.4	+0.1
	comp=N,6µm,0.4s						
NEO	**Neokhori**	0.75	283	P	Pb	22 57 16.5	+0.1
NEO				S	Sb	22 57 26.3	-0.3
NEO				AML	AML	22 57 28.9	
	comp=N,38382µm,0.4s						
NEO				AML	AML	22 57 29.1	
	comp=E,26975µm,0.4s						
NEO	**Neokhori**	0.75	283	P	Pb	22 57 16.5	+0.1
NEO				S	Sb	22 57 26.3	-0.3
	comp=E,16µm,0.5s						
EFSA	**Agios Efstrati**	0.75	58	P	Pb	22 57 16.9	+0.3
EFSA				S	Sb	22 57 27.4	+0.6
EFSA				AML	AML	22 57 30.1	
	comp=E,41554µm,0.3s						
EFSA				AML	AML	22 57 30.3	
	comp=N,16935µm,0.8s						
XOR	**Xorichti**	0.78	287	P	Pg	22 57 16.9	+0.3
XOR				S	Sg	22 57 27.1	+0.2
XOR				AML	AML	22 57 29.7	
	comp=E,17076µm,0.4s						
XOR				AML	AML	22 57 30.1	
	comp=N,18769µm,0.3s						
XOR	**Xorichti**	0.78	287	P	Pg	22 57 16.9	+0.3
XOR				S	Sb	22 57 28.2	+0.5
	comp=N,9µm,0.3s						
PAIG	**Paliouri**	0.87	335	P	Pg	22 57 18.1	-0.1
PAIG				S	Sg	22 57 29.7	+0.2
PAIG				AML	AML	22 57 33.5	
	comp=E,4230µm,0.3s						
PAIG				AML	AML	22 57 34.4	
	comp=N,5086µm,0.6s						
PAIG	**Paliouri**	0.87	335	P	Pg	22 57 18.1	-0.1
PAIG				S	Sn	22 57 31.4	-0.7
	comp=N,2µm,0.5s						
ATAL	**Atalanti**	1.00	243	P	Pg	22 57 20.0	-0.7
ATAL				S	Sg	22 57 33.7	0.0
ATAL				AML	AML	22 57 37.0	
	comp=E,2940µm,0.5s						
ATAL				AML	AML	22 57 37.4	
	comp=N,4241µm,0.5s						
ATAL	**Atalanti**	1.00	243	P	Pg	22 57 20.0	-0.7
DION	**Dionisos Attik**	1.08	190	P	Pb	22 57 21.7	-0.4
DION				S	Sb	22 57 35.4	-0.8
DION				AML	AML	22 57 39.2	
	comp=N,29927µm,0.4s						
DION				AML	AML	22 57 39.2	
	comp=E,26683µm,0.4s						
DION	**Dionisos Attik**	1.08	190	P	Pb	22 57 21.7	-0.4
DION				S	Sn	22 57 37.0	-0.5
	comp=E,22µm,0.4s						
LIA	**Limnos Island**	1.09	46	P	Pb	22 57 21.6	-0.7
LIA				S	Sb	22 57 36.1	-0.4
LIA				AML	AML	22 57 38.7	
	comp=N,12080µm,0.5s						
LIA				AML	AML	22 57 40.7	
	comp=E,7130µm,0.4s						
LIA	**Limnos Island**	1.09	46	P	Pb	22 57 21.6	-0.7
LIA				S	Sg	22 57 36.9	+0.2
	comp=E,5µm,0.4s						
PTL	**Penteli**	1.12	192	P	Pb	22 57 22.0	-0.8
PTL	**Penteli**	1.12	192	P	Pb	22 57 22.0	-0.8
KARY	**Karystos**	1.13	169	P	Pb	22 57 22.3	-0.7
KARY				S	Sb	22 57 36.7	-1.0
KARY	**Karystos**	1.13	169	P	Pb	22 57 22.3	-0.7
VIL2	**Platees**	1.17	217	P	Pb	22 57 22.9	-0.6
VIL2				S	Sb	22 57 38.4	-0.3
VIL2				AML	AML	22 57 41.3	
	comp=N,15299µm,0.4s						
VIL2				AML	AML	22 57 43.4	
	comp=E,14968µm,0.4s						
VILL	**Villia**	1.18	214	P	Pb	22 57 22.9	-1.0
OUR	**Ouranopolis**	1.20	353	P	Pn	22 57 23.2	-0.9
OUR				AML	AML	22 57 42.9	
	comp=E,2989µm,0.4s						
OUR				AML	AML	22 57 44.5	
	comp=N,3918µm,0.4s						
OUR	**Ouranopolis**	1.20	353	P	Pn	22 57 23.2	-0.9
OUR				S	Sn	22 57 40.9	+0.6
	comp=N,2µm,0.4s						
OUR	**Ouranopolis**	1.20	353	PN	Pn	22 57 23.3	-0.8
ATHU	**Athens Univers**	1.21	194	P	Pn	22 57 23.4	-0.9
ATHU	**Athens Univers**	1.21	194	P	Pn	22 57 23.4	-0.9
ATHU				S	Sb	22 57 40.1	+0.1
	comp=N,2µm,0.8s						
ATH	**Athens Observa**	1.22	197	P	Pn	22 57 23.6	-0.8
ATH				S	Sb	22 57 39.6	-0.7
ATH				AML	AML	22 57 42.3	
	comp=N,15014µm,0.4s						
ATH				AML	AML	22 57 44.4	
	comp=E,15187µm,0.8s						
ATH	**Athens Observa**	1.22	197	P	Pn	22 57 23.6	-0.8
ATH				S	Sn	22 57 41.0	+0.1
	comp=E,8µm,0.6s						
PSRA	**Psara**	1.25	118	P	Pb	22 57 25.1	+0.1
PSRA				AML	AML	22 57 44.9	
	comp=N,4469µm,0.3s						
PSRA				AML	AML	22 57 46.4	
	comp=E,5946µm,0.4s						
SIGR	**SIGRI**	1.32	87	P	Pn	22 57 24.9	-0.8
SIGR				AML	AML	22 57 46.9	
	comp=N,2977µm,0.5s						
SIGR				AML	AML	22 57 48.1	
	comp=E,2988µm,0.7s						
SIGR	**SIGRI**	1.32	87	P	Pn	22 57 24.9	-0.8
SIGR				S	Sb	22 57 42.6	-0.5
	comp=E,1µm,0.6s						
VLY	**Voula,Athens**	1.32	193	P	Pn	22 57 24.9	-0.9
VLY				S	Sn	22 57 43.6	+0.2
VLY				AML	AML	22 57 47.0	
	comp=N,13816µm,0.5s						
VLY				AML	AML	22 57 49.6	
	comp=E,10894µm,0.5s						
VLY	**Voula,Athens**	1.32	193	P	Pn	22 57 24.9	-0.9
VLY				S	Sn	22 57 43.6	+0.2
	comp=E,6µm,0.5s						
PLG	**Polygyros**	1.35	336	P	Pn	22 57 24.9	-1.3
PLG				AML	AML	22 57 44.0	
	comp=E,1564µm,0.9s						
PLG				AML	AML	22 57 44.0	
	comp=N,1501µm,0.5s						
PLG	**Polygyros**	1.35	336	P	Pn	22 57 24.9	-1.3
AGG	**Agios Georgios**	1.43	266	P	Pn	22 57 26.9	-0.5
AGG				AML	AML	22 57 50.5	
	comp=E,2210µm,0.6s						
AGG				AML	AML	22 57 52.4	
	comp=N,2984µm,0.5s						
AGG	**Agios Georgios**	1.43	266	P	Pn	22 57 26.9	-0.5
AGG	**Agios Georgios**	1.43	266	PN	Pn	22 57 27.8	+0.5
AGG				SN	Sg	22 57 47.3	-0.2
LTK	**Loutraki**	1.46	220	P	Pn	22 57 26.9	-0.8
DLFA	**Delphi**	1.46	243	P	Pn	22 57 27.1	-0.7
LRSO	**Larissa Observ**	1.47	292	P	Pn	22 57 27.5	-0.3
LRSO	**Larissa Observ**	1.47	292	P	Pn	22 57 27.5	-0.3
GPNR	**Gulpinar-Canak**	1.56	78	PN	Pn	22 57 28.3	-0.8
KOCA	**Canakkale, Ayv**	1.57	76	P	Pn	22 57 28.7	-0.6
KOCA				S	Sg	22 57 53.8	+1.7
KOCA				*i* AML	AML	22 57 55.0	
	comp=N,656nm,0.9s						
KOCA				*i* AML	AML	22 57 58.0	
	comp=N,322nm,0.5s						
BOZC	**Bozcaada**	1.62	64	PN	Pn	22 57 29.1	-0.8
BOZC	**Bozcaada**	1.62	64	P	Pn	22 57 28.9	-1.0
BOZC				S	Sb	22 57 51.9	+0.1
BOZC				*i* AML	AML	22 58 02.0	
	comp=N,272nm,0.9s						
BOZC				*i* AML	AML	22 58 04.0	
	comp=N,216nm,0.8s						
PRK	**Paraskevi**	1.64	86	P	Pn	22 57 30.6	+0.4
PRK				AML	AML	22 57 57.7	
	comp=E,4306µm,0.9s						
PRK				AML	AML	22 57 58.4	
	comp=N,3958µm,1.1s						
PRK	**Paraskevi**	1.64	86	P	Pn	22 57 30.6	+0.4
CHOS	**Chios island**	1.66	116	P	Pn	22 57 30.2	-0.3
CHOS	**Chios island**	1.66	116	PN	Pn	22 57 30.3	-0.3
CHOS				SN	Sn	22 57 51.3	-0.6
HORT	**Hortiatis**	1.67	331	P	Pn	22 57 30.0	-0.6
HORT	**Hortiatis**	1.67	331	PN	Pn	22 57 30.5	-0.1
SMTH	**Samothraki Isl**	1.69	38	P	Pn	22 57 29.6	-1.3
GADA	**Gvkgeada**	1.70	52	PN	Pn	22 57 30.2	-0.8
GADA				SN	Sn	22 57 51.4	-1.3
THL	**Klokotos Trika**	1.72	285	P	Pn	22 57 30.5	-0.7
THE	**Thessaloniki**	1.75	329	P	Pn	22 57 31.5	-0.1
	baz=329						
THE				S	Sn	22 57 51.6	-2.3
	baz=329						
SOH	**Sokhos**	1.79	340	P	Pn	22 57 31.9	-0.4
EZN	**Ezine**	1.81	67	PN	Pn	22 57 31.7	-0.8
EVR	**Evrytania**	1.85	264	P	Pn	22 57 32.9	-0.2
KAVA	**Kavala**	1.87	8	P	Pn	22 57 32.1	-1.2
KLV	**Kalavryta, Ach**	1.92	236	P	Pn	22 57 33.4	-0.7
BAYC	**CANAKKALE_Bayr**	1.94	71	P	Pn	22 57 33.6	-0.8
BAYC				*i* AML	AML	22 58 14.0	
	comp=N,144nm,0.8s						
BAYC				*i* AML	AML	22 58 14.0	
	comp=N,136nm,0.6s						
AYVA	**Ayvalik**	1.97	84	P	Pn	22 57 34.3	-0.4
AYVA				S	Sg	22 58 05.4	+0.6
AYVA				*i* AML	AML	22 58 06.0	
	comp=N,413nm,1.0s						
AYVA				*i* AML	AML	22 58 09.0	
	comp=N,493nm,0.6s						
SRS	**Serrai**	2.02	348	P	Pn	22 57 34.5	-0.9
URLA	**Izmir**	2.06	112	PN	Pn	22 57 35.7	-0.3
URLA	**Izmir**	2.06	112	P	Pn	22 57 35.7	-0.3
URLA				S	Sg	22 58 09.2	+1.6
URLA				*i* AML	AML	22 58 12.0	
	comp=N,570nm,0.9s						
URLA				*i* AML	AML	22 58 14.0	
	comp=N,585nm,0.7s						
DKL	**Dikili**	2.14	91	PN	Pn	22 57 36.9	-0.1
GELI	**Tayfur-Gelibol**	2.18	54	PN	Pn	22 57 37.2	-0.4
ENEZ	**Enez**	2.21	43	PN	Pn	22 57 37.5	-0.5
GRG	**Griva**	2.26	324	PN	Pn	22 57 38.7	0.0
RDO	**Rodhopi**	2.26	27	PN	Pn	22 57 37.8	-0.9
ALN	**Alexandroupoli**	2.27	39	PN	Pn	22 57 38.3	-0.6
ZEDA	**zmir-Bergama**	2.28	94	P	Pn	22 57 38.8	-0.1
ZEDA				S	Sg	22 58 17.1	+2.5
ZEDA				*i* AML	AML	22 58 18.0	
	comp=N,173nm,1.0s						
ZEDA				*i* AML	AML	22 58 18.0	
	comp=N,270nm,0.7s						
BUHA	**Balikesir, Bur**	2.29	80	P	Pn	22 57 39.0	-0.2
BUHA				*i* AML	AML	22 58 29.0	
	comp=N,156nm,0.8s						
BUHA				*i* AML	AML	22 58 29.0	
	comp=N,252nm,0.6s						
APE	**Apeiranthos**	2.34	152	⇑P	Pn	22 57 39.1	-0.7
APE	**Apeiranthos**	2.34	152	PN	Pn	22 57 40.1	+0.3
ERIK	**Erikli-Kesan**	2.37	49	PN	Pn	22 57 39.5	-0.6
BLCB	**Balcova**	2.38	108	PN	Pn	22 57 40.6	+0.3
MMB	**Musomiste**	2.46	352	*i* P	Pn	22 57 40.8	-0.8
VAY	**Valandovo**	2.49	331	*i* Pn	Pn	22 57 41.7	-0.2
RZN	**Rozhen**	2.58	9	*i* P	Pn	22 57 42.9	-0.3
ITM	**Ithomi**	2.64	223	PN	Pn	22 57 44.9	+1.0
KDZ	**Kurdzhali**	2.68	21	P	Pn	22 57 43.1	-1.4
FNA	**Florina**	2.69	308	PN	Pn	22 57 44.9	+0.1
FNA	**Florina**	2.69	308	P	Pn	22 57 44.8	0.0
	baz=307						
FNA				S	Sn	22 58 16.9	-0.5
	baz=307						
KRBG	**Karabiga-Canak**	2.72	62	PN	Pn	22 57 44.8	-0.2
UKOP	**Uzunkopru-Edir**	2.74	43	PN	Pn	22 57 44.9	-0.4
RKY	**Sarkoy-Tekirda**	2.79	55	PN	Pn	22 57 46.0	0.0
KKB	**Krupnik**	2.84	344	*i* P	Pn	22 57 46.4	-0.3
MAR6	**Marsite Statio**	2.85	56	PN	Pn	22 57 46.4	-0.4
MAR3	**Marsite Statio**	2.89	55	PN	Pn	22 57 46.6	-0.8
GZKV	**Gazikoy-Tekird**	2.91	56	PN	Pn	22 57 47.6	-0.1
LSK	**Leskovik**	2.93	291	P	Pn	22 57 49.2	+1.2
	baz=289						
LSK				S	Sn	22 58 23.2	+0.1
	baz=289						
LSK				AMP			
	comp=N,1.7nm,0.8s,baz=289						
STIP	**Stip**	2.96	330	*i* Pn	Pn	22 57 48.1	-0.3
KBN	**Korca**	2.99	301	P	Pn	22 57 49.9	+1.1
	baz=299						
KBN				S	Sn	22 58 24.6	0.0
	baz=299						
KBN				AMP			
	comp=N,1.4nm,0.9s,baz=299						
PLD	**Plovdiv**	2.99	8	PN	Pn	22 57 48.9	+0.2
PLD	**Plovdiv**	2.99	8	P	Pn	22 57 49.1	+0.4
PLD	**Plovdiv**	2.99	8	Pg	Pg	22 57 58.1	-0.6
IGT	**Igoumenitsa**	2.99	279	P	Pn	22 57 51.4	+2.6
	baz=276						
IGT				S	Sn	22 58 25.5	+0.9
	baz=276						
DIM	**Dimitrovgrad**	3.08	19	P	Pn	22 57 49.8	-0.2
EDC	**Edincik**	3.10	66	PN	Pn	22 57 50.2	0.0
OHR	**Ohrid**	3.24	308	*i* Pn	Pn	22 57 53.4	+1.1
SRN	**Sarande**	3.30	284	P	Pn	22 57 55.5	+2.5
	baz=282						
SRN				S	Sn	22 58 32.6	+0.4
	baz=282						
SRN				AMP			
	comp=N,0.4nm,0.7s,baz=282						
EDRB	**Edirne**	3.34	35	PN	Pn	22 57 53.9	+0.3
KCTX	**Karacabey (Bur**	3.42	70	PN	Pn	22 57 54.8	+0.1
SKO	**Skopje**	3.50	325	*i* Pn	Pn	22 57 56.3	+0.5
VTS	**Vitosha**	3.54	349	⇓P	Pn	22 57 56.5	+0.1
VTS	**Vitosha**	3.54	349	*i* P	Pn	22 57 56.5	+0.1
SLVT	**Silivri**	3.73	55	PN	Pn	22 57 59.3	+0.3
PHP	**Peshkopia**	3.81	313	P	Pn	22 58 00.8	+0.8
	baz=313						
PHP				S	Sn	22 58 45.4	+0.6
	baz=313						
PHP				AMP			
	comp=N,0.1nm,0.6s,baz=313						
IDI	**Anoyia**	3.89	171	⇑P	Pn	22 58 01.2	-0.1
IDI	**Anoyia**	3.89	171	Pn	Pn	22 58 00.6	-0.7
	comp=N,3.7nm,0.3s,baz=345,slow=12,SNR=35						
IDI				Sn	Sn	22 58 44.1	-2.9
	comp=N,3.2nm,0.3s,baz=306,slow=19,SNR=3.8						
	comp=N,11nm,0.4s						
CTKS	**Kestanelik-??a**	3.93	57	PN	Pn	22 58 00.2	-1.4
TIR	**Tirane**	3.96	305	⇓P	Pn	22 58 02.4	+0.4
MPEP	**Malo Peshtene**	4.22	356	P	Pn	22 58 06.4	+0.7
SZH	**Strazhica**	4.33	17	P	Pn	22 58 08.1	+0.9
BCI	**Bajram Curri**	4.47	317	P	Pn	22 58 10.5	+1.3
	baz=317						
SCTE	**Santa Cesarea**	4.49	284	P	Pn	22 58 10.8	+1.4
	baz=282						
BLKB	**Belogradchik**	4.61	346	⇑P	Pn	22 58 11.1	0.0
PRD	**Provadia**	4.73	30	P	Pn	22 58 11.9	-0.8
RAZG	**Razgrad**	4.76	21	⇑P	Pn	22 58 13.6	+0.6
DRME	**Dracevica, Mon**	4.85	310	*e*Pn	Pn	22 58 16.0	+1.6
VLAD	**Vladila**	4.85	2	⇑P	Pn	22 58 14.5	+0.2
BAIL	**Bailesti**	4.91	353	⇑P	Pn	22 58 15.5	+0.4
PDG	**Podgorica**	4.96	313	⇑P	Pn	22 58 16.7	+0.9
PDG	**Podgorica**	4.96	313	*e*Pn	Pn	22 58 17.6	+1.8
SJES	**Sjenica**	5.18	324	*e*Pn	Pn	22 58 19.3	+0.3
PUNG	**Punghina**	5.21	350	⇑P	Pn	22 58 20.3	+1.0
SGRR	**Singureni**	5.25	14	⇑P	Pn	22 58 19.9	+0.1
HCY	**Herceg Novi**	5.42	309	*e*Pn	Pn	22 58 22.3	+0.2
SRE	**Strehaia**	5.56	353	⇑P	Pn	22 58 24.7	+0.7
TREB	**Trebinje**	5.67	311	*e*Pn	Pn	22 58 26.4	+0.9
ICOR	**Ion Corvin**	5.67	28	⇑P	Pn	22 58 25.7	+0.2
BRY	**Bratogost**	5.67	313	*e*Pn	Pn	22 58 25.7	0.0
UPM	**Unac-Piva**	5.67	317	*e*Pn	Pn	22 58 27.2	+1.4
RUDO	**Rudo**	5.74	323	*e*Pn	Pn	22 58 24.8	-1.8
DIVS	**Divibare**	5.85	329	*e*Pn	Pn	22 58 27.8	-0.4
BBLS	**Lazići**	5.92	324	*e*Pn	Pn	22 58 29.6	+0.6
MDVR	**Moldovita**	5.92	343	⇑P	Pn	22 58 29.0	0.0
MATE	**Matera**	5.93	287	⇑P	Pn	22 58 29.7	+0.6
MFTR	**Murfatlar**	5.96	31	⇑P	Pn	22 58 30.3	+0.8
TLBR	**Topalu**	6.12	27	⇑P	Pn	22 58 32.7	+0.9
STON	**Ston**	6.14	309	*e*Pn	Pn	22 58 32.0	0.0
HARR	**Harsova**	6.21	26	⇑P	Pn	22 58 33.1	+0.1
ARR	**Arges**	6.23	3	⇑P	Pn	22 58 33.7	+0.3
LOT	**Lotru**	6.31	357	⇑P	Pn	22 58 34.4	0.0
VOIR		6.32	6	⇓P	Pn	22 58 34.7	+0.1
GZR	**Gura Zlata**	6.33	351	⇑P	Pn	22 58 34.8	+0.1
NEHR	**Nehoiu**	6.47	13	⇑P	Pn	22 58 37.7	+1.1
MLR	**Muntele Rosu**	6.48	11	⇑P	Pn	22 58 37.8	+1.0
MLR	**Muntele Rosu**	6.48	11	Pn	Pn	22 58 37.2	+0.4
	comp=N,11nm,0.6s,baz=165,slow=14						
MLR				Sn	Sn	22 59 49.2	-1.5
	comp=N,0.4nm,0.3s,baz=237,slow=19,SNR=1.2						
TPGR	**Topolog**	6.53	28	⇑P	Pn	22 58 38.2	+0.9
BISRR	**Bisoca**	6.67	16	⇑P	Pn	22 58 40.6	+1.2

CFR	**Carcaliu**	**6.71**	**25**	⇓P	**Pn**	**22 58 40.5**	**+0.7**
DEV	**Deva**	**6.80**	**353**	⇑P	**Pn**	**22 58 41.8**	**+0.7**
FRGS	**Fruska Gora**	**6.82**	**333**	*e*Pn	**Pn**	**22 58 41.2**	**-0.2**
COVR	**Voineasa-Covas**	**6.86**	**12**	⇑P	**Pn**	**22 58 43.1**	**+1.1**
DOPR	**Dopca**	**6.88**	**7**	⇑P	**Pn**	**22 58 43.3**	**+1.1**
PLOR	**Plostina**	**6.95**	**15**	⇓P	**Pn**	**22 58 43.7**	**+0.6**
VRI	**Vrincioaia**	**6.98**	**15**	⇑P	**Pn**	**22 58 44.8**	**+1.3**
OZUR		**7.05**	**9**	⇑P	**Pn**	**22 58 45.9**	**+1.4**
SRKY	**Kupres RS**	**7.19**	**315**	*e*Pn	**Pn**	**22 58 47.6**	**+1.1**
VARL	**Varlezi**	**7.28**	**21**	⇑P	**Pn**	**22 58 48.9**	**+1.3**
VLDR	**Vladesti**	**7.29**	**22**	⇑P	**Pn**	**22 58 48.8**	**+0.9**
SIRR	**Siria**	**7.35**	**346**	⇓P	**Pn**	**22 58 49.2**	**+0.5**
BRTR	**Keskin Array B**	**7.36**	**82**	Pn	**Pn**	**22 58 49.3**	**+0.4**
	comp=N,0.8nm,0.3s,baz=258,slow=12,SNR=28						
	comp=N,1.8nm,0.4s						
TESR	**Tescani**	**7.59**	**13**	⇓P	**Pn**	**22 58 53.0**	**+1.1**
BLY	**Banja Luka**	**7.64**	**319**	*e*Pn	**Pn**	**22 58 52.1**	**-0.5**
VAE	**Valguarnera**	**7.84**	**261**	Pn	**Pn**	**22 58 56.5**	**+1.1**
	comp=N,0.7nm,0.3s,baz=100,slow=9.6,SNR=3.8						
VAE				Sn	**Sn**	**23 00 26.1**	**+1.8**
	baz=106,slow=6.4						
	comp=N,9.2nm,0.9s						
ARCR	**ARCALIA**	**7.94**	**1**	⇑P	**Pn**	**22 58 57.7**	**+0.9**
KOVH	**Kovagotottos**	**8.25**	**329**	P	**Pn**	**22 59 01.0**	**0.0**
KOVH				S	**Sn**	**23 00 28.1**	**-6.0**
BURAR	**Bucovina Array**	**8.50**	**5**	⇑P	**Pn**	**22 59 05.3**	**+0.8**
CRES	**Cresnjev**	**9.27**	**319**	*e*Pn	**Pn**	**22 59 14.1**	**-0.8**
CEY	**Cerknica**	**9.75**	**316**	*e*Pn	**Pn**	**22 59 18.5**	**-3.1**
GERES	**GERESS Array B**	**12.27**	**326**	Pn	**Pn**	**22 59 55.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=160,slow=12,SNR=2.9						
	comp=N,0.2nm,0.4s						
ASF	**Jabal al Asfar**	**12.47**	**120**	LR	LR	23 06 56.2	
	comp=N,179nm,21.6s,baz=109,slow=48						
KVAR	**Kislovodsk Arr**	**14.68**	**65**	LR	LR	23 07 01.6	
	comp=N,52nm,21.3s,baz=298,slow=41						
ESDC	**Sonseca Array**	**21.71**	**280**	P	**P**	**23 01 53.5**	**+1.1**
	comp=N,0.6nm,0.7s,baz=74,slow=10,SNR=7.0						
	comp=N,0.6nm,0.7s						
HFS	**Hagfors**	**22.02**	**346**	P	**P**	**23 01 57.3**	**+1.8**
	comp=N,0.4nm,0.6s,baz=159,slow=10,SNR=3.0						
	comp=N,0.4nm,0.6s						
FINES	**FINESS Array B**	**22.36**	**2**	P	**P**	**23 01 59.7**	**+0.6**
	comp=N,0.2nm,0.5s,baz=201,slow=7.3,SNR=1.3						
	comp=N,0.2nm,0.5s						
NB2	**NORSAR Subarra**	**23.35**	**344**	P	**P**	**23 02 09.2**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=150,slow=9.3						
NOA	**NORSAR Array B**	**23.35**	**344**	P	**P**	**23 02 08.9**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=154,slow=11,SNR=5.0						
	comp=Z,0.4nm,0.6s						
EKA	**Eskdalemuir Ar**	**24.39**	**321**	P	**P**	**23 02 19.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=132,slow=11,SNR=1.7						
EKA				LR	LR	23 12 37.3	
	comp=Z,40nm,18.2s,baz=1.0,slow=38						
	comp=Z,0.9nm,0.6s						
GEYT	**Alibeck**	**26.50**	**82**	P	**P**	**23 02 39.4**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=294,slow=14,SNR=2.4						
	comp=Z,0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**32.64**	**224**	P	**P**	**23 03 33.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=38,slow=9.0,SNR=8.3						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**42.36**	**60**	P	**P**	**23 04 55.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=316,slow=5.1,SNR=5.2						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.91**	**49**	P	**P**	**23 05 00.1**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=273,slow=8.8,SNR=4.2						
	comp=Z,0.6nm,0.5s						

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*PRU **09** 23:03:53.6±0.0,50°.00N×18°.59E,h0^{km}*

IPEC 09 23:03:52.6±0.2**,50°.01N**×**18°.66E,h1**^{km}**,ML1.5**/3**,Error ellipse: s-maj=2.2km s-min=1.1km az=162.0,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.37**	**243**	*e*PG	Pg	23 03 59.8	+0.1
OKC				*e*SG	Sg	23 04 05.2	+0.7
MORC	**Moravsky Berou**	**0.76**	**253**	*e*Pg	Pg	23 04 06.9	-0.2
	baz=72						
MORC				*e*Sg	Sg	23 04 16.5	-0.4
	12nm,0.3s,baz=72						
MORC	**Moravsky Berou**	**0.76**	**253**	*e*PG	Pg	23 04 07.0	-0.1
MORC				*e*SG	Sg	23 04 16.6	-0.3
OJC	**Ojcow**	**0.77**	**73**	*e*Pg	Pg	23 04 07.3	+0.1
OJC				*e*Sg	Sb	23 04 19.1	-0.5
LANS	**Liptovska Anna**	**1.00**	**148**	*e*PG	Pg	23 04 12.1	+0.3
LANS				*e*SG	Sn	23 04 28.5	-0.2
LANS				*e*LG	Lg	23 04 35.6	
KRLC	**Kraliky**	**1.21**	**274**	*e*PG	Pg	23 04 14.3	-1.5
KRLC				*e*SG	Sg	23 04 30.2	-1.3
	comp=Z,4.5nm,0.5s						
NIE	**Niedzica**	**1.22**	**118**	*e*Pg	Pn	23 04 17.5	+0.7
NIE				*e*Sg	Sn	23 04 35.4	+1.5
VRAC	**Vranov**	**1.51**	**243**	*e*Pg	Pn	23 04 20.1	-0.7
	baz=62						
VRAC				*e*Sg	Sb	23 04 40.2	-0.9
	5.6nm,0.3s,baz=62						
VRAC	**Vranov**	**1.51**	**243**	*e*PG	Pn	23 04 20.1	-0.7
VRAC				*e*SG	Sb	23 04 40.2	-0.9
VYHS	**Vyhne**	**1.52**	**176**	*e*SG	Sb	23 04 40.4	-0.9
DPC	**Dobruska-Polom**	**1.54**	**284**	*e*PG	Pn	23 04 20.8	-0.5
DPC				*e*SG	Sn	23 04 41.8	-0.1
	comp=Z,3.1nm,0.5s						
OSTC	**Ostas**	**1.66**	**290**	*e*PG	Pb	23 04 23.8	-0.2
OSTC				*e*SG	Sg	23 04 45.8	-0.1
KRUC	**Moravsky**	**1.75**	**238**	*e*Pn	Pn	23 04 24.0	-0.1
	baz=56						
KRUC				*e*Sg	Sn	23 04 47.3	+0.3
	3.4nm,0.4s,baz=56						
KRUC	**Moravsky**	**1.75**	**238**	*e*PN	Pn	23 04 24.0	-0.1
KRUC				*e*SG	Sn	23 04 47.3	+0.3
CHVC	**Chvalec**	**1.77**	**290**	*e*PG	Pb	23 04 25.6	-0.2
CHVC				*e*SG	Sg	23 04 49.2	-0.2

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*IDC **09** 23:04:29.8±1.9,50°.01S×111°.48E,h0^{km},mb4.2/4, mbtmp4.1/4,MS3.1/4,Error ellipse: s-maj=91.9km s-min=26.4km az=109.0*

*NEIC **09** 23:04:37.7±2.2,50°.7S±0°.1×114°.9E±0°.2,h10^{km}±1^{km}, mb4.6/14,Error ellipse: s-maj=30.7km s-min=8.1km az=307.0*

ISC 09 23:04:37.5±0.9**,50°.7S**±0°.1×**115°.0E**±0°.2**,h10**^{km}**,n27, σ1^{s}05**/18**,mb4.5**/11**,MS2.9**/4**,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.84**	**357**	T	T	23 23 42.9	
	baz=186,slow=74,SNR=39						
H01W1	**Cape Leeuwin H**	**15.84**	**357**	T	T	23 23 43.6	
	baz=186,slow=74,SNR=30						
H01W3	**Cape Leeuwin H**	**15.85**	**357**	T	T	23 23 42.3	
	baz=186,slow=74,SNR=38						
NWAO	**Narrogin (SRO)**	**17.87**	**6**		**P**	**23 08 47.3**	**+0.6**
NWAO				IAmb	IAmb	23 08 55.3	
	comp=Z,43nm,1.4s						
FORT	**Forrest**	**22.18**	**31**	P	**P**	**23 09 33.9**	**+0.2**
FORT				IAmb	IAmb	23 09 48.1	
	comp=Z,42nm,1.1s						
STKA	**Stephens Creek**	**27.22**	**56**	LR	LR	23 21 17.4	
	comp=Z,24nm,18.4s,baz=206,slow=35						
CAN	**Canberra**	**28.92**	**71**	P	**P**	**23 10 35.9**	**-0.8**
MBWA	**Marble Bar**	**29.75**	**9**	P	**P**	**23 10 44.9**	**+1.0**
MAW	**Mawson**	**30.39**	**217**	P	**P**	**23 10 48.6**	**-0.6**
MAW				IAmb	IAmb	23 11 00.8	
	comp=Z,3.9nm,1.1s						
ASAR	**Alice Springs**	**30.74**	**36**	P	**P**	**23 10 54.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=208,slow=8.0,SNR=8.3						
ASAR				LR	LR	23 22 14.1	
	comp=Z,27nm,18.6s,baz=168,slow=34						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**30.74**	**36**	P	**P**	**23 10 51.8**	**-1.0**
VNDA	**Vanda**	**31.99**	**163**	P	**P**	**23 11 04.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**33.65**	**18**	LR	LR	23 23 07.2	
	comp=Z,26nm,21.6s,baz=187,slow=33						
ARMA	**Armidale**	**33.95**	**67**	P	**P**	**23 11 21.1**	**+0.1**
ARMA				IAmb	IAmb	23 11 30.6	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**34.31**	**34**	P	**P**	**23 11 24.7**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=205,slow=8.5,SNR=8.2						
	comp=Z,1.9nm,0.8s						
WRA	**Warramunga Arr**	**34.31**	**34**	P	**P**	**23 11 24.7**	**+0.6**
WRA	**Warramunga Arr**	**34.31**	**34**	IAmb	IAmb	23 11 32.8	
	comp=Z,0.4nm,1.4s						
WB2	**Warramunga Arr**	**34.32**	**34**	P	**P**	**23 11 24.4**	**+0.3**
WB2				IAmb	IAmb	23 11 45.6	
	comp=Z,7.5nm,1.2s						
WR0	**Warramunga Arr**	**34.37**	**34**	P	**P**	**23 11 22.2**	**-2.3**
WR0				IAmb	IAmb	23 11 24.2	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**34.50**	**34**	P	**P**	**23 11 25.7**	**0.0**
WB0				IAmb	IAmb	23 11 26.1	
	comp=Z,12nm,1.4s						
KNRA	**Kununurra**	**36.68**	**23**	P	**P**	**23 11 42.4**	**-2.0**
CTA	**Charters Tower**	**39.26**	**50**	LR	LR	23 28 24.3	
	comp=Z,43nm,18.6s,baz=255,slow=35						
QSPA	**South Pole Qui**	**39.40**	**180**	P	**P**	**23 12 06.8**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=338,slow=0.6,SNR=6.0						
	comp=Z,1.5nm,0.9s						
QSPA	**South Pole Qui**	**39.40**	**180**	P	**P**	**23 12 06.8**	**-0.3**
QRZ	**Quartz Range**	**40.38**	**99**	P	**P**	**23 12 15.3**	**0.0**
QRZ				IAmb	IAmb	23 12 19.4	
	comp=Z,39nm,1.4s						
SONM	**Songino Array**	**98.47**	**354**	P	P	23 18 04.7	-11
	comp=Z,1.7nm,0.4s,baz=188,slow=5.8,SNR=2.1						
	comp=Z,1.7nm,0.4s						
TXAR	**Lajitas Array**	**144.05**	**112**	PKPbc	PKPbc	23 24 12.0	+0.9
	comp=Z,0.1nm,0.6s,baz=189,slow=4.6,SNR=1.7						

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*JMA **09** 23:21:51.0±0.3,31°.0N±0°.5×12°9E±°,h6^{km}±2^{km},MD4.3/28, MW4.5/28,SW OFF KYUSHU*

JMA Felt I J1 at SW OFF KYUSHU .

*NIED **09** 23:21:51.0,31°.03N×129°.09E,h6^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.77; $M_{\theta\theta}$2.05; $M_{\phi\phi}$-1.29; $M_{r\theta}$0.66; $M_{\theta\phi}$1.65; $M_{\phi r}$2.58; Fault plane solution: $M_0$3.60000×10^{15} NP1: ϕ_s107.00000°,δ42.00000°,λ-13.00000°. NP2: ϕ_s206.00000°,δ81.00000°,λ-131.00000°.*

*NEIC **09** 23:21:52.9±1.5,31°.07N±0°.06×129°.18E±0°.07,h10^{km}±1^{km}, mb4.5/42,Mwr4.2/10 Error ellipse: s-maj=11.0km s-min=8.5km az=143.0*

*NEIC **09** 23:21:52.9,31°.07N×129°.18E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.85; $M_{\theta\theta}$1.86; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.43; $M_{\theta\phi}$1.72; $M_{\phi r}$1.54; Fault plane solution: $M_0$2.85000×10^{15} NP1:ϕ_s105.76000°, δ51.93000°,λ-15.93000°. NP2:ϕ_s205.74000°,δ77.52000°, λ-140.84000°. Principal axes: T 2.9756, Plg16.0000°, Azm331.0000°; N -0.2695, Plg49.0000°, Azm221.0000°; P -2.7061, Plg36.0000°, Azm73.0000°;*

*IDC **09** 23:21:55.6±5.8,31°.22N×129°.17E,h30^{km}±42^{km},mb3.6/16, mbtmp3.8/20,ML3.2/4,MS3.4/27 Error ellipse: s-maj=20.1km s-min=15.5km az=82.0*

ISC 09 23:21:53.1±1.3**,31°.07N**±0°.03×**129°.19E**±0°.04**,h14**^{km}±8^{km}**, n126,σ1^{s}36**/108**,mb4.3**/38**,MS3.5**/23**,1C,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.76**	**36**	*e*P	**Pg**	**23 22 06.9**	**-1.0**
JSJ				*e*S	**Sg**	**23 22 18.0**	**+0.1**
JSJ	**Shimokoshiki**	**0.76**	**36**	A	A	23 22 06.9	
	comp=E,23nm,1.3s,comp=E,32nm,1.4s						
JKC	**Kuchinoerabu**	**1.05**	**125**	P	**Pg**	**23 22 12.5**	**-1.0**
JKC				S	**Sg**	**23 22 27.1**	**-0.1**
JKC	**Kuchinoerabu**	**1.05**	**125**	A	A	23 22 12.5	
	comp=E,20nm,0.7s,comp=E,34nm,0.8s						
JSU	**Suzuyama**	**1.17**	**68**	Pn	**Pb**	**23 22 14.6**	**-0.5**
JSU				Sn	**Sn**	**23 22 31.4**	**+0.5**
JSU	**Suzuyama**	**1.17**	**68**	P	**Pb**	**23 22 14.8**	**-0.4**
JSU				S	**Sn**	**23 22 31.9**	**+1.0**
JSU	**Suzuyama**	**1.17**	**68**	A	A	23 22 14.8	
	comp=E,7.0nm,1.0s,comp=E,11nm,0.2s						
JNN	**Nakanoshima**	**1.36**	**154**	P	**Pn**	**23 22 16.7**	**-1.0**
JNN	**Nakanoshima**	**1.36**	**154**	A	A	23 22 16.7	
	comp=E,13nm,1.5s,comp=E,12nm,0.9s						
JYAK	**Yakushimahirau**	**1.41**	**126**	*e*P	**Pn**	**23 22 16.7**	**-1.6**
JYAK				S	**Sb**	**23 22 37.7**	**+0.8**
JTSR	**Tashiro 2**	**1.49**	**86**	P	**Pn**	**23 22 18.7**	**-0.8**
JTSR				S	**Sg**	**23 22 41.1**	**0.0**
JTN	**Tanegashima 3**	**1.59**	**104**	P	**Pn**	**23 22 20.8**	**-0.1**
JTN				S	**Sn**	**23 22 42.3**	**+1.0**
JTN	**Tanegashima 3**	**1.59**	**104**	A	A	23 22 20.8	
	comp=E,5.0nm,3.1s,comp=E,5.0nm,4.9s						
JZO	**Okuchi**	**1.61**	**48**	P	**Pb**	**23 22 22.4**	**-0.3**
JZO				S	**Sg**	**23 22 45.0**	**-0.1**
JZO	**Okuchi**	**1.61**	**48**	A	A	23 22 22.4	
	comp=E,9.0nm,0.9s,comp=E,9.0nm,1.4s						
JHD	**Hondo**	**1.61**	**30**	P	**Pb**	**23 22 23.0**	**+0.3**
JHD				S	**Sb**	**23 22 43.4**	**+0.5**
JHD	**Hondo**	**1.61**	**30**	A	A	23 22 23.0	
	comp=E,5.0nm,2.7s,comp=E,4.0nm,2.2s						
JMTN	**Minamitane**	**1.62**	**114**	A	A	23 22 21.3	
	comp=E,6.0nm,2.3s,comp=E,9.0nm,1.9s						
JFU	**Fukue jima 2**	**1.63**	**347**	P	**Pn**	**23 22 19.2**	**-2.2**
JFU				S	**Sn**	**23 22 42.8**	**+0.6**
NGSJ	**Nagasakinomoza**	**1.65**	**18**	P	**Pb**	**23 22 22.9**	**-0.3**
NGSJ				S	**Sb**	**23 22 44.2**	**+0.4**
JNAR	**Kushima--Naru**	**1.84**	**75**	A	A	23 22 25.1	
	comp=E,5.0nm,1.5s,comp=E,7.0nm,1.3s						
JNKG	**Nichinankitago**	**1.96**	**72**	A	A	23 22 26.8	
	comp=E,6.0nm,2.1s,comp=E,6.0nm,1.8s						
JNU	**Nakatsue**	**2.50**	**35**	Pn	**Pn**	**23 22 35.5**	**+2.1**
	23nm,0.3s,baz=206,slow=12,SNR=54						
JNU				Sn	**Sb**	**23 23 10.3**	**+1.8**
	36nm,0.3s,baz=298,slow=23,SNR=11						
JNU	**Nakatsue**	**2.50**	**35**		**Pb**	**23 22 37.6**	**-0.3**
JTU	**Tsushima**	**3.45**	**3**		**Pn**	**23 22 48.2**	**+1.8**
JOW	**Kunigami**	**4.29**	**191**	Pn	**Pn**	**23 22 59.3**	**+1.2**
	3.6nm,0.3s,baz=80,slow=20,SNR=2.8						
	13nm,0.5s						
JHS	**Saijyo**	**5.12**	**39**	Pn	**Pn**	**23 23 11.8**	**+2.3**
TJN	**Taejon**	**5.51**	**344**		**Pn**	**23 23 14.6**	**-0.2**
KSAR	**Wonju Array Be**	**6.45**	**351**	Pn	**Pn**	**23 23 28.2**	**+0.5**
KSRS	**Korea Array**	**6.46**	**351**	Pn	**Pn**	**23 23 26.8**	**-0.9**
	0.7nm,0.3s,baz=178,slow=15,SNR=19						
KSRS				LR	LR	23 25 54.0	
	comp=Z,253nm,19.7s,baz=180,slow=38						
	7.6nm,0.8s						
KS19	**Wonju Array Si**	**6.51**	**351**		**Pn**	**23 23 27.9**	**-0.6**
INCN	**Inchon**	**6.74**	**342**	Pn	**Pn**	**23 23 31.3**	**-0.4**
INU	**Inuyama**	**7.83**	**55**	Pn	**Pn**	**23 23 48.1**	**+1.6**
JGF	**Kuroka**	**8.19**	**54**		**Pn**	**23 23 53.3**	**+1.7**
MJAR	**Matsushiro Arr**	**9.28**	**52**	Pn	**Pn**	**23 24 06.5**	**-0.1**
	0.1nm,0.3s,baz=184,slow=5.5,SNR=2.0						
MJAR				LR	LR	23 28 22.2	
	comp=Z,187nm,18.1s,baz=232,slow=42						
	1.0nm,0.5s						
WHN	**Wuhan**	**12.77**	**271**	⇑P	Pn	23 24 59.6	+5.3
WHN				S	**Sn**	**23 27 21.0**	**+4.8**
WHN				LR	LR		
	comp=N,740nm,8.3s						
WHN				LR	LR		
	comp=E,670nm,8.9s						
WHN				LR	LR		
	comp=Z,1μm,13.2s						
USRK	**Ussuriysk Ar.**	**13.30**	**9**	LR	LR	23 29 58.7	
	comp=Z,76nm,18.6s,baz=175,slow=37						
HNS	**HongShan**	**13.54**	**302**	*e*P	P	23 25 26.9	+13
HNS				*e*S	**S**	**23 27 54.5**	**-3.8**
HNS				LR	LR		
	comp=N,220nm,12.0s						
HNS				LR	LR		
	comp=E,350nm,12.5s						
HNS				LR	LR		
	comp=Z,350nm,12.0s						
ASAJ	**Asahikawa**	**16.78**	**35**	LR	LR	23 31 00.8	
	comp=Z,27nm,19.6s,baz=180,slow=33						
XAN	**Xi'an**	**17.34**	**285**	P	**P**	**23 26 02.0**	**+5.8**
XAN				pP	sP	23 26 07.5	+5.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	**Kul'dur**	**18.25**	**5**	P	**Pn**	**23 26 05.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=206,slow=9.7,SNR=6.6						
KLR				LR	LR	23 32 26.0	
	comp=Z,45nm,19.9s,baz=186,slow=35						
	comp=Z,2.3nm,0.8s						
SONM	**Songino Array**	**24.16**	**320**	P	**P**	**23 27 07.6**	**-1.3**
	comp=Z,3.6nm,0.7s,baz=110,slow=6.7,SNR=3.7						
SONM				LR	LR	23 37 02.8	
	comp=Z,139nm,19.2s,baz=280,slow=38						
	comp=Z,3.6nm,0.7s						
SONM	**Songino Array**	**24.16**	**320**	IAmb	IAmb	23 27 09.2	
	comp=Z,7.1nm,1.2s						
GTA	**Gaotai**	**25.31**	**297**	*e*P	**P**	**23 27 23.7**	**+4.2**
GTA				pP	sP	23 27 28.3	+3.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MYLDM	**Lahad Datu**	**27.64**	**203**	P	**P**	**23 27 40.2**	**-0.3**
MYLDM				IAmb	IAmb	23 27 45.8	
	comp=Z,19nm,1.4s						
GOMU	**GeErMu**	**28.98**	**290**	P	**P**	**23 27 55.8**	**+3.0**
GOMU				pP	sP	23 27 59.4	+0.9
GOMU				sP	pP	23 28 03.7	+6.9
GOMU				S	**S**	**23 32 41.9**	**-1.7**
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,37nm,4.7s						
GOMU				LR	LR		
	comp=N,200nm,16.7s						
GOMU				LR	LR		
	comp=E,85nm,16.3s						
GOMU				LR	LR		
	comp=Z,88nm,16.4s						
CHTO	**Chiang Mai**	**29.91**	**253**	P	**P**	**23 28 00.3**	**-0.5**
CHTO				IAmb	IAmb	23 28 06.4	
	comp=Z,4.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.09**	**252**	P	**P**	**23 28 03.9**	**+1.6**
	comp=Z,1.1nm,0.3s,baz=51,slow=7.2,SNR=6.1						
	comp=Z,1.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.09**	**252**	P	**P**	**23 28 03.0**	**+0.6**
PETK	**Petropavlovsk-**	**30.20**	**35**	LR	LR	23 40 27.5	
	comp=Z,41nm,18.9s,baz=104,slow=37						
SIJI	**Sorong**	**31.82**	**176**	LR	LR	23 39 37.1	
	comp=Z,52nm,20.3s,baz=16,slow=33						
MA2	**Magadan**	**31.99**	**21**	LR	LR	23 39 50.5	
	comp=Z,12nm,21.4s,baz=276,slow=34						
KAPI	**Kappang**	**36.99**	**196**	LR	LR	23 43 32.4	
	comp=Z,47nm,21.7s,baz=354,slow=35						
ZALV	**Zalesovo Beam**	**39.04**	**319**	P	**P**	**23 29 18.9**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=115,slow=6.5,SNR=2.1						
ZALV				LR	LR	23 46 12.7	
	comp=Z,50nm,18.6s,baz=114,slow=37						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**39.04**	**319**	P	**P**	**23 29 18.5**	**-0.7**
MK31	**Makanchi Array**	**39.11**	**307**	P	**P**	**23 29 19.9**	**-0.1**
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**23 29 19.1**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=97,slow=10.0,SNR=8.7						
MKAR				LR	LR	23 46 28.6	
	comp=Z,70nm,18.9s,baz=90,slow=38						
	comp=Z,0.9nm,0.8s						
PSI	**Prapat**	**40.08**	**231**	LR	LR	23 45 52.0	
	comp=Z,74nm,20.0s,baz=48,slow=36						
TIXI	**Tiksi**	**40.64**	**360**	P	**P**	**23 29 30.5**	**-1.8**
KURK	**Kurchatov**	**42.03**	**313**	P	**P**	**23 29 44.2**	**+0.3**
KURBB	**Kurchatov Arra**	**42.07**	**313**	P	**P**	**23 29 43.5**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=100,slow=8.9,SNR=4.1						
	comp=Z,0.5nm,0.6s						
PMG	**Port Moresby**	**43.78**	**154**	LR	LR	23 46 59.2	
	comp=Z,32nm,19.8s,baz=328,slow=34						
NIL	**Nilore**	**46.84**	**289**	P	**P**	**23 30 21.7**	**-1.1**
NIL				IAmb	IAmb	23 30 26.3	
	comp=Z,7.3nm,1.2s						
BRVK	**Borovoye**	**47.40**	**315**	P	**P**	**23 30 26.2**	**-0.6**
KK31	**Karatay Array**	**47.44**	**302**	P	**P**	**23 30 27.6**	**+0.3**
KK31				IAmb	IAmb	23 30 31.1	
	comp=Z,3.3nm,1.1s						
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**23 30 26.8**	**-0.6**
KKAR				IAmb	IAmb	23 30 31.1	
	comp=Z,3.3nm,1.1s						
KKAR	**Karatay Array**	**47.44**	**302**	P	**P**	**23 30 27.3**	**0.0**
GAR	**Garm**	**48.13**	**296**	P	**P**	**23 30 32.4**	**-0.5**
WRA	**Warramunga Arr**	**50.96**	**174**	P	**P**	**23 30 54.8**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=355,slow=8.0,SNR=7.6						
	comp=Z,1.0nm,0.7s						
PALK	**Pallekele**	**51.04**	**253**	LR	LR	23 52 47.9	
	comp=Z,34nm,21.6s,baz=161,slow=36						
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**23 31 17.3**	**+0.3**
ABKAR				IAmb	IAmb	23 31 22.6	
	comp=Z,2.7nm,0.8s						
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**23 31 17.5**	**+0.5**
ARU	**Arti**	**54.19**	**320**	LR	LR	23 55 15.3	
	comp=Z,78nm,18.4s,baz=172,slow=37						
ARU	**Arti**	**54.19**	**320**	P	**P**	**23 31 18.7**	**+0.8**
ARU				IAmb	IAmb	23 31 26.8	
	comp=Z,8.7nm,1.3s						
AS31	**Alice Springs**	**54.61**	**175**	P	**P**	**23 31 21.9**	**+0.6**
ASAR	**Alice Springs**	**54.61**	**175**	P	**P**	**23 31 23.2**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=6.6,slow=13,SNR=8.6						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**54.61**	**175**	P	**P**	**23 31 21.5**	**+0.2**
AKTO	**Aktyubinsk**	**55.12**	**312**	LR	LR	23 55 33.7	
	comp=Z,78nm,19.3s,baz=82,slow=37						
HRA	**Herat**	**55.49**	**293**	P	**P**	**23 31 28.0**	**+0.1**
HRA				IAmb	IAmb	23 31 32.8	
	comp=Z,3.8nm,1.1s						
L19K	**White Mountain**	**56.55**	**33**	P	**P**	**23 31 34.5**	**-0.4**
L19K				IAmb	IAmb	23 31 39.9	
	comp=Z,6.0nm,1.4s						
J20K	**Nowinta River**	**56.75**	**31**	P	**P**	**23 31 35.9**	**-0.3**
GEYT	**Alibeck**	**57.70**	**298**	P	**P**	**23 31 43.1**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=58,slow=14,SNR=1.9						
	comp=Z,0.7nm,0.5s						
NEA2	**Nenana**	**58.91**	**30**	P	**P**	**23 31 51.5**	**+0.1**
NEA2				IAmb	IAmb	23 31 57.7	
	comp=Z,4.0nm,1.0s						
RND	**Reindeer**	**59.16**	**31**	P	**P**	**23 31 54.4**	**+1.1**
MDM	**Murphy Dome**	**59.22**	**29**	IAmb	IAmb	23 31 59.4	
	comp=Z,6.5nm,1.2s						
H24K	**Noodor Dome**	**59.24**	**28**	P	**P**	**23 31 53.1**	**-0.7**
H24K				IAmb	IAmb	23 31 59.8	
	comp=Z,2.8nm,1.1s						
SEW	**Seward**	**59.40**	**35**	P	**P**	**23 31 54.9**	**+0.1**
KNK	**Knik Glacier**	**59.66**	**34**	P	**P**	**23 31 56.7**	**0.0**
KNK				IAmb	IAmb	23 32 02.8	
	comp=Z,5.5nm,1.1s						
ILAR	**Eielson Array**	**59.81**	**30**	P	**P**	**23 31 56.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=278,slow=6.7,SNR=4.2						
	comp=Z,0.3nm,0.7s						
BELG	**Belogornoye**	**61.12**	**316**	LR	LR	00 00 46.3	
	comp=Z,61nm,19.1s,baz=338,slow=38						
N25K	**Chitina, Valde**	**61.44**	**33**	P	**P**	**23 32 08.9**	**+0.1**
N25K				IAmb	IAmb	23 32 11.6	
	comp=Z,3.8nm,1.2s						
MENT	**Mentasta**	**61.54**	**31**	P	**P**	**23 32 09.5**	**0.0**
MENT				IAmb	IAmb	23 32 16.7	
	comp=Z,4.0nm,0.8s						
M26K	**Nabesna, AK**	**61.99**	**32**	P	**P**	**23 32 11.8**	**-0.7**
M26K				IAmb	IAmb	23 32 19.2	
	comp=Z,3.9nm,0.9s						
L27K	**Beaver Creek,**	**62.35**	**31**	P	**P**	**23 32 15.3**	**+0.4**
L27K				IAmb	IAmb	23 32 21.9	
	comp=Z,2.5nm,1.0s						
BCAR	**Beaver Creek A**	**62.37**	**31**	P	**P**	**23 32 15.5**	**+0.4**
KLMR	**Klimovskoe**	**63.25**	**327**	*e*P	**P**	**23 32 22.7**	**+1.9**
KLMR				AMP		23 32 31.0	
	comp=Z,7.0nm,1.3s						
INK	**Inuvik**	**64.14**	**24**	LR	LR	00 01 26.0	
	comp=Z,34nm,20.1s,baz=300,slow=37						
PINNC	**Pines Island,**	**64.77**	**141**	P	**P**	**23 32 29.8**	**-1.5**
ARCES	**ARCESS Array B**	**65.84**	**338**	LR	LR	00 05 56.0	
	comp=Z,30nm,18.9s,baz=70,slow=40						
KBZ	**Khabaz**	**66.80**	**308**	P	**P**	**23 32 45.0**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=131,slow=1.8,SNR=7.9						
	comp=Z,2.8nm,0.8s						
ONI	**Oni**	**66.84**	**307**	P	**P**	**23 32 44.5**	**-0.1**
ONI				IAmb	IAmb	23 32 50.1	
	comp=Z,3.6nm,1.1s						
KIV	**Kislovodsk**	**66.86**	**308**	P	**P**	**23 32 44.5**	**-0.3**
GEVA	**Gevas**	**68.74**	**303**	P	**P**	**23 32 56.6**	**-0.3**
FINES	**FINESS Array B**	**69.10**	**330**	P	**P**	**23 32 55.9**	**-2.5**
	comp=Z,0.7nm,0.9s,baz=57,slow=7.0,SNR=5.0						
FINES				LR	LR	00 08 48.5	
	comp=Z,26nm,19.3s,baz=36,slow=41						
	comp=Z,0.7nm,0.9s						
GURO	**Guroymak-BITLI**	**69.39**	**303**	P	**P**	**23 33 01.2**	**+0.4**
GURO				IAmb	IAmb	23 33 06.2	
	comp=Z,4.0nm,1.0s						
MARD	**Mardin**	**70.80**	**302**	P	**P**	**23 33 08.9**	**-0.6**
AKASG	**Malin Array Be**	**72.43**	**319**	LR	LR	00 06 43.5	
	comp=Z,60nm,18.8s,baz=296,slow=37						
RAYN	**Ar Rayn**	**73.12**	**288**	P	**P**	**23 33 22.4**	**-1.2**
YKA	**Yellowknife Ar**	**73.81**	**26**	P	**P**	**23 33 26.6**	**-0.2**
	comp=Z,1.0nm,1.0s,baz=292,slow=5.5,SNR=4.0						
	comp=Z,1.0nm,1.0s						
BR131	**Keskin Array S**	**74.76**	**307**	P	**P**	**23 33 33.4**	**+0.4**
BR131				IAmb	IAmb	23 33 37.6	
	comp=Z,4.4nm,0.9s						
BRTR	**Keskin Array B**	**74.76**	**307**	P	**P**	**23 33 31.4**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=359,slow=9.6,SNR=2.7						
	comp=Z,0.5nm,0.9s						
BRTR	**Keskin Array B**	**74.76**	**307**	P	**P**	**23 33 33.1**	**+0.1**
HFS	**Hagfors**	**74.95**	**332**	LR	LR	00 07 33.1	
	comp=Z,32nm,20.0s,baz=38,slow=37						
NC405	**NORSAR Array S**	**75.13**	**334**	P	**P**	**23 33 33.8**	**-0.8**

NOA	NORSAR Array B	75.37	334	P	P	23 33 33.3	-2.6
	comp=Z,0.4nm,0.8s,baz=6.3,slow=12,SNR=2.3						
NOA				LR	LR	00 11 23.1	
	comp=Z,16nm,18.2s,baz=310,slow=40						
	comp=Z,0.4nm,0.8s						
TIRR	Tirgusor	75.91	314	P	P	23 33 37.5	-1.8
BURAR	Bucovina Array	76.24	317	P	P	23 33 41.3	+0.1
GHAJ	Ghor Haditha	77.35	299	P	P	23 33 47.4	-0.2
VRAC	Vranov	80.07	322	LR	LR	00 13 58.4	
	comp=Z,35nm,18.1s,baz=82,slow=39						
VTS	Vitosha	80.08	314	P	P	23 34 02.9	+0.2
FNA	Florina	82.25	313	P	P	23 34 14.3	+0.1
PDG	Podgorica	82.61	315	P	P	23 34 15.3	-0.6
PDG				IAmb	IAmb	23 34 18.2	
	comp=Z,3.1nm,0.9s						
FRB	Frobisher Bay	84.47	8	LR	LR	00 15 47.6	
	comp=Z,28nm,18.2s,baz=353,slow=38						
DAVOX	Davos/Dischmat	85.16	323	LR	LR	00 14 06.2	
	comp=Z,57nm,18.7s,baz=84,slow=37						
NVAR	Mina Array Bea	86.57	47	P	P	23 34 36.4	0.0
	comp=Z,0.4nm,0.6s,baz=246,slow=6.8,SNR=2.0						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	88.88	39	P	P	23 34 47.1	-0.3
	comp=Z,0.5nm,0.8s,baz=278,slow=1.0,SNR=4.6						
	comp=Z,0.5nm,0.8s						

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*DDA **09** 23:24:31.5±0.0, 37°.86N×26°.71E, h7^{km}±2^{km}, ML2.6*

*ISK **09** 23:24:31.3, 37°.85N×26°.71E, h8^{km}, ML3.0/23*

*ATH **09** 23:24:31.6, 37°.88N×26°.79E, h18^{km}±4^{km}, ML3.0/3, Error ellipse: s-maj=6.1km s-min=1.3km az=98.0*

*THE **09** 23:24:31.9, 37°.88N×26°.73E, h8^{km}±1^{km}, ML2.8/5, Error ellipse: s-maj=1.9km s-min=0.6km az=67.0*

ISC 09 23:24:32.0±0.8**, 37°.87N**±0°.02×**26°.72E**±0°.02**, h13**^{km}±6^{km}**, n57, σ0^{s}.69**/88**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.19	150	P	Pg	23 24 36.3	+0.1
SMG				S	Sg	23 24 39.4	+0.2
SMG				AML	AML	23 24 39.8	
	comp=E,16303µm,0.4s						
SMG				AML	AML	23 24 40.1	
	comp=N,9763µm,0.2s						
SMG	Samos	0.19	150	P	Pg	23 24 36.3	+0.1
SMG				S	Sg	23 24 39.4	+0.2
	comp=N,7µm,0.3s						
DGB	zmir	0.22	36	P	Pg	23 24 36.4	-0.4
DGB				S	Sg	23 24 39.7	-0.3
DGB				*i* AML	AML	23 24 40.0	
	comp=N,2µm,0.3s						
DGB				*i* AML	AML	23 24 40.0	
	comp=N,2µm,0.3s						
ZEYE	Izmir, Urla-Ze	0.40	335	P	Pg	23 24 39.7	-0.3
ZEYE				S	Sb	23 24 46.0	-1.1
ZEYE				*i* AML	AML	23 24 47.0	
	comp=N,746nm,0.3s						
ZEYE				*i* AML	AML	23 24 52.0	
	comp=N,479nm,0.5s						
GCAM	G?zelcaml?	0.44	113	PG	Pg	23 24 40.5	-0.2
GCAM				SG	Sb	23 24 47.3	-0.9
GCAM	G?zelcaml?	0.44	113	P	Pg	23 24 40.5	-0.2
GCAM				*i* AML	AML	23 24 47.0	
	comp=N,423nm,0.4s						
GCAM				S	Sb	23 24 47.5	-0.7
GCAM				*i* AML	AML	23 24 54.0	
	comp=N,429nm,0.5s						
URLA	Izmir	0.49	349	PG	Pg	23 24 41.3	-0.4
URLA				SG	Sb	23 24 50.0	+0.2
URLA	Izmir	0.49	349	P	Pg	23 24 41.3	-0.4
URLA				S	Sb	23 24 48.9	-0.8
URLA				*i* AML	AML	23 24 49.0	
	comp=N,371nm,0.3s						
URLA				*i* AML	AML	23 24 55.0	
	comp=N,513nm,0.5s						
BLCB	Balcova	0.57	27	P	Pg	23 24 42.4	-0.8
BLCB	Balcova	0.57	27	PG	Pg	23 24 42.7	-0.5
CHOS	Chios island	0.73	315	P	Pg	23 24 45.8	-0.4
CHOS				S	Sb	23 24 56.9	+0.3
CHOS				AML	AML	23 24 57.7	
	comp=N,3811µm,0.3s						
CHOS				AML	AML	23 24 58.1	
	comp=E,3438µm,0.2s						
CHOS	Chios island	0.73	315	P	Pg	23 24 45.8	-0.4
CHOS				S	Sb	23 24 56.9	+0.3
	comp=E,2µm,0.2s						
CHOS	Chios island	0.73	315	PG	Pb	23 24 46.6	0.0
CHOS				SG	Sb	23 24 57.2	+0.6
FOCM	Foa	0.84	1	PG	Pb	23 24 48.3	-0.1
AYDB	Zeytinkoy-Aydi	0.93	85	PG	Pb	23 24 49.7	-0.4
AYDB				SG	Sn	23 25 03.5	-0.7
BODT	Bodrum	0.94	150	P	Pb	23 24 50.4	+0.3
BODT				S	Sb	23 25 02.7	+0.2
BODT	Bodrum	0.94	150	PG	Pb	23 24 50.0	-0.1
BODT				SG	Sb	23 25 02.5	0.0
AYDN	Tasoluk	0.94	103	P	Pg	23 24 49.7	-0.5
AYDN				S	Sb	23 25 03.2	+0.5
AYDN				*i* AML	AML	23 25 06.0	
	comp=E,118nm,0.3s						
AYDN				*i* AML	AML	23 25 08.0	
	comp=E,130nm,0.8s						
BDRM	Kayabasi	0.99	144	P	Pg	23 24 50.8	-0.3
BDRM				S	Sb	23 25 04.2	+0.1
BDRM				*i* AML	AML	23 25 06.0	
	comp=E,249nm,0.3s						
BDRM				*i* AML	AML	23 25 07.0	
	comp=E,323nm,0.6s						
MLSB	Milas	1.02	124	PG	Pb	23 24 51.4	-0.1
MLSB				SG	Sn	23 25 05.9	-0.4
ZEDA	zmir-Bergama	1.13	14	P	Pg	23 24 52.8	-0.9
ZEDA				S	Sb	23 25 08.4	+0.5
ZEDA				*i* AML	AML	23 25 13.0	
	comp=E,89nm,0.5s						
ZEDA				*i* AML	AML	23 25 14.0	
	comp=E,139nm,0.5s						
KOSK	Kos Island	1.14	169	PN	Pg	23 24 53.3	-0.6
DKL	Dikili	1.21	7	PN	Pb	23 24 54.4	-0.3
DKL				SN	Sn	23 25 12.9	+2.1
APE	Apeiranthos	1.24	230	P	Pn	23 24 54.0	-1.1
APE				S	Sb	23 25 11.7	+0.5
APE	Apeiranthos	1.24	230	P	Pn	23 24 54.0	-1.1
APE				S	Sb	23 25 11.7	+0.5
APE	Apeiranthos	1.24	230	PN	Pn	23 24 54.5	-0.6
GOMA	Golmarmara-Man	1.26	48	PN	Pg	23 24 56.1	-0.1
AKHS	Akhisar	1.32	40	P	Pg	23 24 56.9	-0.5
AKHS				S	Sb	23 25 12.4	-1.2
AKHS				*i* AML	AML	23 25 16.0	
	comp=E,183nm,0.5s						
DAT	Datca	1.33	149	PN	Pn	23 24 56.3	-0.1
PRK	Paraskevi	1.41	346	P	Pn	23 24 57.6	+0.2
PRK	Paraskevi	1.41	346	P	Pn	23 24 57.3	-0.1
PRK				S	Sb	23 25 16.1	-0.1
	comp=E,415nm,0.7s						
YER	Yerkesik	1.45	120	PN	Pn	23 24 58.2	+0.3
SIGR	SIGRI	1.50	333	P	Pn	23 24 57.9	-0.6
SIGR				AML	AML	23 25 25.2	
	comp=E,324µm,0.3s						
SIGR				AML	AML	23 25 25.5	
	comp=N,286µm,0.3s						
SIGR	SIGRI	1.50	333	P	Pn	23 24 57.9	-0.6
SIGR				S	Sn	23 25 17.9	-0.1
	comp=N,155nm,0.5s						
MANT	Manisa	1.58	66	P	Pg	23 25 01.8	-0.4
MANT				S	Sn	23 25 19.9	-0.3
MANT				*i* AML	AML	23 25 22.0	
	comp=N,40nm,0.6s						
MANT				*i* AML	AML	23 25 24.0	
	comp=N,54nm,0.4s						
TURN	Turunc	1.64	132	PN	Pn	23 25 00.9	+0.4
TURN	Turunc	1.64	132	P	Pn	23 24 59.8	-0.7
TURN				*i* AML	AML	23 25 31.0	
	comp=N,63nm,0.4s						
TURN				*i* AML	AML	23 25 32.0	
	comp=N,58nm,0.8s						
GPNR	Gulpinar-Canak	1.65	344	PN	Pb	23 25 01.6	-0.6
BUHA	Balikesir, Bur	1.65	10	P	Pn	23 25 00.1	-0.6
BUHA				S	Sg	23 25 27.2	+2.1
BUHA				*i* AML	AML	23 25 29.0	
	comp=N,75nm,0.4s						
BUHA				*i* AML	AML	23 25 31.0	
	comp=N,64nm,0.4s						
KULA	Kula-Manisa	1.66	67	PN	Pb	23 25 01.6	-0.9
KOCA	Canakkale, Ayv	1.69	345	P	Pb	23 25 02.6	-0.3
KOCA				S	Sg	23 25 28.9	+2.6
KOCA				*i* AML	AML	23 25 29.0	
	comp=N,95nm,0.6s						
KOCA				*i* AML	AML	23 25 29.0	
	comp=N,90nm,0.5s						
STEP	BALIKESIR_Sava	1.69	27	P	Pb	23 25 03.0	-0.1
STEP				S	Sg	23 25 26.4	0.0
STEP				*i* AML	AML	23 25 30.0	
	comp=N,121nm,0.3s						
STEP				*i* AML	AML	23 25 31.0	
	comp=N,94nm,0.5s						
SAP3	Santorini-Thir	1.81	218	P	Pb	23 25 04.5	-0.4
SNT5	Nea Kammeni, S	1.81	216	P	Pb	23 25 05.0	+0.1
DALY	Dalyan (Mula)	1.87	124	PN	Pn	23 25 04.3	+0.6
BAYC	CANAKKALE_Bayr	1.87	356	P	Pn	23 25 03.0	-0.7
BAYC				*i* AML	AML	23 25 37.0	
	comp=N,31nm,0.3s						
BAYC				*i* AML	AML	23 25 39.0	
	comp=N,32nm,0.4s						
DEMI	Demirci	1.96	53	P	Pb	23 25 07.8	+0.3
DEMI				S	Sg	23 25 34.8	-0.1
DEMI				*i* AML	AML	23 25 38.0	
	comp=N,47nm,0.5s						
DEMI				*i* AML	AML	23 25 40.0	
	comp=N,33nm,0.6s						
EZN	Ezine	1.97	351	PN	Pn	23 25 06.3	+1.2
BALY	Balya	1.99	20	P	Pg	23 25 10.2	0.0
BALY				S	Sg	23 25 36.9	+0.8
BALY				*i* AML	AML	23 25 38.0	
	comp=N,58nm,0.4s						
BALY				*i* AML	AML	23 25 40.0	
	comp=N,56nm,0.5s						
ARG	Arkhangelos	2.00	145	P	Pn	23 25 05.6	+0.1
ARG	Arkhangelos	2.00	145	P	Pn	23 25 05.6	+0.1
ARG	Arkhangelos	2.00	145	PN	Pn	23 25 05.9	+0.4
SIMA	Simav-Kutahya	2.15	55	PN	Pn	23 25 08.7	+1.1
FETY	Fethiye	2.26	122	PN	Pn	23 25 09.7	+0.7
CAME	Cameli-Denizli	2.26	113	PN	Pn	23 25 09.9	+0.7
KARP	Karpathos	2.35	171	PN	Pn	23 25 10.9	+0.6
LIA	Limnos Island	2.35	330	P	Pn	23 25 09.6	-0.7
LIA				S	Sn	23 25 38.5	-0.5
	comp=N,38nm,0.4s						

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*KRSZO **09** 23:41:40.0±0.8, 45°.23N×16°.91E, h10^{km}±1^{km}, ML2.5/15, Error ellipse: s-maj=2.4km s-min=2.1km az=68.0*

*RHSSO **09** 23:41:41.0±0.2, 45°.22N×16°.95E, h4^{km}±1^{km}, ML2.2/10*

*VIE **09** 23:41:42.2±0.8, 45°.36N×16°.83E, h8^{km}, mb2.1/3, ml2.0/4, Error ellipse: s-maj=7.4km s-min=3.7km az=173.0   82 km SE of Zagreb*

ISC 09 23:41:40.4±1.0**, 45°.24N**±0°.01×**16°.91E**±0°.02**, h8**^{km}±8^{km}**, n74, σ0^{s}.80**/123**, 3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A051A	Mrakovica	0.23	181	⇓*i*Pg	Pg	23 41 45.3	+0.2
A051A				*e*Sg	Sg	23 41 48.5	+0.3
PRIJ	Prijedor	0.30	208	⇓*i*Pg	Pg	23 41 46.4	0.0
PRIJ				*e*Sg	Sg	23 41 51.4	+1.1
MOSL	Moslavina	0.39	343	*e*Pg	Pg	23 41 48.5	+0.5
MOSL				Sg	Sg	23 41 53.8	+0.6
A052A	Srbac	0.45	108	*e*Pg	Pg	23 41 48.7	-0.4
A052A				*e*Sg	Sg	23 41 54.6	-0.4
A251A	Rujevac	0.47	256	*e*Pg	Pg	23 41 49.4	-0.1
A251A				Sg	Sg	23 41 55.3	-0.4
BLY	Banja Luka	0.53	159	⇓*i*Pg	Pg	23 41 50.2	-0.5
BLY				*e*Sg	Sg	23 41 56.9	-0.7
BLY	Banja Luka	0.53	159	Pg	Pg	23 41 50.1	-0.5
	comp=Z,0.2nm,SNR=16						
BLY				Lg	Lg	23 41 56.5	
A252A	Venje	0.69	73	*e*Pg	Pg	23 41 54.8	+1.1
A252A				Sg	Sg	23 42 04.2	+1.5
A050A	Klekovaca	0.81	200	*e*Pg	Pg	23 41 55.0	-1.0
A050A				*e*Sg	Sg	23 42 06.5	0.0
MGRS	Mrkonjic Grad	0.83	171	*e*Pg	Pg	23 41 56.2	-0.3
MGRS				*e*Sg	Sg	23 42 07.5	+0.2
ZAG	Zagreb	0.87	312	Pg	Pg	23 41 57.6	+0.3
	comp=Z,0.3nm,SNR=4.7						
ZAG				Lg	Lg	23 42 09.7	
PTJ	Puntijarka	0.94	315	*e*Pg	Pg	23 41 58.0	-0.4
PTJ				Sg	Sg	23 42 10.3	-0.4
PTJ	Puntijarka	0.94	315	Pg	Pg	23 41 58.1	-0.4
	comp=Z,0.2nm,SNR=6.6						
PTJ				Sg	Sg	23 42 11.1	+0.4
KALN	Kalnik	0.94	340	*e*Pg	Pg	23 41 58.6	0.0
KALN				Sg	Sg	23 42 10.7	-0.2
A264A	Tarany	0.95	16	Pn	Pb	23 42 00.2	+0.9
	comp=Z,0.3nm,SNR=4.4						
PLIT	Plitvice	0.98	249	*e*Pg	Pg	23 41 58.6	-0.7
PLIT				Sg	Sg	23 42 10.6	-1.4
DOB	Doboj	0.98	121	*e*Pg	Pg	23 41 57.5	-1.9
DOB				*e*Sg	Sg	23 42 10.8	-1.3
OZLJ	Ozalj	1.08	291	*e*Pg	Pg	23 42 00.7	-0.5
OZLJ				Sg	Sg	23 42 14.0	-1.2
UDBI	Udbina	1.08	229	*e*Pg	Pg	23 42 00.9	-0.4
UDBI				Sg	Sg	23 42 14.4	-0.9
LOBO	Lobor	1.09	327	*e*Pg	Pg	23 42 00.9	-0.4
LOBO				Sg	Sg	23 42 15.6	+0.2
GCIS	Gornji Cirnik	1.10	305	*i* Pg	Pg	23 42 01.6	+0.1
GCIS				IAML		23 42 20.1	
	comp=Z,8.0nm,0.2s						
CRES	Cresnjev	1.18	300	*e*Pg	Pg	23 42 02.3	-0.7
CRES				*e*Sg	Sb	23 42 19.2	+0.7
CRES	Cresnjev	1.18	300	*i* Pg	Pg	23 42 02.4	-0.6
CRES				*e*Sg	Sb	23 42 19.0	+0.5
CRES				IAML		23 42 21.6	
	comp=Z,6.0nm,0.1s						
CRES	Cresnjev	1.18	300	Pn	Pg	23 42 02.3	-0.7
	comp=Z,0.2nm,SNR=3.7						
CRES				Lg	Lg	23 42 18.5	
KOVH	Kovagotottos	1.19	44	Pn	Pb	23 42 02.1	-1.2
	comp=Z,0.1nm,SNR=6.2						
KOVH				Sn	Sg	23 42 18.0	-0.7
KOVH	Kovagotottos	1.19	44	P	Pb	23 42 02.1	-1.2
KOVH				S	Sg	23 42 18.0	-0.7
SRKY	Kupres RS	1.19	171	*e*Pg	Pg	23 42 01.8	-1.4
SRKY				*e*Sg	Sg	23 42 17.8	-0.9
BOJS	Bojanci	1.20	283	*i* Pg	Pb	23 42 02.7	-0.7
BOJS				IAML		23 42 23.5	
	comp=Z,8.1nm,0.2s						
KIJV	Kijevo	1.29	196	*e*Pg	Pn	23 42 04.0	-0.8
KIJV				Sg	Sb	23 42 21.8	+0.1
KOGS	Kog	1.29	339	*i* Pg	Pn	23 42 04.1	-0.7
KOGS				*e*Sg	Sb	23 42 21.1	-0.6
KOGS	Kog	1.29	339	Pg	Pn	23 42 04.3	-0.6
	comp=Z,0.3nm,SNR=4.2						
KOGS				Lg	Lg	23 42 20.8	
A265A	Kaposfured	1.33	27	Pn	Pg	23 42 07.0	+1.0
	comp=Z,0.3nm,SNR=4.6						
A250A	Rusevo Krmpots	1.43	264	*e*Pg	Pn	23 42 06.7	0.0
A250A				Sg	Sb	23 42 25.0	-0.6
A263A	Hollad	1.43	11	Pn	Pn	23 42 05.8	-0.9
	comp=Z,0.3nm,SNR=8.6						
MORH	Mrgy, Hungar	1.55	51	*e*Pn	Pb	23 42 09.7	+0.2
MORH				*e*Sn	Sn	23 42 29.7	+0.9
MORH	Mrgy, Hungar	1.55	51	Pn	Pb	23 42 09.7	+0.2
	SNR=3.4						
MORH				Lg	Lg	23 42 27.4	
MORH	Mrgy, Hungar	1.55	51	P	Pb	23 42 09.7	+0.2
MORH				S	Sn	23 42 27.4	-1.4
RABC	Rab	1.59	253	*e*Pn	Pn	23 42 08.5	-0.4
RABC				Sn	Sn	23 42 30.2	+0.6
A266A	Gyulaj	1.59	36	Pg	Pg	23 42 11.5	+0.5
	comp=Z,0.3nm,SNR=7.2						
NVLJ	Novalja	1.60	246	*e*Pn	Pn	23 42 09.1	0.0
NVLJ				Sn	Sn	23 42 30.5	+0.6
MORI	Morici	1.62	212	*e*Pn	Pn	23 42 09.8	+0.4
MORI				Sn	Sb	23 42 31.6	+0.3
VIRC	Vir	1.63	235	*e*Pn	Pn	23 42 09.4	0.0
VIRC				Sn	Sb	23 42 31.5	+0.1
A262A	Szaknyer	1.64	351	Lg	Lg	23 42 36.8	
A261A	Ohid	1.72	5	Pn	Pn	23 42 10.2	-0.5
	comp=Z,0.1nm,SNR=1.9						
RIY	Rijeka	1.72	274	*e*Pn	Pn	23 42 10.1	-0.6
RIY				Sn	Sn	23 42 33.1	+0.4
RICI	Ricice	1.75	175	*e*Pn	Pn	23 42 11.4	+0.1
RICI				Sn	Sb	23 42 35.5	+0.4
CEY	Cerknica	1.82	287	*e*Pn	Pn	23 42 13.0	+0.9
CEY				*e*Sn	Sb	23 42 37.2	+0.3
DUGI	Dugi Otok	1.82	227	*e*Pn	Pn	23 42 12.4	+0.3
DUGI				Sn	Sn	23 42 35.7	+0.3
ZIRJ	Zirje	1.83	210	*e*Pn	Pn	23 42 12.7	+0.5
ZIRJ				Sn	Sn	23 42 36.1	+0.6
MAKA	Makarska	1.96	178	*e*Pn	Pn	23 42 15.0	+1.0
MAKA				Sn	Sn	23 42 39.5	+0.8
SMRN	Sveta Marina	1.96	265	*e*Pn	Pn	23 42 13.8	-0.2
SMRN				Sn	Sn	23 42 38.8	0.0
MPLH	Magyarpolny	1.98	13	Pn	Pn	23 42 13.4	-0.9
	SNR=1.8						
MPLH	Magyarpolny	1.98	13	P	Pn	23 42 13.4	-0.9
A267A	Kaloz	2.02	32	Lg	Lg	23 42 47.4	
FRGS	Fruska Gora	2.05	91	*e*Sn	Sn	23 42 41.9	+0.8
SKDS	Skadanscina	2.06	279	*e*Pn	Pn	23 42 16.9	+1.4
SKDS				*e*Sn	Sn	23 42 42.8	+1.4
OBKA	Obir	2.08	308	*e*Sg	Sb	23 42 46.0	+1.4
	comp=Z,8.7nm,0.6s						
OBKA	Obir	2.08	308	*e*Pn	Pn	23 42 17.5	+1.7
OBKA				*e*Sn	Sn	23 42 43.7	+1.8
HVAR	Hvar	2.09	189	*e*Pn	Pn	23 42 16.4	+0.6
HVAR				Sn	Sn	23 42 43.0	+0.9
BBLS	Lazići	2.25	127	*e*Sn	Sn	23 42 46.3	+0.2
BRJN	Brijuni	2.27	263	*e*Pn	Pn	23 42 18.5	+0.4
BRJN				Sn	Sn	23 42 47.2	+0.9
RUDO	Rudo	2.40	132	*e*Pn	Pn	23 42 20.6	+0.6
RUDO				*e*Sn	Sn	23 42 49.5	-0.1
STON	Ston	2.44	166	*e*Pn	Pn	23 42 21.6	+1.1
STON				*e*Sn	Sn	23 42 50.9	+0.4
STON	Ston	2.44	166	*e*Pn	Pn	23 42 20.9	+0.4
STON				Sn	Sn	23 42 51.4	+0.8
SOP	Sopron	2.45	354	Pn	Pn	23 42 20.6	-0.2
	SNR=2.5						
SOP	Sopron	2.45	354	P	Pn	23 42 20.6	-0.2
LSTV	Lastovo	2.47	180	*e*Pn	Pn	23 42 22.0	+0.9
LSTV				Sn	Sn	23 42 52.4	+1.0
DIVS	Divibare	2.48	116	*e*Sn	Sn	23 42 52.2	+0.5
RONA	Rosalia, Austr	2.49	350	*i* Pn	Pn	23 42 21.3	-0.1
	comp=Z,4.3nm,0.2s						
DBRK	Dubrovnik	2.72	160	*e*Pn	Pn	23 42 24.9	+0.4
DBRK				Sn	Sn	23 42 59.3	+1.6
TREB	Trebinje	2.73	157	*e*Pn	Pn	23 42 25.8	+1.2
TREB				*e*Sn	Sn	23 42 58.2	+0.4
CONA	Conrad Observa	2.78	345	*e*Pn	Pn	23 42 25.6	+0.2
	comp=Z,0.7nm,0.1s						
CONA				*e*Sn	Sn	23 42 57.0	-2.2
	comp=Z,0.9nm,0.3s						
MOA	Molln	3.18	326	*i* Pn	Pn	23 42 30.2	-0.6
	comp=Z,0.2nm,0.1s						
MOA				*i* Sn	Sn	23 43 09.2	+0.2
	comp=Z,1.0nm,0.1s						
KOLL	Kolacno	3.49	16	*e*PN	Pn	23 42 34.8	-0.2
KOLL				*e*SN	Sn	23 43 14.9	-1.6

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*IDC **10** 00:05:41.8±0.8, 27°.88N×52°.05E, h0^{km}, mb4.1/23, mbtmp4.0/31, ML3.6/7, MS3.1/6, Error ellipse: s-maj=19.0km s-min=13.6km az=179.0*

*MOS **10** 00:05:42.8±1.0, 27°.81N×52°.12E, h20^{km}, mb4.5/26, Error ellipse: s-maj=7.9km s-min=4.7km az=102.9*

*NEIC **10** 00:05:43.8±1.3, 27°.89N±0°.07×52°.11E±0°.07, h10^{km}±1^{km}, mb4.1/57, mb_Lg4.0(TEH), Error ellipse: s-maj=12.7km s-min=10.1km az=210.0*

*TEH **10** 00:05:45.0, 27°.82N×52°.10E, h25^{km}, ML4.0*

*DSN **10** 00:05:47.3±1.3, 27°.67N×52°.30E, h10^{km}, ML3.6/11, Error ellipse: s-maj=16.1km s-min=6.1km az=167.0*

*SGS **10** 00:05:48.1, 27°.90N×51°.96E, h15^{km}, Ml3.7*

*OMAN **10** 00:05:50.0±0.3, 27°.58N×52°.19E, h85^{km}±8^{km}, mb4.4/8, ml4.0/7, Error ellipse: s-maj=9.4km s-min=3.5km az=10.0*

ISC 10 00:05:45.5±0.4**, 27°.81N**±0°.04×**52°.11E**±0°.04**, h26**^{km}**, n288, σ1^{s}.21**/302**, mb4.2**/64**, MS3.2**/4**, 8C-7D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	Lamerd	1.05	116	*e*		00 06 29.9	
	comp=Z,45µm,0.6s						
LMD1				*e*Pg	Pn	00 06 04.5	0.0
QIR1	Qir	1.06	51	*e*Sg	Sn	00 06 20.5	+1.9
QIR1				*e*Pg	Pn	00 06 04.1	-0.6
QIR1				*e*		00 06 37.5	
	comp=Z,28µm,0.8s						
AHBU	AHRAM	1.27	326	*e*Pg	Pn	00 06 08.7	+1.1
JHRM	Jahrom	1.47	62	*e*Pg	Pn	00 06 12.0	+1.6
KAZ1	Kazerun	1.85	347	*e*Pn	Pn	00 06 16.1	+0.4
KAZ1				*e*		00 07 01.1	
	comp=Z,33µm,0.7s						
SHI	Shiraz	1.86	11	*e*Pn	Pn	00 06 17.0	+1.2
SHI				*e*Sg	Sb	00 06 44.7	+2.9
SHI				*e*		00 06 52.8	
	comp=Z,15µm,0.6s						
LAR1	LAR	2.01	94	*e*Pg	Pn	00 06 21.4	+3.5
LAR1				*e*		00 07 06.8	
	comp=Z,28µm,0.7s						
SHMA	Al-Shehemyia	2.20	208	P	Pn	00 06 22.3	+1.9
KHOR	Al-Khor Airpor	2.25	194	P	Pn	00 06 25.1	+4.1
JRN	Qarnain Island	2.94	167	*e*Pn	Pn	00 06 32.2	+1.7
KLNJ	Kolanjah	3.22	352	*e*Pn	Pn	00 06 35.0	+0.3
SMRA	Abu-Samra	3.27	201	P	Pn	00 06 36.3	+1.3
GENO	Geno	3.63	96	*e*		00 07 56.1	
	comp=N,2µm,0.6s						
SLWR	Sila	3.75	186	*e*Pn	Pn	00 06 43.0	+1.4
IBND	Bandar-abas	3.95	94	*e*Pn	Pn	00 06 45.9	+1.5
IBND				*e*		00 08 44.0	
	comp=Z,3µm,0.9s						
IRAM	Ramesheh	3.99	3	*e*Pn	Pn	00 06 45.8	+0.6
SHME	Shamm	4.00	115	*e*Pn	Pn	00 06 44.5	-0.7
SHME	Shamm	4.00	115	P	Pn	00 06 45.2	0.0
AJN	Ajban	4.14	141	*e*Pn	Pn	00 06 47.9	+0.8
NHRD	Haradh	4.15	223	P	Pn	00 06 49.0	+1.8
IBRJ	Brojen	4.15	350	*e*Pn	Pn	00 06 47.4	0.0
IMEH	Mehriz	4.18	31	*e*Pn	Pn	00 06 49.5	+1.7
BANOM	Banah	4.19	116	*e*Pn	Pn	00 06 48.4	+0.6
BANOM	Banah	4.19	116	P	Pn	00 06 48.3	+0.6
BANOM	Banah	4.19	116	P	Pn	00 06 48.1	+0.3
BANOM				S	Sn	00 07 35.6	-0.3
NAZ	Nazwa, Dubai	4.25	131	*e*Pn	Pn	00 06 50.7	+2.1
NAZ	Nazwa, Dubai	4.25	131	P	Pn	00 06 50.2	+1.7
	SNR=6.9						
NAZ				S	Sn	00 07 36.6	-0.7
NAZ	Nazwa, Dubai	4.25	131	*i* P	Pn	00 06 50.2	+1.7
	SNR=10						
ASUD	Al Ashush, Dub	4.29	137	*e*Pn	Pn	00 06 50.2	+1.0
ASUD	Al Ashush, Dub	4.29	137	P	Pn	00 06 50.4	+1.3
	SNR=18						
ASUD	Al Ashush, Dub	4.29	137	*i* P	Pn	00 06 50.4	+1.3
	SNR=17						
ISAD	Sadrabad	4.31	18	*e*Pn	Pn	00 06 50.8	+1.1
ISAD				*e*		00 08 11.9	
	comp=Z,808nm,0.8s						
MZWR	Madinat Zayed	4.34	158	*e*Pn	Pn	00 06 51.4	+1.6
MASF	Masafi	4.37	123	P	Pn	00 06 51.2	+1.0
MASF				S	Sn	00 07 39.4	-0.9
FAQ	Al Faqa, Dubai	4.37	134	*e*Pn	Pn	00 06 51.7	+1.5
FAQ	Al Faqa, Dubai	4.37	134	P	Pn	00 06 51.1	+0.8
MSFE	Esma-Masafi	4.37	123	*e*Pn	Pn	00 06 50.3	0.0
MSFE	Esma-Masafi	4.37	123	*i* P	Pn	00 06 51.1	+0.8
	SNR=9.4						
NGRK	Negar Kerman	4.45	65	*e*Pn	Pn	00 06 52.7	+1.1
NGRK				*e*		00 07 52.4	
	comp=Z,658nm,0.6s						
AMIS	Naft Sefid	4.56	328	*e*Pn	Pn	00 06 53.5	+0.7
AMIS				*e*		00 08 41.7	
	comp=Z,2µm,0.6s						
IGAR	Gharneh	4.58	359	*e*Pn	Pn	00 06 55.1	+1.8
KHGB	Koh Gabri	4.60	55	*e*Pn	Pn	00 06 54.7	+1.2
KRBR	Kerman	4.62	61	*e*Pn	Pn	00 06 55.2	+1.3
TVBK	TV Kerman	4.62	61	*e*Pn	Pn	00 06 55.3	+1.4
TVBK				*e*		00 07 18.0	
	comp=Z,1µm,0.5s						
SHK1	Shahrekord	4.62	347	*e*Pn	Pn	00 06 53.9	0.0
UOSS	Minazif	4.65	127	Pn	Pn	00 06 54.8	+0.7
UOSS				Sn	Sn	00 07 49.8	+2.5
UOSS	Minazif	4.65	127	*e*Pn	Pn	00 06 54.8	+0.7
UOSS	Minazif	4.65	127	P	Pn	00 06 54.7	+0.7
UOSS				S	Sn	00 07 46.5	-0.8
UOSS	Minazif	4.65	127	*i* P	Pn	00 06 54.8	+0.7
	SNR=5.6						
HATD	Hatta, Dubai	4.68	129	*e*Pn	Pn	00 06 55.9	+1.5
HATD	Hatta, Dubai	4.68	129	P	Pn	00 06 56.0	+1.5
	SNR=13						
HATD	Hatta, Dubai	4.68	129	*i* P	Pn	00 06 55.8	+1.3
	SNR=13						
ASHO	Ashiyiah	4.72	130	*e*Pn	Pn	00 06 56.3	+1.2
ASHO	Ashiyiah	4.72	130	P	Pn	00 06 55.7	+0.6
	SNR=13						
ASHO	Ashiyiah	4.72	130	*i* P	Pn	00 06 55.3	+0.3

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              SNR=10
IBAF   Bafgh              4.82  38 ePn    Pn     00 06 57.8 +1.3
ICHK   Chekchek           4.84  24 ePn    Pn     00 06 58.4 +1.4
ICHK                               e             00 07 01.4
              comp=Z,1µm,0.6s
MZR    Muzera             4.95 165 ePn    Pn     00 06 59.0 +0.8
MZR    Muzera             4.95 165  P     Pn     00 06 58.8 +0.6
MZR    Muzera             4.95 165 i P    Pn     00 06 59.4 +1.2
              SNR=6.8
IPIR   Pirpir             4.97 348 ePn    Pn     00 06 58.6 -0.1
ALNE   Al Ain             4.97 138 ePn    Pn     00 06 59.6 +1.1
NASN   Na'in              5.01   7 ePn    Pn     00 07 00.7 +1.4
YZKH   Yazd               5.04  25 ePn    Pn     00 07 01.1 +1.5
IZEF   Zefreh             5.07   2 ePn    Pn     00 07 01.0 +0.9
CHMN   Cheshme madani     5.18  66 ePn    Pn     00 07 03.3 +1.6
CHMN                               e             00 08 13.8
              comp=Z,561nm,0.5s
RMAH   Rumah              5.29 243  P     Pn     00 07 03.6 +0.8
RMAH                                S     Sn     00 08 00.2 -2.7
IKLH   Kolahrood          5.51 355 ePn    Pn     00 07 06.0 -0.1
ANAR   Anarak             5.54  14 ePn    Pn     00 07 07.6 +1.2
KBAM   BAM                5.74  75 ePn    Pn     00 07 10.5 +1.4
KBAM                               e             00 07 15.2
              comp=Z,2µm,0.5s
UMZA   Um Al Zommool      5.78 151 ePn    Pn     00 07 10.5 +0.9
UMZA   Um Al Zommool      5.78 151  P     Pn     00 07 10.2 +0.6
QAMS   Qamsar             5.94 354 ePn    Pn     00 07 13.0 +1.0
ARQ    Araqi              5.98 137  P     Pn     00 07 10.9 -1.4
              SNR=11
KRSH   Karshahi           6.14   0 ePn    Pn     00 07 14.6 -0.1
HOQ    Hoqain             6.30 131  P     Pn     00 07 18.3 +1.5
ISFB   Sefidab            6.52   1 ePn    Pn     00 07 19.5 -0.3
TPRV   Parvadeh(Tabas     6.53  36 ePn    Pn     00 07 21.0 +1.0
GHVR   GHOM               6.68 354 ePn    Pn     00 07 22.8 +0.7
SRFHA  Rafha              6.72 282  P     Pn     00 07 22.0 -0.6
IKFM   Kafar-mosalman     6.77 328 ePn    Pn     00 07 23.7 +0.5
BSY    Bisya              6.83 136  P     Pn     00 07 24.7 +0.6
              SNR=17
BSY                                 S     Sn     00 08 39.0 -2.1
IDOB   Doab               6.85 331 ePn    Pn     00 07 24.8 +0.3
ASAO   Ashtian            6.95 346 ePn    Pn     00 07 26.6 +0.7
HSAM   Samen              7.05 336 ePn    Pn     00 07 27.8 +0.5
IQOM   Qom                7.06 353 ePn    Pn     00 07 26.6 -0.9
TKDS   Koohdasht(Taba     7.21  35 ePn    Pn     00 07 29.7 +0.3
TABS   Tabas              7.24  35 ePn    Pn     00 07 30.8 +1.1
TNSJ   Nastanj            7.25  31 ePn    Pn     00 07 30.6 +0.8
RAYN   Ar Rayn            7.33 236  P     Pn     00 07 30.2 -0.8
RAYN   Ar Rayn            7.33 236  Pn    Pn     00 07 30.2 -0.8
HAGD   Aghdareh           7.43 341 ePn    Pn     00 07 32.5  0.0
WSAR   Wadi Sarin         7.44 126  Pn    Pn     00 07 32.6 +0.1
              comp=Z,2.0nm,0.3s,baz=310,slow=11,SNR=22
WSAR                                Sn    Sn     00 08 52.9 -3.2
              baz=136,slow=17
              comp=Z,12nm,0.6s
WSAR   Wadi Sarin         7.44 126  P     Pn     00 07 33.0 +0.5
WSAR                                S     Sn     00 08 53.0 -3.2
IBZA   Bozab              7.57 332 ePn    Pn     00 07 34.3 -0.1
JMDO   Jabal Madar        7.67 134  P     Pn     00 07 36.2 +0.6
              SNR=7.4
JMDO                                S     Sn     00 08 58.9 -2.8
KCHF   Cheshme Sefid,     7.77 327 ePn    Pn     00 07 37.8 +0.7
IRAZ   Razeghan           7.79 347 ePn    Pn     00 07 37.1 -0.3
CHBR   Chabahar           7.81 105 ePn    Pn     00 07 38.8 +1.4
KER    Kermanshah         7.82 328 ePn    Pn     00 07 38.1 +0.4
ISHM   Shahmirzad         8.03   7 ePn    Pn     00 07 40.9 +0.1
IGHG   Ghaleghazi         8.05 325 ePn    Pn     00 07 41.1 +0.2
WBK    Wadi Bani Khal     8.09 128  P     Pn     00 07 42.7 +1.4
WBK                                 S     Sn     00 09 09.8 -2.1
SNGE   Sanandaj           8.32 332 ePn    Pn     00 07 43.9 -0.7
ILIN   Lien               8.34 329 ePn    Pn     00 07 45.1 +0.2
IDHR   Dehrash            8.43 326 ePn    Pn     00 07 45.7 -0.5
NGCH   Negor - Chabah     8.44 105 ePn    Pn     00 07 47.6 +1.5
MHTO   MHTO               8.64 141  P     Pn     00 07 49.0 +0.1
QALM   Alamut, Qazvin     8.68 352 ePn    Pn     00 07 49.3 -0.4
IGLO   Ghaloghah          8.79   9 ePn    Pn     00 07 51.8 +0.8
SHRO   Shahrood           8.80  21 ePn    Pn     00 07 52.2 +1.0
SRVN   Saravan            9.14  90 ePn    Pn     00 07 57.4 +1.6
SARAR  Arar               9.26 288  P     Pn     00 07 55.2 -2.2
SBZV   Sabzevar           9.74  27 ePn    Pn     00 08 05.2 +1.1
TBJM   Torbat-e-JAM      10.21  41 ePn    Pn     00 08 11.6 +1.0
MRVT   Maraveh tapeh     10.37  18 ePn    Pn     00 08 13.8 +1.1
BJRD   Bojnurd           10.82  23 ePn    Pn     00 08 20.5 +1.7
HRA    Herat             10.88  50        Pn     00 08 18.3 -1.4
GEYT   Alibeck           11.28  25  Pn    Pn     00 08 24.1 -0.9
              comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=4.5
GEYT                                LR    LR     00 12 45.1
              comp=Z,26nm,20.4s,baz=208,slow=38
              comp=Z,1.9nm,0.7s
GEYT   Alibeck           11.28  25  Pn    Pn     00 08 23.4 -1.7
GYA0   ALIBECK ARRAY     11.28  25  P     Pn     00 08 26.7 +1.7
GYA0B  ALIBECK ARRAY     11.28  25  Pn    Pn     00 08 22.9 -2.1
GRMI   Germi             11.52 343 ePn    Pn     00 08 30.0 +1.6
GEVA   Gevas             12.92 326        Pn     00 08 45.8 -1.8
GEVA                                      Sn     00 11 10.0 -0.7
MARD   Mardin            13.45 318        Pn     00 08 52.5 -2.2
GURO   Guroymak-BITLI    13.62 324        Pn     00 08 54.8 -2.3
GNI    Garni             13.73 336  Pn    Pn     00 08 57.6 -1.0
              comp=Z,2.1nm,0.7s,baz=16,slow=23,SNR=1.8
ASF    Jabal al Asfar    13.88 292  Pn    Pn     00 08 58.9 -1.7
              comp=Z,0.2nm,0.3s,baz=260,slow=18,SNR=1.6
ASF                                 Sn    Sn     00 11 34.5 +0.6
              comp=Z,0.2nm,0.3s,baz=87,slow=7.3,SNR=3.5
ASF                                 Lg    Lg     00 13 01.3
              baz=279,slow=20
              comp=Z,0.6nm,0.4s
KARS   Kars              14.79 332  P     Pn     00 09 10.8 -2.3
KARS   Kars              14.79 332        Pn     00 09 10.8 -2.3
EIL    Elat              15.17 281  Pn    Pn     00 09 16.7 -1.4
              comp=Z,0.1nm,0.3s,baz=42,slow=22,SNR=2.6
              comp=Z,1.7nm,0.7s
MMAI   Mount Meron Ar    15.31 294  Pn    Pn     00 09 17.6 -2.4
              comp=Z,0.4nm,0.3s,baz=114,slow=18,SNR=1.6
              comp=Z,0.7nm,0.7s
KOPT   Kop Dagi          15.51 325        Pn     00 09 21.6 -1.1
KOPT                                IAmb  IAmb   00 09 37.3
              comp=Z,11nm,0.9s
KBL    Kabul             15.96  61  P     Pn     00 09 27.9 -0.6
KBL                                 pmax  pmax
              comp=Z,8.0nm,1.1s
KBL    Kabul             15.96  61  Pn    Pn     00 09 27.9 -0.6
GROC   Groznyy           16.18 343 eP     Pn     00 09 30.7 -0.4
GROC                                pmax  pmax
              comp=Z,7.0nm,0.8s
ONI    Oni               16.34 337  P     Pn     00 09 31.7 -1.4
ONI                                 pmax  pmax
              comp=Z,4.0nm,0.7s
ONI    Oni               16.34 337        Pn     00 09 31.7 -1.4
ZEI    Tsey              16.36 338 eP     Pn     00 09 34.1 +0.5
ZEI                                 pmax  pmax
              comp=Z,17nm,1.5s
NCK    Nalchik           17.09 338⇓eP     Pn     00 09 43.7 +1.1
NCK                                 pmax  pmax
              comp=Z,9.0nm,0.6s
BNN    Bunyan            17.46 313        Pn     00 09 43.4 -3.9
BNN                                 IAmb  IAmb   00 09 52.6
              comp=Z,12nm,1.0s
CSS    Mathiatis         17.53 299  Pn    Pn     00 09 46.7 -1.5
KBZ    Khabaz            17.53 337  Pn    Pn     00 09 47.2 -0.8
              comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=7.0
              comp=Z,2.2nm,0.7s
KBZ    Khabaz            17.53 337⇑iP     Pn     00 09 49.7 +1.7
KIV    Kislovodsk        17.80 337 eP     Pn     00 09 51.1 -0.4
KIV                                 pmax  pmax
              comp=Z,7.0nm,1.0s
KIV    Kislovodsk        17.80 337  P     Pn     00 09 49.9 -1.6
CHGR   Chuyangaron       17.87  48  P     Pn     00 09 49.9 -2.4
CHGR   Chuyangaron       17.87  48  Pn    Pn     00 09 49.9 -2.4
TOKA   Tokat             17.95 318        Pn     00 09 52.1 -1.2
ATD    Arta Tunnel       18.38 210  LR    LR     00 16 45.5
              comp=Z,34nm,21.8s,baz=326,slow=36
GOF    Gofitskoye        18.67 340⇑eP     P      00 09 51.7  -10
GAR    Garm              18.82  49  P     P      00 10 02.7 -0.7
NIL    Nilore            19.07  67  P     P      00 10 04.9 -1.1
NIL                                 pmax  pmax
              comp=Z,16nm,0.8s
NIL    Nilore            19.07  67        P      00 10 04.9 -1.1
NIL                                 IAmb  IAmb   00 10 09.0
              comp=Z,16nm,0.8s
BR131  Keskin Array S    19.37 313⇓eP     P      00 10 10.8 +1.4
BR131  Keskin Array S    19.37 313  P     P      00 10 08.5 -0.9
BR131  Keskin Array S    19.37 313  P     P      00 10 11.1 +1.7
              SNR=6.4
BRTR   Keskin Array B    19.37 313  P     P      00 10 08.5 -0.9
              comp=Z,0.2nm,0.3s,baz=138,slow=10,SNR=18
BRTR                                ScP   ScP    00 18 06.6 +1.6
              comp=Z,0.7nm,0.9s,baz=119,slow=1.8,SNR=4.1
              comp=Z,1.9nm,0.7s
BRTR   Keskin Array B    19.37 313ceP     P      00 10 11.1 +1.7
BRTR                                pmax  pmax
              comp=Z,2.0nm,0.7s
BRTR   Keskin Array B    19.37 313  P     P      00 10 08.1 -1.3
BTK    Batken            19.70  47  P     P      00 10 10.7 -2.3
BTK                                 pmax  pmax
              comp=Z,6.0nm,1.2s
BTK    Batken            19.70  47  P     P      00 10 10.7 -2.3
ILGA   Ilgaz             20.06 316  P     P      00 10 16.6 -0.4
ILGA                                IAmb  IAmb   00 10 28.1
              comp=Z,7.0nm,0.7s
ANN    Anapa             20.62 329 eP     P      00 10 20.7 -2.0
ANN                                e*PP   Pn     00 10 24.2 -0.9
ANN                                eS     S      00 14 13.6 +1.8
ANN                                 pmax  pmax
              comp=Z,7.0nm,0.9s
KK31   Karatay Array     21.32  39  P     P      00 10 29.8 -0.5
KK31                                pmax  pmax
              comp=Z,6.0nm,0.8s
KK31   Karatay Array     21.32  39  P     P      00 10 29.8 -0.5
KK31                                IAmb  IAmb   00 10 33.2
              comp=Z,6.0nm,0.8s
KKAR   Karatay Array     21.32  39  P     P      00 10 29.8 -0.5
KKAR                                pmax  pmax
              comp=Z,6.0nm,0.8s
KKAR   Karatay Array     21.32  39  P     P      00 10 29.8 -0.5
KKAR   Karatay Array     21.32  39  P     P      00 10 29.4 -0.9
KKAR                                IAmb  IAmb   00 10 33.2
              comp=Z,6.0nm,0.8s
MDUB   Mudurnu           21.36 312  P     P      00 10 29.7 -1.3
ABKAR  Akbulak array     22.25  14  P     P      00 10 40.1 -0.1
ABKAR  Akbulak array     22.25  14  P     P      00 10 40.2 -0.1
ABKAR                               IAmb  IAmb   00 10 44.3
              comp=Z,6.3nm,1.1s
KARP   Karpathos         22.55 296  P     P      00 10 43.6 -0.1
AML    Almayashu         22.65  45  P     P      00 10 45.6 +0.5
KSH    Kashi             22.96  53  P     P      00 10 45.9 -2.2
KSH                                 pP    pP     00 10 49.7 -5.8
KSH                                 pmax  pmax
              comp=Z,9.0nm,0.6s
AKTO   Aktyubinsk        23.04  10  P     P      00 10 48.6  0.0
              comp=Z,2.2nm,0.6s,baz=189,slow=11,SNR=2.4
              comp=Z,2.2nm,0.6s
AAK    Ala-Archa         23.42  45  P     P      00 10 51.9 -0.8
              comp=Z,0.6nm,0.2s,baz=218,slow=18,SNR=1.2
AAK                                 LR    LR     00 22 03.6
              comp=Z,37nm,18.4s,baz=244,slow=42
              comp=Z,0.6nm,0.2s
AAK    Ala-Archa         23.42  45  P     P      00 10 53.2 +0.5
AAK                                 pmax  pmax
              comp=Z,3.0nm,0.8s
AAK    Ala-Archa         23.42  45  P     P      00 10 53.2 +0.5
AAK                                 IAmb  IAmb   00 11 06.2
              comp=Z,3.3nm,0.8s
IDI    Anoyia            24.31 295  P     P      00 11 01.5 +0.4
              comp=Z,2.2nm,0.7s,baz=216,slow=19,SNR=2.4
              comp=Z,2.2nm,0.7s
VRH    Novokhopyorsk     24.65 344 eP     P      00 11 03.1 -0.7
VRH                                 pmax  pmax
              comp=Z,10.0nm,0.9s
BELG   Belogornoye       24.78 353  P     P      00 11 05.4 +0.4
              comp=Z,20nm,0.7s,baz=251,slow=4.9,SNR=3.9
              comp=Z,20nm,0.7s
ALN    Alexandroupoli    25.06 308  P     P      00 11 06.9 -0.8
ALN                                 pmax  pmax
              comp=Z,4.0nm,0.9s
ALN    Alexandroupoli    25.06 308  P     P      00 11 06.9 -0.8
ALN                                 IAmb  IAmb   00 11 09.0
              comp=Z,3.6nm,0.9s
VORD   Divnogorie        25.08 341 eP     P      00 11 07.2 -0.6
VORD                                pmax  pmax
              comp=Z,10.0nm,0.6s
TIRR   Tirgusor          25.21 317  P     P      00 11 09.0  0.0
TIRR                                pmax  pmax
              comp=Z,24nm,1.1s
TIRR   Tirgusor          25.21 317  P     P      00 11 09.0  0.0
VSR    Storozhevoye      25.34 341 eP     P      00 11 10.0 -0.1
VSR                                 pmax  pmax
              comp=Z,10.0nm,1.1s
RDO    Rodhopi           25.51 308  P     P      00 11 10.8 -1.0
RDO                                 IAmb  IAmb   00 11 29.8
              comp=Z,3.0nm,0.8s
VORR   Voronezh          25.73 341⇓iP     P      00 11 14.3 +0.6
VORR                                pmax  pmax
              comp=Z,12nm,1.2s
VORR                                pmax  pmax
              comp=Z,3.0nm,0.4s
LPSR   Galich'ya Gora    26.64 342 eP     P      00 11 21.1 -0.8
LPSR                                pmax  pmax
              comp=Z,10.0nm,0.7s
MLR    Muntele Rosu      27.24 317  P     P      00 11 26.9 -0.7
              comp=Z,1.3nm,0.7s,baz=300,slow=18,SNR=2.1
              comp=Z,1.3nm,0.7s
MLR    Muntele Rosu      27.24 317  P     P      00 11 29.2 +1.7
BRVK   Borovoye          28.60  23⇓eP     P      00 11 39.2 -0.2
BRVK                                pmax  pmax
              comp=Z,9.0nm,1.9s
AKASG  Malin Array Be    28.70 329  P     P      00 11 39.1 -1.2
              comp=Z,0.5nm,0.4s,baz=130,slow=7.8,SNR=4.3
              comp=Z,0.5nm,0.4s
AKASG  Malin Array Be    28.70 329ceP     P      00 11 40.4 +0.1
AKASG                               pmax  pmax
              comp=Z,1.0nm,0.5s
AKBB   Malin Array Si    28.70 329⇓iP     P      00 11 40.0 -0.3
AKBB                                pmax  pmax
              comp=Z,2.0nm,0.5s
BURAR  Bucovina Array    28.81 321  P     P      00 11 42.9 +1.4
BURAR  Bucovina Array    28.81 321  P     P      00 11 41.1 -0.4
BUR08  Bucovina Ar. S    28.83 321  P     P      00 11 41.2 -0.5
MAKZ   Makanchi          30.12  43  P     P      00 11 52.8 -0.3
MAKZ                                pmax  pmax
              comp=Z,5.0nm,0.9s
MAKZ   Makanchi          30.12  43  P     P      00 11 52.8 -0.3
MAKZ                                IAmb  IAmb   00 11 57.0
              comp=Z,4.8nm,0.9s
MK31   Makanchi Array    30.31  43⇑eP     P      00 11 54.6 -0.1
MK31   Makanchi Array    30.31  43  P     P      00 11 54.6 -0.1
MK31                                IAmb  IAmb   00 11 58.5
              comp=Z,2.6nm,0.9s
MKAR   Makanchi Array    30.31  43  P     P      00 11 54.8  0.0
              comp=Z,2.4nm,0.8s,baz=236,slow=8.6,SNR=11
              comp=Z,2.4nm,0.8s
MKAR   Makanchi Array    30.31  43  P     P      00 11 54.4 -0.3
MKAR   Makanchi Array    30.31  43  P     P      00 11 54.4 -0.3
KURBB  Kurchatov Arra    30.34  34  P     P      00 11 54.8  0.0
              comp=Z,2.7nm,0.8s,baz=233,slow=9.4,SNR=15
              comp=Z,2.7nm,0.8s
KURK   Kurchatov         30.44  34⇓iP     P      00 11 56.7 +1.0
KURK                                pmax  pmax
              comp=Z,7.0nm,1.3s
KURK   Kurchatov         30.44  34  P     P      00 11 55.6 -0.1
KURK                                IAmb  IAmb   00 11 59.8
              comp=Z,4.4nm,0.9s
KIRV   Kirov             30.82 357⇑eP     P      00 11 59.5 +0.6
KOLS   Kolonicke sedl    31.17 321 eP     P      00 12 04.3 +2.0
KOLS   Kolonicke sedl    31.17 321 eP     P      00 12 04.3 +2.0
KWP    Kalwaria Pacla    31.31 322  P     P      00 12 03.9 +0.4
KWP                                 pmax  pmax
              comp=Z,25nm,0.6s
KWP    Kalwaria Pacla    31.31 322  P     P      00 12 03.9 +0.4
PSZ    Piszkesteto       32.06 317  P     P      00 12 09.1 -1.1
PSZ                                 pmax  pmax
              comp=Z,2.0nm,0.8s
PSZ    Piszkesteto       32.06 317  P     P      00 12 09.1 -1.1
PSZ                                 IAmb  IAmb   00 12 11.2
              comp=Z,1.9nm,0.8s
WMQ    Urumqi            32.69  51 eP     P      00 12 16.1 +0.4
WMQ                                 sP    pP     00 12 25.0 +1.3
WMQ                                 PP    PnPn   00 13 27.3 +3.3
WMQ                                 pmax  pmax
              comp=Z,17nm,0.7s
WMQ                                 pmax  pmax
              comp=Z,160nm,4.7s
LANS   Liptovska Anna    32.88 319 eP     P      00 12 18.8 +1.5
LANS   Liptovska Anna    32.88 319 eP     P      00 12 18.8 +1.5
IIGN   Ignalina          33.27 333 eP     P      00 12 21.0 +0.4
KLMR   Klimovskoe        34.12 349 eP     P      00 12 26.7 -1.1
KLMR                                pmax  pmax
              comp=Z,13nm,1.5s
KLMR   Klimovskoe        34.12 349 eP     P      00 12 26.7 -1.1
KLMR                                AMP          00 12 34.8
              comp=Z,13nm,1.5s
NRCA   Norcia            34.84 306  P     P      00 12 34.1 -0.3
ZAA0   Zalesovo Array    35.42  33  P     P      00 12 38.9 -0.3
ZALV   Zalesovo Beam     35.42  33  P     P      00 12 39.1 -0.1
              comp=Z,3.6nm,0.5s,baz=242,slow=9.3,SNR=19
ZALV                                LR    LR     00 29 14.8
              comp=Z,20nm,21.8s,baz=343,slow=40
              comp=Z,3.6nm,0.5s
ZALV   Zalesovo Beam     35.42  33 i P    P      00 12 39.0 -0.2
ZALV                                pmax  pmax
              comp=Z,4.0nm,0.5s
ZALV   Zalesovo Beam     35.42  33  P     P      00 12 39.2 +0.1
KBA    Koelnbreinsper    35.82 313 eP     P      00 12 43.7 +0.7
              comp=Z,2.2nm,0.6s
BIOA   Bad Ischl, Aus    35.84 314 eP     P      00 12 43.5 +0.6
              comp=Z,1.7nm,0.4s
GERES  GERESS Array B    36.20 316  P     P      00 12 45.8 -0.3
              comp=Z,0.1nm,0.3s,baz=122,slow=10,SNR=1.7
              comp=Z,0.1nm,0.3s
CTI    Castel Tesino     36.64 311  P     P      00 12 50.1 +0.2
CTI                                 pmax  pmax
              comp=Z,5.0nm,1.0s
CTI    Castel Tesino     36.64 311  P     P      00 12 50.1 +0.2
CTI                                 IAmb  IAmb   00 12 51.5
              comp=Z,5.0nm,1.0s
ZCCA   Zocca             36.68 308  P     P      00 12 50.3 +0.1
GOMU   GeErMu            36.93  66  P     P      00 12 52.7 -0.1
GOMU                                pP    pP     00 12 56.3 -4.5
GOMU                                sP    sP     00 13 00.2 -3.9
GOMU                                pmax  pmax
              comp=Z,2.0nm,0.5s
GOMU                                pmax  pmax
              comp=Z,33nm,4.1s
FIA1   FINESS Array S    37.86 340  P     P      00 12 59.9  0.0
FIA1                                IAmb  IAmb   00 13 00.1
              comp=Z,1.0nm,0.4s
FINES  FINESS Array B    37.86 340  P     P      00 12 59.6 -0.2
              comp=Z,1.3nm,0.5s,baz=149,slow=7.9,SNR=14
              comp=Z,1.3nm,0.5s
FINES  FINESS Array B    37.86 340  P     P      00 12 59.9  0.0
DAVA   Damuels           38.14 312 eP     P      00 13 02.2 -0.4
              comp=Z,8.9nm,0.5s
VIKU   Vikbolandet       39.28 331 eP     P      00 13 11.7 -0.2
BFO    Black Forest      39.43 313  P     P      00 13 14.5 +1.2
BFO                                 pmax  pmax
              comp=Z,1.0nm,0.5s
BFO    Black Forest      39.43 313  P     P      00 13 14.5 +1.2
UPP    Uppsala           39.72 333 eP     P      00 13 15.0 -0.5
BNI    Bardonecchia      39.83 308  P     P      00 13 18.2 +1.4
BNI                                 pmax  pmax
              comp=Z,4.0nm,1.0s
BNI    Bardonecchia      39.83 308  P     P      00 13 18.2 +1.4
BNI                                 IAmb  IAmb   00 13 25.0
              comp=Z,3.6nm,1.0s
NC405  NORSAR Array S    42.84 332  P     P      00 13 40.7 -0.4
NC405                               IAmb  IAmb   00 13 52.0
              comp=Z,4.4nm,0.9s
NB201  NORSAR Array S    42.98 332  P     P      00 13 42.0 -0.3
NB201                               IAmb  IAmb   00 13 55.6
              comp=Z,2.8nm,0.8s
KONO   Kongsberg         43.00 330  P     P      00 13 42.1 -0.3
KONO                                pmax  pmax
              comp=Z,3.0nm,0.8s
KONO   Kongsberg         43.00 330  P     P      00 13 42.1 -0.3
KONO                                IAmb  IAmb   00 13 45.7
              comp=Z,2.5nm,0.8s
NB2    NORSAR Subarra    43.00 332  P     P      00 13 41.7 -0.8
              comp=Z,0.9nm,0.5s,baz=121,slow=8.6
NOA    NORSAR Array B    43.00 332  P     P      00 13 41.9 -0.6
              comp=Z,1.0nm,0.5s,baz=122,slow=8.3,SNR=9.8
              comp=Z,1.0nm,0.5s
NBO00  NORSAR Array S    43.18 332  P     P      00 13 42.8 -1.1
NBO00                               IAmb  IAmb   00 13 47.5
              comp=Z,6.7nm,1.1s
NC204  NORSAR Array S    43.31 332  P     P      00 13 44.3 -0.7
NC204                               IAmb  IAmb   00 13 53.3
              comp=Z,2.9nm,0.8s
PZH    PanZhiHua         43.94  80  P     P      00 13 53.1 +2.5
PZH                                 pmax  pmax
              comp=Z,7.0nm,0.8s
PZH                                 pmax  pmax
              comp=Z,100nm,4.9s
ARCES  ARCESS Array B    44.52 347  P     P      00 13 54.1 -0.4
              comp=Z,2.3nm,0.9s,baz=139,slow=5.8,SNR=8.6
              comp=Z,2.3nm,0.9s
OPO    Ambohidratompo    46.35 186  LR    LR     00 32 54.2
              comp=Z,55nm,19.7s,baz=121,slow=35
NRIK   Noril'sk          46.37  17  P     P      00 14 09.1  0.0
              comp=Z,0.8nm,0.4s,baz=356,slow=20,SNR=4.9
              comp=Z,0.8nm,0.4s
NRIK   Noril'sk          46.37  17⇑iP     P      00 14 09.5 +0.4
NRIK                                pmax  pmax
              comp=Z,10.0nm,3.8s
NRIK   Noril'sk          46.37  17  P     P      00 14 09.1  0.0
NRIK                                IAmb  IAmb   00 14 10.3
              comp=Z,1.3nm,0.7s
TORD   Torodi Ar. Bea    49.10 263  P     P      00 14 30.4 -0.6
              comp=Z,1.2nm,0.7s,baz=58,slow=6.9,SNR=9.8
TORD                                PcP   PcP    00 15 54.8 +0.2
              comp=Z,0.3nm,0.7s,baz=69,slow=5.8,SNR=1.5
              comp=Z,1.2nm,0.7s
HHC    Hu-ho-hao-te      49.92  59 eP     P      00 14 37.7 +0.6
HHC                                 pmax  pmax
              comp=Z,25nm,1.0s
HHC                                 pmax  pmax
              comp=Z,100nm,6.1s
SPB2   Spitsbergen Ar    52.95 351  P     P      00 14 57.7 -1.5
KOWA   Kowa              53.59 268  P     P      00 15 04.5 -0.2
KOWA                                IAmb  IAmb   00 15 08.4
              comp=Z,2.5nm,0.8s
DBIC   Dimbokro          57.78 260  P     P      00 15 34.9 +0.1
              comp=Z,1.7nm,0.4s,baz=37,slow=11,SNR=1.5
              comp=Z,1.7nm,0.4s
DBIC   Dimbokro          57.78 260  P     P      00 15 34.7 -0.1
DBIC                                pmax  pmax
              comp=Z,4.0nm,1.1s
DBIC   Dimbokro          57.78 260  P     P      00 15 34.7 -0.1
BORG   Borgarnes         58.16 331  P     P      00 15 37.2 +0.5
BORG                                pmax  pmax
              comp=Z,9.0nm,1.0s
BORG   Borgarnes         58.16 331  P     P      00 15 37.2 +0.5
LBTB   Lobatse           58.40 208  P     P      00 15 39.5 +0.5
LBTB                                pmax  pmax
              comp=Z,3.0nm,0.9s
LBTB   Lobatse           58.40 208  P     P      00 15 39.5 +0.5
TIXI   Tiksi             59.70  21⇑eP     P      00 15 46.7 -0.6
EUNU   Eureka            70.02 353  P     P      00 16 53.2 -1.3
SEY    Seymchan          70.09  29  P     P      00 16 55.3 +0.2
              comp=Z,1.9nm,0.5s,baz=270,slow=22,SNR=4.2
              comp=Z,1.9nm,0.5s
SEY    Seymchan          70.09  29⇓eP     P      00 16 54.7 -0.4
SEY                                 pmax  pmax
              comp=Z,5.0nm,1.5s
PETK   Petropavlovsk-    76.89  37  P     P      00 17 35.1 -0.2
              comp=Z,2.2nm,0.7s,baz=268,slow=4.4,SNR=5.5
              comp=Z,2.2nm,0.7s
A36M   Sachs Harbour     80.45 359  P     P      00 17 55.2 +0.7
SIJI   Sorong            80.81  96  LR    LR     00 56 41.3
              comp=Z,52nm,21.8s,baz=16,slow=38
TOLK   Toolik Lake Re    82.51   8  P     P      00 18 06.2 +0.6
TOLK                                IAmb  IAmb   00 18 07.8
              comp=Z,1.0nm,0.9s
C36M   Paulatuk          83.08 359  P     P      00 18 07.7 -0.7
C36M                                IAmb  IAmb   00 18 21.8
              comp=Z,1.9nm,0.9s
BMAR   Burnt Mountain    84.22   6  P     P      00 18 15.2 +0.8
IMAR   Indian Mountai    84.42  10  P     P      00 18 15.3  0.0
H21K   Melozitna Rive    84.87  10  P     P      00 18 17.2 -0.4
H21K                                IAmb  IAmb   00 18 28.6
              comp=Z,2.2nm,1.1s
ILAR   Eielson Array     86.54   8  P     P      00 18 25.5 -0.5
              comp=Z,0.4nm,0.7s,baz=182,slow=4.8,SNR=4.6
              comp=Z,0.4nm,0.7s
YKA    Yellowknife Ar    89.38 354  P     P      00 18 40.0 +0.5
              comp=Z,1.2nm,0.8s,baz=7.8,slow=4.5,SNR=8.7
              comp=Z,1.2nm,0.8s
WRA    Warramunga Arr    92.56 111  P     P      00 18 57.0 +2.0
              comp=Z,0.2nm,0.6s,baz=312,slow=4.2,SNR=1.8
              comp=Z,0.2nm,0.6s
WRA    Warramunga Arr    92.56 111  P     P      00 18 57.0 +2.0
ASAR   Alice Springs     93.98 115  P     P      00 19 02.3 +0.8
              comp=Z,0.3nm,0.5s,baz=308,slow=4.6,SNR=1.3
              comp=Z,0.3nm,0.5s
ULM    Lac du Bonnet     97.26 340  P     P      00 19 15.8 -0.2
              comp=Z,2.0nm,0.6s,baz=6.4,slow=15,SNR=1.7
              comp=Z,2.0nm,0.6s
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*TUL **10** 00:10:15.9±1.8, 35°.38N±0°.02×96°.48W±0°.02, h3^{km}±7^{km}, ML2.5, mb_Lg2.5/19(NEIC), Error ellipse: s-maj=2.5km s-min=2.1km az=162.0*

NEIC 10 00:10:16.5±0.8**, 35°.39N**±0°.02×**96°.51W**±0°.03**, h11**^{km}±7^{km}**, Error ellipse: s-maj=4.0km s-min=2.9km az=129.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.74	260	Pg	Pg	00 10 30.7	-0.2
OKCSW	OKLAHOMA CITY	0.76	271		Pg	00 10 31.1	0.0
OKCFA	Oklahoma City	0.77	272		Pg	00 10 31.2	-0.2
TUL1	Leonard	0.78	48		Pg	00 10 30.8	-0.8
X37A	Clayton	1.23	130	Pg	Pn	00 10 39.3	-0.3
X34A	Smith Ranch, M	1.34	234	Pn	Pn	00 10 41.1	-0.1
T35A	Sooner Cattle	1.52	360	Pn	Pn	00 10 43.8	+0.1
WMOK	Wichita Mounta	1.98	251	Pn	Pn	00 10 49.2	-0.7
Z35A	Perchaven, San	2.15	197	Pn	Pn	00 10 51.4	-0.9
W39A	Magazine	2.24	94	Pn	Pn	00 10 54.1	+0.7
W39A				IAmb_Lg		00 11 27.3	
	comp=Z,7.4nm,0.7s						
Z38A	Mt. Pleasant	2.47	149	Pn	Pn	00 10 56.3	-0.4
Z38A				IAmb_Lg		00 11 33.9	
	comp=Z,25nm,0.9s						
U40A	Yellville	3.12	71		Pn	00 11 05.1	-0.5
X40A	Basin Creek Fa	3.15	106		Pb	00 11 14.0	+1.6
WLAR	White Oak Lake	3.28	120	IAmb_Lg		00 12 04.3	
	comp=Z,16nm,0.9s						
WHAR	Wooly Hollow	3.45	90		Pb	00 11 18.7	+1.1
UALR	University of	3.47	99	Pn	Pn	00 11 09.7	-0.7
W41B	Gary Mavity, V	3.49	92	IAmb_Lg		00 12 13.1	
	comp=Z,5.7nm,1.0s						
CBKS	Cedar Bluff	4.28	324	IAmb_Lg		00 12 40.1	
	comp=Z,9.5nm,0.7s						
R40A	Maddies Statio	4.46	48	IAmb_Lg		00 12 35.0	
	comp=Z,12nm,1.0s						
CCM	Cathedral Cave	4.99	56	IAmb_Lg		00 12 53.8	
	comp=Z,7.7nm,0.8s						
P40A	Paris	5.44	39	IAmb_Lg		00 13 07.1	
	comp=Z,10nm,0.8s						
JCT	Junction City	5.63	210	IAmb_Lg		00 13 21.2	
	comp=Z,9.0nm,0.7s						

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*IDC **10** 00:16:06.2±3.8, 32°.15S×71°.58W, h41^{km}±38^{km}, mb3.4/4, mbtmp3.7/6, ML4.0/2, MS2.8/3, Error ellipse: s-maj=42.5km s-min=26.3km az=67.0*

*NEIC **10** 00:16:07.0±1.5, 32°.32S±0°.03×71°.75W±0°.08, h56^{km}±10^{km}, mb4.2/5, ML4.2(GUC), Error ellipse: s-maj=9.4km s-min=4.8km az=95.0*

*GUC **10** 00:16:07.4±0.7, 32°.34S×71°.67W, h57^{km}±5^{km}, ML4.3*

ISC 10 00:16:06.2±0.9**, 32°.29S**±0°.04×**71°.76W**±0°.05**, h51**^{km}±10^{km}**, n66, σ1^s.39**/80**, mb3.8**/6**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.74	173		Pn	00 16 21.4	+0.9
VA01				Sn	Sn	00 16 31.7	+0.8
VA01	Torpederas	0.74	173	eP	Pn	00 16 21.5	+1.0
VA01				i S	Sn	00 16 31.6	+0.8
VA01				IAML		00 16 33.3	
	comp=N,21µm,0.1s						
ROCH	El Roble	0.93	138	eP	Pn	00 16 23.8	+0.6
ROCH				i S	Sn	00 16 35.8	+0.1
ROCH				IAML		00 16 37.3	
	comp=N,9µm,0.2s						
ROC1	El Roble	0.93	138		Pn	00 16 21.2	-2.0
ROC1				Sn	Sn	00 16 33.2	-2.5
MT02	Curacav	1.10	152		Pn	00 16 25.9	+0.6
MT02				Sn	Sn	00 16 39.2	-0.3
MT02	Curacav	1.10	152	eP	Pn	00 16 26.0	+0.7
MT02				i S	Sn	00 16 39.3	-0.2
VA03	San Esteban	1.12	115		Pn	00 16 26.3	+0.6
VA03				Sn	Sn	00 16 40.6	+0.5
VA03	San Esteban	1.12	115	eP	Pn	00 16 26.3	+0.6
VA03				i S	Sn	00 16 40.5	+0.3
VA03				IAML		00 16 41.4	
	comp=E,25µm,0.1s						
PEL	Peldehue	1.24	134		Pn	00 16 27.7	+0.5
PEL				Sn	Sn	00 16 43.6	+0.6
CO02	Combarbal	1.26	31		Pn	00 16 28.9	+1.4
CO02				Sn	Sn	00 16 45.1	+1.7
CO02	Combarbal	1.26	31	eP	Pn	00 16 29.0	+1.4
CO02				IAML		00 16 46.4	
	comp=E,10µm,0.3s						
VA05	Santo Domingo	1.37	175		Pn	00 16 28.5	-0.5
VA05				Sn	Sn	00 16 46.0	0.0
MT05	Renca	1.40	142		Pn	00 16 30.1	+0.7
MT05				Sn	Sn	00 16 47.1	+0.3
MT05	Renca	1.40	142	eP	Pn	00 16 30.3	+0.9
MT05				i S	Sn	00 16 47.0	+0.3
MT05				IAML		00 16 50.2	
	comp=E,8µm,0.3s						
MT03	Universidad Ad	1.60	139		Pn	00 16 33.0	+0.9
MT03	Universidad Ad	1.60	139	eP	Pn	00 16 33.2	+1.1
MT03				i S	Sn	00 16 52.1	+0.4
MT03				IAML		00 16 52.9	
	comp=E,15µm,0.2s						
CO06	Fray Jorge	1.61	4		Pn	00 16 33.2	+1.0
CO06	Fray Jorge	1.61	4	eP	Pn	00 16 33.3	+1.0
CO06				i S	Sn	00 16 52.0	+0.1
CO06				IAML		00 16 53.3	
	comp=E,3µm,0.2s						
MT09	Talagante	1.62	157		Pn	00 16 33.9	+1.4
MT01	Popeta	1.63	165		Pn	00 16 32.7	+0.2
MT01	Popeta	1.63	165	eP	Pn	00 16 33.3	+0.9
MT01				i S	Sn	00 16 52.3	0.0
MT01				IAML		00 16 53.5	
	comp=E,3µm,0.1s						
BO04	La Punta	1.95	151		Pn	00 16 38.2	+1.2
BO04	La Punta	1.95	151	eP	Pn	00 16 38.1	+1.2
BO04				i S	Sn	00 17 01.0	+0.7
LMEL	Las Melosas	2.03	140		Pn	00 16 39.5	+1.4
LMEL	Las Melosas	2.03	140	eP	Pn	00 16 39.1	+1.0
LMEL				i S	Sn	00 17 03.1	+0.7
LMEL				IAML		00 17 06.3	
	comp=N,6µm,0.2s						
BO01	Tunca	2.17	165		Pn	00 16 40.7	+0.8
BO01	Tunca	2.17	165	eP	Pn	00 16 40.7	+0.8
BO01				i S	Sn	00 17 05.1	-0.5
GO04	Tololo Observa	2.26	22	eP	Pn	00 16 42.7	+1.4
CO01	Juntas del Tor	2.71	32		Pn	00 16 48.5	+1.1
GO05	Huala	2.72	183		Pn	00 16 47.2	-0.3
ZON	Zonda	2.72	75		Pn	00 16 48.7	+1.2
LCO	Las Campanas	3.39	16		Pn	00 16 57.9	+1.1
ML02	Panimavida	3.48	175		Pn	00 16 58.4	+0.6
AC04	Llanos de Chal	4.11	8		Pn	00 17 06.9	+0.4
BI05	Punta Hualpn	4.61	194	Pn	Pn	00 17 12.4	-0.8
GO03	Copiap	4.86	16		Pn	00 17 17.1	+0.3
AC06	Mina Casimiro	5.06	14		Pn	00 17 19.7	+0.2
AC02	Maricunga	5.89	24		Pn	00 17 31.6	+0.1
H03N1	Juan Fernandez	6.13	257	P	Pn	00 17 35.7	+1.8
	baz=65,slow=26,SNR=7.3						
H03N1				T	T	00 24 18.9	
	baz=84,slow=73,SNR=388						
H03N3	Juan Fernandez	6.14	257	P	Pn	00 17 35.6	+1.5
	baz=65,slow=26,SNR=7.2						
H03N3				T	T	00 24 16.4	
	baz=84,slow=73,SNR=322						
H03N2	Juan Fernandez	6.15	257	P	Pn	00 17 36.1	+2.0
	baz=89,slow=26,SNR=8.8						
H03N2				T	T	00 24 19.3	
	baz=84,slow=73,SNR=402						
H03S3	Juan Fernandez	6.20	254	P	Pn	00 17 36.5	+1.6
	baz=89						
H03S3				T	T	00 24 08.7	
	baz=74						
H03S1	Juan Fernandez	6.20	254	P	Pn	00 17 35.1	+0.3
	baz=65						
H03S1				T	T	00 24 09.2	
	baz=74						
AC01	Pan de Azucar	6.20	10	Pn	Pn	00 17 34.4	-0.7
H03S2	Juan Fernandez	6.21	254	P	Pn	00 17 35.3	+0.2
	baz=89						
H03S2				T	T	00 24 05.7	
	baz=74						
PLCA	Paso Flores	8.48	174	P	Pn	00 18 07.6	+1.1
	comp=N,0.5nm,0.3s,baz=330,slow=12,SNR=12						
PLCA				S	Sn	00 19 34.0	-6.9
	comp=N,1.8nm,0.8s,baz=46,slow=19,SNR=3.0						
PLCA				LR	LR	00 21 07.4	
	comp=N,46nm,19.9s,baz=296,slow=35						
	comp=N,1.6nm,0.3s						
PLCA	Paso Flores	8.48	174	Pn	Pn	00 18 07.5	+1.0
LL04	Puerto Octay	8.62	183	Pn	Pn	00 18 08.2	-0.1
LVC	Limon Verde	9.96	15	S	Sn	00 20 13.3	-4.4
	comp=N,1.7nm,0.5s,baz=198,slow=20,SNR=1.2						
LVC				LR	LR	00 22 25.0	
	comp=N,58nm,20.0s,baz=234,slow=39						
LPAZ	La Paz	16.27	13	P	Pn	00 19 51.0	-0.8
	comp=N,0.2nm,0.3s,baz=180,slow=7.6,SNR=7.1						
LPAZ				LR	LR	00 25 37.3	
	comp=N,46nm,20.1s,baz=50,slow=36						
	comp=N,1.3nm,0.6s						
LPAZ	La Paz	16.27	13	P	Pn	00 19 52.9	+1.1
MG02	Cerro Sombrero	20.57	176	P	P	00 20 39.1	-1.4
MG03	Isla Dawson	21.57	178	P	P	00 20 52.6	+1.3
MG03				IAmb	IAmb	00 20 59.2	
	comp=Z,9.5nm,0.9s						
EFI	East Falkland	21.82	157	P	P	00 20 54.2	+0.3
EFI				IAmb	IAmb	00 21 09.9	
	comp=Z,20nm,0.9s						
USHA	Ushuaia	22.66	175	P	P	00 21 05.8	+2.8
	comp=Z,8.0nm,1.0s,baz=358,slow=10,SNR=5.2						
	comp=Z,8.0nm,1.0s						
TXAR	Lajitas Array	68.36	330	P	P	00 27 03.7	+1.3
	comp=Z,0.2nm,0.6s,baz=147,slow=12,SNR=2.3						
	comp=Z,0.2nm,0.6s						
NVAR	Mina Array Bea	82.62	325	P	P	00 28 25.1	+1.0
	comp=Z,0.2nm,0.5s,baz=140,slow=7.1,SNR=1.8						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	83.41	70	P	P	00 28 28.4	0.0
	comp=Z,0.4nm,0.9s,baz=254,slow=3.4,SNR=2.1						
	comp=Z,0.4nm,0.9s						
H11S2	WAKE ISLAND Hy	126.02	270	T	T	02 54 15.2	
	baz=118,slow=75,SNR=151						
H11S1	WAKE ISLAND Hy	126.03	270	T	T	02 54 14.5	
	baz=118,slow=75,SNR=237						
H11S3	WAKE ISLAND Hy	126.03	270	T	T	02 54 13.6	
	baz=118,slow=75,SNR=190						
H11N3	WAKE ISLAND Hy	126.39	272	T	T	02 54 41.3	
	baz=116,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	126.40	272	T	T	02 54 43.9	
	baz=116,slow=75,SNR=7.1						
H11N2	WAKE ISLAND Hy	126.40	272	T	T	02 54 38.2	
	baz=116,slow=75,SNR=27						
ZALV	Zalesovo Beam	152.65	31	PKPbc	PKPbc	00 35 56.6	+0.1
	comp=Z,1.2nm,0.5s,baz=315,slow=2.6,SNR=5.4						
PZH	PanZhiHua	171.92	134	PKP	PKPdf	00 36 08.4	-1.3

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*IDC **10** 00:25:55.7±1.0, 4°.34S×151°.98E, h164^{km}±13^{km}, mb3.5/3, mbtmp4.0/3, Error ellipse: s-maj=39.5km s-min=3.1km az=57.0*

*NEIC **10** 00:25:57.8±0.6, 4°.3S±0°.1×151°.7E±0°.1, h144^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=19.6km s-min=16.0km az=175.0*

ISC 10 00:25:57.3±0.7**, 4°.3S**±0°.1×**151°.8E**±0°.1**, h150**^{km}**, n20, σ1^s.20**/21**, mb4.2**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.28	87	P	Pn	00 26 17.8	0.0
	144nm,0.3s,baz=237,slow=1.0,SNR=13						
KRVT				S	Sn	00 26 31.1	-2.3
	51nm,0.4s,baz=185,slow=21,SNR=2.2						
RABL	Rabaul	0.44	73	Pn	Pn	00 26 18.3	-0.1
COEN	Coen	12.77	221	P	P	00 29 00.6	+1.7
WB0	Warramunga Arr	22.84	226	P	P	00 30 47.6	-0.2
WB0				IAmb	IAmb	00 30 48.2	
	comp=Z,4.6nm,0.8s						
WR0	Warramunga Arr	22.86	226	P	P	00 30 47.9	-0.1
WB2	Warramunga Arr	22.99	226	P	P	00 30 49.0	-0.1
WB2				IAmb	IAmb	00 30 49.6	
	comp=Z,6.5nm,0.6s						
WRA	Warramunga Arr	23.00	226	P	P	00 30 49.0	-0.2
	comp=Z,3.9nm,0.6s,baz=52,slow=10,SNR=60						
	comp=Z,3.9nm,0.6s						
WRA	Warramunga Arr	23.00	226	P	P	00 30 48.8	-0.4
OUENC	Ouen Island, N	23.18	142	P	P	00 30 51.8	+1.0
OUENC				IAmb	IAmb	00 31 02.4	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	25.81	220	P	P	00 31 12.8	-2.0
	comp=Z,0.2nm,0.3s,baz=53,slow=9.4,SNR=2.1						
	comp=Z,0.2nm,0.3s						
FITZ	Fitzroy Crossi	28.98	240	P	P	00 31 40.8	-2.2
	comp=Z,4.2nm,1.0s,baz=60,slow=10,SNR=8.4						
	comp=Z,4.2nm,1.0s						
FITZ	Fitzroy Crossi	28.98	240	P	P	00 31 42.5	-0.5
FITZ				IAmb	IAmb	00 31 59.9	
	comp=Z,3.7nm,1.1s						
JWT	Wachi	42.28	340	P	P	00 33 37.0	+0.9
JWT				IAmb	IAmb	00 33 38.1	
	comp=Z,9.6nm,1.0s						
PLWZ	Palliser	42.64	154	P	P	00 33 38.5	-0.5
DCZ	Deep Cove	43.14	164	P	P	00 33 41.6	-1.3
JMM	Marumori	43.19	347	P	P	00 33 43.0	-0.4
JMM				IAmb	IAmb	00 33 53.5	
	comp=Z,12nm,0.9s						
MQZ	McQueen's Vall	43.36	158	P	P	00 33 46.2	+1.6
USA0B	Ussuriysk Arra	51.46	342	P	P	00 34 47.8	+0.6
USA0B				IAmb	IAmb	00 34 52.2	
	comp=Z,8.1nm,0.8s						
USRK	Ussuriysk Ar.	51.46	342	P	P	00 34 47.5	+0.3
TORD	Torodi Ar. Bea	149.16	288	PKPbc	PKPdf	00 45 26.0	+1.2
	comp=Z,0.1nm,0.3s,baz=91,slow=2.1,SNR=6.0						

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*NEIC **10** 00:27:45.9±2.1, 35°.56S±0°.05×71°.33W±0°.06, h94^{km}±6^{km}, mb4.4/16, Mwr4.0/20, ML4.4(GUC), Error ellipse: s-maj=9.3km s-min=4.1km az=140.0*

*IDC **10** 00:27:46.5±2.9, 35°.46S×71°.05W, h90^{km}±26^{km}, mb3.7/8, mbtmp4.0/12, MS2.6/2, Error ellipse: s-maj=29.1km s-min=14.6km az=83.0*

*GUC **10** 00:27:46.7±0.7, 35°.53S×71°.31W, h100^{km}±3^{km}, ML4.3*

*NEIC **10** 00:27:46.3, 35°.53S×71°.35W, h94^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.60; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.91; Fault plane solution: $M_0$1.47000×10^{15} NP1:ϕ_s39.68000°, δ84.08000°, λ-131.27000°. NP2:ϕ_s302.98000°, δ41.62000°, λ-8.93000°. Principal axes: T 1.4535, Plg27.0000°, Azm161.0000°; N 0.0307, Plg41.0000°, Azm45.0000°; P -1.4842, Plg37.0000°, Azm274.0000°;*

ISC 10 00:27:46.2±0.6**, 35°.53S**±0°.04×**71°.32W**±0°.06**, h97**^{km}±5^{km}**, n92, σ1^s.04**/110**, mb4.1**/11**, 17C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ML02	Panimavida	0.24	200		Pn	00 28 00.7	+0.6
ML02				Sn	Sn	00 28 11.1	+0.5
ML02	Panimavida	0.24	200	⇓iP	Pn	00 28 00.8	+0.6
ML02				i S	Sn	00 28 11.4	+0.8
ML02				IAML		00 28 12.2	
	comp=E,44µm,0.4s						
GO05	Huala	0.72	316		Pn	00 28 04.2	+0.6
GO05	Huala	0.72	316	eP	Pn	00 28 04.0	+0.5
GO05				eS	Sn	00 28 17.5	+1.0
BO01	Tunca	1.15	10		Pn	00 28 08.4	+0.3
BO01				Sn	Sn	00 28 24.5	-0.1
BO01	Tunca	1.15	10	⇑iP	Pn	00 28 08.5	+0.3
BO01				i S	Sn	00 28 24.5	-0.1
BO01				IAML		00 28 25.2	
	comp=E,5µm,0.2s						
BO03	Pichilemu	1.16	333	⇑iP	Pn	00 28 09.0	+0.9
BO03				eS	Sn	00 28 25.6	+0.8
BO03				IAML		00 28 31.2	
	comp=N,6µm,0.3s						
BO04	La Punta	1.65	21		Pn	00 28 14.6	+0.4
BO04	La Punta	1.65	21	⇑iP	Pn	00 28 14.4	+0.3
BO04				eS	Sn	00 28 35.7	+0.3
MT01	Popeta	1.66	2		Pn	00 28 14.7	+0.4
MT01	Popeta	1.66	2	⇑iP	Pn	00 28 14.7	+0.4
MT01				i S	Sn	00 28 35.2	-0.5
MT01				IAML		00 28 45.5	
	comp=E,2µm,0.2s						
MT09	Talagante	1.77	9		Pn	00 28 15.8	0.0
MT09	Talagante	1.77	9	⇑iP	Pn	00 28 16.2	+0.4
MT09				eS	Sn	00 28 37.8	-0.5
MT09				IAML		00 28 40.9	
	comp=N,3µm,0.2s						
VA05	Santo Domingo	1.89	352		Pn	00 28 17.6	+0.5
VA05	Santo Domingo	1.89	352	⇑iP	Pn	00 28 17.6	+0.5
VA05				i S	Sn	00 28 40.9	+0.1
VA05				IAML		00 28 49.1	
	comp=N,4µm,0.4s						
LMEL	Las Melosas	1.91	29		Pn	00 28 18.8	+1.2
LMEL	Las Melosas	1.91	29	⇑iP	Pn	00 28 19.0	+1.3
LMEL				eS	Sn	00 28 42.7	+1.1
LMEL				IAML		00 28 47.0	
	comp=N,2µm,0.2s						
BI05	Punta Hualpn	1.94	231		Pn	00 28 18.2	+0.4
BI05	Punta Hualpn	1.94	231	eP	Pn	00 28 18.4	+0.5
BI05				eS	Sn	00 28 41.9	-0.1
BI05				IAML		00 28 52.8	
	comp=N,1µm,0.3s						
MT03	Universidad Ad	2.14	18		Pn	00 28 21.1	+0.6
MT03	Universidad Ad	2.14	18	⇑iP	Pn	00 28 21.1	+0.5
MT03				eS	Sn	00 28 47.2	+0.5
MT03				IAML		00 28 50.9	
	comp=E,2µm,0.2s						
MT05	Renca	2.19	13		Pn	00 28 21.8	+0.7
MT05	Renca	2.19	13	⇑iP	Pn	00 28 21.9	+0.7
MT05				eS	Sn	00 28 48.3	+0.4
MT05				IAML		00 28 51.2	
	comp=E,3µm,0.2s						
MT02	Curacav	2.27	4		Pn	00 28 22.8	+0.6
MT02	Curacav	2.27	4	⇑iP	Pn	00 28 22.8	+0.6
MT02				eS	Sn	00 28 49.2	-0.6
MT02				IAML		00 28 51.0	
	comp=N,1µm,0.4s						
FCH	Farellones	2.36	21	⇑iP	Pn	00 28 24.4	+0.8
FCH				eS	Sn	00 28 52.9	+0.7
FCH				IAML		00 28 54.9	
	comp=N,2µm,0.3s						
PEL	Peldehue	2.44	13		Pn	00 28 25.0	+0.6
PEL	Peldehue	2.44	13	⇑iP	Pn	00 28 25.1	+0.7
PEL				eS	Sn	00 28 53.5	-0.3
PEL				IAML		00 28 55.9	
	comp=N,2µm,0.3s						
VA01	Torpederas	2.52	354		Pn	00 28 25.4	0.0
VA01	Torpederas	2.52	354	⇑iP	Pn	00 28 26.0	+0.6
VA01				eS	Sn	00 28 54.7	-0.7
VA01				IAML		00 28 56.5	
	comp=E,3µm,0.1s						
ROCH	El Roble	2.57	6	⇑iP	Pn	00 28 26.8	+0.5
ROCH				eS	Sn	00 28 55.6	-1.4
ROCH				IAML		00 29 00.5	
	comp=E,3µm,0.3s						
VA03	San Esteban	2.83	13	⇑iP	Pn	00 28 30.2	+0.5
VA03				eS	Sn	00 29 03.2	0.0
VA03				IAML		00 29 07.2	
	comp=E,2µm,0.2s						
LC02	Puerto Saavedr	3.65	206		Pn	00 28 39.5	-1.0
LC02	Puerto Saavedr	3.65	206	eP	Pn	00 28 39.7	-0.8
LR03	Panguipulli	4.17	191		Pn	00 28 47.0	-0.7
CO02	Combarbal	4.32	4		Pn	00 28 49.5	-0.3
CO02	Combarbal	4.32	4	⇑iP	Pn	00 28 49.4	-0.3
ZON	Zonda	4.54	30		Pn	00 28 52.8	0.0
CO06	Fray Jorge	4.85	357		Pn	00 28 56.3	-0.6
CO06	Fray Jorge	4.85	357	⇑iP	Pn	00 28 56.3	-0.6
PLCA	Paso Flores	5.23	174	P	Pn	00 29 02.4	+0.4
	comp=E,16nm,0.4s,baz=343,slow=12,SNR=60						
PLCA				LR	LR	00 31 03.8	
	comp=E,45nm,21.9s,baz=330,slow=37						
PLCA	Paso Flores	5.23	174		Pn	00 29 02.5	+0.5
GO04	Tololo Observa	5.36	5		Pn	00 29 03.4	-0.7
LL04	Puerto Octay	5.44	189		Pn	00 29 03.9	-0.8
CO05	La Serena	5.60	1		Pn	00 29 06.4	-0.6
CO01	Juntas del Tor	5.63	11		Pn	00 29 07.1	-0.6
LL03	Petrohue	5.66	188		Pn	00 29 06.4	-1.3
LL05	Los Muermos	6.10	195		Pn	00 29 11.4	-2.4
LCO	Las Campanas	6.52	5		Pn	00 29 18.3	-1.5
AC04	Llanos de Chal	7.31	2		Pn	00 29 28.9	-1.3
LL07	Hotel Espejo d	7.48	192	Pn	Pn	00 29 29.0	-3.5
LL02	Futaleuf	7.66	183	Pn	Pn	00 29 33.0	-2.0
GO03	Copiap	7.97	7	Pn	Pn	00 29 38.0	-1.2
AC06	Mina Casimiro	8.19	6		Pn	00 29 40.7	-1.6
AC02	Maricunga	8.87	13	Pn	Pn	00 29 50.2	-1.8
AY01	Puyuhuapi	8.94	186	Pn	Pn	00 29 49.9	-2.4
AC01	Pan de Azucar	9.37	4	Pn	Pn	00 29 56.3	-2.1
GO02	Mina Guanaco	10.44	9	Pn	Pn	00 30 12.0	-1.2
LVC	Limon Verde	13.05	10	P	Pn	00 30 47.2	-0.9
	comp=E,1.5nm,0.6s,baz=214,slow=18,SNR=2.1						
LVC				S	Sn	00 32 51.5	-20
	comp=E,1.5nm,0.3s,baz=127,slow=23,SNR=11						
GO09	Cerro Castillo	15.75	182	P	Pn	00 31 22.3	0.0
GO09				IAmb	IAmb	00 31 28.0	
	comp=Z,22nm,0.9s						
MG05	Puerto Natales	16.16	183		Pn	00 31 27.8	+0.4
MG05				IAmb	IAmb	00 31 32.5	
	comp=Z,17nm,1.1s						
GO10	Punta Arenas	17.62	179	P	Pn	00 31 47.5	+2.2
GO10				IAmb	IAmb	00 31 49.6	
	comp=Z,25nm,0.8s						
MG03	Isla Dawson	18.32	178	P	Pn	00 31 54.9	+1.2
MG03				IAmb	IAmb	00 31 57.3	
	comp=Z,13nm,0.7s						
ITAB	Concordia	18.33	69	P	P	00 31 51.9	-0.9
EFI	East Falkland	18.73	154	P	P	00 31 55.9	-1.1
LPAZ	La Paz	19.38	9	P	P	00 32 05.4	+0.4
	comp=Z,0.5nm,0.5s,baz=276,slow=9.9,SNR=1.5						
LPAZ	La Paz	19.38	9	P	P	00 32 06.4	+1.4
USHA	Ushuaia	19.40	175	P	P	00 32 05.9	+1.5
	comp=Z,14nm,0.7s,baz=9.4,slow=8.3,SNR=14						
TRCB	Terra Rica	20.62	57	P	P	00 32 18.5	+0.6
TRCB				IAmb	IAmb	00 32 20.7	
	comp=Z,16nm,0.7s						
NNA	Nana	23.97	347	LR	LR	00 40 02.5	
	comp=Z,26nm,20.6s,baz=152,slow=31						
BDFB	Brasilia	28.75	52	P	P	00 33 33.5	-1.3
	comp=Z,1.4nm,0.6s,baz=177,slow=6.3,SNR=3.1						
	comp=Z,1.4nm,0.6s						
BDFB	Brasilia	28.75	52	IAmb	IAmb	00 33 41.3	
	comp=Z,2.5nm,1.1s						
ORCD	Orcadas	30.43	154	P	P	00 33 48.1	-0.9
ORCD				IAmb	IAmb	00 33 50.7	
	comp=Z,8.7nm,0.6s						
HOPE	Hope Point	30.54	139	P	P	00 33 49.3	-0.9
BAUV	El Baul	44.34	5	P	P	00 35 46.1	-0.6
BELA	Belgrano 2	45.27	170	P	P	00 35 53.2	-0.3
SJCC	San Jacinto, C	45.33	355	P	P	00 35 56.2	+1.6
SJCC				IAmb	IAmb	00 36 04.4	
	comp=Z,7.3nm,1.1s						
VNA3	Neumayer Olymp	47.72	157	P	P	00 36 12.5	-0.2
SNAA	Sanae	49.95	157	P	P	00 36 30.3	+0.5
SNAA	Sanae	49.95	157	P	P	00 36 30.5	+0.7
	comp=Z,4.7nm,0.9s,baz=113,slow=2.6,SNR=34						
	comp=Z,4.7nm,0.9s						
SNAA	Sanae	49.95	157	IAmb	IAmb	00 36 32.4	
	comp=Z,8.3nm,1.1s						
TROLL	Troll, Antarti	51.65	158	P	P	00 36 42.4	-0.3
QSPA	South Pole Qui	54.71	180	P	P	00 37 07.2	+2.0
	comp=Z,1.9nm,0.5s,baz=305,slow=1.5,SNR=34						
	comp=Z,1.9nm,0.5s						
TXAR	Lajitas Array	71.36	330	P	P	00 38 57.7	+2.1
	comp=Z,0.8nm,0.5s,baz=158,slow=9.5,SNR=20						
	comp=Z,0.8nm,0.5s						
WVT	Waverly	72.94	346	P	P	00 39 05.8	+1.0
WVT				IAmb	IAmb	00 39 06.8	
	comp=Z,5.8nm,0.6s						
BOSA	Boshof	78.84	117	P	P	00 39 39.2	+0.2
	comp=Z,1.7nm,0.5s,baz=248,slow=5.4,SNR=6.7						
	comp=Z,1.7nm,0.5s						
TORD	Torodi Ar. Bea	84.18	69	P	P	00 40 07.2	+0.2
	comp=Z,0.5nm,0.8s,baz=282,slow=5.8,SNR=6.3						
TORD				pP	pP	00 40 31.9	-0.9
	comp=Z,0.5nm,0.8s,baz=236,slow=3.3,SNR=4.4						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	85.39	333	P	P	00 40 12.8	0.0
	comp=Z,0.6nm,0.7s,baz=150,slow=5.2,SNR=6.0						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	85.48	325	P	P	00 40 14.4	+1.2
	comp=Z,0.5nm,0.6s,baz=104,slow=6.1,SNR=4.4						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	119.70	208	PKP	PKPdf	00 46 26.0	+0.6
	comp=Z,0.6nm,0.8s,baz=168,slow=1.7,SNR=2.9						
KSH	Kashi	153.84	71	PKP	PKPdf	00 47 23.3	-2.8
PZH	PanZhiHua	169.21	145	PKP	PKPdf	00 47 40.8	-1.6

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*NIED **10** 00:32:52.9, 31°.08N×129°.07E, h5^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.21; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-1.10; $M_{r\theta}$0.62; $M_{\theta\phi}$0.07; $M_{\phi r}$1.09; Fault plane solution: $M_0$1.59000×10^{14} NP1: ϕ_s132.00000°, δ37.00000°, λ7.00000°. NP2:ϕ_s36.00000°, δ86.00000°, λ127.00000°.*

JMA 10 00:32:52.9±0.5**, 31°.1N**±0°.6×**12°9E**±°**, h5**^{km}±4^{km}**, MV3.5**/19**, SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.81	42	P	Pg	00 33 08.6	0.0
JSJ				S	Sg	00 33 19.4	+0.3
JKC	Kuchinoerabu	1.14	122	P	Pg	00 33 14.6	-0.2
JKC				S	Sg	00 33 29.1	-0.6
JSU	Suzuyama	1.26	70	P	Pg	00 33 16.6	-0.4
JYAK	Yakushimahirau	1.49	124	*e*P	Pn	00 33 18.5	-1.9
JYAK				*e*S	Sn	00 33 39.2	-1.1
JFU	Fukue jima 2	1.60	350	*e*P	Pn	00 33 21.2	-0.7

TAP 10 00:49:05.8, 24°.19N×121°.75E, h13^{km}, ML3.5, 3C-25D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village baz=256	0.12	256	⇓*i*P	Pg	00 49 09.1	+0.1
ETL	baz=256			*i* S	Sg	00 49 11.8	+0.5
EHP	Heping Village baz=359	0.12	355	⇓*i*P	Pg	00 49 09.1	0.0
EHP	baz=359			*i* S	Sg	00 49 11.8	+0.4
NACB	Ninganchiao baz=265	0.14	264	⇓*i*P	Pg	00 49 09.4	+0.1
NACB	baz=265			*i* S	Sg	00 49 12.2	+0.4
TWD	Chiawan baz=232	0.18	233	⇓*i*P	Pg	00 49 09.9	0.0
TWD	baz=232			*i* S	Sg	00 49 13.4	+0.7
ENA	Nanau baz=359	0.24	358	⇓*i*P	Pg	00 49 11.0	+0.1
ENA	baz=359			*i* S	Sg	00 49 14.9	+0.6
ETLH	Xiulin Townshi baz=274	0.25	274	⇓*i*P	Pg	00 49 11.3	+0.2
ETLH	baz=274			*e*S	Sg	00 49 15.5	+0.9
HWA	Hwalien baz=211	0.25	213	P	Pb	00 49 12.1	-0.1
HWA	baz=211			*e*S	Sb	00 49 17.5	+1.0
EWUT	Wuta baz=5.0	0.26	5	⇓*i*P	Pg	00 49 11.3	0.0
EWUT	baz=5.0			S	Sg	00 49 15.3	+0.5
ETM	Tongmen baz=227	0.32	227	*e*P	Pg	00 49 12.5	+0.1
ETM	baz=227			*e*S	Sb	00 49 17.8	-0.8
TEYL	Yanliau Villag baz=206	0.35	204	*e*P	Pb	00 49 13.7	-0.2
TEYL	baz=206			*e*S	Sb	00 49 20.2	+0.9
LATG	Datong baz=329	0.40	329	⇓*i*P	Pg	00 49 14.3	+0.4
LATG	baz=329			*e*S	Sg	00 49 20.0	+0.6
NNSB	Datong baz=305	0.41	305	⇓*i*P	Pb	00 49 14.7	-0.4
NNSB	baz=305			*e*S	Sb	00 49 20.6	-0.7
NNS	Nan Shan baz=306	0.43	306	⇓*i*P	Pb	00 49 14.9	-0.4
NNS	baz=306			*e*S	Sb	00 49 21.2	-0.6
TWC	Suao baz=13	0.43	12	⇓*i*P	Pg	00 49 14.4	+0.1
TWC	baz=13			*e*S	Sg	00 49 20.2	+0.2
NDS	Dongshan baz=356	0.45	356	⇓*i*P	Pg	00 49 14.9	+0.3
NDS	baz=356			*i* S	Sg	00 49 21.3	+0.7
WHF	Hehuan Shan baz=264	0.45	265	⇓*i*P	Pg	00 49 15.1	+0.3
WHF	baz=264			S	Sb	00 49 22.2	-0.4
NDT	Datong Townshi baz=332	0.47	332	⇓P	Pb	00 49 15.7	-0.2
NDT	baz=332			*e*S	Sb	00 49 22.6	-0.2
FUSS	Fushou baz=277	0.47	277	⇓*i*P	Pb	00 49 15.7	-0.4
FUSS	baz=277			*e*S	Sb	00 49 23.2	+0.1
ESL	Shilin baz=217	0.47	218	⇓*i*P	Pg	00 49 15.1	0.0
ESL	baz=217			*e*S	Sb	00 49 23.6	+0.7
ENTT	Nioudou baz=340	0.48	339	⇓*i*P	Pb	00 49 15.8	-0.4
ENTT	baz=340			*i* S	Sb	00 49 22.9	-0.3
TEGC	Jichi Village baz=201	0.52	202	*e*P	Pb	00 49 17.7	+0.9
TWT	Tachien baz=277	0.53	277	P	Pb	00 49 17.3	+0.2
TWT	baz=277			*e*S	Sb	00 49 24.4	-0.4
TWE	Neicheng baz=353	0.54	352	⇓P	Pb	00 49 16.8	-0.3
TWE	baz=353			*e*S	Sb	00 49 24.5	-0.2
CHGB	Renai baz=256	0.54	257	⇓*i*P	Pb	00 49 17.0	-0.4
CHGB	baz=256			*e*S	Sb	00 49 24.5	-0.7
TDCB	Techi baz=277	0.55	277	*e*P	Pb	00 49 17.3	-0.1
TDCB	baz=277			*e*S	Sg	00 49 24.1	+0.2
ILA	Ilan	0.57	360	*e*P	Pg	00 49 17.2	+0.1
ILA				*e*S	Sb	00 49 26.2	+0.3
OWD	Renai baz=246	0.58	246	⇓*i*P	Pg	00 49 17.3	+0.2
OWD	baz=246			*e*S	Sb	00 49 25.6	-0.5
FUSB	Fushanzhiwuyua baz=345	0.59	345	⇓P	Pb	00 49 17.9	-0.1
FUSB	baz=345			*e*S	Sb	00 49 26.0	-0.3
EGFH	Guangfu baz=210	0.60	210	*e*P	Pg	00 49 17.7	+0.2
EGFH	baz=210			*e*S	Sb	00 49 27.2	+0.7
NSK	Sanguang baz=324	0.60	324	⇓*i*P	Pb	00 49 18.4	+0.1
NSK	baz=324			*e*S	Sb	00 49 27.0	+0.2
WUSB	Renai baz=251	0.61	252	⇓P	Pb	00 49 18.3	-0.2
WUSB	baz=251			*e*S	Sb	00 49 27.3	+0.2
NWLT	Wulai baz=339	0.63	339	⇓P	Pb	00 49 18.7	0.0
NWLT	baz=339			*e*S	Sb	00 49 27.1	-0.4
NTC	Toucheng baz=6.0	0.67	6	*e*P	Pg	00 49 18.2	-0.6
EGS	baz=15	0.67	14	*e*P	Pb	00 49 19.6	+0.1
VWDT	VWDT baz=232	0.71	232	⇑P	Pb	00 49 19.9	-0.1
VWDT	baz=232			*e*S	Sn	00 49 31.4	-0.9
NFF	Wufeng Townshi baz=307	0.73	308	*e*P	Pb	00 49 20.9	+0.5
NFF	baz=307			*e*S	Sb	00 49 31.3	+0.9
WHP	Taichung City baz=277	0.74	277	⇑*e*P	Pb	00 49 21.1	+0.5
WHP	baz=277			*e*S	Sb	00 49 31.7	+0.9
WPL	Puli Township baz=257	0.75	257	*e*P	Pb	00 49 21.1	+0.4
WPL	baz=257			*e*S	Sb	00 49 31.6	+0.7
HGSD	Ruisui baz=203	0.76	204	*e*P	Pb	00 49 20.9	+0.1
HGSD	baz=203			*e*S	Sn	00 49 33.8	+0.2
DPDB	Guoxing baz=258	0.77	259	*e*P	Pb	00 49 21.5	+0.4
DPDB	baz=258			*e*S	Sb	00 49 32.3	+0.8
WCS	Beigang Elemen baz=260	0.78	261	⇑*e*P	Pb	00 49 21.6	+0.4
WCS	baz=260			*e*S	Sb	00 49 32.5	+0.7
TIPB	Shuangxi baz=5.0	0.78	5	⇓*e*P	Pb	00 49 21.2	-0.1
TIPB	baz=5.0			*e*S	Sb	00 49 31.7	-0.3
EHY	Hungye baz=210	0.79	210	*e*P	Pg	00 49 21.1	+0.1
NHDH	Xindian Distri baz=345	0.80	345	*e*P	Pg	00 49 21.3	0.0
NHDH	baz=345			*e*S	Sb	00 49 32.8	+0.5
TWA	Mucha baz=350	0.80	349	*e*P	Pb	00 49 22.1	+0.4
LIOB	Emei baz=304	0.81	304	*e*P	Pn	00 49 22.9	-0.1
LIOB	baz=304			*e*S	Sn	00 49 34.3	-0.7
NSTT	Nanjuang baz=303	0.81	303	*e*P	Pn	00 49 22.7	-0.3
NSTT	baz=303			*e*S	Sb	00 49 33.7	+1.0
TATO	Taipei baz=343	0.82	343	*e*P	Pb	00 49 22.4	+0.4
TATO	baz=343			*e*S	Sb	00 49 33.2	+0.3
SSLB	Suanglung baz=241	0.83	242	P	Pb	00 49 22.1	-0.1
SSLB	baz=241			*e*S	Sb	00 49 33.2	-0.1
SMLT	Sun Moon Lake baz=248	0.84	249	*e*P	Pb	00 49 22.5	+0.2
SMLT	baz=248			*e*S	Sb	00 49 34.2	+0.7
TWB1	Santiao Chiao baz=15	0.84	15	*e*P	Pb	00 49 22.7	+0.3
TYC	Yuchr baz=251	0.87	251	*e*P	Pb	00 49 23.0	+0.3
TYC	baz=251			*e*S	Sb	00 49 35.0	+0.7
NWF	Wu-fen Shan baz=2.0	0.88	2	*e*P	Pb	00 49 23.4	+0.4
NWF	baz=2.0			*e*S	Sb	00 49 35.1	+0.4
WFSB	Wu-fen Shan baz=2.0	0.88	2	*e*P	Pb	00 49 23.4	+0.5
WFSB	baz=2.0			*e*S	Sb	00 49 35.0	+0.4
YULB	Yu-li baz=208	0.90	208	*e*P	Pg	00 49 21.8	-1.3
YULB	baz=208			*e*S	Sb	00 49 36.0	+0.9
TWQ1	Liyutan baz=280	0.91	280	*e*P	Pn	00 49 25.3	+1.0
TWQ1	baz=280			*e*S	Sn	00 49 38.5	+1.2
SXI1	Grass Mountain baz=7.0	0.91	7	*e*P	Pb	00 49 23.8	+0.2
SXI1	baz=7.0			*e*S	Sb	00 49 35.8	+0.2
SBCB	Hsinchu baz=311	0.92	311	*e*P	Pn	00 49 25.7	+1.2
EYUL	Yuli baz=205	0.93	205	*e*P	Pb	00 49 23.7	0.0
EYUL	baz=205			*e*S	Sn	00 49 37.0	-0.7
TWF1	Yuli baz=206	0.93	207	*e*P	Pg	00 49 22.9	-0.9
TWF1	baz=206			*e*S	Sn	00 49 38.0	+0.1
NCUH	Zhongli baz=326	0.93	326	*e*P	Pn	00 49 25.5	+0.8
NSY	Sanyi baz=284	0.93	284	*e*P	Pn	00 49 25.6	+1.0
NMLH	Miaoli baz=292	0.94	292	*e*P	Pn	00 49 25.5	+0.7
NMLH	baz=292			*e*S	Sn	00 49 38.3	+0.1
TNOU	National Taiwa baz=1.0	0.96	1	*e*P	Pb	00 49 23.9	-0.4
TNOU	baz=1.0			*e*S	Sb	00 49 37.0	+0.1
TWS1	Kuangyinshan baz=342	0.96	342	*e*P	Pn	00 49 26.0	+1.0
YM01	YM01 baz=350	0.97	350	*e*P	Pn	00 49 25.2	0.0
YM01	baz=350			*e*S	Sn	00 49 38.3	-0.6
TCU	Taichung baz=268	0.98	268	*e*P	Pn	00 49 27.3	+2.0
WJS	Zhushan baz=249	1.00	249	*e*P	Pn	00 49 26.7	+1.0
YM08	YM08 baz=352	1.01	352	*e*P	Pn	00 49 25.9	+0.1
YM08	baz=352			*e*S	Sn	00 49 39.7	-0.1
YUS	Yu-Shan baz=226	1.01	227	*e*P	Pb	00 49 25.4	0.0
YUS	baz=226			*e*S	Sn	00 49 39.8	-0.7
ANP	Anpu baz=348	1.02	348	*e*P	Pn	00 49 26.5	+0.6
WDJ	Dajia District baz=279	1.03	279	*e*P	Pn	00 49 27.6	+1.7
FULB	Fuli baz=203	1.07	203	*e*P	Pb	00 49 25.8	-0.4
ALS	Alishan baz=232	1.10	232	*e*P	Pn	00 49 27.3	+0.1
ALS	baz=232			*e*S	Sn	00 49 42.9	+0.4
CHN5	Tsauling baz=239	1.15	239	*e*P	Pg	00 49 28.8	+0.9
YOJ	Yonaguni jima baz=76	1.18	76	P	Pn	00 49 27.5	-0.6
YOJ	baz=76			*e*S	Sn	00 49 45.0	+0.9
ELDTW	Lidau baz=214	1.20	214	*e*P	Pn	00 49 27.6	-0.8
WDLH	Douliu baz=246	1.22	246	*e*P	Pg	00 49 29.9	+0.7
EDH	Donghe baz=199	1.28	199	*e*P	Pn	00 49 28.8	-0.6
CHN4	Tsaushan baz=232	1.35	232	*e*P	Pg	00 49 31.9	+0.1
STYH	Taoyuan baz=222	1.35	222	*e*P	Pb	00 49 31.2	+0.2
TPUB	Ta-pu baz=229	1.36	230	*e*P	Pg	00 49 31.8	-0.1
STYT	Tauyuan baz=222	1.37	222	*e*P	Pb	00 49 31.1	-0.2
WTP	Ta-pu baz=228	1.40	228	*e*P	Pg	00 49 32.5	-0.3
TWK	Hsinying baz=231	1.48	232	*e*P	Pg	00 49 34.0	-0.2
CHN1	Nanshi baz=228	1.50	229	*e*P	Pb	00 49 33.4	-0.2
WSL	Shuilin Townsh baz=245	1.54	245	*e*P	Pg	00 49 35.0	-0.5
WSL	baz=245			*e*S	Sg	00 49 57.6	+2.1

NOU 10 00:54:42.6, 16°.84S×167°.41E, h10^{km}, MLv4.1/15, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.15	140	P	Pb	00 55 04.0	-0.6
RTV	Rentapao	1.35	134	P	Pn	00 55 07.4	-0.2
SANVU	Saraoutou	1.40	352	P	Pn	00 55 08.5	+0.3
LIFNC	LIFOU	3.92	182	P	Pn	00 55 42.3	-0.6
YATNC	Mamie plateau, 9.4nm,0.6s	5.21	185	P	Pn	00 55 59.9	-0.8
DZM	Mont Dzumac 16nm,0.5s	5.28	190	P	Pn	00 56 02.2	+0.5
NOUC	Port Laguerre 11nm,1.4s	5.34	191	P	Pn	00 56 02.3	-0.1
ONTNC	Ouen Toro 23nm,0.5s	5.51	189	P	Pn	00 56 04.7	-0.1
OUENC	Ouen Island, N 16nm,2.0s	5.58	185	P	Pn	00 56 06.0	+0.3

NNC ***10*** *01:10:35.0±1.1, 42°.81N×69°.50E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=6.8km s-min=4.0km az=89.0
SOME ***10*** *01:10:36.6, 42°.70N×69°.72E, h0^{km}*
KRNET ***10*** *01:10:36.8±0.1, 42°.72N×69°.64E, h14^{km}, mb3.5*

ISC 10 01:10:35.5±1.2, 42°.85N±0°.03×69°.57E±0°.05, h10^{km}, n45, $\sigma 2^{s}.78$/79, 27C-11D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday 101nm,0.1s	0.27	48	⇑*e*P	Pg	01 10 39.2	-1.8
BRLS	3μm,0.1s			*e*S	Sg	01 10 41.5	-3.1
BRLS	Borolday 101nm,0.1s	0.27	48	P	Pg	01 10 39.2	-1.8
BRLS	Borolday baz=59	0.27	48	⇑*e*P	Pg	01 10 39.2	-1.8
BRLS	baz=59			⇑*e*S	Sg	01 10 41.5	-3.1
CHM	Chimkent 4.5nm,0.1s	0.53	177	*e*P	Pg	01 10 44.3	-1.6
CHM	2μm,0.3s			*e*S	Sg	01 10 50.2	-2.7
TCH	Chimkent baz=84	0.53	177	*e*P	Pg	01 10 44.3	-1.6
TCH	baz=84			*e*S	Sg	01 10 50.2	-2.7
KK31	Karatay Array 2.9nm,0.1s,baz=246,slow=17,SNR=642	0.74	70	⇑P	Pb	01 10 51.2	+0.8
KK31	97nm,0.3s,baz=246,slow=28,SNR=72			⇑S	Sb	01 11 01.9	+1.3
KKAR	Karatay Array baz=59	0.74	70	⇑*i*P	Pb	01 10 51.0	+0.5
KKAR	baz=59			⇑*i*S	Sb	01 11 01.3	+0.7
IUG	Iuzhnay 849nm,0.2s	0.79	154	*e*P	Pg	01 10 49.1	-1.5
IUG	376nm,0.3s			*e*S	Sg	01 10 58.1	-2.8
IUG	Iuzhnay 849nm,0.2s	0.79	154	P	Pg	01 10 49.9	-0.7
IUG	376nm,0.3s			S	Sg	01 10 59.8	-1.1
IUG	Iuzhnay baz=53	0.79	154	*e*P	Pg	01 10 49.1	-1.5
IUG	baz=53			*e*S	Sg	01 10 58.1	-2.8
DZA	Taraz 68nm,0.1s	1.30	88	*e*P	Pg	01 11 00.3	-0.1
DZA	331nm,0.1s			*e*S	Sn	01 11 17.3	+0.1
DZA	Taraz baz=82	1.30	88	*e*P	Pg	01 11 00.3	-0.1
DZA	baz=82			*e*S	Sn	01 11 17.3	+0.1
TAS	Tashkent baz=90	1.54	188	⇑*i*P	Pn	01 11 03.0	0.0
TAS	baz=90			⇑*i*S	Sb	01 11 22.6	-1.1
TRKS	Terek-Say baz=37	1.77	138	⇑*e*P	Pg	01 11 08.4	-1.0
TRKS	baz=37			⇑*i*S	Sg	01 11 31.5	-0.8
ARK	Arkit baz=17	2.07	120	⇑*i*P	Pb	01 11 13.1	-0.1
ARK	baz=17			⇑*i*S	Sg	01 11 39.3	-2.6
MRKS	Merke 1.9nm,0.0s	2.70	91	*e*P	Pg	01 11 25.5	-1.6
MRKS	60nm,0.1s			*e*S	Sg	01 12 00.7	-1.4
MRKS	Merke 2.2nm,0.5s	2.70	91	Pg	Pg	01 11 25.6	-1.6
MRKS	60nm,0.6s			Lg	Lg	01 12 00.7	
BTK	Batken baz=61	2.95	161	⇑*i*P	Pn	01 11 24.6	+2.1
BTK	baz=61			⇑*i*S	Sn	01 11 59.5	+1.6
EKS2	Erkin-Say baz=90	3.11	92	⇑*e*P	Pb	01 11 28.0	-2.9
EKS2	baz=90			⇑*i*S	Sb	01 12 05.2	-3.7
OHH	Osh baz=32	3.35	133	⇓*i*P	Pn	01 11 30.3	+2.3
OHH	baz=32			⇓*i*S	Sn	01 12 09.4	+1.5
AAK	Ala-Archa baz=90	3.64	92	⇑*e*P	Pn	01 11 35.6	+3.6
AAK	baz=90			⇑*i*S	Sn	01 12 18.3	+3.2
USP	Ospenovka baz=80	3.64	82	⇓*e*P	Pb	01 11 36.0	-3.9
USP	baz=80			⇓*i*S	Sn	01 12 18.7	+3.7
ARLS	Aral baz=2.0	3.66	104	⇓*e*P	Pn	01 11 35.8	+3.4
ARLS	baz=2.0			⇓*i*S	Sn	01 12 18.5	+2.8
UCH	Uchtor baz=96	3.71	98	⇑*i*P	Pn	01 11 36.5	+3.2
UCH	baz=96			⇑*i*S	Sn	01 12 20.0	+2.7
FRU1	Bishkek baz=87	3.73	89	⇑*i*P	Pn	01 11 36.7	+3.6
FRU1	baz=87			⇑*i*S	Sn	01 12 20.3	+3.2
SGDS	Sogindy 3.5nm,0.1s	3.75	79	*e*P	Pb	01 11 44.4	+2.5
SGDS	25nm,0.2s			*e*S	Sg	01 12 33.1	-2.9
SGDS	Sogindy 3.5nm,0.4s	3.75	79	Pg	Pb	01 11 44.4	+2.5
SGDS	21nm,0.7s			Lg	Lg	01 12 33.1	
CHMS	Chumysh 1.9nm,0.6s	3.81	86	⇑Pn	Pn	01 11 36.6	+2.3
CHMS	10nm,0.6s			⇓Sn	Sn	01 12 22.7	+3.5
CHMS	23nm,0.6s			⇑Lg	Lg	01 12 34.8	
GAR	Garm baz=72	3.89	171	⇓*i*P	Pn	01 11 38.0	+2.5
GAR	baz=72			⇓*i*S	Sn	01 12 22.3	+1.0
TKM2	Tokmak 2 0.7nm,0.3s	4.43	87	⇓Pn	Pn	01 11 45.8	+2.8
TKM2	4.8nm,0.4s			⇑Sn	Sn	01 12 37.9	+3.2
TKM2	16nm,0.6s			⇑Lg	Lg	01 12 55.1	
KRBS	Karabastau 1.3nm,0.0s	4.54	77	*e*P	Pg	01 11 59.2	-3.2
KRBS	16nm,0.1s			*e*S	Sg	01 12 58.6	-2.7
KRBS	Karabastau 1.3nm,0.2s	4.54	77	Pg	Pg	01 11 59.2	-3.2
KRBS	16nm,0.6s			Lg	Lg	01 12 58.6	
KST	Kastek 2.0nm,0.3s	4.70	86	*e*P	Pg	01 12 02.2	-3.3
KST	29nm,0.2s			*e*S	Sg	01 13 03.4	-3.0
KST	Kastek 1.4nm,0.3s	4.70	86	Pg	Pb	01 12 01.3	+3.3
KST	29nm,0.7s			Lg	Lg	01 13 02.4	
MTBS	Maitube 2.7nm,0.0s	5.04	85	*e*P	Pg	01 12 08.8	-3.2
MTBS	16nm,0.0s			*e*S	Sg	01 13 14.7	-2.7
MTBS	Maitube 2.7nm,0.2s	5.04	85	Pg	Pg	01 12 09.4	-2.7
MTBS	16nm,0.5s			Lg	Lg	01 13 15.8	
KUU	Kurty 1.0nm,0.2s	5.05	76	*e*P	Pg	01 12 08.5	-3.6
KUU	18nm,0.0s			*e*S	Sg	01 13 14.2	-3.3
KUU	Kurty 0.7nm,0.4s	5.05	76	Pg	Pb	01 12 07.9	+4.0
KUU	18nm,0.7s			Lg	Lg	01 13 13.7	
KTBS	Karatobe 0.9nm,0.4s	5.27	78	*e*P	Pg	01 12 12.4	-3.9
KTBS	21nm,0.1s			*e*S	Sg	01 13 21.5	-3.0
KTBS	Karatobe 0.9nm,0.4s	5.27	78	Pg	Pg	01 12 12.4	-3.9
KTBS	21nm,0.7s			Lg	Lg	01 13 21.5	

TNSS	**Tian-Shan**	**5.42**	**86**	*e*P	**Pg**	**01 12 14.9**	**-4.4**
	4.8nm,1.0s						
TNSS				*e*S	**Sg**	**01 13 25.6**	**-3.9**
	7.7nm,0.8s						
TNSS	**Tian-Shan**	**5.42**	**86**	Pg	**Pg**	**01 12 14.9**	**-4.4**
	4.8nm,1.0s						
TNSS				Lg	Lg	01 13 25.6	
	7.7nm,0.8s						
MDOK	**Medeo**	**5.50**	**84**	*e*P	**Pg**	**01 12 16.4**	**-4.3**
	3.3nm,0.1s						
MDOK				*e*S	**Sg**	**01 13 27.7**	**-4.2**
	10nm,0.2s						
MDOK	**Medeo**	**5.50**	**84**	Pg	**Pb**	**01 12 15.7**	**+4.1**
	5.7nm,1.2s						
MDOK				⇓Lg	Lg	01 13 29.1	
	18nm,1.0s						
MDOK	**Medeo**	**5.50**	**84**	Pg	**Pb**	**01 12 15.3**	**+3.6**
	4.1nm,0.8s						
MDOK				Lg	Lg	01 13 26.2	
	10nm,1.2s						

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*MDD **10** 01:17:23.6±1.2, 28°.06N×19°.29W, h0^{km}, mb_Lg3.3/9, Error ellipse: s-maj=9.1km s-min=10.9km az=170.0*

ISC 10 01:17:21.4±2.6, 28°.18N±0°.07×19°.4W±0°.1, h29^{km}±14^{km}, n16, σ1.^{s}16/31, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCUM	**Cumbre, El Hie**	**1.24**	**110**	P	**Pb**	**01 17 44.1**	**-0.1**
CCUM				S	**Sn**	**01 17 59.1**	**+0.4**
CCUM				*i* Vmb_Lg		01 18 05.7	
CMCL	**Mercadel, El H**	**1.26**	**111**	P	**Pb**	**01 17 44.6**	**0.0**
CMCL				S	**Sn**	**01 17 59.8**	**+0.5**
CHIE	**El Hierro**	**1.31**	**110**	P	**Pn**	**01 17 43.4**	**-0.3**
CHIE				S	**Sn**	**01 17 58.5**	**-1.7**
CTIG	**El Hierro**	**1.32**	**107**	P	**Pn**	**01 17 44.0**	**+0.2**
CTIG				S	**Sb**	**01 18 01.3**	**-0.7**
CTIG				*i* Vmb_Lg		01 18 06.9	
TBT	**Taburiente**	**1.36**	**68**	S	**Sb**	**01 18 04.3**	**+1.2**
EHIG	**Higuera**	**1.41**	**74**	P	**Pb**	**01 17 47.5**	**+0.4**
EHIG				S	**Sb**	**01 18 04.2**	**-0.5**
EHIG				*i* Vmb_Lg		01 18 08.4	
EGOM	**La Gomera**	**1.89**	**90**	P	**Pb**	**01 17 53.0**	**-2.1**
EGOM				S	**Sn**	**01 18 15.4**	**+0.9**
EGOM				*i* Vmb_Lg		01 18 16.3	
CCAN	**Las Canadas**	**2.42**	**88**	P	**Pn**	**01 17 59.9**	**+0.7**
CCAN				S	**Sn**	**01 18 27.6**	**-0.5**
CCAN				*i* Vmb_Lg		01 18 30.2	
MACI	**Morro de la Ar**	**2.51**	**88**	P	**Pn**	**01 18 01.3**	**+0.9**
MACI				S	**Sn**	**01 18 30.2**	**+0.1**
MACI				*i* Vmb_Lg		01 18 35.7	
CGUI	**Guimar, Teneri**	**2.57**	**86**	P	**Pn**	**01 18 02.7**	**+1.6**
CGUI				S	**Sn**	**01 18 31.9**	**+0.4**
CGUI				*i* Vmb_Lg		01 18 35.8	
EOSO	**Osorio**	**3.35**	**91**	P	**Pn**	**01 18 13.5**	**+1.6**
EOSO				*i* Vmb_Lg		01 18 48.9	
EOSO				S	**Sn**	**01 18 49.6**	**-1.3**
CFTV	**Fuerteventura**	**4.65**	**86**	P	**Pn**	**01 18 30.7**	**+1.0**
CFTV				S	**Sn**	**01 19 20.9**	**-1.9**
CFTV				*i* Vmb_Lg		01 19 26.0	
CGIN	**Giniginamar, F**	**4.65**	**88**	P	**Pn**	**01 18 31.4**	**+1.7**
CGIN				S	**Sn**	**01 19 22.1**	**-0.6**
CGIN				*i* Vmb_Lg		01 19 26.1	
CFUE	**Fuerteventura**	**4.79**	**83**	P	**Pn**	**01 18 32.9**	**+1.3**
CFUE				S	**Sn**	**01 19 25.3**	**-0.8**
CFUE				*i* Vmb_Lg		01 19 30.3	
PMOZ	**Porto Moniz, M**	**4.99**	**21**	*e*P	**Pn**	**01 18 35.6**	**+1.2**
PMOZ				*e*S	**Sn**	**01 19 29.5**	**-1.7**
PMAR	**Madeira**	**4.99**	**24**	*e*P	**Pn**	**01 18 35.5**	**+0.9**
PMAR				*e*S	**Sn**	**01 19 30.0**	**-1.4**
PMAR				A	A	01 19 35.3	
	30nm,0.2s						

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*NOU **10** 01:22:05.6, 19°.24S×167°.70E, h0^{km}, MLv4.4/13, Vanuatu Islands Region*

*NEIC **10** 01:22:08.7±1.7, 19°.37S±0°.05×167°.79E±0°.08, h24^{km}±5^{km}, mb4.8/27, Error ellipse: s-maj=11.5km s-min=7.8km az=94.0*

*IDC **10** 01:22:10.7±1.0, 19°.39S×167°.67E, h32^{km}±6^{km}, mb4.2/5, mbtmp4.4/6, ML4.1/1, MS3.6/14, Error ellipse: s-maj=40.9km s-min=19.7km az=138.0*

ISC 10 01:22:08.8±0.5, 19°.32S±0°.04×167°.80E±0°.08, h26^{km}, n87, σ1.^{s}25/80, mb4.8/19, MS3.6/12, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**1.54**	**200**	Pn	**Pn**	**01 22 33.2**	**-1.5**
LIFNC				Sn	**Sn**	**01 22 50.7**	**-3.2**
LIFNC	**LIFOU**	**1.54**	**200**	P	**Pn**	**01 22 33.4**	**-1.3**
DVP	**Devils Point**	**1.62**	**13**	P	**Pn**	**01 22 34.1**	**-1.7**
RTV	**Rentapao**	**1.63**	**21**	P	**Pn**	**01 22 34.6**	**-1.2**
MARNC	**Mare, Loyalty**	**2.16**	**174**	Pn	**Pn**	**01 22 41.9**	**-1.3**
MARNC				Sn	**Sn**	**01 23 06.8**	**-2.4**
MARNC	**Mare, Loyalty**	**2.16**	**174**	P	**Pn**	**01 22 42.9**	**-0.3**
YATNC	**Mamie plateau,**	**2.86**	**197**	P	**Pn**	**01 22 52.3**	**-0.5**
DZM	**Mont Dzumac**	**3.02**	**205**	Pn	**Pn**	**01 22 54.8**	**-0.3**
	30nm,0.3s,baz=69,slow=13,SNR=138						
DZM				Sn	**Sn**	**01 23 27.6**	**-2.9**
	32nm,0.3s,baz=311,slow=22,SNR=5.2						
	93nm,0.5s						
DZM	**Mont Dzumac**	**3.02**	**205**	Pn	**Pn**	**01 22 54.3**	**-0.8**
DZM	**Mont Dzumac**	**3.02**	**205**	P	**Pn**	**01 22 55.1**	**0.0**
NOUC	**Port Laguerre**	**3.10**	**207**	P	**Pn**	**01 22 56.8**	**+0.6**
OUENC	**Ouen Island, N**	**3.21**	**196**	Pn	**Pn**	**01 22 55.1**	**-2.6**
OUENC	**Ouen Island, N**	**3.21**	**196**	P	**Pn**	**01 22 58.6**	**+0.9**
ONTNC	**Ouen Toro**	**3.23**	**203**		**Pn**	**01 22 57.1**	**-0.7**
ONTNC	**Ouen Toro**	**3.23**	**203**	P	**Pn**	**01 22 58.6**	**+0.7**
PINNC	**Pines Island,**	**3.30**	**186**	Pn	**Pn**	**01 22 58.5**	**-0.3**
PINNC	**Pines Island,**	**3.30**	**186**	P	**Pn**	**01 22 59.8**	**+1.0**
KOUNC	**Koumac, New Ca**	**3.53**	**249**	Pn	**Pn**	**01 23 01.5**	**-0.4**
SANVU	**Saraoutou**	**3.89**	**351**	Pn	**Pn**	**01 23 05.2**	**-1.7**
MSVF	**Nonsavu**	**9.85**	**82**	LR	LR	01 28 11.2	
	comp=Z,268nm,20.9s,baz=218,slow=36						
RAO	**Raoul Island**	**16.34**	**130**	LR	LR	01 30 49.9	
	comp=Z,198nm,19.2s,baz=300,slow=32						
AFI	**Afiamalu**	**20.29**	**78**	LR	LR	01 34 05.9	
	comp=Z,90nm,18.5s,baz=208,slow=35						
CTA	**Charters Tower**	**20.30**	**264**	P	Pn	01 26 45.8	+0.7
	22nm,0.8s,baz=88,slow=12,SNR=40						
CTA				LR	LR	01 33 26.2	
	comp=Z,151nm,20.9s,baz=78,slow=34						
CTAO	**Charters Tower**	**20.30**	**264**	P	**P**	**01 26 42.3**	**-0.7**
CTAO				IAmb	IAmb	01 26 57.4	
	comp=Z,38nm,1.0s						
URZ	**Urewera**	**20.54**	**159**	LR	LR	01 33 33.4	
	comp=Z,102nm,19.9s,baz=31,slow=33						
PMG	**Port Moresby**	**22.27**	**293**	LR	LR	01 34 28.4	
	comp=Z,198nm,18.2s,baz=52,slow=33						
COEN	**Coen**	**24.18**	**279**	P	**P**	**01 27 23.1**	**-0.2**
STKA	**Stephens Creek**	**26.66**	**237**	LR	LR	01 37 00.4	
	comp=Z,98nm,20.8s,baz=41,slow=34						
WRA	**Warramunga Arr**	**31.50**	**263**	P	**P**	**01 28 28.4**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=83,slow=7.0,SNR=14						
WRA				LR	LR	01 40 04.0	
	comp=Z,103nm,20.5s,baz=58,slow=34						
	comp=Z,1.8nm,0.6s						
WRA	**Warramunga Arr**	**31.50**	**263**	P	**P**	**01 28 28.4**	**-0.4**
ASAR	**Alice Springs**	**31.79**	**256**	P	**P**	**01 28 32.0**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=81,slow=8.7,SNR=36						
ASAR				LR	LR	01 41 36.0	
	comp=Z,141nm,19.1s,baz=131,slow=37						
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**31.79**	**256**	P	**P**	**01 28 29.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**39.88**	**265**	LR	LR	01 45 43.9	
	comp=Z,113nm,18.9s,baz=98,slow=36						
FITZ	**Fitzroy Crossi**	**39.88**	**265**	P	**P**	**01 29 41.9**	**+1.1**
FITZ				IAmb	IAmb	01 29 42.5	
	comp=Z,15nm,0.7s						
SIJI	**Sorong**	**40.21**	**293**	LR	LR	01 46 36.1	
	comp=Z,100nm,20.8s,baz=237,slow=36						
BATI	**Baumata**	**43.52**	**276**	LR	LR	01 47 49.4	
	comp=Z,84nm,19.7s,baz=142,slow=35						
KAPI	**Kappang**	**48.89**	**280**	LR	LR	01 52 56.3	
	comp=Z,63nm,20.1s,baz=12,slow=38						
CMAR	**Chiang Mai Arr**	**77.30**	**295**	P	**P**	**01 34 02.3**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=152,slow=4.1,SNR=4.2						
	comp=Z,1.3nm,0.3s						
BELA	**Belgrano 2**	**82.14**	**175**	P	**P**	**01 34 27.0**	**+0.2**
P18K	**Big Mountain,**	**84.06**	**18**	P	**P**	**01 34 37.3**	**+0.5**
O18K	**Koktuh Hills**	**84.44**	**18**	P	**P**	**01 34 39.7**	**+0.9**
SONM	**Songino Array**	**86.47**	**324**	pP	pP	01 35 02.4	+6.7
	comp=Z,1.5nm,0.5s,baz=116,slow=3.4,SNR=2.6						
SONM	**Songino Array**	**86.47**	**324**	P	**P**	**01 34 50.1**	**+0.8**
SONM				IAmb	IAmb	01 35 04.7	
	comp=Z,5.6nm,1.2s						
CMB	**Columbia Colle**	**88.22**	**49**		**P**	**01 34 58.4**	**+0.5**
TROLL	**Troll, Antarti**	**88.36**	**185**	P	**P**	**01 34 59.6**	**+1.5**
TRF	**Thorofare Moun**	**88.73**	**17**	P	**P**	**01 35 00.1**	**+0.2**
TRF				IAmb	IAmb	01 35 14.0	
	comp=Z,5.1nm,0.9s						
SNAA	**Sanae**	**89.02**	**183**	P	**P**	**01 35 01.4**	**+0.2**
OMMB	**Old Mammoth Mi**	**89.03**	**49**	P	**P**	**01 35 01.1**	**-0.9**
OMMB				IAmb	IAmb	01 35 04.8	
	comp=Z,5.1nm,1.2s						
BEKR	**Beckworth**	**89.05**	**47**		**P**	**01 34 59.6**	**-2.4**
BEKR				IAmb	IAmb	01 35 04.6	
	comp=Z,10nm,1.2s						
PALK	**Pallekele**	**89.65**	**278**	LR	LR	02 18 15.2	
	comp=Z,29nm,18.4s,baz=241,slow=38						
PAHR	**Pah Rah Range**	**89.66**	**47**	P	**P**	**01 35 02.1**	**-2.6**
PAHR				IAmb	IAmb	01 35 07.5	
	comp=Z,11nm,1.3s						
VNA3	**Neumayer Olymp**	**89.66**	**181**	P	**P**	**01 35 05.2**	**+1.0**
NVAR	**Mina Array Bea**	**89.87**	**49**	P	**P**	**01 35 07.9**	**+2.0**
	comp=Z,2.3nm,0.8s,baz=225,slow=8.3,SNR=15						
NVAR				pP	**pwP**	**01 35 18.3**	**-2.0**
	comp=Z,2.0nm,0.9s,baz=233,slow=7.9,SNR=5.3						
	comp=Z,2.3nm,0.8s						
NV11	**Mina Array Sit**	**89.98**	**49**	P	**P**	**01 35 04.3**	**-2.0**
MOD	**Modoc Plateau**	**89.98**	**45**		**P**	**01 35 06.1**	**-0.2**
MOD				IAmb	IAmb	01 35 09.5	
	comp=Z,8.6nm,1.1s						
GWY	**Greenwater Val**	**90.14**	**52**		**P**	**01 35 07.1**	**0.0**
GWY				IAmb	IAmb	01 35 10.1	
	comp=Z,7.4nm,1.1s						
M26K	**Nabesna, AK**	**90.21**	**21**	P	**P**	**01 35 07.0**	**+0.3**
KVN	**Kaiserville**	**90.28**	**48**		**P**	**01 35 09.3**	**+1.5**
KVN				IAmb	IAmb	01 35 10.2	
	comp=Z,4.7nm,0.8s						
HDA	**Harding Lake**	**90.43**	**18**	P	**P**	**01 35 08.5**	**+1.0**
MDM	**Murphy Dome**	**90.47**	**17**		**P**	**01 35 07.9**	**+0.1**
MDM				IAmb	IAmb	01 35 08.6	
	comp=Z,5.3nm,1.0s						
IL31		**90.71**	**18**	P	**P**	**01 35 09.3**	**+0.5**
IL31				IAmb	IAmb	01 35 21.4	
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**90.71**	**18**	P	**P**	**01 35 09.6**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=237,slow=4.8,SNR=24						
ILAR				pP	**sP**	**01 35 20.2**	**+2.5**
	comp=Z,2.5nm,0.8s,baz=235,slow=5.4,SNR=9.2						
	comp=Z,2.1nm,0.7s						
ILAR	**Eielson Array**	**90.71**	**18**	P	**P**	**01 35 09.2**	**+0.3**
SCRK	**Sand Creek**	**91.00**	**19**	P	**P**	**01 35 10.9**	**+0.5**
SCRK				IAmb	IAmb	01 35 24.8	
	comp=Z,4.1nm,1.1s						
SHPR	**Sheep Range**	**91.38**	**52**		**P**	**01 35 15.0**	**+2.1**
SHPR				IAmb	IAmb	01 35 15.8	
	comp=Z,7.5nm,1.2s						
I07A	**Izee**	**91.46**	**43**	P	**P**	**01 35 12.5**	**-0.5**
G08A	**Pilot Rock**	**92.33**	**43**		**P**	**01 35 16.3**	**-0.7**
EGAK	**Eagle**	**92.45**	**19**	P	**P**	**01 35 17.6**	**+0.7**
EGAK				IAmb	IAmb	01 35 32.6	
	comp=Z,4.1nm,1.1s						
ELK	**Elko**	**92.97**	**48**	P	**P**	**01 35 20.0**	**-0.2**
YKA	**Yellowknife Ar**	**101.36**	**28**	P	**Pdif**	**01 35 59.4**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=253,slow=4.6,SNR=8.9						
YKA				pP	pwP	01 36 10.0	-1.8
	comp=Z,0.7nm,0.7s,baz=253,slow=4.8,SNR=6.8						
YKA	**Yellowknife Ar**	**101.36**	**28**	Pdif	**Pdif**	**01 35 58.3**	**+1.0**
FINES	**FINESS Array B**	**130.14**	**337**	PKP	**PKPdf**	**01 41 16.1**	**0.0**
	comp=Z,0.8nm,0.8s,baz=100,slow=5.8,SNR=4.5						
FINES	**FINESS Array B**	**130.14**	**337**		**PKPdf**	**01 41 14.5**	**-1.6**
GERES	**GERESS Array B**	**143.91**	**331**	PKP	**PKPdf**	**01 41 41.4**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=96,slow=2.7,SNR=4.6						
GERES				pPKP	**sPKPdf**	**01 41 51.8**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=79,slow=2.9,SNR=3.6						
GERES	**GERESS Array B**	**143.91**	**331**	PKPdf	**PKPdf**	**01 41 41.6**	**-0.4**
MOA	**Molln**	**144.34**	**329**	*i* P	**PKPdf**	**01 41 43.2**	**+0.5**
	comp=Z,4.2nm,1.1s						
SOKA	**Soboth**	**144.75**	**327**	*e*P	**PKPdf**	**01 41 44.0**	**+0.5**
	comp=Z,4.7nm,1.2s						
KBA	**Koelnbreinsper**	**145.32**	**329**	*i* P	**PKPdf**	**01 41 45.6**	**+1.0**
	comp=Z,6.9nm,1.3s						
MYKA	**Terra Mystica**	**145.49**	**328**	*e*P	**PKPab**	**01 41 46.0**	**+0.9**
	comp=Z,6.2nm,1.0s						
ABTA	**Abfaltersbach**	**145.96**	**329**	*e*P	**PKPab**	**01 41 47.1**	**+0.3**
	comp=Z,12nm,1.4s						
WATA	**Walderalm**	**145.98**	**331**	*i* P	**PKPab**	**01 41 47.9**	**+0.9**
	comp=Z,13nm,1.6s						
WTTA	**Wattenberg**	**146.01**	**331**	*i* P	**PKPab**	**01 41 48.3**	**+1.2**
	comp=Z,7.8nm,0.9s						
MOTA	**Moosalm**	**146.19**	**331**	*e*P	**PKPab**	**01 41 48.7**	**+1.0**
	comp=Z,10nm,1.2s						
SQTA	**Sankt Quirin**	**146.24**	**331**	*i* P	**PKPab**	**01 41 48.9**	**+1.1**
	comp=Z,11nm,1.4s						
RETA	**Reutte**	**146.24**	**332**	*e*P	**PKPab**	**01 41 48.8**	**+1.0**
	comp=Z,6.4nm,1.3s						
FETA	**Feichten**	**146.60**	**331**	*e*P	**PKiKP**	**01 41 50.2**	**-1.0**
	comp=Z,7.3nm,1.1s						
DAVA	**Damuels**	**146.79**	**332**	*e*P	**PKPab**	**01 41 50.7**	**+0.6**
	comp=Z,5.0nm,0.9s						

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*IDC **10** 01:39:15.6±5.0, 22°.26S×69°.07W, h0^{km}, mb3.5/1, mbtmp3.4/2, ML3.2/1, Error ellipse: s-maj=160.6km s-min=59.7km az=79.0*

*GUC **10** 01:39:33.6±0.7, 21°.20S×68°.76W, h113^{km}±4^{km}, ML3.4*

ISC 10 01:39:33.5±1.1, 21°.19S±0°.04×68°.9W±0°.1, h118^{km}±9^{km}, n16, σ0.^{s}45/26, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.60**	**284**	*e*P	**Pn**	**01 39 51.5**	**-0.5**
PB01				*i* S	**Sn**	**01 40 05.5**	**-0.4**
PB01				IAML		01 40 06.8	
	comp=N,3µm,0.2s						
PB09	**IPOC Station P**	**0.70**	**210**	*e*P	**Pn**	**01 39 52.7**	**-0.2**
PB09				*i* S	**Sn**	**01 40 07.7**	**+0.1**
PB09				IAML		01 40 08.4	
	comp=N,951nm,0.6s						
PB02	**IPOC Station P**	**0.97**	**262**	*e*P	**Pn**	**01 39 55.2**	**+0.1**
PB02				*i* S	**Sn**	**01 40 11.8**	**+0.2**
PB02				IAML		01 40 15.3	
	comp=E,2µm,0.1s						
PB08	**IPOC Station P**	**1.07**	**345**	*e*P	**Pn**	**01 39 56.5**	**-0.1**
PB08				*i* S	**Sn**	**01 40 14.3**	**+0.4**
PB07	**IPOC Station P**	**1.09**	**240**	*e*P	**Pn**	**01 39 56.4**	**-0.1**
PB07				*i* S	**Sn**	**01 40 13.8**	**-0.1**
PB07				IAML		01 40 17.6	
	comp=E,972nm,0.2s						
PATCX	**Punta Patache**	**1.25**	**287**	*e*P	**Pn**	**01 39 58.5**	**+0.4**
PATCX				*i* S	**Sn**	**01 40 17.8**	**+1.0**
HMBC	**Humberstone**	**1.31**	**313**	*e*P	**Pn**	**01 39 58.6**	**-0.2**
HMBC				*i* S	**Sn**	**01 40 18.1**	**0.0**
TA01	**Diego Aracena**	**1.37**	**296**	*e*P	**Pn**	**01 39 59.4**	**0.0**
TA01				*i* S	**Sn**	**01 40 19.4**	**+0.4**
TA01				IAML		01 40 20.7	
	comp=E,822nm,0.1s						
PB06	**IPOC Station P**	**1.65**	**203**	*e*P	**Pn**	**01 40 02.5**	**-0.3**
PB06				*i* S	**Sn**	**01 40 25.0**	**0.0**
PB06				IAML		01 40 26.3	
	comp=E,300nm,0.3s						
PB04	**IPOC Station P**	**1.65**	**226**	*e*P	**Pn**	**01 40 02.5**	**-0.3**
PB04				*e*S	**Sn**	**01 40 25.2**	**+0.1**
PB04				IAML		01 40 29.0	
	comp=N,377nm,0.2s						
PB15	**IPOC Station P**	**2.09**	**195**	*e*P	**Pn**	**01 40 08.4**	**+0.2**
PB10	**IPOC Station P**	**2.79**	**214**	*e*P	**Pn**	**01 40 16.7**	**-0.3**
PB12	**IPOC Station P**	**2.90**	**331**	*i* P	**Pn**	**01 40 17.2**	**-1.4**
LPAZ	**La Paz**	**4.92**	**8**	Pn	**Pn**	**01 40 46.3**	**+0.3**
	comp=N,0.3nm,0.3s,baz=165,slow=5.6,SNR=9.5						
	comp=N,0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.21**	**70**	P	**P**	**01 51 15.1**	**+0.1**
	comp=N,0.4nm,0.8s,baz=239,slow=5.2,SNR=1.7						
	comp=N,0.4nm,0.8s						
MKAR	**Makanchi Array**	**145.36**	**36**	PKPbc	**PKPdf**	**01 58 57.5**	**+0.1**
	comp=N,0.8nm,0.8s,baz=325,slow=3.4,SNR=4.1						

IDC 10 01:58:31.8±2.4, 3°.41N×126°.22E, h0^{km}, mb3.5/3, mbtmp3.6/3, MS3.0/2, Error ellipse: s-maj=225.5km s-min=27.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**21.17**	**241**	LR	LR	02 13 52.9	
	comp=Z,68nm,19.5s,baz=358,slow=44						
WRA	**Warramunga Arr**	**24.54**	**161**	P	P	02 03 52.9	-0.5
	1.7nm,0.7s,baz=340,slow=11,SNR=7.6						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**27.93**	**165**	P	P	02 04 24.9	+0.9
	0.2nm,0.5s,baz=341,slow=9.8,SNR=1.3						
	0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**34.77**	**17**	LR	LR	02 18 46.7	
	comp=Z,12nm,20.9s,baz=327,slow=35						
MKAR	**Makanchi Array**	**57.53**	**326**	P	P	02 08 22.9	-0.2
	0.3nm,0.5s,baz=115,slow=8.0,SNR=5.7						
	0.3nm,0.5s						

DJA 10 02:13:52.7±1.2, 12°S±5°×11°7E±°, h23^{km}±11^{km}, M3.7/6, mb3.8/3, MLv3.6/6, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.78**	**9**	P	Pn	02 14 35.3	-0.5
PLAI				Pg	Pb	02 14 46.0	+4.3
WBSI	**Waikabubak, Su**	**2.78**	**46**	P	Pn	02 14 35.1	-0.8
JAGI	**Jajag, Banyuwa**	**4.43**	**314**	P	Pn	02 14 57.6	-0.9
GMJI	**Gumukmas**	**5.07**	**310**	P	Pn	02 15 07.8	+0.4
	0.2nm18nm,1.1s						
EDFI	**Ende, Flores**	**5.11**	**57**	P	Pn	02 15 08.3	+0.3
	0.0nm2.5nm,1.2s						

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*IDC **10** 02:18:17.6±1.3, 37°.79N×20°.82E, h0^{km}, mb3.4/5, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=30.9km s-min=24.2km az=91.0*

*ATH **10** 02:18:18.8, 37°.77N×21°.03E, h10^{km}±2^{km}, ML3.0/20, Error ellipse: s-maj=2.6km s-min=0.9km az=327.0*

*THE **10** 02:18:18.7, 37°.76N×21°.05E, h14^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=1.5km s-min=0.6km az=276.0*

ISC 10 02:18:18.9±0.9, 37°.79N±0°.02×21°.06E±0°.02, h11^{km}±6^{km}, n67, σ0.^{s}94/88, mb3.3/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAK2	**Zakynthos**	**0.13**	**268**	P	**Pg**	**02 18 21.9**	**-0.2**
ZAK2				S	**Sg**	**02 18 25.4**	**+1.1**
	47µm,0.5s						
LTHK	**Lithakia**	**0.20**	**245**	P	**Pg**	**02 18 22.8**	**-0.4**
RLS	**Riolos of Patr**	**0.42**	**50**	P	**Pg**	**02 18 27.0**	**-0.1**
RLS				S	**Sb**	**02 18 33.9**	**-0.6**
RLS				AML	AML	02 18 37.0	
	comp=N,7026µm,0.3s						
RLS				AML	AML	02 18 37.6	
	comp=E,4695µm,0.3s						
RLS	**Riolos of Patr**	**0.42**	**50**	P	**Pg**	**02 18 27.0**	**-0.1**
RLS				S	**Sb**	**02 18 34.0**	**-0.6**
	comp=E,3µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.50**	**311**	P	**Pg**	**02 18 28.5**	**-0.1**
PSDA				S	**Sg**	**02 18 35.4**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.50**	**311**	P	**Pg**	**02 18 28.4**	**-0.3**
PSDA				S	**Sb**	**02 18 37.0**	**+0.1**
	comp=E,855nm,0.6s						
VLS	**Valsamata**	**0.54**	**316**	P	**Pg**	**02 18 29.0**	**-0.4**
VLS				S	**Sg**	**02 18 37.0**	**+0.5**
VLS				AML	AML	02 18 39.4	
	comp=N,7802µm,0.6s						
VLS				AML	AML	02 18 40.0	
	comp=E,6546µm,0.4s						
VLS	**Valsamata**	**0.54**	**316**	P	**Pg**	**02 18 28.8**	**-0.6**
VLS				S	**Sb**	**02 18 37.7**	**-0.4**
	comp=E,4µm,0.5s						
DRO	**Drossia**	**0.54**	**72**	P	**Pg**	**02 18 29.6**	**+0.2**
DRO				S	**Sb**	**02 18 38.1**	**-0.1**
DRO				AML	AML	02 18 45.2	
	comp=E,3745µm,0.5s						
DRO				AML	AML	02 18 45.5	
	comp=N,8048µm,0.4s						
DRO	**Drossia**	**0.54**	**72**	P	**Pg**	**02 18 28.8**	**-0.6**
DRO				S	**Sb**	**02 18 38.5**	**+0.4**
	comp=N,3µm,0.4s						
LXRA	**Lixouri, Kepha**	**0.64**	**310**	P	**Pg**	**02 18 31.2**	**-0.2**
KEF4	**Livadi, Kephal**	**0.69**	**313**	P	**Pg**	**02 18 31.7**	**-0.5**
KEF4	**Livadi, Kephal**	**0.69**	**313**	P	**Pg**	**02 18 31.9**	**-0.3**
KEF4				S	**Sb**	**02 18 43.5**	**+1.1**
KEF3	**Kipouria, Keph**	**0.70**	**306**	P	**Pg**	**02 18 31.6**	**-0.9**
KEF3	**Kipouria, Keph**	**0.70**	**306**	P	**Pg**	**02 18 31.6**	**-0.9**
KEF3				S	**Sg**	**02 18 41.8**	**+0.2**
	comp=N,7µm,0.4s						
DMLN	**Damoulianata-K**	**0.70**	**310**	P	**Pg**	**02 18 31.9**	**-0.7**
DMLN				S	**Sb**	**02 18 43.8**	**+0.9**
	comp=N,4µm,0.5s						
UPR	**University Cam**	**0.75**	**49**	P	**Pg**	**02 18 33.2**	**-0.3**
UPR				S	**Sn**	**02 18 45.7**	**-1.2**
FSK	**Fiskardo**	**0.77**	**330**	P	**Pg**	**02 18 33.5**	**-0.4**
FSK				AML	AML	02 18 51.2	
	comp=E,3220µm,0.7s						
FSK				AML	AML	02 18 56.5	
	comp=N,2726µm,0.6s						
FSK	**Fiskardo**	**0.77**	**330**	P	**Pg**	**02 18 33.5**	**-0.4**
FSK				S	**Sb**	**02 18 45.9**	**+1.0**
	comp=N,1µm,0.6s						
LAKA	**Lakka**	**0.85**	**58**	P	**Pg**	**02 18 35.1**	**-0.3**
LAKA				AML	AML	02 18 58.5	
	comp=E,4405µm,0.5s						
LAKA				AML	AML	02 19 02.8	
	comp=N,4232µm,0.6s						
EVGI	**Lefkada island**	**0.89**	**339**	P	**Pg**	**02 18 35.1**	**-1.0**
EVGI	**Lefkada island**	**0.89**	**339**	P	**Pg**	**02 18 34.8**	**-1.3**
EVGI				S	**Sn**	**02 18 50.1**	**-0.1**
	comp=N,1µm,0.4s						
KLV	**Kalavryta, Ach**	**0.90**	**73**	P	**Pg**	**02 18 35.4**	**-0.8**
KLV				AML	AML	02 18 58.0	
	comp=N,1029µm,0.6s						
KLV				AML	AML	02 19 01.4	
	comp=E,986µm,0.4s						
KLV	**Kalavryta, Ach**	**0.90**	**73**	P	**Pg**	**02 18 35.1**	**-1.2**
KLV				S	**Sn**	**02 18 50.3**	**-0.2**
	comp=E,505nm,0.5s						
EFP	**Efpalio**	**0.92**	**46**	P	**Pg**	**02 18 36.2**	**-0.5**
EFP				AML	AML	02 18 59.5	
	comp=N,1870µm,0.8s						
EFP				AML	AML	02 18 59.9	
	comp=E,1310µm,0.6s						
EFP	**Efpalio**	**0.92**	**46**	P	**Pg**	**02 18 35.9**	**-0.8**
EFP				S	**Sb**	**02 18 49.4**	**+0.3**
	comp=E,812nm,0.5s						
ITM	**Ithomi**	**0.92**	**131**	P	**Pg**	**02 18 36.0**	**-0.7**
ITM				S	**Sb**	**02 18 49.5**	**+0.4**
ITM				AML	AML	02 18 55.3	
	comp=N,2917µm,0.5s						
ITM				AML	AML	02 18 59.7	
	comp=E,1891µm,0.8s						
ITM	**Ithomi**	**0.92**	**131**	P	**Pg**	**02 18 36.0**	**-0.7**
ITM				S	**Sb**	**02 18 49.7**	**+0.6**
	comp=E,1µm,0.6s						
DRAG	**Dragano-Lefkad**	**0.97**	**337**	P	**Pg**	**02 18 36.6**	**-1.1**
GUR	**Goura**	**1.02**	**82**	P	**Pg**	**02 18 37.5**	**-1.2**
GUR				AML	AML	02 19 06.1	
	comp=E,2730µm,0.4s						
GUR				AML	AML	02 19 07.0	
	comp=N,2750µm,0.5s						
PYL	**PYLOS**	**1.05**	**149**	P	**Pb**	**02 18 37.3**	**-1.8**
PYL				AML	AML	02 19 04.5	
	comp=N,1278µm,0.7s						
PYL				AML	AML	02 19 04.7	
	comp=E,2106µm,0.7s						
PYL	**PYLOS**	**1.05**	**149**	P	**Pb**	**02 18 37.1**	**-1.9**
PYL				S	**Sg**	**02 18 52.4**	**-0.3**
	comp=E,848nm,0.7s						
TSLK	**Tsoukalades, L**	**1.08**	**343**	P	**Pb**	**02 18 38.4**	**-1.2**
EVR	**Evrytania**	**1.27**	**27**	P	**Pn**	**02 18 42.4**	**-0.3**
EVR				AML	AML	02 19 16.3	
	comp=E,492µm,0.5s						
EVR				AML	AML	02 19 16.8	
	comp=N,794µm,0.5s						
THAL	**Thalero**	**1.29**	**79**	P	**Pn**	**02 18 43.0**	**+0.2**
THAL				AML	AML	02 19 11.8	
	comp=N,2350µm,0.5s						
THAL				AML	AML	02 19 17.4	
	comp=E,3610µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.48**	**34**	P	**Pb**	**02 18 46.8**	**+0.3**
MAKR				AML	AML	02 19 17.5	
	comp=N,485µm,0.7s						
MAKR				AML	AML	02 19 18.4	
	comp=E,558µm,0.8s						
LTK	**Loutraki**	**1.52**	**81**	P	**Pb**	**02 18 47.7**	**+0.5**
AGG	**Agios Georgios**	**1.58**	**39**	P	**Pb**	**02 18 47.7**	**-0.5**
EPID	**Epidavros**	**1.64**	**96**	P	**Pg**	**02 18 49.9**	**-0.6**

KRND	KRANIDI	1.71	103	P	Pb	02 18 50.7	+0.4
KRND				AML	AML	02 19 24.6	
	comp=N,461µm,0.6s						
KRND				AML	AML	02 19 26.2	
	comp=E,516µm,0.9s						
ATAL	Atalanti	1.79	59	P	Pb	02 18 51.7	+0.1
ATAL				AML	AML	02 19 27.4	
	comp=N,338µm,0.6s						
ATAL				AML	AML	02 19 28.4	
	comp=E,296µm,0.9s						
VIL2	Platees	1.79	76	P	Pg	02 18 52.7	-0.6
VIL2				AML	AML	02 19 27.8	
	comp=E,709µm,0.6s						
VIL2				AML	AML	02 19 35.4	
	comp=N,533µm,0.6s						
IGT	Igoumenitsa	1.83	342	P	Pb	02 18 51.9	-0.5
IGT				AML	AML	02 19 32.4	
	comp=E,469µm,0.6s						
IGT				AML	AML	02 19 34.2	
	comp=N,428µm,1.0s						
VLI	Veliai	1.84	125	P	Pb	02 18 52.8	+0.3
THL	Klokotos Trika	1.92	23	P	Pb	02 18 54.3	+0.4
THL				AML	AML	02 19 37.0	
	comp=N,172µm,0.7s						
THL				AML	AML	02 19 37.2	
	comp=E,347µm,0.7s						
KEK	Kerkira	2.16	333	P	Pb	02 18 56.5	-1.5
KEK				AML	AML	02 19 40.1	
	comp=E,335µm,0.5s						
KEK				AML	AML	02 19 42.4	
	comp=N,364µm,0.7s						
ATHU	Athens Univers	2.16	85	P	Pb	02 18 57.4	-0.7
VLY	Voula,Athens	2.17	88	P	Pb	02 18 57.0	-1.1
KPRO	Kipourio	2.17	6	P	Pb	02 18 58.2	-0.1
KTHR	Kythira	2.18	134	P	Pb	02 18 57.8	-0.6
KTHA	Kythira Island	2.22	133	P	Pb	02 18 58.1	-0.9
DION	Dionisos Attik	2.29	82	P	Pb	02 18 59.2	-1.1
DION				AML	AML	02 19 39.9	
	comp=E,384µm,0.8s						
DION				AML	AML	02 19 45.4	
	comp=N,333µm,0.5s						
XOR	Xorichti	2.29	46	P	Pb	02 18 59.3	-1.0
KYMI	Kymi, Euboea I	2.54	70	P	Pb	02 19 03.2	-1.3
LIT	Litokhoron	2.56	25	P	Pb	02 19 04.6	-0.3
NEST	Nestorio	2.62	360	P	Pb	02 19 05.1	-0.8
OHR	Ohrid	3.32	357	*i* Pn	Pg	02 19 23.4	+0.9
VAY	Valandovo	3.71	18	*i* Pn	Pb	02 19 24.3	-0.2
IDI	Anoyia	3.97	128	Pn	Pn	02 19 20.5	+0.8
	comp=N,0.8nm,0.3s,baz=303,slow=15,SNR=13						
IDI				Sn	Sn	02 20 06.5	+0.2
	comp=N,3.0nm,0.3s,baz=154,slow=20,SNR=7.2						
	comp=N,2.4nm,0.4s						
STIP	Stip	3.99	12	*i* Pn	Pb	02 19 25.8	-3.5
SKO	Skopje	4.18	4	*i* Pn	Pb	02 19 29.6	-3.0
FINES	FINESS Array B	23.88	6	P	P	02 23 31.9	-0.3
	comp=N,0.7nm,0.8s,baz=182,slow=8.2,SNR=5.4						
	comp=N,0.7nm,0.8s						
EKA	Eskdalemuir Ar	23.99	325	P	P	02 23 33.2	-0.1
	comp=N,2.0nm,0.7s,baz=130,slow=11,SNR=2.6						
	comp=N,2.0nm,0.7s						
NB2	NORSAR Subarra	24.08	348	P	P	02 23 33.7	-0.5
	comp=Z,0.6nm,0.7s,baz=159,slow=9.3						
NOA	NORSAR Array B	24.08	348	P	P	02 23 33.4	-0.8
	comp=Z,0.3nm,0.6s,baz=159,slow=8.6,SNR=3.6						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	30.00	220	P	P	02 24 27.2	-0.5
	comp=Z,0.5nm,0.6s,baz=33,slow=9.2,SNR=8.0						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	45.14	58	P	P	02 26 38.4	+3.0
	comp=Z,0.1nm,0.4s,baz=284,slow=6.2,SNR=2.0						
	comp=Z,0.1nm,0.4s						

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*ISK **10** 02:18:57.2, 39°.10N×29°.01E, h12^{km}, ML1.3/3*

DDA 10 02:18:56.8±0.0**, 39°.11N×29°.00E, h7^{km}**±1^{km}**, ML1.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SMAA	Simav-Kutahya	0.02	227	PG	Pg	02 18 59.3	+1.1
SMAA				SG	Sg	02 19 01.3	+2.2
SIMA	Simav-Kutahya	0.03	202	PG	Pg	02 18 59.4	+1.1
SIMA				SG	Sg	02 19 01.3	+2.0
SHAP	Saphane-Kutahy	0.20	117	PG	Pg	02 19 01.6	+0.8
SHAP				SG	Sg	02 19 04.8	+1.3
DEMI	Demirci	0.23	252	P	Pg	02 19 02.2	+0.8
DEMI				*i* AML	AML	02 19 05.0	
	comp=E,69nm,0.2s						
DEMI				*i* AML	AML	02 19 05.0	
	comp=N,60nm,0.4s						
DEMI				S	Sg	02 19 05.8	+1.3
GDZ	Gediz	0.38	94	P	Pg	02 19 04.3	+0.1
GDZ				*i* AML	AML	02 19 09.0	
	comp=E,12nm,0.2s						
GDZ				S	Sg	02 19 09.8	+0.7
GDZ				*i* AML	AML	02 19 10.0	
	comp=N,12nm,0.2s						
USAK	Uak-Merkez	0.40	178	P	Pb	02 19 05.5	-0.7
USAK				*i* AML	AML	02 19 11.0	
	comp=E,13nm,0.7s						
USAK				S	Sb	02 19 11.3	-1.2
USAK				*i* AML	AML	02 19 12.0	
	comp=N,16nm,0.1s						
TVSB	Tavsanli	0.49	47	PG	Pb	02 19 07.4	-0.5
KULA	Kula-Manisa	0.65	204	PG	Pb	02 19 10.2	-0.4
MANT	Manisa	0.71	209	P	Pb	02 19 11.1	-0.5
MANT				*i* AML	AML	02 19 20.0	
	comp=N,7.9nm,0.2s						
MANT				S	Sg	02 19 20.4	+0.7
MANT				*i* AML	AML	02 19 22.0	
	comp=E,12nm,0.3s						
BORA	Eskisehir	1.36	55	PN	Pn	02 19 22.4	+0.1
BORA	Eskisehir	1.36	55	P	Pn	02 19 21.7	-0.6
BORA				S	Sg	02 19 40.6	0.0
BORA				*i* AML	AML	02 19 41.0	
	comp=E,6.5nm,0.2s						
BORA				*i* AML	AML	02 19 42.0	
	comp=N,3.2nm,0.5s						

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*IDC **10** 02:22:26.3±1.7, 16°.24S×173°.23W, h0^{km}, mb3.8/8, mbtmp3.8/9, ML3.5/1, MS4.2/43, Error ellipse: s-maj=95.9km s-min=19.3km az=146.0*

*NEIC **10** 02:22:27.9±2.0, 16°.2S±0°.2×173°.0W±0°.1, h10^{km}±5^{km}, mb4.7/15, Error ellipse: s-maj=30.7km s-min=13.9km az=153.0*

ISC 10 02:22:30.2±1.3**, 16°.1S**±0°.4×**173°.2W**±0°.3**, h26^{km}, n77,** σ**1^{s}.26**/34**, mb4.5**/15**, MS4.3**/42**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.60	32	Pn	Pn	02 23 09.8	-0.9
	9.0nm,0.3s,baz=44,slow=3.7,SNR=8.6						
	61nm,0.7s						
AFI	Afiamalu	2.60	32		Pn	02 23 09.2	-1.4
MSVF	Nonsavu	8.54	258	LR	LR	02 27 18.3	
	comp=Z,1µm,19.2s,baz=44,slow=34						
DZM	Mont Dzumac	20.13	250	P	P	02 27 02.2	-0.2
	9.4nm,1.2s,baz=91,slow=12,SNR=5.0						
DZM				LR	LR	02 32 55.4	
	comp=Z,409nm,20.4s,baz=60,slow=31						
	9.4nm,1.2s						
DZM	Mont Dzumac	20.13	250	P	P	02 27 03.0	+0.5
CTA	Charters Tower	38.69	258	LR	LR	02 44 48.4	
	comp=Z,547nm,19.5s,baz=87,slow=35						
PMG	Port Moresby	39.20	275	LR	LR	02 42 42.1	
	comp=Z,375nm,19.2s,baz=62,slow=31						
H11S2	WAKE ISLAND Hy	39.70	329	T	T	03 10 59.4	
	baz=149,slow=76,SNR=463						
H11S3	WAKE ISLAND Hy	39.72	329	T	T	03 11 02.8	
	baz=149,slow=76,SNR=230						
H11S1	WAKE ISLAND Hy	39.72	329	T	T	03 11 00.7	
	baz=149,slow=76,SNR=316						
H11N3	WAKE ISLAND Hy	40.66	331	T	T	03 12 16.0	
	baz=150,slow=76,SNR=510						
H11N1	WAKE ISLAND Hy	40.66	330	T	T	03 12 14.9	
	baz=150,slow=76,SNR=433						
H11N2	WAKE ISLAND Hy	40.67	330	T	T	03 12 18.6	
	baz=150,slow=76,SNR=446						
WR0	Warramunga Arr	49.69	257	P	P	02 31 19.0	-1.3
WB2	Warramunga Arr	49.87	257	P	P	02 31 20.3	-1.4
WB2				IAmb	IAmb	02 31 42.1	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	49.88	257	P	P	02 31 21.4	-0.5
	comp=Z,1.1nm,0.9s,baz=89,slow=7.5,SNR=4.3						
WRA				LR	LR	02 51 50.7	
	comp=Z,306nm,19.2s,baz=35,slow=35						
	comp=Z,1.1nm,0.9s						
WRA	Warramunga Arr	49.88	257	P	P	02 31 22.1	+0.3
ASAR	Alice Springs	50.08	252	P	P	02 31 22.4	-1.0
	comp=Z,2.6nm,0.8s,baz=81,slow=8.6,SNR=15						
ASAR				LR	LR	02 51 41.6	
	comp=Z,396nm,18.9s,baz=102,slow=35						
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	50.08	252	P	P	02 31 22.9	-0.5
GUMO	Guam	50.91	303	LR	LR	02 51 25.4	
	comp=Z,318nm,18.8s,baz=89,slow=34						
SIJI	Sorong	56.79	280	LR	LR	02 56 09.2	
	comp=Z,259nm,19.6s,baz=93,slow=36						
FITZ	Fitzroy Crossi	58.26	258	LR	LR	02 56 15.6	
	comp=Z,555nm,19.5s,baz=104,slow=35						
RPN	Rapa Nui	59.81	112	LR	LR	02 52 35.6	
	comp=Z,58nm,19.2s,baz=244,slow=30						
JCJ	Chichijima	61.02	314	LR	LR	02 55 30.4	
	comp=Z,386nm,19.9s,baz=115,slow=32						
BATI	Baumata	61.58	267	LR	LR	02 58 29.9	
	comp=Z,372nm,19.6s,baz=130,slow=35						
VNDA	Vanda	62.66	186	LR	LR	02 57 56.5	
	comp=Z,162nm,19.0s,baz=22,slow=34						
DAV	Davao City (W)	64.84	286	LR	LR	03 00 17.8	
	comp=Z,254nm,18.3s,baz=218,slow=35						
SHEM	Shemya Is, Ala	69.46	352	LR	LR	03 01 09.0	
	comp=Z,208nm,18.8s,baz=142,slow=33						
MJAR	Matsushiro Arr	69.64	320	LR	LR	02 58 55.5	
	comp=Z,172nm,21.4s,baz=138,slow=31						
ASAJ	Asahikawa	72.28	328	LR	LR	02 58 59.8	
	comp=Z,110nm,21.9s,baz=166,slow=30						
CCAC	Calif City Air	73.05	45	P	P	02 33 56.2	-2.0
CMB	Columbia Colle	73.18	41	P	P	02 33 58.3	-0.6
CMB				IAmb	IAmb	02 34 13.0	
	comp=Z,6.6nm,1.4s						
LPIG	La Paz	73.25	58	LR	LR	03 00 29.2	
	comp=Z,156nm,18.6s,baz=207,slow=31						
PETK	Petropavlovsk-	73.40	342	LR	LR	03 04 22.7	
	comp=Z,67nm,18.7s,baz=159,slow=34						
YBH	Yreka Blue Hor	74.06	37	LR	LR	02 59 07.2	
	comp=Z,108nm,20.0s,baz=242,slow=30						
NVAR	Mina Array Bea	74.74	42	P	P	02 34 09.4	+1.2
	comp=Z,0.7nm,0.8s,baz=208,slow=5.1,SNR=1.9						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	74.74	42	P	P	02 34 08.4	+0.2
KSRS	Korea Array	76.83	316	LR	LR	03 05 45.3	
	comp=Z,167nm,19.3s,baz=140,slow=34						
ELK	Elko	78.00	41	LR	LR	03 04 49.4	
	comp=Z,105nm,18.8s,baz=237,slow=33						
USRK	Ussuriysk Ar.	78.10	323	LR	LR	03 06 51.9	
	comp=Z,267nm,19.0s,baz=140,slow=34						
TXAR	Lajitas Array	80.85	56	P	P	02 34 41.6	-0.7
	comp=Z,0.3nm,1.0s,baz=177,slow=3.6,SNR=1.9						
TXAR				LR	LR	03 05 00.0	
	comp=Z,127nm,19.8s,baz=264,slow=32						
	comp=Z,0.3nm,1.0s						
MA2	Magadan	80.93	342	LR	LR	03 08 39.7	
	comp=Z,122nm,18.9s,baz=132,slow=34						
ANMO	Albuquerque	81.12	50	LR	LR	03 05 50.5	
	comp=Z,207nm,19.6s,baz=250,slow=32						
NEW	Newport	81.20	34	LR	LR	03 03 48.3	
	comp=Z,60nm,19.6s,baz=223,slow=30						
KLR	Kul'dur	81.25	327	LR	LR	03 05 35.4	
	comp=Z,90nm,21.5s,baz=92,slow=32						
J20K	Nowinta River	81.40	8	P	P	02 34 45.1	+0.8
J20K				IAmb	IAmb	02 34 57.9	
	comp=Z,13nm,1.5s						
RND	Reindeer	81.52	11	P	P	02 34 46.2	+1.1
M26K	Nabesna, AK	81.81	14	P	P	02 34 48.5	+1.9
M26K				IAmb	IAmb	02 35 01.1	
	comp=Z,6.2nm,1.1s						
M27K	Edge Creek, AK	82.03	14	P	P	02 34 49.5	+1.6
M27K				IAmb	IAmb	02 34 51.3	
	comp=Z,8.3nm,1.3s						
DLBC	Dease Lake	82.31	21	LR	LR	03 07 44.4	
	comp=Z,85nm,18.2s,baz=248,slow=33						
WRH	Wood River Hil	82.64	11	P	P	02 34 51.9	+1.1
PDAR	Pinedale Array	82.68	42	P	P	02 34 54.2	+2.4
	comp=Z,0.1nm,0.3s,baz=269,slow=8.9,SNR=3.8						
PDAR				LR	LR	03 07 23.7	
	comp=Z,84nm,18.7s,baz=255,slow=33						
	comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	82.68	42	P	P	02 34 49.5	-2.3
CCB	Clear Creek Bu	82.85	11	P	P	02 34 52.4	+0.5
CCB				IAmb	IAmb	02 34 55.1	
	comp=Z,11nm,1.5s						
ILAR	Eielson Array	83.13	11	P	P	02 34 54.6	+1.3
	comp=Z,0.6nm,0.9s,baz=223,slow=6.7,SNR=5.2						
ILAR				LR	LR	03 05 14.1	
	comp=Z,71nm,20.6s,baz=239,slow=31						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	83.13	11	P	P	02 34 54.4	+1.0
J25K	Salcha River,	83.27	12	P	P	02 34 54.0	-0.2
J25K				IAmb	IAmb	02 35 08.3	
	comp=Z,5.0nm,1.1s						
SEY	Seymchan	83.28	345	LR	LR	03 10 30.5	
	comp=Z,199nm,18.8s,baz=63,slow=35						
PMSA	Palmer Station	83.42	156	LR	LR	03 07 23.9	
	comp=Z,176nm,18.6s,baz=248,slow=32						
CMIG	Matias Romero	83.93	70	LR	LR	03 05 57.1	
	comp=Z,222nm,19.1s,baz=206,slow=31						
DAWY	Dawson	84.08	14	P	P	02 34 58.3	0.0
DAWY				IAmb	IAmb	02 35 13.2	
	comp=Z,5.0nm,1.2s						
BMAR	Burnt Mountain	85.94	11	P	P	02 35 09.1	+1.6
MAW	Mawson	87.16	199	LR	LR	03 14 45.5	
	comp=Z,161nm,18.2s,baz=140,slow=36						
PLCA	Paso Flores	88.86	132	LR	LR	03 09 10.9	
	comp=Z,199nm,19.2s,baz=226,slow=32						
YKA	Yellowknife Ar	90.69	23	P	P	02 35 32.6	+2.4
	comp=Z,1.4nm,1.1s,baz=233,slow=4.7,SNR=8.4						
	comp=Z,1.4nm,1.1s						
YKA	Yellowknife Ar	90.69	23	P	P	02 35 31.6	+1.4
SNAA	Sanae	92.16	177	LR	LR	03 15 53.9	
	comp=Z,178nm,18.6s,baz=122,slow=35						
ATAH	Atahualpa	92.61	98	LR	LR	03 09 57.2	
	comp=Z,273nm,19.5s,baz=247,slow=31						
ULM	Lac du Bonnet	94.38	39	LR	LR	03 14 50.7	
	comp=Z,151nm,18.4s,baz=267,slow=33						
SONM	Songino Array	95.53	318	LR	LR	03 17 45.5	
	comp=Z,64nm,18.8s,baz=243,slow=35						
TIXI	Tiksi	95.77	344	LR	LR	03 18 59.6	
	comp=Z,115nm,18.8s,baz=180,slow=35						
LVC	Limon Verde	96.51	116	LR	LR	03 11 52.0	
	comp=Z,62nm,19.2s,baz=242,slow=31						
TKL	Tuckaleechee C	98.76	55	LR	LR	03 15 41.3	
	comp=Z,92nm,18.4s,baz=276,slow=32						
KHC	Kasperske Hory	146.64	352	*e*PKP	PKiKP	02 42 12.0	-0.4
BRTR	Keskin Array B	146.86	320	PKPbc	PKPbc	02 42 09.8	-0.8
	comp=Z,0.4nm,0.7s,baz=54,slow=2.5,SNR=4.2						
BRTR	Keskin Array B	146.86	320	PKPdf	PKPdf	02 42 08.7	-0.1
GERES	GERESS Array B	146.90	352	PKPbc	PKPdf	02 42 08.6	+0.1
	comp=Z,0.8nm,1.0s,baz=33,slow=5.9,SNR=3.3						

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*IDC **10** 02:23:57.5±1.2, 37°.82N×21°.17E, h0^{km}, mb3.6/6, mbtmp3.5/8, ML3.2/2, MS2.8/8, Error ellipse: s-maj=25.3km s-min=23.4km az=120.0*

*ATH **10** 02:23:59.8, 37°.74N×21°.00E, h14^{km}±2^{km}, ML3.3/22, Error ellipse: s-maj=2.6km s-min=0.8km az=331.0*

*THE **10** 02:23:59.5, 37°.73N×21°.03E, h15^{km}±1^{km}, ML3.4/12, Error ellipse: s-maj=1.5km s-min=0.6km az=243.0*

ISC 10 02:23:59.5±0.9**, 37°.77N**±0°.02×**21°.03E**±0°.02**, h15^{km}**±6^{km}**, n98,** σ**1^{s}.42**/120**, mb3.6**/6**, MS2.8**/5**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
LTHK	Lithakia	0.16	250	P	Pb	02 24 03.8	-0.4
LTHK				S	Sg	02 24 06.5	+0.1
RLS	Riolos of Patr	0.45	50	P	Pg	02 24 08.3	-0.3
RLS				S	Sb	02 24 17.0	+1.3
RLS				AML	AML	02 24 18.4	
	comp=N,11081µm,0.3s						
RLS				AML	AML	02 24 18.8	
	comp=E,7542µm,0.6s						
RLS	Riolos of Patr	0.45	50	P	Pg	02 24 08.1	-0.5
RLS				S	Sg	02 24 15.3	+0.6
	comp=E,5µm,0.4s						
PSDA	Pessada-Kefalo	0.50	315	P	Pg	02 24 09.6	+0.2
PSDA				S	Sb	02 24 17.1	+0.1
PSDA	Pessada-Kefalo	0.50	315	P	Pg	02 24 09.4	0.0
PSDA				S	Sb	02 24 18.1	+1.1
	comp=E,2µm,0.3s						
VLS	Valsamata	0.54	320	P	Pg	02 24 10.1	-0.1
VLS				S	Sg	02 24 17.2	-0.3
VLS				AML	AML	02 24 20.8	
	comp=N,13015µm,0.4s						
VLS				AML	AML	02 24 21.3	
	comp=E,8221µm,0.3s						
VLS	Valsamata	0.54	320	P	Pg	02 24 10.1	-0.1
VLS				S	Sb	02 24 19.2	+0.9
	comp=E,6µm,0.5s						
DRO	Drossia	0.57	71	P	Pg	02 24 10.9	+0.1
DRO				S	Sb	02 24 19.6	+0.5
DRO				AML	AML	02 24 24.7	
	comp=E,6476µm,0.7s						
DRO				AML	AML	02 24 25.3	
	comp=N,13466µm,0.7s						
DRO	Drossia	0.57	71	P	Pg	02 24 10.0	-0.8
DRO				S	Sb	02 24 20.2	+1.1
	comp=N,5µm,0.7s						
LXRA	Lixouri, Kepha	0.64	313	P	Pg	02 24 12.2	+0.1
LXRA				AML	AML	02 24 25.8	
	comp=E,27746µm,0.5s						
LXRA				AML	AML	02 24 25.9	
	comp=N,35417µm,0.5s						
KEF4	Livadi, Kephal	0.69	316	P	Pg	02 24 12.9	-0.1
KEF4	Livadi, Kephal	0.69	316	P	Pg	02 24 12.8	-0.1
KEF4				S	Sb	02 24 23.8	+1.3
KEF3	Kipouria, Keph	0.69	309	P	Pg	02 24 12.7	-0.4
KEF3				S	Sb	02 24 24.1	+1.4
KEF3	Kipouria, Keph	0.69	309	P	Pg	02 24 12.6	-0.5
KEF3				S	Sb	02 24 23.9	+1.2
	comp=N,13µm,0.5s						
DMLN	Damoulianata-K	0.70	313	P	Pg	02 24 13.1	-0.2
DMLN				S	Sb	02 24 24.1	+1.1
	comp=N,8µm,0.5s						
FSK	Fiskardo	0.79	332	P	Pg	02 24 15.0	+0.1
FSK				AML	AML	02 24 37.1	
	comp=E,7633µm,0.4s						
FSK				AML	AML	02 24 37.8	
	comp=N,5828µm,0.5s						
FSK	Fiskardo	0.79	332	P	Pg	02 24 14.6	-0.2
FSK				S	Sb	02 24 26.7	+1.4
	comp=N,3µm,0.5s						
UPR	University Cam	0.79	49	P	Pn	02 24 16.2	+0.1
UPR				S	Sn	02 24 28.0	+0.4
LAKA	Lakka	0.89	57	P	Pb	02 24 16.7	+0.1
LAKA				AML	AML	02 24 39.1	
	comp=E,9498µm,0.7s						
LAKA				AML	AML	02 24 42.6	
	comp=N,8577µm,0.6s						
EVGI	Lefkada island	0.91	341	P	Pb	02 24 16.6	-0.3
EVGI	Lefkada island	0.91	341	P	Pb	02 24 16.2	-0.7
EVGI				S	Sg	02 24 30.2	+1.2
	comp=N,3µm,0.5s						
ITM	Ithomi	0.92	129	P	Pg	02 24 17.3	-0.1
ITM				S	Sb	02 24 29.3	0.0
ITM				AML	AML	02 24 38.8	
	comp=N,5302µm,0.7s						
ITM				AML	AML	02 24 42.7	
	comp=E,4241µm,0.6s						
ITM	Ithomi	0.92	129	P	Pb	02 24 17.1	-0.1
ITM				S	Sg	02 24 28.6	-0.9
	comp=E,2µm,1.0s						
KLV	Kalavryta, Ach	0.93	72	P	Pb	02 24 16.7	-0.6
KLV				AML	AML	02 24 39.2	
	comp=N,2090µm,0.6s						
KLV				AML	AML	02 24 46.5	
	comp=E,1593µm,0.7s						
KLV	Kalavryta, Ach	0.93	72	P	Pb	02 24 16.8	-0.6
KLV				S	Sg	02 24 30.5	+0.8
	comp=E,920nm,0.6s						
EFP	Efpalio	0.96	46	P	Pb	02 24 17.9	+0.1
EFP				AML	AML	02 24 35.8	
	comp=N,4128µm,0.8s						
EFP				AML	AML	02 24 37.1	
	comp=E,2768µm,0.5s						
EFP	Efpalio	0.96	46	P	Pb	02 24 17.2	-0.6
EFP				S	Sn	02 24 32.8	+1.1
	comp=E,2µm,0.6s						
DRAG	Dragano-Lefkad	0.99	339	P	Pb	02 24 17.9	-0.4
DRAG	Dragano-Lefkad	0.99	339	P	Pb	02 24 17.9	-0.4
DRAG				S	Sn	02 24 33.6	+1.1
PYL	PYLOS	1.04	147	P	Pb	02 24 18.6	-0.6
PYL				AML	AML	02 24 45.6	
	comp=N,2363µm,0.5s						
PYL				AML	AML	02 24 45.8	
	comp=E,2932µm,0.8s						
PYL	PYLOS	1.04	147	P	Pb	02 24 18.5	-0.6
PYL				S	Sg	02 24 32.6	-0.5
	comp=E,1µm,0.8s						
GUR	Goura	1.05	80	P	Pb	02 24 19.1	-0.4
GUR				AML	AML	02 24 43.2	
	comp=E,3463µm,0.5s						
GUR				AML	AML	02 24 44.6	
	comp=N,3049µm,0.5s						
TSLK	Tsoukalades, L	1.10	345	P	Pb	02 24 19.8	-0.4
EVR	Evrytania	1.30	28	P	Pb	02 24 24.3	+0.5
EVR				AML	AML	02 24 56.2	
	comp=E,1341µm,0.8s						
EVR				AML	AML	02 24 58.1	
	comp=N,1513µm,0.6s						
THAL	Thalero	1.32	78	P	Pn	02 24 23.8	+0.4
MAKR	Makrakomi, Fth	1.52	34	P	Pb	02 24 27.9	+0.5
MAKR				AML	AML	02 25 00.6	
	comp=N,1377µm,1.1s						
MAKR				AML	AML	02 25 04.8	
	comp=E,1518µm,0.7s						
LTK	Loutraki	1.55	80	P	Pb	02 24 28.4	+0.4
AGG	Agios Georgios	1.62	39	P	Pg	02 24 30.3	-0.4
AGG				AML	AML	02 24 58.7	
	comp=E,1098µm,0.8s						
AGG				AML	AML	02 25 05.6	
	comp=N,1077µm,0.6s						
EPID	Epidavros	1.66	95	P	Pg	02 24 30.9	-0.6
KRND	KRANIDI	1.73	102	P	Pg	02 24 32.0	-0.7
KRND				AML	AML	02 25 03.4	
	comp=N,847µm,0.6s						
KRND				AML	AML	02 25 09.7	
	comp=E,1235µm,0.8s						
ATAL	Atalanti	1.82	59	P	Pg	02 24 33.8	-0.7
ATAL				AML	AML	02 25 06.3	
	comp=E,830µm,0.8s						
ATAL				AML	AML	02 25 13.4	
	comp=N,1270µm,0.8s						
VIL2	Platees	1.82	75	P	Pg	02 24 34.0	-0.6
VIL2				AML	AML	02 25 09.7	
	comp=E,1195µm,0.7s						
VIL2				AML	AML	02 25 16.6	
	comp=N,1275µm,0.7s						
VLI	Veliai	1.84	124	P	Pg	02 24 34.0	-0.9
VLI				AML	AML	02 25 11.4	
	comp=N,1123µm,0.7s						
VLI				AML	AML	02 25 16.1	
	comp=E,1248µm,0.7s						
THL	Klokotos Trika	1.96	23	P	Pb	02 24 35.5	+0.7
THL				AML	AML	02 25 18.5	
	comp=E,693µm,1.0s						
THL				AML	AML	02 25 24.3	
	comp=N,605µm,0.7s						
KTHR	Kythira	2.18	133	P	Pb	02 24 39.2	+0.6
ATHU	Athens Univers	2.19	84	P	Pb	02 24 38.7	-0.1
VLY	Voula,Athens	2.19	87	P	Pb	02 24 38.2	-0.6
KPRO	Kipourio	2.20	7	P	Pb	02 24 39.2	+0.1
KTHA	Kythira Island	2.22	132	P	Pb	02 24 39.5	+0.3
KTHA				AML	AML	02 25 26.2	
	comp=E,999µm,0.9s						
KTHA				AML	AML	02 25 27.3	
	comp=N,723µm,0.8s						
DION	Dionisos Attik	2.32	81	P	Pb	02 24 40.4	-0.5
DION				AML	AML	02 25 18.6	
	comp=N,771µm,1.0s						
DION				AML	AML	02 25 21.1	
	comp=E,819µm,0.7s						
XOR	Xorichti	2.33	46	P	Pb	02 24 40.6	-0.6
KYMI	Kymi, Euboea I	2.57	69	P	Pb	02 24 44.1	-1.2
KYMI				AML	AML	02 25 38.4	
	comp=E,436µm,1.1s						
KYMI				AML	AML	02 25 38.4	
	comp=N,412µm,0.9s						
ANKY	Antikythira Is	2.63	135	P	Pb	02 24 45.1	-1.2
KARY	Karystos	2.71	83	P	Pb	02 24 47.2	-0.5
OHR	Ohrid	3.35	357	*i* Pn	Pn	02 24 55.3	+4.0
VAY	Valandovo	3.75	18	*i* Pn	Pb	02 25 02.4	-2.9
IDI	Anoyia	3.97	127	Pn	Pn	02 25 00.5	+0.6
	comp=N,1.1nm,0.3s,baz=307,slow=15,SNR=5.7						
IDI				Sn	Sn	02 25 50.4	+4.2
	comp=N,2.7nm,0.3s,baz=192,slow=16,SNR=4.7						
	comp=N,1.9nm,0.3s						

STIP	Stip	4.02	12	i Pn	Pb	02 25 06.1	-4.0
DRME	Dracevica, Mon	4.64	343	ePn	Pn	02 25 10.1	+1.1
PDG	Podgorica	4.86	344	ePn	Pn	02 25 11.4	-0.6
HCY	Herceg Novi	5.07	338	ePn	Pn	02 25 13.8	-1.1
TREB	Trebinje	5.36	338	ePn	Pn	02 25 18.7	-0.1
BRY	Bratogost	5.47	340	ePn	Pn	02 25 21.3	+0.7
SJES	Sjenica	5.55	352	ePn	Pn	02 25 23.5	+1.9
UPM	Unac-Piva	5.67	344	ePn	Pn	02 25 22.3	-1.0
STON	Ston	5.70	335	ePn	Pn	02 25 23.2	-0.4
RUDO	Rudo	5.98	348	ePn	Pn	02 25 28.8	+1.3
DIVS	Divibare	6.38	353	ePn	Pn	02 25 31.7	-1.3
SRKY	Kupres RS	6.94	336	ePn	Pn	02 25 38.5	-2.3
BLY	Banja Luka	7.55	339	ePn	Pn	02 25 50.2	+1.2
MLR	Muntele Rosu	8.55	24	LR	LR	02 29 09.4	
	comp=N,46nm,20.1s,baz=204,slow=37						
CRES	Cresnjev	9.06	334	ePn	Pn	02 26 09.1	-0.7
CEY	Cerknica	9.37	330	ePn	Pn	02 26 13.9	0.0
SKDS	Skadanscina	9.38	328	ePn	Pn	02 26 13.1	-1.0
LJU	Ljubljana	9.58	332	ePn	Pn	02 26 15.6	-1.3
SOKA	Soboth	9.95	335	i Pn	Pn	02 26 22.9	+0.9
	comp=N,1.5nm,0.5s						
SOKA				eSn	Sn	02 28 10.5	-2.9
	comp=N,0.7nm,0.4s						
OBKA	Obir	9.97	333	ePn	Pn	02 26 24.1	+1.9
	comp=N,1.2nm,0.3s						
OBKA				i Sn	Sn	02 28 15.5	+1.6
	comp=N,3.4nm,0.5s						
BRTR	Keskin Array B	10.04	75	LR	LR	02 30 13.9	
	comp=N,37nm,20.3s,baz=292,slow=38						
ABTA	Abfaltersbach	10.97	328	i Pn	Pn	02 26 36.7	+0.8
	comp=N,0.5nm,0.3s						
ABTA				eSn	Sn	02 28 35.4	-2.9
	comp=N,2.3nm,0.6s						
WTTA	Wattenberg	11.74	327	eSn	Sn	02 28 54.3	-3.1
	comp=N,2.1nm,0.5s						
SQTA	Sankt Quirin	11.90	326	ePn	Pn	02 26 51.6	+3.0
	comp=N,0.7nm,0.3s						
SQTA				i Sn	Sn	02 29 00.9	-0.3
	comp=N,1.4nm,0.3s						
VRAC	Vranov	11.98	346	LR	LR	02 31 59.5	
	comp=N,37nm,20.0s,baz=167,slow=40						
MOTA	Moosalm	12.04	326	ePn	P	02 26 59.6	-3.9
	comp=N,2.0nm,0.6s						
MOTA				i Sn	Sn	02 29 03.6	-1.1
	comp=N,1.7nm,0.5s						
ESDC	Sonseca Array	19.58	283	P	Pn	02 28 28.5	+0.2
	baz=74,slow=11,SNR=3.1						
	comp=N,0.8nm,1.0s						
VIKU	Vikbolandet	20.94	354	eP	Pn	02 28 46.1	+2.1
MTSE	Matsula	21.04	4	eP	P	02 28 46.7	+4.1
VSU	Vasula	21.04	8	eP	P	02 28 44.0	+1.4
UPP	Uppsala	22.22	355	eP	P	02 28 59.6	+4.5
AAL	Aland	22.44	359	eP	P	02 29 02.0	+4.5
HFS	Hagfors	22.87	351	LR	LR	02 39 28.4	
	comp=N,26nm,19.6s,baz=172,slow=41						
FINES	FINESS Array B	23.91	6	P	P	02 29 12.3	-0.2
	comp=N,0.7nm,0.7s,baz=188,slow=12,SNR=4.6						
FINES				LR	LR	02 38 50.3	
	comp=N,34nm,19.0s,baz=288,slow=37						
	comp=N,0.7nm,0.7s						
EKA	Eskdalemuir Ar	24.00	325	P	P	02 29 14.1	+0.8
	comp=N,2.5nm,0.7s,baz=120,slow=9.7,SNR=6.1						
	comp=N,2.5nm,0.7s						
NB2	NORSAR Subarra	24.10	348	P	P	02 29 14.2	-0.1
	comp=Z,2.7nm,1.1s,baz=158,slow=9.3						
NOA	NORSAR Array B	24.10	348	P	P	02 29 14.4	+0.1
	comp=Z,0.3nm,0.5s,baz=160,slow=8.8,SNR=4.9						
NOA				LR	LR	02 39 54.9	
	comp=Z,13nm,18.2s,baz=305,slow=40						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	29.97	220	P	P	02 30 08.2	+0.8
	comp=Z,0.9nm,0.8s,baz=30,slow=8.8,SNR=9.9						
	comp=Z,0.9nm,0.8s						
ARCES	ARCESS Array B	31.92	3	LR	LR	02 44 49.4	
	comp=Z,42nm,18.6s,baz=174,slow=39						
MKAR	Makanchi Array	45.17	58	P	P	02 32 14.2	-1.4
	comp=Z,0.7nm,1.0s,baz=265,slow=11,SNR=2.0						
MKAR				LR	LR	02 53 20.5	
	comp=Z,23nm,22.0s,baz=356,slow=39						
	comp=Z,0.7nm,1.0s						
ZALV	Zalesovo Beam	45.67	48	P	P	02 32 18.4	-0.9
	comp=Z,0.6nm,0.4s,baz=330,slow=8.3,SNR=2.6						
	comp=Z,0.6nm,0.4s						

IDC 10 02:49:20.7±2.0**, 0°.34S×132°.35E, h0^{km}, mb3.6**/2**, mbtmp3.6**/4**, ML3.5**/2**, MS3.9**/2**, Error ellipse: s-maj=28.9km s-min=28.1km az=50.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.21	244	Pn	Pn	02 49 44.9	0.0
	40nm,0.3s,baz=24,slow=18,SNR=26						
SIJI				Sn	Sn	02 50 03.4	+1.5
	63nm,0.3s,baz=11,slow=23,SNR=16						
FITZ	Fitzroy Crossi	18.84	200	Pn	P	02 53 41.1	-1.2
	0.1nm,0.3s,baz=15,slow=12,SNR=1.5						
	3.5nm,1.1s						
WRA	Warramunga Arr	19.58	174	P	P	02 53 50.6	+0.1
	0.2nm,0.3s,baz=353,slow=11,SNR=6.8						
	0.8nm,0.5s						
ASAR	Alice Springs	23.24	176	P	P	02 54 30.1	+0.3
	1.6nm,0.7s,baz=357,slow=11,SNR=12						
	1.6nm,0.7s						
CTA	Charters Tower	23.89	146	LR	LR	03 05 05.0	
	comp=Z,186nm,19.1s,baz=80,slow=40						
JHJ	Hachijo jima 2	34.01	11	LR	LR	03 06 18.1	
	comp=Z,364nm,21.5s,baz=133,slow=30						
MKAR	Makanchi Array	64.10	324	P	P	02 59 56.7	-0.1
	0.4nm,0.7s,baz=110,slow=7.8,SNR=2.4						
	0.4nm,0.7s						

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*IDC **10** 02:50:49.8±2.5, 30°.49S×66°.73W, h0^{km}, mb3.7/1, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=70.5km s-min=59.3km az=7.0*

*NEIC **10** 02:50:55.3±1.8, 29°.46S±0°.07×66°.83W±0°.08, h12^{km}±10^{km}, Md3.4(SJA), Error ellipse: s-maj=10.8km s-min=9.4km az=124.0*

ISC 10 02:50:55.0±0.8**, 29°.45S**±0°.05×**66°.84W**±0°.08**, h10^{km}, n35, σ1^{s}17**/34**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	2.62	217	Pn	Pn	02 51 38.8	+1.2
ZON				Sn	Sn	02 52 11.1	+1.6
CO01	Juntas del Tor	2.88	259	Pn	Pn	02 51 41.8	+0.6
AC02	Maricunga	3.29	322	Pn	Pn	02 51 48.7	+1.6
LCO	Las Campanas	3.40	276	Pn	Pn	02 51 48.0	-0.5
GO03	Copiap	3.51	301	Pn	Pn	02 51 49.2	-0.5
GO04	Tololo Observa	3.51	257	Pn	Pn	02 51 50.3	+0.4
CO03	El Pedregal	3.61	246	Pn	Pn	02 51 51.5	+0.3
AC06	Mina Casimiro	3.73	303	Pn	Pn	02 51 53.0	+0.3
CO05	La Serena	3.85	262	Pn	Pn	02 51 52.1	-2.2
AC04	Llanos de Chal	3.91	287	Pn	Pn	02 51 54.1	-1.1
CO02	Combarbal	4.00	243	Pn	Pn	02 51 55.9	-0.6
CO06	Fray Jorge	4.33	252	Pn	Pn	02 51 58.4	-2.5
VA03	San Esteban	4.59	223	Pn	Pn	02 52 04.7	+0.1
AC01	Pan de Azucar	4.68	314	Pn	Pn	02 52 05.4	-0.3
GO02	Mina Guanaco	4.92	330	Pn	Pn	02 52 10.4	+1.0
PEL	Peldehue	4.94	221	Pn	Pn	02 52 09.0	-0.3
ROC1	El Roble	5.01	224	Pn	Pn	02 52 09.3	-1.3
MT03	Universidad Ad	5.11	217	Pn	Pn	02 52 12.7	+0.9
MT05	Renca	5.15	219	Pn	Pn	02 52 11.9	-0.4
LMEL	Las Melosas	5.24	212	Pn	Pn	02 52 14.2	+0.6
MT02	Curacav	5.29	223	Pn	Pn	02 52 12.8	-1.3
VA01	Torpederas	5.44	228	Pn	Pn	02 52 16.0	-0.3
BO04	La Punta	5.55	214	Pn	Pn	02 52 17.6	-0.1
MT09	Talagante	5.58	218	Pn	Pn	02 52 16.9	-1.4
MT01	Popeta	5.79	219	Pn	Pn	02 52 18.2	-2.8
BO01	Tunca	6.11	215	Pn	Pn	02 52 23.3	-2.0
GO05	Huala	7.02	217	Pn	Pn	02 52 39.1	+1.1
ITQB	Itaqui	8.90	94	Pn	Pn	02 53 03.8	0.0
CPUP	Villa Florida	8.97	72	Pn	Pn	02 53 04.7	0.0
	0.1nm,0.3s,baz=276,slow=10,SNR=5.3						
	0.6nm,0.4s						
CPUP	Villa Florida	8.97	72	Pn	Pn	02 53 04.4	-0.3
PLTB	Pedras Altas	11.64	105	Pn	Pn	02 53 40.1	-1.1
LPAZ	La Paz	13.15	355	Pn	P	02 54 12.4	-0.4
	0.1nm,0.3s,baz=172,slow=7.7,SNR=6.4						
	1.7nm,0.8s						
TORD	Torodi Ar. Bea	78.44	68	P	P	03 02 54.5	-2.0
	0.5nm,0.8s,baz=226,slow=4.2,SNR=6.6						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	148.03	32	PKPbc	PKPdf	03 10 39.1	+2.0
	0.6nm,0.4s,baz=298,slow=3.1,SNR=3.5						
MKAR	Makanchi Array	150.43	46	PKPbc	PKPdf	03 10 43.7	+2.3
	0.5nm,0.6s,baz=326,slow=0.5,SNR=4.1						

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*IDC **10** 03:43:36.1±3.6, 27°.89N×52°.04E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=87.1km s-min=37.2km az=143.0*

*TEH **10** 03:43:38.8, 27°.81N×52°.02E, h27^{km}, ML3.3*

*OMAN **10** 03:43:45.0±0.4, 27°.40N×52°.34E, h165^{km}±3^{km}, mb3.2/2, ml3.2/7, Error ellipse: s-maj=10.8km s-min=3.5km az=359.0*

ISC 10 03:43:39.5±0.8**, 27°.84N**±0°.04×**52°.10E**±0°.05**, h26^{km}, n44, σ1^{s}99**/56**, mb3.6**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	1.05	52	ePg	Pn	03 43 58.9	+0.4
QIR1				eSg	Sb	03 44 15.6	+3.2
QIR1				e		03 44 22.9	
	comp=N,17µm,0.3s						
LMD1	Lamerd	1.07	117	ePg	Pb	03 43 59.8	+0.5
LMD1				eSg	Sb	03 44 16.4	+3.6
LMD1				e		03 44 21.1	
	comp=Z,16µm,0.5s						
JHRM	Jahrom	1.46	63	ePn	Pb	03 44 07.1	+1.0
KAZ1	Kazerun	1.83	347	ePn	Pb	03 44 10.7	-1.6
KAZ1				e		03 44 55.1	
	comp=Z,5µm,0.8s						
SHI	Shiraz	1.83	11	ePn	Pb	03 44 10.9	-1.6
SHI				e		03 44 45.5	
	comp=Z,2µm,0.6s						
KHOR	Al-Khor Airpor	2.27	194	P	Pb	03 44 19.5	-0.3
SAKB	Bahrain	2.32	217	P	Pb	03 44 23.1	+2.5
JRN	Qarnain Island	2.96	167	ePn	Pn	03 44 25.2	+0.4
JRN	Qarnain Island	2.96	167	P	Pn	03 44 26.6	+1.9
KLNJ	Kolanjah	3.19	352	ePn	Pn	03 44 29.1	+0.8
KLNJ				e		03 45 33.6	
	comp=Z,349nm,0.7s						
IRAM	Ramesheh	3.97	3	ePn	Pn	03 44 39.8	+1.0
SHME	Shamm	4.02	115	P	Pn	03 44 39.4	0.0
SHME				S	Sn	03 45 25.0	-0.6
IMEH	Mehriz	4.16	31	ePn	Pn	03 44 43.4	+1.9
IMEH				e		03 44 44.6	
	comp=Z,380nm,0.2s						
BANOM	Banah	4.21	116	ePn	Pn	03 44 42.0	0.0
BANOM	Banah	4.21	116	P	Pn	03 44 42.2	+0.2
	SNR=15						
BANOM				S	Sn	03 45 29.5	-0.7
NAZ	Nazwa, Dubai	4.27	131	ePn	Pn	03 44 44.0	+1.2
NAZ	Nazwa, Dubai	4.27	131	P	Pn	03 44 43.8	+1.0
NAZ				S	Sn	03 45 31.7	-0.2
ASUD	Al Ashush, Dub	4.32	137	ePn	Pn	03 44 44.5	+1.1
ASUD	Al Ashush, Dub	4.32	137	P	Pn	03 44 44.9	+1.5
	SNR=14						
ASUD				S	Sn	03 45 31.8	-1.1
MASF	Masafi	4.38	123	P	Pn	03 44 45.1	+0.7
MASF				S	Sn	03 45 31.5	-3.2
MSFE	Esma-Masafi	4.39	123	ePn	Pn	03 44 44.9	+0.4
AMIS	Naft Sefid	4.53	328	ePn	Pn	03 44 47.3	+0.9
KHGB	Koh Gabri	4.59	56	ePn	Pn	03 44 48.3	+0.9
KHGB				e		03 45 35.8	
	comp=Z,213nm,0.5s						
TVBK	TV Kerman	4.61	61	ePn	Pn	03 44 49.1	+1.3
TVBK				e		03 45 53.1	
	comp=Z,261nm,0.4s						
UOSS	Minazif	4.67	127	ePn	Pn	03 44 48.4	+0.1
UOSS	Minazif	4.67	127	P	Pn	03 44 48.3	-0.1
UOSS				S	Sn	03 45 39.5	-2.2
HATD	Hatta, Dubai	4.70	129	ePn	Pn	03 44 49.0	+0.3
ASHO	Ashiyiah	4.74	131	ePn	Pn	03 44 49.5	+0.2
ASHO	Ashiyiah	4.74	131	P	Pn	03 44 49.6	+0.3
	SNR=9.1						
ASHO				S	Sn	03 45 41.7	-1.8
IBAF	Bafgh	4.80	38	ePn	Pn	03 44 51.7	+1.4
IZEF	Zefreh	5.05	2	ePn	Pn	03 44 55.1	+1.4
CHMN	Cheshme madani	5.18	66	ePn	Pn	03 44 57.6	+2.0
IKLH	Kolahrood	5.48	355	ePn	Pn	03 45 00.6	+0.9
JASK	Jask - Hormozg	5.51	110	ePn	Pn	03 45 00.1	+0.2
ARQ	Araqi	6.00	137	P	Pn	03 45 06.1	-0.5
	SNR=5.4						
ARQ				S	Sn	03 46 07.2	-7.3
KRSH	Karshahi	6.11	0	ePn	Pn	03 45 08.9	+0.6
HOQ	Hoqain	6.33	131	P	Pn	03 45 11.3	+0.3
HOQ				S	Sn	03 46 19.6	-2.9
SMDO	Samad	7.18	130	P	Pn	03 45 22.4	-0.5
SMDO				S	Sn	03 46 36.3	-7.3
MHTO	MHTO	8.66	141	P	Pn	03 45 42.8	-0.4
	SNR=9.7						
WHFO	Wadi Hawf	9.99	171	P	Pn	03 45 58.5	-3.0
	SNR=7.2						
ZALV	Zalesovo Beam	35.40	33	P	P	03 50 33.2	+0.2
	comp=Z,1.0nm,0.4s,baz=246,slow=12,SNR=4.0						
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	37.84	340	P	P	03 50 53.0	-0.6
	comp=Z,1.1nm,0.9s,baz=142,slow=12,SNR=4.4						
	comp=Z,1.1nm,0.9s						
ARCES	ARCESS Array B	44.49	347	P	P	03 51 49.0	+0.7
	comp=Z,0.6nm,0.7s,baz=149,slow=9.5,SNR=1.3						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	49.10	263	P	P	03 52 25.2	+0.2
	comp=Z,0.4nm,0.8s,baz=47,slow=6.6,SNR=2.3						
	comp=Z,0.4nm,0.8s						

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*NEIC **10** 03:48:29.6±1.3, 12°.1N±0°.1×143°.76E±0°.10, h44^{km}±7^{km}, mb4.6/47, Error ellipse: s-maj=17.9km s-min=12.0km az=145.0*

*IDC **10** 03:48:31.4±2.1, 12°.05N×143°.86E, h50^{km}±19^{km}, mb4.0/13, mbtmp4.2/13, MS3.6/7, Error ellipse: s-maj=20.5km s-min=14.4km az=103.0*

ISC 10 03:48:27.5±0.5**, 12°.09N**±0°.08×**143°.89E**±0°.10**, h26^{km}, n84, σ0^{s}94**/72**, mb4.6**/38**, MS3.3**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.77	32	P	Pb	03 48 59.7	+0.3
	709nm,0.3s,baz=204,slow=4.5,SNR=43						
GUMO				S	Sb	03 49 22.6	+1.5
	1µm,0.4s,baz=28,slow=23,SNR=25						
GUMO				LR	LR	03 49 36.6	
	comp=Z,265nm,21.4s,baz=126,slow=36						
GUMO	Guam	1.77	32	Pn	Pb	03 48 59.1	-0.2
GUMO				Sn	Sb	03 49 21.0	-0.1
RABL	Rabaul	18.14	153	P	Pn	03 52 37.3	-0.6
PMG	Port Moresby	21.60	171	LR	LR	04 01 04.1	
	comp=Z,76nm,18.3s,baz=344,slow=35						
H11S3	WAKE ISLAND Hy	22.88	71	T	T	04 17 33.5	
	baz=252,slow=74,SNR=4.0						
H11S1	WAKE ISLAND Hy	22.89	71	T	T	04 17 40.0	
	baz=252						
H11S2	WAKE ISLAND Hy	22.89	71	T	T	04 17 33.2	
	baz=252,slow=74,SNR=4.1						
H11N1	WAKE ISLAND Hy	23.36	68	T	T	04 18 06.0	
	baz=255,slow=75,SNR=4.5						
H11N2	WAKE ISLAND Hy	23.37	68	T	T	04 18 11.4	
	baz=255,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy	23.38	68	T	T	04 18 10.5	
	baz=255,slow=75,SNR=3.8						
CTA	Charters Tower	32.06	176	LR	LR	04 08 11.5	
	comp=Z,49nm,18.9s,baz=302,slow=37						
WRA	Warramunga Arr	33.19	197	P	P	03 55 02.2	-0.1
	0.9nm,0.6s,baz=19,slow=9.8,SNR=6.3						
WRA				LR	LR	04 08 49.3	
	comp=Z,121nm,19.2s,baz=328,slow=37						
	0.9nm,0.6s						
WRA	Warramunga Arr	33.19	197	P	P	03 55 01.8	-0.5
FITZ	Fitzroy Crossi	34.99	211	LR	LR	04 11 49.5	
	comp=Z,30nm,18.1s,baz=48,slow=40						
ASAR	Alice Springs	36.85	195	P	P	03 55 34.9	+1.0
	0.9nm,0.8s,baz=16,slow=11,SNR=4.9						
ASAR				LR	LR	04 11 05.8	
	comp=Z,67nm,19.9s,baz=334,slow=37						
	0.9nm,0.8s						
DZM	Mont Dzumac	40.52	147	P	P	03 56 06.1	+1.3
	8.2nm,1.0s,baz=9.4,slow=8.8,SNR=5.5						
	8.2nm,1.0s						
CMAR	Chiang Mai Arr	43.73	284	P	P	03 56 32.5	+1.4
	1.3nm,0.3s,baz=84,slow=6.3,SNR=6.3						
	1.3nm,0.3s						
CMAR	Chiang Mai Arr	43.73	284	P	P	03 56 24.8	-6.2
STKA	Stephens Creek	43.77	183	LR	LR	04 18 51.8	
	comp=Z,30nm,18.0s,baz=42,slow=42						
SONM	Songino Array	47.42	326	P	P	03 57 00.6	+0.6
	1.3nm,0.6s,baz=126,slow=7.7,SNR=4.8						
	1.3nm,0.6s						
SONM	Songino Array	47.42	326	P	P	03 56 58.7	-1.3
RSD	Rainshed	58.75	75	P	P	03 58 23.0	-0.9
RPZ	Rata Peaks	60.81	158	LR	LR	04 24 07.3	
	comp=Z,22nm,18.1s,baz=280,slow=35						
MKAR	Makanchi Array	61.91	317	P	P	03 58 46.9	+1.8
	2.4nm,0.8s,baz=92,slow=9.0,SNR=16						
	2.4nm,0.8s						
ZALV	Zalesovo Beam	62.29	325	P	P	03 58 47.9	+0.5
	1.4nm,0.6s,baz=94,slow=5.9,SNR=5.9						
	1.4nm,0.6s						
KURK	Kurchatov	65.12	320	P	P	03 59 05.0	-1.0
J20K	Nowinta River	67.14	25	P	P	03 59 19.3	+0.5
J20K				IAmb	IAmb	03 59 22.4	
	comp=Z,7.2nm,1.1s						
CAST	Castle Rocks	67.75	26	P	P	03 59 23.3	+0.5
CAST				IAmb	IAmb	03 59 24.8	
	comp=Z,4.8nm,0.9s						
BPAW	Bear Paw Mtn.	68.43	25	P	P	03 59 26.2	-0.7
I23K	Minto, Yukon-K	69.40	25	P	P	03 59 31.1	-1.8
I23K				IAmb	IAmb	03 59 35.3	
	comp=Z,8.9nm,1.4s						
SCM	Sheep Creek Mo	69.44	28	P	P	03 59 33.0	-0.4
COLD	Coldfoot	69.69	22	P	P	03 59 35.0	+0.3
COLD				IAmb	IAmb	03 59 37.4	
	comp=Z,6.1nm,1.0s						
KK31	Karatay Array	69.72	312	P	P	03 59 33.2	-2.2
KKAR	Karatay Array	69.72	312	P	P	03 59 33.6	-1.8
KKAR	Karatay Array	69.72	312	P	P	03 59 33.2	-2.2
KKAR				IAmb	IAmb	03 59 37.5	
	comp=Z,3.9nm,0.9s						
WRH	Wood River Hil	69.75	25	P	P	03 59 35.0	-0.1
WRH				IAmb	IAmb	03 59 36.3	
	comp=Z,5.8nm,1.1s						
MDM	Murphy Dome	69.81	25	P	P	03 59 34.2	-1.3
KLU	Klutina	70.02	29	P	P	03 59 36.4	-0.6
KLU				IAmb	IAmb	03 59 39.9	
	comp=Z,6.8nm,1.0s						
H24K	Noodor Dome	70.19	24	P	P	03 59 37.8	-0.1
H24K				IAmb	IAmb	03 59 40.9	
	comp=Z,7.4nm,1.2s						
ILAR	Eielson Array	70.32	25	P	P	03 59 38.4	-0.2
	comp=Z,2.7nm,1.0s,baz=257,slow=4.4,SNR=16						
	comp=Z,2.7nm,1.0s						
TOLK	Toolik Lake Re	70.35	21	P	P	03 59 38.9	+0.1
TOLK				IAmb	IAmb	03 59 41.7	
	comp=Z,10nm,1.3s						
PAX	Paxson	70.53	27	P	P	03 59 40.3	+0.3
RIDG	Independent Ri	70.97	26	P	P	03 59 43.0	+0.4
RIDG				IAmb	IAmb	03 59 44.5	
	comp=Z,8.3nm,1.2s						
GLB	Gilahina Butte	71.01	29	P	P	03 59 42.3	-0.7
GLB				IAmb	IAmb	03 59 45.8	
	comp=Z,6.9nm,1.1s						
DOT	Dot Lake	71.29	27	P	P	03 59 45.4	+0.8
SCRK	Sand Creek	71.39	26	P	P	03 59 45.2	0.0
SCRK				IAmb	IAmb	03 59 47.3	
	comp=Z,6.9nm,1.4s						
BMAR	Burnt Mountain	71.84	23	P	P	03 59 47.0	-0.9
BCAR	Beaver Creek A	72.20	27	P	P	03 59 49.6	-0.5
DAWY	Dawson	73.40	27	P	P	03 59 57.3	+0.1
DAWY				IAmb	IAmb	04 00 00.0	
	comp=Z,7.4nm,1.1s						
I29M	Ogilvie Camp,	74.00	25	P	P	04 00 01.0	+0.3
I29M				IAmb	IAmb	04 00 03.2	
	comp=Z,6.4nm,1.1s						
M30M	Minto, Yukon	74.43	28	P	P	04 00 03.8	+0.5
M31M	Drury Creek, Y	75.53	29	P	P	04 00 09.8	+0.2
INK	Inuvik	76.11	22	LR	LR	04 31 45.0	
	comp=Z,226nm,22.0s,baz=301,slow=34						
INK	Inuvik	76.11	22	P	P	04 00 13.2	+0.5
INK				IAmb	IAmb	04 00 15.3	
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	77.01	318	P	P	04 00 18.6	+0.4
ABKAR	Akbulak array	77.01	318	P	P	04 00 18.1	-0.1
ABKAR				IAmb	IAmb	04 00 19.2	
	comp=Z,2.3nm,0.8s						
ARU	Arti	77.45	325	P	P	04 00 20.0	-0.5
A36M	Sachs Harbour	78.86	18	P	P	04 00 28.1	+0.1
C36M	Paulatuk	79.50	21	P	P	04 00 31.9	+0.4
C36M				IAmb	IAmb	04 00 34.1	
	comp=Z,13nm,1.3s						
EUNU	Eureka	84.47	8	P	P	04 00 57.9	+0.2
EUNU				IAmb	IAmb	04 01 00.3	
	comp=Z,4.3nm,0.8s						
YKA	Yellowknife Ar	84.62	27	P	P	04 00 59.6	+1.1
	comp=Z,1.5nm,0.5s,baz=286,slow=5.0,SNR=33						
	comp=Z,1.5nm,0.5s						
YKA	Yellowknife Ar	84.62	27	P	P	04 00 58.8	+0.2
PINE	Pine Mountain	85.43	46	P	P	04 01 02.6	-0.7
B08A	Colville Reser	85.52	42	P	P	04 01 03.7	+0.2
B08A				IAmb	IAmb	04 01 07.1	
	comp=Z,4.2nm,0.9s						
RES	Resolute Bay	86.22	13	P	P	04 01 07.1	+0.7
RES				IAmb	IAmb	04 01 08.9	
	comp=Z,5.1nm,0.8s						
NEW	Newport	86.98	41	P	P	04 01 10.7	0.0
NEW				IAmb	IAmb	04 01 14.3	
	comp=Z,6.0nm,0.9s						
BMO	Blue Mountains	87.72	45	P	P	04 01 13.0	-1.4
BMO				IAmb	IAmb	04 01 18.9	
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	88.21	342	P	P	04 01 16.9	+0.9
	comp=Z,1.6nm,0.5s,baz=69,slow=7.9,SNR=17						
	comp=Z,1.6nm,0.5s						
ARCES	ARCESS Array B	88.21	342	P	P	04 01 16.2	+0.1
NVAR	Mina Array Bea	88.60	51	P	P	04 01 21.8	+2.9
	comp=Z,2.4nm,0.7s,baz=265,slow=5.3,SNR=13						
	comp=Z,2.4nm,0.7s						
NVAR	Mina Array Bea	88.60	51	P	P	04 01 18.5	-0.4
KVN	Kaiserville	88.60	50	P	P	04 01 19.0	+0.2
KVN				IAmb	IAmb	04 01 24.5	
	comp=Z,2.4nm,0.9s						
MFID	Camas Ranch	89.12	46	P	P	04 01 20.1	-0.9
MFID				IAmb	IAmb	04 01 26.1	
	comp=Z,4.8nm,0.9s						
TPH	Tonopah	89.51	51	P	P	04 01 22.6	-0.5
HLID	Hailey	90.07	45	P	P	04 01 25.0	-0.6
HLID				IAmb	IAmb	04 01 30.6	
	comp=Z,2.7nm,0.9s						
ELK	Elko	90.28	48	P	P	04 01 26.1	-0.6
ELK				IAmb	IAmb	04 01 31.8	
	comp=Z,2.8nm,1.1s						
TPNV	Topopah Spring	90.55	52	P	P	04 01 27.2	-0.7
TPNV				IAmb	IAmb	04 01 34.5	
	comp=Z,2.7nm,0.8s						
FINES	FINESS Array B	92.11	335	P	P	04 01 34.1	-0.3
	comp=Z,3.0nm,0.6s,baz=60,slow=4.6,SNR=25						
	comp=Z,3.0nm,0.6s						
GUVIX	Guadalupe Vict	92.74	56	P	P	04 01 36.1	-1.9
PDAR	Pinedale Array	93.69	45	P	P	04 01 43.5	+1.0
	comp=Z,0.5nm,0.7s,baz=241,slow=4.9,SNR=3.9						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	93.69	45	P	P	04 01 41.7	-0.8
OPO	Ambohidratompo	100.03	253	LR	LR	04 44 02.3	
	comp=Z,41nm,18.7s,baz=139,slow=33						
TORD	Torodi Ar. Bea	134.89	303	PKP	PKiKP	04 07 47.6	+0.9
	comp=Z,0.8nm,1.1s,baz=96,slow=2.2,SNR=3.4						
LPAZ	La Paz	148.70	101	PKPbc	PKPbc	04 08 13.6	-0.6
	comp=Z,1.1nm,0.9s,baz=205,slow=3.9,SNR=4.0						

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*IDC **10** 04:02:21.7±0.5, 43°.85N×148°.48E, h0^{km}, mb4.7/42, mbtmp4.7/49, ML3.9/5, MS4.2/55, Error ellipse: s-maj=12.9km s-min=10.3km az=149.0*

*BJI **10** 04:02:24.4±0.0, 43°.95N×148°.46E, h28^{km}, mb4.9/74, mB5.0/54, Ms4.8/74, Ms7 4.7/69*

*NIED **10** 04:02:24.3, 43°.58N×148°.27E, h0^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.79; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-0.94; $M_{r\theta}$1.81; $M_{\theta\phi}$-0.63; $M_{\phi r}$1.89; Fault plane solution: $M_0$3.10000×10^{16} NP1: ϕ_s223.00000°, δ16.00000°, λ89.00000°. NP2: ϕ_s44.00000°, δ74.00000°, λ90.00000°.*

*SKHL **10** 04:02:24.8±0.0, 43°.70N×148°.70E, h37^{km}±3^{km}, mb5.3/12, mbv5.5/5, ms4.9/8*

*JMA **10** 04:02:24.3±0.7, 44°N±2°×14°8E±°, h0^{km}, MD4.9/40, MV5.1/40, SE OFF ETOROFU*

*NEIC **10** 04:02:25.9±1.2, 43°.85N±0°.06×148°.40E±0°.09, h25^{km}±4^{km}, mb5.0/296, Error ellipse: s-maj=9.7km s-min=8.7km az=83.0*

*MOS **10** 04:02:25.0±1.0, 43°.79N×148°.50E, h35^{km}, mb5.3/55,* *MS4.8/20, Error ellipse: s-maj=5.7km s-min=3.9km az=119.7*

GCMT ***10*** *04:02:28.9±0.3, 43°.89N±0°.02×148°.63E±0°.03, h22^{km}, MW4.9/89, Moment Tensor Solution. s50,c55; s89,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.57±.15; $M_{\theta\theta}$-1.03±.10; $M_{\phi\phi}$-1.54±.10; $M_{r\theta}$0.71±.14; $M_{\theta\phi}$-1.34±.06; $M_{\phi r}$1.61±.13; Best double couple: $M_0$3.14800×10^{16} NP1:ϕ_s229.00000°, δ29.00000°, λ106.00000°. NP2: ϕ_s31.00000°, δ62.00000°, λ81.00000°. Principal axes: T 3.1400, Plg72.0000°, Azm281.0000°; N 0.0150, Plg8.0000°, Azm35.0000°; P -3.1560, Plg17.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 04:02:25.8±0.5, **43°.75N**±0°.04×**148°.59E**±0°.04, **h30**^{km}±2^{km}, **h30**^{km}**:pP-P, n964,** σ**1**^{s}**27**/888, **mb5.0**/285, **MS4.6**/93, **166C-88D, Fault plane solution: NP1:**ϕ_s12.27176°, δ69.47088°, λ77.04177°. **NP2:**ϕ_s225.54259°, δ24.12651°, λ120.91447°. **Principal axes:** T Plg63.2919°, Azm261.6134°; N Plg12.1224°, Azm16.8851°; P Plg23.4137°, Azm112.2218°; **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.28**	**276**	*c i*PN	**Pn**	**04 02 46.2**	**-1.4**
SHO				*e*S	**Sn**	**04 03 02.2**	**-1.5**
SHO				pmax	pmax		
	comp=N,398nm,0.3s						
SHO				pmax	pmax		
	comp=E,809nm,0.3s						
SHO				pmax	pmax		
	comp=Z,2µm,0.3s						
SHO				smax	smax		
	comp=N,8µm,0.3s						
SHO				smax	smax		
	comp=E,2µm,0.2s						
SHO	**Shikotan**	**1.28**	**276**	*i* P	**Pn**	**04 02 46.2**	**-1.4**
SHO				AMB	AMB	04 02 47.3	
	comp=E,2µm,0.3s						
SHO				*e*S	**Sn**	**04 03 02.2**	**-1.5**
SHO				A	A	04 03 07.9	
	comp=E,8µm,0.3s						
SHO				A	A	04 03 07.9	
	comp=E,2µm,0.3s						
KUR	**Kuril'sk**	**1.57**	**341**	*c i*PN	**Pn**	**04 02 50.7**	**-0.8**
KUR				*e*S	**Sn**	**04 03 10.3**	**-0.6**
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=N,919nm,0.2s						
KUR				pmax	pmax		
	comp=Z,16µm,5.2s						
KUR				smax	smax		
	comp=N,8µm,0.3s						
KUR				smax	smax		
	comp=E,3µm,0.3s						
KUR				smax	smax		
	comp=E,41µm,2.3s						
KUR				smax	smax		
	comp=N,19µm,2.0s						
KUR	**Kuril'sk**	**1.57**	**341**	*i* P	**Pn**	**04 02 50.8**	**-0.8**
KUR				AMB	AMB	04 02 52.8	
	comp=N,2µm,0.4s						
KUR				AMB	AMB	04 03 06.3	
	comp=N,17µm,5.2s						
KUR				*e*S	**Sn**	**04 03 10.3**	**-0.6**
KUR				A	A	04 03 15.7	
	comp=N,8µm,0.3s						
KUR				A	A	04 03 15.7	
	comp=N,3µm,0.3s						
KUR				A	A	04 03 22.9	
	comp=N,19µm,2.3s						
KUR				A	A	04 03 22.9	
	comp=N,41µm,2.3s						
KUR				AMS	AMS	04 03 41.3	
	comp=N,39µm,15.0s						
YUK	**Yuzh-Kuril'sk**	**1.99**	**279**	⇑*i*PN	**Pn**	**04 02 56.4**	**-1.0**
YUK				*i* S	**Sn**	**04 03 23.4**	**+2.2**
YUK				pmax	pmax		
	comp=N,788nm,0.3s						
YUK				pmax	pmax		
	comp=E,1µm,0.3s						
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				smax	smax		
	comp=E,10µm,0.5s						
YUK				smax	smax		
	comp=N,8µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.99**	**279**	*i* P	**Pn**	**04 02 56.6**	**-0.8**
YUK				AMB	AMB	04 02 57.6	
	comp=N,3µm,0.6s						
YUK				*i* S	**Sn**	**04 03 20.6**	**-0.6**
YUK				A	A	04 03 26.6	
	comp=N,8µm,0.6s						
YUK				A	A	04 03 26.6	
	comp=N,10µm,0.6s						
NEM2	**Nemuro 2**	**2.10**	**260**	*e*P	**Pn**	**04 02 57.5**	**-1.5**
NEM2	**Nemuro 2**	**2.10**	**260**	A	A	04 02 57.5	
	comp=N,14nm,2.8s,comp=N,15nm,3.6s						
NMR	**Nemuro--Hokkai**	**2.11**	**261**	*e*PN	**Pn**	**04 02 57.8**	**-1.3**
NMR				*e*S	**Sn**	**04 03 25.3**	**+1.0**
NMR	**Nemuro--Hokkai**	**2.11**	**261**	*e*P	**Pn**	**04 02 57.2**	**-1.9**
NMR				*e*S	**Sn**	**04 03 22.1**	**-2.2**
RUSJ	**Misakicho**	**2.44**	**279**	⇑*i*PN	**Pn**	**04 03 03.7**	**+0.2**
RUSJ				*e*S	**Sn**	**04 03 35.0**	**+2.7**
JRA	**Rausu**	**2.51**	**275**	*e*P	**Pn**	**04 03 04.3**	**-0.3**
JRA	**Rausu**	**2.51**	**275**	A	A	04 03 04.3	
	comp=N,20nm,2.2s,comp=N,16nm,2.3s						
JKHN	**Kushirohamanak**	**2.58**	**256**	*e*P	**Pn**	**04 03 04.7**	**-0.8**
JKHN	**Kushirohamanak**	**2.58**	**256**	A	A	04 03 04.7	
	comp=N,15nm,2.8s,comp=N,23nm,2.2s						
JNSB	**Nemuroshibetsu**	**2.59**	**272**	*e*P	**Pn**	**04 03 05.6**	**-0.1**
JNSB	**Nemuroshibetsu**	**2.59**	**272**	A	A	04 03 05.6	
	comp=N,24nm,3.3s,comp=N,20nm,5.2s						
AKK	**Akkeshi**	**2.83**	**256**	*i* P	**Pn**	**04 03 07.9**	**-1.0**
AKK				*e*S	**Sn**	**04 03 41.2**	**-0.7**
JAK	**Akkeshi**	**2.93**	**256**	*e*P	**Pn**	**04 03 09.7**	**-0.7**
JAK				*e*S	**Sn**	**04 03 43.4**	**-1.2**
JAK	**Akkeshi**	**2.93**	**256**	A	A	04 03 09.7	
	comp=N,15nm,3.0s,comp=N,14nm,2.0s						
JTKR	**Abashiri--Toko**	**3.39**	**275**	*e*P	**Pn**	**04 03 17.1**	**+0.5**
JTKR	**Abashiri--Toko**	**3.39**	**275**	A	A	04 03 17.1	
	comp=N,3.0nm,2.6s,comp=N,3.0nm,4.3s						
JAR	**Ashorobuto**	**3.53**	**264**	*e*P	**Pn**	**04 03 18.4**	**-0.2**
JAR				*e*S	**Sn**	**04 03 59.4**	**+0.1**
JAR	**Ashorobuto**	**3.53**	**264**	A	A	04 03 18.4	
	comp=N,6.0nm,4.2s,comp=N,6.0nm,1.3s						
JOB	**Onbets**	**3.57**	**258**	A	A	04 03 18.8	
	comp=N,8.0nm,2.7s,comp=N,9.0nm,2.0s						
JCH	**Churui**	**3.98**	**255**	*e*P	**Pn**	**04 03 24.8**	**0.0**
JCH				*e*S	**Sn**	**04 04 10.6**	**+0.1**
JTHR	**Tokachihiroo**	**4.14**	**251**	A	A	04 03 26.7	
	comp=N,6.0nm,1.4s,comp=N,8.0nm,4.7s						
JKK2	**Kamakawa 2**	**4.23**	**274**	*e*P	**Pn**	**04 03 29.0**	**+0.8**
JKA	**Kamikawa-asahi**	**4.34**	**277**		**Pn**	**04 03 30.3**	**+0.6**
JKA	**Kamikawa-asahi**	**4.34**	**277**	*e*P	**Pn**	**04 03 30.3**	**+0.6**
ASAJ	**Asahikawa**	**4.34**	**277**	Pn	**Pn**	**04 03 31.1**	**+1.4**
	comp=N,4.6nm,0.3s,baz=118,slow=11,SNR=32						
ASAJ	**Asahikawa**	**4.34**	**277**	PN	**Pn**	**04 03 30.3**	**+0.6**
JEM	**Erimo**	**4.35**	**248**	A	A	04 03 29.6	
	comp=N,7.0nm,4.0s,comp=N,5.0nm,4.1s						
ERM	**Erimo**	**4.35**	**248**	*c i*PN	**Pn**	**04 03 31.1**	**+1.3**
ERM	**Erimo**	**4.35**	**248**		**Pn**	**04 03 30.7**	**+0.9**
ERM				Sn	**Sn**	**04 04 17.1**	**-2.4**
JSE	**Soyaes**	**4.47**	**288**	*e*P	**Pn**	**04 03 32.3**	**+0.9**
JNBK	**Urakawa-nobuka**	**4.52**	**253**	*e*P	**Pn**	**04 03 32.1**	**-0.1**
JNBK	**Urakawa-nobuka**	**4.52**	**253**	A	A	04 03 32.1	
	comp=N,6.0nm,1.4s,comp=N,7.0nm,1.6s						
JAB	**Ashibetsu**	**4.62**	**269**	A	A	04 03 34.2	
	comp=N,5.0nm,3.4s,comp=N,5.0nm,5.2s						
JSHD	**Hidakashinhida**	**4.68**	**255**	A	A	04 03 34.4	
	comp=N,10.0nm,1.3s,comp=N,8.0nm,3.7s						
JSS	**Shosan**	**4.89**	**280**	*e*P	**Pn**	**04 03 39.5**	**+2.2**
JHR	**Hokuryu**	**4.97**	**272**	*e*P	**Pn**	**04 03 40.4**	**+2.0**
JHR	**Hokuryu**	**4.97**	**272**	A	A	04 03 40.4	
	comp=N,6.0nm,3.8s,comp=N,6.0nm,4.4s						
JIAM	**Iburiatsuma**	**5.00**	**259**	A	A	04 03 39.1	
	comp=N,11nm,5.1s,comp=N,16nm,1.4s						
JWK2	**Keihoku**	**5.03**	**290**	*e*P	**Pn**	**04 03 41.9**	**+2.8**
YSS	**Yuzh-Sakhalins**	**5.21**	**310**	*ce*PN	**Pn**	**04 03 42.5**	**+0.9**
YSS				*e*S	**Sn**	**04 04 46.6**	**+6.0**
YSS				pmax	pmax		
	comp=Z,400nm,2.7s						
YSS				pmax	pmax		
	comp=Z,210nm,0.9s						
YSS				smax	smax		
	comp=E,170nm,1.2s						
YSS				MLR	MLR		
	comp=E,3µm,14.0s						
YSS				MLR	MLR		
	comp=Z,6µm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.21**	**310**		**Pn**	**04 03 39.7**	**-1.9**
YSS	**Yuzh-Sakhalins**	**5.21**	**310**	*e*P	**Pn**	**04 03 42.5**	**+0.9**
YSS				AMB	AMB	04 03 44.1	
	comp=Z,400nm,2.7s						
YSS				AMB	AMB	04 03 54.1	
	comp=Z,240nm,0.7s						
YSS				*e*S	**Sn**	**04 04 40.7**	**+0.1**
YSS				A	A	04 04 53.3	
	comp=Z,130nm,0.5s						
YSS				A	A	04 04 53.3	
	comp=Z,60nm,0.5s						
YSS				AMS	AMS	04 05 49.5	
	comp=Z,6µm,12.0s						
YSS				AMS	AMS	04 05 49.5	
	comp=Z,5µm,12.0s						
JEW	**Eniwo**	**5.29**	**263**		**Pn**	**04 03 42.8**	**+0.1**
JEW	**Eniwo**	**5.29**	**263**	*e*P	**Pn**	**04 03 44.9**	**+2.2**
JEW	**Eniwo**	**5.29**	**263**	A	A	04 03 44.9	
	comp=Z,5.0nm,5.9s,comp=Z,4.0nm,5.9s						
JRBN	**Rebuntou**	**5.62**	**290**	*e*P	**Pn**	**04 03 48.7**	**+1.4**
JKB	**Kayabe**	**5.86**	**254**	A	A	04 03 51.0	
	comp=Z,5.0nm,1.5s,comp=Z,5.0nm,5.7s						
JOT	**Ohata**	**6.05**	**250**	*e*P	**Pn**	**04 03 52.9**	**-0.2**
JANG	**Nango**	**6.25**	**240**	*e*P	**Pn**	**04 03 54.4**	**-1.5**
JANG				*e*S	**Sn**	**04 05 00.7**	**-5.7**
JTM	**Tenmabayashi**	**6.31**	**245**	Pn	**Pn**	**04 03 56.4**	**-0.5**
JOMM	**Oshimamatsumae**	**6.71**	**254**	*e*P	**Pn**	**04 04 02.1**	**-0.1**
JOSM	**Okushiri--Mats**	**6.89**	**259**	*e*P	**Pn**	**04 04 05.1**	**+0.3**
JOSM				*e*S	**Sn**	**04 05 20.4**	**-1.7**
JOM	**Ohasama**	**6.94**	**234**	*e*P	**Pn**	**04 04 03.6**	**-1.8**
JOM				*e*S	**Sn**	**04 05 16.6**	**-6.7**
UGL	**Uglegorsk**	**6.97**	**322**	*e*PN	**Pn**	**04 04 08.2**	**+2.4**
UGL				pmax	pmax		
	comp=Z,159nm,1.2s						
UGL				MLR	MLR		
	comp=E,3µm,14.0s						
UGL				MLR	MLR		
	comp=N,7µm,15.0s						
UGL	**Uglegorsk**	**6.97**	**322**	*e*P	**Pn**	**04 04 07.9**	**+2.1**
UGL				AMB	AMB	04 04 09.7	
	comp=N,160nm,9.0s						
UGL				*e*S	**Sn**	**04 05 23.9**	**-0.2**
UGL				A	A	04 05 55.4	
	comp=N,30nm,0.8s						
UGL				A	A	04 05 55.4	
	comp=N,70nm,0.8s						
UGL				AMS	AMS	04 07 19.8	
	comp=N,5µm,19.0s						
UGL				AMS	AMS	04 07 19.8	
	comp=N,11µm,19.0s						
UGL				AMS	AMS	04 07 19.8	
	comp=N,6µm,19.0s						
TYV	**Tymovskoe**	**8.17**	**333**	*e*PN	**Pn**	**04 04 25.8**	**+3.5**
TYV				pmax	pmax		
	comp=Z,500nm,4.8s						
TYV				pmax	pmax		
	comp=Z,28nm,0.9s						
TYV				MLR	MLR		
	comp=N,4µm,16.0s						
TYV				MLR	MLR		
	comp=Z,4µm,16.0s						
TYV	**Tymovskoe**	**8.17**	**333**	*e*P	**Pn**	**04 04 24.5**	**+2.2**
TYV				AMB	AMB	04 04 27.5	
	comp=Z,500nm,4.8s						
TYV				AMB	AMB	04 04 29.2	
	comp=Z,30nm,0.9s						
TYV				*e*S	**Sn**	**04 05 53.3**	**-0.2**
TYV				A	A	04 05 57.3	
	comp=Z,30nm,0.7s						
TYV				A	A	04 05 57.3	
	comp=Z,30nm,0.7s						
TYV				A	A	04 06 01.8	
	comp=Z,300nm,6.7s						
TYV				A	A	04 06 01.8	
	comp=Z,400nm,6.7s						
TYV				AMS	AMS	04 07 33.0	
	comp=Z,4µm,16.0s						
TYV				AMS	AMS	04 07 33.0	
	comp=Z,4µm,16.0s						
SKR	**Severo-Kuril's**	**8.62**	**34**	*e*PN	**Pn**	**04 04 27.4**	**-1.0**
SKR				pmax	pmax		
	comp=Z,34nm,0.4s						
SKR				MLR	MLR		
	comp=Z,2µm,12.0s						
SKR				MLR	MLR		
	comp=N,2µm,14.0s						
SKR				MLR	MLR		
	comp=Z,2µm,13.0s						
SKR				MLR	MLR		
	comp=N,2µm,12.0s						
SKR	**Severo-Kuril's**	**8.62**	**34**	*e*P	**Pn**	**04 04 28.5**	**+0.1**
SKR				AMB	AMB	04 04 30.7	
	comp=N,40nm,0.4s						
SKR				*e*S	**Sn**	**04 06 01.6**	**-2.9**
SKR				A	A	04 06 07.6	
	comp=N,50nm,0.6s						
SKR				A	A	04 06 07.6	
	comp=N,20nm,0.6s						
SKR				AMS	AMS	04 08 02.5	
	comp=N,4µm,13.0s						
SKR				AMS	AMS	04 08 02.5	
	comp=N,2µm,13.0s						
SKR				AMS	AMS	04 08 02.5	
	comp=N,2µm,13.0s						
TEY	**Ternei**	**8.68**	**283**	*ce*PN	**Pn**	**04 04 30.8**	**+1.6**
TEY				pmax	pmax		
	comp=E,100nm,5.3s						
TEY				pmax	pmax		
	comp=Z,100nm,5.0s						
TEY	**Ternei**	**8.68**	**283**	*e*P	**Pn**	**04 04 30.8**	**+1.6**
TEY				AMB	AMB	04 04 32.4	
	comp=Z,900nm,5.3s						
TEY				AMB	AMB	04 04 32.4	
	comp=Z,1µm,5.3s						
PAU	**Pauzhetka**	**9.50**	**33**	*e*P	**Pn**	**04 04 40.6**	**+0.1**
PAU				AMB	AMB	04 04 43.3	
	comp=Z,20nm,1.0s						
JSD	**Sado**	**9.68**	**237**	Pn	**Pn**	**04 04 41.8**	**-1.1**
OKH	**Okha**	**10.49**	**341**	*de*PN	**Pn**	**04 04 51.1**	**-2.9**
OKH				pmax	pmax		
	comp=Z,100nm,13.7s						
OKH				MLR	MLR		
	comp=Z,3µm,16.0s						
OKH				MLR	MLR		
	comp=E,4µm,15.0s						
OKH				MLR	MLR		
	comp=N,4µm,14.0s						
OKH	**Okha**	**10.49**	**341**	*e*P	**Pn**	**04 04 55.7**	**+1.7**
OKH				AMB	AMB	04 04 57.5	
	comp=N,40nm,0.6s						
OKH				AMB	AMB	04 05 03.5	
	comp=N,800nm,7.0s						
OKH				AMS	AMS	04 09 57.0	
	comp=N,3µm,15.0s						
OKH				AMS	AMS	04 09 57.0	
	comp=N,4µm,15.0s						
OKH				AMS	AMS	04 09 57.0	
	comp=N,3µm,15.0s						
KHBR	**Khabarovsk**	**10.51**	**301**	*e*P	**Pn**	**04 04 56.0**	**+1.7**
KHBR				AMB	AMB	04 05 02.2	
	comp=N,10.0nm,1.0s						
MJAR	**Matsushiro Arr**	**10.71**	**231**	Pn	**Pn**	**04 04 55.9**	**-1.3**
	comp=N,0.1nm,0.3s,baz=34,slow=14,SNR=26						
MJAR				Sn	**Sn**	**04 06 54.1**	**-2.0**
	comp=N,0.2nm,0.3s,baz=321,slow=16,SNR=4.3						
	comp=N,12nm,0.9s						
MJAR	**Matsushiro Arr**	**10.71**	**231**		**Pn**	**04 04 54.3**	**-2.9**
MJB9	**Matsu-Tunnel**	**10.71**	**231**		**Pn**	**04 04 56.5**	**-0.7**
MAJO	**Matsushiro**	**10.71**	**231**	PN	**Pn**	**04 04 56.5**	**-0.7**
MAJO	**Matsushiro**	**10.71**	**231**	Pn	**Pn**	**04 04 56.5**	**-0.7**
NKL	**Nikolayevsk**	**10.76**	**334**	*e*PN	**Pn**	**04 04 56.5**	**-1.2**
NKL				pmax	pmax		
	comp=N,1.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,35nm,1.0s						
NKL	**Nikolayevsk**	**10.76**	**334**	*e*P	**Pn**	**04 04 59.6**	**+1.9**
NKL				AMB	AMB	04 05 02.5	
	comp=Z,50nm,0.9s						
NKL				AMS	AMS	04 09 30.0	
	comp=Z,2µm,15.0s						
NKL				AMS	AMS	04 09 30.0	
	comp=Z,3µm,15.0s						
NKL				AMS	AMS	04 09 30.0	
	comp=Z,2µm,15.0s						
GRNR	**Gornyy**	**10.84**	**315**	⇓*i*PN	**Pn**	**04 05 02.8**	**+4.0**
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR				MLR	MLR		
	comp=E,2µm,19.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,16.0s						
GRNR	**Gornyy**	**10.84**	**315**	*i* P	**Pn**	**04 05 00.4**	**+1.6**
GRNR				AMB	AMB	04 05 06.8	
	comp=Z,40nm,0.7s						
GRNR				AMS	AMS	04 09 19.0	
	comp=Z,2µm,19.0s						
GRNR				AMS	AMS	04 09 19.0	
	comp=Z,2µm,16.0s						
PEA0B	**Petropavlovsk-**	**11.14**	**30**	⇓*e*PN	**Pn**	**04 05 02.8**	**-0.1**
PEA0B	**Petropavlovsk-**	**11.14**	**30**	Pn	**Pn**	**04 05 03.3**	**+0.4**
PETK	**Petropavlovsk-**	**11.14**	**30**	Pn	**Pn**	**04 05 03.1**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=213,slow=15,SNR=8.1						
PETK				LR	LR	04 09 58.7	
	comp=Z,2µm,18.2s,baz=228,slow=41						
	comp=Z,2.1nm,0.5s						
PETK	**Petropavlovsk-**	**11.14**	**30**		**Pn**	**04 05 02.7**	**-0.2**
PET	**Petropavlovsk**	**11.43**	**32**	*e*PN	**Pn**	**04 05 05.8**	**-1.0**
PET	**Petropavlovsk**	**11.43**	**32**	*e*P	**Pn**	**04 05 07.1**	**+0.3**
PET				AMB	AMB	04 05 08.2	
	comp=Z,60nm,0.6s						
PET				AMS	AMS	04 12 09.8	
	comp=Z,1µm,14.0s						
PET				AMS	AMS	04 12 09.8	
	comp=Z,1µm,14.0s						
PET				AMS	AMS	04 12 09.8	
	comp=Z,2µm,14.0s						
JGF	**Kuroka**	**11.87**	**230**	Pn	**Pn**	**04 05 12.4**	**-0.6**
GRTR	**Gornotajezhnoj**	**11.89**	**275**	*e*P	**Pn**	**04 05 14.0**	**+0.8**
GRTR				AMB	AMB	04 05 19.1	
	comp=Z,30nm,1.0s						
USA0B	**Ussuriysk Arra**	**11.97**	**278**	PN	**Pn**	**04 05 12.8**	**-1.5**
USA0B	**Ussuriysk Arra**	**11.97**	**278**		**Pn**	**04 05 12.8**	**-1.5**
USRK	**Ussuriysk Ar.**	**11.97**	**278**	Pn	**Pn**	**04 05 13.7**	**-0.6**
	comp=Z,12nm,0.9s,baz=83,slow=13,SNR=16						
USRK				LR	LR	04 10 02.0	
	comp=Z,3µm,18.3s,baz=80,slow=39						
USRK	**Ussuriysk Ar.**	**11.97**	**278**	Pn	**Pn**	**04 05 12.8**	**-1.5**
VLA	**Vladivostok**	**12.16**	**273**	⇓*e*PN	**Pn**	**04 05 17.2**	**+0.3**
VLA	**Vladivostok**	**12.16**	**273**	*e*P	**Pn**	**04 05 17.2**	**+0.3**
INU	**Inuyama**	**12.24**	**231**	Pn	**Pn**	**04 05 16.1**	**-1.9**
JHJ	**Hachijo jima 2**	**12.65**	**216**	LR	LR	04 09 15.4	
	comp=Z,290nm,21.5s,baz=76,slow=33						
MSHR	**Mys Shultsa**	**12.78**	**271**	⇑*e*PN	**Pn**	**04 05 25.8**	**+0.4**
KLR	**Kul'dur**	**12.82**	**301**	Pn	**Pn**	**04 05 26.3**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=100,slow=13,SNR=18						
KLR				LR	LR	04 10 44.1	
	comp=Z,3µm,18.1s,baz=110,slow=40						
KLR	**Kul'dur**	**12.82**	**301**	*c i*PN	**Pn**	**04 05 26.9**	**+1.0**
KLR				pmax	pmax		
	comp=Z,39nm,1.3s						
KLR				MLR	MLR		
	comp=Z,3µm,14.0s						
KLR	**Kul'dur**	**12.82**	**301**	*i* P	**Pn**	**04 05 26.9**	**+1.0**
KLR				AMB	AMB	04 05 28.3	
	comp=Z,30nm,0.8s						
KLR				AMS	AMS	04 11 22.9	
	comp=Z,3µm,14.0s						
MDJ	**Mudanjiang**	**13.66**	**280**	Pn	**Pn**	**04 05 35.9**	**-1.4**
MDJ	**Mudanjiang**	**13.66**	**280**	P	**Pn**	**04 05 36.9**	**-0.5**
MDJ				pP	P	04 05 44.3	-1.5
MDJ				S	**Sn**	**04 08 08.2**	**+0.2**
MDJ				SS	**SnSn**	**04 08 22.6**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,3.8s						
MDJ				LR	LR		
	comp=Z,1µm,12.8s						
MDJ				LR	LR		
	comp=Z,3µm,15.5s						
MDJ				LR	LR		
	comp=Z,4µm,15.7s						
JHS	**Saijyo**	**14.80**	**239**	Pn	**Pn**	**04 05 50.5**	**-2.5**
BNX	**BinXian**	**15.18**	**285**	⇑P	**Pn**	**04 05 57.6**	**-0.3**
BNX				pmax	pmax		
	comp=Z,57nm,1.0s						
BNX				pmax	pmax		
	comp=Z,300nm,4.1s						
MA2	**Magadan**	**15.90**	**4**	Pn	**Pn**	**04 06 05.7**	**-1.5**
	comp=Z,10.0nm,0.5s,baz=154,slow=8.4,SNR=8.0						
MA2				LR	LR	04 12 21.7	
	comp=Z,996nm,18.7s,baz=194,slow=38						
MA2	**Magadan**	**15.90**	**4**	*de*P	**Pn**	**04 06 06.3**	**-0.9**
MA2				pmax	pmax		
	comp=Z,25nm,1.0s						
MA2	**Magadan**	**15.90**	**4**	Pn	**Pn**	**04 06 05.2**	**-2.0**
MA2	**Magadan**	**15.90**	**4**	*e*P	**Pn**	**04 06 06.3**	**-0.9**
MA2				AMB	AMB	04 06 08.2	
	comp=Z,30nm,1.0s						
OKHT	**Okhotsk**	**15.97**	**350**	*e*P	**Pn**	**04 06 07.1**	**-0.9**
OKHT				AMB	AMB	04 06 09.3	
	comp=Z,20nm,0.8s						
CN2	**Changchun**	**16.70**	**278**	*e*P	**Pn**	**04 06 14.5**	**-3.0**
CN2				*e*PP	**pP**	**04 06 28.6**	**+2.0**
CN2				*e*S	**Sn**	**04 09 16.9**	**-5.1**
CN2				*e*sS	S	04 09 29.0	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
KSRS	**Korea Array**	**16.89**	**255**	Pn	**Pn**	**04 06 18.1**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=18						
KSRS				LR	LR	04 12 43.8	
	comp=Z,1µm,21.2s,baz=60,slow=37						
	comp=Z,5.8nm,0.8s						
KSAR	**Wonju Array Be**	**16.92**	**255**	P	**Pn**	**04 06 17.2**	**-3.0**
KSAR	**Wonju Array Be**	**16.92**	**255**	Pn	**Pn**	**04 06 17.2**	**-3.0**
KSAR					**PcP**	**04 11 06.1**	**+0.2**
ZEA	**Zeya**	**17.19**	**313**	*e*P	**Pn**	**04 06 22.5**	**-1.0**
ZEA				pmax	pmax		
	comp=E,200nm,4.4s						
ZEA				pmax	pmax		
	comp=N,100nm,4.2s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.5s						
ZEA				pmax	pmax		
	comp=E,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.2s						
ZEA				MLR	MLR		
	comp=E,600nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
ZEA	**Zeya**	**17.19**	**313**	*e*P	**Pn**	**04 06 21.5**	**-2.0**
ZEA				AMB	AMB	04 06 27.1	
	comp=Z,100nm,1.0s						
ZEA				AMB	AMB	04 06 27.1	
	comp=Z,200nm,1.0s						
ZEA				AMB	AMB	04 06 27.1	
	comp=Z,10.0nm,1.0s						
ZEA				AMB	AMB	04 06 30.7	
	comp=Z,100nm,4.4s						
ZEA				AMB	AMB	04 06 30.7	
	comp=Z,200nm,4.4s						
ZEA				AMB	AMB	04 06 30.7	
	comp=Z,300nm,4.4s						
ZEA				AMS	AMS	04 13 28.0	
	comp=Z,600nm,17.0s						
ZEA				AMS	AMS	04 13 28.0	
	comp=Z,1µm,17.0s						
JNU	**Nakatsue**	**17.43**	**238**	P	**Pn**	**04 06 25.7**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=7.1,slow=8.1,SNR=5.0						
	comp=Z,64nm,1.0s						
JNU	**Nakatsue**	**17.43**	**238**	P	**Pn**	**04 06 27.3**	**+0.6**
JNU				IAmb	IAmb	04 06 31.9	
	comp=Z,119nm,1.2s						
KROS	**Kirovskiy**	**17.66**	**315**	*e*P	**Pn**	**04 06 27.5**	**-1.9**
KROS				AMB	AMB	04 06 39.8	

	comp=Z,20nm,0.8s						
PYAG	Pyongyang	17.74	262	P	P	04 06 31.5	+0.5
INCN	Inchon	17.78	257	P	Pn	04 06 27.8	-3.2
INCN				pmax	pmax		
	comp=Z,64nm,1.0s						
INCN	Inchon	17.78	257	P	Pn	04 06 27.8	-3.2
TJN	Taejon	17.81	253	d iP	Pn	04 06 30.7	-0.6
TJN	Taejon	17.81	253	P	Pn	04 06 29.9	-1.4
TJN				IAmb	IAmb	04 06 32.1	
	comp=Z,199nm,1.2s						
HJU	Haeju	18.17	260	P	P	04 06 36.2	+0.4
HJU				pP	pP	04 06 42.4	-0.4
HJU				S	S	04 10 51.8	+49
HJU				AmB			
	comp=Z,243nm,1.2s						
HJU				AMS	AMS		
	comp=N,210nm,2.6s						
HJU				AMS	AMS		
	comp=E,172nm,2.2s						
HJU				AMS	AMS		
	comp=Z,165nm,2.1s						
SUJ	Sinuiju	18.27	267	P	P	04 06 36.5	-0.5
SUJ				pP	sP	04 06 46.1	-1.2
SUJ				S	S	04 10 51.9	+48
SUJ				AmB			
	comp=Z,144nm,0.9s						
SUJ				AMS	AMS		
	comp=N,2µm,16.7s						
SUJ				AMS	AMS		
	comp=E,903nm,7.3s						
SUJ				AMS	AMS		
	comp=Z,1µm,9.3s						
JSU	Suzuyama	18.81	236	P	P	04 06 40.6	-2.4
JSU				IAmb	IAmb	04 06 47.9	
	comp=Z,129nm,1.2s						
SEY	Seymchan	19.34	5	P	P	04 06 46.8	-1.7
	comp=Z,1.5nm,0.3s,baz=182,slow=8.8,SNR=61						
SEY				LR	LR	04 14 32.5	
	comp=Z,1µm,18.7s,baz=185,slow=38						
	comp=Z,19nm,0.6s						
DL2	Dalian	20.77	266	P	P	04 07 03.7	-0.5
DL2				S	S	04 10 56.2	+1.8
DL2				pmax	pmax		
	comp=Z,34nm,1.2s						
DL2				pmax	pmax		
	comp=Z,150nm,3.9s						
DL2				LR	LR		
	comp=Z,580nm,16.1s						
DL2				LR	LR		
	comp=Z,730nm,15.3s						
DL2				LR	LR		
	comp=Z,990nm,13.5s						
YAK	Yakutsk	21.42	335	d iP	P	04 07 07.6	-3.3
YAK				ePPP	PPP	04 07 36.4	
YAK				eS	S	04 11 06.0	-0.8
YAK				e*SS	Sn	04 11 12.0	-3.4
YAK				eSSS	SSS	04 11 45.5	
YAK				e		04 18 30.8	
YAK				pmax	pmax		
	comp=Z,81nm,1.0s						
YAK				pmax	pmax		
	comp=N,28nm,1.1s						
YAK				pmax	pmax		
	comp=E,20nm,1.0s						
YAK				pmax	pmax		
	comp=Z,123nm,1.9s						
YAK				pmax	pmax		
	comp=E,69nm,1.9s						
YAK				pmax	pmax		
	comp=N,96nm,2.2s						
YAK				smax	smax		
	comp=N,99nm,2.5s						
YAK				smax	smax		
	comp=E,87nm,2.1s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=N,1µm,17.0s						
YAK				MLR	MLR		
	comp=E,610nm,17.0s						
YAK	Yakutsk	21.42	335	P	P	04 07 07.4	-3.5
XLT	XiLinHaoTe	23.37	282	⇑iP	P	04 07 31.5	-0.3
XLT				pP	sP	04 07 41.7	-0.7
XLT				S	S	04 11 43.2	+0.4
XLT				sS	sS	04 11 54.5	-2.4
XLT				pmax	pmax		
	comp=E,55nm,0.9s						
XLT				pmax	pmax		
	comp=E,240nm,4.3s						
XLT				LR	LR		
	comp=E,2µm,15.3s						
XLT				LR	LR		
	comp=E,2µm,16.0s						
BJI	Beijing	24.32	272	P	P	04 07 39.8	-0.9
BJI				S	S	04 11 56.9	-0.9
BJI				sS	sS	04 12 13.9	+3.0
BJI				pmax	pmax		
	comp=E,75nm,1.3s						
BJI				pmax	pmax		
	comp=E,280nm,5.0s						
BJI				LR	LR		
	comp=E,1µm,14.6s						
BJI				LR	LR		
	comp=E,800nm,18.1s						
BJI				LR	LR		
	comp=E,1µm,18.9s						
BJT	Baijiatuau	24.33	272	P	P	04 07 39.3	-1.5
BJT				pmax	pmax		
	comp=Z,121nm,1.3s						
BJT	Baijiatuau	24.33	272	P	P	04 07 39.3	-1.5
SSE	Sheshan	25.03	249	P	P	04 07 49.1	+1.9
SSE				S	S	04 12 15.5	+6.1
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,220nm,9.9s						
SSE				LR	LR		
	comp=Z,560nm,19.1s						
SSE				LR	LR		
	comp=Z,340nm,19.0s						
TIA	Tai'an	25.15	263	⇑P	P	04 07 48.0	-0.2
TIA				pmax	pmax		
	comp=Z,47nm,1.6s						
TIA				pmax	pmax		
	comp=Z,320nm,3.5s						
TIA				LR	LR		
	comp=Z,470nm,15.1s						
TIA				LR	LR		
	comp=Z,450nm,15.7s						
TIA				LR	LR		
	comp=Z,680nm,17.2s						
BOD	Bodaibo	25.66	315	eP	P	04 07 48.5	-4.1
BOD				pmax	pmax		
	comp=Z,17nm,1.3s						
NJ2	Nanjing	26.07	253	eP	P	04 08 00.4	+3.8
NJ2				pP	pwP	04 08 09.9	+1.1
NJ2				pmax	pmax		
	comp=Z,52nm,0.9s						
NJ2				LR	LR		
	comp=Z,2µm,15.5s						
NJ2				LR	LR		
	comp=Z,1µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,16.9s						
BILL	Bilibino	26.08	15	⇓eP	P	04 07 55.0	-1.4
BILL				e		04 08 38.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s						
BILL	Bilibino	26.08	15	P	P	04 07 55.2	-1.2
HNS	HongShan	26.38	268	⇑P	P	04 07 59.6	+0.3
HNS				pP	sP	04 08 09.0	-1.1
HNS				PcP	PcP	04 11 24.6	+0.2
HNS				eS	S	04 12 27.4	-3.2
HNS				sS	sS	04 12 42.1	-1.5
HNS				SS	SnSn	04 13 42.4	+10
HNS				pmax	pmax		
	comp=Z,46nm,1.5s						
HNS				pmax	pmax		
	comp=Z,280nm,4.9s						
HNS				LR	LR		
	comp=Z,760nm,14.7s						
HNS				LR	LR		
	comp=Z,780nm,15.5s						
HNS				LR	LR		
	comp=Z,1µm,16.1s						
HHC	Hu-ho-hao-te	27.39	277	eP	P	04 08 08.8	+0.2
HHC				pP	pP	04 08 17.5	+1.3
HHC				S	S	04 12 49.1	+2.3
HHC				sS	sS	04 13 03.8	+3.8
HHC				pmax	pmax		
	comp=Z,61nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,5.4s						
HHC				LR	LR		
	comp=Z,1µm,13.9s						
HHC				LR	LR		
	comp=Z,2µm,17.3s						
HHC				LR	LR		
	comp=Z,3µm,15.5s						
H11N2	WAKE ISLAND Hy	28.44	142	T	T	04 39 14.3	
	baz=332,slow=75,SNR=369						
H11N1	WAKE ISLAND Hy	28.45	142	T	T	04 39 14.5	
	baz=332,slow=75,SNR=350						
H11N3	WAKE ISLAND Hy	28.46	142	T	T	04 39 20.7	
	baz=332,slow=75,SNR=525						
BTO	Baotou	28.58	277	eP	P	04 08 19.5	+0.3
BTO				S	S	04 13 06.0	+0.5
BTO				LR	LR		
	comp=Z,4µm,16.1s						
BTO				LR	LR		
	comp=Z,4µm,16.5s						
ULN	Ulaanbaatar	28.98	293	c iP	P	04 08 22.2	-0.6
ULN				pmax	pmax		
	comp=Z,38nm,1.0s						
LYN	LuoYang	29.28	264	⇓P	P	04 08 26.2	+0.8
LYN				pP	sP	04 08 35.6	-0.6
LYN				PP	PP	04 09 26.1	-5.5
LYN				pmax	pmax		
	comp=Z,30nm,1.3s						
LYN				LR	LR		
	comp=Z,580nm,13.1s						
LYN				LR	LR		
	comp=Z,480nm,14.7s						
LYN				LR	LR		
	comp=Z,920nm,14.9s						
H11S1	WAKE ISLAND Hy	29.43	143	T	T	04 40 33.1	
	baz=333,slow=76,SNR=1010						
SONM	Songino Array	29.43	293	P	P	04 08 26.5	-0.2
	comp=Z,17nm,0.9s,baz=81,slow=8.3,SNR=44						
SONM				LR	LR	04 21 23.8	
	comp=Z,2µm,18.9s,baz=72,slow=39						
	comp=Z,17nm,0.9s						
SONM	Songino Array	29.43	293	P	P	04 08 23.6	-3.1
SONM				IAmb	IAmb	04 08 27.6	
	comp=Z,22nm,1.0s						
H11S3	WAKE ISLAND Hy	29.43	143	T	T	04 40 26.2	
	baz=333,slow=76,SNR=570						
H11S2	WAKE ISLAND Hy	29.45	143	T	T	04 40 28.8	
	baz=333,slow=76,SNR=606						
TIXI	Tiksi	29.58	347	LR	LR	04 21 10.8	
	comp=Z,363nm,18.8s,baz=180,slow=38						
TIXI	Tiksi	29.58	347	⇑eP	P	04 08 22.5	-5.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,796nm,16.0s						
WHN	Wuhan	30.08	256	⇓P	P	04 08 33.0	+0.6
WHN				S	S	04 13 35.2	+6.2
WHN				LR	LR		
	comp=Z,1µm,16.5s						
WHN				LR	LR		
	comp=Z,2µm,11.5s						
WHN				LR	LR		
	comp=Z,3µm,16.7s						
TPUB	Ta-pu	30.73	237	P	P	04 08 38.0	-0.3
TPUB				IAmb	IAmb	04 08 40.3	
	comp=Z,28nm,0.9s						
ZAK	Zakamensk	31.16	298	eP	P	04 08 41.0	-1.0
ZAK				e		04 11 36.0	
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN	Xi'an	32.09	266	P	P	04 08 49.7	-0.5
XAN				pP	sP	04 09 00.2	-0.9
XAN				S	S	04 14 01.0	+0.4
XAN				pmax	pmax		
	comp=Z,26nm,1.5s						
XAN				pmax	pmax		
	comp=Z,140nm,6.9s						
XAN				LR	LR		
	comp=Z,350nm,12.9s						
XAN				LR	LR		
	comp=Z,690nm,15.1s						
XAN				LR	LR		
	comp=Z,940nm,16.7s						
TNA	Tin City	32.29	32	P	P	04 08 51.0	-0.5
	baz=250						
MOY	Mondy	32.49	301	eP	P	04 08 53.2	-0.4
MOY				pmax	pmax		
	comp=Z,18nm,1.4s						
FALS	False Pass	32.58	53	P	P	04 08 54.5	+0.3
	baz=271						
KNGR	Kungurtug, Tuv	34.79	300	⇓eP	P	04 09 13.3	-0.3
LZH	Lanzhou	34.81	273	⇑P	P	04 09 14.7	+0.7
LZH				pP	sP	04 09 25.9	+1.0
LZH				sP	pwP	04 09 29.3	+2.9
LZH				S	S	04 14 41.1	-1.8
LZH				sS	sS	04 14 54.8	-1.7
LZH				pmax	pmax		
	comp=Z,100nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
LZH				LR	LR		
	comp=Z,920nm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
RDOG	Red Dog Mine	35.01	29	P	P	04 09 16.1	+0.9
RDOG				IAmb	IAmb	04 09 27.7	
	comp=Z,15nm,1.2s						
RDOG	Red Dog Mine	35.01	29	P	P	04 09 15.6	+0.4
	baz=252						
GTA	Gaotai	36.32	280	⇑P	P	04 09 27.5	+0.6
GTA				pP	pwP	04 09 39.3	0.0
GTA				sP	sP	04 09 43.5	+5.7
GTA				ScS	ScS	04 19 43.3	+1.8
GTA				pmax	pmax		
	comp=Z,37nm,1.2s						
GTA				pmax	pmax		
	comp=Z,180nm,7.6s						
GTA				LR	LR		
	comp=Z,810nm,15.9s						
GTA				LR	LR		
	comp=Z,1µm,14.3s						
GTA				LR	LR		
	comp=Z,2µm,14.3s						
N18K	Kilae Creek	36.70	43	P	P	04 09 29.9	+0.2
N18K				IAmb	IAmb	04 09 32.8	
	comp=Z,16nm,0.9s						
N18K	Kilae Creek	36.70	43	P	P	04 09 31.1	+1.3
	baz=269						
TTA	Tatalina	36.77	39	P	P	04 09 31.6	+1.2
TTA				pmax	pmax		
	comp=Z,18nm,1.2s						
TTA	Tatalina	36.77	39	P	P	04 09 31.6	+1.2
TTA				IAmb	IAmb	04 09 46.6	
	comp=Z,18nm,1.2s						
TTA	Tatalina	36.77	39	P	P	04 09 31.4	+1.0
	baz=266						
P18K	Big Mountain,	37.02	45	P	P	04 09 33.3	+0.8
	baz=271						
O18K	Koktuh Hills	37.03	44	P	P	04 09 33.2	+0.6
	baz=270						
L19K	White Mountain	37.26	40	P	P	04 09 34.6	+0.1
	baz=268						
N19K	Bonanza Creek	37.40	43	P	P	04 09 36.8	+1.1
	baz=270						
CD2	Chengdu	37.44	265	⇑iP	P	04 09 36.2	-0.2
CD2				S	S	04 15 21.3	-1.7
CD2				pmax	pmax		
	comp=Z,80nm,1.0s						
CD2				pmax	pmax		
	comp=Z,100nm,8.2s						
CD2				LR	LR		
	comp=Z,60nm,13.5s						
CD2				LR	LR		
	comp=Z,530nm,17.1s						
CD2				LR	LR		
	comp=Z,580nm,17.3s						
M19K	Big River Lodg	37.47	41	P	P	04 09 37.8	+1.5
	baz=268						
K20K	Telida	37.69	38	P	P	04 09 39.1	+1.0
K20K	Telida	37.69	38	P	P	04 09 39.1	+1.0
	baz=267						
J20K	Nowinta River	37.71	37	P	P	04 09 39.0	+0.8
J20K	Nowinta River	37.71	37	P	P	04 09 39.4	+1.1
	baz=266,SNR=5.7						
L20K	Farewell, AK	37.73	40	P	P	04 09 39.3	+0.8
	baz=268						
GYA	Guiyang	37.93	257	⇓P	P	04 09 40.7	0.0
GYA				pmax	pmax		
	comp=Z,28nm,1.3s						
GYA				LR	LR		
	comp=Z,630nm,14.6s						
GYA				LR	LR		
	comp=Z,1µm,17.5s						
GYA				LR	LR		
	comp=Z,2µm,13.0s						
IMAR	Indian Mountai	38.06	34	P	P	04 09 42.3	+1.1
M20K	Styx River	38.06	41	P	P	04 09 42.6	+1.3
M20K				IAmb	IAmb	04 09 57.5	
	comp=Z,22nm,1.4s						
H21K	Melozitna Rive	38.41	35	P	P	04 09 45.0	+0.8
H21K				IAmb	IAmb	04 09 47.3	
	comp=Z,20nm,1.1s						
H21K	Melozitna Rive	38.41	35	P	P	04 09 45.4	+1.2
	baz=265,SNR=20						
KDAK	Kodiak Island	38.48	47	P	P	04 09 44.7	0.0
	comp=Z,8.0nm,0.7s,baz=286,slow=9.0,SNR=9.2						
	comp=Z,8.0nm,0.7s						
KDAK	Kodiak Island	38.48	47	P	P	04 09 44.8	0.0
KDAK				pmax	pmax		
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	38.48	47	P	P	04 09 44.8	0.0
KDAK				IAmb	IAmb	04 09 53.1	
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	38.48	47	P	P	04 09 45.8	+1.0
	baz=275						
CHUM	Lake Minchumin	38.50	38	P	P	04 09 46.1	+1.2
	baz=268						
SPCR	Spurr Chakacha	38.50	42	P	P	04 09 46.0	+0.9
	baz=271						
PPLA	Purkeypile	38.52	39	P	P	04 09 46.4	+1.2
	baz=269						
CAST	Castle Rocks	38.58	38	P	P	04 09 46.6	+1.0
CAST	Castle Rocks	38.58	38	P	P	04 09 46.5	+0.8
	baz=269,SNR=9.7						
I21K	Tanana	38.72	36	P	P	04 09 47.7	+1.0
I21K				IAmb	IAmb	04 10 02.4	
	comp=Z,21nm,1.1s						
I21K	Tanana	38.72	36	P	P	04 09 48.1	+1.5
	baz=266,SNR=9.1						
BPAW	Bear Paw Mtn.	39.09	37	P	P	04 09 51.0	+1.1
BPAW	Bear Paw Mtn.	39.09	37	P	P	04 09 50.9	+1.1
	baz=269						
KTH	Kantishna Hill	39.11	38	P	P	04 09 51.1	+1.1
KTH				IAmb	IAmb	04 10 06.0	
	comp=Z,20nm,1.0s						
TRF	Thorofare Moun	39.39	38	P	P	04 09 53.6	+1.1
COLD	Coldfoot	39.59	32	P	P	04 09 55.0	+1.0
COLD				IAmb	IAmb	04 10 10.8	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	39.59	32	P	P	04 09 55.1	+1.1
	baz=266,SNR=19						
RC01	Rabbit Creek A	39.70	42	P	P	04 09 55.3	+0.3
RC01	Rabbit Creek A	39.70	42	P	P	04 09 55.2	+0.3
	baz=274,SNR=6.8						
NRIK	Noril'sk	39.75	331	P	P	04 09 52.5	-2.8
	comp=Z,1.6nm,0.4s,baz=83,slow=9.4,SNR=6.3						
	comp=Z,1.6nm,0.4s						
NRIK	Noril'sk	39.75	331	P	P	04 09 52.5	-2.8
BWN	Browne	39.76	37	P	P	04 09 55.4	0.0
H23K	Yukon River	39.77	35	P	P	04 09 56.5	+1.0
H23K	Yukon River	39.77	35	P	P	04 09 57.0	+1.5
	baz=268,SNR=21						
I23K	Minto, Yukon-K	39.82	36	P	P	04 09 56.4	+0.5
I23K				IAmb	IAmb	04 10 11.8	
	comp=Z,29nm,1.4s						
I23K	Minto, Yukon-K	39.82	36	P	P	04 09 57.2	+1.3
	baz=269,SNR=9.6						
SEW	Seward	39.91	44	P	P	04 09 56.9	+0.3
	baz=275						
NEA2	Nenana	39.93	37	P	P	04 09 57.7	+0.8
	baz=270						
TOLK	Toolik Lake Re	39.96	30	P	P	04 09 57.6	+0.5
TOLK				IAmb	IAmb	04 09 59.4	
	comp=Z,16nm,0.7s						
TOLK	Toolik Lake Re	39.96	30	P	P	04 09 58.0	+0.9
	baz=264,SNR=18						
PMR	Palmer	39.97	41	P	P	04 09 57.9	+0.7
PMR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PMR	Palmer	39.97	41	P	P	04 09 57.9	+0.7
PMR	Palmer	39.97	41	P	P	04 09 57.3	+0.2
	baz=273,SNR=5.1						
RND	Reindeer	40.03	38	P	P	04 09 58.4	+0.6
RND				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RND	Reindeer	40.03	38	P	P	04 09 58.4	+0.6
GHO	Glory Hole Cre	40.06	41	P	P	04 09 58.3	+0.2
WAT1	Susitna Watana	40.19	39	P	P	04 09 59.3	+0.2
	baz=272						
MDM	Murphy Dome	40.30	36	P	P	04 10 00.8	+0.9
KNK	Knik Glacier	40.30	41	P	P	04 10 00.8	+0.8
KNK				IAmb	IAmb	04 10 24.5	
	comp=Z,17nm,0.9s						
KNK	Knik Glacier	40.30	41	P	P	04 09 60.0	0.0
	baz=274,SNR=7.1						
SML	Sawmill	40.34	41	P	P	04 10 00.5	+0.2
SML				IAmb	IAmb	04 10 02.7	
	comp=Z,23nm,1.0s						
SML	Sawmill	40.34	41	P	P	04 10 00.8	+0.5
	baz=274,SNR=14						
WRH	Wood River Hil	40.36	37	P	P	04 10 00.2	-0.1
H24K	Noodor Dome	40.45	35	P	P	04 10 02.1	+0.9
H24K				IAmb	IAmb	04 10 17.1	
	comp=Z,28nm,1.4s						
H24K	Noodor Dome	40.45	35	P	P	04 10 02.4	+1.2
	baz=270,SNR=8.9						
TCOL	CIGO, UAF Yank	40.45	36	P	P	04 10 01.4	+0.2
	baz=271						
COLA	College	40.46	36	c iP	P	04 10 02.2	+1.0
COLA				pmax	pmax		
	comp=Z,18nm,1.1s						
CCB	Clear Creek Bu	40.48	36	P	P	04 10 01.4	+0.1
WAT6	Susitna Watana	40.57	40	P	P	04 10 02.4	0.0
	baz=273						
M23K	Glacier View	40.63	41	P	P	04 10 02.7	+0.1
	baz=274						
POKR	Poker Plat Res	40.63	36	P	P	04 10 03.1	+0.4
POKR				IAmb	IAmb	04 10 18.5	
	comp=Z,32nm,0.9s						
POKR	Poker Plat Res	40.63	36	P	P	04 10 03.4	+0.7
	baz=271,SNR=7.7						
QIZ	Qiongzhong	40.71	245	P	P	04 10 05.2	+1.4
QIZ				S	S	04 16 13.1	+0.9
QIZ				LR	LR		
	comp=Z,550nm,17.2s						
QIZ				LR	LR		
	comp=Z,680nm,19.1s						
QIZ				LR	LR		
	comp=Z,770nm,15.7s						
DHY	Denali Highway	40.71	39	P	P	04 10 03.8	+0.3
DHY	Denali Highway	40.71	39	P	P	04 10 03.9	+0.3
	baz=273,SNR=6.2						
SCM	Sheep Creek Mo	40.81	41	P	P	04 10 04.4	+0.1
SCM				pmax	pmax		
	comp=Z,23nm,1.3s						
SCM	Sheep Creek Mo	40.81	41	P	P	04 10 04.4	+0.1
SCM				IAmb	IAmb	04 10 30.3	
	comp=Z,23nm,1.3s						
SCM	Sheep Creek Mo	40.81	41	P	P	04 10 04.4	+0.1
	baz=275,SNR=5.5						
HDA	Harding Lake	40.85	37	P	P	04 10 04.5	0.0
HDA				IAmb	IAmb	04 10 06.3	
	comp=Z,11nm,0.5s						
HDA	Harding Lake	40.85	37	P	P	04 10 04.9	+0.4
	baz=272,SNR=18						
IL31		40.87	36	P	P	04 10 04.9	+0.3
IL31				IAmb	IAmb	04 10 13.3	
	comp=Z,26nm,1.4s						
ILAR	Eielson Array	40.87	36	P	P	04 10 05.0	+0.4
	comp=Z,2.9nm,0.5s,baz=265,slow=7.9,SNR=51						
	comp=Z,2.9nm,0.5s						
ILAR	Eielson Array	40.87	36	P	P	04 10 05.3	+0.7
GLI	Glacier Island	41.01	42	P	P	04 10 06.1	+0.4

GLI	**Glacier Island**	41.01	42	P	P	04 10 06.1	+0.4
	baz=276						
GOMU	**GeErMu**	41.27	278	P	P	04 10 08.9	+0.2
GOMU				pP	pP	04 10 12.5	-4.0
GOMU				sP	sP	04 10 16.7	-2.9
GOMU				S	S	04 16 19.9	-1.1
GOMU				pmax	pmax		
	comp=Z,16nm,0.8s						
GOMU				LR	LR		
	comp=Z,740nm,17.8s						
GOMU				LR	LR		
	comp=Z,1µm,17.5s						
GOMU				LR	LR		
	comp=Z,1µm,17.9s						
FID	**Port Fidalgo**	41.32	42	P	P	04 10 09.0	+0.6
M24K	**Tolsona, Glenn**	41.33	40	P	P	04 10 09.5	+1.0
M24K				IAmb	IAmb	04 10 38.5	
	comp=Z,32nm,1.3s						
M24K	**Tolsona, Glenn**	41.33	40	P	P	04 10 09.3	+0.8
	baz=275,SNR=5.3						
K24K	**Donnelly Dome**	41.39	38	P	P	04 10 08.9	-0.1
	baz=274,SNR=5.3						
PZH	**PanZhiHua**	41.41	261	P	P	04 10 11.7	+2.1
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
KLU	**Klutina**	41.51	41	P	P	04 10 10.9	+0.9
KLU	**Klutina**	41.51	41	P	P	04 10 10.5	+0.5
	baz=276,SNR=7.8						
J25K	**Salcha River,**	41.53	36	P	P	04 10 09.7	-0.5
J25K	**Salcha River,**	41.53	36	P	P	04 10 09.2	-0.9
	baz=273,SNR=8.9						
KMI	**Kunming**	41.53	259	⇑P	P	04 10 10.8	0.0
KMI				pP	pwP	04 10 23.5	+0.3
KMI				sP	sP	04 10 29.1	+7.3
KMI				S	S	04 16 24.2	-0.7
KMI				pmax	pmax		
	comp=Z,29nm,1.4s						
KMI				pmax	pmax		
	comp=Z,220nm,3.5s						
KMI				LR	LR		
	comp=Z,460nm,14.7s						
KMI				LR	LR		
	comp=Z,880nm,15.4s						
KMI				LR	LR		
	comp=Z,990nm,15.4s						
PAX	**Paxson**	41.59	39	P	P	04 10 11.5	+0.9
PAX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PAX	**Paxson**	41.59	39	P	P	04 10 11.5	+0.9
PAX	**Paxson**	41.59	39	P	P	04 10 10.7	0.0
	baz=275						
DIV	**Divide**	41.62	42	P	P	04 10 11.8	+0.9
BMAR	**Burnt Mountain**	41.78	32	P	P	04 10 13.4	+1.4
HARP	**HAARP**	41.78	40	P	P	04 10 12.4	+0.2
	baz=276						
RIDG	**Independent Ri**	41.81	38	P	P	04 10 11.5	-0.9
RIDG	**Independent Ri**	41.81	38	P	P	04 10 12.8	+0.4
	baz=275,SNR=6.6						
ZAA0	**Zalesovo Array**	41.83	307	P	P	04 10 10.9	-1.6
ZALV	**Zalesovo Beam**	41.83	307	P	P	04 10 11.4	-1.2
	comp=Z,2.4nm,0.4s,baz=69,slow=8.1,SNR=14						
ZALV				PcP	PcP	04 12 07.8	-0.2
	comp=Z,6.1nm,0.8s,baz=85,slow=3.1,SNR=10						
ZALV				LR	LR	04 28 04.9	
	comp=Z,368nm,20.4s,baz=76,slow=37						
	comp=Z,2.4nm,0.4s						
ZALV	**Zalesovo Beam**	41.83	307	P	P	04 10 11.0	-1.5
ZALV					PcP	04 12 08.7	+0.7
N25K	**Chitina, Valde**	42.13	41	P	P	04 10 15.8	+0.8
N25K	**Chitina, Valde**	42.13	41	P	P	04 10 16.0	+1.0
	baz=277						
SCRK	**Sand Creek**	42.17	37	P	P	04 10 16.0	+0.6
SCRK	**Sand Creek**	42.17	37	P	P	04 10 15.3	-0.1
	baz=275,SNR=10						
BMRM	**Bremner River**	42.20	42	P	P	04 10 16.2	+0.5
BMRM				IAmb	IAmb	04 10 42.8	
	comp=Z,19nm,1.1s						
BMRM	**Bremner River**	42.20	42	P	P	04 10 16.4	+0.7
	baz=278,SNR=6.2						
J26L	**Joseph Creek**	42.31	37	P	P	04 10 16.1	-0.4
	baz=275,SNR=9.0						
GLB	**Gilahina Butte**	42.52	41	P	P	04 10 18.5	+0.3
L26K	**Log Cabin Wild**	42.55	39	P	P	04 10 19.4	+1.1
L26K	**Log Cabin Wild**	42.55	39	P	P	04 10 19.1	+0.7
	baz=277,SNR=6.8						
VRDI	**Verde Repeater**	42.72	41	P	P	04 10 20.7	+0.6
BERG	**Berg Lake**	42.73	43	P	P	04 10 20.0	+0.2
BERG				IAmb	IAmb	04 10 35.7	
	comp=Z,17nm,0.8s						
M26K	**Nabesna, AK**	42.78	40	P	P	04 10 21.2	+0.8
M26K	**Nabesna, AK**	42.78	40	P	P	04 10 21.2	+0.8
	baz=278,SNR=21						
WMQ	**Urumqi**	43.06	292	⇓P	P	04 10 23.6	+0.8
WMQ				pP	pP	04 10 29.1	-1.6
WMQ				PP	PP	04 12 07.1	+4.2
WMQ				pmax	pmax		
	comp=Z,91nm,1.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.9s						
WMQ				LR	LR		
	comp=Z,840nm,17.5s						
L27K	**Beaver Creek,**	43.23	39	P	P	04 10 24.7	+0.8
L27K				IAmb	IAmb	04 10 40.1	
	comp=Z,14nm,0.7s						
L27K	**Beaver Creek,**	43.23	39	P	P	04 10 24.7	+0.8
	baz=278,SNR=17						
BCAR	**Beaver Creek A**	43.25	39	P	P	04 10 25.7	+1.6
M27K	**Edge Creek, AK**	43.30	40	P	P	04 10 26.2	+1.5
M27K				IAmb	IAmb	04 10 40.0	
	comp=Z,22nm,1.2s						
M27K	**Edge Creek, AK**	43.30	40	P	P	04 10 25.7	+1.1
	baz=279,SNR=11						
EGAK	**Eagle**	43.32	36	P	P	04 10 24.9	+0.4
EGAK	**Eagle**	43.32	36	P	P	04 10 25.0	+0.5
	baz=277						
BARN	**Barnard Glacie**	43.61	41	P	P	04 10 27.4	+0.2
BARN				IAmb	IAmb	04 10 44.2	
	comp=Z,27nm,1.2s						
ZSN	**Zaisan**	43.63	298	*e*P	P	04 10 27.2	-0.1
ZSN	**Zaisan**	43.63	298	*e*P	P	04 10 27.3	-0.1
	baz=298						
BVCY	**Beaver Creek**	43.76	39	P	P	04 10 29.3	+1.0
	baz=279,SNR=7.9						
YUK3	**Moose Creek**	44.05	40	P	P	04 10 31.4	+0.6
	baz=280,SNR=6.6						
DAWY	**Dawson**	44.17	37	P	P	04 10 32.5	+1.0
DAWY	**Dawson**	44.17	37	P	P	04 10 32.1	+0.6
	baz=279						
I29M	**Ogilvie Camp,**	44.45	35	P	P	04 10 34.7	+1.0
I29M				IAmb	IAmb	04 10 59.8	
	comp=Z,26nm,1.1s						
I29M	**Ogilvie Camp,**	44.45	35	P	P	04 10 34.7	+1.0
	baz=278,SNR=10						
EPYK	**Eagle Plains**	44.95	33	P	P	04 10 38.7	+1.0
EPYK	**Eagle Plains**	44.95	33	P	P	04 10 38.0	+0.4
	baz=279,SNR=18						
YUK4	**Talbot Arm**	44.99	41	P	P	04 10 39.2	+1.0
	baz=282						
MK31	**Makanchi Array**	45.50	298	*c i*P	P	04 10 41.9	-0.4
MK31	**Makanchi Array**	45.50	298	P	P	04 10 41.4	-0.9
MKAR	**Makanchi Array**	45.50	298	P	P	04 10 42.4	+0.1
	comp=Z,26nm,0.8s,baz=77,slow=8.6,SNR=135						
MKAR				PcP	PcP	04 12 20.9	+0.2
	comp=Z,0.9nm,0.6s,baz=80,slow=1.6,SNR=1.3						
MKAR				LR	LR	04 31 02.4	
	comp=Z,1µm,19.3s,baz=68,slow=38						
	comp=Z,26nm,0.8s						
MKAR	**Makanchi Array**	45.50	298	P	P	04 10 41.3	-1.0
MKAR					PcP	04 12 21.0	+0.3
SEM	**Semipalatinsk**	45.51	304	*e*P	P	04 10 41.3	-1.2
SEM				pmax	pmax		
	comp=Z,18nm,1.1s						
SEM	**Semipalatinsk**	45.51	304	*e*P	P	04 10 41.3	-1.2
	comp=Z,18nm,1.1s,baz=303						
SEM				LR	LR	04 30 09.6	
	baz=303						
M30M	**Minto, Yukon**	45.59	39	P	P	04 10 43.7	+0.9
M30M	**Minto, Yukon**	45.59	39	P	P	04 10 43.7	+0.9
	baz=282,SNR=7.1						
HYT	**Haines Junctio**	45.64	41	P	P	04 10 44.4	+1.0
HYT	**Haines Junctio**	45.64	41	P	P	04 10 44.1	+0.7
	baz=284,SNR=13						
MAKZ	**Makanchi**	45.70	298	P	P	04 10 43.3	-0.5
MAKZ				pmax	pmax		
	comp=Z,43nm,1.0s						
MAKZ	**Makanchi**	45.70	298	P	P	04 10 43.3	-0.5
INK	**Inuvik**	45.87	30	P	P	04 10 46.1	+1.3
	comp=Z,16nm,0.5s,baz=290,slow=7.5,SNR=77						
	comp=Z,16nm,0.5s						
INK	**Inuvik**	45.87	30	P	P	04 10 45.4	+0.6
INK	**Inuvik**	45.87	30	P	P	04 10 45.6	+0.7
	baz=280,SNR=46						
N31M	**Braeburn, Yuko**	46.30	40	IAmb	IAmb	04 11 06.7	
	comp=Z,18nm,1.0s						
N31M	**Braeburn, Yuko**	46.30	40	P	P	04 10 49.7	+1.3
	baz=284,SNR=5.1						
KURK	**Kurchatov**	46.39	304	P	P	04 10 49.2	0.0
KURK						04 12 24.6	
KURK	**Kurchatov**	46.39	304	P	P	04 10 48.5	-0.6
KURK					PcP	04 12 24.3	+0.6
KURK	**Kurchatov**	46.39	304	*e*P	P	04 10 49.2	0.0
KURBB	**Kurchatov Arra**	46.47	304	P	P	04 10 49.2	-0.6
	comp=Z,13nm,0.4s,baz=74,slow=7.9,SNR=89						
KURBB				PcP	PcP	04 12 24.6	+0.6
	comp=Z,3.5nm,0.8s,baz=63,slow=3.2,SNR=6.1						
KURBB				LR	LR	04 31 24.6	
	comp=Z,734nm,18.4s,baz=52,slow=38						
	comp=Z,13nm,0.4s						
M31M	**Drury Creek, Y**	46.77	39	IAmb	IAmb	04 11 09.7	
	comp=Z,15nm,1.1s						
M31M	**Drury Creek, Y**	46.77	39	P	P	04 10 53.1	+1.1
	baz=285,SNR=9.4						
WHY	**Whitehorse**	46.93	41	P	P	04 10 54.6	+1.2
	baz=286						
SIJI	**Sorong**	47.05	204	P	P	04 10 54.8	+0.1
	comp=Z,7.7nm,0.7s,baz=9.8,slow=8.1,SNR=6.0						
	comp=Z,7.7nm,0.7s						
LSA	**Lhasa**	47.23	273	P	P	04 10 55.7	-0.9
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	47.23	273	P	P	04 10 55.7	-0.9
LSA				IAmb	IAmb	04 11 11.1	
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	47.23	273	*e*P	P	04 10 55.7	-0.9
A36M	**Sachs Harbour**	47.93	25	IAmb	IAmb	04 11 15.3	
	comp=Z,20nm,1.1s						
A36M	**Sachs Harbour**	47.93	25	P	P	04 11 01.5	+0.6
	baz=283,SNR=6.8						
KRVT	**Keravat (AS076**	47.94	175	LR	LR	04 28 03.0	
	comp=Z,186nm,21.9s,baz=147,slow=32						
CHTO	**Chiang Mai**	48.29	255	P	P	04 11 04.4	+0.1
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	48.29	255	P	P	04 11 04.4	+0.1
CHTO				IAmb	IAmb	04 11 06.3	
	comp=Z,21nm,1.1s						
CMAR	**Chiang Mai Arr**	48.53	255	P	P	04 11 07.2	+1.0
	comp=Z,2.5nm,0.3s,baz=42,slow=7.6,SNR=24						
CMAR				LR	LR	04 34 11.7	
	comp=Z,351nm,18.3s,baz=50,slow=39						
	comp=Z,2.5nm,0.3s						
CMAR	**Chiang Mai Arr**	48.53	255	P	P	04 11 06.0	-0.1
TDK	**Taldyqorghan**	48.70	297	*c i*P	P	04 11 07.6	+0.3
TDK				MLR	MLR		
	comp=Z,866nm,14.0s						
TDK	**Taldyqorghan**	48.70	297	⇑*i*P	P	04 11 07.7	+0.4
	baz=297						
TDK				LR	LR	04 32 33.0	
	comp=Z,866nm,13.6s,baz=297						
C36M	**Paulatuk**	48.99	28	P	P	04 11 09.9	+0.9
	baz=287,SNR=28						
UZB	**Uzynbulak**	49.10	295	*ce*P	P	04 11 10.2	-0.3
UZB				pmax	pmax		
	comp=Z,27nm,1.2s						
UZB	**Uzynbulak**	49.10	295	⇑*e*P	P	04 11 10.2	-0.3
	comp=Z,27nm,1.2s,baz=295						
KPKS	**Kokpek**	49.18	295	*c i*P	P	04 11 11.1	+0.1
KPKS				pmax	pmax		
	comp=Z,25nm,1.0s						
KPKS	**Kokpek**	49.18	295	⇑*i*P	P	04 11 11.2	+0.1
	comp=Z,26nm,1.0s,baz=295						
MRSI	**Marisa**	49.20	216	P	P	04 11 13.0	+1.7
	comp=Z,42nm,1.1s						
ZHN	**Zhinishke**	49.47	295	*e*P	P	04 11 13.1	-0.2
ZHN	**Zhinishke**	49.47	295	*e*P	P	04 11 13.1	-0.2
	baz=295						
SANI	**Sanana**	49.90	210	P	P	04 11 15.8	-0.8
	comp=Z,16nm,1.2s						
CHKK	**Chushkaly**	50.11	297	*e*P	P	04 11 18.1	+0.1
CHKK	**Chushkaly**	50.11	297	*e*P	P	04 11 18.2	+0.1
	baz=296						
BVAR	**Borovoye Array**	50.30	310	P	P	04 11 18.3	-1.0
	comp=Z,1.9nm,0.3s						
	comp=Z,1.9nm,0.3s						
BRVK	**Borovoye**	50.35	310	*d i*P	P	04 11 19.5	-0.2
BRVK				pmax	pmax		
	comp=Z,23nm,1.3s						
BRVK	**Borovoye**	50.35	310	P	P	04 11 19.2	-0.4
BRVK				IAmb	IAmb	04 11 20.4	
	comp=Z,27nm,1.3s						
BRVK	**Borovoye**	50.35	310	*e*P	P	04 11 19.5	-0.2
MDOK	**Medeo**	50.38	296	*i* P	P	04 11 20.6	+0.3
MDOK	**Medeo**	50.38	296	*i* P	P	04 11 20.6	+0.3
	baz=296						
MDOK				LR	LR	04 33 37.5	
	baz=296						
AAA	**Alma-Ata**	50.45	296	*e*P	P	04 11 20.9	+0.3
AAA	**Alma-Ata**	50.45	296	*e*P	P	04 11 21.0	+0.3
	baz=296						
AAA	**Alma-Ata**	50.45	296	*e*P	P	04 11 20.9	+0.3
TNSS	**Tian-Shan**	50.51	296	*i* P	P	04 11 21.8	+0.3
TNSS	**Tian-Shan**	50.51	296	*i* P	P	04 11 21.9	+0.3
	baz=296						
KUU	**Kurty**	50.52	297	*c i*P	P	04 11 20.3	-0.8
KUU				MLR	MLR		
	comp=Z,849nm,15.0s						
KUU	**Kurty**	50.52	297	⇑*i*P	P	04 11 20.4	-0.8
	baz=297						
KUU				LR	LR	04 33 41.8	
	comp=Z,849nm,14.7s,baz=297						
TARG	**Taragay, Kyrgy**	50.54	294	IAmb	IAmb	04 11 28.8	
	comp=Z,28nm,1.1s						
TAPN	**Taplejung**	51.05	272	*e*P	P	04 11 26.5	+0.8
	comp=Z,39nm,1.0s						
ULHL	**Ulahol**	51.33	295	P	P	04 11 27.8	+0.3
	SNR=5.2						
TKM2	**Tokmak 2**	51.44	296	P	P	04 11 28.8	+0.5
	SNR=26						
BTLS	**Baital**	51.47	299	*c i*P	P	04 11 27.7	-0.5
BTLS	**Baital**	51.47	299	⇑*i*P	P	04 11 27.8	-0.5
	baz=299						
ODAN	**Odare**	51.57	272	*e*P	P	04 11 29.4	-0.1
SGDS	**Sogindy**	51.82	297	*c i*P	P	04 11 31.1	+0.1
SGDS				pmax	pmax		
	comp=Z,29nm,1.1s						
SGDS	**Sogindy**	51.82	297	⇑*i*P	P	04 11 31.1	+0.1
	comp=Z,28nm,1.1s,baz=297						
CHMS	**Chumysh**	51.95	297	P	P	04 11 32.2	+0.3
	SNR=5.8						
JIRN	**Jiri**	51.97	274	*e*P	P	04 11 33.6	+1.0
KBK	**Karagaybulak**	51.99	296	P	P	04 11 32.2	-0.1
	SNR=7.8						
USP	**Ospenovka**	51.99	297	P	P	04 11 32.5	+0.3
	SNR=33						
RAMN	**Ramite**	52.09	273	*e*P	P	04 11 33.1	-0.2
	comp=Z,25nm,0.3s						
AAK	**Ala-Archa**	52.29	296	P	P	04 11 34.7	+0.1
	SNR=12						
AAK	**Ala-Archa**	52.29	296	P	P	04 11 34.5	-0.1
	comp=Z,14nm,0.8s,baz=71,slow=4.7,SNR=20						
AAK				LR	LR	04 35 16.9	
	comp=Z,305nm,18.4s,baz=74,slow=38						
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	52.29	296	P	P	04 11 34.1	-0.5
AAK	**Ala-Archa**	52.29	296	*i* P	P	04 11 34.7	+0.1
	SNR=14						
KKN	**Kakani**	52.55	274	*e*P	P	04 11 36.7	-0.1
	comp=Z,76nm,1.1s						
PKI	**Pulchoki**	52.59	274	*e*P	P	04 11 37.1	-0.1
PKIN	**Phulchoki**	52.59	274	*e*P	P	04 11 36.9	-0.2
	comp=Z,18nm,0.6s						
EKS2	**Erkin-Say**	52.74	297	P	P	04 11 38.2	+0.3
	SNR=13						
KSH	**Kashi**	52.83	292	P	P	04 11 42.8	+4.3
KSH				pP	pwP	04 11 51.0	0.0
KSH				PP	PP	04 13 44.7	+6.9
KSH				sS	sS	04 19 27.4	+8.9
KSH				pmax	pmax		
	comp=Z,18nm,1.8s						
KSH				LR	LR		
	comp=Z,890nm,19.0s						
KSH				LR	LR		
	comp=Z,970nm,17.5s						
KSH				LR	LR		
	comp=Z,1µm,17.9s						
GKN	**Gorkha**	52.90	275	*e*P	P	04 11 39.4	+0.2
PMG	**Port Moresby**	52.92	182	LR	LR	04 31 27.2	
	comp=Z,62nm,22.0s,baz=329,slow=33						
AML	**Almayashu**	53.05	296	P	P	04 11 41.1	+0.6
	SNR=12						
AML	**Almayashu**	53.05	296	*i* P	P	04 11 40.8	+0.3
	SNR=12						
DANN	**Dangsing**	53.33	276	*e*P	P	04 11 43.1	+0.5
	comp=Z,142nm,0.9s						
BBB	**Bella Bella**	53.48	50	LR	LR	04 38 23.4	
	comp=Z,64nm,18.1s,baz=305,slow=40						
KOLN	**Koldanda**	53.78	276	*e*P	P	04 11 45.9	+0.1
	comp=Z,130nm,1.1s						
SVE	**Sverdlovsk**	53.85	317	⇓*e*P	P	04 11 44.8	-0.8
SVE				pmax	pmax		
	comp=Z,39nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,17.0s						
PYUN	**Piuthan**	54.03	276	*e*P	P	04 11 47.8	+0.2
	comp=Z,98nm,1.0s						
KSM	**Kuching**	54.11	230	P	P	04 11 48.3	+0.3
KSM				IAmb	IAmb	04 11 50.5	
	comp=Z,27nm,1.1s						
DZA	**Taraz**	54.21	298	*e*P	P	04 11 48.6	+0.1
DZA				pmax	pmax		
	comp=Z,28nm,1.1s						
DZA	**Taraz**	54.21	298	*e*P	P	04 11 48.7	+0.1
	comp=Z,28nm,1.1s,baz=298						
RES	**Resolute Bay**	54.66	17	P	P	04 11 50.9	-0.3
	comp=Z,12nm,0.8s,baz=318,slow=7.8,SNR=28						
	comp=Z,12nm,0.8s						
RES	**Resolute Bay**	54.66	17	IAmb	IAmb	04 11 52.3	
	comp=Z,18nm,1.0s						
KBS	**Kingsbay**	54.95	351	*e*P	P	04 11 53.9	+0.5
SPA0	**Spitsbergen Ar**	54.98	349	*e*P	P	04 11 53.8	+0.2
SPITS	**Spitsbergen Ar**	54.98	349	P	P	04 11 51.8	-1.7
	comp=Z,3.9nm,0.9s,baz=58,slow=8.1,SNR=18						
	comp=Z,3.9nm,0.9s						
ARU	**Arti**	55.05	317	P	P	04 11 52.7	-1.7
	comp=Z,4.5nm,0.6s,baz=50,slow=6.2,SNR=29						
	comp=Z,4.5nm,0.6s						
ARU	**Arti**	55.05	317	*d i*P	P	04 11 52.8	-1.6
ARU						04 12 53.8	
ARU						04 13 53.0	
ARU				S	S	04 19 32.6	-1.9
ARU				SS	SS	04 23 12.2	-5.6
ARU				pmax	pmax		
	comp=Z,45nm,1.1s						
ARU				MLR	MLR		
	comp=Z,980nm,16.0s						
ARU	**Arti**	55.05	317	P	P	04 11 52.6	-1.7
KAPI	**Kappang**	55.07	216	P	P	04 11 54.0	-0.9
KAPI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KAPI	**Kappang**	55.07	216	P	P	04 11 54.0	-0.9
KAPI				IAmb	IAmb	04 11 56.7	
	comp=Z,9.7nm,0.9s						
BKSI	**Bulukumba**	55.19	215	P	P	04 11 56.4	+0.6
	comp=Z,6.8nm,0.9s						
YKA	**Yellowknife Ar**	55.22	34	P	P	04 11 55.8	+0.3
	comp=Z,1.9nm,0.5s,baz=300,slow=6.9,SNR=32						
	comp=Z,1.9nm,0.5s						
IUG	**Iuzhnay**	55.41	298	*e*P	P	04 11 57.7	+0.4
IUG	**Iuzhnay**	55.41	298	*e*P	P	04 11 57.8	+0.4
	baz=298						
BTK	**Batken**	55.97	295	IAmb	IAmb	04 12 15.8	
	comp=Z,27nm,1.2s						
HSPB	**Hornsund (broa**	56.00	348	*e*P	P	04 12 00.4	-0.4
TULEG	**Thule**	57.65	10	IAmb	IAmb	04 12 12.8	
	comp=Z,17nm,0.9s						
NIL	**Nilore**	57.78	287	P	P	04 12 13.7	-0.5
NIL				pmax	pmax		
	comp=Z,82nm,1.1s						
NIL	**Nilore**	57.78	287	P	P	04 12 13.7	-0.5
A04D	**Lummi Island**	58.19	51	P	P	04 12 17.9	+1.1
	baz=302						
KIRV	**Kirov**	58.23	323	P	P	04 12 16.1	-0.8
	comp=Z,10.0nm,0.5s,baz=241,slow=23,SNR=10						
	comp=Z,10.0nm,0.5s						
KIRV	**Kirov**	58.23	323	*d i*P	P	04 12 16.7	-0.1
AKTO	**Aktyubinsk**	58.32	311	P	P	04 12 17.1	-0.6
	comp=Z,10nm,1.0s,baz=67,slow=7.8,SNR=25						
	comp=Z,10nm,1.0s						
D03D	**Eldon**	58.59	53	P	P	04 12 20.8	+1.2
	baz=302						
HAMF	**Hammerfest**	59.24	341	*e*P	P	04 12 23.6	-0.1
DAG	**Danmarks Havn**	59.48	357	*i* P	P	04 12 21.6	-3.7
DAG				IAmb	IAmb	04 12 25.2	
	comp=Z,3.5nm,0.8s						
ARA0	**ARCESS Array S**	59.60	340	*e*P	P	04 12 25.3	-1.0
ARCES	**ARCESS Array B**	59.60	340	P	P	04 12 24.8	-1.5
	comp=Z,1.0nm,0.4s,baz=50,slow=8.3,SNR=18						
	comp=Z,1.0nm,0.4s						
SRBI	**Singaraja**	59.80	219	P	P	04 12 29.3	+1.0
	comp=Z,36nm,0.9s						
PSI	**Prapat**	59.87	242	LR	LR	04 39 30.1	
	comp=Z,138nm,19.6s,baz=34,slow=37						
KBL	**Kabul**	60.16	291	P	P	04 12 29.7	-1.2
KBL				pmax	pmax		
	comp=Z,41nm,1.1s						
KBL	**Kabul**	60.16	291	P	P	04 12 29.7	-1.2
KTK1	**Kautokeino**	60.54	340	*e*P	P	04 12 32.6	-0.1
JETT	**Jettan, Norway**	60.80	342	*e*P	P	04 12 34.4	-0.1
KLMR	**Klimovskoe**	60.99	328	*e*P	P	04 12 32.8	-3.0
KLMR				*e*		04 13 15.2	
KLMR				pmax	pmax		
	comp=Z,35nm,1.2s						
KLMR	**Klimovskoe**	60.99	328	*e*P	P	04 12 32.9	-2.9
KLMR				AMP		04 12 36.3	
	comp=Z,35nm,1.2s						
KLMR				*e*PcP	PcP	04 13 15.3	-3.6
KLMR				LQ	LQ	04 34 00.3	
KLMR				LQ	LQ	04 34 00.3	
KLMR				LR	LR	04 38 42.3	
I04A	**Tendick Farm,**	61.03	56	P	P	04 12 37.9	+1.4
	baz=304						
TRO	**Tromso**	61.08	342	*e*P	P	04 12 35.0	-1.3
PWJI	**Pagerwojo**	61.36	223	P	P	04 12 39.2	+0.3
J04D	**Umpqua Nationa**	61.52	56	P	P	04 12 40.0	0.0
	baz=305						
NEW	**Newport**	61.55	49	P	P	04 12 40.7	+0.8
NEW				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NEW	**Newport**	61.55	49	P	P	04 12 40.7	+0.8
NEW	**Newport**	61.55	49	P	P	04 12 40.8	+0.8
	baz=305						
PINE	**Pine Mountain**	61.91	55	P	P	04 12 42.9	+0.3
PINE				IAmb	IAmb	04 13 05.8	
	comp=Z,18nm,1.2s						
L04D	**Klamath Falls**	61.98	57	P	P	04 12 44.1	+1.0
	baz=305						
YBH	**Yreka Blue Hor**	62.01	58	LR	LR	04 35 44.4	
	comp=Z,75nm,21.7s,baz=305,slow=32						
MDSI	**Maura Dua**	62.45	232	P	P	04 12 46.7	+0.5
BELG	**Belogornoye**	62.60	317	P	P	04 12 47.2	+0.4
	comp=Z,30nm,0.8s,baz=54,slow=1.9,SNR=14						
	comp=Z,30nm,0.8s						
BELG	**Belogornoye**	62.60	317	*c i*P	P	04 12 46.4	-0.4
BELG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WALA	**Waterton Lakes**	62.82	47	IAmb	IAmb	04 13 04.0	
	comp=Z,18nm,1.4s						
STEI	**Steigen**	63.25	342	*e*P	P	04 12 50.5	-0.4
LOF	**Lofoten**	63.46	343	*e*P	P	04 12 52.1	-0.2
CTA	**Charters Tower**	63.56	182	LR	LR	04 41 03.6	
	comp=Z,70nm,19.1s,baz=41,slow=36						
FAUS	**Fauske**	63.69	342	*e*P	P	04 12 52.4	-1.4
VALR	**Valaam**	63.80	332	*ce*P	P	04 12 53.1	-1.5
VALR				pmax	pmax		
	comp=Z,41nm,0.9s						
HYBB	**Hyderabad (bro**	63.81	269	*e*P	P	04 12 55.2	-0.2
SUMG	**Summit**	63.87	2	P	P	04 12 55.4	0.0
SUMG				pmax	pmax		
	comp=Z,108nm,0.9s						
SUMG	**Summit**	63.87	2	P	P	04 12 55.4	0.0
PLID	**Pearl Lake**	64.03	52	P	P	04 12 57.6	+0.9
PLID				IAmb	IAmb	04 13 20.8	
	comp=Z,11nm,1.1s						
WVOR	**Wild Horse Val**	64.07	55	IAmb	IAmb	04 13 20.9	
	comp=Z,9.5nm,1.1s						
MSO	**Missoula**	64.13	49	IAmb	IAmb	04 13 15.4	
	comp=Z,9.4nm,0.9s						

MSO	Missoula	64.13	49	P	P	04 12 58.0	+0.8
	baz=307,SNR=7.5						
WRAB	Tennant Creek	64.70	195	⇓eP	P	04 13 01.8	+0.8
WRAB				pmax	pmax		
	comp=Z,36nm,3.0s						
WRA	Warramunga Arr	64.72	195	P	P	04 13 00.9	-0.1
	comp=Z,2.1nm,0.8s,baz=15,slow=7.1,SNR=11						
WRA				LR	LR	04 39 55.0	
	comp=Z,46nm,20.7s,baz=25,slow=35						
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	64.72	195	P	P	04 13 01.0	-0.1
WRA	Warramunga Arr	64.72	195	P	P	04 13 01.6	+0.5
HRA	Herat	64.81	294	P	P	04 13 01.5	-0.5
HRA				IAmb	IAmb	04 13 15.5	
	comp=Z,18nm,0.9s						
MOS	Moscow	65.06	324	eP	P	04 13 01.3	-1.6
MOS				e		04 15 24.7	
MOS				pmax	pmax		
	comp=Z,49nm,1.2s						
MOS				MLR	MLR		
	comp=Z,600nm,17.0s						
STOK	Stokkvaagen	65.07	342	eP	P	04 13 02.6	-0.2
MPK	Martis Peak	65.10	59	IAmb	IAmb	04 13 24.3	
	comp=Z,19nm,1.1s						
EMB	Emerald Bay	65.25	59	IAmb	IAmb	04 13 28.1	
	comp=Z,8.2nm,0.9s						
PAHR	Pah Rah Range	65.25	58	IAmb	IAmb	04 13 22.4	
	comp=Z,9.9nm,1.1s						
FIA1	FINESS Array S	65.34	334	P	P	04 13 03.9	-0.8
FINES	FINESS Array B	65.34	334	P	P	04 13 03.3	-1.4
	comp=Z,13nm,0.7s,baz=38,slow=7.4,SNR=68						
	comp=Z,13nm,0.7s						
GEYT	Alibeck	65.35	300	P	P	04 13 05.4	+0.2
	comp=Z,10nm,0.9s,baz=260,slow=8.7,SNR=10						
GEYT				LR	LR	04 43 45.9	
	comp=Z,510nm,19.3s,baz=72,slow=38						
	comp=Z,10nm,0.9s						
GEYT	Alibeck	65.35	300	IAmb	IAmb	04 13 18.5	
	comp=Z,14nm,0.9s						
PNTR	Pine Nut	65.49	59	IAmb	IAmb	04 13 30.9	
	comp=Z,9.1nm,1.0s						
FCC	Fort Churchill	65.50	31	P	P	04 13 06.3	+0.6
FCC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FCC	Fort Churchill	65.50	31	P	P	04 13 06.3	+0.6
FCC				IAmb	IAmb	04 13 20.2	
	comp=Z,8.7nm,0.8s						
EGMT	Eagleton	65.64	46	IAmb	IAmb	04 13 30.5	
	comp=Z,8.8nm,0.8s						
EGMT	Eagleton	65.64	46	P	P	04 13 07.5	+0.5
	baz=309,SNR=6.3						
YERR	Yerington	65.77	59	IAmb	IAmb	04 13 26.1	
	comp=Z,16nm,1.1s						
HLID	Hailey	65.86	52	P	P	04 13 09.5	+0.9
	baz=308						
SCO	Scoresbysund	65.87	357	i P	P	04 13 06.4	-1.5
SCO				IAmb	IAmb	04 13 09.0	
	comp=Z,8.6nm,0.8s						
OBN	Obninsk	65.92	324	P	P	04 13 07.8	-0.7
	comp=Z,6.2nm,0.8s,baz=300,slow=0.9,SNR=16						
	comp=Z,6.2nm,0.8s						
OBN	Obninsk	65.92	324	deP	P	04 13 08.2	-0.3
OBN				e		04 13 41.7	
OBN				e		04 15 30.7	
OBN				eS	S	04 21 44.5	-9.0
OBN				pmax	pmax		
	comp=Z,67nm,1.3s						
OBN				MLR	MLR		
	comp=Z,683nm,16.0s						
OBN	Obninsk	65.92	324	P	P	04 13 07.8	-0.7
OBN	Obninsk	65.92	324	eP	P	04 13 08.2	-0.3
BMN	Battle Mountai	66.13	56	IAmb	IAmb	04 13 27.6	
	comp=Z,16nm,1.4s						
BOZ	Bozeman (W)	66.16	49	P	P	04 13 11.2	+0.8
	baz=309,SNR=9.9						
VRH	Novokhopyorsk	66.21	319	eP	P	04 13 09.4	-1.0
VRH				pmax	pmax		
	comp=Z,60nm,0.9s						
RYN	Ryan	66.44	59	IAmb	IAmb	04 13 32.7	
	comp=Z,8.5nm,1.1s						
KVN	Kaiserville	66.44	58	IAmb	IAmb	04 13 26.7	
	comp=Z,17nm,1.2s						
POO	Poona	66.50	274	eP	P	04 13 24.0	+11
LPSR	Galich'ya Gora	66.58	321	eP	P	04 13 12.1	-0.7
LPSR				pmax	pmax		
	comp=Z,70nm,1.2s						
LHV	Little Huntoon	66.68	59	IAmb	IAmb	04 13 28.6	
	comp=Z,19nm,1.0s						
NVAR	Mina Array Bea	66.69	59	P	P	04 13 15.3	+1.2
	comp=Z,2.3nm,0.6s,baz=294,slow=7.3,SNR=22						
NVAR				LR	LR	04 43 41.0	
	comp=Z,87nm,18.5s,baz=300,slow=37						
	comp=Z,2.3nm,0.6s						
NV11	Mina Array Sit	66.78	59	IAmb	IAmb	04 13 31.9	
	comp=Z,14nm,1.2s						
MEF	Metsahovi	66.81	333	eP	P	04 13 13.3	-0.8
NSS	Namsos	66.82	341	eP	P	04 13 14.1	0.0
VORR	Voronezh	67.08	320	eP	P	04 13 17.5	+1.5
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
ELK	Elko	67.12	55	LR	LR	04 38 35.0	
	comp=Z,119nm,22.0s,baz=333,slow=32						
ICESG	Greenland Ices	67.31	3	i P	P	04 13 17.1	-0.5
ICESG				IAmb	IAmb	04 13 19.1	
	comp=Z,23nm,0.9s						
VSU	Vasula	67.34	331	deP	P	04 13 17.6	+0.1
VSU				pmax	pmax		
	comp=Z,68nm,0.9s						
VSU	Vasula	67.34	331	eP	P	04 13 16.8	-0.7
VSR	Storozhevoye	67.40	320	eP	P	04 13 17.4	-0.7
VSR				pmax	pmax		
	comp=Z,100nm,1.2s						
H17A	Grant Village	67.50	50	IAmb	IAmb	04 13 37.9	
	comp=Z,10.0nm,1.1s						
H17A	Grant Village	67.50	50	P	P	04 13 19.8	+0.7
	baz=310						
VORD	Divnogorie	67.51	320	eP	P	04 13 18.9	+0.2
VORD				pmax	pmax		
	comp=Z,120nm,1.2s						
DZM	Mont Dzumac	67.52	162	LR	LR	04 39 26.4	
	comp=Z,100nm,20.7s,baz=6.5,slow=33						
RLMT	Red Lodge	67.75	48	P	P	04 13 21.3	+0.7
	baz=310						
AFI	Afiamalu	67.83	138	LR	LR	04 40 33.8	
	comp=Z,112nm,18.7s,baz=174,slow=34						
TPAW	Teton Pass	67.86	51	IAmb	IAmb	04 13 46.7	
	comp=Z,13nm,1.1s						
PKM	Mcpherson Peak	67.93	62	P	P	04 13 23.3	+1.3
	baz=309						
SNOW	Snow King Moun	67.99	51	IAmb	IAmb	04 13 47.4	
	comp=Z,15nm,1.4s						
REDW	Red Top Meadow	68.00	51	IAmb	IAmb	04 13 46.7	
	comp=Z,19nm,1.3s						
CWC	Cottonwood Cre	68.07	60	P	P	04 13 23.2	+0.5
	baz=309						
MTSE	Matsula	68.15	332	eP	P	04 13 21.7	-0.9
AAL	Aland	68.23	335	eP	P	04 13 21.4	-1.6
ISA	Isabella, Lake	68.30	61	P	P	04 13 25.3	+1.2
	baz=309						
R11A	Troy Canyon, C	68.41	57	P	P	04 13 25.7	+0.8
	baz=310,SNR=7.5						
ASAR	Alice Springs	68.43	194	P	P	04 13 25.9	+1.2
	comp=Z,1.4nm,0.6s,baz=11,slow=5.8,SNR=14						
ASAR				LR	LR	04 41 39.9	
	comp=Z,34nm,21.1s,baz=10.0,slow=34						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	68.43	194	P	P	04 13 25.6	+0.8
ASAR	Alice Springs	68.43	194	P	P	04 13 25.6	+0.8
MAK	Makhachkala	68.55	309	eP	P	04 13 23.0	-2.4
MAK				eS	S	04 22 22.3	-3.2
MAK				eSS	SS	04 26 51.5	+2.4
MAK				pmax	pmax		
	comp=Z,54nm,0.8s						
MAK				MLR	MLR		
	comp=Z,434nm,15.0s						
SFJD	Kangerlussuaq	68.61	8	P	P	04 13 25.2	-0.2
	comp=Z,5.1nm,0.5s,baz=28,slow=4.9,SNR=4.2						
SFJD				LR	LR	04 46 00.0	
	comp=Z,247nm,18.2s,baz=338,slow=38						
	comp=Z,5.1nm,0.5s						
SFJD	Kangerlussuaq	68.61	8	P	P	04 13 25.6	+0.3
SFJD				pmax	pmax		
	comp=Z,23nm,1.2s						
SFJD	Kangerlussuaq	68.61	8	P	P	04 13 25.6	+0.3
SFJD				IAmb	IAmb	04 13 52.0	
	comp=Z,23nm,1.2s						
MPMC	Manual Prospec	68.68	60	P	P	04 13 27.5	+0.9
	baz=310						
HWUT	Hardware Ranch	68.72	52	P	P	04 13 26.5	-0.3
HWUT				IAmb	IAmb	04 13 43.7	
	comp=Z,11nm,1.4s						
S11A	Rachel	68.76	58	IAmb	IAmb	04 13 53.7	
	comp=Z,18nm,1.1s						
FURC	Furnace Creek,	68.81	60	P	P	04 13 28.5	+1.4
	baz=310						
FRB	Frobisher Bay	68.88	17	LR	LR	04 46 33.8	
	comp=Z,175nm,18.9s,baz=356,slow=38						
TPNV	Topopah Spring	68.89	59	IAmb	IAmb	04 13 52.3	
	comp=Z,7.1nm,1.0s						
TPNV	Topopah Spring	68.89	59	P	P	04 13 28.8	+0.9
	baz=310,SNR=6.0						
DUG	Dugway, Tooele	68.90	54	IAmb	IAmb	04 13 43.9	
	comp=Z,11nm,1.3s						
DUG	Dugway, Tooele	68.90	54	P	P	04 13 28.9	+1.0
	baz=310						
PALK	Pallekele	69.06	260	LR	LR	04 46 13.8	
	comp=Z,269nm,20.0s,baz=154,slow=38						
BW06	Boulder Array	69.11	50	P	P	04 13 29.7	+0.4
	baz=311,SNR=6.0						
GWY	Greenwater Val	69.11	60	IAmb	IAmb	04 13 42.6	
	comp=Z,14nm,1.4s						
PDAR	Pinedale Array	69.11	50	P	P	04 13 30.0	+0.8
	comp=Z,2.0nm,0.6s,baz=281,slow=2.3,SNR=16						
	comp=Z,2.0nm,0.6s						
QSM	Queen of Sheba	69.12	60	IAmb	IAmb	04 13 46.9	
	comp=Z,9.8nm,1.0s						
UPP	Uppsala	69.19	336	eP	P	04 13 27.7	-1.4
GROC	Groznyy	69.34	310	eP	P	04 13 30.6	+0.3
GROC				e		04 13 54.5	
GROC				pmax	pmax		
	comp=Z,16nm,0.7s						
SLIT	Slitere, Latvi	69.50	332	eP	P	04 13 29.6	-1.4
DY2G	Dye2	69.51	6	i P	P	04 13 29.7	-1.6
DY2G				IAmb	IAmb	04 13 32.0	
	comp=Z,9.1nm,0.8s						
GOF	Gofitskoye	69.60	313	⇑eP	P	04 13 32.5	+0.6
GOF				pmax	pmax		
	comp=Z,72nm,0.8s						
DOMB	Dombas	69.63	341	eP	P	04 13 31.9	0.0
IDID	Didziasalis	69.71	329	eP	P	04 13 32.6	+0.2
BFSC	Mount Baldy Ra	69.72	62	P	P	04 13 33.7	+0.7
	baz=310						
ISAL	Salakas	69.74	329	eP	P	04 13 32.8	+0.3
SHPR	Sheep Range	69.84	59	IAmb	IAmb	04 13 48.2	
	comp=Z,9.9nm,1.1s						
IIGN	Ignalina	69.87	329	eP	P	04 13 33.6	+0.2
MNK	Minsk	69.88	328	i P	P	04 13 33.6	+0.2
MNK				i		04 13 55.2	
MNK				i		04 16 11.1	
MNK				i PPP	PPP	04 17 50.7	
MNK				i S	S	04 22 41.6	+0.7
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,28nm,1.0s						
MNK				pmax	pmax		
	comp=Z,62nm,1.0s						
MNK				MLR	MLR		
	comp=N,350nm,16.0s						
MNK				MLR	MLR		
	comp=E,62nm,16.0s						
MNK				MLR	MLR		
	comp=Z,587nm,16.0s						
MNK	Minsk	69.88	328	i P	P	04 13 33.7	+0.2
	comp=E,4.0nm,1.0s						
MNK				i P	P	04 13 33.7	+0.2
	comp=N,28nm,1.0s						
MNK				i P	P	04 13 33.7	+0.2
	comp=Z,62nm,1.0s,baz=42						
MNK				i PcP	PcP	04 13 55.2	-0.6
MNK				i PP	PP	04 16 11.2	+3.6
MNK				i PPP	PPP	04 17 50.8	
MNK				i S	S	04 22 41.6	+0.7
MNK				i SS	SS	04 27 24.0	+15
MNK				i SSS	SSS	04 30 44.6	
MNK				i LQ	LQ	04 39 31.4	
MNK				i LR	LR	04 42 40.1	
MNK				i LRM	MLR	04 46 53.7	
	comp=E,62nm,16.4s						
MNK				i LRM	MLR	04 46 53.7	
	comp=N,350nm,16.4s						
MNK				i LRM	MLR	04 46 53.7	
	comp=Z,587nm,16.4s						
NB2	NORSAR Subarra	69.97	339	P	P	04 13 33.0	-1.0
	comp=Z,48nm,1.2s,baz=30,slow=6.5						
NB2	NORSAR Subarra	69.97	339	P	P	04 13 33.0	-1.0
	baz=30,slow=6.5						
NOA	NORSAR Array B	69.97	339	P	P	04 13 33.4	-0.6
	comp=Z,19nm,1.0s,baz=31,slow=6.2,SNR=52						
	comp=Z,19nm,1.0s						
AKN	Aaknes	69.99	342	eP	P	04 13 34.2	+0.2
NACGM	Naroch	70.00	329	eP	P	04 13 33.9	-0.3
	baz=41						
HFS	Hagfors	70.08	338	P	P	04 13 33.4	-1.3
	comp=Z,7.6nm,0.9s,baz=256,slow=24,SNR=27						
	comp=Z,7.6nm,0.9s						
NC602	NORSAR Array S	70.15	339	eP	P	04 13 34.3	-0.7
HEC	Hector,Ludlow	70.18	61	P	P	04 13 36.4	+0.6
	baz=310						
NCK	Nalchik	70.35	312	⇑eP	P	04 13 37.2	+0.6
NCK				pmax	pmax		
	comp=Z,22nm,0.8s						
KIV	Kislovodsk	70.53	313	⇑P	P	04 13 39.6	+1.8
KIV	Kislovodsk	70.53	313	eP	P	04 13 38.4	+0.6
KIV				eS	S	04 22 49.3	+0.2
KIV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIV				pmax	pmax		
	comp=Z,24nm,3.2s						
KIV				MLR	MLR		
	comp=Z,723nm,18.0s						
KIV	Kislovodsk	70.53	313	P	P	04 13 37.4	-0.3
KIV	Kislovodsk	70.53	313	eP	P	04 13 38.4	+0.6
KIV	Kislovodsk	70.53	313	i P	P	04 13 38.3	+0.6
	SNR=15						
RDMU	Red Mountain	70.54	52	IAmb	IAmb	04 13 40.8	
	comp=Z,13nm,0.8s						
KBZ	Khabaz	70.57	312	P	P	04 13 38.7	+0.8
	comp=Z,26nm,0.9s,baz=57,slow=2.8,SNR=56						
KBZ				LR	LR	04 49 23.6	
	comp=Z,722nm,18.2s,baz=30,slow=40						
	comp=Z,26nm,0.9s						
KBZ	Khabaz	70.57	312	c iP	P	04 13 38.3	+0.5
KBZ				pmax	pmax		
	comp=Z,36nm,0.9s						
KBZ	Khabaz	70.57	312	eP	P	04 13 38.3	+0.5
PABE	Paberze	70.58	330	eP	P	04 13 36.7	-1.0
VIKU	Vikbolandet	70.58	336	eP	P	04 13 36.4	-1.3
GMRC	Granite Mounta	70.64	60	P	P	04 13 39.5	+0.9
	baz=311						
ZEI	Tsey	70.66	311	eP	P	04 13 37.3	-1.4
ZEI				pmax	pmax		
	comp=Z,30nm,1.0s						
LCMT	Little Creek M	70.69	57	IAmb	IAmb	04 13 52.9	
	comp=Z,7.5nm,1.0s						
P18A	Preston Nutter	70.77	53	IAmb	IAmb	04 14 09.7	
	comp=Z,11nm,1.2s						
K22A	Casper	70.86	49	IAmb	IAmb	04 14 05.0	
	comp=Z,9.1nm,1.0s						
K22A	Casper	70.86	49	P	P	04 13 40.2	+0.2
	baz=313						
PFO	Pinyon Flats O	70.89	62	P	P	04 13 40.7	+0.6
	baz=311						
FOO	Floro	70.94	343	eP	P	04 13 40.1	+0.3
SRU	San Rafael Swe	70.95	54	IAmb	IAmb	04 13 54.4	
	comp=Z,9.8nm,1.1s						
NEY	Neytrino	70.99	312	⇑eP	P	04 13 42.8	+2.1
NEY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SKAR	Skarslia	71.00	341	eP	P	04 13 40.4	+0.1
OSL	Oslo	71.04	339	eP	P	04 13 40.8	+0.4
HYA	Hoyanger	71.07	342	eP	P	04 13 40.7	+0.1
RSSD	Black Hills	71.20	47	P	P	04 13 42.2	+0.2
RSSD				pmax	pmax		
	comp=Z,16nm,1.5s						
RSSD	Black Hills	71.20	47	P	P	04 13 42.2	+0.2
RSSD				IAmb	IAmb	04 13 55.2	
	comp=Z,16nm,1.4s						
RSSD	Black Hills	71.20	47	P	P	04 13 41.8	-0.3
	baz=314						
IRM	Iron Mountain	71.37	60	P	P	04 13 43.4	+0.4
	baz=311						
SUE	Sulen	71.48	342	eP	P	04 13 43.1	0.0
BORG	Borgarnes	71.55	355	P	P	04 13 45.0	+1.6
	comp=Z,15nm,0.9s,baz=280,slow=0.6,SNR=3.9						
	comp=Z,15nm,0.9s						
KONO	Kongsberg	71.58	339	⇓iP	P	04 13 43.8	+0.1
KONO				pmax	pmax		
	comp=Z,23nm,2.5s						
KONO	Kongsberg	71.58	339	P	P	04 13 43.1	-0.6
KONO				IAmb	IAmb	04 13 44.7	
	comp=Z,28nm,1.4s						
KONO	Kongsberg	71.58	339	eP	P	04 13 43.8	+0.1
O20A	White River Ci	71.59	52	P	P	04 13 44.9	+0.5
	baz=312						
CHVG	Ch'k'valeri	71.69	312	⇑P	P	04 13 46.5	+1.8
CHVG	Ch'k'valeri	71.69	312	⇑P	P	04 13 46.5	+1.8
AKH	Akhalkalaki	71.81	310	⇑P	P	04 13 46.9	+1.2
ASK	Askoy	71.90	342	eP	P	04 13 45.8	+0.2
PDMCI	Parker Dam,Lak	71.90	60	P	P	04 13 47.2	+1.2
	baz=311						
BER	Bergen	71.96	342	eP	P	04 13 46.2	+0.3
GNI	Garni	71.96	308	P	P	04 13 48.0	+1.5
	comp=Z,6.8nm,0.7s,baz=232,slow=3.2,SNR=8.8						
GNI				LR	LR	04 49 23.5	
	comp=Z,310nm,18.3s,baz=38,slow=39						
	comp=Z,6.8nm,0.7s						
GNI	Garni	71.96	308	c iP	P	04 13 48.5	+1.9
GNI				pmax	pmax		
	comp=Z,30nm,1.7s						
GNI	Garni	71.96	308	P	P	04 13 45.9	-0.6
GNI	Garni	71.96	308	P	P	04 13 48.4	+1.8
SUW	Suwalki	72.03	330	eP	P	04 13 46.3	-0.2
SUW	Suwalki	72.03	330	eP	P	04 13 44.9	-1.6
ODD1	Odda	72.08	341	eP	P	04 13 47.2	+0.4
AKASG	Malin Array Be	72.19	324	P	P	04 13 47.0	-0.5
	comp=Z,133nm,1.2s,baz=39,slow=6.8,SNR=138						
AKBB	Malin Array Si	72.19	324	c iP	P	04 13 46.9	-0.6
AKBB				pmax	pmax		
	comp=Z,86nm,1.0s						
AGMN	Agassiz Nation	72.29	39	P	P	04 13 48.3	+0.1
	baz=317						
GLA	Glamis	72.29	61	IAmb	IAmb	04 14 09.1	
	comp=Z,8.1nm,0.8s						
SOC	Sochi	72.36	314	eP	P	04 13 47.4	-1.2
SOC				eS	S	04 23 09.4	-0.5
SOC				eSS	SS	04 27 52.7	+5.2
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
N23A	Red Feather La	72.37	50	IAmb	IAmb	04 14 07.2	
	comp=Z,9.1nm,1.0s						
N23A	Red Feather La	72.37	50	P	P	04 13 49.9	+0.8
	baz=313,SNR=5.1						
PV11	David Mesa, Pa	72.45	54	IAmb	IAmb	04 14 03.0	
	comp=Z,12nm,1.0s						
BLS5	Blasjo	72.55	341	eP	P	04 13 49.9	+0.3
KLNR	Kaliningrad	72.62	331	ceP	P	04 13 49.1	-0.9
KLNR				pmax	pmax		
	comp=Z,95nm,1.3s						
BATM	Batumi	72.67	311	⇑P	P	04 13 51.0	+0.4
BATM	Batumi	72.67	311	⇑P	P	04 13 51.0	+0.4
ANN	Anapa	72.68	316	eP	P	04 13 48.1	-2.4
ANN				e*PP	pP	04 13 59.0	+0.2
ANN				eS	S	04 23 14.3	+0.8
ANN				pmax	pmax		
	comp=Z,44nm,1.3s						
WUAZ	Wupatki	72.81	57	P	P	04 13 52.1	+0.4
	baz=312						
KMY	Karmoy	73.03	341	eP	P	04 13 52.8	+0.5
HOMB	Homborsund	73.06	339	eP	P	04 13 52.9	+0.3
DEL	Delary	73.12	336	eP	P	04 13 51.8	-1.2
ISCO	Idaho Springs	73.30	51	P	P	04 13 55.0	+0.3
	baz=314						
SNART	Snartemo	73.33	340	eP	P	04 13 54.4	+0.3
MVCO	Mesa Verde	73.40	54	P	P	04 13 55.8	+0.6
	baz=313						
BSD	Bornholm Skovb	73.95	334	eP	P	04 13 58.0	+0.2
S22A	4UR Ranch, Cre	74.01	53	P	P	04 13 59.7	+0.8
	baz=314,SNR=5.7						
BANOM	Banah	74.12	291	P	P	04 13 59.8	+0.4
Q24A	Divide	74.14	51	P	P	04 14 00.1	+0.5
	baz=314						
SHME	Shamm	74.15	291	P	P	04 14 00.1	+0.6
GEVA	Gevas	74.17	308	P	P	04 13 59.5	-0.2
GEVA				IAmb	IAmb	04 14 14.6	
	comp=Z,15nm,0.9s						
SIM	Simferopol'	74.21	318	eP	P	04 14 00.0	+0.4
SIM				pmax	pmax		
	comp=Z,48nm,1.0s						
SIM				MLR	MLR		
	comp=Z,513nm,17.0s						
WSAR	Wadi Sarin	74.28	287	LR	LR	04 52 13.9	
	comp=Z,178nm,18.7s,baz=26,slow=40						
214A	Organ Pipe Nat	74.29	61	P	P	04 14 01.7	+1.4
	baz=312						
KOPT	Kop Dagi	74.42	311	IAmb	IAmb	04 14 17.5	
	comp=Z,21nm,1.0s						
OGNE	Ogallala	74.47	48	P	P	04 14 01.4	+0.1
	baz=315						
SORM	Soroca	74.50	323	⇑P	P	04 14 00.1	-1.1
SORM	Soroca	74.50	323	⇑P	P	04 14 00.1	-1.1
EYMN	Ely	74.51	37	P	P	04 14 01.0	-0.3
	baz=320						
GURO	Guroymak-BITLI	74.58	309	IAmb	IAmb	04 14 17.2	
	comp=Z,22nm,1.0s						
MSFE	Esma-Masafi	74.59	290	P	P	04 14 02.9	+0.8
BEL	Belsk	74.64	329	eP	P	04 14 02.5	+0.6
SDCO	Great Sand Dun	74.78	52	P	P	04 14 03.5	+0.1
	baz=314						
UOSS	Minazif	74.83	290	P	P	04 14 02.9	-0.6
UOSS	Minazif	74.83	290	i P	P	04 14 03.2	-0.3
	SNR=6.8						
HATD	Hatta, Dubai	74.96	290	i P	P	04 14 04.7	+0.5
	SNR=6.8						
LVV	L'vov	75.00	326	eP	P	04 14 04.2	+0.1
ASHO	Ashiyiah	75.10	290	i P	P	04 14 05.6	+0.5
	SNR=7.3						
MILM	Milestii Mici	75.22	322	eP	P	04 14 04.0	-1.3
MILM				eL	L	04 45 04.0	
MILM				LRM	MLR	04 50 00.0	
	comp=Z,600nm,14.0s						
MILM	Milestii Mici	75.22	322	eP	P	04 14 04.0	-1.3
MILM				MLR	MLR		
	comp=Z,600nm,14.0s						
ECSD	EROS Data Cent	75.26	43	IAmb	IAmb	04 14 23.6	
	comp=Z,12nm,1.3s						
ECSD	EROS Data Cent	75.26	43	P	P	04 14 05.8	+0.1
	baz=318						
TUC	Tucson	75.32	59	P	P	04 14 07.4	+1.0
	baz=313						
FAQ	Al Faqa, Dubai	75.38	290	P	P	04 14 06.7	+0.1
KSCO	Kaye Shedlock’	75.51	50	P	P	04 14 07.4	0.0
	baz=315						
STKA	Stephens Creek	75.54	186	LR	LR	04 45 26.9	
	comp=Z,90nm,21.9s,baz=22,slow=34						
ASUD	Al Ashush, Dub	75.64	290	P	P	04 14 07.7	-0.4
KWP	Kalwaria Pacla	75.68	327	eP	P	04 14 08.6	+0.6
T25A	Trinidad	75.82	52	P	P	04 14 09.6	+0.3
	baz=315						
VASR	Vaslui	75.89	322	⇑P	P	04 14 10.0	+0.8
SPMN	Marine on St.	75.98	40	P	P	04 14 09.6	-0.2
	baz=319						
DIKM	Dikmen	76.04	315	⇑P	P	04 14 09.3	-0.9
ANMO	Albuquerque	76.16	55	LR	LR	04 44 29.2	
	comp=Z,98nm,21.9s,baz=332,slow=33						
ANMO	Albuquerque	76.16	55	⇑eP	P	04 14 12.8	+1.6
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ANMO	Albuquerque	76.16	55	P	P	04 14 11.7	+0.5
ANMO	Albuquerque	76.16	55	P	P	04 14 11.8	+0.6
	baz=314						
BGNE	Belgrade	76.19	45	P	P	04 14 11.5	+0.4
	baz=317						
BUR08	Bucovina Ar. S	76.23	324	IAmb	IAmb	04 14 12.0	
	comp=Z,19nm,1.2s						
BURAR	Bucovina Array	76.25	324	⇑P	P	04 14 11.1	-0.3
BURAR	Bucovina Array	76.25	324	⇑P	P	04 14 11.1	-0.3
BURAR	Bucovina Array	76.25	324	IAmb	IAmb	04 14 13.0	
	comp=Z,16nm,0.9s						
OJC	Ojcow	76.32	329	eP	P	04 14 11.8	+0.3
KOLS	Kolonicke sedl	76.41	327	eP	P	04 14 12.7	+0.6
KOLS				pmax	pmax		
	comp=Z,14nm,1.0s						
KOLS	Kolonicke sedl	76.41	327	eP	P	04 14 12.7	+0.6
BZK	Bozkurt	76.45	316	⇑P	P	04 14 11.8	-0.6
TESR	Tescani	76.49	323	⇓P	P	04 14 12.7	+0.1
TLCR		76.54	321	⇑P	P	04 14 13.4	+0.5
TLCR		76.54	321	⇑P	P	04 14 13.4	+0.5

UZH	Uzhgorod	76.64	327	eP	P	04 14 12.8	-0.6
UZH				i		04 14 20.8	
UZH				e		04 14 25.3	
CRVS	Cervenica-Dubn	76.75	327	eP	P	04 14 14.4	+0.3
CRVS				pmax	pmax		
	comp=Z,125nm,2.2s						
CRVS	Cervenica-Dubn	76.75	327	eP	P	04 14 14.4	+0.3
PANC	Panciu	76.76	322	⇑P	P	04 14 15.8	+1.7
NIE	Niedzica	76.78	328	eP	P	04 14 15.7	+1.4
CFR	Carcaliu	76.86	321	⇑P	P	04 14 14.7	0.0
CFR	Carcaliu	76.86	321	⇑P	P	04 14 14.7	0.0
ODBI	Odobesti	76.89	322	⇓P	P	04 14 16.8	+1.9
BMR	Baia Mare	76.92	325	⇑P	P	04 14 15.5	+0.5
BMR	Baia Mare	76.92	325	⇑P	P	04 14 15.5	+0.5
VRI	Vrincioaia	76.95	322	⇓P	P	04 14 15.6	+0.3
VRI	Vrincioaia	76.95	322	⇓P	P	04 14 15.6	+0.3
TPGR	Topolog	76.97	321	⇑P	P	04 14 15.9	+0.5
PLOR	Plostina	77.00	323	⇓P	P	04 14 16.7	+1.1
PLOR	Plostina	77.00	323	⇓P	P	04 14 16.7	+1.1
121A	Cookes Peak, D	77.02	57	P	P	04 14 16.8	+0.7
	baz=314						
KSP	Ksiaz	77.07	331	eP	P	04 14 16.0	+0.2
OZUR		77.19	323	⇓P	P	04 14 17.8	+1.2
COVR	Voineasa-Covas	77.20	323	⇑P	P	04 14 17.7	+1.0
BISRR	Bisoca	77.21	322	⇑P	P	04 14 18.3	+1.6
CBKS	Cedar Bluff	77.23	48	P	P	04 14 17.3	+0.3
	baz=317						
OKC	Ostrava-Krasne	77.24	330	AMS	AMS	04 51 30.0	
	comp=Z,400nm,16.2s						
SCHQ	Schefferville	77.27	20	P	P	04 14 16.3	-0.5
	comp=Z,7.9nm,1.0s,baz=282,slow=6.0,SNR=10						
SCHQ				LR	LR	04 50 46.3	
	comp=Z,253nm,20.5s,baz=20,slow=38						
	comp=Z,7.9nm,1.0s						
TIRR	Tirgusor	77.28	321	⇑P	P	04 14 17.2	+0.1
TIRR	Tirgusor	77.28	321	⇑P	P	04 14 17.2	+0.1
TIRR	Tirgusor	77.28	321	⇑P	P	04 14 17.2	+0.1
LANS	Liptovska Anna	77.32	329	eP	P	04 14 18.3	+1.0
LANS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LANS	Liptovska Anna	77.32	329	eP	P	04 14 18.2	+1.0
HARR	Harsova	77.32	321	⇓P	P	04 14 18.1	+0.8
HARR	Harsova	77.32	321	⇓P	Pg	04 14 18.1	+0.7
OSTC	Ostas	77.34	331	eP	P	04 14 17.9	+0.5
OSTC				AMS	AMS	04 51 10.0	
	comp=Z,600nm,17.5s						
CHVC	Chvalec	77.37	331	eP	P	04 14 17.6	+0.1
CHVC				AMS	AMS	04 51 20.0	
	comp=Z,600nm,19.9s						
TLBR	Topalu	77.38	321	⇑P	P	04 14 19.0	+1.3
UPC	Upice	77.45	331	eP	P	04 14 18.0	0.0
UPC				MLR	MLR		
	comp=Z,700nm,19.1s						
UPC	Upice	77.45	331	eP	P	04 14 18.0	0.0
UPC				AMS	AMS	04 51 20.0	
	comp=Z,700nm,19.1s						
DOPR	Dopca	77.46	323	⇑P	P	04 14 19.8	+1.6
KECS	Kecovo	77.47	328	eP	P	04 14 18.9	+0.8
KECS	Kecovo	77.47	328	eP	P	04 14 18.9	+0.8
DPC	Dobruska-Polom	77.47	331	eP	P	04 14 18.2	+0.1
DPC				MLR	MLR		
	comp=Z,400nm,19.3s						
DPC	Dobruska-Polom	77.47	331	eP	P	04 14 18.2	+0.1
DPC				AMS	AMS	04 51 10.0	
	comp=Z,400nm,19.3s						
MFTR	Murfatlar	77.49	320	⇑P	P	04 14 20.4	+2.1
MORC	Moravsky Berou	77.51	330	⇑P	P	04 14 18.8	+0.4
MORC	Moravsky Berou	77.51	330	⇑P	P	04 14 18.8	+0.4
MORC	Moravsky Berou	77.51	330	IAmb	IAmb	04 14 20.1	
	comp=Z,21nm,1.1s						
MORC	Moravsky Berou	77.51	330	eP	P	04 14 18.5	+0.1
KRLC	Kraliky	77.54	331	eP	P	04 14 18.1	-0.4
KRLC				MLR	MLR		
	comp=Z,500nm,13.6s						
KRLC	Kraliky	77.54	331	eP	P	04 14 18.1	-0.4
KRLC				AMS	AMS	04 52 20.0	
	comp=Z,500nm,13.6s						
MESR	Meseseni	77.56	325	⇓P	P	04 14 27.1	+8.4
MLR	Muntele Rosu	77.59	323	⇑P	P	04 14 20.6	+1.6
MLR	Muntele Rosu	77.59	323	P	P	04 14 20.2	+1.2
	comp=Z,4.2nm,0.5s,baz=358,slow=3.8,SNR=14						
MLR				LR	LR	04 51 39.1	
	comp=Z,543nm,18.2s,baz=33,slow=38						
	comp=Z,4.2nm,0.5s						
MLR	Muntele Rosu	77.59	323	⇑P	P	04 14 20.6	+1.6
MLR	Muntele Rosu	77.59	323	IAmb	IAmb	04 14 33.4	
	comp=Z,9.4nm,1.0s						
ISR	Istrita	77.62	322	⇑P	P	04 14 19.5	+0.5
ISR	Istrita	77.62	322	⇑P	P	04 14 19.5	+0.5
CJR	Cluj-Napoca	77.64	325	⇑P	P	04 14 17.4	-1.7
CJR	Cluj-Napoca	77.64	325	⇑P	P	04 14 17.4	-1.7
MAUC	Maruska	77.75	330	eP	P	04 14 20.0	+0.3
MAUC				AMS	AMS	04 51 30.0	
	comp=Z,800nm,14.3s						
CLL	Collm	77.79	333	⇑iP	P	04 14 19.5	-0.3
CLL				i		04 14 28.3	
CLL				e		04 14 31.0	
CLL				pmax	pmax		
	comp=Z,39nm,1.2s						
CLL	Collm	77.79	333	⇑iP	P	04 14 19.5	-0.3
	comp=Z,39nm,1.2s						
CLL				i pP	pP	04 14 28.3	+0.2
CLL				esP	sP	04 14 31.0	-0.2
BRG	Berggiesshubel	77.85	333	eP	P	04 14 20.5	+0.3
BRG				Amp		04 14 23.5	
	comp=Z,18nm,1.3s						
BRG				Amp		04 54 15.0	
	comp=E,0.3nm,14.1s						
BRG				Amp		04 54 16.0	
	comp=N,0.3nm,13.8s						
BRG				Amp		04 54 19.0	
	comp=Z,0.6nm,17.6s						
BRG	Berggiesshubel	77.85	333	eP	P	04 14 20.5	+0.3
BRG				pmax	pmax		
	comp=Z,18nm,1.3s						
PVCC	Panska Ves	77.93	332	AMS	AMS	04 52 10.0	
	comp=Z,700nm,16.0s						
MZR	Muzera	77.97	290	P	P	04 14 21.3	0.0
VOIR		78.03	323	⇓P	P	04 14 22.0	+0.7
VOIR		78.03	323	⇓P	P	04 14 22.0	+0.7
VYHS	Vyhne	78.09	328	eP	P	04 14 22.1	+0.5
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VYHS	Vyhne	78.09	328	eP	P	04 14 22.1	+0.5
PSZ	Piszkesteto	78.16	328	⇑P	P	04 14 23.2	+1.2
PSZ	Piszkesteto	78.16	328	⇑P	P	04 14 23.2	+1.2
PSZ	Piszkesteto	78.16	328	IAmb	IAmb	04 14 23.9	
	comp=Z,12nm,0.9s						
PSZ	Piszkesteto	78.16	328	P	P	04 14 20.8	-1.2
KOLL	Kolacno	78.19	329	eP	P	04 14 23.0	+0.9
JAVC	Velka Javorina	78.23	329	eP	P	04 14 23.8	+1.4
VRAC	Vranov	78.25	330	⇓P	P	04 14 22.8	+0.4
VRAC	Vranov	78.25	330	P	P	04 14 23.5	+1.1
	comp=Z,6.7nm,0.7s,baz=33,slow=5.7,SNR=17						
VRAC				LR	LR	04 52 41.2	
	comp=Z,514nm,18.6s,baz=28,slow=39						
	comp=Z,6.7nm,0.7s						
VRAC	Vranov	78.25	330	⇓P	P	04 14 22.8	+0.4
VRAC	Vranov	78.25	330	eP	P	04 14 22.7	+0.3
ARR	Arges	78.26	323	⇑P	P	04 14 23.8	+1.1
BR131	Keskin Array S	78.29	314	⇑eP	P	04 14 23.2	+0.2
BRTR	Keskin Array B	78.29	314	P	P	04 14 23.9	+0.8
	comp=Z,4.5nm,0.9s,baz=58,slow=7.4,SNR=21						
BRTR				LR	LR	04 55 28.9	
	comp=Z,345nm,18.0s,baz=76,slow=41						
	comp=Z,4.5nm,0.9s						
SCIA	State Center	78.29	42	P	P	04 14 22.7	-0.1
	baz=320						
PRU	Pruhonice	78.39	332	eP	P	04 14 22.8	-0.4
PRU				MLR	MLR		
	comp=Z,800nm,19.5s						
PRU	Pruhonice	78.39	332	eP	P	04 14 22.8	-0.4
PRU				AMS	AMS	04 52 10.0	
	comp=Z,800nm,19.5s						
EKA	Eskdalemuir Ar	78.42	344	P	P	04 14 23.4	+0.1
	comp=Z,2.8nm,0.5s,baz=24,slow=5.4,SNR=14						
EKA				LR	LR	04 55 27.7	
	comp=Z,164nm,19.4s,baz=2.5,slow=41						
	comp=Z,2.8nm,0.5s						
KRUC	Moravsky	78.52	330	eP	P	04 14 24.1	+0.2
SMOL	Smolenice	78.60	329	eP	P	04 14 25.2	+0.8
SMOL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SMOL	Smolenice	78.60	329	eP	P	04 14 25.2	+0.8
ANTO	Ankara	78.62	315	P	P	04 14 24.9	+0.1
ANTO				pmax	pmax		
	comp=Z,22nm,0.8s						
ANTO	Ankara	78.62	315	P	P	04 14 24.9	+0.1
TREC	Trest	78.65	331	AMS	AMS	04 53 10.0	
	comp=Z,500nm,17.0s						
KSU1	Kansas State U	78.68	46	P	P	04 14 25.1	+0.1
	baz=318						
SIRR	Siria	78.80	326	⇑P	P	04 14 25.8	+0.3
BUD	Budapest	78.85	328	P	P	04 14 25.9	+0.1
SRO	Srobarova	78.85	328	eP	P	04 14 27.1	+1.4
SRO	Srobarova	78.85	328	eP	P	04 14 27.1	+1.4
RAO	Raoul Island	78.87	151	LR	LR	04 44 43.3	
	comp=Z,186nm,19.3s,baz=310,slow=32						
NKC	Novy Kostel	78.89	333	eP	P	04 14 25.7	-0.3
NKC				MLR	MLR		
	comp=Z,700nm,15.7s						
NKC	Novy Kostel	78.89	333	eP	P	04 14 25.7	-0.3
NKC				AMS	AMS	04 53 00.0	
	comp=Z,700nm,15.7s						
COPA	Copaceanca	78.98	322	⇑P	P	04 14 27.0	+0.5
AMTX	Amarillo	78.98	52	P	P	04 14 27.2	+0.4
	baz=316						
MSTX	Muleshoe	79.00	53	P	P	04 14 27.2	+0.2
	baz=316						
GZR	Gura Zlata	79.03	324	⇑P	P	04 14 26.6	-0.3
GZR	Gura Zlata	79.03	324	⇑P	P	04 14 26.6	-0.3
MNTX	Cornudas Mount	79.06	57	P	P	04 14 27.9	+0.7
	baz=315						
CSKK	Cskako	79.25	328	P	P	04 14 27.8	-0.1
VLAD	Vladila	79.44	323	⇑P	P	04 14 30.8	+1.7
KHC	Kasperske Hory	79.45	332	c iP	P	04 14 29.3	+0.2
KHC				pmax	pmax		
	comp=Z,41nm,0.7s						
KHC	Kasperske Hory	79.45	332	IAmb	IAmb	04 14 30.7	
	comp=Z,18nm,0.7s						
KHC	Kasperske Hory	79.45	332	eP	P	04 14 29.4	+0.3
KHC				ex	x	04 14 40.5	
KHC				AMS	AMS	04 53 10.0	
	comp=Z,900nm,17.5s						
CKRC	Cesky Krumlov	79.47	331	eP	P	04 14 29.0	-0.2
EGYH	Egyhazaskeszo	79.55	329	P	P	04 14 30.8	+1.2
HERR	Herculane	79.60	324	⇑P	P	04 14 29.2	-0.7
SOP	Sopron	79.62	329	P	P	04 14 30.4	+0.4
GERES	GERESS Array B	79.66	332	P	P	04 14 30.2	-0.1
	comp=Z,3.5nm,0.5s,baz=43,slow=5.9,SNR=35						
	comp=Z,3.5nm,0.5s						
CONA	Conrad Observa	79.67	330	i P	P	04 14 31.1	+0.8
	comp=Z,21nm,1.3s,SNR=8.4						
MPLH	Magyarpolny	79.68	328	P	P	04 14 30.9	+0.6
RONA	Rosalia, Austr	79.70	329	i P	P	04 14 31.3	+0.8
	comp=Z,25nm,1.3s,SNR=8.2						
GRFO	Grafenberg	79.76	333	P	P	04 14 29.7	-1.0
GRFO				pmax	pmax		
	comp=Z,26nm,1.0s						
GRFO	Grafenberg	79.76	333	P	P	04 14 29.7	-1.0
GRFO				IAmb	IAmb	04 14 32.3	
	comp=Z,26nm,1.0s						
BORA	Eskisehir	79.79	316	IAmb	IAmb	04 14 46.4	
	comp=Z,9.9nm,1.0s						
P38A	Dawn	79.86	44	IAmb	IAmb	04 14 32.7	
	comp=Z,11nm,0.9s						
GLMI	Grayling	79.91	35	P	P	04 14 31.6	0.0
	baz=324						
VLDQ	Val d'Or	79.96	29	IAmb	IAmb	04 14 32.2	
	comp=Z,21nm,1.2s						
MDVR	Moldovita	79.97	325	⇑P	P	04 14 30.9	-1.2
MORH	Mrgy, Hungar	80.05	327	P	P	04 14 31.8	-0.5
RAR	Rarotonga	80.11	132	LR	LR	04 41 42.4	
	comp=Z,86nm,21.7s,baz=290,slow=29						
MOA	Molln	80.31	331	i P	P	04 14 34.1	+0.4
	comp=Z,10nm,0.9s						
T35A	Sooner Cattle	80.35	48	IAmb	IAmb	04 14 47.4	
	comp=Z,15nm,0.9s						
KOVH	Kovagotottos	80.36	328	P	P	04 14 33.5	-0.5
ARSA	Arzberg	80.36	330	i P	P	04 14 33.3	-0.7
	comp=Z,6.2nm,1.1s						
BTNL	Ternell	80.52	337	dP	P	04 14 34.5	-0.3
	comp=Z,8.1nm,1.0s						
MEM	Membach	80.53	337	dP	P	04 14 34.3	-0.5
	comp=Z,9.8nm,0.9s						
BIOA	Bad Ischl, Aus	80.67	331	eP	P	04 14 36.0	+0.3
	comp=Z,20nm,1.0s,SNR=7.6						
P40A	Paris	80.68	43	IAmb	IAmb	04 14 37.2	
	comp=Z,10.0nm,0.9s						
BSTI	Sart Tilman	80.68	337	dP	P	04 14 37.3	+1.7
WMOK	Wichita Mounta	80.72	50	P	P	04 14 36.6	+0.4
	baz=318						
BHOU	Houvegnez	80.77	337	dP	P	04 14 36.2	+0.1
	comp=Z,10nm,1.2s						
BCLA	Clavier	80.90	337	dP	P	04 14 36.4	-0.4
	comp=Z,10nm,1.0s						
BGES	Gesves	81.00	337	dP	P	04 14 37.3	0.0
	comp=Z,8.7nm,1.0s						
SOKA	Soboth	81.03	330	eP	P	04 14 37.7	+0.1
	comp=Z,23nm,1.1s,SNR=15						
PERS	Pernice	81.03	330	i P	P	04 14 37.7	0.0
GROS	Grobnik	81.04	329	i P	P	04 14 37.4	-0.3
VTS	Vitosha	81.06	322	⇑P	P	04 14 38.5	+0.5
VTS	Vitosha	81.06	322	⇑P	P	04 14 38.5	+0.5
VTS	Vitosha	81.06	322	IAmb	IAmb	04 14 39.8	
	comp=Z,20nm,1.0s						
FNO	Franklin	81.10	49	IAmb	IAmb	04 14 51.8	
	comp=Z,12nm,0.8s						
SNF	Seneffe	81.11	338	dP	P	04 14 37.8	-0.1
BMRD	Maredsous	81.16	337	dP	P	04 14 38.3	+0.2
BMRD				dx	x	04 14 52.4	
RCHB	Rochefort	81.16	337	dP	P	04 14 38.3	+0.1
	comp=Z,7.9nm,1.0s						
RDO	Rodhopi	81.19	320	IAmb	IAmb	04 14 40.2	
	comp=Z,16nm,0.9s						
HDIL	Hopedale	81.21	41	P	P	04 14 38.7	0.0
	baz=322						
LPIG	La Paz	81.24	65	LR	LR	04 45 40.3	
	comp=Z,51nm,20.3s,baz=314,slow=32						
DIVS	Divibare	81.25	325	IAmb	IAmb	04 14 39.7	
	comp=Z,9.0nm,0.9s						
KBA	Koelnbreinsper	81.29	331	eP	P	04 14 39.3	+0.1
	comp=Z,34nm,1.2s,SNR=18						
WLF	Walferdange	81.34	336	dP	P	04 14 41.4	+2.2
OBKA	Obir	81.35	330	i P	P	04 14 39.2	-0.1
	comp=Z,7.4nm,1.1s						
GOLS	Golise	81.37	329	i P	P	04 14 39.1	-0.3
DOU	Dourbes	81.39	337	dP	P	04 14 39.4	0.0
S39A	Bolivar	81.44	45	IAmb	IAmb	04 14 40.5	
	comp=Z,11nm,1.2s						
TUL1	Leonard	81.49	48	P	P	04 14 40.9	+0.7
	baz=319						
R40A	Maddies Statio	81.52	44	IAmb	IAmb	04 14 41.3	
	comp=Z,8.1nm,0.8s						
MYKA	Terra Mystica	81.57	330	eP	P	04 14 39.9	-0.6
	comp=Z,9.7nm,1.1s						
WATA	Walderalm	81.68	332	eP	P	04 14 41.5	+0.3
	comp=Z,34nm,1.1s,SNR=8.3						
WTTA	Wattenberg	81.72	332	eP	P	04 14 41.9	+0.4
	comp=Z,33nm,1.2s,SNR=7.4						
TX31	Lajitas Ar. Si	81.78	57	IAmb	IAmb	04 14 55.5	
	comp=Z,17nm,1.0s						
TXAR	Lajitas Array	81.78	57	P	P	04 14 43.0	+1.0
	comp=Z,3.9nm,1.0s,baz=296,slow=4.1,SNR=26						
	comp=Z,3.9nm,1.0s						
TXAR	Lajitas Array	81.78	57	P	P	04 14 42.8	+0.8
TXAR	Lajitas Array	81.78	57	P	P	04 14 42.8	+0.8
ABTX	Abilene, Hawle	81.78	52	P	P	04 14 42.1	+0.3
	baz=318						
MANT	Manisa	81.80	317	IAmb	IAmb	04 14 43.4	
	comp=Z,16nm,1.0s						
RETA	Reutte	81.83	333	eP	P	04 14 42.0	+0.2
	comp=Z,24nm,1.3s,SNR=7.5						
MOTA	Moosalm	81.83	332	eP	P	04 14 42.2	+0.1
	comp=Z,38nm,1.1s,SNR=17						
VISS	Visnje	81.84	329	i P	P	04 14 41.2	-0.7
ABTA	Abfaltersbach	81.87	331	i P	P	04 14 41.1	-1.0
	comp=Z,9.2nm,1.2s						
BFO	Black Forest	81.87	334	P	P	04 14 41.7	-0.3
BFO				pmax	pmax		
	comp=Z,13nm,1.0s						
BFO	Black Forest	81.87	334	P	P	04 14 41.7	-0.3
BFO				IAmb	IAmb	04 14 43.2	
	comp=Z,13nm,1.0s						
SQTA	Sankt Quirin	81.91	332	eP	P	04 14 42.4	+0.1
	comp=Z,22nm,1.1s,SNR=8.1						
SADO	Sadowa	82.16	32	LR	LR	04 52 01.1	
	comp=Z,146nm,21.4s,baz=28,slow=36						
CCM	Cathedral Cave	82.21	44	P	P	04 14 43.8	-0.2
CCM				pmax	pmax		
	comp=Z,19nm,1.2s						
CCM	Cathedral Cave	82.21	44	P	P	04 14 43.8	-0.2
CCM				IAmb	IAmb	04 14 45.2	
	comp=Z,19nm,1.2s						
CCM	Cathedral Cave	82.21	44	P	P	04 14 43.7	-0.2
	baz=321						
STAL	STALIGIAL	82.22	331	IAmb	IAmb	04 14 44.1	
	comp=Z,14nm,1.1s						
FETA	Feichten	82.24	332	eP	P	04 14 43.7	-0.5
	comp=Z,14nm,1.0s,SNR=8.3						
STIP	Stip	82.26	323	i P	P	04 14 43.3	-0.9
DAVA	Damuels	82.29	333	eP	P	04 14 44.6	+0.1
	comp=Z,23nm,1.0s,SNR=5.9						
TRI	Trieste	82.31	330	IAmb	IAmb	04 14 44.4	
	comp=Z,15nm,1.1s						
ECH	Echery	82.33	335	IAmb	IAmb	04 14 45.5	
	comp=Z,10.0nm,0.9s						
SKO	Skopje	82.37	323	i P	P	04 14 45.4	+0.7
VAY	Valandovo	82.39	322	i P	P	04 14 45.3	+0.4
U40A	Yellville	82.70	46	IAmb	IAmb	04 14 47.6	
	comp=Z,11nm,0.8s						
U40A	Yellville	82.70	46	P	P	04 14 46.7	+0.2
	baz=320,SNR=12						
DAVOX	Davos/Dischmat	82.74	333	P	P	04 14 47.1	+0.3
	comp=Z,7.2nm,0.8s,baz=321,slow=2.4,SNR=10						
DAVOX				LR	LR	04 55 49.5	
	comp=Z,187nm,19.0s,baz=38,slow=39						
	comp=Z,7.2nm,0.8s						
CTI	Castel Tesino	82.77	331	IAmb	IAmb	04 14 47.4	
	comp=Z,16nm,1.2s						
PDG	Podgorica	82.92	325	⇓P	P	04 14 47.2	-0.4
PDG	Podgorica	82.92	325	IAmb	IAmb	04 15 01.3	
	comp=Z,18nm,0.9s						
RAYN	Ar Rayn	82.94	296	P	P	04 14 48.0	-0.1
RAYN				pmax	pmax		
	comp=Z,34nm,1.4s						
RAYN	Ar Rayn	82.94	296	P	P	04 14 48.0	-0.1
W39A	Magazine	83.10	47	P	P	04 14 49.0	+0.4
	baz=320						
PPT	Papeete	83.14	122	LR	LR	04 49 06.3	
	comp=Z,179nm,19.5s,baz=314,slow=34						
TUE	Stuetta	83.18	333	IAmb	IAmb	04 14 53.6	
	comp=Z,18nm,1.0s						
JCT	Junction City	83.26	54	IAmb	IAmb	04 14 51.2	
	comp=Z,11nm,1.1s						
JCT	Junction City	83.26	54	P	P	04 14 49.9	+0.3
	baz=318						
OHR	Ohrid	83.34	323	i P	P	04 14 50.0	+0.1
FNA	Florina	83.36	322	IAmb	IAmb	04 14 50.6	
	comp=Z,12nm,1.0s						
O48B	Farmland	83.36	38	P	P	04 14 50.1	+0.2
	baz=324						
LIT	Litokhoron	83.42	321	IAmb	IAmb	04 14 50.7	
	comp=Z,14nm,1.1s						
FCAR	Ozark Folk Cen	83.44	45	IAmb	IAmb	04 14 51.2	
	comp=Z,6.0nm,0.7s						
TIR	Tirane	83.56	324	⇓P	P	04 14 49.8	-1.1
TIR	Tirane	83.56	324	⇓P	P	04 14 49.8	-1.1
PBMO	Poplar Bluff	83.61	44	IAmb	IAmb	04 14 52.7	
	comp=Z,17nm,1.3s						
MIAR	Mount Ida	83.70	47	IAmb	IAmb	04 15 04.8	
	comp=Z,9.6nm,0.9s						
MIAR	Mount Ida	83.70	47	P	P	04 14 52.0	+0.2
	baz=320,SNR=6.4						
LCAR	Lake Charles	83.80	45	IAmb	IAmb	04 15 06.8	
	comp=Z,10nm,1.4s						
WHAR	Wooly Hollow	83.81	46	IAmb	IAmb	04 15 05.4	
	comp=Z,8.0nm,0.9s						
W41B	Gary Mavity, V	83.92	46	IAmb	IAmb	04 14 54.1	
	comp=Z,12nm,1.1s						
W41B	Gary Mavity, V	83.92	46	P	P	04 14 52.8	0.0
	baz=321						
SENIN	Lac Senin/Sane	83.94	334	IAmb	IAmb	04 14 57.8	
	comp=Z,16nm,1.2s						
ERPA	Erie	84.05	34	IAmb	IAmb	04 14 54.8	
	comp=Z,11nm,0.8s						
ERPA	Erie	84.05	34	P	P	04 14 53.2	-0.2
	baz=327						
X40A	Basin Creek Fa	84.14	47	P	P	04 14 54.9	+0.9
	baz=321						
P49A	Miami Univ. Ec	84.15	39	P	P	04 14 53.8	-0.2
	baz=325						
M53A	WI Miller and	84.33	35	P	P	04 14 55.2	+0.4
	baz=327,SNR=5.1						
ACSO	Alum Creek Sta	84.35	37	P	P	04 14 55.2	+0.2
	baz=326						
AGG	Agios Georgios	84.36	321	IAmb	IAmb	04 15 07.8	
	comp=Z,11nm,1.1s						
N53A	Lisbon	84.79	35	IAmb	IAmb	04 14 58.6	
	comp=Z,15nm,1.1s						
T47A	Sharon Grove	85.08	42	IAmb	IAmb	04 15 00.4	
	comp=Z,17nm,1.1s						
833A	Chaparral WMA,	85.08	55	P	P	04 14 59.5	+0.7
	baz=318						
O53A	New Philadelph	85.10	36	P	P	04 14 58.8	+0.1
	baz=327						
X43A	Marvell	85.14	46	P	P	04 14 59.4	+0.4
	baz=322						
P52A	Corning	85.21	37	IAmb	IAmb	04 15 12.8	
	comp=Z,15nm,1.1s						
P52A	Corning	85.21	37	P	P	04 14 59.3	0.0
	baz=326						
WVT	Waverly	85.41	43	P	P	04 14 59.7	-0.6
WVT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WVT	Waverly	85.41	43	P	P	04 14 59.7	-0.6
WVT				IAmb	IAmb	04 15 01.9	
	comp=Z,5.9nm,0.8s						
WVT	Waverly	85.41	43	P	P	04 15 00.8	+0.4
	baz=323						
MATE	Matera	85.46	325	⇓P	P	04 15 00.3	-0.2
BINY	Binghamton	85.55	32	P	P	04 15 01.4	+0.4
	baz=330						
URZ	Urewera	85.63	158	LR	LR	04 49 16.8	
	comp=Z,76nm,19.3s,baz=31,slow=33						
U49A	Red Boiling Sp	86.09	41	IAmb	IAmb	04 15 05.3	
	comp=Z,16nm,1.2s						
IDI	Anoyia	86.13	317	LR	LR	04 58 46.1	
	comp=Z,115nm,18.5s,baz=33,slow=39						
IDI	Anoyia	86.13	317	IAmb	IAmb	04 15 20.7	
	comp=Z,17nm,1.1s						
SSPA	Standing Stone	86.14	34	P	P	04 15 03.8	-0.1
	baz=329						
CLTN	Cedars of Leba	86.17	42	IAmb	IAmb	04 15 18.8	
	comp=Z,8.1nm,1.0s						
N58A	Sunbury	86.44	33	IAmb	IAmb	04 15 06.7	
	comp=Z,11nm,0.9s						
TIP	Timpagrande	86.68	325	IAmb	IAmb	04 15 21.0	
	comp=Z,13nm,1.1s						
SWET	Sewanee	87.07	42	IAmb	IAmb	04 15 22.2	
	comp=Z,13nm,1.2s						
TZTN	Tazewell	87.11	40	P	P	04 15 09.2	+0.4
	baz=325						
R55A	Marlinton	87.20	36	P	P	04 15 09.5	+0.3
R55A				IAmb	IAmb	04 15 27.2	
	comp=Z,13nm,1.1s						
CPCT	Cooper Cave	87.55	41	IAmb	IAmb	04 15 12.3	
	comp=Z,7.2nm,1.0s						
TKL	Tuckaleechee C	87.73	40	LR	LR	04 55 51.4	
	comp=Z,186nm,21.0s,baz=340,slow=37						
TKL	Tuckaleechee C	87.73	40	IAmb	IAmb	04 15 13.2	
	comp=Z,8.0nm,1.0s						
BG3	Lake Jocassee	88.67	40	IAmb	IAmb	04 15 18.1	
	comp=Z,12nm,1.0s						
KMSC	Kings Mountain	89.28	39	P	P	04 15 19.4	+0.3
	baz=327						
RPZ	Rata Peaks	89.37	164	LR	LR	04 49 37.0	
	comp=Z,135nm,21.9s,baz=324,slow=32						
HODGE	Hodges	89.61	40	IAmb	IAmb	04 15 22.5	
	comp=Z,11nm,1.2s						
GOGA	Godfrey	89.72	41	P	P	04 15 21.6	+0.5
	baz=326						
KEST	Kesra	92.63	328	LR	LR	05 01 35.5	
	comp=Z,444nm,18.0s,baz=328,slow=38						
ATD	Arta Tunnel	93.20	289	LR	LR	05 03 13.8	
	comp=Z,343nm,18.2s,baz=1.0,slow=39						
ESDC	Sonseca Array	93.33	339	P	P	04 15 37.5	-0.3
	comp=Z,2.2nm,1.0s,baz=19,slow=3.6,SNR=6.6						
ESDC				LR	LR	05 02 24.1	
	comp=Z,171nm,20.2s,baz=36,slow=39						
	comp=Z,2.2nm,1.0s						
ESDC	Sonseca Array	93.33	339	IAmb	IAmb	04 15 38.6	
	comp=Z,4.5nm,1.2s						
DWPF	Disney Wildern	95.07	43	P	P	04 15 46.7	+0.7
	baz=326						
CMIG	Matias Romero	96.22	59	LR	LR	05 01 09.7	
	comp=Z,17nm,18.6s,baz=328,slow=37						
MDT	Midelt	99.96	337	LR	LR	05 09 03.5	

	comp=Z,74nm,18.7s,baz=25,slow=40						
TORD	**Torodi Ar. Bea**	**115.82**	**324**	PKP	**PKiKP**	**04 21 05.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=28,slow=1.9,SNR=12						
TORD				PP	PP	04 21 59.9	-8.4
	comp=Z,0.7nm,1.0s,baz=21,slow=7.0,SNR=3.6						
TROLL	**Troll, Antarti**	**147.33**	**199**	PKPbc	**PKPab**	**04 22 06.4**	**-0.8**
BDFB	**Brasilia**	**148.62**	**32**	PKPbc	**PKPbc**	**04 22 08.8**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=39,slow=6.5,SNR=4.6						
BDFB	**Brasilia**	**148.62**	**32**	PKIKP	**PKPdf**	**04 22 07.0**	**+0.4**
BDFB	**Brasilia**	**148.62**	**32**	PKPdf	**PKPdf**	**04 22 07.0**	**+0.4**
SNAA	**Sanae**	**148.77**	**197**	PKPbc	**PKPbc**	**04 22 09.4**	**+0.4**
VNA3	**Neumayer Olymp**	**150.44**	**194**	PKPbc	**PKPbc**	**04 22 13.3**	**+0.3**
VNA1	**Neumayer--Stat**	**150.67**	**196**	PKPbc	**PKiKP**	**04 22 14.1**	**0.0**
PLCA	**Paso Flores**	**151.05**	**98**	PKPbc	**PKiKP**	**04 22 16.6**	**+0.6**
	comp=Z,2.5nm,0.9s,baz=321,slow=5.3,SNR=6.0						
PLCA	**Paso Flores**	**151.05**	**98**	PKIKP	**PKPdf**	**04 22 11.9**	**+2.2**
PLCA	**Paso Flores**	**151.05**	**98**	PKPdf	**PKPdf**	**04 22 11.9**	**+2.2**
CPUP	**Villa Florida**	**152.74**	**59**	PKPbc	**PKPbc**	**04 22 19.6**	**0.0**
	comp=Z,2.2nm,1.0s,baz=294,slow=2.5,SNR=3.6						

PRU 10 04:11:42.7±0.0**, 50°.24N×19°.26E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.35**	**93**	*e*Pg	Pg	04 11 49.1	-0.2
OJC				*e*Sg	Sg	04 11 53.9	+0.1
OKC	**Ostrava-Krasne**	**0.82**	**241**	*e*PG	Pg	04 11 57.6	-0.8
OKC				*e*SG	Sg	04 12 09.7	+0.6
	comp=Z,7.3nm,0.9s						
NIE	**Niedzica**	**1.06**	**140**	*e*Pg	Pg	04 12 02.5	-0.5
NIE				*e*Sg	Sg	04 12 17.4	+0.6
LANS	**Liptovska Anna**	**1.10**	**173**	*e*PG	Pg	04 12 02.6	-1.1
LANS				*e*SG	Sg	04 12 17.2	-0.8
LANS				*e*LG	Lg	04 12 19.4	
MORC	**Moravsky Berou**	**1.20**	**248**	*e*PG	Pg	04 12 05.2	-0.5
MORC				*e*SG	Sg	04 12 20.8	-0.5
MAUC	**Maruska**	**1.28**	**227**	*e*PG	Pg	04 12 06.2	-0.9
MAUC				*e*SG	Sg	04 12 23.2	-0.4
	comp=Z,11nm,0.7s						
KRLC	**Kraliky**	**1.60**	**265**	*e*PG	Pn	04 12 11.4	-0.9
KRLC				*e*SG	Sn	04 12 33.8	+0.1
	comp=Z,5.8nm,0.4s						
VYHS	**Vyhne**	**1.77**	**189**	*e*PN	Pn	04 12 13.0	-1.6
VYHS				*e*SN	Sn	04 12 36.2	-1.6
VYHS				*e*LG	Lg	04 12 40.5	
DPC	**Dobruska-Polom**	**1.89**	**274**	*e*PG	Pb	04 12 17.6	-0.4
DPC				*e*SG	Sb	04 12 42.4	+0.2
	comp=Z,4.7nm,0.9s						
CHVC	**Chvalec**	**2.08**	**281**	*e*PG	Pb	04 12 21.0	-0.3
CHVC				*e*SG	Sg	04 12 50.1	+0.6

IDC ***10*** *04:24:28.1±3.0, 15°.93S×174°.26W, h83^{km}±27^{km}, mb3.7/7, mbtmp4.1/8, Error ellipse: s-maj=42.2km s-min=16.6km az=143.0*

NEIC ***10*** *04:24:28.4±2.0, 16°.02S±0°.09×174°.03W±0°.09, h83^{km}±6^{km}, mb4.2/10, Error ellipse: s-maj=15.6km s-min=9.2km az=142.0*

NOU ***10*** *04:24:54.3, 14°.05S×172°.25W, h143^{km}, MLv3.2/4, Samoa Islands*

ISC 10 04:24:31.0±0.7**, 15°.8S**±0°.2×**174°.1W**±0°.1**, h115^{km}, n29, σ1^{s}.09**/29**, mb4.2**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.94**	**51**	P	**Pn**	**04 25 15.5**	**-0.9**
	178nm,0.4s,baz=206,slow=1.8,SNR=44						
AFI				S	**Sn**	**04 25 48.5**	**-2.9**
	473nm,0.3s,baz=47,slow=17,SNR=17						
AFI	**Afiamalu**	**2.94**	**51**	P	**Pn**	**04 25 15.9**	**-0.5**
NIUE	**Niue**	**5.16**	**130**		Pn	04 25 40.5	-5.5
MSVF	**Nonsavu**	**7.75**	**254**		**Pn**	**04 26 20.5**	**-0.6**
OUENC	**Ouen Island, N**	**19.15**	**247**	Pn	**P**	**04 28 46.2**	**+0.8**
OUENC				IAmb	IAmb	04 29 07.5	
	comp=Z,12nm,0.8s						
DZM	**Mont Dzumac**	**19.41**	**248**	P	**P**	**04 28 49.1**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=107,slow=19,SNR=1.2						
DZM	**Mont Dzumac**	**19.41**	**248**	P	**P**	**04 28 48.7**	**+0.3**
DZM				IAmb	IAmb	04 29 23.1	
	comp=Z,9.1nm,1.2s						
STKA	**Stephens Creek**	**43.24**	**240**	P	**P**	**04 32 19.3**	**-1.8**
	comp=Z,3.8nm,0.8s,baz=102,slow=14,SNR=4.9						
	comp=Z,3.8nm,0.8s						
STKA	**Stephens Creek**	**43.24**	**240**	P	**P**	**04 32 19.7**	**-1.4**
BBOO	**Buckleboo**	**48.02**	**240**	P	**P**	**04 32 57.4**	**-1.2**
WR0	**Warramunga Arr**	**48.89**	**257**	P	**P**	**04 33 06.1**	**+0.5**
WR0				IAmb	IAmb	04 33 17.4	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**49.05**	**257**	P	**P**	**04 33 06.2**	**-0.5**
WB0				IAmb	IAmb	04 33 19.3	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**49.07**	**257**	P	**P**	**04 33 06.3**	**-0.7**
WRA	**Warramunga Arr**	**49.08**	**257**	P	**P**	**04 33 06.2**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=96,slow=6.2,SNR=30						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**49.08**	**257**	P	**P**	**04 33 06.3**	**-0.8**
AS31	**Alice Springs**	**49.33**	**252**	P	**P**	**04 33 09.1**	**+0.2**
AS31				IAmb	IAmb	04 33 09.8	
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**49.33**	**252**	P	**P**	**04 33 07.8**	**-1.1**
	comp=Z,2.7nm,0.6s,baz=88,slow=7.8,SNR=40						
	comp=Z,2.7nm,0.6s						
VNDA	**Vanda**	**62.92**	**186**	P	**P**	**04 34 44.5**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=9.9,slow=5.6,SNR=3.7						
	comp=Z,0.7nm,0.9s						
VNDA	**Vanda**	**62.92**	**186**	P	**P**	**04 34 44.5**	**-0.1**
VNDA				IAmb	IAmb	04 34 45.3	
	comp=Z,2.0nm,1.2s						
TXAR	**Lajitas Array**	**81.40**	**56**	P	**P**	**04 36 37.5**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=209,slow=8.2,SNR=6.0						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**82.97**	**11**	P	**P**	**04 36 44.3**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=234,slow=6.3,SNR=11						
	comp=Z,0.9nm,0.7s						
ILAR	**Eielson Array**	**82.97**	**11**	P	**P**	**04 36 43.9**	**+1.1**
PDAR	**Pinedale Array**	**83.02**	**42**	P	**P**	**04 36 45.1**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=214,slow=3.5,SNR=19						
	comp=Z,1.9nm,0.6s						
ARCES	**ARCESS Array B**	**124.90**	**352**	PKP	**PKiKP**	**04 43 17.4**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=352,slow=1.7,SNR=5.1						
ARCES	**ARCESS Array B**	**124.90**	**352**		**PKiKP**	**04 43 17.6**	**+0.4**
BRTR	**Keskin Array B**	**146.02**	**320**	PKPbc	**PKPab**	**04 43 59.0**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=145,slow=2.2,SNR=5.8						
BRTR	**Keskin Array B**	**146.02**	**320**	PKPdf	**PKPbc**	**04 43 57.5**	**-0.4**
GERES	**GERESS Array B**	**146.42**	**351**	PKPbc	**PKPab**	**04 43 59.8**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=345,slow=4.7,SNR=5.8						
GERES	**GERESS Array B**	**146.42**	**351**	PKPdf	**PKPdf**	**04 43 57.3**	**+0.1**

TUL ***10*** *05:01:00.9±1.1, 36°.53N±0°.02×98°.97W±0°.03, h5^{km}±5^{km}, ML2.5, mb_Lg2.1/10(NEIC), Error ellipse: s-maj=3.8km s-min=2.2km az=85.0*

NEIC 10 05:01:00.9±1.2**, 36°.53N**±0°.02×**98°.97W**±0°.04**, h13^{km}**±4^{km}**, Error ellipse: s-maj=4.7km s-min=2.6km az=96.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.15**	**191**	Pg	Pg	05 01 04.2	-0.5
WMOK	**Wichita Mounta**	**1.79**	**175**		Pn	05 01 32.4	+0.9
R32A	**Long Quarter,**	**1.90**	**6**		Pn	05 01 34.0	+0.9
T35A	**Sooner Cattle**	**2.01**	**78**	Pn	Pb	05 01 36.3	-1.0
AMTX	**Amarillo**	**2.75**	**234**	IAmb_Lg		05 02 32.9	
	comp=Z,6.0nm,0.7s						
KSCO	**Kaye Shedlock'**	**3.82**	**312**	IAmb_Lg		05 03 08.1	
	comp=Z,7.3nm,0.7s						
T25A	**Trinidad**	**4.41**	**280**	IAmb_Lg		05 03 22.8	
	comp=Z,3.1nm,0.8s						
S39A	**Bolivar**	**4.66**	**74**	IAmb_Lg		05 03 27.4	
	comp=Z,3.0nm,0.7s						
MGMO	**Mountain Grove**	**5.41**	**81**	IAmb_Lg		05 03 56.0	
	comp=Z,3.0nm,0.8s						

HLW ***10*** *05:08:26.2, 32°.57N×29°.74E, h19^{km}±4^{km}, Md2.9, Ml3.1*

GII ***10*** *05:08:30.1±0.0, 32°.36N×30°.12E, h30^{km}, Mm3.0/3*

NIC ***10*** *05:08:31.4±0.0, 32°.62N×30°.38E, h71^{km}±4^{km}, Ml3.3/3*

ISC 10 05:08:25.3±1.3**, 32°.53N**±0°.04×**29°.80E**±0°.05**, h35^{km}, n34, σ1^{s}.86**/51**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OSC1	**CSNet OBS 1**	**1.58**	**52**	P	**Pn**	**05 08 52.5**	**+1.8**
OSC1				S	**Sn**	**05 09 08.1**	**-1.8**
OSC2	**CSNet OBS 4**	**2.15**	**75**	P	**Pn**	**05 08 58.7**	**+0.1**
OSC2				S	**Sn**	**05 09 20.1**	**-3.9**
HNAT	**Natroun**	**2.97**	**166**	P	**Pn**	**05 09 11.3**	**+1.4**
	baz=165						
KOT	**Kottamia**	**3.12**	**146**	P	**Pn**	**05 09 13.6**	**+1.5**
	baz=145						
KOT				S	**Sn**	**05 09 48.1**	**0.0**
	baz=145						
HHAG	**Hagoal**	**3.24**	**142**	P	**Pn**	**05 09 15.1**	**+1.5**
	baz=141						
HHAG				S	**Sn**	**05 09 50.5**	**-0.4**
	baz=141						
AKMS	**Akamas**	**3.26**	**40**	P	**Pn**	**05 09 15.7**	**+1.8**
AKMS				AML	AML	05 09 50.4	
	0.2nm,0.3s						
AKMS				AML	AML	05 09 53.9	
	0.3nm,0.3s						
HSAF	**As Saff**	**3.27**	**152**	P	**Pn**	**05 09 15.7**	**+1.6**
	baz=151						
GLL	**Jalalah**	**3.37**	**150**	P	**Pn**	**05 09 17.1**	**+1.6**
	baz=149						
SZAC	**Souni**	**3.40**	**48**	P	**Pn**	**05 09 17.0**	**+1.2**
SZAC				S	**Sn**	**05 09 52.3**	**-2.6**
SZAC				AML	AML	05 09 58.1	
	0.2nm,0.2s						
SZAC				AML	AML	05 09 58.1	
	0.2nm,0.2s						
SZAC				AML	AML	05 09 59.6	
	0.2nm,0.2s						
SZAC				AML	AML	05 09 59.6	
	0.2nm,0.2s						
RYAN	**Fayoum**	**3.46**	**173**	P	**Pn**	**05 09 17.9**	**+1.3**
	baz=172						
RYAN				S	**Sn**	**05 09 55.3**	**-1.1**
	baz=172						
ALFC	**Alefka**	**3.51**	**41**	P	**Pn**	**05 09 18.8**	**+1.4**
ALFC				S	**Sn**	**05 09 56.7**	**-1.0**
ALFC				AML	AML	05 09 59.2	
	0.3nm,0.3s						
ALFC				AML	AML	05 09 59.2	
	0.3nm,0.3s						
ALFC				AML	AML	05 09 59.2	
	0.3nm,0.1s						
ALFC				AML	AML	05 09 59.2	
	0.3nm,0.1s						
ASGA	**Asgata**	**3.65**	**51**	P	**Pn**	**05 09 21.5**	**+2.2**
SUZ	**Suez**	**3.73**	**135**	P	**Pn**	**05 09 22.2**	**+1.8**
	baz=134						
CSS	**Mathiatis**	**3.82**	**50**	Pn	**Pn**	**05 09 25.8**	**+4.3**
SLUM	**Salum**	**4.03**	**256**	P	**Pn**	**05 09 25.2**	**+0.7**
	baz=256						
SLUM				S	**Sn**	**05 10 06.8**	**-3.6**
	baz=256						
NBNS	**Bani Suef**	**4.10**	**161**	P	**Pn**	**05 09 26.7**	**+1.2**
	baz=160						
KZIT	**Kziot**	**4.24**	**111**	Pn	**Pn**	**05 09 28.2**	**+0.8**
KZIT				Sn	**Sn**	**05 10 13.8**	**-1.9**
YTIR	**Yattir**	**4.67**	**103**	Sn	**Sn**	**05 10 25.7**	**-0.7**
DSI	**Dead Sea**	**4.84**	**100**	Pn	**Pn**	**05 09 37.2**	**+1.6**
DSI				Sn	**Sn**	**05 10 29.7**	**-0.7**
UJAP	**Al Uja**	**4.84**	**95**	Pn	**Pn**	**05 09 36.9**	**+1.4**
HMDT	**Nahal Hemdat**	**4.86**	**92**	Pn	**Pn**	**05 09 37.7**	**+1.9**
HMDT				Sn	**Sn**	**05 10 29.7**	**-1.1**
HRDS	**Abu Rudays**	**4.86**	**141**	P	**Pn**	**05 09 37.1**	**+1.3**
	baz=140						
MDBI	**Mazsada**	**4.88**	**103**	Pn	**Pn**	**05 09 37.3**	**+1.2**
MDBI				Sn	**Sn**	**05 10 29.7**	**-1.7**
TAMRE	**El Minia**	**4.93**	**168**	P	**Pn**	**05 09 38.3**	**+1.5**
	baz=167						
PRNI	**Paran**	**4.95**	**115**	Pn	**Pn**	**05 09 38.5**	**+1.3**
PRNI				Sn	**Sn**	**05 10 30.2**	**-3.0**
SWA2		**4.96**	**230**	P	**Pn**	**05 09 37.9**	**+0.6**
	baz=230						
GRB	**Gharib**	**4.97**	**148**	P	**Pn**	**05 09 38.4**	**+1.0**
	baz=147						
GEM	**Giv'at Ha'Em**	**4.98**	**81**	Pn	**Pn**	**05 09 39.8**	**+2.2**
GEM				Sn	**Sn**	**05 10 33.1**	**-0.9**
HRFI	**Mount Harif**	**5.13**	**118**	Pn	**Pn**	**05 09 40.3**	**+0.7**
HRFI				Sn	**Sn**	**05 10 35.8**	**-1.8**
MBRI	**Mt Berech**	**5.16**	**121**	Pn	**Pn**	**05 09 41.9**	**+1.7**
MBRI				Sn	**Sn**	**05 10 36.3**	**-2.3**
EIL	**Elat**	**5.26**	**121**	Pn	**Pn**	**05 09 42.3**	**+0.9**
EIL				Sn	**Sn**	**05 10 38.4**	**-2.4**
ASUT		**5.34**	**163**	P	**Pn**	**05 09 43.8**	**+1.3**
	baz=162						
HKAT	**Jabal Katrina**	**5.39**	**137**	P	**Pn**	**05 09 44.2**	**+0.8**
	baz=136						
HHRG	**Al Ghardaqah**	**6.22**	**147**	P	**Pn**	**05 09 58.1**	**+3.4**
	baz=147						

IDC ***10*** *05:14:07.6±1.3, 5°.83S×154°.42E, h408^{km}±13^{km}, mb3.1/6, mbtmp3.9/9, Error ellipse: s-maj=25.5km s-min=14.7km az=117.0*

ISC 10 05:14:07.0±0.8**, 5°.9S**±0°.1×**154°.5E**±0°.1**, h400^{km}, n11, σ1^{s}.00**/12**, mb3.4**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.94**	**302**	P	**Pn**	**05 15 11.1**	**+1.4**
	261nm,0.5s,baz=237,slow=1.6,SNR=19						
KRVT				S	**S**	**05 16 00.3**	**-0.1**
	54nm,0.8s,baz=139,slow=20,SNR=1.0						
CTA	**Charters Tower**	**16.27**	**209**	P	**P**	**05 17 34.5**	**+1.3**
	1.3nm,0.3s,baz=52,slow=12,SNR=2.6						
DZM	**Mont Dzumac**	**19.81**	**146**	P	**P**	**05 18 10.8**	**+1.0**
	1.4nm,0.6s,baz=131,slow=20,SNR=1.4						
WRA	**Warramunga Arr**	**24.11**	**233**	P	**P**	**05 18 48.8**	**0.0**
	0.4nm,0.3s,baz=51,slow=7.7,SNR=14						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**26.60**	**226**	P	**P**	**05 19 09.9**	**-1.1**
	0.5nm,0.4s,baz=57,slow=8.9,SNR=4.9						
	0.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**30.71**	**244**	P	**P**	**05 19 46.1**	**-1.1**
	0.9nm,0.3s,baz=69,slow=5.8,SNR=14						
	0.9nm,0.3s						
PETK	**Petropavlovsk-**	**58.80**	**2**	P	**P**	**05 23 25.4**	**+0.5**
	0.9nm,0.5s,baz=166,slow=8.0,SNR=5.7						
	0.9nm,0.5s						
ILAR	**Eielson Array**	**82.49**	**22**	P	**P**	**05 25 45.4**	**-0.4**
	0.8nm,0.7s,baz=248,slow=4.8,SNR=10						
	0.8nm,0.7s						
YKA	**Yellowknife Ar**	**95.55**	**28**	P	**P**	**05 26 46.9**	**-0.5**
	0.1nm,0.6s,baz=267,slow=4.5,SNR=2.4						
	0.1nm,0.6s						
BDFB	**Brasilia**	**149.09**	**134**	PKPbc	**PKPbc**	**05 33 08.8**	**-1.1**
	0.4nm,0.3s,baz=0.0,slow=0.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**152.27**	**287**	PKPbc	**PKPbc**	**05 33 16.8**	**-0.4**
	0.3nm,0.3s,baz=26,slow=1.6,SNR=7.2						

IDC ***10*** *05:16:35.5±1.9, 34°.23S×178°.24W, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.6/1, MS4.4/3, Error ellipse: s-maj=46.4km s-min=43.1km az=9.0*

WEL ***10*** *05:16:41.6±0.9, 34°S±8°×17°9W±1°5, h33^{km}, M4.3/10, mB4.8/5, ML4.7/12, MLv4.4/10, Mw(mB)4.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=115.4*

ISC 10 05:16:39.5±1.5**, 34°.49S**±0°.09×**178°.1W**±0°.2**, h35^{km}, n29, σ1^{s}.52**/40**, mb3.6**/3**, MS4.7**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.25**	**223**	P	**Pn**	**05 17 43.4**	**+1.7**
MXZ				S	**Sn**	**05 18 29.0**	**-1.1**
WMGZ	**Waiomatatini S**	**4.38**	**220**	P	**Pn**	**05 17 44.9**	**+1.5**
WMGZ				S	**Sn**	**05 18 34.2**	**+1.0**
PKGZ	**Pakihiroa**	**4.61**	**222**	S	**Sn**	**05 18 37.7**	**-1.3**
PUZ	**Puketiti**	**4.65**	**219**	P	**Pn**	**05 17 48.3**	**+1.1**
PUZ				S	**Sn**	**05 18 39.9**	**-0.1**
HAZ	**Te Kaha**	**4.68**	**225**	P	**Pn**	**05 17 49.9**	**+2.3**
HAZ				S	**Sn**	**05 18 41.6**	**+0.9**
TWGZ	**Tauwhareparae**	**4.87**	**220**	P	**Pn**	**05 17 49.5**	**-0.8**
TWGZ				S	**Sn**	**05 18 46.3**	**+0.8**
RUGZ	**Raukumara Rang**	**4.89**	**224**	P	**Pn**	**05 17 52.8**	**+2.2**
RUGZ				S	**Sn**	**05 18 45.6**	**-0.4**
CNGZ	**Carnagh Statio**	**4.99**	**216**	P	**Pn**	**05 17 53.4**	**+1.5**
TKGZ	**Te Karaka**	**5.14**	**219**	P	**Pn**	**05 17 53.3**	**-0.5**
TKGZ				S	**Sn**	**05 18 51.6**	**-0.3**
GLKZ	**Green Lake**	**5.22**	**1**	S	**Sn**	**05 18 52.3**	**-1.7**
MWZ	**Matawai**	**5.23**	**222**	P	**Pn**	**05 17 56.3**	**+1.1**
MWZ				S	**Sn**	**05 18 52.7**	**-1.6**
WHRZ	**Whale Island**	**5.23**	**229**	S	**Sn**	**05 18 52.8**	**-1.6**
RIGZ	**Rimuhau**	**5.38**	**217**	P	**Pn**	**05 17 58.2**	**+0.9**
RIGZ				S	**Sn**	**05 18 56.7**	**-1.4**
RAGZ	**Rawiri**	**5.41**	**221**	P	**Pn**	**05 17 58.8**	**+1.1**
RAGZ				S	**Sn**	**05 18 56.8**	**-1.9**
URZ	**Urewera**	**5.41**	**225**	Pn	**Pn**	**05 17 59.2**	**+1.5**
	1.7nm,0.3s,baz=307,slow=20,SNR=8.3						
URZ				Sn	**Sn**	**05 18 57.2**	**-1.5**
	13nm,0.3s,baz=301,slow=24,SNR=4.8						
URZ				LR	LR	05 20 22.0	
	comp=Z,102nm,19.2s,baz=31,slow=41						
	3.8nm,0.3s						
URZ	**Urewera**	**5.41**	**225**	P	**Pn**	**05 17 59.1**	**+1.5**
URZ				S	**Sn**	**05 18 56.5**	**-2.2**
PRGZ	**Paritu Road**	**5.49**	**215**	P	**Pn**	**05 17 59.7**	**+0.9**
PRGZ				S	**Sn**	**05 18 59.5**	**-1.2**
KUZ	**Kuaotunu**	**5.54**	**244**	P	**Pn**	**05 18 02.2**	**+2.7**
SNGZ	**Shannon Statio**	**5.66**	**220**	S	**Sn**	**05 19 03.5**	**-1.3**
KNZ	**Kokohu**	**5.67**	**216**	P	**Pn**	**05 17 59.0**	**-2.2**
MUGZ	**Murupara**	**5.76**	**225**	P	**Pn**	**05 18 02.7**	**+0.3**
MUGZ				S	**Sn**	**05 19 04.2**	**-3.0**
CTA	**Charters Tower**	**34.61**	**285**	P	**P**	**05 23 25.1**	**-0.2**
	1.4nm,0.5s,baz=96,slow=9.2,SNR=2.1						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**43.00**	**271**	P	**P**	**05 24 35.2**	**-0.4**
	0.9nm,0.7s,baz=104,slow=7.2,SNR=5.5						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**44.35**	**276**	P	**P**	**05 24 45.4**	**-1.2**
	0.6nm,0.6s,baz=118,slow=7.4,SNR=4.6						
	0.6nm,0.6s						
KLR	**Kul'dur**	**94.53**	**330**	LR	LR	06 10 54.4	
	comp=Z,85nm,19.3s,baz=92,slow=35						
MA2	**Magadan**	**97.22**	**345**	LR	LR	06 06 59.8	
	comp=Z,250nm,20.4s,baz=194,slow=31						
SEY	**Seymchan**	**99.94**	**347**	LR	LR	06 10 10.3	
	comp=Z,305nm,20.0s,baz=192,slow=32						
FINES	**FINESS Array B**	**148.93**	**338**	PKPbc	**PKPbc**	**05 36 23.4**	**+0.6**
	1.8nm,0.8s,baz=48,slow=5.7,SNR=7.6						
TORD	**Torodi Ar. Bea**	**158.75**	**179**	PKPab	**PKPab**	**05 37 11.5**	**+2.0**
	0.6nm,0.6s,baz=190,slow=3.4,SNR=3.7						

IDC ***10*** *05:44:51.5±0.6, 43°.85N×148°.44E, h0^{km}, mb4.4/20, mbtmp4.4/27, ML4.2/5, MS3.9/7, Error ellipse: s-maj=16.3km s-min=12.6km az=144.0*

BJI ***10*** *05:44:52.6±0.0, 43°.73N×148°.86E, h37^{km}, mb4.8/56, mB4.8/38, Ms4.5/44, Ms7 4.3/44*

NIED ***10*** *05:44:54.0, 43°.61N×148°.28E, h0^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.98; M$_{\theta\theta}$-3.14; M$_{\phi\phi}$-2.85; M$_{r\theta}$5.29; M$_{\theta\phi}$-2.44; M$_{\phi r}$4.38; Fault plane solution: M$_0$8.93000×10^{15} NP1: φ$_s$225.00000°, δ20.00000°, λ85.00000°. NP2:φ$_s$49.00000°, δ70.00000°, λ92.00000°.*

JMA ***10*** *05:44:54.0±0.6, 44°N±2°×14°8E±°, h0^{km}, MD4.5/38, MV5.0/38, SE OFF ETOROFU*

SKHL ***10*** *05:44:53.2±0.3, 43°.60N×148°.70E, h29^{km}±4^{km}, mb5.5/4, mbv4.9/2, ms4.3/7*

MOS ***10*** *05:44:53.6±1.0, 43°.87N×148°.49E, h26^{km}, mb5.1/42, Error ellipse: s-maj=6.6km s-min=4.5km az=128.8*

NEIC ***10*** *05:44:56.6±1.8, 43°.82N±0°.08×148°.4E±0°.1, h30^{km}±4^{km}, mb4.7/145, Error ellipse: s-maj=14.3km s-min=10.1km az=132.0*

ISC 10 05:44:55.6±0.6**, 43°.73N**±0°.05×**148°.58E**±0°.04**, h31^{km}**±3^{km}**, n536, σ1^{s}.29**/510**, mb4.8**/162**, MS4.3**/23**, 71C-13D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.27**	**277***c*	*i*PN	**Pn**	**05 45 15.8**	**-1.4**
SHO				*e*S	**Sn**	**05 45 32.9**	**-0.3**
SHO				pmax	pmax		
	comp=Z,1μm,0.4s						
SHO				pmax	pmax		
	comp=N,157nm,0.2s						
SHO				smax	smax		
	comp=E,7μm,0.5s						
SHO				smax	smax		
	comp=N,5μm,0.3s						
SHO	**Shikotan**	**1.27**	**277**	*i* P	**Pn**	**05 45 16.0**	**-1.2**
SHO				AMB	AMB	05 45 19.8	
	comp=N,1μm,0.3s						
SHO				*e*S	**Sn**	**05 45 32.9**	**-0.3**
SHO				A	A	05 45 37.0	
	comp=N,5μm,0.5s						
SHO				A	A	05 45 37.0	
	comp=N,7μm,0.5s						
KUR	**Kuril'sk**	**1.59**	**342***c*	*i*PN	**Pn**	**05 45 20.7**	**-0.8**
KUR				*e*S	**Sn**	**05 45 40.1**	**-0.9**
KUR				pmax	pmax		
	comp=Z,2μm,0.6s						
KUR				pmax	pmax		
	comp=N,647nm,0.3s						
KUR				pmax	pmax		
	comp=E,603nm,0.3s						
KUR				smax	smax		
	comp=N,5μm,0.4s						
KUR				smax	smax		
	comp=E,2μm,0.4s						
KUR				smax	smax		
	comp=E,19μm,2.5s						
KUR				smax	smax		
	comp=N,7μm,2.2s						
KUR	**Kuril'sk**	**1.59**	**342**	*i* P	**Pn**	**05 45 20.7**	**-0.8**
KUR				AMB	AMB	05 45 26.8	
	comp=N,2μm,0.5s						
KUR				*e*S	**Sb**	**05 45 41.5**	**-2.5**
KUR				A	A	05 45 50.8	
	comp=N,5μm,0.4s						
KUR				A	A	05 45 50.8	
	comp=N,2μm,0.4s						
KUR				A	A	05 45 52.5	
	comp=N,8μm,2.3s						
KUR				A	A	05 45 52.5	
	comp=N,19μm,2.3s						
YUK	**Yuzh-Kuril'sk**	**1.99**	**280**	*e*PN	**Pn**	**05 45 26.1**	**-0.9**
YUK				*e*S	**Sn**	**05 45 51.4**	**+0.6**
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=N,596nm,0.4s						
YUK				pmax	pmax		
	comp=E,1μm,0.4s						
YUK				smax	smax		
	comp=N,8μm,0.4s						
YUK				smax	smax		
	comp=E,9μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.99**	**280**	*i* P	**Pn**	**05 45 26.2**	**-0.8**
YUK				AMB	AMB	05 45 30.1	
	comp=E,600nm,0.4s						
YUK				AMB	AMB	05 45 30.1	
	comp=E,1μm,0.4s						
YUK				AMB	AMB	05 45 30.1	
	comp=E,1μm,0.4s						
YUK				*e*S	**Sn**	**05 45 51.0**	**+0.2**
YUK				A	A	05 46 01.0	
	comp=E,7μm,0.6s						
YUK				A	A	05 46 01.0	
	comp=E,9μm,0.6s						
NEM2	**Nemuro 2**	**2.09**	**261**	*e*P	**Pn**	**05 45 27.2**	**-1.3**
NMR	**Nemuro--Hokkai**	**2.10**	**261**	*e*PN	**Pn**	**05 45 27.2**	**-1.4**
NMR				*e*S	**Sn**	**05 45 52.9**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.10**	**261**	*e*P	**Pn**	**05 45 27.2**	**-1.4**
NMR				*e*S	**Sn**	**05 45 52.9**	**-0.8**
GLVR	**Golovnino**	**2.22**	**271**	*e*PN	**Pn**	**05 45 29.7**	**-0.5**
GLVR				*e*S	**Sn**	**05 45 57.1**	**+0.6**
GLVR				pmax	pmax		
	comp=E,357nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.4s						
GLVR				pmax	pmax		
	comp=N,469nm,0.2s						
GLVR				smax	smax		
	comp=N,5μm,0.5s						
GLVR				smax	smax		
	comp=E,10μm,0.4s						
GLVR	**Golovnino**	**2.22**	**271**	*e*P	**Pn**	**05 45 29.7**	**-0.5**
GLVR				AMB	AMB	05 45 32.9	
	comp=E,1μm,0.4s						
GLVR				*e*S	**Sn**	**05 45 57.1**	**+0.6**
GLVR				A	A	05 46 07.0	
	comp=E,5μm,0.7s						
GLVR				A	A	05 46 07.0	
	comp=E,10μm,0.7s						
RUSJ	**Misakicho**	**2.43**	**280**	*e*PN	**Pn**	**05 45 33.4**	**+0.2**
RUSJ				*e*S	**Sn**	**05 46 03.7**	**+1.8**
JRA	**Rausu**	**2.51**	**276**	*e*P	**Pn**	**05 45 34.0**	**-0.2**

JRA				*e*S	**Sn**	**05 46 04.0**	**+0.4**
JRA	**Rausu**	**2.51**	**276**	A	A	05 45 34.0	
	comp=E,6.0nm,2.2s,comp=E,7.0nm,1.1s						
JKHN	**Kushirohamanak**	**2.57**	**257**	*e*P	**Pn**	**05 45 34.5**	**-0.6**
JKHN	**Kushirohamanak**	**2.57**	**257**	A	A	05 45 34.5	
	comp=E,6.0nm,2.9s,comp=E,6.0nm,4.9s						
JNSB	**Nemuroshibetsu**	**2.59**	**272**	*e*P	**Pn**	**05 45 35.3**	**0.0**
JNSB	**Nemuroshibetsu**	**2.59**	**272**	A	A	05 45 35.3	
	comp=E,8.0nm,2.4s,comp=E,6.0nm,2.4s						
JNK	**Nakash**	**2.80**	**268**	*e*P	**Pn**	**05 45 37.7**	**-0.6**
JAK	**Akkeshi**	**2.92**	**257**	*e*P	**Pn**	**05 45 39.4**	**-0.5**
JAK				*e*S	**Sn**	**05 46 13.2**	**-0.7**
JAK	**Akkeshi**	**2.92**	**257**	A	A	05 45 39.4	
	comp=E,6.0nm,2.9s,comp=E,5.0nm,3.2s						
JTKR	**Abashiri--Toko**	**3.38**	**276**	*e*P	**Pn**	**05 45 46.8**	**+0.6**
JAR	**Ashorobuto**	**3.52**	**265**	*e*P	**Pn**	**05 45 48.2**	**0.0**
JAR	**Ashorobuto**	**3.52**	**265**	A	A	05 45 48.2	
	comp=E,2.0nm,3.8s,comp=E,3.0nm,5.6s						
JCH	**Churui**	**3.97**	**255**	*e*P	**Pn**	**05 45 54.9**	**+0.5**
JCH	**Churui**	**3.97**	**255**	A	A	05 45 54.9	
	comp=E,2.0nm,3.7s,comp=E,2.0nm,1.5s						
JKK2	**Kamakawa 2**	**4.22**	**274**	*e*P	**Pn**	**05 45 59.1**	**+1.3**
JKA	**Kamikawa-asahi**	**4.33**	**277**	Pn	**Pn**	**05 45 59.5**	**+0.2**
JKA	**Kamikawa-asahi**	**4.33**	**277**	*e*P	**Pn**	**05 45 59.5**	**+0.2**
ERM	**Erimo**	**4.34**	**249**	PN	**Pn**	**05 46 00.4**	**+1.0**
ERM	**Erimo**	**4.34**	**249**	Pn	**Pn**	**05 46 00.4**	**+1.0**
ASAJ	**Asahikawa**	**4.34**	**277**	Pn	**Pn**	**05 46 00.9**	**+1.5**
	comp=E,11nm,0.3s,baz=107,slow=20,SNR=18						
ASAJ				LR	LR	05 47 38.4	
	comp=E,1µm,21.5s,baz=156,slow=40						
ASAJ	**Asahikawa**	**4.34**	**277**	PN	**Pn**	**05 45 59.5**	**+0.1**
JSE	**Soyaes**	**4.47**	**288**	*e*P	**Pn**	**05 46 02.5**	**+1.4**
JNBK	**Urakawa-nobuka**	**4.51**	**253**	*e*P	**Pn**	**05 46 02.0**	**+0.2**
JNBK	**Urakawa-nobuka**	**4.51**	**253**	A	A	05 46 02.0	
	comp=E,4.0nm,1.0s,comp=E,3.0nm,1.5s						
JSS	**Shosan**	**4.89**	**280**	*e*P	**Pn**	**05 46 09.2**	**+2.2**
JIAM	**Iburiatsuma**	**4.99**	**259**	A	A	05 46 09.0	
	comp=E,4.0nm,5.5s,comp=E,6.0nm,1.3s						
JWK2	**Keihoku**	**5.03**	**291**	*e*P	**Pn**	**05 46 11.5**	**+2.6**
YSS	**Yuzh-Sakhalins**	**5.22**	**310**	c*e*PN	**Pn**	**05 46 12.1**	**+0.7**
YSS				*e*S	**Sn**	**05 47 13.0**	**+2.5**
YSS				pmax	pmax		
	comp=Z,120nm,0.7s						
YSS				smax	smax		
	comp=E,130nm,0.9s						
YSS				MLR	MLR		
	comp=E,1µm,14.0s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.22**	**310**	Pn	**Pn**	**05 46 10.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	**5.22**	**310**	*e*P	**Pn**	**05 46 12.5**	**+1.1**
YSS				AMB	AMB	05 46 23.4	
	comp=Z,120nm,0.6s						
YSS				*e*S	**Sn**	**05 47 11.7**	**+1.2**
YSS				A	A	05 47 20.4	
	comp=Z,120nm,0.8s						
YSS				A	A	05 47 20.4	
	comp=Z,60nm,0.8s						
YSS				AMS	AMS	05 48 19.0	
	comp=Z,2µm,14.0s						
YSS				AMS	AMS	05 48 19.0	
	comp=Z,1µm,14.0s						
YSS				AMS	AMS	05 48 19.0	
	comp=Z,2µm,14.0s						
JEW	**Eniwo**	**5.28**	**263**	Pn	**Pn**	**05 46 12.7**	**+0.4**
JEW	**Eniwo**	**5.28**	**263**	*e*P	**Pn**	**05 46 13.9**	**+1.6**
JRBN	**Rebuntou**	**5.63**	**290**	*e*P	**Pn**	**05 46 18.6**	**+1.5**
JOT	**Ohata**	**6.03**	**250**	*e*P	**Pn**	**05 46 22.9**	**+0.2**
JOT				*e*S	**Sn**	**05 47 27.5**	**-3.2**
JTM	**Tenmabayashi**	**6.30**	**245**	Pn	**Pn**	**05 46 26.5**	**+0.2**
UGL	**Uglegorsk**	**6.99**	**322**	*e*P	**Pn**	**05 46 38.1**	**+2.4**
UGL				AMB	AMB	05 46 44.4	
	comp=Z,30nm,0.7s						
UGL				*e*S	**Sn**	**05 47 54.9**	**+0.9**
UGL				A	A	05 48 11.9	
	comp=Z,30nm,0.6s						
UGL				A	A	05 48 11.9	
	comp=Z,40nm,0.6s						
TYV	**Tymovskoe**	**8.19**	**333**	*e*PN	Pn	05 46 58.6	+6.4
TYV				*e*S	Sn	05 48 31.7	+8.1
TYV				pmax	pmax		
	comp=Z,22nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
TYV				smax	smax		
	comp=N,14nm,1.0s						
TYV				smax	smax		
	comp=E,18nm,1.0s						
TYV				MLR	MLR		
	comp=N,2µm,15.0s						
TYV				MLR	MLR		
	comp=Z,2µm,15.0s						
TYV	**Tymovskoe**	**8.19**	**333**	*e*P	**Pn**	**05 46 54.0**	**+1.8**
TYV				AMB	AMB	05 47 01.0	
	comp=Z,20nm,0.8s						
TYV				AMB	AMB	05 47 01.4	
	comp=Z,200nm,4.7s						
TYV				*e*S	**Sn**	**05 48 24.2**	**+0.6**
TYV				A	A	05 48 34.0	
	comp=Z,50nm,0.8s						
TYV				A	A	05 48 34.0	
	comp=Z,80nm,0.8s						
TYV				AMS	AMS	05 49 54.7	
	comp=Z,2µm,15.0s						
TYV				AMS	AMS	05 49 54.7	
	comp=Z,2µm,15.0s						
JMM	**Marumori**	**8.31**	**228**	Pn	**Pn**	**05 46 53.0**	**-1.0**
SKR	**Severo-Kuril’s**	**8.64**	**34**	*e*PN	**Pn**	**05 46 57.2**	**-1.2**
SKR				pmax	pmax		
	comp=Z,62nm,0.6s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
SKR				MLR	MLR		
	comp=N,800nm,13.0s						
SKR				MLR	MLR		
	comp=E,1µm,14.0s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
SKR				MLR	MLR		
	comp=N,1µm,12.0s						
SKR				MLR	MLR		
	comp=E,1µm,12.0s						
SKR	**Severo-Kuril’s**	**8.64**	**34**	*e*P	**Pn**	**05 46 58.2**	**-0.2**
SKR				AMB	AMB	05 47 02.5	
	comp=E,70nm,0.5s						
SKR				*e*S	**Sn**	**05 48 32.6**	**-2.0**
SKR				A	A	05 48 48.6	
	comp=E,90nm,0.8s						
SKR				A	A	05 48 48.6	
	comp=E,50nm,0.8s						
SKR				AMS	AMS	05 50 15.6	
	comp=E,800nm,14.0s						
SKR				AMS	AMS	05 50 15.6	
	comp=E,1µm,14.0s						
SKR				AMS	AMS	05 50 15.6	
	comp=E,800nm,14.0s						
TEY	**Ternei**	**8.68**	**283**	*e*PN	**Pn**	**05 47 01.2**	**+2.4**
TEY	**Ternei**	**8.68**	**283**	*e*P	**Pn**	**05 47 01.3**	**+2.4**
TEY				AMB	AMB	05 47 05.8	
	comp=E,10.0nm,0.6s						
PAU	**Pauzhetka**	**9.53**	**33**	*e*P	**Pn**	**05 47 11.5**	**+1.0**
PAU				AMB	AMB	05 47 19.9	
	comp=E,20nm,0.5s						
JSD	**Sado**	**9.66**	**237**	Pn	**Pn**	**05 47 11.3**	**-1.1**
OKH	**Okha**	**10.51**	**341**	d*e*PN	Pn	05 47 18.3	-5.6
OKH				MLR	MLR		
	comp=E,1µm,16.0s						
OKH				MLR	MLR		
	comp=Z,900nm,16.0s						
OKH				MLR	MLR		
	comp=N,1µm,15.0s						
OKH	**Okha**	**10.51**	**341**	*e*P	**Pn**	**05 47 26.0**	**+2.1**
OKH				AMB	AMB	05 47 30.1	
	comp=N,10.0nm,0.8s						
OKH				AMS	AMS	05 52 32.3	
	comp=N,1µm,15.0s						
OKH				AMS	AMS	05 52 32.3	
	comp=N,1µm,15.0s						
OKH				AMS	AMS	05 52 32.3	
	comp=N,1µm,15.0s						
KHBR	**Khabarovsk**	**10.52**	**302**	*e*P	**Pn**	**05 47 25.7**	**+1.6**
MJAR	**Matsushiro Arr**	**10.70**	**231**	Pn	**Pn**	**05 47 24.6**	**-2.0**
	comp=N,0.2nm,0.3s,baz=27,slow=13,SNR=11						
	comp=N,4.1nm,0.7s						
MJB9	**Matsu-Tunnel**	**10.70**	**231**		**Pn**	**05 47 26.1**	**-0.5**
MAJO	**Matsushiro**	**10.70**	**231**	⇑*e*PN	**Pn**	**05 47 24.7**	**-1.9**
MAJO	**Matsushiro**	**10.70**	**231**	Pn	**Pn**	**05 47 26.4**	**-0.2**
NKL	**Nikolayevsk**	**10.78**	**334**	AMS	AMS	05 51 46.0	
	comp=N,900nm,18.0s						
NKL				AMS	AMS	05 51 46.0	
	comp=N,800nm,18.0s						
GRNR	**Gornyy**	**10.85**	**315**	⇑*i*PN	Pn	05 47 33.4	+4.8
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,620nm,18.0s						
GRNR				MLR	MLR		
	comp=N,210nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,470nm,16.0s						
GRNR	**Gornyy**	**10.85**	**315**	*e*P	**Pn**	**05 47 30.6**	**+2.0**
GRNR				AMB	AMB	05 47 35.0	
	comp=Z,10.0nm,0.8s						
GRNR				AMS	AMS	05 51 48.0	
	comp=Z,800nm,16.0s						
GRNR				AMS	AMS	05 51 48.0	
	comp=Z,500nm,16.0s						
PEA0B	**Petropavlovsk-**	**11.16**	**30**	⇑*e*PN	**Pn**	**05 47 31.9**	**-1.0**
PETK	**Petropavlovsk-**	**11.16**	**30**	Pn	**Pn**	**05 47 32.1**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=217,slow=14,SNR=8.2						
PETK				LR	LR	05 52 28.6	
	comp=Z,720nm,18.1s,baz=228,slow=41						
PETK	**Petropavlovsk-**	**11.16**	**30**	PN	**Pn**	**05 47 35.3**	**+2.4**
PETK	**Petropavlovsk-**	**11.16**	**30**	Pn	**Pn**	**05 47 35.3**	**+2.4**
PET	**Petropavlovsk**	**11.45**	**32**	*e*P	**Pn**	**05 47 35.7**	**-1.1**
PET				AMB	AMB	05 47 48.9	
	comp=Z,10.0nm,0.6s						
PET				AMS	AMS	05 54 39.8	
	comp=Z,500nm,14.0s						
JGF	**Kuroka**	**11.85**	**231**	Pn	**Pn**	**05 47 42.1**	**-0.3**
GRTR	**Gornotajezhnoj**	**11.89**	**276**	*e*P	**Pn**	**05 47 43.7**	**+0.8**
GRTR				AMB	AMB	05 47 48.2	
	comp=Z,10.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**11.97**	**278**	⇓*e*PN	**Pn**	**05 47 43.1**	**-0.8**
USA0B	**Ussuriysk Arra**	**11.97**	**278**	Pn	**Pn**	**05 47 43.5**	**-0.4**
USRK	**Ussuriysk Ar.**	**11.97**	**278**	Pn	**Pn**	**05 47 42.7**	**-1.2**
	comp=Z,5.1nm,0.8s,baz=98,slow=14,SNR=5.7						
USRK				LR	LR	05 52 31.4	
	comp=Z,932nm,18.4s,baz=79,slow=39						
USRK	**Ussuriysk Ar.**	**11.97**	**278**	PN	**Pn**	**05 47 43.0**	**-0.9**
USRK	**Ussuriysk Ar.**	**11.97**	**278**	Pn	**Pn**	**05 47 43.0**	**-0.9**
MSHR	**Mys Shultsa**	**12.78**	**271**	⇑*e*PN	**Pn**	**05 47 55.9**	**+0.9**
KLR	**Kul'dur**	**12.83**	**301**	Pn	**Pn**	**05 47 57.8**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=104,slow=14,SNR=11						
KLR				LR	LR	05 53 13.5	
	comp=Z,970nm,18.2s,baz=82,slow=40						
KLR	**Kul'dur**	**12.83**	**301**	⇑*e*PN	**Pn**	**05 47 56.0**	**+0.3**
KLR				MLR	MLR		
	comp=Z,1µm,14.0s						
KLR	**Kul'dur**	**12.83**	**301**	*e*P	**Pn**	**05 47 56.0**	**+0.3**
MDJ	**Mudanjiang**	**13.66**	**280**	P	**Pn**	**05 48 10.5**	**+3.5**
MDJ				S	**Sn**	**05 50 37.4**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,100nm,4.7s						
MDJ				LR	LR		
	comp=Z,360nm,14.2s						
MDJ				LR	LR		
	comp=Z,930nm,15.3s						
MDJ				LR	LR		
	comp=Z,1µm,15.9s						
JHS	**Saijyo**	**14.78**	**239**	Pn	**Pn**	**05 48 22.2**	**-0.2**
BNX	**BinXian**	**15.18**	**285**	⇑P	**Pn**	**05 48 27.3**	**-0.3**
BNX				pmax	pmax		
	comp=Z,33nm,1.0s						
BNX				pmax	pmax		
	comp=Z,110nm,4.5s						
MA2	**Magadan**	**15.93**	**4**	Pn	**Pn**	**05 48 34.6**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=142,slow=19,SNR=2.0						
MA2				LR	LR	05 54 51.2	
	comp=Z,318nm,18.2s,baz=192,slow=38						
	comp=Z,4.7nm,0.6s						
MA2	**Magadan**	**15.93**	**4**	⇓*e*P	**Pn**	**05 48 35.9**	**-1.3**
MA2	**Magadan**	**15.93**	**4**	*e*P	**Pn**	**05 48 35.9**	**-1.3**
KSRS	**Korea Array**	**16.87**	**255**	Pn	**Pn**	**05 48 47.9**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=63,slow=11,SNR=8.7						
KSRS				LR	LR	05 55 13.6	
	comp=Z,324nm,21.4s,baz=65,slow=37						
	comp=Z,2.4nm,0.7s						
ZEA	**Zeya**	**17.20**	**313**	*e*P	**Pn**	**05 48 50.7**	**-2.6**
ZEA				pmax	pmax		
	comp=Z,100nm,5.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
ZEA	**Zeya**	**17.20**	**313**	*e*P	**Pn**	**05 48 51.3**	**-2.0**
ZEA				AMB	AMB	05 48 52.0	
	comp=Z,100nm,5.0s						
ZEA				AMB	AMB	05 48 55.9	
	comp=Z,10.0nm,0.6s						
ZEA				AMS	AMS	05 55 49.0	
	comp=Z,300nm,15.0s						
ZEA				AMS	AMS	05 55 49.0	
	comp=Z,300nm,15.0s						
ZEA				AMS	AMS	05 55 49.0	
	comp=Z,300nm,15.0s						
JNU	**Nakatsue**	**17.41**	**238**	P	**Pn**	**05 48 54.4**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=201,slow=5.6,SNR=2.3						
	comp=Z,7.8nm,0.7s						
JNU	**Nakatsue**	**17.41**	**238**	P	**Pn**	**05 48 57.5**	**+1.3**
JNU				IAmb	IAmb	05 49 00.7	
	comp=Z,56nm,1.4s						
KROS	**Kirovskiy**	**17.67**	**315**	*e*P	**Pn**	**05 48 58.1**	**-1.1**
KROS				AMB	AMB	05 49 06.3	
	comp=Z,10.0nm,0.7s						
SEY	**Seymchan**	**19.37**	**5**	P	**P**	**05 49 16.6**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=183,slow=8.6,SNR=48						
SEY				LR	LR	05 57 02.1	
	comp=Z,305nm,18.3s,baz=186,slow=38						
	comp=Z,18nm,0.9s						
YAK	**Yakutsk**	**21.44**	**335**	*e*P	**P**	**05 49 37.2**	**-3.6**
YAK				*e*S	**S**	**05 53 33.2**	**-3.5**
YAK				*e**SS	Sn	05 53 38.6	-6.8
YAK				*e*		05 53 43.2	
YAK				*e*SSS	SSS	05 54 11.7	
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,92nm,2.0s						
YAK				pmax	pmax		
	comp=N,26nm,1.9s						
YAK				pmax	pmax		
	comp=E,38nm,2.0s						
YAK				smax	smax		
	comp=N,21nm,1.4s						
YAK				smax	smax		
	comp=E,14nm,1.3s						
YAK				MLR	MLR		
	comp=Z,458nm,17.0s						
YAK				MLR	MLR		
	comp=N,373nm,16.0s						
YAK				MLR	MLR		
	comp=E,162nm,15.0s						
YAK	**Yakutsk**	**21.44**	**335**	P	**P**	**05 49 37.7**	**-3.1**
XLT	**XiLinHaoTe**	**23.37**	**282**	⇑*i*P	**P**	**05 50 01.3**	**-0.2**
XLT				sP	pwP	05 50 17.9	+4.2
XLT				S	**S**	**05 54 13.0**	**+0.7**
XLT				sS	Sn	05 54 25.6	-6.6
XLT				SS	**SnSn**	**05 54 53.4**	**+5.0**
XLT				pmax	pmax		
	comp=E,37nm,0.8s						
XLT				pmax	pmax		
	comp=E,77nm,3.7s						
XLT				LR	LR		
	comp=E,640nm,16.0s						
XLT				LR	LR		
	comp=E,680nm,15.7s						
BJI	**Beijing**	**24.32**	**273**	P	**P**	**05 50 09.6**	**-0.7**
BJI				pmax	pmax		
	comp=E,25nm,1.1s						
BJI				LR	LR		
	comp=E,340nm,14.7s						
BJI				LR	LR		
	comp=E,270nm,17.9s						
BJI				LR	LR		
	comp=E,420nm,16.8s						
BJT	**Baijiatuau**	**24.33**	**272**	P	**P**	**05 50 10.4**	**0.0**
BJT				pmax	pmax		
	comp=Z,24nm,1.0s						
BJT	**Baijiatuau**	**24.33**	**272**	P	**P**	**05 50 10.4**	**0.0**
BJT				IAmb	IAmb	05 50 12.2	
	comp=Z,24nm,1.0s						
BOD	**Bodaibo**	**25.67**	**315**	*e*P	**P**	**05 50 18.1**	**-4.2**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NJ2	**Nanjing**	**26.05**	**253**	*e*P	**P**	**05 50 29.3**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,39nm,0.9s						
NJ2				LR	LR		
	comp=Z,550nm,18.6s						
NJ2				LR	LR		
	comp=Z,570nm,14.9s						
NJ2				LR	LR		
	comp=Z,830nm,15.3s						
BILL	**Bilibino**	**26.10**	**15**	⇓*i*P	**P**	**05 50 25.1**	**-1.1**
BILL				*e*		05 51 04.4	
BILL				*e*S	**S**	**05 54 56.2**	**+1.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,382nm,16.0s						
HNS	**HongShan**	**26.37**	**268**	⇑P	**P**	**05 50 29.2**	**+0.3**
HNS				*e*S	**S**	**05 54 57.5**	**-2.5**
HNS				sS	**sS**	**05 55 17.5**	**+4.2**
HNS				pmax	pmax		
	comp=Z,21nm,0.9s						
HNS				LR	LR		
	comp=Z,330nm,13.8s						
HNS				LR	LR		
	comp=Z,270nm,14.5s						
HNS				LR	LR		
	comp=Z,330nm,16.1s						
HHC	**Hu-ho-hao-te**	**27.39**	**277**	*e*P	**P**	**05 50 39.3**	**+1.1**
HHC				S	**S**	**05 55 17.2**	**+1.0**
HHC				sS	pS	05 55 28.4	+2.7
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
HHC				LR	LR		
	comp=Z,280nm,14.9s						
HHC				LR	LR		
	comp=Z,660nm,14.7s						
HHC				LR	LR		
	comp=Z,980nm,14.0s						
H11N2	**WAKE ISLAND Hy**	**28.43**	**142**	T	T	06 21 43.7	
	baz=332,slow=75,SNR=374						
H11N1	**WAKE ISLAND Hy**	**28.44**	**142**	T	T	06 21 47.7	
	baz=332,slow=75,SNR=277						
H11N3	**WAKE ISLAND Hy**	**28.44**	**142**	T	T	06 21 48.8	
	baz=332,slow=75,SNR=441						
BTO	**Baotou**	**28.57**	**277**	*e*P	**P**	**05 50 49.8**	**+1.0**
BTO				S	**S**	**05 55 34.6**	**-0.4**
BTO				LR	LR		
	comp=Z,1µm,15.0s						
BTO				LR	LR		
	comp=Z,1µm,17.4s						
ULN	**Ulaanbaatar**	**28.99**	**293**	c *i*P	**P**	**05 50 52.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,17nm,1.0s						
ULN	**Ulaanbaatar**	**28.99**	**293**	P	**P**	**05 50 51.8**	**-0.6**
ULN				IAmb	IAmb	05 50 53.3	
	comp=Z,18nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.41**	**143**	T	T	06 23 03.3	
	baz=333,slow=76,SNR=895						
H11S3	**WAKE ISLAND Hy**	**29.42**	**143**	T	T	06 22 58.1	
	baz=333,slow=76,SNR=437						
H11S2	**WAKE ISLAND Hy**	**29.43**	**143**	T	T	06 22 56.8	
	baz=333,slow=76,SNR=476						
SONM	**Songino Array**	**29.43**	**293**	P	**P**	**05 50 56.2**	**-0.1**
	comp=Z,6.9nm,0.6s,baz=83,slow=8.6,SNR=22						
	comp=Z,6.9nm,0.6s						
SONM	**Songino Array**	**29.43**	**293**	P	**P**	**05 50 55.9**	**-0.4**
SONM				IAmb	IAmb	05 50 57.1	
	comp=Z,12nm,1.2s						
TIXI	**Tiksi**	**29.60**	**348**	⇓*e*P	**P**	**05 50 53.1**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
TIXI				MLR	MLR		
	comp=Z,229nm,16.0s						
ZAK	**Zakamensk**	**31.17**	**298**	*e*P	**P**	**05 51 10.0**	**-1.7**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN	**Xi'an**	**32.09**	**266**	P	**P**	**05 51 19.5**	**-0.3**
XAN				pP	pP	05 51 29.8	+1.9
XAN				S	**S**	**05 56 32.6**	**+2.6**
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				LR	LR		
	comp=Z,71nm,15.8s						
XAN				LR	LR		
	comp=Z,310nm,15.5s						
XAN				LR	LR		
	comp=Z,300nm,16.9s						
KNGR	**Kungurtug, Tuv**	**34.80**	**300**	⇓*i*P	**P**	**05 51 43.3**	**0.0**
LZH	**Lanzhou**	**34.81**	**273**	⇑P	**P**	**05 51 44.5**	**+0.9**
LZH				pP	pwP	05 51 57.0	+0.6
LZH				sP	sP	05 52 02.1	+7.2
LZH				pmax	pmax		
	comp=Z,43nm,1.4s						
LZH				LR	LR		
	comp=Z,420nm,13.6s						
LZH				LR	LR		
	comp=Z,310nm,11.9s						
LZH				LR	LR		
	comp=Z,450nm,12.5s						
N18K	**Kilae Creek**	**36.72**	**43**	P	**P**	**05 52 00.9**	**+1.3**
	baz=268						
TTA	**Tatalina**	**36.80**	**39**	P	**P**	**05 52 01.9**	**+1.7**
	baz=265						
L19K	**White Mountain**	**37.28**	**40**	P	**P**	**05 52 05.5**	**+1.2**
	baz=268						
CD2	**Chengdu**	**37.43**	**265**	⇑*i*P	**P**	**05 52 05.9**	**-0.1**
CD2				pP	pP	05 52 16.9	+2.8
CD2				sP	pwP	05 52 20.8	+2.0
CD2				S	**S**	**05 57 48.7**	**-3.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,80nm,7.0s						
CD2				LR	LR		
	comp=Z,20nm,14.8s						
CD2				LR	LR		
	comp=Z,170nm,17.6s						
CD2				LR	LR		
	comp=Z,220nm,15.5s						
M19K	**Big River Lodg**	**37.49**	**41**	P	**P**	**05 52 07.5**	**+1.4**
	baz=268						
K20K	**Telida**	**37.71**	**38**	P	**P**	**05 52 08.7**	**+0.8**
	baz=267						
J20K	**Nowinta River**	**37.73**	**37**	P	**P**	**05 52 07.9**	**-0.2**
J20K				IAmb	IAmb	05 52 20.9	
	comp=Z,11nm,1.2s						
J20K	**Nowinta River**	**37.73**	**37**	P	**P**	**05 52 09.7**	**+1.6**
	baz=266						
L20K	**Farewell, AK**	**37.75**	**40**	P	**P**	**05 52 09.5**	**+1.3**
	baz=268						
IMAR	**Indian Mountai**	**38.08**	**34**	P	**P**	**05 52 12.1**	**+1.1**
H21K	**Melozitna Rive**	**38.43**	**35**	IAmb	IAmb	05 52 17.1	
	comp=Z,11nm,1.1s						
H21K	**Melozitna Rive**	**38.43**	**35**	P	**P**	**05 52 14.9**	**+1.0**
	baz=265,SNR=10						
CHUM	**Lake Minchumin**	**38.52**	**38**	P	**P**	**05 52 15.5**	**+0.8**
	baz=268						
SPCR	**Spurr Chakacha**	**38.52**	**42**	P	**P**	**05 52 16.2**	**+1.3**
	baz=271						
PPLA	**Purkeypile**	**38.54**	**39**	P	**P**	**05 52 16.1**	**+1.0**
	baz=269						
CAST	**Castle Rocks**	**38.60**	**38**	P	**P**	**05 52 16.9**	**+1.5**
	baz=268						
I21K	**Tanana**	**38.74**	**36**	IAmb	IAmb	05 52 32.2	
	comp=Z,20nm,1.4s						
I21K	**Tanana**	**38.74**	**36**	P	**P**	**05 52 18.1**	**+1.6**
	baz=266						
BPAW	**Bear Paw Mtn.**	**39.11**	**37**	P	**P**	**05 52 21.0**	**+1.3**
	baz=269						
KTH	**Kantishna Hill**	**39.13**	**38**	IAmb	IAmb	05 52 34.4	
	comp=Z,12nm,1.0s						
COLD	**Coldfoot**	**39.62**	**32**	P	**P**	**05 52 24.7**	**+0.9**

	baz=266,SNR=12						
RC01	Rabbit Creek A	39.73	42	P	P	05 52 24.9	+0.1
RC01				IAmb	IAmb	05 52 44.3	
	comp=Z,14nm,1.2s						
RC01	Rabbit Creek A	39.73	42	P	P	05 52 25.3	+0.5
	baz=273						
NRIK	Noril'sk	39.77	331	⇑iP	P	05 52 22.3	-2.8
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
H23K	Yukon River	39.79	35	P	P	05 52 26.5	+1.2
	baz=268,SNR=11						
I23K	Minto, Yukon-K	39.84	36	P	P	05 52 26.5	+0.9
	baz=269						
SEW	Seward	39.93	44	P	P	05 52 26.9	+0.4
	baz=275						
NEA2	Nenana	39.95	37	IAmb	IAmb	05 52 48.1	
	comp=Z,14nm,1.3s						
NEA2	Nenana	39.95	37	P	P	05 52 27.4	+0.7
	baz=270						
TOLK	Toolik Lake Re	39.98	30	P	P	05 52 28.0	+1.1
TOLK				IAmb	IAmb	05 52 29.1	
	comp=Z,14nm,1.1s						
TOLK	Toolik Lake Re	39.98	30	P	P	05 52 28.0	+1.1
	baz=264,SNR=16						
PMR	Palmer	39.99	41	P	P	05 52 28.0	+1.1
	baz=273						
WAT1	Susitna Watana	40.21	39	P	P	05 52 29.4	+0.5
	baz=272						
MDM	Murphy Dome	40.32	36	IAmb	IAmb	05 52 45.9	
	comp=Z,12nm,1.2s						
KNK	Knik Glacier	40.32	41	IAmb	IAmb	05 52 42.6	
	comp=Z,11nm,0.8s						
KNK	Knik Glacier	40.32	41	P	P	05 52 30.2	+0.4
	baz=274						
SML	Sawmill	40.36	41	P	P	05 52 30.6	+0.5
	baz=274						
H24K	Noodor Dome	40.47	35	P	P	05 52 32.4	+1.3
H24K				IAmb	IAmb	05 52 39.5	
	comp=Z,12nm,1.3s						
H24K	Noodor Dome	40.47	35	P	P	05 52 31.7	+0.7
	baz=269						
COLA	College	40.48	36	⇑eP	P	05 52 31.5	+0.5
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WAT6	Susitna Watana	40.59	40	P	P	05 52 32.5	+0.3
	baz=273						
M23K	Glacier View	40.65	41	P	P	05 52 33.0	+0.5
	baz=274						
POKR	Poker Plat Res	40.66	36	IAmb	IAmb	05 52 49.5	
	comp=Z,15nm,0.9s						
POKR	Poker Plat Res	40.66	36	P	P	05 52 32.8	+0.3
	baz=271						
QIZ	Qiongzhong	40.69	245	P	P	05 52 33.3	0.0
QIZ				S	S	05 58 39.6	-1.9
QIZ				LR	LR		
	comp=Z,310nm,17.5s						
QIZ				LR	LR		
	comp=Z,320nm,20.2s						
QIZ				LR	LR		
	comp=Z,340nm,16.3s						
DHY	Denali Highway	40.73	39	P	P	05 52 34.0	+0.6
	baz=273						
SCM	Sheep Creek Mo	40.83	41	P	P	05 52 35.0	+1.0
	baz=274						
HDA	Harding Lake	40.88	37	P	P	05 52 34.7	+0.4
	baz=272,SNR=7.1						
ILAR	Eielson Array	40.89	36	P	P	05 52 34.7	+0.3
	comp=Z,1.2nm,0.4s,baz=262,slow=7.4,SNR=30						
	comp=Z,1.2nm,0.4s						
GLI	Glacier Island	41.03	42	P	P	05 52 35.9	+0.3
	baz=276						
GOMU	GeErMu	41.27	278	P	P	05 52 38.3	0.0
GOMU				S	S	05 58 49.2	-1.3
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,26nm,4.6s						
GOMU				LR	LR		
	comp=Z,270nm,16.6s						
GOMU				LR	LR		
	comp=Z,400nm,16.8s						
GOMU				LR	LR		
	comp=Z,460nm,16.5s						
PZH	PanZhiHua	41.40	261	P	P	05 52 40.6	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.6s						
K24K	Donnelly Dome	41.41	38	P	P	05 52 39.3	+0.5
	baz=274						
KMI	Kunming	41.52	259	⇓P	P	05 52 41.3	+1.0
KMI				pP	sP	05 52 53.3	+1.5
KMI				LR	LR		
	comp=Z,190nm,16.7s						
KMI				LR	LR		
	comp=Z,260nm,16.7s						
KMI				LR	LR		
	comp=Z,270nm,15.2s						
KLU	Klutina	41.53	41	P	P	05 52 41.1	+1.3
KLU	Klutina	41.53	41	P	P	05 52 40.1	+0.3
	baz=276						
J25K	Salcha River,	41.55	36	P	P	05 52 40.2	+0.3
	baz=273						
PAX	Paxson	41.61	39	P	P	05 52 41.3	+0.9
	baz=275						
EYAK	Cordova Ski Ar	41.72	43	P	P	05 52 42.0	+0.8
	baz=277						
BMAR	Burnt Mountain	41.80	32	P	P	05 52 43.3	+1.4
HARP	HAARP	41.80	40	P	P	05 52 42.6	+0.7
	baz=276						
RIDG	Independent Ri	41.83	38	P	P	05 52 42.6	+0.4
	baz=274						
ZALV	Zalesovo Beam	41.83	307	P	P	05 52 41.1	-1.2
	comp=Z,2.2nm,0.6s,baz=73,slow=6.4,SNR=7.4						
ZALV				PcP	PcP	05 54 37.8	+0.1
	comp=Z,1.8nm,0.5s,baz=59,slow=2.6,SNR=7.6						
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	41.83	307	i P	P	05 52 41.2	-1.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DOT	Dot Lake	42.19	38	P	P	05 52 44.3	-0.8
DOT					sP	05 52 57.0	+0.3
DOT				IAmb	IAmb	05 53 01.2	
	comp=Z,8.2nm,0.5s						
SCRK	Sand Creek	42.19	37	P	P	05 52 45.5	+0.2
	baz=275						
BMRM	Bremner River	42.22	42	P	P	05 52 46.8	+1.4
BMRM				IAmb	IAmb	05 53 08.6	
	comp=Z,11nm,1.0s						
BMRM	Bremner River	42.22	42	P	P	05 52 46.5	+1.1
	baz=278						
J26L	Joseph Creek	42.34	37	P	P	05 52 46.9	+0.5
	baz=275						
KAIM	Kayak Island	42.46	43	P	P	05 52 48.5	+1.2
	baz=279						
L26K	Log Cabin Wild	42.57	39	P	P	05 52 49.3	+1.1
	baz=276						
M26K	Nabesna, AK	42.80	40	P	P	05 52 51.6	+1.5
	baz=277,SNR=8.1						
WMQ	Urumqi	43.06	292	eP	P	05 52 53.0	+0.5
WMQ				sP	pwP	05 53 09.8	+4.4
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				LR	LR		
	comp=Z,380nm,17.9s						
WMQ				LR	LR		
	comp=Z,540nm,19.3s						
L27K	Beaver Creek,	43.25	39	P	P	05 52 55.1	+1.4
L27K				IAmb	IAmb	05 53 06.2	
	comp=Z,9.3nm,0.7s						
L27K	Beaver Creek,	43.25	39	P	P	05 52 55.4	+1.6
	baz=278,SNR=9.9						
M27K	Edge Creek, AK	43.33	40	P	P	05 52 55.7	+1.3
	baz=278						
EGAK	Eagle	43.34	36	P	P	05 52 55.4	+1.0
	baz=276						
ISLE	Juniper Island	43.38	42	IAmb	IAmb	05 53 13.8	
	comp=Z,11nm,0.9s						
ZSN	Zaisan	43.63	298	eP	P	05 52 57.2	+0.2
ZSN	Zaisan	43.63	298	eP	P	05 52 57.2	+0.2
	baz=298						
YUK3	Moose Creek	44.08	40	P	P	05 53 01.0	+0.4
	baz=280						
DAWY	Dawson	44.19	37	P	P	05 53 01.5	+0.2
	baz=279						
I29M	Ogilvie Camp,	44.47	35	IAmb	IAmb	05 53 20.7	
	comp=Z,10nm,0.8s						
I29M	Ogilvie Camp,	44.47	35	P	P	05 53 04.4	+0.9
	baz=278,SNR=8.4						
PINM	Pinnacle	44.49	43	P	P	05 53 04.1	+0.3
	baz=282						
EPYK	Eagle Plains	44.97	33	IAmb	IAmb	05 53 21.8	
	comp=Z,15nm,0.9s						
EPYK	Eagle Plains	44.97	33	P	P	05 53 08.7	+1.2
	baz=279,SNR=7.1						
YUK4	Talbot Arm	45.01	41	P	P	05 53 09.4	+1.3
	baz=282						
MK31	Makanchi Array	45.51	298	i P	P	05 53 10.9	-1.1
MK31	Makanchi Array	45.51	298	P	P	05 53 11.7	-0.3
MKAR	Makanchi Array	45.51	298	P	P	05 53 11.8	-0.1
	comp=Z,12nm,0.6s,baz=77,slow=8.7,SNR=140						
MKAR				PcP	PcP	05 54 49.7	-0.7
	comp=Z,1.1nm,0.7s,baz=68,slow=3.2,SNR=1.9						
	comp=Z,12nm,0.6s						
SEM	Semipalatinsk	45.52	304	eP	P	05 53 10.6	-1.6
SEM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SEM	Semipalatinsk	45.52	304	eP	P	05 53 10.7	-1.6
	comp=Z,5.3nm,0.7s,baz=304						
M30M	Minto, Yukon	45.61	39	P	P	05 53 13.5	+0.9
	baz=282						
HYT	Haines Junctio	45.66	41		P	05 53 15.6	+2.4
HYT				IAmb	IAmb	05 53 27.6	
	comp=Z,16nm,0.9s						
HYT	Haines Junctio	45.66	41	P	P	05 53 13.7	+0.5
	baz=283,SNR=8.7						
MAKZ	Makanchi	45.70	298	P	P	05 53 13.4	-0.1
MAKZ				pmax	pmax		
	comp=Z,23nm,1.0s						
MAKZ	Makanchi	45.70	298	P	P	05 53 13.4	-0.1
INK	Inuvik	45.90	30	P	P	05 53 15.0	+0.3
	baz=280,SNR=17						
N31M	Braeburn, Yuko	46.32	40	IAmb	IAmb	05 53 35.7	
	comp=Z,14nm,1.4s						
N31M	Braeburn, Yuko	46.32	40	P	P	05 53 19.0	+0.8
	baz=284						
KURK	Kurchatov	46.40	304	c iP	P	05 53 18.3	-0.5
KURK				pmax	pmax		
	comp=Z,27nm,1.2s						
KURK	Kurchatov	46.40	304	P	P	05 53 17.3	-1.6
KURK	Kurchatov	46.40	304	eP	P	05 53 18.3	-0.5
KURBB	Kurchatov Arra	46.48	304	P	P	05 53 18.6	-0.9
M31M	Drury Creek, Y	46.79	39	IAmb	IAmb	05 53 34.7	
	comp=Z,5.0nm,0.9s						
M31M	Drury Creek, Y	46.79	39	P	P	05 53 22.7	+0.9
	baz=284						
WHY	Whitehorse	46.95	41	P	P	05 53 24.4	+1.2
	baz=286						
A36M	Sachs Harbour	47.96	25	P	P	05 53 31.7	+1.0
	baz=283						
CMAR	Chiang Mai Arr	48.52	255	P	P	05 53 37.2	+1.5
	comp=Z,1.4nm,0.4s,baz=40,slow=7.8,SNR=9.8						
	comp=Z,1.4nm,0.4s						
CMAR	Chiang Mai Arr	48.52	255	i P	P	05 53 37.2	+1.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TDK	Taldyqorghan	48.71	297	eP	P	05 53 37.0	+0.1
TDK	Taldyqorghan	48.71	297	eP	P	05 53 37.0	+0.1
	baz=297						
PDGK	Podgornoye	48.71	295	P	P	05 53 36.2	-0.9
C36M	Paulatuk	49.01	28	P	P	05 53 39.1	+0.3
	baz=287,SNR=13						
UZB	Uzynbulak	49.10	295	eP	P	05 53 39.3	-0.8
UZB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
UZB	Uzynbulak	49.10	295	eP	P	05 53 39.3	-0.8
	comp=Z,7.7nm,1.0s,baz=295						
KPKS	Kokpek	49.18	295	eP	P	05 53 40.4	-0.3
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KPKS	Kokpek	49.18	295	eP	P	05 53 40.5	-0.3
	comp=Z,7.4nm,0.7s,baz=295						
CHKK	Chushkaly	50.12	297	eP	P	05 53 46.8	-0.9
CHKK	Chushkaly	50.12	297	eP	P	05 53 46.8	-0.9
	baz=296						
BRZS	Berezniki	50.20	305	eP	P	05 53 47.7	-0.5
BRZS	Berezniki	50.20	305	eP	P	05 53 47.8	-0.5
	baz=305						
BRVK	Borovoye	50.36	310	c iP	P	05 53 48.6	-0.8
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	50.36	310	P	P	05 53 47.8	-1.6
BRVK				IAmb	IAmb	05 53 50.0	
	comp=Z,7.3nm,0.9s						
BRVK	Borovoye	50.36	310	eP	P	05 53 48.6	-0.8
MDOK	Medeo	50.39	296	eP	P	05 53 49.5	-0.4
MDOK	Medeo	50.39	296	eP	P	05 53 49.6	-0.4
	baz=296						
KUU	Kurty	50.52	297	eP	P	05 53 49.8	-1.0
KUU				pmax	pmax		
	comp=Z,16nm,0.9s						
KUU	Kurty	50.52	297	eP	P	05 53 49.8	-1.0
	comp=Z,16nm,0.9s,baz=297						
TAPN	Taplejung	51.05	272	eP	P	05 53 55.0	-0.2
	comp=Z,4.6nm,0.5s						
ULHL	Ulahol	51.34	295	P	P	05 53 57.8	+0.6
	SNR=5.5						
TKM2	Tokmak 2	51.45	296	P	P	05 53 59.0	+1.0
	SNR=14						
TKM2	Tokmak 2	51.45	296	P	P	05 53 53.6	-4.4
BTLS	Baital	51.47	299	eP	P	05 53 57.0	-0.9
BTLS	Baital	51.47	299	eP	P	05 53 57.0	-0.9
	baz=299						
SGDS	Sogindy	51.83	297	eP	P	05 54 00.4	-0.2
SGDS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SGDS	Sogindy	51.83	297	eP	P	05 54 00.4	-0.2
	comp=Z,7.2nm,0.9s,baz=297						
KBK	Karagaybulak	51.99	296	P	P	05 54 02.5	+0.5
	SNR=13						
USP	Ospenovka	52.00	297	P	P	05 54 02.2	+0.4
	SNR=14						
RAMN	Ramite	52.08	273	eP	P	05 54 03.2	+0.3
	comp=Z,22nm,0.4s						
AAK	Ala-Archa	52.30	296	P	P	05 54 04.6	+0.3
	SNR=5.5						
AAK	Ala-Archa	52.30	296	c iP	P	05 54 04.3	+0.1
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
AAK	Ala-Archa	52.30	296	P	P	05 54 03.7	-0.5
AAK				IAmb	IAmb	05 54 05.5	
	comp=Z,20nm,1.2s						
AAK	Ala-Archa	52.30	296	eP	P	05 54 04.3	+0.1
KKN	Kakani	52.55	274	eP	P	05 54 06.5	+0.1
	comp=Z,7.7nm,0.4s						
PKI	Pulchoki	52.58	274	eP	P	05 54 06.6	-0.1
EUNU	Eureka	52.70	10	IAmb	IAmb	05 54 12.9	
	comp=Z,8.2nm,1.3s						
EKS2	Erkin-Say	52.75	297	P	P	05 54 08.0	+0.5
	SNR=9.0						
KSH	Kashi	52.83	292	P	P	05 54 12.4	+4.2
KSH				pP	pwP	05 54 24.3	+3.0
KSH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KSH				LR	LR		
	comp=Z,500nm,20.6s						
KSH				LR	LR		
	comp=Z,430nm,21.4s						
KSH				LR	LR		
	comp=Z,580nm,15.5s						
GKN	Gorkha	52.89	275	eP	P	05 54 08.9	+0.1
	comp=Z,10.0nm,0.4s						
AML	Almayashu	53.06	296	P	P	05 54 11.0	+0.8
	SNR=6.5						
DANN	Dangsing	53.33	276	eP	P	05 54 12.7	+0.5
	comp=Z,86nm,0.9s						
KOLN	Koldanda	53.77	276	eP	P	05 54 15.4	0.0
	comp=Z,8.7nm,0.4s						
PYUN	Piuthan	54.02	276	eP	P	05 54 17.5	+0.3
	comp=Z,29nm,0.8s						
DZA	Taraz	54.21	298	eP	P	05 54 18.2	0.0
DZA	Taraz	54.21	298	eP	P	05 54 18.2	0.0
	baz=298						
KK31	Karatay Array	54.63	299	i P	P	05 54 20.3	-0.9
RES	Resolute Bay	54.69	17	IAmb	IAmb	05 54 22.5	
	comp=Z,9.0nm,0.9s						
ARU	Arti	55.06	317	⇓iP	P	05 54 22.4	-1.7
ARU				pmax	pmax		
	comp=Z,26nm,1.3s						
ARU				MLR	MLR		
	comp=Z,303nm,16.0s						
ARU	Arti	55.06	317	P	P	05 54 22.1	-2.0
YKA	Yellowknife Ar	55.24	34	P	P	05 54 25.9	+0.7
	comp=Z,1.1nm,0.6s,baz=302,slow=7.2,SNR=19						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	55.24	34	P	P	05 54 26.0	+0.7
IUG	Iuzhnay	55.42	298	eP	P	05 54 26.7	-0.3
IUG	Iuzhnay	55.42	298	eP	P	05 54 26.8	-0.3
	baz=298						
BTK	Batken	55.98	295	IAmb	IAmb	05 54 44.2	
	comp=Z,8.0nm,0.9s						
NIL	Nilore	57.78	287	P	P	05 54 43.9	+0.1
NIL				pmax	pmax		
	comp=Z,45nm,1.2s						
NIL	Nilore	57.78	287	P	P	05 54 43.9	+0.1
AB31	Akbulak array	57.88	309	i P	P	05 54 44.0	-0.2
KIRV	Kirov	58.24	323	ceP	P	05 54 46.1	-0.5
AKTO	Aktyubinsk	58.33	311	P	P	05 54 46.2	-1.2
ARCES	ARCESS Array B	59.62	340	P	P	05 54 54.5	-1.6
	comp=Z,1.1nm,0.4s,baz=42,slow=6.7,SNR=17						
	comp=Z,1.1nm,0.4s						
KBL	Kabul	60.17	291	P	P	05 54 59.7	-0.9
KBL				pmax	pmax		
	comp=Z,18nm,1.1s						
KBL	Kabul	60.17	291	P	P	05 54 59.7	-0.9
J01E	Myrtle Point	60.48	57	P	P	05 55 03.5	+1.2
	baz=304						
KLMR	Klimovskoe	61.00	328	eP	P	05 55 03.7	-1.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	61.00	328	eP	P	05 55 03.7	-1.9
KLMR				AMP		05 55 07.6	
	comp=Z,12nm,1.1s						
I04A	Tendick Farm,	61.05	56	P	P	05 55 07.0	+0.8
	baz=304						
J05D	Fort Rock, OR	62.04	56	P	P	05 55 13.9	+0.8
	baz=305						
BELG	Belogornoye	62.62	317	c iP	P	05 55 16.2	-0.3
BELG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WRA	Warramunga Arr	64.69	195	P	P	05 55 30.8	+0.2
	comp=Z,0.9nm,0.6s,baz=12,slow=6.9,SNR=11						
	comp=Z,0.9nm,0.6s						
MOS	Moscow	65.07	324	eP	P	05 55 17.0	-16
PAHR	Pah Rah Range	65.27	58	IAmb	IAmb	05 55 50.3	
	comp=Z,6.2nm,1.3s						
GEYT	Alibeck	65.35	300	P	P	05 55 34.9	0.0
	comp=Z,3.5nm,0.5s,baz=43,slow=12,SNR=4.1						
	comp=Z,3.5nm,0.5s						
FIA1	FINESS Array S	65.36	334	P	P	05 55 33.1	-1.3
FINES	FINESS Array B	65.36	334	P	P	05 55 33.2	-1.2
	comp=Z,11nm,0.8s,baz=39,slow=7.3,SNR=33						
	comp=Z,11nm,0.8s						
FINES	FINESS Array B	65.36	334	i P	P	05 55 33.0	-1.4
FINES				pmax	pmax		
	comp=Z,12nm,0.8s						
FCC	Fort Churchill	65.52	31	P	P	05 55 36.0	+0.5
FCC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FCC	Fort Churchill	65.52	31	P	P	05 55 36.0	+0.5
FCC				IAmb	IAmb	05 55 49.7	
	comp=Z,10nm,1.1s						
EGMT	Eagleton	65.66	46	IAmb	IAmb	05 55 39.2	
	comp=Z,12nm,1.1s						
EGMT	Eagleton	65.66	46	P	P	05 55 36.9	+0.1
	baz=309						
HLID	Hailey	65.88	52	P	P	05 55 39.3	+1.0
	baz=308						
OBN	Obninsk	65.94	324	⇓eP	P	05 55 38.1	-0.1
OBN				e		05 56 11.2	
OBN				e		05 58 07.3	
OBN				eS	S	06 04 29.3	+6.1
OBN				pmax	pmax		
	comp=Z,17nm,0.9s						
OBN				MLR	MLR		
	comp=Z,207nm,16.0s						
OBN	Obninsk	65.94	324	eP	P	05 55 38.1	-0.1
BOZ	Bozeman (W)	66.18	49	IAmb	IAmb	05 55 56.7	
	comp=Z,3.7nm,0.6s						
BOZ	Bozeman (W)	66.18	49	P	P	05 55 41.1	+0.9
	baz=309						
VRH	Novokhopyorsk	66.22	319	eP	P	05 55 39.5	-0.6
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
KVN	Kaiserville	66.45	58	P	P	05 55 43.6	+1.5
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KVN	Kaiserville	66.45	58	P	P	05 55 43.6	+1.5
KVN				IAmb	IAmb	05 55 58.8	
	comp=Z,4.8nm,1.0s						
LPSR	Galich'ya Gora	66.60	321	eP	P	05 55 42.2	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
NVAR	Mina Array Bea	66.71	59	P	P	05 55 45.5	+1.8
	comp=Z,1.5nm,0.6s,baz=294,slow=7.3,SNR=17						
	comp=Z,1.5nm,0.6s						
NV11	Mina Array Sit	66.80	59	IAmb	IAmb	05 56 02.5	
	comp=Z,5.2nm,1.1s						
MEF	Metsahovi	66.83	333	eP	P	05 55 43.5	-0.3
RAF	Rauma	67.04	335	eP	P	05 55 45.0	-0.2
VORR	Voronezh	67.09	320	eP	P	05 55 46.8	+1.1
VORR				pmax	pmax		
	comp=Z,20nm,0.3s						
VSU	Vasula	67.36	331	⇓iP	P	05 55 47.3	+0.1
VSU				pmax	pmax		
	comp=Z,36nm,1.1s						
VSU	Vasula	67.36	331	eP	P	05 55 47.6	+0.3
VSR	Storozhevoye	67.42	320	eP	P	05 55 47.4	-0.4
VSR				pmax	pmax		
	comp=Z,30nm,0.5s						
VORD	Divnogorie	67.53	320	eP	P	05 55 48.1	-0.3
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
TPH	Tonopah	67.60	58	P	P	05 55 51.1	+1.7
TPH				pmax	pmax		
	comp=Z,19nm,0.9s						
TPH	Tonopah	67.60	58	P	P	05 55 51.1	+1.7
TPAW	Teton Pass	67.88	51	IAmb	IAmb	05 56 10.7	
	comp=Z,6.1nm,1.0s						
SNOW	Snow King Moun	68.01	51	IAmb	IAmb	05 56 05.8	
	comp=Z,7.3nm,1.4s						
MTSE	Matsula	68.17	332	eP	P	05 55 52.2	-0.1
AAL	Aland	68.24	335	eP	P	05 55 51.8	-0.9
ASAR	Alice Springs	68.41	194	P	P	05 55 55.7	+1.5
	comp=Z,0.9nm,0.6s,baz=11,slow=6.2,SNR=11						
	comp=Z,0.9nm,0.6s						
R11A	Troy Canyon, C	68.43	57	P	P	05 55 55.5	+0.9
	baz=309						
S11A	Rachel	68.78	58	IAmb	IAmb	05 56 16.8	
	comp=Z,7.4nm,0.9s						
FURC	Furnace Creek,	68.83	60	P	P	05 55 58.4	+1.5
	baz=310						
TPNV	Topopah Spring	68.91	59	IAmb	IAmb	05 56 11.8	
	comp=Z,6.4nm,1.1s						
TPNV	Topopah Spring	68.91	59	P	P	05 55 58.3	+0.7
	baz=310						
DUG	Dugway, Tooele	68.92	54	P	P	05 55 58.5	+0.9
	baz=310						
GWY	Greenwater Val	69.13	60	IAmb	IAmb	05 56 26.2	
	comp=Z,7.0nm,1.4s						
BW06	Boulder Array	69.13	50	P	P	05 55 58.8	-0.2
	baz=311						
PDAR	Pinedale Array	69.13	50	P	P	05 55 59.5	+0.6
	comp=Z,1.0nm,0.6s,baz=279,slow=1.2,SNR=11						
	comp=Z,1.0nm,0.6s						
UPP	Uppsala	69.21	336	eP	P	05 55 58.5	-0.3
GROC	Groznyy	69.35	310	eP	P	05 56 00.4	+0.4
GROC				e		05 56 23.8	
GROC				pmax	pmax		
	comp=Z,18nm,0.4s						
SLIT	Slitere, Latvi	69.52	332	eP	P	05 56 00.3	-0.5
GOF	Gofitskoye	69.61	313	⇑eP	P	05 56 02.2	+0.6
GOF				pmax	pmax		
	comp=Z,49nm,0.7s						
ISAL	Salakas	69.76	329	eP	P	05 56 02.5	+0.2
IIGN	Ignalina	69.89	329	eP	P	05 56 03.3	+0.2
MNK	Minsk	69.90	328	i P	P	05 56 02.5	-0.6
MNK				i		05 56 25.6	
MNK				i		05 58 37.6	
MNK				i PPP	PPP	06 00 19.9	
MNK				i S	S	06 05 10.1	-0.5
MNK				i SS	SS	06 09 46.3	+7.6
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				pmax	pmax		
	comp=Z,28nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,210nm,17.0s						

MNK				MLR	MLR		
	comp=Z,228nm,15.0s						
MNK				MLR	MLR		
	comp=E,23nm,17.0s						
MNK	Minsk	69.90	328	*i* P	P	05 56 02.6	-0.6
	comp=E,1.0nm,0.9s						
MNK				*i* P	P	05 56 02.6	-0.6
	comp=N,19nm,0.9s						
MNK				*i* P	P	05 56 02.6	-0.6
	comp=Z,28nm,0.9s,baz=42						
MNK				*i* PcP	PcP	05 56 25.6	+0.2
MNK				*i* PP	PP	05 58 37.7	+0.3
MNK				*i* PPP	PPP	06 00 20.0	
MNK				*i* S	S	06 05 10.1	-0.5
MNK				*i* SS	SS	06 09 46.4	+7.6
MNK				*i* SSS	SSS	06 12 56.2	
MNK				*i* LQ	LQ	06 21 01.8	
MNK				*i* LR	LR	06 25 17.4	
MNK				*i* LRM	MLR	06 28 54.6	
	comp=N,210nm,17.4s						
MNK				*i* LRM	MLR	06 29 20.3	
	comp=E,23nm,17.1s						
MNK				*i* LRM	MLR	06 29 20.3	
	comp=Z,228nm,14.9s						
NB2	NORSAR Subarra	69.99	339	P	P	05 56 02.6	-1.1
	comp=Z,8.0nm,0.7s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.99	339	P	P	05 56 03.2	-0.4
	comp=Z,7.7nm,0.8s,baz=31,slow=6.2,SNR=30						
	comp=Z,7.7nm,0.8s						
NACGM	Naroch	70.02	329	*e*P	P	05 56 04.0	+0.1
	baz=41						
KIV	Kislovodsk	70.54	313	⇑P	P	05 56 08.3	+0.9
KIV	Kislovodsk	70.54	313	*e*P	P	05 56 08.1	+0.6
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						
KIV				MLR	MLR		
	comp=Z,222nm,18.0s						
KIV	Kislovodsk	70.54	313	P	P	05 56 08.1	+0.6
KIV	Kislovodsk	70.54	313	*e*P	P	05 56 08.1	+0.6
RDMU	Red Mountain	70.56	52	IAmb	IAmb	05 56 23.6	
	comp=Z,7.8nm,0.8s						
KBZ	Khabaz	70.58	312	P	P	05 56 08.5	+1.0
	comp=Z,14nm,0.8s,baz=72,slow=3.9,SNR=40						
	comp=Z,14nm,0.8s						
KBZ	Khabaz	70.58	312*c*	*i*P	P	05 56 08.3	+0.8
KBZ				pmax	pmax		
	comp=Z,17nm,0.9s						
KBZ	Khabaz	70.58	312	*e*P	P	05 56 08.3	+0.8
PABE	Paberze	70.59	330	*e*P	P	05 56 07.4	0.0
VIKU	Vikbolandet	70.60	336	*e*P	P	05 56 07.1	-0.2
ZEI	Tsey	70.67	311	*e*P	P	05 56 07.3	-1.1
ZEI				pmax	pmax		
	comp=Z,16nm,0.9s						
MTPU	Mount Pierson	70.68	56	IAmb	IAmb	05 56 09.2	
	comp=Z,7.9nm,0.7s						
K22A	Casper	70.88	49	P	P	05 56 09.9	+0.2
	baz=312						
SRU	San Rafael Swe	70.97	54	IAmb	IAmb	05 56 26.3	
	comp=Z,4.5nm,0.9s						
NEY	Neytrino	71.00	312	⇑*e*P	P	05 56 10.7	+0.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RSSD	Black Hills	71.22	47	P	P	05 56 11.7	0.0
	baz=313						
IKP	In-Ko-Pah, Jac	71.75	62	P	P	05 56 15.4	+0.5
	baz=311						
GNI	Garni	71.97	308	⇑*e*P	P	05 56 18.0	+1.8
GNI				pmax	pmax		
	comp=Z,14nm,0.6s						
SUW	Suwalki	72.05	330	*e*P	P	05 56 15.1	-1.1
AKASG	Malin Array Be	72.20	324	P	P	05 56 16.9	-0.4
	comp=Z,25nm,0.9s,baz=38,slow=6.8,SNR=62						
	comp=Z,25nm,0.9s						
AKASG	Malin Array Be	72.20	324	*i* P	P	05 56 16.8	-0.4
AKASG				pmax	pmax		
	comp=Z,17nm,0.7s						
AKASG	Malin Array Be	72.20	324	IAmb	IAmb	05 56 18.1	
	comp=Z,11nm,1.0s						
AKBB	Malin Array Si	72.20	324*c*	*i*P	P	05 56 16.6	-0.6
AKBB				pmax	pmax		
	comp=Z,40nm,0.9s						
GLA	Glamis	72.30	61	P	P	05 56 19.3	+1.1
	baz=311						
SOC	Sochi	72.37	314	*e*P	P	05 56 17.4	-0.9
SOC				*e*		05 58 58.9	
SOC				*e*PPP	PPP	06 00 42.2	
SOC				*e*S	S	06 05 40.3	+0.8
SOC				*e*SS	SS	06 10 22.6	+5.5
SOC				*e*SSS	SSS	06 13 24.9	
SOC				pmax	pmax		
	comp=Z,12nm,0.7s						
N23A	Red Feather La	72.39	50	P	P	05 56 19.8	+1.0
	baz=313						
KLNR	Kaliningrad	72.64	331	⇓*e*P	P	05 56 19.0	-0.7
KLNR				pmax	pmax		
	comp=Z,40nm,1.1s						
BATM	Batumi	72.68	311	⇑P	P	05 56 19.2	-1.0
BATM	Batumi	72.68	311	⇑P	P	05 56 19.2	-1.0
ANN	Anapa	72.69	316	*e*P	P	05 56 17.6	-2.6
ANN				pmax	pmax		
	comp=Z,22nm,1.0s						
DEL	Delary	73.14	336	*e*P	P	05 56 22.3	-0.4
ISCO	Idaho Springs	73.32	51	P	P	05 56 25.4	+0.9
	baz=314						
MVCO	Mesa Verde	73.42	54	P	P	05 56 26.3	+1.3
	baz=313						
BSD	Bornholm Skovb	73.96	334	*e*P	P	05 56 27.6	+0.1
KOPT	Kop Dagi	74.43	311	IAmb	IAmb	05 56 47.1	
	comp=Z,13nm,0.9s						
OGNE	Ogallala	74.49	48	P	P	05 56 31.9	+0.8
	baz=315						
SORM	Soroca	74.51	323	⇑P	P	05 56 30.5	-0.4
SORM	Soroca	74.51	323	⇑P	P	05 56 30.5	-0.4
SDCO	Great Sand Dun	74.80	52	P	P	05 56 33.8	+0.7
	baz=314						
UOSS	Minazif	74.83	290	P	P	05 56 32.9	-0.2
UOSS				IAmb	IAmb	05 56 34.0	
	comp=Z,9.8nm,0.8s						
ECSD	EROS Data Cent	75.28	43	P	P	05 56 36.3	+0.8
	baz=317						
T25A	Trinidad	75.84	52	P	P	05 56 39.6	+0.6
	baz=315						
DIKM	Dikmen	76.05	315	⇑P	P	05 56 40.5	+0.7
ANMO	Albuquerque	76.17	55	⇑*e*P	P	05 56 41.2	+0.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ANMO	Albuquerque	76.17	55	P	P	05 56 42.0	+1.1
	baz=314						
BUR08	Bucovina Ar. S	76.24	324	IAmb	IAmb	05 56 42.2	
	comp=Z,7.6nm,0.9s						
BURAR	Bucovina Array	76.26	324	⇑P	P	05 56 41.3	+0.3
BURAR	Bucovina Array	76.26	324	⇑P	P	05 56 41.3	+0.3
BURAR	Bucovina Array	76.26	324	P	P	05 56 41.0	-0.1
BURAR				IAmb	IAmb	05 56 42.1	
	comp=Z,6.7nm,0.8s						
OJC	Ojcow	76.33	329	IAmb	IAmb	05 56 42.8	
	comp=Z,18nm,1.2s						
KOLS	Kolonicke sedl	76.42	327	*e*P	P	05 56 42.7	+0.9
KOLS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KOLS	Kolonicke sedl	76.42	327	*e*P	P	05 56 42.7	+0.9
TESR	Tescani	76.50	323	⇑P	P	05 56 42.3	0.0
CRVS	Cervenica-Dubn	76.77	327	*e*P	P	05 56 44.1	+0.3
CRVS				pmax	pmax		
	comp=Z,64nm,2.3s						
CRVS	Cervenica-Dubn	76.77	327	*e*P	P	05 56 44.1	+0.3
CFR	Carcaliu	76.87	321	⇑P	P	05 56 44.8	+0.4
CFR	Carcaliu	76.87	321	⇑P	P	05 56 44.8	+0.4
VRI	Vrincioaia	76.97	322	⇑P	P	05 56 45.4	+0.4
VRI	Vrincioaia	76.97	322	⇑P	P	05 56 45.4	+0.4
TPGR	Topolog	76.99	321	⇑P	P	05 56 45.1	0.0
PLOR	Plostina	77.02	322	⇑P	P	05 56 45.7	+0.4
PLOR	Plostina	77.02	322	⇑P	P	05 56 45.7	+0.4
OZUR		77.20	323	⇑P	P	05 56 47.3	+1.0
BISRR	Bisoca	77.22	322	⇑P	P	05 56 47.6	+1.2
SCHQ	Schefferville	77.29	20	P	P	05 56 47.0	+0.4
	comp=Z,5.8nm,0.9s,baz=342,slow=7.8,SNR=5.5						
	comp=Z,5.8nm,0.9s						
SCHQ	Schefferville	77.29	20	IAmb	IAmb	05 56 59.1	
	comp=Z,3.5nm,0.7s						
LANS	Liptovska Anna	77.33	329	*e*P	P	05 56 48.2	+1.2
LANS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LANS	Liptovska Anna	77.33	329	*e*P	P	05 56 48.2	+1.2
HARR	Harsova	77.34	321	⇑P	P	05 56 45.6	-1.4
HARR	Harsova	77.34	321	⇑P	P	05 56 45.6	-1.4
DPC	Dobruska-Polom	77.49	331	*e*P	P	05 56 48.8	+0.9
DPC	Dobruska-Polom	77.49	331	*e*P	P	05 56 48.8	+0.9
MORC	Moravsky Berou	77.53	330	⇑P	P	05 56 47.4	-0.7
MORC	Moravsky Berou	77.53	330	⇑P	P	05 56 47.4	-0.7
MORC	Moravsky Berou	77.53	330	IAmb	IAmb	05 57 02.3	
	comp=Z,16nm,1.5s						
MORC	Moravsky Berou	77.53	330	*e*P	P	05 56 48.4	+0.3
KRLC	Kraliky	77.56	331	*e*P	P	05 56 48.6	+0.4
KRLC	Kraliky	77.56	331	*e*P	P	05 56 48.6	+0.4
MLR	Muntele Rosu	77.61	323	⇑P	P	05 56 48.3	-0.4
MLR	Muntele Rosu	77.61	323	⇑P	P	05 56 48.3	-0.4
MLR	Muntele Rosu	77.61	323	IAmb	IAmb	05 57 02.3	
	comp=Z,14nm,1.4s						
ISR	Istrita	77.63	322	⇑P	P	05 56 48.6	-0.2
ISR	Istrita	77.63	322	⇑P	P	05 56 48.6	-0.2
CLL	Collm	77.80	333	⇑*i*P	P	05 56 49.5	0.0
CLL				*i* *PP	sP	05 57 01.6	+0.1
CLL				pmax	pmax		
	comp=Z,12nm,0.6s						
CLL	Collm	77.80	333	⇑*i*P	P	05 56 49.5	0.0
	comp=Z,12nm,0.6s						
CLL				*i* pP	sP	05 57 01.6	+0.1
CLL				LmV		06 35 00.0	
	comp=Z,200nm,18.0s						
ICOR	Ion Corvin	77.84	321	⇑P	P	05 56 51.3	+1.5
VOIR		78.04	323	⇑P	P	05 56 52.0	+1.0
VOIR		78.04	323	⇑P	P	05 56 52.0	+1.0
VYHS	Vyhne	78.11	328	*e*P	P	05 56 51.9	+0.6
VYHS	Vyhne	78.11	328	*e*P	P	05 56 51.9	+0.6
PSZ	Piszkesteto	78.17	328	⇑P	P	05 56 50.5	-1.2
PSZ	Piszkesteto	78.17	328	⇑P	P	05 56 50.5	-1.2
VRAC	Vranov	78.26	330	⇑P	P	05 56 50.6	-1.5
VRAC	Vranov	78.26	330	⇑P	P	05 56 50.6	-1.5
VRAC	Vranov	78.26	330	*e*P	P	05 56 52.7	+0.6
ARR	Arges	78.28	323	⇑P	P	05 56 53.8	+1.4
BR131	Keskin Array S	78.30	314	⇓*e*P	P	05 56 53.3	+0.6
BRTR	Keskin Array B	78.30	314	P	P	05 56 53.3	+0.6
	comp=Z,2.2nm,0.8s,baz=96,slow=2.5,SNR=8.0						
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	78.30	314	*i* P	P	05 56 53.5	+0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	78.30	314	pwP	pwP	05 57 04.7	-1.3
PRU	Pruhonice	78.41	332	*e*P	P	05 56 53.3	+0.4
PRU	Pruhonice	78.41	332	*e*P	P	05 56 53.3	+0.4
KRUC	Moravsky	78.54	330	*e*P	P	05 56 54.0	+0.3
TREC	Trest	78.67	331	*e*P	P	05 56 41.1	-13
SRO	Srobarova	78.87	328	*e*P	P	05 56 56.9	+1.4
SRO	Srobarova	78.87	328	*e*P	P	05 56 56.9	+1.4
GZR	Gura Zlata	79.05	324	⇑P	P	05 56 56.5	-0.1
GZR	Gura Zlata	79.05	324	⇑P	P	05 56 56.5	-0.1
MNTX	Cornudas Mount	79.08	57	P	P	05 56 58.2	+1.2
	baz=315						
KHC	Kasperske Hory	79.47	332*c*	*i*P	P	05 56 59.3	+0.4
KHC				pmax	pmax		
	comp=Z,28nm,1.0s						
KHC	Kasperske Hory	79.47	332	IAmb	IAmb	05 57 00.3	
	comp=Z,11nm,0.9s						
KHC	Kasperske Hory	79.47	332	*e*P	P	05 56 59.2	+0.4
KHC				*e*pP	sP	05 57 11.2	+0.3
CKRC	Cesky Krumlov	79.48	331	*e*P	P	05 56 59.7	+0.8
HERR	Herculane	79.61	324	⇑P	P	05 56 57.8	-1.8
GERES	GERESS Array B	79.67	332	P	P	05 57 00.1	+0.1
	comp=Z,2.2nm,0.5s,baz=35,slow=4.9,SNR=20						
	comp=Z,2.2nm,0.5s						
CONA	Conrad Observa	79.69	330	*e*P	P	05 57 00.8	+0.7
	comp=Z,7.3nm,1.2s						
RONA	Rosalia, Austr	79.72	329	*e*P	P	05 57 01.1	+0.9
	comp=Z,6.4nm,0.7s						
MOA	Molln	80.33	331	*i* P	P	05 57 04.1	+0.6
	comp=Z,3.6nm,0.8s						
T35A	Sooner Cattle	80.37	47	IAmb	IAmb	05 57 18.9	
	comp=Z,9.0nm,1.1s						
FRGS	Fruska Gora	80.47	326	⇑P	P	05 57 04.3	+0.1
MEM	Membach	80.55	337	*d*P	P	05 57 04.2	-0.4
	comp=Z,6.5nm,0.8s						
BIOA	Bad Ischl, Aus	80.68	331	*e*P	P	05 57 06.2	+0.9
	comp=Z,12nm,1.1s						
WMOK	Wichita Mounta	80.74	50	P	P	05 57 06.6	+0.7
	baz=318						
SOKA	Soboth	81.04	330	*i* P	P	05 57 07.6	+0.2
	comp=Z,6.6nm,0.7s						
VTS	Vitosha	81.07	322	⇑P	P	05 57 06.4	-1.3
VTS	Vitosha	81.07	322	⇑P	P	05 57 06.4	-1.3
VTS	Vitosha	81.07	322	IAmb	IAmb	05 57 09.4	
	comp=Z,9.5nm,1.0s						
RDO	Rodhopi	81.20	320	IAmb	IAmb	05 57 09.8	
	comp=Z,12nm,1.1s						
HDIL	Hopedale	81.23	41	P	P	05 57 08.6	+0.2
	baz=322						
DIVS	Divibare	81.26	325	IAmb	IAmb	05 57 09.4	
	comp=Z,5.8nm,0.9s						
KBA	Koelnbreinsper	81.31	331	*i* P	P	05 57 09.9	+1.0
	comp=Z,6.2nm,0.6s						
OBKA	Obir	81.36	330	*i* P	P	05 57 09.4	+0.3
	comp=Z,2.1nm,0.6s						
S39A	Bolivar	81.46	45	IAmb	IAmb	05 57 22.6	
	comp=Z,6.4nm,1.1s						
TUL1	Leonard	81.51	48	P	P	05 57 10.3	+0.3
	baz=319						
R40A	Maddies Statio	81.54	44	pwP	pwP	05 57 22.1	-1.4
WATA	Walderalm	81.70	332	*i* P	P	05 57 11.4	+0.4
	comp=Z,7.3nm,0.5s						
WTTA	Wattenberg	81.74	332	*i* P	P	05 57 11.5	+0.3
	comp=Z,5.9nm,0.5s						
TX31	Lajitas Ar. Si	81.80	57	IAmb	IAmb	05 57 26.5	
	comp=Z,16nm,1.2s						
TXAR	Lajitas Array	81.80	57	P	P	05 57 12.9	+1.2
	comp=Z,0.7nm,0.6s,baz=292,slow=4.4,SNR=10.0						
	comp=Z,0.7nm,0.6s						
RETA	Reutte	81.84	333	*i* P	P	05 57 12.3	+0.7
	comp=Z,7.0nm,0.7s						
MOTA	Moosalm	81.85	332	*i* P	P	05 57 12.0	+0.3
	comp=Z,20nm,1.1s						
SQTA	Sankt Quirin	81.92	332	*i* P	P	05 57 12.6	+0.5
	comp=Z,8.9nm,0.7s						
CCM	Cathedral Cave	82.23	44	P	P	05 57 14.3	+0.6
CCM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CCM	Cathedral Cave	82.23	44	P	P	05 57 14.3	+0.6
CCM				IAmb	IAmb	05 57 26.3	
	comp=Z,9.6nm,1.1s						
CCM	Cathedral Cave	82.23	44	P	P	05 57 14.1	+0.4
	baz=321						
STAL	STALIGIAL	82.24	331	IAmb	IAmb	05 57 14.7	
	comp=Z,5.8nm,0.9s						
PMOR	Pomariorio Ree	82.24	119	*e*T	T	07 28 29.9	
	comp=Z,21nm,0.3s						
FETA	Feichten	82.26	332	*i* P	P	05 57 14.5	+0.6
	comp=Z,6.9nm,1.1s						
DAVA	Damuels	82.31	333	*e*P	P	05 57 14.7	+0.6
	comp=Z,10.0nm,0.8s						
ECH	Echery	82.35	335	IAmb	IAmb	05 57 15.6	
	comp=Z,8.6nm,1.0s						
SFIN	Lafayette	82.40	40	P	P	05 57 15.1	+0.6
	baz=323						
U40A	Yellville	82.72	46	IAmb	IAmb	05 57 28.9	
	comp=Z,8.5nm,1.1s						
U40A	Yellville	82.72	46	P	P	05 57 16.7	+0.5
	baz=320						
TAOE	Nuku Hiva Isla	82.84	109	*e*LR	LR	06 23 20.0	
	comp=Z,77nm,22.1s						
PDG	Podgorica	82.94	325	⇑P	P	05 57 16.9	-0.3
RAYN	Ar Rayn	82.94	296	P	P	05 57 18.1	+0.4
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RAYN	Ar Rayn	82.94	296	P	P	05 57 18.1	+0.4
RAYN				IAmb	IAmb	05 57 18.8	
	comp=Z,5.3nm,0.9s						
W39A	Magazine	83.12	47	P	P	05 57 18.9	+0.5
	baz=320						
PPT2	Papeete2	83.15	122	*e*LR	LR	06 23 33.4	
	comp=Z,68nm,21.8s						
PPT2	Papeete2	83.15	122	*e*T	T	07 29 34.5	
	comp=Z,2.4nm,0.3s						
TUE	Stuetta	83.20	333	P	P	05 57 18.8	0.0
TUE				IAmb	IAmb	05 57 23.7	
	comp=Z,10.0nm,0.9s						
FNA	Florina	83.37	322	IAmb	IAmb	05 57 32.6	
	comp=Z,6.6nm,1.1s						
S44A	Carbondale	83.50	43	IAmb	IAmb	05 57 21.7	
	comp=Z,7.1nm,0.8s						
SIUC	Southern Illin	83.50	42	IAmb	IAmb	05 57 36.3	
	comp=Z,8.7nm,0.9s						
MIAR	Mount Ida	83.72	47	IAmb	IAmb	05 57 34.6	
	comp=Z,9.8nm,1.1s						
MIAR	Mount Ida	83.72	47	P	P	05 57 21.7	+0.2
	baz=320						
WHAR	Wooly Hollow	83.83	46	pwP	pwP	05 57 34.7	-0.8
WHAR				IAmb	IAmb	05 57 34.8	
	comp=Z,7.9nm,1.0s						
P49A	Miami Univ. Ec	84.17	39	P	P	05 57 23.1	-0.6
	baz=324						
M53A	WI Miller and	84.35	35	P	P	05 57 24.7	+0.1
	baz=327						
O53A	New Philadelph	85.12	36	P	P	05 57 28.1	-0.3
	baz=326						
WVT	Waverly	85.43	43	P	P	05 57 30.0	-0.1
	baz=323						
T50A	Nancy	86.15	40	P	P	05 57 33.9	+0.2
T50A				IAmb	IAmb	05 57 48.1	
	comp=Z,7.2nm,1.0s						
SSPA	Standing Stone	86.17	34	P	P	05 57 33.3	-0.4
	baz=328						
TBI	Tubuai	87.61	126	*e*LR	LR	06 25 39.3	
KMSC	Kings Mountain	89.31	39	P	P	05 57 48.7	-0.1
	baz=327						
TORD	Torodi Ar. Bea	115.83	324	PKP	PKiKP	06 03 34.8	-0.6
	comp=Z,0.2nm,0.4s,baz=28,slow=2.8,SNR=4.3						
PLCA	Paso Flores	151.06	98	PKPbc	PKPbc	06 04 46.6	+1.5
	comp=Z,2.0nm,0.9s,baz=307,slow=4.4,SNR=6.5						

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*IDC **10** 05:56:34.4±0.6, 43°.86N×148°.47E, h0^{km}, mb4.5/27, mbtmp4.4/33, ML2.9/4, MS4.1/58, Error ellipse: s-maj=16.2km s-min=11.5km az=152.0*

*BJI **10** 05:56:35.6±0.0, 43°.79N×148°.52E, h22^{km}, mb4.8/61, mB4.9/37, Ms4.6/55, Ms7 4.4/53*

*MOS **10** 05:56:37.4±1.0, 43°.75N×148°.52E, h36^{km}, mb5.2/43, MS4.6/14, Error ellipse: s-maj=5.8km s-min=4.4km az=120.7*

*JMA **10** 05:56:37.0±0.5, 44°N±2°×14°8E±°, h0^{km}, MD4.7/36, MV5.0/36, SE OFF ETOROFU*

*SKHL **10** 05:56:37.2±0.1, 43°.80N×148°.70E, h36^{km}±4^{km}, mb5.4/4, ms4.5/7*

*NIED **10** 05:56:37.0, 43°.58N×148°.28E, h0^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-0.53; $M_{r\theta}$1.02; $M_{\theta\phi}$-0.31; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.70000×10^{16} NP1: ϕ_s224.00000°, δ17.00000°, λ88.00000°. NP2: ϕ_s46.00000°, δ73.00000°, λ91.00000°.*

*NEIC **10** 05:56:38.6±2.2, 43°.78N±0°.08×148°.4E±0°.1, h25^{km}±4^{km}, mb4.8/181 Error ellipse: s-maj=14.3km s-min=9.6km az=134.0*

*GCMT **10** 05:56:43.7±0.6, 43°.90N±0°.04×148°.65E±0°.05, h27^{km}±1^{km}, MW4.8/60, Moment Tensor Solution. s21,c24; s60,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.81±.15; $M_{\theta\theta}$-0.93±.10; $M_{\phi\phi}$-0.88±.10; $M_{r\theta}$0.57±.16; $M_{\theta\phi}$-0.86±.05; $M_{\phi r}$1.01±.14; Best double couple: $M_0$2.13300×10^{16} NP1: ϕ_s233.00000°, δ29.00000°, λ104.00000°. NP2: ϕ_s37.00000°, δ61.00000°, λ82.00000°. Principal axes: T 2.1720, Plg72.0000°, Azm289.0000°; N -0.0840, Plg7.0000°, Azm41.0000°; P -2.0930, Plg16.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 05:56:37.6±0.6**, 43°.76N**±0°.04×**148°.45E**±0°.04**, h24**^{km}±3^{km}**, h24**^{km}**:pP-P, n712, σ1**^{s}**32**/621**, mb4.8**/193**, MS4.3**/88**, 87C-47D, Fault plane solution: NP1:**ϕ_s34.15642°, δ58.86518°, λ59.98114°. **NP2:**ϕ_s262.33160°, δ42.17172°, λ129.63133°. **Principal axes:** T Plg62.8324°, Azm253.3725°; N Plg25.3547°, Azm50.7898°; P Plg9.1170°, Azm145.1511°; **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.18	276*c*	*i*PN	Pn	05 56 58.8	+0.2
SHO				*e*S	Sb	05 57 15.1	+1.0
SHO				pmax	pmax		
	comp=Z,868nm,0.3s						
SHO				pmax	pmax		
	comp=N,213nm,0.2s						
SHO				pmax	pmax		
	comp=E,636nm,0.3s						
SHO				smax	smax		
	comp=N,5µm,0.3s						
SHO				smax	smax		
	comp=E,8µm,0.7s						
SHO	Shikotan	1.18	276	*i* P	Pn	05 56 59.0	+0.4
SHO				AMB	AMB	05 57 00.0	
	comp=E,210nm,0.3s						
SHO				AMB	AMB	05 57 00.0	
	comp=E,640nm,0.3s						
SHO				AMB	AMB	05 57 00.0	
	comp=E,870nm,0.3s						
SHO				*e*S	Sb	05 57 15.4	+1.3
SHO				A	A	05 57 21.5	
	comp=E,5µm,0.7s						
SHO				A	A	05 57 21.5	
	comp=E,8µm,0.7s						
KUR	Kuril'sk	1.54	344*c*	*i*PN	Pn	05 57 03.5	+0.1
KUR				*i* S	Sn	05 57 23.3	+0.7
KUR				pmax	pmax		
	comp=Z,2µm,0.6s						
KUR				pmax	pmax		
	comp=E,423nm,0.2s						
KUR				pmax	pmax		
	comp=N,683nm,0.5s						
KUR				pmax	pmax		
	comp=Z,10µm,4.6s						
KUR				smax	smax		
	comp=E,4µm,0.4s						
KUR				smax	smax		
	comp=N,2µm,0.7s						
KUR				smax	smax		
	comp=N,22µm,2.0s						
KUR				smax	smax		
	comp=E,15µm,2.4s						
KUR	Kuril'sk	1.54	344	*i* P	Pn	05 57 02.3	-1.1
KUR				AMB	AMB	05 57 09.9	
	comp=E,2µm,0.6s						
KUR				AMB	AMB	05 57 19.3	
	comp=E,10µm,4.6s						
KUR				*i* S	Sn	05 57 21.0	-1.6
KUR				A	A	05 57 25.7	
	comp=E,2µm,0.6s						
KUR				A	A	05 57 25.7	
	comp=E,4µm,0.6s						
KUR				A	A	05 57 32.7	
	comp=E,22µm,2.4s						
KUR				A	A	05 57 32.7	
	comp=E,15µm,2.4s						
YUK	Yuzh-Kuril'sk	1.89	279	*e*PN	Pn	05 57 09.1	+0.7
YUK				*e*S	Sb	05 57 33.4	-1.2
YUK				pmax	pmax		
	comp=N,544nm,0.3s						
YUK				pmax	pmax		
	comp=E,1µm,0.3s						
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				smax	smax		
	comp=N,8µm,0.6s						
YUK				smax	smax		
	comp=E,4µm,0.5s						
YUK	Yuzh-Kuril'sk	1.89	279	*e*P	Pn	05 57 08.7	+0.3
YUK				AMB	AMB	05 57 16.8	
	comp=E,2µm,0.6s						
YUK				*e*S	Sn	05 57 32.4	+1.0
YUK				A	A	05 57 46.3	
	comp=E,8µm,0.6s						
YUK				A	A	05 57 46.3	
	comp=E,4µm,0.6s						
NEM2	Nemuro 2	2.01	260	P	Pn	05 57 10.2	+0.2
NEM2				*e*S	Sn	05 57 34.6	+0.4
NEM2	Nemuro 2	2.01	260	A	A	05 57 10.2	
	comp=E,8.0nm,2.9s,comp=E,9.0nm,3.9s						
NMR	Nemuro--Hokkai	2.02	260	*e*PN	Pn	05 57 10.4	+0.3
NMR				*e*S	Sn	05 57 35.4	+0.9
NMR	Nemuro--Hokkai	2.02	260	*e*P	Pn	05 57 10.4	+0.3
NMR				*e*S	Sn	05 57 35.4	+0.9
RUSJ	Misakicho	2.34	280	*e*PN	Pn	05 57 16.4	+1.9
RUSJ				*e*S	Sb	05 57 45.7	-1.8
JRA	Rausu	2.42	275	*e*P	Pn	05 57 17.5	+2.0
JRA	Rausu	2.42	275	A	A	05 57 17.5	
	comp=E,14nm,1.9s,comp=E,7.0nm,5.1s						
JKHN	Kushirohamanak	2.49	255	*e*P	Pn	05 57 17.4	+0.8

JKHN				*e*S	Sn	05 57 47.9	+1.7
JKHN	Kushirohamanak	2.49	255	A	A	05 57 17.4	
	comp=E,9.0nm,5.0s,comp=E,13nm,2.7s						
JNSB	Nemuroshibetsu	2.50	272	*e*P	Pn	05 57 18.2	+1.6
JNSB	Nemuroshibetsu	2.50	272	A	A	05 57 18.2	
	comp=E,12nm,3.3s,comp=E,11nm,2.2s						
JNK	Nakash	2.71	268	A	A	05 57 21.2	
	comp=E,4.0nm,4.3s,comp=E,6.0nm,5.3s						
AKK	Akkeshi	2.73	256	*e*P	Pn	05 57 20.9	+1.0
AKK				*e*S	Sn	05 57 53.9	+1.7
JAK	Akkeshi	2.84	256	*e*P	Pn	05 57 22.4	+1.0
JAK				*e*S	Sn	05 57 56.1	+1.3
JAK	Akkeshi	2.84	256	A	A	05 57 22.4	
	comp=E,9.0nm,1.1s,comp=E,8.0nm,3.0s						
JTKR	Abashiri--Toko	3.29	275	*e*P	Pn	05 57 29.8	+2.2
JTKR	Abashiri--Toko	3.29	275	A	A	05 57 29.8	
	comp=E,2.0nm,3.2s,comp=E,2.0nm,4.1s						
JAR	Ashorobuto	3.44	264	*e*P	Pn	05 57 31.2	+1.6
JAR	Ashorobuto	3.44	264	A	A	05 57 31.2	
	comp=E,3.0nm,4.1s,comp=E,3.0nm,1.1s						
JOB	Onbets	3.48	257	A	A	05 57 31.6	
	comp=E,5.0nm,5.6s,comp=E,4.0nm,2.9s						
JCH	Churui	3.89	255	*e*P	Pn	05 57 37.6	+1.8
JCH				*e*S	Sn	05 58 22.8	+2.0
JCH	Churui	3.89	255	A	A	05 57 37.6	
	comp=E,2.0nm,2.8s,comp=E,3.0nm,1.4s						
JTHR	Tokachihiroo	4.05	251	A	A	05 57 39.5	
	comp=E,4.0nm,1.2s,comp=E,5.0nm,3.7s						
JKK2	Kamakawa 2	4.13	274	*e*P	Pn	05 57 41.9	+2.8
JKA	Kamikawa-asahi	4.24	277	Pn	Pn	05 57 43.6	+3.0
JKA	Kamikawa-asahi	4.24	277	*e*P	Pn	05 57 43.6	+3.0
ASAJ	Asahikawa	4.24	277	Pn	Pn	05 57 44.0	+3.3
	comp=E,9.6nm,0.3s,baz=87,slow=14,SNR=16						
ASAJ				LR	LR	05 59 22.0	
	comp=E,2µm,21.1s,baz=162,slow=40						
ASAJ	Asahikawa	4.24	277	PN	Pn	05 57 43.6	+2.9
JEM	Erimo	4.26	248	A	A	05 57 42.4	
	comp=E,5.0nm,4.9s,comp=E,4.0nm,5.3s						
ERM	Erimo	4.26	248	*c i*PN	Pn	05 57 43.9	+3.0
ERM	Erimo	4.26	248	Pn	Pn	05 57 43.7	+2.8
JNBK	Urakawa-nobuka	4.43	253	*e*P	Pn	05 57 45.0	+1.7
JNBK				*e*S	Sn	05 58 36.2	+2.1
JNBK	Urakawa-nobuka	4.43	253	A	A	05 57 45.0	
	comp=E,6.0nm,0.8s,comp=E,4.0nm,1.0s						
JSHD	Hidakashinhida	4.59	255	A	A	05 57 47.2	
	comp=E,6.0nm,1.2s,comp=E,5.0nm,5.1s						
JIAM	Iburiatsuma	4.91	259	A	A	05 57 51.9	
	comp=E,7.0nm,0.9s,comp=E,10.0nm,1.0s						
JWK2	Keihoku	4.94	291	*e*P	Pn	05 57 54.6	+4.4
YSS	Yuzh-Sakhalins	5.13	311	*e*PN	Pn	05 57 55.5	+2.6
YSS				*e*S	Sn	05 58 55.1	+3.8
YSS				pmax	pmax		
	comp=Z,150nm,0.8s						
YSS				smax	smax		
	comp=E,110nm,0.9s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS	Yuzh-Sakhalins	5.13	311	Pn	Pn	05 57 53.8	+1.0
YSS	Yuzh-Sakhalins	5.13	311	AMS	AMS	06 00 02.0	
	comp=Z,2µm,15.0s						
YSS				*e*P	Pn	05 57 54.3	+1.4
YSS				AMB	AMB	05 58 06.8	
	comp=Z,150nm,0.7s						
YSS				*e*S	Sn	05 58 51.9	+0.6
YSS				A	A	05 59 05.6	
	comp=Z,60nm,0.9s						
YSS				A	A	05 59 05.6	
	comp=Z,110nm,0.9s						
YSS				AMS	AMS	06 00 02.0	
	comp=Z,3µm,15.0s						
JEW	Eniwo	5.19	262	Pn	Pn	05 57 55.7	+2.0
JEW	Eniwo	5.19	262	*e*P	Pn	05 57 56.9	+3.1
JRBN	Rebuntou	5.53	290	*e*P	Pn	05 58 01.4	+3.1
JKB	Kayabe	5.77	254	A	A	05 58 03.8	
	comp=Z,3.0nm,1.3s,comp=Z,2.0nm,5.1s						
JAHD	Aomorihigashid	5.82	247	A	A	05 58 04.3	
	comp=Z,4.0nm,5.6s,comp=Z,5.0nm,3.3s						
JOT	Ohata	5.96	249	*e*P	Pn	05 58 05.4	+1.1
JOT				*e*S	Sn	05 59 10.8	-0.9
JANG	Nango	6.17	239	*e*P	Pn	05 58 06.7	-0.4
JANG				*e*S	Sn	05 59 12.6	-4.3
JTM	Tenmabayashi	6.23	244	Pn	Pn	05 58 09.4	+1.4
JOSM	Okushiri--Mats	6.80	259	*e*P	Pn	05 58 17.8	+2.0
JOM	Ohasama	6.86	234	*e*P	Pn	05 58 16.8	+0.1
JOM				*e*S	Sn	05 59 28.9	-5.0
UGL	Uglegorsk	6.91	323	*e*PN	Pn	05 58 05.4	-12
UGL				pmax	pmax		
	comp=Z,56nm,0.6s						
UGL				MLR	MLR		
	comp=N,3µm,18.0s						
UGL				MLR	MLR		
	comp=E,2µm,17.0s						
UGL	Uglegorsk	6.91	323	AMS	AMS	06 01 06.0	
	comp=E,3µm,18.0s						
UGL				*e*P	Pn	05 58 19.2	+1.9
UGL				AMB	AMB	05 58 19.3	
	comp=E,20nm,0.7s						
UGL				*e*S	Sn	05 59 35.6	+0.5
UGL				AMS	AMS	06 01 06.0	
	comp=E,2µm,18.0s						
UGL				AMS	AMS	06 01 06.0	
	comp=E,5µm,18.0s						
TYV	Tymovskoe	8.12	333	*e*PN	Pn	05 58 40.2	+6.3
TYV				*e*S	Sn	06 00 12.8	+7.9
TYV				pmax	pmax		
	comp=Z,200nm,5.0s						
TYV				pmax	pmax		
	comp=Z,18nm,0.9s						
TYV				smax	smax		
	comp=N,14nm,1.1s						
TYV				smax	smax		
	comp=E,11nm,1.1s						
TYV				MLR	MLR		
	comp=N,2µm,17.0s						
TYV				MLR	MLR		
	comp=Z,2µm,17.0s						
TYV	Tymovskoe	8.12	333	*e*S	Sn	06 00 04.2	-0.7
TYV				*e*P	Pn	05 58 35.4	+1.5
TYV				AMB	AMB	05 58 41.5	
	comp=Z,200nm,5.0s						
TYV				AMB	AMB	05 58 42.5	
	comp=Z,20nm,0.9s						
TYV				A	A	06 00 14.5	
	comp=Z,20nm,0.9s						
TYV				A	A	06 00 14.5	
	comp=Z,10.0nm,0.9s						
TYV				AMS	AMS	06 01 45.0	
	comp=Z,2µm,16.0s						
TYV				AMS	AMS	06 01 45.0	
	comp=Z,4µm,16.0s						
TYV				AMS	AMS	06 01 45.0	
	comp=Z,2µm,16.0s						
JMM	Marumori	8.27	227	Pn	Pn	05 58 35.0	-0.9
TEY	Ternei	8.58	283	*e*P	Pn	05 58 43.8	+3.6
TEY				AMB	AMB	05 58 53.3	
	comp=Z,10.0nm,0.9s						
SKR	Severo-Kuril's	8.67	34	*e*PN	Pn	05 58 41.4	0.0
SKR				pmax	pmax		
	comp=Z,52nm,0.7s						
SKR				MLR	MLR		
	comp=Z,1µm,13.0s						
SKR				MLR	MLR		
	comp=E,1µm,14.0s						
SKR				MLR	MLR		
	comp=Z,2µm,13.0s						
SKR				MLR	MLR		
	comp=N,1µm,12.0s						
SKR				MLR	MLR		
	comp=E,1µm,13.0s						
SKR	Severo-Kuril's	8.67	34	*e*S	Sn	06 00 13.1	-5.2
SKR				*e*P	Pn	05 58 40.8	-0.6
SKR				AMB	AMB	05 58 44.7	
	comp=E,50nm,0.7s						
SKR				A	A	06 00 19.0	
	comp=E,10.0nm,0.5s						
SKR				A	A	06 00 19.0	
	comp=E,20nm,0.5s						
SKR				AMS	AMS	06 02 09.7	
	comp=E,800nm,14.0s						
SKR				AMS	AMS	06 02 09.7	
	comp=E,1µm,14.0s						
SKR				AMS	AMS	06 02 09.7	
	comp=E,1µm,14.0s						
PAU	Pauzhetka	9.55	33	*e*S	Sn	06 00 35.3	-4.7
PAU				*e*P	Pn	05 58 52.5	-1.0
PAU				AMB	AMB	05 58 59.8	
	comp=E,10.0nm,0.9s						
JSD	Sado	9.60	237	Pn	Pn	05 58 54.1	0.0
KHBR	Khabarovsk	10.43	302	*e*P	Pn	05 59 07.8	+2.4
OKH	Okha	10.46	342	*de*PN	Pn	05 59 09.9	+4.1
OKH				MLR	MLR		
	comp=E,2µm,16.0s						
OKH				MLR	MLR		
	comp=Z,2µm,14.0s						
OKH				MLR	MLR		
	comp=N,2µm,14.0s						
OKH	Okha	10.46	342	AMS	AMS	06 02 09.7	
	comp=N,2µm,15.0s						
OKH				*e*P	Pn	05 59 07.9	+2.1
OKH				AMB	AMB	05 59 09.9	
	comp=N,20nm,0.5s						
OKH				AMS	AMS	06 02 09.7	
	comp=N,2µm,15.0s						
OKH				AMS	AMS	06 02 09.7	
	comp=N,2µm,15.0s						
MAJO	Matsushiro	10.64	231	*c i*PN	Pn	05 59 08.5	0.0
MAJO	Matsushiro	10.64	231	Pn	Pn	05 59 07.2	-1.3
MJAR	Matsushiro Arr	10.64	231	Pn	Pn	05 59 08.6	+0.1
	comp=N,0.2nm,0.3s,baz=36,slow=14,SNR=20						
MJAR				Sn	Sn	06 01 02.9	-4.0
	comp=N,0.1nm,0.3s,baz=121,slow=27,SNR=2.3						
	comp=N,3.7nm,0.4s						
MJAR	Matsushiro Arr	10.64	231		Pn	05 59 08.2	-0.3
MJB9	Matsu-Tunnel	10.64	231		Pn	05 59 07.4	-1.1
GRNR	Gornyy	10.76	315	⇓*i*PN	Pn	05 59 17.6	+7.5
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,830nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,850nm,17.0s						
GRNR	Gornyy	10.76	315	AMS	AMS	06 03 31.0	
	comp=Z,800nm,17.0s						
GRNR				*e*P	Pn	05 59 11.6	+1.5
GRNR				AMB	AMB	05 59 19.3	
	comp=Z,10.0nm,0.9s						
GRNR				AMS	AMS	06 03 31.0	
	comp=Z,900nm,17.0s						
PEA0B	Petropavlovsk-	11.18	30	PN	Pn	05 59 18.7	+2.9
PEA0B	Petropavlovsk-	11.18	30	Pn	Pn	05 59 18.7	+2.9
PETK	Petropavlovsk-	11.18	30	Pn	Pn	05 59 14.0	-1.8
	comp=Z,0.4nm,0.3s,baz=207,slow=6.3,SNR=7.9						
PETK				LR	LR	06 04 11.4	
	comp=Z,1µm,18.6s,baz=226,slow=41						
	comp=Z,0.9nm,0.4s						
PETK	Petropavlovsk-	11.18	30	PN	Pn	05 59 18.7	+2.9
PETK	Petropavlovsk-	11.18	30	Pn	Pn	05 59 18.7	+2.9
PET	Petropavlovsk	11.48	33	*e*PN	Pn	05 59 19.0	-0.8
PET	Petropavlovsk	11.48	33	*e*P	Pn	05 59 18.5	-1.3
PET				AMB	AMB	05 59 20.1	
	comp=Z,10.0nm,0.7s						
GRTR	Gornotajezhnoj	11.79	275	*e*P	Pn	05 59 26.9	+2.7
GRTR				AMB	AMB	05 59 29.3	
	comp=Z,10.0nm,0.7s						
JGF	Kuroka	11.80	230	Pn	Pn	05 59 23.4	-0.9
USA0B	Ussuriysk Arra	11.87	278	*d i*PN	Pn	05 59 27.0	+1.7
USA0B	Ussuriysk Arra	11.87	278	Pn	Pn	05 59 26.6	+1.3
USRK	Ussuriysk Ar.	11.87	278	Pn	Pn	05 59 26.4	+1.1
	comp=Z,0.3nm,0.3s,baz=91,slow=13,SNR=8.7						
USRK				LR	LR	06 04 15.1	
	comp=Z,2µm,18.3s,baz=86,slow=39						
	comp=Z,6.6nm,0.8s						
USRK	Ussuriysk Ar.	11.87	278	PN	Pn	05 59 27.2	+1.9
USRK	Ussuriysk Ar.	11.87	278	Pn	Pn	05 59 27.2	+1.9
VLA	Vladivostok	12.06	273	*e*PN	Pn	05 59 30.4	+2.5
VLA	Vladivostok	12.06	273	*e*P	Pn	05 59 30.4	+2.5
INU	Inuyama	12.17	230	Pn	Pn	05 59 28.4	-1.0
MSHR	Mys Shultsa	12.69	271	⇑*i*PN	Pn	05 59 37.8	+1.4
KLR	Kul'dur	12.73	301	Pn	Pn	05 59 38.8	+1.8
	baz=123,slow=18,SNR=3.4						
KLR	Kul'dur	12.73	301	⇑*i*PN	Pn	05 59 39.6	+2.6
KLR	Kul'dur	12.73	301	*e*P	Pn	05 59 37.7	+0.7
MDJ	Mudanjiang	13.56	280	P	Pn	05 59 48.6	+0.2
MDJ				pP	P	05 59 56.6	-0.6
MDJ				S	Sn	06 02 19.6	+1.4
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.7s						
MDJ				LR	LR		
	comp=Z,520nm,14.2s						
MDJ				LR	LR		
	comp=Z,1µm,17.8s						
MDJ				LR	LR		
	comp=Z,2µm,17.9s						
JHS	Saijyo	14.72	239	Pn	Pn	06 00 04.1	-0.1
BNX	BinXian	15.08	285	⇑P	Pn	06 00 10.4	+1.4
BNX				pmax	pmax		
	comp=Z,45nm,1.1s						
BNX				pmax	pmax		
	comp=Z,230nm,4.5s						
MA2	Magadan	15.91	4	Pn	Pn	06 00 16.3	-3.3
	comp=Z,6.5nm,1.0s,baz=342,slow=20,SNR=2.2						
MA2	Magadan	15.91	4	*c i*P	Pn	06 00 19.3	-0.3
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
MA2	Magadan	15.91	4	*i* P	Pn	06 00 19.3	-0.3
OKHT	Okhotsk	15.95	350	*e*P	Pn	06 00 17.0	-3.1
CN2	Changchun	16.61	278	*e*P	Pn	06 00 27.0	-1.7
CN2				*e*PP	pwP	06 00 40.9	-0.3
CN2				*e*S	Sn	06 03 30.3	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
KSRS	Korea Array	16.79	255	Pn	Pn	06 00 30.9	-0.1
	comp=Z,0.1nm,0.3s,baz=60,slow=12,SNR=11						
KSRS				LR	LR	06 06 46.0	
	comp=Z,519nm,21.0s,baz=55,slow=36						
	comp=Z,3.5nm,0.8s						
ZEA	Zeya	17.12	313	*e*P	Pn	06 00 34.9	-0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=N,200nm,6.5s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.7s						
ZEA				MLR	MLR		
	comp=E,300nm,17.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
ZEA	Zeya	17.12	313	*e*P	Pn	06 00 32.5	-2.5
ZEA				AMB	AMB	06 00 38.1	
	comp=Z,10.0nm,0.8s						
ZEA				AMB	AMB	06 00 43.4	
	comp=Z,200nm,5.5s						
ZEA				AMB	AMB	06 00 43.4	
	comp=Z,200nm,5.5s						
ZEA				AMS	AMS	06 07 41.0	
	comp=Z,400nm,17.0s						
ZEA				AMS	AMS	06 07 41.0	
	comp=Z,300nm,17.0s						
ZEA				AMS	AMS	06 07 41.0	
	comp=Z,600nm,17.0s						
KROS	Kirovskiy	17.59	315	*e*P	Pn	06 00 38.7	-2.2
KROS				AMB	AMB	06 00 43.3	
	comp=Z,10.0nm,0.8s						
INCN	Inchon	17.69	257	P	P	06 00 42.7	-0.3
INCN				pmax	pmax		
	comp=Z,55nm,1.2s						
INCN	Inchon	17.69	257		P	06 00 42.7	-0.3
INCN	Inchon	17.69	257	*e*P	P	06 00 42.7	-0.3
SNY	Shenyang	18.34	273	⇓P	Pn	06 00 51.7	+1.5
SNY				S	Sn	06 04 07.6	-6.6
SNY				pmax	pmax		
	comp=Z,22nm,1.2s						
SNY				pmax	pmax		
	comp=Z,150nm,9.5s						
SNY				LR	LR		
	comp=Z,670nm,14.1s						
SNY				LR	LR		
	comp=Z,630nm,18.0s						
SNY				LR	LR		
	comp=Z,1µm,16.5s						
SEY	Seymchan	19.35	5	P	P	06 00 59.5	-1.5
	comp=Z,16nm,0.8s,baz=183,slow=9.0,SNR=52						
SEY	Seymchan	19.35	5	*i* P	P	06 00 59.9	-1.1
SEY				pmax	pmax		
	comp=Z,29nm,1.0s						
SEY				MLR	MLR		
	comp=Z,756nm,15.0s						
HIA	Hailar	20.44	296	*i* P	P	06 01 11.1	-2.0
HIA				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK	Yakutsk	21.38	335	*e*P	P	06 01 19.2	-3.7
YAK				*e*S	S	06 05 16.3	-2.5
YAK				*e**SS	pS	06 05 32.1	+3.0
YAK				*e*SS	SnSn	06 05 46.1	+4.1
YAK				pmax	pmax		
	comp=Z,78nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				pmax	pmax		
	comp=Z,96nm,1.5s						
YAK				pmax	pmax		
	comp=N,37nm,1.4s						
YAK				pmax	pmax		
	comp=E,34nm,1.5s						
YAK				smax	smax		
	comp=N,28nm,1.8s						
YAK				smax	smax		
	comp=E,35nm,2.0s						
YAK	Yakutsk	21.38	335		P	06 01 20.2	-2.7
XLT	XiLinHaoTe	23.28	282	⇓*i*P	P	06 01 44.7	+1.3
XLT				pP	pwP	06 01 55.1	+1.2
XLT				sP	sP	06 01 58.5	+6.6
XLT				S	S	06 05 51.6	-2.7
XLT				pmax	pmax		
	comp=E,41nm,0.8s						
XLT				pmax	pmax		
	comp=E,220nm,5.2s						
XLT				LR	LR		
	comp=E,990nm,15.8s						
XLT				LR	LR		
	comp=E,1µm,15.6s						
BJI	Beijing	24.23	272	P	P	06 01 52.8	+0.5
BJI				pmax	pmax		
	comp=E,34nm,1.0s						
BJI				LR	LR		
	comp=E,450nm,15.9s						
BJI				LR	LR		
	comp=E,480nm,20.1s						
BJI				LR	LR		
	comp=E,760nm,18.1s						
BJT	Baijiatuau	24.24	272	P	P	06 01 52.7	+0.2
BJT				pmax	pmax		
	comp=Z,33nm,1.0s						
BJT	Baijiatuau	24.24	272	P	P	06 01 52.7	+0.2
BJT				IAmb	IAmb	06 01 55.3	
	comp=Z,33nm,1.0s						
BOD	Bodaibo	25.58	315	*e*P	P	06 02 01.2	-3.3
BOD				pmax	pmax		
	comp=Z,11nm,1.2s						
NJ2	Nanjing	25.98	253	⇑P	P	06 02 13.0	+4.7
NJ2				pmax	pmax		
	comp=Z,31nm,0.9s						
NJ2				LR	LR		
	comp=Z,830nm,15.2s						
NJ2				LR	LR		
	comp=Z,870nm,17.1s						
NJ2				LR	LR		
	comp=Z,1µm,18.0s						
BILL	Bilibino	26.10	15	⇑*e*P	P	06 02 08.3	-0.8
BILL				*e*		06 02 44.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,736nm,15.0s						
BILL	Bilibino	26.10	15	*e*P	P	06 02 08.3	-0.8
HNS	HongShan	26.28	268	⇑P	P	06 02 12.3	+1.3
HNS				*e*S	S	06 06 42.3	+0.2
HNS				pmax	pmax		
	comp=Z,23nm,1.2s						
HNS				LR	LR		
	comp=Z,280nm,16.5s						
HNS				LR	LR		
	comp=Z,560nm,16.5s						
HNS				LR	LR		
	comp=Z,560nm,16.5s						
HHC	Hu-ho-hao-te	27.29	277	*e*P	P	06 02 21.9	+1.7
HHC				S	S	06 07 00.0	+1.7
HHC				sS	sS	06 07 14.4	+5.7
HHC				pmax	pmax		
	comp=Z,38nm,1.0s						
HHC				pmax	pmax		
	comp=Z,640nm,6.3s						
HHC				LR	LR		
	comp=Z,640nm,14.9s						
HHC				LR	LR		
	comp=Z,1µm,18.6s						
HHC				LR	LR		
	comp=Z,2µm,16.8s						
BTO	Baotou	28.48	277	*e*P	P	06 02 33.0	+2.1
BTO				S	S	06 07 19.6	+2.6
BTO				LR	LR		
	comp=Z,2µm,15.4s						
BTO				LR	LR		
	comp=Z,2µm,16.0s						
H11N2	WAKE ISLAND Hy	28.50	141	T	T	06 33 25.7	
	baz=332,slow=75,SNR=457						
H11N1	WAKE ISLAND Hy	28.52	141	T	T	06 33 26.8	
	baz=332,slow=75,SNR=395						
H11N3	WAKE ISLAND Hy	28.52	141	T	T	06 33 26.3	
	baz=332,slow=75,SNR=389						
ULN	Ulaanbaatar	28.89	293	*c i*P	P	06 02 35.1	+0.6
ULN				pmax	pmax		
	comp=Z,26nm,1.1s						
ULN	Ulaanbaatar	28.89	293	P	P	06 02 34.7	+0.2
ULN				IAmb	IAmb	06 02 36.9	
	comp=Z,27nm,1.1s						
ULN	Ulaanbaatar	28.89	293	*e*P	P	06 02 35.1	+0.6
SPIA	Saint Paul Isl	29.02	48	P	P	06 02 35.9	+0.7
	baz=260						
LYN	LuoYang	29.19	264	*e*P	P	06 02 42.3	+5.3
LYN				S	S	06 07 35.6	+7.6
LYN				LR	LR		
	comp=Z,330nm,14.9s						
LYN				LR	LR		
	comp=Z,300nm,15.4s						
LYN				LR	LR		
	comp=Z,510nm,14.0s						
SONM	Songino Array	29.34	293	P	P	06 02 39.2	+0.8
	comp=Z,12nm,1.0s,baz=82,slow=8.5,SNR=37						
SONM				LR	LR	06 15 36.8	
	comp=Z,1µm,18.8s,baz=80,slow=39						
	comp=Z,12nm,1.0s						
SONM	Songino Array	29.34	293	P	P	06 02 39.2	+0.8
SONM				pmax	pmax		
	comp=Z,17nm,1.2s						
SONM	Songino Array	29.34	293	P	P	06 02 39.1	+0.8
SONM				IAmb	IAmb	06 02 40.2	
	comp=Z,17nm,1.2s						
NIKH	Nikolski High	29.43	57	P	P	06 02 39.1	+0.1
	baz=269						
H11S1	WAKE ISLAND Hy	29.49	143	T	T	06 34 31.2	
	baz=333,slow=76,SNR=639						
H11S3	WAKE ISLAND Hy	29.49	143	T	T	06 34 29.1	
	baz=333,slow=76,SNR=602						
H11S2	WAKE ISLAND Hy	29.51	143	T	T	06 34 29.9	
	baz=333,slow=76,SNR=570						
TIXI	Tiksi	29.55	348	LR	LR	06 15 24.1	
	comp=Z,169nm,19.2s,baz=181,slow=38						
TIXI	Tiksi	29.55	348	*e*P	P	06 02 36.1	-3.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAK	Zakamensk	31.08	298	*e*P	P	06 02 53.9	+0.2
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
XAN	Xi'an	32.00	266	P	P	06 03 02.7	+0.8
XAN				pP	sP	06 03 10.3	-0.4
XAN				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN				LR	LR		
	comp=Z,230nm,14.3s						
XAN				LR	LR		
	comp=Z,360nm,15.7s						
XAN				LR	LR		
	comp=Z,510nm,16.7s						
MOY	Mondy	32.40	301	*e*P	P	06 03 05.8	+0.4
MOY				pmax	pmax		

	comp=Z,9.0nm,1.4s						
KNGR	Kungurtug, Tuv	34.70	300	eP	P	06 03 25.7	+0.3
LZH	Lanzhou	34.72	273	⇑P	P	06 03 27.4	+1.7
LZH				pP	sP	06 03 35.6	+1.1
LZH				sP	pwP	06 03 39.3	+2.7
LZH				pmax	pmax		
	comp=Z,69nm,1.5s						
LZH				LR	LR		
	comp=Z,590nm,12.5s						
LZH				LR	LR		
	comp=Z,550nm,13.6s						
LZH				LR	LR		
	comp=Z,790nm,12.5s						
GTA	Gaotai	36.22	280	⇓P	P	06 03 40.4	+1.8
GTA				pP	pwP	06 03 52.1	+2.6
GTA				sP	sP	06 03 56.4	+9.0
GTA				pmax	pmax		
	comp=Z,23nm,1.1s						
GTA				pmax	pmax		
	comp=Z,96nm,6.4s						
GTA				LR	LR		
	comp=Z,400nm,14.7s						
GTA				LR	LR		
	comp=Z,580nm,13.9s						
GTA				LR	LR		
	comp=Z,850nm,13.9s						
N18K	Kilae Creek	36.77	43	P	P	06 03 42.8	0.0
N18K				IAmb	IAmb	06 04 12.9	
	comp=Z,18nm,1.1s						
N18K	Kilae Creek	36.77	43	P	P	06 03 42.8	0.0
	baz=268						
TTA	Tatalina	36.83	39	P	P	06 03 44.0	+0.5
	baz=265						
P18K	Big Mountain,	37.09	45	P	P	06 03 46.3	+0.7
	baz=271						
O18K	Koktuh Hills	37.09	44	P	P	06 03 46.1	+0.5
	baz=270						
N19K	Bonanza Creek	37.46	43	P	P	06 03 49.4	+0.6
	baz=269						
M19K	Big River Lodg	37.52	41	P	P	06 03 49.7	+0.4
	baz=268						
J20K	Nowinta River	37.77	37	P	P	06 03 51.8	+0.5
J20K	Nowinta River	37.77	37	P	P	06 03 51.7	+0.5
	baz=265						
L20K	Farewell, AK	37.78	40	P	P	06 03 51.8	+0.3
	baz=268						
SII	Sitkinak Islan	37.79	50	P	P	06 03 52.1	+0.5
	baz=275						
IMAR	Indian Mountai	38.11	34	P	P	06 03 54.5	+0.4
O20K	Slope Mountain	38.39	44	P	P	06 03 57.1	+0.5
	baz=272						
H21K	Melozitna Rive	38.46	35	P	P	06 03 57.7	+0.6
	baz=265,SNR=12						
KDAK	Kodiak Island	38.55	47	P	P	06 03 57.5	-0.4
	comp=Z,7.4nm,0.9s,baz=342,slow=4.6,SNR=6.3						
	comp=Z,7.4nm,0.9s						
KDAK	Kodiak Island	38.55	47	eP	P	06 03 56.7	-1.2
KDAK	Kodiak Island	38.55	47	IAmb	IAmb	06 04 09.8	
	comp=Z,20nm,0.8s						
CHUM	Lake Minchumin	38.55	38	P	P	06 03 59.1	+1.2
	baz=267						
SPCR	Spurr Chakacha	38.56	42	P	P	06 03 59.1	+0.9
	baz=271						
PPLA	Purkeypile	38.58	39	P	P	06 03 59.3	+1.0
	baz=269						
CAST	Castle Rocks	38.64	38	P	P	06 03 59.5	+0.9
	baz=268						
I21K	Tanana	38.77	36	P	P	06 04 00.4	+0.8
	baz=266						
BPAW	Bear Paw Mtn.	39.14	37	P	P	06 04 03.6	+0.7
BPAW	Bear Paw Mtn.	39.14	37	P	P	06 04 03.6	+0.7
	baz=268						
KTH	Kantishna Hill	39.16	38	IAmb	IAmb	06 04 29.8	
	comp=Z,20nm,1.2s						
TRF	Thorofare Moun	39.45	38	P	P	06 04 06.6	+1.0
TRF					sP	06 04 14.3	-0.2
FIS	Fire Island	39.53	42		pP	06 04 15.2	+2.9
COLD	Coldfoot	39.64	32	P	P	06 04 07.7	+0.8
	baz=265,SNR=11						
NRIK	Noril'sk	39.70	331	LR	LR	06 21 51.9	
	comp=Z,451nm,18.1s,baz=95,slow=38						
NRIK	Noril'sk	39.70	331	iP	P	06 04 05.6	-1.8
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NRIK				MLR	MLR		
	comp=Z,444nm,17.0s						
RC01	Rabbit Creek A	39.77	42	P	P	06 04 08.5	+0.4
RC01	Rabbit Creek A	39.77	42	P	P	06 04 09.1	+1.0
	baz=273						
H23K	Yukon River	39.82	35	P	P	06 04 09.4	+0.9
	baz=268,SNR=11						
I23K	Minto, Yukon-K	39.87	36	P	P	06 04 09.6	+0.8
	baz=269						
SEW	Seward	39.97	44	P	P	06 04 10.4	+0.7
	baz=274						
TOLK	Toolik Lake Re	40.01	30	P	P	06 04 09.7	-0.3
TOLK				IAmb	IAmb	06 04 26.4	
	comp=Z,17nm,1.1s						
TOLK	Toolik Lake Re	40.01	30	P	P	06 04 10.7	+0.7
	baz=264,SNR=11						
PMR	Palmer	40.03	41	P	P	06 04 11.2	+1.0
	baz=273						
RND	Reindeer	40.09	38	P	P	06 04 10.6	-0.2
RND				pmax	pmax		
	comp=Z,14nm,1.4s						
RND	Reindeer	40.09	38	P	P	06 04 10.6	-0.2
GHO	Glory Hole Cre	40.12	41	P	P	06 04 14.2	+3.2
GHO				pwP	pwP	06 04 21.8	-0.1
GHO				IAmb	IAmb	06 04 27.6	
	comp=Z,16nm,1.1s						
WAT1	Susitna Watana	40.24	39	P	P	06 04 12.6	+0.6
	baz=272						
KNK	Knik Glacier	40.36	41	P	P	06 04 13.4	+0.4
KNK				IAmb	IAmb	06 04 25.4	
	comp=Z,16nm,1.0s						
KNK	Knik Glacier	40.36	41	P	P	06 04 13.3	+0.2
	baz=274						
SML	Sawmill	40.40	41	P	P	06 04 14.1	+0.7
SML				IAmb	IAmb	06 04 26.2	
	comp=Z,16nm,0.8s						
SML	Sawmill	40.40	41	P	P	06 04 13.9	+0.5
	baz=273						
H24K	Noodor Dome	40.50	35	P	P	06 04 15.8	+1.6
H24K	Noodor Dome	40.50	35	P	P	06 04 15.0	+0.8
	baz=269						
TCOL	CIGO, UAF Yank	40.51	36	P	P	06 04 15.0	+0.9
	baz=270						
COLA	College	40.51	36	iP	P	06 04 12.2	-1.9
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	College	40.51	36	P	P	06 04 15.0	+0.9
	baz=270						
WAT6	Susitna Watana	40.63	40	P	P	06 04 15.6	+0.2
	baz=273						
M23K	Glacier View	40.69	41	P	P	06 04 15.7	0.0
	baz=274						
POKR	Poker Plat Res	40.69	36	IAmb	IAmb	06 04 30.7	
	comp=Z,13nm,0.9s						
POKR	Poker Plat Res	40.69	36	P	P	06 04 16.2	+0.6
	baz=270						
DHY	Denali Highway	40.77	39	P	P	06 04 16.6	0.0
	baz=273						
HDA	Harding Lake	40.91	37	P	P	06 04 17.5	0.0
	baz=272,SNR=5.4						
ILAR	Eielson Array	40.92	36	P	P	06 04 17.4	-0.3
	comp=Z,1.8nm,0.8s,baz=266,slow=7.4,SNR=16						
ILAR				LR	LR	06 22 05.4	
	comp=Z,134nm,20.0s,baz=294,slow=38						
	comp=Z,1.8nm,0.8s						
GLI	Glacier Island	41.07	42	P	P	06 04 18.7	-0.1
	baz=276						
GOMU	GeErMu	41.17	278	P	P	06 04 21.5	+1.0
GOMU				pP	pP	06 04 25.0	-1.8
GOMU				sP	sP	06 04 28.6	-0.7
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,100nm,5.2s						
GOMU				LR	LR		
	comp=Z,410nm,17.8s						
GOMU				LR	LR		
	comp=Z,650nm,17.3s						
GOMU				LR	LR		
	comp=Z,740nm,17.3s						
PZH	PanZhiHua	41.31	261	P	P	06 04 22.2	+0.8
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
M24K	Tolsona, Glenn	41.39	40	P	P	06 04 21.9	+0.3
	baz=275						
KMI	Kunming	41.44	259	⇑P	P	06 04 23.9	+1.3
KMI				pP	pwP	06 04 36.1	+2.6
KMI				S	S	06 10 34.8	-1.7
KMI				pmax	pmax		
	comp=Z,16nm,1.3s						
KMI				LR	LR		
	comp=Z,220nm,15.1s						
KMI				LR	LR		
	comp=Z,440nm,15.6s						
KMI				LR	LR		
	comp=Z,530nm,16.1s						
K24K	Donnelly Dome	41.45	38	P	P	06 04 22.1	+0.1
	baz=273						
KLU	Klutina	41.57	41	IAmb	IAmb	06 04 52.2	
	comp=Z,11nm,0.8s						
KLU	Klutina	41.57	41	P	P	06 04 23.4	+0.4
	baz=276						
J25K	Salcha River,	41.58	36	P	P	06 04 22.8	-0.3
	baz=273						
PAX	Paxson	41.65	39	P	P	06 04 23.7	0.0
	baz=274						
ZAA0	Zalesovo Array	41.75	307	P	P	06 04 24.6	+0.2
ZALV	Zalesovo Beam	41.75	307	P	P	06 04 23.8	-0.7
	comp=Z,1.4nm,0.3s,baz=56,slow=5.8,SNR=9.0						
ZALV				PcP	PcP	06 06 21.1	+0.7
	comp=Z,3.8nm,0.7s,baz=64,slow=3.4,SNR=7.9						
ZALV				LR	LR	06 22 50.1	
	comp=Z,344nm,18.2s,baz=64,slow=38						
	comp=Z,1.4nm,0.3s						
EYAK	Cordova Ski Ar	41.76	43	P	P	06 04 25.3	+0.8
	baz=277						
HARP	HAARP	41.84	40	P	P	06 04 26.1	+0.9
	baz=275						
RIDG	Independent Ri	41.87	38	P	P	06 04 25.3	-0.1
	baz=274						
N25K	Chitina, Valde	42.19	41	P	P	06 04 28.1	0.0
	baz=277						
SCRK	Sand Creek	42.23	37	P	P	06 04 28.4	0.0
	baz=275						
BMRM	Bremner River	42.27	42	P	P	06 04 29.9	+1.2
BMRM				IAmb	IAmb	06 04 47.0	
	comp=Z,18nm,1.2s						
BMRM	Bremner River	42.27	42	P	P	06 04 28.0	-0.7
	baz=278						
J26L	Joseph Creek	42.37	37	P	P	06 04 29.4	-0.2
	baz=274						
L26K	Log Cabin Wild	42.60	39	P	P	06 04 32.0	+0.6
	baz=276,SNR=6.7						
M26K	Nabesna, AK	42.84	40	P	P	06 04 34.2	+0.8
	baz=277,SNR=11						
WMQ	Urumqi	42.97	292	⇓P	P	06 04 36.4	+1.7
WMQ				S	S	06 10 56.9	-1.5
WMQ				pmax	pmax		
	comp=Z,60nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.3s						
WMQ				LR	LR		
	comp=Z,570nm,17.1s						
WMQ				LR	LR		
	comp=Z,160nm,20.3s						
L27K	Beaver Creek,	43.29	39	P	P	06 04 37.4	+0.5
	baz=278,SNR=9.4						
M27K	Edge Creek, AK	43.36	40	IAmb	IAmb	06 05 02.2	
	comp=Z,15nm,1.1s						
M27K	Edge Creek, AK	43.36	40	P	P	06 04 38.4	+0.7
	baz=278,SNR=5.2						
EGAK	Eagle	43.37	36	P	P	06 04 38.1	+0.6
	baz=276,SNR=8.1						
BVCY	Beaver Creek	43.82	39	P	P	06 04 41.3	0.0
	baz=279						
YUK3	Moose Creek	44.11	40	P	P	06 04 44.2	+0.3
	baz=280						
DAWY	Dawson	44.23	37	P	P	06 04 44.7	+0.2
	baz=278						
I29M	Ogilvie Camp,	44.50	35	IAmb	IAmb	06 05 01.9	
	comp=Z,10nm,0.8s						
I29M	Ogilvie Camp,	44.50	35	P	P	06 04 47.5	+0.9
	baz=278,SNR=12						
EPYK	Eagle Plains	45.00	33	IAmb	IAmb	06 05 06.0	
	comp=Z,17nm,0.9s						
EPYK	Eagle Plains	45.00	33	P	P	06 04 51.8	+1.2
	baz=278,SNR=11						
YUK4	Talbot Arm	45.05	41	P	P	06 04 51.3	+0.1
	baz=282						
YUK6	Outpost Mounta	45.27	41	P	P	06 04 52.6	-0.5
	baz=282						
MK31	Makanchi Array	45.42	298	iP	P	06 04 54.4	+0.2
MK31				pmax	pmax		
	comp=Z,31nm,0.8s						
MK31	Makanchi Array	45.42	298	P	P	06 04 54.9	+0.7
MKAR	Makanchi Array	45.42	298	P	P	06 04 54.9	+0.7
	comp=Z,22nm,0.9s,baz=74,slow=8.0,SNR=61						
MKAR				LR	LR	06 25 15.5	
	comp=Z,739nm,19.3s,baz=64,slow=38						
	comp=Z,22nm,0.9s						
SEM	Semipalatinsk	45.43	303	eP	P	06 04 53.9	-0.5
SEM				pmax	pmax		
	comp=Z,18nm,1.0s						
SEM	Semipalatinsk	45.43	303	eP	P	06 04 54.0	-0.5
	comp=Z,18nm,1.0s,baz=304						
MAKZ	Makanchi	45.61	298	P	P	06 04 56.2	+0.5
MAKZ				pmax	pmax		
	comp=Z,29nm,1.0s						
MAKZ	Makanchi	45.61	298	P	P	06 04 56.2	+0.5
M30M	Minto, Yukon	45.65	39	P	P	06 04 56.4	+0.6
	baz=282						
HYT	Haines Junctio	45.70	41	IAmb	IAmb	06 05 10.7	
	comp=Z,16nm,0.8s						
HYT	Haines Junctio	45.70	41	P	P	06 04 57.4	+1.1
	baz=283,SNR=9.6						
INK	Inuvik	45.92	30	P	P	06 04 58.8	+1.0
	comp=Z,6.8nm,0.4s,baz=269,slow=9.4,SNR=27						
	comp=Z,6.8nm,0.4s						
INK	Inuvik	45.92	30	P	P	06 04 58.5	+0.8
	baz=279,SNR=23						
KURK	Kurchatov	46.31	304	iP	P	06 05 01.1	0.0
KURK				pmax	pmax		
	comp=Z,31nm,1.2s						
KURK	Kurchatov	46.31	304	P	P	06 05 01.0	-0.1
KURK	Kurchatov	46.31	304	eP	P	06 05 01.1	0.0
N31M	Braeburn, Yuko	46.36	40	IAmb	IAmb	06 05 19.4	
	comp=Z,12nm,1.1s						
N31M	Braeburn, Yuko	46.36	40	P	P	06 05 01.9	+0.5
	baz=284						
KURBB	Kurchatov Arra	46.39	304	P	P	06 05 01.1	-0.6
M31M	Drury Creek, Y	46.82	39	IAmb	IAmb	06 05 27.4	
	comp=Z,7.4nm,1.0s						
M31M	Drury Creek, Y	46.82	39	P	P	06 05 05.6	+0.6
	baz=284						
WHY	Whitehorse	46.99	41	P	P	06 05 07.5	+1.0
	baz=285						
A36M	Sachs Harbour	47.97	25	IAmb	IAmb	06 05 28.3	
	comp=Z,9.7nm,0.8s						
A36M	Sachs Harbour	47.97	25	P	P	06 05 14.3	+0.6
	baz=283						
CHTO	Chiang Mai	48.20	255	P	P	06 05 16.0	-0.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.1s						
CHTO	Chiang Mai	48.20	255	P	P	06 05 16.0	-0.2
CHTO				IAmb	IAmb	06 05 18.9	
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	48.43	255	P	P	06 05 19.9	+1.9
	comp=Z,2.6nm,0.6s,baz=41,slow=7.3,SNR=16						
CMAR				LR	LR	06 26 20.7	
	comp=Z,207nm,20.6s,baz=50,slow=37						
	comp=Z,2.6nm,0.6s						
CMAR	Chiang Mai Arr	48.43	255	iP	P	06 05 20.2	+2.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TDK	Taldyqorghan	48.61	297	eP	P	06 05 20.4	+1.3
TDK	Taldyqorghan	48.61	297	eP	P	06 05 20.5	+1.3
	baz=297						
PDGK	Podgornoye	48.62	295	P	P	06 05 18.6	-0.8
UZB	Uzynbulak	49.01	295c	iP	P	06 05 23.0	+0.7
UZB				pmax	pmax		
	comp=Z,13nm,1.0s						
UZB	Uzynbulak	49.01	295	⇑iP	P	06 05 23.0	+0.7
	comp=Z,13nm,1.0s,baz=295						
C36M	Paulatuk	49.03	28	P	P	06 05 22.5	+0.6
	baz=286,SNR=16						
KPKS	Kokpek	49.09	295c	iP	P	06 05 23.9	+1.0
KPKS				pmax	pmax		
	comp=Z,24nm,1.1s						
KPKS	Kokpek	49.09	295	⇑iP	P	06 05 23.9	+1.0
	comp=Z,24nm,1.1s,baz=295						
CHKK	Chushkaly	50.03	296	eP	P	06 05 30.5	+0.6
CHKK	Chushkaly	50.03	296	eP	P	06 05 30.6	+0.6
	baz=296						
DLBC	Dease Lake	50.03	43	LR	LR	06 27 26.3	
	comp=Z,155nm,20.6s,baz=281,slow=37						
BRVK	Borovoye	50.27	310	iP	P	06 05 32.1	+0.5
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
BRVK	Borovoye	50.27	310	eP	P	06 05 32.1	+0.5
MDOK	Medeo	50.30	296	eP	P	06 05 32.7	+0.6
MDOK	Medeo	50.30	296	eP	P	06 05 32.8	+0.6
	baz=296						
KUU	Kurty	50.43	297c	iP	P	06 05 33.2	+0.2
KUU	Kurty	50.43	297	⇑iP	P	06 05 33.2	+0.2
	baz=297						
TARG	Taragay, Kyrgy	50.45	294	IAmb	IAmb	06 05 36.3	
	comp=Z,22nm,1.2s						
TAPN	Taplejung	50.95	272	eP	P	06 05 39.2	+1.7
OTUK	Ortayu	51.04	303	P	P	06 05 39.8	+2.3
TKM2	Tokmak 2	51.35	296	P	P	06 05 41.9	+1.7
	SNR=16						
TKM2	Tokmak 2	51.35	296	iP	P	06 05 39.8	-0.4
TKM2				pmax	pmax		
	comp=Z,36nm,1.0s						
BTLS	Baital	51.38	299c	iP	P	06 05 40.3	+0.2
BTLS				pmax	pmax		
	comp=Z,11nm,1.5s						
BTLS	Baital	51.38	299	⇑iP	P	06 05 40.4	+0.2
	comp=Z,11nm,1.5s,baz=299						
ODAN	Odare	51.47	272	eP	P	06 05 42.4	+1.1
SGDS	Sogindy	51.73	297c	iP	P	06 05 43.6	+0.8
SGDS				pmax	pmax		
	comp=Z,17nm,1.2s						
SGDS	Sogindy	51.73	297	⇑iP	P	06 05 43.7	+0.8
	comp=Z,17nm,1.2s,baz=297						
JIRN	Jiri	51.88	274	eP	P	06 05 45.9	+1.4
KBK	Karagaybulak	51.90	296	P	P	06 05 45.9	+1.6
	SNR=19						
USP	Ospenovka	51.90	297	P	P	06 05 45.3	+1.1
	SNR=24						
RAMN	Ramite	51.99	273	eP	P	06 05 46.2	+1.0
	comp=Z,20nm,0.3s						
AAK	Ala-Archa	52.20	296	P	P	06 05 47.9	+1.5
	SNR=9.4						
AAK	Ala-Archa	52.20	296	LR	LR	06 29 29.8	
	comp=Z,147nm,18.7s,baz=79,slow=38						
AAK	Ala-Archa	52.20	296	iP	P	06 05 47.1	+0.6
AAK				pmax	pmax		
	comp=Z,21nm,1.1s						
AAK	Ala-Archa	52.20	296	P	P	06 05 47.4	+0.9
AAK				IAmb	IAmb	06 05 48.6	
	comp=Z,20nm,1.1s						
AAK	Ala-Archa	52.20	296	eP	P	06 05 47.1	+0.6
KKN	Kakani	52.46	274	eP	P	06 05 49.3	+0.7
PKI	Pulchoki	52.49	274	eP	P	06 05 49.8	+0.8
PKIN	Phulchoki	52.50	274	eP	P	06 05 49.7	+0.7
EKS2	Erkin-Say	52.66	297	P	P	06 05 50.8	+0.9
	SNR=12						
KSH	Kashi	52.73	292	P	P	06 05 56.0	+5.6
KSH				pP	pwP	06 06 03.1	+1.6
KSH				sP	sP	06 06 07.7	+8.3
KSH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KSH				LR	LR		
	comp=Z,660nm,14.6s						
KSH				LR	LR		
	comp=Z,610nm,18.1s						
KSH				LR	LR		
	comp=Z,740nm,18.3s						
GKN	Gorkha	52.80	275	eP	P	06 05 52.2	+1.1
PMG	Port Moresby	52.92	182	LR	LR	06 28 13.7	
	comp=Z,35nm,19.0s,baz=290,slow=36						
AML	Almayashu	52.97	296	P	P	06 05 54.3	+1.9
	SNR=11						
DANN	Dangsing	53.23	276	eP	P	06 05 55.6	+1.2
	comp=Z,103nm,0.8s						
BBB	Bella Bella	53.55	49	LR	LR	06 32 26.4	
	comp=Z,47nm,18.0s,baz=318,slow=40						
KOLN	Koldanda	53.68	275	eP	P	06 05 58.5	+0.9
SVE	Sverdlovsk	53.78	317	eP	P	06 05 57.6	-0.1
SVE				pmax	pmax		
	comp=Z,26nm,1.1s						
SVE				MLR	MLR		
	comp=Z,697nm,17.0s						
SVE	Sverdlovsk	53.78	317	eP	P	06 05 57.6	-0.1
PYUN	Piuthan	53.93	276	eP	P	06 06 00.3	+0.8
	comp=Z,56nm,0.9s						
DZA	Taraz	54.12	298	eP	P	06 06 00.6	+0.2
DZA				pmax	pmax		
	comp=Z,14nm,0.9s						
DZA	Taraz	54.12	298	eP	P	06 06 00.7	+0.2
	comp=Z,14nm,0.9s,baz=298						
KK31	Karatay Array	54.54	298	iP	P	06 06 03.9	+0.4
RES	Resolute Bay	54.69	17	P	P	06 06 03.4	-0.6
	comp=Z,13nm,1.0s,baz=308,slow=6.8,SNR=18						
RES				LR	LR	06 31 40.0	
	comp=Z,88nm,20.0s,baz=277,slow=39						
	comp=Z,13nm,1.0s						
RES	Resolute Bay	54.69	17	IAmb	IAmb	06 06 05.0	
	comp=Z,15nm,1.1s						
KBS	Kingsbay	54.93	351	eP	P	06 06 06.0	+0.3
SPA0	Spitsbergen Ar	54.95	349	eP	P	06 06 06.3	+0.3
ARU	Arti	54.98	317	LR	LR	06 31 51.9	
	comp=Z,266nm,18.8s,baz=12,slow=39						
ARU	Arti	54.98	317c	iP	P	06 06 05.5	-0.9
ARU						06 07 05.3	
ARU						06 08 05.0	
ARU				S	S	06 13 47.4	+0.7
ARU				SS	SS	06 17 26.3	-3.5
ARU				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU				MLR	MLR		
	comp=Z,445nm,14.0s						
ARU	Arti	54.98	317	P	P	06 06 05.7	-0.7
YKA	Yellowknife Ar	55.27	34	P	P	06 06 08.6	+0.2
	comp=Z,1.7nm,0.8s,baz=296,slow=5.9,SNR=17						
YKA				LR	LR	06 34 28.5	
	comp=Z,95nm,18.2s,baz=322,slow=41						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	55.27	34	pwP	pwP	06 06 20.7	+1.1
BTK	Batken	55.88	295	IAmb	IAmb	06 06 15.2	
	comp=Z,25nm,1.5s						
NIL	Nilore	57.69	287	P	P	06 06 27.3	+1.2
NIL				pmax	pmax		
	comp=Z,39nm,0.9s						
NIL	Nilore	57.69	287	P	P	06 06 27.3	+1.2
AB31	Akbulak array	57.79	309	iP	P	06 06 27.2	+0.6
KIRV	Kirov	58.17	322	LR	LR	06 33 46.4	
	comp=Z,394nm,18.5s,baz=52,slow=38						
AKTO	Aktyubinsk	58.24	311	LR	LR	06 33 30.2	
	comp=Z,382nm,18.1s,baz=46,slow=38						
AKTO	Aktyubinsk	58.24	311	P	P	06 06 28.8	-0.9
DAG	Danmarks Havn	59.47	357	iP	P	06 06 36.0	-1.8
DAG				IAmb	IAmb	06 06 37.9	
	comp=Z,2.5nm,0.8s						
ARA0	ARCESS Array S	59.57	340	eP	P	06 06 38.9	+0.3
ARCES	ARCESS Array B	59.57	340	P	P	06 06 38.0	-0.6
	comp=Z,0.7nm,0.3s,baz=43,slow=7.8,SNR=21						
ARCES				LR	LR	06 36 09.8	
	comp=Z,247nm,19.4s,baz=32,slow=40						
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	59.57	340	P	P	06 06 38.0	-0.6
PSI	Prapat	59.79	242	LR	LR	06 36 13.4	
	comp=Z,102nm,18.7s,baz=30,slow=40						
KBL	Kabul	60.07	291	P	P	06 06 43.0	+0.1
KBL				pmax	pmax		
	comp=Z,25nm,1.0s						
KBL	Kabul	60.07	291	P	P	06 06 43.0	+0.1
KTK1	Kautokeino	60.51	340	eP	P	06 06 45.2	+0.2
KLMR	Klimovskoe	60.93	328	eP	P	06 06 45.9	-2.1
KLMR				pmax	pmax		
	comp=Z,21nm,1.2s						
KLMR	Klimovskoe	60.93	328	eP	P	06 06 45.9	-2.1
KLMR				AMP		06 06 48.9	
	comp=Z,21nm,1.2s						
K02D	Willamette Mer	60.96	57	P	P	06 06 48.5	-0.2
	baz=304						
TRO	Tromso	61.05	342	eP	P	06 06 49.1	+0.5
L02F	Cave Junction	61.34	58	P	P	06 06 50.9	-0.3
	baz=304						
I05D	Terrebonne, OR	61.44	55	P	P	06 06 52.1	+0.2
	baz=304						
NEW	Newport	61.62	49	IAmb	IAmb	06 07 16.4	
	comp=Z,7.0nm,1.1s						

NEW	**Newport**	**61.62**	**49**	P	**P**	**06 06 53.2**	**+0.3**
	baz=305						
DBG	**Daneborg**	**61.98**	**357**	*i* P	**P**	**06 06 54.1**	**-0.8**
PINE	**Pine Mountain**	**61.98**	**55**	IAmb	IAmb	06 07 09.2	
	comp=Z,13nm,1.1s						
L04D	**Klamath Falls**	**62.06**	**57**	P	**P**	**06 06 56.5**	**+0.3**
	baz=305						
YBH	**Yreka Blue Hor**	**62.09**	**58**	LR	LR	06 29 56.6	
	comp=Z,55nm,21.4s,baz=310,slow=32						
J05D	**Fort Rock, OR**	**62.10**	**56**	P	**P**	**06 06 56.7**	**+0.3**
	baz=305						
BELG	**Belogornoye**	**62.54**	**317**	LR	LR	06 37 15.3	
	comp=Z,198nm,19.1s,baz=357,slow=39						
K05A	**Summer Lake**	**62.63**	**56**	P	**P**	**06 07 01.3**	**+1.3**
STEI	**Steigen**	**63.22**	**342**	*e*P	**P**	**06 07 03.1**	**-0.1**
LOF	**Lofoten**	**63.43**	**343**	*e*P	**P**	**06 07 03.3**	**-1.4**
CTA	**Charters Tower**	**63.56**	**182**	LR	LR	06 35 06.3	
	comp=Z,40nm,19.1s,baz=66,slow=36						
FAUS	**Fauske**	**63.65**	**342**	*e*P	**P**	**06 07 06.2**	**+0.1**
J08A	**Circle Bar Ran**	**63.70**	**54**	IAmb	IAmb	06 07 20.3	
	comp=Z,11nm,1.2s						
PLID	**Pearl Lake**	**64.10**	**52**	P	**P**	**06 07 10.4**	**+0.7**
PLID				IAmb	IAmb	06 07 33.2	
	comp=Z,11nm,1.2s						
WVOR	**Wild Horse Val**	**64.15**	**55**	IAmb	IAmb	06 07 33.3	
	comp=Z,6.5nm,1.1s						
MSO	**Missoula**	**64.20**	**49**	IAmb	IAmb	06 07 34.0	
	comp=Z,11nm,1.1s						
MSO	**Missoula**	**64.20**	**49**	P	**P**	**06 07 10.3**	**0.0**
	baz=307						
WRA	**Warramunga Arr**	**64.69**	**195**	P	**P**	**06 07 14.1**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=16,slow=7.0,SNR=10.0						
	comp=Z,1.4nm,0.7s						
MOS	**Moscow**	**65.00**	**324**	*e*P	**P**	**06 07 14.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**65.01**	**204**	LR	LR	06 33 05.8	
	comp=Z,18nm,21.8s,baz=176,slow=34						
PUL	**Pulkovo**	**65.06**	**331**	*i* P	**P**	**06 07 14.5**	**-1.0**
PUL				pmax	pmax		
	comp=Z,30nm,0.8s						
PUL	**Pulkovo**	**65.06**	**331**	*i* P	**P**	**06 07 14.5**	**-1.0**
GEYT	**Alibeck**	**65.26**	**299**	P	**P**	**06 07 17.8**	**+0.6**
	comp=Z,6.9nm,0.7s,baz=48,slow=8.8,SNR=6.1						
GEYT				LR	LR	06 37 59.3	
	comp=Z,288nm,19.3s,baz=70,slow=38						
	comp=Z,6.9nm,0.7s						
GEYT	**Alibeck**	**65.26**	**299**	IAmb	IAmb	06 07 31.1	
	comp=Z,8.9nm,0.8s						
FIA1	**FINESS Array S**	**65.29**	**333**	P	**P**	**06 07 16.7**	**-0.3**
FINES	**FINESS Array B**	**65.29**	**333**	P	**P**	**06 07 16.6**	**-0.4**
	comp=Z,11nm,0.8s,baz=46,slow=8.2,SNR=36						
FINES				LR	LR	06 39 49.7	
	comp=Z,239nm,18.5s,baz=33,slow=40						
	comp=Z,11nm,0.8s						
FINES	**FINESS Array B**	**65.29**	**333**	*i* P	**P**	**06 07 16.3**	**-0.7**
FINES				pmax	pmax		
	comp=Z,11nm,0.8s						
FCC	**Fort Churchill**	**65.54**	**31**	pwP	pwP	06 07 31.3	+1.3
EGMT	**Eagleton**	**65.71**	**46**	IAmb	IAmb	06 07 27.6	
	comp=Z,14nm,1.2s						
EGMT	**Eagleton**	**65.71**	**46**	P	**P**	**06 07 20.2**	**+0.2**
	baz=309						
YERR	**Yerington**	**65.85**	**59**	IAmb	IAmb	06 07 34.4	
	comp=Z,16nm,1.1s						
OBN	**Obninsk**	**65.86**	**324**	*ce*P	**P**	**06 07 20.7**	**0.0**
OBN				*i*		06 07 50.8	
OBN				*e*		06 09 47.8	
OBN				*e*S	**S**	**06 16 02.5**	**-3.4**
OBN				pmax	pmax		
	comp=Z,39nm,1.1s						
OBN				MLR	MLR		
	comp=Z,410nm,16.0s						
OBN	**Obninsk**	**65.86**	**324**	*e*P	**P**	**06 07 20.7**	**0.0**
HLID	**Hailey**	**65.93**	**52**	P	**P**	**06 07 21.9**	**+0.2**
	baz=308						
VRH	**Novokhopyorsk**	**66.14**	**319**	*e*P	**P**	**06 07 22.3**	**-0.3**
VRH				pmax	pmax		
	comp=Z,40nm,0.7s						
BMN	**Battle Mountai**	**66.20**	**56**	IAmb	IAmb	06 07 30.9	
	comp=Z,6.4nm,0.9s						
BOZ	**Bozeman (W)**	**66.23**	**49**	IAmb	IAmb	06 07 39.8	
	comp=Z,9.8nm,1.2s						
BOZ	**Bozeman (W)**	**66.23**	**49**	P	**P**	**06 07 24.0**	**+0.5**
	baz=309						
KVN	**Kaiserville**	**66.52**	**58**	IAmb	IAmb	06 07 38.6	
	comp=Z,14nm,1.1s						
LPSR	**Galich'ya Gora**	**66.52**	**321**	*e*P	**P**	**06 07 25.4**	**+0.4**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
LHV	**Little Huntoon**	**66.76**	**59**	IAmb	IAmb	06 07 41.1	
	comp=Z,14nm,1.0s						
MEF	**Metsahovi**	**66.76**	**333**	*e*P	**P**	**06 07 26.4**	**0.0**
NVAR	**Mina Array Bea**	**66.77**	**59**	P	**P**	**06 07 28.2**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=299,slow=7.1,SNR=14						
	comp=Z,1.3nm,0.6s						
NSS	**Namsos**	**66.78**	**341**	*e*P	**P**	**06 07 26.7**	**+0.2**
RAF	**Rauma**	**66.97**	**335**	*e*P	**P**	**06 07 28.3**	**+0.6**
VORR	**Voronezh**	**67.01**	**320**	*e*P	**P**	**06 07 28.9**	**+0.7**
VORR				pmax	pmax		
	comp=Z,33nm,1.4s						
YHH	**Holmes Hill**	**67.16**	**49**	IAmb	IAmb	06 07 45.9	
	comp=Z,7.5nm,1.2s						
ELK	**Elko**	**67.20**	**55**	P	**P**	**06 07 30.6**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=280,slow=11,SNR=2.0						
	comp=Z,0.5nm,0.6s						
VSU	**Vasula**	**67.29**	**331**	*e*P	**P**	**06 07 30.4**	**+0.6**
ICESG	**Greenland Ices**	**67.31**	**3**	*i* P	**P**	**06 07 28.8**	**-1.4**
ICESG				IAmb	IAmb	06 07 32.2	
	comp=Z,16nm,0.9s						
VSR	**Storozhevoye**	**67.34**	**320**	*e*P	**P**	**06 07 30.1**	**-0.1**
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VORD	**Divnogorie**	**67.45**	**320**	*e*P	**P**	**06 07 31.3**	**+0.4**
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
DZM	**Mont Dzumac**	**67.56**	**162**	LR	LR	06 33 16.4	
	comp=Z,69nm,19.1s,baz=20,slow=33						
RLMT	**Red Lodge**	**67.81**	**48**	P	**P**	**06 07 34.2**	**+0.6**
	baz=310						
MOOW	**Moose Ponds**	**67.89**	**50**	IAmb	IAmb	06 07 58.1	
	comp=Z,6.3nm,1.1s						
TPAW	**Teton Pass**	**67.94**	**51**	IAmb	IAmb	06 07 59.1	
	comp=Z,9.4nm,1.0s						
PKM	**Mcpherson Peak**	**68.01**	**62**	P	**P**	**06 07 35.9**	**+0.8**
	baz=309						
SNOW	**Snow King Moun**	**68.06**	**50**	IAmb	IAmb	06 07 60.0	
	comp=Z,11nm,1.2s						
REDW	**Red Top Meadow**	**68.07**	**51**	IAmb	IAmb	06 07 59.9	
	comp=Z,12nm,1.1s						
MTSE	**Matsula**	**68.10**	**332**	*e*P	**P**	**06 07 35.4**	**+0.5**
AAL	**Aland**	**68.18**	**335**	*e*P	**P**	**06 07 35.1**	**-0.2**
DGMT	**Dagmar**	**68.25**	**43**	P	**P**	**06 07 36.7**	**+0.6**
	baz=312						
ISA	**Isabella, Lake**	**68.39**	**61**	P	**P**	**06 07 37.8**	**+0.6**
	baz=309						
ASAR	**Alice Springs**	**68.41**	**194**	P	**P**	**06 07 38.0**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=12,slow=6.3,SNR=8.0						
ASAR				LR	LR	06 36 16.6	
	comp=Z,25nm,20.8s,baz=125,slow=35						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**68.41**	**194**	P	**P**	**06 07 38.0**	**+0.8**
R11A	**Troy Canyon, C**	**68.49**	**57**	IAmb	IAmb	06 07 50.2	
	comp=Z,6.4nm,1.1s						
R11A	**Troy Canyon, C**	**68.49**	**57**	P	**P**	**06 07 38.6**	**+0.6**
	baz=309						
ARVC	**Arvin**	**68.49**	**62**	P	**P**	**06 07 38.5**	**+0.7**
	baz=309						
MPMC	**Manual Prospec**	**68.76**	**60**	P	**P**	**06 07 40.1**	**+0.4**
	baz=309						
S11A	**Rachel**	**68.84**	**58**	IAmb	IAmb	06 08 01.5	
	comp=Z,12nm,0.9s						
FURC	**Furnace Creek,**	**68.89**	**59**	P	**P**	**06 07 41.1**	**+0.9**
	baz=309						
FRB	**Frobisher Bay**	**68.91**	**17**	LR	LR	06 40 57.1	
	comp=Z,133nm,18.0s,baz=352,slow=39						
TPNV	**Topopah Spring**	**68.97**	**59**	IAmb	IAmb	06 07 48.7	
	comp=Z,8.1nm,1.1s						
TPNV	**Topopah Spring**	**68.97**	**59**	P	**P**	**06 07 41.1**	**+0.2**
	baz=309						
PALK	**Pallekele**	**68.97**	**260**	LR	LR	06 40 25.9	
	comp=Z,134nm,19.9s,baz=146,slow=38						
DUG	**Dugway, Tooele**	**68.98**	**54**	IAmb	IAmb	06 07 50.1	
	comp=Z,6.7nm,1.1s						
DUG	**Dugway, Tooele**	**68.98**	**54**	P	**P**	**06 07 42.2**	**+1.3**
	baz=310						
UPP	**Uppsala**	**69.15**	**336**	*e*P	**P**	**06 07 41.4**	**0.0**
BW06	**Boulder Array**	**69.18**	**50**	P	**P**	**06 07 41.8**	**-0.4**
	baz=311						
EDW2	**Edwards Air Fo**	**69.18**	**61**	P	**P**	**06 07 42.4**	**+0.2**
	baz=309						
PDAR	**Pinedale Array**	**69.18**	**50**	P	**P**	**06 07 42.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=304,slow=2.7,SNR=8.1						
	comp=Z,0.7nm,0.6s						
GWY	**Greenwater Val**	**69.19**	**60**	IAmb	IAmb	06 08 04.7	
	comp=Z,11nm,1.4s						
QSM	**Queen of Sheba**	**69.21**	**60**	IAmb	IAmb	06 07 54.7	
	comp=Z,9.2nm,0.9s						
SLIT	**Slitere, Latvi**	**69.46**	**332**	*e*P	**P**	**06 07 43.6**	**+0.3**
GOF	**Gofitskoye**	**69.53**	**313**	⇑*e*P	**P**	**06 07 45.5**	**+1.4**
GOF				pmax	pmax		
	comp=Z,47nm,0.7s						
NLU	**North Lily Min**	**69.56**	**54**	IAmb	IAmb	06 07 58.0	
	comp=Z,7.0nm,1.3s						
DOMB	**Dombas**	**69.60**	**341**	*e*P	**P**	**06 07 44.5**	**+0.3**
NC303	**NORSAR Array S**	**69.73**	**339**	IAmb	IAmb	06 07 46.1	
	comp=Z,12nm,1.1s						
MNK	**Minsk**	**69.83**	**328**	*i* P	**P**	**06 07 45.9**	**+0.2**
MNK				*i*		06 08 08.0	
MNK				*i*		06 10 21.4	
MNK				*i* PPP	PPP	06 12 04.6	
MNK				*i* S	**S**	**06 16 53.6**	**+0.3**
MNK				*i* SS	**SS**	**06 21 18.7**	**-2.4**
MNK				pmax	pmax		
	comp=N,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,27nm,0.7s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,278nm,15.0s						
MNK				MLR	MLR		
	comp=Z,311nm,15.0s						
MNK				MLR	MLR		
	comp=E,32nm,15.0s						
MNK	**Minsk**	**69.83**	**328**	*i* P	**P**	**06 07 45.9**	**+0.2**
	comp=E,2.0nm,0.7s						
MNK				*i* P	**P**	**06 07 45.9**	**+0.2**
	comp=N,6.0nm,0.7s						
MNK				*i* P	**P**	**06 07 45.9**	**+0.2**
	comp=Z,27nm,0.7s,baz=42						
MNK				*i* PcP	**PcP**	**06 08 08.0**	**-0.2**
MNK				*i* PP	**PP**	**06 10 21.4**	**+1.8**
MNK				*i* PPP	PPP	06 12 04.7	
MNK				*i* S	**S**	**06 16 53.6**	**+0.3**
MNK				*i* SS	**SS**	**06 21 18.7**	**-2.4**
MNK				*i* SSS	SSS	06 24 42.4	
MNK				*i* LQ	LQ	06 33 26.4	
MNK				*i* LR	LR	06 35 57.9	
MNK				*i* LRM	MLR	06 40 39.5	
	comp=N,278nm,15.5s						
MNK				*i* LRM	MLR	06 40 40.2	
	comp=Z,311nm,15.5s						
MNK				*i* LRM	MLR	06 41 04.2	
	comp=E,32nm,15.3s						
CIS	**Catalina Islan**	**69.85**	**63**	P	**P**	**06 07 45.8**	**-0.5**
	baz=310						
SHPR	**Sheep Range**	**69.92**	**58**	IAmb	IAmb	06 08 00.0	
	comp=Z,6.5nm,1.0s						
NB2	**NORSAR Subarra**	**69.93**	**339**	P	**P**	**06 07 45.8**	**-0.5**
	comp=Z,26nm,1.2s,baz=30,slow=6.2						
NB2	**NORSAR Subarra**	**69.93**	**339**	P	**P**	**06 07 45.8**	**-0.5**
	baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.93**	**339**	P	**P**	**06 07 46.1**	**-0.2**
	comp=Z,13nm,1.0s,baz=31,slow=6.1,SNR=28						
NOA				LR	LR	06 41 28.8	
	comp=Z,158nm,21.3s,baz=25,slow=39						
	comp=Z,13nm,1.0s						
NACGM	**Naroch**	**69.95**	**328**	⇓*e*P	**P**	**06 07 47.0**	**+0.6**
	baz=41						
HFS	**Hagfors**	**70.05**	**338**	LR	LR	06 43 24.0	
	comp=Z,115nm,18.7s,baz=32,slow=40						
NC602	**NORSAR Array S**	**70.11**	**339**	P	**P**	**06 07 46.4**	**-1.0**
NC602				pwP	**pwP**	**06 07 58.7**	**+0.1**
NC602	**NORSAR Array S**	**70.11**	**339**	*e*P	**P**	**06 07 47.2**	**-0.1**
NCK	**Nalchik**	**70.28**	**312**	*i* P	**P**	**06 07 48.2**	**-0.5**
NCK				pmax	pmax		
	comp=Z,25nm,0.4s						
CCUT	**Cedar City**	**70.35**	**57**	IAmb	IAmb	06 08 02.2	
	comp=Z,8.8nm,1.3s						
KVAR	**Kislovodsk Arr**	**70.45**	**312**	LR	LR	06 42 59.3	
	comp=Z,293nm,19.4s,baz=266,slow=40						
KIV	**Kislovodsk**	**70.46**	**312**	⇑P	**P**	**06 07 51.1**	**+1.2**
KIV	**Kislovodsk**	**70.46**	**312**	*e*P	**P**	**06 07 49.8**	**-0.1**
KIV				pmax	pmax		
	comp=Z,32nm,1.1s						
KIV				MLR	MLR		
	comp=Z,369nm,18.0s						
KIV	**Kislovodsk**	**70.46**	**312**	P	**P**	**06 07 51.8**	**+1.9**
KIV	**Kislovodsk**	**70.46**	**312**	*e*P	**P**	**06 07 49.8**	**-0.1**
KBZ	**Khabaz**	**70.50**	**312**	P	**P**	**06 07 51.4**	**+1.4**
	comp=Z,19nm,0.8s,baz=50,slow=3.8,SNR=46						
KBZ				LR	LR	06 43 36.8	
	comp=Z,402nm,18.2s,baz=31,slow=40						
	comp=Z,19nm,0.8s						
KBZ	**Khabaz**	**70.50**	**312**	*i* P	**P**	**06 07 50.3**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,26nm,0.9s						
KBZ	**Khabaz**	**70.50**	**312**	*e*P	**P**	**06 07 50.3**	**+0.3**
PABE	**Paberze**	**70.53**	**330**	P	**P**	**06 07 50.2**	**+0.3**
PABE	**Paberze**	**70.53**	**330**	*e*P	**P**	**06 07 50.5**	**+0.6**
VIKU	**Vikbolandet**	**70.54**	**335**	*e*P	**P**	**06 07 49.9**	**0.0**
ZEI	**Tsey**	**70.58**	**311**	*e*P	**P**	**06 07 50.4**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,15nm,0.9s						
ZEI	**Tsey**	**70.58**	**311**	*e*P	**P**	**06 07 50.4**	**-0.4**
SHA1	**Shidzhatmaz**	**70.62**	**312**	*i* P	**P**	**06 07 49.6**	**-1.5**
P17A	**Butcher Ranch,**	**70.66**	**54**	IAmb	IAmb	06 08 02.5	
	comp=Z,9.7nm,1.3s						
LCMT	**Little Creek M**	**70.77**	**57**	IAmb	IAmb	06 08 04.8	
	comp=Z,6.0nm,1.0s						
K22A	**Casper**	**70.93**	**49**	P	**P**	**06 07 52.8**	**-0.2**
	baz=312						
SKAR	**Skarslia**	**70.97**	**341**	*e*P	**P**	**06 07 53.5**	**+0.8**
BELC	**Belle Mtn. Jos**	**71.01**	**61**	P	**P**	**06 07 53.3**	**-0.3**
	baz=310						
SRU	**San Rafael Swe**	**71.02**	**54**	IAmb	IAmb	06 08 16.0	
	comp=Z,7.7nm,0.9s						
RSSD	**Black Hills**	**71.27**	**46**	P	**P**	**06 07 55.3**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RSSD	**Black Hills**	**71.27**	**46**	P	**P**	**06 07 55.3**	**+0.3**
RSSD	**Black Hills**	**71.27**	**46**	P	**P**	**06 07 55.2**	**+0.2**
	baz=313						
IRM	**Iron Mountain**	**71.45**	**60**	P	**P**	**06 07 56.2**	**+0.2**
	baz=311						
SUE	**Sulen**	**71.45**	**342**	*e*P	**P**	**06 07 56.0**	**+0.5**
MONP2	**Monument Peak**	**71.46**	**62**	P	**P**	**06 07 55.9**	**-0.4**
	baz=310						
KONO	**Kongsberg**	**71.54**	**339**	*e*P	**P**	**06 07 56.7**	**+0.7**
O20A	**White River Ci**	**71.66**	**52**	P	**P**	**06 07 57.0**	**-0.4**
	baz=312						
ASK	**Askoy**	**71.87**	**342**	*e*P	**P**	**06 07 58.6**	**+0.6**
GNI	**Garni**	**71.88**	**308**	LR	LR	06 43 36.6	
	comp=Z,150nm,18.1s,baz=39,slow=39						
BER	**Bergen**	**71.92**	**342**	*e*P	**P**	**06 07 58.9**	**+0.5**
SUW	**Suwalki**	**71.98**	**330**	*e*P	**P**	**06 07 59.0**	**+0.3**
ODD1	**Odda**	**72.04**	**341**	*e*P	**P**	**06 07 59.6**	**+0.5**
AKASG	**Malin Array Be**	**72.13**	**324**	P	**P**	**06 07 59.6**	**-0.1**
	comp=Z,25nm,0.9s,baz=40,slow=6.7,SNR=84						
AKASG				LR	LR	06 44 15.6	
	comp=Z,160nm,19.9s,baz=3.5,slow=40						
	comp=Z,25nm,0.9s						
AKASG	**Malin Array Be**	**72.13**	**324**	*i* P	**P**	**06 08 00.1**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SOC	**Sochi**	**72.28**	**314**	*e*P	**P**	**06 08 01.1**	**+0.3**
SOC				*e*		06 10 37.9	
SOC				*e*PPP	PPP	06 12 19.4	
SOC				*e*S	**S**	**06 17 24.4**	**+2.2**
SOC				*e*SS	**SS**	**06 21 58.1**	**-1.3**
SOC				pmax	pmax		
	comp=Z,12nm,0.9s						
SOC				MLR	MLR		
	comp=Z,287nm,17.0s						
AGMN	**Agassiz Nation**	**72.34**	**39**	P	**P**	**06 08 01.4**	**+0.3**
	baz=317						
N23A	**Red Feather La**	**72.44**	**50**	IAmb	IAmb	06 08 13.4	
	comp=Z,18nm,1.4s						
N23A	**Red Feather La**	**72.44**	**50**	P	**P**	**06 08 02.6**	**+0.5**
	baz=313						
KLNR	**Kaliningrad**	**72.57**	**331**	*i* P	**P**	**06 08 01.1**	**-1.2**
KLNR				pmax	pmax		
	comp=Z,59nm,1.2s						
BATM	**Batumi**	**72.59**	**311**	⇑P	**P**	**06 08 03.1**	**+0.4**
BATM	**Batumi**	**72.59**	**311**	⇑P	**P**	**06 08 03.1**	**+0.4**
PV13	**Radium Mtn., P**	**72.65**	**54**	IAmb	IAmb	06 08 19.1	
	comp=Z,7.0nm,0.9s						
WUAZ	**Wupatki**	**72.89**	**57**	P	**P**	**06 08 05.1**	**+0.3**
	baz=312						
KMY	**Karmoy**	**72.99**	**341**	*e*P	**P**	**06 08 05.6**	**+0.9**
DEL	**Delary**	**73.08**	**336**	*e*P	**P**	**06 08 04.4**	**-0.8**
SNART	**Snartemo**	**73.29**	**340**	*e*P	**P**	**06 08 06.7**	**+0.2**
ISCO	**Idaho Springs**	**73.37**	**51**	P	**P**	**06 08 08.0**	**+0.3**
	baz=313						
MVCO	**Mesa Verde**	**73.48**	**54**	P	**P**	**06 08 08.9**	**+0.6**
	baz=313						
GEVA	**Gevas**	**74.09**	**308**	IAmb	IAmb	06 08 27.2	
	comp=Z,13nm,1.0s						
S22A	**4UR Ranch, Cre**	**74.09**	**53**	P	**P**	**06 08 12.2**	**+0.2**
	baz=313						
WSAR	**Wadi Sarin**	**74.19**	**287**	LR	LR	06 46 26.4	
	comp=Z,78nm,18.3s,baz=42,slow=40						
Q24A	**Divide**	**74.21**	**51**	P	**P**	**06 08 12.5**	**-0.2**
	baz=314						
SORM	**Soroca**	**74.44**	**323**	⇓P	**P**	**06 08 14.1**	**+0.7**
SORM	**Soroca**	**74.44**	**323**	⇓P	**P**	**06 08 14.1**	**+0.7**
GURO	**Guroymak-BITLI**	**74.51**	**309**	IAmb	IAmb	06 08 29.8	
	comp=Z,16nm,0.9s						
OGNE	**Ogallala**	**74.54**	**48**	P	**P**	**06 08 14.6**	**+0.3**
	baz=315						
UOSS	**Minazif**	**74.74**	**290**	P	**P**	**06 08 16.3**	**+0.8**
UOSS				IAmb	IAmb	06 08 17.1	
	comp=Z,17nm,1.0s						
SDCO	**Great Sand Dun**	**74.85**	**52**	P	**P**	**06 08 16.5**	**+0.1**
	baz=314						
LVV	**L'vov**	**74.94**	**326**	*e*P	**P**	**06 08 16.8**	**+0.5**
ECSD	**EROS Data Cent**	**75.33**	**43**	P	**P**	**06 08 18.5**	**-0.2**
	baz=317						
STKA	**Stephens Creek**	**75.53**	**186**	LR	LR	06 39 49.0	
	comp=Z,51nm,22.0s,baz=22,slow=34						
KWP	**Kalwaria Pacla**	**75.62**	**327**	*e*P	**P**	**06 08 21.2**	**+0.9**
VASR	**Vaslui**	**75.83**	**322**	⇑P	**P**	**06 08 21.9**	**+0.4**
T25A	**Trinidad**	**75.90**	**52**	P	**P**	**06 08 22.3**	**-0.1**
	baz=314						
DIKM	**Dikmen**	**75.97**	**315**	⇑P	**P**	**06 08 22.4**	**0.0**
BUR08	**Bucovina Ar. S**	**76.17**	**324**	IAmb	IAmb	06 08 24.8	
	comp=Z,9.5nm,1.0s						
BURAR	**Bucovina Array**	**76.19**	**324**	⇑P	**P**	**06 08 24.2**	**+0.6**
BURAR	**Bucovina Array**	**76.19**	**324**	⇑P	**P**	**06 08 24.2**	**+0.6**
BURAR	**Bucovina Array**	**76.19**	**324**	IAmb	IAmb	06 08 25.5	
	comp=Z,8.4nm,0.9s						
ANMO	**Albuquerque**	**76.23**	**55**	P	**P**	**06 08 24.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=307,slow=5.1,SNR=1.4						
	comp=Z,0.6nm,0.6s						
ANMO	**Albuquerque**	**76.23**	**55**	*i* P	**P**	**06 08 23.0**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
OJC	**Ojcow**	**76.27**	**329**	*e*P	**P**	**06 08 24.3**	**+0.4**
KOLS	**Kolonicke sedl**	**76.35**	**327**	*e*P	**P**	**06 08 25.6**	**+1.2**
KOLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KOLS	**Kolonicke sedl**	**76.35**	**327**	*e*P	**P**	**06 08 25.6**	**+1.2**
TESR	**Tescani**	**76.43**	**323**	⇑P	**P**	**06 08 25.3**	**+0.4**
CRVS	**Cervenica-Dubn**	**76.69**	**327**	*e*P	**P**	**06 08 27.2**	**+0.8**
CRVS				pmax	pmax		
	comp=Z,87nm,2.4s						
CRVS	**Cervenica-Dubn**	**76.69**	**327**	*e*P	**P**	**06 08 27.2**	**+0.8**
JURR	**Jurilovca**	**76.77**	**320**	⇓P	**P**	**06 08 27.2**	**+0.4**
CFR	**Carcaliu**	**76.79**	**321**	⇑P	**P**	**06 08 27.2**	**+0.3**
CFR	**Carcaliu**	**76.79**	**321**	⇑P	**P**	**06 08 27.2**	**+0.3**
VRI	**Vrincioaia**	**76.89**	**322**	⇑P	**P**	**06 08 28.3**	**+0.8**
VRI	**Vrincioaia**	**76.89**	**322**	⇑P	**P**	**06 08 28.3**	**+0.8**
TPGR	**Topolog**	**76.91**	**321**	⇑P	**P**	**06 08 28.5**	**+0.9**
OZUR		**77.13**	**323**	⇑P	**P**	**06 08 29.5**	**+0.6**
COVR	**Voineasa-Covas**	**77.14**	**323**	⇓P	**P**	**06 08 29.2**	**+0.3**
OKC	**Ostrava-Krasne**	**77.19**	**330**	AMS	AMS	06 45 20.0	
	comp=Z,700nm,50.3s						
HARR	**Harsova**	**77.26**	**321**	⇓P	**P**	**06 08 30.1**	**+0.5**
HARR	**Harsova**	**77.26**	**321**	⇓P	**P**	**06 08 30.1**	**+0.5**
LANS	**Liptovska Anna**	**77.26**	**328**	*e*P	**P**	**06 08 31.8**	**+2.2**
LANS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LANS	**Liptovska Anna**	**77.26**	**328**	*e*P	**P**	**06 08 31.8**	**+2.2**
OSTC	**Ostas**	**77.29**	**331**	AMS	AMS	06 45 20.0	
	comp=Z,400nm,18.4s						
SCHQ	**Schefferville**	**77.30**	**20**	P	**P**	**06 08 29.7**	**0.0**
	comp=Z,6.3nm,1.0s,baz=252,slow=6.7,SNR=3.6						
SCHQ				LR	LR	06 44 58.8	
	comp=Z,167nm,20.7s,baz=51,slow=38						
	comp=Z,6.3nm,1.0s						
CHVC	**Chvalec**	**77.32**	**331**	*e*P	**P**	**06 08 30.8**	**+0.9**
CHVC				AMS	AMS	06 45 30.0	
	comp=Z,400nm,18.6s						
UPC	**Upice**	**77.40**	**331**	*e*P	**P**	**06 08 31.0**	**+0.7**
UPC				MLR	MLR		
	comp=Z,400nm,13.6s						
UPC	**Upice**	**77.40**	**331**	*e*P	**P**	**06 08 31.0**	**+0.7**
UPC				AMS	AMS	06 45 40.0	
	comp=Z,400nm,13.6s						
DPC	**Dobruska-Polom**	**77.42**	**331**	*e*P	**P**	**06 08 31.3**	**+0.8**
DPC				MLR	MLR		
	comp=Z,200nm,20.2s						
DPC	**Dobruska-Polom**	**77.42**	**331**	*e*P	**P**	**06 08 31.3**	**+0.8**
DPC				AMS	AMS	06 47 00.0	
	comp=Z,200nm,20.2s						
MFTR	**Murfatlar**	**77.43**	**320**	⇑P	**P**	**06 08 33.1**	**+2.6**
MORC	**Moravsky Berou**	**77.46**	**330**	⇑P	**P**	**06 08 31.6**	**+0.9**
MORC	**Moravsky Berou**	**77.46**	**330**	⇑P	**P**	**06 08 31.6**	**+0.9**
MORC	**Moravsky Berou**	**77.46**	**330**	IAmb	IAmb	06 08 32.2	
	comp=Z,9.7nm,1.0s						
MORC	**Moravsky Berou**	**77.46**	**330**	*e*P	**P**	**06 08 30.9**	**+0.2**
KRLC	**Kraliky**	**77.49**	**330**	*e*P	**P**	**06 08 31.7**	**+0.9**
KRLC				MLR	MLR		
	comp=Z,300nm,15.5s						
KRLC	**Kraliky**	**77.49**	**330**	*e*P	**P**	**06 08 31.7**	**+0.9**
KRLC				AMS	AMS	06 46 20.0	
	comp=Z,300nm,15.5s						
MLR	**Muntele Rosu**	**77.53**	**323**	⇓P	**P**	**06 08 31.7**	**+0.4**
MLR	**Muntele Rosu**	**77.53**	**323**	LR	LR	06 45 52.5	
	comp=Z,263nm,18.7s,baz=32,slow=38						
MLR	**Muntele Rosu**	**77.53**	**323**	⇓P	**P**	**06 08 31.7**	**+0.4**
ISR	**Istrita**	**77.55**	**322**	⇑P	**P**	**06 08 31.7**	**+0.4**
ISR	**Istrita**	**77.55**	**322**	⇑P	**P**	**06 08 31.7**	**+0.4**
MAUC	**Maruska**	**77.70**	**329**	AMS	AMS	06 45 10.0	
	comp=Z,500nm,21.2s						
CLL	**Collm**	**77.74**	**333**	⇑*i*P	**P**	**06 08 32.2**	**+0.1**
CLL				*i*		06 08 40.3	
CLL				pmax	pmax		
	comp=Z,17nm,1.1s						
CLL	**Collm**	**77.74**	**333**	IAmb	IAmb	06 08 33.4	
	comp=Z,15nm,0.9s						
CLL	**Collm**	**77.74**	**333**	⇑*i*P	**P**	**06 08 32.2**	**+0.1**
	comp=Z,17nm,1.1s						
CLL				*i* pP	**sP**	**06 08 40.3**	**-1.0**
CLL				LmV		06 46 00.0	
	comp=Z,200nm,18.9s						
ICOR	**Ion Corvin**	**77.76**	**321**	⇓P	**P**	**06 08 32.9**	**+0.5**
BRG	**Berggiesshubel**	**77.80**	**332**	*e*P	**P**	**06 08 32.8**	**+0.2**
BRG				Amp		06 08 36.1	
	comp=Z,7.2nm,1.0s						
BRG				*e*x	x	06 08 41.4	
BRG				Amp		06 08 42.6	
	comp=Z,7.0nm,1.0s						
BRG	**Berggiesshubel**	**77.80**	**332**	*e*P	**P**	**06 08 32.7**	**+0.2**
BRG				*e*		06 08 41.3	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VOIR		**77.96**	**323**	⇑P	**P**	**06 08 34.2**	**+0.6**
VOIR		**77.96**	**323**	⇑P	**P**	**06 08 34.2**	**+0.6**
VYHS	**Vyhne**	**78.04**	**328**	*e*P	**P**	**06 08 34.8**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VYHS	**Vyhne**	**78.04**	**328**	*e*P	**P**	**06 08 34.8**	**+0.9**
PSZ	**Piszkesteto**	**78.10**	**327**	⇑P	**P**	**06 08 34.8**	**+0.5**
PSZ	**Piszkesteto**	**78.10**	**327**	⇑P	**P**	**06 08 34.8**	**+0.5**
PSZ	**Piszkesteto**	**78.10**	**327**	IAmb	IAmb	06 08 36.5	
	comp=Z,10nm,1.0s						
PSZ	**Piszkesteto**	**78.10**	**327**	P	**P**	**06 08 35.9**	**+1.6**
JAVC	**Velka Javorina**	**78.17**	**329**	*e*P	**P**	**06 08 36.5**	**+1.8**
VRAC	**Vranov**	**78.19**	**330**	LR	LR	06 46 54.4	
	comp=Z,299nm,18.5s,baz=29,slow=39						
VRAC	**Vranov**	**78.19**	**330**	*e*P	**P**	**06 08 35.7**	**+0.9**
ARR	**Arges**	**78.20**	**323**	⇑P	**P**	**06 08 35.5**	**+0.6**
BRTR	**Keskin Array B**	**78.22**	**314**	P	**P**	**06 08 36.0**	**+0.7**
	comp=Z,3.5nm,1.0s,baz=50,slow=12,SNR=11						
BRTR				LR	LR	06 49 32.4	
	comp=Z,160nm,18.5s,baz=71,slow=41						
	comp=Z,3.5nm,1.0s						
BRTR	**Keskin Array B**	**78.22**	**314**	P	**P**	**06 08 36.0**	**+0.7**

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PRU   Pruhonice         78.35 332 eP    P      06 08 36.7 +1.2
PRU                               MLR   MLR
      comp=Z,400nm,14.9s
PRU   Pruhonice         78.35 332 eP    P      06 08 36.7 +1.2
PRU                               AMS   AMS    06 46 30.0
      comp=Z,400nm,14.9s
EKA   Eskdalemuir Ar    78.38 344 LR    LR     06 48 03.9
      comp=Z,84nm,20.1s,baz=358,slow=40
KRUC  Moravsky          78.47 330 eP    P      06 08 37.0 +0.7
SMOL  Smolenice         78.55 329 eP    P      06 08 38.2 +1.5
SMOL  Smolenice         78.55 329 eP    P      06 08 38.1 +1.4
TREC  Trest             78.60 331 AMS   AMS    06 46 10.0
      comp=Z,300nm,15.5s
RAZG  Razgrad           78.78 321 ⇑P    P      06 08 36.2 -1.9
NKC   Novy Kostel       78.84 333 AMS   AMS    06 47 10.0
      comp=Z,400nm,14.6s
RAO   Raoul Island      78.92 150 LR    LR     06 43 30.0
      comp=Z,92nm,18.1s,baz=282,slow=36
GZR   Gura Zlata        78.97 324 ⇑P    P      06 08 39.6 +0.4
GZR   Gura Zlata        78.97 324 ⇑P    P      06 08 39.6 +0.4
AMTX  Amarillo          79.05  52 P     P      06 08 40.2 +0.3
      baz=316
MNTX  Cornudas Mount    79.14  56 P     P      06 08 40.7 +0.4
      baz=315
KHC   Kasperske Hory    79.41 332 eP    P      06 08 41.8 +0.4
KHC                               e            06 08 54.0
KHC                               MLR   MLR
      comp=Z,500nm,19.2s
KHC   Kasperske Hory    79.41 332 IAmb  IAmb   06 08 43.3
      comp=Z,12nm,0.8s
KHC   Kasperske Hory    79.41 332 eP    P      06 08 41.8 +0.4
KHC                               ex    x      06 08 54.0
KHC                               AMS   AMS    06 47 10.0
      comp=Z,500nm,19.2s
CKRC  Cesky Krumlov     79.42 331 eP    P      06 08 42.0 +0.5
HERR  Herculane         79.54 324 ⇑P    P      06 08 42.4 +0.3
SOP   Sopron            79.57 329 P     P      06 08 43.8 +1.5
GERES GERESS Array B    79.61 332 P     P      06 08 42.8 +0.2
      comp=Z,3.4nm,0.8s,baz=39,slow=5.1,SNR=23
      comp=Z,3.4nm,0.8s
CONA  Conrad Observa    79.62 330 eP    P      06 08 43.6 +0.9
      comp=Z,11nm,1.1s,SNR=6.1
MPLH  Magyarpolny       79.63 328 P     P      06 08 42.8 +0.2
RONA  Rosalia, Austr    79.65 329 eP    P      06 08 43.8 +1.0
      comp=Z,16nm,1.2s,SNR=6.3
MDVR  Moldovita         79.91 325 ⇑P    P      06 08 41.7 -2.6
GLMI  Grayling          79.96  35 P     P      06 08 44.6 +0.2
      baz=324
MORH  Mrgy, Hungar      79.99 327 P     P      06 08 44.9 +0.3
RAR   Rarotonga         80.19 132 LR    LR     06 38 28.3
      comp=Z,32nm,20.4s,baz=262,slow=31
MOA   Molln             80.26 331 eP    P      06 08 46.3 +0.2
      comp=Z,4.2nm,1.0s
KOVH  Kovagotottos      80.31 327 P     P      06 08 46.0 -0.3
T35A  Sooner Cattle     80.42  47 IAmb  IAmb   06 08 59.9
      comp=Z,9.9nm,0.9s
BLKB  Belogradchik      80.44 323 ⇑P    P      06 08 47.4 +0.2
BTNL  Ternell           80.48 337 dP    P      06 08 47.6 +0.4
      comp=Z,6.8nm,1.0s
MEM   Membach           80.49 337 dP    P      06 08 48.0 +0.7
BIOA  Bad Ischl, Aus    80.61 331 i P   P      06 08 48.9 +0.9
      comp=Z,11nm,0.8s
BHOU  Houvegnez         80.72 337 dP    P      06 08 49.8 +1.3
P40A  Paris             80.74  43 IAmb  IAmb   06 09 13.6
      comp=Z,8.5nm,1.1s
WMOK  Wichita Mounta    80.79  50 P     P      06 08 49.2  0.0
      baz=317
BCLA  Clavier           80.86 337 dP    P      06 08 50.4 +1.2
BGES  Gesves            80.95 337 dP    P      06 08 50.5 +0.8
SOKA  Soboth            80.97 330 eP    P      06 08 50.6 +0.6
      comp=Z,14nm,1.0s,SNR=8.4
GROS  Grobnik           80.98 329 i P   P      06 08 50.2 +0.2
VTS   Vitosha           81.00 322 ⇓P    P      06 08 50.2 -0.1
VTS   Vitosha           81.00 322 ⇓P    P      06 08 50.2 -0.1
VTS   Vitosha           81.00 322 IAmb  IAmb   06 08 52.4
      comp=Z,14nm,1.0s
BMRD  Maredsous         81.12 337 dP    P      06 08 51.1 +0.5
      comp=Z,11nm,0.9s
RDO   Rodhopi           81.12 320 IAmb  IAmb   06 08 52.8
      comp=Z,14nm,1.0s
RCHB  Rochefort         81.12 337 dP    P      06 08 51.2 +0.6
      comp=Z,6.8nm,0.8s
KBA   Koelnbreinsper    81.24 331 eP    P      06 08 52.5 +1.0
      comp=Z,21nm,1.1s,SNR=12
HDIL  Hopedale          81.27  41 P     P      06 08 51.4 -0.2
      baz=322
OBKA  Obir              81.30 330 i P   P      06 08 51.1 -0.6
      comp=Z,4.0nm,0.8s
LPIG  La Paz            81.33  65 LR    LR     06 46 14.0
      comp=Z,49nm,18.6s,baz=348,slow=37
DOU   Dourbes           81.35 337 dP    P      06 08 52.7 +0.8
GCIS  Gornji Cirnik     81.44 329 i P   P      06 08 52.5 +0.1
S39A  Bolivar           81.50  45 IAmb  IAmb   06 08 58.6
      comp=Z,9.7nm,1.2s
PDKS  Podkum            81.51 329 i P   P      06 08 52.5 -0.3
MYKA  Terra Mystica     81.52 330 i P   P      06 08 52.3 -0.6
      comp=Z,7.7nm,1.1s
TUL1  Leonard           81.56  48 P     P      06 08 52.9 -0.3
      baz=319
R40A  Maddies Statio    81.58  44 IAmb  IAmb   06 08 59.9
      comp=Z,5.7nm,0.8s
WATA  Walderalm         81.63 332 eP    P      06 08 54.5 +1.0
      comp=Z,22nm,1.2s,SNR=6.1
WTTA  Wattenberg        81.68 332 i P   P      06 08 54.9 +1.1
      comp=Z,15nm,1.0s
RETA  Reutte            81.78 333 i P   P      06 08 55.3 +1.1
      comp=Z,13nm,1.0s
MOTA  Moosalm           81.79 332 eP    P      06 08 55.4 +1.0
      comp=Z,26nm,1.0s,SNR=10
ABTA  Abfaltersbach     81.82 331 i P   P      06 08 54.1 -0.4
      comp=Z,3.1nm,1.0s
BFO   Black Forest      81.83 334 P     P      06 08 55.0 +0.6
BFO                               pmax  pmax
      comp=Z,7.0nm,0.9s
BFO   Black Forest      81.83 334 P     P      06 08 55.0 +0.6
BFO                               IAmb  IAmb   06 08 57.3
      comp=Z,7.1nm,0.9s
TX31  Lajitas Ar. Si    81.86  57 IAmb  IAmb   06 09 07.8
      comp=Z,19nm,1.1s
TXAR  Lajitas Array     81.86  57 P     P      06 08 56.0 +1.0
      comp=Z,6.4nm,1.2s,baz=290,slow=4.3,SNR=11
      comp=Z,6.4nm,1.2s
SQTA  Sankt Quirin      81.86 332 i P   P      06 08 55.7 +1.0
      comp=Z,9.7nm,0.9s
ASF   Jabal al Asfar    81.98 307 LR    LR     06 52 11.2
      comp=Z,120nm,18.3s,baz=106,slow=41
STAL  STALIGIAL         82.17 331 IAmb  IAmb   06 08 56.3
      comp=Z,6.8nm,0.8s
FETA  Feichten          82.19 332 i P   P      06 08 57.5 +0.9
      comp=Z,11nm,1.2s
SADO  Sadowa            82.20  32 LR    LR     06 46 23.9
      comp=Z,73nm,21.0s,baz=33,slow=36
MMAI  Mount Meron Ar    82.22 309 LR    LR     06 50 03.5
      comp=Z,170nm,18.1s,baz=200,slow=39
DAVA  Damuels           82.25 333 i P   P      06 08 58.0 +1.2
      comp=Z,16nm,1.1s
TRI   Trieste           82.26 330 IAmb  IAmb   06 08 57.5
      comp=Z,14nm,1.1s
CCM   Cathedral Cave    82.28  43 P     P      06 08 56.9  0.0
CCM                               pmax  pmax
      comp=Z,8.0nm,0.9s
CCM   Cathedral Cave    82.28  43 P     P      06 08 56.9  0.0
CCM                               IAmb  IAmb   06 09 10.0
      comp=Z,7.5nm,0.9s
CCM   Cathedral Cave    82.28  43 P     P      06 08 56.6 -0.3
      baz=321
ECH   Echery            82.29 335 IAmb  IAmb   06 08 58.1
      comp=Z,12nm,1.1s
DAVOX Davos/Dischmat    82.69 333 LR    LR     06 50 02.8
      comp=Z,126nm,18.1s,baz=74,slow=39
U40A  Yellville         82.77  46 IAmb  IAmb   06 09 05.8
      comp=Z,7.7nm,0.8s
U40A  Yellville         82.77  46 P     P      06 08 59.3 -0.2
      baz=320
RAYN  Ar Rayn           82.85 296 P     P      06 09 00.1 -0.1
RAYN                              pmax  pmax
      comp=Z,15nm,1.3s
RAYN  Ar Rayn           82.85 296 P     P      06 09 00.1 -0.1
RAYN                              IAmb  IAmb   06 09 02.4
      comp=Z,15nm,1.2s
PDG   Podgorica         82.86 325 ⇓P    P      06 08 59.8 -0.1
PDG   Podgorica         82.86 325 IAmb  IAmb   06 09 13.4
      comp=Z,15nm,1.1s
TAOE  Nuku Hiva Isla    82.93 109 eLR   LR     06 34 40.6
      comp=Z,110nm,21.9s
W39A  Magazine          83.17  47 P     P      06 09 01.8 +0.2
      baz=320
PPT   Papeete           83.22 122 LR    LR     06 39 34.1
      comp=Z,46nm,19.4s,baz=322,slow=31
PPT2  Papeete2          83.24 122 eLR   LR     06 34 24.0
      comp=Z,121nm,23.5s
FNA   Florina           83.30 322 IAmb  IAmb   06 09 03.2
      comp=Z,7.4nm,0.9s
JCT   Junction City     83.33  54 P     P      06 09 02.8 +0.1
      baz=317
FCAR  Ozark Folk Cen    83.50  45 IAmb  IAmb   06 09 09.8
      comp=Z,5.7nm,0.9s
MIAR  Mount Ida         83.77  47 IAmb  IAmb   06 09 17.7
      comp=Z,8.1nm,1.0s
MIAR  Mount Ida         83.77  47 P     P      06 09 05.1 +0.4
      baz=320
SENIN Lac Senin/Sane    83.89 334 IAmb  IAmb   06 09 10.3
      comp=Z,13nm,1.2s
W41B  Gary Mavity, V    83.99  46 P     P      06 09 05.5 -0.3
      baz=321
ERPA  Erie              84.10  34 P     P      06 09 06.4 +0.1
      baz=327
M53A  WI Miller and     84.38  35 P     P      06 09 08.0 +0.3
      baz=327
T47A  Sharon Grove      85.14  42 IAmb  IAmb   06 09 24.3
      comp=Z,6.7nm,0.9s
O53A  New Philadelph    85.15  36 P     P      06 09 12.1 +0.5
      baz=326
P52A  Corning           85.26  37 P     P      06 09 12.5 +0.3
      baz=326
NATX  Nacogdoches       85.31  50 P     P      06 09 13.1 +0.6
      baz=320
MATE  Matera            85.41 325 ⇑P    P      06 09 12.0 -0.8
WVT   Waverly           85.47  42 P     P      06 09 13.4 +0.1
      baz=323
BINY  Binghamton        85.60  31 P     P      06 09 14.1 +0.2
      baz=330
T50A  Nancy             86.19  40 P     P      06 09 17.3 +0.4
T50A                              IAmb  IAmb   06 09 19.6
      comp=Z,5.7nm,1.0s
L61B  Northampton       86.59  29 P     P      06 09 19.3 +0.7
      baz=332
TBI   Tubuai            87.70 126 eLR   LR     06 36 36.8
      comp=Z,124nm,23.0s
TKL   Tuckaleechee C    87.79  40 P     P      06 09 23.8 -0.9
      comp=Z,3.2nm,0.8s,baz=311,slow=2.7,SNR=5.2
TKL                               LR    LR     06 50 04.0
      comp=Z,124nm,20.8s,baz=343,slow=37
      comp=Z,3.2nm,0.8s
TKL   Tuckaleechee C    87.79  40 P     P      06 09 25.2 +0.5
TKL                               IAmb  IAmb   06 09 38.2
      comp=Z,9.9nm,1.2s
NHSC  New Hope          91.56  39 P     P      06 09 43.2 +0.9
      baz=327
KEST  Kesra             92.58 328 LR    LR     06 55 40.3
      comp=Z,268nm,19.1s,baz=327,slow=38
ATD   Arta Tunnel       93.11 289 LR    LR     06 57 26.8
      comp=Z,178nm,18.8s,baz=44,slow=39
ESDC  Sonseca Array     93.29 339 P     P      06 09 49.7 -0.6
      comp=Z,1.2nm,0.9s,baz=18,slow=5.1,SNR=5.1
ESDC                              LR    LR     06 56 37.1
      comp=Z,92nm,20.4s,baz=34,slow=39
      comp=Z,1.2nm,0.9s
MDT   Midelt            99.92 337 LR    LR     07 02 46.6
      comp=Z,47nm,18.8s,baz=29,slow=40
TORD  Torodi Ar. Bea   115.76 324 PKP   PKiKP  06 15 17.8 -0.5
      comp=Z,0.3nm,0.3s,baz=25,slow=1.9,SNR=7.6
TORD                              PP    PP     06 16 08.6  -12
      comp=Z,0.8nm,1.1s,baz=359,slow=7.9,SNR=3.6
PEXB  Peixe            145.31  30 eP    PKPdf  06 16 15.1 +1.5
SALV  Santo Antonio    145.47  44 eP    PKPab  06 16 15.1 +1.0
TROLL Troll, Antarti   147.31 199 PKPbc PKPab  06 16 18.8 -0.9
SNAA  Sanae            148.74 197 PKPbc PKPbc  06 16 21.7 +0.2
VNA3  Neumayer Olymp   150.42 194 PKPbc PKPbc  06 16 25.8 +0.1
PLCA  Paso Flores      151.15  98 PKPbc PKiKP  06 16 29.5 +0.6
      comp=Z,2.0nm,0.9s,baz=197,slow=4.1,SNR=4.3
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*FUNV **10** 06:05:11.9, 8°.29N×71°.83W, h5km, MW3.6*

ISC 10 06:05:10.5±1.1**, 8°.36N**±0°.02×**71°.80W**±0°.02**, h7**km±10km**,**
n41, σ1s.**70**/76**, 1D, Venezuela**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC      h  m  s    ISC
CAPV  Capacho            0.71 226 eP     Pg     06 05 24.3 +0.2
CAPV                              eS     Sg     06 05 32.8 -0.6
SOCV  Socops             0.94  94 eP     Pg     06 05 29.2 +0.7
SOCV                              eS     Sg     06 05 41.6 +1.0
SDV   Santo Domingo      1.27  65 eP     Pg     06 05 34.6 -0.2
SDV                               eS     Sg     06 05 50.8 -0.5
PAMC  Pamplona, Colo     1.35 222 eP     Pg     06 05 36.5 +0.1
PAMC                              eS     Sn     06 05 55.4 +0.7
OCAC  Ocana              1.51 266 eP     Pn     06 05 38.0 -0.2
OCAC                              eS     Sn     06 05 58.4 +0.2
MCQV  Machiques          1.83 337 eP     Pn     06 05 42.5 +0.1
MCQV                              eS     Sb     06 06 07.7 +0.1
TAMC  Tame, Arauca       1.91 180 eP     Pn     06 05 44.8 +1.3
TAMC                              eS     Sg     06 06 13.4 +1.5
TAMC                              i             06 06 14.9
      comp=Z,458nm,0.2s
LL6C  La Loma 6 Bece     2.00 313 eP     Pb     06 05 47.0 -0.2
LL6C                              eS     Sb     06 06 11.6 -0.7
LL1C  La Loma 1 Cana     2.10 304 eP     Pb     06 05 48.1 -0.8
LL1C                              eS     Sb     06 06 15.6 +0.4
BARC  Barichara          2.23 218 eP     Pn     06 05 50.0 +1.9
BARC                              eS     Sb     06 06 20.6 +1.5
BARC                              i             06 06 23.8
      comp=Z,371nm,0.4s
BRRC  Barranca, Sant     2.27 237 eP     Pn     06 05 50.2 +1.8
BRRC                              eS     Sg     06 06 22.3 -1.1
BRRC                              i             06 06 23.8
      comp=Z,132nm,0.2s
SMLC  San Martn de       2.29 281 eP     Pn     06 05 49.9 +1.1
SMLC                              eS     Sb     06 06 20.4 -0.4
LL5C  La Loma 5 El P     2.35 306 eP     Pb     06 05 52.1 -1.1
LL5C                              eS     Sn     06 06 19.1 +0.3
CURV  Curarigua          2.45  48 eP     Pb     06 05 54.4 -0.6
CURV                              eS     Sn     06 06 23.5 +2.2
SANV  Sanarito           2.51  63 eP     Pn     06 05 54.4 +2.5
SANV                              eS     Sn     06 06 24.4 +1.6
RUSC  La Rusia           2.76 208 eP     Pn     06 05 56.7 +1.1
RUSC                              eS     Sb     06 06 37.4 +2.6
RUSC                              i             06 06 42.7
      comp=Z,67nm,0.3s
DABV  Dabajuro           2.79  24 eP     Pn     06 05 56.4 +0.7
DABV                              eS     Sn     06 06 31.5 +1.8
ARGC  Ariguani, Magd     2.84 302 eP     Pn     06 05 56.2 -0.1
ARGC                              eS     Sn     06 06 29.2 -1.7
CRJC  Cerrejon, Guaj     2.85 338 eP     Pn     06 05 56.2 -0.4
CRJC                              eS     Sn     06 06 31.7 +0.3
SIQV  Siquisique         3.01  41 eP     Pn     06 06 00.3 +1.6
SIQV                              eS     Sn     06 06 36.7 +1.7
ZARC  Zaragoza, Cauc     3.15 254 eP     Pn     06 06 00.9 +0.3
ZARC                              eS     Sn     06 06 39.6 +1.1
ZARC                              i             06 06 50.5
      comp=Z,91nm,0.3s
PTBC  PUERTO BERRIO,     3.19 236 eP     Pn     06 06 01.1 -0.1
PTBC                              eS     Sb     06 06 48.1 +1.3
PTBC                              i             06 06 52.1
      comp=Z,186nm,0.5s
URIC  Uribia, Colomb     3.33 357 eP     Pb     06 06 11.6 +1.7
URIC                              eS     Sb     06 06 52.5 +1.8
SPBC  San Pablo de B     3.51 220 eP     Pn     06 06 06.9 +1.3
SPBC                              eS     Sg     06 07 00.9 -2.4
SPBC                              i             06 07 08.7
      comp=Z,56nm,0.7s
MAPV  Macapo             3.61  66 eP     Pn     06 06 08.8 +1.8
MAPV                              eS     Sn     06 06 50.0 +0.1
UREC  San Jos de Ur      3.75 261 eP     Pb     06 06 14.3 -2.7
UREC                              eS     Sn     06 06 55.3 +2.1
BAUV  El Baul            3.76  81 eP     Pn     06 06 10.0 +1.0
BAUV                              eS     Sn     06 06 52.9 -0.7
JACV  Jacura             3.99  47 eP     Pn     06 06 14.2 +2.0
JACV                              eS     Sn     06 06 59.4 +0.1
NORC  Norcasia           4.12 228 eP     Pn     06 06 16.9 +2.8
NORC                              eS     Sn     06 07 05.8 +3.3
NORC                              i             06 07 19.5
      comp=Z,29nm,0.3s
PTGC  Puerto Gaitan,     4.14 185⇓eP     Pn     06 06 14.3 +0.1
PTGC                              eS     Sb     06 07 16.8 +2.6
CHIC  Chingaza           4.17 208 eP     Pn     06 06 15.1 +0.1
CHIC                              eS     Sn     06 07 03.2 -1.1
TURV  Turiamo            4.42  62 eP     Pn     06 06 19.2 +1.1
TURV                              eS     Sn     06 07 08.5 -1.4
BENV  Beln               4.44  69 eP     Pn     06 06 19.6 +1.2
BENV                              eS     Sn     06 07 09.4 -1.1
CBOC  Ciudad Bolivar     4.86 240 eP     Pn     06 06 29.2 +4.9
CACV  CAICARA DEL OR     5.27  98 eP     Pn     06 06 37.0 +7.3
CACV                              eS     Sb     06 07 40.3 -6.2
MERV  Las Mercedes       5.51  80 eP     Pn     06 06 33.5 +0.4
MERV                              eS     Sn     06 07 33.9 -2.9
PRAC  Prado              5.54 214 eP     Pn     06 06 40.1 +6.6
ORTC  Ortega, Tolima     5.59 218 eP     Pn     06 06 34.7 +0.5
GUVC  San Jose del G     5.83 188 eP     Pn     06 06 36.8 -0.7
GUVC                              eS     Sn     06 07 41.5 -3.2
BIRV  Birongo            5.85  68 eP     Pn     06 06 38.7 +1.0
BIRV                              eS     Sn     06 07 42.4 -2.7
PCRV  Puerto La Cruz     7.30  75 eP     Pn     06 06 58.9 +1.2
PCRV                              eS     Sn     06 08 17.1 -3.8
```

IDC 10 06:14:23.6±2.4**, 54°.19N**×**86°.33E, h0**km**, mbtmp2.9**/2**,**
ML2.5/2**, Error ellipse: s-maj=19.3km s-min=12.1km**
az=57.0, Southwestern Siberia

```
Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC      h  m  s    ISC
I46RU ZALESOVO INFRA     0.92 256 i             06 20 51.4
      baz=74,slow=335,SNR=3.2
ZALV  Zalesovo Beam      0.92 256 Pg     Pg     06 14 39.3 -1.9
      2.3nm,0.3s,baz=73,slow=17,SNR=23
ZALV                              Lg     Lg     06 14 54.5
      3.5nm,0.3s,baz=78,slow=31,SNR=21
KURBB Kurchatov Arra     5.96 236 Pn     Pn     06 15 54.0 +1.1
      0.1nm,0.3s,baz=54,slow=13,SNR=12
KURBB                             Lg     Lg     06 17 35.1
      baz=37,slow=27,SNR=4.6
      0.6nm,0.4s
MKAR  Makanchi Array     7.83 201 Pn     Pn     06 16 19.8 +1.1
      0.1nm,0.3s,baz=25,slow=14,SNR=8.9
      0.2nm,0.2s
```

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*IDC **10** 06:28:01.9±1.5, 27°.80N×51°.99E, h0km, mb4.0/9,*
mbtmp3.9/11, ML3.5/2, Error ellipse: s-maj=29.8km
s-min=25.9km az=7.0
*TEH **10** 06:28:03.0, 27°.86N×52°.03E, h17km, ML3.8*
*DSN **10** 06:28:09.1±1.7, 27°.64N×52°.44E, h10km, ML3.3/7, Error*
ellipse: s-maj=30.3km s-min=9.8km az=8.0

ISC 10 06:28:05.6±0.7**, 27°.77N**±0°.06×**52°.06E**±0°.06**, h26**km**, n69,**
σ1s.**24**/74**, mb3.8**/9**, Southern Iran**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op     ISC      h  m  s    ISC
LMD1  Lamerd             1.07 113 ePg    Pn     06 28 25.5 +0.6
LMD1                              eSg    Sb     06 28 43.3 +4.3
LMD1                              e             06 28 48.1
      comp=Z,44µm,0.9s
QIR1  Qir                1.12  51 ePg    Pn     06 28 24.6 -1.0
QIR1                              eSg    Sn     06 28 39.1 -1.1
QIR1                              e             06 28 56.7
      comp=Z,28µm,0.4s
JHRM  Jahrom             1.53  61 ePn    Pn     06 28 32.2 +0.9
JHRM                              e             06 29 01.1
      comp=Z,29µm,0.6s
KAZ1  Kazerun            1.89 349 ePn    Pn     06 28 36.3 +0.1
KAZ1                              e             06 29 08.4
      comp=N,16µm,0.2s
SHI   Shiraz             1.91  12 ePn    Pn     06 28 37.6 +1.0
SHI                               e             06 29 14.5
      comp=Z,5µm,0.7s
LAR1  LAR                2.05  92 ePn    Pn     06 28 40.2 +1.7
LAR1                              e             06 29 34.7
      comp=Z,10µm,0.4s
JRN   Qarnain Island     2.90 166 ePn    Pn     06 28 52.4 +2.3
KLNJ  Kolanjah           3.25 353 ePn    Pn     06 28 55.3  0.0
KLNJ                              e             06 29 60.0
      comp=Z,1µm,0.5s
GENO  Geno               3.67  95 ePn    Pn     06 29 03.4 +2.6
GENO                              e             06 30 22.8
      comp=E,1µm,0.6s
SHME  Shamm              4.03 114 ePn    Pn     06 29 05.1 -0.5
SHME  Shamm              4.03 114 P      Pn     06 29 06.0 +0.5
SHME                              S      Sn     06 29 49.9 -1.9
IRAM  Ramesheh           4.04   4 ePn    Pn     06 29 06.0 +0.1
BANOM Banah              4.21 115 ePn    Pn     06 29 08.4 +0.3
BANOM Banah              4.21 115 P      Pn     06 29 08.6 +0.5
BANOM                             S      Sn     06 29 55.0 -1.5
IMEH  Mehriz             4.24  31 e             06 29 11.2
      comp=Z,1µm,0.3s
IMEH                              ePn    Pn     06 29 09.6 +0.9
NAZ   Nazwa, Dubai       4.25 130 ePn    Pn     06 29 10.3 +1.6
NAZ   Nazwa, Dubai       4.25 130 P      Pn     06 29 10.1 +1.4
ASUD  Al Ashush, Dub     4.29 136 ePn    Pn     06 29 10.3 +1.1
ASUD  Al Ashush, Dub     4.29 136 P      Pn     06 29 10.9 +1.7
ISAD  Sadrabad           4.36  18 ePn    Pn     06 29 11.4 +0.9
MSFE  Esma-Masafi        4.38 122 ePn    Pn     06 29 11.3 +0.8
MSFE  Esma-Masafi        4.38 122 P      Pn     06 29 11.0 +0.4
AMIS  Naft Sefid         4.57 329 ePn    Pn     06 29 13.5 +0.4
AMIS                              e             06 29 15.3
      comp=Z,1µm,0.3s
KHGB  Koh Gabri          4.66  55 ePn    Pn     06 29 15.3 +0.9
KHGB                              e             06 29 15.5
      comp=Z,537nm,0.3s
UOSS  Minazif            4.66 126 ePn    Pn     06 29 15.0 +0.7
KRBR  Kerman             4.67  61 ePn    Pn     06 29 14.9 +0.2
TVBK  TV Kerman          4.67  61 ePn    Pn     06 29 15.8 +1.0
TVBK                              e             06 29 33.6
      comp=Z,761nm,0.4s
HATD  Hatta, Dubai       4.68 128 ePn    Pn     06 29 16.4 +1.8
ASHO  Ashiyiah           4.72 130 ePn    Pn     06 29 15.9 +0.7
ASHO  Ashiyiah           4.72 130 P      Pn     06 29 15.8 +0.5
IBAF  Bafgh              4.88  38 ePn    Pn     06 29 18.5 +1.1
IBAF                              e             06 29 18.7
      comp=Z,533nm,0.2s
ICHK  Chekchek           4.90  24 ePn    Pn     06 29 18.5 +0.7
MZR   Muzera             4.92 165 ePn    Pn     06 29 19.2 +1.4
IPIR  Pirpir             5.00 349 ePn    Pn     06 29 18.9 -0.3
NASN  Na'in              5.05   7 ePn    Pn     06 29 19.9 -0.1
YZKH  Yazd               5.10  25 ePn    Pn     06 29 20.7 +0.3
IZEF  Zefreh             5.11   3 ePn    Pn     06 29 21.5 +0.7
SOHO  SOHO               5.41 131 P      Pn     06 29 23.7 -0.9
JASK  Jask - Hormozg     5.52 109 ePn    Pn     06 29 26.8 +0.7
JASK                              e             06 29 33.1
      comp=Z,752nm,0.2s
ANAR  Anarak             5.59  15 ePn    Pn     06 29 27.2  0.0
KBAM  BAM                5.79  75 ePn    Pn     06 29 31.1 +1.2
KBAM                              e             06 29 35.5
      comp=Z,814nm,0.4s
KRSH  Karshahi           6.18   1 ePn    Pn     06 29 34.7 -0.6
ISFB  Sefidab            6.56   1 ePn    Pn     06 29 39.8 -0.7
TPRV  Parvadeh(Tabas     6.59  36 ePn    Pn     06 29 41.0 +0.1
IKFM  Kafar-mosalman     6.79 329 ePn    Pn     06 29 44.5 +1.0
IDOB  Doab               6.87 332 ePn    Pn     06 29 44.3 -0.5
HSAM  Samen              7.07 336 ePn    Pn     06 29 48.4 +0.7
TKDS  Koohdasht(Taba     7.27  36 ePn    Pn     06 29 50.1 -0.2
TABS  Tabas              7.30  35 ePn    Pn     06 29 50.1 -0.5
TNSJ  Nastanj            7.30  31 ePn    Pn     06 29 51.2 +0.5
WSAR  Wadi Sarin         7.45 126 Pn     Pn     06 29 53.0 +0.3
      comp=Z,1.5nm,0.3s,baz=287,slow=12,SNR=12
WSAR                              Sn     Sn     06 31 11.2 -5.3
      comp=Z,0.8nm,0.3s,baz=150,slow=20,SNR=2.6
      comp=Z,6.4nm,0.5s
CHBR  Chabahar           7.84 104 ePn    Pn     06 29 57.3 -0.6
IGHG  Ghaleghazi         8.06 326 ePn    Pn     06 30 01.6 +0.5
SNGE  Sanandaj           8.34 332 ePn    Pn     06 30 04.4 -0.5
ILIN  Lien               8.35 330 ePn    Pn     06 30 05.0 -0.2
IDHR  Dehrash            8.44 326 ePn    Pn     06 30 06.0 -0.4
SRVN  Saravan            9.18  90 ePn    Pn     06 30 16.7 +0.2
KBZ   Khabaz            17.56 337 P      Pn     06 32 07.7 -0.6
      comp=Z,0.1nm,0.3s,baz=141,slow=8.8,SNR=4.5
      comp=Z,1.3nm,0.7s
BRTR  Keskin Array B    19.37 313 P      Pn     06 32 31.9 +1.2
      comp=Z,1.1nm,0.6s,baz=139,slow=11,SNR=3.6
AKTO  Aktyubinsk        23.09  10 P      P      06 33 10.7 +1.6
      comp=Z,1.1nm,0.4s,baz=168,slow=6.6,SNR=5.8
      comp=Z,1.1nm,0.4s
BELG  Belogornoye       24.82 354 P      P      06 33 25.3 -0.1
      comp=Z,11nm,0.7s,baz=117,slow=12,SNR=3.6
      comp=Z,11nm,0.7s
MKAR  Makanchi Array    30.37  43 P      P      06 34 15.7 +0.3
      comp=Z,0.7nm,0.5s,baz=235,slow=9.4,SNR=6.8
      comp=Z,0.7nm,0.5s
ZALV  Zalesovo Beam     35.48  33 P      P      06 34 59.5 -0.3
      comp=Z,3.1nm,0.4s,baz=248,slow=9.1,SNR=12
      comp=Z,3.1nm,0.4s
FINES FINESS Array B    37.89 340 P      P      06 35 18.6 -1.6
      comp=Z,0.6nm,0.4s,baz=155,slow=7.3,SNR=7.2
      comp=Z,0.6nm,0.4s
```

NB2	**NORSAR Subarra**	**43.02**	**332**	P	**P**	**06 36 01.9**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=121,slow=8.6						
NOA	**NORSAR Array B**	**43.02**	**332**	P	**P**	**06 36 02.1**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=122,slow=8.3,SNR=4.4						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**44.55**	**347**	P	**P**	**06 36 15.0**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=134,slow=7.0,SNR=5.8						
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**49.05**	**263**	P	**P**	**06 36 50.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=61,slow=6.5,SNR=4.7						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**89.42**	**354**	P	**P**	**06 41 00.1**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=8.7,slow=4.9,SNR=4.0						
	comp=Z,0.7nm,0.8s						

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*IDC **10** 06:53:05.5±0.7, 43°.82N×148°.39E, h0^{km}, mb4.1/17, mbtmp4.0/20, ML3.4/3, MS3.1/6, Error ellipse: s-maj=19.8km s-min=15.3km az=153.0*

*JMA **10** 06:53:07.9±0.6, 44°N±2°×14°8E±°, h0^{km}, MV4.3/29, SE OFF ETOROFU*

*SKHL **10** 06:53:07.4±0.2, 43°.70N×148°.80E, h43^{km}±4^{km}, mb5.1/2*

*NIED **10** 06:53:07.9, 43°.62N×148°.30E, h0^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.61; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-1.14; $M_{r\theta}$1.06; $M_{\theta\phi}$-0.76; $M_{\phi r}$0.99; Fault plane solution: $M_0$2.17000×10^{15} NP1: ϕ_s204.00000°, δ25.00000°, λ73.00000°. NP2: ϕ_s42.00000°, δ66.00000°, λ98.00000°.*

*MOS **10** 06:53:08.5±1.3, 43°.73N×148°.56E, h39^{km}, mb4.7/17 Error ellipse: s-maj=9.2km s-min=6.7km az=118.3*

*NEIC **10** 06:53:11.2±2.0, 43°.82N±0°.06×148°.5E±0°.1, h35^{km}±2^{km}, mb4.3/24, Error ellipse: s-maj=14.7km s-min=10.3km az=88.0*

ISC 10 06:53:10.5±0.9**, 43°.75N**±0°.06×**148°.53E**±0°.06**, h43**^{km}±7^{km}**, n151, σ1^s.61**/149**, mb4.3**/41**, MS3.9**/3**, 11C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.55**	**343***c*	*i*PN	**Pn**	**06 53 34.7**	**-1.0**
KUR				*e*S	**Sn**	**06 53 54.0**	**-0.6**
KUR				pmax	pmax		
	comp=Z,628nm,0.6s						
KUR				pmax	pmax		
	comp=N,279nm,0.2s						
KUR				pmax	pmax		
	comp=E,226nm,0.2s						
KUR				smax	smax		
	comp=E,1µm,0.4s						
KUR				smax	smax		
	comp=N,914nm,0.3s						
KUR				smax	smax		
	comp=N,4µm,1.4s						
KUR				smax	smax		
	comp=E,2µm,2.0s						
KUR	**Kuril'sk**	**1.55**	**343**	*i* P	**Pn**	**06 53 34.1**	**-1.6**
KUR				AMB	AMB	06 53 40.7	
	comp=E,630nm,0.5s						
KUR				AMB	AMB	06 53 40.7	
	comp=E,280nm,0.2s						
KUR				AMB	AMB	06 53 40.7	
	comp=E,230nm,0.2s						
KUR				*e*S	**Sn**	**06 53 54.0**	**-0.6**
KUR				A	A	06 54 01.7	
	comp=E,910nm,0.4s						
KUR				A	A	06 54 01.7	
	comp=E,1µm,0.4s						
KUR				A	A	06 54 03.4	
	comp=E,4µm,2.0s						
KUR				A	A	06 54 03.4	
	comp=E,2µm,2.0s						
KUR				AMS	AMS	06 54 18.8	
	comp=E,3µm,10.0s						
YUK	**Yuzh-Kuril'sk**	**1.95**	**279**	*e*PN	**Pn**	**06 53 40.2**	**-0.8**
YUK				*e*S	**Sn**	**06 54 05.5**	**+1.2**
YUK				pmax	pmax		
	comp=Z,546nm,0.3s						
YUK				pmax	pmax		
	comp=N,273nm,0.4s						
YUK				pmax	pmax		
	comp=E,159nm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
YUK				smax	smax		
	comp=E,2µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.95**	**279**	*e*P	**Pn**	**06 53 40.3**	**-0.8**
YUK				AMB	AMB	06 53 46.0	
	comp=E,270nm,0.4s						
YUK				AMB	AMB	06 53 46.0	
	comp=E,160nm,0.4s						
YUK				AMB	AMB	06 53 46.0	
	comp=E,550nm,0.4s						
YUK				*e*S	**Sn**	**06 54 04.9**	**+0.6**
YUK				A	A	06 54 09.5	
	comp=E,1µm,0.6s						
YUK				A	A	06 54 09.5	
	comp=E,2µm,0.6s						
NEM2	**Nemuro 2**	**2.06**	**260**	*e*P	**Pn**	**06 53 42.3**	**-0.3**
NEM2				*e*S	**Sn**	**06 54 06.6**	**-0.5**
NMR	**Nemuro--Hokkai**	**2.07**	**260**	*e*PN	**Pn**	**06 53 41.1**	**-1.6**
NMR				*e*S	**Sn**	**06 54 07.1**	**-0.2**
NMR	**Nemuro--Hokkai**	**2.07**	**260**	*e*P	**Pn**	**06 53 41.7**	**-1.0**
NMR				*e*S	**Sn**	**06 54 07.6**	**+0.3**
RUSJ	**Misakicho**	**2.39**	**280**	*e*PN	**Pn**	**06 53 47.0**	**-0.2**
RUSJ				*e*S	**Sn**	**06 54 17.2**	**+1.9**
JRA	**Rausu**	**2.47**	**275**	*e*P	**Pn**	**06 53 49.1**	**+0.9**
JKHN	**Kushirohamanak**	**2.54**	**256**	*e*P	**Pn**	**06 53 49.0**	**-0.3**
JNSB	**Nemuroshibetsu**	**2.55**	**272**	*e*P	**Pn**	**06 53 49.1**	**-0.2**
JNK	**Nakash**	**2.77**	**268**	*e*P	**Pn**	**06 53 51.5**	**-0.8**
AKK	**Akkeshi**	**2.78**	**256**	*e*P	**Pn**	**06 53 52.1**	**-0.5**
JAK	**Akkeshi**	**2.89**	**256**	*e*P	**Pn**	**06 53 54.0**	**0.0**
JTKR	**Abashiri--Toko**	**3.35**	**275**	*e*P	**Pn**	**06 54 00.1**	**-0.2**
JAR	**Ashorobuto**	**3.49**	**264**	*e*P	**Pn**	**06 54 02.1**	**-0.1**
JAR				*e*S	**Sn**	**06 54 42.5**	**+0.2**
JCH	**Churui**	**3.94**	**255**	*e*P	**Pn**	**06 54 08.8**	**+0.3**
JKK2	**Kamakawa 2**	**4.18**	**274**	*e*P	**Pn**	**06 54 13.2**	**+1.4**
JKA	**Kamikawa-asahi**	**4.29**	**277**		**Pn**	**06 54 15.4**	**+2.1**
JKA	**Kamikawa-asahi**	**4.29**	**277**	*e*P	**Pn**	**06 54 15.4**	**+2.1**
ASAJ	**Asahikawa**	**4.30**	**277**	Pn	**Pn**	**06 54 15.4**	**+2.0**
	comp=E,2.1nm,0.3s,baz=69,slow=14,SNR=3.1						
ASAJ				LR	LR	06 55 51.9	
	comp=E,210nm,20.9s,baz=166,slow=40						
ERM	**Erimo**	**4.31**	**248***ce*	PN	**Pn**	**06 54 14.7**	**+1.2**
ERM				pmax	pmax		
	comp=Z,42nm,0.6s						
ERM	**Erimo**	**4.31**	**248**	Pn	**Pn**	**06 54 14.9**	**+1.4**
JNBK	**Urakawa-nobuka**	**4.48**	**253**	*e*P	**Pn**	**06 54 15.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.17**	**310**	*e*PN	**Pn**	**06 54 26.1**	**+0.7**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,13.0s						
YSS	**Yuzh-Sakhalins**	**5.17**	**310**	Pn	**Pn**	**06 54 26.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**5.17**	**310**	*e*P	**Pn**	**06 54 26.1**	**+0.7**
YSS				AMB	AMB	06 54 37.5	
	comp=E,40nm,0.8s						
YSS				*e*S	**Sn**	**06 55 24.2**	**+0.4**
YSS				A	A	06 55 38.2	
	comp=E,10.0nm,0.7s						
YSS				A	A	06 55 38.2	
	comp=E,30nm,0.7s						
JEW	**Eniwo**	**5.24**	**262**		**Pn**	**06 54 27.7**	**+1.4**
JEW	**Eniwo**	**5.24**	**262**	*e*P	**Pn**	**06 54 27.4**	**+1.1**
JRBN	**Rebuntou**	**5.58**	**290**	*e*P	**Pn**	**06 54 32.3**	**+1.3**
JOT	**Ohata**	**6.01**	**249**	*e*P	**Pn**	**06 54 37.1**	**+0.3**
JANG	**Nango**	**6.21**	**239**	*e*P	**Pn**	**06 54 38.1**	**-1.6**
JANG				*e*S	**Sn**	**06 55 43.8**	**-5.6**
JTM	**Tenmabayashi**	**6.28**	**244**	Pn	**Pn**	**06 54 40.4**	**-0.1**
TYV	**Tymovskoe**	**8.15**	**333**	*e*PN	**Pn**	**06 55 07.9**	**+1.7**
TYV				pmax	pmax		
	comp=Z,14nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
TYV	**Tymovskoe**	**8.15**	**333**	*e*P	**Pn**	**06 55 06.9**	**+0.7**
TYV				AMB	AMB	06 55 07.5	
	comp=Z,30nm,0.5s						
TYV				AMB	AMB	06 55 11.0	
	comp=Z,100nm,3.7s						
TEY	**Ternei**	**8.63**	**283**	*e*P	**Pn**	**06 55 15.3**	**+2.5**
TEY				AMB	AMB	06 55 24.0	
	comp=Z,10.0nm,1.0s						
SKR	**Severo-Kuril's**	**8.64**	**34**	*e*P	**Pn**	**06 55 11.1**	**-1.8**
SKR				AMB	AMB	06 55 13.5	
	comp=Z,20nm,0.6s						
PAU	**Pauzhetka**	**9.53**	**33**	*e*P	**Pn**	**06 55 24.4**	**-0.6**
PAU				AMB	AMB	06 55 26.9	
	comp=Z,10.0nm,0.7s						
JSD	**Sado**	**9.64**	**237**	Pn	**Pn**	**06 55 26.6**	**0.0**
KHBR	**Khabarovsk**	**10.47**	**301**	*e*P	**Pn**	**06 55 39.0**	**+1.1**
KHBR				AMB	AMB	06 55 47.9	
	comp=Z,10.0nm,0.8s						
OKH	**Okha**	**10.47**	**341**	*e*P	**Pn**	**06 55 39.2**	**+1.3**
MJAR	**Matsushiro Arr**	**10.68**	**231**	Pn	**Pn**	**06 55 39.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=4.4						
MJAR				LR	LR	06 59 22.1	
	comp=Z,40nm,21.7s,baz=55,slow=35						
	comp=Z,1.0nm,0.3s						
GRNR	**Gornyy**	**10.80**	**315**	*e*P	**Pn**	**06 55 42.6**	**+0.1**
GRNR				AMB	AMB	06 55 49.6	
	comp=Z,10.0nm,1.0s						
PETK	**Petropavlovsk-**	**11.16**	**30**	LR	LR	07 00 33.7	
	comp=Z,134nm,18.8s,baz=240,slow=40						
PETK	**Petropavlovsk-**	**11.16**	**30**	PN	**Pn**	**06 55 46.4**	**-1.0**
PETK	**Petropavlovsk-**	**11.16**	**30**	Pn	**Pn**	**06 55 46.4**	**-1.0**
USRK	**Ussuriysk Ar.**	**11.93**	**278**	LR	LR	07 00 36.7	
	comp=Z,132nm,20.3s,baz=111,slow=38						
KLR	**Kul'dur**	**12.78**	**301**	LR	LR	07 01 27.7	
	comp=Z,175nm,19.6s,baz=84,slow=40						
KLR	**Kul'dur**	**12.78**	**301**	*i* PN	**Pn**	**06 56 11.9**	**+2.4**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KLR	**Kul'dur**	**12.78**	**301**	*e*P	**Pn**	**06 56 10.1**	**+0.6**
MA2	**Magadan**	**15.91**	**4**	LR	LR	07 02 35.7	
	comp=Z,85nm,18.3s,baz=294,slow=36						
KSRS	**Korea Array**	**16.84**	**255**	Pn	**Pn**	**06 57 01.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=65,slow=11,SNR=4.2						
	comp=Z,1.3nm,0.8s						
ZEA	**Zeya**	**17.16**	**313**	*e*P	**P**	**06 57 10.4**	**+2.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	**Zeya**	**17.16**	**313**	*e*P	**Pn**	**06 57 03.9**	**-3.0**
ZEA				AMB	AMB	06 57 15.2	
	comp=Z,10.0nm,0.5s						
KROS	**Kirovskiy**	**17.63**	**315**	*e*P	**Pn**	**06 57 10.5**	**-2.2**
SEY	**Seymchan**	**19.35**	**5**	P	**P**	**06 57 30.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=176,slow=10,SNR=15						
	comp=Z,4.8nm,0.8s						
SEY	**Seymchan**	**19.35**	**5***ce*	P	**P**	**06 57 31.1**	**-0.9**
SEY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HIA	**Hailar**	**20.49**	**296**	*i* P	Pn	06 57 46.7	-0.4
HIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK	**Yakutsk**	**21.40**	**335**	*e*P	**P**	**06 57 50.6**	**-3.7**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
BILL	**Bilibino**	**26.09**	**15**⇑	*e*P	**P**	**06 58 41.2**	**+1.4**
BILL				*e*		06 59 15.6	
BILL				*e*S	**S**	**07 02 59.1**	**-8.7**
BILL	**Bilibino**	**26.09**	**15**	*e*P	**P**	**06 58 41.2**	**+1.4**
H11N2	**WAKE ISLAND Hy**	**28.47**	**141**	T	T	07 29 59.3	
	baz=332,slow=75,SNR=104						
H11N1	**WAKE ISLAND Hy**	**28.48**	**141**	T	T	07 30 00.3	
	baz=332,slow=75,SNR=62						
H11N3	**WAKE ISLAND Hy**	**28.48**	**141**	T	T	07 30 03.1	
	baz=332,slow=75,SNR=108						
ULN	**Ulaanbaatar**	**28.95**	**293***ce*	P	**P**	**06 59 06.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	**28.95**	**293**	P	**P**	**06 59 05.8**	**+0.1**
ULN				IAmb	IAmb	06 59 08.2	
	comp=Z,3.4nm,0.8s						
ULN	**Ulaanbaatar**	**28.95**	**293**	*e*P	**P**	**06 59 06.5**	**+0.7**
SONM	**Songino Array**	**29.39**	**293**	P	**P**	**06 59 10.3**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=82,slow=8.5,SNR=12						
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**29.39**	**293**	P	**P**	**06 59 08.4**	**-1.2**
H11S1	**WAKE ISLAND Hy**	**29.45**	**143**	T	T	07 31 19.2	
	baz=333,slow=76,SNR=85						
H11S3	**WAKE ISLAND Hy**	**29.46**	**143**	T	T	07 31 05.8	
	baz=333,slow=76,SNR=57						
H11S2	**WAKE ISLAND Hy**	**29.47**	**143**	T	T	07 31 20.4	
	baz=333,slow=76,SNR=69						
TIXI	**Tiksi**	**29.57**	**348**	*i* P	**P**	**06 59 12.5**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,3.3s						
TIXI	**Tiksi**	**29.57**	**348**	*e*P	**P**	**06 59 12.5**	**+1.7**
IMAR	**Indian Mountai**	**38.08**	**34**	P	**P**	**07 00 25.6**	**+0.9**
H21K	**Melozitna Rive**	**38.44**	**35**	P	**P**	**07 00 29.4**	**+1.8**
H21K				IAmb	IAmb	07 00 44.5	
	comp=Z,3.2nm,0.9s						
PPLA	**Purkeypile**	**38.55**	**39**	P	**P**	**07 00 31.1**	**+2.4**
PPLA				IAmb	IAmb	07 00 55.6	
	comp=Z,7.4nm,1.2s						
COLD	**Coldfoot**	**39.62**	**32**	P	**P**	**07 00 37.5**	**0.0**
COLD				IAmb	IAmb	07 00 53.8	
	comp=Z,3.5nm,0.9s						
NRIK	**Noril'sk**	**39.73**	**331**	*i* P	**P**	**07 00 35.9**	**-2.5**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H23K	**Yukon River**	**39.79**	**35**	P	**P**	**07 00 41.1**	**+2.1**
NEA2	**Nenana**	**39.96**	**37**	P	**P**	**07 00 41.7**	**+1.4**
NEA2				IAmb	IAmb	07 00 55.3	
	comp=Z,2.9nm,0.6s						
TOLK	**Toolik Lake Re**	**39.98**	**30**	P	**P**	**07 00 42.0**	**+1.5**
TOLK				IAmb	IAmb	07 00 42.8	
	comp=Z,4.0nm,0.6s						
HDA	**Harding Lake**	**40.88**	**37**	P	**P**	**07 00 48.9**	**+0.9**
HDA				IAmb	IAmb	07 00 49.5	
	comp=Z,3.1nm,0.5s						
IL31		**40.90**	**36**	P	**P**	**07 00 49.4**	**+1.4**
ILAR	**Eielson Array**	**40.90**	**36**	P	**P**	**07 00 49.3**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=262,slow=7.4,SNR=20						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**41.79**	**307**	P	**P**	**07 00 55.6**	**0.0**
	comp=Z,0.8nm,0.4s,baz=91,slow=5.9,SNR=4.5						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**41.79**	**307**	*i* P	**P**	**07 00 58.2**	**+2.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SCRK	**Sand Creek**	**42.20**	**37**	P	**P**	**07 00 59.5**	**+0.6**
M26K	**Nabesna, AK**	**42.81**	**40**	P	**P**	**07 01 06.2**	**+2.4**
L27K	**Beaver Creek,**	**43.26**	**39**	IAmb	IAmb	07 01 24.4	
	comp=Z,2.8nm,0.7s						
EGAK	**Eagle**	**43.34**	**36**	P	**P**	**07 01 09.0**	**+1.0**
I29M	**Ogilvie Camp,**	**44.47**	**35**	IAmb	IAmb	07 01 19.6	
	comp=Z,3.2nm,0.8s						
EPYK	**Eagle Plains**	**44.97**	**33**	IAmb	IAmb	07 01 24.0	
	comp=Z,4.6nm,0.8s						
MK31	**Makanchi Array**	**45.47**	**298**	P	**P**	**07 01 25.8**	**+0.6**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK31	**Makanchi Array**	**45.47**	**298**	P	**P**	**07 01 25.8**	**+0.6**
MKAR	**Makanchi Array**	**45.47**	**298**	P	**P**	**07 01 25.6**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=78,slow=8.7,SNR=45						
	comp=Z,3.2nm,0.5s						
MKAR	**Makanchi Array**	**45.47**	**298**	P	**P**	**07 01 25.7**	**+0.5**
MKAR	**Makanchi Array**	**45.47**	**298**	P	**P**	**07 01 25.7**	**+0.5**
MKAR	**Makanchi Array**	**45.47**	**298**	*e*P	**P**	**07 01 25.7**	**+0.5**
MAKZ	**Makanchi**	**45.66**	**298**	P	**P**	**07 01 27.3**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**45.66**	**298**	P	**P**	**07 01 27.3**	**+0.5**
MAKZ				IAmb	IAmb	07 01 28.2	
	comp=Z,5.1nm,0.9s						
INK	**Inuvik**	**45.90**	**30**	P	**P**	**07 01 30.1**	**+1.9**
	comp=Z,4.2nm,0.6s,baz=277,slow=5.5,SNR=9.4						
	comp=Z,4.2nm,0.6s						
INK	**Inuvik**	**45.90**	**30**	IAmb	IAmb	07 01 30.9	
	comp=Z,4.5nm,0.6s						
KURK	**Kurchatov**	**46.35**	**304***ce*	P	**P**	**07 01 32.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	**Kurchatov**	**46.35**	**304**	P	**P**	**07 01 32.4**	**+0.2**
KURK	**Kurchatov**	**46.35**	**304**	*e*P	**P**	**07 01 32.7**	**+0.6**
C36M	**Paulatuk**	**49.01**	**28**	P	**P**	**07 01 54.0**	**+1.6**
AAK	**Ala-Archa**	**52.25**	**296***ce*	P	**P**	**07 02 17.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AAK	**Ala-Archa**	**52.25**	**296**	*e*P	**P**	**07 02 17.9**	**+0.4**
KKAR	**Karatay Array**	**54.59**	**298**	P	**P**	**07 02 34.7**	**+0.3**
KKAR	**Karatay Array**	**54.59**	**298**	P	**P**	**07 02 34.7**	**+0.3**
KKAR	**Karatay Array**	**54.59**	**298**	IAmb	IAmb	07 02 36.0	
	comp=Z,3.7nm,0.8s						
ARU	**Arti**	**55.02**	**317***d*	*i*P	**P**	**07 02 37.6**	**+0.3**
ARU						07 03 35.5	
ARU						07 04 37.0	
ARU				S	**S**	**07 10 18.9**	**+2.7**
ARU				SS	**SS**	**07 13 58.5**	**-1.1**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ARU	**Arti**	**55.02**	**317**	*e*P	**P**	**07 02 37.6**	**+0.3**
YKA	**Yellowknife Ar**	**55.24**	**34**	P	**P**	**07 02 40.0**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=301,slow=6.9,SNR=13						
	comp=Z,0.7nm,0.7s						
ABKAR	**Akbulak array**	**57.84**	**309**	P	**P**	**07 02 58.1**	**+0.7**
ABKAR	**Akbulak array**	**57.84**	**309**	IAmb	IAmb	07 02 59.0	
	comp=Z,5.4nm,0.7s						
ARCES	**ARCESS Array B**	**59.59**	**340**	P	**P**	**07 03 08.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=44,slow=8.0,SNR=5.8						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**59.59**	**340**	P	**P**	**07 03 08.5**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WRA	**Warramunga Arr**	**64.70**	**195**	P	**P**	**07 03 44.9**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=13,slow=6.9,SNR=2.5						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**65.32**	**333**	P	**P**	**07 03 47.2**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=32,slow=7.3,SNR=19						
	comp=Z,4.0nm,0.7s						
OBN	**Obninsk**	**65.90**	**324**⇑	*e*P	**P**	**07 03 51.5**	**0.0**
OBN				*e*		07 04 22.8	
OBN				*e*		07 06 18.7	
OBN				*e*S	S	07 12 57.9	+23
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,54nm,15.0s						
OBN	**Obninsk**	**65.90**	**324**	*e*P	**P**	**07 03 51.5**	**0.0**
NVAR	**Mina Array Bea**	**66.73**	**59**	P	**P**	**07 03 59.5**	**+2.0**
	comp=Z,1.0nm,0.6s,baz=296,slow=7.4,SNR=10						
	comp=Z,1.0nm,0.6s						
VORR	**Voronezh**	**67.05**	**320**	*e*P	**P**	**07 04 01.6**	**+2.7**
VORR				pmax	pmax		
	comp=Z,30nm,0.3s						
ASAR	**Alice Springs**	**68.42**	**194**	P	**P**	**07 04 09.5**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=14,slow=6.3,SNR=6.6						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**69.14**	**50**	P	**P**	**07 04 13.7**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=213,slow=1.0,SNR=7.1						
	comp=Z,0.6nm,0.6s						
NB2	**NORSAR Subarra**	**69.95**	**339**	P	**P**	**07 04 17.4**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.95**	**339**	P	**P**	**07 04 17.3**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=31,slow=6.3,SNR=11						
	comp=Z,2.2nm,0.7s						
KIV	**Kislovodsk**	**70.50**	**313**	*e*P	**P**	**07 04 22.7**	**+2.0**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,49nm,18.0s						
KIV	**Kislovodsk**	**70.50**	**313**	*e*P	**P**	**07 04 22.7**	**+2.0**
KBZ	**Khabaz**	**70.54**	**312**	P	**P**	**07 04 22.7**	**+2.0**
	comp=Z,4.7nm,0.7s,baz=61,slow=3.6,SNR=14						
	comp=Z,4.7nm,0.7s						
KBZ	**Khabaz**	**70.54**	**312***ce*	P	**P**	**07 04 22.6**	**+1.8**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	**Khabaz**	**70.54**	**312**	*e*P	**P**	**07 04 22.6**	**+1.8**
ZEI	**Tsey**	**70.63**	**311**	*e*P	**P**	**07 04 21.8**	**+0.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZEI	**Tsey**	**70.63**	**311**	*e*P	**P**	**07 04 21.8**	**+0.2**
SHA1	**Shidzhatmaz**	**70.66**	**312**	*i* P	**P**	**07 04 22.6**	**+0.7**
AKASG	**Malin Array Be**	**72.16**	**324**	P	**P**	**07 04 30.8**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=37,slow=6.5,SNR=21						
	comp=Z,5.8nm,0.7s						
AKASG	**Malin Array Be**	**72.16**	**324**	P	**P**	**07 04 31.3**	**+0.9**
AKBB	**Malin Array Si**	**72.16**	**324***ce*	P	**P**	**07 04 31.0**	**+0.5**
SOC	**Sochi**	**72.32**	**314**	*e*P	**P**	**07 04 29.0**	**-2.6**
SOC				*e*		07 07 09.0	
SOC				*e*PPP	PPP	07 08 55.5	
SOC				*e*S	**S**	**07 13 49.9**	**-1.6**
SOC				*e*SS	**SS**	**07 18 29.8**	**+0.6**
SOC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,70nm,21.0s						
CLL	**Collm**	**77.77**	**333**	*e*P	**P**	**07 05 03.0**	**+0.2**
CLL				*e*		07 05 15.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CLL	**Collm**	**77.77**	**333**	*e*P	**P**	**07 05 03.0**	**+0.2**
	comp=Z,5.0nm,0.5s						
CLL				*e*pP	**pP**	**07 05 15.0**	**+0.6**
TREC	**Trest**	**78.63**	**331**	*e*P	P	07 04 59.4	-8.3
TREC	**Trest**	**78.63**	**331**	*e*P	P	07 04 59.4	-8.3
KHC	**Kasperske Hory**	**79.44**	**332**	*e*P	**P**	**07 05 12.5**	**+0.4**
KHC	**Kasperske Hory**	**79.44**	**332**	*e*P	**P**	**07 05 12.5**	**+0.4**
GERES	**GERESS Array B**	**79.64**	**332**	P	**P**	**07 05 13.6**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=48,slow=6.2,SNR=7.8						
	comp=Z,0.7nm,0.5s						
TXAR	**Lajitas Array**	**81.81**	**57**	P	**P**	**07 05 26.3**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=299,slow=3.8,SNR=8.3						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**115.79**	**324**	PKP	**PKiKP**	**07 11 48.8**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=77,slow=1.3,SNR=1.4						
NNA	**Nana**	**129.82**	**65***c*	*i*PKIKP	**PKPdf**	**07 12 09.7**	**-5.9**
NNA				pmax	pmax		
	comp=Z,15nm,1.3s						

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*NEIC **10** 07:04:21.9±0.9, 17°.2S±0°.3×177°.1W±0°.2, h545^{km}±21^{km}, mb4.3/14, Error ellipse: s-maj=43.4km s-min=18.4km az=207.0*

*IDC **10** 07:04:22.9±50.0, 17°.16S×177°.31W, h551^{km}±30^{km}, mb3.1/3, mbtmp4.1/4, Error ellipse: s-maj=858.8km s-min=133.4km az=78.0*

ISC 10 07:04:22.9±4.1**, 17°.2S**±0°.5×**177°.3W**±0°.4**, h550**^{km}**, n20, σ0^s.32**/20**, mb4.2**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.45**	**263**	P	**P**	**07 05 48.6**	**+0.3**
	30nm,0.7s,baz=129,slow=16,SNR=16						
MSVF	**Nonsavu**	**4.45**	**263**	P	**P**	**07 05 48.5**	**+0.2**
URZ	**Urewera**	**21.53**	**192**	P	**P**	**07 08 33.0**	**+0.4**
URZ				IAmb	IAmb	07 08 56.0	
	comp=Z,11nm,1.2s						
CMWZ	**Cape Campbell**	**25.51**	**195**	P	**P**	**07 09 08.0**	**0.0**
TOO	**Toolangi**	**38.41**	**231**	P	**P**	**07 10 57.8**	**+0.1**
STKA	**Stephens Creek**	**39.87**	**241**	P	**P**	**07 11 09.5**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=121,slow=12,SNR=3.3						
	comp=Z,2.8nm,0.9s						
STKA	**Stephens Creek**	**39.87**	**241**	P	**P**	**07 11 09.3**	**-0.3**
BBOO	**Buckleboo**	**44.65**	**241**	P	**P**	**07 11 46.9**	**-0.1**
WR0	**Warramunga Arr**	**45.59**	**259**	P	**P**	**07 11 54.7**	**+0.3**
WR0				IAmb	IAmb	07 12 16.2	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**45.74**	**259**	P	**P**	**07 11 55.7**	**+0.1**
WB0				IAmb	IAmb	07 12 20.9	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**45.77**	**259**	P	**P**	**07 11 56.1**	**+0.3**
WB2				IAmb	IAmb	07 12 07.8	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**45.78**	**259**	P	**P**	**07 11 55.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=94,slow=7.1,SNR=11						
	comp=Z,0.4nm,0.5s						
AS31	**Alice Springs**	**45.98**	**254**	P	**P**	**07 11 57.0**	**-0.4**
ASAR	**Alice Springs**	**45.98**	**254**	P	**P**	**07 11 57.8**	**+0.4**
	comp=Z,4.0nm,0.5s,baz=89,slow=8.1,SNR=80						
	comp=Z,4.0nm,0.5s						
FORT	**Forrest**	**51.24**	**244**	P	**P**	**07 12 36.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**54.17**	**260**	P	**P**	**07 12 57.0**	**-0.3**
FITZ				IAmb	IAmb	07 13 14.8	
	comp=Z,13nm,1.4s						
PSA00	**Pilbara Seismi**	**59.09**	**255**	P	**P**	**07 13 31.4**	**+0.4**
PSA00				IAmb	IAmb	07 13 33.3	
	comp=Z,44nm,1.5s						
NWAO	**Narrogin (SRO)**	**60.45**	**242**	P	**P**	**07 13 39.3**	**-0.7**
NWAO				IAmb	IAmb	07 13 44.2	
	comp=Z,34nm,1.4s						
VNDA	**Vanda**	**61.23**	**185**	P	**P**	**07 13 44.1**	**-0.1**
QSPA	**South Pole Qui**	**72.84**	**180**	P	**P**	**07 14 55.9**	**+0.1**
QSPA				IAmb	IAmb	07 15 04.3	
	comp=Z,3.9nm,1.1s						

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*SKHL **10** 07:04:23.4±0.3, 43°.60N×148°.70E, h35^{km}±5^{km}, mb5.1/3*

*JMA **10** 07:04:24.4±0.6, 44°N±2°×14°8E±°, h0^{km}, MD4.2/30,*

MV4.6/30, SE OFF ETOROFU

NIED **10** *07:04:24.4, 43°.61N×148°.27E, h0km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.61; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$-0.74; $M_{r\theta}$1.99; $M_{\theta\phi}$-0.89; $M_{\phi r}$1.35; Fault plane solution: $M_0$2.92000×10^{15} NP1: ϕ_s219.00000°, δ18.00000°, λ75.00000°. NP2: ϕ_s54.00000°, δ73.00000°, λ95.00000°.*

MOS **10** *07:04:25.3±0.9, 43°.72N×148°.51E, h38km, mb4.7/26, MS3.6/7 Error ellipse: s-maj=6.8km s-min=5.5km az=119.9*

NEIC **10** *07:04:27.1±1.4, 43°.70N±0°.08×148°.6E±0°.1, h35km±2km, mb4.4/74, Error ellipse: s-maj=16.4km s-min=12.4km az=131.0*

IDC **10** *07:04:28.3±2.2, 43°.80N×148°.44E, h46km±20km, mb3.9/26, mbtmp4.1/32, ML3.3/6, MS3.6/18, Error ellipse: s-maj=18.0km s-min=12.2km az=156.0*

ISC 10 07:04:27.0±0.4, **43°.71N**±0°.05×**148°.54E**±0°.05, **h40km, n253,** σ**1ˢ.21**/257, **mb4.4**/84, **MS3.9**/23, **13C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.60**	**343**	c *i*PN	**Pn**	**07 04 51.0**	**-1.7**
KUR				*e*S	**Sn**	**07 05 10.5**	**-1.6**
KUR				pmax	pmax		
	comp=Z,790nm,0.6s						
KUR				pmax	pmax		
	comp=N,278nm,0.3s						
KUR				pmax	pmax		
	comp=E,294nm,0.4s						
KUR				smax	smax		
	comp=N,6μm,1.4s						
KUR				smax	smax		
	comp=E,3μm,1.8s						
KUR				smax	smax		
	comp=E,2μm,0.6s						
KUR				smax	smax		
	comp=N,1μm,0.8s						
KUR	**Kuril'sk**	**1.60**	**343**	*i* P	**Pn**	**07 04 51.0**	**-1.7**
KUR				AMB	AMB	07 04 57.2	
	comp=N,280nm,0.4s						
KUR				AMB	AMB	07 04 57.2	
	comp=N,290nm,0.4s						
KUR				AMB	AMB	07 04 57.2	
	comp=N,790nm,0.5s						
KUR				*e*S	**Sn**	**07 05 11.5**	**-0.6**
KUR				A	A	07 05 19.9	
	comp=N,6μm,1.8s						
KUR				A	A	07 05 19.9	
	comp=N,3μm,1.8s						
KUR				A	A	07 05 27.0	
	comp=N,2μm,0.6s						
KUR				A	A	07 05 27.0	
	comp=N,2μm,0.6s						
KUR				AMS	AMS	07 05 35.4	
	comp=N,5μm,9.2s						
YUK	**Yuzh-Kuril'sk**	**1.96**	**280**	*e*PN	**Pn**	**07 04 56.3**	**-1.4**
YUK				*e*S	**Sn**	**07 05 21.3**	**+0.3**
YUK				pmax	pmax		
	comp=Z,633nm,0.3s						
YUK				pmax	pmax		
	comp=N,218nm,0.1s						
YUK				pmax	pmax		
	comp=E,71nm,0.1s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK				smax	smax		
	comp=E,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.96**	**280**	*e*P	**Pn**	**07 04 56.5**	**-1.2**
YUK				AMB	AMB	07 05 04.1	
	comp=E,610nm,0.5s						
YUK				*e*S	**Sn**	**07 05 21.3**	**+0.3**
YUK				A	A	07 05 26.1	
	comp=E,3μm,0.6s						
YUK				A	A	07 05 26.1	
	comp=E,2μm,0.6s						
NEM2	**Nemuro 2**	**2.06**	**261**	*e*P	**Pn**	**07 04 57.5**	**-1.5**
NMR	**Nemuro--Hokkai**	**2.07**	**262**	*e*PN	**Pn**	**07 04 57.5**	**-1.7**
NMR				*e*S	**Sn**	**07 05 24.7**	**+1.0**
NMR	**Nemuro--Hokkai**	**2.07**	**262**	*e*P	**Pn**	**07 04 57.9**	**-1.3**
NMR				*e*S	**Sn**	**07 05 24.0**	**+0.3**
RUSJ	**Misakicho**	**2.41**	**281**	*e*PN	**Pn**	**07 05 03.1**	**-0.7**
RUSJ				*e*S	**Sn**	**07 05 33.9**	**+1.8**
JRA	**Rausu**	**2.48**	**276**	*e*P	**Pn**	**07 05 04.3**	**-0.5**
JKHN	**Kushirohamanak**	**2.54**	**257**	*e*P	**Pn**	**07 05 05.1**	**-0.5**
JKHN	**Kushirohamanak**	**2.54**	**257**	A	A	07 05 05.1	
	comp=E,3.0nm,3.6s,comp=E,4.0nm,5.9s						
JNSB	**Nemuroshibetsu**	**2.56**	**273**	*e*P	**Pn**	**07 05 05.5**	**-0.4**
JNSB	**Nemuroshibetsu**	**2.56**	**273**	A	A	07 05 05.5	
	comp=E,4.0nm,3.4s,comp=E,3.0nm,5.3s						
JNK	**Nakash**	**2.77**	**269**	*e*P	**Pn**	**07 05 08.1**	**-0.8**
JAK	**Akkeshi**	**2.89**	**257**	*e*P	**Pn**	**07 05 10.4**	**0.0**
JTKR	**Abashiri--Toko**	**3.36**	**276**	*e*P	**Pn**	**07 05 17.2**	**+0.3**
JAR	**Ashorobuto**	**3.49**	**265**	*e*P	**Pn**	**07 05 18.5**	**-0.3**
JCH	**Churui**	**3.94**	**256**	*e*P	**Pn**	**07 05 25.1**	**+0.2**
JKK2	**Kamakawa 2**	**4.19**	**274**	*e*P	**Pn**	**07 05 29.2**	**+0.9**
ERM	**Erimo**	**4.30**	**249**	c*e*PN	**Pn**	**07 05 30.9**	**+1.1**
ERM				pmax	pmax		
	comp=Z,69nm,0.8s						
ERM	**Erimo**	**4.30**	**249**		**Pn**	**07 05 31.2**	**+1.4**
JKA	**Kamikawa-asahi**	**4.31**	**277**		**Pn**	**07 05 30.9**	**+1.0**
JKA	**Kamikawa-asahi**	**4.31**	**277**	*e*P	**Pn**	**07 05 30.9**	**+1.0**
ASAJ	**Asahikawa**	**4.31**	**277**	P	**Pn**	**07 05 31.8**	**+1.8**
	comp=Z,2.2nm,0.3s,baz=95,slow=31,SNR=5.5						
ASAJ				LR	LR	07 07 18.6	
	comp=Z,684nm,20.3s,baz=173,slow=40						
	comp=Z,21nm,0.5s						
ASAJ	**Asahikawa**	**4.31**	**277**	PN	**Pn**	**07 05 30.9**	**+0.9**
JNBK	**Urakawa-nobuka**	**4.47**	**253**	*e*P	**Pn**	**07 05 32.3**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.21**	**311**	*e*PN	**Pn**	**07 05 42.2**	**-0.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.21**	**311**		**Pn**	**07 05 42.7**	**+0.5**
YSS	**Yuzh-Sakhalins**	**5.21**	**311**	*e*P	**Pn**	**07 05 42.4**	**+0.1**
YSS				AMB	AMB	07 05 54.8	
	comp=Z,50nm,0.7s						
YSS				*e*S	**Sn**	**07 06 40.8**	**-0.2**
YSS				A	A	07 06 57.6	
	comp=Z,50nm,0.8s						
YSS				A	A	07 06 57.6	
	comp=Z,80nm,0.8s						
YSS				AMS	AMS	07 07 41.0	
	comp=Z,500nm,14.0s						
YSS				AMS	AMS	07 07 41.0	
	comp=Z,500nm,14.0s						
JEW	**Eniwo**	**5.25**	**263**		**Pn**	**07 05 43.6**	**+0.8**
JEW	**Eniwo**	**5.25**	**263**	*e*P	**Pn**	**07 05 44.2**	**+1.4**
JRBN	**Rebuntou**	**5.61**	**290**	*e*P	**Pn**	**07 05 48.7**	**+1.0**
JOT	**Ohata**	**6.00**	**250**	*e*P	**Pn**	**07 05 53.4**	**+0.3**
JOT				*e*S	**Sn**	**07 06 56.9**	**-3.7**
JANG	**Nango**	**6.20**	**240**	*e*P	**Pn**	**07 05 54.2**	**-1.7**
JTM	**Tenmabayashi**	**6.26**	**245**	Pn	**Pn**	**07 05 56.6**	**-0.2**
UGL	**Uglegorsk**	**6.99**	**322**	*e*P	**Pn**	**07 06 07.9**	**+1.3**
UGL				AMB	AMB	07 06 09.7	
	comp=Z,30nm,0.8s						
TYV	**Tymovskoe**	**8.19**	**333**	*e*P	**Pn**	**07 06 24.8**	**+1.6**
TYV				AMB	AMB	07 06 28.8	
	comp=Z,10.0nm,0.8s						
JMM	**Marumori**	**8.28**	**228**		**Pn**	**07 06 23.0**	**-1.4**
TEY	**Ternei**	**8.65**	**283**	*e*P	**Pn**	**07 06 32.0**	**+2.5**
TEY				AMB	AMB	07 06 35.9	
	comp=Z,10.0nm,0.9s						
SKR	**Severo-Kuril’s**	**8.67**	**34**	*e*PN	**Pn**	**07 06 33.3**	**+3.5**
SKR				pmax	pmax		
	comp=Z,26nm,0.8s						
SKR				MLR	MLR		
	comp=Z,500nm,12.0s						
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
SKR	**Severo-Kuril’s**	**8.67**	**34**	*e*P	**Pn**	**07 06 28.5**	**-1.3**
SKR				AMB	AMB	07 06 35.2	
	comp=Z,30nm,0.8s						
SKR				*e*S	**Sn**	**07 08 02.3**	**-3.9**
SKR				A	A	07 08 09.0	
	comp=Z,60nm,0.8s						
SKR				A	A	07 08 09.0	
	comp=Z,70nm,0.8s						
SKR				AMS	AMS	07 10 14.2	
	comp=Z,500nm,12.0s						
PAU	**Pauzhetka**	**9.56**	**33**	*e*P	**Pn**	**07 06 40.2**	**-1.7**
PAU				AMB	AMB	07 06 53.3	
	comp=Z,10.0nm,0.8s						
JSD	**Sado**	**9.62**	**237**	Pn	**Pn**	**07 06 42.1**	**-0.7**
KHBR	**Khabarovsk**	**10.50**	**302**	*e*P	**Pn**	**07 06 55.4**	**+0.6**
OKH	**Okha**	**10.52**	**341**	*e*P	**Pn**	**07 06 55.4**	**+0.4**
OKH				AMB	AMB	07 06 56.7	
	comp=Z,20nm,0.5s						
MJAR	**Matsushiro Arr**	**10.66**	**231**	P	**Pn**	**07 06 56.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=5.7						
	comp=Z,1.3nm,0.3s						
GRNR	**Gornyy**	**10.84**	**315**	*e*P	**Pn**	**07 07 01.0**	**+1.6**
GRNR				AMB	AMB	07 07 02.7	
PEA0B	**Petropavlovsk-**	**11.19**	**30**	PN	**Pn**	**07 07 05.3**	**+1.0**
PEA0B	**Petropavlovsk-**	**11.19**	**30**	Pn	**Pn**	**07 07 05.3**	**+1.0**
PETK	**Petropavlovsk-**	**11.19**	**30**	P	**Pn**	**07 07 05.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=1.3						
PETK				LR	LR	07 11 59.1	
	comp=Z,246nm,18.0s,baz=234,slow=40						
	comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-**	**11.19**	**30**	PN	**Pn**	**07 07 05.7**	**+1.4**
PETK	**Petropavlovsk-**	**11.19**	**30**	Pn	**Pn**	**07 07 05.7**	**+1.4**
PET	**Petropavlovsk**	**11.48**	**32**	*e*P	**Pn**	**07 07 05.0**	**-3.2**
JGF	**Kuroka**	**11.81**	**230**	Pn	**Pn**	**07 07 13.2**	**+0.3**
USRK	**Ussuriysk Ar.**	**11.94**	**278**	LR	LR	07 12 01.8	
	comp=Z,318nm,18.7s,baz=93,slow=38						
MSHR	**Mys Shultsa**	**12.75**	**271**	*i* PN	**Pn**	**07 07 25.4**	**-0.1**
MSHR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MSHR				MLR	MLR		
	comp=Z,116nm,15.0s						
KLR	**Kul'dur**	**12.81**	**301**	P	**Pn**	**07 07 27.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=48,slow=15,SNR=4.1						
KLR				LR	LR	07 12 34.8	
	comp=Z,238nm,20.1s,baz=90,slow=38						
	comp=Z,2.2nm,0.9s						
KLR	**Kul'dur**	**12.81**	**301**	*i* PN	**Pn**	**07 07 26.7**	**+0.3**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KLR				MLR	MLR		
	comp=Z,352nm,14.0s						
KLR	**Kul'dur**	**12.81**	**301**	*i* P	**Pn**	**07 07 26.7**	**+0.3**
MA2	**Magadan**	**15.95**	**4**	LR	LR	07 14 13.1	
	comp=Z,83nm,19.2s,baz=198,slow=37						
KSRS	**Korea Array**	**16.84**	**255**	P	**Pn**	**07 08 18.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=56,slow=11,SNR=3.1						
KSRS				LR	LR	07 14 32.9	
	comp=Z,107nm,20.9s,baz=70,slow=36						
	comp=Z,1.0nm,0.5s						
ZEA	**Zeya**	**17.19**	**313**	*e*P	**P**	**07 08 24.3**	**-0.8**
ZEA				MLR	MLR		
	comp=Z,200nm,10.0s						
ZEA	**Zeya**	**17.19**	**313**	*e*P	**Pn**	**07 08 21.7**	**-2.2**
ZEA				AMB	AMB	07 08 27.4	
	comp=Z,10.0nm,0.7s						
KROS	**Kirovskiy**	**17.66**	**315**	*e*P	**Pn**	**07 08 28.5**	**-1.3**
SEY	**Seymchan**	**19.39**	**5**	P	**P**	**07 08 47.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=175,slow=11,SNR=14						
SEY				LR	LR	07 16 42.1	
	comp=Z,160nm,19.1s,baz=260,slow=38						
	comp=Z,7.0nm,1.0s						
YAK	**Yakutsk**	**21.44**	**335**	*e*P	**P**	**07 09 05.9**	**-5.5**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
XLT	**XiLinHaoTe**	**23.35**	**282**	⇑*i*P	**P**	**07 09 31.4**	**-0.3**
XLT				S	S	07 13 16.7	-25
XLT				pmax	pmax		
	comp=Z,19nm,0.7s						
XLT				pmax	pmax		
	comp=Z,110nm,4.7s						
XLT				LR	LR		
	comp=N,13nm,16.7s						
XLT				LR	LR		
	comp=E,250nm,15.2s						
XLT				LR	LR		
	comp=Z,220nm,13.6s						
BILL	**Bilibino**	**26.13**	**15**	⇑*e*P	**P**	**07 09 58.0**	**+1.2**
BILL				*e*		07 10 37.7	
BILL				*e*S	**S**	**07 14 28.8**	**+3.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,155nm,15.0s						
BILL	**Bilibino**	**26.13**	**15**	*e*P	**P**	**07 09 58.0**	**+1.2**
HHC	**Hu-ho-hao-te**	**27.36**	**277**	*e*P	**P**	**07 10 09.1**	**+0.8**
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,5.0s						
HHC				LR	LR		
	comp=E,220nm,17.3s						
HHC				LR	LR		
	comp=Z,350nm,16.5s						
H11N2	**WAKE ISLAND Hy**	**28.43**	**141**	T	T	07 41 11.1	
	baz=332,slow=75,SNR=66						
H11N1	**WAKE ISLAND Hy**	**28.44**	**141**	T	T	07 41 17.0	
	baz=332,slow=75,SNR=83						
H11N3	**WAKE ISLAND Hy**	**28.45**	**141**	T	T	07 41 17.3	
	baz=332,slow=75,SNR=76						
ULN	**Ulaanbaatar**	**28.97**	**293**	P	**P**	**07 10 23.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,13nm,1.4s						
ULN	**Ulaanbaatar**	**28.97**	**293**	P	**P**	**07 10 23.0**	**+0.3**
ULN				IAmb	IAmb	07 10 24.2	
	comp=Z,13nm,1.4s						
ULN	**Ulaanbaatar**	**28.97**	**293**	*e*P	**P**	**07 10 23.0**	**+0.3**
NIKH	**Nikolski High**	**29.41**	**56**	P	**P**	**07 10 25.4**	**-0.9**
SONM	**Songino Array**	**29.41**	**293**	P	**P**	**07 10 26.4**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=82,slow=8.3,SNR=12						
SONM				LR	LR	07 23 23.5	
	comp=Z,233nm,18.7s,baz=74,slow=39						
	comp=Z,3.1nm,0.6s						
SONM	**Songino Array**	**29.41**	**293**	P	**P**	**07 10 26.8**	**+0.2**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**29.41**	**293**	P	**P**	**07 10 26.8**	**+0.2**
H11S1	**WAKE ISLAND Hy**	**29.41**	**143**	T	T	07 42 36.9	
	baz=333,slow=76,SNR=128						
H11S3	**WAKE ISLAND Hy**	**29.42**	**143**	T	T	07 42 34.9	
	baz=333,slow=76,SNR=114						
H11S2	**WAKE ISLAND Hy**	**29.43**	**143**	T	T	07 42 26.8	
	baz=333,slow=76,SNR=86						
TIXI	**Tiksi**	**29.61**	**348**	*i* P	**P**	**07 10 29.2**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,42nm,6.0s						
TIXI	**Tiksi**	**29.61**	**348**	*e*P	**P**	**07 10 29.2**	**+1.4**
XAN	**Xi'an**	**32.05**	**266**	P	**P**	**07 10 48.2**	**-1.7**
XAN				pP	pP	07 10 59.4	-0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.9s						
XAN				LR	LR		
	comp=E,180nm,15.1s						
XAN				LR	LR		
	comp=Z,160nm,15.9s						
LZH	**Lanzhou**	**34.78**	**273**	⇓P	**P**	**07 11 15.1**	**+1.4**
LZH				pP	pwP	07 11 27.3	-1.1
LZH				sP	sP	07 11 35.0	+6.9
LZH				pmax	pmax		
	comp=Z,26nm,1.4s						
LZH				pmax	pmax		
	comp=Z,74nm,4.3s						
LZH				LR	LR		
	comp=N,140nm,11.4s						
LZH				LR	LR		
	comp=E,110nm,11.4s						
LZH				LR	LR		
	comp=Z,160nm,12.5s						
GTA	**Gaotai**	**36.29**	**280**	*e*P	**P**	**07 11 27.8**	**+1.2**
GTA				pP	pP	07 11 32.9	-3.8
GTA				sP	sP	07 11 35.5	-5.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,6.0s						
GTA				LR	LR		
	comp=N,82nm,15.5s						
GTA				LR	LR		
	comp=E,180nm,16.7s						
GTA				LR	LR		
	comp=Z,180nm,14.7s						
TTA	**Tatalina**	**36.83**	**39**	P	**P**	**07 11 30.3**	**-0.6**
TTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TTA	**Tatalina**	**36.83**	**39**	P	**P**	**07 11 30.3**	**-0.6**
TTA				IAmb	IAmb	07 11 44.9	
	comp=Z,6.9nm,1.3s						
SVW2	**Sparrevohn**	**36.92**	**42**	P	**P**	**07 11 32.2**	**+0.6**
SVW2				IAmb	IAmb	07 11 34.0	
	comp=Z,7.5nm,1.1s						
CD2	**Chengdu**	**37.40**	**265**	⇑*i*P	**P**	**07 11 36.5**	**+0.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
J20K	**Nowinta River**	**37.77**	**37**	P	**P**	**07 11 40.1**	**+1.4**
J20K				IAmb	IAmb	07 11 53.7	
	comp=Z,5.6nm,1.1s						
IMAR	**Indian Mountai**	**38.11**	**34**	P	**P**	**07 11 42.1**	**+0.5**
OHAK	**Old Harbor**	**38.21**	**48**	P	**P**	**07 11 42.6**	**+0.1**
H21K	**Melozitna Rive**	**38.47**	**35**	P	**P**	**07 11 45.7**	**+1.0**
H21K				IAmb	IAmb	07 11 48.5	
	comp=Z,6.5nm,1.2s						
KDAK	**Kodiak Island**	**38.54**	**47**	P	**P**	**07 11 45.3**	**0.0**
	comp=Z,4.3nm,1.0s,baz=209,slow=10,SNR=1.5						
	comp=Z,4.3nm,1.0s						
KDAK	**Kodiak Island**	**38.54**	**47**	P	**P**	**07 11 45.8**	**+0.5**
CAST	**Castle Rocks**	**38.64**	**38**	P	**P**	**07 11 47.2**	**+1.2**
BRLK	**Bradley Lake**	**39.27**	**44**	P	**P**	**07 11 51.4**	**0.0**
BRLK				IAmb	IAmb	07 12 14.1	
	comp=Z,18nm,1.3s						
COLD	**Coldfoot**	**39.65**	**32**	P	**P**	**07 11 55.9**	**+1.4**
COLD				IAmb	IAmb	07 12 09.8	
	comp=Z,4.6nm,0.9s						
NRIK	**Noril'sk**	**39.77**	**331**	*i* P	**P**	**07 11 56.6**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
NRIK				MLR	MLR		
	comp=Z,110nm,14.0s						
H23K	**Yukon River**	**39.82**	**35**	P	**P**	**07 11 57.8**	**+1.8**
H23K				IAmb	IAmb	07 12 03.6	
	comp=Z,14nm,1.5s						
I23K	**Minto, Yukon-K**	**39.88**	**36**	P	**P**	**07 11 57.4**	**+1.0**
NEA2	**Nenana**	**39.99**	**37**	P	**P**	**07 11 58.6**	**+1.3**
NEA2				IAmb	IAmb	07 12 12.1	
	comp=Z,3.3nm,0.7s						
TOLK	**Toolik Lake Re**	**40.02**	**30**	P	**P**	**07 11 58.5**	**+1.0**
MDM	**Murphy Dome**	**40.35**	**36**	P	**P**	**07 12 01.2**	**+0.8**
SML	**Sawmill**	**40.39**	**41**	P	**P**	**07 12 00.8**	**0.0**
SML				IAmb	IAmb	07 12 17.7	
	comp=Z,8.2nm,1.1s						
WRH	**Wood River Hil**	**40.41**	**37**	P	**P**	**07 12 01.5**	**+0.7**
WRH				IAmb	IAmb	07 12 20.9	
	comp=Z,6.4nm,1.4s						
H24K	**Noodor Dome**	**40.51**	**35**	P	**P**	**07 12 03.3**	**+1.6**
CCB	**Clear Creek Bu**	**40.53**	**36**	P	**P**	**07 12 03.5**	**+1.7**
POKR	**Poker Plat Res**	**40.69**	**36**	P	**P**	**07 12 03.9**	**+0.8**
POKR				IAmb	IAmb	07 12 05.4	
	comp=Z,4.7nm,0.8s						
DHY	**Denali Highway**	**40.77**	**39**	P	**P**	**07 12 03.7**	**-0.3**
DHY				IAmb	IAmb	07 12 31.8	
	comp=Z,6.7nm,1.3s						
HDA	**Harding Lake**	**40.91**	**37**	P	**P**	**07 12 05.8**	**+0.9**
IL31		**40.93**	**36**	P	**P**	**07 12 05.7**	**+0.7**
ILAR	**Eielson Array**	**40.93**	**36**	P	**P**	**07 12 05.5**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=264,slow=7.4,SNR=9.8						
	comp=Z,0.7nm,0.6s						
GOMU	**GeErMu**	**41.24**	**278**	P	**P**	**07 12 08.1**	**-0.3**
GOMU				pP	pP	07 12 11.9	-6.7
GOMU				sP	sP	07 12 15.7	-7.2
GOMU				S	**S**	**07 18 21.0**	**+1.3**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,29nm,5.3s						
GOMU				LR	LR		
	comp=N,120nm,17.6s						
GOMU				LR	LR		
	comp=E,160nm,17.7s						
GOMU				LR	LR		
	comp=Z,140nm,18.0s						
PZH	**PanZhiHua**	**41.36**	**261**	P	**P**	**07 12 09.3**	**+0.1**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,4.1s						
M24K	**Tolsona, Glenn**	**41.39**	**40**	P	**P**	**07 12 08.9**	**0.0**
M24K				IAmb	IAmb	07 12 31.4	
	comp=Z,13nm,1.2s						
KLU	**Klutina**	**41.57**	**41**		**P**	**07 12 11.0**	**+0.6**
J25K	**Salcha River,**	**41.58**	**36**	P	**P**	**07 12 10.8**	**+0.3**
BMAR	**Burnt Mountain**	**41.83**	**32**	P	**P**	**07 12 14.6**	**+2.1**
RIDG	**Independent Ri**	**41.87**	**38**	P	**P**	**07 12 11.8**	**-1.0**
N25K	**Chitina, Valde**	**42.18**	**41**	P	**P**	**07 12 15.3**	**-0.2**
SCRK	**Sand Creek**	**42.23**	**37**	P	**P**	**07 12 16.3**	**+0.5**
BMRM	**Bremner River**	**42.26**	**42**	P	**P**	**07 12 13.3**	**-2.7**
BMRM				IAmb	IAmb	07 12 34.5	
	comp=Z,7.6nm,1.0s						
BERG	**Berg Lake**	**42.78**	**43**	P	**P**	**07 12 20.8**	**+0.5**
BERG				IAmb	IAmb	07 12 46.4	
	comp=Z,7.3nm,0.9s						
M26K	**Nabesna, AK**	**42.84**	**40**	P	**P**	**07 12 22.4**	**+1.7**
M26K				IAmb	IAmb	07 12 34.0	
	comp=Z,4.2nm,0.8s						
WMQ	**Urumqi**	**43.04**	**292**	*e*P	**P**	**07 12 23.6**	**+0.9**
WMQ				pP	pwP	07 12 37.1	-0.4
WMQ				sP	sP	07 12 44.7	+7.5
WMQ				PP	**PcP**	**07 14 07.4**	**-4.8**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				LR	LR		
	comp=N,210nm,17.1s						
WMQ				LR	LR		
	comp=E,470nm,15.5s						
WMQ				LR	LR		
	comp=Z,180nm,16.3s						
L27K	**Beaver Creek,**	**43.29**	**39**	P	**P**	**07 12 26.3**	**+1.9**
L27K				IAmb	IAmb	07 12 40.8	
	comp=Z,3.9nm,0.7s						
BCAR	**Beaver Creek A**	**43.30**	**39**	P	**P**	**07 12 26.4**	**+1.9**
M27K	**Edge Creek, AK**	**43.36**	**40**	P	**P**	**07 12 25.4**	**+0.4**
EGAK	**Eagle**	**43.38**	**36**	P	**P**	**07 12 25.6**	**+0.6**
EGAK				IAmb	IAmb	07 12 29.1	
	comp=Z,6.3nm,1.4s						
DAWY	**Dawson**	**44.23**	**37**	P	**P**	**07 12 32.0**	**+0.1**
EPYK	**Eagle Plains**	**45.00**	**33**	P	**P**	**07 12 39.8**	**+1.8**
EPYK				IAmb	IAmb	07 12 40.5	
	comp=Z,5.3nm,0.9s						
MK31	**Makanchi Array**	**45.49**	**298**	P	**P**	**07 12 42.5**	**+0.3**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK31	**Makanchi Array**	**45.49**	**298**	P	**P**	**07 12 42.5**	**+0.3**
MK31				IAmb	IAmb	07 12 43.0	
	comp=Z,9.3nm,1.0s						
MKAR	**Makanchi Array**	**45.49**	**298**	P	**P**	**07 12 42.1**	**0.0**
	comp=Z,7.4nm,0.9s,baz=74,slow=9.1,SNR=10						
MKAR				LR	LR	07 33 11.3	
	comp=Z,180nm,18.1s,baz=70,slow=38						
	comp=Z,7.4nm,0.9s						
MKAR	**Makanchi Array**	**45.49**	**298**	*e*P	**P**	**07 12 42.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MKAR	**Makanchi Array**	**45.49**	**298**	P	**P**	**07 12 41.9**	**-0.3**
MAKZ	**Makanchi**	**45.69**	**298**	P	**P**	**07 12 43.7**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	**Makanchi**	**45.69**	**298**	P	**P**	**07 12 43.7**	**0.0**
MAKZ				IAmb	IAmb	07 12 44.7	
	comp=Z,6.2nm,0.8s						
HYT	**Haines Junctio**	**45.70**	**41**	P	**P**	**07 12 44.1**	**+0.4**
INK	**Inuvik**	**45.93**	**30**	P	**P**	**07 12 46.4**	**+1.1**
	comp=Z,5.3nm,0.9s,baz=286,slow=8.5,SNR=9.2						
	comp=Z,5.3nm,0.9s						
INK	**Inuvik**	**45.93**	**30**	P	**P**	**07 12 46.8**	**+1.5**
INK				IAmb	IAmb	07 12 47.4	
	comp=Z,5.4nm,0.9s						
KURK	**Kurchatov**	**46.38**	**304**	c*e*P	**P**	**07 12 49.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KURK	**Kurchatov**	**46.38**	**304**	P	**P**	**07 12 49.0**	**-0.1**
KURK				IAmb	IAmb	07 12 49.5	
	comp=Z,11nm,1.2s						
KURK	**Kurchatov**	**46.38**	**304**	*e*P	**P**	**07 12 49.2**	**+0.1**
KURBB	**Kurchatov Arra**	**46.47**	**304**	P	**P**	**07 12 49.4**	**-0.4**
	comp=Z,13nm,1.1s,baz=68,slow=8.3,SNR=8.8						
	comp=Z,13nm,1.1s						
A36M	**Sachs Harbour**	**47.99**	**25**	P	**P**	**07 13 02.2**	**+0.9**
A36M				IAmb	IAmb	07 13 14.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,4.6nm,0.8s						
CMAR	Chiang Mai Arr	48.48	255	P	P	07 13 07.7	+1.9
	comp=Z,0.7nm,0.3s,baz=49,slow=7.9,SNR=4.0						
	comp=Z,0.7nm,0.3s						
C36M	Paulatuk	49.04	28	P	P	07 13 09.8	+0.4
BVAR	Borovoye Array	50.30	310	P	P	07 13 18.5	-0.7
	comp=Z,0.5nm,0.3s						
	comp=Z,0.5nm,0.3s						
BRVK	Borovoye	50.35	310	*ce*P	P	07 13 20.6	+1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BRVK	Borovoye	50.35	310	*e*P	P	07 13 20.6	+1.0
BOOM	Boomskoye usch	51.40	295	P	P	07 13 28.8	+0.9
BOOM				pmax	pmax		
	comp=Z,25nm,1.3s						
BOOM	Boomskoye usch	51.40	295	P	P	07 13 28.8	+0.9
AAK	Ala-Archa	52.28	296	P	P	07 13 34.4	0.0
	comp=Z,3.4nm,0.7s,baz=0.0,slow=5.1,SNR=5.2						
	comp=Z,3.4nm,0.7s						
AAK	Ala-Archa	52.28	296	*ce*P	P	07 13 34.2	-0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
AAK	Ala-Archa	52.28	296	P	P	07 13 34.7	+0.3
AAK				IAmb	IAmb	07 13 35.9	
	comp=Z,10nm,1.1s						
AAK	Ala-Archa	52.28	296	*e*P	P	07 13 34.2	-0.2
EUNU	Eureka	52.72	10	P	P	07 13 37.7	+0.7
EUNU				IAmb	IAmb	07 14 01.1	
	comp=Z,2.4nm,0.8s						
KSH	Kashi	52.81	292	P	P	07 13 40.9	+2.6
KSH				LR	LR		
	comp=N,380nm,24.8s						
KSH				LR	LR		
	comp=E,290nm,18.6s						
KSH				LR	LR		
	comp=Z,210nm,15.2s						
HNR	Honiara	53.90	166	P	P	07 13 47.2	+0.9
HNR				pmax	pmax		
	comp=Z,125nm,0.8s						
HNR	Honiara	53.90	166	P	P	07 13 47.2	+0.9
KKAR	Karatay Array	54.62	299	P	P	07 13 51.3	-0.1
KKAR	Karatay Array	54.62	299	P	P	07 13 51.3	-0.1
RES	Resolute Bay	54.72	17	P	P	07 13 51.4	-0.2
	comp=Z,3.7nm,0.9s,baz=330,slow=8.2,SNR=5.8						
	comp=Z,3.7nm,0.9s						
RES	Resolute Bay	54.72	17	P	P	07 13 51.7	+0.1
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RES	Resolute Bay	54.72	17	P	P	07 13 51.7	+0.1
RES				IAmb	IAmb	07 13 52.4	
	comp=Z,4.1nm,1.0s						
KAPI	Kappang	55.01	216	LR	LR	07 34 32.1	
	comp=Z,26nm,21.1s,baz=12,slow=33						
ARU	Arti	55.06	317	P	P	07 13 53.9	-0.4
	comp=Z,0.7nm,0.3s,baz=7.2,slow=9.7,SNR=6.9						
	comp=Z,0.7nm,0.3s						
ARU	Arti	55.06	317	*c i*P	P	07 13 54.6	+0.3
ARU						07 14 53.9	
ARU				S	S	07 21 36.2	+2.5
ARU				SS	SS	07 25 15.2	-1.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ARU	Arti	55.06	317	P	P	07 13 54.1	-0.2
ARU	Arti	55.06	317	*i* P	P	07 13 54.6	+0.3
YKA	Yellowknife Ar	55.27	34	P	P	07 13 56.2	+0.5
	comp=Z,0.6nm,0.7s,baz=298,slow=5.8,SNR=8.2						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	55.27	34	P	P	07 13 56.6	+0.8
GAR	Garm	56.84	294	P	P	07 14 07.3	-0.2
NIL	Nilore	57.76	287	P	P	07 14 14.6	+0.7
NIL				pmax	pmax		
	comp=Z,15nm,1.0s						
NIL	Nilore	57.76	287	P	P	07 14 14.6	+0.7
CHGR	Chuyangaron	57.79	295	P	P	07 14 14.9	+0.7
ABKAR	Akbulak array	57.87	309	P	P	07 14 14.3	-0.1
ABKAR	Akbulak array	57.87	309	P	P	07 14 14.6	+0.1
ABKAR				IAmb	IAmb	07 14 15.4	
	comp=Z,9.5nm,0.9s						
KIRV	Kirov	58.24	323	*ce*P	P	07 14 18.7	+1.9
AKTO	Aktyubinsk	58.32	311	P	P	07 14 17.3	-0.3
	comp=Z,1.8nm,0.9s,baz=49,slow=12,SNR=4.3						
AKTO				LR	LR	07 41 17.4	
	comp=Z,60nm,18.6s,baz=54,slow=38						
	comp=Z,1.8nm,0.9s						
ARCES	ARCESS Array B	59.63	340	P	P	07 14 25.7	-0.7
	comp=Z,6.8nm,1.2s,baz=35,slow=7.2,SNR=6.2						
	comp=Z,6.8nm,1.2s						
ARCES	ARCESS Array B	59.63	340	*e*P	P	07 14 27.1	+0.7
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	59.63	340	P	P	07 14 24.5	-1.9
WB0	Warramunga Arr	64.48	195	P	P	07 14 59.5	0.0
WB0				IAmb	IAmb	07 15 12.2	
	comp=Z,8.9nm,1.4s						
WR0	Warramunga Arr	64.64	195	P	P	07 15 00.3	-0.2
WRA	Warramunga Arr	64.67	195	P	P	07 15 00.7	+0.1
	comp=Z,0.4nm,0.6s,baz=11,slow=7.0,SNR=2.7						
	comp=Z,0.4nm,0.6s						
GEYT	Alibeck	65.33	300	P	P	07 15 05.4	+0.4
	comp=Z,4.2nm,0.8s,baz=72,slow=19,SNR=4.3						
	comp=Z,4.2nm,0.8s						
GEYT	Alibeck	65.33	300	P	P	07 15 05.0	0.0
GEYT				IAmb	IAmb	07 15 18.2	
	comp=Z,3.9nm,0.6s						
FIA1	FINESS Array S	65.36	334	P	P	07 15 04.5	-0.2
FIA1				IAmb	IAmb	07 15 05.2	
	comp=Z,4.6nm,0.8s						
FINES	FINESS Array B	65.36	334	P	P	07 15 03.6	-1.0
	comp=Z,3.8nm,0.7s,baz=46,slow=8.2,SNR=17						
	comp=Z,3.8nm,0.7s						
FINES	FINESS Array B	65.36	334	*e*P	P	07 15 04.1	-0.6
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	65.36	334	P	P	07 15 03.8	-0.9
FCC	Fort Churchill	65.55	31	P	P	07 15 06.2	+0.2
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FCC	Fort Churchill	65.55	31	P	P	07 15 06.2	+0.2
FCC				IAmb	IAmb	07 15 19.7	
	comp=Z,3.3nm,0.7s						
LRM	Limekiln Ridge	65.62	49	P	P	07 15 07.1	+0.1
OBN	Obninsk	65.94	324	⇑*e*P	P	07 15 09.6	+1.1
OBN				*e*		07 15 42.9	
OBN				*e*		07 17 34.9	
OBN				*e*SS	SS	07 28 02.2	-5.0
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,41nm,4.0s						
OBN	Obninsk	65.94	324	*e*P	P	07 15 09.6	+1.1
BOZ	Bozeman (W)	66.21	49	P	P	07 15 12.0	+1.3
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOZ	Bozeman (W)	66.21	49	P	P	07 15 11.9	+1.3
NVAR	Mina Array Bea	66.75	59	P	P	07 15 15.7	+1.4
	comp=Z,0.6nm,0.7s,baz=294,slow=6.1,SNR=6.2						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	66.75	59	P	P	07 15 15.2	+0.9
VORR	Voronezh	67.09	320	*e*P	P	07 15 17.9	+2.0
VORR				pmax	pmax		
	comp=Z,90nm,0.4s						
ASAR	Alice Springs	68.38	194	P	P	07 15 25.4	+1.1
	comp=Z,0.4nm,0.7s,baz=12,slow=6.3,SNR=4.8						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	69.17	50	P	P	07 15 30.2	+0.8
	comp=Z,0.5nm,0.7s,baz=247,slow=3.4,SNR=5.2						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	69.17	50	P	P	07 15 29.7	+0.2
NC405	NORSAR Array S	69.81	339	P	P	07 15 32.5	-0.3
MNK	Minsk	69.90	328	*i* P	P	07 15 31.3	-2.0
MNK				*i*		07 15 56.2	
MNK				*i*		07 18 07.4	
MNK				*i* PPP	PPP	07 19 50.8	
MNK				*i* S	S	07 24 38.4	-1.6
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,19nm,1.0s						
MNK				pmax	pmax		
	comp=N,6.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,154nm,16.0s						
MNK				MLR	MLR		
	comp=N,198nm,14.0s						
MNK				MLR	MLR		
	comp=E,20nm,22.0s						
MNK	Minsk	69.90	328	*i* P	P	07 15 31.4	-2.0
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	07 15 31.4	-2.0
	comp=N,6.0nm,1.0s						
MNK				*i* P	P	07 15 31.4	-2.0
	comp=Z,19nm,1.0s,baz=42						
MNK				*i* PcP	PcP	07 15 56.3	+0.6
MNK				*i* PP	PP	07 18 07.4	-0.3
MNK				*i* PPP	PPP	07 19 50.8	
MNK				*i* S	S	07 24 38.5	-1.6
MNK				*i* SS	SS	07 28 34.7	-34
MNK				*i* SSS	SSS	07 33 04.4	
MNK				*i* LQ	LQ	07 39 25.0	
MNK				*i* LR	LR	07 43 04.2	
MNK				*i* LRM	MLR	07 48 23.8	
	comp=Z,154nm,15.7s						
MNK				*i* LRM	MLR	07 48 38.6	
	comp=N,198nm,13.9s						
MNK				*i* LRM	MLR	07 49 36.7	
	comp=E,20nm,21.9s						
NB201	NORSAR Array S	69.97	339	P	P	07 15 33.3	-0.5
NB2	NORSAR Subarra	70.00	339	P	P	07 15 33.8	-0.2
	comp=Z,2.0nm,0.8s,baz=31,slow=6.5						
NOA	NORSAR Array B	70.00	339	P	P	07 15 33.4	-0.6
	comp=Z,2.8nm,0.7s,baz=32,slow=6.2,SNR=12						
NOA				LR	LR	07 49 05.0	
	comp=Z,33nm,21.2s,baz=25,slow=38						
	comp=Z,2.8nm,0.7s						
NOA	NORSAR Array B	70.00	339	*e*P	P	07 15 33.6	-0.4
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NACGM	Naroch	70.02	328	⇑*e*P	P	07 15 34.9	+0.7
	baz=41						
HFS	Hagfors	70.11	338	LR	LR	07 51 53.0	
	comp=Z,37nm,18.0s,baz=36,slow=41						
SZCU	Shurtz Canyon	70.46	56	P	P	07 15 35.9	-1.6
SZCU				IAmb	IAmb	07 16 03.0	
	comp=Z,6.0nm,0.8s						
KIV	Kislovodsk	70.53	313	*e*P	P	07 15 39.0	+1.4
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,77nm,18.0s						
KIV	Kislovodsk	70.53	313	*e*P	P	07 15 39.0	+1.4
KBZ	Khabaz	70.57	312	P	P	07 15 38.8	+1.0
	comp=Z,6.3nm,0.8s,baz=58,slow=4.3,SNR=14						
	comp=Z,6.3nm,0.8s						
KBZ	Khabaz	70.57	312	*e*P	P	07 15 38.7	+1.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZEI	Tsey	70.66	311	*e*P	P	07 15 37.9	-0.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZEI	Tsey	70.66	311	*e*P	P	07 15 37.9	-0.7
SHA1	Shidzhatmaz	70.70	312	*i* P	P	07 15 39.0	+0.2
ULM	Lac du Bonnet	70.92	38	LR	LR	07 49 16.5	
	comp=Z,34nm,19.3s,baz=110,slow=38						
ONI	Oni	71.04	311	P	P	07 15 41.4	+0.7
ONI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ONI	Oni	71.04	311	P	P	07 15 41.4	+0.7
GNI	Garni	71.96	308	LR	LR	07 51 23.6	
	comp=Z,36nm,18.2s,baz=91,slow=39						
AKASG	Malin Array Be	72.20	324	P	P	07 15 47.2	-0.2
	comp=Z,4.4nm,0.6s,baz=40,slow=6.9,SNR=29						
	comp=Z,4.4nm,0.6s						
AKASG	Malin Array Be	72.20	324	P	P	07 15 47.5	+0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	72.20	324	P	P	07 15 47.5	+0.1
AKASG				IAmb	IAmb	07 15 48.4	
	comp=Z,5.4nm,1.1s						
AKBB	Malin Array Si	72.20	324	*ce*P	P	07 15 47.4	0.0
AKBB	Malin Array Si	72.20	324	P	P	07 15 47.5	0.0
BUR08	Bucovina Ar. S	76.24	324	P	P	07 16 11.6	+0.4
BUR08				IAmb	IAmb	07 16 18.5	
	comp=Z,4.1nm,1.0s						
BURAR	Bucovina Array	76.26	324	P	P	07 16 12.2	+1.0
BURAR				IAmb	IAmb	07 16 12.8	
	comp=Z,2.8nm,0.7s						
MLR	Muntele Rosu	77.60	323	LR	LR	07 53 20.6	
	comp=Z,61nm,18.7s,baz=53,slow=38						
CLL	Collm	77.81	333	*e*P	P	07 16 20.0	+0.2
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	77.81	333	*e*P	P	07 16 20.0	+0.2
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	78.29	314	P	P	07 16 23.9	+1.1
	comp=Z,0.8nm,0.9s,baz=42,slow=16,SNR=1.6						
	comp=Z,0.8nm,0.9s						
BRTR	Keskin Array B	78.29	314	P	P	07 16 24.0	+1.1
KHC	Kasperske Hory	79.48	332	P	P	07 16 29.5	+0.4
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KHC	Kasperske Hory	79.48	332	P	P	07 16 29.5	+0.4
KHC				IAmb	IAmb	07 16 31.0	
	comp=Z,5.2nm,1.0s						
GERES	GERESS Array B	79.68	332	P	P	07 16 30.3	+0.1
	comp=Z,0.5nm,0.4s,baz=19,slow=4.5,SNR=6.6						
	comp=Z,0.5nm,0.4s						
TXAR	Lajitas Array	81.83	57	P	P	07 16 42.8	+0.7
	comp=Z,0.3nm,0.5s,baz=290,slow=4.0,SNR=5.0						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	81.83	57	P	P	07 16 42.5	+0.4
TXAR	Lajitas Array	81.83	57	P	P	07 16 42.5	+0.4
SADO	Sadowa	82.21	32	LR	LR	07 56 14.3	
	comp=Z,42nm,18.1s,baz=48,slow=38						
FCAR	Ozark Folk Cen	83.49	45	P	P	07 16 50.3	-0.2
FCAR				IAmb	IAmb	07 16 50.8	
	comp=Z,2.3nm,0.7s						
TKL	Tuckaleechee C	87.79	40	LR	LR	08 01 02.9	
	comp=Z,27nm,18.1s,baz=358,slow=39						
TORD	Torodi Ar. Bea	115.83	324	PKP	PKiKP	07 23 04.1	-1.4
	comp=Z,0.5nm,1.1s,baz=2.2,slow=2.2,SNR=2.0						

NNC 10 07:08:28.4±0.4, 50°.02N×78°.73E, h0^{km}, mb3.7, mpv3.3, 9C-4D, Error ellipse: s-maj=4.4km s-min=2.5km az=69.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.61	348	⇑P	Pg	07 08 40.4	+0.2
	46nm,0.3s						
KURBB				⇑S	Sg	07 08 49.2	+1.1
	84nm,0.7s						
KURK	Kurchatov	0.70	354	⇑P	Pg	07 08 41.7	0.0
	14nm,0.3s						
KURK				⇑S	Sg	07 08 51.9	+1.1
	71nm,0.8s						
SEM	Semipalatinsk	1.05	68	P	Pg	07 08 48.3	-0.3
	12nm,0.3s						
SEM				S	Sb	07 09 03.6	-0.4
	33nm,0.2s						
MAKZ	Makanchi	3.88	145	⇑Pn	Pn	07 09 30.9	+1.6
	0.9nm,0.5s						
MAKZ				⇑Pg	Pb	07 09 37.0	-0.7
	3.1nm,0.5s						
MAKZ				⇑Lg	Lg	07 10 29.4	
	13nm,0.8s						
BRZS	Berezniki	3.90	272	Pg	Pb	07 09 40.4	+2.3
	125nm,0.6s						
BRZS				Lg	Lg	07 10 32.8	
	3.5nm,0.3s						
MK31	Makanchi Array	4.01	142	⇑Pn	Pn	07 09 32.7	+1.6
	0.1nm,0.1s,baz=322,slow=10,SNR=60						
MK31				⇓Pg	Pb	07 09 41.2	+1.3
	0.9nm,0.2s,baz=324,slow=14,SNR=6.7						
MK31				⇓Lg	Lg	07 10 34.3	
	17nm,0.8s,baz=334,slow=27,SNR=16						
OTUK	Ortayu	4.56	249	⇑Pn	Pn	07 09 39.8	+1.1
	2.2nm,0.3s						
OTUK				⇓Pg	Pb	07 09 51.1	+1.9
	1.2nm,0.3s						
OTUK				⇓Lg	Lg	07 10 54.0	
	8.6nm,0.8s						
KAPS	Kapalarasan	4.76	175	Pg	Pb	07 09 55.2	+2.4
	1.7nm,0.2s						
KAPS				Lg	Lg	07 10 57.8	
	11nm,0.8s						
KUU	Kurty	6.35	196	Pg	Pb	07 10 23.0	+3.3
	1.6nm,0.1s						
KUU				Lg	Lg	07 11 46.0	
	9.2nm,0.8s						

IDC 10 07:16:24.6±2.6, 53°.99N×86°.60E, h0^{km}, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=22.4km s-min=14.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.05	268	*i*		07 23 30.0	
	baz=89,slow=338,SNR=1.2						
ZALV	Zalesovo Beam	1.05	268	Pg	Pg	07 16 43.5	-1.3
	1.3nm,0.3s,baz=87,slow=16,SNR=7.7						
ZALV				Lg	Lg	07 16 59.0	
	3.0nm,0.3s,baz=83,slow=25,SNR=6.2						
KURBB	Kurchatov Arra	5.99	239	Pn	Pn	07 17 55.7	+1.3
	0.2nm,0.3s,baz=56,slow=13,SNR=12						
KURBB				Lg	Lg	07 19 37.5	
	baz=47,slow=32,SNR=5.9						
	1.4nm,0.4s						
MKAR	Makanchi Array	7.71	203	Pn	Pn	07 18 18.8	+0.6
	0.3nm,0.3s,baz=24,slow=13,SNR=8.5						
MKAR				Lg	Lg	07 20 25.2	
	baz=18,slow=20,SNR=2.3						
	0.5nm,0.3s						

INET ***10*** *07:33:16.1±2.6, 15°.38N×87°.60W, h50^{km}, ML4.7, MW3.8*
UCR ***10*** *07:33:18.7±0.9, 14°.89N×87°.47W, h14^{km}, mb4.0(NEIC)*
NEIC ***10*** *07:33:20.4±2.7, 14°.76N±0°.04×87°.62W±0°.06, h14^{km}±9^{km}, Md4.0(SNET), Error ellipse: s-maj=8.9km s-min=5.1km az=57.0*

ISC 10 07:33:18.7±1.1, 14°.84N±0°.05×87°.58W±0°.03, h10^{km}, n62, σ1^{s}.00/76, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	0.83	159	Pg	Pg	07 33 34.5	-0.5
TGUH				Sg	Sg	07 33 45.8	-0.1
TGUH	Tegucigalpa,Un	0.83	159	*e*P	Pg	07 33 34.4	-0.5
TGUH	Tegucigalpa,Un	0.83	159	*e*P	Pg	07 33 34.4	-0.5
CAHU	Cacacuatique	1.23	210	*e*P	Pn	07 33 41.6	-0.6
CAHU	Cacacuatique	1.23	210	*e*P	Pn	07 33 41.6	-0.6
PQSS	Presa 15 de Se	1.54	218	*e*P	Pb	07 33 46.7	-0.7
PQSS				*e*S	Sg	07 34 08.5	+0.1
PQSS	Presa 15 de Se	1.54	218	*e*P	Pb	07 33 46.7	-0.7
PQSS				*e*S	Sg	07 34 08.5	+0.1
PACA	Pacayal	1.55	208	*e*P	Pb	07 33 47.2	-0.4
PACA	Pacayal	1.55	208	*e*P	Pb	07 33 47.2	-0.4
PACA	Pacayal	1.55	208	*e*P	Pb	07 33 47.1	-0.4
PACA				IAML		07 34 41.6	
	comp=Z,2µm,0.5s						
LCND	La Caada	1.56	191	*e*P	Pn	07 33 46.6	+0.1
LCND				*e*S	Sg	07 34 08.5	-0.3
LCND	La Caada	1.56	191	*e*P	Pn	07 33 46.6	+0.1
LCND				*e*S	Sg	07 34 08.5	-0.3
VSM	San Miguel	1.56	206	*e*P	Pb	07 33 47.1	-0.8
VSM	San Miguel	1.56	206	*e*P	Pb	07 33 47.1	-0.8
CNCH	Conchagua	1.58	189	*e*P	Pb	07 33 47.2	-0.9
CNCH	Conchagua	1.58	189	*e*P	Pb	07 33 47.2	-0.9
CNCH	Conchagua	1.58	189	*e*P	Pb	07 33 47.2	-0.9
SCLA	Alcaldia de Sa	1.59	225	*e*P	Pb	07 33 47.4	-0.9
SCLA				*e*S	Sg	07 34 10.3	+0.3
SCLA	Alcaldia de Sa	1.59	225	*e*P	Pb	07 33 47.4	-0.9
SCLA				*e*S	Sg	07 34 10.3	+0.3
COEB	Comit de Eme	1.63	215	*e*P	Pb	07 33 47.9	-1.0
COEB				*e*S	Sg	07 34 11.4	+0.3
COEB	Comit de Eme	1.63	215	*e*P	Pb	07 33 47.9	-1.0
COEB				*e*S	Sg	07 34 11.4	+0.3
COEB	Comit de Eme	1.63	215	*e*P	Pb	07 33 48.1	-0.8
ESQI	Esquipulas	1.73	261	Pn	Pb	07 33 49.5	-1.2
COEG	Centro de Oper	1.75	226	*e*P	Pb	07 33 49.9	-1.2
COEG	Centro de Oper	1.75	226	*e*P	Pb	07 33 49.9	-1.2
MTO3	Montecristo	1.78	256	Pn	Pn	07 33 48.5	-1.3
MTO3	Montecristo	1.78	256	*e*P	Pn	07 33 48.7	-1.1
LFU	La Fuente	1.84	234	*e*P	Pb	07 33 51.5	-1.2
LFU	La Fuente	1.84	234	*e*P	Pb	07 33 51.5	-1.2
SJTE	Alcalda de S	1.85	229	*e*P	Pb	07 33 51.5	-1.2
SJTE				*e*S	Sg	07 34 17.8	-0.5
SJTE	Alcalda de S	1.85	229	*e*P	Pb	07 33 51.5	-1.2
SJTE				*e*S	Sg	07 34 17.8	-0.5
CSGN	Cosiguina Volc	1.86	179	*e*P	Pb	07 33 51.6	-1.2
CSGN				IAML		07 34 49.0	
	comp=Z,15µm,2.5s						
LFRS	El Faro	1.88	230	*e*P	Pb	07 33 52.2	-1.1
LFRS	El Faro	1.88	230	*e*P	Pb	07 33 52.2	-1.1
SNET	Serv Nac Est T	1.97	235	Pn	Pn	07 33 53.1	+0.8
CRIN	San Cristobal	2.19	166	Pn	Pn	07 33 56.0	+0.7
CRIN	San Cristobal	2.19	166	*e*P	Pb	07 33 57.7	-0.8
CEVE	Cerro Verde	2.23	243	*e*P	Pb	07 33 57.7	-1.5
CEVE				*e*S	Sb	07 34 27.9	+0.9
CEVE	Cerro Verde	2.23	243	*e*P	Pb	07 33 57.7	-1.5
CEVE				*e*S	Sb	07 34 27.9	+0.9
CNGN	Cerro Negro	2.48	160	Pn	Pn	07 34 00.7	+1.4
CNGN	Cerro Negro	2.48	160	*e*P	Pb	07 34 02.8	-0.6
CNGN				*e*S	Sg	07 34 36.4	-2.1
CNGN				IAML		07 34 42.6	
	comp=Z,618nm,0.5s						
MATN	Matagalpa	2.49	140	Pn	Pn	07 33 59.0	-0.5
MOMN	Momotombo	2.62	157	*e*P	Pb	07 34 04.3	-1.6
MOMN				IAML		07 35 26.9	
	comp=Z,7µm,1.1s						
PETF	Flores	3.02	313	Pn	Pn	07 34 06.8	+0.2
BOAB	BOACO BROADBAN	3.02	142	Pn	Pn	07 34 06.6	-0.1
BOAB	BOACO BROADBAN	3.02	142	*e*P	Pn	07 34 06.5	-0.1
ACON	Acoyapa	3.69	140	Pn	Pn	07 34 15.1	-0.8
ACON	Acoyapa	3.69	140	*e*P	Pn	07 34 15.3	-0.6
HUEH	Huehuetenango	3.82	278	Pn	Pn	07 34 18.1	+0.2
RTAL	Retalhuleu	4.00	266	Pn	Pn	07 34 22.5	+2.4
ESPN	Las Esperanzas	4.13	129	Pn	Pn	07 34 21.3	-0.7
HZTE	Horizontes, Gu	4.54	155	Pn	Pn	07 34 27.0	-0.6
CCIG	Comitan	4.62	289	Pn	Pn	07 34 29.1	+0.2
ORTG	Ortega, Santa	4.91	155	Pn	Pn	07 34 34.0	+1.2
DUNO	Dulce Nombre,	5.15	157	Pn	Pn	07 34 36.0	0.0
JTS	Las Juntas de	5.20	150	Pn	Pn	07 34 38.3	+1.6
PRVC	Isla de Provid	6.20	103	Pn	Pn	07 34 52.1	+1.7
RIMA	Rio Macho	6.21	144	Pn	Pn	07 34 52.0	+1.2
BATAN	Batan	6.25	139	Pn	Pn	07 34 50.7	-0.4
PEZE	Perez Zeledon,	6.63	144	Pn	Pn	07 34 58.3	+1.8
DRK0	Durika	6.98	142	Pn	Pn	07 35 01.6	+0.4
SOR	Soroa	9.01	28	Pn	Pn	07 35 31.6	+2.6

ASRS ***10*** *08:17:21.7±0.2, 52°N±1°×9°6E±°, h5^{km}, MLh3.4/11, Error ellipse: s-maj=3.1km s-min=2.0km az=20.0, confirmed*
MOS ***10*** *08:17:26.4±1.5, 51°.63N×95°.54E, h2^{km}, mb3.6/1, Error ellipse: s-maj=23.0km s-min=17.0km az=110.0*

ISC 10 08:17:25.6±1.3, 51°.78N±0°.04×95°.82E±0°.03, h0^{km}±10^{km}, n36, σ1^{s}.97/48, 1C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.85	265	PG	Pn	08 17 43.9	-0.9
KZLR	Kyzyl	0.85	265	Pg	Pn	08 17 43.9	-0.9
KZLR				Sg	Sn	08 17 56.2	-1.8
HVS	Khovu-Aksy	1.47	245	*i* PG	Pg	08 17 54.3	+0.5
ERNS	Erzin	1.58	196	PG	Pn	08 17 53.7	-1.2
ERNS						08 18 14.0	
ERNS	Erzin	1.58	196	Pg	Pn	08 17 53.7	-1.2
ERNS				Sg	Sn	08 18 14.0	-2.0
KNGR	Kungurtug, Tuv	1.59	137	PN	Pn	08 17 54.4	-0.7
KNGR						08 18 13.5	
KNGR	Kungurtug, Tuv	1.59	137	Pg	Pn	08 17 54.4	-0.7
KNGR				Sg	Sn	08 18 13.6	-2.9
ARDR	Aradan	1.67	299	Pg	Pg	08 17 58.5	+0.9
ARDR				Sg	Sg	08 18 21.8	+2.5
DJOS	Djoyskaya Sosn	2.90	292	Sg	Sg	08 18 59.9	+1.3
CERR	Cheremushki	2.91	293	PN	Pb	08 18 15.5	-2.7
CERR						08 19 00.1	
CERR	Cheremushki	2.91	293	Pg	Pb	08 18 15.6	-2.7
CERR				Sg	Sg	08 19 00.2	+1.3
DJO	Djoy, Khakassi	3.00	291	PN	Pb	08 18 20.4	+0.6
DJO						08 19 04.0	
DJO	Djoy, Khakassi	3.00	291	Pg	Pb	08 18 20.5	+0.6
DJO				Sg	Sg	08 19 04.0	+2.2
MOY	Mondy	3.22	90	PN	Pb	08 18 23.4	-0.3
MOY						08 19 04.5	
MOY	Mondy	3.22	90	Pg	Pb	08 18 23.4	-0.3
MOY				Sg	Sb	08 19 04.6	+1.1
MINR	Mina	3.27	343	PN	Pg	08 18 28.4	+0.2
MINR						08 19 10.7	
MINR	Mina	3.27	343	Pg	Pg	08 18 28.5	+0.2
MINR				Sg	Sg	08 19 10.7	+0.1

LUZB	Luzhba, Kemero	4.61	297	Pg	Pg	08 18 53.3	-0.5
LUZB				Sg	Sg	08 19 52.5	-1.0
GZLN	Zheleznogorsk	4.76	346	Pg	Pg	08 18 54.9	-1.9
GZLN				Sg	Sg	08 19 58.1	-0.4
ZAK	Zakamensk	4.91	104	Pg	Pb	08 18 55.6	+3.1
ZAK				Sg	Sg	08 19 57.3	-5.9
TASR	Tashtagol	4.97	284	Sg	Sg	08 20 06.0	+0.9
CUR	Chagan-Uzun	5.01	253	PN	Pg	08 18 58.8	-2.8
CUR						08 20 09.8	
CUR	Chagan-Uzun	5.01	253	Pg	Pg	08 18 58.8	-2.8
CUR				Sg	Sg	08 20 09.9	+3.4
ULGR	Ulagan, Altay	5.07	260	PN	Pg	08 19 01.9	-0.9
ULGR						08 20 09.7	
ULGR	Ulagan, Altay	5.07	260	Pg	Pg	08 19 01.9	-0.9
ULGR				Sg	Sg	08 20 09.8	+1.3
ARTR	Artybash	5.30	274	Sg	Sg	08 20 19.5	+3.8
AKAR	Aktash	5.37	257	Sg	Sg	08 20 17.6	-0.5
CHBI	Chibit, Altay	5.45	258	Sg	Sg	08 20 19.8	-0.6
BRCR	Berchikul'	5.89	314	Sg	Sg	08 20 34.5	-0.3
ELT	Eltsovka	6.03	288	Sg	Sg	08 20 40.0	+0.8
KURK	Kurchatov	10.84	271	*i* P	Pn	08 20 02.3	+0.5
AAK	Ala-Archa	17.08	246	*i* P	P	08 21 26.0	-1.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	18.05	351	*i* P	P	08 21 39.4	+1.5
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	Arti	22.14	297	*i* P	P	08 22 26.4	+3.9
ARU				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PET	Petropavlovsk	37.27	63	*ce*P	P	08 24 43.4	+4.7
AKASG	Malin Array Be	40.38	296	*i* P	P	08 25 05.6	+0.7

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*NEIC **10** 08:31:29.4±2.1, 17°.0N±0°.1×147°.1E±0°.2, h43^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=34.3km s-min=15.1km az=110.0*

*IDC **10** 08:31:29.3±5.3, 17°.10N×147°.14E, h42^{km}±50^{km}, mb3.5/5, mbtmp3.8/6, ML3.9/1, MS3.2/4, Error ellipse: s-maj=53.3km s-min=24.6km az=105.0*

ISC 10 08:31:29.3±0.8**, 17°.0N**±0°.1×**147°.1E**±0°.2**, h48^{km}, n24, σ1^{s}.22**/22**, mb4.1**/11**, MS3.1**/3**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.02	213	P	Pn	08 32 29.9	+1.4
	7.6nm,0.3s,baz=330,slow=5.4,SNR=7.0						
GUMO				S	Sn	08 33 14.3	-0.1
	87nm,0.8s,baz=36,slow=19,SNR=2.2						
GUMO				LR	LR	08 34 12.9	
	comp=Z,376nm,18.9s,baz=66,slow=40						
	22nm,0.3s						
GUMO	Guam	4.02	213	Pn	Pn	08 32 28.1	-0.4
DAV	Davao City (W)	23.23	247	LR	LR	08 44 03.4	
	comp=Z,74nm,20.5s,baz=344,slow=32						
JTM	Tenmabayashi	24.27	349	P	P	08 36 40.0	-1.9
WB0	Warramunga Arr	38.62	199	P	P	08 38 48.0	-0.1
WB0				IAmb	IAmb	08 38 53.0	
	comp=Z,6.7nm,1.2s						
WR0	Warramunga Arr	38.75	199	P	P	08 38 49.4	+0.1
WR0				IAmb	IAmb	08 39 17.1	
	comp=Z,15nm,1.4s						
WRAB	Tennant Creek	38.79	199	P	P	08 38 50.5	+0.9
WB2	Warramunga Arr	38.80	199	P	P	08 38 49.7	+0.1
WB2				IAmb	IAmb	08 39 15.7	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	38.80	199	P	P	08 38 50.2	+0.5
	comp=Z,1.0nm,0.6s,baz=27,slow=8.7,SNR=8.8						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	38.80	199	P	P	08 38 49.5	-0.1
AS31	Alice Springs	42.43	198	P	P	08 39 17.6	-2.0
ASAR	Alice Springs	42.43	198	P	P	08 39 21.9	+2.3
	comp=Z,0.5nm,0.6s,baz=33,slow=11,SNR=4.4						
	comp=Z,0.5nm,0.6s						
CMAR	Chiang Mai Arr	45.79	279	LR	LR	08 57 25.6	
	comp=Z,14nm,21.1s,baz=110,slow=34						
STKA	Stephens Creek	48.89	186	P	P	08 40 09.1	-1.4
STKA				IAmb	IAmb	08 40 21.1	
	comp=Z,1.4nm,1.2s						
KURK	Kurchatov	63.42	319	P	P	08 41 52.5	-1.5
KURK				IAmb	IAmb	08 42 03.2	
	comp=Z,2.7nm,1.0s						
KURBB	Kurchatov Arra	63.47	318	P	P	08 41 53.8	-0.5
	comp=Z,0.6nm,0.3s,baz=98,slow=6.9,SNR=5.6						
	comp=Z,0.6nm,0.3s						
ILAR	Eielson Array	64.57	26	P	P	08 42 00.9	-0.4
	comp=Z,0.4nm,0.8s,baz=253,slow=5.6,SNR=5.2						
	comp=Z,0.4nm,0.8s						
TOLK	Toolik Lake Re	64.67	21	P	P	08 42 03.3	+1.3
TOLK				IAmb	IAmb	08 42 24.6	
	comp=Z,2.7nm,1.4s						
AAK	Ala-Archa	65.97	310	LR	LR	09 12 50.7	
	comp=Z,19nm,18.1s,baz=304,slow=38						
BMAR	Burnt Mountain	66.13	23	P	P	08 42 12.5	+1.1
BCAR	Beaver Creek A	66.43	28	P	P	08 42 14.1	+0.6
ABKAR	Akbulak array	75.48	317	P	P	08 43 10.4	+1.9
YKA	Yellowknife Ar	78.85	28	P	P	08 43 27.9	+0.7
	comp=Z,0.3nm,0.6s,baz=283,slow=5.5,SNR=9.2						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	78.85	28	P	P	08 43 26.8	-0.4

NOU 10 08:34:05.8, 16°.22S×167°.15E, h4^{km}, MLv4.2/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.77	4	P	Pg	08 34 20.8	+0.2
DVP	Devils Point	1.80	147	P	Pn	08 34 37.7	+0.1
RTV	Rentapao	1.98	142	P	Pn	08 34 39.8	-0.4
LIFNC	LIFOU	4.53	179	P	Pn	08 35 15.4	+0.2
KOUNC	Koumac, New Ca	5.09	212	P	Pn	08 35 23.2	+0.2
MARNC	Mare, Loyalty	5.30	171	P	Pn	08 35 26.8	+1.0
YATNC	Mamie plateau,	5.81	182	P	Pn	08 35 31.7	-1.2
DZM	Mont Dzumac	5.86	186	P	Pn	08 35 32.6	-1.0
NOUC	Port Laguerre	5.91	188	P	Pn	08 35 34.1	0.0
ONTNC	Ouen Toro	6.09	186	P	Pn	08 35 37.4	+0.7
OUENC	Ouen Island, N	6.17	183	P	Pn	08 35 37.7	-0.1

IDC 10 08:36:31.0±2.8**, 54°.08N×86°.53E, h0^{km}, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=22.9km s-min=13.5km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.02	263	*i*		08 43 15.5	
	baz=83,slow=328,SNR=2.8						
ZALV	Zalesovo Beam	1.02	263	Pg	Pg	08 36 48.9	-1.6
	0.5nm,0.3s,baz=81,slow=17,SNR=5.2						
ZALV				Lg	Lg	08 37 05.3	
	1.5nm,0.3s,baz=83,slow=32,SNR=8.6						
KURBB	Kurchatov Arra	6.00	238	Pn	Pn	08 38 01.7	+0.8
	0.1nm,0.3s,baz=55,slow=14,SNR=4.3						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.78	202	Pn	Pn	08 38 26.6	+1.2
	0.2nm,0.3s,baz=22,slow=14,SNR=5.9						
	0.2nm,0.3s						

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*IDC **10** 08:51:27.0±1.6, 2°.69S×128°.83E, h0^{km}, mb3.9/2, mbtmp4.0/5, ML3.8/3, MS2.9/6, Error ellipse: s-maj=35.3km s-min=23.3km az=101.0*

*DJA **10** 08:51:30.6±0.3, 3°S±2°×12°9E±°, h10^{km}, M4.0/10, mb4.3/3, mB4.9/2, MLv3.9/10, Mw(mB)4.2/2*

*NEIC **10** 08:51:33.7±2.0, 2°.77S±0°.03×129°.0E±0°.1, h54^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=18.6km s-min=3.3km az=94.0*

ISC 10 08:51:32.0±0.6**, 2°.70S**±0°.05×**128°.97E**±0°.07**, h35^{km}, n39, σ1^{s}.90**/39**, mb4.3**/6**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.64	184	P	Pn	08 51 43.5	-1.1
MSAI				S	Sn	08 51 57.6	+4.0
AAI	Ambon	1.25	218	P	Pn	08 51 54.2	+1.2
AAI				S	Sn	08 52 14.5	+5.9
LBMI	Labuha	2.52	324	P	Pn	08 52 10.8	+0.3
SWI	Sorong	2.92	51	P	Pn	08 52 17.7	+1.7
SWI				S	Sn	08 52 53.4	+3.5
SIJI	Sorong	2.93	52	Pn	Pn	08 52 17.8	+1.8
	27nm,0.3s,baz=94,slow=3.0,SNR=64						
SIJI				Sn	Sn	08 52 53.2	+3.2
	34nm,0.3s,baz=72,slow=17,SNR=18						
SIJI				LR	LR	08 53 51.3	
	comp=Z,199nm,21.6s,baz=250,slow=48						
	58nm,0.3s						
SANI	Sanana	3.05	282	P	Pn	08 52 15.9	-1.9
TNTI	Ternate	3.81	335	P	Pn	08 52 26.9	-1.2
APSI	Ampana	7.53	284	P	Pn	08 53 18.9	-0.5
	0.2nm616nm43nm,0.5s						
TOLI2	Tolitoli	9.02	295	Pn	Pn	08 53 42.0	+2.1
KAPI	Kappang	9.48	256	LR	LR	08 57 59.6	
	comp=Z,43nm,19.8s,baz=85,slow=42						
MPSI	Mapaga	9.56	288	P	Pn	08 53 46.7	-0.5
DAV	Davao City (W)	10.28	341	LR	LR	08 58 30.7	
	comp=Z,85nm,20.6s,baz=40,slow=41						
MTN	Manton Dam	10.30	168	Pn	Pn	08 53 57.5	+0.1
KNRA	Kununurra	12.90	181	Pn	Pn	08 54 32.8	-0.1
FITZ	Fitzroy Crossi	15.65	192	Pn	Pn	08 55 10.7	+0.7
	0.1nm,0.3s,baz=23,slow=13,SNR=1.1						
FITZ				LR	LR	09 01 53.4	
	comp=Z,51nm,18.9s,baz=96,slow=40						
	1.7nm,0.9s						
FITZ	Fitzroy Crossi	15.65	192		Pn	08 55 10.3	+0.4
FITZ				IAmb	IAmb	08 55 21.3	
	comp=Z,17nm,1.4s						
WB0	Warramunga Arr	17.77	163	P	Pn	08 55 35.6	-1.1
WB0				IAmb	IAmb	08 55 46.2	
	comp=Z,18nm,1.3s						
WRA	Warramunga Arr	17.92	163	P	Pn	08 55 37.0	-1.6
	comp=Z,0.5nm,0.3s,baz=344,slow=12,SNR=18						
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	17.92	163	P	Pn	08 55 36.6	-1.9
WB2	Warramunga Arr	17.92	163	P	Pn	08 55 37.1	-1.5
COEN	Coen	17.94	129	P	Pn	08 55 38.0	-0.9
WR0	Warramunga Arr	18.00	163	P	Pn	08 55 39.0	-0.5
WR0				IAmb	IAmb	08 56 06.0	
	comp=Z,10nm,1.4s						
MBWA	Marble Bar	20.44	205	P	P	08 56 07.7	+1.3
PSA00	Pilbara Seismi	20.75	205	P	P	08 56 08.2	-1.7
PSA00				IAmb	IAmb	08 56 16.6	
	comp=Z,55nm,1.4s						
PSA00	Pilbara Seismi	20.75	205	P	P	08 56 08.4	-1.5
PSA00				IAmb	IAmb	08 56 16.6	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	21.38	168	P	P	08 56 16.6	-0.1
AS31				IAmb	IAmb	08 56 17.5	
	comp=Z,4.7nm,0.8s						
ASAR	Alice Springs	21.38	168	P	P	08 56 16.1	-0.5
	comp=Z,13nm,0.8s,baz=351,slow=12,SNR=139						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	21.38	168	P	P	08 56 16.7	0.0
MORW	Morawa	28.97	204	P	P	08 57 28.6	+0.3
MORW				IAmb	IAmb	08 57 55.6	
	comp=Z,15nm,1.4s						
NWAO	Narrogin (SRO)	32.02	199	P	P	08 57 51.3	-4.0
KSAR	Wonju Array Be	39.95	359	P	P	08 59 02.3	-0.7
KSRS	Korea Array	39.96	359	LR	LR	09 14 18.6	
	comp=Z,19nm,22.0s,baz=180,slow=34						
KLR	Kul'dur	51.78	2	LR	LR	09 23 06.3	
	comp=Z,10.0nm,19.5s,baz=250,slow=37						
BKZ	Black Stump Fm	56.37	136	P	P	09 01 11.0	+1.1
MKAR	Makanchi Array	64.10	326	P	P	09 02 02.7	0.0
	comp=Z,0.3nm,0.6s,baz=108,slow=9.4,SNR=3.2						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	68.34	328	P	P	09 02 30.1	+0.4
KURK				IAmb	IAmb	09 02 36.1	
	comp=Z,2.9nm,1.1s						
KKAR	Karatay Array	69.46	318	P	P	09 02 36.8	-0.1
ABKAR	Akbulak array	78.53	321	P	P	09 03 29.1	-0.6
QSPA	South Pole Qui	87.25	180	P	P	09 04 13.9	-0.9
QSPA				IAmb	IAmb	09 04 36.3	
	comp=Z,6.5nm,1.5s						

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*TUL **10** 08:54:05.5±1.2, 36°.53N±0°.02×98°.98W±0°.04, h6^{km}±6^{km}, ML2.7, mb_Lg2.3/18(NEIC), Error ellipse: s-maj=4.5km s-min=2.5km az=96.0*

NEIC 10 08:54:05.7±1.3**, 36°.54N**±0°.02×**98°.95W**±0°.03**, h5^{km}**±2^{km}**, Error ellipse: s-maj=4.6km s-min=3.2km az=304.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.16	194	Pg	Pg	08 54 08.8	-0.2
U32A				Sg	Sg	08 54 10.8	-0.4
OKCFA	Oklahoma City	1.66	132	Pn	Pn	08 54 35.2	-0.2
OKCSW	OKLAHOMA CITY	1.67	132		Pn	08 54 35.4	-0.2
FNO	Franklin	1.80	135		Pn	08 54 37.1	-0.2
WMOK	Wichita Mounta	1.80	175		Pn	08 54 37.0	-0.5
R32A	Long Quarter,	1.89	6		Pn	08 54 39.4	+0.7
T35A	Sooner Cattle	2.00	78	Pn	Pn	08 54 40.3	+0.2
X34A	Smith Ranch, M	2.14	154		Pn	08 54 43.5	+1.4
X34A				IAmb_Lg		08 55 13.3	
	comp=Z,6.6nm,0.7s						
CBKS	Cedar Bluff	2.35	345		Pn	08 54 46.8	+1.7
CBKS				IAmb_Lg		08 55 20.9	
	comp=Z,9.8nm,0.7s						
TUL1	Leonard	2.63	103		Pn	08 54 48.8	-0.1
TUL1				IAmb_Lg		08 55 33.7	
	comp=Z,9.1nm,0.8s						
AMTX	Amarillo	2.77	234		Pn	08 54 51.8	+1.0
KSU1	Kansas State U	3.16	35		Pn	08 54 55.7	-0.4
KSU1				IAmb_Lg		08 55 43.9	
	comp=Z,6.0nm,0.8s						
X37A	Clayton	3.51	123		Pn	08 54 59.9	-1.0
X37A				IAmb_Lg		08 56 05.8	
	comp=Z,12nm,0.9s						
KSCO	Kaye Shedlock'	3.82	311		Pn	08 55 02.8	-2.4
ABTX	Abilene, Hawle	3.95	188	Pn	Pn	08 55 05.2	-1.8
MSTX	Muleshoe	4.04	232	Pn	Pn	08 55 07.7	-0.7
HHAR	Hobbs	4.05	92		Pn	08 55 07.2	-1.1
W39A	Magazine	4.41	106		Pn	08 55 12.9	-0.3
T25A	Trinidad	4.42	279		Pn	08 55 13.5	-0.1
T25A				IAmb_Lg		08 56 24.2	
	comp=Z,6.8nm,0.8s						
S39A	Bolivar	4.64	74	Pn	Pn	08 55 17.6	+1.1
S39A				IAmb_Lg		08 56 32.1	
	comp=Z,8.1nm,0.8s						
MIAR	Mount Ida	4.81	113	Pn	Pn	08 55 19.4	+0.5
U40A	Yellville	4.92	90		Pn	08 55 19.6	-0.7
N35A	Tabor	5.03	30	Pn	Pn	08 55 21.8	0.0
P38A	Dawn	5.27	53	Pn	Pn	08 55 26.0	+0.9
P38A				IAmb_Lg		08 57 01.9	
	comp=Z,8.2nm,0.9s						
SDCO	Great Sand Dun	5.37	285		Pn	08 55 23.2	-3.5
X40A	Basin Creek Fa	5.39	111	Pn	Pn	08 55 26.1	-0.7
MGMO	Mountain Grove	5.40	81	Pn	Pn	08 55 26.8	0.0
MGMO				IAmb_Lg		08 56 59.4	
	comp=Z,5.7nm,0.7s						
Q24A	Divide	5.47	298	Pn	Pn	08 55 26.8	-1.4
WHAR	Wooly Hollow	5.55	101	Pn	Pn	08 55 27.4	-1.6
FCAR	Ozark Folk Cen	5.56	95	Pn	Pn	08 55 27.8	-1.3
R40A	Maddies Statio	5.60	70	Pn	Pn	08 55 29.0	-0.6
W41B	Gary Mavity, V	5.61	102	Pn	Pn	08 55 29.8	0.0
JCT	Junction City	6.08	187	IAmb_Lg		08 57 23.8	
	comp=Z,7.1nm,1.1s						
N38A	Joes South For	6.17	45	Pn	Pn	08 55 37.2	-0.2
ISCO	Idaho Springs	6.17	304	Pn	Pn	08 55 36.5	-1.3
P40A	Paris	6.21	59	Pn	Pn	08 55 36.2	-1.9
ANMO	Albuquerque	6.31	258	Pn	Pn	08 55 37.1	-2.5
LCAR	Lake Charles	6.32	92	Pn	Pn	08 55 38.1	-1.3
CCM	Cathedral Cave	6.33	74	Pn	Pn	08 55 38.6	-1.1
PBMO	Poplar Bluff	6.86	85	Pn	Pn	08 55 45.8	-1.1
PHWY	Pilot Hill	6.95	315	Pn	Pn	08 55 47.2	-1.3
FVM	French Village	6.95	75	Pn	Pn	08 55 48.2	0.0
N23A	Red Feather La	6.98	311	Pn	Pn	08 55 47.6	-1.3
MNTX	Cornudas Mount	7.19	230	Pn	Pn	08 55 49.6	-1.9

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*IDC **10** 09:09:28.6±2.2, 8°.01S×128°.37E, h0^{km}, mb3.4/1, mbtmp3.7/3, ML4.3/2, MS2.9/1, Error ellipse: s-maj=123.1km s-min=33.4km az=65.0*

*NEIC **10** 09:09:40.0±2.4, 8°.1S±0°.2×128°.81E±0°.08, h133^{km}±24^{km}, mb4.2/5, Error ellipse: s-maj=22.6km s-min=11.6km az=174.0*

ISC 10 09:09:40.2±1.2**, 8°.3S**±0°.1×**128°.77E**±0°.09**, h100^{km}, n18, σ1^{s}.73**/19**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.53	82	Pn	Pn	09 10 20.6	+1.0
SOEI	Soe	4.67	252	Pn	Pn	09 10 50.8	+2.2
MTN	Manton Dam	5.05	153	Pn	Pn	09 10 57.3	+3.8
KNRA	Kununurra	7.30	180		Pn	09 11 26.7	+2.6
FITZ	Fitzroy Crossi	10.17	197	LR	LR	09 15 59.8	
	comp=Z,63nm,20.5s,baz=102,slow=38						
FITZ	Fitzroy Crossi	10.17	197	Pn	Pn	09 12 03.6	+0.4
WB0	Warramunga Arr	12.60	155		Pn	09 12 36.3	+0.4
WRA	Warramunga Arr	12.74	156	Pn	Pn	09 12 37.9	+0.2
	1.9nm,0.3s,baz=334,slow=12,SNR=76						
WRA				Sn	Sn	09 14 55.9	-1.9
	1.0nm,0.3s,baz=330,slow=23,SNR=5.3						
	1.5nm,0.3s						
WRA	Warramunga Arr	12.74	156		Pn	09 12 37.2	-0.5
WB2	Warramunga Arr	12.74	156		Pn	09 12 38.0	+0.2
WR0	Warramunga Arr	12.84	155		Pn	09 12 38.9	-0.1
COEN	Coen	15.19	113		Pn	09 13 09.1	-0.3
COEN				IAmb	IAmb	09 13 11.3	
	comp=Z,13nm,1.3s						
MBWA	Marble Bar	15.45	213		Pn	09 13 15.6	+2.9
MBWA				IAmb	IAmb	09 13 18.3	
	comp=Z,53nm,1.5s						
PSA00	Pilbara Seismi	15.72	212	Pn	Pn	09 13 14.8	-1.3
PSA00				IAmb	IAmb	09 13 16.0	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	16.02	163		Pn	09 13 18.6	-1.2
ASAR	Alice Springs	16.02	163	Pn	Pn	09 13 20.5	+0.7
	comp=Z,0.6nm,0.3s,baz=335,slow=9.3,SNR=46						
ASAR				Sn	Sn	09 16 16.5	-0.8
	comp=Z,0.4nm,0.3s,baz=318,slow=16,SNR=4.5						
	comp=Z,0.8nm,0.3s						
FORT	Forrest	22.34	182	P	P	09 14 29.5	-0.3
MKAR	Makanchi Array	68.68	328	P	P	09 20 31.0	-1.9
	comp=Z,0.2nm,0.6s,baz=116,slow=6.6,SNR=1.9						
	comp=Z,0.2nm,0.6s						

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*NNC **10** 09:14:49.2±6.8, 53°.51N×86°.97E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=56.8km s-min=25.2km az=56.0, Suspected Mining explosion.*

*IDC **10** 09:14:51.6±2.4, 53°.60N×86°.94E, h0^{km}, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=22.3km s-min=13.8km az=77.0*

ISC 10 09:14:53.2±3.8**, 53°.6N**±0°.1×**86°.7E**±0°.2**, h0^{km}, n8, σ1^{s}.35**/9**, 5C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.18	290	*i*		09 23 20.0	
	baz=104,slow=332,SNR=2.7						
ZAA0	Zalesovo Array	1.18	290	⇓P	Pg	09 15 14.3	-1.4
	1.1nm,0.9s						
ZAA0				⇓S	Sb	09 15 33.3	+1.2
	7.2nm,1.1s						
ZALV	Zalesovo Beam	1.18	290	Pg	Pg	09 15 14.7	-1.0
	1.5nm,0.3s,baz=104,slow=17,SNR=18						
ZALV				Lg	Lg	09 15 33.4	
	1.9nm,0.3s,baz=108,slow=28,SNR=23						
KURK	Kurchatov	5.72	243	⇑Pn	Pn	09 16 07.9	-11
	2.7nm,1.2s						
KURK				⇓Lg	Lg	09 17 56.9	
	4.1nm,0.9s						
KURBB	Kurchatov Arra	5.82	243	Pn	Pn	09 16 22.7	+2.0
	0.1nm,0.3s,baz=60,slow=14,SNR=7.8						
KURBB				Lg	Lg	09 18 01.0	
	baz=63,slow=34,SNR=5.2						
	1.4nm,0.7s						
KURBB	Kurchatov Arra	5.82	243	⇓Pn	Pn	09 16 21.4	+0.7
	1.6nm,0.7s						
KURBB				⇑Sn	Sn	09 17 27.1	-1.0
	2.4nm,0.8s						
KURBB				⇑Lg	Lg	09 17 57.8	
	10nm,1.1s						
MK31	Makanchi Array	7.33	204	⇓Pn	Pn	09 16 41.8	+0.3
	0.5nm,0.7s,baz=29,slow=12,SNR=6.1						
MK31				⇑Sn	Sn	09 18 04.8	-0.6
	0.8nm,0.7s						
MK31				⇑Lg	Lg	09 18 46.0	
	4.2nm,1.1s,baz=139,slow=20,SNR=4.3						
MKAR	Makanchi Array	7.33	204	Pn	Pn	09 16 42.3	+0.8
	0.2nm,0.3s,baz=28,slow=12,SNR=7.6						
MKAR				Lg	Lg	09 18 47.0	
	0.1nm,0.3s,baz=30,slow=30,SNR=5.1						
	0.4nm,0.5s						

DJA 10 09:30:11.8±0.5**, 12°S**±5°×**11°8E**±°**, h10^{km}, M3.9**/10**, mb4.1**/4**, MLv3.8**/10**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.53	40	P	Pn	09 30 52.5	-0.5
PLAI	Plampang	2.75	1	P	Pn	09 30 55.0	-1.1
IGBI	Denpasar	3.77	317	P	Pn	09 31 09.7	-0.3
SRBI	Singaraja	4.30	324	P	Pn	09 31 17.4	+0.1
JAGI	Jajag, Banyuwa	4.71	311	P	Pn	09 31 23.1	+0.1
EDFI	Ende, Flores	4.80	54	P	Pn	09 31 24.0	-0.4
GMJI	Gumukmas	5.38	308	P	Pn	09 31 32.8	+0.7
	0.2nm18nm,1.0s						
BSSI	Bau Bau, Buton	6.06	27	P	Pn	09 31 42.5	+0.9
	0.1nm7.2nm,0.7s						
PCJI	Pacitan	7.31	297	P	Pn	09 31 58.4	-0.3
	0.3nm44nm,1.6s						

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*IDC **10** 09:34:05.3±1.9, 8°.50S×124°.70E, h0^{km}, mb3.7/1, mbtmp3.7/4, ML3.6/3, MS2.8/1, Error ellipse: s-maj=49.8km s-min=26.2km az=77.0*

*DJA **10** 09:34:16.3±0.4, 9°S±3°×12°4E±°, h92^{km}±7^{km}, M3.9/7, mb4.0/5, mB4.7/1, MLv3.9/7, Mw(mB)4.0/1*

ISC 10 09:34:14.1±1.2**, 9°.14S**±0°.09×**124°.54E**±0°.10**, h100^{km}, n11, σ2^{s}.75**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.37	219	Pn	Pn	09 34 40.1	+1.4
	27nm,0.3s,baz=96,slow=3.4,SNR=18						
BATI				Sn	Sn	09 34 57.4	0.0
	65nm,0.3s,baz=197,slow=3.4,SNR=12						
BATI	Baumata	1.37	219	P	Pn	09 34 39.9	+1.1
BATI				S	Sn	09 34 56.7	-0.8
MMRI	Maumere	2.32	282	P	Pn	09 34 49.5	-1.4
EDFI	Ende, Flores	2.84	278	P	Pn	09 34 55.7	-2.0
BNSI	Bone	6.44	317	P	Pn	09 35 45.0	-1.4
	0.1nm802nm12nm,1.0s						
PLAI	Plampang	6.68	272	P	Pn	09 35 48.1	-1.6
	0.1nm20nm,1.2s						
FITZ	Fitzroy Crossi	8.97	173	Pn	Pn	09 36 22.8	+1.9
	0.8nm,0.3s,baz=357,slow=10,SNR=14						
FITZ				Sn	Sn	09 37 55.5	-4.7
	5.2nm,0.3s,baz=86,slow=18,SNR=19						
	1.7nm,0.3s						
WRA	Warramunga Arr	14.33	140	Pn	P	09 37 36.4	-0.1
	0.3nm,0.3s,baz=323,slow=13,SNR=18						
WRA				Sn	Sn	09 40 07.0	-3.2
	1.1nm,0.3s,baz=303,slow=24,SNR=13						
	0.6nm,0.4s						
ASAR	Alice Springs	17.00	149	P	P	09 38 11.2	+5.1
	0.1nm,0.3s,baz=322,slow=11,SNR=6.7						
ASAR				S	Sn	09 41 09.6	-5.3
	1.1nm,0.6s,baz=317,slow=20,SNR=5.6						
	0.7nm,0.5s						
GUMO	Guam	30.28	42	LR	LR	09 52 08.3	
	comp=Z,20nm,21.2s,baz=90,slow=36						
MKAR	Makanchi Array	67.19	330	P	P	09 44 58.4	+0.9
	0.7nm,0.9s,baz=122,slow=12,SNR=4.0						
	0.7nm,0.9s						

IDC 10 09:35:58.3±27.0**, 18°.25S×172°.73W, h0^{km}, mb4.0**/4**, mbtmp4.0**/4**, Error ellipse: s-maj=507.3km s-min=170.4km az=74.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.72	260	P	P	09 43 24.4	-0.2
	1.2nm,0.5s,baz=79,slow=11,SNR=3.9						
	1.2nm,0.5s						
STKA	Stephens Creek	43.24	243	P	P	09 44 01.6	0.0
	1.5nm,0.7s,baz=66,slow=10.0,SNR=1.4						
	1.5nm,0.7s						
WRA	Warramunga Arr	49.88	259	P	P	09 44 53.5	-0.5
	1.0nm,0.4s,baz=98,slow=6.9,SNR=11						
	1.0nm,0.4s						
ASAR	Alice Springs	49.90	254	P	P	09 44 54.3	+0.2
	1.3nm,0.5s,baz=91,slow=7.7,SNR=14						
	1.3nm,0.5s						

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*BJI **10** 09:44:34.9±0.0, 16°.47S×119°.17E, h8^{km}, mb4.8/47, mB5.0/22, Ms4.4/9, Ms7 4.0/9*

*NOU **10** 09:44:36.2, 16°.43S×118°.75E, h0^{km}, mb5.4/44, Northwest of Australia*

*MOS **10** 09:44:36.3±1.0, 16°.30S×119°.00E, h10^{km}, mb4.8/25, Error ellipse: s-maj=11.2km s-min=7.0km az=117.0*

*IDC **10** 09:44:37.3±0.6, 16°.27S×118°.89E, h0^{km}, mb4.5/13, mbtmp4.7/18, ML5.0/5, MS3.8/44, Error ellipse: s-maj=22.2km s-min=13.1km az=67.0*

*NEIC **10** 09:44:38.2±1.6, 16°.39S±0°.06×118°.87E±0°.08, h10^{km}±1^{km}, mb5.0/48, Error ellipse: s-maj=13.2km s-min=10.5km az=265.0*

*GCMT **10** 09:44:40.2±0.3, 16°.26S±0°.02×118°.79E±0°.02, h26^{km}±1^{km}, MW4.9/92, Moment Tensor Solution. s25,c28; s92,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.26±.12; $M_{\theta\theta}$2.00±.09; $M_{\phi\phi}$-2.26±.12; $M_{r\theta}$1.53±.20; $M_{\theta\phi}$-0.73±.08; $M_{\phi r}$0.46±.20; Best double couple: $M_0$2.75300×10^{16} NP1:ϕ_s148.00000°,δ57.00000°,λ10.00000°. NP2: ϕ_s53.00000°,δ82.00000°,λ147.00000°. Principal axes: T 2.9210, Plg29.0000°, Azm5.0000°; N -0.3390, Plg56.0000°, Azm220.0000°; P -2.5840, Plg16.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:44:37.5±0.3**, 16°.41S**±0°.04×**118°.92E**±0°.05**, h10^{km}, n281,** σ**1^{s}.76**/253**, mb4.9**/68**, MS3.9**/43**, 13C-1D, Northwest of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	4.78	171		Pn	09 45 50.6	+0.9
MBWA	Marble Bar	4.78	171	P	Pn	09 45 50.9	+1.2
PSA00	Pilbara Seismi	5.21	170	Pn	Pn	09 45 56.2	+0.6
PSA00	Pilbara Seismi	5.21	170	P	Pn	09 45 56.5	+1.0
	520nm,0.7s						
FITZ	Fitzroy Crossi	6.64	106	Pn	Pn	09 46 16.2	+1.0
	42nm,0.3s,baz=277,slow=8.3,SNR=585						
FITZ				Sn	Sn	09 47 29.3	-1.6
	36nm,0.3s,baz=105,slow=1.8,SNR=3.2						
	311nm,0.7s						
FITZ	Fitzroy Crossi	6.64	106	P	Pn	09 46 16.0	+0.8
	baz=6.9,SNR=226						
FITZ	Fitzroy Crossi	6.64	106	P	Pn	09 46 17.0	+1.8
	559nm,0.7s						
WBSI	Waikabubak, Su	6.75	4	P	Pn	09 46 16.1	-0.6
GIRL	Giralia	7.61	215	P	Pn	09 46 29.3	+0.7
	baz=7.5,SNR=18						
GIRL	Giralia	7.61	215	Pn	Pn	09 46 29.2	+0.7
GIRL	Giralia	7.61	215	P	Pn	09 46 28.7	+0.2
	2μm,0.7s						
PLAI	Plampang	7.62	351	P	Pn	09 46 27.7	-1.0
	2.2nm7μm605nm,0.6s						
PLAI	Plampang	7.62	351	P	Pn	09 46 27.7	-1.0
	606nm,0.7s						
BATI	Baumata	7.70	37	Pn	Pn	09 46 30.9	+1.1
	60nm,0.3s,baz=238,slow=2.3,SNR=38						
BATI				Sn	Sn	09 47 53.2	-4.1
	136nm,0.3s,baz=45,slow=23,SNR=7.9						
BATI				LR	LR	09 50 22.2	
	comp=Z,378nm,18.6s,baz=198,slow=45						
	223nm,0.5s						
BATI	Baumata	7.70	37	P	Pn	09 46 31.1	+1.2
	1.6nm3μm412nm,0.7s						
EDFI	Ende, Flores	8.08	20	P	Pn	09 46 31.9	-3.2
	2μm103nm,0.5s						
MMRI	Maumere	8.38	23	Pn	Pn	09 46 38.2	-1.0
MMRI	Maumere	8.38	23	P	Pn	09 46 37.9	-1.2
	1μm4μm476nm,0.7s						
MMRI	Maumere	8.38	23	P	Pn	09 46 37.9	-1.2
	475nm,0.7s						
IGBI	Denpasar	8.40	334	P	Pn	09 46 36.6	-2.8
DNP	Denpasar	8.50	334	P	Pn	09 46 39.6	-1.1
SRBI	Singaraja	9.03	336	P	Pn	09 46 46.4	-1.7
	5μm374nm,0.8s						
JAGI	Jajag, Banyuwa	9.16	329	P	Pn	09 46 46.3	-3.6
	12μm671nm,0.6s						
JAGI	Jajag, Banyuwa	9.16	329	P	Pn	09 46 46.6	-3.3
	638nm,0.8s						
KNRA	Kununurra	9.49	87	P	Pn	09 46 53.9	-0.5
	baz=9.7,SNR=65						
KNRA	Kununurra	9.49	87	Pn	Pn	09 46 55.3	+0.9
KNRA	Kununurra	9.49	87	P	Pn	09 46 55.7	+1.3
	594nm,0.9s						
GMJI	Gumukmas	9.70	326	P	Pn	09 46 53.8	-3.4
	3μm133nm,0.7s						
ABJI	Asem Bagus	9.71	331	P	Pn	09 46 55.0	-2.4
	257nm,1.1s						
BLJI	Banyuglugur	10.06	328	P	Pn	09 47 00.6	-1.6
	3μm135nm,0.5s						
MEEK	Meekatharra	10.18	182	P	Pn	09 47 03.0	-0.9
	baz=10,SNR=111						
MEEK				S	Sn	09 48 49.9	-8.2
	baz=10						
MEEK	Meekatharra	10.18	182	P	Pn	09 47 03.2	-0.6
	245nm,0.6s						
BSSI	Bau Bau, Buton	10.32	9	P	Pn	09 47 04.4	-1.4
	2μm179nm,0.7s						
KMMI	Kalianget	10.49	332	P	Pn	09 47 06.1	-2.0
	65nm,0.9s						
PWJI	Pagerwojo	10.86	319	P	Pn	09 47 10.9	-2.2
	3μm278nm,0.7s						
BKSI	Bulukumba	11.09	6	P	Pn	09 47 15.7	-0.5
	4μm430nm,1.0s						
PCJI	Pacitan	11.13	316	P	Pn	09 47 14.0	-2.8
	115nm,1.0s						
KAPI	Kappang	11.36	4	Pn	Pn	09 47 19.8	-0.1
	15nm,0.3s,baz=176,slow=9.6,SNR=39						
KAPI				Sn	Sn	09 49 18.4	-8.6
	5.4nm,0.3s,baz=204,slow=20,SNR=3.9						
KAPI				LR	LR	09 51 41.5	
	comp=Z,500nm,18.4s,baz=194,slow=38						
	74nm,0.6s						
KAPI	Kappang	11.36	4		Pn	09 47 19.3	-0.7
BBSI	Bau Bau	11.43	19	P	Pn	09 47 20.4	-0.6
	261nm35nm,1.0s						
WOJI	Wonogiri, Jawa	11.56	317	P	Pn	09 47 20.9	-1.8
	70nm,1.2s						
UGM	Wanagama	11.77	315	P	Pn	09 47 23.0	-2.7
	230nm,0.6s						
UGM	Wanagama	11.77	315	P	Pn	09 47 23.0	-2.7
	228nm,0.8s						
BNSI	Bone	11.99	6	P	Pn	09 47 29.8	+1.1
	2μm238nm,0.9s						
YOGI	Yogyakarta	12.00	314	P	Pn	09 47 27.2	-1.6
	277nm,1.2s						
WRKA	Warakurna	12.27	136	P	Pn	09 47 31.6	-0.8
	baz=12,SNR=90						
WRKA	Warakurna	12.27	136	P	Pn	09 47 31.8	-0.6
	159nm,0.7s						
MTN	Manton Dam	12.34	75	P	Pn	09 47 32.5	-0.9
	baz=13,SNR=33						
MTN	Manton Dam	12.34	75	Pn	Pn	09 47 32.4	-0.9
MTN	Manton Dam	12.34	75	P	Pn	09 47 33.1	-0.3
	276nm,0.5s						
SPSI	Sidrap Palu	12.40	4	P	Pn	09 47 34.2	0.0
	1μm136nm,0.8s						
SMRI	Semarang	12.46	317	Pn	Pn	09 47 33.8	-1.4
SMRI	Semarang	12.46	317	P	Pn	09 47 34.0	-1.1
	68nm,0.8s						
MORW	Morawa	12.87	191		Pn	09 47 38.5	-2.2
MORW	Morawa	12.87	191	P	Pn	09 47 38.5	-2.2
	339nm,0.7s						
KPJI	Karang Pucung	13.30	312	P	Pn	09 47 44.8	-1.7
	94nm,0.7s						
TTSI	Tana Toraja	13.31	4	P	Pn	09 47 48.0	+1.3
	2μm156nm,0.9s						
BBKI	Banjar Baru	13.48	342	P	Pn	09 47 48.8	-0.2
	41nm,0.8s						
KDU	Kakadu	13.63	76	P	Pn	09 47 49.1	-2.0
	baz=14,SNR=8.9						
KDU	Kakadu	13.63	76	P	Pn	09 47 51.6	+0.5
	156nm,1.0s						
BLDU	Ballidu	14.28	188	P	Pn	09 47 57.4	-2.5
	baz=14,SNR=175						
BLDU	Ballidu	14.28	188	P	Pn	09 47 57.6	-2.3
	715nm,0.7s						
LEM	Lembang	14.60	309	Pn	Pn	09 48 03.7	-0.7
	5.4nm,0.3s,baz=143,slow=20,SNR=1.8						
LEM				Sn	Sn	09 50 31.3	-15
	4.6nm,0.3s,baz=148,slow=19,SNR=2.0						
LEM				LR	LR	09 53 17.9	
	comp=Z,582nm,20.7s,baz=138,slow=36						
	20nm,0.5s						
WRA	Warramunga Arr	15.07	106	Pn	Pn	09 48 08.2	-2.4
	7.5nm,0.3s,baz=276,slow=15,SNR=326						
WRA				Sn	Sn	09 50 45.6	-12
	3.7nm,0.3s,baz=266,slow=22,SNR=7.1						
WRA				LR	LR	09 53 53.1	
	comp=Z,307nm,19.7s,baz=7.0,slow=37						
WRAB	Tennant Creek	15.08	106	P	Pn	09 48 08.5	-2.3
WRAB				pmax	pmax		
	comp=Z,81nm,0.7s						
WRAB	Tennant Creek	15.08	106		Pn	09 48 08.5	-2.3
WB2	Warramunga Arr	15.08	106	P	Pn	09 48 08.2	-2.6
	baz=15						
WB2	Warramunga Arr	15.08	106	Pn	Pn	09 48 08.5	-2.3
WB2				IAmb	IAmb	09 48 37.8	
	comp=Z,92nm,0.9s						
WB0	Warramunga Arr	15.09	105	Pn	Pn	09 48 08.2	-2.7
KLBR	Kellerberrin	15.15	184	P	Pn	09 48 08.9	-2.8
	baz=15,SNR=108						
KLBR	Kellerberrin	15.15	184	P	Pn	09 48 09.2	-2.5
	comp=Z,439nm,0.7s						
WR0	Warramunga Arr	15.26	106	Pn	Pn	09 48 10.6	-2.6
SKJI	Sukabumi	15.29	306	P	Pn	09 48 11.3	-2.2
PBKI	Pangkalan Bun	15.38	332	P	Pn	09 48 09.0	-5.7
	comp=Z,15μmcomp=Z,601nm,0.7s						
AAI	Ambon	15.59	37	P	Pn	09 48 17.4	-0.1
	comp=Z,70nm,0.9s						
APSI	Ampana	15.64	10	P	Pn	09 48 18.1	0.0
	comp=Z,414nmcomp=Z,63nm,1.0s						
MUN	Mundaring	15.69	189	P	Pn	09 48 15.8	-2.9
	baz=16,SNR=73						
MUN	Mundaring	15.69	189	P	Pn	09 48 16.1	-2.7
	comp=Z,241nm,0.7s						
MTKN	Mount Kenneth	15.71	190	P	Pn	09 48 19.1	0.0
	comp=Z,986nm,0.7s						
LUWI	Luwuk	15.74	14		Pn	09 48 18.1	-1.3
LUWI				IAmb	IAmb	09 48 22.1	
	comp=Z,92nm,0.9s						
LUWI	Luwuk	15.74	14	P	Pn	09 48 19.0	-0.5
	comp=Z,107nm,1.0s						
LUWI	Luwuk	15.74	14	P	Pn	09 48 20.1	+0.6
	comp=Z,106nm,1.0s						
ASAR	Alice Springs	15.81	120	Pn	Pn	09 48 18.4	-2.1
	comp=Z,2.6nm,0.3s,baz=298,slow=12,SNR=59						
ASAR				Sn	Sn	09 51 11.0	-5.0
	comp=Z,6.2nm,0.3s,baz=309,slow=25,SNR=8.7						
ASAR				LR	LR	09 54 34.6	
	comp=Z,416nm,20.2s,baz=294,slow=38						
ASAR	Alice Springs	15.81	120	P	Pn	09 48 18.6	-1.9
ASAR	Alice Springs	15.81	120	Pn	Pn	09 48 18.6	-1.9
AS31	Alice Springs	15.81	120		Pn	09 48 20.3	-0.2
AS31				IAmb	IAmb	09 48 36.4	
	comp=Z,37nm,0.6s						
MTKI	Muara Teweh, K	15.88	345	P	Pn	09 48 20.0	-1.2
SANI	Sanana	15.88	27	P	Pn	09 48 20.0	-1.3
	comp=Z,736nmcomp=Z,42nm,1.4s						
SANI	Sanana	15.88	27	P	Pn	09 48 21.1	-0.2
	comp=Z,43nm,1.5s						
SMKI	Samarinda	15.95	354	P	Pn	09 48 21.7	-0.6
MSAI	Masohi	16.29	38	P	Pn	09 48 26.7	+0.1
NWAO	Narrogin (SRO)	16.51	185	P	Pn	09 48 26.3	-3.0
NWAO				pmax	pmax		
	comp=Z,347nm,1.0s						
NWAO	Narrogin (SRO)	16.51	185	Pn	Pn	09 48 26.3	-3.0
NWAO	Narrogin (SRO)	16.51	185	P	Pn	09 48 26.4	-2.9
	comp=Z,420nm,0.9s						
FORT	Forrest	16.56	151	P	Pn	09 48 27.6	-2.4
	baz=17,SNR=24						
FORT	Forrest	16.56	151	Pn	Pn	09 48 28.2	-1.7
MPSI	Mapaga	16.67	3	P	Pn	09 48 32.4	+1.0
	comp=Z,22nm,1.2s						
MRSI	Marisa	17.05	10	P	Pn	09 48 35.2	-0.9
	comp=Z,1μmcomp=Z,80nm,1.6s						
GTOI	Gorontalo	17.41	14	P	P	09 48 41.9	-0.1
	comp=Z,473nmcomp=Z,45nm,1.0s						
TOLI2	Tolitoli	17.51	6	Pn	Pn	09 48 41.2	-0.7
TOLI2				IAmb	IAmb	09 48 46.2	
	comp=Z,94nm,1.0s						
TOLI2	Tolitoli	17.51	6	P	P	09 48 43.4	+0.3
	comp=Z,104nm,1.2s						
TPI	Tanjungpandan	17.52	320	P	Pn	09 48 40.0	-2.1
	comp=Z,19nm,1.2s						
KMSI	Cibinong	17.60	17	P	P	09 48 46.4	+2.3
	comp=Z,272nm,0.8s						
LBMI	Labuha	17.81	29	P	P	09 48 47.6	+1.2
	comp=Z,883nmcomp=Z,57nm,1.3s						
STKI	Sintang	17.94	335	P	Pn	09 48 47.3	0.0
RKGY	Rocky Gully	18.20	185	P	Pn	09 48 49.0	-1.4
	baz=18,SNR=22						
RKGY	Rocky Gully	18.20	185	P	Pn	09 48 49.0	-1.4
	comp=Z,547nm,1.0s						
MDSI	Maura Dua	18.70	308	P	P	09 48 54.4	-1.9
	comp=Z,34nm,1.0s						
PPBI	Pangkal Pinang	18.94	317	P	P	09 48 58.9	0.0
TNTI	Ternate	19.00	27	P	P	09 48 59.8	+0.2
TNTI				IAmb	IAmb	09 49 04.2	
	comp=Z,62nm,1.0s						
TNTI	Ternate	19.00	27	P	Pn	09 49 01.3	+1.1
	comp=Z,65nm,1.1s						
TNTI	Ternate	19.00	27	P	Pn	09 49 00.7	+0.5
	comp=Z,65nm,1.1s						
OOD	Oodnadatta	19.20	129	P	Pn	09 49 02.5	-0.1
	comp=Z,135nm,0.8s						
MULG	Mulgathing	19.56	138	P	P	09 49 06.5	+0.9
	comp=Z,197nm,0.9s						
SIJI	Sorong	19.66	39	P	P	09 49 06.0	-0.8
	comp=Z,0.7nm,0.3s,baz=140,slow=8.4,SNR=4.1						
	comp=Z,25nm,0.9s						
SWI	Sorong	19.66	39	P	P	09 49 05.7	-1.1
	comp=Z,904nmcomp=Z,48nm,1.2s						
KSM	Kuching	19.70	334	P	P	09 49 06.4	-0.8
KSM	Kuching	19.70	334	P	Pn	09 49 08.1	-0.5
	comp=Z,46nm,1.1s						
SBUM	Sibu	19.88	340	P	P	09 49 08.9	-0.2
SBUM				IAmb	IAmb	09 49 12.2	
	comp=Z,42nm,0.9s						
QIS	Mount Isa	20.04	105	P	Pn	09 49 12.4	-0.4
	baz=20,SNR=88						
QIS	Mount Isa	20.04	105	P	Pn	09 49 13.3	+0.6
	comp=Z,142nm,1.1s						
MYLDM	Lahad Datu	21.46	359	P	P	09 49 25.1	-1.1
MYLDM				IAmb	IAmb	09 49 44.8	
	comp=Z,76nm,1.0s						
LCRK	Leigh Creek	22.50	132	P	P	09 49 39.3	+1.9
	comp=Z,144nm,0.8s						
BBOO	Buckleboo	22.52	140	P	P	09 49 38.3	+0.8
	baz=23,SNR=31						
BBOO	Buckleboo	22.52	140	P	P	09 49 39.2	+1.7
BBOO	Buckleboo	22.52	140	P	P	09 49 38.4	+0.9
	comp=Z,87nm,1.1s						
INKA	Innaminka	23.11	123	P	P	09 49 46.2	+2.4
	comp=Z,226nm,0.8s						
COEN	Coen	23.53	87	P	P	09 49 49.6	+1.5
	baz=24,SNR=30						
COEN	Coen	23.53	87	P	P	09 49 47.8	-0.3
COEN	Coen	23.53	87	P	P	09 49 50.1	+1.9
	comp=Z,75nm,0.8s						
WHYH	Whyalla	23.62	138	P	P	09 49 49.1	+0.3
	comp=Z,74nm,0.6s						
NAPP	Napperby	24.09	137	P	P	09 49 55.5	+2.2
	comp=Z,86nm,0.8s						
MTSU	Mount Surprise	24.31	98	P	P	09 49 58.2	+2.7
	baz=24,SNR=34						
MTSU	Mount Surprise	24.31	98	P	P	09 49 58.0	+2.5
	comp=Z,54nm,0.7s						
HTT	Hallett	24.75	137	P	P	09 50 01.5	+2.1
	baz=25,SNR=9.8						
HTT	Hallett	24.75	137	P	P	09 50 01.6	+2.2
	comp=Z,61nm,1.1s						
QLP	Quilpie	25.59	118	P	P	09 50 09.7	+2.6
	baz=26,SNR=13						
QLP	Quilpie	25.59	118	P	P	09 50 09.9	+2.8
	comp=Z,84nm,0.8s						
STKA	Stephens Creek	25.71	131	P	P	09 50 10.1	+2.0
	comp=Z,8.7nm,0.6s,baz=308,slow=10,SNR=22						
STKA				S	S	09 54 52.8	+16
	comp=Z,16nm,0.8s,baz=223,slow=16,SNR=2.9						
STKA				LR	LR	10 00 38.8	
	comp=Z,412nm,21.2s,baz=295,slow=37						
	comp=Z,8.7nm,0.6s						
STKA	Stephens Creek	25.71	131	P	P	09 50 10.1	+2.0
	baz=26,SNR=15						
STKA	Stephens Creek	25.71	131	P	P	09 50 09.6	+1.5
STKA	Stephens Creek	25.71	131	P	P	09 50 10.1	+2.0
	comp=Z,11nm,0.7s						
CTA	Charters Tower	26.20	102	P	P	09 50 15.1	+2.4
	comp=Z,17nm,0.9s,baz=274,slow=9.8,SNR=26						
CTA				LR	LR	10 00 44.4	
	comp=Z,189nm,18.4s,baz=270,slow=37						
	comp=Z,17nm,0.9s						
CTA	Charters Tower	26.20	102	P	P	09 50 15.1	+2.4
	comp=Z,40nm,0.8s						
CTAO	Charters Tower	26.20	102	P	P	09 50 13.2	+0.5
CTAO				pmax	pmax		
	comp=Z,40nm,0.9s						
CTAO	Charters Tower	26.20	102	P	P	09 50 13.2	+0.5
CTAO				IAmb	IAmb	09 50 57.5	
	comp=Z,40nm,0.9s						
CTAO	Charters Tower	26.20	102	P	P	09 50 15.2	+2.5
	comp=Z,34nm,0.9s						
GSI	Gunungsitoli	27.46	308	P	P	09 50 23.0	-1.0
GSI				IAmb	IAmb	09 51 14.9	
	comp=Z,19nm,0.8s						
GSI	Gunungsitoli	27.46	308	P	P	09 50 23.6	-0.4
	comp=Z,25nm,1.0s						
PSI	Prapat	27.47	312	LR	LR	10 01 51.6	
	comp=Z,384nm,21.1s,baz=153,slow=38						
PMG	Port Moresby	28.37	79	LR	LR	10 03 02.2	
	comp=Z,452nm,18.7s,baz=258,slow=39						
PMG	Port Moresby	28.37	79	*i* P	P	09 50 34.3	+2.1
PMG				pmax	pmax		
	comp=Z,17nm,1.2s						
CMSA	Cobar Meteorol	28.62	127	P	P	09 50 35.4	+1.1
	baz=29,SNR=4.8						
CMSA	Cobar Meteorol	28.62	127	P	P	09 50 36.7	+2.4
	comp=Z,38nm,1.2s						
GUMO	Guam	39.32	42	LR	LR	10 11 33.6	
	comp=Z,31nm,18.4s,baz=92,slow=41						
CMAR	Chiang Mai Arr	39.84	330	P	P	09 52 11.3	-0.1
	comp=Z,2.1nm,0.7s,baz=163,slow=6.3,SNR=15						
CMAR				LR	LR	10 09 52.7	
	comp=Z,107nm,19.3s,baz=205,slow=38						
	comp=Z,2.1nm,0.7s						
CMAR	Chiang Mai Arr	39.84	330	P	P	09 52 10.7	-0.7
SSLB	Suanglung	40.00	3	P	P	09 52 13.4	+0.7
CHTO	Chiang Mai	40.15	330	P	P	09 52 13.3	-0.7
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	Chiang Mai	40.15	330	P	P	09 52 13.2	-0.7
KMI	Kunming	44.19	339	⇓P	P	09 52 48.6	+1.5
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				LR	LR		
	comp=Z,130nm,20.3s						
KMI				LR	LR		
	comp=Z,200nm,15.8s						
KMI				LR	LR		
	comp=Z,170nm,24.0s						
PALK	Pallekele	44.54	299	LR	LR	10 11 13.1	
	comp=Z,110nm,18.1s,baz=229,slow=36						
DZM	Mont Dzumac	45.08	105	LR	LR	10 12 27.9	
	comp=Z,235nm,19.4s,baz=264,slow=37						
PZH	PanZhiHua	45.81	338	P	P	09 53 03.6	+3.7
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
H08S2	Diego Garcia H	46.14	275	T	T	10 42 15.4	
	baz=105,slow=75,SNR=88						
H08S3	Diego Garcia H	46.16	275	T	T	10 42 11.5	
	baz=105,slow=75,SNR=88						
H08S1	Diego Carcia H	46.16	275	T	T	10 42 19.6	
	baz=105,slow=75,SNR=88						
NJ2	Nanjing	48.19	360	*e*P	P	09 53 20.2	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CD2	Chengdu	49.26	343	P	P	09 53 26.4	-0.1
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,120nm,18.7s						
CD2				LR	LR		
	comp=Z,140nm,15.5s						
CASY	Casey	50.14	184	P	P	09 53 33.6	+0.8
XAN	Xi'an	51.07	349	P	P	09 53 39.7	-0.5
XAN				pP	sP	09 53 44.1	+0.3
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				LR	LR		
	comp=Z,150nm,20.6s						
XAN				LR	LR		
	comp=Z,140nm,18.6s						
XAN				LR	LR		
	comp=Z,170nm,22.7s						
RPZ	Rata Peaks	51.65	133	P	P	09 53 46.2	+1.7
	comp=Z,14nm,0.8s,baz=236,slow=11,SNR=4.3						
RPZ				LR	LR	10 14 50.1	
	comp=Z,551nm,20.4s,baz=275,slow=35						
	comp=Z,14nm,0.8s						
RPZ	Rata Peaks	51.65	133	IAmb	IAmb	09 53 56.0	
	comp=Z,20nm,0.8s						
JHS	Saijyo	52.88	15	P	P	09 53 54.9	+1.3
LSA	Lhasa	53.10	330	P	P	09 53 56.9	+1.0
LSA				pmax	pmax		
	comp=Z,35nm,0.8s						
LSA	Lhasa	53.10	330	P	P	09 53 56.9	+1.0
HNS	HongShan	53.67	356	⇑P	P	09 53 59.5	+0.1
HNS				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH	Lanzhou	54.13	345	*e*P	P	09 54 03.5	+0.5
LZH				pP	pwP	09 54 08.3	+0.3
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
KSAR	Wonju Array Be	54.23	9	P	P	09 54 03.3	-0.2
KSAR	Wonju Array Be	54.23	9	P	P	09 54 03.3	-0.2
KSRS	Korea Array	54.24	9	P	P	09 54 04.4	+0.8
	comp=Z,3.8nm,0.8s,baz=186,slow=8.0,SNR=12						
KSRS				LR	LR	10 17 29.2	
	comp=Z,21nm,21.3s,baz=185,slow=36						
	comp=Z,3.8nm,0.8s						
JGF	Kuroka	54.60	18	P	P	09 54 06.8	+0.5
URZ	Urewera	55.15	125	LR	LR	10 20 00.2	
	comp=Z,320nm,18.3s,baz=211,slow=38						
MJAR	Matsushiro Arr	55.73	19	P	P	09 54 14.2	-0.2
	comp=Z,5.5nm,0.8s,baz=187,slow=7.7,SNR=14						
	comp=Z,5.5nm,0.8s						
MJAR	Matsushiro Arr	55.73	19	P	P	09 54 14.2	-0.2
MJAR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BJT	Baijiatuau	56.20	357	P	P	09 54 18.3	+0.6
BJT				pmax	pmax		
	comp=Z,36nm,1.6s						
BJT	Baijiatuau	56.20	357	P	P	09 54 18.3	+0.6
BJT				IAmb	IAmb	09 54 19.1	
	comp=Z,36nm,1.6s						
BJI	Beijing	56.22	357	P	P	09 54 17.8	0.0
BJI				pmax	pmax		
	comp=Z,13nm,1.2s						
JSD	Sado	57.13	18	P	P	09 54 24.3	0.0
JSD				IAmb	IAmb	09 54 45.2	
	comp=Z,14nm,0.8s						
BTO	Baotou	57.32	352	*e*P	P	09 54 27.8	+2.0
BTO				S	S	10 02 26.6	+4.3
HHC	Hu-ho-hao-te	57.38	353	*e*P	P	09 54 27.2	+1.0
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
GTA	Gaotai	58.33	343	⇑P	P	09 54 34.4	+1.5
GTA				pP	pwP	09 54 39.0	+1.1
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
RAO	Raoul Island	58.99	115	LR	LR	10 19 37.4	
	comp=Z,165nm,19.8s,baz=323,slow=36						
MSHR	Mys Shultsa	59.77	10	*ce*P	P	09 54 43.2	+0.5
MSHR				pmax	pmax		
	comp=Z,13nm,1.0s						
VLA	Vladivostok	60.42	11	*i* P	P	09 54 46.8	-0.3
VLA				pmax	pmax		
	comp=Z,21nm,0.8s						
USRK	Ussuriysk Ar.	61.49	11	P	P	09 54 55.2	+0.9
	comp=Z,9.7nm,0.9s,baz=194,slow=7.5,SNR=11						
	comp=Z,9.7nm,0.9s						
MDJ	Mudanjiang	61.51	9	P	P	09 54 55.6	+1.1
MDJ	Mudanjiang	61.51	9	P	P	09 54 55.8	+1.3
MDJ				pmax	pmax		
	comp=Z,33nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.2s						
MAW	Mawson	62.30	201	LR	LR	10 19 46.5	
	comp=Z,121nm,18.1s,baz=70,slow=34						
ASAJ	Asahikawa	64.00	19	LR	LR	10 24 31.2	
	comp=Z,13nm,21.2s,baz=161,slow=38						
VNDA	Vanda	64.73	171	P	P	09 55 18.1	+2.6
	comp=Z,1.5nm,0.9s,baz=302,slow=9.4,SNR=7.9						
VNDA				LR	LR	10 22 15.6	
	comp=Z,95nm,18.3s,baz=309,slow=35						
	comp=Z,1.5nm,0.9s						

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VNDA  Vanda             64.73 171   P       P        09 55 15.8 +0.3
VNDA                                IAmb    IAmb     09 55 53.6
      comp=Z,29nm,1.9s
ULN   Ulaanbaatar       64.86 351ceP        P        09 55 17.6 +0.7
ULN                                 pmax    pmax
      comp=Z,8.0nm,1.3s
ULN   Ulaanbaatar       64.86 351   P       P        09 55 16.5  -0.4
ULN                                 IAmb    IAmb     09 55 52.0
      comp=Z,6.5nm,1.0s
SONM  Songino Array     64.93 351   P       P        09 55 18.3 +0.9
      comp=Z,4.2nm,0.8s,baz=165,slow=6.6,SNR=19
      comp=Z,4.2nm,0.8s
SONM  Songino Array     64.93 351   P       P        09 55 17.8 +0.5
SONM                                IAmb    IAmb     09 55 19.4
      comp=Z,6.9nm,1.0s
KLR   Kul'dur           66.33   9   LR      LR       10 24 33.2
      comp=Z,21nm,20.3s,baz=212,slow=36
KLR   Kul'dur           66.33   9ceP        P        09 55 26.8 +0.6
KLR                                 pmax    pmax
      comp=Z,10.0nm,2.5s
WMQ   Urumqi            66.40 336  eP       P        09 55 29.3 +2.5
WMQ                                 sP      pwP      09 55 35.0 +3.1
WMQ                                 S       S        10 04 15.1  -1.9
WMQ                                 pmax    pmax
      comp=Z,15nm,1.5s
YSS   Yuzh-Sakhalins    66.62  18  eP       P        09 55 29.6 +1.6
YSS                                 pmax    pmax
      comp=Z,10.0nm,1.1s
YSS   Yuzh-Sakhalins    66.62  18   P       P        09 55 29.0 +1.0
YSS                                 IAmb    IAmb     09 56 07.2
      comp=Z,13nm,1.1s
ZAK   Zakamensk         67.92 349  eP       P        09 55 36.8 +0.5
ZAK                                 pmax    pmax
      comp=Z,7.0nm,1.1s
KSH   Kashi             68.56 326   P       P        09 55 41.8 +1.1
KSH                                 sP      pwP      09 55 50.0 +4.3
KSH                                 pmax    pmax
      comp=Z,7.0nm,0.6s
ZEA   Zeya              70.23   5  eP       P        09 55 51.6 +1.1
ZEA                                 pmax    pmax
      comp=Z,10.0nm,1.0s
HVS   Khovu-Aksy        70.79 343 i P       P        09 55 53.4  -0.7
HVS                                 pmax    pmax
      comp=Z,4.0nm,1.0s
WSAR  Wadi Sarin        70.89 302   LR      LR       10 26 25.9
      comp=Z,91nm,18.0s,baz=144,slow=35
MK31  Makanchi Array    71.02 334   P       P        09 55 56.4 +0.8
MK31                                pmax    pmax
      comp=Z,4.0nm,0.9s
MK31  Makanchi Array    71.02 334   P       P        09 55 56.4 +0.8
MKAR  Makanchi Array    71.02 334   P       P        09 55 56.5 +1.0
      comp=Z,5.2nm,0.8s,baz=141,slow=7.3,SNR=21
MKAR                                LR      LR       10 31 11.8
      comp=Z,31nm,20.0s,baz=144,slow=39
      comp=Z,5.2nm,0.8s
MKAR  Makanchi Array    71.02 334   P       P        09 55 56.3 +0.7
GAR   Garm              71.42 322   P       P        09 55 58.3   0.0
GAR                                 IAmb    IAmb     09 56 00.2
      comp=Z,14nm,1.0s
AAK   Ala-Archa         71.56 327   LR      LR       10 29 44.6
      comp=Z,46nm,21.2s,baz=150,slow=38
AAK   Ala-Archa         71.56 327ceP        P        09 55 59.3 +0.2
AAK                                 pmax    pmax
      comp=Z,7.0nm,1.7s
AAK   Ala-Archa         71.56 327   P       P        09 55 58.4  -0.7
BTK   Batken            71.82 323   P       P        09 56 00.5  -0.1
BTK                                 pmax    pmax
      comp=Z,20nm,1.7s
BTK   Batken            71.82 323   P       P        09 56 00.5  -0.1
BTK                                 IAmb    IAmb     09 56 05.7
      comp=Z,20nm,1.7s
CHGR  Chuyangaron       71.90 321   P       P        09 56 01.2 +0.1
QSPA  South Pole Qui    73.63 180   LR      LR       10 26 34.8
      comp=Z,101nm,19.7s,baz=300,slow=34
QSPA  South Pole Qui    73.63 180   P       P        09 56 12.9 +1.8
QSPA                                IAmb    IAmb     09 56 24.4
      comp=Z,11nm,1.1s
KKAR  Karatay Array     74.01 325   P       P        09 56 13.3  -0.2
KKAR  Karatay Array     74.01 325   P       P        09 56 13.2  -0.2
BOD   Bodaibo           74.07 357  eP       P        09 56 14.3 +0.9
BOD                                 pmax    pmax
      comp=Z,9.0nm,1.2s
KURK  Kurchatov         75.61 335ceP        P        09 56 23.2 +0.7
KURK                                pmax    pmax
      comp=Z,14nm,1.0s
KURK  Kurchatov         75.61 335   P       P        09 56 22.6 +0.2
KURK                                IAmb    IAmb     09 56 24.4
      comp=Z,12nm,1.0s
ZAA0  Zalesovo Array    75.92 340   P       P        09 56 23.9  -0.3
ZAA0                                IAmb    IAmb     09 56 25.2
      comp=Z,8.2nm,0.9s
ZALV  Zalesovo Beam     75.92 340   P       P        09 56 23.9  -0.3
      comp=Z,7.0nm,0.9s,baz=134,slow=4.3,SNR=21
ZALV                                LR      LR       10 31 14.4
      comp=Z,25nm,21.3s,baz=47,slow=37
      comp=Z,7.0nm,0.9s
ZALV  Zalesovo Beam     75.92 340 i P       P        09 56 24.2 +0.1
ZALV                                pmax    pmax
      comp=Z,7.0nm,0.9s
ZALV  Zalesovo Beam     75.92 340   P       P        09 56 24.3 +0.1
RAR   Rarotonga         76.33 108   LR      LR       10 31 10.5
      comp=Z,36nm,18.6s,baz=262,slow=37
PETK  Petropavlovsk-    76.88  23   P       P        09 56 29.0  -0.6
      comp=Z,3.2nm,0.8s,baz=212,slow=8.0,SNR=3.8
PETK                                LR      LR       10 31 49.3
      comp=Z,18nm,20.5s,baz=216,slow=37
      comp=Z,3.2nm,0.8s
GEYT  Alibeck           78.56 315   LR      LR       10 32 41.4
      comp=Z,41nm,21.1s,baz=180,slow=37
YAK   Yakutsk           78.64   5 i P       P        09 56 40.1 +0.8
YAK                                 pmax    pmax
      comp=Z,15nm,0.7s
MA2   Magadan           80.03  16   LR      LR       10 34 25.2
      comp=Z,18nm,19.9s,baz=191,slow=37
BRVK  Borovoye          80.86 333ceP        P        09 56 52.2 +0.7
BRVK                                pmax    pmax
      comp=Z,6.0nm,1.3s
BRVK  Borovoye          80.86 333   P       P        09 56 51.8 +0.2
RAYN  Ar Rayn           81.95 297   P       P        09 56 57.7  -0.4
RAYN                                pmax    pmax
      comp=Z,5.0nm,1.1s
RAYN  Ar Rayn           81.95 297   P       P        09 56 57.7  -0.4
TROLL Troll, Antarti    82.28 196   P       P        09 57 01.0 +1.9
SEY   Seymchan          83.31  15ceP        P        09 57 04.6 +0.5
SEY                                 pmax    pmax
      comp=Z,4.0nm,0.8s
ABKAR Akbulak array     83.57 326   P       P        09 57 06.0 +0.2
SHEM  Shemya Is, Ala    83.66  30   LR      LR       10 33 31.6
      comp=Z,33nm,20.4s,baz=275,slow=35
SNAA  Sanae             83.88 196   P       P        09 57 08.5 +1.2
SNAA  Sanae             83.88 196   P       P        09 57 09.2 +1.9
      comp=Z,2.9nm,0.9s,baz=197,slow=8.7,SNR=7.3
SNAA                                LR      LR       10 33 51.5
      comp=Z,78nm,18.1s,baz=118,slow=35
      comp=Z,2.9nm,0.9s
SNAA  Sanae             83.88 196 i P       P        09 57 07.8 +0.5
SNAA                                pmax    pmax
      comp=Z,8.0nm,1.1s
SNAA  Sanae             83.88 196   IAmb    IAmb     09 57 19.4
      comp=Z,8.0nm,1.0s
BELA  Belgrano 2        84.67 185   P       P        09 57 12.0 +0.9
BELA                                IAmb    IAmb     09 57 22.3
      comp=Z,5.9nm,0.8s
AKTO  Aktyubinsk        85.26 326   LR      LR       10 42 19.8
      comp=Z,24nm,19.2s,baz=128,slow=41
BOSA  Boshof            85.42 242   LR      LR       10 30 33.4
      comp=Z,53nm,18.5s,baz=186,slow=32
VNA3  Neumayer Olymp    85.87 195   P       P        09 57 19.0 +1.8
LBTB  Lobatse           86.12 245   LR      LR       10 29 23.3
      comp=Z,51nm,20.7s,baz=120,slow=31
LSZ   Lusaka            86.46 255   LR      LR       10 31 31.8
      comp=Z,88nm,18.5s,baz=184,slow=32
PPT   Papeete           86.55 107   LR      LR       10 34 26.6
      comp=Z,43nm,19.4s,baz=276,slow=34
MBAR  Mbarara           88.09 270   LR      LR       10 38 00.2
      comp=Z,31nm,18.2s,baz=90,slow=36
TIXI  Tiksi             88.10   3 i P       P        09 57 27.1  -0.7
TIXI                                pmax    pmax
      comp=Z,2.0nm,0.9s
TIXI  Tiksi             88.10   3   P       P        09 57 27.5  -0.3
ARU   Arti              88.27 331   LR      LR       10 42 07.0
      comp=Z,36nm,18.0s,baz=178,slow=39
ARU   Arti              88.27 331c iP       P        09 57 28.1  -0.8
ARU                                 S       S        10 07 56.9   -17
ARU                                 SS      SS       10 14 02.6  -0.7
ARU                                 pmax    pmax
      comp=Z,6.0nm,1.0s
NRIK  Noril'sk          88.38 349ceP        P        09 57 28.1  -1.0
NRIK                                pmax    pmax
      comp=Z,2.0nm,0.9s
BILL  Bilibino          90.89  16⥣eP        P        09 57 37.3  -3.7
BILL                               e                 09 57 44.0
BILL                               e                 10 01 17.4
BILL                                pmax    pmax
      comp=Z,2.0nm,0.9s
SHA1  Shidzhatmaz       91.62 315 i P       P        09 57 44.7  -0.5
EIL   Elat              92.89 300   LR      LR       10 39 40.5
      comp=Z,49nm,18.5s,baz=279,slow=36
MMAI  Mount Meron Ar    93.51 303   LR      LR       10 44 39.3
      comp=Z,33nm,18.2s,baz=237,slow=39
TSUM  Tsumeb            94.96 248   LR      LR       10 35 07.0
      comp=Z,76nm,21.0s,baz=146,slow=32
BRTR  Keskin Array B    96.77 309   LR      LR       10 43 53.0
      comp=Z,31nm,20.6s,baz=119,slow=37
OBN   Obninsk           99.00 325⥣eP        P        09 58 18.2   0.0
OBN                                e                 10 02 17.9
OBN                                eSS      SS       10 16 28.8  -7.9
OBN                                 pmax    pmax
      comp=Z,3.0nm,0.9s
OBN                                 MLR     MLR
      comp=Z,33nm,18.0s
PMSA  Palmer Station    99.03 179   LR      LR       10 44 09.3
      comp=Z,104nm,18.1s,baz=166,slow=36
TORD  Torodi Ar. Bea   119.42 276   PKP     PKPdf    10 03 28.3   0.0
      comp=Z,0.6nm,0.8s,baz=359,slow=1.4,SNR=4.0
YKA   Yellowknife Ar   120.91  26   PKP     PKiKP    10 03 30.4 +0.6
      comp=Z,0.3nm,0.8s,baz=302,slow=1.9,SNR=6.0
YKA   Yellowknife Ar   120.91  26   PKIKP   PKiKP    10 03 30.2 +0.3
YKA   Yellowknife Ar   120.91  26           PKiKP    10 03 30.2 +0.3
LPAZ  La Paz           146.77 168   PKPbc   PKiKP    10 04 24.2  -0.1
      comp=Z,2.9nm,0.8s,baz=236,slow=2.3,SNR=10
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*NEIC **10** 10:25:07.9±1.3, 17°.7S±0°.2×178°.67W±0°.09, h588^{km}±10^{km}, mb4.3/19, Error ellipse: s-maj=32.8km s-min=7.5km az=163.0*

*IDC **10** 10:25:09.2±1.8, 17°.31S×179°.01W, h594^{km}±19^{km}, mb3.0/6, mbtmp3.9/8, Error ellipse: s-maj=79.5km s-min=16.4km az=149.0*

ISC 10 10:25:04.7±0.8**, 17°.8S**±0°.2×**178°.5W**±0°.1**, h550**^{km}**, n36,** σ**1^{s}.52**/32**, mb4.2**/17**, Fiji Islands region**

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Code  Station Name         Δ°  AZ°     Phase ID            Time     Res
                                     Op       ISC        h  m  s    ISC
MSVF  Nonsavu            3.29 271    P        P         10 26 26.9 +5.2
      18nm,0.5s,baz=73,slow=1.2,SNR=17
MSVF  Nonsavu            3.29 271    P        P         10 26 26.4 +4.6
MARNC Mare, Loyalty     13.20 252    P        P         10 27 56.0 +0.3
LIFNC LIFOU             13.78 255    P        P         10 28 01.3  -0.4
PINNC Pines Island,     14.02 248    P        P         10 28 05.7 +1.6
OUENC Ouen Island, N    14.51 249    P        P         10 28 11.1 +2.0
DZM   Mont Dzumac       14.77 251    P        P         10 28 14.5 +2.5
      5.2nm,0.8s,baz=76,slow=18,SNR=6.7
DZM   Mont Dzumac       14.77 251    P        P         10 28 13.0 +1.0
KOUNC Koumac, New Ca    16.49 258    P        P         10 28 29.5 +0.7
KOUNC                                IAmb     IAmb      10 28 38.3
      comp=Z,18nm,1.3s
EIDS  Eidsvold          29.22 250    P        P         10 30 22.1  -0.4
EIDS                                 IAmb     IAmb      10 30 26.6
      comp=Z,9.2nm,1.3s
ARMA  Armidale          29.91 240    P        P         10 30 28.8 +0.3
ARMA                                 IAmb     IAmb      10 30 53.9
      comp=Z,12nm,1.3s
CTAO  Charters Tower    33.38 260    P        P         10 30 57.7  -0.4
CTAO                                 IAmb     IAmb      10 30 58.2
      comp=Z,3.7nm,0.8s
COEN  Coen              37.02 270    P        P         10 31 28.1  -0.4
COEN                                 IAmb     IAmb      10 31 34.7
      comp=Z,15nm,1.3s
TOO   Toolangi          37.15 231    P        P         10 31 29.3   0.0
STKA  Stephens Creek    38.59 241    P        P         10 31 41.1   0.0
      comp=Z,3.1nm,0.4s,baz=82,slow=6.9,SNR=25
      comp=Z,3.1nm,0.4s
STKA  Stephens Creek    38.59 241    IAmb     IAmb      10 31 41.3
      comp=Z,4.0nm,1.4s
BBOO  Buckleboo         43.37 241    P        P         10 32 18.3  -0.6
BBOO                                 IAmb     IAmb      10 32 22.6
      comp=Z,15nm,1.1s
WR0   Warramunga Arr    44.37 259    P        P         10 32 25.6  -1.3
WB0   Warramunga Arr    44.53 260    P        P         10 32 27.1  -1.1
WB0                                  IAmb     IAmb      10 32 55.0
      comp=Z,13nm,1.5s
WB2   Warramunga Arr    44.55 259    P        P         10 32 26.8  -1.5
WB2                                  IAmb     IAmb      10 32 34.0
      comp=Z,9.9nm,1.3s
WRA   Warramunga Arr    44.56 259    P        P         10 32 26.8  -1.6
      comp=Z,2.4nm,0.4s,baz=93,slow=8.0,SNR=72
      comp=Z,2.4nm,0.4s
WRA   Warramunga Arr    44.56 259    IAmb     IAmb      10 32 27.5
      comp=Z,0.3nm,0.7s
AS31  Alice Springs     44.73 254    P        P         10 32 28.7  -0.9
AS31                                 IAmb     IAmb      10 32 29.3
      comp=Z,6.0nm,0.7s
ASAR  Alice Springs     44.73 254    P        P         10 32 28.7  -1.0
      comp=Z,23nm,0.6s,baz=88,slow=8.3,SNR=573
ASAR  Alice Springs     44.73 254    P        P         10 32 28.4  -1.2
MTN   Manton Dam        48.72 268    P        P         10 32 56.6  -3.2
KNRA  Kununurra         50.41 264    P        P         10 33 09.9  -2.3
FITZ  Fitzroy Crossi    52.96 261    P        P         10 33 28.2  -2.3
FITZ                                 IAmb     IAmb      10 33 30.5
      comp=Z,24nm,1.5s
PSA00 Pilbara Seismi    57.85 255    P        P         10 34 03.6  -0.9
MBWA  Marble Bar        58.01 256    P        P         10 34 04.1  -1.5
QSPA  South Pole Qui    72.22 180    IAmb     IAmb      10 35 33.7
      comp=Z,12nm,1.4s
QSPA                                 P        P         10 35 33.7  -0.5
NVAR  Mina Array Bea    79.43  44    P        P         10 36 15.3 +0.7
      comp=Z,0.2nm,0.6s,baz=220,slow=9.4,SNR=3.9
      comp=Z,0.2nm,0.6s
ILAR  Eielson Array     85.83  13    P        P         10 36 44.5  -1.3
      comp=Z,0.5nm,1.1s,baz=214,slow=5.6,SNR=6.1
      comp=Z,0.5nm,1.1s
TXAR  Lajitas Array     86.03  58    P        P         10 36 49.2 +1.5
      comp=Z,0.5nm,0.8s,baz=216,slow=6.2,SNR=8.0
      comp=Z,0.5nm,0.8s
TXAR  Lajitas Array     86.03  58    P        P         10 36 47.9 +0.1
PDAR  Pinedale Array    87.35  43    P        P         10 36 53.7  -0.2
      comp=Z,0.2nm,0.5s,baz=207,slow=5.0,SNR=2.5
      comp=Z,0.2nm,0.5s
```

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*JMA **10** 10:31:41.2±0.2, 38°.0N±0°.9×13°6E±°, h357^{km}±1^{km}, MV3.5/51, SEA OF JAPAN*

*IDC **10** 10:31:41.8±0.9, 38°.01N×135°.53E, h344^{km}±9^{km}, mb3.4/16, mbtmp4.1/23, Error ellipse: s-maj=11.8km s-min=9.7km az=91.0*

ISC 10 10:31:42.0±0.6**, 37°.99N**±0°.06×**135°.65E**±0°.07**, h348**^{km}±6^{km}**, n35,** σ**0^{s}.86**/41**, mb3.6**/16**, Sea of Japan**

```
Code  Station Name         Δ°  AZ°     Phase ID            Time     Res
                                     Op       ISC        h  m  s    ISC
JHG   Hegura jima        1.02  98   eP        Pn        10 32 28.2 +0.6
JHG                                 eS        S         10 33 04.3 +0.2
JJH   Hakui              1.39 139    P        Pn        10 32 30.1 +0.6
JJH                                 eS        S         10 33 08.3 +0.9
JSZ   Suzu               1.47 111    P        Pn        10 32 30.0 +0.3
JSZ                                 eS        S         10 33 09.4 +1.4
JTT   Ttatey             1.93 135    P        Pn        10 32 33.0 +0.3
JSD   Sado               2.07  88    P        Pn        10 32 33.6 +0.1
JSD                                  S        S         10 33 13.8  -1.1
MAT   Matsushiro         2.50 124    P        Pn        10 32 36.9  -0.1
MJAR  Matsushiro Arr     2.50 124    P        Pn        10 32 37.0   0.0
      30nm,0.4s,baz=310,slow=9.2,SNR=105
JNG   Nsakai             2.52 128    P        Pn        10 32 37.3 +0.1
JKSM  Kasumi             2.52 198    P        Pn        10 32 37.5 +0.4
JKSM                                eS        S         10 33 21.7 +0.2
JYTA  Yamagatataniai     2.54 160    P        Pn        10 32 37.4   0.0
JOI   OKI                2.56 229    P        Pn        10 32 37.7 +0.3
JWT   Wachi              2.71 184    P        Pn        10 32 39.0 +0.3
JWT                                 eS        S         10 33 22.9  -1.4
JHJ   Hachijo jima 2     5.91 144    P        Pn        10 33 11.0  -0.8
      38nm,0.3s,baz=317,slow=23,SNR=16
JHJ                                  S        S         10 34 22.7  -1.9
      26nm,0.2s,baz=107,slow=19,SNR=1.2
KSRS  Korea Array        6.14 267    P        Pn        10 33 15.3 +1.0
      8.2nm,0.8s,baz=87,slow=12,SNR=20
JNU   Nakatsue           6.22 220    P        Pn        10 33 16.1 +0.7
      5.9nm,0.4s,baz=106,slow=8.7,SNR=3.7
USRK  Ussuriysk Ar.      6.79 337    P        P         10 33 22.0 +0.3
      8.9nm,0.6s,baz=141,slow=10,SNR=22
ASAJ  Asahikawa          8.06  38    P        Pn        10 33 35.6  -1.1
      5.0nm,0.3s,baz=239,slow=12,SNR=20
ASAJ                                 S        S         10 35 02.2  -8.0
      6.8nm,0.4s,baz=35,slow=25,SNR=8.9
KLR   Kul'dur           11.58 347    P        Pn        10 34 17.2  -1.3
      5.1nm,0.3s,baz=158,slow=10,SNR=32
JCJ   Chichijima        12.18 151    P        P         10 34 20.2  -5.4
      14nm,0.3s,baz=312,slow=22,SNR=12
JCJ                                  S        S         10 36 28.4   -13
      24nm,0.3s,baz=284,slow=22,SNR=8.0
PETK  Petropavlovsk-    21.48  38    P        P         10 36 04.8 +1.4
      3.5nm,1.0s,baz=205,slow=3.1,SNR=5.2
      3.5nm,1.0s
SONM  Songino Array     23.45 304    P        P         10 36 20.2  -1.2
      1.9nm,0.6s,baz=105,slow=10,SNR=7.0
      1.9nm,0.6s
CMAR  Chiang Mai Arr    37.42 249    P        P         10 38 22.7  -0.4
      1.4nm,0.4s,baz=49,slow=7.8,SNR=4.1
      1.4nm,0.4s
ZALV  Zalesovo Beam     37.87 312    P        P         10 38 25.4  -1.0
      0.9nm,0.4s,baz=111,slow=8.0,SNR=3.0
      0.9nm,0.4s
MKAR  Makanchi Array    39.70 300    P        P         10 38 40.6  -1.0
      2.0nm,0.5s,baz=85,slow=10,SNR=24
      2.0nm,0.5s
NRIK  Noril'sk          40.51 336    P        P         10 38 47.2  -0.5
      6.0nm,0.3s,baz=104,slow=5.8,SNR=7.3
      6.0nm,0.3s
ILAR  Eielson Array     51.15  32    P        P         10 40 10.1   0.0
      0.8nm,0.5s,baz=263,slow=6.0,SNR=18
      0.8nm,0.5s
WRA   Warramunga Arr    57.63 181    P        P         10 40 56.9 +0.1
      2.1nm,0.4s,baz=355,slow=7.6,SNR=31
      2.1nm,0.4s
ASAR  Alice Springs     61.35 182    P        P         10 41 22.2 +0.3
      1.3nm,0.8s,baz=1.8,slow=6.3,SNR=15
      1.3nm,0.8s
ARCES ARCESS Array B    61.44 338    P        P         10 41 21.6  -0.3
      1.2nm,0.8s,baz=51,slow=7.1,SNR=1.7
      1.2nm,0.8s
YKA   Yellowknife Ar    65.23  29    P        P         10 41 47.0 +0.3
      0.4nm,0.5s,baz=310,slow=6.3,SNR=6.7
      0.4nm,0.5s
FINES FINESS Array B    65.77 330    P        P         10 41 49.5  -0.6
      0.5nm,0.3s,baz=40,slow=11,SNR=2.6
      0.5nm,0.3s
STKA  Stephens Creek    69.73 175    P        P         10 42 15.4 +0.6
      1.6nm,0.7s,baz=350,slow=11,SNR=4.0
      1.6nm,0.7s
NVAR  Mina Array Bea    78.01  50    P        P         10 43 04.5 +1.6
      1.0nm,0.6s,baz=286,slow=5.4,SNR=12
      1.0nm,0.6s
PDAR  Pinedale Array    80.17  43    P        P         10 43 15.1 +0.6
      0.8nm,0.8s,baz=278,slow=0.7,SNR=7.3
      0.8nm,0.8s
TXAR  Lajitas Array     93.06  49    P        P         10 44 18.3 +1.2
      0.5nm,0.5s,baz=288,slow=2.9,SNR=10
      0.5nm,0.5s
```

KRSZO 10 10:47:36.3±1.2**, 47°.91N**×**19°.87E, h0**^{km}**, ML2.0**/4**, Error ellipse: s-maj=7.0km s-min=6.2km az=83.0, Explosion., Hungary**

```
Code  Station Name         Δ°  AZ°     Phase ID            Time     Res
                                     Op       ISC        h  m  s    ISC
PSZ   Piszkesteto        0.02  58    Pg       Pg        10 47 36.7  -0.1
PSZ                                  Lg       Lg        10 47 39.1
PSZ   Piszkesteto        0.02  58    P        Pg        10 47 36.7  -0.1
PSZ                                  S        Sg        10 47 39.1 +2.0
KECS  Kecovo             0.71  35    Pg       Pg        10 47 50.6 +0.7
KECS                                 Lg       Lg        10 48 01.3
KECS  Kecovo             0.71  35   ePG       Pb        10 47 51.3  -0.3
KECS                                eSG       Sb        10 48 01.1  -0.8
VYHS  Vyhne              0.91 311    Pg       Pb        10 47 54.4  -0.6
VYHS                                 Lg       Lg        10 48 07.9
VYHS  Vyhne              0.91 311   ePG       Pg        10 47 54.0 +0.3
VYHS                                eSG       Sb        10 48 06.6  -1.0
LANS  Liptovska Anna     1.27 348    Pg       Pb        10 48 01.0  -0.2
LANS                                 Sn       Sn        10 48 19.7 +0.4
LANS  Liptovska Anna     1.27 348   ePG       Pb        10 48 01.0  -0.2
LANS                                eSG       Sn        10 48 19.5 +0.2
```

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*ISU **10** 10:56:11, 41°.32N×69°.71E, h29^{km}*

*SOME **10** 10:56:14.8, 40°.90N×70°.15E, h5^{km}*

*KRNET **10** 10:56:15.2±0.1, 41°.14N×70°.18E, h12^{km}, mb2.8*

*NNC **10** 10:56:15.8±3.8, 40°.91N×70°.07E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=30.6km s-min=17.9km az=48.0*

ISC 10 10:56:16.0±0.9**, 41°.13N**±0°.03×**70°.15E**±0°.04**, h10**^{km}**, n20,** σ**3^{s}.18**/34**, 12C-3D, Kyrgyzstan**

```
Code  Station Name         Δ°  AZ°     Phase ID            Time     Res
                                     Op       ISC        h  m  s    ISC
CHRV  Charvak            0.54 344    P        Pg        10 56 19.7  -6.8
CHRV                                 S        Sg        10 56 26.4  -7.2
TRKS  Terek-Say          0.85  61⥣iP        Pg        10 56 30.9  -1.5
      baz=66
TRKS                               ⥣iS        Sb        10 56 42.9  -1.6
      baz=66
IUG   Iuzhnay            1.02 355   eP        Pn        10 56 39.1 +2.5
      221nm,0.1s
IUG                                 eS        Sn        10 56 57.6 +6.5
      65nm,0.1s
IUG   Iuzhnay            1.02 355    P        Pn        10 56 39.5 +2.9
      295nm,0.2s
IUG                                  S        Sn        10 56 58.4 +7.3
      99nm,0.4s
BTK   Batken             1.18 154⥣iP        Pg        10 56 38.4  -0.3
      baz=55
BTK                                ⥣iS        Sn        10 56 54.3  -0.6
      baz=55
CHMI  Chimion            1.35 129    P        Pg        10 56 41.8  -0.1
CHMI                                 S        Sg        10 57 02.6 +3.1
ARK   Arkit              1.52  63⥣iP        Pb        10 56 43.4  -1.0
      baz=63
ARK                                ⥣iS        Sg        10 57 04.5  -0.4
      baz=63
SHAK  Shakhimardan       1.68 134    P        Pb        10 56 46.7  -0.5
BRLS  Borolday           1.92 353   eP        Pb        10 56 50.9  -0.2
      7.9nm,0.0s
BRLS                                eS        Sg        10 57 16.7  -1.0
      6.8nm,0.2s
BRLS  Borolday           1.92 353    Pg       Pn        10 56 48.8   0.0
      12nm,0.3s
BRLS                                 Lg       Lg        10 57 14.7
      7.0nm,0.3s
KK31  Karatay Array      1.99   8    Pn       Pg        10 56 53.4  -0.9
      3.2nm,0.5s,baz=190,slow=15,SNR=30
KK31                                ⥣Sn       Sg        10 57 22.3 +2.2
      5.7nm,0.6s,baz=191,slow=24,SNR=7.1
GAR   Garm               2.13 177⥣iP        Pb        10 56 54.4  -0.4
      baz=77
GAR                                ⥣iS        Sg        10 57 23.3  -1.1
      baz=77
MRKS  Merke              2.81  54   eP        Pg        10 57 11.2 +1.3
      5.0nm,0.4s
MRKS                                eS        Sg        10 57 50.7 +4.5
      11nm,0.9s
MRKS  Merke              2.81  54    Pg       Pg        10 57 11.2 +1.3
      5.0nm,0.4s
MRKS                                 Lg       Lg        10 57 48.4
      11nm,0.9s
ARLS  Aral               3.22  75⥣iP        Pn        10 57 08.9 +2.1
      baz=76
ARLS                               ⥣iS        Sb        10 57 48.5  -4.2
      baz=76
UCH   Uchtor             3.45  70⥥eP        Pn        10 57 12.1 +1.9
      baz=70
UCH                                ⥥iS        Sb        10 57 54.2  -5.4
      baz=70
TKM2  Tokmak 2           4.43  64 ⥥Pn       Pb        10 57 30.2  -3.9
      2.3nm,1.1s
TKM2                                ⥣Lg       Lg        10 58 42.4
      3.5nm,0.6s
KRBS  Karabastau         4.83  56   eP        Pg        10 57 47.2  -1.4
      1.3nm,0.1s
KRBS                                eS        Sg        10 58 53.3 +2.3
      1.7nm,0.1s
KRBS  Karabastau         4.83  56    Pg       Pg        10 57 44.0  -4.5
      0.5nm,0.3s
KRBS                                 Lg       Lg        10 58 49.3
      1.8nm,0.5s
BTLS  Baital             4.84  35   eP        Pg        10 57 46.5  -2.2
      1.5nm,0.1s
BTLS                                eS        Sg        10 58 52.2 +0.7
      2.4nm,0.1s
```

TUL ***10*** *11:03:08.4±1.2, 36°.76N±0°.01×98°.070W±0°.009, h6km±5km, ML2.8, mb_Lg2.7/40(NEIC), Error ellipse: s-maj=1.6km s-min=1.1km az=182.0*

NEIC 10 11:03:08.6±0.7**, 36°.74N**±0°.01×**98°.06W**±0°.01**, h5**km±5km**, Error ellipse: s-maj=2.2km s-min=0.5km az=147.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.84	245		Pg	11 03 24.3	-0.3
T35A	Sooner Cattle	1.26	81	Pn	Pg	11 03 31.9	-0.7
OKCFA	Oklahoma City	1.41	159	Pn	Pn	11 03 34.8	-0.1
FNO	Franklin	1.57	160		Pn	11 03 37.5	+0.4
TUL1	Leonard	2.01	114	Pn	Pn	11 03 43.6	+0.4
TUL1				IAmb_Lg		11 04 13.7	
	comp=Z,42nm,0.8s						
WMOK	Wichita Mounta	2.08	197		Pn	11 03 45.0	+0.8
X34A	Smith Ranch, M	2.14	175		Pb	11 03 46.4	-1.4
X34A				IAmb_Lg		11 04 20.7	
	comp=Z,29nm,0.7s						
CBKS	Cedar Bluff	2.46	328	Pn	Pn	11 03 49.1	-0.3
X37A	Clayton	3.07	134	IAmb_Lg		11 04 52.8	
	comp=Z,17nm,0.8s						
HHAR	Hobbs	3.35	97	Pn	Pn	11 04 01.8	+0.2
S39A	Bolivar	3.90	74	Pn	Pn	11 04 09.4	+0.3
U40A	Yellville	4.21	94		Pn	11 04 12.9	-0.5
U40A				IAmb_Lg		11 05 27.1	
	comp=Z,11nm,0.7s						
Z38A	Mt. Pleasant	4.29	143	IAmb_Lg		11 05 26.8	
	comp=Z,15nm,0.7s						
P38A	Dawn	4.59	50	IAmb_Lg		11 05 46.5	
	comp=Z,13nm,0.8s						
BGNE	Belgrade	4.67	359	IAmb_Lg		11 05 38.2	
	comp=Z,18nm,0.8s						
X40A	Basin Creek Fa	4.81	116	IAmb_Lg		11 05 46.3	
	comp=Z,12nm,0.9s						
R40A	Maddies Statio	4.86	70	IAmb_Lg		11 05 44.5	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	4.87	98	IAmb_Lg		11 05 50.5	
	comp=Z,9.9nm,1.0s						
T25A	Trinidad	5.10	276	IAmb_Lg		11 05 55.0	
	comp=Z,13nm,1.0s						
P40A	Paris	5.50	58	IAmb_Lg		11 06 05.6	
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	5.59	74	IAmb_Lg		11 06 12.4	
	comp=Z,8.0nm,0.7s						
FVM	French Village	6.21	76	IAmb_Lg		11 06 24.1	
	comp=Z,8.8nm,0.7s						
JCT	Junction City	6.41	194	IAmb_Lg		11 06 34.1	
	comp=Z,13nm,1.1s						
SLM	Saint Louis	6.49	71	IAmb_Lg		11 06 35.3	
	comp=Z,11nm,0.7s						
S44A	Carbondale	7.09	80	IAmb_Lg		11 06 54.3	
	comp=Z,12nm,0.8s						
SIUC	Southern Illin	7.12	79	IAmb_Lg		11 06 58.1	
	comp=Z,9.4nm,0.8s						
N23A	Red Feather La	7.42	306	IAmb_Lg		11 07 16.4	
	comp=Z,8.4nm,1.1s						

IDC 10 11:25:31.2±5.3**, 7°.71S**×**129°.24E, h212**km±53km**, mb2.8**/1**, mbtmp3.5**/5**, Error ellipse: s-maj=53.7km s-min=21.3km az=53.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.04	245	P	Pn	11 26 59.9	+0.6
	8.6nm,0.4s,baz=320,slow=5.7,SNR=2.6						
BATI				S	S	11 28 09.0	+0.1
	9.3nm,0.4s,baz=104,slow=4.2,SNR=1.7						
FITZ	Fitzroy Crossi	10.91	198	P	Pn	11 28 02.6	+0.7
	0.9nm,0.5s,baz=20,slow=12,SNR=15						
FITZ				S	S	11 30 01.9	-2.1
	4.2nm,0.9s,baz=208,slow=17,SNR=2.2						
WRA	Warramunga Arr	13.13	158	P	Pn	11 28 28.4	-1.6
	0.6nm,0.5s,baz=336,slow=16,SNR=13						
WRA				S	S	11 30 50.4	-5.2
	1.0nm,0.7s,baz=232,slow=7.1,SNR=8.6						
ASAR	Alice Springs	16.49	165	P	Pn	11 29 11.8	+0.8
	0.2nm,0.5s,baz=333,slow=9.4,SNR=1.8						
ASAR				S	S	11 32 12.0	+0.3
	0.4nm,0.6s,baz=352,slow=26,SNR=2.5						
MKAR	Makanchi Array	68.40	327	P	P	11 36 09.9	-0.1
	0.2nm,0.5s,baz=125,slow=9.5,SNR=2.9						
	0.2nm,0.5s						

NAM ***10*** *11:29:39.7±21.0, 20°.79S×18°.42E, h40km±216km, MD3.3*

ISC 10 11:29:35.9±2.5**, 19°.4S**±0°.1×**17°.56E**±0°.10**, h10**km**, n5, σ2s.35**/9**, Namibia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KANON	KANO	1.79	83	i P	Pg	11 30 11.0	+0.8
KANON				i S	Sn	11 30 25.6	-4.2
WEWE	WEWE	1.91	201	i P	Pg	11 30 13.1	+0.4
WEWE				i S	Sn	11 30 31.2	-1.8
HOCHN	Hochfeld	2.08	172	i P	Pb	11 30 14.2	+0.3
HOCHN				i S	Sn	11 30 35.0	-2.1
WP01	e3381	2.77	226	i P	Pg	11 30 39.9	+11
WP01				i S	Sn	11 30 54.4	+0.5
GAMM	Gam	3.18	106	i P	Pg	11 30 37.8	+0.9
GAMM				i S	Sn	11 31 06.6	+2.3

IDC 10 11:54:42.5±9.7**, 1°.52S**×**11°.98W, h0**km**, mb4.0**/2**, mbtmp3.9**/3**, ML3.4**/1**, MS3.3**/3**, Error ellipse: s-maj=228.8km s-min=115.2km az=167.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.75	202	T	T	12 01 45.6	
	baz=22,slow=75,SNR=383						
H10N1	ASCENSION HYDR	6.76	202	T	T	12 01 45.1	
	baz=22,slow=75,SNR=385						
H10N3	ASCENSION HYDR	6.77	202	T	T	12 01 48.5	
	baz=22,slow=75,SNR=396						
H10S2	ASCENSION HYDR	7.86	200	T	T	12 03 17.7	
	baz=198,slow=74,SNR=8.2						
H10S3	ASCENSION HYDR	7.86	200	T	T	12 03 28.5	
	baz=22,slow=74,SNR=14						
DBIC	Dimbokro	10.80	41	LR	LR	12 01 04.9	
	comp=Z,77nm,20.1s,baz=188,slow=35						
TORD	Torodi Ar. Bea	19.91	43	P	P	11 59 15.9	0.0
	0.1nm,0.3s,baz=225,slow=10.0,SNR=15						
	2.0nm,0.6s						
KMBO	Kilima Mbogo	49.22	90	LR	LR	12 22 44.6	
	comp=Z,46nm,20.9s,baz=92,slow=34						
GERES	GERESS Array B	54.87	20	P	P	12 04 14.7	-0.1
	1.7nm,0.7s,baz=191,slow=8.0,SNR=9.4						
	1.7nm,0.7s						
BRTR	Keskin Array B	58.50	40	P	P	12 04 40.8	-0.1
	0.6nm,0.5s,baz=224,slow=8.0,SNR=4.1						
	0.6nm,0.5s						
SDV	Santo Domingo	59.35	281	LR	LR	12 28 12.0	
	comp=Z,32nm,20.1s,baz=246,slow=34						

IDC ***10*** *11:57:46.4±1.4, 26°.25N×100°.43E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=77.9km s-min=24.7km az=62.0*

NEIC ***10*** *11:57:49.2±0.9, 27°.65N±0°.08×102°.5E±0°.2, h10km±2km, mb4.4/6, Error ellipse: s-maj=37.0km s-min=4.7km az=110.0*

ISC 10 11:57:48.4±1.3**, 27°.7N**±0°.1×**102°.6E**±0°.2**, h10**km**, n15, σ0s.71**/14**, mb4.2**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHTO	Chiang Mai	9.42	202		Pn	12 00 03.5	-0.9
CM31	Chiang Mai Arr	9.76	201	Pn	Pn	12 00 08.7	-0.2
CMAR	Chiang Mai Arr	9.76	201	Pg	Pn	12 00 09.8	+0.9
	0.1nm,0.3s,baz=356,slow=18,SNR=26						
CMAR				Lg	Lg	12 01 50.0	
	1.6nm,0.3s,baz=351,slow=17,SNR=15						
CMAR	Chiang Mai Arr	9.76	201		Pn	12 00 09.6	+0.7
MK31	Makanchi Array	24.91	325	P	P	12 03 12.0	+0.4
MK31				IAmb	IAmb	12 03 16.4	
	comp=Z,3.8nm,1.3s						
MKAR	Makanchi Array	24.91	325	P	P	12 03 12.2	+0.7
	comp=Z,1.4nm,0.7s,baz=134,slow=10,SNR=11						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	24.91	325	P	P	12 03 10.2	-1.4
MAKZ	Makanchi	25.07	325	P	P	12 03 13.3	+0.3
MAKZ				IAmb	IAmb	12 03 14.5	
	comp=Z,4.8nm,0.5s						
WB0	Warramunga Arr	56.30	143	P	P	12 07 29.7	+0.2
WRA	Warramunga Arr	56.41	144	P	P	12 07 30.4	+0.1
	comp=Z,1.5nm,0.6s,baz=329,slow=7.7,SNR=17						
	comp=Z,1.5nm,0.6s						
WRA	Warramunga Arr	56.41	144	P	P	12 07 30.4	+0.1
WRA	Warramunga Arr	56.41	144	IAmb	IAmb	12 07 39.0	
	comp=Z,0.4nm,1.3s						
WB2	Warramunga Arr	56.42	144	P	P	12 07 30.8	+0.4
WB2				IAmb	IAmb	12 07 30.9	
	comp=Z,4.1nm,0.8s						
WR0	Warramunga Arr	56.53	143	P	P	12 07 31.5	+0.3
WR0				IAmb	IAmb	12 07 32.2	
	comp=Z,7.0nm,1.2s						
ASAR	Alice Springs	59.29	146	P	P	12 07 49.9	-0.7
	comp=Z,0.3nm,0.6s,baz=330,slow=7.0,SNR=4.4						
	comp=Z,0.3nm,0.6s						

IDC ***10*** *12:06:02.7±1.0, 32°.56N×142°.04E, h0km, mb3.8/6, mbtmp3.9/10, ML3.9/4, MS2.3/1, Error ellipse: s-maj=28.0km s-min=16.5km az=68.0*

NIED ***10*** *12:06:03.1, 32°.63N×141°.92E, h0km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.29; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-2.83; $M_{r\theta}$7.81; $M_{\theta\phi}$-0.18; $M_{\phi r}$-5.55; Fault plane solution: $M_0$9.81000×10^{14} NP1:ϕ_s14.00000°, δ11.00000°, λ155.00000°. NP2:ϕ_s129.00000°, δ86.00000°, λ80.00000°.*

JMA ***10*** *12:06:03.1±0.7, 33°N±2°×14°2E±°, h0km, MV3.8/23, E OFF HACHIJOJIMA ISLAND*

NEIC ***10*** *12:06:04.4±1.7, 32°.61N±0°.08×142°.1E±0°.1, h10km±2km, mb4.4/7, Error ellipse: s-maj=15.5km s-min=12.1km az=65.0*

ISC 10 12:06:03.4±0.7**, 32°.52N**±0°.05×**142°.11E**±0°.09**, h10**km**, n51, σ1s.10**/48**, mb4.1**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.98	269	P	Pn	12 06 36.2	-0.9
JHJ2	Mitsune	2.02	288	Pn	Pn	12 06 36.5	-1.0
JHJ2	Mitsune	2.02	288	P	Pn	12 06 36.2	-1.3
JHJ	Hachijo jima 2	2.05	288	Pn	Pn	12 06 36.4	-1.5
	44nm,0.3s,baz=86,slow=22,SNR=31						
JHJ				Sn	Sn	12 07 03.8	+0.2
	79nm,0.3s,baz=190,slow=20,SNR=5.8						
BSO1	Boso 1	2.33	336	P	Pn	12 06 41.2	-0.1
JMKN	Mikurajimanish	2.52	304	eP	Pn	12 06 44.6	+0.2
BSO3	Boso 3	2.64	330	eP	Pn	12 06 46.4	+0.6
BSO4	Boso 4	2.87	330	eP	Pn	12 06 50.2	+1.0
JOD2	Odawara 2	3.71	318	P	Pn	12 07 00.3	-0.6
JYT	Yasato	4.02	337		Pn	12 07 04.5	-0.5
JYN	Shimob	4.19	316	eP	Pn	12 07 08.0	+0.5
JRY	Ryogami san	4.38	324	P	Pn	12 07 10.2	+0.1
JRY				S	Sn	12 08 00.0	-1.2
JAG	Ashikaga	4.47	331	P	Pn	12 07 11.0	-0.2
JAG				S	Sn	12 08 01.1	-2.2
JGF	Kuroka	5.00	309	Pn	Pn	12 07 18.3	-0.3
INU	Inuyama	5.09	305	Pn	Pn	12 07 19.9	+0.2
MJAR	Matsushiro Arr	5.14	322	Pn	Pn	12 07 19.9	-0.6
	0.7nm,0.3s,baz=153,slow=10,SNR=27						
	4.1nm,0.3s						
MJAR	Matsushiro Arr	5.14	322		Pn	12 07 20.7	+0.2
MAJO	Matsushiro	5.14	322		Pn	12 07 20.8	+0.3
MAT	Matsushiro	5.14	322	P	Pn	12 07 20.8	+0.3
MJB9	Matsu-Tunnel	5.15	322		Pn	12 07 20.8	+0.2
JFT	Otama	5.19	344	P	Pn	12 07 21.4	+0.2
JFT				eS	Sn	12 08 18.1	-3.1
CBIJ	Chichi jima	5.41	179	P	Pn	12 07 25.2	+1.1
CBIJ				S	Sn	12 08 24.5	-1.9
JCJ	Chichijima	5.41	179	Pn	Pn	12 07 25.0	+0.9
	17nm,0.3s,baz=52,slow=6.0,SNR=30						
JCJ				Sn	Sn	12 08 23.8	-2.7
	13nm,0.3s,baz=53,slow=20,SNR=2.2						
	33nm,0.3s						
JCJ	Chichijima	5.41	179		Pn	12 07 25.5	+1.3
JMM	Marumori	5.44	349	Pn	Pn	12 07 23.8	-0.8
JSD	Sado	6.34	331	Pn	Pn	12 07 35.8	-1.1
JHS	Saijyo	7.89	291	Pn	Pn	12 07 56.9	-1.3
JTM	Tenmabayashi	8.29	355	Pn	Pn	12 08 04.3	+0.6
ERM	Erimo	9.51	5	Pn	Pn	12 08 18.8	-1.6
ASAJ	Asahikawa	11.58	2	Pn	Pn	12 08 47.3	-1.5
	1.7nm,0.3s,baz=232,slow=9.0,SNR=16						
	3.1nm,0.4s						
JKA	Kamikawa-asahi	11.58	2	Pn	Pn	12 08 47.7	-1.1
KSRS	Korea Array	12.63	297	LR	LR	12 13 17.3	
	comp=Z,12nm,18.9s,baz=130,slow=34						
KLR	Kul'dur	18.41	338	P	Pn	12 10 16.6	-2.0
	0.2nm,0.3s,baz=168,slow=11,SNR=4.1						
	0.9nm,0.5s						
SONM	Songino Array	30.96	310	P	P	12 12 22.8	+2.0
	0.7nm,0.4s,baz=118,slow=10.0,SNR=4.9						
	0.7nm,0.4s						
MK31	Makanchi Array	47.11	306	P	P	12 14 35.9	+0.3
MK31				IAmb	IAmb	12 14 50.2	
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	47.11	306	P	P	12 14 35.9	+0.3
	comp=Z,0.9nm,0.4s,baz=88,slow=9.6,SNR=16						
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	47.11	306	P	P	12 14 35.2	-0.4
KURK	Kurchatov	49.25	311	P	P	12 14 52.5	+0.5
KURK	Kurchatov	49.25	311	IAmb	IAmb	12 15 03.7	
	comp=Z,2.1nm,0.6s						
KURBB	Kurchatov Arra	49.31	311	P	P	12 14 52.5	0.0
	comp=Z,0.9nm,0.5s,baz=88,slow=8.2,SNR=5.0						
	comp=Z,0.9nm,0.5s						
WB0	Warramunga Arr	52.51	189	P	P	12 15 18.0	+1.2
WB0				IAmb	IAmb	12 15 45.1	
	comp=Z,8.0nm,1.1s						
WR0	Warramunga Arr	52.68	189	P	P	12 15 19.2	+1.1
WR0				IAmb	IAmb	12 15 46.0	
	comp=Z,8.2nm,1.4s						
WRAB	Tennant Creek	52.68	189	P	P	12 15 18.9	+0.9
WRAB				IAmb	IAmb	12 15 39.6	
	comp=Z,8.6nm,1.2s						
WB2	Warramunga Arr	52.69	189	P	P	12 15 18.5	+0.4
WRA	Warramunga Arr	52.69	189	P	P	12 15 19.1	+0.9
	comp=Z,0.8nm,0.3s,baz=3.6,slow=7.7,SNR=36						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	52.69	189	IAmb	IAmb	12 15 23.2	
	comp=Z,0.4nm,1.4s						
KKAR	Karatay Array	55.97	303	P	P	12 15 42.0	0.0
ASAR	Alice Springs	56.42	189	P	P	12 15 46.3	+1.1
	comp=Z,0.4nm,0.4s,baz=8.7,slow=7.9,SNR=5.6						
	comp=Z,0.4nm,0.4s						
ABKAR	Akbulak array	61.34	312	P	P	12 16 19.2	0.0
YKA	Yellowknife Ar	67.44	29	P	P	12 17 00.6	+1.7
	comp=Z,0.2nm,0.7s,baz=305,slow=6.5,SNR=3.7						
	comp=Z,0.2nm,0.7s						
TORD	Torodi Ar. Bea	120.89	314	PKP	PKPdf	12 24 56.0	-0.6
	comp=Z,0.1nm,0.4s,baz=70,slow=1.1,SNR=1.6						

DDA ***10*** *12:09:35.8±0.0, 37°.98N×26°.83E, h7km±1km, ML2.3*

ISK ***10*** *12:09:35.8, 38°.01N×26°.85E, h2km, ML2.7/13*

ISC 10 12:09:36.3±0.9**, 37°.99N**±0°.02×**26°.85E**±0°.03**, h8**km±6km**, n35, σ0s.64**/53**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.06	24	P	Pg	12 09 38.3	0.0
DGB				i AML	AML	12 09 39.0	
	comp=E,9μm,0.2s						
DGB				i AML	AML	12 09 39.0	
	comp=N,3μm,0.1s						
DGB				S	Sg	12 09 39.5	-0.1
ZEYE	Izmir, Urla-Ze	0.37	312	P	Pg	12 09 43.2	-0.3
ZEYE				S	Sg	12 09 48.8	+0.5
ZEYE				i AML	AML	12 09 49.0	
	comp=N,936nm,0.2s						
ZEYE				i AML	AML	12 09 49.0	
	comp=E,405nm,0.2s						
URLA	Izmir	0.42	331	PG	Pg	12 09 44.5	0.0
URLA				SG	Sb	12 09 51.0	-1.4
URLA	Izmir	0.42	331	P	Pg	12 09 44.4	-0.1
URLA				S	Sb	12 09 50.9	-1.5
URLA				i AML	AML	12 09 53.0	
	comp=N,260nm,0.5s						
URLA				i AML	AML	12 09 53.0	
	comp=E,280nm,0.5s						
BLCB	Balcova	0.42	21	PG	Pg	12 09 44.8	+0.3
GCAM	G?zelcaml?	0.42	134	PG	Pg	12 09 44.6	0.0
GCAM	G?zelcaml?	0.42	134	P	Pg	12 09 44.5	0.0
GCAM				i AML	AML	12 09 50.0	
	comp=N,566nm,0.3s						
GCAM				S	Sg	12 09 50.6	+0.5
GCAM				i AML	AML	12 09 51.0	
	comp=E,332nm,0.4s						
DDIM	Aydin, Didim	0.62	150	P	Pg	12 09 47.8	-0.5
DDIM				i AML	AML	12 09 57.0	
	comp=N,170nm,0.3s						
DDIM				S	Sb	12 09 57.0	-1.1
DDIM				i AML	AML	12 09 59.0	
	comp=E,116nm,0.3s						
FOCM	Foa	0.72	353	PG	Pb	12 09 50.6	-0.5
FOCM				SG	Sb	12 10 01.5	+0.3
CHOS	Chios island	0.74	302	PG	Pb	12 09 51.6	+0.2
CHOS				SG	Sb	12 10 01.9	+0.2
AYDB	Zeytinkoy-Aydi	0.82	93	PG	Pg	12 09 52.1	-0.1
AYDN	Tasoluk	0.88	112	P	Pb	12 09 53.9	+0.1
AYDN				S	Sb	12 10 06.2	+0.5
AYDN				i AML	AML	12 10 08.0	
	comp=N,47nm,0.2s						
AYDN				i AML	AML	12 10 08.0	
	comp=E,70nm,0.4s						
YKAV	Yalikavak-Bodr	0.93	158	PG	Pn	12 09 55.4	-0.2
ZEDA	zmir-Bergama	0.99	10	P	Pb	12 09 55.8	+0.2
ZEDA				S	Sn	12 10 10.4	-0.1
ZEDA				i AML	AML	12 10 12.0	
	comp=E,164nm,0.6s						
ZEDA				i AML	AML	12 10 13.0	
	comp=N,97nm,0.3s						
BODT	Bodrum	1.00	158	PG	Pb	12 09 56.1	+0.3
MLSB	Milas	1.01	133	PG	Pn	12 09 56.6	-0.2
BDRM	Kayabasi	1.04	153	P	Pg	12 09 55.4	-0.9
BDRM				S	Sg	12 10 09.7	-0.1
BDRM				i AML	AML	12 10 12.0	
	comp=E,55nm,0.3s						
BDRM				i AML	AML	12 10 14.0	
	comp=N,125nm,0.3s						
DKL	Dikili	1.08	2	PG	Pn	12 09 57.4	-0.2
GOMA	Golmarmara-Man	1.10	49	PN	Pn	12 09 57.9	-0.1
GOMA				SN	Sn	12 10 13.9	+0.6
AKHS	Akhisar	1.16	40	P	Pn	12 09 58.9	0.0
AKHS				S	Sb	12 10 14.5	+0.7
AKHS				i AML	AML	12 10 16.0	
	comp=E,87nm,0.3s						
AKS	Akhisar	1.16	40	PN	Pn	12 09 59.1	+0.2
DAT	Datca	1.39	155	PN	Pg	12 10 03.5	+0.5
APE	Apeiranthos	1.40	229	PN	Pg	12 10 03.6	+0.5
YER	Yerkesik	1.43	127	PN	Pg	12 10 03.9	+0.2
MANT	Manisa	1.43	69	P	Pg	12 10 04.1	+0.3
MANT				S	Sb	12 10 21.2	-0.6
MANT				i AML	AML	12 10 25.0	
	comp=N,47nm,0.4s						
MANT				i AML	AML	12 10 26.0	
	comp=E,50nm,0.3s						
BUHA	Balikesir, Bur	1.52	7	P	Pg	12 10 05.0	-0.4
BUHA				S	Sg	12 10 26.8	+1.8
BUHA				i AML	AML	12 10 29.0	
	comp=N,53nm,0.5s						
BUHA				i AML	AML	12 10 30.0	
	comp=E,106nm,0.6s						
KULA	Kula-Manisa	1.52	69	PN	Pg	12 10 05.1	-0.3
STEP	BALIKESIR_Sava	1.54	26	P	Pg	12 10 05.5	-0.3
STEP				S	Sg	12 10 26.6	+0.8
TURN	Turunc	1.65	137	PN	Pb	12 10 07.0	+0.1
BALY	Balya	1.84	19	P	Pb	12 10 10.4	+0.1
BALY				S	Sg	12 10 36.6	+1.0
BALY				i AML	AML	12 10 39.0	
	comp=E,36nm,0.4s						
BALY				i AML	AML	12 10 40.0	
	comp=N,61nm,0.8s						
EZN	Ezine	1.87	348	PN	Pb	12 10 10.1	-0.6
BOZC	Bozcaada	1.95	342	PN	Pb	12 10 11.0	-1.0
SIMA	Simav-Kutahya	2.00	56	PN	Pb	12 10 11.8	-1.1
DURS	Dursunbey	2.05	38	P	Pb	12 10 13.4	-0.3
DURS				i AML	AML	12 10 41.0	
	comp=E,22nm,0.8s						
DURS				S	Sg	12 10 41.1	-1.0
DURS				i AML	AML	12 10 51.0	
	comp=N,16nm,0.4s						
GELI	Tayfur-Gelibol	2.42	353	PN	Pn	12 10 17.2	+1.1

NOU 10 12:22:12.0, 14°.37S×**167°.37E, h176**km**, MLv4.4**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.08	189	P	Pn	12 22 40.3	+0.4
DVP	Devils Point	3.43	167	P	Pn	12 23 05.0	-0.7
RTV	Rentapao	3.55	164	P	Pn	12 23 06.3	-1.0
KOUNC	Koumac, New Ca	6.81	205	P	Pn	12 23 49.1	-0.6
YATNC	Mamie plateau,	7.66	183	P	Pn	12 24 00.3	-0.6
NOUC	Port Laguerre	7.76	187	P	Pn	12 24 03.1	+1.0
OUENC	Ouen Island, N	8.02	184	P	Pn	12 24 05.3	-0.3
PINNC	Pines Island,	8.20	180	P	Pn	12 24 08.4	+0.5

IDC ***10*** *12:26:19.0±1.1, 24°.90N×125°.24E, h0km, mb3.8/6, mbtmp3.8/6, MS2.8/4, Error ellipse: s-maj=59.7km s-min=22.8km az=67.0*

JMA ***10*** *12:26:20.6±0.3, 24°N±1°×125°.2E±0°.9, h38km, MV3.6/9, NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

NIED ***10*** *12:26:20.6, 24°.28N×125°.22E, h38km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.72; $M_{\theta\theta}$-0.82; $M_{\phi\phi}$0.11; $M_{r\theta}$0.58; $M_{\theta\phi}$-0.13; $M_{\phi r}$0.34; Fault plane solution: $M_0$1.03000×10^{15} NP1: ϕ_s280.00000°, δ28.00000°, λ120.00000°. NP2: ϕ_s67.00000°, δ66.00000°, λ75.00000°.*

ISC 10 12:26:21.1±2.7**, 24°.3N**±0°.1×**125°.23E**±0°.10**, h31**km±13km**, n18, σ0s.92**/19**, mb3.8**/6**, MS2.8**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.40	12	P	Pn	12 26 30.7	-0.1
JMJ2				S	Sn	12 26 38.3	+1.0
JOGS	Gusukube	0.44	21	P	Pn	12 26 31.4	0.0
JOGS				S	Sn	12 26 39.8	+1.5
JIRB	Irabujima	0.48	354	P	Pn	12 26 31.5	-0.4
JIRB				S	Sn	12 26 39.6	+0.3
JTJ	Tarama	0.57	302	P	Pb	12 26 32.3	-0.3
JTJ				S	Sb	12 26 41.0	+0.5
JIKM	Ikemajima	0.58	1	P	Pn	12 26 33.2	0.0
JIKM				eS	Sn	12 26 42.6	+1.0
JISG	Ishigakijimahi	0.87	286	i S	Sn	12 26 49.0	+0.1
JIJ	Ishigaki jima	0.99	271	P	Pn	12 26 38.4	-0.5
JIJ				S	Sn	12 26 52.8	+0.9
JKRS	Kuro-shima	1.12	265	P	Pn	12 26 40.9	+0.3
JKRS				eS	Sn	12 26 56.8	+1.8
USRK	Ussuriysk Ar.	20.56	14	LR	LR	12 38 43.5	
	comp=Z,32nm,19.6s,baz=255,slow=37						
SIJI	Sorong	25.74	166	LR	LR	12 40 32.3	
	comp=Z,9.3nm,21.5s,baz=332,slow=32						
MA2	Magadan	39.49	20	LR	LR	12 50 47.0	
	comp=Z,21nm,18.2s,baz=104,slow=38						
MKAR	Makanchi Array	40.83	314	P	P	12 33 59.5	-0.4
	0.9nm,0.4s,baz=102,slow=10.0,SNR=11						
	0.9nm,0.4s						
ZALV	Zalesovo Beam	42.17	325	P	P	12 34 08.9	-1.8
	0.9nm,0.5s,baz=104,slow=8.1,SNR=5.7						
	0.9nm,0.5s						
FITZ	Fitzroy Crossi	42.19	179	LR	LR	12 54 59.4	
	comp=Z,17nm,18.1s,baz=175,slow=40						
WRA	Warramunga Arr	44.91	168	P	P	12 34 39.1	+6.1
	0.8nm,0.7s,baz=345,slow=8.7,SNR=3.5						
	0.8nm,0.7s						
ASAR	Alice Springs	48.46	169	P	P	12 35 08.1	+7.2
	0.5nm,0.8s,baz=354,slow=7.2,SNR=2.5						
	0.5nm,0.8s						
FINES	FINESS Array B	73.16	330	P	P	12 37 48.7	+0.2
	1.1nm,0.5s,baz=86,slow=5.9,SNR=4.9						
	1.1nm,0.5s						
YKA	Yellowknife Ar	81.36	24	P	P	12 38 34.6	+0.2
	0.2nm,0.5s,baz=304,slow=5.2,SNR=5.5						
	0.2nm,0.5s						

DJA 10 13:08:04.6±0.3**, 0°S**±4°×**12°4E**±°**, h87**km±11km**, M4.1**/14**, mb4.0**/5**, MLv4.1**/14**, Minahassa Peninsula, Sulawesi**

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

KMSI	Cibinong	0.68	14	P	Pn	13 08 22.4	+1.7
LUWI	Luwuk	1.40	228	P	Pn	13 08 29.4	+0.4
MRSI	Marisa	1.95	287	P	Pn	13 08 34.4	-1.7
APSI	Ampana	2.31	249	P	Pn	13 08 41.1	+0.3
SANI	Sanana	2.92	132	P	Pn	13 08 47.7	-1.3
LBMI	Labuha	3.73	98	P	Pn	13 08 59.9	-0.1
MPSI	Mapaga	3.94	276	P	Pn	13 09 02.9	+0.2
TTSI	Tana Toraja	4.95	234	P	Pn	13 09 16.7	+0.1
SPSI	Sidrap Palu	5.58	226	P	Pn	13 09 25.2	+0.1
	0.1nm17nm,0.8s						
BNSI	Bone	5.66	221	P	Pn	13 09 26.4	+0.2
	0.1nm12nm,0.5s						
BKSI	Bulukumba	6.37	215	P	Pn	13 09 36.9	+1.0
	0.0nm9.5nm,0.9s						
SRBI	Singaraja	11.68	227	P	Pn	13 10 48.0	-0.3

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*IDC **10** 13:12:01.7±4.1, 15.°96S×173.°60W, h0km, mb3.9/4, mbtmp3.9/5, ML3.4/1, MS3.1/4, Error ellipse: s-maj=201.5km s-min=23.8km az=140.0*

*NEIC **10** 13:12:04.2±1.5, 16.°38S±0.°09×173.°00W±0.°07, h35km±2km, mb4.5/9, Error ellipse: s-maj=14.9km s-min=10.8km az=11.0*

ISC 10 13:12:03.8±0.8**, 16.°34S**±0.°08×**173.°0W**±0.°1**, h35**km**, n27, σ1.s37**/17**, mb4.3**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.70	26	Pn	Pn	13 12 45.2	+0.4
	6.9nm,0.3s,baz=186,slow=2.9,SNR=13						
AFI				Sn	Sn	13 13 13.8	-2.5
	19nm,0.3s,baz=45,slow=19,SNR=4.4						
	16nm,0.3s						
AFI	Afiamalu	2.70	26		Pn	13 12 45.1	+0.3
NIUE	Niue	4.00	133	Pn	Pn	13 13 02.4	-0.3
MSVF	Nonsavu	8.66	260	LR	LR	13 17 02.2	
	comp=Z,159nm,18.4s,baz=231,slow=37						
RAR	Rarotonga	13.44	113	LR	LR	13 19 34.6	
	comp=Z,34nm,20.2s,baz=289,slow=32						
DZM	Mont Dzumac	20.21	250	LR	LR	13 22 59.4	
	comp=Z,114nm,18.7s,baz=72,slow=33						
PPT	Papeete	22.45	97	LR	LR	13 24 12.4	
	comp=Z,36nm,18.0s,baz=126,slow=32						
HNR	Honiara	27.22	281	P	P	13 17 43.2	-1.5
H11S2	WAKE ISLAND Hy	39.96	329	T	T	14 01 19.9	
	baz=150,slow=76,SNR=5.5						
H11S3	WAKE ISLAND Hy	39.97	329	T	T	14 01 20.9	
	baz=150,slow=76,SNR=4.0						
H11S1	WAKE ISLAND Hy	39.98	329	T	T	14 01 19.9	
	baz=150,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	40.91	330	T	T	14 02 30.0	
	baz=158,slow=80,SNR=3.9						
H11N1	WAKE ISLAND Hy	40.92	330	T	T	14 02 35.0	
	baz=158,slow=80,SNR=3.3						
H11N2	WAKE ISLAND Hy	40.93	330	T	T	14 02 31.4	
	baz=158,slow=80,SNR=4.9						
STKA	Stephens Creek	43.90	241	P	P	13 20 07.5	+0.3
	3.0nm,0.9s,baz=86,slow=13,SNR=2.9						
	3.0nm,0.9s						
WR0	Warramunga Arr	49.81	257	P	P	13 20 53.0	-0.7
WR0				IAmb	IAmb	13 20 54.0	
	comp=Z,6.4nm,1.1s						
WB0	Warramunga Arr	49.97	258	P	P	13 20 53.8	-1.1
WB0				IAmb	IAmb	13 21 00.5	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	49.99	257	P	P	13 20 53.9	-1.1
WB2				IAmb	IAmb	13 21 11.3	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	50.00	257	P	P	13 20 54.5	-0.7
	comp=Z,0.6nm,0.6s,baz=92,slow=7.2,SNR=5.6						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	50.00	257	IAmb	IAmb	13 20 56.6	
	comp=Z,0.3nm,1.4s						
AS31	Alice Springs	50.18	253	P	P	13 20 54.6	-1.9
AS31				IAmb	IAmb	13 20 57.0	
	comp=Z,3.0nm,1.4s						
ASAR	Alice Springs	50.18	253	P	P	13 20 55.8	-0.7
	comp=Z,2.7nm,0.5s,baz=88,slow=8.3,SNR=48						
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	50.18	253	P	P	13 20 54.7	-1.8
MTN	Manton Dam	54.03	266	P	P	13 21 25.0	-0.2
MORW	Morawa	65.83	245	P	P	13 22 46.9	+0.8
ILAR	Eielson Array	83.29	11	P	P	13 24 28.9	+2.4
	comp=Z,0.2nm,0.6s,baz=240,slow=6.4,SNR=4.3						
	comp=Z,0.2nm,0.6s						
BRTR	Keskin Array B	147.12	320	PKPbc	PKPab	13 31 45.9	+0.6
	comp=Z,1.1nm,0.8s,baz=90,slow=2.9,SNR=2.7						

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*IDC **10** 13:20:17.5±0.7, 29.°24N×51.°97E, h0km, mb4.2/24, mbtmp4.2/28, ML3.9/4, MS3.5/29, Error ellipse: s-maj=15.6km s-min=13.2km az=172.0*

*NEIC **10** 13:20:19.1±1.6, 29.°22N±0.°07×52.°01E±0.°08, h10km±1km, mb4.5/71, Error ellipse: s-maj=12.2km s-min=11.5km az=287.0*

*TEH **10** 13:20:20.3, 29.°26N×52.°04E, h19km, ML4.2*

*MOS **10** 13:20:21.0±1.1, 29.°29N×52.°03E, h34km, mb4.5/30, Error ellipse: s-maj=8.3km s-min=4.8km az=104.5*

*SGS **10** 13:20:22.2, 29.°36N×52.°00E, h7km, Ml4.0*

*OMAN **10** 13:20:23.8±0.4, 29.°09N×52.°27E, h18km, mb4.4/19, ml4.5/7, ms2.8/3, Error ellipse: s-maj=6.5km s-min=4.3km az=349.0*

*DSN **10** 13:20:24.6±1.0, 28.°95N×52.°22E, h10km, ML4.2/12, Error ellipse: s-maj=13.7km s-min=4.9km az=10.0*

ISC 10 13:20:19.0±0.3**, 29.°25N**±0.°04×**52.°06E**±0.°03**, h10**km**, n386, σ1.s66**/401**, mb4.5**/84**, MS3.5**/28**, 30C-9D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.52	316	*e*Pg	Pg	13 20 30.4	+1.1
KAZ1				*e*		13 20 45.2	
	comp=Z,73μm,0.4s						
SHI	Shiraz	0.56	45	*e*Pg	Pg	13 20 31.3	+1.3
SHI				*e*Sg	Sg	13 20 39.9	+2.5
SHI				*e*		13 20 40.6	
	comp=Z,79μm,0.7s						
AHBU	AHRAM	0.77	240	*e*Pg	Pb	13 20 36.0	+1.5
QIR1	Qir	1.16	131	*e*Pg	Pb	13 20 42.3	+1.1
QIR1				*e*		13 21 03.8	
	comp=Z,39μm,0.5s						
JHRM	Jahrom	1.52	119	*e*Pg	Pb	13 20 49.6	+2.1
KLNJ	Kolanjah	1.80	347	*e*Pn	Pn	13 20 52.3	+1.8
KLNJ				*e*		13 21 25.0	
	comp=Z,22μm,0.4s						
ABEH	Behbahan	2.06	311	*e*Pn	Pn	13 20 56.4	+2.6
LMD1	Lamerd	2.14	153	*e*Pn	Pn	13 20 57.7	+2.9
IRAM	Ramesheh	2.57	6	*e*Pn	Pn	13 21 02.9	+2.0
IRAM				*e*		13 21 57.5	
	comp=Z,6μm,0.6s						
LAR1	LAR	2.58	127	*e*Pn	Pn	13 21 02.7	+1.8
IBRJ	Brojen	2.74	346	*e*Pn	Pn	13 21 05.0	+1.7
ISAD	Sadrabad	3.00	27	*e*		13 21 11.2	
	comp=Z,5μm,0.2s						
ISAD				*e*Pn	Pn	13 21 09.3	+2.3
IMEH	Mehriz	3.07	45	*e*Pn	Pn	13 21 10.4	+2.5
IMEH				*e*		13 21 13.2	
	comp=Z,4μm,0.2s						
IGAR	Gharneh	3.15	360	*e*Pn	Pn	13 21 10.5	+1.6
SHK1	Shahrekord	3.23	342	*e*Pn	Pn	13 21 11.2	+1.1
AMIS	Naft Sefid	3.40	316	*e*Pn	Pn	13 21 13.5	+1.4
SHMA	Al-Shehemyia	3.52	196	P	Pn	13 21 16.7	+2.9
SAKB	Bahrain	3.53	203	P	Pn	13 21 16.8	+3.0
IPIR	Pirpir	3.57	344	*e*Pn	Pn	13 21 16.1	+1.3
IPIR				*e*		13 21 29.6	
	comp=Z,3μm,0.4s						
NASN	Na'in	3.60	10	*e*Pn	Pn	13 21 16.5	+1.3
ICHK	Chekchek	3.61	34	*e*Pn	Pn	13 21 17.9	+2.7
ICHK				*e*		13 21 18.9	
	comp=Z,5μm,0.2s						
IZEF	Zefreh	3.64	4	*e*Pn	Pn	13 21 17.5	+1.7
KHOR	Al-Khor Airpor	3.64	188	P	Pn	13 21 18.2	+2.6
KHOR				S	Sn	13 22 00.9	+2.4
YZKH	Yazd	3.81	34	*e*Pn	Pn	13 21 20.9	+2.9
IBAF	Bafgh	3.83	52	*e*Pn	Pn	13 21 20.8	+2.6
IBAF				*e*		13 21 22.4	
	comp=Z,3μm,0.2s						
KHGB	Koh Gabri	4.00	73	*e*Pn	Pn	13 21 22.8	+2.1
KHGB				*e*		13 22 34.9	
	comp=Z,3μm,1.0s						
GENO	Geno	4.07	116	*e*Pn	Pn	13 21 24.5	+3.0
IKLH	Kolahrood	4.08	354	*e*Pn	Pn	13 21 23.2	+1.5
NGRK	Negar Kerman	4.09	83	*e*Pn	Pn	13 21 24.7	+2.6
NGRK				*e*		13 21 29.6	
	comp=Z,2μm,0.2s						
KRBR	Kerman	4.16	79	*e*Pn	Pn	13 21 25.9	+3.0
TVBK	TV Kerman	4.16	79	*e*Pn	Pn	13 21 26.2	+3.2
TVBK				*e*		13 21 42.7	
	comp=Z,4μm,0.5s						
ANAR	Anarak	4.18	20	*e*Pn	Pn	13 21 24.8	+1.8
JRN	Qarnain Island	4.35	170	*e*Pn	Pn	13 21 26.6	+1.4
JRN	Qarnain Island	4.35	170	P	Pn	13 21 27.1	+1.9
JRN				S	Sn	13 22 16.1	+0.2
QAMS	Qamsar	4.51	353	*e*Pn	Pn	13 21 28.8	+1.1
TRNA	Turayna	4.56	190	P	Pn	13 21 30.2	+2.1
TRNA				S	Sn	13 22 21.9	+0.8
SMRA	Abu-Samra	4.62	194	P	Pn	13 21 31.5	+2.6
SMRA				S	Sn	13 22 24.7	+2.1
KRSH	Karshahi	4.71	1	*e*Pn	Pn	13 21 31.6	+1.3
QYSM	Um Kedad	4.76	254	P	Pn	13 21 32.5	+1.5
CHMN	Cheshme madani	4.81	81	*e*Pn	Pn	13 21 34.6	+2.6
CHMN				*e*		13 23 09.4	
	comp=Z,1μm,0.9s						
KHMZ	Khomeyn	4.82	339	*e*Pn	Pn	13 21 32.5	+0.6
SHME	Shamm	4.82	130	*e*Pn	Pn	13 21 33.3	+1.5
SHME	Shamm	4.82	130	P	Pn	13 21 33.4	+1.7
	SNR=12						
SHME				S	Sn	13 22 26.4	-1.3
SHME	Shamm	4.82	130	*i* P	Pn	13 21 33.5	+1.7
	SNR=11						
SHME				S	Sn	13 22 26.7	-1.0
UMQ	Umm Al-Quwin	4.90	138	*e*Pn	Pn	13 21 35.0	+2.2
BANOM	Banah	5.01	130	*e*Pn	Pn	13 21 35.3	+0.9
BANOM	Banah	5.01	130	P	Pn	13 21 36.0	+1.6
	SNR=69						
BANOM				S	Sn	13 22 32.3	-0.1
BANOM	Banah	5.01	130	*i* P	Pn	13 21 36.0	+1.6
	SNR=14						
BANOM				S	Sn	13 22 31.9	-0.6
ISFB	Sefidab	5.09	2	*e*Pn	Pn	13 21 37.2	+1.7
SLWR	Sila	5.17	184	*e*Pn	Pn	13 21 38.4	+1.9
SLWR	Sila	5.17	184	P	Pn	13 21 38.6	+2.1
SLWR				S	Sn	13 22 36.5	+0.3
GHVR	GHOM	5.26	353	*e*Pn	Pn	13 21 39.1	+1.3
NHRD	Haradh	5.26	212	P	Pn	13 21 40.3	+2.5
MASF	Masafi	5.31	136	P	Pn	13 21 40.1	+1.6
	SNR=8.2						
MASF				S	Sn	13 22 38.2	-1.6
GHWR	Ruwais	5.32	172	*e*Pn	Pn	13 21 39.9	+1.4
GHWR	Ruwais	5.32	172	P	Pn	13 21 41.6	+3.1
GHWR				S	Sn	13 22 39.4	-0.4
MSFE	Esma-Masafi	5.32	136	*e*Pn	Pn	13 21 39.9	+1.3
MSFE	Esma-Masafi	5.32	136	*i* P	Pn	13 21 39.9	+1.3
	SNR=12						
NAZ	Nazwa, Dubai	5.32	142	P	Pn	13 21 39.9	+1.3
AJN	Ajban	5.35	150	*e*Pn	Pn	13 21 41.6	+2.6
AJN	Ajban	5.35	150	P	Pn	13 21 41.3	+2.3
AJN				S	Sn	13 22 40.6	-0.1
ASUD	Al Ashush, Dub	5.45	147	P	Pn	13 21 42.4	+2.0
TPRV	Parvadeh(Tabas	5.47	45	*e*Pn	Pn	13 21 43.7	+3.0
ASAO	Ashtian	5.56	342	*e*Pn	Pn	13 21 43.0	+0.9
IKFM	Kafar-mosalman	5.58	321	*e*Pn	Pn	13 21 43.9	+1.8
KBAM	BAM	5.59	90	*e*Pn	Pn	13 21 45.5	+3.1
KBAM				*e*		13 21 52.1	
	comp=Z,3μm,0.2s						
IQOM	Qom	5.64	352	*e*Pn	Pn	13 21 43.7	+0.5
UOSS	Minazif	5.66	138		Pn	13 21 43.9	+0.7
UOSS	Minazif	5.66	138	P	Pn	13 21 44.2	+1.0
UOSS				S	Sn	13 22 45.2	-3.1
MZWR	Madinat Zayed	5.70	163	*e*Pn	Pn	13 21 46.0	+2.1
MZWR	Madinat Zayed	5.70	163	P	Pn	13 21 45.9	+2.1
MZWR				S	Sn	13 22 49.9	+0.5
HATD	Hatta, Dubai	5.71	140	P	Pn	13 21 44.9	+1.0
IVRN	Varamin	5.74	357	*e*Pn	Pn	13 21 45.0	+0.6
HSAM	Samen	5.76	330	*e*Pn	Pn	13 21 45.9	+1.1
ASHO	Ashiyiah	5.78	141	*e*Pn	Pn	13 21 46.1	+1.1
ASHO	Ashiyiah	5.78	141	P	Pn	13 21 46.1	+1.1
	SNR=13						
ASHO				S	Sn	13 22 49.0	-2.4
ASHO	Ashiyiah	5.78	141	*i* P	Pn	13 21 46.0	+1.0
	SNR=13						
RMAH	Rumah	6.02	231	P	Pn	13 21 49.9	+1.6
RMAH				S	Sn	13 22 55.8	-1.6
HAGD	Aghdareh	6.08	337	*e*Pn	Pn	13 21 50.0	+0.7
TNSJ	Nastanj	6.10	38	*e*Pn	Pn	13 21 51.6	+2.3
ALNE	Al Ain	6.14	147	*e*Pn	Pn	13 21 51.1	+1.3
ALNE	Al Ain	6.14	147	P	Pn	13 21 51.2	+1.4
ALNE				S	Sn	13 23 00.4	+0.3
ALNE	Al Ain	6.14	147	P	Pn	13 21 51.0	+1.1
TKDS	Koohdasht(Taba	6.14	44	*e*Pn	Pn	13 21 52.3	+2.4
JASK	Jask - Hormozg	6.16	122	*e*Pn	Pn	13 21 51.6	+1.5
TABS	Tabas	6.16	43	*e*Pn	Pn	13 21 52.4	+2.2
IDMV	Damavand	6.31	360	*e*Pn	Pn	13 21 53.8	+1.4
MZR	Muzera	6.35	168	*e*Pn	Pn	13 21 54.5	+1.7
MZR	Muzera	6.35	168	P	Pn	13 21 54.7	+1.9
	SNR=14						
MZR	Muzera	6.35	168	P	Pn	13 21 54.4	+1.6
DAMV	Damavand	6.36	359	*e*Pn	Pn	13 21 54.5	+1.4
IANJ	Anjilo	6.40	14	*e*Pn	Pn	13 21 55.4	+1.8
IRAZ	Razeghan	6.40	344	*e*Pn	Pn	13 21 54.4	+0.9
IFIR	Firoozkooh	6.40	5	*e*Pn	Pn	13 21 55.0	+1.3
SOHO	SOHO	6.48	141	*e*Pn	Pn	13 21 54.9	+0.4
SOHO	SOHO	6.48	141	P	Pn	13 21 55.2	+0.7
SOHO				S	Sn	13 23 07.0	-1.5
SOHO	SOHO	6.48	141	*i* P	Pn	13 21 54.7	+0.2
	SNR=11						
ISHM	Shahmirzad	6.62	9	*e*Pn	Pn	13 21 58.4	+1.7
BSRN	Basiran	6.67	64	*e*Pn	Pn	13 21 58.9	+1.7
CHTH	Charan	6.69	353	*e*Pn	Pn	13 21 58.5	+0.9
IGHG	Ghaleghazi	6.89	319	*e*Pn	Pn	13 22 02.0	+1.7
IPRN	Peran	6.98	2	*e*Pn	Pn	13 22 03.0	+1.5
UMZA	Um Al Zommool	7.08	156	*e*Pn	Pn	13 22 03.9	+1.1
UMZA	Um Al Zommool	7.08	156	P	Pn	13 22 04.0	+1.3
UMZA				S	Sn	13 23 20.2	-3.2
ILIN	Lien	7.12	324	*e*Pn	Pn	13 22 03.7	+0.3
ARQ	Araqi	7.12	145	P	Pn	13 22 04.0	+0.6
	SNR=14						
ARQ				S	Sn	13 23 20.6	-3.8
NHDN	Nehbandan	7.23	71	*e*Pn	Pn	13 22 09.3	+4.3
IDHR	Dehrash	7.26	320	*e*Pn	Pn	13 22 06.9	+1.5
QALM	Alamut, Qazvin	7.26	351	*e*Pn	Pn	13 22 06.1	+0.7
AFRZ	Afriz	7.26	53	*e*Pn	Pn	13 22 07.8	+2.4
HOQ	Hoqain	7.35	139	P	Pn	13 22 07.2	+0.7
	SNR=9.1						
HOQ				P	Pn	13 22 07.2	+0.7
	SNR=9.1						
HOQ				S	Sn	13 23 26.3	-3.7
HOQ				S	Sn	13 23 26.3	-3.7
IGLO	Ghaloghah	7.39	11	*e*Pn	Pn	13 22 09.5	+2.4
BIDO	Bidbid	7.88	135	*e*Pn	Pn	13 22 15.4	+1.6
BSY	Bisya	7.96	143	P	Pn	13 22 15.6	+0.8
BSY				P	Pn	13 22 15.6	+0.8
BSY				S	Sn	13 23 40.0	-5.0
BSY				S	Sn	13 23 40.0	-5.0
SMDO	Samad	8.18	138	P	Pn	13 22 19.1	+1.1
	SNR=18						
SMDO				S	Sn	13 23 46.9	-3.8
WSAR	Wadi Sarin	8.40	134	Pn	Pn	13 22 21.1	+0.2
	comp=Z,3.5nm,0.3s,baz=308,slow=9.0,SNR=33						
WSAR				Sn	Sn	13 23 49.8	-6.2
	comp=Z,1.7nm,0.3s,baz=150,slow=20,SNR=1.7						
WSAR				LR	LR	13 25 47.3	
	comp=Z,75nm,20.9s,baz=334,slow=39						
	comp=Z,7.0nm,0.3s						
WSAR	Wadi Sarin	8.40	134	P	Pn	13 22 21.3	+0.4
	SNR=34						
WSAR				S	Sn	13 23 51.1	-4.8
SBZV	Sabzevar	8.51	32	*e*Pn	Pn	13 22 25.6	+3.0
JMDO	Jabal Madar	8.75	140	P	Pn	13 22 26.1	+0.4
MRVT	Maraveh tapeh	9.04	21	*e*Pn	Pn	13 22 31.8	+2.1
WBK	Wadi Bani Khal	9.08	135	P	Pn	13 22 30.0	-0.2
	SNR=16						
WBK				P	Pn	13 22 30.0	-0.2
	SNR=16						
WBK				S	Sn	13 24 08.3	-4.2
WBK				S	Sn	13 24 08.3	-4.2
ISFR	Sfrayin	9.24	31	*e*Pn	Pn	13 22 35.1	+2.5
IAKL	Akhelmad	9.24	36	*e*Pn	Pn	13 22 35.3	+2.6
IPAY	Payeh	9.25	37	*e*Pn	Pn	13 22 35.6	+2.9
SRVN	Saravan	9.30	99	*e*Pn	Pn	13 22 34.4	+1.1
BJRD	Bojnurd	9.54	27	*e*Pn	Pn	13 22 38.7	+2.1
JLN	Jalan Bani Buh	9.69	135	P	Pn	13 22 38.5	-0.1
IKRD	Kardeh	9.77	38	*e*Pn	Pn	13 22 43.2	+3.3
MHTO	MHTO	9.81	146	P	Pn	13 22 40.4	+0.1
IEMG	Emamgholi	9.83	32	*e*Pn	Pn	13 22 42.9	+2.1
GEYT	Alibeck	10.02	29	Pn	Pn	13 22 43.1	0.0
	comp=Z,0.6nm,0.3s,baz=169,slow=8.6,SNR=4.6						
GEYT				LR	LR	13 27 16.3	
	comp=Z,280nm,20.2s,baz=222,slow=42						
	comp=Z,2.6nm,0.5s						
GEYT	Alibeck	10.02	29	Pn	Pn	13 22 44.7	+1.5
GYA0	ALIBECK ARRAY	10.02	29	P	Pn	13 22 44.7	+1.6
GYA0B	ALIBECK ARRAY	10.02	29	Pn	Pn	13 22 44.6	+1.5
DQM	DQM	10.53	151	P	Pn	13 22 50.6	+0.4
DOK	Doka	10.75	169	P	Pn	13 22 52.5	-0.6
	SNR=30						
WHFO	Wadi Hawf	11.39	172	P	Pn	13 23 00.8	-1.1
	SNR=8.8						
SHAO	Shalim	11.64	163	P	Pn	13 23 04.8	-0.5
	SNR=9.9						
GEVA	Gevas	11.73	323		Pn	13 23 06.3	-0.4
DMTO	DMTO	11.78	166	P	Pn	13 23 06.9	-0.3
RBK	Rabkut	11.86	170	P	Pn	13 23 08.1	-0.2
ABTO	Aybut	11.89	174	P	Pn	13 23 09.4	+0.6
	SNR=9.9						
GNI	Garni	12.42	333	LR	LR	13 27 41.1	
	comp=Z,17nm,18.9s,baz=150,slow=36						
GNI	Garni	12.42	333	*i* P	Pn	13 23 14.3	-1.8
MAK	Makhachkala	14.17	346	*e*P	Pn	13 23 34.5	-5.2
MAK				*e*S	Sn	13 26 10.8	-6.1
MAK				pmax	pmax		
	comp=Z,55nm,0.5s						
MAK				MLR	MLR		
	comp=Z,65nm,13.0s						
ONI	Oni	15.02	335	P	Pn	13 23 52.8	+1.4
ONI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ONI	Oni	15.02	335	Pn	Pn	13 23 52.8	+1.4
ZEI	Tsey	15.02	336	*e*P	Pn	13 23 53.4	+1.8
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBL	Kabul	15.36	66	P	P	13 24 01.9	+1.1
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
KBL	Kabul	15.36	66	P	P	13 24 01.9	+1.1
KBZ	Khabaz	16.20	336	Pn	Pn	13 24 07.8	+1.1
	comp=Z,0.2nm,0.3s,baz=162,slow=6.0,SNR=4.9						
KBZ				LR	LR	13 30 59.9	
	comp=Z,111nm,18.5s,baz=178,slow=40						
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	16.20	336	*ce*P	Pn	13 24 06.6	-0.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SHA1	Shidzhatmaz	16.30	335	*i* P	Pn	13 24 09.0	+0.8
KIV	Kislovodsk	16.48	336	*e*P	Pn	13 24 11.5	+1.2
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,41nm,13.0s						
KIV	Kislovodsk	16.48	336		Pn	13 24 11.6	+1.3
SOCY	Socotra	17.07	174	Pn	Pn	13 24 13.7	-4.3
SOCY				IAmb	IAmb	13 24 26.3	
	comp=Z,55nm,1.4s						
SOC	Sochi	17.39	329	*e*P	Pn	13 24 19.7	-2.0
SOC				*e*		13 27 34.8	
SOC				MLR	MLR		
	comp=Z,50nm,14.0s						
CEP	Cherat	17.52	70	P	Pn	13 24 24.3	+0.7
GAR	Garm	17.95	52	P	Pn	13 24 30.0	+1.2
BR131	Keskin Array S	18.40	309	P	Pn	13 24 33.7	-0.7
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR131	Keskin Array S	18.40	309	P	Pn	13 24 33.7	-0.7
BRTR	Keskin Array B	18.40	309	P	Pn	13 24 35.0	+0.7
	comp=Z,0.3nm,0.3s,baz=128,slow=14,SNR=20						
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	18.40	309	*i* P	Pn	13 24 34.7	+0.3
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	18.40	309	P	Pn	13 24 34.0	-0.4
ATD	Arta Tunnel	19.61	208	LR	LR	13 32 23.7	
	comp=Z,28nm,18.5s,baz=212,slow=37						
KK31	Karatay Array	20.26	42	P	P	13 24 54.9	+0.2
KK31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KK31	Karatay Array	20.26	42	P	P	13 24 54.9	+0.2
KK31				IAmb	IAmb	13 25 03.1	
	comp=Z,9.1nm,0.6s						
KKAR	Karatay Array	20.26	42	P	P	13 24 54.6	-0.1
KKAR	Karatay Array	20.26	42	P	P	13 24 54.6	-0.1
ABKAR	Akbulak array	20.87	15	P	P	13 25 01.3	+0.2
AKTO	Aktyubinsk	21.64	10	P	P	13 25 10.0	+0.7
	comp=Z,9.4nm,0.7s,baz=203,slow=11,SNR=27						
AKTO				LR	LR	13 35 37.8	
	comp=Z,79nm,19.0s,baz=189,slow=42						
	comp=Z,9.4nm,0.7s						
AML	Almayashu	21.70	48	P	P	13 25 14.9	+4.3
	SNR=14						
AML	Almayashu	21.70	48	P	P	13 25 14.8	+4.2
KSH	Kashi	22.18	56	P	P	13 25 13.1	-2.3
KSH				pP	pP	13 25 15.5	-3.2
KSH				sP	sP	13 25 19.8	-0.4
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
UCH	Uchtor	22.28	48	P	P	13 25 20.5	+3.6
	SNR=7.4						
AAK	Ala-Archa	22.46	47	P	P	13 25 20.8	+2.3
	comp=Z,5.7nm,1.0s,baz=251,slow=7.5,SNR=8.5						
AAK				LR	LR	13 35 35.8	
	comp=Z,165nm,19.8s,baz=246,slow=41						
	comp=Z,5.7nm,1.0s						
AAK	Ala-Archa	22.46	47	*ce*P	P	13 25 21.2	+2.7
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KBK	Karagaybulak	22.77	48	P	P	13 25 24.7	+3.0
	SNR=7.9						
USP	Ospenovka	22.78	46	P	P	13 25 23.9	+2.2
	SNR=11						
TKM2	Tokmak 2	23.31	48	P	P	13 25 28.8	+1.4
	SNR=7.0						
BOOM	Boomskoye usch	23.34	49	P	P	13 25 28.0	+0.3
BOOM				pmax	pmax		
	comp=Z,24nm,1.2s						
BOOM	Boomskoye usch	23.34	49	P	P	13 25 28.0	+0.3
BOOM				IAmb	IAmb	13 25 39.6	
	comp=Z,24nm,1.1s						
BELG	Belogornoye	23.36	353	P	P	13 25 26.6	-0.8
	comp=Z,33nm,0.8s,baz=162,slow=2.4,SNR=8.2						
BELG				LR	LR	13 37 04.1	
	comp=Z,50nm,21.8s,baz=151,slow=43						
	comp=Z,33nm,0.8s						
BELG	Belogornoye	23.36	353	*i* P	P	13 25 26.6	-0.8
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
IDI	Anoyia	23.71	292	P	P	13 25 32.3	+1.0
	comp=Z,6.7nm,0.8s,baz=153,slow=13,SNR=2.5						
	comp=Z,6.7nm,0.8s						
IDI	Anoyia	23.71	292	P	P	13 25 29.6	-1.6
IDI				IAmb	IAmb	13 25 52.7	
	comp=Z,26nm,1.2s						
JURR	Jurilovca	24.02	316	⇑P	P	13 25 44.0	+10
TIRR	Tirgusor	24.14	315	⇓P	P	13 25 35.4	+0.3
TIRR	Tirgusor	24.14	315	P	P	13 25 35.4	+0.3
TIRR				pmax	pmax		
	comp=Z,13nm,0.9s						
TIRR	Tirgusor	24.14	315	P	P	13 25 35.4	+0.3
TIRR				IAmb	IAmb	13 25 51.6	
	comp=Z,13nm,0.9s						
ALN	Alexandroupoli	24.16	306	P	P	13 25 36.0	+0.6
ALN				pmax	pmax		
	comp=Z,11nm,1.1s						
ALN	Alexandroupoli	24.16	306	P	P	13 25 36.0	+0.6
ALN				IAmb	IAmb	13 25 48.7	
	comp=Z,11nm,1.1s						
TPGR	Topolog	24.34	316	⇓P	P	13 25 37.1	+0.1
VORR	Voronezh	24.37	340	*e*P	P	13 25 33.3	-3.8
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
HARR	Harsova	24.55	315	⇑P	P	13 25 39.4	+0.5
HARR	Harsova	24.55	315	⇑P	P	13 25 39.4	+0.5
CFR	Carcaliu	24.68	317	⇑P	P	13 25 40.4	+0.3
CFR	Carcaliu	24.68	317	⇑P	P	13 25 40.4	+0.3
RAZG	Razgrad	24.91	312	⇓P	P	13 25 44.0	+1.8
BISRR	Bisoca	25.73	316	⇓P	P	13 25 54.3	+4.6
VRI	Vrincioaia	25.89	317	⇓P	P	13 25 54.7	+3.7
VRI	Vrincioaia	25.89	317	⇓P	P	13 25 54.7	+3.7
NEHR	Nehoiu	25.92	316	⇑P	P	13 25 53.7	+2.3
PLOR	Plostina	25.92	317	⇑P	P	13 25 52.9	+1.5
PLOR	Plostina	25.92	317	⇑P	P	13 25 52.9	+1.5
MLR	Muntele Rosu	26.17	315	⇑P	P	13 25 55.6	+1.8

MLR	Muntele Rosu	26.17	315	P	P	13 25 53.2	-0.5
	comp=Z,4.8nm,0.8s,baz=305,slow=4.9,SNR=7.2						
	comp=Z,4.8nm,0.8s						
MLR	Muntele Rosu	26.17	315	⇑P	P	13 25 55.6	+1.8
MLR	Muntele Rosu	26.17	315	P	P	13 25 53.8	0.0
MLR				IAmb	IAmb	13 26 09.5	
	comp=Z,9.4nm,0.9s						
COVR	Voineasa-Covas	26.19	316	⇑P	P	13 25 55.6	+1.8
SORM	Soroca	26.24	322	⇑P	P	13 25 55.4	+1.2
SORM	Soroca	26.24	322	⇑P	P	13 25 55.4	+1.2
TESR	Tescani	26.27	318	⇓P	P	13 25 54.7	+0.3
ITM	Ithomi	26.34	295	P	P	13 25 55.2	0.0
ITM				IAmb	IAmb	13 26 23.3	
	comp=Z,13nm,0.9s						
LIT	Litokhoron	26.50	302	P	P	13 25 56.1	-0.6
LIT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LIT	Litokhoron	26.50	302	P	P	13 25 56.1	-0.6
LIT				IAmb	IAmb	13 26 14.4	
	comp=Z,8.1nm,1.0s						
VOIR		26.70	315	⇑P	P	13 25 59.4	+1.0
VOIR		26.70	315	⇑P	P	13 25 59.4	+1.0
DOPR	Dopca	26.74	316	⇑P	P	13 26 00.1	+1.3
ARR	Arges	26.93	314	⇑P	P	13 26 01.0	+0.5
PYUN	Piuthan	27.13	85	*e*P	P	13 26 03.1	+0.5
	comp=Z,12nm,0.5s						
BRVK	Borovoye	27.30	24	*ce*P	P	13 26 04.5	+0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BRVK	Borovoye	27.30	24	P	P	13 26 04.4	+0.7
BRVK				IAmb	IAmb	13 26 04.9	
	comp=Z,3.7nm,0.6s						
AKASG	Malin Array Be	27.46	328	P	P	13 26 03.4	-1.7
	comp=Z,0.5nm,0.4s,baz=126,slow=9.0,SNR=4.1						
AKASG				LR	LR	13 38 02.7	
	comp=Z,43nm,18.8s,baz=236,slow=39						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	27.46	328	P	P	13 26 03.4	-1.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKBB	Malin Array Si	27.46	328	*ce*P	P	13 26 04.6	-0.5
ARU	Arti	27.56	8	P	P	13 26 08.0	+2.1
	comp=Z,0.9nm,0.3s,baz=28,slow=1.6,SNR=4.4						
	comp=Z,0.9nm,0.3s						
ARU	Arti	27.56	8	*d i*P	P	13 26 06.5	+0.6
ARU				S	S	13 30 49.0	+2.0
ARU				SS	SnSn	13 31 55.2	-2.3
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BURAR	Bucovina Array	27.68	319	⇑P	P	13 26 07.7	+0.4
BURAR	Bucovina Array	27.68	319	⇑P	P	13 26 07.7	+0.4
BURAR	Bucovina Array	27.68	319	P	P	13 26 06.2	-1.1
BUR08	Bucovina Ar. S	27.71	319	P	P	13 26 07.1	-0.4
DANN	Dangsing	27.75	84	*e*P	P	13 26 09.0	+0.6
	comp=Z,13nm,0.5s						
GZR	Gura Zlata	28.11	313	⇑P	P	13 26 07.4	-3.7
OBN	Obninsk	28.15	341	⇑*e*P	P	13 26 12.3	+1.1
OBN				*e*		13 26 57.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,36nm,17.0s						
MAKZ	Makanchi	29.13	45	P	P	13 26 19.5	-0.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAKZ	Makanchi	29.13	45	P	P	13 26 19.4	-0.6
MAKZ				IAmb	IAmb	13 26 21.1	
	comp=Z,5.2nm,0.7s						
KKN	Kakani	29.18	85	*e*P	P	13 26 21.0	+0.1
	comp=Z,11nm,0.3s						
KURBB	Kurchatov Arra	29.19	36	P	P	13 26 21.6	+1.0
	comp=Z,2.0nm,0.8s,baz=236,slow=9.1,SNR=16						
KURBB				LR	LR	13 39 27.1	
	comp=Z,84nm,20.2s,baz=206,slow=39						
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	29.29	36	*ce*P	P	13 26 22.5	+1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	29.29	36	P	P	13 26 21.6	+0.2
MK31	Makanchi Array	29.31	45	P	P	13 26 22.2	+0.4
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	29.31	45	P	P	13 26 22.2	+0.4
MK31				IAmb	IAmb	13 26 23.4	
	comp=Z,4.5nm,0.7s						
MKAR	Makanchi Array	29.31	45	P	P	13 26 22.6	+0.8
	comp=Z,4.3nm,0.7s,baz=233,slow=7.6,SNR=41						
MKAR				LR	LR	13 39 59.3	
	comp=Z,144nm,18.5s,baz=238,slow=40						
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	29.31	45	P	P	13 26 22.1	+0.3
MKAR	Makanchi Array	29.31	45	P	P	13 26 22.1	+0.3
PKIN	Phulchoki	29.32	85	*e*P	P	13 26 22.1	-0.2
	comp=Z,7.5nm,0.4s						
PKI	Pulchoki	29.33	85	*e*P	P	13 26 22.1	-0.3
	comp=Z,9.0nm,0.7s						
KIRV	Kirov	29.39	357	LR	LR	13 41 01.6	
	comp=Z,64nm,18.7s,baz=187,slow=42						
RAMN	Ramite	30.50	86	*e*P	P	13 26 32.4	-0.3
	comp=Z,6.4nm,0.4s						
NACGM	Naroch	31.43	332	*e*P	P	13 26 36.4	-3.9
	baz=133						
WMQ	Urumqi	31.84	53	*e*P	P	13 26 46.8	+2.6
KLMR	Klimovskoe	32.70	349	*e*P	P	13 26 49.6	-1.8
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLMR	Klimovskoe	32.70	349	*e*P	P	13 26 49.6	-1.8
KLMR				AMP		13 27 01.0	
	comp=Z,7.0nm,0.7s						
KMBO	Kilima Mbogo	33.36	208	LR	LR	13 41 35.3	
	comp=Z,144nm,20.2s,baz=64,slow=38						
NRCA	Norcia	33.98	304	P	P	13 27 03.4	+0.5
NRCA				IAmb	IAmb	13 27 27.9	
	comp=Z,4.9nm,0.9s						
ZAA0	Zalesovo Array	34.26	35	P	P	13 27 04.7	-0.4
ZAA0				IAmb	IAmb	13 27 06.0	
	comp=Z,2.9nm,0.7s						
ZALV	Zalesovo Beam	34.26	35	P	P	13 27 05.2	+0.1
	comp=Z,1.9nm,0.3s,baz=240,slow=9.5,SNR=17						
ZALV				LR	LR	13 42 46.3	
	comp=Z,61nm,18.4s,baz=250,slow=39						
	comp=Z,1.9nm,0.3s						
ZALV	Zalesovo Beam	34.26	35	P	P	13 27 04.4	-0.7
KBA	Koelnbreinsper	34.83	312	*e*P	P	13 27 10.3	0.0
	comp=Z,2.0nm,0.5s						
GERES	GERESS Array B	35.15	315	P	P	13 27 13.0	0.0
	comp=Z,0.3nm,0.3s,baz=108,slow=6.3,SNR=1.6						
	comp=Z,0.3nm,0.3s						
GERES	GERESS Array B	35.15	315	P	P	13 27 13.0	0.0
KHC	Kasperske Hory	35.32	315	P	P	13 27 14.1	-0.3
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	35.32	315	P	P	13 27 14.1	-0.3
MBAR	Mbarara	36.00	218	LR	LR	13 42 36.7	
	comp=Z,54nm,19.5s,baz=32,slow=37						
SQTA	Sankt Quirin	36.27	311	*e*P	P	13 27 21.9	-0.7
	comp=Z,8.0nm,0.4s						
MOTA	Moosalm	36.37	311	*e*P	P	13 27 22.9	-0.6
	comp=Z,6.4nm,0.8s						
GOMU	GeErMu	36.41	68	P	P	13 27 23.1	-1.1
GOMU				pP	pP	13 27 26.5	-1.3
GOMU				sP	sP	13 27 30.7	+1.5
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,29nm,5.1s						
CLL	Collm	36.45	318	*i* P	P	13 27 23.6	-0.3
CLL	Collm	36.45	318	*i* P	P	13 27 23.6	-0.3
FIA1	FINESS Array S	36.51	339	P	P	13 27 23.8	-0.5
FIA1				IAmb	IAmb	13 27 24.3	
	comp=Z,9.2nm,1.0s						
FINES	FINESS Array B	36.51	339	P	P	13 27 23.6	-0.6
	comp=Z,2.8nm,0.5s,baz=126,slow=12,SNR=12						
	comp=Z,2.8nm,0.5s						
FINES	FINESS Array B	36.51	339	P	P	13 27 24.0	-0.3
FINES	FINESS Array B	36.51	339	P	P	13 27 24.0	-0.3
FETA	Feichten	36.53	311	*e*P	P	13 27 24.5	-0.4
	comp=Z,2.8nm,0.5s						
DAVA	Damuels	37.16	311	*e*P	P	13 27 29.5	-0.7
	comp=Z,5.4nm,0.4s						
SENIN	Lac Senin/Sane	38.70	309	P	P	13 27 42.6	-0.7
BNI	Bardonecchia	38.92	307	P	P	13 27 44.8	-0.3
BNI				pmax	pmax		
	comp=Z,15nm,1.5s						
BNI	Bardonecchia	38.92	307	P	P	13 27 44.8	-0.3
BNI				IAmb	IAmb	13 27 59.9	
	comp=Z,15nm,1.5s						
HFS	Hagfors	40.20	331	LR	LR	13 46 01.3	
	comp=Z,40nm,18.1s,baz=139,slow=38						
GTA	Gaotai	40.31	62	⇑P	P	13 27 58.1	+1.3
GTA				pP	sP	13 28 06.2	+4.4
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NC602	NORSAR Array S	41.43	331	*e*P	P	13 28 04.7	-0.8
NC405	NORSAR Array S	41.55	332	P	P	13 28 05.1	-1.5
NC405				IAmb	IAmb	13 28 11.8	
	comp=Z,12nm,0.9s						
NB201	NORSAR Array S	41.69	331	P	P	13 28 06.0	-1.7
NB2	NORSAR Subarra	41.72	331	P	P	13 28 06.5	-1.5
	comp=Z,1.1nm,0.5s,baz=121,slow=8.6						
NB2	NORSAR Subarra	41.72	331	P	P	13 28 06.5	-1.5
	baz=121,slow=8.6						
NOA	NORSAR Array B	41.72	331	P	P	13 28 06.4	-1.5
	comp=Z,2.0nm,0.6s,baz=121,slow=8.2,SNR=11						
NOA				LR	LR	13 46 58.3	
	comp=Z,39nm,20.8s,baz=130,slow=38						
	comp=Z,2.0nm,0.6s						
KONO	Kongsberg	41.74	329	*e*P	P	13 28 06.8	-1.3
NAO01	NORSAR Array S	41.76	331	P	P	13 28 06.8	-1.5
NAO01				IAmb	IAmb	13 28 22.7	
	comp=Z,15nm,1.3s						
NBO00	NORSAR Array S	41.90	331	P	P	13 28 08.0	-1.4
NBO00				IAmb	IAmb	13 28 19.5	
	comp=Z,10nm,1.1s						
NC204	NORSAR Array S	42.03	332	P	P	13 28 08.9	-1.6
NC204				IAmb	IAmb	13 28 35.2	
	comp=Z,8.7nm,1.1s						
MOY	Mondy	42.45	44	*e*P	P	13 28 15.8	+1.6
SKAR	Skarslia	42.79	330	*e*P	P	13 28 16.1	-0.6
KEV	Kevo	43.01	348	P	P	13 28 17.8	-0.4
KEV				pmax	pmax		
	comp=Z,16nm,1.2s						
KEV	Kevo	43.01	348	P	P	13 28 17.8	-0.4
KEV				IAmb	IAmb	13 28 41.9	
	comp=Z,16nm,1.2s						
ARA0	ARCESS Array S	43.12	347	*e*P	P	13 28 19.0	-0.2
ARCES	ARCESS Array B	43.12	347	P	P	13 28 19.1	-0.1
	comp=Z,1.6nm,0.6s,baz=138,slow=7.5,SNR=17						
ARCES				LR	LR	13 49 46.9	
	comp=Z,42nm,18.1s,baz=87,slow=41						
	comp=Z,1.6nm,0.6s						
ARCES	ARCESS Array B	43.12	347	P	P	13 28 18.9	-0.2
DOMB	Dombas	43.12	332	*e*P	P	13 28 18.6	-0.7
KTK1	Kautokeino	43.17	345	*e*P	P	13 28 19.1	-0.5
NSS	Namsos	43.33	336	*e*P	P	13 28 20.4	-0.5
MOR8	Moi Rana	43.50	339	*e*P	P	13 28 21.7	-0.6
KMY	Karmoy	43.57	327	*e*P	P	13 28 22.5	-0.4
PZH	PanZhiHua	43.75	81	P	P	13 28 26.9	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
CMAR	Chiang Mai Arr	43.95	93	P	P	13 28 26.2	-0.4
	comp=Z,0.6nm,0.3s,baz=289,slow=8.2,SNR=5.7						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	43.95	93	*i* P	P	13 28 28.3	+1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FAUS	Fauske	44.02	341	*e*P	P	13 28 25.8	-0.7
AKN	Aaknes	44.04	331	*e*P	P	13 28 26.8	+0.1
STOK	Stokkvaagen	44.05	339	*e*P	P	13 28 26.2	-0.4
JETT	Jettan, Norway	44.23	345	*e*P	P	13 28 28.1	-0.1
HAMF	Hammerfest	44.38	347	*e*P	P	13 28 29.0	-0.3
STEI	Steigen	44.40	341	*e*P	P	13 28 28.9	-0.6
TRO	Tromso	44.64	344	*e*P	P	13 28 30.9	-0.4
NRIK	Noril'sk	45.01	17	*i* P	P	13 28 34.2	-0.1
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	45.37	50	P	P	13 28 38.2	+0.5
	comp=Z,0.4nm,0.3s,baz=261,slow=8.6,SNR=4.5						
	comp=Z,0.4nm,0.3s						
SONM	Songino Array	45.37	50	P	P	13 28 38.2	+0.5
SONM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	45.37	50	IAmb	IAmb	13 28 40.5	
	comp=Z,2.2nm,1.1s						
ULN	Ulaanbaatar	45.82	50	*ce*P	P	13 28 42.0	+0.7
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BJO1	Bjornoya	48.31	349	*e*P	P	13 29 00.0	-0.1
HHC	Hu-ho-hao-te	49.22	60	*e*P	P	13 29 08.8	+1.0
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
TORD	Torodi Ar. Bea	49.24	262	P	P	13 29 07.5	-0.5
	comp=Z,2.0nm,0.4s,baz=60,slow=7.8,SNR=22						
	comp=Z,2.0nm,0.4s						
LSZ	Lusaka	49.91	211	LR	LR	13 51 38.4	
	comp=Z,101nm,18.9s,baz=135,slow=38						
SPB2	Spitsbergen Ar	51.53	351	P	P	13 29 24.6	0.0
SPA0	Spitsbergen Ar	51.54	351	*e*P	P	13 29 25.0	+0.4
SPITS	Spitsbergen Ar	51.54	351	P	P	13 29 24.9	+0.3
SPITS				pmax	pmax		
	comp=Z,44nm,1.4s						
KOWA	Kowa	53.61	267	P	P	13 29 40.2	-0.6
NJ2	Nanjing	56.70	69	*e*P	P	13 30 01.1	-1.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BORG	Borgarnes	56.89	331	LR	LR	13 55 01.4	
	comp=Z,26nm,18.4s,baz=210,slow=37						
DBIC	Dimbokro	58.00	259	P	P	13 30 11.7	-0.6
	comp=Z,3.6nm,0.7s,baz=87,slow=9.2,SNR=5.1						
	comp=Z,3.6nm,0.7s						
DBIC	Dimbokro	58.00	259	P	P	13 30 11.4	-0.9
TIXI	Tiksi	58.38	21	*i* P	P	13 30 14.4	+0.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TIXI	Tiksi	58.38	21	P	P	13 30 14.0	-0.2
TSUM	Tsumeb	58.54	219	LR	LR	13 56 25.8	
	comp=Z,62nm,19.5s,baz=152,slow=37						
YAK	Yakutsk	58.87	33	*ce*P	P	13 30 17.1	-0.6
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LBTB	Lobatse	59.64	208	P	P	13 30 23.8	+0.2
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LBTB	Lobatse	59.64	208	P	P	13 30 23.8	+0.2
KLR	Kul'dur	61.99	47	LR	LR	14 00 24.0	
	comp=Z,69nm,20.5s,baz=262,slow=39						
KLR	Kul'dur	61.99	47	*i* P	P	13 30 38.8	-0.5
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSRS	Korea Array	62.34	61	P	P	13 30 41.0	-0.8
	comp=Z,1.7nm,0.5s,baz=280,slow=6.3,SNR=9.2						
KSRS				LR	LR	14 00 50.6	
	comp=Z,30nm,20.0s,baz=220,slow=39						
	comp=Z,1.7nm,0.5s						
SUMG	Summit	62.54	340	P	P	13 30 43.8	+0.8
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SUMG	Summit	62.54	340	P	P	13 30 43.8	+0.8
BOSA	Boshof	62.98	206	P	P	13 30 46.0	-0.2
	comp=Z,2.3nm,0.6s,baz=13,slow=7.5,SNR=7.0						
BOSA				LR	LR	14 00 01.1	
	comp=Z,84nm,19.4s,baz=159,slow=38						
	comp=Z,2.3nm,0.6s						
BOSA	Boshof	62.98	206	P	P	13 30 45.9	-0.2
SUR	Sutherland	68.09	208	LR	LR	14 02 28.6	
	comp=Z,106nm,19.3s,baz=126,slow=37						
SUR	Sutherland	68.09	208	P	P	13 31 18.7	-0.6
EUNU	Eureka	68.59	353	P	P	13 31 22.2	+0.5
EUNU				IAmb	IAmb	13 31 42.4	
	comp=Z,4.7nm,1.4s						
SEY	Seymchan	68.86	29	*ce*P	P	13 31 24.1	+0.6
SEY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MA2	Magadan	69.45	32	LR	LR	14 05 38.9	
	comp=Z,19nm,19.5s,baz=138,slow=39						
YSS	Yuzh-Sakhalins	69.71	47	*e*P	P	13 31 34.1	+5.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,19.0s						
ASAJ	Asahikawa	70.65	50	LR	LR	14 06 51.1	
	comp=Z,33nm,19.0s,baz=344,slow=40						
BILL	Bilibino	71.60	21	⇓*e*P	P	13 31 38.5	-1.7
BILL				*e*		13 34 15.9	
BILL				pmax	pmax		
	comp=Z,8.0nm,3.1s						
BILL				MLR	MLR		
	comp=Z,21nm,14.0s						
A36M	Sachs Harbour	79.02	359	P	P	13 32 22.7	-0.1
TOLK	Toolik Lake Re	81.10	8	P	P	13 32 34.5	+0.3
TOLK				IAmb	IAmb	13 32 35.2	
	comp=Z,2.7nm,0.7s						
SCHQ	Schefferville	81.25	329	P	P	13 32 35.0	-0.2
	comp=Z,4.0nm,0.7s,baz=32,slow=3.5,SNR=5.9						
	comp=Z,4.0nm,0.7s						
SCHQ	Schefferville	81.25	329	P	P	13 32 34.8	-0.4
SCHQ				IAmb	IAmb	13 32 41.8	
	comp=Z,4.1nm,0.9s						
C36M	Paulatuk	81.65	359	P	P	13 32 36.0	-1.0
C36M				IAmb	IAmb	13 32 37.0	
	comp=Z,6.0nm,1.0s						
INK	Inuvik	82.65	2	P	P	13 32 41.9	-0.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	82.65	2	P	P	13 32 41.9	-0.3
BMAR	Burnt Mountain	82.81	6	P	P	13 32 43.9	+0.7
IMAR	Indian Mountai	83.02	10	P	P	13 32 43.8	-0.4
H21K	Melozitna Rive	83.47	10	P	P	13 32 46.7	+0.1
H21K				IAmb	IAmb	13 32 55.9	
	comp=Z,3.6nm,1.1s						
H23K	Yukon River	83.78	9	P	P	13 32 49.0	+0.8
MDM	Murphy Dome	84.78	9	P	P	13 32 53.2	-0.1
MDM				IAmb	IAmb	13 33 02.9	
	comp=Z,2.9nm,1.0s						
ILAR	Eielson Array	85.13	8	P	P	13 32 54.3	-0.7
	comp=Z,0.8nm,0.6s,baz=324,slow=4.1,SNR=11						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	85.13	8	P	P	13 32 54.1	-0.9
CCB	Clear Creek Bu	85.13	8	P	P	13 32 53.9	-1.1
CCB				IAmb	IAmb	13 33 18.1	
	comp=Z,3.9nm,1.4s						
BPAW	Bear Paw Mtn.	85.21	10	P	P	13 32 54.6	-0.9
WRH	Wood River Hil	85.26	9	P	P	13 32 54.8	-0.9
K20K	Telida	85.40	11	P	P	13 32 57.1	+0.7
K20K				IAmb	IAmb	13 33 07.3	
	comp=Z,5.2nm,1.2s						
J25K	Salcha River,	85.46	7	P	P	13 32 56.7	0.0
J25K				IAmb	IAmb	13 32 57.1	
	comp=Z,3.6nm,0.9s						
CAST	Castle Rocks	85.68	11	P	P	13 32 57.8	0.0
CAST				IAmb	IAmb	13 32 59.1	
	comp=Z,3.6nm,1.0s						
EGAK	Eagle	85.72	6	P	P	13 32 57.8	-0.2
EGAK				IAmb	IAmb	13 33 07.5	
	comp=Z,6.3nm,1.3s						
KTH	Kantishna Hill	85.73	10	P	P	13 32 57.5	-0.7
PPLA	Purkeypile	86.15	11	P	P	13 32 59.7	-0.6
RND	Reindeer	86.18	9	P	P	13 32 59.5	-0.9
RND				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RND	Reindeer	86.18	9	P	P	13 32 59.5	-0.9
RND				IAmb	IAmb	13 33 06.0	
	comp=Z,7.7nm,1.5s						
SCRK	Sand Creek	86.23	7	P	P	13 33 00.7	+0.1
RIDG	Independent Ri	86.36	7	P	P	13 33 01.0	-0.3
RIDG				IAmb	IAmb	13 33 15.9	
	comp=Z,6.2nm,1.4s						
DOT	Dot Lake	86.54	7	P	P	13 33 02.1	0.0
DOT				IAmb	IAmb	13 33 03.0	
	comp=Z,2.7nm,0.8s						
DHY	Denali Highway	86.70	9	P	P	13 33 02.4	-0.6
L27K	Beaver Creek,	87.34	6	P	P	13 33 06.8	+0.8
BCAR	Beaver Creek A	87.34	6	P	P	13 33 06.6	+0.6
YKA	Yellowknife Ar	87.95	354	P	P	13 33 08.8	-0.1
	comp=Z,1.4nm,0.6s,baz=11,slow=5.2,SNR=36						
YKA				LR	LR	14 21 54.5	
	comp=Z,42nm,18.5s,baz=310,slow=42						
	comp=Z,1.4nm,0.6s						
KDAK	Kodiak Island	90.86	13	LR	LR	14 20 22.4	
	comp=Z,52nm,19.3s,baz=155,slow=40						
ASAR	Alice Springs	94.61	114	P	P	13 33 42.2	+1.7
	comp=Z,0.5nm,0.8s,baz=306,slow=4.7,SNR=7.4						
	comp=Z,0.5nm,0.8s						
MAW	Mawson	96.90	176	LR	LR	14 14 32.8	
	comp=Z,32nm,18.1s,baz=238,slow=34						

TUL ***10*** *13:45:31.4±1.1, 36°.53N±0°.02×98°.98W±0°.02, h6^{km}±6^{km}, ML2.7, mb_Lg2.5/30(NEIC), Error ellipse: s-maj=3.2km s-min=2.6km az=192.0*

NEIC 10 13:45:31.2±1.2**, 36°.55N**±0°.03×**98°.99W**±0°.06**, h13^{km}**±4^{km}**,**
Error ellipse: s-maj=7.0km s-min=4.2km az=111.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.17	183		Pg	13 45 34.7	-0.5
OKCFA	Oklahoma City	1.68	132	Pn	Pb	13 46 01.3	-0.7
WMOK	Wichita Mounta	1.81	175		Pn	13 46 02.7	+0.5
FNO	Franklin	1.82	135	Pn	Pb	13 46 03.5	-0.9
T35A	Sooner Cattle	2.02	79		Pn	13 46 06.1	+1.1
T35A				IAmb_Lg		13 46 40.0	
	comp=Z,18nm,0.9s						
CBKS	Cedar Bluff	2.34	346	Pn	Pn	13 46 09.6	+0.2
CBKS				IAmb_Lg		13 46 47.5	
	comp=Z,11nm,0.7s						
TUL1	Leonard	2.66	103	Pn	Pn	13 46 14.1	+0.3
X37A	Clayton	3.54	122	IAmb_Lg		13 47 29.2	
	comp=Z,17nm,0.9s						
KSCO	Kaye Shedlock'	3.79	312	IAmb_Lg		13 47 35.3	
	comp=Z,16nm,0.7s						
MSTX	Muleshoe	4.03	231	IAmb_Lg		13 47 49.8	
	comp=Z,8.9nm,1.0s						
T25A	Trinidad	4.39	279	IAmb_Lg		13 47 53.2	
	comp=Z,12nm,0.8s						
S39A	Bolivar	4.67	74	IAmb_Lg		13 47 59.9	
	comp=Z,10nm,0.7s						
U40A	Yellville	4.95	90	IAmb_Lg		13 48 17.4	
	comp=Z,5.7nm,0.7s						
P38A	Dawn	5.29	53	IAmb_Lg		13 48 21.9	
	comp=Z,8.8nm,0.7s						
X40A	Basin Creek Fa	5.42	110	IAmb_Lg		13 48 32.2	
	comp=Z,6.1nm,0.8s						
Q24A	Divide	5.44	298	IAmb_Lg		13 48 26.0	
	comp=Z,8.7nm,1.0s						
R40A	Maddies Statio	5.62	70	IAmb_Lg		13 48 38.5	
	comp=Z,6.5nm,0.8s						
JCT	Junction City	6.09	187	IAmb_Lg		13 48 46.8	
	comp=Z,6.2nm,0.8s						
CCM	Cathedral Cave	6.35	74	IAmb_Lg		13 48 59.7	
	comp=Z,6.3nm,0.8s						
PBMO	Poplar Bluff	6.88	86	IAmb_Lg		13 49 22.8	
	comp=Z,6.6nm,0.7s						

IDC 10 14:23:44.1±29.0**, 24°.02S**×**172°.96W, h0^{km}, mb3.9**/4**,**
mbtmp3.9/4**, Error ellipse: s-maj=546.3km**
s-min=165.5km az=80.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.91	268	P	P	14 31 03.7	+0.3
	1.4nm,0.7s,baz=104,slow=11,SNR=2.5						
	1.4nm,0.7s						
STKA	Stephens Creek	40.66	248	P	P	14 31 25.7	-0.6
	1.1nm,0.4s,baz=86,slow=9.0,SNR=4.3						
	1.1nm,0.4s						
ASAR	Alice Springs	48.35	259	P	P	14 32 27.7	-0.2
	0.5nm,0.4s,baz=95,slow=7.7,SNR=31						
	0.5nm,0.4s						
WRA	Warramunga Arr	48.81	264	P	P	14 32 31.6	+0.1
	0.5nm,0.5s,baz=103,slow=7.5,SNR=6.8						
	0.5nm,0.5s						

NOU 10 14:36:59.4, 16°.25S×**167°.42E, h39^{km}, MLv4.1**/14**,**
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.82	345	P	Pn	14 37 15.1	+0.6
DVP	Devils Point	1.64	154	P	Pn	14 37 25.7	0.0
LIFNC	LIFOU	4.51	182	P	Pn	14 38 04.4	-0.7
KOUNC	Koumac, New Ca	5.21	214	P	Pn	14 38 14.7	-0.1
MARNC	Mare, Loyalty	5.24	174	P	Pn	14 38 15.4	+0.2
	0.5nm,0.8s						
YATNC	Mamie plateau,	5.80	185	P	Pn	14 38 22.0	-0.9
DZM	Mont Dzumac	5.86	189	P	Pn	14 38 23.8	-0.1
NOUC	Port Laguerre	5.92	190	P	Pn	14 38 24.2	-0.3
ONTNC	Ouen Toro	6.09	188	P	Pn	14 38 28.1	+1.1
OUENC	Ouen Island, N	6.16	185	P	Pn	14 38 28.8	+0.9
PINNC	Pines Island,	6.33	180	P	Pn	14 38 31.1	+0.9

NEIC **10** *14:41:33.3±1.5, 65°.73N±0°.03×145°.30W±0°.08, h13^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=4.3km az=111.0*

NEIC **10** *14:41:34, 65°.75N×145°.26W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.29; $M_{\theta\theta}$-2.95; $M_{\phi\phi}$2.66; $M_{r\theta}$-0.20; $M_{\theta\phi}$-1.24; $M_{\phi r}$0.86; Fault plane solution: $M_0$3.20000×10^{14} NP1:ϕ_s301.82000°, δ78.29000°, λ167.62000°. NP2:ϕ_s34.37000°, δ77.88000°, λ11.99000°. Principal axes: T 3.1894, Plg17.0000°, Azm258.0000°; N 0.0211, Plg73.0000°, Azm79.0000°; P -3.2105, Plg0.0000°, Azm348.0000°;*

AEIC **10** *14:41:35±1.7, 65°.70N±0°.03×145°.32W±0°.06, h35^{km}±7^{km}, ML3.9, ML4.0/111(NEIC), Mwr3.6/72(NEIC) Error ellipse: s-maj=4.0km s-min=3.7km az=208.0*

ISC 10 14:41:32.5±1.5, **65°.82N**±0°.04×**145°.26W**±0°.03, **h16**^{km}±13^{km}, **n192**, σ0^s.**97**/172, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H24K	Noodor Dome	1.08	272		Pg	14 41 53.8	+0.5
H24K					Sn	14 42 08.1	+0.5
H24K	Noodor Dome	1.08	272	IAML		14 42 12.3	
	comp=E,3µm,0.6s						
H24K	Noodor Dome	1.08	272	P	Pg	14 41 53.8	+0.5
	baz=96						
H24K				S	Sn	14 42 08.1	+0.5
	baz=96						
POKR	Poker Plat Res	1.15	233		Pn	14 41 53.9	0.0
POKR	Poker Plat Res	1.15	233	IAML		14 42 11.4	
	comp=E,3µm,0.5s						
POKR	Poker Plat Res	1.15	233	P	Pn	14 41 53.9	0.0
	baz=55						
J25K	Salcha River,	1.22	182		Pn	14 41 54.0	-0.8
J25K	Salcha River,	1.22	182	IAML		14 42 09.9	
	comp=E,3µm,0.6s						
J25K				IAML		14 42 10.6	
	comp=N,4µm,0.5s						
J25K	Salcha River,	1.22	182	P	Pn	14 41 54.0	-0.8
	baz=1.8						
IL31		1.26	214		Pn	14 41 55.0	-0.3
ILAR	Eielson Array	1.26	214		Pn	14 41 54.9	-0.5
PS07	TAPS Pump Stn7	1.36	249		Pb	14 41 57.4	-0.1
PS08	TAPS Pump Stn8	1.44	208		Pn	14 41 57.8	-0.1
PS08					Sn	14 42 15.0	-1.6
COLA	College	1.44	230		Pn	14 41 58.2	+0.3
COLA					Sn	14 42 16.2	-0.3
COLA	College	1.44	230	IAML		14 42 18.6	
	comp=N,2µm,0.4s						
TCOL	CIGO, UAF Yank	1.45	230		Pn	14 41 58.2	+0.3
TCOL	CIGO, UAF Yank	1.45	230	P	Pn	14 41 58.2	+0.3
	baz=51						
J26L	Joseph Creek	1.51	151	P	Pn	14 41 58.8	-0.2
	baz=330						
MDM	Murphy Dome	1.52	236		Pn	14 41 59.2	+0.3
MDM					Sn	14 42 18.4	0.0
MDM	Murphy Dome	1.52	236	IAML		14 42 22.9	
	comp=N,2µm,0.5s						
MDM				IAML		14 42 23.4	
	comp=E,3µm,0.5s						
HDA	Harding Lake	1.59	207		Pn	14 41 59.7	-0.2
HDA					Sn	14 42 19.4	-0.8
HDA	Harding Lake	1.59	207	P	Pn	14 41 59.7	-0.2
	baz=28						
HDA				S	Sn	14 42 19.4	-0.8
	baz=28						
HDA				S	Sn	14 42 19.4	-0.8
	baz=28						
CCB	Clear Creek Bu	1.59	223		Pn	14 41 59.8	-0.2
CCB	Clear Creek Bu	1.59	223	IAML		14 42 23.2	
	comp=N,3µm,0.4s						
BM03	Burnt Mountain	1.62	9		Pg	14 42 04.1	+0.4
BMAR	Burnt Mountain	1.64	9		Pg	14 42 03.9	0.0
H23K	Yukon River	1.76	272		Pn	14 42 03.1	+0.8
H23K	Yukon River	1.76	272	P	Pn	14 42 03.1	+0.8
	baz=92						
WRH	Wood River Hil	1.81	223		Pn	14 42 02.8	-0.1
WRH					Sb	14 42 26.8	-0.7
WRH	Wood River Hil	1.81	223	IAML		14 42 27.5	
	comp=N,2µm,0.6s						
I23K	Minto, Yukon-K	1.84	250		Pn	14 42 03.5	+0.2
I23K	Minto, Yukon-K	1.84	250	IAML		14 42 31.4	
	comp=E,1µm,0.6s						
I23K				IAML		14 42 38.1	
	comp=N,1µm,0.5s						
I23K	Minto, Yukon-K	1.84	250	P	Pn	14 42 03.5	+0.2
	baz=70						
PS06	TAPS Pump Stn6	1.84	273		Pb	14 42 05.0	-0.7
PS09	TAPS Pump Stn9	1.91	187		Sn	14 42 29.2	+1.1
SCRK	Sand Creek	1.93	163		Pn	14 42 05.0	+0.2
SCRK	Sand Creek	1.93	163	IAML		14 42 31.0	
	comp=N,1µm,0.5s						
SCRK	Sand Creek	1.93	163	P	Pn	14 42 05.0	+0.2
	baz=343						
EGAK	Eagle	2.02	119		Pn	14 42 06.3	+0.5
EGAK	Eagle	2.02	119	IAML		14 42 36.3	
	comp=N,1µm,0.5s						
EGAK				IAML		14 42 39.5	
	comp=N,1µm,0.5s						
EGAK	Eagle	2.02	119	P	Pn	14 42 06.3	+0.5
	baz=300						
NEA2	Nenana	2.02	234		Pn	14 42 05.8	-0.1
NEA2	Nenana	2.02	234	IAML		14 42 38.4	
	comp=E,1µm,0.7s						
NEA2				IAML		14 42 38.5	
	comp=N,2µm,0.8s						
NEA2	Nenana	2.02	234	P	Pn	14 42 05.8	-0.1
	baz=53						
K24K	Donnelly Dome	2.04	186	P	Pn	14 42 06.6	+0.4
	baz=6.1						
RIDG	Independent Ri	2.10	175		Pn	14 42 07.1	+0.1
RIDG	Independent Ri	2.10	175	IAML		14 42 36.0	
	comp=N,1µm,0.7s						
RIDG	Independent Ri	2.10	175	P	Pn	14 42 07.1	+0.1
	baz=355						
DOT	Dot Lake	2.24	166		Pn	14 42 09.1	+0.2
PS05	TAPS Pump Stn5	2.40	297		Pn	14 42 12.4	+1.4
PS10	TAPS Pump St10	2.42	185		Pn	14 42 11.2	-0.2
COLD	Coldfoot	2.43	308		Pb	14 42 13.9	-1.8
COLD	Coldfoot	2.43	308	P	Pb	14 42 13.9	-1.8
	baz=125						
BWN	Browne	2.44	229		Pn	14 42 11.0	-0.5
MCK	McKinley	2.62	219		Pn	14 42 14.4	+0.3
MCK	McKinley	2.62	219	IAML		14 42 55.5	
	comp=E,778nm,0.6s						
MCK	McKinley	2.62	219	P	Pn	14 42 14.4	+0.3
	baz=37						
PAX	Paxson	2.87	182		Pn	14 42 17.9	+0.3
PAX	Paxson	2.87	182	P	Pn	14 42 17.9	+0.3
	baz=1.6						
I21K	Tanana	2.87	260		Pn	14 42 17.7	+0.2
I21K	Tanana	2.87	260	IAML		14 43 07.1	
	comp=N,669nm,0.6s						
I21K				IAML		14 43 09.9	
	comp=E,547nm,0.6s						
I21K	Tanana	2.87	260	P	Pn	14 42 17.7	+0.2
	baz=76						
RND	Reindeer	2.88	214		Pn	14 42 18.3	+0.6
RND	Reindeer	2.88	214	IAML		14 43 01.0	
	comp=E,687nm,0.6s						
DHY	Denali Highway	2.91	199		Pn	14 42 19.1	+0.9
DHY	Denali Highway	2.91	199	IAML		14 43 02.8	
	comp=N,514nm,0.6s						
DHY				IAML		14 43 09.4	
	comp=E,441nm,0.7s						
DHY	Denali Highway	2.91	199	P	Pn	14 42 19.1	+0.9
	baz=18						
I29M	Ogilvie Camp,	2.93	96		Pn	14 42 18.8	+0.5
I29M				IAML		14 43 12.0	
	comp=N,450nm,0.5s						
L26K	Log Cabin Wild	2.93	163		Pn	14 42 18.6	+0.2
L26K	Log Cabin Wild	2.93	163	P	Pn	14 42 18.6	+0.2
	baz=344						
MENT	Mentasta	2.97	166		Pn	14 42 19.0	0.0
BPAW	Bear Paw Mtn.	2.99	237		Pn	14 42 18.9	-0.3
BPAW	Bear Paw Mtn.	2.99	237	IAML		14 43 06.8	
	comp=N,565nm,0.6s						
BPAW				IAML		14 43 10.9	
	comp=E,519nm,0.6s						
BPAW	Bear Paw Mtn.	2.99	237	P	Pn	14 42 18.9	-0.3
	baz=54						
DAWY	Dawson	3.06	123		Pn	14 42 20.4	+0.2
DAWY	Dawson	3.06	123	IAML		14 43 10.0	
	comp=N,601nm,0.6s						
DAWY	Dawson	3.06	123	P	Pn	14 42 20.4	+0.2
	baz=306						
H21K	Melozitna Rive	3.12	270		Pn	14 42 22.0	+1.0
H21K	Melozitna Rive	3.12	270	IAML		14 43 17.4	
	comp=E,370nm,0.4s						
H21K	Melozitna Rive	3.12	270	P	Pn	14 42 22.0	+1.0
	baz=86						
L27K	Beaver Creek,	3.15	150		Pn	14 42 21.3	-0.1
L27K	Beaver Creek,	3.15	150	IAML		14 43 12.9	
	comp=N,655nm,0.8s						
L27K	Beaver Creek,	3.15	150	P	Pn	14 42 21.3	-0.1
	baz=332						
BC03		3.15	150		Pn	14 42 21.4	+0.1
BCAR	Beaver Creek A	3.15	150		Pn	14 42 21.3	-0.1
TRF	Thorofare Moun	3.22	225		Pn	14 42 22.7	+0.3
TRF	Thorofare Moun	3.22	225	IAML		14 43 16.0	
	comp=N,336nm,0.6s						
TRF				IAML		14 43 18.5	
	comp=E,462nm,1.2s						
TRF	Thorofare Moun	3.22	225	P	Pn	14 42 22.7	+0.3
	baz=41						
TOLK	Toolik Lake Re	3.29	331		Pb	14 42 28.0	-2.5
TOLK	Toolik Lake Re	3.29	331	IAML		14 43 10.9	
	comp=N,274nm,0.8s						
TOLK	Toolik Lake Re	3.29	331	P	Pb	14 42 28.0	-2.5
	baz=148						
WAT1	Susitna Watana	3.33	207		Pn	14 42 24.5	+0.7
WAT1	Susitna Watana	3.33	207	P	Pn	14 42 24.5	+0.7
	baz=25						
KTH	Kantishna Hill	3.33	229		Pn	14 42 23.9	0.0
KTH	Kantishna Hill	3.33	229	IAML		14 43 18.8	
	comp=E,328nm,0.6s						
KTH				IAML		14 43 19.3	
	comp=N,359nm,1.6s						
WAT6	Susitna Watana	3.43	200		Pn	14 42 26.3	+1.0
WAT6	Susitna Watana	3.43	200	P	Pn	14 42 26.3	+1.0
	baz=18						
HARP	HAARP	3.44	179		Pn	14 42 26.2	+0.8
HARP	HAARP	3.44	179	P	Pn	14 42 26.2	+0.8
	baz=359						
IM03		3.49	277		Pn	14 42 26.9	+0.9
IMAR	Indian Mountai	3.49	277	Pn	Pn	14 42 26.7	+0.7
M26K	Nabesna, AK	3.58	163		Pn	14 42 27.7	+0.4
M26K	Nabesna, AK	3.58	163	IAML		14 43 25.3	
	comp=E,388nm,0.5s						
M26K				IAML		14 43 28.0	
	comp=N,478nm,0.5s						
M26K	Nabesna, AK	3.58	163	P	Pn	14 42 27.7	+0.4
	baz=344						
CHUM	Lake Minchumin	3.58	240		Pn	14 42 27.3	0.0
CHUM	Lake Minchumin	3.58	240	P	Pn	14 42 27.3	0.0
	baz=55						
M24K	Tolsona, Glenn	3.75	187		Pn	14 42 30.0	+0.3
M24K				IAML		14 43 30.1	
	comp=N,408nm,1.2s						
M24K				IAML		14 43 33.1	
	comp=E,357nm,0.9s						
M24K	Tolsona, Glenn	3.75	187	P	Pn	14 42 31.1	+1.4
	baz=5.8						
PS11	TAPS Pump St11	3.76	182		Pn	14 42 31.3	+1.6
M27K	Edge Creek, AK	3.78	155		Pn	14 42 30.1	-0.1
CAST	Castle Rocks	3.80	234		Pn	14 42 29.2	-1.1
CAST				IAML		14 43 30.4	
	comp=E,256nm,0.6s						
CAST				IAML		14 43 33.8	
	comp=N,244nm,0.6s						
BVCY	Beaver Creek	3.93	149		Pn	14 42 32.8	+0.8
BVCY	Beaver Creek	3.93	149	P	Pn	14 42 32.8	+0.8
	baz=332						
SCM	Sheep Creek Mo	4.11	194		Pn	14 42 36.2	+1.6
SCM	Sheep Creek Mo	4.11	194	P	Pn	14 42 36.2	+1.6
	baz=12						
J20K	Nowinta River	4.12	250		Pn	14 42 34.3	-0.3
J20K	Nowinta River	4.12	250	IAML		14 43 44.0	
	comp=E,307nm,0.6s						
J20K	Nowinta River	4.12	250	P	Pn	14 42 34.3	-0.3
	baz=64						
PPLA	Purkeypile	4.21	229		Pn	14 42 35.1	-0.9
PPLA	Purkeypile	4.21	229	P	Pn	14 42 35.9	-0.1
	baz=44						
N25K	Chitina, Valde	4.24	176		Pn	14 42 35.4	-1.0
SML	Sawmill	4.25	200		Pn	14 42 37.9	+1.3
SML	Sawmill	4.25	200	P	Pn	14 42 37.9	+1.3
	baz=18						
KLU	Klutina	4.36	184		Pn	14 42 38.6	+0.6
KLU				IAML		14 43 53.2	
	comp=E,142nm,0.9s						
KLU	Klutina	4.36	184	P	Pn	14 42 39.5	+1.5
	baz=3.6						
GHO	Glory Hole Cre	4.38	203		Pn	14 42 38.6	+0.3
GHO				IAML		14 44 01.8	
	comp=N,196nm,1.3s						
GLB	Gilahina Butte	4.45	171	Pn	Pn	14 42 39.3	+0.1
YUK2	White River	4.50	152		Pn	14 42 40.4	+0.4
K20K	Telida	4.53	241		Pn	14 42 39.9	-0.5
K20K				IAML		14 44 04.1	
	comp=E,171nm,0.7s						
K20K				IAML		14 44 08.3	
	comp=N,154nm,0.8s						
K20K	Telida	4.53	241	P	Pn	14 42 40.8	+0.5
	baz=54						
PMR	Palmer	4.58	204		Pn	14 42 39.6	-1.4
YUK3	Moose Creek	4.59	150		Pn	14 42 41.5	+0.2
YUK3	Moose Creek	4.59	150	P	Pn	14 42 41.5	+0.2
	baz=334						
M22K	Willow	4.62	210		Pn	14 42 40.8	-0.7
KNK	Knik Glacier	4.65	199		Pn	14 42 44.1	+2.1
KNK	Knik Glacier	4.65	199	IAML		14 44 01.3	
	comp=N,195nm,0.6s						
KNK	Knik Glacier	4.65	199	P	Pn	14 42 44.1	+2.1
	baz=17						
VRDI	Verde Repeater	4.68	169		Pn	14 42 43.6	+1.0
DIV	Divide	4.72	183		Pn	14 42 44.5	+1.6
JPK	Jack Peak	4.82	188		Pn	14 42 45.9	+1.4
BMRM	Bremner River	4.88	176		Pn	14 42 46.8	+1.6
BMRM	Bremner River	4.88	176	P	Pn	14 42 46.8	+1.6
	baz=357						
M30M	Minto, Yukon	4.93	127		Pn	14 42 45.9	+0.1
M30M	Minto, Yukon	4.93	127	IAML		14 44 08.6	
	comp=E,128nm,1.0s						
M30M	Minto, Yukon	4.93	127	P	Pn	14 42 45.9	+0.1
	baz=314						
GCSA	Galena City Sc	5.00	263		Pn	14 42 47.7	+1.0
GCSA	Galena City Sc	5.00	263	P	Pn	14 42 47.7	+1.0
	baz=74						
GLI	Glacier Island	5.03	190		Pn	14 42 47.9	+0.7
GLI				IAML		14 44 10.2	
	comp=E,108nm,0.6s						
GLI				IAML		14 44 17.5	
	comp=N,107nm,0.7s						
GLI	Glacier Island	5.03	190	P	Pn	14 42 48.3	+1.1
	baz=8.8						
BARN	Barnard Glacie	5.05	160		Pn	14 42 45.8	-1.8
KIAG	Kiagna River	5.09	164		Pn	14 42 48.8	+0.6
FID	Port Fidalgo	5.12	187		Pn	14 42 49.9	+1.4
FID	Port Fidalgo	5.12	187	IAML		14 44 16.1	
	comp=E,85nm,0.9s						
FID				IAML		14 44 19.2	
	comp=N,88nm,1.0s						
INK	Inuvik	5.22	56		Pn	14 42 52.6	+2.9
INK	Inuvik	5.22	56	P	Pn	14 42 52.6	+2.9
	baz=246						
STLK	Strandline Lak	5.23	217		Pn	14 42 51.6	+1.6
GOAT	Goat Mountain	5.27	177		Pn	14 42 52.6	+2.1
EYAK	Cordova Ski Ar	5.30	183		Pn	14 42 52.7	+1.8
EYAK	Cordova Ski Ar	5.30	183	P	Pn	14 42 52.7	+1.8
	baz=2.1						
YUK4	Talbot Arm	5.38	144	P	Pn	14 42 52.2	+0.1
	baz=328						
RAGM	Ragged Mountai	5.46	177		Pn	14 42 55.2	+2.0
RAGM				IAML		14 44 28.3	
	comp=E,112nm,1.2s						
KHIT	Khitrov Hills	5.48	169		Pn	14 42 55.2	+1.8
TTA	Tatalina	5.49	243	Pn	Pn	14 42 52.6	-1.0
BERG	Berg Lake	5.50	172		Pn	14 42 54.8	+1.2
BERG	Berg Lake	5.50	172	IAML		14 44 42.1	
	comp=E,75nm,1.3s						
WAX	Waxell Ridge	5.50	167		Pn	14 42 54.5	+0.8
TT01	Tatalina	5.51	243		Pn	14 42 53.2	-0.6
SPU	Mount Spurr	5.56	216		Pn	14 42 53.9	-0.6
L19K	White Mountain	5.58	234		Pn	14 42 54.7	-0.1
L19K	White Mountain	5.58	234	P	Pn	14 42 54.7	-0.1
	baz=46						
M19K	Big River Lodg	5.63	230	Pn	Pn	14 42 55.4	-0.1
O22K	Cooper Landing	5.73	203	Pn	Pn	14 42 55.7	-1.1
YUK6	Outpost Mounta	5.79	144		Pn	14 42 58.9	+1.0
YUK6	Outpost Mounta	5.79	144	P	Pn	14 42 58.9	+1.0
	baz=330						
SUCK	Suckling Hills	5.81	173	Pn	Pn	14 42 57.6	-0.3
KAIM	Kayak Island	5.93	176	Pn	Pn	14 42 59.8	+0.3
M31M	Drury Creek, Y	6.00	122	Pn	Pn	14 43 01.0	+0.5
N31M	Braeburn, Yuko	6.06	131		Pn	14 43 01.7	+0.4
HYT	Haines Junctio	6.11	142		Pn	14 43 02.3	+0.2
HYT	Haines Junctio	6.11	142	P	Pn	14 43 02.8	+0.6
	baz=328						
YUK7	Dusty Glacier	6.21	145		Pn	14 43 04.7	+1.2
RDWB	Redoubt West	6.36	216		Pn	14 43 06.7	+1.2
BRSE	Bradley Lake S	6.60	205		Pn	14 43 09.9	+1.2
BRSE	Bradley Lake S	6.60	205	P	Pn	14 43 09.9	+1.2
	baz=20						
SVW2	Sparrevohn	6.62	229	Pn	Pn	14 43 09.0	0.0
HOM	Homer	6.84	208	Pn	Pn	14 43 11.7	-0.3
WHY	Whitehorse	6.98	133	Pn	Pn	14 43 12.7	-1.4
N18K	Kilae Creek	7.04	228	Pn	Pn	14 43 13.6	-1.1
C36M	Paulatuk	8.81	57	Pn	Pn	14 43 40.4	+1.5
OHAK	Old Harbor	9.43	208	Pn	Pn	14 43 46.5	-1.0
A36M	Sachs Harbour	9.45	40	Pn	Pn	14 43 49.5	+1.8
WRAK	Wrangell Islan	11.28	141	Pn	Pn	14 44 12.6	-0.2

NEIC **10** *14:55:43.6±1.4, 20°.3S±0°.1×178°.3W±0°.2, h564^{km}±10^{km}, mb4.0/37, Error ellipse: s-maj=23.8km s-min=18.4km az=119.0*

IDC **10** *14:55:44.9±2.1, 20°.19S×178°.43W, h580^{km}±24^{km}, mb3.0/8, mbtmp3.9/9, Error ellipse: s-maj=37.0km s-min=17.1km az=144.0*

ISC 10 14:55:46.1±0.6, **20°.3S**±0°.1×**178°.6W**±0°.1, **h600**^{km}, **n52**, σ**1**^{s}.**12**/52, **mb3.9**/27, **1C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.08	308	P	P	14 57 09.5	-2.8
	5.4nm,0.4s,baz=227,slow=22,SNR=20						
MARNC	Mare, Loyalty	12.59	262	P	P	14 58 30.1	-0.7
PINNC	Pines Island,	13.24	257	P	P	14 58 36.9	-0.4
DZM	Mont Dzumac	14.10	260	P	P	14 58 45.3	-0.8
URZ	Urewera	18.32	191	P	P	14 59 21.6	-2.8
BKZ	Black Stump Fm	19.31	192	P	P	14 59 30.1	-3.4
THZ	Tophouse	22.62	197	P	P	15 00 01.3	-1.8
WHZ	Wether Hill Ro	27.87	200	P	P	15 00 48.7	-0.5
ARMA	Armidale	28.70	243	P	P	15 00 57.9	+1.1
CTAO	Charters Tower	32.99	264	P	P	15 01 35.0	+1.6
CTAO				IAmb	IAmb	15 01 44.3	
	comp=Z,4.3nm,1.3s						
STKA	Stephens Creek	37.42	244	P	P	15 02 10.4	+0.6
	comp=Z,0.8nm,0.4s,baz=63,slow=8.8,SNR=3.6						
	comp=Z,0.8nm,0.4s						
BBOO	Buckleboo	42.18	243	P	P	15 02 48.5	+0.7
WR0	Warramunga Arr	43.92	262	P	P	15 03 02.4	+0.9
WR0				IAmb	IAmb	15 03 25.9	
	comp=Z,6.1nm,1.1s						
AS31	Alice Springs	44.06	257	P	P	15 03 03.4	+0.9
ASAR	Alice Springs	44.06	257	P	P	15 03 04.0	+1.4
	comp=Z,1.9nm,0.5s,baz=88,slow=7.9,SNR=79						
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	44.06	257	P	P	15 03 03.6	+1.1
WB0	Warramunga Arr	44.09	262	P	P	15 03 03.8	+1.0
WB0				IAmb	IAmb	15 03 15.3	
	comp=Z,7.6nm,1.4s						
WB2	Warramunga Arr	44.10	262	P	P	15 03 03.9	+1.0
WB2				IAmb	IAmb	15 03 15.5	
	comp=Z,8.9nm,1.2s						
WRA	Warramunga Arr	44.11	262	P	P	15 03 04.0	+1.1
	comp=Z,1.0nm,0.3s,baz=96,slow=7.6,SNR=47						
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	44.11	262	IAmb	IAmb	15 03 04.4	
	comp=Z,0.4nm,1.1s						
SBA	Scott Base	58.07	184	P	P	15 04 44.5	+1.9
VNDA	Vanda	58.10	185	P	P	15 04 43.4	+0.6
	comp=Z,0.7nm,1.0s,baz=356,slow=7.8,SNR=1.9						
	comp=Z,0.7nm,1.0s						
QSPA	South Pole Qui	69.80	180	P	P	15 05 58.1	+0.9
ADK	Adak	71.86	1	P	P	15 06 09.4	+0.3
NVAR	Mina Array Bea	81.22	44	P	P	15 07 01.9	+1.0
	comp=Z,0.5nm,0.8s,baz=216,slow=9.0,SNR=4.1						
	comp=Z,0.5nm,0.8s						
M19K	Big River Lodg	84.13	11	P	P	15 07 14.9	+0.3
GLI	Glacier Island	84.76	15	P	P	15 07 17.6	-0.1
GLI				IAmb	IAmb	15 07 18.6	
	comp=Z,3.3nm,0.8s						
SCM	Sheep Creek Mo	85.54	14	P	P	15 07 22.4	+0.9
SCM				IAmb	IAmb	15 07 22.8	
	comp=Z,3.6nm,0.8s						
CAST	Castle Rocks	85.95	12	P	P	15 07 22.6	-0.7
CAST				IAmb	IAmb	15 07 23.4	
	comp=Z,2.1nm,0.8s						
N25K	Chitina, Valde	86.00	16	P	P	15 07 24.3	+0.6
N25K				IAmb	IAmb	15 07 27.9	
	comp=Z,6.9nm,1.5s						
GLB	Gilahina Butte	86.06	16	P	P	15 07 24.4	+0.4
GLB				IAmb	IAmb	15 07 34.0	
	comp=Z,2.5nm,1.0s						
TRF	Thorofare Moun	86.33	12	P	P	15 07 25.1	-0.3
TRF				IAmb	IAmb	15 07 26.0	
	comp=Z,3.5nm,0.9s						
TXAR	Lajitas Array	87.38	58	P	P	15 07 30.8	-0.1
	comp=Z,0.3nm,0.7s,baz=255,slow=7.2,SNR=4.2						
	comp=Z,0.3nm,0.7s						
I21K	Tanana	87.58	11	P	P	15 07 31.3	+0.4
I21K				IAmb	IAmb	15 07 31.7	
	comp=Z,3.6nm,1.1s						
WRH	Wood River Hil	87.69	13	P	P	15 07 31.4	-0.1
WRH				IAmb	IAmb	15 07 32.2	
	comp=Z,2.2nm,0.7s						
H21K	Melozitna Rive	87.87	10	P	P	15 07 33.1	+0.8
H21K				IAmb	IAmb	15 07 46.2	
	comp=Z,3.0nm,1.4s						
HDA	Harding Lake	87.88	13	P	P	15 07 32.5	+0.1
HDA				IAmb	IAmb	15 07 33.8	
	comp=Z,2.8nm,1.0s						
CCB	Clear Creek Bu	87.90	13	P	P	15 07 32.2	-0.2
IMAR	Indian Mountai	88.02	10	P	P	15 07 33.3	+0.3
I23K	Minto, Yukon-K	88.04	12	P	P	15 07 32.9	-0.1
I23K				IAmb	IAmb	15 07 35.3	
	comp=Z,2.1nm,1.1s						
MDM	Murphy Dome	88.09	12	P	P	15 07 33.2	-0.1
MDM				IAmb	IAmb	15 07 33.9	
	comp=Z,1.8nm,0.9s						
IL31		88.20	13	P	P	15 07 33.7	-0.1
ILAR	Eielson Array	88.20	13	P	P	15 07 33.7	-0.2
	comp=Z,0.5nm,0.4s,baz=221,slow=5.3,SNR=15						
	comp=Z,0.5nm,0.4s						
J25K	Salcha River,	88.40	14	P	P	15 07 35.2	+0.3
J25K				IAmb	IAmb	15 07 35.8	
	comp=Z,1.3nm,0.7s						
LRM	Limekiln Ridge	88.87	40	P	P	15 07 38.5	+0.8
M30M	Minto, Yukon	88.91	18	P	P	15 07 38.1	+0.9
M30M				IAmb	IAmb	15 07 38.9	
	comp=Z,2.0nm,0.8s						
PD31	Pinedale Array	89.15	43	P	P	15 07 39.4	+0.4
PDAR	Pinedale Array	89.15	43	P	P	15 07 38.9	-0.3
	comp=Z,0.4nm,0.6s,baz=208,slow=3.7,SNR=4.9						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	89.15	43	P	P	15 07 39.5	+0.4
EGAK	Eagle	89.52	15	P	P	15 07 40.7	+0.8
EGAK				IAmb	IAmb	15 07 58.9	
	comp=Z,4.8nm,1.4s						
AKASG	Malin Array Be	142.55	331	PKP	PKPdf	15 14 09.2	-2.4
	comp=Z,1.4nm,0.5s,baz=48,slow=4.3,SNR=8.0						
CLL	Collm	147.71	346 ⇑	*i*PKPbc	PKiKP	15 14 25.5	0.0
	comp=Z,5.0nm,0.8s						
CLL				*i* PKPab	PKPab	15 14 28.5	-0.1

IDC **10** *15:24:39.3±0.7, 0°.67S×133°.48E, h0^{km}, mb4.1/8, mbtmp4.3/11, ML4.6/3, MS3.5/10, Error ellipse: s-maj=24.0km s-min=15.2km az=67.0*

NEIC **10** *15:24:43.9±2.0, 0°.74S±0°.06×133°.38E±0°.07, h26^{km}±5^{km}, mb4.6/42, Error ellipse: s-maj=10.7km s-min=8.0km az=115.0*

DJA **10** *15:24:43.5±0.4, 1°S±5°×13°3E±°, h10^{km}, M4.5/16, mB4.9/6, mb4.6/16, MLv4.5/10, Mw(mB)4.2/6*

ISC 10 15:24:45.1±0.4, **0°.88S**±0°.06×**133°.34E**±0°.05, **h35**^{km}, **n106**, σ**1**^{s}.**73**/95, **mb4.5**/32, **MS3.6**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.08	270	Pn	Pn	15 25 18.4	+0.9
	339nm,0.3s,baz=86,slow=11,SNR=423						
SIJI				Sn	Sn	15 25 45.8	+3.7
	80nm,0.3s,baz=73,slow=14,SNR=9.0						

SIJI				LR	LR	15 26 28.3	
	comp=Z,891nm,19.4s,baz=135,slow=49						
	628nm,0.3s						
SWI	Sorong	2.08	270	P	Pn	15 25 17.3	-0.2
SWI				S	Sn	15 25 45.6	+3.4
BAKI	Biak	2.78	96	P	Pn	15 25 26.8	-0.4
SRPI	Serui, Papua	3.06	109	P	Pn	15 25 32.7	+1.7
BNDI	Bandanaira	4.99	223	P	Pn	15 25 58.9	+1.4
MSAI	Masohi	5.04	241	P	Pn	15 26 01.8	+3.5
	0.2nm646nm44nm,0.5s						
SMPI	Sarmi	5.48	102	P	Pn	15 26 06.4	+2.1
	0.1nm31nm,1.0s						
LBMI	Labuha	5.84	272	P	Pn	15 26 10.4	+1.1
	0.2nm560nm52nm,0.9s						
AAI	Ambon	5.85	241	P	Pn	15 26 10.6	+1.2
	0.9nm2µm210nm,0.5s						
TNTI	Ternate	6.20	285	Pn	Pn	15 26 13.2	-1.0
TNTI	Ternate	6.20	285	P	Pn	15 26 40.7	+27
	25nm,0.9s						
SAUI	Saumlaki	7.34	196	Pn	Pn	15 26 32.6	+2.7
SANI	Sanana	7.44	261	P	Pn	15 26 31.1	-0.2
	0.1nm16nm,0.4s						
GTOI	Gorontalo	10.44	278	P	Pn	15 27 15.4	+3.0
	6.5nm,1.1s						
LUWI	Luwuk	10.57	269	Pn	Pn	15 27 13.6	-0.6
APSI	Ampana	11.69	270	P	Pn	15 27 28.9	-0.6
	511nm42nm,1.1s						
KDU	Kakadu	11.76	184	P	Pn	15 27 31.0	+0.5
MTN	Manton Dam	12.08	190	Pn	Pn	15 27 34.2	-0.7
MTN	Manton Dam	12.08	190	P	Pn	15 27 34.4	-0.5
BATI	Baumata	13.36	226	Pn	Pn	15 27 53.1	+0.8
	5.5nm,0.3s,baz=110,slow=2.0,SNR=17						
BATI				LR	LR	15 34 00.4	
	comp=Z,151nm,18.0s,baz=48,slow=41						
	31nm,0.5s						
BATI	Baumata	13.36	226	P	Pn	15 27 53.7	+1.4
	46nm,1.5s						
MPSI	Mapaga	13.50	275	P	Pn	15 27 55.8	+1.6
	6.5nm,0.4s						
SPSI	Sidrap Palu	13.90	257	P	Pn	15 28 01.5	+1.8
	11nm,0.5s						
EDFI	Ende, Flores	13.99	236	P	Pn	15 28 03.3	+2.3
	7.3nm,1.4s						
KAPI	Kappang	14.18	253	Pn	P	15 28 07.6	-2.9
	1.3nm,0.3s,baz=147,slow=6.6,SNR=6.5						
KNRA	Kununurra	15.38	197	Pn	Pn	15 28 17.7	-1.9
KNRA	Kununurra	15.38	197	P	Pn	15 28 16.9	-2.7
MYLDM	Lahad Datu	16.00	292		P	15 28 31.7	+0.9
MYLDM				IAmb	IAmb	15 28 46.5	
	comp=Z,48nm,1.2s						
PMG	Port Moresby	16.15	122	LR	LR	15 37 02.1	
	comp=Z,150nm,20.1s,baz=315,slow=46						
COEN	Coen	16.23	144	Pn	Pn	15 28 31.5	+0.9
PLAI	Plampang	17.39	243	P	P	15 28 48.0	+1.8
	comp=Z,46nm,1.4s						
GUMO	Guam	18.36	38	LR	LR	15 35 39.0	
	comp=Z,34nm,18.1s,baz=174,slow=36						
WB0	Warramunga Arr	18.80	177	P	Pn	15 29 02.1	-0.3
WRA	Warramunga Arr	18.97	177	P	Pn	15 29 04.5	+0.1
	comp=Z,1.2nm,0.3s,baz=355,slow=11,SNR=34						
WRA				S	Sn	15 32 27.9	-8.0
	comp=Z,3.7nm,0.7s,baz=356,slow=23,SNR=8.0						
	comp=Z,2.8nm,0.4s						
WRA	Warramunga Arr	18.97	177	P	P	15 29 03.5	-0.1
WB2	Warramunga Arr	18.97	177	P	Pn	15 29 04.1	-0.4
WR0	Warramunga Arr	19.00	177	P	Pn	15 29 04.3	-0.5
MTSU	Mount Surprise	20.25	148	P	Pn	15 29 27.4	+7.6
QIS	Mount Isa	20.49	163	P	Pn	15 29 26.5	+4.0
JAGI	Jajag, Banyuwa	20.54	248	P	P	15 29 20.4	-0.4
JAGI				IAmb	IAmb	15 29 38.5	
	comp=Z,45nm,1.1s						
SBUM	Sibu	21.37	279	P	P	15 29 28.9	-0.9
SBUM				IAmb	IAmb	15 29 42.1	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	22.66	179	P	P	15 29 44.7	+1.3
AS31				IAmb	IAmb	15 29 47.7	
	comp=Z,7.6nm,0.4s						
ASAR	Alice Springs	22.66	179	P	P	15 29 44.8	+1.3
	comp=Z,13nm,0.4s,baz=0.7,slow=11,SNR=119						
	comp=Z,13nm,0.4s						
ASAR	Alice Springs	22.66	179	P	P	15 29 44.5	+1.1
CTA	Charters Tower	22.89	147	P	P	15 29 46.2	+0.2
	comp=Z,3.4nm,0.7s,baz=306,slow=9.1,SNR=7.3						
CTA				LR	LR	15 40 27.3	
	comp=Z,306nm,18.1s,baz=300,slow=41						
	comp=Z,3.4nm,0.7s						
CTAO	Charters Tower	22.89	147	P	P	15 29 46.0	+0.1
KSM	Kuching	23.15	276	P	P	15 29 47.1	-1.5
KSM				IAmb	IAmb	15 29 55.7	
	comp=Z,17nm,1.3s						
UGM	Wanagama	23.79	252	P	P	15 29 55.7	+0.9
PSA00	Pilbara Seismi	24.41	212	P	P	15 30 02.4	+1.8
PSA00				IAmb	IAmb	15 30 13.7	
	comp=Z,37nm,1.1s						
EIDS	Eidsvold	29.77	146	P	P	15 30 49.2	+0.7
EIDS				IAmb	IAmb	15 31 02.7	
	comp=Z,20nm,1.3s						
FORT	Forrest	30.15	189	P	P	15 30 53.6	+1.7
FORT				IAmb	IAmb	15 30 57.6	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	31.80	167	P	P	15 31 06.9	+0.5
	comp=Z,1.9nm,0.4s,baz=340,slow=8.6,SNR=9.3						
STKA				LR	LR	15 46 01.5	
	comp=Z,226nm,19.2s,baz=4.2,slow=40						
	comp=Z,1.9nm,0.4s						
STKA	Stephens Creek	31.80	167	P	P	15 31 06.8	+0.4
BBOO	Buckleboo	31.86	176	P	P	15 31 08.1	+1.2
ARMA	Armidale	34.13	151	P	P	15 31 26.5	-0.4
ARMA				IAmb	IAmb	15 31 40.3	
	comp=Z,17nm,1.5s						
NJ2	Nanjing	35.51	339	*e*P	P	15 31 39.8	+1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
GSI	Gunungsitoli	35.83	273	P	P	15 31 40.9	-0.8
MJAR	Matsushiro Arr	37.51	6	LR	LR	15 44 32.0	
	comp=Z,34nm,20.8s,baz=156,slow=32						
H11S3	WAKE ISLAND Hy	38.02	58	T	T	16 12 16.3	
	baz=246						
H11S2	WAKE ISLAND Hy	38.03	58	T	T	16 12 18.4	
	baz=246						
H11S1	WAKE ISLAND Hy	38.03	58	T	T	16 12 18.9	
	baz=246						
KSRS	Korea Array	38.47	353	LR	LR	15 47 35.5	
	comp=Z,26nm,19.2s,baz=190,slow=36						
H11N1	WAKE ISLAND Hy	38.74	56	T	T	16 13 06.5	
	baz=243,slow=75,SNR=185						
H11N2	WAKE ISLAND Hy	38.76	56	T	T	16 13 07.4	
	baz=243,slow=75,SNR=180						
H11N3	WAKE ISLAND Hy	38.76	56	T	T	16 13 07.8	
	baz=243,slow=75,SNR=191						
CMAR	Chiang Mai Arr	38.89	301	P	P	15 32 05.3	-2.3
	comp=Z,0.4nm,0.3s,baz=113,slow=9.1,SNR=1.3						
	comp=Z,0.4nm,0.3s						
PZH	PanZhiHua	40.85	314	P	P	15 32 24.7	+0.7
PZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC	Hu-ho-hao-te	46.02	337	*e*P	P	15 33 07.4	+2.0
HHC				pmax	pmax		
	comp=Z,46nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.9s						
ULN	Ulaanbaatar	53.68	338	P	P	15 34 03.0	-0.5
ULN				IAmb	IAmb	15 34 12.3	
	comp=Z,5.4nm,1.2s						
SONM	Songino Array	53.90	338	P	P	15 34 05.1	0.0
	comp=Z,0.7nm,0.4s,baz=136,slow=7.5,SNR=5.0						
SONM				PcP	PcP	15 35 07.8	-2.5
	comp=Z,0.2nm,0.3s,baz=145,slow=5.3,SNR=1.4						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	53.90	338	IAmb	IAmb	15 34 10.4	
	comp=Z,2.6nm,1.1s						
TUWZ	Tuamarina	54.48	143	P	P	15 34 10.1	+0.7
URZ	Urewera	54.70	138	P	P	15 34 11.9	+1.0
URZ				IAmb	IAmb	15 34 16.5	
	comp=Z,20nm,1.4s						
BKZ	Black Stump Fm	54.78	139	P	P	15 34 12.4	+0.8
KHZ	Kahutara	54.84	144	P	P	15 34 12.4	+0.5
WMQ	Urumqi	60.30	323	*e*P	P	15 34 51.7	+1.2
SMY	Shemya	63.35	26	P	P	15 35 11.3	+0.6
MK31	Makanchi Array	65.12	324	P	P	15 35 21.8	-0.7
MK31				IAmb	IAmb	15 35 22.9	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	65.12	324	P	P	15 35 21.9	-0.5
	comp=Z,2.7nm,0.5s,baz=113,slow=8.2,SNR=31						
	comp=Z,2.7nm,0.5s						
MKAR	Makanchi Array	65.12	324	P	P	15 35 21.7	-0.7
MAKZ	Makanchi	65.31	324	P	P	15 35 23.1	-0.6
MAKZ				IAmb	IAmb	15 35 28.9	
	comp=Z,5.4nm,0.8s						
KSH	Kashi	65.96	314	P	P	15 35 29.7	+1.5
KSH				pP	pP	15 35 34.5	-4.6
KSH				sP	sP	15 35 40.4	-2.9
KSH				PcP	PcP	15 36 03.1	+4.4
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZAA0	Zalesovo Array	67.72	331	P	P	15 35 37.1	-1.8
ZAA0				IAmb	IAmb	15 35 43.9	
	comp=Z,4.1nm,1.2s						
ZALV	Zalesovo Beam	67.72	331	P	P	15 35 37.7	-1.2
	comp=Z,0.9nm,0.8s,baz=104,slow=6.3,SNR=5.5						
	comp=Z,0.9nm,0.8s						
ZALV	Zalesovo Beam	67.72	331	P	P	15 35 37.0	-1.9
KURK	Kurchatov	69.19	326	P	P	15 35 46.8	-1.3
KURK				IAmb	IAmb	15 35 53.3	
	comp=Z,6.3nm,0.8s						
BTK	Batken	69.86	314	P	P	15 35 51.1	-1.6
BTK				IAmb	IAmb	15 35 53.3	
	comp=Z,9.4nm,1.4s						
GAR	Garm	69.89	312	P	P	15 35 51.0	-1.9
KK31	Karatay Array	71.09	316	P	P	15 35 58.5	-1.6
KK31				IAmb	IAmb	15 36 05.3	
	comp=Z,4.8nm,0.8s						
KKAR	Karatay Array	71.09	316	P	P	15 35 58.7	-1.3
SOCY	Socotra	79.78	282	P	P	15 36 49.3	-1.2
ABKAR	Akbulak array	79.88	320	P	P	15 36 48.6	-1.7
OHAK	Old Harbor	81.79	32	P	P	15 36 59.6	-0.7
KDAK	Kodiak Island	82.30	31	LR	LR	16 11 56.9	
	comp=Z,42nm,18.5s,baz=231,slow=35						
J20K	Nowinta River	83.23	25	P	P	15 37 07.3	-0.4
J20K				IAmb	IAmb	15 37 17.4	
	comp=Z,9.9nm,1.4s						
I23K	Minto, Yukon-K	85.47	24	P	P	15 37 18.4	-0.6
I23K				IAmb	IAmb	15 37 26.1	
	comp=Z,9.2nm,1.4s						
MDM	Murphy Dome	85.90	25	P	P	15 37 21.4	+0.2
CCB	Clear Creek Bu	86.02	25	P	P	15 37 20.2	-1.5
CCB				IAmb	IAmb	15 37 39.3	
	comp=Z,6.2nm,1.4s						
H24K	Noodor Dome	86.21	24	P	P	15 37 21.8	-1.0
H24K				IAmb	IAmb	15 37 39.4	
	comp=Z,4.4nm,1.2s						
IL31		86.43	25	P	P	15 37 21.9	-1.8
IL31				IAmb	IAmb	15 37 37.9	
	comp=Z,3.5nm,1.3s						
ILAR	Eielson Array	86.43	25	P	P	15 37 21.6	-2.2
	comp=Z,0.6nm,0.6s,baz=239,slow=4.9,SNR=12						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	86.43	25	P	P	15 37 22.0	-1.8
BMAR	Burnt Mountain	87.76	22	P	P	15 37 29.5	-0.7
FINES	FINESS Array B	98.97	332	LR	LR	16 25 56.0	
	comp=Z,16nm,20.2s,baz=60,slow=37						
CPUP	Villa Florida	151.05	160	PKPbc	PKiKP	15 44 36.5	+0.7
	comp=Z,0.9nm,0.3s,baz=180,slow=6.1,SNR=3.2						
LPAZ	La Paz	152.79	130	PKPbc	PKiKP	15 44 40.1	-0.3
	comp=Z,0.5nm,0.5s,baz=307,slow=5.1,SNR=1.7						

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*MAN **10** 15:30:48.9, 15°.45N×122°.11E, h8^{km}, mb4.6, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*

ISC 10 15:30:49.1±1.1**, 15°.49N**±0°.03×**122°.15E**±0°.06**, h26^{km}, n13, σ2^{s}49**/22**, 2C-11D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.61	294	⇓*e*P	Pb	15 31 00.4	-0.8
BALP				*e*S	Sn	15 31 47.7	+37
PCPH	Palayan	1.02	274	⇓*e*P	Pn	15 31 07.0	-0.8
PCPH				*e*S	Sn	15 31 22.4	+1.2
JCNP	Jose Panganiba	1.30	156	⇓*i*P	Pn	15 31 11.1	-0.6
JCNP				*i* S	Sn	15 31 28.1	-0.2
CAUP	Cauayan	1.48	348	⇓*e*P	Pb	15 31 16.2	+0.2
CAUP				*e*S	Sn	15 31 27.4	-5.2
LQP	Lukban	1.49	203	⇑*e*P	Pn	15 31 13.8	-0.6
LQP				*i* S	Sb	15 31 36.5	+1.6
SMPP	San Manuel, Pa	1.56	295	⇓*e*P	Pn	15 31 16.6	+1.4
GQP	Guinayangan	1.60	170	⇓*e*P	Pn	15 31 16.8	+1.1
GQP				*e*S	Sn	15 31 36.4	+0.8
TGY	Tagaytay City	1.81	221	⇑*e*P	Pn	15 31 17.9	-0.8
MACP	Maragondon, Ca	1.85	229	⇓*e*P	Pn	15 31 19.7	+0.6
MACP				*e*S	Sb	15 31 46.9	+2.0
SAMP	Sagada Mountai	1.98	323	⇓*e*P	Pb	15 31 23.4	-1.2
SAMP				*e*S	Sn	15 31 38.4	-6.7
BOAC	Boac	2.04	188	⇓*e*P	Pb	15 31 24.2	-1.3
BOAC				*e*S	Sb	15 31 51.5	+1.0
BOLP	Bolinao	2.33	293	⇓*e*P	Pn	15 31 28.1	+2.4
BOLP				*e*S	Sn	15 31 39.4	-14
APYP	Conner	2.52	340	⇓*e*P	Pn	15 31 30.6	+2.3
APYP				*i* S	Sb	15 32 08.2	+4.0

TAP 10 15:31:29.1, 24°.59N×121°.22E, h16^{km}, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NFF	Wufeng Townshi	0.10	293	P	Pb	15 31 33.1	+0.3
	baz=292						
NFF				S	Sb	15 31 35.8	+0.5
	baz=292						
NSK	Sanguang	0.15	56	P	Pb	15 31 33.5	-0.1
	baz=58						
NSK				*i* S	Sb	15 31 37.0	+0.4
	baz=58						
YHNB	Yeheng	0.16	61	P	Pb	15 31 34.1	+0.3
	baz=60						
YHNB				*e*S	Sb	15 31 36.7	-0.2
	baz=60						
LIOB	Emei	0.20	286	P	Pb	15 31 34.4	0.0
	baz=286						
LIOB				*i* S	Sb	15 31 37.7	-0.1
	baz=286						
NNS	Nan Shan	0.20	138	P	Pb	15 31 35.3	+0.7
	baz=136						
NNS				S	Sb	15 31 38.5	+0.2
	baz=136						
NSTT	Nanjuang	0.20	281	*i* P	Pg	15 31 34.0	+0.2
	baz=280						
NSTT				S	Sb	15 31 38.6	+0.5
	baz=280						
NNSB	Datong	0.22	138	*e*P	Pb	15 31 34.5	-0.3
	baz=138						
NNSB				*e*S	Sb	15 31 38.4	-0.3
	baz=138						
LATG	Datong	0.28	101	P	Pb	15 31 35.8	-0.1
	baz=101						
LATG				S	Sb	15 31 40.6	+0.1
	baz=101						
HSN	Hsinchu	0.31	312	*e*P	Pb	15 31 36.0	-0.3
	baz=321						
HSN				*e*S	Sb	15 31 41.2	0.0
	baz=321						
NWLT	Wulai	0.32	54	*e*P	Pb	15 31 36.9	+0.5
	baz=54						
NWLT				S	Sb	15 31 41.7	+0.4
	baz=54						
ENTT	Nioudou	0.32	81	*i* P	Pb	15 31 37.0	+0.6
	baz=81						
ENTT				S	Sb	15 31 41.7	+0.3
	baz=81						
TWT	Tachien	0.34	187	*e*S	Sb	15 31 43.1	+0.9
	baz=189						
TDCB	Techi	0.34	190	*e*S	Sb	15 31 42.4	+0.2
	baz=189						
FUSS	Fushou	0.34	177	*e*P	Pb	15 31 36.9	-0.1
	baz=176						
FUSB	Fushanzhiwuyua	0.37	63	P	Pb	15 31 37.8	+0.4
	baz=63						
FUSB				S	Sb	15 31 43.5	+0.5
	baz=63						
NCU	National Centr	0.38	355	*e*S	Sb	15 31 43.4	+0.3
	baz=356						
NDS	Dongshan	0.45	85	P	Pb	15 31 39.1	+0.4
	baz=84						
NDS				*e*S	Sb	15 31 45.5	+0.3
	baz=84						
ENA	Nanau	0.50	109	P	Pb	15 31 39.3	-0.2
	baz=108						
ENA				*e*S	Sb	15 31 47.3	+0.7
	baz=108						
TAP	Taipei	0.52	30	*e*P	Pb	15 31 40.1	+0.3
	baz=30						
TAP				*e*S	Sb	15 31 47.5	+0.4
	baz=30						
NACB	Ninganchiao	0.54	141	*e*P	Pb	15 31 40.1	-0.1
	baz=140						

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*ISK **10** 15:32:28.6, 38°.71N×43°.61E, h5^{km}, ML2.5/7*
*DDA **10** 15:32:29.1±0.0, 38°.66N×43°.65E, h7^{km}±4^{km}, ML2.3*

ISC 10 15:32:29.9±0.9**, 38°.72N**±0°.03×**43°.62E**±0°.03**, h12^{km}**±8^{km}**, n20, σ1^{s}10**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.22	237	PG	Pg	15 32 34.7	+0.1
VANB				SG	Sg	15 32 40.1	+2.3
TVAN	Van	0.25	222	P	Pg	15 32 34.8	-0.4
TVAN				S	Sg	15 32 38.2	-0.7
TVAN				*i* AML	AML	15 32 45.0	
	comp=Z,618nm,0.6s						
TVAN				*i* AML	AML	15 32 45.0	
	comp=E,568nm,1.0s						
TVAN				*i* AML	AML	15 32 47.0	
	comp=N,628nm,0.6s						
VMUR	Van-Muradiye	0.28	352	P	Pg	15 32 34.8	-0.9
VMUR				S	Sb	15 32 41.7	0.0
VMUR				*i* AML	AML	15 32 45.0	
	comp=N,279nm,0.4s						
VMUR				*i* AML	AML	15 32 45.0	
	comp=E,443nm,0.3s						
OZAP	Van, Ozalp-Mer	0.30	100	P	Pg	15 32 34.7	-1.3
OZAP				S	Sb	15 32 44.1	+1.8
CLDR	Caldiran	0.48	28	PG	Pg	15 32 39.1	-0.4
CLDR				SG	Sb	15 32 47.7	-0.1
CLDR	Caldiran	0.48	28	P	Pg	15 32 37.6	-1.9
CLDR				S	Sb	15 32 48.8	+1.0
CLDR				*i* AML	AML	15 32 54.0	
	comp=N,164nm,0.3s						
CLDR				*i* AML	AML	15 32 57.0	
	comp=E,258nm,0.6s						
GEVA	Gevas	0.60	228	P	Pg	15 32 40.6	-0.9
GEVA				S	Sn	15 32 54.3	+0.1
AKDM	Akdamar-Van	0.63	233	PG	Pg	15 32 41.5	-0.8
ADCV	BITLIS_Adilcev	0.71	278	P	Pb	15 32 43.5	-0.8
ADCV				S	Sb	15 32 54.6	+0.5
MLAZ	Malazgirt-MUS	0.94	297	PG	Pg	15 32 47.5	-0.5
AGRB	Hanur-Agry	0.99	331	PG	Pg	15 32 48.5	-0.5
KOTA	Agri, Merkez-K	1.13	344	P	Pg	15 32 49.9	-1.8
KOTA				S	Sg	15 33 06.5	0.0
HAKT	HAKKARI	1.16	177	P	Pb	15 32 50.8	-1.2
HAKT				S	Sn	15 33 08.9	+0.8
IGDI	IGDIR	1.20	17	P	Pn	15 32 53.8	+1.1
BLIS	Bitlis-Merkez	1.22	256	P	Pg	15 32 52.1	-1.3
BLIS				S	Sb	15 33 08.9	+0.1
GURO	Guroymak-BITLI	1.25	263	PN	Pn	15 32 53.1	-0.4
EATA	Eleskirt	1.44	323	P	Pb	15 32 56.8	-0.1
EATA				S	Sg	15 33 18.5	+2.1
MUSM	Mu-Merkez	1.65	271	P	Pn	15 32 59.0	+0.1
GNI	Garni	1.67	31	PN	Pb	15 33 00.6	-0.2
KOPR	Koprukoy-ERZUR	1.87	313	PN	Pb	15 33 03.1	-1.1

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*HEL **10** 15:35:30.0±0.0, 67°.19N×20°.63E, h1^{km}, ML1.8, ML2.6(UPP), Confirmed Induced event*
*BER **10** 15:35:31.1±1.9, 67°.11N×20°.75E, h0^{km}±28^{km}, ML1.5, Confirmed Induced event*

ISC 10 15:35:29.3±0.9**, 67°.20N**±0°.02×**20°.69E**±0°.03**, h0^{km}, n21, σ0^{s}55**/31**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.09	210	*i* P	Pg	15 35 31.2	+0.3
DUNU				*i* S	Sg	15 35 32.4	+0.3
MASU	Masugnsbyn	0.57	62	*i* P	Pg	15 35 40.6	+0.5
MASU				*i* S	Sg	15 35 48.5	+1.0
RATU	Laukkuluspa	0.76	327	*i* P	Pg	15 35 43.5	-0.2
KUA	Kurravaara	0.77	350	*i* P	Pg	15 35 43.8	-0.2
KUA				*i* S	Sg	15 35 54.7	+0.7
ERTU	Ertsjaerv	0.88	137	*e*P	Pg	15 35 45.5	-0.6
ERTU				*e*S	Sg	15 35 57.0	-0.4
PAJU	Pajala	0.97	99	*e*P	Pg	15 35 47.7	0.0
PAJU				*e*S	Sg	15 36 00.5	+0.3
LANU	Lannavaara	0.99	30	*e*P	Pg	15 35 47.9	-0.3
LANU				*e*S	Sg	15 36 01.0	0.0
KOVU	Salmi	1.05	349	*e*P	Pg	15 35 48.9	-0.4
HEF	Hetta	1.66	42	*e*P	Pn	15 35 59.3	-0.3
HEF	Hetta	1.66	42	*e*P	Pn	15 35 59.5	-0.1
HEF				*e*S	Sn	15 36 21.2	-0.3
KALU	Kalix	1.72	140	*e*P	Pn	15 36 00.4	+0.1
KALU				*e*S	Sn	15 36 22.4	-0.6
SJUU	Sjulsmark	1.74	167	*e*P	Pn	15 36 00.7	0.0
KIF	Kilpisjarvi	1.81	1	*e*P	Pb	15 36 02.7	-0.5
KIF				*e*S	Sg	15 36 26.9	-0.5
KIF	Kilpisjarvi	1.81	1	*e*P	Pb	15 36 02.7	-0.5
KIF				*e*S	Sg	15 36 27.0	-0.5
KIF				MSG		15 36 30.0	
	comp=Z,8.4nm,0.2s						
TOF	Tornio	1.84	126	*e*P	Pn	15 36 02.7	+0.7
TOF				*e*S	Sn	15 36 26.1	+0.3
TOF				MSG		15 36 28.8	
	comp=Z,11nm,0.3s						
KTK1	Kautokeino	2.06	27	*e*P	Pn	15 36 05.4	+0.4
KTK1				IAML		15 36 35.8	
	comp=Z,8.5nm,0.3s						
FAUS	Fauske	2.10	277	*e*P	Pn	15 36 06.7	+1.1
FAUS				*e*S	Sn	15 36 32.0	-0.4
FAUS				IAML		15 36 36.9	
	comp=Z,13nm,0.7s						
RNF	Rovaniemi	2.18	103	MSG		15 36 39.5	
	comp=Z,3.6nm,0.2s						
ARA0	ARCESS Array S	2.95	35	*e*P	Pn	15 36 18.2	+0.9
ARA0				*e*S	Sn	15 36 54.4	+1.0
ARA0				IAML		15 37 08.4	
	comp=Z,1.2nm,0.3s						
OUL	Oulu	3.00	133	MSG		15 37 10.1	
	comp=Z,2.2nm,0.3s						
OLKF	Oulanka, Finla	3.57	100	MSG		15 37 27.0	
	comp=Z,1.9nm,0.3s						

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*IDC **10** 15:46:17.9±0.9, 53°.44N×160°.45E, h0^{km}, mb3.7/16, mbtmp3.8/19, ML4.2/3, MS3.1/13, Error ellipse: s-maj=23.1km s-min=13.6km az=150.0*
*KRSC **10** 15:46:19.7±1.5, 53°.10N×160°.69E, h41^{km}±14^{km}, ML4.4*
*NEIC **10** 15:46:19.4±2.0, 53°.2N±0°.2×160°.7E±0°.2, h24^{km}±11^{km}, mb4.2/22, Error ellipse: s-maj=29.1km s-min=13.2km az=141.0*
*MOS **10** 15:46:21.6±0.9, 53°.12N×160°.55E, h49^{km}, mb4.2/16, Error ellipse: s-maj=6.5km s-min=4.6km az=82.1*

ISC 10 15:46:18.2±1.3**, 53°.21N**±0°.04×**160°.70E**±0°.03**, h12^{km}**±8^{km}**, n165, σ1^{s}47**/192**, mb4.0**/33**, MS3.2**/11**, 4C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.42	255	PN	Pn	15 46 30.1	0.0
SPN				S	Sb	15 46 36.0	+2.1
SPN	Mys Shipunski	0.42	255	*e*P	Pn	15 46 30.1	0.0
SPN				*e*S	Sb	15 46 36.0	+2.1
NLC	Nalytchevo	0.82	268	PN	Pn	15 46 35.6	+0.1
NLC				S	Sb	15 46 45.7	+0.5
NLC	Nalytchevo	0.82	268	*e*P	Pn	15 46 35.6	+0.1
NLC				*e*S	Sb	15 46 45.7	+0.5
SDLR	Sedlovina	1.09	274	PN	Pg	15 46 40.2	+1.0
SDLR				S	Sb	15 46 53.5	+0.1
SDLR	Sedlovina	1.09	274	*e*P	Pg	15 46 40.2	+1.0
SDLR				*e*S	Sb	15 46 53.5	+0.1
UGLR	Uglovaya	1.13	271	PN	Pg	15 46 40.9	+1.0
UGLR				S	Sb	15 46 54.7	+0.3
UGLR	Uglovaya	1.13	271	*e*P	Pg	15 46 40.9	+1.0
UGLR				*e*S	Sb	15 46 54.7	+0.3
SMAR	Somma	1.14	273	PN	Pb	15 46 40.9	+0.9
SMAR				S	Sb	15 46 54.8	-0.1
SMAR	Somma	1.14	273	*e*P	Pb	15 46 40.9	+0.9
SMAR				*e*S	Sb	15 46 54.8	-0.1
KRER	Koryakskii	1.18	275	PN	Pg	15 46 41.8	+1.0
KRER				S	Sn	15 46 56.6	-0.1
KRER	Koryakskii	1.18	275	*e*P	Pg	15 46 41.8	+1.0
KRER				*e*S	Sn	15 46 56.6	-0.1
AVH	Avacha	1.18	273	PN	Pg	15 46 41.8	+0.9
AVH				S	Sn	15 46 56.6	0.0
AVH	Avacha	1.18	273	*e*P	Pg	15 46 41.8	+0.9

AVH				*e*S	**Sn**	**15 46 56.6**	**0.0**
DALK	**Dalny**	**1.19**	**262**	PN	**Pn**	**15 46 40.6**	**0.0**
DALK				S	**Sb**	**15 46 54.1**	**-1.8**
DALK	**Dalny**	**1.19**	**262**	*e*P	**Pn**	**15 46 40.6**	**0.0**
DALK				*e*S	**Sb**	**15 46 54.1**	**-1.8**
KRX	**Arik**	**1.24**	**278**	PN	**Pb**	**15 46 42.4**	**+0.8**
KRX				S	**Sb**	**15 46 56.9**	**-0.7**
KRX	**Arik**	**1.24**	**278**	*e*P	**Pb**	**15 46 42.4**	**+0.8**
KRX				*e*S	**Sb**	**15 46 56.9**	**-0.7**
KOK	**Koryaka**	**1.24**	**275**	PN	**Pb**	**15 46 42.5**	**+0.9**
KOK	**Koryaka**	**1.24**	**275**	*e*P	**Pb**	**15 46 42.5**	**+0.9**
PET	**Petropavlovsk**	**1.25**	**262**	*e*PN	**Pn**	**15 46 41.4**	**0.0**
PET				*e*S	**Sn**	**15 46 56.4**	**-1.7**
PET				pmax	pmax		
	comp=Z,251nm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.5s						
PET				smax	smax		
	comp=N,1μm,0.4s						
PET	**Petropavlovsk**	**1.25**	**262**	Pn	**Pn**	**15 46 41.2**	**-0.1**
PET	**Petropavlovsk**	**1.25**	**262**	*e*P	**Pn**	**15 46 41.3**	**-0.1**
PET				*e*S	**Sn**	**15 46 55.6**	**-2.5**
MKZ	**Mys Kozlova**	**1.48**	**24**	PN	**Pg**	**15 46 46.7**	**+0.1**
MKZ				S	**Sg**	**15 47 05.0**	**-0.8**
MKZ	**Mys Kozlova**	**1.48**	**24**	*e*P	**Pg**	**15 46 46.7**	**+0.1**
MKZ				*e*S	**Sg**	**15 47 05.0**	**-0.8**
RUS	**Russkaya**	**1.54**	**241**	PN	**Pn**	**15 46 45.3**	**-0.1**
RUS				S	**Sn**	**15 47 02.6**	**-2.7**
RUS	**Russkaya**	**1.54**	**241**	*e*P	**Pn**	**15 46 45.3**	**-0.1**
RUS				*e*S	**Sn**	**15 47 02.6**	**-2.7**
KRMR	**Karymshinskiy**	**1.60**	**257**	PN	**Pn**	**15 46 46.7**	**+0.5**
KRMR				S	**Sb**	**15 47 08.2**	**+0.5**
KRMR	**Karymshinskiy**	**1.60**	**257**	*e*P	**Pn**	**15 46 46.7**	**+0.5**
KRMR				*e*S	**Sb**	**15 47 08.2**	**+0.5**
MTVR	**Mutnovka**	**1.69**	**246**	PN	**Pn**	**15 46 48.0**	**+0.3**
MTVR	**Mutnovka**	**1.69**	**246**	*e*P	**Pn**	**15 46 48.0**	**+0.3**
GNL	**Ganaly**	**1.72**	**288**	PN	**Pb**	**15 46 50.2**	**+0.4**
GNL				S	**Sb**	**15 47 12.2**	**+0.8**
GNL	**Ganaly**	**1.72**	**288**	*e*P	**Pb**	**15 46 50.2**	**+0.4**
GNL				*e*S	**Sb**	**15 47 12.2**	**+0.8**
GRL	**Gorelyy**	**1.72**	**249**	PN	**Pn**	**15 46 48.9**	**+0.8**
GRL				S	**Sn**	**15 47 08.7**	**-1.4**
GRL	**Gorelyy**	**1.72**	**249**	*e*P	**Pn**	**15 46 48.9**	**+0.8**
GRL				*e*S	**Sn**	**15 47 08.7**	**-1.4**
PEA0B	**Petropavlovsk-**	**1.81**	**268**	*i* PN	**Pb**	**15 46 50.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**1.81**	**268**		**Pn**	**15 46 50.1**	**+1.0**
PETK	**Petropavlovsk-**	**1.81**	**268**	Pn	**Pn**	**15 46 50.5**	**+1.4**
	comp=N,86nm,0.3s,baz=88,slow=21,SNR=328						
PETK				Sn	**Sn**	**15 47 12.4**	**+0.4**
	comp=N,67nm,0.3s,baz=226,slow=7.7,SNR=12						
PETK				LR	LR	15 47 44.7	
	comp=N,325nm,20.5s,baz=102,slow=52						
PETK	**Petropavlovsk-**	**1.81**	**268**		**Pn**	**15 46 49.8**	**+0.6**
ASAK	**Asacha**	**1.89**	**245**	PN	**Pn**	**15 46 51.4**	**+1.1**
ASAK				S	**Sn**	**15 47 14.8**	**+0.7**
ASAK	**Asacha**	**1.89**	**245**	*e*P	**Pn**	**15 46 51.4**	**+1.1**
ASAK				*e*S	**Sn**	**15 47 14.8**	**+0.7**
TUMD	**Tumrok D**	**2.01**	**355**	*e*P	**Pb**	**15 46 55.2**	**+0.6**
TUMD				*e*S	**Sb**	**15 47 20.3**	**+0.8**
TUMR	**Tumrok**	**2.10**	**351**	PN	**Pb**	**15 46 55.2**	**-1.1**
TUMR				S	**Sb**	**15 47 20.3**	**-2.1**
TUMR	**Tumrok**	**2.10**	**351**	*e*P	**Pb**	**15 46 57.4**	**+1.1**
TUMR				*e*S	**Sb**	**15 47 23.3**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.13**	**230**	PN	**Pn**	**15 46 54.0**	**+0.5**
KDTR				S	**Sn**	**15 47 18.9**	**-1.0**
KDTR	**Khodutka, Kamc**	**2.13**	**230**	*e*P	**Pn**	**15 46 54.0**	**+0.5**
KDTR				*e*S	**Sn**	**15 47 18.9**	**-1.0**
APC	**Apacha**	**2.16**	**264**	PN	**Pb**	**15 46 56.2**	**-0.9**
APC				S	**Sb**	**15 47 23.5**	**-0.3**
APC	**Apacha**	**2.16**	**264**	*e*P	**Pb**	**15 46 56.2**	**-0.9**
APC				*e*S	**Sb**	**15 47 23.5**	**-0.3**
KMNR	**Kamenistaya**	**2.57**	**354**	PN	**Pb**	**15 47 04.6**	**+0.4**
KMNR	**Kamenistaya**	**2.57**	**354**	*e*P	**Pb**	**15 47 04.6**	**+0.4**
MIPR	**Malaya Ipel'ka**	**2.57**	**250**	PN	**Pn**	**15 47 01.7**	**+2.1**
MIPR	**Malaya Ipel'ka**	**2.57**	**250**	*e*P	**Pn**	**15 47 01.7**	**+2.1**
KIRR	**Kirishev**	**2.76**	**356**	PN	**Pb**	**15 47 06.9**	**-0.5**
KIRR	**Kirishev**	**2.76**	**356**	*e*P	**Pb**	**15 47 06.9**	**-0.5**
BZWR	**Bezymyannyi-We**	**2.76**	**358**	PN	**Pb**	**15 47 07.8**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.76**	**358**	*e*P	**Pb**	**15 47 07.8**	**+0.2**
KPT	**Kopyto**	**2.78**	**354**	PN	**Pb**	**15 47 07.2**	**-0.5**
KPT	**Kopyto**	**2.78**	**354**	*e*P	**Pb**	**15 47 07.2**	**-0.5**
PAU	**Pauzhetka**	**2.96**	**235**	PN	**Pn**	**15 47 06.8**	**+1.9**
PAU	**Pauzhetka**	**2.96**	**235**	*e*P	**Pn**	**15 47 06.8**	**+1.9**
ESO	**Esso**	**2.96**	**338**	PN	**Pn**	**15 47 07.7**	**+2.7**
ESO	**Esso**	**2.96**	**338**	*e*P	**Pn**	**15 47 07.7**	**+2.7**
KRSR	**Krestovskiy**	**3.02**	**359**	PN	**Pb**	**15 47 10.7**	**-1.1**
KRSR	**Krestovskiy**	**3.02**	**359**	*e*P	**Pb**	**15 47 10.7**	**-1.1**
KLY	**Klyuchi**	**3.11**	**359**	PN	**Pb**	**15 47 11.7**	**-1.7**
KLY	**Klyuchi**	**3.11**	**359**	*e*P	**Pb**	**15 47 11.7**	**-1.7**
KBTR	**Krutoberegovo**	**3.25**	**21**	PN	**Pb**	**15 47 13.3**	**-2.4**
KBTR	**Krutoberegovo**	**3.25**	**21**	*e*P	**Pb**	**15 47 13.3**	**-2.4**
KBG	**Krutoberegovo**	**3.27**	**20**	PN	**Pb**	**15 47 13.3**	**-2.7**
KBG	**Krutoberegovo**	**3.27**	**20**	*e*P	**Pb**	**15 47 13.3**	**-2.7**
BDR	**Baidarnaya**	**3.38**	**5**	PN	**Pb**	**15 47 15.4**	**-2.6**
BDR	**Baidarnaya**	**3.38**	**5**	*e*P	**Pb**	**15 47 15.4**	**-2.6**
SMKR	**Semkarok**	**3.41**	**7**	PN	**Pb**	**15 47 15.9**	**-2.6**
SMKR	**Semkarok**	**3.41**	**7**	*e*P	**Pb**	**15 47 15.9**	**-2.6**
SRKR	**Sorokina**	**3.46**	**4**	PN	**Pb**	**15 47 16.4**	**-3.0**
SRKR	**Sorokina**	**3.46**	**4**	*e*P	**Pb**	**15 47 16.4**	**-3.0**
BKI	**Bering**	**3.68**	**55**	PN	**Pn**	**15 47 17.8**	**+3.0**
BKI	**Bering**	**3.68**	**55**	*e*P	**Pn**	**15 47 17.8**	**+3.0**
BKI				*e*S	**Sn**	**15 47 57.3**	**-0.8**
SKR	**Severo-Kuril's**	**3.80**	**230**	*e*PN	**Pn**	**15 47 20.1**	**+3.6**
SKR				*e*S	**Sn**	**15 47 59.9**	**-1.1**
SKR				pmax	pmax		
	comp=Z,49nm,0.8s						
SKR				smax	smax		
	comp=N,155nm,0.8s						
SKR				smax	smax		
	comp=E,142nm,0.7s						
SKR	**Severo-Kuril's**	**3.80**	**230**	*e*P	**Pn**	**15 47 19.8**	**+3.3**
MA2	**Magadan**	**8.42**	**323**	LR	LR	15 52 00.0	
	comp=E,85nm,19.9s,baz=150,slow=42						
SEY	**Seymchan**	**10.69**	**339**	*i* PN	Pn	15 48 56.0	+5.1
SEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SEY				MLR	MLR		
	comp=Z,60nm,13.0s						
SHO	**Shikotan**	**13.09**	**230**	*e*PN	**Pn**	**15 49 19.5**	**-4.2**
SHO				pmax	pmax		
	comp=N,5.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,6.0nm,0.4s						
YSS	**Yuzh-Sakhalins**	**13.10**	**249**	*e*PN	**Pn**	**15 49 25.4**	**+1.5**
YSS				MLR	MLR		
	comp=Z,100nm,20.0s						
JKA	**Kamikawa-asahi**	**14.99**	**240**		**Pn**	**15 49 50.1**	**+0.5**
ASAJ	**Asahikawa**	**14.99**	**240**	Pn	**Pn**	**15 49 50.1**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=73,slow=17,SNR=8.2						
ASAJ				LR	LR	15 54 52.2	
	comp=Z,29nm,21.6s,baz=360,slow=34						
	comp=Z,5.3nm,0.7s						
BILL	**Bilibino**	**15.12**	**8**	⇓*e*P	**P**	**15 50 00.3**	**+3.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,31nm,12.0s						
BILL	**Bilibino**	**15.12**	**8**	Pn	**Pn**	**15 49 49.6**	**-1.7**
ERM	**Erimo**	**16.24**	**233**	*i* P	**Pn**	**15 50 02.9**	**-3.0**
ERM	**Erimo**	**16.24**	**233**	Pn	**Pn**	**15 50 01.2**	**-4.7**
ERM				IAmb	IAmb	15 50 06.7	
	comp=Z,32nm,1.1s						
KLR	**Kul'dur**	**18.50**	**269**	P	**Pn**	**15 50 34.9**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=74,slow=12,SNR=8.0						
KLR				LR	LR	15 58 06.4	
	comp=Z,40nm,18.1s,baz=48,slow=39						
	comp=Z,2.3nm,0.7s						
KLR	**Kul'dur**	**18.50**	**269**	*ce*P	**P**	**15 50 33.1**	**-0.9**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR				MLR	MLR		
	comp=Z,38nm,17.0s						
YAK	**Yakutsk**	**18.64**	**311**	P	**Pn**	**15 50 35.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=246,slow=0.6,SNR=6.1						
	comp=Z,4.3nm,0.5s						
YAK	**Yakutsk**	**18.64**	**311**	*e*P	**P**	**15 50 34.9**	**-0.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK	**Yakutsk**	**18.64**	**311**	P	**P**	**15 50 34.8**	**-0.6**
YAK				IAmb	IAmb	15 50 36.2	
	comp=Z,11nm,0.7s						
JMM	**Marumori**	**20.63**	**230**	P	**P**	**15 50 55.5**	**-1.7**
USRK	**Ussuriysk Ar.**	**20.86**	**256**	P	**P**	**15 51 00.5**	**+0.7**
	comp=Z,3.3nm,0.6s,baz=57,slow=10,SNR=2.1						
	comp=Z,3.3nm,0.6s						
JSD	**Sado**	**21.70**	**235**	P	**P**	**15 51 08.8**	**+0.1**
JSD				IAmb	IAmb	15 51 29.9	
	comp=Z,21nm,1.1s						
MJB9	**Matsu-Tunnel**	**22.91**	**232**	P	**P**	**15 51 20.5**	**-1.2**
MJB9				IAmb	IAmb	15 51 22.8	
	comp=Z,8.5nm,0.6s						
MAJO	**Matsushiro**	**22.91**	**232**	P	**P**	**15 51 20.3**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAJO	**Matsushiro**	**22.91**	**232**	P	**P**	**15 51 20.3**	**-1.4**
MAJO				IAmb	IAmb	15 51 22.9	
	comp=Z,9.1nm,0.6s						
MJAR	**Matsushiro Arr**	**22.91**	**232**	P	**P**	**15 51 21.9**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=323,slow=9.2,SNR=16						
	comp=Z,3.2nm,0.5s						
MJAR	**Matsushiro Arr**	**22.91**	**232**	P	**P**	**15 51 20.6**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	**Matsushiro Arr**	**22.91**	**232**	P	**P**	**15 51 20.6**	**-1.1**
TIXI	**Tiksi**	**23.13**	**335**	P	**P**	**15 51 23.3**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=267,slow=23,SNR=8.0						
TIXI				LR	LR	16 01 20.5	
	comp=Z,59nm,19.0s,baz=181,slow=40						
	comp=Z,1.1nm,0.4s						
TIXI	**Tiksi**	**23.13**	**335**	*ce*P	**P**	**15 51 22.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,47nm,18.0s						
TIXI	**Tiksi**	**23.13**	**335**	IAmb	IAmb	15 51 29.7	
	comp=Z,1.7nm,0.5s						
JGF	**Kuroka**	**24.07**	**232**	P	**P**	**15 51 33.3**	**0.0**
KSRS	**Korea Array**	**27.60**	**248**	P	**P**	**15 52 06.5**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=34,slow=9.7,SNR=5.0						
KSRS				LR	LR	16 02 02.4	
	comp=Z,17nm,18.6s,baz=30,slow=34						
	comp=Z,1.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.76**	**169**	T	T	16 28 26.4	
	baz=353,slow=76,SNR=89						
H11N3	**WAKE ISLAND Hy**	**33.77**	**169**	T	T	16 28 26.4	
	baz=353,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**33.77**	**169**	T	T	16 28 41.5	
	baz=353,slow=76,SNR=29						
ULN	**Ulaanbaatar**	**33.83**	**283**	*i* P	**P**	**15 52 58.9**	**-1.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,2.4s						
SONM	**Songino Array**	**34.23**	**283**	P	**P**	**15 53 02.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=40,slow=7.7,SNR=3.8						
SONM				LR	LR	16 08 37.3	
	comp=Z,39nm,18.1s,baz=88,slow=39						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**34.23**	**283**	P	**P**	**15 53 02.9**	**-0.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**34.95**	**170**	T	T	16 30 14.2	
	baz=352,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**34.96**	**170**	T	T	16 30 28.2	
	baz=352,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**34.96**	**170**	T	T	16 30 25.0	
	baz=352,slow=76,SNR=5.0						
EUNU	**Eureka**	**41.75**	**14**	P	**P**	**15 54 08.4**	**+1.8**
EUNU				IAmb	IAmb	15 54 10.2	
	comp=Z,2.7nm,0.6s						
YKA	**Yellowknife Ar**	**42.83**	**43**	P	**P**	**15 54 17.8**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=299,slow=8.0,SNR=2.0						
	comp=Z,0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**43.02**	**303**	LR	LR	16 13 33.0	
	comp=Z,31nm,19.7s,baz=36,slow=38						
SPITS	**Spitsbergen Ar**	**47.08**	**351**	P	**P**	**15 54 49.5**	**+0.4**
SPITS				pmax	pmax		
	comp=Z,29nm,1.5s						
SPB2	**Spitsbergen Ar**	**47.08**	**351**	P	**P**	**15 54 49.6**	**+0.5**
KURK	**Kurchatov**	**47.98**	**302**	*ce*P	**P**	**15 54 54.3**	**-2.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	**Makanchi Array**	**48.43**	**296**	P	**P**	**15 54 58.1**	**-1.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	**Makanchi Array**	**48.43**	**296**	P	**P**	**15 54 58.1**	**-1.9**
MK31				IAmb	IAmb	15 55 20.3	
	comp=Z,1.8nm,1.1s						
MKAR	**Makanchi Array**	**48.43**	**296**	P	**P**	**15 54 58.5**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=57,slow=6.4,SNR=18						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**48.43**	**296**	*e*P	**P**	**15 54 58.2**	**-1.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**48.43**	**296**	P	**P**	**15 54 58.1**	**-1.9**
MAKZ	**Makanchi**	**48.59**	**296**	P	**P**	**15 54 59.7**	**-1.6**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	**Makanchi**	**48.59**	**296**	P	**P**	**15 54 59.7**	**-1.6**
MAKZ				IAmb	IAmb	15 54 59.8	
	comp=Z,1.2nm,0.7s						
BRVK	**Borovoye**	**50.63**	**309**	*i* P	**P**	**15 55 17.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**53.29**	**342**	P	**P**	**15 55 35.2**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=48,slow=8.6,SNR=3.6						
	comp=Z,1.5nm,0.9s						
ARU	**Arti**	**53.56**	**318**	LR	LR	16 21 18.4	
	comp=Z,33nm,19.3s,baz=10.0,slow=39						
ARU	**Arti**	**53.56**	**318**	*i* P	**P**	**15 55 38.2**	**-0.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.4s						
AAK	**Ala-Archa**	**55.35**	**296**	*i* P	**P**	**15 55 50.4**	**-1.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PDAR	**Pinedale Array**	**57.15**	**61**	P	**P**	**15 56 06.2**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=45,slow=0.6,SNR=4.0						
	comp=Z,0.5nm,0.8s						
KKAR	**Karatay Array**	**57.15**	**299**	P	**P**	**15 56 03.6**	**-0.9**
KKAR	**Karatay Array**	**57.15**	**299**	P	**P**	**15 56 03.6**	**-0.9**
ABKAR	**Akbulak array**	**58.00**	**311**	P	**P**	**15 56 08.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**58.56**	**259**	P	**P**	**15 56 15.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=26,slow=6.9,SNR=5.1						
CMAR				LR	LR	16 22 49.0	
	comp=Z,6.5nm,18.8s,baz=235,slow=38						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**60.16**	**337**	P	**P**	**15 56 24.9**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=43,slow=8.6,SNR=6.6						
	comp=Z,1.6nm,0.6s						
FINES	**FINESS Array B**	**60.16**	**337**	*e*P	**P**	**15 56 25.7**	**+0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**60.16**	**337**	P	**P**	**15 56 24.4**	**-0.6**
OBN	**Obninsk**	**62.62**	**328**	⇓*e*P	**P**	**15 56 43.2**	**+1.5**
OBN				*e*		15 57 19.1	
OBN				*e*		15 59 01.7	
OBN				*e*S	S	16 05 28.0	+19
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,21nm,17.0s						
NB2	**NORSAR Subarra**	**63.53**	**344**	P	**P**	**15 56 47.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**63.53**	**344**	P	**P**	**15 56 47.9**	**0.0**
	comp=Z,1.0nm,0.6s,baz=20,slow=6.8,SNR=6.0						
NOA				LR	LR	16 28 30.1	
	comp=Z,6.3nm,18.3s,baz=295,slow=40						
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**63.95**	**342**	LR	LR	16 28 48.2	
	comp=Z,27nm,18.9s,baz=345,slow=40						
AKASG	**Malin Array Be**	**68.70**	**329**	P	**P**	**15 57 20.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=34,slow=6.4,SNR=4.8						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**68.70**	**329**	*e*P	**P**	**15 57 21.3**	**+0.2**
AKASG	**Malin Array Be**	**68.70**	**329**	IAmb	IAmb	15 57 21.8	
	comp=Z,1.1nm,0.9s						
KIV	**Kislovodsk**	**69.60**	**317**	*e*P	**P**	**15 57 26.7**	**-0.3**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	**Khabaz**	**69.70**	**317**	*i* P	**P**	**15 57 27.0**	**-0.4**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**70.25**	**67**	P	**P**	**15 57 33.1**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=300,slow=5.7,SNR=8.4						
	comp=Z,0.5nm,0.5s						
BUR08	**Bucovina Ar. S**	**72.64**	**330**	P	**P**	**15 57 44.7**	**-0.7**
BUR08				IAmb	IAmb	15 57 46.0	
	comp=Z,1.4nm,0.8s						
BURAR	**Bucovina Array**	**72.66**	**330**	P	**P**	**15 57 44.6**	**-0.8**
BURAR				IAmb	IAmb	15 57 47.5	
	comp=Z,1.1nm,0.7s						
VRAC	**Vranov**	**73.44**	**336**	LR	LR	16 33 12.7	
	comp=Z,14nm,18.8s,baz=6.0,slow=38						
GERES	**GERESS Array B**	**74.54**	**338**	P	**P**	**15 57 57.0**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=40,slow=5.3,SNR=3.4						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**74.54**	**338**	P	**P**	**15 57 57.0**	**+0.5**
BRTR	**Keskin Array B**	**76.76**	**321**	*ce*P	**P**	**15 58 10.1**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
UOSS	**Minazif**	**78.56**	**296**	P	**P**	**15 58 17.2**	**-2.2**
UOSS				IAmb	IAmb	15 58 21.9	
	comp=Z,6.8nm,1.1s						
ASAR	**Alice Springs**	**80.02**	**205**	P	**P**	**15 58 31.5**	**+4.3**
	comp=Z,0.2nm,0.5s,baz=18,slow=4.9,SNR=1.9						
	comp=Z,0.2nm,0.5s						
IDI	**Anoyia**	**83.88**	**325**	LR	LR	16 39 13.6	
	comp=Z,12nm,19.7s,baz=110,slow=38						
RAYN	**Ar Rayn**	**85.30**	**304**	P	**P**	**15 58 53.7**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RAYN	**Ar Rayn**	**85.30**	**304**	P	**P**	**15 58 53.7**	**-1.3**

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*MOS **10** 16:16:58.3±1.4, 43°.73N×148°.69E, h24^{km}, mb4.2/1, Error ellipse: s-maj=13.1km s-min=10.5km az=40.2*

*JMA **10** 16:16:59.6±0.6, 44°N±2°×14°8E±°, h0^{km}, MV3.9/21, SE OFF ETOROFU*

*NIED **10** 16:16:59.6, 43°.60N×148°.33E, h0^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.16; M$_{\theta\theta}$-1.47; M$_{\phi\phi}$-1.70; M$_{r\theta}$2.32; M$_{\theta\phi}$-1.13; M$_{\phi r}$1.85; Fault plane solution: M$_0$4.18000×10^{14} NP1: ϕ_s218.00000°, δ23.00000°, λ80.00000°. NP2: ϕ_s48.00000°, δ68.00000°, λ94.00000°.*

*SKHL **10** 16:17:00.5±0.1, 43°.70N×148°.70E, h41^{km}±5^{km}, mb4.8/9*

*IDC **10** 16:17:09.1±5.3, 44°.54N×148°.09E, h53^{km}±29^{km}, mb3.6/8, mbtmp3.7/11, ML2.8/3, MS2.7/5, Error ellipse: s-maj=99.7km s-min=20.9km az=157.0*

ISC 10 16:17:02.3±1.0, **43°.71N**±0°.07×**148°.56E**±0°.08, **h40**^{km}, **n45**, σ**1^{s}.09**/54, **mb3.9**/8, **4C**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.26**	**278**	*c i*PN	**Pn**	**16 17 22.0**	**-1.4**
SHO				*e*S	**Sn**	**16 17 37.5**	**-1.6**
SHO				pmax	pmax		
	comp=E,79nm,0.4s						
SHO				pmax	pmax		
	comp=Z,141nm,0.4s						
SHO				pmax	pmax		
	comp=N,34nm,0.2s						
SHO				smax	smax		
	comp=E,809nm,0.4s						
SHO				smax	smax		
	comp=N,477nm,0.3s						
SHO	**Shikotan**	**1.26**	**278**	*i* P	**Pn**	**16 17 22.2**	**-1.2**
SHO				AMB	AMB	16 17 23.0	
	comp=N,180nm,0.2s						
SHO				*e*S	**Sn**	**16 17 38.4**	**-0.7**
SHO				A	A	16 17 43.8	
	comp=N,660nm,0.3s						
SHO				A	A	16 17 43.8	
	comp=N,1μm,0.3s						
KUR	**Kuril'sk**	**1.60**	**342**	*c i*PN	**Pn**	**16 17 26.8**	**-1.3**
KUR				S	**Sn**	**16 17 46.6**	**-0.8**
KUR				pmax	pmax		
	comp=Z,200nm,0.6s						
KUR				pmax	pmax		
	comp=N,124nm,0.2s						
KUR				pmax	pmax		
	comp=E,95nm,0.2s						
KUR				smax	smax		
	comp=E,490nm,0.3s						
KUR				smax	smax		
	comp=N,230nm,0.2s						
KUR	**Kuril'sk**	**1.60**	**342**	*i* P	**Pn**	**16 17 26.8**	**-1.3**
KUR				AMB	AMB	16 17 32.9	
	comp=N,120nm,0.3s						
KUR				AMB	AMB	16 17 32.9	
	comp=N,100nm,0.3s						
KUR				AMB	AMB	16 17 32.9	
	comp=N,240nm,0.3s						
KUR				*e*S	**Sn**	**16 17 46.6**	**-0.8**
KUR				A	A	16 17 53.5	
	comp=N,320nm,0.3s						
KUR				A	A	16 17 53.5	
	comp=N,690nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.97**	**280**	*c i*PN	**Pn**	**16 17 32.2**	**-1.0**
YUK				*e*S	**Sn**	**16 17 57.2**	**+0.5**
YUK				pmax	pmax		
	comp=N,52nm,0.3s						
YUK				pmax	pmax		
	comp=Z,136nm,0.3s						
YUK				smax	smax		
	comp=N,382nm,0.3s						
YUK				smax	smax		
	comp=E,738nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.97**	**280**	*i* P	**Pn**	**16 17 32.5**	**-0.7**
YUK				AMB	AMB	16 17 34.7	
	comp=E,50nm,0.3s						
YUK				AMB	AMB	16 17 34.7	
	comp=E,210nm,0.3s						
YUK				*e*S	**Sn**	**16 17 56.5**	**-0.2**
YUK				A	A	16 18 09.1	
	comp=E,320nm,0.3s						
YUK				A	A	16 18 09.1	
	comp=E,910nm,0.3s						
NEM2	**Nemuro 2**	**2.07**	**261**	*e*P	**Pn**	**16 17 33.5**	**-1.1**
NEM2				*e*S	**Sn**	**16 17 58.3**	**-0.9**
NMR	**Nemuro--Hokkai**	**2.08**	**261**	*e*PN	**Pn**	**16 17 33.5**	**-1.2**
NMR				*e*S	**Sn**	**16 17 56.4**	**-3.0**
NMR	**Nemuro--Hokkai**	**2.08**	**261**	*e*P	**Pn**	**16 17 33.6**	**-1.2**
NMR				*e*S	**Sn**	**16 17 57.9**	**-1.5**
GLVR	**Golovnino**	**2.20**	**272**	*e*PN	**Pn**	**16 17 36.0**	**-0.3**
GLVR				*e*S	**Sn**	**16 18 01.5**	**-0.8**
GLVR				pmax	pmax		
	comp=Z,159nm,0.4s						
GLVR				smax	smax		
	comp=N,950nm,0.3s						
GLVR				smax	smax		
	comp=E,439nm,0.3s						
GLVR	**Golovnino**	**2.20**	**272**	*e*P	**Pn**	**16 17 35.8**	**-0.5**
GLVR				AMB	AMB	16 17 36.8	
	comp=E,160nm,0.4s						
GLVR				*e*S	**Sn**	**16 18 01.5**	**-0.8**
GLVR				A	A	16 18 08.5	
	comp=E,950nm,0.4s						
GLVR				A	A	16 18 08.5	
	comp=E,440nm,0.4s						
RUSJ	**Misakicho**	**2.42**	**280**	⇑*i*PN	**Pn**	**16 17 39.4**	**0.0**
RUSJ				*e*S	**Sn**	**16 18 08.4**	**+0.6**
JRA	**Rausu**	**2.50**	**276**	*e*P	**Pn**	**16 17 40.3**	**-0.1**
JNSB	**Nemuroshibetsu**	**2.57**	**273**	*e*P	**Pn**	**16 17 41.5**	**0.0**
JNSB				*e*S	**Sn**	**16 18 13.1**	**+1.6**
JNK	**Nakash**	**2.79**	**269**	*e*S	**Sn**	**16 18 16.0**	**-0.8**
AKK	**Akkeshi**	**2.80**	**257**	*e*P	**Pn**	**16 17 45.0**	**+0.5**
JAK	**Akkeshi**	**2.90**	**257**	*e*P	**Pn**	**16 17 45.4**	**-0.6**
JAK				*e*S	**Sn**	**16 18 18.9**	**-0.7**
JTKR	**Abashiri--Toko**	**3.37**	**276**	*e*P	**Pn**	**16 17 53.0**	**+0.6**
JAR	**Ashorobuto**	**3.51**	**265**	*e*P	**Pn**	**16 17 54.6**	**+0.3**
JAR				*e*S	**Sn**	**16 18 35.2**	**+0.7**
JCH	**Churui**	**3.95**	**256**	*e*P	**Pn**	**16 18 00.8**	**+0.4**
JCH				*e*S	**Sn**	**16 18 46.4**	**+0.9**
ASAJ	**Asahikawa**	**4.32**	**277**	P	**Pn**	**16 18 07.3**	**+1.8**
	comp=E,0.8nm,0.3s,baz=83,slow=11,SNR=7.8						
ASAJ				LR	LR	16 19 54.0	
	comp=E,114nm,18.6s,baz=156,slow=42						
	comp=E,3.9nm,0.4s						
JNBK	**Urakawa-nobuka**	**4.49**	**253**	*e*P	**Pn**	**16 18 07.9**	**+0.1**
JNBK				*e*S	**Sn**	**16 18 60.0**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.22**	**310**	*e*PN	**Pn**	**16 18 18.8**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.22**	**310**	*e*P	**Pn**	**16 18 18.6**	**+0.9**
YSS				AMB	AMB	16 18 20.4	
	comp=Z,10.0nm,0.3s						
YSS				*e*S	**Sn**	**16 19 16.3**	**-0.3**
YSS				A	A	16 19 30.8	
	comp=Z,10.0nm,0.4s						
YSS				A	A	16 19 30.8	

	comp=Z,10.0nm,0.4s						
TYV	Tymovskoe	8.20	333	eP	Pn	16 19 00.1	+1.5
TYV				AMB	AMB	16 19 05.1	
	comp=Z,30nm,0.6s						
SKR	Severo-Kuril's	8.66	34	eP	Pn	16 19 05.0	0.0
SKR				AMB	AMB	16 19 13.4	
	comp=Z,30nm,0.6s						
PETK	Petropavlovsk-	11.18	30	P	Pn	16 19 38.2	-1.2
	comp=Z,0.1nm,0.3s,baz=204,slow=17,SNR=1.5						
	comp=Z,1.3nm,0.8s						
KLR	Kul'dur	12.82	301	LR	LR	16 25 11.4	
	comp=Z,40nm,21.7s,baz=72,slow=40						
KSRS	Korea Array	16.86	255	LR	LR	16 27 42.5	
	comp=Z,9.9nm,19.5s,baz=65,slow=38						
SEY	Seymchan	19.38	5	P	P	16 21 22.5	-2.0
	comp=Z,0.1nm,0.3s,baz=174,slow=8.5,SNR=5.2						
	comp=Z,1.1nm,0.8s						
H11N2	WAKE ISLAND Hy	28.42	141	T	T	16 53 52.9	
	baz=344,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	28.43	142	T	T	16 53 51.8	
	baz=344,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	28.44	141	T	T	16 53 54.0	
	baz=344,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	29.41	143	T	T	16 55 06.4	
	baz=333,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	29.41	143	T	T	16 55 07.2	
	baz=333,slow=76,SNR=12						
SONM	Songino Array	29.42	293	P	P	16 23 02.1	+0.1
	comp=Z,0.6nm,0.5s,baz=81,slow=7.6,SNR=5.1						
SONM				LR	LR	16 35 15.1	
	comp=Z,24nm,19.5s,baz=204,slow=38						
	comp=Z,0.6nm,0.5s						
H11S2	WAKE ISLAND Hy	29.43	143	T	T	16 55 07.6	
	baz=333,slow=76,SNR=11						
ILAR	Eielson Array	40.91	36	P	P	16 24 41.4	+1.1
	comp=Z,0.2nm,0.6s,baz=276,slow=11,SNR=4.1						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	45.50	298	P	P	16 25 18.2	+0.6
	comp=Z,1.0nm,0.5s,baz=76,slow=8.2,SNR=17						
	comp=Z,1.0nm,0.5s						
INK	Inuvik	45.92	30	P	P	16 25 22.6	+2.1
	comp=Z,0.7nm,0.4s,baz=325,slow=6.4,SNR=3.6						
	comp=Z,0.7nm,0.4s						
RES	Resolute Bay	54.71	17	LR	LR	16 52 38.1	
	comp=Z,12nm,18.1s,baz=76,slow=39						
FINES	FINESS Array B	65.36	334	P	P	16 27 38.8	-1.3
	comp=Z,1.6nm,0.8s,baz=12,slow=7.1,SNR=6.5						
	comp=Z,1.6nm,0.8s						
NOA	NORSAR Array B	70.00	339	P	P	16 28 09.8	+0.4
	comp=Z,0.5nm,0.5s,baz=32,slow=6.3,SNR=3.2						
	comp=Z,0.5nm,0.5s						
KBZ	Khabaz	70.58	312	P	P	16 28 14.2	+1.0
	comp=Z,1.2nm,0.7s,baz=17,slow=11,SNR=3.8						
	comp=Z,1.2nm,0.7s						
AKASG	Malin Array Be	72.21	324	P	P	16 28 22.3	-0.5
	comp=Z,0.9nm,0.5s,baz=37,slow=6.5,SNR=7.2						
	comp=Z,0.9nm,0.5s						

VIE 10 16:31:41.9±0.3, 47°.82N×13°.81E, h0km, mb1.5/1, ml0.9/3, Error ellipse: s-maj=2.9km s-min=2.0km az=139.0 3 km ENE of Ebensee Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIOA	Bad Ischl, Aus	0.18	221	ePg	Pg	16 31 44.9	-0.3
	0.4nm,0.1s						
BIOA				eSg	Sg	16 31 48.3	+0.8
	0.8nm,0.1s						
MOA	Molln	0.31	85	ePg	Pg	16 31 47.7	-0.1
	0.2nm,0.1s						
MOA				Sg	Sg	16 31 53.0	+1.2
	0.9nm,0.2s						

LJU 10 16:32:19.7, 46°.39N×15°.07E, h0km, Confirmed Rockburst, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZLJ	Ozalj	0.82	160	ePg	Pg	16 32 34.0	-1.5
OZLJ				Sg	Sg	16 32 45.6	-0.5
SMRN	Sveta Marina	1.50	206	ePg	Pn	16 32 45.5	-2.3
SMRN				Sg	Sg	16 33 04.2	-3.6

IDC ***10*** *16:54:18.6±1.5, 6°.28S×128°.71E, h0km, mb3.6/2, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=54.3km s-min=27.7km az=77.0*

DJA ***10*** *16:54:31.4±0.7, 6°S±5°×13°0E±1°0, h188km±19km, M3.9/7, mb3.7/3, mB4.8/2, MLv4.0/7, Mw(mB)4.1/2*

ISC 10 16:54:32.5±0.9, 6°.00S±0°.06×130°.3E±0°.2, h150km, n20, σ1s72/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.53	344	P	Pn	16 55 03.7	+1.3
SAUI	Saumlaki	2.19	154	P	Pn	16 55 11.2	+1.3
SAUI	Saumlaki	2.19	154	P	Pn	16 55 10.8	+0.9
MSAI	Masohi	2.98	332	P	Pn	16 55 20.1	+0.4
SIJI	Sorong	5.18	10	Pn	Pn	16 55 49.0	+0.6
	0.8nm,0.3s,baz=186,slow=23,SNR=30						
SIJI				Sn	Sn	16 56 44.2	-3.5
	3.4nm,0.3s,baz=275,slow=23,SNR=20						
	3.7nm,0.2s						
SWI	Sorong	5.19	10	P	Pn	16 55 48.9	+0.4
	0.2nm1µm7.8nm,0.8s						
MTN	Manton Dam	6.84	173	P	Pn	16 56 09.0	-1.6
KDU	Kakadu	6.97	163	P	Pn	16 56 10.3	-1.9
KNRA	Kununurra	9.74	189	P	Pn	16 56 45.5	-3.6
WRAB	Tennant Creek	14.39	165	P	Pn	16 57 48.8	-0.6
WRA	Warramunga Arr	14.40	165	Pn	Pn	16 57 45.8	-3.7
	0.4nm,0.3s,baz=338,slow=13,SNR=11						
WRA				Sn	Sn	17 00 15.1	-14
	1.0nm,0.3s,baz=334,slow=22,SNR=12						
	0.4nm,0.4s						
COEN	Coen	14.91	123	P	P	16 57 59.5	+1.6
QIS	Mount Isa	17.04	149	P	P	16 58 23.1	+1.7
ASAR	Alice Springs	17.90	169	P	P	16 58 31.4	+0.6
	0.2nm,0.3s,baz=352,slow=12,SNR=17						
ASAR				S	S	17 01 35.4	-13
	0.5nm,0.8s,baz=356,slow=27,SNR=3.2						
	1.2nm,0.6s						
WRKA	Warakurna	19.03	186	P	P	16 58 42.8	-0.3
OOD	Oodnadatta	22.26	167	P	P	16 59 17.4	0.0
INKA	Innaminka	23.78	157	P	P	16 59 33.7	+2.3
MULG	Mulgathing	24.41	172	P	P	16 59 38.8	+1.7
MKAR	Makanchi Array	67.58	326	P	P	17 05 12.9	0.0
	0.4nm,0.6s,baz=128,slow=6.5,SNR=6.4						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	71.84	328	P	P	17 05 39.3	+0.4
	0.4nm,0.9s,baz=117,slow=5.7,SNR=2.8						
	0.4nm,0.9s						

JMA 10 16:56:41.0±0.3, 24°.2N±0°.8×123°.8E±0°.8, h15km±3km, MV1.1/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.12	177	eP	Pg	16 56 44.4	-0.1
HATJ				S	Sg	16 56 46.1	-0.8
IRIF	Iriomote-Funau	0.17	338	P	Pg	16 56 45.2	0.0
JKRS	Kuro-shima	0.20	73	P	Pb	16 56 46.1	-0.2
JKRS				eS	Sg	16 56 49.0	+0.2
JIJ	Ishigaki jima	0.36	59	P	Pg	16 56 48.2	-0.2
JIJ				eS	Sg	16 56 52.9	-0.7
JISG	Ishigakijimahi	0.62	49	eP	Pg	16 56 53.0	-0.2
JISG				eS	Sg	16 57 00.9	-0.5
JTJ	Tarama	0.94	61	eP	Pb	16 56 59.1	+0.1
JTJ				eS	Sb	16 57 11.4	0.0

TAP 10 16:57:04.7, 24°.22N×121°.77E, h9km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.15	245	i P	Pg	16 57 08.2	+0.3
	baz=242						
ETL				S	Sg	16 57 10.9	+0.7
	baz=242						
NACB	Ninganchiao	0.16	253	i P	Pg	16 57 08.2	0.0
	baz=243						
NACB				eS	Sg	16 57 11.3	+0.7
	baz=243						
ENA	Nanau	0.21	353	i P	Pg	16 57 09.3	+0.3
	baz=356						
ENA				S	Sg	16 57 12.5	+0.6
	baz=356						
TWD	Chiawan	0.21	228	P	Pg	16 57 09.2	+0.2
	baz=232						
TWD				eS	Sg	16 57 12.4	+0.4
	baz=232						
EWUT	Wuta	0.22	3	i P	Pg	16 57 09.5	+0.2
	baz=4.0						
EWUT				S	Sg	16 57 12.7	+0.4
	baz=4.0						
ETLH	Xiulin Townshi	0.26	267	eP	Pg	16 57 10.2	+0.3
	baz=267						
ETLH				eS	Sb	16 57 15.2	-1.0
	baz=267						
LATG	Datong	0.38	325	P	Pg	16 57 12.6	+0.3
	baz=325						
LATG				eS	Sb	16 57 18.7	-1.0
	baz=325						
NNSB	Datong	0.41	300	P	Pg	16 57 12.8	+0.2
	baz=300						
NNSB				eS	Sg	16 57 18.5	+0.4
	baz=300						
NDS	Dongshan	0.41	354	i P	Pg	16 57 13.0	+0.2
	baz=354						
NDS				eS	Sg	16 57 18.3	0.0
	baz=354						
NNS	Nan Shan	0.42	301	eP	Pb	16 57 13.9	-0.5
	baz=301						
ENTT	Nioudou	0.46	336	P	Pg	16 57 14.0	+0.4
	baz=337						
ENTT				eS	Sg	16 57 20.4	+0.8
	baz=337						
WHF	Hehuan Shan	0.47	261	P	Pg	16 57 13.9	0.0
	baz=260						
WHF				eS	Sg	16 57 20.8	+0.8
	baz=260						
FUSS	Fushou	0.48	273	P	Pg	16 57 14.6	+0.5
	baz=274						
ESL	Shilin	0.51	217	eP	Pb	16 57 15.4	-0.4
	baz=225						
ESL				eS	Sb	16 57 22.4	-0.8
	baz=225						
FUSB	Fushanzhiwuyua	0.56	343	eP	Pg	16 57 16.0	+0.5
	baz=343						
FUSB				eS	Sg	16 57 22.3	-0.7
	baz=343						
CHGB	Renai	0.56	254	P	Pg	16 57 16.1	+0.4
	baz=246						
CHGB				eS	Sg	16 57 23.8	+0.6
	baz=246						
YHNB	Yeheng	0.57	321	eP	Pb	16 57 16.4	-0.5
	baz=321						
YHNB				eS	Sg	16 57 24.0	+0.7
	baz=321						
NSK	Sanguang	0.59	321	eP	Pg	16 57 16.4	+0.4
	baz=321						
NSK				eS	Sg	16 57 24.7	+0.9
	baz=321						
OWD	Renai	0.60	244	eP	Pb	16 57 17.0	-0.5
	baz=244						
OWD				eS	Sg	16 57 24.6	+0.3
	baz=244						
NWLT	Wulai	0.60	336	eP	Pg	16 57 16.2	-0.2
	baz=336						
NWLT				eS	Sg	16 57 24.2	-0.1
	baz=336						
WUSB	Renai	0.64	249	eP	Pb	16 57 17.7	-0.3
	baz=242						
WUSB				eS	Sb	16 57 26.4	-0.6
	baz=242						

IDC ***10*** *16:59:17.7±2.4, 29°.38N×142°.14E, h0km, mb3.6/8, mbtmp3.7/10, ML3.3/3, MS2.8/3, Error ellipse: s-maj=101.8km s-min=16.7km az=76.0*

JMA ***10*** *16:59:21.2±0.2, 29°.8N±0°.6×14°3E±°, h27km, MV4.2/22, NEAR TORISHIMA IS*

ISC 10 16:59:19.1±1.3, 29°.49N±0°.10×142°.2E±0°.3, h10km, n20, σ1s38/20, mb3.7/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.39	181	Pn	Pn	16 59 57.3	-1.0
	4.9nm,0.3s,baz=12,slow=22,SNR=12						
JHJ	Hachijo jima 2	4.17	331	Pn	Pn	17 00 22.4	-0.4
	7.8nm,0.3s,baz=96,slow=22,SNR=6.6						
JHJ				Sn	Sn	17 01 09.0	-2.6
	12nm,0.3s,baz=279,slow=19,SNR=1.4						
	32nm,0.5s						
BSO1	Boso 1	5.25	349	eP	Pn	17 00 37.4	+0.2
JOD2	Odawara 2	6.33	336	eP	Pn	17 00 54.9	+2.4
JHU	Hanno	6.81	339	P	Pn	17 01 00.1	+1.1
JHU				eS	Sn	17 02 15.8	-0.7
JRY	Ryogami san	7.08	338	P	Pn	17 01 04.2	+1.4
JHO	Hitachi	7.23	349	P	Pn	17 01 04.3	-0.5
JAG	Ashikaga	7.29	342	P	Pn	17 01 06.0	+0.3
JAG				eS	Sn	17 02 26.0	-2.5
MJAR	Matsushiro Arr	7.79	335	Pn	Pn	17 01 13.3	+0.8
	0.4nm,0.3s,baz=119,slow=14,SNR=13						
	4.1nm,0.5s						
KSRS	Korea Array	14.32	307	LR	LR	17 08 17.4	
	comp=Z,48nm,19.1s,baz=165,slow=38						
ASAJ	Asahikawa	14.60	1	LR	LR	17 08 32.8	
	comp=Z,21nm,21.8s,baz=173,slow=38						
KLR	Kul'dur	21.27	341	P	P	17 04 07.3	+1.8
	0.8nm,0.6s,baz=139,slow=12,SNR=2.4						
	0.8nm,0.6s						
SONM	Songino Array	33.05	314	P	P	17 05 55.6	+0.8
	0.3nm,0.4s,baz=122,slow=10,SNR=2.7						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	40.83	264	LR	LR	17 23 48.2	
	comp=Z,18nm,19.3s,baz=95,slow=36						
ZALV	Zalesovo Beam	47.72	318	P	P	17 07 56.1	+0.3
	0.5nm,0.4s,baz=83,slow=5.1,SNR=4.2						
	0.5nm,0.4s						
MKAR	Makanchi Array	49.00	308	P	P	17 08 05.5	-0.4
	0.4nm,0.6s,baz=87,slow=9.1,SNR=4.2						
	0.4nm,0.6s						
WRA	Warramunga Arr	49.73	190	P	P	17 08 11.0	-0.7
	0.5nm,0.5s,baz=17,slow=9.0,SNR=5.3						
	0.5nm,0.5s						
KURBB	Kurchatov Arra	51.41	313	P	P	17 08 24.8	+0.7
	1.0nm,0.4s,baz=91,slow=9.2,SNR=24						
	1.0nm,0.4s						
ASAR	Alice Springs	53.46	190	P	P	17 08 38.1	-1.4
	0.4nm,1.0s,baz=2.7,slow=5.8,SNR=1.8						
	0.4nm,1.0s						
FINES	FINESS Array B	75.82	334	P	P	17 11 05.5	+0.4
	0.4nm,0.4s,baz=65,slow=5.0,SNR=4.7						
	0.4nm,0.4s						

IDC ***10*** *17:18:47.0±1.4, 36°.57N×5°.85W, h0km, mb3.7/3, mbtmp3.6/6, ML3.7/3, MS3.5/2, Error ellipse: s-maj=42.4km s-min=17.8km az=101.0*

MDD ***10*** *17:18:48.7±0.2, 36°.69N×5°.82W, h0km, mb_Lg4.1/31, Error ellipse: s-maj=1.5km s-min=1.2km az=10.0*

LDG ***10*** *17:18:48.7±0.1, 36°.59N×5°.84W, h2km, Ml3.8/29, Error ellipse: s-maj=3.2km s-min=2.2km az=1.0*

SFS ***10*** *17:18:48.0, 36°.60N×5°.80W, ML4.1, ARCOS DE LA FTRA. (CADIZ)*

IGIL ***10*** *17:18:49.3, 36°.69N×5°.82W, h4km, ML4.0*

CNRM ***10*** *17:18:50.8, 36°.23N×6°.12W, h0km, ml3.6*

INMG ***10*** *17:18:50.5±1.7, 36°.65N×5°.80W, h22km±3km, MD3.7, ML4.0, Error ellipse: s-maj=2.1km s-min=1.9km az=12.0*

ISC 10 17:18:48.7±0.8, 36°.66N±0°.02×5°.78W±0°.01, h16km±6km, n161, σ2s57/264, mb3.9/4, MS4.2/10, 2C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPR	Espera	0.22	343	⇓Pg	Pg	17 18 53.4	-0.3
ESPR				Sg	Sg	17 18 56.3	-0.8
ESPR				i Vmb_Lg		17 19 03.2	
EJIF	Jimena Fronter	0.32	130	⇓Pg	Pg	17 18 53.8	-1.6
CNIL	Conil	0.36	218	P	Pg	17 18 56.0	-0.2
LIJA	Lijar	0.39	50	P	Pg	17 18 55.5	-1.2
LIJA				S	Sg	17 19 00.0	-2.1
SFS	San Fernando	0.40	241	P	Pg	17 18 57.7	+0.9
SFS				S	Sn	17 19 05.9	-1.0
EMIJ	Mijas	0.81	96	Pg	Pb	17 19 02.9	-1.6
EMIJ				Sg	Sg	17 19 16.3	+1.1
CEU	Ceuta	0.83	157	P	Pn	17 19 06.2	+0.6
CEU				S	Sn	17 19 22.4	+4.9
ECEU	Ceuta	0.83	157	⇓Pg	Pn	17 19 05.8	+0.1
ECEU				Sg	Sb	17 19 15.4	-0.2
EMAL	Malaga-Limoner	1.09	84	P	Pb	17 19 10.0	+0.8
EMAL				S	Sg	17 19 26.4	+2.4
EMIN	Mina Concepcio	1.32	327	Pn	Pn	17 19 11.9	-0.6
EMIN				Pg	Pb	17 19 13.3	+0.3
EMIN				Sn	Sn	17 19 29.6	-0.1
EMIN				Sg	Sb	17 19 31.5	+1.8
EMIN				i Vmb_Lg		17 19 34.5	
EGOR	Sierra Gorda,	1.41	71	⇑Pn	Pn	17 19 14.7	+0.9
EGOR				Sn	Sg	17 19 35.3	+1.1
EGOR				i Vmb_Lg		17 19 49.4	
ECAB	El Cabril	1.44	11	Pn	Pn	17 19 13.7	-0.4
ECAB				Pg	Pb	17 19 15.4	+0.2
ECAB				Sg	Sb	17 19 35.5	+2.1
ECAB				i Vmb_Lg		17 19 39.3	
EGRO	El Granado	1.62	303	Pn	Pn	17 19 16.1	-0.5
EGRO				Pg	Pb	17 19 17.9	-0.3
EGRO				Sg	Sn	17 19 38.5	+1.4
EGRO				i Vmb_Lg		17 19 43.4	
PVAQ	Vaqueiros	1.72	296	ePn	Pn	17 19 17.2	-0.8
PVAQ	Vaqueiros	1.72	296	ePg	Pb	17 19 20.4	+0.5
PVAQ				eSg	Sb	17 19 43.5	+2.2
PVAQ				A	A	17 19 47.1	
	749nm,0.7s						
PVAQ	Vaqueiros	1.72	296	P	Pb	17 19 21.9	+2.0
ELGU	Los Guajares,	1.74	82	Pn	Pn	17 19 18.9	+0.6
ELGU				Pg	Pb	17 19 21.9	+1.6
ELGU				Sg	Sb	17 19 43.1	+1.1
ELGU				i Vmb_Lg		17 19 58.2	
EADA	Adamuz	1.78	32	Pn	Pn	17 19 19.1	+0.2
EADA				Pg	Pb	17 19 22.1	+1.1
EADA				Sg	Sb	17 19 45.7	+2.6
EADA				i Vmb_Lg		17 19 53.9	
PBAR	Barrancos	1.82	327	ePn	Pn	17 19 19.1	-0.2
PBAR	Barrancos	1.82	327	ePg	Pb	17 19 21.8	+0.2
PBAR				eSg	Sb	17 19 46.9	+2.8
PBAR				A	A	17 19 50.0	
	886nm,0.4s						
PBDV	Barranco-do-Ve	1.82	289	ePn	Pn	17 19 18.8	-0.6
PBDV	Barranco-do-Ve	1.82	289	ePg	Pb	17 19 23.6	+1.9
PBDV				eSg	Sg	17 19 47.2	-0.2
PBDV				A	A	17 19 58.5	
	543nm,0.5s						
PVLZ	Peæn de	1.91	141	P	Pn	17 19 20.4	0.0
PVLZ				S	Sb	17 19 46.0	-0.7
EQUE	Quentar	1.95	73	Pn	Pn	17 19 22.4	+1.2
EQUE				Pg	Pg	17 19 26.8	+0.7
EQUE				Sg	Sg	17 19 52.4	+1.0
EQUE				i Vmb_Lg		17 20 10.1	
PCVE	Castro Verde	2.05	299	ePn	Pn	17 19 22.1	-0.4
PCVE	Castro Verde	2.05	299	ePg	Pb	17 19 26.6	+1.0
PCVE				eSg	Sb	17 19 53.7	+2.9
PCVE				A	A	17 20 03.2	
	735nm,0.6s						
PBEJ	Beja	2.15	310	ePn	Pn	17 19 23.8	-0.1
PBEJ	Beja	2.15	310	ePg	Pb	17 19 28.8	+1.5
PBEJ				eSg	Sb	17 19 56.7	+2.9
MESJ	Messejana	2.28	302	eP	Pn	17 19 25.2	-0.4
MESJ				eSg	Sb	17 19 58.5	+1.1
MESJ				IAML		17 20 08.4	
	comp=N,785nm,0.6s						
MESJ	Messejana	2.28	302	⇑ePn	Pn	17 19 25.4	-0.2
MESJ	Messejana	2.28	302	ePg	Pb	17 19 30.7	+1.3
MESJ				eSg	Sb	17 19 59.8	+2.5
MESJ				A	A	17 20 12.1	
	comp=N,471nm,0.6s						
EBAD	Badajoz	2.31	335	Pn	Pn	17 19 25.9	-0.2
EBAD				Pg	Pb	17 19 30.5	+0.5
EBAD				Sg	Sb	17 20 00.3	+2.0
EBAD				i Vmb_Lg		17 20 08.9	
EALB	Alboran	2.33	107	Pn	Pn	17 19 27.0	+0.7
EBER	Berja	2.33	83	Pn	Pn	17 19 27.9	+1.4
EBER				i Vmb_Lg		17 20 25.5	
MORF	Marmelete	2.39	287	eP	Pn	17 19 26.7	-0.6
MORF	Marmelete	2.39	287	ePn	Pn	17 19 26.9	-0.3
MORF	Marmelete	2.39	287	ePg	Pb	17 19 32.4	+1.0
MORF				eSg	Sg	17 20 06.1	+0.6
MORF				A	A	17 20 12.1	
	comp=N,233nm,0.2s						
EQES	Quesada	2.44	61	Pn	Pn	17 19 28.4	+0.4
EQES				Sg	Sb	17 20 02.6	+0.4
EQES				i Vmb_Lg		17 20 19.5	
PFVI	Vila Bisbo	2.49	282	ePn	Pn	17 19 28.0	-0.6
PFVI				eSn	Sn	17 19 57.0	-1.6
PFVI				A	A	17 20 18.7	
	comp=N,268nm,0.7s						
PTEO	Sao Teotonio	2.52	291	ePn	Pn	17 19 29.1	+0.2
PTEO	Sao Teotonio	2.52	291	ePg	Pb	17 19 35.3	+1.8
PTEO				eSg	Sg	17 20 10.1	+0.5
PTEO				A	A	17 20 27.8	
	comp=N,495nm,0.6s						
EVO	Evora	2.58	317	P	Pn	17 19 29.9	+0.2
EVO				S	Sn	17 19 57.5	-3.3
EVO	Evora	2.58	317	ePn	Pn	17 19 29.7	-0.1
EVO	Evora	2.58	317	ePg	Pb	17 19 36.0	+1.5
EVO				eSg	Sb	17 20 10.2	+4.2
EVO				A	A	17 20 26.4	
	comp=N,537nm,0.6s						
PNCL	Nicolau / Gran	2.63	304	ePn	Pn	17 19 30.0	-0.4
PNCL	Nicolau / Gran	2.63	304	ePg	Pb	17 19 37.0	+1.6
PNCL				eSg	Sb	17 20 10.4	+3.0
PNCL				A	A	17 20 13.9	
	comp=N,311nm,0.6s						
PESTR	Estremoz	2.63	327	ePn	Pn	17 19 30.5	0.0
PESTR	Estremoz	2.63	327	ePg	Pb	17 19 37.6	+2.1
PESTR				eSg	Sb	17 20 11.0	+3.5
PESTR				A	A	17 20 21.7	
	comp=N,399nm,0.4s						
PESTR	Estremoz	2.63	327	P	Pb	17 19 37.8	+2.3
PESTR				S	Sg	17 20 16.5	+3.3
WMELI	Melilla	2.65	119	P	Pn	17 19 31.4	+0.6
WMELI				S	Sn	17 20 04.3	+1.7
EMEL	Melilla	2.66	120	Pn	Pn	17 19 30.1	-0.7
EMEL				Sn	Sn	17 20 03.7	+1.0
EMEL				i Vmb_Lg		17 20 06.0	
ENIJ	Nijar	2.88	83	Pn	Pn	17 19 35.2	+1.2
PMRV	Marv??o	3.04	336	ePn	Pn	17 19 36.2	0.0
PMRV	Marv??o	3.04	336	ePg	Pb	17 19 42.9	+0.4
PMRV				eSg	Sg	17 20 25.3	-1.2
PMRV				A	A	17 20 29.9	
	comp=N,751nm,0.6s						
CHAS	Isla Isabel II	3.09	117	P	Pn	17 19 36.0	-0.7
CHAS				S	Sn	17 20 12.6	-0.7
PMTG	Montargil	3.09	322	ePn	Pn	17 19 36.4	-0.4
PMTG	Montargil	3.09	322	ePg	Pb	17 19 45.5	+2.3
PMTG				eSg	Sb	17 20 25.2	+4.5
PMTG				A	A	17 20 35.9	
	comp=N,280nm,0.5s						
PAB	San Pablo	3.09	21	Pn	Pn	17 19 36.9	0.0
PAB				Pg	Pb	17 19 46.4	+3.0
PAB				Sg	Sg	17 20 26.9	-1.2
PAB				i Vmb_Lg		17 20 34.2	
PAB	San Pablo	3.09	21	P	Pg	17 19 47.5	-0.5
PACT	Alcochete	3.21	312	ePn	Pn	17 19 39.2	+0.8
PACT				eSg	Sg	17 20 34.3	+2.5
PACT				A	A	17 20 38.5	
	comp=N,504nm,0.8s						
ZHG	ZHG	3.28	193	P	Pn	17 19 38.7	-0.9
ESDC	Sonseca Array	3.33	25	Pn	Pn	17 19 40.9	+0.7
	comp=N,3.2nm,0.3s,baz=205,slow=12,SNR=52						
ESDC				Lg	Lg	17 20 35.1	
	comp=N,52nm,0.3s,baz=213,slow=30,SNR=16						
	comp=N,5.3nm,0.3s						
ESDC	Sonseca Array	3.33	25	Pn	Pn	17 19 41.3	+1.1
ESDC				Pg	Pb	17 19 49.5	+2.0
ESDC				Sn	Sn	17 20 18.6	-0.9
ESDC				Sg	Sg	17 20 34.0	-1.7
ESDC				i Vmb_Lg		17 20 47.0	
LIS	Lisbon	3.37	309	ePg	Pb	17 19 51.4	+3.3
LIS				eSg	Sg	17 20 36.4	-0.6
LIS				A	A	17 20 57.0	
	comp=N,280nm,0.6s						
PMST	Lisbon--Monsan	3.41	309	ePg	Pb	17 19 51.9	+3.3
PMST				eSg	Sg	17 20 36.2	-1.9
PMST				A	A	17 21 04.1	
	comp=N,323nm,0.6s						
PCBR	Castelo Branco	3.45	338	ePn	Pn	17 19 42.0	+0.3
PCBR				eSg	Sg	17 20 37.5	-1.9
PCBR				A	A	17 20 45.8	
	comp=N,342nm,0.6s						

EZAR	Zarzadilla de	3.48	68	Sn	Sn	17 20 24.4	+1.3
EZAR				Sg	Sg	17 20 41.9	+1.6
JBK	JBK	3.50	131	P	Pn	17 19 46.0	+3.4
PMAFR	Mafra	3.60	311	*e*Pn	Pn	17 19 44.1	+0.3
PMAFR				*e*Sg	Sg	17 20 43.5	-0.8
PMAFR				A	A	17 20 51.5	
	comp=N,311nm,0.4s						
AVE	Averroes	3.61	202	P	Pn	17 19 42.8	-1.2
AVE				S	Sn	17 20 22.5	-3.8
PSBE	So Bento	3.71	321	*e*Pn	Pn	17 19 45.8	+0.4
PSBE	So Bento	3.71	321	*e*Pg	Pg	17 19 58.5	-1.3
PSBE				*e*Sg	Sg	17 20 46.9	-1.1
PSBE				A	A	17 20 55.5	
	comp=N,384nm,0.6s						
EMUR	La Murta	3.81	71	Pn	Pn	17 19 49.0	+2.3
ETOB	Tobarra	3.90	58	Pn	Pn	17 19 47.8	-0.1
ETOB				Sn	Sn	17 20 33.9	+0.4
ETOB				Sg	Sb	17 20 50.4	+6.3
ETOB				*i* Vmb_Lg		17 21 09.8	
CART	Cartagena	3.93	75	P	Pn	17 19 42.6	-5.7
CART				S	Sn	17 20 23.9	-10
MDT	Midelt	3.96	166	Pn	Pn	17 19 48.5	-0.3
	comp=N,6.5nm,0.3s,baz=202,slow=9.4,SNR=82						
MDT				Sn	Sn	17 20 30.3	-4.6
	comp=N,14nm,0.3s,baz=181,slow=21,SNR=11						
	comp=N,25nm,0.3s						
MTE	Manteigas	3.98	340	*e*Pn	Pn	17 19 49.6	+0.5
MTE				*e*Sg	Sb	17 20 52.7	+6.2
MTE				A	A	17 21 03.5	
	comp=N,756nm,0.6s						
PCAS	Casmilo, Conde	4.01	329	*e*Pn	Pn	17 19 49.6	+0.2
PCAS				*e*Sg	Sg	17 20 56.3	-1.0
PCAS				A	A	17 21 11.5	
	comp=N,291nm,0.6s						
COI	Coimbra	4.10	331	*e*Pn	Pn	17 19 51.1	+0.4
COI				*e*Sg	Sg	17 21 00.6	+0.2
COI				A	A	17 21 13.4	
	comp=N,653nm,0.6s						
UCM	Universidad Co	4.15	28	S	Sn	17 20 39.5	-0.1
GUD	Guadarrama	4.18	17	Pn	Pn	17 19 52.6	+0.7
GUD				Sn	Sn	17 20 39.7	-0.7
GUD				Sg	Sb	17 20 58.7	+6.6
GUD				*i* Vmb_Lg		17 21 09.6	
PVIS	Viseu	4.38	338	*e*Pn	Pn	17 19 55.2	+0.7
PVIS				*e*Sg	Sb	17 21 04.7	+6.9
PVIS				A	A	17 21 19.2	
	comp=N,182nm,0.7s						
MVO	Moncorvo	4.60	348	*e*Pn	Pn	17 19 57.9	+0.2
MVO				*e*Sg	Sb	17 21 12.0	+7.7
MVO				A	A	17 21 29.2	
	comp=N,335nm,0.6s						
ECHE	Chera	4.79	51	Pn	Pn	17 20 00.3	+0.1
ECHE				Sg	Sg	17 21 19.2	-3.2
ECHE				*i* Vmb_Lg		17 21 37.4	
PVRL	Vila Real	4.85	342	*e*Pn	Pn	17 20 02.5	+1.5
PVRL				*e*Sn	Sn	17 20 53.4	-3.5
PVRL				*e*Sg	Sg	17 21 22.6	-1.8
PVRL				A	A	17 21 35.6	
	comp=N,180nm,0.7s						
EBEN2	Beniarda presa	4.87	64	Pn	Pn	17 20 01.1	-0.2
EBEN2				Sn	Sn	17 20 58.5	+1.2
EBEN2				*i* Vmb_Lg		17 21 55.2	
POLO	Lamas de Olo	4.96	342	*e*Pn	Pn	17 20 03.4	+0.8
POLO				*e*Sn	Sn	17 20 58.2	-1.5
POLO				*e*Sg	Sg	17 21 24.7	-3.3
POLO				A	A	17 21 28.9	
	comp=N,83nm,0.5s						
PTO	Porto	4.99	335	*e*Sn	Sn	17 20 58.2	-1.9
PTO				*e*Sg	Sb	17 21 23.2	+8.0
PTO				A	A	17 21 41.2	
	comp=N,203nm,0.2s						
ETOR	Torete	5.07	34	Pn	Pn	17 20 04.6	+0.5
ETOR				Sn	Sn	17 21 03.1	+0.8
ETOR				Sg	Sb	17 21 26.4	+8.6
ETOR				*i* Vmb_Lg		17 21 42.7	
PBRG	Braganca	5.19	352	*e*Pn	Pn	17 20 06.1	+0.4
PBRG				*e*Sn	Sn	17 21 05.7	+0.4
PBRG				*e*Sg	Sg	17 21 32.6	-2.7
PBRG				A	A	17 21 44.5	
	comp=N,147nm,0.5s						
PCAB	Cabril	5.34	342	*e*Sn	Sn	17 21 05.0	-3.9
PCAB				*e*Sg	Sb	17 21 31.1	+5.7
PCAB				A	A	17 21 51.8	
	comp=N,212nm,0.6s						
ELOB	Lobios	5.50	342	Pn	Pn	17 20 11.9	+1.9
ELOB				Sn	Sn	17 21 10.5	-2.3
ELOB				Sg	Sg	17 21 40.8	-4.3
EMOS	Mosqueruela	5.57	47	Pn	Pn	17 20 11.7	+0.7
EMOS				Sn	Sn	17 21 14.7	0.0
EMOS				Sg	Sb	17 21 41.4	+9.3
EMOS				*i* Vmb_Lg		17 21 51.9	
PGAV	Gavieira, Arco	5.64	341	*e*Pn	Pn	17 20 12.8	+0.9
PGAV				*e*Sn	Sn	17 21 15.7	-0.7
PGAV				*e*Sg	Sg	17 21 45.4	-4.3
PGAV				A	A	17 22 03.2	
	comp=N,171nm,0.8s						
EZAM	Zamans	5.93	338	Sg	Sg	17 21 54.9	-4.0
ECOL	Islas Columbre	6.02	56	Pn	Pn	17 20 18.8	+1.7
EIBI	Ibiza	6.11	65	Sn	Sn	17 21 24.7	-3.2
EAGO	Agolada(Pontev	6.39	345	Pn	Pn	17 20 24.1	+2.0
EAGO				Sn	Sn	17 21 34.2	-0.5
EAGO				Sg	Sg	17 22 07.4	-6.3
EAGO				*i* Vmb_Lg		17 22 28.3	
ERTA	Horta de San J	6.42	46	Pn	Pn	17 20 23.0	+0.5
ERTA				Sg	Sg	17 22 08.5	-6.1
ERTA				*i* Vmb_Lg		17 22 43.6	
TTIG	Tnine Tigouga,	6.49	201	P	Pn	17 20 21.0	-2.7
ESAC	San Caprasio	6.52	38	Pn	Pn	17 20 25.5	+1.5
ESAC				Sn	Sn	17 21 41.6	+3.6
ESAC				Sg	Sg	17 22 14.0	-4.0
EMAZ	Mazaricos	6.75	340	Sg	Sg	17 22 21.1	-4.0
ELAN	Lanestosa	6.81	15	Pn	Pn	17 20 28.1	+0.2
ELAN				Sn	Sn	17 21 42.1	-2.9
ELAN				Sg	Sg	17 22 24.9	-2.1
EPOB	Poblet	7.10	47	Pn	Pn	17 20 32.7	+0.7
EPOB				Sg	Sg	17 22 31.5	-5.0
EPOB				*i* Vmb_Lg		17 22 58.6	
EORO	Oroz-Betelu	7.11	28	Pn	Pn	17 20 33.6	+1.5
EORO				Sn	Sn	17 21 53.1	+0.5
EORO				Sg	Sg	17 22 33.8	-3.0
EALK	Alkurruntz	7.33	25	Pn	Pn	17 20 35.8	+0.7
EALK				Sn	Sn	17 21 55.7	-2.2
SJPF	Ste Jean	7.33	27	*e*Pn	Pn	17 20 36.1	+1.0
SJPF				*e*Sn	Sn	17 21 55.8	-2.2
SJPF				*e*Sg	Sg	17 22 43.4	-0.5
	comp=N,21nm,0.5s						
ETSF	Etsaut	7.41	31	*e*Pn	Pn	17 20 37.1	+0.9
ETSF				*e*Sn	Sn	17 21 57.0	-3.0
ETSF				*e*Sg	Sg	17 22 45.2	-1.3
	comp=N,2.8nm,0.3s						
ETOS	Mallorca	7.44	63	Pn	Pn	17 20 37.9	+1.3
ETOS				*i* Vmb_Lg		17 22 11.8	
ECHI	Chisagues Biel	7.56	36	Pn	Pn	17 20 39.4	+1.0
ECHI				Sn	Sn	17 22 03.9	+0.2
ECHI				Sg	Sb	17 22 48.6	+19
ECHI				*i* Vmb_Lg		17 23 19.0	
EMIR	Miracle	7.72	45	Sg	Sb	17 22 57.6	+24
EPF	Esparros	7.91	35	*e*Pn	Pn	17 20 44.0	+0.9
EPF				*e*Sn	Sn	17 22 10.3	-2.0
EPF				*e*Sg	Sb	17 23 00.2	+21
	comp=N,25nm,0.5s						
EJON	La Jonquera	8.84	47	Sg	Sn	17 23 29.2	+54
MTLF	Montolieu	9.06	40	*e*Pn	Pn	17 21 00.1	+1.3
MTLF				*e*Sn	Sn	17 22 35.8	-4.6
MTLF				*e*Sg		17 23 36.2	
	comp=N,16nm,0.6s						
LFF	La Frestale	9.63	29	*e*Pn	Pn	17 21 06.8	+0.2
LFF				*e*Sn	Sn	17 22 51.3	-3.1
	comp=N,1.0nm,0.3s						
CAF	Calviac	10.17	33	*e*Pn	Pn	17 21 14.9	+0.9
CAF				*e*Sn	Sn	17 23 03.7	-4.0
RJF	Les Rejaudoux	10.24	30	*e*Pn	Pn	17 21 14.1	-0.8
RJF				*e*Sn	Sn	17 23 03.8	-5.6
	comp=N,0.4nm,0.2s						
LASF	Ste Croix	10.43	42	*e*Pn	Pn	17 21 17.8	+0.3
LASF				*e*Sn	Sn	17 23 06.0	-8.1
LASF				*e*Sg		17 24 17.5	
	comp=N,12nm,0.8s						
MFF	Saint Martin d	10.79	21	*e*Pn	Pn	17 21 22.3	-0.1
MFF				*e*Sn	Sn	17 23 17.7	-5.0
	comp=N,4.1nm,0.5s						
TCF	Toulx Ste Croi	11.33	29	*e*Pn	Pn	17 21 30.6	+0.8
TCF				*e*Sn	Sn	17 23 29.9	-6.1
	comp=N,7.8nm,0.8s						
VIVF	Saint-Julien-l	11.39	41	*e*Pn	Pn	17 21 33.6	+3.0
VIVF				*e*Sn	Sn	17 23 32.4	-5.1
VIVF				*e*Sg		17 24 49.2	
	comp=N,19nm,0.9s						
QUIF	Quistinic	11.41	9	*e*Pn	Pn	17 21 30.8	-0.1
QUIF				*e*Sn	Sn	17 23 32.3	-5.8
	comp=N,0.4nm,0.2s						
BGF	Bois d'Agland	11.80	30	*e*Pn	Pn	17 21 36.7	+0.4
BGF				*e*Sn	Sn	17 23 43.6	-4.0
ROSF	Rostrenen	11.81	8	*e*Pn	Pn	17 21 36.5	+0.1
SGMF	Saint Gilles	11.83	11	*e*Pn	Pn	17 21 36.3	-0.3
SGMF				*e*Sn	Sn	17 23 42.0	-6.2
	comp=N,1.2nm,0.3s						
ORIF	Oris-en-Rattie	12.08	43	*e*P	Pn	17 21 45.4	+5.2
ORIF				*e*Sn	Sn	17 23 50.0	-4.5
	comp=N,2.3nm,0.3s						
AVF	Avril sur Loir	12.20	31	*e*Pn	Pn	17 21 42.3	+0.6
AVF				*e*Sn	Sn	17 23 51.9	-5.3
	comp=N,1.0nm,0.3s						
GRR	Gorron	12.27	16	*e*Pn	Pn	17 21 41.1	-1.5
GRR				*e*Sn	Sn	17 23 52.8	-6.1
	comp=N,2.0nm,0.4s						
SMF	Signal de Mont	12.29	33	*e*Pn	Pn	17 21 41.5	-1.5
SMF				*e*Sn	Sn	17 23 52.2	-7.3
	comp=N,1.1nm,0.3s						
MBDF	Montbardon	12.46	46	*e*P	Pn	17 21 52.5	+7.0
MBDF				*e*Sn	Sn	17 24 01.0	-3.0
	comp=N,7.0nm,0.6s						
SSF	Saint Saulge	12.47	31	*e*Pn	Pn	17 21 45.5	0.0
LDF	La Druitiere	12.63	17	*e*Pn	Pn	17 21 47.1	-0.5
LDF				*e*Sn	Sn	17 24 01.4	-6.4
	comp=N,2.7nm,0.5s						
FLN	La Foliniere	12.70	16	*e*Pn	Pn	17 21 47.3	-1.3
	baz=199						
FLN				*e*Sn	Sn	17 24 02.2	-7.4
	comp=N,2.1nm,0.4s						
LOR	Lormes	12.79	31	*e*Pn	Pn	17 21 49.0	-0.7
	baz=210						
LOR				*e*Sn	Sn	17 24 03.1	-8.6
	comp=N,0.8nm,0.4s						
LOR				*e*Sg		17 25 32.7	
	comp=N,0.3nm,0.2s						
LPG	La Plagne	12.92	43	*e*Pn	Pn	17 21 54.5	+2.7
LPG				*e*Sn	Sn	17 24 09.3	-6.1
	comp=N,9.9nm,0.9s						
LPL	La Plagne	12.92	43	*e*P	Pn	17 21 56.2	+4.4
LPL				*e*Sn	Sn	17 24 11.8	-3.5
	comp=N,4.5nm,0.7s						
CABF	La Chapelle	13.31	38	*e*Pn	Pn	17 21 57.8	+0.8
CABF				*e*Sn	Sn	17 24 17.8	-6.8
	comp=N,3.5nm,0.5s						
HAU	Haudompre	14.43	34	*e*Sg		17 26 24.3	
	comp=N,74nm,1.5s						
CDF	Champ du Feu	15.16	35	*e*Pn	Pn	17 22 23.0	+0.9
CDF				*e*Sn	Sn	17 25 03.6	-6.0
	comp=N,0.9nm,0.3s						
BAIF	Baives	15.21	25	*e*Pn	Pn	17 22 23.1	+0.4
BAIF				*e*Sn	Sn	17 25 00.1	-11
	comp=N,1.9nm,0.4s						
GIVF	Givet	15.47	26	*e*P	P	17 22 30.3	-0.2
GERES	GERESS Array B	18.72	43	P	Pn	17 23 10.1	+3.1
	comp=N,0.1nm,0.3s,baz=220,slow=12,SNR=6.2						
	comp=N,1.0nm,1.0s						
KHC	Kasperske Hory	18.81	42	*e*P	Pn	17 23 11.1	+3.1
KHC				AMS	AMS	17 37 40.0	
	comp=N,700nm,18.4s						
NKC	Novy Kostel	18.88	38	AMS	AMS	17 37 20.0	
	comp=N,800nm,15.7s						
PRU	Pruhonice	19.82	41	AMS	AMS	17 38 10.0	
	comp=N,800nm,17.8s						
CLL	Collm	19.84	37	*e*P	P	17 23 20.0	+1.3
CLL				*e*SSS	SSS	17 27 30.0	
TREC	Trest	19.95	44	AMS	AMS	17 38 20.0	
	comp=N,800nm,16.4s						
PVCC	Panska Ves	20.14	40	AMS	AMS	17 38 20.0	
	comp=N,900nm,17.4s						
UPC	Upice	20.89	42	AMS	AMS	17 38 40.0	
	comp=N,900nm,19.0s						
CHVC	Chvalec	20.96	42	AMS	AMS	17 38 40.0	
	comp=N,800nm,17.6s						
DPC	Dobruska-Polom	20.97	42	AMS	AMS	17 39 20.0	
	comp=N,800nm,18.0s						
OSTC	Ostas	21.02	42	AMS	AMS	17 39 00.0	
	comp=N,800nm,17.4s						
KRLC	Kraliky	21.08	43	*e*P	P	17 23 36.8	+4.6
KRLC				AMS	AMS	17 39 20.0	
	comp=N,900nm,18.0s						
MAUC	Maruska	21.32	46	*e*P	P	17 23 37.3	+2.5
MAUC				AMS	AMS	17 39 40.0	
	comp=N,1µm,17.4s						
OKC	Ostrava-Krasne	21.73	45	AMS	AMS	17 40 00.0	
	comp=N,1µm,17.4s						
TORD	Torodi Ar. Bea	24.35	162	P	P	17 24 05.4	-0.6
	comp=N,6.5nm,0.4s,baz=335,slow=9.7,SNR=3.4						
BORG	Borgarnes	29.62	347	LR	LR	17 35 24.7	
	comp=N,79nm,19.5s,baz=169,slow=34						
FINES	FINESS Array B	31.84	29	P	P	17 25 14.4	+2.0
	comp=N,1.6nm,0.9s,baz=233,slow=6.8,SNR=2.7						
	comp=N,1.6nm,0.9s						
FRB	Frobisher Bay	45.89	327	LR	LR	17 44 02.3	
	comp=N,76nm,20.3s,baz=1.5,slow=33						
MKAR	Makanchi Array	63.22	50	P	P	17 29 17.5	+1.4
	comp=N,0.4nm,0.8s,baz=313,slow=3.0,SNR=2.5						
	comp=N,0.4nm,0.8s						
YKA	Yellowknife Ar	66.05	331	P	P	17 29 35.5	+1.3
	comp=N,0.5nm,0.7s,baz=66,slow=6.6,SNR=4.3						
	comp=N,0.5nm,0.7s						

MOS ***10*** *17:20:58.2±1.6, 57°.48N×33°.07W, h10^{km}, mb4.9/28, MS4.2/9, Error ellipse: s-maj=9.3km s-min=6.4km az=58.6*

IDC ***10*** *17:20:59.9±0.5, 57°.60N×32°.96W, h0^{km}, mb4.3/31, mbtmp4.3/35, ML3.7/4, MS4.1/63, Error ellipse: s-maj=14.5km s-min=9.5km az=179.0*

GCMT ***10*** *17:20:59.8±0.2, 57°.68N±0°.03×32°.80W±0°.03, h12^{km}, MW4.9/107, Moment Tensor Solution. s29,c31; s107,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.57±.07; $M_{\theta\theta}$0.17±.08; $M_{\phi\phi}$2.40±.05; $M_{r\theta}$0.50±.28; $M_{\theta\phi}$0.66±.06; $M_{\phi r}$-0.13±.27; Best double couple: $M_0$2.62400×10^{16} NP1:ϕ_s5.00000°, δ46.00000°, λ-105.00000°. NP2:ϕ_s206.00000°, δ46.00000°, λ-75.00000°. Principal axes: T 2.5790, Plg0.0000°, Azm285.0000°; N 0.0940, Plg11.0000°, Azm15.0000°; P -2.6690, Plg79.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *17:20:59.8±1.9, 57°.58N±0°.03×32°.9W±0°.1, h10^{km}±1^{km}, mb5.0/280 Error ellipse: s-maj=11.6km s-min=4.9km az=108.0*

ISC 10 17:21:00.1±0.3**, 57°.60N**±0°.05×**33°.02W**±0°.04**, h10**^{km}**, n663,** σ1^{s}**71**/589**, mb4.9**/208**, MS4.1**/77**, 25C-10D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NRS	Narsarsuaq	7.27	305	Pn	Pn	17 22 44.5	-1.7
NRS				Sn	Sn	17 24 04.7	-3.9
ANGG	Ammassalik, Gr	8.34	347	Pn	Pn	17 22 57.9	-2.9
IVI	Ivigtut	8.53	301	Pn	Pn	17 23 06.0	+2.5
BORG	Borgarnes	9.11	33	Pn	Pn	17 23 14.3	+2.9
	3.2nm,0.3s,baz=228,slow=4.3,SNR=15						
BORG				Sn	Sn	17 24 52.0	-1.8
	0.1nm,0.3s,baz=253,slow=19,SNR=1.5						
BORG				LR	LR	17 25 50.6	
	comp=Z,3µm,18.3s,baz=239,slow=32						
	8.7nm,0.3s						
BORG	Borgarnes	9.11	33	P	Pn	17 23 11.9	+0.5
BORG	Borgarnes	9.11	33	Pn	Pn	17 23 11.9	+0.5
SFJD	Kangerlussuaq	12.43	326	LR	LR	17 28 00.0	
	comp=Z,2µm,18.8s,baz=136,slow=34						
SFJD	Kangerlussuaq	12.43	326	P	Pn	17 24 00.4	+3.7
SFJD	Kangerlussuaq	12.43	326	Pn	Pn	17 24 00.4	+3.7
ILULI	Ilulissat	14.10	333	P	Pn	17 24 17.4	-2.2
ILULI	Ilulissat	14.10	333		Pn	17 24 17.4	-2.2
SUMG	Summit	15.20	354	P	Pn	17 24 32.3	-2.5
SUMG				pmax	pmax		
	comp=Z,38nm,1.2s						
SUMG	Summit	15.20	354	Pn	Pn	17 24 32.3	-2.5
ESK	Eskdalemuir	16.57	85	P	Pn	17 24 48.4	-3.8
ESK				pmax	pmax		
	comp=Z,135nm,1.7s						
ESK	Eskdalemuir	16.57	85	Pn	Pn	17 24 48.4	-3.8
EKA	Eskdalemuir Ar	16.59	85	Pn	Pn	17 24 53.2	+0.8
	baz=290,slow=9.7						
	comp=Z,2.0nm,0.6s						
DRLN	Deer Lake	16.74	251		Pn	17 24 55.7	+1.4
JMIC	Jan Mayen	16.92	28	LR	LR	17 30 04.0	
	comp=Z,257nm,18.1s,baz=246,slow=32						
FRB	Frobisher Bay	18.26	304	P	P	17 25 16.0	+2.6
	comp=Z,0.4nm,0.3s,baz=101,slow=12,SNR=4.8						
FRB				LR	LR	17 31 21.1	
	comp=Z,1µm,18.7s,baz=52,slow=34						
	comp=Z,7.5nm,0.9s						
SCHQ	Schefferville	18.89	276	P	Pn	17 25 22.5	+1.5
	comp=Z,0.5nm,0.3s,baz=69,slow=11,SNR=9.6						
SCHQ				LR	LR	17 31 32.0	
	comp=Z,1µm,18.4s,baz=101,slow=33						
	comp=Z,21nm,1.1s						
SCHQ	Schefferville	18.89	276	P	Pn	17 25 22.0	+0.9
CMLA	Cha da Macela	20.45	163	P	P	17 25 35.6	-2.0
CMLA				pmax	pmax		
	comp=Z,250nm,1.1s						
CMLA	Cha da Macela	20.45	163	P	P	17 25 35.6	-2.0
GBN	Guysborough	21.34	247	P	P	17 25 45.7	-1.3
KONO	Kongsberg	22.00	67	*ce*P	P	17 25 56.4	+2.3
KONO				pmax	pmax		
	comp=Z,49nm,1.7s						
KONO	Kongsberg	22.00	67	P	P	17 25 52.2	-1.9
KONO				IAmb	IAmb	17 26 04.9	
	comp=Z,96nm,1.8s						
NC204	NORSAR Array S	22.24	62	P	P	17 25 54.0	-2.6
NBO00	NORSAR Array S	22.29	63	P	P	17 25 56.4	-0.8
NAO01	NORSAR Array S	22.38	63	P	P	17 25 56.6	-1.4
BATG	Bathurst New B	22.41	257	P	P	17 25 59.3	+0.8
BATG				IAmb	IAmb	17 26 07.3	
	comp=Z,125nm,1.5s						
NB2	NORSAR Subarra	22.50	63	P	P	17 26 00.7	+1.3
	comp=Z,113nm,2.0s,baz=277,slow=9.3						
NB2	NORSAR Subarra	22.50	63	P	P	17 26 00.7	+1.3
	baz=277,slow=9.3						
NOA	NORSAR Array B	22.50	63	P	P	17 26 01.3	+1.9
	comp=Z,8.3nm,1.3s,baz=280,slow=9.6,SNR=11						
NOA				LR	LR	17 33 20.3	
	comp=Z,330nm,21.6s,baz=280,slow=33						
	comp=Z,8.3nm,1.3s						
NB201	NORSAR Array S	22.53	62	P	P	17 25 57.7	-2.1
NC303	NORSAR Array S	22.53	62	P	P	17 25 58.2	-1.6
LMN	Caledonia Moun	22.70	253	P	P	17 26 00.8	-0.9
LMN				IAmb	IAmb	17 26 07.8	
	comp=Z,76nm,1.4s						
NC602	NORSAR Array S	22.71	63	P	P	17 26 01.1	-0.5
NC405	NORSAR Array S	22.72	62	P	P	17 26 00.7	-1.0
TULEG	Thule	22.85	339	P	P	17 26 02.5	-0.4
CLF	Chambon-Foret	23.12	99	P	P	17 26 05.8	-0.2
PQI	Presque Isle	23.83	258	P	P	17 26 13.9	+0.8
PQI				IAmb	IAmb	17 26 20.9	
	comp=Z,52nm,1.4s						
HFS	Hagfors	23.89	64	LR	LR	17 34 02.3	
	comp=Z,360nm,22.0s,baz=266,slow=33						
D62A	Allapoint, All	24.11	260	P	P	17 26 16.6	+0.9
D62A				IAmb	IAmb	17 26 24.4	
	comp=Z,49nm,1.2s						
WLF	Walferdange	24.25	92	P	P	17 26 16.1	-0.8
WLF				pmax	pmax		
	comp=Z,12nm,1.1s						
WLF	Walferdange	24.25	92	P	P	17 26 16.1	-0.8
GGN	Saint George	24.25	254	P	P	17 26 19.2	+2.3
GGN				IAmb	IAmb	17 26 24.8	
	comp=Z,45nm,1.3s						
LMQ	La Malbaie	24.50	262	P	P	17 26 20.2	+0.9
F64A	Sherman	24.53	257	P	P	17 26 20.2	+0.7
EMMW	East Machias	24.85	254	P	P	17 26 23.3	+0.9
EMMW				IAmb	IAmb	17 26 29.9	
	comp=Z,36nm,1.1s						
PESTR	Estremoz	25.01	128	P	P	17 26 23.8	-0.1
F63A	Nahmakanta, Br	25.03	257	P	P	17 26 24.9	+0.8
DEL	Delary	25.15	72	*e*P	P	17 26 26.6	+1.6
PKME	Peaks-Kenny Pk	25.43	257	P	P	17 26 29.4	+1.8
PKME	Peaks-Kenny Pk	25.43	257	P	P	17 26 29.0	+1.4
	baz=48,SNR=8.4						
ECH	Echery	25.63	94	P	P	17 26 28.6	-0.9
ECH				pmax	pmax		
	comp=Z,18nm,1.5s						
ECH	Echery	25.63	94	P	P	17 26 28.6	-0.9
KBS	Kingsbay	25.78	18	P	P	17 26 29.1	-1.5
KBS				pmax	pmax		
	comp=Z,47nm,1.4s						
KBS	Kingsbay	25.78	18	P	P	17 26 29.1	-1.5
KBS				IAmb	IAmb	17 26 54.0	
	comp=Z,47nm,1.4s						
VIKU	Vikbolandet	25.84	67	*e*P	P	17 26 31.9	+0.7
UPP	Uppsala	25.87	63	*e*P	P	17 26 33.9	+2.4
PAB	San Pablo	25.89	122	P	P	17 26 31.4	-0.6
PAB				pmax	pmax		
	comp=Z,21nm,1.3s						
PAB	San Pablo	25.89	122	P	P	17 26 31.4	-0.6
LATQ	La Tuque	25.91	264	P	P	17 26 32.2	+0.2
LATQ				IAmb	IAmb	17 26 42.5	
	comp=Z,50nm,1.3s						
ESBB	Sonseca Array	25.96	121	P	P	17 26 30.8	-1.8
ESDC	Sonseca Array	25.96	121	P	P	17 26 34.0	+1.4
	comp=Z,4.4nm,1.1s,baz=318,slow=8.7,SNR=6.2						
ESDC				LR	LR	17 34 53.9	
	comp=Z,461nm,19.5s,baz=330,slow=32						
	comp=Z,4.4nm,1.1s						
ESDC	Sonseca Array	25.96	121	P	P	17 26 33.1	+0.6
PFVI	Vila Bisbo	25.97	132	P	P	17 26 32.5	-0.1
WVL	Waterville	26.09	256	P	P	17 26 34.8	+1.2
WVL				IAmb	IAmb	17 26 42.7	
	comp=Z,63nm,1.6s						
G62A	West of Eustis	26.11	258	P	P	17 26 34.3	+0.4
G62A				IAmb	IAmb	17 26 43.2	
	comp=Z,42nm,1.2s						
BFO	Black Forest	26.19	93	P	P	17 26 33.7	-0.9
BFO				pmax	pmax		
	comp=Z,16nm,1.3s						
BFO	Black Forest	26.19	93	P	P	17 26 33.7	-0.9
SPITS	Spitsbergen Ar	26.25	21	P	P	17 26 35.3	+0.4
SPITS				pmax	pmax		
	comp=Z,51nm,1.4s						
SPB2	Spitsbergen Ar	26.25	21	P	P	17 26 34.4	-0.5
SPB2				IAmb	IAmb	17 26 43.8	
	comp=Z,59nm,1.6s						
SENIN	Lac Senin/Sane	26.85	97	P	P	17 26 40.1	-0.6
H62A	Milan	26.87	258	P	P	17 26 41.9	+1.2
H62A				IAmb	IAmb	17 27 06.7	
	comp=Z,40nm,1.4s						
GRA1	Grafenberg Arr	26.96	88		P	17 26 41.1	-0.4
GRF	Grafenberg Arr	26.96	88	P	P	17 26 41.1	-0.4
GRF				pmax	pmax		
	comp=Z,33nm,1.7s						
GRFO	Grafenberg	26.96	88	P	P	17 26 40.8	-0.7
GRFO				pmax	pmax		
	comp=Z,14nm,1.3s						
GRFO	Grafenberg	26.96	88	P	P	17 26 40.8	-0.7
CLL	Collm	27.04	83	*i* P	P	17 26 43.2	+1.0
CLL				*i*		17 26 48.7	
CLL				MLR	MLR		
	comp=Z,800nm,18.2s						
CLL	Collm	27.04	83	P	P	17 26 41.5	-0.7
CLL	Collm	27.04	83	*i* P	P	17 26 43.2	+1.0
CLL				*i* x	x	17 26 48.7	
	comp=Z,16nm,1.7s						
CLL				Lm	MLR	17 37 00.0	
	comp=Z,800nm,18.2s						
CLL				Lmax		17 37 00.0	
CLL				LmV		18 27 00.0	
	comp=Z,100nm,18.8s						
BNI	Bardonecchia	27.37	100	P	P	17 26 44.4	-0.9
BNI				pmax	pmax		
	comp=Z,30nm,1.6s						
BNI	Bardonecchia	27.37	100	P	P	17 26 44.4	-0.9
ARCES	ARCESS Array B	27.41	41	P	P	17 26 45.8	+0.4
	comp=Z,4.1nm,0.8s,baz=271,slow=8.1,SNR=9.3						
ARCES				LR	LR	17 35 35.5	
	comp=Z,287nm,18.1s,baz=260,slow=32						
	comp=Z,4.1nm,0.8s						
ARCES	ARCESS Array B	27.41	41	P	P	17 26 44.6	-0.7
ARCES				pmax	pmax		
	comp=Z,69nm,1.7s						
ARCES	ARCESS Array B	27.41	41	P	P	17 26 44.6	-0.7
ARCES				IAmb	IAmb	17 26 50.8	
	comp=Z,69nm,1.6s						
LBNH	Lisbon	27.50	258	P	P	17 26 47.1	+0.7
	baz=47						
MNTQ	Montreal, Queb	27.56	262	P	P	17 26 46.6	-0.2

TRQ	Mont Tremblant	27.59	264	P	P	17 26 47.7	+0.5
EUNU	Eureka	27.67	343	P	P	17 26 48.0	+0.4
EUNU				IAmb	IAmb	17 27 17.9	
	comp=Z,48nm,1.8s						
BRG	Berggiesshubel	27.77	84	*e*x	x	17 26 52.3	
BRG				Amp		17 26 55.3	
	comp=Z,1.4nm,0.6s						
BRG				Amp		17 38 14.0	
	comp=N,0.5nm,14.6s						
BRG				Amp		17 38 17.0	
	comp=Z,0.9nm,16.7s						
BRG				Amp		17 38 21.0	
	comp=E,0.6nm,15.8s						
BRG	Berggiesshubel	27.77	84	*e*P	P	17 26 52.3	+3.5
BRG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRG				MLR	MLR		
	comp=N,470nm,14.6s						
BRG				MLR	MLR		
	comp=Z,920nm,16.7s						
BRG				MLR	MLR		
	comp=E,640nm,15.8s						
TUE	Stuetta	27.87	95	P	P	17 26 48.8	-1.2
TUE				IAmb	IAmb	17 27 46.0	
	comp=Z,41nm,1.9s						
DAVOX	Davos/Dischmat	27.97	94	LR	LR	17 37 21.1	
	comp=Z,813nm,20.0s,baz=268,slow=35						
FRNY	Flat Rock	27.98	261	P	P	17 26 52.2	+1.5
FRNY				IAmb	IAmb	17 27 02.3	
	comp=Z,28nm,1.4s						
VLDQ	Val d'Or	27.98	270	P	P	17 26 51.8	+1.2
RES	Resolute Bay	28.38	330	P	P	17 26 55.4	+1.5
	comp=Z,3.1nm,1.0s,baz=67,slow=5.9,SNR=3.9						
RES				LR	LR	17 37 43.8	
	comp=Z,239nm,18.2s,baz=81,slow=35						
	comp=Z,3.1nm,1.0s						
RES	Resolute Bay	28.38	330	P	P	17 26 53.9	0.0
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RES	Resolute Bay	28.38	330	P	P	17 26 53.9	0.0
J61A	Chester	28.45	257	P	P	17 26 56.0	+1.2
J61A				IAmb	IAmb	17 27 06.3	
	comp=Z,36nm,1.6s						
HRV	Adam Dziewonsk	28.52	255	P	P	17 26 55.4	-0.1
	baz=44						
KHC	Kasperske Hory	28.55	87	P	P	17 26 55.3	-0.4
KHC				pmax	pmax		
	comp=Z,11nm,1.7s						
KHC	Kasperske Hory	28.55	87	P	P	17 26 55.3	-0.4
LONY	Lake Ozonia	28.65	261	P	P	17 26 57.8	+1.2
LONY	Lake Ozonia	28.65	261	P	P	17 26 57.3	+0.6
	baz=48						
K62A	Royalston	28.75	256	P	P	17 26 58.5	+1.0
K62A				IAmb	IAmb	17 27 33.4	
	comp=Z,35nm,1.4s						
GEC2	GERESS Array S	28.78	87	P	P	17 26 56.5	-1.3
GERES	GERESS Array B	28.78	87	LR	LR	17 38 18.7	
	comp=Z,533nm,18.2s,baz=350,slow=36						
GERES	GERESS Array B	28.78	87	P	P	17 26 56.6	-1.3
GERES	GERESS Array B	28.78	87	P	P	17 26 56.6	-1.3
NCB	Newcomb	28.90	260	P	P	17 26 59.4	+0.6
NCB				IAmb	IAmb	17 27 10.3	
	comp=Z,42nm,1.9s						
ACCN	Adirondack Com	29.00	258	P	P	17 26 59.5	-0.3
KLNR	Kaliningrad	29.20	73	*i* P	P	17 27 03.6	+2.2
KLNR				pmax	pmax		
	comp=Z,39nm,0.8s						
FINES	FINESS Array B	29.32	57	P	P	17 27 03.9	+1.5
	comp=Z,3.8nm,0.8s,baz=280,slow=11,SNR=4.0						
	comp=Z,3.8nm,0.8s						
FINES	FINESS Array B	29.32	57	P	P	17 27 02.0	-0.4
FINES	FINESS Array B	29.32	57	P	P	17 27 02.0	-0.4
FIA1	FINESS Array S	29.32	57	P	P	17 27 01.8	-0.5
J59A	Piesco	29.39	259	P	P	17 27 04.3	+1.0
J59A				IAmb	IAmb	17 27 13.5	
	comp=Z,48nm,1.9s						
STAL	STALIGIAL	29.81	92	P	P	17 27 04.9	-2.0
J58A	Remsen	29.88	260	P	P	17 27 08.0	+0.5
VRAC	Vranov	30.06	84	LR	LR	17 39 14.0	
	comp=Z,639nm,18.6s,baz=294,slow=36						
ZCCA	Zocca	30.12	97	P	P	17 27 08.9	-0.9
J57A	Williamstown	30.22	261	P	P	17 27 11.0	+0.5
J57A				IAmb	IAmb	17 27 21.6	
	comp=Z,25nm,1.4s						
MORC	Moravsky Berou	30.30	83	P	P	17 27 10.4	-0.9
MORC				pmax	pmax		
	comp=Z,27nm,2.0s						
MORC	Moravsky Berou	30.30	83	P	P	17 27 10.4	-0.9
MORC	Moravsky Berou	30.30	83	*e*P	P	17 27 13.0	+1.7
DELO	Deloro Mine	30.34	264	P	P	17 27 12.9	+1.3
DELO				IAmb	IAmb	17 27 19.7	
	comp=Z,41nm,1.6s						
PECO	Prince Edward	30.40	263	P	P	17 27 12.6	+0.6
L59A	Walton	30.56	258	P	P	17 27 13.6	-0.1
APA	Apatity	30.59	44	⇓*i*P	P	17 27 15.6	+2.0
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PABE	Paberze	30.69	69	P	P	17 27 13.4	-1.1
PABE	Paberze	30.69	69	*e*P	P	17 27 15.5	+1.0
VSU	Vasula	30.74	63	*i* P	P	17 27 15.8	+0.8
VSU				pmax	pmax		
	comp=Z,67nm,1.3s						
VSU	Vasula	30.74	63	*e*P	P	17 27 15.7	+0.7
J56A	Wolcott	30.77	261	P	P	17 27 15.4	+0.1
PAL	Palisades	30.82	255	P	P	17 27 15.4	-0.4
	baz=43						
TRNY	Table Rock, Ra	30.88	256	P	P	17 27 17.2	+0.8
TRNY				IAmb	IAmb	17 27 24.3	
	comp=Z,22nm,1.4s						
K57A	Scipio Center	30.96	260	P	P	17 27 19.1	+2.0
K57A				IAmb	IAmb	17 27 25.2	
	comp=Z,17nm,1.1s						
SADO	Sadowa	30.99	266	LR	LR	17 38 28.5	
	comp=Z,936nm,19.1s,baz=56,slow=34						
SADO	Sadowa	30.99	266	P	P	17 27 18.1	+0.7
SADO				IAmb	IAmb	17 27 25.1	
	comp=Z,26nm,1.1s						
SUW	Suwalki	31.01	72	P	P	17 27 17.6	+0.2
SUW				pmax	pmax		
	comp=Z,52nm,1.5s						
SUW	Suwalki	31.01	72	P	P	17 27 17.6	+0.2
SUW	Suwalki	31.01	72	*e*P	P	17 27 18.8	+1.4
BINY	Binghamton	31.05	259	P	P	17 27 19.9	+2.0
BINY				IAmb	IAmb	17 27 37.8	
	comp=Z,38nm,1.8s						
FCC	Fort Churchill	31.25	298	P	P	17 27 20.2	+0.8
FCC				pmax	pmax		
	comp=Z,40nm,1.3s						
FCC	Fort Churchill	31.25	298	P	P	17 27 20.2	+0.8
FCC				IAmb	IAmb	17 27 26.5	
	comp=Z,40nm,1.3s						
OJC	Ojcow	31.25	81	P	P	17 27 19.2	-0.4
OJC				pmax	pmax		
	comp=Z,34nm,1.9s						
OJC	Ojcow	31.25	81	P	P	17 27 19.1	-0.4
OJC				IAmb	IAmb	17 27 28.4	
	comp=Z,34nm,1.9s						
KSPA	Keystone Colle	31.39	258	P	P	17 27 22.1	+1.2
KSPA				IAmb	IAmb	17 27 38.5	
	comp=Z,21nm,1.4s						
MDT	Midelt	31.43	130	P	P	17 27 23.5	+2.1
	comp=Z,4.0nm,0.9s,baz=315,slow=1.4,SNR=2.6						
MDT				LR	LR	17 38 41.4	
	comp=Z,233nm,19.2s,baz=343,slow=34						
	comp=Z,4.0nm,0.9s						
MURB	Monte Urbino	31.68	97	P	P	17 27 23.4	-0.2
MURB				IAmb	IAmb	17 27 56.7	
	comp=Z,46nm,1.8s						
MMNY	Mt. Morris Dam	31.70	262	P	P	17 27 24.7	+1.1
MMNY				IAmb	IAmb	17 27 31.8	
	comp=Z,35nm,1.2s						
LUPA	Lehigh Univers	31.87	256	P	P	17 27 24.8	-0.3
LUPA				IAmb	IAmb	17 27 30.0	
	comp=Z,41nm,2.0s						
L56A	Greenwood	31.93	261	P	P	17 27 26.5	+0.8
L56A				IAmb	IAmb	17 27 40.5	
	comp=Z,16nm,1.2s						
M57A	Sunshine Farm,	32.27	259	P	P	17 27 29.8	+1.2
M57A				IAmb	IAmb	17 27 39.9	
	comp=Z,17nm,1.3s						
NRCA	Norcia	32.29	97	P	P	17 27 26.5	-2.4
NRCA				IAmb	IAmb	17 28 23.1	
	comp=Z,12nm,0.7s						
WVNY	West Valley, N	32.30	262	P	P	17 27 29.5	+0.6
WVNY				IAmb	IAmb	17 28 12.8	
	comp=Z,50nm,1.8s						
NACGM	Naroch	32.40	69	⇓*e*P	P	17 27 29.9	+0.3
	baz=300						
N58A	Sunbury	32.41	258	P	P	17 27 31.6	+1.8
N58A				IAmb	IAmb	17 28 02.2	
	comp=Z,47nm,2.0s						
PSZ	Piszkesteto	32.65	84	P	P	17 27 31.2	-0.8
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PSZ	Piszkesteto	32.65	84	P	P	17 27 31.2	-0.8
E46A	Sault Ste Mari	32.74	272	P	P	17 27 33.0	+0.3
MVL	Millersville	32.82	257	P	P	17 27 34.7	+1.2
PAGS	Pennsylvania G	32.85	257	P	P	17 27 34.6	+0.9
PAGS				IAmb	IAmb	17 27 44.7	
	comp=Z,33nm,1.4s						
MORH	Mrgy, Hungar	33.04	87	⇑P	P	17 27 36.2	+0.9
M55A	Ridgway	33.04	261	P	P	17 27 36.0	+0.6
M55A				IAmb	IAmb	17 27 43.7	
	comp=Z,32nm,1.2s						
KWP	Kalwaria Pacla	33.13	79	P	P	17 27 35.5	-0.6
KWP				pmax	pmax		
	comp=Z,446nm,1.9s						
KWP	Kalwaria Pacla	33.13	79	P	P	17 27 35.5	-0.6
MNK	Minsk	33.15	69	*i* P	P	17 27 35.9	-0.2
MNK				*i*		17 28 45.1	
MNK				*i*		17 30 22.3	
MNK				*i* S	S	17 32 55.2	0.0
MNK				*i* SS	SnSn	17 34 59.5	+5.6
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				MLR	MLR		
	comp=N,197nm,19.0s						
MNK				MLR	MLR		
	comp=E,41nm,19.0s						
MNK				MLR	MLR		
	comp=Z,436nm,21.0s						
MNK	Minsk	33.15	69	*i* P	P	17 27 36.0	-0.2
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	17 27 36.0	-0.2
	comp=N,6.0nm,0.8s						
MNK				*i* P	P	17 27 36.0	-0.2
	comp=Z,11nm,0.8s,baz=301						
MNK				*i* PP	PnPn	17 28 45.1	-0.6
MNK				*i* PPP	PPP	17 28 55.5	
MNK				*i* S	S	17 32 55.2	0.0
MNK				*i* SS	SnSn	17 34 59.5	+5.6
MNK				*i* LR	LR	17 37 54.8	
MNK				*i* LRM	MLR	17 40 23.7	
	comp=N,197nm,18.7s						
MNK				*i* LRM	MLR	17 40 28.9	
	comp=E,41nm,19.1s						
MNK				*i* LRM	MLR	17 40 29.5	
	comp=Z,436nm,20.9s						
SSPA	Standing Stone	33.17	259	P	P	17 27 37.7	+1.2
SSPA				IAmb	IAmb	17 27 44.1	
	comp=Z,32nm,1.8s						
SSPA	Standing Stone	33.17	259	P	P	17 27 37.0	+0.6
	baz=44						
UZH	Uzhgorod	33.50	81	*e*P	P	17 27 40.6	+1.3
UZH				*e*		17 27 45.7	
SDMD	Soldier's Deli	33.51	256	P	P	17 27 39.9	+0.4
SDMD				IAmb	IAmb	17 28 14.7	
	comp=Z,24nm,1.9s						
I49A	Point Hope	33.52	268	P	P	17 27 40.6	+1.1
LVV	L'vov	33.72	78	*e*P	P	17 27 43.5	+2.3
P57A	Homestead Farm	34.07	258	P	P	17 27 43.3	-1.0
P57A				IAmb	IAmb	17 27 56.4	
	comp=Z,36nm,1.5s						
M53A	WI Miller and	34.08	263	P	P	17 27 44.0	-0.4
M53A				IAmb	IAmb	17 27 52.9	
	comp=Z,22nm,1.1s						
FRGS	Fruska Gora	34.34	88	⇑P	P	17 27 47.7	+1.0
D41A	Chassel	34.59	277	P	P	17 27 49.9	+1.1
N53A	Lisbon	34.62	262	P	P	17 27 49.7	+0.6
O54A	Avella	34.82	261	P	P	17 27 51.1	+0.3
BZS	Buzias	35.02	86	⇓P	P	17 27 53.8	+1.3
BZS	Buzias	35.02	86	⇓P	P	17 27 53.8	+1.3
Q56A	Snyder Ridge,	35.02	258	P	P	17 27 53.7	+1.2
R58B	Mineral	35.13	256	P	P	17 27 53.4	-0.1
O53A	New Philadelph	35.21	262	P	P	17 27 55.3	+1.1
	baz=44						
HORU	Horodok	35.34	77	P	P	17 27 56.4	+1.2
M50A	Fremont	35.37	265	P	P	17 27 55.4	-0.1
KLMR	Klimovskoe	35.52	53	*e*P	P	17 27 55.6	-1.0
KLMR				pmax	pmax		
	comp=Z,111nm,1.4s						
KLMR	Klimovskoe	35.52	53	*e*P	P	17 27 55.6	-1.0
KLMR				AMP		17 28 06.5	
	comp=Z,111nm,1.4s						
KLMR				LQ	LQ	17 39 42.7	
KLMR				LQ	LQ	17 39 42.7	
KLMR				LR	LR	17 40 51.8	
KEST	Kesra	35.55	109	LR	LR	17 40 48.8	
	comp=Z,384nm,21.1s,baz=284,slow=34						
KEST	Kesra	35.55	109	P	P	17 27 55.9	-1.4
KEST				IAmb	IAmb	17 28 23.8	
	comp=Z,48nm,1.6s						
O52A	Adamsville	35.64	262	P	P	17 27 58.0	+0.1
BUR08	Bucovina Ar. S	35.65	80	P	P	17 27 56.2	-1.8
BURAR	Bucovina Array	35.68	80	P	P	17 28 00.1	+1.8
BURAR	Bucovina Array	35.68	80	P	P	17 28 00.1	+1.8
BURAR	Bucovina Array	35.68	80	P	P	17 27 56.9	-1.3
GZR	Gura Zlata	35.78	85	⇑P	P	17 28 00.7	+1.6
GZR	Gura Zlata	35.78	85	⇑P	P	17 28 00.7	+1.6
AKASG	Malin Array Be	35.92	74	P	P	17 28 00.3	+0.1
	comp=Z,1.0nm,0.5s,baz=307,slow=8.4,SNR=17						
AKASG				LR	LR	17 42 14.8	
	comp=Z,314nm,19.8s,baz=340,slow=36						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	35.92	74	*i* P	P	17 28 01.2	+1.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKBB	Malin Array Si	35.92	74	P	P	17 27 58.0	-2.2
AKBB				pmax	pmax		
	comp=Z,38nm,1.6s						
AKBB	Malin Array Si	35.92	74	P	P	17 27 58.0	-2.2
AKBB				IAmb	IAmb	17 28 08.7	
	comp=Z,38nm,1.6s						
P52A	Corning	36.15	262	P	P	17 28 03.2	+1.0
	baz=44						
ACSO	Alum Creek Sta	36.17	263	P	P	17 28 03.0	+0.6
	baz=44						
ULM	Lac du Bonnet	36.51	286	P	P	17 28 05.7	+0.5
	comp=Z,7.2nm,0.7s,baz=5.7,slow=10,SNR=1.8						
ULM				LR	LR	17 41 52.9	
	comp=Z,697nm,18.1s,baz=70,slow=34						
	comp=Z,7.2nm,0.7s						
ULM	Lac du Bonnet	36.51	286	P	P	17 28 04.3	-0.9
ULM				pmax	pmax		
	comp=Z,40nm,1.3s						
ULM	Lac du Bonnet	36.51	286	P	P	17 28 04.3	-0.9
ULM				IAmb	IAmb	17 28 44.6	
	comp=Z,40nm,1.2s						
VAE	Valguarnera	36.84	102	LR	LR	17 41 18.2	
	comp=Z,442nm,21.8s,baz=320,slow=33						
SORM	Soroca	37.01	78	⇓P	P	17 28 13.4	+3.9
SORM	Soroca	37.01	78	⇓P	P	17 28 13.4	+3.9
OBN	Obninsk	37.10	63	LR	LR	17 42 34.5	
	comp=Z,81nm,19.8s,baz=337,slow=35						
OBN	Obninsk	37.10	63	⇑*e*P	P	17 28 09.9	-0.2
OBN				*e*		17 29 34.7	
OBN				*i* S	S	17 34 01.4	+5.6
OBN				pmax	pmax		
	comp=Z,44nm,1.7s						
MOS	Moscow	37.26	62	*e*P	P	17 28 11.3	-0.2
MOS				*e*		17 29 36.1	
MOS				pmax	pmax		
	comp=Z,33nm,1.2s						
O48B	Farmland	37.32	265	P	P	17 28 13.2	+1.0
	baz=44						
A36M	Sachs Harbour	37.41	329	P	P	17 28 12.7	+0.2
	baz=62						
MLR	Muntele Rosu	37.42	83	LR	LR	17 44 38.8	
	comp=Z,594nm,18.5s,baz=318,slow=38						
VRI	Vrincioaia	37.59	82	⇑P	P	17 28 19.0	+4.5
VRI	Vrincioaia	37.59	82	⇑P	P	17 28 19.0	+4.5
PRGR	Permogore	37.72	50	*e*P	P	17 28 19.2	+3.9
PRGR				*e*		17 29 46.2	
PRGR				*e*		17 30 36.9	
KIS	Kishinev	37.97	79	*e*P	P	17 28 25.0	+7.4
KIS				MLR	MLR		
	comp=Z,200nm,16.0s						
SPMN	Marine on St.	38.03	278	P	P	17 28 18.4	+0.2
	baz=49						
FNA	Florina	38.15	92	P	P	17 28 16.7	-2.6
FNA				pmax	pmax		
	comp=Z,13nm,1.0s						
FNA	Florina	38.15	92	P	P	17 28 16.7	-2.6
JFWS	Jewell Farm	38.21	273	P	P	17 28 18.9	-0.7
	baz=47						
SFIN	Lafayette	38.27	267	P	P	17 28 19.4	-0.8
	baz=45						
C36M	Paulatuk	38.34	325	P	P	17 28 19.4	-1.1
	baz=60						
YKA	Yellowknife Ar	38.47	312	P	P	17 28 22.4	+0.7
	comp=Z,4.4nm,0.9s,baz=59,slow=9.3,SNR=17						
YKA				PcP	PcP	17 30 35.2	+0.8
	comp=Z,2.3nm,0.9s,baz=56,slow=3.5,SNR=9.3						
YKA				LR	LR	17 43 36.5	
	comp=Z,2µm,18.3s,baz=54,slow=35						
	comp=Z,4.4nm,0.9s						
YKA	Yellowknife Ar	38.47	312	*i* P	P	17 28 26.7	+5.0
YKA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YKA	Yellowknife Ar	38.47	312	P	P	17 28 20.5	-1.2
CFR	Carcaliu	38.79	81	⇓P	P	17 28 23.8	-0.7
CFR	Carcaliu	38.79	81	⇓P	P	17 28 23.8	-0.7
TZTN	Tazewell	39.18	260	P	P	17 28 28.3	+0.4
	baz=41						
HDIL	Hopedale	39.33	269	P	P	17 28 30.1	+1.0
	baz=45						
MDND	Maddock	39.92	286	P	P	17 28 34.3	+0.3
	baz=50						
TKL	Tuckaleechee C	39.97	259	LR	LR	17 44 09.2	
	comp=Z,910nm,19.6s,baz=42,slow=35						
BG3	Lake Jocassee	40.03	258	P	P	17 28 35.1	+0.1
BG3				IAmb	IAmb	17 28 43.5	
	comp=Z,56nm,1.6s						
RDO	Rodhopi	40.14	88	P	P	17 28 34.5	-1.3
VORR	Voronezh	40.38	66	*e*P	P	17 28 39.6	+1.9
VORR				pmax	pmax		
	comp=Z,60nm,1.7s						
U49A	Red Boiling Sp	40.39	262	P	P	17 28 37.8	-0.2
SCIA	State Center	40.49	274	P	P	17 28 39.9	+1.1
	baz=46						
CPCT	Cooper Cave	40.52	260	P	P	17 28 38.3	-0.7
KIRV	Kirov	40.98	52	P	P	17 28 42.8	+0.3
	comp=Z,4.9nm,0.3s,baz=327,slow=5.6,SNR=7.5						
	comp=Z,4.9nm,0.3s						
KIRV	Kirov	40.98	52	*ce*P	P	17 28 44.6	+2.1
ECSD	EROS Data Cent	41.06	279	P	P	17 28 43.8	+0.3
ECSD				IAmb	IAmb	17 28 59.7	
	comp=Z,17nm,0.8s						
ECSD	EROS Data Cent	41.06	279	P	P	17 28 44.4	+1.0
	baz=47						
SWET	Sewanee	41.45	261	P	P	17 28 45.8	-0.9
GOGA	Godfrey	41.53	257	P	P	17 28 49.1	+1.7
	baz=39						
P40A	Paris	41.54	271	P	P	17 28 46.1	-1.3
P40A				IAmb	IAmb	17 29 51.0	
	comp=Z,36nm,0.8s						
WVT	Waverly	41.77	263	P	P	17 28 48.9	-0.4
WVT				pmax	pmax		
	comp=Z,13nm,1.1s						
WVT	Waverly	41.77	263	P	P	17 28 48.9	-0.4
WVT	Waverly	41.77	263	P	P	17 28 48.8	-0.4
	baz=41						
INK	Inuvik	41.77	327	P	P	17 28 49.6	+0.7
	comp=Z,12nm,1.2s,baz=33,slow=12,SNR=5.6						
INK				PcP	PcP	17 30 46.0	+1.2
	comp=Z,4.1nm,1.0s,baz=68,slow=5.6,SNR=3.0						
INK				LR	LR	17 44 46.2	
	comp=Z,300nm,21.8s,baz=40,slow=34						
	comp=Z,12nm,1.2s						
INK	Inuvik	41.77	327	P	P	17 28 48.4	-0.6
INK				pmax	pmax		
	comp=Z,25nm,1.4s						
INK	Inuvik	41.77	327	P	P	17 28 48.4	-0.6
INK	Inuvik	41.77	327	P	P	17 28 49.2	+0.2
	baz=52,SNR=13						
DGMT	Dagmar	41.88	289	P	P	17 28 49.3	-0.8
	baz=50						
SIM	Simferopol'	42.10	77	*e*P	P	17 28 58.0	+6.0
SIM				*e*		17 30 44.0	
SIM				*e*S	S	17 35 16.0	+4.8
SIM				*e*SSS	SSS	17 38 46.0	
SIM				pmax	pmax		
	comp=Z,20nm,0.5s						
SIM				MLR	MLR		
	comp=Z,274µm,17.0s						
CCM	Cathedral Cave	42.18	268	P	P	17 28 54.4	+1.8
CCM				pmax	pmax		
	comp=Z,26nm,0.6s						
CCM	Cathedral Cave	42.18	268	P	P	17 28 54.4	+1.8
CCM				IAmb	IAmb	17 29 46.8	
	comp=Z,26nm,0.6s						
CCM	Cathedral Cave	42.18	268	P	P	17 28 53.0	+0.3
	baz=43						
PLAL	Pickwick Lake	42.76	262	P	P	17 28 58.2	+0.8
EDM	Edmonton	43.31	300	P	P	17 29 01.2	-0.5
EDM				pmax	pmax		
	comp=Z,50nm,1.2s						
EDM	Edmonton	43.31	300	P	P	17 29 01.2	-0.5
EDM				IAmb	IAmb	17 29 08.9	
	comp=Z,50nm,1.2s						
MGMO	Mountain Grove	43.39	268	P	P	17 29 01.5	-1.0
LCAR	Lake Charles	43.60	266	P	P	17 29 04.4	+0.2
LCAR				IAmb	IAmb	17 29 44.8	
	comp=Z,18nm,0.7s						
LRAL	Lakeview Retre	43.68	260	P	P	17 29 04.7	-0.2
LRAL	Lakeview Retre	43.68	260	P	P	17 29 05.8	+0.9
	baz=39						
ANN	Anapa	43.94	75	*e*P	P	17 29 05.2	-1.6
ANN				*e*		17 30 53.4	
ANN				*e*S	S	17 35 35.4	-2.7
ANN				pmax	pmax		
	comp=Z,19nm,1.2s						
ANN				MLR	MLR		
	comp=Z,468nm,14.0s						
BELG	Belogornoye	43.98	61	P	P	17 29 08.2	+1.2
	comp=Z,18nm,0.8s,baz=162,slow=19,SNR=6.0						
BELG				LR	LR	17 46 19.7	
	comp=Z,246nm,20.3s,baz=329,slow=35						
	comp=Z,18nm,0.8s						
BELG	Belogornoye	43.98	61	*i* P	P	17 29 08.6	+1.6
BELG				pmax	pmax		
	comp=Z,9.0nm,1.9s						
IDI	Anoyia	44.06	95	LR	LR	17 48 58.2	
	comp=Z,223nm,18.4s,baz=300,slow=38						
RSSD	Black Hills	44.70	285	P	P	17 29 12.2	-1.0
	baz=46						
W41B	Gary Mavity, V	44.85	266	P	P	17 29 15.4	+1.2
	baz=41,SNR=9.0						
I29M	Ogilvie Camp,	45.13	325	P	P	17 29 15.8	-0.3
I29M				IAmb	IAmb	17 29 22.9	
	comp=Z,21nm,1.0s						
I29M	Ogilvie Camp,	45.13	325	P	P	17 29 15.6	-0.5
	baz=47,SNR=12						
A21K	Barrow	45.43	338	P	P	17 29 17.2	-1.1
	baz=39						
BMAR	Burnt Mountain	45.49	330	P	P	17 29 19.4	+0.4
BRTR	Keskin Array B	45.49	83	P	P	17 29 21.9	+2.5
	comp=Z,1.2nm,0.7s,baz=335,slow=5.5,SNR=8.5						
BRTR				LR	LR	17 49 14.5	
	comp=Z,162nm,20.8s,baz=304,slow=37						
	comp=Z,1.2nm,0.7s						
BRTR	Keskin Array B	45.49	83	*i* P	P	17 29 21.6	+2.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	45.49	83	P	P	17 29 18.0	-1.5
OGNE	Ogallala	45.88	280	P	P	17 29 21.6	-0.9
	baz=44						
TOLK	Toolik Lake Re	45.90	333	P	P	17 29 22.3	+0.1
TOLK	Toolik Lake Re	45.90	333	P	P	17 29 21.9	-0.3
	baz=42,SNR=22						
SOC	Sochi	45.97	75	*e*P	P	17 29 23.1	+0.1
SOC				*e*		17 31 11.3	
SOC				*e*PPP	PPP	17 31 57.0	
SOC				*e*S	S	17 36 07.9	+0.4
SOC				*e*SS	SS	17 39 26.4	-5.4
SOC				MLR	MLR		
	comp=Z,209nm,20.0s						
M31M	Drury Creek, Y	46.01	320	P	P	17 29 21.9	-1.1
M31M				IAmb	IAmb	17 29 30.8	
	comp=Z,19nm,1.4s						
M31M	Drury Creek, Y	46.01	320	P	P	17 29 21.6	-1.5
	baz=47						

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ARU   Arti             46.17  50c iP   P      17 29 25.3 +0.9
ARU                                           17 31 00.1
ARU                                           17 31 12.9
ARU                               S    S      17 36 11.9 +1.7
ARU                               SS   SS     17 39 34.7 -0.1
ARU                               pmax pmax
      comp=Z,31nm,1.9s
ARU   Arti             46.17  50   P    P      17 29 22.5 -1.9
ARU                               IAmb IAmb   17 29 30.8
      comp=Z,17nm,1.1s
CBKS  Cedar Bluff      46.19 276   P    P      17 29 24.8 -0.1
      baz=43
WALA  Waterton Lakes   46.31 296   P    P      17 29 24.2 -1.6
NRIK  Noril'sk         46.32  25   P    P      17 29 26.8 +1.3
      comp=Z,0.6nm,0.3s,baz=330,slow=12,SNR=5.9
NRIK                              LR   LR     17 49 28.2
      comp=Z,82nm,18.0s,baz=346,slow=37
      comp=Z,0.6nm,0.3s
NRIK  Noril'sk         46.32  25ceP    P      17 29 26.7 +1.3
NRIK                              pmax pmax
      comp=Z,4.0nm,1.4s
NRIK  Noril'sk         46.32  25   P    P      17 29 24.1 -1.3
NRIK                              IAmb IAmb   17 29 28.8
      comp=Z,24nm,1.9s
DAWY  Dawson           46.36 324   P    P      17 29 25.2 -0.7
DAWY                              IAmb IAmb   17 29 33.4
      comp=Z,24nm,1.1s
DAWY  Dawson           46.36 324   P    P      17 29 24.7 -1.2
      baz=45,SNR=17
EGAK  Eagle            46.40 326   P    P      17 29 26.4 +0.3
EGAK                              IAmb IAmb   17 29 32.8
      comp=Z,18nm,1.1s
EGAK  Eagle            46.40 326   P    P      17 29 24.7 -1.4
      baz=45,SNR=14
SJG   San Juan         46.44 226   LR   LR     17 45 20.3
      comp=Z,47nm,20.8s,baz=66,slow=31
M30M  Minto, Yukon     46.56 322   P    P      17 29 27.0 -0.5
M30M                              IAmb IAmb   17 29 34.7
      comp=Z,12nm,1.1s
M30M  Minto, Yukon     46.56 322   P    P      17 29 26.6 -0.9
      baz=46
Z41A  Richland Creek   46.61 265   P    P      17 29 28.1 -0.1
      baz=40
GOF   Gofitskoye       46.65  71⇑eP    P      17 29 30.4 +2.1
RLMT  Red Lodge        46.71 289   P    P      17 29 27.6 -1.5
      baz=46
N31M  Braeburn, Yuko   46.98 320   P    P      17 29 30.5 -0.3
N31M  Braeburn, Yuko   46.98 320   P    P      17 29 28.8 -2.0
      baz=46,SNR=16
DLBC  Dease Lake       46.99 314   LR   LR     17 49 04.0
      comp=Z,1µm,18.8s,baz=72,slow=36
DLBC  Dease Lake       46.99 314   P    P      17 29 31.3 +0.4
K22A  Casper           47.03 285   P    P      17 29 31.6  0.0
K22A                              IAmb IAmb   17 29 38.3
      comp=Z,20nm,1.1s
K22A  Casper           47.03 285   P    P      17 29 31.1 -0.4
      baz=45,SNR=5.3
COLD  Coldfoot         47.12 332   P    P      17 29 30.6 -1.2
      baz=41,SNR=5.3
KIV   Kislovodsk       47.24  72  eP    P      17 29 35.2 +2.1
KIV                               pmax pmax
      comp=Z,12nm,1.1s
KIV                               MLR  MLR
      comp=Z,160nm,16.0s
KIV   Kislovodsk       47.24  72   P    P      17 29 32.5 -0.6
KIV                               IAmb IAmb   17 29 43.1
      comp=Z,28nm,1.5s
WHY   Whitehorse       47.24 319   P    P      17 29 32.4 -0.5
WHY   Whitehorse       47.24 319   P    P      17 29 30.0 -2.9
      baz=46
BNN   Bunyan           47.31  82   P    P      17 29 32.1 -1.6
J26L  Joseph Creek     47.32 327   P    P      17 29 32.0 -1.5
      baz=43,SNR=13
SHA1  Shidzhatmaz      47.38  73c iP   P      17 29 36.5 +2.2
JTMT  Jette            47.39 295   P    P      17 29 33.6 -0.6
JTMT                              IAmb IAmb   17 29 40.8
      comp=Z,16nm,1.0s
N30M  Aishikik Lake    47.45 321   P    P      17 29 33.0 -1.5
      baz=45
KBZ   Khabaz           47.51  72   P    P      17 29 37.5 +2.5
      comp=Z,5.7nm,1.2s,baz=301,slow=6.3,SNR=12
KBZ                               LR   LR     17 49 24.4
      comp=Z,172nm,21.0s,baz=326,slow=36
      comp=Z,5.7nm,1.2s
KBZ   Khabaz           47.51  72ceP    P      17 29 37.5 +2.5
KBZ                               pmax pmax
      comp=Z,14nm,1.5s
H24K  Noodor Dome      47.56 330   P    P      17 29 34.6 -0.6
H24K                              IAmb IAmb   17 29 42.6
      comp=Z,13nm,0.9s
H24K  Noodor Dome      47.56 330   P    P      17 29 34.1 -1.1
      baz=41,SNR=7.1
BOZ   Bozeman (W)      47.57 291   P    P      17 29 35.5 -0.2
BOZ                               pmax pmax
      comp=Z,20nm,1.1s
BOZ   Bozeman (W)      47.57 291   P    P      17 29 35.5 -0.2
BOZ                               IAmb IAmb   17 29 43.2
      comp=Z,20nm,1.1s
BOZ   Bozeman (W)      47.57 291   P    P      17 29 35.3 -0.4
      baz=46,SNR=23
KSCO  Kaye Shedlock'   47.59 278   P    P      17 29 34.9 -1.0
      baz=43
J25K  Salcha River,    47.77 327   P    P      17 29 36.4 -0.5
J25K  Salcha River,    47.77 327   P    P      17 29 35.7 -1.2
      baz=42,SNR=16
SCRK  Sand Creek       47.84 326   P    P      17 29 37.1 -0.3
SCRK  Sand Creek       47.84 326   P    P      17 29 34.5 -3.0
      baz=43,SNR=30
L27K  Beaver Creek,    47.84 324   IAmb IAmb   17 29 44.8
      comp=Z,12nm,1.1s
L27K  Beaver Creek,    47.84 324   P    P      17 29 35.8 -1.7
      baz=43,SNR=14
MSO   Missoula         47.86 294   P    P      17 29 36.6 -1.3
      baz=46
H17A  Grant Village    47.88 289   P    P      17 29 36.9 -1.4
      baz=45
N23A  Red Feather La   47.98 283   P    P      17 29 38.1 -1.0
      baz=44
POKR  Poker Plat Res   47.98 329   P    P      17 29 36.8 -1.7
      baz=41
BVCY  Beaver Creek     48.01 323   P    P      17 29 37.7 -1.1
      baz=44
H23K  Yukon River      48.02 330   P    P      17 29 39.4 +0.6
H23K  Yukon River      48.02 330   P    P      17 29 37.6 -1.1
      baz=40,SNR=16
HYT   Haines Junctio   48.04 320   P    P      17 29 39.8 +0.7
HYT   Haines Junctio   48.04 320   P    P      17 29 39.8 +0.7
      baz=44,SNR=18
YUK4  Talbot Arm       48.06 321   P    P      17 29 35.8 -3.5
      baz=44,SNR=13
IL31                   48.09 328   IAmb IAmb   17 29 46.5
      comp=Z,18nm,1.1s
ILAR  Eielson Array    48.09 328   P    P      17 29 41.0 +1.7
      comp=Z,8.2nm,1.1s,baz=33,slow=5.7,SNR=30
ILAR                              PcP  PcP    17 31 07.8 +1.1
      comp=Z,4.4nm,0.8s,baz=6.2,slow=2.9,SNR=11
ILAR                              LR   LR     17 50 15.7
      comp=Z,190nm,19.4s,baz=66,slow=36
      comp=Z,8.2nm,1.1s
DLMT  Dillon           48.22 292   IAmb IAmb   17 29 47.8
      comp=Z,20nm,1.4s
YUK6  Outpost Mounta   48.25 321   P    P      17 29 38.4 -2.5
      baz=44,SNR=6.1
KOWA  Kowa             48.26 141   P    P      17 29 38.7 -2.5
RIDG  Independent Ri   48.27 326   P    P      17 29 39.5 -1.2
RIDG  Independent Ri   48.27 326   P    P      17 29 39.0 -1.7
      baz=42,SNR=6.2
COLA  College          48.28 329   P    P      17 29 37.3 -3.4
      baz=41
TCOL  CIGO, UAF Yank   48.28 329   P    P      17 29 38.2 -2.5
      baz=41
YUK3  Moose Creek      48.34 323   P    P      17 29 40.0 -1.6
      baz=43,SNR=17
M27K  Edge Creek, AK   48.38 324   P    P      17 29 39.7 -2.0
      baz=43
HDA   Harding Lake     48.38 328   P    P      17 29 41.5 -0.1
HDA                               IAmb IAmb   17 29 48.0
      comp=Z,12nm,1.0s
HDA   Harding Lake     48.38 328   P    P      17 29 39.2 -2.3
      baz=41
NEW   Newport          48.40 297   P    P      17 29 44.2 +2.2
      comp=Z,5.7nm,0.9s,baz=39,slow=5.7,SNR=6.8
NEW                               LR   LR     17 49 10.4
      comp=Z,544nm,19.4s,baz=39,slow=35
      comp=Z,5.7nm,0.9s
NEW   Newport          48.40 297   P    P      17 29 41.2 -0.8
      baz=46
I23K  Minto, Yukon-K   48.49 330   IAmb IAmb   17 29 49.8
      comp=Z,23nm,1.3s
I23K  Minto, Yukon-K   48.49 330   P    P      17 29 40.6 -1.7
      baz=40,SNR=9.9
K24K  Donnelly Dome    48.50 327   P    P      17 29 41.7 -0.7
      baz=41,SNR=23
PD31  Pinedale Array   48.52 287   P    P      17 29 42.9 -0.3
PDAR  Pinedale Array   48.52 287   P    P      17 29 44.4 +1.2
      comp=Z,5.8nm,0.8s,baz=78,slow=8.4,SNR=22
PDAR                              LR   LR     17 49 10.3
      comp=Z,558nm,18.4s,baz=42,slow=35
      comp=Z,5.8nm,0.8s
BW06  Boulder Array    48.52 287   IAmb IAmb   17 29 49.4
      comp=Z,9.4nm,0.9s
BW06  Boulder Array    48.52 287   P    P      17 29 44.2 +1.0
      baz=44
MENT  Mentasta         48.52 325   IAmb IAmb   17 29 50.3
      comp=Z,18nm,1.4s
ISCO  Idaho Springs    48.60 281   IAmb IAmb   17 29 52.0
      comp=Z,21nm,1.2s
ISCO  Idaho Springs    48.60 281   P    P      17 29 44.5 +0.6
      baz=43
WRH   Wood River Hil   48.66 328   P    P      17 29 43.5 -0.2
WRH                               IAmb IAmb   17 29 50.6
      comp=Z,12nm,1.1s
M26K  Nabesna, AK      48.70 324   P    P      17 29 43.7 -0.4
M26K                              IAmb IAmb   17 29 52.0
      comp=Z,17nm,1.1s
M26K  Nabesna, AK      48.70 324   P    P      17 29 44.8 +0.7
      baz=42,SNR=7.4
NEA2  Nenana           48.84 329   IAmb IAmb   17 29 52.2
      comp=Z,17nm,1.2s
NEA2  Nenana           48.84 329   P    P      17 29 44.8 -0.3
      baz=40
Q24A  Divide           48.96 280   P    P      17 29 44.9 -1.9
      baz=43
IMAR  Indian Mountai   48.98 332   P    P      17 29 46.4 +0.2
H21K  Melozitna Rive   49.00 332   IAmb IAmb   17 29 53.7
      comp=Z,19nm,1.2s
H21K  Melozitna Rive   49.00 332   P    P      17 29 46.3  0.0
      baz=38,SNR=5.2
PAX   Paxson           49.03 326   IAmb IAmb   17 29 54.3
      comp=Z,14nm,1.1s
PAX   Paxson           49.03 326   P    P      17 29 46.3 -0.3
      baz=41,SNR=5.6
I21K  Tanana           49.16 331   IAmb IAmb   17 29 54.8
      comp=Z,22nm,1.1s
I21K  Tanana           49.16 331   P    P      17 29 45.5 -2.0
      baz=38,SNR=7.2
BARN  Barnard Glacie   49.26 323   P    P      17 29 48.2 -0.4
C09A  Chrisman Ranch   49.28 298   IAmb IAmb   17 29 55.3
      comp=Z,18nm,0.9s
WRAK  Wrangell Islan   49.30 314   P    P      17 29 47.8 -0.9
      baz=44
GROC  Groznyy          49.37  71  eP    P      17 29 48.0 -1.3
HARP  HAARP            49.37 325   P    P      17 29 47.3 -1.9
      baz=41
B08A  Colville Reser   49.39 299   P    P      17 29 49.3 -0.2
B08A                              IAmb IAmb   17 29 56.3
      comp=Z,26nm,1.1s
MCK   McKinley         49.46 328   P    P      17 29 47.5 -2.3
      baz=40
PINM  Pinnacle         49.51 321   P    P      17 29 49.3 -1.1
      baz=42
DHY   Denali Highway   49.52 327   IAmb IAmb   17 29 57.7
      comp=Z,14nm,1.1s
DHY   Denali Highway   49.52 327   P    P      17 29 48.9 -1.6
      baz=40
PNL   Peninsula        49.53 320   P    P      17 29 48.8 -1.6
      baz=43
RND   Reindeer         49.69 328   IAmb IAmb   17 29 58.3
      comp=Z,18nm,1.0s
O20A  White River Ci   49.74 284   P    P      17 29 52.5  0.0
      baz=43
BPAW  Bear Paw Mtn.    49.75 329   P    P      17 29 52.6 +0.6
BPAW                              IAmb IAmb   17 29 59.8
      comp=Z,21nm,1.3s
BPAW  Bear Paw Mtn.    49.75 329   P    P      17 29 50.5 -1.6
      baz=38
SMCO  Snowmass         49.77 282   IAmb IAmb   17 30 11.7
      comp=Z,19nm,1.4s
N25K  Chitina, Valde   49.80 324   IAmb IAmb   17 29 59.9
      comp=Z,24nm,1.1s
N25K  Chitina, Valde   49.80 324   P    P      17 29 51.7 -0.8
      baz=41,SNR=5.3
M24K  Tolsona, Glenn   49.90 326   P    P      17 29 50.6 -2.6
      baz=40
T25A  Trinidad         49.92 278   P    P      17 29 52.2 -1.7
      baz=42
SIT   Sitka            49.98 316   P    P      17 29 52.0 -1.8
      baz=43
WAT6  Susitna Watana   50.01 327   P    P      17 29 52.6 -1.6
      baz=40,SNR=14
SDCO  Great Sand Dun   50.05 280   P    P      17 29 51.7 -3.3
      baz=42
WAT1  Susitna Watana   50.05 327   P    P      17 29 52.6 -1.8
      baz=39
TRF   Thorofare Moun   50.06 329   P    P      17 29 52.1 -2.5
      baz=38
F10A  Beach Ranch, E   50.07 295   IAmb IAmb   17 30 00.8
      comp=Z,12nm,1.0s
WHTX  Lake Whitney,    50.08 268   P    P      17 29 55.4 +0.4
      baz=39
AKTO  Aktyubinsk       50.09  56   LR   LR     17 50 38.7
      comp=Z,312nm,18.2s,baz=319,slow=36
PLID  Pearl Lake       50.11 294   P    P      17 29 55.2 -0.1
PLID                              IAmb IAmb   17 30 02.0
      comp=Z,29nm,1.1s
WAX   Waxell Ridge     50.11 323   P    P      17 29 55.1 +0.2
KTH   Kantishna Hill   50.16 329   IAmb IAmb   17 30 07.1
      comp=Z,17nm,0.7s
CHUM  Lake Minchumin   50.28 330   P    P      17 29 53.4 -2.6
      baz=38,SNR=6.7
BMRM  Bremner River    50.28 324   P    P      17 29 55.4 -0.8
      baz=40
CRAG  Craig            50.29 313   P    P      17 29 55.3 -0.8
      baz=43
KLU   Klutina          50.30 325   IAmb IAmb   17 30 03.4
      comp=Z,17nm,1.0s
KLU   Klutina          50.30 325   P    P      17 29 55.8 -0.5
      baz=40,SNR=5.7
HWUT  Hardware Ranch   50.39 287   IAmb IAmb   17 30 04.0
      comp=Z,16nm,0.9s
MAK   Makhachkala      50.41  70  eP    P      17 29 54.6 -2.6
MAK                              eS    S      17 37 04.6 -5.6
MAK                               pmax pmax
      comp=Z,161nm,1.2s
MAK                               MLR  MLR
      comp=Z,261nm,13.0s
HLID  Hailey           50.41 291   P    P      17 29 58.1 +0.6
      baz=44,SNR=6.5
TIXI  Tiksi            50.41   7   LR   LR     17 49 29.3
      comp=Z,36nm,19.6s,baz=359,slow=34
TIXI  Tiksi            50.41   7ceP    P      17 30 01.8 +4.9
TIXI                              pmax pmax
      comp=Z,5.0nm,0.9s
TIXI  Tiksi            50.41   7   P    P      17 29 56.2 -0.7
SCM   Sheep Creek Mo   50.46 326   P    P      17 29 56.3 -1.3
      baz=39
J20K  Nowinta River    50.53 331   P    P      17 29 57.1 -0.9
      baz=36,SNR=5.4
CAST  Castle Rocks     50.59 329   P    P      17 29 57.7 -0.6
CAST                              IAmb IAmb   17 30 04.1
      comp=Z,27nm,1.2s
CAST  Castle Rocks     50.59 329   P    P      17 29 57.2 -1.2
      baz=37
BBB   Bella Bella      50.61 307   LR   LR     17 51 34.0
      comp=Z,392nm,18.0s,baz=34,slow=36
M23K  Glacier View     50.61 326   P    P      17 29 56.9 -1.7
      baz=39
GCSA  Galena City Sc   50.76 333   P    P      17 29 58.8 -0.9
      baz=35
SML   Sawmill          50.78 326   P    P      17 29 59.0 -0.9
      baz=39,SNR=5.4
BMO   Blue Mountains   50.92 294   IAmb IAmb   17 30 08.2
      comp=Z,13nm,1.0s
CBB   Campbell River   50.96 304   IAmb IAmb   17 30 08.8
      comp=Z,30nm,1.1s
EYAK  Cordova Ski Ar   50.97 324   P    P      17 30 00.3 -1.0
EYAK  Cordova Ski Ar   50.97 324   P    P      17 30 00.1 -1.1
      baz=40
KAIM  Kayak Island     51.02 323   P    P      17 29 59.4 -2.3
      baz=40
PPLA  Purkeypile       51.03 329   P    P      17 30 00.2 -1.7
      baz=37
FID   Port Fidalgo     51.04 325   P    P      17 30 02.3 +0.5
FID                               IAmb IAmb   17 30 09.7
      comp=Z,29nm,1.0s
GNI   Garni            51.04  74   LR   LR     17 52 01.4
      comp=Z,140nm,19.6s,baz=356,slow=36
GNI   Garni            51.04  74ceP    P      17 30 05.7 +3.4
GNI                               pmax pmax
      comp=Z,36nm,1.7s
JLU   Jordanelle       51.06 286   IAmb IAmb   17 30 09.4
      comp=Z,27nm,1.5s
435B  Jarrell          51.09 267   P    P      17 30 02.0 -0.5
      baz=38
KNK   Knik Glacier     51.13 326   IAmb IAmb   17 30 10.2
      comp=Z,27nm,1.1s
KNK   Knik Glacier     51.13 326   P    P      17 30 01.9 -0.6
      baz=38,SNR=11
GLI   Glacier Island   51.13 325   P    P      17 30 01.3 -1.2
GLI                               IAmb IAmb   17 30 09.9
      comp=Z,33nm,1.2s
GLI   Glacier Island   51.13 325   P    P      17 30 03.8 +1.3
      baz=39,SNR=14
P18A  Preston Nutter   51.15 285   IAmb IAmb   17 30 10.7
      comp=Z,46nm,1.9s
K20K  Telida           51.17 330   IAmb IAmb   17 30 09.6
      comp=Z,30nm,1.1s
K20K  Telida           51.17 330   P    P      17 30 01.3 -1.5
      baz=36,SNR=5.2
PMR   Palmer           51.19 327   P    P      17 30 01.5 -1.4
      baz=38
PV07  Paradox Valley   51.20 283   IAmb IAmb   17 30 11.3
      comp=Z,28nm,1.5s
M22K  Willow           51.35 327   P    P      17 30 04.3 +0.2
      baz=38
G08A  Pilot Rock       51.41 296   P    P      17 30 04.7 -0.2
G08A                              IAmb IAmb   17 30 11.7
      comp=Z,20nm,1.5s
MSTX  Muleshoe         51.43 274   P    P      17 30 05.2  0.0
      baz=40
GANJ  Ganja            51.49  73   P    P      17 30 09.3 +3.8
PV13  Radium Mtn., P   51.50 282   P    P      17 30 05.9 +0.1
PV13                              IAmb IAmb   17 30 13.4
      comp=Z,29nm,1.0s
P17A  Butcher Ranch,   51.53 285   IAmb IAmb   17 30 13.1
      comp=Z,17nm,1.2s
SEKA  Sheki            51.53  72   P    P      17 30 09.6 +3.8
RC01  Rabbit Creek A   51.77 326   P    P      17 30 06.9 -0.4
      baz=38,SNR=5.2
MNGR  Mingechevir, A   51.79  72   P    P      17 30 11.2 +3.5
ABKAR Akbulak array    51.80  56   P    P      17 30 07.2 -0.4
ABKAR Akbulak array    51.80  56   IAmb IAmb   17 30 17.3
      comp=Z,26nm,1.4s
L20K  Farewell, AK     51.83 330   P    P      17 30 05.7 -2.1
      baz=36
D04E  Lakebay          51.85 300   P    P      17 30 06.5 -1.5
      baz=43
NLU   North Lily Min   51.86 286   P    P      17 30 08.9 +0.4
NLU                               IAmb IAmb   17 30 15.9
      comp=Z,26nm,1.2s
MVCO  Mesa Verde       52.03 281   IAmb IAmb   17 30 17.5
      comp=Z,19nm,1.1s
MVCO  Mesa Verde       52.03 281   P    P      17 30 11.3 +1.4
      baz=41
TTA   Tatalina         52.03 331   IAmb IAmb   17 30 15.4
      comp=Z,18nm,1.2s
TTA   Tatalina         52.03 331   P    P      17 30 06.0 -3.4
      baz=35
DUG   Dugway, Tooele   52.06 287   P    P      17 30 11.8 +1.9
      baz=42
NAX   Nakhchivan       52.16  75   P    P      17 30 14.0 +3.5
E04D  Cinebar          52.21 299   P    P      17 30 08.3 -2.4
      baz=43
L19K  White Mountain   52.34 330   P    P      17 30 10.7 -0.8
L19K                              IAmb IAmb   17 30 18.5
      comp=Z,25nm,1.5s
L19K  White Mountain   52.34 330   P    P      17 30 12.1 +0.5
      baz=35
SPU   Mount Spurr      52.37 328   P    P      17 30 10.4 -1.4
SPCR  Spurr Chakacha   52.40 328   P    P      17 30 12.5 +0.4
      baz=36
M19K  Big River Lodg   52.44 329   P    P      17 30 12.7 +0.4
      baz=35,SNR=5.9
SEW   Seward           52.47 326   P    P      17 30 13.6 +1.2
      baz=37
JCT   Junction City    52.52 269   P    P      17 30 13.2  0.0
      baz=38
J08A  Circle Bar Ran   52.59 294   IAmb IAmb   17 30 20.3
      comp=Z,25nm,1.0s
ANMO  Albuquerque      52.66 278   P    P      17 30 17.1 +2.7
      comp=Z,3.6nm,0.9s,baz=84,slow=10,SNR=4.4
ANMO                              LR   LR     17 51 47.7
      comp=Z,735nm,18.6s,baz=53,slow=35
      comp=Z,3.6nm,0.9s
ANMO  Albuquerque      52.66 278ceP    P      17 30 17.2 +2.7
ANMO                              pmax pmax
      comp=Z,17nm,1.7s
ANMO  Albuquerque      52.66 278   P    P      17 30 21.9 +7.5
ANMO                              IAmb IAmb   17 30 22.8
      comp=Z,44nm,2.0s
ANMO  Albuquerque      52.66 278   P    P      17 30 13.7 -0.8
      baz=40
F04D  Rainier, OR      52.77 299   P    P      17 30 13.9 -1.0
      baz=42
ANM   Nome             52.89 336   P    P      17 30 14.5 -1.0
      baz=30
ELK   Elko             52.90 289   P    P      17 30 18.9 +2.6
      comp=Z,7.3nm,1.0s,baz=44,slow=5.4,SNR=9.3
ELK                               LR   LR     17 52 11.8
      comp=Z,608nm,18.1s,baz=48,slow=35
      comp=Z,7.3nm,1.0s
ELK   Elko             52.90 289   P    P      17 30 16.7 +0.5
ELK                               pmax pmax
      comp=Z,17nm,1.2s
ELK   Elko             52.90 289   P    P      17 30 16.7 +0.5
ELK                               IAmb IAmb   17 30 24.4
      comp=Z,17nm,1.2s
BRSE  Bradley Lake S   53.15 326   P    P      17 30 14.9 -2.6
      baz=36
I05D  Terrebonne, OR   53.26 296   P    P      17 30 17.9 -0.7
      baz=42
BRVK  Borovoye         53.34  47ceP    P      17 30 20.5 +1.5
BRVK                              pmax pmax
      comp=Z,7.0nm,1.0s
BRVK  Borovoye         53.34  47   P    P      17 30 17.9 -1.0
BRVK                              IAmb IAmb   17 30 28.6
      comp=Z,22nm,1.5s
MTPU  Mount Pierson    53.34 285   P    P      17 30 19.5 -0.2
MTPU                              IAmb IAmb   17 30 27.6
      comp=Z,34nm,1.8s
WVOR  Wild Horse Val   53.35 293   IAmb IAmb   17 30 26.6
      comp=Z,25nm,1.1s
N19K  Bonanza Creek    53.36 329   P    P      17 30 17.0 -2.2
      baz=35
O20K  Slope Mountain   53.43 327   P    P      17 30 14.9 -4.8
      baz=36
PINE  Pine Mountain    53.47 296   IAmb IAmb   17 30 27.9
      comp=Z,19nm,1.0s
G03D  McMinnville, O   53.53 298   P    P      17 30 18.0 -2.4
      baz=42
H04D  Lebanon          53.79 298   P    P      17 30 22.8 +0.4
      baz=42
O19K  Port Alsworth    53.83 328   P    P      17 30 21.9 -0.5
      baz=35
PSUT  Pine Spring      53.84 286   IAmb IAmb   17 30 33.1
      comp=Z,11nm,1.0s
PKCU  Pink Cliffs      53.86 284   P    P      17 30 23.2 -0.2
N18K  Kilae Creek      53.86 329   P    P      17 30 22.9 +0.2
      baz=34
BILL  Bilibino         53.87 351⇓eP    P      17 30 23.3 +0.6
BILL                              e           17 31 28.7
BILL                              e           17 32 28.0
BILL                              eS   S      17 37 59.7 +2.6
BILL                              eSS  SS     17 41 43.0 +5.8
BILL                              pmax pmax
      comp=Z,4.0nm,1.1s
BILL                              MLR  MLR
      comp=Z,125nm,19.0s
BILL  Bilibino         53.87 351   P    P      17 30 22.8 +0.2
P19K  Oil Pt           53.96 327   P    P      17 30 21.4 -2.1
      baz=35
833A  Chaparral WMA,   53.99 267   P    P      17 30 23.9 -0.2
      baz=37
J05D  Fort Rock, OR    53.99 296   P    P      17 30 23.5 -0.6
      baz=42,SNR=18
LKRN  Lenkeran, Azer   54.20  73   P    P      17 30 29.4 +3.9
W18A  Petrified Fore   54.27 281   P    P      17 30 24.3 -2.0
      baz=40
CCUT  Cedar City       54.33 285   P    P      17 30 25.7 -1.1
O18K  Koktuh Hills     54.36 328   P    P      17 30 25.7 -0.7
      baz=34
J04D  Umpqua Nationa   54.45 296   P    P      17 30 24.2 -3.3
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	baz=41						
MOD	**Modoc Plateau**	**54.57**	**294**	IAmb	IAmb	17 30 35.4	
	comp=Z,24nm,1.1s						
MNTX	**Cornudas Mount**	**54.57**	**274**	P	**P**	**17 30 29.4**	**+1.0**
	baz=39						
MDP	**Montagnes des**	**54.58**	**204**	LR	LR	17 48 32.1	
	comp=Z,83nm,19.9s,baz=23,slow=30						
I02E	**Swisshome, OR**	**54.63**	**298**	P	**P**	**17 30 26.4**	**-2.1**
	baz=41						
LCMT	**Little Creek M**	**54.67**	**285**	IAmb	IAmb	17 30 36.2	
	comp=Z,15nm,1.4s						
Q19K	**Cape Douglas,**	**54.67**	**327**	P	**P**	**17 30 27.2**	**-1.5**
	baz=34						
I03D	**Drain, OR**	**54.70**	**297**	P	**P**	**17 30 26.6**	**-2.4**
	baz=41						
P18K	**Big Mountain,**	**54.75**	**328**	P	**P**	**17 30 29.8**	**+0.5**
	baz=34						
WUAZ	**Wupatki**	**54.83**	**282**	IAmb	IAmb	17 30 38.0	
	comp=Z,28nm,1.2s						
WUAZ	**Wupatki**	**54.83**	**282**	P	**P**	**17 30 28.9**	**-1.4**
	baz=40,SNR=6.3						
R11A	**Troy Canyon, C**	**54.87**	**288**	P	**P**	**17 30 29.3**	**-1.3**
	baz=41,SNR=16						
121A	**Cookes Peak, D**	**55.22**	**277**	P	**P**	**17 30 33.8**	**+0.7**
	baz=39						
KDAK	**Kodiak Island**	**55.30**	**325**	P	**P**	**17 30 32.0**	**-1.1**
	baz=35						
PRN	**Pahroc Range**	**55.31**	**286**	IAmb	IAmb	17 30 41.6	
	comp=Z,16nm,1.3s						
L04D	**Klamath Falls**	**55.31**	**295**	P	**P**	**17 30 32.6**	**-1.1**
	baz=41						
DBIC	**Dimbokro**	**55.34**	**145**	P	**P**	**17 30 35.1**	**+1.2**
	comp=Z,7.6nm,1.0s,baz=8.9,slow=4.5,SNR=4.7						
DBIC				LR	LR	17 51 22.3	
	comp=Z,303nm,20.3s,baz=356,slow=33						
	comp=Z,7.6nm,1.0s						
DBIC	**Dimbokro**	**55.34**	**145**	P	**P**	**17 30 32.1**	**-1.8**
DBIC				pmax	pmax		
	comp=Z,17nm,1.3s						
DBIC	**Dimbokro**	**55.34**	**145**	P	**P**	**17 30 32.1**	**-1.8**
DBIC				IAmb	IAmb	17 30 36.2	
	comp=Z,17nm,1.3s						
J01E	**Myrtle Point**	**55.38**	**297**	P	**P**	**17 30 30.1**	**-3.9**
	baz=41						
TXAR	**Lajitas Array**	**55.49**	**271**	P	**P**	**17 30 37.9**	**+2.8**
	comp=Z,2.0nm,0.9s,baz=69,slow=7.1,SNR=8.0						
TXAR				LR	LR	17 53 33.9	
	comp=Z,163nm,19.6s,baz=40,slow=35						
	comp=Z,2.0nm,0.9s						
BAUV	**El Baul**	**55.55**	**223**	P	**P**	**17 30 35.6**	**+0.1**
K02D	**Willamette Mer**	**55.61**	**297**	P	P	17 30 31.7	-4.0
	baz=40						
YBH	**Yreka Blue Hor**	**55.88**	**295**	P	**P**	**17 30 42.2**	**+4.5**
	comp=Z,4.0nm,0.9s,baz=68,slow=3.6,SNR=4.0						
YBH				LR	LR	17 53 32.0	
	comp=Z,332nm,20.7s,baz=34,slow=35						
YBH	**Yreka Blue Hor**	**55.88**	**295**	IAmb	IAmb	17 30 43.7	
	comp=Z,15nm,1.4s						
OHAK	**Old Harbor**	**55.98**	**325**	P	P	17 30 32.5	-5.5
	baz=34						
L02F	**Cave Junction**	**56.00**	**296**	P	**P**	**17 30 35.7**	**-2.7**
	baz=40						
NVAR	**Mina Array Bea**	**56.20**	**290**	P	**P**	**17 30 41.7**	**+1.5**
	comp=Z,2.6nm,0.7s,baz=40,slow=4.8,SNR=14						
NVAR				LR	LR	17 54 07.0	
	comp=Z,485nm,18.1s,baz=57,slow=35						
	comp=Z,2.6nm,0.7s						
TPNV	**Topopah Spring**	**56.28**	**287**	P	**P**	**17 30 38.0**	**-2.7**
	baz=40						
SDV	**Santo Domingo**	**56.58**	**226**	LR	LR	17 52 50.4	
	comp=Z,31nm,21.3s,baz=4.0,slow=34						
LCH	**Last Change Ra**	**56.78**	**288**	P	**P**	**17 30 43.7**	**-0.6**
LCH				IAmb	IAmb	17 30 51.9	
	comp=Z,30nm,2.0s						
TUC	**Tucson**	**56.99**	**279**	P	**P**	**17 30 44.2**	**-1.5**
	baz=39						
TUQ	**Turquoise Moun**	**57.27**	**286**	P	**P**	**17 30 45.1**	**-2.6**
	baz=39						
QSM	**Queen of Sheba**	**57.35**	**287**	IAmb	IAmb	17 30 56.0	
	comp=Z,20nm,1.3s						
KMRM	**Mail Ridge**	**57.52**	**295**	P	**P**	**17 30 49.6**	**+0.3**
MPMC	**Manual Prospec**	**57.60**	**287**	P	**P**	**17 30 48.3**	**-1.9**
	baz=39,SNR=14						
GMRC	**Granite Mounta**	**57.64**	**285**	P	**P**	**17 30 49.8**	**-0.6**
	baz=39						
BLYC	**Blythe**	**57.84**	**283**	P	**P**	**17 30 51.5**	**-0.1**
BLYC				IAmb	IAmb	17 30 59.5	
	comp=Z,13nm,1.0s						
IRM	**Iron Mountain**	**57.85**	**284**	P	**P**	**17 30 51.9**	**+0.2**
	baz=39						
ZALV	**Zalesovo Beam**	**57.92**	**38**	P	**P**	**17 30 52.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=330,slow=5.5,SNR=1.8						
	comp=Z,0.2nm,0.3s						
HEC	**Hector,Ludlow**	**57.95**	**285**	P	**P**	**17 30 50.5**	**-2.0**
	baz=39						
LRMC	**Laurel Mtn Rad**	**58.15**	**287**	P	**P**	**17 30 54.1**	**+0.2**
	baz=39						
113A	**Mohawk Valley,**	**58.21**	**282**	IAmb	IAmb	17 31 01.9	
	comp=Z,24nm,1.2s						
214A	**Organ Pipe Nat**	**58.34**	**281**	P	**P**	**17 30 54.3**	**-0.9**
	baz=38						
KURK	**Kurchatov**	**58.38**	**44**	*ce*P	**P**	**17 30 56.0**	**+0.9**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	**Kurchatov**	**58.38**	**44**	P	**P**	**17 30 54.1**	**-1.0**
BC3	**Big Chuckawall**	**58.40**	**284**	P	**P**	**17 30 55.2**	**-0.5**
	baz=39						
ISA	**Isabella, Lake**	**58.41**	**288**	IAmb	IAmb	17 31 03.8	
	comp=Z,28nm,1.4s						
ISA	**Isabella, Lake**	**58.41**	**288**	P	**P**	**17 30 54.5**	**-1.1**
	baz=39						
BELC	**Belle Mtn. Jos**	**58.42**	**285**	P	**P**	**17 30 54.7**	**-1.1**
	baz=39						
GLA	**Glamis**	**58.55**	**283**	P	**P**	**17 30 56.3**	**-0.3**
GLA				pmax	pmax		
	comp=Z,35nm,1.1s						
GLA	**Glamis**	**58.55**	**283**	P	**P**	**17 30 56.3**	**-0.3**
GLA	**Glamis**	**58.55**	**283**	P	**P**	**17 30 56.2**	**-0.3**
	baz=38						
BBRC	**Big Bear Solar**	**58.70**	**285**	P	**P**	**17 30 57.2**	**-0.7**
	baz=39						
EDW2	**Edwards Air Fo**	**58.77**	**287**	P	**P**	**17 30 58.0**	**-0.2**
	baz=39,SNR=14						
PFO	**Pinyon Flats O**	**58.96**	**285**	LR	LR	17 55 42.3	
	comp=Z,334nm,19.6s,baz=40,slow=35						
PFO	**Pinyon Flats O**	**58.96**	**285**	P	**P**	**17 30 59.7**	**+0.1**
	baz=38,SNR=5.1						
TPFO	**Pinon Flats**	**58.96**	**285**	P	**P**	**17 31 00.5**	**+0.9**
	baz=38,SNR=5.4						
ARVC	**Arvin**	**59.01**	**288**	P	**P**	**17 30 56.7**	**-3.1**
	baz=39						
BFSC	**Mount Baldy Ra**	**59.10**	**286**	P	**P**	**17 30 58.8**	**-1.7**
	baz=38						
SWSC	**Sam W. Stewart**	**59.14**	**284**	P	**P**	**17 31 00.0**	**-0.6**
	baz=38						
MONP2	**Monument Peak**	**59.51**	**284**	P	**P**	**17 31 04.0**	**+0.5**
	baz=38						
GEYT	**Alibeck**	**59.51**	**67**	P	**P**	**17 31 04.9**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=242,slow=15,SNR=1.9						
GEYT				LR	LR	17 57 45.0	
	comp=Z,95nm,18.0s,baz=334,slow=37						
	comp=Z,1.8nm,0.8s						
GEYT	**Alibeck**	**59.51**	**67**	IAmb	IAmb	17 31 13.4	
	comp=Z,11nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**59.53**	**284**	P	**P**	**17 31 04.2**	**+0.8**
	baz=38						
SEY	**Seymchan**	**59.73**	**357**	*ce*P	**P**	**17 31 07.2**	**+2.9**
SEY				pmax	pmax		
	comp=Z,8.0nm,1.7s						
CHNA	**Chernabura Isl**	**59.89**	**328**	P	**P**	**17 31 05.4**	**0.0**
	baz=30						
YAK	**Yakutsk**	**59.95**	**9**	LR	LR	17 55 23.9	
	comp=Z,35nm,20.7s,baz=321,slow=34						
YAK	**Yakutsk**	**59.95**	**9**	*ce*P	**P**	**17 31 06.3**	**+0.5**
YAK				pmax	pmax		
	comp=Z,11nm,1.7s						
PTBC	**PUERTO BERRIO,**	**60.24**	**229**	*e*P	**P**	**17 31 09.8**	**+1.4**
CMIG	**Matias Romero**	**60.73**	**255**	LR	LR	17 56 42.3	
	comp=Z,160nm,21.9s,baz=20,slow=35						
SPBC	**San Pablo de B**	**60.89**	**228**	*e*P	**P**	**17 31 17.1**	**+4.1**
FALS	**False Pass**	**60.94**	**330**	P	**P**	**17 31 11.9**	**-0.8**
HELC	**Santa Helena**	**61.00**	**230**	*e*P	**P**	**17 31 16.3**	**+2.3**
NORC	**Norcasia**	**61.29**	**229**	*e*P	**P**	**17 31 18.0**	**+2.4**
AZU	**Azuero**	**61.60**	**236**	*e*P	P	17 31 04.3	-13
ROSC	**El Rosal**	**61.73**	**228**	*e*P	**P**	**17 31 22.6**	**+3.7**
BOD	**Bodaibo**	**61.95**	**19**	*e*P	**P**	**17 31 18.8**	**-0.7**
BOD				pmax	pmax		
	comp=Z,11nm,1.9s						
MAKZ	**Makanchi**	**62.86**	**44**	P	**P**	**17 31 25.0**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,33nm,1.9s						
MAKZ	**Makanchi**	**62.86**	**44**	P	**P**	**17 31 25.0**	**-0.8**
PRAC	**Prado**	**62.98**	**228**	*e*P	P	17 31 21.5	-5.4
MKAR	**Makanchi Array**	**62.99**	**44**	P	**P**	**17 31 27.3**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=339,slow=5.3,SNR=16						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	**62.99**	**44**	P	**P**	**17 31 25.4**	**-1.2**
MKAR	**Makanchi Array**	**62.99**	**44**	P	**P**	**17 31 25.4**	**-1.2**
MA2	**Magadan**	**63.13**	**358**	LR	LR	17 57 06.8	
	comp=Z,65nm,21.8s,baz=28,slow=34						
MA2	**Magadan**	**63.13**	**358**	*i* P	**P**	**17 31 28.7**	**+1.4**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPIG	**La Paz**	**63.23**	**273**	LR	LR	17 58 34.5	
	comp=Z,134nm,19.3s,baz=30,slow=36						
RCBR	**Riachuelo**	**63.26**	**183**	LR	LR	17 54 24.7	
	comp=Z,32nm,18.6s,baz=142,slow=32						
AAK	**Ala-Archa**	**63.31**	**52**	LR	LR	17 58 09.4	
	comp=Z,180nm,18.6s,baz=324,slow=35						
AAK	**Ala-Archa**	**63.31**	**52**	*ce*P	**P**	**17 31 30.3**	**+1.3**
AAK				pmax	pmax		
	comp=Z,16nm,1.7s						
AAK	**Ala-Archa**	**63.31**	**52**	P	**P**	**17 31 27.3**	**-1.7**
AAK				IAmb	IAmb	17 31 39.5	
	comp=Z,12nm,1.1s						
MOY	**Mondy**	**64.76**	**30**	*e*P	**P**	**17 31 39.9**	**+1.5**
MOY				pmax	pmax		
	comp=Z,25nm,1.9s						
KSH	**Kashi**	**66.51**	**53**	P	**P**	**17 31 53.6**	**+3.7**
KSH				pP	pwP	17 31 58.3	+3.4
KSH				sP	sP	17 32 01.4	+7.9
KSH				PcP	**PcP**	**17 32 25.2**	**+5.9**
KSH				pmax	pmax		
	comp=Z,17nm,1.7s						
ZAK	**Zakamensk**	**66.54**	**29**	*e*P	**P**	**17 31 50.4**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
H10N2	**ASCENSION HYDR**	**66.93**	**160**	T	T	18 44 28.1	
	baz=350,slow=75,SNR=6.1						
H10N3	**ASCENSION HYDR**	**66.94**	**160**	T	T	18 44 27.0	
	baz=350,slow=75,SNR=6.9						
H10N1	**ASCENSION HYDR**	**66.95**	**160**	T	T	18 44 28.7	
	baz=350,slow=75,SNR=9.4						
WMQ	**Urumqi**	**67.52**	**42**	*e*P	**P**	**17 31 58.4**	**+2.3**
WMQ				pP	pwP	17 32 02.8	+1.7
WMQ				S	**S**	**17 40 50.1**	**-2.1**
WMQ				sS	sS	17 41 01.7	+5.1
WMQ				pmax	pmax		
	comp=Z,14nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.9s						
WMQ				LR	LR		
	comp=N,180nm,17.5s						
WMQ				LR	LR		
	comp=Z,160nm,21.3s						
ZEA	**Zeya**	**67.86**	**13**	*e*P	**P**	**17 31 59.8**	**+1.8**
H10S3	**ASCENSION HYDR**	**68.00**	**160**	T	T	18 45 43.1	
	baz=184,slow=74,SNR=21						
H10S2	**ASCENSION HYDR**	**68.01**	**160**	T	T	18 45 48.3	
	baz=36,slow=74,SNR=12						
UOSS	**Minazif**	**68.89**	**77**	P	**P**	**17 32 02.9**	**-2.0**
SONM	**Songino Array**	**69.68**	**28**	P	**P**	**17 32 10.6**	**+1.0**
	comp=Z,4.0nm,1.0s,baz=327,slow=5.3,SNR=12						
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**69.68**	**28**	IAmb	IAmb	17 32 19.0	
	comp=Z,12nm,1.4s						
ULN	**Ulaanbaatar**	**69.82**	**27**	*ce*P	**P**	**17 32 11.9**	**+1.4**
ULN				pmax	pmax		
	comp=Z,24nm,1.7s						
ULN	**Ulaanbaatar**	**69.82**	**27**	P	**P**	**17 32 10.2**	**-0.3**
ULN				IAmb	IAmb	17 32 20.4	
	comp=Z,20nm,1.2s						
WSAR	**Wadi Sarin**	**71.56**	**76**	LR	LR	18 08 11.8	
	comp=Z,82nm,19.1s,baz=335,slow=40						
ATD	**Arta Tunnel**	**72.77**	**96**	LR	LR	18 06 15.7	
	comp=Z,42nm,18.1s,baz=324,slow=37						
KLR	**Kul'dur**	**72.79**	**10**	*ce*P	**P**	**17 32 28.1**	**-0.1**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BDFB	**Brasilia**	**74.02**	**195**	P	**P**	**17 32 36.5**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=150,slow=1.2,SNR=4.1						
	comp=Z,3.9nm,0.8s						
BDFB	**Brasilia**	**74.02**	**195**	P	**P**	**17 32 33.6**	**-2.3**
BDFB				pmax	pmax		
	comp=Z,59nm,2.0s						
BDFB	**Brasilia**	**74.02**	**195**	P	**P**	**17 32 33.5**	**-2.3**
GTA	**Gaotai**	**75.56**	**36**	*e*P	**P**	**17 32 45.4**	**+0.6**
GTA				sP	pwP	17 32 53.2	+3.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.8s						
XLT	**XiLinHaoTe**	**75.62**	**23**	*e*P	**P**	**17 32 45.0**	**0.0**
XLT				S	**S**	**17 42 22.3**	**-3.5**
XLT				SKS	**SKSac**	**17 42 45.5**	**-9.3**
XLT	**XiLinHaoTe**	**75.62**	**23**	SS	SS	17 47 06.1	-9.4
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,100nm,5.1s						
XLT				LR	LR		
	comp=N,27nm,15.6s						
XLT				LR	LR		
	comp=E,420nm,18.1s						
XLT				LR	LR		
	comp=Z,150nm,19.9s						
YSS	**Yuzh-Sakhalins**	**75.75**	**3**	*e*P	**P**	**17 32 44.7**	**-0.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,20.0s						
MBAR	**Mbarara**	**76.74**	**113**	LR	LR	18 07 51.4	
	comp=Z,192nm,18.1s,baz=316,slow=37						
GOMU	**GeErMu**	**76.80**	**41**	P	**P**	**17 32 53.6**	**+1.5**
GOMU				pP	sP	17 32 56.8	+1.0
GOMU				sP	PcP	17 33 01.0	-2.4
GOMU				S	S	17 42 30.4	-9.1
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,48nm,4.7s						
GOMU				LR	LR		
	comp=N,63nm,14.8s						
GOMU				LR	LR		
	comp=E,79nm,14.5s						
GOMU				LR	LR		
	comp=Z,46nm,14.4s						
MDJ	**Mudanjiang**	**77.12**	**13**	P	**P**	**17 32 52.7**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,79nm,3.6s						
BTO	**Baotou**	**77.36**	**28**	*e*P	**P**	**17 32 52.0**	**-2.9**
BTO				S	**S**	**17 42 37.5**	**-7.5**
BTO				LR	LR		
	comp=N,430nm,15.6s						
BTO				LR	LR		
	comp=E,240nm,13.7s						
HHC	**Hu-ho-hao-te**	**77.51**	**27**	*e*P	**P**	**17 32 55.3**	**-0.4**
HHC				pmax	pmax		
	comp=Z,52nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.3s						
LPAZ	**La Paz**	**79.16**	**214**	P	**P**	**17 33 06.4**	**+0.9**
	comp=Z,2.2nm,1.2s,baz=0.6,slow=6.3,SNR=7.0						
	comp=Z,2.2nm,1.2s						
BJI	**Beijing**	**79.34**	**24**	P	**P**	**17 33 06.9**	**+1.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.9s						
LZH	**Lanzhou**	**79.87**	**34**	⇓P	**P**	**17 33 12.4**	**+3.6**
LZH				pP	PcP	17 33 19.8	+3.4
LZH				sP	pwP	17 33 25.2	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
KMBO	**Kilima Mbogo**	**80.49**	**107**	LR	LR	18 07 43.0	
	comp=Z,55nm,21.6s,baz=84,slow=35						
HNS	**HongShan**	**81.54**	**25**	⇑P	**P**	**17 33 19.6**	**+2.1**
HNS				pmax	pmax		
	comp=Z,14nm,1.2s						
PB11	**IPOC Station P**	**82.90**	**215**	P	**P**	**17 33 22.9**	**-2.0**
XAN	**Xi'an**	**83.25**	**31**	P	**P**	**17 33 27.2**	**+0.6**
XAN				pP	sP	17 33 31.2	+0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN				LR	LR		
	comp=N,180nm,20.6s						
XAN				LR	LR		
	comp=E,140nm,17.9s						
XAN				LR	LR		
	comp=Z,180nm,24.7s						
KSRS	**Korea Array**	**83.95**	**15**	P	**P**	**17 33 29.2**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=347,slow=5.0,SNR=3.2						
KSAR	**Wonju Array Be**	**83.96**	**15**	P	**P**	**17 33 28.3**	**-1.8**
KSAR	**Wonju Array Be**	**83.96**	**15**	P	**P**	**17 33 28.3**	**-1.8**
LVC	**Limon Verde**	**85.36**	**213**	P	**P**	**17 33 36.9**	**-0.7**
LVC				pmax	pmax		
	comp=Z,23nm,1.2s						
LVC	**Limon Verde**	**85.36**	**213**	P	**P**	**17 33 36.9**	**-0.7**
CPUP	**Villa Florida**	**86.07**	**202**	P	**P**	**17 33 41.2**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=57,slow=2.5,SNR=3.2						
CPUP				LR	LR	18 06 59.0	
	comp=Z,69nm,21.6s,baz=6.0,slow=32						
	comp=Z,3.2nm,0.8s						
ENH	**Enshi**	**86.95**	**32**	P	**P**	**17 33 44.4**	**-0.8**
TSUM	**Tsumeb**	**87.28**	**133**	LR	LR	18 09 05.9	
	comp=Z,85nm,21.8s,baz=335,slow=33						
NJ2	**Nanjing**	**87.60**	**24**	*e*P	**P**	**17 33 47.3**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
PZH	**PanZhiHua**	**88.03**	**40**	P	**P**	**17 33 51.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PZH				pmax	pmax		
	comp=Z,120nm,5.7s						
LSZ	**Lusaka**	**88.30**	**122**	LR	LR	18 14 53.9	
	comp=Z,162nm,18.3s,baz=330,slow=37						
CMAR	**Chiang Mai Arr**	**94.39**	**45**	P	**P**	**17 34 20.4**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=317,slow=5.8,SNR=4.4						
	comp=Z,0.4nm,0.5s						
LBTB	**Lobatse**	**95.74**	**129**	LR	LR	18 17 05.0	
	comp=Z,131nm,18.9s,baz=346,slow=35						
BOSA	**Boshof**	**98.77**	**131**	LR	LR	18 16 37.5	
	comp=Z,93nm,21.1s,baz=0.0,slow=34						
PPT2	**Papeete2**	**118.86**	**283**	*e*LR	LR	18 16 23.8	
	comp=Z,224nm,23.0s						
TBI	**Tubuai**	**123.54**	**279**	*e*LR	LR	18 18 18.9	
	comp=Z,139nm,28.0s						
DZM	**Mont Dzumac**	**141.79**	**330**	*e*LR	LR	18 26 56.7	
	comp=Z,101nm,22.6s						
ASAR	**Alice Springs**	**144.81**	**21**	PKP	**PKPab**	**17 40 36.2**	**+0.4**
	comp=Z,7.9nm,1.1s,baz=342,slow=2.6,SNR=16						
VNDA	**Vanda**	**159.34**	**189**	PKPab	**PKPab**	**17 41 35.7**	**+1.2**
	comp=Z,1.9nm,1.1s,baz=180,slow=6.4,SNR=3.9						

TUL ***10*** *17:27:16.8±1.2, 36°.30N±0°.01×96°.82W±0°.02, h4^{km}±6^{km}, ML3.1, mb_Lg2.8/46(NEIC), Error ellipse: s-maj=1.8km s-min=1.7km az=79.0*

NEIC ***10*** *17:27:16.9±0.8, 36°.31N±0°.01×96°.83W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.4km az=96.0*

ANF ***10*** *17:27:17.0±0.4, 36°.30N×96°.84W, h4^{km}, ML3.3/8, Error ellipse: s-maj=3.7km s-min=2.9km az=141.0*

ISC 10 17:27:16.6±1.2**, 36°.31N**±0°.03×**96°.84W**±0°.03**, h3**^{km}±15^{km}**, n49, σ0^{s}.76**/42**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.66**	**24**		**Pg**	**17 27 29.6**	**+0.3**
T35A				Sg	**Sg**	**17 27 38.2**	**+0.3**
T35B	**Sooner Cattle**	**0.66**	**24**	P	**Pg**	**17 27 29.7**	**+0.4**
	baz=202,SNR=730						
T35B				S	**Sg**	**17 27 38.4**	**+0.5**
	baz=202						
TUL1	**Leonard**	**0.94**	**115**		**Pg**	**17 27 34.3**	**-0.2**
TUL1				Sg	**Sg**	**17 27 46.4**	**-0.4**
TUL1	**Leonard**	**0.94**	**115**	P	**Pg**	**17 27 34.4**	**-0.2**
	baz=295,SNR=137						
TUL1				S	**Sg**	**17 27 46.9**	**+0.2**
	baz=295						
TUL1	**Leonard**	**0.94**	**115**	P	**Pg**	**17 27 34.4**	**-0.2**
	baz=295						
TUL1				S	**Sg**	**17 27 46.6**	**-0.2**
	baz=295						
OKCFA	**Oklahoma City**	**1.02**	**209**	Pg	**Pg**	**17 27 35.7**	**-0.4**
OKCFA				Sg	**Sg**	**17 27 49.8**	**+0.5**
OKCFA	**Oklahoma City**	**1.02**	**209**	P	**Pg**	**17 27 35.7**	**-0.4**
	baz=30						
OKCFA				S	**Sg**	**17 27 50.1**	**+0.8**
	baz=30						
OKCSW	**OKLAHOMA CITY**	**1.02**	**208**		**Pg**	**17 27 35.6**	**-0.6**
OKCSW				Sg	**Sg**	**17 27 50.2**	**+0.8**
FNO	**Franklin**	**1.14**	**204**		**Pg**	**17 27 37.8**	**-0.7**
FNO				Sg	**Sg**	**17 27 53.6**	**+0.3**
U32A	**Winter Ranch,**	**1.74**	**273**	Pn	**Pn**	**17 27 48.4**	**+0.6**
U32A	**Winter Ranch,**	**1.74**	**273**	P	**Pn**	**17 27 48.7**	**+1.0**
	baz=92						
U32A				Sb	**Sg**	**17 28 13.3**	**+0.7**
	baz=92						
X37A	**Clayton**	**2.10**	**145**		**Pn**	**17 27 53.1**	**+0.5**
X37A				IAmb_Lg		17 28 27.5	
	comp=Z,66nm,0.8s						
X37A	**Clayton**	**2.10**	**145**	P	**Pn**	**17 27 53.2**	**+0.7**
	baz=326,SNR=13						
WMOK	**Wichita Mounta**	**2.23**	**226**		**Pn**	**17 27 55.2**	**+0.8**
WMOK	**Wichita Mounta**	**2.23**	**226**	P	**Pn**	**17 27 55.5**	**+1.1**
	baz=45,SNR=26						
WMOK	**Wichita Mounta**	**2.23**	**226**	P	**Pn**	**17 27 55.5**	**+1.1**
	baz=45						
WMOK				S	**Sb**	**17 28 24.3**	**-1.1**
	baz=45						
R32A	**Long Quarter,**	**2.58**	**325**	Pn	**Pn**	**17 27 59.0**	**-0.3**
W39A	**Magazine**	**2.73**	**113**		**Pn**	**17 28 01.2**	**0.0**
W39A	**Magazine**	**2.73**	**113**	P	**Pn**	**17 28 03.5**	**+2.3**
	baz=295,SNR=19						
S39A	**Bolivar**	**3.14**	**63**		**Pn**	**17 28 07.5**	**+0.6**
S39A				IAmb_Lg		17 29 03.5	
	comp=Z,27nm,0.7s						
MIAR	**Mount Ida**	**3.20**	**122**		**Pn**	**17 28 07.5**	**-0.2**
U40A	**Yellville**	**3.22**	**88**		**Pn**	**17 28 08.0**	**-0.1**
U40A	**Yellville**	**3.22**	**88**	P	**Pn**	**17 28 08.6**	**+0.4**
	baz=270,SNR=20						
U40A				P	**Pn**	**17 28 08.6**	**+0.4**
	baz=270,SNR=20						
U40A	**Yellville**	**3.22**	**88**	P	**Pn**	**17 28 08.5**	**+0.4**
	baz=270						
CBKS	**Cedar Bluff**	**3.40**	**318**		**Pn**	**17 28 10.8**	**+0.2**
CBKS	**Cedar Bluff**	**3.40**	**318**	S	**Sg**	**17 29 03.9**	**-1.8**
	baz=136						
Z38A	**Mt. Pleasant**	**3.41**	**153**	IAmb_Lg		17 29 06.6	
	comp=Z,21nm,0.8s						
X40A	**Basin Creek Fa**	**3.75**	**118**		**Pn**	**17 28 14.9**	**-0.4**
X40A				IAmb_Lg		17 29 23.2	
	comp=Z,19nm,0.9s						
MGMO	**Mountain Grove**	**3.77**	**76**	Pn	**Pn**	**17 28 15.9**	**+0.2**
MGMO				IAmb_Lg		17 29 20.4	
	comp=Z,29nm,0.8s						
WHAR	**Wooly Hollow**	**3.84**	**104**		**Pn**	**17 28 15.8**	**-0.8**
WHAR				IAmb_Lg		17 29 19.2	
	comp=Z,31nm,1.0s						
W41B	**Gary Mavity, V**	**3.91**	**106**	IAmb_Lg		17 29 22.5	
	comp=Z,28nm,0.8s						
W41B	**Gary Mavity, V**	**3.91**	**106**	P	**Pn**	**17 28 18.6**	**+1.1**
	baz=288,SNR=8.0						
UALR	**University of**	**3.98**	**111**	IAmb_Lg		17 29 24.6	
	comp=Z,34nm,1.2s						
R40A	**Maddies Statio**	**4.15**	**60**	IAmb_Lg		17 29 31.1	
	comp=Z,18nm,0.7s						
ABTX	**Abilene, Hawle**	**4.34**	**213**	IAmb_Lg		17 29 39.4	
	comp=Z,14nm,0.9s						
N33A	**J Bar K, Exete**	**4.45**	**354**	IAmb_Lg		17 29 43.9	
	comp=Z,18nm,0.7s						
N35A	**Tabor**	**4.64**	**11**	IAmb_Lg		17 29 53.6	
	comp=Z,16nm,0.8s						
CCM	**Cathedral Cave**	**4.80**	**67**	IAmb_Lg		17 29 59.6	
	comp=Z,20nm,0.8s						
PBMO	**Poplar Bluff**	**5.18**	**83**	IAmb_Lg		17 30 09.8	
	comp=Z,24nm,0.8s						
KSCO	**Kaye Shedlock’**	**5.32**	**302**	IAmb_Lg		17 30 07.4	
	comp=Z,12nm,0.9s						
MSTX	**Muleshoe**	**5.39**	**246**	IAmb_Lg		17 30 21.6	
	comp=Z,12nm,1.1s						
FVM	**French Village**	**5.39**	**70**	IAmb_Lg		17 30 13.2	
	comp=Z,17nm,0.8s						
435B	**Jarrell**	**5.55**	**187**	IAmb_Lg		17 30 26.2	
	comp=Z,19nm,1.1s						
L34A	**Svendsen Farm,**	**5.66**	**4**	IAmb_Lg		17 30 23.6	
	comp=Z,21nm,0.7s						
T25A	**Trinidad**	**6.13**	**280**	IAmb_Lg		17 30 43.2	
	comp=Z,10.0nm,1.0s						
S44A	**Carbondale**	**6.23**	**75**	IAmb_Lg		17 30 32.9	
	comp=Z,16nm,0.8s						
SIUC	**Southern Illin**	**6.26**	**75**	IAmb_Lg		17 30 40.6	

	comp=Z,20nm,0.8s						
JCT	Junction City	6.32	204	IAmb_Lg		17 30 43.3	
	comp=Z,19nm,1.1s						
N23A	Red Feather La	8.47	305	IAmb_Lg		17 31 49.3	
	comp=Z,9.3nm,0.8s						

IDC 10 17:29:49.4±1.5**,14°.33S**×**166°.77E,h0^{km},mb3.7**/2**,**
mbtmp3.7/3**,ML3.7**/1**,Error ellipse: s-maj=62.0km**
s-min=33.2km az=118.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.71	182	Pn	Pn	17 31 43.0	0.0
	1.1nm,0.3s,baz=193,slow=18,SNR=17						
	2.2nm,0.3s						
ASAR	Alice Springs	32.36	248	P	P	17 36 20.7	-0.2
	0.3nm,0.6s,baz=80,slow=8.9,SNR=5.2						
	0.3nm,0.6s						
ILAR	Eielson Array	86.30	18	P	P	17 42 32.5	-0.3
	0.7nm,0.7s,baz=236,slow=5.3,SNR=9.1						
	0.7nm,0.7s						
ARCES	ARCESS Array B	119.75	345	PKP	PKiKP	17 48 41.3	+0.3
	0.9nm,0.8s,baz=11,slow=1.8,SNR=3.7						

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*NEIC **10** 17:32:34.3±1.0, 16°.0S±0°.4×177°.9W±0°.2, h10^{km}±2^{km},*
mb4.5/10, Error ellipse: s-maj=67.3km s-min=19.1km
az=151.0

*IDC **10** 17:32:43.4±7.4, 15°.97S×178°.11W, h75^{km}±44^{km}, mb3.8/4,*
mbtmp4.0/5, ML4.6/1, MS3.9/30, Error ellipse:
s-maj=255.2km s-min=32.8km az=142.0

ISC 10 17:32:33.4±1.5**,17°.4S**±0°.4×**177°.0W**±0°.2**,h35^{km},n51,**
σ**1^{s}.71**/14**,mb4.4**/7**,MS4.0**/30**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.76	265	P	Pn	17 33 43.5	+0.8
	1.4nm,0.3s,baz=151,slow=23,SNR=6.0						
MSVF				S	Sn	17 34 38.9	+2.2
	10nm,0.7s,baz=210,slow=20,SNR=2.5						
MSVF				LR	LR	17 35 32.4	
	comp=Z,5µm,18.2s,baz=108,slow=41						
	6.5nm,0.6s						
MSVF	Nonsavu	4.76	265		Pn	17 33 39.7	-3.0
DZM	Mont Dzumac	16.29	251	*e*P	Pn	17 36 17.8	-1.9
	40nm,1.2s						
DZM				*e*LR	LR	17 40 17.0	
	comp=Z,1µm,25.2s						
DZM	Mont Dzumac	16.29	251	LR	LR	17 41 33.0	
	comp=Z,1µm,21.0s,baz=64,slow=34						
DZM	Mont Dzumac	16.29	251		Pn	17 36 21.3	+1.5
ONTNC	Ouen Toro	16.34	250	Pn	Pn	17 36 20.7	+0.4
ONTNC				IAmb	IAmb	17 36 44.9	
	comp=Z,30nm,1.1s						
KOUNC	Koumac, New Ca	18.00	257	P	Pn	17 36 39.2	-1.7
URZ	Urewera	21.45	193	LR	LR	17 44 00.7	
	comp=Z,361nm,21.6s,baz=31,slow=30						
HNR	Honiara	23.77	286	LR	LR	17 45 36.9	
	comp=Z,444nm,19.6s,baz=88,slow=35						
PPT2	Papeete2	26.13	95	*e*LR	LR	17 44 05.9	
	comp=Z,1µm,27.0s,baz=262						
TBI	Tubuai	26.45	108	*e*LR	LR	17 44 24.5	
	comp=Z,913nm,29.0s,baz=283						
RPZ	Rata Peaks	28.15	199	LR	LR	17 49 25.0	
	comp=Z,594nm,18.5s,baz=47,slow=34						
KRVT	Keravat (AS076	33.02	290	LR	LR	17 51 20.3	
	comp=Z,333nm,20.4s,baz=251,slow=35						
CTA	Charters Tower	34.88	260	P	P	17 39 20.9	-0.9
	comp=Z,2.4nm,0.9s,baz=59,slow=12,SNR=2.2						
CTA				LR	LR	17 52 11.5	
	comp=Z,404nm,18.2s,baz=82,slow=34						
	comp=Z,2.4nm,0.9s						
CTAO	Charters Tower	34.88	260	P	P	17 39 19.7	-2.1
CTAO				IAmb	IAmb	17 39 40.5	
	comp=Z,9.8nm,1.3s						
PMG	Port Moresby	35.73	278	LR	LR	17 53 08.3	
	comp=Z,128nm,18.6s,baz=89,slow=36						
STKA	Stephens Creek	40.08	241	LR	LR	17 56 02.3	
	comp=Z,94nm,19.2s,baz=45,slow=35						
WRA	Warramunga Arr	46.07	259	P	P	17 40 54.3	0.0
	comp=Z,1.0nm,1.0s,baz=92,slow=6.7,SNR=3.3						
WRA				LR	LR	17 59 09.3	
	comp=Z,296nm,19.4s,baz=38,slow=35						
	comp=Z,1.0nm,1.0s						
AS31	Alice Springs	46.25	254	P	P	17 40 55.3	-0.4
AS31				IAmb	IAmb	17 41 06.9	
	comp=Z,2.3nm,0.8s						
ASAR	Alice Springs	46.25	254	P	P	17 40 56.5	+0.8
	comp=Z,5.4nm,0.8s,baz=84,slow=8.0,SNR=24						
ASAR				LR	LR	17 59 41.3	
	comp=Z,334nm,18.9s,baz=108,slow=36						
	comp=Z,5.4nm,0.8s						
ASAR	Alice Springs	46.25	254	P	P	17 40 56.2	+0.5
SIJI	Sorong	53.45	282	LR	LR	18 03 41.9	
	comp=Z,144nm,20.4s,baz=68,slow=36						
BATI	Baumata	57.90	269	LR	LR	18 07 30.8	
	comp=Z,102nm,18.1s,baz=122,slow=37						
DAV	Davao City (W)	61.72	288	LR	LR	18 05 01.8	
	comp=Z,44nm,21.8s,baz=87,slow=32						
RPN	Rapa Nui	62.72	112	LR	LR	18 03 05.7	
	comp=Z,134nm,20.0s,baz=221,slow=28						
KAPI	Kappang	63.02	273	LR	LR	18 09 16.0	
	comp=Z,48nm,18.8s,baz=82,slow=35						
ASAJ	Asahikawa	71.47	330	LR	LR	18 09 54.8	
	comp=Z,74nm,21.3s,baz=46,slow=32						
PETK	Petropavlovsk-	73.52	344	LR	LR	18 12 06.5	
	comp=Z,45nm,19.7s,baz=129,slow=33						
LEM	Lembang	74.10	268	LR	LR	18 18 00.4	
	comp=Z,50nm,18.1s,baz=154,slow=37						
PFO	Pinyon Flats O	76.78	48	LR	LR	18 09 17.8	
	comp=Z,72nm,21.1s,baz=141,slow=29						
LPIG	La Paz	76.99	59	LR	LR	18 09 47.4	
	comp=Z,85nm,18.6s,baz=257,slow=29						
KLR	Kul'dur	80.35	329	LR	LR	18 15 12.4	
	comp=Z,45nm,19.9s,baz=62,slow=32						
SEY	Seymchan	83.57	346	LR	LR	18 15 20.4	
	comp=Z,54nm,20.9s,baz=347,slow=31						
WRH	Wood River Hil	84.55	12	P	P	17 45 01.3	-1.2
TXAR	Lajitas Array	84.56	57	LR	LR	18 13 55.5	
	comp=Z,44nm,20.4s,baz=242,slow=29						
CCB	Clear Creek Bu	84.77	12	P	P	17 45 02.6	-1.0
CCB				IAmb	IAmb	17 45 17.5	
	comp=Z,6.5nm,1.2s						
MDM	Murphy Dome	84.96	12	P	P	17 45 02.8	-1.8
ILAR	Eielson Array	85.06	12	P	P	17 45 04.8	-0.3
	comp=Z,3.2nm,1.1s,baz=213,slow=5.9,SNR=13						
	comp=Z,3.2nm,1.1s						
ILAR	Eielson Array	85.06	12	P	P	17 45 03.5	-1.5
BW06	Boulder Array	86.03	43	P	P	17 45 12.8	+2.1
BW06				IAmb	IAmb	17 45 26.1	
	comp=Z,2.9nm,0.7s						
CMIG	Matias Romero	87.77	71	LR	LR	18 15 13.4	
	comp=Z,87nm,21.7s,baz=210,slow=29						
YAK	Yakutsk	89.59	338	LR	LR	18 19 34.9	
	comp=Z,24nm,21.2s,baz=279,slow=32						
PLCA	Paso Flores	90.71	133	LR	LR	18 20 18.9	
	comp=Z,54nm,18.6s,baz=352,slow=31						
NNA	Nana	95.92	104	LR	LR	18 21 55.8	
	comp=Z,33nm,18.8s,baz=206,slow=30						
TIXI	Tiksi	95.98	345	LR	LR	18 26 13.0	
	comp=Z,51nm,19.1s,baz=181,slow=34						
ATAH	Atahualpa	96.02	99	LR	LR	18 18 41.8	
	comp=Z,111nm,21.6s,baz=267,slow=28						
BNN	Bunyan	144.29	314		PKPdf	17 52 05.2	-1.0
BRTR	Keskin Array B	145.35	316	PKP	PKPab	17 52 09.6	+1.4
	comp=Z,1.5nm,0.9s,baz=90,slow=2.9,SNR=9.2						
BRTR	Keskin Array B	145.35	316		PKPab	17 52 08.0	-0.1
GERES	GERESS Array B	147.42	347	PKPbc	PKPdf	17 52 13.7	+2.5
	comp=Z,0.2nm,0.3s,baz=76,slow=5.6,SNR=5.2						
GERES	GERESS Array B	147.42	347		PKPdf	17 52 11.9	+0.7

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*IDC **10** 18:10:32.9±0.6, 57°.62N×32°.77W, h0^{km}, mb4.1/17,*
mbtmp4.1/21, ML3.4/4, MS3.6/40, Error ellipse:
s-maj=19.3km s-min=12.7km az=11.0

*NEIC **10** 18:10:34.0±2.6, 57°.74N±0°.08×32°.8W±0°.1, h10^{km}±1^{km},*
mb4.5/122, Error ellipse: s-maj=13.9km s-min=11.6km
az=168.0

ISC 10 18:10:34.5±0.4**,57°.69N**±0°.07×**32°.76W**±0°.04**,h15^{km},n188,**
σ**1^{s}.37**/168**,mb4.5**/80**,MS3.6**/36**,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	7.33	304	Pn	Pn	18 12 16.0	-4.8
ANGG	Ammassalik, Gr	8.28	346	Pn	Pn	18 12 30.4	-3.4
BORG	Borgarnes	8.96	33	Pn	Pn	18 12 46.2	+3.2
	1.6nm,0.3s,baz=209,slow=5.4,SNR=13						
BORG				Sn	Sn	18 14 25.0	+1.5
	0.3nm,0.3s,baz=238,slow=15,SNR=1.7						
BORG				LR	LR	18 15 22.6	
	comp=Z,315nm,18.2s,baz=207,slow=32						
	9.3nm,0.6s						
BORG	Borgarnes	8.96	33		Pn	18 12 44.0	+0.9
SFJD	Kangerlussuaq	12.42	326	LR	LR	18 17 33.2	
	comp=Z,463nm,18.2s,baz=136,slow=34						
ESK	Eskdalemuir	16.43	86	Pn	Pn	18 14 24.8	+0.7
EKA	Eskdalemuir Ar	16.45	86	Pn	P	18 14 26.2	-0.8
	baz=285,slow=10						
EKA				LR	LR	18 19 33.8	
	comp=Z,183nm,19.6s,baz=355,slow=33						
	3.8nm,0.8s						
FRB	Frobisher Bay	18.32	304	P	P	18 14 49.1	+1.4
	0.1nm,0.3s,baz=99,slow=8.4,SNR=3.2						
FRB				LR	LR	18 20 44.9	
	comp=Z,290nm,19.0s,baz=40,slow=33						
	2.0nm,0.5s						
SCHQ	Schefferville	19.02	276	P	Pn	18 14 56.2	0.0
	0.2nm,0.3s,baz=82,slow=9.4,SNR=8.0						
SCHQ				LR	LR	18 20 55.9	
	comp=Z,232nm,20.0s,baz=67,slow=33						
	6.3nm,0.7s						
SCHQ	Schefferville	19.02	276	P	Pn	18 14 56.4	+0.2
NOA	NORSAR Array B	22.33	63	LR	LR	18 22 41.4	
	comp=Z,63nm,21.4s,baz=275,slow=33						
NB201	NORSAR Array S	22.37	63	P	P	18 15 28.0	-3.7
NB201				IAmb	IAmb	18 15 39.9	
	comp=Z,29nm,1.2s						
NC303	NORSAR Array S	22.37	62	P	P	18 15 24.5	-7.1
NC602	NORSAR Array S	22.55	64	P	P	18 15 32.0	-1.5
NC602				IAmb	IAmb	18 15 39.5	
	comp=Z,19nm,1.2s						
NC405	NORSAR Array S	22.56	62	P	P	18 15 30.3	-3.4
NC405				IAmb	IAmb	18 15 36.5	
	comp=Z,18nm,1.2s						
BATG	Bathurst New B	22.57	257	P	P	18 15 33.4	-0.5
BATG				IAmb	IAmb	18 15 38.7	
	comp=Z,40nm,1.4s						
TULEG	Thule	22.81	339	P	P	18 15 33.3	-2.9
TULEG				IAmb	IAmb	18 15 51.5	
	comp=Z,16nm,1.0s						
CLF	Chambon-Foret	23.00	100	P	P	18 15 37.4	-1.0
HFS	Hagfors	23.73	64	LR	LR	18 23 54.7	
	comp=Z,55nm,19.4s,baz=264,slow=34						
D62A	Allapoint, All	24.26	260	P	P	18 15 51.4	+0.7
D62A				IAmb	IAmb	18 16 20.2	
	comp=Z,29nm,1.6s						
LMQ	La Malbaie	24.65	262	P	P	18 15 52.9	-1.4
LMQ				IAmb	IAmb	18 15 57.2	
	comp=Z,10.0nm,1.1s						
PESTR	Estremoz	24.96	128	P	P	18 15 55.5	-1.6
PESTR				IAmb	IAmb	18 16 03.4	
	comp=Z,16nm,1.1s						
EMMW	East Machias	25.01	254	P	P	18 15 57.6	+0.2
ECH	Echery	25.50	94	P	P	18 16 01.4	-0.5
ECH				IAmb	IAmb	18 16 14.8	
	comp=Z,11nm,1.5s						
KBS	Kingsbay	25.65	18	P	P	18 16 03.5	+0.5
PAB	San Pablo	25.82	122	P	P	18 16 03.7	-1.3
PAB				IAmb	IAmb	18 16 08.8	
	comp=Z,25nm,1.5s						
ESDC	Sonseca Array	25.89	122	P	P	18 16 06.8	+1.2
	comp=Z,3.4nm,1.1s,baz=325,slow=9.8,SNR=8.8						
ESDC				LR	LR	18 24 06.1	
	comp=Z,103nm,21.2s,baz=316,slow=31						
	comp=Z,3.4nm,1.1s						
ESDC	Sonseca Array	25.89	122	P	P	18 16 04.7	-0.9
PFVI	Vila Bisbo	25.93	132	P	P	18 16 04.6	-1.3
GRA1	Grafenberg Arr	26.82	88	P	P	18 16 10.9	-3.0
GRFO	Grafenberg	26.82	88	P	P	18 16 10.8	-3.1
ARCES	ARCESS Array B	27.25	41	P	P	18 16 18.2	+0.7
	comp=Z,2.6nm,0.9s,baz=268,slow=9.0,SNR=3.9						
	comp=Z,2.6nm,0.9s						
TRQ	Mont Tremblant	27.74	264	P	P	18 16 24.1	+1.9
TRQ				IAmb	IAmb	18 16 30.4	
	comp=Z,12nm,1.4s						
TUE	Stuetta	27.75	95	P	P	18 16 20.6	-1.8
KEV	Kevo	27.76	40	P	P	18 16 20.8	-1.2
KEV				IAmb	IAmb	18 16 44.9	
	comp=Z,24nm,1.6s						
DAVOX	Davos/Dischmat	27.84	94	LR	LR	18 26 53.4	
	comp=Z,164nm,20.2s,baz=266,slow=35						
RES	Resolute Bay	28.36	330	LR	LR	18 27 27.5	
	comp=Z,110nm,18.6s,baz=77,slow=36						
FINES	FINESS Array B	29.15	58	P	P	18 16 36.5	+2.1
	comp=Z,3.0nm,0.9s,baz=304,slow=11,SNR=5.5						
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	29.15	58	P	P	18 16 32.1	-2.4
FIA1	FINESS Array S	29.15	58	P	P	18 16 32.5	-2.0
FIA1				IAmb	IAmb	18 16 40.4	
	comp=Z,10nm,1.1s						
VRAC	Vranov	29.92	85	LR	LR	18 28 36.7	
	comp=Z,119nm,18.8s,baz=299,slow=36						
PABE	Paberze	30.53	69	P	P	18 16 47.9	+1.1
TRNY	Table Rock, Ra	31.03	256	P	P	18 16 49.7	-1.7
TRNY				IAmb	IAmb	18 16 58.4	
	comp=Z,6.2nm,0.9s						
FCC	Fort Churchill	31.32	298	P	P	18 16 54.5	+0.8
FCC				IAmb	IAmb	18 16 59.5	
	comp=Z,9.5nm,1.2s						
MDT	Midelt	31.39	130	LR	LR	18 28 31.9	
	comp=Z,75nm,18.2s,baz=344,slow=34						
MNK	Minsk	32.99	69	*i* P	P	18 17 09.6	+1.2
	comp=E,1.0nm,0.8s						
MNK				*i* P	P	18 17 09.6	+1.2
	comp=N,4.0nm,0.8s						
MNK				*i* P	P	18 17 09.6	+1.2
	comp=Z,14nm,0.8s,baz=301						
MNK				*i* PP	PnPn	18 18 18.4	+1.0
MNK				*i* PPP	PPP	18 18 27.2	
MNK				*i* S	S	18 22 27.3	+1.5
MNK				*i* SS	SnSn	18 24 24.0	+0.6
MNK				*i* SSS	SSS	18 24 52.8	
MNK				*i* LQ	LQ	18 27 11.4	
MNK				*i* LR	LR	18 30 46.3	
MNK				*i* LRM	MLR	18 34 23.5	
	comp=N,27nm,13.1s						
MNK				*i* LRM	MLR	18 34 30.6	
	comp=E,8.0nm,13.8s						
MNK				*i* LRM	MLR	18 34 31.9	
	comp=Z,131nm,14.2s						
PAGS	Pennsylvania G	33.01	257	P	P	18 17 07.0	-1.6
R58B	Mineral	35.28	256	P	P	18 17 29.7	+1.3
KLMR	Klimovskoe	35.35	54	*e*P	P	18 17 27.9	-0.9
KLMR				AMP		18 17 31.2	
	comp=Z,25nm,1.0s						
KEST	Kesra	35.45	110	LR	LR	18 30 42.4	
	comp=Z,57nm,20.3s,baz=246,slow=34						
BURAR	Bucovina Array	35.53	81	P	P	18 17 31.3	+0.7
AKASG	Malin Array Be	35.76	74	P	P	18 17 33.0	+0.5
	comp=Z,2.6nm,0.7s,baz=306,slow=8.3,SNR=10						
AKASG				LR	LR	18 32 05.9	
	comp=Z,50nm,18.6s,baz=153,slow=36						
	comp=Z,2.6nm,0.7s						
AKASG	Malin Array Be	35.76	74	IAmb	IAmb	18 17 40.1	
	comp=Z,2.2nm,1.2s						
AKBB	Malin Array Si	35.76	74	P	P	18 17 32.7	+0.3
AKBB				IAmb	IAmb	18 17 37.9	
	comp=Z,7.6nm,1.1s						
ULM	Lac du Bonnet	36.61	286	LR	LR	18 31 16.9	
	comp=Z,135nm,18.5s,baz=58,slow=34						
VAE	Valguarnera	36.73	103	LR	LR	18 31 23.6	
	comp=Z,111nm,18.9s,baz=328,slow=34						
MLR	Muntele Rosu	37.27	83	LR	LR	18 33 51.8	
	comp=Z,104nm,18.4s,baz=322,slow=38						
VTS	Vitosha	37.74	89	P	P	18 17 47.6	-1.9
FNA	Florina	38.02	92	P	P	18 17 51.5	-0.3
FNA				IAmb	IAmb	18 17 58.9	
	comp=Z,9.4nm,0.9s						
F36A	Milaca	38.12	279	P	P	18 17 52.9	+0.3
YKA	Yellowknife Ar	38.51	312	P	P	18 17 56.1	+0.6
	comp=Z,2.9nm,0.9s,baz=60,slow=9.0,SNR=26						
YKA				PcP	PcP	18 20 08.2	+0.2
	comp=Z,0.6nm,0.8s,baz=51,slow=3.3,SNR=6.2						
YKA				LR	LR	18 33 09.6	
	comp=Z,317nm,18.6s,baz=7.5,slow=35						
	comp=Z,2.9nm,0.9s						
YKA	Yellowknife Ar	38.51	312	P	P	18 17 56.4	+0.8
P46A	Rosedale	39.02	267	P	P	18 18 01.1	+1.0
P46A				IAmb	IAmb	18 18 21.8	
	comp=Z,9.4nm,0.7s						
TKL	Tuckaleechee C	40.12	259	LR	LR	18 33 43.0	
	comp=Z,143nm,19.5s,baz=31,slow=35						
P43A	Skaggs, Pawnee	40.24	269	P	P	18 18 10.4	+0.1
P43A				IAmb	IAmb	18 18 17.0	
	comp=Z,22nm,1.4s						
ECSD	EROS Data Cent	41.18	279	P	P	18 18 19.1	+1.1
INK	Inuvik	41.77	327	P	P	18 18 22.8	+0.3
	comp=Z,1.6nm,1.0s,baz=49,slow=9.2,SNR=3.1						
INK				LR	LR	18 33 56.1	
	comp=Z,83nm,19.7s,baz=56,slow=34						
	comp=Z,1.6nm,1.0s						
INK	Inuvik	41.77	327	P	P	18 18 21.5	-1.0
FPAL	Fort Paine	41.94	260	P	P	18 18 26.1	+1.7
FPAL				IAmb	IAmb	18 18 29.1	
	comp=Z,19nm,1.7s						
CCM	Cathedral Cave	42.31	268	P	P	18 18 27.3	0.0
R40A	Maddies Statio	42.69	270	P	P	18 18 31.0	+0.5
R40A				IAmb	IAmb	18 18 35.8	
	comp=Z,6.4nm,0.9s						
EDM	Edmonton	43.38	300	P	P	18 18 35.5	-0.3
EDM				IAmb	IAmb	18 18 41.7	
	comp=Z,12nm,1.0s						
MGMO	Mountain Grove	43.53	268	P	P	18 18 37.0	-0.2
MGMO				IAmb	IAmb	18 18 40.3	
	comp=Z,6.3nm,0.9s						
BORA	Eskisehir	43.53	86	P	P	18 18 38.0	+0.7
U40A	Yellville	44.44	268	P	P	18 18 44.9	+0.4
U40A				IAmb	IAmb	18 18 50.3	
	comp=Z,12nm,1.2s						
BRTR	Keskin Array B	45.35	83	LR	LR	18 38 03.8	
	comp=Z,47nm,18.7s,baz=312,slow=36						
BRTR	Keskin Array B	45.35	83	P	P	18 18 51.1	-0.8
BMAR	Burnt Mountain	45.48	330	P	P	18 18 52.7	+0.2
W39A	Magazine	45.80	268	P	P	18 18 55.0	-0.3
X40A	Basin Creek Fa	45.83	266	P	P	18 18 56.4	+0.8
X40A				IAmb	IAmb	18 19 01.6	
	comp=Z,6.6nm,0.9s						
TOLK	Toolik Lake Re	45.88	333	P	P	18 18 56.7	+1.1
TOLK				IAmb	IAmb	18 19 01.9	
	comp=Z,8.7nm,1.2s						
ARU	Arti	46.01	51	LR	LR	18 36 57.6	
	comp=Z,71nm,21.1s,baz=20,slow=34						
ARU	Arti	46.01	51	P	P	18 18 56.5	-0.2
ARU				IAmb	IAmb	18 18 59.2	
	comp=Z,6.2nm,0.9s						
M31M	Drury Creek, Y	46.02	320	P	P	18 18 56.6	-0.2
WALA	Waterton Lakes	46.39	296	P	P	18 18 59.9	-0.1
HUMP	Col San Antoni	46.46	226	P	P	18 19 01.8	+1.2
N31M	Braeburn, Yuko	46.99	320	P	P	18 19 03.8	-0.6
DLBC	Dease Lake	47.02	315	LR	LR	18 38 27.3	
	comp=Z,234nm,18.5s,baz=76,slow=36						
COLD	Coldfoot	47.10	332	P	P	18 19 04.6	-0.5
COLD				IAmb	IAmb	18 19 11.3	
	comp=Z,4.0nm,1.1s						
BNN	Bunyan	47.16	83		P	18 19 06.5	+0.3
KBZ	Khabaz	47.35	73	P	P	18 19 09.0	+1.6
	comp=Z,1.1nm,0.7s,baz=275,slow=9.8,SNR=3.9						
	comp=Z,1.1nm,0.7s						
H24K	Noodor Dome	47.55	330	P	P	18 19 09.2	+0.5
H24K				IAmb	IAmb	18 19 16.7	
	comp=Z,10nm,1.5s						
BOZ	Bozeman (W)	47.66	291	P	P	18 19 10.4	+0.4
BOZ				IAmb	IAmb	18 19 16.0	
	comp=Z,5.1nm,1.0s						
KSCO	Kaye Shedlock'	47.71	279	P	P	18 19 09.7	-0.8
J25K	Salcha River,	47.76	327	P	P	18 19 12.0	+1.6
J25K				IAmb	IAmb	18 19 16.4	
	comp=Z,7.0nm,1.3s						
BCAR	Beaver Creek A	47.83	324	P	P	18 19 12.3	+1.3
SCRK	Sand Creek	47.83	326	P	P	18 19 12.6	+1.6
SCRK				IAmb	IAmb	18 19 17.9	
	comp=Z,6.4nm,1.0s						
L27K	Beaver Creek,	47.85	325	P	P	18 19 11.8	+0.8
L27K				IAmb	IAmb	18 19 18.1	
	comp=Z,3.0nm,0.9s						
H23K	Yukon River	48.00	330	P	P	18 19 13.4	+1.2
H23K				IAmb	IAmb	18 19 18.7	
	comp=Z,6.6nm,1.2s						
HYT	Haines Junctio	48.05	320	P	P	18 19 12.5	-0.3
ILAR	Eielson Array	48.08	328	P	P	18 19 14.6	+1.8
	comp=Z,2.6nm,0.9s,baz=37,slow=6.5,SNR=10.0						
ILAR				PcP	PcP	18 20 41.1	+0.9
	comp=Z,1.4nm,0.7s,baz=354,slow=2.3,SNR=5.5						
ILAR				LR	LR	18 38 19.9	
	comp=Z,55nm,20.6s,baz=76,slow=35						
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	48.08	328	P	P	18 19 14.1	+1.3
N23A	Red Feather La	48.09	283	P	P	18 19 12.6	-0.9
MDM	Murphy Dome	48.31	329	P	P	18 19 14.5	-0.1
ONI	Oni	48.45	73	P	P	18 19 14.7	-1.3
ONI				IAmb	IAmb	18 19 28.6	
	comp=Z,7.4nm,1.5s						
I23K	Minto, Yukon-K	48.48	330	P	P	18 19 16.0	+0.2
I23K				IAmb	IAmb	18 19 22.5	
	comp=Z,9.9nm,1.4s						
NEW	Newport	48.48	297	LR	LR	18 38 43.0	
	comp=Z,126nm,18.8s,baz=12,slow=35						
BW06	Boulder Array	48.62	287	P	P	18 19 18.2	+0.7
BW06				IAmb	IAmb	18 19 22.2	
	comp=Z,3.8nm,1.0s						
PD31	Pinedale Array	48.62	287	P	P	18 19 17.7	+0.1
PD31				IAmb	IAmb	18 19 22.2	
	comp=Z,3.4nm,1.0s						
PDAR	Pinedale Array	48.62	287	P	P	18 19 18.0	+0.5
	comp=Z,2.0nm,0.9s,baz=64,slow=6.6,SNR=9.3						
PDAR				LR	LR	18 38 44.0	
	comp=Z,94nm,18.9s,baz=71,slow=35						
	comp=Z,2.0nm,0.9s						
PDAR	Pinedale Array	48.62	287	P	P	18 19 17.0	-0.5
ISCO	Idaho Springs	48.71	282	P	P	18 19 18.3	-0.1
ISCO				IAmb	IAmb	18 19 24.8	
	comp=Z,3.7nm,0.9s						
MCMT	McKenzie Canyo	48.82	291	P	P	18 19 19.3	+0.3
WMOK	Wichita Mounta	48.83	272	P	P	18 19 19.4	+0.4
WMOK				IAmb	IAmb	18 19 24.6	
	comp=Z,9.5nm,1.2s						
IMAR	Indian Mountai	48.96	332	P	P	18 19 20.8	+1.3
PAX	Paxson	49.03	326	P	P	18 19 22.0	+1.8
PAX				IAmb	IAmb	18 19 23.9	
	comp=Z,3.9nm,1.1s						
MCK	McKinley	49.45	328	P	P	18 19 24.8	+1.4
B08A	Colville Reser	49.46	299	P	P	18 19 24.2	+0.6
B08A				IAmb	IAmb	18 19 29.2	
	comp=Z,7.4nm,1.1s						
BCYI	Bear Canyon	49.46	291	P	P	18 19 23.8	-0.2
N25K	Chitina, Valde	49.80	324	P	P	18 19 27.7	+1.6
N25K				IAmb	IAmb	18 19 32.6	
	comp=Z,6.4nm,1.0s						
ISLE	Juniper Island	49.84	323	P	P	18 19 26.2	-0.3
SMCO	Snowmass	49.88	282	P	P	18 19 28.0	+0.5
AKTO	Aktyubinsk	49.92	57	LR	LR	18 40 29.3	
	comp=Z,53nm,18.8s,baz=0.2,slow=36						
T25A	Trinidad	50.04	278	P	P	18 19 26.8	-1.6
T25A				IAmb	IAmb	18 19 34.7	
	comp=Z,7.0nm,1.0s						
TRF	Thorofare Moun	50.05	329	P	P	18 19 28.0	-0.1
KTH	Kantishna Hill	50.15	329	P	P	18 19 27.1	-1.6
PLID	Pearl Lake	50.19	294	P	P	18 19 30.1	+0.6
PLID				IAmb	IAmb	18 19 34.3	
	comp=Z,8.0nm,1.2s						
RDMU	Red Mountain	50.22	285	P	P	18 19 28.4	-1.3
RDMU				IAmb	IAmb	18 19 35.1	
	comp=Z,3.8nm,0.9s						
TIXI	Tiksi	50.30	7	P	P	18 19 30.2	+0.5
HWUT	Hardware Ranch	50.49	288	P	P	18 19 30.5	-1.2
HWUT				IAmb	IAmb	18 19 36.9	
	comp=Z,5.3nm,1.0s						
HLID	Hailey	50.51	291	P	P	18 19 31.2	-0.6
J20K	Nowinta River	50.51	331	P	P	18 19 31.9	+0.5
J20K				IAmb	IAmb	18 19 39.5	
	comp=Z,5.8nm,1.2s						
BBB	Bella Bella	50.66	308	LR	LR	18 39 18.6	
	comp=Z,78nm,18.6s,baz=256,slow=34						
S22A	4UR Ranch, Cre	50.87	281	P	P	18 19 33.3	-1.4
LTY	Liberty	50.88	299	P	P	18 19 34.2	-0.3
GNI	Garni	50.89	75	LR	LR	18 45 08.6	
	comp=Z,23nm,18.0s,baz=63,slow=41						
BMO	Blue Mountains	51.00	294	P	P	18 19 34.0	-1.5
BMO				IAmb	IAmb	18 19 41.0	
	comp=Z,4.2nm,0.9s						
CBB	Campbell River	51.02	304	P	P	18 19 34.2	-1.2
P18A	Preston Nutter	51.26	285	P	P	18 19 36.7	-1.0
TORD	Torodi Ar. Bea	51.54	135	P	P	18 19 39.8	+0.2
	comp=Z,16nm,0.8s,baz=332,slow=9.0,SNR=4.4						
PV13	Radium Mtn., P	51.61	283	P	P	18 19 40.2	-0.1
P17A	Butcher Ranch,	51.63	285	P	P	18 19 39.7	-0.6

ABKAR	**Akbulak array**	**51.63**	**57**	P	**P**	**18 19 39.1**	**-0.9**
ABKAR				IAmb	IAmb	18 19 42.8	
	comp=Z,4.5nm,0.9s						
ABKAR	**Akbulak array**	**51.63**	**57**	P	**P**	**18 19 38.7**	**-1.3**
NLU	**North Lily Min**	**51.97**	**286**	P	**P**	**18 19 43.1**	**+0.3**
NLU				IAmb	IAmb	18 19 48.8	
	comp=Z,5.8nm,1.1s						
MVCO	**Mesa Verde**	**52.15**	**282**	P	**P**	**18 19 44.6**	**+0.3**
MVCO				IAmb	IAmb	18 19 57.2	
	comp=Z,12nm,1.2s						
DUG	**Dugway, Tooele**	**52.17**	**287**	P	**P**	**18 19 44.3**	**0.0**
JCT	**Junction City**	**52.66**	**269**	P	**P**	**18 19 48.5**	**+0.7**
JCT				IAmb	IAmb	18 19 53.0	
	comp=Z,8.8nm,1.1s						
J08A	**Circle Bar Ran**	**52.67**	**294**	P	**P**	**18 19 47.5**	**-0.4**
J08A				IAmb	IAmb	18 19 53.7	
	comp=Z,6.3nm,1.0s						
ANMO	**Albuquerque**	**52.78**	**278**	P	**P**	**18 19 51.3**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=36,slow=8.7						
ANMO				LR	LR	18 41 21.4	
	comp=Z,143nm,18.5s,baz=43,slow=35						
	comp=Z,0.5nm,0.3s						
ANMO	**Albuquerque**	**52.78**	**278**	P	**P**	**18 19 49.4**	**+0.5**
ELK	**Elko**	**52.99**	**289**	LR	LR	18 41 36.1	
	comp=Z,116nm,18.1s,baz=58,slow=35						
ELK	**Elko**	**52.99**	**289**	P	**P**	**18 19 49.3**	**-1.2**
WVOR	**Wild Horse Val**	**53.44**	**293**	P	**P**	**18 19 53.0**	**-0.6**
WVOR				IAmb	IAmb	18 19 59.4	
	comp=Z,8.8nm,1.2s						
PSUT	**Pine Spring**	**53.94**	**287**	P	**P**	**18 19 56.9**	**-0.6**
K05A	**Summer Lake**	**54.33**	**295**	P	**P**	**18 19 58.8**	**-1.4**
MOD	**Modoc Plateau**	**54.66**	**294**	P	**P**	**18 20 01.5**	**-1.1**
DBIC	**Dimbokro**	**55.34**	**146**	P	**P**	**18 20 07.2**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=23,slow=3.1,SNR=3.9						
DBIC				LR	LR	18 40 44.7	
	comp=Z,73nm,20.7s,baz=318,slow=33						
	comp=Z,3.8nm,0.8s						
TXAR	**Lajitas Array**	**55.63**	**271**	P	**P**	**18 20 13.1**	**+3.4**
	comp=Z,1.3nm,1.0s,baz=106,slow=1.8,SNR=5.1						
TXAR				LR	LR	18 42 22.5	
	comp=Z,22nm,18.1s,baz=7.0,slow=34						
TXAR	**Lajitas Array**	**55.63**	**271**	P	**P**	**18 20 10.3**	**+0.7**
KVN	**Kaiserville**	**55.72**	**290**	P	**P**	**18 20 11.4**	**+1.1**
KVN				IAmb	IAmb	18 20 16.2	
	comp=Z,7.4nm,1.0s						
PAHR	**Pah Rah Range**	**55.86**	**292**	P	**P**	**18 20 12.2**	**+0.9**
YBH	**Yreka Blue Hor**	**55.96**	**295**	LR	LR	18 43 14.7	
	comp=Z,66nm,18.8s,baz=58,slow=35						
NVAR	**Mina Array Bea**	**56.29**	**290**	P	**P**	**18 20 15.8**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=45,slow=3.8,SNR=5.2						
NVAR				LR	LR	18 43 50.1	
	comp=Z,95nm,18.0s,baz=34,slow=36						
	comp=Z,1.1nm,0.8s						
GWY	**Greenwater Val**	**57.18**	**287**	P	**P**	**18 20 21.9**	**+1.2**
GWY				IAmb	IAmb	18 20 26.9	
	comp=Z,9.5nm,1.2s						
KURK	**Kurchatov**	**58.22**	**44**	P	**P**	**18 20 28.0**	**+0.5**
KURBB	**Kurchatov Arra**	**58.26**	**44**	LR	LR	18 46 24.4	
	comp=Z,25nm,18.1s,baz=223,slow=37						
CMIG	**Matias Romero**	**60.89**	**255**	LR	LR	18 48 36.1	
	comp=Z,20nm,18.5s,baz=16,slow=38						
MK31	**Makanchi Array**	**62.83**	**44**	P	**P**	**18 20 59.2**	**+0.1**
MK31				IAmb	IAmb	18 21 13.0	
	comp=Z,6.2nm,1.6s						
MKAR	**Makanchi Array**	**62.83**	**44**	P	**P**	**18 21 00.8**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=333,slow=5.2,SNR=14						
	comp=Z,1.1nm,0.6s						
BTK	**Batken**	**63.64**	**56**	P	**P**	**18 21 04.3**	**-0.4**
RAYN	**Ar Rayn**	**64.21**	**86**	P	**P**	**18 21 08.2**	**-0.4**
RAYN				IAmb	IAmb	18 21 15.3	
	comp=Z,4.1nm,1.2s						
GAR	**Garm**	**64.28**	**57**	P	**P**	**18 21 10.3**	**+1.3**
KSH	**Kashi**	**66.35**	**53**	P	**P**	**18 21 26.8**	**+4.4**
KSH				pP	pwP	18 21 30.8	+1.8
KSH				sP	sP	18 21 34.1	+5.9
KSH				PcP	**PcP**	**18 21 55.4**	**+3.3**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**69.53**	**28**	P	**P**	**18 21 43.2**	**+1.0**
	comp=Z,2.0nm,1.0s,baz=336,slow=5.2,SNR=10						
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**69.53**	**28**	P	**P**	**18 21 42.3**	**0.0**
SONM				IAmb	IAmb	18 21 44.5	
	comp=Z,3.7nm,1.2s						
ULN	**Ulaanbaatar**	**69.67**	**28**	P	**P**	**18 21 43.7**	**+0.6**
KLR	**Kul'dur**	**72.67**	**11**	LR	LR	18 52 24.5	
	comp=Z,15nm,19.6s,baz=74,slow=34						
ATAH	**Atahualpa**	**74.42**	**227**	LR	LR	18 55 15.0	
	comp=Z,16nm,19.3s,baz=20,slow=36						
GTA	**Gaotai**	**75.41**	**36**	*e*P	**P**	**18 22 18.6**	**+1.2**
GTA				sP	pwP	18 22 26.6	+2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KSRS	**Korea Array**	**83.83**	**15**	P	**P**	**18 23 02.4**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=357,slow=6.4,SNR=4.2						
	comp=Z,1.2nm,0.8s						
CPUP	**Villa Florida**	**86.21**	**202**	P	**P**	**18 23 15.3**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=15,slow=8.1,SNR=4.4						
	comp=Z,1.8nm,0.7s						
CPUP	**Villa Florida**	**86.21**	**202**	P	**P**	**18 23 13.0**	**-1.7**
CPUP				IAmb	IAmb	18 23 16.3	
	comp=Z,5.2nm,1.1s						
LSZ	**Lusaka**	**88.24**	**122**	LR	LR	19 03 09.5	
	comp=Z,30nm,18.8s,baz=316,slow=36						
CMAR	**Chiang Mai Arr**	**94.22**	**45**	P	**P**	**18 23 53.9**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=324,slow=5.6,SNR=4.9						
	comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**94.22**	**45**	P	**P**	**18 23 50.0**	**-2.8**
ASAR	**Alice Springs**	**144.67**	**21**	PKP	PKPbc	18 30 09.3	+0.3
	comp=Z,1.4nm,0.9s,baz=353,slow=1.7,SNR=9.7						
ASAR	**Alice Springs**	**144.67**	**21**		**PKPab**	**18 30 08.5**	**-0.3**

IDC ***10*** *18:25:54.4±1.5, 2°.11N×126°.31E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.6/1, MS3.0/1, Error ellipse: s-maj=60.3km s-min=22.7km az=56.0*

DJA ***10*** *18:26:00.4±1.5, 2°N±4°×12°7E±°, h19^{km}±14^{km}, M3.5/7, mb3.7/3, MLv3.5/7*

NEIC ***10*** *18:26:03.2±1.2, 2°.3N±0°.1×126°.8E±0°.1, h69^{km}±11^{km}, mb4.2/10, Error ellipse: s-maj=22.6km s-min=10.7km az=221.0*

ISC 10 18:26:01.5±0.8**, 2°.40N**±0°.08×**126°.82E**±0°.09**, h53^{km}, n27, σ1^{s}64**/27**, mb4.1**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.70**	**161**		**Pn**	**18 26 28.4**	**-0.5**
TNTI	**Ternate**	**1.70**	**161**	P	**Pn**	**18 26 28.7**	**-0.2**
TNTI				S	**Sn**	**18 26 51.1**	**+1.6**
SGSI	**Sangihe**	**1.82**	**315**	P	**Pn**	**18 26 31.7**	**+1.3**
SGSI				S	**Sn**	**18 26 53.9**	**+1.6**
LBMI	**Labuha**	**3.09**	**167**	P	**Pn**	**18 26 49.3**	**+1.4**
GTOI	**Gorontalo**	**4.19**	**245**	P	**Pn**	**18 27 06.1**	**+3.2**
SANI	**Sanana**	**4.49**	**191**	P	**Pn**	**18 27 06.6**	**-0.5**
SWI	**Sorong**	**5.50**	**126**	P	**Pn**	**18 27 21.6**	**+0.7**
	0.0nm7.8nm,0.7s						
SIJI	**Sorong**	**5.50**	**126**	Pn	**Pn**	**18 27 21.9**	**+0.9**
	1.6nm,0.3s,baz=324,slow=22,SNR=6.5						
SIJI				Sn	**Sn**	**18 28 27.4**	**+4.3**
	0.4nm,0.3s,baz=315,slow=20,SNR=1.7						
	4.2nm,0.3s						
TOLI2	**Tolitoli**	**6.17**	**258**	Pn	**Pn**	**18 27 30.8**	**+0.7**
MYLDM	**Lahad Datu**	**8.75**	**289**		**Pn**	**18 28 07.7**	**+2.3**
BATI	**Baumata**	**12.91**	**194**	LR	LR	18 34 36.7	
	comp=Z,74nm,19.2s,baz=160,slow=42						
SBUM	**Sibu**	**14.59**	**271**	P	**Pn**	**18 29 25.7**	**+0.7**
KNRA	**Kununurra**	**18.06**	**174**	P	**P**	**18 30 07.5**	**-1.1**
KNRA				IAmb	IAmb	18 30 23.4	
	comp=Z,74nm,1.6s						
WRA	**Warramunga Arr**	**23.39**	**162**	P	**P**	**18 31 03.9**	**-2.0**
	comp=Z,1.0nm,0.5s,baz=338,slow=11,SNR=13						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**23.39**	**162**	IAmb	IAmb	18 31 11.5	
	comp=Z,0.2nm,1.1s						
WB2	**Warramunga Arr**	**23.40**	**162**	P	**P**	**18 31 05.0**	**-1.0**
WB2				IAmb	IAmb	18 31 24.2	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**23.47**	**161**	P	**P**	**18 31 05.0**	**-1.7**
WR0				IAmb	IAmb	18 31 17.0	
	comp=Z,14nm,1.6s						
AS31	**Alice Springs**	**26.81**	**165**	P	**P**	**18 31 35.9**	**-1.1**
ASAR	**Alice Springs**	**26.81**	**165**	P	**P**	**18 31 35.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=344,slow=10,SNR=8.2						
	comp=Z,0.3nm,0.3s						
FORT	**Forrest**	**33.01**	**178**	P	**P**	**18 32 31.1**	**-0.7**
BBOO	**Buckleboo**	**36.09**	**167**	P	**P**	**18 32 57.0**	**-1.4**
STKA	**Stephens Creek**	**36.86**	**159**	P	**P**	**18 33 03.4**	**-1.5**
	comp=Z,2.6nm,0.6s,baz=323,slow=12,SNR=4.9						
	comp=Z,2.6nm,0.6s						
STKA	**Stephens Creek**	**36.86**	**159**	IAmb	IAmb	18 33 11.0	
	comp=Z,1.4nm,1.1s						
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**18 35 53.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=117,slow=7.7,SNR=5.0						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**18 35 52.4**	**-1.4**
MAKZ	**Makanchi**	**58.88**	**326**	P	**P**	**18 35 54.8**	**-0.2**
MAKZ				IAmb	IAmb	18 36 19.0	
	comp=Z,2.3nm,1.4s						
KURK	**Kurchatov**	**62.91**	**328**	P	**P**	**18 36 21.4**	**-0.8**
KURK				IAmb	IAmb	18 36 23.9	
	comp=Z,1.5nm,0.8s						

IDC 10 18:27:18.3±16.0**, 0°.98N**×**127°.65E, h0^{km}, mb3.9**/3**, mbtmp3.9**/3**, Error ellipse: s-maj=251.4km s-min=158.4km az=160.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.80**	**163**	P	P	18 32 12.3	+0.1
	3.2nm,0.3s,baz=343,slow=11,SNR=24						
	3.2nm,0.3s						
ASAR	**Alice Springs**	**25.24**	**166**	P	P	18 32 46.1	-0.1
	0.2nm,0.3s,baz=339,slow=7.8,SNR=4.4						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**35.25**	**159**	P	P	18 34 14.6	-0.1
	2.6nm,0.6s,baz=342,slow=12,SNR=3.4						
	2.6nm,0.6s						

IDC 10 18:47:28.6±2.2**, 2°.19N**×**126°.10E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=181.3km s-min=27.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.43**	**160**	P	P	18 52 39.6	-0.1
	0.3nm,0.3s,baz=339,slow=11,SNR=11						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.80**	**164**	P	P	18 53 11.0	+0.3
	0.3nm,0.8s,baz=345,slow=7.1,SNR=5.9						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**58.47**	**326**	P	P	18 57 26.2	-0.3
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.3						
	0.2nm,0.5s						

IDC 10 18:53:38.9±2.4**, 13°.69N**×**144°.15E, h127^{km}**±82^{km}**, mb3.3**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=231.3km s-min=24.4km az=81.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.70**	**98**	P	Pn	18 53 59.9	+0.9
	1µm,0.3s,baz=203,slow=0.8,SNR=286						
GUMO				S	Sn	18 54 15.2	+1.1
	512nm,0.3s,baz=90,slow=22,SNR=32						
WRA	**Warramunga Arr**	**34.79**	**196**	P	P	19 00 17.5	-0.1
	0.8nm,0.5s,baz=18,slow=8.5,SNR=10						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**38.46**	**195**	P	P	19 00 48.4	-0.3
	0.2nm,0.3s,baz=18,slow=13,SNR=9.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**60.94**	**316**	P	P	19 03 38.5	-0.1
	0.4nm,0.5s,baz=89,slow=8.0,SNR=6.6						
	0.4nm,0.5s						

GUC 10 19:08:08.8±0.5**, 23°.90S**×**66°.99W, h226^{km}**±9^{km}**, ML3.7, 8C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.59**	**121**	*e*P	Pn	19 08 42.3	-3.5
SLA				*i* S	S	19 09 08.5	-6.1
LVC	**Limon Verde**	**2.18**	**306**	⇑*i*P	Pn	19 08 51.5	0.0
LVC				*i* S	S	19 09 23.4	-1.3
PB15	**IPOC Station P**	**2.37**	**286**	⇑*e*P	Pn	19 08 53.5	+0.1
PB15				*i* S	S	19 09 27.5	-0.5
PB06	**IPOC Station P**	**2.65**	**296**	⇑*i*P	Pn	19 08 56.5	+0.3
PB06				*i* S	S	19 09 32.3	-0.9
PB06				IAML		19 09 34.4	
	comp=E,189nm,0.1s						
GO02	**Mina Guanaco**	**2.68**	**241**	⇑*i*P	Pn	19 08 56.7	+0.1
GO02				*i* S	S	19 09 33.9	-0.1
GO02				IAML		19 09 37.0	
	comp=N,196nm,0.1s						
PB09	**IPOC Station P**	**2.94**	**315**	⇑*i*P	Pn	19 09 00.1	+0.6
PB09				*i* S	S	19 09 38.6	-0.5
PB09				IAML		19 09 41.8	
	comp=E,52nm,0.3s						
PB10	**IPOC Station P**	**3.29**	**276**	⇑*i*P	Pn	19 09 03.4	+0.3
PB10				*i* S	S	19 09 45.1	-0.6
PB04	**IPOC Station P**	**3.29**	**298**	*e*P	Pn	19 09 03.7	+0.2
PB04				*i* S	S	19 09 45.2	-1.0
PB07	**IPOC Station P**	**3.43**	**308**	⇑*i*P	Pn	19 09 05.0	-0.1
PB07				*i* S	S	19 09 47.1	-2.1
PB01	**IPOC Station P**	**3.66**	**320**	*e*P	Pn	19 09 07.2	-0.4
PB01				*i* S	S	19 09 52.4	-1.4
PB02	**IPOC Station P**	**3.71**	**313**	⇑*i*P	Pn	19 09 08.1	-0.2
PB02				*i* S	S	19 09 53.2	-1.8
AC01	**Pan de Azucar**	**3.96**	**235**	*e*P	Pn	19 09 10.2	-1.0
AC01				*i* S	S	19 09 58.2	-2.1
PATCX	**Punta Patache**	**4.23**	**316**	*e*P	Pn	19 09 13.7	-0.9
PATCX				*i* S	S	19 10 05.2	-1.2
PB08	**IPOC Station P**	**4.24**	**331**	*e*P	Pn	19 09 15.2	+0.3
PB08				*i* S	S	19 10 07.2	+0.2
HMBC	**Humberstone**	**4.49**	**323**	*e*P	Pn	19 09 16.3	-1.5
HMBC				*i* S	S	19 10 08.3	-3.8
PB11	**IPOC Station P**	**4.80**	**328**	*e*P	Pn	19 09 20.2	-1.4

NAO ***10*** *19:21:11.5±3.1, 78°.64N×6°.49E, ML3.9*

IDC ***10*** *19:21:13.7±0.7, 78°.55N×6°.35E, h0^{km}, mb3.6/12, mbtmp3.7/16, ML3.1/2, MS3.2/21, Error ellipse: s-maj=18.4km s-min=11.0km az=25.0*

BER ***10*** *19:21:15.7±3.0, 78°.55N×6°.78E, h26^{km}±25^{km}, ML3.2, ML3.9(NAO), Confirmed Earthquake*

IEPN ***10*** *19:21:17.0, 78°.46N×7°.32E, h10^{km}*

KOLA ***10*** *19:21:21.1, 78°.69N×10°.86E, h0^{km}, ML2.4*

ISC 10 19:21:13.3±1.6**, 78°.45N**±0°.05×**7°.23E**±0°.04**, h7^{km}**±11^{km}**, n90, σ2^{s}95**/96**, mb3.5**/13**, MS3.3**/17**, 4C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.04**	**61**	Pg	**Pb**	**19 21 33.5**	**-0.1**
KBS				Lg	Lg	19 21 46.6	
KBS	**Kingsbay**	**1.04**	**61**	⇑*i*P	**Pg**	**19 21 33.8**	**+0.5**
KBS				*e*S	**Sg**	**19 21 46.4**	**-0.4**
KBS				IAML		19 21 48.1	
	comp=Z,4µm,0.5s						
KBS	**Kingsbay**	**1.04**	**61**	*e*P	**Pb**	**19 21 33.3**	**-0.3**
KBS				*e*S	**Sb**	**19 21 46.1**	**-1.4**
BRBB	**Barentsburg B**	**1.47**	**101**	Pn	**Pn**	**19 21 40.2**	**+0.1**
BRBB				Sn	**Sn**	**19 21 57.9**	**-1.7**
BRBB	**Barentsburg B**	**1.47**	**101**	⇑*i*P	**Pn**	**19 21 40.4**	**+0.3**
BRBB				*e*S	**Sn**	**19 21 57.9**	**-1.7**
BRBA	**Barentsburg A**	**1.48**	**102**	Pn	**Pn**	**19 21 40.4**	**+0.1**
BRBA				Sn	**Sn**	**19 21 58.6**	**-1.3**
BRBA	**Barentsburg A**	**1.48**	**102**	⇑*i*P	**Pn**	**19 21 40.6**	**+0.3**
BRBA				*e*S	**Sn**	**19 21 58.5**	**-1.4**
BRBA				IAML		19 22 02.6	
	comp=Z,481nm,0.2s						
SPA0	**Spitsbergen Ar**	**1.88**	**94**	Pn	**Pb**	**19 21 47.1**	**-0.7**
	baz=266,slow=12						
SPA0				Sn	**Sb**	**19 22 10.0**	**-1.5**
	baz=276,slow=18						
SPA0	**Spitsbergen Ar**	**1.88**	**94**	Pn	**Pb**	**19 21 47.1**	**-0.7**
	baz=266,slow=12						
SPA0				Sn	**Sb**	**19 22 10.0**	**-1.5**
	baz=276,slow=18						
SPA0	**Spitsbergen Ar**	**1.88**	**94**	⇑*i*P	**Pb**	**19 21 47.1**	**-0.7**
SPA0				*i* S	**Sn**	**19 22 09.4**	**-0.3**
SPITS	**Spitsbergen Ar**	**1.88**	**94**	Pn	**Pb**	**19 21 47.1**	**-0.7**
	comp=Z,255nm,0.3s,baz=265,slow=10.0,SNR=5213						
SPITS				Sn	**Sb**	**19 22 09.9**	**-1.7**
	baz=265,slow=18						
HSPB	**Hornsund (broa**	**2.30**	**125**	Pn	**Pn**	**19 21 51.5**	**+0.1**
HSPB				Sn	**Sn**	**19 22 18.4**	**-1.5**
HSPB	**Hornsund (broa**	**2.30**	**125**	*e*P	**Pn**	**19 21 51.7**	**+0.2**
HSPB				*e*S	**Sn**	**19 22 18.2**	**-1.7**
HSPB				IAML		19 22 21.2	
	comp=Z,218nm,0.4s						
HSPB	**Hornsund (broa**	**2.30**	**125**	*e*P	**Pn**	**19 21 51.5**	**+0.1**
HSPB				*e*S	**Sn**	**19 22 17.6**	**-2.3**
HOPEN	**Hopen**	**4.32**	**108**	Pn	**Pn**	**19 22 19.5**	**+0.3**
HOPEN				Sn	**Sn**	**19 23 07.7**	**-2.1**
HOPEN	**Hopen**	**4.32**	**108**	*e*P	**Pn**	**19 22 19.4**	**+0.3**
HOPEN				*e*S	**Sn**	**19 23 06.8**	**-2.9**
HOPEN				IAML		19 23 09.6	
	comp=Z,100nm,0.4s						
HOPEN	**Hopen**	**4.32**	**108**	*e*P	**Pn**	**19 22 19.3**	**+0.1**
HOPEN				*e*S	**Sn**	**19 23 06.1**	**-3.6**
BJO1	**Bjornoya**	**4.83**	**139**	Pn	**Pn**	**19 22 28.8**	**+2.6**
BJO1				Sn	**Sn**	**19 23 19.3**	**-2.9**
BJO1	**Bjornoya**	**4.83**	**139**	*e*P	**Pn**	**19 22 27.2**	**+1.0**
BJO1				*e*S	**Sn**	**19 23 19.5**	**-2.7**
BJO1				IAML		19 23 24.6	
	comp=Z,14nm,0.4s						
BJO1	**Bjornoya**	**4.83**	**139**	*e*P	**Pn**	**19 22 27.7**	**+1.6**
BJO1				*e*S	**Sn**	**19 23 18.6**	**-3.5**
NOR	**Nord**	**5.17**	**319**	Pn	**Pn**	**19 22 27.0**	**-3.8**
NOR				Sn	Sn	19 23 21.5	-9.1
NOR	**Nord**	**5.17**	**319**	*i* P	Pn	19 22 26.6	-4.3
NOR				IAML		19 22 39.9	
	comp=Z,18nm,0.6s						
NOR	**Nord**	**5.17**	**319**	*e*P	**Pn**	**19 22 27.2**	**-3.7**
NOR				*e*S	Sn	19 23 21.4	-9.2
DAG	**Danmarks Havn**	**5.78**	**266**	*i* P	Pn	19 22 35.0	-4.2
DAG				IAML		19 22 40.6	
	comp=Z,39nm,0.3s						
DAG	**Danmarks Havn**	**5.78**	**266**	*e*P	Pn	19 22 35.0	-4.2
DAG				*e*		19 23 33.3	
ZFI2	**Zemlya Franca-**	**7.51**	**53**	*e*P	**Pn**	**19 23 02.7**	**-0.3**
ZFI2				*e*S	**Sn**	**19 24 20.7**	**-7.5**
ZFI	**Zemlya Franca-**	**7.52**	**53**	*e*P	**Pn**	**19 23 02.7**	**-0.3**
ZFI				*e*S	**Sn**	**19 24 21.1**	**-7.2**
	comp=Z,59nm,0.5s						
DBG	**Daneborg**	**7.62**	**251**	Pn	**Pn**	**19 23 01.0**	**-3.4**
DBG				Sn	Sn	19 24 18.6	-12
DBG	**Daneborg**	**7.62**	**251**	*i* P	Pn	19 23 00.8	-3.6
DBG				IAML		19 23 03.4	
	comp=Z,24nm,0.7s						
DBG	**Daneborg**	**7.62**	**251**	*e*P	Pn	19 23 00.6	-3.8
DBG				*e*S	Sn	19 24 18.8	-12
JMIC	**Jan Mayen**	**8.53**	**217**	Pn	**Pn**	**19 23 16.9**	**+0.1**
	comp=Z,39nm,0.3s,baz=170,slow=9.5,SNR=6.7						
JMIC				Sn	Sn	19 24 45.0	-8.1
	comp=Z,19nm,0.3s,baz=245,slow=23,SNR=10.0						
JMIC	**Jan Mayen**	**8.53**	**217**	Pn	**Pn**	**19 23 16.8**	**0.0**
JMIC				Sn	**Sn**	**19 24 47.7**	**-5.4**
JMIC	**Jan Mayen**	**8.53**	**217**	Pn	**Pn**	**19 23 16.8**	**0.0**
JMIC				Sn	**Sn**	**19 24 47.7**	**-5.4**
HAMF	**Hammerfest**	**8.94**	**143**	Pn	**Pn**	**19 23 24.5**	**+2.0**
HAMF				Sn	**Sn**	**19 24 57.0**	**-6.1**
HAMF	**Hammerfest**	**8.94**	**143**	*e*P	**Pn**	**19 23 22.7**	**+0.2**
TRO	**Tromso**	**9.40**	**154**	*e*P	**Pn**	**19 23 26.4**	**-2.4**
JETT	**Jettan, Norway**	**9.61**	**151**	*e*P	**Pn**	**19 23 29.8**	**-2.0**
KIF	**Kilpisjarvi**	**10.18**	**151**	Pn	**Pn**	**19 23 40.8**	**+1.3**
KIF	**Kilpisjarvi**	**10.18**	**151**	*e*	**Pn**	**19 23 40.1**	**+0.6**
KEV	**Kevo**	**10.19**	**138**	*e*	**Pn**	**19 23 41.0**	**+1.4**
ARA0	**ARCESS Array S**	**10.20**	**141**	Pn	**Pn**	**19 23 40.1**	**+0.3**
	baz=347,slow=12						
ARA0				Sn	**Sn**	**19 25 29.2**	**-5.0**
	baz=351,slow=28						
ARA0	**ARCESS Array S**	**10.20**	**141**	Pn	**Pn**	**19 23 40.1**	**+0.3**
	baz=347,slow=12						
ARA0				Sn	**Sn**	**19 25 29.2**	**-5.0**
	baz=351,slow=28						
ARCES	**ARCESS Array B**	**10.20**	**141**	Pn	**Pn**	**19 23 41.6**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=348,slow=12,SNR=16						
ARCES				Sn	**Sn**	**19 25 26.9**	**-7.3**
	comp=Z,0.1nm,0.3s,baz=347,slow=23,SNR=2.1						
	comp=Z,2.6nm,0.5s						
ARCES	**ARCESS Array B**	**10.20**	**141**	P	**Pn**	**19 23 41.1**	**+1.3**
ARCES				S	**Sn**	**19 25 29.2**	**-5.0**
KTK1	**Kautokeino**	**10.43**	**147**	*e*	**Pn**	**19 23 44.6**	**+1.7**
LOF	**Lofoten**	**10.53**	**167**	Pn	**Pn**	**19 23 46.4**	**+2.2**
LOF	**Lofoten**	**10.53**	**167**	*e*	**Pn**	**19 23 46.7**	**+2.5**
PRVG	**Vayda Guba**	**10.95**	**129**	P	**Pn**	**19 23 50.1**	**+0.1**
PRVG				S	**Sn**	**19 25 43.8**	**-8.7**
SCO	**Scoresbysund**	**11.00**	**239**	*i* P	Pn	19 23 46.0	-4.6
SCO				IAML		19 24 12.8	
	comp=Z,8.4nm,1.1s						
FAUS	**Fauske**	**11.36**	**164**	*e*	**Pn**	**19 23 52.6**	**-3.0**
SALU	**Saltoluokta**	**11.57**	**158**	*e*	**Pn**	**19 23 60.0**	**+1.4**
TERR	**Teriberka**	**11.91**	**126**	S	Sn	19 26 03.2	-13
KONS	**Konsvik**	**12.14**	**169**	*e*	**Pn**	**19 24 04.2**	**-2.0**
APA0	**Apatity Array**	**13.03**	**132**	P	**Pn**	**19 24 19.8**	**+1.4**
APA0				S	Sn	19 26 33.9	-9.4
ICESG	**Greenland Ices**	**15.50**	**259**	*i* P	**Pn**	**19 24 47.0**	**-5.1**
ICESG				IAML		19 24 48.0	
	comp=Z,23nm,0.6s						
BORG	**Borgarnes**	**16.11**	**228**	LR	LR	19 29 48.0	
	comp=Z,29nm,18.7s,baz=3.1,slow=32						
AMDE	**Amderma**	**16.46**	**92**	*e*P	**Pn**	**19 24 58.1**	**-6.0**
AMDE				*e*S	Sn	19 27 43.7	-23
NOA	**NORSAR Array B**	**17.55**	**174**	P	**P**	**19 25 25.6**	**+6.5**
	comp=Z,0.9nm,0.7s,baz=348,slow=14,SNR=4.5						
NOA				LR	LR	19 31 13.4	
	comp=Z,11nm,19.9s,baz=0.0,slow=34						
LSH	**Leshukonskoye**	**17.62**	**119**	*e*P	**Pn**	**19 25 17.8**	**-1.0**
LSH				S	Sn	19 28 15.0	-20
FINES	**FINESS Array B**	**18.08**	**150**	P	**P**	**19 25 29.0**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=357,slow=9.7,SNR=7.7						
	comp=Z,2.8nm,0.7s						
HFS	**Hagfors**	**18.53**	**170**	LR	LR	19 31 46.0	
	comp=Z,27nm,21.5s,baz=340,slow=34						
DY2G	**Dye2**	**19.05**	**261**	*i* P	**P**	**19 25 34.6**	**-1.2**
DY2G				IAML		19 25 40.1	
	comp=Z,11nm,0.6s						
SFJD	**Kangerlussuaq**	**19.47**	**267**	P	**P**	**19 25 38.4**	**-1.6**
	comp=Z,6.8nm,0.5s,baz=51,slow=6.5,SNR=8.3						
SFJD				LR	LR	19 33 45.2	
	comp=Z,119nm,18.3s,baz=352,slow=39						
KLMR	**Klimovskoe**	**20.37**	**131**	*e*P	Pn	19 25 52.5	+0.6
KLMR				AMP		19 26 00.0	
	comp=Z,6.0nm,1.0s						
RES	**Resolute Bay**	**21.09**	**314**	P	**P**	**19 25 56.9**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=73,slow=11,SNR=2.8						
	comp=Z,1.1nm,0.6s						
NRIK	**Noril'sk**	**21.91**	**70**	P	**P**	**19 26 09.5**	**+3.0**
	comp=Z,4.5nm,0.8s,baz=19,slow=0.8,SNR=5.4						
	comp=Z,4.5nm,0.8s						
FRB	**Frobisher Bay**	**25.93**	**280**	LR	LR	19 37 39.7	
	comp=Z,40nm,18.6s,baz=202,slow=38						
CLL	**Collm**	**27.34**	**172**	*i* P	**P**	**19 27 00.7**	**+2.4**
	comp=Z,5.0nm,1.3s						
AKASG	**Malin Array Be**	**28.99**	**151**	P	**P**	**19 27 14.2**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=343,slow=9.3,SNR=5.5						
AKASG				LR	LR	19 39 04.7	
	comp=Z,36nm,20.4s,baz=354,slow=37						
	comp=Z,0.2nm,0.3s						
VRAC	**Vranov**	**29.47**	**167**	LR	LR	19 38 29.4	
	comp=Z,23nm,20.0s,baz=0.5,slow=35						
GERES	**GERESS Array B**	**29.82**	**171**	P	**P**	**19 27 24.5**	**+3.9**
	comp=Z,0.4nm,0.7s,baz=22,slow=6.6,SNR=4.5						
	comp=Z,0.4nm,0.7s						
DAVOX	**Davos/Dischmat**	**31.81**	**177**	LR	LR	19 40 05.8	
	comp=Z,25nm,18.6s,baz=281,slow=36						
AKTO	**Aktyubinsk**	**33.44**	**116**	LR	LR	19 43 41.3	
	comp=Z,36nm,18.5s,baz=349,slow=40						
SCHQ	**Schefferville**	**33.81**	**271**	LR	LR	19 40 56.2	
	comp=Z,49nm,21.0s,baz=113,slow=35						
MLR	**Muntele Rosu**	**33.86**	**156**	LR	LR	19 42 52.8	
	comp=Z,66nm,18.0s,baz=11,slow=38						
YKA	**Yellowknife Ar**	**35.10**	**317**	P	**P**	**19 28 05.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=22,slow=9.6,SNR=6.2						
	comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**35.35**	**86**	P	**P**	**19 28 11.6**	**+3.0**
	comp=Z,0.9nm,0.8s,baz=335,slow=10.0,SNR=4.7						
ZALV				LR	LR	19 45 58.9	
	comp=Z,39nm,18.6s,baz=355,slow=42						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**36.17**	**342**	P	**P**	**19 28 17.5**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=8.9,slow=6.4,SNR=3.8						
	comp=Z,0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**37.23**	**94**	P	**P**	**19 28 28.4**	**+3.7**
	comp=Z,1.3nm,0.6s,baz=342,slow=7.6,SNR=17						
KURBB				LR	LR	19 45 57.9	
	comp=Z,60nm,18.3s,baz=334,slow=40						
	comp=Z,1.3nm,0.6s						
DLBC	**Dease Lake**	**40.95**	**327**	LR	LR	19 47 03.2	
	comp=Z,36nm,18.1s,baz=318,slow=38						
MKAR	**Makanchi Array**	**41.64**	**92**	P	**P**	**19 29 04.5**	**+2.9**

	comp=Z,1.3nm,0.6s,baz=339,slow=7.1,SNR=15						
MKAR				LR	LR	19 49 31.9	
	comp=Z,46nm,18.4s,baz=337,slow=41						
	comp=Z,1.3nm,0.6s						
IDI	Anoyia	43.92	159	LR	LR	19 48 11.8	
	comp=Z,14nm,18.7s,baz=48,slow=37						
AAK	Ala-Archa	44.07	102	LR	LR	19 49 54.0	
	comp=Z,57nm,20.0s,baz=350,slow=39						
SONM	Songino Array	45.40	69	P	P	19 29 34.3	+2.4
	comp=Z,0.4nm,0.7s,baz=335,slow=9.5,SNR=3.2						
	comp=Z,0.4nm,0.7s						
SADO	Sadowa	45.85	278	LR	LR	19 46 58.7	
	comp=Z,34nm,18.7s,baz=350,slow=34						
KLR	Kul'dur	48.33	46	LR	LR	19 51 18.3	
	comp=Z,30nm,18.5s,baz=308,slow=37						
PDAR	Pinedale Array	53.43	305	P	P	19 30 33.3	-0.2
	comp=Z,0.1nm,0.4s,baz=27,slow=8.1,SNR=4.0						
	comp=Z,0.1nm,0.4s						
TKL	Tuckaleechee C	55.56	279	LR	LR	19 55 36.0	
	comp=Z,37nm,18.4s,baz=332,slow=37						
ANMO	Albuquerque	60.52	300	LR	LR	19 56 37.2	
	comp=Z,39nm,18.4s,baz=52,slow=35						
TXAR	Lajitas Array	65.50	296	P	P	19 31 57.0	+0.2
	comp=Z,0.8nm,0.8s,baz=42,slow=5.0,SNR=8.9						
	comp=Z,0.8nm,0.8s						

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*IDC **10** 19:22:31.2±9.0, 2°.61N×124°.69E, h0^{km}, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=261.5km s-min=144.9km az=68.0*

*NEIC **10** 19:22:52.4±2.1, 1°.29N±0°.10×125°.76E±0°.06, h53^{km}±10^{km}, mb4.5/11, Error ellipse: s-maj=14.1km s-min=8.9km az=178.0*

ISC 10 19:22:51.8±0.8**, 1°.29N**±0°.09×**125°.78E**±0°.07**, h50^{km}, n17, σ1^{s}.38**/18**, mb4.3**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.67	108		Pn	19 23 19.0	+0.4
LUWI	Luwuk	3.80	232	Pn	Pn	19 23 47.7	-0.2
LUWI				Sn	Sn	19 24 34.9	+3.6
TOLI2	Tolitoli	5.00	268	Pn	Pn	19 24 04.1	-0.3
MYLDM	Lahad Datu	8.23	298	Pn	Pn	19 24 49.8	+1.1
WB0	Warramunga Arr	22.57	158	P	P	19 27 47.9	-0.3
WB0				IAmb	IAmb	19 28 11.6	
	comp=Z,24nm,1.5s						
WRA	Warramunga Arr	22.71	159	P	P	19 27 49.3	-0.3
	comp=Z,1.4nm,0.5s,baz=335,slow=9.8,SNR=19						
	comp=Z,1.4nm,0.5s						
WRA	Warramunga Arr	22.71	159	P	P	19 27 48.2	-1.4
WB2	Warramunga Arr	22.72	159	P	P	19 27 49.1	-0.6
WB2				IAmb	IAmb	19 27 59.1	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	22.80	158	P	P	19 27 49.1	-1.5
WR0				IAmb	IAmb	19 28 23.4	
	comp=Z,23nm,1.4s						
AS31	Alice Springs	26.04	163	P	P	19 28 21.6	+1.0
AS31				IAmb	IAmb	19 28 24.9	
	comp=Z,2.9nm,0.3s						
ASAR	Alice Springs	26.04	163	P	P	19 28 21.6	+0.9
	comp=Z,1.2nm,0.4s,baz=341,slow=7.3,SNR=57						
	comp=Z,1.2nm,0.4s						
JHS	Saijyo	34.22	11	P	P	19 29 33.4	+0.5
BBOO	Buckleboo	35.28	165	P	P	19 29 42.0	-0.1
BBOO				IAmb	IAmb	19 29 55.5	
	comp=Z,48nm,1.5s						
STKA	Stephens Creek	36.24	157	P	P	19 29 50.6	+0.4
	comp=Z,2.9nm,1.0s,baz=349,slow=13,SNR=3.0						
	comp=Z,2.9nm,1.0s						
STKA	Stephens Creek	36.24	157	P	P	19 29 48.3	-1.9
UOSS	Minazif	70.97	296	P	P	19 34 03.1	-1.6
UOSS				IAmb	IAmb	19 34 24.6	
	comp=Z,11nm,1.2s						
GYA0B	ALIBECK ARRAY	71.69	310	P	P	19 34 07.8	-1.1
GYA0B				IAmb	IAmb	19 34 08.9	
	comp=Z,2.5nm,0.6s						

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*IDC **10** 19:23:07.8±1.3, 37°.05S×77°.96E, h0^{km}, mb4.0/4, mbtmp4.0/4, MS4.0/44, Error ellipse: s-maj=60.3km s-min=29.4km az=91.0*

*NEIC **10** 19:23:09.5±1.2, 37°.08S±0°.08×77°.9E±0°.3, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=37.1km s-min=7.0km az=288.0*

ISC 10 19:23:09.4±0.8**, 37°.1S**±0°.1×**78°.0E**±0°.2**, h9^{km}, n63, σ0^{s}.97**/16**, mb4.5**/9**, MS4.1**/44**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	0.75	205		Pg	19 23 24.2	+0.3
H01W2	Cape Leeuwin H	29.23	97	T	T	19 59 18.4	
	baz=255,slow=75,SNR=71						
H01W3	Cape Leeuwin H	29.24	97	T	T	19 59 18.6	
	baz=255,slow=75,SNR=101						
H01W1	Cape Leeuwin H	29.25	97	T	T	19 59 19.5	
	baz=255,slow=75,SNR=90						
H08S2	Diego Garcia H	29.75	349	T	T	20 00 29.0	
	baz=171						
H08S1	Diego Carcia H	29.76	349	T	T	20 00 29.0	
	baz=171						
H08S3	Diego Garcia H	29.77	349	T	T	20 00 27.8	
	baz=171						
MAW	Mawson	31.71	191	LR	LR	19 40 40.3	
	comp=Z,967nm,18.5s,baz=5.5,slow=33						
LEM	Lembang	40.47	49	LR	LR	19 45 04.0	
	comp=Z,377nm,19.6s,baz=174,slow=33						
PALK	Pallekele	44.23	4	LR	LR	19 46 49.7	
	comp=Z,270nm,18.8s,baz=289,slow=32						
PSI	Prapat	44.24	31	LR	LR	19 46 47.6	
	comp=Z,600nm,18.8s,baz=210,slow=32						
BOSA	Boshof	44.60	265	LR	LR	19 46 40.9	
	comp=Z,153nm,20.9s,baz=135,slow=32						
LBTB	Lobatse	45.93	270	LR	LR	19 48 01.8	
	comp=Z,305nm,18.4s,baz=127,slow=32						
SUR	Sutherland	46.60	258	LR	LR	19 48 18.4	
	comp=Z,302nm,18.4s,baz=119,slow=32						
LSZ	Lusaka	49.04	283	LR	LR	19 50 11.7	
	comp=Z,152nm,19.0s,baz=141,slow=33						
BATI	Baumata	49.05	69	LR	LR	19 52 10.8	
	comp=Z,169nm,18.4s,baz=233,slow=36						
ASAR	Alice Springs	49.44	91	LR	LR	19 51 13.5	
	comp=Z,348nm,18.5s,baz=273,slow=34						
KAPI	Kappang	49.76	60	LR	LR	19 50 24.5	
	comp=Z,158nm,20.8s,baz=228,slow=33						
WRA	Warramunga Arr	51.67	87	P	P	19 32 16.8	-0.1
	1.5nm,0.9s,baz=221,slow=10,SNR=2.7						
WRA				LR	LR	19 52 38.2	
	comp=Z,283nm,19.1s,baz=19,slow=34						
	1.5nm,0.9s						
WR0	Warramunga Arr	51.82	87	P	P	19 32 16.5	-1.6
WR0				IAmb	IAmb	19 32 17.9	
	comp=Z,6.6nm,1.0s						
STKA	Stephens Creek	51.84	104	LR	LR	19 51 12.7	
	comp=Z,164nm,20.4s,baz=211,slow=32						
SNAA	Sanae	52.38	203	LR	LR	19 51 46.6	
	comp=Z,213nm,19.6s,baz=114,slow=33						
VNDA	Vanda	52.77	164	P	P	19 32 23.9	-0.4
	comp=Z,1.0nm,1.1s,baz=297,slow=6.8,SNR=3.3						
VNDA				LR	LR	19 53 22.5	
	comp=Z,164nm,18.2s,baz=241,slow=34						
	comp=Z,1.0nm,1.1s						
VNDA	Vanda	52.77	164	IAmb	IAmb	19 32 30.9	
	comp=Z,9.4nm,1.6s						
QSPA	South Pole Qui	53.04	180	P	P	19 32 27.4	+0.8
	comp=Z,1.8nm,0.8s,baz=322,slow=16,SNR=8.3						
QSPA				LR	LR	19 54 02.6	
	comp=Z,828nm,18.8s,baz=292,slow=35						
	comp=Z,1.8nm,0.8s						
QSPA	South Pole Qui	53.04	180	P	P	19 32 26.4	-0.2
QSPA				IAmb	IAmb	19 32 36.2	
	comp=Z,9.1nm,1.2s						
TSUM	Tsumeb	55.26	271	LR	LR	19 53 46.8	
	comp=Z,338nm,19.5s,baz=143,slow=33						
MYLDM	Lahad Datu	56.55	51	P	P	19 32 54.4	+2.0
MBAR	Mbarara	56.70	299	LR	LR	19 54 25.1	
	comp=Z,92nm,18.2s,baz=116,slow=33						
CMAR	Chiang Mai Arr	58.71	23	LR	LR	19 55 26.6	
	comp=Z,101nm,20.2s,baz=185,slow=33						
SIJI	Sorong	60.88	67	LR	LR	19 57 08.9	
	comp=Z,41nm,21.7s,baz=200,slow=34						
CTA	Charters Tower	61.11	94	LR	LR	19 58 18.3	
	comp=Z,351nm,19.3s,baz=260,slow=34						
DAV	Davao City (W)	62.52	56	LR	LR	19 59 17.1	
	comp=Z,74nm,20.2s,baz=217,slow=35						
WSAR	Wadi Sarin	62.74	340	LR	LR	19 55 41.6	
	comp=Z,81nm,20.1s,baz=179,slow=31						
RPZ	Rata Peaks	67.51	128	LR	LR	19 58 01.6	
	comp=Z,87nm,18.1s,baz=260,slow=31						
PMG	Port Moresby	67.81	85	LR	LR	20 03 43.7	
	comp=Z,210nm,18.4s,baz=238,slow=36						
PMSA	Palmer Station	74.16	196	LR	LR	20 06 16.5	
	comp=Z,98nm,18.7s,baz=144,slow=35						
KRVT	Keravat (AS076	74.71	84	LR	LR	20 07 43.3	
	comp=Z,53nm,19.4s,baz=1.1,slow=36						
DZM	Mont Dzumac	75.87	107	LR	LR	20 04 16.8	
	comp=Z,74nm,18.1s,baz=212,slow=32						
BTK	Batken	77.08	354	P	P	19 35 02.6	-0.3
BTK				IAmb	IAmb	19 35 09.3	
	comp=Z,6.3nm,1.0s						
JOW	Kunigami	79.26	44	LR	LR	20 06 53.0	
	comp=Z,34nm,21.1s,baz=346,slow=33						
AAK	Ala-Archa	79.44	357	LR	LR	20 08 04.7	
	comp=Z,115nm,19.7s,baz=184,slow=34						
KK31	Karatay Array	80.13	354	P	P	19 35 18.7	-0.8
KK31				IAmb	IAmb	19 35 25.7	
	comp=Z,6.2nm,1.1s						
KKAR	Karatay Array	80.13	354	P	P	19 35 19.7	+0.2
KKAR	Karatay Array	80.13	354	P	P	19 35 19.0	-0.5
KKAR				IAmb	IAmb	19 35 25.7	
	comp=Z,6.2nm,1.1s						
GUMO	Guam	80.53	65	LR	LR	20 06 32.4	
	comp=Z,16nm,20.1s,baz=205,slow=32						
GNI	Garni	82.72	335	LR	LR	20 08 27.1	
	comp=Z,40nm,20.4s,baz=130,slow=33						
MK31	Makanchi Array	83.62	3	P	P	19 35 38.1	+0.3
MKAR	Makanchi Array	83.62	3	P	P	19 35 38.0	+0.2
	comp=Z,1.6nm,0.8s,baz=178,slow=4.9,SNR=13						
MKAR				LR	LR	20 11 24.7	
	comp=Z,108nm,19.5s,baz=188,slow=35						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	83.62	3	P	P	19 35 37.7	-0.1
MAKZ	Makanchi	83.62	3	P	P	19 35 38.9	+1.1
MAKZ				IAmb	IAmb	19 35 41.9	
	comp=Z,7.9nm,1.6s						
KSRS	Korea Array	87.40	38	LR	LR	20 15 26.7	
	comp=Z,38nm,18.0s,baz=205,slow=36						
JCJ	Chichijima	87.84	53	LR	LR	20 11 50.5	
	comp=Z,38nm,21.4s,baz=126,slow=33						
DBIC	Dimbokro	88.29	280	LR	LR	20 11 51.0	
	comp=Z,65nm,18.9s,baz=136,slow=33						
SONM	Songino Array	88.30	19	LR	LR	20 15 11.3	
	comp=Z,79nm,18.8s,baz=188,slow=35						
AKTO	Aktyubinsk	88.93	347	LR	LR	20 14 04.9	
	comp=Z,27nm,18.1s,baz=150,slow=34						
ZALV	Zalesovo Beam	90.89	4	LR	LR	20 15 08.9	
	comp=Z,76nm,21.5s,baz=142,slow=34						
MJAR	Matsushiro Arr	92.10	44	LR	LR	20 19 08.1	
	comp=Z,24nm,18.0s,baz=198,slow=36						
USRK	Ussuriysk Ar.	94.57	36	LR	LR	20 19 56.4	
	comp=Z,62nm,18.3s,baz=204,slow=36						
ARU	Arti	94.63	349	LR	LR	20 18 03.1	
	comp=Z,26nm,19.6s,baz=174,slow=35						
KLR	Kul'dur	98.29	32	LR	LR	20 21 23.8	
	comp=Z,128nm,18.9s,baz=205,slow=36						
ASAJ	Asahikawa	99.80	41	LR	LR	20 23 31.5	
	comp=Z,20nm,18.0s,baz=206,slow=36						
YKA	Yellowknife Ar	153.43	13	PKPbc	PKPbc	19 43 05.6	-1.6
	comp=Z,0.2nm,0.6s,baz=344,slow=2.8,SNR=5.1						

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*NEIC **10** 19:59:42.2±1.5, 52°.03N±0°.06×178°.30E±0°.07, h112^{km}±6^{km}, mb4.4/144, ML3.8(AEIC), Error ellipse: s-maj=9.3km s-min=5.9km az=157.0*

*MOS **10** 19:59:42.8±1.2, 52°.01N×178°.44E, h129^{km}, mb4.3/12, Error ellipse: s-maj=9.3km s-min=7.2km az=94.0*

*AEIC **10** 19:59:43±2.0, 51°.96N±0°.09×178°.29E±0°.07, h107^{km}±5^{km}, Error ellipse: s-maj=13.5km s-min=6.7km az=180.0*

*IDC **10** 19:59:44.1±1.7, 52°.04N×178°.39E, h124^{km}±14^{km}, mb3.9/28, mbtmp4.3/30, MS2.9/5, Error ellipse: s-maj=14.8km s-min=8.6km az=165.0*

ISC 10 19:59:42.6±0.4**, 52°.02N**±0°.07×**178°.35E**±0°.03**, h113^{km}, n450, σ1^{s}.11**/450**, mb4.4**/104**, 25C-9D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GASW	Gareloi Southw	1.75	97		Pn	20 00 12.8	+0.2
GASW					Sn	20 00 35.3	-0.1
GANO	Gareloi North	1.78	95		Pn	20 00 13.1	+0.2
GANO					Sn	20 00 36.1	+0.1
GALAA	Gareloi Lava P	1.81	97		Pn	20 00 13.9	+0.7
GAEA	Gareloi East	1.82	96		Pn	20 00 13.7	+0.4
TASE	Tanaga Southea	2.25	93		Pn	20 00 19.2	+0.4
TAFP	Tanaga Falls P	2.27	92		Pn	20 00 19.4	+0.2
TAFP					Sn	20 00 47.2	0.0
TAPA	Tanaga Point A	2.39	93		Pn	20 00 20.9	+0.3
SHEM	Shemya Is, Ala	2.70	287	LR	LR	20 01 26.6	
	comp=Z,126nm,21.9s,baz=218,slow=38						
SMY	Shemya	2.70	287		Pn	20 00 23.3	-1.3
SMY	Shemya	2.70	287		Sn	20 00 56.6	-0.3
KIMD	Kanaga Island	2.75	94		Pn	20 00 25.3	0.0
KICM	Kanaga Island	2.76	90		Pn	20 00 25.7	+0.3
KIKV	Kanaga Island	2.78	91		Pn	20 00 26.3	+0.6
KIWB	Kanaga Island	2.79	92		Pn	20 00 25.3	-0.5
KINC	Kanaga Island	2.80	90		Pn	20 00 26.5	+0.5
ADK	Adak	3.08	91		Pn	20 00 29.3	-0.3
ADK	Adak	3.08	91		Sn	20 01 06.0	+0.1
GSSP	Great Sitkin S	3.38	87		Pn	20 00 33.7	0.0
GSTD	Great Sitkin T	3.40	87		Pn	20 00 33.9	-0.1
GSTR	Great Sitkin T	3.46	87		Pn	20 00 34.5	-0.1
GSMY	Great Sitkin M	3.46	87		Pn	20 00 34.7	0.0
ATKA	Atka Island	4.60	85		Pn	20 00 50.3	+0.3
NIKH	Nikolski High	7.87	78		Pn	20 01 34.6	+0.4
NIKH	Nikolski High	7.87	78	P	Pn	20 01 34.3	+0.1
	baz=268						
SPIA	Saint Paul Isl	8.40	48	Pn	Pn	20 01 41.7	+0.5
SPIA	Saint Paul Isl	8.40	48	P	Pn	20 01 41.4	+0.2
	baz=237						
MSW	Makushin Switc	9.18	72		Pn	20 01 52.1	+0.3
UNV	Unalaska Valle	9.33	73	Pn	Pn	20 01 54.6	+0.7
UNV	Unalaska Valle	9.33	73	P	Pn	20 01 53.1	-0.8
	baz=264						
AKUT	Akutan	9.79	71	Pn	Pn	20 02 00.5	+0.4
PEA0B	Petropavlovsk-	12.61	283	*i* P	Pn	20 02 38.9	+1.2
PEA0B	Petropavlovsk-	12.61	283	Pn	Pn	20 02 36.9	-0.8
PETK	Petropavlovsk-	12.61	283	P	Pn	20 02 39.1	+1.4
	8.1nm,0.9s,baz=15,slow=1.7,SNR=48						
PETK				S	Sn	20 04 48.9	-7.4
	1.3nm,0.4s,baz=108,slow=17,SNR=1.7						
PETK				LR	LR	20 07 08.4	
	comp=Z,32nm,21.4s,baz=97,slow=35						
SDPT	Sand Point	12.98	67	P	Pn	20 02 41.2	-1.3
SDPT	Sand Point	12.98	67	P	Pn	20 02 42.4	-0.1
	baz=264						
CHNA	Chernabura Isl	13.44	69	P	Pn	20 02 47.4	-1.1
	baz=267						
CNBA	Chernabura Isl	13.44	69	P	Pn	20 02 45.9	-2.7
TNA	Tin City	15.28	22	P	Pn	20 03 08.4	-3.4
TNA				IAmb	IAmb	20 03 17.6	
	comp=Z,33nm,1.0s						
CHIR	Chirikof Islan	15.76	66	P	Pn	20 03 15.5	-2.4
CHIR	Chirikof Islan	15.76	66	P	Pn	20 03 18.0	0.0
	baz=267						
P18K	Big Mountain,	16.54	53	P	P	20 03 28.3	+0.2
P18K				IAmb	IAmb	20 03 31.3	
	comp=Z,20nm,0.8s						
P18K	Big Mountain,	16.54	53	P	Pn	20 03 27.2	-0.3
	baz=255						
N18K	Kilae Creek	16.61	48	P	P	20 03 30.2	+1.3
N18K				IAmb	IAmb	20 03 35.5	
	comp=Z,18nm,0.7s						
N18K	Kilae Creek	16.61	48	P	Pn	20 03 27.9	-0.4
	baz=250,SNR=7.5						
SII	Sitkinak Islan	16.61	63	P	Pn	20 03 28.0	-0.4
	baz=266						
O18K	Koktuh Hills	16.67	52	P	P	20 03 30.6	+1.0
O18K	Koktuh Hills	16.67	52	P	Pn	20 03 28.6	-0.5
	baz=254						
SVW2	Sparrevohn	16.89	47	P	P	20 03 32.9	+0.9
BILL	Bilibino	17.11	344	*c i*P	Pn	20 03 36.9	+2.6
BILL				*e*S	Sn	20 06 41.3	-3.2
BILL				pmax	pmax		
	comp=Z,14nm,0.9s						
BILL	Bilibino	17.11	344	P	Pn	20 03 34.9	+0.5
OHAK	Old Harbor	17.16	61	P	P	20 03 33.0	-1.9
OHAK				IAmb	IAmb	20 03 37.3	
	comp=Z,20nm,1.0s						
OHAK	Old Harbor	17.16	61	P	P	20 03 34.0	-0.9
	baz=264						
O19K	Port Alsworth	17.20	51	P	Pn	20 03 36.8	+1.4
Q19K	Cape Douglas,	17.22	55	P	P	20 03 35.1	-0.6
Q19K	Cape Douglas,	17.22	55	P	Pn	20 03 35.7	-0.2
	baz=258						
N19K	Bonanza Creek	17.30	49	P	Pn	20 03 37.2	+0.3
N19K	Bonanza Creek	17.30	49	P	Pn	20 03 36.8	-0.1
	baz=252,SNR=11						
TTA	Tatalina	17.45	41	P	Pn	20 03 39.1	+0.4
TTA				pmax	pmax		
	comp=Z,13nm,0.8s						
TTA	Tatalina	17.45	41	P	Pn	20 03 39.0	+0.4
TTA	Tatalina	17.45	41	P	Pn	20 03 38.8	+0.1
	baz=243,SNR=9.8						
SEY	Seymchan	17.58	318	P	Pn	20 03 40.8	+0.7
	comp=Z,1.5nm,0.7s,baz=85,slow=23,SNR=4.6						
SEY	Seymchan	17.58	318	*i* P	Pn	20 03 42.1	+2.0
SEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
P19K	Oil Pt	17.59	53	P	P	20 03 38.1	-1.6
P19K	Oil Pt	17.59	53	P	Pn	20 03 39.9	-0.4
	baz=257						
KDAK	Kodiak Island	17.60	59	P	P	20 03 38.2	-1.5
	comp=Z,13nm,0.4s,baz=272,slow=1.2,SNR=45						
KDAK	Kodiak Island	17.60	59	P	P	20 03 38.4	-1.3
KDAK				pmax	pmax		
	comp=Z,21nm,1.0s						
KDAK	Kodiak Island	17.60	59	P	P	20 03 38.4	-1.3
KDAK				IAmb	IAmb	20 03 41.8	
	comp=Z,21nm,0.9s						
KDAK	Kodiak Island	17.60	59	P	P	20 03 39.6	-0.1
	baz=263						
L19K	White Mountain	17.62	44	P	P	20 03 38.2	-1.8
L19K				IAmb	IAmb	20 03 45.8	
	comp=Z,19nm,0.9s						
L19K	White Mountain	17.62	44	P	Pn	20 03 40.8	+0.2
	baz=247,SNR=9.5						
M19K	Big River Lodg	17.72	45	P	P	20 03 39.2	-1.8
M19K	Big River Lodg	17.72	45	P	Pn	20 03 41.8	0.0
	baz=248						
O20K	Slope Mountain	17.98	52	P	P	20 03 44.0	0.0
	baz=256,SNR=9.0						
RSO	Redoubt South	18.02	51	P	P	20 03 42.0	-2.5
L20K	Farewell, AK	18.16	44	P	P	20 03 45.7	-0.2
	baz=247						
K20K	Telida	18.43	41		P	20 03 47.4	-1.5
K20K	Telida	18.43	41	P	Pn	20 03 49.8	-0.6
	baz=245,SNR=6.7						
RDOG	Red Dog Mine	18.47	22	P	P	20 03 49.7	+0.5
	baz=219						
SPCR	Spurr Chakacha	18.48	49	P	P	20 03 49.6	+0.2
	baz=253						
SPU	Mount Spurr	18.54	49	P	P	20 03 48.5	-1.6
CNPM	China Poot	18.55	54	P	P	20 03 48.5	-1.7
J20K	Nowinta River	18.77	39		P	20 03 50.9	-1.6
J20K				IAmb	IAmb	20 03 55.6	
	comp=Z,51nm,1.6s						
J20K	Nowinta River	18.77	39	P	P	20 03 52.9	+0.4
	baz=242,SNR=15						
BRLK	Bradley Lake	18.77	54	P	P	20 03 50.3	-2.3
BRSE	Bradley Lake S	18.84	54	P	P	20 03 53.2	-0.2
	baz=259,SNR=12						
PPLA	Purkeypile	19.04	44	P	P	20 03 54.7	-0.9
PPLA				IAmb	IAmb	20 04 01.6	
	comp=Z,19nm,0.8s						
PPLA	Purkeypile	19.04	44	P	Pn	20 03 56.6	-1.0
	baz=249						
CAST	Castle Rocks	19.28	42		P	20 03 57.0	-1.1
CAST				IAmb	IAmb	20 04 01.2	
	comp=Z,15nm,0.8s						
CAST	Castle Rocks	19.28	42	P	Pn	20 03 59.7	-0.5
	baz=247,SNR=15						
CHUM	Lake Minchumin	19.36	41	P	Pn	20 04 01.0	-0.2
	baz=246,SNR=22						
O22K	Cooper Landing	19.48	52	P	P	20 04 00.4	+0.1
	baz=258						
SEW	Seward	19.54	53	P	P	20 03 59.8	-1.1
SEW	Seward	19.54	53	P	P	20 04 01.0	0.0
	baz=260						
M22K	Willow	19.59	48	P	P	20 04 00.5	-0.9
M22K				IAmb	IAmb	20 04 19.2	
	comp=Z,24nm,0.8s						
M22K	Willow	19.59	48	P	P	20 04 02.4	+1.0
	baz=254						
RC01	Rabbit Creek A	19.61	50	P	P	20 04 02.4	+0.8
	baz=257						
CUT	Chulitna	19.71	46	P	P	20 04 03.6	+0.9
CUT				IAmb	IAmb	20 04 09.4	
	comp=Z,24nm,0.8s						
CUT	Chulitna	19.71	46	P	Pn	20 04 04.2	-1.0
	baz=252						
IMAR	Indian Mountai	19.81	34	P	Pn	20 04 05.0	-1.4
KTH	Kantishna Hill	19.81	42		P	20 04 04.8	+0.9
KTH				IAmb	IAmb	20 04 09.2	
	comp=Z,18nm,0.8s						
H21K	Melozitna Rive	19.98	36	P	Pn	20 04 07.2	-1.2
H21K				IAmb	IAmb	20 04 11.4	
	comp=Z,14nm,0.9s						
H21K	Melozitna Rive	19.98	36	P	Pn	20 04 07.3	-1.1
	baz=241,SNR=17						
BPAW	Bear Paw Mtn.	19.99	41	P	Pn	20 04 07.4	-1.1
BPAW				IAmb	IAmb	20 04 11.0	
	comp=Z,20nm,1.1s						
BPAW	Bear Paw Mtn.	19.99	41	P	P	20 04 06.8	+1.1
	baz=247,SNR=12						
PMR	Palmer	20.01	49	P	P	20 04 07.0	+1.1
	baz=256						
TRF	Thorofare Moun	20.04	43	P	P	20 04 07.7	+1.2
TRF				IAmb	IAmb	20 04 10.7	
	comp=Z,18nm,0.7s						
TRF	Thorofare Moun	20.04	43	P	P	20 04 07.4	+1.0
	baz=250						
I21K	Tanana	20.06	38	P	Pn	20 04 08.0	-1.2
I21K				IAmb	IAmb	20 04 09.5	
	comp=Z,15nm,0.9s						
I21K	Tanana	20.06	38	P	Pn	20 04 08.1	-1.1
	baz=243,SNR=14						
GHO	Glory Hole Cre	20.15	48	P	P	20 04 07.6	+0.1
GHO				IAmb	IAmb	20 04 18.1	
	comp=Z,11nm,0.7s						
KNK	Knik Glacier	20.28	49	P	P	20 04 09.8	+0.9
KNK				IAmb	IAmb	20 04 12.4	
	comp=Z,19nm,0.7s						
KNK	Knik Glacier	20.28	49	P	P	20 04 09.8	+0.9
	baz=257						
SML	Sawmill	20.43	48	P	P	20 04 11.6	+1.1
	baz=256,SNR=5.6						
WAT1	Susitna Watana	20.59	45	P	P	20 04 13.2	+0.9
	baz=254						
RND	Reindeer	20.64	44	P	P	20 04 12.7	-0.1
RND				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RND	Reindeer	20.64	44	P	P	20 04 12.7	-0.1
MCK	McKinley	20.70	43	P	P	20 04 13.3	-0.2
MCK				pmax	pmax		
	comp=Z,15nm,1.1s						
MCK	McKinley	20.70	43	P	P	20 04 13.3	-0.2
MCK				IAmb	IAmb	20 04 16.9	
	comp=Z,15nm,1.1s						
MCK	McKinley	20.70	43	P	P	20 04 13.7	+0.3
	baz=251						
M23K	Glacier View	20.71	49	P	P	20 04 14.2	+0.7
	baz=257						
GLI	Glacier Island	20.83	51	P	P	20 04 14.3	-0.4
GLI	Glacier Island	20.83	51	P	P	20 04 14.2	-0.6
	baz=260,SNR=9.7						
WAT6	Susitna Watana	20.89	46	P	P	20 04 15.6	+0.1
	baz=255,SNR=7.9						
SCM	Sheep Creek Mo	20.90	49	P	P	20 04 16.2	+0.6
SCM				pmax	pmax		
	comp=Z,27nm,1.0s						
SCM	Sheep Creek Mo	20.90	49	P	P	20 04 16.2	+0.6
SCM				IAmb	IAmb	20 04 42.2	
	comp=Z,27nm,1.0s						
SCM	Sheep Creek Mo	20.90	49	P	P	20 04 15.9	+0.2
	baz=258						
NEA2	Nenana	20.95	41	P	P	20 04 16.3	+0.2
NEA2				IAmb	IAmb	20 04 47.6	
	comp=Z,16nm,0.9s						
NEA2	Nenana	20.95	41	P	P	20 04 16.8	+0.8
	baz=248,SNR=14						
I23K	Minto, Yukon-K	21.05	39	P	P	20 04 17.9	+0.9
I23K				IAmb	IAmb	20 04 22.4	
	comp=Z,8.0nm,0.5s						
I23K	Minto, Yukon-K	21.05	39	P	P	20 04 17.8	+0.7
	baz=247,SNR=12						
DHY	Denali Highway	21.18	45	P	P	20 04 19.0	+0.3
DHY				IAmb	IAmb	20 04 21.4	
	comp=Z,21nm,0.8s						

DHY	Denali Highway	21.18	45	P	P	20 04 19.3	+0.7
	baz=254,SNR=25						
H23K	Yukon River	21.25	37	P	P	20 04 19.5	+0.2
H23K	Yukon River	21.25	37	P	P	20 04 20.1	+0.8
	baz=245,SNR=12						
WRH	Wood River Hil	21.30	41	P	P	20 04 19.1	-0.8
MDM	Murphy Dome	21.42	40	P	P	20 04 21.5	+0.4
MDM				IAmb	IAmb	20 04 24.4	
	comp=Z,9.4nm,0.6s						
EYAK	Cordova Ski Ar	21.43	52	P	P	20 04 20.4	-0.8
EYAK	Cordova Ski Ar	21.43	52	P	P	20 04 21.3	+0.1
	baz=263						
CCB	Clear Creek Bu	21.48	41	P	P	20 04 21.9	+0.2
M24K	Tolsona, Glenn	21.49	48	P	P	20 04 22.2	+0.3
M24K	Tolsona, Glenn	21.49	48	P	P	20 04 22.7	+0.8
	baz=258						
KLU	Klutina	21.49	50	P	P	20 04 22.3	+0.3
KLU				IAmb	IAmb	20 04 26.5	
	comp=Z,14nm,0.8s						
KLU	Klutina	21.49	50	P	P	20 04 22.3	+0.3
	baz=260						
DIV	Divide	21.50	51	P	P	20 04 22.1	0.0
TCOL	CIGO, UAF Yank	21.53	40	P	P	20 04 23.1	+0.8
	baz=249						
COLA	College	21.54	40	P	P	20 04 23.1	+0.8
	baz=249						
COLD	Coldfoot	21.66	33	P	P	20 04 23.9	+0.3
COLD	Coldfoot	21.66	33	P	P	20 04 24.4	+0.8
	baz=241						
HDA	Harding Lake	21.75	42	P	P	20 04 24.5	-0.1
HDA	Harding Lake	21.75	42	P	P	20 04 24.8	+0.2
	baz=252,SNR=7.2						
POKR	Poker Plat Res	21.79	40	P	P	20 04 25.3	+0.3
POKR	Poker Plat Res	21.79	40	P	P	20 04 25.6	+0.6
	baz=249						
H24K	Noodor Dome	21.89	38	P	P	20 04 26.0	0.0
H24K	Noodor Dome	21.89	38	P	P	20 04 26.9	+0.8
	baz=247,SNR=14						
IL31		21.89	41	P	P	20 04 25.5	-0.5
ILAR	Eielson Array	21.89	41	P	P	20 04 25.8	-0.3
	comp=Z,1.3nm,0.4s,baz=247,slow=8.3,SNR=26						
ILAR				ScP	ScP	20 11 46.0	-1.1
	comp=Z,1.0nm,0.7s,baz=278,slow=3.4,SNR=10.0						
ILAR				LR	LR	20 12 20.4	
	comp=Z,22nm,21.6s,baz=240,slow=35						
	comp=Z,1.3nm,0.4s						
RAGM	Ragged Mountai	21.94	53	P	P	20 04 25.7	-1.0
PAX	Paxson	22.00	46	P	P	20 04 27.1	-0.2
PAX				pmax	pmax		
	comp=Z,38nm,1.6s						
PAX	Paxson	22.00	46	P	P	20 04 27.1	-0.2
PAX				IAmb	IAmb	20 04 29.7	
	comp=Z,38nm,1.6s						
PAX	Paxson	22.00	46	P	P	20 04 27.2	-0.2
	baz=257,SNR=11						
HARP	HAARP	22.02	48	P	P	20 04 28.1	+0.7
	baz=259,SNR=7.2						
KAIM	Kayak Island	22.03	54	P	P	20 04 26.9	-0.6
	baz=265						
BMRM	Bremner River	22.04	52	P	P	20 04 27.4	-0.4
BMRM				IAmb	IAmb	20 04 54.7	
	comp=Z,20nm,1.1s						
BMRM	Bremner River	22.04	52	P	P	20 04 27.3	-0.4
	baz=263,SNR=6.5						
K24K	Donnelly Dome	22.07	44	P	P	20 04 27.6	-0.4
	baz=254						
N25K	Chitina, Valde	22.14	50	P	P	20 04 27.6	-1.1
N25K	Chitina, Valde	22.14	50	P	P	20 04 28.3	-0.5
	baz=261						
HMT	Hamilton	22.14	53	P	P	20 04 28.2	-0.6
HMT				IAmb	IAmb	20 04 31.5	
	comp=Z,28nm,0.9s						
SUCK	Suckling Hills	22.36	54	P	P	20 04 30.0	-1.0
BERG	Berg Lake	22.43	53	P	P	20 04 31.0	-0.6
RIDG	Independent Ri	22.45	44	P	P	20 04 30.9	-1.0
RIDG	Independent Ri	22.45	44	P	P	20 04 31.8	-0.1
	baz=256,SNR=8.0						
J25K	Salcha River,	22.46	42	P	P	20 04 30.8	-1.2
J25K	Salcha River,	22.46	42	P	P	20 04 31.5	-0.6
	baz=253						
GLB	Gilahina Butte	22.49	50	P	P	20 04 31.5	-0.8
GLB				IAmb	IAmb	20 04 36.5	
	comp=Z,9.6nm,0.7s						
TOLK	Toolik Lake Re	22.58	30	P	P	20 04 32.1	-1.1
TOLK	Toolik Lake Re	22.58	30	P	P	20 04 33.9	+0.8
	baz=239,SNR=10						
BGLC	Bering Glacier	22.61	54	P	P	20 04 33.1	-0.3
	baz=266						
VRDI	Verde Repeater	22.63	51	P	P	20 04 32.1	-1.8
DOT	Dot Lake	22.77	45	P	P	20 04 34.3	-0.7
DOT				IAmb	IAmb	20 04 36.7	
	comp=Z,12nm,0.6s						
MENT	Mentasta	22.77	47	P	P	20 04 34.7	-0.3
MENT				IAmb	IAmb	20 04 39.9	
	comp=Z,13nm,0.6s						
WAX	Waxell Ridge	22.85	53	P	P	20 04 35.1	-0.9
SCRK	Sand Creek	22.88	44	P	P	20 04 35.2	-1.0
SCRK	Sand Creek	22.88	44	P	P	20 04 35.7	-0.5
	baz=256,SNR=9.9						
L26K	Log Cabin Wild	22.95	46	P	P	20 04 36.1	-0.8
L26K				IAmb	IAmb	20 04 41.0	
	comp=Z,18nm,0.9s						
L26K	Log Cabin Wild	22.95	46	P	P	20 04 36.5	-0.4
	baz=259						
M26K	Nabesna, AK	23.01	48	P	P	20 04 37.0	-0.4
M26K	Nabesna, AK	23.01	48	P	P	20 04 37.7	+0.3
	baz=261						
ISLE	Juniper Island	23.11	53	P	P	20 04 37.4	-1.1
ISLE				IAmb	IAmb	20 04 40.8	
	comp=Z,22nm,1.2s						
J26L	Joseph Creek	23.18	43	P	P	20 04 38.4	-0.6
	baz=256,SNR=22						
BARN	Barnard Glacie	23.48	52	P	P	20 04 41.2	-0.7
YSS	Yuzh-Sakhalins	23.51	272	*e*P	P	20 04 43.9	+1.8
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	23.51	272	P	P	20 04 39.8	-2.3
YSS				IAmb	IAmb	20 04 44.5	
	comp=Z,17nm,0.7s						
M27K	Edge Creek, AK	23.52	48	P	P	20 04 42.4	+0.2
	baz=262						
L27K	Beaver Creek,	23.64	47	P	P	20 04 43.1	-0.2
L27K				IAmb	IAmb	20 04 46.0	
	comp=Z,16nm,0.7s						
L27K	Beaver Creek,	23.64	47	P	P	20 04 43.0	-0.2
	baz=261,SNR=29						
BCAR	Beaver Creek A	23.66	47	P	P	20 04 43.3	-0.1
TABL	Table Mountain	23.70	53	P	P	20 04 42.6	-1.3
BMAR	Burnt Mountain	23.71	35	P	P	20 04 44.1	+0.4
BVCY	Beaver Creek	23.99	48	P	P	20 04 46.8	+0.4
	baz=263,SNR=26						
YUK3	Moose Creek	24.11	50	P	P	20 04 47.5	-0.2
	baz=265,SNR=31						
PCA	Pinnacle	24.13	54	P	P	20 04 47.4	-0.3
PINM	Pinnacle	24.13	54	P	P	20 04 47.7	+0.1
	baz=269						
EGAK	Eagle	24.26	43	P	P	20 04 48.7	+0.1
	baz=258,SNR=18						
PNL	Peninsula	24.56	55	P	P	20 04 51.3	-0.2
	baz=271						
DAWY	Dawson	24.88	45	P	P	20 04 54.9	+0.5
	baz=261,SNR=17						
JKA	Kamikawa-asahi	24.95	266	P	P	20 04 56.4	+1.2
JKA	Kamikawa-asahi	24.95	266	IAmb	IAmb	20 05 06.7	
	comp=Z,33nm,1.4s						
YUK4	Talbot Arm	24.95	51	P	P	20 04 56.4	+1.2
	baz=268,SNR=31						
ASAJ	Asahikawa	24.96	266	P	P	20 04 56.4	+1.2
	comp=Z,8.7nm,0.7s,baz=72,slow=11,SNR=6.5						
	comp=Z,8.7nm,0.7s						
ASAJ	Asahikawa	24.96	266	P	P	20 04 56.4	+1.2
ASAJ				pmax	pmax		
	comp=Z,33nm,1.4s						
YUK6	Outpost Mounta	25.08	52	P	P	20 04 57.4	+1.0
	baz=269,SNR=6.3						
HYT	Haines Junctio	25.50	52	P	P	20 05 00.0	-0.1
HYT	Haines Junctio	25.50	52	P	P	20 05 01.1	+1.0
	baz=270,SNR=18						
I29M	Ogilvie Camp,	25.56	42	P	P	20 05 00.1	-0.4
I29M				IAmb	IAmb	20 05 03.7	
	comp=Z,8.9nm,0.6s						
I29M	Ogilvie Camp,	25.56	42	P	P	20 05 00.8	+0.3
	baz=260						
N30M	Aishikik Lake	25.71	51	P	P	20 05 02.3	+0.4
	baz=269						
M30M	Minto, Yukon	25.89	48	P	P	20 05 03.8	+0.3
M30M	Minto, Yukon	25.89	48	P	P	20 05 04.5	+1.0
	baz=267,SNR=18						
N31M	Braeburn, Yuko	26.34	51	P	P	20 05 07.8	+0.3
N31M				IAmb	IAmb	20 05 26.4	
	comp=Z,10.0nm,0.7s						
N31M	Braeburn, Yuko	26.34	51	P	P	20 05 08.4	+0.8
	baz=270						
M31M	Drury Creek, Y	27.00	49	P	P	20 05 13.5	+0.1
M31M				IAmb	IAmb	20 05 20.0	
	comp=Z,6.9nm,0.6s						
M31M	Drury Creek, Y	27.00	49	P	P	20 05 14.1	+0.6
	baz=270						
YAK	Yakutsk	27.66	310	*ce*P	P	20 05 19.1	-0.1
YAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	27.97	36	P	P	20 05 23.0	+1.0
	comp=Z,2.0nm,0.4s,baz=250,slow=6.6,SNR=17						
INK				ScP	ScP	20 12 02.4	-1.8
	comp=Z,0.5nm,0.5s,baz=270,slow=1.0,SNR=3.5						
	comp=Z,2.0nm,0.4s						
INK	Inuvik	27.97	36	P	P	20 05 22.5	+0.5
INK	Inuvik	27.97	36	P	P	20 05 23.2	+1.2
	baz=259						
S34M	Telegraph Cree	29.01	58	P	P	20 05 32.3	+0.9
	baz=280						
TIXI	Tiksi	29.20	330	P	P	20 05 32.7	-0.2
	comp=Z,0.4nm,0.3s,baz=89,slow=23,SNR=8.5						
	comp=Z,0.4nm,0.3s						
KLR	Kul'dur	29.30	283	P	P	20 05 34.1	0.0
	comp=Z,5.2nm,0.4s,baz=62,slow=8.4,SNR=45						
	comp=Z,5.2nm,0.4s						
KLR	Kul'dur	29.30	283	*de*P	P	20 05 34.0	0.0
KLR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DLBC	Dease Lake	29.49	57	P	P	20 05 37.1	+1.4
	comp=Z,1.7nm,0.6s,baz=271,slow=9.1,SNR=5.6						
DLBC				LR	LR	20 16 54.1	
	comp=Z,65nm,18.1s,baz=262,slow=35						
	comp=Z,1.7nm,0.6s						
ZEA	Zeya	30.35	294	*e*P	P	20 05 42.3	-0.9
A36M	Sachs Harbour	31.40	30	P	P	20 05 52.5	+0.3
A36M	Sachs Harbour	31.40	30	P	P	20 05 53.4	+1.2
	baz=261						
C36M	Paulatuk	31.51	35	P	P	20 05 53.9	+0.7
	baz=267						
MJAR	Matsushiro Arr	32.16	257	P	P	20 06 00.1	+0.8
	comp=Z,2.1nm,0.7s,baz=50,slow=7.9,SNR=4.6						
	comp=Z,2.1nm,0.7s						
H11N2	WAKE ISLAND Hy	33.45	200	T	T	20 41 29.1	
	baz=11,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	33.45	200	T	T	20 41 33.9	
	baz=11,slow=76,SNR=51						
H11N1	WAKE ISLAND Hy	33.46	200	T	T	20 41 30.5	
	baz=11,slow=76,SNR=34						
BNX	BinXian	33.50	280	⇑P	P	20 06 10.0	-0.8
BNX				pmax	pmax		
	comp=Z,32nm,0.6s						
BNX				pmax	pmax		
	comp=Z,150nm,3.7s						
H11S1	WAKE ISLAND Hy	34.67	200	T	T	20 43 17.3	
	baz=11,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	34.69	200	T	T	20 43 11.1	
	baz=11,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	34.69	200	T	T	20 43 18.1	
	baz=11,slow=76,SNR=9.4						
YKA	Yellowknife Ar	36.08	47	P	P	20 06 33.8	+0.9
	comp=Z,3.1nm,0.6s,baz=282,slow=8.3,SNR=43						
YKA				ScP	ScP	20 12 28.8	-3.1
	comp=Z,0.5nm,0.7s,baz=291,slow=3.4,SNR=7.7						
	comp=Z,3.1nm,0.6s						
D03D	Eldon	37.20	73	P	P	20 06 43.3	+0.8
	baz=299						
B05A	Bryant	37.43	71	P	P	20 06 44.8	+0.4
	baz=299						
KSRS	Korea Array	37.87	268	P	P	20 06 49.6	+1.4
	comp=Z,3.0nm,0.9s,baz=62,slow=8.3,SNR=6.0						
	comp=Z,3.0nm,0.9s						
E04D	Cinebar	37.99	74	P	P	20 06 49.7	+0.5
	baz=300						
I03D	Drain, OR	39.04	78	P	P	20 06 58.1	+0.1
	baz=303						
I04A	Tendick Farm,	39.55	78	P	P	20 07 02.1	-0.2
	baz=304						
L02F	Cave Junction	39.79	81	P	P	20 07 03.8	-0.4
	baz=305						
I05D	Terrebonne, OR	39.90	76	P	P	20 07 05.1	-0.1
	baz=303						
NEW	Newport	40.32	69	P	P	20 07 07.6	-1.0
NEW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NEW	Newport	40.32	69	P	P	20 07 07.6	-1.0
NEW				IAmb	IAmb	20 07 08.9	
	comp=Z,5.3nm,0.9s						
NEW	Newport	40.32	69	P	P	20 07 08.5	-0.1
	baz=300						
L04D	Klamath Falls	40.50	80	P	P	20 07 10.0	-0.3
	baz=305						
J05D	Fort Rock, OR	40.55	78	P	P	20 07 10.3	-0.3
	baz=304						
K05A	Summer Lake	41.07	78	P	P	20 07 14.4	-0.6
K05A				IAmb	IAmb	20 07 16.5	
	comp=Z,5.8nm,0.5s						
I07A	Izee	41.14	76	P	P	20 07 14.8	-0.7
XLT	XiLinHaoTe	41.31	284	⇓*i*P	P	20 07 17.4	+0.6
XLT				pmax	pmax		
	comp=Z,19nm,0.9s						
XLT				pmax	pmax		
	comp=Z,86nm,5.2s						
WALA	Waterton Lakes	41.74	66	P	P	20 07 19.9	-0.4
WALA				IAmb	IAmb	20 07 20.9	
	comp=Z,7.6nm,0.8s						
MOD	Modoc Plateau	41.90	79	P	P	20 07 20.6	-1.2
MOD				IAmb	IAmb	20 07 23.9	
	comp=Z,5.5nm,0.6s						
BMO	Blue Mountains	42.02	73	P	P	20 07 22.0	-0.6
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BMO	Blue Mountains	42.02	73	P	P	20 07 22.0	-0.6
ORV	Oroville	42.57	82	P	P	20 07 25.8	-1.2
ORV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ORV	Oroville	42.57	82	P	P	20 07 25.8	-1.2
ORV				IAmb	IAmb	20 07 28.0	
	comp=Z,6.1nm,1.1s						
WVOR	Wild Horse Val	42.60	77	P	P	20 07 26.7	-0.7
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WVOR	Wild Horse Val	42.60	77	P	P	20 07 26.6	-0.7
WVOR				IAmb	IAmb	20 07 28.0	
	comp=Z,3.6nm,0.5s						
MSO	Missoula	42.91	69	P	P	20 07 28.8	-1.0
	baz=303						
NRIK	Noril'sk	42.95	329	P	P	20 07 31.2	+1.5
	comp=Z,3.7nm,0.5s,baz=104,slow=5.1,SNR=3.6						
	comp=Z,3.7nm,0.5s						
NRIK	Noril'sk	42.95	329	*ce*P	P	20 07 31.6	+1.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BEKR	Beckworth	43.08	81	P	P	20 07 30.8	-0.5
PNTR	Pine Nut	44.02	82	P	P	20 07 38.0	-1.0
YERR	Yerington	44.30	81	P	P	20 07 40.4	-0.8
YERR				IAmb	IAmb	20 07 42.8	
	comp=Z,6.9nm,1.1s						
ULN	Ulaanbaatar	44.38	294	*ce*P	P	20 07 41.3	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	44.38	294	P	P	20 07 40.5	-1.1
HLID	Hailey	44.47	73	P	P	20 07 42.0	-0.4
HLID	Hailey	44.47	73	P	P	20 07 41.4	-1.0
	baz=306						
BCYI	Bear Canyon	44.63	72	P	P	20 07 42.7	-1.0
BMN	Battle Mountai	44.65	78	P	P	20 07 42.9	-0.9
BMN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BMN	Battle Mountai	44.65	78	P	P	20 07 42.9	-0.9
BMN				IAmb	IAmb	20 07 44.8	
	comp=Z,5.3nm,0.5s						
MCMT	McKenzie Canyo	44.66	71	P	P	20 07 42.8	-1.1
SONM	Songino Array	44.77	295	P	P	20 07 45.6	+0.9
	comp=Z,2.9nm,0.5s,baz=62,slow=7.8,SNR=34						
SONM				PcP	PcP	20 09 25.1	+0.3
	comp=Z,1.6nm,0.6s,baz=66,slow=2.6,SNR=11						
SONM				ScP	ScP	20 13 06.1	-0.3
	comp=Z,0.4nm,0.6s,baz=40,slow=3.8,SNR=3.8						
	comp=Z,2.9nm,0.5s						
SONM	Songino Array	44.77	295	P	P	20 07 45.6	+0.9
SONM				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SONM	Songino Array	44.77	295	IAmb	IAmb	20 07 45.9	
	comp=Z,7.0nm,1.5s						
BOZ	Bozeman (W)	44.92	69	P	P	20 07 45.2	-0.8
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOZ	Bozeman (W)	44.92	69	P	P	20 07 45.2	-0.8
BOZ				IAmb	IAmb	20 08 12.1	
	comp=Z,9.6nm,1.0s						
BOZ	Bozeman (W)	44.92	69	P	P	20 07 45.3	-0.6
	baz=305						
KVN	Kaiserville	44.96	81	P	P	20 07 45.9	-0.5
KVN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KVN	Kaiserville	44.96	81	P	P	20 07 45.9	-0.5
KVN				IAmb	IAmb	20 07 47.9	
	comp=Z,3.1nm,0.5s						
RYN	Ryan	44.97	81	P	P	20 07 46.0	-0.4
NVAR	Mina Array Bea	45.22	81	P	P	20 07 49.0	+0.5
	comp=Z,2.6nm,0.5s,baz=293,slow=7.7,SNR=24						
	comp=Z,2.6nm,0.5s						
OMMB	Old Mammoth Mi	45.31	83	P	P	20 07 48.9	-0.4
YHL	Hebgen Lake	45.61	70	P	P	20 07 51.0	-0.5
YHL				IAmb	IAmb	20 07 51.1	
	comp=Z,6.9nm,0.8s						
ELK	Elko	45.65	77	P	P	20 07 51.5	-0.4
ELK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ELK	Elko	45.65	77	P	P	20 07 51.5	-0.4
HHC	Hu-ho-hao-te	45.81	284	*e*P	P	20 07 51.2	-1.7
HHC				pmax	pmax		
	comp=Z,41nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.3s						
HNS	HongShan	46.05	278	⇓P	P	20 07 55.8	+1.1
HNS				pmax	pmax		
	comp=Z,13nm,0.7s						
LCH	Last Change Ra	46.38	82	P	P	20 07 57.3	-0.2
LCH				IAmb	IAmb	20 07 59.0	
	comp=Z,8.1nm,1.4s						
HVU	Hansel Valley	46.50	74	P	P	20 07 58.1	-0.3
HVU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HVU	Hansel Valley	46.50	74	P	P	20 07 58.1	-0.3
HVU				IAmb	IAmb	20 07 59.0	
	comp=Z,4.3nm,0.6s						
PKM	Mcpherson Peak	46.58	86	P	P	20 07 59.0	-0.1
	baz=311						
CWC	Cottonwood Cre	46.63	83	P	P	20 07 58.6	-0.9
	baz=310						
ISA	Isabella, Lake	46.89	85	P	P	20 08 00.1	-1.4
	baz=311						
R11A	Troy Canyon, C	46.93	80	P	P	20 08 01.3	-0.6
R11A				IAmb	IAmb	20 08 02.6	
	comp=Z,3.7nm,0.5s						
R11A	Troy Canyon, C	46.93	80	P	P	20 08 00.6	-1.3
	baz=309,SNR=13						
MPMC	Manual Prospec	47.24	83	P	P	20 08 02.9	-1.4
	baz=311,SNR=5.9						
FURC	Furnace Creek,	47.36	83	P	P	20 08 04.5	-0.4
	baz=311						
TPNV	Topopah Spring	47.42	82	P	P	20 08 04.7	-0.9
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TPNV	Topopah Spring	47.42	82	P	P	20 08 04.7	-0.9
TPNV				IAmb	IAmb	20 08 06.9	
	comp=Z,6.9nm,0.9s						
TPNV	Topopah Spring	47.42	82	P	P	20 08 03.4	-2.3
	baz=310,SNR=8.5						
DUG	Dugway, Tooele	47.45	76	P	P	20 08 05.4	-0.4
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DUG	Dugway, Tooele	47.45	76	P	P	20 08 05.4	-0.4
DUG	Dugway, Tooele	47.45	76	P	P	20 08 03.3	-2.5
	baz=309						
LRMC	Laurel Mtn Rad	47.50	84	P	P	20 08 05.5	-0.8
	baz=311						
GWY	Greenwater Val	47.66	83	P	P	20 08 07.3	-0.2
GWY				IAmb	IAmb	20 08 08.5	
	comp=Z,3.0nm,0.6s						
QSM	Queen of Sheba	47.68	83	P	P	20 08 07.0	-0.5
QSM				IAmb	IAmb	20 08 08.2	
	comp=Z,2.8nm,0.6s						
EDW2	Edwards Air Fo	47.70	85	P	P	20 08 06.3	-1.3
	baz=312						
PDAR	Pinedale Array	47.80	71	P	P	20 08 07.5	-1.0
	comp=Z,1.7nm,0.5s,baz=324,slow=4.2,SNR=5.8						
	comp=Z,1.7nm,0.5s						
PRN	Pahroc Range	47.86	80	P	P	20 08 08.5	-0.4
PRN				IAmb	IAmb	20 08 10.2	
	comp=Z,3.9nm,0.7s						
PSUT	Pine Spring	47.86	78	P	P	20 08 08.9	-0.1
PSUT				IAmb	IAmb	20 08 09.8	
	comp=Z,4.2nm,0.6s						
GSC	Goldstone, Bar	48.16	84	P	P	20 08 11.0	-0.2
GSC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GSC	Goldstone, Bar	48.16	84	P	P	20 08 10.9	-0.2
GSC	Goldstone, Bar	48.16	84	P	P	20 08 11.1	-0.2
	baz=311,SNR=6.7						
SCI2	San Clemente I	48.63	87	P	P	20 08 13.4	-1.4
	baz=313						
HEC	Hector,Ludlow	48.76	84	P	P	20 08 13.9	-1.9
	baz=312						
TMUT	Trail Mountain	48.97	76	P	P	20 08 15.3	-2.4
GMRC	Granite Mounta	49.20	83	P	P	20 08 16.7	-2.6
	baz=312,SNR=5.1						
LCMT	Little Creek M	49.21	79	P	P	20 08 17.1	-2.2
LCMT				IAmb	IAmb	20 08 22.6	
	comp=Z,8.8nm,1.4s						
P18A	Preston Nutter	49.34	75	P	P	20 08 19.2	-1.2
BELC	Belle Mtn. Jos	49.52	84	P	P	20 08 18.9	-2.8
	baz=312						
IRM	Iron Mountain	49.94	84	P	P	20 08 22.2	-2.6
	baz=312						
MONP2	Monument Peak	50.00	86	P	P	20 08 23.5	-2.0
	baz=313						
BC3	Big Chuckawall	50.08	84	P	P	20 08 24.0	-2.0
	baz=313						
U15A	North Rim	50.17	79	P	P	20 08 26.0	-0.7
MDND	Maddock	50.31	60	P	P	20 08 27.2	-0.1
	baz=307						
PDMCI	Parker Dam,Lak	50.45	83	P	P	20 08 28.2	-0.3
	baz=312						
ULM	Lac du Bonnet	50.80	56	P	P	20 08 29.6	-1.4
	comp=Z,4.0nm,0.6s,baz=272,slow=7.8,SNR=3.8						
	comp=Z,4.0nm,0.6s						
GLA	Glamis	50.88	84	P	P	20 08 31.6	-0.2
	baz=313						
WUAZ	Wupatki	51.33	80	P	P	20 08 34.7	-0.7
	baz=312						
Y14A	Wickenburg	51.40	82	P	P	20 08 35.0	-0.7
Y14A				IAmb	IAmb	20 08 36.8	
	comp=Z,5.9nm,1.3s						
XAN	Xi'an	51.80	278	P	P	20 08 38.8	+0.1
XAN				pP	pP	20 09 08.5	+3.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZALV	Zalesovo Beam	52.29	312	P	P	20 08 41.4	-0.5
	comp=Z,0.6nm,0.3s,baz=38,slow=8.5,SNR=3.9						
ZALV				PcP	PcP	20 09 52.3	+0.7
	comp=Z,1.6nm,0.6s,baz=45,slow=3.1,SNR=9.8						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	52.29	312	*i* P	P	20 08 45.2	+3.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
S22A	4UR Ranch, Cre	52.59	74	P	P	20 08 43.7	-1.1
	baz=311						
214A	Organ Pipe Nat	52.87	84	P	P	20 08 45.6	-1.0
	baz=314						
GTA	Gaotai	53.68	290	⇓P	P	20 08 53.1	+0.6
GTA				pP	pP	20 09 03.2	-16
GTA				pmax	pmax		
	comp=Z,11nm,0.5s						
TUC	Tucson	53.87	82	P	P	20 08 53.1	-0.8
	baz=314						
ENH	Enshi	54.04	275	P	P	20 08 53.0	-2.2
T25A	Trinidad	54.43	73	P	P	20 08 57.0	-1.2
T25A	Trinidad	54.43	73	P	P	20 08 56.8	-1.3
	baz=312						
ECSD	EROS Data Cent	54.53	62	P	P	20 08 56.4	-2.1
	baz=311						
121A	Cookes Peak, D	55.54	80	P	P	20 09 04.0	-2.2
	baz=314						
ARCES	ARCESS Array B	57.14	349	P	P	20 09 16.6	-0.2
	comp=Z,0.4nm,0.3s,baz=27,slow=8.0,SNR=8.8						
	comp=Z,0.4nm,0.3s						

KURK	Kurchatov	57.28	312	ceP	P	20 09 18.2	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	Kurchatov	57.28	312	P	P	20 09 16.9	-1.0
WMQ	Urumqi	57.49	301	eP	P	20 09 20.5	+0.8
WMQ				sP	sP	20 10 00.6	+2.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
MNTX	Cornudas Mount	57.58	79	P	P	20 09 18.7	-1.7
	baz=315						
MK31	Makanchi Array	58.23	307	P	P	20 09 23.4	-1.4
MK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MK31	Makanchi Array	58.23	307	P	P	20 09 23.4	-1.4
MK31				IAmb	IAmb	20 09 24.9	
	comp=Z,5.7nm,1.4s						
MKAR	Makanchi Array	58.23	307	P	P	20 09 24.1	-0.6
	comp=Z,2.0nm,0.4s,baz=48,slow=6.6,SNR=50						
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	58.23	307	P	P	20 09 23.9	-0.9
MAKZ	Makanchi	58.38	307	P	P	20 09 25.0	-0.8
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	Makanchi	58.38	307	P	P	20 09 25.0	-0.8
MAKZ				IAmb	IAmb	20 09 25.9	
	comp=Z,3.3nm,0.6s						
GOMU	GeErMu	58.76	290	P	P	20 09 28.8	-0.2
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,65nm,4.3s						
BRVK	Borovoye	59.26	318	ceP	P	20 09 31.4	-0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	59.26	318	P	P	20 09 31.6	-0.1
WMOK	Wichita Mounta	59.40	72	P	P	20 09 31.2	-1.8
	baz=315						
TX31	Lajitas Ar. Si	60.30	79	P	P	20 09 38.6	-0.7
TX32	Lajitas Array	60.30	79	P	P	20 09 38.5	-0.7
TX32				IAmb	IAmb	20 09 40.1	
	comp=Z,2.4nm,0.7s						
TXAR	Lajitas Array	60.30	79	P	P	20 09 39.3	0.0
	comp=Z,1.7nm,0.5s,baz=303,slow=4.9,SNR=28						
	comp=Z,1.7nm,0.5s						
SCHQ	Schefferville	60.58	37	P	P	20 09 41.6	+0.8
	comp=Z,1.8nm,0.6s,baz=283,slow=14,SNR=1.5						
	comp=Z,1.8nm,0.6s						
HDIL	Hopedale	60.67	61	P	P	20 09 40.2	-1.4
	baz=315						
ARU	Arti	61.11	327	diP	P	20 09 45.0	+0.8
ARU				*PP	pP	20 10 11.3	+0.3
ARU						20 10 25.5	
ARU				S	S	20 17 57.6	+3.5
ARU				SS	SS	20 21 55.2	+0.5
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	61.11	327	P	P	20 09 43.9	-0.3
PZH	PanZhiHua	61.49	277	P	P	20 09 47.4	0.0
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
U40A	Yellville	61.68	66	P	P	20 09 46.0	-2.4
	baz=316						
W39A	Magazine	61.97	68	P	P	20 09 49.5	-0.9
	baz=316						
SFIN	Lafayette	61.98	60	P	P	20 09 49.4	-0.9
	baz=316						
KIRV	Kirov	62.20	333	ceP	P	20 09 51.6	+0.1
FCAR	Ozark Folk Cen	62.42	66	P	P	20 09 51.5	-1.8
MIAR	Mount Ida	62.56	68	P	P	20 09 53.5	-0.8
	baz=316						
BORG	Borgarnes	62.58	9	LR	LR	20 36 39.7	
	comp=Z,21nm,21.0s,baz=247,slow=35						
SADO	Sadowa	62.84	51	P	P	20 09 55.5	-0.5
	comp=Z,2.7nm,0.5s,baz=344,slow=5.0,SNR=3.2						
	comp=Z,2.7nm,0.5s						
W41B	Gary Mavity, V	62.87	67	P	P	20 09 54.6	-1.7
	baz=316						
WVT	Waverly	64.65	63	P	P	20 10 06.5	-1.5
	baz=317						
FINES	FINESS Array B	64.75	346	P	P	20 10 08.2	0.0
	comp=Z,1.2nm,0.4s,baz=15,slow=7.9,SNR=18						
	comp=Z,1.2nm,0.4s						
AAK	Ala-Archa	65.08	308	P	P	20 10 09.3	-1.6
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	Ala-Archa	65.08	308	P	P	20 10 09.3	-1.6
AAK				IAmb	IAmb	20 10 12.2	
	comp=Z,3.4nm,0.6s						
P52A	Corning	65.13	57	P	P	20 10 09.3	-1.7
	baz=318						
ABKAR	Akbulak array	66.34	321	P	P	20 10 18.5	-0.2
SSPA	Standing Stone	66.54	54	P	P	20 10 18.0	-2.1
	baz=319						
KK31	Karatay Array	66.63	311	P	P	20 10 20.1	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KK31	Karatay Array	66.63	311	P	P	20 10 20.1	-0.6
KK31				IAmb	IAmb	20 10 21.3	
	comp=Z,3.8nm,0.6s						
KKAR	Karatay Array	66.63	311	P	P	20 10 20.0	-0.7
KKAR	Karatay Array	66.63	311	P	P	20 10 20.0	-0.7
KKAR	Karatay Array	66.63	311	P	P	20 10 19.8	-0.8
KKAR				IAmb	IAmb	20 10 21.3	
	comp=Z,3.8nm,0.6s						
KSH	Kashi	66.68	305	P	P	20 10 25.3	+4.1
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NOA	NORSAR Array B	66.82	353	P	P	20 10 21.1	-0.5
	comp=Z,0.4nm,0.5s,baz=8.0,slow=6.2,SNR=2.6						
	comp=Z,0.4nm,0.5s						
BELG	Belogornoye	68.03	330	i P	P	20 10 29.5	+0.3
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	Obninsk	68.62	338	⇓eP	P	20 10 34.0	+1.1
OBN				e*PP	sP	20 11 16.3	+4.0
OBN				e		20 13 07.5	
OBN				eS	SKiKP	20 19 54.5	-19
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	69.19	274	P	P	20 10 37.3	+0.3
	comp=Z,2.1nm,0.6s,baz=26,slow=7.1,SNR=15						
	comp=Z,2.1nm,0.6s						
ODAN	Odare	69.87	288	eP	P	20 10 42.0	+0.6
	comp=Z,12nm,0.8s						
RAMN	Ramite	70.27	289	eP	P	20 10 44.5	+0.7
	comp=Z,35nm,0.5s						
KKN	Kakani	70.41	290	eP	P	20 10 45.3	+0.7
	comp=Z,28nm,0.5s						
PKI	Pulchoki	70.50	290	eP	P	20 10 45.7	+0.4
	comp=Z,25nm,0.5s						
PKIN	Phulchoki	70.50	290	eP	P	20 10 45.7	+0.5
	comp=Z,29nm,0.5s						
GKN	Gorkha	70.62	291	eP	P	20 10 46.3	+0.5
	comp=Z,26nm,0.5s						
DANN	Dangsing	70.86	292	eP	P	20 10 48.2	+0.7
	comp=Z,46nm,0.8s						
KOLN	Koldanda	71.39	291	eP	P	20 10 51.0	+0.4
	comp=Z,25nm,0.9s						
PYUN	Piuthan	71.49	292	eP	P	20 10 51.7	+0.5
	comp=Z,32nm,0.9s						
AKASG	Malin Array Be	74.37	340	P	P	20 11 07.1	-0.3
	comp=Z,4.0nm,0.4s,baz=22,slow=6.3,SNR=18						
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	74.37	340	i P	P	20 11 07.9	+0.5
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	74.37	340	IAmb	IAmb	20 11 08.9	
	comp=Z,1.1nm,0.5s						
AKBB	Malin Array Si	74.37	340	ceP	P	20 11 07.6	+0.2
SORM	Soroca	76.98	340	⇑P	P	20 11 22.3	-0.1
SORM	Soroca	76.98	340	⇑P	P	20 11 22.3	-0.1
KIV	Kislovodsk	77.02	329	eP	P	20 11 24.3	+1.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	77.16	329	P	P	20 11 25.1	+1.7
	comp=Z,1.7nm,0.6s,baz=162,slow=3.3,SNR=5.7						
	comp=Z,1.7nm,0.6s						
KBZ	Khabaz	77.16	329	ceP	P	20 11 24.8	+1.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHA1	Shidzhatmaz	77.23	329	i P	P	20 11 25.7	+1.5
ZEI	Tsey	77.67	327	eP	P	20 11 26.5	-0.1
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BURAR	Bucovina Array	78.11	342	⇑P	P	20 11 29.9	+1.1
BURAR	Bucovina Array	78.11	342	⇑P	P	20 11 29.9	+1.1
BIZ	Bicaz	78.59	341	⇑P	P	20 11 32.9	+1.6
TESR	Tescani	78.89	341	⇑P	P	20 11 34.1	+1.1
VLDR	Vladesti	79.22	339	⇑P	P	20 11 36.5	+1.8
VRI	Vrincioaia	79.48	340	⇑P	P	20 11 37.9	+1.6
VRI	Vrincioaia	79.48	340	⇑P	P	20 11 37.9	+1.6
COVR	Voineasa-Covas	79.61	341	⇑P	P	20 11 38.2	+1.3
MLR	Muntele Rosu	80.00	341	⇓P	P	20 11 40.6	+1.4
MLR	Muntele Rosu	80.00	341	⇓P	P	20 11 40.6	+1.4
TPGR	Topolog	80.08	339	⇑P	P	20 11 39.9	+0.4
VOIR		80.24	341	⇑P	P	20 11 42.3	+1.9
VOIR		80.24	341	⇑P	P	20 11 42.3	+1.9
ARR	Arges	80.39	342	⇓P	P	20 11 46.0	+4.8
GZR	Gura Zlata	80.71	343	⇑P	P	20 11 43.4	+0.5
GZR	Gura Zlata	80.71	343	⇑P	P	20 11 43.4	+0.5
WRA	Warramunga Arr	81.28	221	P	P	20 11 45.8	-0.3
	comp=Z,3.8nm,0.6s,baz=31,slow=6.0,SNR=119						
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	81.28	221	P	P	20 11 45.8	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.6s						
ASAR	Alice Springs	84.79	220	P	P	20 12 04.2	+0.1
	comp=Z,2.3nm,0.7s,baz=23,slow=5.4,SNR=22						
	comp=Z,2.3nm,0.7s						
STKA	Stephens Creek	89.53	211	P	P	20 12 27.6	+0.9
	comp=Z,3.7nm,0.6s,baz=345,slow=4.0,SNR=9.0						
	comp=Z,3.7nm,0.6s						
STKA	Stephens Creek	89.53	211	P	P	20 12 27.6	+0.9
STKA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
STKA	Stephens Creek	89.53	211	IAmb	IAmb	20 12 28.4	
	comp=Z,6.7nm,1.6s						
TORD	Torodi Ar. Bea	115.04	356	PKP	PKiKP	20 18 09.7	-0.7
	comp=Z,13nm,0.6s,baz=5.6,slow=2.1,SNR=4.7						
DBIC	Dimbokro	121.48	4	PKP	PKPdf	20 18 20.6	-2.2
	comp=Z,1.0nm,0.4s,baz=8.6,slow=3.1,SNR=4.5						
MAW	Mawson	145.90	218	PKPbc	PKPbc	20 19 07.2	0.0
	comp=Z,1.5nm,0.4s,baz=120,slow=4.1,SNR=10.0						
BOSA	Boshof	149.21	309	PKPbc	PKPbc	20 19 17.9	+0.3
	comp=Z,2.7nm,0.6s,baz=42,slow=2.9,SNR=12						
BOSA	Boshof	149.21	309	PKP2	PKPbc	20 19 18.0	+0.3

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*NNC **10** 20:17:58.4±3.8, 38°.76N×71°.03E, h0^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=31.7km s-min=22.8km az=30.0*

*KRNET **10** 20:18:01.1±0.1, 39°.17N×71°.52E, h13^{km}, mb3.1*

*ISU **10** 20:18:02, 39°.30N×71°.49E, h5^{km}*

*SOME **10** 20:18:05.1, 39°.53N×71°.60E, h0^{km}*

ISC 10 20:18:03.3±1.0**, 39°.26N**±0°.04×**71°.43E**±0°.03**, h10^{km}, n22, σ1^s.86**/42**, 23C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.36	53	⇑iP	Pg	20 18 08.7	-1.9
	baz=35						
DRK				⇑iS	Sg	20 18 14.2	-1.2
	baz=35						
SHAK	Shakhimardan	0.73	19	P	Pg	20 18 16.8	-0.6
SHAK				S	Sb	20 18 27.7	-0.7
GAR	Garm	0.90	253	⇑iP	Pg	20 18 19.5	-1.2
	baz=60						
GAR				⇑iS	Sb	20 18 32.8	-0.4
	baz=60						
BTK	Batken	0.92	330	⇑iP	Pg	20 18 21.1	0.0
	baz=29						
BTK				⇑iS	Sb	20 18 35.6	+1.8
	baz=29						
BTK	Batken	0.92	330	P	Pg	20 18 21.1	0.0
BTK				S	Sb	20 18 35.3	+1.5
CHMI	Chimion	1.01	4	P	Pn	20 18 22.7	-0.8
CHMI				S	Sn	20 18 38.4	+0.6
FRG	Fergana	1.14	14	P	Pg	20 18 25.1	-0.2
FRG				S	Sn	20 18 42.6	+1.5
OHH	Osh	1.64	39	⇑iP	Pb	20 18 32.4	-1.2
	baz=35						
OHH				⇑iS	Sg	20 18 55.1	-0.8
	baz=35						
OHH	Osh	1.64	39	P	Pg	20 18 33.5	-1.2
OHH				S	Sg	20 18 55.2	-0.7
CHGR	Chuyangaron	1.87	252	⇑iP	Pb	20 18 36.7	-0.9
	baz=55						
CHGR				⇑iS	Sg	20 19 02.7	-0.7
	baz=55						
TRKS	Terek-Say	2.28	355	⇑iP	Pb	20 18 42.6	-1.9
	baz=53						
TRKS				⇑iS	Sb	20 19 12.6	-0.2
	baz=53						
ARK	Arkit	2.57	9	⇑iP	Pb	20 18 46.8	-2.6
	baz=7.0						
ARK				⇑iS	Sb	20 19 21.0	-0.1
	baz=7.0						
IUG	Iuzhnay	3.07	340	eP	Pg	20 19 00.4	-1.7
	154nm,0.0s						
IUG				eS	Sg	20 19 40.1	-1.8
	9.9nm,0.1s						
ARLS	Aral	3.41	39	⇓iP	Pn	20 18 58.1	+1.5
	baz=38						
ARLS				⇓iS	Sn	20 19 39.6	+2.5
	baz=38						
MRKS	Merke	3.74	21	eP	Pb	20 19 09.6	+0.2
	2.3nm,0.1s						
MRKS				eS	Sb	20 19 56.0	+1.3
	12nm,0.3s						
UCH	Uchtor	3.78	37	⇑iP	Pn	20 19 03.7	+1.7
	baz=36						
UCH				⇑iS	Sn	20 19 49.1	+2.4
	baz=36						
EKS2	Erkin-Say	3.83	27	⇑iP	Pn	20 19 04.4	+2.0
	baz=25						
EKS2				⇑iS	Sn	20 19 50.6	+3.0
	baz=25						
KK31	Karatay Array	3.90	350	P	Pn	20 19 07.0	+3.7
	1.4nm,0.3s,baz=177,slow=13,SNR=29						
KK31				⇓S	Sb	20 19 58.1	-1.3
	4.4nm,0.7s,baz=162,slow=26,SNR=4.0						
KKAR	Karatay Array	3.90	350	⇑iP	Pn	20 19 05.9	+2.7
	baz=49						
KKAR				⇑iS	Sn	20 19 53.2	+4.1
	baz=49						
BRLS	Borolday	3.95	343	eP	Pb	20 19 10.0	-3.0
	2.1nm,0.0s						
BRLS				eS	Sb	20 19 56.7	-4.2
	2.1nm,0.0s						
CHMS	Chumysh	4.50	33	⇑P	Pb	20 19 15.6	-6.7
	2.8nm,0.5s						
CHMS				⇓S	Sb	20 20 16.6	0.0
	1.9nm,0.4s						
TKM2	Tokmak 2	4.82	39	⇑P	Pn	20 19 19.5	+3.4
	2.5nm,0.9s						
TKM2				⇑S	Sb	20 20 25.8	-0.4
	2.9nm,0.8s						

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*IDC **10** 20:30:45.5±2.3, 30°.42N×82°.83E, h0^{km}, mb3.6/6, mbtmp3.6/8, ML3.2/2, MS3.0/9, Error ellipse: s-maj=73.3km s-min=22.1km az=69.0*

ISC 10 20:30:51.1±2.4**, 30°.5N**±0°.2×**83°.0E**±0°.5**, h35^{km}, n16, σ0^s.85**/8**, mb3.6**/5**, MS3.0**/9**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.27	358	Pn	Pn	20 34 36.4	-0.6
	baz=173,slow=13,SNR=2.7						
	0.3nm,0.7s						
CMAR	Chiang Mai Arr	18.83	126	P	P	20 35 07.8	-0.2
	0.1nm,0.3s,baz=304,slow=12,SNR=12						
	1.6nm,0.9s						
KURBB	Kurchatov Arra	20.37	352	P	P	20 35 25.4	+0.9
	1.1nm,0.2s,baz=173,slow=9.9,SNR=7.2						
	1.1nm,0.2s						
GEYT	Alibeck	21.79	297	LR	LR	20 45 56.1	
	comp=Z,82nm,20.8s,baz=147,slow=42						
WSAR	Wadi Sarin	22.84	257	LR	LR	20 44 57.6	
	comp=Z,35nm,19.0s,baz=101,slow=38						
ZALV	Zalesovo Beam	23.47	3	P	P	20 35 57.9	+0.5
	0.4nm,0.3s,baz=212,slow=10,SNR=4.3						
	0.4nm,0.3s						
SONM	Songino Array	24.94	39	P	P	20 36 11.8	+0.6
	1.4nm,0.8s,baz=231,slow=9.8,SNR=12						
SONM				LR	LR	20 45 24.2	
	comp=Z,19nm,18.2s,baz=171,slow=35						
	1.4nm,0.8s						
GNI	Garni	32.42	298	LR	LR	20 51 56.6	
	comp=Z,18nm,19.4s,baz=44,slow=39						
KBZ	Khabaz	34.23	304	LR	LR	20 54 12.5	
	comp=Z,32nm,19.5s,baz=111,slow=41						
KSRS	Korea Array	37.65	67	LR	LR	20 54 36.7	
	comp=Z,36nm,19.9s,baz=275,slow=38						
BRTR	Keskin Array B	40.94	297	LR	LR	20 57 32.7	
	comp=Z,24nm,20.5s,baz=127,slow=39						
VRAC	Vranov	52.53	311	LR	LR	21 03 30.8	
	comp=Z,18nm,19.2s,baz=61,slow=37						
NOA	NORSAR Array B	55.05	326	LR	LR	21 05 14.7	
	comp=Z,13nm,18.7s,baz=290,slow=38						
WRA	Warramunga Arr	70.40	129	P	P	20 42 02.2	+0.3
	0.9nm,0.6s,baz=324,slow=6.4,SNR=12						
	0.9nm,0.6s						
ILAR	Eielson Array	77.42	20	P	P	20 42 41.0	-1.3
	0.4nm,0.7s,baz=313,slow=6.2,SNR=4.1						
	0.4nm,0.7s						
YKA	Yellowknife Ar	86.26	8	P	P	20 43 29.2	+0.3
	0.2nm,0.6s,baz=340,slow=4.8,SNR=4.5						
	0.2nm,0.6s						

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*IDC **10** 20:31:41.1±1.7, 1°.38S×127°.93E, h0^{km}, mb3.5/2, mbtmp3.4/4, ML3.4/2, MS2.7/1, Error ellipse: s-maj=33.3km s-min=28.4km az=59.0*

*DJA **10** 20:31:41.4±0.3, 1°S±2°×12°8E±°, h10^{km}, M3.8/12, mb4.1/4, mB4.9/1, MLv3.7/12, Mw(mB)4.2/1*

ISC 10 20:31:39.5±1.0**, 0°.97S**±0°.07×**128°.01E**±0°.05**, h19^{km}, n13, σ1^s.51**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.60	303	P	Pb	20 31 50.6	-0.8
LBMI				S	Sb	20 31 57.5	-2.0
TNTI	Ternate	1.84	340	P	Pb	20 32 12.0	-0.6
SANI	Sanana	2.29	242	P	Pn	20 32 15.7	-0.6
MSAI	Masohi	2.54	159	P	Pb	20 32 24.2	-0.3
SWI	Sorong	3.25	88	P	Pb	20 32 35.8	-0.9
SIJI	Sorong	3.26	88	Pn	Pb	20 32 34.7	-2.2
	3.5nm,0.3s,baz=251,slow=21,SNR=9.5						
SIJI				Sn	Sb	20 33 17.1	+0.9
	1.8nm,0.3s,baz=220,slow=22,SNR=7.3						
SIJI				LR	LR	20 34 02.0	
	comp=Z,107nm,18.7s,baz=98,slow=42						
	6.2nm,0.3s						
KMSI	Cibinong	4.31	291	P	Pn	20 32 45.3	+1.2
GTOI	Gorontalo	5.24	288	P	Pn	20 33 00.2	+3.2
	0.1nm8.8nm,0.8s						
MRSI	Marisa	6.23	283	P	Pn	20 33 11.4	+0.8
	0.2nm12nm,0.5s						
APSI	Ampana	6.36	270	P	Pn	20 33 12.9	+0.6
WRA	Warramunga Arr	19.85	162	P	P	20 36 09.7	+0.1
	0.1nm,0.3s,baz=339,slow=12,SNR=3.0						
	0.5nm,0.5s						
ASAR	Alice Springs	23.28	166	P	P	20 36 47.0	+0.7
	1.5nm,0.7s,baz=343,slow=12,SNR=19						
	1.5nm,0.7s						
MKAR	Makanchi Array	62.13	326	P	P	20 42 06.1	+6.6
	0.2nm,0.5s,baz=118,slow=8.5,SNR=2.5						
	0.2nm,0.5s						

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*MDD **10** 20:38:15.8±0.9, 35°.49N×3°.76W, h27^{km}±35^{km}, mb_Lg2.5/7, Error ellipse: s-maj=5.3km s-min=3.6km az=17.0*

*SFS **10** 20:38:16.0, 35°.43N×3°.75W, h33^{km}, ML2.6, ALBORAN SUR*

*CNRM **10** 20:38:17.4, 35°.33N×3°.75W, h23^{km}, ml2.6*

ISC 10 20:38:14.9±1.1**, 35°.49N**±0°.02×**3°.70W**±0°.03**, h17^{km}**±9^{km}**, n25, σ1^s.28**/44**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	Palemas	0.33	216	P	Pb	20 38 22.3	-0.1
PALE				S	Sg	20 38 26.7	-0.1
PVLZ	Peæn de	0.58	238	P	Pb	20 38 26.7	0.0
PVLZ				S	Sg	20 38 32.8	-1.5
GOG	Mont Gurugu	0.63	114	P	Pn	20 38 30.3	+1.1
GOG				S	Sn	20 38 38.3	-0.7
WMELI	Melilla	0.64	105	P	Pn	20 38 28.8	-0.4
WMELI				S	Sn	20 38 37.6	-1.2
EMEL	Melilla	0.64	107	Pg	Pn	20 38 28.9	-0.3
EMEL				Sg	Sn	20 38 39.1	+0.2
EMEL				i Vmb_Lg		20 38 41.1	
EALB	Alboran	0.71	50	Pg	Pn	20 38 29.8	-0.3
EALB				Sg	Sb	20 38 39.6	+1.4
EALB				i Vmb_Lg		20 38 44.7	
CHAS	Isla Isabel II	1.08	106	P	Pg	20 38 36.2	+0.3
CHAS				S	Sn	20 38 49.9	0.0
TAF	Taforalt	1.25	122	P	Pg	20 38 38.9	-0.2
ELGU	Los Guajares,	1.38	2	Pg	Pn	20 38 39.6	+0.1
ELGU				Sg	Sn	20 38 56.5	-0.8
ELGU				i Vmb_Lg		20 39 03.8	
EMIJ	Mijas	1.38	321	Pg	Pn	20 38 39.2	-0.3
EMIJ				Sg	Sn	20 38 57.4	+0.1
EMIJ				i Vmb_Lg		20 39 09.4	
CHEFC	Chefchaouen	1.39	255	P	Pb	20 38 40.8	+0.2
EMAL	Malaga-Limoner	1.40	335	P	Pg	20 38 42.3	+0.3
EMAL				S	Sn	20 38 58.0	+0.2
CEU	Ceuta	1.42	287	P	Pn	20 38 39.2	-0.8
CEU				S	Sn	20 38 54.5	-3.7
JBK	JBK	1.48	141	P	Pb	20 38 42.0	-0.1
JBK				S	Sn	20 38 58.2	-1.8
EBER	Berja	1.55	25	Pg	Pn	20 38 42.3	+0.3
EBER				Sg	Sn	20 39 02.8	+0.9
EBER				i Vmb_Lg		20 39 25.0	
EGOR	Sierra Gorda,	1.65	349	Pg	Pb	20 38 45.4	+0.4
EGOR				Sg	Sn	20 39 04.5	+0.3
EGOR				i Vmb_Lg		20 39 18.5	
LCRM	LCR	2.03	208	P	Pb	20 38 51.9	+0.4
LCRM				S	Sn	20 39 14.0	+0.3
EQES	Quesada	2.37	12	Pg	Pb	20 38 55.6	-1.5
EQES				Sg	Sb	20 39 25.9	-0.2
EQES				i Vmb_Lg		20 39 28.3	
MD31	MD31	2.76	199	P	Pn	20 38 59.9	+1.5
MD31				S	Sn	20 39 30.6	-0.8
MDT	Midelt	2.77	196	P	Pn	20 38 59.7	+1.1
PVAQ	Vaqueiros	3.76	302	ePn	Pn	20 39 15.8	+3.7
PVAQ				eSn	Sn	20 39 54.8	-1.2
PVAQ				A	A	20 40 01.9	
	3.2nm,0.3s						
PVAQ	Vaqueiros	3.76	302	P	Pn	20 39 14.0	+1.8
PBDV	Barranco-do-Ve	3.84	298	eSn	Sn	20 39 56.4	-1.5
PNCL	Nicolau / Gran	4.68	305	ePn	Pn	20 39 27.1	+2.4
PNCL				eSn	Sn	20 40 16.5	-2.1
OUZM	OUZ	5.24	210	P	Pn	20 39 32.3	-0.3

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*IDC **10** 20:49:36.6±1.6, 30°.50N×70°.47E, h0^{km}, mb3.5/6, mbtmp3.6/8, ML3.6/2, MS3.0/5, Error ellipse: s-maj=37.6km s-min=31.0km az=73.0*

*NDI **10** 20:49:36.2±2.2, 30°.42N×69°.86E, h10^{km}, ML4.1*

ISC 10 20:49:38.0±0.9**, 30°.28N**±0°.08×**70°.21E**±0°.08**, h19^{km}, n25, σ2^s.03**/26**, mb3.5**/6**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	Jammu	4.68	58	eP	Pn	20 50 49.0	+1.3
JMU				eS	Sn	20 51 43.3	+1.8
THN	Thein Dam	5.17	64	eP	Pn	20 50 58.8	+4.4
THN				eS	Sn	20 51 56.9	+3.3
AJM	Ajmer	5.44	133	eP	Pb	20 51 12.4	-0.1
BHK	Bhakra	5.46	76	eP	Pn	20 50 58.8	+0.5
BHK				eS	Sn	20 52 02.0	+1.4
SMLA	Simla	6.05	80	eP	Pn	20 51 09.0	+2.6
SMLA				eS	Sn	20 52 16.6	+1.4
SMLA				IAML		20 52 20.1	
	comp=E,209nm,0.5s						
SMLA				IAML		20 52 21.7	
	comp=N,226nm,0.3s						
BHPL	Bhopal	9.52	136	eS	Sn	20 53 40.2	-0.5
PYUN	Piuthan	11.38	98	eP	Pn	20 52 19.4	-0.3
	comp=N,7.7nm,0.3s						
DANN	Dangsing	11.98	96	eP	Pn	20 52 27.8	-0.3
	comp=N,17nm,0.4s						
KOLN	Koldanda	11.98	99	eP	Pn	20 52 28.2	+0.2
	comp=N,16nm,0.4s						
GEYT	Alibeck	12.59	311	LR	LR	20 58 21.8	
	comp=N,50nm,21.9s,baz=159,slow=42						
AAK	Ala-Archa	12.80	14	Pn	Pn	20 52 36.2	-2.8
	comp=N,0.6nm,0.3s,baz=184,slow=7.5,SNR=4.6						
AAK				Sn	Sn	20 54 48.7	-12
	comp=N,0.2nm,0.3s,baz=222,slow=14,SNR=1.2						
AAK				LR	LR	20 58 13.3	
	comp=N,75nm,18.2s,baz=200,slow=41						
	comp=N,1.7nm,0.4s						

GKN	Gorkha	12.81	97	*e*P	Pn	20 52 37.9	-1.4
	comp=N,12nm,0.3s						
KKN	Kakani	13.42	97	*e*P	Pn	20 52 45.6	-2.0
	comp=N,9.9nm,0.5s						
PKIN	Phulchoki	13.57	98	*e*P	Pn	20 52 47.5	-2.3
	comp=N,6.0nm,0.5s						
PKI	Pulchoki	13.58	98	*e*P	Pn	20 52 48.3	-1.7
	comp=N,8.0nm,0.6s						
RAMN	Ramite	14.77	99	*e*P	Pn	20 53 03.3	-2.9
	comp=N,6.5nm,0.4s						
ODAN	Odare	15.47	99	*e*P	Pn	20 53 10.7	-4.8
MKAR	Makanchi Array	18.96	26	P	P	20 53 56.5	-1.6
	comp=N,0.1nm,0.3s,baz=209,slow=12,SNR=8.0						
MKAR				LR	LR	21 02 17.0	
	comp=N,60nm,18.8s,baz=210,slow=41						
	comp=N,0.4nm,0.5s						
KURBB	Kurchatov Arra	21.25	15	P	P	20 54 21.7	-1.2
	comp=N,0.4nm,0.5s,baz=206,slow=9.0,SNR=3.5						
	comp=N,0.4nm,0.5s						
PALK	Pallekele	24.92	155	LR	LR	21 05 58.9	
	comp=N,49nm,18.5s,baz=147,slow=39						
ZALV	Zalesovo Beam	25.91	20	P	P	20 55 07.4	-1.2
	comp=N,0.4nm,0.3s,baz=223,slow=9.0,SNR=2.6						
ZALV				LR	LR	21 06 27.6	
	comp=N,24nm,18.9s,baz=313,slow=40						
	comp=N,0.4nm,0.3s						
MLR	Muntele Rosu	37.59	306	P	P	20 56 53.7	+2.3
	comp=N,1.7nm,0.7s,baz=174,slow=10,SNR=4.6						
	comp=N,1.7nm,0.7s						
ARCES	ARCESS Array B	46.69	340	P	P	20 58 04.8	-0.3
	comp=N,0.5nm,0.6s,baz=103,slow=5.2,SNR=3.6						
	comp=N,0.5nm,0.6s						
ASAR	Alice Springs	81.30	124	P	P	21 01 54.8	+1.5
	comp=N,0.3nm,0.6s,baz=306,slow=5.1,SNR=4.7						
	comp=N,0.3nm,0.6s						
YKA	Yellowknife Ar	87.47	2	P	P	21 02 24.9	+0.9
	comp=N,0.1nm,0.6s,baz=349,slow=4.4,SNR=2.9						
	comp=N,0.1nm,0.6s						

NOU 10 20:56:01.5, 14.°36S×166.°14E, h0km, MLv4.6/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.49	137	P	Pn	20 56 27.5	-2.1
DVP	Devils Point	3.88	150	P	Pn	20 57 03.6	+1.1
KOUNC	Koumac, New Ca	6.41	196	P	Pn	20 57 37.0	-0.2
DZM	Mont Dzumac	7.67	178	P	Pn	20 57 53.7	-1.0
YATNC	Mamie plateau,	7.69	175	P	Pn	20 57 53.8	-1.0
OUENC	Ouen Island, N	8.04	175	P	Pn	20 58 00.0	+0.3
	12nm,1.2s						

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*IDC **10** 21:05:47.3±0.8, 18.°41S×173.°65W, h0km, mb4.2/11, mbtmp4.2/13, ML3.6/2, MS3.5/12, Error ellipse: s-maj=36.2km s-min=15.7km az=132.0*

*NOU **10** 21:05:48.4, 18.°45S×173.°05W, h0km, mb5.0/13, Tonga Islands*

*NEIC **10** 21:05:48.1±2.4, 18.°5S±0.°1×173.°27W±0.°10, h10km±1km, mb4.6/18, Error ellipse: s-maj=18.2km s-min=14.7km az=208.0*

ISC 10 21:05:49.2±0.5**, 18.°38S**±0.°07×**173.°24W**±0.°06**, h19km, n87, σ2s46**/81**, mb4.6**/21**, MS3.6**/9**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.21	103	Pn	Pn	21 06 37.8	-0.9
NIUE				Sn	Sn	21 07 11.7	-4.8
NIUE	Niue	3.21	103	P	Pn	21 06 38.1	-0.6
AFI	Afiamalu	4.66	18	Pn	Pn	21 06 59.6	+0.9
	3.6nm,0.3s,baz=124,slow=7.3,SNR=1.6						
AFI				Sn	Sn	21 07 44.1	-8.2
	16nm,0.3s,baz=41,slow=22,SNR=7.5						
AFI				LR	LR	21 08 46.3	
	comp=Z,320nm,21.3s,baz=168,slow=37						
	9.7nm,0.3s						
AFI	Afiamalu	4.66	18		Pn	21 06 58.6	-0.1
MSVF	Nonsavu	8.31	273	LR	LR	21 10 36.7	
	comp=Z,232nm,21.7s,baz=78,slow=36						
RAR	Rarotonga	12.98	105	P	Pn	21 08 51.4	-1.4
	31nm,1.3s						
PINNC	Pines Island,	18.57	254		Pn	21 10 05.8	+0.3
PINNC				IAmb	IAmb	21 10 06.7	
	comp=Z,32nm,0.9s						
OUENC	Ouen Island, N	19.10	254	P	P	21 10 10.2	-0.7
OUENC				IAmb	IAmb	21 10 13.6	
	comp=Z,15nm,1.0s						
DZM	Mont Dzumac	19.41	256	P	P	21 10 12.9	-1.6
	comp=Z,0.1nm,0.3s,baz=84,slow=19,SNR=3.0						
DZM				LR	LR	21 16 26.7	
	comp=Z,167nm,21.8s,baz=106,slow=34						
	comp=Z,7.4nm,0.8s						
DZM	Mont Dzumac	19.41	256	P	P	21 10 14.1	-0.4
DZM				IAmb	IAmb	21 10 17.9	
	comp=Z,7.6nm,0.8s						
OUZ	Omahuta	20.45	212	P	Pn	21 10 28.0	+0.3
	comp=Z,37nm,2.4s						
URZ	Urewera	21.53	201	P	P	21 10 37.2	+0.1
	comp=Z,21nm,0.4s,baz=300,slow=23,SNR=22						
	comp=Z,21nm,0.4s						
URZ	Urewera	21.53	201	P	P	21 10 37.2	+0.1
URZ				IAmb	IAmb	21 10 40.1	
	comp=Z,27nm,0.6s						
URZ	Urewera	21.53	201	P	P	21 10 37.8	+0.6
	comp=Z,132nm,0.5s						
PPT	Papeete	22.52	92	LR	LR	21 17 16.5	
	comp=Z,79nm,19.7s,baz=274,slow=30						
BKZ	Black Stump Fm	22.55	201	P	P	21 10 47.3	-0.9
BKZ	Black Stump Fm	22.55	201	P	P	21 10 48.9	+0.7
	comp=Z,141nm,0.7s						
HIZ	Hauiti	22.59	205	P	P	21 10 51.4	+2.8
	comp=Z,651nm,0.9s						
BFZ	Birch Farm	24.00	200	P	P	21 11 03.8	+1.1
	comp=Z,30nm,1.2s						
QRZ	Quartz Range	25.50	206	P	P	21 11 18.8	+2.5
	comp=Z,44nm,1.1s						
THZ	Tophouse	26.14	204	P	P	21 11 25.3	+3.1
KHZ	Kahutara	26.47	202	P	P	21 11 27.6	+2.5
	comp=Z,31nm,2.1s						
DSZ	Denniston Nort	26.56	206	P	P	21 11 29.6	+3.6
GVZ	Greta Valley S	27.13	202	P	P	21 11 35.7	+4.6
LTZ	Lake Taylor	27.26	204	P	P	21 11 36.7	+4.5
INZ	Inchbonnie	27.53	205	P	P	21 11 35.8	+1.1
OXZ	Oxford	27.81	203	P	P	21 11 41.1	+3.9
MQZ	McQueen's Vall	27.91	202	P	P	21 11 43.7	+5.7
WVZ	Waitaha Valley	28.11	205	P	P	21 11 39.1	-0.7
RPZ	Rata Peaks	28.52	204	P	P	21 11 41.5	-2.0
	comp=Z,5.4nm,0.5s,baz=252,slow=6.4,SNR=2.7						
	comp=Z,5.4nm,0.5s						
RPZ	Rata Peaks	28.52	204	P	P	21 11 46.7	+3.2
RPZ	Rata Peaks	28.52	204	P	P	21 11 46.0	+2.5
	comp=Z,166nm,1.9s						
ARCZ	Arundel	28.67	204	P	P	21 11 49.6	+4.7
FOZ	Fox Glacier	28.87	206	P	P	21 11 50.2	+3.6
TMZ	Timaru	29.10	204	P	P	21 11 53.0	+4.3
CTA	Charters Tower	38.22	261	LR	LR	21 26 50.2	
	comp=Z,73nm,21.2s,baz=81,slow=33						
CTAO	Charters Tower	38.22	261	P	P	21 13 05.6	-2.6
CTAO				IAmb	IAmb	21 13 17.1	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	42.75	243	P	P	21 13 43.8	-1.7
	comp=Z,1.3nm,0.6s,baz=105,slow=13,SNR=4.9						
STKA				LR	LR	21 29 46.0	
	comp=Z,93nm,18.2s,baz=34,slow=34						
	comp=Z,1.3nm,0.6s						
STKA	Stephens Creek	42.75	243	P	P	21 13 43.6	-1.9
BBOO	Buckleboo	47.51	242	P	P	21 14 21.1	-2.3
WB0	Warramunga Arr	49.35	259	P	P	21 14 35.2	-2.6
WRA	Warramunga Arr	49.38	259	P	P	21 14 34.9	-3.1
	comp=Z,1.5nm,0.5s,baz=98,slow=6.4,SNR=12						
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	49.38	259	P	P	21 14 35.1	-2.9
AS31	Alice Springs	49.40	254	P	P	21 14 35.7	-2.4
ASAR	Alice Springs	49.40	254	P	P	21 14 35.9	-2.2
	comp=Z,2.6nm,0.7s,baz=87,slow=8.5,SNR=22						
	comp=Z,2.6nm,0.7s						
ASAR	Alice Springs	49.40	254	P	P	21 14 34.9	-3.2
KNRA	Kununurra	55.33	263	P	P	21 15 19.9	-2.2
MJAR	Matsushiro Arr	71.31	320	LR	LR	21 43 08.4	
	comp=Z,12nm,20.7s,baz=176,slow=32						
LPIG	La Paz	74.47	58	LR	LR	21 41 19.9	
	comp=Z,40nm,19.3s,baz=222,slow=28						
WDC	Whiskeytown Da	75.22	38	P	P	21 17 31.4	+0.7
PETK	Petropavlovsk-	75.50	342	P	P	21 17 32.6	+0.7
	comp=Z,4.3nm,1.1s,baz=165,slow=6.0,SNR=2.6						
	comp=Z,4.3nm,1.1s						
YBH	Yreka Blue Hor	75.88	37	P	P	21 17 37.4	+2.9
	comp=Z,1.8nm,0.7s,baz=150,slow=8.1,SNR=4.2						
YBH				LR	LR	21 42 42.5	
	comp=Z,58nm,20.1s,baz=265,slow=29						
	comp=Z,1.8nm,0.7s						
USRK	Ussuriysk Ar.	79.85	323	LR	LR	21 52 37.6	
	comp=Z,27nm,18.2s,baz=161,slow=35						
TXAR	Lajitas Array	82.14	56	P	P	21 18 12.6	+3.4
	comp=Z,0.2nm,0.3s,baz=224,slow=2.5,SNR=5.1						
	comp=Z,0.2nm,0.3s						
SCM	Sheep Creek Mo	82.56	12	P	P	21 18 12.3	+1.7
SCM				IAmb	IAmb	21 18 13.4	
	comp=Z,5.1nm,0.8s						
MA2	Magadan	83.03	342	LR	LR	21 50 53.1	
	comp=Z,18nm,19.2s,baz=133,slow=33						
MCMT	McKenzie Canyo	83.47	39	P	P	21 18 16.6	+0.7
PDAR	Pinedale Array	84.37	42	P	P	21 18 22.4	+1.8
	comp=Z,0.5nm,0.8s,baz=197,slow=4.6,SNR=4.2						
	comp=Z,0.5nm,0.8s						
WRH	Wood River Hil	84.83	11	P	P	21 18 22.9	+0.9
WRH				IAmb	IAmb	21 18 24.9	
	comp=Z,7.0nm,1.0s						
BCAR	Beaver Creek A	84.84	14	P	P	21 18 23.0	+0.8
CCB	Clear Creek Bu	85.04	11	P	P	21 18 24.1	+1.0
CCB				IAmb	IAmb	21 18 25.6	
	comp=Z,6.2nm,0.9s						
IL31		85.32	11	P	P	21 18 25.5	+1.1
IL31				IAmb	IAmb	21 18 26.5	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	85.32	11	P	P	21 18 26.2	+1.7
	comp=Z,1.3nm,0.7s,baz=225,slow=5.9,SNR=16						
ILAR				LR	LR	21 48 12.1	
	comp=Z,28nm,20.3s,baz=158,slow=30						
	comp=Z,1.3nm,0.7s						
ILAR	Eielson Array	85.32	11	P	P	21 18 25.4	+0.9
IMAR	Indian Mountai	85.39	8	P	P	21 18 26.1	+1.3
BMAR	Burnt Mountain	88.13	11	P	P	21 18 40.1	+1.9
YKA	Yellowknife Ar	92.75	23	P	P	21 19 01.8	+2.0
	comp=Z,0.2nm,0.7s,baz=238,slow=4.2,SNR=5.2						
	comp=Z,0.2nm,0.7s						
CLL	Collm	146.77	353	⇑*i*PKPbc	PKiKP	21 25 31.9	-0.7
	comp=Z,6.0nm,0.8s						
OSTC	Ostas	147.02	349	*e*PKP	PKiKP	21 25 32.9	-0.2
DPC	Dobruska-Polom	147.20	349	*e*PKP	PKPab	21 25 32.5	-0.3
PVCC	Panska Ves	147.32	351	*e*PKP	PKiKP	21 25 33.9	+0.2
KRLC	Kraliky	147.37	348	*e*PKP	PKPab	21 25 33.0	-0.5
MORC	Moravsky Berou	147.50	347	*e*PKP	PKiKP	21 25 34.1	-0.1
NKC	Novy Kostel	147.89	353	*e*PKP	PKPab	21 25 40.8	+5.3
KHC	Kasperske Hory	148.83	351	*e*PKP	PKiKP	21 25 38.0	+1.1
CKRC	Cesky Krumlov	149.02	350	*e*PKP	PKiKP	21 25 38.1	+0.8
GERES	GERESS Array B	149.09	351	PKPbc	PKiKP	21 25 38.5	+1.0
	comp=Z,1.7nm,0.8s,baz=46,slow=3.9,SNR=12						
CONA	Conrad Observa	149.60	348	*e*P	PKiKP	21 25 40.1	+1.5
	comp=Z,5.2nm,0.9s						
RONA	Rosalia, Austr	149.73	347	*e*P	PKiKP	21 25 40.3	+1.4
	comp=Z,3.4nm,0.7s						
KBA	Koelnbreinsper	150.87	351	*e*P	PKiKP	21 25 42.8	+1.4
	comp=Z,1.3nm,0.7s						
MOTA	Moosalm	150.89	354	*e*P	PKiKP	21 25 42.4	+0.9
	comp=Z,4.9nm,1.3s						
WTTA	Wattenberg	150.91	353	*e*P	PKiKP	21 25 42.9	+1.4
	comp=Z,3.3nm,0.7s						
SOKA	Soboth	150.96	348	*i* P	PKiKP	21 25 42.4	+0.9
	comp=Z,4.2nm,1.0s						
SQTA	Sankt Quirin	151.00	354	*e*P	PKiKP	21 25 43.1	+1.5
	comp=Z,2.5nm,0.7s						
DAVA	Damuels	151.06	356	*e*P	PKiKP	21 25 43.6	+1.8
	comp=Z,7.1nm,1.2s						
FETA	Feichten	151.25	354	*e*P	PKiKP	21 25 43.7	+1.5
	comp=Z,2.9nm,0.8s						
ABTA	Abfaltersbach	151.31	352	*e*P	PKiKP	21 25 42.9	+0.7
	comp=Z,5.3nm,0.7s						

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*NEIC **10** 21:20:03.8±1.4, 37.°82S±0.°06×74.°4W±0.°3, h28km±16km, Error ellipse: s-maj=30.3km s-min=8.4km az=92.0*

*GUC **10** 21:20:03.6±0.5, 37.°83S×74.°30W, h20km±4km, ML4.0*

ISC 10 21:20:03.4±2.7**, 37.°83S**±0.°06×**74.°5W**±0.°2**, h35km, n38, σ1s11**/39**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LC02	Puerto Saavedr	1.28	139	Pn	Pn	21 20 23.9	-0.9
LC02	Puerto Saavedr	1.28	139	*e*P	Pn	21 20 23.8	-0.9
LC02				*e*S	Sn	21 20 38.9	-1.8
BI05	Punta Hualpn	1.48	44	Pn	Pn	21 20 27.5	0.0
BI05	Punta Hualpn	1.48	44	*e*P	Pn	21 20 27.3	-0.2
BI05				*e*S	Sn	21 20 44.5	-1.2
BI05				IAML		21 20 53.4	
	comp=E,1μm,0.7s						
LR02	Universidad Au	2.19	155	IAML		21 21 15.7	
	comp=E,4μm,0.7s						
LR03	Panguipulli	2.44	138	Pn	Pn	21 20 41.9	+1.1
LR03	Panguipulli	2.44	138	*e*P	Pn	21 20 41.8	+1.1
LR03				*e*S	Sn	21 21 11.2	+1.8
ML02	Panimavida	3.20	51	IAML		21 21 45.9	
	comp=E,909nm,0.6s						
LL04	Puerto Octay	3.46	153	Pn	Pn	21 20 55.9	+1.2
LL04	Puerto Octay	3.46	153	*e*P	Pn	21 20 56.1	+1.4
GO05	Huala	3.48	37	Pn	Pn	21 20 56.1	+1.1
GO05	Huala	3.48	37	*e*P	Pn	21 20 56.1	+1.1
GO05				*e*S	Sn	21 21 48.5	+13
GO05				IAML		21 21 58.0	
	comp=E,137nm,0.7s						
BO03	Pichilemu	3.90	32	*e*P	Pn	21 21 01.8	+1.1
PLCA	Paso Flores	4.20	135	Pn	Pn	21 21 05.7	+0.8
PLCA	Paso Flores	4.20	135	*e*P	Pn	21 21 05.7	+0.8
BO01	Tunca	4.39	40	Pn	Pn	21 21 08.6	+1.1
BO01	Tunca	4.39	40	*e*P	Pn	21 21 08.5	+1.1
MT09	Talagante	4.93	36		Pn	21 21 15.6	+0.4
MT09	Talagante	4.93	36	*e*P	Pn	21 21 16.0	+0.9
BO04	La Punta	4.95	40		Pn	21 21 15.6	+0.4
BO04	La Punta	4.95	40	*e*P	Pn	21 21 15.5	+0.2
LMEL	Las Melosas	5.27	42		Pn	21 21 21.0	+1.2
LMEL	Las Melosas	5.27	42	*e*P	Pn	21 21 20.9	+1.2
MT02	Curacav	5.31	32		Pn	21 21 20.6	+0.5
MT02	Curacav	5.31	32	*e*P	Pn	21 21 20.6	+0.5
MT05	Renca	5.37	36	Pn	Pn	21 21 20.6	-0.5
MT03	Universidad Ad	5.39	38		Pn	21 21 22.0	+0.6
PEL	Peldehue	5.60	34		Pn	21 21 24.2	0.0
PEL	Peldehue	5.60	34	*e*P	Pn	21 21 25.3	+1.1
ROC1	El Roble	5.60	31		Pn	21 21 23.1	-1.3
FCH	Farellones	5.63	38	*e*P	Pn	21 21 25.7	+0.8
VA06	Catapilco	5.86	27		Pn	21 21 27.7	-0.1
VA03	San Esteban	5.98	33		Pn	21 21 29.8	+0.3
CO02	Combarbal	7.20	24		Pn	21 21 47.3	+1.0
CO06	Fray Jorge	7.51	19	Pn	Pn	21 21 52.7	+2.2
GO04	Tololo Observa	8.22	23		Pn	21 22 01.1	+0.8
CO01	Juntas del Tor	8.63	26	Pn	Pn	21 22 06.6	+0.5
GO02	Mina Guanaco	13.29	20	Pn	Pn	21 23 07.2	-2.6

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*MAN **10** 21:21:46.4, 9.°33N×125.°62E, h17km, mb4.6, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*

ISC 10 21:21:45.9±1.7**, 9.°41N**±0.°04×**125.°63E**±0.°05**, h7km**±13km**, n11, σ1s31**/16**, 1C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.39	340	⇓*e*P	Pb	21 21 56.5	+1.2
BUTP	Butuan	0.44	181	⇓*e*P	Pg	21 21 53.9	-0.6
BUTP				*e*S	Sb	21 22 14.1	+11
GLSP	General Luna,	0.62	53	⇓*e*P	Pb	21 22 00.1	+1.1
MSLP	Maasin	1.04	314	⇓*e*P	Pb	21 22 06.5	+0.2
BIPH	Bislig	1.42	149	⇓*e*P	Pn	21 22 10.0	-2.1
BIPH				*i* S	Sn	21 22 29.2	-1.9
TBP	Tagbilaran	1.76	279	*e*P	Pn	21 22 16.4	-0.5
TBP				*i* S	Sn	21 22 38.8	-0.8
LLP	Lapu-Lapu	1.87	299	⇑*e*P	Pn	21 22 18.4	0.0
LLP				*i* S	Sn	21 22 42.6	+0.4
SNPH	Sibulan	2.36	269	*e*P	Pb	21 22 28.6	-0.2
KCP	Kidapawan	2.44	193	⇓*e*P	Pb	21 22 32.0	+1.7
KCP				*e*S	Sn	21 22 57.8	+1.3
MATI	Mati	2.53	166	⇓*e*P	Pn	21 22 29.1	+1.8
MATI				*e*S	Sn	21 22 57.6	-0.9
PAGZ	Pagadian	2.71	235	⇓*e*P	Pn	21 22 29.8	-0.1

IDC 10 21:40:07.1±9.0**, 7.°39S×128.°51E, h169km**±94km**, mb2.9**/1**, mbtmp3.6**/4**, Error ellipse: s-maj=111.0km s-min=30.5km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.55	239	P	Pn	21 41 27.8	-0.3
	43nm,0.4s,baz=240,slow=1.6,SNR=20						
BATI				S	Sn	21 42 28.7	-2.9
	20nm,0.4s,baz=131,slow=22,SNR=7.9						
WRA	Warramunga Arr	13.70	156	P	Pn	21 43 12.6	-1.9
	0.2nm,0.3s,baz=338,slow=12,SNR=1.9						
WRA				S	Sn	21 45 33.6	-13
	1.3nm,0.5s,baz=335,slow=23,SNR=6.8						
ASAR	Alice Springs	16.99	163	P	Pn	21 43 55.4	+0.4
	0.7nm,0.5s,baz=335,slow=10,SNR=15						
ASAR				S	S	21 46 54.5	-8.2
	0.6nm,0.9s,baz=322,slow=22,SNR=2.5						
MKAR	Makanchi Array	67.75	328	P	P	21 50 46.5	+0.1
	0.1nm,0.3s,baz=130,slow=7.2,SNR=4.1						
	0.1nm,0.3s						

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*GUC **10** 21:47:20.4±0.5, 37.°88S×74.°75W, h22km±5km, ML4.3*

*NEIC **10** 21:47:25.8±1.3, 37.°83S±0.°05×74.°0W±0.°1, h17km±4km, mb4.4/3, ML4.3(GUC), Error ellipse: s-maj=16.3km s-min=7.4km az=94.0*

ISC 10 21:47:25.0±2.2**, 37.°88S**±0.°04×**74.°2W**±0.°1**, h16km**±13km**, n48, σ1s39**/55**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LC02	Puerto Saavedr	1.10	147	Pn	Pn	21 47 44.0	-1.9
LC02				Sn	Sb	21 47 59.6	-0.2
LC02	Puerto Saavedr	1.10	147	*e*P	Pn	21 47 44.0	-1.9
LC02				*i* S	Sb	21 47 59.2	-0.6
CCSP	San Pedro de C	1.33	39	*e*P	Pg	21 47 50.9	+0.3
CCSP				*e*S	Sg	21 48 08.8	+0.9
CCSP				IAML		21 48 12.9	
	comp=E,9μm,0.7s						
BI05	Punta Hualpn	1.36	35		Pn	21 47 48.1	-1.3
BI05	Punta Hualpn	1.36	35	*e*P	Pn	21 47 48.3	-1.2
BI05				*i* S	Sg	21 48 09.7	+0.6
BI05				IAML		21 48 15.3	
	comp=E,3μm,0.4s						
LR03	Panguipulli	2.26	142	Pn	Pn	21 48 01.3	-0.4
LR03	Panguipulli	2.26	142	*e*P	Pn	21 48 01.4	-0.4
LR03				*i* S	Sb	21 48 32.2	-0.9
LR03				IAML		21 48 38.4	
	comp=N,3μm,0.7s						
ML02	Panimavida	3.05	47		Pn	21 48 11.1	-1.5
ML02	Panimavida	3.05	47	*e*P	Pn	21 48 12.5	-0.1
ML02				*e*S	Sb	21 48 53.5	-2.4
LL04	Puerto Octay	3.32	156	Pn	Pn	21 48 17.1	+0.7
LL04	Puerto Octay	3.32	156	*e*P	Pn	21 48 15.1	-1.3
GO05	Huala	3.38	33		Pn	21 48 16.6	-0.6
GO05	Huala	3.38	33	*e*P	Pn	21 48 16.6	-0.6
GO05				*e*S	Sn	21 49 00.4	+3.4
LL03	Petrohue	3.53	158	Pn	Pn	21 48 18.2	-1.1
LL05	Los Muermos	3.57	172		Pn	21 48 20.8	+1.0
BO03	Pichilemu	3.81	28	*e*P	Pn	21 48 21.8	-1.4
PLCA	Paso Flores	4.00	137	Pn	Pn	21 48 25.9	+0.1
PLCA	Paso Flores	4.00	137	*e*P	Pn	21 48 25.3	-0.5
BO01	Tunca	4.27	37	Pn	Pn	21 48 26.9	-2.6
BO01	Tunca	4.27	37	*e*P	Pn	21 48 28.5	-1.0
VA05	Santo Domingo	4.69	27		Pn	21 48 33.8	-1.4
VA05	Santo Domingo	4.69	27	*e*P	Pn	21 48 34.0	-1.2
BO04	La Punta	4.83	38		Pn	21 48 35.9	-1.3
BO04	La Punta	4.83	38	*e*P	Pn	21 48 36.2	-1.0
MT09	Talagante	4.83	33		Pn	21 48 36.1	-1.1
MT09	Talagante	4.83	33	*e*P	Pn	21 48 36.2	-1.1
LMEL	Las Melosas	5.14	40		Pn	21 48 40.7	-0.9
LMEL	Las Melosas	5.14	40	*e*P	Pn	21 48 41.2	-0.4
MT02	Curacav	5.22	29		Pn	21 48 40.8	-1.7
MT02	Curacav	5.22	29	*e*P	Pn	21 48 40.6	-1.9
GO07	Milladeo Hill,	5.25	176	Pn	Pn	21 48 43.4	+0.5
VA01	Torpederas	5.26	24	Pn	Pn	21 48 42.3	-0.7
MT03	Universidad Ad	5.28	35	*e*P	Pn	21 48 42.1	-1.3
PEL	Peldehue	5.50	32		Pn	21 48 43.8	-2.7
PEL	Peldehue	5.50	32	*e*P	Pn	21 48 45.1	-1.4
ROC1	El Roble	5.52	29		Pn	21 48 43.6	-3.3
FCH	Farellones	5.52	36	*e*P	Pn	21 48 45.8	-1.2
ROCH	El Roble	5.53	29	*e*P	Pn	21 48 45.5	-1.5
VA06	Catapilco	5.79	25		Pn	21 48 49.0	-1.3
VA03	San Esteban	5.89	31		Pn	21 48 50.8	-1.1
CO02	Combarbal	7.15	22		Pn	21 49 08.1	-1.0
CO06	Fray Jorge	7.48	17	Pn	Pn	21 49 12.4	-1.1
GO04	Tololo Observa	8.17	21	Pn	Pn	21 49 22.5	-0.8
CO01	Juntas del Tor	8.57	24		Pn	21 49 28.4	-0.4
TRQA	Tornquist	9.62	95	Pn	Pn	21 49 42.1	-0.8
PB11	IPOC Station P	18.47	13		Pn	21 51 40.5	-0.1
PB11				IAmb	IAmb	21 51 51.5	
	comp=Z,13nm,1.0s						
SNAA	Sanae	48.69	156	P	P	21 56 07.9	-0.3
SNAA				IAmb	IAmb	21 56 22.6	
	comp=Z,6.6nm,1.3s						
QSPA	South Pole Qui	52.37	180	P	P	21 56 37.3	+1.1
QSPA				IAmb	IAmb	21 56 38.3	
	comp=Z,7.0nm,1.4s						

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*IDC **10** 21:55:36.4±1.1, 37.°72S×73.°73W, h0km, mb4.0/5, mbtmp4.1/7, ML3.6/2, MS3.6/12, Error ellipse: s-maj=47.6km s-min=24.1km az=68.0*

*GUC **10** 21:55:38.1±0.6, 37.°94S×74.°36W, h19km±12km, ML4.9*

*NEIC **10** 21:55:38.2±1.3, 37.°86S±0.°04×73.°8W±0.°1, h7km±4km, mb4.4/22, Mwr4.5(GUC), Error ellipse: s-maj=14.4km s-min=5.6km az=82.0*

*VAO **10** 21:55:40.8±0.9, 37.°82S×73.°47W, h10km, mb4.4*

ISC 10 21:55:40.8±1.6**, 37.°89S**±0.°04×**73.°83W**±0.°09**, h28km**±11km**, n152, σ1s28**/143**, mb4.4**/11**, MS3.7**/10**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LC02	Puerto Saavedr	0.97	159		Pn	21 55 56.9	-1.6
LC02				Sn	Sn	21 56 12.2	+0.9
LC02	Puerto Saavedr	0.97	159	*i* P	Pn	21 55 56.9	-1.6
LC02				*e*S	Sn	21 56 12.3	+1.0
CCSP	San Pedro de C	1.19	29	*e*P	Pb	21 56 02.9	+0.2
CCSP				*e*S	Sb	21 56 21.6	+3.9
BI05	Punta Hualpn	1.25	24	Pn	Pn	21 56 01.1	-1.3
BI05	Punta Hualpn	1.25	24	*e*P	Pb	21 56 03.6	-0.1
BI05				*e*S	Sb	21 56 22.1	+2.7
BI05				IAML		21 56 27.8	
	comp=E,15μm,0.4s						
LR02	Universidad Au	1.97	167	*e*P	Pn	21 56 11.9	-0.3
LR03	Panguipulli	2.09	147		Pn	21 56 13.8	-0.2
LR03	Panguipulli	2.09	147	*e*P	Pn	21 56 14.2	+0.3
LR03				IAML		21 56 58.4	
	comp=N,13μm,0.4s						
ML02	Panimavida	2.87	43	Pn	Pn	21 56 24.1	-0.6
ML02	Panimavida	2.87	43	*e*P	Pn	21 56 27.0	+2.4
ML02				*e*S	Sb	21 57 04.4	-1.6
LL04	Puerto Octay	3.21	160		Pn	21 56 28.1	-1.2
LL04	Puerto Octay	3.21	160	*e*P	Pn	21 56 29.6	+0.2
GO05	Huala	3.26	29		Pn	21 56 28.6	-1.4
GO05	Huala	3.26	29	*e*P	Pn	21 56 29.5	-0.5
GO05				*e*S	Sb	21 57 15.9	-1.2
LL03	Petrohue	3.43	162	Pn	Pn	21 56 31.8	-0.5
LL03	Petrohue	3.43	162	*e*P	Pn	21 56 32.4	+0.1
LL05	Los Muermos	3.52	176		Pn	21 56 32.6	-1.0
LL05	Los Muermos	3.52	176	*e*P	Pn	21 56 32.7	-0.9
BO03	Pichilemu	3.71	25	*e*P	Pn	21 56 34.6	-1.5
BO03				IAML		21 57 46.1	
	comp=E,847nm,0.4s						
PLCA	Paso Flores	3.81	139	Pn	Pn	21 56 38.8	+1.1
	comp=E,2.1nm,0.3s,baz=286,slow=7.6,SNR=26						
PLCA				Sn	Sb	21 57 31.4	-1.8
	comp=E,20nm,0.3s,baz=327,slow=14,SNR=4.0						
	comp=E,12nm,0.5s						
PLCA	Paso Flores	3.81	139	Pn	Pn	21 56 36.0	-1.7
PLCA	Paso Flores	3.81	139	*e*P	Pn	21 56 38.2	+0.5
PLCA	Paso Flores	3.81	139	*e*P	Pn	21 56 37.8	+0.1
PLCA				*e*S	Sn	21 57 22.7	+1.1
BO01	Tunca	4.14	33	Pn	Pn	21 56 40.8	-1.3
BO01	Tunca	4.14	33	*e*P	Pn	21 56 41.5	-0.6
VA05	Santo Domingo	4.59	24		Pn	21 56 46.6	-1.8
VA05	Santo Domingo	4.59	24	*e*P	Pn	21 56 46.4	-1.9
LL01	San Ignacio de	4.61	167	Pn	Pn	21 56 48.4	-0.2
LL01	San Ignacio de	4.61	167	*e*P	Pn	21 56 49.1	+0.5
BO04	La Punta	4.69	35		Pn	21 56 48.3	-1.4
BO04	La Punta	4.69	35	*e*P	Pn	21 56 48.5	-1.2
MT09	Talagante	4.71	30		Pn	21 56 49.1	-0.9
MT09	Talagante	4.71	30	*e*P	Pn	21 56 49.2	-0.9

LL07	Hotel Espejo d	4.95	177	Pn	Pn	21 56 53.9	+0.7
LL07	Hotel Espejo d	4.95	177	*e*P	Pn	21 56 52.0	-1.1
LMEL	Las Melosas	4.99	37		Pn	21 56 53.9	-0.2
LMEL	Las Melosas	4.99	37	*e*P	Pn	21 56 54.0	-0.1
MT02	Curacav	5.11	26		Pn	21 56 53.9	-1.6
MT02	Curacav	5.11	26	*e*P	Pn	21 56 53.8	-1.8
MT05	Renca	5.14	30	Pn	Pn	21 56 55.2	-0.8
MT05	Renca	5.14	30	*e*P	Pn	21 56 55.4	-0.6
MT03	Universidad Ad	5.15	33		Pn	21 56 54.8	-1.4
MT03	Universidad Ad	5.15	33	*e*P	Pn	21 56 55.7	-0.4
VA01	Torpederas	5.17	21	Pn	Pn	21 56 55.2	-1.1
VA01	Torpederas	5.17	21	*e*P	Pn	21 56 53.3	-3.0
GO07	Milladeo Hill,	5.22	179		Pn	21 56 55.7	-1.2
PEL	Peldehue	5.38	29		Pn	21 56 58.1	-1.2
PEL	Peldehue	5.38	29	*e*P	Pn	21 56 58.4	-0.9
FCH	Farellones	5.39	33	*e*P	Pn	21 56 58.8	-0.8
ROC1	El Roble	5.41	26		Pn	21 56 56.3	-3.6
ROCH	El Roble	5.42	26	*e*P	Pn	21 56 58.7	-1.2
LL02	Futaleuf	5.51	165	Pn	Pn	21 57 01.0	+0.1
VA06	Catapilco	5.71	22		Pn	21 57 01.5	-2.1
H03S1	Juan Fernandez	5.77	313	T	T	22 02 58.1	
	baz=136,SNR=5182						
VA03	San Esteban	5.77	29		Pn	21 57 03.4	-1.2
H03S3	Juan Fernandez	5.78	313	T	T	22 03 04.5	
	baz=136,SNR=5479						
H03S2	Juan Fernandez	5.79	313	T	T	22 03 00.1	
	baz=136,SNR=6449						
H03N3	Juan Fernandez	6.06	315	T	T	22 03 27.9	
	baz=146,slow=78,SNR=90						
H03N1	Juan Fernandez	6.07	315	T	T	22 03 26.1	
	baz=146,slow=78,SNR=70						
H03N2	Juan Fernandez	6.08	315	T	T	22 03 28.4	
	baz=146,slow=78,SNR=62						
AY01	Puyuhuapi	6.59	173	Pn	Pn	21 57 15.6	-0.1
CO02	Combarbal	7.07	20		Pn	21 57 20.4	-2.1
CO06	Fray Jorge	7.42	15		Pn	21 57 24.4	-2.9
ZON	Zonda	7.62	35		Pn	21 57 27.9	-2.1
COYC	Coyhaique	7.79	171		Pn	21 57 32.4	+0.2
GO04	Tololo Observa	8.10	19	Pn	Pn	21 57 34.9	-1.8
CO05	La Serena	8.24	16		Pn	21 57 36.2	-2.2
CO01	Juntas del Tor	8.48	23		Pn	21 57 40.2	-1.8
TRQA	Tornquist	9.36	95		Pn	21 57 54.4	+0.6
AC04	Llanos de Chal	9.93	14		Pn	21 58 00.8	-0.8
GO03	Copiap	10.70	17		Pn	21 58 10.5	-1.8
AC06	Mina Casimiro	10.90	17		Pn	21 58 12.6	-2.4
AC02	Maricunga	11.71	21		Pn	21 58 24.0	-2.5
AC01	Pan de Azucar	12.02	14		Pn	21 58 29.4	-0.9
GO02	Mina Guanaco	13.19	17	Pn	Pn	21 58 44.7	-1.8
PB10	IPOC Station P	14.60	12	Pn	Pn	21 59 04.6	-0.9
AF01	San Pedro de A	15.66	20	Pn	Pn	21 59 19.2	-0.6
LVC	Limon Verde	15.81	17	LR	LR	22 06 12.2	
	comp=E,156nm,18.7s,baz=204,slow=41						
LVC	Limon Verde	15.81	17	*e*P	Pn	21 59 22.0	+0.3
PB04	IPOC Station P	15.82	13	Pn	Pn	21 59 20.4	-1.4
PB04				IAmb	IAmb	21 59 33.9	
	comp=Z,29nm,1.1s						
PB02	IPOC Station P	16.86	13		Pn	21 59 34.1	-0.8
PB01	IPOC Station P	17.20	14	Pn	Pn	21 59 37.7	-1.5
USHA	Ushuaia	17.34	169	P	Pn	21 59 41.3	+0.7
	baz=334,slow=3.5,SNR=5.1						
	comp=Z,7.2nm,1.0s						
PLTB	Pedras Altas	17.68	76	Pn	Pn	21 59 41.7	-3.3
PLTB	Pedras Altas	17.68	76	*e*P	Pn	21 59 42.8	-2.2
EFI	East Falkland	17.70	146		Pn	21 59 45.1	+0.1
EFI				IAmb	IAmb	21 59 46.3	
	comp=Z,36nm,0.8s						
CPUP	Villa Florida	18.09	55	LR	LR	22 07 22.1	
	comp=Z,188nm,19.6s,baz=232,slow=39						
CPUP	Villa Florida	18.09	55		Pn	21 59 49.4	-0.5
PB11	IPOC Station P	18.43	13	P	P	21 59 53.6	-0.5
PB11				IAmb	IAmb	22 00 04.0	
	comp=Z,32nm,0.9s						
ITAB	Concordia	21.10	66	P	P	22 00 22.5	-0.6
ITAB				IAmb	IAmb	22 00 24.4	
	comp=Z,19nm,1.0s						
ITAB	Concordia	21.10	66	*e*P	P	22 00 23.7	+0.6
MCR1	Marechal Candi	21.53	57	*e*P	P	22 00 27.5	-0.2
LPAZ	La Paz	22.10	15	P	P	22 00 36.2	+1.7
	comp=Z,1.1nm,0.8s,baz=200,slow=14,SNR=3.1						
LPAZ	La Paz	22.10	15	P	P	22 00 34.3	-0.2
LPAZ				IAmb	IAmb	22 00 52.2	
	comp=Z,10nm,1.1s						
LPAZ	La Paz	22.10	15	*e*P	P	22 00 35.7	+1.2
PTGB	Pitanga	22.70	61	*e*P	P	22 00 39.7	-0.6
AQDB	Aquidauana	23.41	47	*e*P	P	22 00 47.6	+0.1
TRCB	Terra Rica	23.60	56	P	P	22 00 47.5	-1.9
TRCB	Terra Rica	23.60	56	*e*P	P	22 00 48.5	-0.9
TIJ01	Guaruva-PR	24.49	66	*e*P	P	22 00 56.6	-1.1
FRTB	Fartura	25.32	62	*e*P	P	22 01 05.8	+0.5
PCMB	Pacaembu	25.34	57	*e*P	P	22 01 05.0	-0.4
PTLB	Pontes e Lacer	25.85	34	*e*P	P	22 01 10.1	+0.1
NNA	Nana	25.93	353	LR	LR	22 09 10.7	
	comp=Z,42nm,18.2s,baz=176,slow=32						
PP1B	Ponte de Pedra	26.17	45	*e*P	P	22 01 12.9	0.0
PET01	Itanhaem-SP	26.36	67	*e*P	P	22 01 12.8	-1.9
C2SB	Chapadao do Su	26.43	50	*e*P	P	22 01 15.9	+0.7
SPB	Sao Paulo	26.68	65	*e*P	P	22 01 18.0	+0.5
SALV	Santo Antonio	27.13	41	*e*P	P	22 01 22.0	+0.5
ITRB	Iturama	27.29	55	*e*P	P	22 01 22.8	-0.2
RCLB	Rio Claro- Sao	27.35	63	*e*P	P	22 01 23.0	-0.5
VAO	Valinhos	27.38	65	*e*P	P	22 01 23.4	-0.4
BB19B	Bebedouro	27.55	60	*e*P	P	22 01 27.0	+1.6
NBRS	Nobres	28.42	39	*e*P	P	22 01 34.2	+1.1
DVLD	Doverlandia	28.49	48	*e*P	P	22 01 33.6	-0.1
ETMB	Extrema	28.78	16	*e*P	P	22 01 36.9	+0.6
ORCD	Orcadas	29.27	151	P	P	22 01 40.8	+0.6
ORCD				IAmb	IAmb	22 02 00.7	
	comp=Z,4.7nm,0.7s						
PDRB	Porto dos Gac	30.32	35	*e*P	P	22 01 50.1	+0.2
ATAH	Atahualpa	30.89	351	LR	LR	22 13 18.5	
	comp=Z,49nm,18.1s,baz=234,slow=35						
PEXB	Peixe	34.34	48	*e*P	P	22 02 25.0	-0.2
NAN01	Guarapari, ES	35.59	65	*e*P	P	22 02 37.7	+1.8
SDBA	SAO DESIDERIO	36.19	53	*e*P	P	22 02 40.6	-0.5
ITTB	Itaituba	37.23	31	*e*P	P	22 02 49.1	-0.8
SMTB	Santa Maria do	37.35	46	*e*P	P	22 02 51.4	+0.4
CMC01	Camacan, BA	37.68	63	*e*P	P	22 02 52.8	-0.9
BELA	Belgrano 2	43.34	169	P	P	22 03 41.0	+1.2
BELA				IAmb	IAmb	22 03 41.5	
	comp=Z,6.8nm,1.4s						
NBMA	Muriti-CE	43.93	55	*e*P	P	22 03 46.0	+0.7
NBPS	Pedro II - PI	44.54	50	*e*P	P	22 03 51.8	+1.5
VNA3	Neumayer Olymp	46.35	156	P	P	22 04 04.5	+0.6
BAUV	El Baul	46.90	8	P	P	22 04 08.8	0.0
RCBR	Riachuelo	46.95	57	LR	LR	22 23 24.8	
	comp=Z,72nm,21.4s,baz=333,slow=36						
MDP	Montagnes des	47.09	29	LR	LR	22 25 50.7	
	comp=Z,60nm,20.0s,baz=188,slow=39						
SNAA	Sanae	48.57	156	P	P	22 04 20.8	-0.4
SNAA	Sanae	48.57	156	P	P	22 04 21.7	+0.5
SNAA				IAmb	IAmb	22 04 49.3	
	comp=Z,6.7nm,1.1s						
TROLL	Troll, Antarti	50.26	157	P	P	22 04 34.9	+0.7
QSPA	South Pole Qui	52.35	180	P	P	22 04 51.1	+1.1
	comp=Z,2.9nm,0.8s,baz=110,slow=1.6,SNR=6.5						
	comp=Z,2.9nm,0.8s						
QSPA	South Pole Qui	52.35	180	P	P	22 04 50.8	+0.8
QSPA				IAmb	IAmb	22 05 00.5	
	comp=Z,5.7nm,1.0s						
TXAR	Lajitas Array	72.47	333	P	P	22 07 04.9	+0.2
	comp=Z,1.0nm,1.0s,baz=152,slow=8.2,SNR=4.8						
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	72.47	333	P	P	22 07 05.3	+0.6
SUR	Sutherland	74.23	119	LR	LR	22 37 41.3	
	comp=Z,38nm,18.3s,baz=170,slow=34						
DBIC	Dimbokro	77.79	72	P	P	22 07 35.4	-0.3
	comp=Z,3.9nm,0.9s,baz=270,slow=9.1,SNR=4.0						
	comp=Z,3.9nm,0.9s						
DBIC	Dimbokro	77.79	72	P	P	22 07 35.7	0.0
BOSA	Boshof	79.54	118	P	P	22 07 44.7	-0.7
	comp=Z,2.8nm,0.8s,baz=222,slow=7.8,SNR=4.2						
	comp=Z,2.8nm,0.8s						
BOSA	Boshof	79.54	118	P	P	22 07 44.9	-0.5
BOSA				IAmb	IAmb	22 07 46.7	
	comp=Z,6.8nm,1.1s						
TSUM	Tsumeb	79.54	106	LR	LR	22 40 40.1	
	comp=Z,52nm,19.7s,baz=153,slow=34						
LBTB	Lobatse	81.97	115	LR	LR	22 42 58.0	
	comp=Z,28nm,18.2s,baz=169,slow=35						
LBTB	Lobatse	81.97	115	P	P	22 07 58.8	+0.4
LBTB				IAmb	IAmb	22 08 25.2	
	comp=Z,7.6nm,1.1s						
D62A	Allapoint, All	84.70	3	P	P	22 08 13.0	+1.5
PDAR	Pinedale Array	86.61	334	P	P	22 08 19.9	-1.5
	comp=Z,0.2nm,0.6s,baz=164,slow=10,SNR=1.4						
PDAR				LR	LR	22 41 00.8	
	comp=Z,27nm,19.5s,baz=104,slow=32						
	comp=Z,0.2nm,0.6s						
MDT	Midelt	95.36	52	LR	LR	22 51 34.3	
	comp=Z,48nm,18.0s,baz=156,slow=35						
DZM	Mont Dzumac	97.78	234	LR	LR	22 49 47.0	
	comp=Z,30nm,18.2s,baz=111,slow=33						
NACGM	Naroch	125.69	44	⇓*e*PKP	PKPdf	22 14 37.7	-1.1
	baz=253						

IDC ***10*** *22:08:45.9±0.8, 13°.09N×148°.48E, h0^{km}, mb4.0/15, mbtmp4.0/15, ML5.3/1, MS3.2/4, Error ellipse: s-maj=24.1km s-min=18.5km az=103.0*

NEIC ***10*** *22:08:48.0±1.5, 13°.1N±0°.1×148°.48E±0°.09, h13^{km}±5^{km}, mb4.3/16, Error ellipse: s-maj=16.7km s-min=12.0km az=205.0*

ISC 10 22:08:47.3±0.6**, 13°.1N**±0°.1×**148°.45E**±0°.07**, h10^{km}, n50, σ1^{s}.34**/45**, mb4.2**/20**, MS3.1**/4**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.53	279	Pn	Pn	22 09 42.0	-0.2
	271nm,0.3s,baz=109,slow=5.6,SNR=44						
GUMO				Sn	Sn	22 10 21.2	-2.7
	169nm,0.3s,baz=57,slow=22,SNR=14						
GUMO	Guam	3.53	279		Pn	22 09 41.9	-0.3
GUMO				Sn	Sn	22 10 21.5	-2.4
PATS	Pohnpei	11.52	122	Pn	Pn	22 11 29.1	-2.9
H11N1	WAKE ISLAND Hy	18.87	67	T	T	22 32 39.5	
	baz=257,slow=74,SNR=13						
H11N2	WAKE ISLAND Hy	18.88	67	T	T	22 32 40.7	
	baz=257,slow=74,SNR=8.0						
H11N3	WAKE ISLAND Hy	18.89	67	T	T	22 32 40.1	
	baz=257,slow=74,SNR=10.0						
SIJI	Sorong	21.97	232	P	P	22 13 46.3	+4.7
	2.0nm,0.3s,baz=45,slow=11,SNR=4.4						
SIJI				LR	LR	22 20 45.6	
	comp=Z,30nm,18.1s,baz=98,slow=33						
PMG	Port Moresby	22.38	183	LR	LR	22 22 13.2	
	comp=Z,34nm,18.2s,baz=265,slow=36						
MJAR	Matsushiro Arr	25.11	340	P	P	22 14 11.9	-0.4
	2.9nm,0.6s,baz=170,slow=8.9,SNR=3.4						
	2.9nm,0.6s						
MJAR	Matsushiro Arr	25.11	340	P	P	22 14 09.7	-2.6
MJAR				IAmb	IAmb	22 14 34.9	
	comp=Z,6.1nm,1.0s						
MAJO	Matsushiro	25.11	340	P	P	22 14 11.8	-0.6
KSRS	Korea Array	30.42	327	P	P	22 14 58.2	-1.6
	comp=Z,1.1nm,0.6s,baz=138,slow=9.3,SNR=2.3						
	comp=Z,1.1nm,0.6s						
WB0	Warramunga Arr	35.46	203	P	P	22 15 42.9	-1.2
WB0				IAmb	IAmb	22 15 54.1	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	35.64	203	P	P	22 15 45.1	-0.5
	comp=Z,1.4nm,0.7s,baz=28,slow=9.7,SNR=11						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	35.64	203	P	P	22 15 44.3	-1.3
ASAR	Alice Springs	39.20	201	P	P	22 16 16.1	+0.2
	comp=Z,0.6nm,0.5s,baz=24,slow=7.4,SNR=8.3						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	39.20	201	P	P	22 16 15.2	-0.6
CMAR	Chiang Mai Arr	47.83	283	P	P	22 17 27.6	+2.0
	comp=Z,1.3nm,0.3s,baz=90,slow=5.9,SNR=8.0						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	47.83	283	P	P	22 17 25.4	-0.2
ULN	Ulaanbaatar	48.82	324	P	P	22 17 33.3	+0.3
ULN				IAmb	IAmb	22 17 36.0	
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	49.19	323	P	P	22 17 36.7	+1.0
	comp=Z,1.1nm,0.4s,baz=138,slow=6.9,SNR=14						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	49.19	323	P	P	22 17 35.7	-0.1
SONM				IAmb	IAmb	22 17 39.0	
	comp=Z,2.3nm,1.0s						
ZALV	Zalesovo Beam	64.08	324	P	P	22 19 21.3	-0.1
	comp=Z,0.5nm,0.4s,baz=99,slow=8.9,SNR=2.0						
	comp=Z,0.5nm,0.4s						
MK31	Makanchi Array	64.28	316	P	P	22 19 22.9	-0.1
MKAR	Makanchi Array	64.28	316	P	P	22 19 23.6	+0.6
	comp=Z,1.0nm,0.6s,baz=87,slow=8.1,SNR=10						
	comp=Z,1.0nm,0.6s						
J20K	Nowinta River	64.40	24	P	P	22 19 24.6	+1.2
J20K				IAmb	IAmb	22 19 30.1	
	comp=Z,3.7nm,1.0s						
MAKZ	Makanchi	64.50	316	P	P	22 19 24.8	+0.4
MAKZ				IAmb	IAmb	22 19 25.7	
	comp=Z,1.3nm,0.7s						
IMAR	Indian Mountai	65.31	22	P	P	22 19 30.1	+0.8
KURK	Kurchatov	67.22	320	P	P	22 19 41.5	-0.3
ILAR	Eielson Array	67.55	25	P	P	22 19 43.4	-0.3
	comp=Z,0.4nm,0.6s,baz=261,slow=4.8,SNR=4.5						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	69.23	22	P	P	22 19 55.1	+1.0
BCAR	Beaver Creek A	69.28	27	P	P	22 19 55.0	+0.4
NIL	Nilore	70.63	301	P	P	22 20 04.2	+0.8
KKAR	Karatay Array	72.41	311	P	P	22 20 14.3	+0.3
KKAR	Karatay Array	72.41	311	P	P	22 20 14.2	+0.3
KKAR				IAmb	IAmb	22 20 15.4	
	comp=Z,1.7nm,0.9s						
BVAR	Borovoye Array	72.49	322	P	P	22 20 14.6	+0.4
	comp=Z,1.2nm,0.4s						
	comp=Z,1.2nm,0.4s						
GAR	Garm	72.72	307	P	P	22 20 16.5	+0.5
INK	Inuvik	73.50	22	P	P	22 20 20.8	+1.0
	comp=Z,1.3nm,0.7s,baz=270,slow=15,SNR=3.6						
	comp=Z,1.3nm,0.7s						
INK	Inuvik	73.50	22	P	P	22 20 20.2	+0.3
INK				IAmb	IAmb	22 20 30.6	
	comp=Z,6.5nm,1.4s						
ARU	Arti	79.16	326	P	P	22 20 52.1	-0.1
	comp=Z,0.7nm,0.5s,baz=85,slow=2.0,SNR=5.8						
	comp=Z,0.7nm,0.5s						
ARU	Arti	79.16	326	P	P	22 20 51.8	-0.4
ARU				IAmb	IAmb	22 20 53.4	
	comp=Z,1.9nm,0.6s						
ABKAR	Akbulak array	79.25	318	P	P	22 20 52.7	-0.2
ABKAR	Akbulak array	79.25	318	P	P	22 20 51.7	-1.2
ABKAR				IAmb	IAmb	22 20 53.7	
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	81.69	28	P	P	22 21 06.2	+0.4
	comp=Z,0.6nm,0.7s,baz=288,slow=5.6,SNR=8.9						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	84.50	52	P	P	22 21 22.1	+1.1
	comp=Z,0.5nm,0.6s,baz=270,slow=5.1,SNR=2.3						
	comp=Z,0.5nm,0.6s						
GNI	Garni	91.87	312	LR	LR	23 07 39.2	
	comp=Z,11nm,18.8s,baz=144,slow=38						
FINES	FINESS Array B	93.07	336	P	P	22 22 00.1	-1.1
	comp=Z,0.9nm,0.5s,baz=70,slow=6.3,SNR=11						
	comp=Z,0.9nm,0.5s						
BRTR	Keskin Array B	99.92	315	LR	LR	23 11 06.2	
	comp=Z,26nm,20.7s,baz=316,slow=37						
LPAZ	La Paz	144.50	100	PKP	PKPbc	22 28 25.4	+1.1
	comp=Z,1.2nm,0.5s,baz=198,slow=2.0,SNR=7.4						
DBIC	Dimbokro	147.01	305	PKPbc	PKPdf	22 28 31.1	+1.7
	comp=Z,3.8nm,0.8s,baz=108,slow=3.2,SNR=4.1						

NEIC ***10*** *22:10:26.3±1.2, 18°.0S±0°.1×178°.5W±0°.2, h597^{km}±9^{km}, mb4.3/13, Error ellipse: s-maj=24.7km s-min=16.7km az=135.0*

IDC ***10*** *22:10:28.7±1.7, 17°.83S×178°.65W, h619^{km}±12^{km}, mb3.0/8, mbtmp3.9/10, Error ellipse: s-maj=53.7km s-min=17.3km az=147.0*

ISC 10 22:10:24.7±0.6**, 17°.9S**±0°.1×**178°.5W**±0°.1**, h579^{km}, n58, σ0^{s}.66**/58**, mb3.7**/15**, 9C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.28	273	P	P	22 11 48.9	+4.9
	13nm,0.5s,baz=162,slow=1.6,SNR=11						
MSVF				S	S	22 12 58.1	+10
	4.8nm,0.9s,baz=70,slow=23,SNR=0.8						
MSVF	Nonsavu	3.28	273	P	P	22 11 49.0	+5.1
MARNC	Mare, Loyalty	13.16	252	P	P	22 13 15.6	+0.3
LIFNC	LIFOU	13.74	256	P	P	22 13 20.9	-0.4
PINNC	Pines Island,	13.97	248	P	P	22 13 24.1	+0.6
DZM	Mont Dzumac	14.73	251	P	P	22 13 32.7	+1.7
	2.7nm,0.8s,baz=73,slow=22,SNR=2.3						
DZM	Mont Dzumac	14.73	251	P	P	22 13 31.6	+0.6
LTZ	Lake Taylor	25.98	196	P	P	22 15 12.2	-0.3
EIDS	Eidsvold	29.17	250	P	P	22 15 40.9	+0.4
EIDS				IAmb	IAmb	22 15 45.3	
	comp=Z,14nm,1.3s						
BBOO	Buckleboo	43.31	241	P	P	22 17 37.0	+0.4
WB0	Warramunga Arr	44.50	260	P	P	22 17 45.7	-0.2
WB0				IAmb	IAmb	22 17 51.8	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	44.53	260	P	P	22 17 46.9	+0.7
	comp=Z,0.4nm,0.5s,baz=97,slow=6.9,SNR=4.6						
WRA				PcP	PcP	22 19 16.0	-0.7
	comp=Z,0.3nm,0.3s,baz=93,slow=3.3,SNR=1.9						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	44.53	260	P	P	22 17 46.1	-0.1
ASAR	Alice Springs	44.69	254	P	P	22 17 47.9	+0.5
	comp=Z,1.5nm,0.6s,baz=90,slow=8.3,SNR=21						
ASAR				PcP	PcP	22 19 16.8	-0.5
	comp=Z,0.6nm,0.4s,baz=103,slow=3.9,SNR=7.3						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	44.69	254	P	P	22 17 47.1	-0.3
QSPA	South Pole Qui	72.12	180	P	P	22 20 50.9	-0.2
SSLB	Suanglung	72.17	303	P	P	22 20 52.0	0.0
PEA0B	Petropavlovsk-	73.68	345	P	P	22 21 00.4	+0.5
PEA0B				IAmb	IAmb	22 21 25.7	
	comp=Z,26nm,1.5s						
PETK	Petropavlovsk-	73.68	345	P	P	22 20 59.8	-0.1
	comp=Z,1.5nm,0.6s,baz=130,slow=7.5,SNR=6.2						
	comp=Z,1.5nm,0.6s						
PETK	Petropavlovsk-	73.68	345	P	P	22 20 59.6	-0.4
NVAR	Mina Array Bea	79.51	44	P	P	22 21 33.4	+1.0
	comp=Z,0.5nm,0.6s,baz=216,slow=7.9,SNR=4.7						
	comp=Z,0.5nm,0.6s						
M19K	Big River Lodg	81.85	11	P	P	22 21 43.9	+0.2
M19K				IAmb	IAmb	22 21 48.3	
	comp=Z,9.0nm,1.2s						
SCM	Sheep Creek Mo	83.28	14	P	P	22 21 51.3	+0.3
SCM				IAmb	IAmb	22 21 52.0	
	comp=Z,7.1nm,0.6s						
GLB	Gilahina Butte	83.81	16	P	P	22 21 54.1	+0.6
GLB				IAmb	IAmb	22 22 05.2	
	comp=Z,4.7nm,1.2s						
CCB	Clear Creek Bu	85.63	13	P	P	22 22 01.7	-0.5
CCB				IAmb	IAmb	22 22 04.4	
	comp=Z,5.3nm,1.4s						
IMAR	Indian Mountai	85.72	10	P	P	22 22 03.0	+0.4
IL31		85.93	13	P	P	22 22 03.3	-0.3
ILAR	Eielson Array	85.93	13	P	P	22 22 03.2	-0.4
	comp=Z,0.6nm,0.4s,baz=220,slow=4.9,SNR=14						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	85.93	13	P	P	22 22 03.9	+0.2
TXAR	Lajitas Array	86.09	58	P	P	22 22 06.6	+1.2
	comp=Z,0.9nm,0.7s,baz=219,slow=5.8,SNR=4.8						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	86.09	58		P	22 22 06.1	+0.7
PDAR	Pinedale Array	87.43	43	P	P	22 22 11.8	+0.3
	comp=Z,0.8nm,0.7s,baz=242,slow=3.6,SNR=7.3						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	87.43	43	P	P	22 22 11.6	0.0
BMAR	Burnt Mountain	88.70	12	P	P	22 22 17.9	+1.2
YKA	Yellowknife Ar	94.39	25	P	P	22 22 42.8	0.0
	comp=Z,0.3nm,0.6s,baz=250,slow=4.2,SNR=3.0						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	109.08	314	PKiKP	PKiKP	22 27 47.7	-1.5
	comp=Z,0.2nm,0.6s,baz=164,slow=2.4,SNR=2.1						
ARCES	ARCESS Array B	126.32	350	PKP	PKPdf	22 28 21.1	-0.5
	comp=Z,0.7nm,0.6s,baz=0.0,slow=1.2,SNR=9.2						
FINES	FINESS Array B	133.19	344	PKP	PKPdf	22 28 33.8	-1.0
	comp=Z,0.9nm,0.8s,baz=106,slow=6.2,SNR=3.9						
VLDR	Vladesti	144.48	327	⇑P	PKPab	22 28 57.3	+0.8
BURAR	Bucovina Array	144.59	332	⇓P	PKPab	22 28 57.8	+0.7
GHRR		144.67	328	⇓P	PKPab	22 28 58.1	+0.9
BIZ	Bicaz	144.68	330	⇑P	PKPab	22 28 57.5	+0.2
TESR	Tescani	144.73	329	⇑P	PKPab	22 28 57.8	+0.4
BRTR	Keskin Array B	144.73	315	PKP	PKPab	22 28 57.2	-0.7
	comp=Z,0.7nm,0.6s,baz=84,slow=4.5,SNR=3.7						
CFR	Carcaliu	144.90	327	⇑P	PKPdf	22 28 54.9	-1.6
TPGR	Topolog	144.97	326	⇑P	PKPab	22 28 57.7	-0.7
OSTC	Ostas	145.39	343	*e*PKP	PKPab	22 28 59.7	-0.2
CLL	Collm	145.47	347	*i* PKPbc	PKPbc	22 28 58.9	+0.2
	comp=Z,6.0nm,0.6s						
DPC	Dobruska-Polom	145.54	343	*e*PKP	PKPbc	22 28 59.5	+0.5
DRGR		146.32	333	⇓P	PKPbc	22 29 02.2	+0.8
ARR	Arges	146.53	330	⇑P	PKiKP	22 29 03.0	-1.1
GZR	Gura Zlata	147.37	332	⇓P	PKPbc	22 29 04.3	+0.1
KHC	Kasperske Hory	147.37	345	*e*PKP	PKPbc	22 29 04.2	+0.2
CKRC	Cesky Krumlov	147.48	344	*e*PKP	PKPbc	22 29 04.6	+0.3
GERES	GERESS Array B	147.61	345	PKPbc	PKPbc	22 29 05.0	+0.2
	comp=Z,1.2nm,0.6s,baz=29,slow=3.0,SNR=14						
BZS	Buzias	147.71	333	⇑	PKPbc	22 29 04.7	-0.2
HERR	Herculane	147.93	331	⇑P	PKPbc	22 29 05.4	-0.1
VTS	Vitosha	149.22	328	⇑P	PKiKP	22 29 09.3	-0.6

IDC ***10*** *22:10:36.3±1.5, 50°.46N×130°.21W, h0^{km}, mb3.6/3, mbtmp3.7/11, ML3.6/8, MS3.2/27, Error ellipse: s-maj=23.7km s-min=12.3km az=61.0*

PGC ***10*** *22:10:36.9±3.0, 50°.44N×130°.19W, h10^{km}, MLSn3.4/41, Mw4.2, 198km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

ISC 10 22:10:37.8±2.5**, 50°.48N**±0°.05×**130°.10W**±0°.05**, h13^{km}**±16^{km}**, n104, σ1^{s}.90**/99**, mb3.5**/3**, MS3.3**/18**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.27	82	P	Pn	22 10 59.6	-1.6
HOLB				S	Sg	22 11 15.6	-3.1
BPBC	Brooks Peninsu	1.53	101	Pn	Pn	22 11 02.4	-2.4
PACB	Port Alice, BC	1.67	91	Pn	Pn	22 11 04.9	-1.7
PHC	Port Hardy	1.72	82	Pn	Pn	22 11 06.1	-1.2
PHC				Sn	Sn	22 11 26.3	-2.7
MAYB	Maynard	1.88	91	Pn	Pn	22 11 07.9	-1.7
HG4B	Hotspring	1.94	340	Pn	Pn	22 11 07.9	-2.5
HG4B				Sn	Sn	22 11 31.1	-3.4
EDB	Eliza Dome	2.01	107	Pn	Pn	22 11 09.1	-2.3
EDB				Sn	Sn	22 11 32.5	-3.8
BBB	Bella Bella	2.11	35	Pn	Pn	22 11 12.0	-0.8
	7.2nm,0.3s,baz=311,slow=22,SNR=113						
BBB				Sn	Sn	22 11 35.4	-3.4
	63nm,0.3s,baz=311,slow=18,SNR=8.3						
BBB				LR	LR	22 12 04.1	
	comp=Z,203nm,19.7s,baz=190,slow=40						
	82nm,0.5s						
BBB	Bella Bella	2.11	35	Pn	Pn	22 11 11.9	-0.8
BBB				Sn	Sn	22 11 35.7	-3.1
WOSB	Woss	2.29	97	Pn	Pn	22 11 14.1	-1.1
BNB	Barry Inlet	2.33	334	Pn	Pn	22 11 13.3	-2.6
ETB	Estevan Point	2.56	114	Pn	Pn	22 11 17.4	-1.4
NCRB	Newcastle Ridg	2.59	90	Pn	Pn	22 11 18.2	-1.2
GDR	Gold River	2.71	103	Pn	Pn	22 11 19.4	-1.6
HG1B	Mitchell Dam	2.76	334	Pn	Pn	22 11 20.2	-1.5
BUTB	Butedale	2.78	21	Pn	Pn	22 11 21.4	-0.6
BUTB				Sn	Sn	22 11 53.9	-1.5
BNKB	Banks Island	2.85	2	Pn	Pn	22 11 21.5	-1.5
BNKB				Sn	Sn	22 11 53.4	-3.8
MOBC	Moresby Island	2.91	337	Pn	Pn	22 11 21.4	-2.3
MOBC				Sn	Sn	22 11 55.7	-2.8
SPLB	Strathcona Par	2.92	100	Pn	Pn	22 11 23.1	-0.8
TOFB	Tofino	3.03	114	Pn	Pn	22 11 24.0	-1.3
BNAB	Bonilla	3.03	354	Pn	Pn	22 11 23.9	-1.5
BNAB				Sn	Sn	22 11 57.6	-3.9
CBB	Campbell River	3.07	97	Pn	Pn	22 11 25.3	-0.6
DIB	Dawson Inlet,	3.10	333	Pn	Pn	22 11 23.9	-2.3
H02S1	DAWSON INLET T	3.10	333	Pn	Pn	22 11 24.6	-1.6
H02S1				Sn	Sn	22 12 00.1	-2.9
BTB	Buttle Lake	3.13	107	Pn	Pn	22 11 25.5	-1.4
BTB				Sn	Sn	22 12 00.7	-3.4
HWKB	Hawksbury Isla	3.17	10	Pn	Pn	22 11 26.4	-1.0
HWKB				Sn	Sn	22 12 02.3	-2.8
MWAB	Mount Washingt	3.18	102	Pn	Pn	22 11 26.6	-0.9
OZB	Mount Ozzard	3.36	115	Pn	Pn	22 11 28.8	-1.1
OZB				Sn	Sn	22 12 03.9	-5.7
GRNB	Grenville Isla	3.37	1	Pn	Pn	22 11 29.0	-1.0
GRNB				Sn	Sn	22 12 06.7	-3.2
B928	Bamfield	3.63	115	Pn	Pn	22 11 32.7	-0.8
BFSB	Bamfield	3.63	115	Pn	Pn	22 11 33.0	-0.5
MBLB	Minette Bay Lo	3.67	14	Sn	Sn	22 12 16.3	-0.9
KITB	Kitimat	3.71	13	Pn	Pn	22 11 34.4	-0.3
KITB				Sn	Sn	22 12 16.2	-2.0
TXB	Texada	3.73	100	Pn	Pn	22 11 34.3	-0.8
MGB	Mount Grey	3.81	111	Pn	Pn	22 11 35.0	-1.2
RUBB	Prince Rupert	3.85	359	Pn	Pn	22 11 36.0	-0.6
RUBB				Sn	Sn	22 12 19.2	-2.4
SHB	Sechelt	4.11	100	Pn	Pn	22 11 39.7	-0.6
PFB	Port Renfrew	4.16	115	Pn	Pn	22 11 40.4	-0.5
OCP	Olym-Cheeka Pk	4.19	119	Pn	Pn	22 11 41.0	-0.4

UBRB	Upper Baezaeko	4.45	55	Pn	Pn	22 11 46.3	+1.3
GOBB	Galiano Island	4.54	107	Pn	Pn	22 11 45.9	-0.2
WSLR	Whistler	4.62	92	Pn	Pn	22 11 47.6	+0.3
B010	North Saanich	4.70	110	Pn	Pn	22 11 49.3	+1.0
PGC	Sidney	4.70	110	Pn	Pn	22 11 49.3	+1.0
B009	North Saanich	4.70	110	Pn	Pn	22 11 49.3	+0.9
PA02	PA02 Ocean	4.70	110	Pn	Pn	22 11 49.4	+1.0
B011	North Saanich	4.70	110	Pn	Pn	22 11 49.3	+0.9
PA01	PA01 North	4.70	110	Pn	Pn	22 11 49.2	+0.8
STW	Striped Peak	4.81	117	Pn	Pn	22 11 50.2	+0.4
SNB	Saturna Island	4.82	108	Pn	Pn	22 11 50.8	+0.9
HNBB	Haney	5.01	101	Pn	Pn	22 11 53.8	+1.2
MCW	Mount Constitu	5.06	108	Pn	Pn	22 11 54.3	+0.9
LLLB	Lillooet	5.25	85	Pn	Pn	22 11 56.1	+0.3
FSB	Fort Saint Jam	5.33	39	Pn	Pn	22 11 58.1	+1.0
FSJB	Fort St James	5.33	39	Pn	Pn	22 11 58.2	+1.1
VDB	Vedder Mountai	5.39	103	Pn	Pn	22 11 59.0	+1.3
A05A	Maple Falls	5.41	103	Pn	Pn	22 11 59.7	+1.7
MBW	Mount Baker	5.59	105	Pn	Pn	22 12 01.8	+1.0
CMW	Cultus Mountai	5.60	109	Pn	Pn	22 12 02.1	+1.3
B06A	Marblemount	5.95	106	Pn	Pn	22 12 06.5	+1.0
RPW	Rockport	5.96	107	Pn	Pn	22 12 06.7	+1.0
FMW	Mount Fremont	6.62	119	Pn	Pn	22 12 16.4	+1.6
PNT	Penticton	6.88	96	Pn	Pn	22 12 19.0	+0.8
LTY	Liberty	7.01	114	Pn	Pn	22 12 21.9	+1.8
BMBC	Bull Mountain	7.34	38	Pn	Pn	22 12 25.4	+0.8
BMBC				Sn	Sn	22 13 46.2	-1.5
B08A	Colville Reser	7.34	103	Pn	Pn	22 12 24.6	0.0
NBC4	NorthernBC 4	7.71	44	Pn	Pn	22 12 31.0	+1.4
NBC4				Sn	Sn	22 13 56.3	-0.4
DLBC	Dease Lake	7.97	0	Pn	Pn	22 12 35.1	+1.9
	2.1nm,0.3s,baz=185,slow=11,SNR=58						
DLBC				Sn	Sn	22 14 00.1	-3.1
	0.7nm,0.3s,baz=163,slow=19,SNR=2.3						
DLBC				LR	LR	22 14 44.6	
	comp=Z,45nm,21.3s,baz=238,slow=31						
	9.4nm,0.5s						
DLBC	Dease Lake	7.97	0	Pn	Pn	22 12 35.3	+2.1
BDMTA	Bald Mountain	8.06	53	Pn	Pn	22 12 36.7	+2.2
NBC5	NorthernBC 5	8.29	29	Pn	Pn	22 12 38.8	+1.1
NEW	Newport	8.76	100	Pn	Pn	22 12 44.7	+0.7
	0.3nm,0.3s,baz=300,slow=14,SNR=3.5						
NEW				LR	LR	22 16 05.0	
	comp=Z,207nm,20.4s,baz=283,slow=37						
	1.1nm,0.3s						
YBH	Yreka Blue Hor	10.14	147	LR	LR	22 16 37.3	
	comp=Z,121nm,19.5s,baz=322,slow=36						
ELK	Elko	14.22	128	LR	LR	22 19 47.5	
	comp=Z,65nm,19.4s,baz=350,slow=39						
NVAR	Mina Array Bea	14.68	141	Pn	Pn	22 14 07.9	+2.6
	0.1nm,0.3s,baz=329,slow=13,SNR=1.8						
	0.2nm,0.5s						
YKA	Yellowknife Ar	14.71	29	Pn	Pn	22 14 02.6	-2.7
	0.2nm,0.3s,baz=220,slow=12,SNR=15						
YKA				Sn	Sn	22 16 41.6	-6.3
	0.1nm,0.3s,baz=222,slow=22,SNR=4.9						
YKA				LR	LR	22 19 35.4	
	comp=Z,55nm,20.7s,baz=306,slow=36						
	0.7nm,0.5s						
KDAK	Kodiak Island	15.02	308	LR	LR	22 18 59.7	
	comp=Z,70nm,18.2s,baz=183,slow=34						
PDAR	Pinedale Array	16.05	111	Pn	Pn	22 14 26.8	+3.5
	0.1nm,0.3s,baz=38,slow=3.4,SNR=21						
PDAR				LR	LR	22 20 33.0	
	comp=Z,60nm,21.2s,baz=310,slow=37						
	4.0nm,1.0s						
ILAR	Eielson Array	16.82	335	Pn	Pn	22 14 34.7	+2.1
	baz=146,slow=11,SNR=5.9						
	1.3nm,0.9s						
INK	Inuvik	17.96	356	P	Pn	22 14 46.5	-0.3
	baz=120,slow=19,SNR=3.0						
INK				LR	LR	22 21 52.9	
	comp=Z,111nm,19.5s,baz=176,slow=38						
	3.6nm,1.0s						
ULM	Lac du Bonnet	21.73	77	P	P	22 15 27.9	-0.5
	5.6nm,0.8s,baz=272,slow=13,SNR=2.4						
ULM				LR	LR	22 23 26.2	
	comp=Z,46nm,21.7s,baz=278,slow=35						
	5.6nm,0.8s						
ANMO	Albuquerque	23.16	123	LR	LR	22 24 28.8	
	comp=Z,56nm,18.8s,baz=316,slow=36						
RES	Resolute Bay	28.31	19	LR	LR	22 28 26.8	
	comp=Z,52nm,19.0s,baz=311,slow=38						
TXAR	Lajitas Array	29.02	127	P	P	22 16 39.1	+1.7
	0.9nm,1.0s,baz=304,slow=2.3,SNR=4.9						
TXAR				LR	LR	22 29 09.3	
	comp=Z,38nm,18.9s,baz=83,slow=38						
	0.9nm,1.0s						
SADO	Sadowa	34.25	79	LR	LR	22 30 09.3	
	comp=Z,57nm,19.4s,baz=5.5,slow=34						
TKL	Tuckaleechee C	36.32	96	LR	LR	22 32 53.5	
	comp=Z,68nm,18.5s,baz=322,slow=37						
SCHQ	Schefferville	37.46	58	LR	LR	22 32 52.8	
	comp=Z,66nm,19.8s,baz=110,slow=36						
MA2	Magadan	43.65	314	LR	LR	22 35 41.9	
	comp=Z,16nm,19.9s,baz=162,slow=34						
H11N2	WAKE ISLAND Hy	57.90	262	T	T	23 23 03.2	
	baz=42,slow=75,SNR=262						
H11N3	WAKE ISLAND Hy	57.90	262	T	T	23 23 06.6	
	baz=42,slow=75,SNR=336						
H11N1	WAKE ISLAND Hy	57.92	262	T	T	23 23 04.4	
	baz=42,slow=75,SNR=171						
KLR	Kul'dur	58.56	310	LR	LR	22 45 30.8	
	comp=Z,20nm,19.6s,baz=102,slow=36						
H11S1	WAKE ISLAND Hy	58.93	261	T	T	23 24 29.9	
	baz=46,slow=75,SNR=8.4						
H11S2	WAKE ISLAND Hy	58.94	261	T	T	23 24 30.3	
	baz=46,slow=75,SNR=8.9						
H11S3	WAKE ISLAND Hy	58.95	261	T	T	23 24 31.7	
	baz=46,slow=75,SNR=7.2						
ARCES	ARCESS Array B	58.97	10	LR	LR	22 49 21.2	
	comp=Z,12nm,18.2s,baz=41,slow=39						
NOA	NORSAR Array B	64.57	20	LR	LR	22 48 19.1	
	comp=Z,16nm,19.8s,baz=255,slow=35						
FINES	FINESS Array B	66.80	12	LR	LR	22 49 50.5	
	comp=Z,36nm,21.1s,baz=22,slow=35						
DAVOX	Davos/Dischmat	77.14	27	LR	LR	22 57 57.1	
	comp=Z,20nm,18.0s,baz=257,slow=37						
AKASG	Malin Array Be	77.66	13	LR	LR	22 57 10.8	
	comp=Z,26nm,18.4s,baz=158,slow=36						
MDP	Montagnes des	78.11	96	LR	LR	23 02 41.8	
	comp=Z,10nm,18.0s,baz=335,slow=40						
MKAR	Makanchi Array	79.14	338	P	P	22 22 41.9	+0.1
	0.2nm,0.8s,baz=48,slow=6.8,SNR=1.5						
MKAR				LR	LR	23 00 12.2	
	comp=Z,23nm,19.1s,baz=302,slow=38						
	0.2nm,0.8s						
LPAZ	La Paz	85.77	122	LR	LR	23 04 02.0	
	comp=Z,15nm,20.9s,baz=253,slow=37						
LVC	Limon Verde	90.55	126	LR	LR	23 04 15.7	
	comp=Z,20nm,18.7s,baz=237,slow=36						

ATH 10 22:24:59.5,37°.76N×21°.27E,h10^{km}±31^{km},ML1.6/3,Error ellipse: s-maj=31.6km s-min=2.5km az=0.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.34	28	P	Pg	22 25 05.8	-0.4
RLS				S	Sg	22 25 10.4	-0.3
RLS				AML	AML	22 25 13.5	
	comp=N,180µm,0.2s						
RLS				AML	AML	22 25 14.1	
	comp=E,189µm,0.3s						
DRO	Drossia	0.40	61	P	Pg	22 25 07.1	-0.3
DRO				S	Sg	22 25 12.9	+0.2
DRO				AML	AML	22 25 15.0	
	comp=E,212µm,0.5s						
DRO				AML	AML	22 25 15.3	
	comp=N,430µm,0.5s						
LAKA	Lakka	0.74	49	P	Pg	22 25 13.7	-0.1
LAKA				S	Sg	22 25 23.9	+0.5
KLV	Kalavryta, Ach	0.75	68	P	Pg	22 25 13.7	-0.4
EFP	Efpalio	0.83	37	P	Pg	22 25 15.7	+0.1
GUR	Goura	0.87	78	P	Pg	22 25 15.6	-0.7
GUR				AML	AML	22 25 32.2	
	comp=E,116µm,0.4s						
GUR				AML	AML	22 25 36.4	
	comp=N,120µm,0.3s						
PVO	Paravola	0.88	13	P	Pb	22 25 16.8	-0.1

ATH 10 22:25:00.5,38°.10N×20°.80E,h15^{km}±4^{km},ML1.4/1,Error ellipse: s-maj=5.3km s-min=2.0km az=265.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSDA	Pessada-Kefalo	0.17	275	P	Pg	22 25 04.7	+0.1
PSDA				S	Sg	22 25 07.6	+0.2
VLS	Valsamata	0.18	296	P	Pg	22 25 04.7	-0.2
VLS				S	Sg	22 25 07.5	-0.3
VLS				AML	AML	22 25 07.6	
	comp=E,355µm,0.1s						
VLS				AML	AML	22 25 07.7	
	comp=N,303µm,0.1s						
KEF4	Livadi, Kephal	0.33	299	P	Pg	22 25 07.3	-0.1
KEF4				S	Sg	22 25 12.7	+0.6
DMLN	Damoulianata-K	0.36	293	P	Pg	22 25 07.7	-0.3
DMLN				S	Sb	22 25 13.6	-0.5
KEF3	Kipouria, Keph	0.37	287	P	Pg	22 25 07.6	-0.4
KEF3				S	Sg	22 25 13.0	-0.1
FSK	Fiskardo	0.41	333	P	Pg	22 25 08.8	+0.1
FSK				S	Sg	22 25 13.9	-0.4
EVGI	Lefkada island	0.53	348	P	Pb	22 25 11.4	-0.2
EVGI				S	Sg	22 25 18.4	+0.2

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*IDC **10** 22:56:31.0±2.3,30°.67S×67°.61W,h0^{km},mb4.0/1, mbtmp3.8/3,ML3.8/2,MS3.0/2,Error ellipse: s-maj=57.4km s-min=48.8km az=176.0*

ISC 10 22:56:35.5±2.0,30°.5S±0°.2×67°.6W±0°.2,h24^{km},n8,σ1^{s}.58/8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	7.89	351	Pn	Pn	22 58 31.1	+2.0
	0.3nm,0.3s,baz=158,slow=8.9,SNR=2.8						
LVC				Sn	Sn	22 59 57.1	-0.8
	0.3nm,0.3s,baz=92,slow=23,SNR=1.2						
	1.1nm,0.3s						
CPUP	Villa Florida	9.91	68	Pn	Pn	22 58 56.4	-0.1
	0.4nm,0.3s,baz=254,slow=12,SNR=3.2						
CPUP				Lg	Lg	23 01 44.8	
	0.6nm,0.3s,baz=163,slow=11,SNR=1.9						
CPUP				LR	LR	23 02 49.8	
	comp=Z,34nm,21.9s,baz=220,slow=38						
	1.3nm,0.3s						
PLCA	Paso Flores	10.54	192	Lg	Lg	23 02 03.7	
	0.2nm,0.3s,baz=160,slow=18,SNR=1.8						
LPAZ	La Paz	14.10	358	Pn	P	23 00 00.6	-1.3
	0.2nm,0.3s,baz=140,slow=13,SNR=2.2						
BDFB	Brasilia	23.21	55	P	P	23 01 40.4	-0.5
	2.9nm,0.6s,baz=220,slow=9.8,SNR=5.8						
	2.9nm,0.6s						
TORD	Torodi Ar. Bea	79.41	68	P	P	23 08 41.8	+1.7
	7.5nm,0.7s,baz=256,slow=5.8,SNR=0.6						
TORD				LR	LR	23 41 56.7	
	comp=Z,25nm,21.3s,baz=216,slow=34						
ZALV	Zalesovo Beam	149.21	32	PKPbc	PKPbc	23 16 20.1	-1.4
	0.7nm,0.5s,baz=328,slow=3.5,SNR=2.6						
MKAR	Makanchi Array	151.59	46	PKPbc	PKiKP	23 16 26.9	-1.0
	0.4nm,0.7s,baz=304,slow=2.0,SNR=4.8						

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*NIED **10** 23:08:05.1,31°.02N×129°.06E,h6^{km},MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.26; $M_{\theta\theta}$1.14; $M_{\phi\phi}$-0.88; $M_{r\theta}$0.53; $M_{\theta\phi}$0.95; $M_{\phi r}$-0.74; Fault plane solution: $M_0$1.66000×10^{14} NP1:ϕ_s28.00000°, δ63.00000°,λ-163.00000°. NP2:ϕ_s290.00000°, δ75.00000°,λ-28.00000°.*

JMA 10 23:08:05.1±0.3,31°.0N±0°.4×129°.1E±0°.8,h6^{km}±2^{km}, MV3.5/26,SW OFF KYUSHU,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.87	40	*e*P	Pg	23 08 21.7	0.0
JSJ				*e*S	Sg	23 08 33.2	+0.1
JSU	Suzuyama	1.29	67	*e*P	Pn	23 08 29.4	-0.4
JNN	Nakanoshima	1.37	149	*e*P	Pn	23 08 30.9	+0.1
JYAK	Yakushimahirau	1.47	121	P	Pn	23 08 31.4	-0.8
JFU	Fukue jima 2	1.66	351	P	Pn	23 08 34.0	-0.8
JTN	Tanegashima 3	1.69	102	P	Pn	23 08 35.2	-0.1
JMTN	Minamitane	1.70	111	*e*P	Pn	23 08 35.8	+0.4
JZO	Okuchi	1.73	49	*e*P	Pb	23 08 37.4	+0.1
JZO				S	Sb	23 08 59.6	+0.3

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*IDC **10** 23:10:00.9±1.1,25°.22S×179°.60W,h420^{km}±11^{km}, mb3.6/16,mbtmp4.4/20,Error ellipse: s-maj=13.2km s-min=12.4km az=89.0*

*NEIC **10** 23:10:03.6±1.9,25°.3S±0°.1×179°.6W±0°.1,h446^{km}±7^{km}, mb4.4/39,Error ellipse: s-maj=16.4km s-min=15.3km az=107.0*

ISC 10 23:10:02.3±0.4,25°.35S±0°.05×179°.58W±0°.07,h432^{km}, n104,σ1^{s}.28/119,mb4.2/35,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.16	160	P	P	23 11 17.1	-0.5
	132nm,0.2s,baz=100,slow=23,SNR=2.7						
RAO				S	S	23 12 19.7	+0.7
	276nm,0.3s,baz=62,slow=18,SNR=4.6						
RAO	Raoul Island	4.16	160	P	P	23 11 18.5	+0.8
GLKZ	Green Lake	4.17	160	P	P	23 11 18.4	+0.7
GLKZ				S	S	23 12 16.8	-2.4
MSVF	Nonsavu	7.89	343	P	P	23 11 54.3	-2.3
	19nm,0.7s,baz=201,slow=4.6,SNR=11						
MSVF	Nonsavu	7.89	343	P	P	23 11 55.4	-1.3
NIUE	Niue	10.90	57	P	P	23 12 33.0	+3.6
OUZ	Omahuta	11.47	209	P	P	23 12 37.9	+2.5
MARNC	Mare, Loyalty	12.01	286	P	P	23 12 42.6	+1.1
PINNC	Pines Island,	12.17	280	P	P	23 12 45.1	+1.9
WIAZ	Waiheke Island	12.27	200	P	P	23 12 46.8	+2.6
MXZ	Matakaoa Point	12.31	188	P	P	23 12 44.3	-0.3
MXZ				S	S	23 14 56.9	-1.7
MKAZ	Moumakai	12.55	200	P	P	23 12 49.8	+2.6
WMGZ	Waiomatatini S	12.55	187	P	P	23 12 48.2	+1.0
WMGZ				S	S	23 15 03.0	-0.4
HAZ	Te Kaha	12.57	190	P	P	23 12 47.9	+0.5
PKGZ	Pakihiroa	12.66	188	P	P	23 12 47.1	-1.4
PKGZ				S	S	23 15 03.1	-2.6
OUENC	Ouen Island, N	12.76	280	P	P	23 12 51.1	+1.4
RUGZ	Raukumara Rang	12.79	190	P	P	23 12 48.7	-1.2
RUGZ				S	S	23 15 08.1	-0.4
PUZ	Puketiti	12.82	188	P	P	23 12 48.2	-2.0
PUZ				S	S	23 15 05.5	-3.4
LIFNC	LIFOU	12.96	288	P	P	23 12 52.2	+0.4
TWGZ	Tauwhareparae	12.96	189	P	P	23 12 51.7	0.0
TWGZ				S	S	23 15 11.0	-0.6
TOZ	Tahuroa Road	13.04	198	P	P	23 12 54.2	+1.7
URZ	Urewera	13.18	192	P	P	23 12 52.3	-1.7
	19nm,0.4s,baz=119,slow=23,SNR=13						
URZ				S	S	23 15 12.9	-3.0
	14nm,0.5s,baz=119,slow=23,SNR=4.9						
URZ	Urewera	13.18	192	P	P	23 12 53.3	-0.7
URZ	Urewera	13.18	192	P	P	23 12 51.8	-2.2
URZ				S	S	23 15 17.3	+1.5
MWZ	Matawai	13.18	190	P	P	23 12 52.0	-2.1
MWZ				S	S	23 15 17.1	+1.1
DZM	Mont Dzumac	13.21	281	P	P	23 12 56.6	+1.9
	23nm,0.6s,baz=77,slow=18,SNR=43						
DZM	Mont Dzumac	13.21	281	P	P	23 12 56.7	+2.0
CNGZ	Carnagh Statio	13.23	188	P	P	23 12 54.8	+0.2
CNGZ				S	S	23 15 16.2	-0.8
RIGZ	Rimuhau	13.51	189	P	P	23 12 58.8	+1.2
RIGZ				S	S	23 15 21.0	-1.5
PRGZ	Paritu Road	13.71	188	P	P	23 12 58.1	-1.7
PRGZ				S	S	23 15 27.3	+0.8
KNZ	Kokohu	13.83	189	P	P	23 12 59.7	-1.3
KNZ				S	S	23 15 29.0	+0.1
BFZ	Birch Farm	15.69	192	P	P	23 13 19.9	-1.1
RPZ	Rata Peaks	19.86	200	P	P	23 14 02.2	-1.1
	9.2nm,0.6s,baz=151,slow=2.8,SNR=5.5						
RPZ	Rata Peaks	19.86	200	P	P	23 14 02.9	-0.4
ARMA	Armidale	25.91	252	P	P	23 14 59.5	+1.4
ARMA				IAmb	IAmb	23 15 19.2	
	comp=Z,56nm,1.9s						
EIDS	Eidsvold	26.49	264	P	P	23 15 03.7	+0.5
CAN	Canberra	28.78	242	P	P	23 15 24.7	+1.4
CAN				IAmb	IAmb	23 16 16.5	
	comp=Z,46nm,1.3s						
CTAO	Charters Tower	31.89	272	P	P	23 15 51.0	+0.5
CTAO				IAmb	IAmb	23 15 51.5	
	comp=Z,16nm,0.7s						
TOO	Toolangi	32.01	239	P	P	23 15 52.2	+0.9
STKA	Stephens Creek	34.57	250	P	P	23 16 13.0	-0.1
	comp=Z,3.1nm,0.6s,baz=97,slow=11,SNR=14						
	comp=Z,3.1nm,0.6s						
STKA	Stephens Creek	34.57	250	P	P	23 16 13.3	+0.3
COEN	Coen	36.74	281	P	P	23 16 31.9	+0.4
BBOO	Buckleboo	39.25	249	P	P	23 16 50.8	-1.1
AS31	Alice Springs	42.20	262	P	P	23 17 15.4	-0.3
ASAR	Alice Springs	42.20	262	P	P	23 17 15.2	-0.5
	comp=Z,4.6nm,0.4s,baz=89,slow=6.8,SNR=103						
ASAR				PcP	PcP	23 18 59.4	-1.2
	comp=Z,0.4nm,0.7s,baz=100,slow=5.2,SNR=1.7						
ASAR				ScP	ScP	23 22 10.8	+1.5
	comp=Z,0.9nm,0.9s,baz=148,slow=3.9,SNR=5.0						
	comp=Z,4.6nm,0.4s						
ASAR	Alice Springs	42.20	262	P	P	23 17 14.9	-0.9
WR0	Warramunga Arr	42.52	268	P	P	23 17 17.3	-1.0
WR0				IAmb	IAmb	23 17 18.1	
	comp=Z,16nm,1.1s						
WB2	Warramunga Arr	42.70	268	P	P	23 17 19.0	-0.7
WB2				IAmb	IAmb	23 17 19.2	
	comp=Z,12nm,0.6s						
WB0	Warramunga Arr	42.71	268	P	P	23 17 18.9	-0.9
WB0				IAmb	IAmb	23 17 19.6	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	42.71	268	P	P	23 17 18.9	-1.0
	comp=Z,9.8nm,0.5s,baz=99,slow=6.7,SNR=44						
WRA				ScP	ScP	23 22 14.3	+2.8
	comp=Z,1.5nm,1.1s,baz=101,slow=4.5,SNR=5.4						
	comp=Z,9.8nm,0.5s						
WRA	Warramunga Arr	42.71	268	P	P	23 17 18.9	-1.0
FORT	Forrest	46.19	251	P	P	23 17 45.5	-1.2
FORT				IAmb	IAmb	23 17 46.3	
	comp=Z,25nm,0.8s						
KNRA	Kununurra	49.08	271	P	P	23 18 08.1	-0.7
FITZ	Fitzroy Crossi	51.11	267	P	P	23 18 22.5	-1.2
	comp=Z,4.6nm,0.8s,baz=104,slow=6.7,SNR=7.1						
	comp=Z,4.6nm,0.8s						
FITZ	Fitzroy Crossi	51.11	267	P	P	23 18 23.5	-0.2
FITZ				IAmb	IAmb	23 18 26.2	
	comp=Z,70nm,2.0s						
VNDA	Vanda	52.98	185	P	P	23 18 36.9	+0.5
	comp=Z,0.4nm,0.7s,baz=345,slow=3.6,SNR=2.3						
	comp=Z,0.4nm,0.7s						
VNDA	Vanda	52.98	185	P	P	23 18 38.5	+2.1
SIJI	Sorong	53.27	289	P	P	23 18 38.0	-1.4
	comp=Z,13nm,0.2s,baz=27,slow=6.4,SNR=5.5						
NWAO	Narrogin (SRO)	55.00	246	P	P	23 18 51.2	-0.3
NWAO				IAmb	IAmb	23 20 51.6	
	comp=Z,39nm,1.4s						
MORW	Morawa	56.75	251	P	P	23 19 02.9	-0.9
CASY	Casey	58.99	206	P	P	23 19 17.9	-0.5
CASY				IAmb	IAmb	23 19 18.8	
	comp=Z,6.4nm,0.7s						
QSPA	South Pole Qui	64.74	180	P	P	23 19 57.3	+1.0
	comp=Z,2.7nm,0.7s,baz=359,slow=0.6,SNR=14						
	comp=Z,2.7nm,0.7s						
QSPA	South Pole Qui	64.74	180	P	P	23 19 57.7	+1.3
QSPA				IAmb	IAmb	23 20 47.1	
	comp=Z,34nm,1.9s						
BELA	Belgrano 2	74.96	173	P	P	23 20 57.3	0.0
MAW	Mawson	76.53	200	P	P	23 21 07.3	+1.1
	comp=Z,2.4nm,0.7s,baz=56,slow=8.9,SNR=1.6						
	comp=Z,2.4nm,0.7s						
MAW	Mawson	76.53	200	P	P	23 21 07.4	+1.2
MG03	Isla Dawson	80.36	145	P	P	23 21 27.4	+0.2
PEA0B	Petropavlovsk-	80.59	346	P	P	23 21 28.0	-0.1
PETK	Petropavlovsk-	80.59	346	P	P	23 21 27.7	-0.4
	comp=Z,2.1nm,0.7s,baz=167,slow=7.0,SNR=5.0						
	comp=Z,2.1nm,0.7s						
PETK	Petropavlovsk-	80.59	346	P	P	23 21 27.9	-0.2
TROLL	Troll, Antarti	82.90	181	P	P	23 21 40.2	+0.1
SNAA	Sanae	83.22	179	P	P	23 21 41.1	-0.5
	comp=Z,1.2nm,0.6s,baz=174,slow=6.4,SNR=5.6						
	comp=Z,1.2nm,0.6s						
SNAA	Sanae	83.22	179	P	P	23 21 40.9	-0.8
SNAA				IAmb	IAmb	23 24 52.0	
	comp=Z,13nm,1.5s						
VNA3	Neumayer Olymp	83.42	177	P	P	23 21 42.5	0.0
ISA	Isabella, Lake	83.75	46	P	P	23 21 44.3	-0.5
ISA				IAmb	IAmb	23 21 46.3	
	comp=Z,4.9nm,0.9s						
YBH	Yreka Blue Hor	84.96	39	P	P	23 21 49.7	-1.0
	comp=Z,1.7nm,0.8s,baz=78,slow=3.1,SNR=4.0						
	comp=Z,1.7nm,0.8s						
LCH	Last Change Ra	85.22	45	P	P	23 21 52.0	-0.1
LCH				IAmb	IAmb	23 21 53.3	
	comp=Z,5.8nm,1.4s						
NVAR	Mina Array Bea	85.53	44	P	P	23 21 52.4	-1.3
	comp=Z,1.4nm,0.9s,baz=220,slow=8.9,SNR=7.5						
	comp=Z,1.4nm,0.9s						
NVAR	Mina Array Bea	85.53	44	P	P	23 21 53.9	+0.2
TPNV	Topopah Spring	85.95	46	P	P	23 21 55.0	-0.7
TPNV				IAmb	IAmb	23 21 57.0	
	comp=Z,3.9nm,0.9s						
KVN	Kaiserville	86.03	43	P	P	23 21 55.3	-0.7
PRN	Pahroc Range	87.00	46	P	P	23 22 00.2	-0.4
TUC	Tucson	87.09	52	P	P	23 22 01.8	+0.7
TUC				IAmb	IAmb	23 22 03.5	
	comp=Z,4.0nm,0.8s						
I07A	Izee	88.27	39	P	P	23 22 06.8	+0.4
I07A				IAmb	IAmb	23 22 08.0	
	comp=Z,7.9nm,1.0s						
J08A	Circle Bar Ran	88.42	40	P	P	23 22 07.0	-0.1
J08A				IAmb	IAmb	23 22 08.5	
	comp=Z,6.7nm,1.2s						
MTPU	Mount Pierson	89.23	47	P	P	23 22 11.5	+0.2
MTPU				IAmb	IAmb	23 22 13.6	
	comp=Z,3.5nm,0.8s						
G08A	Pilot Rock	89.32	38	P	P	23 22 11.0	-0.3
G08A				IAmb	IAmb	23 22 13.3	
	comp=Z,4.7nm,1.0s						
CMAR	Chiang Mai Arr	90.39	290	P	P	23 22 17.8	+1.1
	comp=Z,3.2nm,0.3s,baz=130,slow=3.6,SNR=5.2						
	comp=Z,3.2nm,0.3s						
CMAR	Chiang Mai Arr	90.39	290	P	P	23 22 17.1	+0.4
KLU	Klutina	90.70	15	P	P	23 22 17.9	+0.7
KLU				IAmb	IAmb	23 22 27.1	
	comp=Z,15nm,1.6s						
SEY	Seymchan	90.76	348	P	P	23 22 17.1	-0.2
	comp=Z,0.9nm,0.4s,baz=116,slow=7.2,SNR=4.8						
	comp=Z,0.9nm,0.4s						
TXAR	Lajitas Array	90.87	58	P	P	23 22 19.0	+0.2
	comp=Z,1.4nm,0.9s,baz=213,slow=5.7,SNR=11						
	comp=Z,1.4nm,0.9s						
ILAR	Eielson Array	93.34	13	P	P	23 22 27.8	-1.4
	comp=Z,0.3nm,0.6s,baz=226,slow=5.0,SNR=4.6						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	93.46	44	P	P	23 22 29.8	-0.9
	comp=Z,0.5nm,0.7s,baz=190,slow=0.9,SNR=4.7						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	113.41	312	PKiKP	PKiKP	23 27 48.5	-1.4
	comp=Z,0.2nm,0.5s,baz=56,slow=0.5,SNR=2.7						
ARCES	ARCESS Array B	133.38	348	PKP	PKPdf	23 28 25.7	-1.7
	comp=Z,0.9nm,0.6s,baz=90,slow=1.2,SNR=7.7						
FINES	FINESS Array B	139.93	341	PKhKP	PKPpre	23 28 30.4	
	comp=Z,0.5nm,0.4s,baz=327,slow=3.2,SNR=5.3						
NB2	NORSAR Subarra	143.56	351	PKP	PKPab	23 28 43.4	-1.0
	comp=Z,1.1nm,0.7s,baz=13,slow=3.6						
NOA	NORSAR Array B	143.56	351	PKP	PKPab	23 28 42.9	-1.5
	comp=Z,2.1nm,0.8s,baz=5.9,slow=2.1,SNR=9.9						
AKASG	Malin Array Be	146.39	326	PKPbc	PKPdf	23 28 51.5	+0.2
	comp=Z,1.8nm,0.4s,baz=44,slow=5.2,SNR=12						
AKASG	Malin Array Be	146.39	326		PKPdf	23 28 50.0	-1.2
BRTR	Keskin Array B	148.74	305	PKPbc	PKPbc	23 28 59.3	-0.8
	comp=Z,0.8nm,0.4s,baz=141,slow=3.3,SNR=5.7						
CLL	Collm	152.34	343	*i* PKPbc	PKPbc	23 29 07.4	-0.5
	comp=Z,5.0nm,0.9s						
TORD	Torodi Ar. Bea	167.81	186	PKPab	PKPab	23 30 27.6	-0.4
	comp=Z,5.9nm,0.4s,baz=189,slow=3.3,SNR=3.6						

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*SNET **10** 23:32:23.3±0.9,13°.61N×87°.90W,h6^{km}±7^{km},ML3.2*

*INET **10** 23:32:24.1±1.1,13°.51N×87°.96W,h7^{km}±17^{km},MW2.8*

ISC 10 23:32:22.7±1.5,13°.61N±0°.04×87°.90W±0°.03,h14^{km}±16^{km}, n19,σ0^{s}.28/25,4C-3D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNRM	Centro Naciona	0.30	243	⇑*i*P	Pb	23 32 29.7	-0.2
CNRM				*e*S	Sb	23 32 34.5	-0.2
LCND	La Caada	0.30	179	⇑*i*P	Pb	23 32 29.8	-0.2
LCND				*e*S	Sb	23 32 34.5	-0.3
LCND				IAML		23 32 37.0	
	comp=Z,2µm,0.3s						
CNCH	Conchagua	0.34	169	⇑*i*P	Pb	23 32 30.6	-0.1
CNCH				*e*S	Sb	23 32 35.9	-0.1
CNCH				IAML		23 32 42.1	
	comp=Z,5µm,0.3s						
CAHU	Cacacuatique	0.34	298	⇓*e*P	Pb	23 32 30.6	-0.2

CAHU				eS	Sb	23 32 36.4	+0.1
RANC	El Ranchito	0.42	245	⇑iP	Pb	23 32 32.0	-0.1
PACA	Pacayal	0.44	251	⇓eP	Pb	23 32 32.4	+0.1
JUCU	Jucuar¡n	0.49	224	eP	Pb	23 32 33.2	0.0
JUCU				eS	Sb	23 32 40.4	0.0
COEB	Comit de Eme	0.63	260	eP	Pb	23 32 35.6	0.0
PQSS	Presa 15 de Se	0.65	271	eP	Pb	23 32 36.2	+0.3
TGUH	Tegucigalpa,Un	0.75	54	⇓iP	Pb	23 32 37.7	0.0
TGUH				eS	Sb	23 32 47.8	-0.2
SCLA	Alcaldia de Sa	0.81	277	eP	Pb	23 32 38.9	+0.2
COEG	Centro de Oper	0.96	271	eP	Pg	23 32 41.3	0.0
COEG				IAML		23 32 56.0	
	comp=Z,717nm,0.2s						
CRIN	San Cristobal	1.22	138	eP	Pg	23 32 46.5	+0.1
CNGN	Cerro Negro	1.61	133	eP	Pn	23 32 50.2	-0.6
MTO3	Montecristo	1.62	299	eP	Pb	23 32 52.4	-0.3
MTO3	Montecristo	1.62	299	eP	Pb	23 32 52.2	-0.4
MOMN	Momotombo	1.78	132	eP	Pn	23 32 53.8	+0.6
MATN	Matagalpa	2.04	109	eP	Pg	23 33 01.8	-0.1
BOAB	BOACO BROADBAN	2.46	118	eP	Pn	23 33 03.0	+0.5

IDC 11 00:01:17.8±23.0**, 7°.00S**×**120°.22E, h389**^{km}±270^{km}**, mb2.9**/3**, mbtmp3.6**/4**, Error ellipse: s-maj=340.9km s-min=43.6km az=63.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.80	135	P	P	00 05 11.4	0.0
	1.0nm,0.6s,baz=311,slow=9.1,SNR=5.4						
ASAR	Alice Springs	21.16	143	P	P	00 05 33.8	+0.1
	0.4nm,0.3s,baz=321,slow=8.5,SNR=6.8						
	0.4nm,0.3s						
STKA	Stephens Creek	31.79	144	P	P	00 07 07.7	-0.3
	3.3nm,1.0s,baz=315,slow=10.0,SNR=2.4						
	3.3nm,1.0s						
MKAR	Makanchi Array	63.25	332	P	P	00 11 06.4	+0.1
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.6						
	0.2nm,0.6s						

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*NEIC **11** 00:17:33.9±2.2, 78°.64N±0°.07×6°.3E±0°.3, h10^{km}±1^{km}, mb4.3/15, Error ellipse: s-maj=13.0km s-min=9.6km az=157.0*
*NAO **11** 00:17:33.0±1.6, 78°.62N×6°.43E, ML3.9*
*IDC **11** 00:17:35.1±0.8, 78°.55N×6°.32E, h0^{km}, mb3.7/8, mbtmp3.8/14, ML3.2/5, MS3.3/37, Error ellipse: s-maj=17.1km s-min=13.5km az=11.0*
*BER **11** 00:17:37.5±2.4, 78°.54N×6°.78E, h25^{km}±18^{km}, ML3.4, ML3.9(NAO), Confirmed Earthquake*
*DNK **11** 00:17:37.1±4.9, 78°.62N×7°.06E, h32^{km}±36^{km}, ML2.6*
*IEPN **11** 00:17:39.0, 78°.60N×7°.88E, h10^{km}*
*KOLA **11** 00:17:43.9, 78°.49N×10°.18E, h0^{km}, ML2.7*
ISC 11 00:17:34.1±2.6**, 78°.55N**±0°.04×**6°.78E**±0°.04**, h12**^{km}±17^{km}**, n132, σ3^{s}.05**/132**, mb4.0**/14**, MS3.3**/30**, 4C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.08	67	Pg	Pn	00 17 55.3	+0.3
KBS				Lg	Lg	00 18 08.2	
KBS	Kingsbay	1.08	67		Pn	00 17 55.4	+0.3
KBS	Kingsbay	1.08	67	i P	Pn	00 17 55.1	+0.1
KBS				i S	Sn	00 18 07.7	-2.2
KBS	Kingsbay	1.08	67	⇑iP	Pn	00 17 55.4	+0.3
KBS				eS	Sn	00 18 08.1	-1.8
KBS				IAML		00 18 09.6	
	comp=Z,6µm,0.1s						
BRBB	Barentsburg B	1.58	103	Pn	Pb	00 18 01.9	-1.1
BRBB				Lg	Lg	00 18 19.6	
BRBB	Barentsburg B	1.58	103	⇑iP	Pb	00 18 02.0	-1.1
BRBB				eS	Sn	00 18 20.0	-2.1
BRBA	Barentsburg A	1.59	104	Pn	Pn	00 18 02.1	+0.1
BRBA				Lg	Lg	00 18 20.0	
BRBA	Barentsburg A	1.59	104	eP	Pb	00 18 02.2	-1.1
BRBA				eS	Sn	00 18 20.1	-2.4
BRBA				IAML		00 18 24.2	
	comp=Z,869nm,0.2s						
SPA0	Spitsbergen Ar	1.98	96	Pn	Pb	00 18 08.7	-1.3
	baz=281,slow=11						
SPA0				Lg	Lg	00 18 32.0	
	baz=273,slow=22						
SPA0	Spitsbergen Ar	1.98	96	Pn	Pb	00 18 08.7	-1.3
	baz=281,slow=11						
SPA0				eS	Sn	00 18 32.0	0.0
	baz=273,slow=22						
SPITS	Spitsbergen Ar	1.98	96	Pn	Pb	00 18 08.6	-1.3
	comp=Z,474nm,0.3s,baz=265,slow=10.0						
SPITS				Sn	Sn	00 18 31.5	-0.5
	baz=277,slow=16						
SPB2	Spitsbergen Ar	1.98	96	Pn	Pb	00 18 08.5	-1.5
HSPB	Hornsund (broa	2.43	125	Pn	Pn	00 18 13.4	0.0
HSPB				Sn	Sn	00 18 39.2	-3.7
HSPB	Hornsund (broa	2.43	125	⇑iP	Pn	00 18 13.3	-0.2
HSPB				eS	Sn	00 18 40.1	-2.8
HSPB				IAML		00 18 42.9	
	comp=Z,322nm,0.5s						
HSPB	Hornsund (broa	2.43	125	⇓iP	Pn	00 18 13.1	-0.3
HSPB				i S	Sn	00 18 39.1	-3.9
HOPEN	Hopen	4.44	108	Pn	Pn	00 18 41.0	0.0
HOPEN				Sn	Sn	00 19 29.1	-3.3
HOPEN	Hopen	4.44	108	⇑iP	Pn	00 18 41.1	+0.1
HOPEN				eS	Sn	00 19 29.1	-3.3
HOPEN				IAML		00 19 31.3	
	comp=Z,174nm,0.3s						
HOPEN	Hopen	4.44	108	P	Pn	00 18 41.1	+0.1
HOPEN				i S	Sn	00 19 27.8	-4.7
BJO1	Bjornoya	4.96	139	Pn	Pn	00 18 49.9	+1.8
BJO1				Sn	Sn	00 19 41.0	-4.3
BJO1	Bjornoya	4.96	139	eP	Pn	00 18 48.8	+0.7
BJO1				eS	Sn	00 19 41.3	-4.0
BJO1				IAML		00 19 47.3	
	comp=Z,24nm,0.3s						
BJO1	Bjornoya	4.96	139	eP	Pn	00 18 48.6	+0.4
BJO1				eS	Sn	00 19 41.3	-4.0
NOR	Nord	5.04	318	Pn	Pn	00 18 49.0	-0.3
NOR				Sn	Sn	00 19 43.0	-4.2
NOR	Nord	5.04	318	i P	Pn	00 18 49.0	-0.3
NOR				i S	Sn	00 19 43.1	-4.2
NOR				IAML		00 19 46.4	
	comp=Z,26nm,0.4s						
NOR	Nord	5.04	318	eP	Pn	00 18 49.0	-0.3
NOR				eS	Sn	00 19 42.9	-4.3
DAG	Danmarks Havn	5.70	265	i P	Pn	00 18 59.8	+1.4
DAG				i S	Sn	00 19 57.2	-6.3
DAG				IAML		00 20 02.2	
	comp=Z,21nm,0.6s						
DAG	Danmarks Havn	5.70	265	eP	Pn	00 18 59.5	+1.2
DAG				eS	Sn	00 19 58.8	-4.8
ZFI2	Zemlya Franca-	7.53	53	eP	Pn	00 19 24.3	+0.9
ZFI2				eS	Sn	00 20 40.5	-8.0
	comp=Z,76nm,0.5s						
ZFI	Zemlya Franca-	7.53	53	eP	Pn	00 19 24.3	+0.8
ZFI				eS	Sn	00 20 40.4	-8.2
	comp=Z,67nm,0.3s						
DBG	Daneborg	7.56	250	Pn	Pn	00 19 22.1	-1.7
DBG				Sn	Sn	00 20 40.3	-9.0
DBG	Daneborg	7.56	250	i P	Pn	00 19 22.4	-1.5
DBG				i S	Sn	00 20 40.3	-9.0
DBG				IAML		00 20 52.2	
	comp=Z,14nm,1.1s						
DBG	Daneborg	7.56	250	eP	Pn	00 19 22.4	-1.5
DBG				eS	Sn	00 20 40.3	-9.0
JMIC	Jan Mayen	8.55	216	Pn	Pn	00 19 37.4	0.0
	comp=Z,29nm,0.3s,baz=186,slow=15,SNR=6.3						
JMIC				Sn	Sn	00 21 08.2	-5.4
	comp=Z,12nm,0.3s,baz=155,slow=19,SNR=1.8						
JMIC				LR	LR	00 21 43.0	
	comp=Z,72nm,18.1s,baz=105,slow=29						
JMIC	Jan Mayen	8.55	216	Pn	Pn	00 19 37.1	-0.3
JMIC				Sn	Sn	00 21 08.0	-5.6
JMIC	Jan Mayen	8.55	216	Pn	Pn	00 19 37.1	-0.3
JMIC				Sn	Sn	00 21 08.0	-5.6
HAMF	Hammerfest	9.07	142	Pn	Pn	00 19 45.2	+0.7
HAMF				Sn	Sn	00 21 18.8	-7.5
HAMF	Hammerfest	9.07	142	eP	Pn	00 19 44.5	0.0
JETT	Jettan, Norway	9.74	151	Pn	Pn	00 19 55.5	+1.8
KIF	Kilpisjarvi	10.31	151	Pn	Pn	00 20 02.3	+0.9
KIF	Kilpisjarvi	10.31	151	e	Pn	00 20 00.9	-0.6
KEV	Kevo	10.32	138	Pn	Pn	00 20 03.2	+1.6
KEV				Sn	Sn	00 21 49.7	-7.2
KEV	Kevo	10.32	138	Pn	Pn	00 20 03.5	+1.8
KEV	Kevo	10.32	138	e	Pn	00 20 03.2	+1.6
ARA0	ARCESS Array S	10.33	141	Pn	Pn	00 20 01.8	-0.1
	baz=347,slow=12						
ARA0				Sn	Sn	00 21 50.5	-6.8
	baz=357,slow=22						
ARA0	ARCESS Array S	10.33	141	Pn	Pn	00 20 01.8	-0.1
	baz=347,slow=12						
ARA0				Sn	Sn	00 21 50.5	-6.8
	baz=357,slow=22						
ARCES	ARCESS Array B	10.33	141	Pn	Pn	00 20 02.3	+0.5
	comp=Z,0.2nm,0.3s,baz=345,slow=12,SNR=32						
ARCES				Sn	Sn	00 21 50.4	-6.9
	comp=Z,0.5nm,0.3s,baz=358,slow=24,SNR=5.5						
ARCES				LR	LR	00 23 58.5	
	comp=Z,73nm,21.2s,baz=337,slow=37						
	comp=Z,1.2nm,0.4s						
ARCES	ARCESS Array B	10.33	141	Pn	Pn	00 20 03.0	+1.1
ARCES	ARCESS Array B	10.33	141	P	Pn	00 20 03.8	+2.0
ARCES				S	Sn	00 21 50.1	-7.1
LOF	Lofoten	10.64	166	Pn	Pn	00 20 08.1	+2.2
LOF	Lofoten	10.64	166	e	Pn	00 20 06.6	+0.6
STEI	Steigen	10.93	163	e	Pn	00 20 09.8	-0.2
SCO	Scoresbysund	10.97	238	Pn	Pn	00 20 09.7	-0.8
SCO	Scoresbysund	10.97	238	i P	Pn	00 20 09.0	-1.5
SCO				eS	Sn	00 22 03.0	-10
PRVG	Vayda Guba	11.08	129	P	Pn	00 20 12.8	+0.7
PRVG				S	Sn	00 22 04.9	-11
HEF	Hetta	11.18	146	e	Pn	00 20 15.0	+1.5
TERR	Teriberka	12.03	126	P	Pn	00 20 25.2	+0.2
TERR				S	Sn	00 22 26.8	-12
SUMG	Summit	12.39	265	Pn	Pn	00 20 28.1	-2.3
SUMG	Summit	12.39	265	i P	Pn	00 20 28.7	-1.6
SUMG				i S	Sn	00 22 36.9	-11
SUMG	Summit	12.39	265	i P	Pn	00 20 28.0	-2.3
LVZ	Lovozero	13.14	129	Pn	Pn	00 20 40.8	+0.6
APA0	Apatity Array	13.16	132	P	Pn	00 20 40.6	+0.2
APA0				S	Sn	00 22 53.8	-13
TULEG	Thule	15.38	301	Pn	Pn	00 21 04.8	-5.6
TULEG				IAmb	IAmb	00 21 07.4	
	comp=Z,16nm,1.0s						
EUNU	Eureka	15.64	320	Pn	Pn	00 21 11.8	-2.0
BORG	Borgarnes	16.11	227	LR	LR	00 25 40.2	
	comp=Z,42nm,21.6s,baz=9.1,slow=30						
AMDE	Amderma	16.55	92	eP	Pn	00 21 20.4	-5.1
	comp=Z,8.5nm,0.6s						
AMDE				S	Sn	00 24 10.4	-18
ILULI	Ilulissat	17.60	270	Pn	Pn	00 21 35.9	-2.7
ILULI				IAmb	IAmb	00 21 36.2	
	comp=Z,34nm,1.3s						
NOA	NORSAR Array B	17.65	173	P	P	00 21 43.3	+2.9
	baz=349,slow=12,SNR=5.5						
NOA				LR	LR	00 27 35.4	
	comp=Z,38nm,18.8s,baz=5.0,slow=34						
	comp=Z,1.4nm,0.7s						
LSH	Leshukonskoye	17.75	118	eP	Pn	00 21 38.3	-2.2
	comp=Z,55nm,2.1s						
LSH				eS	Sn	00 24 39.4	-18
FINES	FINESS Array B	18.21	149	P	P	00 21 50.2	+3.7
	comp=Z,0.2nm,0.3s,baz=7.9,slow=13,SNR=6.7						
FINES				LR	LR	00 28 43.3	
	comp=Z,90nm,21.1s,baz=16,slow=37						
	comp=Z,2.3nm,0.7s						
FINES	FINESS Array B	18.21	149		P	00 21 47.6	+1.2
HFS	Hagfors	18.64	169	P	Pn	00 21 54.4	+3.0
	comp=Z,0.3nm,0.3s,baz=239,slow=20,SNR=6.7						
HFS				LR	LR	00 28 19.1	
	comp=Z,56nm,18.7s,baz=347,slow=34						
	comp=Z,2.3nm,1.0s						
MEF	Metsahovi	19.25	153	eP	Pn	00 22 01.8	+2.9
SFJD	Kangerlussuaq	19.39	266	P	P	00 21 59.1	-0.2
	comp=Z,0.5nm,0.3s,baz=173,slow=20,SNR=1.7						
SFJD				LR	LR	00 30 15.3	
	comp=Z,174nm,18.1s,baz=20,slow=39						
	comp=Z,2.7nm,0.5s						
SFJD	Kangerlussuaq	19.39	266	P	P	00 21 59.0	-0.3
SFJD				IAmb	IAmb	00 22 10.4	
	comp=Z,43nm,1.4s						
KLMR	Klimovskoe	20.50	131	eP	Pn	00 22 14.2	+0.5
	comp=Z,20nm,2.0s						
KLMR	Klimovskoe	20.50	131	eP	Pn	00 22 14.5	+0.9
KLMR				AMP		00 22 24.1	
	comp=Z,8.0nm,1.0s						
MTSE	Matsula	20.68	154	eP	Pn	00 22 16.1	+0.3
RES	Resolute Bay	20.96	313	LR	LR	00 30 08.0	
	comp=Z,148nm,18.1s,baz=344,slow=36						
RES	Resolute Bay	20.96	313	P	P	00 22 15.6	-0.7
NRIK	Noril'sk	21.96	69	P	P	00 22 30.7	+3.6
	comp=Z,4.4nm,0.6s,baz=342,slow=12,SNR=10.0						
NRIK				LR	LR	00 33 45.9	
	comp=Z,77nm,18.2s,baz=348,slow=44						
	comp=Z,4.4nm,0.6s						
NRIK	Noril'sk	21.96	69	P	P	00 22 28.5	+1.3
NRIK				IAmb	IAmb	00 22 35.6	
	comp=Z,6.8nm,0.9s						
PBUR	Paburge	23.20	158	eP	P	00 22 44.2	+3.9
EKA	Eskdalemuir Ar	23.57	194	LR	LR	00 30 36.2	
	comp=Z,67nm,19.3s,baz=357,slow=33						
PABE	Paberze	23.88	155	P	P	00 22 49.4	+2.5
PABE	Paberze	23.88	155	eP	P	00 22 49.9	+3.0
IIGN	Ignalina	24.23	152	eP	P	00 22 54.0	+3.7
IDID	Didziasalis	24.31	152	eP	P	00 22 54.6	+3.6
SUW	Suwalki	25.30	157	P	P	00 23 00.7	+0.8
SUW	Suwalki	25.30	157	eP	P	00 23 03.9	+4.0
OBN	Obninsk	25.63	139	LR	LR	00 33 30.0	
	comp=Z,16nm,18.1s,baz=352,slow=37						
FRB	Frobisher Bay	25.83	279	LR	LR	00 32 57.7	
	comp=Z,41nm,18.8s,baz=57,slow=36						
TIXI	Tiksi	26.39	37	LR	LR	00 35 42.9	
	comp=Z,42nm,18.6s,baz=342,slow=41						
CLL	Collm	27.45	172	ePx	Px	00 23 23.0	
AKASG	Malin Array Be	29.12	150	P	P	00 23 36.6	+2.5
	comp=Z,0.4nm,0.3s,baz=347,slow=9.2,SNR=8.0						
AKASG				LR	LR	00 35 26.5	
	comp=Z,71nm,20.9s,baz=352,slow=37						
	comp=Z,0.4nm,0.3s						
VRAC	Vranov	29.58	167	LR	LR	00 34 26.9	
	comp=Z,40nm,21.1s,baz=355,slow=34						
GERES	GERESS Array B	29.93	171	P	P	00 23 45.2	+3.6
	comp=Z,0.5nm,0.7s,baz=10,slow=7.0,SNR=5.8						
	comp=Z,0.5nm,0.7s						
GERES	GERESS Array B	29.93	171	P	P	00 23 43.8	+2.2
INK	Inuvik	31.52	333	LR	LR	00 39 56.1	
	comp=Z,22nm,18.7s,baz=309,slow=43						
BUR08	Bucovina Ar. S	31.78	156	P	P	00 24 00.4	+2.5
BUR08				IAmb	IAmb	00 24 17.3	
	comp=Z,7.5nm,1.4s						
BURAR	Bucovina Array	31.81	156	P	P	00 24 00.6	+2.4
DAVOX	Davos/Dischmat	31.91	176	LR	LR	00 37 16.4	
	comp=Z,26nm,18.3s,baz=283,slow=37						
AKTO	Aktyubinsk	33.56	116	LR	LR	00 39 55.2	
	comp=Z,47nm,18.9s,baz=352,slow=40						
SCHQ	Schefferville	33.72	270	LR	LR	00 38 15.5	
	comp=Z,66nm,18.7s,baz=112,slow=37						
YKA	Yellowknife Ar	34.97	316	P	P	00 24 27.4	+2.1
	comp=Z,0.2nm,0.6s,baz=20,slow=9.9,SNR=5.9						
YKA				LR	LR	00 38 21.5	
	comp=Z,93nm,18.4s,baz=2.0,slow=36						
	comp=Z,0.2nm,0.6s						
TIRR	Tirgusor	35.22	153	P	P	00 24 28.8	+1.1
ZALV	Zalesovo Beam	35.43	86	P	P	00 24 33.0	+3.6
	comp=Z,0.8nm,0.7s,baz=331,slow=8.8,SNR=5.4						
ZALV				LR	LR	00 42 21.1	
	comp=Z,66nm,18.0s,baz=25,slow=42						
	comp=Z,0.8nm,0.7s						
ZALV	Zalesovo Beam	35.43	86	P	P	00 24 32.1	+2.7
YAK	Yakutsk	35.62	43	LR	LR	00 40 42.1	
	comp=Z,32nm,18.2s,baz=264,slow=39						
IL31		36.05	341	P	P	00 24 35.1	+0.6
IL31				IAmb	IAmb	00 24 48.2	
	comp=Z,3.6nm,0.9s						
KURK	Kurchatov	37.26	94	P	P	00 24 47.3	+2.3
KURK				IAmb	IAmb	00 24 49.9	
	comp=Z,3.8nm,0.8s						
KURBB	Kurchatov Arra	37.33	94	LR	LR	00 42 20.6	
	comp=Z,84nm,19.9s,baz=308,slow=40						
KBZ	Khabaz	37.63	136	LR	LR	00 40 32.4	
	comp=Z,42nm,19.2s,baz=335,slow=36						
BRTR	Keskin Array B	40.43	147	LR	LR	00 43 51.4	
	comp=Z,28nm,18.2s,baz=12,slow=39						
DLBC	Dease Lake	40.82	327	LR	LR	00 43 32.8	
	comp=Z,69nm,18.7s,baz=356,slow=38						
MAKZ	Makanchi	41.65	92	P	P	00 25 24.4	+2.6
MAKZ				IAmb	IAmb	00 25 34.8	
	comp=Z,5.4nm,1.2s						
MK31	Makanchi Array	41.73	92	P	P	00 25 24.5	+2.1
MK31				IAmb	IAmb	00 25 27.2	
	comp=Z,2.1nm,0.6s						
MKAR	Makanchi Array	41.73	92	P	P	00 25 26.5	+4.1
	comp=Z,1.6nm,0.6s,baz=335,slow=7.0,SNR=20						
MKAR				LR	LR	00 46 04.0	
	comp=Z,82nm,18.3s,baz=328,slow=41						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	41.73	92	P	P	00 25 25.6	+3.2
AAK	Ala-Archa	44.18	102	LR	LR	00 46 26.3	
	comp=Z,71nm,19.6s,baz=344,slow=39						
SONM	Songino Array	45.45	69	P	P	00 25 56.9	+4.5
	comp=Z,0.4nm,0.5s,baz=344,slow=9.4,SNR=1.6						
	comp=Z,0.4nm,0.5s						
GEYT	Alibeck	45.69	120	LR	LR	00 46 53.8	
	comp=Z,57nm,19.3s,baz=358,slow=38						
SADO	Sadowa	45.75	277	LR	LR	00 43 57.9	
	comp=Z,32nm,19.7s,baz=344,slow=35						
KLR	Kul'dur	48.33	46	LR	LR	00 46 56.9	
	comp=Z,30nm,19.9s,baz=210,slow=36						
BCYI	Bear Canyon	52.41	308	P	P	00 26 44.8	-1.1
TKL	Tuckaleechee C	55.45	279	LR	LR	00 49 49.6	
	comp=Z,28nm,18.8s,baz=334,slow=35						
ELK	Elko	56.18	309	LR	LR	00 52 00.7	
	comp=Z,55nm,19.0s,baz=224,slow=37						
KSRS	Korea Array	59.26	52	LR	LR	00 54 04.2	
	comp=Z,45nm,18.2s,baz=335,slow=37						
ANMO	Albuquerque	60.40	300	LR	LR	00 55 29.2	
	comp=Z,34nm,18.5s,baz=27,slow=38						
MJAR	Matsushiro Arr	61.68	43	LR	LR	00 56 43.0	
	comp=Z,21nm,18.4s,baz=298,slow=38						
TXAR	Lajitas Array	65.38	296	P	P	00 28 18.8	+2.8
	comp=Z,0.5nm,0.8s,baz=35,slow=4.6,SNR=5.6						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	65.38	296	P	P	00 28 16.8	+0.8
TORD	Torodi Ar. Bea	65.46	185	P	P	00 28 19.6	+3.1
	comp=Z,12nm,0.6s,baz=11,slow=6.1,SNR=4.6						
LPIG	La Paz	71.65	301	LR	LR	01 03 31.1	
	comp=Z,18nm,18.2s,baz=31,slow=38						

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*REN **11** 00:54:45.8±1.2, 36°.49N±0°.03×113°.98W±0°.03, h14^{km}±4^{km}, Error ellipse: s-maj=4.7km s-min=3.1km az=132.0*
*NEIC **11** 00:54:45.6±0.9, 36°.50N±0°.03×114°.01W±0°.03, h6^{km}±9^{km}, ML2.7/72, ML2.7/5(REN), Error ellipse: s-maj=4.2km s-min=2.7km az=151.0*
*ANF **11** 00:54:46.1±0.7, 36°.51N×113°.95W, h14^{km}±5^{km}, ML3.0/18, ML3.0/18, Error ellipse: s-maj=3.0km s-min=2.0km az=45.0*
ISC 11 00:54:45.2±1.2**, 36°.50N**±0°.02×**114°.02W**±0°.02**, h3**^{km}±11^{km}**, n52, σ0^{s}.58**/63**, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ICU	Indian Springs	0.65	7		Pg	00 54 58.7	+0.9
ICU					Sb	00 55 08.1	-0.9
LCMT	Little Creek M	0.81	50		Pg	00 55 00.8	0.0
LCMT				Sg	Sg	00 55 10.6	-0.6
LCMT				IAML		00 55 11.3	
	comp=E,384nm,0.2s						
LCMT				IAML		00 55 16.8	
	comp=N,255nm,0.2s						
SHPR	Sheep Range	0.92	271		Pg	00 55 03.4	+0.5
SHPR				Sg	Sg	00 55 15.7	+0.9
SHPR				IAML		00 55 18.8	
	comp=E,189nm,0.3s						
CCUT	Cedar City	1.17	26		Pg	00 55 08.0	+0.2
CCUT				Sg	Sg	00 55 22.9	-0.2
PRN	Pahroc Range	1.23	318		Pg	00 55 09.3	+0.5
PRN				Sg	Sg	00 55 25.0	+0.3
SZCU	Shurtz Canyon	1.32	34		Pn	00 55 10.7	-0.2
SZCU				IAML		00 55 28.9	
	comp=N,232nm,0.3s						
U15A	North Rim	1.40	92		Pb	00 55 12.0	-0.1
W13A	Hualapai Mount	1.40	175		Pn	00 55 12.0	+0.1
W13A				IAML		00 55 32.8	
	comp=E,91nm,0.2s						
W13A				IAML		00 55 33.7	
	comp=N,107nm,0.4s						
PKCU	Pink Cliffs	1.66	55	Pn	Pb	00 55 16.5	-0.2
S11A	Rachel	1.79	310	Pn	Pn	00 55 16.1	-1.1
NEE2	Needles Airpor	1.79	196	P	Pn	00 55 17.2	+0.1
	baz=17						
NEE2				Sb	Sg	00 55 43.6	+0.7
	baz=17						
TPNV	Topopah Spring	1.85	285		Pn	00 55 18.3	+0.3
TPNV	Topopah Spring	1.85	285	P	Pn	00 55 18.7	+0.6
	baz=103,SNR=158						
TPNV				S	Sn	00 55 42.4	+0.4
	baz=103						
TUQ	Turquoise Moun	1.87	236	P	Pn	00 55 18.4	+0.1
	baz=56,SNR=19						
TUQ				S	Sn	00 55 42.8	+0.3
	baz=56						
SHOC	Shoshone, Teco	1.92	253	P	Pn	00 55 19.0	+0.1
	baz=72,SNR=17						
PSUT	Pine Spring	2.04	4	Pn	Pb	00 55 22.4	-0.6
PSUT				IAML		00 55 56.3	
	comp=N,48nm,0.6s						
PSUT				IAML		00 55 56.8	
	comp=E,50nm,0.5s						
GWY	Greenwater Val	2.16	262	Pn	Pb	00 55 24.3	-0.9
GWY				IAML		00 55 35.8	
	comp=E,68nm,0.6s						
GWY				IAML		00 55 38.4	
	comp=N,80nm,0.6s						
GMRC	Granite Mounta	2.17	218	P	Pn	00 55 22.4	0.0
	baz=38,SNR=16						
GMRC				Sb	Sg	00 55 54.6	-0.3
	baz=38						
R11A	Troy Canyon, C	2.23	326	Pn	Pn	00 55 23.2	0.0
R11A				IAML		00 55 58.7	
	comp=E,35nm,0.4s						
R11A	Troy Canyon, C	2.23	326	P	Pn	00 55 23.3	+0.1
	baz=145						
R11A				Sb	Sg	00 55 56.1	-0.7
	baz=145						
FURC	Furnace Creek,	2.29	270	Pb	Pg	00 55 28.7	-0.5
	baz=88						
WUAZ	Wupatki	2.36	114	Pn	Pn	00 55 26.3	+1.3
WUAZ	Wupatki	2.36	114	Pb	Pb	00 55 28.6	+0.2
	baz=296						
WUAZ				Sb	Sb	00 55 58.2	+0.2
	baz=296						
QSM	Queen of Sheba	2.36	258	Pn	Pn	00 55 26.2	+1.3
QSM				IAML		00 56 07.5	
	comp=E,42nm,1.0s						
QSM				IAML		00 56 09.3	
	comp=N,35nm,0.8s						
MSU	Marysvale	2.49	36	Pn	Pn	00 55 28.1	+1.2
IRM	Iron Mountain	2.51	202	P	Pn	00 55 27.1	+0.1
	baz=22,SNR=17						
HEC	Hector,Ludlow	2.52	229	P	Pn	00 55 27.2	+0.1
	baz=48,SNR=12						
GSC	Goldstone, Bar	2.56	243		Pn	00 55 27.7	0.0
GSC				IAML		00 56 17.6	
	comp=E,45nm,0.7s						
GSC				IAML		00 56 18.4	
	comp=N,31nm,0.8s						
GSC	Goldstone, Bar	2.56	243	P	Pn	00 55 28.1	+0.4
	baz=62,SNR=26						
Y14A	Wickenburg	2.69	162		Pn	00 55 30.3	+0.9
Y14A				IAML		00 56 12.9	
	comp=N,49nm,0.6s						
Y14A				IAML		00 56 13.3	
	comp=E,43nm,0.5s						
BLYC	Blythe	2.77	189		Pn	00 55 29.8	-0.8
BLYC				IAML		00 56 18.2	
	comp=E,37nm,1.0s						
BLYC				IAML		00 56 20.4	
	comp=N,25nm,0.5s						
MPMC	Manual Prospec	2.84	262	P	Pn	00 55 32.2	+0.5
	baz=80						
LCH	Last Change Ra	3.00	285	Pn	Pn	00 55 34.0	+0.2
TPH	Tonopah	3.00	303	Pn	Pn	00 55 33.7	-0.2
BBRC	Big Bear Solar	3.25	228	S	Sn	00 56 17.3	+0.4
	baz=46						
GLA	Glamis	3.50	191	Pn	Pn	00 55 41.0	+0.4
GLA				IAML		00 56 42.5	
	comp=N,29nm,0.7s						
PFO	Pinyon Flats O	3.51	216	Pn	Pn	00 55 40.2	-0.6
PFO	Pinyon Flats O	3.51	216	P	Pn	00 55 40.5	-0.3
	baz=34						
TPFO	Pinon Flats	3.51	215	P	Pn	00 55 41.3	+0.5
	baz=34						
EDW2	Edwards Air Fo	3.62	245	P	Pn	00 55 42.7	+0.5
	baz=62						
W18A	Petrified Fore	3.74	110	Pg	Pg	00 55 55.8	-1.2

	baz=293						
DUG	**Dugway, Tooele**	**3.81**	**14**	Pg	**Pg**	**00 55 59.6**	**+1.3**
	baz=194						
NV11	**Mina Array Sit**	**3.81**	**302**	Pn	**Pn**	**00 55 45.1**	**0.0**
NV11				IAML		00 56 49.4	
	comp=N,10nm,0.8s						
NVAR	**Mina Array Bea**	**3.92**	**301**	Pn	**Pn**	**00 55 46.4**	**-0.1**
LHV	**Little Huntoon**	**3.98**	**297**	Pn	**Pn**	**00 55 47.3**	**+0.2**
LHV				IAML		00 56 59.2	
	comp=N,19nm,1.1s						
LHV				IAML		00 57 19.6	
	comp=E,20nm,0.9s						
ELS	**Elsinore Mount**	**3.99**	**225**	Pn	**Pn**	**00 55 47.0**	**-0.4**
ELS				IAML		00 56 36.9	
	comp=N,8.8nm,0.7s						
ELS				IAML		00 56 37.0	
	comp=E,10nm,1.2s						
KVN	**Kaiserville**	**4.12**	**309**	Pn	**Pn**	**00 55 49.3**	**+0.1**
KVN				IAML		00 57 00.1	
	comp=N,7.2nm,0.9s						
KVN				IAML		00 57 01.9	
	comp=E,9.7nm,0.6s						
OMMB	**Old Mammoth Mi**	**4.14**	**287**	Pn	**Pn**	**00 55 49.9**	**+0.3**
RYN	**Ryan**	**4.16**	**302**	Pn	**Pn**	**00 55 49.5**	**-0.3**
RYN				IAML		00 57 00.2	
	comp=E,14nm,0.7s						
RYN				IAML		00 57 08.4	
	comp=N,13nm,0.8s						
ELK	**Elko**	**4.35**	**348**	Pn	**Pn**	**00 55 52.2**	**-0.2**
BAR	**Barrett**	**4.39**	**211**	Pn	**Pn**	**00 55 52.9**	**0.0**
BAR				IAML		00 56 51.2	
	comp=N,7.0nm,5.0s						
BAR				IAML		00 57 07.3	
	comp=E,6.9nm,1.0s						
PV13	**Radium Mtn., P**	**4.46**	**67**	Pn	**Pn**	**00 55 53.5**	**-0.5**

ISN ***11*** *01:11:54.1±0.5, 32°.87N×46°.36E, h9^{km}±2^{km}, ML3.0*

TEH ***11*** *01:11:55.7, 33°.04N×46°.40E, h8^{km}, ML3.2*

ISC 11 01:11:54.9±0.9**, 32°.87N**±0°.04×**46°.39E**±0°.04**, h13^{km}, n17, σ1^{s}.02**/22**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.46**	**302**	*e*Pg	**Pg**	**01 12 03.0**	**-0.9**
IBDR				*e*Sg	**Sg**	**01 12 09.0**	**-1.0**
RAFI	**Al-Rafai**	**1.17**	**192**	*e*Pg	**Pn**	**01 12 16.5**	**-0.5**
RAFI				*e*Sg	**Sb**	**01 12 33.0**	**+1.0**
IKFM	**Kafar-mosalman**	**1.38**	**62**	*e*Pg	**Pb**	**01 12 19.9**	**-0.7**
IKFM				*e*Sg	**Sg**	**01 12 40.3**	**+0.8**
IKFM				*e*		01 12 42.6	
	comp=Z,5μm,0.4s						
IGHG	**Ghaleghazi**	**1.46**	**6**	*e*Pg	**Pb**	**01 12 21.2**	**-0.9**
IGHG				*e*		01 12 47.1	
	comp=Z,6μm,0.8s						
KCHF	**Cheshme Sefid,**	**1.50**	**21**	*e*Pg	**Pb**	**01 12 21.7**	**-1.1**
KCHF				*e*		01 12 44.3	
	comp=Z,12μm,0.4s						
KER	**Kermanshah**	**1.63**	**22**	*e*Pg	**Pb**	**01 12 23.9**	**-1.1**
BHD	**Baghdad**	**1.74**	**284**	*e*Pn	**Pn**	**01 12 26.0**	**+1.2**
BHD				*e*Sn	**Sb**	**01 12 49.0**	**+0.7**
BHD				AML	AML	01 12 54.6	
	comp=E,286nm,0.5s						
IDOB	**Doab**	**1.75**	**58**	*e*Pn	**Pb**	**01 12 25.9**	**-1.2**
IDHR	**Dehrash**	**1.82**	**360**	*e*Pn	**Pn**	**01 12 26.2**	**0.0**
IDHR				*e*		01 12 52.7	
	comp=Z,4μm,0.4s						
IBZA	**Bozab**	**2.01**	**37**	*e*Pn	**Pb**	**01 12 30.0**	**-1.5**
ILIN	**Lien**	**2.10**	**13**	*e*Pn	**Pn**	**01 12 30.2**	**+0.2**
ILIN				*e*		01 13 05.5	
	comp=Z,1μm,0.5s						
HSAM	**Samen**	**2.28**	**54**	*e*Pn	**Pn**	**01 12 33.0**	**+0.5**
AMIS	**Naft Sefid**	**2.73**	**115**	*e*Pn	**Pb**	**01 12 43.2**	**-0.5**
HAGD	**Aghdareh**	**3.00**	**49**	*e*Pn	**Pn**	**01 12 43.4**	**+1.0**
HAGD				*e*		01 12 44.8	
	comp=Z,344nm,0.2s						
IKRK	**Kirkuk**	**3.04**	**327**	*e*Pn	**Pn**	**01 12 44.0**	**+1.2**
IKRK				*e*Sn	**Sn**	**01 13 21.0**	**+1.9**
IKRK				AML	AML	01 13 34.0	
	comp=N,56nm,0.4s						
IKRK				AML	AML	01 13 34.0	
	comp=E,51nm,0.7s						
QABG	**Abgarm-Qazvin**	**3.87**	**42**	*e*Pn	**Pn**	**01 12 54.8**	**+0.4**
IRAZ	**Razeghan**	**3.87**	**48**	*e*Pn	**Pn**	**01 12 54.7**	**+0.3**

MOS ***11*** *01:15:45.7±0.9, 31°.99N×95°.08E, h11^{km}, mb5.6/74, MS5.2/40, Error ellipse: s-maj=5.5km s-min=3.0km az=126.6*

IDC ***11*** *01:15:46.0±0.3, 31°.98N×95°.09E, h0^{km}, mb4.9/47, mbtmp4.9/51, ML4.5/4, MS4.8/66, Error ellipse: s-maj=9.4km s-min=8.5km az=25.0*

NEIC ***11*** *01:15:47.6, 32°.05N×95°.03E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-7.31; M$_{\theta\theta}$0.24; M$_{\phi\phi}$7.07; M$_{r\theta}$-1.56; M$_{\theta\phi}$4.43; M$_{\phi r}$-3.76; Fault plane solution: M$_0$9.38000×10^{16} NP1:φ$_s$24.04000°, δ58.11000°, λ-92.57000°. NP2:φ$_s$208.89000°, δ31.98000°, λ-85.88000°. Principal axes: T 10.1944, Plg13.0000°, Azm116.0000°; N -1.9346, Plg2.0000°, Azm25.0000°; P -8.2598, Plg77.0000°, Azm286.0000°;*

NEIC ***11*** *01:15:47.2±1.8, 32°.02N±0°.06×95°.03E±0°.08, h8^{km}±1^{km}, mb5.5/283, Mwb5.2/39 Error ellipse: s-maj=11.7km s-min=10.6km az=116.0*

NDI ***11*** *01:15:48.5±2.5, 32°.06N×94°.78E, h10^{km}, mb5.4, MS5.4, mb5.5(NEIC)*

BJI ***11*** *01:15:48.1±0.0, 32°.01N×95°.08E, h10^{km}, mb5.0/63, mB5.5/54, ML5.2/13, Ms5.7/91, Ms7 5.6/83*

GCMT ***11*** *01:15:49.2±0.1, 31°.87N±0°.01×95°.12E±0°.01, h17^{km}, MW5.5/138, Moment Tensor Solution. s126, c214; s138, c304; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.76±.03; M$_{\theta\theta}$-0.09±.03; M$_{\phi\phi}$1.85±.03; M$_{r\theta}$-0.39±.07; M$_{\theta\phi}$1.25±.02; M$_{\phi r}$-0.40±.06; Best double couple: M$_0$2.18900×10^{17} NP1:φ$_s$197.00000°, δ39.00000°, λ-104.00000°. NP2:φ$_s$34.00000°, δ53.00000°, λ-79.00000°. Principal axes: T 2.5270, Plg7.0000°, Azm116.0000°; N -0.6760, Plg8.0000°, Azm208.0000°; P -1.8500, Plg79.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 01:15:47.4±0.3**, 31°.94N**±0°.02×**95°.01E**±0°.02**, h13^{km}**±1^{km}**, h13^{km}:pP-P, n1333, σ1^{s}.82**/1364**, mb5.5**/313**, MS5.0**/112**, 133C-238D, Fault plane solution: NP1:**φ$_s$229.78906°**,** δ13.16015°**,** λ-60.31167°. **NP2:**φ$_s$19.44023°**,** δ78.59239°**,** λ-96.60565°. **Principal axes:** T Plg33.2765°**,** Azm115.0237°**;** N Plg6.4746°**,** Azm20.7523°**;** P Plg55.9340°**,** Azm281.0905°**; Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.00**	**237**	Pn	**Pn**	**01 16 52.6**	**+3.7**
LSA	**Lhasa**	**4.00**	**237**	P	**Pn**	**01 16 52.6**	**+3.7**
LSA	**Lhasa**	**4.00**	**237**	Pn	**Pb**	**01 16 54.0**	**-4.1**
LSA				Sn	**Sb**	**01 17 46.5**	**-0.1**
LSA				LR	LR		
	comp=N,122μm,8.2s						
LSA				LR	LR		
	comp=E,68μm,9.6s						
LSA				LR	LR		
	comp=Z,76μm,8.9s						
LSA	**Lhasa**	**4.00**	**237**	*i* P	**Pb**	**01 16 54.0**	**-4.1**
	SNR=58						
GOMU	**GeErMu**	**4.25**	**358**	Pn	**Pn**	**01 16 55.7**	**+3.5**
GOMU				Pg	**Pb**	**01 17 00.0**	**-2.3**
GOMU				Sg	**Sg**	**01 18 08.6**	**+4.6**
GOMU				smax	smax		
	comp=N,910nm,1.4s						
GOMU				smax	smax		
	comp=E,430nm,2.0s						
GOMU				LR	LR		
	comp=N,66μm,7.6s						
GOMU				LR	LR		
	comp=E,47μm,5.5s						
GOMU				LR	LR		
	comp=Z,52μm,8.0s						
LKP	**Lekhapani**	**4.65**	**171**	*e*P	**Pn**	**01 17 01.1**	**+3.8**
ITAN	**ITANAGAR**	**4.91**	**194**	*e*P	**Pn**	**01 17 04.5**	**+3.6**
MOKO	**MOKOCHONG**	**5.62**	**185**	*e*P	**Pn**	**01 17 13.9**	**+3.1**
TEZP	**TEZPUR**	**5.64**	**201**	*e*P	**Pn**	**01 17 13.9**	**+2.9**
KOHI	**KOHIMA**	**6.25**	**188**	*e*P	**Pn**	**01 17 21.9**	**+2.5**
GUWA	**GUWAHATI**	**6.42**	**208**	*e*P	**Pn**	**01 17 23.7**	**+2.0**
SHL	**Shillong**	**6.92**	**204**	*e*P	**Pn**	**01 17 30.0**	**+1.3**
GTK	**Tadong**	**7.23**	**232**	*e*x	x	01 17 38.6	
SILR	**SILCHAR**	**7.39**	**196**	*e*x	x	01 17 43.3	
CD2	**Chengdu**	**7.54**	**96**	Pn	**Pn**	**01 17 39.8**	**+2.6**
CD2				Pg	Pg	01 18 05.5	-6.3
CD2				Sn	**Sn**	**01 18 57.8**	**-4.8**
CD2				Sg	**Sg**	**01 19 43.6**	**-5.9**
CD2				smax	smax		
	comp=E,720nm,1.7s						
PZH	**PanZhiHua**	**7.99**	**131**	P	**Pn**	**01 17 45.8**	**+2.4**
PZH				pP	Pb	01 17 48.3	-18
PZH				PP	**PnPn**	**01 17 54.3**	**+3.3**
PZH				S	**Sn**	**01 19 18.6**	**+4.8**
PZH				SS	**SnSn**	**01 19 30.6**	**+5.2**
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,420nm,3.8s						
PZH				LR	LR		
	comp=N,28μm,8.9s						
PZH				LR	LR		
	comp=E,39μm,9.4s						
PZH				LR	LR		
	comp=Z,36μm,10.6s						
ODAN	**Odare**	**8.35**	**235**	*e*P	**Pn**	**01 17 51.9**	**+3.4**
	277nm,0.4s						
GTA	**Gaotai**	**8.41**	**26**	*e*P	**Pn**	**01 17 50.3**	**+1.1**
GTA				pP	Pb	01 17 53.5	-20
GTA				sP	Pg	01 17 56.8	-32
GTA				S	**Sn**	**01 19 24.5**	**+0.4**
GTA				pmax	pmax		
	comp=Z,540nm,8.0s						
GTA				LR	LR		
	comp=N,10μm,10.4s						
GTA				LR	LR		
	comp=E,14μm,9.2s						
GTA				LR	LR		
	comp=Z,11μm,11.5s						
LZH	**Lanzhou**	**8.42**	**58**	P	**Pn**	**01 17 51.0**	**+1.7**
LZH				S	**Sn**	**01 19 29.7**	**+5.5**
LZH				smax	smax		
	comp=N,360nm,1.6s						
LZH				smax	smax		
	comp=E,310nm,1.5s						
LZH				LR	LR		
	comp=N,34μm,7.0s						
LZH				LR	LR		
	comp=E,23μm,7.0s						
LZH				LR	LR		
	comp=Z,36μm,7.6s						
AZL	**Aizawl**	**8.42**	**195**	*e*P	**Pn**	**01 17 50.4**	**+1.1**
JIRN	**Jiri**	**8.77**	**243**	*e*P	**Pn**	**01 17 55.7**	**+1.4**
	36nm,0.9s						
RAMN	**Ramite**	**8.86**	**238**	*e*P	**Pn**	**01 17 57.0**	**+1.6**
	254nm,0.4s						
BELO	**BELONIA**	**9.21**	**201**	*e*P	**Pn**	**01 18 02.1**	**+2.0**
KKN	**Kakani**	**9.40**	**246**	*e*P	**Pn**	**01 18 02.8**	**-0.1**
	224nm,0.6s						
PKI	**Pulchoki**	**9.41**	**245**	*e*P	**Pn**	**01 18 03.0**	**-0.1**
	383nm,0.8s						
PKIN	**Phulchoki**	**9.42**	**245**	*e*P	**Pn**	**01 18 03.2**	**+0.1**
	227nm,0.4s						
KMI	**Kunming**	**9.60**	**133**	⇑P	**Pn**	**01 18 06.6**	**+1.0**
KMI				S	**Sn**	**01 19 56.5**	**+2.9**
KMI				pmax	pmax		
	comp=Z,47nm,1.4s						
KMI				pmax	pmax		
	comp=Z,390nm,4.1s						
KMI				LR	LR		
	comp=N,19μm,8.4s						
KMI				LR	LR		
	comp=E,34μm,7.4s						
KMI				LR	LR		
	comp=Z,34μm,8.9s						
BRDH	**Bariadhala**	**9.70**	**199**	Pn	**Pn**	**01 18 08.9**	**+2.2**
	0.2nm,0.3s,baz=180,slow=24,SNR=15						
BRDH				Sn	**Sn**	**01 19 56.8**	**+1.2**
	0.4nm,0.3s,baz=180,slow=24,SNR=8.0						
GKN	**Gorkha**	**9.81**	**249**	*e*P	**Pn**	**01 18 07.6**	**-0.8**
	236nm,0.5s						
DANN	**Dangsing**	**10.38**	**253**	*e*P	**Pn**	**01 18 15.6**	**-0.6**
	390nm,0.7s						
VLK	**Valmikinagar**	**10.73**	**247**	*e*x	x	01 20 00.2	
KOLN	**Koldanda**	**10.74**	**250**	*e*P	**Pn**	**01 18 20.5**	**-0.7**
	157nm,0.7s						
PYUN	**Piuthan**	**11.10**	**253**	*e*P	**Pn**	**01 18 25.6**	**-0.5**
	823nm,0.8s						
BOK	**Bokaro**	**11.44**	**227**	⇓*i*P	**Pn**	**01 18 29.6**	**-1.0**
BOK				IAmb	IAmb	01 18 34.4	
	comp=Z,144nm,0.5s						
GYA	**Guiyang**	**11.55**	**115**	⇑P	**Pn**	**01 18 31.8**	**-0.4**
GYA				sP		01 18 39.0	
GYA				S	**Sn**	**01 20 41.9**	**+0.8**
GYA				pmax	pmax		
	comp=Z,78nm,2.4s						
GYA				pmax	pmax		
	comp=Z,810nm,3.5s						
GYA				LR	LR		
	comp=Z,20μm,7.5s						
GYA				LR	LR		
	comp=Z,30μm,9.2s						
GYA				LR	LR		
	comp=Z,42μm,9.7s						
XAN	**Xi'an**	**11.87**	**76**	⇑P	**Pn**	**01 18 36.9**	**+0.5**
XAN				pP		01 18 40.6	
XAN				sP		01 18 44.1	
XAN				S	**Sn**	**01 20 50.2**	**+1.5**
XAN				pmax	pmax		
	comp=Z,34nm,1.3s						
XAN				pmax	pmax		
	comp=Z,930nm,7.1s						
XAN				LR	LR		
	comp=Z,58μm,12.1s						
XAN				LR	LR		
	comp=Z,32μm,10.5s						
XAN				LR	LR		
	comp=Z,41μm,10.8s						
ENH	**Enshi**	**12.52**	**94**	Pn	**Pn**	**01 18 44.1**	**-1.2**
LGTI	**Lohaghat**	**12.95**	**263**	*e*P	Pn	01 18 58.4	+7.3
LGTI				*e*S	**Sn**	**01 21 10.2**	**-4.9**
WMQ	**Urumqi**	**13.19**	**336**	*e*P	**Pn**	**01 18 58.7**	**+4.3**
WMQ				pP	P	01 19 01.1	-3.3
WMQ				PP	**PnPn**	**01 19 10.9**	**+8.6**
WMQ				S	**Sn**	**01 21 21.4**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,140nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,2μm,4.9s						
WMQ				LR	LR		
	comp=Z,17μm,9.3s						
WMQ				LR	LR		
	comp=Z,15μm,8.9s						
WMQ				LR	LR		
	comp=Z,10μm,15.5s						
CHTO	**Chiang Mai**	**13.54**	**164**	Pn	**Pn**	**01 19 00.1**	**+0.8**
CHTO	**Chiang Mai**	**13.54**	**164**	P	**Pn**	**01 19 00.1**	**+0.8**
CHTO	**Chiang Mai**	**13.54**	**164**	P	**Pn**	**01 19 00.0**	**+0.7**
CHTO				P	**Pn**	**01 19 00.0**	**+0.7**
CHTO	**Chiang Mai**	**13.54**	**164**	P	**Pn**	**01 19 01.1**	**+1.8**
CM31	**Chiang Mai Arr**	**13.88**	**164**	Pn	**Pn**	**01 19 06.1**	**+2.1**
CMAR	**Chiang Mai Arr**	**13.88**	**164**	Pn	**Pn**	**01 19 05.9**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=341,slow=12,SNR=6.2						
CMAR				Lg	Lg	01 23 11.2	
	comp=Z,1.5nm,0.3s,baz=350,slow=26,SNR=1.8						
CMAR				LR	LR	01 24 58.9	
	comp=Z,6μm,20.7s,baz=345,slow=40						
	comp=Z,7.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.88**	**164**	Pn	**Pn**	**01 19 05.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**13.88**	**164**	P	**Pn**	**01 19 05.4**	**+1.4**
BWNR	**Bhubaneshwar**	**14.23**	**218**	*e*P	**Pn**	**01 19 07.4**	**-1.3**
JHSG	**JHARSUGUGA**	**14.25**	**227**	*e*P	**Pn**	**01 19 11.0**	**+2.0**
DDI	**Dehra Dun**	**14.61**	**268**	*e*P	**Pn**	**01 19 14.2**	**+0.2**
DDI				IAmb	IAmb	01 19 21.2	
	comp=Z,298nm,1.0s						
DDI				*i* x	x	01 24 53.0	
DDI				IAMs_20	IAMs_20	01 25 34.3	
	comp=Z,22μm,4.9s						
LYN	**LuoYang**	**14.84**	**75**	*e*P	**Pn**	**01 19 16.1**	**-0.9**
LYN				pP	P	01 19 23.6	+0.8
LYN				S	**Sn**	**01 21 56.8**	**-4.4**
LYN				pmax	pmax		
	comp=Z,30nm,2.5s						
LYN				pmax	pmax		
	comp=Z,470nm,5.7s						
LYN				LR	LR		
	comp=Z,40μm,10.9s						
LYN				LR	LR		
	comp=Z,8μm,12.8s						
LYN				LR	LR		
	comp=Z,20μm,9.7s						
BTO	**Baotou**	**14.86**	**50**	*e*P	**Pn**	**01 19 17.1**	**-0.2**
BTO				S	**Sn**	**01 22 02.2**	**+0.3**
BTO				LR	LR		
	comp=Z,18μm,13.5s						
BTO				LR	LR		
	comp=Z,30μm,16.1s						
GULI	**GuiLin**	**15.02**	**112**	⇓P	**Pn**	**01 19 15.9**	**-3.5**
GULI				S	**Sn**	**01 21 55.8**	**-10**
GULI				pmax	pmax		
	comp=Z,120nm,0.8s						
GULI				LR	LR		
	comp=N,6μm,10.3s						
GULI				LR	LR		
	comp=E,11μm,9.2s						
GULI				LR	LR		
	comp=Z,25μm,9.8s						
BLSP	**Bilaspur**	**15.06**	**233**	*e*x	**Pn**	**01 19 15.5**	**-4.5**
SMLA	**Simla**	**15.24**	**272**	*e*P	**Pn**	**01 19 20.0**	**-2.4**
SMLA				IAmb	IAmb	01 19 25.5	
	comp=Z,250nm,1.1s						
TIY	**Taiyuan**	**15.42**	**63**	⇓P	**P**	**01 19 28.7**	**-0.6**
TIY				sP	**pP**	**01 19 33.1**	**-1.2**
TIY				PP	**sP**	**01 19 42.8**	**+6.2**
TIY				S	**Sn**	**01 22 10.0**	**-5.4**
TIY				sS	**S**	**01 22 21.4**	**-10**
TIY				LR	LR		
	comp=Z,16μm,8.2s						
TIY				LR	LR		
	comp=Z,6μm,9.6s						
TIY				LR	LR		
	comp=Z,8μm,10.0s						
JHNI	**Jhansi**	**15.82**	**250**	*e*x	**Pn**	**01 19 33.7**	**+3.8**
BHK	**Bhakra**	**15.84**	**273**	*e*P	**Pn**	**01 19 29.3**	**-0.9**
JBP	**Jabalpur**	**15.92**	**240**	*e*x	**Pn**	**01 19 28.1**	**-3.2**
JBP				*e*P	**Pn**	**01 19 28.1**	**-3.2**
JBP				IAmb	IAmb	01 19 37.8	
	comp=Z,165nm,0.8s						
JBP				*e*S	**Sn**	**01 22 20.3**	**-7.4**
CNSH	**ChangSha**	**15.96**	**99**	⇑P	**Pn**	**01 19 27.8**	**-3.9**
CNSH				S	**Sn**	**01 22 22.2**	**-6.3**
CNSH				LR	LR		
	comp=N,7μm,8.5s						
CNSH				LR	LR		
	comp=E,14μm,9.6s						
CNSH				LR	LR		
	comp=Z,14μm,10.9s						
HHC	**Hu-ho-hao-te**	**16.00**	**52**	*e*P	**Pn**	**01 19 32.1**	**-0.2**
HHC				S	**Sn**	**01 22 27.5**	**-2.1**
HHC				sS	S	01 22 37.3	-6.2
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1μm,4.8s						
HHC				LR	LR		
	comp=Z,31μm,9.8s						
HHC				LR	LR		
	comp=Z,23μm,9.2s						
HHC				LR	LR		
	comp=Z,27μm,10.2s						
RAGD	**RAYAGADA**	**16.36**	**222**	*e*P	**Pn**	**01 19 36.6**	**-0.4**
KUDL	**Kundal**	**16.48**	**262**	*e*P	**Pn**	**01 19 38.8**	**+0.5**
WHN	**Wuhan**	**16.60**	**90**	⇓P	**Pn**	**01 19 38.9**	**-1.0**
WHN				S	**Sn**	**01 22 45.0**	**+0.9**
WHN				pmax	pmax		
	comp=Z,410nm,1.3s						
WHN				LR	LR		
	comp=Z,23μm,7.8s						
WHN				LR	LR		
	comp=Z,39μm,8.7s						
WHN				LR	LR		
	comp=Z,54μm,8.6s						
TARG	**Taragay, Kyrgy**	**16.86**	**310**	P	**Pn**	**01 19 44.4**	**+0.9**
PRZ	**Przheval'sk**	**16.88**	**313**	P	**P**	**01 19 47.1**	**+1.5**
PRZ	**Przheval'sk**	**16.88**	**313**	P	**P**	**01 19 47.1**	**+1.5**
PRZ				pmax	pmax		
	comp=Z,1μm,1.6s						
UZB	**Uzynbulak**	**16.88**	**316**	*i* P	**Pn**	**01 19 43.3**	**-0.2**
UZB				*e*S	**Sn**	**01 22 50.9**	**0.0**
UZB				pmax	pmax		
	comp=Z,92nm,1.1s						
UZB	**Uzynbulak**	**16.88**	**316**	*i* P	**Pn**	**01 19 43.3**	**-0.2**
	comp=Z,92nm,1.1s,baz=315						
UZB				*e*S	**Sn**	**01 22 51.0**	**0.0**
	baz=315						
JMU	**Jammu**	**17.02**	**278**	*e*x	x	01 19 48.4	
HNS	**HongShan**	**17.08**	**66**	⇑P	**Pn**	**01 19 44.5**	**-1.4**
HNS				PP	**PnPn**	**01 20 00.6**	**+4.9**
HNS				S	**Sn**	**01 22 53.8**	**-1.9**
HNS				SS	**SnSn**	**01 23 14.0**	**+5.0**
HNS				pmax	pmax		
	comp=Z,29nm,1.5s						
HNS				pmax	pmax		
	comp=Z,220nm,3.7s						
HNS				LR	LR		
	comp=Z,14μm,10.4s						
HNS				LR	LR		
	comp=Z,29μm,11.5s						
HNS				LR	LR		
	comp=Z,26μm,11.8s						
KSH	**Kashi**	**17.19**	**301**	P	**P**	**01 19 50.2**	**+1.2**
KSH				pP	sP	01 19 54.2	-2.1
KSH				sP	pP	01 19 58.0	+4.1
KSH				S	**S**	**01 23 07.4**	**-0.4**
KSH				pmax	pmax		
	comp=Z,34nm,1.7s						
KSH				pmax	pmax		
	comp=Z,3μm,5.6s						
KSH				LR	LR		
	comp=Z,6μm,13.7s						
KSH				LR	LR		
	comp=Z,21μm,15.3s						
KSH				LR	LR		
	comp=Z,20μm,16.5s						
SATY	**Saty**	**17.20**	**315**	*d i*P	**Pn**	**01 19 47.6**	**+0.1**
SATY				*i* S	**Sn**	**01 22 59.1**	**+0.5**
SATY				pmax	pmax		
	comp=Z,209nm,1.6s						
SATY	**Saty**	**17.20**	**315**	⇓*i*P	**Pn**	**01 19 47.6**	**+0.1**
	comp=Z,208nm,1.6s,baz=314						
SATY				*i* S	**Sn**	**01 22 59.2**	**+0.5**
	baz=314						
ZHN	**Zhinishke**	**17.24**	**315**	*e*P	**Pn**	**01 19 47.7**	**-0.3**
ZHN				*i* S	**Sn**	**01 22 59.6**	**-0.1**
ZHN				pmax	pmax		
	comp=Z,246nm,1.8s						
ZHN	**Zhinishke**	**17.24**	**315**	*e*P	**Pn**	**01 19 47.8**	**-0.3**
	comp=Z,246nm,1.8s,baz=315						
ZHN				*i* S	**Sn**	**01 22 59.6**	**-0.1**
	baz=315						
KPKS	**Kokpek**	**17.27**	**316**	*i* P	**Pn**	**01 19 47.6**	**-0.7**
KPKS				*i* S	**Sn**	**01 23 00.0**	**-0.3**
KPKS	**Kokpek**	**17.27**	**316**	*i* P	**Pn**	**01 19 47.7**	**-0.7**
	baz=316						
KPKS				*i* S	**Sn**	**01 23 00.1**	**-0.3**
	baz=316						
ZSN	**Zaisan**	**17.32**	**336**	*e*P	**Pn**	**01 19 48.8**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,103nm,1.1s						
ZSN	**Zaisan**	**17.32**	**336**	*e*P	**Pn**	**01 19 48.8**	**-0.1**
	comp=Z,103nm,1.1s,baz=336						
KDJ	**Kajisay**	**17.46**	**311**	P	**P**	**01 19 51.4**	**-0.7**
KDJ	**Kajisay**	**17.46**	**311**	P	**P**	**01 19 51.4**	**-0.7**
KDJ				pmax	pmax		
	comp=Z,267nm,1.2s						
MK31	**Makanchi Array**	**17.76**	**330**	P	**Pn**	**01 19 53.6**	**-0.8**
MK31	**Makanchi Array**	**17.76**	**330**	P	**Pn**	**01 19 53.6**	**-0.8**
MK31				pmax	pmax		
	comp=Z,52nm,1.0s						
MKAR	**Makanchi Array**	**17.76**	**330**	P	**Pn**	**01 19 53.9**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=139,slow=13,SNR=48						
MKAR				S	**S**	**01 23 15.6**	**-3.6**
	comp=Z,3.7nm,0.9s,baz=152,slow=20,SNR=1.5						
MKAR				LR	LR	01 27 36.4	
	comp=Z,4μm,18.9s,baz=144,slow=40						
	comp=Z,11nm,0.6s						
MKAR	**Makanchi Array**	**17.76**	**330**	Pn	**Pn**	**01 19 53.0**	**-1.4**
MKAR	**Makanchi Array**	**17.76**	**330**	P	**Pn**	**01 19 53.0**	**-1.4**
BHPL	**Bhopal**	**17.82**	**245**	*e*x	**Pn**	**01 19 52.1**	**-3.1**
BHPL				*i* x	x	01 26 44.9	

BHPL				IAMs_20	IAMs_20	01 27 10.5	
	comp=Z,13µm,11.2s						
MAKZ	**Makanchi**	**17.91**	**330**	P	**Pn**	**01 19 56.0**	**-0.2**
MAKZ	**Makanchi**	**17.91**	**330**	P	**Pn**	**01 19 56.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,131nm,1.0s						
TNSS	**Tian-Shan**	**18.08**	**313**	*e*P	**Pn**	**01 19 58.7**	**+0.1**
TNSS	**Tian-Shan**	**18.08**	**313**	*e*P	**Pn**	**01 19 58.8**	**+0.1**
	baz=312						
MDOK	**Medeo**	**18.08**	**313**	*i* P	**P**	**01 19 58.7**	**-0.1**
MDOK				*i* S	**Sn**	**01 23 21.0**	**+0.9**
MDOK	**Medeo**	**18.08**	**313**	*i* P	**P**	**01 19 58.7**	**-0.1**
	baz=313						
MDOK				*i* S	**Sn**	**01 23 21.1**	**+0.9**
	baz=313						
SONM	**Songino Array**	**18.09**	**25**	P	**Pn**	**01 19 57.9**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=208,slow=12,SNR=24						
SONM				LR	LR	01 27 35.4	
	comp=Z,3µm,21.1s,baz=209,slow=39						
	comp=Z,8.9nm,0.5s						
SONM	**Songino Array**	**18.09**	**25**	P	**Pn**	**01 19 57.5**	**-1.0**
ULHL	**Ulahol**	**18.13**	**310**	P	**P**	**01 20 05.3**	**+5.8**
	SNR=13						
AAA	**Alma-Ata**	**18.19**	**313**	*e*P	**P**	**01 20 00.5**	**+0.6**
AAA				*e*S	**Sn**	**01 23 23.8**	**+1.2**
AAA				pmax	pmax		
	comp=Z,252nm,1.6s						
AAA	**Alma-Ata**	**18.19**	**313**	*e*P	**P**	**01 20 00.5**	**+0.6**
	comp=Z,252nm,1.6s,baz=313						
AAA				*e*S	**Sn**	**01 23 23.9**	**+1.3**
	baz=313						
ULN	**Ulaanbaatar**	**18.36**	**26**	Pn	**Pn**	**01 20 01.1**	**-0.6**
ULN				P	**P**	**01 20 01.4**	**-0.5**
ULN	**Ulaanbaatar**	**18.36**	**26**	*de*P	**Pn**	**01 20 00.0**	**-1.8**
ULN				pmax	pmax		
	comp=Z,48nm,1.3s						
ULN	**Ulaanbaatar**	**18.36**	**26**	P	**P**	**01 20 02.6**	**+0.7**
ULN				P	**P**	**01 20 02.6**	**+0.7**
CHCP	**Chirah Chowk**	**18.36**	**281**	P	**Pn**	**01 20 01.5**	**-0.4**
TDK	**Taldyqorghan**	**18.37**	**320**	*i* P	**P**	**01 20 01.9**	**+0.1**
TDK				pmax	pmax		
	comp=Z,180nm,1.5s						
TDK	**Taldyqorghan**	**18.37**	**320**	*i* P	**P**	**01 20 02.0**	**+0.1**
	comp=Z,180nm,1.5s,baz=319						
NIL	**Nilore**	**18.37**	**281**		**Pn**	**01 20 00.5**	**-1.5**
NIL	**Nilore**	**18.37**	**281**	P	**Pn**	**01 20 00.5**	**-1.5**
NIL				pmax	pmax		
	comp=Z,1µm,1.5s						
BOOM	**Boomskoye usch**	**18.44**	**310**	P	**P**	**01 20 02.2**	**-0.7**
BOOM	**Boomskoye usch**	**18.44**	**310**	P	**P**	**01 20 02.2**	**-0.7**
BOOM				pmax	pmax		
	comp=Z,177nm,1.1s						
CHKK	**Chushkaly**	**18.50**	**315**	*e*P	**Pn**	**01 20 04.0**	**+0.6**
CHKK	**Chushkaly**	**18.50**	**315**	*e*P	**Pn**	**01 20 04.1**	**+0.6**
	baz=314						
QIZ	**Qiongzhong**	**18.53**	**130**		**P**	**01 20 02.8**	**-1.0**
QIZ	**Qiongzhong**	**18.53**	**130**	P	**P**	**01 20 03.5**	**-0.3**
QIZ				S	**S**	**01 23 33.8**	**-1.3**
QIZ				sS	**sS**	**01 23 41.3**	**-1.7**
QIZ				pmax	pmax		
	comp=Z,49nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,1µm,3.9s						
QIZ				LR	LR		
	comp=Z,12µm,13.3s						
QIZ				LR	LR		
	comp=Z,10µm,14.6s						
QIZ				LR	LR		
	comp=Z,12µm,14.1s						
QIZ	**Qiongzhong**	**18.53**	**130**	P	**Pn**	**01 20 05.8**	**+1.8**
AJM	**Ajmer**	**18.59**	**258**	*e*P	**P**	**01 20 03.9**	**-0.5**
KNGR	**Kungurtug, Tuv**	**18.74**	**5**	*i* P	**P**	**01 20 04.7**	**-1.3**
DGPR	**DIGLIPUR**	**18.77**	**186**	⇑*i*P	**Pn**	**01 20 08.6**	**+1.7**
DGPR				IAmb	IAmb	01 20 14.5	
	comp=Z,203nm,0.9s						
TIA	**Tai'an**	**18.80**	**71**	P	**P**	**01 20 06.6**	**0.0**
TIA				S	**Sn**	**01 23 36.4**	**-0.9**
TIA				pmax	pmax		
	comp=Z,280nm,2.9s						
TIA				LR	LR		
	comp=Z,6µm,9.8s						
TIA				LR	LR		
	comp=Z,11µm,15.0s						
TIA				LR	LR		
	comp=Z,14µm,11.4s						
TKM2	**Tokmak 2**	**18.87**	**311**	P	**Pn**	**01 20 10.4**	**+2.2**
	SNR=31						
BJT	**Baijiatuau**	**18.90**	**59**	P	**Pn**	**01 20 08.3**	**+0.1**
BJT	**Baijiatuau**	**18.90**	**59**	P	**Pn**	**01 20 08.4**	**+0.1**
BJT				pmax	pmax		
	comp=Z,80nm,1.2s						
BJI	**Beijing**	**18.91**	**59**	P	**Pn**	**01 20 09.2**	**+0.8**
BJI				S	**S**	**01 23 41.5**	**-0.9**
BJI				SS	**SnSn**	**01 23 58.8**	**+5.0**
BJI				pmax	pmax		
	comp=Z,35nm,1.4s						
BJI				pmax	pmax		
	comp=Z,1µm,6.1s						
BJI				LR	LR		
	comp=Z,17µm,10.7s						
BJI				LR	LR		
	comp=Z,12µm,10.7s						
BJI				LR	LR		
	comp=Z,14µm,11.4s						
KUU	**Kurty**	**18.91**	**314**	*d i*P	**Pn**	**01 20 09.6**	**+1.2**
KUU				*i* S	**S**	**01 23 41.1**	**-1.3**
KUU				pmax	pmax		
	comp=Z,117nm,1.0s						
KUU	**Kurty**	**18.91**	**314**	⇓*i*P	**Pn**	**01 20 09.6**	**+1.2**
	comp=Z,117nm,1.0s,baz=314						
KUU				*i* S	**S**	**01 23 41.2**	**-1.3**
	baz=314						
SARP	**Sargodha**	**18.96**	**276**	P	**P**	**01 20 07.3**	**-1.1**
KBK	**Karagaybulak**	**19.17**	**310**	P	**Pn**	**01 20 16.6**	**+4.9**
	SNR=33						
UCH	**Uchtor**	**19.27**	**308**	P	**Pn**	**01 20 14.6**	**+1.4**
	SNR=36						
ZAK	**Zakamensk**	**19.43**	**16**	*e*P	**Pn**	**01 20 14.4**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,120nm,1.3s						
FRU1	**Bishkek**	**19.45**	**310**	P	**Pn**	**01 20 15.2**	**+0.2**
FRU1				IAmb	IAmb	01 20 22.4	
	comp=Z,399nm,1.5s						
FRU1	**Bishkek**	**19.45**	**310**	P	**Pn**	**01 20 15.2**	**+0.2**
FRU1				pmax	pmax		
	comp=Z,399nm,1.5s						
CHMS	**Chumysh**	**19.46**	**310**	P	**Pn**	**01 20 15.7**	**+0.7**
	SNR=21						
AAK	**Ala-Archa**	**19.46**	**309**	P	**Pn**	**01 20 16.7**	**+1.4**
	SNR=52						
AAK	**Ala-Archa**	**19.46**	**309**	P	**Pn**	**01 20 15.9**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=122,slow=8.6,SNR=56						
AAK				S	**S**	**01 23 58.3**	**+4.5**
	comp=Z,7.3nm,0.8s,baz=324,slow=23,SNR=1.6						
AAK				LR	LR	01 29 14.3	
	comp=Z,8µm,21.6s,baz=118,slow=42						
	comp=Z,62nm,1.1s						
AAK	**Ala-Archa**	**19.46**	**309**	P	**Pn**	**01 20 16.0**	**+0.8**
AAK				IAmb	IAmb	01 20 23.8	
	comp=Z,845nm,1.6s						
AAK	**Ala-Archa**	**19.46**	**309**	*de*P	**Pn**	**01 20 16.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,228nm,1.7s						
AAK	**Ala-Archa**	**19.46**	**309**	P	**Pn**	**01 20 16.6**	**+1.4**
AAK				P	**Pn**	**01 20 16.6**	**+1.4**
AAK	**Ala-Archa**	**19.46**	**309**	*i* P	**Pn**	**01 20 16.4**	**+1.3**
	SNR=107						
CEP	**Cherat**	**19.49**	**282**	P	**P**	**01 20 13.8**	**-0.6**
CEP				S	**Sn**	**01 23 49.0**	**-5.3**
AKL	**Akola**	**19.60**	**240**	*e*x	**P**	**01 20 13.2**	**-2.3**
THW	**Thamme Wali**	**19.67**	**279**	P	**P**	**01 20 15.8**	**-0.4**
USP	**Ospenovka**	**19.74**	**311**	P	**Pn**	**01 20 18.6**	**+0.2**
	SNR=37						
SGDS	**Sogindy**	**19.75**	**311**	*de*P	**Pn**	**01 20 18.3**	**-0.2**
SGDS				pmax	pmax		
	comp=Z,239nm,2.1s						
SGDS	**Sogindy**	**19.75**	**311**	⇓*e*P	**Pn**	**01 20 18.4**	**-0.2**
	comp=Z,239nm,2.1s,baz=311						
AML	**Almayashu**	**19.78**	**307**	P	**Pn**	**01 20 19.9**	**+0.6**
	SNR=42						
AML	**Almayashu**	**19.78**	**307**	P	**Pn**	**01 20 18.8**	**-0.4**
AML	**Almayashu**	**19.78**	**307**	*i* P	**Pn**	**01 20 19.9**	**+0.6**
	SNR=100						
EKS2	**Erkin-Say**	**19.95**	**308**	P	**Pn**	**01 20 21.6**	**+0.7**
	SNR=53						
VJD	**Vijayawada**	**20.15**	**224**	*e*P	**P**	**01 20 22.5**	**+1.1**
MOY	**Mondy**	**20.20**	**11**	*e*P	Pn	01 20 23.3	-0.5
MOY				pmax	pmax		
	comp=Z,129nm,1.0s						
NJ2	**Nanjing**	**20.22**	**83**	*e*P	**P**	**01 20 22.0**	**-0.1**
NJ2				pP	**pP**	**01 20 27.0**	**-0.2**
NJ2				S	**S**	**01 24 06.6**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,470nm,3.5s						
NJ2				LR	LR		
	comp=Z,8µm,9.0s						
NJ2				LR	LR		
	comp=Z,11µm,10.9s						
NJ2				LR	LR		
	comp=Z,14µm,16.6s						
DRK	**Karamyk**	**20.26**	**298**	P	**P**	**01 20 23.5**	**+0.6**
PBA	**Port Blair**	**20.30**	**186**	*e*P	Pn	01 20 24.7	-0.3
XLT	**XiLinHaoTe**	**20.40**	**48**	⇑*i*P	Pn	01 20 26.2	0.0
XLT				pP	sP	01 20 31.6	+0.1
XLT				sP	pP	01 20 36.2	+7.1
XLT				S	**S**	**01 24 11.2**	**-1.2**
XLT				sS	pS	01 24 23.8	-1.0
XLT				SS	**SnSn**	**01 24 42.1**	**+12**
XLT				pmax	pmax		
	comp=Z,89nm,1.4s						
XLT				pmax	pmax		
	comp=Z,1µm,8.2s						
XLT				LR	LR		
	comp=Z,7µm,10.7s						
XLT				LR	LR		
	comp=Z,9µm,10.9s						
HYB	**Hyderabad**	**20.76**	**230**	*e*P	**P**	**01 20 29.0**	**+0.8**
HYB				IAmb	IAmb	01 20 33.4	
	comp=Z,101nm,0.7s						
HYBB	**Hyderabad (bro**	**20.76**	**230**	*e*P	**P**	**01 20 28.4**	**+0.2**
HYBB				*e*S	**S**	**01 24 21.9**	**+2.1**
HYBB				IVMs_BB	IVMs_BB	01 28 24.1	
	comp=Z,2µm,7.9s						
BTLS	**Baital**	**20.91**	**315**	*d i*P	Pn	01 20 30.8	-1.3
BTLS				*i* S	**S**	**01 24 23.5**	**+1.1**
BTLS	**Baital**	**20.91**	**315**	⇓*i*P	Pn	01 20 30.8	-1.3
	baz=314						
BTLS				*i* S	**S**	**01 24 23.5**	**+1.1**
	baz=314						
BTK	**Batken**	**21.14**	**299**	P	**P**	**01 20 33.4**	**+1.2**
BTK	**Batken**	**21.14**	**299**	P	**P**	**01 20 33.4**	**+1.2**
BTK				pmax	pmax		
	comp=Z,713nm,1.5s						
GAR	**Garm**	**21.27**	**296**	P	**P**	**01 20 33.3**	**-0.4**
IRK	**Irkutsk**	**21.39**	**16**	*e*P	**P**	**01 20 35.9**	**+1.3**
IRK				*e*S	Sn	01 24 36.8	-2.6
IRK				pmax	pmax		
	comp=Z,312nm,1.4s						
SEM	**Semipalatinsk**	**21.47**	**334**	*d i*P	**P**	**01 20 35.6**	**-0.1**
SEM				*i* S	**S**	**01 24 33.4**	**-0.2**
SEM				pmax	pmax		
	comp=Z,122nm,1.3s						
SEM	**Semipalatinsk**	**21.47**	**334**	⇓*i*P	**P**	**01 20 35.6**	**-0.1**
	comp=Z,122nm,1.3s,baz=333						
SEM				*i* S	**S**	**01 24 33.5**	**-0.2**
	baz=333						
JASL	**Jaisalmer**	**21.57**	**263**	*e*x	x	01 20 39.6	
DZA	**Taraz**	**21.68**	**307**	*i* P	**P**	**01 20 39.0**	**+1.1**
DZA				pmax	pmax		
	comp=Z,108nm,1.1s						
DZA	**Taraz**	**21.68**	**307**	*i* P	**P**	**01 20 39.1**	**+1.1**
	comp=Z,108nm,1.1s,baz=306						
QZH	**Quanzhou**	**21.85**	**103**	⇑*i*P	**P**	**01 20 39.6**	**-0.2**
QZH				S	**S**	**01 24 39.1**	**-2.0**
QZH				LR	LR		
	comp=Z,8µm,9.9s						
QZH				LR	LR		
	comp=Z,4µm,9.9s						
QZH				LR	LR		
	comp=Z,10µm,10.4s						
KBL	**Kabul**	**21.86**	**284**	P	**P**	**01 20 40.6**	**+0.5**
KBL	**Kabul**	**21.86**	**284**	P	**P**	**01 20 40.6**	**+0.5**
KBL				pmax	pmax		
	comp=Z,785nm,1.4s						
KBL	**Kabul**	**21.86**	**284**	P	**P**	**01 20 41.2**	**+1.1**
	SNR=386						
KBL				P	**P**	**01 20 41.2**	**+1.1**
	SNR=386						
CHGR	**Chuyangaron**	**22.10**	**295**	P	**P**	**01 20 42.7**	**+0.2**
KURBB	**Kurchatov Arra**	**22.31**	**332**	P	**P**	**01 20 44.3**	**-0.2**
	comp=Z,34nm,0.9s,baz=140,slow=11,SNR=177						
KURBB				PcP	**PcP**	**01 24 40.0**	**+0.1**
	comp=Z,7.5nm,1.0s,baz=157,slow=1.8,SNR=4.3						
KURBB				LR	LR	01 29 12.7	
	comp=Z,4µm,21.9s,baz=115,slow=36						
	comp=Z,34nm,0.9s						
SSE	**Sheshan**	**22.32**	**85**	P	**P**	**01 20 45.7**	**+0.9**
SSE				S	**S**	**01 24 50.7**	**+0.8**
SSE				pmax	pmax		
	comp=Z,28nm,1.0s						
SSE				pmax	pmax		
	comp=Z,350nm,4.8s						
SSE				LR	LR		
	comp=Z,2µm,13.9s						
SSE				LR	LR		
	comp=Z,5µm,13.9s						
IUG	**Iuzhnay**	**22.32**	**304**	*i* P	**P**	**01 20 46.2**	**+1.4**
IUG				*i* S	**S**	**01 24 52.5**	**+2.4**
IUG	**Iuzhnay**	**22.32**	**304**	*i* P	**P**	**01 20 46.3**	**+1.4**
	baz=304						
IUG				*i* S	**S**	**01 24 52.5**	**+2.4**
	baz=304						
KK31	**Karatay Array**	**22.32**	**307**	P	**P**	**01 20 45.2**	**+0.4**
KK31				IAmb	IAmb	01 20 53.0	
	comp=Z,445nm,1.6s						
KK31	**Karatay Array**	**22.32**	**307**	P	**P**	**01 20 45.2**	**+0.4**
KK31				pmax	pmax		
	comp=Z,445nm,1.6s						
KURK	**Kurchatov**	**22.35**	**332**	P	**P**	**01 20 44.5**	**-0.4**
KURK	**Kurchatov**	**22.35**	**332**	*ce*P	**P**	**01 20 44.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,245nm,1.7s						
KURK	**Kurchatov**	**22.35**	**332**	P	**P**	**01 20 45.3**	**+0.4**
KURK				P	**P**	**01 20 45.3**	**+0.4**
TAS	**Tashkent**	**22.60**	**302**	P	**P**	**01 20 48.4**	**+0.7**
TAS	**Tashkent**	**22.60**	**302**	P	**P**	**01 20 48.4**	**+0.7**
TAS				pmax	pmax		
	comp=Z,658nm,1.4s						
DL2	**Dalian**	**22.73**	**65**	P	**P**	**01 20 49.0**	**-0.1**
DL2				S	**S**	**01 24 58.3**	**+0.9**
DL2				pmax	pmax		
	comp=Z,85nm,0.8s						
DL2				pmax	pmax		
	comp=Z,500nm,6.4s						
DL2				LR	LR		
	comp=Z,9µm,14.1s						
DL2				LR	LR		
	comp=Z,7µm,13.0s						
DL2				LR	LR		
	comp=Z,10µm,13.2s						
MDRS	**Chennai**	**23.16**	**219**	⇓*i*P	**P**	**01 20 54.3**	**+0.6**
ZAA0	**Zalesovo Array**	**23.18**	**345**	IAmb	IAmb	01 21 00.1	
	comp=Z,167nm,1.2s						
ZALV	**Zalesovo Beam**	**23.18**	**345**	P	**P**	**01 20 53.1**	**-0.5**
	comp=Z,31nm,0.9s,baz=160,slow=9.3,SNR=41						
ZALV				LR	LR	01 31 04.6	
	comp=Z,1µm,18.6s,baz=168,slow=40						
	comp=Z,31nm,0.9s						
ZALV	**Zalesovo Beam**	**23.18**	**345**	*i* P	**P**	**01 20 53.0**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,31nm,0.9s						
POO	**Poona**	**23.28**	**240**	*e*P	**P**	**01 20 56.2**	**+1.2**
SRIT	**Nakonsritamara**	**23.62**	**169**	IAmb	IAmb	01 21 05.0	
	comp=Z,123nm,1.2s						
KAD	**Karad**	**23.83**	**237**	*e*P	**P**	**01 21 00.8**	**+0.4**
CIT	**Chita**	**24.21**	**29**	*e*P	**P**	**01 21 01.8**	**-1.9**
CIT				*e*		01 21 32.6	
CIT				*e*		01 21 50.8	
CIT				pmax	pmax		
	comp=Z,129nm,2.9s						
TPUB	**Ta-pu**	**24.23**	**104**	P	**P**	**01 21 06.4**	**+2.3**
YHNB	**Yeheng**	**24.28**	**101**	P	**P**	**01 21 05.2**	**+0.6**
SSLB	**Suanglung**	**24.29**	**103**	P	**P**	**01 21 04.7**	**0.0**
NACB	**Ninganchiao**	**24.66**	**102**	P	**P**	**01 21 08.7**	**+0.8**
YULB	**Yu-li**	**24.74**	**104**	P	**P**	**01 21 08.8**	**+0.1**
YULB				IAmb	IAmb	01 21 14.8	
	comp=Z,272nm,2.0s						
SNY	**Shenyang**	**24.79**	**58**	⇓P	**P**	**01 21 10.0**	**+1.0**
SNY				S	**S**	**01 25 30.5**	**-0.6**
SNY				pmax	pmax		
	comp=Z,19nm,0.8s						
SNY				pmax	pmax		
	comp=Z,1µm,4.4s						
SNY				LR	LR		
	comp=Z,5µm,12.7s						
SNY				LR	LR		
	comp=Z,5µm,16.7s						
SNY				LR	LR		
	comp=Z,6µm,13.9s						
TWG	**Pinlang**	**24.81**	**105**	P	**P**	**01 21 09.6**	**+0.2**
TWG				IAmb	IAmb	01 21 28.3	
	comp=Z,102nm,1.1s						
SUJ	**Sinuiju**	**25.11**	**63**	P	**P**	**01 21 12.6**	**+0.7**
SUJ				pP	**pP**	**01 21 16.1**	**-1.1**
SUJ				S	**S**	**01 25 37.8**	**+1.5**
SUJ				AmB			
	comp=Z,646nm,2.5s						
SUJ				AMS	AMS		
	comp=N,2µm,7.1s						
SUJ				AMS	AMS		
	comp=E,2µm,6.8s						
SUJ				AMS	AMS		
	comp=Z,2µm,5.8s						
GOA	**Goa**	**25.31**	**235**	*e*P	**P**	**01 21 15.5**	**+1.7**
GOA				IAmb	IAmb	01 21 18.6	
	comp=Z,49nm,0.6s						
HIA	**Hailar**	**25.36**	**40**	P	**P**	**01 21 15.0**	**+0.8**
HIA				IAmb	IAmb	01 21 19.1	
	comp=Z,179nm,1.5s						
HIA	**Hailar**	**25.36**	**40**	*d i*P	**P**	**01 21 14.6**	**+0.5**
HIA				pmax	pmax		
	comp=Z,85nm,1.3s						
HJU	**Haeju**	**25.82**	**68**	P	**P**	**01 21 18.9**	**+0.5**
HJU				pP	**pP**	**01 21 23.0**	**-0.6**
HJU				S	**S**	**01 25 48.0**	**+0.5**
HJU				AmB			
	comp=Z,346nm,1.2s						
HJU				AMS	AMS		
	comp=N,1µm,3.9s						
HJU				AMS	AMS		
	comp=E,2µm,4.9s						
HJU				AMS	AMS		
	comp=Z,2µm,6.8s						
PYAG	**Pyongyang**	**25.93**	**66**	P	**P**	**01 21 19.6**	**+0.2**
PYAG				pP	**pP**	**01 21 24.4**	**-0.4**
PYAG				S	**S**	**01 25 50.2**	**+0.9**
PYAG				AmB			
	comp=Z,324nm,2.0s						
PYAG				AMS	AMS		
	comp=N,614nm,5.5s						
PYAG				AMS	AMS		
	comp=E,356nm,3.2s						
PYAG				AMS	AMS		
	comp=Z,314nm,2.8s						
INCN	**Inchon**	**26.50**	**69**	P	**P**	**01 21 24.2**	**-0.4**
INCN				IAmb	IAmb	01 21 32.6	
	comp=Z,119nm,1.3s						
INCN	**Inchon**	**26.50**	**69**	P	**P**	**01 21 24.2**	**-0.4**
INCN				pmax	pmax		
	comp=Z,119nm,1.3s						
INCN	**Inchon**	**26.50**	**69**	P	**P**	**01 21 25.1**	**+0.5**
LHMI	**Lhok Sumawe**	**26.63**	**176**	P	**P**	**01 21 27.7**	**+1.9**
LHMI				IAmb	IAmb	01 21 33.9	
	comp=Z,122nm,0.8s						
LHMI	**Lhok Sumawe**	**26.63**	**176**	P	**P**	**01 21 29.3**	**+3.4**
	comp=Z,4µmcomp=Z,147nm,1.2s						
LHMI	**Lhok Sumawe**	**26.63**	**176**	P	**P**	**01 21 28.5**	**+2.6**
CN2	**Changchun**	**26.64**	**55**	*e*P	**P**	**01 21 26.5**	**+0.8**
CN2				*e*S	**S**	**01 25 59.8**	**-0.6**
CN2				pmax	pmax		
	comp=Z,90nm,1.5s						
CN2				pmax	pmax		
	comp=Z,600nm,3.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,6µm,16.0s						
KULM	**Kulim**	**27.03**	**168**	P	**P**	**01 21 29.3**	**-0.2**
TJN	**Taejon**	**27.06**	**72**	IAmb	IAmb	01 21 54.6	
	comp=Z,158nm,1.0s						
TJN	**Taejon**	**27.06**	**72**	*ce*P	**P**	**01 21 29.9**	**+0.3**
TJN	**Taejon**	**27.06**	**72**	P	**P**	**01 21 31.0**	**+1.4**
HHU	**Hamhung**	**27.40**	**64**	P	**P**	**01 21 32.3**	**-0.2**
PCHI	**Peechi**	**27.42**	**223**	⇓*e*P	**P**	**01 21 34.0**	**+1.0**
PCHI				*e*S	**S**	**01 26 16.3**	**+3.2**
KSAR	**Wonju Array Be**	**27.49**	**69**	P	**P**	**01 21 33.0**	**-0.5**
KSAR	**Wonju Array Be**	**27.49**	**69**	P	**P**	**01 21 33.0**	**-0.5**
KSRS	**Korea Array**	**27.52**	**69**	P	**P**	**01 21 34.7**	**+1.0**
	comp=Z,6.1nm,0.6s,baz=260,slow=9.4,SNR=12						
KSRS				PcP	**PcP**	**01 24 52.3**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=180,slow=1.0,SNR=4.2						
KSRS				LR	LR	01 33 32.4	
	comp=Z,5µm,20.4s,baz=265,slow=39						
	comp=Z,6.1nm,0.6s						
BVAR	**Borovoye Array**	**27.57**	**327**	P	**P**	**01 21 34.8**	**+0.7**
	comp=Z,19nm,1.0s						
	comp=Z,19nm,1.0s						
BRVK	**Borovoye**	**27.64**	**327**	P	**P**	**01 21 34.2**	**-0.5**
BRVK				IAmb	IAmb	01 21 41.0	
	comp=Z,75nm,0.9s						
BRVK	**Borovoye**	**27.64**	**327**	*ce*P	**P**	**01 21 35.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,145nm,2.5s						
BRVK	**Borovoye**	**27.64**	**327**	P	**P**	**01 21 35.0**	**+0.3**
PALK	**Pallekele**	**27.93**	**212**	P	**P**	**01 21 38.3**	**+0.7**
	comp=Z,13nm,0.8s,baz=125,slow=9.3,SNR=10						
PALK				LR	LR	01 33 34.0	
	comp=Z,2µm,21.0s,baz=135,slow=38						
	comp=Z,13nm,0.8s						
PALK	**Pallekele**	**27.93**	**212**	P	**P**	**01 21 38.0**	**+0.4**
PALK	**Pallekele**	**27.93**	**212**	P	**P**	**01 21 38.0**	**+0.4**
PALK				pmax	pmax		
	comp=Z,23nm,1.0s						
PALK	**Pallekele**	**27.93**	**212**	P	**P**	**01 21 38.6**	**+1.0**
PALK				P	**P**	**01 21 38.6**	**+1.0**
PALK				P	**pP**	**01 21 39.0**	**-4.0**
PALK				P	**pP**	**01 21 39.0**	**-4.0**
KCSI	**Kotacane, Aceh**	**28.39**	**174**	P	**P**	**01 21 44.9**	**+3.3**
	comp=Z,2µmcomp=Z,40nm,1.0s						
BNX	**BinXian**	**28.53**	**52**	⇑P	**P**	**01 21 43.3**	**+0.6**
BNX				pP	**sP**	**01 21 52.8**	**+2.5**
BNX				S	**S**	**01 26 26.4**	**-3.8**
BNX				sS	**sS**	**01 26 39.1**	**+0.1**
BNX				pmax	pmax		
	comp=Z,57nm,1.2s						
BNX				pmax	pmax		
	comp=Z,980nm,3.5s						
BNX				LR	LR		
	comp=Z,13µm,10.0s						
BNX				LR	LR		
	comp=Z,7µm,8.5s						
BNX				LR	LR		
	comp=Z,11µm,11.1s						
BOD	**Bodaibo**	**28.96**	**21**	*e*P	**P**	**01 21 46.8**	**+0.5**
BOD				pmax	pmax		
	comp=Z,41nm,1.6s						
PSI	**Prapat**	**29.22**	**172**	P	**P**	**01 21 49.7**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=333,slow=15,SNR=2.6						
PSI				LR	LR	01 35 29.4	
	comp=Z,1µm,18.1s,baz=326,slow=40						
	comp=Z,4.5nm,0.6s						
JOW	**Kunigami**	**29.36**	**91**	LR	LR	01 34 39.0	
	comp=Z,6µm,18.4s,baz=292,slow=39						
TGY	**Tagaytay City**	**29.62**	**121**	LR	LR	01 34 03.5	
	comp=Z,3µm,18.1s,baz=321,slow=37						
MDJ	**Mudanjiang**	**29.72**	**55**	P	**P**	**01 21 53.7**	**+0.4**
MDJ				pP	pP	01 21 56.8	-1.9
MDJ				S	**S**	**01 26 47.1**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.3s						
MDJ				LR	LR		
	comp=Z,9µm,14.2s						
MDJ				LR	LR		
	comp=Z,3µm,14.2s						
MDJ				LR	LR		
	comp=Z,7µm,15.1s						
JNU	**Nakatsue**	**30.17**	**78**	LR	LR	01 34 59.4	
	comp=Z,3µm,18.6s,baz=284,slow=38						
GSI	**Gunungsitoli**	**30.57**	**175**	P	**P**	**01 22 00.9**	**0.0**
GSI	**Gunungsitoli**	**30.57**	**175**	P	**P**	**01 22 00.9**	**0.0**
	comp=Z,3µmcomp=Z,110nm,1.9s						

GSI	Gunungsitoli	30.57	175	P	P	01 22 01.9	+1.0
GEYT	Alibeck	30.69	292	P	P	01 22 04.3	+2.3
	comp=Z,18nm,0.9s,baz=259,slow=14,SNR=11						
	comp=Z,18nm,0.9s						
GEYT	Alibeck	30.69	292	P	P	01 22 03.0	+1.1
GEYT				IAmb	IAmb	01 22 10.0	
	comp=Z,168nm,1.6s						
MYKOM	Kota Tinggi	31.13	163	P	P	01 22 07.0	+1.1
MNSI	Mandailing Nat	31.28	171	P	P	01 22 09.1	+1.9
	comp=Z,22nm,0.8s						
USRK	Ussuriysk Ar.	31.32	56	P	P	01 22 07.6	+0.2
	comp=Z,1.9nm,0.5s,baz=232,slow=6.3,SNR=9.7						
USRK				LR	LR	01 35 37.5	
	comp=Z,2µm,18.7s,baz=248,slow=38						
	comp=Z,1.9nm,0.5s						
ZEA	Zeya	31.71	37	eP	P	01 22 12.1	+1.4
ZEA				eS	S	01 27 16.9	-3.0
ZEA				pmax	pmax		
	comp=E,100nm,4.5s						
ZEA				pmax	pmax		
	comp=N,100nm,4.4s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.7s						
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
ZEA				smax	smax		
	comp=E,200nm,8.5s						
ZEA				smax	smax		
	comp=N,300nm,7.6s						
ZEA				MLR	MLR		
	comp=N,3µm,10.0s						
ZEA				MLR	MLR		
	comp=E,2µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,10.0s						
BKNI	Bangkinang	31.95	169	P	P	01 22 13.4	+0.2
BKNI	Bangkinang	31.95	169	P	P	01 22 14.7	+1.5
	comp=Z,6µmcomp=Z,74nm,0.8s						
BKNI	Bangkinang	31.95	169	P	P	01 22 14.3	+1.1
KLR	Kul'dur	32.41	47	P	P	01 22 17.1	+0.1
	comp=Z,15nm,0.9s,baz=260,slow=9.3,SNR=35						
KLR				LR	LR	01 36 37.7	
	comp=Z,3µm,19.8s,baz=250,slow=39						
	comp=Z,15nm,0.9s						
RGRI	Rengat	32.85	166	P	P	01 22 23.7	+2.7
AKTO	Aktyubinsk	32.97	315	P	P	01 22 22.9	+1.1
	comp=Z,40nm,0.9s,baz=108,slow=8.9,SNR=24						
AKTO				LR	LR	01 37 16.5	
	comp=Z,5µm,18.5s,baz=113,slow=39						
	comp=Z,40nm,0.9s						
JLN	Jalan Bani Buh	33.05	262	P	P	01 22 25.5	+2.8
	SNR=7.0						
WBK	Wadi Bani Khal	33.23	263	P	P	01 22 25.0	+0.6
	SNR=6.0						
WSAR	Wadi Sarin	33.26	264	P	P	01 22 25.2	+0.5
	comp=Z,13nm,1.1s,baz=118,slow=3.2,SNR=9.1						
WSAR				LR	LR	01 37 06.4	
	comp=Z,2µm,19.8s,baz=109,slow=38						
	comp=Z,13nm,1.1s						
WSAR	Wadi Sarin	33.26	264	P	P	01 22 26.0	+1.3
	SNR=10						
SISI	Saibi	33.31	173	P	P	01 22 27.7	+2.7
	comp=Z,961nmcomp=Z,44nm,1.4s						
DSRI	Dabo	33.49	162	P	P	01 22 27.9	+1.3
	comp=Z,22nm,1.1s						
SBUM	Sibu	33.51	148	P	P	01 22 27.3	+0.5
KSM	Kuching	33.56	152	P	P	01 22 27.2	-0.1
KSM				IAmb	IAmb	01 22 35.3	
	comp=Z,68nm,1.2s						
KSM	Kuching	33.56	152	P	P	01 22 28.9	+1.6
BIDO	Bidbid	33.58	265	P	P	01 22 28.2	+0.7
	SNR=15						
SMDO	Samad	33.83	264	P	P	01 22 30.5	+0.8
	SNR=15						
SMDO				P	P	01 22 30.5	+0.8
	SNR=15						
JMDO	Jabal Madar	34.06	263	P	P	01 22 31.9	+0.3
	SNR=5.9						
HOQ	Hoqain	34.25	266	P	P	01 22 34.2	+1.0
	SNR=16						
HOQ				P	P	01 22 34.2	+1.0
	SNR=16						
BANOM	Banah	34.28	270	P	P	01 22 35.7	+2.2
	SNR=5.4						
BANOM	Banah	34.28	270	i P	P	01 22 34.6	+1.1
	SNR=6.5						
SVE	Sverdlovsk	34.36	327	ceP	P	01 22 35.2	+1.4
SVE				eS	S	01 28 04.6	+3.7
SVE				pmax	pmax		
	comp=Z,259nm,1.5s						
SVE				MLR	MLR		
	comp=Z,3µm,13.0s						
SHME	Shamm	34.37	270	P	P	01 22 36.3	+2.0
SHME				P	P	01 22 36.3	+2.0
SHME	Shamm	34.37	270	i P	P	01 22 36.3	+2.0
	SNR=8.3						
MYLDM	Lahad Datu	34.53	136	P	P	01 22 36.9	+1.2
MYLDM				IAmb	IAmb	01 22 44.2	
	comp=Z,112nm,1.1s						
MASF	Masafi	34.58	269	P	P	01 22 38.5	+2.4
	SNR=5.0						
MSFE	Esma-Masafi	34.59	269	i P	P	01 22 38.1	+2.0
	SNR=11						
BSY	Bisya	34.67	264	P	P	01 22 37.9	+1.0
	SNR=16						
BSY				P	P	01 22 37.9	+1.0
	SNR=16						
UOSS	Minazif	34.69	268	P	P	01 22 36.4	-0.6
UOSS	Minazif	34.69	268	P	P	01 22 38.0	+0.9
UOSS				P	P	01 22 38.0	+0.9
UOSS	Minazif	34.69	268	i P	P	01 22 37.3	+0.2
	SNR=7.1						
TEY	Ternei	34.70	56	⇑eP	P	01 22 38.1	+1.2
TEY				e		01 28 05.2	
TEY				pmax	pmax		
	comp=Z,20nm,1.4s						
MHTO	MHTO	34.76	261	P	P	01 22 38.1	+0.5
	SNR=9.7						
HATD	Hatta, Dubai	34.79	268	i P	P	01 22 38.7	+0.7
	SNR=21						
ASHO	Ashiyiah	34.91	268	P	P	01 22 40.9	+1.9
	SNR=34						
ASHO	Ashiyiah	34.91	268	i P	P	01 22 40.0	+1.1
	SNR=32						
UMQ	Umm Al-Quwin	34.95	270	P	P	01 22 42.4	+3.1
UMQ	Umm Al-Quwin	34.95	270	P	P	01 22 41.6	+2.4
ARQ	Araqi	35.01	266	P	P	01 22 40.9	+1.1
	SNR=18						
ARQ				P	P	01 22 40.9	+1.1
	SNR=18						
NAZ	Nazwa, Dubai	35.14	269	i P	P	01 22 41.8	+0.9
	SNR=16						
ARU	Arti	35.15	325	P	P	01 22 41.3	+0.7
	comp=Z,3.8nm,0.5s,baz=117,slow=7.0,SNR=29						
ARU				LR	LR	01 37 56.7	
	comp=Z,2µm,21.0s,baz=110,slow=38						
	comp=Z,3.8nm,0.5s						
ARU	Arti	35.15	325	P	P	01 22 40.2	-0.4
ARU				IAmb	IAmb	01 22 47.0	
	comp=Z,140nm,1.1s						
ARU	Arti	35.15	325	d iP	P	01 22 41.3	+0.7
ARU						01 23 59.4	
ARU				PPP	PPP	01 24 14.0	
ARU				S	S	01 28 15.6	+2.5
ARU				pmax	pmax		
	comp=Z,58nm,1.4s						
ARU				MLR	MLR		
	comp=Z,3µm,13.0s						
FAQ	Al Faqa, Dubai	35.28	268	i P	P	01 22 43.4	+1.3
	SNR=17						
STKI	Sintang	35.32	151	P	P	01 22 43.8	+1.3
	comp=Z,17µmcomp=Z,25nm,0.7s						
ALNE	Al Ain	35.40	267	P	P	01 22 45.2	+2.0
	SNR=20						
ALNE	Al Ain	35.40	267	i P	P	01 22 44.8	+1.6
	SNR=21						
ASUD	Al Ashush, Dub	35.55	268	i P	P	01 22 46.0	+1.6
	SNR=8.2						
GRNR	Gornyy	35.75	46	eP	P	01 22 46.2	+0.3
GRNR				MLR	MLR		
	comp=E,1µm,11.0s						
GRNR				MLR	MLR		
	comp=N,840nm,16.0s						
MJAR	Matsushiro Arr	35.78	71	P	P	01 22 46.1	-0.3
	comp=N,4.0nm,0.7s,baz=286,slow=4.9,SNR=2.7						
MJAR				LR	LR	01 37 29.1	
	comp=N,2µm,20.0s,baz=282,slow=36						
AJN	Ajban	35.86	268	P	P	01 22 48.2	+1.1
	SNR=10						
AJN				P	P	01 22 48.2	+1.1
	SNR=10						
AJN	Ajban	35.86	268	i P	P	01 22 48.0	+0.9
	SNR=13						
UMZA	Um Al Zommool	36.41	265	P	P	01 22 52.4	+0.6
UMZA				P	P	01 22 52.4	+0.6
TPI	Tanjungpandan	36.53	158	P	P	01 22 54.7	+1.8
	comp=N,554nmcomp=N,30nm,1.9s						
MZWR	Madinat Zayed	37.09	268	P	P	01 22 58.6	+1.0
MZWR				P	P	01 22 58.6	+1.0
YAK	Yakutsk	37.45	26	P	P	01 23 00.1	0.0
	comp=N,11nm,0.4s,baz=43,slow=2.6,SNR=8.7						
YAK				LR	LR	01 39 24.4	
	comp=N,2µm,19.2s,baz=262,slow=38						
	comp=N,11nm,0.4s						
YAK	Yakutsk	37.45	26	P	P	01 22 59.3	-0.9
YAK				IAmb	IAmb	01 23 09.3	
	comp=Z,90nm,0.8s						
YAK	Yakutsk	37.45	26	eP	P	01 23 00.7	+0.6
YAK				e*PP	pP	01 23 04.4	-1.2
YAK				e		01 24 31.2	
YAK				e		01 25 18.5	
YAK				eS	S	01 28 48.5	+0.5
YAK				e*SS	pS	01 28 54.3	+0.2
YAK				eSS	SnSn	01 31 20.6	-4.5
YAK				e		01 33 15.9	
YAK				pmax	pmax		
	comp=Z,59nm,1.0s						
YAK				pmax	pmax		
	comp=N,30nm,1.1s						
YAK				pmax	pmax		
	comp=E,51nm,1.4s						
YAK				pmax	pmax		
	comp=Z,94nm,2.0s						
YAK				pmax	pmax		
	comp=E,89nm,1.9s						
YAK				pmax	pmax		
	comp=N,63nm,2.2s						
YAK				smax	smax		
	comp=N,142nm,2.9s						
YAK				smax	smax		
	comp=E,90nm,2.8s						
YAK				MLR	MLR		
	comp=Z,3µm,10.0s						
YAK				MLR	MLR		
	comp=E,2µm,10.0s						
YAK				MLR	MLR		
	comp=N,1µm,10.0s						
JRN	Qarnain Island	37.54	270	P	P	01 23 02.0	+0.6
	SNR=11						
NRIK	Noril'sk	37.69	356	P	P	01 23 02.6	+0.5
	comp=N,18nm,0.7s,baz=162,slow=6.9,SNR=29						
NRIK				LR	LR	01 38 10.4	
	comp=N,1µm,18.2s,baz=176,slow=36						
	comp=N,18nm,0.7s						
NRIK	Noril'sk	37.69	356	deP	P	01 23 02.3	+0.2
NRIK				pmax	pmax		
	comp=Z,23nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,2µm,17.0s						
MZR	Muzera	37.72	267	P	P	01 23 03.5	+0.5
	SNR=21						
MZR	Muzera	37.72	267	i P	P	01 23 02.9	-0.1
	SNR=23						
DAV	Davao City (W)	37.73	124	P	P	01 23 05.0	+1.9
	comp=Z,270nm,0.4s,baz=61,slow=12,SNR=1.4						
DAV				LR	LR	01 40 49.9	
	comp=Z,4µm,19.8s,baz=334,slow=40						
DAV	Davao City (W)	37.73	124	P	P	01 23 05.7	+2.7
MTKI	Muara Teweh, K	37.74	146	P	P	01 23 05.4	+2.3
PBKI	Pangkalan Bun	37.91	152	P	P	01 23 06.6	+2.0
	comp=Z,7µmcomp=Z,272nm,0.5s						
LKRN	Lenkeran, Azer	38.00	293	P	P	01 23 07.3	+2.1
SHAO	Shalim	38.08	258	P	P	01 23 07.8	+1.7
SHAO	Shalim	38.08	258	P	P	01 23 06.8	+0.8
KASI	Kota Agung	38.34	165	P	P	01 23 06.7	-1.4
	comp=Z,58nm,0.8s						
KHOR	Al-Khor Airpor	38.45	272	P	P	01 23 09.6	+0.6
DMTO	DMTO	38.79	258	P	P	01 23 13.1	+1.1
MAK	Makhachkala	38.82	300	eP	P	01 23 07.2	-4.8
MAK				eS	S	01 29 02.0	-7.4
MAK				eSS	SnSn	01 31 54.4	-4.5
MAK				pmax	pmax		
	comp=Z,242nm,1.6s						
SHMA	Al-Shehemyia	38.83	273	P	P	01 23 12.5	+0.2
SLWR	Sila	38.84	270	P	P	01 23 12.5	+0.2
ASAJ	Asahikawa	38.90	58	P	P	01 23 13.5	+0.8
	comp=Z,27nm,0.7s,baz=266,slow=16,SNR=13						
ASAJ				LR	LR	01 39 16.6	
	comp=Z,2µm,21.4s,baz=333,slow=36						
	comp=Z,27nm,0.7s						
JKA	Kamikawa-asahi	38.90	58	IAmb	IAmb	01 23 17.1	
	comp=Z,374nm,1.8s						
NKL	Nikolayevsk	38.91	43	eP	P	01 23 21.8	+9.2
NKL				eS	S	01 29 07.3	-3.2
NKL				pmax	pmax		
	comp=E,3.0nm,0.9s						
NKL				pmax	pmax		
	comp=N,1.0nm,0.8s						
NKL				pmax	pmax		
	comp=Z,119nm,1.0s						
NKL				smax	smax		
	comp=E,3.0nm,1.1s						
NKL				smax	smax		
	comp=N,1.0nm,1.7s						
UGL	Uglegorsk	38.97	50	eP	P	01 23 15.9	+2.8
UGL				eS	S	01 29 11.6	+0.2
UGL				pmax	pmax		
	comp=Z,100nm,0.9s						
UGL				MLR	MLR		
	comp=Z,5µm,13.0s						
UGL				MLR	MLR		
	comp=N,6µm,12.0s						
UGL				MLR	MLR		
	comp=E,6µm,12.0s						
TRNA	Turayna	39.01	271	P	P	01 23 14.3	+0.5
DOK	Doka	39.05	260	P	P	01 23 14.5	+0.3
	SNR=6.9						
SEKA	Sheki	39.08	298	P	P	01 23 15.8	+1.5
TOLI2	Tolitoli	39.14	136	P	P	01 23 16.2	+1.3
YSS	Yuzh-Sakhalins	39.18	53	P	P	01 23 15.6	+0.7
YSS				IAmb	IAmb	01 23 19.4	
	comp=Z,178nm,1.3s						
YSS	Yuzh-Sakhalins	39.18	53	deP	P	01 23 14.5	-0.4
YSS				e		01 24 52.9	
YSS				eS	S	01 29 10.6	-4.0
YSS				pmax	pmax		
	comp=Z,90nm,1.4s						
YSS				pmax	pmax		
	comp=Z,700nm,3.5s						
YSS				smax	smax		
	comp=N,600nm,6.1s						
YSS				smax	smax		
	comp=E,300nm,7.2s						
YSS				MLR	MLR		
	comp=Z,2µm,12.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,12.0s						
YSS	Yuzh-Sakhalins	39.18	53	P	P	01 23 16.9	+2.0
MNGR	Mingechevir, A	39.18	297	P	P	01 23 16.9	+1.9
MPSI	Mapaga	39.26	138	P	P	01 23 16.1	+0.2
	comp=E,652nmcomp=E,21nm,1.0s						
SMRA	Abu-Samra	39.33	271	P	P	01 23 16.5	0.0
RBK	Rabkut	39.51	259	P	P	01 23 18.7	+0.5
	SNR=8.1						
RBK				P	P	01 23 18.7	+0.5
	SNR=8.1						
TYV	Tymovskoe	39.62	47	eP	P	01 23 21.6	+3.0
TYV				eS	S	01 29 28.1	+6.9
TYV				pmax	pmax		
	comp=Z,40nm,1.6s						
TYV				pmax	pmax		
	comp=Z,600nm,4.1s						
TYV				smax	smax		
	comp=N,800nm,9.4s						
TYV				smax	smax		
	comp=E,600nm,9.4s						
TYV				MLR	MLR		
	comp=E,3µm,16.0s						
TYV				MLR	MLR		
	comp=Z,5µm,16.0s						
WHFO	Wadi Hawf	39.68	259	P	P	01 23 19.5	0.0
	SNR=8.4						
BELG	Belogornoye	39.76	315	P	P	01 23 20.1	+0.5
	comp=Z,72nm,1.0s,baz=290,slow=4.8,SNR=21						
BELG				LR	LR	01 41 40.0	
	comp=Z,2µm,18.1s,baz=100,slow=39						
	comp=Z,72nm,1.0s						
BELG	Belogornoye	39.76	315	d iP	P	01 23 20.0	+0.3
BELG				pmax	pmax		
	comp=Z,15nm,1.3s						
BELG				MLR	MLR		
	comp=Z,262nm,10.0s						
GANJ	Ganja	39.77	297	P	P	01 23 21.5	+1.5
DDFL	Dedoflistskaro	39.88	298	P	P	01 23 24.5	+3.5
BBKI	Banjar Baru	39.94	148	P	P	01 23 22.7	+1.2
	comp=Z,45nm,0.4s						
GROC	Groznyy	40.07	301	eP	P	01 23 23.8	+1.3
GROC				e		01 24 57.8	
GROC				e		01 25 26.4	
GROC				eS	S	01 29 30.0	+1.8
GROC				pmax	pmax		
	comp=Z,104nm,1.0s						
SGSI	Sangihe	40.13	128	P	P	01 23 25.3	+2.1
	comp=Z,19µmcomp=Z,501nm,0.4s						
MRSI	Marisa	40.33	136	P	P	01 23 26.7	+1.9
	comp=Z,1µmcomp=Z,53nm,1.6s						
ABTO	Aybut	40.34	259	P	P	01 23 25.0	-0.1
	SNR=7.2						
LEM	Lembang	40.38	160	P	P	01 23 27.2	+1.8
	comp=Z,22nm,0.5s,baz=331,slow=23,SNR=1.8						
LEM				LR	LR	01 41 44.3	
	comp=Z,2µm,18.2s,baz=322,slow=39						
	comp=Z,22nm,0.5s						
NAX	Nakhchivan	40.51	294	P	P	01 23 27.6	+1.3
KIRV	Kirov	40.53	325	P	P	01 23 27.1	+1.1
	comp=Z,89nm,0.5s,baz=40,slow=0.4,SNR=20						
KIRV				LR	LR	01 41 03.7	
	comp=Z,2µm,21.6s,baz=112,slow=37						
	comp=Z,89nm,0.5s						
KIRV	Kirov	40.53	325	ceP	P	01 23 25.8	-0.2
GNI	Garni	41.01	296	P	P	01 23 32.4	+2.0
	comp=Z,18nm,1.2s,baz=184,slow=1.8,SNR=16						
	comp=Z,18nm,1.2s						
GNI	Garni	41.01	296	P	P	01 23 32.0	+1.6
GNI				IAmb	IAmb	01 23 38.5	
	comp=Z,308nm,1.8s						
GNI	Garni	41.01	296	ceP	P	01 23 32.1	+1.6
GNI				pmax	pmax		
	comp=Z,117nm,1.7s						
GNI	Garni	41.01	296	P	P	01 23 31.3	+0.9
GNI				P	P	01 23 31.3	+0.9
GNI	Garni	41.01	296	P	P	01 23 32.7	+2.3
GUDG	Gudauri	41.06	300	P	P	01 23 32.9	+2.0
JCJ	Chichijima	41.08	84	LR	LR	01 41 00.0	
	comp=Z,2µm,18.7s,baz=285,slow=37						
KPJI	Karang Pucung	41.25	159	P	P	01 23 32.3	-0.1
	comp=Z,2µmcomp=Z,131nm,1.2s						
APSI	Ampana	41.27	137	P	P	01 23 34.1	+1.5
SMRI	Semarang	41.47	157	P	P	01 23 36.3	+2.1
SMRI	Semarang	41.47	157	P	P	01 23 35.6	+1.4
	comp=Z,5µmcomp=Z,219nm,1.8s						
SMRI	Semarang	41.47	157	P	P	01 23 37.3	+3.1
ZEI	Tsey	41.47	300	eP	P	01 23 34.8	+0.5
ZEI				pmax	pmax		
	comp=Z,15nm,0.7s						
KMSI	Cibinong	41.49	133	P	P	01 23 34.5	+0.1
	comp=Z,465nm,0.9s						
NCK	Nalchik	41.67	301	d iP	P	01 23 36.2	+0.5
NCK				pmax	pmax		
	comp=Z,89nm,1.6s						
ONI	Oni	41.81	300	IAmb	IAmb	01 23 45.1	
	comp=Z,236nm,1.4s						
TTSI	Tana Toraja	42.02	141	P	P	01 23 40.0	+1.3
	comp=Z,78nm,1.4s						
LUWI	Luwuk	42.04	136	P	P	01 23 39.1	+0.2
	comp=Z,4µmcomp=Z,123nm,0.9s						
LUWI	Luwuk	42.04	136	P	P	01 23 41.3	+2.4
GOF	Gofitskoye	42.04	304	⇑eP	P	01 23 40.0	+1.3
GOF				pmax	pmax		
	comp=Z,93nm,1.0s						
KBZ	Khabaz	42.17	302	P	P	01 23 41.2	+1.5
	comp=Z,5.1nm,0.8s,baz=116,slow=3.4,SNR=12						
	comp=Z,5.1nm,0.8s						
KBZ	Khabaz	42.17	302	ceP	P	01 23 40.3	+0.6
KBZ				pmax	pmax		
	comp=Z,77nm,2.3s						
KARS	Kars	42.23	297	P	P	01 23 44.5	+4.1
KVAR	Kislovodsk Arr	42.31	302	P	P	01 23 43.7	+2.7
	comp=Z,7.0nm,0.8s,baz=97,slow=22,SNR=15						
KVAR				LR	LR	01 43 42.8	
	comp=Z,2µm,19.3s,baz=214,slow=40						
	comp=Z,7.0nm,0.8s						
KIV	Kislovodsk	42.32	302	⇓P	P	01 23 43.3	+2.2
KIV	Kislovodsk	42.32	302	P	P	01 23 41.1	+0.1
KIV				IAmb	IAmb	01 23 49.0	
	comp=Z,187nm,1.6s						
KIV	Kislovodsk	42.32	302	eP	P	01 23 42.2	+1.1
KIV				e		01 25 20.8	
KIV				eS	S	01 30 03.7	+2.0
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,16.0s						
KIV	Kislovodsk	42.32	302	P	P	01 23 41.2	+0.1
KIV	Kislovodsk	42.32	302	i P	P	01 23 41.6	+0.5
	SNR=30						
NEY	Neytrino	42.32	301	d iP	P	01 23 42.3	+1.1
NEY				pmax	pmax		
	comp=Z,91nm,2.5s						
SHA1	Shidzhatmaz	42.35	302	d iP	P	01 23 41.6	+0.1
SOCY	Socotra	42.48	252	P	P	01 23 39.8	-2.8
SOCY				IAmb	IAmb	01 23 47.0	
	comp=Z,56nm,0.8s						
SOCY	Socotra	42.48	252	P	P	01 23 41.7	-0.9
GEVA	Gevas	42.51	294	IAmb	IAmb	01 23 50.3	
	comp=Z,254nm,1.9s						
KUR	Kuril'sk	42.67	56	eP	P	01 23 46.1	+2.4
KUR				pmax	pmax		
	comp=Z,700nm,3.6s						
KUR				MLR	MLR		
	comp=Z,1µm,14.0s						
SPSI	Sidrap Palu	42.77	142	P	P	01 23 46.4	+1.6
	comp=Z,3µmcomp=Z,113nm,1.5s						
CHVG	Ch'k'valeri	42.81	300	⇑P	P	01 23 49.2	+4.2
CHVG	Ch'k'valeri	42.81	300	⇑P	P	01 23 49.2	+4.2
PWJI	Pagerwojo	42.85	155	P	P	01 23 45.7	+0.2
	comp=Z,82nm,0.8s						
BATM	Batumi	43.19	298	⇑P	P	01 23 51.6	+3.6
BATM	Batumi	43.19	298	P	P	01 23 50.1	+2.1
VRH	Novokhopyorsk	43.20	313	eP	P	01 23 47.8	-0.2
VRH				e		01 25 28.5	
VRH				pmax	pmax		
	comp=Z,170nm,1.5s						
VRH				MLR	MLR		
	comp=Z,2µm,15.0s						
GURO	Guroymak-BITLI	43.27	294	IAmb	IAmb	01 23 56.9	
	comp=Z,227nm,1.7s						
BNSI	Bone	43.32	142	P	P	01 23 50.6	+1.4
	comp=Z,969nmcomp=Z,43nm,1.1s						
PRGR	Permogore	43.38	328	⇑iP	P	01 23 50.4	+1.2
PRGR				e		01 25 37.6	
TNTI	Ternate	43.52	129	IAmb	IAmb	01 23 56.6	
	comp=Z,124nm,1.0s						
TNTI	Ternate	43.52	129	P	P	01 23 49.8	-1.1
	comp=Z,2µmcomp=Z,137nm,0.9s						
TNTI	Ternate	43.52	129	P	P	01 23 52.5	+1.6
ABJI	Asem Bagus	43.57	152	P	P	01 23 53.0	+1.7
	comp=Z,61nm,0.8s						
KAPI	Kappang	43.65	143	LR	LR	01 43 12.2	
	comp=Z,1µm,19.9s,baz=320,slow=38						
KAPI	Kappang	43.65	143	P	P	01 23 51.6	-0.4
KAPI	Kappang	43.65	143	P	P	01 23 51.6	-0.4
KAPI				pmax	pmax		
	comp=Z,27nm,0.9s						
KAPI	Kappang	43.65	143	P	P	01 23 53.2	+1.3
KAPI	Kappang	43.65	143	P	P	01 23 52.6	+0.6
GMJI	Gumukmas	43.69	153	P	P	01 23 53.9	+1.6
	comp=Z,70nm,2.1s						
TIXI	Tiksi	43.70	15	P	P	01 23 51.3	-0.4
	comp=Z,16nm,0.6s,baz=268,slow=23,SNR=48						
TIXI				LR	LR	01 45 16.5	
	comp=Z,924nm,18.4s,baz=182,slow=41						
	comp=Z,16nm,0.6s						
TIXI	Tiksi	43.70	15	P	P	01 23 50.6	-1.1
TIXI	Tiksi	43.70	15	deP	P	01 23 51.0	-0.7

TIXI				pmax	pmax		
	comp=Z,47nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,3µm,11.0s						
BKSI	Bulukumba	44.10	143	P	P	01 23 55.3	-0.3
	comp=Z,676nmcomp=Z,45nm,1.7s						
JAGI	Jajag, Banyuwa	44.15	152	IAmb	IAmb	01 24 01.3	
	comp=Z,60nm,0.8s						
JAGI	Jajag, Banyuwa	44.15	152	P	P	01 23 55.6	-0.3
	comp=Z,80nm,1.1s						
JAGI	Jajag, Banyuwa	44.15	152	P	P	01 23 56.7	+0.8
SRBI	Singaraja	44.23	151	P	P	01 23 57.2	+0.6
	comp=Z,2µmcomp=Z,92nm,1.2s						
KOPT	Kop Dagi	44.26	296	IAmb	IAmb	01 24 04.8	
	comp=Z,100nm,1.8s						
SOC	Sochi	44.49	302	*d i*P	P	01 23 59.1	+0.7
SOC				*e*		01 25 40.6	
SOC				*e*S	S	01 30 36.3	+3.0
SOC				*e*SS	SS	01 33 39.8	-13
SOC				pmax	pmax		
	comp=Z,64nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,17.0s						
LBMI	Labuha	44.66	130	P	P	01 24 00.9	+0.8
	comp=Z,2µmcomp=Z,116nm,1.2s						
VORD	Divnogorie	44.71	312	*e*P	P	01 24 03.7	+3.6
VORD				pmax	pmax		
	comp=Z,150nm,1.5s						
SANI	Sanana	44.78	133	P	P	01 24 00.2	-0.8
	comp=Z,598nmcomp=Z,41nm,1.0s						
SANI	Sanana	44.78	133	P	P	01 24 03.0	+1.9
VSR	Storozhevoye	44.80	312	*e*P	P	01 24 00.5	-0.3
VSR				*e*		01 25 44.1	
VSR				pmax	pmax		
	comp=Z,120nm,1.2s						
VSR				MLR	MLR		
	comp=Z,2µm,15.0s						
VORR	Voronezh	44.81	313	*e*P	P	01 24 00.9	+0.1
VORR				pmax	pmax		
	comp=Z,30nm,0.5s						
LPSR	Galich'ya Gora	45.05	314	*e*P	P	01 24 03.7	+1.0
LPSR				pmax	pmax		
	comp=Z,190nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,1µm,13.0s						
BBSI	Bau Bau	45.55	140	P	P	01 24 07.8	+0.7
	comp=Z,10nm,1.0s						
MA2	Magadan	45.84	36	P	P	01 24 08.9	-0.1
	comp=Z,3.4nm,0.3s,baz=264,slow=9.8,SNR=15						
MA2				LR	LR	01 44 36.8	
	comp=Z,992nm,19.0s,baz=254,slow=38						
	comp=Z,3.4nm,0.3s						
MA2	Magadan	45.84	36	P	P	01 24 08.7	-0.3
MA2	Magadan	45.84	36	*c e*P	P	01 24 08.8	-0.1
MA2				pmax	pmax		
	comp=Z,55nm,1.7s						
MA2				MLR	MLR		
	comp=Z,2µm,11.0s						
MA2	Magadan	45.84	36	P	P	01 24 09.3	+0.4
KLMR	Klimovskoe	45.98	326	*e*P	P	01 24 09.5	-0.5
KLMR				*e*		01 25 54.7	
KLMR				*e*S	S	01 30 52.9	-1.6
KLMR				*e*SS	SS	01 34 19.0	0.0
KLMR				pmax	pmax		
	comp=Z,185nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,2µm,13.0s						
KLMR	Klimovskoe	45.98	326	*e*P	P	01 24 09.6	-0.5
KLMR				AMP		01 24 16.1	
	comp=Z,185nm,1.1s						
KLMR				*e*PP	PP	01 25 54.7	-3.0
KLMR				*e*S	S	01 30 52.9	-1.6
KLMR				*e*S	S	01 30 52.9	-1.6
KLMR				*e*SS	SS	01 34 19.0	0.0
KLMR				*e*SS	SS	01 34 19.0	0.0
KLMR				LQ	LQ	01 40 11.5	
KLMR				LQ	LQ	01 40 11.5	
KLMR				LR	LR	01 42 23.9	
KLMR				AMP		01 45 03.0	
	comp=Z,2µm,12.8s						
ANN	Anapa	46.03	303	*e*P	P	01 24 10.7	0.0
ANN				*e**PP	pP	01 24 14.3	-1.9
ANN				*i*		01 26 01.5	
ANN				*e*S	S	01 30 58.1	+2.5
ANN				pmax	pmax		
	comp=Z,157nm,1.7s						
ANN				MLR	MLR		
	comp=N,3µm,16.0s						
ANN				MLR	MLR		
	comp=Z,1µm,15.0s						
MOS	Moscow	46.11	319	*e*P	P	01 24 09.8	-1.3
MOS				*e*		01 25 53.9	
MOS				*e*S	S	01 30 57.0	+0.7
MOS				pmax	pmax		
	comp=Z,900nm,2.2s						
MOS				pmax	pmax		
	comp=Z,260nm,1.1s						
MOS				smax	smax		
	comp=N,300nm,2.7s						
MOS				smax	smax		
	comp=E,300nm,2.9s						
MOS				MLR	MLR		
	comp=E,2µm,15.0s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
OBN	Obninsk	46.64	318	⇓P	P	01 24 15.5	+0.2
OBN	Obninsk	46.64	318	LR	LR	01 43 48.2	
	comp=Z,374nm,21.4s,baz=87,slow=36						
OBN	Obninsk	46.64	318	P	P	01 24 15.5	+0.2
OBN	Obninsk	46.64	318	*d i*P	P	01 24 15.5	+0.2
OBN				*i*		01 25 50.1	
OBN				*i*		01 26 05.9	
OBN				*i* S	S	01 30 58.6	-5.4
OBN				*i* SS	ScS	01 34 09.1	-0.6
OBN				pmax	pmax		
	comp=Z,92nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,13.0s						
SEY	Seymchan	47.32	32	P	P	01 24 21.0	+0.5
	comp=Z,6.5nm,0.6s,baz=265,slow=11,SNR=15						
SEY				LR	LR	01 46 07.3	
	comp=Z,1µm,18.2s,baz=248,slow=38						
	comp=Z,6.5nm,0.6s						
SEY	Seymchan	47.32	32	*c e*P	P	01 24 20.4	-0.1
SEY				pmax	pmax		
	comp=Z,39nm,1.7s						
SEY				MLR	MLR		
	comp=Z,2µm,9.0s						
SWI	Sorong	47.34	126	P	P	01 24 21.4	+0.2
	comp=Z,50nm,1.1s						
WBSI	Waikabubak, Su	47.47	146	P	P	01 24 21.0	-1.2
	comp=Z,127nm,0.9s						
EDFI	Ende, Flores	47.83	143	P	P	01 24 25.0	-0.1
	comp=Z,282nmcomp=Z,17nm,1.1s						
DIKM	Dikmen	47.97	299	⇑P	P	01 24 27.0	+1.1
MMRI	Maumere	48.01	143	P	P	01 24 25.8	-0.6
	comp=Z,73nm,1.0s						
MMRI	Maumere	48.01	143	P	P	01 24 29.5	+3.1
SIM	Simferopol'	48.37	304	*e*P	P	01 24 28.6	-0.3
SIM				*e*		01 26 23.0	
SIM				*e*S	S	01 31 27.4	-1.5
SIM				*e*SS	SS	01 34 50.0	-8.3
SIM				pmax	pmax		
	comp=Z,54nm,0.9s						
ASF	Jabal al Asfar	48.71	287	P	P	01 24 33.6	+1.7
	comp=Z,12nm,0.9s,baz=82,slow=2.3,SNR=21						
	comp=Z,12nm,0.9s						
BZK	Bozkurt	48.85	300	⇓P	P	01 24 32.9	+0.3
BZK	Bozkurt	48.85	300	P	P	01 24 32.9	+0.3
HWQ	Hawqa	48.92	290	*e*P	P	01 24 34.9	+1.4
PEA0B	Petropavlovsk-	49.06	45	P	P	01 24 34.8	+0.7
PEA0B				IAmb	IAmb	01 24 49.6	
	comp=Z,51nm,1.2s						
PEA0B	Petropavlovsk-	49.06	45	P	P	01 24 34.8	+0.7
PEA0B				pmax	pmax		
	comp=Z,51nm,1.3s						
PETK	Petropavlovsk-	49.06	45	P	P	01 24 33.4	-0.7
	comp=Z,7.2nm,1.0s,baz=211,slow=5.2,SNR=8.3						
PETK				LR	LR	01 46 10.3	
	comp=Z,1µm,19.4s,baz=265,slow=37						
	comp=Z,7.2nm,1.0s						
PETK	Petropavlovsk-	49.06	45	P	P	01 24 34.0	-0.1
PETK	Petropavlovsk-	49.06	45	P	P	01 24 34.0	-0.1
BHL	Bhannes	49.25	289	*e*P	P	01 24 37.0	+1.0
SHBL	Chebaa	49.33	288	*e*P	P	01 24 38.0	+1.4
FAKI	Fak Fak	49.51	127	IAmb	IAmb	01 24 43.3	
	comp=Z,87nm,1.2s						
FAKI	Fak Fak	49.51	127	P	P	01 24 37.3	-0.6
	comp=Z,2µmcomp=Z,54nm,0.9s						
FAKI	Fak Fak	49.51	127	P	P	01 24 38.5	+0.6
BR131	Keskin Array S	49.51	297	P	P	01 24 38.2	+0.3
	SNR=23						
BRTR	Keskin Array B	49.51	297	P	P	01 24 39.4	+1.4
	comp=Z,9.5nm,0.9s,baz=96,slow=5.2,SNR=19						
BRTR				PP	PP	01 26 38.5	+6.5
	comp=Z,0.8nm,0.4s,baz=305,slow=37,SNR=3.3						
	comp=Z,9.5nm,0.9s						
BRTR	Keskin Array B	49.51	297	*c e*P	P	01 24 38.7	+0.7
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PET	Petropavlovsk	49.64	45	*e*P	P	01 24 36.9	-1.6
PET				*e*		01 26 33.4	
PET				*e*S	S	01 31 40.2	-6.3
PET				*e*SS	SS	01 35 10.9	-7.5
PET				pmax	pmax		
	comp=Z,500nm,7.0s						
PET				pmax	pmax		
	comp=Z,100nm,13.4s						
PET				pmax	pmax		
	comp=Z,200nm,12.2s						
PET				MLR	MLR		
	comp=Z,3µm,14.0s						
PET				MLR	MLR		
	comp=Z,4µm,13.0s						
MMAI	Mount Meron Ar	49.69	288	P	P	01 24 41.4	+2.1
	comp=Z,4.7nm,1.1s,baz=198,slow=24,SNR=8.0						
	comp=Z,4.7nm,1.1s						
LVZ	Lovozero	49.73	334	P	P	01 24 38.0	-1.1
LVZ				IAmb	IAmb	01 24 44.8	
	comp=Z,81nm,1.0s						
LVZ	Lovozero	49.73	334	*c e*P	P	01 24 38.3	-0.7
LVZ				pmax	pmax		
	comp=Z,119nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,4µm,14.0s						
BATI	Baumata	50.08	142	LR	LR	01 48 39.5	
	comp=Z,703nm,18.9s,baz=306,slow=39						
BATI	Baumata	50.08	142	P	P	01 24 43.7	+1.4
	comp=Z,1µmcomp=Z,75nm,1.0s						
APA	Apatity	50.11	334	⇓*i*P	P	01 24 41.3	-0.6
APA				*i*		01 25 58.0	
APA				*i*		01 26 37.0	
APA				*i* S	S	01 31 49.0	-3.7
APA				*i*		01 34 34.0	
APA				*i* SS	SS	01 35 27.0	+1.5
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
ANTO	Ankara	50.12	297	P	P	01 24 42.9	+0.4
ANTO	Ankara	50.12	297	P	P	01 24 42.9	+0.4
ANTO				pmax	pmax		
	comp=Z,265nm,1.6s						
PUL	Pulkovo	50.36	324	*i* P	P	01 24 43.8	0.0
PUL				pmax	pmax		
	comp=Z,14nm,0.7s						
CSS	Mathiatis	50.83	291	IAmb	IAmb	01 24 54.1	
	comp=Z,139nm,1.8s						
BAKI	Biak	50.97	122	P	P	01 24 50.3	+1.2
	comp=Z,2µmcomp=Z,88nm,1.4s						
EIL	Elat	51.05	284	P	P	01 24 49.7	+0.1
	comp=Z,27nm,0.9s,baz=79,slow=3.5,SNR=19						
	comp=Z,27nm,0.9s						
AKASG	Malin Array Be	51.09	312	P	P	01 24 49.2	-0.3
	comp=Z,35nm,0.7s,baz=70,slow=7.6,SNR=70						
	comp=Z,35nm,0.7s						
AKASG	Malin Array Be	51.09	312	IAmb	IAmb	01 24 55.0	
	comp=Z,74nm,0.9s						
AKBB	Malin Array Si	51.09	312	IAmb	IAmb	01 24 55.0	
	comp=Z,114nm,1.2s						
AKBB	Malin Array Si	51.09	312	*c e*P	P	01 24 49.3	-0.2
MNK	Minsk	51.66	317	*i* P	P	01 24 54.4	+0.7
MNK				*i*		01 26 45.8	
MNK				*i* S	S	01 32 14.1	-0.3
MNK				*i* SS	SS	01 35 53.5	+3.1
MNK				*i* SSS	SSS	01 37 29.8	
MNK				pmax	pmax		
	comp=N,4.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,35nm,1.0s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.3s						
MNK				MLR	MLR		
	comp=Z,899nm,15.0s						
MNK				MLR	MLR		
	comp=N,158nm,14.0s						
MNK	Minsk	51.66	317	*i* P	P	01 24 54.5	+0.7
	comp=E,6.0nm,1.3s						
MNK				*i* P	P	01 24 54.5	+0.7
	comp=N,4.0nm,1.3s						
MNK				*i* P	P	01 24 54.5	+0.7
	comp=Z,35nm,1.0s,baz=87						
MNK				*i* PP	PP	01 26 45.8	-5.2
MNK				*i* PPP	PPP	01 27 44.6	
MNK				*i* S	S	01 32 14.2	-0.3
MNK				*i* SS	SS	01 35 53.6	+3.1
MNK				*i* SSS	SSS	01 37 29.8	
MNK				*i* LQ	LQ	01 43 06.8	
MNK				*i* LR	LR	01 47 02.4	
MNK				*i* LRM	MLR	01 49 14.5	
	comp=Z,899nm,15.3s						
MNK				*i* LRM	MLR	01 49 21.3	
	comp=E,73nm,17.9s						
MNK				*i* LRM	MLR	01 49 21.3	
	comp=N,158nm,14.1s						
KIS	Kishinev	51.78	307	⇓*i*P	P	01 24 54.0	-0.7
	comp=N,350nm,5.9s						
KIS	Kishinev	51.78	307	*e*PP	PP	01 26 57.0	+4.7
KIS	Kishinev	51.78	307	⇑P	P	01 24 58.3	+3.6
KIS	Kishinev	51.78	307	*d i*P	P	01 24 54.0	-0.7
KIS				*e*		01 26 57.0	
KIS				*e*PPP	PPP	01 27 54.0	
KIS				*e*S	S	01 32 13.0	-3.4
KIS				pmax	pmax		
	comp=Z,350nm,5.9s						
KIS				MLR	MLR		
	comp=Z,500nm,14.0s						
KIS				MLR	MLR		
	comp=E,600nm,15.0s						
MILM	Milestii Mici	51.79	307	⇓*i*P	P	01 24 54.4	-0.4
	comp=E,800nm,5.9s						
MILM	Milestii Mici	51.79	307	*e*PP	PP	01 26 56.0	+3.6
MILM	Milestii Mici	51.79	307	⇓P	P	01 24 54.3	-0.6
MILM	Milestii Mici	51.79	307	*d i*P	P	01 24 54.4	-0.4
MILM				*e*		01 26 56.0	
MILM				*e*PPP	PPP	01 27 51.0	
MILM				*e*S	S	01 32 12.0	-4.6
MILM				pmax	pmax		
	comp=Z,800nm,5.9s						
MILM				pmax	pmax		
	comp=E,400nm,6.1s						
MILM				MLR	MLR		
	comp=Z,1µm,14.0s						
MILM				MLR	MLR		
	comp=E,1µm,13.0s						
BORA	Eskisehir	51.88	298	IAmb	IAmb	01 25 01.4	
	comp=Z,110nm,1.6s						
SORM	Soroca	51.94	309	⇑P	P	01 24 55.3	-0.6
SORM	Soroca	51.94	309	⇑P	P	01 24 55.3	-0.6
ATD	Arta Tunnel	52.00	259	P	P	01 24 58.2	+1.3
	comp=Z,4.6nm,0.6s,baz=51,slow=20,SNR=5.0						
	comp=Z,4.6nm,0.6s						
ATD	Arta Tunnel	52.00	259	P	P	01 24 56.4	-0.4
ATD	Arta Tunnel	52.00	259	P	P	01 24 57.2	+0.3
ATD	Arta Tunnel	52.00	259	*e*P	P	01 24 46.4	-10
TLCR		52.06	305	⇑P	P	01 24 57.2	+0.4
TLCR		52.06	305	⇑P	P	01 24 57.2	+0.4
JURR	Jurilovca	52.08	304	⇑P	P	01 24 58.4	+1.3
VSU	Vasula	52.17	322	*i* P	P	01 24 57.7	+0.2
VSU				pmax	pmax		
	comp=Z,184nm,1.0s						
VSU	Vasula	52.17	322	*e*P	P	01 24 58.0	+0.5
LEOM	Leova	52.24	307	⇑P	P	01 24 57.2	-1.0
LEOM	Leova	52.24	307	⇑P	P	01 24 57.2	-1.0
NACGM	Naroch	52.27	317	⇑*e*P	P	01 24 59.3	+1.0
	baz=86						
IDID	Didziasalis	52.27	318	*e*P	P	01 24 58.8	+0.5
TPGR	Topolog	52.39	305	⇑P	P	01 25 00.3	+1.0
MANR	Mangalia	52.46	303	⇓P	P	01 25 01.3	+1.5
VLDR	Vladesti	52.46	306	⇑P	P	01 25 00.4	+0.6
TIRR	Tirgusor	52.46	304	⇓P	P	01 25 00.0	+0.2
TIRR	Tirgusor	52.46	304	⇓P	P	01 25 00.0	+0.2
TIRR	Tirgusor	52.46	304	⇓P	P	01 25 00.0	+0.2
MFTR	Murfatlar	52.51	304	⇓P	P	01 25 01.4	+1.2
FIA1	FINESS Array S	52.52	326	P	P	01 24 59.4	-0.6
FIA1				IAmb	IAmb	01 25 06.0	
	comp=Z,68nm,1.2s						
FINES	FINESS Array B	52.52	326	P	P	01 25 00.1	+0.1
	comp=Z,4.3nm,0.5s,baz=93,slow=6.7,SNR=18						
FINES				LR	LR	01 48 15.1	
	comp=Z,1µm,20.3s,baz=88,slow=37						
	comp=Z,4.3nm,0.5s						
VASR	Vaslui	52.53	307	⇑P	P	01 25 02.0	+1.7
CFR	Carcaliu	52.53	305	⇑P	P	01 25 00.6	+0.3
CFR	Carcaliu	52.53	305	⇑P	P	01 25 00.6	+0.3
SCTR	Scanteiesti	52.55	306	⇑P	P	01 25 01.2	+0.8
IIGN	Ignalina	52.57	318	*e*P	P	01 25 01.2	+0.7
IAS	Iasi	52.60	308	⇑P	P	01 25 03.3	+2.5
IAS	Iasi	52.60	308	⇑P	P	01 25 03.3	+2.5
ISAL	Salakas	52.61	318	*e*P	P	01 25 01.5	+0.7
VARL	Varlezi	52.61	306	⇑P	P	01 25 01.9	+1.0
KALB	Balgarevo	52.66	303	⇓P	P	01 25 02.5	+1.2
ISK	Istanbul-Kandi	52.66	300	P	P	01 25 01.3	-0.1
SCHL	Schela	52.69	305	⇑P	P	01 25 05.2	+3.7
TLBR	Topalu	52.70	304	⇑P	P	01 25 03.1	+1.5
SLCR	Slobozia Conac	52.72	306	⇓P	P	01 25 03.2	+1.5
IZVR	Izvoarele	52.73	305	⇑P	P	01 25 03.0	+1.2
HARR	Harsova	52.76	304	⇑P	P	01 25 03.5	+1.4
HARR	Harsova	52.76	304	⇑P	P	01 25 03.5	+1.4
KEV	Kevo	52.82	336	P	P	01 25 01.4	-0.7
KEV				IAmb	IAmb	01 25 08.3	
	comp=Z,84nm,1.2s						
KEV	Kevo	52.82	336	P	P	01 25 01.4	-0.7
KEV				pmax	pmax		
	comp=Z,84nm,1.2s						
GHRR		52.88	306	⇑P	P	01 25 05.3	+2.3
ICOR	Ion Corvin	52.96	304	⇑P	P	01 25 05.3	+1.8
PANC	Panciu	53.10	306	⇓P	P	01 25 07.1	+2.6
ODBI	Odobesti	53.18	306	⇑P	P	01 25 09.0	+3.8
AMRR	Amara	53.19	304	⇑P	P	01 25 08.9	+3.7
AMRR	Amara	53.19	304	⇑P	P	01 25 08.9	+3.7
GRER		53.30	305	⇑P	P	01 25 09.9	+3.8
ARA0	ARCESS Array S	53.31	336	*e*P	P	01 25 05.7	0.0
ARCES	ARCESS Array B	53.31	336	P	P	01 25 06.3	+0.5
	comp=Z,11nm,0.6s,baz=87,slow=7.2,SNR=53						
ARCES				LR	LR	01 50 31.2	
	comp=Z,2µm,20.8s,baz=96,slow=39						
	comp=Z,11nm,0.6s						
ARCES	ARCESS Array B	53.31	336	P	P	01 25 05.9	+0.2
ARCES				IAmb	IAmb	01 25 12.1	
	comp=Z,41nm,0.9s						
ARCES	ARCESS Array B	53.31	336	P	P	01 25 05.9	+0.2
ARCES				pmax	pmax		
	comp=Z,41nm,1.0s						
TESR	Tescani	53.33	307	⇑P	P	01 25 06.2	0.0
MEF	Metsahovi	53.34	324	*e*P	P	01 25 06.3	+0.2
PGOR	Pogoanele	53.38	305	⇓P	P	01 25 09.8	+3.1
VRI	Vrincioaia	53.39	306	⇓P	P	01 25 07.8	+1.1
VRI	Vrincioaia	53.39	306	⇓P	P	01 25 07.8	+1.1
SMPI	Sarmi	53.41	121	P	P	01 25 08.1	+0.9
	comp=Z,43nm,1.1s						
PRD	Provadia	53.42	303	P	P	01 25 07.0	0.0
PLOR	Plostina	53.44	306	⇓P	P	01 25 08.3	+1.2
PLOR	Plostina	53.44	306	⇓P	P	01 25 08.3	+1.2
BISRR	Bisoca	53.45	306	⇓P	P	01 25 09.5	+2.2
KULA	Kula-Manisa	53.56	297	P	P	01 25 07.3	-0.9
BIZ	Bicaz	53.62	307	⇓P	P	01 25 08.9	+0.5
MANT	Manisa	53.64	297	IAmb	IAmb	01 25 14.4	
	comp=Z,61nm,1.5s						
ISR	Istrita	53.65	305	⇑P	P	01 25 10.9	+2.2
ISR	Istrita	53.65	305	⇑P	P	01 25 10.9	+2.2
MTSE	Matsula	53.69	322	*e*P	P	01 25 06.5	-2.1
COVR	Voineasa-Covas	53.75	306	⇑P	P	01 25 10.5	+1.1
NEHR	Nehoiu	53.76	306	⇑P	P	01 25 11.5	+2.0
BILL	Bilibino	53.80	26	P	P	01 25 09.7	+0.3
BILL				IAmb	IAmb	01 25 16.8	
	comp=Z,52nm,1.3s						
BILL	Bilibino	53.80	26	*c i*P	P	01 25 08.1	-1.3
BILL				*i*		01 26 17.0	
BILL				pmax	pmax		
	comp=Z,40nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,11.0s						
PABE	Paberze	53.84	318	*e*P	P	01 25 10.1	+0.4
SULR		53.94	305	⇓P	P	01 25 15.8	+5.1
RAZG	Razgrad	53.98	303	⇓P	P	01 25 12.6	+1.4
OZUR		53.99	306	⇓P	P	01 25 13.2	+2.0
MLR	Muntele Rosu	53.99	306	⇓P	P	01 25 12.4	+1.1
MLR	Muntele Rosu	53.99	306	⇓P	P	01 25 12.4	+1.1
SECR		54.00	305	⇑P	P	01 25 15.6	+4.4
HAMF	Hammerfest	54.05	337	*e*P	P	01 25 12.1	+0.9
KTK1	Kautokeino	54.06	335	*e*P	P	01 25 11.5	+0.2
BUR01	Bucovina Ar. S	54.10	308	⇑P	P	01 25 12.1	+0.1
BURAR	Bucovina Array	54.10	308	⇓P	P	01 25 12.7	+0.7
BURAR	Bucovina Array	54.10	308	IAmb	IAmb	01 25 20.5	
	comp=Z,29nm,0.7s						
BURAR	Bucovina Array	54.10	308	⇓P	P	01 25 12.7	+0.7
JMB	Yambol	54.17	302	P	P	01 25 07.0	-5.4
EDRB	Edirne	54.19	301	P	P	01 25 12.7	+0.1
DOPR	Dopca	54.29	306	⇑P	P	01 25 15.0	+1.7
SUW	Suwalki	54.45	316	*e*P	P	01 25 14.2	-0.1
SUW				*e*sP	pP	01 25 18.8	-1.0
SUW	Suwalki	54.45	316	*e*P	P	01 25 13.3	-1.0
SZH	Strazhica	54.46	303	P	P	01 25 12.6	-2.0
LVV	L'vov	54.51	311	*e*P	P	01 25 15.2	+0.4
LVV				*e*		01 26 17.0	
LVV				*e*		01 27 23.6	
LVV				*e*S	S	01 32 50.2	-3.3
LVV				*e*SS	SS	01 36 34.4	-1.2
LVV				MLR	MLR		
	comp=Z,2µm,17.0s						
HOPEN	Hopen	54.55	344	*e*P	P	01 25 16.1	+1.4
SLIT	Slitere, Latvi	54.58	321	*e*P	P	01 25 13.9	-1.2
ARG	Arkhangelos	54.58	294	P	P	01 25 14.8	-0.7
RAF	Rauma	54.61	325	*e*P	P	01 25 15.6	+0.3
VOIR		54.62	306	⇑P	P	01 25 18.0	+2.2
VOIR		54.62	306	⇑P	P	01 25 18.0	+2.2
ARCR	ARCALIA	54.77	308	⇑P	P	01 25 20.3	+3.5
ZIMR		54.78	304	⇑P	P	01 25 19.3	+2.5
ZIMR		54.78	304	⇑P	P	01 25 19.3	+2.5
COPA	Copaceanca	54.78	304	⇑P	P	01 25 18.8	+2.0
STFAR	Stefanesti-Arg	54.80	305	⇑P	P	01 25 21.8	+4.7
BLCB	Balcova	54.82	297	P	P	01 25 16.7	-0.5
HUMR	Humele	54.86	305	⇑P	P	01 25 18.7	+1.2
GENI	Genyem	54.88	120	P	P	01 25 19.4	+1.5
	comp=Z,4µmcomp=Z,106nm,1.0s						
GENI	Genyem	54.88	120	P	P	01 25 20.5	+2.6
ENEZ	Enez	54.88	300	P	P	01 25 17.9	+0.2
ALN	Alexandroupoli	54.92	300	P	P	01 25 16.8	-1.1
ALN	Alexandroupoli	54.92	300	IAmb	IAmb	01 25 23.9	
	comp=Z,117nm,1.6s						
ARR	Arges	54.92	306	⇓P	P	01 25 19.6	+1.6
PBUR	Paburge	54.93	319	*e*P	P	01 25 18.0	+0.2
BODT	Bodrum	54.97	295	P	P	01 25 18.1	-0.3
EZN	Ezine	54.98	299	P	P	01 25 18.2	-0.2
JETT	Jettan, Norway	55.10	336	*e*P	P	01 25 19.3	+0.5
SMG	Samos	55.16	296	P	P	01 25 20.1	+0.4
KDZ	Kurdzhali	55.20	301	P	P	01 25 19.9	-0.1
RDO	Rodhopi	55.23	301	P	P	01 25 20.2	0.0
RDO	Rodhopi	55.23	301	IAmb	IAmb	01 25 26.2	
	comp=Z,100nm,1.5s						
BMR	Baia Mare	55.24	309	⇑P	P	01 25 22.3	+2.2
BMR	Baia Mare	55.24	309	⇑P	P	01 25 22.3	+2.2
CJR	Cluj-Napoca	55.36	308	⇓P	P	01 25 22.8	+1.7
CJR	Cluj-Napoca	55.36	308	⇓P	P	01 25 22.8	+1.7
VLAD	Vladila	55.38	304	⇓P	P	01 25 27.4	+6.2
KWP	Kalwaria Pacla	55.39	311	*e*P	P	01 25 21.9	+0.7
KWP				*e*sP	pP	01 25 26.4	-0.4
KWP				*e*PP	PP	01 27 26.3	+1.5
SMTH	Samothraki Isl	55.41	300	P	P	01 25 21.3	-0.2
LOT	Lotru	55.50	306	⇑P	P	01 25 23.1	+0.9
AAL	Aland	55.54	324	*e*P	P	01 25 23.3	+1.2
CHOS	Chios island	55.56	297	P	P	01 25 21.5	-1.2
TRO	Tromso	55.62	336	*e*P	P	01 25 21.9	-0.6
RZN	Rozhen	55.70	301	*i* P	P	01 25 24.2	+0.4
MESR	Meseseni	55.70	308	⇑P	P	01 25 24.8	+1.3
BJO1	Bjornoya	55.78	342	*e*P	P	01 25 24.8	+1.2
KOLS	Kolonicke sedl	55.80	310	*e*P	P	01 25 26.1	+1.9
KOLS				pmax	pmax		
	comp=Z,32nm,0.8s						
KOLS	Kolonicke sedl	55.80	310	*e*P	P	01 25 26.1	+1.9
LIA	Limnos Island	55.81	299	P	P	01 25 22.6	-1.8
UZH	Uzhgorod	55.84	310	*e*P	P	01 25 24.4	0.0
UZH				*i*		01 25 29.3	

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UZH                                e              01 26 25.8
UZH                                e              01 27 25.0
UZH                                i S    S       01 33 07.6 -3.7
UZH                                eSSS   SSS     01 38 57.0
UZH                                 MLR   MLR
       comp=N,400nm,16.0s
UZH                                 MLR   MLR
       comp=E,800nm,16.0s
UZH                                 MLR   MLR
       comp=Z,400nm,16.0s
DRGR                     55.94 308 ⇑P     P       01 25 26.3 +1.0
DRGR                     55.94 308 ⇑P     P       01 25 26.3 +1.0
THAS  Thassos island     55.97 300  P     P       01 25 23.6 -1.9
MPEP  Malo Peshtene      56.00 304  P     P       01 25 26.8 +1.1
DEV   Deva               56.00 307 ⇓P     P       01 25 26.5 +0.9
DEV   Deva               56.00 307 ⇓P     P       01 25 26.5 +0.9
KAVA  Kavala             56.02 301  P     P       01 25 25.3 -0.6
KLNR  Kaliningrad        56.09 317d iP    P       01 25 26.5 +0.4
KLNR                                pmax  pmax
       comp=Z,210nm,1.0s
KLNR                                MLR   MLR
       comp=Z,2µm,13.0s
BAIL  Bailesti           56.12 304 ⇑P     P       01 25 28.1 +1.6
GZR   Gura Zlata         56.20 306 ⇑P     P       01 25 29.6 +2.4
GZR   Gura Zlata         56.20 306 ⇑P     P       01 25 29.6 +2.4
CRVS  Cervenica-Dubn     56.33 310 eP     P       01 25 30.0 +2.0
CRVS                                pmax  pmax
       comp=Z,42nm,1.0s
CRVS  Cervenica-Dubn     56.33 310 eP     P       01 25 30.0 +2.0
PUNG  Punghina           56.34 305 ⇑P     P       01 25 31.0 +2.9
LTVH  Ltavrtes, Hu       56.35 309 ⇑P     P       01 25 31.0 +2.9
LTVH  Ltavrtes, Hu       56.35 309  P     P       01 25 31.3 +3.2
NVR   Nevrokopi          56.41 301  P     P       01 25 26.6 -2.1
MMB   Musomiste          56.44 302 i P    P       01 25 28.5 -0.4
KOKK  Kokkinochori,      56.45 301  P     P       01 25 27.9 -1.0
BORR  Bors               56.49 308 ⇑P     P       01 25 35.0 +5.9
VTS   Vitosha            56.53 303 ⇓P     P       01 25 30.3 +0.6
VTS   Vitosha            56.53 303  IAmb  IAmb    01 25 36.2
       comp=Z,82nm,1.3s
VTS   Vitosha            56.53 303 ⇓P     P       01 25 30.3 +0.6
VTS   Vitosha            56.53 303 i P    P       01 25 30.3 +0.6
HERR  Herculane          56.56 306 ⇑P     P       01 25 33.7 +4.1
OUR   Ouranopolis        56.59 300  P     P       01 25 29.1 -0.8
SPB2  Spitsbergen Ar     56.65 346  IAmb  IAmb    01 25 38.8
       comp=Z,66nm,1.1s
SPA0  Spitsbergen Ar     56.66 346 eP     P       01 25 29.6 -0.3
SPITS Spitsbergen Ar     56.66 346  LR    LR      01 53 32.0
       comp=Z,2µm,18.4s,baz=215,slow=40
SPITS Spitsbergen Ar     56.66 346  P     P       01 25 28.8 -1.1
SPITS                               pmax  pmax
       comp=Z,75nm,0.9s
SRS   Serrai             56.66 301  P     P       01 25 28.6 -1.9
BLKB  Belogradchik       56.68 304 ⇓P     P       01 25 31.9 +1.3
AAE   Adis Abeba         56.72 259 eP     P       01 25 30.8 -0.8
AAE   Adis Abeba         56.72 259 eP     P       01 25 18.1  -13
UPP   Uppsala            56.76 324 eP     P       01 25 31.0 +0.3
SIRR  Siria              56.76 307 ⇓P     P       01 25 33.5 +2.4
HSPB  Hornsund (broa     56.77 345 eP     P       01 25 31.4 +0.7
HSPB                               esP    pP      01 25 35.9 -0.4
HSPB  Hornsund (broa     56.77 345 eP     P       01 25 31.9 +1.3
KKB   Krupnik            56.84 302 i P    P       01 25 31.5 -0.2
FURI  Furi               56.87 259 eP     P       01 25 31.7 -0.9
FURI  Furi               56.87 259 eP     P       01 25 19.8  -13
SOH   Sokhos             56.92 301  P     P       01 25 29.8 -2.5
BZS   Buzias             56.94 307 ⇓P     P       01 25 32.5 +0.1
BZS   Buzias             56.94 307 ⇓P     P       01 25 32.5 +0.1
KYMI  Kymi, Euboea I     56.97 298  P     P       01 25 32.2 -0.5
NIE   Niedzica           56.97 311 eP     P       01 25 34.2 +1.6
NIE                                esP    sP      01 25 38.8 -1.5
NIE                                ePcP   PcP     01 26 27.8  0.0
PLG   Polygyros          56.97 300  P     P       01 25 31.6 -1.1
STEI  Steigen            57.01 334 eP     P       01 25 32.1 -0.4
KECS  Kecovo             57.05 310 eP     P       01 25 35.8 +2.7
KECS                                pmax  pmax
       comp=Z,46nm,0.8s
KECS  Kecovo             57.05 310 eP     P       01 25 35.8 +2.7
MDVR  Moldovita          57.07 306 ⇓P     P       01 25 34.2 +0.8
OJC   Ojcow              57.12 312 eP     P       01 25 33.9 +0.3
OJC                                esP    pP      01 25 38.2 -1.0
OJC   Ojcow              57.12 312  IAmb  IAmb    01 25 39.7
       comp=Z,54nm,0.7s
KSTL  Kastelli Herak     57.22 294  P     P       01 25 37.7 +3.2
DION  Dionisos Attik     57.26 297  P     P       01 25 31.4 -3.3
PTL   Penteli            57.31 297  P     P       01 25 34.4 -0.8
BANR  Banloc             57.32 306 ⇓P     P       01 25 38.0 +3.0
KNRA  Kununurra          57.35 141  P     P       01 25 35.3 -0.2
KNRA                                IAmb  IAmb    01 25 41.3
       comp=Z,88nm,1.1s
KNRA  Kununurra          57.35 141  P     P       01 25 37.2 +1.8
VAY   Valandovo          57.35 301 i P    P       01 25 35.0 -0.3
IDI   Anoyia             57.37 294 ⇑P     P       01 25 34.7 -0.9
IDI   Anoyia             57.37 294  P     P       01 25 32.4 -3.2
IDI   Anoyia             57.37 294  IAmb  IAmb    01 25 47.8
       comp=Z,104nm,1.3s
ATHU  Athens Univers     57.40 297  P     P       01 25 34.4 -1.3
VIKU  Vikbolandet        57.42 322 eP     P       01 25 35.6 +0.1
VLY   Voula,Athens       57.43 297  P     P       01 25 34.8 -1.1
NEO   Neokhori           57.43 299  P     P       01 25 34.6 -1.4
ATH   Athens Observa     57.45 297  P     P       01 25 35.0 -1.0
BSZH  Besenyszg          57.45 309  P     P       01 25 38.8 +2.9
MOR8  Moi Rana           57.48 332 eP     P       01 25 35.1 -0.7
PSZ   Piszkesteto        57.56 310 ⇑P     P       01 25 37.4 +0.6
PSZ   Piszkesteto        57.56 310  IAmb  IAmb    01 25 43.0
       comp=Z,64nm,1.4s
PSZ   Piszkesteto        57.56 310 ⇑P     P       01 25 37.4 +0.6
PSZ   Piszkesteto        57.56 310  P     P       01 25 37.8 +1.0
LANS  Liptovska Anna     57.56 311 eP     P       01 25 38.3 +1.6
LANS  Liptovska Anna     57.56 311 eP     P       01 25 38.3 +1.6
KBS   Kingsbay           57.56 347 eP     P       01 25 36.4 +0.2
LOF   Lofoten            57.63 334 eP     P       01 25 36.4 -0.5
VILL  Villia             57.70 298  P     P       01 25 35.2 -2.7
LIT   Litokhoron         57.75 300  P     P       01 25 36.7 -1.5
LIT   Litokhoron         57.75 300  IAmb  IAmb    01 25 43.1
       comp=Z,107nm,1.5s
ATAL  Atalanti           57.76 298  P     P       01 25 36.7 -1.6
FITZ  Fitzroy Crossi     57.77 145  LR    LR      01 53 13.9
       comp=Z,339nm,18.4s,baz=318,slow=39
FITZ  Fitzroy Crossi     57.77 145  P     P       01 25 38.4  0.0
MBWA  Marble Bar         57.86 153  P     P       01 25 40.5 +1.5
MBWA                                IAmb  IAmb    01 25 43.5
       comp=Z,34nm,0.9s
KONS  Konsvik            57.97 332 eP     P       01 25 39.7 +0.5
SKO   Skopje             57.99 302 i P    P       01 25 40.1 +0.3
LTK   Loutraki           58.00 298  P     P       01 25 42.3 +2.3
IMMV  Iera Moni Meta     58.02 294  P     P       01 25 39.3 -0.8
STOK  Stokkvaagen        58.03 332 eP     P       01 25 40.4 +0.8
KRND  KRANIDI            58.05 297  P     P       01 25 37.4 -2.9
GKP   Gorka Klasztor     58.06 316 eP     P       01 25 40.8 +0.7
GKP                                esP    pP      01 25 44.8 -1.0
GKP   Gorka Klasztor     58.06 316 eP     P       01 25 40.5 +0.5
VYHS  Vyhne              58.11 310 eP     P       01 25 41.4 +0.8
VYHS                                pmax  pmax
       comp=Z,34nm,1.4s
VYHS  Vyhne              58.11 310 eP     P       01 25 41.3 +0.7
GVDS  Gavdos             58.13 294  P     P       01 25 39.1 -1.8
GVD   Gavdhos            58.13 294  P     P       01 25 39.5 -1.4
RODP  Rodopos            58.16 295  P     P       01 25 43.6 +2.5
AGG   Agios Georgios     58.18 299  P     P       01 25 39.5 -1.7
KZN   Kozani             58.22 301  P     P       01 25 38.8 -2.7
BUD   Budapest           58.23 309  P     P       01 25 42.5 +1.1
OKC   Ostrava-Krasne     58.24 312 eP     P       01 25 41.8 +0.4
OKC                                e              01 25 45.4
OKC                                 MLR   MLR
       comp=Z,1µm,17.6s
OKC   Ostrava-Krasne     58.24 312 eP     P       01 25 41.8 +0.4
OKC                                ex     x       01 25 45.4
OKC                                 AMS   AMS     01 52 40.0
       comp=Z,1µm,17.6s
THL   Klokotos Trika     58.25 300  P     P       01 25 39.3 -2.4
FRGS  Fruska Gora        58.29 306 ⇑P     P       01 25 42.3 +0.4
FRGS  Fruska Gora        58.29 306⇓iP     P       01 25 41.9  0.0
KNDR  Palaiochora Ch     58.32 294  P     P       01 25 40.8 -1.4
MAKR  Makrakomi, Fth     58.33 299  P     P       01 25 40.8 -1.5
FNA   Florina            58.37 301  IAmb  IAmb    01 25 47.2
       comp=Z,71nm,1.8s
KOLL  Kolacno            58.37 311 eP     P       01 25 43.5 +1.1
ANKY  Antikythira Is     58.41 295  P     P       01 25 41.0 -1.8
VLI   Veliai             58.42 296  P     P       01 25 39.9 -3.0
DIVS  Divibare           58.44 305⇓iP     P       01 25 42.9 -0.1
KTHA  Kythira Island     58.47 296  P     P       01 25 41.5 -1.8
GUR   Goura              58.50 298  P     P       01 25 39.5 -4.0
KTHR  Kythira            58.52 296  P     P       01 25 40.4 -3.2
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MAUC  Maruska            58.56 312 eP     P       01 25 44.5 +0.8
MAUC                                AMS   AMS     01 55 20.0
       comp=Z,5µm,17.1s
EVR   Evrytania          58.60 299  P     P       01 25 43.2 -1.0
KLV   Kalavryta, Ach     58.61 298  P     P       01 25 41.7 -2.6
SRO   Srobarova          58.62 310 eP     P       01 25 47.0 +2.9
SRO                                 pmax  pmax
       comp=Z,46nm,1.3s
SRO   Srobarova          58.62 310 eP     P       01 25 47.0 +2.9
KPRO  Kipourio           58.62 300  P     P       01 25 35.2 -9.1
MORC  Moravsky Berou     58.64 312 ⇓P     P       01 25 44.8 +0.5
MORC  Moravsky Berou     58.64 312  IAmb  IAmb    01 25 50.5
       comp=Z,98nm,1.5s
MORC  Moravsky Berou     58.64 312 ⇓P     P       01 25 44.8 +0.5
MORC  Moravsky Berou     58.64 312⇓iP     P       01 25 44.7 +0.4
HFS   Hagfors            58.67 325  LR    LR      01 53 06.6
       comp=Z,1µm,19.1s,baz=78,slow=38
SJES  Sjenica            58.68 304 eP     P       01 25 45.2 +0.5
OHR   Ohrid              58.69 302 i P    P       01 25 47.3 +2.5
NEST  Nestorio           58.71 301  P     P       01 25 44.0 -1.0
NSS   Namsos             58.72 330 eP     P       01 25 44.5  0.0
CSKK  Cskako             58.76 309  P     P       01 25 45.9 +0.8
JAVC  Velka Javorina     58.78 311⇓iP     P       01 25 46.9 +1.6
MORH  Mrgy, Hungar       58.80 308⇓iP     P       01 25 45.3 -0.1
MORH  Mrgy, Hungar       58.80 308  P     P       01 25 45.2 -0.1
KBN   Korca              58.84 301  P     P       01 25 43.6 -2.3
KBN   Korca              58.84 301  IAmb  IAmb    01 25 51.0
       comp=Z,78nm,1.2s
BBLS  Lazi&#263;i        58.91 305⇓iP     P       01 25 46.5 +0.2
SHEM  Shemya Is, Ala     58.95  44  LR    LR      01 53 04.9
       comp=Z,956nm,20.0s,baz=290,slow=38
DRO   Drossia            58.97 298  P     P       01 25 44.7 -2.0
RUDO  Rudo               59.00 305 eP     P       01 25 46.5 -0.4
BSD   Bornholm Skovb     59.01 319 eP     P       01 25 46.2 -0.5
BSD   Bornholm Skovb     59.01 319 eP     P       01 25 44.5 -2.2
SMOL  Smolenice          59.02 311 eP     P       01 25 48.2 +1.3
SMOL                                pmax  pmax
       comp=Z,24nm,1.4s
SMOL  Smolenice          59.02 311 eP     P       01 25 48.2 +1.3
KRLC  Kraliky            59.05 313 eP     P       01 25 47.6 +0.5
KRLC                               e              01 25 51.1
KRLC                               eS     S       01 33 55.8 +2.2
KRLC                                MLR   MLR
       comp=Z,1µm,15.6s
KRLC  Kraliky            59.05 313 eP     P       01 25 47.6 +0.5
KRLC                               epP    pP      01 25 51.1 -1.7
KRLC                               eS     S       01 33 55.8 +2.2
KRLC                                AMS   AMS     01 53 00.0
       comp=Z,1µm,15.6s
RLS   Riolos of Patr     59.12 298  P     P       01 25 45.5 -2.2
LSK   Leskovik           59.12 301  P     P       01 25 47.0 -0.8
TIH   Tihany             59.12 309  P     P       01 25 45.5 -2.1
KSP   Ksiaz              59.16 314 eP     P       01 25 48.7 +0.8
KSP                                esP    pP      01 25 52.8 -0.7
KOVH  Kovagotottos       59.20 308  P     P       01 25 48.5 +0.3
DPC   Dobruska-Polom     59.27 313 eP     P       01 25 49.2 +0.6
DPC                                e              01 25 52.9
DPC                                eS     S       01 33 53.1 -3.3
DPC                                 MLR   MLR
       comp=Z,2µm,16.5s
DPC   Dobruska-Polom     59.27 313 eP     P       01 25 49.2 +0.6
DPC                                epP    pP      01 25 52.9 -1.4
DPC                                eS     S       01 33 53.1 -3.3
DPC                                 AMS   AMS     01 53 20.0
       comp=Z,2µm,16.5s
PYL   PYLOS              59.28 297  P     P       01 25 45.1 -3.7
OSTC  Ostas              59.28 313 eP     P       01 25 49.1 +0.4
OSTC                               ex     x       01 25 52.5
OSTC                               eS     S       01 33 51.1 -5.5
OSTC                                AMS   AMS     01 53 10.0
       comp=Z,1µm,17.0s
MPLH  Magyarpolny        59.29 309  P     P       01 25 49.2 +0.4
DEL   Delary             59.30 320 eP     P       01 25 48.4 -0.2
DEL   Delary             59.30 320 i P    P       01 25 49.0 +0.4
TIR   Tirane             59.30 302 ⇓P     P       01 25 51.2 +2.3
TIR   Tirane             59.30 302  P     P       01 25 46.8 -2.1
TIR                                 IAmb  IAmb    01 25 55.9
       comp=Z,26nm,0.8s
TIR   Tirane             59.30 302 ⇓P     P       01 25 51.2 +2.3
ZST   Bratislava         59.31 310 eP     P       01 25 51.6 +2.7
ZST                                 pmax  pmax
       comp=Z,102nm,1.5s
ZST   Bratislava         59.31 310 eP     P       01 25 51.6 +2.7
VRAC  Vranov             59.35 312 ⇑P     P       01 25 49.8 +0.6
VRAC  Vranov             59.35 312 ⇑P     P       01 25 49.8 +0.6
VRAC  Vranov             59.35 312⇓iP     P       01 25 49.9 +0.6
EGYH  Egyhazaskeszo      59.36 310  P     P       01 25 50.1 +0.9
CHVC  Chvalec            59.37 313 eP     P       01 25 50.2 +0.9
CHVC                               ex     x       01 25 53.5
CHVC                                AMS   AMS     01 53 20.0
       comp=Z,1µm,16.5s
PDG   Podgorica          59.42 304 ⇓P     P       01 25 49.5 -0.2
PDG   Podgorica          59.42 304 eP     P       01 25 49.5 -0.2
UPC   Upice              59.42 313 eP     P       01 25 52.1 +2.5
UPC                                eS     S       01 33 55.6 -2.7
UPC                                 MLR   MLR
       comp=Z,2µm,16.4s
UPC   Upice              59.42 313 eP     P       01 25 52.1 +2.5
UPC                                eS     S       01 33 55.6 -2.7
UPC                                 AMS   AMS     01 53 10.0
       comp=Z,2µm,16.4s
UPM   Unac-Piva          59.44 304 eP     P       01 25 51.3 +1.2
IGT   Igoumenitsa        59.50 300  P     P       01 25 46.6 -3.8
DRME  Dracevica, Mon     59.54 303 eP     P       01 25 50.1 -0.5
KRUC  Moravsky           59.54 312⇓iP     P       01 25 50.9 +0.4
EVGI  Lefkada island     59.55 299  P     P       01 25 48.3 -2.4
NC303 NORSAR Array S     59.58 326  IAmb  IAmb    01 25 56.3
       comp=Z,70nm,1.2s
NC602 NORSAR Array S     59.60 326 eP     P       01 25 50.4 -0.2
TBLU  Trondheim          59.69 329 eP     P       01 25 51.0 -0.3
NB2   NORSAR Subarra     59.70 326  P     P       01 25 50.9 -0.5
       comp=Z,161nm,1.7s,baz=78,slow=7.4
NB2   NORSAR Subarra     59.70 326  P     P       01 25 50.9 -0.5
       baz=78,slow=7.4
NOA   NORSAR Array B     59.70 326  P     P       01 25 51.3 -0.1
       comp=Z,24nm,1.0s,baz=153,slow=19,SNR=25
NOA                                 LR    LR      01 51 38.5
       comp=Z,899nm,18.1s,baz=75,slow=36
       comp=Z,24nm,1.0s
VLS   Valsamata          59.73 298  P     P       01 25 48.8 -3.2
BRY   Bratogost          59.79 304 eP     P       01 25 52.4 -0.1
SOP   Sopron             59.80 310  P     P       01 25 52.6 +0.3
KEK   Kerkira            59.84 300  P     P       01 25 51.2 -1.5
KEK                                 IAmb  IAmb    01 25 59.6
       comp=Z,26nm,0.7s
RONA  Rosalia, Austr     59.96 310 eP     P       01 25 53.1 -0.3
       comp=Z,11nm,1.0s,SNR=31
MANU  Manus Island       59.98 114  P     P       01 25 56.1 +2.2
TREC  Trest              60.06 312 eP     P       01 25 56.5 +2.4
TREC                               eS     S       01 34 04.9 -1.7
TREC                                MLR   MLR
       comp=Z,2µm,15.5s
TREC  Trest              60.06 312 eP     P       01 25 56.5 +2.4
TREC                               eS     S       01 34 04.9 -1.7
TREC                                AMS   AMS     01 56 10.0
       comp=Z,2µm,15.5s
OSL   Oslo               60.17 325 eP     P       01 25 54.7 +0.1
CONA  Conrad Observa     60.18 310 eP     P       01 25 55.5 +0.4
       comp=Z,43nm,0.8s,SNR=44
BLY   Banja Luka         60.19 307⇓iP     P       01 25 55.1 +0.1
COP   Copenhagen         60.26 320 i P    P       01 25 56.9 +1.6
COP                                 IAmb  IAmb    01 26 04.9
       comp=Z,27nm,0.8s
RUE   Ruedersdorf        60.28 316 eP     P       01 25 55.9 +0.4
PVCC  Panska Ves         60.30 314 eP     P       01 25 57.8 +2.1
PVCC                               e              01 25 59.9
PVCC                                MLR   MLR
       comp=Z,1µm,15.8s
PVCC  Panska Ves         60.30 314 eP     P       01 25 57.8 +2.1
PVCC                               epP    pP      01 25 59.9 -1.5
PVCC                                AMS   AMS     01 53 30.0
       comp=Z,1µm,15.8s
KOGS  Kog                60.34 309 i P    P       01 25 55.6 -0.4
KOGS                               i pP   pP      01 25 59.8 -1.9
MGRS  Mrkonjic Grad      60.36 306 eP     P       01 25 56.9 +0.7
STON  Ston               60.38 304 eP     P       01 25 55.5 -0.8
SRKY  Kupres RS          60.40 306 eP     P       01 25 57.5 +0.9
PRU   Pruhonice          60.47 313 eP     P       01 25 57.0 +0.2
PRU                                eS     S       01 34 11.7  0.0
PRU                                 MLR   MLR
       comp=Z,2µm,15.7s
PRU   Pruhonice          60.47 313 eP     P       01 25 57.0 +0.2
PRU                                eS     S       01 34 11.7  0.0
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PRU                                 AMS   AMS     01 57 00.0
       comp=Z,2µm,15.7s
DOMB  Dombas             60.48 327 eP     P       01 25 57.6 +0.8
ARSA  Arzberg            60.59 310 eP     P       01 25 57.8 +0.1
       comp=Z,12nm,0.7s,SNR=7.7
BRG   Berggiesshubel     60.60 314 eP     P       01 25 58.2 +0.5
BRG                                 Amp           01 26 00.4
       comp=Z,13nm,0.8s
BRG                                ex     x       01 26 03.1
BRG                                 Amp           01 26 04.6
       comp=Z,86nm,1.5s
BRG   Berggiesshubel     60.60 314  PP    PP      01 28 15.0 +4.0
BRG   Berggiesshubel     60.60 314  S     S       01 34 19.0 +5.6
BRG                                 Amp           01 56 19.0
       comp=N,1.5nm,17.6s
BRG                                 Amp           01 56 29.0
       comp=E,1.3nm,14.9s
BRG                                 Amp           01 56 33.0
       comp=Z,1.8nm,15.5s
BRG   Berggiesshubel     60.60 314 eP     P       01 25 58.2 +0.5
BRG                                e              01 26 03.1
BRG                                               01 28 15.0
BRG                                 PPP   PPP     01 29 44.0
BRG                                 S     S       01 34 19.0 +5.6
BRG                                 pmax  pmax
       comp=Z,13nm,0.8s
BRG                                 smax  smax
       comp=N,2µm,17.6s
BRG                                 MLR   MLR
       comp=E,1µm,14.9s
BRG                                 MLR   MLR
       comp=Z,2µm,15.5s
KONO  Kongsberg          60.79 325  P     P       01 25 57.5 -1.3
KONO                                IAmb  IAmb    01 26 04.5
       comp=Z,50nm,1.1s
KONO  Kongsberg          60.79 325ceP     P       01 25 58.6 -0.2
KONO                                pmax  pmax
       comp=Z,81nm,1.7s
KONO  Kongsberg          60.79 325 eP     P       01 25 59.4 +0.6
CKRC  Cesky Krumlov      60.93 312 eP     P       01 26 00.9 +0.9
CKRC                               eS     S       01 34 06.3  -11
PERS  Pernice            61.03 309 i P    P       01 26 00.9 +0.1
PERS                               i pP   pP      01 26 04.8 -1.6
PERS                               i PP   PP      01 28 19.2 +4.2
PERS                               eS     S       01 34 20.2 +0.9
CRES  Cresnjev           61.04 308⇓iP     P       01 26 01.2 +0.4
MOL   Molde              61.05 328 eP     P       01 26 01.0 +0.5
CLL   Collm              61.05 315  IAmb  IAmb    01 26 06.6
       comp=Z,57nm,1.3s
CLL   Collm              61.05 315 eP     P       01 26 01.0 +0.2
CLL                                i              01 26 05.3
CLL                                eS     S       01 34 22.0 +2.8
CLL                                 pmax  pmax
       comp=Z,23nm,1.5s
CLL                                 MLR   MLR
       comp=Z,2µm,21.1s
CLL   Collm              61.05 315 eP     P       01 26 01.0 +0.2
       comp=Z,23nm,1.5s
CLL                                i Pmax         01 26 05.3
       comp=Z,62nm,1.4s
CLL                                i PP   PP      01 28 15.3 +0.4
CLL                                ePPP   PPP     01 29 46.0
CLL                                eS     S       01 34 22.0 +2.8
CLL                                ex     x       01 36 06.0
CLL                                eSS    SS      01 38 36.0  +18
CLL                                ex     x       01 39 48.0
CLL                                eSSS   SSS     01 41 00.0
CLL                                 LmH           01 53 00.0
       comp=N,2µm,19.3s
CLL                                 LmH           01 53 00.0
       comp=E,700nm,20.3s
CLL                                 LmV           01 56 00.0
       comp=Z,2µm,21.1s
SOKA  Soboth             61.08 309 eP     P       01 26 01.2 +0.1
       comp=Z,40nm,1.2s,SNR=28
SKAR  Skarslia           61.16 326 eP     P       01 26 02.2 +0.7
MOA   Molln              61.23 311 eP     P       01 26 02.1  0.0
       comp=Z,27nm,1.5s,SNR=15
KHC   Kasperske Hory     61.30 312  IAmb  IAmb    01 26 09.1
       comp=Z,62nm,1.6s
KHC   Kasperske Hory     61.30 312 eP     P       01 26 02.6  0.0
KHC                                e              01 26 06.7
KHC                                 MLR   MLR
       comp=Z,3µm,16.8s
KHC   Kasperske Hory     61.30 312 eP     P       01 26 02.6  0.0
KHC                                ex     x       01 26 06.7
KHC                                eS     S       01 34 08.9  -14
KHC                                 AMS   AMS     01 56 50.0
       comp=Z,3µm,16.8s
GEC2  GERESS Array S     61.31 312  IAmb  IAmb    01 26 09.1
       comp=Z,99nm,1.5s
GERES GERESS Array B     61.31 312  P     P       01 26 03.2 +0.5
       comp=Z,8.1nm,0.7s,baz=69,slow=6.4,SNR=47
       comp=Z,8.1nm,0.7s
AKN   Aaknes             61.40 328 eP     P       01 26 03.9 +1.0
OBKA  Obir               61.44 309 eP     P       01 26 03.6  0.0
       comp=Z,23nm,0.9s,SNR=7.8
LJU   Ljubljana          61.60 309⇓iP     P       01 26 04.6  0.0
LJU   Ljubljana          61.60 309 eP     P       01 26 04.1 -0.5
LJU                                i pP   pP      01 26 08.8 -1.5
LJU                                ePP    PP      01 28 24.9 +5.0
LJU                                e              01 29 59.3
LJU                                eS     S       01 34 27.0 +0.6
GOET  G??ttrup           61.64 322 i P    P       01 26 08.9 +4.3
GOET                                IAmb  IAmb    01 26 14.9
       comp=Z,28nm,0.9s
NOR   Nord               61.67 351 i P    P       01 26 02.7 -1.8
NOR                                 IAmb  IAmb    01 26 11.3
       comp=Z,6.9nm,0.9s
HOMB  Homborsund         61.69 323 eP     P       01 26 05.2 +0.3
BIOA  Bad Ischl, Aus     61.69 311 eP     P       01 26 05.2  0.0
       comp=Z,13nm,0.7s
NKC   Novy Kostel        61.69 314 eP     P       01 26 07.2 +2.0
NKC                                e              01 26 10.7
NKC                                 MLR   MLR
       comp=Z,2µm,15.4s
NKC   Novy Kostel        61.69 314 eP     P       01 26 07.2 +2.0
NKC                                epP    pP      01 26 10.7 -0.1
NKC                                 AMS   AMS     01 57 40.0
       comp=Z,2µm,15.4s
CEY   Cerknica           61.76 308⇓iP     P       01 26 05.8 +0.1
MATE  Matera             61.79 302 ⇓P     P       01 26 10.2 +4.3
MUD   Monsted U'grnd     61.83 321 i P    P       01 26 08.2 +2.3
MUD                                 IAmb  IAmb    01 26 11.5
       comp=Z,7.0nm,1.0s
MYKA  Terra Mystica      62.01 309 eP     P       01 26 06.8 -0.6
       comp=Z,10nm,0.7s
KBA   Koelnbreinsper     62.06 310 eP     P       01 26 07.9  0.0
       comp=Z,25nm,1.0s,SNR=9.9
SKDS  Skadanscina        62.09 308⇓iP     P       01 26 07.6 -0.3
ODD1  Odda               62.17 325 eP     P       01 26 09.0 +0.8
SNART Snartemo           62.32 323 eP     P       01 26 09.7 +0.5
BLS5  Blasjo             62.39 325 eP     P       01 26 11.6 +1.9
GRFO  Grafenberg         62.61 313  P     P       01 26 11.5 +0.2
GRFO  Grafenberg         62.61 313  P     P       01 26 11.5 +0.2
GRFO                                pmax  pmax
       comp=Z,147nm,1.5s
LODK  Lodwar             62.61 256  P     P       01 26 11.0 -0.9
LODK  Lodwar             62.61 256  P     P       01 26 12.9 +1.0
       SNR=12
LODK  Lodwar             62.61 256 i P    P       01 26 11.9  0.0
BER   Bergen             62.66 326 eP     P       01 26 11.7 +0.3
ASK   Askoy              62.70 326 eP     P       01 26 11.9 +0.3
ABTA  Abfaltersbach      62.71 310 eP     P       01 26 11.1 -1.0
       comp=Z,13nm,0.6s,SNR=5.9
SUE   Sulen              62.73 327 eP     P       01 26 10.8 -1.0
STAL  STALIGIAL          62.73 309  P     P       01 26 10.5 -1.7
KMY   Karmoy             63.05 325 eP     P       01 26 14.8 +0.8
WTTA  Wattenberg         63.11 311 eP     P       01 26 14.6 -0.3
       comp=Z,7.0nm,0.6s,SNR=17
WATA  Walderalm          63.13 311 eP     P       01 26 14.5 -0.5
       comp=Z,40nm,1.2s,SNR=6.9
SQTA  Sankt Quirin       63.40 311 eP     P       01 26 16.3 -0.4
       comp=Z,24nm,0.6s,SNR=20
MOTA  Moosalm            63.43 311 eP     P       01 26 15.6 -1.4
       comp=Z,41nm,1.2s,SNR=16
CTI   Castel Tesino      63.50 309  P     P       01 26 17.6 +0.2
CTI                                 IAmb  IAmb    01 26 22.4
       comp=Z,69nm,1.5s
CTI   Castel Tesino      63.50 309  P     P       01 26 17.6 +0.2
CTI                                 pmax  pmax
       comp=Z,69nm,1.5s
AQU   L'Aquila           63.55 305  IAmb  IAmb    01 26 26.6
       comp=Z,52nm,0.9s
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NRCA	Norcia	63.59	306	IAmb	IAmb	01 26 26.3	
	comp=Z,31nm,0.7s						
RETA	Reutte	63.60	311	*e*P	P	01 26 17.9	-0.1
	comp=Z,29nm,0.8s,SNR=24						
KMBO	Kilima Mbogo	63.69	251	P	P	01 26 20.6	+1.3
	comp=Z,13nm,0.9s,baz=48,slow=11,SNR=18						
	comp=Z,13nm,0.9s						
KMBO	Kilima Mbogo	63.69	251	P	P	01 26 19.6	+0.4
KMBO				IAmb	IAmb	01 26 28.9	
	comp=Z,26nm,1.0s						
KMBO	Kilima Mbogo	63.69	251	*ce*P	P	01 26 19.9	+0.7
KMBO				pmax	pmax		
	comp=Z,13nm,0.9s						
KMBO	Kilima Mbogo	63.69	251	*i* P	P	01 26 20.0	+0.7
	SNR=9.9						
FETA	Feichten	63.77	311	*e*P	P	01 26 18.8	-0.5
	comp=Z,8.4nm,0.8s,SNR=22						
WRAB	Tennant Creek	63.88	138	P	P	01 26 20.1	+0.1
WRAB	Tennant Creek	63.88	138	*ce*P	P	01 26 21.4	+1.4
WRAB				pmax	pmax		
	comp=Z,164nm,1.7s						
WRAB	Tennant Creek	63.88	138	P	P	01 26 20.9	+0.9
WRA	Warramunga Arr	63.88	138	P	P	01 26 20.4	+0.3
	comp=Z,49nm,0.8s,baz=332,slow=7.4,SNR=110						
WRA				PKP2bc		01 55 21.8	
	comp=Z,2.0nm,1.1s,baz=146,slow=2.1,SNR=4.8						
	comp=Z,49nm,0.8s						
WR0	Warramunga Arr	64.01	138	IAmb	IAmb	01 26 25.4	
	comp=Z,35nm,0.9s						
DAVA	Damuels	64.23	311	*e*P	P	01 26 21.4	-0.9
	comp=Z,20nm,0.8s,SNR=6.1						
JMIC	Jan Mayen	64.39	339	LR	LR	01 58 46.9	
	comp=Z,302nm,18.9s,baz=78,slow=40						
PMG	Port Moresby	64.58	120	P	P	01 26 23.8	-0.9
PMG				IAmb	IAmb	01 26 30.8	
	comp=Z,61nm,1.1s						
PMG	Port Moresby	64.58	120	*ce*P	P	01 26 26.7	+2.0
PMG				pmax	pmax		
	comp=Z,48nm,1.0s						
PMG	Port Moresby	64.58	120	P	P	01 26 26.3	+1.6
PMG	Port Moresby	64.58	120	P	P	01 26 26.7	+2.0
OSSC	Osservatorio P	64.63	307	P	P	01 26 24.2	-0.6
OSSC				IAmb	IAmb	01 26 30.2	
	comp=Z,66nm,1.3s						
BFO	Black Forest	64.85	313	P	P	01 26 25.8	-0.3
BFO				IAmb	IAmb	01 26 32.0	
	comp=Z,84nm,1.5s						
BFO	Black Forest	64.85	313	P	P	01 26 25.8	-0.3
BFO				pmax	pmax		
	comp=Z,84nm,1.5s						
COEN	Coen	64.89	127	IAmb	IAmb	01 26 36.2	
	comp=Z,50nm,1.2s						
COEN	Coen	64.89	127	P	P	01 26 28.2	+1.5
WRKA	Warakurna	64.97	147	P	P	01 26 28.1	+1.0
KRVT	Keravat (AS076	65.02	113	LR	LR	01 53 04.8	
	comp=Z,715nm,20.0s,baz=84,slow=34						
RDOG	Red Dog Mine	65.10	24	P	P	01 26 26.9	-0.5
RDOG	Red Dog Mine	65.10	24	P	P	01 26 25.5	-2.0
	baz=294						
BTNL	Ternell	65.41	315	*d*P	P	01 26 29.6	-0.1
BTNL				*d*x	x	01 26 34.8	
MEM	Membach	65.47	316	*d*P	P	01 26 30.3	+0.2
MEM				*d*x	x	01 26 35.2	
BHOU	Houvegnez	65.56	315	*d*P	P	01 26 30.8	+0.1
BHOU				*d*x	x	01 26 36.1	
ANM	Nome	65.57	28	P	P	01 26 29.1	-1.4
	baz=293						
ECH	Echery	65.63	313	IAmb	IAmb	01 26 36.9	
	comp=Z,37nm,1.4s						
WLF	Walferdange	65.72	315	*d*P	P	01 26 30.8	-0.9
WLF				*d*x	x	01 26 37.5	
BSTI	Sart Tilman	65.74	316	*d*P	P	01 26 33.8	+2.0
BSTI				*d*x	x	01 26 37.5	
BCLA	Clavier	65.96	316	*d*P	P	01 26 33.2	0.0
BCLA				*d*x	x	01 26 38.4	
BGES	Gesves	66.10	316	*d*P	P	01 26 34.4	+0.2
BGES				*d*x	x	01 26 39.1	
RCHB	Rochefort	66.10	315	*d*P	P	01 26 35.1	+1.0
BMRD	Maredsous	66.32	316	*d*P	P	01 26 36.5	+0.9
DOU	Dourbes	66.50	315	*d*P	P	01 26 37.1	+0.4
DOU				*d*x	x	01 26 41.9	
ASAR	Alice Springs	66.63	141	P	P	01 26 38.4	+0.5
	comp=Z,44nm,0.8s,baz=326,slow=6.5,SNR=149						
ASAR				PKP2bc		01 55 10.6	
	comp=Z,0.4nm,0.3s,baz=123,slow=3.4,SNR=3.6						
ASAR				LR	LR	01 57 40.7	
	comp=Z,474nm,20.6s,baz=322,slow=38						
	comp=Z,44nm,0.8s						
ASAR	Alice Springs	66.63	141	P	P	01 26 37.4	-0.4
QIS	Mount Isa	67.44	135	P	P	01 26 44.2	+1.1
EUNU	Eureka	68.24	0	P	P	01 26 48.0	+0.6
EUNU				IAmb	IAmb	01 27 08.3	
	comp=Z,26nm,0.9s						
NIKH	Nikolski High	68.63	40	P	P	01 26 48.9	-1.3
	baz=295						
MTSU	Mount Surprise	68.64	129	P	P	01 26 52.1	+1.5
MBAR	Mbarara	68.68	255	LR	LR	01 57 45.3	
	comp=Z,355nm,18.3s,baz=52,slow=37						
MBAR	Mbarara	68.68	255	P	P	01 26 51.3	+0.1
MBAR	Mbarara	68.68	255	*ce*P	P	01 26 53.3	+2.1
MBAR				pmax	pmax		
	comp=Z,67nm,2.5s						
MBAR	Mbarara	68.68	255	P	P	01 26 51.7	+0.4
EKA	Eskdalemuir Ar	68.72	323	LR	LR	01 59 53.8	
	comp=Z,2µm,19.0s,baz=59,slow=38						
GCSA	Galena City Sc	68.77	26	P	P	01 26 51.2	+0.4
	baz=300,SNR=9.2						
KEST	Kesra	69.00	300	P	P	01 26 54.5	+1.7
	comp=Z,16nm,0.8s,baz=68,slow=2.2,SNR=11						
	comp=Z,16nm,0.8s						
TOLK	Toolik Lake Re	69.13	21	IAmb	IAmb	01 27 04.0	
	comp=Z,45nm,0.8s						
TOLK	Toolik Lake Re	69.13	21	P	P	01 26 51.8	-1.3
	baz=305,SNR=43						
UNV	Unalaska Valle	69.53	39	P	P	01 26 54.7	-0.9
	baz=296						
COLD	Coldfoot	69.75	22	P	P	01 26 56.4	-0.4
	baz=305,SNR=16						
H21K	Melozitna Rive	69.75	24	IAmb	IAmb	01 27 02.1	
	comp=Z,50nm,1.2s						
H21K	Melozitna Rive	69.75	24	P	P	01 26 55.8	-1.1
	baz=303,SNR=24						
FORT	Forrest	69.80	150	P	P	01 26 58.0	+0.5
FORT	Forrest	69.80	150	P	P	01 26 59.3	+1.8
TTA	Tatalina	70.02	27	IAmb	IAmb	01 27 03.9	
	comp=Z,97nm,1.8s						
TTA	Tatalina	70.02	27	P	P	01 26 56.9	-1.8
	baz=301,SNR=8.7						
J20K	Nowinta River	70.07	26	IAmb	IAmb	01 27 09.1	
	comp=Z,24nm,0.8s						
J20K	Nowinta River	70.07	26	P	P	01 26 58.7	-0.2
	baz=302,SNR=22						
I21K	Tanana	70.31	24	P	P	01 27 01.1	+0.9
	baz=304,SNR=14						
K20K	Telida	70.55	27	IAmb	IAmb	01 27 07.5	
	comp=Z,63nm,1.4s						
K20K	Telida	70.55	27	P	P	01 27 01.9	+0.1
	baz=303,SNR=13						
VOI	Vohitsoka	70.68	227	P	P	01 27 01.5	-1.8
VOI				IAmb	IAmb	01 27 12.4	
	comp=Z,41nm,0.9s						
VOI	Vohitsoka	70.68	227	P	P	01 27 12.1	+8.8
H23K	Yukon River	70.77	23	IAmb	IAmb	01 27 08.7	
	comp=Z,73nm,1.8s						
H23K	Yukon River	70.77	23	P	P	01 27 03.7	+0.6
	baz=306,SNR=19						
L19K	White Mountain	70.87	28	IAmb	IAmb	01 27 09.4	
	comp=Z,75nm,1.4s						
L19K	White Mountain	70.87	28	P	P	01 27 04.6	+0.8
	baz=302,SNR=13						
CHUM	Lake Minchumin	70.91	26	P	P	01 27 04.1	+0.2
	baz=304,SNR=16						
OOD	Oodnadatta	70.91	142	P	P	01 27 05.4	+1.0
SUMG	Summit	70.99	347	IAmb	IAmb	01 27 11.8	
	comp=Z,41nm,1.2s						
SUMG	Summit	70.99	347	*i* P	P	01 27 04.0	-0.8
SUMG				IAmb	IAmb	01 27 10.9	
	comp=Z,9.4nm,0.7s						
L20K	Farewell, AK	71.10	27	P	P	01 27 06.0	+0.8
	baz=303,SNR=5.7						
SVW2	Sparrevohn	71.16	29	IAmb	IAmb	01 27 15.8	
	comp=Z,30nm,0.9s						
M19K	Big River Lodg	71.21	28	IAmb	IAmb	01 27 11.6	
	comp=Z,115nm,1.9s						
M19K	Big River Lodg	71.21	28	P	P	01 27 05.7	-0.1
	baz=303						
I23K	Minto, Yukon-K	71.23	24	IAmb	IAmb	01 27 11.2	
	comp=Z,78nm,1.8s						
I23K	Minto, Yukon-K	71.23	24	P	P	01 27 05.5	-0.4
	baz=306,SNR=19						
N18K	Kilae Creek	71.25	29	P	P	01 27 05.8	-0.3
N18K				IAmb	IAmb	01 27 10.7	
	comp=Z,82nm,1.7s						
N18K	Kilae Creek	71.25	29	P	P	01 27 04.4	-1.7
	baz=302						
CAST	Castle Rocks	71.26	26	P	P	01 27 06.9	+0.8
	baz=304,SNR=26						
BPAW	Bear Paw Mtn.	71.27	25	IAmb	IAmb	01 27 16.4	
	comp=Z,28nm,0.9s						
BPAW	Bear Paw Mtn.	71.27	25	P	P	01 27 06.4	+0.2
	baz=305,SNR=30						
CTA	Charters Tower	71.31	129	LR	LR	01 59 52.9	
	comp=Z,340nm,20.1s,baz=299,slow=37						
CTA	Charters Tower	71.31	129	P	P	01 27 07.8	+0.8
CTAO	Charters Tower	71.31	129	P	P	01 27 06.8	-0.2
CTAO				IAmb	IAmb	01 27 12.9	
	comp=Z,40nm,1.0s						
CTAO	Charters Tower	71.31	129	P	P	01 27 06.8	-0.2
CTAO				pmax	pmax		
	comp=Z,40nm,1.0s						
CTAO	Charters Tower	71.31	129	P	P	01 27 07.8	+0.8
TULEG	Thule	71.31	356	P	P	01 27 03.9	-2.3
TULEG				IAmb	IAmb	01 27 12.0	
	comp=Z,28nm,0.6s						
TULEG	Thule	71.31	356	*i* P	P	01 27 05.0	-1.1
TULEG				IAmb	IAmb	01 27 11.4	
	comp=Z,24nm,0.6s						
H24K	Noodor Dome	71.32	23	P	P	01 27 06.8	+0.3
	baz=307,SNR=8.9						
PPLA	Purkeypile	71.51	26	P	P	01 27 08.2	+0.4
	baz=304,SNR=23						
NEA2	Nenana	71.66	24	IAmb	IAmb	01 27 11.6	
	comp=Z,49nm,1.3s						
NEA2	Nenana	71.66	24	P	P	01 27 08.8	+0.2
	baz=306,SNR=24						
BORG	Borgarnes	71.71	336	LR	LR	01 59 32.9	
	comp=Z,529nm,19.4s,baz=46,slow=37						
MDM	Murphy Dome	71.73	24	P	P	01 27 08.8	-0.1
MDM				IAmb	IAmb	01 27 13.0	
	comp=Z,124nm,1.8s						
N19K	Bonanza Creek	71.77	29	IAmb	IAmb	01 27 17.4	
	comp=Z,67nm,1.6s						
N19K	Bonanza Creek	71.77	29	P	P	01 27 08.0	-1.4
	baz=303						
TRF	Thorofare Moun	71.90	25	P	P	01 27 10.2	0.0
	baz=306						
POKR	Poker Plat Res	71.90	23	IAmb	IAmb	01 27 20.4	
	comp=Z,45nm,1.2s						
POKR	Poker Plat Res	71.90	23	P	P	01 27 09.7	-0.2
	baz=308,SNR=7.0						
TCOL	CIGO, UAF Yank	71.91	24	IAmb	IAmb	01 27 21.0	
	comp=Z,40nm,0.8s						
TCOL	CIGO, UAF Yank	71.91	24	P	P	01 27 09.9	-0.1
	baz=307						
COLA	College	71.91	24	P	P	01 27 09.6	-0.4
COLA				IAmb	IAmb	01 27 21.1	
	comp=Z,39nm,0.8s						
COLA	College	71.91	24	⇓P	P	01 27 10.3	+0.3
COLA	College	71.91	24	P	P	01 27 10.0	0.0
	baz=307						
SDPT	Sand Point	71.91	36	P	P	01 27 08.2	-2.0
	baz=300						
O18K	Koktuh Hills	71.98	30	P	P	01 27 10.4	-0.1
	baz=303						
CCB	Clear Creek Bu	72.06	24	IAmb	IAmb	01 27 14.3	
	comp=Z,64nm,1.9s						
MULG	Mulgathing	72.12	145	P	P	01 27 13.0	+1.4
O19K	Port Alsworth	72.17	29	IAmb	IAmb	01 27 16.9	
	comp=Z,150nm,1.9s						
O19K	Port Alsworth	72.17	29	P	P	01 27 11.2	-0.4
	baz=303						
MCK	McKinley	72.22	25	P	P	01 27 12.0	+0.1
	baz=307,SNR=9.4						
P18K	Big Mountain,	72.23	30	P	P	01 27 11.1	-0.9
	baz=303						
IL31		72.30	23	P	P	01 27 11.4	-0.9
ILAR	Eielson Array	72.30	23	P	P	01 27 11.9	-0.4
	comp=Z,11nm,1.0s,baz=293,slow=5.0,SNR=57						
ILAR				PP	PP	01 29 52.6	+0.2
	comp=Z,1.3nm,0.9s,baz=292,slow=5.7,SNR=2.6						
ILAR				LR	LR	01 59 56.0	
	comp=Z,358nm,19.2s,baz=318,slow=37						
	comp=Z,11nm,1.0s						
ILAR	Eielson Array	72.30	23	P	P	01 27 12.0	-0.4
RND	Reindeer	72.45	25	IAmb	IAmb	01 27 17.5	
	comp=Z,81nm,1.7s						
SPCR	Spurr Chakacha	72.47	28	P	P	01 27 13.1	-0.4
	baz=305						
HDA	Harding Lake	72.50	24	P	P	01 27 12.1	-1.5
	baz=308,SNR=9.7						
CUT	Chulitna	72.52	26	P	P	01 27 12.9	-0.7
	baz=306						
CHNA	Chernabura Isl	72.62	36	P	P	01 27 12.5	-1.8
	baz=301						
A36M	Sachs Harbour	72.63	12	IAmb	IAmb	01 27 27.1	
	comp=Z,58nm,0.9s						
A36M	Sachs Harbour	72.63	12	P	P	01 27 13.1	-1.1
	baz=325,SNR=13						
WAT1	Susitna Watana	72.91	25	P	P	01 27 14.8	-1.2
	baz=307						
J25K	Salcha River,	72.91	23	P	P	01 27 14.5	-1.6
	baz=309,SNR=15						
P19K	Oil Pt	72.93	30	P	P	01 27 14.8	-1.4
	baz=304						
O20K	Slope Mountain	72.94	29	P	P	01 27 15.2	-1.1
	baz=305						
M22K	Willow	72.96	27	IAmb	IAmb	01 27 20.5	
	comp=Z,71nm,1.2s						
M22K	Willow	72.96	27	P	P	01 27 15.6	-0.7
	baz=306						
CAPN	Captain Cook N	73.14	28	P	P	01 27 15.8	-1.5
	baz=306						
Q19K	Cape Douglas,	73.16	30	P	P	01 27 16.0	-1.6
	baz=304						
DHY	Denali Highway	73.18	25	P	P	01 27 16.4	-1.4
	baz=308,SNR=13						
K24K	Donnelly Dome	73.28	24	P	P	01 27 17.5	-0.7
	baz=309,SNR=16						
WAT6	Susitna Watana	73.36	25	P	P	01 27 17.7	-1.1
	baz=308,SNR=19						
GHO	Glory Hole Cre	73.41	26	IAmb	IAmb	01 27 23.8	
	comp=Z,38nm,1.2s						
PMR	Palmer	73.44	27	IAmb	IAmb	01 27 28.8	
	comp=Z,44nm,1.0s						
PMR	Palmer	73.44	27	P	P	01 27 17.7	-1.4
	baz=307,SNR=9.0						
RES	Resolute Bay	73.44	3	P	P	01 27 18.9	0.0
RES	Resolute Bay	73.44	3	P	P	01 27 18.9	0.0
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RC01	Rabbit Creek A	73.51	27	IAmb	IAmb	01 27 23.9	
	comp=Z,72nm,1.4s						
RC01	Rabbit Creek A	73.51	27	P	P	01 27 19.1	-0.5
	baz=307,SNR=7.3						
J26L	Joseph Creek	73.58	23	P	P	01 27 19.5	-0.6
	baz=311,SNR=20						
INKA	Innaminka	73.61	139	P	P	01 27 22.9	+2.4
SML	Sawmill	73.61	26	P	P	01 27 20.2	-0.1
	baz=308,SNR=30						
RIDG	Independent Ri	73.64	24	IAmb	IAmb	01 27 24.4	
	comp=Z,92nm,1.4s						
RIDG	Independent Ri	73.64	24	P	P	01 27 19.3	-1.1
	baz=310,SNR=23						
INK	Inuvik	73.77	17	P	P	01 27 21.1	+0.1
	comp=Z,13nm,1.0s,baz=318,slow=8.0,SNR=18						
INK				LR	LR	02 05 09.9	
	comp=Z,218nm,20.4s,baz=324,slow=40						
	comp=Z,13nm,1.0s						
INK	Inuvik	73.77	17	P	P	01 27 20.8	-0.2
	baz=318,SNR=14						
SCRK	Sand Creek	73.78	23	IAmb	IAmb	01 27 31.5	
	comp=Z,41nm,0.9s						
SCRK	Sand Creek	73.78	23	P	P	01 27 20.9	-0.4
	baz=311,SNR=34						
KNK	Knik Glacier	73.80	27	IAmb	IAmb	01 27 31.4	
	comp=Z,41nm,0.9s						
KNK	Knik Glacier	73.80	27	P	P	01 27 21.3	0.0
	baz=308,SNR=14						
BRLK	Bradley Lake	73.84	29	P	P	01 27 20.8	-0.8
M23K	Glacier View	73.85	26	P	P	01 27 21.7	+0.1
	baz=308,SNR=17						
BRSE	Bradley Lake S	73.91	29	P	P	01 27 21.2	-0.8
	baz=306						
PAX	Paxson	73.92	24	P	P	01 27 21.6	-0.5
	baz=310,SNR=10						
ICESG	Greenland Ices	73.93	345	*i* P	P	01 27 21.7	-0.6
ICESG				IAmb	IAmb	01 27 31.6	
	comp=Z,23nm,0.8s						
SCM	Sheep Creek Mo	73.97	26	IAmb	IAmb	01 27 41.7	
	comp=Z,54nm,1.0s						
SCM	Sheep Creek Mo	73.97	26	P	P	01 27 22.3	-0.1
	baz=308,SNR=17						
EGAK	Eagle	74.17	22	P	P	01 27 23.3	0.0
	baz=313,SNR=11						
SEW	Seward	74.21	28	IAmb	IAmb	01 27 27.8	
	comp=Z,152nm,2.0s						
SEW	Seward	74.21	28	P	P	01 27 23.0	-0.6
	baz=307						
M24K	Tolsona, Glenn	74.22	25	IAmb	IAmb	01 27 27.5	
	comp=Z,85nm,1.2s						
M24K	Tolsona, Glenn	74.22	25	P	P	01 27 23.8	0.0
	baz=309,SNR=9.7						
SII	Sitkinak Islan	74.26	33	P	P	01 27 23.1	-1.0
	baz=304						
KDAK	Kodiak Island	74.28	31	LR	LR	02 02 42.5	
	comp=Z,727nm,18.9s,baz=307,slow=38						
KDAK	Kodiak Island	74.28	31	P	P	01 27 24.8	+0.7
KDAK				IAmb	IAmb	01 27 33.5	
	comp=Z,64nm,1.3s						
KDAK	Kodiak Island	74.28	31	P	P	01 27 24.8	+0.7
KDAK				pmax	pmax		
	comp=Z,65nm,1.3s						
KDAK	Kodiak Island	74.28	31	P	P	01 27 23.1	-1.0
	baz=305						
OHAK	Old Harbor	74.29	32	IAmb	IAmb	01 27 45.9	
	comp=Z,45nm,1.2s						
OHAK	Old Harbor	74.29	32	P	P	01 27 23.5	-0.6
	baz=305						
LCRK	Leigh Creek	74.35	142	P	P	01 27 26.4	+1.6
HNR	Honiara	74.36	112	LR	LR	01 58 44.3	
	comp=Z,308nm,20.1s,baz=312,slow=35						
K27K	Chicken	74.38	23	P	P	01 27 25.1	+0.4
	baz=312						
HARP	HAARP	74.40	25	P	P	01 27 24.9	+0.1
	baz=310						
MENT	Mentasta	74.55	24	IAmb	IAmb	01 27 26.3	
	comp=Z,18nm,0.3s						
L26K	Log Cabin Wild	74.62	24	P	P	01 27 25.9	-0.2
	baz=311						
I29M	Ogilvie Camp,	74.63	20	P	P	01 27 25.6	-0.5
	baz=315						
GLI	Glacier Island	74.66	27	P	P	01 27 25.9	-0.3
	baz=309						
KLU	Klutina	74.71	26	IAmb	IAmb	01 27 30.0	
	comp=Z,57nm,1.1s						
KLU	Klutina	74.71	26	P	P	01 27 26.0	-0.7
	baz=310,SNR=24						
QLP	Quilpie	74.76	135	P	P	01 27 29.7	+2.5
DIV	Divide	75.00	26	P	P	01 27 28.5	+0.2
C36M	Paulatuk	75.04	13	IAmb	IAmb	01 27 30.8	
	comp=Z,59nm,1.3s						
C36M	Paulatuk	75.04	13	P	P	01 27 27.9	-0.4
	baz=326,SNR=5.3						
L27K	Beaver Creek,	75.11	23	IAmb	IAmb	01 27 34.6	
	comp=Z,58nm,1.2s						
L27K	Beaver Creek,	75.11	23	P	P	01 27 29.4	+0.5
	baz=313,SNR=36						
N25K	Chitina, Valde	75.12	25	IAmb	IAmb	01 27 34.5	
	comp=Z,50nm,1.2s						
N25K	Chitina, Valde	75.12	25	P	P	01 27 29.6	+0.6
	baz=311,SNR=19						
M26K	Nabesna, AK	75.16	24	IAmb	IAmb	01 27 39.7	
	comp=Z,73nm,1.6s						
M26K	Nabesna, AK	75.16	24	P	P	01 27 30.1	+0.8
	baz=312,SNR=17						
BBOO	Buckleboo	75.16	145	IAmb	IAmb	01 27 35.1	
	comp=Z,73nm,1.0s						
BBOO	Buckleboo	75.16	145	P	P	01 27 30.7	+1.2
DAWY	Dawson	75.21	22	IAmb	IAmb	01 27 34.3	
	comp=Z,88nm,1.9s						
DAWY	Dawson	75.21	22	P	P	01 27 28.4	-1.1
	baz=314,SNR=22						
J29M	Klondike Camp	75.30	21	P	P	01 27 29.8	-0.2
	baz=315						
EYAK	Cordova Ski Ar	75.38	26	P	P	01 27 30.4	0.0
	baz=310						
BMRM	Bremner River	75.53	26	P	P	01 27 31.0	-0.4
BMRM				IAmb	IAmb	01 27 41.2	
	comp=Z,65nm,1.2s						
BMRM	Bremner River	75.53	26	P	P	01 27 31.7	+0.3
	baz=311,SNR=18						
M27K	Edge Creek, AK	75.58	24	IAmb	IAmb	01 27 44.4	
	comp=Z,42nm,1.2s						
M27K	Edge Creek, AK	75.58	24	P	P	01 27 32.4	+0.7
	baz=313						
VRDI	Verde Repeater	75.78	25	IAmb	IAmb	01 27 38.2	
	comp=Z,63nm,1.7s						
Q23K	Middleton Isla	75.86	28	P	P	01 27 33.1	0.0
	baz=310						
BVCY	Beaver Creek	75.88	23	P	P	01 27 33.7	+0.4
	baz=314						
RAGM	Ragged Mountai	75.89	26	IAmb	IAmb	01 27 38.9	
	comp=Z,122nm,1.5s						
WHYH	Whyalla	76.09	144	P	P	01 27 36.2	+1.5
KAIM	Kayak Island	76.29	27	P	P	01 27 36.0	+0.3
	baz=311						
YUK3	Moose Creek	76.46	24	P	P	01 27 37.4	+0.5
	baz=314,SNR=16						
NAPP	Napperby	76.50	144	P	P	01 27 38.5	+1.4
WAX	Waxell Ridge	76.52	26	IAmb	IAmb	01 27 47.9	
	comp=Z,44nm,1.4s						
BARN	Barnard Glacie	76.54	25	P	P	01 27 38.0	+0.7
ESDC	Sonseca Array	76.56	308	P	P	01 27 37.9	+0.2
	comp=Z,5.9nm,0.8s,baz=44,slow=4.6,SNR=17						
ESDC				PP	PP	01 30 17.7	-12
	comp=Z,1.6nm,1.0s,baz=50,slow=8.8,SNR=2.8						
	comp=Z,5.9nm,0.8s						
ISLE	Juniper Island	76.61	25	IAmb	IAmb	01 27 49.7	
	comp=Z,33nm,1.1s						
PAB	San Pablo	76.88	308	⇑P	P	01 27 40.4	+0.9
HTT	Hallett	77.08	143	P	P	01 27 42.4	+1.9
M30M	Minto, Yukon	77.10	22	P	P	01 27 40.7	+0.5
	baz=317,SNR=6.6						
STKA	Stephens Creek	77.26	141	P	P	01 27 42.4	+0.9
	comp=Z,23nm,0.8s,baz=325,slow=8.0,SNR=18						
STKA				LR	LR	02 06 03.6	
	comp=Z,353nm,18.8s,baz=305,slow=39						
	comp=Z,23nm,0.8s						
STKA	Stephens Creek	77.26	141	P	P	01 27 43.1	+1.7
PBRG	Braganca	77.28	311	*i* LQ	LQ	01 27 46.9	
YUK4	Talbot Arm	77.39	23	P	P	01 27 41.8	-0.2
	baz=316,SNR=6.2						
RMQ	Roma	77.46	132	P	P	01 27 45.4	+2.7
DY2G	Dye2	77.53	345	*i* P	P	01 27 42.9	+0.1
DY2G				IAmb	IAmb	01 27 49.2	
	comp=Z,28nm,0.6s						
PINM	Pinnacle	77.71	25	P	P	01 27 43.6	-0.1
	baz=314						
YUK6	Outpost Mounta	77.77	24	P	P	01 27 43.1	-1.1
	baz=316,SNR=8.3						
MVO	Moncorvo	77.80	311	*e*P	P	01 27 46.8	+2.2
	comp=Z,36nm,2.0s						
MVO				*i* LQ	LQ	01 27 49.6	
MVO	Moncorvo	77.80	311	*e*PP	PP	01 30 32.0	-7.7
MVO				*e*S	S	01 37 35.6	-1.5
MVO				*e*SS	SS	01 42 33.6	-3.0
MVO	Moncorvo	77.80	311	*e*LR	LR	01 54 22.1	
	comp=Z,916nm,20.0s						
SFJD	Kangerlussuaq	77.98	347	LR	LR	02 07 03.9	
	comp=Z,738nm,18.6s,baz=22,slow=40						
SFJD	Kangerlussuaq	77.98	347	P	P	01 27 44.3	-0.7
SFJD				IAmb	IAmb	01 27 50.0	
	comp=Z,30nm,0.9s						
SFJD	Kangerlussuaq	77.98	347	P	P	01 27 44.3	-0.7
SFJD				pmax	pmax		
	comp=Z,31nm,0.9s						
SFJD	Kangerlussuaq	77.98	347	*i* P	P	01 27 43.6	-1.4
SFJD				IAmb	IAmb	01 27 50.0	
	comp=Z,20nm,0.6s						
M31M	Drury Creek, Y	78.13	21	IAmb	IAmb	01 27 51.1	
	comp=Z,86nm,1.7s						
M31M	Drury Creek, Y	78.13	21	P	P	01 27 45.6	-0.4
	baz=319,SNR=14						
HYT	Haines Junctio	78.14	23	P	P	01 27 46.9	+0.7
	baz=316,SNR=15						
PCAB	Cabril	78.15	312	*i* LQ	LQ	01 27 52.0	
PGAV	Gavieira, Arco	78.17	312	*i* LQ	LQ	01 27 51.2	
PGAV	Gavieira, Arco	78.17	312	*e*PP	PP	01 30 42.2	-0.6
PGAV	Gavieira, Arco	78.17	312	*e*LR	LR	01 54 24.6	
	comp=Z,532nm,18.0s						
EIDS	Eidsvold	78.17	130	IAmb	IAmb	01 27 53.2	

	comp=Z,71nm,1.4s						
EIDS	Eidsvold	78.17	130	P	P	01 27 48.8	+2.2
POLO	Lamas de Olo	78.18	311	*e*PcP	PcP	01 27 53.4	-2.9
N31M	Braeburn, Yuko	78.23	22	IAmb	IAmb	01 27 57.8	
	comp=Z,26nm,0.8s						
N31M	Braeburn, Yuko	78.23	22	P	P	01 27 47.3	+0.7
	baz=318,SNR=9.3						
PNL	Peninsula	78.32	25	P	P	01 27 46.8	-0.3
	baz=315						
MTE	Manteigas	78.54	310	*i* LQ	LQ	01 27 54.4	
MTE	Manteigas	78.54	310	*e*PcP	PcP	01 27 57.8	0.0
MTE				A	A	01 27 58.3	
	comp=Z,48nm,1.1s						
MTE	Manteigas	78.54	310	*e*PP	PP	01 30 47.5	+1.6
MTE				*e*S	S	01 37 50.3	+5.3
MTE				*e*SS	SS	01 42 45.6	-2.1
MTE	Manteigas	78.54	310	*e*LR	LR	01 54 51.9	
	comp=Z,852nm,20.0s						
PVIS	Viseu	78.59	311	*e*P	P	01 27 51.2	+2.2
PCBR	Castelo Branco	78.79	310	*e*PcP	PcP	01 27 56.4	-2.4
PMRV	Marv??o	78.95	310	*i* LQ	LQ	01 27 56.3	
PMRV	Marv??o	78.95	310	*e*PcP	PcP	01 27 59.7	+0.1
PMRV				A	A	01 28 07.8	
	comp=Z,36nm,1.7s						
PMRV	Marv??o	78.95	310	*e*PP	PP	01 30 53.9	+4.5
PMRV	Marv??o	78.95	310	*e*LR	LR	01 55 16.1	
	comp=Z,442nm,18.0s						
WHY	Whitehorse	79.14	23	P	P	01 27 50.6	-1.1
	baz=319,SNR=6.5						
COI	Coimbra	79.20	311	*i* LQ	LQ	01 27 57.7	
COI	Coimbra	79.20	311	*e*PcP	PcP	01 28 01.6	+1.0
COI				A	A	01 28 10.1	
	comp=Z,72nm,1.4s						
CMSA	Cobar Meteorol	79.28	138	P	P	01 27 54.3	+1.7
LSZ	Lusaka	79.33	245	*e*P	P	01 27 53.4	0.0
LSZ				IAmb	IAmb	01 27 55.1	
	comp=Z,159nm,0.9s						
LSZ	Lusaka	79.33	245	*i* P	P	01 27 53.4	0.0
LSZ	Lusaka	79.33	245	*i* P	P	01 27 53.4	0.0
PESTR	Estremoz	79.39	309	*e*PcP	PcP	01 28 02.2	+0.8
PBAR	Barrancos	79.39	308	*e*P	P	01 27 54.0	+0.7
	comp=Z,42nm,2.6s						
PBAR				*i* LQ	LQ	01 27 57.6	
PMTG	Montargil	79.69	310	*e*P	P	01 27 57.6	+2.6
	comp=Z,44nm,1.5s						
PSBE	So Bento	79.82	310	*e*P	P	01 27 58.0	+2.3
PSBE	So Bento	79.82	310	*e*PcP	PcP	01 28 03.1	-0.3
EVO	Evora	79.84	309	*e*P	P	01 27 56.6	+0.8
SKAG	Skagway	79.89	24	IAmb	IAmb	01 28 07.1	
	comp=Z,72nm,1.1s						
SKAG	Skagway	79.89	24	P	P	01 27 55.8	+0.2
	baz=318,SNR=19						
PVAQ	Vaqueiros	80.26	308	*e*PcP	PcP	01 28 04.8	-0.4
PVAQ	Vaqueiros	80.26	308	*e*PP	PP	01 31 01.4	+1.2
PVAQ				*e*S	S	01 38 07.8	+4.6
PVAQ	Vaqueiros	80.26	308	*e*LR	LR	01 56 02.8	
	comp=Z,432nm,18.0s						
MESJ	Messejana	80.36	309	*e*P	P	01 27 58.7	+0.1
MESJ				*e*PP	PP	01 31 01.0	0.0
MESJ				*e*S	S	01 38 05.0	+0.7
MESJ				IAMs_20	IAMs_20	02 08 32.2	
	comp=Z,992nm,15.2s						
MESJ	Messejana	80.36	309	*e*P	P	01 27 57.8	-0.8
MESJ	Messejana	80.36	309	*e*P	P	01 27 58.6	+0.1
MESJ				*e*		01 31 00.9	
MESJ				*e*S	S	01 38 04.9	+0.7
PNCL	Nicolau / Gran	80.41	309	*e*PcP	PcP	01 28 07.8	+1.9
TGTN	Hyland Airport	80.47	19	P	P	01 27 58.5	-0.4
	baz=324,SNR=14						
LIS	Lisbon	80.49	310	*e*P	P	01 27 59.4	+0.2
LIS	Lisbon	80.49	310	*e*P	P	01 27 59.4	+0.2
NUUK	Nuuk	80.68	346	*i* P	P	01 27 59.1	-0.6
BESE	Bessie Mountai	80.72	24	IAmb	IAmb	01 28 06.1	
	comp=Z,78nm,1.5s						
MORF	Marmelete	80.93	308	*e*P	P	01 28 01.8	+0.1
MORF				*e*PP	PP	01 31 05.8	0.0
MORF				IAMs_20	IAMs_20	02 10 36.2	
	comp=Z,1µm,19.4s						
MORF	Marmelete	80.93	308	*e*PcP	PcP	01 28 08.4	+0.1
MORF				A	A	01 28 11.2	
	comp=Z,126nm,1.4s						
MORF	Marmelete	80.93	308	*e*P	P	01 28 01.8	+0.1
MORF				*e*		01 31 05.8	
ARPS	Mount Arapiles	81.18	144	P	P	01 28 04.4	+1.7
SIT	Sitka	81.70	25	P	P	01 28 04.9	-0.4
	baz=319						
BLWY	Bulawayo	81.98	240	*e*P	P	01 28 08.3	+0.8
BLWY				IAmb	IAmb	01 28 15.9	
	comp=Z,161nm,0.9s						
ARMA	Armidale	82.02	133	P	P	01 28 08.9	+1.5
ARMA				IAmb	IAmb	01 28 12.8	
	comp=Z,65nm,1.4s						
ARMA	Armidale	82.02	133	P	P	01 28 10.6	+3.1
MOPA	Mopani	82.07	236	*e*P	P	01 28 04.9	-2.9
MOPA				IAmb	IAmb	01 28 09.2	
	comp=Z,16nm,0.9s						
MOPA	Mopani	82.07	236	*i* P	P	01 27 59.5	-8.3
MOPA	Mopani	82.07	236	*i* P	P	01 27 59.5	-8.3
MATP	Matopo	82.23	240	*i* P	P	01 28 06.6	-2.3
MATP	Matopo	82.23	240	*i* P	P	01 28 06.6	-2.3
DLBC	Dease Lake	82.43	22	LR	LR	02 08 15.3	
	comp=Z,621nm,18.5s,baz=321,slow=38						
DLBC	Dease Lake	82.43	22	IAmb	IAmb	01 28 13.6	
	comp=Z,41nm,1.4s						
BRAT	Ballarat	82.85	143	P	P	01 28 14.0	+2.6
YKA	Yellowknife Ar	82.93	13	P	P	01 28 11.1	-0.6
	comp=Z,6.5nm,0.9s,baz=338,slow=4.6,SNR=44						
YKA				PKKPbc	PKKPbc	01 46 32.3	-2.5
	comp=Z,0.4nm,0.8s,baz=159,slow=2.3,SNR=6.9						
YKA				LR	LR	02 08 52.0	
	comp=Z,352nm,19.0s,baz=338,slow=38						
	comp=Z,6.5nm,0.9s						
WRAK	Wrangell Islan	83.24	24	P	P	01 28 13.3	-0.1
	baz=321						
CNG	Changalane	83.30	234	*e*P	P	01 28 13.9	-0.2
CNG				IAmb	IAmb	01 28 23.2	
	comp=Z,6.2nm,0.9s						
CRAG	Craig	83.70	25	P	P	01 28 16.3	+0.5
	baz=320						
FRB	Frobisher Bay	83.75	353	LR	LR	02 09 09.0	
	comp=Z,413nm,20.4s,baz=17,slow=38						
MAGG	Maguga Dam	83.80	234	*e*P	P	01 28 16.5	-0.2
MAGG				IAmb	IAmb	01 28 18.3	
	comp=Z,116nm,2.0s						
MMAL	MMAL	83.82	234	*e*P	P	01 28 16.6	-0.3
MMAL				IAmb	IAmb	01 28 18.6	
	comp=Z,135nm,1.9s						
POGA	Pongola	84.31	233	*e*P	P	01 28 17.9	-1.3
POGA				IAmb	IAmb	01 28 28.2	
	comp=Z,46nm,0.9s						
SLR	Silverton	85.66	236	*e*P	P	01 28 25.2	-1.0
SLR				IAmb	IAmb	01 28 28.7	
	comp=Z,475nm,3.0s						
NWCL	Newcastle	85.80	234	*e*P	P	01 28 26.6	-0.2
NWCL				IAmb	IAmb	01 28 28.3	
	comp=Z,153nm,2.1s						
TOA0	Torodi Ar. Sit	85.92	283	P	P	01 28 27.6	-0.1
	SNR=12						
TORD	Torodi Ar. Bea	85.92	283	P	P	01 28 29.0	+1.3
	comp=Z,30nm,0.7s,baz=72,slow=4.7,SNR=6.8						
DZM	Mont Dzumac	86.88	118	LR	LR	02 08 49.3	
	comp=Z,102nm,18.1s,baz=264,slow=37						
DZM	Mont Dzumac	86.88	118	P	P	01 28 30.5	-1.8
DZM	Mont Dzumac	86.88	118	P	P	01 28 35.3	+3.0
LBTB	Lobatse	87.14	238	*e*P	P	01 28 33.8	+0.3
LBTB				IAmb	IAmb	01 28 42.3	
	comp=Z,43nm,0.9s						
LBTB	Lobatse	87.14	238	LR	LR	02 05 22.4	
	comp=Z,432nm,19.6s,baz=44,slow=34						
LBTB	Lobatse	87.14	238	P	P	01 28 32.5	-1.0
LBTB				IAmb	IAmb	01 28 42.5	
	comp=Z,43nm,0.9s						
LBTB	Lobatse	87.14	238	P	P	01 28 32.5	-1.0
LBTB				pmax	pmax		
	comp=Z,43nm,0.9s						
LBTB	Lobatse	87.14	238	*i* P	P	01 28 34.0	+0.5
LBTB	Lobatse	87.14	238	*i* P	P	01 28 34.0	+0.5
KSD	Kokstad	87.89	232	*e*P	P	01 28 35.0	-2.0
KSD				IAmb	IAmb	01 28 41.7	
	comp=Z,243nm,2.8s						
BBB	Bella Bella	88.12	25	LR	LR	02 10 49.3	
	comp=Z,616nm,18.3s,baz=332,slow=38						
SWZ	Schweizer	88.64	237	*e*P	P	01 28 40.8	+0.1
SWZ				IAmb	IAmb	01 28 49.0	
	comp=Z,17nm,1.0s						
BOSA	Boshof	89.55	236	*e*P	P	01 28 44.2	-0.7
BOSA				IAmb	IAmb	01 28 53.4	
	comp=Z,10nm,1.0s						
BOSA	Boshof	89.55	236	P	P	01 28 44.6	-0.3
	comp=Z,5.4nm,0.9s,baz=66,slow=1.5,SNR=15						
	comp=Z,5.4nm,0.9s						
BOSA	Boshof	89.55	236	P	P	01 28 43.5	-1.4
BOSA	Boshof	89.55	236	P	P	01 28 43.5	-1.4
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BOSA	Boshof	89.55	236	*i* P	P	01 28 45.1	+0.2
BOSA	Boshof	89.55	236	*i* P	P	01 28 45.1	+0.2
KOWA	Kowa	89.90	287	P	P	01 28 46.5	-0.3
KOWA				IAmb	IAmb	01 28 53.7	
	comp=Z,36nm,0.7s						
EDM	Edmonton	91.67	17	IAmb	IAmb	01 28 57.6	
	comp=Z,41nm,1.3s						
SCHQ	Schefferville	92.18	350	P	P	01 28 57.8	+1.2
	comp=Z,2.8nm,0.7s,baz=353,slow=7.2,SNR=2.9						
SCHQ				LR	LR	02 14 27.1	
	comp=Z,397nm,20.9s,baz=16,slow=38						
	comp=Z,2.8nm,0.7s						
KEIM	Keimoes	92.65	238	*e*P	P	01 28 59.5	+0.3
KEIM				IAmb	IAmb	01 29 06.6	
	comp=Z,101nm,2.5s						
A04D	Lummi Island	92.92	24	P	P	01 29 01.1	+0.9
	baz=329						
MSVF	Nonsavu	93.51	109	LR	LR	02 07 03.9	
	comp=Z,222nm,21.9s,baz=2.9,slow=33						
B05A	Bryant	93.52	24	P	P	01 29 03.5	+0.6
	baz=329						
D03D	Eldon	93.79	25	P	P	01 29 02.4	-1.9
	baz=328						
D04E	Lakebay	94.21	25	P	P	01 29 03.8	-2.3
	baz=329						
B08A	Colville Reser	94.35	22	IAmb	IAmb	01 29 12.3	
	comp=Z,33nm,2.0s						
E04D	Cinebar	94.81	25	P	P	01 29 07.3	-1.7
	baz=329						
DBIC	Dimbokro	94.82	281	*e*P	P	01 29 09.9	+0.4
DBIC				IAmb	IAmb	01 29 14.8	
	comp=Z,77nm,2.1s						
DBIC	Dimbokro	94.82	281	P	P	01 29 09.4	-0.1
	comp=Z,2.6nm,0.6s,baz=89,slow=8.1,SNR=2.9						
	comp=Z,2.6nm,0.6s						
KIC	Kosan Boka	94.89	281	*e*P	P	01 29 11.2	+1.4
	comp=Z,7.7nm,0.8s						
TIC	Toumodi	94.97	281	*e*P	P	01 29 11.3	+1.1
NEW	Newport	95.13	21	LR	LR	02 15 13.0	
	comp=Z,561nm,18.6s,baz=345,slow=38						
NEW	Newport	95.13	21	P	P	01 29 10.1	-0.3
	baz=333						
LIC	Lamto	95.20	281	*e*P	P	01 29 13.0	+1.7
	comp=Z,21nm,1.5s						
G03D	McMinnville, O	95.70	26	P	P	01 29 11.4	-1.6
	baz=328						
G05D	Wamic, OR	96.39	25	P	P	01 29 15.4	-0.8
	baz=330						
JTMT	Jette	96.43	19	IAmb	IAmb	01 29 21.8	
	comp=Z,28nm,1.9s						
F10A	Beach Ranch, E	97.14	22	IAmb	IAmb	01 29 22.6	
	comp=Z,18nm,1.9s						
ULM	Lac du Bonnet	97.61	7	LR	LR	02 15 44.9	
	comp=Z,476nm,20.9s,baz=1.0,slow=37						
K02D	Willamette Mer	97.68	28	P	P	01 29 21.4	-0.8
	baz=328						
YBH	Yreka Blue Hor	98.87	28	LR	LR	02 16 00.7	
	comp=Z,390nm,18.8s,baz=338,slow=37						
AFI	Afiamalu	99.90	100	LR	LR	02 11 15.7	
	comp=Z,166nm,19.9s,baz=322,slow=33						
PDAR	Pinedale Array	102.31	18	PP	PKiKP	01 33 57.7	-7.0
	comp=Z,0.5nm,0.8s,baz=17,slow=7.1,SNR=2.7						
NVAR	Mina Array Bea	103.42	26	PP	PKiKP	01 34 04.1	-2.8
	comp=Z,0.9nm,0.8s,baz=334,slow=5.5,SNR=4.1						
VNDA	Vanda	116.17	167	PKP	PKPdf	01 34 29.1	-0.2
	comp=Z,0.7nm,0.9s,baz=260,slow=7.0,SNR=3.6						
TXAR	Lajitas Array	116.53	18	PKP	PKPdf	01 34 30.8	-0.9
	comp=Z,0.7nm,0.8s,baz=188,slow=1.2,SNR=4.4						
TXAR				PKKPbc	PKKPbc	01 45 00.7	+1.5
	comp=Z,0.3nm,0.6s,baz=167,slow=7.3,SNR=4.6						
TROLL	Troll, Antarti	120.79	201	PKPdf	PKiKP	01 34 38.7	+0.1
SNAA	Sanae	122.42	202	PKPdf	PKPdf	01 34 40.7	-0.8
TAOE	Nuku Hiva Isla	124.09	78	*e*PKIKP	PKPdf	01 34 46.3	-0.1
	comp=Z,146nm,28.3s						
TAOE				*e*SS	SS	01 53 31.6	+10
TAOE				*e*LR	LR	02 13 29.0	
	comp=Z,501nm,22.8s						
VNA1	Neumayer--Stat	124.15	203	PKPdf	PKPdf	01 34 44.1	-0.6
VNA3	Neumayer Olymp	124.60	202	PKPdf	PKPdf	01 34 45.2	-0.5
NBPV	Pedro Velho	127.23	288	*e*P	PKiKP	01 34 54.0	+1.1
RCBR	Riachuelo	127.38	289	*e*P	PKiKP	01 34 53.5	+0.2
NBCL	Cascavel-CE	128.32	292	*e*P	PKiKP	01 34 55.9	+0.8
NBRF	Rio Formoso -	128.38	285	*e*P	PKiKP	01 34 56.5	+1.3
NBCA	Caruaru-PE	128.85	286	*e*P	PKiKP	01 34 58.7	+2.5
BELA	Belgrano 2	128.99	192		PKPdf	01 34 53.4	-0.5
NBMA	Muriti-CE	130.58	289	*e*P	PKiKP	01 35 00.3	+0.7
BAUV	El Baul	136.24	335	PKPdf	PKPdf	01 35 07.7	-1.7
GUA01	Guaratinga, BA	136.38	280	*e*P	PKPdf	01 35 10.3	+0.8
SDV	Santo Domingo	137.15	339	*e*P	PKPdf	01 35 08.4	-3.0
SDV	Santo Domingo	137.15	339	*e*P	PKPdf	01 35 10.4	-0.9
NAN01	Guarapari, ES	137.25	278	*e*P	PKiKP	01 35 12.4	-0.6
SJCC	San Jacinto, C	137.36	346	*e*P	PKiKP	01 35 12.8	-0.6
JTS	Las Juntas de	138.01	360	*e*P	PKiKP	01 35 17.3	+2.6
SMLC	San Martn de	138.17	344	*e*P	PKiKP	01 35 15.8	+0.8
BSFB	Barra de Sao F	138.31	277	*e*P	PKiKP	01 35 15.0	-0.1
MALB	Monte Alegre	138.37	310	*e*P	PKPdf	01 35 12.6	-0.8
SMTB	Santa Maria do	138.42	295	*e*P	PKiKP	01 35 15.0	-0.5
OCAC	Ocana	138.52	342	*e*P	PKPdf	01 35 12.8	-1.0
BCIP	Isla Barro Col	138.83	352	*e*P	PKiKP	01 35 23.2	+6.9
UREC	San Jos de Ur	139.51	345	*e*P	PKPdf	01 35 11.4	-4.1
BRRC	Barranca, Sant	139.71	343	*e*P	PKiKP	01 35 17.3	-0.9
PTBC	PUERTO BERRIO,	140.44	343	*e*P	PKPdf	01 35 11.4	-5.8
RUSC	La Rusia	140.70	341	*e*P	PKPdf	01 35 18.8	+0.5
CACAO	El Cacao, Vera	140.74	354	*e*P	PKPdf	01 35 17.3	-0.4
PEXB	Peixe	140.94	292	*e*P	PKPdf	01 35 19.4	+1.4
SPBC	San Pablo de B	141.20	342	*e*P	PKPdf	01 35 18.8	+0.2
PTGC	Puerto Gaitan,	142.04	339	*e*P	PKPdf	01 35 18.8	-1.2
ROSC	El Rosal	142.04	343	PKhKP	PKPpre	01 35 16.7	
	comp=Z,7.0nm,0.4s,baz=125,slow=16,SNR=2.5						
PLMC	San Jos del P	142.43	346	*e*P	PKPdf	01 35 15.8	-5.0
VILC	Villavicencio,	142.57	341	*e*P	PKPdf	01 35 17.3	-3.8
BDFB	Brasilia	142.70	287	PKP	PKPdf	01 35 20.5	-0.7
	comp=Z,3.2nm,0.8s,baz=105,slow=6.2,SNR=4.5						
BDFB	Brasilia	142.70	287		PKPdf	01 35 18.8	-2.4
BDFB	Brasilia	142.70	287	PKIKP	PKPdf	01 35 18.8	-2.4
PRAC	Prado	143.26	343	*e*P	PKPab	01 35 15.8	-2.2
YOTC	Yotoco, Valle	143.34	345	*e*P	PKPab	01 35 14.3	-4.0
GUVC	San Jose del G	143.75	339	*e*P	PKiKP	01 35 39.6	+13
PARB	Paraibuna	144.25	274	*e*P	PKPdf	01 35 23.4	-0.3
MARP	Paez Belalcaza	144.36	344	*e*P	PKPab	01 35 20.3	-2.2
MACC	Macarena, Meta	144.49	341	*e*P	PKPab	01 35 20.3	-2.3
GARC	Garzon, Huila	144.88	343⇓	*e*P	PKPab	01 35 21.8	-2.6
PCON	Cinco Dias	144.96	345	*e*P	PKPab	01 35 21.8	-3.2
SOTA	Rioblanco	145.19	345	*e*P	PKPbc	01 35 23.2	-2.5
VAO	Valinhos	145.25	275	*e*P	PKPdf	01 35 26.7	+1.2
RCLB	Rio Claro- Sao	145.50	277	*e*P	PKPab	01 35 27.5	+1.4
BB19B	Bebedouro	145.77	279	*e*P	PKPab	01 35 28.1	+0.9
CLDB	Colider	145.87	301	*e*P	PKPab	01 35 27.8	+0.2
SPB	Sao Paulo	145.88	275	*e*P	PKPab	01 35 28.1	+0.6
TUMC	Tumaco	145.90	349	*e*P	PKPdf	01 35 24.7	-2.0
CTUM2	Tumaco	145.90	349	*e*P	PKPdf	01 35 24.7	-2.0
PET01	Itanhaem-SP	146.00	273	*e*P	PKPab	01 35 28.4	+0.5
DVLD	Doverlandia	146.59	289	*e*P	PKPbc	01 35 28.9	-0.4
CMBC	Cumbal	146.60	347⇓	*e*P	PKiKP	01 35 32.1	-0.8
ITRB	Iturama	146.68	283	*e*P	PKPbc	01 35 29.7	+0.2
PDRB	Porto dos Gac	147.04	302	*e*P	PKPbc	01 35 29.9	-0.8
OTAV	Otavalo	147.41	348	*e*P	PKPdf	01 35 30.5	+0.6
FRTB	Fartura	147.59	276	*e*P	PKPbc	01 35 31.3	-0.7
TIJ01	Guaruva-PR	147.84	273	*e*P	PKPdf	01 35 30.6	+0.8
NBRS	Nobres	148.07	297	*e*P	PKPdf	01 35 31.6	+1.3
C2SB	Chapadao do Su	148.25	287	*e*P	PKPbc	01 35 32.9	-0.9
PCMB	Pacaembu	148.29	281	*e*P	PKPbc	01 35 32.4	-1.5
SALV	Santo Antonio	148.96	294	*e*P	PKPdf	01 35 33.0	+1.3
TBTG	Tabatinga, AM	148.97	330	*e*P	PKPdf	01 35 30.7	-1.2
TBTG	Tabatinga, AM	148.97	330	*e*P	PKPdf	01 35 33.3	+1.5
PP1B	Ponte de Pedra	149.28	290	*e*P	PKPdf	01 35 34.1	+1.9
CPUP	Villa Florida	155.24	276	PKP	PKPdf	01 35 41.0	+0.3
	comp=Z,5.3nm,0.9s,baz=351,slow=3.3,SNR=8.2						
LPAZ	La Paz	158.15	312	PKP	PKPdf	01 35 44.8	-0.8
	comp=Z,3.2nm,1.0s,baz=141,slow=1.3,SNR=6.2						
LPAZ				PKPab	PKPab	01 36 18.7	-0.5
	comp=Z,2.4nm,0.7s,baz=18,slow=5.8,SNR=6.0						
LPAZ	La Paz	158.15	312	PKPdf	PKPdf	01 35 43.2	-2.3
LPAZ	La Paz	158.15	312	PKIKP	PKPdf	01 35 43.3	-2.3
PLCA	Paso Flores	165.44	229	PKPab	PKPab	01 36 49.6	-0.3
	comp=Z,2.3nm,0.9s,baz=70,slow=6.4,SNR=2.5						

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*IDC **11** 01:19:40.5±0.7, 27°.89N×84°.91E, h0^{km}, mb4.2/18, mbtmp4.2/19, ML4.6/1, MS4.4/2 Error ellipse: s-maj=23.9km s-min=14.4km az=66.0*

*NEIC **11** 01:19:42.3±2.1, 27°.95N±0°.08×84°.93E±0°.06, h10^{km}±5^{km}, mb4.5/50, Error ellipse: s-maj=12.5km s-min=4.8km az=209.0*

ISC 11 01:19:41.6±0.6**, 27°.81N**±0°.09×**84°.80E**±0°.10**, h12^{km}, n82, σ1^{s}.09**/76**, mb4.3**/34**, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	5.88	70	Pn	Pn	01 21 01.3	-7.7
NIL	Nilore	11.51	303	Pn	Pn	01 22 24.6	-1.2
HYBB	Hyderabad (bro	11.84	210	*e*P	Pn	01 22 28.8	-1.7
TARG	Taragay, Kyrgy	15.02	339	Pn	Pn	01 23 11.3	-2.7
KBL	Kabul	15.05	300	Pn	Pn	01 23 15.9	+1.5
KBL				IAmb	IAmb	01 23 31.3	
	comp=Z,50nm,1.4s						
BOOM	Boomskoye usch	16.32	336	Pn	Pn	01 23 29.4	-1.4
GAR	Garm	16.43	316	Pn	Pn	01 23 29.0	-3.1
BTK	Batken	16.82	320	Pn	Pn	01 23 33.8	-3.2
BTK				IAmb	IAmb	01 23 42.9	
	comp=Z,26nm,0.9s						
MK31	Makanchi Array	19.05	355	P	P	01 24 02.4	-1.2
MK31				IAmb	IAmb	01 24 08.2	
	comp=Z,33nm,1.4s						
MKAR	Makanchi Array	19.05	355	P	Pn	01 24 04.0	-0.3
	comp=Z,1.6nm,0.3s,baz=178,slow=9.5,SNR=17						
	comp=Z,4.9nm,0.5s						
MKAR	Makanchi Array	19.05	355	P	P	01 24 02.7	-0.9
MAKZ	Makanchi	19.09	354	P	P	01 24 02.5	-1.6
KK31	Karatay Array	19.15	327	P	P	01 24 03.6	-1.1
KKAR	Karatay Array	19.15	327	P	P	01 24 03.4	-1.3
PALK	Pallekele	20.80	192	P	Pn	01 24 26.4	+1.1
	comp=Z,6.9nm,0.4s,baz=108,slow=11,SNR=8.8						
	comp=Z,6.9nm,0.4s						
PALK	Pallekele	20.80	192	P	Pn	01 24 27.5	+2.2
PALK				IAmb	IAmb	01 24 30.7	
	comp=Z,10nm,0.5s						
KURBB	Kurchatov Arra	23.27	350	P	P	01 24 49.5	+0.6
	comp=Z,5.6nm,0.6s,baz=172,slow=9.8,SNR=14						
	comp=Z,5.6nm,0.6s						
KURK	Kurchatov	23.35	350	P	P	01 24 50.3	+0.7
ZAA0	Zalesovo Array	26.11	0	P	P	01 25 14.6	-0.6
ZAA0				IAmb	IAmb	01 25 42.3	
	comp=Z,27nm,1.4s						
ZALV	Zalesovo Beam	26.11	0	P	P	01 25 15.5	+0.4
	comp=Z,4.4nm,0.6s,baz=186,slow=10,SNR=5.1						
	comp=Z,4.4nm,0.6s						
ZALV	Zalesovo Beam	26.11	0	P	P	01 25 15.6	+0.5
SONM	Songino Array	26.12	34	P	P	01 25 16.7	+1.2
	comp=Z,3.3nm,0.9s,baz=218,slow=9.1,SNR=4.5						
	comp=Z,3.3nm,0.9s						
SONM	Songino Array	26.12	34	P	P	01 25 16.6	+1.1
BVAR	Borovoye Array	27.36	341	P	P	01 25 26.4	-0.1
	comp=Z,0.8nm,0.4s						
	comp=Z,0.8nm,0.4s						
ABKAR	Akbulak array	28.69	325	P	P	01 25 39.4	+1.1
ARU	Arti	34.18	334	P	P	01 26 26.7	+0.2
	comp=Z,1.5nm,0.5s,baz=118,slow=13,SNR=2.4						
	comp=Z,1.5nm,0.5s						
ARU	Arti	34.18	334	P	P	01 26 26.4	-0.1
ARU				IAmb	IAmb	01 26 34.1	
	comp=Z,15nm,1.3s						
KSRS	Korea Array	37.29	64	P	P	01 26 52.6	-0.9
	comp=Z,0.6nm,0.3s,baz=267,slow=9.1,SNR=2.3						
	comp=Z,0.6nm,0.3s						
NRIK	Noril'sk	41.59	1	P	P	01 27 29.4	+0.5
	comp=Z,2.4nm,0.5s,baz=152,slow=6.7,SNR=2.4						
	comp=Z,2.4nm,0.5s						
NRIK	Noril'sk	41.59	1	P	P	01 27 28.7	-0.2
NRIK				IAmb	IAmb	01 27 33.1	
	comp=Z,7.8nm,1.2s						
ATD	Arta Tunnel	42.46	256	LR	LR	01 44 57.9	
	comp=Z,347nm,21.4s,baz=51,slow=36						
ELL	Elmali	46.71	295	P	P	01 28 11.2	+0.6
AKASG	Malin Array Be	47.42	315	P	P	01 28 15.3	-0.5
	comp=Z,0.9nm,0.5s,baz=71,slow=8.3,SNR=2.1						
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	47.42	315	P	P	01 28 14.9	-0.9
AKASG				IAmb	IAmb	01 28 16.6	
	comp=Z,2.9nm,0.9s						
BURAR	Bucovina Array	49.82	310	P	P	01 28 34.4	-0.1
TIXI	Tiksi	50.07	17	P	P	01 28 36.2	+0.4
	comp=Z,3.6nm,0.6s,baz=91,slow=22,SNR=5.6						
	comp=Z,3.6nm,0.6s						
TIXI	Tiksi	50.07	17	P	P	01 28 35.7	-0.2
TIXI				IAmb	IAmb	01 28 36.8	
	comp=Z,4.4nm,0.8s						
FINES	FINESS Array B	51.10	328	P	P	01 28 43.8	+0.1
	comp=Z,1.0nm,0.5s,baz=110,slow=7.2,SNR=4.0						
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	51.10	328	P	P	01 28 43.3	-0.4
KWP	Kalwaria Pacla	51.52	313	P	P	01 28 47.8	+0.6
ARCES	ARCESS Array B	53.59	338	P	P	01 29 02.4	+0.2
	comp=Z,1.8nm,0.6s,baz=96,slow=7.4,SNR=5.0						
	comp=Z,1.8nm,0.6s						
ARCES	ARCESS Array B	53.59	338	P	P	01 29 01.2	-0.9
GERES	GERESS Array B	57.45	312	P	P	01 29 31.8	+1.4
	comp=Z,0.6nm,0.7s,baz=73,slow=11,SNR=1.4						
	comp=Z,0.6nm,0.7s						
CLL	Collm	57.66	315	*e*Px	Px	01 29 33.0	
WB0	Warramunga Arr	67.38	129	P	P	01 30 35.0	-2.0
WRA	Warramunga Arr	67.46	129	P	P	01 30 37.3	-0.2
	comp=Z,2.2nm,0.9s,baz=319,slow=6.4,SNR=12						
	comp=Z,2.2nm,0.9s						
WRA	Warramunga Arr	67.46	129	P	P	01 30 36.5	-1.0
WRAB	Tennant Creek	67.46	129	P	P	01 30 35.7	-1.8
WB2	Warramunga Arr	67.47	129	P	P	01 30 37.4	-0.1
WR0	Warramunga Arr	67.61	129	P	P	01 30 37.4	-1.0
ASAR	Alice Springs	69.73	132	P	P	01 30 52.6	+1.0
	comp=Z,1.9nm,0.6s,baz=312,slow=6.0,SNR=6.2						
	comp=Z,1.9nm,0.6s						
TOLK	Toolik Lake Re	75.94	18	P	P	01 31 28.4	+0.4
IMAR	Indian Mountai	76.45	21	P	P	01 31 31.1	+0.3
COLD	Coldfoot	76.72	19	P	P	01 31 33.1	+0.8
COLD				IAmb	IAmb	01 31 34.7	
	comp=Z,3.2nm,1.0s						
H21K	Melozitna Rive	76.96	21	P	P	01 31 34.8	+1.1
H21K				IAmb	IAmb	01 31 43.0	
	comp=Z,3.3nm,1.1s						
J20K	Nowinta River	77.46	23	P	P	01 31 36.6	+0.1
J20K				IAmb	IAmb	01 31 38.9	
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	77.97	279	P	P	01 31 41.9	+1.7
	comp=Z,1.7nm,0.7s,baz=17,slow=4.7,SNR=1.3						
K20K	Telida	78.00	23	P	P	01 31 40.7	+1.1
K20K				IAmb	IAmb	01 31 42.2	
	comp=Z,3.7nm,0.8s						
BMAR	Burnt Mountain	78.14	17	P	P	01 31 42.2	+1.8
H24K	Noodor Dome	78.35	20	P	P	01 31 42.6	+1.0
CAST	Castle Rocks	78.65	23	P	P	01 31 44.1	+0.9
CAST				IAmb	IAmb	01 31 45.8	
	comp=Z,6.8nm,0.8s						
MDM	Murphy Dome	78.86	20	P	P	01 31 45.0	+0.6
MDM				IAmb	IAmb	01 31 45.9	
	comp=Z,2.9nm,0.8s						
POKR	Poker Plat Res	78.99	20	P	P	01 31 46.4	+1.4
POKR				IAmb	IAmb	01 31 49.9	
	comp=Z,5.1nm,0.7s						
CCB	Clear Creek Bu	79.20	20	P	P	01 31 45.9	-0.2
CCB				IAmb	IAmb	01 31 47.2	
	comp=Z,6.0nm,1.5s						
IL31		79.40	20	P	P	01 31 46.6	-0.6
IL31				IAmb	IAmb	01 31 47.8	
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	79.40	20	P	P	01 31 47.1	-0.1
	comp=Z,1.5nm,0.6s,baz=308,slow=4.8,SNR=14						
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	79.40	20	P	P	01 31 46.8	-0.4
HDA	Harding Lake	79.64	20	P	P	01 31 48.1	-0.5
RND	Reindeer	79.73	22	P	P	01 31 48.9	-0.3
RND				IAmb	IAmb	01 31 49.9	
	comp=Z,2.0nm,0.6s						
J25K	Salcha River,	79.97	20	P	P	01 31 50.4	0.0
INK	Inuvik	80.06	14	P	P	01 31 51.2	+0.5
	comp=Z,1.6nm,0.9s,baz=14,slow=1.3,SNR=4.9						
	comp=Z,1.6nm,0.9s						
INK	Inuvik	80.06	14	P	P	01 31 50.5	-0.2
INK				IAmb	IAmb	01 32 03.3	
	comp=Z,5.7nm,1.4s						
STKA	Stephens Creek	80.28	134	P	P	01 31 53.1	+0.6

	comp=Z,2.4nm,0.9s,baz=314,slow=23,SNR=1.9						
	comp=Z,2.4nm,0.9s						
DHY	Denali Highway	80.44	21	P	P	01 31 53.2	+0.1
DHY				IAmb	IAmb	01 31 54.6	
	comp=Z,2.4nm,0.6s						
RIDG	Independent Ri	80.76	20	P	P	01 31 54.7	0.0
RIDG				IAmb	IAmb	01 31 55.4	
	comp=Z,3.9nm,0.6s						
SCRK	Sand Creek	80.84	20	P	P	01 31 55.9	+0.7
SCRK				IAmb	IAmb	01 31 56.6	
	comp=Z,3.7nm,0.7s						
SML	Sawmill	81.02	23	P	P	01 31 57.3	+1.2
K27K	Chicken	81.36	19	P	P	01 31 58.3	+0.5
K27K				IAmb	IAmb	01 32 00.0	
	comp=Z,5.0nm,1.1s						
DAWY	Dawson	82.09	18	P	P	01 32 02.0	+0.3
DAWY				IAmb	IAmb	01 32 02.9	
	comp=Z,2.6nm,0.7s						
L27K	Beaver Creek,	82.17	20	P	P	01 32 03.4	+1.3
BCAR	Beaver Creek A	82.18	20	P	P	01 32 03.5	+1.3
MAW	Mawson	96.54	188	LR	LR	02 14 11.0	
	comp=Z,207nm,18.4s,baz=12,slow=34						

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*IDC **11** 01:47:47.5±1.1, 7°.56N×73°.92W, h0km, mb3.6/3, mbtmp3.5/5, ML1.9/2, MS4.3/1, Error ellipse: s-maj=21.9km s-min=15.4km az=120.0*

*RSNC **11** 01:47:51.0±1.3, 7°.37N×73°.83W, h4km±5km, ML3.3, Mw3.5*

ISC 11 01:47:47.8±1.1**, 7°.32N**±0°.02×**73°.89W**±0°.02**, h6**km±9km**, n37, σ1ˢ48**/63**, mb3.9**/3**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	Barranca, Sant	0.27	140⇑	*i*P	Pn	01 47 56.8	-1.6
BRRC				*e*S	Sb	01 48 01.8	+1.8
BRRC				*i*		01 48 02.2	
	comp=Z,6µm,0.2s						
PTBC	PUERTO BERRIO,	0.96	216	*e*P	Pn	01 48 09.1	+1.2
PTBC				*e*S	Sn	01 48 22.6	+0.7
PTBC				*i*		01 48 23.7	
	comp=Z,1µm,0.2s						
ZARC	Zaragoza, Cauc	0.98	280⇓	*i*P	Pn	01 48 09.2	+1.0
ZARC				*e*S	Sn	01 48 23.0	+0.6
ZARC				*i*		01 48 26.8	
	comp=Z,2µm,0.5s						
BARC	Barichara	1.00	136⇓	*e*P	Pn	01 48 08.9	+0.2
BARC				*e*S	Sb	01 48 21.8	+0.5
BARC				*i*		01 48 25.4	
	comp=Z,943nm,0.3s						
OCAC	Ocana	1.07	31	*e*P	Pg	01 48 08.8	+0.3
OCAC				*e*S	Sg	01 48 22.6	+0.1
PAMC	Pamplona, Colo	1.18	89⇓	*e*P	Pn	01 48 11.1	-0.2
PAMC				*e*S	Sg	01 48 25.8	0.0
PAMC				*i*		01 48 30.2	
	comp=Z,739nm,0.3s						
SMLC	San Martn de	1.49	353	*e*P	Pn	01 48 14.1	-1.0
SMLC				*e*S	Sn	01 48 34.7	-0.3
SMLC				*i*		01 48 34.9	
	comp=Z,849nm,0.3s						
RUSC	La Rusia	1.62	151	*e*P	Pg	01 48 19.9	+0.8
RUSC				*e*S	Sg	01 48 40.9	+0.8
RUSC				*i*		01 48 43.7	
	comp=Z,805nm,0.3s						
SPBC	San Pablo de B	1.66	186	*e*P	Pg	01 48 19.4	-0.3
SPBC				*e*S	Sg	01 48 40.9	-0.4
SPBC				*i*		01 48 53.5	
	comp=Z,199nm,0.4s						
UREC	San Jos de Ur	1.69	285	*e*P	Pg	01 48 20.2	0.0
UREC				*e*S	Sg	01 48 42.7	+0.5
UREC				*i*		01 48 45.2	
	comp=Z,507nm,0.2s						
HELC	Santa Helena	1.98	236	*e*P	Pg	01 48 25.7	-0.1
HELC				*e*S	Sg	01 48 52.1	+0.6
HELC				*i*		01 48 57.0	
	comp=Z,182nm,0.4s						
NORC	Norcasia	2.00	209	*e*P	Pb	01 48 24.3	-0.3
NORC				*e*S	Sb	01 48 50.4	+0.6
NORC				*i*		01 48 57.9	
	comp=Z,128nm,0.2s						
TAMC	Tame, Arauca	2.26	113	*e*P	Pb	01 48 28.1	-1.0
TAMC				*e*S	Sg	01 49 00.6	+0.2
TAMC				*i*		01 49 06.7	
	comp=Z,131nm,0.3s						
ROSC	El Rosal	2.50	190	Pn	Pb	01 48 32.8	-0.6
	comp=Z,3.0nm,0.3s,baz=92,slow=21,SNR=3.0						
ROSC				Lg	Lg	01 49 15.8	
	comp=Z,40nm,0.3s,baz=190,slow=20,SNR=7.1						
	comp=Z,6.1nm,0.3s						
ARGC	Ariguani, Magd	2.55	352	*e*P	Pn	01 48 30.9	+1.1
ARGC				*e*S	Sb	01 49 07.2	+1.4
ARGC				*i*		01 49 16.1	
	comp=Z,55nm,0.3s						
CBOC	Ciudad Bolivar	2.56	236	*e*P	Pg	01 48 36.2	-0.7
CBOC				*e*S	Sg	01 49 11.4	+1.3
CBOC				*i*		01 49 17.6	
	comp=Z,76nm,0.6s						
CHIC	Chingaza	2.67	177	*e*P	Pb	01 48 36.8	+0.4
CHIC				*e*S	Sg	01 49 14.8	+1.0
CHIC				*i*		01 49 20.3	
	comp=Z,53nm,0.6s						
SJCC	San Jacinto, C	2.87	334	*e*P	Pn	01 48 36.5	+2.3
SJCC				*e*S	Sn	01 49 11.1	+2.0
SJCC				*i*		01 49 30.1	
	comp=Z,54nm,0.5s						
LCBC	Los crdobas,	2.90	302	*e*P	Pb	01 48 38.6	-1.4
LCBC				*e*S	Sb	01 49 17.4	+1.8
LCBC				*i*		01 49 29.0	
	comp=Z,103nm,0.4s						
ANIL	Santa Ana	3.19	208	*e*P	Pg	01 48 48.8	-0.2
ANIL				*e*S	Sb	01 49 24.0	-0.3
ANIL				*i*		01 49 34.5	
	comp=Z,123nm,0.3s						
VILC	Villavicencio,	3.19	177	*e*P	Pb	01 48 45.3	+0.2
VILC				*e*S	Sg	01 49 29.1	-1.3
PTGC	Puerto Gaitan,	3.55	151	*e*P	Pn	01 48 46.0	+2.4
PTGC				*e*S	Sn	01 49 28.0	+2.0
PTGC				*i*		01 49 43.8	
	comp=Z,91nm,0.4s						
SDV	Santo Domingo	3.58	64	Pn	Pn	01 48 45.5	+1.4
	comp=Z,1.7nm,0.3s,baz=236,slow=11,SNR=16						
SDV				Sn	Sn	01 49 26.2	-0.7
	comp=Z,18nm,0.3s,baz=58,slow=19,SNR=7.1						
SDV				Lg	Lg	01 49 38.7	
	comp=Z,30nm,0.3s,baz=66,slow=21,SNR=12						
	comp=Z,4.6nm,0.2s						
SDV	Santo Domingo	3.58	64	*e*P	Pn	01 48 45.4	+1.2
SDV				*e*S	Sb	01 49 37.2	+1.7
SDV				*i*		01 49 43.5	
	comp=Z,70nm,0.3s						
ORTC	Ortega, Tolima	3.65	202	*e*P	Pn	01 48 48.6	+3.6
ORTC				*e*S	Sb	01 49 35.0	-2.3
ORTC				*i*		01 49 58.1	
	comp=Z,35nm,0.3s						
PRAC	Prado	3.71	196	*e*P	Pb	01 48 50.5	-3.5
PRAC				*e*S	Sb	01 49 40.5	+1.2
PRAC				*i*		01 49 54.6	
	comp=Z,49nm,0.3s						
CRJC	Cerrejon, Guaj	3.81	15	*e*P	Pn	01 48 46.3	-0.9
CRJC				*i*		01 49 52.5	
	comp=Z,95nm,0.4s						
SMRC	Santa Marta, M	3.84	355	*e*P	Pn	01 48 48.5	+1.0
SMRC				*e*S	Sn	01 49 36.0	+3.0
SMRC				*i*		01 49 59.6	
	comp=Z,24nm,0.4s						
YOTC	Yotoco, Valle	4.12	217	*e*P	Pb	01 48 57.9	-3.0
YOTC				*e*S	Sb	01 49 49.3	-1.7
URIC	Uribia, Colomb	4.74	23	*e*P	Pn	01 48 58.7	-1.3
MACC	Macarena, Meta	5.14	180	*e*P	Pn	01 49 09.0	+3.6
MACC				*e*S	Sn	01 50 05.9	+0.8
MACC				*i*		01 50 44.9	
	comp=Z,19nm,0.6s						
PCON	Cinco Dias	5.55	207	*e*P	Pb	01 49 18.9	-6.7
TXAR	Lajitas Array	35.57	312	P	P	01 54 46.6	+0.2
	comp=Z,0.1nm,0.3s,baz=130,slow=8.4,SNR=1.9						
	comp=Z,0.1nm,0.3s						
PDAR	Pinedale Array	47.23	324	LR	LR	02 20 37.9	
	comp=Z,284nm,18.6s,baz=349,slow=42						
YKA	Yellowknife Ar	62.54	340	P	P	01 58 11.5	-0.8
	comp=Z,0.5nm,0.5s,baz=133,slow=7.0,SNR=20						
	comp=Z,0.5nm,0.5s						
ARCES	ARCESS Array B	86.47	20	P	P	02 00 30.3	-1.0
	comp=Z,1.3nm,0.9s,baz=264,slow=3.5,SNR=4.2						
	comp=Z,1.3nm,0.9s						
WRA	Warramunga Arr	149.90	243	PKPbc	PKPbc	02 07 38.2	-1.9
	comp=Z,0.2nm,0.6s,baz=102,slow=2.9,SNR=1.4						

WEL 11 01:50:10.0±1.3**, 31°S**±20°×**17°9E**±5°5**, h260**km±57km**, M4.1**/7**, mB4.5**/7**, ML4.5**/7**, MLv4.5**/6**, Mw(mB)3.7**/7**, Error ellipse: s-maj=0.1km s-min=0.0km az=109.1, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.24	60	P	Pn	01 51 04.2	-1.5
GLKZ				S	S	01 51 50.7	+0.8
MXZ	Matakaoa Point	6.63	184	P	Pn	01 51 47.8	+1.7
HAZ	Te Kaha	6.87	187	P	Pn	01 51 49.3	+0.3
HAZ				S	S	01 53 08.9	+0.2
WMGZ	Waiomatatini S	6.89	183	P	Pn	01 51 51.0	+1.8
WMGZ				S	S	01 53 11.0	+2.0
PKGZ	Pakihiroa	6.97	185	P	Pn	01 51 50.2	-0.2
PKGZ				S	S	01 53 12.5	+1.3
RUGZ	Raukumara Rang	7.09	188	P	Pn	01 51 52.1	+0.2
RUGZ				S	S	01 53 13.3	-0.6
TWGZ	Tauwhareparae	7.27	186	P	Pn	01 51 55.7	+1.6
TWGZ				S	S	01 53 18.4	+0.5
URZ	Urewera	7.46	191	P	Pn	01 51 55.8	-0.6
URZ				S	S	01 53 22.4	+0.3
MWZ	Matawai	7.47	188	P	Pn	01 51 57.2	+0.6
MWZ				S	S	01 53 21.1	-1.4
CNGZ	Carnagh Statio	7.56	184	P	Pn	01 51 57.5	-0.2
MUGZ	Murupara	7.73	192	P	Pn	01 51 59.9	0.0
KNZ	Kokohu	8.14	187	P	Pn	01 52 02.8	-2.1
KNZ				S	S	01 53 35.4	-2.3
MRHZ	Matea Rd	8.14	194	P	Pn	01 52 04.5	-0.6

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*ISK **11** 01:57:08.3, 35°.29N×30°.35E, h14km, ML3.0/18*

*DDA **11** 01:57:10.7±0.0, 35°.45N×30°.44E, h38km±1km, ML2.8*

*NIC **11** 01:57:11.6±0.0, 35°.42N×30°.42E, h21km±2km, Ml2.9/4*

*GII **11** 01:57:12.2±0.4, 35°.32N×30°.32E, h40km, Mm2.8/4*

ISC 11 01:57:09.6±1.4**, 35°.40N**±0°.03×**30°.42E**±0°.03**, h10**km±10km**, n65, σ1ˢ01**/99**, 2C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.92	356	P	Pg	01 57 26.7	-0.7
AKUM				S	Sn	01 57 41.3	-0.6
KSL	Kastellorizon	1.01	318	P	Pg	01 57 30.1	+1.0
KSL				S	Sn	01 57 44.6	+0.6
AKAS	Kas	1.06	322	PN	Pb	01 57 30.1	0.0
AKAS				SN	Sn	01 57 46.4	+0.9
AKAS	Kas	1.06	322	P	Pb	01 57 29.9	-0.3
AKAS				S	Sn	01 57 48.7	+3.2
AKAS				*i* AML	AML	01 57 52.0	
	comp=E,262nm,0.5s						
AKAS				*i* AML	AML	01 58 06.0	
	comp=N,322nm,0.5s						
ELL	Elmali	1.41	343	PN	Pn	01 57 35.7	+0.3
ELL				SN	Sg	01 57 55.1	+0.2
ELL	Elmali	1.41	343	P	Pg	01 57 37.2	+0.5
ANTB	Antalya	1.51	7	PN	Pb	01 57 37.6	-0.1
KORT	Korkueli	1.60	358	PN	Pn	01 57 38.6	+0.6
KORT	Korkueli	1.60	358	P	Pn	01 57 38.2	+0.1
AKMS	Akamas	1.62	103⇑	*i*P	Pn	01 57 38.9	+0.7
AKMS				S	Sn	01 57 59.8	+0.7
AKMS				AML	AML	01 58 02.2	
	0.6nm,0.5s						
AKMS				AML	AML	01 58 02.2	
	0.6nm,0.5s						
AKMS				AML	AML	01 58 11.8	
	0.5nm,0.4s						
AKMS				AML	AML	01 58 11.8	
	0.5nm,0.4s						
FETY	Fethiye	1.64	319	PN	Pn	01 57 38.6	+0.1
FETY	Fethiye	1.64	319	P	Pb	01 57 40.4	+0.4
FETY				S	Sn	01 57 60.0	+0.3
GAZI	Gazipasa	1.75	61	PN	Pn	01 57 39.9	-0.2
GAZI	Gazipasa	1.75	61	P	Pn	01 57 39.6	-0.4
GAZI				S	Sn	01 58 00.9	-1.5
KEPZ	Antalya-Kepez	1.78	32	P	Pn	01 57 40.6	+0.2
KEPZ				S	Sn	01 58 02.7	-0.4
CAME	Cameli-Denizli	1.78	330	PN	Pn	01 57 41.0	+0.4
ALFC	Alefka	1.80	97	P	Pn	01 57 41.5	+0.8
ALFC				S	Sb	01 58 05.0	-0.3
ALFC				AML	AML	01 58 11.4	
	0.4nm,0.3s						
ALFC				AML	AML	01 58 11.4	
	0.4nm,0.3s						
ALFC				AML	AML	01 58 17.7	
	0.4nm,0.6s						
ALFC				AML	AML	01 58 17.7	
	0.4nm,0.6s						
NATA	Nata	1.87	109⇑	*e*P	Pn	01 57 42.8	+1.1
NATA				S	Sn	01 58 06.7	+1.3
BUCA	Burdur, Bucak-	1.93	3	P	Pg	01 57 45.9	-0.7
BUCA				S	Sg	01 58 11.3	-0.3
CAEL	Denizli, Camel	1.93	333	P	Pb	01 57 45.6	+0.5
CAEL				*i* AML	AML	01 58 30.0	
	comp=N,110nm,0.8s						
CAEL				*i* AML	AML	01 58 44.0	
	comp=E,136nm,1.1s						
CAEL				*i* AML	AML	01 58 47.0	
	comp=Z,86nm,0.8s						
GOLH	Golhisar	1.96	340	P	Pn	01 57 44.2	+1.3
DALY	Dalyan (Mula)	2.01	315	PN	Pn	01 57 43.8	+0.3
ARG	Arkhangelos	2.03	294	PN	Pn	01 57 43.3	-0.6
LEF	Lefka	2.04	97	PN	Pn	01 57 43.5	-0.5
LEF	Lefka	2.04	97	P	Pn	01 57 45.8	+1.8
SZAC	Souni	2.12	107	P	Pn	01 57 46.0	+0.9
SZAC				S	Sb	01 58 14.1	-0.4
SZAC				AML	AML	01 58 18.5	
	0.3nm,0.3s						
SZAC				AML	AML	01 58 18.5	
	0.3nm,0.3s						
TURN	Turunc	2.23	309	P	Pn	01 57 47.4	+0.8
TURN				S	Sn	01 58 15.1	+0.9
HDMB	Hadim	2.29	46	PN	Pn	01 57 48.5	+0.9
SEYD	Seydisehir-KON	2.31	29	PN	Pn	01 57 49.2	+1.4
BRDR	BURDUR-Merkez	2.31	353	P	Pn	01 57 49.0	+1.2
BRDR				S	Sb	01 58 18.0	-2.0
SEDI	Konya, Seydise	2.31	27	P	Pn	01 57 49.6	+1.7
SEDI				S	Sb	01 58 18.3	-1.9
ERMK	Ermenek	2.37	58	P	Pn	01 57 48.3	-0.4
ERMK				S	Sn	01 58 19.0	+1.0
ERMK				*i* AML	AML	01 58 47.0	
	comp=E,45nm,0.8s						
TAVA	DENIZLI_Tavas	2.39	330	P	Pn	01 57 50.7	+1.8
ASGA	Asgata	2.40	104	P	Pn	01 57 49.8	+0.9
ASGA				S	Sn	01 58 20.0	+1.7
ASGA				AML	AML	01 58 23.6	
	0.2nm,0.4s						
ASGA				AML	AML	01 58 23.6	
	0.2nm,0.4s						
CSS	Mathiatis	2.43	100	Pn	Pn	01 57 50.1	+0.8
MULA	Mugla, Merkez-	2.51	318	P	Pn	01 57 51.1	+0.6
MULA				S	Sn	01 58 22.7	+1.5
DAT	Datca	2.66	301	PN	Pn	01 57 52.2	-0.4
DAT	Datca	2.66	301	P	Pn	01 57 52.4	-0.2
GULN	MERSIN_Gulnar	2.66	72	P	Pn	01 57 53.5	+1.0
KKBE	Karaman, Kazim	2.73	48	P	Pn	01 57 55.5	+2.0
KKBE				*i* AML	AML	01 58 50.0	
	comp=N,34nm,1.6s						
KZIL	AFYON_Kizioren	2.86	356	P	Pn	01 57 56.4	+1.0
KZIL				S	Sn	01 58 30.1	+0.2
DOGA	KONYA_Doganhis	2.88	20	P	Pn	01 57 56.6	+0.9
DOGA				S	Sb	01 58 33.8	-2.8
YVAC	Isparta, Yalva	2.94	13	P	Pn	01 57 57.5	+1.1
YVAC				S	Sn	01 58 33.8	+1.9
KONT	Konya--Tatoy	2.98	31	P	Pn	01 57 58.1	+1.2
BODT	Bodrum	3.01	304	PN	Pn	01 57 56.5	-0.8
AYDN	Tasoluk	3.04	319	P	Pn	01 57 58.6	+0.7
AYDB	Zeytinkoy-Aydi	3.25	322	PN	Pn	01 58 01.2	+0.4
GCAM	G?zelcaml?	3.44	313	PN	Pn	01 58 03.5	+0.3
ZKR	Zakros	3.45	266	PN	Pn	01 58 02.8	-0.6
BLCB	Balcova	4.02	319	PN	Pn	01 58 11.5	+0.2
APE	Apeiranthos	4.29	294	Pn	Pn	01 58 15.0	+0.1
OFRI	\`Ofer	4.70	125	Pn	Pn	01 58 21.5	+0.9
MMA0B	Mount Meron ar	4.77	119	Pn	Pn	01 58 22.8	+1.2
MMA0B				Sn	Sn	01 59 17.8	+0.9
GEM	Giv'at Ha'Em	4.86	115	Pn	Pn	01 58 23.8	+1.0
GEM				Sn	Sn	01 59 19.9	+0.8
NATI	Neve Ativ	4.89	114	Pn	Pn	01 58 24.1	+0.9
NATI				Sn	Sn	01 59 20.1	+0.3
MMLI	Mount Malkishu	5.10	124	Pn	Pn	01 58 26.7	+0.6
MMLI				Sn	Sn	01 59 25.7	+0.6
HMDT	Nahal Hemdat	5.29	125	Pn	Pn	01 58 29.2	+0.6
AMAZ	Amatzia	5.39	134	Pn	Pn	01 58 30.9	+0.9
AMAZ				Sn	Sn	01 59 32.0	-0.1
KZIT	Kziot	5.59	142	Pn	Pn	01 58 33.8	+1.0
KZIT				Sn	Sn	01 59 36.0	-1.0
DSI	Dead Sea	5.64	131	Pn	Pn	01 58 34.4	+1.0
DSI				Sn	Sn	01 59 38.3	+0.1
PRNI	Paran	6.34	141	Pn	Pn	01 58 43.5	+0.3
PRNI				Sn	Sn	01 59 54.1	-1.6
KRMI	Paran Flat	6.40	144	Pn	Pn	01 58 43.9	0.0
KRMI				Sn	Sn	01 59 56.8	-0.2
HRFI	Mount Harif	6.62	143	Pn	Pn	01 58 47.9	+1.0
HRFI				Sn	Sn	02 00 01.0	-1.4
MBRI	Mt Berech	6.75	145	Pn	Pn	01 58 49.2	+0.3
MBRI				Sn	Sn	02 00 05.8	-0.1
EIL	Elat	6.88	145	Pn	Pn	01 58 50.7	+0.2
EIL				Sn	Sn	02 00 07.4	-1.4

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*IDC **11** 02:28:14.3±2.1, 12°.92N×142°.79E, h149km±19km, mb3.5/9, mbtmp4.0/10, MS2.6/1, Error ellipse: s-maj=31.2km s-min=13.7km az=105.0*

*NEIC **11** 02:28:15.2±1.8, 12°.9N±0°.1×142°.7E±0°.1, h147km±7km, mb4.5/20, Error ellipse: s-maj=18.0km s-min=14.6km az=99.0*

ISC 11 02:28:14.7±0.5**, 12°.91N**±0°.08×**142°.77E**±0°.09**, h150**km**, n40, σ0ˢ86**/41**, mb4.4**/18**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.15	71	P	Pn	02 28 52.3	+0.8
	201nm,0.3s,baz=206,slow=2.0,SNR=21						
GUMO				S	Sn	02 29 19.3	-0.6
	183nm,0.4s,baz=72,slow=23,SNR=12						
GUMO				LR	LR	02 29 44.1	
	comp=Z,144nm,19.1s,baz=202,slow=42						
GUMO	Guam	2.15	71		Pn	02 28 52.1	+0.6
PATS	Pohnpei	16.45	110	P	P	02 31 58.9	+1.9
FAKI	Fak Fak	18.88	214	P	Pn	02 32 28.2	+2.2
FAKI				IAmb	IAmb	02 32 29.7	
	comp=Z,14nm,0.7s						
COEN	Coen	26.70	179	P	P	02 33 38.9	-1.1
COEN				IAmb	IAmb	02 33 45.2	
	comp=Z,11nm,1.1s						
CTAO	Charters Tower	32.97	174	P	P	02 34 35.2	-0.2
CTAO				IAmb	IAmb	02 34 47.0	
	comp=Z,16nm,1.2s						
WB0	Warramunga Arr	33.50	194	P	P	02 34 39.3	-0.7
WB0				IAmb	IAmb	02 34 40.5	
	comp=Z,8.6nm,0.8s						
WR0	Warramunga Arr	33.65	194	P	P	02 34 40.6	-0.7
WR0				IAmb	IAmb	02 34 41.6	
	comp=Z,7.2nm,0.8s						
WB2	Warramunga Arr	33.68	194	P	P	02 34 41.2	-0.4
WB2				IAmb	IAmb	02 34 41.9	
	comp=Z,9.7nm,0.6s						
WRA	Warramunga Arr	33.69	194	P	P	02 34 41.1	-0.5
	comp=Z,8.4nm,0.7s,baz=14,slow=9.3,SNR=62						
	comp=Z,8.4nm,0.7s						
WRA	Warramunga Arr	33.69	194	P	P	02 34 41.0	-0.6
FITZ	Fitzroy Crossi	35.15	209	P	P	02 34 54.1	-0.1
FITZ				IAmb	IAmb	02 35 13.1	
	comp=Z,18nm,1.5s						
KLR	Kul'dur	37.34	348	P	P	02 35 10.9	-1.6
	comp=Z,0.4nm,0.4s,baz=293,slow=24,SNR=1.9						
	comp=Z,0.4nm,0.4s						
AS31	Alice Springs	37.37	193	P	P	02 35 13.0	-0.1
ASAR	Alice Springs	37.37	193	P	P	02 35 12.7	-0.4
	comp=Z,1.6nm,0.4s,baz=20,slow=12,SNR=56						
	comp=Z,1.6nm,0.4s						
ASAR	Alice Springs	37.37	193	P	P	02 35 12.5	-0.6
DZM	Mont Dzumac	41.81	146	P	P	02 35 50.0	+0.2
DZM				IAmb	IAmb	02 35 50.4	
	comp=Z,5.3nm,0.6s						
STKA	Stephens Creek	44.55	181	P	P	02 36 10.3	-1.2
	comp=Z,4.4nm,0.4s,baz=355,slow=8.5,SNR=8.9						
	comp=Z,4.4nm,0.4s						
STKA	Stephens Creek	44.55	181	P	P	02 36 10.4	-1.2
FORT	Forrest	45.69	198	P	P	02 36 20.6	0.0
BBOO	Buckleboo	45.91	188	P	P	02 36 21.3	-1.1
BBOO				IAmb	IAmb	02 36 28.9	
	comp=Z,17nm,1.1s						
MORW	Morawa	49.08	211	P	P	02 36 46.5	-0.3
MORW				IAmb	IAmb	02 36 47.1	
	comp=Z,5.6nm,0.7s						
TOO	Toolangi	50.28	177	P	P	02 36 56.2	+0.3
MKAR	Makanchi Array	60.57	317	P	P	02 38 10.2	+0.8
	comp=Z,0.3nm,0.6s,baz=98,slow=9.0,SNR=2.9						
	comp=Z,0.3nm,0.6s						
LTZ	Lake Taylor	61.67	156	P	P	02 38 16.2	-0.5
CNPM	China Poot	66.84	30	P	P	02 38 49.4	-0.8
IMAR	Indian Mountai	67.62	23	P	P	02 38 55.0	0.0
BPAW	Bear Paw Mtn.	68.16	26	P	P	02 38 58.2	-0.3
BRVK	Borovoye	69.26	322	P	P	02 39 06.9	+1.5
ILAR	Eielson Array	70.05	25	P	P	02 39 08.5	-1.5
	comp=Z,0.4nm,0.6s,baz=252,slow=5.7,SNR=7.8						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	71.51	23	P	P	02 39 19.5	+0.7
ABKAR	Akbulak array	75.67	318	P	P	02 39 43.7	+0.3
YKA	Yellowknife Ar	84.39	27	P	P	02 40 29.8	-0.1
	comp=Z,0.1nm,0.4s,baz=288,slow=4.9,SNR=2.0						
	comp=Z,0.1nm,0.4s						
NVAR	Mina Array Bea	88.93	51	P	P	02 40 53.1	+0.3
	comp=Z,0.3nm,0.5s,baz=280,slow=7.2,SNR=3.0						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	90.93	176	P	P	02 41 00.5	-0.4
	comp=Z,1.1nm,1.0s,baz=316,slow=8.1,SNR=3.7						
	comp=Z,1.1nm,1.0s						
VNDA	Vanda	90.93	176	P	P	02 41 00.7	-0.1
TORD	Torodi Ar. Bea	133.53	302	PKP	PKPdf	02 47 14.3	0.0
	comp=Z,18nm,0.9s,baz=48,slow=3.8,SNR=4.3						
PLCA	Paso Flores	139.77	140	PKP	PKPdf	02 47 24.7	-0.5
	comp=Z,1.2nm,0.9s,baz=260,slow=2.6,SNR=4.2						
PLCA	Paso Flores	139.77	140		PKPdf	02 47 25.9	+0.7
LPAZ	La Paz	149.92	100	PKPbc	PKiKP	02 47 49.4	-0.4
	comp=Z,2.7nm,0.7s,baz=187,slow=1.5,SNR=10						

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*TUL **11** 02:28:31±0.6, 36°.123N±0°.006×97°.07W±0°.01, h7km±3km, ML2.5, mb_Lg2.1/10(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=80.0*

NEIC 11 02:28:31.6±0.6**, 36°.12N**±0°.01×**97°.07W**±0°.01**, h5**km±3km**, Error ellipse: s-maj=1.7km s-min=1.4km az=167.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.77	204	Pg	Pg	02 28 45.7	-0.8
OKCFA				Sg	Sg	02 28 56.5	0.0
OKCSW	OKLAHOMA CITY	0.78	203	Pg	Pg	02 28 45.6	-1.0
FNO	Franklin	0.91	197	Pg	Pg	02 28 47.8	-1.3
FNO				Sg	Sg	02 29 00.6	-0.2
T35A	Sooner Cattle	0.91	29	Pg	Pg	02 28 48.2	-0.9
T35A				Sg	Sg	02 29 00.3	-0.6
TUL1	Leonard	1.06	101	Pg	Pg	02 28 50.3	-1.6
TUL1				Sg	Sg	02 29 04.7	-0.9
U32A	Winter Ranch,	1.58	280		Pn	02 28 59.3	-1.2
X34A	Smith Ranch, M	1.64	203	Pn	Pn	02 29 00.2	-1.0
WMOK	Wichita Mounta	1.97	226	Pn	Pn	02 29 04.8	-0.8
WMOK				IAmb_Lg		02 29 32.5	
	comp=Z,9.3nm,0.8s						
HHAR	Hobbs	2.54	86	Pn	Pn	02 29 12.8	-0.7
MIAR	Mount Ida	3.26	118	Pn	Pn	02 29 23.5	+0.1
MIAR				IAmb_Lg		02 30 19.7	
	comp=Z,4.9nm,0.8s						
U40A	Yellville	3.42	85	Pn	Pn	02 29 24.9	-0.7
MGMO	Mountain Grove	4.00	74	IAmb_Lg		02 30 36.7	
	comp=Z,5.5nm,0.8s						
W41B	Gary Mavity, V	4.04	102	Pn	Pn	02 29 35.6	+1.4
R40A	Maddies Statio	4.40	59	IAmb_Lg		02 30 54.7	
	comp=Z,5.5nm,0.8s						
P38A	Dawn	4.48	38	IAmb_Lg		02 30 51.2	
	comp=Z,3.2nm,0.8s						
P40A	Paris	5.23	48	Pn	Pn	02 29 48.9	-1.6
PBMO	Poplar Bluff	5.39	81	IAmb_Lg		02 31 28.0	
	comp=Z,3.7nm,0.7s						

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*IDC **11** 03:06:12.3±1.1, 19°.16N×145°.63E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=53.6km s-min=25.0km az=106.0*

*NEIC **11** 03:06:36.1±0.8, 18°.9N±0°.1×145°.54E±0°.10, h199km±11km, mb4.6/9, Error ellipse: s-maj=15.1km s-min=12.9km az=182.0*

ISC 11 03:06:36.7±0.8**, 18°.9N**±0°.1×**145°.5E**±0°.2**, h214^{km}, n15, σ0^{s}.44**/15**, mb4.0**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	23.88	163	P	P	03 11 30.8	-0.2
TOLI2	**Tolitoli**	30.01	237	P	P	03 12 25.1	-0.6
CTAO	**Charters Tower**	38.77	179	P	P	03 13 40.8	+0.1
CTAO				IAmb	IAmb	03 14 49.6	
	comp=Z,28nm,1.4s						
WB0	**Warramunga Arr**	39.96	196	P	P	03 13 51.0	+0.4
WB0				IAmb	IAmb	03 14 15.0	
	comp=Z,40nm,1.9s						
WR0	**Warramunga Arr**	40.10	196	P	P	03 13 52.1	+0.4
WB2	**Warramunga Arr**	40.14	196	P	P	03 13 52.1	+0.1
WB2				IAmb	IAmb	03 14 47.7	
	comp=Z,24nm,1.6s						
WRA	**Warramunga Arr**	40.14	196	P	P	03 13 52.7	+0.6
	comp=Z,1.3nm,0.6s,baz=8.9,slow=8.7,SNR=13						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	40.14	196	P	P	03 13 52.4	+0.4
FITZ	**Fitzroy Crossi**	41.64	209	P	P	03 14 04.9	+0.7
FITZ				IAmb	IAmb	03 14 28.6	
	comp=Z,55nm,1.9s						
ASAR	**Alice Springs**	43.81	195	P	P	03 14 21.6	-0.1
	comp=Z,0.3nm,0.4s,baz=17,slow=7.1,SNR=6.1						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	58.18	314	P	P	03 16 08.3	0.0
	comp=Z,0.2nm,0.5s,baz=99,slow=6.3,SNR=2.5						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	58.18	314	P	P	03 16 08.7	+0.4
J20K	**Nowinta River**	60.34	26	P	P	03 16 23.1	+0.4
J20K				IAmb	IAmb	03 17 46.1	
	comp=Z,17nm,1.8s						
YKA	**Yellowknife Ar**	77.88	28	P	P	03 18 10.1	-0.4
	comp=Z,0.1nm,0.6s,baz=290,slow=5.6,SNR=4.2						
	comp=Z,0.1nm,0.6s						
NVAR	**Mina Array Bea**	83.15	52	P	P	03 18 39.1	-0.2
	comp=Z,0.3nm,0.5s,baz=263,slow=7.2,SNR=3.1						
	comp=Z,0.3nm,0.5s						

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*ARE **11** 03:13:40±2.4, 16°.61S±0°.08×72°.54W±0°.07, h74^{km}±7^{km}, Error ellipse: s-maj=12.3km s-min=8.7km az=208.0*

*IDC **11** 03:13:41.2±8.5, 16°.97S×72°.65W, h97^{km}±53^{km}, mb3.3/2, mbtmp3.9/3, Error ellipse: s-maj=134.1km s-min=35.7km az=17.0*

*NEIC **11** 03:13:42.5±1.3, 16°.65S±0°.04×72°.29W±0°.08, h116^{km}±11^{km}, mb3.8/3, ML4.3(ARE), Error ellipse: s-maj=12.9km s-min=2.8km az=117.0*

ISC 11 03:13:39.5±0.9**, 16°.70S**±0°.08×**72°.72W**±0°.10**, h76^{km}, n34, σ1^{s}.44**/25**, mb3.7**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	4.21	137	Pn	Pn	03 14 41.8	+0.3
PB11				Sn	Sn	03 15 26.9	-2.6
LPAZ	**La Paz**	4.42	85	P	Pn	03 14 45.7	+0.9
	74nm,0.5s,baz=268,slow=12,SNR=274						
LPAZ				S	Sn	03 15 37.4	+2.0
	6.9nm,0.4s,baz=242,slow=13,SNR=1.1						
LPAZ	**La Paz**	4.42	85	Pn	Pn	03 14 45.2	+0.5
TA01	**Diego Aracena**	4.54	148	Pn	Pn	03 14 46.8	+1.1
PATCX	**Punta Patache**	4.76	150		Pn	03 14 49.6	+0.7
PB08	**IPOC Station P**	4.81	136		Pn	03 14 50.7	+0.8
PB01	**IPOC Station P**	5.29	145		Pn	03 14 56.8	+0.7
PB02	**IPOC Station P**	5.31	150		Pn	03 14 57.2	+0.7
PB07	**IPOC Station P**	5.67	152		Pn	03 15 02.6	+1.2
PB09	**IPOC Station P**	6.04	148		Pn	03 15 07.9	+1.5
PB04	**IPOC Station P**	6.11	157		Pn	03 15 08.5	+1.2
NNA	**Nana**	6.16	319	Pn	Pn	03 15 14.2	+6.2
PB06	**IPOC Station P**	6.67	154	Pn	Pn	03 15 16.3	+1.3
LVC	**Limon Verde**	6.89	149	Pn	Pn	03 15 19.9	+1.8
PB10	**IPOC Station P**	7.08	164	Pn	Pn	03 15 21.7	+1.3
PB15	**IPOC Station P**	7.16	155		Pn	03 15 23.1	+1.4
AF01	**San Pedro de A**	7.54	146	Pn	Pn	03 15 24.4	-2.7
GO02	**Mina Guanaco**	8.91	161	Pn	Pn	03 15 47.5	+1.7
AC01	**Pan de Azucar**	9.61	168	Pn	Pn	03 15 57.2	+2.2
H03N1	**Juan Fernandez**	17.58	197	T	T	03 36 03.3	
	baz=20,slow=73,SNR=841						
H03N2	**Juan Fernandez**	17.58	197	T	T	03 36 00.5	
	baz=20,slow=73,SNR=694						
H03N3	**Juan Fernandez**	17.59	197	T	T	03 35 56.5	
	baz=20,slow=73,SNR=716						
ZARC	**Zaragoza, Cauc**	24.13	355	P	P	03 18 46.4	-2.1
ZARC				IAmb	IAmb	03 18 56.4	
	comp=Z,3.0nm,1.3s						
TXAR	**Lajitas Array**	54.66	327	P	P	03 23 02.1	+1.3
	comp=Z,0.3nm,0.9s,baz=138,slow=8.2,SNR=3.2						
	comp=Z,0.3nm,0.9s						
QSPA	**South Pole Qui**	73.46	180	P	P	03 25 02.3	-1.3
TORD	**Torodi Ar. Bea**	79.27	73	P	P	03 25 36.4	-0.8
	comp=Z,12nm,0.6s,baz=238,slow=5.5,SNR=4.1						
YKA	**Yellowknife Ar**	85.51	342	P	P	03 26 09.4	+0.7
	comp=Z,0.9nm,0.7s,baz=136,slow=5.1,SNR=24						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	85.51	342	P	P	03 26 08.5	-0.1
H11N3	**WAKE ISLAND Hy**	123.52	283	T	T	05 48 17.3	
	baz=99,slow=78						
H11N2	**WAKE ISLAND Hy**	123.53	283	T	T	05 48 16.5	
	baz=99,slow=78						
H11N1	**WAKE ISLAND Hy**	123.54	283	T	T	05 48 18.5	
	baz=99,slow=78						
H11S2	**WAKE ISLAND Hy**	123.55	281	T	T	05 48 15.5	
	baz=99,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	123.56	281	T	T	05 48 16.3	
	baz=99,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	123.57	281	T	T	05 48 17.0	
	baz=99,slow=75,SNR=15						

IDC 11 03:25:57.8±1.7**, 31°.29N**×**95°.02E, h0^{km}, mb3.3**/3**, mbtmp3.3**/4**, ML2.9**/1**, Error ellipse: s-maj=175.7km s-min=28.7km az=55.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	18.33	331	P	P	03 30 13.8	+0.2
	baz=150,slow=13,SNR=1.6						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	22.89	332	P	P	03 31 02.5	-0.3
	0.3nm,0.5s,baz=144,slow=11,SNR=1.4						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	51.53	312	P	P	03 35 05.2	0.0
	0.2nm,0.3s,baz=90,slow=8.3,SNR=1.2						
	0.2nm,0.3s						
ASAR	**Alice Springs**	66.12	141	P	P	03 36 47.0	0.0
	0.2nm,0.5s,baz=327,slow=6.6,SNR=1.4						
	0.2nm,0.5s						

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*IDC **11** 03:40:13.6±1.0, 45°.27N×144°.28E, h244^{km}±41^{km}, mb2.8/5, mbtmp3.5/6, Error ellipse: s-maj=93.8km s-min=27.2km az=178.0*

*JMA **11** 03:40:13.1±0.4, 45°N±2°×14°4E±°, h265^{km}±3^{km}, MV3.2/23, NE OFF HOKKAIDO*

ISC 11 03:40:13.3±0.8**, 44°.84N**±0°.09×**144°.37E**±0°.08**, h263^{km}**±7^{km}**, n20, σ0^{s}.93**/29**, mb3.1**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTKR	**Abashiri--Toko**	0.93	201	*e*P	Pn	03 40 50.2	+0.8
JTKR				*e*S	S	03 41 18.3	+0.4
JRA	**Rausu**	1.05	149	*e*P	Pn	03 40 50.9	+0.9
JMP	**Maruseppu**	1.11	221	*e*P	Pn	03 40 50.8	+0.5
JMP				*e*S	S	03 41 19.4	-0.2
JSE	**Soyaes**	1.27	276	*e*P	Pn	03 40 50.6	-0.6
JNK	**Nakash**	1.28	169	*e*P	Pn	03 40 52.2	+0.8
ASAJ	**Asahikawa**	1.46	241	P	Pn	03 40 53.0	+0.4
	5.5nm,0.4s,baz=254,slow=33,SNR=5.7						
ASAJ				S	S	03 41 23.3	-0.3
	2.4nm,0.3s,baz=68,slow=27,SNR=1.5						
JAR	**Ashorobuto**	1.61	196	P	Pn	03 40 55.0	+1.3
NEM2	**Nemuro 2**	1.78	146	*e*P	Pn	03 40 54.7	-0.3
NEM2				*e*S	S	03 41 26.2	-1.8
JWK2	**Keihoku**	1.81	286	*e*P	Pn	03 40 54.9	-0.2
JSS	**Shosan**	1.85	257	*e*P	Pn	03 40 56.4	+0.9
JSS				*e*S	S	03 41 29.6	+0.6
JAK	**Akkeshi**	1.86	173	*e*P	Pn	03 40 56.1	+0.5
JAK				*e*S	S	03 41 28.8	-0.5
JCH	**Churui**	2.35	198	*e*P	Pn	03 41 00.5	+0.5
JCH				*e*S	S	03 41 35.7	-1.3
JNBK	**Urakawa-nobuka**	2.82	205	*e*P	Pn	03 41 05.6	+0.9
JNBK				*e*S	S	03 41 45.1	-0.4
JOT	**Ohata**	4.23	216	*e*P	Pn	03 41 21.0	+0.7
JOT				*e*S	S	03 42 11.6	-2.2
USRK	**Ussuriysk Ar.**	8.87	270	P	Pn	03 42 18.0	+0.5
	4.8nm,0.7s,baz=86,slow=13,SNR=7.0						
ILAR	**Eielson Array**	41.80	37	P	P	03 47 36.5	-0.3
	0.1nm,0.6s,baz=266,slow=6.2,SNR=5.0						
	0.1nm,0.6s						
INK	**Inuvik**	46.47	31	P	P	03 48 13.2	-0.4
	1.2nm,0.8s,baz=292,slow=5.4,SNR=3.3						
	1.2nm,0.8s						
YKA	**Yellowknife Ar**	55.99	33	P	P	03 49 23.7	-0.4
	0.1nm,0.7s,baz=306,slow=6.9,SNR=2.1						
	0.1nm,0.7s						
FINES	**FINESS Array B**	62.98	332	P	P	03 50 11.1	-0.6
	1.9nm,0.9s,baz=46,slow=11,SNR=8.8						
	1.9nm,0.9s						
NVAR	**Mina Array Bea**	68.67	57	P	P	03 50 50.0	+1.5
	0.2nm,0.5s,baz=280,slow=5.3,SNR=2.1						
	0.2nm,0.5s						

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*IDC **11** 03:55:08.4±1.6, 15°.94S×167°.56E, h0^{km}, mb3.8/4, mbtmp4.0/5, ML4.4/1, MS3.4/8, Error ellipse: s-maj=52.6km s-min=29.2km az=127.0*

*NOU **11** 03:55:13.7, 16°.11S×167°.58E, h14^{km}, MLv4.7/15, Vanuatu Islands*

ISC 11 03:55:14.5±1.0**, 16°.10S**±0°.06×**167°.4E**±0°.1**, h39^{km}, n21, σ1^{s}.27**/16**, mb3.8**/4**, MS3.5**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	0.68	341	P	Pn	03 55 28.7	+1.0
DVP	**Devils Point**	1.77	156	P	Pn	03 55 44.6	+2.0
RTV	**Rentapao**	1.93	151	P	Pn	03 55 45.0	+0.1
KOUNC	**Koumac, New Ca**	5.34	214	P	Pn	03 56 32.6	+0.9
	137nm,0.6s						
MARNC	**Mare, Loyalty**	5.38	174	P	Pn	03 56 33.9	+1.6
DZM	**Mont Dzumac**	6.01	189	Pn	Pn	03 56 40.8	-0.3
	8.5nm,0.3s,baz=26,slow=18,SNR=90						
DZM				Sn	Sn	03 57 46.4	-2.3
	baz=329,slow=22						
DZM				LR	LR	03 58 43.9	
	comp=Z,275nm,20.4s,baz=30,slow=35						
	25nm,0.4s						
DZM	**Mont Dzumac**	6.01	189	P	Pn	03 56 41.6	+0.6
NOUC	**Port Laguerre**	6.07	190	P	Pn	03 56 43.1	+1.4
ONTNC	**Ouen Toro**	6.24	188	P	Pn	03 56 45.4	+1.3
	97nm,0.7s						
OUENC	**Ouen Island, N**	6.31	185	P	Pn	03 56 46.0	+1.0
	35nm,0.8s						
RAO	**Raoul Island**	18.79	137	LR	LR	04 04 39.3	
	comp=Z,68nm,19.3s,baz=97,slow=30						
AFI	**Afiamalu**	20.20	87	LR	LR	04 06 16.9	
	comp=Z,44nm,18.2s,baz=249,slow=33						
URZ	**Urewera**	23.66	161	LR	LR	04 08 46.8	
	comp=Z,78nm,18.6s,baz=31,slow=34						
RPZ	**Rata Peaks**	27.70	174	LR	LR	04 10 52.5	
	comp=Z,123nm,18.3s,baz=257,slow=34						
WRA	**Warramunga Arr**	31.67	258	P	P	04 01 34.6	+0.1
	0.5nm,0.7s,baz=89,slow=8.8,SNR=2.1						
	0.5nm,0.7s						
ASAR	**Alice Springs**	32.36	251	P	P	04 01 41.7	+1.2
	2.1nm,0.6s,baz=76,slow=8.9,SNR=16						
	2.1nm,0.6s						
FITZ	**Fitzroy Crossi**	39.94	261	LR	LR	04 18 47.0	
	comp=Z,102nm,19.0s,baz=150,slow=35						
YAK	**Yakutsk**	83.38	343	LR	LR	04 40 00.8	
	comp=Z,19nm,21.5s,baz=258,slow=32						
SONM	**Songino Array**	83.69	324	P	P	04 07 39.0	-0.3
	0.8nm,0.7s,baz=132,slow=4.3,SNR=2.5						
	0.8nm,0.7s						
ILAR	**Eielson Array**	87.77	18	P	P	04 07 58.0	-1.0
	0.3nm,0.6s,baz=238,slow=5.6,SNR=6.4						
ILAR				LR	LR	04 46 39.9	
	comp=Z,28nm,18.3s,baz=163,slow=35						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	121.61	345	PKP	PKPdf	04 14 03.1	-0.3
	11nm,1.3s,baz=64,slow=2.8,SNR=8.3						

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*IPEC **11** 03:57:32.4±0.3, 51°.51N×16°.21E, h0^{km}, ML2.1/3, Error ellipse: s-maj=3.1km s-min=1.4km az=58.0*

*PRU **11** 03:57:33.1±0.0, 51°.48N×16°.13E, h0^{km}*

*VIE **11** 03:57:33.2±0.7, 51°.44N×16°.16E, h0^{km}, mb2.3/2, ml2.8/2, Error ellipse: s-maj=8.8km s-min=4.6km az=59.0 71 km NW of Wroclaw Suspected Mining induced.*

*IDC **11** 03:57:33.7±1.2, 51°.44N×16°.08E, h0^{km}, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=18.2km s-min=9.9km az=128.0*

ISC 11 03:57:31.3±0.9**, 51°.55N**±0°.04×**16°.16E**±0°.03**, h0^{km}, n32, σ0^{s}.72**/65**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.71	173	*e*Pg	Pg	03 57 45.5	+0.5
KSP				*e*Sg	Sg	03 57 54.2	0.0
CHVC	**Chvalec**	0.97	184	*e*PG	Pg	03 57 49.9	+0.1
CHVC				*e*SG	Sg	03 58 02.4	+0.1
	comp=Z,34nm,0.6s						
OSTC	**Ostas**	0.99	178	*e*PG	Pg	03 57 50.9	+0.5
OSTC				*e*SG	Sg	03 58 03.0	-0.3
	comp=Z,29nm,0.3s						
UPC	**Upice**	1.05	185	*e*PG	Pg	03 57 51.4	0.0
UPC				*e*SG	Sg	03 58 04.1	-0.9
	comp=Z,42nm,0.4s						
DPC	**Dobruska-Polom**	1.21	175	*e*PG	Pg	03 57 54.2	-0.2
DPC				*e*SG	Sg	03 58 09.6	-0.4
	comp=Z,24nm,0.5s						
PVCC	**Panska Ves**	1.44	225	*e*PG	Pn	03 57 58.6	0.0
PVCC				*e*SG	Sg	03 58 16.9	-0.5
	comp=Z,83nm,0.2s						
KRLC	**Kraliky**	1.53	165	*e*PG	Pn	03 57 59.6	-0.3
KRLC				*e*SG	Sg	03 58 18.8	-1.6
	comp=Z,31nm,0.7s						
BRG	**Berggiesshubel**	1.55	245	Pg	Pb	03 58 01.3	+0.4
BRG				Sg	Sg	03 58 21.7	+0.5
BRG				Amp		03 58 24.1	
	comp=Z,32nm,0.3s						
PRU	**Pruhonice**	1.87	214	*e*PG	Pb	03 58 06.0	-0.4
PRU				*e*SG	Sb	03 58 30.3	0.0
	comp=Z,15nm,0.6s						
MORC	**Moravsky Berou**	1.98	153	*e*Pn	Pn	03 58 06.2	+0.1
	baz=334						
MORC				*e*Sg	Sb	03 58 33.0	-0.5
	comp=Z,14nm,0.3s,baz=334						
MORC	**Moravsky Berou**	1.98	153	*e*PN	Pn	03 58 06.2	+0.1
MORC				*e*SG	Sb	03 58 33.0	-0.5
CLL	**Collm**	1.99	264	*e*Pn	Pn	03 58 06.0	-0.3
CLL				*e*Pg	Pb	03 58 09.0	+0.6
CLL				*e*x	x	03 58 12.0	
CLL				*e*x	x	03 58 24.0	
CLL				*e*Sg	Sg	03 58 36.0	+0.7
	comp=Z,17nm,0.6s						
OKC	**Ostrava-Krasne**	2.13	143	*e*PG	Pb	03 58 11.4	+0.7
OKC				*e*SG	Sg	03 58 39.6	-0.1
	comp=Z,21nm,0.5s						
VRAC	**Vranov**	2.26	173	Pn	Pn	03 58 10.9	+1.0
	comp=Z,1.4nm,0.3s,baz=344,slow=16,SNR=13						
VRAC				Lg	Lg	03 58 41.5	
	comp=Z,1.5nm,0.3s,baz=245,slow=19,SNR=3.8						
	comp=Z,3.9nm,0.4s						
VRAC	**Vranov**	2.26	173	*e*Pn	Pn	03 58 10.6	+0.6
	baz=354						
VRAC				*e*Sg	Sb	03 58 41.7	+0.2
	comp=Z,14nm,0.3s,baz=354						
VRAC	**Vranov**	2.26	173	*e*PN	Pn	03 58 10.6	+0.6
VRAC				*e*SG	Sb	03 58 41.8	+0.2
TREC	**Trest**	2.30	191	*e*PN	Pn	03 58 11.7	+1.2
TREC				*e*PG	Pb	03 58 14.4	+0.7
TREC				*e*SG	Sg	03 58 44.2	-0.9
	comp=Z,15nm,0.6s						
MAUC	**Maruska**	2.43	153	*e*PN	Pn	03 58 12.6	+0.3
MAUC				*e*PG	Pb	03 58 16.0	+0.1
MAUC				*e*SG	Sg	03 58 48.5	-0.9
	comp=Z,22nm,0.4s						
KRUC	**Moravsky**	2.50	177	*e*Pn	Pn	03 58 13.8	+0.6
	baz=357						
KRUC				*e*Sg	Sb	03 58 49.2	+1.0
	comp=Z,9.4nm,0.4s,baz=357						
KRUC	**Moravsky**	2.50	177	*e*PN	Pn	03 58 13.8	+0.6
KRUC				*e*SG	Sb	03 58 49.3	+1.0
OJC	**Ojcow**	2.66	119	*e*Pg	Pg	03 58 22.7	+0.4
OJC				*e*Sg	Sg	03 58 57.9	+1.2
NKC	**Novy Kostel**	2.70	242	*e*PN	Pn	03 58 16.8	+0.8
NKC				*e*PG	Pb	03 58 20.4	-0.1
NKC				*e*SG	Sg	03 58 58.3	+0.4
	comp=Z,20nm,0.4s						
JAVC	**Velka Javorina**	2.86	160	*e*PN	Pn	03 58 19.0	+0.7
KHC	**Kasperske Hory**	2.93	215	*e*PN	Pn	03 58 19.6	+0.4
KHC				*e*PG	Pb	03 58 25.7	+1.2
KHC				*e*SN	Sn	03 58 54.8	-0.4
KHC				*e*SG	Sg	03 59 04.3	-1.2
	comp=Z,9.3nm,0.6s						
CKRC	**Cesky Krumlov**	2.98	204	*e*PN	Pn	03 58 20.7	+0.8
CKRC				*e*PG	Pb	03 58 26.2	+0.9
CKRC				*e*SG	Sg	03 59 05.1	-2.0
GERES	**GERESS Array B**	3.14	211	Pn	Pn	03 58 23.2	+1.2
	comp=Z,0.4nm,0.3s,baz=26,slow=12,SNR=11						
GERES				Pg	Pb	03 58 28.6	+0.6
	comp=Z,1.4nm,0.3s,baz=33,slow=16,SNR=20						
GERES				Sn	Sn	03 58 59.9	-0.4
	comp=Z,1.2nm,0.3s,baz=26,slow=16,SNR=5.9						
GERES				Lg	Lg	03 59 07.3	
	comp=Z,2.4nm,0.3s,baz=32,slow=29,SNR=10						
	comp=Z,0.7nm,0.4s						
LANS	**Liptovska Anna**	3.20	137	*e*PN	Pn	03 58 23.6	+0.7
LANS				*e*PG	Pg	03 58 32.8	+0.2
LANS				*e*SG	Sg	03 59 14.6	+0.5
CONA	**Conrad Observa**	3.63	183	*e*Pn	Pn	03 58 29.6	+0.7
	comp=Z,0.7nm,0.3s						
MOA	**Molln**	3.90	199	*e*Pn	Pn	03 58 33.0	+0.5
	comp=Z,1.3nm,0.3s						
DAVOX	**Davos/Dischmat**	6.30	223	Lg	Lg	04 00 45.7	
	comp=Z,0.1nm,0.3s,baz=259,slow=17,SNR=1.3						
AKASG	**Malin Array Be**	8.26	91	Pn	Pn	03 59 31.9	-0.4
	comp=Z,0.6nm,0.3s,baz=280,slow=12,SNR=2.1						
	comp=Z,0.2nm,0.2s						
FINES	**FINESS Array B**	11.31	25	Pn	Pn	04 00 12.5	-1.5
	comp=Z,0.3nm,0.3s,baz=220,slow=13,SNR=1.8						
	comp=Z,0.7nm,0.4s						

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*LDG **11** 04:01:33.6±0.2, 51°.47N×16°.21E, h1^{km}, Ml3.6/14, Error ellipse: s-maj=4.1km s-min=2.8km az=6.0, Suspected Mining induced.*

*MCSM **11** 04:01:33.9±0.4, 51°N±3°×1°6E±°, h3^{km}±2^{km}, ML3.8*

*IDC **11** 04:01:34.6±0.5, 51°.50N×16°.07E, h0^{km}, mb3.7/10, mbtmp3.7/20, ML3.6/10, Error ellipse: s-maj=9.9km s-min=6.2km az=116.0*

*IPEC **11** 04:01:34.5±0.2, 51°.47N×16°.27E, h1^{km}, ML3.4/4, Error ellipse: s-maj=2.7km s-min=1.3km az=58.0*

*DNK **11** 04:01:34.2±2.4, 51°.53N×16°.18E, h0^{km}±101^{km}*

*PRU **11** 04:01:35.6±0.0, 51°.43N×16°.22E, h0^{km}*

*BGR **11** 04:01:36.0±0.2, 51°.41N×16°.20E, h1^{km}, ML3.6/16, Error ellipse: s-maj=2.2km s-min=2.2km az=30.0*

*BNS **11** 04:01:38.8±0.3, 51°.39N×16°.08E, h10^{km}, ML3.5*

*UPP **11** 04:01:42.2±3.2, 51°.98N×15°.74E, h0^{km}, ML3.3, Suspected explosion*

ISC 11 04:01:33.1±0.4**, 51°.48N**±0°.02×**16°.16E**±0°.02**, h0^{km}, n229, σ1^{s}.80**/335**, mb3.7**/11**, 4C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.64	173	*e*Pg	Pb	04 01 46.8	-0.3
KSP				*e*Sg	Sg	04 01 54.7	+1.0
KSP	**Ksiaz**	0.64	173	*e*Pg	Pb	04 01 46.9	-0.3
	SNR=45						
KSP				*e*Sg	Sg	04 01 54.5	+0.8
	SNR=7.4						
KSP	**Ksiaz**	0.64	173	Pg	Pb	04 01 46.5	-0.7
KSP				Sg	Sg	04 01 55.2	+1.5
CHVC	**Chvalec**	0.89	184	*e*PG	Pb	04 01 51.8	+0.3
CHVC				*e*SG	Sg	04 02 03.0	+1.2
	comp=Z,316nm,0.4s						
CHVC	**Chvalec**	0.89	184	Pg	Pb	04 01 51.8	+0.3
OSTC	**Ostas**	0.92	178	*e*PG	Pb	04 01 51.9	-0.1
OSTC				*e*SG	Sg	04 02 03.9	+1.2
	comp=Z,536nm,0.9s						
OSTC	**Ostas**	0.92	178	Pg	Pb	04 01 52.3	+0.3
OSTC				Sg	Sb	04 02 04.6	-0.2
UPC	**Upice**	0.98	186	*e*PG	Pb	04 01 53.0	+0.1
UPC				*e*SG	Sg	04 02 05.0	+0.6
	comp=Z,992nm,0.4s						
UPC	**Upice**	0.98	186	Pg	Pb	04 01 53.0	+0.1
DPC	**Dobruska-Polom**	1.13	175	*e*PG	Pb	04 01 55.8	+0.2
DPC				*e*SG	Sb	04 02 10.5	-0.4
	comp=Z,414nm,0.5s						
DPC	**Dobruska-Polom**	1.13	175	*e*Pg	Pb	04 01 55.8	+0.2
	SNR=251						
DPC				*e*Sg	Sg	04 02 10.1	+0.6
	SNR=6.5						
DPC	**Dobruska-Polom**	1.13	175	Pg	Pb	04 01 55.6	0.0
PVCC	**Panska Ves**	1.39	227	*e*PG	Pb	04 02 01.1	+1.3
PVCC				*e*SG	Sn	04 02 20.0	+1.3
	comp=Z,2µm,0.3s						
PVCC	**Panska Ves**	1.39	227	*e*Pg	Pb	04 02 01.2	+1.4
	SNR=185						
PVCC				*e*Sg	Sn	04 02 20.3	+1.6
	SNR=3.2						
KRLC	**Kraliky**	1.46	164	*e*PG	Pb	04 02 01.5	+0.4
KRLC				*e*SG	Sg	04 02 20.2	+0.3
	comp=Z,961nm,1.6s						
BRG	**Berggiesshubel**	1.52	247	Pn	Pg	04 02 02.4	+0.1
BRG				Pg	Pb	04 02 04.5	+2.3
BRG				Sg	Sn	04 02 24.7	+2.6
BRG				Amp		04 02 25.8	
	comp=Z,315nm,0.4s						
BRG	**Berggiesshubel**	1.52	247	*e*Pn	Pg	04 02 02.4	+0.1
	SNR=5.7						
BRG				*e*Pg	Pg	04 02 04.3	+2.0
	SNR=79						
BRG				*e*Sg	Sn	04 02 24.7	+2.6
	SNR=3.4						
RUE	**Ruedersdorf**	1.78	305	*e*Pn	Pb	04 02 06.5	-0.1
	SNR=4.2						
RUE				*e*Sg	Sg	04 02 34.1	+3.8
	SNR=4.9						
RUE	**Ruedersdorf**	1.78	305	Pn	Pb	04 02 06.1	-0.5
GOPC	**GO Pecny, Ondr**	1.79	210	Pn	Pn	04 02 06.1	+0.8
PRU	**Pruhonice**	1.81	215	*e*PG	Pb	04 02 07.2	+0.1
PRU				*e*SG	Sg	04 02 32.1	+0.8
	comp=Z,339nm,0.6s						
PRU	**Pruhonice**	1.81	215	*e*Pn	Pn	04 02 06.3	+0.7
	SNR=7.7						
PRU				*e*Sg	Sg	04 02 32.1	+0.8
	SNR=4.3						
PRU	**Pruhonice**	1.81	215	Pn	Pn	04 02 06.3	+0.7
FBE	**Freiberg**	1.85	254	*e*Pn	Pb	04 02 07.6	-0.2
	SNR=3.1						
FBE				*e*Sg	Sg	04 02 34.8	+2.2
	SNR=4.3						
RAC	**Raciborz**	1.90	137	*e*PG	Pg	04 02 10.0	+0.5
RAC				*e*SG	Sg	04 02 35.0	+0.9
GKP	**Gorka Klasztor**	1.91	20	*e*Pn	Pg	04 02 09.5	-0.2
	SNR=1.5						
MORC	**Moravsky Berou**	1.92	152	⇓P	Pn	04 02 07.5	+0.4
MORC				⇓S	Sn	04 02 31.2	-0.7
MORC	**Moravsky Berou**	1.92	152	*e*Pn	Pn	04 02 07.4	+0.4
	baz=335						
MORC				*e*Sg	Sb	04 02 33.8	+0.4
	comp=Z,266nm,0.7s,baz=335						
MORC	**Moravsky Berou**	1.92	152	*e*PN	Pn	04 02 07.4	+0.4
MORC				*e*SG	Sb	04 02 33.8	+0.4
MORC	**Moravsky Berou**	1.92	152	*e*Pn	Pn	04 02 07.4	+0.4
	SNR=45						
MORC				*e*Sg	Sb	04 02 33.7	+0.3
	SNR=5.2						
MORC	**Moravsky Berou**	1.92	152	Pn	Pn	04 02 07.4	+0.4
CLL	**Collm**	1.99	266	*e*Pn	Pn	04 02 09.0	+1.1
CLL				*e*Pg	Pg	04 02 12.0	+0.8
CLL				*e*Sg	Sg	04 02 39.0	+2.1
	comp=Z,139nm,0.7s						
CLL	**Collm**	1.99	266	*e*Pn	Pn	04 02 09.1	+1.1
	SNR=7.0						
CLL				*e*Sg	Sg	04 02 39.7	+2.8
	SNR=2.5						
OKC	**Ostrava-Krasne**	2.07	142	*e*PN	Pn	04 02 09.6	+0.5
OKC				*e*PG	Pb	04 02 12.2	+0.7
OKC				*e*SG	Sb	04 02 38.8	+1.0
	comp=Z,271nm,0.5s						
OKC	**Ostrava-Krasne**	2.07	142	*e*Pn	Pn	04 02 09.5	+0.4
	SNR=3.3						
OKC	**Ostrava-Krasne**	2.07	142	Pn	Pn	04 02 08.8	-0.3
VRAC	**Vranov**	2.19	173	⇓P	Pb	04 02 12.4	-1.2
VRAC				⇑S	Sb	04 02 41.4	+0.1
VRAC	**Vranov**	2.19	173	Pn	Pn	04 02 12.1	+1.4
	comp=Z,9.3nm,0.3s,baz=343,slow=13,SNR=32						
VRAC				Lg	Lg	04 02 41.0	
	comp=Z,10nm,0.3s,baz=283,slow=22,SNR=4.7						

	comp=Z,24nm,0.4s						
VRAC	**Vranov**	2.19	173	ePn	Pn	04 02 11.6	+0.9
	baz=355						
VRAC				eSg	Sg	04 02 42.6	-0.8
	comp=Z,203nm,0.7s,baz=355						
VRAC	**Vranov**	2.19	173	ePN	Pn	04 02 11.7	+1.0
VRAC				eSG	Sg	04 02 42.6	-0.8
TREC	**Trest**	2.23	191	ePN	Pn	04 02 12.4	+1.1
TREC				ePG	Pb	04 02 14.7	+0.5
TREC				eSG	Sg	04 02 44.6	0.0
	comp=Z,121nm,0.4s						
TREC	**Trest**	2.23	191	ePn	Pn	04 02 12.6	+1.3
	SNR=5.4						
TREC				eSg	Sg	04 02 44.2	-0.4
	SNR=3.0						
MAUC	**Maruska**	2.37	153	ePN	Pn	04 02 14.3	+1.1
MAUC				ePG	Pb	04 02 17.5	+0.9
MAUC				eSG	Sg	04 02 48.9	-0.2
	comp=Z,772nm,1.0s						
KRUC	**Moravsky**	2.42	176	ePn	Pn	04 02 15.1	+1.2
	baz=358						
KRUC				eSg	Sg	04 02 50.3	-0.6
	comp=Z,185nm,0.8s,baz=358						
KRUC	**Moravsky**	2.42	176	ePN	Pn	04 02 15.2	+1.3
KRUC				eSG	Sg	04 02 50.3	-0.6
KRUC	**Moravsky**	2.42	176	ePn	Pn	04 02 15.3	+1.3
	SNR=7.3						
KRUC				eSg	Sg	04 02 50.3	-0.6
	SNR=2.5						
TANN	**Tannenbergstha**	2.57	247	ePn	Pn	04 02 17.7	+1.6
	SNR=15						
TANN				eSg	Sg	04 02 57.6	+2.0
	SNR=4.3						
OJC	**Ojcow**	2.63	117	ePn	Pn	04 02 15.8	-0.9
OJC				ePg	Pg	04 02 22.9	-0.5
OJC				eSn	Sn	04 02 47.4	-1.9
OJC				eSg	Sg	04 02 57.9	+0.5
OJC	**Ojcow**	2.63	117	ePn	Pn	04 02 16.0	-0.8
	SNR=3.6						
OJC				eSg	Sg	04 02 58.1	+0.7
	SNR=4.2						
WERD	**Werda**	2.65	249	ePn	Pn	04 02 18.8	+1.7
	SNR=2.8						
WERD				eSg	Sg	04 02 59.0	+0.9
	SNR=3.0						
NKC	**Novy Kostel**	2.67	244	ePN	Pn	04 02 19.1	+1.8
NKC				eSG	Sg	04 03 00.8	+2.2
	comp=Z,284nm,0.7s						
NKC	**Novy Kostel**	2.67	244	ePn	Pn	04 02 19.0	+1.8
	SNR=27						
NKC	**Novy Kostel**	2.67	244	Pn	Pn	04 02 18.8	+1.5
GUNZ	**Gunzen**	2.67	247	ePn	Pn	04 02 19.0	+1.7
	SNR=9.3						
WERN	**Wernitzgruen**	2.68	245	ePn	Pn	04 02 19.1	+1.6
	SNR=25						
PLN	**Plauen**	2.72	250	ePn	Pn	04 02 19.7	+1.7
	SNR=3.0						
PLN				eSg	Sg	04 03 01.7	+1.3
	SNR=3.7						
JAVC	**Velka Javorina**	2.80	159	ePn	Pn	04 02 20.1	+1.0
	baz=342						
JAVC				eSg	Sg	04 03 01.3	-1.5
	comp=Z,150nm,0.9s,baz=342						
JAVC	**Velka Javorina**	2.80	159	ePN	Pn	04 02 20.1	+1.0
JAVC				eSG	Sg	04 03 01.3	-1.5
JAVC	**Velka Javorina**	2.80	159	ePn	Pb	04 02 22.0	-1.9
	SNR=17						
KHC	**Kasperske Hory**	2.88	216	ePN	Pn	04 02 21.4	+1.2
KHC				ePG	Pg	04 02 27.4	-0.8
KHC				eSN	Sn	04 02 56.4	+0.9
KHC				eSG	Sg	04 03 05.6	+0.2
	comp=Z,98nm,0.4s						
KHC	**Kasperske Hory**	2.88	216	ePn	Pn	04 02 21.3	+1.1
	SNR=18						
KHC	**Kasperske Hory**	2.88	216	Pn	Pn	04 02 21.4	+1.2
CKRC	**Cesky Krumlov**	2.92	205	ePN	Pn	04 02 22.6	+1.9
CKRC				ePG	Pg	04 02 27.9	-1.1
CKRC				eSG	Sg	04 03 06.9	+0.2
CKRC	**Cesky Krumlov**	2.92	205	ePn	Pn	04 02 22.8	+2.1
	SNR=5.3						
MOX	**Moxa**	2.99	256	ePn	Pn	04 02 23.4	+1.7
	SNR=6.2						
MOX				eSg	Sg	04 03 10.8	+1.7
	SNR=3.9						
GEC2	**GERESS Array S**	3.08	212	ePn	Pn	04 02 24.8	+1.8
	SNR=9.2						
GEC2				eSg	Sg	04 03 11.3	-0.5
	SNR=4.1						
GERES	**GERESS Array B**	3.08	212	Pn	Pn	04 02 24.9	+1.9
	comp=Z,3.4nm,0.3s,baz=36,slow=13,SNR=55						
GERES				Pg	Pg	04 02 30.7	-1.3
	comp=Z,32nm,0.3s,baz=33,slow=16,SNR=92						
GERES				Sn	Sn	04 02 59.0	-1.6
	comp=Z,9.9nm,0.3s,baz=36,slow=25,SNR=6.7						
GERES				Lg	Lg	04 03 10.2	
	comp=Z,41nm,0.3s,baz=37,slow=27,SNR=12						
	comp=Z,5.7nm,0.4s						
SMOL	**Smolenice**	3.08	164	ePG	Pg	04 02 33.7	+1.7
SMOL				eSG	Sg	04 03 13.5	+1.6
WET	**Wettzell**	3.15	223	ePn	Pn	04 02 25.4	+1.5
	SNR=21						
WET				eSg	Sg	04 03 13.4	-0.7
	SNR=2.4						
LANS	**Liptovska Anna**	3.15	136	ePN	Pn	04 02 25.1	+1.2
LANS				ePG	Pg	04 02 34.3	+0.9
LANS				eSG	Sg	04 03 15.0	+0.8
KOLL	**Kolacno**	3.24	153	ePN	Pn	04 02 27.0	+1.8
KOLL				ePG	Pg	04 02 36.1	+0.9
KOLL				eSG	Sg	04 03 17.2	0.0
ZST	**Bratislava**	3.34	169	ePG	Pg	04 02 37.3	+0.2
ZST				eSG	Sg	04 03 19.5	-0.9
NIE	**Niedzica**	3.35	126	ePn	Pn	04 02 28.5	+1.7
NIE				e		04 02 40.0	
NIE				eSg	Sg	04 03 21.6	+0.8
VYHS	**Vyhne**	3.45	149	ePN	Pn	04 02 28.6	+0.5
VYHS				ePG	Pg	04 02 40.3	+1.1
VYHS				eSG	Sg	04 03 25.1	+1.3
CONA	**Conrad Observa**	3.56	183	ePn	Pn	04 02 31.1	+1.5
	comp=Z,5.0nm,0.4s,SNR=12						
GRF	**Grafenberg Arr**	3.62	242	ePn	Pn	04 02 32.5	+2.0
	SNR=6.2						
CLZ	**Clausthal**	3.62	278	ePn	Pn	04 02 33.0	+2.5
	SNR=6.2						
BSD	**Bornholm Skovb**	3.72	349	iP	Pn	04 02 32.3	+0.6
RONA	**Rosalia, Austr**	3.78	179	ePn	Pn	04 02 33.5	+0.9
	comp=Z,3.0nm,0.4s,SNR=5.3						
SOP	**Sopron**	3.81	176	P	Pn	04 02 34.5	+1.6
MOA	**Molln**	3.84	199	ePn	Pn	04 02 34.8	+1.4
	comp=Z,12nm,0.3s,SNR=33						
UBBA	**Unterbreizbach**	3.94	263	ePn	Pn	04 02 36.4	+1.8
	SNR=2.5						
KECS	**Kecovo**	4.09	135	ePN	Pn	04 02 37.6	+0.7
KECS				ePG	Pg	04 02 54.1	+2.6
KECS				eSG	Sg	04 03 45.9	+1.4
BIOA	**Bad Ischl, Aus**	4.13	204	ePn	Pn	04 02 39.2	+1.7
	comp=Z,7.0nm,0.3s,SNR=12						
EGYH	**Egyhazaskeszo**	4.14	169	P	Pn	04 02 38.3	+0.9
ARSA	**Arzberg**	4.25	186	ePn	Pn	04 02 41.5	+2.4
	comp=Z,4.3nm,0.3s						
CRVS	**Cervenica-Dubn**	4.27	125	ePN	Pn	04 02 42.2	+2.9
CRVS				ePG	Pg	04 02 55.7	+0.8
CRVS				eSG	Sg	04 03 53.2	+3.0
PSZ	**Piszkesteto**	4.31	144	⇑P	Pn	04 02 41.3	+1.4
PSZ	**Piszkesteto**	4.31	144	P	Pn	04 02 41.3	+1.4
BSEG	**Bad Segeberg**	4.32	307	ePn	Pn	04 02 41.5	+1.5
	SNR=5.4						
CSKK	**Cskako**	4.34	161	P	Pn	04 02 42.3	+2.0
MPLH	**Magyarpolny**	4.41	168	P	Pn	04 02 41.6	+0.4
LLD	**Lille Linde**	4.53	330	iP	Pn	04 02 42.5	-0.3
LLD				IAmb	IAmb	04 02 42.9	
	comp=Z,28nm,0.5s						
LLD				eS	Sn	04 03 34.6	-1.4
KOLS	**Kolonicke sedl**	4.68	121	ePN	Pn	04 02 45.9	+1.0
KOLS				ePG	Pg	04 03 06.5	+3.8
KOLS				eSG	Sg	04 04 05.0	+1.7
TIH	**Tihany**	4.72	165	P	Pn	04 02 46.9	+1.4
COP	**Copenhagen**	4.76	334	eS	Sn	04 03 41.6	-0.3
KBA	**Koelnbreinsper**	4.78	204	ePn	Pn	04 02 48.0	+1.6
	comp=Z,6.2nm,0.5s,SNR=7.1						
BLEU	**Blekinge**	4.84	358	P	Pn	04 02 48.0	+1.0
BLEU				iP	Pn	04 02 48.0	+1.0
BLEU				S	Sn	04 03 39.7	-4.1
BLEU	**Blekinge**	4.84	358	P	Pn	04 02 48.0	+1.0
BLEU				S	Sn	04 03 39.7	-4.1
SOKA	**Soboth**	4.86	189	ePn	Pn	04 02 49.8	+2.3
	comp=Z,1.5nm,0.4s						
SUW	**Suwalki**	4.96	56	eP	Pn	04 02 49.4	+0.6
BJUU	**Bjuv**	4.97	339	iP	Pn	04 02 48.5	-0.3
BJUU				P	Pn	04 02 48.7	-0.2
BJUU				iS	Sn	04 03 45.9	-1.0
BJUU	**Bjuv**	4.97	339	P	Pn	04 02 48.7	-0.2
OBKA	**Obir**	5.09	193	ePn	Pn	04 02 52.3	+1.6
	comp=Z,2.4nm,0.4s						
WATA	**Walderalm**	5.11	218	ePn	Pn	04 02 53.5	+2.5
	comp=Z,9.7nm,0.5s,SNR=6.0						
WTTA	**Wattenberg**	5.15	217	ePn	Pn	04 02 54.0	+2.4
	comp=Z,6.9nm,0.5s,SNR=6.2						
DEL	**Delary**	5.18	346	eP	Pn	04 02 52.1	+0.3
DEL	**Delary**	5.18	346	iP	Pn	04 02 51.6	-0.2
DEL				P	Pn	04 02 52.4	+0.6
DEL				iS	Sn	04 03 50.0	-2.2
DEL	**Delary**	5.18	346	P	Pn	04 02 52.4	+0.6
MOTA	**Moosalm**	5.29	221	ePn	Pn	04 02 54.8	+1.3
	comp=Z,2.2nm,0.2s,SNR=4.1						
ABTA	**Abfaltersbach**	5.31	208	ePn	Pn	04 02 55.7	+2.1
	comp=Z,1.7nm,0.4s,SNR=7.5						
RETA	**Reutte**	5.32	223	ePn	Pn	04 02 55.2	+1.3
	comp=Z,3.3nm,0.3s						
SQTA	**Sankt Quirin**	5.35	219	ePn	Pn	04 02 56.8	+2.5
	comp=Z,2.0nm,0.1s,SNR=6.6						
VXJU	**Vaexsjoe**	5.50	353	P	Pn	04 02 57.2	+1.0
VXJU	**Vaexsjoe**	5.50	353	P	Pn	04 02 57.2	+1.0
MORH	**Mrgy, Hungar**	5.52	162	P	Pn	04 02 58.2	+1.8
KOVH	**Kovagotottos**	5.54	166	P	Pn	04 02 57.9	+1.1
HOBG	**Hohbusch**	5.57	268	ePg	Pn	04 02 59.7	+2.5
FETA	**Feichten**	5.71	221	ePn	Pn	04 03 01.5	+2.4
	comp=Z,1.5nm,0.5s						
OSKU	**Oskarshamn**	5.73	360	P	Pn	04 03 00.3	+1.0
OSKU	**Oskarshamn**	5.73	360	P	Pn	04 03 00.3	+1.0
BGG	**Burgeitz**	5.74	261	ePg	Pn	04 03 01.8	+2.4
BGG				eSg	Sn	04 04 05.0	-0.9
	comp=Z,14nm,1.1s						
BYXU	**Byxelkrok**	5.84	5	P	Pn	04 03 02.2	+1.4
BYXU	**Byxelkrok**	5.84	5	P	Pn	04 03 02.2	+1.4
DAVA	**Damuels**	5.87	227	ePn	Pn	04 03 02.2	+0.8
	comp=Z,2.7nm,0.4s						
FABU	**Falkenberg**	5.89	341	iP	Pn	04 03 01.7	+0.2
STB	**Steinbach**	5.95	265	ePg	Pn	04 03 04.9	+2.6
GNOU	**Gnosjoe**	5.99	347	P	Pn	04 03 03.5	+0.6
GNOU	**Gnosjoe**	5.99	347	P	Pn	04 03 03.5	+0.6
PABE	**Paberze**	6.16	46	eP	Pn	04 03 07.0	+1.8
VSTU	**Vaestervik**	6.20	2	P	Pn	04 03 07.7	+1.9
VSTU	**Vaestervik**	6.20	2	P	Pn	04 03 07.7	+1.9
DAVOX	**Davos/Dischmat**	6.25	224	Pn	Pn	04 03 08.4	+1.7
	comp=Z,1.0nm,0.3s,baz=95,slow=17,SNR=5.1						
DAVOX				Sn	Sn	04 04 18.6	-0.3
	comp=Z,1.1nm,0.3s,baz=313,slow=19,SNR=1.7						
DAVOX				Lg	Lg	04 04 51.4	
	comp=Z,1.6nm,0.3s,baz=334,slow=4.6,SNR=6.9						
	comp=Z,3.0nm,0.4s						
KLL	**Kalltalsperre**	6.27	266	ePg	Pn	04 03 09.2	+2.5
DREG	**Dreilaegerbach**	6.31	266	ePg	Pn	04 03 10.2	+2.8
DRGR		6.36	135	⇑P	Pn	04 03 09.4	+1.3
ONAU	**Onsala**	6.42	339	P	Pn	04 03 09.7	+0.8
ONAU	**Onsala**	6.42	339	P	Pn	04 03 09.7	+0.8
BORU	**Boraas**	6.48	344	iP	Pn	04 03 10.0	+0.4
BORU				P	Pn	04 03 10.4	+0.9
BORU	**Boraas**	6.48	344	P	Pn	04 03 10.4	+0.9
CDF	**Champ du Feu**	6.50	245	ePn	Pn	04 03 08.8	-1.3
CDF	**Champ du Feu**	6.50	245	eP	Pn	04 03 12.1	+2.0
CDF				eSg	Sg	04 04 58.7	-3.2
	comp=Z,7.2nm,0.5s						
BURAR	**Bucovina Array**	7.04	120	⇑P	Pn	04 03 18.3	+0.9
VIKU	**Vikbolandet**	7.05	2	eP	Pn	04 03 18.4	+1.1
HINF	**Hinteralfeld**	7.07	242	ePn	Pn	04 03 14.8	-3.0
HINF	**Hinteralfeld**	7.07	242	eP	Pn	04 03 21.0	+3.2
HINF	**Hinteralfeld**	7.07	242	ePg	Pg	04 03 45.4	-3.0
HINF				eSg	Sg	04 05 15.7	-4.3
	comp=Z,12nm,0.6s						
SLIT	**Slitere, Latvi**	7.12	28	eP	Pn	04 03 19.3	+1.0
IIGN	**Ignalina**	7.15	53	eP	Pn	04 03 19.6	+0.8
IIGN				IAmb	IAmb	04 03 33.3	
	comp=Z,2.9nm,0.5s						
ISAL	**Salakas**	7.21	51	eP	Pn	04 03 20.4	+0.7
NACGM	**Naroch**	7.24	58	⇓eP	Pn	04 03 21.1	+1.0
	baz=246						
KMPD	**K-Podol'skiy**	7.25	110	Pn	Pn	04 03 19.5	-0.6
HAU	**Haudompre**	7.25	245	ePn	Pn	04 03 18.9	-1.3
HAU				eSg	Sg	04 05 21.3	-4.4
	comp=Z,6.1nm,0.4s						
PAGF	**Fort de Pagny**	7.33	251	ePn	Pn	04 03 20.0	-1.4
PAGF				eSg	Sg	04 05 22.8	-5.7
	comp=Z,30nm,0.8s						
IDID	**Didziasalis**	7.40	55	eP	Pn	04 03 22.6	+0.5
IDID				IAmb	IAmb	04 03 24.9	
	comp=Z,4.7nm,0.4s						
MI29	**MI29, Kamyanyy**	7.46	94	Pn	Pn	04 03 23.0	-0.1
MI29				pP	Pn	04 03 23.4	+0.3
LUBAR	**Lubar, Ukraine**	7.53	97	Pn	Pn	04 03 23.5	-0.5
LUBAR				pP	Pn	04 03 24.5	+0.5
SAVF	**Savonnieres en**	7.66	252	eSg	Sg	04 05 32.9	-6.1
	comp=Z,2.9nm,0.3s						
MNK	**Minsk**	7.69	62	iP	Pn	04 03 24.7	-1.6
MNK				iP	Pn	04 03 24.7	-1.6
	comp=N,4.0nm,0.9s						
MNK				iP	Pn	04 03 24.7	-1.6
	comp=Z,3.0nm,0.5s,baz=251						
MNK				iS	Sn	04 04 50.6	-3.5
MNK				iLR	LR	04 06 11.2	
MEZF	**Maizieres J’vi**	7.76	252	ePn	Pn	04 03 26.2	-1.0
	baz=65						
MEZF	**Maizieres J’vi**	7.76	252	eP	Pn	04 03 29.3	+2.1
MEZF				eSg	Sg	04 05 36.4	-5.6
	comp=Z,6.0nm,0.4s						
SFTF	**Sexfontaines**	7.90	250	ePn	Pn	04 03 27.8	-1.4
SFTF				eSg	Sg	04 05 40.0	-6.7
	comp=Z,8.0nm,0.5s						
AK20	**Malin Array Si**	8.12	90	Pn	Pn	04 03 31.8	-0.3
AK19	**Malin Array Si**	8.12	90	Pn	Pn	04 03 31.8	-0.4
AK22	**Malin Array Si**	8.16	90	Pn	Pn	04 03 31.9	-0.7
AK18	**Malin Array Si**	8.16	90	Pn	Pn	04 03 32.3	-0.4
AK17	**Malin Array Si**	8.16	91	Pn	Pn	04 03 31.9	-0.8
AK23	**Malin Array Si**	8.19	90	Pn	Pn	04 03 32.6	-0.5
AK23				pP	Pn	04 03 33.3	+0.2
AK15	**Malin Array Si**	8.20	90	Pn	Pn	04 03 32.5	-0.7
AK15				pP	Pn	04 03 33.9	+0.7
AK14	**Malin Array Si**	8.20	91	Pn	Pn	04 03 32.5	-0.7
AK14				pP	Pn	04 03 33.6	+0.4
CABF	**La Chapelle**	8.22	238	ePn	Pn	04 03 31.9	-1.7
CABF	**La Chapelle**	8.22	238	ePg	Pg	04 04 07.1	-3.3
CABF				eSg	Sg	04 05 51.2	-5.6
	comp=Z,47nm,1.0s						
AK11	**Malin Array Si**	8.23	91	Pn	Pn	04 03 33.1	-0.5
AK03	**Malin Array Si**	8.26	90	Pn	Pn	04 03 33.3	-0.7
AK03				pP	Pn	04 03 34.3	+0.3
AK01	**Malin Array Si**	8.26	90	Pn	Pn	04 03 33.5	-0.5
AKASG	**Malin Array Be**	8.26	90	Pn	Pn	04 03 33.5	-0.6
	comp=Z,3.1nm,0.3s,baz=283,slow=12,SNR=15						
AKASG				Sn	Sn	04 05 02.5	-5.5
	comp=Z,2.1nm,0.3s,baz=246,slow=31,SNR=2.3						
AKASG				Lg	Lg	04 05 59.3	
	comp=Z,0.3nm,0.3s,baz=278,slow=30,SNR=4.3						
	comp=Z,1.1nm,0.3s						
AKBB	**Malin Array Si**	8.26	90	Pn	Pn	04 03 33.3	-0.8
MTSE	**Matsula**	8.47	28	eP	Pn	04 03 37.4	+0.5
LPL	**La Plagne**	8.64	230	ePn	Pn	04 03 37.1	-2.5
LPL	**La Plagne**	8.64	230	eP	Pn	04 03 41.8	+2.2
LPL				eSg	Sg	04 06 03.4	-7.1
	comp=Z,1.6nm,0.3s						
LPG	**La Plagne**	8.65	230	ePn	Pn	04 03 36.8	-2.9
LPG	**La Plagne**	8.65	230	eP	Pn	04 03 41.9	+2.2
HFS	**Hagfors**	8.79	352	Pn	Pn	04 03 41.0	-0.2
	comp=Z,0.7nm,0.3s,baz=198,slow=42,SNR=3.8						
HFS				Sn	Sn	04 05 19.0	-1.8
	comp=Z,0.5nm,0.3s,baz=200,slow=43,SNR=1.7						
	comp=Z,0.6nm,0.3s						
AAL	**Aland**	8.98	12	eP	Pn	04 03 44.5	+0.6
KONO	**Kongsberg**	8.99	338	eP	Pn	04 03 46.1	+2.1
LOR	**Lormes**	9.06	247	ePn	Pn	04 03 42.9	-2.2
	baz=69						
MBDF	**Montbardon**	9.22	227	ePn	Pn	04 03 45.5	-1.9
MBDF	**Montbardon**	9.22	227	eP	Pn	04 03 50.5	+3.1
MBDF				eSg	Sn	04 06 23.0	+51
	comp=Z,1.2nm,0.3s						
VSU	**Vasula**	9.26	37	eP	Pn	04 03 48.6	+0.9
SSF	**Saint Saulge**	9.38	247	ePn	Pn	04 03 48.0	-1.4
SSF				eSg	Sn	04 06 28.5	+53
	comp=Z,3.9nm,0.6s						
SMF	**Signal de Mont**	9.42	244	eSg	Sn	04 06 31.5	+55
	comp=Z,25nm,0.9s						
ORIF	**Oris-en-Rattie**	9.49	230	ePn	Pn	04 03 48.5	-2.6
ORIF	**Oris-en-Rattie**	9.49	230	eP	Pn	04 03 55.3	+4.2
AVF	**Avril sur Loir**	9.62	246	ePn	Pn	04 03 51.3	-1.3
AVF				eSg	Sn	04 06 35.5	+54
	comp=Z,13nm,0.9s						
SBF	**Sospel**	9.62	221	ePn	Pn	04 03 51.5	-1.3
NC602	**NORSAR Array S**	9.63	346	eP	Pn	04 03 52.3	-0.5
MEF	**Metsahovi**	9.90	25	eP	Pn	04 03 57.1	+0.7
NOA	**NORSAR Array B**	9.97	346	Pn	Pn	04 03 54.0	-3.4
	comp=Z,0.1nm,0.3s,baz=180,slow=11,SNR=9.7						
NOA				Sn	Sn	04 05 39.1	-11
	baz=226,slow=9.9,SNR=2.1						
NOA				Lg	Lg	04 06 42.6	
	baz=165,slow=17						
	comp=Z,0.4nm,0.5s						
BGF	**Bois d'Agland**	10.04	246	ePn	Pn	04 03 57.9	-0.5
BGF				eSg	Sn	04 06 48.7	+57
	comp=Z,7.5nm,0.5s						
RAF	**Rauma**	10.06	16	eP	Pn	04 03 58.4	-0.2
VIVF	**Saint-Julien-l**	10.13	234	ePn	Pn	04 03 57.1	-2.7
VIVF	**Saint-Julien-l**	10.13	234	eP	Pn	04 04 03.3	+3.5
SKAR	**Skarslia**	10.21	338	eP	Pn	04 04 02.6	+1.9
SMRF	**Simiane la Rot**	10.35	228	ePn	Pn	04 04 02.1	-0.6
LMR	**La Mourre**	10.44	222	ePn	Pn	04 04 02.9	-1.1
FINES	**FINESS Array B**	11.38	25	Pn	Pn	04 04 15.3	-1.4
	comp=Z,1.0nm,0.3s,baz=208,slow=12,SNR=25						
FINES				Sn	Sn	04 06 15.9	-8.4
	comp=Z,0.3nm,0.3s,baz=204,slow=21,SNR=2.2						
	comp=Z,3.0nm,0.4s						
EKA	**Eskdalemuir Ar**	12.15	296	Pn	Pn	04 04 26.2	-1.0
	baz=102,slow=14						
	comp=Z,0.7nm,0.4s						
NSS	**Namsos**	13.27	352	eP	Pn	04 04 42.0	-0.6
MOR8	**Moi Rana**	14.76	357	eP	Pn	04 05 02.6	-0.3
KONS	**Konsvik**	15.14	355	eP	Pn	04 05 07.8	-0.2
STEI	**Steigen**	16.51	359	eP	Pn	04 05 24.3	-1.4
IDI	**Anoyia**	17.36	155	P	P	04 05 38.1	0.0
	comp=Z,0.2nm,0.3s,baz=349,slow=18,SNR=1.6						
	comp=Z,2.3nm,0.7s						
KTK1	**Kautokeino**	17.91	8	eP	Pn	04 05 41.8	-1.5
JETT	**Jettan, Norway**	18.25	5	eP	Pn	04 05 46.2	-1.2
TRO	**Tromso**	18.26	3	eP	Pn	04 05 44.8	-2.7
ARCES	**ARCESS Array B**	18.65	10	Pn	P	04 05 49.5	-2.5
	comp=Z,0.7nm,0.3s,baz=193,slow=13,SNR=31						
	comp=Z,1.9nm,0.4s						
ARA0	**ARCESS Array S**	18.65	10	eP	P	04 05 49.6	-2.5
HAMF	**Hammerfest**	19.54	7	eP	Pn	04 06 02.7	-0.3
ARU	**Arti**	25.12	62	P	P	04 07 00.4	+1.0
	comp=Z,1.3nm,0.4s,baz=253,slow=7.4,SNR=5.8						
	comp=Z,1.3nm,0.4s						
AKTO	**Aktyubinsk**	26.13	76	P	P	04 07 09.9	+1.4
	comp=Z,1.3nm,0.7s,baz=303,slow=9.9,SNR=3.9						
	comp=Z,1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	39.98	202	P	P	04 09 10.1	+0.8
	comp=Z,20nm,1.2s,baz=7.5,slow=9.0,SNR=1.4						
ZALV	**Zalesovo Beam**	40.19	59	P	P	04 09 11.3	+0.6
	comp=Z,0.7nm,0.4s,baz=302,slow=8.3,SNR=1.8						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	42.19	69	P	P	04 09 28.3	+0.9
	comp=Z,0.2nm,0.5s,baz=304,slow=7.8,SNR=5.2						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	54.91	55	P	P	04 11 05.8	+0.5
	comp=Z,0.6nm,0.7s,baz=307,slow=8.7,SNR=3.9						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	59.90	336	P	P	04 11 42.2	+2.0
	comp=Z,1.0nm,0.7s,baz=26,slow=7.2,SNR=19						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	63.34	352	P	P	04 12 04.0	+0.6
	comp=Z,0.1nm,0.6s,baz=354,slow=2.7,SNR=1.5						
	comp=Z,0.1nm,0.6s						
PETK	**Petropavlovsk-**	70.89	23	P	P	04 12 52.7	+1.2
	comp=Z,1.0nm,0.5s,baz=60,slow=0.7,SNR=12						
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	74.98	322	P	P	04 13 18.5	+2.3
	comp=Z,0.3nm,0.5s,baz=40,slow=4.9,SNR=2.3						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	83.76	310	P	P	04 14 05.5	+1.3
	comp=Z,0.1nm,0.5s,baz=41,slow=6.0,SNR=2.8						
	comp=Z,0.1nm,0.5s						

WEL 11 04:39:51.1±0.7, 38°S±5°×17°6E±°, h176km±6km, M3.7/127, ML2.4/8, MLv3.7/127, Error ellipse: s-maj=0.0km s-min=0.0km az=165.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	0.08	340	P	Pn	04 40 15.0	+0.6
OPRZ	**Ohinepanea**	0.21	101	P	Pn	04 40 15.0	+0.5
OPRZ				S	Sn	04 40 35.0	+2.5
KARZ	**Kaharoa**	0.22	191	P	Pn	04 40 15.1	+0.6
KMRZ	**Kaimai**	0.28	262	P	Pn	04 40 15.4	+0.7
OMRZ	**Omania**	0.30	169	P	Pn	04 40 15.4	+0.7
NGRZ	**Ngongotaha**	0.31	196	P	Pn	04 40 15.6	+0.8
MARZ	**Manawahe**	0.35	121	P	Pn	04 40 15.6	+0.8
UTU	**Utuhina**	0.38	192	P	Pn	04 40 15.9	+1.0
HLRZ	**Highlands Stat**	0.45	174	P	Pn	04 40 16.2	+1.0
TARZ	**Mount Tarawera**	0.46	159	P	Pn	04 40 16.2	+0.9
EDRZ	**Edgecumbe**	0.46	131	P	Pn	04 40 16.0	+0.7
HSRZ	**Hossack Road**	0.51	185	P	Pn	04 40 16.4	+1.0
RRRZ	**Republican Roa**	0.56	162	P	Pn	04 40 16.6	+0.9
GRRZ	**Galatos Road**	0.56	195	P	Pn	04 40 16.4	+0.7
HRRZ	**Handcock Road**	0.58	181	P	Pn	04 40 16.5	+0.7
TOZ	**Tahuroa Road**	0.63	277	P	Pn	04 40 16.6	+0.6
PRRZ	**Plateau Road**	0.70	174	P	Pn	04 40 16.9	+0.5
WPRZ	**Whakapapatarin**	0.72	188	P	Pn	04 40 17.1	+0.6
ALRZ	**Allen Road**	0.76	177	P	Pn	04 40 17.4	+0.7
MUGZ	**Murupara**	0.77	151	P	Pn	04 40 16.9	+0.2
KUTZ	**Kaahu Road**	0.78	209	P	Pn	04 40 17.5	+0.6
URZ	**Urewera**	0.79	125	P	Pn	04 40 16.8	0.0
URZ				S	Sn	04 40 36.9	+0.2
TLZ	**Tolley Road**	0.80	229	P	Pn	04 40 17.5	+0.5
WHTZ	**Whakaora**	0.90	197	P	Pn	04 40 18.7	+1.0
RTZ	**Ruatahuna**	0.97	147	P	Pn	04 40 18.4	+0.1
RTZ				S	Sn	04 40 39.7	+0.4
WATZ	**Wairara**	1.00	206	P	Pn	04 40 18.9	+0.5
MRHZ	**Matea Rd**	1.03	175	P	Pn	04 40 18.7	+0.1
HATZ	**Hinemaiaia**	1.09	188	P	Pn	04 40 19.1	0.0
RUGZ	**Raukumara Rang**	1.10	99	P	Pn	04 40 18.9	-0.4
RUGZ				S	Sn	04 40 39.9	-1.1
MWZ	**Matawai**	1.10	119	P	Pn	04 40 19.7	+0.5
MWZ				S	Sn	04 40 41.0	0.0
RAGZ	**Rawiri**	1.12	128	P	Pn	04 40 19.8	+0.4
MTHZ	**Maungataniwha**	1.13	158	P	Pn	04 40 19.6	+0.2
RATZ	**Rangitukua**	1.14	201	P	Pn	04 40 19.7	+0.2
MKAZ	**Moumakai**	1.14	307	P	Pn	04 40 19.9	+0.4
KUZ	**Kuaotunu**	1.15	336	P	Pn	04 40 19.8	+0.2
HAZ	**Te Kaha**	1.18	88	P	Pn	04 40 19.5	-0.2
HAZ				S	Sn	04 40 41.7	-0.2
RITZ	**Rihia Road**	1.22	196	P	Pn	04 40 20.6	+0.5
KATZ	**Kakaramea**	1.26	202	P	Pn	04 40 20.9	+0.3
RAHZ	**Arahi**	1.27	151	P	Pn	04 40 21.2	+0.6
RAHZ				S	Sn	04 40 44.3	+0.8
SNGZ	**Shannon Statio**	1.27	140	P	Pn	04 40 21.2	+0.6
SNGZ				S	Sn	04 40 43.7	+0.2
HIZ	**Hauiti**	1.34	238	P	Pn	04 40 21.3	+0.2
NMHZ	**Naumai**	1.35	163	P	Pn	04 40 22.0	+0.7
NMHZ				S	Sn	04 40 45.9	+1.0
BKZ	**Black Stump Fm**	1.37	174	P	Pn	04 40 21.1	-0.4
TKGZ	**Te Karaka**	1.38	118	P	Pn	04 40 21.9	+0.4
NTVZ	**North Tongarir**	1.38	201	P	Pn	04 40 21.6	0.0
TWGZ	**Tauwhareparae**	1.38	106	P	Pn	04 40 22.2	+0.6
TWGZ				S	Sn	04 40 46.5	+1.3
KRVZ	**Karewarewa**	1.39	202	P	Pn	04 40 21.6	-0.1
TMVZ	**Te Maari**	1.39	199	P	Pn	04 40 21.5	-0.2
ETVZ	**East Tongariro**	1.41	199	P	Pn	04 40 21.8	-0.1
PKGZ	**Pakihiroa**	1.41	94	P	Pn	04 40 22.3	+0.4
WTVZ	**West Tongariro**	1.42	203	P	Pn	04 40 21.9	-0.1
NNVZ	**North Ngauruho**	1.43	202	P	Pn	04 40 22.2	0.0
TWVZ	**Taurewa**	1.43	208	P	Pn	04 40 22.0	-0.1
OTVZ	**Oturere**	1.44	200	P	Pn	04 40 22.5	+0.2
RIGZ	**Rimuhau**	1.46	128	P	Pn	04 40 22.8	+0.5
SNVZ	**South Ngauruho**	1.47	200	P	Pn	04 40 22.5	-0.1
NGZ	**Ngauruhoe**	1.47	202	P	Pn	04 40 22.8	+0.3
TUVZ	**Tukino**	1.54	199	P	Pn	04 40 23.2	-0.1
ARHZ	**Aropaoanui**	1.56	160	P	Pn	04 40 23.4	+0.2
FWVZ	**Far West T-bar**	1.56	202	P	Pn	04 40 23.0	-0.5
PUZ	**Puketiti**	1.57	100	P	Pn	04 40 23.3	0.0
WHVZ	**Whangaehu Hut**	1.57	200	P	Pn	04 40 23.4	-0.2
MXZ	**Matakaoa Point**	1.61	82	P	Pn	04 40 23.8	+0.1
WNVZ	**Wahianoa**	1.61	200	P	Pn	04 40 23.5	-0.5
KWHZ	**Kaweka Forest**	1.62	177	P	Pn	04 40 23.6	-0.2
KNZ	**Kokohu**	1.63	139	P	Pn	04 40 23.8	0.0

CNGZ	Carnagh Statio	1.65	115	P	Pn	04 40 25.2	+1.0
MOVZ	Moawhango	1.65	195	P	Pn	04 40 23.3	-0.9
PKVZ	Pokaka	1.66	206	P	Pn	04 40 24.2	0.0
MCHZ	McNeill Hill	1.67	169	P	Pn	04 40 24.5	+0.2
PRGZ	Paritu Road	1.67	132	P	Pn	04 40 24.5	+0.1
WMGZ	Waiomatatini S	1.68	91	P	Pn	04 40 24.4	0.0
BHHZ	Black Hill Sta	1.69	186	P	Pn	04 40 23.8	-0.8
VRZ	Vera Road	1.79	222	P	Pn	04 40 25.7	+0.2
KRHZ	Kereru	1.83	178	P	Pn	04 40 25.5	-0.6
MHGZ	Mahia Peninsul	1.84	137	P	Pn	04 40 26.3	+0.2
CKHZ	Cape Kidnapper	1.95	162	P	Pn	04 40 27.1	-0.1
KAHZ	Kahuranaki	2.04	167	P	Pn	04 40 27.9	-0.4
PNHZ	Pukenui	2.11	182	P	Pn	04 40 27.9	-1.1
WAZ	Wanganui	2.20	207	P	Pn	04 40 29.2	-0.8
LREZ	Lake Rotokare	2.22	221	P	Pn	04 40 30.3	+0.1
WPHZ	Waipukurau	2.26	177	P	Pn	04 40 29.6	-1.1
NEZ	North Egmont	2.26	229	P	Pn	04 40 31.6	+0.8
TSZ	Takapari Road	2.26	187	P	Pn	04 40 29.4	-1.4
PXZ	Pawanui	2.27	169	P	Pn	04 40 29.8	-0.9
PKE	Pukeiti	2.28	232	P	Pn	04 40 31.3	+0.3
KHEZ	Kahui Hut	2.33	230	P	Pn	04 40 32.2	+0.6
NBEZ	Newall Road No	2.40	232	P	Pn	04 40 32.3	0.0
PRHZ	Porangahau	2.47	174	P	Pn	04 40 31.9	-1.3
DVHZ	Dannevirke	2.49	182	P	Pn	04 40 31.6	-1.8
OHWZ	Ohakea	2.52	197	P	Pn	04 40 32.8	-0.8
POWZ	Post Office Ro	2.62	189	P	Pn	04 40 32.9	-1.9
ANWZ	Angora Road	2.65	177	P	Pn	04 40 33.9	-1.3
PRWZ	Pori Road	2.76	185	P	Pn	04 40 34.7	-1.8
BFZ	Birch Farm	2.87	181	P	Pn	04 40 35.8	-2.1
MRZ	Mangatainoka R	2.91	191	P	Pn	04 40 35.7	-2.6
TIWZ	Tintock	2.98	186	P	Pn	04 40 37.0	-2.3
CPWZ	Castlepoint	3.10	181	P	Pn	04 40 38.7	-2.0
OGWZ	Otaki Gorge	3.13	196	P	Pn	04 40 38.3	-2.7
HOWZ	Holdsworth Sta	3.15	191	P	Pn	04 40 38.2	-3.1
KIW	Kapiti Island	3.23	199	P	Pn	04 40 39.3	-3.1
TMWZ	Te Maipa	3.31	185	P	Pn	04 40 40.5	-2.9
MTW	Mount Morrison	3.40	190	P	Pn	04 40 41.0	-3.4
CAW	Cannon Point	3.43	196	P	Pn	04 40 41.5	-3.2
DUWZ	D'Urville Isla	3.51	211	P	Pn	04 40 42.5	-3.3
TRWZ	Traveller	3.62	187	P	Pn	04 40 43.6	-3.5
PAWZ	Paruwai Farm	3.63	190	P	Pn	04 40 43.6	-3.7
WEL	Wellington	3.67	198	P	Pn	04 40 44.3	-3.4
MSWZ	Moikau Station	3.69	192	P	Pn	04 40 44.3	-3.8
TCW	Tory Channel	3.74	204	P	Pn	04 40 44.8	-3.9
BHW	Baring Head	3.76	197	P	Pn	04 40 45.1	-3.8
PLWZ	Palliser	3.84	192	P	Pn	04 40 46.1	-4.0
TUWZ	Tuamarina	4.05	206	P	Pn	04 40 48.6	-4.0
NNZ	Nelson	4.09	213	P	Pn	04 40 49.1	-3.9
TKNZ	Takaka Hill	4.13	218	P	Pn	04 40 50.4	-3.3
BSWZ	Blackbirch Sta	4.33	205	P	Pn	04 40 52.6	-3.5
MRNZ	Matariki Terra	4.51	216	P	Pn	04 40 55.2	-3.3
THZ	Tophouse	4.74	212	P	Pn	04 40 57.5	-4.0
KHZ	Kahutara	5.07	204	P	Pn	04 41 01.1	-4.5
GVZ	Greta Valley S	5.72	205	P	Pn	04 41 09.6	-4.7
LTZ	Lake Taylor	5.84	211	P	Pn	04 41 11.3	-4.7
OXZ	Oxford	6.39	209	P	Pn	04 41 17.6	-5.5
MQZ	McQueen's Vall	6.51	204	P	Pn	04 41 18.3	-6.3
RACZ	Rakaia	6.70	207	P	Pn	04 41 21.7	-5.5
RPZ	Rata Peaks	7.12	212	P	Pn	04 41 27.8	-4.9
TMZ	Timaru	7.69	210	P	Pn	04 41 34.6	-5.5
ODZ	Otahua Downs	8.38	209	P	Pn	04 41 44.4	-4.9

IDC 11 05:24:27.6±6.5**, 30°.94S×178°.58W, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=257.5km s-min=62.5km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.59	268	P	P	05 32 25.1	-0.6
	0.4nm,0.7s,baz=112,slow=7.4,SNR=2.3 0.4nm,0.7s						
WRA	Warramunga Arr	43.62	273	P	P	05 32 34.1	+0.1
	0.9nm,0.4s,baz=113,slow=7.6,SNR=20 0.9nm,0.4s						
H03S2	Juan Fernandez	80.58	124	T	T	07 05 33.7	
	baz=236						
H03S1	Juan Fernandez	80.60	124	T	T	07 05 26.2	
	baz=236						
H03S3	Juan Fernandez	80.60	124	T	T	07 05 21.1	
	baz=236						
FINES	FINESS Array B	145.47	339	PKPbc	PKPdf	05 44 06.2	-0.8
	2.3nm,0.9s,baz=22,slow=1.5,SNR=3.6						

IDC 11 05:24:33.9±2.4, 30°.48N×49°.86E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=55.7km s-min=29.3km az=163.0

TEH 11 05:24:35.0, 30°.10N×50°.21E, h17^{km}, ML3.5

ISC 11 05:24:33.7±0.8**, 30°.04N**±0°.06×**50°.16E**±0°.05**, h10^{km}, n44, σ1^{s}.60**/45**, mb3.8**/6**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.56	9	ePg	Pg	05 24 44.8	+0.1
KAZ1	Kazerun	1.36	108	ePg	Pg	05 25 00.4	+0.6
KAZ1				eSg	Sg	05 25 18.9	+1.5
AHBU	AHRAM	1.54	139	ePn	Pb	05 25 03.3	+1.0
KLNJ	Kolanjah	1.57	52	ePn	Pn	05 25 01.9	-0.1
KLNJ				e		05 25 29.2	
	comp=Z,9μm,0.6s						
AMIS	Naft Sefid	1.78	335	e		05 25 55.3	
	comp=Z,5μm,0.8s						
AMIS				ePn	Pn	05 25 06.1	+1.5
AHWZ	Ahwaz	1.83	315	ePg	Pb	05 25 09.0	+1.8
IBRJ	Brojen	2.09	27	ePn	Pn	05 25 10.6	+1.6
IBRJ				e		05 25 46.1	
	comp=Z,3μm,0.6s						
SHI	Shiraz	2.09	100	ePn	Pb	05 25 11.2	-0.6
SHI				e		05 25 44.3	
	comp=Z,2μm,0.4s						
SHK1	Shahrekord	2.36	15	ePn	Pn	05 25 14.2	+1.4
SHK1				e		05 25 51.4	
	comp=Z,2μm,1.0s						
IRAM	Ramesheh	2.60	47	ePn	Pn	05 25 17.2	+1.2
IRAM				e		05 26 01.6	
	comp=Z,3μm,0.6s						
IPIR	Pirpir	2.71	13	ePn	Pn	05 25 20.1	+2.5
IPIR				e		05 26 06.6	
	comp=Z,2μm,0.7s						
IGAR	Gharneh	2.85	34	ePn	Pn	05 25 21.3	+1.7
IGAR				e		05 26 16.4	
	comp=Z,767nm,0.6s						
QIR1	Qir	2.97	121	ePn	Pn	05 25 22.2	+1.2
IZEF	Zefreh	3.40	33	ePn	Pn	05 25 28.7	+1.7
IKLH	Kolahrood	3.48	20	ePn	Pn	05 25 30.2	+2.0
IKLH				e		05 26 24.9	
	comp=Z,641nm,0.5s						
NASN	Na'in	3.56	39	ePn	Pn	05 25 30.9	+1.5
KHMZ	Khomeyn	3.69	357	ePn	Pn	05 25 33.2	+2.2
QAMS	Qamsar	3.83	16	ePn	Pn	05 25 34.5	+1.5
IMEH	Mehriz	4.07	70	ePn	Pn	05 25 38.2	+2.0
ICHK	Chekchek	4.25	58	ePn	Pn	05 25 39.6	+0.8
KRSH	Karshahi	4.26	23	ePn	Pn	05 25 40.4	+1.6
HSAM	Samen	4.36	343	ePn	Pn	05 25 42.4	+2.1
ANAR	Anarak	4.37	43	ePn	Pn	05 25 41.3	+0.9
YZKH	Yazd	4.46	57	ePn	Pn	05 25 42.8	+1.3
ASAO	Ashtian	4.49	359	ePn	Pn	05 25 44.2	+2.1
GHVR	GHOM	4.53	12	ePn	Pn	05 25 43.8	+1.4
ISFB	Sefidab	4.65	22	ePn	Pn	05 25 45.0	+1.0
IQOM	Qom	4.85	9	ePn	Pn	05 25 48.8	+1.8
IVRN	Varamin	5.11	15	ePn	Pn	05 25 51.8	+1.3
ILIN	Lien	5.56	332	ePn	Pn	05 25 58.0	+1.3
KRBR	Kerman	5.73	89	ePn	Pn	05 26 01.5	+2.4
TPRV	Parvadeh(Tabas	6.32	60	ePn	Pn	05 26 07.8	+0.7
TNSJ	Nastanj	6.73	53	ePn	Pn	05 26 13.9	+1.2
TKDS	Koohdasht(Taba	6.91	57	ePn	Pn	05 26 16.5	+1.3
TABS	Tabas	6.93	57	ePn	Pn	05 26 16.9	+1.5
SHRO	Shahrood	7.70	38	ePn	Pn	05 26 27.8	+1.7
BSRN	Basiran	7.94	74	ePn	Pn	05 26 31.1	+1.8
BRTR	Keskin Array B	16.62	310	Pn	Pn	05 28 25.0	-1.9
	comp=Z,0.2nm,0.3s,baz=129,slow=13,SNR=1.5 comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	25.91	329	P	P	05 30 02.5	-3.4
	comp=Z,0.5nm,0.5s,baz=133,slow=8.5,SNR=3.8 comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	29.95	47	P	P	05 30 43.2	+1.1
	comp=Z,0.5nm,0.9s,baz=241,slow=9.0,SNR=3.9 comp=Z,0.5nm,0.9s						
ZALV	Zalesovo Beam	34.58	36	P	P	05 31 22.3	-0.2
	comp=Z,1.0nm,0.5s,baz=251,slow=9.0,SNR=1.5 comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	35.19	340	P	P	05 31 25.6	-2.0
	comp=Z,2.1nm,0.9s,baz=140,slow=8.8,SNR=2.1 comp=Z,2.1nm,0.9s						
TORD	Torodi Ar. Bea	47.72	260	P	P	05 33 11.4	+0.4
	comp=Z,10nm,0.6s,baz=72,slow=9.3,SNR=1.8						
YKA	Yellowknife Ar	86.98	353	P	P	05 37 18.2	-0.6
	comp=Z,0.3nm,0.8s,baz=6.5,slow=4.7,SNR=5.0 comp=Z,0.3nm,0.8s						

IDC 11 05:58:57.3±0.6, 36°.58N×141°.59E, h0^{km}, mb3.9/18, mbtmp3.9/25, ML3.4/6, MS3.3/24, Error ellipse: s-maj=16.0km s-min=13.5km az=114.0

JMA 11 05:59:02.4±0.2, 36°.7N±0°.5×14°1E±°, h47^{km}±2^{km}, MD4.2/38, MV4.1/38, E OFF IBARAKI PREF

JMA Felt I J1 at E OFF IBARAKI PREF .

NIED 11 05:59:02.4, 36°.66N×141°.44E, h47^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.27; $M_{\theta\theta}$0.34; $M_{\phi\phi}$-0.07; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.00; $M_{\phi r}$1.53; Fault plane solution: $M_0$1.55000×10^{15} NP1:ϕ_s63.00000°, δ3.00000°, λ-37.00000°. NP2:ϕ_s190.00000°, δ88.00000°, λ-93.00000°.

NEIC 11 05:59:03.0±2.6, 36°.62N±0°.04×141°.56E±0°.09, h35^{km}±5^{km}, mb4.1/8 Error ellipse: s-maj=11.1km s-min=3.6km az=110.0

ISC 11 05:59:00.8±0.5**, 36°.58N**±0°.04×**141°.59E**±0°.06**, h21^{km}**±4^{km}**, n106, σ1^{s}.75**/68**, mb4.0**/18**, MS3.3**/22**, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.82	273	⇓iP	Pb	05 59 15.8	-0.5
JHO				⇓S	Sb	05 59 25.5	-1.6
JHO	Hitachi	0.82	273	A	A	05 59 15.8	
	comp=E,5.0nm,2.0s,comp=E,4.0nm,4.4s						
ONAJ	Iwakimizuishiy	0.82	310	⇓iP	Pb	05 59 15.6	-0.8
ONAJ				⇓S	Sb	05 59 25.4	-1.8
ONAJ	Iwakimizuishiy	0.82	310	A	A	05 59 15.6	
	comp=E,21nm,0.3s,comp=E,18nm,0.3s						
JHYU	Hitachinakayam	0.84	254	⇓iP	Pb	05 59 16.9	+0.2
JHYU				⇓S	Sb	05 59 27.7	+0.1
JHYU	Hitachinakayam	0.84	254	A	A	05 59 16.9	
	comp=E,8.0nm,0.6s,comp=E,12nm,0.7s						
JFFD	Fukushimafurud	0.97	302	P	Pb	05 59 17.7	-1.2
JFFD				eS	Sb	05 59 29.1	-2.3
JFK	Kawauchi	0.97	324	i P	Pb	05 59 17.6	-1.3
JFK	Kawauchi	0.97	324	A	A	05 59 17.6	
	comp=E,5.0nm,1.1s,comp=E,6.0nm,0.7s						
CHOJ	Chosi	1.05	214	A	A	05 59 21.1	
	comp=E,6.0nm,2.6s,comp=E,7.0nm,3.5s						
JIHU	Itakohorinouch	1.06	235	A	A	05 59 20.4	
	comp=E,23nm,3.8s,comp=E,24nm,1.3s						
JYT	Yasato	1.18	253		Pn	05 59 21.6	-0.4
JYT	Yasato	1.18	253	A	A	05 59 21.6	
	comp=E,14nm,0.4s,comp=E,13nm,0.3s						
JMST	Minamisoumatoc	1.28	334	A	A	05 59 22.5	
	comp=E,8.0nm,0.9s,comp=E,6.0nm,0.5s						
JFT	Otama	1.38	313	i P	Pn	05 59 24.5	-0.2
JFT				S	Sn	05 59 40.2	-2.0
JFT	Otama	1.38	313	A	A	05 59 24.5	
	comp=E,10.0nm,2.5s,comp=E,21nm,0.8s						
JSB	Shiboa	1.40	287	A	A	05 59 24.0	
	comp=E,20nm,1.3s,comp=E,11nm,1.1s						
JMM	Marumori	1.44	334		Pn	05 59 24.9	-0.6
JMM	Marumori	1.44	334	P	Pn	05 59 24.1	-1.4
JMM	Marumori	1.44	334	A	A	05 59 24.1	
	comp=E,5.0nm,4.5s,comp=E,5.0nm,1.1s						
JFY	Yanaizu	1.72	299	P	Pn	05 59 30.0	+0.5
JFY				eS	Sn	05 59 49.6	-1.3
JFY	Yanaizu	1.72	299	A	A	05 59 30.0	
	comp=E,3.0nm,2.3s,comp=E,3.0nm,0.7s						
JAG	Ashikaga	1.73	266	⇓iP	Pn	05 59 29.4	-0.2
TOK	Tokyo	1.73	240	A	A	05 59 29.9	
	comp=E,16nm,2.5s,comp=E,15nm,5.1s						
JYAR	Yonezawaarcadi	1.77	320	A	A	05 59 29.2	
	comp=E,20nm,1.0s,comp=E,18nm,1.0s						
JIO	Ouri	1.88	354	P	Pn	05 59 30.5	-1.2
JKT	Katashina	1.89	276	P	Pn	05 59 32.3	+0.4
JKT	Katashina	1.89	276	A	A	05 59 32.3	
	comp=E,6.0nm,0.6s,comp=E,5.0nm,1.9s						
JOU	Okura	1.93	338	i P	Pn	05 59 32.6	+0.3
JOU				S	Sn	05 59 55.6	-0.4
JOU	Okura	1.93	338	A	A	05 59 32.6	
	comp=E,7.0nm,3.3s,comp=E,7.0nm,1.5s						
JHU	Hanno	2.00	250	A	A	05 59 33.5	
	comp=E,2.0nm,7.8s,comp=E,2.0nm,1.2s						
JYS	Shirataka	2.04	324	A	A	05 59 33.4	
	comp=E,6.0nm,1.5s,comp=E,6.0nm,1.5s						
JGK	Kuni	2.38	271	A	A	05 59 38.3	
	comp=E,4.0nm,1.2s,comp=E,3.0nm,1.8s						
JOD2	Odawara 2	2.42	238	A	A	05 59 39.8	
	comp=E,4.0nm,1.6s,comp=E,5.0nm,2.7s						
JYA	Atsumi	2.50	324	A	A	05 59 40.0	
	comp=E,4.0nm,1.1s,comp=E,4.0nm,1.0s						
JHTM	Izuhatsuma	2.65	233	A	A	05 59 43.1	
	comp=E,5.0nm,3.9s,comp=E,10.0nm,1.0s						
JYN	Shimob	2.69	247	A	A	05 59 43.4	
	comp=E,5.0nm,3.7s,comp=E,4.0nm,1.1s						
MJAR	Matsushiro Arr	2.72	270	Pn	Pn	05 59 43.4	+0.1
	7.2nm,0.3s,baz=90,slow=8.8,SNR=63						
MJAR				Sn	Sn	06 00 17.0	+1.5
	9.2nm,0.3s,baz=85,slow=16,SNR=4.3						
MJAR				LR	LR	06 01 06.5	
	comp=Z,717nm,19.2s,baz=30,slow=47 100nm,0.2s						
MAJO	Matsushiro	2.73	270		Pn	05 59 44.8	+1.5
MJB9	Matsu-Tunnel	2.73	270		Pn	05 59 44.8	+1.5
JSD	Sado	3.03	300		Pn	05 59 49.4	+1.9
JGF	Kuroka	3.57	255		Pn	05 59 57.5	+2.6
JHJ2	Mitsune	3.75	203	Pn	Pn	05 59 60.0	+2.6
JHJ	Hachijo jima 2	3.76	204	Pn	Pn	05 59 57.6	+0.2
	22nm,0.3s,baz=230,slow=17,SNR=2.2						
JHJ				Sn	Sn	06 00 41.5	+0.5
	65nm,0.3s,baz=60,slow=22,SNR=4.6 64nm,0.3s						
INU	Inuyama	3.91	253		Pn	06 00 02.6	+3.1
JTM	Tenmabayashi	4.22	355	Pn	Pn	06 00 05.7	+1.8
ERM	Erimo	5.56	12	Pn	Pn	06 00 23.5	+1.2
JHS	Saijyo	7.07	260		Pn	06 00 46.9	+3.9
ASAJ	Asahikawa	7.57	6	Pn	Pn	06 00 50.9	+1.1
	1.2nm,0.3s,baz=266,slow=33,SNR=6.4						
ASAJ				Sn	Sn	06 02 21.1	+6.2
	0.7nm,0.3s,baz=352,slow=28,SNR=2.0 5.0nm,0.5s						
JKA	Kamikawa-asahi	7.57	6		Pn	06 00 50.9	+1.1
JCJ	Chichijima	9.47	177	Pn	Pn	06 01 13.8	-2.1
	17nm,0.3s,baz=346,slow=23,SNR=9.3						
JCJ				Sn	Sn	06 02 54.3	-7.3
	5.9nm,0.3s,baz=120,slow=24,SNR=1.6						
JCJ	Chichijima	9.47	177	Pn	Pn	06 01 17.0	+1.1
USRK	Ussuriysk Ar.	10.56	319	Pn	Pn	06 01 30.9	+0.2
	0.4nm,0.3s,baz=121,slow=14,SNR=1.5 1.2nm,0.7s						
KSRS	Korea Array	10.97	279	Pn	Pn	06 01 36.1	-0.2
	0.2nm,0.3s,baz=91,slow=14,SNR=1.7 0.5nm,0.3s						
KLR	Kul'dur	14.54	333	Pn	Pn	06 02 25.1	0.0
	0.1nm,0.3s,baz=234,slow=22,SNR=2.2						
KLR				LR	LR	06 07 56.4	
	comp=Z,70nm,18.2s,baz=188,slow=37 0.4nm,0.4s						
PETK	Petropavlovsk-	20.01	29	P	P	06 03 31.4	-0.5
	0.5nm,0.4s,baz=207,slow=12,SNR=1.7						
PETK				LR	LR	06 10 44.6	
	comp=Z,42nm,21.6s,baz=214,slow=35 0.5nm,0.4s						
GUMO	Guam	23.08	172	LR	LR	06 12 48.9	
	comp=Z,16nm,20.9s,baz=82,slow=36						
MA2	Magadan	23.77	12	LR	LR	06 14 52.5	
	comp=Z,27nm,19.6s,baz=304,slow=40						
YAK	Yakutsk	26.55	347	LR	LR	06 16 50.0	
	comp=Z,40nm,18.6s,baz=274,slow=40						
SEY	Seymchan	27.21	11	P	P	06 04 41.7	-1.0
	0.5nm,0.3s,baz=198,slow=4.8,SNR=5.2						
SEY				LR	LR	06 16 00.3	
	comp=Z,40nm,19.4s,baz=144,slow=38 0.5nm,0.3s						
ULN	Ulaanbaatar	27.73	305	P	P	06 04 46.2	-1.6
ULN				IAmb	IAmb	06 04 53.3	
	comp=Z,3.8nm,0.7s						
H11N2	WAKE ISLAND Hy	27.79	120	T	T	06 34 08.6	
	baz=313,slow=75,SNR=137						
H11N1	WAKE ISLAND Hy	27.80	120	T	T	06 34 04.3	
	baz=313,slow=75,SNR=113						
H11N3	WAKE ISLAND Hy	27.81	120	T	T	06 34 05.1	
	baz=313,slow=75,SNR=120						
SONM	Songino Array	28.16	305	P	P	06 04 51.7	+0.1
	comp=Z,3.0nm,0.7s,baz=106,slow=9.2,SNR=3.4						
SONM				LR	LR	06 16 44.0	
	comp=Z,64nm,18.3s,baz=44,slow=38 comp=Z,3.0nm,0.7s						
SONM	Songino Array	28.16	305	P	P	06 04 51.0	-0.6
SONM				IAmb	IAmb	06 04 57.1	
	comp=Z,2.5nm,0.8s						
H11S1	WAKE ISLAND Hy	28.49	122	T	T	06 35 01.7	
	baz=314,slow=76,SNR=144						
H11S3	WAKE ISLAND Hy	28.49	122	T	T	06 35 06.9	
	baz=314,slow=76,SNR=120						
H11S2	WAKE ISLAND Hy	28.51	122	T	T	06 35 08.1	
	baz=314,slow=76,SNR=90						
CMAR	Chiang Mai Arr	41.52	256	LR	LR	06 26 21.0	
	comp=Z,55nm,18.5s,baz=195,slow=40						
ZALV	Zalesovo Beam	42.33	313	P	P	06 06 52.0	-0.8
	comp=Z,1.0nm,0.4s,baz=97,slow=7.4,SNR=1.9						
ZALV				LR	LR	06 24 47.3	
	comp=Z,54nm,21.7s,baz=30,slow=37 comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	44.48	303	P	P	06 07 09.2	-1.2
MKAR	Makanchi Array	44.48	303	P	P	06 07 09.9	-0.6
	comp=Z,0.7nm,0.7s,baz=86,slow=9.4,SNR=6.4						
MKAR				LR	LR	06 26 18.6	
	comp=Z,43nm,19.9s,baz=79,slow=37 comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	44.48	303	P	P	06 07 11.6	+1.2
KAPI	Kappang	46.14	211	LR	LR	06 27 04.9	
	comp=Z,20nm,18.7s,baz=321,slow=37						
KURK	Kurchatov	46.33	308	P	P	06 07 23.6	-1.3
KURBB	Kurchatov Arra	46.40	308	P	P	06 07 24.7	-0.7
	comp=Z,1.8nm,0.8s,baz=84,slow=8.3,SNR=8.8 comp=Z,1.8nm,0.8s						
KDAK	Kodiak Island	47.34	42	LR	LR	06 27 05.1	
	comp=Z,29nm,21.6s,baz=227,slow=36						
MDM	Murphy Dome	49.23	32	P	P	06 07 46.3	-1.0
ILAR	Eielson Array	49.80	32	P	P	06 07 51.7	+0.1
	comp=Z,0.8nm,0.9s,baz=264,slow=6.1,SNR=8.0 comp=Z,0.8nm,0.9s						
AAK	Ala-Archa	50.83	299	LR	LR	06 30 46.8	
	comp=Z,97nm,18.9s,baz=74,slow=38						
INK	Inuvik	54.73	27	P	P	06 08 28.1	+0.1
	comp=Z,0.9nm,0.7s,baz=296,slow=4.5,SNR=4.2 comp=Z,0.9nm,0.7s						
INK	Inuvik	54.73	27	IAmb	IAmb	06 08 44.1	
	comp=Z,2.6nm,1.1s						
WRA	Warramunga Arr	56.63	188	P	P	06 08 42.1	-0.2
	comp=Z,2.5nm,1.0s,baz=7.2,slow=7.5,SNR=9.2 comp=Z,2.5nm,1.0s						
WRA	Warramunga Arr	56.63	188	IAmb	IAmb	06 08 43.1	
	comp=Z,0.8nm,1.4s						
AKTO	Aktyubinsk	59.09	312	LR	LR	06 35 27.5	
	comp=Z,20nm,21.9s,baz=70,slow=37						
ASAR	Alice Springs	60.36	188	P	P	06 09 08.5	+0.3
	comp=Z,1.1nm,0.8s,baz=14,slow=5.6,SNR=7.4 comp=Z,1.1nm,0.8s						
KIRV	Kirov	60.70	323	LR	LR	06 35 32.6	
	comp=Z,28nm,20.6s,baz=85,slow=36						
YKA	Yellowknife Ar	64.13	30	P	P	06 09 33.2	+0.2
	comp=Z,0.7nm,0.8s,baz=302,slow=6.5,SNR=12 comp=Z,0.7nm,0.8s						
ARCES	ARCESS Array B	64.47	340	P	P	06 09 35.9	+0.7
	comp=Z,2.8nm,1.1s,baz=71,slow=9.0,SNR=1.6						
ARCES				LR	LR	06 40 38.5	
	comp=Z,23nm,20.9s,baz=254,slow=39 comp=Z,2.8nm,1.1s						
AFI	Afiamalu	66.73	130	LR	LR	06 34 21.7	
	comp=Z,15nm,21.2s,baz=264,slow=32						
FINES	FINESS Array B	69.28	332	P	P	06 10 05.9	-0.1
	comp=Z,2.7nm,1.0s,baz=75,slow=7.4,SNR=1.4 comp=Z,2.7nm,1.0s						
WSAR	Wadi Sarin	71.12	285	LR	LR	06 44 11.5	
	comp=Z,17nm,18.5s,baz=132,slow=38						
HFS	Hagfors	74.56	336	LR	LR	06 45 51.5	
	comp=Z,25nm,18.5s,baz=34,slow=38						
NOA	NORSAR Array B	74.66	337	P	P	06 10 37.9	-0.4
	comp=Z,0.3nm,0.6s,baz=38,slow=5.7,SNR=1.9						
NOA				LR	LR	06 46 48.2	
	comp=Z,19nm,19.4s,baz=35,slow=38 comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	74.75	322	P	P	06 10 37.2	-1.7
	comp=Z,0.7nm,0.4s,baz=44,slow=6.5,SNR=4.7						
AKASG				LR	LR	06 46 21.1	
	comp=Z,31nm,20.0s,baz=320,slow=38 comp=Z,0.7nm,0.4s						
AKASG	Malin Array Be	74.75	322	IAmb	IAmb	06 10 57.0	
	comp=Z,2.9nm,1.4s						
NVAR	Mina Array Bea	75.15	53	P	P	06 10 41.5	-0.2
	comp=Z,1.0nm,0.8s,baz=289,slow=4.5,SNR=7.0 comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	77.88	45	P	P	06 10 56.9	-0.2
	comp=Z,0.2nm,0.4s,baz=284,slow=3.6,SNR=1.5 comp=Z,0.2nm,0.4s						
MLR	Muntele Rosu	79.83	320	LR	LR	06 49 20.9	
	comp=Z,36nm,18.5s,baz=90,slow=38						
VRAC	Vranov	81.58	327	LR	LR	06 50 21.2	
	comp=Z,10nm,18.2s,baz=32,slow=38						
TXAR	Lajitas Array	90.28	52	P	P	06 12 00.6	+0.2
	comp=Z,0.2nm,0.8s,baz=299,slow=5.3,SNR=4.3 comp=Z,0.2nm,0.8s						
LPAZ	La Paz	146.80	60	PKPbc	PKPbc	06 18 42.4	0.0
	comp=Z,1.5nm,0.7s,baz=331,slow=1.3,SNR=9.6						
H03N2	Juan Fernandez	146.83	97	T	T	09 02 53.1	
	baz=291,slow=76,SNR=6.6						
H03N3	Juan Fernandez	146.84	97	T	T	09 02 55.5	
	baz=291,slow=76,SNR=7.8						
H03N1	Juan Fernandez	146.85	97	T	T	09 02 54.2	
	baz=291,slow=76,SNR=7.5						

IDC 11 06:29:02.7±2.3**, 6°.38S×151°.98E, h0^{km}, mb3.4**/3**, mbtmp3.5**/4**, ML4.2**/1**, MS3.1**/1**, Error ellipse: s-maj=82.1km s-min=22.0km az=111.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.06	1	Pn	Pn	06 29 39.2	+0.6
	77nm,0.3s,baz=144,slow=19,SNR=28						
KRVT				Sn	Sn	06 30 04.3	-0.7
	36nm,0.3s,baz=196,slow=17,SNR=4.4 154nm,0.3s						
WRA	Warramunga Arr	21.80	230	P	P	06 33 57.9	+1.3
	1.3nm,1.1s,baz=55,slow=9.9,SNR=2.5 1.3nm,1.1s						
ASAR	Alice Springs	24.45	223	P	P	06 34 22.4	-1.1
	0.5nm,0.4s,baz=58,slow=9.3,SNR=2.0 0.5nm,0.4s						
CMAR	Chiang Mai Arr	57.82	296	LR	LR	07 00 37.1	
	comp=Z,17nm,21.9s,baz=160,slow=33						
ILAR	Eielson Array	83.92	22	P	P	06 41 34.2	-0.1
	0.3nm,0.7s,baz=251,slow=4.7,SNR=3.1 0.3nm,0.7s						

IDC 11 06:35:01.0±2.5, 24°.05S×176°.74W, h79^{km}±21^{km}, mb4.4/10, mbtmp4.7/12, MS3.6/2, Error ellipse: s-maj=22.1km s-min=15.1km az=84.0

NEIC 11 06:35:02.7±2.6, 24°.10S±0°.08×176°.5W±0°.1, h105^{km}±5^{km}, mb4.6/20, Error ellipse: s-maj=16.6km s-min=11.6km az=71.0

ISC 11 06:35:00.9±0.6**, 24°.03S**±0°.07×**176°.65W**±0°.09**, h82^{km}, n51, σ1^{s}.15**/52**, mb4.6**/17**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.32	192	P	Pn	06 36 18.8	+1.0
	307nm,0.2s,baz=101,slow=5.9,SNR=10						
RAO				S	Sn	06 37 17.6	-0.3
	290nm,0.2s,baz=72,slow=22,SNR=2.7						
NIUE	Niue	7.96	53	Pn	Pn	06 36 54.4	+0.5
AFI	Afiamalu	11.07	25	P	Pn	06 37 36.2	-0.1
	76nm,0.6s,baz=229,slow=19,SNR=17						
AFI	Afiamalu	11.07	25		Pn	06 37 36.9	+0.5
MARNC	Mare, Loyalty	14.36	277		P	06 38 26.2	+1.4
PINNC	Pines Island,	14.68	272	P	P	06 38 30.8	+2.5
URZ	Urewera	15.15	199	P	Pn	06 38 31.0	+0.7
	9.7nm,0.8s,baz=116,slow=24,SNR=3.2						
URZ	Urewera	15.15	199	IAmb	IAmb	06 38 37.0	
	comp=Z,18nm,1.1s						
LIFNC	LIFOU	15.24	279	P	P	06 38 36.2	+1.6
LIFNC				IAmb	IAmb	06 38 41.5	
	comp=Z,36nm,0.9s						
DZM	Mont Dzumac	15.68	274	P	P	06 38 39.6	0.0
	comp=Z,19nm,0.7s,baz=92,slow=17,SNR=26						

DZM	**Mont Dzumac**	**15.68**	**274**	P	**P**	**06 38 42.8**	**+3.2**
DZM				IAmb	IAmb	06 38 47.0	
	comp=Z,28nm,0.9s						
RAR	**Rarotonga**	**15.83**	**83**	LR	LR	06 43 05.3	
	comp=Z,59nm,20.6s,baz=224,slow=30						
SANVU	**Saraoutou**	**17.42**	**296**	P	**P**	**06 39 01.3**	**+2.5**
SANVU				IAmb	IAmb	06 39 05.4	
	comp=Z,42nm,0.9s						
LTZ	**Lake Taylor**	**20.83**	**203**	P	**P**	**06 39 36.3**	**+0.5**
ARMA	**Armidale**	**28.85**	**250**	P	**P**	**06 40 53.1**	**+1.3**
ARMA				IAmb	IAmb	06 40 54.0	
	comp=Z,10nm,0.8s						
CTA	**Charters Tower**	**34.54**	**269**	P	**P**	**06 41 42.2**	**+0.5**
	comp=Z,12nm,0.4s,baz=95,slow=9.5,SNR=12						
	comp=Z,12nm,0.4s						
CTAO	**Charters Tower**	**34.54**	**269**	P	**P**	**06 41 42.5**	**+0.9**
KRVT	**Keravat (AS076**	**35.99**	**298**	P	**P**	**06 41 54.3**	**+0.1**
	comp=Z,40nm,0.3s,baz=162,slow=20,SNR=2.2						
PMG	**Port Moresby**	**37.45**	**287**	P	**P**	**06 42 06.5**	**0.0**
	comp=Z,7.5nm,0.4s,baz=112,slow=11,SNR=3.8						
	comp=Z,7.5nm,0.4s						
STKA	**Stephens Creek**	**37.52**	**248**	P	**P**	**06 42 07.2**	**+0.1**
	comp=Z,4.3nm,0.5s,baz=68,slow=9.5,SNR=6.1						
	comp=Z,4.3nm,0.5s						
STKA	**Stephens Creek**	**37.52**	**248**	IAmb	IAmb	06 42 07.7	
	comp=Z,1.1nm,0.7s						
COEN	**Coen**	**39.16**	**277**	P	**P**	**06 42 22.1**	**+1.1**
COEN				IAmb	IAmb	06 42 46.0	
	comp=Z,27nm,1.4s						
BBOO	**Buckleboo**	**42.21**	**247**	P	**P**	**06 42 45.2**	**-0.7**
ASAR	**Alice Springs**	**45.03**	**260**	P	**P**	**06 43 07.7**	**-1.0**
	comp=Z,6.1nm,0.9s,baz=101,slow=8.3,SNR=30						
ASAR				PcP	**PcP**	**06 44 48.6**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=104,slow=4.0,SNR=5.5						
	comp=Z,6.1nm,0.9s						
ASAR	**Alice Springs**	**45.03**	**260**	P	**P**	**06 43 08.0**	**-0.7**
WR0	**Warramunga Arr**	**45.26**	**265**	P	**P**	**06 43 09.0**	**-1.5**
WR0				IAmb	IAmb	06 43 14.5	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**45.44**	**265**	P	**P**	**06 43 10.7**	**-1.3**
WB2				IAmb	IAmb	06 43 21.6	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**45.45**	**265**	P	**P**	**06 43 10.7**	**-1.3**
WB0				IAmb	IAmb	06 43 12.2	
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**45.45**	**265**	P	**P**	**06 43 10.2**	**-1.8**
	comp=Z,3.7nm,0.5s,baz=103,slow=8.0,SNR=40						
WRA				PcP	**PcP**	**06 44 50.4**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=113,slow=2.2,SNR=2.6						
	comp=Z,3.7nm,0.5s						
WRA	**Warramunga Arr**	**45.45**	**265**	P	**P**	**06 43 10.7**	**-1.4**
FORT	**Forrest**	**49.13**	**249**	P	**P**	**06 43 38.2**	**-2.3**
KNRA	**Kununurra**	**51.75**	**269**	P	**P**	**06 43 59.3**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.87**	**265**	P	**P**	**06 44 15.3**	**-0.6**
VNDA	**Vanda**	**54.53**	**186**	P	**P**	**06 44 20.5**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=344,slow=6.4,SNR=4.3						
VNDA	**Vanda**	**54.53**	**186**	P	**P**	**06 44 20.0**	**+0.1**
SIJI	**Sorong**	**55.39**	**287**	P	**P**	**06 44 26.1**	**-1.0**
	comp=Z,15nm,0.5s,baz=89,slow=4.3,SNR=5.3						
	comp=Z,15nm,0.5s						
MORW	**Morawa**	**59.70**	**249**	P	**P**	**06 44 55.5**	**-1.6**
TOLI2	**Tolitoli**	**65.58**	**283**	P	**P**	**06 45 34.7**	**-1.8**
TOLI2				IAmb	IAmb	06 45 37.2	
	comp=Z,7.0nm,0.6s						
QSPA	**South Pole Qui**	**66.06**	**180**	P	**P**	**06 45 38.2**	**-0.6**
	comp=Z,4.9nm,0.8s,baz=351,slow=0.6,SNR=23						
	comp=Z,4.9nm,0.8s						
QSPA	**South Pole Qui**	**66.06**	**180**	P	**P**	**06 45 38.9**	**0.0**
QSPA				IAmb	IAmb	06 45 40.6	
	comp=Z,4.4nm,0.7s						
LEM	**Lembang**	**74.24**	**269**	LR	LR	07 21 29.5	
	comp=Z,104nm,18.1s,baz=222,slow=38						
BELA	**Belgrano 2**	**75.91**	**172**	P	**P**	**06 46 37.1**	**-1.0**
MAW	**Mawson**	**78.68**	**200**	P	**P**	**06 46 54.3**	**+0.7**
	comp=Z,5.1nm,1.0s,baz=113,slow=7.7,SNR=2.9						
	comp=Z,5.1nm,1.0s						
PETK	**Petropavlovsk-**	**79.99**	**345**	P	**P**	**06 47 00.9**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=123,slow=7.3,SNR=5.8						
	comp=Z,3.1nm,0.8s						
TROLL	**Troll, Antarti**	**84.22**	**180**	P	**P**	**06 47 23.0**	**-0.1**
SNAA	**Sanae**	**84.46**	**178**	P	**P**	**06 47 23.6**	**-0.6**
VNA3	**Neumayer Olymp**	**84.55**	**176**	P	**P**	**06 47 24.1**	**-0.5**
SONM	**Songino Array**	**99.22**	**318**	P	**Pdif**	**06 48 34.4**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=90,slow=4.3,SNR=3.5						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**146.68**	**330**	PKPbc	**PKPbc**	**06 54 33.1**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=45,slow=4.3,SNR=12						
BRTR	**Keskin Array B**	**150.07**	**309**	PKP	**PKPdf**	**06 54 37.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=38,slow=12,SNR=1.7						
BRTR				PKPbc	**PKPbc**	**06 54 42.0**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=123,slow=4.6,SNR=5.8						
BRTR				PKPab	**PKPab**	**06 54 49.6**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=106,slow=4.7,SNR=4.8						
CLL	**Collm**	**151.76**	**347**	*i* PKPbc	**PKiKP**	**06 54 46.7**	**+0.6**
	comp=Z,4.0nm,0.8s						

*IDC **11** 06:36:06.9±3.5, 59°.89N×153°.05W, h47^{km}±28^{km}, mb3.0/1, mbtmp3.0/4, ML2.8/3, Error ellipse: s-maj=68.6km s-min=11.0km az=98.0*

*NEIC **11** 06:36:08.2±0.5, 59°.80N±0°.05×153°.06W±0°.09, h102^{km}±6^{km}, Error ellipse: s-maj=8.8km s-min=5.5km az=213.0*

*AEIC **11** 06:36:09±0.9, 59°.80N±0°.05×153°.08W±0°.09, h98^{km}±5^{km}, ML2.3, ML2.5/40(NEIC), Error ellipse: s-maj=8.8km s-min=5.2km az=211.0*

ISC 11 06:36:08.3±1.2, **59°.81N**±0°.04×**153°.00W**±0°.05, **h103**^{km}±10^{km}, **n29**, σ1^{s}.**12**/34, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
P19K	**Oil Pt**	**0.20**	**216**		**Pn**	**06 36 22.9**	**0.0**
RSO	**Redoubt South**	**0.66**	**11**		**Pn**	**06 36 25.9**	**0.0**
O19K	**Port Alsworth**	**0.77**	**301**	Pn	**Pn**	**06 36 26.2**	**-0.2**
O19K					**Sn**	**06 36 39.6**	**-0.6**
O19K				IAML		06 36 40.1	
	comp=E,230nm,0.5s						
O19K				IAML		06 36 40.3	
	comp=N,157nm,0.5s						
CNPM	**China Poot**	**0.94**	**107**		**Pn**	**06 36 28.5**	**+0.2**
CNPM					**Sn**	**06 36 43.5**	**+0.2**
CNPM				IAML		06 36 43.7	
	comp=N,89nm,0.1s						
CNPM				IAML		06 36 44.2	
	comp=E,92nm,0.3s						
Q19K	**Cape Douglas,**	**0.95**	**201**	Pn	**Pn**	**06 36 28.1**	**-0.2**
Q19K				IAML		06 36 35.7	
	comp=N,99nm,1.2s						
Q19K				IAML		06 36 53.7	
	comp=E,136nm,1.4s						
BRLK	**Bradley Lake**	**1.07**	**92**		**Pn**	**06 36 29.7**	**0.0**
BRLK				IAML		06 36 47.0	
	comp=E,107nm,0.1s						
BRLK				IAML		06 36 47.7	
	comp=N,112nm,0.1s						
N19K	**Bonanza Creek**	**1.25**	**324**		**Pn**	**06 36 31.6**	**-0.1**
N19K					**Sn**	**06 36 49.3**	**-0.2**
O22K	**Cooper Landing**	**1.77**	**66**	Pn	**Pn**	**06 36 38.4**	**+0.4**
SEW	**Seward**	**1.81**	**79**	Pn	**Pn**	**06 36 38.5**	**+0.1**
SEW					**Sn**	**06 37 00.5**	**-1.0**
KDAK	**Kodiak Island**	**2.05**	**174**	P	**Pn**	**06 36 41.0**	**-0.5**
	comp=N,4.2nm,0.3s,baz=3.4,slow=11,SNR=60						
KDAK				S	**Sn**	**06 37 05.4**	**-1.5**
	comp=N,7.0nm,0.3s,baz=323,slow=20,SNR=14						
	comp=N,11nm,0.3s						
KDAK	**Kodiak Island**	**2.05**	**174**	Pn	**Pn**	**06 36 41.1**	**-0.5**
KDAK				IAML		06 37 08.0	
	comp=N,31nm,0.5s						
KDAK				IAML		06 37 08.0	
	comp=N,27nm,0.3s						
M19K	**Big River Lodg**	**2.21**	**343**		**Pn**	**06 36 43.5**	**-0.1**
L19K	**White Mountain**	**2.54**	**340**		**Pn**	**06 36 48.0**	**0.0**
SML	**Sawmill**	**3.04**	**47**	Pn	**Pn**	**06 36 54.2**	**-0.4**
SML				IAML		06 37 36.9	
	comp=E,15nm,0.4s						
FID	**Port Fidalgo**	**3.38**	**71**	Pn	**Pn**	**06 36 57.5**	**-1.7**
TTA	**Tatalina**	**3.45**	**336**	Pn	**Pn**	**06 36 59.8**	**-0.2**
TTA				IAML		06 37 35.8	
	comp=E,9.3nm,3.5s						
TTA				IAML		06 38 18.9	
	comp=N,7.4nm,2.8s						
K20K	**Telida**	**3.59**	**352**	Pn	**Pn**	**06 37 02.6**	**+0.6**
K20K				IAML		06 37 48.9	
	comp=N,5.7nm,3.8s						
K20K				IAML		06 38 10.9	
	comp=E,7.9nm,3.2s						
CAST	**Castle Rocks**	**3.65**	**7**		**Pn**	**06 37 03.3**	**+0.7**
CAST				IAML		06 38 11.0	
	comp=E,7.7nm,3.1s						
CAST				IAML		06 39 10.1	
	comp=N,8.6nm,3.2s						
TRF	**Thorofare Moun**	**3.87**	**18**		**Pn**	**06 37 06.5**	**+0.7**
RND	**Reindeer**	**4.11**	**27**		**Pn**	**06 37 09.6**	**+0.6**
RND				IAML		06 38 12.5	
	comp=E,8.2nm,3.6s						
RND				IAML		06 38 58.0	
	comp=N,6.5nm,3.4s						
J20K	**Nowinta River**	**4.41**	**353**		**Pn**	**06 37 13.3**	**+0.3**
J20K				IAML		06 39 05.0	
	comp=N,6.8nm,2.5s						
NEA2	**Nenana**	**5.14**	**19**		**Pn**	**06 37 22.8**	**0.0**
HDA	**Harding Lake**	**5.42**	**29**		**Pn**	**06 37 26.6**	**+0.1**
CCB	**Clear Creek Bu**	**5.42**	**24**		**Pn**	**06 37 26.3**	**-0.3**
IL31		**5.73**	**27**		**Pn**	**06 37 30.4**	**-0.3**
ILAR	**Eielson Array**	**5.73**	**27**	P	**Pn**	**06 37 30.1**	**-0.7**
	comp=N,0.4nm,0.3s,baz=217,slow=14,SNR=18						
ILAR				S	**Sn**	**06 38 31.0**	**-4.2**
	comp=N,0.3nm,0.4s,baz=216,slow=22,SNR=3.0						
	comp=N,0.7nm,0.3s						
DLBC	**Dease Lake**	**11.87**	**87**	P	**Pn**	**06 38 57.0**	**+3.1**
	comp=N,0.6nm,0.4s,baz=326,slow=17,SNR=1.8						
YKA	**Yellowknife Ar**	**18.53**	**65**	P	**P**	**06 40 17.2**	**+0.9**
	baz=278,slow=9.9,SNR=4.2						
	comp=N,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**30.63**	**119**	P	P	06 42 18.6	+5.9
	comp=N,0.2nm,0.6s,baz=292,slow=9.5,SNR=1.9						
	comp=N,0.2nm,0.6s						

*RSNC **11** 06:38:57.1±0.7, 2°.79N×79°.55W, h0^{km}±6^{km}, ML3.0, Mw3.3*

*UPA **11** 06:39:00.2±1.8, 3°.21N×79°.13W, h18^{km}±322^{km}, MW4.7*

ISC 11 06:38:53.7±1.4, **2°.80N**±0°.06×**79°.79W**±0°.06, **h10**^{km}, **n23**, σ**2**^{s}.**26**/39, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMC	**Tumaco**	**1.44**	**132**	*e*P	**Pn**	**06 39 19.4**	**-0.5**
TUMC				*e*S	**Sb**	**06 39 37.0**	**-2.1**
TUMC				*i*		06 39 45.6	
	comp=Z,134nm,0.4s						
GR1C	**Gorgona, Isla**	**1.63**	**83**	*e*P	**Pn**	**06 39 21.9**	**-0.6**
GR1C				*e*S	**Sn**	**06 39 40.5**	**-3.1**
CMBC	**Cumbal**	**2.70**	**133**	*e*P	**Pn**	**06 39 37.0**	**-0.6**
GCUF	**Volcan Galeras**	**2.90**	**123**	*e*P	**Pn**	**06 39 41.0**	**+0.5**
GCUF				*e*S	**Sn**	**06 40 15.3**	**-0.3**
GCUF				*i*		06 40 16.8	
	comp=Z,62nm,0.5s						
CPAS1	**Pasto**	**2.94**	**123**	*e*P	**Pn**	**06 39 42.6**	**+1.7**
CRUC	**La Cruz**	**3.09**	**113**	*e*P	**Pn**	**06 39 44.4**	**+1.5**
CRUC				*e*S	**Sn**	**06 40 20.8**	**+0.7**
SOTA	**Rioblanco**	**3.25**	**102**	*e*P	**Pn**	**06 39 47.0**	**+1.8**
SOTA				*e*S	**Sn**	**06 40 24.0**	**-0.2**
SOTA				*i*		06 40 30.1	
	comp=Z,65nm,0.4s						
PCON	**Cinco Dias**	**3.42**	**98**	*e*P	**Pn**	**06 39 49.8**	**+2.1**
PCON				*e*S	**Sn**	**06 40 28.7**	**+0.1**
PCON				*i*		06 40 32.2	
	comp=Z,84nm,0.5s						
YOTC	**Yotoco, Valle**	**3.63**	**71**	*e*P	**Pn**	**06 39 50.9**	**+0.8**
YOTC				*e*S	**Sn**	**06 40 31.7**	**-1.5**
YOTC				*i*		06 40 33.6	
	comp=Z,18nm,0.3s						
PLMC	**San Jos del P**	**4.07**	**59**	*e*P	**Pn**	**06 39 56.9**	**+0.6**
PLMC				*e*S	**Sn**	**06 40 43.1**	**-1.0**
PLMC				*i*		06 40 53.9	
	comp=Z,17nm,0.3s						
GARC	**Garzon, Huila**	**4.33**	**98**	*e*P	**Pn**	**06 40 02.7**	**+2.7**
GARC				*e*S	**Sn**	**06 40 49.6**	**-1.1**
CACAO	**El Cacao, Vera**	**4.64**	**347**	*e*P	**Pn**	**06 40 04.8**	**+0.9**
CACAO				*e*S	**Sn**	**06 40 56.2**	**-1.6**
ORTC	**Ortega, Tolima**	**4.67**	**76**	*e*P	**Pn**	**06 40 07.3**	**+3.0**
ORTC				*e*S	**Sn**	**06 40 58.9**	**+0.3**
ORTC				*i*		06 41 08.1	
	comp=Z,10nm,0.2s						
ANIL	**Santa Ana**	**4.69**	**69**	*e*P	**Pn**	**06 40 07.5**	**+2.7**
ANIL				*e*S	**Sn**	**06 40 58.6**	**-0.9**
ANIL				*i*		06 41 07.1	
	comp=Z,39nm,0.4s						
CBOC	**Ciudad Bolivar**	**4.84**	**51**	*e*P	**Pn**	**06 40 07.0**	**+0.1**
CBOC				*e*S	**Sn**	**06 40 55.8**	**-7.3**
PRAC	**Prado**	**4.98**	**79**	*e*P	**Pn**	**06 40 11.3**	**+2.7**
PRAC				*e*S	**Sn**	**06 41 07.5**	**+1.2**
PRAC				*i*		06 41 12.4	
	comp=Z,12nm,0.3s						
AZU	**Azuero**	**4.98**	**354**	*e*P	**Pn**	**06 40 10.4**	**+1.8**
AZU				*e*S	**Sn**	**06 41 02.9**	**-3.4**
AZU	**Azuero**	**4.98**	**354**	*i* P	**Pn**	**06 40 10.5**	**+1.8**
AZU				*e*S	Sn	06 41 01.2	-5.1
GMAL	**Guarumal, Vera**	**5.13**	**344**	*e*P	**Pn**	**06 40 13.5**	**+2.7**
GMAL				*i* S	**Sn**	**06 41 09.8**	**-0.2**
UPA	**Univ. de Panam**	**6.14**	**2**	*e*P	**Pn**	**06 40 24.4**	**-0.3**
CHIC	**Chingaza**	**6.31**	**73**	*e*P	**Pn**	**06 40 31.1**	**+3.8**
CHIC				*e*S	**Sn**	**06 41 40.6**	**+1.0**
CHIC				*i*		06 41 42.0	
	comp=Z,4.9nm,0.4s						
BCO2	**Palmira**	**6.48**	**335**	*e*P	Pn	06 40 35.5	+6.1
BRU2	**Volcan**	**6.62**	**334**	*e*P	**Pn**	**06 40 35.6**	**+4.4**

*ATH **11** 06:41:36.9, 36°.68N×26°.17E, h44^{km}±9^{km}, ML2.3/4, Error ellipse: s-maj=9.6km s-min=1.4km az=2.0*

*ISK **11** 06:41:37.5, 36°.60N×26°.50E, h120^{km}±2^{km}, ML2.4/15*

*DDA **11** 06:41:38.0±0.0, 36°.36N×26°.70E, h136^{km}±17^{km}, ML3.2*

ISC 11 06:41:37.0±1.6, **36°.56N**±0°.05×**26°.50E**±0°.04, **h130**^{km}±12^{km}, **n29**, σ**1**^{s}.**54**/42, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.82**	**52**	PG	**Pn**	**06 41 58.3**	**0.0**
DAT	**Datca**	**0.88**	**79**	PG	**Pn**	**06 41 59.1**	**+0.2**
DAT				SG	**Sn**	**06 42 14.7**	**-0.8**
DAT	**Datca**	**0.88**	**79**	P	**Pn**	**06 41 59.2**	**+0.2**
DAT				S	**Sn**	**06 42 16.2**	**+0.7**
APE	**Apeiranthos**	**0.93**	**303**	P	Pn	06 41 50.5	-8.8
APE				S	Sn	06 41 60.0	-16
APE				AML	AML	06 42 00.6	
	comp=N,87µm,0.4s						
APE				AML	AML	06 42 00.8	
	comp=E,112µm,0.5s						
APE	**Apeiranthos**	**0.93**	**303**	PG	**Pn**	**06 41 59.7**	**+0.4**
APE				SG	**Sn**	**06 42 14.9**	**-1.3**
KARP	**Karpathos**	**1.15**	**152**	P	**Pn**	**06 42 01.8**	**+0.4**
KARP				S	**Sn**	**06 42 20.2**	**+0.4**
KARP	**Karpathos**	**1.15**	**152**	PN	**Pn**	**06 42 01.7**	**+0.4**
MLSB	**Milas**	**1.25**	**54**	PN	**Pn**	**06 42 02.4**	**0.0**
GCAM	**G?zelcaml?**	**1.27**	**27**	PN	**Pn**	**06 42 02.7**	**+0.1**
ARG	**Arkhangelos**	**1.35**	**104**	PN	**Pn**	**06 42 04.1**	**+0.6**
ZKR	**Zakros**	**1.47**	**189**	P	**Pn**	**06 42 05.7**	**+1.0**
ZKR				S	**Sn**	**06 42 25.7**	**-0.1**
ZKR				AML	AML	06 42 29.3	
	comp=E,310µm,0.4s						
ZKR				AML	AML	06 42 29.5	
	comp=N,95µm,0.4s						
ZKR	**Zakros**	**1.47**	**189**	PN	**Pn**	**06 42 06.0**	**+1.3**
YER	**Yerkesik**	**1.54**	**68**	PN	**Pn**	**06 42 06.2**	**+0.6**
MULA	**Mugla, Merkez-**	**1.61**	**64**	P	**Pn**	**06 42 07.1**	**+0.7**
MULA				S	**Sn**	**06 42 32.2**	**+3.3**
DALY	**Dalyan (Mula)**	**1.75**	**81**	PN	**Pn**	**06 42 09.0**	**+1.1**
AYDB	**Zeytinkoy-Aydi**	**1.77**	**38**	PN	**Pn**	**06 42 08.5**	**+0.2**
URLA	**Izmir**	**1.79**	**2**	PN	**Pn**	**06 42 08.7**	**+0.2**
IDI	**Anoyia**	**1.83**	**226**	P	**Pn**	**06 42 08.2**	**-0.7**
IDI				S	**Sn**	**06 42 30.4**	**-3.0**
IDI				AML	AML	06 42 34.5	
	comp=N,137µm,0.4s						
IDI				AML	AML	06 42 37.2	
	comp=E,112µm,0.3s						
CHOS	**Chios island**	**1.85**	**349**	PN	**Pn**	**06 42 09.3**	**0.0**
BLCB	**Balcova**	**1.87**	**13**	PN	**Pn**	**06 42 09.6**	**+0.3**
FETY	**Fethiye**	**2.08**	**87**	PN	**Pn**	**06 42 12.3**	**+0.4**
FETY	**Fethiye**	**2.08**	**87**	P	**Pn**	**06 42 12.1**	**+0.1**
FETY				S	**Sn**	**06 42 38.2**	**-0.5**
TAVA	**DENIZLI_Tavas**	**2.13**	**64**	P	**Pn**	**06 42 12.7**	**+0.1**
TAVA				S	**Sn**	**06 42 39.2**	**-0.8**
CAEL	**Denizli, Camel**	**2.33**	**75**	P	Pn	06 42 05.1	-10
CAEL				S	**Sn**	**06 42 44.4**	**0.0**
AKAS	**Kas**	**2.52**	**97**	P	**Pn**	**06 42 17.7**	**+0.1**
AKAS				S	**Sn**	**06 42 46.8**	**-2.0**
AKAS				*i* AML	AML	06 42 51.0	
	comp=E,174nm,0.4s						
AKAS				*i* AML	AML	06 42 51.0	
	comp=E,63nm,0.5s						
GOLH	**Golhisar**	**2.54**	**74**	P	**Pn**	**06 42 18.7**	**+0.9**
GOLH				S	**Sn**	**06 42 48.6**	**-0.6**
GVD	**Gavdhos**	**2.61**	**230**	P	**Pn**	**06 42 19.9**	**+1.2**
GVD				S	**Sn**	**06 42 52.0**	**+1.3**
GVD				AML	AML	06 42 53.1	
	comp=E,170µm,0.5s						
GVD				AML	AML	06 42 59.7	
	comp=N,176µm,0.3s						
AKUM	**Antalya-Kumluc**	**3.11**	**93**	P	**Pn**	**06 42 20.7**	**-4.3**
AKUM				S	**Sn**	**06 42 58.6**	**-3.3**
KEPZ	**Antalya-Kepez**	**4.11**	**84**	P	**Pn**	**06 42 42.9**	**+4.6**
KEPZ				S	**Sn**	**06 43 24.7**	**-1.1**

*BJI **11** 07:07:51.4±0.0, 31°.94N×95°.15E, h95^{km}, mb4.5/13, mB4.5/2*

*NEIC **11** 07:07:52.2±1.9, 32°.1N±0°.1×94°.98E±0°.10, h46^{km}±8^{km}, mb4.1/21, Error ellipse: s-maj=19.6km s-min=7.2km az=146.0*

*IDC **11** 07:07:54.6±4.4, 32°.07N×95°.03E, h75^{km}±41^{km}, mb3.6/13, mbtmp3.9/17, ML4.2/3, MS3.3/10, Error ellipse: s-maj=23.8km s-min=14.1km az=54.0*

ISC 11 07:07:50.6±0.5, **32°.06N**±0°.06×**95°.09E**±0°.06, **h35**^{km}, **n54**, σ**1**^{s}.**69**/47, **mb3.9**/20, **MS3.3**/9, **1D**, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.12**	**236**		**Pn**	**07 08 52.3**	**+0.7**
LSA	**Lhasa**	**4.12**	**236**	P	**Pn**	**07 08 53.2**	**+1.7**
LSA				S	Sn	07 09 46.5	+7.7
LSA				LR	LR		
	comp=N,210nm,3.8s						
LSA				LR	LR		
	comp=E,180nm,3.4s						
LSA				LR	LR		
	comp=Z,590nm,4.1s						
GOMU	**GeErMu**	**4.13**	**357**	P	Pn	07 08 59.0	+7.5
GOMU				S	Sn	07 09 50.2	+11
GOMU				smax	smax		
	comp=N,22nm,1.2s						
GOMU				smax	smax		
	comp=E,28nm,1.1s						
MOKO	**MOKOCHONG**	**5.74**	**185**	*e*P	Pn	07 09 21.3	+7.8
MOKO				*e*S	**Sn**	**07 10 22.9**	**+4.6**
TEZP	**TEZPUR**	**5.78**	**201**	*e*P	**Pn**	**07 09 12.8**	**-1.1**
KOHI	**KOHIMA**	**6.38**	**188**	*e*P	**Pn**	**07 09 21.1**	**-1.1**
PZH	**PanZhiHua**	**8.03**	**132**	P	**Pn**	**07 09 45.3**	**+0.5**
PZH				PP	**PnPn**	**07 09 53.2**	**+0.7**
PZH				S	**Sn**	**07 11 16.2**	**+1.7**
PZH				SS	**SnSn**	**07 11 28.4**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,3.9s						
PZH				LR	LR		
	comp=N,530nm,8.2s						
PZH				LR	LR		
	comp=E,500nm,8.5s						
PZH				LR	LR		
	comp=Z,430nm,9.2s						
WMQ	**Urumqi**	**13.10**	**336**	*e*P	**Pn**	**07 10 55.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**13.99**	**165**	P	**P**	**07 11 11.2**	**-2.7**
	2.7nm,0.3s,baz=293,slow=6.5,SNR=4.1						
CMAR				LR	LR	07 17 14.6	
	comp=Z,36nm,18.3s,baz=225,slow=40						
	3.1nm,0.3s						
TARG	**Taragay, Kyrgy**	**16.83**	**310**	P	**P**	**07 11 46.6**	**+0.8**
HNS	**HongShan**	**16.97**	**66**	⇓P	**Pn**	**07 11 44.3**	**-0.9**
HNS				*e*S	**Sn**	**07 14 53.4**	**+0.6**
HNS				LR	LR		
	comp=N,260nm,9.2s						
HNS				LR	LR		
	comp=E,500nm,11.1s						
HNS				LR	LR		
	comp=Z,430nm,11.3s						
MKAR	**Makanchi Array**	**17.69**	**330**	P	**P**	**07 11 55.0**	**+0.3**
	0.1nm,0.3s,baz=136,slow=13,SNR=12						
	1.2nm,0.7s						
MAKZ	**Makanchi**	**17.83**	**329**	P	**P**	**07 11 56.7**	**+0.3**
SONM	**Songino Array**	**17.95**	**25**	P	**P**	**07 11 60.0**	**+2.3**
	0.2nm,0.3s,baz=232,slow=7.0,SNR=2.4						
	0.9nm,0.5s						
SONM	**Songino Array**	**17.95**	**25**	IAmb	IAmb	07 12 07.3	
	comp=Z,1.7nm,1.0s						
BOOM	**Boomskoye usch**	**18.41**	**310**	P	**P**	**07 12 01.1**	**-1.8**
NIL	**Nilore**	**18.41**	**281**		**P**	**07 12 00.9**	**-2.0**
NIL				IAmb	IAmb	07 12 05.9	
	comp=Z,9.0nm,0.8s						
AAK	**Ala-Archa**	**19.43**	**309**	P	**Pn**	**07 12 15.4**	**0.0**
	comp=Z,4.5nm,0.9s,baz=118,slow=11,SNR=6.5						
AAK				LR	LR	07 21 01.2	
	comp=Z,144nm,21.4s,baz=126,slow=41						
AAK	**Ala-Archa**	**19.43**	**309**		**Pn**	**07 12 14.8**	**-0.7**
AAK				IAmb	IAmb	07 12 22.5	
	comp=Z,12nm,1.2s						
GAR	**Garm**	**21.28**	**296**	P	**P**	**07 12 32.4**	**-1.7**
KBL	**Kabul**	**21.89**	**284**	P	**P**	**07 12 39.9**	**-0.9**
CHGR	**Chuyangaron**	**22.11**	**295**	P	**P**	**07 12 41.2**	**-1.7**
KURBB	**Kurchatov Arra**	**22.23**	**331**	P	**P**	**07 12 43.4**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=143,slow=10,SNR=16						
	comp=Z,2.8nm,0.8s						
KURK	**Kurchatov**	**22.27**	**332**	P	**P**	**07 12 44.5**	**+0.1**
KURK				IAmb	IAmb	07 12 48.1	
	comp=Z,12nm,1.2s						
KK31	**Karatay Array**	**22.30**	**307**	P	**P**	**07 12 44.8**	**-0.1**
KK31				IAmb	IAmb	07 12 51.4	
	comp=Z,11nm,1.3s						
KKAR	**Karatay Array**	**22.30**	**307**	P	**P**	**07 12 43.7**	**-1.2**
KKAR	**Karatay Array**	**22.30**	**307**	P	**P**	**07 12 44.5**	**-0.3**
KKAR				IAmb	IAmb	07 12 51.5	
	comp=Z,11nm,1.3s						
ZALV	**Zalesovo Beam**	**23.08**	**344**	P	**P**	**07 12 51.7**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=148,slow=17,SNR=1.8						
	comp=Z,1.9nm,0.6s						
KSRS	**Korea Array**	**27.42**	**70**	LR	LR	07 25 29.4	
	comp=Z,71nm,20.0s,baz=270,slow=38						
JOW	**Kunigami**	**29.29**	**92**	LR	LR	07 26 28.7	
	comp=Z,60nm,18.5s,baz=306,slow=38						
ABKAR	**Akbulak array**	**31.35**	**314**	P	**P**	**07 14 06.5**	**-1.2**
ABKAR				IAmb	IAmb	07 14 08.7	
	comp=Z,1.6nm,0.8s						
KLR	**Kul'dur**	**32.28**	**47**	P	**P**	**07 14 16.4**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=284,slow=8.9,SNR=5.1						
	comp=Z,1.1nm,0.7s						
AKTO	**Aktyubinsk**	**32.93**	**315**	LR	LR	07 29 15.0	
	comp=Z,52nm,19.0s,baz=109,slow=39						
WSAR	**Wadi Sarin**	**33.34**	**264**	LR	LR	07 28 55.0	
	comp=Z,58nm,19.4s,baz=120,slow=38						
MJAR	**Matsushiro Arr**	**35.68**	**71**	LR	LR	07 30 02.4	
	comp=Z,28nm,18.3s,baz=250,slow=37						
DAV	**Davao City (W)**	**37.74**	**125**	LR	LR	07 30 09.3	
	comp=Z,56nm,20.0s,baz=46,slow=35						
ASAJ	**Asahikawa**	**38.78**	**58**	LR	LR	07 31 53.6	
	comp=Z,70nm,20.2s,baz=118,slow=37						
TIXI	**Tiksi**	**43.56**	**15**	P	**P**	**07 15 51.0**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=310,slow=11,SNR=4.2						
	comp=Z,1.1nm,0.6s						
TIXI	**Tiksi**	**43.56**	**15**	IAmb	IAmb	07 15 51.9	
	comp=Z,3.9nm,1.4s						
KLMR	**Klimovskoe**	**45.92**	**326**	*e*P	**P**	**07 16 08.0**	**-1.5**
KLMR				AMP		07 16 15.1	
	comp=Z,5.0nm,0.9s						
KLMR				*e*PP	**PP**	**07 17 58.3**	**+1.0**
AKASG	**Malin Array Be**	**51.06**	**312**	P	**P**	**07 16 48.3**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=69,slow=7.6,SNR=8.7						
	comp=Z,1.7nm,0.6s						
AKASG	**Malin Array Be**	**51.06**	**312**	IAmb	IAmb	07 16 49.0	
	comp=Z,1.7nm,1.0s						
MNK	**Minsk**	**51.61**	**317**	*i* P	P	07 17 00.9	+7.6
	comp=E,2.0nm,0.7s						
MNK				*i* P	P	07 17 00.9	+7.6
	comp=N,15nm,0.9s						
MNK				*i* P	P	07 17 00.9	+7.6
	comp=Z,8.0nm,0.7s,baz=87						
MNK				*i* PP	PP	07 18 58.2	+7.4
MNK				*i* PPP	PPP	07 19 57.5	
MNK				*i* S	**S**	**07 24 18.5**	**+6.8**
MNK				*i* SS	SS	07 27 59.0	+11
MNK				*i* SSS	SSS	07 29 34.3	
MNK				*i* LQ	LQ	07 34 34.9	
MNK				*i* LR	LR	07 38 32.6	
MNK				*i* LRM	MLR	07 41 34.0	

	comp=N,20nm,17.9s						
MNK				*i* LRM	MLR	07 41 36.6	
	comp=Z,161nm,20.4s						
MNK				*i* LRM	MLR	07 41 43.0	
	comp=E,5.0nm,21.7s						
ARCES	**ARCESS Array B**	**53.22**	**336**	P	**P**	**07 17 05.6**	**+0.5**
	comp=E,1.1nm,0.7s,baz=67,slow=4.1,SNR=3.6						
	comp=E,1.1nm,0.7s						
MLR	**Muntele Rosu**	**53.98**	**306**	P	**P**	**07 17 11.6**	**+0.4**
MLR				IAmb	IAmb	07 17 16.1	
	comp=Z,4.0nm,0.8s						
NOA	**NORSAR Array B**	**59.63**	**326**	P	**P**	**07 17 49.8**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=165,slow=13,SNR=2.7						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**61.27**	**312**	P	**P**	**07 18 02.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=80,slow=11,SNR=1.7						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**63.93**	**138**	P	**P**	**07 18 19.7**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=307,slow=12,SNR=12						
	comp=Z,1.8nm,0.7s						
DAVOX	**Davos/Dischmat**	**64.37**	**311**	LR	LR	07 50 44.6	
	comp=Z,47nm,18.3s,baz=84,slow=40						
ASAR	**Alice Springs**	**66.69**	**141**	P	**P**	**07 18 37.8**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=324,slow=6.5,SNR=22						
	comp=Z,1.7nm,0.5s						
ILAR	**Eielson Array**	**72.16**	**23**	P	**P**	**07 19 11.4**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=298,slow=6.4,SNR=7.8						
	comp=Z,0.8nm,1.0s						
ESDC	**Sonseca Array**	**76.54**	**308**	P	**P**	**07 19 36.8**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=38,slow=4.9,SNR=2.7						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**82.79**	**13**	P	**P**	**07 20 09.5**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=331,slow=4.7,SNR=6.4						
	comp=Z,0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**85.96**	**283**	P	**P**	**07 20 27.4**	**-0.3**
	comp=Z,11nm,0.6s,baz=39,slow=4.2,SNR=4.6						

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*IDC **11** 07:25:22.1±0.7, 0°.15S×124°.85E, h0^{km}, mb4.1/10, mbtmp4.1/11, ML4.0/1, MS2.7/1, Error ellipse: s-maj=34.4km s-min=15.6km az=70.0*

*DJA **11** 07:25:28.0±1.1, 0°N±3°×12°5E±°, h27^{km}±10^{km}, M4.4/12, mb4.7/5, mB4.8/2, MLv4.3/12, Mw(mB)4.1/2*

*NEIC **11** 07:25:29.1±1.2, 0°.31S±0°.09×124°.79E±0°.07, h52^{km}±9^{km}, mb4.2/9, Error ellipse: s-maj=12.4km s-min=10.5km az=187.0*

ISC 11 07:25:29.0±0.6**, 0°.07S**±0°.06×**125°.06E**±0°.05**, h53**^{km}**, n36, σ1^{s}.44**/39**, mb4.2**/14**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.25**	**301**	P	**Pn**	**07 25 48.7**	**-1.5**
KMSI				S	**Sn**	**07 26 05.3**	**-0.7**
GTOI	**Gorontalo**	**2.17**	**289**	P	**Pn**	**07 26 04.3**	**+1.7**
GTOI				S	**Sn**	**07 26 31.4**	**+3.1**
TNTI	**Ternate**	**2.45**	**70**	Pn	**Pn**	**07 26 10.1**	**+3.5**
LUWI	**Luwuk**	**2.48**	**247**	P	**Pn**	**07 26 07.3**	**+0.3**
LUWI				S	**Sn**	**07 26 38.2**	**+2.1**
LBMI	**Labuha**	**2.51**	**103**	P	**Pn**	**07 26 08.4**	**+1.1**
LBMI				S	**Sn**	**07 26 38.1**	**+1.4**
MRSI	**Marisa**	**3.17**	**280**	P	**Pn**	**07 26 14.1**	**-2.2**
APSI	**Ampana**	**3.51**	**256**	P	**Pn**	**07 26 21.3**	**+0.2**
TOLI2	**Tolitoli**	**4.43**	**285**		**Pn**	**07 26 32.1**	**-1.7**
AAI	**Ambon**	**4.77**	**139**	P	**Pn**	**07 26 39.0**	**+0.6**
MPSI	**Mapaga**	**5.18**	**274**	P	**Pn**	**07 26 44.6**	**+0.7**
	0.2nm703nm44nm,0.9s						
TTSI	**Tana Toraja**	**6.01**	**241**	P	**Pn**	**07 26 55.9**	**+0.5**
	0.2nm40nm,0.6s						
SPSI	**Sidrap Palu**	**6.55**	**234**	P	**Pn**	**07 27 03.3**	**+0.5**
	0.1nm1μm24nm,0.6s						
BKSI	**Bulukumba**	**7.18**	**223**	P	**Pn**	**07 27 12.2**	**+0.8**
	0.1nm9.5nm,0.7s						
KAPI	**Kappang**	**7.23**	**227**	Pn	Pn	07 27 05.2	-6.8
	2.4nm,0.3s,baz=308,slow=22,SNR=4.9						
KAPI				LR	LR	07 30 30.3	
	comp=Z,60nm,18.6s,baz=27,slow=44						
	4.1nm,0.3s						
MYLDM	**Lahad Datu**	**8.37**	**309**	Pn	**Pn**	**07 27 26.4**	**-1.3**
KMPI	**Kaimana, Papua**	**9.35**	**113**	P	**Pn**	**07 27 39.6**	**-1.5**
PBKI	**Pangkalan Bun**	**13.64**	**259**	P	P	07 28 57.6	+10
KNRA	**Kununurra**	**15.94**	**167**	Pn	**Pn**	**07 29 07.3**	**-2.6**
KNRA				IAmb	IAmb	07 29 08.3	
	comp=Z,68nm,1.4s						
WB0	**Warramunga Arr**	**21.61**	**155**	P	**P**	**07 30 13.4**	**-1.3**
WB0				IAmb	IAmb	07 30 22.3	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**21.74**	**156**	P	**P**	**07 30 14.9**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=339,slow=10,SNR=13						
	comp=Z,1.2nm,0.5s						
WB2	**Warramunga Arr**	**21.75**	**156**	P	**P**	**07 30 14.6**	**-1.6**
WB2				IAmb	IAmb	07 30 18.6	
	comp=Z,8.1nm,1.1s						
WR0	**Warramunga Arr**	**21.84**	**155**	P	**P**	**07 30 15.3**	**-1.9**
WR0				IAmb	IAmb	07 30 30.1	
	comp=Z,12nm,1.4s						
COEN	**Coen**	**22.63**	**128**	P	**P**	**07 30 26.4**	**+0.7**
ASAR	**Alice Springs**	**24.98**	**160**	P	**P**	**07 30 47.6**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=345,slow=11,SNR=12						
ASAR				PcP	**PcP**	**07 34 22.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=354,slow=1.7,SNR=5.5						
	comp=Z,1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.58**	**307**	P	**P**	**07 31 46.7**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=129,slow=11,SNR=1.2						
	comp=Z,1.8nm,0.3s						
STKA	**Stephens Creek**	**35.29**	**155**	P	**P**	**07 32 19.6**	**+0.6**
	comp=Z,4.1nm,0.8s,baz=332,slow=8.9,SNR=7.0						
	comp=Z,4.1nm,0.8s						
STKA	**Stephens Creek**	**35.29**	**155**	IAmb	IAmb	07 32 20.6	
	comp=Z,1.4nm,1.1s						
SONM	**Songino Array**	**50.40**	**344**	P	**P**	**07 34 22.5**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=163,slow=10,SNR=3.4						
	comp=Z,1.0nm,0.6s						
PETK	**Petropavlovsk-**	**59.55**	**22**	P	**P**	**07 35 28.8**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=184,slow=6.0,SNR=5.2						
	comp=Z,0.4nm,0.5s						
MK31	**Makanchi Array**	**59.77**	**327**	P	**P**	**07 35 28.6**	**0.0**
MK31				IAmb	IAmb	07 35 29.4	
	comp=Z,2.8nm,1.0s						
MKAR	**Makanchi Array**	**59.77**	**327**	P	**P**	**07 35 28.7**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=128,slow=8.6,SNR=32						
MKAR				PcP	**PcP**	**07 36 14.0**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=113,slow=5.2,SNR=3.5						
	comp=Z,2.8nm,0.5s						
ZALV	**Zalesovo Beam**	**63.24**	**335**	P	**P**	**07 35 51.7**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=175,slow=7.2,SNR=3.1						
	comp=Z,0.8nm,0.4s						
KURK	**Kurchatov**	**64.08**	**329**	P	**P**	**07 35 57.5**	**+0.1**
NRIK	**Noril'sk**	**73.71**	**347**	P	**P**	**07 36 56.7**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=120,slow=8.4,SNR=5.7						
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**74.05**	**322**	P	**P**	**07 36 57.8**	**-1.5**
KMBO	**Kilima Mbogo**	**87.81**	**269**	P	**P**	**07 38 14.1**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=88,slow=5.8,SNR=3.6						
	comp=Z,1.1nm,0.4s						

TAP 11 07:28:07.2, 23°.31N×121°.59E, h46^{km}±1^{km}, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin**	**0.13**	**274**	*e*P	Pn	07 28 15.0	+0.3
	baz=274						
ECBN				*e*S	Sn	07 28 20.5	+0.5
	baz=274						
HGSD	**Ruisui**	**0.24**	**321**	*e*P	Pn	07 28 15.4	-0.1
	baz=320						
EYUL	**Yuli**	**0.25**	**279**	*e*P	Pn	07 28 15.9	+0.3
	baz=279						
EYUL				*e*S	Sn	07 28 22.6	+1.0
	baz=279						
TWF1	**Yuli**	**0.27**	**280**	*e*P	Pn	07 28 15.3	-0.5
	baz=280						
YULB	**Yu-li**	**0.28**	**288**	*e*P	Pn	07 28 15.3	-0.6
	baz=287						
YULB				*e*S	Sn	07 28 22.1	0.0
	baz=287						
CHKT	**Chengkung**	**0.29**	**225**	*e*P	Pn	07 28 16.4	+0.5
	baz=219						
FULB	**Fuli**	**0.29**	**248**	*e*P	Pn	07 28 16.4	+0.4
	baz=248						
EHY	**Hungye**	**0.32**	**309**	*e*P	Pn	07 28 16.7	+0.5
	baz=309						
EHY				*e*S	Sn	07 28 20.8	-1.8
	baz=309						
EGFH	**Guangfu**	**0.39**	**338**	*e*P	Pn	07 28 17.3	+0.3
	baz=327						
EDH	**Donghe**	**0.42**	**218**	*e*P	Pn	07 28 17.8	+0.5
	baz=212						
VWDT	**VWDT**	**0.61**	**317**	*e*P	Pn	07 28 20.3	+0.7
	baz=317						
VWDT				*e*S	Sn	07 28 28.0	-0.5
	baz=317						
YUS	**Yu-Shan**	**0.61**	**287**	*e*P	Pn	07 28 20.2	0.0
	baz=284						
WUSB	**Renai**	**0.81**	**328**	*e*P	Pn	07 28 23.0	+0.5
	baz=327						

MEX 11 08:04:40.4±0.4**, 16°.31N×97°.94W, h31**^{km}±7^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.20**	**294**	*i* P	Pb	08 04 45.3	-1.4
PNIG				*i* S	Sb	08 04 49.3	-1.7
YOIG	**Yosondua**	**0.66**	**35**	*i* P	Pb	08 04 51.5	-2.2
YOIG				*i* S	Sb	08 05 00.3	-2.5
PEIG	**Puerto Escondi**	**0.82**	**112**	*i* P	Pn	08 04 53.6	-2.3
PEIG				*i* S	Sb	08 05 04.0	-3.1
TXIG	**Tlaxiaco**	**0.95**	**10**	*i* P	Pn	08 04 56.5	-1.5

MEX 11 08:04:55.5±0.6**, 16°.92N×97°.55W, h1**^{km}±15^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOIG	**Yosondua**	**0.06**	**176**	*i* P	Pg	08 04 56.5	-0.3
YOIG				*i* S	Sg	08 05 02.2	+4.5
TXIG	**Tlaxiaco**	**0.39**	**328**	*i* P	Pg	08 05 01.6	-1.4
TXIG				*i* S	Sg	08 05 08.8	+0.6
TXIG	**Tlaxiaco**	**0.39**	**328**	*i* S	Sg	08 05 09.1	+0.9
VHO	**Vista Hermosa**	**0.80**	**79**	*i* P	Pg	08 05 10.0	-0.8
VHO				*i* S	Sg	08 05 21.0	-0.2
HLIG	**Huajuapan de L**	**0.94**	**345**	*i* P	Pg	08 05 12.9	-0.6
HLIG				*i* S	Sg	08 05 25.2	-0.5
FTIG	**Fresnillo de T**	**1.13**	**331**	*i* P	Pg	08 05 14.5	-2.7
FTIG				*i* S	Sg	08 05 27.8	-4.1
TOIG	**Toxpalan**	**1.26**	**22**	*e*	Pg	08 05 19.6	0.0
TOIG				*e*		08 05 40.1	

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*TEH **11** 08:09:43.6, 27°.52N×52°.53E, h20^{km}, ML3.8*

*IDC **11** 08:09:45.3±2.6, 27°.31N×52°.54E, h49^{km}±40^{km}, mb3.5/8, mbtmp3.8/12, ML3.7/4, MS3.1/1, Error ellipse: s-maj=47.0km s-min=18.6km az=25.0*

*DSN **11** 08:09:47.7±0.8, 27°.35N×52°.83E, h10^{km}, ML3.4/6, Error ellipse: s-maj=13.6km s-min=6.3km az=30.0*

ISC 11 08:09:43.0±0.7**, 27°.49N**±0°.05×**52°.54E**±0°.05**, h14**^{km}**, n72, σ1^{s}.45**/77**, mb3.6**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.57**	**105**	*e*Pg	**Pg**	**08 09 55.3**	**+1.0**
LMD1				*e*Sg	**Sb**	**08 10 04.6**	**+1.7**
QIR1	**Qir**	**1.08**	**24**	*e*Sg	**Sn**	**08 10 20.4**	**+1.8**
QIR1				*e*Pg	**Pb**	**08 10 03.5**	**0.0**
JHRM	**Jahrom**	**1.36**	**42**	*e*		08 10 36.8	
	comp=Z,43μm,0.4s						
JHRM				*e*Pg	**Pg**	**08 10 09.3**	**0.0**
LAR1	**LAR**	**1.64**	**83**	*e*Pg	**Pb**	**08 10 13.3**	**+0.3**
LAR1				*e*		08 10 41.9	
	comp=Z,31μm,0.6s						
AHBU	**AHRAM**	**1.76**	**322**	*e*Pg	**Pb**	**08 10 15.9**	**+0.9**
SHI	**Shiraz**	**2.14**	**359**	*e*Pn	**Pn**	**08 10 18.7**	**+0.2**
SHI				*e*		08 11 06.6	
	comp=Z,4μm,0.6s						
JRN	**Qarnain Island**	**2.55**	**174**	*e*Pn	**Pn**	**08 10 25.7**	**+1.8**
GENO	**Geno**	**3.23**	**91**	*e*Pn	**Pn**	**08 10 35.0**	**+1.6**
GENO				*e*		08 11 57.8	
	comp=Z,1μm,1.2s						
SLWR	**Sila**	**3.49**	**193**	*e*Pn	**Pn**	**08 10 38.3**	**+1.4**
SHME	**Shamm**	**3.52**	**113**	*e*Pn	**Pn**	**08 10 37.9**	**+0.6**
SHME	**Shamm**	**3.52**	**113**	P	**Pn**	**08 10 38.3**	**+0.9**
GHWR	**Ruwais**	**3.52**	**175**	*e*Pn	**Pn**	**08 10 39.6**	**+2.3**
KLNJ	**Kolanjah**	**3.60**	**347**	*e*Pn	**Pn**	**08 10 38.9**	**+0.2**
KLNJ				*e*		08 11 49.8	
	comp=Z,2μm,0.5s						
BANOM	**Banah**	**3.71**	**114**	*e*Pn	**Pn**	**08 10 40.9**	**+1.0**
BANOM	**Banah**	**3.71**	**114**	P	**Pn**	**08 10 40.8**	**+0.9**
BANOM				S	**Sn**	**08 11 23.0**	**-0.4**
NAZ	**Nazwa, Dubai**	**3.75**	**131**	*e*Pn	**Pn**	**08 10 42.0**	**+1.6**
ASUD	**Al Ashush, Dub**	**3.80**	**138**	*e*Pn	**Pn**	**08 10 43.6**	**+2.5**
FAQ	**Al Faqa, Dubai**	**3.87**	**134**	*e*Pn	**Pn**	**08 10 44.4**	**+2.3**
MSFE	**Esma-Masafi**	**3.88**	**122**	*e*Pn	**Pn**	**08 10 43.8**	**+1.6**
MSFE	**Esma-Masafi**	**3.88**	**122**	P	**Pn**	**08 10 42.9**	**+0.7**
MSFE				S	**Sn**	**08 11 26.9**	**-0.7**
MZWR	**Madinat Zayed**	**3.91**	**162**	*e*Pn	**Pn**	**08 10 44.3**	**+1.7**
UOSS	**Minazif**	**4.15**	**127**	*e*Pn	**Pn**	**08 10 48.1**	**+2.1**
UOSS	**Minazif**	**4.15**	**127**	P	**Pn**	**08 10 48.2**	**+2.1**
HATD	**Hatta, Dubai**	**4.18**	**129**	*e*Pn	**Pn**	**08 10 48.4**	**+2.0**
HATD	**Hatta, Dubai**	**4.18**	**129**	P	**Pn**	**08 10 47.6**	**+1.2**
ASHO	**Ashiyiah**	**4.22**	**131**	*e*Pn	**Pn**	**08 10 48.7**	**+1.7**
ASHO	**Ashiyiah**	**4.22**	**131**	P	**Pn**	**08 10 48.2**	**+1.2**
ASHO				S	**Sn**	**08 11 35.2**	**-0.9**
NGRK	**Negar Kerman**	**4.26**	**59**	*e*Pn	**Pn**	**08 10 48.8**	**+0.9**
NGRK				*e*		08 11 42.2	
	comp=E,1μm,0.2s						
IMEH	**Mehriz**	**4.29**	**24**	*e*Pn	**Pn**	**08 10 49.9**	**+1.9**
IRAM	**Ramesheh**	**4.31**	**358**	*e*Pn	**Pn**	**08 10 48.5**	**+0.2**
KRBR	**Kerman**	**4.46**	**55**	*e*Pn	**Pn**	**08 10 52.6**	**+2.1**
ALNE	**Al Ain**	**4.48**	**139**	*e*Pn	**Pn**	**08 10 53.8**	**+3.3**
KHGB	**Koh Gabri**	**4.49**	**49**	*e*Pn	**Pn**	**08 10 52.4**	**+1.6**
KHGB				*e*		08 11 51.6	
	comp=Z,594nm,0.6s						
MZR	**Muzera**	**4.55**	**169**	*e*Pn	**Pn**	**08 10 53.2**	**+1.8**
IBAF	**Bafgh**	**4.86**	**32**	*e*Pn	**Pn**	**08 10 57.4**	**+1.5**
IBAF				*e*		08 10 58.3	
	comp=Z,1μm,0.2s						
SOHO	**SOHO**	**4.91**	**132**	*e*Pn	**Pn**	**08 10 56.8**	**+0.4**
SOHO	**SOHO**	**4.91**	**132**	P	**Pn**	**08 10 58.1**	**+1.7**
CHMN	**Cheshme madani**	**4.99**	**61**	*e*Pn	**Pn**	**08 10 59.4**	**+1.6**
CHMN				*e*		08 12 05.5	
	comp=Z,440nm,0.4s						
ICHK	**Chekchek**	**5.01**	**18**	*e*Pn	**Pn**	**08 10 59.8**	**+1.9**
JASK	**Jask - Hormozg**	**5.03**	**108**	*e*Pn	**Pn**	**08 10 59.3**	**+1.2**
AMIS	**Naft Sefid**	**5.03**	**327**	*e*Pn	**Pn**	**08 10 59.2**	**+1.1**
YZKH	**Yazd**	**5.20**	**20**	*e*Pn	**Pn**	**08 11 00.3**	**-0.1**
NASN	**Na'in**	**5.30**	**2**	*e*Pn	**Pn**	**08 11 02.6**	**+0.6**
UMZA	**Um Al Zommool**	**5.32**	**153**	*e*Pn	**Pn**	**08 11 04.2**	**+2.2**
IPIR	**Pirpir**	**5.37**	**345**	*e*Pn	**Pn**	**08 11 02.6**	**-0.4**
IZEF	**Zefreh**	**5.39**	**358**	*e*Pn	**Pn**	**08 11 03.2**	**0.0**
KBAM	**BAM**	**5.46**	**71**	*e*Pn	**Pn**	**08 11 05.8**	**+1.7**
KBAM				*e*		08 12 14.6	
	comp=Z,382nm,0.7s						
ANAR	**Anarak**	**5.77**	**10**	*e*Pn	**Pn**	**08 11 08.8**	**+0.4**
IKLH	**Kolahrood**	**5.87**	**352**	*e*Pn	**Pn**	**08 11 10.5**	**+0.7**
KRSH	**Karshahi**	**6.47**	**357**	*e*Pn	**Pn**	**08 11 17.4**	**-0.6**
TPRV	**Parvadeh(Tabas**	**6.58**	**32**	*e*Pn	**Pn**	**08 11 19.8**	**+0.4**
ISFB	**Sefidab**	**6.84**	**358**	*e*Pn	**Pn**	**08 11 22.3**	**-0.7**
WSAR	**Wadi Sarin**	**6.95**	**126**	P	**Pn**	**08 11 24.8**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=301,slow=9.0,SNR=12						
WSAR				S	**Sn**	**08 12 38.6**	**-4.6**
	comp=Z,3.8nm,0.5s,baz=177,slow=20,SNR=5.9						
	comp=Z,2.7nm,0.5s						
BSRN	**Basiran**	**7.26**	**51**	*e*Pn	**Pn**	**08 11 27.6**	**-1.2**
TKDS	**Koohdasht(Taba**	**7.27**	**32**	*e*Pn	**Pn**	**08 11 29.2**	**+0.3**
TABS	**Tabas**	**7.30**	**32**	*e*Pn	**Pn**	**08 11 29.2**	**-0.1**
TNSJ	**Nastanj**	**7.34**	**27**	*e*Pn	**Pn**	**08 11 30.2**	**+0.3**
ASAO	**Ashtian**	**7.36**	**344**	*e*Pn	**Pn**	**08 11 32.6**	**+2.3**
CHBR	**Chabahar**	**7.36**	**103**	*e*Pn	**Pn**	**08 11 30.2**	**+0.2**
SHRO	**Shahrood**	**8.97**	**18**	*e*Pn	**Pn**	**08 11 52.7**	**+0.4**
ASF	**Jabal al Asfar**	**14.36**	**293**	P	**Pn**	**08 13 07.1**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=58,slow=19,SNR=3.4						
	comp=Z,3.6nm,0.5s						
KBZ	**Khabaz**	**17.98**	**337**	P	**P**	**08 13 54.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=170,slow=9.7,SNR=4.4						
	comp=Z,2.7nm,0.9s						
BRTR	**Keskin Array B**	**19.87**	**313**	P	**P**	**08 14 14.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=123,slow=14,SNR=5.1						
	comp=Z,1.2nm,0.5s						
AKTO	**Aktyubinsk**	**23.29**	**9**	P	**P**	**08 14 48.7**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=203,slow=9.9,SNR=2.4						
	comp=Z,0.9nm,0.5s						
AAK	**Ala-Archa**	**23.38**	**44**	LR	LR	08 26 22.4	
	comp=Z,40nm,18.9s,baz=297,slow=42						
AKASG	**Malin Array Be**	**29.17**	**329**	P	**P**	**08 15 42.7**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=114,slow=6.5,SNR=4.5						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**30.28**	**43**	P	**P**	**08 15 53.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=239,slow=10.0,SNR=3.9						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**30.39**	**33**	P	**P**	**08 15 54.4**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=233,slow=9.0,SNR=5.0						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**35.48**	**33**	P	**P**	**08 16 38.5**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=240,slow=9.6,SNR=4.8						
	comp=Z,1.8nm,0.5s						
FINES	**FINESS Array B**	**38.30**	**340**	P	**P**	**08 17 02.0**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=134,slow=11,SNR=6.4						
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**43.47**	**332**	P	**P**	**08 17 43.4**	**-2.1**
	comp=Z,0.7nm,0.8s,baz=118,slow=7.6,SNR=2.1						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**89.74**	**354**	P	**P**	**08 22 39.4**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=6.6,slow=5.4,SNR=6.5						
	comp=Z,0.3nm,0.7s						

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*IDC **11** 08:09:53.9±2.5, 53°.54N×87°.74E, h0^{km}, mbtmp3.3/2, ML3.2/2, Error ellipse: s-maj=21.9km s-min=14.5km az=65.0*

*NNC **11** 08:09:54.2±3.7, 53°.48N×87°.66E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=27.4km s-min=14.5km az=67.0, Suspected Mining explosion.*

ISC 11 08:09:55.0±3.4**, 53°.6N**±0°.1×**87°.5E**±0°.2**, h0**^{km}**, n8, σ0^{s}.76**/11**, 8C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**284**	*i*		08 22 03.4	
	0.1nm,0.8s,baz=98,slow=336,SNR=1.2						
ZAA0	**Zalesovo Array**	**1.65**	**284**	⇓Pg	**Pn**	**08 10 25.5**	**+0.3**
	0.4nm,0.2s						
ZAA0				⇑Lg	Lg	08 10 51.9	
	2.9nm,0.3s						
ZALV	**Zalesovo Beam**	**1.65**	**284**	Pn	**Pb**	**08 10 25.8**	**-0.4**
	4.0nm,0.3s,baz=101,slow=14,SNR=19						
ZALV				Lg	Lg	08 10 50.4	
	9.8nm,0.3s,baz=105,slow=27,SNR=20						
KURK	**Kurchatov**	**6.19**	**246**	⇓Sn	**Sn**	**08 12 39.2**	**+0.3**
	1.2nm,0.4s						
KURK				⇑Lg	Lg	08 13 12.7	
	4.0nm,0.8s						
KURBB	**Kurchatov Arra**	**6.29**	**245**	Pn	**Pn**	**08 11 30.1**	**+1.2**
	0.4nm,0.3s,baz=62,slow=14,SNR=16						
KURBB				Sn	**Sn**	**08 12 40.9**	**-0.4**
	0.1nm,0.3s,baz=60,slow=15,SNR=2.2						
KURBB				Lg	Lg	08 13 16.1	
	0.1nm,0.3s,baz=60,slow=36,SNR=2.0						
	1.6nm,0.3s						
KURBB	**Kurchatov Arra**	**6.29**	**245**	⇑Pn	**Pn**	**08 11 29.7**	**+0.8**
	1.7nm,0.3s						
KURBB				⇑Sn	**Sn**	**08 12 40.2**	**-1.2**
	3.0nm,0.5s						
KURBB				⇑Lg	Lg	08 13 14.8	
	4.3nm,0.7s						
MK31	**Makanchi Array**	**7.58**	**208**	⇑Pn	**Pn**	**08 11 46.2**	**-0.5**
	0.2nm,0.3s,baz=29,slow=13,SNR=9.7						
MK31				⇑Sn	**Sn**	**08 13 13.9**	**+0.6**
	0.2nm,0.3s,baz=36,slow=23,SNR=4.3						
MK31				⇑Lg	Lg	08 13 55.5	
	3.4nm,0.9s						
MKAR	**Makanchi Array**	**7.58**	**208**	Pn	**Pn**	**08 11 46.9**	**+0.2**
	0.4nm,0.3s,baz=29,slow=14,SNR=12						
MKAR				Sn	**Sn**	**08 13 13.1**	**-0.2**
	0.2nm,0.3s,baz=32,slow=23,SNR=5.5						
MKAR				Lg	Lg	08 13 54.8	
	0.2nm,0.3s,baz=27,slow=31,SNR=6.0						
	0.5nm,0.3s						

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*WEL **11** 08:45:00, 43°.59S×172°.70E, h7^{km}, ML4.7, Mw4.2, Moment Tensor Solution. s8 Moment tensor: Scale 10^{15} Nm; M_{rr}0.31; $M_{\theta\theta}$1.23; $M_{\phi\phi}$-1.54; $M_{r\theta}$0.96; $M_{\theta\phi}$-1.68; $M_{\phi r}$0.34; Fault plane solution: $M_0$2.41000×10^{15} NP1: ϕ_s161.00000°, δ64.00000°, λ5.00000°. NP2: ϕ_s69.00000°, δ86.00000°, λ154.00000°. Principal axes: T -252.1800, Plg21.0000°, Azm22.0000°; N 229.9000, Plg64.0000°, Azm240.0000°; P 22.2800, Plg15.0000°, Azm118.0000°;*

*NOU **11** 08:45:52.1, 43°.86S×173°.16E, h12^{km}, MLv5.0/8, Off E. Coast of S. Island, N.Z.*

*WEL **11** 08:45:53.7, 44°S±2°×17°3E±°, h7^{km}±2^{km}, M4.7/123, ML4.8/16, MLv4.7/123, Error ellipse: s-maj=0.0km s-min=0.0km az=36.9*

*IDC **11** 08:45:53.6±1.2, 43°.49S×172°.73E, h0^{km}, mb4.1/4, mbtmp4.1/5, ML4.1/1, MS3.5/7, Error ellipse: s-maj=25.7km s-min=24.1km az=136.0*

*NEIC **11** 08:45:53.5±1.6, 43°.66S±0°.04×172°.90E±0°.05, h10^{km}±2^{km}, mb4.4/8, Error ellipse: s-maj=9.2km s-min=3.5km az=318.0*

ISC 11 08:45:54.9±0.8**, 43°.58S**±0°.03×**172°.82E**±0°.03**, h14**^{km}±6^{km}**, n180, σ1^{s}.18**/182**, mb4.3**/7**, MS3.3**/6**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.18**	**222**		**Pg**	**08 45 58.3**	**-0.8**
MQZ	**McQueen's Vall**	**0.18**	**222**	P	**Pg**	**08 45 58.3**	**-0.8**
MQZ				S	**Sg**	**08 46 00.5**	**-1.3**
OKCZ	**Okains Bay**	**0.23**	**130**	P	**Pg**	**08 46 01.2**	**+1.3**
OKCZ				S	**Sg**	**08 46 05.7**	**+2.3**
AKCZ	**Akaroa Harbour**	**0.30**	**167**	P	**Pb**	**08 46 01.8**	**-0.3**
AKCZ				S	**Sb**	**08 46 06.5**	**-0.5**
AMCZ	**Amberley**	**0.42**	**343**	P	**Pb**	**08 46 04.1**	**+0.1**
AMCZ				S	**Sb**	**08 46 11.0**	**+0.8**
RACZ	**Rakaia**	**0.51**	**253**	P	**Pg**	**08 46 04.5**	**-0.5**
OXZ	**Oxford**	**0.62**	**294**	Pg	**Pg**	**08 46 06.1**	**-0.9**
OXZ	**Oxford**	**0.62**	**294**	P	**Pg**	**08 46 06.3**	**-0.7**
GVZ	**Greta Valley S**	**0.63**	**15**	P	**Pn**	**08 46 08.4**	**-1.0**
WACZ	**Wakanui South**	**0.80**	**242**	P	**Pg**	**08 46 10.0**	**-0.3**
LTZ	**Lake Taylor**	**0.89**	**333**	Pg	**Pb**	**08 46 11.9**	**-0.2**
LTZ	**Lake Taylor**	**0.89**	**333**	P	**Pb**	**08 46 11.9**	**-0.2**
MHCZ	**Mount Hutt**	**0.91**	**272**	P	**Pg**	**08 46 11.8**	**-0.6**
ARCZ	**Arundel**	**1.25**	**252**	P	**Pn**	**08 46 16.5**	**-1.5**
KHZ	**Kahutara**	**1.27**	**25**		**Pg**	**08 46 17.7**	**-1.7**
KHZ	**Kahutara**	**1.27**	**25**	P	**Pb**	**08 46 17.5**	**-1.1**
KHZ	**Kahutara**	**1.27**	**25**	P	**Pg**	**08 46 18.1**	**-1.3**
RPZ	**Rata Peaks**	**1.29**	**263**	Pn	**Pn**	**08 46 17.0**	**-1.5**
	887nm,0.3s,baz=116,slow=5.1,SNR=686						
RPZ				LR	LR	08 46 24.3	
	comp=Z,88nm,19.5s,baz=196,slow=25						
RPZ				Sn	**Sb**	**08 46 33.2**	**-2.1**
	2μm,0.3s,baz=32,slow=18,SNR=26						
RPZ	**Rata Peaks**	**1.29**	**263**		**Pn**	**08 46 17.2**	**-1.3**
RPZ	**Rata Peaks**	**1.29**	**263**	P	**Pn**	**08 46 17.2**	**-1.3**
RPZ	**Rata Peaks**	**1.29**	**263**	P	**Pg**	**08 46 19.1**	**-0.6**
INZ	**Inchbonnie**	**1.32**	**310**	P	**Pb**	**08 46 19.1**	**-0.3**
TMZ	**Timaru**	**1.54**	**238**	P	**Pn**	**08 46 20.6**	**-1.3**
WVZ	**Waitaha Valley**	**1.60**	**288**	P	**Pn**	**08 46 22.3**	**-0.4**
THZ	**Tophouse**	**1.81**	**2**		**Pn**	**08 46 25.1**	**-0.6**
THZ	**Tophouse**	**1.81**	**2**	P	**Pn**	**08 46 25.2**	**-0.5**
GCSZ	**Gaunt Creek Bo**	**1.83**	**277**	P	**Pn**	**08 46 25.9**	**0.0**
DSZ	**Denniston Nort**	**1.98**	**337**	P	**Pn**	**08 46 28.2**	**+0.2**
BSWZ	**Blackbirch Sta**	**2.02**	**23**	Pn	**Pn**	**08 46 28.3**	**-0.2**
BSWZ	**Blackbirch Sta**	**2.02**	**23**	P	**Pn**	**08 46 28.5**	**0.0**
LBZ	**Lake Benmore**	**2.06**	**246**	Pn	**Pn**	**08 46 28.3**	**-0.9**
LBZ	**Lake Benmore**	**2.06**	**246**	P	**Pn**	**08 46 28.3**	**-0.9**
CMWZ	**Cape Campbell**	**2.10**	**30**	Pn	**Pn**	**08 46 29.6**	**0.0**
CMWZ	**Cape Campbell**	**2.10**	**30**	P	**Pb**	**08 46 31.2**	**-1.5**
ODZ	**Otahua Downs**	**2.14**	**226**	Pn	**Pn**	**08 46 28.8**	**-1.4**
ODZ	**Otahua Downs**	**2.14**	**226**	P	**Pn**	**08 46 28.8**	**-1.4**
MRNZ	**Matariki Terra**	**2.18**	**359**	P	**Pn**	**08 46 31.0**	**+0.3**
FOZ	**Fox Glacier**	**2.18**	**270**	Pn	**Pn**	**08 46 31.3**	**+0.6**
FOZ	**Fox Glacier**	**2.18**	**270**	P	**Pn**	**08 46 31.0**	**+0.2**
TUWZ	**Tuamarina**	**2.30**	**22**	Pn	**Pn**	**08 46 31.8**	**-0.6**
TUWZ	**Tuamarina**	**2.30**	**22**	P	**Pn**	**08 46 32.1**	**-0.3**
NNZ	**Nelson**	**2.39**	**10**	Pn	**Pn**	**08 46 33.6**	**0.0**
NNZ	**Nelson**	**2.39**	**10**	P	**Pn**	**08 46 33.8**	**+0.1**
TKNZ	**Takaka Hill**	**2.54**	**2**	P	**Pn**	**08 46 36.4**	**+0.7**
TCW	**Tory Channel**	**2.60**	**25**	P	**Pn**	**08 46 35.9**	**-0.6**
BHW	**Baring Head**	**2.65**	**36**	Pn	**Pn**	**08 46 36.5**	**-0.7**
BHW	**Baring Head**	**2.65**	**36**	P	**Pn**	**08 46 36.6**	**-0.5**
SNZO	**South Karori**	**2.66**	**32**	Pn	**Pn**	**08 46 36.6**	**-0.7**
SNZO	**South Karori**	**2.66**	**32**	P	**Pn**	**08 46 36.9**	**-0.4**
PLWZ	**Palliser**	**2.69**	**43**	Pn	**Pn**	**08 46 36.9**	**-1.0**
PLWZ	**Palliser**	**2.69**	**43**	P	**Pn**	**08 46 37.1**	**-0.8**
WEL	**Wellington**	**2.71**	**33**	P	**Pn**	**08 46 37.6**	**-0.4**
QRZ	**Quartz Range**	**2.76**	**355**	Pn	**Pn**	**08 46 39.4**	**+0.7**
QRZ	**Quartz Range**	**2.76**	**355**	P	**Pn**	**08 46 39.3**	**+0.7**
QRZ	**Quartz Range**	**2.76**	**355**	P	**Pn**	**08 46 39.8**	**+1.1**

HHSZ	Highcliff Hill	2.80	214	P	Pn	08 46 37.8	-1.4
MSWZ	Moikau Station	2.81	41	Pn	Pn	08 46 38.3	-1.1
MSWZ	Moikau Station	2.81	41	P	Pn	08 46 38.7	-0.7
DUWZ	D'Urville Isla	2.89	17	P	Pn	08 46 41.2	+0.6
PAWZ	Paruwai Farm	2.92	42	P	Pn	08 46 40.1	-0.9
JCZ	Jackson Bay	2.96	259	P	Pn	08 46 41.1	-0.4
CAW	Cannon Point	2.98	35	P	Pn	08 46 40.9	-0.8
WKZ	Wanaka	3.00	244	Pn	Pn	08 46 41.4	-0.7
WKZ	Wanaka	3.00	244	P	Pn	08 46 41.1	-1.0
EAZ	Earnscleugh	3.01	235	P	Pn	08 46 40.9	-1.2
TRWZ	Traveller	3.04	45	P	Pn	08 46 41.7	-0.9
KIW	Kapiti Island	3.13	31	P	Pn	08 46 43.3	-0.4
OGWZ	Otaki Gorge	3.27	33	P	Pn	08 46 44.9	-0.8
TUZ	Tuapeka	3.29	223	P	Pn	08 46 44.7	-1.2
TMWZ	Te Maipa	3.36	44	P	Pn	08 46 45.9	-1.1
MRZ	Mangatainoka R	3.56	36	P	Pn	08 46 48.5	-1.3
MSZ	Milford Sound	3.69	251	P	Pn	08 46 52.1	+0.7
MLZ	Mavora Lakes	3.81	240	Pn	Pn	08 46 51.8	-1.4
MLZ	Mavora Lakes	3.81	240	P	Pn	08 46 51.9	-1.2
PRWZ	Pori Road	3.83	39	P	Pn	08 46 53.3	0.0
BFZ	Birch Farm	3.86	43	Pn	Pn	08 46 52.1	-1.7
BFZ	Birch Farm	3.86	43	P	Pn	08 46 52.5	-1.3
POWZ	Post Office Ro	3.87	36	P	Pn	08 46 54.6	+0.6
SYZ	Scrubby Hill	3.94	220	P	Pn	08 46 53.9	-1.0
ANWZ	Angora Road	4.14	42	P	Pn	08 46 57.0	-0.6
WAZ	Wanganui	4.15	24	P	Pn	08 46 59.4	+1.5
WHZ	Wether Hill Ro	4.17	235	Pn	Pn	08 46 56.5	-1.7
WHZ	Wether Hill Ro	4.17	235	P	Pn	08 46 56.1	-2.0
TSZ	Takapari Road	4.23	35	P	Pn	08 46 57.4	-1.5
NMEZ	Namu Road	4.24	11	P	Pn	08 47 01.3	+2.3
LREZ	Lake Rotokare	4.28	17	P	Pn	08 47 02.3	+2.6
PREZ	Palmer Road	4.35	14	P	Pn	08 47 02.8	+2.2
PRHZ	Porangahau	4.37	42	P	Pn	08 46 59.2	-1.5
KHEZ	Kahui Hut	4.37	12	P	Pn	08 47 02.9	+1.9
NBEZ	Newall Road No	4.38	11	P	Pn	08 47 01.9	+0.9
NEZ	North Egmont	4.41	13	P	Pn	08 47 02.9	+1.5
PNHZ	Pukenui	4.45	36	P	Pn	08 47 00.4	-1.6
PKE	Pukeiti	4.47	12	P	Pn	08 47 03.5	+1.3
DCZ	Deep Cove	4.47	243	Pn	Pn	08 47 01.3	-0.8
DCZ	Deep Cove	4.47	243	P	Pn	08 47 01.4	-0.8
DREZ	Durham Road	4.51	14	P	Pn	08 47 04.1	+1.4
MHEZ	Mangahewa	4.64	15	P	Pn	08 47 07.0	+2.5
VRZ	Vera Road	4.68	19	P	Pn	08 47 05.9	+0.8
MOVZ	Moawhango	4.71	29	P	Pn	08 47 05.5	-0.1
APZ	The Paps	4.71	225	P	Pn	08 47 04.7	-0.9
WNVZ	Wahianoa	4.73	27	P	Pn	08 47 06.3	+0.3
TRVZ	Turoa	4.74	27	P	Pn	08 47 07.5	+1.4
KRHZ	Kereru	4.75	35	P	Pn	08 47 04.2	-1.9
BHHZ	Black Hill Sta	4.75	32	P	Pn	08 47 05.8	-0.4
WHVZ	Whangaehu Hut	4.77	27	P	Pn	08 47 08.2	+1.7
TUVZ	Tukino	4.80	27	P	Pn	08 47 07.1	+0.1
KAHZ	Kahuranaki	4.85	40	P	Pn	08 47 07.1	-0.4
NGZ	Ngauruhoe	4.87	26	P	Pn	08 47 08.7	+0.9
OTVZ	Oturere	4.90	27	P	Pn	08 47 08.9	+0.6
NNVZ	North Ngauruho	4.91	26	P	Pn	08 47 08.9	+0.4
TWVZ	Taurewa	4.92	25	P	Pn	08 47 08.9	+0.4
WTVZ	West Tongariro	4.92	26	P	Pn	08 47 08.3	-0.2
ETVZ	East Tongariro	4.94	27	P	Pn	08 47 09.2	+0.3
KWHZ	Kaweka Forest	4.95	34	P	Pn	08 47 07.6	-1.3
KRVZ	Karewarewa	4.96	26	P	Pn	08 47 09.4	+0.4
TMVZ	Te Maari	4.96	27	P	Pn	08 47 09.0	0.0
NTVZ	North Tongarir	4.96	27	P	Pn	08 47 09.7	+0.5
MCHZ	McNeill Hill	5.05	37	P	Pn	08 47 09.8	-0.4
PYZ	Puysegur Point	5.07	237	Pn	Pn	08 47 09.2	-1.2
PYZ	Puysegur Point	5.07	237	P	Pn	08 47 09.9	-0.6
KATZ	Kakaramea	5.08	26	P	Pn	08 47 11.4	+0.6
RITZ	Rihia Road	5.13	28	P	Pn	08 47 11.6	+0.3
BKZ	Black Stump Fm	5.20	33	Pn	Pn	08 47 11.3	-1.1
BKZ	Black Stump Fm	5.20	33	P	Pn	08 47 11.2	-1.1
BKZ	Black Stump Fm	5.20	33	P	Pn	08 47 11.5	-0.8
RATZ	Rangitukua	5.21	26	P	Pn	08 47 12.7	+0.3
HIZ	Hauiti	5.29	18		Pn	08 47 13.5	0.0
HIZ	Hauiti	5.29	18	P	Pn	08 47 13.5	0.0
HIZ	Hauiti	5.29	18	P	Pn	08 47 14.2	+0.7
HATZ	Hinemaiaia	5.29	29	P	Pn	08 47 12.8	-0.8
ARHZ	Aropaoanui	5.33	37	P	Pn	08 47 13.6	-0.5
WATZ	Wairara	5.34	25	P	Pn	08 47 14.0	-0.2
NMHZ	Naumai	5.39	35	P	Pn	08 47 15.1	+0.2
MRHZ	Matea Rd	5.46	31	P	Pn	08 47 14.2	-1.6
MTHZ	Maungataniwha	5.61	34	P	Pn	08 47 16.6	-1.3
TLZ	Tolley Road	5.63	22	P	Pn	08 47 18.0	-0.2
WPRZ	Whakapapatarin	5.65	28	P	Pn	08 47 17.5	-1.0
RAHZ	Arahi	5.66	36	P	Pn	08 47 17.5	-1.1
KNZ	Kokohu	5.84	40	P	Pn	08 47 19.0	-1.9
MHGZ	Mahia Peninsul	5.85	43	P	Pn	08 47 20.7	-0.4
PRGZ	Paritu Road	6.01	41	P	Pn	08 47 21.4	-2.1
RIGZ	Rimuhau	6.13	39	P	Pn	08 47 22.9	-2.2
TOZ	Tahuroa Road	6.19	20	P	Pn	08 47 25.3	-0.4
URZ	Urewera	6.23	33	Pn	Pn	08 47 24.2	-2.1
	4.0nm,0.3s,baz=205,slow=5.0,SNR=15						
URZ				Sn	Sn	08 48 33.2	-4.1
	3.7nm,0.3s,baz=232,slow=18,SNR=1.3						
URZ				LR	LR	08 50 27.4	
	comp=Z,363nm,20.2s,baz=211,slow=44						
	7.9nm,0.3s						
URZ	Urewera	6.23	33		Pn	08 47 24.5	-1.8
URZ	Urewera	6.23	33	P	Pn	08 47 24.3	-2.0
URZ	Urewera	6.23	33	P	Pn	08 47 24.6	-1.8
MWZ	Matawai	6.33	36	P	Pn	08 47 25.4	-2.5
TGRZ	Tauranga	6.40	25	P	Pn	08 47 28.3	-0.4
CNGZ	Carnagh Statio	6.52	41	P	Pn	08 47 28.5	-1.9
AWAZ	Awhitu Peninsu	6.65	13	P	Pn	08 47 32.7	+0.5
TWGZ	Tauwhareparae	6.66	38	P	Pn	08 47 31.0	-1.3
WTAZ	Waiatarua	6.77	12	P	Pn	08 47 35.3	+1.4
ETAZ	East Tamaki Re	6.81	14	P	Pn	08 47 34.6	+0.3
PUZ	Puketiti	6.87	39	P	Pn	08 47 34.0	-1.2
PKGZ	Pakihiroa	6.94	37	P	Pn	08 47 34.3	-2.0
MBAZ	Motutapu North	6.98	14	P	Pn	08 47 37.6	+0.8
WIAZ	Waiheke Island	7.00	15	P	Pn	08 47 37.9	+0.9
WMGZ	Waiomatatini S	7.15	38	P	Pn	08 47 36.5	-2.6
OUZ	Omahuta	8.37	4	Pn	Pn	08 47 56.7	+1.0
OUZ	Omahuta	8.37	4	P	Pn	08 47 57.4	+1.7
DZM	Mont Dzumac	22.09	344	P	P	08 50 50.7	+1.0
	2.4nm,0.8s,baz=163,slow=11,SNR=2.8						
DZM				LR	LR	08 58 43.5	
	comp=Z,137nm,18.6s,baz=230,slow=35						
	2.4nm,0.8s						
KOUNC	Koumac, New Ca	24.04	340	P	P	08 51 12.1	+2.5
KOUNC				IAmb	IAmb	08 51 12.9	
	comp=Z,8.8nm,0.9s						
STKA	Stephens Creek	27.16	285	LR	LR	09 02 26.0	
	comp=Z,54nm,18.1s,baz=201,slow=37						
CTA	Charters Tower	32.27	308	LR	LR	09 03 44.4	
	comp=Z,39nm,20.9s,baz=96,slow=33						
VNDA	Vanda	34.34	184	LR	LR	09 03 59.2	
	comp=Z,51nm,19.9s,baz=290,slow=32						
ASAR	Alice Springs	37.56	289	P	P	08 53 09.1	+0.2
	comp=Z,3.0nm,0.7s,baz=132,slow=7.6,SNR=26						
ASAR				LR	LR	09 07 34.3	
	comp=Z,56nm,18.4s,baz=150,slow=35						
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	37.56	289	P	P	08 53 10.0	+1.2
WR0	Warramunga Arr	39.67	294	P	P	08 53 26.4	-0.1
WB2	Warramunga Arr	39.80	294	P	P	08 53 27.4	-0.3
WB2				IAmb	IAmb	08 53 31.2	
	comp=Z,8.9nm,1.0s						
WRAB	Tennant Creek	39.81	294	P	P	08 53 27.7	0.0
WRAB				IAmb	IAmb	08 53 31.5	
	comp=Z,6.5nm,0.8s						
WRA	Warramunga Arr	39.81	294	P	P	08 53 28.1	+0.3
	comp=Z,3.9nm,0.6s,baz=133,slow=8.0,SNR=31						
	comp=Z,3.9nm,0.6s						
WRA	Warramunga Arr	39.81	294	P	P	08 53 27.8	0.0
WB0	Warramunga Arr	39.90	294	P	P	08 53 28.5	0.0
QSPA	South Pole Qui	46.55	180	P	P	08 54 23.9	+2.0
	comp=Z,2.3nm,0.9s,baz=46,slow=2.9,SNR=14						
	comp=Z,2.3nm,0.9s						
QSPA	South Pole Qui	46.55	180	P	P	08 54 24.3	+2.4
QSPA				IAmb	IAmb	08 54 29.7	
	comp=Z,2.8nm,0.8s						
LEM	Lembang	67.43	283	LR	LR	09 27 03.8	
	comp=Z,97nm,19.1s,baz=28,slow=37						
HHC	Hu-ho-hao-te	100.51	317	eP	Pdif	08 59 42.3	+0.7
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
YKA	Yellowknife Ar	120.49	31	PKP	PKiKP	09 04 45.2	+0.3
	comp=Z,0.2nm,0.7s,baz=255,slow=1.7,SNR=4.8						
ARCES	ARCESS Array B	149.11	338	PKPbc	PKPbc	09 05 41.2	-0.2
	comp=Z,1.1nm,0.6s,baz=27,slow=3.0,SNR=1.8						

DMN ***11*** *08:52:46.5±0.2, 28°.01N×84°.68E, h10^{km}, Ml4.5/2, Error ellipse: s-maj=10.4km s-min=2.2km az=20.0*

NDI ***11*** *08:52:46.5±2.6, 27°.84N×84°.59E, h10^{km}±14^{km}, ML4.2, mb4.5(NEIC)*

BJI ***11*** *08:52:47.8±0.0, 28°.11N×84°.67E, h33^{km}, mb4.4/30, mB4.5/13, Ms4.0/10, Ms7 3.9/9*

NEIC ***11*** *08:52:47.6±1.3, 28°.05N±0°.08×84°.56E±0°.09, h16^{km}±4^{km}, mb4.5/38, Error ellipse: s-maj=12.6km s-min=10.3km az=224.0*

MOS ***11*** *08:52:48.4±0.9, 28°.08N×84°.64E, h37^{km}, mb4.9/20, Error ellipse: s-maj=8.7km s-min=5.1km az=109.1*

IDC ***11*** *08:52:50.9±2.6, 28°.04N×84°.66E, h46^{km}±25^{km}, mb4.1/36, mbtmp4.3/40, ML4.4/3, MS3.2/2, Error ellipse: s-maj=14.9km s-min=9.6km az=40.0*

ISC 11 08:52:46.3±0.8, **27°.96N**±0°.04×**84°.60E**±0°.02, **h16**^{km}±5^{km}, **n191**, **σ1^{s}60**/199, **mb4.5**/60, **MS3.3**/7, **10C-11D**, **Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GKN	Gorkha	0.05	42	ePg	Pg	08 52 48.9	-0.6
GKN	Gorkha	0.05	42	ePg	Pg	08 52 48.9	-0.6
DMN	Daman	0.57	128	ePg	Pg	08 52 57.7	-0.1
DMN				eSg	Sg	08 53 04.6	-0.9
	4µm,0.3s						
KKN	Kakani	0.63	106	ePg	Pg	08 52 58.1	-0.7
KKN	Kakani	0.63	106	ePg	Pg	08 52 58.3	-0.5
KKN				eSg	Sg	08 53 04.2	-3.0
	3µm,0.2s						
PKI	Pulchoki	0.82	118	ePg	Pg	08 53 02.1	-0.3
PKI				eSg	Sg	08 53 11.4	-1.8
	2µm,0.3s						
DANN	Dangsing	0.83	298	ePg	Pb	08 53 03.1	+0.5
DANN	Dangsing	0.83	298	ePg	Pb	08 53 03.1	+0.5
DANN				eSg	Sn	08 53 15.3	-0.6
	1µm,0.2s						
KOLN	Koldanda	0.90	258	ePg	Pn	08 53 05.3	+0.7
PYUN	Piuthan	1.43	276	ePg	Pg	08 53 14.6	+0.8
JIRN	Jiri	1.44	102	ePg	Pb	08 53 13.2	+0.1
JIRN				eSg	Sn	08 53 30.8	-0.3
RAMN	Ramite	2.05	119	ePg	Pb	08 53 22.8	-0.5
RAMN	Ramite	2.05	119	ePg	Pb	08 53 23.0	-0.3
RAMN				eSg	Sb	08 53 49.7	+1.0
ODAN	Odare	2.72	113	ePg	Pb	08 53 32.6	-2.1
ODAN				eSg	Sb	08 54 09.8	+1.9
	496nm,0.3s						
GTK	Tadong	3.61	99	eP	Pn	08 53 44.5	+2.6
GTK				eS	Sn	08 54 26.7	+2.5
GTK				IAML		08 54 36.0	
	comp=N,770nm,0.3s						
BOK	Bokaro	4.31	164	eP	Pn	08 53 53.3	+2.0
TURI	Tura	5.66	114	eP	Pn	08 54 10.4	+0.5
TURI				eS	Sn	08 55 10.1	-4.6
TURI				IAML		08 55 13.2	
	comp=E,727nm,0.4s						
LSA	Lhasa	6.00	72	Pn	Pn	08 54 16.0	+1.0
LSA	Lhasa	6.00	72	P	Pn	08 54 16.0	+1.0
LSA	Lhasa	6.00	72	P	Pn	08 54 16.6	+1.6
LSA				pmax	pmax		
	comp=E,10.0nm,0.3s						
LSA				LR	LR		
	comp=E,370nm,7.0s						
LSA				LR	LR		
	comp=E,380nm,7.3s						
LSA				LR	LR		
	comp=E,530nm,8.8s						
DDI	Dehra Dun	6.18	294	eP	Pn	08 54 19.8	+2.7
JBP	Jabalpur	6.34	222	ex	Pn	08 54 21.8	+2.6
JBP				⇓eP	Pn	08 54 21.8	+2.6
JBP				ex	Sn	08 55 33.0	+1.7
NDI	New Delhi	6.54	278	eP	Pn	08 54 23.0	+1.0
NDI				eS	Sg	08 56 15.0	-1.4
GUWA	GUWAHATI	6.57	104	eP	Pn	08 54 23.6	+1.3
GUWA				eS	Sn	08 55 35.8	-1.1
GUWA				IAML		08 55 40.5	
	comp=N,220nm,0.1s						
SHL	Shillong	6.94	108	eP	Pn	08 54 27.7	+0.1
SHL				IAML		08 55 46.4	
	comp=N,248nm,0.4s						
SMLA	Simla	7.20	298	eP	Pn	08 54 32.9	+1.9
SMLA				eS	Sn	08 55 52.3	-0.1
SMLA				IAML		08 55 58.7	
	comp=N,136nm,0.4s						
SMLA				IAML		08 56 02.5	
	comp=E,267nm,0.5s						
TEZP	TEZPUR	7.42	99	eP	Pn	08 54 33.4	-0.7
BHPL	Bhopal	8.00	236	eP	Pn	08 54 41.5	-0.5
BHPL				eS	Sn	08 56 05.7	-6.6
BRDH	Bariadhala	8.27	128	P	Pn	08 54 47.8	+2.2
	comp=E,0.7nm,0.4s,baz=0.0,slow=20,SNR=7.9						
AZL	Aizawl	8.42	118	eP	Pn	08 54 47.8	0.0
KOHI	KOHIMA	8.79	103	eP	Pn	08 54 53.6	+0.7
KOHI				ex	Sn	08 56 30.2	-1.6
AJM	Ajmer	8.98	263	eP	Pn	08 54 54.0	-1.5
AJM				i S	Sn	08 56 33.0	-3.4
CHCP	Chirah Chowk	11.27	303	P	Pn	08 55 27.0	+0.1
NIL	Nilore	11.28	303	Pn	Pn	08 55 26.5	-0.4
NIL	Nilore	11.28	303	P	Pn	08 55 26.5	-0.4
HYBB	Hyderabad (bro	11.88	209	eP	Pn	08 55 34.1	-1.2
HYBB				e		08 57 40.0	
HYB	Hyderabad	11.88	209	eP	Pn	08 55 34.1	-1.2
HYB				IAmb	IAmb	08 55 40.1	
	comp=Z,29nm,0.5s						
GOMU	GeErMu	11.93	44	P	Pn	08 55 37.4	+1.2
GOMU				pP		08 55 41.4	
GOMU				sP		08 55 44.0	
GOMU				S	Sn	08 57 47.8	-1.4
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,33nm,6.6s						
GOMU				LR	LR		
	comp=Z,250nm,11.7s						
GOMU				LR	LR		
	comp=Z,220nm,11.8s						
GOMU				LR	LR		
	comp=Z,290nm,10.3s						
THW	Thamme Wali	12.10	297	P	Pn	08 55 37.0	-1.1
THW				S	Sn	08 57 46.0	-6.7
CEP	Cherat	12.36	301	P	Pn	08 55 39.6	-2.2
CEP				S	Sn	08 57 53.0	-6.3
KSH	Kashi	13.56	330	P	Pn	08 55 55.6	-2.6
KSH				pP	P	08 56 03.4	-3.9
KSH				PP	PnPn	08 56 07.5	+1.3
KSH				S	Sn	08 58 21.3	-7.4
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
POO	Poona	13.62	229	eP	Pn	08 55 57.0	-2.0
	comp=Z,20nm,0.2s						
POO				eS	Sn	08 58 20.0	-10
KBL	Kabul	14.82	300	Pn	Pn	08 56 15.3	-0.3
KBL	Kabul	14.82	300	P	Pn	08 56 15.3	-0.3
PZH	PanZhiHua	15.32	91	P	P	08 56 27.7	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,3.6s						
CHTO	Chiang Mai	16.00	122		Pn	08 56 32.3	+1.4
CHTO				IAmb	IAmb	08 56 35.2	
	comp=Z,20nm,1.1s						
CHTO	Chiang Mai	16.00	122	P	Pn	08 56 32.3	+1.4
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ	Urumqi	16.02	8	⇑P	P	08 56 36.6	+2.1
WMQ				pP	sP	08 56 40.1	-1.2
WMQ				sP	pP	08 56 42.4	+3.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
BOOM	Boomskoye usch	16.11	336	Pn	Pn	08 56 31.6	-0.7
BOOM	Boomskoye usch	16.11	336	P	Pn	08 56 31.7	-0.7
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GAR	Garm	16.20	316		Pn	08 56 31.6	-1.8
GAR				IAmb	IAmb	08 56 38.5	
	comp=Z,33nm,0.6s						
CM31	Chiang Mai Arr	16.22	123	Pn	Pn	08 56 35.0	+1.3
CM31				IAmb	IAmb	08 56 39.7	
	comp=Z,18nm,0.7s						
CMAR	Chiang Mai Arr	16.22	123	P	Pn	08 56 35.0	+1.3
	comp=Z,1.0nm,0.3s,baz=306,slow=12,SNR=30						
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	16.22	123	P	Pn	08 56 35.0	+1.3
BTK	Batken	16.59	320	Pn	Pn	08 56 36.6	-1.8
BTK				IAmb	IAmb	08 56 43.6	
	comp=Z,26nm,0.6s						
BTK	Batken	16.59	320	P	Pn	08 56 36.6	-1.8
BTK				pmax	pmax		
	comp=Z,26nm,0.6s						
CHGR	Chuyangaron	16.72	314	Pn	Pn	08 56 39.3	-0.8
CHGR				IAmb	IAmb	08 56 48.6	
	comp=Z,52nm,0.7s						
AAK	Ala-Archa	16.78	333	P	Pn	08 56 40.8	-0.1
	comp=Z,0.4nm,0.3s,baz=187,slow=4.0,SNR=9.7						
	comp=Z,5.3nm,0.8s						
AAK	Ala-Archa	16.78	333		Pn	08 56 40.3	-0.6
AAK	Ala-Archa	16.78	333	deP	Pn	08 56 41.1	+0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA	Gaotai	17.02	44	⇓P	P	08 56 47.4	+1.7
GTA				pP	sP	08 56 53.0	+0.4
GTA				sP	pP	08 56 56.1	+5.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LZH	Lanzhou	18.20	59	eP	P	08 57 02.1	+3.3
LZH				pP	sP	08 57 07.5	+1.9
LZH				sP	pP	08 57 10.6	+7.1
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
MK31	Makanchi Array	18.89	355	P	P	08 57 06.3	+0.2
MK31	Makanchi Array	18.89	355	P	P	08 57 06.3	+0.2
MK31				pmax	pmax		
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	18.89	355	P	P	08 57 06.0	-0.1
	comp=Z,1.9nm,0.3s,baz=169,slow=11,SNR=72						
	comp=Z,8.1nm,0.5s						
MKAR	Makanchi Array	18.89	355	P	P	08 57 06.3	+0.2
KK31	Karatay Array	18.92	327	P	P	08 57 05.1	-1.4
KK31	Karatay Array	18.92	327	i P	P	08 57 04.9	-1.6
KKAR	Karatay Array	18.92	327	P	P	08 57 05.0	-1.5
KKAR	Karatay Array	18.92	327	P	P	08 57 05.0	-1.5
MAKZ	Makanchi	18.92	354	P	P	08 57 06.7	+0.2
MAKZ				IAmb	IAmb	08 57 09.2	
	comp=Z,14nm,0.6s						
MAKZ	Makanchi	18.92	354	P	P	08 57 06.7	+0.2
MAKZ				pmax	pmax		
	comp=Z,14nm,0.6s						
GYA	Guiyang	19.68	89	⇑P	Pn	08 57 16.3	-0.2
GYA				pmax	pmax		
	comp=Z,24nm,0.7s						
HRA	Herat	20.15	294	P	P	08 57 21.1	+0.9
PALK	Pallekele	20.91	191	P	Pn	08 57 33.3	+2.4
	comp=Z,2.8nm,0.6s,baz=278,slow=7.1,SNR=1.7						
PALK				LR	LR	09 05 24.4	
	comp=Z,56nm,18.9s,baz=127,slow=36						
PALK	Pallekele	20.91	191	IAmb	IAmb	08 57 53.0	
	comp=Z,8.0nm,0.8s						
PALK	Pallekele	20.91	191	P	Pn	08 57 33.3	+2.5
PALK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN	Xi'an	21.69	68	⇑P	P	08 57 35.6	-1.0
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN				pmax	pmax		
	comp=Z,99nm,5.2s						
XAN				LR	LR		
	comp=Z,850nm,11.4s						
ENH	Enshi	21.86	78	P	P	08 57 38.6	+0.1
ENH				IAmb	IAmb	08 57 42.8	
	comp=Z,16nm,0.7s						
OTUK	Ortayu	22.37	338	P	P	08 57 44.4	+0.6
KURBB	Kurchatov Arra	23.09	350	P	P	08 57 51.6	+0.3
	comp=Z,9.5nm,0.8s,baz=175,slow=9.5,SNR=53						
KURBB				PcP	PcP	09 01 40.4	+0.5
	comp=Z,0.7nm,0.6s,baz=198,slow=1.5,SNR=2.3						
	comp=Z,9.5nm,0.8s						
KURK	Kurchatov	23.17	350	P	P	08 57 52.5	+0.4
KURK				IAmb	IAmb	08 57 54.7	
	comp=Z,27nm,0.8s						
KURK	Kurchatov	23.17	350		PcP	09 01 40.4	+0.3
KURK	Kurchatov	23.17	350	c iP	P	08 57 53.5	+1.4
KURK				pmax	pmax		
	comp=Z,30nm,0.8s						
WSAR	Wadi Sarin	23.86	265	LR	LR	09 08 46.4	
	comp=Z,48nm,18.1s,baz=116,slow=40						
GEYT	Alibeck	24.27	301	P	P	08 58 04.8	+1.9
	comp=Z,2.4nm,0.5s,baz=104,slow=6.1,SNR=2.8						
	comp=Z,2.4nm,0.5s						
GEYT	Alibeck	24.27	301	IAmb	IAmb	08 58 11.1	
	comp=Z,6.2nm,0.9s						
ZALV	Zalesovo Beam	25.96	0	P	P	08 58 18.8	+0.8
	comp=Z,14nm,0.6s,baz=185,slow=9.5,SNR=43						
	comp=Z,14nm,0.6s						
SONM	Songino Array	26.10	35	P	P	08 58 21.1	+1.6
	comp=Z,3.6nm,0.5s,baz=223,slow=9.8,SNR=14						
	comp=Z,3.6nm,0.5s						
SONM	Songino Array	26.10	35	P	P	08 58 20.3	+0.8
SONM	Songino Array	26.10	35	P	P	08 58 20.3	+0.8
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	26.45	35	P	P	08 58 23.0	+0.2
ULN				IAmb	IAmb	08 58 26.9	
	comp=Z,8.1nm,0.8s						
ULN	Ulaanbaatar	26.45	35	ceP	P	08 58 23.7	+1.0
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
HNS	HongShan	26.94	62	⇓P	P	08 58 28.3	+1.3
HNS				eS	S	09 03 03.2	-0.3
HNS				LR	LR		
	comp=Z,680nm,11.5s						
HNS				LR	LR		
	comp=Z,540nm,13.7s						
HNS				LR	LR		
	comp=Z,420nm,12.2s						
BVAR	Borovoye Array	27.16	341	P	P	08 58 28.8	-0.1
	comp=Z,0.8nm,0.3s						
	comp=Z,0.8nm,0.3s						
BRVK	Borovoye	27.22	341	⇑eP	P	08 58 31.0	+1.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AB31	Akbulak array	28.46	325	eP	P	08 58 41.2	+0.6
ABKAR	Akbulak array	28.46	325	P	P	08 58 41.2	+0.6
PSI	Prapat	28.52	149	P	P	08 58 43.8	+2.4
	comp=Z,1.9nm,0.3s,baz=53,slow=12,SNR=1.5						
	comp=Z,1.9nm,0.3s						
AKTO	Aktyubinsk	30.18	325	P	P	08 58 56.0	+0.3
	comp=Z,1.8nm,0.5s,baz=108,slow=9.4,SNR=6.6						
	comp=Z,1.8nm,0.5s						
ARU	Arti	33.96	334	P	P	08 59 28.7	-0.2
ARU	Arti	33.96	334	d iP	P	08 59 29.6	+0.7
ARU						09 00 38.0	
ARU				S	S	09 04 50.1	-3.0
ARU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZEI	Tsey	35.96	305	eP	P	08 59 48.1	+1.5
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BOD	Bodaibo	36.25	26	eP	P	08 59 49.6	+1.0
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2	Changchun	36.28	53	eP	P	08 59 47.6	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	37.39	64	P	P	08 59 58.2	-0.3
	comp=Z,1.7nm,0.5s,baz=272,slow=8.3,SNR=8.6						
	comp=Z,1.7nm,0.5s						
JOW	Kunigami	38.64	81	P	P	09 00 08.4	-0.8
	comp=Z,11nm,0.7s,baz=196,slow=7.4,SNR=1.9						
	comp=Z,11nm,0.7s						
ZEA	Zeya	40.39	38	eP	P	09 00 25.1	+1.7
ZEA				MLR	MLR		
	comp=N,200nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,9.0s						
USRK	Ussuriysk Ar.	41.00	54	P	P	09 00 28.6	0.0
	comp=Z,2.0nm,0.5s,baz=283,slow=4.2,SNR=3.1						
	comp=Z,2.0nm,0.5s						
ASF	Jabal al Asfar	41.23	288	P	P	09 00 32.7	+1.8
	comp=Z,3.9nm,0.7s,baz=71,slow=5.4,SNR=4.8						
	comp=Z,3.9nm,0.7s						
NRIK	Noril'sk	41.45	2	P	P	09 00 32.8	+0.9
	comp=Z,4.1nm,0.6s,baz=176,slow=6.9,SNR=14						
	comp=Z,4.1nm,0.6s						
NRIK	Noril'sk	41.45	2	P	P	09 00 32.4	+0.5
NRIK				IAmb	IAmb	09 00 34.0	
	comp=Z,6.9nm,0.9s						
NRIK	Noril'sk	41.45	2	P	P	09 00 32.4	+0.5
NRIK				pmax	pmax		

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         comp=Z,7.0nm,0.9s
KLR    Kul'dur            41.71  46⇓eP      P        09 00 33.9  -0.5
KLR                                 pmax    pmax
         comp=Z,1.0nm,0.9s
BRTR   Keskin Array B     43.40 299  P      P        09 00 49.2 +0.8
         comp=Z,1.8nm,0.8s,baz=86,slow=10,SNR=5.9
         comp=Z,1.8nm,0.8s
BRTR   Keskin Array B     43.40 299ceP      P        09 00 50.0 +1.6
BRTR                                pmax    pmax
         comp=Z,3.0nm,0.9s
MOS    Moscow             43.44 323 eP      P        09 00 52.4 +4.0
MOS                                 e                09 03 11.4
OBN    Obninsk            43.81 322 eP      P        09 00 51.8 +0.5
OBN                                 pmax    pmax
         comp=Z,23nm,1.0s
OBN                                 MLR     MLR
         comp=Z,26nm,16.0s
KLMR   Klimovskoe         44.56 330 eP      P        09 00 56.4  -0.8
KLMR                                pmax    pmax
         comp=Z,10.0nm,1.0s
KLMR   Klimovskoe         44.56 330 eP      P        09 00 56.5  -0.8
KLMR                                AMP              09 01 03.0
         comp=Z,10.0nm,1.0s
YAK    Yakutsk            45.11  28 eP      P        09 01 02.2 +0.6
YAK                                 pmax    pmax
         comp=Z,19nm,0.9s
YAK                                 pmax    pmax
         comp=N,3.0nm,0.9s
YAK                                 pmax    pmax
         comp=E,3.0nm,0.9s
AKASG  Malin Array Be     47.19 314  P      P        09 01 17.7  -0.4
         comp=E,3.7nm,0.6s,baz=83,slow=7.2,SNR=31
         comp=E,3.7nm,0.6s
AKASG  Malin Array Be     47.19 314  IAmb   IAmb     09 01 19.1
         comp=Z,2.7nm,1.1s
AKBB   Malin Array Si     47.19 314deP      P        09 01 18.3 +0.2
MNK    Minsk              48.54 319 i P     P        09 01 29.9 +1.3
MNK                                 i                09 03 22.9
MNK                                 i PPP   PPP      09 04 12.6
MNK                                 i S     S        09 08 28.6  -0.7
MNK                                 i SSS   SSS      09 13 14.2
MNK                                 pmax    pmax
         comp=Z,18nm,0.8s
MNK                                 pmax    pmax
         comp=E,3.0nm,0.8s
MNK                                 pmax    pmax
         comp=N,38nm,1.0s
MNK                                 MLR     MLR
         comp=Z,105nm,16.0s
MNK                                 MLR     MLR
         comp=N,16nm,19.0s
MNK                                 MLR     MLR
         comp=E,3.0nm,17.0s
MNK    Minsk              48.54 319 i LRM   MLR      09 23 55.7
         comp=E,3.0nm,17.2s
MNK    Minsk              48.54 319 i P     P        09 01 29.9 +1.3
         comp=Z,18nm,0.8s,baz=99
MNK    Minsk              48.54 319 i P     P        09 01 29.9 +1.3
         comp=N,38nm,1.0s
MNK    Minsk              48.54 319 i P     P        09 01 29.9 +1.3
         comp=E,3.0nm,0.8s
MNK    Minsk              48.54 319 i PP    PP       09 03 23.0 +1.7
MNK    Minsk              48.54 319 i PPP   PPP      09 04 12.6
MNK    Minsk              48.54 319 i S     S        09 08 28.7  -0.7
MNK    Minsk              48.54 319 i SS    SS       09 12 01.3 +2.3
MNK    Minsk              48.54 319 i SSS   SSS      09 13 14.2
MNK    Minsk              48.54 319 i LR    LR       09 21 19.8
MNK    Minsk              48.54 319 i LRM   MLR      09 23 37.8
         comp=Z,105nm,16.0s
MNK    Minsk              48.54 319 i LRM   MLR      09 23 49.9
         comp=N,16nm,18.5s
MLR    Muntele Rosu       49.06 307  P      P        09 01 34.3 +1.4
         comp=N,12nm,0.8s,baz=126,slow=1.6,SNR=20
         comp=N,12nm,0.8s
MLR    Muntele Rosu       49.06 307  P      P        09 01 34.2 +1.3
MLR    Muntele Rosu       49.06 307  P      P        09 01 34.2 +1.3
MLR                                 pmax    pmax
         comp=Z,17nm,0.9s
NACGM  Naroch             49.24 320⇑eP      P        09 01 18.9   -15
         baz=99
BURAR  Bucovina Array     49.59 310  P      P        09 01 37.1 +0.3
BURAR                               IAmb    IAmb     09 01 38.9
         comp=Z,4.1nm,0.8s
BUR08  Bucovina Ar. S     49.60 310  IAmb   IAmb     09 01 43.3
         comp=Z,4.1nm,0.8s
TIXI   Tiksi              49.98  17  P      P        09 01 39.5 +0.2
TIXI   Tiksi              49.98  17  P      P        09 01 39.5 +0.2
TIXI                                pmax    pmax
         comp=Z,13nm,0.8s
JCJ    Chichijima         50.66  77  P      P        09 01 45.9 +0.8
IDI    Anoyia             50.71 294  P      P        09 01 45.8 +0.3
         comp=Z,5.6nm,0.8s,baz=50,slow=16,SNR=3.5
         comp=Z,5.6nm,0.8s
IDI    Anoyia             50.71 294  IAmb   IAmb     09 01 50.5
         comp=Z,4.6nm,0.7s
FINES  FINESS Array B     50.87 328  P      P        09 01 46.6 +0.4
         comp=Z,5.3nm,0.7s,baz=119,slow=7.6,SNR=17
         comp=Z,5.3nm,0.7s
VTS    Vitosha            51.12 304  P      P        09 01 48.7 +0.1
VTS                                 IAmb    IAmb     09 01 54.5
         comp=Z,5.4nm,0.8s
VTS    Vitosha            51.12 304  P      P        09 01 48.7 +0.1
VTS                                 pmax    pmax
         comp=Z,5.0nm,0.8s
ARCES  ARCESS Array B     53.38 338  P      P        09 02 05.2 +0.4
         comp=Z,5.1nm,0.7s,baz=45,slow=3.6,SNR=21
         comp=Z,5.1nm,0.7s
ARCES  ARCESS Array B     53.38 338  IAmb   IAmb     09 02 06.7
         comp=Z,7.7nm,0.9s
ARCES  ARCESS Array B     53.38 338  P      P        09 02 05.3 +0.4
ARCES                               pmax    pmax
         comp=Z,8.0nm,1.0s
MA2    Magadan            54.31  35⇓eP      P        09 02 12.4 +0.7
MA2                                 pmax    pmax
         comp=Z,8.0nm,1.0s
VRAC   Vranov             55.28 312  P      P        09 02 19.0   0.0
         comp=Z,3.5nm,0.7s,baz=97,slow=5.3,SNR=2.3
         comp=Z,3.5nm,0.7s
VRAC   Vranov             55.28 312  P      P        09 02 19.0   0.0
SEY    Seymchan           55.41  31⇓eP      P        09 02 20.8 +1.2
SEY                                 pmax    pmax
         comp=Z,7.0nm,1.4s
HFS    Hagfors            56.72 326  P      P        09 02 29.1   0.0
         comp=Z,3.3nm,0.8s,baz=91,slow=8.3,SNR=6.5
         comp=Z,3.3nm,0.8s
GERES  GERESS Array B     57.22 312  P      P        09 02 33.3 +0.4
         comp=Z,0.8nm,0.6s,baz=74,slow=10,SNR=2.9
         comp=Z,0.8nm,0.6s
KHC    Kasperske Hory     57.27 312⇑iP      P        09 02 34.2 +1.0
KHC                                 pmax    pmax
         comp=Z,3.0nm,0.9s
NB2    NORSAR Subarra     57.95 327  P      P        09 02 37.6  -0.2
         comp=Z,0.6nm,0.5s,baz=88,slow=7.4
NOA    NORSAR Array B     57.95 327  P      P        09 02 37.0  -0.8
         comp=Z,0.9nm,0.6s,baz=89,slow=7.1,SNR=4.5
         comp=Z,0.9nm,0.6s
PETK   Petropavlovsk-     58.19  43  P      P        09 02 38.8  -0.7
         comp=Z,1.3nm,0.9s,baz=351,slow=3.0,SNR=2.2
         comp=Z,1.3nm,0.9s
SPITS  Spitsbergen Ar     58.39 347  P      P        09 02 41.3 +0.7
         comp=Z,2.3nm,0.4s,baz=104,slow=10,SNR=12
         comp=Z,2.3nm,0.4s
BILL   Bilibino           61.29  25 i P     P        09 02 59.7  -0.9
BILL                                pmax    pmax
         comp=Z,4.0nm,1.0s
KEST   Kesra              62.97 298  P      P        09 03 13.4 +0.9
         comp=Z,6.8nm,0.8s,baz=85,slow=5.4,SNR=4.6
         comp=Z,6.8nm,0.8s
EKA    Eskdalemuir Ar     66.26 321  P      P        09 03 33.6   0.0
         comp=Z,1.7nm,0.6s,baz=83,slow=6.8,SNR=5.2
         comp=Z,1.7nm,0.6s
WRA    Warramunga Arr     67.69 129  P      P        09 03 43.7 +0.5
         comp=Z,3.8nm,0.8s,baz=323,slow=6.5,SNR=43
         comp=Z,3.8nm,0.8s
WRAB   Tennant Creek      67.69 129⇑eP      P        09 03 43.8 +0.6
WRAB                                pmax    pmax
         comp=Z,19nm,1.7s
AS31   Alice Springs      69.97 132  P      P        09 03 56.5  -0.8
AS31                                IAmb    IAmb     09 04 02.7
         comp=Z,1.6nm,0.8s
ASAR   Alice Springs      69.97 132  P      P        09 03 57.9 +0.6
         comp=Z,4.1nm,0.7s,baz=313,slow=6.2,SNR=42
         comp=Z,4.1nm,0.7s
PMG    Port Moresby       70.95 112⇓eP      P        09 04 03.0  -0.4
PMG                                 pmax    pmax
         comp=Z,20nm,1.1s
ESDC   Sonseca Array      71.71 306  P      P        09 04 08.0 +0.1
         comp=Z,1.4nm,0.8s,baz=56,slow=7.1,SNR=6.1
         comp=Z,1.4nm,0.8s
SUMG   Summit             72.58 345 i P     P        09 04 10.8  -2.1
BMAR   Burnt Mountain     78.05  17  P      P        09 04 45.1 +1.1
CAST   Castle Rocks       78.58  23  P      P        09 04 48.0 +1.1
COLA   College            78.95  20⇓eP      P        09 04 49.2 +0.3
ILAR   Eielson Array      79.32  20  P      P        09 04 50.8  -0.2
         comp=Z,2.0nm,0.7s,baz=304,slow=4.6,SNR=30
ILAR                                PP      PP       09 07 48.2  -2.0
         comp=Z,0.6nm,0.8s,baz=310,slow=7.2,SNR=7.3
         comp=Z,2.0nm,0.7s
BOSA   Boshof             79.96 230  P      P        09 04 57.9 +2.8
         comp=Z,1.8nm,0.6s,baz=52,slow=4.8,SNR=5.5
         comp=Z,1.8nm,0.6s
INK    Inuvik             79.96  13  P      P        09 04 54.7 +0.4
         comp=Z,1.7nm,1.0s,baz=320,slow=8.6,SNR=2.7
         comp=Z,1.7nm,1.0s
STKA   Stephens Creek     80.52 134  P      P        09 04 58.0 +0.1
         comp=Z,2.3nm,0.5s,baz=320,slow=3.3,SNR=8.4
         comp=Z,2.3nm,0.5s
STKA   Stephens Creek     80.52 134  IAmb   IAmb     09 04 58.7
         comp=Z,0.6nm,0.8s
STKA   Stephens Creek     80.52 134  P      P        09 04 58.0 +0.1
STKA                                pmax    pmax
         comp=Z,1.0nm,0.9s
KDAK   Kodiak Island      82.12  27  P      P        09 05 06.7 +0.6
         comp=Z,10nm,0.9s,baz=327,slow=2.8,SNR=4.9
         comp=Z,10nm,0.9s
DBIC   Dimbokro           86.43 276  P      P        09 05 29.1 +0.4
         comp=Z,2.1nm,0.5s,baz=57,slow=2.6,SNR=2.1
         comp=Z,2.1nm,0.5s
YKA    Yellowknife Ar     88.55   9  P      P        09 05 37.8  -0.3
         comp=Z,0.6nm,0.8s,baz=340,slow=4.7,SNR=10
         comp=Z,0.6nm,0.8s
TXAR   Lajitas Array     122.48   9  PKP    PKPdf    09 11 41.0  -0.7
         comp=Z,0.2nm,0.4s,baz=33,slow=1.5,SNR=4.7
TXAR   Lajitas Array     122.48   9  PKIKP  PKPdf    09 11 41.0  -0.7
CPUP   Villa Florida     146.17 264  PKPbc  PKPdf    09 12 25.1  -0.2
         comp=Z,1.0nm,0.6s,baz=36,slow=3.5,SNR=2.0
LPAZ   La Paz            152.26 289  PKPbc  PKPbc    09 12 41.0  -1.9
         comp=Z,0.7nm,0.7s,baz=122,slow=8.1,SNR=2.2
```

IDC 11 09:00:09.2±5.6**, 52°.03N**×**35°.67E, h0^{km}, mb3.2**/1**, mbtmp3.5**/3**, ML3.2**/1**, Error ellipse: s-maj=122.4km s-min=62.8km az=47.0, Baltic States-Belarus-Northwestern Russia**

```
Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
AKASG  Malin Array Be      4.25 254  Sn     Sn       09 02 05.0  -0.5
         1.2nm,0.3s,baz=42,slow=26,SNR=1.6
AKASG                                Lg     Lg       09 02 22.1
         3.3nm,0.3s,baz=100,slow=26,SNR=3.0
I43RU  DUBNA INFRASON      4.78  10  i               09 27 30.0
         baz=196,slow=317,SNR=0.6
FINES  FINESS Array B     10.79 335  Pn     Pn       09 02 40.5  -4.3
         2.3nm,0.9s,baz=151,slow=13,SNR=1.1
ARCES  ARCESS Array B     18.20 349  P      Pn       09 04 21.7  -1.2
         0.1nm,0.3s,baz=163,slow=13,SNR=3.6
         0.8nm,0.6s
YKA    Yellowknife Ar     63.42 345  P      P        09 10 39.6  -0.4
         0.2nm,0.6s,baz=9.8,slow=6.5,SNR=2.1
         0.2nm,0.6s
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*IDC **11** 09:01:19.9±0.9, 31°.11N×100°.40E, h0^{km}, mb3.9/15, mbtmp3.9/16, ML4.0/1, MS3.6/22, Error ellipse: s-maj=27.0km s-min=17.0km az=43.0*

*NEIC **11** 09:01:24.6±1.9, 31°.54N±0°.08×100°.69E±0°.06, h10^{km}±1^{km}, mb4.4/33, ML4.3(BJI), Error ellipse: s-maj=16.3km s-min=4.4km az=150.0*

ISC 11 09:01:23.5±0.4**, 31°.34N**±0°.03×**100°.67E**±0°.03**, h10^{km}, n101, σ2^{s}44**/100**, mb4.2**/29**, MS3.6**/22**, 2C-1D, Sichuan**

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Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
CD2    Chengdu             2.68  98  Pn     Pb       09 02 10.7  -0.9
CD2                                  Pg     Pg       09 02 14.0  -0.8
CD2                                  Sg     Sb       09 02 46.0 +1.5
CD2                                  smax   smax
         comp=E,870nm,0.7s
PZH    PanZhiHua           4.91 169  Pn     Pn       09 02 41.4 +4.0
PZH                                  Pg     Pg       09 02 55.4  -2.1
PZH                                  Sn     Sn       09 03 37.2 +2.8
PZH                                  Sg     Sg       09 04 00.7  -0.4
PZH                                  smax   smax
         comp=N,90nm,1.1s
PZH                                  smax   smax
         comp=E,100nm,1.3s
PZH                                  LR     LR
         comp=N,2μm,7.1s
PZH                                  LR     LR
         comp=E,2μm,8.6s
PZH                                  LR     LR
         comp=Z,2μm,8.6s
LZH    Lanzhou             5.42  28  Pn     Pn       09 02 48.7 +4.2
LZH                                  Pg     Pg       09 03 04.8  -2.5
LZH                                  Sn     Sn       09 03 47.2 +0.1
LZH                                  Sg     Sg       09 04 16.9  -0.7
LZH                                  smax   smax
         comp=N,250nm,1.5s
LZH                                  smax   smax
         comp=E,340nm,1.6s
LZH                                  LR     LR
         comp=N,2μm,7.0s
LZH                                  LR     LR
         comp=E,3μm,8.1s
LZH                                  LR     LR
         comp=Z,760nm,7.1s
LKP    Lekhapani           5.80 228 ex      Pg       09 03 12.5  -2.1
LKP                                  IAML            09 04 56.2
         comp=N,240nm,1.2s
DIBR   DIBRUGARH           6.34 234 ex      Pg       09 03 30.2 +5.4
DIBR                                ex      Sg       09 04 46.6  -0.3
DIBR                                 IAML            09 05 01.1
         comp=N,300nm,0.8s
KMI    Kunming             6.46 163 ⇑P      Pn       09 03 00.8 +2.0
KMI                                  pmax   pmax
         comp=Z,64nm,1.1s
KMI                                  LR     LR
         comp=N,1μm,5.7s
KMI                                  LR     LR
         comp=E,1μm,11.6s
KMI                                  LR     LR
         comp=Z,1μm,9.2s
GOMU   GeErMu              6.88 316  Pn     Pn       09 03 08.4 +3.7
GOMU                                 Pg     Pb       09 03 26.7 +3.4
GOMU                                 Sn     Sb       09 04 52.1 +6.5
GOMU                                 Sg     Sg       09 05 07.6 +3.4
GOMU                                 smax   smax
         comp=N,17nm,1.8s
GOMU                                 smax   smax
         comp=E,18nm,1.6s
GOMU                                 LR     LR
         comp=N,2μm,9.7s
GOMU                                 LR     LR
         comp=E,1μm,7.7s
GOMU                                 LR     LR
         comp=Z,2μm,9.5s
GYA    Guiyang             7.16 131 ⇑Pn     Pn       09 03 12.3 +4.0
GYA                                  Sn     Sb       09 04 47.6  -5.8
GYA                                  Sg     Sg       09 05 14.1 +0.9
GYA                                  smax   smax
         comp=N,120nm,1.6s
GYA                                  smax   smax
         comp=E,170nm,1.6s
GYA                                  LR     LR
         comp=N,770nm,5.6s
GYA                                  LR     LR
         comp=E,700nm,5.4s
GYA                                  LR     LR
         comp=Z,1μm,7.1s
MOKO   MOKOCHONG           7.36 229 ex      Pn       09 03 19.1 +8.0
MOKO                                ex      Sn       09 04 34.4  -0.4
XAN    Xi'an               7.46  67  Pn     Pn       09 03 14.3 +2.0
XAN                                  Pg     Pg       09 03 39.8  -6.4
XAN                                  Sg     Sg       09 05 17.2  -5.5
XAN                                  smax   smax
         comp=N,160nm,1.2s
XAN                                  smax   smax
         comp=E,120nm,1.4s
ENH    Enshi               7.66  96         Pn       09 03 16.3 +1.2
GTA    Gaotai              8.08 355 eP      Pg       09 03 55.6  -2.6
GTA                                  sP     Pb       09 04 02.3   +19
GTA                                  pmax   pmax
         comp=Z,5.0nm,0.8s
GTA                                  LR     LR
         comp=N,680nm,9.6s
GTA                                  LR     LR
         comp=E,820nm,9.6s
GTA                                  LR     LR
         comp=Z,880nm,9.6s
TEZP   TEZPUR              8.35 238 ex      Pb       09 03 40.3  -7.8
TEZP                                ex      x        09 05 42.2
LSA    Lhasa               8.38 261         Pn       09 03 26.9 +1.5
LSA    Lhasa               8.38 261  P      Pn       09 03 24.7  -0.7
LSA                                  S      Sb       09 05 39.4   +11
LSA                                  LR     LR
         comp=N,310nm,7.4s
LSA                                  LR     LR
         comp=E,250nm,6.3s
LSA                                  LR     LR
         comp=Z,370nm,7.3s
SHL    Shillong            9.64 236 ex      x        09 05 23.6
SHL                                 ex      x        09 06 27.9
SHL                                  IAML            09 06 56.2
         comp=E,29nm,0.6s
LYN    LuoYang            10.41  69⇓eP      Pn       09 03 57.2 +4.3
LYN                                  S      Sn       09 05 52.1 +2.5
LYN                                  LR     LR
         comp=N,570nm,10.6s
LYN                                  LR     LR
         comp=E,650nm,11.6s
LYN                                  LR     LR
         comp=Z,550nm,10.2s
ODAN   Odare              12.44 252 eP      Pn       09 04 20.2  -0.7
         comp=Z,38nm,0.6s
CHTO   Chiang Mai         12.57 188  Pn     Pn       09 04 26.6 +4.1
CM31   Chiang Mai Arr     12.92 187  Pn     Pn       09 04 31.8 +4.6
CMAR   Chiang Mai Arr     12.92 187  Pn     Pn       09 04 30.1 +2.9
         comp=Z,0.5nm,0.3s,baz=354,slow=12,SNR=13
CMAR                                 Pg              09 05 26.5
         comp=Z,0.6nm,0.3s,baz=359,slow=17,SNR=7.9
CMAR                                 Lg     Lg       09 08 19.1
         comp=Z,0.7nm,0.3s,baz=162,slow=34,SNR=1.4
CMAR   Chiang Mai Arr     12.92 187         Pn       09 04 31.2 +4.0
RAMN   Ramite             13.05 254 eP      Pn       09 04 27.9  -1.3
         comp=Z,33nm,0.4s
JIRN   Jiri               13.14 257 eP      Pn       09 04 29.7  -0.8
PKI    Pulchoki           13.82 258 eP      Pn       09 04 37.9  -1.9
         comp=Z,34nm,0.5s
KKN    Kakani             13.86 259 eP      Pn       09 04 37.7  -2.5
DMN    Daman              14.06 259 eP      Pn       09 04 40.5  -2.5
TIA    Tai'an             14.52  66  P      P        09 05 00.0 +4.4
TIA                                  pmax   pmax
         comp=Z,10.0nm,0.7s
TIA                                  pmax   pmax
         comp=Z,25nm,1.6s
TIA                                  LR     LR
         comp=N,170nm,5.2s
TIA                                  LR     LR
         comp=E,170nm,2.7s
TIA                                  LR     LR
         comp=Z,220nm,12.1s
QIZ    Qiongzhong         14.79 144  P      Pn       09 04 52.2  -0.6
QIZ                                  S      Sn       09 07 37.9 +1.1
QIZ                                  LR     LR
         comp=N,550nm,12.6s
QIZ                                  LR     LR
         comp=E,990nm,11.6s
QIZ                                  LR     LR
         comp=Z,550nm,7.8s
BJT    Baijiatuau         15.27  51  Pn     Pn       09 04 59.7 +0.6
BJT                                  IAmb   IAmb     09 05 24.3
         comp=Z,5.3nm,0.6s
KOLN   Koldanda           15.28 261 eP      Pn       09 04 56.1  -3.4
         comp=Z,22nm,0.5s
PYUN   Piuthan            15.70 263 eP      Pn       09 05 00.2  -4.8
         comp=Z,43nm,0.8s
WMQ    Urumqi             16.13 324 eP      Pn       09 05 09.4  -0.9
WMQ                                  pP     P        09 05 13.2  -0.4
WMQ                                  sP     pP       09 05 17.5  -0.1
WMQ                                  pmax   pmax
         comp=Z,25nm,0.7s
WMQ                                  LR     LR
         comp=N,710nm,11.1s
WMQ                                  LR     LR
         comp=E,490nm,11.5s
WMQ                                  LR     LR
         comp=Z,180nm,13.1s
SONM   Songino Array      17.05  13  P      Pn       09 05 22.4 +0.5
         comp=Z,0.5nm,0.3s,baz=194,slow=12,SNR=26
SONM                                 LR     LR       09 12 34.9
         comp=Z,93nm,20.1s,baz=197,slow=39
         comp=Z,16nm,1.0s
SONM   Songino Array      17.05  13  P      Pn       09 05 21.1  -0.8
ULN    Ulaanbaatar        17.21  15  P      Pn       09 05 22.4  -1.6
ULN                                  IAmb   IAmb     09 05 32.3
         comp=Z,15nm,0.8s
PRZ    Przheval'sk        20.93 308  P      P        09 06 07.5 +0.9
PRZ                                  IAmb   IAmb     09 06 33.5
         comp=Z,21nm,1.1s
MK31   Makanchi Array     20.94 323  P      P        09 06 06.0  -0.4
MKAR   Makanchi Array     20.94 323  P      P        09 06 04.5  -1.8
         comp=Z,1.4nm,0.6s,baz=132,slow=12,SNR=17
MKAR                                 LR     LR       09 14 51.2
         comp=Z,153nm,19.5s,baz=126,slow=39
         comp=Z,1.4nm,0.6s
MKAR   Makanchi Array     20.94 323  P      P        09 06 06.2  -0.2
TARG   Taragay, Kyrgy     21.04 306  P      P        09 06 07.5  -0.4
MAKZ   Makanchi           21.11 322  P      P        09 06 07.9  -0.3
KDJ    Kajisay            21.62 306  P      P        09 06 13.4  -0.6
KDJ                                  IAmb   IAmb     09 06 22.4
         comp=Z,10nm,1.0s
KSH    Kashi              21.67 299  P      P        09 06 21.4 +7.0
KSH    Kashi              21.67 299  pmax   pmax
         comp=Z,12nm,0.9s
BOOM   Boomskoye usch     22.61 306  P      P        09 06 24.2  -0.3
BOOM                                 IAmb   IAmb     09 06 33.4
         comp=Z,9.9nm,0.8s
CN2    Changchun          23.15  51 eP      P        09 06 35.0 +5.1
CN2                                  pmax   pmax
         comp=Z,10.0nm,0.5s
CN2                                  LR     LR
         comp=N,500nm,14.0s
CN2                                  LR     LR
         comp=E,300nm,14.0s
CN2                                  LR     LR
         comp=Z,300nm,12.0s
KS19   Wonju Array Si     23.21  67  P      P        09 06 31.8 +1.1
KS19                                 IAmb   IAmb     09 06 42.2
         comp=Z,34nm,1.4s
NIL    Nilore             23.22 283  P      P        09 06 29.9  -0.9
KSAR   Wonju Array Be     23.22  67  P      P        09 06 31.8 +1.1
KSRS   Korea Array        23.25  67  P      P        09 06 31.9 +0.9
         comp=Z,5.0nm,0.7s,baz=257,slow=9.6,SNR=17
         comp=Z,5.0nm,0.7s
AAK    Ala-Archa          23.66 306  P      P        09 06 34.5  -0.8
         comp=Z,4.6nm,0.9s,baz=114,slow=8.7,SNR=8.8
         comp=Z,4.6nm,0.9s
AAK    Ala-Archa          23.66 306  P      P        09 06 35.3   0.0
AAK                                  IAmb   IAmb     09 06 38.1
         comp=Z,9.2nm,1.1s
DRK    Karamyk            24.82 297  P      P        09 06 44.3  -1.9
ZAA0   Zalesovo Array     25.31 338  P      P        09 06 47.6  -2.5
ZAA0                                 IAmb   IAmb     09 06 56.0
         comp=Z,8.8nm,0.7s
ZALV   Zalesovo Beam      25.31 338  P      P        09 06 49.8  -0.3
         comp=Z,2.4nm,0.5s,baz=148,slow=10,SNR=9.7
         comp=Z,2.4nm,0.5s
KURBB  Kurchatov Arra     25.34 326  P      P        09 06 50.1  -0.2
         comp=Z,3.6nm,0.9s,baz=131,slow=9.6,SNR=19
KURBB                                LR     LR       09 16 31.2
         comp=Z,184nm,20.1s,baz=102,slow=36
         comp=Z,3.6nm,0.9s
KURK   Kurchatov          25.36 326  P      P        09 06 49.1  -1.4
KURK                                 IAmb   IAmb     09 06 58.7
         comp=Z,6.9nm,0.7s
BTK    Batken             25.67 298  P      P        09 06 54.2 +0.6
BTK                                  IAmb   IAmb     09 07 06.6
         comp=Z,7.1nm,0.9s
GAR    Garm               25.88 296  P      P        09 06 55.5  -0.1
MDJ    Mudanjiang         26.21  51  P      P        09 06 57.5  -0.8
MDJ                                  IAmb   IAmb     09 07 22.7
         comp=Z,14nm,1.3s
KK31   Karatay Array      26.59 305  P      P        09 07 01.6  -0.3
KKAR   Karatay Array      26.59 305  P      P        09 07 01.4  -0.4
KKAR   Karatay Array      26.59 305  P      P        09 07 01.5  -0.4
KKAR                                 IAmb   IAmb     09 07 08.4
         comp=Z,5.4nm,1.2s
KBL    Kabul              26.68 285  P      P        09 07 03.8 +0.8
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KBL				IAmb	IAmb	09 07 11.8	
	comp=Z,10nm,0.7s						
CHGR	Chuyangaron	26.74	295	P	P	09 07 01.5	-1.8
CHGR				IAmb	IAmb	09 07 21.1	
	comp=Z,10.0nm,0.8s						
PALK	Pallekele	30.36	222	LR	LR	09 22 32.6	
	comp=Z,47nm,18.7s,baz=143,slow=42						
PALK	Pallekele	30.36	222	P	P	09 07 37.4	+1.7
PALK				IAmb	IAmb	09 07 50.6	
	comp=Z,7.8nm,1.1s						
ABKAR	Akbulak array	35.33	312	P	P	09 08 17.3	-1.5
GEYT	Alibeck	35.39	293	LR	LR	09 25 48.8	
	comp=Z,94nm,20.3s,baz=64,slow=42						
GYA0B	ALIBECK ARRAY	35.39	293	P	P	09 08 20.0	+0.5
GYA0B				IAmb	IAmb	09 08 32.3	
	comp=Z,5.8nm,0.8s						
AKTO	Aktyubinsk	36.84	314	LR	LR	09 25 03.8	
	comp=Z,181nm,18.8s,baz=110,slow=39						
NRIK	Noril'sk	38.77	353	P	P	09 08 45.5	-2.2
	comp=Z,0.9nm,0.4s,baz=145,slow=7.7,SNR=1.7						
NRIK				LR	LR	09 24 40.6	
	comp=Z,72nm,18.7s,baz=150,slow=36						
	comp=Z,0.9nm,0.4s						
GNI	Garni	45.59	297	LR	LR	09 33 19.6	
	comp=Z,38nm,18.1s,baz=128,slow=42						
KBZ	Khabaz	46.59	302	LR	LR	09 32 41.4	
	comp=Z,65nm,18.3s,baz=86,slow=40						
BRTR	Keskin Array B	54.06	299	P	P	09 10 44.6	-3.8
	comp=Z,0.6nm,0.5s,baz=119,slow=4.8,SNR=3.7						
BRTR				LR	LR	09 39 39.5	
	comp=Z,47nm,18.7s,baz=108,slow=43						
	comp=Z,0.6nm,0.5s						
BRTR	Keskin Array B	54.06	299	P	P	09 10 47.5	-0.9
FITZ	Fitzroy Crossi	54.69	151	LR	LR	09 35 00.1	
	comp=Z,16nm,21.6s,baz=347,slow=37						
AKASG	Malin Array Be	55.07	313	LR	LR	09 35 15.2	
	comp=Z,51nm,18.3s,baz=114,slow=37						
FINES	FINESS Array B	55.73	326	P	P	09 10 57.8	-2.2
	comp=Z,1.6nm,0.8s,baz=187,slow=29,SNR=2.1						
FINES				LR	LR	09 35 11.5	
	comp=Z,67nm,19.7s,baz=53,slow=36						
	comp=Z,1.6nm,0.8s						
ARCES	ARCESS Array B	55.84	336	P	P	09 11 00.1	-0.6
	comp=Z,1.3nm,0.8s,baz=84,slow=10,SNR=1.5						
	comp=Z,1.3nm,0.8s						
SPITS	Spitsbergen Ar	58.40	346	LR	LR	09 40 34.6	
	comp=Z,47nm,18.0s,baz=226,slow=40						
WRA	Warramunga Arr	60.36	143	P	P	09 11 31.7	-1.2
	comp=Z,1.2nm,0.9s,baz=339,slow=7.4,SNR=5.5						
	comp=Z,1.2nm,0.9s						
WRA	Warramunga Arr	60.36	143	P	P	09 11 34.4	+1.5
WB2	Warramunga Arr	60.37	143	P	P	09 11 33.4	+0.4
WR0	Warramunga Arr	60.48	143	P	P	09 11 32.9	-0.9
COEN	Coen	60.76	131	P	P	09 11 35.9	+0.1
IDI	Anoyia	61.99	296	LR	LR	09 44 06.7	
	comp=Z,36nm,20.8s,baz=88,slow=42						
NOA	NORSAR Array B	62.87	327	P	P	09 11 47.0	-2.4
	comp=Z,0.4nm,0.6s,baz=70,slow=7.0,SNR=1.7						
NOA				LR	LR	09 39 43.4	
	comp=Z,43nm,19.6s,baz=80,slow=37						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	63.28	146	P	P	09 11 49.9	-2.6
	comp=Z,0.3nm,0.8s,baz=333,slow=6.7,SNR=2.2						
	comp=Z,0.3nm,0.8s						
VRAC	Vranov	63.32	313	LR	LR	09 41 36.4	
	comp=Z,67nm,19.5s,baz=61,slow=38						
CLL	Collm	64.87	316	*i* P	P	09 12 02.1	-0.6
	comp=Z,5.0nm,0.5s						
ILAR	Eielson Array	70.88	25	P	P	09 12 40.1	-0.1
	comp=Z,0.8nm,0.9s,baz=297,slow=4.8,SNR=2.1						
	comp=Z,0.8nm,0.9s						
INK	Inuvik	72.88	18	P	P	09 12 53.1	+0.9
	comp=Z,0.9nm,0.6s,baz=340,slow=8.9,SNR=7.4						
	comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	82.30	16	P	P	09 13 43.3	-1.6
	comp=Z,0.6nm,0.9s,baz=327,slow=4.5,SNR=6.6						
YKA				LR	LR	09 54 13.4	
	comp=Z,37nm,18.5s,baz=322,slow=38						
	comp=Z,0.6nm,0.9s						
YKA	Yellowknife Ar	82.30	16	P	P	09 13 44.1	-0.8
FRB	Frobisher Bay	84.85	355	LR	LR	09 54 29.8	
	comp=Z,21nm,18.1s,baz=154,slow=38						
TORD	Torodi Ar. Bea	90.75	286	P	P	09 14 23.0	-4.2
	comp=Z,11nm,0.6s,baz=46,slow=4.7,SNR=4.5						
SCHQ	Schefferville	93.51	353	LR	LR	10 00 53.6	
	comp=Z,29nm,18.9s,baz=66,slow=38						
SUR	Sutherland	98.53	237	LR	LR	09 58 42.2	
	comp=Z,58nm,18.0s,baz=114,slow=35						
DBIC	Dimbokro	99.66	284	LR	LR	10 05 23.0	
	comp=Z,51nm,19.9s,baz=122,slow=39						

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*IDC **11** 09:01:45.5±0.9, 23°.04N×144°.04E, h0^{km}, mb3.5/6, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=34.6km s-min=24.1km az=89.0*

ISC 11 09:01:50.3±0.9**, 23°.0N**±0°.1×**144°.1E**±0°.2**, h34**^{km}**, n12, σ0**^{s}.**99**/10**, mb3.5**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	4.40	338	Pn	Pn	09 02 55.2	+0.5
	3.4nm,0.3s,baz=296,slow=23,SNR=19						
JCJ				Sn	Sn	09 03 44.5	-0.3
	18nm,0.3s,baz=293,slow=23,SNR=8.2						
	29nm,0.7s						
H11N1	WAKE ISLAND Hy	21.52	94	T	T	09 28 52.9	
	baz=283,slow=74,SNR=18						
H11N2	WAKE ISLAND Hy	21.52	94	T	T	09 28 53.1	
	baz=283,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	21.54	94	T	T	09 28 54.2	
	baz=283,slow=74,SNR=13						
WRA	Warramunga Arr	43.74	193	P	P	09 09 52.1	-0.5
	0.4nm,0.6s,baz=15,slow=8.8,SNR=10						
	0.4nm,0.6s						
MKAR	Makanchi Array	54.41	312	P	P	09 11 15.3	+1.2
	0.2nm,0.4s,baz=92,slow=8.7,SNR=2.5						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	57.12	316	P	P	09 11 31.9	-1.5
	0.2nm,0.3s,baz=97,slow=8.5,SNR=1.6						
	0.2nm,0.3s						
ILAR	Eielson Array	60.51	27	P	P	09 11 55.8	-1.0
	0.6nm,0.7s,baz=261,slow=6.2,SNR=6.9						
	0.6nm,0.7s						
YKA	Yellowknife Ar	74.92	28	P	P	09 13 28.3	+0.7
	0.4nm,0.8s,baz=291,slow=5.5,SNR=5.6						
	0.4nm,0.8s						
NVAR	Mina Array Bea	81.70	52	P	P	09 14 05.6	-0.2
	0.5nm,0.9s,baz=265,slow=5.1,SNR=3.4						
	0.5nm,0.9s						
PLCA	Paso Flores	146.00	129	PKPbc	PKPab	09 21 28.2	+0.8
	0.6nm,0.8s,baz=196,slow=7.4,SNR=2.8						
LPAZ	La Paz	149.01	83	PKPbc	PKiKP	09 21 38.3	+0.6
	0.9nm,0.8s,baz=225,slow=5.7,SNR=4.2						

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*NEIC **11** 09:03:06.8±4.4, 30°.69N±0°.04×115°.74W±0°.04, h10^{km}±2^{km}, Error ellipse: s-maj=7.8km s-min=5.6km az=140.0*

*ANF **11** 09:03:10.2±0.5, 30°.83N×115°.83W, h0^{km}, ML4.5/30, Error ellipse: s-maj=6.8km s-min=2.3km az=24.0*

*NEIC **11** 09:03:11.9, 30°.84N×115°.62W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.52; M$_{\theta\theta}$-2.49; M$_{\phi\phi}$0.97; M$_{r\theta}$0.92; M$_{\theta\phi}$-4.19; M$_{\phi r}$-1.77; Fault plane solution: M$_{0}$5.13000×10^{15} NP1:φ$_{s}$195.41000°, δ70.64000°, λ23.79000°. NP2:φ$_{s}$97.09000°, δ67.63000°, λ159.00000°. Principal axes: T 4.9294, Plg30.0000°, Azm57.0000°; N 0.3767, Plg60.0000°, Azm232.0000°; P -5.3061, Plg2.0000°, Azm326.0000°;*

*ECX **11** 09:03:11.3±0.4, 30°.83N×115°.69W, h12^{km}±3^{km}, MD4.1, ML4.4, Fault plane solution: NP1:φ$_{s}$82.00000°, δ78.00000°, λ138.00000°.*

*MEX **11** 09:03:13.5±1.5, 30°.84N×115°.60W, h5^{km}, MD4.5*

*IDC **11** 09:03:13.4±1.1, 30°.94N×115°.26W, h0^{km}, mb4.1/9, mbtmp4.0/16, ML3.6/7, MS3.7/26, Error ellipse: s-maj=20.6km s-min=9.8km az=51.0*

ISC 11 09:03:11.9±0.8**, 30°.88N**±0°.03×**115°.57W**±0°.02**, h12**^{km}±4^{km}**, n325, σ2**^{s}.**45**/324**, mb4.2**/18**, MS3.6**/19**, 29C-9D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	San Pedro Mart	0.18	28		Pg	09 03 17.0	+0.7
SPIG					Sb	09 03 21.7	+2.3
SPIG	San Pedro Mart	0.18	28	*i* P	Pg	09 03 17.0	+0.7
SPIG				*i* S	Sb	09 03 21.7	+2.3
SPIG	San Pedro Mart	0.18	28	⇑*e*P	Pg	09 03 17.0	+0.7
SPIG				*e*S	Sb	09 03 21.7	+2.3
SFX	San Felipe	0.63	76		Pg	09 03 24.4	+0.2
SFX					Sb	09 03 34.2	+0.6
SFX	San Felipe	0.63	76	⇑*e*P	Pg	09 03 24.6	+0.4
SFX				*e*S	Sb	09 03 34.4	+0.6
SFX				⇓*e*		09 03 37.1	
SFX				IAML		09 03 37.1	
	comp=N,20μm,0.6s						
SFX				⇑*e*		09 03 37.9	
SFX				IAML		09 03 37.9	
	comp=E,13μm,0.5s						
ECBX	El Chinero	0.73	37	⇑*e*P	Pb	09 03 26.6	0.0
ECBX				*e*S	Sn	09 03 38.0	-1.2
SVX	San Vicente	0.74	307	⇓*e*P	Pb	09 03 23.3	-3.4
SVX				*e*S	Sb	09 03 32.8	-3.8
ALAMX	Rancho Alamar	1.13	354	⇓*e*P	Pb	09 03 32.4	-1.0
ALAMX				*e*S	Sb	09 03 47.1	-0.8
CCX	Cicese	1.36	317		Pn	09 03 34.4	-2.3
CCX				Sn	Sn	09 03 52.4	-2.1
CCX	Cicese	1.36	317	⇓*e*P	Pn	09 03 34.6	-2.0
CCX				*e*S	Sn	09 03 51.8	-2.7
RITX	Riito Sonora	1.38	22	⇑*e*P	Pn	09 03 36.2	-0.7
GUVIX	Guadalupe Vict	1.48	16		Pn	09 03 37.3	-0.9
GUVIX				Sn	Sg	09 04 02.6	+3.2
GUVIX	Guadalupe Vict	1.48	16	⇑*e*P	Pn	09 03 37.7	-0.5
CPBX	Cerro Prieto	1.55	8		Pn	09 03 38.5	-0.7
CPBX	Cerro Prieto	1.55	8	⇑*e*P	Pn	09 03 38.5	-0.7
MBIG	Mexicali	1.55	12		Pn	09 03 39.0	-0.3
MBIG					Sb	09 03 59.3	-0.8
MBIG	Mexicali	1.55	12	*e*P	Pn	09 03 38.7	-0.6
MBIG				*e*P	Pn	09 03 39.0	-0.3
MBIG				*e*S	Sb	09 03 59.3	-0.8
MBIG				*e*S	Sb	09 03 59.3	-0.8
MBIG	Mexicali	1.55	12	⇑*e*P	Pn	09 03 38.8	-0.4
CTLX	Tlaxcala, TLX	1.63	13	*e*P	Pn	09 03 39.6	-0.7
CBX	Cerro Bola	1.71	327		Pn	09 03 40.7	-0.8
CBX	Cerro Bola	1.71	327		Sn	09 04 02.0	-1.4
CBX	Cerro Bola	1.71	327	*e*P	Pn	09 03 40.3	-1.3
CBX				*i* S	Sn	09 04 02.0	-1.4
CBX	Cerro Bola	1.71	327	⇓*e*P	Pn	09 03 39.8	-1.7
CBX				*e*S	Sn	09 04 02.2	-1.2
UABX	UABC, Campus M	1.75	3		Pn	09 03 42.0	0.0
UABX	UABC, Campus M	1.75	3	⇑*e*P	Pn	09 03 42.0	0.0
YUCAX	Ej. Yucat¡n	1.77	13	⇑*e*P	Pn	09 03 41.6	-0.5
RMX	La Rumorosa	1.77	346		Pn	09 03 41.1	-1.3
RMX	La Rumorosa	1.77	346	⇑*e*P	Pn	09 03 41.1	-1.3
RMX				*e*		09 04 10.1	
RMX				IAML		09 04 10.1	
	comp=N,3μm,0.4s						
RMX				⇑*e*		09 04 10.2	
RMX				IAML		09 04 10.2	
	comp=E,5μm,0.9s						
YUH2	Yuha Desert	1.79	350	⇑*e*P	Pn	09 03 41.7	-0.8
YUH	Yuha Desert	1.79	350		Pn	09 03 42.0	-0.5
TJIG	Tijuana	1.81	329	*e*P	Pn	09 03 42.1	-0.8
TJIG				*e*S	Sn	09 04 05.5	-0.3
TJIG	Tijuana	1.81	329	⇓*e*P	Pn	09 03 41.4	-1.5
IKP	In-Ko-Pah, Jac	1.82	345	*e*P	Pn	09 03 42.6	-0.5
IKP	In-Ko-Pah, Jac	1.82	345	P	Pn	09 03 42.6	-0.5
	baz=167,SNR=510						
IKP				S	Sb	09 04 08.0	0.0
	baz=167						
WESC	Westside Schoo	1.88	356	*e*P	Pn	09 03 43.1	-0.6
YMD	Yuma Desert	1.88	27	⇑*e*P	Pn	09 03 43.0	-0.8
TKX	Tecate	1.90	332		Pn	09 03 43.5	-0.6
TKX	Tecate	1.90	332	⇓*e*P	Pn	09 03 43.5	-0.6
EMSC	East Mesa	1.92	15	⇑*e*P	Pn	09 03 43.7	-0.6
DREC	Desert Rsrch C	1.92	3	⇑*e*P	Pn	09 03 44.1	-0.2
AGUTJ	Tijuana	2.01	323	⇓*e*P	Pb	09 03 46.8	-1.5
BAR	Barrett	2.02	333		Pn	09 03 45.5	-0.3
BAR	Barrett	2.02	333	*e*P	Pn	09 03 44.8	-1.1
BAR				⇑*e*		09 04 18.9	
BAR				IAML		09 04 18.9	
	comp=N,2μm,0.6s						
BAR				IAML		09 04 20.0	
	comp=E,3μm,0.8s						
BAR				⇑*e*		09 04 20.0	
TJX	Tijuana	2.06	322		Pn	09 03 45.0	-1.3
TJX	Tijuana	2.06	322	⇓*e*P	Pb	09 03 47.7	-1.5
TJX	Tijuana	2.06	322	*e*P	Pn	09 03 45.0	-1.3
SWSC	Sam W. Stewart	2.07	355	⇑*e*P	Pn	09 03 45.6	-0.8
SWSC	Sam W. Stewart	2.07	355	P	Pn	09 03 45.5	-0.8
	baz=176,SNR=506						
OLP	Otay Lakes Par	2.08	326	⇑*e*P	Pn	09 03 46.0	-0.5
MONP2	Monument Peak	2.13	340	⇑*e*P	Pn	09 03 47.5	0.0
MONP2	Monument Peak	2.13	340	P	Pn	09 03 47.0	-0.5
	baz=162,SNR=367						
MONP2				Sb	Sb	09 04 17.8	+0.7
	baz=162						
WEMD	Westmorland, C	2.15	360	⇑*e*P	Pn	09 03 47.6	+0.1
SDRC	San Diego Road	2.19	328	⇑*e*P	Pn	09 03 47.3	-0.7
SDRC				⇑*e*		09 04 20.7	
SDRC				IAML		09 04 20.7	
	comp=E,3μm,0.8s						
GLA	Glamis	2.25	16		Pn	09 03 48.5	-0.5
GLA	Glamis	2.25	16	⇑*e*P	Pn	09 03 48.3	-0.7
GLA	Glamis	2.25	16	P	Pn	09 03 48.4	-0.5
	baz=196,SNR=88						
EML	El Monte Cty P	2.28	332	⇑*e*P	Pn	09 03 49.0	-0.3
SLH	Sleepy Hollow	2.38	346	⇑*e*P	Pn	09 03 50.5	-0.1
109C	Camp Elliot, M	2.39	327		Pn	09 03 49.6	-1.2
109C	Camp Elliot, M	2.39	327	P	Pn	09 03 49.0	-1.8
	baz=149,SNR=86						
109C				Sb	Sb	09 04 23.6	-0.7
	baz=149						
113A	Mohawk Valley,	2.42	39		Pn	09 03 51.2	-0.1
MATG	Mataguay Scout	2.49	339	⇑*e*P	Pn	09 03 52.5	+0.2
214A	Organ Pipe Nat	2.59	65		Pn	09 03 53.6	+0.1
214A	Organ Pipe Nat	2.59	65	*e*P	Pn	09 03 53.4	-0.2
214A				*i* S	Sn	09 04 23.8	-1.1
214A	Organ Pipe Nat	2.59	65	⇑*e*P	Pn	09 03 53.4	-0.2
214A	Organ Pipe Nat	2.59	65	P	Pn	09 03 53.4	-0.2
	baz=244,SNR=236						
BAHB	Baha de los	2.60	137	*e*P	Pb	09 03 57.5	-0.9
BAHB				*e*S	Sn	09 04 26.1	+0.9
BC3	Big Chuckawall	2.77	2	P	Pn	09 03 55.8	-0.3
	baz=183,SNR=62						
TPFO	Pinon Flats	2.82	345	P	Pn	09 03 56.0	-0.8
	baz=166,SNR=55						
LAPR	La Primavera	2.82	97	*e*P	Pn	09 03 55.5	-1.2
LAPR				*e*S	Sb	09 04 39.5	+2.8
PFO	Pinyon Flats O	2.83	345	Pn	Pn	09 03 56.3	-0.7
PFO	Pinyon Flats O	2.83	345	P	Pn	09 03 56.2	-0.8
	baz=166,SNR=50						
PFO				Sb	Sb	09 04 38.7	+1.8
	baz=166						
BLYC	Blythe	2.99	17	Pn	Pn	09 03 59.2	+0.1
MURC	Murrieta	3.04	333	P	Pn	09 04 00.0	+0.2
	baz=154,SNR=92						
BELC	Belle Mtn. Jos	3.13	353	P	Pn	09 04 01.2	+0.1
	baz=174,SNR=69						
BELC				Sb	Sg	09 04 50.5	-2.0
	baz=174						
ELS	Elsinore Mount	3.18	331	Pn	Pn	09 04 01.7	0.0
IRM	Iron Mountain	3.29	6	P	Pn	09 04 03.5	+0.3
	baz=187,SNR=88						
SCI2	San Clemente I	3.29	310	P	Pn	09 04 01.1	-2.0
	baz=131						
SCI2				S	Sn	09 04 40.1	-2.1
	baz=131						
CIS	Catalina Islan	3.49	317	P	Pn	09 04 03.2	-2.7
	baz=137,SNR=7.6						
BBRC	Big Bear Solar	3.56	342	P	Pn	09 04 07.0	-0.2
	baz=162,SNR=24						
BBRC				Sb	Sb	09 05 00.5	+2.4
	baz=162						
PDMCI	Parker Dam,Lak	3.62	19	P	Pn	09 04 08.2	+0.5
	baz=200,SNR=44						
FMP	Fort Macarthur	3.65	321	Pg	Pb	09 04 18.0	+1.7
	baz=142						
FMP				Sb	Sb	09 05 00.9	+0.5
	baz=142						
Y14A	Wickenburg	3.74	35		Pn	09 04 09.9	+0.5
BFSC	Mount Baldy Ra	3.79	333	P	Pn	09 04 09.5	-0.7
	baz=153,SNR=72						
BFSC				Sb	Sb	09 05 05.4	+0.9
	baz=153						
GMRC	Granite Mounta	3.89	359	P	Pn	09 04 12.2	+0.6
	baz=179,SNR=38						
NEE2	Needles Airpor	3.96	11	P	Pn	09 04 13.0	+0.7
	baz=192,SNR=12						
PASC	Pasadena Art C	3.96	327		Pn	09 04 11.1	-1.2
HEC	Hector,Ludlow	3.99	351	P	Pn	09 04 13.6	+0.7
	baz=171,SNR=9.6						
DECC	Green Verdugo	4.09	326	Pb	Pb	09 04 22.7	-1.2
	baz=146						
SNCC	San Nicolas Is	4.11	306		Pn	09 04 12.4	-2.0
SNCC	San Nicolas Is	4.11	306	P	Pn	09 04 11.9	-2.5
	baz=126						
SNCC				S	Sn	09 04 58.8	-3.6
	baz=126						
TUC	Tucson	4.32	70	Pn	Pn	09 04 17.4	0.0
TUC	Tucson	4.32	70	*e*P	Pn	09 04 17.4	0.0
TUC				*i* S	Sn	09 05 08.5	+0.7
TUC	Tucson	4.32	70	P	Pn	09 04 17.5	+0.1
	baz=251						
HSIG		4.42	114		Pn	09 04 19.1	+0.4
HSIG		4.42	114	*e*P	Pb	09 04 26.9	-2.4
HSIG				*e*S	Sb	09 05 20.2	-2.4
W13A	Hualapai Mount	4.44	18	Pn	Pn	09 04 19.9	+0.7
EDW2	Edwards Air Fo	4.48	334	P	Pn	09 04 19.0	-0.6
	baz=153,SNR=38						
GSC	Goldstone, Bar	4.53	347	Pn	Pn	09 04 20.7	+0.4
GSC	Goldstone, Bar	4.53	347	P	Pn	09 04 20.7	+0.4
	baz=167,SNR=15						
TUQ	Turquoise Moun	4.55	356	P	Pn	09 04 21.0	+0.3
	baz=177,SNR=19						
SRIG	Santa Rosalia	4.59	140		Pn	09 04 20.3	-0.8
SRIG	Santa Rosalia	4.59	140	*e*P	Pn	09 04 20.1	-1.0
SRIG				*e*S	Sn	09 05 20.8	+6.5
CCAC	Calif City Air	4.73	335		Pn	09 04 22.5	-0.5
ARVC	Arvin	5.04	328	P	Pn	09 04 27.7	+0.4
	baz=147						
GUYB	Guaymas	5.06	125	*e*P	Pn	09 04 26.8	-0.7
GUYB				*e*S	Sn	09 05 26.7	+0.8
QSM	Queen of Sheba	5.18	348		Pn	09 04 29.7	+0.5
ISA	Isabella, Lake	5.35	334	Pn	Pn	09 04 31.1	-0.5
ISA	Isabella, Lake	5.35	334	P	Pn	09 04 31.9	+0.3
	baz=153,SNR=18						
PKM	Mcpherson Peak	5.36	319	P	Pn	09 04 30.9	-0.9
	baz=138						
GWY	Greenwater Val	5.37	350		Pn	09 04 33.3	+1.3
MPMC	Manual Prospec	5.41	343	P	Pn	09 04 33.0	+0.6
	baz=163,SNR=11						
319A	Douglas	5.41	83		Pn	09 04 33.2	+0.8
SHPR	Sheep Range	5.62	3	Pn	Pn	09 04 37.8	+2.4
FURC	Furnace Creek,	5.67	349	P	Pn	09 04 36.5	+0.6
	baz=169						
SMMC	Simmler	5.78	321	P	Pn	09 04 37.2	-0.2
	baz=140						
WUAZ	Wupatki	5.80	36	Pn	Pn	09 04 38.4	+0.4
WUAZ	Wupatki	5.80	36	P	Pn	09 04 39.7	+1.8
	baz=218,SNR=98						
CWC	Cottonwood Cre	5.93	340	P	Pn	09 04 39.9	+0.4
	baz=159						
X18A	Snowflake	5.97	51		Pn	09 04 41.3	+1.2
TPNV	Topopah Spring	6.08	355		Pn	09 04 43.4	+1.7
TPNV	Topopah Spring	6.08	355	P	Pn	09 04 43.6	+1.9
	baz=175,SNR=56						
U15A	North Rim	6.17	25	Pn	Pn	09 04 45.3	+2.3
LCMT	Little Creek M	6.41	17		Pn	09 04 48.7	+2.5
W18A	Petrified Fore	6.47	48		Pn	09 04 49.3	+2.3
W18A	Petrified Fore	6.47	48	P	Pn	09 04 48.9	+1.8
	baz=230,SNR=95						
PRN	Pahroc Range	6.52	4		Pn	09 04 50.7	+2.9
CGIG		6.56	93	*e*P	Pn	09 04 49.5	+1.2
CGIG				*e*S	Sn	09 06 09.8	+6.7
LCH	Last Change Ra	6.57	345		Pn	09 04 50.7	+2.4
S11A	Rachel	6.75	359	Pn	Pn	09 04 47.7	-3.1
121A	Cookes Peak, D	6.83	74		Pn	09 04 48.3	-3.7
121A	Cookes Peak, D	6.83	74	*e*P	Pn	09 04 53.8	+1.8
121A				*e*S	Sn	09 06 09.5	-0.3
121A	Cookes Peak, D	6.83	74	P	Pn	09 04 53.6	+1.6
	baz=257,SNR=33						
CCUT	Cedar City	6.90	15	Pn	Pn	09 04 55.8	+2.8
PKCU	Pink Cliffs	7.08	22	Pn	Pn	09 04 59.0	+3.4
R11A	Troy Canyon, C	7.45	360	P	Pn	09 05 03.4	+2.9
	baz=180,SNR=12						
CSIG	Choix	7.49	121	*e*P	Pn	09 05 00.8	-0.1
SAO	San Andreas Ge	7.64	322	Pn	Pn	09 04 59.6	-3.3
MTPU	Mount Pierson	7.67	20	Pn	Pn	09 05 01.5	-2.2
PSUT	Pine Spring	7.76	10		Pn	09 05 03.0	-1.8
NVAR	Mina Array Bea	7.86	344	Pn	Pn	09 05 09.2	+3.1
	comp=E,0.4nm,0.3s,baz=166,slow=16,SNR=10						
NVAR				Lg	Lg	09 07 16.8	
	baz=165,slow=17						
	comp=E,0.7nm,0.7s						
LENM	Lemitar	7.96	63	Pn	Pn	09 05 04.2	-3.3
Y22D	IRIS PASSCAL I	7.97	64	P	Pn	09 05 10.8	+3.2
	baz=248						
LPIG	La Paz	8.21	144	Pn	Pn	09 05 10.0	-0.8
	comp=E,1.4nm,0.3s,baz=31,slow=5.7,SNR=1.3						
LPIG				Sn	Sn	09 06 52.5	+9.0
	comp=E,0.6nm,0.3s,baz=188,slow=1.2,SNR=3.6						
LPIG				LR	LR	09 08 13.6	
	comp=E,535nm,19.8s,baz=319,slow=37						
BNM	Barren Site	8.22	64		Pn	09 05 07.5	-3.6
MVCO	Mesa Verde	8.61	41	P	Pn	09 05 19.2	+2.7
	baz=225,SNR=17						
ANMO	Albuquerque	8.66	60	Pn	Pn	09 05 18.8	+1.6
	comp=E,0.4nm,0.3s,baz=233,slow=11,SNR=28						
ANMO				LR	LR	09 09 01.6	
	comp=E,621nm,18.7s,baz=248,slow=41						
	comp=E,8.6nm,0.9s						
ANMO	Albuquerque	8.66	60	Pn	Pn	09 05 13.6	-3.6
ANMO	Albuquerque	8.66	60	P	Pn	09 05 20.4	+3.2
	baz=244						
SLBS	Sierra La Lagu	8.74	144	*e*P	Pn	09 05 17.4	-0.7
MNTX	Cornudas Mount	8.75	82		Pn	09 05 15.1	-3.2
MNTX	Cornudas Mount	8.75	82	*e*P	Pn	09 05 20.4	+2.1
MNTX				*e*		09 07 38.4	
MNTX	Cornudas Mount	8.75	82	P	Pn	09 05 20.8	+2.6
	baz=267,SNR=12						
DUG	Dugway, Tooele	9.56	13	P	Pn	09 05 31.7	+2.3
	baz=194,SNR=20						
ELK	Elko	9.85	1	Pn	Pn	09 05 36.2	+2.8
	comp=E,0.3nm,0.3s,baz=193,slow=9.5,SNR=5.8						
ELK				Lg	Lg	09 08 20.2	
	baz=205,slow=18,SNR=1.5						
ELK				LR	LR	09 09 13.3	
	comp=E,342nm,18.1s,baz=180,slow=37						
	comp=E,4.6nm,0.8s						
S22A	4UR Ranch, Cre	9.95	44	P	Pn	09 05 37.7	+2.8
	baz=229						
CTU	Camp Tracy	10.27	16	Pn	Pn	09 05 35.7	-3.4
TXAR	Lajitas Array	10.42	96	Pn	Pn	09 05 42.8	+1.6
	comp=E,0.1nm,0.3s,baz=265,slow=12,SNR=12						
TXAR				Lg	Lg	09 08 34.8	
	baz=289,slow=28						
TXAR				LR	LR	09 10 00.4	
	comp=E,276nm,19.4s,baz=272,slow=40						
	comp=E,1.2nm,0.8s						
TXAR	Lajitas Array	10.42	96	Pn	Pn	09 05 37.1	-4.1
SDCO	Great Sand Dun	10.77	48	P	Pn	09 05 49.1	+3.0
	baz=233						
O20A	White River Ci	10.99	31	P	Pn	09 05 52.8	+3.8
	baz=215						
T25A	Trinidad	11.16	53	P	Pn	09 05 54.9	+3.5
	baz=239						
MSTX	Muleshoe	11.24	71	P	Pn	09 05 55.7	+3.2
	baz=257,SNR=15						
ISCO	Idaho Springs	12.04	40	P	Pn	09 06 06.5	+3.0
	baz=225,SNR=8.1						
YBH	Yreka Blue Hor	12.26	334	Pn	Pn	09 06 11.9	+5.6
	baz=127,slow=7.7,SNR=4.7						
YBH				LR	LR	09 11 12.0	
	comp=E,339nm,20.6s,baz=176,slow=39						
	comp=E,3.6nm,0.8s						
AMTX	Amarillo	12.33	67		Pn	09 06 03.8	-3.6
AMTX	Amarillo	12.33	67	P	Pn	09 06 10.1	+2.7
	baz=254						
MFID	Camas Ranch	12.51	359	Pn	Pn	09 06 06.7	-3.0
L04D	Klamath Falls	12.54	336	Pn	Pn	09 06 06.8	-3.4
L04D	Klamath Falls	12.54	336	P	Pn	09 06 10.6	+0.4
	baz=153						
N23A	Red Feather La	12.67	35	P	Pn	09 06 15.6	+3.5
	baz=221,SNR=7.0						
HLID	Hailey	12.69	4	P	Pn	09 06 16.1	+3.8
	baz=185,SNR=9.5						
BW06	Boulder Array	12.79	20	P	Pn	09 06 16.4	+2.6
	baz=204,SNR=12						
PDAR	Pinedale Array	12.79	20	Pn	Pn	09 06 18.1	+4.4
	comp=E,0.2nm,0.3s,baz=200,slow=11,SNR=32						
PDAR				Lg	Lg	09 09 52.9	
	baz=238,slow=47,SNR=1.2						
PDAR				LR	LR	09 11 27.8	
	comp=E,400nm,18.4s,baz=212,slow=39						
	comp=E,5.1nm,1.0s						
KSCO	Kaye Shedlock’	13.35	49	P	Pn	09 06 25.2	+4.0

	baz=236						
J04D	**Umpqua Nationa**	13.39	339	Pn	**Pn**	**09 06 17.4**	**-4.5**
MOOW	**Moose Ponds**	13.40	15		**Pn**	**09 06 19.9**	**-2.1**
BCYI	**Bear Canyon**	13.51	7		**Pn**	**09 06 21.4**	**-2.1**
JCT	**Junction City**	13.57	88		**Pn**	**09 06 20.9**	**-3.4**
JCT	**Junction City**	13.57	88	P	**Pn**	**09 06 27.4**	**+3.1**
	baz=275,SNR=10						
ABTX	**Abilene, Hawle**	13.66	79	P	**Pn**	**09 06 28.2**	**+2.8**
	baz=266						
K22A	**Casper**	13.79	29	P	**Pn**	**09 06 30.0**	**+2.7**
	baz=214						
YPP	**Pitchstone Pla**	13.88	14	Pn	**Pn**	**09 06 25.8**	**-2.8**
H17A	**Grant Village**	14.05	15	P	**Pn**	**09 06 32.8**	**+1.8**
	baz=198						
MCMT	**McKenzie Canyo**	14.09	8	Pn	**Pn**	**09 06 27.8**	**-3.6**
ZAIG	**Zacatecas**	14.13	122		Pn	09 06 25.2	-6.9
YMR	**Madison River**	14.23	13		**Pn**	**09 06 31.9**	**-1.5**
QLMT	**Earthquake Lak**	14.30	12	Pn	**Pn**	**09 06 32.8**	**-1.5**
YNR	**Norris Junctio**	14.34	14		**Pn**	**09 06 33.6**	**-1.2**
YHL	**Hebgen Lake**	14.37	13		**Pn**	**09 06 33.5**	**-1.8**
YHH	**Holmes Hill**	14.37	14		**Pn**	**09 06 33.7**	**-1.6**
WMOK	**Wichita Mounta**	14.63	70		**Pn**	**09 06 34.8**	**-3.9**
WMOK	**Wichita Mounta**	14.63	70	P	**P**	**09 06 42.4**	**-2.6**
	baz=259,SNR=5.6						
DLMT	**Dillon**	14.64	8		**Pn**	**09 06 36.2**	**-2.8**
BOZ	**Bozeman (W)**	15.01	11	Pn	**Pn**	**09 06 41.6**	**-2.3**
BOZ	**Bozeman (W)**	15.01	11	P	**Pn**	**09 06 46.3**	**+2.4**
	baz=193,SNR=7.3						
G05D	**Wamic, OR**	15.03	344	P	**Pn**	**09 06 43.5**	**-0.5**
	baz=161						
F10A	**Beach Ranch, E**	15.12	356		**Pn**	**09 06 42.2**	**-3.1**
HOOD	**Mount Hood Mea**	15.18	343		**Pn**	**09 06 42.5**	**-3.7**
HAWA	**Hanford**	15.79	350		**Pn**	**09 06 51.4**	**-2.6**
HAWA				IAmb	IAmb	09 07 09.1	
	comp=Z,31nm,1.7s						
FNO	**Franklin**	15.84	69		**Pn**	**09 06 51.5**	**-3.1**
FNO				IAmb	IAmb	09 07 10.8	
	comp=Z,39nm,1.2s						
F04A	**Amboy**	15.95	342	Pn	**Pn**	**09 06 52.9**	**-3.1**
MSO	**Missoula**	15.97	4	P	**P**	**09 06 59.4**	**-0.6**
	baz=185,SNR=7.4						
RSSD	**Black Hills**	16.05	31	Pn	**Pn**	**09 06 53.1**	**-4.4**
RSSD	**Black Hills**	16.05	31	P	**P**	**09 07 01.2**	**+0.2**
	baz=218						
HRY	**Holter Researc**	16.07	9	Pn	**Pn**	**09 06 55.0**	**-2.7**
D08A	**Wollman Farm,**	16.36	352	P	**Pn**	**09 06 57.8**	**-3.4**
E04D	**Cinebar**	16.57	343	P	**P**	**09 07 06.0**	**-0.4**
	baz=159						
TUL1	**Leonard**	17.25	68	P	**P**	**09 07 15.7**	**+1.6**
	baz=258						
NEW	**Newport**	17.40	357	Pn	**P**	**09 07 18.8**	**+3.1**
	comp=Z,0.2nm,0.3s,baz=178,slow=16,SNR=4.9						
NEW				LR	LR	09 14 04.8	
	comp=Z,339nm,18.8s,baz=180,slow=38						
	comp=Z,3.6nm,0.9s						
NEW	**Newport**	17.40	357		**Pn**	**09 07 10.6**	**-3.8**
NEW	**Newport**	17.40	357	P	**P**	**09 07 17.7**	**+2.0**
	baz=176						
BGNE	**Belgrade**	17.52	48	P	**Pn**	**09 07 11.9**	**-4.1**
KSU1	**Kansas State U**	17.54	57	P	**Pn**	**09 07 11.8**	**-4.4**
KSU1				IAmb	IAmb	09 07 22.9	
	comp=Z,16nm,0.9s						
NLWA	**Neilton Lookou**	17.68	341	P	**Pn**	**09 07 13.0**	**-4.9**
NLWA				IAmb	IAmb	09 07 36.6	
	comp=Z,52nm,1.9s						
EGMT	**Eagleton**	17.69	13		**Pn**	**09 07 14.8**	**-3.2**
EGMT				IAmb	IAmb	09 07 24.1	
	comp=Z,37nm,1.5s						
EGMT	**Eagleton**	17.69	13	P	**P**	**09 07 20.7**	**+1.8**
	baz=197,SNR=8.1						
B08A	**Colville Reser**	17.69	352		**Pn**	**09 07 13.5**	**-4.5**
NATX	**Nacogdoches**	17.89	82	P	**Pn**	**09 07 15.3**	**-5.2**
NATX				IAmb	IAmb	09 07 27.7	
	comp=Z,27nm,1.2s						
WALA	**Waterton Lakes**	18.20	3	P	**Pn**	**09 07 21.4**	**-3.0**
W39A	**Magazine**	18.75	71	P	**Pn**	**09 07 32.5**	**+1.5**
	baz=263						
MIAR	**Mount Ida**	18.85	73	P	**Pn**	**09 07 33.4**	**+1.1**
	baz=265						
Z41A	**Richland Creek**	19.43	77	P	**P**	**09 07 33.5**	**-4.6**
S39A	**Bolivar**	19.57	64	P	**P**	**09 07 35.2**	**-4.4**
DGMT	**Dagmar**	19.59	23	P	**P**	**09 07 36.1**	**-3.6**
DGMT	**Dagmar**	19.59	23	P	**Pn**	**09 07 41.5**	**+0.5**
	baz=210						
U40A	**Yellville**	19.67	68	P	**P**	**09 07 36.1**	**-4.6**
U40A				IAmb	IAmb	09 07 50.0	
	comp=Z,27nm,1.8s						
U40A	**Yellville**	19.67	68	P	**Pn**	**09 07 42.3**	**+0.2**
	baz=260						
ECSD	**EROS Data Cent**	19.74	44	P	**P**	**09 07 38.1**	**-3.2**
ECSD				IAmb	IAmb	09 07 47.1	
	comp=Z,26nm,1.4s						
ECSD	**EROS Data Cent**	19.74	44	P	**Pn**	**09 07 44.9**	**+2.0**
	baz=236,SNR=12						
TLIG	**Tlapa**	20.36	127	P	**P**	**09 07 41.8**	**-6.7**
TLIG				IAmb	IAmb	09 07 51.1	
	comp=Z,20nm,1.3s						
R40A	**Maddies Statio**	20.52	63	P	**P**	**09 07 46.1**	**-3.8**
N38A	**Joes South For**	20.58	55	P	**P**	**09 07 47.6**	**-3.0**
P40A	**Paris**	21.02	59	P	**P**	**09 07 51.6**	**-3.7**
P40A				IAmb	IAmb	09 08 04.1	
	comp=Z,10nm,0.8s						
SCIA	**State Center**	21.03	52	P	**P**	**09 07 59.1**	**+3.7**
	baz=245						
F33A	**5 Mile Ranch,**	21.17	40	P	**P**	**09 07 52.0**	**-4.8**
F33A				IAmb	IAmb	09 08 06.0	
	comp=Z,7.5nm,0.9s						
CCM	**Cathedral Cave**	21.25	64	P	**P**	**09 07 53.8**	**-4.1**
CCM				IAmb	IAmb	09 08 10.1	
	comp=Z,12nm,1.1s						
CCM	**Cathedral Cave**	21.25	64	P	**P**	**09 07 59.5**	**+1.6**
	baz=257						
VBMS	**Vicksburg**	21.38	80	P	**P**	**09 07 52.5**	**-6.8**
I37A	**Lemond, Waseca**	21.86	47	P	**P**	**09 07 59.8**	**-4.5**
FVM	**French Village**	21.87	64	P	**P**	**09 07 58.9**	**-5.7**
FVM				IAmb	IAmb	09 08 15.4	
	comp=Z,7.9nm,1.0s						
HALT	**Halls**	22.43	70	P	**P**	**09 08 05.1**	**-5.4**
F36A	**Milaca**	22.75	43	P	**P**	**09 08 10.1**	**-3.7**
F36A				IAmb	IAmb	09 08 22.0	
	comp=Z,15nm,1.1s						
SPMN	**Marine on St.**	22.84	45	P	**P**	**09 08 10.7**	**-4.0**
SPMN				IAmb	IAmb	09 08 38.5	
	comp=Z,22nm,1.6s						
SPMN	**Marine on St.**	22.84	45	P	**P**	**09 08 16.2**	**+1.5**
	baz=239						
AGMN	**Agassiz Nation**	22.98	35	P	**P**	**09 08 12.7**	**-3.4**
AGMN	**Agassiz Nation**	22.98	35	P	**P**	**09 08 17.9**	**+1.7**
	baz=228						
Q44A	**Meyer Farm, Va**	23.14	63	P	**P**	**09 08 14.1**	**-3.8**
BBB	**Bella Bella**	23.20	340	LR	LR	09 17 00.6	
	comp=Z,164nm,20.4s,baz=159,slow=36						
CMIG	**Matias Romero**	23.30	121	P	**P**	**09 08 20.3**	**+0.6**
	comp=Z,6.1nm,0.9s,baz=314,slow=7.8,SNR=9.2						
CMIG				LR	LR	09 17 59.6	
	comp=Z,316nm,18.4s,baz=294,slow=38						
	comp=Z,6.1nm,0.9s						
PLAL	**Pickwick Lake**	23.40	73	P	**P**	**09 08 15.8**	**-4.8**
PLAL				IAmb	IAmb	09 08 42.2	
	comp=Z,7.5nm,1.1s						
WVT	**Waverly**	23.67	70	P	**P**	**09 08 19.7**	**-3.5**
WVT				IAmb	IAmb	09 08 41.5	
	comp=Z,7.3nm,1.1s						
WVT	**Waverly**	23.67	70	P	**P**	**09 08 24.2**	**+1.0**
	baz=265						
ULM	**Lac du Bonnet**	24.32	32	P	**P**	**09 08 30.0**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=222,slow=10,SNR=1.8						
ULM				LR	LR	09 18 24.1	
	comp=Z,192nm,19.4s,baz=316,slow=38						
	comp=Z,2.0nm,0.5s						
ULM	**Lac du Bonnet**	24.32	32	P	**P**	**09 08 24.8**	**-4.4**
TKL	**Tuckaleechee C**	26.94	71	P	**P**	**09 08 53.5**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=248,slow=19,SNR=1.5						
TKL				LR	LR	09 20 06.8	
	comp=Z,109nm,19.3s,baz=266,slow=38						
	comp=Z,2.4nm,0.9s						
DLBC	**Dease Lake**	29.28	344	P	P	09 09 19.0	+5.2
	comp=Z,4.9nm,1.1s,baz=162,slow=12,SNR=3.7						
DLBC				LR	LR	09 21 10.1	
	comp=Z,324nm,19.9s,baz=142,slow=37						
	comp=Z,4.9nm,1.1s						
YKA	**Yellowknife Ar**	31.63	1	P	P	09 09 39.0	+4.6
	comp=Z,0.3nm,0.7s,baz=181,slow=8.5,SNR=8.5						
YKA				LR	LR	09 22 39.0	
	comp=Z,157nm,19.6s,baz=126,slow=37						
	comp=Z,0.3nm,0.7s						
SADO	**Sadowa**	31.65	54	LR	LR	09 21 31.8	
	comp=Z,31nm,18.5s,baz=225,slow=35						
BMRM	**Bremner River**	35.66	336	P	**P**	**09 10 13.0**	**+3.5**
	baz=134						
M27K	**Edge Creek, AK**	35.78	339	P	P	09 10 14.7	+4.0
	baz=140						
N25K	**Chitina, Valde**	36.11	337	P	**P**	**09 10 16.2**	**+2.7**
	baz=135						
M26K	**Nabesna, AK**	36.16	339	P	**P**	**09 10 16.5**	**+2.6**
	baz=138						
L27K	**Beaver Creek,**	36.31	340	P	**P**	**09 10 17.3**	**+2.2**
	baz=140						
DAWY	**Dawson**	36.43	343	P	**P**	**09 10 19.4**	**+3.2**
	baz=144,SNR=7.5						
GLI	**Glacier Island**	36.49	335	P	P	09 10 20.8	+4.1
	baz=131						
HARP	**HAARP**	36.85	337	P	**P**	**09 10 23.0**	**+3.3**
	baz=135						
K27K	**Chicken**	37.13	341	P	**P**	**09 10 25.7**	**+3.7**
	baz=141						
SCM	**Sheep Creek Mo**	37.21	336	P	**P**	**09 10 25.5**	**+2.6**
	baz=132						
I29M	**Ogilvie Camp,**	37.24	344	P	P	09 10 27.5	+4.5
	baz=147						
KNK	**Knik Glacier**	37.34	334	P	P	09 10 28.5	+4.6
	baz=130,SNR=6.5						
PAX	**Paxson**	37.36	338	P	P	09 10 28.0	+3.9
	baz=135						
EGAK	**Eagle**	37.47	342	P	**P**	**09 10 28.2**	**+3.4**
	baz=142,SNR=5.9						
SML	**Sawmill**	37.55	335	P	**P**	**09 10 29.0**	**+3.3**
	baz=130						
SCRK	**Sand Creek**	37.64	340	P	P	09 10 30.4	+3.9
	baz=138,SNR=5.2						
PMR	**Palmer**	37.71	334	P	P	09 10 31.5	+4.6
	baz=129,SNR=7.1						
RIDG	**Independent Ri**	37.72	339	P	P	09 10 31.1	+4.0
	baz=137						
EPYK	**Eagle Plains**	37.76	346	P	**P**	**09 10 31.0**	**+3.6**
	baz=150						
WAT6	**Susitna Watana**	37.85	336	P	**P**	**09 10 30.9**	**+2.6**
	baz=132						
J26L	**Joseph Creek**	37.91	341	P	**P**	**09 10 31.3**	**+2.6**
	baz=139						
DHY	**Denali Highway**	38.06	337	P	P	09 10 34.6	+4.5
	baz=133						
WAT1	**Susitna Watana**	38.30	336	P	**P**	**09 10 35.1**	**+3.2**
	baz=131						
J25K	**Salcha River,**	38.52	340	P	P	09 10 37.8	+4.0
	baz=137,SNR=9.7						
INK	**Inuvik**	38.91	349	P	P	09 10 41.1	+4.2
	comp=Z,5.1nm,1.0s,baz=143,slow=9.2,SNR=3.6						
INK				LR	LR	09 27 02.6	
	comp=Z,192nm,18.8s,baz=158,slow=37						
	comp=Z,5.1nm,1.0s						
INK	**Inuvik**	38.91	349	P	**P**	**09 10 39.9**	**+3.0**
	baz=155,SNR=7.2						
MCK	**McKinley**	39.02	337	P	**P**	**09 10 41.5**	**+3.4**
	baz=132						
ILAR	**Eielson Array**	39.08	339	P	P	09 10 43.8	+5.3
	comp=Z,3.7nm,1.1s,baz=152,slow=7.0,SNR=20						
	comp=Z,3.7nm,1.1s						
TRF	**Thorofare Moun**	39.30	336	P	**P**	**09 10 43.8**	**+3.2**
	baz=130						
N19K	**Bonanza Creek**	39.37	331	P	**P**	**09 10 44.3**	**+3.3**
	baz=122						
PPLA	**Purkeypile**	39.64	335	P	**P**	**09 10 45.5**	**+2.2**
	baz=127,SNR=5.8						
NEA2	**Nenana**	39.64	338	P	**P**	**09 10 46.7**	**+3.5**
	baz=132						
CAST	**Castle Rocks**	39.92	335	P	**P**	**09 10 48.1**	**+2.6**
	baz=127						
M19K	**Big River Lodg**	39.92	332	P	**P**	**09 10 48.7**	**+3.2**
	baz=123						
BPAW	**Bear Paw Mtn.**	39.96	337	P	P	09 10 49.9	+4.1
	baz=129,SNR=6.1						
I23K	**Minto, Yukon-K**	40.11	339	P	**P**	**09 10 49.8**	**+2.8**
	baz=132						
H24K	**Noodor Dome**	40.13	340	P	P	09 10 51.7	+4.5
	baz=135						
L19K	**White Mountain**	40.25	333	P	**P**	**09 10 50.5**	**+2.2**
	baz=123						
CHUM	**Lake Minchumin**	40.28	336	P	**P**	**09 10 51.7**	**+3.3**
	baz=128,SNR=7.2						
K20K	**Telida**	40.61	334	P	P	09 10 55.1	+3.9
	baz=125,SNR=5.6						
H23K	**Yukon River**	40.62	339	P	**P**	**09 10 54.3**	**+3.0**
	baz=133						
I21K	**Tanana**	40.97	338	P	**P**	**09 10 57.4**	**+3.2**
	baz=129						
J20K	**Nowinta River**	41.11	335	P	**P**	**09 10 58.4**	**+3.1**
	baz=126						
TTA	**Tatalina**	41.11	333	P	P	09 10 59.2	+3.8
	baz=122						
A36M	**Sachs Harbour**	41.49	355	P	P	09 11 02.3	+4.0
	baz=168						
H21K	**Melozitna Rive**	41.54	338	P	**P**	**09 11 01.0**	**+2.2**
	baz=128,SNR=7.8						
COLD	**Coldfoot**	41.77	341	P	**P**	**09 11 04.0**	**+3.3**
	baz=133						
SCHQ	**Schefferville**	41.87	41	LR	LR	09 29 22.9	
	comp=Z,40nm,21.9s,baz=132,slow=38						
GCSA	**Galena City Sc**	42.41	335	P	**P**	**09 11 08.5**	**+2.6**
	baz=123						
TOLK	**Toolik Lake Re**	42.58	342	P	**P**	**09 11 10.4**	**+3.1**
	baz=135						
SJG	**San Juan**	46.39	94	LR	LR	09 34 37.2	
	comp=Z,32nm,20.9s,baz=279,slow=41						
ATAH	**Atahualpa**	51.92	130	P	**P**	**09 12 22.3**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=314,slow=8.0,SNR=5.3						
	comp=Z,4.5nm,0.9s						
SFJD	**Kangerlussuaq**	52.21	27	LR	LR	09 35 01.0	
	comp=Z,98nm,19.8s,baz=250,slow=37						
RPN	**Rapa Nui**	57.99	173	LR	LR	09 31 52.6	
	comp=Z,40nm,20.7s,baz=187,slow=30						
MDP	**Montagnes des**	64.22	100	LR	LR	09 45 14.9	
	comp=Z,25nm,18.3s,baz=233,slow=39						
AFI	**Afiamalu**	69.98	239	LR	LR	09 36 38.7	
	comp=Z,46nm,18.9s,baz=150,slow=28						
H11S1	**WAKE ISLAND Hy**	70.46	280	T	T	10 31 17.6	
	baz=62,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	70.46	280	T	T	10 31 18.0	
	baz=62,slow=74,SNR=13						
H11S3	**WAKE ISLAND Hy**	70.48	280	T	T	10 31 19.0	
	baz=62,slow=74,SNR=8.6						
NOA	**NORSAR Array B**	78.72	23	LR	LR	09 50 52.6	
	comp=Z,40nm,18.3s,baz=65,slow=36						
PLCA	**Paso Flores**	82.54	147	P	**P**	**09 15 36.8**	**+2.4**
	comp=Z,1.7nm,0.9s,baz=329,slow=10.0,SNR=4.0						
	comp=Z,1.7nm,0.9s						
MJAR	**Matsushiro Arr**	83.72	309	LR	LR	09 46 29.0	
	comp=Z,25nm,19.3s,baz=72,slow=31						
RCBR	**Riachuelo**	84.15	100	LR	LR	09 57 46.1	
	comp=Z,26nm,18.1s,baz=26,slow=39						
DZM	**Mont Dzumac**	91.42	245	LR	LR	09 49 51.4	
	comp=Z,34nm,18.0s,baz=12,slow=30						
HHC	**Hu-ho-hao-te**	96.37	326	*e*P	**P**	**09 16 37.4**	**-3.5**
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,4.6s						
AKTO	**Aktyubinsk**	98.84	4	LR	LR	10 05 54.9	
	comp=Z,49nm,18.5s,baz=4.2,slow=38						

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*LVSN **11** 09:24:58.7±5.7, 59°.33N×24°.84E, h0^{km}±39^{km}, ML1.9*

HEL 11 09:25:05.3±0.1**, 60°.57N×25°.47E, h0**^{km}**, ML1.7, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	**Pernaja**	0.19	96	PG	Pg	09 25 08.9	-0.1
PVF				SG	Sg	09 25 11.2	-0.2
NUR	**Nurmijrvi**	0.41	262	PG	Pg	09 25 12.5	-0.7
NUR				SG	Sg	09 25 17.6	-0.9
MEF	**Metsahovi**	0.64	237	*e*P	Pg	09 25 16.6	-0.9
MEF				*e*S	Sg	09 25 24.9	-0.9
MEF				AML	AML	09 25 27.4	
	comp=N,30nm,0.5s						
MEF				AML	AML	09 25 27.7	
	comp=E,36nm,0.6s						
MEF				AML	AML	09 25 29.8	
	comp=Z,15nm,0.6s						
MEF	**Metsahovi**	0.64	237	PG	Pg	09 25 16.5	-1.0
MEF				SG	Sg	09 25 24.8	-0.9
FIA0	**FINESS Array S**	0.93	18	PG	Pg	09 25 22.0	-1.1
	baz=195						
FIA0				SB	Sg	09 25 34.2	-0.9
VJF	**Virojoki**	1.03	91	PG	Pg	09 25 23.9	-1.1
	baz=276						
VJF				MSG		09 25 36.7	
	comp=Z,11nm,0.2s						
KAF	**Kangasniemi**	1.60	14	PN	Pn	09 25 34.5	-0.3
KAF				SN	Sn	09 25 55.6	-0.7
KEF	**Keuruu**	1.63	350	PN	Pn	09 25 35.2	-0.1
KEF				MSG		09 25 54.0	
	comp=Z,5.8nm,0.2s						
KEF				SN	Sn	09 25 56.8	-0.2
RAF	**Rauma**	1.88	286	*e*S	Sn	09 26 02.7	-0.2
RAF				AML	AML	09 26 07.5	
	comp=E,4.8nm,0.5s						
RAF				AML	AML	09 26 07.8	
	comp=Z,6.1nm,0.9s						
RAF				AML	AML	09 26 08.2	
	comp=N,6.2nm,0.4s						
RAF	**Rauma**	1.88	286	PG	Pb	09 25 39.7	-0.7
RAF				MSG		09 26 01.0	
	comp=Z,3.6nm,0.2s						
RAF				SG	Sn	09 26 02.9	0.0
MTSE	**Matsula**	2.04	205	SG	Sb	09 26 08.8	-0.1
SUF	**Sumiainen**	2.19	8	PG	Pb	09 25 44.4	-1.3
SUF				MSG		09 26 10.1	
	comp=Z,1.6nm,0.2s						
SUF				SG	Sb	09 26 13.4	+0.1
SLIT	**Slitere, Latvi**	3.37	211	AML	AML	09 26 03.0	
	comp=N,53nm,0.6s						
SLIT				*e*S	Pn	09 25 58.5	-0.7
SLIT				AML	AML	09 26 03.4	
	comp=Z,68nm,0.6s						
SLIT				AML	AML	09 26 04.5	
	comp=E,79nm,0.6s						

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*IDC **11** 09:34:32.4±5.6, 57°.86S×25°.74W, h45^{km}±54^{km}, mb3.7/10, mbtmp4.0/11, ML4.4/1, MS3.2/5, Error ellipse: s-maj=22.3km s-min=19.3km az=24.0*

*NEIC **11** 09:34:36.8±1.0, 58°.0S±0°.1×25°.80W±0°.09, h84^{km}±7^{km}, mb4.3/14, Error ellipse: s-maj=15.4km s-min=6.2km az=190.0*

ISC 11 09:34:32.9±0.5**, 57°.93S**±0°.08×**25°.60W**±0°.09**, h50**^{km}**, n43,** σ**1**^{s}.**10**/36**, mb4.2**/14**, MS3.2**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	7.10	296		**Pn**	**09 36 17.0**	**+3.0**
ORCD	**Orcadas**	10.16	246		**Pn**	**09 36 57.9**	**+1.9**
VNA1	**Neumayer--Stat**	14.72	157	P	**Pn**	**09 37 57.7**	**-0.1**
VNA3	**Neumayer Olymp**	14.93	160	P	**Pn**	**09 37 59.9**	**-0.5**
VNA3				S	Sn	09 40 28.6	-16
SNAA	**Sanae**	16.67	155	P	**Pn**	**09 38 23.9**	**+1.2**
SNAA				S	Sn	09 41 12.4	-14
SNAA	**Sanae**	16.67	155	P	**Pn**	**09 38 23.7**	**+1.0**
	1.2nm,0.3s,baz=42,slow=14,SNR=196						
SNAA				S	Sn	09 41 11.0	-16
	2.1nm,0.9s,baz=322,slow=13,SNR=3.7						
SNAA				LR	LR	09 43 24.1	
	comp=Z,93nm,21.9s,baz=326,slow=32						
	8.2nm,0.7s						
SNAA	**Sanae**	16.67	155		**Pn**	**09 38 23.6**	**+0.9**
TROLL	**Troll, Antarti**	18.17	152	P	**Pn**	**09 38 43.6**	**+2.3**
BELA	**Belgrano 2**	20.27	185	P	**P**	**09 39 04.0**	**+0.2**
USHA	**Ushuaia**	23.62	259	P	**P**	**09 39 38.1**	**-1.0**
	1.4nm,0.7s,baz=335,slow=9.6,SNR=1.7						
	1.4nm,0.7s						
DSPA	**Despedida**	23.92	261	P	**P**	**09 39 42.3**	**+0.4**
MG05	**Puerto Natales**	27.28	263	P	**P**	**09 40 11.3**	**-0.9**
MG05				IAmb	IAmb	09 40 14.2	
	comp=Z,12nm,1.1s						
GO09	**Cerro Castillo**	27.41	264	P	**P**	**09 40 13.2**	**-0.3**
GO09				IAmb	IAmb	09 40 38.1	
	comp=Z,9.4nm,1.1s						
QSPA	**South Pole Qui**	32.32	180	P	**P**	**09 40 57.5**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=327,slow=1.0,SNR=5.3						
QSPA				LR	LR	09 52 42.0	
	comp=Z,52nm,20.1s,baz=225,slow=34						
	comp=Z,0.7nm,0.7s						
QSPA	**South Pole Qui**	32.32	180	P	**P**	**09 40 57.5**	**+0.6**
QSPA				IAmb	IAmb	09 41 16.5	
	comp=Z,4.1nm,1.1s						
PLCA	**Paso Flores**	33.21	281	P	**P**	**09 41 04.6**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=117,slow=11,SNR=1.6						
PLCA				LR	LR	09 54 00.4	
	comp=Z,42nm,19.5s,baz=165,slow=35						
	comp=Z,0.7nm,0.9s						
PLCA	**Paso Flores**	33.21	281	P	**P**	**09 41 03.6**	**-1.3**
PLCA				IAmb	IAmb	09 41 28.1	
	comp=Z,6.1nm,1.2s						
MAW	**Mawson**	38.12	142	P	**P**	**09 41 46.1**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=282,slow=12,SNR=2.7						
	comp=Z,2.5nm,0.8s						
CPUP	**Villa Florida**	38.70	311	LR	LR	09 57 06.5	
	comp=Z,32nm,18.5s,baz=158,slow=35						
VNDA	**Vanda**	44.73	182	P	**P**	**09 42 42.0**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=199,slow=7.7,SNR=4.1						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	44.73	182	P	**P**	**09 42 39.1**	**-1.4**
BDFB	**Brasilia**	45.43	329	P	**P**	**09 42 46.7**	**-0.1**
BDFB				IAmb	IAmb	09 43 02.6	
	comp=Z,4.5nm,1.1s						
BOSA	**Boshof**	45.65	72	P	**P**	**09 42 48.6**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=174,slow=12,SNR=4.0						
	comp=Z,2.1nm,0.8s						
BOSA	**Boshof**	45.65	72	P	**P**	**09 42 49.4**	**+0.9**
BOSA				IAmb	IAmb	09 43 18.3	
	comp=Z,5.2nm,1.2s						
LBTB	**Lobatse**	48.77	70	P	**P**	**09 43 13.1**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=225,slow=2.9,SNR=2.6						
	comp=Z,1.8nm,0.7s						
H10S2	**ASCENSION HYDR**	49.58	14	T	T	10 37 52.3	
	baz=188,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	49.59	14	T	T	10 37 54.3	
	baz=32,slow=74,SNR=32						
H10N1	**ASCENSION HYDR**	50.70	14	T	T	10 39 17.1	
	baz=190,slow=72,SNR=24						
H10N3	**ASCENSION HYDR**	50.70	14	T	T	10 39 16.3	
	baz=190,slow=72,SNR=175						
H10N2	**ASCENSION HYDR**	50.72	14	T	T	10 39 18.5	
	baz=190,slow=72,SNR=73						
LPAZ	**La Paz**	52.17	305	P	**P**	**09 43 37.3**	**-1.8**
	comp=Z,1.2nm,0.5s,baz=206,slow=7.6,SNR=7.5						
	comp=Z,1.2nm,0.5s						
LPAZ	**La Paz**	52.17	305	P	**P**	**09 43 38.7**	**-0.4**
LPAZ				IAmb	IAmb	09 43 43.9	
	comp=Z,1.7nm,0.7s						
NNA	**Nana**	59.91	298	LR	LR	10 12 10.2	
	comp=Z,14nm,19.1s,baz=283,slow=38						
DBIC	**Dimbokro**	66.54	23	P	**P**	**09 45 17.4**	**0.0**
	comp=Z,1.1nm,0.3s,baz=213,slow=4.9,SNR=4.2						
	comp=Z,1.1nm,0.3s						
DBIC	**Dimbokro**	66.54	23	P	**P**	**09 45 18.0**	**+0.6**
TORD	**Torodi Ar. Bea**	74.29	28	P	**P**	**09 46 05.4**	**+0.7**
	comp=Z,8.6nm,0.8s,baz=200,slow=6.3,SNR=0.6						
PAYG	**Puerto Ayora**	76.23	291	P	**P**	**09 46 14.2**	**-1.8**
ASAR	**Alice Springs**	96.93	161	P	**P**	**09 47 58.1**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=108,slow=5.0,SNR=1.2						
	comp=Z,0.6nm,1.0s						
ARCES	**ARCESS Array B**	132.37	22	PKP	**PKPdf**	**09 53 38.7**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=186,slow=1.8,SNR=1.1						
YKA	**Yellowknife Ar**	138.14	316	PKP	**PKPdf**	**09 53 50.4**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=126,slow=2.3,SNR=15						
YKA	**Yellowknife Ar**	138.14	316		**PKPdf**	**09 53 50.8**	**+0.1**
SONM	**Songino Array**	149.94	89	PKPbc	**PKPbc**	**09 54 16.7**	**0.0**
	comp=Z,0.7nm,0.6s,baz=250,slow=4.2,SNR=3.3						
ILAR	**Eielson Array**	152.00	309	PKPbc	**PKPbc**	**09 54 20.7**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=146,slow=1.9,SNR=14						

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*SFS **11** 09:34:54.0, 36°.50N×5°.80W, h12^{km}, ML2.6, PATERNA DE RIVERA (CADIZ)*

*MDD **11** 09:34:54.3±0.4, 36°.59N×5°.83W, h12^{km}, mb_Lg2.6/9, Error ellipse: s-maj=3.6km s-min=2.2km az=14.0*

*INMG **11** 09:34:54.6±1.9, 36°.59N×5°.76W, h17^{km}±5^{km}, ML2.5, Error ellipse: s-maj=4.3km s-min=3.2km az=38.0*

*CNRM **11** 09:34:57.3, 36°.18N×6°.61W, h127^{km}, ml2.5*

ISC 11 09:34:53.4±1.1**, 36°.61N**±0°.02×**5°.78W**±0°.02**, h15**^{km}±9^{km}**, n37,** σ**1**^{s}.**54**/66**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPR	**Espera**	0.27	346	Pg	**Pg**	**09 34 59.3**	**+0.1**
ESPR				Sg	**Sb**	**09 35 04.6**	**+0.4**
EJIF	**Jimena Fronter**	0.29	122	Pg	**Pb**	**09 34 59.6**	**-0.8**

EJIF				Sg	Sb	09 35 04.2	-0.7
CNIL	Conil	0.33	223	P	Pb	09 35 02.0	+1.1
SFS	San Fernando	0.37	248	P	Pb	09 35 02.9	+1.2
SFS				S	Sb	09 35 10.7	+3.4
LIJA	Lijar	0.42	45	P	Pb	09 35 02.0	-0.6
LIJA				S	Sb	09 35 09.2	+0.5
EMIJ	Mijas	0.81	93	Pg	Pb	09 35 09.7	+0.6
EMIJ				Sg	Sn	09 35 22.3	+0.4
EMIJ				i Vmb_Lg		09 35 27.1	
EMAL	Malaga-Limoner	1.09	82	P	Pn	09 35 16.1	+2.0
EMAL				S	Sn	09 35 31.9	+3.0
EMIN	Mina Concepcio	1.36	329	Pg	Pn	09 35 18.6	+0.8
EMIN				Sg	Sb	09 35 36.4	+0.7
EMIN				i Vmb_Lg		09 35 40.7	
EGOR	Sierra Gorda,	1.43	69	Pg	Pn	09 35 17.8	-1.0
EGOR				Sg	Sg	09 35 42.1	+2.6
EGOR				i Vmb_Lg		09 35 50.6	
ECAB	El Cabril	1.49	11	Pg	Pb	09 35 21.1	+0.3
ECAB				Sg	Sg	09 35 40.7	-0.8
ECAB				i Vmb_Lg		09 35 44.9	
EGRO	El Granado	1.65	305	Pg	Pn	09 35 21.9	+0.2
EGRO				Sg	Sn	09 35 42.8	+0.2
EGRO				i Vmb_Lg		09 35 47.7	
PVAQ	Vaqueiros	1.75	298	ePn	Pn	09 35 22.9	-0.2
PVAQ				eSg	Sg	09 35 49.3	-0.3
PVAQ				A	A	09 35 52.4	
	25nm,0.6s						
PVAQ	Vaqueiros	1.75	298	P	Pb	09 35 25.4	+0.3
PVAQ				S	Sb	09 35 47.9	+1.2
ELGU	Los Guajares,	1.75	81	Pn	Pb	09 35 24.9	-0.3
ELGU				Sn	Sb	09 35 47.7	+0.9
ELGU				i Vmb_Lg		09 35 59.6	
EADA	Adamuz	1.83	31	Pn	Pn	09 35 24.6	+0.4
EADA				Pg	Pb	09 35 27.1	+0.6
EADA				Sn	Sn	09 35 46.9	-0.2
EADA				Sg	Sg	09 35 53.4	+1.2
EADA				i Vmb_Lg		09 35 56.9	
PBDV	Barranco-do-Ve	1.84	291	ePn	Pn	09 35 24.5	+0.1
PBDV				eSg	Sg	09 35 53.5	+0.9
PBDV				A	A	09 35 57.1	
	15nm,0.5s						
PBAR	Barrancos	1.86	328	ePg	Pb	09 35 27.7	+0.7
PBAR				eSg	Sg	09 35 52.3	-0.9
PBAR				A	A	09 35 53.8	
	20nm,0.3s						
PCVE	Castro Verde	2.08	300	ePn	Pn	09 35 27.8	+0.2
PCVE	Castro Verde	2.08	300	ePg	Pg	09 35 32.3	-0.9
PCVE				eSg	Sg	09 35 59.6	-0.6
PCVE				A	A	09 36 07.0	
	12nm,0.5s						
PBEJ	Beja	2.19	311	eSg	Sg	09 36 02.3	-1.4
MESJ	Messejana	2.31	303	ePn	Pn	09 35 31.1	+0.3
MESJ	Messejana	2.31	303	ePg	Pb	09 35 36.3	+1.7
MESJ				eSg	Sg	09 36 06.0	-1.5
MESJ				A	A	09 36 12.8	
	12nm,0.5s						
EBAD	Badajoz	2.36	336	Pn	Pn	09 35 30.6	-0.9
EBAD				Sg	Sb	09 36 06.8	+2.4
EBAD				i Vmb_Lg		09 36 13.2	
EVO	Evora	2.62	318	eSg	Sg	09 36 16.4	-1.1
EVO				A	A	09 36 22.3	
	13nm,0.6s						
PNCL	Nicolau / Gran	2.66	305	ePn	Pn	09 35 35.8	+0.2
PNCL	Nicolau / Gran	2.66	305	ePg	Pb	09 35 42.3	+1.7
PESTR	Estremoz	2.67	328	eSg	Sg	09 36 17.8	-1.5
PESTR				A	A	09 36 22.3	
	9.3nm,0.4s						
PESTR	Estremoz	2.67	328	P	Pb	09 35 41.9	+0.9
PESTR				S	Sb	09 36 14.1	+0.5
PMRV	Marv??o	3.09	336	eSg	Sg	09 36 30.8	-1.9
PMRV				A	A	09 36 35.1	
	20nm,0.7s						
PMTG	Montargil	3.13	322	ePn	Pn	09 35 43.9	+1.8
PMTG				eSg	Sg	09 36 30.9	-3.0
PMTG				A	A	09 36 46.5	
	9.2nm,0.7s						
PAB	San Pablo	3.14	21	Pn	Pn	09 35 42.5	+0.2
PAB				Sn	Sn	09 36 19.0	-0.6
PAB				Sg	Sg	09 36 31.9	-2.4
PAB				i Vmb_Lg		09 36 39.5	
ZHG	ZHG	3.23	193	P	Pn	09 35 42.9	-0.7
ZHG				S	Sn	09 36 15.8	-6.0
PCBR	Castelo Branco	3.49	338	eSn	Sn	09 36 27.2	-0.9
PCBR				eSg	Sg	09 36 43.2	-2.4
PCBR				A	A	09 36 50.1	
	8.8nm,0.5s						
MD31	MD31	3.83	167	P	Pn	09 35 52.9	+1.2
MD31				S	Sn	09 36 36.2	-0.2
MDT	Midelt	3.91	165	P	Pn	09 35 53.3	+0.4
MDT				S	Sn	09 36 37.7	-0.8
MTE	Manteigas	4.03	340	eSg	Sg	09 37 00.5	-2.3
MTE				A	A	09 37 09.2	
	14nm,0.4s						
PVIS	Viseu	4.42	339	eSg	Sg	09 37 13.1	-2.3

IDC 11 09:36:10.9±10.0**, 23°.67S×179°.98W, h509^{km}**±130^{km}**,**
mb3.3/5**, mbtmp4.3**/6**, Error ellipse: s-maj=91.9km**
s-min=30.6km az=6.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.75	189	P	P	09 39 17.6	-0.6
	4.9nm,0.6s,baz=303,slow=23,SNR=1.5						
URZ				S	S	09 41 44.0	-8.7
	19nm,1.1s,baz=298,slow=18,SNR=2.8						
CTA	Charters Tower	31.49	270	P	P	09 41 51.6	+0.9
	6.3nm,0.5s,baz=94,slow=10,SNR=25						
	6.3nm,0.5s						
STKA	Stephens Creek	34.82	248	P	P	09 42 18.6	-0.2
	4.2nm,1.1s,baz=98,slow=15,SNR=1.7						
	4.2nm,1.1s						
ASAR	Alice Springs	42.09	260	P	P	09 43 17.7	-0.4
	2.6nm,0.8s,baz=94,slow=7.7,SNR=33						
	2.6nm,0.8s						
WRA	Warramunga Arr	42.44	266	P	P	09 43 20.1	-0.7
	3.7nm,0.5s,baz=96,slow=8.3,SNR=83						
	3.7nm,0.5s						
TXAR	Lajitas Array	90.30	58	P	P	09 48 17.6	+0.1
	0.2nm,0.6s,baz=230,slow=5.9,SNR=4.3						
	0.2nm,0.6s						

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*NNC **11** 09:43:27.2±3.1, 53°.72N×90°.64E, h0^{km}, mb3.4, mpv3.1,*
Error ellipse: s-maj=23.7km s-min=16.1km az=61.0,
Suspected Mining explosion.
*IDC **11** 09:43:28.7±3.5, 53°.59N×90°.64E, h0^{km}, mbtmp3.1/3,*
ML2.6/3, Error ellipse: s-maj=29.6km s-min=23.3km
az=60.0
ISC 11 09:43:30.0±4.1**, 53°.6N**±0°.1×**90°.5E**±0°.2**, h0^{km}, n8,** σ**1^s.40**/10**,**
5C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.38	279	i		10 06 20.0	
	baz=89,slow=334,SNR=5.4						
ZAA0	Zalesovo Array	3.38	279	⇑Pg	Pb	09 44 29.0	-1.7
	1.7nm,1.1s						
ZAA0				⇓Lg	Lg	09 45 18.8	
	8.4nm,1.1s						
ZALV	Zalesovo Beam	3.38	279	Pn	Pn	09 44 26.0	+2.0
	0.8nm,0.3s,baz=94,slow=14,SNR=9.4						
ZALV				Lg	Lg	09 45 18.9	
	2.2nm,0.3s,baz=95,slow=29,SNR=9.1						
	2.1nm,0.4s						
KURBB	Kurchatov Arra	7.93	253	Pn	Pn	09 45 25.8	-0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=5.3						
KURBB				Sn	Sn	09 46 56.3	-0.5
	baz=312,slow=46						
KURBB				Lg	Lg	09 47 46.4	
	0.1nm,0.3s,baz=73,slow=32,SNR=8.9						
	1.0nm,0.6s						
KURBB	Kurchatov Arra	7.93	253	⇑Pn	Pn	09 45 26.7	+0.3
	1.9nm,0.5s						
KURBB				⇑Sn	Sn	09 46 58.4	+1.7
	15nm,0.9s						
KURBB				⇑Lg	Lg	09 47 43.3	
	40nm,1.1s						
MK31	Makanchi Array	8.58	221	⇑Pn	Pn	09 45 35.6	+0.2
	0.6nm,0.6s,baz=40,slow=13,SNR=9.2						
MK31				⇓Sn	Sn	09 47 14.5	+1.7
	1.4nm,0.6s						
MK31				⇓Lg	Lg	09 48 05.3	
	4.2nm,0.8s,baz=36,slow=28,SNR=3.7						
MKAR	Makanchi Array	8.58	221	Pn	Pn	09 45 35.9	+0.5
	0.2nm,0.3s,baz=41,slow=14,SNR=10						
MKAR				Sn	Sn	09 47 12.6	-0.2
	0.1nm,0.3s,baz=48,slow=22,SNR=2.2						
MKAR				Lg	Lg	09 48 01.4	
	0.1nm,0.3s,baz=32,slow=33,SNR=3.1						
	0.6nm,0.5s						
MAKZ	Makanchi	8.69	222	⇓Lg	Lg	09 48 09.3	
	10nm,1.1s						

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*NNC **11** 09:55:03.0±3.0, 36°.95N×70°.71E, h0^{km}, mb4.8, mpv5.0,*
Error ellipse: s-maj=24.1km s-min=18.6km az=5.0
*MOS **11** 09:55:02.9±0.8, 36°.48N×70°.78E, h211^{km}, mb4.0/10, Error*
ellipse: s-maj=11.4km s-min=5.0km az=78.4
*BJI **11** 09:55:03.4±0.0, 36°.65N×70°.76E, h217^{km}, mb4.3/18,*
mB4.5/9
*NEIC **11** 09:55:04.0±2.3, 36°.49N±0°.06×70°.73E±0°.08, h206^{km}±5^{km},*
mb4.2/12, Error ellipse: s-maj=9.9km s-min=8.1km
az=111.0
*IDC **11** 09:55:04.5±0.7, 36°.40N×70°.84E, h210^{km}±5^{km}, mb3.5/12,*
mbtmp4.2/16, Error ellipse: s-maj=14.0km s-min=12.1km
az=64.0
*SOME **11** 09:55:13.4, 38°.28N×71°.18E, h0^{km}, MS3.8*
ISC 11 09:55:03.3±0.4**, 36°.50N**±0°.04×**70°.81E**±0°.04**, h200^{km}, n147,**
σ**1^s.60**/179**, mb4.0**/20**, 14C-10D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.42	217	Pn	Pn	09 55 47.3	+0.7
KBL				Sn	Sn	09 56 19.2	-1.1
KBL	Kabul	2.42	217	PN	Pn	09 55 47.3	+0.7
KBL						09 56 19.2	
CHGR	Chuyangaron	2.53	329	Pn	Pn	09 55 48.3	+0.8
GAR	Garm	2.53	351		Pn	09 55 48.8	+1.2
CEP	Cherat	2.81	161	P	Pn	09 55 52.1	+1.2
CEP				S	Sn	09 56 28.0	-0.1
DRK	Karamyk	3.08	14		Pn	09 55 55.7	+1.6
CHCP	Chirah Chowk	3.47	144	P	Pn	09 56 00.0	+1.4
NIL	Nilore	3.47	144		Pn	09 55 59.5	+0.9
NIL	Nilore	3.47	144	PN	Pn	09 55 59.5	+0.9
BTK	Batken	3.56	0		Pn	09 56 01.6	+2.0
BTK	Batken	3.56	0	PN	Pn	09 56 01.6	+2.0
THW	Thamme Wali	3.77	168	P	Pn	09 56 03.1	+0.8
SARP	Sargodha	4.81	161	P	Pn	09 56 15.6	+0.3
TAS	Tashkent	4.97	347	Pn	Pn	09 56 18.2	+1.1
TAS	Tashkent	4.97	347	PN	Pn	09 56 18.2	+1.1
JMU	Jammu	5.06	137	eP	Pn	09 56 18.0	-0.4
JMU				i x	x	09 56 19.8	
JMU				eS	Sn	09 57 14.8	-2.8
KSH	Kashi	5.07	52	P	Pn	09 56 15.3	-3.3
KSH				S	Sn	09 57 10.5	-7.6
KSH				smax	smax		
	comp=N,580nm,0.8s						
KSH				smax	smax		
	comp=E,820nm,0.6s						
IUG	Iuzhnay	5.68	354	eP	Pn	09 56 28.7	+2.3
	3µm,0.3s						
IUG				eS	Sn	09 57 28.9	-3.2
	1µm,0.3s						
THN	Thein Dam	5.73	134	eP	Pn	09 56 27.7	+0.7
THN				eS	Sn	09 57 31.6	-1.6
CHM	Chimkent	5.89	351	eP	Pn	09 56 31.7	+2.7
	222nm,0.1s						
CHM				eS	Sn	09 57 34.6	-2.4
	3µm,1.4s						
AML	Almayashu	6.06	21	P	Pn	09 56 32.1	+0.6
	SNR=527						
AML	Almayashu	6.06	21	P	Pn	09 56 32.4	+0.8
DZA	Taraz	6.40	3	eP	Pn	09 56 38.4	+2.8
	193nm,0.1s						
DZA				eS	Sn	09 57 46.4	-2.5
	440nm,0.6s						
UCH	Uchtor	6.40	25	P	Pn	09 56 36.8	+0.8
	SNR=314						
MRKS	Merke	6.51	16	eP	Pn	09 56 42.5	+5.3
	100nm,0.4s						
MRKS				eS	Sn	09 57 53.6	+2.0
	210nm,0.5s						
EKS2	Erkin-Say	6.57	19	P	Pn	09 56 38.7	+0.8
	SNR=106						
KK31	Karatay Array	6.61	358	Pn	Pn	09 56 38.9	+0.7
KK31	Karatay Array	6.61	358	PN	Pn	09 56 38.7	+0.4
KK31	Karatay Array	6.61	358	⇑P	Pn	09 56 36.3	-2.0
	16nm,0.2s,baz=190,slow=14,SNR=1232						
KK31				⇑S	Sn	09 57 48.8	-4.8
	142nm,0.6s,baz=192,slow=23,SNR=19						
KKAR	Karatay Array	6.61	358	Pn	Pn	09 56 38.7	+0.4
KKAR	Karatay Array	6.61	358		Pn	09 56 38.9	+0.7
KKAR	Karatay Array	6.61	358	PN	Pn	09 56 38.9	+0.7
AAK	Ala-Archa	6.76	24	P	Pn	09 56 41.3	+0.9
	SNR=97						
AAK	Ala-Archa	6.76	24	P	Pn	09 56 41.3	+0.9
	53nm,0.3s,baz=198,slow=8.7,SNR=123						
AAK				S	Sn	09 57 56.2	-1.3
	33nm,0.5s,baz=179,slow=23,SNR=2.3						
AAK	Ala-Archa	6.76	24	c iPN	Pn	09 56 41.1	+0.7
AAK	Ala-Archa	6.76	24	P	Pn	09 56 41.4	+0.9
BHK	Bhakra	6.88	136	ePN	Pn	09 56 41.6	-0.4
BHK				eP	Pn	09 56 41.8	-0.2
BHK				eS	Sn	09 57 56.2	-4.1
BHK				eSN	Sn	09 57 58.0	-2.2
KBK	Karagaybulak	6.93	26	P	Pn	09 56 43.8	+1.1
	SNR=76						
FRU1	Bishkek	6.96	24	Pn	Pn	09 56 44.3	+1.4
FRU1	Bishkek	6.96	24	PN	Pn	09 56 44.3	+1.4
ULHL	Ulahol	7.12	35	P	Pn	09 56 45.7	+0.6
	SNR=13						
CHMS	Chumysh	7.17	24	P	Pn	09 56 46.7	+1.0
	SNR=19						
CHMS	Chumysh	7.17	24	i PN	Pn	09 56 45.2	-0.4
CHMS				pmax	pmax		
	comp=Z,36nm,0.4s						
CHMS	Chumysh	7.17	24	⇑P	Pn	09 56 45.7	+0.1
	comp=Z,36nm,0.4s						
CHMS				⇓S	Sn	09 58 02.9	-4.1
	comp=Z,57nm,0.8s						
BOOM	Boomskoye usch	7.18	32	Pn	Pn	09 56 46.2	+0.3
BOOM	Boomskoye usch	7.18	32	PN	Pn	09 56 46.2	+0.3
HRA	Herat	7.30	256	Pn	Pn	09 56 47.8	+0.2
USP	Ospenovka	7.33	22	P	Pn	09 56 48.0	+0.2
	SNR=42						
TKM2	Tokmak 2	7.40	28	P	Pn	09 56 49.5	+0.7
	SNR=222						
TKM2	Tokmak 2	7.40	28	PN	Pn	09 56 49.4	+0.6
TKM2	Tokmak 2	7.40	28	⇑P	Pn	09 56 49.5	+0.7
	comp=Z,137nm,0.7s						
TKM2				⇑S	Sn	09 58 09.3	-3.4
	comp=Z,27nm,0.8s						
KDJ	Kajisay	7.48	39		Pn	09 56 50.0	+0.1
KDJ	Kajisay	7.48	39	PN	Pn	09 56 50.0	+0.1
SMLA	Simla	7.52	134	eP	Pn	09 56 49.9	-0.4
SMLA				eS	Sn	09 58 11.0	-4.3
SMLA				IAML		09 58 15.4	
	comp=N,224nm,0.4s						
TARG	Taragay, Kyrgy	7.54	44		Pn	09 56 51.3	+0.4
MDOK	Medeo	8.21	34	⇑P	Pn	09 56 60.0	+0.7
	comp=N,44nm,0.5s						
PRZ	Przheval'sk	8.38	42		Pn	09 57 02.8	+1.3
PRZ	Przheval'sk	8.38	42	PN	Pn	09 57 02.8	+1.3
KHET	Khetri	9.40	152	eP	Pn	09 57 13.5	-1.3
NDI	New Delhi	9.48	143	eP	Pn	09 57 14.0	-1.7
NDI				eS	Sn	09 58 54.0	-7.9
PDGK	Podgornoye	9.54	42	⇓P	Pn	09 57 16.1	-0.4
	comp=N,7.8nm,0.9s						
PDGK				⇑S	Sn	09 59 02.2	-1.1
	comp=N,14nm,0.8s						
AYAN	Aya Nagar	9.60	145	eP	Pn	09 57 16.7	-0.6
KUDL	Kundal	9.61	148	eP	Pn	09 57 15.9	-1.5
GEYT	Alibeck	10.23	282	P	Pn	09 57 24.4	-1.1
	comp=N,7.3nm,0.5s,baz=195,slow=11,SNR=12						
GEYT				S	Sn	09 59 18.0	-1.6
	comp=N,3.0nm,0.4s,baz=61,slow=44,SNR=1.4						
GEYT	Alibeck	10.23	282		Pn	09 57 23.4	-2.0
GYA0B	ALIBECK ARRAY	10.23	282		Pn	09 57 23.7	-1.7
PTH	Pithoragarh	10.50	129	eP	Pn	09 57 27.3	-1.8
AJM	Ajmer	10.51	161	eP	Pn	09 57 28.0	-1.1
AJM				i S	Sn	09 59 18.0	-8.4
LGTI	Lohaghat	10.59	129	eP	Pn	09 57 28.2	-1.9
OTUK	Ortayu	11.80	5	P	Pn	09 57 44.7	-0.7
OTUK	Ortayu	11.80	5	⇓P	Pn	09 57 45.0	-0.4
	comp=N,10nm,0.8s						
OTUK				⇑S	Sn	09 59 53.0	-3.8
	comp=N,12nm,0.7s						
MAKZ	Makanchi	13.25	35		Pn	09 58 03.6	-0.1
MAKZ	Makanchi	13.25	35	P	Pn	09 58 03.6	-0.1
PYUN	Piuthan	13.26	126	eP	Pn	09 58 02.5	-1.8
	comp=N,93nm,0.3s						
MKAR	Makanchi Array	13.38	36	P	Pn	09 58 06.4	+1.0
	comp=N,2.3nm,0.3s,baz=205,slow=8.4,SNR=18						
MKAR				S	S	10 00 33.2	-1.3
	comp=N,0.5nm,0.7s,baz=216,slow=14,SNR=0.9						
MKAR	Makanchi Array	13.38	36	P	Pn	09 58 06.0	+0.6
MKAR	Makanchi Array	13.38	36	P	Pn	09 58 06.0	+0.6
MK31	Makanchi Array	13.38	36		Pn	09 58 06.0	+0.6
MK31	Makanchi Array	13.38	36	P	Pn	09 58 06.0	+0.6
MK31	Makanchi Array	13.38	36	P	P	09 58 08.9	+0.8
	comp=N,1.8nm,0.4s,baz=207,slow=9.7,SNR=37						
DANN	Dangsing	13.61	123	eP	Pn	09 58 07.2	-1.5
	comp=N,99nm,0.4s						
KOLN	Koldanda	13.88	125	eP	Pn	09 58 10.7	-1.3
	comp=N,62nm,0.3s						
BHPL	Bhopal	14.39	155	ex	Pn	09 58 21.2	+3.1
GKN	Gorkha	14.43	122	eP	Pn	09 58 17.9	-0.8
	comp=N,134nm,0.4s						
WMQ	Urumqi	14.82	55	eP	Pn	09 58 24.5	+1.2
DMN	Daman	15.00	122	eP	Pn	09 58 25.1	-0.7
	comp=N,108nm,0.4s						
KKN	Kakani	15.00	121	eP	Pn	09 58 25.5	-0.3
	comp=N,123nm,0.6s						
AB31	Akbulak array	15.02	332	P	P	09 58 27.3	+1.2
	comp=N,3.7nm,0.6s,baz=146,slow=12,SNR=73						
AB31				⇓S	Sn	10 01 13.8	+0.4
	comp=N,2.3nm,0.4s,baz=151,slow=24,SNR=5.8						
ABKAR	Akbulak array	15.02	332	P	Pn	09 58 25.3	-0.2
ABKAR	Akbulak array	15.02	332	P	Pn	09 58 25.0	-0.4
KURBB	Kurchatov Arra	15.18	19	P	Pn	09 58 26.2	-1.2
	comp=N,1.1nm,0.4s,baz=204,slow=11,SNR=12						
PKI	Pulchoki	15.23	122	eP	Pn	09 58 28.0	-0.6
	comp=N,89nm,0.5s						
KURK	Kurchatov	15.29	19		Pn	09 58 28.2	-0.5
KURK	Kurchatov	15.29	19	deP	Pn	09 58 28.3	-0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JIRN	Jiri	15.72	120	eP	P	09 58 34.8	+0.3
	comp=Z,19nm,1.0s						
BANOM	Banah	16.26	234	P	Pn	09 58 41.1	+0.3
SHME	Shamm	16.28	234	P	Pn	09 58 42.3	+1.3
RAMN	Ramite	16.44	121	eP	P	09 58 42.9	+0.6
	comp=Z,123nm,0.4s						
BRVK	Borovoye	16.57	359	P	P	09 58 43.2	+0.1
BRVK	Borovoye	16.57	359	⇑eP	P	09 58 42.7	-0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKTO	Aktyubinsk	16.71	330	P	Pn	09 58 46.6	+0.7
	comp=Z,12nm,0.5s,baz=141,slow=10,SNR=31						
AKTO				S	S	10 01 45.4	-3.5
	comp=Z,2.9nm,0.7s,baz=288,slow=16,SNR=3.0						
AKTO	Aktyubinsk	16.71	330	⇓P	Pn	09 58 51.2	+5.3
	comp=Z,11nm,0.6s						
AKTO				⇓S	Sn	10 01 54.7	+0.8
	comp=Z,7.5nm,0.7s						
MSFE	Esma-Masafi	16.75	233	P	Pn	09 58 47.8	+1.2
WSAR	Wadi Sarin	16.89	222	P	Pn	09 58 48.2	-0.1
	comp=Z,5.5nm,0.6s,baz=83,slow=5.6,SNR=6.9						
UOSS	Minazif	17.01	231	P	P	09 58 47.9	-0.4
UOSS				IAmb	IAmb	09 58 56.0	
	comp=Z,5.8nm,0.8s						
UOSS	Minazif	17.01	231	P	P	09 58 47.5	-0.8
ODAN	Odare	17.05	120	eP	P	09 58 50.8	+1.8
	comp=Z,74nm,0.5s						
ASHO	Ashiyiah	17.29	231	P	Pn	09 58 52.8	-0.2
GOMU	GeErMu	19.33	84	P	P	09 59 12.3	-1.5
GOMU				pP	Pn	09 59 18.2	+0.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,40nm,4.4s						
ZALV	Zalesovo Beam	19.98	25	P	P	09 59 21.2	+1.0
	comp=Z,6.9nm,0.3s,baz=212,slow=11,SNR=28						
ZALV				pP	pP	09 59 56.2	+1.8
	comp=Z,1.1nm,0.3s,baz=207,slow=13,SNR=1.3						
ZALV				sP	sP	10 00 23.1	+2.7
	comp=Z,3.2nm,0.4s,baz=216,slow=12,SNR=2.1						
ZALV				S	S	10 02 52.4	-1.2
	comp=Z,0.5nm,0.4s,baz=239,slow=45,SNR=3.2						
	comp=Z,6.9nm,0.3s						
GNI	Garni	20.75	288	ceP	P	09 59 28.1	-0.6
GNI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU	Arti	21.59	341	P	P	09 59 36.1	-1.0
ARU				IAmb	IAmb	09 59 41.2	
	comp=Z,4.8nm,0.4s						
ARU	Arti	21.59	341	d iP	P	09 59 36.0	-1.0
ARU				S	S	10 03 20.0	-2.6
ARU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIV	Kislovodsk	22.66	298	P	P	09 59 43.4	-4.0
KIV				IAmb	IAmb	10 00 05.3	
	comp=Z,7.2nm,0.9s						
KIV	Kislovodsk	22.66	298	eP	P	09 59 45.1	-2.4
KIV				eS	S	10 03 37.1	-3.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BELG	Belogornoye	22.80	321	⇑eP	P	09 59 48.3	-0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KNGR	Kungurtug, Tuv	23.78	45	⇑eP	P	09 59 58.6	+1.0
RAYN	Ar Rayn	25.36	246	P	P	10 00 12.0	-0.1
RAYN				IAmb	IAmb	10 00 18.5	
	comp=Z,6.0nm,1.1s						
RAYN	Ar Rayn	25.36	246	P	P	10 00 12.0	-0.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BNN	Bunyan	27.68	286	P	P	10 00 30.1	-2.6
PZH	PanZhiHua	28.09	102	P	P	10 00 37.4	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
SONM	Songino Array	28.46	55	P	P	10 00 40.7	+1.1
	comp=Z,1.0nm,0.8s,baz=235,slow=7.0,SNR=3.6						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	28.46	55	P	P	10 00 38.2	-1.5
KMI	Kunming	29.54	104	⇓P	P	10 00 51.4	+1.9
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	30.59	118	P	P	10 00 58.8	+0.3
	comp=Z,4.0nm,0.2s,baz=306,slow=7.7,SNR=5.4						
CMAR				pP	pP	10 01 41.7	+1.0
	comp=Z,1.1nm,0.4s,baz=322,slow=7.1,SNR=1.7						
	comp=Z,4.0nm,0.2s						
HHC	Hu-ho-hao-te	31.91	70	eP	P	10 01 09.4	-0.6
HHC				pmax	pmax		
	comp=Z,39nm,0.7s						
HHC				pmax	pmax		
	comp=Z,70nm,4.8s						
FINES	FINESS Array B	37.40	326	P	P	10 01 57.8	+1.2
	comp=Z,0.9nm,0.3s,baz=118,slow=11,SNR=9.7						
	comp=Z,0.9nm,0.3s						
ARCES	ARCESS Array B	41.09	338	P	P	10 02 28.9	+1.8
	comp=Z,2.5nm,0.6s,baz=111,slow=7.8,SNR=16						
	comp=Z,2.5nm,0.6s						
ARCES	ARCESS Array B	41.09	338	P	P	10 02 28.6	+1.6
ARCES				IAmb	IAmb	10 02 29.5	
	comp=Z,8.4nm,1.1s						
ARCES	ARCESS Array B	41.09	338	P	P	10 02 28.6	+1.6
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PAOL	Paolisi	43.45	294	P	P	10 02 44.6	-1.9
NOA	NORSAR Array B	44.29	323	P	P	10 02 53.2	+0.3
	comp=Z,0.5nm,0.5s,baz=103,slow=7.3,SNR=3.4						
NOA				sP	sP	10 04 01.8	+2.9
	comp=Z,1.0nm,0.8s,baz=96,slow=8.1,SNR=2.6						
	comp=Z,0.5nm,0.5s						
TIXI	Tiksi	45.84	22	P	P	10 03 05.4	+0.6
TIXI	Tiksi	45.84	22	⇓eP	P	10 03 05.8	+1.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	Kilima Mbogo	48.72	227	⇑eP	P	10 03 28.3	+0.3
ESDC	Sonseca Array	57.33	298	P	P	10 04 31.3	+0.9
	comp=Z,0.2nm,0.4s,baz=68,slow=7.5,SNR=1.8						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	65.56	269	P	P	10 05 24.4	-1.4
	comp=Z,13nm,0.7s,baz=50,slow=5.9,SNR=4.4						
ILAR	Eielson Array	74.83	16	P	P	10 06 22.1	+0.9
	comp=Z,0.6nm,1.1s,baz=321,slow=4.0,SNR=4.1						
ILAR				pP	pP	10 07 11.8	+1.7
	comp=Z,0.5nm,0.9s,baz=316,slow=5.0,SNR=3.9						

	comp=Z,0.6nm,1.1s						
BOSA	**Boshof**	**77.64**	**220**	P	**P**	**10 06 37.8**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=38,slow=5.1,SNR=6.1						
	comp=Z,2.9nm,0.8s						
BOSA	**Boshof**	**77.64**	**220**	P	**P**	**10 06 37.7**	**+0.1**
BOSA				IAmb	IAmb	10 06 55.2	
	comp=Z,5.3nm,1.2s						
BOSA	**Boshof**	**77.64**	**220**	P	**P**	**10 06 37.7**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**10 06 57.5**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=352,slow=5.4,SNR=22						
YKA				pP	**pP**	**10 07 48.4**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=352,slow=5.5,SNR=4.0						
YKA				sP	**sP**	**10 08 10.5**	**+3.1**
	comp=Z,0.5nm,0.7s,baz=351,slow=5.5,SNR=2.8						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**82.12**	**122**	P	**P**	**10 07 00.9**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=324,slow=5.0,SNR=26						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**82.12**	**122**	*i* P	**P**	**10 07 00.4**	**-1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**84.38**	**125**	P	**P**	**10 07 12.5**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=307,slow=4.9,SNR=18						
	comp=Z,1.1nm,0.7s						
PLCA	**Paso Flores**	**149.68**	**250**	PKPbc	**PKPbc**	**10 14 29.1**	**0.0**
	comp=Z,1.4nm,1.0s,baz=181,slow=5.4,SNR=3.0						
PLCA	**Paso Flores**	**149.68**	**250**		**PKPbc**	**10 14 29.7**	**+0.6**

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*IDC **11** 10:18:50.7±2.8, 21°.94N×143°.35E, h219^{km}±27^{km}, mb2.8/5, mbtmp3.4/6, Error ellipse: s-maj=45.0km s-min=17.2km az=102.0*

ISC 11 10:18:48.8±1.1**, 21°.8N**±0°.1×**143°.5E**±0°.3**, h200**^{km}**, n6, σ1^s.71**/7**, mb3.1**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.38**	**347**	P	**Pn**	**10 20 10.5**	**+2.4**
	14nm,0.4s,baz=289,slow=20,SNR=1.7						
JCJ				S	**Sn**	**10 21 09.8**	**-1.0**
	30nm,0.6s,baz=142,slow=23,SNR=5.5						
WRA	**Warramunga Arr**	**42.48**	**193**	P	**P**	**10 26 24.7**	**+0.2**
	0.8nm,1.0s,baz=12,slow=9.7,SNR=5.5						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**46.18**	**192**	P	**P**	**10 26 54.4**	**+0.6**
	0.3nm,0.9s,baz=16,slow=6.0,SNR=1.4						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**54.84**	**313**	P	**P**	**10 27 56.9**	**-1.5**
	0.2nm,0.5s,baz=93,slow=8.7,SNR=2.1						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**61.78**	**27**	P	**P**	**10 28 44.6**	**-1.4**
	0.1nm,0.4s,baz=248,slow=4.8,SNR=4.4						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**76.19**	**28**	P	**P**	**10 30 15.2**	**+0.5**
	0.2nm,0.4s,baz=292,slow=5.8,SNR=11						
	0.2nm,0.4s						

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*LDG **11** 10:42:50.3±0.1, 43°.11N×0°.64W, h10^{km}, Md2.4/2, Ml2.4/10, Error ellipse: s-maj=1.8km s-min=1.7km az=135.0*
*STR **11** 10:42:50.2±0.2, 43°N±3°×°±°, h12^{km}±3^{km}, MLv1.7/6, preliminary*
*MDD **11** 10:42:51.2±0.3, 43°.10N×0°.63W, h11^{km}, mb_Lg2.5/10, Error ellipse: s-maj=2.6km s-min=1.7km az=178.0*

ISC 11 10:42:49.5±0.9**, 43°.15N**±0°.02×**0°.59W**±0°.02**, h11**^{km}±6^{km}**, n36, σ0^s.97**/62**, 1C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.10**	**234**	⇓Pg	**Pg**	**10 42 52.5**	**+0.3**
ATE				Sg	**Sg**	**10 42 54.2**	**0.0**
ETSF	**Etsaut**	**0.25**	**175**	*e*Pg	**Pg**	**10 42 54.5**	**-0.1**
ETSF				*e*Sg	**Sg**	**10 42 57.7**	**-0.4**
	330nm,0.3s						
CANF	**Canfranc**	**0.38**	**172**	⇑Pg	**Pg**	**10 42 57.0**	**-0.2**
CANF				Sg	**Sg**	**10 43 01.4**	**-0.8**
PYLO	**Lourdes**	**0.40**	**97**	Pg	**Pb**	**10 42 58.9**	**+0.3**
PYLO				Sg	**Sb**	**10 43 04.9**	**+0.2**
SJPF	**Ste Jean**	**0.47**	**266**	*e*Pg	**Pg**	**10 42 58.5**	**-0.2**
SJPF				*e*Sg	**Sg**	**10 43 04.4**	**-0.5**
	56nm,0.3s						
OSSF	**Osses**	**0.51**	**283**	Pg	**Pg**	**10 42 58.9**	**-0.5**
OSSF				Sg	**Sg**	**10 43 05.1**	**-0.9**
VIEF	**Viey**	**0.52**	**120**	Pg	**Pb**	**10 43 00.1**	**-0.6**
VIEF				Sg	**Sb**	**10 43 07.0**	**-1.3**
EORO	**Oroz-Betelu**	**0.59**	**245**	Pg	**Pg**	**10 43 00.8**	**-0.2**
EORO				Sg	**Sg**	**10 43 08.1**	**-0.6**
EORO				*i* Vmb_Lg		10 43 10.9	
EALK	**Alkurruntz**	**0.68**	**277**	Pg	**Pg**	**10 43 02.0**	**-0.6**
EALK				Sg	**Sg**	**10 43 10.6**	**-0.9**
EALK	**Alkurruntz**	**0.68**	**277**	Sg	**Sg**	**10 43 11.3**	**-0.2**
EALK	**Alkurruntz**	**0.68**	**277**	Pg	**Pg**	**10 43 01.9**	**-0.8**
EPF	**Esparros**	**0.69**	**99**	*e*Pg	**Pb**	**10 43 03.6**	**0.0**
EPF	**Esparros**	**0.69**	**99**	*e*Pn	**Pn**	**10 43 06.0**	**+0.7**
EPF				*e*Sg	**Sb**	**10 43 13.6**	**+0.4**
	20nm,0.2s						
ECHI	**Chisagues Biel**	**0.75**	**130**	Pg	**Pb**	**10 43 04.1**	**-0.6**
ECHI				Sg	**Sg**	**10 43 13.4**	**-0.3**
ECHI				*i* Vmb_Lg		10 43 14.8	
ECHI	**Chisagues Biel**	**0.75**	**130**	Sg	**Sg**	**10 43 13.5**	**-0.3**
ECHI	**Chisagues Biel**	**0.75**	**130**	Pg	**Pb**	**10 43 04.1**	**-0.6**
EARA	**Aranguren**	**0.82**	**243**	Pg	**Pb**	**10 43 06.4**	**+0.6**
EARA				Sg	**Sg**	**10 43 16.3**	**+0.3**
EARA				*i* Vmb_Lg		10 43 18.4	
MLS	**Moulis**	**1.25**	**98**	Pn	**Pn**	**10 43 14.0**	**+1.1**
ESAC	**San Caprasio**	**1.43**	**176**	Pg	**Pb**	**10 43 16.6**	**+0.5**
ESAC				Sg	**Sn**	**10 43 36.2**	**+2.0**
ESAC				*i* Vmb_Lg		10 43 39.6	
MONQ	**Montcuq**	**1.78**	**46**	Pn	**Pb**	**10 43 21.7**	**-0.4**
EMIR	**Miracle**	**1.99**	**127**	Pg	**Pg**	**10 43 27.4**	**-0.3**
EMIR				Sg	**Sg**	**10 43 53.5**	**0.0**
EMIR				*i* Vmb_Lg		10 43 54.6	
LFF	**La Frestale**	**2.03**	**28**	*e*Pn	**Pn**	**10 43 24.5**	**+0.8**
LFF	**La Frestale**	**2.03**	**28**	*e*Pg	**Pg**	**10 43 28.9**	**+0.4**
LFF				*e*Sn	**Sn**	**10 43 49.6**	**+0.5**
	5.6nm,0.2s						
LFF				*e*Sg	**Sg**	**10 43 55.8**	**+0.9**
	5.8nm,0.2s						
MTLF	**Montolieu**	**2.06**	**84**	Pn	**Pn**	**10 43 25.0**	**+0.9**
ELAN	**Lanestosa**	**2.08**	**273**	Pn	**Pn**	**10 43 25.0**	**+0.5**
ELAN				Sg	**Sb**	**10 43 53.7**	**+0.4**
EPOB	**Poblet**	**2.18**	**145**	Pn	**Pn**	**10 43 27.2**	**+1.5**
EPOB				Pg	**Pg**	**10 43 30.6**	**-0.6**
EPOB				Sg	**Sg**	**10 43 57.9**	**-1.5**
EPOB				*i* Vmb_Lg		10 44 00.5	
ERTA	**Horta de San J**	**2.29**	**162**	Pg	**Pb**	**10 43 31.8**	**+0.9**
ERTA				Sn	**Sn**	**10 43 55.2**	**-0.3**
ERTA				Sg	**Sg**	**10 44 02.0**	**-1.1**
ERTA				*i* Vmb_Lg		10 44 05.9	
ETOR	**Torete**	**2.57**	**206**	Sn	**Sn**	**10 43 59.3**	**-3.2**
ETOR				Sg	**Sb**	**10 44 09.5**	**+2.2**
CAF	**Calviac**	**2.61**	**46**	*e*Pn	**Pn**	**10 43 32.4**	**+0.7**
CAF	**Calviac**	**2.61**	**46**	*e*Pg	**Pg**	**10 43 40.0**	**+0.4**
CAF				*e*Sg	**Sg**	**10 44 14.3**	**+0.8**
	2.8nm,0.5s						
RJF	**Les Rejaudoux**	**2.64**	**34**	*e*Pg	**Pg**	**10 43 40.6**	**+0.6**
RJF				*e*Sg	**Sg**	**10 44 13.9**	**-0.3**
	2.8nm,0.2s						
EMOS	**Mosqueruela**	**2.78**	**178**	Pg	**Pb**	**10 43 37.6**	**-1.8**
MFF	**Saint Martin d**	**3.47**	**5**	*e*Pg	**Pg**	**10 43 55.4**	**-0.6**
MFF				*e*Sg	**Sg**	**10 44 40.0**	**-1.0**
	0.5nm,0.2s						
TCF	**Toulx Ste Croi**	**3.72**	**31**	*e*Pg	**Pg**	**10 44 00.2**	**-0.6**
TCF				*e*Sg	**Sg**	**10 44 47.5**	**-1.5**
	5.5nm,0.6s						
BGF	**Bois d'Agland**	**4.20**	**34**	*e*Sg	**Sg**	**10 45 02.1**	**-2.1**
	7.1nm,0.4s						
LOR	**Lormes**	**5.18**	**36**	*e*Sg	**Sg**	**10 45 34.5**	**-1.4**
	0.8nm,0.3s						

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*IDC **11** 10:45:51.0±1.6, 43°.07N×0°.66W, h0^{km}, mb3.7/1, mbtmp3.5/4, ML3.7/3, MS2.5/1, Error ellipse: s-maj=44.1km s-min=15.3km az=132.0*
*LDG **11** 10:45:52.8±0.1, 43°.14N×0°.63W, h10^{km}, Md3.8/3, Ml4.1/67, Error ellipse: s-maj=1.2km s-min=1.1km az=117.0*
*MDD **11** 10:45:53.3±0.2, 43°.17N×0°.66W, h12^{km}, mb_Lg4.0/43, Error ellipse: s-maj=1.5km s-min=1.2km az=145.0*
*INMG **11** 10:45:53.4±1.6, 43°.17N×0°.62W, h17^{km}±3^{km}, MD3.7, ML3.6, Error ellipse: s-maj=2.8km s-min=2.4km az=174.0*
*SFS **11** 10:45:53.0, 43°.17N×0°.65W, h12^{km}, ML4.0, ALORON STE. MARIE (FRANCIA)*
*STR **11** 10:45:53.2±0.2, 43°N±2°×°±°, h11^{km}±2^{km}, MLv3.9/12, preliminary*
*BGS **11** 10:45:54.1±0.3, 43°.35N×0°.65W, h10^{km}, ML4.0, ML4.0*
*IGIL **11** 10:45:55.4, 43°.17N×0°.66W, h12^{km}, ML3.4*

ISC 11 10:45:51.1±0.8**, 43°.16N**±0°.02×**0°.61W**±0°.01**, h17**^{km}±5^{km}**, n189, σ2^s.24**/353**, 2C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.10**	**220**	⇓Pg	**Pg**	**10 45 55.5**	**+0.7**
ATE				Sg	**Sg**	**10 45 57.3**	**+0.1**
ETSF	**Etsaut**	**0.27**	**172**	*e*Pg	**Pb**	**10 45 57.6**	**+0.1**
ETSF				*e*Sg	**Sg**	**10 45 59.6**	**-1.6**
	62μm,0.3s						
CANF	**Canfranc**	**0.41**	**170**	⇑Pg	**Pg**	**10 45 59.9**	**+0.4**
CANF				Sg	**Sg**	**10 46 04.6**	**-0.5**
PYLO	**Lourdes**	**0.42**	**99**	⇑Pg	**Pb**	**10 46 01.4**	**+1.4**
PYLO				Sg	**Sb**	**10 46 08.0**	**+1.9**
SJPF	**Ste Jean**	**0.45**	**264**	*e*Pg	**Pb**	**10 46 01.4**	**+0.7**
SJPF				*e*Sg	**Sb**	**10 46 07.5**	**+0.4**
	8μm,0.2s						
OSSF	**Osses**	**0.49**	**281**	Pg	**Pb**	**10 46 01.8**	**+0.6**
OSSF				Sg	**Sb**	**10 46 08.3**	**+0.3**
VIEF	**Viey**	**0.54**	**121**	Pg	**Pb**	**10 46 03.0**	**+0.8**
VIEF				Sg	**Sb**	**10 46 10.1**	**+0.4**
EORO	**Oroz-Betelu**	**0.58**	**242**	Pg	**Pb**	**10 46 03.7**	**+0.8**
EORO				Sg	**Sg**	**10 46 10.1**	**-0.3**
EORO				*i* Vmb_Lg		10 46 12.8	
TERF	**Tercis-les-Bai**	**0.63**	**325**	Pg	**Pn**	**10 46 06.5**	**+1.3**
TERF				Sg	**Sn**	**10 46 16.1**	**+1.2**
EALK	**Alkurruntz**	**0.66**	**275**	Pg	**Pg**	**10 46 04.7**	**+0.6**
EALK				Sg	**Sg**	**10 46 14.0**	**+1.0**
EALK				*i* Vmb_Lg		10 46 15.1	
EALK	**Alkurruntz**	**0.66**	**275**	Sg	**Sg**	**10 46 13.7**	**+0.7**
EALK	**Alkurruntz**	**0.66**	**275**	Pg	**Pg**	**10 46 04.8**	**+0.6**
EPF	**Esparros**	**0.71**	**101**	*e*Pg	**Pn**	**10 46 06.4**	**0.0**
EPF				*e*Sg	**Sn**	**10 46 16.6**	**-0.3**
	1μm,0.3s						
ECHI	**Chisagues Biel**	**0.77**	**130**	Pg	**Pg**	**10 46 06.9**	**+0.6**
ECHI				Sg	**Sb**	**10 46 16.7**	**+0.2**
ECHI				*i* Vmb_Lg		10 46 17.8	
EARA	**Aranguren**	**0.81**	**242**	Pg	**Pn**	**10 46 08.3**	**+0.5**
EARA				Sg	**Sg**	**10 46 18.5**	**+0.8**
EARA				*i* Vmb_Lg		10 46 21.6	
EARA	**Aranguren**	**0.81**	**242**	Sg	**Sn**	**10 46 19.6**	**+0.2**
EARA	**Aranguren**	**0.81**	**242**	Pg	**Pn**	**10 46 08.2**	**+0.5**
ESAC	**San Caprasio**	**1.45**	**176**	Pg	**Pg**	**10 46 19.0**	**0.0**
ESAC				Sg	**Sg**	**10 46 39.0**	**+1.2**
ESAC				*i* Vmb_Lg		10 46 41.8	
EMIR	**Miracle**	**2.01**	**128**	Pn	**Pg**	**10 46 28.8**	**-0.9**
EMIR				Sg	**Sg**	**10 46 56.3**	**+0.4**
EMIR				*i* Vmb_Lg		10 46 58.5	
LFF	**La Frestale**	**2.02**	**28**	*e*Pn	**Pn**	**10 46 25.8**	**+1.4**
LFF	**La Frestale**	**2.02**	**28**	*e*Pg	**Pg**	**10 46 32.1**	**+2.1**
LFF				*e*Sn	**Sn**	**10 46 50.0**	**+0.7**
	691nm,0.3s						
LFF				*e*Sg	**Sg**	**10 46 57.3**	**+1.0**
	893nm,0.3s						
ELAN	**Lanestosa**	**2.07**	**273**	Pn	**Pb**	**10 46 28.7**	**+0.5**
ELAN				Sg	**Sb**	**10 46 55.4**	**+1.8**
ELAN				*i* Vmb_Lg		10 47 02.3	
EPOB	**Poblet**	**2.20**	**145**	Pn	**Pb**	**10 46 29.5**	**-1.0**
EPOB				Pg	**Pg**	**10 46 33.4**	**0.0**
EPOB				Sg	**Sb**	**10 46 59.8**	**+2.3**
EPOB				*i* Vmb_Lg		10 47 03.0	
ERTA	**Horta de San J**	**2.31**	**162**	Pg	**Pb**	**10 46 34.2**	**+1.7**
ERTA				Sn	**Sn**	**10 46 56.9**	**+0.4**
ERTA				Sg	**Sb**	**10 47 02.5**	**+1.8**
ERTA				*i* Vmb_Lg		10 47 12.9	
ETOR	**Torete**	**2.58**	**205**	Pn	**Pb**	**10 46 34.8**	**-2.2**
ETOR				Sn	**Sn**	**10 47 03.3**	**+0.2**
ETOR				*i* Vmb_Lg		10 47 18.5	
CAF	**Calviac**	**2.61**	**47**	*e*Pn	**Pn**	**10 46 33.6**	**+1.0**
CAF	**Calviac**	**2.61**	**47**	*e*Pg	**Pg**	**10 46 41.1**	**-0.1**
CAF				*e*Sn	**Sn**	**10 47 03.9**	**0.0**
	118nm,0.2s						
CAF				*e*Sg	**Sg**	**10 47 15.9**	**+0.8**
	308nm,0.3s						
RJF	**Les Rejaudoux**	**2.63**	**35**	*e*Pn	**Pn**	**10 46 33.8**	**+1.0**
RJF	**Les Rejaudoux**	**2.63**	**35**	*e*Pg	**Pg**	**10 46 42.7**	**+1.2**
RJF				*e*Sn	**Sn**	**10 47 04.3**	**0.0**
	136nm,0.2s						
RJF				*e*Sg	**Sg**	**10 47 16.3**	**+0.7**
	633nm,0.3s						
EJON	**La Jonquera**	**2.67**	**104**	Pn	**Pb**	**10 46 38.0**	**-0.5**
EJON				Sg	**Sg**	**10 47 16.1**	**-0.9**
EJON				*i* Vmb_Lg		10 47 19.2	
EMOS	**Mosqueruela**	**2.80**	**178**	Pn	**Pn**	**10 46 37.6**	**+2.3**
EMOS				Sn	**Sn**	**10 47 08.5**	**-0.3**
EMOS				Sg	**Sb**	**10 47 16.0**	**+1.2**
EMOS				*i* Vmb_Lg		10 47 22.5	
CHIF	**Chize**	**2.97**	**3**	*e*P	**Pn**	**10 46 38.2**	**+0.7**
CHIF				IAML		10 47 32.6	
	comp=E,405nm,0.4s						
CHIF				IAML		10 47 36.6	
	comp=N,548nm,0.5s						
LASF	**Ste Croix**	**3.37**	**73**	*e*Pn	**Pn**	**10 46 44.5**	**+1.5**
LASF	**Ste Croix**	**3.37**	**73**	*e*Pg	**Pg**	**10 46 55.3**	**-0.4**
LASF				*e*Sn	**Sn**	**10 47 21.6**	**-0.9**
	comp=N,48nm,0.2s						
LASF				*e*Sg	**Sg**	**10 47 38.9**	**-0.4**
	comp=N,141nm,0.5s						
ECOL	**Islas Columbre**	**3.40**	**163**	Pn	**Pn**	**10 46 45.0**	**+1.6**
ECOL				Pg	**Pg**	**10 46 54.7**	**-1.6**
ECOL				Sn	**Sn**	**10 47 24.0**	**+0.6**
ECOL				Sg	**Sb**	**10 47 36.1**	**+4.1**
MFF	**Saint Martin d**	**3.45**	**5**	*e*Pn	**Pn**	**10 46 45.2**	**+1.1**
MFF	**Saint Martin d**	**3.45**	**5**	*e*Pg	**Pg**	**10 46 56.4**	**-0.9**
MFF				*e*Sg	**Sg**	**10 47 42.0**	**0.0**
	comp=N,335nm,0.4s						
UCM	**Universidad Co**	**3.47**	**216**	P	**Pn**	**10 46 47.0**	**+2.6**
UCM				S	**Sn**	**10 47 25.9**	**+0.8**
ECHE	**Chera**	**3.58**	**184**	Pn	**Pn**	**10 46 47.4**	**+1.5**
ECHE				Sn	**Sn**	**10 47 28.2**	**+0.4**
ECHE				Sg	**Sb**	**10 47 38.8**	**+1.7**
ECHE				*i* Vmb_Lg		10 47 50.2	
GUD	**Guadarrama**	**3.65**	**228**	Pn	**Pn**	**10 46 49.6**	**+2.6**
GUD				Sn	**Sn**	**10 47 30.4**	**+0.7**
GUD				*i* Vmb_Lg		10 47 32.3	
TCF	**Toulx Ste Croi**	**3.71**	**32**	*e*Pn	**Pn**	**10 46 49.2**	**+1.5**
TCF	**Toulx Ste Croi**	**3.71**	**32**	*e*Pg	**Pg**	**10 47 01.3**	**-1.0**
TCF				*e*Sn	**Sn**	**10 47 31.3**	**+0.3**
	comp=N,129nm,0.4s						
TCF				*e*Sg	**Sg**	**10 47 50.1**	**-0.3**
	comp=N,341nm,0.3s						
VIVF	**Saint-Julien-l**	**4.17**	**64**	*e*Pn	**Pn**	**10 46 56.1**	**+2.1**
VIVF				*e*Sn	**Sn**	**10 47 40.6**	**-1.7**
	comp=N,24nm,0.3s						
VIVF				*e*Sg	**Sg**	**10 48 04.2**	**-0.7**
	comp=N,84nm,0.4s						
BGF	**Bois d'Agland**	**4.19**	**35**	*e*Pn	**Pn**	**10 46 55.5**	**+1.3**
BGF	**Bois d'Agland**	**4.19**	**35**	*e*Pg	**Pg**	**10 47 10.5**	**-0.8**
BGF				*e*Sn	**Sn**	**10 47 41.8**	**-0.9**
BGF				*e*Sg	**Sg**	**10 48 04.8**	**-0.8**
ETOS	**Mallorca**	**4.26**	**142**	Pn	**Pn**	**10 46 56.6**	**+1.5**
ETOS				Sn	**Sn**	**10 47 43.3**	**-1.1**
ETOS				*i* Vmb_Lg		10 47 48.4	
ESDC	**Sonseca Array**	**4.30**	**217**	Pn	**Pn**	**10 46 57.4**	**+1.5**
	comp=N,3.4nm,0.3s,baz=40,slow=14,SNR=49						
ESDC				Sn	**Sn**	**10 47 43.5**	**-2.1**
	comp=N,11nm,0.3s,baz=39,slow=23,SNR=9.9						
ESDC				Lg	Lg	10 48 04.2	
	comp=N,13nm,0.3s,baz=37,slow=30,SNR=8.1						
	comp=N,9.2nm,0.3s						
ESDC	**Sonseca Array**	**4.30**	**217**	Pn	**Pn**	**10 46 55.7**	**-0.2**
ESDC				Sn	**Sn**	**10 47 43.1**	**-2.5**
ESDC				*i* Vmb_Lg		10 47 47.3	
EIBI	**Ibiza**	**4.39**	**160**	Pn	**Pn**	**10 46 57.3**	**+0.4**
EIBI				Sn	**Sn**	**10 47 44.8**	**-2.9**
EIBI				*i* Vmb_Lg		10 47 47.0	
AFON	**Font Roja**	**4.50**	**179**	Pn	**Pn**	**10 47 00.0**	**+1.5**
AFON				Sn	**Sn**	**10 47 50.4**	**0.0**
AFON				*i* Vmb_Lg		10 47 56.3	
EBEN2	**Beniarda presa**	**4.50**	**176**	Pn	**Pn**	**10 46 59.6**	**+1.2**
EBEN2				Sn	**Sn**	**10 47 48.5**	**-1.8**
SMRF	**Simiane la Rot**	**4.57**	**78**	*e*Pn	**Pn**	**10 47 00.9**	**+1.5**
SMRF	**Simiane la Rot**	**4.57**	**78**	*e*P	Pn	10 47 04.2	+4.8
SMRF				*e*Sn	**Sn**	**10 47 50.0**	**-2.1**
	comp=N,14nm,0.3s						
SMRF				*e*Sg	**Sg**	**10 48 16.3**	**-1.4**
	comp=N,92nm,0.6s						
ETOB	**Tobarra**	**4.57**	**189**	Pn	**Pn**	**10 47 01.3**	**+1.8**
ETOB				Sn	**Sn**	**10 47 50.7**	**-1.5**
ETOB				*i* Vmb_Lg		10 47 59.8	
PAB	**San Pablo**	**4.58**	**219**	Pn	**Pn**	**10 47 00.8**	**+1.1**
PAB				Sn	**Sn**	**10 47 50.7**	**-1.8**
PAB				*i* Vmb_Lg		10 47 55.0	
AVF	**Avril sur Loir**	**4.59**	**36**	*e*Pn	**Pn**	**10 47 01.3**	**+1.6**
AVF	**Avril sur Loir**	**4.59**	**36**	*e*Pg	**Pg**	**10 47 18.4**	**-0.6**
AVF				*e*Sn	**Sn**	**10 47 51.2**	**-1.3**
AVF				*e*Sg	**Sg**	**10 48 17.7**	**-0.6**
	comp=N,246nm,0.5s						
HYF	**Humbligny**	**4.70**	**28**	*e*Pn	**Pn**	**10 47 02.7**	**+1.4**
HYF	**Humbligny**	**4.70**	**28**	*e*Pg	**Pg**	**10 47 20.6**	**-0.5**
HYF				*e*Sn	**Sn**	**10 47 54.0**	**-1.4**
HYF				*e*Sg	**Sg**	**10 48 21.3**	**-0.7**
SMF	**Signal de Mont**	**4.70**	**41**	*e*Pn	**Pn**	**10 47 01.8**	**+0.5**
SMF	**Signal de Mont**	**4.70**	**41**	*e*Pg	**Pg**	**10 47 21.1**	**0.0**
SMF				*e*Sg	**Sg**	**10 48 21.5**	**-0.5**
	comp=N,109nm,0.3s						
PBRG	**Braganca**	**4.73**	**255**	*e*Pn	**Pn**	**10 47 04.5**	**+2.8**
PBRG				*e*Sn	**Sn**	**10 47 56.2**	**0.0**
PBRG				A	A	10 48 23.0	
	comp=N,63nm,0.5s						
SSF	**Saint Saulge**	**4.87**	**35**	*e*Pn	**Pn**	**10 47 04.7**	**+1.2**
SSF	**Saint Saulge**	**4.87**	**35**	*e*Pg	**Pg**	**10 47 22.7**	**-1.6**
SSF				*e*Sn	**Sn**	**10 47 57.4**	**-2.0**
	comp=N,31nm,0.2s						
SSF				*e*Sg	**Sg**	**10 48 26.0**	**-1.2**
	comp=N,290nm,0.7s						
MAHO	**Mahon**	**4.90**	**130**	P	**Pn**	**10 47 06.7**	**+2.7**
MAHO				S	**Sn**	**10 48 00.9**	**+0.6**
ORIF	**Oris-en-Rattie**	**5.00**	**67**	*e*Pn	**Pn**	**10 47 07.1**	**+1.7**
ORIF				*e*Sn	**Sn**	**10 48 00.5**	**-2.2**
	comp=N,8.1nm,0.3s						
ORIF				*e*Sg	**Sg**	**10 48 30.0**	**-1.5**
	comp=N,74nm,0.8s						
QUIF	**Quistinic**	**5.08**	**340**	*e*Pn	**Pn**	**10 47 07.7**	**+1.3**
QUIF	**Quistinic**	**5.08**	**340**	*e*Pg	**Pg**	**10 47 27.1**	**-1.3**
QUIF				*e*Sn	**Sn**	**10 48 03.0**	**-1.6**
	comp=N,108nm,0.3s						
QUIF				*e*Sg	**Sg**	**10 48 33.0**	**-1.1**
	comp=N,67nm,0.3s						
EPLA	**Plasencia**	**5.14**	**235**	Pn	**Pn**	**10 47 08.7**	**+1.5**
EPLA				Sn	**Sn**	**10 48 04.1**	**-2.1**
EPLA				*i* Vmb_Lg		10 48 06.2	
EPLA				Sg	**Sb**	**10 48 26.4**	**+4.4**
MVO	**Moncorvo**	**5.17**	**249**	*e*Pn	**Pn**	**10 47 10.4**	**+2.6**
MVO				*e*Sn	**Sn**	**10 48 06.3**	**-0.8**
MVO				*e*Sg	**Sg**	**10 48 31.9**	**-5.2**
MVO				A	A	10 48 38.2	
	comp=N,126nm,0.6s						
LOR	**Lormes**	**5.18**	**36**	*e*Pn	**Pn**	**10 47 08.6**	**+0.8**
	baz=219						
LOR	**Lormes**	**5.18**	**36**	*e*Pg	**Pg**	**10 47 29.1**	**-1.1**
LOR				*e*Sn	**Sn**	**10 48 05.1**	**-2.0**
LOR				*e*Sg	**Sg**	**10 48 36.2**	**-1.0**
	comp=N,140nm,0.4s						
LMR	**La Mourre**	**5.20**	**86**	*e*Pn	**Pn**	**10 47 09.4**	**+1.3**
LMR	**La Mourre**	**5.20**	**86**	*e*P	Pn	10 47 13.2	+5.1
LMR				*e*Sn	**Sn**	**10 48 05.3**	**-2.4**
	comp=N,10nm,0.3s						
LMR				*e*Sg	**Sg**	**10 48 36.4**	**-1.7**
	comp=N,30nm,0.5s						
GRR	**Gorron**	**5.23**	**358**	*e*Pn	**Pn**	**10 47 09.1**	**+0.7**
GRR	**Gorron**	**5.23**	**358**	*e*Pg	**Pg**	**10 47 29.9**	**-1.3**
GRR				*e*Sn	**Sn**	**10 48 06.5**	**-1.8**
	comp=N,110nm,0.3s						
GRR				*e*Sg	**Sg**	**10 48 37.7**	**-1.1**
	comp=N,97nm,0.3s						
SGMF	**Saint Gilles**	**5.27**	**346**	*e*Pn	**Pn**	**10 47 10.1**	**+1.1**
SGMF	**Saint Gilles**	**5.27**	**346**	*e*Pg	**Pg**	**10 47 29.9**	**-2.1**
SGMF				*e*Sn	**Sn**	**10 48 07.2**	**-2.1**
	comp=N,55nm,0.4s						
SGMF				*e*Sg	**Sg**	**10 48 38.8**	**-1.4**
	comp=N,104nm,0.4s						
EMUR	**La Murta**	**5.34**	**185**	Pn	**Pn**	**10 47 11.0**	**+0.9**
EMUR				*i* Vmb_Lg		10 48 18.6	
EZAR	**Zarzadilla de**	**5.35**	**189**	Pn	**Pn**	**10 47 12.6**	**+2.4**
EZAR				Sn	**Sn**	**10 48 09.5**	**-2.0**
LDF	**La Druitiere**	**5.44**	**3**	*e*Pn	**Pn**	**10 47 12.3**	**+0.9**
LDF	**La Druitiere**	**5.44**	**3**	*e*Pg	**Pg**	**10 47 35.1**	**-0.2**
LDF				*e*Sn	**Sn**	**10 48 11.7**	**-1.8**
	comp=N,71nm,0.5s						
LDF				*e*Sg	**Sg**	**10 48 43.9**	**-1.8**
	comp=N,168nm,0.5s						
ROSF	**Rostrenen**	**5.50**	**341**	*e*Pn	**Pn**	**10 47 13.5**	**+1.3**
ROSF				*e*Sn	**Sn**	**10 48 12.6**	**-2.3**
	comp=N,35nm,0.2s						
ROSF				*e*Sg	**Sg**	**10 48 46.3**	**-1.2**
	comp=N,82nm,0.3s						
ROSF	**Rostrenen**	**5.50**	**341**	*e*P	**Pn**	**10 47 13.3**	**+1.1**
ROSF				IAML		10 49 01.5	
	comp=N,44nm,0.4s						
ROSF				IAML		10 49 04.4	
	comp=E,65nm,0.8s						
EAGO	**Agolada(Pontev**	**5.50**	**269**	Pn	**Pn**	**10 47 14.2**	**+2.0**
EAGO				Sn	**Sn**	**10 48 15.8**	**+0.7**
EAGO				*i* Vmb_Lg		10 48 18.0	
MBDF	**Montbardon**	**5.55**	**71**	*e*Pn	**Pn**	**10 47 17.3**	**+4.2**
MBDF				*e*Sg	**Sg**	**10 48 46.7**	**-2.6**
	comp=E,35nm,0.8s						
FLN	**La Foliniere**	**5.60**	**1**	*e*Pn	**Pn**	**10 47 15.2**	**+1.6**
	baz=183						
FLN				*e*Sn	**Sn**	**10 48 15.5**	**-1.9**
	comp=E,41nm,0.3s						
FLN				*e*Sg	**Sg**	**10 48 49.2**	**-1.6**
	comp=E,79nm,0.4s						
PVRL	**Vila Real**	**5.60**	**253**	*e*Pn	**Pn**	**10 47 16.2**	**+2.5**
PVRL				*e*Sn	**Sn**	**10 48 16.9**	**-0.8**
PVRL				A	A	10 48 50.1	
	comp=E,70nm,0.4s						
POLO	**Lamas de Olo**	**5.62**	**254**	*e*Pn	**Pn**	**10 47 16.3**	**+2.3**
POLO				*e*Sn	**Sn**	**10 48 17.1**	**-1.1**
POLO				*e*Sg	**Sg**	**10 48 45.3**	**-6.3**
POLO				A	A	10 48 55.3	
	comp=E,22nm,0.7s						
ELOB	**Lobios**	**5.66**	**259**	Pn	**Pn**	**10 47 16.7**	**+2.2**
ELOB				Sn	**Sn**	**10 48 18.2**	**-0.8**
ELOB				*i* Vmb_Lg		10 48 21.6	
ELOB				Sg	**Sb**	**10 48 42.7**	**+5.7**
EQES	**Quesada**	**5.67**	**200**	Pn	**Pn**	**10 47 17.3**	**+2.5**
EQES				Sn	**Sn**	**10 48 16.6**	**-2.9**
EQES				*i* Vmb_Lg		10 48 43.5	
PCAB	**Cabril**	**5.68**	**258**	*e*Pn	**Pn**	**10 47 17.1**	**+2.4**
PCAB				*e*Sn	**Sn**	**10 48 18.9**	**-0.6**
PCAB				A	A	10 48 59.2	
	comp=E,54nm,0.5s						
LPL	**La Plagne**	**5.77**	**63**	*e*Pn	**Pn**	**10 47 18.0**	**+1.9**
LPL				*e*Sg	**Sg**	**10 48 53.2**	**-3.0**
	comp=E,45nm,0.6s						
LPG	**La Plagne**	**5.77**	**64**	*e*P	**Pn**	**10 47 20.4**	**+4.2**
LPG				*e*Sn	**Sn**	**10 48 19.2**	**-2.9**
	comp=E,9.1nm,0.3s						
LPG				*e*Sg	**Sg**	**10 48 53.8**	**-2.5**
	comp=E,33nm,0.6s						
PGAV	**Gavieira, Arco**	**5.78**	**261**	*e*Pn	**Pn**	**10 47 18.8**	**+2.6**
PGAV				*e*Sn	**Sn**	**10 48 23.0**	**+0.9**
PGAV				*e*Sg	**Sg**	**10 48 51.8**	**-4.9**
PGAV				A	A	10 49 11.1	
	comp=E,47nm,0.6s						
EADA	**Adamuz**	**5.83**	**212**	Pn	**Pn**	**10 47 17.5**	**+0.7**
EADA				Sn	**Sn**	**10 48 20.2**	**-3.0**
EADA				*i* Vmb_Lg		10 48 23.5	
CABF	**La Chapelle**	**5.87**	**52**	*e*Pn	**Pn**	**10 47 19.7**	**+2.3**
CABF	**La Chapelle**	**5.87**	**52**	*e*Pg	**Pg**	**10 47 41.3**	**-2.2**
CABF				*e*Sg	**Sg**	**10 48 57.3**	**-2.3**
	comp=E,82nm,0.7s						
MTE	**Manteigas**	**5.87**	**244**	*e*Pn	**Pn**	**10 47 19.4**	**+2.0**
MTE				*e*Sn	**Sn**	**10 48 22.7**	**-1.6**
MTE				*e*Sg	**Sg**	**10 48 53.9**	**-5.7**
MTE				A	A	10 48 59.1	
	comp=E,67nm,0.4s						
SBF	**Sospel**	**5.89**	**80**	*e*Pn	**Pn**	**10 47 19.3**	**+1.6**
SBF	**Sospel**	**5.89**	**80**	*e*P	Pn	10 47 23.1	+5.4
SBF				*e*Sn	**Sn**	**10 48 22.0**	**-2.8**
	comp=E,14nm,0.3s						
PVIS	**Viseu**	**5.96**	**248**	*e*Pn	**Pn**	**10 47 20.7**	**+2.1**
PVIS				*e*Sn	**Sn**	**10 48 25.1**	**-1.3**
PVIS				*e*Sg	**Sg**	**10 48 55.4**	**-6.9**
PVIS				A	A	10 49 04.3	
	comp=E,53nm,0.4s						
EZAM	**Zamans**	**6.05**	**263**	Pn	**Pn**	**10 47 21.1**	**+1.4**
EZAM				Sn	**Sn**	**10 48 26.9**	**-1.7**

JDC	Jersey Dam (Cr	6.10	351	eP	Pn	10 47 21.5	+1.0
JDC				IAML		10 48 31.1	
	comp=N,160nm,0.2s						
JDC				IAML		10 48 31.4	
	comp=E,91nm,0.2s						
JDG	Jersey Dam (Ga	6.11	351	eP	Pn	10 47 21.3	+0.7
JDG				IAML		10 49 21.1	
	comp=E,35nm,0.4s						
JDG				IAML		10 49 22.2	
	comp=N,27nm,0.7s						
JRS	Jersey	6.12	351	eP	Pn	10 47 21.8	+1.1
JRS				IAML		10 49 19.0	
	comp=N,39nm,0.5s						
JRS				IAML		10 49 21.9	
	comp=E,40nm,0.8s						
JQE	Queens East	6.12	351	eP	Pn	10 47 21.7	+1.1
JSA	Saint Aubin	6.12	350	eP	Pn	10 47 21.3	+0.6
JSA				IAML		10 49 16.4	
	comp=E,52nm,0.3s						
JSA				IAML		10 49 24.0	
	comp=N,44nm,0.4s						
JSA	Saint Aubin	6.12	350	Pn	Pn	10 47 20.3	-0.4
JSA				Sn	Sn	10 48 26.6	-3.7
PCBR	Castelo Branco	6.13	240	ePn	Pn	10 47 23.0	+2.1
PCBR				eSn	Sn	10 48 28.3	-2.3
PCBR				A	A	10 49 16.2	
	comp=N,62nm,0.5s						
EMAZ	Mazaricos	6.13	271	Pn	Pn	10 47 21.8	+0.9
EMAZ				Sn	Sn	10 48 29.8	-0.9
EMAZ				i Vmb_Lg		10 48 33.3	
JVM	Valle D.L. Mar	6.16	350	eP	Pn	10 47 22.0	+0.8
JLP	Les Platons	6.17	351	eP	Pn	10 47 22.1	+0.8
ECAB	El Cabril	6.26	217	Pn	Pn	10 47 24.4	+1.6
ECAB				Sn	Sn	10 48 29.9	-4.0
ECAB				i Vmb_Lg		10 48 43.0	
BRANT	Les Verrieres	6.28	51	Pn	Pn	10 47 23.9	+0.9
BRANT				Sn	Sn	10 48 37.5	+3.3
BRANT				Sg	Sg	10 49 09.4	-3.0
PTO	Porto	6.28	254	ePn	Pn	10 47 26.0	+3.2
PTO				eSn	Sn	10 48 35.1	+1.0
PMRV	Marv??o	6.33	236	ePn	Pn	10 47 25.4	+1.8
PMRV				eSn	Sn	10 48 33.5	-1.9
PMRV				A	A	10 49 19.1	
	comp=N,45nm,0.7s						
EQUE	Quentar	6.33	201	Pn	Pn	10 47 26.3	+2.5
EQUE				i Vmb_Lg		10 48 39.3	
SFTF	Sexfontaines	6.41	36	ePn	Pn	10 47 25.6	+1.0
SFTF	Sexfontaines	6.41	36	ePg	Pg	10 47 51.1	-2.6
SFTF				eSn	Sn	10 48 35.0	-2.3
SFTF				eSg	Sg	10 49 13.7	-2.9
	comp=N,112nm,0.5s						
SENIN	Lac Senin/Sane	6.47	58	Pn	Pn	10 47 27.6	+1.9
SENIN				Sn	Sn	10 48 38.1	-1.2
SENIN				Sg	Sg	10 49 11.9	-6.9
EBER	Berja	6.50	196	Pn	Pn	10 47 28.1	+2.0
EBER				Sn	Sn	10 48 38.8	-1.1
EBER				i Vmb_Lg		10 48 45.5	
COI	Coimbra	6.54	246	eSn	Sn	10 48 38.6	-2.1
COI				eSg	Sg	10 49 15.7	-5.4
EBAD	Badajoz	6.55	230	Pn	Pn	10 47 27.7	+1.1
EBAD				Sn	Sn	10 48 37.9	-3.0
EBAD				i Vmb_Lg		10 48 41.2	
EGOR	Sierra Gorda,	6.61	205	Pn	Pn	10 47 29.8	+2.2
EGOR				Sn	Sn	10 48 42.0	-0.7
EGOR				i Vmb_Lg		10 48 45.9	
MEZF	Maizieres J'vi	6.64	35	ePn	Pn	10 47 29.1	+1.2
	baz=213						
MEZF	Maizieres J'vi	6.64	35	ePg	Pg	10 47 55.0	-3.2
MEZF				eSn	Sn	10 48 40.7	-2.4
MEZF				eSg	Sg	10 49 21.6	-2.5
	comp=N,87nm,0.4s						
PCAS	Casmilo, Conde	6.68	245	ePn	Pn	10 47 30.8	+2.4
PCAS				eSn	Sn	10 48 42.4	-1.7
PCAS				eSg	Sg	10 49 19.9	-5.5
PCAS				A	A	10 49 40.1	
	comp=N,59nm,0.6s						
ELGU	Los Guajares,	6.70	201	Pn	Pn	10 47 30.6	+1.8
ELGU				Sn	Sn	10 48 46.2	+1.5
ELGU				i Vmb_Lg		10 48 54.0	
SAVF	Savonnieres en	6.76	34	ePn	Pn	10 47 30.5	+1.0
SAVF	Savonnieres en	6.76	34	ePg	Pg	10 47 57.8	-2.7
SAVF				eSn	Sn	10 48 43.4	-2.6
	comp=N,19nm,0.3s						
SAVF				eSg	Sg	10 49 26.1	-1.8
	comp=N,188nm,0.7s						
PESTR	Estremoz	6.80	233	ePn	Pn	10 47 31.8	+1.7
PESTR				eSn	Sn	10 48 43.8	-3.4
PESTR				A	A	10 49 35.7	
	comp=N,34nm,0.5s						
HAU	Haudompre	6.87	43	ePn	Pn	10 47 32.3	+1.2
HAU				eSn	Sn	10 48 45.3	-3.6
HAU				eSg	Sg	10 49 28.9	-2.7
	comp=N,41nm,0.4s						
PAGF	Fort de Pagny	6.97	37	ePn	Pn	10 47 33.7	+1.3
PAGF	Fort de Pagny	6.97	37	ePg	Pg	10 48 01.5	-3.0
PAGF				eSn	Sn	10 48 47.8	-3.4
	comp=N,12nm,0.3s						
PAGF				eSg	Sg	10 49 31.8	-2.9
	comp=N,164nm,0.6s						
PBAR	Barrancos	6.98	227	ePn	Pn	10 47 34.6	+2.1
PBAR				eSn	Sn	10 48 48.9	-2.5
PBAR				A	A	10 49 55.6	
	comp=N,26nm,0.5s						
HINF	Hinteralfeld	7.01	46	ePn	Pn	10 47 34.3	+1.3
HINF	Hinteralfeld	7.01	46	ePg	Pg	10 48 02.9	-2.3
HINF				eSn	Sn	10 48 49.7	-2.5
	comp=N,4.7nm,0.3s						
HINF				eSg	Sg	10 49 33.0	-2.9
	comp=N,48nm,0.6s						
FIESA	Fiescheralp	7.01	59	Pn	Pn	10 47 36.3	+3.1
FIESA				Sn	Sn	10 48 59.3	+6.7
PMTG	Montargil	7.06	237	ePn	Pn	10 47 35.5	+1.9
PMTG				eSn	Sn	10 48 50.5	-2.8
PMTG				A	A	10 49 46.5	
	comp=N,35nm,0.6s						
PGF	Pioggiola	7.09	92	ePn	Pn	10 47 35.2	+1.1
PGF				eSn	Sn	10 48 50.4	-3.9
	comp=N,18nm,0.4s						
EMIN	Mina Concepcio	7.10	223	Pn	Pn	10 47 35.1	+0.9
EMIN				Sn	Sn	10 48 49.7	-4.7
EMIN				i Vmb_Lg		10 48 54.0	
PSBE	So Bento	7.16	242	ePn	Pn	10 47 37.5	+2.5
PSBE				eSn	Sn	10 48 54.2	-1.7
PSBE				eSg	Sg	10 49 36.1	-4.6
PSBE				A	A	10 49 52.6	
	comp=N,33nm,0.7s						
HASLI	Hasliberg/Brie	7.18	57	Pn	Pn	10 47 37.5	+2.2
EVO	Evora	7.27	233	P	Pn	10 47 37.6	+1.1
EVO	Evora	7.27	233	eSn	Sn	10 48 55.9	-2.8
EVO				A	A	10 50 02.8	
	comp=N,23nm,0.7s						
EMIJ	Mijas	7.33	207	Pn	Pn	10 47 39.1	+1.8
EMIJ				Sn	Sn	10 48 60.0	-0.1
EMIJ				i Vmb_Lg		10 49 09.5	
MUGIO	Muggio	7.43	65	Pn	Pn	10 47 43.5	+4.8
ESPR	Espera	7.46	214	Pn	Pn	10 47 41.2	+2.0
ESPR				i Vmb_Lg		10 49 12.6	
PBEJ	Beja	7.54	230	ePn	Pn	10 47 42.0	+1.8
PBEJ				eSn	Sn	10 49 03.2	-2.0
CDF	Champ du Feu	7.61	44	ePn	Pn	10 47 41.1	-0.1
CDF				eSn	Sn	10 49 03.5	-3.5
	comp=N,2.2nm,0.3s						
CDF				eSg	Sb	10 49 51.8	+19
	comp=N,64nm,0.7s						
PACT	Alcochete	7.62	238	ePn	Pn	10 47 44.1	+2.9
PACT				eSn	Sn	10 49 05.2	-1.9
BAIF	Baives	7.65	24	ePn	Pn	10 47 42.1	+0.4
BAIF	Baives	7.65	24	ePg	Pb	10 48 13.9	+11
BAIF				eSn	Sn	10 49 04.2	-3.7
	comp=N,10nm,0.3s						
BAIF				eSg	Sb	10 49 53.4	+19
	comp=N,152nm,1.0s						
EJIF	Jimena Fronter	7.67	211	Pn	Pn	10 47 43.9	+1.8
EJIF				Sn	Sn	10 49 07.2	-1.4
EGRO	El Granado	7.69	225	Pn	Pn	10 47 43.4	+1.2
EGRO				Sn	Sn	10 49 03.8	-5.2
EGRO				i Vmb_Lg		10 49 10.8	
CCA1	Carnmenellis	7.71	337	Pn	Pn	10 47 42.4	0.0
CCA1				Sn	Sn	10 49 04.5	-4.8
PMAFR	Mafra	7.79	240	ePn	Pn	10 47 46.2	+2.6
PMAFR				eSn	Sn	10 49 09.3	-2.0
PMAFR				A	A	10 50 15.6	
	comp=N,34nm,0.5s						
DOU	Dourbes	7.80	25	eP	Pn	10 47 45.1	+1.3
PMST	Lisbon--Monsan	7.85	239	eSn	Sn	10 49 11.1	-1.8
PMST				A	A	10 50 13.1	
	comp=N,48nm,0.5s						
PNCL	Nicolau / Gran	7.86	233	ePn	Pn	10 47 46.4	+1.9
PNCL				eSn	Sn	10 49 10.3	-2.7
PNCL				A	A	10 50 17.0	
	comp=N,15nm,0.6s						
MESJ	Messejana	7.87	230	eP	Pn	10 47 45.9	+1.3
MESJ				eS	Sn	10 49 06.5	-6.8
MESJ				IAML		10 49 14.3	
	comp=N,25nm,0.7s						
MESJ	Messejana	7.87	230	ePn	Pn	10 47 46.3	+1.6
MESJ				eSn	Sn	10 49 11.1	-2.2
MESJ				A	A	10 50 03.3	
	comp=N,17nm,0.6s						
GIVF	Givet	7.88	26	ePn	Pn	10 47 45.4	+0.5
GIVF	Givet	7.88	26	ePg	Pb	10 48 15.8	+8.6
GIVF				eSn	Sn	10 49 10.1	-3.5
	comp=N,24nm,0.4s						
GIVF				eSg	Sb	10 50 00.1	+19
	comp=N,218nm,1.0s						
PVAQ	Vaqueiros	7.91	226	ePn	Pn	10 47 46.5	+1.2
PVAQ				eSn	Sn	10 49 10.3	-4.1
PVAQ				A	A	10 50 03.5	
	comp=N,14nm,0.7s						
PCVE	Castro Verde	7.91	228	ePn	Pn	10 47 47.3	+1.9
PCVE				eSn	Sn	10 49 11.6	-2.9
PCVE				A	A	10 50 18.3	
	comp=N,20nm,0.6s						
ELSH	Elham, Standar	8.07	8	eP	Pn	10 47 48.6	+1.1
ELSH	Elham, Standar	8.07	8	Pn	Pn	10 47 47.4	-0.1
ELSH				Sn	Sn	10 49 13.4	-4.9
ECEU	Ceuta	8.14	208	Pn	Pn	10 47 47.3	-1.1
ECEU				i Vmb_Lg		10 49 26.3	
PBDV	Barranco-do-Ve	8.14	226	ePn	Pn	10 47 50.3	+1.8
PBDV				eSn	Sn	10 49 17.0	-3.2
PBDV				A	A	10 50 17.9	
	comp=N,22nm,0.6s						
HTL	Hartland	8.27	343	eP	Pn	10 47 50.7	+0.6
HTL				IAML		10 50 35.4	
	comp=E,28nm,0.5s						
HTL				IAML		10 50 36.6	
	comp=N,27nm,0.6s						
HTL	Hartland	8.27	343	Pn	Pn	10 47 49.7	-0.4
HTL				Sn	Sn	10 49 17.7	-5.3
DAVOX	Davos/Dischmat	8.27	60	Pn	Pn	10 47 53.8	+3.5
	comp=N,0.3nm,0.3s,baz=236,slow=15,SNR=1.7						
DAVOX				Lg	Lg	10 50 19.2	
	comp=N,0.3nm,0.3s,baz=331,slow=22,SNR=1.3						
	comp=N,1.1nm,0.4s						
PTEO	Sao Teotonio	8.36	231	ePn	Pn	10 47 52.6	+1.2
PTEO				eSn	Sn	10 49 22.3	-3.0
PTEO				A	A	10 50 45.4	
	comp=N,24nm,0.6s						
MORF	Marmelete	8.48	229	eP	Pn	10 47 54.1	+0.9
MORF	Marmelete	8.48	229	ePn	Pn	10 47 54.4	+1.2
MORF				eSn	Sn	10 49 25.1	-3.5
MORF				A	A	10 50 34.2	
	comp=N,13nm,0.6s						
PFVI	Vila Bisbo	8.71	229	ePn	Pn	10 47 58.1	+1.9
MCH1	Michaelchurch	8.98	351	eP	Pn	10 48 00.1	+0.1
MCH1	Michaelchurch	8.98	351	Pn	Pn	10 47 59.1	-0.8
MCH1				Sn	Sn	10 49 35.8	-4.9
CWF	Charnwood Fore	9.59	357	Pn	Pn	10 48 07.6	-0.7
CWF				Sn	Sn	10 49 49.4	-6.2
FOEL	Foel Wylfa	9.88	351	Pn	Pn	10 48 11.9	-0.4
FOEL				Sn	Sn	10 49 60.0	-2.8
GERES	GERESS Array B	11.45	55	Pn	Pn	10 48 35.5	+1.6
	comp=N,0.2nm,0.3s,baz=240,slow=14,SNR=1.7						
GERES				Sn	Sn	10 50 44.2	+2.8
	comp=N,0.3nm,0.3s,baz=251,slow=24,SNR=2.1						
GERES				Lg	Lg	10 52 02.3	
	baz=245,slow=23						
	comp=N,0.2nm,0.3s						
EKA	Eskdalemuir Ar	12.29	353	Pn	Pn	10 48 42.8	-2.4
	baz=172,slow=13						
EKA				Sn	Sn	10 50 52.0	-10
	baz=171,slow=25						
NOA	NORSAR Array B	19.26	18	LR	LR	10 58 19.6	
	comp=N,14nm,18.4s,baz=330,slow=39						
NACGM	Naroch	21.30	47	eP	P	10 50 42.6	+5.9
	baz=249						
FINES	FINESS Array B	24.23	32	P	P	10 51 09.0	+2.3
	comp=N,1.7nm,0.9s,baz=248,slow=7.4,SNR=1.8						
	comp=N,1.7nm,0.9s						
TORD	Torodi Ar. Bea	29.98	176	P	P	10 52 00.5	+1.9
	comp=N,10nm,0.6s,baz=337,slow=8.2,SNR=4.5						
VNDA	Vanda	144.79	173	PKP	PKiKP	11 05 27.7	-1.6
	comp=N,1.1nm,0.8s,baz=185,slow=0.5,SNR=6.0						

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*ISU **11** 10:47:46, 40°.10N×70°.71E, h2^{km}*

*KRNET **11** 10:47:48.1±0.1, 40°.09N×71°.10E, h8^{km}, mb2.5*

ISC 11 10:47:48.0±1.1, **40°.12N**±0°.03×**71°.06E**±0°.04, **h6**^{km}±11^{km}, **n10**, σ**1§30**/16, **6C-6D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.19	252	⇑eP	Pg	10 47 52.6	+0.7
	baz=62						
BTK				⇑eS	Sg	10 47 55.4	+0.9
	baz=62						
MINT	Mingtut	0.35	350	P	Pg	10 47 54.8	-0.1
MINT				S	Sb	10 48 01.9	-0.7
CHMI	Chimion	0.39	67	P	Pn	10 47 59.7	-0.5
CHMI				S		10 48 09.5	
SHAK	Shakhimardan	0.55	107	P	Pn	10 48 02.7	+0.2
SHAK				S	Sn	10 48 15.4	+3.3
FRG	Fergana	0.61	65	P	Pn	10 48 17.2	+14
DRK	Karamyk	0.85	138	⇓iP	Pg	10 48 03.6	-0.8
	baz=38						
DRK				⇓iS	Sg	10 48 15.4	-0.1
	baz=38						
GAR	Garm	1.25	207	⇓iP	Pn	10 48 12.0	-0.2
	baz=9.0						
GAR				⇓iS	Sn	10 48 29.4	0.0
	baz=9.0						
TRKS	Terek-Say	1.41	2	⇑eP	Pb	10 48 14.5	-0.4
	baz=2.0						
TRKS				⇑iS	Sb	10 48 33.3	+0.1
	baz=2.0						
ARK	Arkit	1.81	22	⇑iP	Pg	10 48 22.7	-0.1
	baz=21						
ARK				⇑iS	Sg	10 48 47.8	+1.5
	baz=21						
KK31	Karatay Array	3.01	352	⇓Pg	Pb	10 48 40.0	-2.0
	1.4nm,0.7s,baz=176,slow=15,SNR=6.0						
KK31				⇓Lg	Lg	10 49 22.8	
	1.6nm,0.6s,baz=174,slow=28,SNR=3.8						

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*STR **11** 10:57:56.9±0.2, 43°N±2°×°±°, h9^{km}±2^{km}, MLv2.0/7, preliminary*

*MDD **11** 10:57:57.6±0.2, 43°.11N×0°.66W, h12^{km}, mb_Lg2.7/16, Error ellipse: s-maj=1.9km s-min=1.5km az=175.0*

*LDG **11** 10:57:57.1±0.1, 43°.09N×0°.65W, h10^{km}, Md2.6/3, Ml2.5/19, Error ellipse: s-maj=1.7km s-min=1.6km az=91.0*

ISC 11 10:57:55.5±0.8, **43°.16N**±0°.02×**0°.63W**±0°.02, **h15**^{km}±5^{km}, **n58**, σ**1§04**/110, **2C-1D**, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATE	Arette	0.09	213	⇓Pg	Pg	10 57 59.2	+0.4
ATE				Sg	Sg	10 58 00.8	-0.1
ETSF	Etsaut	0.27	168	ePg	Pg	10 58 01.3	-0.1
ETSF				eSg	Sg	10 58 04.3	-1.0
	405nm,0.2s						
CANF	Canfranc	0.41	168	⇑Pg	Pg	10 58 03.7	0.0
CANF				Sg	Sg	10 58 08.4	-1.0
PYLO	Lourdes	0.43	98	⇑Pg	Pb	10 58 05.5	+0.7
PYLO				Sg	Sb	10 58 11.3	+0.1
SJPF	Ste Jean	0.43	264	ePg	Pb	10 58 05.2	+0.3
SJPF				eSg	Sb	10 58 11.2	0.0
	42nm,0.2s						
OSSF	Osses	0.47	282	Pg	Pb	10 58 05.6	+0.1
OSSF				Sg	Sb	10 58 11.9	-0.3
VIEF	Viey	0.56	120	Pg	Pb	10 58 06.9	-0.1
VIEF				Sg	Sg	10 58 13.8	-0.1
EORO	Oroz-Betelu	0.56	242	Pg	Pb	10 58 07.5	+0.4
EORO				Sg	Sg	10 58 14.5	+0.3
EORO				i Vmb_Lg		10 58 17.6	
EALK	Alkurruntz	0.64	276	Pg	Pb	10 58 08.4	0.0
EALK				Sg	Sb	10 58 17.5	+0.2
EALK	Alkurruntz	0.64	276	Sg	Sb	10 58 17.4	+0.2
EALK	Alkurruntz	0.64	276	Pg	Pb	10 58 08.7	+0.3
EPF	Esparros	0.72	100	ePg	Pb	10 58 10.4	+0.5
EPF				eSg	Sb	10 58 20.0	+0.4
	22nm,0.2s						
ECHI	Chisagues Biel	0.78	129	Pg	Pg	10 58 10.5	-0.4
ECHI				Sg	Sg	10 58 20.2	-1.0
ECHI				i Vmb_Lg		10 58 21.4	
ECHI	Chisagues Biel	0.78	129	Sg	Sg	10 58 20.2	-1.0
ECHI	Chisagues Biel	0.78	129	Pg	Pg	10 58 11.0	+0.1
EARA	Aranguren	0.79	241	Pg	Pb	10 58 11.3	+0.2
EARA				Sg	Sg	10 58 20.5	-1.0
EARA				i Vmb_Lg		10 58 25.8	
EARA	Aranguren	0.79	241	Sg	Sb	10 58 22.4	+0.8
EARA	Aranguren	0.79	241	Pg	Pb	10 58 11.9	+0.8
MLS	Moulis	1.28	98	Pn	Pg	10 58 20.7	+0.4
MLS				Sn	Sn	10 58 37.8	+2.0
ESAC	San Caprasio	1.44	175	Pg	Pb	10 58 22.7	+0.6
ESAC				Sg	Sn	10 58 41.4	+1.6
ESAC				i Vmb_Lg		10 58 45.7	
MONQ	Montcuq	1.79	47	Pn	Pb	10 58 27.6	-0.4
MONQ				Sn	Sg	10 58 51.9	-1.4
EMIR	Miracle	2.02	127	Pn	Pn	10 58 29.8	+0.7
EMIR				Sg	Sg	10 59 00.3	-0.4
EMIR				i Vmb_Lg		10 59 03.3	
LFF	La Frestale	2.04	29	ePn	Pb	10 58 31.7	-0.5
LFF	La Frestale	2.04	29	ePg	Pg	10 58 35.8	+1.2
LFF				eSn	Sb	10 58 56.7	-0.6
	13nm,0.3s						
LFF				eSg	Sg	10 59 03.2	+2.1
ELAN	Lanestosa	2.05	273	Pn	Pn	10 58 30.5	+1.0
ELAN				Sg	Sg	10 58 59.9	-1.5
ELAN				i Vmb_Lg		10 59 00.6	
MTLF	Montolieu	2.09	84	Pn	Pn	10 58 31.7	+1.7
MTLF				Pg	Pg	10 58 34.8	-0.9
MTLF				Sn	Sb	10 58 58.4	-0.5
MTLF				Sg	Sg	10 59 01.5	-1.3
EPOB	Poblet	2.21	144	Pn	Pn	10 58 32.4	+0.8
EPOB				Pg	Pg	10 58 37.1	-0.8
EPOB				Sn	Sn	10 58 59.6	+0.9
EPOB				Sg	Sg	10 59 05.4	-1.1
EPOB				i Vmb_Lg		10 59 07.3	
ERTA	Horta de San J	2.32	162	Pn	Pn	10 58 33.2	+0.1
ERTA				Pg	Pb	10 58 38.5	+1.5
ERTA				Sn	Sn	10 58 59.8	-1.5
ERTA				Sg	Sb	10 59 05.8	+0.4
ERTA				i Vmb_Lg		10 59 11.0	
ETOR	Torete	2.57	205	Pn	Pn	10 58 37.0	+0.4
ETOR				Sn	Sn	10 59 06.3	-1.3
ETOR				i Vmb_Lg		10 59 20.4	
CAF	Calviac	2.63	47	ePn	Pn	10 58 38.7	+1.3
CAF	Calviac	2.63	47	ePg	Pg	10 58 46.5	+0.6
CAF				eSn	Sn	10 59 09.6	+0.6
CAF				eSg	Sg	10 59 20.4	+0.4
	4.3nm,0.2s						
RJF	Les Rejaudoux	2.64	35	ePn	Pn	10 58 38.3	+0.7
RJF	Les Rejaudoux	2.64	35	ePg	Pg	10 58 46.7	+0.5
RJF				eSn	Sn	10 59 10.8	+1.4
RJF				eSg	Sg	10 59 20.6	+0.1
	12nm,0.4s						
EJON	La Jonquera	2.69	104	Sg	Sg	10 59 20.4	-1.5
EJON				i Vmb_Lg		10 59 30.5	
EMOS	Mosqueruela	2.80	177	Pn	Pn	10 58 40.4	+0.5
EMOS				Pg	Pb	10 58 43.9	-1.3
EMOS				Sn	Sn	10 59 13.8	+0.4
EMOS				Sg	Sb	10 59 20.8	+1.4
EMOS				i Vmb_Lg		10 59 29.3	
LASF	Ste Croix	3.39	73	ePn	Pn	10 58 49.4	+1.6
LASF	Ste Croix	3.39	73	eP	Pb	10 58 52.7	-2.5
LASF	Ste Croix	3.39	73	ePg	Pg	10 58 59.1	-1.3
LASF				eSn	Sn	10 59 28.3	+0.6
LASF				eSg	Sg	10 59 44.0	-0.3
	1.0nm,0.2s						
MFF	Saint Martin d	3.46	6	ePn	Pn	10 58 49.7	+0.9
MFF	Saint Martin d	3.46	6	ePg	Pg	10 59 02.1	+0.3
MFF				eSn	Sn	10 59 30.8	+1.3
	5.1nm,0.3s						
GUD	Guadarrama	3.64	227	Sn	Sn	10 59 34.4	+0.4
GUD				i Vmb_Lg		10 59 43.4	
TCF	Toulx Ste Croi	3.73	32	ePn	Pn	10 58 53.3	+0.8
TCF	Toulx Ste Croi	3.73	32	ePg	Pg	10 59 07.3	+0.4
TCF				eSn	Sn	10 59 36.8	+0.7
TCF				eSg	Sg	10 59 55.2	0.0
	2.3nm,0.2s						
VIVF	Saint-Julien-l	4.19	64	ePn	Pn	10 59 00.4	+1.6
VIVF	Saint-Julien-l	4.19	64	ePg	Pg	10 59 14.4	-1.3
VIVF				eSg	Sg	11 00 09.9	0.0
	1.7nm,0.3s						
BGF	Bois d'Agland	4.20	35	ePg	Pg	10 59 13.1	-2.9
BGF				eSg	Sg	11 00 09.5	-1.0
	14nm,0.4s						
ETOS	Mallorca	4.26	141	Pn	Pn	10 58 59.4	-0.5
ETOS				i Vmb_Lg		10 59 54.4	
SMRF	Simiane la Rot	4.58	78	eP	Pn	10 59 10.2	+5.9
SMRF				eSg	Sg	11 00 21.1	-1.6
	0.4nm,0.2s						
AVF	Avril sur Loir	4.60	37	ePn	Pn	10 59 06.2	+1.7
AVF				eSg	Sg	11 00 23.1	-0.1
	0.2nm,0.2s						
SMF	Signal de Mont	4.72	41	ePn	Pn	10 59 07.7	+1.6
SMF	Signal de Mont	4.72	41	ePg	Pg	10 59 24.9	-0.9
SMF				eSn	Sn	11 00 00.8	+0.3
	1.1nm,0.2s						
SMF				eSg	Sg	11 00 26.8	-0.1
	0.5nm,0.2s						
QUIF	Quistinic	5.08	340	eP	Pn	10 59 17.1	+6.1
QUIF	Quistinic	5.08	340	ePg	Pg	10 59 31.9	-0.9
QUIF				eSn	Sn	11 00 08.6	-0.7
QUIF				eSg	Sg	11 00 37.8	-0.7
	0.7nm,0.2s						
GRR	Gorron	5.23	358	ePn	Pn	10 59 14.7	+1.6
GRR	Gorron	5.23	358	ePg	Pg	10 59 35.3	-0.4
GRR				eSn	Sn	11 00 11.4	-1.7
GRR				eSg	Sg	11 00 42.9	-0.5
	1.9nm,0.3s						
SGMF	Saint Gilles	5.27	346	ePn	Pn	10 59 16.1	+2.4
SGMF	Saint Gilles	5.27	346	ePg	Pg	10 59 34.6	-1.8
SGMF				eSn	Sn	11 00 14.4	+0.3
	1.1nm,0.2s						
ROSF	Rostrenen	5.50	341	ePn	Pn	10 59 17.1	+0.3
ROSF				eSn	Sn	11 00 17.9	-1.8
	0.7nm,0.3s						
ROSF				eSg	Sg	11 00 51.0	-0.9
	1.4nm,0.3s						

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*IDC **11** 11:19:21.9±0.9, 1°.38N×125°.98E, h0^{km}, mb3.9/6, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=60.5km s-min=19.0km az=77.0*

*DJA **11** 11:19:29.5±1.9, 1°N±4°×12°6E±°, h35^{km}±38^{km}, M3.9/9, mb4.3/5, mB5.0/1, MLv3.7/9, Mw(mB)4.4/1*

*NEIC **11** 11:19:29.3±1.6, 1°.36N±0°.10×126°.43E±0°.05, h42^{km}±10^{km}, mb4.2/13, Error ellipse: s-maj=15.2km s-min=5.2km az=200.0*

ISC 11 11:19:28.9±0.7, **1°.44N**±0°.08×**126°.46E**±0°.05, **h47**^{km}, **n40**, σ**1§27**/41, **mb4.2**/11, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.12	126		Pn	11 19 48.8	+0.6
TNTI	Ternate	1.12	126	P	Pn	11 19 49.0	+0.8
TNTI				S	Sn	11 20 05.0	+2.5
LBMI	Labuha	2.31	153	P	Pn	11 20 05.5	+1.0
SGSI	Sangihe	2.42	337	P	Pn	11 20 16.3	+10
KMSI	Cibinong	2.62	251	P	Pn	11 20 08.7	-0.1
SANI	Sanana	3.49	188	P	Pn	11 20 20.4	-0.3
GTOI	Gorontalo	3.54	257	P	Pn	11 20 22.4	+1.0
LUWI	Luwuk	4.43	236		Pn	11 20 32.6	-1.1
LUWI				Sn	Sn	11 21 26.1	+2.1
LUWI	Luwuk	4.43	236	P	Pn	11 20 52.4	+19
APSI	Ampana	5.34	244	P	Pn	11 20 50.3	+4.1
TOLI2	Tolitoli	5.69	267		Pn	11 20 49.1	-1.7
MPSI	Mapaga	6.65	261	P	Pn	11 21 04.4	+0.3
	0.0nm11nm,0.8s						
TTSI	Tana Toraja	7.99	236	P	Pn	11 21 21.9	-0.6
	0.1nm982nm19nm,0.6s						
SPSI	Sidrap Palu	8.57	231	P	Pn	11 21 30.9	+0.4
	12nm,0.4s						
MYLDM	Lahad Datu	8.77	295		Pn	11 21 34.4	+1.1
SBUM	Sibu	14.27	274	P	P	11 22 55.0	+0.6
MTN	Manton Dam	14.93	162	Pn	Pn	11 22 56.2	-0.8

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KNRA  Kununurra         17.15 172  P       P        11 23 25.7 -0.7
KNRA                               IAmb    IAmb     11 23 32.2
      comp=Z,37nm,1.4s
FITZ  Fitzroy Crossi    19.43 182  P       P        11 23 49.1 -2.3
      comp=Z,0.2nm,0.3s,baz=2.2,slow=11,SNR=1.5
      comp=Z,2.6nm,0.8s
FITZ  Fitzroy Crossi    19.43 182  P       P        11 23 51.2 -0.2
WB0   Warramunga Arr    22.46 160  P       P        11 24 23.5 -0.7
WB0                                IAmb    IAmb     11 24 26.0
      comp=Z,8.9nm,0.5s
COEN  Coen              22.54 133  P       P        11 24 23.8 -1.4
COEN                               IAmb    IAmb     11 24 30.6
      comp=Z,17nm,1.3s
WRA   Warramunga Arr    22.61 160  P       P        11 24 25.2 -0.6
      comp=Z,4.5nm,0.5s,baz=336,slow=11,SNR=52
      comp=Z,4.5nm,0.5s
WRA   Warramunga Arr    22.61 160  P       P        11 24 24.9 -0.9
WB2   Warramunga Arr    22.61 160  P       P        11 24 25.1 -0.7
WB2                                IAmb    IAmb     11 24 27.6
      comp=Z,9.8nm,0.7s
WR0   Warramunga Arr    22.69 160  P       P        11 24 26.2 -0.5
WR0                                IAmb    IAmb     11 24 48.5
      comp=Z,7.5nm,1.1s
PSA00 Pilbara Seismi    23.76 195  P       P        11 24 36.4 -0.8
AS31  Alice Springs     25.98 164  P       P        11 24 57.8 +0.4
ASAR  Alice Springs     25.98 164  P       P        11 24 57.6 +0.2
      comp=Z,1.2nm,0.5s,baz=346,slow=7.3,SNR=41
ASAR                               PcP     PcP      11 28 25.1 +0.1
      comp=Z,0.5nm,0.5s,baz=348,slow=2.0,SNR=7.2
      comp=Z,1.2nm,0.5s
ASAR  Alice Springs     25.98 164  P       P        11 24 57.8 +0.4
EIDS  Eidsvold          35.75 140  P       P        11 26 22.8 -0.7
STKA  Stephens Creek    36.11 158  P       P        11 26 26.3 -0.2
      comp=Z,4.0nm,1.0s,baz=338,slow=7.2,SNR=5.6
      comp=Z,4.0nm,1.0s
PETK  Petropavlovsk-    57.65  22  P       P        11 29 15.5 +1.2
      comp=Z,0.6nm,0.7s,baz=191,slow=3.7,SNR=5.7
      comp=Z,0.6nm,0.7s
MKAR  Makanchi Array    59.29 326  P       P        11 29 24.1 -1.8
      comp=Z,0.6nm,0.5s,baz=125,slow=7.6,SNR=5.9
      comp=Z,0.6nm,0.5s
MKAR  Makanchi Array    59.29 326  P       P        11 29 25.4 -0.4
MAKZ  Makanchi          59.47 326  P       P        11 29 26.6 -0.5
MAKZ                               IAmb    IAmb     11 29 54.2
      comp=Z,1.9nm,1.1s
KURK  Kurchatov         63.53 328  P       P        11 29 54.8 +0.4
VNDA  Vanda             81.20 173  P       P        11 31 40.0 +0.8
      comp=Z,0.4nm,0.5s,baz=337,slow=7.7,SNR=5.6
      comp=Z,0.4nm,0.5s
VNDA  Vanda             81.20 173  P       P        11 31 40.4 +1.2
VNDA                               IAmb    IAmb     11 31 56.1
      comp=Z,2.4nm,1.2s
TORD  Torodi Ar. Bea   123.34 287  PKP     PKPdf    11 38 19.9 -2.0
      comp=Z,5.8nm,0.4s,baz=357,slow=2.9,SNR=2.0
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*ROM **11** 11:21:00.2±0.2, 42°.430N±0°.004×15°.260E±0°.006, h8^{km}±1^{km}, ML2.6/14, Error ellipse: s-maj=0.5km s-min=0.2km az=209.0*

ISC 11 11:20:60.0±1.1**, 42°.44N**±0°.02×**15°.23E**±0°.02**, h9**^{km}±9^{km}**, n49,** σ1^{s}**10**/84**, 2C, Adriatic Sea**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC        h  m  s    ISC
TREM  Isole Tremiti      0.38 146  P       Pb       11 21 08.4 -0.5
FRES  Fresagrandinar     0.62 222  P       Pg       11 21 12.6 +0.6
CAFR  Castel Frentan     0.68 252  P       Pb       11 21 14.5 +0.4
APRC  Apricena           0.72 161  P       Pg       11 21 13.8 -0.1
APRC                               S       Sb       11 21 24.3 -0.4
MELA  Melanico ??? S     0.74 186  P       Pg       11 21 13.5 -0.7
MELA                               S       Sg       11 21 24.3 +0.5
SGRT  San Giovanni R     0.79 150  P       Pg       11 21 14.9 -0.2
SGRT                               S       Sg       11 21 25.7 +0.4
CIGN  Sant'Elia a Pi     0.82 197  P       Pg       11 21 15.8 +0.1
CIGN                               S       Sb       11 21 27.4 -0.1
TRIV  Trivento           0.84 217  P       Pb       11 21 17.0 +0.2
TRIV                               S       Sb       11 21 28.6 +0.5
LPEL  Lama dei Pelig     0.87 243  P       Pg       11 21 17.0 +0.3
LPEL                               S       Sb       11 21 29.2 +0.2
LPEL                               AML     AML
      comp=E,914µm,0.9s
LPEL                               AML     AML
      comp=N,543µm,0.3s
MSAG  Monte S. Angel     0.89 145  P       Pg       11 21 16.9 -0.1
MSAG                               S       Sg       11 21 28.8 +0.2
MSAG                               AML     AML
      comp=N,1585µm,0.5s
MSAG                               AML     AML
      comp=E,1008µm,1.0s
MSAG                               AML     AML
      comp=N,1580µm,0.5s
BSSO  Busso             1.01 208   P       Pg       11 21 19.4 +0.1
BSSO                               S       Sb       11 21 33.8 +0.7
BSSO                               AML     AML
      comp=E,98µm,0.8s
BSSO                               AML     AML
      comp=N,84µm,0.6s
VCEL  Villa Celiera     1.03 268   P       Pg       11 21 19.6 -0.1
VCEL                               S       Sb       11 21 34.5 +0.9
VCEL                               AML     AML
      comp=N,604µm,0.7s
VCEL                               AML     AML
      comp=E,513µm,0.4s
TRTR  Tortoreto Alta    1.04 291   P       Pb       11 21 20.3 +0.2
INTR  Introdacqua       1.07 247   P       Pg       11 21 20.6 +0.1
INTR                               S       Sb       11 21 35.5 +0.7
INTR                               AML     AML
      comp=E,162µm,1.1s
INTR                               AML     AML
      comp=N,366µm,1.0s
INTR                               AML     AML
      comp=E,161µm,1.1s
MIDA  Miranda           1.08 223   P       Pg       11 21 20.5 -0.2
MIDA                               S       Sn       11 21 36.2 -0.2
RNI2  Rionero Sannit    1.09 228   P       Pn       11 21 21.6 +0.1
RNI2                               S       Sb       11 21 35.8 +0.5
RNI2                               AML     AML
      comp=N,180µm,0.6s
RNI2                               AML     AML
      comp=N,181µm,0.6s
RNI2                               AML     AML
      comp=E,200µm,1.1s
T0110 Collepietro       1.09 259   P       Pb       11 21 21.4 +0.3
T0110                              S       Sb       11 21 36.2 +0.7
T0110                              AML     AML
      comp=N,483µm,0.5s
T0110                              AML     AML
      comp=N,482µm,0.5s
T0110                              AML     AML
      comp=E,480µm,0.5s
HVAR  Hvar              1.17  50   ePg     Pb       11 21 22.0 -0.2
HVAR                               Sg      Sn       11 21 38.7 +0.2
HVAR  Hvar              1.17  50   P       Pb       11 21 22.2 -0.1
HVAR                               S       Sg       11 21 37.4  0.0
TERO  Teramo            1.21 279   P       Pn       11 21 22.6 -0.6
TERO                               S       Sg       11 21 39.6 +0.6
TERO                               AML     AML
      comp=E,162µm,1.6s
TERO                               AML     AML
      comp=N,246µm,0.4s
ZIRJ  Zirje             1.25  14   ePn     Pn       11 21 22.9 -0.7
ZIRJ                               Sg      Sn       11 21 41.2 +0.6
VAGA  Valle Agricola    1.26 216   P       Pn       11 21 23.7 -0.1
VAGA                               S       Sb       11 21 40.6 +0.3
VAGA                               AML     AML
      comp=E,122µm,0.2s
VAGA                               AML     AML
      comp=N,208µm,0.3s
LSTV  Lastovo           1.27  74   ePg     Pb       11 21 24.2 +0.1
LSTV                               Sg      Sn       11 21 41.1  0.0
POFI  Posta Fibreno     1.34 238   P       Pn       11 21 25.1 +0.2
POFI                               S       Sg       11 21 43.1 +0.2
POFI                               AML     AML
      comp=E,80µm,0.5s
POFI                               AML     AML
      comp=E,80µm,0.5s
POFI                               AML     AML
      comp=N,75µm,0.6s
MORI  Morici            1.47  14   ePn     Pn       11 21 26.9 +0.2
MORI                               Sn      Sb       11 21 46.8 +0.5
RM33  Pellescritta (    1.49 273   P       Pb       11 21 27.8 -0.1
RM33                               S       Sg       11 21 48.0 +0.2
RM33                               AML     AML
      comp=E,552µm,0.8s
RM33                               AML     AML
      comp=E,97µm,0.4s
RM33                               AML     AML
      comp=N,99µm,1.2s
RM33                               AML     AML
      comp=N,521µm,1.4s
RM33                               AML     AML
      comp=N,100µm,1.2s
RM33                               AML     AML
      comp=E,552µm,0.8s
RM33                               AML     AML
      comp=E,97µm,0.4s
DUGI  Dugi Otok         1.56 356   ePn     Pn       11 21 28.0 +0.2
DUGI                               Sn      Sb       11 21 49.5 +0.8
MAKA  Makarska          1.57  57   ePn     Pn       11 21 27.7 -0.3
MAKA                               Sn      Sb       11 21 48.9 -0.2
NRCA  Norcia            1.61 285   P       Pn       11 21 29.4 +0.8
NRCA                               S       Sg       11 21 51.5 -0.2
NRCA                               AML     AML
      comp=E,115µm,0.9s
NRCA                               AML     AML
      comp=N,145µm,0.8s
LNSS  Leonessa          1.62 277   P       Pn       11 21 29.6 +0.8
LNSS                               S       Sb       11 21 51.7 +0.9
LNSS                               AML     AML
      comp=E,180µm,0.7s
LNSS                               AML     AML
      comp=N,122µm,0.4s
LNSS                               AML     AML
      comp=N,122µm,0.4s
LNSS                               AML     AML
      comp=E,179µm,0.7s
CSP1  Cessapalombo      1.62 294   P       Pn       11 21 29.3 +0.4
CSP1                               S       Sb       11 21 51.8 +1.0
RICI  Ricice            1.75  52   ePn     Pn       11 21 30.8 +0.2
RICI                               Sn      Sb       11 21 54.7 +0.3
KIJV  Kijevo            1.79  28   ePn     Pn       11 21 31.9 +0.9
KIJV                               Sn      Sb       11 21 55.7 +0.3
VIRC  Vir               1.86 356   ePn     Pn       11 21 32.1 +0.2
VIRC                               Sn      Sb       11 21 56.7 -0.7
SNTG  Esanatoglia       1.87 297   P       Pn       11 21 32.6 +0.5
SNTG                               AML     AML
      comp=E,49µm,0.7s
SNTG                               AML     AML
      comp=N,58µm,0.5s
SNTG                               AML     AML
      comp=E,49µm,0.7s
STON  Ston              1.88  76   ePn     Pn       11 21 32.8 +0.6
STON                               Sn      Sn       11 21 56.1 +0.1
ARVD  Arcevia           1.98 303   AML     AML
      comp=N,53µm,0.6s
ARVD                               AML     AML
      comp=E,43µm,1.0s
UDBI  Udbina            2.12  10   ePn     Pn       11 21 36.1 +0.4
UDBI                               Sn      Sn       11 22 03.2 +0.9
NVLJ  Novalja           2.14 353   ePn     Pn       11 21 36.2 +0.4
NVLJ                               Sn      Sn       11 22 03.9 +1.4
ATFO  Monte Foce - G    2.16 296   AML     AML
      comp=E,86µm,0.8s
ATFO                               AML     AML
      comp=N,58µm,0.9s
A250A Rusevo Krmpots    2.65 355   ePn     Pn       11 21 44.0 +1.0
A250A                              Sn      Sn       11 22 16.2 +0.9
BRJN  Brijuni           2.69 337   ePn     Pn       11 21 43.0 -0.4
BRJN                               Sn      Sn       11 22 16.2 +0.2
SMRN  Sveta Marina      2.71 344   ePn     Pn       11 21 43.1 -0.6
SMRN                               Sn      Sn       11 22 16.2 -0.3
IMOL  Imola, Italy      3.18 308   S       Sn       11 22 21.0 -7.2
GSCL  Gusciola          3.88 301   S       Sn       11 22 49.0 +3.4
GSCL                               S       Sg       11 23 03.0 -1.6
BOSI  Bolzano           4.92 327   ⇑P      Pg       11 22 35.5 +1.3
CRJA  Costa Raja        4.93 201   ⇑P      Pb       11 22 25.4 -1.2
ZONE  Zone              4.96 314   P       Pn       11 22 14.4 -0.3
ZONE                               AML     AML
      comp=E,281µm,0.1s
ZONE                               AML     AML
      comp=N,612µm,0.4s
EUCT  Pavia             5.20 304   P       Pg       11 22 36.6 -2.9
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*JMA **11** 11:30:16.5±0.1, 24°.3N±0°.8×14°2E±°, h119^{km}, MV5.0/15, IOTO ISLANDS REGION*

*NEIC **11** 11:30:16.7±1.4, 24°.05N±0°.09×141°.7E±0°.2, h99^{km}±7^{km}, mb4.5/73, Error ellipse: s-maj=21.3km s-min=12.4km az=91.0*

*IDC **11** 11:30:16.4±0.8, 24°.16N×141°.76E, h103^{km}±6^{km}, mb3.9/14, mbtmp4.3/19, MS3.1/18, Error ellipse: s-maj=23.6km s-min=8.9km az=91.0*

*NIED **11** 11:30:16.5, 24°.27N×141°.71E, h119^{km}, MW4.4, Moment Tensor Solution. s1 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.39; $M_{\theta\theta}$-2.67; $M_{\phi\phi}$3.07; $M_{r\theta}$2.80; $M_{\theta\phi}$-2.95; $M_{\phi r}$1.06; Fault plane solution: $M_0$4.97000×10^{15} NP1: ϕ_s198.00000°, δ68.00000°, λ-21.00000°. NP2: ϕ_s296.00000°, δ71.00000°, λ-157.00000°.*

ISC 11 11:30:16.2±0.4**, 24°.11N**±0°.05×**141°.7E**±0°.1**, h100**^{km}**, n125,** σ1^{s}**02**/94**, mb4.5**/49**, Volcano Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC        h  m  s    ISC
JHH2  Haha-jima-NKT2     2.55  10  P       Pn       11 30 55.3 -0.7
JHH2                               eS      Sn       11 31 24.1 -2.4
JHH2  Haha-jima-NKT2     2.55  10  A       A        11 30 55.3
      comp=E,21nm,0.5s,comp=E,11nm,0.9s
CBIJ  Chichi jima        3.01   9  P       Pn       11 31 01.5 -0.5
CBIJ                               S       Sn       11 31 35.3 -2.1
CBIJ  Chichi jima        3.01   9  A       A        11 31 01.5
      comp=E,8.0nm,6.9s,comp=E,8.0nm,10.9s
JCJ   Chichijima         3.01   9  P       Pn       11 31 01.4 -0.6
      439nm,0.5s,baz=346,slow=17,SNR=72
JCJ                                S       Sn       11 31 34.8 -2.6
      803nm,0.4s,baz=110,slow=23,SNR=11
JCJ   Chichijima         3.01   9  Pn      Pn       11 31 01.8 -0.3
JHJ   Hachijo jima 2     9.13 350  P       Pn       11 32 22.8 -2.2
      99nm,0.9s,baz=246,slow=14,SNR=1.6
JHJ                                S       Sn       11 33 57.8 -8.1
      24nm,0.4s,baz=62,slow=21,SNR=0.9
GUMO  Guam              10.89 163  LR      LR       11 35 43.7
      comp=Z,97nm,19.8s,baz=16,slow=30
JHU   Hanno             11.88 351  eP      Pn       11 32 58.7 -3.6
JGF   Kuroka            12.05 343  Pn      Pn       11 33 02.4 -2.1
JYT   Yasato            12.15 354  Pn      Pn       11 33 04.1 -1.6
JOW   Kunigami          12.41 285  LR      LR       11 36 52.4
      comp=Z,86nm,21.7s,baz=118,slow=32
JAG   Ashikaga          12.42 352  eP      Pn       11 33 04.1 -5.3
MJAR  Matsushiro Arr    12.75 347  P       Pn       11 33 11.8 -1.9
      1.2nm,0.4s,baz=148,slow=12,SNR=6.2
MJAR                               LR      LR       11 38 13.4
      comp=Z,42nm,18.5s,baz=168,slow=38
MJAR  Matsushiro Arr    12.75 347  Pn      Pn       11 33 12.6 -1.0
MAJO  Matsushiro        12.75 347  Pn      Pn       11 33 04.0  -10
MJB9  Matsu-Tunnel      12.75 347  Pn      Pn       11 33 03.9  -10
JMM   Marumori          13.73 357  Pn      Pn       11 33 22.4 -4.1
KSRS  Korea Array       17.77 322  P       P        11 34 17.7 +1.3
      1.6nm,0.7s,baz=143,slow=12,SNR=5.4
KSRS                               LR      LR       11 41 15.9
      comp=Z,45nm,20.0s,baz=125,slow=37
JKA   Kamikawa-asahi    19.97   2  P       P        11 34 41.3 +0.9
JKA                                IAmb    IAmb     11 35 02.1
      comp=Z,24nm,1.0s
ASAJ  Asahikawa         19.97   2  P       P        11 34 40.5 +0.1
      comp=Z,6.7nm,0.7s,baz=214,slow=12,SNR=2.4
DAV   Davao City (W)    22.92 225  LR      LR       11 46 10.3
      comp=Z,31nm,18.2s,baz=68,slow=42
H11N1 WAKE ISLAND Hy    23.79  96  T       T        11 59 33.2
      baz=283,slow=74,SNR=20
H11N2 WAKE ISLAND Hy    23.79  96  T       T        11 59 34.7
      baz=283,slow=74,SNR=17
H11N3 WAKE ISLAND Hy    23.80  96  T       T        11 59 36.2
      baz=283,slow=74,SNR=16
H11S3 WAKE ISLAND Hy    23.95  99  T       T        12 00 51.1
      baz=289,slow=74,SNR=6.1
H11S1 WAKE ISLAND Hy    23.95  99  T       T        12 00 55.1
      baz=289,slow=74,SNR=8.9
H11S2 WAKE ISLAND Hy    23.96  99  T       T        12 00 55.8
      baz=289,slow=74,SNR=15
KLR   Kul'dur           26.26 345  LR      LR       11 44 53.4
      comp=Z,33nm,20.2s,baz=230,slow=33
LUWI  Luwuk             31.02 219  P       P        11 36 23.9 -0.6
MA2   Magadan           36.01   8  LR      LR       11 55 47.2
      comp=Z,8.4nm,18.4s,baz=196,slow=43
SONM  Songino Array     36.61 319  LR      LR       11 51 50.6
      comp=Z,21nm,18.5s,baz=267,slow=35
SHEM  Shemya Is, Ala    37.67  32  LR      LR       11 52 06.9
      comp=Z,25nm,19.1s,baz=328,slow=35
COEN  Coen              37.86 178  P       P        11 37 22.5 -1.0
MTN   Manton Dam        38.15 197  P       P        11 37 25.2 -0.7
CMAR  Chiang Mai Arr    40.10 270  LR      LR       11 54 29.9
      comp=Z,14nm,18.7s,baz=125,slow=36
CTA   Charters Tower    44.16 174  P       P        11 38 14.2 -0.8
      comp=Z,9.7nm,0.7s,baz=11,slow=6.5,SNR=12
CTA                                LR      LR       11 58 01.4
      comp=Z,38nm,18.6s,baz=259,slow=38
      comp=Z,9.7nm,0.7s
CTAO  Charters Tower    44.16 174  P       P        11 38 14.9 -0.1
WB0   Warramunga Arr    44.19 190  P       P        11 38 14.8 -0.5
WR0   Warramunga Arr    44.35 190  P       P        11 38 16.3 -0.3
WR0                                IAmb    IAmb     11 38 17.0
      comp=Z,11nm,0.9s
WRAB  Tennant Creek     44.35 190  P       P        11 38 16.4 -0.3
WB2   Warramunga Arr    44.36 190  P       P        11 38 16.6 -0.1
WRA   Warramunga Arr    44.37 190  P       P        11 38 16.2 -0.5
      comp=Z,9.2nm,0.6s,baz=11,slow=8.7,SNR=67
WRA                                PcP     PcP      11 39 59.6 +0.6
      comp=Z,1.9nm,0.6s,baz=5.4,slow=3.5,SNR=6.6
WRA                                ScP     ScP      11 43 41.7 -0.4
      comp=Z,1.9nm,1.0s,baz=1.4,slow=4.2,SNR=5.1
      comp=Z,9.2nm,0.6s
WRA   Warramunga Arr    44.37 190  P       P        11 38 16.1 -0.7
FITZ  Fitzroy Crossi    44.77 202  LR      LR       11 59 40.2
      comp=Z,24nm,18.0s,baz=48,slow=39
FITZ  Fitzroy Crossi    44.77 202  P       P        11 38 20.4 +0.4
BILL  Bilibino          46.46  12  P       P        11 38 33.6 +0.9
BILL                               IAmb    IAmb     11 38 59.4
      comp=Z,14nm,1.2s
AS31  Alice Springs     48.09 190  P       P        11 38 44.7 -1.2
ASAR  Alice Springs     48.09 190  P       P        11 38 45.1 -0.7
      comp=Z,3.3nm,0.6s,baz=16,slow=11,SNR=60
ASAR                               PcP     PcP      11 40 12.2  0.0
      comp=Z,0.8nm,0.8s,baz=20,slow=5.6,SNR=2.6
ASAR                               ScP     ScP      11 43 57.0 -0.5
      comp=Z,0.4nm,0.8s,baz=16,slow=4.4,SNR=2.9
      comp=Z,3.3nm,0.6s
DZM   Mont Dzumac       51.84 150  P       P        11 39 13.5 -0.8
      comp=Z,12nm,0.7s,baz=344,slow=8.0
      comp=Z,12nm,0.7s
DZM   Mont Dzumac       51.84 150  P       P        11 39 13.2 -1.2
MKAR  Makanchi Array    52.06 311  P       P        11 39 16.8 +1.1
      comp=Z,0.4nm,0.6s,baz=96,slow=9.1,SNR=1.9
MKAR                               ScP     ScP      11 44 14.4 -0.1
      comp=Z,1.2nm,1.1s,baz=114,slow=3.5,SNR=2.9
      comp=Z,0.4nm,0.6s
MKAR  Makanchi Array    52.06 311  P       P        11 39 15.9 +0.2
OUENC Ouen Island, N    52.32 150  P       P        11 39 18.0 +0.2
KURK  Kurchatov         54.78 316  P       P        11 39 35.8 +0.4
KURK                               IAmb    IAmb     11 39 53.9
      comp=Z,2.3nm,0.8s
STKA  Stephens Creek    55.67 180  P       P        11 39 41.1 -0.9
      comp=Z,5.2nm,0.6s,baz=349,slow=9.0,SNR=9.4
      comp=Z,5.2nm,0.6s
STKA  Stephens Creek    55.67 180  P       P        11 39 41.7 -0.3
FORT  Forrest           56.12 194  P       P        11 39 45.3 +0.1
OHAK  Old Harbor        56.59  36  P       P        11 39 48.6 +0.4
L19K  White Mountain    56.62  30  P       P        11 39 49.6 +1.1
L19K                               IAmb    IAmb     11 39 50.2
      comp=Z,4.9nm,1.1s
BBOO  Buckleboo         56.85 186  P       P        11 39 50.4  0.0
KDAK  Kodiak Island     57.03  36  LR      LR       12 02 36.8
      comp=Z,30nm,19.7s,baz=216,slow=34
K20K  Telida            57.21  29  P       P        11 39 54.2 +1.6
K20K                               IAmb    IAmb     11 39 54.8
      comp=Z,6.7nm,0.9s
J20K  Nowinta River     57.35  28  P       P        11 39 55.2 +1.6
IMAR  Indian Mountai    57.91  26  P       P        11 39 58.5 +1.0
CAST  Castle Rocks      58.10  29  P       P        11 39 59.9 +1.1
CAST                               IAmb    IAmb     11 40 00.6
      comp=Z,6.8nm,1.0s
H21K  Melozitna Rive    58.22  26  P       P        11 40 01.0 +1.4
H21K                               IAmb    IAmb     11 40 02.7
      comp=Z,4.2nm,0.9s
I21K  Tanana            58.47  27  P       P        11 40 02.8 +1.5
I21K                               IAmb    IAmb     11 40 03.2
      comp=Z,5.1nm,0.8s
PMR   Palmer            59.20  31  P       P        11 40 06.6 +0.1
PMR                                IAmb    IAmb     11 40 07.4
      comp=Z,6.1nm,0.9s
RND   Reindeer          59.54  29  IAmb    IAmb     11 40 09.2
      comp=Z,2.8nm,0.7s
MCK   McKinley          59.54  29  IAmb    IAmb     11 40 09.6
      comp=Z,5.4nm,0.9s
I23K  Minto, Yukon-K    59.55  27  IAmb    IAmb     11 40 11.1
      comp=Z,4.3nm,0.8s
H23K  Yukon River       59.58  26  IAmb    IAmb     11 40 10.8
      comp=Z,2.9nm,0.8s
MDM   Murphy Dome       60.00  28  P       P        11 40 12.6 +0.6
MDM                                IAmb    IAmb     11 40 13.5
      comp=Z,2.9nm,0.6s
TOLK  Toolik Lake Re    60.05  23  P       P        11 40 13.7 +1.5
TOLK                               IAmb    IAmb     11 40 40.9
      comp=Z,2.2nm,0.9s
GLI   Glacier Island    60.12  32  IAmb    IAmb     11 40 13.6
      comp=Z,4.3nm,0.7s
H24K  Noodor Dome       60.26  27  P       P        11 40 14.7 +1.0
H24K                               IAmb    IAmb     11 40 16.2
      comp=Z,7.6nm,1.4s
IL31                    60.55  28  P       P        11 40 15.1 -0.6
IL31                               IAmb    IAmb     11 40 15.9
      comp=Z,4.3nm,0.8s
ILAR  Eielson Array     60.55  28  P       P        11 40 14.8 -0.8
      comp=Z,3.5nm,0.8s,baz=259,slow=5.7,SNR=39
ILAR                               pP      pP       11 40 41.6 +2.1
      comp=Z,2.0nm,0.7s,baz=262,slow=5.5,SNR=7.8
      comp=Z,3.5nm,0.8s
ILAR  Eielson Array     60.55  28  P       P        11 40 15.3 -0.3
BMRM  Bremner River     61.34  32  IAmb    IAmb     11 40 23.2
      comp=Z,5.8nm,1.1s
RIDG  Independent Ri    61.35  29  IAmb    IAmb     11 40 21.9
      comp=Z,5.8nm,1.1s
BMAR  Burnt Mountain    61.74  25  P       P        11 40 25.4 +1.7
SCRK  Sand Creek        61.75  29  P       P        11 40 24.4 +0.4
L26K  Log Cabin Wild    62.00  30  IAmb    IAmb     11 40 26.6
      comp=Z,3.1nm,0.8s
BCAR  Beaver Creek A    62.71  30  P       P        11 40 30.9 +0.6
DAWY  Dawson            63.77  29  P       P        11 40 38.2 +0.9
DAWY                               IAmb    IAmb     11 40 38.8
      comp=Z,5.3nm,1.2s
EPYK  Eagle Plains      64.82  26  P       P        11 40 44.8 +0.7
EPYK                               IAmb    IAmb     11 40 45.6
      comp=Z,8.7nm,1.0s
INK   Inuvik            65.93  24  P       P        11 40 51.3 +0.2
ABKAR Akbulak array     66.86 315  P       P        11 40 57.1 -0.3
C36M  Paulatuk          69.16  22  P       P        11 41 11.5 +0.1
C36M                               IAmb    IAmb     11 41 25.7
      comp=Z,12nm,1.4s
BKZ   Black Stump Fm    70.87 152  P       P        11 41 21.3 -1.0
EUNU  Eureka            72.91   8  P       P        11 41 34.8 +0.8
EUNU                               IAmb    IAmb     11 41 45.1
      comp=Z,10.0nm,1.4s
SPITS Spitsbergen Ar    73.23 350  LR      LR       12 16 08.4
      comp=Z,9.8nm,19.1s,baz=264,slow=38
YKA   Yellowknife Ar    74.98  28  P       P        11 41 46.0 -0.3
      comp=Z,1.6nm,0.7s,baz=292,slow=5.7,SNR=24
YKA                                pP      pP       11 42 13.2 +2.2
      comp=Z,2.7nm,0.7s,baz=293,slow=5.7,SNR=12
      comp=Z,1.6nm,0.7s
YKA   Yellowknife Ar    74.98  28  P       P        11 41 45.8 -0.4
ARCES ARCESS Array B    76.20 341  P       P        11 41 52.3 -0.8
      comp=Z,1.4nm,0.8s,baz=62,slow=8.5,SNR=1.5
      comp=Z,1.4nm,0.8s
NEW   Newport           79.42  42  P       P        11 42 10.6 -0.9
KBZ   Khabaz            79.71 313  P       P        11 42 14.3 +1.3
      comp=Z,1.5nm,0.7s,baz=78,slow=5.3,SNR=2.3
      comp=Z,1.5nm,0.7s
FINES FINESS Array B    80.42 334  P       P        11 42 16.7 +0.2
      comp=Z,1.9nm,0.9s,baz=73,slow=1.9,SNR=1.4
      comp=Z,1.9nm,0.9s
J08A  Circle Bar Ran    80.57  47  P       P        11 42 18.5 +0.7
BEKR  Beckworth         80.68  51  P       P        11 42 19.3 +0.8
WALA  Waterton Lakes    81.00  40  P       P        11 42 21.7 +1.6
WALA                               IAmb    IAmb     11 42 21.9
      comp=Z,5.4nm,0.8s
JTMT  Jette             81.37  41  P       P        11 42 22.3 +0.4
JTMT                               IAmb    IAmb     11 42 24.1
      comp=Z,9.6nm,1.4s
MFID  Camas Ranch       82.29  46  P       P        11 42 27.3 +0.4
NVAR  Mina Array Bea    82.73  51  P       P        11 42 29.8 +0.4
      comp=Z,1.5nm,0.9s,baz=266,slow=5.5,SNR=8.7
      comp=Z,1.5nm,0.9s
ELK   Elko              83.86  48  P       P        11 42 35.5 +0.3
QLMT  Earthquake Lak    84.47  43  P       P        11 42 39.4 +1.3
YHL   Hebgen Lake       84.61  43  IAmb    IAmb     11 42 41.1
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,5.4nm,0.9s						
GWY	Greenwater Val	84.87	53	IAmb	IAmb	11 42 41.5	
	comp=Z,5.9nm,1.3s						
H17A	Grant Village	85.21	43	IAmb	IAmb	11 42 45.6	
	comp=Z,7.8nm,1.2s						
FLWY	Flagg Ranch	85.28	44	IAmb	IAmb	11 42 44.8	
	comp=Z,6.0nm,0.9s						
RLMT	Red Lodge	85.66	42	IAmb	IAmb	11 42 46.1	
	comp=Z,5.0nm,0.6s						
DUG	Dugway, Tooele	85.76	48	IAmb	IAmb	11 42 45.9	
	comp=Z,4.4nm,1.1s						
SHPR	Sheep Range	85.82	52	P	P	11 42 45.0	0.0
HWUT	Hardware Ranch	85.92	46	IAmb	IAmb	11 42 46.8	
	comp=Z,3.5nm,0.8s						
HFS	Hagfors	85.97	337	LR	LR	12 22 49.3	
	comp=Z,23nm,18.1s,baz=32,slow=37						
NOA	NORSAR Array B	86.20	338	pP	pP	11 43 12.6	+0.5
	comp=Z,0.3nm,0.4s,baz=43,slow=4.6,SNR=2.5						
NOA				LR	LR	12 26 05.6	
	comp=Z,12nm,19.2s,baz=320,slow=39						
PDAR	Pinedale Array	86.66	44	P	P	11 42 48.5	-0.6
	comp=Z,0.4nm,0.6s,baz=308,slow=3.6,SNR=4.9						
PDAR				pP	pP	11 43 16.1	+1.7
	comp=Z,0.4nm,0.7s,baz=270,slow=2.3,SNR=1.4						
PDAR				LR	LR	12 19 42.8	
	comp=Z,25nm,18.6s,baz=298,slow=34						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	86.66	44	P	P	11 42 49.2	+0.2
Y14A	Wickenburg	88.56	53	P	P	11 42 57.9	-0.3
Y14A				IAmb	IAmb	11 42 59.6	
	comp=Z,2.4nm,0.8s						
ANMO	Albuquerque	92.75	50	LR	LR	12 16 41.6	
	comp=Z,20nm,20.8s,baz=75,slow=30						
TXAR	Lajitas Array	97.75	53	P	Pdif	11 43 41.5	+0.9
	comp=Z,0.1nm,0.6s,baz=297,slow=3.6,SNR=3.7						
	comp=Z,0.1nm,0.6s						
PLCA	Paso Flores	148.37	129	PKPbc	PKPbc	11 49 51.3	+0.2
	comp=Z,2.1nm,0.7s,baz=221,slow=2.0,SNR=5.0						
LPAZ	La Paz	151.01	80	PKPbc	PKPbc	11 49 58.1	-0.8
	comp=Z,1.1nm,0.7s,baz=146,slow=1.4,SNR=5.0						

IDC **11** *11:39:38.8±7.0, 27°.65N×52°.22E, h0^{km}, mb3.8/3, mbtmp3.8/3, MS2.1/1, Error ellipse: s-maj=284.9km s-min=30.7km az=149.0*
TEH **11** *11:39:42.7, 27°.82N×52°.04E, h20^{km}, ML3.5*
DSN **11** *11:39:47.6±2.1, 27°.49N×52°.43E, h10^{km}, ML3.2/8, Error ellipse: s-maj=25.2km s-min=15.5km az=174.0*
ISC 11 11:39:43.6±0.9**, 27°.81N**±0°.06×**52°.09E**±0°.06**, h26**^{km}**, n50, σ1^s.17**/51**, mb4.0**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	1.06	116	ePg	Pb	11 40 02.8	-0.6
LMD1				eSg	Sn	11 40 20.9	+4.1
LMD1				e		11 40 24.9	
	comp=Z,22µm,0.2s						
QIR1	Qir	1.07	52	e		11 40 27.0	
	comp=Z,11µm,0.4s						
QIR1				ePg	Pb	11 40 03.5	0.0
AHBU	AHRAM	1.26	326	ePg	Pn	11 40 06.6	+1.1
JHRM	Jahrom	1.48	62	ePg	Pb	11 40 10.5	-0.1
JHRM				e		11 40 39.4	
	comp=Z,14µm,0.6s						
SHI	Shiraz	1.86	11	ePn	Pb	11 40 15.4	-1.6
SHI				e		11 40 52.3	
	comp=Z,2µm,0.9s						
LAR1	LAR	2.03	94	ePn	Pb	11 40 18.2	-1.6
JRN	Qarnain Island	2.94	166	ePn	Pn	11 40 29.4	+0.8
KLNJ	Kolanjah	3.21	352	ePn	Pn	11 40 33.1	+0.4
KLNJ				e		11 41 37.2	
	comp=Z,870nm,0.5s						
IRAM	Ramesheh	3.99	4	ePn	Pn	11 40 44.3	+1.0
SHME	Shamm	4.02	115	ePn	Pn	11 40 43.6	+0.1
SHME	Shamm	4.02	115	P	Pn	11 40 44.3	+0.8
IMEH	Mehriz	4.19	31	ePn	Pn	11 40 46.8	+0.8
BANOM	Banah	4.21	116	ePn	Pn	11 40 46.1	0.0
BANOM	Banah	4.21	116	P	Pn	11 40 45.9	-0.2
NAZ	Nazwa, Dubai	4.26	130	ePn	Pn	11 40 48.2	+1.4
NAZ	Nazwa, Dubai	4.26	130	P	Pn	11 40 48.1	+1.2
ASUD	Al Ashush, Dub	4.31	137	ePn	Pn	11 40 48.6	+1.2
ASUD	Al Ashush, Dub	4.31	137	P	Pn	11 40 48.6	+1.2
FAQ	Al Faqa, Dubai	4.38	133	ePn	Pn	11 40 49.9	+1.4
MSFE	Esma-Masafi	4.39	123	ePn	Pn	11 40 48.8	+0.3
MSFE	Esma-Masafi	4.39	123	P	Pn	11 40 48.9	+0.3
MSFE				S	Sn	11 41 36.0	-2.9
AMIS	Naft Sefid	4.55	328	ePn	Pn	11 40 51.6	+0.9
KHGB	Koh Gabri	4.61	55	ePn	Pn	11 40 52.7	+0.9
KHGB				e		11 40 53.0	
	comp=Z,206nm,0.3s						
KRBR	Kerman	4.63	61	ePn	Pn	11 40 53.1	+0.9
UOSS	Minazif	4.67	127	ePn	Pn	11 40 52.3	-0.1
UOSS	Minazif	4.67	127	P	Pn	11 40 50.2	-2.1
HATD	Hatta, Dubai	4.69	128	ePn	Pn	11 40 53.2	+0.5
HATD	Hatta, Dubai	4.69	128	P	Pn	11 40 52.4	-0.4
ASHO	Ashiyiah	4.73	130	ePn	Pn	11 40 53.8	+0.4
ASHO	Ashiyiah	4.73	130	P	Pn	11 40 52.6	-0.8
IBAF	Bafgh	4.83	38	ePn	Pn	11 40 55.9	+1.1
MZR	Muzera	4.95	165	ePn	Pn	11 40 56.9	+0.6
MZR	Muzera	4.95	165	P	Pn	11 40 56.6	+0.3
NASN	Na'in	5.01	7	ePn	Pn	11 40 58.2	+0.8
YZKH	Yazd	5.05	25	ePn	Pn	11 40 59.3	+1.6
IZEF	Zefreh	5.07	2	ePn	Pn	11 40 59.9	+1.7
SOHO	SOHO	5.42	131	ePn	Pn	11 41 02.6	-0.2
JASK	Jask - Hormozg	5.51	109	ePn	Pn	11 41 04.4	+0.4
ANAR	Anarak	5.54	14	ePn	Pn	11 41 06.0	+1.5
KRSH	Karshahi	6.14	0	ePn	Pn	11 41 12.8	+0.1
KHMZ	Khomeyn	6.18	343	ePn	Pn	11 41 15.0	+1.6
ISFB	Sefidab	6.52	1	ePn	Pn	11 41 17.4	-0.5
IQOM	Qom	7.06	353	ePn	Pn	11 41 24.8	-0.7
TKDS	Koohdasht(Taba	7.22	36	ePn	Pn	11 41 27.6	0.0
TNSJ	Nastanj	7.26	31	ePn	Pn	11 41 28.9	+0.9
GEYT	Alibeck	11.29	25	LR	LR	11 47 58.6	
	comp=Z,9.0nm,20.0s,baz=110,slow=44						
MKAR	Makanchi Array	30.32	43	P	P	11 45 52.4	-0.5
	comp=Z,0.4nm,0.7s,baz=231,slow=9.1,SNR=2.9						
	comp=Z,0.4nm,0.7s						
ZALV	Zalesovo Beam	35.43	33	P	P	11 46 36.9	-0.5
	comp=Z,1.5nm,0.5s,baz=244,slow=9.5,SNR=6.2						
	comp=Z,1.5nm,0.5s						
TORD	Torodi Ar. Bea	49.08	263	P	P	11 48 28.8	-0.2
	comp=Z,16nm,0.8s,baz=60,slow=6.8,SNR=4.3						
YKA	Yellowknife Ar	89.38	354	P	P	11 52 38.0	+0.4
	comp=Z,0.3nm,0.7s,baz=10,slow=5.5,SNR=5.7						
	comp=Z,0.3nm,0.7s						

MDD **11** *11:48:56.9±0.4, 35°.71N×2°.23W, h0^{km}, mb_Lg2.5/11, Error ellipse: s-maj=3.6km s-min=2.8km az=107.0*
CNRM **11** *11:48:57.9, 35°.62N×2°.29W, h6^{km}, ml2.6*
SFS **11** *11:48:58.0, 35°.60N×2°.33W, h37^{km}, ML2.8, ALBORAN SUR*
ISC 11 11:48:57.8±1.0**, 35°.70N**±0°.03×**2°.30W**±0°.04**, h22**^{km}±11^{km}**, n24, σ1^s.55**/43**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHAS	Isla Isabel II	0.53	192	S	Sb	11 49 12.2	-3.3
EALB	Alboran	0.65	292	Pg	Pn	11 49 10.9	-0.7
EALB				Sg	Sn	11 49 20.3	-0.9
EALB				i Vmb_Lg		11 49 21.8	
WMELI	Melilla	0.66	235	P	Pb	11 49 10.5	0.0
EMEL	Melilla	0.67	234	Pg	Pb	11 49 10.9	+0.1
EMEL				Sg	Sb	11 49 19.9	+0.3
GOG	Mont Gurugu	0.74	230	P	Pb	11 49 11.2	-0.9
GOG				S	Sb	11 49 21.3	-0.6
TAF	Taforalt	0.89	186	P	Pb	11 49 13.7	-0.8
TAF				S	Sb	11 49 25.6	-0.4
ENIJ	Nijar	1.27	3	Pg	Pn	11 49 20.1	-0.2
ENIJ				Sg	Sn	11 49 35.6	-1.1
ENIJ				i Vmb_Lg		11 49 39.9	
EBER	Berja	1.29	338	Pg	Pn	11 49 20.3	-0.4
EBER				Sg	Sn	11 49 37.0	-0.3
EBER				i Vmb_Lg		11 49 46.3	
JBK	JBK	1.38	189	P	Pb	11 49 24.5	+1.5
JBK				S	Sb	11 49 44.6	+4.4
PALE	Palemas	1.42	251	P	Pb	11 49 24.5	+0.8
PALE				S	Sb	11 49 45.8	+4.4
ELGU	Los Guajares,	1.59	318	Pg	Pn	11 49 23.9	-0.8
ELGU				Sg	Sn	11 49 43.1	-1.4
ELGU				i Vmb_Lg		11 49 45.9	
PVLZ	Peæn de	1.72	253	P	Pn	11 49 25.9	-0.4
PVLZ				S	Sn	11 49 46.3	-1.3
EMAL	Malaga-Limoner	2.02	302	P	Pb	11 49 33.5	-0.4
EMAL				S	Sn	11 49 54.5	-0.6
EMIJ	Mijas	2.18	294	Pn	Pn	11 49 32.6	-0.2
EMIJ				Sg	Sn	11 49 55.9	-3.3
EMIJ				i Vmb_Lg		11 50 00.4	
EQES	Quesada	2.19	344	Pn	Pn	11 49 34.7	+1.7
EQES				Sn	Sb	11 50 02.3	-1.2
EQES				i Vmb_Lg		11 50 06.4	
EZAR	Zarzadilla de	2.23	12	Pn	Pn	11 49 34.5	+1.0
EZAR				Sn	Sn	11 49 59.5	-0.8
EMUR	La Murta	2.30	21	Pn	Pn	11 49 34.2	-0.2
EMUR				Sn	Sn	11 50 00.8	-1.3
EMUR				i Vmb_Lg		11 50 04.7	
ETOB	Tobarra	3.00	11	Pn	Pn	11 49 45.4	+1.3
ETOB				Sn	Sn	11 50 19.5	0.0
ETOB				i Vmb_Lg		11 50 22.6	
EADA	Adamuz	3.07	324	Pn	Pn	11 49 46.5	+1.5
EADA				Sn	Sn	11 50 21.9	+0.9
EADA				i Vmb_Lg		11 50 29.4	
ECAB	El Cabril	3.45	314	Pn	Pn	11 49 49.7	-0.5
ECAB				Sn	Sn	11 50 30.0	-0.4
ECAB				i Vmb_Lg		11 50 42.2	
MD31	MD31	3.48	217	P	Pn	11 49 50.0	-0.7
MD31				S	Sn	11 50 31.3	0.0
PVAQ	Vaqueiros	4.68	293	ePn	Pn	11 50 08.2	+1.1
PBDV	Barranco-do-Ve	4.79	290	ePn	Pn	11 50 10.3	+1.6
PNCL	Nicolau / Gran	5.54	298	ePn	Pn	11 50 20.7	+1.7

GUC **11** *11:54:22.2±0.5, 30°.27S×69°.51W, h27^{km}±2^{km}, ML3.8*
IDC **11** *11:54:29.1±1.5, 29°.54S×69°.33W, h0^{km}, mb6.1/1, mbtmp3.7/3, ML3.8/3, MS2.9/3, Error ellipse: s-maj=32.1km s-min=27.4km az=108.0*
ISC 11 11:54:23.3±2.3**, 30°.22S**±0°.04×**69°.61W**±0°.05**, h10**^{km}±15^{km}**, n24, σ2^s.30**/40**, 3C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO01	Juntas del Tor	0.48	299	⇓iP	Pb	11 54 35.0	+0.9
CO01				i S	Sn	11 54 44.8	+5.5
GO04	Tololo Observa	1.03	272	⇓iP	Pb	11 54 43.8	+0.4
GO04				eS	Sn	11 54 59.7	+1.1
GO04				IAML		11 55 01.8	
	comp=N,4µm,0.3s						
CO05	La Serena	1.45	281	eP	Pb	11 54 50.2	-0.1
CO05				eS	Sg	11 55 11.2	+1.5
CO05				IAML		11 55 14.2	
	comp=E,3µm,0.4s						
CO06	Fray Jorge	1.81	255	⇑eP	Pn	11 54 54.2	-0.3
CO06				eS	Sb	11 55 20.0	+0.8
CO06				IAML		11 55 23.4	
	comp=E,861nm,0.3s						
AC04	Llanos de Chal	2.38	327	eP	Pn	11 55 03.3	+1.0
AC04				eS	Sb	11 55 35.2	-0.5
AC04				IAML		11 55 44.2	
	comp=E,389nm,0.3s						
VA03	San Esteban	2.66	197	⇑iP	Pn	11 55 06.2	-0.2
VA03				eS	Sn	11 55 40.4	+1.6
VA03				IAML		11 55 47.8	
	comp=E,1µm,0.4s						
GO03	Copiap	2.67	348	eP	Pn	11 55 07.3	+0.9
GO03				eS	Sn	11 55 41.9	+3.1
GO03				IAML		11 55 43.2	
	comp=N,318nm,0.3s						
VA06	Catapilco	2.75	211	⇑eP	Pn	11 55 06.0	-1.3
VA06				eS	Sn	11 55 40.3	-0.3
VA06				IAML		11 55 48.5	
	comp=N,513nm,0.3s						
AC06	Mina Casimiro	2.92	347	eP	Pn	11 55 10.7	+0.9
AC06				eS	Sn	11 55 47.4	+2.3
AC06				IAML		11 55 48.1	
	comp=N,186nm,0.3s						
ROCH	El Roble	3.00	203	eP	Pn	11 55 09.9	-1.1
ROCH				eS	Sn	11 55 47.3	+0.2
ROCH				IAML		11 55 57.0	
	comp=E,348nm,0.4s						
PEL	Peldehue	3.06	197	eP	Pn	11 55 10.6	-1.1
PEL				eS	Sn	11 55 48.7	+0.3
PEL				IAML		11 55 59.8	
	comp=E,232nm,0.4s						
FCH	Farellones	3.15	190	eP	Pn	11 55 13.0	-0.3
FCH				eS	Sn	11 55 52.5	+1.3
FCH				IAML		11 56 00.6	
	comp=E,187nm,0.3s						
MT05	Renca	3.31	197	eP	Pn	11 55 14.4	-0.7
MT05				eS	Sn	11 55 54.5	-0.1
MT05				IAML		11 56 14.7	
	comp=E,392nm,0.4s						
MT03	Universidad Ad	3.35	193	eP	Pn	11 55 15.6	-0.2
MT03				eS	Sn	11 55 56.8	+1.0
MT03				IAML		11 56 08.8	
	comp=N,244nm,0.5s						
AC02	Maricunga	3.40	7	⇓eP	Pn	11 55 18.3	+1.5
AC02				eS	Sn	11 56 01.2	+3.8
AC02				IAML		11 56 04.1	
	comp=E,119nm,0.4s						
MT09	Talagante	3.74	198	⇓eP	Pn	11 55 19.2	-1.9
MT09				eS	Sn	11 56 05.0	-0.2
LVC	Limon Verde	7.60	5	Pn	Pn	11 56 12.2	-2.3
	comp=E,1.5nm,0.3s,baz=180,slow=11,SNR=8.1						
LVC				Sn	Sn	11 57 35.7	-5.1
	comp=E,0.5nm,0.3s,baz=254,slow=19,SNR=1.4						
LVC				Lg	Lg	11 58 07.1	
	comp=E,1.4nm,0.3s,baz=13,slow=5.0,SNR=3.9						
LVC				LR	LR	11 59 23.8	
	comp=E,44nm,19.1s,baz=242,slow=43						
	comp=E,3.2nm,0.3s						
CPUP	Villa Florida	11.49	73	Pn	Pn	11 57 07.5	+0.1
	comp=E,0.3nm,0.3s,baz=248,slow=11,SNR=1.8						
CPUP				Sn	Sn	11 59 14.0	-1.9
	comp=E,0.1nm,0.3s,baz=262,slow=14,SNR=1.5						
CPUP				Lg	Lg	12 00 21.5	
	comp=E,0.2nm,0.3s,baz=166,slow=17,SNR=1.6						
CPUP				LR	LR	12 02 13.2	
	comp=E,37nm,18.3s,baz=218,slow=42						
	comp=E,0.8nm,0.3s						
LPAZ	La Paz	13.93	6	Pn	Pn	11 57 38.2	-3.2
	comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=2.6						
	comp=E,0.6nm,0.4s						
CMIG	Matias Romero	52.97	329	LR	LR	12 21 23.9	
	comp=E,28nm,19.4s,baz=150,slow=31						
TORD	Torodi Ar. Bea	80.96	69	P	P	12 06 43.6	+5.2
	comp=E,61nm,0.3s,baz=240,slow=3.7,SNR=1.6						
WRA	Warramunga Arr	125.06	208	PKP	PKiKP	12 13 31.1	+6.3
	comp=E,0.8nm,1.1s,baz=153,slow=1.7,SNR=2.0						
ZALV	Zalesovo Beam	149.93	31	PKPbc	PKPab	12 14 20.4	+1.5
	comp=E,1.1nm,0.6s,baz=317,slow=3.1,SNR=5.3						
MKAR	Makanchi Array	152.68	45	PKPbc	PKPab	12 14 26.4	-4.3
	comp=E,0.4nm,0.6s,baz=323,slow=1.5,SNR=3.2						

NOU 11 12:03:56.4, 16°.20S×167°.21E, h5^{km}, MLv4.2/18**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.75	360	P	Pg	12 04 11.1	+0.3
DVP	Devils Point	1.78	148	P	Pn	12 04 27.9	0.0
RTV	Rentapao	1.96	144	P	Pn	12 04 30.5	+0.1
LIFNC	LIFOU	4.55	180	P	Pn	12 05 06.4	+0.4
KOUNC	Koumac, New Ca	5.14	212	P	Pn	12 05 13.5	-0.6
MARNC	Mare, Loyalty	5.31	172	P	Pn	12 05 17.0	+0.6
YATNC	Mamie plateau,	5.84	183	P	Pn	12 05 23.5	-0.2
DZM	Mont Dzumac	5.88	187	P	Pn	12 05 23.9	-0.5
ONTNC	Ouen Toro	6.12	187	P	Pn	12 05 27.8	+0.3
OUENC	Ouen Island, N	6.20	183	P	Pn	12 05 29.3	+0.7
PINNC	Pines Island,	6.38	178	P	Pn	12 05 31.3	+0.1

IDC **11** *12:07:18.1±2.4, 20°.07S×177°.79W, h535^{km}±24^{km}, mb3.0/5, mbtmp4.0/7, Error ellipse: s-maj=40.0km s-min=28.4km az=161.0*
ISC 11 12:07:19.2±1.3**, 20°.0S**±0°.2×**177°.9W**±0°.2**, h550**^{km}**, n7, σ0^s.95**/8**, mb3.6**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.50	300	P	P	12 08 43.8	-1.3
	6.2nm,0.4s,baz=109,slow=23,SNR=15						
URZ	Urewera	18.68	192	P	P	12 11 02.0	-1.1
	13nm,0.9s,baz=129,slow=23,SNR=2.2						
CTA	Charters Tower	33.67	264	P	P	12 13 15.3	+0.2
	1.0nm,0.4s,baz=84,slow=9.2,SNR=1.4						
	1.0nm,0.4s						
ASAR	Alice Springs	44.76	256	P	P	12 14 44.5	+0.2
	1.7nm,0.6s,baz=96,slow=7.4,SNR=27						
ASAR				PcP	PcP	12 16 15.0	+0.3
	0.6nm,0.7s,baz=99,slow=4.8,SNR=5.2						
	1.7nm,0.6s						
WRA	Warramunga Arr	44.80	262	P	P	12 14 44.4	-0.2
	0.5nm,0.3s,baz=96,slow=7.6,SNR=21						
	0.5nm,0.3s						
FITZ	Fitzroy Crossi	53.23	262	P	P	12 15 48.1	+1.2
	3.0nm,1.0s,baz=100,slow=6.1,SNR=1.4						
	3.0nm,1.0s						
TXAR	Lajitas Array	86.69	57	P	P	12 19 05.6	+0.3
	0.3nm,0.6s,baz=210,slow=7.0,SNR=2.5						
	0.3nm,0.6s						

INMG **11** *12:20:32.8±1.8, 43°.04N×0°.28E, h4^{km}±5^{km}, ML3.0, Error ellipse: s-maj=3.2km s-min=2.9km az=78.0*
IASPEI **11** *12:20:32.3±0.9, 42°.99N±0°.03×0°.26E±0°.02, h19^{km}±2^{km}, Error ellipse: s-maj=4.1km s-min=2.2km az=16.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
STR **11** *12:20:33.6±0.4, 43°N±3°×°±°, h15^{km}±5^{km}, MLv3.2/7, preliminary*
LDG **11** *12:20:33.1±0.1, 42°.98N×0°.26E, h13^{km}, Md3.4/2, Ml3.8/56, Error ellipse: s-maj=1.1km s-min=1.0km az=97.0*
MRB **11** *12:20:33.4±0.4, 42°.99N×0°.26E, h13^{km}±2^{km}, ML3.4/19, Error ellipse: s-maj=1.4km s-min=0.9km az=23.0*
SFS **11** *12:20:34.0, 42°.98N×0°.27E, h12^{km}, ML3.5, LA MONGIE (FRANCIA)*
MDD **11** *12:20:34.3±0.2, 42°.99N×0°.27E, h12^{km}, mb_Lg3.5/17, Error ellipse: s-maj=1.7km s-min=1.2km az=177.0*
ISC 11 12:20:32.0±0.8**, 43°.02N**±0°.01×**0°.27E**±0°.01**, h18**^{km}±1^{km}**, n167, σ1^s.85**/306**, 1C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPF	Esparros	0.05	77	ePg	Pg	12 20 36.1	+0.7
EPF				eSg	Sg	12 20 38.6	+0.8
	9µm,0.2s						
EPF	Esparros	0.05	77	Pg	Pg	12 20 36.1	+0.7
EPF				Sg	Sg	12 20 38.6	+0.8
FMON	Montouss	0.12	68	P	Pb	12 20 36.7	+2.8
FMON				S	Sg	12 20 39.5	+0.9
VIEF	Viey	0.23	233	Pg	Pb	12 20 37.9	+0.6
VIEF				Sg	Sb	12 20 41.1	+0.3
PYLO	Lourdes	0.25	289	P	Pb	12 20 38.3	+0.6
PYLO				S	Sb	12 20 42.3	+0.9
PYLO	Lourdes	0.25	289	Pg	Pb	12 20 38.5	+0.8
PYLO				Sg	Sb	12 20 42.6	+1.1
ECHI	Chisagues Biel	0.36	189	P	Pg	12 20 39.9	+0.3
ECHI				S	Sb	12 20 44.5	-0.7
	6µm,0.1s						
ECHI	Chisagues Biel	0.36	189	⇑Pg	Pg	12 20 40.0	+0.3
ECHI				Sg	Sb	12 20 44.3	-0.9
ECHI	Chisagues Biel	0.36	189	Pg	Pg	12 20 40.0	+0.3
ECHI				Sg	Sb	12 20 44.4	-0.9
CARA	Val d'Aran	0.51	128	P	Pg	12 20 42.8	+0.6
CARA				S	Sg	12 20 49.5	+0.3
	2µm,0.3s						
MLS	Moulis	0.61	96	P	Pb	12 20 44.5	+0.5
MLS				S	Sb	12 20 53.1	+1.0
MLS	Moulis	0.61	96	Pg	Pg	12 20 45.6	+1.5
MLS				Sg	Sg	12 20 54.6	+2.4
ETSF	Etsaut	0.62	259	ePg	Pb	12 20 44.8	+0.6
ETSF				eSg	Sb	12 20 53.1	+0.5
	2µm,0.3s						
ETSF	Etsaut	0.62	259	Pg	Pb	12 20 44.8	+0.6
ETSF				Sg	Sb	12 20 53.1	+0.5
CANF	Canfranc	0.63	246	Pg	Pb	12 20 45.0	+0.6
CANF				Sg	Sb	12 20 53.1	+0.1
ATE	Arette	0.71	276	P	Pb	12 20 46.4	+0.6
ATE				S	Sb	12 20 56.6	+1.4
ATE	Arette	0.71	276	Pg	Pb	12 20 46.9	+1.1
ATE				Sg	Sb	12 20 56.7	+1.4
CTRE	Tremp	0.79	152	P	Pb	12 20 47.7	+0.5
CTRE				S	Sg	12 20 58.1	+0.2
	380nm,0.2s						
CEST	Esterri de Car	0.84	120	P	Pb	12 20 48.5	+0.5
CEST				S	Sb	12 20 59.9	+1.0
	291nm,0.4s						
CSOR	Sort	0.91	135	P	Pb	12 20 49.7	+0.6
CSOR				S	Sg	12 21 02.0	+0.4
	311nm,0.2s						
PAND	Andorre	1.06	117	Pg	Pb	12 20 53.0	+1.1
PAND				Sg	Sg	12 21 08.2	+1.6
SJPF	Ste Jean	1.10	275	ePg	Pn	12 20 53.5	+1.1
SJPF				eSg	Sn	12 21 08.3	+1.1
	371nm,0.4s						
SJPF	Ste Jean	1.10	275	Pg	Pn	12 20 53.5	+1.1
SJPF				Sg	Sn	12 21 08.3	+1.1
CORG	Organya	1.10	135	P	Pn	12 20 53.6	+1.0
CORG				S	Sg	12 21 08.1	+0.3
	270nm,0.3s						
OSSF	Osses	1.15	282	Pg	Pn	12 20 53.6	+0.6
OSSF				Sg	Sg	12 21 11.4	+2.2
EORO	Oroz-Betelu	1.17	264	Pg	Pn	12 20 54.7	+1.3
EORO	Oroz-Betelu	1.17	264	Pg	Pn	12 20 54.7	+1.3
EORO				Sg	Sg	12 21 11.0	+1.1
EORO				i Vmb_Lg		12 21 17.0	
CAVN	Les Avellanes	1.19	162	P	Pb	12 20 54.9	+0.9
CAVN				S	Sg	12 21 10.4	-0.2
	2µm,0.3s						
EALK	Alkurruntz	1.32	279	Pg	Pn	12 20 56.5	+1.0
EALK	Alkurruntz	1.32	279	Pg	Pn	12 20 56.5	+1.0
EALK				Sg	Sg	12 21 15.4	+0.7
EALK	Alkurruntz	1.32	279	Pg	Pb	12 20 57.5	+1.3
FNEB	Nbias	1.35	94	P	Pb	12 20 58.2	+1.4
FNEB				S	Sg	12 21 16.2	+0.4
	177nm,0.2s						
FNEB	Nbias	1.35	94	Pn	Pg	12 20 59.3	+1.2
FNEB				Sn	Sg	12 21 17.9	+2.2
CLLI	Llivia	1.37	113	P	Pb	12 20 58.2	+1.2
CLLI				S	Sg	12 21 16.3	+0.1
	154nm,0.3s						
EARA	Aranguren	1.38	260	Pg	Pg	12 20 59.6	+0.9
EARA				Sg	Sg	12 21 20.0	+3.3
EARA				i Vmb_Lg		12 21 22.0	
EARA	Aranguren	1.38	260	Pn	Pg	12 20 59.7	+1.1
EARA				Sn	Sg	12 21 20.6	+3.9
ESAC	San Caprasio	1.41	203	Pn	Pb	12 20 58.9	+1.2
ESAC				Pg	Pg	12 20 59.8	+0.7
ESAC				Sg	Sg	12 21 18.3	+0.8
ESAC				i Vmb_Lg		12 21 22.3	
EMIR	Miracle	1.44	140	Pn	Pb	12 20 58.9	+0.6
EMIR				Sg	Sg	12 21 18.6	0.0
EMIR	Miracle	1.44	140	Pg	Pb	12 20 59.7	+1.4
EMIR				Sg	Sg	12 21 18.6	0.0
MTLF	Montolieu	1.46	77	ePn	Pn	12 20 58.0	+0.6
MTLF	Montolieu	1.46	77	ePg	Pg	12 21 01.0	+0.9
MTLF				eSg	Sg	12 21 19.6	+0.5
	642nm,0.3s						
MONQ	Montcuq	1.50	26	Pn	Pn	12 20 58.4	+0.4
MONQ				Pg	Pb	12 21 01.4	+2.1
MONQ				Sg	Sb	12 21 21.6	+3.5
CBRU	Bruguera	1.59	117	P	Pb	12 21 01.2	+0.4
CBRU				S	Sb	12 21 21.8	+1.2
	213nm,0.6s						
CORI	Orista	1.68	128	P	Pb	12 21 02.6	+0.2
CORI				S	Sb	12 21 23.9	+0.8
	307nm,0.3s						
FILF	Fillols	1.75	104	Pn	Pb	12 21 04.8	+1.4
FILF				Sn	Sb	12 21 27.6	+2.6
EPOB	Poblet	1.77	160	P	Pn	12 21 03.2	+1.5
EPOB				S	Sb	12 21 25.4	-0.4
	527nm,0.4s						
EPOB	Poblet	1.77	160	Pn	Pb	12 21 03.5	-0.4
EPOB				Pg	Pg	12 21 05.2	-0.8
EPOB				Sg	Sg	12 21 27.7	-1.3
EPOB				i Vmb_Lg		12 21 28.9	
CGAR	Garraf	1.84	159	P	Pg	12 21 08.1	+0.8
CGAR				S	Sg	12 21 34.3	+3.0
	110nm,0.4s						
CBEU	Beuda	1.93	112	P	Pn	12 21 06.0	+2.1
CBEU				S	Sb	12 21 30.3	-0.1
	223nm,0.4s						
LFF	La Frestale	1.95	10	ePn	Pn	12 21 04.8	+0.7
LFF	La Frestale	1.95	10	ePg	Pb	12 21 10.1	+3.2

LFF				*e*Sg	Sg	12 21 35.8	+1.1
	503nm,0.4s						
LRVF	**chteau la Riv**	1.97	348	Pn	Pg	12 21 10.7	+0.8
LRVF				Sn	Sg	12 21 36.9	+1.4
SJAF	**Saint Jean de**	2.00	105	P	Pn	12 21 07.3	+2.5
SJAF				S	Sb	12 21 32.3	+0.1
SJAF	**Saint Jean de**	2.00	105	Pn	Pg	12 21 10.5	+0.2
SJAF				Sn	Sg	12 21 36.1	-0.1
EJON	**La Jonquera**	2.01	106	Pg	Pb	12 21 09.1	+1.1
EJON				Sg	Sg	12 21 37.1	+0.4
EJON				*i* Vmb_Lg		12 21 42.9	
CFON	**Fontmartina**	2.04	127	P	Pn	12 21 07.7	+2.3
ERTA	**Horta de San J**	2.06	179	P	Pn	12 21 07.6	+2.0
ERTA				S	Sb	12 21 32.9	-1.3
	227nm,0.2s						
ERTA	**Horta de San J**	2.06	179	Pn	Pn	12 21 07.7	+2.0
ERTA				Pg	Pb	12 21 10.5	+1.6
ERTA				Sn	Sb	12 21 32.8	-1.3
ERTA				Sg	Sg	12 21 36.9	-1.4
ERTA				*i* Vmb_Lg		12 21 39.8	
FBR	**Fabra**	2.11	139	P	Pn	12 21 08.6	+2.2
CPAL	**Palau Saverder**	2.25	107	P	Pn	12 21 10.7	+2.5
CCAS	**Cassa de la Se**	2.26	119	P	Pn	12 21 10.0	+1.7
CCAS				S	Sn	12 21 38.2	+2.6
	58nm,0.3s						
CMAS	**Mas de Barbera**	2.29	179	P	Pn	12 21 10.5	+1.7
CMAS				S	Sn	12 21 38.2	+1.6
	312nm,0.3s						
CAF	**Calviac**	2.30	34	*e*Pn	Pn	12 21 09.4	+0.4
CAF	**Calviac**	2.30	34	*e*Pg	Pg	12 21 16.6	+0.4
CAF				*e*Sn	Sn	12 21 36.0	-0.9
	73nm,0.4s						
CAF				*e*Sg	Sg	12 21 46.4	+0.3
	169nm,0.2s						
RJF	**Les Rejaudoux**	2.45	21	*e*Pn	Pn	12 21 10.6	-0.5
RJF	**Les Rejaudoux**	2.45	21	*e*Pg	Pb	12 21 19.1	+3.6
RJF				*e*Sn	Sn	12 21 39.6	-1.0
	149nm,0.2s						
RJF				*e*Sg	Sg	12 21 51.8	+0.9
	149nm,0.2s						
EMOS	**Mosqueruela**	2.71	192	P	Pn	12 21 16.5	+1.7
EMOS				S	Sn	12 21 49.0	+1.8
	150nm,0.5s						
EMOS	**Mosqueruela**	2.71	192	Pn	Pn	12 21 17.5	+2.7
EMOS				Sg	Sb	12 21 56.0	+3.0
EMOS				*i* Vmb_Lg		12 22 04.3	
ELAN	**Lanestosa**	2.72	276	Pn	Pn	12 21 18.3	+3.6
ELAN				Sn	Sn	12 21 48.0	+0.8
ELAN				*i* Vmb_Lg		12 22 02.6	
ETOR	**Torete**	2.80	219	Pn	Pn	12 21 18.6	+2.7
ETOR				Sn	Sn	12 21 50.8	+1.6
ETOR				Sg	Sg	12 22 00.7	-1.3
ETOR				*i* Vmb_Lg		12 22 04.0	
LASF	**Ste Croix**	2.81	67	*e*Pn	Pn	12 21 16.6	+0.6
LASF	**Ste Croix**	2.81	67	*e*Pg	Pb	12 21 25.2	+3.6
LASF				*e*Sn	Sn	12 21 48.1	-1.3
	63nm,0.5s						
LASF				*e*Sg	Sg	12 22 01.4	-1.0
	172nm,0.3s						
ECOL	**Islas Columbre**	3.13	174	Pn	Pn	12 21 21.2	+0.8
ECOL				Pg	Pg	12 21 30.4	-1.7
ECOL				Sg	Sg	12 22 10.8	-1.9
CHIF	**Chize**	3.15	351	Pn	Pn	12 21 22.4	+1.8
PYM	**Petit Puy Mans**	3.36	35	Pn	Pn	12 21 23.4	-0.2
TCF	**Toulx Ste Croi**	3.55	22	*e*Pn	Pn	12 21 26.0	-0.1
TCF				*e*Sn	Sn	12 22 05.3	-2.3
	137nm,0.5s						
TCF				*e*Sg	Sg	12 22 25.2	-0.7
	137nm,0.5s						
ECHE	**Chera**	3.55	196	Pn	Pn	12 21 27.7	+1.5
ECHE				Sn	Sn	12 22 06.9	-0.7
ECHE				Sg	Sb	12 22 20.7	+3.7
ECHE				*i* Vmb_Lg		12 22 42.7	
MFF	**Saint Martin d**	3.59	355	*e*Pn	Pn	12 21 27.7	+1.0
MFF	**Saint Martin d**	3.59	355	*e*Pg	Pg	12 21 40.3	-0.5
MFF				*e*Sn	Sn	12 22 07.5	-1.2
	91nm,0.3s						
MFF				*e*Sg	Sg	12 22 25.4	-2.0
	91nm,0.3s						
VIVF	**Saint-Julien-l**	3.67	58	*e*Pn	Pn	12 21 28.2	+0.4
VIVF	**Saint-Julien-l**	3.67	58	*e*Pg	Pg	12 21 42.0	-0.3
VIVF				*e*Sn	Sn	12 22 08.3	-2.3
VIVF				*e*Sg	Sg	12 22 28.8	-1.0
	157nm,0.5s						
ETOS	**Mallorca**	3.77	149	P	Pn	12 21 31.1	+1.9
ETOS	**Mallorca**	3.77	149	Pn	Pn	12 21 30.8	+1.7
ETOS				Sn	Sn	12 22 12.1	-0.9
UCM	**Universidad Co**	3.78	225	P	Pn	12 21 24.2	-5.1
UCM				S	Sn	12 22 09.1	-4.2
SMRF	**Simiane la Rot**	3.98	74	*e*Pn	Pn	12 21 32.8	+0.8
SMRF	**Simiane la Rot**	3.98	74	*e*Pg	Pg	12 21 47.7	-0.4
SMRF				*e*Sg	Sg	12 22 40.9	+1.3
	88nm,0.6s						
BGF	**Bois d'Agland**	3.98	26	*e*Pn	Pn	12 21 32.5	+0.4
BGF	**Bois d'Agland**	3.98	26	*e*Pg	Pg	12 21 47.5	-0.8
BGF				*e*Sg	Sg	12 22 38.7	-1.2
	318nm,0.4s						
EIBI	**Ibiza**	4.07	168	Pn	Pn	12 21 35.0	+1.7
EIBI				Sn	Sn	12 22 19.3	-1.2
GUD	**Guadarrama**	4.07	236	Pn	Pn	12 21 35.7	+2.3
GUD				Sn	Sn	12 22 20.1	-0.5
AVF	**Avril sur Loir**	4.36	29	*e*Pn	Pn	12 21 37.9	+0.7
AVF	**Avril sur Loir**	4.36	29	*e*Pg	Pg	12 21 54.3	-1.1
AVF				*e*Sn	Sn	12 22 24.9	-2.6
	14nm,0.5s						
AVF				*e*Sg	Sg	12 22 50.7	-1.2
	34nm,0.3s						
SMF	**Signal de Mont**	4.43	34	*e*Pn	Pn	12 21 38.6	+0.5
SMF	**Signal de Mont**	4.43	34	*e*Pg	Pg	12 21 55.8	-0.9
SMF				*e*Sg	Sg	12 22 52.8	-1.2
	35nm,0.4s						
ORIF	**Oris-en-Rattie**	4.47	63	*e*Pn	Pn	12 21 38.9	0.0
ORIF				*e*Sg	Sg	12 22 53.7	-1.8
	35nm,0.6s						
HYF	**Humbligny**	4.57	21	*e*Pn	Pn	12 21 42.3	+2.2
HYF	**Humbligny**	4.57	21	*e*Pg	Pg	12 21 58.9	-0.5
HYF				*e*Sg	Sg	12 22 56.5	-2.0
LMR	**La Mourre**	4.57	84	*e*Pn	Pn	12 21 40.1	0.0
LMR	**La Mourre**	4.57	84	*e*Pg	Pg	12 21 58.0	-1.5
LMR				*e*Sg	Sg	12 22 55.5	-3.2
	19nm,0.4s						
ETOB	**Tobarra**	4.58	198	Pn	Pn	12 21 42.8	+2.4
ETOB				Sn	Sn	12 22 30.6	-2.5
ETOB				Sg	Sb	12 22 51.3	+4.6
ESDC	**Sonseca Array**	4.62	225	Pn	Pn	12 21 42.6	+1.8
ESDC				Sn	Sn	12 22 31.8	-2.2
ESDC				*i* Vmb_Lg		12 22 34.8	
SSF	**Saint Saulge**	4.65	28	*e*Pn	Pn	12 21 41.5	+0.3
SSF	**Saint Saulge**	4.65	28	*e*Pg	Pg	12 21 59.5	-1.4
SSF				*e*Sn	Sn	12 22 33.9	-0.7
	2.1nm,0.2s						
SSF				*e*Sg	Sg	12 22 59.5	-1.6
	114nm,0.9s						
PAB	**San Pablo**	4.91	227	Pn	Pn	12 21 47.0	+2.1
PAB				Sn	Sn	12 22 39.8	-1.6
PAB				*i* Vmb_Lg		12 23 13.4	
LOR	**Lormes**	4.95	30	*e*Pn	Pn	12 21 45.5	+0.2
LOR	**Lormes**	4.95	30	*e*Pg	Pg	12 22 05.7	-1.0
	baz=218						
LOR				*e*Sn	Sn	12 22 39.6	-2.5
	baz=210						
LOR				*e*Sg	Sg	12 23 08.8	-1.9
	30nm,0.3s,baz=201						
MBDF	**Montbardon**	5.00	68	*e*P	Pn	12 21 51.5	+5.3
MBDF	**Montbardon**	5.00	68	*e*Pg	Pg	12 22 06.0	-1.7
MBDF				*e*Sn	Sn	12 22 44.0	+0.5
MBDF				*e*Sg	Sg	12 23 08.4	-4.0
	18nm,0.7s						
LPL	**La Plagne**	5.27	60	*e*Pn	Pn	12 21 50.0	+0.1
LPL	**La Plagne**	5.27	60	*e*Pg	Pg	12 22 10.8	-2.0
LPL				*e*Sg	Sg	12 23 18.7	-2.3
	19nm,0.5s						
LPG	**La Plagne**	5.27	60	*e*Pn	Pn	12 21 52.8	+2.8
LPG	**La Plagne**	5.27	60	*e*Pg	Pg	12 22 11.6	-1.3
LPG				*e*Sg	Sg	12 23 18.2	-3.0
	28nm,0.7s						
SBF	**Sospel**	5.28	78	*e*P	Pn	12 21 50.8	+0.8
SBF	**Sospel**	5.28	78	*e*Pg	Pg	12 22 11.7	-1.4
SBF				*e*Sg	Sg	12 23 18.4	-3.1
	35nm,0.6s						
PBRG	**Braganca**	5.33	259	*e*Pn	Pn	12 21 52.8	+2.2
PBRG				*e*Sn	Sn	12 22 50.1	-1.5
PBRG				A	A	12 23 25.2	
	9.0nm,0.3s						
EZAR	**Zarzadilla de**	5.35	197	Pn	Pn	12 21 53.5	+2.5
EZAR				Sn	Sn	12 22 49.7	-2.5
GRR	**Gorron**	5.43	352	*e*Pn	Pn	12 21 52.1	+0.2
GRR	**Gorron**	5.43	352	*e*Pg	Pg	12 22 14.1	-1.7
GRR				*e*Sn	Sn	12 22 50.9	-2.9
	40nm,0.5s						
GRR				*e*Sg	Sg	12 23 24.2	-1.9
	25nm,0.5s						
QUIF	**Quistinic**	5.46	335	*e*Pn	Pn	12 21 52.6	+0.3
QUIF	**Quistinic**	5.46	335	*e*Pg	Pg	12 22 15.0	-1.5
QUIF				*e*Sn	Sn	12 22 51.9	-2.7
	9.2nm,0.3s						
QUIF				*e*Sg	Sg	12 23 25.6	-1.5
	24nm,0.4s						
CABF	**La Chapelle**	5.48	47	*e*Pg	Pg	12 22 15.2	-1.6
CABF				*e*Sg	Sg	12 23 25.3	-2.4
	50nm,0.6s						
LDF	**La Druitiere**	5.58	357	*e*Pn	Pn	12 21 54.4	+0.4
LDF	**La Druitiere**	5.58	357	*e*Pg	Pg	12 22 17.2	-1.6
LDF				*e*Sn	Sn	12 22 54.6	-3.0
	4.5nm,0.3s						
LDF				*e*Sg	Sg	12 23 29.2	-1.8
	38nm,0.5s						
SGMF	**Saint Gilles**	5.60	340	*e*Pn	Pn	12 21 54.8	+0.6
SGMF	**Saint Gilles**	5.60	340	*e*Pg	Pg	12 22 17.4	-1.7
SGMF				*e*Sn	Sn	12 22 55.5	-2.5
SGMF				*e*Sg	Sg	12 23 29.9	-1.6
	37nm,0.6s						
EPLA	**Plasencia**	5.61	240	Pn	Pn	12 21 55.7	+1.3
EPLA				Sn	Sn	12 22 57.2	-1.1
MVO	**Moncorvo**	5.74	254	*e*Pn	Pn	12 21 58.5	+2.3
MVO				*e*Sn	Sn	12 22 59.9	-1.7
MVO				A	A	12 23 37.6	
	22nm,0.5s						
FLN	**La Foliniere**	5.77	355	*e*Pn	Pn	12 21 57.0	+0.5
	baz=148						
FLN	**La Foliniere**	5.77	355	*e*Pg	Pg	12 22 20.6	-1.7
	baz=183						
FLN				*e*Sn	Sn	12 23 00.7	-1.5
FLN				*e*Sg	Sg	12 23 35.0	-2.0
	24nm,0.4s,baz=168						
EQES	**Quesada**	5.80	207	Pn	Pn	12 21 59.4	+2.3
EQES				Sn	Sn	12 23 00.6	-2.6
EQES				*i* Vmb_Lg		12 23 42.4	
ROSF	**Rostrenen**	5.87	336	*e*Pn	Pn	12 21 58.1	+0.2
ROSF				*e*Sn	Sn	12 23 03.0	-1.7
	298nm,2.2s						
ROSF				*e*Sg	Sg	12 23 37.6	-2.6
	39nm,0.6s						
EADA	**Adamuz**	6.09	219	Pn	Pn	12 22 02.8	+1.7
EADA				Sn	Sn	12 23 06.2	-4.1
EADA				Sg	Sg	12 23 43.8	-3.5
EADA				*i* Vmb_Lg		12 23 51.0	
EAGO	**Agolada(Pontev**	6.14	271	Pn	Pn	12 22 03.8	+2.1
EAGO				Sn	Sn	12 23 10.1	-1.4
SFTF	**Sexfontaines**	6.17	31	*e*Pn	Pn	12 22 03.6	+1.5
SFTF	**Sexfontaines**	6.17	31	*e*Pg	Pg	12 22 28.1	-1.9
SFTF				*e*Sn	Sn	12 23 10.5	-1.6
SFTF				*e*Sg	Sg	12 23 47.0	-2.8
	58nm,0.8s						
POLO	**Lamas de Olo**	6.21	257	*e*Pn	Pn	12 22 04.5	+1.7
POLO				*e*Sn	Sn	12 23 11.5	-1.8
POLO				A	A	12 23 56.6	
	4.6nm,0.6s						
ELOB	**Lobios**	6.27	262	Pn	Pn	12 22 05.3	+1.7
ELOB				Sn	Sn	12 23 11.8	-3.0
PCAB	**Cabril**	6.29	261	*e*Pn	Pn	12 22 06.3	+2.6
MTE	**Manteigas**	6.41	249	*e*Sn	Sn	12 23 15.4	-2.7
MTE				A	A	12 24 01.1	
	14nm,0.6s						
MEZF	**Maizieres J’vi**	6.42	30	*e*Sg	Sg	12 23 54.5	-3.4
	30nm,0.4s						
PGF	**Pioggiola**	6.44	91	*e*Pn	Pn	12 22 05.6	-0.3
PGF				*e*Sn	Sn	12 23 14.7	-4.2
	3.9nm,0.4s						
PVIS	**Viseu**	6.52	252	*e*Pn	Pn	12 22 08.4	+1.5
PVIS				*e*Sn	Sn	12 23 18.3	-2.4
PVIS				A	A	12 24 18.3	
	7.0nm,0.6s						
SAVF	**Savonnieres en**	6.54	30	*e*Pn	Pn	12 22 10.1	+2.9
SAVF	**Savonnieres en**	6.54	30	*e*Pg	Pg	12 22 34.3	-2.8
SAVF				*e*Sg	Sg	12 23 57.6	-4.2
	6.0nm,0.3s						
HAU	**Haudompre**	6.56	38	*e*P	Pn	12 22 13.2	+5.7
HAU	**Haudompre**	6.56	38	*e*Pg	Pg	12 22 34.3	-3.2
HAU				*e*Sg	Sg	12 23 58.5	-3.9
	16nm,0.4s						
ECAB	**El Cabril**	6.57	223	Pn	Pn	12 22 09.2	+1.6
ECAB				Sn	Sn	12 23 18.0	-4.0
PCBR	**Castelo Branco**	6.63	244	*e*Sn	Sn	12 23 21.6	-1.9
PCBR				A	A	12 24 15.9	
	7.0nm,0.6s						
HINF	**Hinteralfeld**	6.67	42	*e*Pg	Pg	12 22 37.4	-2.1
HINF				*e*Sg	Sg	12 24 02.4	-3.4
	8.2nm,0.3s						
PAGF	**Fort de Pagny**	6.72	33	*e*P	Pn	12 22 14.6	+5.0
PAGF	**Fort de Pagny**	6.72	33	*e*Pg	Pg	12 22 37.3	-3.2
	baz=200						
PAGF				*e*Sg	Sg	12 24 03.9	-3.6
	22nm,0.7s						
EMAZ	**Mazaricos**	6.78	273	Pn	Pn	12 22 12.5	+2.0
EMAZ				Sn	Sn	12 23 25.4	-1.8
PMRV	**Marv??o**	6.80	241	*e*Pn	Pn	12 22 12.3	+1.5
PMRV				*e*Sn	Sn	12 23 25.5	-2.2
PMRV				A	A	12 24 16.7	
	6.6nm,0.7s						
EBAD	**Badajoz**	6.97	235	Pn	Pn	12 22 14.6	+1.6
EBAD				Sn	Sn	12 23 27.9	-3.9
PCAS	**Casmilo, Conde**	7.21	249	*e*Sn	Sn	12 23 35.5	-2.4
PCAS				A	A	12 24 25.3	
	7.6nm,0.5s						
PESTR	**Estremoz**	7.25	238	*e*Pn	Pn	12 22 18.7	+1.7
PESTR				*e*Sn	Sn	12 23 36.2	-2.6
PESTR				A	A	12 24 37.6	
	6.5nm,0.5s						
CDF	**Champ du Feu**	7.29	40	*e*Pg	Pg	12 22 47.5	-3.8
CDF				*e*Sg	Sg	12 24 21.6	-4.0
	24nm,0.9s						
PBAR	**Barrancos**	7.37	231	*e*Pn	Pn	12 22 20.6	+2.0
PBAR				*e*Sn	Sn	12 23 38.6	-3.1
PBAR				A	A	12 24 35.7	
	4.5nm,0.6s						
PMTG	**Montargil**	7.54	241	*e*Pn	Pn	12 22 22.5	+1.7
PMTG				*e*Sn	Sn	12 23 43.6	-2.2
PMTG				A	A	12 24 35.2	
	6.4nm,0.6s						
BAIF	**Baives**	7.54	20	*e*Pn	Pn	12 22 22.6	+1.7
BAIF				*e*Sn	Sn	12 23 45.6	-0.3
BAIF				*e*Sg	Sb	12 24 28.8	+17
	42nm,1.0s						
EVO	**Evora**	7.72	237	*e*Sn	Sn	12 23 47.7	-2.6
GIVF	**Givet**	7.75	22	*e*Pn	Pn	12 22 23.7	0.0
GIVF				*e*Sn	Sn	12 23 49.2	-1.7
GIVF				*e*Sg	Sb	12 24 35.4	+18
	23nm,0.8s						
PBEJ	**Beja**	7.95	234	*e*Sn	Sn	12 23 53.3	-2.7
MESJ	**Messejana**	8.29	234	*e*Sn	Sn	12 24 01.7	-2.5
MESJ				A	A	12 24 03.8	
	3.6nm,0.4s						
PVAQ	**Vaqueiros**	8.29	230	*e*Sn	Sn	12 23 59.6	-4.8
PNCL	**Nicolau / Gran**	8.30	237	*e*Pn	Pn	12 22 33.5	+2.2
PNCL				*e*Sn	Sn	12 24 01.9	-2.6
PNCL				A	A	12 24 12.8	
	4.5nm,0.6s						
PCVE	**Castro Verde**	8.32	232	*e*Pn	Pn	12 22 34.2	+2.6

TUL ***11*** *12:36:45.8±1.4, 36°.701N±0°.010×97°.68W±0°.02, h6^{km}±7^{km}, ML2.9, mb_Lg2.7/56(NEIC), Error ellipse: s-maj=2.4km s-min=1.4km az=89.0*

NEIC 11 12:36:45.9±0.7**, 36°.68N**±0°.01×**97°.67W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.8km az=278.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	0.96	76		Pg	12 37 04.0	-0.2
U32A	**Winter Ranch,**	1.12	255		Pg	12 37 06.7	-0.7
FNO	**Franklin**	1.44	171		Pn	12 37 12.7	0.0
TUL1	**Leonard**	1.70	116		Pn	12 37 16.9	+0.7
TUL1				IAmb_Lg		12 37 40.6	
	comp=Z,50nm,0.8s						
R32A	**Long Quarter,**	1.92	335		Pb	12 37 20.5	-1.0
X34A	**Smith Ranch, M**	2.08	184		Pn	12 37 21.8	+0.2
WMOK	**Wichita Mounta**	2.14	205		Pn	12 37 22.7	+0.4
X37A	**Clayton**	2.81	137	IAmb_Lg		12 38 21.6	
	comp=Z,17nm,0.7s						
W39A	**Magazine**	3.48	114	IAmb_Lg		12 38 41.6	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	3.72	242	IAmb_Lg		12 38 47.0	
	comp=Z,26nm,0.7s						
U40A	**Yellville**	3.89	93	IAmb_Lg		12 38 59.0	
	comp=Z,15nm,0.8s						
MIAR	**Mount Ida**	3.96	121	IAmb_Lg		12 38 53.6	
	comp=Z,15nm,0.8s						
MGMO	**Mountain Grove**	4.35	82	IAmb_Lg		12 39 02.2	
	comp=Z,16nm,0.8s						
P38A	**Dawn**	4.39	47	IAmb_Lg		12 39 05.9	
	comp=Z,25nm,0.7s						
X40A	**Basin Creek Fa**	4.51	118	IAmb_Lg		12 39 11.3	
	comp=Z,12nm,0.7s						
FCAR	**Ozark Folk Cen**	4.55	98	IAmb_Lg		12 39 21.1	
	comp=Z,11nm,0.7s						
KSCO	**Kaye Shedlock’**	4.56	302	IAmb_Lg		12 39 13.3	
	comp=Z,16nm,0.7s						
WHAR	**Wooly Hollow**	4.58	106	IAmb_Lg		12 39 17.2	
	comp=Z,12nm,0.9s						
R40A	**Maddies Statio**	4.58	68	IAmb_Lg		12 39 22.1	
	comp=Z,15nm,0.7s						
W41B	**Gary Mavity, V**	4.65	107	IAmb_Lg		12 39 20.7	
	comp=Z,10nm,0.8s						
BGNE	**Belgrade**	4.73	356	IAmb_Lg		12 39 23.0	
	comp=Z,22nm,0.8s						
WLAR	**White Oak Lake**	4.78	127	IAmb_Lg		12 39 29.3	
	comp=Z,13nm,0.8s						
P40A	**Paris**	5.26	56	IAmb_Lg		12 39 39.9	
	comp=Z,22nm,0.8s						
LCAR	**Lake Charles**	5.29	95	IAmb_Lg		12 39 39.2	
	comp=Z,9.9nm,0.8s						
L34A	**Svendsen Farm,**	5.37	10	IAmb_Lg		12 39 50.0	
	comp=Z,19nm,0.8s						
T25A	**Trinidad**	5.42	277	IAmb_Lg		12 39 49.9	
	comp=Z,8.2nm,0.7s						
OGNE	**Ogallala**	5.45	323	IAmb_Lg		12 39 44.0	
	comp=Z,16nm,0.8s						
PBMO	**Poplar Bluff**	5.81	87	IAmb_Lg		12 39 49.9	
	comp=Z,15nm,0.8s						
SCIA	**State Center**	6.25	32	IAmb_Lg		12 40 14.3	
	comp=Z,15nm,0.7s						
JCT	**Junction City**	6.44	197	IAmb_Lg		12 40 25.8	
	comp=Z,12nm,1.1s						
N23A	**Red Feather La**	7.71	306	IAmb_Lg		12 40 56.8	
	comp=Z,11nm,0.8s						
O44A	**Mansfield**	8.01	62	IAmb_Lg		12 41 18.0	
	comp=Z,12nm,0.7s						
JFWS	**Jewell Farm**	8.44	40	IAmb_Lg		12 41 17.0	
	comp=Z,8.3nm,0.8s						
RSSD	**Black Hills**	8.87	329	IAmb_Lg		12 41 34.3	
	comp=Z,5.1nm,0.9s						

ISK ***11*** *12:56:35.8, 37°.48N×26°.70E, h10^{km}, ML3.6/20*

ATH ***11*** *12:56:35.5, 37°.50N×26°.71E, h28^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=3.3km s-min=1.1km az=78.0*

DDA ***11*** *12:56:36.4±0.0, 37°.49N×26°.72E, h4^{km}±1^{km}, ML3.4*

THE ***11*** *12:56:36.3, 37°.47N×26°.69E, h6^{km}±1^{km}, ML3.6/5, Error ellipse: s-maj=1.6km s-min=0.4km az=83.0*

ISC 11 12:56:36.4±0.9**, 37°.47N**±0°.02×**26°.68E**±0°.02**, h13**^{km}±7^{km}**, n57, σ0^{s}56**/82**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	0.27	27	P	Pg	12 56 41.8	-0.2
SMG				S	Sg	12 56 46.3	+0.5
SMG				AML	AML	12 56 46.6	
	comp=E,55176µm,0.5s						
SMG				AML	AML	12 56 47.0	
	comp=N,63920µm,0.3s						
SMG	**Samos**	0.27	27	P	Pg	12 56 41.8	-0.2
SMG				S	Sg	12 56 46.0	+0.2
	comp=N,30µm,0.4s						
DDIM	**Aydin, Didim**	0.45	92	P	Pg	12 56 45.1	-0.1
GCAM	**G?zelcaml?**	0.49	62	PG	Pg	12 56 45.9	-0.2
GCAM				SG	Sb	12 56 53.2	-0.8
GCAM	**G?zelcaml?**	0.49	62	P	Pb	12 56 46.0	-0.8
GCAM				S	Sb	12 56 52.9	-1.0
GCAM				*i* AML	AML	12 56 54.0	
	comp=N,6µm,0.6s						
GCAM				*i* AML	AML	12 56 54.0	
	comp=N,6µm,0.2s						
YKAV	**Yalikavak-Bodr**	0.59	126	PG	Pg	12 56 47.5	-0.4
YKAV				SG	Sg	12 56 55.9	+0.2
DGB	**zmir**	0.60	15	P	Pg	12 56 47.9	-0.3
DGB				S	Sb	12 56 58.0	+0.9
DGB				*i* AML	AML	12 56 59.0	
	comp=N,4µm,0.4s						
DGB				*i* AML	AML	12 57 00.0	
	comp=N,2µm,0.5s						
BODT	**Bodrum**	0.65	129	P	Pg	12 56 48.4	-0.5
BODT				S	Sb	12 56 57.8	-0.6
BODT	**Bodrum**	0.65	129	PG	Pg	12 56 48.5	-0.5
BODT				SG	Sb	12 56 58.1	-0.3
KOSK	**Kos Island**	0.76	162	P	Pg	12 56 51.0	-0.1
KOSK				S	Sb	12 57 03.2	+1.7
KOSK				AML	AML	12 57 05.5	
	comp=E,45106µm,0.4s						
KOSK				AML	AML	12 57 05.7	
	comp=N,43528µm,0.3s						
KOSK	**Kos Island**	0.76	162	P	Pb	12 56 51.4	+0.1
KOSK				S	Sb	12 57 01.8	+0.3
	comp=N,7µm,0.4s						
KOSK	**Kos Island**	0.76	162	PG	Pg	12 56 50.9	-0.1
KOSK				SG	Sb	12 57 01.8	+0.3
ZEYE	**Izmir, Urla-Ze**	0.78	350	P	Pg	12 56 51.3	-0.2
ZEYE				S	Sb	12 57 02.9	+0.6
ZEYE				*i* AML	AML	12 57 04.0	
	comp=N,3µm,0.4s						
ZEYE				*i* AML	AML	12 57 04.0	
	comp=N,7µm,0.4s						
MLSB	**Milas**	0.89	101	PG	Pb	12 56 53.3	-0.3
URLA	**Izmir**	0.89	356	PG	Pg	12 56 53.2	-0.4
URLA				SG	Sb	12 57 06.1	+0.6
URLA	**Izmir**	0.89	356	P	Pg	12 56 53.4	-0.2
URLA				S	Sn	12 57 07.7	+0.3
URLA				*i* AML	AML	12 57 09.0	
	comp=N,2µm,0.6s						
URLA				*i* AML	AML	12 57 10.0	
	comp=N,1µm,0.3s						
NISR	**Nisiros**	0.93	157	P	Pg	12 56 54.2	-0.1
NISR				S	Sb	12 57 06.8	+0.3
NISR				AML	AML	12 57 11.5	
	comp=N,3560µm,0.3s						
NISR				AML	AML	12 57 12.8	
	comp=E,8217µm,0.3s						
NISR	**Nisiros**	0.93	157	P	Pg	12 56 53.9	-0.4
NISR				S	Sb	12 57 06.8	+0.3
	comp=E,3µm,0.3s						
BLCB	**Balcova**	0.95	17	P	Pg	12 56 54.3	-0.5
BLCB				S	Sb	12 57 07.9	+0.6
BLCB	**Balcova**	0.95	17	PG	Pg	12 56 54.4	-0.4
BLCB				SG	Sb	12 57 07.9	+0.6
APE	**Apeiranthos**	1.00	247	P	Pg	12 56 55.2	-0.5
APE				AML	AML	12 57 11.8	
	comp=N,4130µm,0.4s						
APE				AML	AML	12 57 13.5	
	comp=E,2852µm,0.4s						
APE	**Apeiranthos**	1.00	247	P	Pg	12 56 55.0	-0.7
APE				S	Sg	12 57 09.5	+0.7
	comp=E,2µm,0.4s						
DAT	**Datca**	1.03	136	P	Pg	12 56 55.6	-0.7
DAT				S	Sb	12 57 10.2	+0.6
DAT	**Datca**	1.03	136	PG	Pb	12 56 56.1	0.0
DAT	**Datca**	1.03	136	P	Pb	12 56 56.2	+0.1
DAT				S	Sn	12 57 10.7	-0.2
DAT				*i* AML	AML	12 57 15.0	
	comp=E,720nm,0.2s						
DAT				*i* AML	AML	12 57 15.0	
	comp=E,699nm,0.4s						
CHOS	**Chios island**	1.04	332	P	Pg	12 56 55.6	-0.9
CHOS				AML	AML	12 57 12.6	
	comp=E,7567µm,0.9s						
CHOS				AML	AML	12 57 12.6	
	comp=N,5662µm,0.8s						
CHOS	**Chios island**	1.04	332	P	Pg	12 56 55.8	-0.7
CHOS				S	Sb	12 57 10.9	+1.1
	comp=N,3µm,0.8s						
CHOS	**Chios island**	1.04	332	PG	Pg	12 56 56.0	-0.5

AYDB	Zeytinkoy-Aydi	1.07	63	PG	Pb	12 56 56.5	-0.3
FOCM	Foa	1.24	2	PN	Pb	12 56 59.7	+0.1
YER	Yerkesik	1.32	104	P	Pn	12 57 00.3	-0.2
YER	Yerkesik	1.32	104	PN	Pb	12 57 00.9	-0.1
MULA	Mugla, Merkez-	1.32	99	P	Pb	12 57 00.8	-0.2
TURN	Turunc	1.43	119	PN	Pn	12 57 01.8	-0.2
TURN	Turunc	1.43	119	P	Pn	12 57 01.7	-0.2
TURN				S	Sg	12 57 22.2	-0.2
TURN				*i* AML	AML	12 57 29.0	
	comp=N,283nm,0.8s						
TURN				*i* AML	AML	12 57 34.0	
	comp=N,390nm,0.4s						
ZEDA	zmir-Bergama	1.52	12	S	Sg	12 57 26.6	+1.1
DKL	Dikili	1.61	6	PN	Pb	12 57 05.2	-0.7
AKS	Akhisar	1.66	32	PN	Pn	12 57 05.6	+0.4
DALY	Dalyan (Mula)	1.71	112	PN	Pn	12 57 06.0	+0.3
ARG	Arkhangelos	1.71	137	P	Pn	12 57 05.5	-0.3
ARG				AML	AML	12 57 37.5	
	comp=N,894µm,0.6s						
ARG				AML	AML	12 57 39.5	
	comp=E,1360µm,0.5s						
ARG	Arkhangelos	1.71	137	PN	Pn	12 57 05.6	-0.2
MANT	Manisa	1.80	55	P	Pg	12 57 11.1	+0.2
PRK	Paraskevi	1.80	350	P	Pn	12 57 07.7	+0.6
PRK				AML	AML	12 57 42.4	
	comp=E,4784µm,0.7s						
PRK				AML	AML	12 57 42.7	
	comp=N,2938µm,0.6s						
SIGR	SIGRI	1.85	340	P	Pn	12 57 07.4	-0.5
SIGR	SIGRI	1.85	340	P	Pn	12 57 07.3	-0.5
KULA	Kula-Manisa	1.88	56	P	Pn	12 57 07.7	-0.5
KULA				S	Sn	12 57 32.2	+0.4
KULA	Kula-Manisa	1.88	56	PN	Pn	12 57 09.1	+0.9
KARP	Karpathos	1.96	169	P	Pn	12 57 08.8	-0.5
BUHA	Balikesir, Bur	2.05	9	P	Pg	12 57 14.3	-1.4
BUHA				S	Sg	12 57 42.4	+0.1
BUHA				*i* AML	AML	12 57 50.0	
	comp=N,265nm,1.5s						
BUHA				*i* AML	AML	12 57 54.0	
	comp=N,305nm,0.6s						
STEP	BALIKESIR_Sava	2.07	23	P	Pg	12 57 15.8	-0.3
STEP				*i* AML	AML	12 57 53.0	
	comp=N,385nm,1.0s						
STEP				*i* AML	AML	12 57 56.0	
	comp=N,329nm,0.7s						
KOCA	Canakkale, Ayv	2.07	348	P	Pg	12 57 15.4	-0.7
FETY	Fethiye	2.09	113	PN	Pn	12 57 12.2	+1.1
CAME	Cameli-Denizli	2.16	103	PN	Pn	12 57 12.8	+0.7
EZN	Ezine	2.37	353	P	Pn	12 57 14.6	-0.3
EZN	Ezine	2.37	353	PN	Pn	12 57 14.3	-0.6
LIA	Limnos Island	2.69	335	P	Pn	12 57 19.3	0.0
SMTH	Samothraki Isl	3.13	344	P	Pn	12 57 25.1	-0.2

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*IDC **11** 13:10:32.2±0.6, 33°.13S×78°.08E, h0^{km}, mb4.1/14, mbtmp4.1/14, MS3.7/8, Error ellipse: s-maj=21.6km s-min=19.1km az=159.0*

*NEIC **11** 13:10:33.8±1.3, 33°.2S±0°.1×78°.0E±0°.2, h10^{km}±1^{km}, mb4.5/17, Error ellipse: s-maj=22.0km s-min=20.6km az=278.0*

ISC 11 13:10:33.6±0.5, **33°.2S**±0°.1×**78°.1E**±0°.1, **h10**^{km}, **n47**, σ**0**^{s}**91**/35, **mb4.3**/19, **MS3.8**/8, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	25.91	347	T	T	13 42 59.7	
	baz=169,slow=76,SNR=845						
H08S1	Diego Carcia H	25.92	347	T	T	13 42 60.0	
	baz=169,slow=76,SNR=605						
H08S3	Diego Garcia H	25.93	347	T	T	13 43 01.1	
	baz=169,slow=76,SNR=1009						
H01W2	Cape Leeuwin H	29.83	103	T	T	13 47 52.8	
	baz=263,slow=74,SNR=60						
H01W3	Cape Leeuwin H	29.84	103	T	T	13 47 53.5	
	baz=263,slow=74,SNR=47						
H01W1	Cape Leeuwin H	29.85	103	T	T	13 47 53.9	
	baz=263,slow=74,SNR=57						
ABPO	Ambohimpanom	30.95	289	P	P	13 16 49.7	-1.5
ABPO				IAmb	IAmb	13 16 55.2	
	comp=Z,14nm,1.2s						
MAW	Mawson	35.60	190	LR	LR	13 28 38.8	
	comp=Z,183nm,21.9s,baz=20,slow=30						
MAW	Mawson	35.60	190	P	P	13 17 31.0	0.0
PALK	Pallekele	40.29	4	LR	LR	13 31 42.8	
	comp=Z,212nm,20.5s,baz=254,slow=32						
PSI	Prapat	40.84	33	LR	LR	13 31 33.7	
	comp=Z,105nm,18.9s,baz=213,slow=31						
FITZ	Fitzroy Crossi	45.05	83	LR	LR	13 35 53.9	
	comp=Z,97nm,18.1s,baz=250,slow=34						
BOSA	Boshof	45.17	261	P	P	13 18 50.6	-0.3
	comp=Z,0.6nm,0.4s,baz=109,slow=3.9,SNR=1.3						
	comp=Z,0.6nm,0.4s						
LBTB	Lobatse	46.18	266	P	P	13 18 58.4	-0.5
	comp=Z,1.2nm,0.6s,baz=110,slow=2.1,SNR=2.2						
	comp=Z,1.2nm,0.6s						
LBTB	Lobatse	46.18	266	P	P	13 18 58.3	-0.5
LBTB				IAmb	IAmb	13 19 11.9	
	comp=Z,5.1nm,1.3s						
SUR	Sutherland	47.63	254	P	P	13 19 09.9	-0.3
	comp=Z,2.5nm,0.8s,baz=93,slow=12,SNR=2.0						
	comp=Z,2.5nm,0.8s						
SUR	Sutherland	47.63	254	P	P	13 19 09.7	-0.5
LSZ	Lusaka	48.39	279	P	P	13 19 17.2	+1.0
	comp=Z,1.7nm,0.2s,baz=112,slow=5.4,SNR=1.4						
	comp=Z,1.7nm,0.2s						
ASAR	Alice Springs	49.51	94	P	P	13 19 24.2	-0.4
	comp=Z,1.6nm,1.0s,baz=248,slow=7.3,SNR=6.6						
ASAR				PcP	PcP	13 20 47.6	+1.0
	comp=Z,0.4nm,0.9s,baz=247,slow=1.9,SNR=1.8						
ASAR				LR	LR	13 37 41.9	
	comp=Z,59nm,21.4s,baz=228,slow=33						
	comp=Z,1.6nm,1.0s						
AS31	Alice Springs	49.51	94	P	P	13 19 25.1	+0.5
WRA	Warramunga Arr	51.47	90	P	P	13 19 38.9	-0.6
	comp=Z,1.2nm,0.9s,baz=247,slow=7.2,SNR=4.0						
	comp=Z,1.2nm,0.9s						
WB0	Warramunga Arr	51.60	90	P	P	13 19 39.7	-0.7
WR0	Warramunga Arr	51.63	90	P	P	13 19 40.2	-0.5
CM31	Chiang Mai Arr	55.07	24	P	P	13 20 06.2	+0.4
CM31				IAmb	IAmb	13 20 12.7	
	comp=Z,3.5nm,0.7s						
CMAR	Chiang Mai Arr	55.07	24	P	P	13 20 06.5	+0.8
	comp=Z,2.3nm,0.8s,baz=211,slow=7.1,SNR=13						
CMAR				LR	LR	13 39 16.1	
	comp=Z,34nm,21.7s,baz=145,slow=31						
	comp=Z,2.3nm,0.8s						
CMAR	Chiang Mai Arr	55.07	24	P	P	13 20 02.4	-3.3
SNAA	Sanae	56.06	202	P	P	13 20 12.1	-0.2
SNAA				IAmb	IAmb	13 20 13.7	
	comp=Z,5.5nm,1.4s						
VNDA	Vanda	56.55	165	P	P	13 20 16.8	+1.1
	comp=Z,0.8nm,0.7s,baz=267,slow=6.4,SNR=3.4						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	56.55	165	P	P	13 20 15.2	-0.6
VNDA				IAmb	IAmb	13 20 18.1	
	comp=Z,3.9nm,1.4s						
QSPA	South Pole Qui	56.98	180	P	P	13 20 19.5	+0.3
	comp=Z,5.7nm,1.0s,baz=292,slow=4.2,SNR=8.1						
	comp=Z,5.7nm,1.0s						
QSPA	South Pole Qui	56.98	180	P	P	13 20 19.4	+0.3
QSPA				IAmb	IAmb	13 20 20.4	
	comp=Z,14nm,1.2s						
WSAR	Wadi Sarin	59.08	339	LR	LR	13 40 20.4	
	comp=Z,69nm,20.7s,baz=178,slow=30						
KBL	Kabul	67.88	352	P	P	13 21 32.9	+0.6
KBL				IAmb	IAmb	13 21 54.4	
	comp=Z,4.7nm,0.7s						
ODZ	Otahua Downs	69.06	131	P	P	13 21 38.9	-0.7
AAK	Ala-Archa	75.50	357	LR	LR	13 52 15.6	
	comp=Z,88nm,21.0s,baz=180,slow=33						
KK31	Karatay Array	76.22	354	P	P	13 22 23.1	+1.2
KK31				IAmb	IAmb	13 22 28.7	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	76.22	354	P	P	13 22 23.0	+1.1
MK31	Makanchi Array	79.68	3	P	P	13 22 41.0	0.0
MKAR	Makanchi Array	79.68	3	P	P	13 22 40.1	-0.9
	comp=Z,1.1nm,0.9s,baz=183,slow=7.3,SNR=6.9						
	comp=Z,1.1nm,0.9s						
MKAR	Makanchi Array	79.68	3	P	P	13 22 40.3	-0.7
BRTR	Keskin Array B	83.38	327	P	P	13 23 01.9	+1.0
	comp=Z,1.3nm,0.8s,baz=181,slow=5.8,SNR=2.5						
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	84.54	19	P	P	13 23 06.8	+0.2
	comp=Z,1.0nm,0.9s,baz=204,slow=3.2,SNR=4.2						
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	84.54	19	IAmb	IAmb	13 23 09.2	
	comp=Z,2.2nm,1.2s						
ZALV	Zalesovo Beam	86.95	4	P	P	13 23 17.9	-0.3
	comp=Z,1.8nm,0.5s,baz=189,slow=3.5,SNR=11						
	comp=Z,1.8nm,0.5s						
AKASG	Malin Array Be	93.97	331	P	P	13 23 51.5	+0.3
	comp=Z,0.9nm,0.5s,baz=106,slow=3.9,SNR=4.1						
	comp=Z,0.9nm,0.5s						
ILAR	Eielson Array	138.27	27	PKP	PKPdf	13 29 58.6	+0.4
	comp=Z,0.2nm,0.8s,baz=262,slow=2.6,SNR=2.0						
YKA	Yellowknife Ar	149.56	12	PKPbc	PKPbc	13 30 22.1	-0.3
	comp=Z,2.5nm,0.7s,baz=325,slow=3.5,SNR=22						

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*SJA **11** 13:11:28.9±0.6, 30°.62S×72°.10W, h10^{km}±3^{km}, ML5.3, MW5.0*

*IDC **11** 13:11:30.1±0.4, 30°.70S×71°.60W, h0^{km}, mb4.9/16, mbtmp4.8/21, ML4.5/5, MS4.8/39, Error ellipse: s-maj=18.3km s-min=11.9km az=78.0*

*VAO **11** 13:11:31.8±0.4, 30°.71S×71°.65W, h10^{km}, mb5.3*

*GUC **11** 13:11:32.6±0.7, 30°.66S×71°.89W, h37^{km}±2^{km}, ML5.6*

*MOS **11** 13:11:33.2±1.4, 30°.65S×71°.64W, h29^{km}, mb5.4/22, MS5.0/6, Error ellipse: s-maj=14.3km s-min=7.0km az=97.8*

*NEIC **11** 13:11:33.9, 30°.65S×71°.84W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.19; M$_{\theta\theta}$1.21; M$_{\phi\phi}$-7.41; M$_{r\theta}$2.20; M$_{\theta\phi}$1.06; M$_{\phi r}$-2.59; Fault plane solution: M$_0$7.75000×10^{16} NP1:φ$_s$157.03000°, δ58.48000°, λ70.76000°. NP2:φ$_s$10.76000°, δ36.41000°, λ118.25000°. Principal axes: T 7.3244, Plg70.0000°, Azm24.0000°; N 0.7904, Plg16.0000°, Azm167.0000°; P -8.1148, Plg12.0000°, Azm261.0000°;*

*NEIC **11** 13:11:34.0±1.4, 30°.66S±0°.04×71°.75W±0°.07, h25^{km}±3^{km}, mb5.3/144, Ms_20 5.0/189, Mwr5.2/62, Mww5.4, Mwr5.3(GUC) Error ellipse: s-maj=9.7km s-min=3.6km az=118.0*

*NEIC **11** 13:11:37, 30°.65S×71°.62W, h24^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.01; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-1.02; M$_{r\theta}$0.05; M$_{\theta\phi}$0.01; M$_{\phi r}$-1.00; Fault plane solution: M$_0$1.43000×10^{17} NP1:φ$_s$2.00000°, δ23.00000°, λ94.00000°. NP2:φ$_s$178.00000°, δ67.00000°, λ88.00000°. Principal axes: T 1.4251, Plg68.0000°, Azm85.0000°; N 0.0079, Plg1.0000°, Azm178.0000°; P -1.4330, Plg22.0000°, Azm269.0000°;*

*GCMT **11** 13:11:38.0±0.1, 30°.73S±0°.01×71°.95W±0°.01, h30^{km}, MW5.4/138, Moment Tensor Solution. s115,c183; s138,c217; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.19±.02; M$_{\theta\theta}$0.12±.01; M$_{\phi\phi}$-1.31±.02; M$_{r\theta}$0.21±.02; M$_{\theta\phi}$0.10±.01; M$_{\phi r}$-0.93±.03; Best double couple: M$_0$1.57300×10^{17} NP1:φ$_s$3.00000°, δ27.00000°, λ101.00000°. NP2:φ$_s$171.00000°, δ64.00000°, λ85.00000°. Principal axes: T 1.5160, Plg71.0000°, Azm69.0000°; N 0.1150, Plg5.0000°, Azm173.0000°; P -1.6300, Plg18.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 13:11:34.1±0.5, **30°.68S**±0°.02×**71°.76W**±0°.03, **h26**^{km}±3^{km}, **n890**, σ**1**^{s}**47**/872, **mb5.3**/97, **MS5.0**/144, **57C-63D**, **Fault plane solution: NP1:**φ$_s$273.52344°, δ8.15571°, λ-5.31618°. **NP2:**φ$_s$8.78616°, δ89.24689°, λ-98.12109°. **Principal axes:** T Plg43.6825°, Azm106.7256°; N Plg8.1204°, Azm8.8936°; P Plg45.1739°, Azm270.6401°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.11	87		Pb	13 11 39.3	+0.3
CO06				Sg	Sb	13 11 43.4	+1.1
CO06	Fray Jorge	0.11	87	⇓*i*P	Pb	13 11 39.2	+0.3
CO06				*i* S	Sb	13 11 42.8	+0.5
CO06				IAML		13 11 43.7	
	comp=N,548µm,0.3s						
CO02	Combarbal	0.84	129		Pb	13 11 48.9	-1.2
CO05	La Serena	0.88	31		Pn	13 11 50.5	-0.3
CO05				Sn	Sn	13 12 02.8	+0.1
CO05	La Serena	0.88	31	⇓*i*P	Pn	13 11 50.4	-0.3
CO05				*i* S	Sb	13 12 02.3	+0.2
GO04	Tololo Observa	0.97	59		Pn	13 11 51.9	-0.3
GO04				Sn	Sn	13 12 06.7	+1.4
GO04	Tololo Observa	0.97	59	⇓*i*P	Pn	13 11 52.0	-0.3
GO04				*i* S	Sn	13 12 05.8	+0.6
GO04				IAML		13 12 09.4	
	comp=E,372µm,0.5s						
GO04	Tololo Observa	0.97	59	*e*P	Pn	13 11 52.0	-0.2
GO04				*e*S	Sn	13 12 07.4	+2.1
CO01	Juntas del Tor	1.60	65		Pn	13 12 01.8	+0.9
CO01	Juntas del Tor	1.60	65	⇓*i*P	Pn	13 12 02.1	+1.2
CO01				*i* S	Sb	13 12 23.6	+0.6
CO01	Juntas del Tor	1.60	65	*e*P	Pn	13 12 02.2	+1.3
CO01				*e*S	Sb	13 12 24.3	+1.2
CO01				IAML		13 12 26.6	
	comp=Z,10µm,0.5s						
LCO	Las Campanas	1.90	29	Pn	Pn	13 12 05.4	+0.4
LCO	Las Campanas	1.90	29	P	Pn	13 12 05.4	+0.4
LCO	Las Campanas	1.90	29	⇑*i*P	Pn	13 12 05.5	+0.4
LCO				*i* S	Sn	13 12 29.4	+1.1
LCO	Las Campanas	1.90	29	*e*P	Pn	13 12 05.6	+0.6
LCO				*e*S	Sb	13 12 32.2	+0.6
VA06	Catapilco	1.92	168		Pn	13 12 04.8	-0.2
VA06	Catapilco	1.92	168	*i* P	Pn	13 12 04.6	-0.3
VA06				IAML		13 12 36.9	
	comp=N,64µm,0.5s						
AROD	Rodeo	2.04	76	*e*P	Pb	13 12 10.0	-0.7
VA03	San Esteban	2.32	154		Pn	13 12 11.5	+0.9
VA03	San Esteban	2.32	154	*e*P	Pn	13 12 11.2	+0.6
VA03				*e*S	Sn	13 12 41.1	+2.8
VA03				IAML		13 12 49.1	
	comp=E,43µm,0.4s						
VA03	San Esteban	2.32	154	*e*P	Pn	13 12 12.0	+1.4
VA03				*e*S	Sb	13 12 44.6	+1.1
VA03				IAML		13 12 49.7	
	comp=Z,25µm,0.6s						
ACCO	Cerro Coronel	2.33	88	*e*P	Pb	13 12 14.6	-0.9
ACDV	Cuesta del Vie	2.34	78	*e*P	Pb	13 12 15.3	-0.3
ACDV				IAML		13 12 55.0	
	comp=Z,7µm,1.5s						
VA01	Torpederas	2.34	178	Pn	Pn	13 12 09.7	-1.0
VA01	Torpederas	2.34	178	*e*P	Pn	13 12 10.4	-0.4
VA01	Torpederas	2.34	178	*e*P	Pn	13 12 10.7	0.0
VA01				*e*S	Sb	13 12 46.2	+2.3
VA01				IAML		13 12 50.3	
	comp=Z,7µm,1.4s						
ROCH	El Roble	2.37	165	*e*P	Pn	13 12 11.5	+0.1
ROCH				*e*S	Sn	13 12 40.6	+0.8
ROCH				IAML		13 12 53.8	
	comp=N,53µm,0.5s						
ROC1	El Roble	2.38	165	*e*P	Pn	13 12 10.0	-1.5
ROC1				*e*S	Sb	13 12 44.5	-0.8
RTLS	Leoncito	2.39	118	*e*P	Pb	13 12 15.0	-1.5
RTLS				*e*S	Sb	13 12 49.2	+3.5
RTLS				IAML		13 12 56.4	
	comp=Z,37µm,0.7s						
AC04	Llanos de Chal	2.54	14	Pn	Pn	13 12 13.1	-0.4
AC04	Llanos de Chal	2.54	14	⇑*i*P	Pn	13 12 13.2	-0.3
AC04				*e*S	Sn	13 12 43.7	+0.1
AC04	Llanos de Chal	2.54	14	*e*P	Pn	13 12 13.2	-0.3
AC04				IAML		13 13 02.1	
	comp=Z,8µm,0.7s						
AUSP	Uspallata	2.55	128	*e*P	Pb	13 12 17.2	-2.1
PEL	Peldehue	2.62	160		Pn	13 12 14.9	+0.2
PEL	Peldehue	2.62	160	P	Pn	13 12 14.9	+0.2
PEL	Peldehue	2.62	160	⇑*i*P	Pn	13 12 15.3	+0.6
PEL				*i* S	Sn	13 12 47.8	+2.1
PEL				IAML		13 12 57.2	
	comp=N,30µm,0.5s						
PEL	Peldehue	2.62	160	*e*P	Pn	13 12 15.6	+0.9
PEL				*e*S	Sb	13 12 52.8	+0.6
MT02	Curacav	2.63	169		Pn	13 12 15.0	+0.2
MT02	Curacav	2.63	169	*e*P	Pn	13 12 13.9	-0.9
MT02				*e*S	Sn	13 12 45.9	+0.1
MT02	Curacav	2.63	169	*e*P	Pn	13 12 14.6	-0.2
MT02				*e*S	Sb	13 12 52.8	+0.6
MT02				IAML		13 12 59.1	
	comp=Z,11µm,0.8s						
ZON	Zonda	2.78	109	*e*P	Pb	13 12 21.0	-2.1
ZON				*e*S	Sb	13 12 58.4	+1.6
ZON				IAML		13 13 12.8	
	comp=Z,7µm,1.6s						
MT05	Renca	2.84	162	Pn	Pn	13 12 18.0	+0.3
MT05	Renca	2.84	162	⇑*i*P	Pn	13 12 18.2	+0.5
MT05				*i* S	Sn	13 12 52.6	+1.5
MT05				IAML		13 13 05.0	
	comp=E,31µm,0.7s						
MT05	Renca	2.84	162	*e*P	Pn	13 12 19.2	+1.4
MT05				*e*S	Sb	13 12 58.6	+0.1
MT05				IAML		13 13 04.9	
	comp=Z,22µm,0.8s						
FCH	Farellones	2.92	155	⇑*i*P	Pn	13 12 19.8	+0.7
FCH				IAML		13 13 10.2	
	comp=E,9µm,0.7s						
VA05	Santo Domingo	2.97	178		Pn	13 12 19.1	-0.3
VA05	Santo Domingo	2.97	178	*e*P	Pn	13 12 18.7	-0.8
VA05				IAML		13 13 07.7	
	comp=N,23µm,0.6s						
RTCV	Cerro Valdivia	3.00	114	*e*P	Pb	13 12 24.6	-2.2
RTCV				*e*S	Sb	13 13 13.4	+10
MT03	Universidad Ad	3.00	160		Pn	13 12 21.1	+1.1
MT03	Universidad Ad	3.00	160	⇑*i*P	Pn	13 12 20.8	+0.8
MT03				*i* S	Sn	13 12 56.3	+1.1
MT03	Universidad Ad	3.00	160	*e*P	Pn	13 12 21.8	+1.8
MT03				*e*S	Sb	13 13 06.4	+3.3
MT03				IAML		13 13 12.8	
	comp=Z,15µm,1.6s						
ASAL	Salagasta	3.14	128	*e*P	Pb	13 12 26.2	-3.0
MT09	Talagante	3.16	168		Pn	13 12 22.2	+0.1
MT09	Talagante	3.16	168	⇑*i*P	Pn	13 12 22.4	+0.3
MT09				*i* S	Sn	13 13 00.2	+1.1
MT09				IAML		13 13 14.0	
	comp=E,15µm,0.5s						
ARCO	CERRO ARCO	3.23	133	*e*P	Pb	13 12 28.2	-2.7
ARCO				*e*S	Sb	13 13 21.4	+12
ARCO				IAML		13 13 26.3	
	comp=Z,6µm,0.6s						
GO03	Copiap	3.35	24		Pn	13 12 24.4	-0.4
GO03	Copiap	3.35	24	*e*P	Pn	13 12 24.8	0.0
GO03				*i* S	Sn	13 13 04.3	+0.5
GO03				IAML		13 13 28.6	
	comp=N,6µm,0.4s						
GO03	Copiap	3.35	24	*e*P	Pn	13 12 25.6	+0.8
GO03				*e*S	Sb	13 13 18.0	+4.8
LMEL	Las Melosas	3.42	158		Pn	13 12 27.3	+1.5
BO04	La Punta	3.44	164		Pn	13 12 26.3	+0.3
BO04	La Punta	3.44	164	*e*P	Pn	13 12 26.4	+0.3
BO04				IAML		13 13 23.3	
	comp=E,9µm,0.4s						
AAGR	Agrelo	3.46	135	*e*P	Pb	13 12 31.0	-3.7
AC06	Mina Casimiro	3.53	21	Pn	Pn	13 12 26.9	-0.4
AC06	Mina Casimiro	3.53	21	⇑*i*P	Pn	13 12 27.2	-0.1
AC06				*i* S	Sn	13 13 08.0	-0.2
AC06				IAML		13 13 26.4	
	comp=E,4µm,0.3s						
AVFE	Valle Fertil	3.71	91	*e*P	Pn	13 12 32.6	+2.9
AVFE				*e*S	Sb	13 13 30.7	+7.2
AVFE				IAML		13 13 33.8	
	comp=Z,3µm,0.8s						
GO05	Huala	4.32	182		Pn	13 12 37.5	-0.5
GO05	Huala	4.32	182	*e*P	Pn	13 12 36.8	-1.3
GO05				*e*S	Sb	13 13 46.0	+5.0
ACLC	CERRO LA CRUZ	4.35	75	*e*P	Pn	13 12 41.9	+3.3
ACLC				*e*S	Sb	13 13 44.2	+2.1
ACLC				IAML		13 13 53.5	
	comp=Z,5µm,3.1s						
ACHE	Chepes	4.41	98	*e*P	Pn	13 12 41.7	+2.4
AC02	Maricunga	4.47	32	Pn	Pn	13 12 40.9	+0.3
AC02	Maricunga	4.47	32	*e*P	Pn	13 12 41.7	+1.1
AC02				*e*S	Sb	13 13 50.6	+4.7
AC02				IAML		13 13 52.7	
	comp=Z,4µm,1.8s						
APLL	PUNTA DE LOS L	4.52	88	*e*P	Pn	13 12 43.5	+2.6
AC01	Pan de Azucar	4.63	13		Pn	13 12 40.0	-2.3
AC01	Pan de Azucar	4.63	13	*e*P	Pn	13 12 40.4	-2.0
AC01				*e*S	Sb	13 13 53.8	+3.9
AC01				IAML		13 14 11.2	
	comp=Z,2µm,1.1s						
RFA	San Rafael	4.94	147	*e*P	Pn	13 12 48.7	+2.2
RFA				IAML		13 14 16.9	
	comp=Z,3µm,0.9s						
ML02	Panimavida	5.08	177	Pn	Pn	13 12 48.6	+0.1
BI05	Punta Hualpn	6.17	191		Pn	13 13 01.3	-2.1
H03N1	Juan Fernandez	6.67	244	T	T	13 20 03.0	
	baz=72,slow=72,SNR=6423						
H03N3	Juan Fernandez	6.68	244	T	T	13 20 02.6	
	baz=72,slow=72,SNR=3217						
H03N2	Juan Fernandez	6.68	244	T	T	13 20 00.0	
	baz=72,slow=72,SNR=4080						
LVC	Limon Verde	8.43	18	Pn	Pn	13 13 32.2	-2.7
	comp=Z,1.2nm,0.3s,baz=206,slow=7.9,SNR=15						
LVC				Sn	Sn	13 15 07.1	-2.3
	comp=Z,7.8nm,0.3s,baz=180,slow=14,SNR=1.8						
LVC				LR	LR	13 16 51.5	
	comp=Z,10µm,20.1s,baz=210,slow=38						
	comp=Z,2.4nm,0.3s						
LVC	Limon Verde	8.43	18		Pn	13 13 32.6	-2.3
LVC	Limon Verde	8.43	18	*e*P	Pn	13 13 31.5	-3.4
LVC	Limon Verde	8.43	18	*e*P	Pn	13 13 35.6	+0.7
LVC				*e*S	Sn	13 15 09.8	+0.5
LR03	Panguipulli	8.95	183	Pn	Pn	13 13 40.7	-0.8
PB09	IPOC Station P	9.13	15		Pn	13 13 42.5	-1.8
PB02	IPOC Station P	9.47	11		Pn	13 13 46.4	-2.5
PB01	IPOC Station P	9.81	13		Pn	13 13 50.9	-2.7
PLCA	Paso Flores	10.08	175	Pn	Pn	13 13 56.9	-0.3
	comp=Z,0.8nm,0.3s,baz=342,slow=13,SNR=16						
PLCA				LR	LR	13 17 55.7	
	comp=Z,6µm,20.5s,baz=351,slow=38						
	comp=Z,5.4nm,0.6s						
PLCA	Paso Flores	10.08	175		Pn	13 13 57.3	+0.2
LL04	Puerto Octay	10.22	183		Pn	13 13 58.6	-0.4
TRQA	Tornquist	10.93	135		Pn	13 14 08.2	-0.5
TRQA	Tornquist	10.93	135	P	Pn	13 14 08.2	-0.5
PB12	IPOC Station P	12.08	7		Pn	13 14 25.5	+0.9
LPA	La Plata	12.38	114	*e*P	Pn	13 14 28.1	-0.4
LPA				pPP		13 14 40.2	
LPA				PP	PbPb	13 15 07.8	-1.9
LPA				S	Sn	13 16 45.4	-0.1
LPA				SS	SnSn	13 17 02.3	+4.8
LPA				SSS	SSS	13 17 15.8	
LPA				PCP	PcP	13 20 10.4	+1.7
LPA				SCS	ScS	13 27 12.5	-3.5
LPA				PKIKP	PKiKP	13 28 08.1	+1.8
LPA				SKIKP		13 31 37.2	
LPA				PKIKS		13 31 42.6	
LPA				SKIKS		13 35 10.8	
ITQB	Itaqui	13.14	89		Pn	13 14 37.3	-1.6
ITQB	Itaqui	13.14	89	*e*P	Pn	13 14 37.4	-1.5
CPUP	Villa Florida	13.41	75	Pn	Pn	13 14 40.4	-2.3
	comp=Z,1.0nm,0.3s,baz=236,slow=11,SNR=12						
CPUP				Sn	Sn	13 17 06.8	-4.0
	comp=Z,1.7nm,0.3s,baz=209,slow=19,SNR=2.3						
CPUP				LR	LR	13 20 13.5	
	comp=Z,6µm,21.8s,baz=254,slow=39						
	comp=Z,4.8nm,0.5s						
CPUP	Villa Florida	13.41	75		Pn	13 14 41.6	-1.0
CPUP	Villa Florida	13.41	75	*e*P	Pn	13 14 41.7	-1.0
LPAZ	La Paz	14.71	14	Pn	Pn	13 15 01.8	+0.8
	comp=Z,1.2nm,0.3s,baz=181,slow=7.8,SNR=70						
	comp=Z,39nm,0.9s						
LPAZ	La Paz	14.71	14	*e*P	Pn	13 15 02.1	+1.2
COYC	Coyhaique	14.87	181		Pn	13 14 59.9	-2.5
PLTB	Pedras Altas	15.57	99		Pn	13 15 10.4	-1.5
PLTB	Pedras Altas	15.57	99	*e*P	Pn	13 15 08.1	-3.7
CPSB	Cacapava Do Su	15.79	94	*e*P	Pn	13 15 11.8	-2.8
MCR1	Marechal Candi	16.89	73	*e*P	Pn	13 15 28.1	-0.5
ITAB	Concordia	17.52	84	P	Pn	13 15 35.5	-1.0
ITAB	Concordia	17.52	84	*e*P	Pn	13 15 35.7	-0.8
AQDB	Aquidauana	17.68	59	*e*P	Pn	13 15 36.3	-2.2
GO08	Villa O'Higgin	17.77	182	P	P	13 15 39.9	-0.2
CNLB	Canela	18.16	91	*e*P	Pn	13 15 43.4	-1.0
PTGB	Pitanga	18.42	76	*e*P	P	13 15 47.4	0.0
TRCB	Terra Rica	18.79	70	P	P	13 15 51.4	-0.1
TRCB				IAmb	IAmb	13 16 04.4	
	comp=Z,533nm,1.6s						
TRCB	Terra Rica	18.79	70	*e*P	P	13 15 51.4	-0.1
PTLB	Pontes e Lacer	19.07	40	*e*P	P	13 15 54.0	-0.6
NNA	Nana	19.19	345	P	Pn	13 15 56.9	0.0
	comp=Z,1.6nm,0.3s,baz=181,slow=14,SNR=3.0						
NNA				LR	LR	13 21 49.4	
	comp=Z,2µm,19.6s,baz=168,slow=32						
	comp=Z,6.3nm,0.3s						
NNA	Nana	19.19	345	P	P	13 15 54.6	-1.3
NNA	Nana	19.19	345	P	P	13 15 54.6	-1.3

NNA				pmax	pmax		
	comp=Z,54nm,1.2s						
TER01	Tubaro-SC	19.79	90	eP	P	13 16 02.4	0.0
PP1B	Ponte de Pedra	20.14	54	eP	P	13 16 05.4	-0.8
PCMB	Pacaembu	20.48	69	eP	P	13 16 09.0	-0.9
VILB	Vilhena	20.62	34	eP	P	13 16 11.0	-0.5
TIJ01	Guaruva-PR	20.78	81	eP	P	13 16 10.0	-3.3
SALV	Santo Antonio	20.80	49	eP	P	13 16 12.1	-1.3
C2SB	Chapadao do Su	20.85	60	eP	P	13 16 13.6	-0.3
FRTB	Fartura	21.06	75	eP	P	13 16 15.7	-0.6
ETMB	Extrema	21.39	15	eP	P	13 16 20.0	+0.2
NBRS	Nobres	21.93	46	eP	P	13 16 24.1	-1.5
ITRB	Iturama	22.20	66	eP	P	13 16 27.1	-1.3
GO10	Punta Arenas	22.46	179	P	P	13 16 31.5	+0.5
PET01	Itanhaem-SP	22.61	80	eP	P	13 16 33.1	+0.3
DVLD	Doverlandia	22.70	56	eP	P	13 16 31.7	-2.1
SPB	Sao Paulo	22.75	78	eP	P	13 16 32.6	-1.7
CZSB	Cruzeiro do Su	22.85	358	eP	P	13 16 36.7	+1.3
BB19B	Bebedouro	22.95	71	eP	P	13 16 36.1	-0.4
RCLB	Rio Claro- Sao	23.15	75	eP	P	13 16 36.9	-1.7
MG03	Isla Dawson	23.17	178	P	P	13 16 39.0	+0.6
MG03				IAmb	IAmb	13 16 40.6	
	comp=Z,170nm,1.4s						
EFI	East Falkland	23.30	158⇓	eP	P	13 16 40.0	+0.4
EFI				pmax	pmax		
	comp=Z,12nm,0.6s						
VAO	Valinhos	23.38	77	eP	P	13 16 39.0	-1.8
DSPA	Despedida	23.40	175	P	P	13 16 41.6	+1.0
PDRB	Porto dos Gac	23.54	40	eP	P	13 16 40.3	-2.1
ATAH	Atahualpa	24.23	344	P	P	13 16 51.4	+2.1
	comp=Z,7.6nm,0.8s,baz=161,slow=9.1,SNR=8.5						
ATAH				LR	LR	13 24 55.2	
	comp=Z,1µm,18.7s,baz=174,slow=33						
	comp=Z,7.6nm,0.8s						
USHA	Ushuaia	24.26	175	P	P	13 16 47.8	-1.0
	comp=Z,56nm,0.9s,baz=352,slow=7.6,SNR=30						
USHA				LR	LR	13 27 06.3	
	comp=Z,4µm,18.2s,baz=349,slow=39						
	comp=Z,56nm,0.9s						
PARB	Paraibuna	24.37	79	eP	P	13 16 49.4	-0.8
MG01	Puerto William	24.42	174	P	P	13 16 49.9	-0.3
CLDB	Colider	24.66	40	eP	P	13 16 52.1	-0.6
SLP01	Ubatuba-SP	24.77	79	eP	P	13 16 52.7	-1.2
IPMB	Ipameri, GO	24.84	65	eP	P	13 16 53.1	-1.3
ESAR	Angra dos Reis	25.50	79	eP	P	13 16 59.0	-1.3
MAN01	Angra dos Reis	25.96	79	eP	P	13 17 04.0	-0.6
BSCB	Bom Sucesso	26.08	75	eP	P	13 17 04.2	-1.5
BDFB	Brasilia	26.39	61	P	P	13 17 07.4	-1.2
	comp=Z,17nm,0.6s,baz=230,slow=7.2,SNR=26						
BDFB				LR	LR	13 28 38.5	
	comp=Z,7µm,18.6s,baz=237,slow=39						
	comp=Z,17nm,0.6s						
BDFB	Brasilia	26.39	61	P	P	13 17 07.2	-1.4
BDFB	Brasilia	26.39	61	P	P	13 17 07.2	-1.4
BDFB				pmax	pmax		
	comp=Z,307nm,1.1s						
TBTG	Tabatinga, AM	26.41	4	eP	P	13 17 08.4	-0.2
TBTG	Tabatinga, AM	26.41	4	eP	P	13 17 09.2	+0.6
SNDB	Serra Nova Dou	26.56	50	eP	P	13 17 09.4	-0.5
VAS01	Vassouras-RJ	26.64	79	eP	P	13 17 10.7	0.0
DUB01	Friburgo-RJ	27.62	79	eP	P	13 17 19.1	-0.4
CFSA	Confresa	27.96	47	eP	P	13 17 23.1	+0.5
DIAM	Diamantina, MG	28.29	71	eP	P	13 17 25.6	0.0
CAM01	Campos-RJ	28.33	79	eP	P	13 17 26.0	+0.2
PEXB	Peixe	28.51	55	eP	P	13 17 26.8	-0.7
MACA	Manacapuru-AM	29.30	23	eP	P	13 17 34.7	+0.2
JANB	Januaria	29.58	64	eP	P	13 17 35.9	-1.1
ALF01	Guarapari-ES	29.63	78	eP	P	13 17 36.7	-0.7
SJMB	Sao Joao De Ma	30.13	74	eP	P	13 17 41.0	-0.8
ITTB	Itaituba	30.22	33	eP	P	13 17 41.1	-1.5
BSFB	Barra de Sao F	30.35	74	eP	P	13 17 42.9	-0.9
RIB01	Linhares ES	30.50	76	eP	P	13 17 44.7	-0.4
SDBA	SAO DESIDERIO	30.77	60	eP	P	13 17 46.6	-0.9
SMTB	Santa Maria do	31.30	51	eP	P	13 17 51.6	-0.6
OTAV	Otavalo	31.40	347	eP	P	13 17 52.9	-0.6
PRPB	Parauapebas	31.92	45	eP	P	13 17 56.4	-1.2
GCUF	Volcan Galeras	32.17	349	eP	P	13 18 03.1	+2.8
GUA01	Guaratinga, BA	32.33	72	eP	P	13 18 00.0	-1.2
MACC	Macarena, Meta	32.70	356	eP	P	13 18 06.3	+1.8
SOTA	Rioblanco	32.96	351	eP	P	13 18 09.3	+2.1
RPN	Rapa Nui	32.98	267	LR	LR	13 27 48.5	
	comp=Z,2µm,21.4s,baz=124,slow=30						
MALB	Monte Alegre	33.12	33	eP	P	13 18 07.4	-0.6
PCON	Cinco Dias	33.12	352	eP	P	13 18 11.1	+2.4
CMC01	Camacan, BA	33.21	70	eP	P	13 18 08.4	-0.5
GDU01	Guandu, BA	34.08	67	eP	P	13 18 15.3	-1.2
PRAC	Prado	34.33	354	eP	P	13 18 20.5	+1.8
PMSA	Palmer Station	34.45	174	LR	LR	13 32 15.0	
	comp=Z,2µm,19.7s,baz=346,slow=36						
PMSA	Palmer Station	34.45	174	IAMs_20	IAMs_20	13 32 02.8	
	comp=Z,2µm,20.0s						
HOPE	Hope Point	34.54	143	IAMs_20	IAMs_20	13 31 50.4	
	comp=Z,2µm,20.0s						
ORTC	Ortega, Tolima	34.55	354	eP	P	13 18 20.5	-0.1
BOAV	Boa Vista	34.59	20	eP	P	13 18 20.3	-0.6
PAYG	Puerto Ayora	34.64	326	IAMs_20	IAMs_20	13 28 33.3	
	comp=Z,2µm,20.0s						
VILC	Villavicencio,	34.65	357	eP	P	13 18 23.4	+1.9
PTGC	Puerto Gaitan,	34.68	359	eP	P	13 18 21.3	-0.4
YOTC	Yotoco, Valle	34.74	352	eP	P	13 18 23.6	+1.3
ORCD	Orcadas	34.99	157	P	P	13 18 23.1	-0.7
ANIL	Santa Ana	35.15	354	eP	P	13 18 27.8	+1.8
CHIC	Chingaza	35.16	357	eP	P	13 18 27.8	+1.6
NBPN	Ponto Novo - B	35.31	63	eP	P	13 18 26.2	-1.0
ROSC	El Rosal	35.40	356	P	P	13 18 32.9	+4.6
	comp=Z,24nm,0.8s,baz=93,slow=18,SNR=8.5						
ROSC	El Rosal	35.40	356	IAmb	IAmb	13 18 34.4	
	comp=Z,36nm,1.0s						
ROSC	El Rosal	35.40	356	P	P	13 18 32.9	+4.6
ROSC				pmax	pmax		
	comp=Z,36nm,1.0s						
ROSC	El Rosal	35.40	356	eP	P	13 18 31.1	+2.8
MCPB	Macapa, AP	35.49	36	eP	P	13 18 28.3	-0.3
TMAB	Tom-Au,PA,Br	35.98	43	eP	P	13 18 32.7	-0.1
NORC	Norcasia	36.16	355	eP	P	13 18 29.1	-5.3
SPBC	San Pablo de B	36.19	356	eP	P	13 18 35.5	+0.7
RUSC	La Rusia	36.39	358	eP	P	13 18 37.5	+0.7
CBOC	Ciudad Bolivar	36.56	353	eP	P	13 18 39.8	+1.8
HELC	Santa Helena	36.84	354	eP	P	13 18 42.4	+1.9
BARC	Barichara	37.09	358	eP	P	13 18 43.4	+0.9
NBLA	Lagarto - SE	37.09	65	eP	P	13 18 40.4	-1.9
PTBC	PUERTO BERRIO,	37.10	356	eP	P	13 18 39.7	-2.7
DBBC	Dabeiba	37.72	353	eP	P	13 18 50.8	+3.0
ROSB	Rosrio	38.02	49	eP	P	13 18 49.4	-0.8
ZARC	Zaragoza, Cauc	38.07	355	P	P	13 18 49.8	-0.8
ZARC	Zaragoza, Cauc	38.07	355	eP	P	13 18 50.9	+0.3
UREC	San Jos de Ur	38.38	354	eP	P	13 18 52.1	-1.1
NBMA	Muriti-CE	38.62	60	eP	P	13 18 54.7	-0.6
NBPS	Pedro II - PI	38.72	54	eP	P	13 18 55.7	-0.5
OCAC	Ocana	38.72	358	P	P	13 18 54.1	-2.2
NBAN	Anadia - AL	39.07	65	eP	P	13 18 58.3	-0.8
NBPB	Pedra_Branca-C	39.23	57	eP	P	13 19 00.0	-0.4
SDV	Santo Domingo	39.35	2	LR	LR	13 36 42.8	
	comp=Z,2µm,18.6s,baz=176,slow=38						
SDV	Santo Domingo	39.35	2	P	P	13 19 00.8	-0.8
SDV	Santo Domingo	39.35	2	IAMs_20	IAMs_20	13 37 31.3	
	comp=Z,2µm,18.0s						
SDV	Santo Domingo	39.35	2	eP	P	13 18 59.6	-1.9
SDV	Santo Domingo	39.35	2	eP	P	13 19 01.2	-0.4
BAUV	El Baul	39.56	6	P	P	13 19 01.7	-1.4
MDP	Montagnes des	40.01	30	LR	LR	13 36 47.6	
	comp=Z,997nm,18.4s,baz=203,slow=38						
BCIP	Isla Barro Col	40.37	348	eP	P	13 19 10.1	+0.3
NBMO	Morrinhos-CE	40.47	54	eP	P	13 19 11.0	+0.3
SJCC	San Jacinto, C	40.48	355	P	P	13 19 10.4	-0.3
SJCC				IAmb	IAmb	13 19 20.9	
	comp=Z,68nm,1.2s						
SJCC	San Jacinto, C	40.48	355	eP	P	13 19 10.6	-0.1
NBRF	Rio Formoso -	40.57	65	eP	P	13 19 11.4	-0.1
NBCL	Cascavel-CE	41.07	57	eP	P	13 19 16.4	+0.8
BIRV	Birongo	41.26	8	P	P	13 19 15.7	-1.4
BIRV				IAmb	IAmb	13 19 18.6	
	comp=Z,61nm,1.0s						
RCBR	Riachuelo	41.77	61	LR	LR	13 38 18.1	
	comp=Z,3µm,18.6s,baz=7.5,slow=39						
RCBR	Riachuelo	41.77	61	eP	P	13 19 21.3	-0.1
NBPV	Pedro Velho	41.85	62	eP	P	13 19 21.7	-0.3
URIC	Uribia, Colomb	42.14	360	P	P	13 19 23.4	-0.9
JTS	Las Juntas de	42.66	341⇑	eP	P	13 19 27.5	-1.1
JTS				pmax	pmax		
	comp=Z,13nm,1.5s						
HATO	Hato, Curacao	42.70	4	IAMs_20	IAMs_20	13 39 15.0	
	comp=Z,1µm,19.0s						
GRGR	Grenville	43.66	14	IAMs_20	IAMs_20	13 41 22.5	
	comp=Z,1µm,20.0s						
MPOM	Morne Pois Mar	46.07	15	P	P	13 19 54.6	-1.2
MPOM				IAMs_20	IAMs_20	13 41 27.5	
	comp=Z,1µm,21.0s						
BIM	Bigot	46.10	14	IAMs_20	IAMs_20	13 41 17.2	
	comp=Z,1µm,21.0s						
FDF	Fort de France	46.29	14	IAMs_20	IAMs_20	13 42 55.3	
	comp=Z,2µm,20.0s						
ABD	La Joyeuse, An	47.91	13	IAMs_20	IAMs_20	13 43 02.2	
	comp=Z,1µm,20.0s						
MLPR	Magueyes Islan	48.58	6	P	P	13 20 13.7	-1.6
CRPR	Cabo Rojo, PR	48.61	6	P	P	13 20 14.1	-1.5
OBIP	Obispado Ponce	48.69	7	P	P	13 20 16.0	-0.2
CELP	Cerrillos	48.73	7	P	P	13 20 16.0	-0.4
PDPR	Patillas Dam,	48.73	7	P	P	13 20 15.3	-1.2
SJG	San Juan	48.81	7	P	P	13 20 15.7	-1.3
SJG	San Juan	48.81	7	P	P	13 20 15.7	-1.3
SJG				pmax	pmax		
	comp=Z,95nm,1.1s						
PRSN	Puerto Rico Se	48.82	6	P	P	13 20 16.4	-0.8
MTP	Monte Pirata	48.86	8	P	P	13 20 16.1	-1.3
AOPR	Arecibo Observ	48.98	6	P	P	13 20 17.3	-1.1
CBYP	Canovanas	49.00	7	P	P	13 20 17.6	-1.0
GCPR	Guaynabo City	49.01	7	P	P	13 20 16.7	-1.9
ANWB	Willy Bob	49.02	13	IAMs_20	IAMs_20	13 42 34.5	
	comp=Z,1µm,21.0s						
DR12	Loma Pena Alta	49.23	3	P	P	13 20 19.7	-0.7
SDDR	Presa de Saban	49.38	1	IAMs_20	IAMs_20	13 42 56.0	
	comp=Z,1µm,19.0s						
BELA	Belgrano 2	50.10	170	P	P	13 20 26.9	+0.6
BELA				IAmb	IAmb	13 20 28.4	
	comp=Z,41nm,1.4s						
GRTK	Grand Turk	51.90	1	IAMs_20	IAMs_20	13 44 33.7	
	comp=Z,1µm,19.0s						
VNA3	Neumayer Olymp	52.35	159	P	P	13 20 43.5	+0.3
CMIG	Matias Romero	52.45	332	LR	LR	13 37 54.7	
	comp=Z,523nm,21.5s,baz=150,slow=30						
VNA1	Neumayer--Stat	52.64	158	P	P	13 20 45.7	+0.3
VNA2	Neumayer--Watz	52.99	158	P	P	13 20 47.6	-0.4
	baz=282,slow=8.0						
SNAA	Sanae	54.57	159	P	P	13 20 59.4	-0.3
SNAA	Sanae	54.57	159⇑	iP	P	13 20 59.4	-0.3
SNAA	Sanae	54.57	159	LR	LR	13 42 17.9	
	comp=Z,997nm,21.4s,baz=300,slow=34						
SNAA	Sanae	54.57	159	P	P	13 20 59.6	0.0
SNAA				IAmb	IAmb	13 21 08.9	
	comp=Z,37nm,1.0s						
SNAA				IAMs_20	IAMs_20	13 41 44.6	
	comp=Z,1µm,21.0s						
SNAA	Sanae	54.57	159c	iP	P	13 20 59.5	-0.2
SNAA				pmax	pmax		
	comp=Z,35nm,1.1s						
UNM	Universidad Na	56.28	328	IAMs_20	IAMs_20	13 40 13.9	
	comp=Z,1µm,19.0s						
TROLL	Troll, Antarti	56.28	159	P	P	13 21 11.9	-0.2
DWPF	Disney Wildern	59.19	350	P	P	13 21 33.2	+0.5
	baz=170						
NVL	N'lazarevskaya	59.28	157⇑	iP	P	13 21 31.0	-1.9
NVL				pmax	pmax		
	comp=Z,18nm,1.0s						
QSPA	South Pole Qui	59.55	180	P	P	13 21 35.2	+0.2
	comp=Z,33nm,1.1s,baz=157,slow=6.6,SNR=47						
QSPA				LR	LR	13 46 31.3	
	comp=Z,412nm,21.5s,baz=167,slow=35						
QSPA				PKP2bc		13 51 15.4	
	comp=Z,4.6nm,1.1s,baz=275,slow=2.7,SNR=4.0						
	comp=Z,33nm,1.1s						
QSPA	South Pole Qui	59.55	180	P	P	13 21 35.0	0.0
QSPA				IAmb	IAmb	13 21 48.8	
	comp=Z,38nm,1.0s						
656A	Willston	60.59	349	P	P	13 21 42.0	-0.4
TIGA	Tifton	62.79	349	P	P	13 21 56.5	-0.6
	baz=169						
BRAL	Brewton	63.20	345	P	P	13 22 00.2	+0.4
	baz=165						
NHSC	New Hope	63.94	352	P	P	13 22 05.7	+1.0
	baz=172						
152A	Waverly Hall	64.19	348	P	P	13 22 05.9	-0.4
833A	Chaparral WMA,	64.33	333	P	P	13 22 09.2	+1.9
	baz=154,SNR=7.1						
833A	Chaparral WMA,	64.33	333	P	P	13 22 07.4	+0.1
	baz=154						
HKT	Hockley	64.50	337⇑	eP	P	13 22 07.3	-1.0
HKT				pmax	pmax		
	comp=Z,10.0nm,1.5s						
GOGA	Godfrey	64.70	349	P	P	13 22 09.0	-0.6
	baz=169						
LRAL	Lakeview Retre	64.99	346	P	P	13 22 11.2	-0.4
LRAL	Lakeview Retre	64.99	346	P	P	13 22 12.1	+0.5
	baz=166						
LRAL	Lakeview Retre	64.99	346	P	P	13 22 11.5	-0.1
	baz=166						
VBMS	Vicksburg	65.03	343	P	P	13 22 12.3	+0.5
	baz=162						
Y52A	Lilburn	65.24	349	P	P	13 22 13.1	-0.1
Y52A				IAmb	IAmb	13 22 14.4	
	comp=Z,27nm,1.2s						
Y49A	Blount Mountai	65.67	347	P	P	13 22 15.0	-1.0
NATX	Nacogdoches	65.79	339	P	P	13 22 17.4	+0.7
	baz=158						
LPIG	La Paz	65.82	321	LR	LR	13 44 44.6	
	comp=Z,194nm,20.0s,baz=120,slow=30						
CNNC	Cliffs of the	65.82	355	P	P	13 22 17.3	+0.4
	baz=174						
435B	Jarrell	65.87	336	P	P	13 22 18.1	+0.8
	baz=156						
W57A	Gilead	65.94	353	P	P	13 22 17.5	-0.1
W57A	Gilead	65.94	353	P	P	13 22 17.8	+0.1
	baz=172						
W57A				P	P	13 22 17.8	+0.1
	baz=172						
X51A	Calhoun	66.06	348	P	P	13 22 18.1	-0.4
X51A				IAmb	IAmb	13 22 20.0	
	comp=Z,43nm,1.1s						
X51A	Calhoun	66.06	348	P	P	13 22 19.1	+0.6
	baz=168,SNR=8.4						
X51A				P	P	13 22 19.1	+0.6
	baz=168,SNR=8.4						
KMSC	Kings Mountain	66.09	351	P	P	13 22 19.4	+0.8
	baz=171						
KMSC	Kings Mountain	66.09	351	P	P	13 22 18.8	+0.1
	baz=171						
CASEE	Lake Jocassee	66.17	350	P	P	13 22 20.1	+1.0
	baz=170						
Y45A	Yeager Farm, C	66.36	344	P	P	13 22 22.1	+1.7
	baz=163						
X48A	Hartselle	66.37	346	P	P	13 22 20.2	-0.2
X48A				IAmb	IAmb	13 22 21.9	
	comp=Z,28nm,1.0s						
X48A	Hartselle	66.37	346	P	P	13 22 21.0	+0.6
	baz=166,SNR=10						
JCT	Junction City	66.41	334	P	P	13 22 22.3	+1.5
	baz=154						
JCT	Junction City	66.41	334	P	P	13 22 21.6	+0.8
	baz=154						
W52A	Murphy	66.42	349	P	P	13 22 20.3	-0.5
W52A	Murphy	66.42	349	P	P	13 22 21.1	+0.3
	baz=169,SNR=5.8						
Z41A	Richland Creek	66.63	341	P	P	13 22 22.7	+0.6
	baz=160						
W50A	Signal Mountai	66.76	348	P	P	13 22 22.3	-0.7
W50A				IAmb	IAmb	13 22 24.5	
	comp=Z,30nm,1.1s						
W50A	Signal Mountai	66.76	348	P	P	13 22 23.6	+0.6
	baz=167,SNR=9.4						
V55A	Taylorsville	66.77	352	P	P	13 22 23.1	+0.1
V55A				IAmb	IAmb	13 22 24.6	
	comp=Z,21nm,1.1s						
V55A	Taylorsville	66.77	352	P	P	13 22 23.6	+0.6
	baz=171,SNR=7.5						
V55A				P	P	13 22 23.6	+0.6
	baz=171,SNR=7.5						
V53A	Saluda	66.81	350	P	P	13 22 23.9	+0.6
	baz=170,SNR=6.8						
V53A				P	P	13 22 23.9	+0.6
	baz=170,SNR=6.8						
CPCT	Cooper Cave	66.87	349	P	P	13 22 22.7	-0.9
CPCT				IAmb	IAmb	13 22 25.1	
	comp=Z,27nm,1.1s						
SWET	Sewanee	66.89	347	P	P	13 22 23.4	-0.4
SWET				IAmb	IAmb	13 22 25.2	
	comp=Z,29nm,1.1s						
WHTX	Lake Whitney,	66.92	336	P	P	13 22 25.5	+1.5
	baz=156						
WHTX	Lake Whitney,	66.92	336	P	P	13 22 24.3	+0.3
	baz=156						
OXF	Oxford	66.94	344	P	P	13 22 24.0	-0.1
	baz=164						
TKL	Tuckaleechee C	66.95	349	P	P	13 22 24.0	-0.1
	baz=169,SNR=8.7						
TAOE	Nuku Hiva Isla	66.97	273	eS	S	13 31 18.7	+1.7
	comp=Z,376nm,25.5s						
TAOE	Nuku Hiva Isla	66.97	273	eLR	LR	13 42 35.8	
	comp=Z,619nm,22.8s						
TXAR	Lajitas Array	66.97	330	P	P	13 22 25.4	+0.8
	comp=Z,3.1nm,0.7s,baz=152,slow=8.0,SNR=40						
TXAR				LR	LR	13 47 35.2	
	comp=Z,752nm,18.1s,baz=146,slow=32						
TXAR				PKP2ab		13 51 00.4	
	comp=Z,0.2nm,0.3s,baz=316,slow=2.5,SNR=5.0						
	comp=Z,3.1nm,0.7s						
TXAR	Lajitas Array	66.97	330	P	P	13 22 24.8	+0.3
TXAR	Lajitas Array	66.97	330	P	P	13 22 24.8	+0.3
TX31	Lajitas Ar. Si	66.97	330	P	P	13 22 24.5	-0.1
TX31	Lajitas Ar. Si	66.97	330	P	P	13 22 25.7	+1.2
	baz=150,SNR=11						
V52A	Sevierville	67.10	350	P	P	13 22 25.3	+0.2
V52A				IAmb	IAmb	13 22 26.2	
	comp=Z,28nm,1.1s						
V52A	Sevierville	67.10	350	P	P	13 22 24.8	-0.2
	baz=169,SNR=10						
V51A	Loudon	67.18	349	P	P	13 22 25.6	0.0
V51A	Loudon	67.18	349	P	P	13 22 26.1	+0.5
	baz=168,SNR=7.2						
VNDA	Vanda	67.39	191	P	P	13 22 27.7	+1.1
	comp=Z,2.3nm,0.8s,baz=151,slow=4.9,SNR=12						
VNDA				LR	LR	13 50 10.1	
	comp=Z,216nm,18.1s,baz=134,slow=34						
VNDA				PKPPKP	P'P'df	13 50 51.1	-5.9
	comp=Z,1.1nm,1.0s,baz=321,slow=3.4,SNR=4.3						
	comp=Z,2.3nm,0.8s						
U54A	Nelsons Funny	67.51	351	P	P	13 22 26.5	-1.2
U54A				IAmb	IAmb	13 22 29.0	
	comp=Z,31nm,1.1s						
U54A	Nelsons Funny	67.51	351	P	P	13 22 28.2	+0.5
	baz=171,SNR=7.1						
U54A				P	P	13 22 28.2	+0.5
	baz=171,SNR=7.1						
W45A	Hickory Valley	67.51	345	P	P	13 22 27.5	-0.2
T59A	Double "B" Far	67.52	355	P	P	13 22 28.5	+0.9
	baz=175						
T59A				P	P	13 22 28.5	+0.9
	baz=175						
V48A	Smith Brothers	67.57	347	P	P	13 22 27.8	-0.2
V48A				IAmb	IAmb	13 22 29.6	
	comp=Z,36nm,1.1s						
V48A	Smith Brothers	67.57	347	P	P	13 22 28.3	+0.3
	baz=166,SNR=8.3						
TZTN	Tazewell	67.78	350	P	P	13 22 28.7	-0.7
	baz=169						
X40A	Basin Creek Fa	67.80	341	P	P	13 22 29.5	0.0
X40A				IAmb	IAmb	13 22 39.7	
	comp=Z,37nm,1.9s						
X40A	Basin Creek Fa	67.80	341	P	P	13 22 29.6	+0.1
	baz=160						
CLTN	Cedars of Leba	67.81	347	P	P	13 22 29.1	-0.5
CLTN				IAmb	IAmb	13 22 31.1	
	comp=Z,21nm,1.0s						
UALR	University of	67.93	342	P	P	13 22 29.7	-0.7
BLA	Blacksburg	68.02	353	P	P	13 22 30.5	-0.5
	baz=172						
MIAR	Mount Ida	68.06	341	P	P	13 22 31.0	-0.1
MIAR				IAmb	IAmb	13 22 42.2	
	comp=Z,40nm,1.6s						
MIAR	Mount Ida	68.06	341	P	P	13 22 31.0	-0.1
MIAR				pmax	pmax		
	comp=Z,40nm,1.6s						
MIAR	Mount Ida	68.06	341	P	P	13 22 31.4	+0.3
	baz=160,SNR=8.0						
MIAR	Mount Ida	68.06	341	P	P	13 22 31.4	+0.3
	baz=160,SNR=8.0						
Z35A	Perchaven, San	68.08	337	P	P	13 22 33.2	+1.9
	baz=156						
U49A	Red Boiling Sp	68.12	348	P	P	13 22 31.2	-0.3
U49A	Red Boiling Sp	68.12	348	P	P	13 22 31.9	+0.4
	baz=167,SNR=6.6						
WVT	Waverly	68.15	346	P	P	13 22 31.4	-0.3
WVT				IAmb	IAmb	13 22 33.0	
	comp=Z,36nm,1.1s						
WVT	Waverly	68.15	346	P	P	13 22 31.4	-0.3
WVT				pmax	pmax		
	comp=Z,36nm,1.1s						
WVT	Waverly	68.15	346	P	P	13 22 32.1	+0.4
	baz=165,SNR=15						
WVT	Waverly	68.15	346	P	P	13 22 31.7	0.0
	baz=165						
ABTX	Abilene, Hawle	68.27	335	P	P	13 22 33.0	+0.4
	baz=154						
W41B	Gary Mavity, V	68.28	342	P	P	13 22 32.9	+0.4
	baz=161						
W41B	Gary Mavity, V	68.28	342	P	P	13 22 32.9	+0.4
	baz=161						
TBI	Tubuai	68.36	255	eP	P	13 22 36.4	+2.9
	comp=Z,96nm,25.8s						
TBI				eS	S	13 31 34.2	+0.9
	comp=Z,464nm,25.0s						
TBI	Tubuai	68.36	255	eLR	LR	13 43 07.6	
	comp=Z,1µm,25.5s						
TBI	Tubuai	68.36	255	eT	T	14 37 05.6	
	comp=Z,36nm,0.2s						
WHAR	Wooly Hollow	68.41	342	P	P	13 22 33.6	+0.3
WHAR				IAmb	IAmb	13 22 44.4	
	comp=Z,44nm,1.5s						
S57A	Dark Hollow, R	68.42	354	P	P	13 22 34.1	+0.8
	baz=173						
S57A				P	P	13 22 34.1	+0.8
	baz=173						
T50A	Nancy	68.45	349	P	P	13 22 33.5	-0.1
	baz=168						
T50A				P	P	13 22 33.5	-0.1
	baz=168						
R58B	Mineral	68.53	355	P	P	13 22 34.6	+0.6
R58B				IAmb	IAmb	13 22 49.8	
	comp=Z,56nm,1.6s						
R58B	Mineral	68.53	355	P	P	13 22 35.1	+1.1
	baz=174,SNR=7.1						
R58B				P	P	13 22 35.1	+1.1
	baz=174,SNR=7.1						
X37A	Clayton	68.63	339	P	P	13 22 35.0	+0.3
X37A				IAmb	IAmb	13 22 46.1	
	comp=Z,53nm,1.7s						
X37A	Clayton	68.63	339	P	P	13 22 35.9	+1.2
	baz=158						
S54A	Dingess, Beckl	68.71	352	P	P	13 22 35.9	+0.7
	baz=171						
S54A				P	P	13 22 35.9	+0.7
	baz=171						
W39A	Magazine	68.73	341	P	P	13 22 35.6	+0.3
W39A				IAmb	IAmb	13 22 37.7	
	comp=Z,42nm,1.1s						
W39A	Magazine	68.73	341	P	P	13 22 36.5	+1.2
	baz=160,SNR=22						
W39A	Magazine	68.73	341	P	P	13 22 35.9	+0.6
	baz=160,SNR=22						
CBN	Corbin Frederi	68.73	355	P	P	13 22 35.3	0.0
	baz=175						
T47A	Sharon Grove	68.83	347	P	P	13 22 35.6	-0.3
T47A				IAmb	IAmb	13 22 37.3	
	comp=Z,35nm,1.1s						
T47A	Sharon Grove	68.83	347	P	P	13 22 36.0	+0.1
	baz=166,SNR=9.3						
LCAR	Lake Charles	68.85	343	P	P	13 22 35.7	-0.3
LCAR				IAmb	IAmb	13 22 37.4	
	comp=Z,20nm,0.8s						
LCAR	Lake Charles	68.85	343	P	P	13 22 36.6	+0.5
	baz=162,SNR=11						
R55A	Marlinton	69.05	353	P	P	13 22 38.4	+1.0
	baz=172,SNR=5.5						
R55A				P	P	13 22 38.4	+1.0
	baz=172,SNR=5.5						
PBMO	Poplar Bluff	69.35	344	P	P	13 22 39.1	0.0
PBMO				IAmb	IAmb	13 22 40.6	
	comp=Z,22nm,0.9s						
PBMO	Poplar Bluff	69.35	344	P	P	13 22 39.7	+0.6
	baz=163,SNR=6.9						
X34A	Smith Ranch, M	69.43	337		P	13 22 40.0	+0.2
X34A				IAmb	IAmb	13 22 50.3	
	comp=Z,48nm,1.3s						
U40A	Yellville	69.56	342	P	P	13 22 40.7	+0.2
	baz=161,SNR=17						
U40A				P	P	13 22 40.7	+0.2

	baz=161,SNR=17						
U40A	Yellville	69.56	342	P	P	13 22 40.5	0.0
	baz=161,SNR=17						
Q56A	Snyder Ridge,	69.71	354	P	P	13 22 41.6	+0.2
	baz=173,SNR=8.3						
Q56A				P	P	13 22 41.6	+0.2
	baz=173,SNR=8.3						
MNTX	Cornudas Mount	69.75	330	IAMs_20	IAMs_20	13 48 55.8	
	comp=Z,988nm,19.0s						
MNTX	Cornudas Mount	69.75	330	P	P	13 22 41.7	-0.2
	baz=150,SNR=12						
MNTX	Cornudas Mount	69.75	330	P	P	13 22 41.5	-0.3
	baz=150						
HHAR	Hobbs	69.79	341	P	P	13 22 42.1	+0.2
HHAR				IAmb	IAmb	13 22 43.4	
	comp=Z,28nm,1.0s						
HHAR	Hobbs	69.79	341	P	P	13 22 43.0	+1.1
	baz=160						
Q54A	Coxs Mills	69.82	352	P	P	13 22 42.4	+0.4
	baz=172						
Q54A				P	P	13 22 42.4	+0.4
	baz=172						
WMOK	Wichita Mounta	69.87	337	P	P	13 22 42.7	+0.2
	baz=155,SNR=5.6						
WMOK	Wichita Mounta	69.87	337	P	P	13 22 42.4	-0.1
	baz=155,SNR=5.6						
S44A	Carbondale	69.96	345	P	P	13 22 43.0	+0.2
S44A				IAmb	IAmb	13 22 44.2	
	comp=Z,28nm,0.9s						
S44A	Carbondale	69.96	345	P	P	13 22 43.8	+0.9
	baz=164,SNR=7.8						
SIUC	Southern Illin	69.97	345	P	P	13 22 43.1	+0.1
SIUC				IAmb	IAmb	13 22 44.3	
	comp=Z,29nm,0.8s						
Q52A	Bidwell	69.97	351	P	P	13 22 43.6	+0.6
	baz=170						
Q52A				P	P	13 22 43.6	+0.6
	baz=170						
TUL1	Leonard	69.98	339	P	P	13 22 44.1	+1.0
	baz=158						
TUL1	Leonard	69.98	339	P	P	13 22 42.7	-0.4
	baz=158						
P57A	Homestead Farm	70.05	355	P	P	13 22 44.2	+0.8
P57A				IAmb	IAmb	13 22 46.0	
	comp=Z,22nm,1.1s						
P57A	Homestead Farm	70.05	355	P	P	13 22 44.4	+1.0
	baz=174,SNR=8.2						
P57A				P	P	13 22 44.4	+1.0
	baz=174,SNR=8.2						
MGMO	Mountain Grove	70.16	343	P	P	13 22 43.9	-0.2
Q51A	Peebles	70.18	350	P	P	13 22 44.7	+0.4
	baz=169,SNR=6.2						
Q51A				P	P	13 22 44.7	+0.4
	baz=169,SNR=6.2						
P53A	Whipple	70.38	352	P	P	13 22 45.4	-0.1
P53A				IAmb	IAmb	13 22 46.3	
	comp=Z,53nm,1.8s						
P53A	Whipple	70.38	352	P	P	13 22 46.3	+0.9
	baz=171						
P53A				P	P	13 22 46.3	+0.9
	baz=171						
FVM	French Village	70.50	344	P	P	13 22 46.3	+0.1
FVM				IAmb	IAmb	13 22 47.8	
	comp=Z,47nm,1.2s						
FVM	French Village	70.50	344	P	P	13 22 46.3	+0.1
FVM				pmax	pmax		
	comp=Z,47nm,1.2s						
FVM	French Village	70.50	344	P	P	13 22 46.9	+0.7
	baz=163,SNR=11						
P51A	Williamsport	70.59	351	P	P	13 22 46.2	-0.5
P51A				IAmb	IAmb	13 22 47.8	
	comp=Z,24nm,0.9s						
P51A	Williamsport	70.59	351	P	P	13 22 47.0	+0.3
	baz=170						
P51A				P	P	13 22 47.0	+0.3
	baz=170						
P52A	Corning	70.62	352	P	P	13 22 46.4	-0.5
P52A				IAmb	IAmb	13 22 57.4	
	comp=Z,44nm,1.4s						
P52A	Corning	70.62	352	P	P	13 22 46.6	-0.3
	baz=171						
MSTX	Muleshoe	70.65	333	P	P	13 22 47.8	+0.4
MSTX				IAmb	IAmb	13 23 11.8	
	comp=Z,47nm,1.4s						
MSTX	Muleshoe	70.65	333	P	P	13 22 48.2	+0.8
	baz=152,SNR=7.5						
MSTX	Muleshoe	70.65	333	P	P	13 22 47.1	-0.3
	baz=152						
OLIL	Olney	70.72	347	P	P	13 22 47.2	-0.3
OLIL				IAmb	IAmb	13 22 48.4	
	comp=Z,41nm,1.2s						
CCM	Cathedral Cave	70.76	344	P	P	13 22 47.6	-0.2
CCM				IAmb	IAmb	13 22 49.4	
	comp=Z,33nm,0.9s						
CCM	Cathedral Cave	70.76	344	P	P	13 22 47.6	-0.2
CCM				pmax	pmax		
	comp=Z,33nm,1.0s						
CCM	Cathedral Cave	70.76	344	P	P	13 22 48.1	+0.3
	baz=162,SNR=16						
CCM	Cathedral Cave	70.76	344	P	P	13 22 48.0	+0.3
	baz=162						
P49A	Miami Univ. Ec	70.89	349	P	P	13 22 48.4	-0.1
P49A				IAmb	IAmb	13 22 49.4	
	comp=Z,20nm,0.9s						
P49A	Miami Univ. Ec	70.89	349	P	P	13 22 47.9	-0.6
	baz=168						
S39A	Bolivar	70.94	342	P	P	13 22 49.2	+0.3
	baz=160,SNR=21						
PPT2	Papeete2	70.98	260	*e*P	P	13 22 53.4	+3.6
	comp=Z,81nm,24.5s						
PPT2				*e*S	S	13 32 05.1	+0.7
	comp=Z,572nm,27.8s						
PPT2	Papeete2	70.98	260	*e*LR	LR	13 44 09.6	
	comp=Z,1µm,23.8s						
PPT2	Papeete2	70.98	260	*e*T	T	14 40 10.6	
	comp=Z,2.1nm,0.2s						
PPT	Papeete	70.99	260	LR	LR	13 45 49.7	
	comp=Z,448nm,21.8s,baz=112,slow=29						
AMTX	Amarillo	71.05	334	P	P	13 22 50.1	+0.4
	baz=153						
Q44A	Meyer Farm, Va	71.07	346	P	P	13 22 50.1	+0.5
	baz=164						
O53A	New Philadelph	71.11	352	P	P	13 22 49.8	-0.1
	baz=171						
T35B	Sooner Cattle	71.13	339	P	P	13 22 50.8	+0.7
	baz=158,SNR=5.3						
SSPA	Standing Stone	71.18	355	P	P	13 22 51.5	+1.2
	baz=174,SNR=5.1						
SSPA	Standing Stone	71.18	355	P	P	13 22 50.9	+0.6
	baz=174						
R40A	Maddies Statio	71.24	343	P	P	13 22 50.4	-0.2
R40A	Maddies Statio	71.24	343	P	P	13 22 51.3	+0.7
	baz=162,SNR=22						
N58A	Sunbury	71.31	356	P	P	13 22 52.3	+1.2
	baz=176						
N58A				P	P	13 22 52.3	+1.2
	baz=176						
ACSO	Alum Creek Sta	71.32	351	P	P	13 22 50.6	-0.5
ACSO				IAmb	IAmb	13 22 52.3	
	comp=Z,36nm,1.1s						
ACSO	Alum Creek Sta	71.32	351	P	P	13 22 51.4	+0.3
	baz=170,SNR=6.6						
ACSO	Alum Creek Sta	71.32	351	P	P	13 22 50.9	-0.2
	baz=170,SNR=6.6						
PAL	Palisades	71.35	358	P	P	13 22 52.0	+0.7
	baz=178						
P46A	Rosedale	71.40	347	P	P	13 22 51.0	-0.7
P46A				IAmb	IAmb	13 22 52.4	
	comp=Z,27nm,0.9s						
P46A	Rosedale	71.40	347	P	P	13 22 51.7	+0.1
	baz=166,SNR=6.4						
O49A	Covington	71.47	350	P	P	13 22 51.2	-0.8
O49A				IAmb	IAmb	13 22 53.1	
	comp=Z,24nm,0.9s						
O49A	Covington	71.47	350	P	P	13 22 52.4	+0.3
	baz=169,SNR=6.9						
O49A				P	P	13 22 52.4	+0.3
	baz=169,SNR=6.9						
121A	Cookes Peak, D	71.53	328	P	P	13 22 54.4	+1.6
	baz=148,SNR=7.9						
121A	Cookes Peak, D	71.53	328	P	P	13 22 54.1	+1.3
	baz=148,SNR=7.9						
O48B	Farmland	71.67	349	P	P	13 22 52.8	-0.4
	baz=168						
P43A	Skaggs, Pawnee	71.89	346	P	P	13 22 55.3	+0.8
	baz=164,SNR=5.3						
M65A	Busby, Falmout	71.89	1	IAMs_20	IAMs_20	14 00 10.1	
	comp=Z,490nm,20.0s						
M65A	Busby, Falmout	71.89	1	P	P	13 22 55.0	+0.5
	baz=181						
M55A	Ridgway	72.08	354	P	P	13 22 56.7	+1.0
	baz=174,SNR=7.4						
M55A				P	P	13 22 56.7	+1.0
	baz=174,SNR=7.4						
NPNY	Mohonk Preserv	72.11	358	P	P	13 22 57.1	+1.3
	baz=178,SNR=5.2						
SFIN	Lafayette	72.12	348	P	P	13 22 55.1	-0.8
	baz=166						
N49A	Columbus Grove	72.17	350	P	P	13 22 56.4	+0.2
N49A	Columbus Grove	72.17	350	P	P	13 22 56.8	+0.6
	baz=169,SNR=8.8						
N49A				P	P	13 22 56.8	+0.6
	baz=169,SNR=8.8						
M53A	WI Miller and	72.23	353	P	P	13 22 56.6	0.0
	baz=172						
P40A	Paris	72.36	344	P	P	13 22 57.3	0.0
P40A	Paris	72.36	344	P	P	13 22 57.7	+0.3
	baz=162,SNR=22						
N47A	Urbana	72.36	349	P	P	13 22 56.0	-1.3
N47A				IAmb	IAmb	13 22 58.0	
	comp=Z,34nm,1.1s						
N47A	Urbana	72.36	349	P	P	13 22 57.1	-0.2
	baz=168,SNR=6.8						
N47A				P	P	13 22 57.1	-0.2
	baz=168,SNR=6.8						
M50A	Fremont	72.48	351	P	P	13 22 58.8	+0.8
	baz=170						
M50A				P	P	13 22 58.8	+0.8
	baz=170						
L59A	Walton	72.57	357	P	P	13 22 59.3	+0.6
L59A	Walton	72.57	357	P	P	13 22 59.8	+1.2
	baz=177						
L59A				P	P	13 22 59.8	+1.2
	baz=177						
BINY	Binghamton	72.62	357	P	P	13 23 00.1	+1.1
	baz=176						
BINY	Binghamton	72.62	357	P	P	13 22 59.9	+0.9
	baz=176						
L56A	Greenwood	72.65	355	P	P	13 22 59.5	+0.3
L56A				IAmb	IAmb	13 23 01.2	
	comp=Z,24nm,1.0s						
L56A	Greenwood	72.65	355	P	P	13 23 00.3	+1.1
	baz=175,SNR=6.7						
L56A				P	P	13 23 00.3	+1.1
	baz=175,SNR=6.7						
HDIL	Hopedale	72.72	346	P	P	13 23 00.1	+0.6
	baz=164						
HDIL	Hopedale	72.72	346	P	P	13 22 58.9	-0.6
	baz=164						
TUC	Tucson	72.74	326	IAMs_20	IAMs_20	13 50 10.9	
	comp=Z,541nm,20.0s						
TUC	Tucson	72.74	326	P	P	13 23 01.3	+1.3
	baz=146						
L61B	Northampton	72.77	359	P	P	13 23 00.6	+0.8
L61B	Northampton	72.77	359	P	P	13 23 01.3	+1.5
	baz=179,SNR=5.1						
L61B	Northampton	72.77	359	P	P	13 23 00.6	+0.8
	baz=179,SNR=5.1						
P38A	Dawn	72.82	343	P	P	13 23 00.4	+0.3
	baz=160,SNR=6.3						
HRV	Adam Dziewonsk	72.83	0	P	P	13 22 59.7	-0.4
HRV				IAmb	IAmb	13 23 02.1	
	comp=Z,28nm,1.2s						
HRV	Adam Dziewonsk	72.83	0	P	P	13 22 59.7	-0.4
HRV				pmax	pmax		
	comp=Z,28nm,1.2s						
HRV	Adam Dziewonsk	72.83	0	P	P	13 23 01.6	+1.5
	baz=180						
ERPA	Erie	72.83	354	P	P	13 23 01.0	+0.8
	baz=173						
ERPA	Erie	72.83	354	P	P	13 23 00.4	+0.2
	baz=173						
WVNY	West Valley, N	73.00	355	P	P	13 23 01.4	+0.3
WVNY				IAmb	IAmb	13 23 03.2	
	comp=Z,23nm,0.9s						
ANMO	Albuquerque	73.00	331	LR	LR	13 50 54.9	
	comp=Z,786nm,19.7s,baz=156,slow=32						
ANMO	Albuquerque	73.00	331	IAMs_20	IAMs_20	13 50 43.7	
	comp=Z,738nm,20.0s						
ANMO	Albuquerque	73.00	331	*ce*P	P	13 23 02.8	+1.2
ANMO				pmax	pmax		
	comp=Z,13nm,1.4s						
ANMO	Albuquerque	73.00	331	P	P	13 23 03.1	+1.5
	baz=149,SNR=10						
ANMO	Albuquerque	73.00	331	P	P	13 23 02.8	+1.2
	baz=149						
KSU1	Kansas State U	73.18	340	P	P	13 23 02.3	0.0
	baz=158						
N41A	Harden Midland	73.20	345	P	P	13 23 02.1	-0.2
N41A				IAmb	IAmb	13 23 03.5	
	comp=Z,42nm,0.9s						
N41A	Harden Midland	73.20	345	P	P	13 23 03.0	+0.6
	baz=163,SNR=8.8						
L48A	N Adams	73.20	350	P	P	13 23 01.7	-0.6
MMNY	Mt. Morris Dam	73.27	355	P	P	13 23 03.4	+0.7
AAM	Ann Arbor	73.44	351	IAMs_20	IAMs_20	13 53 28.2	
	comp=Z,493nm,20.0s						
AAM	Ann Arbor	73.44	351	P	P	13 23 03.5	-0.2
	baz=169						
214A	Organ Pipe Nat	73.45	324	P	P	13 23 05.5	+1.5
	baz=144,SNR=6.8						
LIC	Lamto	73.52	72	*e*P	P	13 23 05.1	+0.2
	comp=Z,98nm,1.3s						
J56A	Wolcott	73.74	356	P	P	13 23 04.8	-0.6
TIC	Toumodi	73.76	72	*e*P	P	13 23 05.9	-0.5
J59A	Piesco	73.83	358	P	P	13 23 06.3	+0.3
	baz=178						
J59A				P	P	13 23 06.3	+0.3
	baz=178						
J57A	Williamstown	73.83	357	P	P	13 23 05.8	-0.2
J57A	Williamstown	73.83	357	P	P	13 23 07.2	+1.2
	baz=176						
J57A				P	P	13 23 07.2	+1.2
	baz=176						
KIC	Kosan Boka	73.83	72	*e*P	P	13 23 06.5	-0.2
	comp=Z,82nm,1.0s						
CBKS	Cedar Bluff	73.89	338	P	P	13 23 08.2	+1.7
	baz=155						
CBKS	Cedar Bluff	73.89	338	P	P	13 23 07.4	+0.9
	baz=155						
DBIC	Dimbokro	73.91	72	*e*P	P	13 23 06.8	-0.3
DBIC				IAmb	IAmb	13 23 19.6	
	comp=Z,109nm,1.1s						
DBIC	Dimbokro	73.91	72	P	P	13 23 06.9	-0.3
	comp=Z,16nm,0.5s,baz=235,slow=6.3,SNR=54						
DBIC				LR	LR	13 53 13.1	
	comp=Z,2µm,19.4s,baz=236,slow=34						
	comp=Z,16nm,0.5s						
DBIC	Dimbokro	73.91	72	P	P	13 23 07.3	+0.1
DBIC	Dimbokro	73.91	72	P	P	13 23 07.3	+0.1
DBIC				pmax	pmax		
	comp=Z,106nm,1.2s						
L44A	Lake County Fo	74.01	348	P	P	13 23 06.8	-0.3
	baz=166						
T25A	Trinidad	74.07	333	P	P	13 23 09.3	+1.4
	baz=151,SNR=18						
I62A	Tamworth	74.19	0	P	P	13 23 09.9	+1.8
	baz=180						
I62A				P	P	13 23 09.9	+1.8
	baz=180						
MCVT	Middlebury Col	74.28	359	P	P	13 23 09.9	+1.3
	baz=179						
NCB	Newcomb	74.32	358	P	P	13 23 08.7	-0.2
NCB	Newcomb	74.32	358	P	P	13 23 09.7	+0.8
	baz=178						
I63A	Otisfield	74.38	1	P	P	13 23 11.2	+2.1
	baz=181,SNR=5.3						
I63A				P	P	13 23 11.2	+2.1
	baz=181,SNR=5.3						
WCNY	West Carthage	74.39	357	P	P	13 23 10.0	+0.8
	baz=176						
N35A	Tabor	74.54	341	P	P	13 23 10.2	0.0
N35A	Tabor	74.54	341	P	P	13 23 11.0	+0.8
	baz=159						
LBNH	Lisbon	74.56	360	P	P	13 23 12.2	+2.0
	baz=180						
LBNH	Lisbon	74.56	360	P	P	13 23 11.7	+1.5
	baz=180						
L40A	Anamosa	74.57	345	P	P	13 23 10.0	-0.4
L40A				IAmb	IAmb	13 23 11.6	
	comp=Z,55nm,1.1s						
L40A	Anamosa	74.57	345	P	P	13 23 10.3	-0.1
	baz=163,SNR=12						
W18A	Petrified Fore	74.57	328	P	P	13 23 12.1	+1.3
	baz=147,SNR=5.6						
CER	Ceres	74.66	120⇑	*i*P	P	13 23 10.8	-0.5
CER				IAmb	IAmb	13 23 12.9	
	comp=Z,15nm,1.1s						
SCIA	State Center	74.89	344	P	P	13 23 12.5	+0.4
SCIA	State Center	74.89	344	P	P	13 23 12.6	+0.4
	baz=161						
LONY	Lake Ozonia	74.98	358	P	P	13 23 13.3	+0.6
LONY	Lake Ozonia	74.98	358	P	P	13 23 13.1	+0.4
	baz=178,SNR=7.0						
SDCO	Great Sand Dun	75.02	333	P	P	13 23 14.0	+0.5
SDCO				IAMs_20	IAMs_20	13 52 46.2	
	comp=Z,521nm,18.0s						
SDCO	Great Sand Dun	75.02	333	P	P	13 23 14.8	+1.3
	baz=150,SNR=17						
SDCO	Great Sand Dun	75.02	333	P	P	13 23 14.6	+1.1
	baz=150,SNR=17						
DELO	Deloro Mine	75.03	356	P	P	13 23 12.7	-0.2
DELO				IAmb	IAmb	13 23 22.0	
	comp=Z,51nm,2.0s						
KSCO	Kaye Shedlock'	75.06	336	P	P	13 23 14.6	+1.2
	baz=153						
FRNY	Flat Rock	75.17	359	P	P	13 23 14.5	+0.8
	baz=178,SNR=8.1						
JFWS	Jewell Farm	75.18	346	P	P	13 23 13.9	+0.1
JFWS				IAmb	IAmb	13 23 15.4	
	comp=Z,38nm,1.1s						
JFWS	Jewell Farm	75.18	346	P	P	13 23 13.9	+0.1
JFWS				pmax	pmax		
	comp=Z,38nm,1.2s						
JFWS				MLR	MLR		
	comp=Z,400nm,21.0s						
JFWS	Jewell Farm	75.18	346	P	P	13 23 14.7	+0.8
	baz=164,SNR=5.3						
JFWS	Jewell Farm	75.18	346	P	P	13 23 13.8	0.0
	baz=164,SNR=5.3						
BMNY	Brushton-Moira	75.20	358	P	P	13 23 14.9	+1.1
	baz=178						
GLA	Glamis	75.34	324	P	P	13 23 16.7	+1.6
	baz=143						
SADO	Sadowa	75.39	355	LR	LR	13 58 25.0	
	comp=Z,388nm,20.7s,baz=161,slow=37						
K38A	Parkersburg	75.48	344	P	P	13 23 15.5	-0.1
K38A				IAmb	IAmb	13 23 16.7	
	comp=Z,23nm,0.9s						
K38A	Parkersburg	75.48	344	P	P	13 23 16.2	+0.6
	baz=161						
G62A	West of Eustis	75.55	1	P	P	13 23 17.0	+1.1
G62A				IAmb	IAmb	13 23 18.7	
	comp=Z,27nm,1.0s						
G62A	West of Eustis	75.55	1	P	P	13 23 17.7	+1.8
	baz=181,SNR=9.2						
G62A				P	P	13 23 17.7	+1.8
	baz=181,SNR=9.2						
S22A	4UR Ranch, Cre	75.55	332	P	P	13 23 17.8	+1.3
	baz=149,SNR=9.4						
PKME	Peaks-Kenny Pk	75.62	2	P	P	13 23 17.6	+1.3
	baz=182						
WUAZ	Wupatki	75.65	328	IAMs_20	IAMs_20	13 51 17.0	
	comp=Z,590nm,22.0s						
WUAZ	Wupatki	75.65	328	P	P	13 23 18.5	+1.6
	baz=146,SNR=13						
IKP	In-Ko-Pah, Jac	75.69	323	P	P	13 23 18.9	+1.8
	baz=142						
BGNE	Belgrade	75.76	340	P	P	13 23 18.1	+0.8
BGNE				IAmb	IAmb	13 23 19.1	
	comp=Z,42nm,0.9s						
BGNE	Belgrade	75.76	340	P	P	13 23 17.8	+0.6
	baz=157						
SWSC	Sam W. Stewart	75.76	323	P	P	13 23 17.2	-0.3
	baz=142						
MVCO	Mesa Verde	75.79	330	IAMs_20	IAMs_20	13 52 52.2	
	comp=Z,665nm,18.0s						
MVCO	Mesa Verde	75.79	330	P	P	13 23 18.9	+1.1
	baz=148,SNR=15						
CVNA	Calvinia	75.86	118	*e*P	P	13 23 19.2	+0.8
CVNA				IAmb	IAmb	13 23 20.2	
	comp=Z,52nm,1.1s						
Q24A	Divide	75.95	334	P	P	13 23 19.9	+1.2
	baz=151,SNR=14						
MONP2	Monument Peak	76.05	322	P	P	13 23 20.4	+1.0
	baz=142						
BC3	Big Chuckawall	76.14	324	P	P	13 23 21.3	+1.5
	baz=142,SNR=7.8						
I40A	Norwalk	76.19	346	P	P	13 23 19.9	+0.2
SUR	Sutherland	76.24	120	P	P	13 23 21.4	+0.7
	comp=Z,23nm,0.8s,baz=236,slow=6.5,SNR=33						
SUR				LR	LR	13 54 55.7	
	comp=Z,733nm,18.2s,baz=232,slow=34						
	comp=Z,23nm,0.8s						
F64A	Sherman	76.25	2	P	P	13 23 21.8	+1.9
	baz=183,SNR=5.6						
F64A				P	P	13 23 21.8	+1.9
	baz=183,SNR=5.6						
MAW	Mawson	76.29	164	P	P	13 23 20.3	+0.3
	comp=Z,24nm,0.5s,baz=211,slow=6.8,SNR=92						
MAW				LR	LR	13 55 57.4	
	comp=Z,994nm,21.5s,baz=230,slow=35						
	comp=Z,24nm,0.5s						
IRM	Iron Mountain	76.38	324	P	P	13 23 22.4	+1.4
	baz=143						
OGNE	Ogallala	76.57	337	P	P	13 23 22.7	+0.7
	baz=154						
TRQ	Mont Tremblant	76.58	358	P	P	13 23 21.4	-0.4
TPFO	Pinon Flats	76.62	323	P	P	13 23 24.1	+1.6
	baz=142,SNR=5.5						
PFO	Pinyon Flats O	76.62	323	P	P	13 23 24.1	+1.6
	baz=142						
BELC	Belle Mtn. Jos	76.69	323	P	P	13 23 24.2	+1.3
	baz=142						
E63A	Oxbow	76.80	2	P	P	13 23 24.5	+1.5
	baz=183,SNR=7.7						
E63A				P	P	13 23 24.5	+1.5
	baz=183,SNR=7.7						
ISCO	Idaho Springs	76.85	334	P	P	13 23 25.6	+1.7
	baz=151,SNR=12						
ISCO	Idaho Springs	76.85	334	P	P	13 23 24.9	+1.0
	baz=151,SNR=12						
MURC	Murrieta	77.00	322	P	P	13 23 26.2	+1.7
	baz=141						
K31A	O'Neill	77.05	340	P	P	13 23 25.3	+0.7
K31A	O'Neill	77.05	340	P	P	13 23 26.2	+1.6
	baz=156,SNR=8.0						
GMRC	Granite Mounta	77.14	324	P	P	13 23 26.7	+1.3
	baz=142,SNR=11						
SCI2	San Clemente I	77.25	321	P	P	13 23 26.8	+0.9
	baz=140						
GRAN	Grantham	77.29	120⇑	*i*P	P	13 23 26.8	+0.3
GRAN				IAmb	IAmb	13 23 27.8	
	comp=Z,37nm,0.6s						
BBRC	Big Bear Solar	77.37	323	P	P	13 23 28.4	+1.6
	baz=141						
D62A	Allapoint, All	77.44	2	P	P	13 23 27.7	+1.2
D62A				IAmb	IAmb	13 23 29.0	
	comp=Z,45nm,1.1s						
D62A	Allapoint, All	77.44	2	P	P	13 23 27.9	+1.3
	baz=182,SNR=14						
D62A				P	P	13 23 27.9	+1.3
	baz=182,SNR=14						
ECSD	EROS Data Cent	77.47	342	P	P	13 23 27.2	+0.3
	baz=158,SNR=35						
ECSD	EROS Data Cent	77.47	342	P	P	13 23 27.1	+0.2
	baz=158,SNR=35						
HEC	Hector,Ludlow	77.51	324	P	P	13 23 29.2	+1.7
	baz=142,SNR=9.0						
E46A	Sault Ste Mari	77.52	351	P	P	13 23 26.9	-0.1
	baz=169,SNR=9.7						
FMP	Fort Macarthur	77.67	322	P	P	13 23 29.7	+1.5
	baz=140						
BFSC	Mount Baldy Ra	77.74	322	P	P	13 23 30.1	+1.4
	baz=141						
TUQ	Turquoise Moun	77.78	324	P	P	13 23 30.2	+1.2
	baz=142,SNR=13						
RAR	Rarotonga	77.85	253	LR	LR	13 49 23.6	
	comp=Z,507nm,19.2s,baz=165,slow=29						
RRX	Edison Barstow	77.89	323	P	P	13 23 30.9	+1.4
	baz=141						
N23A	Red Feather La	77.92	334	P	P	13 23 31.0	+1.2
	baz=150,SNR=9.2						
E43A	Lone Tree Farm	77.93	349	P	P	13 23 28.9	-0.4
E43A	Lone Tree Farm	77.93	349	P	P	13 23 29.8	+0.5
	baz=167,SNR=7.9						
SPMN	Marine on St.	77.93	345	P	P	13 23 29.1	-0.3
SPMN	Marine on St.	77.93	345	P	P	13 23 28.9	-0.5
	baz=162						
SNCC	San Nicolas Is	77.98	321	P	P	13 23 31.1	+1.1
	baz=139						
COWI	Conover	78.03	348	P	P	13 23 30.6	+0.7

	baz=165						
KEIM	Keimoes	78.08	116	*e*P	P	13 23 31.3	+0.4
KEIM				IAmb	IAmb	13 23 31.9	
	comp=Z,25nm,0.8s						
GSC	Goldstone, Bar	78.12	324	P	P	13 23 32.1	+1.3
	baz=142,SNR=7.0						
O20A	White River Ci	78.16	332	P	P	13 23 32.3	+1.3
	baz=148,SNR=17						
SRU	San Rafael Swe	78.25	330	P	P	13 23 32.2	+0.6
SRU	San Rafael Swe	78.25	330	P	P	13 23 32.2	+0.6
SRU				pmax	pmax		
	comp=Z,16nm,1.0s						
EDW2	Edwards Air Fo	78.41	323	P	P	13 23 33.3	+0.9
	baz=141,SNR=7.8						
UPI	Upington	78.46	116	*e*P	P	13 23 33.5	+0.4
UPI				IAmb	IAmb	13 23 34.3	
	comp=Z,32nm,1.2s						
F36A	Milaca	78.70	345	P	P	13 23 33.5	-0.1
F36A	Milaca	78.70	345	P	P	13 23 34.0	+0.4
	baz=161,SNR=16						
LRMC	Laurel Mtn Rad	78.71	323	P	P	13 23 35.3	+1.2
	baz=141						
SUSD	Miller	78.78	341	P	P	13 23 34.1	0.0
	baz=156						
D41A	Chassel	78.85	348	P	P	13 23 35.4	+0.9
	baz=165,SNR=14						
MPMC	Manual Prospec	79.06	324	P	P	13 23 37.3	+1.2
	baz=141,SNR=8.4						
FURC	Furnace Creek,	79.06	324	P	P	13 23 36.8	+1.0
	baz=142						
KOWA	Kowa	79.06	66	P	P	13 23 36.8	+0.5
RWWY	Rawlins	79.09	334	IAMs_20	IAMs_20	13 55 03.9	
	comp=Z,434nm,20.0s						
TPNV	Topopah Spring	79.14	325	P	P	13 23 37.7	+1.2
	baz=142,SNR=14						
ISA	Isabella, Lake	79.26	323	P	P	13 23 38.5	+1.5
	baz=140,SNR=13						
F33A	5 Mile Ranch,	79.35	343	P	P	13 23 36.3	-0.9
F33A	5 Mile Ranch,	79.35	343	P	P	13 23 37.7	+0.5
	baz=159,SNR=5.6						
PKM	Mcpherson Peak	79.38	322	P	P	13 23 39.0	+1.2
	baz=139,SNR=10						
SOE	Somerset East	79.60	122	*e*P	P	13 23 39.9	+0.7
SOE				IAmb	IAmb	13 23 40.7	
	comp=Z,64nm,1.1s						
CWC	Cottonwood Cre	79.66	324	P	P	13 23 40.4	+1.1
	baz=141						
K22A	Casper	79.66	335	P	P	13 23 40.2	+1.1
K22A	Casper	79.66	335	P	P	13 23 40.6	+1.4
	baz=150,SNR=12						
K22A	Casper	79.66	335	P	P	13 23 40.3	+1.1
	baz=150,SNR=12						
SMMC	Simmler	79.80	322	P	P	13 23 41.8	+1.9
	baz=139						
TSUM	Tsumeb	79.90	106	*e*P	P	13 23 41.3	+0.1
TSUM				IAmb	IAmb	13 23 50.2	
	comp=Z,348nm,1.2s						
TSUM	Tsumeb	79.90	106	LR	LR	13 54 56.0	
	comp=Z,829nm,19.8s,baz=204,slow=33						
TSUM	Tsumeb	79.90	106	P	P	13 23 41.2	+0.1
TSUM				IAmb	IAmb	13 23 42.9	
	comp=Z,42nm,1.1s						
R11A	Troy Canyon, C	79.92	326	P	P	13 23 42.3	+1.6
	baz=143,SNR=20						
RSSD	Black Hills	80.07	337	P	P	13 23 42.0	+0.6
RSSD	Black Hills	80.07	337	P	P	13 23 42.1	+0.6
RSSD				pmax	pmax		
	comp=Z,11nm,1.0s						
RSSD	Black Hills	80.07	337	P	P	13 23 42.0	+0.6
	baz=152,SNR=7.1						
RSSD	Black Hills	80.07	337	P	P	13 23 41.9	+0.4
	baz=152						
DUG	Dugway, Tooele	80.14	329	IAMs_20	IAMs_20	13 55 28.7	
	comp=Z,791nm,19.0s						
DUG	Dugway, Tooele	80.14	329	P	P	13 23 42.9	+1.1
	baz=145,SNR=5.9						
TIN	Tinemaha, Big	80.21	324	P	P	13 23 43.6	+1.4
	baz=141						
VOG	Valley Oaks Go	80.24	323	P	P	13 23 41.8	-0.4
	baz=140						
EYMN	Ely	80.25	347	P	P	13 23 41.8	-0.3
	baz=163						
DRLN	Deer Lake	80.59	9	P	P	13 23 44.9	+1.2
DRLN				IAmb	IAmb	13 23 45.7	
	comp=Z,37nm,1.0s						
HVD	Gariep Dam	80.60	120⇑	*i*P	P	13 23 44.6	-0.1
HVD				IAmb	IAmb	13 23 46.3	
	comp=Z,70nm,1.0s						
HWUT	Hardware Ranch	80.77	331	P	P	13 23 45.6	+0.4
HWUT				IAMs_20	IAMs_20	13 56 51.2	
	comp=Z,779nm,18.0s						
BW06	Boulder Array	80.92	333	IAMs_20	IAMs_20	13 56 06.3	
	comp=Z,569nm,20.0s						
BW06	Boulder Array	80.92	333	P	P	13 23 46.3	+0.2
	baz=148,SNR=10						
PDAR	Pinedale Array	80.92	333	P	P	13 23 46.5	+0.5
	comp=Z,2.2nm,0.7s,baz=144,slow=5.3,SNR=24						
PDAR				LR	LR	13 56 26.1	
	comp=Z,401nm,20.1s,baz=153,slow=33						
	comp=Z,2.2nm,0.7s						
MLAC	Mammoth, Mammo	80.96	324	P	P	13 23 47.1	+0.7
	baz=140						
B35A	Bob, Littlefor	81.11	345	P	P	13 23 46.5	-0.1
	baz=161,SNR=15						
NVAR	Mina Array Bea	81.31	325	P	P	13 23 49.9	+1.7
	comp=Z,5.3nm,0.9s,baz=154,slow=5.9,SNR=39						
	comp=Z,5.3nm,0.9s						
BOSA	Boshof	81.41	118⇑	*i*P	P	13 23 48.4	-0.7
BOSA				IAmb	IAmb	13 23 49.9	
	comp=Z,42nm,1.1s						
BOSA	Boshof	81.41	118	P	P	13 23 49.1	0.0
	comp=Z,24nm,0.9s,baz=252,slow=4.1,SNR=35						
BOSA				LR	LR	13 55 56.5	
	comp=Z,695nm,19.1s,baz=236,slow=33						
	comp=Z,24nm,0.9s						
BOSA	Boshof	81.41	118	P	P	13 23 48.9	-0.2
BOSA				IAmb	IAmb	13 23 50.1	
	comp=Z,36nm,1.0s						
BOSA	Boshof	81.41	118	P	P	13 23 48.9	-0.2
BOSA				pmax	pmax		
	comp=Z,36nm,1.0s						
AGMN	Agassiz Nation	81.53	344	P	P	13 23 49.0	+0.1
	baz=159,SNR=13						
AGMN	Agassiz Nation	81.53	344	P	P	13 23 48.9	0.0
	baz=159,SNR=13						
AHID	Auburn Hatcher	81.53	332	IAMs_20	IAMs_20	13 56 34.6	
	comp=Z,606nm,20.0s						
ELK	Elko	81.67	328	LR	LR	13 55 24.6	
	comp=Z,436nm,21.2s,baz=143,slow=32						
ELK	Elko	81.67	328	IAMs_20	IAMs_20	13 55 23.2	
	comp=Z,490nm,20.0s						
REDW	Red Top Meadow	81.93	332	IAMs_20	IAMs_20	13 57 02.1	
	comp=Z,491nm,19.0s						
SNOW	Snow King Moun	81.98	332	IAMs_20	IAMs_20	13 56 27.3	
	comp=Z,488nm,20.0s						
LOHW	Long Hollow	82.04	333	IAMs_20	IAMs_20	13 56 41.0	
	comp=Z,606nm,20.0s						
MDND	Maddock	82.08	341	P	P	13 23 52.2	+0.5
	baz=156						
SWZ	Schweizer	82.19	117	*e*P	P	13 23 52.5	-0.7
SWZ				IAmb	IAmb	13 23 53.6	
	comp=Z,27nm,1.0s						
MOOW	Moose Ponds	82.21	333	IAMs_20	IAMs_20	13 57 13.5	
	comp=Z,641nm,18.0s						
FLWY	Flagg Ranch	82.47	333	IAMs_20	IAMs_20	13 57 05.5	
	comp=Z,589nm,20.0s						
LKWY	Lake	82.76	333	IAMs_20	IAMs_20	13 56 39.1	
	comp=Z,462nm,22.0s						
RLMT	Red Lodge	82.80	334	P	P	13 23 56.2	+0.3
	baz=148						
TORD	Torodi Ar. Bea	82.86	70	P	P	13 23 56.1	-0.6
	comp=Z,23nm,0.8s,baz=274,slow=5.3,SNR=5.9						
LAO	LASA Array	83.06	337	P	P	13 23 57.4	+0.4
	baz=151						
CASY	Casey	83.34	181	P	P	13 23 59.0	+0.8
CASY				IAmb	IAmb	13 24 00.3	
	comp=Z,42nm,1.1s						
ULM	Lac du Bonnet	83.36	345	P	P	13 23 58.1	-0.2
	comp=Z,21nm,1.0s,baz=154,slow=3.6,SNR=16						
	comp=Z,21nm,1.0s						
ULM	Lac du Bonnet	83.36	345	P	P	13 23 57.9	-0.4
ULM				IAmb	IAmb	13 23 59.4	
	comp=Z,23nm,0.9s						
ULM	Lac du Bonnet	83.36	345	P	P	13 23 57.9	-0.4
ULM				pmax	pmax		
	comp=Z,23nm,0.9s						
SNKL	Senekal, Frees	83.49	119	*e*P	P	13 23 59.5	-0.5
SNKL				IAmb	IAmb	13 24 00.9	
	comp=Z,84nm,1.2s						
LBTB	Lobatse	83.49	115⇑	*i*P	P	13 23 58.8	-1.2
LBTB				IAmb	IAmb	13 24 00.7	
	comp=Z,49nm,1.1s						
LBTB	Lobatse	83.49	115	P	P	13 23 59.9	-0.1
	baz=241,slow=7.7						
LBTB				LR	LR	13 56 47.7	
	comp=Z,1µm,19.9s,baz=231,slow=33						
LBTB	Lobatse	83.49	115	P	P	13 23 59.8	-0.1
LBTB	Lobatse	83.49	115	P	P	13 23 59.8	-0.1
LBTB				pmax	pmax		
	comp=Z,49nm,1.1s						
HLID	Hailey	83.57	330	P	P	13 24 00.6	+0.8
HLID				IAMs_20	IAMs_20	13 56 40.5	
	comp=Z,498nm,22.0s						
HLID	Hailey	83.57	330	P	P	13 24 00.7	+0.8
	baz=144,SNR=21						
DGMT	Dagmar	83.97	339	P	P	13 24 02.8	+1.2
	baz=152,SNR=7.5						
DGMT	Dagmar	83.97	339	P	P	13 24 02.2	+0.6
	baz=152,SNR=7.5						
MFID	Camas Ranch	84.07	329	IAMs_20	IAMs_20	13 57 53.6	
	comp=Z,678nm,19.0s						
BOZ	Bozeman (W)	84.10	333	IAMs_20	IAMs_20	13 58 09.5	
	comp=Z,458nm,20.0s						
BOZ	Bozeman (W)	84.10	333	P	P	13 24 03.0	+0.6
	baz=146						
DLMT	Dillon	84.29	332	P	P	13 24 03.7	+0.3
SLR	Silverton	85.20	117	*e*P	P	13 24 07.7	-1.0
SLR				IAmb	IAmb	13 24 09.1	
	comp=Z,39nm,1.3s						
SCHQ	Schefferville	85.27	3	P	P	13 24 07.8	-0.2
	comp=Z,24nm,1.1s,baz=199,slow=3.3,SNR=15						
SCHQ				LR	LR	14 06 17.0	
	comp=Z,129nm,18.1s,baz=200,slow=38						
	comp=Z,24nm,1.1s						
SCHQ	Schefferville	85.27	3	P	P	13 24 07.7	-0.2
EGMT	Eagleton	85.44	336	P	P	13 24 09.1	0.0
	baz=148						
BMO	Blue Mountains	85.85	329	IAMs_20	IAMs_20	13 58 50.9	
	comp=Z,640nm,20.0s						
MSO	Missoula	86.03	332	IAMs_20	IAMs_20	13 59 33.5	
	comp=Z,555nm,19.0s						
MSO	Missoula	86.03	332	P	P	13 24 12.5	+0.5
	baz=145						
L04D	Klamath Falls	86.17	325	P	P	13 24 12.9	0.0
	baz=138						
K04D	Chiloquin, OR	86.20	325	P	P	13 24 13.8	+0.8
	baz=139						
J05D	Fort Rock, OR	86.45	326	P	P	13 24 15.0	+0.7
	baz=139						
L02F	Cave Junction	86.73	324	P	P	13 24 16.8	+1.3
	baz=137						
J04D	Umpqua Nationa	86.84	326	P	P	13 24 17.0	+0.8
	baz=138						
K02D	Willamette Mer	87.20	324	P	P	13 24 18.4	+0.5
	baz=137						
I05D	Terrebonne, OR	87.29	327	P	P	13 24 19.3	+1.1
	baz=139						
I04A	Tendick Farm,	87.40	326	P	P	13 24 18.9	+0.2
	baz=138						
I03D	Drain, OR	87.78	325	P	P	13 24 19.7	-0.8
	baz=138						
WALA	Waterton Lakes	87.84	334	P	P	13 24 20.8	0.0
WALA				IAmb	IAmb	13 24 22.5	
	comp=Z,15nm,1.0s						
CNG	Changalane	87.87	119	*e*P	P	13 24 21.2	-0.3
CNG				IAmb	IAmb	13 24 32.8	
	comp=Z,197nm,3.9s						
G05D	Wamic, OR	87.96	327	P	P	13 24 22.1	+0.7
	baz=139						
HAWA	Hanford	88.03	329	IAMs_20	IAMs_20	13 59 56.6	
	comp=Z,708nm,20.0s						
BLWY	Bulawayo	88.39	112	*e*P	P	13 24 24.9	+0.6
BLWY				IAmb	IAmb	13 24 25.1	
	comp=Z,556nm,2.7s						
NEW	Newport	88.47	332	LR	LR	14 01 12.4	
	comp=Z,615nm,18.1s,baz=140,slow=34						
NEW	Newport	88.47	332	IAMs_20	IAMs_20	14 01 38.0	
	comp=Z,637nm,19.0s						
NEW	Newport	88.47	332	P	P	13 24 23.7	0.0
	baz=142						
E04D	Cinebar	89.53	328	P	P	13 24 29.6	+1.0
	baz=138						
MDT	Midelt	89.55	51	LR	LR	14 02 06.9	
	comp=Z,513nm,21.4s,baz=168,slow=34						
D04E	Lakebay	90.08	328	P	P	13 24 32.6	+1.3
	baz=138						
D03D	Eldon	90.49	328	P	P	13 24 34.3	+1.2
	baz=138						
LSZ	Lusaka	90.61	108	*e*P	P	13 24 35.9	+1.2
LSZ				IAmb	IAmb	13 24 51.9	
	comp=Z,184nm,1.2s						
LSZ	Lusaka	90.61	108	LR	LR	14 02 31.1	
	comp=Z,615nm,18.5s,baz=198,slow=34						
AFI	Afiamalu	91.39	253	LR	LR	13 57 05.2	
	comp=Z,588nm,18.3s,baz=123,slow=30						
ESDC	Sonseca Array	94.11	46	P	P	13 24 49.7	-0.5
	comp=Z,2.6nm,1.1s,baz=249,slow=3.9,SNR=6.9						
ESDC				LR	LR	14 07 34.6	
	comp=Z,924nm,18.1s,baz=212,slow=36						
	comp=Z,2.6nm,1.1s						
FRB	Frobisher Bay	94.14	1	LR	LR	14 10 01.4	
	comp=Z,236nm,20.3s,baz=179,slow=37						
CART	Cartagena	94.75	49	IAMs_20	IAMs_20	14 08 39.1	
	comp=Z,429nm,19.0s						
BBB	Bella Bella	96.09	329	LR	LR	14 03 48.2	
	comp=Z,144nm,19.8s,baz=131,slow=33						
KIP	Kipapa	97.58	290⇓	*e*P	P	13 25 05.7	-0.6
KIP				pmax	pmax		
	comp=Z,153nm,2.1s						
SFJD	Kangerlussuaq	98.69	8	LR	LR	14 12 13.6	
	comp=Z,121nm,18.2s,baz=198,slow=37						
YKA	Yellowknife Ar	99.00	341	P	P	13 25 10.7	-0.9
	comp=Z,1.0nm,0.8s,baz=141,slow=4.3,SNR=22						
	comp=Z,1.0nm,0.8s						
VSL	Villasalto	102.65	52	IAMs_20	IAMs_20	14 17 50.2	
	comp=Z,559nm,18.0s						
DZM	Mont Dzumac	103.38	234	*e*SS	SS	13 44 32.5	+2.5
	comp=Z,194nm,26.1s						
DZM	Mont Dzumac	103.38	234	*e*LR	LR	13 59 36.5	
	comp=Z,1µm,23.6s						
M31M	Drury Creek, Y	105.23	334	IAMs_20	IAMs_20	14 12 17.3	
	comp=Z,509nm,18.0s						
ECH	Echery	105.47	43	IAMs_20	IAMs_20	14 11 44.5	
	comp=Z,440nm,21.0s						
KOUNC	Koumac, New Ca	105.89	234	IAMs_20	IAMs_20	14 03 25.9	
	comp=Z,558nm,21.0s						
BFO	Black Forest	106.21	43	IAMs_20	IAMs_20	14 12 18.1	
	comp=Z,311nm,20.0s						
M30M	Minto, Yukon	106.36	334	IAMs_20	IAMs_20	14 12 49.0	
	comp=Z,479nm,19.0s						
LODK	Lodwar	106.46	96	IAMs_20	IAMs_20	14 12 36.4	
	comp=Z,550nm,19.0s						
C36M	Paulatuk	106.73	343	P	PKiKP	13 29 56.0	+0.1
	baz=135						
STU	Stuttgart	106.93	43	IAMs_20	IAMs_20	14 11 47.0	
	comp=Z,389nm,21.0s						
TULEG	Thule	106.98	1	IAMs_20	IAMs_20	14 15 41.9	
	comp=Z,482nm,21.0s						
VRDI	Verde Repeater	108.26	331	IAMs_20	IAMs_20	14 19 35.6	
	comp=Z,261nm,18.0s						
EPYK	Eagle Plains	108.52	337	IAMs_20	IAMs_20	14 14 06.1	
	comp=Z,515nm,20.0s						
GRFO	Grafenberg	108.52	43	IAMs_20	IAMs_20	14 12 44.3	
	comp=Z,458nm,21.0s						
GRA1	Grafenberg Arr	108.53	43	IAMs_20	IAMs_20	14 13 04.3	
	comp=Z,418nm,20.0s						
L27K	Beaver Creek,	108.56	333	IAMs_20	IAMs_20	14 14 00.2	
	comp=Z,443nm,19.0s						
A36M	Sachs Harbour	108.85	345	IAMs_20	IAMs_20	14 16 32.4	
	comp=Z,371nm,19.0s						
L26K	Log Cabin Wild	109.13	333	IAMs_20	IAMs_20	14 22 34.4	
	comp=Z,468nm,19.0s						
EGAK	Eagle	109.20	335	IAMs_20	IAMs_20	14 15 54.1	
	comp=Z,353nm,19.0s						
NKC	Novy Kostel	109.47	43	AMS	AMS	14 12 40.0	
	comp=Z,600nm,22.8s						
KHC	Kasperske Hory	109.69	44	AMS	AMS	14 18 40.0	
	comp=Z,400nm,19.1s						
SCRK	Sand Creek	109.85	333	IAMs_20	IAMs_20	14 14 14.5	
	comp=Z,477nm,19.0s						
CLL	Collm	110.23	42	*e*P	Pdif	13 26 03.0	+1.1
CLL				*e*		13 30 36.0	
CLL	Collm	110.23	42	*e*Pdif	Pdif	13 26 03.0	+1.1
CLL				*e*PP	PP	13 30 36.0	-2.1
CLL				*e*PPP	PPP	13 32 54.0	
CLL				*e*PS	PS	13 40 12.0	+4.4
CLL				*e*PPS	PPS	13 41 21.0	
CLL				*e*SSS	SSS	13 50 30.0	
CLL				*e*(SSSS)		13 54 30.0	
PRU	Pruhonice	110.61	43	AMS	AMS	14 18 00.0	
	comp=Z,300nm,18.5s						
PDG	Podgorica	110.65	52	IAMs_20	IAMs_20	14 22 41.0	
	comp=Z,362nm,18.0s						
J25K	Salcha River,	110.69	334	IAMs_20	IAMs_20	14 15 43.6	
	comp=Z,475nm,18.0s						
TREC	Trest	110.90	44	AMS	AMS	14 18 20.0	
	comp=Z,600nm,19.8s						
HOM	Homer	111.14	328	P	PKiKP	13 30 05.1	+0.7
	baz=115						
ILAR	Eielson Array	111.34	334	PP	PP	13 30 48.0	+2.3
	comp=Z,0.4nm,0.9s,baz=110,slow=7.9,SNR=4.5						
WRH	Wood River Hil	111.67	333	IAMs_20	IAMs_20	14 15 30.6	
	comp=Z,404nm,20.0s						
UPC	Upice	111.68	43	AMS	AMS	14 14 20.0	
	comp=Z,400nm,19.0s						
POKR	Poker Plat Res	111.70	334	IAMs_20	IAMs_20	14 16 32.4	
	comp=Z,445nm,18.0s						
CHVC	Chvalec	111.73	43	AMS	AMS	14 14 10.0	
	comp=Z,400nm,22.9s						
DIVS	Divibare	111.78	51	IAMs_20	IAMs_20	14 24 28.9	
	comp=Z,469nm,18.0s						
DPC	Dobruska-Polom	111.80	44	AMS	AMS	14 14 50.0	
	comp=Z,400nm,21.9s						
OSTC	Ostas	111.81	43	AMS	AMS	14 14 20.0	
	comp=Z,400nm,23.9s						
KONO	Kongsberg	111.82	33	IAMs_20	IAMs_20	14 20 09.8	
	comp=Z,363nm,20.0s						
IDI	Anoyia	111.94	61	IAMs_20	IAMs_20	14 19 10.6	
	comp=Z,449nm,21.0s						
MDM	Murphy Dome	111.94	334	IAMs_20	IAMs_20	14 15 26.7	
	comp=Z,321nm,20.0s						
KRLC	Kraliky	111.97	44	AMS	AMS	14 16 20.0	
	comp=Z,300nm,20.4s						
SPCR	Spurr Chakacha	112.02	329	P	PKiKP	13 30 07.4	+1.1
	baz=114						
NEA2	Nenana	112.11	333	IAMs_20	IAMs_20	14 15 34.1	
	comp=Z,327nm,20.0s						
H24K	Noodor Dome	112.19	334	IAMs_20	IAMs_20	14 15 30.1	
	comp=Z,349nm,18.0s						
MAUC	Maruska	112.34	45	AMS	AMS	14 14 50.0	
	comp=Z,800nm,20.6s						
OKC	Ostrava-Krasne	112.71	45	AMS	AMS	14 18 30.0	
	comp=Z,400nm,17.9s						
H23K	Yukon River	112.80	334	IAMs_20	IAMs_20	14 16 16.4	
	comp=Z,355nm,20.0s						
L20K	Farewell, AK	113.25	330	P	PKiKP	13 30 09.4	+0.9
	baz=112						
I21K	Tanana	113.48	333	IAMs_20	IAMs_20	14 15 36.5	
	comp=Z,324nm,20.0s						
KARP	Karpathos	113.75	62	IAMs_20	IAMs_20	14 24 55.7	
	comp=Z,418nm,19.0s						
OJC	Ojcow	113.84	45	IAMs_20	IAMs_20	14 19 21.0	
	comp=Z,316nm,19.0s						
TOLK	Toolik Lake Re	113.94	337	IAMs_20	IAMs_20	14 17 53.3	
	comp=Z,356nm,20.0s						
TOLK	Toolik Lake Re	113.94	337	P	PKiKP	13 30 10.3	+0.6
	baz=113						
H21K	Melozitna Rive	113.98	333	IAMs_20	IAMs_20	14 18 03.6	
	comp=Z,315nm,18.0s						
H21K	Melozitna Rive	113.98	333	P	PKiKP	13 30 10.7	+0.9
	baz=111						
TTA	Tatalina	114.33	330	P	PKiKP	13 30 11.2	+0.6
	baz=110						
ISP	Isparta	117.08	60	IAMs_20	IAMs_20	14 28 27.5	
	comp=Z,416nm,19.0s						
CSS	Mathiatis	118.28	64	IAMs_20	IAMs_20	14 23 27.7	
	comp=Z,380nm,21.0s						
RDOG	Red Dog Mine	118.49	335	IAMs_20	IAMs_20	14 30 07.6	
	comp=Z,256nm,21.0s						
KBS	Kingsbay	118.68	13	IAMs_20	IAMs_20	14 30 38.1	
	comp=Z,277nm,18.0s						
ANM	Nome	118.77	331	P	PKiKP	13 30 20.4	+1.3
	baz=101						
NACGM	Naroch	119.23	41	*e*PKP	PKPdf	13 30 20.2	0.0
	comp=Z,10.0nm,0.9s,baz=257						
AKASG	Malin Array Be	119.75	46	PKP	PKPdf	13 30 20.3	-1.0
	comp=Z,0.4nm,0.4s,baz=268,slow=2.3,SNR=7.2						
AKBB	Malin Array Si	119.75	46⇑	*i*PKIKP	PKPdf	13 30 20.7	-0.6
MNK	Minsk	119.78	41	*i* P	Pdif	13 26 37.0	-7.2
MNK				*i* SS	SS	13 48 21.5	+13
MNK				MLR	MLR		
	comp=Z,312nm,14.0s						
MNK				MLR	MLR		
	comp=E,49nm,19.0s						
MNK				MLR	MLR		
	comp=N,339nm,19.0s						
MNK	Minsk	119.78	41	*i* P	Pdif	13 26 37.1	-7.2
MNK				*i* P	Pdif	13 26 37.1	-7.2
	baz=258						
MNK				*i* P	Pdif	13 26 37.1	-7.2
MNK				*i* PKP	pPKPdf	13 30 28.1	-2.1
MNK				*i* PP	PP	13 31 56.4	+11
MNK				*i* PPP	PPP	13 34 28.5	
MNK				*i* SKS	SKSdf	13 37 44.1	+13
MNK				*i* PS	PS	13 41 45.9	+11
MNK				*i* SS	SKKSdf	13 48 21.6	+6.1
MNK				*i* SSS	SSS	13 52 47.0	
MNK				*i* LQ	LQ	14 13 21.1	
MNK				*i* LR	LR	14 19 36.7	
MNK				*i* LRM	MLR	14 23 14.0	
	comp=Z,312nm,14.1s						
MNK				*i* LRM	MLR	14 23 45.9	
	comp=E,49nm,19.2s						
MNK				*i* LRM	MLR	14 23 57.4	
	comp=N,339nm,19.2s						
BRTR	Keskin Array B	119.98	59	PP	PP	13 31 50.6	+3.3
	comp=N,1.5nm,0.9s,baz=235,slow=5.1,SNR=1.8						
ASAR	Alice Springs	120.62	207	PKP	PKPdf	13 30 22.5	-1.5
	comp=N,1.0nm,0.6s,baz=138,slow=1.8,SNR=16						
ASAR				PKKPbc	PKKPbc	13 40 29.1	+0.3
	comp=N,0.7nm,0.8s,baz=337,slow=3.2,SNR=9.2						
WRA	Warramunga Arr	123.76	210	PKP	PKPdf	13 30 29.0	-1.1
	comp=N,4.3nm,0.3s,baz=153,slow=1.8,SNR=48						
ANN	Anapa	123.93	54	*i* PKIKP	PKiKP	13 30 32.4	+2.6
ANN				pmax	pmax		
	comp=Z,78nm,1.2s						
RAYN	Ar Rayn	124.31	81	IAMs_20	IAMs_20	14 28 47.9	
	comp=Z,322nm,20.0s						
OBN	Obninsk	124.83	42	*i* PKIKP	PKPdf	13 30 30.2	-0.7
OBN				*i* SS	SS	13 49 16.8	+4.0
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
OBN				MLR	MLR		
	comp=Z,500nm,19.0s						
SOC	Sochi	125.31	56	*i* PKIKP	PKiKP	13 30 34.9	+2.3
SOC				*e*		13 32 28.5	
SOC				*e*PPP	PPP	13 35 02.1	
SOC				*e*PS	PS	13 42 27.7	+3.6
SOC				*e*SS	SS	13 49 25.0	+5.5
MOS	Moscow	125.48	41	*e*PKIKP	PKPdf	13 30 21.3	-11
MOS				*e*		13 30 31.8	
MOS				*e*		13 32 30.5	
MOS				MLR	MLR		
	comp=Z,700nm,19.0s						
H11S2	WAKE ISLAND Hy	125.99	271	T	T	15 49 17.0	
	baz=115,slow=74,SNR=788						
H11S1	WAKE ISLAND Hy	126.00	271	T	T	15 49 16.1	
	baz=115,slow=74,SNR=636						
H11S3	WAKE ISLAND Hy	126.01	271	T	T	15 49 19.9	
	baz=115,slow=74,SNR=497						
KLMR	Klimovskoe	126.57	35	*e*PKIKP	PKPdf	13 30 32.9	-1.2
KLMR				*e*SSS	SSS	13 54 16.7	
KLMR				pmax	pmax		
	comp=Z,22nm,1.2s						
KLMR	Klimovskoe	126.57	35	*e*PKPdf	PKPdf	13 30 32.9	-1.2
KLMR				AMP		13 30 35.7	
	comp=Z,22nm,1.2s						
KLMR				*e*SSS	SSS	13 54 16.7	
KLMR				*e*SSS	SSS	13 54 16.7	
KLMR				LQ	LQ	14 16 50.1	
KLMR				LQ	LQ	14 16 50.1	
KLMR				LR	LR	14 22 41.2	
KIV	Kislovodsk	127.49	56	*i* PKIKP	PKPdf	13 30 36.2	-0.3
KIV				*e*		13 32 36.1	
KIV				*e*PS	PS	13 42 41.5	-2.0
KIV				*e*SS	SS	13 49 46.8	-0.2
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	127.61	56⇑	*i*PKIKP	PKPdf	13 30 36.1	-0.5
GNI	Garni	128.37	61	IAMs_20	IAMs_20	14 30 15.5	
	comp=Z,242nm,19.0s						

GNI	**Garni**	128.37	61	⇑iPKIKP	PKPdf	13 30 37.4	-1.0
PRGR	**Permogore**	129.44	33	ePKIKP	PKPdf	13 30 39.3	-0.2
BILL	**Bilibino**	129.94	335	IAMs_20	IAMs_20	14 29 11.3	
	comp=Z,251nm,19.0s						
BILL	**Bilibino**	129.94	335	i PKIKP	PKPdf	13 30 37.7	-2.6
BILL				i		13 30 47.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,203nm,18.0s						
MAK	**Makhachkala**	130.84	58	i P	Pdif	13 27 22.1	-12
MAK				i		13 30 41.3	
MAK				e		13 32 56.0	
MAK				e		13 37 51.3	
MAK				pmax	pmax		
	comp=Z,173nm,0.9s						
BELG	**Belogornoye**	131.32	45	⇑iPKIKP	PKPdf	13 30 43.7	+0.4
ARU	**Arti**	137.04	38	i PKIKP	PKPdf	13 30 54.4	+0.4
ARU						13 33 37.7	
ARU				SS	SS	13 51 39.0	-3.0
ARU				MLR	MLR		
	comp=Z,468nm,18.0s						
SEY	**Seymchan**	137.25	332	⇓iPKIKP	PKiKP	13 30 55.5	-0.5
SEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PET	**Petropavlovsk**	137.41	317	i PKIKP	PKiKP	13 30 56.2	-0.4
PET				e		13 33 50.5	
PET				ePS	PS	13 44 11.3	+3.2
PET				ePPS	PPS	13 45 59.6	
PET				eSS	SS	13 51 52.3	+5.7
PET				eSSS	SSS	13 56 54.0	
PET				pmax	pmax		
	comp=Z,15nm,1.4s						
PETK	**Petropavlovsk-**	137.96	317	PKP	PKPdf	13 30 56.4	+0.6
	comp=Z,2.8nm,0.9s,baz=72,slow=6.8,SNR=5.8						
AB31	**Akbulak array**	139.38	49	i PKIKP	PKPdf	13 30 56.6	-1.9
MA2	**Magadan**	139.48	328	IAMs_20	IAMs_20	14 36 17.8	
	comp=Z,212nm,21.0s						
MA2	**Magadan**	139.48	328	i PKIKP	PKPdf	13 30 59.5	+1.1
NRIK	**Noril'sk**	139.53	11	PKP	PKPdf	13 30 58.1	-0.1
	comp=Z,1.0nm,0.4s,baz=249,slow=1.9,SNR=4.7						
NRIK	**Noril'sk**	139.53	11	i PKIKP	PKPdf	13 30 57.7	-0.5
KAPI	**Kappang**	142.84	199	IAMs_20	IAMs_20	14 32 10.0	
	comp=Z,361nm,22.0s						
SPSI	**Sidrap Palu**	143.83	200	PKP	PKPab	13 31 04.7	+0.1
SPSI				PKP	PKPbc	13 31 05.9	+0.7
LBMI	**Labuha**	143.87	214	PKP	PKiKP	13 31 14.3	+3.1
PCHI	**Peechi**	144.24	117	eP	PKPab	13 31 04.7	-1.4
PCHI				ex	x	13 42 42.4	
BRVK	**Borovoye**	144.57	40c	ePKIKP	PKPbc	13 31 06.8	+0.4
TTSI	**Tana Toraja**	144.69	200	PKP	PKPab	13 31 07.8	0.0
TTSI				PKP	PKPdf	13 31 08.8	-0.3
TNTI	**Ternate**	145.15	215	PKP	PKPbc	13 31 08.6	-0.8
TNTI				PKP	PKPdf	13 31 11.4	+1.5
BBKI	**Banjar Baru**	145.47	192	PKP	PKPbc	13 31 10.3	-0.1
BBKI				PKP	PKPab	13 31 10.7	+0.1
LUWI	**Luwuk**	145.55	206	PKP	PKPab	13 31 11.3	+0.4
LUWI				PKP	PKPbc	13 31 12.1	+1.4
YAK	**Yakutsk**	145.67	342		PKPdf	13 31 09.1	-0.2
YAK	**Yakutsk**	145.67	342c	iPKP2	PKPdf	13 31 09.2	0.0
YAK				e		13 34 30.8	
YAK				pmax	pmax		
	comp=Z,128nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				pmax	pmax		
	comp=N,22nm,1.4s						
YAK				pmax	pmax		
	comp=Z,39nm,2.2s						
YAK				pmax	pmax		
	comp=N,39nm,2.8s						
YAK				pmax	pmax		
	comp=E,21nm,2.8s						
KMSI	**Cibinong**	146.54	209	PKP	PKiKP	13 31 25.5	+8.9
PBKI	**Pangkalan Bun**	146.64	186	PKP	PKPab	13 31 14.6	-0.4
PBKI				PKP	PKiKP	13 31 16.8	-0.1
PPBI	**Pangkal Pinang**	147.28	176	PKP	PKiKP	13 31 18.2	0.0
OTUK	**Ortayu**	147.57	47	PKIKP	PKPdf	13 31 13.4	+0.4
KK31	**Karatay Array**	147.65	57	i PKP2	PKPbc	13 31 15.3	-0.7
KKAR	**Karatay Array**	147.65	57		PKPbc	13 31 15.9	-0.1
KKAR	**Karatay Array**	147.65	57	PKP2	PKPbc	13 31 15.9	-0.1
MPSI	**Mapaga**	147.86	202	PKP	PKPbc	13 31 16.5	-0.8
MPSI				PKP	PKPbc	13 31 16.6	-0.8
GAR	**Garm**	147.97	65		PKPdf	13 31 14.5	+0.4
TOLI2	**Tolitoli**	148.28	204	IAMs_20	IAMs_20	14 35 31.5	
	comp=Z,254nm,21.0s						
DSRI	**Dabo**	148.82	173	PKP	PKPbc	13 31 19.6	-0.3
DSRI				PKP	PKiKP	13 31 20.5	-0.8
YSS	**Yuzh-Sakhalins**	148.89	311	i PKIKP	PKPdf	13 31 15.3	+0.2
YSS				e		13 31 27.5	
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,18.0s						
STKI	**Sintang**	149.40	186	PKP	PKPbc	13 31 21.7	+0.3
STKI				PKP	PKiKP	13 31 22.8	+0.3
SBSI	**Sibolga**	149.70	161	PKP	PKPbc	13 31 20.7	-1.5
SBSI				PKP	pPKPbc	13 31 31.3	+0.9
HYBB	**Hyderabad (bro**	149.95	109	ePKPdf	PKPdf	13 31 13.1	-4.6
EKS2	**Erkin-Say**	150.09	57	P	PKiKP	13 31 23.5	+0.2
	SNR=10						
KURBB	**Kurchatov Arra**	150.23	39	PKIKP	PKPbc	13 31 21.9	-0.4
USP	**Ospenovka**	150.47	55	P	PKiKP	13 31 23.9	0.0
	SNR=14						
AAK	**Ala-Archa**	150.61	57	P	PKiKP	13 31 24.8	+0.4
	SNR=12						
AAK	**Ala-Archa**	150.61	57	IAMs_20	IAMs_20	14 41 44.7	
	comp=Z,365nm,22.0s						
AAK	**Ala-Archa**	150.61	57c	iPKIKP	PKiKP	13 31 24.6	+0.2
AAK				pmax	pmax		
	comp=Z,32nm,1.3s						
CHMS	**Chumysh**	150.71	56	P	PKiKP	13 31 24.1	-0.3
	SNR=5.8						
UCH	**Uchtor**	150.71	57	P	PKiKP	13 31 25.5	+0.5
	SNR=13						
KSM	**Kuching**	150.89	184	IAMs_20	IAMs_20	14 37 28.7	
	comp=Z,296nm,19.0s						
KBK	**Karagaybulak**	150.93	56	P	PKPbc	13 31 24.4	-0.1
	SNR=6.5						
KCSI	**Kotacane, Aceh**	151.23	158	PKP	PKPab	13 31 34.4	+0.8
ZALV	**Zalesovo Beam**	151.26	29	PKP	PKPdf	13 31 18.9	+0.3
	comp=Z,1.3nm,0.4s,baz=318,slow=2.0,SNR=12						
ZALV				PKPbc	PKPbc	13 31 24.7	+0.1
	comp=Z,54nm,0.9s,baz=298,slow=3.2,SNR=83						
TKM2	**Tokmak 2**	151.33	56	P	PKiKP	13 31 25.9	0.0
	SNR=12						
ULHL	**Ulahol**	151.96	57	P	PKiKP	13 31 27.9	+0.7
	SNR=6.1						
KSH	**Kashi**	152.29	63	PKPbc	PKPdf	13 31 21.1	+0.3
KSH				pPKP	PKiKP	13 31 28.1	+0.2
KSH				PP	PP	13 35 08.7	-1.5
KSH				AMB	AMB		
	comp=Z,180nm,5.5s						
KSH				LR	LR		
	comp=Z,290nm,20.3s						
KSH				LR	LR		
	comp=Z,470nm,20.6s						
KSH				LR	LR		
	comp=Z,470nm,22.0s						
BOD	**Bodaibo**	152.57	353	ePKIKP	PKPdf	13 31 19.7	-0.8
BOD				pmax	pmax		
	comp=Z,43nm,1.4s						
IPM	**Ipoh**	153.07	164	IAMs_20	IAMs_20	14 34 43.9	
	comp=Z,304nm,20.0s						
ZEA	**Zeya**	153.16	335	ePKIKP	PKPdf	13 31 20.3	-1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KULM	**Kulim**	153.75	163	IAMs_20	IAMs_20	14 40 29.2	
	comp=Z,262nm,19.0s						
MK31	**Makanchi Array**	154.31	44	i PKIKP	PKPbc	13 31 30.6	-1.1
MKAR	**Makanchi Array**	154.31	44	PKP	PKPdf	13 31 22.4	-1.0
	comp=Z,1.2nm,1.0s,baz=305,slow=4.3,SNR=5.9						
MKAR				PKPbc	PKPbc	13 31 31.5	-0.2
	comp=Z,4.0nm,1.0s,baz=336,slow=2.7,SNR=14						
MKAR				PKPab	sPKPbc	13 31 44.5	+0.9
	comp=Z,7.2nm,0.9s,baz=309,slow=2.8,SNR=13						
MJAR	**Matsushiro Arr**	154.43	291	PKPab	PKPab	13 31 47.7	+1.1
	comp=Z,5.6nm,0.8s,baz=116,slow=2.9,SNR=5.5						
MDJ	**Mudanjiang**	158.19	316	IAMs_20	IAMs_20	14 37 38.9	
	comp=Z,215nm,20.0s						
MDJ	**Mudanjiang**	158.19	316	PKP	PKPdf	13 31 28.2	-0.3
IRK	**Irkutsk**	158.26	7	ePKP2	PKPab	13 32 02.7	+0.3
IRK				pmax	pmax		
	comp=Z,55nm,1.7s						
WMQ	**Urumqi**	159.11	45	ePKP	PKPdf	13 31 30.2	+0.5
WMQ				LR	LR		
	comp=Z,360nm,17.7s						
WMQ				LR	LR		
	comp=Z,350nm,17.7s						
WMQ				LR	LR		
	comp=Z,340nm,21.3s						
HIA	**Hailar**	159.49	338	IAMs_20	IAMs_20	14 55 24.3	
	comp=Z,264nm,20.0s						
ZAK	**Zakamensk**	159.97	9	ePKP2	PKPab	13 32 10.1	+0.1
ZAK				e		13 35 48.1	
ZAK				pmax	pmax		
	comp=Z,22nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KSRS	**Korea Array**	162.36	298	PKP	PKPdf	13 31 33.1	-0.2
	comp=Z,0.2nm,0.3s,baz=90,slow=1.2,SNR=4.4						
KSRS				PKPab	PKPab	13 32 22.3	+1.4
	comp=Z,0.6nm,0.7s,baz=41,slow=4.5,SNR=1.9						
SONM	**Songino Array**	162.81	4	PKP	PKPdf	13 31 33.4	-0.2
	comp=Z,1.6nm,1.0s,baz=90,slow=1.4,SNR=7.8						
SONM				PKPab	PKPab	13 32 23.9	+1.4
	comp=Z,6.4nm,1.0s,baz=329,slow=4.3,SNR=20						
CMAR	**Chiang Mai Arr**	165.19	143	PKP	PKPdf	13 31 37.1	+0.6
	comp=Z,0.5nm,0.4s,baz=255,slow=1.2,SNR=6.1						
CMAR				PKPab	PKPab	13 32 32.9	-0.8
	comp=Z,5.9nm,1.0s,baz=230,slow=5.3,SNR=22						
CMAR				PP	PP	13 36 23.7	+4.1
	comp=Z,0.2nm,0.3s,baz=243,slow=5.6,SNR=1.4						
XLT	**XiLinHaoTe**	165.41	337	ePKP	PKPdf	13 31 28.2	-7.9
XLT				PP	PP	13 36 15.7	-4.8
GOMU	**GeErMu**	167.51	60	PKP	PKPdf	13 31 38.9	+0.6
GOMU				pPKP	pPKPdf	13 31 43.8	-2.9
GOMU				sPKP		13 31 48.2	
GOMU				PP	PP	13 36 33.2	+0.3
GOMU				AMB	AMB		
	comp=Z,48nm,3.9s						
GOMU				LR	LR		
	comp=Z,150nm,19.1s						
GOMU				LR	LR		
	comp=Z,130nm,19.3s						
GOMU				LR	LR		
	comp=Z,250nm,18.2s						
QIZ	**Qiongzhong**	168.31	188	PKP	PKPdf	13 31 38.6	-0.3
QIZ				PP	PP	13 36 36.3	+1.3
QIZ				SS	SS	13 57 25.5	+2.0
QIZ				LR	LR		
	comp=Z,270nm,14.9s						
QIZ				LR	LR		
	comp=Z,180nm,16.3s						
QIZ				LR	LR		
	comp=Z,210nm,19.4s						
GTA	**Gaotai**	168.89	36	⇓PKP	PKPdf	13 31 39.5	+0.7
GTA				pPKP	pPKPdf	13 31 44.2	-3.0
GTA				sPKP		13 31 47.6	
HHC	**Hu-ho-hao-te**	169.50	346	ePKP	PKPdf	13 31 37.0	-2.1
HHC				LR	LR		
	comp=Z,710nm,19.0s						
HHC				LR	LR		
	comp=Z,710nm,19.7s						
HHC				LR	LR		
	comp=Z,1μm,19.0s						
TIA	**Tai'an**	170.75	309	PKP	PKPdf	13 31 40.0	+0.1
TIA				PP	PP	13 36 53.8	+5.3
TIA				LR	LR		
	comp=Z,200nm,19.2s						
TIA				LR	LR		
	comp=Z,190nm,14.2s						
TIA				LR	LR		
	comp=Z,290nm,19.9s						
NJ2	**Nanjing**	170.82	281	ePKP	PKPdf	13 31 40.0	0.0
HNS	**HongShan**	171.42	323	⇑PKP	PKPdf	13 31 39.6	-0.5
HNS				PP	PP	13 36 53.3	+2.1
HNS				eSS	SS	13 57 55.8	+0.2
HNS				AMB	AMB		
	comp=Z,170nm,5.8s						
HNS				LR	LR		
	comp=Z,180nm,17.1s						
HNS				LR	LR		
	comp=Z,220nm,15.7s						
HNS				LR	LR		
	comp=Z,380nm,21.2s						
PZH	**PanZhiHua**	172.94	124	PKP	PKPdf	13 31 39.7	-1.6
PZH				PKPab	PKPab	13 33 06.7	-1.3
PZH				PP	PP	13 37 02.9	+3.3
PZH				SKKS		13 43 45.2	
PZH				SS	SS	13 58 13.4	+1.5
PZH				AMB	AMB		
	comp=Z,110nm,10.8s						
PZH				LR	LR		
	comp=Z,390nm,21.2s						
PZH				LR	LR		
	comp=Z,470nm,20.0s						
PZH				LR	LR		
	comp=Z,500nm,19.6s						
LZH	**Lanzhou**	173.47	33	PKP	PKPdf	13 31 42.0	+0.7
LZH				sPKP		13 31 49.2	
LZH				AMB	AMB		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,170nm,17.3s						
LZH				LR	LR		
	comp=Z,290nm,18.4s						
LZH				LR	LR		
	comp=Z,280nm,17.4s						
CD2	**Chengdu**	176.14	85	PKP	PKPdf	13 31 41.2	-0.9
CD2				PP	PP	13 37 16.1	+0.5
CD2				SKS	SKSdf	13 38 40.1	-3.4
CD2				AMB	AMB		
	comp=Z,330nm,9.8s						
CD2				LR	LR		
	comp=Z,220nm,22.6s						
CD2				LR	LR		
	comp=Z,400nm,16.2s						
XAN	**Xi'an**	176.60	350	⇓PKP	PKPdf	13 31 42.8	+0.7
XAN				PKPab	PKPab	13 33 23.5	-0.3
XAN				PP	PP	13 37 15.4	-0.4
XAN				AMB	AMB		
	comp=Z,440nm,9.4s						
XAN				LR	LR		
	comp=Z,300nm,20.9s						
XAN				LR	LR		
	comp=Z,190nm,20.0s						
XAN				LR	LR		
	comp=Z,420nm,20.9s						

THE **11** *13:14:25.2, 38°.21N×20°.51E, h17^{km}, ML2.6/4 Error ellipse: s-maj=1.1km s-min=0.5km az=221.0*

ATH **11** *13:14:25.9, 38°.22N×20°.54E, h14^{km}±1^{km}, ML2.1/8, Error ellipse: s-maj=2.7km s-min=1.1km az=252.0*

ISC 11 13:14:25.4±1.0**, 38°.21N**±0°.03×**20°.52E**±0°.04**, h17**^{km}±6^{km}**, n23, σ0^s.35**/37**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	0.06	261	P	Pg	13 14 28.5	-0.1
LXRA				S	Sg	13 14 31.0	+0.3
LXRA				AML	AML	13 14 31.3	
	comp=E,16568μm,0.2s						
LXRA				AML	AML	13 14 31.3	
	comp=N,45622μm,0.1s						
VLS	**Valsamata**	0.07	120	P	Pg	13 14 28.4	-0.3
VLS				S	Sg	13 14 30.7	-0.1
VLS	**Valsamata**	0.07	120	P	Pg	13 14 28.4	-0.3
VLS				S	Sg	13 14 30.7	-0.1
KEF4	**Livadi, Kephal**	0.09	303	P	Pg	13 14 28.6	-0.2
KEF4				S	Sg	13 14 31.4	+0.3
PSDA	**Pessada-Kefalo**	0.11	151	P	Pg	13 14 28.9	-0.1
PSDA				S	Sg	13 14 31.5	+0.1
PSDA	**Pessada-Kefalo**	0.11	151	P	Pg	13 14 28.9	-0.1
PSDA				S	Sg	13 14 31.5	+0.1
DMLN	**Damoulianata-K**	0.12	284	P	Pg	13 14 28.9	-0.2
DMLN				S	Sg	13 14 31.6	-0.1
	comp=N,3μm,0.1s						
KEF3	**Kipouria, Keph**	0.13	267	P	Pg	13 14 28.8	-0.5
KEF3				S	Sg	13 14 31.4	-0.5
FSK	**Fiskardo**	0.25	8	P	Pg	13 14 31.3	+0.2
FSK				S	Sb	13 14 35.3	-0.3
FSK				AML	AML	13 14 36.0	
	comp=E,8092μm,0.1s						
FSK				AML	AML	13 14 36.1	
	comp=N,1722μm,0.1s						
FSK	**Fiskardo**	0.25	8	P	Pg	13 14 31.3	+0.2
FSK				S	Sb	13 14 35.3	-0.3
	comp=N,3μm,0.2s						
EVGI	**Lefkada island**	0.42	15	P	Pg	13 14 33.5	-0.6
EVGI				S	Sg	13 14 40.0	+0.1
EVGI	**Lefkada island**	0.42	15	P	Pg	13 14 33.5	-0.6
EVGI				S	Sg	13 14 40.0	+0.1
	comp=N,1μm,0.1s						
DRAG	**Dragano-Lefkad**	0.47	5	P	Pg	13 14 34.3	-0.7
DRAG				S	Sg	13 14 41.8	+0.3
TSLK	**Tsoukalades, L**	0.62	10	P	Pg	13 14 37.5	-0.2
TSLK				AML	AML	13 14 50.1	
	comp=E,346μm,0.3s						
TSLK				AML	AML	13 14 53.0	
	comp=N,421μm,0.4s						
TSLK	**Tsoukalades, L**	0.62	10	P	Pg	13 14 37.7	0.0
TSLK				S	Sg	13 14 46.1	0.0
	comp=N,152nm,0.3s						
RLS	**Riolos of Patr**	0.77	101	P	Pg	13 14 39.7	-0.6
RLS				AML	AML	13 14 59.2	
	comp=N,171μm,0.4s						
RLS				AML	AML	13 14 59.8	
	comp=E,136μm,0.3s						
PVO	**Paravola**	0.89	63	P	Pb	13 14 42.4	0.0
DRO	**Drossia**	0.98	105	P	Pb	13 14 43.4	-0.5
DRO				AML	AML	13 15 06.7	
	comp=N,280μm,0.5s						
DRO				AML	AML	13 15 06.8	
	comp=E,132μm,0.5s						
KLV	**Kalavryta, Ach**	1.30	97	P	Pn	13 14 49.1	+0.3
KLV				AML	AML	13 15 13.6	
	comp=E,60μm,0.9s						
KLV				AML	AML	13 15 14.1	
	comp=N,66μm,0.5s						
IGT	**Igoumenitsa**	1.33	354	P	Pb	13 14 49.9	0.0
IGT				AML	AML	13 15 11.3	
	comp=E,195μm,0.6s						
IGT				AML	AML	13 15 12.8	
	comp=N,108μm,0.4s						
GUR	**Goura**	1.47	100	P	Pn	13 14 51.6	+0.5
GUR				AML	AML	13 15 16.4	
	comp=N,193μm,0.6s						
GUR				AML	AML	13 15 22.1	
	comp=E,114μm,0.6s						
MAKR	**Makrakomi, Fth**	1.50	57	P	Pb	13 14 53.1	+0.4
ITM	**Ithomi**	1.52	132	P	Pb	13 14 53.8	+0.6

IDC 11 13:42:55.8±23.0**, 1°.46N×124°.84E, h337**^{km}±265^{km}**, mb3.0**/3**, mbtmp3.6**/4**, MS2.8**/1**, Error ellipse: s-maj=172.7km s-min=34.3km az=52.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	6.83	110	LR	LR	13 47 20.1	
	comp=Z,84nm,21.6s,baz=32,slow=39						
FITZ	**Fitzroy Crossi**	19.45	178	P	P	13 46 58.9	-0.1
	1.3nm,0.6s,baz=7.9,slow=8.4,SNR=1.3						
WRA	**Warramunga Arr**	23.23	157	P	P	13 47 34.0	-0.2
	1.7nm,0.4s,baz=334,slow=10,SNR=29						
	1.7nm,0.4s						
ASAR	**Alice Springs**	26.49	161	P	P	13 48 03.6	+0.2
	0.2nm,0.4s,baz=344,slow=7.7,SNR=8.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	58.37	327	P	P	13 52 16.6	-0.1
	0.5nm,0.7s,baz=128,slow=6.7,SNR=2.4						
	0.5nm,0.7s						

NIED **11** *13:43:47.0, 32°.39N×130°.54E, h11^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.32; M$_{θθ}$2.71; M$_{φφ}$-1.39; M$_{rθ}$-0.07; M$_{θφ}$1.55; M$_{φr}$-0.08; Fault plane solution: M$_0$2.57000×10^{14} NP1: φ$_s$296.00000°, δ86.00000°, λ-3.00000°. NP2: φ$_s$27.00000°, δ87.00000°, λ-176.00000°.*

JMA 11 13:43:47.0±0.0**, 32°.4N**±0°.1×**130°.5E**±0°.1**, h11**^{km}**, MV3.8**/20**, 4D, SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZO	**Okuchi**	0.25	168	i P	Pg	13 43 52.1	-0.1
JZO				S	Sg	13 43 55.9	+0.2
JIU3	**Izumi3**	0.28	56	⇓P	Pg	13 43 52.6	-0.1
JIU3				⇓S	Sg	13 43 57.0	+0.4
JHD	**Hondo**	0.35	283	⇓P	Pg	13 43 54.0	+0.2
JHD				⇓S	Sg	13 43 59.2	+0.7
JTA	**Tamana**	0.57	360	i P	Pg	13 43 58.1	0.0

WEL **11** *13:44:00, 38°.49S×176°.59E, h108^{km}, ML5.2, Mw4.9, Moment Tensor Solution. s9 Moment tensor: Scale 10^{16} Nm; M$_{rr}$1.03; M$_{θθ}$1.42; M$_{φφ}$-2.45; M$_{rθ}$1.51; M$_{θφ}$0.74; M$_{φr}$-0.42; Fault plane solution: M$_0$2.75000×10^{16} NP1: φ$_s$27.00000°, δ53.00000°, λ157.00000°. NP2: φ$_s$132.00000°, δ72.00000°, λ39.00000°. Principal axes: T 2768.2000, Plg40.0000°, Azm356.0000°; N -34.5000, Plg47.0000°, Azm152.0000°; P -2733.7000, Plg12.0000°, Azm256.0000°;*

NEIC **11** *13:44:22.1, 38°.63S×176°.62E, h113^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.72; M$_{θθ}$0.58; M$_{φφ}$-2.30; M$_{rθ}$1.17; M$_{θφ}$0.26; M$_{φr}$-0.18; Fault plane solution: M$_0$2.40000×10^{16} NP1: φ$_s$146.74000°, δ57.04000°, λ51.25000°. NP2: φ$_s$22.61000°, δ49.13000°, λ133.99000°. Principal axes: T 2.4496, Plg58.0000°, Azm0.0000°; N -0.1034, Plg32.0000°, Azm170.0000°; P -2.3463, Plg4.0000°, Azm263.0000°;*

NEIC **11** *13:44:22.4±2.5, 38°.64S±0°.06×176°.60E±0°.08, h113^{km}±4^{km}, mb5.0/40, Mwr4.9/43 Error ellipse: s-maj=9.2km s-min=7.8km az=121.0*

WEL **11** *13:44:23.8±0.5, 38°S±3°×17°7E±°, h88^{km}±4^{km}, M5.2/151, ML5.2/56, MLv5.2/151, Error ellipse: s-maj=0.0km s-min=0.0km az=147.4*

GCMT **11** *13:44:24.4±0.3, 38°.49S±0°.02×176°.56E±0°.03, h100^{km}±4^{km}, MW5.0/73, Moment Tensor Solution. s24,c25; s73,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.57±.14; M$_{θθ}$2.23±.16; M$_{φφ}$-3.79±.15; M$_{rθ}$1.68±.09; M$_{θφ}$0.79±.16; M$_{φr}$-0.18±.12; Best double couple: M$_0$3.78400×10^{16} NP1: φ$_s$31.00000°, δ60.00000°, λ154.00000°. NP2: φ$_s$135.00000°, δ67.00000°, λ33.00000°. Principal axes: T 3.6450, Plg39.0000°, Azm355.0000°; N 0.2880, Plg51.0000°, Azm166.0000°; P -3.9230, Plg4.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC **11** *13:44:28.2±1.6, 38°.33S×176°.64E, h166^{km}±13^{km}, mb4.4/18, mbtmp4.8/19, MS3.9/3 Error ellipse: s-maj=11.8km s-min=10.0km az=40.0*

ISC 11 13:44:22.4±0.5**, 38°.56S**±0°.03×**176°.54E**±0°.03**, h117**^{km}±3^{km}**, n306, σ1^s.60**/313**, mb5.0**/37**, 5C-6D, Fault plane solution: NP1:** φ$_s$139.38126°**,** δ71.84575°**,** λ36.24199°. **NP2:** φ$_s$36.51612°**,** δ55.82186°**,** λ157.87549°. **Principal axes:** T Plg38.1373°, Azm2.9056°**;** N Plg50.0299°**,** Azm162.4097°**;** P Plg10.1899°**,** Azm264.7925°**; North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRRZ	**Plateau Road**	0.12	297	P	Pn	13 44 37.6	-1.0
ALRZ	**Allen Road**	0.15	267	P	Pn	13 44 37.6	-1.0
ALRZ				S	Sn	13 44 49.1	-1.7
MUGZ	**Murupara**	0.20	67	P	Pn	13 44 37.6	-1.2
MUGZ				S	Sn	13 44 46.7	-4.3
RRRZ	**Republican Roa**	0.22	356	P	Pn	13 44 37.7	-1.1
RRRZ				S	Sn	13 44 49.1	-2.0
HRRZ	**Handcock Road**	0.26	310	P	Pn	13 44 38.1	-0.8
HRRZ				S	Sn	13 44 49.7	-1.7
MRHZ	**Matea Rd**	0.29	198	P	Pn	13 44 38.4	-0.7
WPRZ	**Whakapapatarin**	0.29	277	P	Pn	13 44 38.4	-0.6
TARZ	**Mount Tarawera**	0.32	356	P	Pn	13 44 38.2	-1.1
TARZ				S	Sn	13 44 47.7	-4.2
HSRZ	**Hossack Road**	0.33	317	P	Pn	13 44 38.5	-0.7
HLRZ	**Highlands Stat**	0.34	335	P	Pn	13 44 38.5	-0.8
RTZ	**Ruatahuna**	0.35	100	P	Pn	13 44 38.4	-0.9
RTZ				S	Sn	13 44 50.5	-1.6
MTHZ	**Maungataniwha**	0.38	141	P	Pn	13 44 38.9	-0.6
GRRZ	**Galatos Road**	0.39	301	P	Pn	13 44 39.0	-0.5
MKRZ	**Makatiti**	0.42	353	P	Pn	13 44 39.3	-0.5
UTU	**Utuhina**	0.46	325	P	Pn	13 44 39.3	-0.6
OMRZ	**Omania**	0.47	344	P	Pn	13 44 38.9	-1.1

WHTZ	Whakaora	0.47	256	P	Pn	13 44 39.8	-0.1
EDRZ	Edgecumbe	0.48	20	P	Pn	13 44 38.7	-1.3
HATZ	Hinemaiaia	0.48	226	P	Pn	13 44 39.6	-0.4
NGRZ	Ngongotaha	0.53	329	P	Pn	13 44 39.7	-0.6
URZ	Urewera	0.54	57	P	Pn	13 44 39.0	-1.3
	8µm,0.4s,baz=237,slow=4.5						
URZ				S	Sn	13 44 50.6	-3.1
	21µm,0.3s,baz=135,slow=18,SNR=13						
URZ	Urewera	0.54	57	Pn	Pn	13 44 38.7	-1.6
URZ	Urewera	0.54	57	P	Pn	13 44 38.9	-1.4
URZ				S	Sn	13 44 50.8	-2.9
KUTZ	Kaahu Road	0.56	276	P	Pn	13 44 40.2	-0.3
RAHZ	Arahi	0.56	130	P	Pn	13 44 40.4	0.0
RAHZ				S	Sn	13 44 53.5	-0.7
LIRZ	Lichensteins R	0.56	348	P	Pn	13 44 39.6	-0.9
MARZ	Manawahe	0.58	11	P	Pn	13 44 39.5	-1.1
KARZ	Kaharoa	0.58	337	P	Pn	13 44 39.7	-0.9
NMHZ	Naumai	0.58	159	P	Pn	13 44 41.2	+0.5
BKZ	Black Stump Fm	0.61	183	Pn	Pn	13 44 40.5	-0.3
BKZ	Black Stump Fm	0.61	183	P	Pn	13 44 40.6	-0.3
WATZ	Wairara	0.65	256	P	Pn	13 44 40.9	-0.2
SNGZ	Shannon Statio	0.67	110	P	Pn	13 44 41.1	-0.2
RATZ	Rangitukua	0.67	242	P	Pn	13 44 41.1	-0.2
RITZ	Rihia Road	0.68	231	P	Pn	13 44 41.5	+0.2
RAGZ	Rawiri	0.69	85	P	Pn	13 44 40.8	-0.7
OPRZ	Ohinepanea	0.71	1	P	Pn	13 44 40.2	-1.4
OPRZ				S	Sn	13 44 53.3	-2.7
KATZ	Kakaramea	0.78	237	P	Pn	13 44 42.2	-0.1
WHRZ	Whale Island	0.78	27	P	Pn	13 44 41.0	-1.2
ARHZ	Aropaoanui	0.79	153	P	Pn	13 44 42.6	+0.4
MWZ	Matawai	0.81	75	P	Pn	13 44 41.5	-0.9
TLZ	Tolley Road	0.81	286	P	Pn	13 44 42.5	0.0
KMRZ	Kaimai	0.85	326	P	Pn	13 44 42.2	-0.6
TGRZ	Tauranga	0.85	345	P	Pn	13 44 42.0	-0.8
TMVZ	Te Maari	0.86	229	P	Pn	13 44 43.1	+0.1
NTVZ	North Tongarir	0.86	231	P	Pn	13 44 43.0	0.0
ETVZ	East Tongariro	0.87	228	P	Pn	13 44 43.2	+0.1
KWHZ	Kaweka Forest	0.87	186	P	Pn	13 44 43.4	+0.3
KRVZ	Karewarewa	0.88	232	P	Pn	13 44 43.1	0.0
MCHZ	McNeill Hill	0.90	172	P	Pn	13 44 43.8	+0.6
OTVZ	Oturere	0.91	228	P	Pn	13 44 43.7	+0.2
NNVZ	North Ngauruho	0.92	231	P	Pn	13 44 43.8	+0.2
WTVZ	West Tongariro	0.93	233	P	Pn	13 44 43.6	0.0
SNVZ	South Ngauruho	0.94	228	P	Pn	13 44 44.0	+0.2
NGZ	Ngauruhoe	0.96	229	P	Pn	13 44 44.1	+0.2
RIGZ	Rimuhau	0.97	99	P	Pn	13 44 43.7	-0.3
TUVZ	Tukino	0.99	224	P	Pn	13 44 44.4	+0.2
TWVZ	Taurewa	1.00	239	P	Pn	13 44 44.4	+0.1
BHHZ	Black Hill Sta	1.00	201	P	Pn	13 44 44.3	0.0
KNZ	Kokohu	1.00	118	P	Pn	13 44 43.9	-0.3
WHVZ	Whangaehu Hut	1.04	225	P	Pn	13 44 44.9	+0.1
FWVZ	Far West T-bar	1.04	227	P	Pn	13 44 44.9	+0.1
TKGZ	Te Karaka	1.04	84	P	Pn	13 44 44.2	-0.3
DRZ	Dome Shelter	1.04	226	P	Pn	13 44 45.2	+0.2
MOVZ	Moawhango	1.05	215	P	Pn	13 44 44.6	-0.2
WNVZ	Wahianoa	1.06	223	P	Pn	13 44 45.1	+0.1
TRVZ	Turoa	1.07	226	P	Pn	13 44 45.3	+0.1
RUGZ	Raukumara Rang	1.07	57	P	Pn	13 44 43.4	-1.7
KRHZ	Kereru	1.09	187	P	Pn	13 44 45.2	0.0
PRGZ	Paritu Road	1.12	110	P	Pn	13 44 44.9	-0.5
WIZ	White Island	1.15	27	P	Pn	13 44 44.0	-1.7
WSRZ	White Island S	1.15	26	P	Pn	13 44 44.3	-1.5
TOZ	Tahuroa Road	1.16	315	P	Pn	13 44 45.7	-0.1
MTVZ	Mangateitei	1.17	225	P	Pn	13 44 46.3	+0.3
CKHZ	Cape Kidnapper	1.18	159	P	Pn	13 44 46.4	+0.3
PKVZ	Pokaka	1.18	231	P	Pn	13 44 46.4	+0.3
TWGZ	Tauwhareparae	1.20	72	P	Pn	13 44 45.7	-0.6
MHGZ	Mahia Peninsul	1.23	120	P	Pn	13 44 46.5	-0.1
KAHZ	Kahuranaki	1.27	168	P	Pn	13 44 47.4	+0.3
MYRZ	Mayor Island	1.29	350	P	Pn	13 44 46.9	-0.4
CNGZ	Carnagh Statio	1.31	87	P	Pn	13 44 47.2	-0.3
HIZ	Hauiti	1.32	271		Pn	13 44 48.0	+0.4
HIZ	Hauiti	1.32	271	P	Pn	13 44 48.0	+0.4
PNHZ	Pukenui	1.38	191	P	Pn	13 44 48.0	-0.4
PKGZ	Pakihiroa	1.39	62	P	Pn	13 44 47.5	-0.9
PUZ	Puketiti	1.44	71	P	Pn	13 44 47.9	-1.0
PXZ	Pawanui	1.50	170	P	Pn	13 44 49.5	-0.1
VRZ	Vera Road	1.50	247	P	Pn	13 44 50.2	+0.6
WPHZ	Waipukurau	1.51	183	P	Pn	13 44 49.5	-0.2
TSZ	Takapari Road	1.57	196	P	Pn	13 44 50.1	-0.4
WMGZ	Waiomatatini S	1.65	64	P	Pn	13 44 50.4	-1.0
WAZ	Wanganui	1.70	225	P	Pn	13 44 52.6	+0.6
PRHZ	Porangahau	1.71	177	P	Pn	13 44 51.8	-0.3
MXZ	Matakaoa Point	1.71	55	Pn	Pn	13 44 51.2	-0.9
MXZ	Matakaoa Point	1.71	55	P	Pn	13 44 51.4	-0.8
DVHZ	Dannevirke	1.77	189	P	Pn	13 44 52.0	-0.8
MHEZ	Mangahewa	1.81	253	P	Pn	13 44 54.7	+1.4
MKAZ	Moumakai	1.81	323	P	Pn	13 44 53.3	0.0
LREZ	Lake Rotokare	1.89	241	P	Pn	13 44 55.3	+0.9
OHWZ	Ohakea	1.90	209	P	Pn	13 44 54.7	+0.2
ANWZ	Angora Road	1.90	181	P	Pn	13 44 54.2	-0.3
KUZ	Kuaotunu	1.92	340	P	Pn	13 44 54.1	-0.6
POWZ	Post Office Ro	1.93	198	P	Pn	13 44 54.1	-0.7
DREZ	Durham Road	1.93	250	P	Pn	13 44 56.0	+1.2
PREZ	Palmer Road	2.01	246	P	Pn	13 44 57.3	+1.4
NEZ	North Egmont	2.03	249	P	Pn	13 44 57.4	+1.2
ETAZ	East Tamaki Re	2.04	321	P	Pn	13 44 56.5	+0.2
PRWZ	Pori Road	2.04	192	P	Pn	13 44 55.6	-0.6
WIAZ	Waiheke Island	2.08	327	P	Pn	13 44 56.8	+0.1
PKE	Pukeiti	2.09	251	P	Pn	13 44 57.7	+0.9
KHEZ	Kahui Hut	2.10	249	P	Pn	13 44 58.0	+0.9
AWAZ	Awhitu Peninsu	2.11	314	P	Pn	13 44 57.3	+0.1
BFZ	Birch Farm	2.14	186		Pn	13 44 56.4	-1.0
BFZ	Birch Farm	2.14	186	P	Pn	13 44 56.5	-0.9
EPAZ	Eden Park BICE	2.20	319	P	Pn	13 44 58.2	0.0
NBEZ	Newall Road No	2.20	250	P	Pn	13 44 58.8	+0.6
MBAZ	Motutapu North	2.21	323	P	Pn	13 44 58.5	+0.2
HBAZ	Herne Bay Bore	2.22	319	P	Pn	13 44 58.5	0.0
MRZ	Mangatainoka R	2.23	199	P	Pn	13 44 57.5	-1.1
NMEZ	Namu Road	2.24	247	P	Pn	13 44 59.5	+0.8
WTAZ	Waiatarua	2.25	316	P	Pn	13 44 59.2	+0.3
TIWZ	Tintock	2.27	193	P	Pn	13 44 58.3	-0.9
RVAZ	Riverhead Bore	2.36	318	P	Pn	13 45 00.2	-0.1
CPWZ	Castlepoint	2.37	186	P	Pn	13 44 60.0	-0.3
ABAZ	Army Bay	2.37	325	P	Pn	13 45 00.9	+0.4
GRZ	Great Barrier	2.46	339	P	Pn	13 45 01.3	-0.2
HOWZ	Holdsworth Sta	2.47	198	P	Pn	13 45 00.3	-1.4
OGWZ	Otaki Gorge	2.49	205	P	Pn	13 45 00.8	-1.1
TMWZ	Te Maipa	2.60	191	P	Pn	13 45 02.0	-1.3
KIW	Kapiti Island	2.62	208	P	Pn	13 45 02.3	-1.4
MTW	Mount Morrison	2.72	197	P	Pn	13 45 03.1	-1.8
CAW	Cannon Point	2.79	203	P	Pn	13 45 04.1	-1.7
TRWZ	Traveller	2.91	193	P	Pn	13 45 05.7	-1.7
PAWZ	Paruwai Farm	2.95	196	P	Pn	13 45 05.9	-2.0
DUWZ	D'Urville Isla	3.02	221	P	Pn	13 45 07.2	-1.6
MSWZ	Moikau Station	3.02	199		Pn	13 45 06.5	-2.4
MSWZ	Moikau Station	3.02	199	P	Pn	13 45 06.7	-2.2
WEL	Wellington	3.05	206	P	Pn	13 45 07.2	-2.0
SNZO	South Karori	3.09	206		Pn	13 45 07.4	-2.3
BHW	Baring Head	3.12	204		Pn	13 45 07.8	-2.4
BHW	Baring Head	3.12	204	P	Pn	13 45 08.0	-2.2
WCZ	Waipu Caves	3.14	326	P	Pn	13 45 10.7	+0.2
PLWZ	Palliser	3.17	198	Pn	Pn	13 45 08.4	-2.4
PLWZ	Palliser	3.17	198	P	Pn	13 45 08.5	-2.4
TCW	Tory Channel	3.17	213	P	Pn	13 45 08.7	-2.1
TUWZ	Tuamarina	3.49	214		Pn	13 45 12.7	-2.4
TUWZ	Tuamarina	3.49	214	P	Pn	13 45 12.7	-2.4
NNZ	Nelson	3.60	221		Pn	13 45 14.7	-1.8
NNZ	Nelson	3.60	221	P	Pn	13 45 14.1	-2.4
CMWZ	Cape Campbell	3.65	208		Pn	13 45 15.0	-2.2
CMWZ	Cape Campbell	3.65	208	P	Pn	13 45 15.3	-1.9
TKNZ	Takaka Hill	3.70	227	P	Pn	13 45 15.6	-2.3
BSWZ	Blackbirch Sta	3.76	212		Pn	13 45 16.0	-2.5
BSWZ	Blackbirch Sta	3.76	212	P	Pn	13 45 16.1	-2.5
QRZ	Quartz Range	3.83	232		Pn	13 45 17.8	-1.9
QRZ	Quartz Range	3.83	232	P	Pn	13 45 17.4	-2.2
MRNZ	Matariki Terra	4.06	224	P	Pn	13 45 20.2	-2.5
OUZ	Omahuta	4.08	324	Pn	Pn	13 45 23.3	+0.3
OUZ	Omahuta	4.08	324	P	Pn	13 45 23.6	+0.7
THZ	Tophouse	4.24	220	Pn	Pn	13 45 22.7	-2.4
THZ	Tophouse	4.24	220	P	Pn	13 45 22.7	-2.4
KHZ	Kahutara	4.48	210	P	Pn	13 45 25.2	-3.0
INZ	Inchbonnie	5.69	221	P	Pn	13 45 41.8	-2.7
RPZ	Rata Peaks	6.61	217	P	Pn	13 45 53.1	-3.9
	141nm,0.3s,baz=116,slow=2.3,SNR=213						
RPZ				S	Sn	13 47 03.2	-7.7
	1µm,0.4s,baz=3.8,slow=24,SNR=47						
RPZ	Rata Peaks	6.61	217	Pn	Pn	13 45 54.1	-2.9
CTZ	Chatham Island	7.31	137	P	Pn	13 46 05.9	-0.6
MLZ	Mavora Lakes	9.25	220		Pn	13 46 30.4	-2.3
DCZ	Deep Cove	9.81	222	P	Pn	13 46 37.6	-2.7
RAO	Raoul Island	10.36	28	S	Sn	13 48 30.5	-11
	418nm,0.3s,baz=142,slow=21,SNR=4.2						
LHI	Lord Howe Isla	15.93	291		P	13 48 00.7	-0.4
LHI				IAmb	IAmb	13 48 15.2	
	comp=Z,108nm,1.1s						
PINNC	Pines Island,	17.70	331		Pn	13 48 22.5	+1.1
OUENC	Ouen Island, N	18.10	330		Pn	13 48 27.1	+0.7
OUENC				IAmb	IAmb	13 48 30.1	
	comp=Z,181nm,1.4s						
ONTNC	Ouen Toro	18.36	329	P	Pn	13 48 28.7	-0.7
DZM	Mont Dzumac	18.57	329	P	Pn	13 48 32.5	+0.5
	comp=Z,32nm,0.6s,baz=170,slow=9.6,SNR=162						
DZM	Mont Dzumac	18.57	329	P	Pn	13 48 31.9	-0.1
DZM				IAmb	IAmb	13 48 35.5	
	comp=Z,98nm,1.4s						
LIFNC	LIFOU	19.45	333	P	P	13 48 40.3	+0.5
LIFNC				IAmb	IAmb	13 48 42.9	
	comp=Z,111nm,1.0s						
MSVF	Nonsavu	20.79	4	P	P	13 48 53.1	-1.2
	comp=Z,15nm,0.4s,baz=247,slow=13,SNR=44						
	comp=Z,15nm,0.4s						
MSVF	Nonsavu	20.79	4	P	P	13 48 53.1	-1.2
MSVF				IAmb	IAmb	13 49 00.2	
	comp=Z,65nm,0.8s						
KOUNC	Koumac, New Ca	20.83	326		P	13 48 56.2	+1.5
KOUNC				IAmb	IAmb	13 49 02.3	
	comp=Z,82nm,1.2s						
SANVU	Saraoutou	24.44	338	P	P	13 49 31.0	+0.7
AFI	Afiamalu	26.64	26	P	P	13 49 50.3	+0.1
	comp=Z,20nm,0.7s,baz=294,slow=12,SNR=1.6						
	comp=Z,20nm,0.7s						
RAR	Rarotonga	26.72	56	P	P	13 49 51.2	+0.4
	comp=Z,14nm,0.5s,baz=185,slow=5.0,SNR=7.4						
	comp=Z,14nm,0.5s						
RAR	Rarotonga	26.72	56	IAmb	IAmb	13 50 00.2	
	comp=Z,88nm,1.4s						
STKA	Stephens Creek	29.19	272	P	P	13 50 15.0	+2.2
	comp=Z,1.6nm,0.4s,baz=103,slow=6.3,SNR=8.0						
	comp=Z,1.6nm,0.4s						
STKA	Stephens Creek	29.19	272	P	P	13 50 13.4	+0.6
CTA	Charters Tower	31.97	296	P	P	13 50 39.6	+2.2
	comp=Z,7.5nm,0.7s,baz=140,slow=11,SNR=9.5						
	comp=Z,7.5nm,0.7s						
CTAO	Charters Tower	31.97	296	P	P	13 50 38.6	+1.2
HNR	Honiara	32.60	328	P	P	13 50 45.0	+2.1
	comp=Z,128nm,0.9s,baz=99,slow=2.1,SNR=5.0						
HNR	Honiara	32.60	328	P	P	13 50 44.2	+1.3
BBOO	Buckleboo	33.18	267	P	P	13 50 48.4	+0.6
BBOO				IAmb	IAmb	13 50 49.6	
	comp=Z,19nm,0.9s						
PPTF	Pamatai, Papee	36.18	64	P	P	13 51 15.8	+2.0
PPT	Papeete	36.19	64	P	P	13 51 15.6	+1.8
	comp=Z,29nm,0.8s,baz=180,slow=9.1,SNR=3.7						
COEN	Coen	38.32	301	P	P	13 51 33.1	+1.2
COEN				IAmb	IAmb	13 51 34.0	
	comp=Z,24nm,0.9s						
AS31	Alice Springs	39.04	280	P	P	13 51 38.8	+0.9
ASAR	Alice Springs	39.04	280	P	P	13 51 39.1	+1.2
	comp=Z,11nm,0.6s,baz=127,slow=8.3,SNR=97						
ASAR				PcP	PcP	13 53 44.5	-1.2
	comp=Z,3.0nm,0.5s,baz=118,slow=4.4,SNR=3.3						
ASAR				ScP	ScP	13 57 18.6	-4.5
	comp=Z,1.2nm,0.7s,baz=117,slow=3.6,SNR=5.9						
ASAR				S	S	13 57 27.4	-1.1
	comp=Z,3.8nm,0.8s,baz=126,slow=15,SNR=15						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	39.04	280	P	P	13 51 38.7	+0.8
PMG	Port Moresby	39.20	310	P	P	13 51 40.8	+1.6
	comp=Z,17nm,0.6s,baz=48,slow=2.6,SNR=9.1						
	comp=Z,17nm,0.6s						
PMG	Port Moresby	39.20	310	P	P	13 51 40.5	+1.3
PMG				IAmb	IAmb	13 51 41.7	
	comp=Z,25nm,0.9s						
VNDA	Vanda	39.57	185	P	P	13 51 45.1	+3.6
	comp=Z,0.9nm,0.6s,baz=2.8,slow=7.2,SNR=7.2						
FORT	Forrest	40.23	266	P	P	13 51 47.9	+0.3
KRVT	Keravat (AS076	40.74	321	P	P	13 51 53.0	+1.1
	comp=Z,117nm,0.6s,baz=124,slow=0.9,SNR=31						
RABL	Rabaul	40.77	321	P	P	13 51 52.6	+0.5
WB2	Warramunga Arr	40.80	285	P	P	13 51 52.8	+0.4
WRA	Warramunga Arr	40.81	285	P	P	13 51 52.6	+0.2
	comp=Z,7.3nm,0.5s,baz=127,slow=7.1,SNR=53						
WRA				PcP	PcP	13 53 49.7	-1.7
	comp=Z,0.8nm,0.5s,baz=122,slow=2.8,SNR=1.9						
WRA				ScP	ScP	13 57 25.2	-4.8
	comp=Z,1.5nm,0.9s,baz=116,slow=3.7,SNR=4.0						
	comp=Z,7.3nm,0.5s						
WRA	Warramunga Arr	40.81	285	P	P	13 51 52.4	-0.1
WB0	Warramunga Arr	40.87	285	P	P	13 51 53.3	+0.3
CASY	Casey	45.84	211	P	P	13 52 33.3	+1.0
CASY				IAmb	IAmb	13 52 34.6	
	comp=Z,33nm,1.2s						
MORW	Morawa	50.35	262	P	P	13 53 07.5	0.0
MORW				IAmb	IAmb	13 53 08.6	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	51.57	180	P	P	13 53 19.5	+3.3
	comp=Z,3.4nm,0.5s,baz=303,slow=1.4,SNR=31						
QSPA				LR	LR	14 10 52.9	
	comp=Z,50nm,21.7s,baz=104,slow=31						
	comp=Z,3.4nm,0.5s						
SIJI	Sorong	55.87	301	P	P	13 53 48.4	+0.4
	comp=Z,23nm,0.8s,baz=89,slow=4.8,SNR=15						
	comp=Z,23nm,0.8s						
BELA	Belgrano 2	62.30	173	P	P	13 54 33.2	+1.6
BELA				IAmb	IAmb	13 55 01.1	
	comp=Z,20nm,1.2s						
MAW	Mawson	63.08	203	P	P	13 54 39.1	+2.3
	comp=Z,8.7nm,0.8s,baz=116,slow=7.1,SNR=12						
	comp=Z,8.7nm,0.8s						
MAW	Mawson	63.08	203	P	P	13 54 38.8	+2.0
MYLDM	Lahad Datu	69.04	295	P	P	13 55 14.5	-1.2
MYLDM				IAmb	IAmb	13 55 29.6	
	comp=Z,35nm,1.5s						
TROLL	Troll, Antarti	69.66	182	P	P	13 55 21.0	+2.2
SNAA	Sanae	70.08	180	P	P	13 55 23.4	+2.1
VNA3	Neumayer Olymp	70.42	178	P	P	13 55 25.3	+2.0
VNA2	Neumayer--Watz	70.79	179	P	P	13 55 28.0	+2.4
	baz=188,slow=7.0						
VNA1	Neumayer--Stat	71.05	178	P	P	13 55 29.6	+2.5
KSM	Kuching	72.54	286	P	P	13 55 36.2	-0.7
PLCA	Paso Flores	80.13	135	P	P	13 56 21.9	+2.4
	comp=Z,2.5nm,0.7s,baz=210,slow=4.6,SNR=9.4						
	comp=Z,2.5nm,0.7s						
RPSI	Rantau Prapat	82.01	280	P	P	13 56 28.3	-1.4
PSI	Prapat	82.07	280	P	P	13 56 28.3	-1.9
	comp=Z,2.4nm,0.3s,baz=99,slow=4.6,SNR=5.1						
MJAR	Matsushiro Arr	82.68	330	P	P	13 56 32.0	-0.7
	comp=Z,6.2nm,0.9s,baz=158,slow=6.0,SNR=7.5						
MJAR				LR	LR	14 28 47.0	
	comp=Z,107nm,21.7s,baz=34,slow=32						
MJAR	Matsushiro Arr	82.68	330	IAmb	IAmb	13 56 36.9	
	comp=Z,262nm,1.4s						
JNU	Nakatsue	82.97	323	P	P	13 56 33.5	-0.8
	comp=Z,13nm,0.9s,baz=79,slow=5.4,SNR=4.2						
	comp=Z,13nm,0.9s						
JNU	Nakatsue	82.97	323	IAmb	IAmb	13 56 36.0	
	comp=Z,18nm,1.0s						
TJN	Taejon	87.30	322		P	13 56 56.0	+0.3
KSRS	Korea Array	87.90	323	P	P	13 56 59.6	+1.1
	comp=Z,15nm,0.8s,baz=144,slow=5.6,SNR=36						
KSRS				LR	LR	14 32 09.5	
	comp=Z,92nm,21.9s,baz=40,slow=33						
	comp=Z,15nm,0.8s						
KSAR	Wonju Array Be	87.91	323		P	13 56 59.5	+0.9
KS19	Wonju Array Si	87.96	323	P	P	13 57 00.1	+1.3
KS19				IAmb	IAmb	13 57 01.2	
	comp=Z,18nm,0.8s						
YSS	Yuzh-Sakhalins	90.33	338		P	13 57 10.4	+0.7
CM31	Chiang Mai Arr	92.03	292	P	P	13 57 19.4	+1.1
CM31				IAmb	IAmb	13 57 20.7	
	comp=Z,9.9nm,0.8s						
CMAR	Chiang Mai Arr	92.03	292	P	P	13 57 18.9	+0.5
	comp=Z,6.6nm,0.8s,baz=151,slow=3.3,SNR=42						
	comp=Z,6.6nm,0.8s						
CMAR	Chiang Mai Arr	92.03	292	P	P	13 57 17.8	-0.5
CHTO	Chiang Mai	92.26	292		P	13 57 17.8	-1.5
CHTO				IAmb	IAmb	13 57 21.0	
	comp=Z,11nm,1.2s						
PETK	Petropavlovsk-	92.74	349	P	P	13 57 19.6	-1.1
	comp=Z,3.1nm,0.6s,baz=117,slow=6.3,SNR=19						
	comp=Z,3.1nm,0.6s						
PZH	PanZhiHua	95.23	300	P	P	13 57 33.7	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.3s						
XAN	Xi'an	95.62	310	P	P	13 57 35.6	+1.1
XAN				pP	pP	13 58 04.2	-0.8
XAN				sP	sP	13 58 16.6	-0.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMB	Columbia Colle	95.77	45	P	P	13 57 36.1	+1.0
CMB				IAmb	IAmb	13 57 37.4	
	comp=Z,5.0nm,0.8s						
YBH	Yreka Blue Hor	97.18	41	P	Pdif	13 57 42.0	+0.6
	comp=Z,1.1nm,0.6s,baz=156,slow=7.2,SNR=2.5						
	comp=Z,1.1nm,0.6s						
YBH	Yreka Blue Hor	97.18	41	IAmb	IAmb	13 57 43.7	
	comp=Z,4.8nm,1.2s						
NVAR	Mina Array Bea	97.21	46	P	P	13 57 41.7	-0.2
	comp=Z,1.5nm,0.7s,baz=222,slow=8.6,SNR=13						
	comp=Z,1.5nm,0.7s						
KVN	Kaiserville	97.76	46	P	Pdif	13 57 46.2	+1.9
XLT	XiLinHaoTe	98.59	321	*e*P	Pdif	13 57 48.1	+0.4
XLT				pP	pP	13 58 18.5	+0.2
XLT				sP	sP	13 58 32.1	+1.4
XLT	XiLinHaoTe	98.59	321	S	S	14 09 04.7	-1.8
XLT	XiLinHaoTe	98.59	321	sS	sS	14 09 46.8	-13
XLT				pmax	pmax		
	comp=Z,14nm,0.9s						
XLT				pmax	pmax		
	comp=Z,44nm,5.4s						
XLT				LR	LR		
	comp=N,15nm,21.1s						
XLT				LR	LR		
	comp=E,190nm,18.8s						
XLT				LR	LR		
	comp=Z,240nm,20.6s						
HHC	Hu-ho-hao-te	98.79	316	*e*P	Pdif	13 57 52.0	+3.3
HHC				pmax	pmax		
	comp=Z,42nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
HHC				LR	LR		
	comp=N,350nm,19.7s						
HHC				LR	LR		
	comp=E,410nm,19.7s						
HHC				LR	LR		
	comp=Z,660nm,20.9s						
TXAR	Lajitas Array	100.44	61	P	Pdif	13 57 58.0	+1.7
	comp=Z,0.7nm,1.1s,baz=199,slow=4.8,SNR=2.1						
PDAR	Pinedale Array	105.06	47	Pdiff	Pdif	13 58 19.1	+2.4
	comp=Z,0.7nm,0.8s,baz=190,slow=4.6,SNR=5.7						
PDAR				PP	PP	14 02 35.9	-3.4
	comp=Z,0.3nm,0.6s,baz=238,slow=5.2,SNR=4.9						
SONM	Songino Array	106.21	319	PP	PP	14 02 47.8	+0.3
	comp=Z,0.7nm,0.8s,baz=141,slow=9.3,SNR=2.9						
ILAR	Eielson Array	106.92	15	PKiKP	PKiKP	14 02 31.4	-1.7
	comp=Z,0.5nm,0.5s,baz=290,slow=2.5,SNR=8.0						
ILAR				PKKPbc	PKKPbc	14 13 51.6	-1.3
	comp=Z,0.2nm,0.4s,baz=355,slow=2.5,SNR=4.4						
INK	Inuvik	112.87	18	PKiKP	PKiKP	14 02 42.9	-1.4
	comp=Z,1.1nm,0.5s,baz=151,slow=2.3,SNR=14						
WMQ	Urumqi	114.63	307	*e*P	PKiKP	14 02 49.2	+0.7
WMQ				LR	LR		
	comp=N,380nm,15.1s						
WMQ				LR	LR		
	comp=E,320nm,17.3s						
WMQ				LR	LR		
	comp=Z,340nm,21.5s						
YKA	Yellowknife Ar	114.74	28	Pdiff	Pdif	13 59 04.0	+5.0
	comp=Z,0.1nm,0.5s,baz=213,slow=4.6,SNR=1.4						
YKA				PKP	PKPdf	14 02 46.6	-1.4
	comp=Z,1.1nm,0.5s,baz=251,slow=1.6,SNR=36						
YKA				PKKP	PKKPdf	14 13 53.9	+3.3
	comp=Z,0.3nm,0.6s,baz=51,slow=3.9,SNR=7.2						
ULM	Lac du Bonnet	117.05	46	PKP	PKPdf	14 02 50.5	-2.3
	comp=Z,1.1nm,0.3s,baz=225,slow=1.4,SNR=3.1						
TKL	Tuckaleechee C	117.89	65	PKP	PKPdf	14 02 54.0	-1.0
	comp=Z,1.8nm,0.5s,baz=338,slow=5.4,SNR=5.2						
MKAR	Makanchi Array	119.40	308	PKP	PKPdf	14 02 55.5	-2.0
	comp=Z,1.3nm,0.4s,baz=108,slow=3.2,SNR=21						
ZALV	Zalesovo Beam	120.97	316	PKP	PKPdf	14 02 57.8	-2.4
	comp=Z,1.7nm,0.6s,baz=153,slow=1.0,SNR=12						
KURBB	Kurchatov Arra	123.23	311	PKP	PKPdf	14 03 02.5	-2.2
	comp=Z,2.1nm,0.4s,baz=115,slow=1.9,SNR=22						
SADO	Sadowa	125.02	57	PKP	PKPdf	14 03 06.5	-1.8
	comp=Z,4.6nm,0.6s,baz=272,slow=2.9,SNR=4.6						
SADO				pPKP	sPKPdf	14 03 49.8	-2.3
	comp=Z,35nm,0.9s,baz=320,slow=2.4,SNR=15						
NRIK	Noril'sk	125.12	334	PKP	PKPdf	14 03 06.2	-1.5
	comp=Z,11nm,0.6s,baz=95,slow=2.2,SNR=16						
HAMF	Hammerfest	144.87	345	*e*	PKPbc	14 03 42.8	-1.0
KBZ	Khabaz	145.06	294	PKPbc	PKPbc	14 03 44.1	-1.0
	comp=Z,27nm,0.9s,baz=112,slow=2.3,SNR=48						
KLMR	Klimovskoe	145.29	324	*e*PKPdf	PKPdf	14 03 41.3	-4.0
KLMR				AMP		14 03 44.9	
	comp=Z,107nm,0.7s						
ARA0	ARCESS Array S	145.31	343	*e*	PKPdf	14 03 44.2	-0.9
ARCES	ARCESS Array B	145.31	343	PKPbc	PKPdf	14 03 44.3	-0.9
	comp=Z,26nm,0.6s,baz=38,slow=3.6,SNR=225						
ARCES				SKPbc	SKPbc	14 07 10.9	-2.9
	comp=Z,1.6nm,0.5s,baz=48,slow=1.3,SNR=4.4						
KTK1	Kautokeino	146.24	343	*e*	PKPdf	14 03 46.8	+0.1
JETT	Jettan, Norway	146.41	345	*e*	PKPdf	14 03 47.3	+0.3
TRO	Tromso	146.64	346	*e*	PKPdf	14 03 48.0	+0.6
LIC	Lamto	147.78	177	*e*PKIKP	PKPbc	14 03 54.4	+0.4
	comp=Z,26nm,1.2s						
KIC	Kosan Boka	147.93	178	*e*PKIKP	PKPbc	14 03 54.7	+0.3
	comp=Z,11nm,0.4s						
TIC	Toumodi	148.20	177	*e*PKIKP	PKPbc	14 03 55.3	+0.2
DBIC	Dimbokro	148.23	177	PKP	PKPdf	14 03 52.2	+0.5
	comp=Z,8.2nm,0.7s,baz=173,slow=6.1,SNR=7.2						
DBIC				PKPbc	PKPbc	14 03 55.5	+0.3
	comp=Z,8.2nm,0.7s,baz=152,slow=0.2,SNR=9.5						
STEI	Steigen	148.79	346	*e*PKPdf	PKPbc	14 03 54.0	-1.0
LOF	Lofoten	148.91	348	*e*PKPdf	PKPbc	14 03 53.7	-1.5
FAUS	Fauske	149.27	346	*e*PKPdf	PKPbc	14 03 54.8	-1.3
KONS	Konsvik	150.45	347	*e*PKPdf	PKPbc	14 03 58.0	-1.1
MOR8	Moi Rana	150.49	345	*e*PKPdf	PKPbc	14 03 57.6	-1.6
STOK	Stokkvaagen	150.62	346	*e*PKPdf	PKPbc	14 03 57.9	-1.5
FINES	FINESS Array B	150.71	331	PKPbc	PKPbc	14 03 58.6	-1.2
	comp=Z,32nm,0.5s,baz=33,slow=3.3,SNR=181						
BRTR	Keskin Array B	151.33	284	PKPbc	PKPbc	14 04 00.7	-1.5
	comp=Z,5.9nm,0.7s,baz=144,slow=4.5,SNR=18						
BRTR				PKPab	PKPab	14 04 09.9	-0.9
	comp=Z,11nm,0.7s,baz=160,slow=3.9,SNR=22						
MEF	Metsahovi	152.11	330	*e*P	PKPbc	14 04 02.4	-0.7
VSU	Vasula	152.16	326	*e*P	PKPbc	14 04 02.6	-0.6
NSS	Namsos	152.43	346	*e*PKPdf	PKPbc	14 04 02.0	-1.7
RAF	Rauma	152.56	333	*e*P	PKPbc	14 04 02.9	-1.1
MTSE	Matsula	153.27	328	*e*P	PKPbc	14 04 05.0	-0.7
IDID	Didziasalis	153.72	319	*e*P	PKiKP	14 04 07.1	+0.3
AAL	Aland	153.78	333	*e*P	PKPbc	14 04 05.4	-1.3
ISAL	Salakas	153.91	320	*e*P	PKiKP	14 04 07.4	+0.1
IIGN	Ignalina	153.97	320	*e*P	PKiKP	14 04 07.4	0.0
AKASG	Malin Array Be	153.98	308	PKPbc	PKPbc	14 04 06.0	-1.4
	comp=Z,6.0nm,0.8s,baz=60,slow=3.2,SNR=14						
AKASG				PKPab	PKPab	14 04 20.4	-1.0
	comp=Z,4.1nm,0.6s,baz=58,slow=4.7,SNR=12						
TORD	Torodi Ar. Bea	154.28	192	PKP	PKPdf	14 04 00.5	-0.5
	comp=Z,4.1nm,1.0s,baz=114,slow=0.6,SNR=0.8						
TORD				PKPbc	PKPbc	14 04 08.8	-0.4
	comp=Z,21nm,1.1s,baz=170,slow=1.2,SNR=1.1						
VSVD	Vaisvydziai	154.78	323	*e*P	PKPbc	14 04 08.8	-0.2
PABE	Paberze	155.01	322	*e*P	PKPdf	14 04 09.1	+8.5
DOMB	Dombas	155.25	346	*e*PKPdf	PKPdf	14 04 07.8	+7.0
AKN	Aaknes	155.49	348	*e*PKPdf	PKPdf	14 04 09.2	+8.1
NB201	NORSAR Array S	155.67	342	*e*PKPdf	PKPdf	14 04 09.8	+8.4
NB2	NORSAR Subarra	155.69	343	PKP	PKPdf	14 04 09.4	+7.9
	comp=Z,1.8nm,0.6s,baz=17,slow=2.6						
NB2	NORSAR Subarra	155.69	343	PKPdf	PKPdf	14 04 09.4	+7.9
	baz=17,slow=2.6						
NOA	NORSAR Array B	155.69	343	PKPbc	PKPdf	14 04 09.6	+8.1
	comp=Z,2.6nm,0.7s,baz=31,slow=2.0,SNR=12						
NOA				PKPab	PKPab	14 04 26.9	-1.5
	comp=Z,2.2nm,0.5s,baz=25,slow=3.4,SNR=12						
NC602	NORSAR Array S	155.88	342	*e*PKPdf	PKPdf	14 04 09.8	+8.2
KONO	Kongsberg	157.30	343	*e*PKPdf	PKPdf	14 04 07.5	+4.0
CLL	Collm	162.77	323	*i* PKPab	PKPab	14 04 59.0	-0.4
	comp=Z,15nm,1.0s						
GERES	GERESS Array B	163.91	315	PKPab	PKPab	14 05 03.8	-0.9
	comp=Z,2.0nm,0.9s,baz=142,slow=3.7,SNR=3.6						
ESDC	Sonseca Array	178.82	19	PKPab		14 06 11.0	
	comp=Z,0.7nm,0.6s,baz=315,slow=5.3,SNR=6.5						

BUC 11 13:45:59.1±0.3, 45.30N×25.09E, h2km, ml0.3/2, 8C-8D
Error ellipse: s-maj=2.5km s-min=1.9km az=166.0,
Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTUR	**Matau**	**0.08**	**196**	⇑P	Pg	13 46 00.5	-0.1
MTUR	**Matau**	**0.08**	**196**	⇑P	Pg	13 46 00.5	-0.1
VOIR		**0.14**	**348**	⇑P	Pg	13 46 01.2	-0.6
VOIR				⇓S	Sg	13 46 03.6	-0.1
VOIR		**0.14**	**348**	⇑P	Pg	13 46 01.2	-0.6
VOIR				⇓S	Sg	13 46 03.6	-0.1
ARR	**Arges**	**0.33**	**282**	⇓P	Pg	13 46 05.5	+0.1
ARR				⇑S	Sg	13 46 10.5	+0.7
ARR	**Arges**	**0.33**	**282**	⇓P	Pg	13 46 05.5	+0.1
ARR				⇑S	Sg	13 46 10.5	+0.7
MLR	**Muntele Rosu**	**0.63**	**72**	⇑P	Pg	13 46 11.8	+0.6
MLR				⇓S	Sg	13 46 19.8	+0.4
MLR	**Muntele Rosu**	**0.63**	**72**	⇑P	Pg	13 46 11.8	+0.6
MLR	**Muntele Rosu**	**0.63**	**72**	⇓S	Sg	13 46 19.8	+0.4
DOPR	**Dopca**	**0.70**	**17**	⇓S	Sb	13 46 23.0	-1.1
DOPR	**Dopca**	**0.70**	**17**	⇓S	Sb	13 46 23.0	-1.1

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*IDC **11** 13:53:17.5±1.9,28°.49N×87°.28E,h0^{km},mb3.5/5,
mbtmp3.7/7,ML4.3/2,MS4.0/1,Error ellipse: s-maj=72.8km
s-min=21.3km az=65.0*

**ISC 11 13:53:22.5±1.8,28°.5N±0°.2×87°.2E±0°.4,h35^{km},n8,σ0^s.80/7,
mb3.5/5,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**17.43**	**327**	P	**P**	**13 57 23.9**	**-0.1**
	1.1nm,0.3s,baz=79,slow=16,SNR=3.0						
	1.8nm,0.3s						
MKAR	**Makanchi Array**	**18.65**	**349**	P	**P**	**13 57 37.2**	**0.0**
	0.7nm,0.3s,baz=176,slow=11,SNR=27						
	1.7nm,0.4s						
KURBB	**Kurchatov Arra**	**23.03**	**346**	P	**P**	**13 58 24.1**	**-0.3**
	0.6nm,0.3s,baz=162,slow=8.9,SNR=5.5						
	0.6nm,0.3s						
SONM	**Songino Array**	**24.39**	**32**	P	**P**	**13 58 37.7**	**+0.2**
	0.5nm,0.5s,baz=225,slow=7.5,SNR=3.7						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**25.47**	**357**	P	**P**	**13 58 47.1**	**+0.1**
	0.7nm,0.5s,baz=171,slow=10,SNR=3.8						
	0.7nm,0.5s						
ASAJ	**Asahikawa**	**46.44**	**55**	LR	LR	14 24 10.7	
	comp=Z,174nm,20.8s,baz=88,slow=40						
WRA	**Warramunga Arr**	**66.30**	**131**	P	**P**	**14 04 06.5**	**-1.1**
	0.3nm,0.5s,baz=324,slow=6.5,SNR=4.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**68.68**	**134**	P	**P**	**14 04 23.7**	**+1.1**
	0.3nm,0.7s,baz=310,slow=7.2,SNR=1.9						
	0.3nm,0.7s						

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*IDC **11** 14:23:34.8±0.8,51°.52N×15°.81E,h0^{km},mb3.3/1,
mbtmp3.3/8,ML3.1/7,MS3.7/1,Error ellipse: s-maj=14.4km
s-min=7.8km az=106.0*

*IPEC **11** 14:23:34.9±0.3,51°.44N×16°.23E,h1^{km},ML2.7/3,Error
ellipse: s-maj=3.1km s-min=1.4km az=58.0*

*BGR **11** 14:23:35.2±0.4,51°.47N×16°.20E,h1^{km},ML3.0/13,Error
ellipse: s-maj=5.6km s-min=2.2km az=27.0*

*PRU **11** 14:23:35.1±0.0,51°.45N×16°.15E,h0^{km}*

*VIE **11** 14:23:35.1,51°.58N×15°.97E,h0^{km},ML3.2/3 90 km NW
of Wroclaw Suspected Mining induced.*

**ISC 11 14:23:32.4±0.6,51°.56N±0°.03×16°.23E±0°.02,h0^{km},n62,
σ1^s.60/113,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**177**	*e*Pg	**Pg**	**14 23 46.9**	**+0.7**
KSP				*e*Sg	**Sg**	**14 23 55.3**	**-0.1**
KSP	**Ksiaz**	**0.72**	**177**	*e*Pg	**Pg**	**14 23 46.9**	**+0.7**
	SNR=16						
KSP				*e*Sg	**Sg**	**14 23 55.6**	**+0.1**
	SNR=2.1						
CHVC	**Chvalec**	**0.98**	**187**	*e*PG	**Pg**	**14 23 51.6**	**+0.5**
CHVC				*e*SG	**Sg**	**14 24 03.4**	**-0.4**
	comp=Z,99nm,0.7s						
OSTC	**Ostas**	**1.00**	**180**	*e*PG	**Pg**	**14 23 52.3**	**+0.7**
OSTC				*e*SG	**Sg**	**14 24 04.4**	**-0.2**
	comp=Z,77nm,0.6s						
UPC	**Upice**	**1.06**	**188**	*e*PG	**Pg**	**14 23 52.9**	**+0.2**
UPC				*e*SG	**Sg**	**14 24 05.5**	**-1.0**
	comp=Z,183nm,0.3s						
DPC	**Dobruska-Polom**	**1.21**	**177**	*e*PG	**Pg**	**14 23 55.6**	**0.0**
DPC				*e*SG	**Sg**	**14 24 10.4**	**-0.9**
	comp=Z,87nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**177**	*e*Pg	**Pg**	**14 23 55.9**	**+0.3**
	SNR=26						
DPC				*e*Sg	**Sg**	**14 24 11.2**	**-0.1**
	SNR=2.6						
PVCC	**Panska Ves**	**1.47**	**226**	*e*PG	**Pn**	**14 24 00.8**	**+0.6**
PVCC				*e*SG	**Sg**	**14 24 18.7**	**-0.9**
	comp=Z,179nm,0.4s						
PVCC	**Panska Ves**	**1.47**	**226**	*e*Pg	**Pb**	**14 24 01.3**	**+0.7**
	SNR=18						
PVCC				*e*Sg	**Sn**	**14 24 20.7**	**+0.6**
	SNR=2.7						
KRLC	**Kraliky**	**1.53**	**167**	*e*PG	**Pn**	**14 24 01.0**	**0.0**
KRLC				*e*SG	**Sg**	**14 24 20.4**	**-1.0**
	comp=Z,77nm,0.7s						
BRG	**Berggiesshubel**	**1.59**	**245**	Pg	**Pg**	**14 24 03.6**	**+0.6**
BRG				Sg	**Sg**	**14 24 24.2**	**+0.7**
BRG				Amp		14 24 27.4	
	comp=Z,93nm,0.4s						
BRG	**Berggiesshubel**	**1.59**	**245**	*e*Pg	**Pg**	**14 24 03.7**	**+0.8**
	SNR=16						
BRG				*e*Sg	**Sg**	**14 24 24.3**	**+0.7**
	SNR=8.1						
RUE	**Ruedersdorf**	**1.77**	**302**	*e*Sg	**Sg**	**14 24 33.2**	**+3.9**
	SNR=4.3						
PRU	**Pruhonice**	**1.90**	**215**	*e*PG	**Pn**	**14 24 06.8**	**+0.7**
PRU				*e*SG	**Sb**	**14 24 31.8**	**-0.5**
	comp=Z,76nm,0.7s						
PRU	**Pruhonice**	**1.90**	**215**	*e*Pg	**Pb**	**14 24 08.2**	**+0.2**
	SNR=12						
FBE	**Freiberg**	**1.92**	**252**	*e*Pg	**Pg**	**14 24 09.9**	**+0.8**
	SNR=7.0						
FBE				*e*Sg	**Sg**	**14 24 35.0**	**+1.0**
	SNR=3.2						
MORC	**Moravsky Berou**	**1.97**	**154**	*e*Pn	**Pn**	**14 24 07.4**	**+0.4**
	baz=334						
MORC				*e*Sg	**Sn**	**14 24 33.3**	**+0.8**
	comp=Z,39nm,0.6s,baz=334						
MORC	**Moravsky Berou**	**1.97**	**154**	*e*PN	**Pn**	**14 24 07.5**	**+0.4**
MORC				*e*SG	**Sn**	**14 24 33.3**	**+0.8**
MORC	**Moravsky Berou**	**1.97**	**154**	*e*Pn	**Pn**	**14 24 07.6**	**+0.5**
	SNR=17						
MORC				*e*Sg	**Sb**	**14 24 35.1**	**+0.8**
	SNR=3.0						
CLL	**Collm**	**2.04**	**264**	*e*Pn	**Pn**	**14 24 08.0**	**+0.1**
CLL				*e*Pg	**Pb**	**14 24 11.0**	**+0.7**
CLL				*e*x	x	14 24 16.0	
CLL				*e*x	x	14 24 26.0	
CLL				*e*Sg	**Sg**	**14 24 38.0**	**+0.2**
	comp=Z,39nm,0.7s						
CLL				LmV		17 11 00.0	
	comp=Z,100nm,19.2s						
CLL	**Collm**	**2.04**	**264**	*e*Pg	**Pg**	**14 24 12.5**	**+1.1**
	SNR=6.8						
CLL				*e*Sg	**Sg**	**14 24 39.2**	**+1.4**
	SNR=2.5						
OKC	**Ostrava-Krasne**	**2.11**	**144**	*e*PG	**Pb**	**14 24 12.5**	**+1.0**
OKC				*e*SG	**Sb**	**14 24 39.5**	**+1.2**
	comp=Z,43nm,0.6s						
VRAC	**Vranov**	**2.27**	**174**	Pn	**Pn**	**14 24 12.6**	**+1.5**
	comp=Z,3.6nm,0.3s,baz=341,slow=15,SNR=9.3						
VRAC				Sn	**Sb**	**14 24 41.7**	**-0.9**
	comp=Z,3.1nm,0.3s,baz=266,slow=21,SNR=4.9						
	comp=Z,9.5nm,0.4s						
VRAC	**Vranov**	**2.27**	**174**	*e*Pn	**Pn**	**14 24 11.8**	**+0.7**
	baz=354						
VRAC				*e*Sg	**Sb**	**14 24 41.8**	**-0.9**
	comp=Z,46nm,0.8s,baz=354						
VRAC	**Vranov**	**2.27**	**174**	*e*PN	**Pn**	**14 24 11.8**	**+0.7**
VRAC				*e*SG	**Sb**	**14 24 41.8**	**-0.9**
VRAC	**Vranov**	**2.27**	**174**	*e*Pg	**Pn**	**14 24 13.1**	**+1.9**
	SNR=4.7						
VRAC				*e*Sg	**Sg**	**14 24 44.2**	**-1.0**
	SNR=2.8						
MAUC	**Maruska**	**2.42**	**154**	*e*PN	**Pn**	**14 24 14.2**	**+0.9**
MAUC				*e*PG	**Pb**	**14 24 17.4**	**+0.5**
MAUC				*e*SG	**Sb**	**14 24 48.5**	**+1.2**
	comp=Z,137nm,1.1s						
KRUC	**Moravsky**	**2.50**	**177**	*e*Pn	**Pn**	**14 24 14.9**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**14 24 49.4**	**-0.1**
	comp=Z,38nm,0.7s,baz=358						
KRUC	**Moravsky**	**2.50**	**177**	*e*PN	**Pn**	**14 24 15.0**	**+0.6**
KRUC				*e*PG	**Pb**	**14 24 18.3**	**+0.1**
KRUC				*e*SG	**Sb**	**14 24 49.4**	**-0.1**
KRUC	**Moravsky**	**2.50**	**177**	*e*Sg	**Sg**	**14 24 51.6**	**-1.2**
	SNR=3.0						
OJC	**Ojcow**	**2.63**	**119**	*e*Pg	**Pg**	**14 24 24.2**	**+1.4**
OJC				*e*Sg	**Sg**	**14 24 58.9**	**+2.1**
TANN	**Tannenbergstha**	**2.64**	**246**	*e*Pn	**Pn**	**14 24 17.5**	**+1.2**
	SNR=4.0						
WERD	**Werda**	**2.72**	**247**	*e*Pg	**Pg**	**14 24 25.3**	**+0.8**
	SNR=3.8						
WERD				*e*Sg	**Sg**	**14 24 59.7**	**0.0**
	SNR=4.0						
NKC	**Novy Kostel**	**2.74**	**242**	*e*PN	**Pn**	**14 24 18.9**	**+1.3**
NKC				*e*PG	**Pb**	**14 24 24.0**	**+1.8**
NKC				*e*SG	**Sg**	**14 24 59.5**	**-0.8**
	comp=Z,50nm,0.6s						
GUNZ	**Gunzen**	**2.74**	**246**	*e*Pg	**Pg**	**14 24 26.6**	**+1.7**
	SNR=4.1						
GUNZ				*e*Sg	**Sg**	**14 25 00.1**	**-0.2**
	SNR=3.4						
WERN	**Wernitzgruen**	**2.75**	**244**	*e*Pg	**Pg**	**14 24 26.7**	**+1.6**
	SNR=3.1						
WERN				*e*Sg	**Sg**	**14 25 01.2**	**+0.5**
	SNR=3.1						
PLN	**Plauen**	**2.79**	**249**	*e*Sg	**Sg**	**14 25 02.1**	**+0.2**
	SNR=3.7						
JAVC	**Velka Javorina**	**2.86**	**161**	*e*PN	**Pn**	**14 24 20.5**	**+1.2**
JAVC	**Velka Javorina**	**2.86**	**161**	*e*Pg	**Pg**	**14 24 29.1**	**+2.0**
	SNR=5.1						
JAVC				*e*Sg	**Sg**	**14 25 06.0**	**+1.8**
	SNR=2.7						
KHC	**Kasperske Hory**	**2.96**	**216**	*e*PN	**Pn**	**14 24 22.0**	**+1.2**
KHC				*e*PG	**Pb**	**14 24 27.0**	**+0.9**
KHC				*e*SN	**Sn**	**14 24 56.5**	**-0.5**
KHC				*e*SG	**Sg**	**14 25 05.1**	**-2.5**
	comp=Z,26nm,0.6s						
CKRC	**Cesky Krumlov**	**3.01**	**205**	*e*PN	**Pn**	**14 24 22.6**	**+1.3**
CKRC				*e*PG	**Pb**	**14 24 27.4**	**+0.6**
CKRC				*e*SG	**Sg**	**14 25 07.0**	**-1.9**
SMOL	**Smolenice**	**3.14**	**165**	*e*SG	**Sg**	**14 25 13.4**	**0.0**
GERES	**GERESS Array B**	**3.16**	**212**	Pn	**Pn**	**14 24 24.4**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=33,slow=13,SNR=13						
GERES				Sn	**Sn**	**14 24 59.9**	**-2.1**
	comp=Z,2.3nm,0.3s,baz=35,slow=23,SNR=6.8						
GERES				Lg	Lg	14 25 09.8	
	comp=Z,3.9nm,0.3s,baz=38,slow=28,SNR=5.3						
	comp=Z,2.1nm,0.4s						
LANS	**Liptovska Anna**	**3.18**	**138**	*e*PN	**Pn**	**14 24 24.9**	**+1.2**
LANS				*e*PG	**Pg**	**14 24 33.9**	**+0.6**
LANS				*e*SG	**Sg**	**14 25 13.4**	**-1.1**
WET	**Wettzell**	**3.23**	**223**	*e*Pn	**Pn**	**14 24 25.2**	**+0.8**
	SNR=4.0						
NIE	**Niedzica**	**3.37**	**128**	*e*P	**Pg**	**14 24 38.1**	**+1.2**
NIE				*e*S	**Sg**	**14 25 22.4**	**+1.8**
VYHS	**Vyhne**	**3.50**	**150**	*e*PG	**Pg**	**14 24 41.5**	**+2.1**
VYHS				*e*SG	**Sg**	**14 25 26.6**	**+1.9**
CONA	**Conrad Observa**	**3.64**	**184**	*e*Pn	**Pn**	**14 24 31.7**	**+1.6**
	comp=Z,1.1nm,0.4s						
CONA				*e*Sg	**Sg**	**14 25 29.5**	**+0.2**
	comp=Z,28nm,0.5s						
RONA	**Rosalia, Austr**	**3.86**	**179**	Sg	**Sg**	**14 25 35.7**	**-0.8**
	comp=Z,10nm,0.5s						
MOA	**Molln**	**3.92**	**200**	*e*Pn	**Pn**	**14 24 35.1**	**+1.2**
	comp=Z,2.7nm,0.4s						
MOA				*e*Sg	**Sg**	**14 25 36.2**	**-2.3**
	comp=Z,18nm,0.6s						
BIOA	**Bad Ischl, Aus**	**4.22**	**205**	*e*Sg	**Sg**	**14 25 48.5**	**+0.5**
	comp=Z,51nm,0.7s						
ARSA	**Arzberg**	**4.34**	**186**	*e*Pn	**Pn**	**14 24 42.6**	**+3.0**
	comp=Z,0.8nm,0.2s						
ARSA				*e*Sg	**Sg**	**14 25 52.6**	**+0.9**
	comp=Z,12nm,0.5s						
KBA	**Koelnbreinsper**	**4.86**	**204**	*e*Pn	**Pn**	**14 24 48.3**	**+1.3**
	comp=Z,2.4nm,0.4s						
KBA				*e*Sg	**Sg**	**14 26 13.7**	**+5.1**
	comp=Z,11nm,0.8s						
FETA	**Feichten**	**5.79**	**221**	*e*Sg	**Sg**	**14 26 45.9**	**+7.5**
	comp=Z,1.8nm,0.7s						
DAVOX	**Davos/Dischmat**	**6.34**	**224**	Lg	Lg	14 26 50.4	
	comp=Z,0.3nm,0.3s,baz=47,slow=23,SNR=1.9						
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**14 25 35.2**	**+2.4**
	comp=Z,1.3nm,0.3s,baz=281,slow=12,SNR=11						
AKASG				Sn	**Sn**	**14 27 03.5**	**-2.8**
	comp=Z,0.8nm,0.3s,baz=276,slow=21,SNR=3.5						
AKASG				Lg	Lg	14 28 00.7	
	baz=280,slow=28						
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**9.90**	**346**	Pn	**Pn**	**14 25 54.9**	**-1.0**
	baz=158,slow=13,SNR=1.5						
	comp=Z,0.1nm,0.5s						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**14 26 15.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=206,slow=12,SNR=1.7						
FINES				Sn	**Sn**	**14 28 15.7**	**-5.8**
	comp=Z,0.1nm,0.3s,baz=212,slow=23,SNR=1.2						
	comp=Z,2.2nm,0.9s						
EKA	**Eskdalemuir Ar**	**12.15**	**296**	Pn	**Pn**	**14 26 23.9**	**-2.7**
	baz=96,slow=13						
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**18.56**	**10**	Pn	**P**	**14 27 49.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=9.6						
	comp=Z,1.5nm,0.7s						
ASF	**Jabal al Asfar**	**24.59**	**134**	LR	LR	14 40 50.2	
	comp=Z,168nm,18.9s,baz=289,slow=42						
YKA	**Yellowknife Ar**	**59.84**	**336**	P	**P**	**14 33 41.1**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=28,slow=7.1,SNR=4.6						
	comp=Z,0.2nm,0.5s						

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*IDC **11** 14:38:17.4±2.0,22°.59S×170°.39E,h0^{km},mb3.8/4,
mbtmp3.8/5,ML4.0/1,MS3.3/1,Error ellipse: s-maj=52.7km
s-min=35.7km az=32.0*

*NOU **11** 14:38:22.0,21°.85S×169°.97E,h0^{km},MLv3.7/12,
Southeast of Loyalty Islands*

**ISC 11 14:38:23.1±1.9,21°.9S±0°.1×170°.2E±0°.2,h25^{km},n17,
σ0^s.92/16,mb3.8/4,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.02**	**282**	P	**Pn**	**14 38 54.3**	**-1.2**
PINNC	**Pines Island,**	**2.59**	**254**	P	**Pn**	**14 39 02.8**	**-0.7**
LIFNC	**LIFOU**	**2.94**	**292**	P	**Pn**	**14 39 07.3**	**-0.9**
YATNC	**Mamie plateau,**	**3.02**	**267**	P	**Pn**	**14 39 08.1**	**-1.3**
OUENC	**Ouen Island, N**	**3.10**	**260**	P	**Pn**	**14 39 10.0**	**-0.5**
DZM	**Mont Dzumac**	**3.44**	**267**	Pn	**Pn**	**14 39 14.8**	**-0.4**
	12nm,0.3s,baz=116,slow=18,SNR=189						
DZM				Sn	**Sn**	**14 39 56.5**	**+1.3**
	3.1nm,0.3s,baz=279,slow=21,SNR=1.7						
	18nm,0.3s						
DZM	**Mont Dzumac**	**3.44**	**267**	P	**Pn**	**14 39 15.1**	**-0.1**
ONTNC	**Ouen Toro**	**3.44**	**263**	P	**Pn**	**14 39 14.9**	**-0.3**
NOUC	**Port Laguerre**	**3.57**	**266**	P	**Pn**	**14 39 16.7**	**-0.2**
RTV	**Rentapao**	**4.42**	**338**	P	**Pn**	**14 39 28.4**	**-0.2**
DVP	**Devils Point**	**4.57**	**336**	P	**Pn**	**14 39 30.1**	**-0.5**
URZ	**Urewera**	**17.35**	**161**	LR	LR	14 46 36.2	
	comp=Z,94nm,19.0s,baz=31,slow=30						
ASAR	**Alice Springs**	**33.40**	**260**	P	**P**	**14 44 59.6**	**-0.3**
	0.8nm,0.7s,baz=88,slow=8.4,SNR=9.2						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**33.46**	**267**	P	**P**	**14 44 59.6**	**-0.8**
	0.6nm,0.5s,baz=100,slow=8.8,SNR=10.0						
	0.6nm,0.5s						
VNDA	**Vanda**	**55.79**	**182**	P	P	14 47 50.9	-6.7
	0.5nm,0.8s,baz=23,slow=7.7,SNR=3.8						
	0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.38**	**294**	P	**P**	**14 50 34.4**	**+1.6**
	0.7nm,0.3s,baz=133,slow=4.6,SNR=4.6						
	0.7nm,0.3s						
GERES	**GERESS Array B**	**147.24**	**331**	PKPbc	**PKPbc**	**14 58 03.5**	**-0.8**
	0.8nm,0.7s,baz=62,slow=2.9,SNR=4.1						

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*IDC **11** 14:40:08.0±1.6,13°.70N×51°.57E,h0^{km},mb3.6/6,
mbtmp3.6/6,MS3.3/2,Error ellipse: s-maj=45.8km
s-min=30.0km az=165.0*

**ISC 11 14:40:10.9±1.3,13°.7N±0°.3×51°.6E±0°.2,h18^{km},n9,σ1^s.26/7,
mb3.7/7,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**8.77**	**257**	LR	LR	14 44 56.9	
	comp=Z,168nm,18.3s,baz=146,slow=33						
MMAI	**Mount Meron Ar**	**24.21**	**325**	LR	LR	14 55 28.5	
	comp=Z,86nm,20.9s,baz=226,slow=38						
MKAR	**Makanchi Array**	**41.84**	**32**	P	**P**	**14 47 59.0**	**-0.8**
	0.2nm,0.5s,baz=216,slow=7.8,SNR=3.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**42.84**	**25**	P	**P**	**14 48 08.7**	**+0.9**
	0.3nm,0.2s,baz=224,slow=7.8,SNR=2.1						
	0.3nm,0.2s						
CMAR	**Chiang Mai Arr**	**45.68**	**78**	P	**P**	**14 48 30.0**	**-1.1**
	1.0nm,0.8s,baz=271,slow=9.2,SNR=8.3						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**47.91**	**26**	P	**P**	**14 48 46.7**	**-1.3**
	0.3nm,0.4s,baz=218,slow=9.1,SNR=2.1						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**48.43**	**276**	P	**P**	**14 48 52.4**	**-0.3**
	10nm,0.6s,baz=92,slow=7.8,SNR=4.5						
SONM	**Songino Array**	**56.56**	**41**	P	**P**	**14 49 53.9**	**+1.3**
	0.3nm,0.8s,baz=236,slow=10,SNR=2.2						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**87.99**	**111**	P	**P**	**14 53 01.3**	**+0.7**
	0.6nm,0.9s,baz=293,slow=4.0,SNR=1.9						
	0.6nm,0.9s						

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*IDC **11** 14:46:09.3±0.6,6°.80N×72°.95W,h165^{km}±5^{km},mb3.6/13,
mbtmp4.1/16,MS3.3/1,Error ellipse: s-maj=12.0km
s-min=10.2km az=121.0*

*NEIC **11** 14:46:09.4±1.4,6°.82N±0°.07×72°.98W±0°.07,h157^{km}±7^{km},
mb4.4/18,ML4.0(RSNC),Error ellipse: s-maj=10.3km
s-min=9.4km az=113.0*

*RSNC **11** 14:46:09.8±1.1,6°.81N×73°.13W,h152^{km}±4^{km},ML4.0,
Mw4.2,Fault plane solution: NP1:ϕ_s138.00000°,
δ43.00000°,λ-180.00000°.*

*VAO **11** 14:46:24.2±3.8,6°.05N×72°.40W,h240^{km}±23^{km},mb4.2*

**ISC 11 14:46:08.8±0.5,6°.82N±0°.03×73°.11W±0°.03,h159^{km}±4^{km},
n127,σ1^s.51/174,mb4.2/19,6C-9D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**199**	⇓*i*P	**Pn**	**14 46 30.5**	**-0.1**
BARC				*e*S	**Sn**	**14 46 45.9**	**-1.4**
BARC				*i*		14 46 48.2	
	comp=Z,3μm,0.5s						
PAMC	**Pamplona, Colo**	**0.66**	**38**	⇑*i*P	**Pn**	**14 46 33.4**	**+0.7**
PAMC				*e*S	**Sn**	**14 46 50.6**	**-0.3**
PAMC				*i*		14 46 53.1	
	comp=Z,2μm,0.7s						
BRRC	**Barranca, Sant**	**0.67**	**296**	⇑*i*P	**Pn**	**14 46 32.5**	**+0.4**
BRRC				*e*S	**Sn**	**14 46 49.3**	**-0.6**
BRRC				*i*		14 46 53.0	
	comp=Z,1μm,0.2s						
RUSC	**La Rusia**	**0.92**	**179**	⇓*i*P	**Pn**	**14 46 34.3**	**-0.1**
RUSC				*e*S	**Sn**	**14 46 52.9**	**-1.1**
RUSC				*i*		14 46 54.0	
	comp=Z,968nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**106**	⇓*i*P	**Pn**	**14 46 38.7**	**+0.9**
TAMC				*e*S	**Sn**	**14 46 59.2**	**-0.7**
TAMC				*i*		14 46 59.6	
	comp=Z,655nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	⇑*i*P	**Pn**	**14 46 37.0**	**-0.8**
PTBC				*e*S	**Sn**	**14 46 58.5**	**-1.5**
PTBC				*i*		14 47 05.9	
	comp=Z,4μm,0.3s						
OCAC	**Ocana**	**1.43**	**352**		**Pn**	**14 46 38.5**	**0.0**
OCAC	**Ocana**	**1.43**	**352**	⇑*i*P	**Pn**	**14 46 38.6**	**0.0**
OCAC				*e*S	**Sn**	**14 47 00.7**	**-0.8**
SPBC	**San Pablo de B**	**1.50**	**220**	*e*P	**Pn**	**14 46 39.3**	**+0.1**
SPBC				*e*S	**Sn**	**14 47 02.0**	**-0.6**
SPBC				*i*		14 47 08.7	
	comp=Z,2μm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**		**Pn**	**14 46 43.0**	**0.0**
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**14 46 43.0**	**0.0**
ZARC				*e*S	**Sn**	**14 47 09.0**	**-0.3**
ZARC				*i*		14 47 15.8	
	comp=Z,2μm,0.3s						
NORC	**Norcasia**	**2.15**	**235**	*e*P	**Pn**	**14 46 46.2**	**-0.1**
NORC				*e*S	**Sn**	**14 47 13.8**	**-1.4**
NORC				*i*		14 47 19.9	
	comp=Z,979nm,0.3s						
SMLC	**San Martn de**	**2.19**	**334**	*e*P	**Pn**	**14 46 46.7**	**0.0**
SMLC				*e*S	**Sn**	**14 47 15.3**	**-0.8**
SMLC				*i*		14 47 22.9	
	comp=Z,1μm,0.3s						
CHIC	**Chingaza**	**2.26**	**196**	⇓*i*P	**Pn**	**14 46 48.1**	**+0.1**
CHIC				*e*S	**Sn**	**14 47 18.0**	**-0.1**
CHIC				*i*		14 47 25.7	
	comp=Z,446nm,0.4s						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**14 46 49.8**	**+1.3**
	comp=Z,806nm,0.3s,baz=302,slow=6.8,SNR=151						
ROSC				S	**Sn**	**14 47 17.8**	**-1.2**
	comp=Z,1μm,0.4s,baz=24,slow=23,SNR=9.9						
ROSC	**El Rosal**	**2.30**	**212**	Pn	**Pn**	**14 46 49.6**	**+1.1**
ROSC	**El Rosal**	**2.30**	**212**	⇓*i*P	**Pn**	**14 46 50.0**	**+1.5**
ROSC				*e*S	**Sn**	**14 47 19.2**	**+0.1**
ROSC				*i*		14 47 28.5	
	comp=Z,1μm,0.4s						
HELC	**Santa Helena**	**2.48**	**256**	*e*P	**Pn**	**14 46 51.7**	**+1.1**
HELC				*e*S	**Sn**	**14 47 22.1**	**-0.7**
HELC				*i*		14 47 28.9	
	comp=Z,1μm,0.3s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**14 46 50.5**	**-0.9**
UREC				*e*S	**Sn**	**14 47 22.2**	**-2.1**
UREC				*i*		14 47 31.5	
	comp=Z,907nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**14 46 55.0**	**+1.6**
LL1C				*e*S	**Sn**	**14 47 29.7**	**+1.6**
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**14 46 53.4**	**-0.2**
VILC				*e*S	**Sn**	**14 47 28.4**	**+0.1**
PTGC	**Puerto Gaitan,**	**2.77**	**160**	⇓*i*P	**Pn**	**14 46 53.3**	**-0.5**
PTGC				*e*S	**Sn**	**14 47 25.9**	**-2.7**
PTGC				*i*		14 47 27.9	
	comp=Z,378nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	⇓*i*P	**Pn**	**14 46 55.0**	**-0.4**
LL6C				*e*S	**Sn**	**14 47 28.5**	**-3.1**
LL6C				*i*		14 47 40.8	
	comp=Z,334nm,0.3s						
LL5C	**La Loma 5 El P**	**2.98**	**348**	*e*S	**Sn**	**14 47 33.3**	**+0.1**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**14 46 58.1**	**+0.9**
CBOC				*e*S	**Sn**	**14 47 33.0**	**-1.7**
CBOC				*i*		14 47 50.9	
	comp=Z,369nm,0.6s						
DBBC	**Dabeiba**	**3.09**	**274**	⇑*i*P	**Pn**	**14 46 58.0**	**+0.3**
DBBC				*e*S	**Sn**	**14 47 35.0**	**-0.7**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**14 46 59.2**	**0.0**
	comp=Z,79nm,0.2s,baz=231,slow=9.9,SNR=52						
SDV				S	**Sn**	**14 47 36.9**	**-1.5**
	comp=Z,119nm,0.3s,baz=266,slow=23,SNR=20						
SDV	**Santo Domingo**	**3.20**	**50**	Pn	**Pn**	**14 46 59.6**	**+0.4**
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**14 46 59.8**	**+0.6**
SDV				*e*S	**Sn**	**14 47 36.7**	**-1.7**
SDV				*i*		14 47 40.8	
	comp=Z,141nm,0.5s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**14 47 01.2**	**+1.3**
ANIL				*e*S	**Sn**	**14 47 41.5**	**+1.8**
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**14 47 03.9**	**+0.2**
PRAC				*e*S	**Sn**	**14 47 45.8**	**-0.5**
PRAC				*i*		14 47 52.5	
	comp=Z,424nm,0.5s						
ORTC	**Ortega, Tolima**	**3.59**	**217**	⇓*i*P	**Pn**	**14 47 04.1**	**+0.1**
ORTC				*e*S	**Sn**	**14 47 47.8**	**+0.8**
ORTC				*i*		14 47 54.2	
	comp=Z,277nm,0.5s						
PLMC	**San Jos del P**	**3.69**	**239**	*e*P	**Pn**	**14 47 06.1**	**+0.8**
PLMC				*e*S	**Sn**	**14 47 43.5**	**-5.8**
PLMC				*i*		14 47 55.9	
	comp=Z,209nm,0.5s						
SJCC	**San Jacinto, C**	**3.69**	**326**	Pn	**Pn**	**14 47 04.2**	**-1.2**
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**14 47 04.1**	**-1.2**
SJCC				*e*S	**Sn**	**14 47 45.6**	**-3.7**
SJCC				*i*		14 47 50.6	
	comp=Z,481nm,0.5s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*P	**Pn**	**14 47 05.9**	**-1.0**
LCBC				*e*S	**Sn**	**14 47 52.1**	**-0.1**
LCBC				*i*		14 48 05.9	
	comp=Z,321nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	⇓*i*P	**Pn**	**14 47 10.6**	**-1.2**
CRJC				*e*S	**Sn**	**14 47 56.9**	**-4.1**
CRJC				*i*		14 48 11.4	
	comp=Z,274nm,0.2s						
GUVC	**San Jose del G**	**4.27**	**174**	*e*P	**Pn**	**14 47 11.9**	**-1.0**
GUVC				*e*S	**Sn**	**14 48 01.6**	**-1.2**
GUVC				*i*		14 48 07.3	
	comp=Z,256nm,0.1s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**14 47 13.1**	**0.0**
YOTC				*e*S	**Sn**	**14 48 01.8**	**-1.4**

SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P	**Pn**	**14 47 15.1**	**-0.2**
SMRC				*e*S	**Sn**	**14 48 03.7**	**-3.5**
SMRC				*i*		14 48 06.6	
	comp=Z,337nm,0.3s						
PIZC	**Pizarro, Choco**	**4.61**	**247**	*e*P	**Pn**	**14 47 19.3**	**+2.0**
PIZC				*e*S	**Sn**	**14 48 06.4**	**-4.4**
PIZC				*i*		14 48 21.4	
	comp=Z,150nm,0.5s						
PTAC	**Punta Ardita,**	**4.68**	**274**	*e*P	**Pn**	**14 47 17.3**	**-0.9**
PTAC				*i*		14 48 08.5	
	comp=Z,73nm,0.5s						
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**14 47 17.0**	**-1.5**
MACC				*e*S	**Sn**	**14 48 08.5**	**-4.4**
MACC				*i*		14 48 28.8	
	comp=Z,80nm,0.3s						
BETC	**Betania**	**4.72**	**210**	*e*P	**Pn**	**14 47 18.1**	**-0.7**
BETC				*e*S	**Sn**	**14 48 09.3**	**-4.1**
BETC				*i*		14 48 23.3	
	comp=Z,84nm,0.5s						
MARP	**Paez Belalcaza**	**4.86**	**216**	*e*P	**Pn**	**14 47 21.1**	**+0.2**
MARP				*e*S	**Sn**	**14 48 16.6**	**-0.4**
URIC	**Uribia, Colomb**	**4.98**	**13**		**Pn**	**14 47 20.3**	**-1.8**
MALC	**Bahia Malaga**	**5.05**	**237**	*e*P	**Pn**	**14 47 25.0**	**+1.9**
MALC				*e*S	**Sn**	**14 48 24.7**	**+3.6**
MALC				*i*		14 48 30.7	
	comp=Z,47nm,0.4s						
GARC	**Garzon, Huila**	**5.18**	**207⇑**	*e*P	**Pn**	**14 47 24.4**	**-0.6**
GARC				*e*S	**Sn**	**14 48 22.3**	**-2.2**
GARC				*i*		14 48 30.1	
	comp=Z,117nm,0.1s						
BAUV	**El Baul**	**5.45**	**67**	Pn	**Pn**	**14 47 26.1**	**-2.2**
PCON	**Cinco Dias**	**5.53**	**216**	*e*P	**Pn**	**14 47 30.9**	**+1.0**
PCON				*i*		14 48 41.6	
	comp=Z,40nm,0.5s						
SOTA	**Rioblanco**	**5.81**	**217**	*e*P	**Pn**	**14 47 35.1**	**+1.4**
SOTA				*e*S	**Sn**	**14 48 36.6**	**-3.4**
SOTA				*i*		14 48 49.6	
	comp=Z,47nm,0.6s						
GR1C	**Gorgona, Isla**	**6.30**	**233**	*e*P	**Pn**	**14 47 38.9**	**-0.8**
GR1C				*e*S	**Sn**	**14 48 47.5**	**-3.5**
GCUF	**Volcan Galeras**	**6.98**	**217**	*e*P	**Pn**	**14 47 51.0**	**+1.9**
GCUF				*e*S	**Sn**	**14 49 06.7**	**-1.1**
GCUF				*i*		14 49 13.3	
	comp=Z,16nm,0.5s						
BCIP	**Isla Barro Col**	**7.06**	**290**	Pn	**Pn**	**14 47 48.2**	**-1.5**
BCIP	**Isla Barro Col**	**7.06**	**290**	*e*P	**Pn**	**14 47 48.0**	**-1.7**
BCIP				*e*S	**Sn**	**14 49 06.0**	**-3.1**
BCIP				*i*		14 49 31.8	
	comp=Z,19nm,0.6s						
BIRV	**Birongo**	**7.68**	**61**	Pn	**Pn**	**14 47 55.5**	**-2.4**
SRBA	**San Rafael, Bu**	**10.43**	**284**	Pn	**Pn**	**14 48 36.1**	**+1.5**
SDDR	**Presa de Saban**	**12.22**	**8**		**Pn**	**14 48 58.7**	**+0.9**
PDPR	**Patillas Dam,**	**13.10**	**31**	Pn	**Pn**	**14 49 08.4**	**-0.7**
SJG	**San Juan**	**13.12**	**31**	P	**Pn**	**14 49 08.3**	**-1.0**
	comp=Z,13nm,0.2s,baz=297,slow=2.3,SNR=3.4						
ETMB	**Extrema**	**17.89**	**157**	*e*P	**P**	**14 50 04.9**	**-1.5**
ITTB	**Itaituba**	**20.59**	**122**	*e*P	**P**	**14 50 34.5**	**-1.1**
MALB	**Monte Alegre**	**20.68**	**114**	*e*P	Pn	14 50 37.3	-3.7
MCPB	**Macapa, AP**	**22.18**	**108**	*e*P	**P**	**14 50 52.6**	**+0.3**
VILB	**Vilhena**	**23.45**	**147**	*e*P	**P**	**14 51 03.9**	**-0.1**
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**14 51 04.2**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=322,slow=11,SNR=8.0						
LPAZ				pP	**pP**	**14 51 37.2**	**+1.6**
	comp=Z,4.3nm,0.8s,baz=340,slow=10,SNR=6.5						
	comp=Z,0.8nm,0.3s						
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**14 51 04.3**	**-0.5**
LPAZ	**La Paz**	**23.48**	**168**	*e*P	**P**	**14 51 04.5**	**-0.4**
PDRB	**Porto dos Gac**	**24.51**	**138**	*e*P	**P**	**14 51 12.2**	**-1.4**
CLDB	**Colider**	**24.61**	**135**	*e*P	**P**	**14 51 13.3**	**-1.3**
PTLB	**Pontes e Lacer**	**26.09**	**148**	*e*P	**P**	**14 51 27.2**	**-0.7**
SALV	**Santo Antonio**	**28.40**	**143**	*e*P	**P**	**14 51 47.4**	**-1.2**
SNDB	**Serra Nova Dou**	**28.62**	**131**	*e*P	**P**	**14 51 49.4**	**-1.1**
SMTB	**Santa Maria do**	**29.82**	**121**	*e*P	**P**	**14 52 00.6**	**-0.6**
PP1B	**Ponte de Pedra**	**30.21**	**144**	*e*P	**P**	**14 52 04.1**	**-0.4**
ROSB	**Rosrio**	**30.50**	**108**	*e*P	**P**	**14 52 07.2**	**+0.1**
PEXB	**Peixe**	**31.01**	**127**	*e*P	**P**	**14 52 10.7**	**-1.0**
V48A	**Smith Brothers**	**31.42**	**338**	P	**P**	**14 52 16.3**	**+1.4**
V48A				IAmb	IAmb	14 52 17.9	
	comp=Z,9.8nm,0.8s						
AQDB	**Aquidauana**	**32.07**	**148**	*e*P	**P**	**14 52 20.3**	**-0.5**
WVT	**Waverly**	**32.14**	**337**	P	**P**	**14 52 22.0**	**+0.7**
WVT				IAmb	IAmb	14 52 23.0	
	comp=Z,4.5nm,0.7s						
BDFB	**Brasilia**	**33.40**	**132**	P	**P**	**14 52 31.7**	**-0.9**
	comp=Z,4.7nm,0.6s,baz=299,slow=11,SNR=6.8						
	comp=Z,4.7nm,0.6s						
BDFB	**Brasilia**	**33.40**	**132**	IAmb	IAmb	14 52 33.0	
	comp=Z,5.9nm,0.6s						
LCAR	**Lake Charles**	**33.48**	**333**	P	**P**	**14 52 34.2**	**+1.3**
LCAR				IAmb	IAmb	14 52 44.0	
	comp=Z,5.3nm,0.6s						
NBPS	**Pedro II - PI**	**33.51**	**109**	*e*P	**P**	**14 52 33.9**	**+0.3**
BRNJ	**Basking Ridge**	**33.75**	**358**	P	**P**	**14 52 35.4**	**+0.2**
SDBA	**SAO DESIDERIO**	**33.92**	**124**	*e*P	**P**	**14 52 36.5**	**-0.5**
FVM	**French Village**	**34.78**	**336**	P	**P**	**14 52 44.8**	**+0.7**
FVM				IAmb	IAmb	14 52 46.1	
	comp=Z,6.9nm,0.7s						
IPMB	**Ipameri, GO**	**34.80**	**135**	*e*P	**P**	**14 52 43.5**	**-1.1**
CCM	**Cathedral Cave**	**35.18**	**335**	P	**P**	**14 52 48.0**	**+0.5**
PCMB	**Pacaembu**	**35.45**	**143**	*e*P	**P**	**14 52 49.4**	**-0.7**
JANB	**Januaria**	**35.88**	**127**	*e*P	**P**	**14 52 52.5**	**-1.3**
CPUP	**Villa Florida**	**36.33**	**156**	*e*P	**P**	**14 52 57.7**	**+0.3**
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**14 52 59.7**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=127,slow=8.5,SNR=15						
	comp=Z,1.0nm,0.6s						
TX31	**Lajitas Ar. Si**	**36.48**	**312**	P	**P**	**14 52 59.7**	**+0.9**
NBMA	**Muriti-CE**	**37.04**	**112**	*e*P	**P**	**14 53 03.5**	**-0.2**
NBPN	**Ponto Novo - B**	**37.16**	**118**	*e*P	**P**	**14 53 03.8**	**-0.9**
P38A	**Dawn**	**37.48**	**334**	P	**P**	**14 53 07.3**	**+0.3**
FRTB	**Fartura**	**37.79**	**143**	*e*P	**P**	**14 53 08.4**	**-1.4**
DIAM	**Diamantina, MG**	**38.29**	**131**	*e*P	**P**	**14 53 13.5**	**-0.8**
MNTX	**Cornudas Mount**	**38.98**	**314**	P	**P**	**14 53 20.4**	**+0.7**
GDU01	**Guandu, BA**	**39.04**	**122**	*e*P	**P**	**14 53 19.6**	**-0.8**
VAO	**Valinhos**	**39.14**	**140**	*e*P	**P**	**14 53 20.7**	**-0.5**
LMN	**Caledonia Moun**	**39.55**	**9**	P	**P**	**14 53 24.9**	**+0.7**
LMN				IAmb	IAmb	14 53 44.5	
	comp=Z,12nm,1.2s						
CMC01	**Camacan, BA**	**39.91**	**124**	*e*P	**P**	**14 53 26.7**	**-0.9**
NBAN	**Anadia - AL**	**40.18**	**114**	*e*P	**P**	**14 53 29.1**	**-0.8**
GUA01	**Guaratinga, BA**	**40.32**	**126**	*e*P	**P**	**14 53 29.9**	**-1.1**
ANMO	**Albuquerque**	**41.53**	**317**	LR	LR	15 13 57.9	
	comp=Z,36nm,18.2s,baz=342,slow=40						
EYMN	**Ely**	**43.88**	**342**	P	**P**	**14 53 59.5**	**+0.1**
EYMN				IAmb	IAmb	14 54 00.4	
	comp=Z,8.6nm,0.7s						
ULM	**Lac du Bonnet**	**47.30**	**340**	P	**P**	**14 54 25.9**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=147,slow=10,SNR=3.5						
	comp=Z,2.6nm,0.4s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**14 54 33.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=127,slow=9.5,SNR=9.0						
PDAR				pP	**pP**	**14 55 10.8**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=134,slow=10,SNR=1.4						
	comp=Z,0.9nm,0.6s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**14 54 32.9**	**+0.2**
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**14 54 33.4**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=189,slow=12,SNR=5.1						
	comp=Z,2.8nm,0.7s						
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**14 54 33.4**	**+0.8**
SCHQ				IAmb	IAmb	14 54 34.3	
	comp=Z,2.9nm,0.7s						
NVAR	**Mina Array Bea**	**51.50**	**315**	P	**P**	**14 54 59.4**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=119,slow=7.8,SNR=5.1						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**14 56 20.4**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=131,slow=6.8,SNR=62						
YKA				pP	**PcP**	**14 56 59.5**	**+3.5**
	comp=Z,0.6nm,0.5s,baz=134,slow=6.9,SNR=3.7						
	comp=Z,2.7nm,0.7s						
DBIC	**Dimbokro**	**67.72**	**86**	P	**P**	**14 56 48.1**	**-1.6**
	comp=Z,1.4nm,0.3s,baz=284,slow=8.3,SNR=9.3						
	comp=Z,1.4nm,0.3s						
DBIC	**Dimbokro**	**67.72**	**86**	IAmb	IAmb	14 56 51.3	
	comp=Z,15nm,1.4s						
INK	**Inuvik**	**73.04**	**340**	P	**P**	**14 57 21.6**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=81,slow=2.4,SNR=4.4						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**14 57 43.5**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=86,slow=4.7,SNR=2.6						
ILAR				pP	**pP**	**14 58 24.2**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=90,slow=4.5,SNR=2.8						
	comp=Z,0.2nm,0.6s						
NOA	**NORSAR Array B**	**81.33**	**29**	P	**P**	**14 58 08.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=266,slow=5.3,SNR=2.4						
	comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**86.67**	**20**	P	**P**	**14 58 34.4**	**+0.2**
	comp=Z,3.2nm,1.0s,baz=279,slow=3.1,SNR=5.5						
	comp=Z,3.2nm,1.0s						
ZALV	**Zalesovo Beam**	**116.67**	**14**	PKP	**PKiKP**	**15 04 34.3**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=354,slow=1.5,SNR=4.4						
MKAR	**Makanchi Array**	**122.32**	**20**	PKP	**PKPdf**	**15 04 44.5**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=315,slow=2.4,SNR=8.4						
SONM	**Songino Array**	**125.59**	**0**	PKP	**PKiKP**	**15 04 52.3**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=12,slow=2.3,SNR=5.5						
ASAR	**Alice Springs**	**149.12**	**234**	PKP	**PKPdf**	**15 05 34.6**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=116,slow=3.6,SNR=14						
ASAR				PKPbc	**PKPbc**	**15 05 38.3**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=119,slow=3.3,SNR=9.5						
WRA	**Warramunga Arr**	**150.35**	**241**	PKP	**PKPdf**	**15 05 36.6**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=106,slow=2.7,SNR=2.0						
WRA				PKPbc	**PKPbc**	**15 05 41.4**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=106,slow=2.7,SNR=24						
WRA				pPKP	**pPKPbc**	**15 06 19.7**	**-4.7**
	comp=Z,0.5nm,0.4s,baz=106,slow=2.8,SNR=1.6						
CMAR	**Chiang Mai Arr**	**153.69**	**17**	PKPbc	**PKPbc**	**15 05 49.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=320,slow=2.9,SNR=2.4						

IDC 11 14:59:04.9±2.9**, 2°.72N×90°.22E, h0^{km}, mb3.5**/3**, mbtmp3.4**/4**, ML3.6**/1**, MS3.2**/1**, Error ellipse: s-maj=89.7km s-min=35.5km az=65.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.69**	**89**	LR	LR	15 03 54.0	
	comp=Z,148nm,21.2s,baz=292,slow=33						
CMAR	**Chiang Mai Arr**	**17.82**	**28**	P	P	15 03 16.1	+0.8
	0.1nm,0.3s,baz=224,slow=13,SNR=2.5						
	0.2nm,0.5s						
H08S2	**Diego Garcia H**	**20.47**	**240**	T	T	15 25 05.2	
	baz=60,slow=75						
H08S3	**Diego Garcia H**	**20.47**	**240**	T	T	15 24 53.2	
	baz=60,slow=75						
H08S1	**Diego Carcia H**	**20.48**	**240**	T	T	15 24 50.2	
	baz=60,slow=75						
H01W3	**Cape Leeuwin H**	**43.63**	**151**	T	T	15 54 24.7	
	baz=325						
H01W2	**Cape Leeuwin H**	**43.64**	**151**	T	T	15 54 13.5	
	baz=325						
H01W1	**Cape Leeuwin H**	**43.64**	**151**	T	T	15 54 14.0	
	baz=325						
MKAR	**Makanchi Array**	**44.44**	**352**	P	P	15 07 18.9	+1.3
	0.4nm,0.6s,baz=175,slow=8.9,SNR=4.2						
	0.4nm,0.6s						
SONM	**Songino Array**	**47.06**	**15**	P	P	15 07 36.8	-1.7
	0.4nm,0.5s,baz=193,slow=9.0,SNR=3.2						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**48.80**	**120**	P	P	15 07 52.6	+0.2
	0.5nm,1.0s,baz=298,slow=8.8,SNR=2.3						
	0.5nm,1.0s						
TXAR	**Lajitas Array**	**145.46**	**22**	PKPbc	PKPbc	15 18 44.0	-1.8
	0.1nm,0.3s,baz=297,slow=1.6,SNR=2.0						

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*HEL **11** 15:14:45.5±0.4, 67°.90N×34°.55E, h0^{km}, ML2.6, Explosion*
*NAO **11** 15:14:49.5±1.2, 67°.73N×33°.99E, ML3.0*
*KOLA **11** 15:14:49.0, 67°.70N×34°.06E, h0^{km}, ML2.6*
*IDC **11** 15:14:51.0±1.6, 67°.65N×33°.60E, h0^{km}, mbtmp3.5/4, ML2.8/4, Error ellipse: s-maj=17.5km s-min=8.5km az=89.0*

ISC 11 15:14:47.4±0.8**, 67°.64N**±0°.03×**34°.19E**±0°.04**, h0^{km}, n39, σ1^{s}48**/70**, 3D, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	**0.31**	**257**	P	**Pg**	**15 14 54.1**	**+0.8**
APA				S	**Sg**	**15 14 58.4**	**+1.0**
APZ9	**Apatity**	**0.31**	**257**	Pg	**Pg**	**15 14 54.2**	**+0.9**
APZ9				Lg	Lg	15 14 58.4	
APZ9				Rg	Rg	15 15 00.3	
APZ9	**Apatity**	**0.31**	**257**	Pg	**Pg**	**15 14 54.2**	**+0.9**
APZ9				Sg	**Sg**	**15 14 58.4**	**+1.1**
LVZ	**Lovozero**	**0.31**	**34**	P	**Pg**	**15 14 54.1**	**+0.8**
LVZ				S	**Sg**	**15 14 58.4**	**+1.0**
APA0	**Apatity Array**	**0.46**	**266**	Pg	**Pg**	**15 14 56.8**	**+0.6**
	baz=89,slow=16						
APA0				Lg	Lg	15 15 02.8	
	baz=85,slow=28						
APA0				Rg	Rg	15 15 05.3	
	baz=71,slow=56						
APA0	**Apatity Array**	**0.46**	**266**	Pg	**Pg**	**15 14 56.8**	**+0.6**
	baz=89,slow=16						
APA0				Sg	**Sg**	**15 15 02.8**	**+0.6**
	baz=85,slow=28						
APA0	**Apatity Array**	**0.46**	**266**	P	**Pg**	**15 14 56.2**	**-0.1**
APA0				S	**Sg**	**15 15 02.6**	**+0.5**
TERR	**Teriberka**	**1.60**	**12**	P	**Pn**	**15 15 17.0**	**+0.1**
TERR				S	**Sn**	**15 15 37.4**	**-0.9**
VRF	**Varrio**	**1.75**	**276**	PG	**Pn**	**15 15 19.2**	**+0.2**
	baz=86						
VRF				MSG		15 15 41.5	
	comp=Z,56nm,0.2s						
VRF				SG	**Sn**	**15 15 41.5**	**-0.5**
PRVG	**Vayda Guba**	**2.24**	**342**	P	**Pn**	**15 15 26.1**	**+0.5**
PRVG				S	**Sn**	**15 15 54.0**	**0.0**
OLKF	**Oulanka, Finla**	**2.30**	**237**	PN	**Pn**	**15 15 28.1**	**+1.5**
OLKF				SN	**Sb**	**15 15 59.0**	**+0.2**
KU6	**Riekki**	**2.35**	**228**	PN	**Pn**	**15 15 28.7**	**+1.4**
KU6				SN	**Sb**	**15 16 00.5**	**+0.3**
KU6				MSG		15 16 03.0	
	comp=Z,20nm,0.2s						
MSF	**Maaselka**	**2.68**	**232**	PN	**Pn**	**15 15 33.7**	**+1.9**
MSF				SN	**Sb**	**15 16 09.8**	**+0.1**
RNF	**Rovaniemi**	**3.36**	**256**	PN	**Pn**	**15 15 41.6**	**+0.5**
	baz=68						
KEV	**Kevo**	**3.37**	**312**	Pn	**Pn**	**15 15 42.4**	**+1.2**
KEV				Sn	**Sn**	**15 16 22.9**	**+0.9**
KEV				Lg	Lg	15 16 30.5	
KEV	**Kevo**	**3.37**	**312**	*e*P	**Pn**	**15 15 42.3**	**+1.1**
KEV	**Kevo**	**3.37**	**312**	PB	**Pn**	**15 15 42.0**	**+0.8**
KEV				SB	**Sn**	**15 16 22.8**	**+0.9**
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**15 15 46.4**	**+0.5**
	baz=121,slow=16						
ARA0				Pg	**Pb**	**15 15 54.4**	**+0.7**
	baz=120,slow=14						
ARA0				Sn	**Sn**	**15 16 28.8**	**-1.4**
	baz=118,slow=28						
ARA0				Lg	Lg	15 16 40.5	
	baz=127,slow=28						
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**15 15 46.4**	**+0.5**
	baz=121,slow=16						
ARA0				Pg	**Pb**	**15 15 54.4**	**+0.7**
	baz=120,slow=14						
ARA0				Sn	**Sn**	**15 16 28.8**	**-1.4**
	baz=118,slow=28						
ARA0	**ARCESS Array S**	**3.71**	**305**	PB	**Pn**	**15 15 46.4**	**+0.5**
ARA0				SN	**Sn**	**15 16 29.3**	**-0.9**
ARCES	**ARCESS Array B**	**3.71**	**305**	Pn	**Pn**	**15 15 46.4**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=120,slow=14,SNR=370						
ARCES				Sn	**Sn**	**15 16 28.5**	**-1.7**
	comp=Z,1.7nm,0.3s,baz=119,slow=26,SNR=9.3						
ARCES				Lg	Lg	15 16 40.2	
	comp=Z,5.7nm,0.3s,baz=115,slow=29,SNR=17						
	comp=Z,7.2nm,0.2s						
ARCES	**ARCESS Array B**	**3.71**	**305**	P	**Pn**	**15 15 46.4**	**+0.5**
ARCES				S	**Sn**	**15 16 26.7**	**-3.5**
HEF	**Hetta**	**4.03**	**286**	Pn	**Pn**	**15 15 50.5**	**+0.2**
HEF				Pg	**Pb**	**15 16 00.6**	**+1.3**
HEF				Sn	**Sn**	**15 16 37.0**	**-1.2**
HEF				Lg	Lg	15 16 50.6	
HEF	**Hetta**	**4.03**	**286**	*e*P	**Pn**	**15 15 50.6**	**+0.2**
HEF				*e*S	**Sn**	**15 16 36.5**	**-1.7**
HEF	**Hetta**	**4.03**	**286**	PN	**Pn**	**15 15 50.4**	**0.0**
	baz=90						
HEF				SN	**Sn**	**15 16 37.6**	**-0.6**
TOF	**Tornio**	**4.20**	**253**	PN	**Pn**	**15 15 53.2**	**+0.6**
OUL	**Oulu**	**4.21**	**236**	PG	**Pb**	**15 16 05.1**	**+2.9**
KTK1	**Kautokeino**	**4.29**	**294**	*e*P	**Pn**	**15 15 54.8**	**+0.9**
KTK1				*e*Pg	**Pb**	**15 16 04.8**	**+1.1**
KTK1				IAML		15 17 02.1	
	comp=Z,49nm,0.6s						
PAJU	**Pajala**	**4.33**	**267**	PN	**Pn**	**15 15 54.0**	**-0.5**
LANU	**Lannavaara**	**4.64**	**281**	PN	**Pn**	**15 15 58.2**	**-0.5**
	baz=83						
LANU				SN	**Sn**	**15 16 54.2**	**+1.1**
HAMF	**Hammerfest**	**4.81**	**314**	*e*P	**Pn**	**15 16 00.6**	**-0.4**
HAMF				*e*S	**Sn**	**15 16 55.1**	**-2.2**
HAMF				IAML		15 17 19.9	
	comp=Z,20nm,0.6s						
I37NO	**I37NO**	**5.94**	**291**	*i*		15 49 40.0	
	comp=Z,0.1nm,0.6s,baz=100,slow=329,SNR=5.3						
FIA0	**FINESS Array S**	**7.13**	**213**	Pn	**Pn**	**15 16 34.2**	**+1.4**
	baz=24,slow=14						
FIA0				Sn	**Sn**	**15 17 52.6**	**-1.8**
	baz=27,slow=28						
FIA0				Lg	Lg	15 18 31.9	
	baz=30,slow=28						
FIA0	**FINESS Array S**	**7.13**	**213**	Pn	**Pn**	**15 16 34.2**	**+1.4**
	baz=24,slow=14						
FIA0				Sg	**Sg**	**15 18 31.9**	**-4.3**
	baz=30,slow=28						
FINES	**FINESS Array B**	**7.13**	**213**	Pn	**Pn**	**15 16 33.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=30,slow=13,SNR=12						
FINES				Sn	**Sn**	**15 17 51.3**	**-3.1**
	comp=Z,0.4nm,0.3s,baz=29,slow=21,SNR=3.0						
FINES				Lg	Lg	15 18 29.7	
	comp=Z,0.9nm,0.3s,baz=27,slow=28,SNR=8.0						
	comp=Z,0.6nm,0.3s						
KLMR	**Klimovskoe**	**7.20**	**159**	*e*Pn	**Pn**	**15 16 38.3**	**+4.6**
KLMR				AMP		15 16 45.5	
	comp=Z,8.0nm,1.1s						
KLMR				*e*Sn	**Sn**	**15 17 54.6**	**-1.4**
KLMR				*e*Sn	**Sn**	**15 17 54.6**	**-1.4**
KLMR				⇓Lg	Lg	15 18 30.0	
KLMR				⇓Lg	Lg	15 18 30.0	
KLMR				⇓Lg	Lg	15 18 30.0	
SPA0	**Spitsbergen Ar**	**11.72**	**342**	Pn	**Pn**	**15 17 32.8**	**-2.7**
	baz=147,slow=12						
SPITS	**Spitsbergen Ar**	**11.72**	**342**	Pn	**Pn**	**15 17 32.7**	**-2.9**
	baz=138,slow=15						
SPITS				Sn	Sn	15 19 35.2	-12
	baz=140,slow=27						
	comp=Z,8.3nm,0.9s						
NOA	**NORSAR Array B**	**11.89**	**247**	Pn	**Pn**	**15 17 36.2**	**-1.8**
	baz=46,slow=11,SNR=3.6						
NOA				Sn	Sn	15 19 43.2	-8.1
	baz=53,slow=22,SNR=2.1						
NOA				Lg	Lg	15 20 55.5	
	baz=46,slow=25,SNR=3.6						
	comp=Z,0.2nm,0.5s						

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*UCR **11** 15:40:59.6±2.1, 8°.63N×82°.86W, h23^{km}±4^{km}, MW3.6*
*UPA **11** 15:40:59.6±1.9, 8°.65N×82°.80W, h17^{km}±2^{km}, MW4.1*

ISC 11 15:40:59.2±0.9**, 8°.65N**±0°.03×**82°.83W**±0°.02**, h30^{km}**±5^{km}**, n37, σ1^{s}00**/60**, 10C-15D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLIR3	**Monte Lirio, C**	**0.14**	**2⇓**	*i*P	**Pb**	**15 41 05.0**	**0.0**
MLIR3				*i* S	**Sb**	**15 41 07.5**	**-1.3**
BRU2	**Volcan**	**0.19**	**44⇓**	*i*P	**Pb**	**15 41 05.3**	**-0.2**
BRU2				*e*S	**Sb**	**15 41 09.8**	**0.0**
BRU2	**Volcan**	**0.19**	**44⇓**	*i*P	**Pb**	**15 41 05.3**	**-0.2**
BRU2				*i* S	**Sb**	**15 41 08.1**	**-1.8**
EDSV	**San Vito**	**0.22**	**319⇑**	*i*P	**Pb**	**15 41 05.9**	**+0.2**
EDSV				*e*S	**Sb**	**15 41 11.3**	**+1.2**
LESP3	**La Esperanza,**	**0.25**	**171⇓**	*i*P	**Pb**	**15 41 05.3**	**-0.7**
LESP3				*i* S	**Sb**	**15 41 10.0**	**-0.6**
BC3P	**Paso Ancho**	**0.27**	**53⇓**	*i*P	**Pb**	**15 41 06.1**	**-0.3**
BC3P				*i* S	**Sb**	**15 41 11.0**	**-0.3**
CCOL	**Caracol de Cor**	**0.28**	**210⇓**	*i*P	**Pb**	**15 41 05.8**	**-0.6**
CCOL				*e*S	**Sb**	**15 41 11.8**	**+0.5**
BCO2	**Palmira**	**0.30**	**78⇓**	*i*P	**Pb**	**15 41 06.8**	**-0.1**
BCO2				*i* S	**Sb**	**15 41 11.5**	**-0.5**
DVD	**David**	**0.43**	**120⇓**	*i*P	**Pb**	**15 41 08.3**	**-0.3**
DVD				*i* S	**Sb**	**15 41 13.9**	**-1.0**
LOCO3	**Loma Colorada,**	**0.47**	**121⇓**	*i*P	**Pb**	**15 41 09.1**	**-0.1**
LOCO3				*i* S	**Sb**	**15 41 15.4**	**-0.6**
LOMA3	**Las Lomas, Chi**	**0.48**	**117⇓**	*e*P	**Pb**	**15 41 09.1**	**-0.3**
LOMA3				*i* S	**Sb**	**15 41 15.5**	**-0.8**
POTG	**Potrero Grande**	**0.49**	**324⇑**	*i*P	**Pb**	**15 41 09.6**	**+0.1**
POTG				*e*S	**Sn**	**15 41 18.4**	**+0.5**
GUAL3	**Gualaca, Chiri**	**0.54**	**103⇑**	*i*P	**Pb**	**15 41 09.8**	**-0.4**
GUAL3				*i* S	**Sb**	**15 41 17.4**	**-0.4**
CHIR3	**Chiriqui UPA,**	**0.56**	**118⇑**	*i*P	**Pb**	**15 41 10.2**	**-0.4**
CHIR3				*i* S	**Sb**	**15 41 18.5**	**+0.2**
PIRO	**Carate, Puerto**	**0.56**	**244⇓**	*e*P	**Pb**	**15 41 09.7**	**-1.0**
PIRO				*e*S	**Sn**	**15 41 21.0**	**+1.5**
PIRO	**Carate, Puerto**	**0.56**	**244⇓**	*e*P	**Pb**	**15 41 09.7**	**-1.0**
EDBA	**Buenos Aires**	**0.67**	**319**	*e*P	**Pb**	**15 41 12.4**	**-0.1**
RIOS	**Rincon, Osa**	**0.68**	**274⇑**	*e*P	**Pb**	**15 41 11.2**	**-1.5**
RIOS				*e*S	**Sb**	**15 41 20.4**	**-1.4**
CHGR2	**Aguacate**	**0.73**	**67⇑**	*i*P	**Pb**	**15 41 12.9**	**-0.6**
CHGR2				*i* S	**Sb**	**15 41 22.4**	**-0.8**
DRK0	**Durika**	**0.73**	**326⇑**	*i*P	**Pb**	**15 41 13.3**	**-0.3**
DRK0				*e*S	**Sb**	**15 41 24.2**	**+0.8**
DRK0	**Durika**	**0.73**	**326⇑**	*i*P	**Pb**	**15 41 13.3**	**-0.3**
DRK0				*i* S	**Sb**	**15 41 23.6**	**+0.2**
SRBA	**San Rafael, Bu**	**0.78**	**318⇑**	*i*P	**Pb**	**15 41 13.7**	**-0.7**
SRBA				*e*S	**Sb**	**15 41 24.4**	**-0.3**
CNI2	**El Empalme, Bo**	**0.84**	**25⇓**	*e*P	**Pb**	**15 41 15.1**	**-0.2**
PLAN	**Los Planes de**	**0.84**	**271**	*e*P	**Pb**	**15 41 14.9**	**-0.5**
REME3	**Remedios, Chir**	**1.07**	**113⇓**	*e*P	**Pn**	**15 41 18.2**	**0.0**
REME3				*i* S	**Sb**	**15 41 32.2**	**-0.7**
RIMA	**Rio Macho**	**1.51**	**317**	*e*P	**Pn**	**15 41 24.9**	**+0.5**
BATAN	**Batan**	**1.53**	**339**	*e*P	**Pn**	**15 41 22.2**	**-2.4**
OCM	**Ochomogo**	**1.67**	**318**	*e*P	**Pn**	**15 41 27.2**	**+0.6**
RSUS3	**Rio de Jesus,**	**1.78**	**112**	*e*P	**Pb**	**15 41 30.7**	**-0.5**
GMAL	**Guarumal, Vera**	**1.81**	**119⇓**	*i*P	**Pn**	**15 41 29.6**	**+1.2**
GMAL				*i* S	**Sn**	**15 41 49.9**	**-0.5**
HDC	**Heredia**	**1.84**	**317**	*e*P	**Pn**	**15 41 30.1**	**+1.0**
CACAO	**El Cacao, Vera**	**2.34**	**124**	*e*P	**Pn**	**15 41 38.1**	**+2.3**
CACAO				*i* S	**Sb**	**15 42 07.2**	**-2.1**
CHIT3	**Chitre**	**2.48**	**106⇑**	*e*P	**Pn**	**15 41 39.5**	**+1.8**
AZU	**Azuero**	**2.67**	**109**	*e*P	**Pn**	**15 41 43.1**	**+2.9**
VTON	**El Valle, Cocl**	**2.69**	**91**	*e*P	**Pn**	**15 41 39.6**	**-0.9**
ZANG	**Zanguenga, Cho**	**2.94**	**84**	*e*P	**Pn**	**15 41 45.2**	**+1.2**
BCIP	**Isla Barro Col**	**3.00**	**80**	*e*P	**Pn**	**15 41 45.3**	**+0.5**

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*IDC **11** 15:54:38.5±0.7, 33°.49S×178°.54W, h0^{km}, mb4.4/10, mbtmp4.4/11, ML4.8/1, MS3.7/4, Error ellipse: s-maj=24.1km s-min=20.5km az=77.0*
*WEL **11** 15:54:39.2±0.8, 34°S±7°×17°8W±1°6, h33^{km}, M4.7/17, mB5.2/13, ML5.2/18, MLv4.9/17, Mw(mB)4.6/13, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8*
*NEIC **11** 15:54:39.7±2.9, 33°.5S±0°.1×178°.3W±0°.2, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=28.8km s-min=19.4km az=82.0*

ISC 11 15:54:43.6±0.6**, 33°.64S**±0°.06×**178°.47W**±0°.09**, h41^{km}, n84, σ1^{s}72**/95**, mb4.6**/17**, MS3.5**/5**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.39**	**6**	P	Pn	15 55 41.3	-6.5
GLKZ				S	**Sn**	**15 56 30.7**	**-6.8**
RAO	**Raoul Island**	**4.40**	**6**	Pn	Pn	15 55 41.9	-6.0
MXZ	**Matakaoa Point**	**4.72**	**213**	Pn	**Pn**	**15 55 50.9**	**-1.3**
MXZ	**Matakaoa Point**	**4.72**	**213**	P	**Pn**	**15 55 49.4**	**-2.8**
MXZ				S	**Sn**	**15 56 44.7**	**-1.0**
WMGZ	**Waiomatatini S**	**4.88**	**210**	P	**Pn**	**15 55 52.3**	**-2.2**
WMGZ				S	**Sn**	**15 56 50.1**	**+0.3**
PKGZ	**Pakihiroa**	**5.09**	**213**	P	**Pn**	**15 55 55.6**	**-1.8**
PKGZ				S	**Sn**	**15 56 53.8**	**-1.1**
HAZ	**Te Kaha**	**5.12**	**216**	P	**Pn**	**15 55 57.1**	**-0.7**
HAZ				S	**Sn**	**15 56 57.6**	**+2.0**
PUZ	**Puketiti**	**5.16**	**210**	P	**Pn**	**15 55 55.0**	**-3.4**
PUZ				S	**Sn**	**15 56 55.3**	**-1.4**
RUGZ	**Raukumara Rang**	**5.33**	**215**	P	**Pn**	**15 55 58.3**	**-2.5**
TWGZ	**Tauwhareparae**	**5.37**	**211**	P	**Pn**	**15 55 58.1**	**-3.1**
CNGZ	**Carnagh Statio**	**5.54**	**208**	P	**Pn**	**15 56 00.8**	**-2.7**
TKGZ	**Te Karaka**	**5.64**	**211**	P	**Pn**	**15 56 02.0**	**-3.0**
TKGZ				S	**Sn**	**15 57 07.8**	**-0.7**
MWZ	**Matawai**	**5.70**	**214**	P	**Pn**	**15 56 04.6**	**-1.2**
MWZ				S	**Sn**	**15 57 09.6**	**-0.4**
OPRZ	**Ohinepanea**	**5.83**	**223**	P	**Pn**	**15 56 07.2**	**-0.4**
OPRZ				S	**Sn**	**15 57 14.0**	**+0.9**
URZ	**Urewera**	**5.84**	**217**	Pn	**Pn**	**15 56 05.9**	**-1.8**
	22nm,0.3s,baz=301,slow=19,SNR=90						
URZ				Sn	**Sn**	**15 57 11.6**	**-1.7**
	26nm,0.3s,baz=90,slow=20,SNR=11						
	91nm,0.5s						
URZ	**Urewera**	**5.84**	**217**	Pn	**Pn**	**15 56 06.2**	**-1.5**
URZ	**Urewera**	**5.84**	**217**	P	**Pn**	**15 56 05.7**	**-2.0**
URZ				S	**Sn**	**15 57 12.1**	**-1.3**
RAGZ	**Rawiri**	**5.88**	**213**	P	**Pn**	**15 56 08.0**	**-0.4**
RIGZ	**Rimuhau**	**5.91**	**210**	P	**Pn**	**15 56 06.0**	**-2.6**

RIGZ				S	**Sn**	**15 57 13.9**	**-1.1**
TGRZ	**Tauranga**	**5.92**	**225**	P	**Pn**	**15 56 09.0**	**+0.2**
PRGZ	**Paritu Road**	**6.04**	**208**	P	**Pn**	**15 56 07.0**	**-3.5**
SNGZ	**Shannon Statio**	**6.15**	**212**	P	**Pn**	**15 56 11.4**	**-0.5**
SNGZ				S	**Sn**	**15 57 20.1**	**-0.9**
MUGZ	**Murupara**	**6.18**	**217**	P	**Pn**	**15 56 10.7**	**-1.6**
MUGZ				S	**Sn**	**15 57 20.2**	**-1.5**
RTZ	**Ruatahuna**	**6.18**	**215**	P	**Pn**	**15 56 11.5**	**-1.0**
RTZ				S	**Sn**	**15 57 21.1**	**-0.8**
KNZ	**Kokohu**	**6.21**	**209**	P	**Pn**	**15 56 08.7**	**-4.0**
KNZ				S	**Sn**	**15 57 20.0**	**-2.4**
MHGZ	**Mahia Peninsul**	**6.23**	**207**	P	**Pn**	**15 56 10.7**	**-2.4**
OUZ	**Omahuta**	**6.75**	**254**	Pn	**Pn**	**15 56 21.9**	**+1.8**
BKZ	**Black Stump Fm**	**6.85**	**215**	Pn	**Pn**	**15 56 19.9**	**-1.7**
KRVZ	**Karewarewa**	**7.23**	**219**	P	Pn	15 56 08.9	-18
THZ	**Tophouse**	**10.60**	**218**	Pn	**Pn**	**15 57 11.9**	**-1.1**
OUENC	**Ouen Island, N**	**17.10**	**307**		**P**	**15 58 42.1**	**+1.2**
OUENC				IAmb	IAmb	15 58 45.5	
	comp=Z,26nm,0.9s						
ONTNC	**Ouen Toro**	**17.43**	**306**	P	**P**	**15 58 44.4**	**-0.3**
ONTNC				IAmb	IAmb	15 58 50.3	
	comp=Z,25nm,0.9s						
DZM	**Mont Dzumac**	**17.60**	**307**	P	**P**	**15 58 48.3**	**+1.7**
	comp=Z,16nm,0.8s,baz=114,slow=16,SNR=19						
DZM				LR	LR	16 04 44.4	
	comp=Z,240nm,18.1s,baz=163,slow=35						
DZM	**Mont Dzumac**	**17.60**	**307**	*e*P	**P**	**15 58 47.6**	**+1.0**
	comp=Z,50nm,26.1s						
DZM				*e*LR	LR	16 02 49.6	
	comp=Z,205nm,25.2s						
DZM	**Mont Dzumac**	**17.60**	**307**	P	**P**	**15 58 47.2**	**+0.6**
KOUNC	**Koumac, New Ca**	**20.10**	**306**	P	**P**	**15 59 12.1**	**-1.8**
KOUNC				IAmb	IAmb	15 59 20.1	
	comp=Z,23nm,1.1s						
TBI	**Tubuai**	**27.39**	**76**	*e*LR	LR	16 06 42.6	
	comp=Z,85nm,22.0s						
EIDS	**Eidsvold**	**27.68**	**279**	P	**P**	**16 00 29.9**	**+2.0**
EIDS				IAmb	IAmb	16 00 37.8	
	comp=Z,11nm,1.2s						
PPT2	**Papeete2**	**30.42**	**66**	*e*LR	LR	16 08 10.0	
	comp=Z,82nm,21.0s						
PPT	**Papeete**	**30.44**	**65**	LR	LR	16 11 27.6	
	comp=Z,108nm,18.6s,baz=242,slow=33						
STKA	**Stephens Creek**	**33.49**	**262**	P	**P**	**16 01 20.1**	**+1.0**
	comp=Z,2.3nm,0.9s,baz=98,slow=14,SNR=1.7						
STKA				LR	LR	16 15 02.0	
	comp=Z,128nm,18.2s,baz=66,slow=37						
	comp=Z,2.3nm,0.9s						
STKA	**Stephens Creek**	**33.49**	**262**	P	**P**	**16 01 20.2**	**+1.0**
CTA	**Charters Tower**	**34.07**	**284**	P	**P**	**16 01 25.4**	**+1.1**
	comp=Z,5.2nm,0.7s,baz=112,slow=8.2,SNR=8.4						
	comp=Z,5.2nm,0.7s						
CTAO	**Charters Tower**	**34.07**	**284**	P	**P**	**16 01 25.7**	**+1.5**
KRVT	**Keravat (AS076**	**40.08**	**310**	P	**P**	**16 02 14.6**	**-0.6**
	comp=Z,26nm,0.9s,baz=165,slow=3.9,SNR=3.8						
	comp=Z,26nm,0.9s						
AS31	**Alice Springs**	**42.64**	**271**	P	**P**	**16 02 35.8**	**-0.6**
ASAR	**Alice Springs**	**42.64**	**271**	P	**P**	**16 02 36.0**	**-0.4**
	comp=Z,7.9nm,0.7s,baz=111,slow=7.2,SNR=88						
ASAR				PcP	**PcP**	**16 04 27.6**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=116,slow=3.6,SNR=6.3						
ASAR				S	**S**	**16 08 52.6**	**-4.2**
	comp=Z,0.3nm,1.0s,baz=115,slow=15,SNR=1.5						
	comp=Z,7.9nm,0.7s						
ASAR	**Alice Springs**	**42.64**	**271**	P	**P**	**16 02 35.5**	**-0.8**
WR0	**Warramunga Arr**	**43.75**	**276**	P	**P**	**16 02 44.5**	**-0.7**
WR0				IAmb	IAmb	16 02 57.6	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**43.91**	**276**	P	**P**	**16 02 46.5**	**0.0**
WRA	**Warramunga Arr**	**43.92**	**276**	P	**P**	**16 02 46.2**	**-0.5**
	comp=Z,8.7nm,0.8s,baz=117,slow=7.8,SNR=36						
WRA				PcP	**PcP**	**16 04 32.1**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=124,slow=2.8,SNR=4.0						
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**43.92**	**276**	P	**P**	**16 02 46.3**	**-0.4**
WB0	**Warramunga Arr**	**43.96**	**276**	P	**P**	**16 02 46.5**	**-0.5**
WB0				IAmb	IAmb	16 02 59.6	
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**44.84**	**186**	P	**P**	**16 02 56.0**	**+2.8**
	comp=Z,0.4nm,0.8s,baz=3.1,slow=5.2,SNR=2.2						
	comp=Z,0.4nm,0.8s						
FORT	**Forrest**	**44.92**	**258**	P	**P**	**16 02 53.1**	**-1.3**
KNRA	**Kununurra**	**50.63**	**277**	P	**P**	**16 03 38.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.03**	**273**	P	**P**	**16 03 49.2**	**-0.1**
MORW	**Morawa**	**55.29**	**256**	P	**P**	**16 04 11.4**	**-1.7**
MORW				IAmb	IAmb	16 04 33.6	
	comp=Z,14nm,1.4s						
QSPA	**South Pole Qui**	**56.48**	**180**	P	**P**	**16 04 23.5**	**+2.3**
	comp=Z,6.6nm,0.9s,baz=8.1,slow=2.9,SNR=12						
	comp=Z,6.6nm,0.9s						
QSPA	**South Pole Qui**	**56.48**	**180**	P	**P**	**16 04 23.1**	**+1.9**
QSPA				IAmb	IAmb	16 04 28.3	
	comp=Z,6.5nm,0.9s						
MAW	**Mawson**	**69.15**	**201**	P	**P**	**16 05 47.5**	**+2.3**
	comp=Z,2.0nm,0.9s,baz=149,slow=5.9,SNR=2.3						
	comp=Z,2.0nm,0.9s						
SNAA	**Sanae**	**74.94**	**179**	LR	LR	16 39 43.4	
	comp=Z,46nm,18.1s,baz=336,slow=36						
NJ2	**Nanjing**	**88.05**	**311**	*e*P	**P**	**16 07 29.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PETK	**Petropavlovsk-**	**88.84**	**346**	P	**P**	**16 07 34.2**	**+1.3**
	comp=Z,3.8nm,0.9s,baz=113,slow=6.6,SNR=6.3						
	comp=Z,3.8nm,0.9s						
PETK	**Petropavlovsk-**	**88.84**	**346**	P	**P**	**16 07 33.7**	**+0.8**
NVAR	**Mina Array Bea**	**90.88**	**43**	P	**P**	**16 07 44.9**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=206,slow=6.0,SNR=4.4						
	comp=Z,0.4nm,0.6s						
PZH	**PanZhiHua**	**96.44**	**297**	P	**P**	**16 08 08.3**	**-0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.9s						
HHC	**Hu-ho-hao-te**	**98.19**	**314**	*e*P	**P**	**16 08 15.3**	**-1.0**
HHC				pmax	pmax		
	comp=Z,29nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.4s						
WMQ	**Urumqi**	**114.89**	**307**	*e*P	PKPdf	16 13 13.8	-5.9
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
MKAR	**Makanchi Array**	**119.52**	**309**	PKP	**PKPdf**	**16 13 28.1**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=95,slow=3.0,SNR=7.3						
ZALV	**Zalesovo Beam**	**120.16**	**317**	PKP	**PKiKP**	**16 13 29.3**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=2.0						
ZALV	**Zalesovo Beam**	**120.16**	**317**		**PKPdf**	**16 13 28.8**	**-0.6**
ARCES	**ARCESS Array B**	**141.65**	**347**	PKP	**PKPdf**	**16 14 10.0**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=0.0,slow=2.3,SNR=3.2						
KBZ	**Khabaz**	**146.48**	**300**	PKPbc	**PKPab**	**16 14 20.6**	**-0.6**
	comp=Z,4.0nm,0.9s,baz=119,slow=4.2,SNR=6.6						
FIA1	**FINESS Array S**	**148.01**	**338**	PKPbc	**PKPbc**	**16 14 23.9**	**+0.1**
FINES	**FINESS Array B**	**148.01**	**338**	PKPbc	**PKPbc**	**16 14 24.0**	**+0.2**
	comp=Z,10nm,0.9s,baz=45,slow=3.5,SNR=24						
FINES	**FINESS Array B**	**148.01**	**338**	PKPbc	**PKPbc**	**16 14 23.6**	**-0.2**
NB2	**NORSAR Subarra**	**151.87**	**350**	PKP	**PKiKP**	**16 14 33.6**	**-0.1**
	comp=Z,7.3nm,1.4s,baz=35,slow=2.6						
NOA	**NORSAR Array B**	**151.87**	**350**	PKPbc	**PKiKP**	**16 14 33.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=14,slow=4.1,SNR=6.1						
NACGM	**Naroch**	**152.36**	**328**	⇓*e*PKP	**PKiKP**	**16 14 35.5**	**+0.8**
	comp=Z,27nm,0.9s,baz=48						
AKASG	**Malin Array Be**	**153.54**	**318**	PKPbc	**PKiKP**	**16 14 37.6**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=74,slow=2.5,SNR=8.4						
AKASG	**Malin Array Be**	**153.54**	**318**		**PKPbc**	**16 14 36.2**	**-1.0**
BRTR	**Keskin Array B**	**153.63**	**293**	PKPbc	**PKiKP**	**16 14 39.5**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=130,slow=3.9,SNR=8.0						
TORD	**Torodi Ar. Bea**	**159.60**	**180**	PKPab	**PKPab**	**16 15 17.1**	**+0.4**
	comp=Z,15nm,0.8s,baz=189,slow=3.5,SNR=4.5						

STR ***11*** *15:57:19.4±0.5,46°N±3°×°±°,h0^{km},MLv0.2/3,preliminary*

ZUR 11 15:57:19.0,46°.26N×7°.41E,h2^{km}±4^{km},MLh0.6/6,**2C-1D, Error ellipse: s-maj=9.3km s-min=1.1km az=113.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENIN	**Lac Senin/Sane**	**0.13**	**324**	⇓Pg	Pg	15 57 21.9	+0.3
DIX	**Grande Dixence**	**0.18**	**179**	Pg	Pg	15 57 23.9	+1.3
DIX				Sg	Sg	15 57 25.6	+0.7
LKBD	**Leukerbad**	**0.20**	**51**	Pg	Pg	15 57 23.3	+0.4
LKBD2	**Leukerbad 2**	**0.20**	**55**	⇑Pg	Pg	15 57 23.3	+0.4
GRYON	**Gryon**	**0.20**	**267**	Pg	Pg	15 57 23.1	+0.2
GRYON				Sg	Sg	15 57 26.0	+0.4
LAUCH	**Lauchernalp**	**0.30**	**58**	⇑Pg	Pg	15 57 25.0	+0.2
LAUCH				Sg	Sg	15 57 29.2	+0.5
EMBD	**Embd, Matterta**	**0.30**	**98**	Sg	Sg	15 57 29.0	+0.3
EMBD	**Embd, Matterta**	**0.30**	**98**	Pg	Pg	15 57 25.9	+1.2
AIGLE	**Aigle**	**0.32**	**285**	Sg	Sg	15 57 29.8	+0.3
AIGLE	**Aigle**	**0.32**	**285**	Pg	Pb	15 57 26.9	-0.6

ROM 11 15:58:13.2±0.1,**46°.145N**±0°.009×**11°.19E**±0°.02,**h0**^{km}**, ML0.9**/3,**1C-2D, Error ellipse: s-maj=1.4km s-min=0.8km az=302.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAGG	**Gaggia**	**0.17**	**249**	P	Pg	15 58 17.4	+0.9
GAGG				AML	AML		
	comp=E,44μm,0.2s						
GAGG				AML	AML		
	comp=E,44μm,0.2s						
GAGG				AML	AML		
	comp=N,41μm,0.3s						
LUSI	**Trento, Gardas**	**0.25**	**222**	⇑P	Pg	15 58 18.9	+0.9
LUSI				AML	AML		
	comp=N,64μm,0.2s						
LUSI				AML	AML		
	comp=N,64μm,0.2s						
LUSI				AML	AML		
	comp=E,37μm,1.1s						
DOSS	**Dosso del Somm**	**0.27**	**180**	P	Pg	15 58 19.0	+0.8
DOSS				AML	AML		
	comp=E,30μm,1.1s						
DOSS				AML	AML		
	comp=N,52μm,1.1s						
DOSS				AML	AML		
	comp=E,74μm,0.8s						
DOSS				AML	AML		
	comp=N,63μm,1.6s						
APPI	**Appiano**	**0.34**	**5**	P	Pg	15 58 20.8	+1.1
CTI	**Castel Tesino**	**0.34**	**107**	P	Pg	15 58 20.6	+0.9
KOSI	**Kohlern**	**0.34**	**23**	P	Pg	15 58 21.0	+1.2
MABI	**Malga Bissina**	**0.48**	**259**	P	Pg	15 58 23.2	+0.8
ABSI	**Aberstueckl**	**0.59**	**9**	P	Pg	15 58 25.5	+0.9
RISI	**Rein**	**1.01**	**37**	P	Pb	15 58 33.8	0.0
EUCT	**Pavia**	**1.72**	**237**	P	Pg	15 58 47.9	+1.7
QLNO	**Quiliano**	**2.71**	**229**	⇓P	Pn	15 58 58.8	+0.9
APEC	**Apecchio**	**2.73**	**161**	S	Sn	15 59 28.0	-4.0
SSFR	**Montelago di S**	**2.94**	**157**	S	Sn	15 59 39.0	+1.9
PP3	**Marolino**	**3.26**	**147**	S	Sg	15 59 57.0	-1.0
FAGN	**Fagnano**	**4.24**	**155**	S	Sn	16 00 07.0	-2.4
VENT	**Ventotene**	**5.59**	**162**	⇓P	Pn	15 59 41.3	+3.8

IDC ***11*** *16:06:09.7±0.5,11°.86N×144°.61E,h0^{km},mb4.5/27, mbtmp4.5/29,ML4.0/2,MS3.8/62,Error ellipse: s-maj=17.0km s-min=10.7km az=83.0*

NEIC ***11*** *16:06:12.1±2.0,11°.82N±0°.06×144°.78E±0°.06,h10^{km}±1^{km}, mb4.9/133,Error ellipse: s-maj=13.8km s-min=4.3km az=135.0*

DJA ***11*** *16:06:14.7±0.7,12°N±3°×14°5E±°,h39^{km}±5^{km},M4.7/19, mB5.2/6,mb4.8/19,MLv4.8/1,Mw(mB)4.5/6*

GCMT ***11*** *16:06:16.1±0.2,11°.62N±0°.02×144°.58E±0°.03,h12^{km}, MW4.8/105,Moment Tensor Solution. s29,c37; s105,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.06; $M_{\theta\theta}$1.91±.05; $M_{\phi\phi}$0.26±.07; $M_{r\theta}$0.86±.22; $M_{\theta\phi}$0.66±.06; $M_{\phi r}$0.62±.28; Best double couple: $M_0$2.40500×10^{16} NP1:ϕ_s77.00000°,δ33.00000°, λ-79.00000°. NP2:ϕ_s244.00000°,δ58.00000°, λ-97.00000°. Principal axes: T 2.3700, Plg13.0000°, Azm339.0000°; N 0.0670, Plg6.0000°, Azm248.0000°; P -2.4390, Plg76.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 16:06:13.8±1.8,**11°.81N**±0°.05×**144°.75E**±0°.07,**h25**^{km}±12^{km}**, n335,**σ1^{s}.**43**/274,**mb4.8**/116,**MS3.9**/73,**4D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.77**	**4**	Pn	**Pn**	**16 06 42.2**	**-0.7**
	212nm,0.3s,baz=128,slow=5.4,SNR=162						
GUMO				Sn	**Sn**	**16 07 04.5**	**-0.2**
	620nm,0.3s,baz=351,slow=19,SNR=10						
GUMO	**Guam**	**1.77**	**4**		**Pn**	**16 06 42.8**	**-0.1**
PATS	**Pohnpei**	**14.26**	**109**	Pn	Pn	16 09 31.0	-3.3
KRVT	**Keravat (AS076**	**17.57**	**155**	P	**P**	**16 10 17.9**	**-0.1**
	0.7nm,0.3s,baz=0.0,slow=6.1,SNR=2.0						
	13nm,0.9s						
SIJI	**Sorong**	**18.39**	**228**	P	**P**	**16 10 26.7**	**-0.4**
	0.4nm,0.3s,baz=180,slow=20,SNR=2.2						
SIJI				LR	LR	16 15 16.3	
	comp=Z,172nm,21.5s,baz=62,slow=30						
	3.1nm,0.6s						
SWI	**Sorong**	**18.39**	**228**	P	**Pn**	**16 10 28.1**	**+0.9**
	614nm17nm,1.4s						
DAV	**Davao City (W)**	**19.48**	**258**	LR	LR	16 18 03.1	
	comp=Z,70nm,20.9s,baz=80,slow=37						
TNTI	**Ternate**	**20.44**	**239**	P	Pn	16 10 52.9	+1.1
	19nm,1.2s						
LBMI	**Labuha**	**21.13**	**235**	P	**P**	**16 10 59.4**	**+2.4**
	552nm37nm,1.5s						
PMG	**Port Moresby**	**21.21**	**173**	LR	LR	16 18 30.3	
	comp=Z,442nm,18.3s,baz=336,slow=35						
JOW	**Kunigami**	**21.53**	**316**	P	**P**	**16 11 00.2**	**-1.0**
	12nm,0.5s,baz=110,slow=16,SNR=5.4						
JOW				LR	LR	16 17 43.1	
	comp=Z,169nm,20.4s,baz=120,slow=32						
	12nm,0.5s						
JOW	**Kunigami**	**21.53**	**316**	P	**P**	**16 11 02.0**	**+0.9**
JOW				IAmb	IAmb	16 11 24.3	
	comp=Z,78nm,1.5s						
JHJ	**Hachijo jima 2**	**21.70**	**349**	LR	LR	16 18 53.1	
	comp=Z,416nm,20.3s,baz=124,slow=35						
H11S3	**WAKE ISLAND Hy**	**22.18**	**70**	T	T	16 34 40.3	
	baz=254,slow=74						
H11S1	**WAKE ISLAND Hy**	**22.20**	**70**	T	T	16 34 59.0	
	baz=254,slow=74						
H11S2	**WAKE ISLAND Hy**	**22.20**	**70**	T	T	16 34 34.9	
	baz=254,slow=74						
H11N1	**WAKE ISLAND Hy**	**22.69**	**67**	T	T	16 35 46.0	
	baz=249,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.70**	**67**	T	T	16 36 05.2	
	baz=249,slow=75						
H11N3	**WAKE ISLAND Hy**	**22.71**	**67**	T	T	16 36 04.5	
	baz=249,slow=75						
TGY	**Tagaytay City**	**23.32**	**278**	P	**P**	**16 11 18.0**	**-2.2**
	comp=Z,292nm,0.3s,baz=96,slow=11,SNR=4.3						
GTOI	**Gorontalo**	**24.26**	**244**	P	**P**	**16 11 32.6**	**+3.4**
	comp=Z,8.4nm,0.8s						
INU	**Inuyama**	**24.46**	**345**	P	**P**	**16 11 29.1**	**-1.7**
INU				IAmb	IAmb	16 11 42.1	
	comp=Z,31nm,1.3s						
JYT	**Yasato**	**24.66**	**351**	P	**P**	**16 11 31.9**	**-0.7**
JYT				IAmb	IAmb	16 11 36.3	
	comp=Z,41nm,1.2s						
JNU	**Nakatsue**	**24.73**	**331**	P	**P**	**16 11 31.6**	**-1.7**
	comp=Z,15nm,0.7s,baz=162,slow=8.9,SNR=5.7						
	comp=Z,15nm,0.7s						
JNU	**Nakatsue**	**24.73**	**331**	P	**P**	**16 11 32.5**	**-0.8**
JNU				IAmb	IAmb	16 11 48.9	
	comp=Z,28nm,0.8s						
YULB	**Yu-li**	**25.11**	**300**	P	**P**	**16 11 35.8**	**-1.0**
YULB				IAmb	IAmb	16 11 51.9	
	comp=Z,29nm,1.2s						
MRSI	**Marisa**	**25.28**	**245**	P	**P**	**16 11 37.9**	**-0.6**
	comp=Z,616nmcomp=Z,50nm,1.3s						
LUWI	**Luwuk**	**25.29**	**241**	P	**P**	**16 11 37.0**	**-1.5**
LUWI	**Luwuk**	**25.29**	**241**	P	**P**	**16 11 38.5**	**0.0**
	comp=Z,1μmcomp=Z,139nm,0.9s						
MJAR	**Matsushiro Arr**	**25.32**	**348**	P	**P**	**16 11 36.2**	**-2.4**
	comp=Z,7.2nm,0.7s,baz=170,slow=9.4,SNR=12						
MJAR				LR	LR	16 21 08.6	
	comp=Z,430nm,19.1s,baz=176,slow=36						
	comp=Z,7.2nm,0.7s						
MJAR	**Matsushiro Arr**	**25.32**	**348**	P	**P**	**16 11 37.9**	**-0.8**
MAJO	**Matsushiro**	**25.32**	**348**	P	**P**	**16 11 38.7**	**+0.1**
MJB9	**Matsu-Tunnel**	**25.33**	**348**	P	**P**	**16 11 39.1**	**+0.4**
SSLB	**Suanglung**	**25.55**	**301**	P	**P**	**16 11 39.8**	**-1.1**
TPUB	**Ta-pu**	**25.64**	**300**	P	**P**	**16 11 41.4**	**-0.2**
COEN	**Coen**	**25.64**	**184**	P	**P**	**16 11 41.8**	**+0.1**
COEN				IAmb	IAmb	16 11 53.6	
	comp=Z,26nm,1.2s						
HNR	**Honiara**	**25.95**	**144**	LR	LR	16 20 59.5	
	comp=Z,244nm,21.6s,baz=336,slow=34						
JMM	**Marumori**	**26.19**	**353**	P	**P**	**16 11 46.2**	**-0.2**
JMM				IAmb	IAmb	16 12 09.9	
	comp=Z,49nm,1.2s						
APSI	**Ampana**	**26.20**	**243**	P	**P**	**16 11 48.8**	**+2.0**
	comp=Z,306nmcomp=Z,25nm,0.9s						
MYLDM	**Lahad Datu**	**26.77**	**258**	P	**P**	**16 11 53.8**	**+1.9**
MPSI	**Mapaga**	**27.17**	**247**	P	**P**	**16 11 55.3**	**-0.3**
	comp=Z,8.3nm,0.9s						
KSRS	**Korea Array**	**29.66**	**332**	P	**P**	**16 12 14.9**	**-2.6**
	comp=Z,1.7nm,0.5s,baz=145,slow=9.7,SNR=5.4						
KSRS				PcP	**PcP**	**16 15 22.9**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=144,slow=2.0,SNR=5.6						
KSRS				LR	LR	16 23 25.3	
	comp=Z,143nm,18.0s,baz=115,slow=35						
	comp=Z,1.7nm,0.5s						
BATI	**Baumata**	**30.29**	**225**	LR	LR	16 24 12.3	
	comp=Z,142nm,21.4s,baz=76,slow=36						
NJ2	**Nanjing**	**31.20**	**314**	*e*P	**P**	**16 12 32.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CTA	**Charters Tower**	**31.73**	**177**	LR	LR	16 25 28.4	
	comp=Z,152nm,18.5s,baz=7.0,slow=36						
ASAJ	**Asahikawa**	**32.25**	**357**	LR	LR	16 24 10.5	
	comp=Z,197nm,21.9s,baz=190,slow=34						
WB0	**Warramunga Arr**	**32.99**	**198**	P	**P**	**16 12 46.2**	**-0.7**
WB0				IAmb	IAmb	16 12 47.5	
	comp=Z,29nm,1.2s						
WR0	**Warramunga Arr**	**33.13**	**198**	P	**P**	**16 12 47.6**	**-0.5**
WR0				IAmb	IAmb	16 12 48.7	
	comp=Z,24nm,1.2s						
WB2	**Warramunga Arr**	**33.17**	**198**	P	**P**	**16 12 48.1**	**-0.4**
WRA	**Warramunga Arr**	**33.17**	**198**	P	**P**	**16 12 47.9**	**-0.7**
	comp=Z,12nm,0.8s,baz=22,slow=9.7,SNR=74						
WRA				LR	LR	16 26 24.0	
	comp=Z,221nm,18.6s,baz=165,slow=37						
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**33.17**	**198**	P	**P**	**16 12 46.6**	**-1.9**
WHN	**Wuhan**	**33.76**	**308**	⇓P	**P**	**16 12 56.2**	**+2.6**
WHN				S	S	16 18 21.3	+5.4
WHN				LR	LR		
	comp=N,380nm,3.6s						
WHN				LR	LR		
	comp=E,400nm,3.6s						
WHN				LR	LR		
	comp=Z,790nm,30.0s						
QIZ	**Qiongzhong**	**34.36**	**286**	P	**P**	**16 12 59.2**	**+0.2**
QIZ				S	**S**	**16 18 26.8**	**+1.3**
QIZ				LR	LR		
	comp=N,170nm,13.5s						
QIZ				LR	LR		
	comp=E,170nm,13.5s						
QIZ				LR	LR		
	comp=Z,110nm,14.3s						
FITZ	**Fitzroy Crossi**	**35.20**	**213**	P	**P**	**16 13 05.9**	**-0.2**
FITZ				IAmb	IAmb	16 13 33.4	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**36.82**	**197**	P	**P**	**16 13 19.7**	**-0.3**
ASAR	**Alice Springs**	**36.82**	**197**	P	**P**	**16 13 19.4**	**-0.7**
	comp=Z,5.2nm,0.6s,baz=26,slow=9.6,SNR=114						
ASAR				PcP	**PcP**	**16 15 42.2**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=30,slow=2.7,SNR=2.5						
ASAR				LR	LR	16 29 14.6	
	comp=Z,133nm,20.7s,baz=359,slow=38						
	comp=Z,5.2nm,0.6s						
HNS	**HongShan**	**37.06**	**319**	⇓P	**P**	**16 13 23.3**	**+1.3**
HNS				S	**S**	**16 19 09.4**	**+2.9**
HNS				pmax	pmax		
	comp=Z,17nm,1.0s						
HNS				LR	LR		
	comp=N,260nm,17.6s						
HNS				LR	LR		
	comp=E,250nm,19.4s						
HNS				LR	LR		
	comp=Z,340nm,19.8s						
EIDS	**Eidsvold**	**37.46**	**171**	P	**P**	**16 13 25.1**	**-0.3**
GYA	**Guiyang**	**38.65**	**298**	⇓P	**P**	**16 13 38.2**	**+2.5**
GYA				pmax	pmax		
	comp=Z,16nm,1.3s						
KLR	**Kul'dur**	**38.84**	**346**	LR	LR	16 28 32.7	
	comp=Z,181nm,20.2s,baz=178,slow=35						
XAN	**Xi'an**	**39.42**	**310**	P	**P**	**16 13 41.4**	**-0.6**
XAN				pP	pP	16 13 45.9	-1.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,140nm,5.9s						
XAN				LR	LR		
	comp=N,150nm,15.9s						
XAN				LR	LR		
	comp=E,200nm,16.8s						
XAN				LR	LR		
	comp=Z,210nm,18.1s						
DZM	**Mont Dzumac**	**39.83**	**148**	P	**P**	**16 13 45.7**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=12,slow=14,SNR=3.6						
DZM				LR	LR	16 28 35.1	
	comp=Z,165nm,21.8s,baz=350,slow=34						
	comp=Z,4.1nm,0.9s						
DZM	**Mont Dzumac**	**39.83**	**148**	*e*LR	LR	16 24 44.2	
	comp=Z,565nm,32.9s						
XLT	**XiLinHaoTe**	**40.40**	**328**	*e*P	**P**	**16 13 51.0**	**+1.0**
XLT				pP	pP	16 13 56.3	+0.9
XLT				sP	sP	16 13 58.0	+0.5
XLT				sS	sS	16 20 11.3	+6.9
XLT				SS	**SS**	**16 22 56.7**	**+0.3**
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,67nm,3.7s						
XLT				LR	LR		
	comp=N,15nm,17.7s						
XLT				LR	LR		
	comp=E,180nm,16.8s						
XLT				LR	LR		
	comp=Z,280nm,16.0s						
MBWA	**Marble Bar**	**40.96**	**217**	P	**P**	**16 13 54.0**	**-0.7**
MBWA				IAmb	IAmb	16 14 15.2	
	comp=Z,44nm,1.4s						
HHC	**Hu-ho-hao-te**	**41.05**	**321**	*e*P	**P**	**16 13 57.6**	**+2.1**
HHC				pmax	pmax		
	comp=Z,29nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.5s						
HHC				LR	LR		
	comp=N,470nm,17.1s						
HHC				LR	LR		
	comp=E,400nm,17.8s						
HHC				LR	LR		
	comp=Z,450nm,17.8s						
PSA00	**Pilbara Seismi**	**41.21**	**217**	P	**P**	**16 13 56.0**	**-0.8**
PSA00				IAmb	IAmb	16 13 57.9	
	comp=Z,22nm,0.9s						
KMI	**Kunming**	**41.81**	**294**	⇓P	**P**	**16 14 04.7**	**+2.6**
KMI				pmax	pmax		
	comp=Z,16nm,1.4s						
KMI				LR	LR		
	comp=N,100nm,14.3s						
KMI				LR	LR		
	comp=E,150nm,15.0s						
KMI				LR	LR		
	comp=Z,180nm,21.8s						
BTO	**Baotou**	**41.89**	**319**	*e*P	**P**	**16 14 06.0**	**+3.7**
BTO				S	**S**	**16 20 23.5**	**+4.4**
BTO				LR	LR		
	comp=N,610nm,14.1s						
BTO				LR	LR		
	comp=E,570nm,16.5s						
CD2	**Chengdu**	**42.34**	**303**	P	**P**	**16 14 07.7**	**+1.6**
CD2				S	**S**	**16 20 28.0**	**+2.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,100nm,5.5s						
CD2				LR	LR		
	comp=N,10.0nm,13.3s						
CD2				LR	LR		
	comp=E,120nm,9.0s						
CD2				LR	LR		
	comp=Z,160nm,12.7s						
PETK	**Petropavlovsk-**	**42.48**	**12**	P	**P**	**16 14 05.9**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=171,slow=9.9,SNR=5.0						
PETK				PcP	**PcP**	**16 15 59.9**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=224,slow=4.0,SNR=3.9						
PETK				LR	LR	16 30 57.0	
	comp=Z,89nm,19.2s,baz=188,slow=35						
	comp=Z,1.5nm,0.9s						
PETK	**Petropavlovsk-**	**42.48**	**12**	P	**P**	**16 14 08.8**	**+2.0**
ARMA	**Armidale**	**42.50**	**171**	P	**P**	**16 14 07.2**	**-0.1**
PET	**Petropavlovsk**	**42.60**	**12**	P	**P**	**16 14 06.3**	**-1.4**
PZH	**PanZhiHua**	**42.96**	**296**	P	**P**	**16 14 12.0**	**+0.7**
PZH				pmax	pmax		

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      comp=Z,10.0nm,1.3s
PZH                                pmax   pmax
      comp=Z,90nm,5.1s
STKA  Stephens Creek    43.54 184  P      P      16 14 15.1 -0.5
      comp=Z,4.6nm,0.9s,baz=12,slow=2.7,SNR=5.2
STKA                               PcP    PcP    16 16 03.4 +0.2
      comp=Z,1.8nm,0.9s,baz=286,slow=22,SNR=2.8
STKA                               LR     LR     16 32 54.5
      comp=Z,228nm,18.3s,baz=17,slow=37
      comp=Z,4.6nm,0.9s
STKA  Stephens Creek    43.54 184  P      P      16 14 14.1 -1.5
LZH   Lanzhou           44.06 310  eP     P      16 14 22.2 +2.2
LZH                                pP     pP     16 14 28.2 +2.9
LZH                                pmax   pmax
      comp=Z,18nm,1.5s
MSVF  Nonsavu           44.08 131  P      P      16 14 21.3 +1.0
      comp=Z,8.2nm,0.8s,baz=335,slow=16,SNR=5.5
MSVF                               LR     LR     16 30 13.3
      comp=Z,155nm,21.6s,baz=322,slow=33
      comp=Z,8.2nm,0.8s
MSVF  Nonsavu           44.08 131  P      P      16 14 21.2 +0.9
MSVF                               IAmb   IAmb   16 14 26.7
      comp=Z,16nm,1.0s
SRIT  Nakonsritamara    44.51 270  P      P      16 14 25.7 +1.9
CM31  Chiang Mai Arr    44.62 284  P      P      16 14 24.9 +0.4
CM31                               IAmb   IAmb   16 14 30.2
      comp=Z,30nm,1.2s
CMAR  Chiang Mai Arr    44.62 284  P      P      16 14 25.6 +1.1
      comp=Z,0.8nm,0.3s,baz=80,slow=7.2,SNR=8.3
CMAR                               LR     LR     16 30 43.9
      comp=Z,47nm,21.9s,baz=100,slow=33
CHTO  Chiang Mai        44.63 285  P      P      16 14 24.3 -0.4
BBOO  Buckleboo         45.14 190  P      P      16 14 28.3 -0.1
FORT  Forrest           45.28 200  P      P      16 14 29.7 +0.2
PSI   Prapat            46.26 263  LR     LR     16 39 55.3
      comp=Z,26nm,18.4s,baz=94,slow=44
SHEM  Shemya Is, Ala    47.12  24  LR     LR     16 31 53.5
      comp=Z,89nm,21.8s,baz=249,slow=33
ULN   Ulaanbaatar       47.78 326  P      P      16 14 49.0 -0.2
MA2   Magadan           47.89   4  P      P      16 14 49.5 -0.2
      comp=Z,3.7nm,0.7s,baz=189,slow=9.3,SNR=5.9
MA2                                LR     LR     16 34 53.5
      comp=Z,63nm,20.1s,baz=174,slow=36
      comp=Z,3.7nm,0.7s
MA2   Magadan           47.89   4  P      P      16 14 49.4 -0.2
MA2                                IAmb   IAmb   16 15 00.4
      comp=Z,17nm,1.4s
GSI   Gunungsitoli      47.93 261  P      P      16 14 49.1 -1.6
GSI                                IAmb   IAmb   16 14 51.7
      comp=Z,13nm,0.9s
SONM  Songino Array     48.12 326  P      P      16 14 51.0 -0.8
      comp=Z,1.6nm,0.7s,baz=146,slow=8.6,SNR=12
SONM                               PcP    PcP    16 16 19.2 +0.1
      comp=Z,1.0nm,0.6s,baz=155,slow=3.2,SNR=2.0
SONM                               LR     LR     16 36 14.4
      comp=Z,223nm,18.6s,baz=127,slow=38
      comp=Z,1.6nm,0.7s
SONM  Songino Array     48.12 326  P      P      16 14 51.6 -0.2
GTA   Gaotai            48.28 313  eP     P      16 14 53.4 +0.2
GTA                                pP     pP     16 14 57.3 -1.2
GTA                                sP     sP     16 15 00.0 -0.6
GTA                                pmax   pmax
      comp=Z,7.0nm,0.6s
TOO   Toolangi          49.12 179  P      P      16 14 58.9 -0.5
MORW  Morawa            49.19 214  P      P      16 14 59.6 -0.5
ADK   Adak              50.65  30  P      P      16 15 09.6 -1.3
GOMU  GeErMu            51.00 307  P      P      16 15 16.2 +1.9
GOMU                               pP     pP     16 15 20.6 +1.0
GOMU                               sP     sP     16 15 22.5 +0.9
GOMU                               PcP    PcP    16 16 31.3 +1.1
GOMU                               PP     PP     16 17 08.8 -2.1
GOMU                               S      S      16 22 29.7 -0.7
GOMU                               sS     sS     16 22 40.9 +2.3
GOMU                               SS     ScS    16 25 01.4 -2.6
GOMU                               pmax   pmax
      comp=Z,4.0nm,0.9s
GOMU                               pmax   pmax
      comp=Z,70nm,4.7s
GOMU                               LR     LR
      comp=N,75nm,14.2s
GOMU                               LR     LR
      comp=E,110nm,14.7s
GOMU                               LR     LR
      comp=Z,96nm,17.2s
YAK   Yakutsk           51.32 351  LR     LR     16 36 47.4
      comp=Z,165nm,19.0s,baz=96,slow=36
YAK   Yakutsk           51.32 351  P      P      16 15 14.3 -1.4
NWAO  Narrogin (SRO)    51.66 210  P      P      16 15 17.2 -1.5
NWAO                               IAmb   IAmb   16 15 17.3
      comp=Z,33nm,1.4s
RAO   Raoul Island      54.44 139  LR     LR     16 35 37.6
      comp=Z,172nm,19.6s,baz=313,slow=32
ODAN  Odare             55.73 294  eP     P      16 15 49.7 +0.7
RAMN  Ramite            56.44 295  eP     P      16 15 54.4 +0.3
      comp=Z,8.4nm,0.5s
JIRN  Jiri              56.85 295  eP     P      16 15 58.3 +1.2
UNV   Unalaska Valle    56.88  32  P      P      16 15 57.0 +0.5
UNV   Unalaska Valle    56.88  32  P      P      16 15 57.3 +0.8
      baz=241
PKI   Pulchoki          57.53 295  eP     P      16 16 02.1 +0.2
      comp=Z,11nm,0.6s
KKN   Kakani            57.66 295  eP     P      16 16 03.4 +0.7
      comp=Z,18nm,0.8s
DMN   Daman             57.80 295  eP     P      16 16 03.6 -0.2
      comp=Z,32nm,1.0s
BILL  Bilibino          57.93   9  P      P      16 16 04.2 +0.6
GKN   Gorkha            58.24 296  eP     P      16 16 06.9 +0.2
URZ   Urewera           58.28 150  LR     LR     16 39 34.5
      comp=Z,157nm,19.3s,baz=31,slow=34
WMQ   Urumqi            58.28 314  eP     P      16 16 08.1 +1.5
WMQ                                pmax   pmax
      comp=Z,23nm,1.1s
DANN  Dangsing          59.03 296  eP     P      16 16 12.3 -0.1
      comp=Z,25nm,0.5s
KOLN  Koldanda          59.15 295  eP     P      16 16 13.2 +0.1
      comp=Z,26nm,0.9s
PYUN  Piuthan           59.70 296  eP     P      16 16 16.8 -0.1
      comp=Z,30nm,0.8s
RPZ   Rata Peaks        60.23 158  LR     LR     16 39 41.4
      comp=Z,262nm,20.8s,baz=278,slow=33
TIXI  Tiksi             60.59 354  LR     LR     16 47 36.2
      comp=Z,12nm,18.1s,baz=181,slow=41
TIXI  Tiksi             60.59 354  P      P      16 16 20.8 -1.0
MK31  Makanchi Array    62.69 317  P      P      16 16 36.8 +0.1
MK31                               IAmb   IAmb   16 16 39.3
      comp=Z,7.9nm,1.1s
MKAR  Makanchi Array    62.69 317  P      P      16 16 37.0 +0.4
      comp=Z,5.8nm,0.8s,baz=89,slow=8.3,SNR=39
MKAR                               LR     LR     16 44 43.7
      comp=Z,56nm,19.8s,baz=102,slow=37
      comp=Z,5.8nm,0.8s
MKAR  Makanchi Array    62.69 317  P      P      16 16 37.2 +0.6
MAKZ  Makanchi          62.91 317  P      P      16 16 38.8 +0.7
MAKZ                               IAmb   IAmb   16 16 40.8
      comp=Z,11nm,0.9s
ZAA0  Zalesovo Array    63.00 325  P      P      16 16 38.0 -0.5
ZALV  Zalesovo Beam     63.00 325  P      P      16 16 37.5 -1.0
      comp=Z,2.2nm,0.5s,baz=106,slow=7.0,SNR=14
ZALV                               LR     LR     16 45 06.0
      comp=Z,112nm,18.7s,baz=124,slow=37
      comp=Z,2.2nm,0.5s
ZALV  Zalesovo Beam     63.00 325  P      P      16 16 37.7 -0.8
CHIR  Chirikof Islan    63.44  33  P      P      16 16 42.7 +1.4
      baz=251
PRZ   Przheval'sk       64.70 311  P      P      16 16 51.4 +1.2
N18K  Kilae Creek       65.00  28  P      P      16 16 52.8 +1.2
      baz=248
KDJ   Kajisay           65.56 311  P      P      16 16 56.8 +1.0
KDJ                                IAmb   IAmb   16 17 01.8
      comp=Z,12nm,0.9s
KDAK  Kodiak Island     65.64  31  P      P      16 16 56.5 +0.9
      comp=Z,5.3nm,0.8s,baz=169,slow=5.2,SNR=1.5
      comp=Z,5.3nm,0.8s
KDAK  Kodiak Island     65.64  31  P      P      16 16 57.4 +1.8
      baz=253
N19K  Bonanza Creek     65.69  28  P      P      16 16 57.2 +1.1
N19K  Bonanza Creek     65.69  28  P      P      16 16 57.9 +1.8
      baz=250
TTA   Tatalina          65.80  26  P      P      16 16 57.4 +0.6
TTA                                IAmb   IAmb   16 16 59.1
      comp=Z,6.0nm,0.9s
TTA   Tatalina          65.80  26  P      P      16 16 57.8 +1.1
      baz=247
KURK  Kurchatov         65.87 320  P      P      16 16 56.9 -0.4
KURBB Kurchatov Arra    65.91 320  LR     LR     16 47 17.7
      comp=Z,142nm,18.2s,baz=77,slow=38
L19K  White Mountain    66.02  27  P      P      16 16 59.1 +1.0
L19K  White Mountain    66.02  27  P      P      16 16 59.6 +1.5
      baz=249
M19K  Big River Lodg    66.12  27  IAmb   IAmb   16 17 02.1
      comp=Z,9.1nm,1.0s
M19K  Big River Lodg    66.12  27  P      P      16 17 00.3 +1.6
      baz=249
KSH   Kashi             66.23 308  P      P      16 17 04.3 +4.2
KSH                                pmax   pmax
      comp=Z,5.0nm,1.3s
L20K  Farewell, AK      66.55  26  P      P      16 17 02.6 +1.1
      baz=250
K20K  Telida            66.78  25  P      P      16 17 04.7 +1.8
      baz=249
J20K  Nowinta River     67.05  25  P      P      16 17 06.0 +1.4
      baz=248,SNR=13
BRSE  Bradley Lake S    67.13  30  P      P      16 17 06.0 +0.8
      baz=254
PPLA  Purkeypile        67.42  26  P      P      16 17 07.9 +0.7
      baz=251
AAK   Ala-Archa         67.59 311  LR     LR     16 49 46.7
      comp=Z,58nm,18.6s,baz=93,slow=39
AAK   Ala-Archa         67.59 311  P      P      16 17 08.1 -0.5
CAST  Castle Rocks      67.64  26  P      P      16 17 09.1 +0.7
      baz=251,SNR=21
CHUM  Lake Minchumin    67.70  25  P      P      16 17 08.7  0.0
      baz=250
NRIK  Noril'sk          67.77 341  P      P      16 17 07.9 -1.2
      comp=Z,1.5nm,0.4s,baz=94,slow=3.9,SNR=6.5
NRIK                               LR     LR     16 47 59.8
      comp=Z,57nm,18.2s,baz=122,slow=37
      comp=Z,1.5nm,0.4s
NRIK  Noril'sk          67.77 341  P      P      16 17 08.3 -0.8
NRIK                               IAmb   IAmb   16 17 25.6
      comp=Z,8.2nm,1.1s
SEW   Seward            67.85  30  P      P      16 17 09.9 +0.2
      baz=255
IMAR  Indian Mountai    67.87  23  P      P      16 17 10.4 +0.6
RC01  Rabbit Creek A    67.98  28  P      P      16 17 10.9 +0.3
      baz=254
M22K  Willow            67.99  28  P      P      16 17 10.5 -0.1
      baz=253
H21K  Melozitna Rive    68.11  23  IAmb   IAmb   16 17 14.5
      comp=Z,16nm,1.4s
H21K  Melozitna Rive    68.11  23  P      P      16 17 12.3 +0.9
      baz=249,SNR=8.6
NIL   Nilore            68.20 302  P      P      16 17 12.4 -0.2
I21K  Tanana            68.27  24  IAmb   IAmb   16 17 15.1
      comp=Z,11nm,1.0s
I21K  Tanana            68.27  24  P      P      16 17 13.4 +1.1
      baz=250,SNR=11
BPAW  Bear Paw Mtn.     68.32  25  IAmb   IAmb   16 17 14.8
      comp=Z,12nm,1.0s
BPAW  Bear Paw Mtn.     68.32  25  P      P      16 17 13.4 +0.7
      baz=252,SNR=12
PMR   Palmer            68.40  28  P      P      16 17 13.8 +0.6
      baz=254
TRF   Thorofare Moun    68.42  26  IAmb   IAmb   16 17 15.5
      comp=Z,13nm,1.1s
TRF   Thorofare Moun    68.42  26  P      P      16 17 14.0 +0.5
      baz=252,SNR=6.1
GHO   Glory Hole Cre    68.55  28  P      P      16 17 14.6 +0.4
GHO                                IAmb   IAmb   16 17 17.8
      comp=Z,8.7nm,0.8s
KNK   Knik Glacier      68.67  28  P      P      16 17 15.7 +0.8
      baz=255
SML   Sawmill           68.83  28  P      P      16 17 16.3 +0.3
      baz=255,SNR=7.7
WAT1  Susitna Watana    69.00  27  P      P      16 17 17.2 +0.2
      baz=254
RND   Reindeer          69.02  26  IAmb   IAmb   16 17 19.6
      comp=Z,6.5nm,0.9s
MCK   McKinley          69.08  26  P      P      16 17 18.6 +1.2
      baz=254
M23K  Glacier View      69.10  28  P      P      16 17 18.8 +1.2
      baz=256
GLI   Glacier Island    69.17  29  P      P      16 17 18.9 +0.9
GLI                                IAmb   IAmb   16 17 22.2
      comp=Z,8.1nm,1.0s
GLI   Glacier Island    69.17  29  P      P      16 17 19.5 +1.5
      baz=256
NEA2  Nenana            69.27  25  P      P      16 17 18.9 +0.3
      baz=253
SCM   Sheep Creek Mo    69.29  28  P      P      16 17 20.3 +1.5
      baz=256
WAT6  Susitna Watana    69.29  27  P      P      16 17 18.9 -0.1
      baz=255,SNR=8.0
I23K  Minto, Yukon-K    69.31  24  IAmb   IAmb   16 17 21.2
      comp=Z,15nm,1.1s
I23K  Minto, Yukon-K    69.31  24  P      P      16 17 19.5 +0.7
      baz=253,SNR=12
H23K  Yukon River       69.44  24  IAmb   IAmb   16 17 22.2
      comp=Z,7.0nm,0.8s
H23K  Yukon River       69.44  24  P      P      16 17 20.5 +0.9
      baz=252,SNR=9.8
DHY   Denali Highway    69.58  27  P      P      16 17 21.8 +1.1
      baz=255
COLD  Coldfoot          69.63  22  IAmb   IAmb   16 17 24.1
      comp=Z,13nm,1.0s
COLD  Coldfoot          69.63  22  P      P      16 17 21.6 +0.9
      baz=251,SNR=16
WRH   Wood River Hil    69.64  25  IAmb   IAmb   16 17 22.7
      comp=Z,14nm,1.1s
MDM   Murphy Dome       69.72  25  IAmb   IAmb   16 17 24.2
      comp=Z,7.0nm,0.8s
CCB   Clear Creek Bu    69.81  25  IAmb   IAmb   16 17 23.6
      comp=Z,10nm,1.1s
DIV   Divide            69.86  29  IAmb   IAmb   16 17 25.5
      comp=Z,8.6nm,1.0s
KLU   Klutina           69.87  29  P      P      16 17 23.2 +0.8
      baz=257
M24K  Tolsona, Glenn    69.89  28  P      P      16 17 24.4 +1.9
M24K  Tolsona, Glenn    69.89  28  P      P      16 17 23.9 +1.4
      baz=257
POKR  Poker Plat Res    70.08  25  P      P      16 17 25.1 +1.5
      baz=255
H24K  Noodor Dome       70.10  24  IAmb   IAmb   16 17 26.3
      comp=Z,11nm,0.9s
H24K  Noodor Dome       70.10  24  P      P      16 17 23.9 +0.2
      baz=254,SNR=16
HDA   Harding Lake      70.10  25  IAmb   IAmb   16 17 25.1
      comp=Z,7.9nm,0.9s
HDA   Harding Lake      70.10  25  P      P      16 17 23.4 -0.3
      baz=255,SNR=9.1
IL31                    70.22  25  IAmb   IAmb   16 17 25.1
      comp=Z,8.3nm,0.9s
ILAR  Eielson Array     70.22  25  P      P      16 17 23.6 -0.8
      comp=Z,6.0nm,0.8s,baz=250,slow=6.0,SNR=60
ILAR                               LR     LR     16 45 38.4
      comp=Z,74nm,21.4s,baz=296,slow=34
      comp=Z,6.0nm,0.8s
ILAR  Eielson Array     70.22  25  P      P      16 17 23.2 -1.2
BTK   Batken            70.22 308  IAmb   IAmb   16 17 45.2
      comp=Z,11nm,1.2s
KAIM  Kayak Island      70.27  30  P      P      16 17 25.1 +0.3
      baz=259
TOLK  Toolik Lake Re    70.31  21  P      P      16 17 26.0 +1.0
TOLK                               IAmb   IAmb   16 17 27.8
      comp=Z,7.9nm,0.9s
TOLK  Toolik Lake Re    70.31  21  P      P      16 17 25.4 +0.5
      baz=251,SNR=9.1
BMRM  Bremner River     70.38  29  P      P      16 17 26.6 +1.1
BMRM                               IAmb   IAmb   16 17 39.2
      comp=Z,10nm,1.0s
BMRM  Bremner River     70.38  29  P      P      16 17 27.0 +1.5
      baz=259
PAX   Paxson            70.40  27  IAmb   IAmb   16 17 27.7
      comp=Z,7.0nm,0.9s
PAX   Paxson            70.40  27  P      P      16 17 26.6 +0.9
      baz=257
HARP  HAARP             70.42  28  P      P      16 17 26.6 +1.0
      baz=258
K24K  Donnelly Dome     70.45  26  P      P      16 17 26.7 +0.8
      baz=257
N25K  Chitina, Valde    70.51  29  P      P      16 17 27.4 +1.0
      baz=258
KK31  Karatay Array     70.54 312  IAmb   IAmb   16 17 28.6
      comp=Z,9.9nm,0.9s
KKAR  Karatay Array     70.54 312  IAmb   IAmb   16 17 28.6
      comp=Z,9.9nm,0.9s
GAR   Garm              70.60 307  P      P      16 17 26.8 -0.6
J25K  Salcha River,     70.81  25  P      P      16 17 28.3 +0.1
      baz=257,SNR=6.9
RIDG  Independent Ri    70.84  26  IAmb   IAmb   16 17 30.9
      comp=Z,14nm,1.1s
RIDG  Independent Ri    70.84  26  P      P      16 17 29.0 +0.7
      baz=258,SNR=6.9
PPT   Papeete           71.11 113  LR     LR     16 44 16.3
      comp=Z,72nm,18.3s,baz=312,slow=32
PPT2  Papeete2          71.12 113  eLR    LR     16 38 46.0
      comp=Z,161nm,28.5s
DOT   Dot Lake          71.17  27  P      P      16 17 31.8 +1.6
DOT                                IAmb   IAmb   16 17 32.2
      comp=Z,8.4nm,0.8s
SCRK  Sand Creek        71.27  26  P      P      16 17 30.7 -0.3
      baz=258,SNR=7.5
BRVK  Borovoye          71.31 322  P      P      16 17 31.5 +0.2
L26K  Log Cabin Wild    71.36  27  P      P      16 17 33.2 +1.8
      baz=259
J26L  Joseph Creek      71.55  26  P      P      16 17 32.6 -0.1
      baz=258,SNR=16
KBL   Kabul             71.68 303  P      P      16 17 34.2 +0.1
KBL                                IAmb   IAmb   16 17 37.9
      comp=Z,14nm,1.2s
L27K  Beaver Creek,     72.05  27  P      P      16 17 36.4 +0.8
      baz=260
K27K  Chicken           72.10  26  P      P      16 17 37.2 +1.4
      baz=260
YUK3  Moose Creek       72.48  29  P      P      16 17 39.7 +1.3
      baz=262
EGAK  Eagle             72.62  26  IAmb   IAmb   16 17 42.0
      comp=Z,9.6nm,1.0s
EGAK  Eagle             72.62  26  P      P      16 17 40.6 +1.8
      baz=261
TBI   Tubuai            73.21 119  eLR    LR     16 39 42.3
      comp=Z,142nm,31.8s
DAWY  Dawson            73.28  26  IAmb   IAmb   16 17 45.6
      comp=Z,19nm,1.5s
DAWY  Dawson            73.28  26  P      P      16 17 44.2 +1.3
      baz=262
HYT   Haines Junctio    73.80  30  P      P      16 17 47.5 +1.4
      baz=265
I29M  Ogilvie Camp,     73.90  25  P      P      16 17 48.0 +1.6
      baz=263
N30M  Aishikik Lake     74.05  29  P      P      16 17 48.1 +0.6
      baz=265
M30M  Minto, Yukon      74.28  28  P      P      16 17 49.9 +1.1
      baz=265
EPYK  Eagle Plains      74.66  24  IAmb   IAmb   16 17 54.2
      comp=Z,28nm,1.5s
EPYK  Eagle Plains      74.66  24  P      P      16 17 52.6 +1.7
      baz=264
N31M  Braeburn, Yuko    74.68  29  P      P      16 17 52.8 +1.7
      baz=266
WHY   Whitehorse        75.07  30  P      P      16 17 55.0 +1.5
      baz=268
M31M  Drury Creek, Y    75.38  29  P      P      16 17 55.8 +0.7
      baz=268
INK   Inuvik            76.05  22  P      P      16 17 59.0 +0.3
      comp=Z,9.2nm,1.1s,baz=267,slow=6.4,SNR=15
INK                                LR     LR     16 49 32.7
      comp=Z,13nm,21.0s,baz=184,slow=34
      comp=Z,9.2nm,1.1s
INK   Inuvik            76.05  22  P      P      16 17 59.0 +0.3
INK                                IAmb   IAmb   16 18 01.4
      comp=Z,13nm,1.1s
INK   Inuvik            76.05  22  P      P      16 17 59.4 +0.6
      baz=267
HRA   Herat             77.30 303  P      P      16 18 06.7 -0.1
HRA                                IAmb   IAmb   16 18 08.7
      comp=Z,10nm,0.9s
DLBC  Dease Lake        77.54  32  LR     LR     16 53 33.2
      comp=Z,36nm,18.2s,baz=248,slow=37
ABKAR Akbulak array     77.78 318  P      P      16 18 08.3 -0.6
ABKAR                              IAmb   IAmb   16 18 10.2
      comp=Z,11nm,0.8s
ARU   Arti              78.16 326  P      P      16 18 10.4 -0.5
      comp=Z,1.7nm,0.4s,baz=68,slow=3.6,SNR=3.8
ARU                                LR     LR     16 55 15.9
      comp=Z,74nm,18.1s,baz=94,slow=38
      comp=Z,1.7nm,0.4s
ARU   Arti              78.16 326  P      P      16 18 10.7 -0.2
ARU                                IAmb   IAmb   16 18 12.3
      comp=Z,16nm,1.1s
AKTO  Aktyubinsk        78.93 319  P      P      16 18 14.3 -1.0
      comp=Z,3.9nm,0.5s,baz=88,slow=10,SNR=6.8
AKTO                               LR     LR     16 56 02.1
      comp=Z,35nm,18.6s,baz=80,slow=38
      comp=Z,3.9nm,0.5s
BBB   Bella Bella       79.03  39  LR     LR     16 48 42.3
      comp=Z,57nm,19.4s,baz=266,slow=32
C36M  Paulatuk          79.46  21  P      P      16 18 18.5 +0.8
      baz=275
GEYT  Alibeck           80.22 307  P      P      16 18 20.8 -1.8
      comp=Z,6.6nm,0.9s,baz=72,slow=9.3,SNR=7.2
GEYT                               LR     LR     16 56 11.1
      comp=Z,46nm,20.0s,baz=121,slow=38
      comp=Z,6.6nm,0.9s
GEYT  Alibeck           80.22 307  P      P      16 18 23.5 +0.9
GYA0B ALIBECK ARRAY     80.22 307  IAmb   IAmb   16 18 24.8
      comp=Z,15nm,1.1s
WSAR  Wadi Sarin        81.91 292  LR     LR     16 56 58.3
      comp=Z,16nm,20.4s,baz=120,slow=37
H04D  Lebanon           83.61  46  P      P      16 18 40.1 -0.1
      baz=280
YBH   Yreka Blue Hor    84.13  49  LR     LR     16 50 58.3
      comp=Z,39nm,19.7s,baz=280,slow=32
YKA   Yellowknife Ar    84.49  27  P      P      16 18 44.0 -0.3
      comp=Z,2.1nm,0.7s,baz=287,slow=5.3,SNR=30
YKA                                LR     LR     16 54 48.4
      comp=Z,68nm,20.4s,baz=316,slow=34
      comp=Z,2.1nm,0.7s
YKA   Yellowknife Ar    84.49  27  P      P      16 18 44.5 +0.2
J05D  Fort Rock, OR     84.90  47  P      P      16 18 48.2 +1.1
      baz=281
PINE  Pine Mountain     85.01  46  P      P      16 18 49.0 +1.4
PINE                               IAmb   IAmb   16 18 51.4
      comp=Z,9.8nm,1.1s
BELG  Belogornoye       85.05 322  LR     LR     16 58 01.2
      comp=Z,96nm,19.7s,baz=113,slow=37
SPITS Spitsbergen Ar    85.78 351  LR     LR     16 58 48.8
      comp=Z,60nm,18.9s,baz=244,slow=37
G08A  Pilot Rock        86.08  45  P      P      16 18 53.0 +0.2
RES   Resolute Bay      86.30  13  LR     LR     16 56 24.3
      comp=Z,20nm,22.0s,baz=34,slow=35
RES   Resolute Bay      86.30  13  IAmb   IAmb   16 18 55.4
      comp=Z,8.8nm,1.0s
NEW   Newport           86.63  42  P      P      16 18 56.8 +1.5
      baz=284
KLMR  Klimovskoe        87.06 332  eP     P      16 18 56.2 -0.9
KLMR                               AMP           16 18 58.2
      comp=Z,12nm,1.2s
BMO   Blue Mountains    87.33  45  P      P      16 18 59.0 +0.1
BMO                                IAmb   IAmb   16 19 01.6
      comp=Z,7.2nm,1.1s
PKM   Mcpherson Peak    87.74  55  P      P      16 19 02.8 +1.6
      baz=283
OMMB  Old Mammoth Mi    87.77  52  IAmb   IAmb   16 19 04.6
      comp=Z,7.4nm,1.4s
NVAR  Mina Array Bea    88.12  51  P      P      16 19 03.5 +0.5
      comp=Z,1.8nm,0.6s,baz=266,slow=5.5,SNR=17
      comp=Z,1.8nm,0.6s
KVN   Kaiserville       88.13  51  P      P      16 19 03.6 +0.6
KVN                                IAmb   IAmb   16 19 06.1
      comp=Z,6.3nm,1.2s
PLID  Pearl Lake        88.17  44  P      P      16 19 03.2 +0.2
BMN   Battle Mountai    88.46  49  P      P      16 19 04.3 -0.1
BMN                                IAmb   IAmb   16 19 07.6
      comp=Z,8.6nm,1.2s
ISA   Isabella, Lake    88.63  54  P      P      16 19 06.9 +1.6
      baz=284
MFID  Camas Ranch       88.72  46  IAmb   IAmb   16 19 08.6
      comp=Z,9.5nm,0.9s
ARCES ARCESS Array B    88.73 342  P      P      16 19 03.9 -1.0
      comp=Z,3.3nm,0.7s,baz=73,slow=5.4,SNR=12
ARCES                              LR     LR     17 01 20.6
      comp=Z,57nm,21.4s,baz=96,slow=37
      comp=Z,3.3nm,0.7s
CWC   Cottonwood Cre    88.76  53  P      P      16 19 08.5 +2.6
      baz=284
EDW2  Edwards Air Fo    89.19  55  P      P      16 19 10.5 +2.5
      baz=284
LRMC  Laurel Mtn Rad    89.30  54  P      P      16 19 11.2 +2.7
      baz=284
MPMC  Manual Prospec    89.31  53  P      P      16 19 11.5 +2.8
      baz=284
HLID  Hailey            89.67  46  P      P      16 19 12.2 +2.0
      baz=286
FURC  Furnace Creek,    89.70  53  P      P      16 19 13.0 +2.8
      baz=284
VNDA  Vanda             89.71 176  LR     LR     16 55 38.8
      comp=Z,49nm,21.0s,baz=344,slow=33
ELK   Elko              89.84  48  LR     LR     16 54 24.4
      comp=Z,63nm,20.1s,baz=267,slow=32
ELK   Elko              89.84  48  IAmb   IAmb   16 19 14.8
      comp=Z,9.7nm,1.1s
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GWY	Greenwater Val	89.92	53	P	P	16 19 12.2	+0.7
GNI	Garni	89.99	311	LR	LR	17 03 41.6	
	comp=Z,27nm,19.7s,baz=76,slow=38						
GSC	Goldstone, Bar	90.04	54	P	P	16 19 14.6	+2.7
	baz=284						
TPNV	Topopah Spring	90.06	52	P	P	16 19 14.7	+2.6
	baz=285						
R11A	Troy Canyon, C	90.21	51	P	P	16 19 14.6	+1.8
	baz=285						
KBZ	Khabaz	90.33	315	LR	LR	17 02 41.6	
	comp=Z,44nm,20.8s,baz=60,slow=38						
KVAR	Kislovodsk Arr	90.40	315	LR	LR	17 03 26.3	
	comp=Z,48nm,18.9s,baz=271,slow=38						
TUQ	Turquoise Moun	90.70	54	P	P	16 19 17.6	+2.5
	baz=285						
PFO	Pinyon Flats O	90.74	56	LR	LR	17 01 22.2	
	comp=Z,35nm,18.6s,baz=316,slow=36						
PFO	Pinyon Flats O	90.74	56	P	P	16 19 17.1	+1.9
	baz=285						
TPFO	Pinon Flats	90.74	56	P	P	16 19 17.2	+2.0
	baz=285						
MONP2	Monument Peak	90.95	56	P	P	16 19 17.2	+0.8
	baz=285						
BOZ	Bozeman (W)	90.98	43	P	P	16 19 17.9	+1.7
	baz=288						
BELC	Belle Mtn. Jos	91.01	55	P	P	16 19 18.7	+2.2
	baz=285						
GMRC	Granite Mounta	91.08	54	P	P	16 19 18.8	+2.0
	baz=285						
IKP	In-Ko-Pah, Jac	91.26	56	P	P	16 19 19.7	+2.0
	baz=285						
EGMT	Eagleton	91.43	40	P	P	16 19 20.2	+2.1
	baz=289						
YHL	Hebgen Lake	91.51	44	P	P	16 19 19.6	+0.8
YHL				IAmb	IAmb	16 19 23.1	
	comp=Z,10nm,1.3s						
BC3	Big Chuckawall	91.54	55	P	P	16 19 21.1	+2.2
	baz=285						
IRM	Iron Mountain	91.65	55	P	P	16 19 21.6	+2.2
	baz=285						
DUG	Dugway, Tooele	91.77	48	P	P	16 19 21.9	+2.0
	baz=287						
PDMCI	Parker Dam,Lak	92.41	54	P	P	16 19 25.3	+2.5
	baz=286						
FINES	FINESS Array B	92.72	335	P	P	16 19 22.2	-1.4
	comp=Z,6.5nm,0.6s,baz=66,slow=4.9,SNR=32						
FINES				LR	LR	17 02 55.4	
	comp=Z,68nm,20.4s,baz=42,slow=37						
	comp=Z,6.5nm,0.6s						
PDAR	Pinedale Array	93.30	45	P	P	16 19 27.1	0.0
	comp=Z,0.3nm,0.6s,baz=280,slow=10.0,SNR=2.8						
PDAR				LR	LR	16 56 31.8	
	comp=Z,29nm,19.4s,baz=298,slow=32						
	comp=Z,0.3nm,0.6s						
WUAZ	Wupatki	94.24	53	P	P	16 19 33.5	+2.1
	baz=288						
RWWY	Rawlins	95.30	46	P	P	16 19 34.8	-1.5
MNK	Minsk	95.33	328	*i* P	P	16 19 31.0	-4.8
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	16 19 31.0	-4.8
	comp=N,9.0nm,0.8s						
MNK				*i* P	P	16 19 31.0	-4.8
	comp=Z,7.0nm,0.7s,baz=61						
MNK				*i* PP	PP	16 23 19.5	-6.2
MNK				*i* PPP	PPP	16 25 37.4	
MNK				*i* SKS		16 29 05.0	
MNK				*i* S	SKSac	16 30 03.9	-6.2
MNK				*i* PS	PS	16 31 52.4	-18
MNK				*i* SS	SS	16 37 01.6	-15
MNK				*i* SSS	SSS	16 41 05.6	
MNK				*i* LQ	LQ	16 56 37.2	
MNK				*i* LR	LR	17 00 06.6	
MNK				*i* LRM	MLR	17 03 11.9	
	comp=Z,115nm,20.4s						
MNK				*i* LRM	MLR	17 03 18.7	
	comp=E,13nm,19.2s						
MNK				*i* LRM	MLR	17 03 18.7	
	comp=N,71nm,21.7s						
AKASG	Malin Array Be	96.40	325	LR	LR	17 07 17.0	
	comp=N,45nm,18.2s,baz=30,slow=38						
S22A	4UR Ranch, Cre	96.97	49	P	P	16 19 46.0	+2.0
	baz=291						
MAW	Mawson	97.75	203	LR	LR	16 57 34.3	
	comp=N,56nm,20.1s,baz=82,slow=32						
BRTR	Keskin Array B	98.20	313	LR	LR	17 11 14.3	
	comp=N,28nm,18.1s,baz=60,slow=40						
HFS	Hagfors	98.39	338	LR	LR	17 06 19.9	
	comp=N,52nm,22.0s,baz=37,slow=37						
NOA	NORSAR Array B	98.66	339	P	P	16 19 49.8	-0.9
	comp=N,0.6nm,0.6s,baz=49,slow=4.8,SNR=3.5						
NOA				LR	LR	17 07 07.4	
	comp=N,23nm,21.0s,baz=50,slow=37						
	comp=N,0.6nm,0.6s						
MMAI	Mount Meron Ar	99.34	307	LR	LR	17 08 53.7	
	comp=N,22nm,21.4s,baz=227,slow=38						
MNTX	Cornudas Mount	100.22	55	P	Pdif	16 20 00.5	+2.2
	baz=291						
DBIC	Dimbokro	144.63	300	PKP	PKPab	16 25 48.1	+0.2
	comp=N,13nm,0.7s,baz=66,slow=3.3,SNR=16						
DBIC	Dimbokro	144.63	300	PKPdf	PKPbc	16 25 48.4	+0.2
KIC	Kosan Boka	144.69	299	*e*P	PKPab	16 25 48.0	-0.2
	comp=N,16nm,0.7s						
TIC	Toumodi	144.78	300	*e*P	PKPab	16 25 48.3	-0.2
LIC	Lamto	145.01	299	*e*P	PKPab	16 25 49.7	+0.4
	comp=N,33nm,0.8s						
LPAZ	La Paz	147.82	102	PKPbc	PKPbc	16 25 58.1	-0.3
	comp=N,6.6nm,0.9s,baz=256,slow=4.2,SNR=19						
LPAZ	La Paz	147.82	102		PKPdf	16 25 55.8	+0.4

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*IDC **11** 16:12:27.8±1.1, 11°.77N×144°.95E, h0^{km}, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=39.3km s-min=18.3km az=97.0*

*NEIC **11** 16:12:31.5±1.4, 11°.80N±0°.10×144°.7E±0°.2, h10^{km}±2^{km}, mb4.4/7, Error ellipse: s-maj=33.8km s-min=16.4km az=86.0*

ISC 11 16:12:30.3±0.8**, 11°.80N**±0°.09×**144°.7E**±0°.1**, h10**^{km}**, n20, σ0^{s}.92**/21**, mb4.1**/14**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.79	5	Pn	Pn	16 13 01.7	+0.5
	39nm,0.3s,baz=158,slow=16,SNR=3.7						
GUMO				Sn	Sn	16 13 23.6	-0.4
	92nm,0.3s,baz=350,slow=21,SNR=12						
PATS	Pohnpei	14.28	109	Pn	Pn	16 15 53.5	+0.8
WB0	Warramunga Arr	32.97	198	P	P	16 19 05.2	-0.3
WB0				IAmb	IAmb	16 19 14.6	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	33.11	198	P	P	16 19 05.7	-1.0
WR0				IAmb	IAmb	16 19 26.1	
	comp=Z,10nm,1.3s						
WB2	Warramunga Arr	33.15	198	P	P	16 19 07.0	-0.1
WRA	Warramunga Arr	33.16	198	P	P	16 19 06.4	-0.7
	comp=Z,0.4nm,0.6s,baz=22,slow=9.8,SNR=2.5						
	comp=Z,0.4nm,0.6s						
AS31	Alice Springs	36.80	197	P	P	16 19 38.8	+0.3
ASAR	Alice Springs	36.80	197	P	P	16 19 38.0	-0.6
	comp=Z,0.6nm,0.8s,baz=18,slow=13,SNR=6.6						
	comp=Z,0.6nm,0.8s						
CMAR	Chiang Mai Arr	44.59	284	P	P	16 20 44.2	+1.1
	comp=Z,0.2nm,0.2s,baz=87,slow=6.5,SNR=2.1						
	comp=Z,0.2nm,0.2s						
MK31	Makanchi Array	62.68	317	P	P	16 22 56.2	+0.8
MK31				IAmb	IAmb	16 23 18.3	
	comp=Z,1.5nm,1.3s						
MKAR	Makanchi Array	62.68	317	P	P	16 22 56.0	+0.6
	comp=Z,0.7nm,0.7s,baz=91,slow=9.3,SNR=5.5						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	62.68	317	P	P	16 22 56.4	+1.0
MAKZ	Makanchi	62.90	317	P	P	16 22 58.2	+1.4
MAKZ				IAmb	IAmb	16 22 58.9	
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	65.86	320	P	P	16 23 16.8	+0.7
KURK				IAmb	IAmb	16 23 17.2	
	comp=Z,3.2nm,1.1s						
KURBB	Kurchatov Arra	65.90	320	P	P	16 23 16.6	+0.2
	comp=Z,0.9nm,0.5s,baz=104,slow=6.7,SNR=10						
	comp=Z,0.9nm,0.5s						
NRIK	Noril'sk	67.77	341	P	P	16 23 27.4	-0.5
	comp=Z,0.8nm,0.4s,baz=190,slow=23,SNR=6.9						
	comp=Z,0.8nm,0.4s						
IMAR	Indian Mountai	67.89	23	P	P	16 23 30.1	+1.3
ILAR	Eielson Array	70.24	25	P	P	16 23 42.1	-1.2
	comp=Z,0.6nm,0.8s,baz=249,slow=5.7,SNR=6.1						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	84.51	27	P	P	16 25 02.6	-0.7
	comp=Z,0.1nm,0.3s,baz=281,slow=4.3,SNR=2.4						
	comp=Z,0.1nm,0.3s						
FINES	FINESS Array B	92.72	335	P	P	16 25 41.0	-1.5
	comp=Z,0.6nm,0.6s,baz=96,slow=1.9,SNR=4.6						
	comp=Z,0.6nm,0.6s						

DJA 11 16:25:25.8±0.3**, 9°S**±3°×**12°0E**±°**, h32**^{km}±6^{km}**, M4.0**/13**, mb4.3**/3**, MLv3.9**/13**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.39	244	P	Pn	16 25 35.1	-0.2
WBSI				S	Sn	16 25 42.9	+1.2
EDFI	Ende, Flores	2.04	70	P	Pn	16 25 57.3	-0.8
EDFI				S	Sn	16 26 21.0	-1.6
PLAI	Plampang	2.05	288	P	Pn	16 25 57.6	-0.5
PLAI				S	Sn	16 26 22.0	-0.6
MMRI	Maumere	2.59	72	P	Pn	16 26 06.0	+0.4
MMRI				S	Sn	16 26 35.6	-0.4
BATI	Baumata	3.92	101	P	Pn	16 26 23.8	-0.1
BKSI	Bulukumba	4.14	5	P	Pn	16 26 27.7	+0.9
BKSI				S	Sn	16 27 13.6	-0.5
SOEI	Soe	4.46	94	P	Pn	16 26 33.0	+1.6
IGBI	Denpasar	4.59	278	P	Pn	16 26 33.6	+0.5
BBSI	Bau Bau	4.84	35	P	Pn	16 26 38.0	+1.4
BBSI				S	Sn	16 27 33.2	+1.6
BNSI	Bone	5.05	4	P	Pn	16 26 40.9	+1.6
	0.1nm18nm,0.5s						
SPSI	Sidrap Palu	5.47	0	P	Pn	16 26 45.0	-0.1
	0.1nm12nm,0.6s						
JAGI	Jajag, Banyuwa	5.62	280	P	Pn	16 26 47.4	+0.2

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*LDG **11** 16:36:50.7±0.1, 43°.10N×0°.63W, h10^{km}, Md1.9/2, Ml2.2/10, Error ellipse: s-maj=2.8km s-min=2.3km az=140.0*

*STR **11** 16:36:50.6±0.3, 43°N±3°×°±°, h9^{km}±2^{km}, MLv2.0/7, preliminary*

*MDD **11** 16:36:52.1±0.3, 43°.06N×0°.67W, h0^{km}, mb_Lg2.5/8, Error ellipse: s-maj=3.0km s-min=2.2km az=25.0*

ISC 11 16:36:49.9±0.8**, 43°.14N**±0°.02×**0°.59W**±0°.02**, h11**^{km}±6^{km}**, n37, σ0^{s}.99**/65**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATE	Arette	0.10	235	Pg	Pg	16 36 52.8	+0.1
ATE				Sg	Sg	16 36 54.5	-0.1
ETSF	Etsaut	0.24	174	*e*Pg	Pg	16 36 54.7	-0.3
ETSF				*e*Sg	Sg	16 36 57.3	-1.2
	272nm,0.3s						
CANF	Canfranc	0.38	172	Pg	Pg	16 36 57.2	-0.3
CANF				Sg	Sg	16 37 02.0	-0.6
SJPF	Ste Jean	0.46	267	*e*Pg	Pg	16 36 58.9	-0.1
SJPF				*e*Sg	Sg	16 37 04.9	-0.3
	36nm,0.2s						
OSSF	Osses	0.50	283	Pg	Pg	16 37 00.2	+0.4
OSSF				Sg	Sg	16 37 06.0	-0.4
VIEF	Viey	0.52	119	Pg	Pg	16 37 00.3	+0.2
VIEF				Sg	Sg	16 37 07.2	+0.3
EORO	Oroz-Betelu	0.58	245	Pg	Pg	16 37 01.0	-0.3
EORO				Sg	Sg	16 37 09.0	+0.1
EORO				*i* Vmb_Lg		16 37 10.4	
EALK	Alkurruntz	0.67	277	Pg	Pg	16 37 02.2	-0.8
EALK				Sg	Sg	16 37 11.7	-0.1
EALK	Alkurruntz	0.67	277	Sg	Sg	16 37 12.2	+0.4
EALK	Alkurruntz	0.67	277	Pg	Pg	16 37 02.3	-0.7
EPF	Esparros	0.69	99	*e*Pg	Pb	16 37 03.9	-0.1
EPF	Esparros	0.69	99	*e*Pn	Pn	16 37 06.1	+0.5
EPF				*e*Sg	Sb	16 37 13.3	-0.2
	19nm,0.3s						
ECHI	Chisagues Biel	0.75	129	Pg	Pg	16 37 04.3	-0.1
ECHI				Sg	Sb	16 37 15.1	-0.1
ECHI				*i* Vmb_Lg		16 37 16.1	
ECHI	Chisagues Biel	0.75	129	Sg	Sg	16 37 13.8	-0.4
ECHI	Chisagues Biel	0.75	129	Pg	Pg	16 37 04.5	+0.1
EARA	Aranguren	0.81	243	Sg	Sg	16 37 15.4	-0.8
EARA	Aranguren	0.81	243	Pg	Pg	16 37 04.7	-0.9
ESAC	San Caprasio	1.42	176	Pg	Pg	16 37 17.0	-0.2
ESAC				Sg	Sg	16 37 36.0	+0.3
ESAC				*i* Vmb_Lg		16 37 38.2	
MONQ	Montcuq	1.78	46	Pn	Pn	16 37 22.1	+1.5
MONQ				Sn	Sb	16 37 45.2	+0.3
LFF	La Frestale	2.04	28	*e*Pn	Pn	16 37 25.2	+1.1
LFF	La Frestale	2.04	28	*e*Pg	Pg	16 37 29.5	+0.5
LFF				*e*Sg	Sg	16 37 55.9	+0.5
	7.6nm,0.3s						
MTLF	Montolieu	2.06	83	*e*Pg	Pb	16 37 28.4	+1.1
MTLF				*e*Sg	Sg	16 37 56.1	-0.1
	2.8nm,0.3s						
MTLF	Montolieu	2.06	83	Pn	Pn	16 37 25.6	+1.1
MTLF				Sn	Sb	16 37 51.9	-1.1
EPOB	Poblet	2.18	145	Pn	Pb	16 37 28.5	-0.8
EPOB				*i* Vmb_Lg		16 38 00.4	
ERTA	Horta de San J	2.29	162	Pn	Pn	16 37 29.6	+2.0
ERTA				Pg	Pb	16 37 31.4	+0.2
ERTA				Sn	Sb	16 37 58.3	-1.2
ERTA				Sg	Sg	16 38 01.8	-1.7
ERTA				*i* Vmb_Lg		16 38 05.6	
ETOR	Torete	2.56	206	Pn	Pn	16 37 31.6	+0.2
ETOR				Sn	Sn	16 38 02.7	+0.1
ETOR				Sg	Sb	16 38 08.0	+0.6
CAF	Calviac	2.62	46	*e*Pn	Pn	16 37 32.8	+0.7
CAF	Calviac	2.62	46	*e*Pg	Pg	16 37 39.9	-0.2
CAF				*e*Sn	Sn	16 38 03.2	-0.7
CAF				*e*Sg	Sg	16 38 14.4	+0.4
	0.3nm,0.1s						
RJF	Les Rejaudoux	2.64	34	*e*Pn	Pn	16 37 33.1	+0.7
RJF	Les Rejaudoux	2.64	34	*e*Pg	Pg	16 37 40.2	-0.3
RJF				*e*Sn	Sn	16 38 04.3	-0.1
RJF				*e*Sg	Sg	16 38 14.4	-0.3
	3.1nm,0.2s						
LASF	Ste Croix	3.36	72	*e*P	Pn	16 37 45.9	+3.5
LASF	Ste Croix	3.36	72	*e*Pg	Pg	16 37 53.9	-0.4
LASF				*e*Sg	Sg	16 38 37.0	-0.9
	0.3nm,0.3s						
MFF	Saint Martin d	3.48	5	*e*P	Pn	16 37 46.4	+2.5
MFF	Saint Martin d	3.48	5	*e*Pg	Pg	16 37 55.6	-0.9
MFF				*e*Sg	Sg	16 38 40.1	-1.4
	0.9nm,0.2s						
TCF	Toulx Ste Croi	3.73	31	*e*Pn	Pn	16 37 47.9	+0.6
TCF	Toulx Ste Croi	3.73	31	*e*Pg	Pg	16 38 00.1	-1.2
TCF				*e*Sn	Sn	16 38 29.8	-1.4
TCF				*e*Sg	Sg	16 38 47.5	-2.0
	1.6nm,0.2s						
BGF	Bois d'Agland	4.20	34	*e*Sg	Sg	16 39 02.8	-1.9
	4.3nm,0.4s						

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*IDC **11** 16:43:01.5±0.9, 11°.80N×144°.83E, h0^{km}, mb4.0/12, mbtmp3.9/12, Error ellipse: s-maj=29.8km s-min=15.4km az=100.0*

*NEIC **11** 16:43:04.4±1.3, 11°.79N±0°.07×144°.7E±0°.2, h10^{km}±1^{km}, mb4.5/26, Error ellipse: s-maj=29.8km s-min=11.8km az=98.0*

ISC 11 16:43:06.2±0.8**, 11°.8N**±0°.1×**144°.7E**±0°.2**, h29**^{km}**, n47, σ1^{s}.00**/47**, mb4.3**/24**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.84	5	Pn	Pn	16 43 35.1	-0.7
	140nm,0.3s,baz=73,slow=5.3,SNR=114						
JSU	Suzuyama	23.66	328	P	P	16 48 15.2	-0.1
KSRS	Korea Array	29.70	332	P	P	16 49 08.0	-1.8
	0.9nm,0.7s,baz=144,slow=9.5,SNR=5.0						
	0.9nm,0.7s						
WB0	Warramunga Arr	32.92	198	P	P	16 49 38.5	+0.2
WR0	Warramunga Arr	33.06	198	P	P	16 49 39.8	+0.2
WR0				IAmb	IAmb	16 50 04.0	
	comp=Z,10nm,1.1s						
WB2	Warramunga Arr	33.10	198	P	P	16 49 40.2	+0.4
WB2				IAmb	IAmb	16 49 43.6	
	comp=Z,8.5nm,0.9s						
WRA	Warramunga Arr	33.11	198	P	P	16 49 40.0	+0.1
	comp=Z,2.2nm,0.8s,baz=22,slow=9.6,SNR=17						
	comp=Z,2.2nm,0.8s						
WRA	Warramunga Arr	33.11	198	P	P	16 49 39.5	-0.4
AS31	Alice Springs	36.75	197	P	P	16 50 11.5	+0.1
ASAR	Alice Springs	36.75	197	P	P	16 50 11.8	+0.4
	comp=Z,1.0nm,0.7s,baz=20,slow=11,SNR=20						
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	36.75	197	P	P	16 50 11.2	-0.2
CMAR	Chiang Mai Arr	44.60	284	P	P	16 51 16.7	+0.4
	comp=Z,1.0nm,0.6s,baz=80,slow=5.7,SNR=10						
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	44.60	284	P	P	16 51 18.1	+1.8
MA2	Magadan	47.95	4	P	P	16 51 42.2	+0.2
SONM	Songino Array	48.15	326	P	P	16 51 43.7	-0.2
	comp=Z,0.7nm,0.7s,baz=151,slow=7.5,SNR=5.4						
	comp=Z,0.7nm,0.7s						
SONM	Songino Array	48.15	326	P	P	16 51 44.5	+0.5
MORW	Morawa	49.13	214	P	P	16 51 50.4	-1.1
SEY	Seymchan	51.40	4	P	P	16 52 08.3	+0.1
	comp=Z,1.4nm,0.8s,baz=92,slow=19,SNR=5.6						
	comp=Z,1.4nm,0.8s						
TIXI	Tiksi	60.64	354	P	P	16 53 15.1	+1.0
MK31	Makanchi Array	62.71	317	P	P	16 53 29.3	+0.7
MK31				IAmb	IAmb	16 53 53.8	
	comp=Z,3.7nm,1.4s						
MKAR	Makanchi Array	62.71	317	P	P	16 53 29.0	+0.4
	comp=Z,1.0nm,0.6s,baz=92,slow=8.2,SNR=11						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	62.71	317	P	P	16 53 29.4	+0.8
MAKZ	Makanchi	62.92	317	P	P	16 53 30.5	+0.5
MAKZ				IAmb	IAmb	16 53 31.8	
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	63.03	325	P	P	16 53 30.2	-0.3
	comp=Z,1.0nm,0.6s,baz=107,slow=6.8,SNR=5.6						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	63.03	325	P	P	16 53 30.6	0.0
KURK	Kurchatov	65.89	320	P	P	16 53 49.8	+0.4
KURK				IAmb	IAmb	16 53 52.0	
	comp=Z,4.4nm,0.9s						
K20K	Telida	66.85	25	P	P	16 53 56.5	+1.3
K20K				IAmb	IAmb	16 53 57.5	
	comp=Z,4.3nm,1.0s						
J20K	Nowinta River	67.11	25	P	P	16 53 57.9	+1.0
CAST	Castle Rocks	67.71	26	P	P	16 54 01.5	+0.8
CAST				IAmb	IAmb	16 54 04.1	
	comp=Z,3.9nm,0.9s						
IMAR	Indian Mountai	67.94	23	P	P	16 54 02.8	+0.7
BPAW	Bear Paw Mtn.	68.39	25	P	P	16 54 05.6	+0.6
BPAW				IAmb	IAmb	16 54 08.3	
	comp=Z,3.8nm,1.0s						
SCM	Sheep Creek Mo	69.36	28	P	P	16 54 11.8	+0.6
COLD	Coldfoot	69.70	22	P	P	16 54 13.4	+0.4
COLD				IAmb	IAmb	16 54 17.8	
	comp=Z,3.3nm,1.0s						
H24K	Noodor Dome	70.17	24	P	P	16 54 17.3	+1.3
H24K				IAmb	IAmb	16 54 17.9	
	comp=Z,4.8nm,1.1s						
HDA	Harding Lake	70.17	25	P	P	16 54 14.6	-1.3
HDA				IAmb	IAmb	16 54 19.3	
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	70.29	25	P	P	16 54 15.4	-1.2
	comp=Z,1.6nm,0.9s,baz=257,slow=5.2,SNR=13						
	comp=Z,1.6nm,0.9s						
ILAR	Eielson Array	70.29	25	P	P	16 54 15.1	-1.6
TOLK	Toolik Lake Re	70.38	21	P	P	16 54 18.4	+1.2
TOLK				IAmb	IAmb	16 54 19.4	
	comp=Z,6.2nm,1.4s						
KK31	Karatay Array	70.55	312	P	P	16 54 19.1	+0.3
KKAR	Karatay Array	70.55	312	P	P	16 54 18.0	-0.7
SCRK	Sand Creek	71.33	26	P	P	16 54 24.5	+1.3
BMAR	Burnt Mountain	71.85	23	P	P	16 54 27.6	+1.5
INK	Inuvik	76.11	22	P	P	16 54 49.9	-1.1
	comp=Z,2.4nm,1.0s,baz=314,slow=4.2,SNR=4.7						
	comp=Z,2.4nm,1.0s						
INK	Inuvik	76.11	22	P	P	16 54 54.3	+3.3
INK				IAmb	IAmb	16 55 14.2	
	comp=Z,6.8nm,1.4s						
ABKAR	Akbulak array	77.80	318	P	P	16 55 00.8	-0.1
YKA	Yellowknife Ar	84.55	27	P	P	16 55 36.4	-0.1
	comp=Z,0.6nm,0.8s,baz=286,slow=5.2,SNR=7.0						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	92.76	335	P	P	16 56 14.4	-1.2
	comp=Z,0.7nm,0.6s,baz=66,slow=3.5,SNR=4.9						
	comp=Z,0.7nm,0.6s						

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*IDC **11** 16:43:23.3±0.9, 11°.85N×144°.77E, h0^{km}, mb4.0/8, mbtmp4.0/8, MS3.3/4, Error ellipse: s-maj=43.2km s-min=20.5km az=101.0*

*NEIC **11** 16:43:26.2±1.1, 11°.79N±0°.10×144°.8E±0°.2, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=34.3km s-min=15.7km az=282.0*

ISC 11 16:43:26.0±0.8**, 11°.79N**±0°.09×**144°.8E**±0°.2**, h16**^{km}**, n29, σ0^{s}.78**/25**, mb4.2**/12**, MS3.5**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.79	1	Sn	Sn	16 44 18.4	-0.3
	233nm,0.3s,baz=7.3,slow=22,SNR=13						
GUMO	Guam	1.79	1	Pn	Pn	16 43 56.6	+0.4
GUMO	Guam	1.79	1	Sn	Pn	16 43 56.3	0.0
	130nm,0.3s,baz=184,slow=21,SNR=5.7						
SIJI	Sorong	18.44	228	LR	LR	16 53 17.1	
	comp=Z,39nm,21.1s,baz=50,slow=32						
CTA	Charters Tower	31.71	177	LR	LR	17 02 12.6	
	comp=Z,59nm,19.9s,baz=22,slow=36						
WB0	Warramunga Arr	33.01	198	P	P	16 50 00.3	-0.3
WB0				IAmb	IAmb	16 50 01.5	
	comp=Z,7.5nm,1.1s						
WR0	Warramunga Arr	33.14	198	P	P	16 50 01.6	-0.2
WB2	Warramunga Arr	33.18	198	P	P	16 50 01.9	-0.3
WB2				IAmb	IAmb	16 50 02.9	
	comp=Z,9.8nm,1.1s						
WRA	Warramunga Arr	33.19	198	P	P	16 50 02.0	-0.2
	comp=Z,2.0nm,0.5s,baz=22,slow=9.7,SNR=16						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	33.19	198	P	P	16 50 00.7	-1.6
AS31	Alice Springs	36.83	197	P	P	16 50 34.9	+1.2
ASAR	Alice Springs	36.83	197	P	P	16 50 33.6	-0.1
	comp=Z,1.0nm,0.6s,baz=33,slow=9.6,SNR=12						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	36.83	197	P	P	16 50 33.2	-0.4
STKA	Stephens Creek	43.53	184	LR	LR	17 10 31.9	
	comp=Z,61nm,18.1s,baz=23,slow=37						
MORW	Morawa	49.23	214	P	P	16 52 14.1	+0.2
RAO	Raoul Island	54.37	139	LR	LR	17 12 57.2	
	comp=Z,40nm,20.5s,baz=284,slow=33						
MK31	Makanchi Array	62.77	317	P	P	16 53 51.8	+1.0
MKAR	Makanchi Array	62.77	317	P	P	16 53 50.7	-0.1
	comp=Z,0.7nm,0.6s,baz=88,slow=8.0,SNR=5.1						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	62.77	317	P	P	16 53 51.4	+0.6
ZALV	Zalesovo Beam	63.07	325	P	P	16 53 51.5	-1.0
	comp=Z,0.7nm,0.5s,baz=120,slow=6.9,SNR=3.5						
	comp=Z,0.7nm,0.5s						
KURK	Kurchatov	65.94	320	P	P	16 54 11.5	+0.1
KURK				IAmb	IAmb	16 54 39.9	
	comp=Z,3.9nm,1.1s						
ILAR	Eielson Array	70.20	25	P	P	16 54 37.9	0.0
	comp=Z,0.9nm,0.6s,baz=252,slow=5.8,SNR=6.8						
	comp=Z,0.9nm,0.6s						
KK31	Karatay Array	70.61	312	P	P	16 54 41.5	+0.6
KK31				IAmb	IAmb	16 54 42.2	
	comp=Z,2.1nm,0.8s						
KKAR	Karatay Array	70.61	312	P	P	16 54 41.9	+1.0
BMAR	Burnt Mountain	71.76	23	P	P	16 54 48.6	+1.2
ABKAR	Akbulak array	77.85	318	P	P	16 55 23.0	0.0
YKA	Yellowknife Ar	84.46	27	P	P	16 55 57.0	-0.9
	comp=Z,0.4nm,0.7s,baz=282,slow=4.9,SNR=4.3						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	88.06	51	P	P	16 56 17.0	+0.7
	comp=Z,0.3nm,0.5s,baz=267,slow=3.3,SNR=2.6						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	92.77	335	P	P	16 56 36.0	-1.5
	comp=Z,2.1nm,0.7s,baz=92,slow=4.0,SNR=8.3						
	comp=Z,2.1nm,0.7s						

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*IDC **11** 16:44:46.2±1.0, 11°.79N×144°.93E, h0^{km}, mb4.0/9, mbtmp4.0/9, MS3.3/5, Error ellipse: s-maj=37.2km s-min=16.8km az=95.0*

*NEIC **11** 16:44:48.9±1.6, 11°.79N±0°.06×144°.8E±0°.1, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=21.4km s-min=8.7km az=107.0*

ISC 11 16:44:49.0±0.6**, 11°.76N**±0°.07×**144°.9E**±0°.1**, h16**^{km}**, n49, σ0^{s}.95**/39**, mb4.5**/20**, MS3.2**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.81	0	Pn	Pn	16 45 19.3	-0.3
	39nm,0.3s,baz=180,slow=11,SNR=1.1						
GUMO				Sn	Sn	16 45 41.5	-0.8
	193nm,0.3s,baz=180,slow=15,SNR=3.5						
PATS	Pohnpei	14.14	109	Pn	Pn	16 48 08.1	-0.8

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PMG    Port Moresby        21.16 174  LR      LR      16 57 16.9
       comp=Z,71nm,18.3s,baz=332,slow=36
H11S3  WAKE ISLAND Hy      22.09  70  T       T       17 11 46.9
       baz=254,slow=75
H11S1  WAKE ISLAND Hy      22.11  70  T       T       17 11 48.1
       baz=254,slow=75
H11S2  WAKE ISLAND Hy      22.11  70  T       T       17 11 44.6
       baz=254,slow=75
H11N1  WAKE ISLAND Hy      22.61  67  T       T       17 13 06.3
       baz=249,slow=75
H11N2  WAKE ISLAND Hy      22.62  67  T       T       17 13 18.3
       baz=249,slow=75
H11N3  WAKE ISLAND Hy      22.63  67  T       T       17 13 08.2
       baz=249,slow=75
COEN   Coen                25.61 184          P       16 50 18.5 +0.7
COEN                                  IAmb    IAmb    16 50 23.2
       comp=Z,36nm,1.4s
WB0    Warramunga Arr      32.98 198  P       P       16 51 23.2 -0.2
WB0                                   IAmb    IAmb    16 51 24.2
       comp=Z,13nm,1.3s
WR0    Warramunga Arr      33.12 198  P       P       16 51 24.6 -0.1
WB2    Warramunga Arr      33.16 198  P       P       16 51 25.1 +0.1
WB2                                   IAmb    IAmb    16 51 27.4
       comp=Z,8.1nm,0.9s
WRA    Warramunga Arr      33.17 198  P       P       16 51 24.9 -0.2
       comp=Z,3.5nm,0.6s,baz=22,slow=9.7,SNR=17
       comp=Z,3.5nm,0.6s
WRA    Warramunga Arr      33.17 198  P       P       16 51 23.6 -1.4
AS31   Alice Springs       36.81 197  P       P       16 51 57.1 +0.6
ASAR   Alice Springs       36.81 197  P       P       16 51 56.6 +0.1
       comp=Z,1.9nm,0.6s,baz=24,slow=10,SNR=16
       comp=Z,1.9nm,0.6s
DZM    Mont Dzumac         39.73 148  LR      LR      17 05 25.9
       comp=Z,62nm,20.4s,baz=333,slow=31
MBWA   Marble Bar          40.99 217  P       P       16 52 31.1 -0.4
PEA0B  Petropavlovsk-      42.50  11  P       P       16 52 42.4 -1.2
PEA0B                                 IAmb    IAmb    16 53 06.2
       comp=Z,16nm,1.2s
PETK   Petropavlovsk-      42.50  11  LR      LR      17 08 21.3
       comp=Z,20nm,20.3s,baz=194,slow=33
CMAR   Chiang Mai Arr      44.73 284  P       P       16 53 02.6 +0.6
       comp=Z,1.2nm,0.9s,baz=82,slow=6.4,SNR=5.9
       comp=Z,1.2nm,0.9s
CMAR   Chiang Mai Arr      44.73 284  P       P       16 53 00.2 -1.9
BBOO   Buckleboo           45.11 190  P       P       16 53 04.7 -0.1
SHEM   Shemya Is, Ala      47.12  24  LR      LR      17 11 03.2
       comp=Z,26nm,20.8s,baz=286,slow=34
SONM   Songino Array       48.22 326  P       P       16 53 28.9 -0.2
       comp=Z,0.8nm,0.7s,baz=139,slow=8.4,SNR=4.5
       comp=Z,0.8nm,0.7s
SONM   Songino Array       48.22 326  P       P       16 53 30.0 +0.8
MORW   Morawa              49.22 214  P       P       16 53 36.7 -0.2
MORW                                  IAmb    IAmb    16 53 37.6
       comp=Z,6.7nm,0.7s
YAK    Yakutsk             51.38 351  LR      LR      17 13 43.3
       comp=Z,46nm,21.8s,baz=96,slow=34
MK31   Makanchi Array      62.80 317  P       P       16 55 14.5 +0.6
MKAR   Makanchi Array      62.80 317  P       P       16 55 14.1 +0.1
       comp=Z,1.0nm,0.6s,baz=86,slow=8.4,SNR=4.8
       comp=Z,1.0nm,0.6s
MKAR   Makanchi Array      62.80 317  P       P       16 55 14.8 +0.9
MAKZ   Makanchi            63.01 317  P       P       16 55 15.4  0.0
MAKZ                                  IAmb    IAmb    16 55 17.5
       comp=Z,2.6nm,0.9s
ZALV   Zalesovo Beam       63.10 325  P       P       16 55 15.7 -0.1
       comp=Z,1.0nm,0.7s,baz=109,slow=8.1,SNR=3.8
       comp=Z,1.0nm,0.7s
KURK   Kurchatov           65.97 320  P       P       16 55 34.6  0.0
KURK                                  IAmb    IAmb    16 55 45.1
       comp=Z,3.4nm,0.8s
PPLA   Purkeypile          67.41  26  P       P       16 55 45.0 +1.3
CAST   Castle Rocks        67.63  26  P       P       16 55 46.4 +1.5
CAST                                  IAmb    IAmb    16 56 05.5
       comp=Z,5.9nm,1.3s
I23K   Minto, Yukon-K      69.31  24  P       P       16 55 56.2 +0.9
I23K                                  IAmb    IAmb    16 55 57.4
       comp=Z,2.6nm,0.9s
ILAR   Eielson Array       70.21  25  P       P       16 56 00.5 -0.5
       comp=Z,1.1nm,0.8s,baz=253,slow=4.8,SNR=6.4
       comp=Z,1.1nm,0.8s
ILAR   Eielson Array       70.21  25  P       P       16 56 01.5 +0.5
KKAR   Karatay Array       70.65 312  P       P       16 56 05.1 +1.0
BRVK   Borovoye            71.42 322  P       P       16 56 10.5 +2.0
BRVK                                  IAmb    IAmb    16 56 10.9
       comp=Z,3.6nm,0.8s
BMAR   Burnt Mountain      71.78  23  P       P       16 56 12.8 +2.3
ABKAR  Akbulak array       77.89 318  P       P       16 56 46.0 -0.1
YKA    Yellowknife Ar      84.47  27  P       P       16 57 21.5 +0.7
       comp=Z,0.4nm,0.7s,baz=287,slow=5.2,SNR=2.8
       comp=Z,0.4nm,0.7s
EUNU   Eureka              84.67   8  P       P       16 57 22.8 +1.2
EUNU                                  IAmb    IAmb    16 57 24.0
       comp=Z,3.8nm,1.1s
FINES  FINESS Array B      92.81 335  P       P       16 57 59.0 -1.6
       comp=Z,2.2nm,0.9s,baz=74,slow=6.9,SNR=4.3
       comp=Z,2.2nm,0.9s
DBIC   Dimbokro           144.75 300  PKP     PKPab   17 04 24.6 -0.5
       comp=Z,4.1nm,0.9s,baz=57,slow=5.1,SNR=5.2
DBIC   Dimbokro           144.75 300          PKPab   17 04 24.3 -0.8
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IDC ***11*** *16:49:24.4±0.6, 39°.05N×144°.92E, h0^{km}, mb4.0/21, mbtmp4.1/28, ML3.8/6, MS3.3/13, Error ellipse: s-maj=16.7km s-min=12.5km az=129.0*

NEIC ***11*** *16:49:27.4±2.0, 39°.12N±0°.07×144°.8E±0°.1, h10^{km}±1^{km}, mb4.4/49, Error ellipse: s-maj=16.0km s-min=10.6km az=110.0*

JMA ***11*** *16:49:29.8±0.2, 39°.3N±1°.0×14°5E±°, h49^{km}, MV4.5/35, FAR E OFF NORTH HONSHU*

NIED ***11*** *16:49:29.8, 39°.28N×144°.60E, h49^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.61; M$_{\theta\theta}$0.08; M$_{\phi\phi}$1.53; M$_{r\theta}$0.82; M$_{\theta\phi}$0.60; M$_{\phi r}$0.81; Fault plane solution: M$_{0}$2.04000×10^{15} NP1:φ$_{s}$5.00000°, δ31.00000°, λ-115.00000°. NP2:φ$_{s}$214.00000°, δ62.00000°, λ-76.00000°.*

ISC 11 16:49:28.9±3.1, **39°.15N**±0°.05×**144°.80E**±0°.06, **h23**^{km}±22^{km}, **n144,** σ**1^{s}.67**/122, **mb4.3**/47, **MS3.3**/11, **Off east coast of Honshu**

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Code   Station Name          Δ°  AZ°      Phase ID          Time      Res
                                       Op      ISC       h  m  s     ISC
MIYJ   Miyakonagasawa       2.35 281 i P      Pn      16 50 04.7 -1.3
MIYJ                                  S       Sn      16 50 30.0 -4.2
JTH    Tanohata             2.40 290 i P      Pn      16 50 05.1 -1.7
JTH                                   S       Sn      16 50 31.9 -3.6
OFUJ   Ofunato              2.44 269 i P      Pn      16 50 06.0 -1.3
OFUJ                                  S       Sn      16 50 32.4 -3.8
JOM    Ohasama              2.74 278 i P      Pn      16 50 10.5 -0.9
JOM                                   S       Sn      16 50 40.5 -3.2
JMK    Ichinoseki           2.79 267 i P      Pn      16 50 11.2 -0.9
JMK                                   S       Sn      16 50 41.4 -3.7
JANG   Nango                2.81 297 eP       Pn      16 50 10.4 -2.0
ERM    Erimo                3.13 337  Pn      Pn      16 50 14.1 -2.6
JTM    Tenmabayashi         3.30 301  Pn      Pn      16 50 17.7 -1.4
JMM    Marumori             3.39 249  Pn      Pn      16 50 18.2 -2.2
JYK    Kaneyama             3.46 268 eP       Pn      16 50 20.8 -0.6
JYK                                  eS       Sn      16 50 59.0 -2.6
JNBK   Urakawa-nobuka       3.49 334  P       Pn      16 50 20.4 -1.4
JNBK                                  S       Sn      16 50 59.5 -2.9
JCH    Churui               3.63 343  P       Pn      16 50 21.5 -2.1
JCH                                   S       Sn      16 51 01.3 -4.5
JOT    Ohata                3.63 309  P       Pn      16 50 22.7 -1.0
JOT                                   S       Sn      16 51 02.4 -3.4
NEM2   Nemuro 2             4.27   9  P       Pn      16 50 29.5 -3.0
NEM2                                 eS       Sn      16 51 14.7 -6.9
JEW    Eniwo                4.47 327  Pn      Pn      16 50 34.2 -1.0
JYT    Yasato               4.67 233  Pn      Pn      16 50 35.2 -2.8
JTKR   Abashiri--Toko       4.87 352  P       Pn      16 50 39.0 -1.6
JTKR                                 eS       Sn      16 51 31.2 -4.9
JOSM   Okushiri--Mats       5.00 308  P       Pn      16 50 41.5 -1.0
JHR    Hokuryu              5.14 334  P       Pn      16 50 45.4 +1.0
JHR                                  eS       Sn      16 51 42.1 -0.9
JKA    Kamikawa-asahi       5.23 342  Pn      Pn      16 50 44.5 -1.2
ASAJ   Asahikawa            5.23 342  Pn      Pn      16 50 44.8 -0.9
       5.4nm,0.3s,baz=189,slow=14,SNR=56
ASAJ                                  Sn      Sn      16 51 41.2 -4.0
       6.6nm,0.3s,baz=3.3,slow=32,SNR=7.0
       22nm,0.4s
JSD    Sado                 5.24 260  Pn      Pn      16 50 45.5 -0.3
BSO1   Boso 1               5.43 215  S       Sn      16 51 45.3 -4.1
JRY    Ryogami san          5.63 238  P       Pn      16 50 49.5 -1.6
JRY                                   S       Sn      16 51 49.6 -5.5
MJAR   Matsushiro Arr       5.83 246  Pn      Pn      16 50 53.2 -0.7
       2.6nm,0.3s,baz=322,slow=22,SNR=87
MJAR                                  Sn      Sn      16 51 56.3 -3.7
       0.6nm,0.3s,baz=24,slow=8.4,SNR=4.0
       19nm,0.3s
MJAR   Matsushiro Arr       5.83 246  Pn      Pn      16 50 52.9 -1.0
MAJO   Matsushiro           5.83 246          Pn      16 50 54.2 +0.4
MJB9   Matsu-Tunnel         5.83 246          Pn      16 50 54.2 +0.3
JOD2   Odawara 2            5.98 231  P       Pn      16 50 54.9 -1.1
JOD2                                 eS       Sn      16 51 57.1 -6.6
JGF    Kuroka               6.90 241          Pn      16 51 08.9 +0.3
JHJ2   Mitsune              7.25 215  Pn      Pn      16 51 10.0 -3.4
JHJ    Hachijo jima 2       7.25 216  Pn      Pn      16 51 10.4 -3.1
       29nm,0.3s,baz=329,slow=17,SNR=22
JHJ                                   Sn      Sn      16 52 26.7 -8.3
       56nm,0.3s,baz=88,slow=23,SNR=11
       51nm,0.3s
INU    Inuyama              7.27 241  Pn      Pn      16 51 11.9 -1.8
YSS    Yuzh-Sakhalins       7.95 350  Pn      Pn      16 51 20.2 -2.7
JHS    Saijyo              10.21 250  Pn      Pn      16 51 54.0  0.0
USRK   Ussuriysk Ar.       10.83 302  Pn      Pn      16 52 02.5 +0.1
       1.7nm,0.3s,baz=97,slow=15,SNR=21
USRK                                  LR      LR      16 57 01.3
       comp=Z,91nm,18.7s,baz=101,slow=42
       12nm,0.6s
JCJ    Chichijima          12.21 191  Pn      Pn      16 52 15.4 -6.0
       3.1nm,0.3s,baz=81,slow=23,SNR=7.0
JCJ                                   Sn      Sn      16 54 21.1  -16
       8.3nm,0.3s,baz=291,slow=22,SNR=7.1
KSRS   Korea Array         13.36 268  Pn      Pn      16 52 37.1 +0.1
       0.2nm,0.3s,baz=82,slow=13,SNR=2.8
KSRS                                  LR      LR      16 57 14.7
       comp=Z,56nm,20.6s,baz=100,slow=35
       1.1nm,0.5s
KLR    Kul'dur             13.74 321  Pn      Pn      16 52 41.3 -0.8
       0.2nm,0.3s,baz=128,slow=13,SNR=4.4
KLR                                   LR      LR      16 58 10.8
       comp=Z,52nm,19.3s,baz=194,slow=38
       2.1nm,0.9s
PEA0B  Petropavlovsk-      16.54  28          Pn      16 53 21.6 +2.4
PETK   Petropavlovsk-      16.54  28  Pn      Pn      16 53 16.6 -2.6
       0.8nm,0.7s,baz=211,slow=16,SNR=1.9
PETK   Petropavlovsk-      16.54  28          P       16 53 23.1 +1.4
HIA    Hailar              20.53 308  P       P       16 54 06.2 +0.8
HIA                                   IAmb    IAmb    16 54 10.1
       comp=Z,8.1nm,0.6s
MA2    Magadan             20.80   9  P       P       16 54 06.9 -1.4
       comp=Z,5.5nm,0.8s,baz=188,slow=7.1,SNR=5.6
       comp=Z,5.5nm,0.8s
MA2    Magadan             20.80   9  P       P       16 54 08.4 +0.2
XLT    XiLinHaoTe          21.96 292 eP       P       16 54 22.9 +1.9
XLT                                   sP      sP      16 54 35.1 +7.0
XLT                                   PP      PnPn    16 54 45.5 +2.7
XLT                                   S       S       16 58 25.3 +3.0
XLT                                   sS      Sn      16 58 31.6 -1.4
XLT                                   pmax    pmax
       comp=Z,7.0nm,1.3s
XLT                                   LR      LR
       comp=N,12nm,18.1s
XLT                                   LR      LR
       comp=E,200nm,19.8s
XLT                                   LR      LR
       comp=Z,100nm,14.3s
SEY    Seymchan            24.26   8  P       P       16 54 42.5 -1.3
       comp=Z,0.4nm,0.3s,baz=212,slow=12,SNR=1.7
       comp=Z,0.4nm,0.3s
YAK    Yakutsk             24.71 343  P       P       16 54 46.9 -1.1
       comp=Z,4.4nm,0.6s,baz=72,slow=0.4,SNR=6.6
       comp=Z,4.4nm,0.6s
YAK    Yakutsk             24.71 343  P       P       16 54 47.0 -1.0
HHC    Hu-ho-hao-te        25.43 285 eP       P       16 54 55.5 +0.6
HHC                                   pmax    pmax
       comp=Z,29nm,0.9s
HHC                                   pmax    pmax
       comp=Z,140nm,5.7s
H11N2  WAKE ISLAND Hy      27.16 129  T       T       17 23 38.6
       baz=320,slow=75
H11N1  WAKE ISLAND Hy      27.17 129  T       T       17 23 42.1
       baz=320,slow=75
H11N3  WAKE ISLAND Hy      27.18 129  T       T       17 23 43.0
       baz=320,slow=75
H11S1  WAKE ISLAND Hy      27.99 131  T       T       17 24 43.3
       baz=322,slow=74
H11S3  WAKE ISLAND Hy      28.00 131  T       T       17 24 42.1
       baz=322
H11S2  WAKE ISLAND Hy      28.01 131  T       T       17 24 46.4
       baz=322,slow=74
SONM   Songino Array       28.93 300  P       P       16 55 27.9 +1.6
       comp=Z,0.7nm,0.7s,baz=99,slow=8.8,SNR=3.9
SONM                                  LR      LR      17 06 39.8
       comp=Z,63nm,21.5s,baz=110,slow=36
       comp=Z,0.7nm,0.7s
SONM   Songino Array       28.93 300  P       P       16 55 24.2 -2.1
TIXI   Tiksi               33.57 351  P       P       16 56 06.5 -0.1
PZH    PanZhiHua           37.98 264  P       P       16 56 47.0 +1.9
PZH                                   pmax    pmax
       comp=Z,10.0nm,0.9s
PZH                                   pmax    pmax
       comp=Z,100nm,5.0s
GOMU   GeErMu              39.27 282  P       P       16 56 59.1 +2.9
GOMU                                  pP      pP      16 57 03.2 +1.8
GOMU                                  sP      sP      16 57 05.0 +1.4
GOMU                                  pmax    pmax
       comp=Z,3.0nm,1.2s
GOMU                                  pmax    pmax
       comp=Z,61nm,4.2s
WMQ    Urumqi              42.31 295 eP       P       16 57 22.5 +1.7
NRIK   Noril'sk            42.51 334  LR      LR      17 16 53.6
       comp=Z,62nm,20.0s,baz=124,slow=39
ZALV   Zalesovo Beam       42.51 311  P       P       16 57 23.4 +1.2
       comp=Z,0.6nm,0.4s,baz=79,slow=7.5,SNR=2.4
ZALV                                  PcP     PcP     16 59 14.7 +0.2
       comp=Z,0.4nm,0.3s,baz=95,slow=2.5,SNR=2.2
       comp=Z,0.6nm,0.4s
ZALV   Zalesovo Beam       42.51 311  P       P       16 57 22.6 +0.4
K20K   Telida              43.07  35  P       P       16 57 27.2 +0.6
IMAR   Indian Mountai      43.47  32  P       P       16 57 30.6 +0.9
KDAK   Kodiak Island       43.74  43  P       P       16 57 31.2 -0.8
       comp=Z,6.6nm,0.8s,baz=276,slow=5.7,SNR=5.1
       comp=Z,6.6nm,0.8s
KDAK   Kodiak Island       43.74  43  P       P       16 57 32.2 +0.2
PPLA   Purkeypile          43.90  36  P       P       16 57 35.1 +1.6
PPLA                                  IAmb    IAmb    16 57 40.3
       comp=Z,12nm,1.5s
CAST   Castle Rocks        43.97  35  P       P       16 57 35.1 +1.2
BPAW   Bear Paw Mtn.       44.49  34  P       P       16 57 38.5 +0.5
CMAR   Chiang Mai Arr      44.61 256  P       P       16 57 38.6 -0.9
       comp=Z,0.8nm,0.3s,baz=49,slow=6.2,SNR=7.6
CMAR                                  LR      LR      17 17 55.8
       comp=Z,23nm,19.1s,baz=90,slow=38
       comp=Z,0.8nm,0.3s
TRF    Thorofare Moun      44.78  35  P       P       16 57 41.7 +1.2
TRF                                   IAmb    IAmb    16 57 59.2
       comp=Z,2.9nm,1.0s
COLD   Coldfoot            45.00  30  P       P       16 57 43.7 +1.7
MK31   Makanchi Array      45.29 301  P       P       16 57 45.4 +0.8
MKAR   Makanchi Array      45.29 301  P       P       16 57 44.8 +0.1
       comp=Z,0.7nm,0.7s,baz=82,slow=8.8,SNR=5.4
MKAR                                  LR      LR      17 18 26.5
       comp=Z,35nm,18.1s,baz=74,slow=38
       comp=Z,0.7nm,0.7s
MKAR   Makanchi Array      45.29 301  P       P       16 57 45.6 +0.9
GHO    Glory Hole Cre      45.42  38  P       P       16 57 46.1 +0.6
RND    Reindeer            45.42  35  P       P       16 57 45.9 +0.3
RND                                   IAmb    IAmb    16 57 56.9
       comp=Z,3.7nm,1.2s
MDM    Murphy Dome         45.70  33  P       P       16 57 49.0 +1.4
MDM                                   IAmb    IAmb    16 57 50.2
       comp=Z,3.0nm,0.7s
WRH    Wood River Hil      45.76  34  P       P       16 57 48.5 +0.4
WRH                                   IAmb    IAmb    16 57 50.2
       comp=Z,2.4nm,0.6s
DHY    Denali Highway      46.10  36  P       P       16 57 52.1 +1.1
HDA    Harding Lake        46.25  34  P       P       16 57 52.3 +0.3
HDA                                   IAmb    IAmb    16 57 53.0
       comp=Z,3.5nm,0.6s
IL31                       46.27  33  P       P       16 57 52.2 +0.1
IL31                                  IAmb    IAmb    16 57 53.4
       comp=Z,3.6nm,0.7s
ILAR   Eielson Array       46.27  33  P       P       16 57 50.8 -1.3
       comp=Z,2.6nm,0.6s,baz=258,slow=6.7,SNR=26
ILAR                                  PcP     PcP     16 59 25.8 -1.4
       comp=Z,0.3nm,0.6s,baz=284,slow=4.5,SNR=2.0
       comp=Z,2.6nm,0.6s
ILAR   Eielson Array       46.27  33  P       P       16 57 52.8 +0.7
KLU    Klutina             46.87  38  P       P       16 57 57.8 +0.8
KLU                                   IAmb    IAmb    16 57 58.9
       comp=Z,3.9nm,0.9s
J25K   Salcha River,       46.93  34  P       P       16 57 56.9 -0.5
J25K                                  IAmb    IAmb    16 58 08.4
       comp=Z,2.6nm,1.2s
BMAR   Burnt Mountain      47.19  30  P       P       16 58 00.8 +1.5
SCRK   Sand Creek          47.57  34  P       P       16 58 03.2 +0.8
SCRK                                  IAmb    IAmb    16 58 03.6
       comp=Z,2.5nm,0.6s
MENT   Mentasta            47.77  36  P       P       16 58 05.6 +1.7
MENT                                  IAmb    IAmb    16 58 10.1
       comp=Z,2.4nm,0.8s
VRDI   Verde Repeater      48.08  38  P       P       16 58 07.5 +1.0
VRDI                                  IAmb    IAmb    16 58 08.6
       comp=Z,3.3nm,0.8s
L27K   Beaver Creek,       48.62  36  P       P       16 58 11.0 +0.6
L27K                                  IAmb    IAmb    16 58 14.6
       comp=Z,2.0nm,0.8s
BCAR   Beaver Creek A      48.64  36  P       P       16 58 12.4 +1.8
I29M   Ogilvie Camp,       49.85  32  P       P       16 58 21.5 +1.7
I29M                                  IAmb    IAmb    16 58 31.6
       comp=Z,3.3nm,0.7s
EPYK   Eagle Plains        50.36  31  P       P       16 58 25.4 +1.8
EPYK                                  IAmb    IAmb    16 58 35.5
       comp=Z,4.3nm,0.7s
HYT    Haines Junctio      51.00  38  P       P       16 58 30.8 +2.1
HYT                                   IAmb    IAmb    16 58 53.1
       comp=Z,5.8nm,0.8s
INK    Inuvik              51.28  28  P       P       16 58 31.2 +0.8
       comp=Z,2.7nm,0.5s,baz=300,slow=7.4,SNR=14
       comp=Z,2.7nm,0.5s
INK    Inuvik              51.28  28  P       P       16 58 31.3 +0.8
INK                                   IAmb    IAmb    16 58 32.4
       comp=Z,3.0nm,0.6s
AAK    Ala-Archa           51.85 298  LR      LR      17 22 19.6
       comp=Z,18nm,18.1s,baz=88,slow=38
KSH    Kashi               51.99 294  P       P       16 58 41.9 +5.5
KSH                                   pP      pwP     16 58 51.7 +2.0
KSH                                   sP      sP      16 58 59.8  +16
MTN    Manton Dam          53.27 197  P       P       16 58 45.3 -0.5
C36M   Paulatuk            54.38  26  P       P       16 58 54.2 +0.8
C36M                                  IAmb    IAmb    16 59 22.8
       comp=Z,5.0nm,1.1s
NIL    Nilore              56.49 288  P       P       16 59 09.6 +0.5
ARU    Arti                56.55 318  LR      LR      17 24 52.0
       comp=Z,16nm,18.9s,baz=145,slow=38
GSI    Gunungsitoli        57.17 241  P       P       16 59 15.8 +1.8
EUNU   Eureka              57.69   9  P       P       16 59 16.6 -0.4
EUNU                                  IAmb    IAmb    16 59 18.6
       comp=Z,2.5nm,0.8s
ABKAR  Akbulak array       58.62 310  P       P       16 59 24.0 +0.1
ABKAR                                 IAmb    IAmb    16 59 43.5
       comp=Z,2.1nm,0.7s
AKTO   Aktyubinsk          59.25 312  LR      LR      17 26 10.4
       comp=Z,33nm,18.6s,baz=93,slow=37
WB0    Warramunga Arr      59.41 191  P       P       16 59 28.3 -1.2
WR0    Warramunga Arr      59.58 191  P       P       16 59 28.8 -1.9
WB2    Warramunga Arr      59.59 191  P       P       16 59 29.3 -1.5
WRA    Warramunga Arr      59.59 191  P       P       16 59 28.9 -1.9
       comp=Z,2.4nm,0.6s,baz=12,slow=7.2,SNR=14
       comp=Z,2.4nm,0.6s
WRA    Warramunga Arr      59.59 191  P       P       16 59 29.4 -1.4
RES    Resolute Bay        59.88  15  P       P       16 59 32.0 -0.1
       comp=Z,4.0nm,0.6s,baz=323,slow=6.1,SNR=16
       comp=Z,4.0nm,0.6s
RES    Resolute Bay        59.88  15  P       P       16 59 32.7 +0.6
YKA    Yellowknife Ar      60.63  32  P       P       16 59 36.7 -0.8
       comp=Z,0.8nm,0.6s,baz=304,slow=6.7,SNR=12
       comp=Z,0.8nm,0.6s
YKA    Yellowknife Ar      60.63  32  P       P       16 59 37.1 -0.3
AS31   Alice Springs       63.31 191  P       P       16 59 55.1 -0.8
ASAR   Alice Springs       63.31 191  P       P       16 59 54.5 -1.5
       comp=Z,1.2nm,0.7s,baz=12,slow=7.4,SNR=17
       comp=Z,1.2nm,0.7s
ASAR   Alice Springs       63.31 191  P       P       16 59 54.9 -1.1
DZM    Mont Dzumac         64.18 158  LR      LR      17 27 27.6
       comp=Z,18nm,19.1s,baz=34,slow=36
FINES  FINESS Array B      68.17 333  P       P       17 00 26.7 -0.1
       comp=Z,1.7nm,0.7s,baz=72,slow=6.2,SNR=9.6
FINES                                 LR      LR      17 32 13.7
       comp=Z,40nm,21.6s,baz=38,slow=38
       comp=Z,1.7nm,0.7s
FINES  FINESS Array B      68.17 333  P       P       17 00 27.0 +0.2
FCC    Fort Churchill      70.90  28  P       P       17 00 43.8 +0.1
FCC                                   IAmb    IAmb    17 00 44.1
       comp=Z,4.2nm,0.8s
KVN    Kaiserville         71.36  55  P       P       17 00 48.1 +1.0
KVN                                   IAmb    IAmb    17 00 59.3
       comp=Z,2.0nm,1.0s
KBZ    Khabaz              71.53 312  P       P       17 00 48.4 +0.7
       comp=Z,2.8nm,0.9s,baz=116,slow=1.5,SNR=5.4
       comp=Z,2.8nm,0.9s
NVAR   Mina Array Bea      71.59  55  P       P       17 00 48.6  0.0
       comp=Z,0.5nm,0.6s,baz=289,slow=5.9,SNR=5.6
       comp=Z,0.5nm,0.6s
NVAR   Mina Array Bea      71.59  55  P       P       17 00 49.4 +0.9
NOA    NORSAR Array B      73.24 338  P       P       17 00 57.5 -0.2
       comp=Z,0.6nm,0.9s,baz=31,slow=5.6,SNR=2.5
       comp=Z,0.6nm,0.9s
GWY    Greenwater Val      73.96  56  P       P       17 01 03.5 +0.9
GWY                                   IAmb    IAmb    17 01 06.5
       comp=Z,4.8nm,1.4s
AKASG  Malin Array Be      74.23 323  P       P       17 01 03.6 -0.1
       comp=Z,0.6nm,0.4s,baz=45,slow=5.9,SNR=5.1
       comp=Z,0.6nm,0.4s
AKASG  Malin Array Be      74.23 323  P       P       17 01 03.8 +0.1
PDAR   Pinedale Array      74.28  47  P       P       17 01 04.2 -0.3
       comp=Z,0.4nm,0.5s,baz=286,slow=3.2,SNR=7.1
       comp=Z,0.4nm,0.5s
PDAR   Pinedale Array      74.28  47  P       P       17 01 04.4 -0.1
SRU    San Rafael Swe      76.01  51  P       P       17 01 15.2 +0.8
SRU                                   IAmb    IAmb    17 01 16.0
       comp=Z,1.9nm,0.6s
PPT    Papeete             83.25 119  LR      LR      17 29 26.9
       comp=Z,35nm,21.5s,baz=80,slow=29
TXAR   Lajitas Array       86.72  54  P       P       17 02 10.1 -1.1
       comp=Z,0.5nm,0.4s,baz=290,slow=2.4,SNR=7.5
       comp=Z,0.5nm,0.4s
TXAR   Lajitas Array       86.72  54  P       P       17 02 10.3 -0.9
CCM    Cathedral Cave      87.53  41  P       P       17 02 14.0 -0.9
SNAA   Sanae              143.54 197  PKPdf   PKPab   17 08 58.0 +1.0
VNA2   Neumayer--Watz     145.08 196  PKPdf   PKPbc   17 09 01.8 -0.8
       baz=126,slow=2.0
VNA3   Neumayer Olymp     145.28 194  PKPdf   PKPbc   17 09 01.7 -1.6
```

ISK ***11*** *17:08:08.9, 34°.63N×33°.14E, h12^{km}, ML2.9/16*

GII ***11*** *17:08:09.9±0.0, 34°.64N×33°.16E, h16^{km}, Mm2.9/3*

NIC ***11*** *17:08:09.1±0.0, 34°.66N×33°.12E, h22^{km}±1^{km}, Ml3.0/7*

DDA ***11*** *17:08:12.0±0.0, 34°.89N×33°.05E, h35^{km}±8^{km}, ML2.5*

ISC 11 17:08:09.4±1.0, **34°.65N**±0°.02×**33°.12E**±0°.02, **h17**^{km}±7^{km}, **n55,** σ**1^{s}.02**/84, **1C-1D, Cyprus region**

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Code   Station Name          Δ°  AZ°      Phase ID          Time      Res
                                       Op      ISC       h  m  s     ISC
ASGA   Asgata               0.17  38  P       Pb      17 08 14.5 +0.3
ASGA                                  AML     AML     17 08 18.4
       25nm,0.2s
ASGA                                  AML     AML     17 08 18.4
       25nm,0.2s
ASGA                                  AML     AML     17 08 18.4
       39nm,0.4s
ASGA                                  AML     AML     17 08 18.4
       39nm,0.4s
ASGA                                  S       Sb      17 08 18.6 +1.2
SZAC   Souni                0.22 298⇑eP       Pg      17 08 14.7  0.0
SZAC                                  AML     AML     17 08 18.4
       40nm,0.2s
SZAC                                  AML     AML     17 08 18.4
       40nm,0.2s
SZAC                                  AML     AML     17 08 18.6
       18nm,0.1s
SZAC                                  AML     AML     17 08 18.6
       18nm,0.1s
SZAC                                  S       Sg      17 08 18.8 +0.6
CSS    Mathiatis            0.36  29  PG      Pg      17 08 16.7 -0.2
CSS                                   SG      Sb      17 08 22.1 -0.6
CSS    Mathiatis            0.36  29⇓eP       Pg      17 08 16.8 -0.2
CSS                                   S       Sb      17 08 22.7  0.0
CSS    Mathiatis            0.36  29  Pg      Pg      17 08 16.7 -0.2
AKIN   Akıncılar- Kıb       0.46  38  PG      Pb      17 08 18.7 -0.4
NATA   Nata                 0.47 286  P       Pg      17 08 18.2 -0.7
NATA                                  S       Sb      17 08 26.7 +0.8
NATA                                  AML     AML     17 08 28.0
       4.8nm,0.7s
NATA                                  AML     AML     17 08 28.0
       4.8nm,0.7s
NATA                                  AML     AML     17 08 30.3
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	7.1nm,0.6s						
NATA				AML	AML	17 08 30.3	
	7.1nm,0.6s						
LEF	**Lefka**	0.51	338	PG	Pb	17 08 19.9	0.0
LEF				SG	Sb	17 08 27.9	+1.0
LEF	**Lefka**	0.51	338	P	Pb	17 08 20.7	+0.9
ATHAL	**Athalassa**	0.54	25	P	Pb	17 08 20.1	-0.3
MVOU	**Mavrovouni**	0.56	49	P	Pg	17 08 20.0	-0.5
MVOU				AML	AML	17 08 33.0	
	2.8nm,0.3s						
MVOU				AML	AML	17 08 33.1	
	3.0nm,0.3s						
AKDN	**Akdeniz- Kıbrı**	0.66	349	PG	Pg	17 08 22.1	-0.3
AKDN				SG	Sn	17 08 32.6	-1.4
ALFC	**Alefka**	0.66	320	P	Pg	17 08 21.3	-1.2
ALFC				S	Sb	17 08 32.6	+1.1
ALFC				AML	AML	17 08 32.8	
	7.4nm,0.6s						
ALFC				AML	AML	17 08 32.8	
	7.4nm,0.6s						
ALFC				AML	AML	17 08 34.2	
	3.7nm,0.5s						
ALFC				AML	AML	17 08 34.2	
	3.7nm,0.5s						
LFK	**Lefkose**	0.71	28	PG	Pb	17 08 23.6	+0.2
AKMS	**Akamas**	0.74	300	P	Pb	17 08 23.2	-0.7
AKMS				S	Sg	17 08 34.7	+0.9
AKMS				AML	AML	17 08 38.0	
	0.9nm,0.3s						
AKMS				AML	AML	17 08 38.0	
	0.9nm,0.3s						
AKMS				AML	AML	17 08 39.8	
	1.3nm,0.3s						
AKMS				AML	AML	17 08 39.8	
	1.3nm,0.3s						
PARAL	**Paralimni**	0.83	65	S	Sn	17 08 38.6	+0.4
PARAL				AML	AML	17 08 42.6	
	2.2nm,0.7s						
PARAL				AML	AML	17 08 45.6	
	2.2nm,0.5s						
EREN	**Erenkoy**	1.23	44	PN	Pg	17 08 33.0	-0.2
EREN	**Erenkoy**	1.23	44	P	Pg	17 08 33.0	-0.2
TEKE	**Tekeli-Mersin**	1.49	360	PN	Pb	17 08 36.1	-0.5
AKKU	**Akkuyu-Mersin**	1.55	13	PN	Pn	17 08 36.5	+0.3
GULN	**MERSIN_Gulnar**	1.57	13	P	Pn	17 08 35.6	-0.9
GULN				S	Sb	17 08 57.0	-0.6
KARG	**Kargicak-Mersi**	1.62	17	PN	Pb	17 08 38.1	-0.8
IKL	**Isikli**	1.65	16	PN	Pb	17 08 38.7	-0.7
BERE	**Bereket-Mersin**	1.70	3	PN	Pn	17 08 38.7	+0.3
GAZI	**Gazipasa**	1.71	338	PN	Pn	17 08 38.9	+0.4
GAZI	**Gazipasa**	1.71	338	P	Pn	17 08 38.7	+0.2
GAZI				S	Sn	17 09 00.3	+0.3
GAZI				*i* AML	AML	17 09 01.0	
	comp=N,69nm,0.7s						
GAZI				*i* AML	AML	17 09 01.0	
	comp=E,49nm,0.3s						
OSC2	**CSNet OBS 4**	1.72	205	P	Pn	17 08 38.1	-0.5
TEVE	**Tevekalti-Mers**	1.80	8	PN	Pb	17 08 41.0	-1.0
SILI	**Silifke-Mersin**	1.84	21	PN	Pb	17 08 41.4	-1.1
KEBE	**Keben-Mersin**	1.86	15	PN	Pb	17 08 41.6	-1.4
OSC1	**CSNet OBS 1**	1.91	234	P	Pn	17 08 40.4	-0.8
OSC1				S	Sn	17 09 05.0	+0.2
ERMK	**Ermenek**	2.00	355	P	Pn	17 08 43.0	+0.4
ERMK				S	Sn	17 09 07.8	+0.5
ERMK				*i* AML	AML	17 09 14.0	
	comp=E,46nm,0.6s						
HNTI	**Hanita**	2.31	132	Pn	Pn	17 08 46.7	-0.1
HNTI				Sn	Sn	17 09 14.5	-0.3
MERS	**Mersin**	2.49	27	PN	Pn	17 08 50.8	+1.6
MMA0B	**Mount Meron ar**	2.50	130	Pn	Pn	17 08 50.0	+0.6
MMA0B				Sn	Sn	17 09 20.3	+0.7
GEM	**Giv'at Ha'Em**	2.56	123	Pn	Pn	17 08 50.4	+0.4
KEPZ	**Antalya-Kepez**	2.56	332	P	Pn	17 08 50.6	+0.4
KEPZ				S	Sn	17 09 22.5	+1.5
KKBE	**Karaman, Kazim**	2.57	357	P	Pb	17 08 53.0	-2.1
KKBE				S	Sb	17 09 24.9	-1.5
NATI	**Neve Ativ**	2.58	122	Pn	Pn	17 08 50.9	+0.6
NATI				Sn	Sn	17 09 20.9	-0.3
KERG	**Konya-Eregli**	2.88	16	P	Pb	17 08 57.4	-3.0
KERG				S	Sb	17 09 33.8	-1.6
KERG				*i* AML	AML	17 09 37.0	
	comp=N,33nm,0.5s						
KERG				*i* AML	AML	17 09 43.0	
	comp=E,23nm,0.4s						
MMLI	**Mount Malkishu**	2.92	138	PN	Pn	17 08 56.3	+1.1
MMLI	**Mount Malkishu**	2.92	138	Pn	Pn	17 08 56.0	+0.8
MMLI				Sn	Sn	17 09 30.5	+0.6
SEYD	**Seydisehir-KON**	2.94	340	PN	Pn	17 08 57.5	+2.0
GULE	**Gulek**	2.95	27	P	Pb	17 08 59.2	-2.4
SEDI	**Konya, Seydise**	3.01	339	P	Pn	17 08 59.2	+2.9
SEDI				S	Sb	17 09 38.5	-0.6
SEDI				*i* AML	AML	17 09 42.0	
	comp=N,18nm,0.6s						
KARA	**Karaisali**	3.04	30	PN	Pn	17 08 58.3	+1.5
HMDT	**Nahal Hemdat**	3.12	139	Pn	Pn	17 08 58.9	+1.1
HMDT				Sn	Sn	17 09 35.1	+0.3
CMRD	**Camardi-Nigde**	3.37	26	PN	Pn	17 09 03.0	+1.7
MDBI	**Mazsada**	3.82	150	Pn	Pn	17 09 07.9	+0.5
MDBI				Sn	Sn	17 09 52.4	+0.5
KZIT	**Kziot**	3.88	164	Pn	Pn	17 09 09.5	+1.2
KZIT				Sn	Sn	17 09 53.5	0.0
PRNI	**Paran**	4.57	159	Pn	Pn	17 09 18.7	+0.9
PRNI				Sn	Sn	17 10 10.4	-0.1
KRMI	**Paran Flat**	4.72	163	Pn	Pn	17 09 20.1	+0.3
KRMI				Sn	Sn	17 10 13.5	-0.7
HRFI	**Mount Harif**	4.88	160	Pn	Pn	17 09 23.3	+1.3
HRFI				Sn	Sn	17 10 17.2	-0.9
MBRI	**Mt Berech**	5.07	162	Pn	Pn	17 09 26.0	+1.2
MBRI				Sn	Sn	17 10 23.7	+0.7
EIL	**Elat**	5.20	162	Pn	Pn	17 09 27.8	+1.4
EIL				Sn	Sn	17 10 27.3	+1.3

IDC 11 17:24:22.4±4.1**, 17°.98S×178°.36W, h577**^{km}±22^{km}**,**
mb2.9/4**, mbtmp3.8**/5**, Error ellipse: s-maj=107.3km**
s-min=26.8km az=134.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.43	274	P	P	17 25 42.5	+0.1
	10nm,0.6s,baz=124,slow=8.5,SNR=9.4						
WRA	**Warramunga Arr**	44.67	260	P	P	17 31 44.2	-0.7
	0.4nm,0.5s,baz=96,slow=7.0,SNR=7.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	44.82	254	P	P	17 31 46.2	+0.1
	2.4nm,0.5s,baz=88,slow=9.0,SNR=84						
ASAR				PcP	PcP	17 33 15.4	0.0
	0.3nm,0.6s,baz=106,slow=4.3,SNR=5.7						
	2.4nm,0.5s						
PETK	**Petropavlovsk-**	73.76	345	P	P	17 34 58.4	+0.2
	1.5nm,0.8s,baz=126,slow=7.8,SNR=4.2						
	1.5nm,0.8s						
ILAR	**Eielson Array**	85.94	13	P	P	17 36 01.0	-0.5
	0.1nm,0.5s,baz=216,slow=4.5,SNR=1.7						
	0.1nm,0.5s						

TAP 11 17:29:39.9, 23°.98N×121°.59E, h10^{km}**, ML1.7, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	0.01	119	P	Pg	17 29 42.5	+0.7
	baz=113						
HWA				S	Sg	17 29 43.7	+0.7
	baz=113						
TWD	**Chiawan**	0.10	2	P	Pg	17 29 43.5	+0.9
	baz=6.0						
TWD				S	Sg	17 29 45.5	+1.1
	baz=6.0						
ETL	**Fush Village**	0.18	9	P	Pb	17 29 44.7	-0.6
	baz=8.0						
ETL				S	Sg	17 29 47.5	+1.0
	baz=8.0						
NACB	**Ninganchiao**	0.19	0	P	Pb	17 29 45.0	-0.6
NACB				S	Sg	17 29 47.9	+1.1
ESL	**Shilin**	0.22	221	P	Pg	17 29 45.1	+0.5
	baz=219						
ESL				*e*S	Sg	17 29 49.0	+1.3
	baz=219						
ETLH	**Xiulin Townshi**	0.24	336	P	Pb	17 29 46.1	-0.4
	baz=335						
ETLH				S	Sg	17 29 50.0	+1.5
	baz=335						
WHF	**Hehuan Shan**	0.34	298	P	Pb	17 29 47.9	-0.4
	baz=298						
WHF				S	Sb	17 29 53.4	-0.6
	baz=298						
EGFH	**Guangfu**	0.35	206	P	Pg	17 29 47.5	+0.6
	baz=205						
EGFH				S	Sb	17 29 53.8	+0.1
	baz=205						
OWD	**Renai**	0.38	266	*e*P	Pb	17 29 48.4	-0.4
	baz=265						
OWD				*e*S	Sb	17 29 54.0	-0.9
	baz=265						
CHGB	**Renai**	0.39	281	*e*P	Pb	17 29 48.7	-0.4
	baz=281						
CHGB				*e*S	Sb	17 29 55.0	-0.2
	baz=281						
FUSS	**Fushou**	0.41	310	P	Pb	17 29 49.5	+0.1
	baz=309						
FUSS				S	Sb	17 29 55.5	-0.4
	baz=309						
WUSB	**Renai**	0.43	271	*e*P	Pb	17 29 49.9	+0.1
	baz=271						
WUSB				*e*S	Sb	17 29 56.2	-0.2
	baz=271						
TWT	**Tachien**	0.47	305	*e*P	Pb	17 29 50.3	0.0
	baz=303						
TWT				*e*S	Sb	17 29 57.8	+0.4
	baz=303						
VWDT	**VWDT**	0.47	241	*e*P	Pb	17 29 50.1	-0.2
	baz=241						
VWDT				*e*S	Sb	17 29 57.6	+0.3
	baz=241						
TDCB	**Techi**	0.48	304	*e*P	Pb	17 29 50.2	-0.4
	baz=303						
TDCB				*e*S	Sb	17 29 57.8	+0.1
	baz=303						
NNSB	**Datong**	0.48	337	*e*P	Pb	17 29 50.7	+0.2
	baz=336						
NNSB				*e*S	Sb	17 29 57.3	-0.5
	baz=336						
NNS	**Nan Shan**	0.50	336	*e*P	Pb	17 29 51.0	+0.2
	baz=336						
NNS				*e*S	Sb	17 29 58.3	+0.1
	baz=336						
HGSD	**Ruisui**	0.51	198	*e*P	Pb	17 29 50.9	-0.1
	baz=197						
HGSD				*e*S	Sb	17 29 59.4	+1.0
	baz=197						
EHY	**Hungye**	0.54	208	*e*P	Pb	17 29 51.1	-0.3
	baz=206						
EHY				*e*S	Sb	17 29 59.5	+0.4
	baz=206						
LATG	**Datong**	0.55	354	*e*S	Sb	17 29 59.9	+0.1
	baz=353						
SSLB	**Suanglung**	0.62	252	*e*P	Pb	17 29 52.5	-0.3
	baz=251						
SSLB				*e*S	Sb	17 30 01.6	+0.1
	baz=251						
WCS	**Beigang Elemen**	0.63	277	*e*P	Pb	17 29 53.0	0.0
	baz=276						
WCS				*e*S	Sb	17 30 02.6	+0.8
	baz=276						
SMLT	**Sun Moon Lake**	0.64	261	*e*P	Pb	17 29 53.3	0.0
	baz=260						
SMLT				*e*S	Sb	17 30 02.5	+0.2
	baz=260						
YULB	**Yu-li**	0.65	205	*e*P	Pb	17 29 53.2	-0.1
	baz=204						
YULB				*e*S	Sb	17 30 03.2	+0.8
	baz=204						
ENTT	**Nioudou**	0.66	358	*e*P	Pb	17 29 53.5	+0.1
	baz=358						
ENTT				*e*S	Sb	17 30 02.9	+0.3
	baz=358						
NDS	**Dongshan**	0.66	10	*e*S	Sb	17 30 03.5	+0.8
	baz=9.0						
WHP	**Taichung City**	0.66	297	*e*P	Pg	17 29 53.2	+0.4
	baz=296						
WHP				*e*S	Sb	17 30 03.3	+0.5
	baz=296						
YHNB	**Yeheng**	0.71	344	*e*P	Pb	17 29 54.3	-0.1
	baz=343						
YHNB				*e*S	Sb	17 30 04.8	+0.5
	baz=343						
NSK	**Sanguang**	0.72	343	*e*P	Pb	17 29 54.4	-0.2
	baz=343						
NSK				*e*S	Sb	17 30 05.2	+0.6
	baz=343						
TWE	**Neicheng**	0.74	5	*e*P	Pb	17 29 55.0	+0.1
	baz=6.0						
TWE				*e*S	Sb	17 30 05.6	+0.6
	baz=6.0						
FUSB	**Fushanzhiwuyua**	0.77	360	*e*S	Sb	17 30 07.0	+0.9
	baz=359						
NWLT	**Wulai**	0.80	354	*e*S	Sb	17 30 07.6	+0.9
	baz=354						
LIOB	**Emei**	0.84	322	*e*S	Sn	17 30 09.3	-1.0
	baz=321						
ALS	**Alishan**	0.86	237	*e*P	Pb	17 29 56.9	-0.2
	baz=236						
ALS				*e*S	Sb	17 30 09.4	+0.6
	baz=236						

*MAN **11** 17:38:37.9, 14°.16N×120°.32E, h95^{km}, mb4.6, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*
ISC 11 17:38:37.6±1.4**, 14°.16N**±0°.05×**120°.34E**±0°.10**, h120**^{km}**, n8,**
σ**1^{s}51**/13**, 8D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACP	**Maragondon, Ca**	0.38	74	⇓*e*P	Pn	17 38 54.4	-0.5
TGY	**Tagaytay City**	0.58	95	⇓*e*P	Pn	17 38 55.2	-0.9
PGP	**Puerto Galera**	0.88	137	⇓*e*P	Pn	17 38 58.1	-0.5
PGP				*i* S	Sn	17 39 12.2	-2.1
LQP	**Lukban**	1.16	92	⇓*e*P	Pn	17 39 00.6	-0.9
LQP				*e*S	Sn	17 39 23.0	+3.4
BALP	**Baler**	1.98	37	⇓*e*P	Pn	17 39 11.2	+0.4
BALP				*e*S	Sn	17 39 36.6	+0.5
SMPP	**San Manuel, Pa**	2.01	9	⇓*e*P	Pn	17 39 10.7	-0.5
SMPP				*e*S	Sn	17 39 35.9	-1.1
SAMP	**Sagada Mountai**	2.96	10	⇓*e*P	Pn	17 39 23.9	+0.5
ENPP	**El Nido**	3.06	197	⇓*e*P	Pn	17 39 26.2	+1.4
ENPP				*e*S	Sn	17 40 00.5	-0.6

*MDD **11** 17:47:03.0±0.4, 35°.52N×3°.77W, h0^{km}, mb_Lg2.3/16, Error ellipse: s-maj=3.4km s-min=2.2km az=174.0*
*SFS **11** 17:47:03.0, 35°.85N×3°.77W, ML2.3, ALBORAN SUR*
*CNRM **11** 17:47:03.1, 35°.48N×3°.78W, h20^{km}, ml2.9*
*INMG **11** 17:47:03.2±1.5, 35°.52N×3°.78W, h3^{km}±4^{km}, ML2.2, Error ellipse: s-maj=3.2km s-min=2.2km az=16.0*
*IGIL **11** 17:47:04.1, 35°.52N×3°.77W, h1^{km}, ML2.2*
ISC 11 17:47:03.3±0.9**, 35°.46N**±0°.03×**3°.76W**±0°.02**, h20**^{km}±6^{km}**,**
n40, σ**1^{s}30**/73**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	0.29	211	P	Pb	17 47 09.8	0.0
PALE				S	Sb	17 47 13.9	-0.4
PVLZ	**Peæn de**	0.53	237	P	Pb	17 47 13.7	-0.2
PVLZ				S	Sb	17 47 21.1	-0.1
GOG	**Mont Gurugu**	0.67	111	P	Pb	17 47 16.5	+0.1
GOG				S	Sb	17 47 25.3	0.0
EMEL	**Melilla**	0.68	104	Pg	Pb	17 47 16.5	+0.1
EMEL				Sg	Sb	17 47 26.0	+0.6
WMELI	**Melilla**	0.68	102	P	Pb	17 47 16.6	+0.1
WMELI				S	Sb	17 47 25.2	-0.2
EALB	**Alboran**	0.76	51	Pg	Pn	17 47 17.9	-0.9
EALB				Sg	Sb	17 47 27.1	-0.6
CHAS	**Isla Isabel II**	1.12	104	P	Pn	17 47 22.7	-1.2
CHAS				S	Sb	17 47 36.4	-1.8
TAF	**Taforalt**	1.28	120	P	Pn	17 47 25.4	-0.8
TAF				S	Sb	17 47 45.7	+3.0
EMIJ	**Mijas**	1.37	324	Pg	Pn	17 47 26.9	-0.4
EMIJ				Sg	Sb	17 47 44.9	-0.6
EMIJ				*i* Vmb_Lg		17 47 46.9	
CEU	**Ceuta**	1.38	289	P	Pn	17 47 25.4	-2.0
CEU				S	Sn	17 47 40.0	-5.2
ECEU	**Ceuta**	1.39	289	Sn	Sn	17 47 44.7	-0.6
EMAL	**Malaga-Limoner**	1.40	337	P	Pb	17 47 30.0	+1.2
EMAL				S	Sb	17 47 45.7	-0.6
ELGU	**Los Guajares,**	1.41	4	Pn	Pn	17 47 27.2	-0.6
ELGU				Sg	Sb	17 47 45.8	-0.6
ELGU				*i* Vmb_Lg		17 47 45.9	
JBK	**JBK**	1.49	139	P	Pb	17 47 30.8	+0.3
JBK				S	Sn	17 47 46.7	-1.4
EBER	**Berja**	1.59	26	Pn	Pn	17 47 30.4	-0.1
EBER				Sn	Sn	17 47 50.3	-0.3
EBER				*i* Vmb_Lg		17 47 54.0	
EGOR	**Sierra Gorda,**	1.67	350	Pn	Pb	17 47 31.9	-1.5
EGOR				*i* Vmb_Lg		17 47 43.3	
EGOR				Sn	Sn	17 47 52.1	-0.3
EQUE	**Quentar**	1.76	8	Pn	Pn	17 47 32.7	0.0
EQUE				*i* Vmb_Lg		17 48 02.4	
ENIJ	**Nijar**	1.96	39	*i* Vmb_Lg		17 47 58.5	
ENIJ				Sn	Sn	17 47 59.2	-0.2
ESPR	**Espera**	2.20	310	Sn	Sn	17 48 05.6	+0.3
ESPR				*i* Vmb_Lg		17 48 15.0	
EQES	**Quesada**	2.40	13	Pn	Pn	17 47 41.8	+0.3
EQES				Sn	Sn	17 48 10.6	+0.2
EQES				*i* Vmb_Lg		17 48 15.3	
MD31	**MD31**	2.72	198	P	Pn	17 47 47.3	+1.4
MD31				S	Sn	17 48 19.5	+1.3
EADA	**Adamuz**	2.78	347	Pn	Pn	17 47 46.9	+0.2
EADA				Sn	Sn	17 48 19.7	+0.1
EADA				*i* Vmb_Lg		17 48 25.1	
EADA				Sg	Sb	17 48 30.3	+4.4
EZAR	**Zarzadilla de**	2.92	34	Pn	Pn	17 47 48.6	-0.1
EZAR				Sn	Sn	17 48 23.5	+0.2
ECAB	**El Cabril**	2.93	333	Pn	Pn	17 47 48.7	0.0
ECAB				Sn	Sn	17 48 23.1	-0.2
ECAB				*i* Vmb_Lg		17 48 34.7	
EMIN	**Mina Concepcio**	3.28	315	Pn	Pn	17 47 53.7	+0.1
EMIN				Sn	Sn	17 48 31.5	-0.5
EMIN				*i* Vmb_Lg		17 48 55.7	
ETOB	**Tobarra**	3.63	28	Pn	Pn	17 47 59.1	+0.6
ETOB				Sn	Sn	17 48 40.0	-0.8
ETOB				*i* Vmb_Lg		17 49 00.0	
EGRO	**El Granado**	3.64	306	Pn	Pn	17 47 58.7	+0.1
EGRO				Sn	Sn	17 48 40.4	-0.5
EGRO				*i* Vmb_Lg		17 48 53.4	
PVAQ	**Vaqueiros**	3.73	302	*e*Pn	Pn	17 48 00.5	+0.8
PVAQ				*e*Sn	Sn	17 48 41.8	-1.3
PVAQ				A	A	17 48 43.2	
	4.9nm,0.6s						
PVAQ	**Vaqueiros**	3.73	302	P	Pn	17 48 00.6	+0.8
PVAQ				S	Sn	17 48 41.6	-1.5
PBAR	**Barrancos**	3.77	317	*e*Pn	Pn	17 48 02.9	+2.6
PBAR				*e*Sn	Sn	17 48 44.3	+0.2
PBAR				A	A	17 48 49.9	
	2.1nm,0.8s						
PBDV	**Barranco-do-Ve**	3.81	299	*e*Pn	Pn	17 48 02.4	+1.6
PBDV				*e*Sn	Sn	17 48 44.0	-1.0
PBDV				A	A	17 48 44.9	
	6.6nm,0.5s						
PCVE	**Castro Verde**	4.07	303	*e*Pn	Pn	17 48 06.6	+2.2
PAB	**San Pablo**	4.10	354	Pn	Pn	17 48 05.2	+0.2
PAB				*i* Vmb_Lg		17 49 03.8	
EBAD	**Badajoz**	4.19	323	Pn	Pn	17 48 06.3	+0.2
EBAD				Sn	Sn	17 48 53.0	-1.4
EBAD				*i* Vmb_Lg		17 49 01.4	
MESJ	**Messejana**	4.30	305	*e*P	Pn	17 48 08.2	+0.7
MESJ				*e*S	Sn	17 48 55.0	-2.1
MESJ				IAML		17 48 60.0	
	comp=N,4.3nm,0.1s						
MESJ	**Messejana**	4.30	305	*e*Pn	Pn	17 48 08.7	+1.1
MESJ				*e*Sn	Sn	17 48 56.0	-1.1
MESJ				A	A	17 49 00.9	
	comp=N,3.2nm,0.4s						
MORF	**Marmelete**	4.35	296	*e*Sn	Sn	17 48 58.5	0.0
MORF				A	A	17 49 00.2	
	comp=N,4.4nm,0.3s						
EVO	**Evora**	4.58	313	*e*Pn	Pn	17 48 12.9	+1.5
EVO				*e*Sn	Sn	17 49 03.3	-0.7
EVO				A	A	17 49 07.9	
	comp=N,2.3nm,0.3s						
PNCL	**Nicolau / Gran**	4.65	306	*e*Pn	Pn	17 48 12.9	+0.5
PNCL				A	A	17 49 04.8	
	comp=N,2.2nm,0.5s						
PNCL				*e*Sn	Sn	17 49 04.9	-0.9
PMTG	**Montargil**	5.06	317	*e*Pn	Pn	17 48 19.6	+1.6

IDC 11 17:58:33.9±2.9**, 6°.86S×128°.51E, h0**^{km}**, mb3.3**/1**,**
mbtmp3.5/3**, ML3.8**/2**, Error ellipse: s-maj=310.0km**
s-min=32.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.18	157	Pn	Pn	18 01 55.0	-1.2
	0.6nm,0.3s,baz=335,slow=13,SNR=18						
WRA				Sn	Sn	18 04 20.5	-14
	0.6nm,0.3s,baz=343,slow=22,SNR=2.7						
	0.7nm,0.3s						
ASAR	**Alice Springs**	17.50	163	P	P	18 02 40.4	-0.4
	0.3nm,0.3s,baz=340,slow=8.8,SNR=26						
ASAR				S	Sn	18 05 46.6	-8.4
	0.5nm,0.6s,baz=0.0,slow=29,SNR=5.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	67.31	327	P	P	18 09 30.6	0.0
	0.2nm,0.5s,baz=131,slow=7.9,SNR=2.2						
	0.2nm,0.5s						

*VAO **11** 17:59:33.9±0.9, 28°.04S×71°.47W, h10^{km}, mb4.4*
*IDC **11** 17:59:34.9±0.6, 27°.94S×71°.08W, h0^{km}, mb4.1/9, mbtmp4.1/12, ML4.0/3, MS3.7/24, Error ellipse: s-maj=25.0km s-min=18.2km az=89.0*
*NEIC **11** 17:59:35.7, 27°.86S×71°.37W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.25; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-2.54; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.05; $M_{\phi r}$-2.12; Fault plane solution: $M_0$3.24000×10^{15} NP1:ϕ_s171.67000°, δ66.30000°, λ81.51000°. NP2:ϕ_s12.05000°, δ25.09000°, λ108.59000°. Principal axes: T 3.1286, Plg68.0000°, Azm66.0000°; N 0.2204, Plg8.0000°, Azm175.0000°; P -3.3491, Plg21.0000°, Azm268.0000°;*
*NEIC **11** 17:59:35.8±1.8, 27°.85S±0°.03×71°.35W±0°.05, h10^{km}±1^{km}, mb4.8/35, Mwr4.3/98, Mwr4.7(GUC) Error ellipse: s-maj=8.5km s-min=2.8km az=52.0*
*SJA **11** 17:59:35.6±1.0, 27°.91S×71°.33W, h10^{km}±49^{km}, ML4.4, MW4.0*
*GUC **11** 17:59:39.5±0.9, 27°.95S×71°.13W, h29^{km}±3^{km}, ML4.6*
ISC 11 17:59:34.4±1.9**, 27°.90S**±0°.03×**71°.41W**±0°.05**, h4**^{km}±12^{km}**,**
n183, σ**1^{s}38**/174**, mb4.8**/27**, MS3.8**/19**, 14C-14D, Fault plane solution: NP1:**ϕ_s181.95726°**,** δ59.84144°**,** λ79.41533°. **NP2:**ϕ_s22.36018°**,** δ31.79636°**,** λ107.54351°. **Principal axes:** T Plg72.9864°**,** Azm65.6037°**;** N Plg9.1386°, Azm187.3206°**;** P Plg14.2257°, Azm279.6578°**; Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	0.43	136	Pg	Pb	17 59 45.0	+0.5
AC04				Sg	Sg	17 59 49.6	+1.4
AC04	**Llanos de Chal**	0.43	136	⇓*i*P	Pb	17 59 45.2	+0.7
AC04				*i* S	Sg	17 59 50.1	+1.9
AC04				IAML		17 59 50.8	
	comp=E,143µm,0.5s						
AC06	**Mina Casimiro**	1.08	60		Pb	17 59 55.0	-0.7
AC06	**Mina Casimiro**	1.08	60	⇓*i*P	Pb	17 59 55.2	-0.5
AC06				*i* S	Sb	18 00 08.0	-2.1
GO03	**Copiap**	1.08	74		Pb	17 59 55.2	-0.5
GO03	**Copiap**	1.08	74	⇓*i*P	Pb	17 59 55.4	-0.3
GO03				*i* S	Sb	18 00 07.0	-3.3
GO03	**Copiap**	1.08	74	*e*P	Pb	17 59 55.5	-0.3
GO03				*e*S	Sg	18 00 09.7	+0.4
LCO	**Las Campanas**	1.27	151		Pn	17 59 59.1	-0.1
LCO	**Las Campanas**	1.27	151	⇓*i*P	Pn	17 59 59.3	0.0
LCO				*i* S	Sb	18 00 14.6	-1.4
AC01	**Pan de Azucar**	1.89	23		Pn	18 00 07.4	0.0
AC01	**Pan de Azucar**	1.89	23	⇑*i*P	Pn	18 00 07.6	+0.2
CO05	**La Serena**	2.02	176		Pn	18 00 10.2	+1.0
CO05	**La Serena**	2.02	176	*e*P	Pn	18 00 10.3	+1.0
CO05				*e*S	Sn	18 00 33.4	-1.6
CO05				IAML		18 00 41.4	
	comp=E,12µm,0.4s						
AC02	**Maricunga**	2.29	63		Pb	18 00 15.4	-1.2
AC02	**Maricunga**	2.29	63	⇑*i*P	Pb	18 00 15.6	-0.9
AC02				*i* S	Sn	18 00 42.4	+0.1
AC02				IAML		18 00 47.5	
	comp=E,5µm,0.6s						
GO04	**Tololo Observa**	2.33	167	Pn	Pn	18 00 15.2	+1.4
GO04	**Tololo Observa**	2.33	167	⇑*i*P	Pn	18 00 15.0	+1.2
GO04				*i* S	Sb	18 00 44.7	-1.7
GO04	**Tololo Observa**	2.33	167	*e*P	Pn	18 00 15.4	+1.6
GO04				*e*S	Sn	18 00 44.1	+1.0

CO01	Juntas del Tor	2.37	151		Pn	18 00 16.4	+2.1
CO01	Juntas del Tor	2.37	151⇑	iP	Pn	18 00 16.5	+2.1
CO01				iS	Sb	18 00 45.8	-1.8
CO01				IAML		18 00 50.2	
	comp=N,3µm,0.4s						
CO06	Fray Jorge	2.77	184		Pn	18 00 19.8	+0.1
AROD	Rodeo	2.83	144	eP	Pb	18 00 24.7	-0.9
ACDV	Cuesta del Vie	3.02	139	iP	Pb	18 00 28.4	-0.6
ACDV				IAML		18 01 53.0	
	comp=Z,352nm,0.9s						
GO02	Mina Guanaco	3.17	31	Pn	Pn	18 00 26.3	+0.8
GO02	Mina Guanaco	3.17	31⇑	iP	Pn	18 00 26.4	+1.0
GO02				iS	Sn	18 01 03.6	-0.3
GO02				IAML		18 01 23.1	
	comp=N,3µm,0.6s						
CO02	Combarbal	3.31	174		Pn	18 00 28.0	+0.8
CO02	Combarbal	3.31	174	eP	Pn	18 00 28.1	+0.9
ACCO	Cerro Coronel	3.37	143	iP	Pb	18 00 32.5	-2.6
ACCO				IAML		18 01 51.5	
	comp=Z,379nm,0.7s						
PB14	IPOC Station P	3.38	16		Pn	18 00 27.8	-0.5
PB14	IPOC Station P	3.38	16	eP	Pn	18 00 28.1	-0.2
PB14				IAML		18 01 26.1	
	comp=E,654nm,0.6s						
PB14	IPOC Station P	3.38	16	iP	Pn	18 00 28.0	-0.3
PB14				eS	Sb	18 01 19.7	+3.0
PB14				IAML		18 01 25.9	
	comp=Z,726nm,0.6s						
ACLC	CERRO LA CRUZ	4.20	112	iP	Pn	18 00 42.2	+2.8
ACLC				IAML		18 02 02.5	
	comp=Z,409nm,1.3s						
RTLS	Leoncito	4.30	155	eP	Pn	18 00 45.1	+4.2
RTLS				IAML		18 02 08.2	
	comp=Z,310nm,0.7s						
ZON	Zonda	4.34	148	Pn	Pn	18 00 44.4	+3.1
PB10	IPOC Station P	4.43	10	Pn	Pn	18 00 41.4	-1.1
PB10	IPOC Station P	4.43	10	eP	Pn	18 00 41.5	-1.1
PB10				IAML		18 02 06.8	
	comp=Z,274nm,0.6s						
VA06	Catapilco	4.65	179		Pn	18 00 45.9	+0.5
VA03	San Esteban	4.91	172		Pn	18 00 50.2	+1.1
PB15	IPOC Station P	4.99	21		Pn	18 00 50.6	+0.3
ROC1	El Roble	5.07	176		Pn	18 00 52.2	+0.7
VA01	Torpederas	5.11	182	Pn	Pn	18 00 52.4	+0.6
ASAL	Salagasta	5.18	155	eP	Pn	18 00 56.8	+3.9
ASAL				IAML		18 02 29.3	
	comp=Z,489nm,1.4s						
PEL	Peldehue	5.27	173		Pn	18 00 55.2	+1.2
MT02	Curacav	5.35	178		Pn	18 00 55.5	+0.4
ARCO	CERRO ARCO	5.37	157	eP	Pn	18 00 59.6	+4.1
ARCO				IAML		18 02 40.1	
	comp=Z,274nm,0.6s						
PB06	IPOC Station P	5.43	18		Pn	18 00 55.3	-1.0
MT05	Renca	5.51	174	Pn	Pn	18 00 58.3	+1.0
AAGR	Agrelo	5.63	157	eP	Pn	18 01 02.3	+3.2
AAGR				IAML		18 02 48.0	
	comp=Z,500nm,1.7s						
PB04	IPOC Station P	5.66	12		Pn	18 00 57.7	-1.7
LVC	Limon Verde	5.73	24	Pn	Pn	18 01 01.3	+0.6
	comp=Z,8.5nm,0.3s,baz=168,slow=9.0,SNR=40						
LVC				Lg	Lg	18 02 28.0	
	comp=Z,24nm,0.3s,baz=336,slow=19,SNR=7.3						
LVC				LR	LR	18 03 21.0	
	comp=Z,889nm,18.5s,baz=226,slow=40						
	comp=Z,16nm,0.3s						
LVC	Limon Verde	5.73	24	Pn	Pn	18 01 00.6	0.0
LVC	Limon Verde	5.73	24	eP	Pn	18 01 00.7	0.0
VA05	Santo Domingo	5.75	182		Pn	18 01 00.6	+0.1
MT09	Talagante	5.87	177		Pn	18 01 03.1	+0.7
LMEL	Las Melosas	6.02	170		Pn	18 01 03.9	-0.6
BO04	La Punta	6.11	174		Pn	18 01 06.5	+0.9
PB07	IPOC Station P	6.30	13		Pn	18 01 06.7	-1.6
PB09	IPOC Station P	6.38	18		Pn	18 01 08.3	-1.2
MRA	San Martin	6.68	134	eP	Pn	18 01 15.0	+1.6
MRA				IAML		18 03 07.9	
	comp=Z,256nm,0.8s						
PB02	IPOC Station P	6.69	12		Pn	18 01 11.8	-1.8
PB01	IPOC Station P	7.04	15		Pn	18 01 16.7	-1.8
GO05	Huala	7.11	183		Pn	18 01 18.1	-1.1
PATCX	Punta Patache	7.14	9	Pn	Pn	18 01 17.1	-2.6
TA01	Diego Aracena	7.38	9	Pn	Pn	18 01 20.3	-2.8
ML02	Panimavida	7.84	180	Pn	Pn	18 01 30.1	+0.8
PB08	IPOC Station P	7.99	15		Pn	18 01 30.6	-1.1
PB11	IPOC Station P	8.26	12	Pn	Pn	18 01 33.1	-2.1
H03N1	Juan Fernandez	8.50	228	Pn	Pn	18 01 37.7	-0.4
	baz=106,slow=17						
H03N1				T	T	18 10 34.7	
	baz=55,slow=72,SNR=8362						
H03N2	Juan Fernandez	8.51	228	Pn	Pn	18 01 37.7	-0.6
	baz=106,slow=17						
H03N2				T	T	18 10 34.1	
	baz=55,slow=72,SNR=4154						
H03N3	Juan Fernandez	8.52	228	Pn	Pn	18 01 37.7	-0.7
	baz=106,slow=17						
H03N3				T	T	18 10 28.6	
	baz=55,slow=72,SNR=5515						
H03S3	Juan Fernandez	8.74	226	Pn	Pn	18 01 39.8	-1.7
H03S3				T	T	18 10 33.0	
	baz=99,SNR=12						
H03S1	Juan Fernandez	8.75	226	Pn	Pn	18 01 40.0	-1.6
H03S1				T	T	18 10 37.3	
	baz=99,SNR=9.7						
H03S2	Juan Fernandez	8.76	226	Pn	Pn	18 01 39.9	-1.8
H03S2				T	T	18 10 51.5	
	baz=99,SNR=12						
PB12	IPOC Station P	9.29	6		Pn	18 01 48.2	-1.2
LPAZ	La Paz	11.94	15	Pn	Pn	18 02 26.0	-0.1
	comp=Z,1.1nm,0.3s,baz=209,slow=6.2,SNR=19						
LPAZ				LR	LR	18 07 30.1	
	comp=Z,220nm,20.1s,baz=200,slow=40						
	comp=Z,3.6nm,0.4s						
LPAZ	La Paz	11.94	15		Pn	18 02 25.5	-0.6
CPUP	Villa Florida	12.64	86	Pn	Pn	18 02 35.0	0.0
	comp=Z,0.3nm,0.3s,baz=225,slow=11,SNR=2.3						
CPUP				Lg	Lg	18 05 57.5	
	comp=Z,0.3nm,0.3s,baz=350,slow=16,SNR=2.9						
CPUP				LR	LR	18 07 51.4	
	comp=Z,516nm,18.2s,baz=268,slow=40						
CPUP	Villa Florida	12.64	86	Pn	Pn	18 02 33.9	-1.1
CPUP	Villa Florida	12.64	86	eP	Pn	18 02 34.9	-0.2
PLCA	Paso Flores	12.82	177	Pn	Pn	18 02 39.4	+1.8
	comp=Z,0.1nm,0.3s,baz=328,slow=13,SNR=2.3						
PLCA				Lg	Lg	18 06 13.4	
	comp=Z,0.1nm,0.3s,baz=354,slow=6.8,SNR=2.8						
PLCA				LR	LR	18 07 54.0	
	comp=Z,308nm,18.7s,baz=351,slow=39						
	comp=Z,1.2nm,0.9s						
ITQB	Itaqui	13.09	101	Pn	Pn	18 02 41.2	0.0
ITQB	Itaqui	13.09	101	eP	Pn	18 02 40.1	-1.0
CPSB	Cacapava Do Su	15.90	103	eP	Pn	18 03 16.2	-2.8
PLTB	Pedras Altas	15.92	108		Pn	18 03 19.0	-0.4
PLTB	Pedras Altas	15.92	108	eP	Pn	18 03 19.1	-0.4
NNA	Nana	16.63	341	LR	LR	18 08 30.5	
	comp=Z,121nm,21.4s,baz=182,slow=32						
PTLB	Pontes e Lacer	16.82	45	eP	P	18 03 33.0	-0.1
ITAB	Concordia	17.11	92	eP	Pn	18 03 34.0	-0.5
PTGB	Pitanga	17.63	84	eP	Pn	18 03 41.1	-0.1
TRCB	Terra Rica	17.71	78	P	Pn	18 03 41.1	-0.9
TRCB				IAmb	IAmb	18 03 54.8	
	comp=Z,28nm,0.7s						
VILB	Vilhena	18.18	37	eP	P	18 03 48.9	+0.7
ETMB	Extrema	18.64	16	eP	P	18 03 53.4	+0.2
SALV	Santo Antonio	18.82	54	eP	Pn	18 03 55.9	+0.2
PCMB	Pacaembu	19.33	76	eP	P	18 04 00.9	+0.1
TER01	Tubaro-SC	19.64	97	eP	P	18 04 04.5	+0.3
NBRS	Nobres	19.84	50	eP	P	18 04 06.4	-0.1
TIJ01	Guaruva-PR	20.19	88	eP	P	18 04 08.5	-1.8
FRTB	Fartura	20.20	82	eP	P	18 04 10.2	-0.2
ITRB	Iturama	20.89	72	eP	P	18 04 17.6	-0.3
DVLD	Doverlandia	21.01	62	eP	P	18 04 20.1	+1.0
PDRB	Porto dos Gac	21.25	43	eP	P	18 04 21.2	-0.6
ATAH	Atahualpa	21.68	341	LR	LR	18 11 18.1	
	comp=Z,70nm,20.2s,baz=171,slow=32						
BB19B	Bebedouro	21.89	77	eP	P	18 04 27.4	-1.2
CLDB	Colider	22.40	44	eP	P	18 04 32.4	-1.7
VAO	Valinhos	22.59	83	eP	P	18 04 35.0	-1.1
PARB	Paraibuna	23.67	85	eP	P	18 04 45.6	-1.7
SLP01	Ubatuba-SP	24.09	85	eP	P	18 04 49.1	-2.2
SNDB	Serra Nova Dou	24.60	54	eP	P	18 04 53.9	-2.1
BDFB	Brasilia	24.86	65	P	P	18 04 57.0	-1.4
	comp=Z,5.3nm,0.7s,baz=216,slow=11,SNR=6.1						
BDFB				LR	LR	18 16 00.5	
	comp=Z,384nm,19.6s,baz=238,slow=40						
	comp=Z,5.3nm,0.7s						
BDFB	Brasilia	24.86	65	P	P	18 04 57.4	-1.0
PEXB	Peixe	26.72	59	eP	P	18 05 14.8	-0.3
USHA	Ushuaia	27.00	176	P	P	18 05 17.9	+0.7
	comp=Z,3.6nm,0.8s,baz=310,slow=11,SNR=2.3						
	comp=Z,3.6nm,0.8s						
GDU01	Guandu, BA	32.81	71	eP	P	18 06 07.6	-1.5
RPN	Rapa Nui	33.56	262	LR	LR	18 16 13.0	
	comp=Z,178nm,19.7s,baz=150,slow=30						
NBPN	Ponto Novo - B	33.83	66	eP	P	18 06 17.1	-1.1
ZARC	Zaragoza, Cauc	35.34	354	P	P	18 06 30.4	-0.7
NBLA	Lagarto - SE	35.72	69	eP	P	18 06 33.0	-1.5
BAUV	El Baul	36.77	6	P	P	18 06 43.2	0.0
BAUV				IAmb	IAmb	18 06 44.4	
	comp=Z,28nm,1.2s						
NBMA	Muriti-CE	37.01	63	eP	P	18 06 45.2	-0.3
PMSA	Palmer Station	37.19	175	LR	LR	18 22 00.3	
	comp=Z,146nm,18.6s,baz=15,slow=36						
ORCD	Orcadas	37.44	159	P	P	18 06 48.1	-0.4
ORCD				IAmb	IAmb	18 06 49.4	
	comp=Z,14nm,0.6s						
MDP	Montagnes des	37.47	32	LR	LR	18 24 07.6	
	comp=Z,82nm,18.6s,baz=223,slow=39						
NBPB	Pedra_Branca-C	37.51	60	eP	P	18 06 48.8	-0.9
SJCC	San Jacinto, C	37.75	354	P	P	18 06 50.9	-0.7
SJCC				IAmb	IAmb	18 06 56.5	
	comp=Z,15nm,1.1s						
RCBR	Riachuelo	40.20	64	LR	LR	18 24 58.0	
	comp=Z,182nm,19.3s,baz=348,slow=38						
BELA	Belgrano 2	52.79	171	P	P	18 08 50.9	+0.6
VNA3	Neumayer Olymp	54.83	160	P	P	18 09 05.8	+0.4
VNA1	Neumayer--Stat	55.10	159	P	P	18 09 08.5	+1.3
VNA2	Neumayer--Watz	55.46	159	P	P	18 09 10.2	+0.3
	baz=275,slow=9.0						
SNAA	Sanae	57.06	159	P	P	18 09 21.5	+0.1
SNAA	Sanae	57.06	159	LR	LR	18 34 09.6	
	comp=Z,44nm,18.2s,baz=325,slow=36						
SNAA	Sanae	57.06	159	P	P	18 09 21.3	0.0
SNAA				IAmb	IAmb	18 09 22.5	
	comp=Z,11nm,1.0s						
TROLL	Troll, Antarti	58.77	160	P	P	18 09 33.6	+0.2
H06E1	SOCORRO T-PHAS	60.14	316	T	T	19 15 10.3	
	SNR=12						
X48A	Hartselle	63.75	346	P	P	18 10 06.6	-0.7
X48A				IAmb	IAmb	18 10 09.4	
	comp=Z,5.1nm,0.9s						
SWET	Sewanee	64.25	347	P	P	18 10 11.5	+0.8
SWET				IAmb	IAmb	18 10 12.3	
	comp=Z,6.3nm,0.9s						
TXAR	Lajitas Array	64.74	329	P	P	18 10 16.0	+1.9
	comp=Z,0.4nm,0.6s,baz=147,slow=7.5,SNR=4.7						
TXAR				LR	LR	18 33 07.9	
	comp=Z,14nm,21.4s,baz=137,slow=31						
	comp=Z,0.4nm,0.6s						
T47A	Sharon Grove	66.21	346	P	P	18 10 24.0	+0.7
T47A				IAmb	IAmb	18 10 24.9	
	comp=Z,5.5nm,0.8s						
LCAR	Lake Charles	66.29	343	P	P	18 10 24.8	+1.0
LCAR				IAmb	IAmb	18 10 25.7	
	comp=Z,4.7nm,0.8s						
S44A	Carbondale	67.36	345	P	P	18 10 30.7	0.0
S44A				IAmb	IAmb	18 10 32.4	
	comp=Z,7.3nm,0.8s						
MGMO	Mountain Grove	67.61	342	P	P	18 10 33.0	+0.7
MGMO				IAmb	IAmb	18 10 34.5	
	comp=Z,4.6nm,1.1s						
FVM	French Village	67.92	344	P	P	18 10 34.7	+0.6
FVM				IAmb	IAmb	18 10 36.3	
	comp=Z,7.5nm,0.8s						
S39A	Bolivar	68.41	341	P	P	18 10 38.6	+1.4
S39A				IAmb	IAmb	18 10 39.5	
	comp=Z,4.7nm,0.9s						
R40A	Maddies Statio	68.68	342	P	P	18 10 39.9	+1.0
P43A	Skaggs, Pawnee	69.28	345	P	P	18 10 42.1	-0.5
P43A				IAmb	IAmb	18 10 44.7	
	comp=Z,7.3nm,0.8s						
P40A	Paris	69.79	343	P	P	18 10 46.8	+1.0
L59A	Walton	69.82	357	P	P	18 10 47.4	+1.4
L59A				IAmb	IAmb	18 10 48.7	
	comp=Z,6.5nm,0.9s						
L61B	Northampton	70.00	359	P	P	18 10 48.4	+1.3
L61B				IAmb	IAmb	18 10 49.6	
	comp=Z,7.6nm,0.9s						
VNDA	Vanda	70.18	191	P	P	18 10 50.0	+2.1
	comp=Z,1.0nm,1.0s,baz=162,slow=3.5,SNR=4.1						
	comp=Z,1.0nm,1.0s						
G62A	West of Eustis	72.77	1	P	P	18 11 05.3	+1.6
DBIC	Dimbokro	72.77	73	P	P	18 11 04.2	-0.3
	comp=Z,10nm,0.7s,baz=250,slow=5.2,SNR=13						
DBIC				LR	LR	18 39 41.6	
	comp=Z,28nm,21.6s,baz=177,slow=33						
	comp=Z,10nm,0.7s						
DBIC	Dimbokro	72.77	73	P	P	18 11 03.8	-0.7
K31A	O'Neill	74.56	339	P	P	18 11 14.0	-0.4
ECSD	EROS Data Cent	74.94	341	P	P	18 11 17.7	+1.2
ECSD				IAmb	IAmb	18 11 18.8	
	comp=Z,3.7nm,0.8s						
SUR	Sutherland	77.35	120	LR	LR	18 42 20.1	
	comp=Z,62nm,18.5s,baz=244,slow=33						
KOWA	Kowa	77.66	66	P	P	18 11 32.2	-0.3
KOWA				IAmb	IAmb	18 11 33.1	
	comp=Z,6.9nm,0.8s						
PDAR	Pinedale Array	78.60	332	P	P	18 11 41.3	+3.8
	comp=Z,0.4nm,0.6s,baz=131,slow=4.5,SNR=1.8						
PDAR				LR	LR	18 44 34.3	
	comp=Z,33nm,19.0s,baz=144,slow=34						
	comp=Z,0.4nm,0.6s						
MAW	Mawson	78.87	164	LR	LR	18 45 41.1	
	comp=Z,44nm,19.6s,baz=230,slow=35						
NVAR	Mina Array Bea	79.23	324	P	P	18 11 43.8	+2.7
	comp=Z,0.6nm,0.7s,baz=130,slow=6.5,SNR=4.8						
NVAR				LR	LR	18 42 47.4	
	comp=Z,55nm,18.2s,baz=37,slow=33						
	comp=Z,0.6nm,0.7s						
TSUM	Tsumeb	80.39	107	LR	LR	18 42 55.7	
	comp=Z,55nm,18.3s,baz=252,slow=32						
TORD	Torodi Ar. Bea	81.64	70	P	P	18 11 54.0	-0.3
	comp=Z,5.7nm,0.8s,baz=256,slow=5.1,SNR=1.6						
BOSA	Boshof	82.45	118	P	P	18 11 58.2	-0.3
	comp=Z,3.5nm,0.6s,baz=260,slow=2.8,SNR=12						
	comp=Z,3.5nm,0.6s						
BOSA	Boshof	82.45	118	IAmb	IAmb	18 11 58.8	
	comp=Z,9.1nm,1.1s						
LSZ	Lusaka	91.18	108	LR	LR	18 51 43.7	
	comp=Z,76nm,18.6s,baz=200,slow=34						
AFI	Afiamalu	92.50	253	LR	LR	18 43 24.5	
	comp=Z,30nm,21.9s,baz=148,slow=28						
YKA	Yellowknife Ar	96.47	341	P	P	18 13 05.1	+0.7
	comp=Z,0.4nm,0.7s,baz=137,slow=4.5,SNR=9.0						
YKA				LR	LR	18 57 55.1	
	comp=Z,33nm,19.0s,baz=312,slow=36						
	comp=Z,0.4nm,0.7s						
DLBC	Dease Lake	98.83	333	LR	LR	18 55 39.6	
	comp=Z,16nm,19.5s,baz=280,slow=34						
KEST	Kesra	98.91	54	LR	LR	18 58 20.3	
	comp=Z,88nm,21.2s,baz=278,slow=36						
ASAR	Alice Springs	123.22	208	PKP	PKPdf	18 18 33.1	-0.1
	comp=Z,0.5nm,0.5s,baz=129,slow=1.6,SNR=29						
H11S2	WAKE ISLAND Hy	126.19	273	T	T	20 37 49.5	
	baz=112,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	126.20	273	T	T	20 37 50.2	
	baz=112,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	126.20	273	T	T	20 37 50.8	
	baz=112,slow=75,SNR=22						
WRA	Warramunga Arr	126.31	210	PKP	PKPdf	18 18 39.0	-0.2
	comp=Z,1.9nm,0.6s,baz=149,slow=1.7,SNR=19						
H11N3	WAKE ISLAND Hy	126.44	275	T	T	20 38 08.4	
	baz=113,slow=75,SNR=7.2						
H11N1	WAKE ISLAND Hy	126.46	275	T	T	20 38 11.8	
	baz=113,slow=75,SNR=7.5						
H11N2	WAKE ISLAND Hy	126.46	275	T	T	20 38 18.2	
	baz=113,slow=75,SNR=7.3						
TIXI	Tiksi	134.78	351	PKP	PKPdf	18 18 54.2	+0.6
	comp=Z,0.3nm,0.5s,baz=89,slow=24,SNR=1.4						
ZALV	Zalesovo Beam	148.67	27	PKPbc	PKiKP	18 19 23.4	-0.5
	comp=Z,6.0nm,0.7s,baz=301,slow=3.4,SNR=18						
ZALV	Zalesovo Beam	148.67	27		PKPdf	18 19 17.7	-1.1
MKAR	Makanchi Array	152.05	41	PKPbc	PKiKP	18 19 31.1	-0.1
	comp=Z,3.3nm,0.8s,baz=325,slow=1.9,SNR=27						
MKAR	Makanchi Array	152.05	41		PKPdf	18 19 21.4	-2.9
CMAR	Chiang Mai Arr	167.08	135	PKPab	PKPab	18 20 46.0	-0.2
	comp=Z,0.7nm,0.9s,baz=236,slow=6.4,SNR=4.2						
PZH	PanZhiHua	173.74	101	PKP	PKPdf	18 19 43.3	-2.6

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*IDC **11** 18:19:36.1±1.0, 13°.44N×90°.74W, h0km, mb4.0/15, mbtmp4.0/16, ML4.5/1, MS3.5/13 Error ellipse: s-maj=32.9km s-min=16.2km az=52.0*

*SNET **11** 18:19:37.6±1.1, 13°.10N×91°.15W, h15km±18km, ML3.9*

*UCR **11** 18:19:38.2±1.2, 13°.14N×91°.14W, h20km±16km, ML3.8, mb4.3(NEIC)*

*NEIC **11** 18:19:42.8±2.5, 13°.48N±0°.08×90°.97W±0°.07, h38km±4km, mb4.3/79, Error ellipse: s-maj=14.0km s-min=7.2km az=220.0*

*GCG **11** 18:19:50.3±0.3, 14°.04N×91°.10W, h61km±7km, MD4.4*

ISC 11 18:19:39.9±0.6**, 13°.36N**±0°.07×**90°.99W**±0°.05**, h29km, n158, σ1^{s}25**/148**, mb4.3**/44**, MS3.5**/13**, 6C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.09	7	eP	Pb	18 20 02.6	+2.2
NUBE	Las Nubes	1.29	65	eP	Pb	18 20 04.2	+0.5
NUBE	Las Nubes	1.29	65	eP	Pb	18 20 04.2	+0.5
LOAL	Lomas de Alarc	1.33	61	eP	Pb	18 20 05.3	+0.9
LOAL	Lomas de Alarc	1.33	61	eP	Pb	18 20 05.3	+0.9
RTAL	Retalhuleu	1.35	329	Pn	Pb	18 20 02.6	-2.0
RTAL				Sn	Sn	18 20 16.9	-3.0
NBG	Las Nubes	1.37	27	eP	Pb	18 20 08.0	+2.8
CEVE	Cerro Verde	1.40	70	eP	Pb	18 20 05.8	+0.2
CEVE				IAML		18 20 38.2	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	1.40	70	eP	Pb	18 20 05.8	+0.2
CEVE				IAML		18 20 38.2	
	comp=Z,2µm,0.3s						
SBLS	San Blas	1.41	70	eP	Pb	18 20 05.8	+0.1
SBLS	San Blas	1.41	70	eP	Pb	18 20 05.8	+0.1
STG3	Santiaguito 3,	1.46	337	eP	Pb	18 20 06.6	-0.1
JAYA	Jayaque - finc	1.52	79	eP	Pb	18 20 06.6	-1.0
JAYA				IAML		18 20 40.3	
	comp=Z,817nm,0.5s						
JAYA	Jayaque - finc	1.52	79	eP	Pb	18 20 06.6	-1.0
JAYA				IAML		18 20 40.3	
	comp=Z,817nm,0.5s						
SNET	Serv Nac Est T	1.74	79		Pn	18 20 08.8	+0.5
MTO3	Montecristo	1.89	56		Pb	18 20 13.2	-0.7
MTO3	Montecristo	1.89	56⇑	eP	Pb	18 20 13.7	-0.2
MTO3	Montecristo	1.89	56⇑	eP	Pb	18 20 13.7	-0.2
LFRS	El Faro	1.89	82	eP	Pb	18 20 12.9	-0.9
LFRS	El Faro	1.89	82	eP	Pb	18 20 12.9	-0.9
ESQI	Esquipulas	2.00	53		Pn	18 20 11.8	-0.1
ESQI	Esquipulas	2.00	53	eP	Pb	18 20 15.4	-0.2
HUEH	Huehuetenango	2.01	346		Pn	18 20 12.0	-0.2
COEG	Centro de Oper	2.06	82	eP	Pb	18 20 15.0	-1.8
COEG	Centro de Oper	2.06	82	eP	Pb	18 20 15.0	-1.8
MRL	Marmol	2.13	36	eP	Pb	18 20 18.8	+0.8
RANC	El Ranchito	2.62	88⇑	eP	Pn	18 20 22.6	+2.0
RANC	El Ranchito	2.62	88⇑	eP	Pn	18 20 22.6	+2.0
CNCH	Conchagua	3.07	91⇑	eP	Pn	18 20 27.8	+1.1
CNCH	Conchagua	3.07	91⇑	eP	Pn	18 20 27.8	+1.1
CCIG	Comitan	3.12	339		Pn	18 20 27.5	+0.1
TGUH	Tegucigalpa,Un	3.67	79	Pn	Pn	18 20 36.1	+1.1
PETF	Flores	3.70	17		Pn	18 20 34.4	-0.8
CRIN	San Cristobal	3.89	99		Pn	18 20 38.2	+0.4
CNGN	Cerro Negro	4.26	101		Pn	18 20 42.9	-0.1
MATN	Matagalpa	4.95	94	Pn	Pn	18 20 52.5	+0.1
BOAB	BOACO BROADBAN	5.26	99		Pn	18 20 56.1	-0.6
CMIG	Matias Romero	5.29	315	Pn	Pn	18 20 56.3	-0.7
	comp=Z,0.3nm,0.3s,baz=136,slow=10,SNR=2.2						
CMIG				Sn	Sn	18 21 57.9	+0.9
	comp=Z,0.9nm,0.3s,baz=119,slow=23,SNR=3.7						
ACON	Acoyapa	5.84	103		Pn	18 21 04.4	-0.2
ORTG	Ortega, Santa	6.17	118		Pn	18 21 09.7	+0.4
DUNO	Dulce Nombre,	6.29	121		Pn	18 21 11.4	+0.7
ESPN	Las Esperanzas	6.62	99	Pn	Pn	18 21 15.4	+0.1
JTS	Las Juntas de	6.64	117	Pn	Pn	18 21 15.8	+0.1
RIMA	Rio Macho	7.84	116		Pn	18 21 35.5	+3.2
SRBA	San Rafael, Bu	8.53	118		Pn	18 21 43.8	+2.1
DRK0	Durika	8.61	117		Pn	18 21 45.1	+2.3
RIOS	Rincon, Osa	8.67	121		Pn	18 21 45.9	+2.4
BRU2	Volcan	9.32	118	Pn	Pn	18 21 53.2	+0.7
ZAIG	Zacatecas	14.45	312	Pn	Pn	18 23 03.5	+0.7
SJCC	San Jacinto, C	15.86	101	P	P	18 23 24.8	0.0
352A	Blakely	18.88	16	P	Pn	18 23 58.8	0.0
352A				IAmb	IAmb	18 24 07.7	
	comp=Z,32nm,1.1s						
JCT	Junction City	18.89	336	P	Pn	18 23 57.7	-1.2
HPIG		19.27	317	P	P	18 24 01.5	-1.1
TX31	Lajitas Ar. Si	19.78	325	P	Pn	18 24 09.6	-0.1
TX31				IAmb	IAmb	18 24 14.2	
	comp=Z,15nm,1.1s						
TX32	Lajitas Array	19.78	325	P	Pn	18 24 09.6	-0.1
TXAR	Lajitas Array	19.78	325	P	Pn	18 24 10.3	+0.7
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=17						
	comp=Z,2.4nm,0.9s						
TXAR	Lajitas Array	19.78	325	P	Pn	18 24 08.9	-0.8
H06E1	SOCORRO T-PHAS	19.90	288	T	T	18 44 28.4	
	SNR=13						
Z47A	Carrollton	19.93	7	P	Pn	18 24 10.5	-0.8
Z47A				IAmb	IAmb	18 24 24.7	
	comp=Z,17nm,0.8s						
152A	Waverly Hall	20.06	16	P	Pn	18 24 12.1	-0.7
152A				IAmb	IAmb	18 24 24.1	
	comp=Z,13nm,1.2s						
SDV	Santo Domingo	20.45	100	P	P	18 24 15.2	-0.4
	comp=Z,4.9nm,0.3s,baz=317,slow=11,SNR=4.1						
	comp=Z,4.9nm,0.3s						
ABTX	Abilene, Hawle	20.75	339	P	Pn	18 24 19.9	-1.1
MIAR	Mount Ida	21.23	354	P	P	18 24 23.9	+0.4
WHAR	Wooly Hollow	21.87	357	P	P	18 24 30.0	-0.4
WHAR				IAmb	IAmb	18 24 32.5	
	comp=Z,11nm,1.1s						
W39A	Magazine	21.89	354	P	P	18 24 32.8	+2.1
SWET	Sewanee	22.24	11	P	P	18 24 35.8	+1.3
FCAR	Ozark Folk Cen	22.46	358	P	P	18 24 37.9	+1.1
MNTX	Cornudas Mount	22.54	326	P	P	18 24 37.8	+0.1
MNTX				IAmb	IAmb	18 24 49.1	
	comp=Z,11nm,1.0s						
FNO	Franklin	22.56	346	P	P	18 24 37.1	-0.8
V48A	Smith Brothers	22.60	9	P	P	18 24 39.4	+1.1
V48A				IAmb	IAmb	18 24 41.2	
	comp=Z,5.7nm,0.7s						
LCAR	Lake Charles	22.62	360	P	P	18 24 38.9	+0.4
CPCT	Cooper Cave	22.76	14	P	P	18 24 42.4	+2.5
WVT	Waverly	22.85	7	P	P	18 24 41.8	+0.9
WVT				IAmb	IAmb	18 24 58.8	
	comp=Z,9.6nm,1.0s						
U40A	Yellville	22.96	356	P	P	18 24 41.6	-0.5
U40A				IAmb	IAmb	18 24 43.7	
	comp=Z,7.1nm,0.8s						
CLTN	Cedars of Leba	23.02	10	P	P	18 24 43.6	+0.9
CLTN				IAmb	IAmb	18 24 54.6	
	comp=Z,8.0nm,0.9s						
TKL	Tuckaleechee C	23.14	15	P	P	18 24 43.7	-0.1
	comp=Z,4.7nm,0.7s,baz=197,slow=9.4,SNR=7.5						
TKL				LR	LR	18 34 35.6	
	comp=Z,239nm,20.1s,baz=196,slow=39						
	comp=Z,4.7nm,0.7s						
TKL	Tuckaleechee C	23.14	15	P	P	18 24 44.8	+0.9
TKL				IAmb	IAmb	18 25 07.2	
	comp=Z,10nm,1.1s						
V52A	Sevierville	23.36	15	P	P	18 24 48.4	+2.3
V52A				IAmb	IAmb	18 25 13.3	
	comp=Z,12nm,1.2s						
V53A	Saluda	23.41	17	P	P	18 24 48.9	+2.3
V53A				IAmb	IAmb	18 25 14.6	
	comp=Z,10nm,1.1s						
AMTX	Amarillo	23.52	338	P	P	18 24 48.5	+0.8
AMTX				IAmb	IAmb	18 24 50.5	
	comp=Z,6.8nm,0.7s						
U49A	Red Boiling Sp	23.53	11	P	P	18 24 48.6	+0.9
U49A				IAmb	IAmb	18 24 49.6	
	comp=Z,6.6nm,0.8s						
MGMO	Mountain Grove	23.73	357	P	P	18 24 51.0	+1.3
MGMO				IAmb	IAmb	18 24 51.9	
	comp=Z,11nm,0.9s						
T47A	Sharon Grove	23.79	8	P	P	18 24 51.1	+0.9
ATAH	Atahualpa	23.89	148	P	P	18 24 52.3	+0.5
	comp=Z,5.4nm,0.8s,baz=318,slow=3.3,SNR=3.2						
ATAH				LR	LR	18 32 09.8	
	comp=Z,55nm,20.1s,baz=336,slow=32						
	comp=Z,5.4nm,0.8s						
TZTN	Tazewell	24.04	15	P	P	18 24 52.7	+0.2
TZTN				IAmb	IAmb	18 24 55.1	
	comp=Z,17nm,1.4s						
S44A	Carbondale	24.29	3	P	P	18 24 54.4	-0.4
S44A				IAmb	IAmb	18 25 07.0	
	comp=Z,16nm,1.2s						
S39A	Bolivar	24.32	355	P	P	18 24 56.2	+1.1
S39A				IAmb	IAmb	18 24 57.3	

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      comp=Z,13nm,0.8s
121A  Cookes Peak, D     24.50 324  P      P      18 24 59.3 +2.2
121A                                IAmb   IAmb   18 25 15.2
      comp=Z,14nm,1.1s
CCM   Cathedral Cave     24.60 360  P      P      18 24 58.4 +0.7
CCM                                 IAmb   IAmb   18 25 01.3
      comp=Z,5.8nm,0.8s
R40A  Maddies Statio     24.86 358  P      P      18 25 00.2 +0.2
R40A                                IAmb   IAmb   18 25 10.6
      comp=Z,10nm,1.1s
BNM   Barren Site        25.11 328  P      P      18 25 03.0 +0.4
LENM  Lemitar            25.30 328  P      P      18 25 05.3 +1.0
ANMO  Albuquerque        25.65 330  P      P      18 25 08.3 +0.8
      comp=Z,1.0nm,0.7s,baz=141,slow=11,SNR=4.0
      comp=Z,1.0nm,0.7s
ANMO  Albuquerque        25.65 330  P      P      18 25 08.1 +0.6
Q54A  Coxs Mills         27.06  18  P      P      18 25 20.7 +0.8
Q54A                                IAmb   IAmb   18 25 26.4
      comp=Z,8.0nm,1.0s
ACSO  Alum Creek Sta     27.68  13  P      P      18 25 26.1 +0.6
NNA   Nana               28.82 150  LR     LR     18 35 00.1
      comp=Z,31nm,18.9s,baz=270,slow=32
U15A  North Rim          29.89 324  P      P      18 25 45.6 +0.2
LCMT  Little Creek M     30.84 324  P      P      18 25 57.9 +4.1
MTPU  Mount Pierson      30.98 326  P      P      18 25 54.6  -0.6
CCUT  Cedar City         31.28 324  P      P      18 26 02.3 +4.6
CCUT                                IAmb   IAmb   18 26 27.5
      comp=Z,4.5nm,1.2s
MSU   Marysvale          31.32 327  P      P      18 25 56.2  -1.8
SPMN  Marine on St.      31.80 358  P      P      18 26 01.9   0.0
J57A  Williamstown       32.61  20  P      P      18 26 09.2 +0.2
COWI  Conover            32.68   2  P      P      18 26 08.5  -1.1
PECO  Prince Edward      32.75  19  P      P      18 26 10.1  -0.1
SADO  Sadowa             32.90  16  P      P      18 26 11.2  -0.3
      comp=Z,3.1nm,0.7s,baz=261,slow=1.0,SNR=4.0
SADO                                LR     LR     18 40 37.8
      comp=Z,180nm,18.4s,baz=197,slow=38
      comp=Z,3.1nm,0.7s
SADO  Sadowa             32.90  16  P      P      18 26 11.0  -0.6
SADO                                IAmb   IAmb   18 26 12.2
      comp=Z,4.9nm,0.9s
DELO  Deloro Mine        33.09  18  P      P      18 26 13.4 +0.1
R11A  Troy Canyon, C     33.11 323  P      P      18 26 13.8 +0.1
R11A                                IAmb   IAmb   18 26 26.9
      comp=Z,4.8nm,1.4s
E38A  The Farm, Brul     33.15 359  P      P      18 26 13.6  -0.1
PDAR  Pinedale Array     33.42 335  P      P      18 26 18.9 +2.5
      comp=Z,0.1nm,0.4s,baz=144,slow=11,SNR=1.4
      comp=Z,0.1nm,0.4s
REDW  Red Top Meadow     34.45 334  P      P      18 26 26.5 +1.2
REDW                                IAmb   IAmb   18 26 28.9
      comp=Z,4.5nm,0.8s
ELK   Elko               34.57 327  P      P      18 26 29.0 +2.6
      comp=Z,0.8nm,0.6s,baz=104,slow=5.8,SNR=4.1
      comp=Z,0.8nm,0.6s
ELK   Elko               34.57 327  P      P      18 26 25.1  -1.3
TPAW  Teton Pass         34.59 334  P      P      18 26 26.1  -0.6
TPAW                                IAmb   IAmb   18 26 38.7
      comp=Z,3.2nm,1.1s
NV11  Mina Array Sit     34.70 321  P      P      18 26 30.3 +2.8
NV11                                IAmb   IAmb   18 26 32.3
      comp=Z,5.2nm,0.9s
NVAR  Mina Array Bea     34.79 321  P      P      18 26 31.5 +3.2
      comp=Z,4.9nm,0.8s,baz=138,slow=8.6,SNR=34
NVAR                                PcP    PcP    18 29 04.8 +3.4
      comp=Z,0.5nm,0.7s,baz=141,slow=4.4,SNR=3.1
NVAR  Mina Array Bea     34.79 321  P      P      18 26 30.0 +1.6
LHV   Little Huntoon     34.80 320  P      P      18 26 29.5 +1.4
LHV                                 IAmb   IAmb   18 26 33.0
      comp=Z,3.9nm,0.9s
KVN   Kaiserville        35.06 322  P      P      18 26 32.6 +2.0
KVN                                 IAmb   IAmb   18 26 42.0
      comp=Z,3.4nm,1.0s
AGMN  Agassiz Nation     35.07 354  P      P      18 26 29.4  -1.0
PAHR  Pah Rah Range      36.24 322  P      P      18 26 39.8  -0.9
PAHR                                IAmb   IAmb   18 26 44.4
      comp=Z,2.6nm,0.9s
MCMT  McKenzie Canyo     36.48 334  P      P      18 26 43.9 +1.1
BEKR  Beckworth          36.93 321         P      18 26 46.6  -0.1
BEKR                                IAmb   IAmb   18 26 50.8
      comp=Z,5.3nm,1.2s
ULM   Lac du Bonnet      37.01 355  P      P      18 26 45.3  -1.6
      comp=Z,2.6nm,0.5s,baz=178,slow=6.8,SNR=4.0
      comp=Z,2.6nm,0.5s
ULM   Lac du Bonnet      37.01 355  P      P      18 26 45.7  -1.2
ULM                                 IAmb   IAmb   18 26 46.9
      comp=Z,5.3nm,0.9s
PLID  Pearl Lake         38.11 331  P      P      18 26 57.3 +0.6
J08A  Circle Bar Ran     38.11 327  P      P      18 26 57.6 +1.1
MDP   Montagnes des      38.68  99  LR     LR     18 46 01.5
      comp=Z,39nm,18.4s,baz=238,slow=41
F10A  Beach Ranch, E     39.35 331  P      P      18 27 08.1 +1.3
F10A                                IAmb   IAmb   18 27 09.2
      comp=Z,6.4nm,0.9s
SCHQ  Schefferville      45.49  19  P      P      18 27 55.2  -1.3
      comp=Z,8.4nm,0.9s,baz=217,slow=6.1,SNR=8.4
      comp=Z,8.4nm,0.9s
SCHQ  Schefferville      45.49  19  P      P      18 27 55.5  -1.1
CPUP  Villa Florida      51.26 140  P      P      18 28 40.6  -0.8
      comp=Z,1.0nm,0.4s,baz=0.5,slow=4.9,SNR=2.8
      comp=Z,1.0nm,0.4s
CPUP  Villa Florida      51.26 140  IAmb   IAmb   18 28 41.8
      comp=Z,7.3nm,1.3s
YKA   Yellowknife Ar     51.88 346  P      P      18 28 45.9 +0.4
      comp=Z,1.4nm,0.8s,baz=148,slow=7.7,SNR=24
YKA                                 PcP    PcP    18 29 59.0 +1.1
      comp=Z,0.5nm,0.7s,baz=147,slow=3.7,SNR=8.5
      comp=Z,1.4nm,0.8s
YKA   Yellowknife Ar     51.88 346  P      P      18 28 45.1  -0.4
PLCA  Paso Flores        57.05 162  LR     LR     18 49 10.4
      comp=Z,27nm,18.4s,baz=178,slow=31
N31M  Braeburn, Yuko     57.80 336  P      P      18 29 28.9 +0.4
RCBR  Riachuelo          57.92 106  LR     LR     18 56 40.3
      comp=Z,37nm,19.7s,baz=138,slow=38
INK   Inuvik             61.33 343  LR     LR     19 02 07.8
      comp=Z,27nm,20.4s,baz=158,slow=42
RES   Resolute Bay       61.36 359  P      P      18 29 52.0  -0.7
      comp=Z,2.2nm,0.7s,baz=189,slow=12,SNR=3.7
RES                                 LR     LR     18 59 21.1
      comp=Z,68nm,18.1s,baz=130,slow=39
      comp=Z,2.2nm,0.7s
RES   Resolute Bay       61.36 359  P      P      18 29 53.4 +0.7
RES                                 IAmb   IAmb   18 30 18.3
      comp=Z,3.8nm,0.9s
KLU   Klutina            61.99 334  P      P      18 29 59.0 +1.7
GHO   Glory Hole Cre     63.41 333  P      P      18 30 08.2 +1.4
ILAR  Eielson Array      63.82 337  P      P      18 30 09.9 +0.6
      comp=Z,0.8nm,0.9s,baz=128,slow=4.4,SNR=7.2
      comp=Z,0.8nm,0.9s
BMAR  Burnt Mountain     64.23 340  P      P      18 30 13.0 +1.0
I23K  Minto, Yukon-K     64.93 337  P      P      18 30 16.9 +0.4
BORG  Borgarnes          69.36  25  LR     LR     19 01 28.9
      comp=Z,26nm,18.1s,baz=266,slow=36
ESDC  Sonseca Array      79.34  52  P      P      18 31 41.9  -1.5
      comp=Z,0.5nm,0.7s,baz=273,slow=6.7,SNR=2.6
      comp=Z,0.5nm,0.7s
SPITS Spitsbergen Ar     80.52  12  LR     LR     19 09 33.5
      comp=Z,76nm,19.4s,baz=46,slow=37
NOA   NORSAR Array B     84.24  29  LR     LR     19 07 16.0
      comp=Z,15nm,21.6s,baz=295,slow=34
TORD  Torodi Ar. Bea     89.57  77  P      P      18 32 34.7  -0.8
      comp=Z,5.6nm,0.4s,baz=294,slow=7.0,SNR=2.2
SEY   Seymchan           89.74 336  P      P      18 32 34.3  -1.0
      comp=Z,2.4nm,0.9s,baz=258,slow=23,SNR=15
      comp=Z,2.4nm,0.9s
FINES FINESS Array B     90.66  25  LR     LR     19 13 59.3
      comp=Z,29nm,18.6s,baz=328,slow=36
PZH   PanZhiHua         138.49 343  PKP    PKPdf  18 39 04.0 +0.2
CMAR  Chiang Mai Arr    146.91 343  PKPbc  PKPab  18 39 21.4  -0.4
      comp=Z,1.7nm,0.8s,baz=354,slow=4.1,SNR=14
CMAR  Chiang Mai Arr    146.91 343         PKPdf  18 39 18.8 +0.2
```

IDC 11 18:32:30.1±2.6**, 8°.25S×158°.99E, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=61.4km s-min=21.3km az=36.0, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC        h  m  s    ISC
HNR   Honiara             1.51 141  Pn     Pn     18 32 58.6 +0.1
      32nm,0.3s,baz=230,slow=7.4,SNR=26
HNR                                 Sn     Sg     18 33 18.2  -0.5
      72nm,0.3s,baz=5.1,slow=24,SNR=34
WRA   Warramunga Arr     26.54 241  P      P      18 38 09.5  -0.3
      0.3nm,0.4s,baz=66,slow=9.2,SNR=8.0
      0.3nm,0.4s
H11S3 WAKE ISLAND Hy     27.64  16  T      T      19 06 50.4
      baz=196,slow=76,SNR=90
H11S2 WAKE ISLAND Hy     27.64  16  T      T      19 06 50.4
      baz=196,slow=76,SNR=89
H11S1 WAKE ISLAND Hy     27.65  16  T      T      19 06 51.6
      baz=196,slow=76,SNR=57
ASAR  Alice Springs      28.50 235  P      P      18 38 27.7 +0.2
      0.3nm,0.8s,baz=58,slow=9.9,SNR=1.6
      0.3nm,0.8s
H11N1 WAKE ISLAND Hy     28.86  16  T      T      19 08 21.1
      baz=196,slow=76,SNR=53
H11N3 WAKE ISLAND Hy     28.86  16  T      T      19 08 20.4
      baz=196,slow=76,SNR=74
H11N2 WAKE ISLAND Hy     28.87  16  T      T      19 08 21.1
      baz=196,slow=76,SNR=73
CMAR  Chiang Mai Arr     64.90 295  P      P      18 43 12.3 +0.4
      0.3nm,0.6s,baz=126,slow=5.7,SNR=2.5
      0.3nm,0.6s
```

IDC ***11*** *18:43:57.7±1.1, 39°.64N×21°.59E, h0^{km}, mb3.4/5, mbtmp3.4/8, ML3.4/3, MS2.9/2, Error ellipse: s-maj=25.0km s-min=16.7km az=111.0*

TIR ***11*** *18:44:00.8, 39°.68N×21°.68E, h3^{km}±5^{km}, Md3.5, Ml3.6*

DDA ***11*** *18:44:00.3±0.0, 39°.80N×22°.20E, h7^{km}±3^{km}, MW3.6*

ATH ***11*** *18:44:00.0, 39°.68N×21°.82E, h27^{km}, ML3.4/32, Error ellipse: s-maj=1.0km s-min=0.8km az=8.0*

THE ***11*** *18:44:01.0, 39°.67N×21°.78E, h12^{km}, ML3.5/11, Error ellipse: s-maj=0.9km s-min=0.4km az=92.0*

ISC 11 18:44:00.6±0.9**, 39°.68N**±0°.02×**21°.81E**±0°.02**, h18^{km}**±4^{km}**, n147, σ1^{s}09**/179**, mb3.4**/6**, 13C-5D, Greece**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC        h  m  s    ISC
THL   Klokotos Trika      0.20 124  P      Pg     18 44 05.5   0.0
THL                                 S      Sg     18 44 09.5 +0.8
THL                                 AML    AML    18 44 09.8
      comp=E,16497µm,0.2s
THL                                 AML    AML    18 44 11.0
      comp=N,21050µm,0.5s
THL   Klokotos Trika      0.20 124  P      Pg     18 44 05.4   0.0
THL                                 S      Sg     18 44 09.1 +0.3
      comp=N,9µm,0.3s
TYRN  Tyrnavos            0.33  84  P      Pb     18 44 08.1 +0.1
TYRN                                S      Sb     18 44 13.6 +0.6
TYRN  Tyrnavos            0.33  84  P      Pb     18 44 08.1 +0.1
TYRN                                S      Sb     18 44 13.8 +0.8
      comp=N,4µm,0.3s
KPRO  Kipourio            0.44 309  P      Pb     18 44 09.0  -1.0
KPRO                                S      Sb     18 44 17.0 +0.8
KPRO                                AML    AML    18 44 18.5
      comp=N,26433µm,0.3s
KPRO                                AML    AML    18 44 18.7
      comp=E,24224µm,0.4s
KPRO  Kipourio            0.44 309  P      Pb     18 44 09.2  -0.8
KPRO                                S      Sb     18 44 15.8  -0.5
      comp=E,12µm,0.3s
LRSO  Larissa Observ      0.45  90  P      Pb     18 44 10.2 +0.1
LRSO                                S      Sb     18 44 17.1 +0.6
LRSO  Larissa Observ      0.45  90  P      Pb     18 44 10.2 +0.1
LRSO                                S      Sb     18 44 17.1 +0.6
      comp=E,6µm,0.3s
KZN   Kozani              0.63 358  P      Pb     18 44 12.7  -0.4
KZN                                 S      Sb     18 44 22.0 +0.3
KZN                                 AML    AML    18 44 24.8
      comp=E,13572µm,0.3s
KZN                                 AML    AML    18 44 25.4
      comp=N,15510µm,0.5s
KZN   Kozani              0.63 358  P      Pb     18 44 12.8  -0.4
KZN                                 S      Sb     18 44 23.0 +1.3
      comp=N,7µm,0.5s
LIT   Litokhoron          0.68  51  P      Pb     18 44 13.8  -0.1
LIT                                 S      Sb     18 44 23.3 +0.4
LIT                                 AML    AML    18 44 27.8
      comp=E,6085µm,0.3s
LIT                                 AML    AML    18 44 28.7
      comp=N,6051µm,0.2s
LIT   Litokhoron          0.68  51  P      Pn     18 44 14.9  -0.4
LIT                                 S      Sb     18 44 24.6 +1.7
      comp=N,3µm,0.4s
LIT   Litokhoron          0.68  51  P      Pb     18 44 14.1 +0.2
LIT                                 S      Sb     18 44 24.2 +1.3
MAKR  Makrakomi, Fth      0.71 159  P      Pb     18 44 14.1  -0.3
MAKR                                S      Sb     18 44 24.9 +1.1
MAKR                                AML    AML    18 44 29.1
      comp=N,5763µm,0.3s
MAKR                                AML    AML    18 44 31.0
      comp=E,6252µm,0.5s
MAKR  Makrakomi, Fth      0.71 159  P      Pb     18 44 14.4   0.0
MAKR                                S      Sb     18 44 25.2 +1.4
      comp=E,8µm,0.3s
JAN   Janina              0.74 269  P      Pb     18 44 14.5  -0.5
JAN                                 S      Sb     18 44 24.8 +0.1
JAN                                 AML    AML    18 44 33.6
      comp=N,3653µm,0.5s
JAN                                 AML    AML    18 44 35.5
      comp=E,2563µm,0.4s
JAN   Janina              0.74 269  P      Pg     18 44 14.1  -1.0
EVR   Evrytania           0.76 180  P      Pg     18 44 14.5  -1.0
EVR                                 S      Sb     18 44 25.9 +0.6
EVR                                 AML    AML    18 44 27.9
      comp=E,20348µm,0.3s
EVR                                 AML    AML    18 44 28.4
      comp=N,20094µm,0.4s
EVR   Evrytania           0.76 180  P      Pg     18 44 14.1  -1.4
EVR                                 S      Sb     18 44 26.0 +0.6
      comp=N,10µm,0.3s
AGG   Agios Georgios      0.77 148  P      Pb     18 44 15.1  -0.3
AGG                                 AML    AML    18 44 30.0
      comp=N,5751µm,0.3s
AGG                                 AML    AML    18 44 30.3
      comp=E,8191µm,0.4s
AGG   Agios Georgios      0.77 148  P      Pb     18 44 15.2  -0.3
AGG                                 S      Sn     18 44 27.6  -0.1
      comp=E,3µm,0.3s
AGG   Agios Georgios      0.77 148  P      Pb     18 44 14.9  -0.6
AGG                                 S      Sn     18 44 27.6  -0.1
AGG                               i AML    AML    18 44 29.0
      comp=E,1µm,0.3s
AGG                               i AML    AML    18 44 30.0
      comp=E,2µm,0.4s
NEST  Nestorio            0.94 322  P      Pb     18 44 18.1  -0.3
NEST                                AML    AML    18 44 35.8
      comp=E,8681µm,0.9s
NEST                                AML    AML    18 44 36.1
      comp=N,9101µm,0.6s
NEST  Nestorio            0.94 322  P      Pb     18 44 18.6 +0.1
NEST                                S      Sn     18 44 32.7 +0.6
      comp=N,4µm,0.9s
LSK   Leskovik            1.04 297  P      Pb     18 44 19.8  -0.3
LSK   Leskovik            1.04 297  P      Pb     18 44 19.9  -0.3
      baz=300
LSK                                 S      Sn     18 44 35.1 +0.5
      baz=300
PVO   Paravola            1.08 192  P      Pg     18 44 19.8  -1.8
XOR   Xorichti            1.12 106  P      Pb     18 44 21.4   0.0
XOR                                 AML    AML    18 44 42.6
      comp=N,4550µm,0.3s
XOR                                 AML    AML    18 44 44.6
      comp=E,2143µm,0.8s
XOR   Xorichti            1.12 106  P      Pb     18 44 21.4   0.0
IGT   Igoumenitsa         1.15 263  P      Pb     18 44 21.7  -0.2
IGT                                 AML    AML    18 44 42.5
      comp=N,3716µm,0.6s
IGT                                 AML    AML    18 44 43.2
      comp=E,4229µm,0.6s
IGT   Igoumenitsa         1.15 263  P      Pn     18 44 22.0 +0.2
IGT   Igoumenitsa         1.15 263  P      Pn     18 44 21.9 +0.2
      baz=263
IGT                                 S      Sn     18 44 38.0 +1.0
      baz=263
FNA   Florina             1.16 344  P      Pg     18 44 21.7  -1.3
FNA                                 AML    AML    18 44 43.1
      comp=N,6614µm,0.3s
FNA                                 AML    AML    18 44 46.2
      comp=E,4311µm,0.4s
FNA   Florina             1.16 344  P      Pg     18 44 21.7  -1.3
FNA                                 S      Sn     18 44 39.0 +1.7
      comp=E,3µm,0.4s
FNA   Florina             1.16 344  P      Pb     18 44 21.9  -0.2
FNA                                 S      Sn     18 44 39.5 +2.2
FNA                               i AML    AML    18 44 43.0
      comp=E,1µm,0.3s
NEO   Neokhori            1.16 108  P      Pb     18 44 22.0  -0.1
NEO                                 AML    AML    18 44 43.3
      comp=N,5777µm,0.3s
NEO                                 AML    AML    18 44 45.3
      comp=E,4174µm,0.7s
NEO   Neokhori            1.16 108  P      Pb     18 44 22.0  -0.1
KBN   Korca               1.23 321  P      Pn     18 44 23.4 +0.4
KBN   Korca               1.23 321  P      Pn     18 44 23.9 +0.9
      baz=325
KBN                                 S      Sn     18 44 41.2 +2.1
      baz=325
KBN                                 AMP
      comp=N,7.3nm,0.5s,baz=325
TSLK  Tsoukalades, L      1.23 227  P      Pn     18 44 23.9 +0.9
TSLK  Tsoukalades, L      1.23 227  P      Pb     18 44 23.1  -0.3
EFP   Efpalio             1.25 176  P      Pn     18 44 23.0  -0.1
EFP                                 AML    AML    18 44 45.1
      comp=N,8954µm,0.6s
EFP                                 AML    AML    18 44 47.8
      comp=E,9692µm,0.5s
EFP   Efpalio             1.25 176  P      Pn     18 44 23.1  -0.1
LKD2  Lefkada island      1.26 226  P      Pn     18 44 23.4 +0.1
LKD2                                AML    AML    18 44 46.6
      comp=N,4648µm,0.4s
LKD2                                AML    AML    18 44 48.6
      comp=E,3430µm,0.6s
LKD2  Lefkada island      1.26 226  P      Pg     18 44 23.6  -1.3
LKD2  Lefkada island      1.26 226  P      Pg     18 44 25.2 +0.3
      baz=223
LKD2                                S      Sn     18 44 41.7 +1.9
      baz=223
DLFA  Delphi              1.31 156  P      Pg     18 44 24.7  -1.2
HORT  Hortiatis           1.35  47  P      Pn     18 44 24.5  -0.2
HORT  Hortiatis           1.35  47  P      Pn     18 44 24.5  -0.2
GRG   Griva               1.36  19  P      Pb     18 44 25.2  -0.4
GRG                                 AML    AML    18 44 53.7
      comp=N,1454µm,0.8s
GRG                                 AML    AML    18 44 53.9
      comp=E,1608µm,0.6s
GRG   Griva               1.36  19  P      Pb     18 44 25.2  -0.4
ATAL  Atalanti            1.36 136  P      Pn     18 44 25.2 +0.4
ATAL                                AML    AML    18 44 51.4
      comp=N,1244µm,0.8s
ATAL                                AML    AML    18 44 52.5
      comp=E,886µm,1.0s
ATAL  Atalanti            1.36 136  P      Pn     18 44 25.0 +0.3
EVGI  Lefkada island      1.38 221  P      Pb     18 44 25.5  -0.5
EVGI  Lefkada island      1.38 221  P      Pb     18 44 25.4  -0.5
SRN   Sarande             1.41 279  P      Pb     18 44 26.0  -0.3
      baz=280
SRN                                 S      Sg     18 44 45.4  -0.7
      baz=280
SRN                                 AMP
      comp=N,2.4nm,0.5s,baz=280
ALIK  Aliki, Aigiali      1.43 170  P      Pb     18 44 26.8   0.0
LAKA  Lakka               1.44 175  P      Pb     18 44 26.6  -0.3
LAKA                                AML    AML    18 44 51.7
      comp=N,3892µm,0.5s
LAKA                                AML    AML    18 44 55.4
      comp=E,6136µm,0.5s
LAKA  Lakka               1.44 175  P      Pn     18 44 26.4 +0.6
PLG   Polygyros           1.44  60  P      Pn     18 44 25.9 +0.1
PLG   Polygyros           1.44  60  P      Pn     18 44 25.9 +0.1
KASA  Kassiopi            1.44 273  P      Pg     18 44 28.1  -0.3
PAIG  Paliouri            1.47  80  P      Pn     18 44 25.9  -0.3
PAIG                                AML    AML    18 44 52.0
      comp=N,557µm,0.5s
PAIG                                AML    AML    18 44 52.6
      comp=E,592µm,0.7s
PAIG  Paliouri            1.47  80  P      Pn     18 44 25.8  -0.3
KEK   Kerkira             1.55 272  P      Pg     18 44 29.3  -1.1
KEK                                 AML    AML    18 44 56.8
      comp=N,1296µm,0.6s
KEK                                 AML    AML    18 45 00.9
      comp=E,1635µm,0.5s
FSK   Fiskardo            1.55 219  P      Pb     18 44 28.6  -0.3
FSK                                 AML    AML    18 44 55.7
      comp=E,2314µm,0.4s
FSK                                 AML    AML    18 44 56.7
      comp=N,2737µm,1.0s
OHR   Ohrid               1.63 332 i Pn    Pg     18 44 30.9  -1.1
RLS   Riolos of Patr      1.64 189  P      Pb     18 44 29.7  -0.6
RLS                                 AML    AML    18 44 58.8
      comp=E,1555µm,0.5s
RLS                                 AML    AML    18 45 00.6
      comp=N,1738µm,0.7s
SOH   Sokhos              1.65  45  P      Pn     18 44 29.4 +0.6
SOH                                 AML    AML    18 44 59.9
      comp=E,1019µm,0.6s
SOH                                 AML    AML    18 45 03.5
      comp=N,847µm,0.6s
SOH   Sokhos              1.65  45  P      Pb     18 44 29.7  -0.8
KLV   Kalavryta, Ach      1.65 171  P      Pn     18 44 29.3 +0.5
KLV                                 AML    AML    18 45 02.3
      comp=E,981µm,0.9s
KLV                                 AML    AML    18 45 07.4
      comp=N,1027µm,0.8s
KLV   Kalavryta, Ach      1.65 171  P      Pn     18 44 29.6 +0.8
DRO   Drossia             1.72 183  P      Pb     18 44 31.0  -0.8
DRO                                 AML    AML    18 45 06.8
      comp=E,1052µm,0.9s
DRO                                 AML    AML    18 45 08.0
      comp=N,3217µm,0.7s
VAY   Valandovo           1.74  19 i Pn    Pb     18 44 31.1  -1.0
THAL  Thalero             1.77 157  P      Pn     18 44 30.9 +0.6
VLS   Valsamata           1.77 213  P      Pb     18 44 31.6  -1.0
VLS                                 AML    AML    18 45 00.3
      comp=E,1246µm,0.5s
VLS                                 AML    AML    18 45 04.8
      comp=N,1423µm,0.6s
KEF4  Livadi, Kephal      1.78 218  P      Pb     18 44 32.3  -0.3
GUR   Goura               1.79 166  P      Pn     18 44 31.6 +1.0
OUR   Ouranopolis         1.80  68  P      Pn     18 44 31.3 +0.7
OUR   Ouranopolis         1.80  68  P      Pn     18 44 31.4 +0.7
VIL2  Platees             1.85 142  P      Pn     18 44 32.4 +0.9
VIL2                                AML    AML    18 45 09.3
      comp=N,733µm,0.6s
VIL2                                AML    AML    18 45 11.5
      comp=E,1064µm,0.6s
KEF3  Kipouria, Keph      1.86 218  P      Pb     18 44 33.1  -1.0
KOKK  Kokkinochori,       2.03  55  P      Pn     18 44 34.7 +0.8
KOKK  Kokkinochori,       2.03  55  P      Pn     18 44 34.7 +0.8
STIP  Stip                2.04   8 i Pn    Pb     18 44 36.4  -0.7
KYMI  Kymi, Euboea I      2.06 120  P      Pn     18 44 35.6 +1.2
KYMI                                AML    AML    18 45 16.0
      comp=N,400µm,0.9s
KYMI                                AML    AML    18 45 19.5
      comp=E,411µm,0.8s
TIR   Tirane              2.23 319 ⇓S      Sn     18 45 04.9 +1.1
TIR   Tirane              2.23 319  P      Pg     18 44 41.2  -2.2
      baz=321
TIR                                 S      Sg     18 45 16.6 +4.2
      baz=321
PHP   Peshkopia           2.26 333  P      Pg     18 44 42.1  -1.9
      baz=336
PHP                                 S      Sb     18 45 09.8 +1.3
      baz=336
PHP                                 AMP
      comp=N,1.1nm,0.9s,baz=336
PTL   Penteli             2.29 135  P      Pn     18 44 37.7 +0.2
NVR   Nevrokopi           2.29  42  P      Pn     18 44 38.6 +1.0
NVR                                 AML    AML    18 45 15.0
      comp=N,212µm,0.9s
NVR                                 AML    AML    18 45 22.9
      comp=E,232µm,0.9s
NVR   Nevrokopi           2.29  42  P      Pn     18 44 38.9 +1.3
EPID  Epidavros           2.30 153  P      Pn     18 44 38.9 +1.2
DION  Dionisos Attik      2.30 133  P      Pn     18 44 38.1 +0.4
DION                                AML    AML    18 45 12.5
      comp=E,578µm,0.4s
DION                                AML    AML    18 45 13.1
      comp=N,752µm,0.9s
SKO   Skopje              2.31 353 i Pn    Pg     18 44 43.2  -1.7
VLY   Voula,Athens        2.39 139  P      Pn     18 44 39.3 +0.4
VLY                                 AML    AML    18 45 09.8
      comp=E,554µm,0.7s
VLY                                 AML    AML    18 45 10.6
      comp=N,476µm,0.7s
THAS  Thassos island      2.42  66  P      Pn     18 44 39.2  -0.1
KAVA  Kavala              2.46  57  P      Pn     18 44 40.0 +0.3
KAVA  Kavala              2.46  57  P      Pn     18 44 40.0 +0.3
ITM   Ithomi              2.49 178  P      Pn     18 44 42.6 +2.3
ITM                                 AML    AML    18 45 32.0
      comp=E,568µm,0.8s
ITM                                 AML    AML    18 45 36.2
      comp=N,508µm,0.9s
LIA   Limnos Island       2.61  84  P      Pn     18 44 42.1 +0.2
KARY  Karystos            2.63 128  P      Pn     18 44 42.6 +0.4
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PYL	PYLOS	2.78	181	P	Pn	18 44 45.9	+1.7
SMTH	Samothraki Isl	2.97	73	P	Pn	18 44 47.7	+0.9
VLI	Veliai	3.08	163	P	Pn	18 44 48.8	+0.4
VTS	Vitosha	3.13	20	⇑P	Pn	18 44 50.3	+1.1
VTS				⇓S	Sn	18 45 27.0	+0.7
BOZC	Bozcaada	3.28	86	P	Pn	18 44 50.4	-0.6
PDG	Podgorica	3.36	326	⇑P	Pn	18 44 53.9	+1.7
PDG				⇑S	Sn	18 45 32.6	+1.0
ALN	Alexandroupoli	3.46	68	P	Pn	18 44 51.7	-1.9
CHOS	Chios island	3.55	110	P	Pn	18 44 55.5	+0.6
KTHA	Kythira Island	3.56	163	P	Pn	18 44 56.0	+1.1
BAYC	CANAKKALE_Bayr	3.66	87	P	Pn	18 44 57.0	+0.6
APE	Apeiranthos	3.92	130	⇓P	Pn	18 45 00.7	+0.8
APE	Apeiranthos	3.92	130	P	Pn	18 45 00.9	+1.0
ZEYE	Izmir, Urla-Ze	3.93	110	P	Pn	18 44 56.1	-4.0
TIP	Timpagrande	3.94	264	⇑P	Pn	18 45 01.8	+1.5
URLA	Izmir	3.96	108	P	Pn	18 45 01.7	+1.3
BLKB	Belogradchik	4.00	9	⇑P	Pn	18 45 02.5	+1.5
BLKB				⇑S	Sn	18 45 48.0	+0.6
DKL	Dikili	4.00	97	P	Pn	18 45 01.7	+0.8
EDRB	Edirne	4.33	58	P	Pn	18 45 06.1	+0.5
BALY	Balya	4.49	87	P	Pn	18 45 07.4	-0.3
ARMN	Kirklareli, Me	4.80	61	P	Pn	18 45 10.4	-1.5
IDI	Anoyia	5.02	150	⇑P	Pn	18 45 17.4	+2.3
IDI	Anoyia	5.02	150	Pn	Pn	18 45 16.5	+1.4
	comp=N,0.8nm,0.3s,baz=325,slow=15,SNR=10.0						
IDI				Sn	Sn	18 46 14.2	+1.5
	comp=N,1.1nm,0.3s,baz=70,slow=24,SNR=1.6						
	comp=N,2.8nm,0.4s						
FRGS	Fruska Gora	5.67	346	⇑P	Pn	18 45 25.6	+1.6
GZR	Gura Zlata	5.76	7	⇑P	Pn	18 45 26.0	+0.7
BZS	Buzias	5.94	359	⇓P	Pn	18 45 28.1	+0.5
VOIR		6.24	22	⇓P	Pn	18 45 33.2	+1.4
MLR	Muntele Rosu	6.56	26	⇑P	Pn	18 45 37.7	+1.3
MLR	Muntele Rosu	6.56	26	Pn	Pn	18 45 39.3	+3.0
	comp=N,0.9nm,0.3s,baz=174,slow=7.0,SNR=14						
MLR				Lg	Lg	18 47 31.8	
	comp=N,0.2nm,0.3s,baz=179,slow=18,SNR=1.0						
	comp=N,3.9nm,0.5s						
MORH	Mrgy, Hungar	6.94	342	⇑P	Pn	18 45 42.9	+1.6
MORH	Mrgy, Hungar	6.94	342	P	Pn	18 45 42.3	+1.0
KOVH	Kovagotottos	6.96	338	P	Pn	18 45 42.0	+0.3
PLOR	Plostina	7.13	28	⇑P	Pn	18 45 45.0	+1.1
VRI	Vrincioaia	7.17	29	⇑P	Pn	18 45 45.5	+1.0
VYHS	Vyhne	9.07	347	*e*PN	Pn	18 46 13.4	+2.8
AKASG	Malin Array Be	12.20	23	LR	LR	18 52 48.8	
	comp=N,41nm,21.4s,baz=284,slow=43						
ESDC	Sonseca Array	19.82	278	P	P	18 48 28.8	-1.5
	baz=74,slow=14,SNR=1.7						
	comp=N,0.3nm,0.7s						
FINES	FINESS Array B	21.95	5	P	P	18 48 51.7	-1.3
	comp=N,1.9nm,0.9s,baz=163,slow=13,SNR=3.7						
	comp=N,1.9nm,0.9s						
NB2	NORSAR Subarra	22.37	346	P	P	18 48 59.3	+1.7
	comp=Z,1.5nm,0.9s,baz=161,slow=11						
NOA	NORSAR Array B	22.37	346	P	P	18 48 55.2	-2.4
	comp=Z,0.6nm,0.8s,baz=152,slow=11,SNR=2.6						
	comp=Z,0.6nm,0.8s						
EKA	Eskdalemuir Ar	22.83	322	LR	LR	18 59 32.9	
	comp=Z,54nm,20.2s,baz=158,slow=41						
TORD	Torodi Ar. Bea	31.82	219	P	P	18 50 24.0	-0.3
	comp=Z,11nm,0.6s,baz=31,slow=9.4,SNR=4.6						
MKAR	Makanchi Array	43.67	60	P	P	18 52 04.2	0.0
	comp=Z,0.3nm,0.7s,baz=282,slow=6.1,SNR=4.3						
	comp=Z,0.3nm,0.7s						
ZALV	Zalesovo Beam	43.95	49	P	P	18 52 06.9	+0.6
	comp=Z,0.8nm,0.4s,baz=265,slow=8.6,SNR=2.7						
	comp=Z,0.8nm,0.4s						
YKA	Yellowknife Ar	72.32	340	P	P	18 55 25.2	+0.5
	comp=Z,0.2nm,0.6s,baz=32,slow=5.9,SNR=2.0						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	121.33	96	PKP	PKPdf	19 02 51.5	-1.4
	comp=Z,0.3nm,0.8s,baz=306,slow=1.3,SNR=1.9						

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*REN **11** 18:48:11.5±1.5, 40°.64N±0°.03×119°.46W±0°.03, h8^{km}±7^{km}, ML2.8/3, ML2.7/68(NEIC), Error ellipse: s-maj=4.5km s-min=3.2km az=185.0*

NEIC 11 18:48:11.2±1.3**, 40°.62N**±0°.02×**119°.49W**±0°.04**, h8**^{km}±7^{km}**, Error ellipse: s-maj=5.0km s-min=1.1km az=67.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAHR	Pah Rah Range	0.92	175		Pb	18 48 29.2	-0.2
PAHR				IAML		18 48 45.0	
	comp=E,256nm,0.4s						
PAHR				IAML		18 48 45.0	
	comp=N,172nm,0.2s						
BEKR	Beckworth	1.01	222		Pg	18 48 30.7	+0.1
BEKR				IAML		18 48 47.8	
	comp=N,132nm,0.3s						
BEKR				IAML		18 48 48.6	
	comp=E,124nm,0.3s						
VCNR	Virginia City	1.33	186		Pg	18 48 37.1	+0.4
MPK	Martis Peak	1.39	198		Pb	18 48 37.3	-0.2
MPK				IAML		18 48 59.6	
	comp=E,127nm,0.3s						
MPK				IAML		18 49 00.3	
	comp=N,131nm,0.4s						
MOD	Modoc Plateau	1.42	335		Pn	18 48 37.5	+0.1
MOD	Modoc Plateau	1.42	335	Pn	Pn	18 48 37.3	-0.1
MOD	Modoc Plateau	1.42	335	IAML		18 49 02.8	
	comp=N,178nm,0.6s						
PNTR	Pine Nut	1.53	183		Pn	18 48 38.6	-0.4
PNTR				IAML		18 49 04.0	
	comp=N,142nm,0.8s						
PNTR				IAML		18 49 08.4	
	comp=E,112nm,0.9s						
LCMM	Colby Mountain	1.63	254		Pn	18 48 40.3	0.0
YERR	Yerington	1.64	173		Pn	18 48 40.4	-0.1
EMB	Emerald Bay	1.71	196		Pn	18 48 41.0	-0.5
EMB				IAML		18 49 09.2	
	comp=N,56nm,0.3s						
EMB				IAML		18 49 09.4	
	comp=E,53nm,0.4s						
BMN	Battle Mountai	1.73	96	Pn	Pn	18 48 40.8	-0.9
BMN				Pg	Pb	18 48 42.9	-0.4
BMN				IAML		18 49 06.5	
	comp=N,59nm,0.7s						
BMN				IAML		18 49 06.9	
	comp=E,49nm,0.6s						
ORV	Oroville	1.88	236		Pb	18 48 44.7	-1.0
ORV	Oroville	1.88	236	Pn	Pn	18 48 43.3	-0.3
KVN	Kaiserville	1.90	145	Pn	Pn	18 48 43.7	-0.3
KVN				IAML		18 49 12.7	
	comp=E,35nm,0.8s						
KVN				IAML		18 49 14.0	
	comp=N,36nm,0.5s						
WVOR	Wild Horse Val	1.92	19		Pn	18 48 43.5	-0.7
RYN	Ryan	2.12	159		Pb	18 48 50.2	+0.2
K05A	Summer Lake	2.35	334		Pb	18 48 53.7	-0.2
K05A				IAML		18 49 27.2	
	comp=E,58nm,1.1s						
K05A				IAML		18 49 31.1	
	comp=N,68nm,0.8s						
NVAR	Mina Array Bea	2.37	157		Pn	18 48 50.7	+0.2
NV11	Mina Array Sit	2.42	154		Pb	18 48 55.0	+0.1
NV11				IAML		18 49 30.2	
	comp=E,24nm,0.5s						
NV11				IAML		18 49 32.1	
	comp=N,23nm,0.3s						
LHV	Little Huntoon	2.48	162		Pn	18 48 52.5	+0.6
L04D	Klamath Falls	2.65	308		Pn	18 48 53.9	-0.4
L04D				IAML		18 49 43.5	
	comp=E,31nm,1.3s						
L04D				IAML		18 49 49.3	
	comp=N,22nm,2.1s						
CMB	Columbia Colle	2.68	195		Pb	18 49 00.7	+1.3
YBH	Yreka Blue Hor	2.68	296		Pn	18 48 54.0	-0.6
J08A	Circle Bar Ran	2.84	15		Pb	18 49 02.0	-0.1
J08A				IAML		18 49 43.6	
	comp=N,29nm,0.7s						
J08A				IAML		18 49 45.1	
	comp=E,20nm,0.8s						
MDPB	Devils Postpil	3.00	174		Pn	18 48 57.6	-1.6
OMMB	Old Mammoth Mi	3.03	173	Pg	Pb	18 49 06.7	+1.2
TPH	Tonopah	3.09	145		Pb	18 49 08.2	+1.7
ELK	Elko	3.23	86		Pb	18 49 10.3	+1.4
ELK				IAML		18 49 57.5	
	comp=E,10nm,0.4s						
J04D	Umpqua Nationa	3.27	324	Pg	Pb	18 49 10.4	+0.9
PINE	Pine Mountain	3.35	342		Pn	18 49 03.6	-0.3
PINE				IAML		18 50 00.9	
	comp=E,13nm,0.7s						
PINE				IAML		18 50 14.0	
	comp=N,12nm,1.2s						
I07A	Izee	3.46	360		Pn	18 49 06.4	+1.0
LCH	Last Change Ra	3.67	156		Pn	18 49 08.9	+0.5
R11A	Troy Canyon, C	3.77	126		Pb	18 49 19.2	+1.0
MFID	Camas Ranch	3.90	43	Pn	Pn	18 49 11.4	0.0
MFID				IAML		18 50 18.9	
	comp=N,12nm,0.8s						
MFID				IAML		18 50 19.2	
	comp=N,12nm,0.7s						
TPNV	Topopah Spring	4.45	144		Pb	18 49 28.6	-1.1
TPNV				IAML		18 50 37.5	
	comp=N,7.2nm,3.0s						
TPNV				IAML		18 50 48.8	
	comp=N,6.7nm,1.0s						
PSUT	Pine Spring	4.82	114		Pn	18 49 23.6	-0.7

IDC 11 19:09:13.5±1.6**, 1°.12N×127°.27E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/4**, ML3.0**/1**, Error ellipse: s-maj=67.2km s-min=25.7km az=58.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.46	116	Pn	Pn	19 10 22.8	+0.4
	0.8nm,0.3s,baz=270,slow=20,SNR=6.3						
	2.9nm,0.4s						
WRA	Warramunga Arr	22.05	162	P	P	19 14 09.8	-0.3
	0.3nm,0.6s,baz=341,slow=11,SNR=1.6						
	0.3nm,0.6s						
ASAR	Alice Springs	25.47	166	P	P	19 14 43.6	+0.1
	0.2nm,0.5s,baz=358,slow=8.8,SNR=4.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	60.00	326	P	P	19 19 22.0	-0.1
	0.3nm,0.4s,baz=127,slow=7.8,SNR=5.4						
	0.3nm,0.4s						

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*WEL **11** 19:15:00, 40°.92S×175°.42E, h24^{km}, ML4.7, Mw4.3, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M_{rr}-1.95; $M_{\theta\theta}$0.16; $M_{\phi\phi}$1.78; $M_{r\theta}$3.29; $M_{\theta\phi}$0.58; $M_{\phi r}$1.45; Fault plane solution: $M_0$4.03000×10^{15} NP1: ϕ_s5.00000°, δ20.00000°, λ-141.00000°. NP2: ϕ_s237.00000°, δ78.00000°, λ-75.00000°. Principal axes: T -446.5000, Plg31.0000°, Azm314.0000°; N 358.5500, Plg15.0000°, Azm53.0000°; P 87.9600, Plg55.0000°, Azm166.0000°;*

*IDC **11** 19:15:27.6±0.7, 40°.71S×175°.40E, h0^{km}, mb4.1/8, mbtmp4.1/10, ML3.5/2, MS3.6/19 Error ellipse: s-maj=20.6km s-min=18.4km az=111.0*

*NOU **11** 19:15:30.8, 41°.12S×175°.75E, h64^{km}, MLv4.9/10, North Island, New Zealand*

*NEIC **11** 19:15:32.0±1.5, 40°.95S±0°.02×175°.49E±0°.03, h27^{km}±4^{km}, mb4.4/15, Error ellipse: s-maj=3.3km s-min=2.2km az=76.0*

*WEL **11** 19:15:32.2, 41°S±2°×17°5E±°, h28^{km}±3^{km}, M4.7/156, ML5.0/24, MLv4.7/156, Error ellipse: s-maj=0.0km s-min=0.0km az=104.6*

ISC 11 19:15:32.6±0.7**, 40°.92S**±0°.02×**175°.48E**±0°.02**, h31**^{km}±4^{km}**, n241, σ1§36**/250**, mb4.4**/17**, MS3.7**/17**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	Holdsworth Sta	0.04	47	P	Pb	19 15 37.4	-0.4
HOWZ				S	Sb	19 15 41.1	-0.2
MTW	Mount Morrison	0.23	176	P	Pn	19 15 39.4	-0.6
MTW				S	Sb	19 15 45.0	+1.1
OGWZ	Otaki Gorge	0.26	295	P	Pb	19 15 39.3	-0.3
OGWZ				S	Sn	19 15 44.2	-1.0
MRZ	Mangatainoka R	0.28	16	P	Pn	19 15 39.5	-1.0
MRZ				S	Sn	19 15 44.7	-0.9
TIWZ	Tintock	0.34	65	P	Pn	19 15 40.9	-0.6
TIWZ				S	Sn	19 15 47.0	-0.4
CAW	Cannon Point	0.36	239	P	Pn	19 15 40.9	-0.8
CAW				S	Sb	19 15 46.8	+0.1
TMWZ	Te Maipa	0.36	120	P	Pn	19 15 41.5	-0.2
TMWZ				S	Sn	19 15 48.7	+0.8
KIW	Kapiti Island	0.43	278	P	Pn	19 15 42.0	-0.7
KIW				S	Sn	19 15 48.9	-0.7
PAWZ	Paruwai Farm	0.46	185	P	Pn	19 15 42.8	-0.3
PAWZ				S	Sn	19 15 50.9	+0.6
TRWZ	Traveller	0.50	161	P	Pn	19 15 43.3	-0.4
TRWZ				S	Sn	19 15 52.6	+1.4
MSWZ	Moikau Station	0.52	199		Pn	19 15 43.5	-0.4
MSWZ	Moikau Station	0.52	199	P	Pn	19 15 43.6	-0.4
PRWZ	Pori Road	0.53	46	P	Pn	19 15 43.8	-0.2
PRWZ				S	Sn	19 15 53.0	+1.1
CPWZ	Castlepoint	0.55	89	P	Pn	19 15 44.5	+0.2
CPWZ				S	Sn	19 15 55.2	+2.8
POWZ	Post Office Ro	0.58	23	P	Pn	19 15 44.1	-0.5
POWZ				S	Sn	19 15 52.8	-0.3
BFZ	Birch Farm	0.63	68		Pn	19 15 44.9	-0.5
BFZ				Sn	Sn	19 15 55.1	+0.6
BFZ	Birch Farm	0.63	68	P	Pn	19 15 45.0	-0.4
BFZ				S	Sn	19 15 54.8	+0.3
BFZ	Birch Farm	0.63	68	P	Pn	19 15 45.8	+0.4
WEL	Wellington	0.65	236	P	Pn	19 15 45.4	-0.2
BHW	Baring Head	0.67	223		Pn	19 15 45.5	-0.4
BHW	Baring Head	0.67	223	P	Pn	19 15 45.7	-0.2
PLWZ	Palliser	0.67	195		Pb	19 15 45.2	-0.6
PLWZ				Sn	Sn	19 15 55.4	0.0
PLWZ	Palliser	0.67	195	P	Pb	19 15 45.4	-0.4
SNZO	South Karori	0.70	236		Pn	19 15 46.0	-0.3
SNZO				Sn	Sn	19 15 56.4	+0.3
SNZO	South Karori	0.70	236	P	Pn	19 15 46.5	+0.2
OHWZ	Ohakea	0.73	350	P	Pn	19 15 47.3	+0.5
DVHZ	Dannevirke	0.82	40	P	Pn	19 15 47.9	-0.1
ANWZ	Angora Road	0.89	59	P	Pb	19 15 48.7	-0.8
TSZ	Takapari Road	0.94	23	P	Pb	19 15 49.7	-0.7
TSZ				S	Sn	19 16 02.7	+0.6
TCW	Tory Channel	0.95	252	P	Pb	19 15 49.9	-0.6
PRHZ	Porangahau	1.10	54	P	Pn	19 15 51.7	-0.2
WPHZ	Waipukurau	1.13	41	P	Pb	19 15 52.4	-1.2
PNHZ	Pukenui	1.15	29	P	Pn	19 15 52.6	-0.1
DUWZ	D'Urville Isla	1.19	275	P	Pb	19 15 53.7	-0.8
WAZ	Wanganui	1.23	342	P	Pb	19 15 55.2	0.0
CMWZ	Cape Campbell	1.26	229		Pn	19 15 54.0	0.0
CMWZ	Cape Campbell	1.26	229	P	Pn	19 15 54.4	+0.3
TUWZ	Tuamarina	1.26	246		Pn	19 15 53.5	-0.6
TUWZ	Tuamarina	1.26	246	P	Pn	19 15 53.8	-0.3
PXZ	Pawanui	1.38	50	P	Pn	19 15 55.0	-0.8
BSWZ	Blackbirch Sta	1.44	236		Pn	19 15 56.1	-0.4
BSWZ	Blackbirch Sta	1.44	236	P	Pn	19 15 56.3	-0.3
KRHZ	Kereru	1.45	28	P	Pn	19 15 56.5	-0.2
BHHZ	Black Hill Sta	1.50	18	P	Pn	19 15 57.9	+0.4
MOVZ	Moawhango	1.53	8	P	Pn	19 15 58.3	+0.4
MTVZ	Mangateitei	1.54	360	P	Pb	19 15 59.4	-1.1
KAHZ	Kahuranaki	1.56	44	P	Pn	19 15 57.5	-0.6
WNVZ	Wahianoa	1.60	3	P	Pb	19 15 59.9	-1.7
NNZ	Nelson	1.61	259		Pn	19 15 59.2	+0.2
NNZ	Nelson	1.61	259	P	Pn	19 15 59.1	+0.2
TRVZ	Turoa	1.62	2	P	Pb	19 16 00.5	-1.5
PKVZ	Pokaka	1.64	356	P	Pb	19 16 00.6	-1.5
WHVZ	Whangaehu Hut	1.64	3	P	Pb	19 16 00.7	-1.7
DRZ	Dome Shelter	1.65	2	P	Pb	19 16 01.1	-1.4
TUVZ	Tukino	1.66	5	P	Pb	19 16 00.9	-1.7
KWHZ	Kaweka Forest	1.67	26	P	Pn	19 15 59.5	-0.2
FWVZ	Far West T-bar	1.67	2	P	Pb	19 16 01.0	-1.8
LREZ	Lake Rotokare	1.68	330	P	Pb	19 16 02.3	-0.5
SNVZ	South Ngauruho	1.74	4	P	Pb	19 16 02.2	-1.8
MCHZ	McNeill Hill	1.75	33	P	Pn	19 16 00.4	-0.4
NGZ	Ngauruhoe	1.75	3	P	Pb	19 16 02.1	-2.0
CKHZ	Cape Kidnapper	1.76	45	P	Pn	19 15 59.8	-1.1
OTVZ	Oturere	1.77	5	P	Pb	19 16 02.3	-2.1
NNVZ	North Ngauruho	1.79	3	P	Pb	19 16 02.9	-2.0
ETVZ	East Tongariro	1.80	6	P	Pn	19 16 02.5	+1.0
WTVZ	West Tongariro	1.81	3	P	Pb	19 16 03.0	-2.1
TMVZ	Te Maari	1.81	6	P	Pn	19 16 02.8	+1.0
NTVZ	North Tongarir	1.83	5	P	Pn	19 16 03.1	+1.1
KRVZ	Karewarewa	1.83	4	P	Pb	19 16 03.3	-2.2
TWVZ	Taurewa	1.85	359	P	Pn	19 16 03.3	+1.0
PREZ	Palmer Road	1.88	327	P	Pb	19 16 05.5	-0.7
VRZ	Vera Road	1.88	343	P	Pb	19 16 04.3	-2.0
TKNZ	Takaka Hill	1.91	266	P	Pn	19 16 03.7	+0.7
BKZ	Black Stump Fm	1.92	24		Pn	19 16 02.5	-0.7
BKZ	Black Stump Fm	1.92	24	P	Pn	19 16 02.7	-0.6
BKZ	Black Stump Fm	1.92	24	P	Pn	19 16 03.1	-0.1
NMEZ	Namu Road	1.94	320	P	Pb	19 16 06.4	-0.9
KATZ	Kakaramea	1.95	5	P	Pn	19 16 04.9	+1.1
NEZ	North Egmont	1.96	327	P	Pb	19 16 06.5	-1.2
RITZ	Rihia Road	1.97	9	P	Pn	19 16 04.7	+0.9
KHEZ	Kahui Hut	1.98	325	P	Pb	19 16 06.7	-1.2
DREZ	Durham Road	1.99	330	P	Pb	19 16 07.0	-1.1
ARHZ	Aropaoanui	2.03	36	P	Pn	19 16 04.2	-0.5
MHEZ	Mangahewa	2.05	334	P	Pb	19 16 07.9	-1.2
NBEZ	Newall Road No	2.06	323	P	Pb	19 16 08.2	-1.2
RATZ	Rangitukua	2.07	6	P	Pn	19 16 05.9	+0.7
PKE	Pukeiti	2.07	326	P	Pb	19 16 08.5	-1.0
KHZ	Kahutara	2.08	224		Pn	19 16 04.0	-1.3
KHZ	Kahutara	2.08	224	P	Pn	19 16 04.1	-1.3
KHZ	Kahutara	2.08	224	P	Pn	19 16 04.3	-1.0
HATZ	Hinemaiaia	2.09	13	P	Pn	19 16 05.7	+0.2
NMHZ	Naumai	2.09	30	P	Pn	19 16 06.1	+0.5
MRNZ	Matariki Terra	2.11	256	P	Pn	19 16 06.2	+0.4
THZ	Tophouse	2.11	246	Pn	Pn	19 16 05.1	-0.7
THZ	Tophouse	2.11	246	P	Pn	19 16 05.1	-0.7
MRHZ	Matea Rd	2.21	19	P	Pn	19 16 06.6	-0.5
WATZ	Wairara	2.22	5	P	Pn	19 16 07.8	+0.4
QRZ	Quartz Range	2.24	272		Pn	19 16 07.9	+0.4
QRZ	Quartz Range	2.24	272	P	Pn	19 16 07.6	+0.1
QRZ	Quartz Range	2.24	272	P	Pn	19 16 08.3	+0.8
WHTZ	Whakaora	2.29	9	P	Pn	19 16 08.7	+0.5
MTHZ	Maungataniwha	2.32	27	P	Pn	19 16 08.0	-0.7
RAHZ	Arahi	2.36	32	P	Pn	19 16 08.2	-0.9
KUTZ	Kaahu Road	2.45	6	P	Pn	19 16 10.9	+0.5
ALRZ	Allen Road	2.45	16	P	Pn	19 16 10.6	+0.1
HIZ	Hauiti	2.46	349		Pn	19 16 11.6	+1.0
HIZ	Hauiti	2.46	349	P	Pn	19 16 11.7	+1.2
HIZ	Hauiti	2.46	349	P	Pn	19 16 12.1	+1.6
WPRZ	Whakapapatarin	2.46	13	P	Pn	19 16 10.4	-0.2
PRRZ	Plateau Road	2.52	17	P	Pn	19 16 10.7	-0.7
KNZ	Kokohu	2.54	42	P	Pn	19 16 10.1	-1.6
MHGZ	Mahia Peninsul	2.57	47	P	Pn	19 16 10.7	-1.4
RTZ	Ruatahuna	2.58	27	P	Pn	19 16 11.1	-1.2
TLZ	Tolley Road	2.59	1	P	Pn	19 16 13.3	+0.9
HRRZ	Handcock Road	2.61	14	P	Pn	19 16 12.5	-0.1
GRRZ	Galatos Road	2.62	11	P	Pn	19 16 13.2	+0.4
MUGZ	Murupara	2.64	23	P	Pn	19 16 11.5	-1.5
HSRZ	Hossack Road	2.68	13	P	Pn	19 16 13.4	-0.1
RRRZ	Republican Roa	2.70	18	P	Pn	19 16 13.2	-0.7
GVZ	Greta Valley S	2.74	221	P	Pn	19 16 12.7	-1.7
HLRZ	Highlands Stat	2.75	14	P	Pb	19 16 19.1	-2.1
TARZ	Mount Tarawera	2.80	17	P	Pn	19 16 14.7	-0.6
RIGZ	Rimuhau	2.83	39	P	Pn	19 16 14.1	-1.6
RAGZ	Rawiri	2.85	32	P	Pn	19 16 14.6	-1.4
DSZ	Denniston Nort	2.88	252	P	Pn	19 16 16.1	-0.4
OMRZ	Omania	2.90	14	P	Pn	19 16 15.9	-0.7
URZ	Urewera	2.95	26	Pn	Pn	19 16 15.1	-2.1
	6.4nm,0.3s,baz=223,slow=6.1,SNR=37						
URZ				Sn	Sn	19 16 49.2	-2.3
	61nm,0.3s,baz=210,slow=17,SNR=10						
URZ				LR	LR	19 17 29.1	
	comp=Z,142nm,20.3s,baz=211,slow=44						
	35nm,0.6s						
URZ	Urewera	2.95	26	Pn	Pn	19 16 14.9	-2.3
URZ	Urewera	2.95	26	P	Pn	19 16 15.1	-2.1
URZ	Urewera	2.95	26	P	Pn	19 16 15.4	-1.8
KARZ	Kaharoa	2.96	12	P	Pn	19 16 17.2	-0.3
LTZ	Lake Taylor	3.03	231	Pn	Pn	19 16 16.6	-1.9
LTZ	Lake Taylor	3.03	231	P	Pn	19 16 17.0	-1.4
MWZ	Matawai	3.03	32	P	Pn	19 16 16.3	-2.2
AMCZ	Amberley	3.08	222	P	Pn	19 16 17.2	-1.9
TKGZ	Te Karaka	3.08	37	P	Pn	19 16 17.5	-1.7
OPRZ	Ohinepanea	3.19	16	P	Pn	19 16 19.8	-0.8
TOZ	Tahuroa Road	3.19	0	P	Pn	19 16 20.9	+0.3
CNGZ	Carnagh Statio	3.22	42	P	Pn	19 16 19.5	-1.5
TGRZ	Tauranga	3.25	11	P	Pn	19 16 22.4	+1.0
OKCZ	Okains Bay	3.32	212	P	Pn	19 16 20.4	-2.0
TWGZ	Tauwhareparae	3.36	36	P	Pn	19 16 21.2	-1.8
RUGZ	Raukumara Rang	3.41	31	P	Pn	19 16 22.2	-1.5
MQZ	McQueen's Vall	3.48	216		Pn	19 16 21.7	-2.9
MQZ	McQueen's Vall	3.48	216	P	Pn	19 16 21.7	-2.9
AKCZ	Akaroa Harbour	3.51	212	P	Pn	19 16 22.6	-2.3
OXZ	Oxford	3.51	226		Pn	19 16 22.7	-2.3
OXZ	Oxford	3.51	226	P	Pn	19 16 22.6	-2.3
INZ	Inchbonnie	3.51	238	P	Pn	19 16 23.9	-1.1
PUZ	Puketiti	3.57	38	P	Pn	19 16 23.4	-2.4
PKGZ	Pakihiroa	3.64	34	P	Pn	19 16 24.7	-2.1
RACZ	Rakaia	3.74	220	P	Pn	19 16 25.8	-2.3
MKAZ	Moumakai	3.82	356	P	Pn	19 16 29.7	+0.4
WMGZ	Waiomatatini S	3.85	37	P	Pn	19 16 27.5	-2.1
AWAZ	Awhitu Peninsu	3.91	350	P	Pn	19 16 31.8	+1.3
ETAZ	East Tamaki Re	3.99	354	P	Pn	19 16 33.1	+1.5
MXZ	Matakaoa Point	4.01	34	Pn	Pn	19 16 29.3	-2.6
MXZ	Matakaoa Point	4.01	34	P	Pn	19 16 30.4	-1.5
WACZ	Wakanui South	4.04	221	P	Pn	19 16 30.0	-2.3
WTAZ	Waiatarua	4.05	350	P	Pn	19 16 33.8	+1.4
WIAZ	Waiheke Island	4.13	356	P	Pn	19 16 34.4	+0.8
WVZ	Waitaha Valley	4.13	237	P	Pn	19 16 32.6	-0.9
KUZ	Kuaotunu	4.18	3	P	Pn	19 16 34.0	-0.2
RVAZ	Riverhead Bore	4.21	350	P	Pn	19 16 36.1	+1.6
RPZ	Rata Peaks	4.30	228	Pn	Pn	19 16 34.4	-1.5
	3.3nm,0.3s,baz=205,slow=2.6,SNR=17						
RPZ				Pg	Pb	19 16 49.8	+2.3
	11nm,0.3s,baz=317,slow=4.2,SNR=7.8						
RPZ				Sn	Sn	19 17 20.6	-4.5
	20nm,0.3s,baz=8.3,slow=11,SNR=2.5						
RPZ				LR	LR	19 18 40.4	
	comp=Z,505nm,20.7s,baz=93,slow=44						
	9.7nm,0.4s						
RPZ	Rata Peaks	4.30	228	Pn	Pn	19 16 32.3	-3.6
RPZ	Rata Peaks	4.30	228	P	Pn	19 16 33.9	-2.0
RPZ	Rata Peaks	4.30	228	P	Pn	19 16 33.9	-2.0
ABAZ	Army Bay	4.35	353	P	Pn	19 16 37.4	+0.9
ARCZ	Arundel	4.39	225	P	Pn	19 16 35.3	-1.8
TMZ	Timaru	4.78	222	P	Pn	19 16 40.4	-2.0
FOZ	Fox Glacier	4.95	236	Pn	Pn	19 16 42.8	-1.9
FOZ	Fox Glacier	4.95	236	P	Pn	19 16 42.9	-1.8
WCZ	Waipu Caves	5.06	350	P	Pn	19 16 47.4	+1.1
LBZ	Lake Benmore	5.21	227	Pn	Pn	19 16 46.3	-2.2
LBZ	Lake Benmore	5.21	227	P	Pn	19 16 47.1	-1.3
ODZ	Otahua Downs	5.43	219	Pn	Pn	19 16 49.0	-2.4
ODZ	Otahua Downs	5.43	219	P	Pn	19 16 49.1	-2.4
ODZ	Otahua Downs	5.43	219	P	Pn	19 16 49.0	-2.4
JCZ	Jackson Bay	5.86	235	P	Pn	19 16 55.4	-2.0
OUZ	Omahuta	5.88	345	Pn	Pn	19 16 58.4	+0.7
OUZ	Omahuta	5.88	345	P	Pn	19 16 59.2	+1.6
OUZ	Omahuta	5.88	345	P	Pn	19 16 59.1	+1.5
HHSZ	Highcliff Hill	6.10	214	P	Pn	19 16 58.6	-2.0
WKZ	Wanaka	6.14	228	Pn	Pn	19 16 58.9	-2.2
WKZ	Wanaka	6.14	228	P	Pn	19 16 59.0	-2.2
EAZ	Earnscleugh	6.24	224	P	Pn	19 17 00.4	-2.1
CTZ	Chatham Island	6.50	118	P	Pn	19 17 04.8	-1.2
TUZ	Tuapeka	6.58	218	P	Pn	19 17 05.3	-1.9
SYZ	Scrubby Hill	7.25	217	P	Pn	19 17 15.4	-0.9
WHZ	Wether Hill Ro	7.39	225	Pn	Pn	19 17 15.9	-2.5
DZM	Mont Dzumac	20.29	335	P	P	19 20 06.0	+0.2
	3.3nm,0.8s,baz=219,slow=7.4,SNR=7.4						
DZM				LR	LR	19 26 52.2	
	comp=Z,219nm,21.9s,baz=212,slow=34						
DZM	Mont Dzumac	20.29	335	P	P	19 20 06.1	+0.2
DZM				IAmb	IAmb	19 20 31.6	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	28.58	278	P	P	19 21 24.4	-1.4
	comp=Z,4.7nm,1.0s,baz=84,slow=13,SNR=3.8						
STKA				LR	LR	19 32 05.4	
	comp=Z,107nm,18.6s,baz=191,slow=35						
	comp=Z,4.7nm,1.0s						
STKA	Stephens Creek	28.58	278	IAmb	IAmb	19 21 28.2	
	comp=Z,1.0nm,0.9s						
BBOO	Buckleboo	32.34	272	P	P	19 21 58.1	-1.0
CTA	Charters Tower	32.40	301	LR	LR	19 35 13.4	
	comp=Z,194nm,18.1s,baz=108,slow=37						
VNDA	Vanda	37.14	185	P	P	19 22 41.3	+1.3
	comp=Z,0.6nm,0.8s,baz=345,slow=6.8,SNR=3.8						
VNDA				LR	LR	19 34 41.8	
	comp=Z,61nm,20.1s,baz=26,slow=31						
	comp=Z,0.6nm,0.8s						
AS31	Alice Springs	38.72	283	P	P	19 22 52.8	-1.2
AS31				IAmb	IAmb	19 23 03.0	
	comp=Z,2.8nm,1.1s						
ASAR	Alice Springs	38.72	283	P	P	19 22 52.9	-1.1
	comp=Z,1.1nm,0.6s,baz=124,slow=7.1,SNR=37						
ASAR				LR	LR	19 38 50.8	
	comp=Z,115nm,19.5s,baz=137,slow=36						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	38.72	283	P	P	19 22 53.1	-0.9
COEN	Coen	38.90	304	P	P	19 22 55.3	-0.2
WR0	Warramunga Arr	40.55	289	P	P	19 23 07.8	-1.3
WR0				IAmb	IAmb	19 23 14.1	
	comp=Z,7.9nm,1.1s						
WB2	Warramunga Arr	40.69	288	P	P	19 23 09.2	-1.2

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WB2                                   IAmb    IAmb     19 23 19.1
          comp=Z,12nm,1.1s
WRA    Warramunga Arr    40.70 288    P       P        19 23 09.4  -1.0
          comp=Z,3.2nm,0.5s,baz=126,slow=8.4,SNR=47
WRA                                   LR      LR       19 40 03.6
          comp=Z,125nm,18.5s,baz=37,slow=36
          comp=Z,3.2nm,0.5s
WRA    Warramunga Arr    40.70 288    P       P        19 23 09.1  -1.3
WB0    Warramunga Arr    40.77 289    P       P        19 23 09.9  -1.2
WB0                                   IAmb    IAmb     19 23 21.3
          comp=Z,18nm,1.4s
FITZ   Fitzroy Crossi    48.22 283    P       P        19 24 09.4  -1.1
          comp=Z,1.7nm,0.7s,baz=108,slow=6.4,SNR=1.0
FITZ                                  LR      LR       19 44 25.5
          comp=Z,74nm,20.2s,baz=127,slow=36
          comp=Z,1.7nm,0.7s
FITZ   Fitzroy Crossi    48.22 283    P       P        19 24 10.0  -0.4
QSPA   South Pole Qui    49.20 180    P       P        19 24 19.9  +2.2
          comp=Z,6.2nm,1.0s,baz=34,slow=2.5,SNR=12
QSPA                                  LR      LR       19 43 02.9
          comp=Z,53nm,18.3s,baz=31,slow=34
          comp=Z,6.2nm,1.0s
QSPA   South Pole Qui    49.20 180    P       P        19 24 19.8  +2.1
QSPA                                  IAmb    IAmb     19 24 20.6
          comp=Z,9.0nm,1.1s
SIJI   Sorong            56.43 303    LR      LR       19 51 38.6
          comp=Z,48nm,18.3s,baz=76,slow=39
BELA   Belgrano 2        60.05 173    P       P        19 25 35.9  -0.1
BELA                                  IAmb    IAmb     19 25 37.4
          comp=Z,3.4nm,0.8s
MAW    Mawson            60.59 204    LR      LR       19 50 29.9
          comp=Z,76nm,18.4s,baz=34,slow=35
KAPI   Kappang           61.20 290    LR      LR       19 54 33.8
          comp=Z,63nm,18.1s,baz=94,slow=38
DAV    Davao City (W)    66.13 304    LR      LR       19 56 31.9
          comp=Z,18nm,18.1s,baz=164,slow=37
TROLL  Troll, Antarti    67.26 182    P       P        19 26 24.5  +0.8
SNAA   Sanae             67.70 181    P       P        19 26 26.7  +0.3
SNAA   Sanae             67.70 181    LR      LR       19 54 10.7
          comp=Z,43nm,19.2s,baz=122,slow=34
SNAA   Sanae             67.70 181    P       P        19 26 26.1  -0.3
SNAA                                  IAmb    IAmb     19 26 27.4
          comp=Z,3.0nm,0.8s
VNA3   Neumayer Olymp    68.08 178    P       P        19 26 29.3  +0.6
VNA2   Neumayer--Watz    68.44 179    P       P        19 26 31.9  +0.9
          baz=179,slow=6.0
VNA1   Neumayer--Stat    68.70 179    P       P        19 26 33.3  +0.7
PLCA   Paso Flores       79.03 135    P       P        19 27 35.0  +1.3
          comp=Z,1.9nm,0.9s,baz=236,slow=7.1,SNR=4.4
          comp=Z,1.9nm,0.9s
PLCA   Paso Flores       79.03 135    IAmb    IAmb     19 27 35.8
          comp=Z,3.0nm,0.9s
JOW    Kunigami          80.38 318    LR      LR       19 58 06.0
          comp=Z,37nm,21.1s,baz=176,slow=32
PSI    Prapat            81.70 281    LR      LR       20 06 43.1
          comp=Z,51nm,18.0s,baz=98,slow=38
MJAR   Matsushiro Arr    84.33 331    LR      LR       19 59 09.1
          comp=Z,28nm,21.9s,baz=118,slow=31
KSRS   Korea Array       89.32 324    LR      LR       20 06 50.9
          comp=Z,11nm,19.4s,baz=130,slow=35
NJ2    Nanjing           89.46 315   eP       P        19 28 29.2  +2.9
NJ2                                   pmax    pmax
          comp=Z,5.0nm,0.5s
CMAR   Chiang Mai Arr    92.17 293    P       P        19 28 39.2  -0.1
          comp=Z,0.9nm,0.8s,baz=154,slow=3.3,SNR=8.0
          comp=Z,0.9nm,0.8s
PZH    PanZhiHua         95.71 300    P       P        19 28 57.8  +2.3
PZH                                   pmax    pmax
          comp=Z,10.0nm,0.5s
PZH                                   pmax    pmax
          comp=Z,80nm,4.0s
HHC    Hu-ho-hao-te      99.93 316   eP       Pdif     19 29 17.4  +3.3
HHC                                   pmax    pmax
          comp=Z,29nm,0.8s
HHC                                   pmax    pmax
          comp=Z,140nm,4.5s
Y49A   Blount Mountai   116.80  67            PKPdf    19 34 12.7  -1.1
YKA    Yellowknife Ar   117.20  29    PKP     PKiKP    19 34 13.5  -0.1
          comp=Z,0.3nm,0.7s,baz=262,slow=1.1,SNR=7.6
MKAR   Makanchi Array   120.20 307    PKP     PKPdf    19 34 18.1  -1.8
          comp=Z,0.4nm,0.8s,baz=79,slow=2.6,SNR=3.0
KBZ    Khabaz           145.20 291    PKPbc   PKPbc    19 35 04.6  -1.6
          comp=Z,4.2nm,0.8s,baz=162,slow=1.5,SNR=10
ARCES  ARCESS Array B   147.31 341    PKPbc   PKPdf    19 35 10.1  +0.7
          comp=Z,1.6nm,0.7s,baz=79,slow=2.1,SNR=9.7
BRTR   Keskin Array B   151.03 280    PKPbc   PKPbc    19 35 21.4  -0.8
          comp=Z,2.7nm,0.7s,baz=133,slow=5.3,SNR=11
TORD   Torodi Ar. Bea   151.80 193    PKPbc   PKPbc    19 35 23.8  -0.8
          comp=Z,7.7nm,0.7s,baz=158,slow=4.2,SNR=0.3
FINES  FINESS Array B   152.34 328    PKPbc   PKPbc    19 35 22.8  -1.5
          comp=Z,1.6nm,0.7s,baz=103,slow=4.1,SNR=5.1
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IDC **11** *19:16:50.9±0.7, 43.°83N×148.°40E, h0^{km}, mb4.2/22, mbtmp4.1/26, ML3.3/4, MS3.4/20, Error ellipse: s-maj=19.1km s-min=13.9km az=147.0*

JMA **11** *19:16:52.4±0.4, 44°N±2°×14°8E±°, h0^{km}, MV4.7/28, SE OFF ETOROFU*

NIED **11** *19:16:52.4, 43.°58N×148.°34E, h0^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.79; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-1.23; $M_{r\theta}$1.59; $M_{\theta\phi}$-0.87; $M_{\phi r}$0.92; Fault plane solution: $M_0$2.58000×10^{15} NP1: ϕ_s199.00000°, δ25.00000°, λ60.00000°. NP2: ϕ_s52.00000°, δ68.00000°, λ103.00000°.*

SKHL **11** *19:16:52.9±0.1, 43.°70N×148.°80E, h40^{km}±5^{km}, mb5.4/4*

MOS **11** *19:16:54.4±1.0, 43.°77N×148.°44E, h37^{km}, mb4.8/13, MS3.5/5, Error ellipse: s-maj=7.6km s-min=6.1km az=126.2*

NEIC **11** *19:16:56.6±1.6, 43.°87N±0.°09×148.°34E±0.°05, h38^{km}±8^{km}, mb4.4/69, Error ellipse: s-maj=13.8km s-min=2.5km az=162.0*

ISC 11 19:16:54.2±0.9**, 43.°71N**±0.°05×**148.°53E**±0.°04**, h28**^{km}±5^{km}**, n294, σ1.^{s}39**/303**, mb4.5**/87**, MS3.6**/26**, 22C-26D, East of Kuril Islands**

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Code   Station Name       Δ°   AZ°     Phase ID           Time      Res
                                      Op      ISC       h  m  s     ISC
SHO    Shikotan           1.24 278   ePN      Pn       19 17 15.3  -0.4
SHO                                  eS       Sn       19 17 31.2  -0.2
SHO                                   pmax    pmax
          comp=N,239nm,0.3s
SHO                                   pmax    pmax
          comp=E,381nm,0.3s
SHO                                   pmax    pmax
          comp=Z,475nm,0.3s
SHO                                   smax    smax
          comp=N,7µm,0.4s
SHO                                   smax    smax
          comp=E,4µm,0.4s
SHO    Shikotan           1.24 278   i P      Pn       19 17 15.3  -0.4
SHO                                   AMB     AMB      19 17 22.2
          comp=E,240nm,0.2s
SHO                                   AMB     AMB      19 17 22.2
          comp=E,380nm,0.2s
SHO                                   AMB     AMB      19 17 22.2
          comp=E,850nm,0.2s
SHO                                  i S      Sb       19 17 32.1  -0.4
SHO                                   A       A        19 17 37.1
          comp=E,6µm,0.6s
SHO                                   A       A        19 17 37.1
          comp=E,4µm,0.6s
KUR    Kuril'sk           1.59 343c iPN       Pn       19 17 19.7  -0.8
KUR                                  eS       Sn       19 17 40.5  +0.4
KUR                                   pmax    pmax
          comp=E,363nm,0.3s
KUR                                   pmax    pmax
          comp=Z,834nm,0.3s
KUR                                   pmax    pmax
          comp=N,188nm,0.4s
KUR                                   smax    smax
          comp=N,8µm,2.4s
KUR                                   smax    smax
          comp=E,6µm,2.2s
KUR                                   smax    smax
          comp=N,2µm,0.5s
KUR                                   smax    smax
          comp=E,801nm,0.5s
KUR    Kuril'sk           1.59 343   i P      Pn       19 17 19.7  -0.8
KUR                                   AMB     AMB      19 17 27.3
          comp=E,190nm,0.2s
KUR                                   AMB     AMB      19 17 27.3
          comp=E,360nm,0.2s
KUR                                   AMB     AMB      19 17 27.3
          comp=E,830nm,0.2s
KUR                                  eS       Sn       19 17 39.8  -0.3
KUR                                   A       A        19 17 42.4
          comp=E,8µm,2.4s
KUR                                   A       A        19 17 42.4
          comp=E,6µm,2.4s
KUR                                   A       A        19 17 44.4
          comp=E,2µm,0.5s
KUR                                   A       A        19 17 44.4
          comp=E,800nm,0.5s
YUK    Yuzh-Kuril'sk      1.96 280   ePN      Pn       19 17 26.1  +0.6
YUK                                  eS       Sn       19 17 50.6  +1.5
YUK                                   pmax    pmax
          comp=Z,658nm,0.2s
YUK                                   pmax    pmax
          comp=E,421nm,0.4s
YUK                                   pmax    pmax
          comp=N,435nm,0.3s
YUK                                   smax    smax
          comp=N,4µm,0.5s
YUK                                   smax    smax
          comp=E,4µm,0.6s
YUK    Yuzh-Kuril'sk      1.96 280   eP       Pn       19 17 25.9  +0.4
YUK                                   AMB     AMB      19 17 29.6
          comp=E,440nm,0.2s
YUK                                   AMB     AMB      19 17 29.6
          comp=E,420nm,0.2s
YUK                                   AMB     AMB      19 17 29.6
          comp=E,560nm,0.2s
YUK                                  eS       Sn       19 17 50.5  +1.5
YUK                                   A       A        19 17 58.5
          comp=E,5µm,0.7s
YUK                                   A       A        19 17 58.5
          comp=E,4µm,0.7s
NEM2   Nemuro 2           2.06 261   eP       Pn       19 17 26.8   0.0
NEM2                                 eS       Sn       19 17 51.6   0.0
NMR    Nemuro--Hokkai     2.06 261   ePN      Pn       19 17 26.7  -0.3
NMR                                  eS       Sn       19 17 51.5  -0.3
NMR    Nemuro--Hokkai     2.06 261   eP       Pn       19 17 27.0   0.0
NMR                                  eS       Sn       19 17 52.3  +0.5
GLVR   Golovnino          2.18 272   ePN      Pn       19 17 28.7  +0.1
GLVR                                 eS       Sn       19 17 55.6  +0.9
GLVR                                  pmax    pmax
          comp=E,79nm,0.2s
GLVR                                  pmax    pmax
          comp=Z,182nm,0.2s
GLVR                                  pmax    pmax
          comp=N,88nm,0.3s
GLVR                                  smax    smax
          comp=N,3µm,0.4s
GLVR                                  smax    smax
          comp=E,3µm,0.4s
GLVR   Golovnino          2.18 272   eP       Pn       19 17 28.7  +0.1
GLVR                                  AMB     AMB      19 17 30.6
          comp=E,240nm,0.2s
GLVR                                 eS       Sn       19 17 55.6  +0.9
GLVR                                  A       A        19 18 00.7
          comp=E,3µm,0.5s
GLVR                                  A       A        19 18 00.7
          comp=E,3µm,0.5s
RUSJ   Misakicho          2.40 281   ePN      Pn       19 17 32.4  +0.8
RUSJ                                 eS       Sn       19 18 02.1  +2.0
JRA    Rausu              2.48 276   eP       Pn       19 17 32.9  +0.3
JRA                                  eS       Sn       19 18 03.2  +1.3
JNSB   Nemuroshibetsu     2.56 273   eP       Pn       19 17 34.2  +0.5
JNK    Nakash             2.77 269   eP       Pn       19 17 36.4  -0.2
JAK    Akkeshi            2.88 257   eP       Pn       19 17 38.3  +0.1
JTKR   Abashiri--Toko     3.35 276   eP       Pn       19 17 45.9  +1.2
JAR    Ashorobuto         3.49 265   eP       Pn       19 17 46.7  +0.2
JCH    Churui             3.94 256   eP       Pn       19 17 53.8  +1.1
JCH                                  eS       Sn       19 18 38.3  +0.4
ERM    Erimo              4.30 249    Pn      Pn       19 17 58.1  +0.4
ERM    Erimo              4.30 249d iPN       Pn       19 17 59.6  +1.9
ERM                                   pmax    pmax
          comp=Z,48nm,0.6s
JKA    Kamikawa-asahi     4.30 277            Pn       19 17 58.0  +0.2
ASAJ   Asahikawa          4.30 277    Pn      Pn       19 17 59.5  +1.7
          comp=Z,3.3nm,0.3s,baz=171,slow=5.5,SNR=24
ASAJ                                  LR      LR       19 19 37.7
          comp=Z,298nm,21.1s,baz=144,slow=40
ASAJ   Asahikawa          4.30 277    PN      Pn       19 17 58.0  +0.2
YSS    Yuzh-Sakhalins     5.20 311            Pn       19 18 10.3  +0.2
YSS    Yuzh-Sakhalins     5.20 311   ePN      Pn       19 18 10.3  +0.2
YSS                                   pmax    pmax
          comp=Z,60nm,1.0s
YSS                                   MLR     MLR
          comp=Z,600nm,15.0s
YSS                                   MLR     MLR
          comp=N,400nm,16.0s
YSS                                   MLR     MLR
          comp=E,500nm,16.0s
YSS    Yuzh-Sakhalins     5.20 311   eP       Pn       19 18 11.5  +1.4
YSS                                   AMB     AMB      19 18 13.5
          comp=E,60nm,0.8s
YSS                                  eS       Sn       19 19 10.2  +1.1
YSS                                   A       A        19 19 17.5
          comp=E,60nm,0.8s
JEW    Eniwo              5.24 263    Pn      Pn       19 18 10.6   0.0
JEW    Eniwo              5.24 263   eP       Pn       19 18 12.8  +2.1
JOT    Ohata              6.00 250   eP       Pn       19 18 22.2  +1.2
JANG   Nango              6.20 240   eP       Pn       19 18 23.2  -0.6
JANG                                 eS       Sn       19 19 28.2  -5.5
JTM    Tenmabayashi       6.26 245    Pn      Pn       19 18 24.8  +0.2
UGL    Uglegorsk          6.98 322   eP       Pn       19 18 36.8  +2.3
UGL                                   AMB     AMB      19 18 37.1
          comp=E,10.0nm,0.8s
UGL                                  eS       Sn       19 19 53.5  +0.6
UGL                                   A       A        19 20 21.0
          comp=E,20nm,0.7s
UGL                                   A       A        19 20 21.0
          comp=E,40nm,0.7s
TYV    Tymovskoe          8.19 333   eP       Pn       19 18 53.3  +2.2
TYV                                   AMB     AMB      19 18 54.9
          comp=E,20nm,0.7s
JMM    Marumori           8.28 228    Pn      Pn       19 18 48.5  -3.8
TEY    Ternei             8.65 283   eP       Pn       19 18 59.8  +2.4
TEY                                   AMB     AMB      19 19 01.8
SKR    Severo-Kuril's     8.68  34   eP       Pn       19 18 57.2  -0.5
SKR                                   AMB     AMB      19 19 06.0
          comp=E,20nm,0.7s
PAU    Pauzhetka          9.56  33   eP       Pn       19 19 10.4  +0.6
PAU                                   AMB     AMB      19 19 13.7
          comp=E,10.0nm,0.7s
JSD    Sado               9.62 237    Pn      Pn       19 19 10.2  -0.6
OKH    Okha              10.52 341   eP       Pn       19 19 24.0  +1.1
OKH                                   AMB     AMB      19 19 25.0
          comp=E,20nm,0.6s
MJAR   Matsushiro Arr    10.66 231    Pn      Pn       19 19 25.8  +0.8
          comp=E,0.1nm,0.3s,baz=31,slow=14,SNR=4.8
          comp=E,0.9nm,0.3s
MJB9   Matsu-Tunnel      10.66 231    Pn      Pn       19 19 23.3  -1.7
MAJO   Matsushiro        10.66 231    Pn      Pn       19 19 23.9  -1.1
MAJO   Matsushiro        10.66 231⇑ePN       Pn       19 19 26.6  +1.6
MAJO                                  pmax    pmax
          comp=Z,3.0nm,0.4s
NKL    Nikolayevsk       10.78 334   eP       Pn       19 19 27.4  +0.9
NKL                                   AMB     AMB      19 19 28.2
          comp=Z,30nm,0.6s
GRNR   Gornyy            10.83 315   eP       Pn       19 19 28.5  +1.2
PEA0B  Petropavlovsk-    11.19  30    Pn      Pn       19 19 32.1  -0.1
PEA0B  Petropavlovsk-    11.19  30⇑ePN       Pn       19 19 28.6  -3.6
PETK   Petropavlovsk-    11.19  30    Pn      Pn       19 19 32.6  +0.3
          comp=Z,0.3nm,0.3s,baz=209,slow=14,SNR=7.5
          comp=Z,0.8nm,0.5s
PETK   Petropavlovsk-    11.19  30    Pn      Pn       19 19 32.4  +0.2
PET    Petropavlovsk     11.48  32   eP       Pn       19 19 34.4  -1.7
JGF    Kuroka            11.81 230    Pn      Pn       19 19 39.3  -1.5
GRTR   Gornotajezhnoj    11.85 276   eP       Pn       19 19 41.0  -0.3
USRK   Ussuriysk Ar.     11.94 278    LR      LR       19 24 30.2
          comp=Z,278nm,18.1s,baz=105,slow=39
KLR    Kul'dur           12.81 301    Pn      Pn       19 19 58.4  +4.2
          comp=Z,0.2nm,0.3s,baz=113,slow=12,SNR=5.4
KLR                                   LR      LR       19 25 13.1
          comp=Z,288nm,18.4s,baz=76,slow=40
KLR    Kul'dur           12.81 301⇑ePN       Pn       19 19 53.7  -0.6
KLR                                   pmax    pmax
          comp=Z,2.0nm,1.4s
KLR    Kul'dur           12.81 301   eP       Pn       19 19 55.7  +1.4
MA2    Magadan           15.95   4    LR      LR       19 26 51.1
          comp=Z,105nm,18.3s,baz=194,slow=38
KSRS   Korea Array       16.84 255    Pn      Pn       19 20 46.4  -1.4
          comp=Z,0.2nm,0.3s,baz=62,slow=12,SNR=4.5
KSRS                                  LR      LR       19 27 12.0
          comp=Z,92nm,20.8s,baz=65,slow=37
          comp=Z,1.2nm,0.7s
ZEA    Zeya              17.19 313   eP       Pn       19 20 52.5  +0.4
ZEA                                   pmax    pmax
          comp=Z,10.0nm,1.0s
ZEA                                   MLR     MLR
          comp=E,100nm,13.0s
ZEA                                   MLR     MLR
          comp=N,100nm,15.0s
ZEA                                   MLR     MLR
          comp=Z,100nm,16.0s
ZEA    Zeya              17.19 313   eP       Pn       19 20 49.9  -2.2
ZEA                                   AMB     AMB      19 20 55.0
          comp=Z,10.0nm,0.8s
JCJ    Chichijima        17.36 199            P        19 20 57.9  +2.4
JCJ                                   IAmb    IAmb     19 21 18.6
          comp=Z,52nm,0.8s
TJN    Taejon            17.76 253ceP         P        19 21 00.9  +1.0
SEY    Seymchan          19.39   5    P       P        19 21 16.0  -1.6
          comp=Z,0.4nm,0.3s,baz=192,slow=8.9,SNR=18
          comp=Z,5.5nm,0.8s
SEY    Seymchan          19.39   5⇑iP         P        19 21 15.3  -2.3
SEY                                   pmax    pmax
          comp=Z,8.0nm,0.9s
YAK    Yakutsk           21.44 335    P       P        19 21 36.2  -3.5
          comp=Z,15nm,0.6s,baz=122,slow=2.2,SNR=28
YAK                                   LR      LR       19 30 34.1
          comp=Z,146nm,18.2s,baz=102,slow=39
YAK    Yakutsk           21.44 335    P       P        19 21 35.6  -4.2
YAK    Yakutsk           21.44 335   eP       P        19 21 35.8  -4.0
YAK                                  e                 19 21 51.1
YAK                                  eS       S        19 25 30.9  -5.1
YAK                                  e*SS     pS       19 25 49.1  +2.3
YAK                                  e                 19 32 55.6
YAK                                   pmax    pmax
          comp=Z,21nm,0.8s
YAK                                   pmax    pmax
          comp=N,3.0nm,0.8s
YAK                                   pmax    pmax
          comp=E,3.0nm,0.8s
YAK                                   pmax    pmax
          comp=Z,77nm,3.7s
YAK                                   pmax    pmax
          comp=N,48nm,3.3s
YAK                                   pmax    pmax
          comp=E,42nm,3.7s
YAK                                   smax    smax
          comp=E,57nm,4.3s
YAK                                   smax    smax
          comp=N,50nm,3.0s
YAK                                   MLR     MLR
          comp=Z,134nm,17.0s
YAK                                   MLR     MLR
          comp=N,119nm,15.0s
XLT    XiLinHaoTe        23.34 282   eP       P        19 21 58.7  -1.5
XLT                                   pP      pP       19 22 08.0  +1.0
XLT                                   sP      pwP      19 22 11.7  +0.1
XLT                                   PP      PnPn     19 22 31.3  +4.8
XLT                                   S       S        19 26 08.2  -2.9
XLT                                   SS      SnSn     19 26 50.3  +3.6
XLT                                   pmax    pmax
          comp=Z,16nm,0.7s
XLT                                   pmax    pmax
          comp=Z,57nm,4.1s
XLT                                   LR      LR
          comp=N,13nm,15.6s
XLT                                   LR      LR
          comp=E,210nm,15.6s
XLT                                   LR      LR
          comp=Z,230nm,17.3s
BILL   Bilibino          26.13  15   i P      P        19 22 23.2  -2.2
BILL                                 i                 19 22 34.3
BILL                                 e                 19 25 53.6
BILL                                  pmax    pmax
          comp=Z,2.0nm,1.0s
BILL                                  MLR     MLR
          comp=Z,117nm,16.0s
HNS    HongShan          26.33 268 ⇓P         P        19 22 28.5  +0.9
HHC    Hu-ho-hao-te      27.35 277   eP       P        19 22 38.4  +1.5
HHC                                   pmax    pmax
          comp=Z,21nm,0.9s
HHC                                   pmax    pmax
          comp=Z,140nm,5.1s
HHC                                   LR      LR
          comp=N,230nm,13.3s
HHC                                   LR      LR
          comp=E,250nm,14.6s
HHC                                   LR      LR
          comp=Z,240nm,14.0s
H11N2  WAKE ISLAND Hy    28.43 141    T       T        19 53 40.5
          baz=332,slow=75,SNR=377
H11N1  WAKE ISLAND Hy    28.45 141    T       T        19 53 46.9
          baz=332,slow=75,SNR=374
H11N3  WAKE ISLAND Hy    28.45 141    T       T        19 53 43.4
          baz=332,slow=75,SNR=280
ULN    Ulaanbaatar       28.96 293d iP        P        19 22 51.7  +0.4
ULN                                   pmax    pmax
          comp=Z,8.0nm,1.0s
ULN    Ulaanbaatar       28.96 293   eP       P        19 22 51.7  +0.4
SONM   Songino Array     29.41 293    P       P        19 22 55.3  +0.2
          comp=Z,3.7nm,0.6s,baz=82,slow=8.2,SNR=34
SONM                                  LR      LR       19 35 52.4
          comp=Z,159nm,19.4s,baz=75,slow=39
          comp=Z,3.7nm,0.6s
SONM   Songino Array     29.41 293    P       P        19 22 54.8  -0.4
H11S1  WAKE ISLAND Hy    29.42 143    T       T        19 54 52.3
          baz=333,slow=76,SNR=450
H11S3  WAKE ISLAND Hy    29.43 143    T       T        19 54 52.9
          baz=333,slow=76,SNR=403
H11S2  WAKE ISLAND Hy    29.44 143    T       T        19 54 53.6
          baz=333,slow=76,SNR=314
TIXI   Tiksi             29.61 348    P       P        19 22 53.0  -3.5
          comp=Z,0.8nm,0.5s,baz=84,slow=22,SNR=10
TIXI                                  LR      LR       19 35 48.6
          comp=Z,35nm,18.8s,baz=181,slow=39
TIXI   Tiksi             29.61 348    IAmb    IAmb     19 22 55.3
          comp=Z,1.1nm,0.8s
TIXI   Tiksi             29.61 348⇓eP         P        19 22 52.9  -3.5
TIXI                                  pmax    pmax
          comp=Z,6.0nm,3.0s
LZH    Lanzhou           34.77 273   eP       P        19 23 43.0  +0.7
LZH                                   pP      sP       19 23 51.6  -0.9
LZH                                   pmax    pmax
          comp=Z,30nm,1.4s
LZH                                   LR      LR
          comp=N,140nm,12.4s
LZH                                   LR      LR
          comp=E,120nm,11.8s
LZH                                   LR      LR
          comp=Z,150nm,11.8s
GTA    Gaotai            36.28 280 ⇓P         P        19 23 56.6  +1.3
GTA                                   pP      pP       19 24 03.2  +0.7
GTA                                   sP      pwP      19 24 07.9  +0.7
GTA                                   pmax    pmax
          comp=Z,7.0nm,1.0s
GTA                                   pmax    pmax
          comp=Z,35nm,5.6s
GTA                                   LR      LR
          comp=N,80nm,12.3s
GTA                                   LR      LR
          comp=E,120nm,15.1s
GTA                                   LR      LR
          comp=Z,190nm,14.3s
J20K   Nowinta River     37.77  37            P        19 24 09.1  +1.8
J20K                                  IAmb    IAmb     19 24 23.0
          comp=Z,4.1nm,0.8s
IMAR   Indian Mountai    38.11  34    P       P        19 24 10.8  +0.5
H21K   Melozitna Rive    38.47  35    P       P        19 24 14.9  +1.6
H21K                                  IAmb    IAmb     19 24 28.3
          comp=Z,6.7nm,1.2s
CAST   Castle Rocks      38.64  38    P       P        19 24 16.5  +1.8
COLD   Coldfoot          39.65  32    P       P        19 24 24.0  +0.8
COLD                                  IAmb    IAmb     19 24 25.3
          comp=Z,3.4nm,0.8s
H23K   Yukon River       39.82  35    P       P        19 24 26.4  +1.7
I23K   Minto, Yukon-K    39.88  36    P       P        19 24 26.0  +1.0
NEA2   Nenana            39.99  37    P       P        19 24 26.7  +0.7
NEA2                                  IAmb    IAmb     19 24 41.6
          comp=Z,3.5nm,0.6s
TOLK   Toolik Lake Re    40.02  30    P       P        19 24 26.6  +0.4
TOLK                                  IAmb    IAmb     19 24 28.2
          comp=Z,5.0nm,0.8s
RND    Reindeer          40.09  38    P       P        19 24 29.0  +2.1
RND                                   IAmb    IAmb     19 24 43.4
          comp=Z,7.2nm,1.2s
RND    Reindeer          40.09  38    P       P        19 24 29.0  +2.1
RND                                   pmax    pmax
          comp=Z,7.0nm,1.2s
MDM    Murphy Dome       40.35  36    P       P        19 24 29.4  +0.4
```

SML	**Sawmill**	**40.40**	**41**	P	**P**	**19 24 29.8**	**+0.3**
SML				IAmb	IAmb	19 24 49.0	
	comp=Z,8.9nm,1.0s						
WRH	**Wood River Hil**	**40.41**	**37**	P	**P**	**19 24 28.6**	**-0.9**
WRH				IAmb	IAmb	19 24 38.7	
	comp=Z,3.5nm,0.7s						
H24K	**Noodor Dome**	**40.51**	**35**	P	**P**	**19 24 31.9**	**+1.6**
CCB	**Clear Creek Bu**	**40.53**	**36**	P	**P**	**19 24 31.0**	**+0.5**
DHY	**Denali Highway**	**40.77**	**39**	P	**P**	**19 24 33.0**	**+0.4**
HDA	**Harding Lake**	**40.91**	**37**	P	**P**	**19 24 34.3**	**+0.7**
HDA				IAmb	IAmb	19 24 49.4	
	comp=Z,8.6nm,1.4s						
IL31		**40.93**	**36**	P	**P**	**19 24 33.6**	**-0.1**
ILAR	**Eielson Array**	**40.93**	**36**	P	**P**	**19 24 34.3**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=266,slow=8.1,SNR=12						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**40.93**	**36**	P	**P**	**19 24 33.5**	**-0.2**
ILAR	**Eielson Array**	**40.93**	**36**	P	**P**	**19 24 33.5**	**-0.2**
GOMU	**GeErMu**	**41.23**	**278**	P	**P**	**19 24 37.2**	**+0.1**
GOMU				pP	pP	19 24 41.0	-3.3
GOMU				sP	sP	19 24 42.5	-4.7
GOMU				S	S	19 31 32.3	+43
GOMU				sS	sS	19 31 46.3	+45
GOMU				SS	**SnSn**	**19 33 58.9**	**-2.8**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,65nm,4.7s						
GOMU				LR	LR		
	comp=N,100nm,18.6s						
GOMU				LR	LR		
	comp=E,110nm,15.2s						
GOMU				LR	LR		
	comp=Z,150nm,14.9s						
PZH	**PanZhiHua**	**41.36**	**261**	P	**P**	**19 24 35.0**	**-2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
KMI	**Kunming**	**41.49**	**259**	⇑P	**P**	**19 24 39.8**	**+0.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLU	**Klutina**	**41.57**	**41**	P	**P**	**19 24 39.7**	**+0.6**
KLU				IAmb	IAmb	19 24 51.9	
	comp=Z,7.0nm,1.1s						
J25K	**Salcha River,**	**41.59**	**36**	P	**P**	**19 24 38.9**	**-0.3**
ZALV	**Zalesovo Beam**	**41.82**	**307**	P	**P**	**19 24 40.0**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=74,slow=6.3,SNR=6.8						
ZALV				PcP	**PcP**	**19 26 37.4**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=64,slow=3.4,SNR=5.9						
ZALV				LR	LR	19 43 05.6	
	comp=Z,47nm,18.1s,baz=38,slow=38						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**41.82**	**307**	P	**P**	**19 24 39.8**	**-1.4**
ZALV	**Zalesovo Beam**	**41.82**	**307**	*i* P	**P**	**19 24 41.7**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BMAR	**Burnt Mountain**	**41.83**	**32**	P	**P**	**19 24 42.4**	**+1.2**
RIDG	**Independent Ri**	**41.87**	**38**	P	**P**	**19 24 43.0**	**+1.5**
SCRK	**Sand Creek**	**42.23**	**37**	P	**P**	**19 24 45.0**	**+0.5**
M26K	**Nabesna, AK**	**42.84**	**40**	P	**P**	**19 24 50.9**	**+1.5**
M26K				IAmb	IAmb	19 25 04.1	
	comp=Z,7.6nm,1.2s						
WMQ	**Urumqi**	**43.04**	**292**	*e*P	**P**	**19 24 52.2**	**+0.9**
WMQ				sP	pwP	19 25 06.9	+3.5
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				LR	LR		
	comp=Z,170nm,17.9s						
WAX	**Waxell Ridge**	**43.19**	**42**	P	**P**	**19 24 52.9**	**+0.6**
WAX				IAmb	IAmb	19 25 12.0	
	comp=Z,12nm,1.1s						
L27K	**Beaver Creek,**	**43.29**	**39**	P	**P**	**19 24 54.2**	**+1.2**
L27K				IAmb	IAmb	19 25 11.8	
	comp=Z,3.7nm,0.8s						
BCAR	**Beaver Creek A**	**43.31**	**39**	P	**P**	**19 24 53.5**	**+0.3**
BARN	**Barnard Glacie**	**43.66**	**41**	P	**P**	**19 24 57.9**	**+1.6**
BARN				IAmb	IAmb	19 25 10.0	
	comp=Z,4.4nm,0.9s						
I29M	**Ogilvie Camp,**	**44.50**	**35**	P	**P**	**19 25 04.2**	**+1.5**
I29M				IAmb	IAmb	19 25 18.3	
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	**45.49**	**298**	P	**P**	**19 25 10.8**	**0.0**
MK31				IAmb	IAmb	19 25 11.9	
	comp=Z,7.8nm,0.9s						
MK31	**Makanchi Array**	**45.49**	**298**	P	**P**	**19 25 10.8**	**0.0**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MKAR	**Makanchi Array**	**45.49**	**298**	P	**P**	**19 25 11.1**	**+0.2**
	comp=Z,6.1nm,0.7s,baz=79,slow=8.6,SNR=46						
	comp=Z,6.1nm,0.7s						
MKAR	**Makanchi Array**	**45.49**	**298**	P	**P**	**19 25 10.8**	**-0.1**
MAKZ	**Makanchi**	**45.68**	**298**	P	**P**	**19 25 11.8**	**-0.5**
MAKZ				IAmb	IAmb	19 25 13.4	
	comp=Z,7.2nm,0.8s						
MAKZ	**Makanchi**	**45.68**	**298**	P	**P**	**19 25 11.8**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HYT	**Haines Junctio**	**45.70**	**41**	P	**P**	**19 25 15.0**	**+2.5**
HYT				IAmb	IAmb	19 25 29.2	
	comp=Z,8.4nm,0.9s						
INK	**Inuvik**	**45.93**	**30**	P	**P**	**19 25 15.3**	**+1.4**
	comp=Z,4.5nm,0.6s,baz=266,slow=6.6,SNR=20						
	comp=Z,4.5nm,0.6s						
INK	**Inuvik**	**45.93**	**30**	P	**P**	**19 25 15.2**	**+1.3**
INK				IAmb	IAmb	19 25 16.2	
	comp=Z,4.8nm,0.7s						
INK	**Inuvik**	**45.93**	**30**	P	**P**	**19 25 15.2**	**+1.3**
INK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**46.38**	**304**	P	**P**	**19 25 16.9**	**-0.8**
KURK				IAmb	IAmb	19 25 18.2	
	comp=Z,6.5nm,0.6s						
KURK	**Kurchatov**	**46.38**	**304**	*ce*P	**P**	**19 25 17.2**	**-0.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**46.38**	**304**	*e*P	**P**	**19 25 17.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**48.48**	**255**	P	**P**	**19 25 36.1**	**+1.7**
	comp=Z,0.6nm,0.2s,baz=46,slow=6.8,SNR=8.1						
	comp=Z,0.6nm,0.2s						
C36M	**Paulatuk**	**49.04**	**28**	P	**P**	**19 25 39.0**	**+0.8**
DLBC	**Dease Lake**	**50.03**	**43**	LR	LR	19 47 31.4	
	comp=Z,37nm,19.4s,baz=174,slow=37						
BRVK	**Borovoye**	**50.34**	**310**	⇓*e*P	**P**	**19 25 48.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**50.34**	**310**	*e*P	**P**	**19 25 48.3**	**0.0**
KDJ	**Kajisay**	**50.75**	**294**	P	**P**	**19 25 50.4**	**-1.4**
KDJ				IAmb	IAmb	19 25 53.5	
	comp=Z,8.6nm,1.1s						
KDJ	**Kajisay**	**50.75**	**294**	P	**P**	**19 25 50.4**	**-1.4**
KDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BOOM	**Boomskoye usch**	**51.40**	**295**	P	**P**	**19 25 55.5**	**-1.1**
BOOM	**Boomskoye usch**	**51.40**	**295**	P	**P**	**19 25 55.5**	**-1.1**
BOOM				pmax	pmax		
	comp=Z,11nm,0.9s						
RAMN	**Ramite**	**52.05**	**273**	*e*P	**P**	**19 26 02.2**	**+0.5**
AAK	**Ala-Archa**	**52.27**	**296**	LR	LR	19 49 53.8	
	comp=Z,45nm,18.8s,baz=58,slow=38						
AAK	**Ala-Archa**	**52.27**	**296**	*de*P	**P**	**19 26 03.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AAK	**Ala-Archa**	**52.27**	**296**	*e*P	**P**	**19 26 03.9**	**+0.8**
KKN	**Kakani**	**52.52**	**274**	*e*P	**P**	**19 26 05.3**	**+0.1**
PKI	**Pulchoki**	**52.55**	**274**	*e*P	**P**	**19 26 05.9**	**+0.4**
EUNU	**Eureka**	**52.72**	**10**	P	**P**	**19 26 06.1**	**+0.3**
EUNU				IAmb	IAmb	19 26 20.7	
	comp=Z,1.9nm,0.7s						
GKN	**Gorkha**	**52.86**	**275**	*e*P	**P**	**19 26 08.2**	**+0.6**
DANN	**Dangsing**	**53.29**	**276**	*e*P	**P**	**19 26 11.7**	**+0.7**
	comp=Z,37nm,0.9s						
KOLN	**Koldanda**	**53.74**	**276**	*e*P	**P**	**19 26 14.6**	**+0.4**
	comp=Z,19nm,1.0s						
PYUN	**Piuthan**	**53.99**	**276**	*e*P	**P**	**19 26 16.8**	**+0.8**
KKAR	**Karatay Array**	**54.61**	**299**	P	**P**	**19 26 20.3**	**+0.2**
KKAR	**Karatay Array**	**54.61**	**299**	P	**P**	**19 26 20.3**	**+0.2**
RES	**Resolute Bay**	**54.72**	**17**	LR	LR	19 51 56.2	
	comp=Z,15nm,19.8s,baz=80,slow=38						
RES	**Resolute Bay**	**54.72**	**17**	P	**P**	**19 26 20.5**	**+0.2**
RES				IAmb	IAmb	19 26 21.7	
	comp=Z,8.4nm,1.2s						
RES	**Resolute Bay**	**54.72**	**17**	P	**P**	**19 26 20.5**	**+0.2**
RES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARU	**Arti**	**55.05**	**317**	LR	LR	19 54 10.4	
	comp=Z,41nm,18.1s,baz=163,slow=41						
ARU	**Arti**	**55.05**	**317**	P	**P**	**19 26 21.4**	**-1.6**
ARU	**Arti**	**55.05**	**317**	*d i*P	**P**	**19 26 22.5**	**-0.5**
ARU						19 28 24.9	
ARU				S	**S**	**19 34 07.9**	**+4.5**
ARU				SS	**SS**	**19 37 47.2**	**+0.5**
ARU				pmax	pmax		
	comp=Z,12nm,1.3s						
ARU	**Arti**	**55.05**	**317**	*e*P	**P**	**19 26 22.5**	**-0.5**
YKA	**Yellowknife Ar**	**55.27**	**34**	P	**P**	**19 26 25.2**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=297,slow=6.7,SNR=8.9						
	comp=Z,0.7nm,0.7s						
ABKAR	**Akbulak array**	**57.86**	**309**	P	**P**	**19 26 42.9**	**-0.2**
ABKAR	**Akbulak array**	**57.86**	**309**	P	**P**	**19 26 43.2**	**+0.1**
ABKAR				IAmb	IAmb	19 26 44.2	
	comp=Z,9.9nm,0.6s						
AKTO	**Aktyubinsk**	**58.31**	**311**	LR	LR	19 53 37.9	
	comp=Z,40nm,21.4s,baz=46,slow=38						
ARCES	**ARCESS Array B**	**59.63**	**340**	P	**P**	**19 26 54.4**	**-0.7**
	comp=Z,4.0nm,0.9s,baz=50,slow=8.4,SNR=8.6						
ARCES				LR	LR	19 56 25.5	
	comp=Z,46nm,19.2s,baz=67,slow=40						
	comp=Z,4.0nm,0.9s						
ARCES	**ARCESS Array B**	**59.63**	**340**	P	**P**	**19 26 54.2**	**-0.9**
ARCES	**ARCESS Array B**	**59.63**	**340**	P	**P**	**19 26 54.2**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,21nm,1.4s						
BELG	**Belogornoye**	**62.61**	**317**	⇑*e*P	**P**	**19 27 15.4**	**-0.1**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SUMG	**Summit**	**63.91**	**2**	P	**P**	**19 27 24.8**	**+0.4**
SUMG	**Summit**	**63.91**	**2**	P	**P**	**19 27 24.8**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BEKR	**Beckworth**	**64.61**	**58**	P	**P**	**19 27 29.2**	**0.0**
BEKR				IAmb	IAmb	19 27 57.8	
	comp=Z,2.2nm,0.4s						
WRA	**Warramunga Arr**	**64.67**	**195**	P	**P**	**19 27 29.8**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=9.9,slow=7.0,SNR=3.1						
	comp=Z,0.9nm,0.9s						
FIA1	**FINESS Array S**	**65.36**	**334**	P	**P**	**19 27 32.5**	**-0.9**
FINES	**FINESS Array B**	**65.36**	**334**	P	**P**	**19 27 32.7**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=40,slow=6.6,SNR=28						
FINES				LR	LR	19 58 03.3	
	comp=Z,37nm,19.5s,baz=30,slow=38						
	comp=Z,5.8nm,0.7s						
LRM	**Limekiln Ridge**	**65.62**	**49**	P	**P**	**19 27 36.2**	**+0.4**
OBN	**Obninsk**	**65.93**	**324**	*i* P	**P**	**19 27 37.2**	**0.0**
OBN				*i*		19 27 43.9	
OBN				*i*		19 28 11.1	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,59nm,16.0s						
OBN	**Obninsk**	**65.93**	**324**	*e*P	**P**	**19 27 37.2**	**0.0**
BOZ	**Bozeman (W)**	**66.21**	**49**	P	**P**	**19 27 40.2**	**+0.7**
BOZ				IAmb	IAmb	19 27 56.3	
	comp=Z,2.1nm,0.6s						
BOZ	**Bozeman (W)**	**66.21**	**49**	P	**P**	**19 27 40.2**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KVN	**Kaiserville**	**66.49**	**58**	P	**P**	**19 27 42.9**	**+1.5**
KVN				IAmb	IAmb	19 27 59.2	
	comp=Z,2.2nm,0.8s						
KVN	**Kaiserville**	**66.49**	**58**	P	**P**	**19 27 42.9**	**+1.5**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LHV	**Little Huntoon**	**66.73**	**59**	P	**P**	**19 27 44.9**	**+2.2**
LHV				IAmb	IAmb	19 28 09.3	
	comp=Z,5.4nm,1.2s						
NVAR	**Mina Array Bea**	**66.75**	**59**	P	**P**	**19 27 45.0**	**+1.9**
	comp=Z,0.9nm,0.7s,baz=292,slow=7.3,SNR=10						
	comp=Z,0.9nm,0.7s						
NVAR	**Mina Array Bea**	**66.75**	**59**	P	**P**	**19 27 45.0**	**+1.9**
VORR	**Voronezh**	**67.08**	**320**	*e*P	**P**	**19 27 45.3**	**+0.6**
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
TPH	**Tonopah**	**67.64**	**58**	P	**P**	**19 27 50.4**	**+1.7**
TPH	**Tonopah**	**67.64**	**58**	P	**P**	**19 27 50.4**	**+1.7**
TPH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ASAR	**Alice Springs**	**68.38**	**194**	P	**P**	**19 27 54.6**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=8.6,slow=5.6,SNR=7.9						
	comp=Z,0.7nm,0.7s						
BW06	**Boulder Array**	**69.17**	**50**	P	**P**	**19 27 58.6**	**+0.3**
PD31	**Pinedale Array**	**69.17**	**50**	P	**P**	**19 27 59.0**	**+0.8**
PDAR	**Pinedale Array**	**69.17**	**50**	P	**P**	**19 27 59.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=245,slow=0.7,SNR=6.8						
	comp=Z,0.4nm,0.6s						
NC405	**NORSAR Array S**	**69.80**	**339**	P	**P**	**19 28 01.0**	**-0.5**
MNK	**Minsk**	**69.89**	**328**	*i* P	**P**	**19 28 00.0**	**-2.1**
MNK				*i*		19 30 34.4	
MNK				*i* PPP	PPP	19 32 16.0	
MNK				*i* S	**S**	**19 37 08.1**	**-1.8**
MNK				*i* SS	**SS**	**19 41 40.6**	**+2.6**
MNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,69nm,19.0s						
MNK				MLR	MLR		
	comp=E,7.0nm,17.0s						
MNK				MLR	MLR		
	comp=Z,214nm,22.0s						
MNK	**Minsk**	**69.89**	**328**	*i* P	**P**	**19 28 00.1**	**-2.1**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**19 28 00.1**	**-2.1**
	comp=N,4.0nm,0.9s						
MNK				*i* P	**P**	**19 28 00.1**	**-2.1**
	comp=Z,3.0nm,0.8s,baz=41						
MNK				*i* PP	**PP**	**19 30 34.5**	**-1.9**
MNK				*i* PPP	PPP	19 32 16.0	
MNK				*i* S	**S**	**19 37 08.1**	**-1.8**
MNK				*i* SS	**SS**	**19 41 40.7**	**+2.6**
MNK				*i* SSS	SSS	19 44 58.5	
MNK				*i* LR	LR	19 58 43.7	
MNK				*i* LRM	MLR	20 01 04.2	
	comp=N,69nm,19.2s						
MNK				*i* LRM	MLR	20 01 15.9	
	comp=E,7.0nm,16.6s						
MNK				*i* LRM	MLR	20 01 24.7	
	comp=Z,214nm,21.7s						
NC204	**NORSAR Array S**	**69.91**	**340**	P	**P**	**19 28 01.8**	**-0.4**
NB201	**NORSAR Array S**	**69.97**	**339**	P	**P**	**19 28 02.0**	**-0.6**
NB2	**NORSAR Subarra**	**69.99**	**339**	P	**P**	**19 28 02.3**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.99**	**339**	P	**P**	**19 28 02.5**	**-0.3**
	comp=Z,4.2nm,0.8s,baz=30,slow=6.3,SNR=19						
NOA				LR	LR	20 01 44.7	
	comp=Z,23nm,21.6s,baz=15,slow=39						
	comp=Z,4.2nm,0.8s						
NACGM	**Naroch**	**70.01**	**328**	*e*P	**P**	**19 28 03.0**	**+0.1**
	baz=41						
KIV	**Kislovodsk**	**70.53**	**313**	⇑P	**P**	**19 28 08.0**	**+1.6**
KIV	**Kislovodsk**	**70.53**	**313**	P	**P**	**19 28 06.7**	**+0.3**
KIV	**Kislovodsk**	**70.53**	**313**	*e*P	**P**	**19 28 08.0**	**+1.6**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,72nm,18.0s						
KIV	**Kislovodsk**	**70.53**	**313**	*e*P	**P**	**19 28 08.0**	**+1.6**
KBZ	**Khabaz**	**70.57**	**312**	P	**P**	**19 28 07.9**	**+1.4**
	comp=Z,7.4nm,0.8s,baz=69,slow=4.6,SNR=23						
	comp=Z,7.4nm,0.8s						
KBZ	**Khabaz**	**70.57**	**312**	*c i*P	**P**	**19 28 07.5**	**+1.0**
KBZ	**Khabaz**	**70.57**	**312**	*e*P	**P**	**19 28 07.5**	**+1.0**
PABE	**Paberze**	**70.59**	**330**	P	**P**	**19 28 06.3**	**-0.1**
RDMU	**Red Mountain**	**70.60**	**52**	P	**P**	**19 28 07.7**	**+0.6**
RDMU				IAmb	IAmb	19 28 31.0	
	comp=Z,3.9nm,0.7s						
ZEI	**Tsey**	**70.66**	**311**	*e*P	**P**	**19 28 06.4**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ONI	**Oni**	**71.03**	**311**	P	**P**	**19 28 08.8**	**-0.7**
ONI	**Oni**	**71.03**	**311**	P	**P**	**19 28 08.8**	**-0.7**
ONI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GNI	**Garni**	**71.95**	**308**	LR	LR	20 03 00.0	
	comp=Z,27nm,18.4s,baz=47,slow=39						
AKASG	**Malin Array Be**	**72.20**	**324**	P	**P**	**19 28 16.1**	**-0.2**
	comp=Z,6.4nm,0.6s,baz=37,slow=6.7,SNR=28						
	comp=Z,6.4nm,0.6s						
AKASG	**Malin Array Be**	**72.20**	**324**	P	**P**	**19 28 15.9**	**-0.3**
AKASG				IAmb	IAmb	19 28 17.2	
	comp=Z,5.8nm,1.1s						
AKASG	**Malin Array Be**	**72.20**	**324**	P	**P**	**19 28 15.9**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKBB	**Malin Array Si**	**72.20**	**324**	P	**P**	**19 28 15.8**	**-0.4**
AKBB	**Malin Array Si**	**72.20**	**324**	*ce*P	**P**	**19 28 15.9**	**-0.3**
PV13	**Radium Mtn., P**	**72.63**	**54**	P	**P**	**19 28 20.4**	**+1.0**
SORM	**Soroca**	**74.51**	**323**	⇑P	**P**	**19 28 29.5**	**-0.4**
SORM	**Soroca**	**74.51**	**323**	⇑P	**P**	**19 28 29.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**76.24**	**324**	P	**P**	**19 28 40.4**	**+0.4**
BUR08				IAmb	IAmb	19 28 41.3	
	comp=Z,4.8nm,0.9s						
BURAR	**Bucovina Array**	**76.25**	**324**	⇓P	**P**	**19 28 40.5**	**+0.5**
BURAR	**Bucovina Array**	**76.25**	**324**	P	**P**	**19 28 40.6**	**+0.5**
BURAR				IAmb	IAmb	19 28 41.7	
	comp=Z,5.9nm,0.8s						
BURAR	**Bucovina Array**	**76.25**	**324**	⇓P	**P**	**19 28 40.5**	**+0.5**
BIZ	**Bicaz**	**76.40**	**323**	⇓P	**P**	**19 28 41.1**	**+0.3**
CFR	**Carcaliu**	**76.86**	**321**	⇓P	**P**	**19 28 44.0**	**+0.6**
CFR	**Carcaliu**	**76.86**	**321**	⇓P	**P**	**19 28 44.0**	**+0.6**
VRI	**Vrincioaia**	**76.96**	**322**	⇓P	**P**	**19 28 45.5**	**+1.5**
VRI	**Vrincioaia**	**76.96**	**322**	⇓P	**P**	**19 28 45.5**	**+1.5**
PLOR	**Plostina**	**77.01**	**322**	⇓P	**P**	**19 28 46.3**	**+2.0**
PLOR	**Plostina**	**77.01**	**322**	⇓P	**P**	**19 28 46.3**	**+2.0**
SCHQ	**Schefferville**	**77.32**	**20**	LR	LR	20 05 24.9	
	comp=Z,23nm,18.9s,baz=277,slow=38						
HARR	**Harsova**	**77.33**	**321**	⇓P	**P**	**19 28 46.5**	**+0.5**
HARR	**Harsova**	**77.33**	**321**	⇓P	Pn	19 28 46.5	+2.7
DOPR	**Dopca**	**77.47**	**323**	⇑P	Pn	19 28 48.6	+0.1
MORC	**Moravsky Berou**	**77.53**	**330**	⇓P	**P**	**19 28 48.1**	**+1.0**
MORC	**Moravsky Berou**	**77.53**	**330**	⇓P	**P**	**19 28 48.1**	**+1.0**
MORC	**Moravsky Berou**	**77.53**	**330**	*e*P	**P**	**19 28 47.7**	**+0.6**
KRLC	**Kraliky**	**77.55**	**331**	*e*P	**P**	**19 28 47.7**	**+0.4**
KRLC				*e*		19 28 54.1	
KRLC	**Kraliky**	**77.55**	**331**	*e*P	**P**	**19 28 47.7**	**+0.4**
KRLC				*e*x	x	19 28 54.1	
MLR	**Muntele Rosu**	**77.60**	**323**	⇑P	**P**	**19 28 49.5**	**+1.8**
MLR	**Muntele Rosu**	**77.60**	**323**	⇑P	**P**	**19 28 49.5**	**+1.8**
CLL	**Collm**	**77.80**	**333**	P	**P**	**19 28 47.7**	**-0.9**
CLL	**Collm**	**77.80**	**333**	⇑*i*P	**P**	**19 28 48.6**	**0.0**
CLL				*e*		19 28 55.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CLL	**Collm**	**77.80**	**333**	⇑*i*P	**P**	**19 28 48.6**	**0.0**
	comp=Z,6.0nm,0.6s						
CLL				*e*x	x	19 28 55.0	
CLL				*i* pP	**pwP**	**19 29 01.6**	**+0.6**
ICOR	**Ion Corvin**	**77.83**	**321**	⇓P	**P**	**19 28 50.1**	**+1.3**
VOIR		**78.03**	**323**	⇓P	**P**	**19 28 51.4**	**+1.3**
VOIR		**78.03**	**323**	⇓P	**P**	**19 28 51.4**	**+1.3**
JAVC	**Velka Javorina**	**78.24**	**329**	*e*P	Pg	19 28 52.7	+3.4
VRAC	**Vranov**	**78.26**	**330**	P	**P**	**19 28 52.1**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=21,slow=5.0,SNR=5.3						
VRAC				LR	LR	20 06 51.1	
	comp=Z,46nm,18.3s,baz=24,slow=38						
	comp=Z,2.9nm,0.7s						
VRAC	**Vranov**	**78.26**	**330**	*e*P	Pg	19 28 52.0	+0.1
BRTR	**Keskin Array B**	**78.29**	**314**	P	**P**	**19 28 52.5**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=64,slow=4.0,SNR=4.2						
	comp=Z,0.8nm,0.6s						
PRU	**Pruhonice**	**78.41**	**332**	*e*P	**P**	**19 28 52.6**	**+0.6**
PRU	**Pruhonice**	**78.41**	**332**	*e*P	**P**	**19 28 52.6**	**+0.6**
EKA	**Eskdalemuir Ar**	**78.44**	**344**	P	**P**	**19 28 53.0**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=24,slow=5.1,SNR=8.1						
	comp=Z,2.2nm,0.6s						
KRUC	**Moravsky**	**78.54**	**330**	*e*P	Pn	19 28 53.2	-0.2
GZR	**Gura Zlata**	**79.04**	**324**	⇑P	**P**	**19 28 54.9**	**-0.7**
GZR	**Gura Zlata**	**79.04**	**324**	⇑P	Pb	19 28 54.9	+3.5
KHC	**Kasperske Hory**	**79.47**	**332**	P	**P**	**19 28 58.0**	**+0.1**
KHC				IAmb	IAmb	19 28 59.4	
	comp=Z,5.1nm,0.7s						
KHC	**Kasperske Hory**	**79.47**	**332**	*e*P	**P**	**19 28 58.4**	**+0.5**
KHC				*e*		19 29 09.8	
KHC	**Kasperske Hory**	**79.47**	**332**	*e*P	**P**	**19 28 58.4**	**+0.5**
KHC				*e*pP	**pwP**	**19 29 09.8**	**-0.5**
CKRC	**Cesky Krumlov**	**79.48**	**331**	*e*P	**P**	**19 28 58.2**	**+0.3**
CKRC				*e*x	x	19 29 06.2	
HERR	**Herculane**	**79.61**	**324**	⇑P	**P**	**19 28 58.5**	**-0.1**
GERES	**GERESS Array B**	**79.67**	**332**	P	**P**	**19 28 59.4**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=42,slow=6.2,SNR=7.0						
	comp=Z,0.9nm,0.5s						
GERES	**GERESS Array B**	**79.67**	**332**	P	**P**	**19 28 58.4**	**-0.7**
CONA	**Conrad Observa**	**79.68**	**330**	*e*P	**P**	**19 29 00.3**	**+1.2**
	comp=Z,1.0nm,0.4s						
RONA	**Rosalia, Austr**	**79.72**	**329**	*e*P	**P**	**19 29 00.5**	**+1.3**
	comp=Z,2.3nm,0.6s						
SOKA	**Soboth**	**81.04**	**330**	*e*P	**P**	**19 29 07.0**	**+0.6**
VTS	**Vitosha**	**81.07**	**322**	⇓P	**P**	**19 29 07.7**	**+1.0**
VTS	**Vitosha**	**81.07**	**322**	P	**P**	**19 29 07.0**	**+0.3**
VTS				IAmb	IAmb	19 29 20.8	
	comp=Z,3.2nm,0.7s						
VTS	**Vitosha**	**81.07**	**322**	⇓P	**P**	**19 29 07.7**	**+1.0**
RDO	**Rodhopi**	**81.19**	**320**	P	**P**	**19 29 07.5**	**+0.4**
RDO				IAmb	IAmb	19 29 08.9	
	comp=Z,3.6nm,0.9s						
WATA	**Walderalm**	**81.70**	**332**	*e*P	**P**	**19 29 10.6**	**+0.6**
	comp=Z,3.5nm,0.5s						
WTTA	**Wattenberg**	**81.74**	**332**	*e*P	**P**	**19 29 11.3**	**+1.0**
	comp=Z,3.2nm,0.4s						
TXAR	**Lajitas Array**	**81.83**	**57**	P	**P**	**19 29 11.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=270,slow=3.8,SNR=4.0						
	comp=Z,0.3nm,0.5s						
SQTA	**Sankt Quirin**	**81.92**	**332**	*e*P	**P**	**19 29 11.9**	**+0.8**
	comp=Z,4.0nm,0.6s						
DAVA	**Damuels**	**82.31**	**333**	*e*P	**P**	**19 29 13.7**	**+0.5**
	comp=Z,1.5nm,0.3s						
DAVOX	**Davos/Dischmat**	**82.75**	**333**	P	**P**	**19 29 14.6**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=30,slow=14,SNR=2.4						
	comp=Z,1.3nm,0.4s						
URZ	**Urewera**	**85.60**	**158**	LR	LR	19 59 28.9	
	comp=Z,502nm,20.4s,baz=211,slow=30						
H03N2	**Juan Fernandez**	**141.96**	**91**	T	T	22 15 17.5	
	baz=304,slow=77,SNR=20						
H03N3	**Juan Fernandez**	**141.98**	**91**	T	T	22 15 17.7	
	baz=304,slow=77,SNR=33						
H03N1	**Juan Fernandez**	**141.98**	**91**	T	T	22 15 18.8	
	baz=304,slow=77,SNR=34						
TROLL	**Troll, Antarti**	**147.28**	**199**	PKPbc	**PKPbc**	**19 36 34.9**	**+1.1**
VNA2	**Neumayer--Watz**	**150.22**	**196**	PKPbc	**PKiKP**	**19 36 42.2**	**+0.2**
	baz=48,slow=2.0						
VNA3	**Neumayer Olymp**	**150.39**	**194**	PKPbc	**PKPbc**	**19 36 42.1**	**+0.5**

KRNET ***11*** *19:22:22.0±0.1, 39°.82N×77°.48E, mb3.5*
NNC ***11*** *19:22:23.6±1.2, 39°.99N×76°.99E, h0^{km}, mb3.9, mpv3.6,*
Error ellipse: s-maj=8.6km s-min=7.4km az=152.0
SOME ***11*** *19:22:25.1, 40°.02N×77°.03E, h10^{km}*
ISC 11 19:22:28.8±1.9, **40°.24N**±0°.09×**77°.12E**±0°.04, **h10**^{km}, **n52,**
σ**1^{s}.47**/79, **23C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.89**	**1**	⇑*e*P	**Pn**	**19 23 01.6**	**+0.2**
	baz=55						
KDJ				⇑*i*S	**Sg**	**19 23 30.6**	**+0.9**
	baz=55						
ULHL	**Ulahol**	**2.11**	**342**	P	**Pb**	**19 23 06.3**	**-1.1**
	SNR=6.2						
ULHL	**Ulahol**	**2.11**	**342**	⇑*i*P	**Pb**	**19 23 05.7**	**-1.7**
	baz=39						
ULHL				⇑*i*S	**Sg**	**19 23 37.5**	**+0.7**
	baz=39						
BOOM	**Boomskoye usch**	**2.42**	**339**	⇓*e*P	**Pb**	**19 23 09.9**	**-2.7**
	baz=37						
BOOM				⇓*i*S	**Sg**	**19 23 45.1**	**-1.5**
	baz=37						
PRZ	**Przheval'sk**	**2.44**	**23**	⇑*e*P	**Pn**	**19 23 07.8**	**-1.2**
	baz=14						
PRZ				⇑*i*S	**Sb**	**19 23 41.7**	**-1.5**
	baz=14						
ANVS	**Anan'yevo**	**2.58**	**9**	⇑*i*P	**Pn**	**19 23 10.8**	**0.0**
	baz=3.0						
ANVS				⇑*i*S	**Sb**	**19 23 46.6**	**-0.5**
	baz=3.0						
ARLS	**Aral**	**2.66**	**308**	⇓*i*P	**Pn**	**19 23 12.6**	**+0.6**
	baz=11						
ARLS				⇓*e*S	**Sb**	**19 23 50.7**	**+1.2**
	baz=11						
UCH	**Uchtor**	**2.79**	**316**	P	**Pn**	**19 23 14.8**	**+0.8**
	SNR=11						
UCH	**Uchtor**	**2.79**	**316**	⇑*i*P	**Pn**	**19 23 14.9**	**+0.9**
	baz=18						
UCH				⇑*i*S	**Sb**	**19 23 54.3**	**+0.7**

	baz=18						
TNSS	Tian-Shan	2.80	357	eP	Pg	19 23 20.8	-1.8
	8.1nm,0.5s						
TNSS				eS	Sg	19 24 00.9	+2.1
	24nm,0.6s						
TNSS	Tian-Shan	2.80	357	Pg	Pb	19 23 19.0	-0.2
	20nm,0.3s						
TNSS				Lg	Lg	19 24 01.2	
	24nm,0.6s						
TKM2	Tokmak 2	2.92	337	P	Pn	19 23 17.3	+1.8
	SNR=15						
TKM2	Tokmak 2	2.92	337	⇓eP	Pn	19 23 16.8	+1.3
	baz=36						
TKM2				⇓iS	Sb	19 23 56.8	0.0
	baz=36						
KBK	Karagaybulak	2.92	327	P	Pb	19 23 20.8	-0.2
	SNR=8.7						
KBK	Karagaybulak	2.92	327	⇓iP	Pn	19 23 17.0	+1.5
	baz=27						
KBK				⇓iS	Sb	19 23 57.1	+0.3
	baz=27						
MDOK	Medeo	2.92	359	eP	Pg	19 23 23.1	-1.8
	10nm,0.3s						
MDOK				eS	Sg	19 24 04.8	+2.0
	21nm,0.8s						
MDOK	Medeo	2.92	359	⇑Pg	Pb	19 23 21.6	+0.5
	5.5nm,0.4s						
MDOK				Lg	Lg	19 24 04.7	
	38nm,0.6s						
MDOK	Medeo	2.92	359	Pg	Pb	19 23 21.6	+0.5
	10nm,0.3s						
MDOK				Lg	Lg	19 24 04.5	
	21nm,0.8s						
KST	Kastek	2.94	343	eP	Pg	19 23 22.7	-2.4
	7.0nm,0.4s						
KST				eS	Sg	19 24 04.2	+1.1
	26nm,0.4s						
KST	Kastek	2.94	343	Pg	Pb	19 23 20.9	-0.4
	12nm,0.7s						
KST				Lg	Lg	19 24 04.2	
	26nm,0.4s						
MTBS	Maitube	2.94	350	eP	Pg	19 23 22.8	-2.3
	7.7nm,0.2s						
MTBS				eS	Sg	19 24 04.3	+1.1
	36nm,0.4s						
MTBS	Maitube	2.94	350	Pg	Pb	19 23 21.1	-0.2
	7.8nm,0.3s						
MTBS				Lg	Lg	19 24 04.3	
	36nm,0.4s						
AAA	Alma-Ata	2.98	357	eP	Pg	19 23 24.5	-1.4
	11nm,0.2s						
AAA				eS	Sg	19 24 07.1	+2.7
	97nm,0.6s						
AAA	Alma-Ata	2.98	357	Pg	Pb	19 23 22.5	+0.5
	18nm,0.1s						
AAA				Lg	Lg	19 24 07.1	
	97nm,0.6s						
KNDC	Almaty	2.98	358	⇑Pg	Pg	19 23 24.0	-1.9
	16nm,0.6s						
KNDC				⇑Lg	Lg	19 24 07.1	
	123nm,0.6s						
SATY	Saty	2.98	18	eP	Pg	19 23 23.9	-2.1
	7.4nm,0.4s						
SATY				eS	Sg	19 24 06.0	+1.4
	40nm,0.3s						
SATY	Saty	2.98	18	Pg	Pb	19 23 22.5	+0.4
	15nm,0.4s						
SATY				Lg	Lg	19 24 06.3	
	40nm,0.3s						
ZHN	Zhinishke	3.09	18	eP	Pg	19 23 25.8	-2.3
	6.9nm,0.2s						
ZHN				eS	Sg	19 24 09.3	+1.2
	32nm,0.5s						
ZHN	Zhinishke	3.09	18	Pg	Pb	19 23 24.1	+0.1
	4.2nm,0.1s						
ZHN				Lg	Lg	19 24 09.3	
	32nm,0.5s						
AAK	Ala-Archa	3.10	321	P	Pb	19 23 23.2	-1.1
	SNR=8.1						
AAK	Ala-Archa	3.10	321	⇓eP	Pn	19 23 19.5	+1.5
	baz=22						
AAK				⇓eS	Sb	19 24 01.6	-0.6
	baz=22						
FRU1	Bishkek	3.18	325	⇑eP	Pn	19 23 20.7	+1.8
	baz=25						
FRU1				⇑iS	Sb	19 24 03.8	-0.4
	baz=25						
AML	Almayashu	3.20	307	P	Pn	19 23 19.7	+0.1
	SNR=27						
UZB	Uzynbulak	3.24	26	eP	Pb	19 23 27.9	+1.4
	4.2nm,0.3s						
UZB				eS	Sg	19 24 13.5	+0.6
	18nm,0.6s						
UZB	Uzynbulak	3.24	26	Pg	Pb	19 23 26.7	+0.1
	4.2nm,0.3s						
UZB				Lg	Lg	19 24 13.2	
	18nm,0.6s						
CHMS	Chumysh	3.28	328	P	Pn	19 23 20.5	+0.2
	SNR=8.0						
CHMS	Chumysh	3.28	328	⇑iP	Pn	19 23 21.9	+1.6
	baz=28						
CHMS				⇑iS	Sb	19 24 05.6	-1.6
	baz=28						
KURS	Kuram	3.34	13	eP	Pb	19 23 29.8	+1.6
	6.8nm,0.7s						
KURS				eS	Sg	19 24 16.6	+0.4
	17nm,0.8s						
KURS	Kuram	3.34	13	Pg	Pb	19 23 28.7	+0.4
	6.8nm,0.7s						
KURS				Lg	Lg	19 24 16.6	
	17nm,0.8s						
KPKS	Kokpek	3.43	19	eP	Pg	19 23 32.0	-2.6
	4.6nm,0.2s						
KPKS				eS	Sg	19 24 20.2	+1.2
	20nm,0.4s						
EKS2	Erkin-Say	3.49	315	P	Pn	19 23 24.5	+1.2
	SNR=17						
EKS2	Erkin-Say	3.49	315	⇑iP	Pn	19 23 24.4	+1.1
	baz=17						
EKS2				⇑iS	Sb	19 24 10.7	-2.5
	baz=17						
PDGK	Podgornoye	3.56	29	⇓Pg	Pg	19 23 35.2	-1.9
	9.3nm,0.7s						
PDGK				⇑Lg	Lg	19 24 28.3	
	54nm,1.0s						
USP	Ospenovka	3.61	328	P	Pn	19 23 26.1	+1.3
	SNR=5.9						
CHKK	Chushkaly	3.62	359	eP	Pg	19 23 35.5	-2.6
	2.4nm,0.2s						
CHKK				eS	Sg	19 24 26.1	+1.1
	17nm,0.2s						
CHKK	Chushkaly	3.62	359	Pg	Pb	19 23 34.3	+1.4
	4.3nm,0.3s						
CHKK				Lg	Lg	19 24 25.7	
	17nm,0.2s						
KUU	Kurty	3.70	351	eP	Pg	19 23 36.7	-3.0
	2.0nm,0.3s						
KUU				eS	Sg	19 24 28.1	+0.5
	10nm,0.5s						
KUU	Kurty	3.70	351	Pg	Pb	19 23 35.3	+1.0
	2.0nm,0.3s						
KUU				Lg	Lg	19 24 27.7	
	10nm,0.5s						
SGDS	Sogindy	3.71	331	eP	Pb	19 23 35.9	+1.4
	1.5nm,0.2s						
SGDS				eS	Sg	19 24 26.7	-1.3
	9.3nm,0.3s						
SGDS	Sogindy	3.71	331	Pg	Pb	19 23 34.5	0.0
	1.9nm,0.3s						
SGDS				Lg	Lg	19 24 26.7	
	9.3nm,0.3s						
ARK	Arkit	4.20	293	⇑iP	Pn	19 23 33.8	+0.8
	baz=97						
ARK				⇑iS	Sn	19 24 26.1	+3.9
	baz=97						
KK31	Karatay Array	5.72	302	⇑Pg	Pb	19 24 08.2	-0.5
	1.0nm,0.5s,baz=124,slow=17,SNR=5.7						
KK31				⇓Lg	Lg	19 25 25.5	
	3.2nm,0.7s,baz=120,slow=26,SNR=4.7						

THE ***11*** *19:26:40.9, 37°.44N×21°.77E, h14^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=1.4km s-min=0.4km az=128.0*

ATH 11 19:26:40.8, 37°.44N×21°.80E, h22^{km}±6^{km}**, ML2.3**/4**, Error ellipse: s-maj=7.1km s-min=1.0km az=113.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.28	159	P	Pb	19 26 47.1	-0.2
ITM				S	Sb	19 26 51.5	-0.2
ITM				AML	AML	19 26 52.2	
	comp=E,1128µm,0.4s						
ITM				AML	AML	19 26 53.5	
	comp=N,917µm,0.1s						
ITM	Ithomi	0.28	159	P	Pb	19 26 47.1	-0.2
ITM				S	Sb	19 26 51.5	-0.2
	comp=N,518nm,0.2s						
DRO	Drossia	0.52	352	P	Pb	19 26 50.8	-0.5
DRO				S	Sb	19 26 58.6	+0.2
DRO				AML	AML	19 27 00.4	
	comp=N,1599µm,0.2s						
DRO				AML	AML	19 27 00.6	
	comp=E,753µm,0.3s						
DRO	Drossia	0.52	352	P	Pb	19 26 51.0	-0.3
DRO				S	Sb	19 26 58.6	+0.2
	comp=E,595nm,0.3s						
PYL	PYLOS	0.54	185	P	Pb	19 26 51.0	-0.7
PYL				S	Sb	19 26 59.5	+0.4
PYL				AML	AML	19 27 02.3	
	comp=N,799µm,0.3s						
PYL				AML	AML	19 27 04.4	
	comp=E,654µm,0.3s						
PYL	PYLOS	0.54	185	P	Pb	19 26 51.0	-0.7
PYL				S	Sb	19 26 59.5	+0.4
	comp=E,328nm,0.3s						
GUR	Goura	0.66	41	P	Pb	19 26 53.3	-0.3
GUR				AML	AML	19 27 06.7	
	comp=N,882µm,0.3s						
GUR				AML	AML	19 27 07.6	
	comp=E,807µm,0.3s						
GUR	Goura	0.66	41	P	Pb	19 26 53.4	-0.3
GUR				S	Sn	19 27 03.8	-0.8
	comp=E,435nm,0.3s						
KLV	Kalavryta, Ach	0.67	24	P	Pb	19 26 53.2	-0.6
KLV	Kalavryta, Ach	0.67	24	P	Pb	19 26 53.4	-0.4
KLV				S	Sn	19 27 03.8	-1.0
	comp=E,80nm,0.2s						
RLS	Riolos of Patr	0.67	337	P	Pb	19 26 53.2	-0.6
RLS	Riolos of Patr	0.67	337	P	Pb	19 26 53.1	-0.8
RLS				S	Sb	19 27 03.6	+0.8
	comp=E,355nm,0.4s						
LAKA	Lakka	0.81	10	P	Pb	19 26 55.7	-0.6
LAKA	Lakka	0.81	10	P	Pb	19 26 56.0	-0.3
LAKA				S	Sn	19 27 08.4	0.0
	comp=E,482nm,0.5s						
ALIK	Aliki, Aigiali	0.86	17	P	Pn	19 26 57.5	0.0
EFP	Efpalio	0.99	5	P	Pn	19 26 59.3	0.0
EFP	Efpalio	0.99	5	P	Pb	19 26 59.3	0.0
EFP				S	Sn	19 27 13.9	+1.2
	comp=E,100nm,0.6s						

PRU 11 19:28:18.3±0.0**, 50°.28N×18°.85E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.98	240	ePG	Pg	19 28 37.4	+0.3
MORC				eSG	Sg	19 28 49.6	-0.2
MAUC	Maruska	1.13	216	eSG	Sg	19 28 54.2	-0.4
LANS	Liptovska Anna	1.20	160	e	Sg	19 28 56.7	-0.1
LANS	Liptovska Anna	1.20	160	ePG	Pg	19 28 41.2	-0.1
LANS				eSG	Sg	19 28 56.7	-0.1
LANS				eLG	Lg	19 28 59.1	
LANS	Liptovska Anna	1.20	160	eP	Pg	19 28 41.2	-0.1
KRLC	Kraliky	1.34	262	ePG	Pg	19 28 42.5	-1.6
KRLC				eSG	Sg	19 29 01.0	-0.5
	comp=Z,1.5nm,0.5s						
DPC	Dobruska-Polom	1.62	273	eP	Pn	19 28 47.6	-0.6
DPC	Dobruska-Polom	1.62	273	ePG	Pn	19 28 47.6	-0.6
DPC				eSG	Sb	19 29 10.1	0.0

WEL ***11*** *19:55:00, 40°.92S×175°.42E, h20^{km}, ML5.2, Mw4.9, Moment Tensor Solution. s7 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.50; $M_{\theta\theta}$1.41; $M_{\phi\phi}$1.09; $M_{r\theta}$1.50; $M_{\theta\phi}$0.57; $M_{\phi r}$1.65; Fault plane solution: $M_0$3.11000×10^{16} NP1: ϕ_s55.00000°, δ22.00000°, λ-82.00000°. NP2: ϕ_s226.00000°, δ68.00000°, λ-93.00000°. Principal axes: T -3444.7500, Plg23.0000°, Azm319.0000°; N 2770.5900, Plg3.0000°, Azm227.0000°; P 674.1600, Plg67.0000°, Azm130.0000°;*

IDC ***11*** *19:55:13.5±0.5, 40°.80S×175°.44E, h0^{km}, mb4.7/14, mbtmp4.6/16, ML4.2/2, MS4.1/45 Error ellipse: s-maj=18.7km s-min=14.2km az=63.0*

MOS ***11*** *19:55:16.3±1.1, 40°.95S×175°.35E, h25^{km}, mb5.3/4, Error ellipse: s-maj=20.7km s-min=13.1km az=134.7*

NOU ***11*** *19:55:17.4, 41°.16S×175°.76E, h39^{km}, mb5.2/32, North Island, New Zealand*

NEIC ***11*** *19:55:18.2±2.5, 40°.95S±0°.04×175°.57E±0°.06, h30^{km}±2^{km}, mb5.0/34, Mwr4.8/34, Error ellipse: s-maj=7.6km s-min=5.0km az=119.0*

WEL ***11*** *19:55:18.2, 41°S±2°×17°5E±°, h27^{km}±3^{km}, M5.2/165, ML5.7/16, MLv5.2/165, Error ellipse: s-maj=0.0km s-min=0.0km az=102.3*

NEIC ***11*** *19:55:18.4, 40°.94S×175°.54E, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.96; $M_{\theta\theta}$0.51; $M_{\phi\phi}$0.45; $M_{r\theta}$0.58; $M_{\theta\phi}$0.59; $M_{\phi r}$1.23; Fault plane solution: $M_0$1.70000×10^{16} NP1: ϕ_s209.50000°, δ72.23000°, λ-101.84000°. NP2: ϕ_s63.97000°, δ21.25000°, λ-57.38000°. Principal axes: T 1.7045, Plg26.0000°, Azm309.0000°; N -0.0120, Plg11.0000°, Azm213.0000°; P -1.6925, Plg61.0000°, Azm102.0000°;*

IASPEI ***11*** *19:55:18.6±0.9, 40°.93S±0°.03×175°.47E±0°.03, h30^{km}±6^{km}, mb5.1/57, MS4.2/51 Error ellipse: s-maj=4.9km s-min=3.4km az=134.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

GCMT ***11*** *19:55:19.2±0.4, 41°.05S±0°.04×175°.32E±0°.04, h29^{km}±1^{km}, MW4.9/70, Moment Tensor Solution. s33,c37; s70,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.77±.15; $M_{\theta\theta}$1.50±.11; $M_{\phi\phi}$0.27±.10; $M_{r\theta}$0.94±.15; $M_{\theta\phi}$0.90±.06; $M_{\phi r}$2.39±.20; Best double couple: $M_0$3.16200×10^{16} NP1: ϕ_s83.00000°, δ25.00000°, λ-42.00000°. NP2: ϕ_s212.00000°, δ74.00000°, λ-109.00000°. Principal axes: T 2.9570, Plg26.0000°, Azm317.0000°; N 0.4090, Plg18.0000°, Azm218.0000°; P -3.3670, Plg57.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 19:55:18.6±0.7**, 40°.96S**±0°.02×**175°.49E**±0°.02**, h33**^{km}±3^{km}**, n505,** σ1^{s}**37**/448**, mb5.0**/57**, MS4.2**/51**, 20C-29D, Fault plane solution: NP1:** ϕ_s127.57607°, δ24.83703°, λ-5.81703°. **NP2:** ϕ_s222.85826°, δ87.56008°, λ-114.72446°. **Principal axes:** T Plg37.7054°, Azm334.8094°; N Plg24.7005°, Azm223.9813°; P Plg42.2067°, Azm109.3256°; **Fault plane solution: NP1:** ϕ_s5.66636°, δ34.98563°, λ-95.61556°. **NP2:** ϕ_s192.50980°, δ55.20657°, λ-86.08244°. **Principal axes:** T Plg10.1276°, Azm279.6969°; N Plg3.2163°, Azm10.2720°; P Plg79.3636°, Azm117.6830°; **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	Holdsworth Sta	0.06	20	P	Pb	19 55 23.5	-0.8
HOWZ				S	Sb	19 55 27.1	-0.9
MTW	Mount Morrison	0.20	177	P	Pb	19 55 25.3	+0.1
MTW				S	Sb	19 55 30.6	+0.9
OGWZ	Otaki Gorge	0.28	300	P	Pb	19 55 25.2	-0.8
OGWZ				S	Sn	19 55 30.4	-0.5
MRZ	Mangatainoka R	0.30	13	P	Pb	19 55 25.6	-0.8
MRZ				S	Sb	19 55 30.8	-0.9
TMWZ	Te Maipa	0.34	116	P	Pn	19 55 27.5	+0.2
TMWZ				S	Sn	19 55 34.6	+1.8
CAW	Cannon Point	0.35	245	P	Pb	19 55 26.8	-0.2
TIWZ	Tintock	0.35	59	P	Pb	19 55 26.9	-0.2
TIWZ				S	Sb	19 55 33.2	+0.3
PAWZ	Paruwai Farm	0.43	186	P	Pn	19 55 28.7	+0.2
KIW	Kapiti Island	0.45	282	P	Pb	19 55 28.0	-0.4
TRWZ	Traveller	0.47	161	P	Pn	19 55 29.4	+0.4
MSWZ	Moikau Station	0.49	201		Pn	19 55 29.3	0.0
MSWZ				Sg	Sn	19 55 37.3	+0.5
MSWZ	Moikau Station	0.49	201	P	Pn	19 55 29.5	+0.2
MSWZ				S	Sn	19 55 37.8	+1.0
CPWZ	Castlepoint	0.54	85	P	Pn	19 55 30.6	+0.6
PRWZ	Pori Road	0.55	43	P	Pb	19 55 30.0	0.0
POWZ	Post Office Ro	0.60	21	P	Pb	19 55 30.2	-0.6
WEL	Wellington	0.63	239	P	Pb	19 55 31.4	+0.1
PLWZ	Palliser	0.64	196		Pn	19 55 31.1	-0.2
PLWZ	Palliser	0.64	196	P	Pn	19 55 31.3	0.0
BFZ	Birch Farm	0.64	65		Pn	19 55 31.0	-0.2
BFZ	Birch Farm	0.64	65	P	Pn	19 55 31.1	-0.2
BFZ	Birch Farm	0.64	65	P	Pb	19 55 31.6	+0.2
BHW	Baring Head	0.65	226		Pn	19 55 31.2	-0.2
BHW	Baring Head	0.65	226	P	Pb	19 55 31.6	0.0
SNZO	South Karori	0.69	239		Pn	19 55 31.9	-0.1
SNZO	South Karori	0.69	239	P	Pb	19 55 32.4	+0.2
OHWZ	Ohakea	0.76	350	P	Pb	19 55 33.3	-0.2
DVHZ	Dannevirke	0.84	38	P	Pn	19 55 33.8	-0.3
ANWZ	Angora Road	0.90	57	P	Pn	19 55 34.6	-0.3
TCW	Tory Channel	0.95	254	P	Pn	19 55 35.8	+0.2
TSZ	Takapari Road	0.97	22	P	Pn	19 55 35.8	-0.1
PRHZ	Porangahau	1.11	52	P	Pn	19 55 37.6	-0.3
PRHZ				P	Pn	19 55 37.7	-0.3
WPHZ	Waipukurau	1.15	40	P	Pn	19 55 38.4	0.0
PNHZ	Pukenui	1.18	28	P	Pn	19 55 38.6	-0.1
DUWZ	D’Urville Isla	1.20	277	P	Pn	19 55 39.6	+0.6
CMWZ	Cape Campbell	1.24	230		Pn	19 55 40.1	+0.4
CMWZ	Cape Campbell	1.24	230	P	Pb	19 55 40.6	-1.0
TUWZ	Tuamarina	1.26	247	Pn	Pn	19 55 39.7	-0.1
TUWZ	Tuamarina	1.26	247	P	Pn	19 55 39.8	0.0
WAZ	Wanganui	1.26	342	P	Pb	19 55 41.3	-0.5
PXZ	Pawanui	1.40	49	P	Pn	19 55 40.9	-0.9
BSWZ	Blackbirch Sta	1.43	237		Pn	19 55 42.3	0.0
BSWZ	Blackbirch Sta	1.43	237	P	Pn	19 55 42.4	+0.1
KRHZ	Kereru	1.48	28	P	Pn	19 55 42.5	-0.4
BHHZ	Black Hill Sta	1.53	17	P	Pn	19 55 43.9	+0.2
MOVZ	Moawhango	1.56	8	P	Pn	19 55 44.4	+0.3
MTVZ	Mangateitei	1.57	360	P	Pn	19 55 45.3	+1.1
KAHZ	Kahuranaki	1.57	43	P	Pn	19 55 43.6	-0.7
NNZ	Nelson	1.61	260		Pn	19 55 45.0	+0.3
NNZ	Nelson	1.61	260	P	Pn	19 55 44.9	+0.3
WNVZ	Wahianoa	1.63	3	P	Pn	19 55 46.0	+0.8
TRVZ	Turoa	1.66	2	P	Pn	19 55 46.6	+1.0
PKVZ	Pokaka	1.67	356	P	Pn	19 55 46.6	+1.0
WHVZ	Whangaehu Hut	1.68	3	P	Pn	19 55 46.7	+0.9
DRZ	Dome Shelter	1.68	2	P	Pn	19 55 47.1	+1.1
KWHZ	Kaweka Forest	1.69	25	P	Pn	19 55 45.7	-0.2
TUVZ	Tukino	1.69	4	P	Pn	19 55 47.0	+1.0
FWVZ	Far West T-bar	1.70	2	P	Pn	19 55 47.2	+1.0
LREZ	Lake Rotokare	1.71	331	P	Pb	19 55 48.0	-1.4
MCHZ	McNeill Hill	1.77	32	P	Pn	19 55 46.7	-0.3
SNVZ	South Ngauruho	1.77	4	P	Pn	19 55 48.1	+1.0
CKHZ	Cape Kidnapper	1.78	44	P	Pn	19 55 45.7	-1.3
NGZ	Ngauruhoe	1.78	3	P	Pn	19 55 48.3	+1.0
OTVZ	Oturere	1.80	4	P	Pn	19 55 48.5	+1.0
NNVZ	North Ngauruho	1.83	3	P	Pn	19 55 48.9	+1.0
ETVZ	East Tongariro	1.83	5	P	Pn	19 55 48.8	+1.0
WTVZ	West Tongariro	1.84	3	P	Pn	19 55 49.0	+1.0
TMVZ	Te Maari	1.85	5	P	Pn	19 55 48.8	+0.7
NTVZ	North Tongarir	1.86	5	P	Pn	19 55 49.3	+1.0
KRVZ	Karewarewa	1.86	4	P	Pn	19 55 49.3	+1.0
TWVZ	Taurewa	1.89	359	P	Pn	19 55 49.3	+0.8
PREZ	Palmer Road	1.91	327	P	Pn	19 55 50.7	+1.8
TKNZ	Takaka Hill	1.91	267	P	Pn	19 55 49.6	+0.7
VRZ	Vera Road	1.91	343	P	Pn	19 55 50.2	+1.4
BKZ	Black Stump Fm	1.95	24		Pn	19 55 48.8	-0.6
BKZ	Black Stump Fm	1.95	24	P	Pn	19 55 48.9	-0.5
BKZ	Black Stump Fm	1.95	24	P	Pn	19 55 49.0	-0.5
NMEZ	Namu Road	1.97	321	P	Pb	19 55 52.2	-1.7
KATZ	Kakaramea	1.99	5	P	Pn	19 55 51.1	+1.1
NEZ	North Egmont	1.99	327	P	Pn	19 55 52.1	+2.0
RITZ	Rihia Road	2.00	8	P	Pn	19 55 50.7	+0.6
KHEZ	Kahui Hut	2.01	325	P	Pn	19 55 52.3	+2.0
DREZ	Durham Road	2.02	330	P	Pb	19 55 53.0	-1.7
ARHZ	Aropaoanui	2.05	35	P	Pn	19 55 50.3	-0.5
KHZ	Kahutara	2.06	224		Pn	19 55 50.0	-0.8
KHZ	Kahutara	2.06	224	P	Pn	19 55 50.1	-0.8
KHZ	Kahutara	2.06	224	P	Pn	19 55 50.5	-0.4
MHEZ	Mangahewa	2.08	334	P	Pb	19 55 54.1	-1.6
NBEZ	Newall Road No	2.10	323	P	Pb	19 55 54.4	-1.6
RATZ	Rangitukua	2.10	6	P	Pn	19 55 52.3	+0.8
THZ	Tophouse	2.10	247		Pn	19 55 51.2	-0.4
THZ	Tophouse	2.10	247	P	Pn	19 55 51.2	-0.4
PKE	Pukeiti	2.10	326	P	Pb	19 55 54.1	-2.0
MRNZ	Matariki Terra	2.11	257	P	Pn	19 55 51.8	+0.3
HATZ	Hinemaiaia	2.12	13	P	Pn	19 55 52.6	+0.9
NMHZ	Naumai	2.12	29	P	Pn	19 55 51.4	-0.3
MRHZ	Matea Rd	2.24	19	P	Pn	19 55 53.0	-0.4
QRZ	Quartz Range	2.25	272		Pn	19 55 53.7	+0.2
QRZ	Quartz Range	2.25	272	P	Pn	19 55 53.6	+0.2
QRZ	Quartz Range	2.25	272	P	Pn	19 55 54.3	+0.9
WATZ	Wairara	2.25	5	P	Pn	19 55 53.8	+0.1
WHTZ	Whakaora	2.32	9	P	Pn	19 55 54.8	+0.3
MTHZ	Maungataniwha	2.35	27	P	Pn	19 55 55.0	+0.1
RAHZ	Arahi	2.38	32	P	Pn	19 55 54.1	-1.2
KUTZ	Kaahu Road	2.48	6	P	Pn	19 55 57.1	+0.4
ALRZ	Allen Road	2.48	16	P	Pn	19 55 56.6	-0.1
HIZ	Hauiti	2.49	349		Pn	19 55 57.6	+0.8
HIZ	Hauiti	2.49	349	P	Pn	19 55 57.8	+1.0
HIZ	Hauiti	2.49	349	P	Pn	19 55 58.8	+2.0
WPRZ	Whakapapatarin	2.49	12	P	Pn	19 55 56.5	-0.3
PRRZ	Plateau Road	2.55	16	P	Pn	19 55 57.6	0.0
KNZ	Kokohu	2.56	42	P	Pn	19 55 55.9	-1.8
MHGZ	Mahia Peninsul	2.59	47	P	Pn	19 55 56.6	-1.6
SNGZ	Shannon Statio	2.60	34	P	Pn	19 55 57.3	-1.0
RTZ	Ruatahuna	2.61	27	P	Pn	19 55 57.8	-0.7
TLZ	Tolley Road	2.62	1	P	Pn	19 55 58.8	+0.1
HRRZ	Handcock Road	2.64	14	P	Pn	19 55 58.8	-0.1
GRRZ	Galatos Road	2.65	11	P	Pn	19 55 59.4	+0.4
MUGZ	Murupara	2.67	22	P	Pn	19 55 57.7	-1.5
HSRZ	Hossack Road	2.71	13	P	Pn	19 55 59.7	-0.2
GVZ	Greta Valley S	2.72	221	P	Pn	19 55 58.8	-1.1
RRRZ	Republican Roa	2.73	17	P	Pn	19 55 59.6	-0.6
PRGZ	Paritu Road	2.74	43	P	Pn	19 55 58.4	-1.9
HLRZ	Highlands Stat	2.78	14	P	Pb	19 56 06.1	-1.6
TARZ	Mount Tarawera	2.83	16	P	Pn	19 56 00.9	-0.7
RIGZ	Rimuhau	2.85	39	P	Pn	19 56 00.5	-1.3
RAGZ	Rawiri	2.87	32	P	Pn	19 56 00.4	-1.8
DSZ	Denniston Nort	2.88	253	P	Pn	19 56 01.8	-0.4
OMRZ	Omania	2.93	14	P	Pn	19 56 03.5	+0.6
URZ	Urewera	2.97	25	Pn	Pn	19 56 01.4	-2.0
	16nm,0.3s,baz=238,slow=4.0,SNR=55						
	42nm,0.3s						
URZ	Urewera	2.97	25	P	Pn	19 56 01.4	-2.0
URZ	Urewera	2.97	25	P	Pn	19 56 01.8	-1.6
EDRZ	Edgecumbe	3.01	19	P	Pn	19 56 04.7	+0.8
LTZ	Lake Taylor	3.01	232		Pn	19 56 03.0	-1.1
LTZ	Lake Taylor	3.01	232	P	Pn	19 56 03.1	-1.0
MWZ	Matawai	3.06	32	P	Pn	19 56 02.6	-2.0
AMCZ	Amberley	3.06	223	P	Pn	19 56 03.3	-1.3
MARZ	Manawahe	3.11	18	P	Pn	19 56 08.2	+2.8
KMRZ	Kaimai	3.13	7	P	Pn	19 56 08.4	+2.7
OPRZ	Ohinepanea	3.22	15	P	Pn	19 56 06.9	+0.1
TOZ	Tahuroa Road	3.22	0	P	Pn	19 56 07.0	+0.1
CNGZ	Carnagh Statio	3.24	41	P	Pn	19 56 05.7	-1.5
OKCZ	Okains Bay	3.30	212	P	Pn	19 56 06.4	-1.6
WHRZ	Whale Island	3.31	21	P	Pn	19 56 08.5	+0.5
TWGZ	Tauwhareparae	3.38	36	P	Pn	19 56 07.6	-1.5
RUGZ	Raukumara Rang	3.44	30	P	Pn	19 56 07.8	-2.1
MQZ	McQueen’s Vall	3.46	216	Pn	Pn	19 56 07.7	-2.4
MQZ	McQueen’s Vall	3.46	216	P	Pn	19 56 07.7	-2.4
AKCZ	Akaroa Harbour	3.48	212	P	Pn	19 56 08.8	-1.6
OXZ	Oxford	3.49	226		Pn	19 56 07.8	-2.7
OXZ	Oxford	3.49	226	P	Pn	19 56 08.4	-2.1
INZ	Inchbonnie	3.50	238	P	Pn	19 56 09.7	-1.0
PUZ	Puketiti	3.59	38	P	Pn	19 56 09.5	-2.5
PKGZ	Pakihiroa	3.66	34	P	Pn	19 56 11.1	-1.9
RACZ	Rakaia	3.72	221	P	Pn	19 56 11.7	-1.9
MYRZ	Mayor Island	3.72	9	P	Pn	19 56 16.8	+3.1
MKAZ	Moumakai	3.86	356	P	Pn	19 56 16.0	+0.5
WMGZ	Waiomatatini S	3.87	37	P	Pn	19 56 13.5	-2.2
AWAZ	Awhitu Peninsu	3.94	350	P	Pn	19 56 17.9	+1.1
ETAZ	East Tamaki Re	4.02	354	P	Pn	19 56 20.0	+2.2
WACZ	Wakanui South	4.02	221	P	Pn	19 56 15.9	-2.0
MXZ	Matakaoa Point	4.04	34	Pn	Pn	19 56 15.7	-2.4
MXZ	Matakaoa Point	4.04	34	P	Pn	19 56 16.2	-1.9
WTAZ	Waiatarua	4.08	350	P	Pn	19 56 20.4	+1.7
EPAZ	Eden Park BICE	4.12	352	P	Pn	19 56 20.1	+1.0
WVZ	Waitaha Valley	4.12	238	P	Pn	19 56 18.1	-1.1

HBAZ	Herne Bay Bore	4.14	352	P	Pn	19 56 20.5	+1.0
WIAZ	Waiheke Island	4.17	356	P	Pn	19 56 20.4	+0.6
MBAZ	Motutapu North	4.21	354	P	Pn	19 56 21.1	+0.7
KUZ	Kuaotunu	4.21	3	P	Pn	19 56 20.3	-0.1
RVAZ	Riverhead Bore	4.24	350	P	Pn	19 56 22.1	+1.2
RPZ	Rata Peaks	4.29	229	Pn	Pn	19 56 19.6	-1.9
	29nm,0.3s,baz=203,slow=1.2,SNR=86						
RPZ				Pg	Pb	19 56 35.6	+2.4
	182nm,0.3s,baz=301,slow=3.3,SNR=28						
RPZ				Sn	Sn	19 57 05.8	-4.6
	92nm,0.3s,baz=145,slow=23,SNR=16						
	54nm,0.3s						
RPZ	Rata Peaks	4.29	229	P	Pn	19 56 19.6	-1.9
RPZ	Rata Peaks	4.29	229	P	Pn	19 56 20.4	-1.1
ARCZ	Arundel	4.37	225	P	Pn	19 56 21.0	-1.6
ABAZ	Army Bay	4.38	353	P	Pn	19 56 23.6	+0.9
GCSZ	Gaunt Creek Bo	4.50	237	P	Pn	19 56 23.3	-1.1
GRZ	Great Barrier	4.70	360	P	Pn	19 56 27.1	-0.1
TMZ	Timaru	4.76	222	P	Pn	19 56 26.2	-1.8
FOZ	Fox Glacier	4.93	237		Pn	19 56 31.8	+1.4
FOZ	Fox Glacier	4.93	237	P	Pn	19 56 28.8	-1.6
WCZ	Waipu Caves	5.09	350	P	Pn	19 56 33.6	+1.0
LBZ	Lake Benmore	5.20	227	Pn	Pn	19 56 32.4	-1.6
LBZ	Lake Benmore	5.20	227	P	Pn	19 56 32.6	-1.5
ODZ	Otahua Downs	5.41	219		Pn	19 56 34.6	-2.3
ODZ	Otahua Downs	5.41	219	P	Pn	19 56 34.6	-2.3
ODZ	Otahua Downs	5.41	219	P	Pn	19 56 35.3	-1.6
JCZ	Jackson Bay	5.85	236	P	Pn	19 56 40.4	-2.6
OUZ	Omahuta	5.92	345	Pn	Pn	19 56 42.0	-1.9
OUZ	Omahuta	5.92	345	P	Pn	19 56 45.2	+1.3
OUZ	Omahuta	5.92	345	P	Pn	19 56 45.5	+1.6
HHSZ	Highcliff Hill	6.08	214	P	Pn	19 56 44.6	-1.5
WKZ	Wanaka	6.12	229	Pn	Pn	19 56 45.1	-1.6
WKZ	Wanaka	6.12	229	P	Pn	19 56 44.1	-2.6
EAZ	Earnscleugh	6.22	225	P	Pn	19 56 46.3	-1.8
CTZ	Chatham Island	6.48	118	P	Pn	19 56 50.6	-1.0
TUZ	Tuapeka	6.56	219	P	Pn	19 56 50.9	-1.8
MLZ	Mavora Lakes	6.96	228	Pn	Pn	19 56 56.3	-1.9
WHZ	Wether Hill Ro	7.38	226	Pn	Pn	19 57 02.8	-1.1
DCZ	Deep Cove	7.57	231	Pn	Pn	19 57 04.8	-1.7
NFK	Norfolk Island	13.39	330	P	Pn	19 58 27.3	+1.0
	baz=13						
NFK	Norfolk Island	13.39	330	P	Pn	19 58 29.8	+3.5
MCQ	Macquarie Isla	17.46	214	P	P	19 59 20.7	+0.4
	baz=17,SNR=3.3						
PINNC	Pines Island,	19.51	337	P	P	19 59 43.4	+0.4
PINNC				IAmb	IAmb	19 59 59.2	
	comp=Z,102nm,1.3s						
OUENC	Ouen Island, N	19.87	336		P	19 59 46.8	-0.2
ONTNC	Ouen Toro	20.10	335		P	19 59 48.7	-0.8
ONTNC				IAmb	IAmb	20 00 13.1	
	comp=Z,73nm,1.1s						
YATNC	Mamie plateau,	20.20	336	P	Pn	19 59 52.8	+0.2
DZM	Mont Dzumac	20.32	335	P	P	19 59 53.1	+1.0
	comp=Z,8.5nm,0.8s,baz=157,slow=13,SNR=11						
DZM				LR	LR	20 07 20.1	
	comp=Z,787nm,18.4s,baz=178,slow=36						
DZM	Mont Dzumac	20.32	335	*e*P	Pn	19 59 57.7	+3.5
DZM				*e*S	Sn	20 03 45.4	+3.2
DZM				*e*LR	LR	20 05 02.5	
	comp=Z,2µm,25.6s						
DZM	Mont Dzumac	20.32	335	P	P	19 59 52.5	+0.5
DZM				IAmb	IAmb	20 00 17.1	
	comp=Z,70nm,1.1s						
DZM	Mont Dzumac	20.32	335	P	P	19 59 53.0	+1.0
LIFNC	LIFOU	21.30	338	P	P	20 00 03.4	+0.9
ARMA	Armidale	21.98	291	P	P	20 00 09.7	-0.2
	baz=22,SNR=4.4						
ARMA	Armidale	21.98	291	P	P	20 00 11.4	+1.6
TOO	Toolangi	23.41	268	P	P	20 00 25.1	+0.5
	baz=23,SNR=7.0						
TOO	Toolangi	23.41	268	P	P	20 00 25.7	+1.0
TOO				IAmb	IAmb	20 00 35.2	
	comp=Z,65nm,1.2s						
TOO	Toolangi	23.41	268	P	P	20 00 25.7	+1.0
TOO				pmax	pmax		
	comp=Z,65nm,1.2s						
TOO	Toolangi	23.41	268	P	P	20 00 25.8	+1.1
DVP	Devils Point	23.99	343	P	P	20 00 31.7	+1.5
EIDS	Eidsvold	25.55	300	P	P	20 00 45.2	+0.8
	baz=25,SNR=3.6						
EIDS	Eidsvold	25.55	300	P	P	20 00 44.6	+0.2
EIDS				IAmb	IAmb	20 00 56.4	
	comp=Z,57nm,1.3s						
CMSA	Cobar Meteorol	25.70	282	P	P	20 00 46.5	+0.8
STKA	Stephens Creek	28.59	278	P	P	20 01 12.2	+0.5
	comp=Z,8.6nm,0.9s,baz=100,slow=12,SNR=7.9						
STKA				LR	LR	20 12 11.4	
	comp=Z,574nm,18.6s,baz=115,slow=36						
	comp=Z,8.6nm,0.9s						
STKA	Stephens Creek	28.59	278	P	P	20 01 13.1	+1.4
	baz=28,SNR=5.8						
STKA	Stephens Creek	28.59	278	P	P	20 01 12.5	+0.8
STKA	Stephens Creek	28.59	278	P	P	20 01 12.5	+0.8
STKA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
STKA	Stephens Creek	28.59	278	P	P	20 01 12.9	+1.2
RAR	Rarotonga	28.75	54	LR	LR	20 10 10.6	
	comp=Z,213nm,21.5s,baz=202,slow=31						
AFI	Afiamalu	29.15	26	LR	LR	20 12 54.2	
	comp=Z,103nm,19.1s,baz=205,slow=36						
TWOA	Tennyson Woods	29.53	269	P	P	20 01 20.8	+0.9
HTT	Hallett	29.91	273	P	P	20 01 23.9	+0.5
	baz=30,SNR=3.7						
HTT	Hallett	29.91	273	P	P	20 01 23.9	+0.5
INKA	Innaminka	31.35	284	P	P	20 01 36.7	+0.6
LCRK	Leigh Creek	31.82	277	P	P	20 01 40.3	+0.1
BBOO	Buckleboo	32.35	272	P	P	20 01 44.5	-0.4
	baz=32,SNR=9.3						
BBOO	Buckleboo	32.35	272	P	P	20 01 44.0	-0.8
BBOO	Buckleboo	32.35	272	P	P	20 01 44.3	-0.6
CTA	Charters Tower	32.42	301	P	P	20 01 46.2	+0.6
	comp=Z,14nm,0.9s,baz=163,slow=11,SNR=6.3						
CTA				LR	LR	20 15 00.7	
	comp=Z,1µm,18.3s,baz=126,slow=37						
	comp=Z,14nm,0.9s						
TBI	Tubuai	34.19	70	*e*LR	LR	20 10 23.9	
	comp=Z,530nm,24.8s						
HNR	Honiara	34.28	332	LR	LR	20 16 04.9	
	comp=Z,205nm,18.2s,baz=186,slow=37						
MULG	Mulgathing	35.03	274	P	P	20 02 07.5	-0.7
OOD	Oodnadatta	35.08	279	P	P	20 02 08.7	+0.1
MTSU	Mount Surprise	35.09	301	P	P	20 02 09.4	+0.6
	baz=35,SNR=4.9						
MTSU	Mount Surprise	35.09	301	P	P	20 02 09.6	+0.8
QIS	Mount Isa	36.58	293	P	P	20 02 21.3	-0.2
	baz=36,SNR=5.6						
QIS	Mount Isa	36.58	293	P	P	20 02 21.6	0.0
VNDA	Vanda	37.11	185	P	P	20 02 27.1	+1.7
	comp=Z,3.1nm,0.9s,baz=4.9,slow=7.9,SNR=16						
VNDA				PcP	PcP	20 04 45.7	+0.6
	comp=Z,1.4nm,0.7s,baz=324,slow=2.1,SNR=3.4						
VNDA				LR	LR	20 15 59.2	
	comp=Z,164nm,18.6s,baz=36,slow=33						
	comp=Z,3.1nm,0.9s						
VNDA	Vanda	37.11	185	P	P	20 02 25.6	+0.2
SBA	Scott Base	37.18	183	P	P	20 02 26.3	+0.3
SBA	Scott Base	37.18	183	P	P	20 02 26.3	+0.3
SBA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PPT2	Papeete2	37.97	63	*e*LR	LR	20 12 04.8	
	comp=Z,376nm,25.2s						
PPT	Papeete	37.98	63	LR	LR	20 14 09.6	
	comp=Z,205nm,20.1s,baz=240,slow=30						
AS31	Alice Springs	38.73	283	P	P	20 02 38.6	-1.2
AS31				IAmb	IAmb	20 02 49.0	
	comp=Z,24nm,1.1s						
ASAR	Alice Springs	38.73	283	P	P	20 02 38.6	-1.2
	comp=Z,3.4nm,0.6s,baz=123,slow=7.1,SNR=102						
ASAR				S	S	20 08 31.3	-3.5
	comp=Z,1.7nm,1.0s,baz=128,slow=16,SNR=5.3						
ASAR				LR	LR	20 18 46.9	
	comp=Z,704nm,19.3s,baz=139,slow=37						
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	38.73	283	P	P	20 02 38.4	-1.4
ASAR	Alice Springs	38.73	283	P	P	20 02 38.4	-1.4
COEN	Coen	38.93	304	P	P	20 02 41.2	-0.2
	baz=39,SNR=8.5						
COEN	Coen	38.93	304	P	P	20 02 40.6	-0.8
COEN				IAmb	IAmb	20 02 50.9	
	comp=Z,28nm,0.8s						
COEN	Coen	38.93	304	P	P	20 02 41.0	-0.4
FORT	Forrest	39.33	270	P	P	20 02 45.1	+0.5
	baz=39,SNR=11						
FORT	Forrest	39.33	270	P	P	20 02 45.3	+0.6
FORT	Forrest	39.33	270	P	P	20 02 44.6	-0.1
PMG	Port Moresby	40.20	313	LR	LR	20 18 43.2	
	comp=Z,279nm,19.3s,baz=152,slow=35						
PMG	Port Moresby	40.20	313	P	P	20 02 52.4	+0.5
PMG	Port Moresby	40.20	313	*ce*P	P	20 02 52.2	+0.3
PMG				pmax	pmax		
	comp=Z,69nm,1.0s						
WR0	Warramunga Arr	40.56	289	P	P	20 02 53.9	-1.1
WR0				IAmb	IAmb	20 03 03.8	
	comp=Z,38nm,1.1s						
WB2	Warramunga Arr	40.71	288	P	P	20 02 54.6	-1.6
WB2				IAmb	IAmb	20 03 05.0	
	comp=Z,34nm,0.8s						
WRAB	Tennant Creek	40.72	288	P	P	20 02 54.6	-1.6
WRAB				IAmb	IAmb	20 03 05.1	
	comp=Z,42nm,1.0s						
WRAB	Tennant Creek	40.72	288	⇓*e*P	P	20 02 55.2	-1.0
WRAB				pmax	pmax		
	comp=Z,46nm,2.4s						
WRAB	Tennant Creek	40.72	288	P	P	20 02 55.3	-1.0
WRA	Warramunga Arr	40.72	288	P	P	20 02 55.2	-1.1
	comp=Z,4.6nm,0.5s,baz=126,slow=8.3,SNR=39						
WRA				S	S	20 09 00.3	-4.2
	comp=Z,1.9nm,1.0s,baz=132,slow=18,SNR=1.7						
WRA				LR	LR	20 19 59.4	
	comp=Z,544nm,18.7s,baz=70,slow=37						
	comp=Z,4.6nm,0.5s						
WRA	Warramunga Arr	40.72	288	P	P	20 02 55.0	-1.3
WRA	Warramunga Arr	40.72	288	P	P	20 02 55.0	-1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WB0	Warramunga Arr	40.79	289	P	P	20 02 55.5	-1.4
WB0				IAmb	IAmb	20 03 05.7	
	comp=Z,54nm,1.1s						
WRKA	Warakurna	42.12	277	P	P	20 03 05.9	-1.8
	baz=42,SNR=58						
WRKA	Warakurna	42.12	277	P	P	20 03 06.0	-1.8
KRVT	Keravat (AS076	42.14	324	LR	LR	20 19 56.6	
	comp=Z,186nm,20.6s,baz=293,slow=35						
CASY	Casey	43.37	212	P	P	20 03 17.4	+0.1
KDU	Kakadu	46.93	294	P	P	20 03 47.3	+1.1
	baz=47,SNR=4.8						
KNRA	Kununurra	47.51	288	P	P	20 03 50.9	+0.2
	baz=47,SNR=7.7						
KNRA	Kununurra	47.51	288	P	P	20 03 50.3	-0.4
MUN	Mundaring	47.70	261	P	P	20 03 51.9	-0.2
	baz=47,SNR=3.8						
MTN	Manton Dam	47.75	293	P	P	20 03 51.7	-0.8
	baz=48,SNR=6.3						
FITZ	Fitzroy Crossi	48.23	283	P	P	20 03 55.0	-1.3
	comp=Z,3.8nm,0.6s,baz=139,slow=4.5,SNR=13						
FITZ				LR	LR	20 24 22.4	
	comp=Z,399nm,19.8s,baz=112,slow=36						
	comp=Z,3.8nm,0.6s						
FITZ	Fitzroy Crossi	48.23	283	P	P	20 03 55.3	-1.0
	baz=48,SNR=13						
FITZ	Fitzroy Crossi	48.23	283	P	P	20 03 56.5	+0.2
MEEK	Meekatharra	48.57	269	P	P	20 03 57.5	-1.4
	baz=48,SNR=14						
QSPA	South Pole Qui	49.17	180	P	P	20 04 05.7	+2.6
	comp=Z,33nm,1.0s,baz=30,slow=2.3,SNR=52						
QSPA				LR	LR	20 21 04.5	
	comp=Z,187nm,21.9s,baz=41,slow=31						
	comp=Z,33nm,1.0s						
QSPA	South Pole Qui	49.17	180	P	P	20 04 05.1	+1.9
TAOE	Nuku Hiva Isla	50.59	63	*e*LR	LR	20 18 00.4	
	comp=Z,458nm,31.6s						
SMPI	Sarmi	51.04	310	P	P	20 04 24.0	+6.3
	comp=Z,12nm,1.8s						
SOEI	Soe	54.72	290	P	P	20 04 55.4	+10
BATI	Baumata	54.85	289	LR	LR	20 30 53.8	
	comp=Z,237nm,18.2s,baz=141,slow=39						
SIJI	Sorong	56.46	303	LR	LR	20 31 34.6	
	comp=Z,206nm,18.6s,baz=1.5,slow=39						
SWI	Sorong	56.47	303	P	P	20 05 04.1	+6.7
	comp=Z,28nm,1.5s						
MMRI	Maumere	56.94	289	P	P	20 05 11.8	+11
	comp=Z,50nm,1.0s						
EDFI	Ende, Flores	57.26	288	P	P	20 05 10.1	+6.9
	comp=Z,14nm,1.2s						
BBSI	Bau Bau	58.89	292	P	P	20 05 22.3	+7.8
	comp=Z,3.6nm,1.0s						
LBMI	Labuha	59.06	300	P	P	20 05 20.8	+5.1
	comp=Z,20nm,0.9s						
BELA	Belgrano 2	60.02	173	P	P	20 05 21.9	+0.5
BELA				IAmb	IAmb	20 05 23.5	
	comp=Z,17nm,0.8s						
TNTI	Ternate	60.21	301	P	P	20 05 33.8	+10
	comp=Z,11nm,0.9s						
MAW	Mawson	60.56	204	P	P	20 05 25.5	+0.3
	comp=Z,8.9nm,0.8s,baz=124,slow=6.2,SNR=18						
MAW				LR	LR	20 30 22.1	
	comp=Z,277nm,18.9s,baz=111,slow=35						
	comp=Z,8.9nm,0.8s						
MAW	Mawson	60.56	204	P	P	20 05 26.2	+1.1
	baz=60,SNR=13						
MAW	Mawson	60.56	204	P	P	20 05 25.7	+0.5
MAW	Mawson	60.56	204	P	P	20 05 25.7	+0.5
MAW				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KAPI	Kappang	61.22	290	LR	LR	20 34 09.8	
	comp=Z,370nm,19.0s,baz=108,slow=38						
GUMO	Guam	61.23	326	LR	LR	20 30 36.0	
	comp=Z,47nm,20.2s,baz=134,slow=35						
LUWI	Luwuk	61.93	296	P	P	20 05 42.2	+7.0
	comp=Z,60nm,1.0s						
RPN	Rapa Nui	62.04	103	LR	LR	20 25 58.4	
	comp=Z,164nm,18.0s,baz=201,slow=30						
KMSI	Cibinong	62.30	298	P	P	20 05 45.1	+7.4
	comp=Z,65nm,1.0s						
TTSI	Tana Toraja	62.55	292	P	P	20 05 47.3	+7.9
	comp=Z,17nm,1.2s						
APSI	Ampana	62.80	295	P	P	20 05 50.3	+9.3
	comp=Z,13nm,0.9s						
GTOI	Gorontalo	62.99	297	P	P	20 05 49.6	+7.3
	comp=Z,7.2nm,0.7s						
BLJI	Banyuglugur	63.83	283	P	P	20 05 55.6	+7.7
	comp=Z,37nm,0.8s						
PMSA	Palmer Station	64.82	156	LR	LR	20 30 10.1	
	comp=Z,224nm,18.1s,baz=226,slow=32						
TOLI2	Tolitoli	64.85	296	P	P	20 05 53.1	-1.5
TOLI2				IAmb	IAmb	20 05 57.2	
	comp=Z,9.4nm,0.8s						
MPSI	Mapaga	64.90	294	P	P	20 06 02.1	+7.2
	comp=Z,12nm,1.0s						
BBKI	Banjar Baru	65.81	287	P	P	20 06 07.5	+6.7
	comp=Z,16nm,0.9s						
DAV	Davao City (W)	66.15	304	LR	LR	20 34 39.1	
	comp=Z,78nm,21.3s,baz=148,slow=36						
TROLL	Troll, Antarti	67.23	182	P	P	20 06 10.6	+1.4
MTKI	Muara Teweh, K	67.51	289	P	P	20 06 20.3	+8.7
	comp=Z,21nm,0.4s						
SNAA	Sanae	67.67	181	P	P	20 06 13.1	+1.2
SNAA	Sanae	67.67	181	P	P	20 06 12.8	+0.9
	comp=Z,13nm,0.8s,baz=197,slow=5.3,SNR=98						
SNAA				LR	LR	20 34 05.1	
	comp=Z,119nm,18.8s,baz=196,slow=34						
	comp=Z,13nm,0.8s						
SNAA	Sanae	67.67	181	P	P	20 06 12.5	+0.6
SNAA	Sanae	67.67	181	*d i*P	P	20 06 12.8	+0.9
SNAA				pmax	pmax		
	comp=Z,21nm,1.1s						
NVL	N'lazarevskaya	67.96	186	*e*P	P	20 06 13.8	+0.2
NVL				*e*S	SKiKP	20 15 54.2	-12
NVL				pmax	pmax		
	comp=Z,34nm,1.2s						
VNA3	Neumayer Olymp	68.05	178	P	P	20 06 15.4	+1.2
VNA2	Neumayer--Watz	68.41	179	P	P	20 06 18.0	+1.5
	baz=192,slow=7.0						
VNA1	Neumayer--Stat	68.67	179	P	P	20 06 19.8	+1.7
LEM	Lembang	68.87	280	P	P	20 06 21.0	+0.6
	comp=Z,6.5nm,0.5s,baz=344,slow=22,SNR=1.5						
LEM				LR	LR	20 35 40.7	
	comp=Z,335nm,21.8s,baz=162,slow=35						
	comp=Z,6.5nm,0.5s						
LEM	Lembang	68.87	280	P	P	20 06 26.2	+5.8
	comp=Z,19nm,1.0s						
DBJI	Dramaga	69.70	279	P	P	20 06 34.2	+8.9
	comp=Z,2µmcomp=Z,22nm,0.9s						
USHA	Ushuaia	70.13	146	LR	LR	20 32 31.4	
	comp=Z,149nm,19.3s,baz=288,slow=32						
STKI	Sintang	70.66	288	P	P	20 06 39.0	+7.8
TPI	Tanjungpandan	71.54	283	P	P	20 06 46.9	+10
	comp=Z,6.2nm,1.0s						
BLSI	Bandar Lampung	71.60	279	P	P	20 06 44.4	+7.5
	comp=Z,34nm,0.4s						
KLI	Kotabumi	72.22	279	P	P	20 06 51.1	+10
	comp=Z,47nm,0.5s						
ORCD	Orcadas	73.46	161	P	P	20 06 47.7	+0.5
ORCD				IAmb	IAmb	20 06 49.1	
	comp=Z,24nm,1.1s						
JCJ	Chichijima	74.43	329	LR	LR	20 34 44.4	
	comp=Z,115nm,19.1s,baz=122,slow=32						
LL02	Futaleuf	76.59	136	P	P	20 07 06.9	+1.2
LL02				IAmb	IAmb	20 07 08.5	
	comp=Z,17nm,0.9s						
PLCA	Paso Flores	79.01	135	P	P	20 07 21.4	+2.1
	comp=Z,7.6nm,0.8s,baz=218,slow=6.4,SNR=22						
PLCA				LR	LR	20 34 56.7	
	comp=Z,258nm,19.5s,baz=212,slow=30						
	comp=Z,7.6nm,0.8s						
PLCA	Paso Flores	79.01	135	P	P	20 07 20.9	+1.6
PLCA				IAmb	IAmb	20 07 22.4	
	comp=Z,14nm,1.1s						
PLCA	Paso Flores	79.01	135	P	P	20 07 20.9	+1.6
PLCA				pmax	pmax		
	comp=Z,14nm,1.1s						
H03N3	Juan Fernandez	79.16	125	T	T	21 32 15.5	
	baz=229,slow=72,SNR=7.8						
H03N2	Juan Fernandez	79.16	125	T	T	21 32 14.6	
	baz=229,slow=72,SNR=7.4						
H03N1	Juan Fernandez	79.17	125	T	T	21 32 08.5	
	baz=229,slow=72,SNR=8.1						
JOW	Kunigami	80.41	318	LR	LR	20 38 04.9	
	comp=Z,120nm,21.9s,baz=172,slow=32						
JHJ	Hachijo jima 2	80.73	330	LR	LR	20 37 47.6	
	comp=Z,58nm,21.9s,baz=76,slow=32						
PSI	Prapat	81.72	281	LR	LR	20 45 42.1	
	comp=Z,269nm,19.4s,baz=145,slow=37						
GSI	Gunungsitoli	81.73	279	P	P	20 07 39.6	+5.5
	comp=Z,32nm,0.9s						
TSI	Tuntungan	82.45	281	P	P	20 07 46.3	+8.4
PEL	Peldehue	84.34	130	P	P	20 07 49.2	+1.7
PEL	Peldehue	84.34	130	P	P	20 07 49.2	+1.7
PEL				pmax	pmax		
	comp=Z,24nm,0.9s						
MJAR	Matsushiro Arr	84.36	331	LR	LR	20 41 34.9	
	comp=Z,32nm,20.8s,baz=138,slow=33						
ZON	Zonda	86.67	130	P	P	20 07 59.6	+0.5
ZON				IAmb	IAmb	20 08 12.7	
	comp=Z,14nm,0.9s						
ZON	Zonda	86.67	130	P	P	20 07 59.6	+0.5
ZON				pmax	pmax		
	comp=Z,14nm,0.9s						
KSRS	Korea Array	89.35	324	P	P	20 08 12.6	+1.2
	comp=Z,0.8nm,0.3s,baz=150,slow=7.2,SNR=7.2						
KSRS				LR	LR	20 45 48.7	
	comp=Z,42nm,20.4s,baz=145,slow=34						
	comp=Z,0.8nm,0.3s						
KSAR	Wonju Array Be	89.36	324	P	P	20 08 11.4	0.0
KSAR	Wonju Array Be	89.36	324	P	P	20 08 11.4	0.0
NJ2	Nanjing	89.49	315	*e*P	P	20 08 15.1	+2.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	89.71	337	LR	LR	20 42 13.5	
	comp=Z,130nm,21.2s,baz=166,slow=32						
GO02	Mina Guanaco	90.75	125	P	P	20 08 20.0	+1.2
CMAR	Chiang Mai Arr	92.19	293	P	P	20 08 25.2	+0.1
	comp=Z,2.5nm,0.9s,baz=151,slow=3.2,SNR=21						
CMAR				PP	PP	20 12 12.6	+6.8
	comp=Z,0.9nm,0.9s,baz=155,slow=6.0,SNR=4.1						
CMAR				LR	LR	20 53 45.0	
	comp=Z,46nm,19.0s,baz=135,slow=38						
	comp=Z,2.5nm,0.9s						
CMAR	Chiang Mai Arr	92.19	293	P	P	20 08 24.7	-0.4
CHTO	Chiang Mai	92.43	293	P	P	20 08 25.8	-0.4
CHTO				IAmb	IAmb	20 08 37.6	
	comp=Z,4.7nm,0.9s						
CHTO	Chiang Mai	92.43	293	P	P	20 08 25.8	-0.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LVC	Limon Verde	93.03	123	LR	LR	20 41 31.5	
	comp=Z,221nm,20.0s,baz=224,slow=30						
SHEM	Shemya Is, Ala	93.32	359	LR	LR	20 45 17.8	
	comp=Z,130nm,21.1s,baz=303,slow=32						
USRK	Ussuriysk Ar.	93.35	330	LR	LR	20 46 16.1	
	comp=Z,65nm,21.2s,baz=158,slow=33						
LPIG	La Paz	94.40	62	LR	LR	20 41 21.5	
	comp=Z,115nm,21.2s,baz=229,slow=29						
PETK	Petropavlovsk-	94.94	349	P	P	20 08 40.8	+3.9
	comp=Z,2.2nm,0.9s,baz=180,slow=5.8,SNR=3.8						
PETK				LR	LR	20 46 39.8	
	comp=Z,151nm,20.1s,baz=146,slow=33						
NNA	Nana	95.18	111	LR	LR	20 43 07.8	
	comp=Z,153nm,18.9s,baz=219,slow=30						
PZH	PanZhiHua	95.73	300	P	P	20 08 41.9	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.3s						
CPUP	Villa Florida	97.05	134	LR	LR	20 46 55.7	
	comp=Z,92nm,19.1s,baz=209,slow=32						
CD2	Chengdu	97.45	305	*e*P	Pdif	20 08 50.0	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	97.72	333	LR	LR	20 48 06.5	
	comp=Z,91nm,21.6s,baz=108,slow=32						
KLR	Kul'dur	97.72	333	⇑*e*P	Pdif	20 08 51.7	+2.1
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LPAZ	La Paz	98.12	120	LR	LR	20 44 02.2	
	comp=Z,86nm,21.6s,baz=232,slow=30						
PALK	Pallekele	98.32	272	LR	LR	20 53 41.5	
	comp=Z,103nm,18.0s,baz=237,slow=36						
NVAR	Mina Array Bea	99.45	47	P	Pdif	20 08 58.6	+0.7
	comp=Z,0.1nm,0.5s,baz=256,slow=20,SNR=2.3						
	comp=Z,0.1nm,0.5s						
YBH	Yreka Blue Hor	99.51	42	LR	LR	20 45 55.1	
	comp=Z,59nm,20.8s,baz=216,slow=31						
HHC	Hu-ho-hao-te	99.96	316	*e*P	Pdif	20 09 01.6	+1.6
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				LR	LR		
	comp=Z,270nm,17.8s						
HHC				LR	LR		
	comp=Z,180nm,17.1s						
HHC				LR	LR		
	comp=Z,220nm,16.5s						
ILAR	Eielson Array	109.44	16	PKiKP	PKiKP	20 13 43.8	-0.6
	comp=Z,0.9nm,0.8s,baz=258,slow=3.2,SNR=9.5						
ILAR	Eielson Array	109.44	16		PKiKP	20 13 43.7	-0.7
INK	Inuvik	115.40	19		PKPdf	20 13 55.0	-0.6
INK	Inuvik	115.40	19	*i* PKIKP	PKPdf	20 13 55.0	-0.6
WMQ	Urumqi	115.43	307	*e*PKP	PKiKP	20 13 56.9	+0.4
WMQ				AMB	AMB		
	comp=Z,91nm,3.7s						
WMQ				LR	LR		
	comp=Z,260nm,19.1s						
TIXI	Tiksi	117.04	345	PKP	PKPdf	20 13 57.0	-1.6
	comp=Z,2.1nm,0.9s,baz=273,slow=23,SNR=2.2						
YKA	Yellowknife Ar	117.23	29	PKP	PKPdf	20 13 58.7	-0.6
	comp=Z,1.9nm,0.8s,baz=242,slow=1.5,SNR=27						
YKA				PKKPbc	PKKPab	20 24 24.6	+0.1
	comp=Z,0.8nm,0.8s,baz=50,slow=4.6,SNR=11						
YKA	Yellowknife Ar	117.23	29		PKPdf	20 13 58.4	-0.9
YKA	Yellowknife Ar	117.23	29	PKIKP	PKPdf	20 13 58.4	-0.9
C36M	Paulatuk	118.55	21		PKPdf	20 14 00.6	-1.0
MKAR	Makanchi Array	120.23	307	PKP	PKPdf	20 14 04.0	-1.6
	comp=Z,0.7nm,0.6s,baz=204,slow=1.2,SNR=11						
MKAR	Makanchi Array	120.23	307		PKPdf	20 14 03.9	-1.7
MKAR	Makanchi Array	120.23	307	PKIKP	PKPdf	20 14 03.9	-1.7
MAKZ	Makanchi	120.42	307	⇑PKIKP	PKPdf	20 14 03.8	-2.2
ZALV	Zalesovo Beam	122.13	316	PKP	PKPdf	20 14 07.1	-1.9
	comp=Z,0.5nm,0.5s,baz=314,slow=0.7,SNR=2.4						
AAK	Ala-Archa	123.18	300	⇓*i*PKIKP	PKiKP	20 14 12.6	+0.8
KMBO	Kilima Mbogo	123.51	233	⇑*i*PKIKP	PKiKP	20 14 13.8	+0.3
KURK	Kurchatov	124.17	310		PKPdf	20 14 11.3	-1.7
KURK	Kurchatov	124.17	310	⇑*i*PKIKP	PKPdf	20 14 11.4	-1.6
KURBB	Kurchatov Arra	124.18	310	PKP	PKPdf	20 14 11.6	-1.5
	comp=Z,0.8nm,0.5s,baz=122,slow=1.7,SNR=10						
BTK	Batken	124.46	296		PKPdf	20 14 13.1	-1.0
BTK	Batken	124.46	296	PKIKP	PKPdf	20 14 13.1	-1.0
KK31	Karatay Array	126.01	299		PKPdf	20 14 15.9	-0.9
KK31	Karatay Array	126.01	299	PKIKP	PKPdf	20 14 15.9	-0.9
KKAR	Karatay Array	126.01	299		PKPdf	20 14 15.9	-0.9
KKAR	Karatay Array	126.01	299		PKPdf	20 14 15.5	-1.3
KKAR	Karatay Array	126.01	299	PKIKP	PKPdf	20 14 15.5	-1.3
NRIK	Noril'sk	126.92	334	PKP	PKPdf	20 14 16.6	-1.2
	comp=Z,1.2nm,0.4s,baz=68,slow=2.3,SNR=1.4						
NRIK	Noril'sk	126.92	334	*i* PKIKP	PKPdf	20 14 16.4	-1.3
SADO	Sadowa	126.96	59	PKP	PKPdf	20 14 17.8	-0.7
	comp=Z,4.2nm,0.8s,baz=189,slow=5.5,SNR=3.9						
BRVK	Borovoye	129.83	311	*i* PKIKP	PKPdf	20 14 22.7	-1.1

MAK	**Makhachkala**	**141.77**	**291**	*i* P	**Pdif**	**20 12 07.5**	**+1.8**
MAK				*i*		20 14 46.0	
MAK				*e*SS	SS	20 36 14.2	-7.3
MAK				pmax	pmax		
	comp=Z,203nm,1.5s						
BELG	**Belogornoye**	**143.21**	**306**	*i* PKIKP	PKPbc	20 14 45.8	+0.2
DAG	**Danmarks Havn**	**143.57**	**5**	*i* P	PKPab	20 14 45.1	+0.1
AKH	**Akhalkalaki**	**144.24**	**287**	⇓P	**PKPab**	**20 14 49.1**	**+0.2**
SUMG	**Summit**	**144.29**	**17**		PKPbc	20 14 49.2	+0.5
SUMG	**Summit**	**144.29**	**17**	PKIKP	PKPbc	20 14 49.2	+0.5
SUMG	**Summit**	**144.29**	**17**	*i* P	**PKPab**	**20 14 48.1**	**-0.3**
ZEI	**Tsey**	**144.29**	**289**	*i* PKIKP	**PKPab**	**20 14 48.1**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GURO	**Guroymak-BITLI**	**144.46**	**282**		PKPbc	20 14 50.0	0.0
ONI	**Oni**	**144.57**	**289**		**PKPab**	**20 14 49.9**	**0.0**
ONI	**Oni**	**144.57**	**289**	PKIKP	**PKPab**	**20 14 49.9**	**0.0**
MARD	**Mardin**	**144.98**	**279**		PKPbc	20 14 51.2	-0.4
KBZ	**Khabaz**	**145.22**	**291**	PKPbc	**PKPbc**	**20 14 51.1**	**-0.9**
	comp=Z,15nm,1.0s,baz=123,slow=2.4,SNR=25						
KBZ	**Khabaz**	**145.22**	**291**	*i* PKIKP	**PKPbc**	**20 14 51.3**	**-0.7**
GOF	**Gofitskoye**	**145.38**	**293**	⇑*e*PKIKP	**PKPbc**	**20 14 51.6**	**-0.9**
GOF				pmax	pmax		
	comp=Z,48nm,0.8s						
KIV	**Kislovodsk**	**145.42**	**291**	⇓P	**PKPdf**	**20 14 51.6**	**-1.1**
KIV	**Kislovodsk**	**145.42**	**291**		**PKPdf**	**20 14 51.5**	**-1.3**
KIV	**Kislovodsk**	**145.42**	**291**	⇓PKIKP	**PKPdf**	**20 14 51.6**	**-1.1**
CHVG	**Ch'k'valeri**	**145.58**	**289**	⇓P	**PKPbc**	**20 14 53.3**	**+0.1**
CHVG	**Ch'k'valeri**	**145.58**	**289**	⇓PKIKP	**PKPbc**	**20 14 53.3**	**+0.1**
DY2G	**Dye2**	**145.58**	**28**	*i* P	**PKPdf**	**20 14 51.7**	**-0.8**
BATM	**Batumi**	**145.59**	**287**	⇓P	**PKPdf**	**20 14 52.6**	**-0.4**
BATM	**Batumi**	**145.59**	**287**	⇓PKIKP	**PKPdf**	**20 14 52.6**	**-0.4**
LVZ	**Lovozero**	**145.75**	**335**	⇑PKP2	**PKPdf**	**20 14 51.8**	**-0.7**
DBG	**Daneborg**	**145.77**	**8**	*i* P	**PKPdf**	**20 14 50.9**	**-1.5**
DBIC	**Dimbokro**	**145.86**	**179**	PKPbc	**PKPab**	**20 14 55.2**	**-0.1**
	comp=Z,15nm,0.8s,baz=171,slow=3.2,SNR=17						
DBIC	**Dimbokro**	**145.86**	**179**	⇑PKP2	**PKPab**	**20 14 55.6**	**+0.3**
ICESG	**Greenland Ices**	**146.28**	**22**	*i* P	**PKPdf**	**20 14 53.1**	**-0.7**
KLMR	**Klimovskoe**	**146.71**	**322**	*e*PKIKP	**PKPdf**	**20 14 53.8**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,45nm,1.1s						
KLMR	**Klimovskoe**	**146.71**	**322**	*e*PKPdf	**PKPdf**	**20 14 53.8**	**-0.5**
KLMR				AMP		20 15 04.5	
	comp=Z,45nm,1.1s						
HAMF	**Hammerfest**	**146.95**	**343**	*e*PKPbc	**PKPbc**	**20 14 55.7**	**-0.7**
ARA0	**ARCESS Array S**	**147.34**	**341**	*e*PKPbc	**PKPbc**	**20 14 56.8**	**-0.8**
ARCES	**ARCESS Array B**	**147.34**	**341**	PKPbc	**PKPbc**	**20 14 56.8**	**-0.8**
	comp=Z,5.3nm,0.6s,baz=87,slow=2.2,SNR=39						
ARCES	**ARCESS Array B**	**147.34**	**341**		**PKPdf**	**20 14 56.2**	**+1.1**
ARCES	**ARCESS Array B**	**147.34**	**341**	PKP2	**PKPdf**	**20 14 56.2**	**+1.1**
KTK1	**Kautokeino**	**148.28**	**341**	*e*PKPbc	**PKPbc**	**20 14 59.5**	**-0.6**
VORR	**Voronezh**	**148.41**	**305**	*e*PKP2	**PKPbc**	**20 14 59.8**	**-1.1**
VORR				pmax	pmax		
	comp=Z,26nm,1.1s						
JETT	**Jettan, Norway**	**148.50**	**344**	*e*PKPbc	**PKPbc**	**20 14 59.4**	**-1.3**
TRO	**Tromso**	**148.75**	**344**	*e*PKPbc	**PKPbc**	**20 15 00.1**	**-1.2**
MOS	**Moscow**	**148.89**	**313**	*e*PKP2	**PKPab**	**20 15 08.3**	**+2.2**
BNN	**Bunyan**	**149.16**	**280**		**PKPbc**	**20 15 03.1**	**-0.4**
OBN	**Obninsk**	**149.59**	**312**	*i* PKP2	**PKPbc**	**20 15 03.6**	**-0.2**
OBN				pmax	pmax		
	comp=Z,25nm,1.3s						
OBN				MLR	MLR		
	comp=Z,79nm,23.0s						
CSS	**Mathiatis**	**149.74**	**271**		**PKPbc**	**20 15 03.4**	**-1.4**
STEI	**Steigen**	**150.92**	**345**	*e*PKPbc	**PKPbc**	**20 15 05.5**	**-1.1**
BR131	**Keskin Array S**	**151.04**	**280**		**PKPbc**	**20 15 06.7**	**-1.3**
BR131	**Keskin Array S**	**151.04**	**280**	PKIKP	**PKPbc**	**20 15 06.7**	**-1.3**
BRTR	**Keskin Array B**	**151.04**	**280**	PKPbc	**PKPbc**	**20 15 07.3**	**-0.7**
	comp=Z,12nm,0.8s,baz=149,slow=5.5,SNR=31						
BRTR	**Keskin Array B**	**151.04**	**280**		**PKPbc**	**20 15 07.1**	**-0.9**
BRTR	**Keskin Array B**	**151.04**	**280**	PKIKP	**PKPbc**	**20 15 07.1**	**-0.9**
LOF	**Lofoten**	**151.07**	**346**	*e*PKPbc	**PKPbc**	**20 15 06.7**	**-0.2**
ILGA	**Ilgaz**	**151.30**	**283**		**PKPbc**	**20 15 08.1**	**-0.6**
FAUS	**Fauske**	**151.38**	**344**	*e*PKPbc	**PKPbc**	**20 15 06.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**151.77**	**193**	PKPbc	**PKPbc**	**20 15 09.8**	**-0.3**
	comp=Z,6.9nm,0.5s,baz=161,slow=2.3,SNR=3.2						
FINES	**FINESS Array B**	**152.37**	**328**	PKPbc	**PKPbc**	**20 15 08.9**	**-1.2**
	comp=Z,3.4nm,0.6s,baz=31,slow=2.9,SNR=19						
KONS	**Konsvik**	**152.58**	**345**	*e*PKPbc	**PKPbc**	**20 15 08.9**	**-1.5**
MOR8	**Moi Rana**	**152.58**	**343**	*e*PKPbc	**PKPbc**	**20 15 08.6**	**-1.9**
ELL	**Elmali**	**152.97**	**272**		**PKPdf**	**20 15 01.6**	**-3.5**
ELL	**Elmali**	**152.97**	**272**	PKIKP	**PKPdf**	**20 15 01.6**	**-3.5**
AKAS	**Kas**	**153.03**	**271**		**PKPbc**	**20 15 12.3**	**-0.2**
KOWA	**Kowa**	**153.63**	**181**		**PKPbc**	**20 15 14.4**	**+0.1**
NSS	**Namsos**	**154.53**	**343**	*e*	PKPpre	20 14 47.9	
NSS				*e*PKPdf	**PKPdf**	**20 15 05.2**	**-1.0**
AKASG	**Malin Array Be**	**154.75**	**304**	PKPbc	**PKPbc**	**20 15 14.7**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=67,slow=2.7,SNR=1.3						
SORM	**Soroca**	**155.64**	**298**	⇑P	**PKPab**	**20 15 41.7**	**+7.1**
SORM	**Soroca**	**155.64**	**298**	⇑PKP2	**PKPab**	**20 15 41.7**	**+7.1**
CFR	**Carcaliu**	**155.87**	**291**	⇓P	**PKPab**	**20 15 34.8**	**-1.0**
CFR	**Carcaliu**	**155.87**	**291**	⇓PKP2	**PKPab**	**20 15 34.8**	**-1.0**
HARR	**Harsova**	**156.00**	**290**	⇓P	PKPab	20 15 27.4	-8.9
VRI	**Vrincioaia**	**156.87**	**293**	⇑P	**PKPab**	**20 15 40.2**	**+0.1**
VRI	**Vrincioaia**	**156.87**	**293**	⇑PKP2	**PKPab**	**20 15 40.2**	**+0.1**
TESR	**Tescani**	**156.90**	**294**	⇑P	**PKPab**	**20 15 38.8**	**-1.4**
PLOR	**Plostina**	**156.92**	**293**	⇓P	**PKPab**	**20 15 40.6**	**+0.2**
PLOR	**Plostina**	**156.92**	**293**	⇓PKP2	**PKPab**	**20 15 40.6**	**+0.2**
MLR	**Muntele Rosu**	**157.42**	**292**	⇓P	**PKPab**	**20 15 40.3**	**-2.3**
MLR	**Muntele Rosu**	**157.42**	**292**	PKPab	**PKPab**	**20 15 40.6**	**-2.0**
	comp=Z,2.0nm,0.8s,baz=161,slow=8.8,SNR=4.8						
MLR	**Muntele Rosu**	**157.42**	**292**		**PKPab**	**20 15 39.7**	**-3.0**
MLR	**Muntele Rosu**	**157.42**	**292**	⇓PKP2	**PKPab**	**20 15 40.3**	**-2.3**
NB2	**NORSAR Subarra**	**157.70**	**340**	PKP	**PKPab**	**20 15 41.9**	**-1.3**
	comp=Z,6.2nm,0.9s,baz=34,slow=3.4						
NB2	**NORSAR Subarra**	**157.70**	**340**	PKPab	**PKPab**	**20 15 41.9**	**-1.3**
	baz=34,slow=3.4						
NOA	**NORSAR Array B**	**157.70**	**340**	PKPab	**PKPab**	**20 15 44.4**	**+1.2**
	comp=Z,4.0nm,0.9s,baz=30,slow=3.3,SNR=7.7						
BURAR	**Bucovina Array**	**157.79**	**297**	⇓P	**PKPab**	**20 15 44.2**	**+0.1**
BURAR	**Bucovina Array**	**157.79**	**297**		**PKPab**	**20 15 43.1**	**-1.1**
BURAR	**Bucovina Array**	**157.79**	**297**	⇓PKP2	**PKPab**	**20 15 44.2**	**+0.1**
BUR08	**Bucovina Ar. S**	**157.80**	**298**		**PKPab**	**20 15 43.4**	**-0.8**
NC602	**NORSAR Array S**	**157.87**	**339**	*e*PKPab	**PKPab**	**20 15 43.1**	**-0.7**
ARR	**Arges**	**158.35**	**291**	⇑P	**PKPdf**	**20 15 12.3**	**+0.4**
SKAR	**Skarslia**	**158.73**	**342**	*e*PKPab	**PKPab**	**20 15 46.8**	**-0.9**
LIT	**Litokhoron**	**159.48**	**276**		**PKPab**	**20 15 50.1**	**-1.4**
LIT	**Litokhoron**	**159.48**	**276**	PKP2	**PKPab**	**20 15 50.2**	**-1.4**
KOLS	**Kolonicke sedl**	**159.51**	**302**	*e*PKP2	**PKPab**	**20 15 54.4**	**+3.0**
CRVS	**Cervenica-Dubn**	**160.04**	**302**	*e*PKP2	**PKPab**	**20 15 54.5**	**+0.8**
GERES	**GERESS Array B**	**164.90**	**308**	PKPab	**PKPab**	**20 16 15.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=263,slow=6.3,SNR=3.6						
DAVOX	**Davos/Dischmat**	**168.10**	**304**	PKPab	**PKPab**	**20 16 29.7**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=30,slow=11,SNR=3.6						
ESDC	**Sonseca Array**	**178.65**	**198**	PKPab		20 17 15.0	
	comp=Z,0.7nm,0.9s,baz=134,slow=3.7,SNR=2.4						

TAP 11 20:02:36.9, 24.°27N×121.°72E, h7^{km}±1^{km}, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**218**	*e*P	Pg	20 02 40.4	+0.6
	baz=217						
ETL				*e*S	Sg	20 02 43.1	+1.4
	baz=217						
NACB	**Ninganchiao**	**0.14**	**230**	*e*P	Pg	20 02 40.6	+0.8
	baz=229						
NACB				S	Sg	20 02 43.3	+1.5
	baz=229						
ENA	**Nanau**	**0.16**	**8**	P	Pg	20 02 41.1	+0.9
	baz=11						
ENA				S	Sg	20 02 44.3	+1.8
	baz=11						
EWUT	**Wuta**	**0.19**	**18**	*e*P	Pg	20 02 41.4	+0.7
	baz=18						
EWUT				*e*S	Sg	20 02 44.6	+1.4
	baz=18						
ETLH	**Xiulin Townshi**	**0.22**	**255**	*e*P	Pg	20 02 42.7	+1.4
	baz=254						
ETLH				*e*S	Sg	20 02 46.4	+2.1
	baz=254						
LATG	**Datong**	**0.32**	**327**	P	Pb	20 02 44.7	-0.3
	baz=327						
NNSB	**Datong**	**0.34**	**298**	P	Pb	20 02 45.5	0.0
	baz=298						
NNSB				*e*S	Sb	20 02 50.6	-0.6
	baz=298						
NNS	**Nan Shan**	**0.36**	**299**	*e*P	Pb	20 02 45.6	-0.1
	baz=299						
TWC	**Suao**	**0.36**	**20**	*e*P	Pg	20 02 44.1	+0.1
	baz=21						
NDS	**Dongshan**	**0.37**	**0**	*e*P	Pb	20 02 45.2	-0.6
NDT	**Datong Townshi**	**0.38**	**331**	*e*P	Pb	20 02 45.5	-0.5
	baz=331						
ENTT	**Nioudou**	**0.40**	**340**	P	Pb	20 02 46.1	-0.2
	baz=340						
WHF	**Hehuan Shan**	**0.43**	**254**	*e*P	Pg	20 02 46.1	+0.8
	baz=253						
FUSS	**Fushou**	**0.43**	**268**	*e*P	Pb	20 02 46.3	-0.7
	baz=267						
TWE	**Neicheng**	**0.46**	**354**	*e*P	Pb	20 02 46.6	-0.7
	baz=356						
FUSB	**Fushanzhiwuyua**	**0.51**	**347**	*e*P	Pb	20 02 47.8	-0.4
	baz=346						
FUSB				*e*S	Sg	20 02 54.1	+0.8
	baz=346						
YHNB	**Yeheng**	**0.51**	**322**	*e*P	Pb	20 02 48.3	+0.1
	baz=322						
TDCB	**Techi**	**0.51**	**269**	*e*P	Pb	20 02 48.5	+0.2
	baz=268						
ESL	**Shilin**	**0.52**	**210**	*e*P	Pb	20 02 48.0	-0.3
	baz=208						
NSK	**Sanguang**	**0.52**	**322**	*e*P	Pb	20 02 48.6	+0.1
	baz=321						
CHGB	**Renai**	**0.54**	**248**	*e*P	Pb	20 02 48.4	-0.3
	baz=247						
NWLT	**Wulai**	**0.55**	**339**	*e*P	Pb	20 02 48.7	-0.1
	baz=339						
OWD	**Renai**	**0.58**	**238**	*e*P	Pb	20 02 49.1	-0.4
	baz=237						
WUSB	**Renai**	**0.61**	**244**	*e*P	Pb	20 02 49.8	-0.2
	baz=243						

IDC 11 20:03:21.4±1.8, 32.°02N×95.°21E, h0^{km}, mb3.3/3, mbtmp3.2/5, ML3.0/2, MS3.2/1, Error ellipse: s-maj=74.8km s-min=25.1km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.77**	**330**	P	Pn	20 07 30.3	+0.1
	baz=138,slow=13,SNR=2.6						
	0.3nm,0.7s						
SONM	**Songino Array**	**17.94**	**25**	P	Pn	20 07 31.7	-0.7
	0.1nm,0.3s,baz=219,slow=11,SNR=2.0						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**22.32**	**331**	P	P	20 08 19.7	-0.7
	0.7nm,1.0s,baz=139,slow=11,SNR=6.3						
	0.7nm,1.0s						
ZALV	**Zalesovo Beam**	**23.14**	**344**	P	P	20 08 30.3	+1.1
	0.3nm,0.2s,baz=161,slow=14,SNR=2.1						
	0.3nm,0.2s						
GNI	**Garni**	**41.12**	**296**	LR	LR	20 32 24.6	
	comp=Z,28nm,18.8s,baz=98,slow=42						
ASAR	**Alice Springs**	**66.60**	**141**	P	P	20 14 13.8	0.0
	0.2nm,0.4s,baz=323,slow=6.1,SNR=5.1						
	0.2nm,0.4s						

JMA 11 20:07:55.7±0.2, 24°N±1°×122.°3E±0.°3, h0^{km}, MV2.7/9, TAIWAN REGION

TAP 11 20:07:56.3, 24.°07N×122.°26E, h21^{km}, ML2.8, D

ISC 11 20:07:54.8±1.0, 23.°94N±0.°02×122.°24E±0.°02, h14^{km}±8^{km}, n78, σ0.^{s}77/144, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.60**	**292**	P	**Pn**	**20 08 08.8**	**-0.2**
	baz=263						
ETL				*e*S	**Sn**	**20 08 18.7**	**+0.2**
	baz=263						
TWD	**Chiawan**	**0.60**	**284**	P	**Pn**	**20 08 09.9**	**+1.0**
	baz=271						
NACB	**Ninganchiao**	**0.63**	**292**	P	**Pn**	**20 08 08.6**	**-0.7**
	baz=264						
EWUT	**Wuta**	**0.66**	**321**	*i* P	**Pg**	**20 08 07.8**	**+0.1**
	baz=320						
EWUT				S	**Sg**	**20 08 16.1**	**-0.3**
	baz=320						
ENA	**Nanau**	**0.67**	**318**	*i* P	**Pg**	**20 08 08.1**	**+0.3**
	baz=317						
ENA				*e*S	**Sg**	**20 08 16.6**	**-0.1**
	baz=317						
ETLH	**Xiulin Townshi**	**0.74**	**292**	P	**Pb**	**20 08 10.0**	**+0.5**
	baz=267						
ETLH				*e*S	**Sn**	**20 08 21.0**	**-1.0**
	baz=267						
ESL	**Shilin**	**0.74**	**261**	P	**Pn**	**20 08 10.8**	**0.0**
	baz=241						
ESL				*e*S	**Sn**	**20 08 21.4**	**-0.5**
	baz=241						
TWC	**Suao**	**0.76**	**332**	*i* P	**Pg**	**20 08 08.8**	**-0.8**
	baz=332						
TWC				*i* S	**Sg**	**20 08 17.1**	**-2.4**
	baz=332						
JYNG	**Yonagunijimaku**	**0.83**	**51**	P	**Pb**	**20 08 10.8**	**-0.2**
JYNG				S	**Sg**	**20 08 21.5**	**-0.2**
NDS	**Dongshan**	**0.84**	**326**	*i* P	**Pb**	**20 08 10.8**	**-0.4**
	baz=324						
NDS				*i* S	**Sb**	**20 08 20.8**	**-1.5**
	baz=324						
HGSD	**Ruisui**	**0.86**	**240**	P	**Pn**	**20 08 12.7**	**+0.1**
	baz=234						
LATG	**Datong**	**0.88**	**313**	*i* P	**Pg**	**20 08 12.2**	**+0.3**
	baz=305						
LATG				*i* S	**Sg**	**20 08 24.5**	**+1.1**
	baz=305						
YOJ	**Yonaguni jima**	**0.88**	**53**	*i* P	**Pb**	**20 08 11.8**	**-0.1**
	baz=58						
YOJ				S	**Sb**	**20 08 23.0**	**-0.5**
	baz=58						
YOJ	**Yonaguni jima**	**0.88**	**53**	P	**Pb**	**20 08 11.8**	**-0.1**
YOJ				S	**Sb**	**20 08 23.2**	**-0.2**
WHF	**Hehuan Shan**	**0.91**	**283**	*i* P	**Pn**	**20 08 13.2**	**-0.3**
	baz=262						
WHF				S	**Sn**	**20 08 26.1**	**-0.6**
	baz=262						
NNSB	**Datong**	**0.92**	**302**	*i* P	**Pn**	**20 08 13.3**	**-0.1**
	baz=294						
NNSB				S	**Sg**	**20 08 25.3**	**+0.5**
	baz=294						
ENTT	**Nioudou**	**0.93**	**319**	*i* P	**Pb**	**20 08 12.9**	**+0.2**
	baz=325						
ENTT				*e*S	**Sb**	**20 08 24.6**	**-0.4**
	baz=325						
NNS	**Nan Shan**	**0.93**	**303**	*i* P	**Pn**	**20 08 13.5**	**-0.1**
	baz=295						
NNS				S	**Sg**	**20 08 25.9**	**+0.8**
	baz=295						
EHY	**Hungye**	**0.94**	**243**	P	**Pn**	**20 08 14.0**	**+0.5**
	baz=238						
EHY				*e*S	**Sn**	**20 08 28.0**	**+1.2**
	baz=238						
ILA	**Ilan**	**0.94**	**332**	P	**Pb**	**20 08 12.3**	**-0.5**
	baz=326						
ILA				*e*S	**Sb**	**20 08 24.3**	**-0.9**
	baz=326						
TWE	**Neicheng**	**0.94**	**327**	*i* P	**Pb**	**20 08 12.1**	**-0.7**
	baz=328						
TWE				S	**Sb**	**20 08 24.7**	**-0.5**
	baz=328						
EGS		**0.95**	**343**	P	**Pb**	**20 08 12.7**	**-0.3**
	baz=339						
EGS				*e*S	**Sb**	**20 08 25.3**	**-0.1**
	baz=339						
FUSS	**Fushou**	**0.96**	**289**	P	**Pn**	**20 08 14.1**	**+0.1**
	baz=281						
FUSS				*e*S	**Sn**	**20 08 27.3**	**-0.3**
	baz=281						
OWD	**Renai**	**0.97**	**271**	P	**Pn**	**20 08 14.5**	**+0.4**
	baz=264						
CHGB	**Renai**	**0.98**	**278**	*i* P	**Pn**	**20 08 14.3**	**0.0**
	baz=258						
CHGB				S	**Sn**	**20 08 27.8**	**-0.2**
	baz=258						
NTC	**Toucheng**	**0.99**	**338**	*i* P	**Pb**	**20 08 12.4**	**-1.3**
	baz=346						
NTC				S	**Sb**	**20 08 25.5**	**-1.1**
	baz=346						
FUSB	**Fushanzhiwuyua**	**1.01**	**324**	*i* P	**Pb**	**20 08 14.2**	**+0.1**
	baz=318						
FUSB				*i* S	**Sb**	**20 08 27.4**	**+0.1**
	baz=318						
YULB	**Yu-li**	**1.01**	**238**	*i* P	**Pn**	**20 08 15.4**	**+0.8**
	baz=250						
YULB				*i* S	**Sn**	**20 08 30.2**	**+1.6**
	baz=250						
VWDT	**VWDT**	**1.02**	**260**	P	**Pn**	**20 08 14.9**	**+0.3**
	baz=244						
TWT	**Tachien**	**1.02**	**288**	*i* P	**Pn**	**20 08 15.6**	**+0.8**
	baz=267						
EYUL	**Yuli**	**1.02**	**235**	*i* P	**Pn**	**20 08 16.2**	**+1.5**
	baz=219						
EYUL				S	**Sn**	**20 08 30.9**	**+2.0**
	baz=219						
WUSB	**Renai**	**1.02**	**273**	*i* P	**Pn**	**20 08 15.3**	**+0.5**
	baz=267						
WUSB				S	**Sn**	**20 08 30.2**	**+1.2**
	baz=267						
TDCB	**Techi**	**1.03**	**288**	*i* P	**Pn**	**20 08 15.6**	**+0.6**
	baz=267						
NWLT	**Wulai**	**1.07**	**322**	*i* P	**Pn**	**20 08 15.5**	**+0.1**
	baz=325						
NWLT				*e*S	**Sb**	**20 08 29.2**	**+0.1**
	baz=325						
YHNB	**Yeheng**	**1.07**	**313**	P	**Pb**	**20 08 14.7**	**-0.4**
	baz=306						
YHNB				*e*S	**Sb**	**20 08 28.6**	**-0.5**
	baz=306						
NSK	**Sanguang**	**1.09**	**313**	*i* P	**Pg**	**20 08 16.7**	**+0.9**
	baz=306						
NSK				S	**Sb**	**20 08 28.9**	**-0.6**
	baz=306						
TWB1	**Santiao Chiao**	**1.09**	**348**	P	**Pb**	**20 08 15.3**	**-0.1**
	baz=331						
TWB1				*e*S	**Sb**	**20 08 28.1**	**-1.4**
	baz=331						
TIPB	**Shuangxi**	**1.10**	**340**	*i* P	**Pb**	**20 08 15.3**	**-0.3**
	baz=335						
TIPB				S	**Sb**	**20 08 27.6**	**-2.2**
	baz=335						
FULB	**Fuli**	**1.13**	**230**	*i* P	**Pg**	**20 08 16.9**	**+0.2**
	baz=213						
FULB				*i* S	**Sn**	**20 08 32.4**	**+0.8**
	baz=213						
CHKT	**Chengkung**	**1.15**	**224**	*i* P	**Pg**	**20 08 16.9**	**-0.1**
	baz=209						
CHKT				*i* S	**Sn**	**20 08 31.8**	**-0.3**
	baz=209						
SSLB	**Suanglung**	**1.18**	**263**	P	**Pg**	**20 08 17.5**	**-0.1**
	baz=258						
SSLB				*e*S	**Sg**	**20 08 34.0**	**+1.0**
	baz=258						
TWA	**Mucha**	**1.20**	**330**	P	**Pn**	**20 08 16.8**	**-0.3**
	baz=325						
TWA				*e*S	**Sb**	**20 08 31.3**	**-1.4**
	baz=325						
SXI1	**Grass Mountain**	**1.20**	**344**	*i* P	**Pn**	**20 08 16.2**	**-1.0**
	baz=339						
SXI1				S	**Sb**	**20 08 31.1**	**-1.7**
	baz=339						
NWF	**Wu-fen Shan**	**1.20**	**340**	*i* P	**Pn**	**20 08 17.4**	**+0.1**
	baz=335						
NWF				S	**Sb**	**20 08 32.0**	**-0.9**
	baz=335						
NHDH	**Xindian Distri**	**1.21**	**328**	*i* P	**Pg**	**20 08 19.3**	**+1.2**
	baz=336						
NHDH				S	**Sb**	**20 08 32.8**	**-0.2**
	baz=336						
WCS	**Beigang Elemen**	**1.22**	**276**	P	**Pg**	**20 08 18.5**	**+0.2**
	baz=270						
SMLT	**Sun Moon Lake**	**1.22**	**268**	*i* P	**Pg**	**20 08 18.6**	**+0.3**
	baz=262						
WHP	**Taichung City**	**1.23**	**286**	P	**Pg**	**20 08 19.0**	**+0.6**
	baz=269						
WHP				*e*S	**Sg**	**20 08 35.0**	**+0.5**
	baz=269						
NFF	**Wufeng Townshi**	**1.23**	**304**	P	**Pg**	**20 08 19.3**	**+0.8**
	baz=298						
NFF				*e*S	**Sn**	**20 08 34.4**	**+0.2**
	baz=298						
YUS	**Yu-Shan**	**1.26**	**250**	P	**Pg**	**20 08 19.7**	**+0.6**
	baz=245						
YUS				*e*S	**Sg**	**20 08 36.0**	**+0.4**
	baz=245						
TYC	**Yuchr**	**1.26**	**269**	P	**Pg**	**20 08 19.1**	**0.0**
	baz=264						
TYC				*e*S	**Sg**	**20 08 35.5**	**0.0**
	baz=264						
EDH	**Donghe**	**1.28**	**222**	P	**Pg**	**20 08 18.5**	**-1.0**
	baz=210						
EDH				*e*S	**Sg**	**20 08 35.6**	**-0.7**
	baz=210						
LIOB	**Emei**	**1.32**	**303**	P	**Pg**	**20 08 20.2**	**+0.1**
	baz=297						
NSTT	**Nanjuang**	**1.32**	**302**	*i* P	**Pg**	**20 08 20.4**	**+0.1**
	baz=296						
NSTT				S	**Sb**	**20 08 36.8**	**+0.6**
	baz=296						
ELDTW	**Lidau**	**1.34**	**237**	*i* P	**Pg**	**20 08 19.9**	**-0.7**
	baz=221						
ELDTW				S	**Sn**	**20 08 36.1**	**-0.8**
	baz=221						
YM01	**YM01**	**1.35**	**333**	*e*P	**Pb**	**20 08 20.1**	**+0.2**
	baz=344						
YM01				*e*S	**Sn**	**20 08 37.5**	**+0.5**
	baz=344						
ALS	**Alishan**	**1.38**	**252**	P	**Pg**	**20 08 21.5**	**+0.1**
	baz=249						
ALS				*e*S	**Sg**	**20 08 39.7**	**+0.4**
	baz=249						
TWS1	**Kuangyinshan**	**1.38**	**328**	P	**Pb**	**20 08 21.0**	**+0.7**
	baz=334						
TWS1				*e*S	**Sn**	**20 08 38.0**	**+0.3**
	baz=334						
WJS	**Zhushan**	**1.38**	**266**	P	**Pg**	**20 08 23.2**	**+1.8**
	baz=261						
WJS				*e*S	**Sg**	**20 08 40.3**	**+0.8**
	baz=261						
ANP	**Anpu**	**1.41**	**333**	*e*P	**Pn**	**20 08 20.6**	**+0.5**
	baz=328						
WNT	**Mingjian**	**1.42**	**268**	P	**Pg**	**20 08 22.6**	**+0.4**
	baz=263						
WNT				*e*S	**Sg**	**20 08 42.0**	**+1.3**
	baz=263						
IRIF	**Iriomote-Funau**	**1.42**	**73**	P	**Pb**	**20 08 21.2**	**+0.1**
IRIF				S	**Sb**	**20 08 39.3**	**+0.2**
LDUT	**Ludao**	**1.44**	**209**	P	**Pb**	**20 08 20.4**	**-1.0**
	baz=209						
LDUT				*e*S	**Sb**	**20 08 38.8**	**-0.8**
	baz=209						
HATJ	**Hateruma jima**	**1.44**	**85**	P	**Pg**	**20 08 22.8**	**+0.3**
HATJ				*e*S	**Sg**	**20 08 41.4**	**+0.1**
LONT	**Longtian**	**1.44**	**225**	P	**Pg**	**20 08 21.3**	**-1.2**
	baz=224						
LONT				*e*S	**Sg**	**20 08 39.9**	**-1.4**
	baz=224						
TWY	**Chenhua**	**1.46**	**337**	*e*P	**Pb**	**20 08 22.1**	**+0.4**
	baz=332						
TWY				*e*S	**Sn**	**20 08 39.5**	**0.0**
	baz=332						
TWGBT	**Beinan**	**1.54**	**224**	P	**Pb**	**20 08 22.6**	**-0.5**
	baz=235						
TWGBT				S	**Sb**	**20 08 41.6**	**-0.8**
	baz=235						
STYH	**Taoyuan**	**1.54**	**241**	P	**Pg**	**20 08 23.2**	**-1.2**
	baz=227						
STYH				*e*S	**Sg**	**20 08 44.4**	**0.0**
	baz=227						
TWG	**Pinlang**	**1.54**	**224**	P	**Pb**	**20 08 22.5**	**-0.6**
	baz=235						
TWG				*e*S	**Sb**	**20 08 41.7**	**-0.7**
	baz=235						
WDLH	**Douliu**	**1.57**	**261**	P	**Pg**	**20 08 24.4**	**-0.6**
	baz=258						
WDLH				*e*S	**Sg**	**20 08 47.0**	**+1.6**
	baz=258						
TPUB	**Ta-pu**	**1.60**	**247**	P	**Pg**	**20 08 25.2**	**-0.4**
	baz=244						
TPUB				*e*S	**Sg**	**20 08 45.9**	**-0.5**
	baz=244						
CHN4	**Tsaushan**	**1.61**	**249**	P	**Pg**	**20 08 25.9**	**+0.1**
	baz=246						
CHN4				*e*S	**Sg**	**20 08 48.3**	**+1.5**
	baz=246						
WTP	**Ta-pu**	**1.64**	**246**	P	**Pg**	**20 08 25.6**	**-0.7**
	baz=243						
WTP				*e*S	**Sg**	**20 08 48.8**	**+1.2**
	baz=243						
JKRS	**Kuro-shima**	**1.65**	**79**	P	**Pb**	**20 08 24.9**	**0.0**
JKRS				S	**Sb**	**20 08 46.5**	**+0.9**
CHN1	**Nanshi**	**1.73**	**245**	P	**Pb**	**20 08 26.3**	**-0.1**
	baz=243						
CHN1				*e*S	**Sg**	**20 08 50.7**	**0.0**
	baz=243						
TWK	**Hsinying**	**1.73**	**248**	P	**Pb**	**20 08 26.6**	**+0.1**
	baz=245						
SNST	**Tainan City**	**1.75**	**246**	P	**Pg**	**20 08 27.2**	**-1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=244						
SNST				eS	Sg	20 08 50.5	-0.5
	baz=244						
JIJ	Ishigaki jima	1.79	76	P	Pn	20 08 26.1	+0.8
JIJ				S	Sn	20 08 48.1	+0.3

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*IDC **11** 20:12:18.4±2.0, 15°.79S×174°.37W, h123^{km}±16^{km}, mb3.7/8, mbtmp4.1/10, Error ellipse: s-maj=91.0km s-min=12.7km az=148.0*

*NEIC **11** 20:12:19.8±1.0, 16°.1S±0°.1×174°.1W±0°.1, h139^{km}±8^{km}, mb4.4/20, Error ellipse: s-maj=17.9km s-min=14.5km az=109.0*

*NOU **11** 20:12:53.0, 14°.13S×172°.28W, h83^{km}, MLv3.4/4, Samoa Islands*

ISC 11 20:12:17.1±0.6**, 16°.15S**±0°.07×**174°.19W**±0°.07**, h115^{km}, n36,** σ1^{s}36/37**, mb4.2**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.22	47	P	Pn	20 13 08.5	+2.3
	270nm,0.4s,baz=46,slow=2.3,SNR=10						
AFI				S	Sn	20 13 43.3	-0.9
	215nm,0.3s,baz=30,slow=23,SNR=6.1						
AFI	Afiamalu	3.22	47		Pn	20 13 08.5	+2.3
AFI					Sn	20 13 42.4	-1.8
AFI	Afiamalu	3.22	47	P	Pn	20 13 08.8	+2.6
NIUE	Niue	5.00	126	Pn	Pn	20 13 32.5	+2.5
NIUE					Sn	20 14 24.2	-2.4
MARNC	Mare, Loyalty	17.64	250	P	Pn	20 16 15.8	+0.1
LIFNC	LIFOU	18.21	253	P	P	20 16 21.2	0.0
PINNC	Pines Island,	18.47	247	P	Pn	20 16 26.3	+0.7
PINNC				IAmb	IAmb	20 16 38.7	
	comp=Z,22nm,0.7s						
OUENC	Ouen Island, N	18.95	248	P	P	20 16 30.3	+0.9
OUENC				IAmb	IAmb	20 16 38.2	
	comp=Z,17nm,0.8s						
DZM	Mont Dzumac	19.22	249	P	Pn	20 16 33.6	-0.9
	comp=Z,3.5nm,0.8s,baz=82,slow=16,SNR=4.1						
DZM	Mont Dzumac	19.22	249	IAmb	IAmb	20 16 41.5	
	comp=Z,13nm,0.9s						
ONTNC	Ouen Toro	19.27	248	P	Pn	20 16 35.0	0.0
ONTNC				IAmb	IAmb	20 16 41.7	
	comp=Z,27nm,1.1s						
STKA	Stephens Creek	43.01	240	P	P	20 20 05.6	+0.3
	comp=Z,4.9nm,0.9s,baz=97,slow=9.8,SNR=4.9						
	comp=Z,4.9nm,0.9s						
STKA	Stephens Creek	43.01	240	IAmb	IAmb	20 20 07.0	
	comp=Z,1.5nm,1.1s						
WRA	Warramunga Arr	48.94	257	P	P	20 20 51.4	-0.6
	comp=Z,0.5nm,0.4s,baz=94,slow=6.9,SNR=13						
	comp=Z,0.5nm,0.4s						
AS31	Alice Springs	49.16	253	P	P	20 20 53.3	-0.4
ASAR	Alice Springs	49.16	253	P	P	20 20 53.4	-0.4
	comp=Z,2.5nm,0.4s,baz=90,slow=7.6,SNR=102						
	comp=Z,2.5nm,0.4s						
FORT	Forrest	54.40	244	P	P	20 21 32.5	0.0
KNRA	Kununurra	54.71	262	P	P	20 21 33.9	-0.9
FITZ	Fitzroy Crossi	57.32	259	P	P	20 21 53.9	+0.5
	comp=Z,3.0nm,0.8s,baz=61,slow=10,SNR=1.7						
	comp=Z,3.0nm,0.8s						
FITZ	Fitzroy Crossi	57.32	259	P	P	20 21 52.7	-0.7
FITZ				IAmb	IAmb	20 22 08.5	
	comp=Z,7.0nm,1.1s						
PSA00	Pilbara Seismi	62.27	254	P	P	20 22 27.5	+0.2
MBWA	Marble Bar	62.43	254	P	P	20 22 28.7	+0.3
QSPA	South Pole Qui	73.90	180	P	P	20 23 39.9	+0.5
NVAR	Mina Array Bea	75.39	42	P	P	20 23 48.9	+0.4
	comp=Z,0.8nm,0.7s,baz=226,slow=4.8,SNR=7.4						
	comp=Z,0.8nm,0.7s						
TXAR	Lajitas Array	81.66	56	P	P	20 24 23.3	+0.3
	comp=Z,0.3nm,0.6s,baz=219,slow=7.0,SNR=2.3						
	comp=Z,0.3nm,0.6s						
MCK	McKinley	82.00	11	P	P	20 24 23.9	0.0
MCK				IAmb	IAmb	20 24 24.9	
	comp=Z,5.4nm,0.8s						
JTMT	Jette	83.04	36	P	P	20 24 26.8	-3.0
JTMT				IAmb	IAmb	20 24 32.2	
	comp=Z,10nm,0.8s						
CCB	Clear Creek Bu	83.04	11	P	P	20 24 28.7	-0.5
CCB				IAmb	IAmb	20 24 29.8	
	comp=Z,3.5nm,1.1s						
SCRK	Sand Creek	83.20	13	P	P	20 24 29.7	-0.5
SCRK				IAmb	IAmb	20 24 31.4	
	comp=Z,2.9nm,1.3s						
IMAR	Indian Mountai	83.32	8	P	P	20 24 31.1	+0.5
ILAR	Eielson Array	83.32	11	P	P	20 24 29.7	-1.0
	comp=Z,0.5nm,0.4s,baz=203,slow=5.3,SNR=10						
	comp=Z,0.5nm,0.4s						
PDAR	Pinedale Array	83.33	42	P	P	20 24 31.2	-0.3
	comp=Z,1.2nm,0.7s,baz=206,slow=3.0,SNR=10						
	comp=Z,1.2nm,0.7s						
YHL	Hebgen Lake	83.34	40	P	P	20 24 32.5	+0.9
YHL				IAmb	IAmb	20 24 32.9	
	comp=Z,3.1nm,0.7s						
J25K	Salcha River,	83.48	12	P	P	20 24 31.7	+0.1
GCMT	Greycliff	84.73	39	P	P	20 24 35.4	-3.1
ARCES	ARCESS Array B	125.24	352	PKP	PKPdf	20 31 01.6	-2.0
	comp=Z,2.1nm,0.8s,baz=40,slow=1.5,SNR=4.5						

IDC 11 20:16:56.6±2.1**, 2°.09N**×**124°.74E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, MS3.6**/1**, Error ellipse: s-maj=198.4km s-min=28.3km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.84	157	P	P	20 22 11.2	-0.4
	0.6nm,0.5s,baz=336,slow=11,SNR=5.7						
	0.6nm,0.5s						
ASAR	Alice Springs	27.11	161	P	P	20 22 42.4	+0.9
	0.4nm,0.9s,baz=344,slow=8.5,SNR=4.6						
	0.4nm,0.9s						
MKAR	Makanchi Array	57.80	327	P	P	20 26 49.2	-0.6
	0.1nm,0.3s,baz=117,slow=6.9,SNR=1.6						
	0.1nm,0.3s						
YAK	Yakutsk	59.91	3	LR	LR	20 53 30.6	
	comp=Z,52nm,22.0s,baz=90,slow=37						

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*JMA **11** 20:38:50.7±0.0, 32°.81N±0°.07×130°.5E±0°.1, h14^{km}, MV3.6/20, NW KUMAMOTO PREF*

JMA Felt II J1 at NW KUMAMOTO PREF .

*IDC **11** 20:38:52.3±2.6, 32°.93N×130°.51E, h0^{km}, mb3.1/1, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=29.8km s-min=10.2km az=172.0*

ISC 11 20:38:51.7±2.3**, 32°.6N**±0°.2×**130°.4E**±0°.1**, h11^{km}, n7,** σ**1^{s}08**/8**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTA	Tamana	0.33	14	P	Pg	20 38 54.6	-3.8
JTA				S	Sg	20 38 57.3	-5.5
JIU3	Izumi3	0.33	106	P	Pg	20 38 57.6	-0.8
JIU3				S	Sg	20 39 02.5	-0.3
JNU	Nakatsue	0.61	38	Pg	Pg	20 38 58.7	-4.8
	219nm,0.3s,baz=321,slow=21,SNR=302						
JNU				Lg	Lg	20 39 04.9	
	1μm,0.3s,baz=2.5,slow=8.6,SNR=64						
KSRS	Korea Array	5.22	337	Pn	Pn	20 40 09.3	-0.5
	0.3nm,0.3s,baz=154,slow=14,SNR=2.7						
KSRS				Pg	Pb	20 40 23.8	+0.7
	0.8nm,0.3s,baz=153,slow=17,SNR=3.4						
KSRS				Sn	Sn	20 41 08.7	-1.3
	0.4nm,0.3s,baz=153,slow=30,SNR=2.6						
KSRS				Lg	Lg	20 41 27.8	
	0.4nm,0.3s,baz=154,slow=28,SNR=4.1						
	0.7nm,0.4s						
MJAR	Matsushiro Arr	7.50	57	Pn	Pn	20 40 42.0	+1.0
	0.1nm,0.3s,baz=246,slow=15,SNR=5.5						
	3.3nm,0.6s						
KLR	Kul'dur	16.60	3	Pn	Pn	20 42 43.8	-0.5
	0.1nm,0.3s,baz=167,slow=23,SNR=1.6						
	0.4nm,0.3s						
SONM	Songino Array	23.68	317	P	P	20 44 04.7	+1.3
	0.6nm,0.9s,baz=128,slow=9.3,SNR=4.3						
	0.6nm,0.9s						

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*ARE **11** 21:01:42±3.4, 8°.00S±0°.06×74°.69W±0°.06, h170^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=224.0*

*IDC **11** 21:01:43.3±0.5, 8°.12S×74°.47W, h154^{km}±5^{km}, mb3.7/17, mbtmp4.2/22, MS2.7/2, Error ellipse: s-maj=11.3km s-min=8.9km az=56.0*

*NEIC **11** 21:01:44.7±1.6, 8°.07S±0°.06×74°.49W±0°.06, h161^{km}±6^{km}, mb4.5/78, ML5.1(ARE), Error ellipse: s-maj=9.0km s-min=8.2km az=135.0*

*VAO **11** 21:01:50.4±0.7, 8°.04S×73°.80W, h156^{km}±4^{km}, mbR4.4*

ISC 11 21:01:43.2±0.3**, 8°.06S**±0°.05×**74°.48W**±0°.06**, h151^{km}, n170,** σ**0^{s}97**/177**, mb4.4**/47**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.79	79	eP	Pn	21 02 17.6	+1.7
ATAH	Atahualpa	3.99	283	P	Pn	21 02 43.6	-0.2
	216nm,0.3s,baz=100,slow=2.7,SNR=1088						
ATAH				S	Sn	21 03 31.1	+0.4
	223nm,0.4s,baz=42,slow=20,SNR=11						
ATAH				LR	LR	21 03 47.3	
	comp=Z,115nm,21.4s,baz=251,slow=31						
NNA	Nana	4.54	211	P	Pn	21 02 51.3	+0.6
	33nm,0.3s,baz=17,slow=12,SNR=16						
NNA				S	Sn	21 03 40.9	-2.4
	144nm,0.4s,baz=317,slow=13,SNR=12						
TBTG	Tabatinga, AM	5.95	50	eP	Pn	21 03 09.9	+0.6
ETMB	Extrema	8.35	103	eP	Pn	21 03 39.5	-1.8
LPAZ	La Paz	10.26	143	P	Pn	21 04 06.6	-0.7
	3.4nm,0.6s,baz=319,slow=13,SNR=10						
LPAZ				LR	LR	21 08 37.0	
	comp=Z,43nm,19.0s,baz=54,slow=40						
LPAZ	La Paz	10.26	143	Pn	Pn	21 04 06.7	-0.5
LPAZ	La Paz	10.26	143	eP	Pn	21 04 06.8	-0.5
PB08	IPOC Station P	13.07	157	Pn	Pn	21 04 43.8	+0.1
PB02	IPOC Station P	13.90	162		Pn	21 04 54.4	+0.5
PB07	IPOC Station P	14.29	162		Pn	21 04 59.5	+0.5
PB09	IPOC Station P	14.56	160	Pn	Pn	21 05 02.6	+0.3
MACA	Manacapuru-AM	14.56	71	eP	Pn	21 04 60.0	-2.3
VILB	Vilhena	14.85	110	eP	Pn	21 05 06.0	+0.1
LVC	Limon Verde	15.42	160	P	Pn	21 05 12.8	-0.4
	1.3nm,0.3s,baz=358,slow=6.3,SNR=1.9						
LVC	Limon Verde	15.42	160		Pn	21 05 13.2	0.0
ZARC	Zaragoza, Cauc	15.46	359		Pn	21 05 13.1	-0.3
OCAC	Ocana	16.23	4		Pn	21 05 22.1	-0.9
OCAC				IAmb	IAmb	21 05 23.6	
	comp=Z,8.3nm,0.5s						
PTLB	Pontes e Lacer	16.71	117	eP	Pn	21 05 29.0	+0.4
SDV	Santo Domingo	17.27	13	P	Pn	21 05 35.7	+0.1
	comp=Z,3.8nm,0.3s,baz=210,slow=14,SNR=3.8						
SDV	Santo Domingo	17.27	13	P	P	21 05 34.8	+0.2
SDV				IAmb	IAmb	21 05 41.3	
	comp=Z,6.7nm,0.7s						
BOAV	Boa Vista	17.37	54	eP	Pn	21 05 36.6	0.0
GO02	Mina Guanaco	17.63	165		Pn	21 05 39.7	-0.3
PDRB	Porto dos Gac	17.84	103	eP	P	21 05 41.5	+0.7
SJCC	San Jacinto, C	17.85	358		P	21 05 41.1	+0.2
SJCC				IAmb	IAmb	21 05 43.7	
	comp=Z,31nm,1.1s						
BCIP	Isla Barro Col	17.93	343	P	P	21 05 41.3	-0.5
BCIP				IAmb	IAmb	21 05 44.3	
	comp=Z,12nm,0.6s						
BAUV	El Baul	18.07	21	P	P	21 05 43.3	0.0
BAUV				IAmb	IAmb	21 06 12.8	
	comp=Z,21nm,0.7s						
AC01	Pan de Azucar	18.36	169	P	P	21 05 43.5	-2.9
CLDB	Colider	18.64	100	eP	P	21 05 49.7	+0.2
ITTB	Itaituba	18.99	80	eP	P	21 05 53.3	0.0
AC02	Maricunga	19.35	165	P	Pn	21 05 59.2	-1.1
AC02				IAmb	IAmb	21 06 04.3	
	comp=Z,15nm,0.9s						
URIC	Uribia, Colomb	19.79	7	P	P	21 05 59.0	-2.9
URIC				IAmb	IAmb	21 06 22.3	
	comp=Z,12nm,0.8s						
SALV	Santo Antonio	19.95	115	eP	P	21 06 04.1	+0.5
BIRV	Birongo	20.15	24	P	P	21 06 06.9	+1.1
MALB	Monte Alegre	21.05	74	eP	P	21 06 15.6	+0.1
PP1B	Ponte de Pedra	21.31	118	eP	P	21 06 19.5	+1.2
AQDB	Aquidauana	21.95	126	P	P	21 06 25.1	+0.1
AQDB				IAmb	IAmb	21 06 28.8	
	comp=Z,16nm,1.3s						
AQDB	Aquidauana	21.95	126	eP	P	21 06 26.9	+1.9
SNDB	Serra Nova Dou	23.15	102	eP	P	21 06 36.2	-0.3
CO02	Combarbal	23.25	172	P	P	21 06 37.6	+0.2
MCPB	Macapa, AP	23.62	72	eP	P	21 06 39.6	-1.1
GRGR	Grenville	23.77	33	P	P	21 06 41.9	-0.2
CPUP	Villa Florida	24.41	140	P	P	21 06 46.4	-1.3
	comp=Z,4.9nm,0.8s,baz=331,slow=8.4,SNR=8.9						
	comp=Z,4.9nm,0.8s						
CPUP	Villa Florida	24.41	140	P	P	21 06 46.6	-1.1
CPUP				IAmb	IAmb	21 06 51.8	
	comp=Z,7.7nm,0.9s						
CPUP	Villa Florida	24.41	140	eP	P	21 06 49.9	+2.2
PRPB	Parauapebas	24.54	87	eP	P	21 06 49.0	-0.1
SVB	Belmont	24.93	32	P	P	21 06 53.4	+0.7
TRCB	Terra Rica	25.59	127	eP	P	21 07 01.3	+2.7
ITRB	Iturama	26.07	119	eP	P	21 07 05.2	+2.2
PEXB	Peixe	26.08	101	eP	P	21 07 04.5	+1.5
PCMB	Pacaembu	26.12	124	eP	P	21 07 05.5	+2.2
SMTB	Santa Maria do	26.61	94	eP	P	21 07 09.2	+1.4
TMAB	Tom-Au,PA,Br	26.86	79	eP	P	21 07 11.2	+1.2
BDFB	Brasilia	26.95	109	P	P	21 07 10.4	-0.5
	comp=Z,1.6nm,0.4s,baz=256,slow=12,SNR=4.0						
BDFB				pP	pP	21 07 43.1	+0.4
	comp=Z,4.3nm,0.6s,baz=262,slow=12,SNR=3.6						
	comp=Z,1.6nm,0.4s						
PTGB	Pitanga	27.07	130	eP	P	21 07 13.8	+2.0
DR12	Loma Pena Alta	27.15	11	P	P	21 07 11.6	-0.9
IPMB	Ipameri, GO	27.39	114	eP	P	21 07 16.3	+1.5
CBYP	Canovanas	27.52	18	P	P	21 07 14.8	-1.0
STVI	Saint Thomas	27.88	20	P	P	21 07 17.8	-1.1
BB19B	Bebedouro	28.19	120	eP	P	21 07 24.0	+2.2
FRTB	Fartura	28.32	125	eP	P	21 07 25.6	+2.6
ITAB	Concordia	28.49	135	P	P	21 07 23.0	-1.3
ITAB	Concordia	28.49	135	eP	P	21 07 27.4	+3.0
SDBA	SAO DESIDERIO	29.41	101	eP	P	21 07 33.7	+0.9
JANB	Januaria	30.34	106	eP	P	21 07 42.1	+1.2
DIAM	Diamantina, MG	31.62	112	eP	P	21 07 52.6	+0.4
TRQA	Tornquist	31.93	161	P	P	21 07 53.7	-0.9
PLCA	Paso Flores	32.72	174	P	P	21 08 02.3	+0.7
	comp=Z,2.1nm,0.6s,baz=349,slow=9.9,SNR=6.8						
	comp=Z,2.1nm,0.6s						
PLCA	Paso Flores	32.72	174	P	P	21 08 01.0	-0.6
VAS01	Vassouras-RJ	33.03	119	eP	P	21 08 06.9	+2.5
NBPS	Pedro II - PI	33.03	86	eP	P	21 08 05.6	+1.0
GDU01	Guandu, BA	34.70	102	eP	P	21 08 18.0	-1.0
RIB01	Linhares ES	34.88	112	eP	P	21 08 21.9	+1.5
CMC01	Camacan, BA	34.95	105	eP	P	21 08 22.5	+1.5
LL02	Futaleuf	35.07	177	P	P	21 08 22.1	+0.4
LL02				IAmb	IAmb	21 08 23.1	
	comp=Z,11nm,1.1s						
COYC	Coyhaique	37.43	177	P	P	21 08 42.4	+0.7
COYC				IAmb	IAmb	21 08 43.5	
	comp=Z,8.3nm,0.8s						
NBAN	Anadia - AL	37.77	95	eP	P	21 08 43.6	-1.4
RCBR	Riachuelo	38.35	89	P	P	21 08 49.8	-0.1
U56A	King	44.52	353	P	P	21 09 40.5	+0.7
U56A				IAmb	IAmb	21 09 41.3	
	comp=Z,10nm,0.6s						
T57A	Hurt	45.05	355	P	P	21 09 44.1	+0.2
T57A				IAmb	IAmb	21 09 44.9	
	comp=Z,10nm,0.7s						
S57A	Dark Hollow, R	45.77	355	P	P	21 09 49.6	-0.1
S57A				IAmb	IAmb	21 09 50.8	
	comp=Z,9.5nm,0.7s						
R58B	Mineral	45.90	356	P	P	21 09 51.4	+0.8
WHAR	Wooly Hollow	46.28	340	P	P	21 09 53.2	-0.5
TXAR	Lajitas Array	46.61	324	P	P	21 09 57.4	+0.9
	comp=Z,1.3nm,0.6s,baz=155,slow=9.0,SNR=11						
	comp=Z,1.3nm,0.6s						
TXAR	Lajitas Array	46.61	324	P	P	21 09 56.6	+0.2
ABTX	Abilene, Hawle	47.03	331	P	P	21 09 60.0	+0.4
ABTX				IAmb	IAmb	21 10 01.4	
	comp=Z,12nm,0.7s						
U40A	Yellville	47.44	340	P	P	21 10 01.6	-1.0
MGMO	Mountain Grove	47.97	341	P	P	21 10 06.1	-0.6
M57A	Sunshine Farm,	49.22	357	P	P	21 10 16.9	+0.8
M57A				IAmb	IAmb	21 10 17.7	
	comp=Z,7.7nm,0.7s						
MNTX	Cornudas Mount	49.35	325	P	P	21 10 17.5	+0.1
BINY	Binghamton	50.04	359	P	P	21 10 22.8	+0.5
BINY				IAmb	IAmb	21 10 23.8	
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	52.37	327	P	P	21 10 40.6	+0.5
	comp=Z,3.1nm,0.8s,baz=139,slow=8.7,SNR=7.8						
	comp=Z,3.1nm,0.8s						
ANMO	Albuquerque	52.37	327	P	P	21 10 40.6	+0.5
SDCO	Great Sand Dun	54.00	330	P	P	21 10 52.6	+0.5
SDCO				IAmb	IAmb	21 10 53.8	
	comp=Z,6.6nm,0.9s						
214A	Organ Pipe Nat	54.06	319	P	P	21 10 53.4	+1.0
214A				IAmb	IAmb	21 10 54.3	
	comp=Z,5.6nm,0.9s						
ECSD	EROS Data Cent	55.33	341	P	P	21 11 00.1	-1.1
WUAZ	Wupatki	55.57	324	P	P	21 11 03.7	+0.4
WUAZ				IAmb	IAmb	21 11 05.8	
	comp=Z,7.0nm,0.9s						
PV15	Paradox Valley	55.98	328	P	P	21 11 07.2	+0.9
PV15				IAmb	IAmb	21 11 08.2	
	comp=Z,9.3nm,1.0s						
W13A	Hualapai Mount	56.80	322	P	P	21 11 12.7	+0.7
W13A				IAmb	IAmb	21 11 14.8	
	comp=Z,4.3nm,1.0s						
SRU	San Rafael Swe	57.63	327	P	P	21 11 17.8	0.0
SRU				IAmb	IAmb	21 11 19.2	
	comp=Z,3.2nm,0.8s						
RSSD	Black Hills	58.42	335	P	P	21 11 23.4	+0.2
RSSD				IAmb	IAmb	21 11 24.8	
	comp=Z,13nm,1.4s						
DRLN	Deer Lake	58.98	13	P	P	21 11 26.5	-0.2
TPNV	Topopah Spring	59.45	322	P	P	21 11 31.0	+0.6
TPNV				IAmb	IAmb	21 11 32.6	
	comp=Z,5.0nm,0.8s						
DUG	Dugway, Tooele	59.64	327	P	P	21 11 31.6	-0.1
DUG				IAmb	IAmb	21 11 33.6	
	comp=Z,7.1nm,0.9s						
PD31	Pinedale Array	59.84	331	P	P	21 11 32.7	-0.4
PDAR	Pinedale Array	59.84	331	P	P	21 11 33.1	+0.1
	comp=Z,0.9nm,0.6s,baz=139,slow=7.9,SNR=12						
PDAR				pP	pP	21 12 10.6	+2.0
	comp=Z,0.3nm,0.6s,baz=162,slow=9.0,SNR=1.9						
	comp=Z,0.9nm,0.6s						
PDAR	Pinedale Array	59.84	331	P	P	21 11 32.6	-0.4
HWUT	Hardware Ranch	59.98	329	P	P	21 11 34.2	+0.2
ELK	Elko	61.36	326	P	P	21 11 43.6	+0.2
	comp=Z,0.7nm,0.6s,baz=137,slow=5.9,SNR=3.8						
	comp=Z,0.7nm,0.6s						
OMMB	Old Mammoth Mi	61.58	321	P	P	21 11 45.0	0.0
OMMB				IAmb	IAmb	21 11 46.8	
	comp=Z,5.2nm,0.9s						
NVAR	Mina Array Bea	61.65	322	P	P	21 11 46.5	+1.1
	comp=Z,2.1nm,0.9s,baz=143,slow=6.3,SNR=11						
	comp=Z,2.1nm,0.9s						
NVAR	Mina Array Bea	61.65	322	P	P	21 11 45.9	+0.5
YHH	Holmes Hill	61.97	331	P	P	21 11 47.9	+0.4
YHH				IAmb	IAmb	21 11 49.5	
	comp=Z,5.5nm,0.8s						
YHL	Hebgen Lake	62.17	331	P	P	21 11 50.1	+1.2
GCMT	Greycliff	62.18	333	P	P	21 11 49.2	+0.5
BOZ	Bozeman (W)	62.94	332	P	P	21 11 53.9	+0.2
BOZ				IAmb	IAmb	21 11 55.2	
	comp=Z,5.5nm,0.8s						
MCMT	McKenzie Canyo	62.96	330	P	P	21 11 54.3	+0.2
SCHQ	Schefferville	62.99	5	P	P	21 11 53.0	-0.6
	comp=Z,2.0nm,0.9s,baz=340,slow=6.1,SNR=2.0						
SCHQ				pP	pP	21 12 29.1	-0.6
	comp=Z,2.3nm,0.6s,baz=236,slow=7.3,SNR=3.3						
	comp=Z,2.0nm,0.9s						
PAHR	Pah Rah Range	63.10	322	P	P	21 11 55.9	+0.9
PAHR				IAmb	IAmb	21 11 57.0	
	comp=Z,5.9nm,1.0s						
MFID	Camas Ranch	63.50	327	P	P	21 11 58.0	+0.5
ORV	Oroville	64.31	321	P	P	21 12 03.2	+0.6
ORV				IAmb	IAmb	21 12 04.8	
	comp=Z,8.0nm,0.9s						
MSO	Missoula	64.94	331	P	P	21 12 07.2	+0.4
I07A	Izee	65.93	326	P	P	21 12 13.9	+0.7
NEW	Newport	67.48	331	P	P	21 12 22.9	+0.1
	comp=Z,3.1nm,0.7s,baz=111,slow=6.8,SNR=4.1						
	comp=Z,3.1nm,0.7s						
EDM	Edmonton	69.38	336	P	P	21 12 34.3	-0.2
DBIC	Dimbokro	70.95	80	P	P	21 12 43.9	-0.9
	comp=Z,3.0nm,0.4s,baz=94,slow=5.0,SNR=3.4						
	comp=Z,3.0nm,0.4s						
DBIC	Dimbokro	70.95	80	P	P	21 12 44.2	-0.6
DBIC				IAmb	IAmb	21 12 48.5	
	comp=Z,5.9nm,0.8s						
FRB	Frobisher Bay	71.75	3	P	P	21 12 47.4	-1.1
	comp=Z,1.3nm,0.4s,baz=214,slow=7.5,SNR=3.6						
	comp=Z,1.3nm,0.4s						
BELA	Belgrano 2	72.73	172	P	P	21 12 54.9	+0.6
KOWA	Kowa	73.37	72	P	P	21 12 58.4	-0.9
VNA3	Neumayer Olymp	74.44	162	P	P	21 13 05.1	+0.7
VNA2	Neumayer--Watz	75.03	162	P	P	21 13 08.4	+0.6
	baz=260,slow=6.0						
SNAA	Sanae	76.65	162	P	P	21 13 17.7	+0.7
SNAA	Sanae	76.65	162	P	P	21 13 17.3	+0.2
SNAA				IAmb	IAmb	21 13 18.7	
	comp=Z,4.8nm,0.7s						
YKA	Yellowknife Ar	76.81	342	P	P	21 13 17.5	-0.4
	comp=Z,1.4nm,0.6s,baz=139,slow=6.4,SNR=34						
YKA				pP	pP	21 13 56.0	+0.8
	comp=Z,1.2nm,0.6s,baz=137,slow=6.9,SNR=6.1						
	comp=Z,1.4nm,0.6s						
YKA	Yellowknife Ar	76.81	342	P	P	21 13 18.3	+0.4
TROLL	Troll, Antarti	78.37	162	P	P	21 13 27.5	+0.9
TORD	Torodi Ar. Bea	78.52	75	P	P	21 13 27.2	-1.1
	comp=Z,2.8nm,0.3s,baz=285,slow=5.5,SNR=0.9						
ESDC	Sonseca Array	80.42	48	P	P	21 13 37.1	-1.2
	comp=Z,0.5nm,0.7s,baz=250,slow=5.6,SNR=2.8						
	comp=Z,0.5nm,0.7s						
QSPA	South Pole Qui	82.05	180	P	P	21 13 47.4	+0.9
QSPA				IAmb	IAmb	21 13 48.6	
	comp=Z,7.3nm,0.8s						
SUMG	Summit	83.78	10	P	P	21 13 55.4	-0.1
SUMG				IAmb	IAmb	21 13 56.5	
	comp=Z,5.0nm,0.8s						
INK	Inuvik	86.56	341	P	P	21 14 08.7	-0.1
	comp=Z,2.3nm,0.8s,baz=137,slow=6.6,SNR=6.4						
	comp=Z,2.3nm,0.8s						
INK	Inuvik	86.56	341	P	P	21 14 08.7	-0.1
M27K	Edge Creek, AK	86.89	334	P	P	21 14 11.2	+0.4
M27K				IAmb	IAmb	21 14 12.1	
	comp=Z,5.0nm,0.9s						
BERG	Berg Lake	86.93	332	P	P	21 14 11.6	+0.7
VRDI	Verde Repeater	87.14	333	P	P	21 14 11.9	-0.2
VRDI				IAmb	IAmb	21 14 13.2	
	comp=Z,6.3nm,0.8s						
BCAR	Beaver Creek A	87.14	335	P	P	21 14 12.2	+0.4
K27K	Chicken	87.65	336	P	P	21 14 14.4	+0.3
K27K				IAmb	IAmb	21 14 16.0	
	comp=Z,6.9nm,0.8s						
VNDA	Vanda	89.05	190	P	P	21 14 20.8	+0.2
	comp=Z,0.8nm,0.9s,baz=124,slow=7.8,SNR=3.9						
	comp=Z,0.8nm,0.9s						
ILAR	Eielson Array	89.86	336	P	P	21 14 24.4	-0.2
	comp=Z,1.0nm,0.8s,baz=127,slow=3.9,SNR=7.9						
ILAR				pP	pP	21 15 03.6	+0.7
	comp=Z,0.9nm,0.9s,baz=140,slow=4.4,SNR=3.8						
	comp=Z,1.0nm,0.8s						
BMAR	Burnt Mountain	89.91	339	P	P	21 14 25.1	+0.3
RND	Reindeer	90.25	334	P	P	21 14 26.7	+0.2
IMAR	Indian Mountai	92.96	336	P	P	21 14 38.4	-0.6
STKA	Stephens Creek	127.42	219	PKP	PKPdf	21 20 31.0	+0.3
	comp=Z,1.4nm,0.6s,baz=72,slow=5.9,SNR=4.3						
ZALV	Zalesovo Beam	131.29	16	PKP	PKiKP	21 20 38.1	-0.2
	comp=Z,1.5nm,0.6s,baz=15,slow=1.7,SNR=8.0						
ZALV	Zalesovo Beam	131.29	16		PKPdf	21 20 37.3	-0.1
MKAR	Makanchi Array	136.59	23	PKP	PKPdf	21 20 47.8	+0.2
	comp=Z,0.6nm,0.7s,baz=333,slow=2.5,SNR=4.8						
MKAR				pPKP	pPKPdf	21 21 28.6	+0.9
	comp=Z,0.6nm,0.8s,baz=250,slow=3.5,SNR=3.7						
MKAR	Makanchi Array	136.59	23		PKPdf	21 20 47.1	-0.4
ASAR	Alice Springs	138.00	221	PKP	PKPdf	21 20 51.0	+0.1
	comp=Z,1.4nm,0.6s,baz=123,slow=2.1,SNR=12						
ASAR	Alice Springs	138.00	221		PKPdf	21 20 50.3	-0.6
WRA	Warramunga Arr	140.26	225	PKhKP	PKPpre	21 20 48.5	
	comp=Z,1.4nm,1.0s,baz=127,slow=2.8,SNR=7.6						
WRA				PKP	PKPdf	21 20 55.3	+0.2
	comp=Z,1.8nm,0.5s,baz=119,slow=2.2,SNR=12						
WRA				pPKP	pPKPdf	21 21 36.5	+1.3
	comp=Z,0.9nm,0.8s,baz=127,slow=1.9,SNR=2.4						
KSRS	Korea Array	144.38	329	PKP	PKPbc	21 21 01.1	+0.5
	comp=Z,1.3nm,0.7s,baz=46,slow=3.6,SNR=5.0						
PYUN	Piuthan	150.85	44	eP	PKPbc	21 21 18.8	-0.1
DANN	Dangsing	151.21	43	eP	PKiKP	21 21 20.1	-0.2
	comp=Z,18nm,0.7s						
KOLN	Koldanda	151.47	44	eP	PKPbc	21 21 20.0	-0.3
GKN	Gorkha	152.02	42	eP	PKPbc	21 21 21.5	0.0
	comp=Z,6.1nm,0.4s						
KKN	Kakani	152.59	42	eP	PKPbc	21 21 22.8	0.0
DMN	Daman	152.59	42	eP	PKPbc	21 21 22.9	0.0
PKI	Pulchoki	152.82	42	eP	PKPbc	21 21 22.9	-0.6
RAMN	Ramite	154.02	41	eP	PKPbc	21 21 25.8	-0.2

**SVSA 11 21:10:11.7±1.0,41°.53N×29°.15W,h5^{km},ML3.9(INMG),
Error ellipse: s-maj=5.1km s-min=4.9km az=81.0,
Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBC	Serra Branca	2.63	161	eP	Pn	21 10 49.0	-5.8
SRBC				eS	Sn	21 11 18.9	-8.2
SRBC	110nm,0.3s			A	A	21 11 23.8	
PGRA	Graciosa	2.65	160	eP	Pn	21 10 50.5	-4.6
PGRA				eS	Sn	21 11 19.6	-8.0
PGRA	49nm,0.2s			A	A	21 11 22.0	
H07S1	FLORES T-PHASE	2.66	217	eP	Pn	21 10 50.6	-4.6
H07S1				eS	Sn	21 11 19.6	-8.2
ROSA	Rosais	2.89	166	eP	Pn	21 10 53.9	-4.5
ROSA				eS	Sn	21 11 25.0	-8.6
ROSA	20nm,0.4s			A	A	21 11 25.3	
ROSA	32nm,0.3s			A	A	21 11 35.7	
CALA	Caldeira	2.96	173	eP	Pn	21 10 55.4	-4.1
PMAN	Manadas	3.01	164	eP	Pn	21 10 55.2	-4.8
PMAN				eS	Sn	21 11 27.8	-8.5
PMAN	19nm,0.3s			A	A	21 11 28.6	
PICO	Pico	3.08	169	eP	Pn	21 10 56.4	-4.6
PICO				eS	Sn	21 11 30.1	-8.1
PICO	262nm,0.2s			A	A	21 11 32.2	
PAGU	Agualva, Azore	3.14	151	eP	Pn	21 10 56.6	-5.3
PAGU				eS	Sn	21 11 29.6	-10
PAGU	74nm,0.2s			A	A	21 11 36.0	
PPV	Praia da Vit	3.22	150	eP	Pn	21 10 57.7	-5.2
ADH	Angra Heroismo	3.23	152	eP	Pn	21 10 57.3	-5.7
PSET	Sete Cidades	4.55	143	eP	Pn	21 11 16.9	-4.3
PDA	Ponta Delgada	4.64	143	eP	Pn	21 11 18.2	-4.2
GRON	Grota Negra	4.68	142	eP	Pn	21 11 19.3	-3.7
CMLA	Cha da Macela	4.69	142	eP	Pn	21 11 18.7	-4.4
CMLA				eS	Sn	21 12 09.0	-8.9
CMLA	56nm,0.3s			A	A	21 12 17.1	
BART	Pico Bartolome	4.85	139	eP	Pn	21 11 21.1	-4.2
BART				eS	Sn	21 12 13.3	-8.6
BART	24nm,0.3s			A	A	21 12 18.2	
PSMA	Santa Maria	5.50	144	eP	Pn	21 11 30.1	-4.1
PSMA				eS	Sn	21 12 31.1	-6.7
PSMA	18nm,0.2s			A	A	21 12 34.3	
PSMN	Pico do Norte,	5.52	144	eP	Pn	21 11 30.3	-4.2
PSMN				eS	Sn	21 12 31.6	-6.8
PSMN	19nm,0.3s			A	A	21 12 32.8	

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*JMA **11** 21:19:23.6±0.7,23°N±2°×12°1E±°,h0^{km},MV3.4/10,
TAIWAN REGION*
*ASIES **11** 21:19:23.6,23°.16N×121°.01E,h15^{km},MW3.7*
*TAP **11** 21:19:23.5,23°.15N×121°.00E,h2^{km},ML3.9,B*
*IDC **11** 21:19:24.2±1.3,22°.89N×121°.22E,h0^{km},mb3.5/6,
mbtmp3.5/7,MS2.9/7,Error ellipse: s-maj=74.9km
s-min=21.2km az=67.0*
ISC 11 21:19:24.0±1.1,**23°.16N**±0°.01×**121°.07E**±0°.01,**h0**^{km}±8^{km},
n151,σ**1**^{s}**.35**/240,**mb3.4**/6,**MS2.9**/5,**39C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau baz=29	0.05	303	⇑iP	Pg	21 19 24.9	-0.1
ELDTW	baz=29			i S	Sg	21 19 25.7	0.0
ECS	Chishang baz=106	0.15	114	⇑iP	Pg	21 19 28.4	+1.5
ECS	baz=106			eS	Sg	21 19 32.2	+3.3
FULB	Fuli baz=80	0.21	79	⇑iP	Pg	21 19 29.9	+1.8
FULB	baz=80			i S	Sg	21 19 34.5	+3.6
LONT	Longtian baz=154	0.26	167	⇓iP	Pg	21 19 29.5	+0.6
LONT	baz=154			i S	Sg	21 19 33.2	+1.0
STYH	Taoyuan baz=278	0.27	272	⇑iP	Pg	21 19 28.4	-0.7
STYH	baz=278			S	Sg	21 19 31.4	-1.1
CHKT	Chengkung baz=99	0.28	102	⇑iP	Pg	21 19 31.6	+2.2
CHKT	baz=99			eS	Sg	21 19 37.7	+4.6
STYT	Tauyuan baz=273	0.28	271	⇑iP	Pg	21 19 28.7	-0.7
STYT	baz=273			i S	Sg	21 19 32.2	-0.9
TWF1	Yuli baz=54	0.29	48	⇑iP	Pg	21 19 30.3	+0.9
TWF1	baz=54			eS	Sg	21 19 34.6	+1.4
EDH	Donghe baz=123	0.29	130	⇓iP	Pg	21 19 31.1	+1.6
EDH	baz=123			i S	Sg	21 19 36.6	+3.4
EYUL	Yuli baz=56	0.30	51	⇑iP	Pb	21 19 30.5	-1.7
EYUL	baz=56			i S	Sb	21 19 34.7	-3.0
YULB	Yu-li baz=48	0.31	42	⇑iP	Pb	21 19 30.5	-2.0
YULB	baz=48			i S	Sb	21 19 34.8	-3.4
TWG	Pinlang baz=168	0.34	179	⇓iP	Pg	21 19 30.8	+0.4
TWG	baz=168			i S	Sg	21 19 35.4	+0.6
TWGBT	Beinan baz=168	0.34	178	⇓iP	Pg	21 19 30.8	+0.3
TWGBT	baz=168			i S	Sg	21 19 35.4	+0.5
YUS	Yu-Shan baz=353	0.34	342	⇑iP	Pg	21 19 30.4	-0.2
YUS	baz=353			i S	Sg	21 19 35.1	0.0
ECBN	Changbin baz=68	0.39	66	P	Pb	21 19 33.5	-0.2
ECBN	baz=68			eS	Sb	21 19 41.5	+1.3
TTN	Taitung baz=161	0.41	170	eP	Pb	21 19 33.2	-0.9
TTN	baz=161			eS	Sb	21 19 40.0	-0.9
EHY	Hungye baz=41	0.42	34	⇑iP	Pb	21 19 32.3	-1.9
EHY	baz=41			eS	Sg	21 19 37.9	+0.5
SLGT	Liugui baz=244	0.42	247	⇑iP	Pg	21 19 31.9	-0.2
SLGT	baz=244			i S	Sg	21 19 37.3	-0.2
ALS	Alishan baz=334	0.42	326	⇓iP	Pg	21 19 32.0	-0.1
ALS	baz=334			eS	Sg	21 19 37.7	0.0
TPUB	Ta-pu baz=293	0.42	289	⇑iP	Pg	21 19 32.0	-0.1
TPUB	baz=293			S	Sg	21 19 37.8	+0.1
WTP	Ta-pu baz=285	0.42	282	⇑iP	Pg	21 19 31.9	-0.2
WTP	baz=285			S	Sg	21 19 38.1	+0.4
SGST	Jiashian baz=260	0.45	260	⇑eP	Pg	21 19 31.5	-1.1
SGST	baz=260			eS	Sg	21 19 37.8	-0.7
HGSD	Ruisui baz=49	0.47	45	⇑iP	Pb	21 19 34.1	-1.0
HGSD	baz=49			eS	Sb	21 19 42.3	-0.2
CHN4	Tsaushan baz=298	0.47	294	⇑iP	Pg	21 19 33.2	+0.1
CHN4	baz=298			eS	Sg	21 19 40.2	+0.9
CHN1	Nanshi baz=274	0.50	273	⇑iP	Pg	21 19 33.6	+0.1
CHN1	baz=274			eS	Sg	21 19 41.1	+1.2
SNST	Tainan City baz=278	0.53	277	⇑iP	Pg	21 19 34.3	+0.2
SNST	baz=278			eS	Sg	21 19 42.3	+1.3
TWK	Hsinying baz=284	0.54	281	⇑iP	Pg	21 19 34.5	+0.1
TWK	baz=284			eS	Sg	21 19 42.5	+1.1
CHN5	Tsauling baz=326	0.56	321	⇓iP	Pg	21 19 35.0	+0.2
ECL	Taimali baz=184	0.57	190	⇑iP	Pg	21 19 34.4	-0.5
ECL	baz=184			i S	Sg	21 19 41.3	-1.0
SSD	Sandimen baz=220	0.57	224	⇑iP	Pg	21 19 33.9	-1.1
SSD	baz=220			i S	Sg	21 19 40.9	-1.5
SCST	Cishan baz=241	0.59	243	⇑iP	Pg	21 19 35.4	+0.1
SCST	baz=241			eS	Sg	21 19 44.8	+1.8
VWDT	VWDT baz=12	0.59	7	⇑iP	Pg	21 19 34.8	-0.6
VWDT	baz=12			eS	Sb	21 19 46.0	-0.3
TSMG	Majia baz=217	0.60	221	⇑iP	Pg	21 19 34.2	-1.1
TSMG	baz=217			S	Sg	21 19 41.3	-1.8
EGFH	Guangfu baz=37	0.61	33	⇑P	Pg	21 19 35.5	-0.1
EGFH	baz=37			eS	Sb	21 19 44.2	-2.4
LDUT	Ludao baz=138	0.61	142	⇓P	Pb	21 19 36.3	-1.2
LDUT	baz=138			eS	Sn	21 19 46.9	-3.5
SSLB	Suanglung baz=356	0.63	351	i P	Pg	21 19 35.4	-0.7
SSLB	baz=356			eS	Sg	21 19 44.2	-0.2
CHN3	Shinhua baz=263	0.65	263	⇑eP	Pg	21 19 38.0	+1.5
MASBT	Mashibuluo baz=212	0.68	216	⇑iP	Pg	21 19 35.8	-1.1
MASBT	baz=212			eS	Sg	21 19 44.3	-1.4
SHHT	Tainan City baz=258	0.68	258	⇑P	Pb	21 19 38.5	-0.1
CHY	Chiayi baz=303	0.68	300	eP	Pg	21 19 37.4	+0.4
CHY	baz=303			eS	Sg	21 19 47.5	+1.7
TWM1	Shoushan baz=238	0.68	241	eP	Pg	21 19 37.2	+0.2
SGLT	Jiouru baz=228	0.68	231	eP	Pg	21 19 37.3	+0.3
SGLT	baz=228			eS	Sb	21 19 49.3	+0.5
TEGC	Jichi Village baz=42	0.70	38	eP	Pn	21 19 39.2	-1.9
TEGC	baz=42			eS	Sn	21 19 50.5	-2.1
WGK	Gukeng baz=323	0.70	319	eP	Pg	21 19 38.1	+0.7
TSPT	Pingtung City baz=225	0.71	228	eP	Pg	21 19 38.0	+0.4
WDLH	Douliu baz=321	0.72	317	eP	Pg	21 19 38.9	+1.2
WDLH	baz=321			eS	Sg	21 19 49.3	+2.3
WJS	Zhushan baz=339	0.73	335	eP	Pb	21 19 39.3	-0.2
WJS	baz=339			eS	Sb	21 19 49.9	-0.3
ESL	Shilin baz=31	0.73	27	⇑P	Pg	21 19 37.8	-0.3
ESL	baz=31			eS	Sg	21 19 47.8	+0.2
SMLT	Sun Moon Lake baz=353	0.74	348	eP	Pg	21 19 37.7	-0.4
ICHU	Yijhu baz=287	0.75	286	eP	Pg	21 19 38.7	+0.3
ICHU	baz=287			eS	Sg	21 19 50.1	+1.9
TYC	Yuchr baz=351	0.77	346	eP	Pg	21 19 38.7	0.0
TYC	baz=351			eS	Sb	21 19 51.8	+0.7
TAI1	Yung-k'ang baz=261	0.78	261	eP	Pg	21 19 38.7	-0.3
WNT	Mingjian baz=338	0.80	334	eP	Pb	21 19 40.4	-0.3
WNT	baz=338			eS	Sb	21 19 52.5	+0.4
OWD	Renai baz=11	0.80	7	⇑eP	Pg	21 19 38.1	-1.2
OWD	baz=11			eS	Sb	21 19 53.0	+0.8
EAST	Anshuo baz=190	0.80	195	⇑iP	Pg	21 19 38.8	-0.5
EAST	baz=190			eS	Sg	21 19 50.1	+0.5
SCLT	Jiali baz=272	0.80	271	eP	Pg	21 19 40.7	+1.3
CHN8	Yiju baz=285	0.81	283	eP	Pg	21 19 39.8	+0.3
CHN8	baz=285			eS	Sg	21 19 52.7	+2.8
TAW	Tawu baz=187	0.81	191	eP	Pg	21 19 39.3	-0.3
TAW	baz=187			eS	Sg	21 19 50.0	-0.1
SSPT	Xinbi baz=211	0.81	214	⇑eP	Pg	21 19 39.0	-0.6
SSPT	baz=211			eS	Sg	21 19 50.2	0.0
WTK	Tuku baz=313	0.81	310	eP	Pg	21 19 40.1	+0.5
WTK	baz=313			eS	Sg	21 19 52.0	+1.8
TAI	Tainan baz=258	0.82	259	eP	Pb	21 19 41.4	+0.3
WNT1	Nantou City baz=338	0.82	335	eP	Pb	21 19 41.3	+0.1
WNT1	baz=338			eS	Sb	21 19 53.6	+0.8
WUSB	Renai baz=7.0	0.83	3	⇑eP	Pg	21 19 38.8	-1.1
TAWH	Dawu Township baz=188	0.83	191	⇑P	Pg	21 19 39.4	-0.5
TAWH	baz=188			eS	Sg	21 19 50.1	-0.6
WSL	Shuilin Townsh baz=297	0.85	295	⇑eP	Pg	21 19 40.5	+0.2
WSL	baz=297			eS	Sg	21 19 52.8	+1.5
WPL	Puli Township baz=357	0.85	353	eP	Pg	21 19 39.9	-0.4
TEYL	Yanliau Villag baz=36	0.86	35	eP	Pn	21 19 41.8	-1.5
DPDB	Guoxing baz=355	0.88	352	eP	Pg	21 19 40.5	-0.4
SCZT	Fangliau baz=204	0.89	208	⇑iP	Pg	21 19 39.9	-1.0
SCZT	baz=204			eS	Sg	21 19 52.6	+0.2
ETM	Tongmen baz=29	0.89	26	eP	Pg	21 19 40.8	-0.4
CHGB	Renai baz=10.0	0.90	6	eP	Pg	21 19 40.1	-1.1
WSSB	Gushan baz=233	0.90	235	eP	Pb	21 19 43.1	+0.6
WSSB	baz=233			eS	Sn	21 19 59.3	+1.6
WCS	Beigang Elemen baz=355	0.91	351	eP	Pg	21 19 41.1	-0.2
WSF	Szhu baz=304	0.91	302	eP	Pg	21 19 41.6	+0.2
KAU	Kaohsiung baz=227	0.91	230	eP	Pn	21 19 43.9	-0.2
WYL	Yuanlin Townsh baz=334	0.91	331	eP	Pb	21 19 43.0	+0.3
WWF	Wufeng baz=343	0.94	339	eP	Pb	21 19 43.3	+0.1
HWA	Hwalien baz=34	0.95	31	eP	Pb	21 19 42.7	-0.7
SLIU	Shizi baz=191	0.97	195	⇑eP	Pg	21 19 41.9	-0.7
SLIU	baz=191			eS	Sn	21 19 58.1	-1.3
WRL	Guolierlin Hig baz=323	0.97	320	eP	Pg	21 19 42.8	+0.2
WHF	Hehuan Shan baz=14	1.00	10	eP	Pg	21 19 41.9	-1.2
WHF	baz=14			eS	Sn	21 19 59.1	-1.6
WLCH	Liuqiu baz=216	1.02	218	eP	Pn	21 19 46.1	+0.5
WCHH	Zhanghua baz=336	1.03	333	eP	Pb	21 19 44.9	+0.3
WCHH	baz=336			eS	Sb	21 19 58.7	+0.1
TWD	Chiawan baz=31	1.04	28	eP	Pb	21 19 43.8	-1.0
TWD	baz=31			eS	Sn	21 19 59.7	-1.2
TWP	Hsiaoliuchiu baz=216	1.04	219	eP	Pn	21 19 46.1	+0.4
TWP	baz=216			eS	Sn	21 20 05.3	+4.3
TCU	Taichung baz=344	1.05	340	eP	Pn	21 19 45.6	-0.3
TDCB	Techi baz=7.0	1.09	4	eP	Pg	21 19 44.0	-1.0
TDCB	baz=7.0			eS	Sn	21 20 02.7	+0.1
TWT	Tachien baz=8.0	1.09	5	eP	Pg	21 19 44.5	-0.4
FUSS	Fushou baz=11	1.09	9	eP	Pg	21 19 43.6	-1.4
FUSS	baz=11			eS	Sn	21 20 02.0	-0.8
ETLH	Xiulin Townshi baz=23	1.11	20	eP	Pg	21 19 44.1	-1.1
ETLH	baz=23			eS	Sg	21 19 59.3	-0.4
ETL	Fush Village baz=30	1.12	27	eP	Pn	21 19 45.7	-1.2
WHP	Taichung City baz=357	1.12	354	eP	Pg	21 19 45.1	-0.3
WHP	baz=357			eS	Sn	21 20 03.3	+0.1
NACB	Ninganchiao baz=28	1.12	26	eP	Pg	21 19 44.1	-1.3
NACB	baz=28			eS	Sn	21 20 01.3	-1.8
SMST	Manzhou Townsh baz=188	1.15	191	eP	Pg	21 19 45.6	-0.5
HEN	Hengchun baz=192	1.19	195	eP	Pg	21 19 46.7	0.0
HEN	baz=192			eS	Sn	21 20 05.6	+0.9
LAY	Lan-yu baz=155	1.20	158	eP	Pg	21 19 45.1	-1.9
TWQ1	Liyutan baz=350	1.21	347	eP	Pn	21 19 48.1	-0.1
TWQ1	baz=350			eS	Sn	21 20 07.0	+1.6
TWKBT	Hengchun baz=188	1.24	191	eP	Pb	21 19 47.6	-0.5
TWKBT	baz=188			eS	Sn	21 20 07.8	+1.9
WDJ	Dajia District baz=344	1.25	342	eP	Pn	21 19 49.1	+0.4
LYUB	Lan-yu baz=155	1.25	157	eP	Pg	21 19 44.7	-3.2
TSEB	Hengchuen, Pin baz=186	1.26	187	eP	Pn	21 19 48.5	-0.3
TSEB	baz=186			eS	Sn	21 20 09.3	+2.7
NSY	Sanyi baz=350	1.28	347	eP	Pb	21 19 49.0	0.0
NSY	baz=350			eS	Sn	21 20 08.0	+0.9
NNSB	Datong baz=15	1.30	13	eP	Pg	21 19 47.9	-1.0
NNSB	baz=15			eS	Sn	21 20 07.4	-0.2
WDGT	Dungji baz=275	1.30	275	⇑eP	Pn	21 19 47.1	-2.2
WDGT	baz=275			eS	Sg	21 20 04.2	-1.5
NNS	Nan Shan baz=15	1.30	12	eP	Pg	21 19 48.2	-0.9
NNS	baz=15			eS	Sn	21 20 08.4	+0.6
NMLH	Miaoli baz=352	1.39	350	eP	Pg	21 19 51.5	+0.8
ENA	Nanau baz=28	1.41	26	eP	Pb	21 19 50.4	-0.7
PHUB	P'eng-hu baz=285	1.42	285	eP	Pn	21 19 49.0	-2.0
PHUB	baz=285			eS	Sb	21 20 07.5	-2.4
LATG	Datong baz=19	1.43	17	eP	Pn	21 19 50.3	-1.1
LATG	baz=19			eS	Sn	21 20 11.1	+0.1
EWUT	Wuta baz=29	1.44	27	eP	Pg	21 19 51.0	-0.6
PNG	Penghu baz=287	1.45	287	eP	Pn	21 19 49.4	-2.0
PNG	baz=287			eS	Sn	21 20 08.4	-2.7
NFF	Wufeng Townshi baz=4.0	1.47	2	eP	Pg	21 19 52.0	-0.1
NFF	baz=4.0			eS	Sn	21 20 13.1	+1.4
NSTT	Nanjuang	1.47	358	eP	Pg	21 19 52.5	+0.4
LIOB	Emei	1.48	358	eP	Pg	21 19 52.9	+0.5
LIOB				eS	Sg	21 20 13.1	+1.5
NDT	Datong Townshi baz=18	1.49	16	eP	Pg	21 19 52.0	-0.6
NDT	baz=18			eS	Sg	21 20 14.2	+2.2
VCHM	Qimei baz=272	1.51	272	eP	Pn	21 19 50.2	-2.0
VCHM	baz=272			eS	Sn	21 20 10.4	-2.2
YHNB	Yeheng baz=13	1.53	11	eP	Pn	21 19 51.9	-0.7
YHNB	baz=13			eS	Sn	21 20 12.4	-0.9
NSK	Sanguang baz=12	1.53	10	eP	Pn	21 19 52.1	-0.6
NSK	baz=12			eS	Sb	21 20 12.7	-0.6
ENTT	Nioudou baz=19	1.54	17	eP	Pb	21 19 52.6	-0.9
ENTT	baz=19			eS	Sg	21 20 14.9	+1.3
NDS	Dongshan baz=24	1.58	22	eP	Pb	21 19 53.5	-0.6
NDS	baz=24			eS	Sg	21 20 15.3	+0.4
TWC	Suao baz=28	1.61	26	eP	Pg	21 19 54.3	-0.6
TWC	baz=28			eS	Sg	21 20 15.4	-0.4
TWE	Neicheng baz=22	1.65	19	eP	Pb	21 19 54.5	-0.7
NWLT	Wulai baz=16	1.66	14	eP	Pb	21 19 54.5	-0.9
FUSB	Fushanzhiwuyua baz=18	1.66	17	eP	Pb	21 19 54.7	-0.8
FUSB	baz=18			eS	Sg	21 20 17.5	+0.1
NHDH	Xindian Distri baz=15	1.84	13	eP	Pn	21 19 56.9	0.0
NHDH	baz=15			eS	Sg	21 20 24.2	+0.9
TWA	Mucha baz=16	1.87	15	eP	Pg	21 19 59.4	-0.5
TWA	baz=16			eS	Sg	21 20 27.1	+2.9
TIPB	Shuangxi baz=23	1.93	21	eP	Pb	21 19 59.1	-1.0
TWS1	Kuangyinshan baz=11	1.96	9	eP	Pg	21 20 01.8	+0.3
YM01	YM01	2.03	13	eP	Pb	21 20 01.1	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=15						
JYNG	Yonagunijimaku	2.15	53	P	Pn	21 20 00.9	-0.1
JYNG				S	Sn	21 20 27.4	-1.0
YOJ	Yonaguni jima	2.20	54	eP	Pn	21 20 01.2	-0.6
	baz=54						
YOJ				eS	Sb	21 20 30.5	-2.0
	baz=54						
YOJ	Yonaguni jima	2.20	54	P	Pn	21 20 01.6	-0.2
YOJ				S	Sn	21 20 29.0	-0.7
HATJ	Hateruma jima	2.67	70	S	Sn	21 20 39.0	-2.2
IRIF	Iriomote-Funau	2.71	64	eP	Pn	21 20 08.3	-0.5
IRIF				eS	Sn	21 20 41.1	-1.1
JKRS	Kuro-shima	2.90	68	P	Pn	21 20 10.7	-0.7
JKRS				S	Sn	21 20 46.1	-0.9
JIJ	Ishigaki jima	3.06	66	P	Pn	21 20 12.8	-0.8
JIJ				S	Sn	21 20 47.4	-3.6
JISG	Ishigakijimahi	3.29	64	eP	Pn	21 20 15.7	-1.1
KSRS	Korea Array	15.42	21	Pn	P	21 23 07.3	-0.2
	0.7nm,0.5s,baz=206,slow=12,SNR=2.2						
KSRS				LR	LR	21 29 14.5	
	comp=Z,21nm,19.0s,baz=195,slow=38						
MJAR	Matsushiro Arr	19.93	44	LR	LR	21 31 41.9	
	comp=Z,32nm,21.0s,baz=200,slow=37						
CMAR	Chiang Mai Arr	21.20	261	LR	LR	21 33 52.5	
	comp=Z,19nm,18.9s,baz=185,slow=41						
USRK	Ussuriysk Ar.	22.83	21	LR	LR	21 33 48.7	
	comp=Z,49nm,21.3s,baz=23,slow=38						
SONM	Songino Array	27.27	338	P	P	21 25 11.6	+1.5
	0.2nm,0.4s,baz=162,slow=11,SNR=2.7						
	0.2nm,0.4s						
ASAJ	Asahikawa	27.39	35	LR	LR	21 36 24.8	
	comp=Z,37nm,19.1s,baz=38,slow=37						
MKAR	Makanchi Array	39.00	317	P	P	21 26 55.0	+2.9
	0.5nm,0.7s,baz=119,slow=12,SNR=3.7						
	0.5nm,0.7s						
PETK	Petropavlovsk-	40.77	33	LR	LR	21 44 23.8	
	comp=Z,23nm,18.7s,baz=224,slow=37						
ZALV	Zalesovo Beam	41.05	328	P	P	21 27 11.0	+2.1
	1.5nm,0.7s,baz=109,slow=8.2,SNR=5.5						
	1.5nm,0.7s						
KSH	Kashi	41.37	304	P	P	21 27 14.7	+2.7
MA2	Magadan	41.97	22	LR	LR	21 45 28.6	
	comp=Z,16nm,18.2s,baz=172,slow=37						
KURBB	Kurchatov Arra	42.82	321	P	P	21 27 27.5	+3.9
	0.4nm,0.7s,baz=114,slow=8.3,SNR=4.3						
	0.4nm,0.7s						
WRA	Warramunga Arr	44.76	162	P	P	21 27 36.4	-3.0
	0.6nm,0.8s,baz=345,slow=8.7,SNR=1.9						
	0.6nm,0.8s						
ASAR	Alice Springs	48.19	164	P	P	21 28 04.9	-1.5
	0.2nm,0.4s,baz=343,slow=7.8,SNR=1.9						
	0.2nm,0.4s						

TAP 11 21:22:55.0,23°.15N×121°.00E,h4^{km},ML1.2,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau	0.04	16	P	Pg	21 22 56.4	+0.2
	baz=29						
ELDTW				S	Sg	21 22 57.3	+0.2
	baz=29						
STYH	Taoyuan	0.21	277	eP	Pg	21 22 59.7	+0.5
	baz=275						
STYH				eS	Sg	21 23 03.0	+1.1
	baz=275						
LONT	Longtian	0.27	154	eS	Sg	21 23 04.4	+0.8
	baz=162						
FULB	Fuli	0.27	79	eP	Pg	21 23 01.2	+0.9
	baz=72						
EDH	Donghe	0.33	122	eP	Pb	21 23 02.5	-0.9
	baz=135						
EDH				eS	Sb	21 23 08.1	-0.9
	baz=135						
TWG	Pinlang	0.33	169	eP	Pg	21 23 01.6	+0.2
	baz=167						
TWG				eS	Sg	21 23 06.4	+0.8
	baz=167						
TWGBT	Beinan	0.33	168	eP	Pg	21 23 01.5	0.0
	baz=167						
TWGBT				eS	Sg	21 23 06.5	+0.7
	baz=167						
EYUL	Yuli	0.35	55	eP	Pg	21 23 02.0	+0.2
	baz=57						
EYUL				eS	Sg	21 23 06.2	-0.2
	baz=57						
YULB	Yu-li	0.36	48	eP	Pg	21 23 02.0	0.0
	baz=50						
YULB				eS	Sg	21 23 06.3	-0.5
	baz=50						
WTP	Ta-pu	0.37	286	eP	Pb	21 23 03.9	-0.3
	baz=284						
WTP				eS	Sb	21 23 09.2	-1.2
	baz=284						
ALS	Alishan	0.41	333	eP	Pg	21 23 03.6	+0.7
	baz=336						
ALS				eS	Sg	21 23 08.7	+0.4
	baz=336						

ATH 11 21:25:12.0,38°.77N×20°.66E,h8^{km}±3^{km},ML1.1/1,Error ellipse: s-maj=41.7km s-min=1.5km az=90.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	Lefkada island	0.02	1	P	Pg	21 25 13.3	-0.3
LKD2				S	Sg	21 25 14.5	-0.1
LKD2				AML	AML	21 25 14.6	
	comp=E,730µm,0.1s						
LKD2				AML	AML	21 25 14.6	
	comp=N,503µm,0.1s						
TSLK	Tsoukalades, L	0.06	359	P	Pg	21 25 13.9	+0.1
EVGI	Lefkada island	0.14	180	P	Pg	21 25 15.0	0.0
EVGI				S	Sg	21 25 17.3	+0.2

THE 11 21:25:13.2,38°.08N×20°.37E,h14^{km}±1^{km},ML1.8/1,Error ellipse: s-maj=1.4km s-min=0.6km az=29.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.13	353	P	Pg	21 25 16.7	0.0
KEF3				S	Sg	21 25 19.2	+0.2
DMLN	Damoulianata-K	0.16	2	P	Pg	21 25 16.9	-0.3
DMLN				S	Sg	21 25 19.7	-0.1
	448nm,0.1s						
PSDA	Pessada-Kefalo	0.17	78	P	Pg	21 25 17.2	-0.1
PSDA				S	Sg	21 25 20.5	+0.4
KEF4	Livadi, Kephal	0.18	14	P	Pg	21 25 17.2	-0.3
KEF4				S	Sg	21 25 20.7	+0.3
VLS	Valsamata	0.20	60	P	Pg	21 25 17.5	-0.3
VLS				S	Sg	21 25 20.9	0.0
FSK	Fiskardo	0.41	22	P	Pg	21 25 21.3	-0.1
FSK				S	Sg	21 25 27.6	+0.6

IDC ***11*** *21:27:40.4±1.0,6°.76S×127°.47E,h406^{km}±13^{km},mb3.6/13, mbtmp4.5/19,Error ellipse: s-maj=15.8km s-min=9.2km az=48.0*

NEIC ***11*** *21:27:40.4±1.4,6°.76S±0°.08×127°.54E±0°.03,h402^{km}±8^{km}, mb4.3/42,Error ellipse: s-maj=12.2km s-min=3.3km az=186.0*

DJA ***11*** *21:27:40.0±0.2,7°S±2°×12°8E±°,h399^{km}±3^{km},M4.2/28, mB4.7/18,mb4.5/28,MLv4.8/18,Mw(mB)4.0/18*

ISC 11 21:27:39.6±0.3,6°.78S±0°.04×127°.51E±0°.05,h400^{km},n165, σ0^{s}.97/175,mb4.3/40,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	3.15	13	P	Pn	21 28 46.5	+2.3
AAI				S	S	21 29 37.2	+0.9
BNDI	Bandanaira	3.27	47	P	Pn	21 28 47.3	+2.1
MSAI	Masohi	3.70	23	P	Pn	21 28 48.9	-0.1
SAUI	Saumlaki	3.94	108	Pn	Pn	21 28 52.0	+0.8
SAUI				Sn	S	21 29 47.5	-1.7
SAUI	Saumlaki	3.94	108	P	Pn	21 28 52.9	+1.7
SOEI	Soe	4.36	227	Pn	Pn	21 28 56.5	+1.1
SOEI	Soe	4.36	227	P	Pn	21 28 56.4	+1.1
SOEI				S	S	21 29 55.7	-1.1
SOEI	Soe	4.36	227	P	Pn	21 28 56.8	+1.4
SANI	Sanana	4.94	342	P	Pn	21 29 01.2	+0.1
SANI	Sanana	4.94	342	P	Pn	21 29 01.6	+0.5
BBSI	Bau Bau	5.08	284	P	Pn	21 29 04.9	+2.4
	0.1nm415nm37nm,1.1s						
BATI	Baumata	5.10	228	P	Pn	21 29 04.5	+1.6
	454nm,0.3s,baz=55,slow=2.4,SNR=187						
BATI				S	S	21 30 11.0	+0.7
	3µm,0.7s,baz=134,slow=1.5,SNR=53						
BATI	Baumata	5.10	228	P	Pn	21 29 04.4	+1.6
	5.9nm5µm367nm,0.6s						
BATI				S	S	21 30 10.5	+0.2
	5.9nm5µm367nm,0.6s						
MMRI	Maumere	5.54	250	Pn	Pn	21 29 08.5	+1.1
MMRI	Maumere	5.54	250	P	Pn	21 29 08.5	+1.1
	0.7nm50nm,0.5s						
MMRI	Maumere	5.54	250	P	Pn	21 29 09.0	+1.6
EDFI	Ende, Flores	6.09	251	P	Pn	21 29 12.8	-0.6
	0.2nm718nm42nm,0.6s						
LBMI	Labuha	6.11	360	P	Pn	21 29 14.2	+0.7
	0.2nm515nm32nm,1.1s						
SIJI	Sorong	6.97	33	P	P	21 29 22.5	-1.2
	58nm,0.5s,baz=184,slow=7.3,SNR=42						
SIJI				S	S	21 30 43.2	-4.2
	13nm,0.4s,baz=118,slow=22,SNR=10						
SWI	Sorong	6.97	33	P	P	21 29 22.6	-1.1
	0.4nm1µm72nm,0.7s						
MTN	Manton Dam	7.00	150	Pn	P	21 29 24.4	+0.4
MTN	Manton Dam	7.00	150	P	P	21 29 24.8	+0.9
LUWI	Luwuk	7.41	320	P	P	21 29 29.2	+0.7
LUWI	Luwuk	7.41	320	P	P	21 29 29.3	+0.7
	0.6nm2µm192nm,0.9s						
LUWI	Luwuk	7.41	320	P	P	21 29 29.5	+1.0
BKSI	Bulukumba	7.49	281	P	P	21 29 29.8	+0.4
	0.2nm499nm61nm,0.7s						
KDU	Kakadu	7.64	141	P	P	21 29 31.5	+0.5
BNSI	Bone	7.74	287	P	P	21 29 32.5	+0.3
	0.3nm999nm88nm,0.8s						
KAPI	Kappang	7.91	282	P	P	21 29 35.1	+1.0
	27nm,0.6s,baz=124,slow=5.6,SNR=13						
KAPI	Kappang	7.91	282	P	P	21 29 34.3	+0.2
KMSI	Cibinong	8.11	334	P	P	21 29 36.7	+0.3
	2µm50nm,0.6s						
SPSI	Sidrap Palu	8.20	290	P	P	21 29 37.7	+0.4
	40nm,1.0s						
APSI	Ampana	8.26	315	P	P	21 29 38.2	+0.2
	592nm54nm,0.9s						
TTSI	Tana Toraja	8.51	295	P	P	21 29 42.4	+1.6
	1µm39nm,0.6s						
WBSI	Waikabubak, Su	8.52	250	P	Pn	21 29 38.8	-1.9
	2µm144nm,0.6s						
KNRA	Kununurra	8.92	172		P	21 29 46.2	+0.9
KNRA	Kununurra	8.92	172	P	P	21 29 46.2	+0.9
	121nm,0.5s						
PLAI	Plampang	9.86	257	P	P	21 29 53.5	-2.2
	2µm97nm,0.5s						
BAKI	Biak	10.22	57	P	Pn	21 30 00.8	+0.5
	2µm162nm,0.7s						
TOLI2	Tolitoli	10.32	319	P	Pn	21 30 01.1	-0.5
TOLI2	Tolitoli	10.32	319	P	Pn	21 30 01.5	0.0
MPSI	Mapaga	10.38	313	P	Pn	21 30 01.3	-0.9
	11nm,0.6s						
FITZ	Fitzroy Crossi	11.39	189	P	Pn	21 30 13.4	-0.4
	4.2nm,0.7s,baz=14,slow=7.0,SNR=21						
FITZ				S	S	21 32 17.9	-1.1
	11nm,0.8s,baz=171,slow=12,SNR=4.1						
FITZ	Fitzroy Crossi	11.39	189	P	Pn	21 30 13.2	-0.6
FITZ	Fitzroy Crossi	11.39	189	P	Pn	21 30 13.5	-0.4
BBKI	Banjar Baru	13.04	284	P	Pn	21 30 33.9	+0.9
JAGI	Jajag, Banyuwa	13.35	262	P	P	21 30 32.6	-1.7
JAGI	Jajag, Banyuwa	13.35	262	P	P	21 30 33.8	-0.4
KMMI	Kalianget	13.45	268	P	Pn	21 30 36.3	-1.4
	4µm87nm,1.5s						
BLJI	Banyuglugur	13.84	265	P	P	21 30 39.3	-0.3
	49nm,0.8s						
MTKI	Muara Teweh, K	13.85	294	P	Pn	21 30 41.9	-0.5
WB0	Warramunga Arr	14.54	153	P	P	21 30 47.4	+0.2
WRAB	Tennant Creek	14.66	154	P	P	21 30 48.9	+0.4
WRAB	Tennant Creek	14.66	154	P	P	21 30 49.0	+0.5
WRA	Warramunga Arr	14.66	154	P	P	21 30 48.8	+0.2
	55nm,0.7s,baz=338,slow=11,SNR=451						
WRA				S	S	21 33 21.8	-3.2
	16nm,0.8s,baz=326,slow=19,SNR=8.3						
WRA	Warramunga Arr	14.66	154	P	P	21 30 47.4	-1.1
WB2	Warramunga Arr	14.67	154	P	P	21 30 48.8	+0.2
WR0	Warramunga Arr	14.77	153	P	P	21 30 50.0	+0.3
MBWA	Marble Bar	16.15	207	P	P	21 31 04.8	+0.2
MBWA	Marble Bar	16.15	207	P	P	21 31 04.3	-0.3
	26nm,0.9s						
PSA00	Pilbara Seismi	16.46	206	P	P	21 31 07.1	-0.8
PSA00				IAmb	IAmb	21 31 08.8	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	16.46	206	P	P	21 31 08.2	+0.2
PSA00				IAmb	IAmb	21 31 08.8	
	comp=Z,26nm,1.1s						
PSA00	Pilbara Seismi	16.46	206	P	P	21 31 07.8	-0.1
COEN	Coen	16.97	116	P	P	21 31 13.5	+0.1
COEN	Coen	16.97	116	P	P	21 31 13.5	+0.1
AS31	Alice Springs	17.88	161	P	P	21 31 23.4	+0.5
ASAR	Alice Springs	17.88	161	P	P	21 31 23.4	+0.5
	comp=Z,44nm,0.6s,baz=348,slow=12,SNR=541						
ASAR				S	S	21 34 26.1	-1.6
	comp=Z,9.4nm,0.6s,baz=349,slow=21,SNR=13						
ASAR				ScP	ScP	21 38 33.6	-1.2
	comp=Z,1.7nm,0.7s,baz=10,slow=1.9,SNR=2.8						
QIS	Mount Isa	18.03	141	P	P	21 31 24.9	+0.3
WRKA	Warakurna	18.17	178	P	P	21 31 26.6	+0.6
KSM	Kuching	19.03	295	P	P	21 31 34.6	-0.5
KSM				IAmb	IAmb	21 31 38.5	
	comp=Z,13nm,0.9s						
KSM	Kuching	19.03	295	P	P	21 31 34.8	-0.3
PMG	Port Moresby	19.63	99	P	P	21 31 41.8	+1.0
	comp=Z,11nm,0.4s,baz=194,slow=3.6,SNR=5.6						
PMG	Port Moresby	19.63	99	P	P	21 31 41.6	+0.8
TPI	Tanjungpandan	20.18	280	P	P	21 31 45.3	-0.7
GIRL	Giralia	20.31	218	P	P	21 31 48.0	+1.1
GIRL	Giralia	20.31	218	P	P	21 31 46.2	-0.7
MEEK	Meekatharra	21.48	202	P	P	21 31 56.9	-0.8
	comp=Z,19nm,0.8s						
OOD	Oodnadatta	22.29	161	P	P	21 32 05.6	+0.7
CTA	Charters Tower	22.49	128	P	P	21 32 08.5	+1.6
	comp=Z,12nm,0.6s,baz=310,slow=9.8,SNR=13						
	comp=Z,12nm,0.6s						
CTA	Charters Tower	22.49	128	P	P	21 32 08.0	+1.1
CTAO	Charters Tower	22.49	128	P	P	21 32 07.8	+0.9
CTAO				IAmb	IAmb	21 32 09.3	
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	22.49	128	P	P	21 32 08.7	+1.8
FORT	Forrest	23.88	179	P	P	21 32 19.6	+0.3
FORT	Forrest	23.88	179	P	P	21 32 19.7	+0.5
MULG	Mulgathing	24.17	166	P	P	21 32 22.5	+0.6
INKA	Innaminka	24.33	150	P	P	21 32 24.4	+1.0
MORW	Morawa	24.67	205	P	P	21 32 26.5	+0.2
MORW				IAmb	IAmb	21 32 48.8	
	comp=Z,20nm,1.5s						
MORW	Morawa	24.67	205	P	P	21 32 26.7	+0.3
QLP	Quilpie	25.32	143	P	P	21 32 32.9	+0.7
LCRK	Leigh Creek	25.60	158	P	P	21 32 35.3	+0.7
BLDU	Ballidu	25.78	202	P	P	21 32 36.2	-0.1
KLBR	Kellerberrin	26.31	199	P	P	21 32 41.3	+0.3
GUMO	Guam	26.59	40	P	P	21 32 43.2	-0.3
BBOO	Buckleboo	27.09	164	P	P	21 32 48.1	+0.3
BBOO				IAmb	IAmb	21 32 48.7	
	comp=Z,9.9nm,0.6s						
BBOO	Buckleboo	27.09	164	P	P	21 32 48.4	+0.6
RK1H	Rockhampton Ha	27.58	129	P	P	21 32 52.8	+0.5
NWAO	Narrogin (SRO)	27.71	199	P	P	21 32 52.5	-0.8
NWAO				IAmb	IAmb	21 32 54.5	
	comp=Z,19nm,1.1s						
NWAO	Narrogin (SRO)	27.71	199	P	P	21 32 53.7	+0.4
STKA	Stephens Creek	28.22	154	P	P	21 32 58.4	+0.6
	comp=Z,17nm,0.4s,baz=334,slow=8.4,SNR=103						
	comp=Z,17nm,0.4s						
STKA	Stephens Creek	28.22	154	P	P	21 32 58.3	+0.6
STKA	Stephens Creek	28.22	154	P	P	21 32 58.6	+0.8
HTT	Hallett	28.55	160	P	P	21 33 01.7	+0.9
EIDS	Eidsvold	29.14	132	P	P	21 33 05.2	-0.8
EIDS				IAmb	IAmb	21 33 09.2	
	comp=Z,11nm,1.1s						
KULM	Kulim	29.37	293	P	P	21 33 07.3	-0.9
KULM				IAmb	IAmb	21 33 09.0	
	comp=Z,14nm,1.4s						
CMSA	Cobar Meteorol	29.92	148	P	P	21 33 13.8	+1.0
GSI	Gunungsitoli	30.94	284	P	P	21 33 21.7	-0.1
GSI				IAmb	IAmb	21 33 23.9	
	comp=Z,16nm,1.0s						
GSI	Gunungsitoli	30.94	284	P	P	21 33 22.3	+0.5
SRIT	Nakonsritamara	31.74	298	P	P	21 33 29.9	+1.1
SRIT				IAmb	IAmb	21 33 30.8	
	comp=Z,15nm,0.8s						
ARPS	Mount Arapiles	32.59	158	P	P	21 33 37.2	+1.4
ARMA	Armidale	32.64	139	P	P	21 33 37.3	+0.9
ARMA				IAmb	IAmb	21 34 04.6	
	comp=Z,36nm,1.4s						
ARMA	Armidale	32.64	139	P	P	21 33 38.2	+1.8
CAN	Canberra	34.59	148	P	P	21 33 54.5	+1.5
CAN				IAmb	IAmb	21 34 05.8	
	comp=Z,38nm,1.4s						
CAN	Canberra	34.59	148	P	P	21 33 54.9	+1.9
TOO	Toolangi	34.74	155	P	P	21 33 55.6	+1.5
TOO	Toolangi	34.74	155	P	P	21 33 55.6	+1.5
CMAR	Chiang Mai Arr	37.73	312	P	P	21 34 19.2	-0.1
	comp=Z,3.2nm,0.9s,baz=141,slow=6.5,SNR=14						
	comp=Z,3.2nm,0.9s						
SANVU	Saraoutou	39.83	106	P	P	21 34 37.3	+0.7
DZM	Mont Dzumac	40.50	116	P	P	21 34 42.6	+0.5
	comp=Z,3.7nm,0.9s,baz=267,slow=12,SNR=6.3						
	comp=Z,3.7nm,0.9s						
DZM	Mont Dzumac	40.50	116	P	P	21 34 42.5	+0.4
YATNC	Mamie plateau,	40.90	116	P	P	21 34 45.9	+0.7
OUENC	Ouen Island, N	40.95	117	P	P	21 34 46.0	+0.4
OUENC				IAmb	IAmb	21 34 47.0	
	comp=Z,7.3nm,0.7s						
PINNC	Pines Island,	41.54	117	P	P	21 34 51.3	+1.0
PINNC				IAmb	IAmb	21 34 52.4	
	comp=Z,19nm,1.0s						
MARNC	Mare, Loyalty	41.77	115	P	P	21 34 53.0	+0.9
KSRS	Korea Array	44.01	0	P	P	21 35 09.7	+0.2
	comp=Z,0.9nm,0.6s,baz=172,slow=9.8,SNR=4.2						
	comp=Z,0.9nm,0.6s						
PALK	Pallekele	48.73	286	P	P	21 35 47.3	+1.0
PALK				IAmb	IAmb	21 35 59.2	
	comp=Z,17nm,1.2s						
LSA	Lhasa	50.36	318	P	P	21 35 58.5	-0.2
ODAN	Odare	51.27	312	eP	P	21 36 04.3	-0.8
	comp=Z,16nm,0.4s						
RAMN	Ramite	51.90	312	eP	P	21 36 09.6	-0.1
	comp=Z,37nm,0.4s						
FOZ	Fox Glacier	52.07	142	P	P	21 36 10.6	+0.2
QRZ	Quartz Range	52.47	137	P	P	21 36 13.9	+0.5
GTA	Gaotai	52.63	333	eP	P	21 36 15.0	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PKI	Pulchoki	53.12	312	eP	P	21 36 17.7	-1.0
	comp=Z,18nm,0.4s						
KKN	Kakani	53.34	312	eP	P	21 36 19.1	-1.0
DMN	Daman	53.37	312	eP	P	21 36 19.8	-0.6
	comp=Z,19nm,0.5s						
GKN	Gorkha	53.93	312	eP	P	21 36 23.7	-0.6
	comp=Z,60nm,0.3s						
KOLN	Koldanda	54.58	311	eP	P	21 36 28.2	-0.7
	comp=Z,26nm,0.3s						
DANN	Dangsing	54.77	312	eP	P	21 36 29.5	-0.9
	comp=Z,21nm,0.5s						
PYUN	Piuthan	55.21	311	eP	P	21 36 32.9	-0.5
	comp=Z,30nm,0.5s						
ULN	Ulaanbaatar	57.33	344	P	P	21 36 48.4	+0.6
SONM	Songino Array	57.49	343	P	P	21 36 49.6	+0.8
	comp=Z,1.2nm,0.6s,baz=167,slow=7.5,SNR=8.8						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	57.49	343	P	P	21 36 49.3	+0.5
PETK	Petropavlovsk-	64.92	20	P	P	21 37 38.7	+0.9
	comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=2.0						
	comp=Z,0.7nm,0.6s						
KSH	Kashi	66.20	319	P	P	21 37 47.1	+0.8
MK31	Makanchi Array	66.71	328	P	P	21 37 49.4	+0.2
MKAR	Makanchi Array	66.71	328	P	P	21 37 49.4	+0.2
	comp=Z,2.5nm,0.6s,baz=120,slow=8.4,SNR=50						
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	66.71	328	P	P	21 37 49.2	0.0
MAKZ	Makanchi	66.89	328	P	P	21 37 50.1	-0.2
MAKZ				IAmb	IAmb	21 37 51.1	
	comp=Z,5.1nm,1.2s						
BOOM	Boomskoye usch	67.81	321	P	P	21 37 56.7	+0.3
AAK	Ala-Archa	68.80	321	P	P	21 38 02.8	+0.4
	comp=Z,1.4nm,0.5s,baz=134,slow=8.1,SNR=5.4						
	comp=Z,1.4nm,0.5s						
ZAA0	Zalesovo Array	70.32	335	P	P	21 38 10.4	-0.7
ZAA0				IAmb	IAmb	21 38 11.2	
	comp=Z,4.3nm,0.8s						
ZALV	Zalesovo Beam	70.32	335	P	P	21 38 10.7	-0.4
	comp=Z,3.7nm,0.6s,baz=131,slow=4.8,SNR=19						
	comp=Z,3.7nm,0.6s						
ZALV	Zalesovo Beam	70.32	335	P	P	21 38 10.3	-0.7
KURK	Kurchatov	71.06	330	P	P	21 38 15.7	+0.2
KURK				IAmb	IAmb	21 38 16.5	
	comp=Z,8.4nm,0.9s						
KK31	Karatay Array	71.56	320	P	P	21 38 18.7	-0.1
KKAR	Karatay Array	71.56	320	P	P	21 38 18.6	-0.2
BRVK	Borovoye	76.65	329	P	P	21 38 47.3	-0.3
TIXI	Tiksi	78.28	0	P	P	21 38 55.7	-0.3
	comp=Z,2.0nm,0.5s,baz=90,slow=23,SNR=14						
	comp=Z,2.0nm,0.5s						
TIXI	Tiksi	78.28	0	P	P	21 38 55.8	-0.3
TIXI				IAmb	IAmb	21 38 56.5	
	comp=Z,2.1nm,0.5s						
ABKAR	Akbulak array	80.81	322	P	P	21 39 09.8	-0.3
ABKAR	Akbulak array	80.81	322	P	P	21 39 09.6	-0.4
AKTO	Aktyubinsk	82.40	323	P	P	21 39 18.1	-0.1
	comp=Z,3.2nm,0.9s,baz=109,slow=6.5,SNR=7.5						
	comp=Z,3.2nm,0.9s						
QSPA	South Pole Qui	83.19	180	P	P	21 39 21.8	-0.3
QSPA				IAmb	IAmb	21 39 22.2	
	comp=Z,7.1nm,1.5s						
ARU	Arti	84.22	329	P	P	21 39 25.7	-1.6
	comp=Z,0.4nm,0.3s,baz=13,slow=5.5,SNR=4.3						
	comp=Z,0.4nm,0.3s						
ARU	Arti	84.22	329	P	P	21 39 27.1	-0.1
ARU				IAmb	IAmb	21 39 27.6	
	comp=Z,4.7nm,1.0s						
RAYN	Ar Rayn	85.40	294	P	P	21 39 33.5	-0.3
RAYN				IAmb	IAmb	21 39 34.4	
	comp=Z,3.8nm,0.9s						

NEIC ***11*** *21:39:13.2±2.0,1°.50N±0°.07×125°.88E±0°.03,h86^{km}±7^{km}, mb4.6/50,Error ellipse: s-maj=9.8km s-min=4.1km az=191.0*

DJA ***11*** *21:39:13.6±0.2,1°N±2°×12°6E±°,h43^{km}±7^{km},M4.7/21, mB5.2/15,mb4.9/21,MLv5.0/19,Mw(mB)4.5/15*

IDC ***11*** *21:39:13.4±1.9,1°.48N×125°.81E,h91^{km}±19^{km},mb4.0/21, mbtmp4.4/25,MS3.2/5,Error ellipse: s-maj=15.3km s-min=10.2km az=88.0*

ISC 11 21:39:13.5±0.3,1°.42N±0°.03×125°.90E±0°.04,h100^{km},n180, σ1^{s}.60/148,mb4.5/56,3C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.60	114	Pn	Pn	21 39 39.3	-1.7
TNTI				Sn	Sn	21 40 01.5	-0.3
TNTI	Ternate	1.60	114	P	Pn	21 39 39.1	-1.9
KMSI	Cibinong	2.10	246	P	Pn	21 39 46.8	-0.5
SGSI	Sangihe	2.28	351	P	Pn	21 39 48.2	-1.6
SGSI				S	Sn	21 40 15.8	-1.7
LBMI	Labuha	2.59	142	P	Pn	21 39 52.7	-1.2
LBMI				S	Sn	21 40 22.8	-2.1
GTOI	Gorontalo	3.00	255	P	Pn	21 39 59.3	+0.1
GTOI				S	Sn	21 40 34.8	+0.4
SANI	Sanana	3.45	179	P	Pn	21 40 02.6	-2.7
SANI				S	Sn	21 40 38.6	-6.7
SANI	Sanana	3.45	179	P	Pn	21 40 02.9	-2.4
LUWI	Luwuk	3.97	232		Pn	21 40 12.1	-0.3
LUWI				Sn	Sn	21 40 58.3	+0.3
LUWI	Luwuk	3.97	232	P	Pn	21 40 13.0	+0.7
LUWI				S	Sn	21 40 58.7	+0.7
MRSI	Marisa	4.07	257	P	Pn	21 40 14.1	+0.4
MRSI				S	Sn	21 40 59.8	-0.6
GSPH	General Santos	4.73	348⇑	iP	Pn	21 40 20.9	-1.8
APSI	Ampana	4.84	241	P	Pn	21 40 25.9	+1.8
APSI				S	Sn	21 41 19.9	+0.8
TOLI2	Tolitoli	5.13	267	Pn	Pn	21 40 25.2	-2.8
TOLI2	Tolitoli	5.13	267	P	Pn	21 40 27.0	-1.0
AAI	Ambon	5.57	156	P	Pn	21 40 33.6	-0.3
	1.8nm4µm151nm,0.4s						
KCP	Kidapawan	5.61	352⇑	eP	Pn	21 40 35.3	+0.7
KCP				i S	Sn	21 41 39.4	+1.6
MSAI	Masohi	5.62	147	P	Pn	21 40 36.0	+1.4
	0.4nm1µm20nm,0.6s						
DAV	Davao City (W)	5.62	357	P	Pn	21 40 35.3	+0.6
	183nm,0.4s,baz=228,slow=5.1,SNR=2.3						
DAV				S	Sn	21 41 40.9	+3.0
	137nm,0.4s,baz=258,slow=19,SNR=1.3						
DAV	Davao City (W)	5.62	357		Pn	21 40 33.1	-1.6
SWI	Sorong	5.82	113	P	Pn	21 40 37.3	0.0
	0.2nm58nm,1.1s						
SIJI	Sorong	5.82	113	P	Pn	21 40 37.6	+0.2

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      18nm,0.3s,baz=318,slow=9.7,SNR=17
SIJI                              LR      LR        21 43 05.5
      comp=Z,226nm,19.9s,baz=314,slow=39
CTBH  Cotabato--PC H     6.00 344 eP      Pn        21 40 39.7  -0.1
CTBH                              i S     Sn        21 41 41.8  -5.3
MPSI  Mapaga             6.10 260 P       Pn        21 40 43.0  +1.8
      0.5nm1µm135nm,0.8s
BIPH  Bislig             6.73   4⇓i P     Pn        21 40 48.4  -1.4
BIPH                              eS      Sn        21 42 08.1  +3.0
PAGZ  Pagadian           6.86 339⇓eP      Pn        21 40 51.3  -0.3
TTSI  Tana Toraja        7.53 234 P       Pn        21 41 00.9  +0.3
      1.0nm2µm144nm,0.5s
BBSI  Bau Bau            7.63 206 P       Pn        21 41 02.6  +0.6
      0.1nm209nm16nm,0.6s
SPSI  Sidrap Palu        8.14 229 P       Pn        21 41 09.1  +0.2
      1µm108nm,0.5s
BNSI  Bone               8.19 225 P       Pn        21 41 09.6   0.0
      1µm60nm,0.4s
MYLDM Lahad Datu         8.28 297 Pn      Pn        21 41 12.2  +1.3
TBP   Tagbilaran         8.46 346 eP      Pn        21 41 13.0  -0.3
BKSI  Bulukumba          8.84 221 P       Pn        21 41 18.8  +0.3
      1µm60nm,0.6s
KAPI  Kappang            8.87 224 P       Pn        21 41 19.4  +0.6
      38nm,0.4s,baz=37,slow=4.0,SNR=45
KAPI                              S       Sn        21 42 56.8  -0.2
      8.6nm,0.3s,baz=202,slow=23,SNR=1.6
KAPI  Kappang            8.87 224 Pn      Pn        21 41 19.0  +0.2
KAPI  Kappang            8.87 224 P       Pn        21 41 19.8  +1.0
BKB   Balikpapan         9.39 254 Pn      Pn        21 41 24.8  -1.2
EDFI  Ende, Flores      10.94 203 P       Pn        21 41 48.5  +1.3
      441nm15nm,0.6s
SOEI  Soe               11.22 188 Pn      Pn        21 41 53.1  +2.1
BATI  Baumata           11.76 191 P       Pn        21 42 03.8  +5.6
      84nm,0.8s,baz=214,slow=1.0,SNR=7.2
BATI  Baumata           11.76 191 P       Pn        21 41 59.3  +1.2
      69nm,1.4s
STKI  Sintang           14.49 265 P       P         21 42 35.6  -2.1
      3µm27nm,0.6s
KMMI  Kalianget         14.58 235 P       P         21 42 38.3  -0.4
      38nm,0.7s
JAGI  Jajag, Banyuwa    15.29 230 P       P         21 42 48.2  +1.6
JAGI                              IAmb    IAmb      21 42 56.7
      comp=Z,110nm,1.4s
JAGI  Jajag, Banyuwa    15.29 230 P       P         21 42 46.9  +0.3
      comp=Z,63nm,1.9s
JAGI  Jajag, Banyuwa    15.29 230 P       P         21 42 45.8  -0.8
KSM   Kuching           15.59 270 P       P         21 42 49.6  -0.4
GMJI  Gumukmas          15.72 232 P       P         21 42 52.3  +1.0
      comp=Z,56nm,1.0s
PWJI  Pagerwojo         16.90 236 P       P         21 43 07.5  +3.1
      comp=Z,32nm,2.9s
KNRA  Kununurra         17.22 171         P         21 43 07.7  -0.2
KNRA                              IAmb    IAmb      21 43 18.8
      comp=Z,30nm,1.1s
KNRA  Kununurra         17.22 171 P       P         21 43 07.6  -0.3
PCJI  Pacitan           17.52 237 P       Pn        21 43 14.0  +2.5
      comp=Z,39nm,0.7s
FITZ  Fitzroy Crossi    19.40 181 P       Pn        21 43 32.1  -1.7
      comp=Z,4.0nm,0.4s,baz=15,slow=8.9,SNR=20
FITZ                              LR      LR        21 51 29.8
      comp=Z,51nm,19.3s,baz=7.0,slow=38
FITZ  Fitzroy Crossi    19.40 181         Pn        21 43 31.7  -2.1
FITZ  Fitzroy Crossi    19.40 181 P       Pn        21 43 32.1  -1.7
LEM   Lembang           20.00 246 LR      LR        21 51 43.8
      comp=Z,65nm,19.4s,baz=40,slow=38
MYKOM Kota Tinggi       22.05 271 P       P         21 44 01.4  +1.1
WB0   Warramunga Arr    22.64 159 P       P         21 44 05.9  -0.5
WB0                               IAmb    IAmb      21 44 19.9
      comp=Z,17nm,0.7s
WRAB  Tennant Creek     22.78 159 P       P         21 44 07.9  +0.1
WRA   Warramunga Arr    22.79 159 P       P         21 44 08.0  +0.1
      comp=Z,6.8nm,0.4s,baz=332,slow=11,SNR=84
WRA                               S       S         21 48 09.4   0.0
      comp=Z,6.1nm,1.0s,baz=331,slow=20,SNR=6.4
      comp=Z,6.8nm,0.4s
WRA   Warramunga Arr    22.79 159 P       P         21 44 07.3  -0.5
COEN  Coen              22.94 132 P       P         21 44 09.7  +0.2
COEN                              IAmb    IAmb      21 44 21.6
      comp=Z,39nm,1.4s
MBWA  Marble Bar        23.24 195 P       P         21 44 12.1   0.0
MBWA                              IAmb    IAmb      21 44 13.1
      comp=Z,37nm,1.4s
MBWA  Marble Bar        23.24 195 P       P         21 44 12.6  +0.4
PSA00 Pilbara Seismi    23.61 194 P       P         21 44 15.4  -0.1
PSA00                             IAmb    IAmb      21 44 30.0
      comp=Z,22nm,1.1s
PSA00 Pilbara Seismi    23.61 194 P       P         21 44 16.5  +1.0
IPM   Ipoh              25.03 278 P       P         21 44 28.4  -0.1
IPM                               IAmb    IAmb      21 44 29.4
      comp=Z,11nm,0.7s
JOW   Kunigami          25.37   5 P       P         21 44 32.5  +1.1
      comp=Z,25nm,0.8s,baz=160,slow=12,SNR=4.3
      comp=Z,25nm,0.8s
JOW   Kunigami          25.37   5 P       P         21 44 32.4  +0.9
JOW                               IAmb    IAmb      21 44 35.5
      comp=Z,43nm,1.0s
JOW   Kunigami          25.37   5 P       P         21 44 33.4  +2.0
KULM  Kulim             25.50 279 P       P         21 44 32.2  -0.6
QIS   Mount Isa         25.64 149 P       P         21 44 36.8  +2.8
AS31  Alice Springs     26.12 163 P       P         21 44 40.3  +2.0
ASAR  Alice Springs     26.12 163 P       P         21 44 40.6  +2.3
      comp=Z,8.7nm,0.5s,baz=349,slow=14,SNR=55
ASAR                              PcP     PcP       21 48 05.4  +1.9
      comp=Z,0.4nm,0.5s,baz=343,slow=2.9,SNR=2.2
      comp=Z,8.7nm,0.5s
ASAR  Alice Springs     26.12 163 P       P         21 44 40.8  +2.5
WRKA  Warakurna         26.40 175 P       P         21 44 43.1  +2.3
PSI   Prapat            27.00 273 P       P         21 44 45.6  -0.9
      comp=Z,2.3nm,0.4s,baz=91,slow=7.4,SNR=6.3
      comp=Z,2.3nm,0.4s
GSI   Gunungsitoli      28.32 270 P       P         21 44 56.3  -1.8
GSI                               IAmb    IAmb      21 45 04.9
      comp=Z,17nm,1.1s
GSI   Gunungsitoli      28.32 270 P       P         21 45 01.3  +3.2
      comp=Z,12nm,0.9s
MEEK  Meekatharra       28.77 194 P       P         21 45 03.4  +1.5
JCJ   Chichijima        29.93  30 P       P         21 45 12.3  +0.1
      comp=Z,30nm,0.7s,baz=279,slow=20,SNR=4.7
JCJ   Chichijima        29.93  30 P       P         21 45 11.2  -1.0
JCJ   Chichijima        29.93  30 P       P         21 45 13.6  +1.4
OOD   Oodnadatta        30.53 163 P       P         21 45 19.1  +1.6
NJ2   Nanjing           31.19 348 eP      P         21 45 24.2  +1.0
NJ2                               pmax    pmax
      comp=Z,4.0nm,0.5s
CMAR  Chiang Mai Arr    31.40 304 P       P         21 45 25.4   0.0
      comp=Z,1.7nm,1.1s,baz=119,slow=7.5,SNR=6.7
      comp=Z,1.7nm,1.1s
CMAR  Chiang Mai Arr    31.40 304 P       P         21 45 25.7  +0.4
MORW  Morawa            31.75 197 P       P         21 45 29.0  +0.8
MORW                              IAmb    IAmb      21 45 55.4
      comp=Z,15nm,1.3s
FORT  Forrest           32.09 177 P       P         21 45 32.7  +1.6
FORT  Forrest           32.09 177 P       P         21 45 33.3  +2.2
MULG  Mulgathing        32.47 167 P       P         21 45 36.6  +2.1
BLDU  Ballidu           33.04 195 P       P         21 45 40.9  +1.4
KLBR  Kellerberrin      33.73 193 P       P         21 45 46.9  +1.4
LCRK  Leigh Creek       33.79 161 P       P         21 45 49.1  +3.1
PZH   PanZhiHua         34.08 319 P       P         21 45 52.4  +3.7
PZH                               pmax    pmax
      comp=Z,10.0nm,0.5s
PZH                               pmax    pmax
      comp=Z,70nm,4.0s
MUN   Mundaring         34.47 195 P       P         21 45 54.2  +2.4
NWAO  Narrogin (SRO)    35.13 193 P       P         21 45 58.8  +1.3
NWAO  Narrogin (SRO)    35.13 193 P       P         21 45 59.6  +2.1
BBOO  Buckleboo         35.37 165 P       P         21 46 00.6  +1.0
BBOO  Buckleboo         35.37 165 P       P         21 46 01.3  +1.7
JGF   Kuroka            35.64  16 P       P         21 46 02.2  +0.4
KSRS  Korea Array       35.91   3 P       P         21 46 04.5  +0.4
      comp=Z,1.2nm,0.7s,baz=177,slow=10,SNR=4.9
      comp=Z,1.2nm,0.7s
XAN   Xi'an             36.13 336 ⇑P      P         21 46 03.8  -2.3
XAN                               pP      pP        21 46 15.2   -13
XAN                               sP      pwP       21 46 20.7   -11
XAN                               pmax    pmax
      comp=Z,4.0nm,1.1s
STKA  Stephens Creek    36.30 157 P       P         21 46 09.4  +1.9
      comp=Z,2.0nm,0.4s,baz=349,slow=6.0,SNR=9.2
      comp=Z,2.0nm,0.4s
STKA  Stephens Creek    36.30 157 P       P         21 46 09.2  +1.7
STKA  Stephens Creek    36.30 157 P       P         21 46 09.7  +2.1
MJAR  Matsushiro Arr    36.76  17 P       P         21 46 10.5  -0.8
      comp=Z,6.7nm,0.8s,baz=178,slow=9.4,SNR=10
      comp=Z,6.7nm,0.8s
HTT   Hallett           36.77 162 P       P         21 46 14.8  +3.2
RKGY  Rocky Gully       36.81 192 P       P         21 46 15.1  +3.3
CMSA  Cobar Meteorol    37.78 152 P       P         21 46 22.7  +2.6
JMM   Marumori          38.77  19 P       P         21 46 29.0  +0.8
ARPS  Mount Arapiles    40.78 160 P       P         21 46 47.7  +2.7
HHC   Hu-ho-hao-te      41.34 343 eP      P         21 46 52.3  +2.7
HHC                               pmax    pmax
      comp=Z,48nm,0.8s
HHC                               pmax    pmax
      comp=Z,160nm,6.1s
USRK  Ussuriysk Ar.     42.94   6 P       P         21 47 02.4   0.0
      comp=Z,2.2nm,0.6s,baz=191,slow=6.9,SNR=2.9
      comp=Z,2.2nm,0.6s
LSA   Lhasa             43.38 314 P       P         21 47 06.5  -0.3
LSA                               IAmb    IAmb      21 47 12.9
      comp=Z,4.3nm,0.7s
H11S3 WAKE ISLAND Hy    43.44  64 T       T         22 34 14.8
      baz=253,slow=75,SNR=28
H11S2 WAKE ISLAND Hy    43.45  64 T       T         22 34 13.5
      baz=253,slow=75,SNR=39
H11S1 WAKE ISLAND Hy    43.45  64 T       T         22 34 11.6
      baz=253,slow=75,SNR=22
H11N1 WAKE ISLAND Hy    44.01  63 T       T         22 35 20.0
      baz=257
H11N2 WAKE ISLAND Hy    44.02  63 T       T         22 35 05.8
      baz=257
H11N3 WAKE ISLAND Hy    44.03  63 T       T         22 35 23.7
      baz=257
TAPN  Taplejung         44.76 309 eP      P         21 47 16.6  -1.0
ODAN  Odare             44.78 308 eP      P         21 47 18.1  +0.4
      comp=Z,12nm,0.8s
ASAJ  Asahikawa         45.03  17 P       P         21 47 20.9  +1.8
      comp=Z,35nm,1.3s,baz=351,slow=26,SNR=2.4
      comp=Z,35nm,1.3s
PALK  Pallekele         45.42 279 P       P         21 47 22.6  -0.2
      comp=Z,3.4nm,0.7s,baz=93,slow=22,SNR=1.6
PALK                              LR      LR        22 08 14.9
      comp=Z,38nm,19.4s,baz=210,slow=38
      comp=Z,3.4nm,0.7s
PALK  Pallekele         45.42 279 P       P         21 47 23.2  +0.4
PALK                              IAmb    IAmb      21 47 33.3
      comp=Z,18nm,1.2s
RAMN  Ramite            45.45 307 eP      P         21 47 23.7  +0.7
PKI   Pulchoki          46.67 308 eP      P         21 47 32.2  -0.5
DMN   Daman             46.93 307 eP      P         21 47 35.2  +0.5
      comp=Z,13nm,0.9s
GKN   Gorkha            47.47 308 eP      P         21 47 38.7  -0.1
      comp=Z,14nm,0.8s
KOLN  Koldanda          48.20 307 eP      P         21 47 44.3  -0.1
      comp=Z,40nm,0.8s
DANN  Dangsing          48.32 308 eP      P         21 47 45.0  -0.5
      comp=Z,29nm,0.7s
PYUN  Piuthan           48.83 307 eP      P         21 47 49.0  -0.3
      comp=Z,36nm,0.8s
SONM  Songino Array     49.23 343 P       P         21 47 53.0  +1.1
      comp=Z,0.5nm,0.4s,baz=163,slow=7.1,SNR=5.9
      comp=Z,0.5nm,0.4s
SONM  Songino Array     49.23 343 P       P         21 47 52.6  +0.7
WMQ   Urumqi            54.16 326 eP      P         21 48 29.7  +1.1
WMQ                               pmax    pmax
      comp=Z,14nm,0.7s
PETK  Petropavlovsk-    57.87  22 P       P         21 48 56.6  +1.9
      comp=Z,4.5nm,0.9s,baz=174,slow=4.5,SNR=3.3
      comp=Z,4.5nm,0.9s
PETK  Petropavlovsk-    57.87  22 P       P         21 48 56.0  +1.2
TARG  Taragay, Kyrgy    58.93 319 P       P         21 49 02.7  -0.2
TARG                              IAmb    IAmb      21 49 31.5
      comp=Z,7.2nm,1.4s
MK31  Makanchi Array    58.99 326 P       P         21 49 02.2  -0.5
MKAR  Makanchi Array    58.99 326 P       P         21 49 02.7  -0.1
      comp=Z,2.0nm,0.4s,baz=122,slow=7.2,SNR=38
      comp=Z,2.0nm,0.4s
MKAR  Makanchi Array    58.99 326 P       P         21 49 02.2  -0.5
KSH   Kashi             59.11 316 P       P         21 49 05.6  +1.8
KSH                               pmax    pmax
      comp=Z,3.0nm,1.1s
MAKZ  Makanchi          59.17 326 P       P         21 49 03.4  -0.6
MAKZ                              IAmb    IAmb      21 49 05.6
      comp=Z,8.3nm,1.5s
KDJ   Kajisay           59.53 320 P       P         21 49 06.8   0.0
KDJ                               IAmb    IAmb      21 49 10.0
      comp=Z,4.1nm,0.9s
YAK   Yakutsk           60.53   2 P       P         21 49 12.6  -0.2
MA2   Magadan           61.13  14 LR      LR        22 19 27.6
      comp=Z,9.9nm,18.5s,baz=295,slow=40
AAK   Ala-Archa         61.53 319 P       P         21 49 20.7  +0.4
ZALV  Zalesovo Beam     62.27 334 P       P         21 49 23.6  -1.2
      comp=Z,0.6nm,0.3s,baz=136,slow=6.4,SNR=3.8
      comp=Z,0.6nm,0.3s
ZALV  Zalesovo Beam     62.27 334 P       P         21 49 23.9  -0.9
KBL   Kabul             62.29 309 P       P         21 49 24.1  -1.5
KBL                               IAmb    IAmb      21 49 26.8
      comp=Z,5.0nm,1.1s
GAR   Garm              62.89 314 P       P         21 49 28.9  -0.5
BTK   Batken            62.94 315 P       P         21 49 29.8  +0.1
BTK                               IAmb    IAmb      21 49 36.2
      comp=Z,3.5nm,0.7s
KURK  Kurchatov         63.25 328 P       P         21 49 31.2  -0.1
KURK                              IAmb    IAmb      21 49 37.1
      comp=Z,8.3nm,1.1s
CHGR  Chuyangaron       63.61 313 P       P         21 49 34.2  +0.1
CHGR                              IAmb    IAmb      21 49 34.9
      comp=Z,11nm,0.8s
KK31  Karatay Array     64.37 318 P       P         21 49 38.2  -0.7
KKAR  Karatay Array     64.37 318 P       P         21 49 38.1  -0.8
BRVK  Borovoye          68.88 328 P       P         21 50 07.1  -0.2
TIXI  Tiksi             70.15   1 P       P         21 50 15.2  +0.4
TIXI                              IAmb    IAmb      21 50 22.7
      comp=Z,3.1nm,0.4s
ABKAR Akbulak array     73.42 321 P       P         21 50 34.4  -0.5
ABKAR Akbulak array     73.42 321 P       P         21 50 34.6  -0.2
ARU   Arti              76.44 328 P       P         21 50 52.2  +0.1
ARU                               IAmb    IAmb      21 50 52.8
      comp=Z,9.0nm,1.4s
VNDA  Vanda             81.26 173 P       P         21 51 20.1  +2.1
      comp=Z,0.3nm,0.5s,baz=18,slow=5.9,SNR=2.1
      comp=Z,0.3nm,0.5s
VNDA  Vanda             81.26 173 P       P         21 51 20.5  +2.5
GURO  Guroymak-BITLI    84.32 308 P       P         21 51 35.4  +0.5
GURO                              IAmb    IAmb      21 51 38.5
      comp=Z,9.2nm,1.4s
IMAR  Indian Mountai    84.77  24 P       P         21 51 38.7  +2.3
KLMR  Klimovskoe        87.00 331 eP      P         21 51 47.2  -0.2
KLMR                              AMP               21 51 52.2
      comp=Z,11nm,1.1s
SCM   Sheep Creek Mo    87.22  28 P       P         21 51 50.7  +2.1
SCM                               IAmb    IAmb      21 52 15.7
      comp=Z,6.6nm,1.0s
ILAR  Eielson Array     87.53  25 P       P         21 51 50.7  +0.8
      comp=Z,0.2nm,0.6s,baz=230,slow=5.6,SNR=3.1
      comp=Z,0.2nm,0.6s
KIBK  Kibwezi           87.92 268 P       P         21 51 53.5  +0.5
KIBK                              IAmb    IAmb      21 51 56.1
      comp=Z,9.7nm,1.0s
BMAR  Burnt Mountain    88.51  23         P         21 51 57.4  +2.8
KMBO  Kilima Mbogo      88.68 269 P       P         21 51 58.0  +1.3
      comp=Z,4.9nm,0.9s,baz=58,slow=8.1,SNR=7.6
      comp=Z,4.9nm,0.9s
BCAR  Beaver Creek A    89.80  27         P         21 52 02.8  +2.1
ARCES ARCESS Array B    92.32 340 P       P         21 52 12.3  +0.1
      comp=Z,2.0nm,0.9s,baz=59,slow=3.7,SNR=1.1
      comp=Z,2.0nm,0.9s
AKASG Malin Array Be    93.15 321 P       P         21 52 15.5  -0.9
      comp=Z,0.2nm,0.3s,baz=87,slow=15,SNR=1.8
      comp=Z,0.2nm,0.3s
FINES FINESS Array B    93.46 332 P       P         21 52 16.7  -0.9
      comp=Z,0.9nm,0.7s,baz=55,slow=5.6,SNR=8.4
      comp=Z,0.9nm,0.7s
MNK   Minsk             93.52 325 i P     P         21 52 23.1  +5.1
MNK                               i P     P         21 52 23.1  +5.1
      comp=N,3.0nm,0.6s
MNK                               i P     P         21 52 23.1  +5.1
      comp=Z,4.0nm,0.8s,baz=83
MNK                               i pP    pP        21 52 36.2  -7.6
MNK                               i sP    pwP       21 52 42.1  -4.5
MNK                               i PP    PP        21 56 08.8  +5.2
MNK                               i PPP   PPP       21 58 05.5
MNK                               i SKS   SKSac     22 02 21.9   -21
MNK                               i S     SKKSac    22 02 52.7   -11
MNK                               i sS    ScS       22 03 18.8  -0.6
MNK                               i SS    SS        22 09 45.8  +8.9
MNK                               i SSS   SSS       22 13 00.5
MNK                               i LR    LR        22 31 00.5
MNK                               i LRM   MLR       22 34 57.1
      comp=N,32nm,14.0s
MNK                               i LRM   MLR       22 35 02.1
      comp=Z,116nm,19.1s
MNK                               i LRM   MLR       22 35 40.3
      comp=E,6.0nm,17.8s
BURAR Bucovina Array    96.16 318 P       P         21 52 30.9  +0.5
BURAR                             IAmb    IAmb      21 52 32.4
      comp=Z,2.8nm,0.8s
BUR08 Bucovina Ar. S    96.17 318 P       P         21 52 31.4  +0.9
TORD  Torodi Ar. Bea   122.82 287 PKP     PKiKP     21 58 00.1  +0.9
      comp=Z,0.6nm,0.5s,baz=95,slow=2.1,SNR=0.7
```

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*NEIC **11** 21:42:19.9±1.4, 23°.0S±0°.1×179°.2E±0°.2, h618^{km}±11^{km}, mb4.3/24, Error ellipse: s-maj=28.2km s-min=13.9km az=62.0*

*IDC **11** 21:42:27.4±20.0, 22°.68S×178°.51E, h685^{km}±213^{km}, mb3.4/4, mbtmp4.7/4, Error ellipse: s-maj=171.9km s-min=84.7km az=84.0*

ISC 11 21:42:17.1±1.2**, 22°.9S**±0°.2×**179°.4E**±0°.1**, h600**^{km}**, n35, σ1**^{s}**09**/35**, mb4.3**/14**, South of Fiji Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time       Res
                                  Op      ISC        h  m  s       ISC
PINNC Pines Island,     10.99 269 P       P         21 44 47.4  +1.7
OUENC Ouen Island, N    11.56 270 P       P         21 44 52.5  +1.1
DZM   Mont Dzumac       11.96 271 P       P         21 44 57.3  +1.7
URZ   Urewera           15.47 187 P       P         21 45 27.2  -2.2
URZ                               IAmb    IAmb      21 45 42.2
      comp=Z,67nm,1.4s
BKZ   Black Stump Fm    16.44 188 P       P         21 45 36.6  -1.7
BKZ                               IAmb    IAmb      21 45 48.1
      comp=Z,22nm,1.3s
QRZ   Quartz Range      18.82 196 P       P         21 46 00.5  +0.5
ARMA  Armidale          25.85 247 P       P         21 47 03.5  +0.5
ARMA                              IAmb    IAmb      21 47 04.3
      comp=Z,12nm,0.8s
EIDS  Eidsvold          25.90 259 P       P         21 47 03.6  +0.3
EIDS                              IAmb    IAmb      21 47 27.2
      comp=Z,11nm,1.2s
CTA   Charters Tower    30.89 269 P       P         21 47 47.0  +0.4
      comp=Z,13nm,0.4s,baz=93,slow=9.6,SNR=20
      comp=Z,13nm,0.4s
CTAO  Charters Tower    30.89 269 P       P         21 47 46.8  +0.2
TOO   Toolangi          32.53 235 P       P         21 48 00.5  +0.2
STKA  Stephens Creek    34.57 247 P       P         21 48 17.6  +0.2
      comp=Z,3.1nm,0.4s,baz=92,slow=12,SNR=7.8
      comp=Z,3.1nm,0.4s
STKA  Stephens Creek    34.57 247 P       P         21 48 17.4   0.0
BBOO  Buckleboo         39.31 246 P       P         21 48 55.4  -0.7
BBOO                              IAmb    IAmb      21 48 55.8
      comp=Z,12nm,0.9s
AS31  Alice Springs     41.62 260 P       P         21 49 14.3  -0.3
AS31                              IAmb    IAmb      21 49 16.1
      comp=Z,3.8nm,0.9s
ASAR  Alice Springs     41.62 260 P       P         21 49 14.4  -0.2
      comp=Z,5.8nm,0.7s,baz=88,slow=7.9,SNR=28
      comp=Z,5.8nm,0.7s
ASAR  Alice Springs     41.62 260 P       P         21 49 14.2  -0.4
WR0   Warramunga Arr    41.70 265 P       P         21 49 14.4  -0.8
WR0                               IAmb    IAmb      21 49 15.6
      comp=Z,9.9nm,1.2s
WRA   Warramunga Arr    41.89 265 P       P         21 49 16.1  -0.7
      comp=Z,1.6nm,0.3s,baz=96,slow=8.2,SNR=39
      comp=Z,1.6nm,0.3s
WRA   Warramunga Arr    41.89 265 P       P         21 49 15.8  -0.9
FORT  Forrest           46.12 249 P       P         21 49 48.6  -0.5
KNRA  Kununurra         48.10 269 P       P         21 50 03.8  -0.3
PSA00 Pilbara Seismi    54.77 259 P       P         21 50 50.8  -1.1
PSA00                             IAmb    IAmb      21 51 16.5
      comp=Z,12nm,1.4s
MBWA  Marble Bar        54.97 260 P       P         21 50 52.8  -0.6
MBWA                              IAmb    IAmb      21 51 15.5
      comp=Z,22nm,1.2s
NWAO  Narrogin (SRO)    55.13 245 P       P         21 50 53.9  -0.4
NWAO                              IAmb    IAmb      21 51 21.5
      comp=Z,36nm,1.4s
MORW  Morawa            56.67 249 P       P         21 51 04.1  -0.9
MORW                              IAmb    IAmb      21 51 26.6
      comp=Z,15nm,1.3s
CASY  Casey             60.79 206 P       P         21 51 32.0  +0.2
TOLI2 Tolitoli          61.74 284 P       P         21 51 39.0  +0.1
TOLI2                             IAmb    IAmb      21 51 39.5
      comp=Z,4.5nm,0.8s
JAGI  Jajag, Banyuwa    63.94 272 P       P         21 51 52.1  -0.9
QSPA  South Pole Qui    67.22 180 P       P         21 52 14.0  +1.3
BELA  Belgrano 2        77.54 173 P       P         21 53 12.7  +1.0
SNAA  Sanae             85.72 179 P       P         21 53 53.5  +0.1
ARCES ARCESS Array B   130.75 348 PKP     PKiKP     22 00 22.0  +0.8
      comp=Z,2.5nm,1.0s,baz=45,slow=2.7,SNR=1.3
AKASG Malin Array Be   143.77 328 PKP     PKiKP     22 00 45.2  -3.1
      comp=Z,0.8nm,0.3s,baz=40,slow=4.6,SNR=6.5
CLL   Collm            149.69 343 i PKPbc PKiKP     22 01 02.2  +1.7
```

IDC 11 21:47:26.1±2.8**, 7°.05S**×**129°.68E, h106**^{km}±38^{km}**, mb3.2**/1**, mbtmp3.8**/5**, Error ellipse: s-maj=63.0km s-min=22.1km az=91.0, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time       Res
                                  Op      ISC        h  m  s       ISC
SIJI  Sorong             6.34  15 P       Pn        21 48 57.5  +0.4
      3.5nm,0.4s,baz=181,slow=21,SNR=9.1
SIJI                              S       Sn        21 50 03.0  -5.2
      6.2nm,0.2s,baz=152,slow=22,SNR=9.3
FITZ  Fitzroy Crossi    11.67 199 P       Pn        21 50 09.7  +0.4
      1.4nm,0.3s,baz=17,slow=11,SNR=14
FITZ                              S       Sn        21 52 11.8  -5.9
      2.7nm,0.3s,baz=147,slow=23,SNR=6.2
WRA   Warramunga Arr    13.59 161 P       Pn        21 50 33.3  -1.3
      1.5nm,0.6s,baz=340,slow=13,SNR=7.4
WRA                               S       Sn        21 52 56.4  -8.0
      0.5nm,0.3s,baz=337,slow=20,SNR=5.6
ASAR  Alice Springs     17.02 167 P       P         21 51 18.6  +0.7
      0.8nm,0.4s,baz=340,slow=10.0,SNR=7.9
MKAR  Makanchi Array    68.09 327 P       P         21 58 14.4  -0.1
      0.2nm,0.3s,baz=110,slow=8.0,SNR=5.8
      0.2nm,0.3s
```

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*NEIC **11** 21:59:17.8±0.6, 31°.54N±0°.03×115°.61W±0°.03, h14^{km}±8^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=186.0*

*ECX **11** 21:59:18.8±0.5, 31°.53N×115°.61W, h5^{km}±4^{km}, MD3.1, ML3.3*

*PAS **11** 21:59:18.0±2.1, 31°.52N±0°.01×115°.66W±0°.02, h6^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=3.0km az=229.0*

*ECX **11** 21:59:19.0±1.1, 31°.52N×115°.66W, h6^{km}±14^{km}, MD2.2, ML3.1*

*MEX **11** 21:59:20.1±0.4, 31°.42N×115°.60W, h38^{km}±12^{km}, MD4.1*

ISC 11 21:59:17.8±1.0**, 31°.54N**±0°.02×**115°.63W**±0°.02**, h12**^{km}±9^{km}**, n52, σ0**^{s}**94**/83**, 9C-7D, Baja California**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time       Res
                                  Op      ISC        h  m  s       ISC
ALAMX Rancho Alamar      0.47 352⇓eP      Pg        21 59 27.4  +0.2
ALAMX                             eS      Sg        21 59 33.3  -0.2
ALAMX                             e                 21 59 34.3
ALAMX                             IAML              21 59 34.3
      comp=N,1µm,0.2s
ALAMX                             IAML              21 59 34.3
      comp=E,2µm,0.2s
ALAMX Rancho Alamar      0.47 352⇓eP      Pg        21 59 27.4  +0.2
ALAMX                             eS      Sg        21 59 33.7  +0.2
ALAMX                             IAML              21 59 34.3
      comp=E,2µm,0.2s
ECBX  El Chinero         0.50  97⇑i P     Pg        21 59 27.4  -0.1
ECBX                              eS      Sg        21 59 33.5  -0.7
SPIG  San Pedro Mart     0.51 164         Pg        21 59 27.9   0.0
SPIG                                      Sg        21 59 34.5  -0.1
SPIG  San Pedro Mart     0.51 164 eP      Pg        21 59 27.9   0.0
SPIG                              eS      Sg        21 59 34.5  -0.1
SPIG  San Pedro Mart     0.51 164 eP      Pg        21 59 27.9   0.0
SPIG                              eS      Sg        21 59 34.9  +0.2
SVX   San Vicente        0.57 249⇑i P     Pg        21 59 29.2  +0.3
SVX                               eS      Sg        21 59 37.0  +0.5
SFX   San Felipe         0.83 127         Pg        21 59 33.6  -0.3
SFX                               Sg      Sg        21 59 44.5  -0.3
SFX                               IAML              21 59 46.0
      comp=N,309nm,0.4s
SFX                               IAML              21 59 46.2
      comp=E,294nm,0.7s
SFX   San Felipe         0.83 127 eP      Pg        21 59 33.6  -0.3
SFX                               eS      Sg        21 59 44.3  -0.5
SFX                              ⇓e                 21 59 46.1
SFX                               IAML              21 59 46.1
      comp=N,382nm,0.5s
```

SFX				IAML		21 59 46.3	
	comp=E,370nm,0.9s						
SFX				⇓e		21 59 46.3	
SFX	San Felipe	0.83	127	eP	Pg	21 59 33.6	-0.3
SFX				eS	Sg	21 59 44.3	-0.5
RITX	Riito Sonora	0.85	42	eP	Pg	21 59 34.7	+0.5
RITX				eS	Sb	21 59 47.1	+1.3
GUVIX	Guadalupe Vict	0.90	31	Pg	Pg	21 59 35.8	+0.7
GUVIX				Sg	Sb	21 59 48.5	+1.3
CPBX	Cerro Prieto	0.92	17	Pg	Pg	21 59 35.4	-0.3
CPBX	Cerro Prieto	0.92	17	eP	Pg	21 59 36.1	+0.5
CPBX				IAML		21 59 50.9	
	comp=E,3µm,0.3s						
CPBX				⇓e		21 59 50.9	
CPBX				IAML		21 59 53.5	
	comp=N,2µm,0.3s						
CPBX	Cerro Prieto	0.92	17	eP	Pg	21 59 35.0	-0.6
CPBX				IAML		21 59 50.9	
	comp=E,3µm,0.3s						
CPBX				⇓e		21 59 50.9	
CPBX				IAML		21 59 53.5	
	comp=N,2µm,0.3s						
MBIG	Mexicali	0.94	23		Pg	21 59 36.5	+0.5
MBIG					Sg	21 59 49.7	+1.4
MBIG	Mexicali	0.94	23	eP	Pg	21 59 36.5	+0.5
MBIG				eP	Pg	21 59 36.5	+0.5
MBIG				eS	Sg	21 59 49.0	+0.7
MBIG				eS	Sg	21 59 49.7	+1.4
CCX	Cicese	0.94	291		Pg	21 59 35.9	-0.1
CCX				Sg	Sg	21 59 48.8	+0.5
CCX				IAML		21 59 51.9	
	comp=N,285nm,0.5s						
CCX				IAML		21 59 52.2	
	comp=E,313nm,0.4s						
RMX	La Rumorosa	1.13	340	Pg	Pg	21 59 38.1	-1.4
RMX				Sg	Sg	21 59 51.6	-2.7
RMX				IAML		21 59 53.8	
	comp=E,333nm,0.2s						
RMX				IAML		21 59 54.5	
	comp=N,317nm,0.3s						
RMX	La Rumorosa	1.13	340	eP	Pg	21 59 38.0	-1.6
RMX				eS	Sg	21 59 51.5	-2.8
RMX				IAML		21 59 53.9	
	comp=E,328nm,0.2s						
RMX				⇓e		21 59 53.9	
RMX				IAML		21 59 54.7	
	comp=N,302nm,0.2s						
RMX				⇑e		21 59 54.7	
RMX	La Rumorosa	1.13	340	eP	Pg	21 59 38.0	-1.6
YUH	Yuha Desert	1.14	347	Pg	Pg	21 59 38.7	-1.0
YUH				IAML		21 59 55.5	
	comp=E,267nm,0.5s						
YUH2	Yuha Desert	1.14	347	eP	Pg	21 59 38.7	-1.0
YUH2				eS	Sg	21 59 54.0	-0.5
YUH2	Yuha Desert	1.14	347	eP	Pg	21 59 38.7	-1.0
YUH2				eS	Sg	21 59 54.0	-0.5
CBX	Cerro Bola	1.17	312		Pg	21 59 40.1	-0.3
CBX	Cerro Bola	1.17	312		Sg	21 59 54.7	-0.9
CBX	Cerro Bola	1.17	312	IAML		21 59 56.8	
	comp=E,193nm,0.3s						
CBX				IAML		21 59 59.0	
	comp=N,224nm,0.5s						
CBX	Cerro Bola	1.17	312	eP	Pg	21 59 39.9	-0.5
CBX				eS	Sg	21 59 54.7	-0.9
CBX	Cerro Bola	1.17	312	eP	Pg	21 59 40.1	-0.3
CBX				eS	Sg	21 59 55.6	-0.1
CBX	Cerro Bola	1.17	312	eP	Pg	21 59 39.9	-0.5
CBX				eS	Sg	21 59 55.6	-0.1
IKP	In-Ko-Pah, Jac	1.18	340	eP	Pg	21 59 39.9	-0.7
IKP				eS	Sg	21 59 54.8	-1.2
IKP	In-Ko-Pah, Jac	1.18	340	eP	Pg	21 59 39.9	-0.7
TJIG	Tijuana	1.26	315		Pn	21 59 41.1	-0.2
TJIG					Sg	21 59 57.2	-1.2
TJIG	Tijuana	1.26	315	eP	Pn	21 59 41.1	-0.2
TJIG				eS	Sg	21 59 57.2	-1.2
EMSC	East Mesa	1.32	24	eP	Pn	21 59 43.0	+1.0
TKX	Tecate	1.32	321		Pn	21 59 42.2	+0.1
BAR	Barrett	1.44	322		Pn	21 59 44.2	+0.4
BAR				IAML		22 00 03.5	
	comp=N,391nm,0.1s						
BAR				IAML		22 00 03.8	
	comp=E,367nm,0.2s						
BAR	Barrett	1.44	322	eP	Pn	21 59 44.0	+0.3
BAR				eS	Sn	22 00 02.7	0.0
BAR				IAML		22 00 03.4	
	comp=N,436nm,0.1s						
BAR				⇑e		22 00 03.4	
BAR				IAML		22 00 03.8	
	comp=E,387nm,0.2s						
BAR				⇑e		22 00 03.8	
BAR	Barrett	1.44	322	eP	Pn	21 59 44.0	+0.3
BAR				eS	Sn	22 00 03.1	+0.4
BAR				⇑e		22 00 03.4	
BAR				IAML		22 00 03.4	
	comp=N,436nm,0.1s						
BAR				IAML		22 00 03.8	
	comp=E,387nm,0.2s						
BAR				⇑e		22 00 03.8	
MONP2	Monument Peak	1.51	334	eP	Pn	21 59 45.2	+0.3
MONP2				eS	Sn	22 00 04.9	+0.3
MONP2	Monument Peak	1.51	334	eP	Pn	21 59 45.2	+0.3
SDRC	San Diego Road	1.63	317	eP	Pn	21 59 47.2	+0.8
SDRC				⇑e		22 00 09.0	
SDRC				IAML		22 00 09.0	
	comp=E,267nm,0.3s						
SDRC				⇑e		22 00 09.6	
SDRC				IAML		22 00 09.6	
	comp=N,233nm,0.3s						
SDRC	San Diego Road	1.63	317	eP	Pn	21 59 47.2	+0.8
GLA	Glamis	1.66	24	Pn	Pn	21 59 48.4	+1.7
EML	El Monte Cty P	1.70	323	eP	Pn	21 59 48.4	+1.1
EML				eS	Sn	22 00 10.1	+1.1
EML	El Monte Cty P	1.70	323	eP	Pn	21 59 48.4	+1.1
109C	Camp Elliot, M	1.84	318		Pn	21 59 50.8	+1.6
113A	Mohawk Valley,	2.00	52	Pn	Pn	21 59 50.8	-0.6
PFO	Pinyon Flats O	2.19	341		Pn	21 59 53.4	-0.7
214A	Organ Pipe Nat	2.44	79	Pn	Pn	21 59 56.4	-1.1
214A				IAML		22 00 26.2	
	comp=E,41nm,0.5s						
214A	Organ Pipe Nat	2.44	79	eP	Pn	21 59 56.3	-1.1
214A				eS	Sn	22 00 24.2	-3.0
ELS	Elsinore Mount	2.59	325		Pn	22 00 00.1	+0.4
ELS				IAML		22 00 38.1	
	comp=N,38nm,0.3s						
ELS				IAML		22 00 41.3	
	comp=E,59nm,0.5s						

SNET ***11*** *22:29:19.5±0.5, 15°.11N×90°.75W, h0^{km}±3^{km}, ML2.7*
GCG ***11*** *22:29:21.5±0.3, 15°.36N×90°.59W, h26^{km}±15^{km}, MD3.7*
ISC 11 22:29:21.6±2.4**, 15°.5N**±0°.2×**90°.66W**±0°.06**, h35^{km}, n8,**
σ**1^{s}.49**/8**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUEH	Huehuetenango	0.83	257	eS	Sn	22 29 48.1	-0.1
NBG	Las Nubes	0.97	161	eP	Pn	22 29 37.3	-1.6
MRL	Marmol	1.04	114	eP	Pn	22 29 39.0	-0.9
FUG	Fuego 3	1.07	189	eP	Pn	22 29 39.2	-1.1
STG3	Santiaguito 3,	1.18	228	eP	Pn	22 29 42.5	+0.6
ESQI	Esquipulas	1.59	126	eP	Pn	22 29 46.8	-0.6
ESQI				eS	Sn	22 30 08.6	+1.8
ESQI				IAML		22 30 11.0	
	comp=Z,96nm,0.3s						
MTO3	Montecristo	1.68	131	eS	Sn	22 30 10.5	+1.5
CEVE	Cerro Verde	1.95	149	IAML		22 30 23.2	
	comp=Z,104nm,0.3s						

IDC ***11*** *22:35:17.7±0.9, 20°.83N×103°.34W, h0^{km}, mb4.1/15, mbtmp4.1/18, ML3.9/3, MS3.8/49, Error ellipse: s-maj=27.0km s-min=12.8km az=53.0*
NEIC ***11*** *22:35:19.1±2.1, 20°.75N±0°.03×103°.50W±0°.03, h10^{km}±1^{km}, mb4.5/97, Md4.8/154(MEX), Error ellipse: s-maj=7.0km s-min=3.4km az=219.0*
MEX ***11*** *22:35:20.6±1.3, 20°.81N×103°.52W, h8^{km}±13^{km}, MD4.8*
GCMT ***11*** *22:35:20.1±0.2, 20°.88N±0°.02×103°.51W±0°.02, h17^{km}, MW4.9/102, Moment Tensor Solution. s48,c53; s102,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.92±.15; M$_{\theta\theta}$0.17±.09; M$_{\phi\phi}$2.75±.10; M$_{r\theta}$-0.12±.30; M$_{\theta\phi}$1.18±.07; M$_{\phi r}$-0.03±.23; Best double couple: M$_0$3.06700×10^{16} NP1:φ$_s$199.00000°, δ44.00000°, λ-93.00000°. NP2:φ$_s$23.00000°, δ46.00000°, λ-87.00000°.*
Principal axes: T 3.2090, Plg1.0000°, Azm111.0000°; N -0.2830, Plg2.0000°, Azm201.0000°; P -2.9250, Plg88.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 11 22:35:17.7±1.0**, 20°.80N**±0°.02×**103°.50W**±0°.02**, h4^{km}**±7^{km}**,**
n439, σ**1^{s}.40**/490**, mb4.5**/38**, MS3.9**/47**, 16C-2D, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDLP	Chapalita	0.12	156	eP	Pg	22 35 20.4	+0.1
GDLP				i S	Sg	22 35 22.9	+0.9
GDLC		0.16	136		Pg	22 35 20.6	-0.3
GDLC					Sg	22 35 23.3	+0.3
GDLC		0.16	136	⇑eP	Pg	22 35 20.6	-0.3
GDLC				eS	Sg	22 35 23.3	+0.3
ANIG	Ahuacatlan	0.99	285		Pg	22 35 36.6	-0.2
ANIG					Sg	22 35 49.8	+0.2
ANIG	Ahuacatlan	0.99	285	⇑eP	Pg	22 35 36.6	-0.2
ANIG				eS	Sg	22 35 49.8	+0.2
INCO	Volcan de Coli	1.27	185	⇑eP	Pg	22 35 41.5	-0.6
INCO				i S	Sg	22 35 57.0	-1.6
JUBC	Volcan de Coli	1.28	183	⇑eP	Pn	22 35 41.7	-0.9
JUBC				eS	Sg	22 35 57.4	-1.4
EZ5V		1.31	184		Pn	22 35 42.2	-0.9
EZ5V		1.31	184	⇑eP	Pn	22 35 42.2	-0.9
EZ5V				eS	Sg	22 35 58.6	-1.4
MNGA	Volcan de Coli	1.33	185	⇑eP	Pn	22 35 42.5	-0.7
MNGA				eS	Sg	22 35 59.7	-0.8
COMA	Comala	1.48	190	eP	Pn	22 35 44.9	-0.3
COMA				eS	Sn	22 36 02.5	-2.6
TEPI	Tepic	1.51	299	eP	Pn	22 35 45.0	-0.6
TEPI				eS	Sn	22 36 02.7	-3.1
AAIG	Aguscalientes	1.56	42	⇑eP	Pn	22 35 45.2	-1.3
AAIG				eS	Sn	22 36 04.8	-2.5
COIG	Colima	1.62	186	⇑eP	Pn	22 35 45.7	-1.4
COIG				eS	Sn	22 36 06.0	-2.5
PUVA	Puert Vallarta	1.62	264		Pn	22 35 46.8	-0.2
PUVA					Sn	22 36 07.9	-0.5
PUVA	Puert Vallarta	1.62	264	eP	Pn	22 35 46.8	-0.2
PUVA				i S	Sn	22 36 07.9	-0.5
R15V		1.68	196		Pn	22 35 46.9	-1.1
R15V		1.68	196	⇑eP	Pn	22 35 46.9	-1.1
R15V				eS	Sn	22 36 07.0	-3.0
CDAR	Ciudad de Arme	1.91	195	⇓eP	Pn	22 35 50.1	-0.9
URUA	Uruapan	1.91	135		Pn	22 35 50.2	-1.1
URUA					Sn	22 36 12.6	-3.3
URUA	Uruapan	1.91	135	eP	Pn	22 35 50.2	-1.1
URUA				eS	Sn	22 36 12.6	-3.3
CJM	Chamela	1.94	229	eP	Pn	22 35 50.8	-0.7
CJM				i S	Sn	22 36 13.6	-2.7
IGIG	Irapuato, Guan	2.03	91		Pn	22 35 53.0	+0.1
IGIG					Sn	22 36 17.7	-1.1
IGIG	Irapuato, Guan	2.03	91	eP	Pn	22 35 53.0	+0.1
IGIG				eS	Sn	22 36 17.7	-1.1
ZAIG	Zacatecas	2.14	24		Pn	22 35 52.8	-1.7
ZAIG					Sb	22 36 22.6	-1.7
ZAIG	Zacatecas	2.14	24	⇓eP	Pn	22 35 53.1	-1.4
ZAIG				eS	Sn	22 36 19.3	-2.4
MOIG	Morelia	2.44	117		Pn	22 35 57.7	-0.8
MOIG					Sn	22 36 28.0	-0.9
MOIG	Morelia	2.44	117	⇑eP	Pn	22 35 57.7	-0.8
MOIG				eS	Sn	22 36 28.0	-0.9
MMIG	Aquila	2.50	177		Pn	22 35 59.0	-0.1
MMIG					Sn	22 36 29.2	-0.9
MMIG	Aquila	2.50	177	eP	Pn	22 35 59.0	-0.1
MMIG				eS	Sn	22 36 29.2	-0.9
JRQG	Juriquilla Cam	2.86	91		Pn	22 36 04.8	+0.6
JRQG	Juriquilla Cam	2.86	91	eP	Pn	22 36 04.8	+0.6
JRQG				eS	Sn	22 36 41.1	+1.9
UON	La Union	3.23	150	eP	Pn	22 36 12.2	+3.0
UON				i S	Sn	22 36 49.5	+1.4
RPIG	Rio Verde	3.45	71	⇑iP	Pn	22 36 11.6	-0.7
RPIG				eS	Sn	22 36 51.8	-1.9
ACIG	Acambay	3.49	103	⇑eP	Pn	22 36 12.8	-0.1
ACIG				i S	Sn	22 36 57.9	+3.1
MAIG	Mazatlaan	3.61	312		Pn	22 36 11.9	-2.5
MAIG					Sn	22 36 55.8	-1.8
MAIG	Mazatlaan	3.61	312	eP	Pn	22 36 11.9	-2.5
MAIG				eS	Sn	22 36 55.8	-1.8
TEJU	Tejupilco	3.66	120	i P	Pn	22 36 15.2	-0.1
TEJU				i S	Sn	22 37 01.0	+2.0
ZIIG	Zihuatanejo	3.71	148		Pn	22 36 15.7	-0.1
ZIIG	Zihuatanejo	3.71	148	⇑eP	Pn	22 36 15.7	-0.1
ZIIG				eS	Sn	22 37 01.5	+1.6
ARIG	Puente Sto Nin	3.88	130		Pn	22 36 17.6	-0.6
ARIG					Sn	22 37 03.4	-1.0
ARIG	Puente Sto Nin	3.88	130	⇑eP	Pn	22 36 17.6	-0.6
ARIG				eS	Sn	22 37 03.4	-1.0
TOVM	TOLUCA	3.89	112		Pn	22 36 19.2	+0.5
TOVM					Sn	22 37 03.9	-1.1
TOVM	TOLUCA	3.89	112	eP	Pn	22 36 19.2	+0.5
TOVM				i S	Sn	22 37 03.9	-1.1
MAVM	Malinalco, Edo	4.19	115		Pn	22 36 23.6	+1.1
MAVM					Sn	22 37 12.0	-0.1
MAVM	Malinalco, Edo	4.19	115	eP	Pn	22 36 23.6	+1.1
MAVM				eS	Sn	22 37 12.0	-0.1
CJVM	Cuajimalpa	4.21	109	i P	Pn	22 36 26.6	+3.6
CJVM				eS	Sn	22 37 12.7	+0.1
AOVM	Tlapan	4.21	110	i P	Pn	22 36 23.7	+0.6
AOVM				eS	Sn	22 37 12.0	-1.0
DEIG	Demacu	4.21	96	⇑eP	Pn	22 36 27.5	+4.6
DEIG				e		22 36 30.5	
DEIG				eS	Sn	22 37 10.1	-2.6
MCRU	Las Cruces	4.25	109	e	Pb	22 36 29.9	-3.3
MCRU				eS	Sn	22 37 12.4	-1.4
ZUVM	ZUMPANGO	4.26	102		Pn	22 36 25.1	+1.4
ZUVM					Sn	22 37 14.0	+0.1
ZUVM	ZUMPANGO	4.26	102	eP	Pn	22 36 25.1	+1.4
ZUVM				eS	Sn	22 37 14.0	+0.1
PTVM	Pico Tres Padr	4.29	105		Pn	22 36 24.8	+0.8
PTVM					Sn	22 37 13.3	-1.4
PTVM	Pico Tres Padr	4.29	105	eP	Pn	22 36 24.8	+0.8
PTVM				eS	Sn	22 37 13.3	-1.4
BJVM	Benito Juarez	4.30	108	e	Pg	22 36 40.6	+0.4
BJVM				i S	Sn	22 37 13.7	-1.3
UNM	Universidad Na	4.31	109	Pn	Pn	22 36 25.7	+1.3
GMVM	Gustavo A Made	4.32	107	e	Pb	22 36 35.9	+1.5
GMVM				eS	Sn	22 37 15.2	-0.3
PBVM	Pinon	4.36	107		Sn	22 37 13.1	-3.0
PBVM	Pinon	4.36	107	eP	Pb	22 36 32.4	-2.5
PBVM				eS	Sn	22 37 13.1	-3.0
PLIG	Platanillo	4.46	122		Pn	22 36 26.9	+0.7
PLIG					Sn	22 37 19.1	+0.4
PLIG	Platanillo	4.46	122	i P	Pn	22 36 26.9	+0.7
PLIG				eS	Sn	22 37 19.1	+0.4
THVM	De Xico	4.50	108	e	Pb	22 36 38.7	+1.2
THVM				eS	Sn	22 37 19.8	-0.2
VTVM	Tizayuca	4.55	102		Pn	22 36 26.4	-1.3
VTVM					Sn	22 37 21.1	-0.1
VTVM	Tizayuca	4.55	102	eP	Pn	22 36 26.4	-1.3
VTVM				eS	Sn	22 37 21.1	-0.1
PDIG	Papasquiaro	4.57	338	e	Pb	22 36 36.0	-2.6
PDIG				eS	Sn	22 37 22.3	+0.8
YAIG	Yautepec	4.59	114		Pn	22 36 25.8	-2.3
YAIG					Sn	22 37 21.8	-0.2
YAIG	Yautepec	4.59	114	i P	Pn	22 36 25.8	-2.3
YAIG				eS	Sn	22 37 21.8	-0.2
GTIG	Gomez Farias	4.61	60	eP	Pn	22 36 26.9	-1.3
GTIG				eS	Sn	22 37 25.2	+3.0
MEIG	Mezcala	4.64	127		Pn	22 36 29.4	+0.7
MEIG	Mezcala	4.64	127	eP	Pn	22 36 29.4	+0.7
MEIG				eS	Sn	22 37 25.2	+2.1
AMVM	AMECAMECA	4.73	110		Sn	22 37 25.0	-0.6
AMVM	AMECAMECA	4.73	110	e	Pb	22 36 44.9	+3.5
AMVM				i S	Sn	22 37 25.0	-0.6
CAIG	El Cayaco	4.82	140		Pn	22 36 31.8	+0.7
CAIG					Sn	22 37 28.3	+0.9
CAIG	El Cayaco	4.82	140	eP	Pn	22 36 31.8	+0.7
CAIG				eS	Sn	22 37 28.3	+0.9
PPM	Popocatepetl	4.89	110	eP	Pn	22 36 34.4	+1.9
PPM				eS	Sn	22 37 31.3	+1.3
SSIG	Sanalona	5.23	321	eP	Pn	22 36 35.6	-1.1
SSIG				eS	Sn	22 37 34.2	-3.2
DAIG	Los Arroyos	5.23	135		Pn	22 36 39.1	+2.3
DAIG					Sn	22 37 39.3	+1.7
DAIG	Los Arroyos	5.23	135	eP	Pn	22 36 39.1	+2.3
DAIG				eS	Sn	22 37 39.3	+1.7
TLIG	Tlapa	5.66	124		Pn	22 36 44.0	+1.2
TLIG	Tlapa	5.66	124		Sn	22 37 48.4	0.0
TLIG	Tlapa	5.66	124	eP	Pn	22 36 42.7	-0.1
TLIG				eS	Sn	22 37 48.4	0.0
CRIG	Cruz Grande	5.78	134		Sn	22 37 52.2	+1.1
CRIG	Cruz Grande	5.78	134	eP	Pn	22 36 48.4	+4.1
CRIG				eS	Sn	22 37 52.2	+1.1
FTIG	Fresnillo de T	5.82	119	eP	Pn	22 36 46.7	+1.7
FTIG				eS	Sn	22 37 51.8	-0.5
TPIG	Tehuac#an	6.25	111		Pn	22 36 50.1	-0.8
TPIG					Sn	22 38 02.9	0.0
TPIG	Tehuac#an	6.25	111	eP	Pn	22 36 50.1	-0.8
TPIG				eS	Sn	22 38 02.9	0.0
HPIG		6.42	342		Pn	22 36 54.3	+1.0
HPIG		6.42	342		Sn	22 38 09.5	+2.3
HPIG		6.42	342	eP	Pn	22 36 54.7	+1.4
HPIG				eS	Sn	22 38 09.5	+2.3
TXIG	Tlaxiaco	6.46	122	⇑iP	Pn	22 36 55.4	+1.4
TXIG				eS	Sn	22 38 04.8	-3.6
SLBS	Sierra La Lagu	6.63	297		Pn	22 36 57.9	+1.9
TOIG	Toxpalan	6.64	113	eP	Pn	22 36 59.1	+2.9
TOIG				eS	Sn	22 38 15.9	+3.5
PNIG	Pinotepa	6.72	130		Pn	22 36 57.4	+0.2
PNIG	Pinotepa	6.72	130	eP	Pn	22 36 57.4	+0.2
PNIG				eS	Sn	22 38 19.4	+5.2
YOIG	Yosondua	6.86	124	eP	Pn	22 37 01.1	+1.7
YOIG				eS	Sn	22 38 17.2	-1.0
TSIG	Topolobambo	6.99	314	eP	Pn	22 37 01.9	+1.1
TSIG				eS	Sn	22 38 18.2	-2.6
LPIG	La Paz	7.11	299	LR	LR	22 39 37.9	
	comp=Z,1µm,19.2s,baz=77,slow=36						
MCIG	Muzquiz	7.28	14	e	Pb	22 37 29.9	+5.2
MCIG				eS	Sn	22 38 29.8	+1.6
VHO	Vista Hermosa	7.39	119	eP	Pn	22 37 10.2	+3.5
VHO				eS	Sn	22 38 33.5	+2.3
PEIG	Puerto Escondi	7.69	127	eP	Pn	22 37 11.3	+0.8
PEIG				eS	Sn	22 38 41.5	+3.4
833A	Chaparral WMA,	8.37	26	P	Pn	22 37 19.4	-0.4
	baz=206						
TXAR	Lajitas Array	8.50	359	Pn	Pn	22 37 23.1	+1.4
	1.6nm,0.3s,baz=181,slow=13,SNR=72						
TXAR				Lg	Lg	22 39 42.9	
	4.5nm,0.3s,baz=180,slow=29,SNR=9.3						
TXAR				LR	LR	22 40 13.3	
	comp=Z,266nm,19.4s,baz=168,slow=35 3.6nm,0.5s						
TXAR	Lajitas Array	8.50	359	Pn	Pn	22 37 22.9	+1.2
TX32	Lajitas Array	8.50	359		Pn	22 37 23.5	+1.8
HUIG	Huatulco	8.62	124		Pn	22 37 24.5	+1.2
HUIG					Sn	22 38 59.3	-1.7
HUIG	Huatulco	8.62	124	eP	Pn	22 37 24.5	+1.2
HUIG				eS	Sn	22 38 59.3	-1.7
CMIG	Matias Romero	8.94	113	Pn	Pn	22 37 27.8	0.0
	0.8nm,0.3s,baz=278,slow=12,SNR=22						
CMIG				Lg	Lg	22 39 58.4	
	0.7nm,0.3s,baz=69,slow=9.7,SNR=3.7						
CMIG				LR	LR	22 41 15.1	
	comp=Z,1µm,19.3s,baz=289,slow=40 13nm,0.8s						
CMIG	Matias Romero	8.94	113		Pn	22 37 29.5	+1.8
CMIG					Sn	22 39 06.0	-3.0
CMIG	Matias Romero	8.94	113	eP	Pn	22 37 29.5	+1.8
CMIG				eS	Sn	22 39 06.0	-3.0
UXUV	UXUV	9.49	110	eP	Pn	22 37 37.3	+2.0
UXUV				i S	Sn	22 39 24.0	+1.5
JCT	Junction City	10.20	18	Pn	Pn	22 37 45.5	+0.5
JCT	Junction City	10.20	18	P	Pn	22 37 46.1	+1.1
	baz=199						
CGIG		10.35	338		Pn	22 37 47.9	+0.8
CGIG					Sn	22 39 44.4	+0.7
CGIG		10.35	338	eP	Pn	22 37 47.9	+0.8
CGIG				eS	Sn	22 39 44.4	+0.7
HSIG		10.62	322	Pn	Pn	22 37 53.2	+2.6
MNTX	Cornudas Mount	10.99	352	Pn	Pn	22 37 57.1	+1.4
MNTX	Cornudas Mount	10.99	352	P	Pn	22 37 56.9	+1.2
	baz=170,SNR=11						
PCIG		11.00	116		Pn	22 37 56.3	+0.4
PCIG					Sn	22 40 00.1	+0.7
PCIG		11.00	116	eP	Pn	22 37 56.3	+0.4
PCIG				eS	Sn	22 40 00.1	+0.7
435B	Jarrell	11.28	27	Pn	Pn	22 38 00.3	+0.7
CCIG	Comitan	11.67	111		Pn	22 38 06.2	+0.9
319A	Douglas	11.74	335		Pn	22 38 07.9	+1.7
ABTX	Abilene, Hawle	12.27	15		Pn	22 38 14.2	+0.9
ABTX	Abilene, Hawle	12.27	15	P	Pn	22 38 14.6	+1.3
	baz=196						
121A	Cookes Peak, D	12.30	343	Pn	Pn	22 38 16.3	+2.4
121A	Cookes Peak, D	12.30	343	P	Pn	22 38 16.3	+2.4
	baz=160,SNR=17						
MSTX	Muleshoe	13.14	3	Pn	Pn	22 38 24.6	-0.6
MSTX	Muleshoe	13.14	3	P	Pn	22 38 26.9	+1.6
	baz=182						
TUC	Tucson	13.18	332	Pn	Pn	22 38 27.6	+1.7
TUC	Tucson	13.18	332	P	Pn	22 38 28.8	+2.9
	baz=148						
PETF	Flores	13.47	104		Pn	22 38 29.8	+0.1
BNM	Barren Site	13.59	349	Pn	Pn	22 38 34.1	+2.6
LENM	Lemitar	13.67	348		Pn	22 38 33.8	+1.3
214A	Organ Pipe Nat	13.89	325		Pn	22 38 37.3	+1.9
214A	Organ Pipe Nat	13.89	325	P	Pn	22 38 38.5	+3.1
	baz=140						
AMTX	Amarillo	14.12	6		Pn	22 38 38.7	0.0
AMTX	Amarillo	14.12	6	P	Pn	22 38 40.5	+1.8
	baz=186						
ANMO	Albuquerque	14.34	350	Pn	Pn	22 38 43.7	+2.0
	0.1nm,0.3s,baz=156,slow=13,SNR=7.8						
ANMO				Lg	Lg	22 42 49.3	
	0.1nm,0.3s,baz=59,slow=23,SNR=3.3						
ANMO				LR	LR	22 43 35.8	
	comp=Z,404nm,18.3s,baz=162,slow=35 1.2nm,0.5s						
ANMO	Albuquerque	14.34	350	Pn	Pn	22 38 42.9	+1.3
ANMO	Albuquerque	14.34	350	P	Pn	22 38 44.1	+2.4
	baz=168						
WMOK	Wichita Mounta	14.50	16		Pn	22 38 44.4	+0.6
WMOK	Wichita Mounta	14.50	16	P	Pn	22 38 45.1	+1.4
	baz=197,SNR=9.5						
X34A	Smith Ranch, M	14.63	19	Pn	Pn	22 38 45.8	+0.2
X18A	Snowflake	14.82	339	Pn	P	22 38 51.7	-2.7
MTO3	Montecristo	14.90	113		Pn	22 38 49.8	+0.3
113A	Mohawk Valley,	15.03	325		Pn	22 38 52.6	+1.6
113A				IAmb	IAmb	22 39 01.0	
	comp=Z,17nm,1.1s						
W18A	Petrified Fore	15.29	340		Pn	22 38 54.6	+0.1
W18A				IAmb	IAmb	22 39 03.9	
	comp=Z,68nm,1.8s						
W18A	Petrified Fore	15.29	340	P	Pn	22 38 56.3	+1.7
	baz=157						
X37A	Clayton	15.50	26	Pn	Pn	22 38 58.4	+1.2
X37A				IAmb	IAmb	22 39 05.3	
	comp=Z,29nm,1.1s						
Z41A	Richland Creek	15.63	35		Pn	22 38 59.9	+1.0
Z41A				IAmb	IAmb	22 39 10.0	
	comp=Z,41nm,0.9s						
Z41A	Richland Creek	15.63	35	P	Pn	22 39 00.6	+1.7
	baz=220						
WLAR	White Oak Lake	15.80	34		Pn	22 39 02.7	+1.6
WLAR				IAmb	IAmb	22 39 11.5	
	comp=Z,24nm,0.8s						
GLA	Glamis	15.83	323		Pn	22 39 03.1	+1.6
GLA				IAmb	IAmb	22 39 10.6	
	comp=Z,58nm,1.6s						
GLA	Glamis	15.83	323	P	P	22 39 04.8	-0.6
	baz=137,SNR=6.2						
YUH	Yuha Desert	16.18	319		Pn	22 39 07.3	+1.3
BLYC	Blythe	16.19	325	P	P	22 39 08.4	-0.9
WUAZ	Wupatki	16.21	336		P	22 39 08.7	-1.1
WUAZ	Wupatki	16.21	336	P	P	22 39 09.8	-0.1
	baz=152						
VBMS	Vicksburg	16.24	43	P	P	22 39 08.5	-1.5
	baz=228						
MIAR	Mount Ida	16.26	31	P	P	22 39 08.9	-1.1
MIAR	Mount Ida	16.26	31	P	P	22 39 09.0	-1.1
	baz=215,SNR=5.9						
IKP	In-Ko-Pah, Jac	16.30	319	P	Pn	22 39 09.5	+1.8
	baz=133						
T25A	Trinidad	16.30	357		P	22 39 09.8	-1.1
T25A	Trinidad	16.30	357	P	Pn	22 39 08.8	+1.0
	baz=176						
SWSC	Sam W. Stewart	16.32	320	P	Pn	22 39 09.7	+1.9
	baz=134						
PDMCI	Parker Dam,Lak	16.42	327	P	P	22 39 12.5	+0.6
	baz=142,SNR=7.2						

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TUL1  Leonard          16.50  23 Pn    Pn    22 39 10.6 +0.4
TUL1                             IAmb  IAmb  22 39 16.0
      comp=Z,48nm,0.9s
TUL1  Leonard          16.50  23 P     Pn    22 39 10.5 +0.4
      baz=206,SNR=8.6
X40A  Basin Creek Fa   16.57  32 P     Pn    22 39 11.9 +0.9
      baz=217
BC3   Big Chuckawall   16.63 323 P     P     22 39 14.5 +0.2
      baz=137,SNR=6.8
MONP2 Monument Peak    16.66 319 P     Pn    22 39 13.2 +0.9
      baz=133
W39A  Magazine         16.70  29 P     P     22 39 14.9  0.0
W39A                             IAmb  IAmb  22 39 17.7
      comp=Z,79nm,1.8s
W39A  Magazine         16.70  29 P     Pn    22 39 13.5 +1.0
      baz=213,SNR=10
IRM   Iron Mountain    16.83 325 P     P     22 39 16.1 -0.4
      baz=139,SNR=7.5
MVCO  Mesa Verde       16.92 346 P     P     22 39 17.5 -0.3
MVCO  Mesa Verde       16.92 346 P     Pn    22 39 16.4 +0.7
      baz=163
W13A  Hualapai Mount   16.93 329 P     P     22 39 17.4 -0.4
SDCO  Great Sand Dun   16.98 355 P     P     22 39 17.8 -0.6
      baz=173,SNR=16
NEE2  Needles Airpor   17.02 327 P     P     22 39 19.4 +0.8
      baz=142
109C  Camp Elliot, M   17.08 318 P     P     22 39 19.0 -0.3
      baz=131
S22A  4UR Ranch, Cre   17.14 351       Pn    22 39 19.3 +0.9
S22A  4UR Ranch, Cre   17.14 351 P     P     22 39 19.9 -0.3
      baz=169,SNR=7.1
TPFO  Pinon Flats      17.17 321 P     P     22 39 21.0 +0.6
      baz=134
PFO   Pinyon Flats O   17.18 321       Pn    22 39 19.6 +0.8
PFO   Pinyon Flats O   17.18 321 P     P     22 39 21.4 +0.9
      baz=134
BELC  Belle Mtn. Jos   17.19 323 P     P     22 39 21.6 +1.0
      baz=136
W41B  Gary Mavity, V   17.41  32 P     P     22 39 22.9 +0.1
      baz=217
GMRC  Granite Mounta   17.58 325 P     P     22 39 26.8 +1.9
      baz=139
MURC  Murrieta         17.61 319 P     P     22 39 27.5 +2.4
      baz=132
BBRC  Big Bear Solar   17.91 321 P     P     22 39 30.8 +2.1
      baz=135
HEC   Hector,Ludlow    17.98 324 P     P     22 39 30.9 +1.6
      baz=137
PV11  David Mesa, Pa   18.05 346 P     P     22 39 30.7 +0.5
SCI2  San Clemente I   18.07 315 P     P     22 39 30.8 +0.7
      baz=128
U40A  Yellville        18.08  29 P     Pn    22 39 29.3 -0.5
      baz=213
Q24A  Divide           18.16 356 P     P     22 39 33.1 +1.6
      baz=175
KSCO  Kaye Shedlock’   18.17   2 P     Pn    22 39 31.2 +0.2
      baz=182
TUQ   Turquoise Moun   18.22 326 P     P     22 39 34.9 +3.0
      baz=140
CBKS  Cedar Bluff      18.25   9 P     Pn    22 39 31.9  0.0
      baz=191
CIS   Catalina Islan   18.25 317 P     P     22 39 34.0 +1.8
      baz=129
BFSC  Mount Baldy Ra   18.33 320 P     P     22 39 35.5 +2.3
      baz=133
RRX   Edison Barstow   18.39 323 P     P     22 39 36.6 +2.9
      baz=136
OXF   Oxford           18.47  39 P     Pn    22 39 34.5 -0.1
      baz=226
SMCO  Snowmass         18.56 351       Pn    22 39 37.0 +0.9
GSC   Goldstone, Bar   18.59 324 P     Pn    22 39 39.2 +3.0
      baz=137
LCAR  Lake Charles     18.66  33       Pn    22 39 38.2 +1.3
DECC  Green Verdugo    18.75 319 P     Pn    22 39 38.6 +0.5
      baz=131
SHOC  Shoshone, Teco   18.76 326 P     Pn    22 39 40.2 +2.0
      baz=140
SNCC  San Nicolas Is   18.88 314 P     Pn    22 39 40.9 +1.2
      baz=127
EDW2  Edwards Air Fo   18.97 321 P     Pn    22 39 41.6 +0.8
      baz=134
BOAB  BOACO BROADBAN   18.98 113 P     Pn    22 39 42.4 +1.4
BOAB                             IAmb  IAmb  22 40 03.8
      comp=Z,36nm,1.1s
ISCO  Idaho Springs    19.03 355 P     Pn    22 39 41.6 -0.1
ISCO  Idaho Springs    19.03 355 P     P     22 39 41.2 +0.1
      baz=173
LRAL  Lakeview Retre   19.07  47       Pn    22 39 41.9  0.0
LRAL                             IAmb  IAmb  22 39 49.1
      comp=Z,37nm,1.4s
LRAL  Lakeview Retre   19.07  47 P     P     22 39 41.3 +0.1
      baz=234
KSU1  Kansas State U   19.18  16 P     P     22 39 42.5 +0.1
      baz=200
LRMC  Laurel Mtn Rad   19.21 323 P     Pn    22 39 44.0 +0.3
      baz=136
Q16A  Castle Valley    19.23 342 P     Pn    22 39 45.1 +1.1
OSI   Osito Audit: C   19.23 319 P     Pn    22 39 45.1 +1.1
      baz=131
FURC  Furnace Creek,   19.50 326 P     Pn    22 39 48.5 +1.5
      baz=139
MPMC  Manual Prospec   19.52 324 P     Pn    22 39 48.7 +1.1
      baz=137,SNR=8.7
TPNV  Topopah Spring   19.56 328 P     Pn    22 39 48.2 +0.2
TPNV                             IAmb  IAmb  22 39 55.7
      comp=Z,47nm,1.6s
TPNV  Topopah Spring   19.56 328 P     Pn    22 39 49.2 +1.3
      baz=142,SNR=17
ARVC  Arvin            19.64 320 P     Pn    22 39 49.1 +0.4
      baz=132
O20A  White River Ci   19.70 349 P     Pn    22 39 49.9 +0.3
      baz=166
ISA   Isabella, Lake   19.80 322 P     Pn    22 39 51.5 +0.7
      baz=134
PKM   Mcpherson Peak   20.09 318 P     Pn    22 39 54.6 +0.3
      baz=130
OGNE  Ogallala         20.12   3 P     P     22 39 53.7 +0.9
      baz=184
CWC   Cottonwood Cre   20.13 324 P     Pn    22 39 54.8 +0.1
      baz=136
N23A  Red Feather La   20.14 355 P     Pn    22 39 54.4 -0.6
      baz=173
CCM   Cathedral Cave   20.21  29 P     P     22 39 53.6 +0.1
CCM   Cathedral Cave   20.21  29 P     P     22 39 54.2 +0.6
      baz=215
R11A  Troy Canyon, C   20.37 332 P     Pn    22 39 57.0 -0.6
      baz=145,SNR=13
WVT   Waverly          20.52  39 P     P     22 39 56.8 -0.2
WVT                              IAmb  IAmb  22 40 02.1
      comp=Z,50nm,1.8s
WVT   Waverly          20.52  39 P     P     22 39 57.3 +0.2
      baz=226
TIGA  Tifton           20.75  55 P     P     22 39 54.6 -4.9
      baz=244
FPAL  Fort Paine       20.89  45 P     P     22 40 01.0 -0.1
FPAL                             IAmb  IAmb  22 40 07.0
      comp=Z,25nm,0.8s
DUG   Dugway, Tooele   20.91 340 P     P     22 40 01.5 +0.1
DUG                              IAmb  IAmb  22 40 09.1
      comp=Z,32nm,1.8s
DUG   Dugway, Tooele   20.91 340 P     Pn    22 40 03.3 -0.5
      baz=154,SNR=8.0
SIUC  Southern Illin   20.92  33 P     P     22 40 00.5 -0.7
BGNE  Belgrade         21.04  11 P     P     22 40 02.2 -0.4
      baz=194
DWPF  Disney Wildern   21.34  66 P     P     22 40 04.1 -1.9
      baz=255
PMPB  Monarch Peak     21.56 319 P     P     22 40 09.5 +1.2
PMPB                             IAmb  IAmb  22 40 33.5
      comp=Z,43nm,1.6s
LHV   Little Huntoon   21.70 327 P     P     22 40 11.5 +1.8
LHV                              IAmb  IAmb  22 40 23.2
      comp=Z,22nm,1.6s
NVAR  Mina Array Bea   21.73 327 P     P     22 40 12.9 +2.6
      comp=Z,4.4nm,0.9s,baz=146,slow=12,SNR=25
NVAR                             LR    LR    22 48 17.3
      comp=Z,395nm,20.4s,baz=164,slow=36
      comp=Z,4.4nm,0.9s
NVAR  Mina Array Bea   21.73 327 P     P     22 40 12.0 +1.8
GOGA  Godfrey          21.77  51 P     P     22 40 10.3 -0.1
GOGA  Godfrey          21.77  51 P     P     22 40 10.0 -0.5
      baz=240,SNR=14
HWUT  Hardware Ranch   21.84 344 P     P     22 40 12.5 +1.1
HWUT                             IAmb  IAmb  22 40 16.5
      comp=Z,28nm,1.1s
RIMA  Rio Macho        21.86 117 P     P     22 40 12.1 +0.3
RIMA                             IAmb  IAmb  22 40 17.4
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      comp=Z,21nm,1.0s
Q44A  Meyer Farm, Va   21.93  31 P     P     22 40 12.4 +0.3
Q44A                             IAmb  IAmb  22 40 19.4
      comp=Z,25nm,0.9s
K22A  Casper           21.94 354 P     P     22 40 14.2 +1.8
K22A  Casper           21.94 354 P     P     22 40 13.2 +0.8
      baz=172,SNR=11
ELK   Elko             22.26 336 P     P     22 40 18.1 +2.2
      comp=Z,0.7nm,0.4s,baz=185,slow=7.7,SNR=6.6
ELK                              LR    LR    22 48 22.8
      comp=Z,649nm,18.1s,baz=160,slow=35
      comp=Z,0.7nm,0.4s
ELK   Elko             22.26 336 P     P     22 40 17.5 +1.6
P43A  Skaggs, Pawnee   22.28  29 P     P     22 40 16.2 +0.4
P43A                             IAmb  IAmb  22 40 22.7
      comp=Z,16nm,0.9s
BW06  Boulder Array    22.49 348 P     P     22 40 19.0 +0.6
      baz=165,SNR=5.3
PD31  Pinedale Array   22.49 348 P     P     22 40 19.5 +1.1
PD31                             IAmb  IAmb  22 40 21.0
      comp=Z,10nm,0.9s
PDAR  Pinedale Array   22.49 348 P     P     22 40 19.7 +1.3
      comp=Z,7.6nm,0.8s,baz=151,slow=10,SNR=63
PDAR                             LR    LR    22 49 30.8
      comp=Z,171nm,18.3s,baz=182,slow=38
      comp=Z,7.6nm,0.8s
PDAR  Pinedale Array   22.49 348 P     P     22 40 19.3 +0.9
TKL   Tuckaleechee C   22.77  45 P     P     22 40 20.8 -0.4
      comp=Z,4.0nm,0.6s,baz=193,slow=10.0,SNR=7.0
      comp=Z,4.0nm,0.6s
TKL   Tuckaleechee C   22.77  45 P     P     22 40 21.0 -0.1
SCIA  State Center     22.77  20 P     P     22 40 20.8 -0.3
SCIA  State Center     22.77  20 P     P     22 40 20.9 -0.3
      baz=205
HODGE Hodges           23.05  50 P     P     22 40 23.8 -0.3
HODGE                            IAmb  IAmb  22 40 31.9
      comp=Z,21nm,1.1s
HDIL  Hopedale         23.12  28 P     P     22 40 23.9 -0.9
      baz=215,SNR=5.3
PAHR  Pah Rah Range    23.25 328 P     P     22 40 27.1 +0.8
RSSD  Black Hills      23.26 359 P     P     22 40 27.0 +0.6
RSSD                             IAmb  IAmb  22 40 30.5
      comp=Z,14nm,1.5s
RSSD  Black Hills      23.26 359 P     P     22 40 27.1 +0.6
      baz=178
TZTN  Tazewell         23.43  44 P     P     22 40 27.9 -0.1
TZTN  Tazewell         23.43  44 P     P     22 40 26.4 -1.6
      baz=233,SNR=15
ECSD  EROS Data Cent   23.58  13 P     P     22 40 29.5  0.0
ECSD                             IAmb  IAmb  22 40 33.5
      comp=Z,17nm,1.4s
ECSD  EROS Data Cent   23.58  13 P     P     22 40 29.7 +0.3
      baz=196,SNR=6.4
PAULI Pauline          23.66  49 P     P     22 40 29.5 -0.7
PAULI                            IAmb  IAmb  22 40 32.5
      comp=Z,20nm,1.0s
SUSD  Miller           23.88   8 P     P     22 40 32.1 -0.2
      baz=190
SFIN  Lafayette        24.01  32 P     P     22 40 33.2 -0.4
SFIN  Lafayette        24.01  32 P     P     22 40 33.3 -0.3
      baz=220,SNR=10.0
NHSC  New Hope         24.07  55 P     P     22 40 34.2  0.0
NHSC  New Hope         24.07  55 P     P     22 40 33.6 -0.6
      baz=245
KMSC  Kings Mountain   24.16  49 P     P     22 40 34.2 -0.8
      baz=239,SNR=7.2
H17A  Grant Village    24.26 348 P     P     22 40 37.5 +1.3
      baz=163
HLID  Hailey           24.46 341 P     P     22 40 38.3 +0.4
HLID  Hailey           24.46 341 P     P     22 40 38.5 +0.5
      baz=154,SNR=8.6
BIRD  Birdtown, Kers   24.54  51 P     P     22 40 38.8 +0.2
V55A  Taylorsville     24.61  48 P     P     22 40 39.6 +0.5
P49A  Miami Univ. Ec   24.66  37 P     P     22 40 38.8 -0.7
      baz=226
JFWS  Jewell Farm      24.70  24 P     P     22 40 39.7 -0.1
JFWS  Jewell Farm      24.70  24 P     P     22 40 38.2 -1.7
      baz=210,SNR=5.1
RLMT  Red Lodge        24.72 350 P     P     22 40 40.1 -0.2
      baz=167
YHL   Hebgen Lake      24.82 347 P     P     22 40 42.0 +0.7
O48B  Farmland         24.93  35 P     P     22 40 41.0 -0.9
      baz=224,SNR=6.5
R53A  Hurricane        25.52  42 P     P     22 40 46.8 -0.6
BOZ   Bozeman (W)      25.62 347 P     P     22 40 48.9 +0.5
BOZ   Bozeman (W)      25.62 347 P     P     22 40 49.6 +1.2
      baz=162
J08A  Circle Bar Ran   25.75 334 P     P     22 40 49.6 +0.1
BLA   Blacksburg       25.87  46 P     P     22 40 50.0 -0.7
BLA                              IAmb  IAmb  22 40 56.7
      comp=Z,13nm,0.8s
BLA   Blacksburg       25.87  46 P     P     22 40 49.9 -0.7
      baz=237
LRM   Limekiln Ridge   26.02 346 P     P     22 40 52.3 +0.2
YBH   Yreka Blue Hor   26.44 326 LR    LR    22 51 43.7
      comp=Z,158nm,19.5s,baz=166,slow=37
P53A  Whipple          26.57  41 P     P     22 40 56.2 -0.7
P53A                             IAmb  IAmb  22 40 57.4
      comp=Z,13nm,0.9s
HRY   Holter Researc   26.73 347 P     P     22 40 58.9 +0.5
AAM   Ann Arbor        27.18  33 P     P     22 41 01.7 -0.6
MSO   Missoula         27.33 344 P     P     22 41 03.5 -0.3
MSO                              IAmb  IAmb  22 41 07.9
      comp=Z,17nm,1.6s
MSO   Missoula         27.33 344 P     P     22 41 05.3 +1.6
      baz=158
DGMT  Dagmar           27.61 359 P     P     22 41 06.9 +0.7
      baz=178
EGMT  Eagleton         27.63 351 P     P     22 41 06.6 +0.2
EGMT                             IAmb  IAmb  22 41 35.2
      comp=Z,8.5nm,0.8s
EGMT  Eagleton         27.63 351 P     P     22 41 06.4  0.0
      baz=167
AGMN  Agassiz Nation   28.12  11 P     P     22 41 10.0 -0.6
AGMN  Agassiz Nation   28.12  11 P     P     22 41 10.3 -0.3
      baz=195,SNR=5.4
CBN   Corbin Frederi   28.45  47 P     P     22 41 13.4 -0.3
EYMN  Ely              28.77  17 P     P     22 41 17.1 +0.7
      baz=204
F05D  White Salmon     29.04 334 P     P     22 41 19.5 +0.6
      baz=143
SJCC  San Jacinto, C   29.33 107 P     P     22 41 21.3 -0.5
SJCC                             IAmb  IAmb  22 41 23.1
      comp=Z,12nm,0.9s
SSPA  Standing Stone   29.42  42 P     P     22 41 21.3 -1.0
SSPA                             IAmb  IAmb  22 41 26.3
      comp=Z,4.8nm,0.8s
SSPA  Standing Stone   29.42  42 P     P     22 41 21.3 -1.0
      baz=235
NEW   Newport          29.52 341 LR    LR    22 54 42.1
      comp=Z,94nm,21.1s,baz=208,slow=39
ULM   Lac du Bonnet    30.00  10 P     P     22 41 27.2 -0.1
      comp=Z,3.2nm,0.7s,baz=199,slow=9.4,SNR=4.3
      comp=Z,3.2nm,0.7s
ULM   Lac du Bonnet    30.00  10 P     P     22 41 27.0 -0.3
ULM                              IAmb  IAmb  22 41 27.9
      comp=Z,7.9nm,0.9s
D03D  Eldon            31.03 334 P     P     22 41 37.7 +1.2
      baz=142
SADO  Sadowa           31.25  34 P     P     22 41 37.4 -1.1
BINY  Binghamton       31.48  41 P     P     22 41 40.4 -0.1
      baz=236
PECO  Prince Edward    31.90  38 P     P     22 41 43.5 -0.6
ROSC  El Rosal         32.48 115 P     P     22 41 50.3 +0.3
      comp=Z,5.8nm,0.4s,baz=322,slow=20,SNR=3.7
ROSC                             LR    LR    22 55 10.7
      comp=Z,264nm,21.5s,baz=294,slow=37
      comp=Z,5.8nm,0.4s
NCB   Newcomb          33.54  40 P     P     22 41 57.8 -0.8
NCB                              IAmb  IAmb  22 42 01.8
      comp=Z,3.4nm,0.7s
SDV   Santo Domingo    33.82 106 P     P     22 42 01.7 +0.2
      comp=Z,3.0nm,0.3s,baz=299,slow=6.6,SNR=3.1
SDV                              LR    LR    22 56 06.7
      comp=Z,222nm,21.6s,baz=293,slow=37
      comp=Z,3.0nm,0.3s
SDV   Santo Domingo    33.82 106 P     P     22 41 59.7 -1.9
SDV                              IAmb  IAmb  22 42 06.0
      comp=Z,30nm,1.7s
VLDQ  Val d'Or         34.38  31 P     P     22 42 04.4 -1.3
HRV   Adam Dziewonsk   34.44  44 P     P     22 42 06.1 -0.2
      baz=241
TRQ   Mont Tremblant   34.66  36 P     P     22 42 07.4 -0.9
TRQ                              IAmb  IAmb  22 42 08.9
      comp=Z,11nm,1.2s
SJG   San Juan         35.27  88 LR    LR    22 57 54.9
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      comp=Z,107nm,19.8s,baz=263,slow=39
BBB   Bella Bella      36.69 335 LR    LR    22 56 41.5
      comp=Z,244nm,20.9s,baz=118,slow=35
FCC   Fort Churchill   38.53   8 P     P     22 42 40.8 -0.3
FCC                              IAmb  IAmb  22 42 42.2
      comp=Z,21nm,1.4s
NNA   Nana             41.81 139 LR    LR    22 57 06.4
      comp=Z,202nm,21.5s,baz=333,slow=31
DLBC  Dease Lake       42.23 340 LR    LR    23 01 20.3
      comp=Z,312nm,18.7s,baz=112,slow=37
YKA   Yellowknife Ar   42.36 352 P     P     22 43 11.9 -0.8
      comp=Z,3.2nm,0.8s,baz=163,slow=8.1,SNR=41
YKA                              PcP   PcP   22 45 07.5 +1.5
      comp=Z,0.5nm,0.9s,baz=168,slow=2.7,SNR=4.5
YKA                              LR    LR    23 03 04.8
      comp=Z,87nm,18.3s,baz=313,slow=39
      comp=Z,3.2nm,0.8s
YKA   Yellowknife Ar   42.36 352 P     P     22 43 12.3 -0.4
SIT   Sitka            43.12 335 P     P     22 43 21.0 +2.1
      baz=134
SCHQ  Schefferville    43.77  30 P     P     22 43 23.1 -1.2
      comp=Z,8.3nm,0.8s,baz=228,slow=5.6,SNR=4.5
SCHQ                             LR    LR    23 02 37.6
      comp=Z,75nm,21.3s,baz=200,slow=38
      comp=Z,8.3nm,0.8s
SCHQ  Schefferville    43.77  30 P     P     22 43 23.4 -0.8
SCHQ                             IAmb  IAmb  22 43 27.9
      comp=Z,9.3nm,0.8s
TGTN  Hyland Airport   44.20 343 P     P     22 43 30.2 +2.5
      baz=146
N31M  Braeburn, Yuko   46.43 339 P     P     22 43 47.1 +1.7
      baz=136
M31M  Drury Creek, Y   46.51 341 P     P     22 43 47.7 +1.7
      baz=138
HYT   Haines Junctio   46.55 338 P     P     22 43 47.0 +0.5
HYT   Haines Junctio   46.55 338 P     P     22 43 47.6 +1.2
      baz=134
N30M  Aishikik Lake    46.85 339 P     P     22 43 49.3 +0.6
      baz=135
YUK6  Outpost Mounta   46.94 338 P     P     22 43 50.6 +1.1
      baz=133
YUK4  Talbot Arm       47.31 338 P     P     22 43 54.1 +1.6
      baz=133
M30M  Minto, Yukon     47.55 340 P     P     22 43 54.6 +0.5
      baz=136
YUK3  Moose Creek      48.24 337 P     P     22 44 01.2 +1.5
      baz=131
BVCY  Beaver Creek     48.81 338 P     P     22 44 06.3 +2.4
      baz=131
M27K  Edge Creek, AK   49.13 337 P     P     22 44 07.2 +0.7
      baz=130
BMRM  Bremner River    49.31 335 P     P     22 44 08.9 +1.2
      baz=126
BCAR  Beaver Creek A   49.56 338 P     P     22 44 10.3 +0.7
M26K  Nabesna, AK      49.56 337 P     P     22 44 10.5 +0.8
      baz=128
L27K  Beaver Creek,    49.57 338 P     P     22 44 10.5 +0.8
      baz=130
N25K  Chitina, Valde   49.68 336 P     P     22 44 12.2 +1.6
      baz=126
I29M  Ogilvie Camp,    50.02 342 P     P     22 44 14.3 +1.2
      baz=136
L26K  Log Cabin Wild   50.08 338 P     P     22 44 14.8 +1.2
      baz=128
C36M  Paulatuk         50.15 351 P     P     22 44 15.5 +1.7
      baz=154
K27K  Chicken          50.28 339 P     P     22 44 16.7 +1.7
      baz=130
LPAZ  La Paz           50.63 134 P     P     22 44 18.7 -0.3
      comp=Z,0.3nm,0.4s,baz=340,slow=5.6,SNR=1.7
LPAZ                             LR    LR    23 03 58.1
      comp=Z,119nm,20.4s,baz=286,slow=34
      comp=Z,0.3nm,0.4s
PAX   Paxson           50.82 337 P     P     22 44 20.3 +1.2
      baz=126
SCRK  Sand Creek       50.90 338 P     P     22 44 19.8 -0.1
      baz=128
INK   Inuvik           51.03 346 P     P     22 44 20.9 +0.4
INK                              IAmb  IAmb  22 44 22.1
      comp=Z,7.9nm,1.1s
INK   Inuvik           51.03 346 P     P     22 44 20.7 +0.2
      baz=143,SNR=5.4
RIDG  Independent Ri   51.05 338 P     P     22 44 21.5 +0.6
RIDG  Independent Ri   51.05 338 P     P     22 44 21.2 +0.3
      baz=127,SNR=6.6
J26L  Joseph Creek     51.09 339 P     P     22 44 22.3 +1.2
      baz=129,SNR=11
KNK   Knik Glacier     51.10 334 P     P     22 44 22.6 +1.3
      baz=122
K24K  Donnelly Dome    51.42 338 P     P     22 44 26.1 +2.4
      baz=126
WAT6  Susitna Watana   51.45 336 P     P     22 44 25.1 +1.1
      baz=123
DHY   Denali Highway   51.59 336 P     P     22 44 24.5 -0.5
      baz=124
MDP   Montagnes des    51.72 100 LR    LR    23 09 20.7
      comp=Z,74nm,19.1s,baz=264,slow=40
J25K  Salcha River,    51.77 339 P     P     22 44 27.1 +0.8
J25K                             IAmb  IAmb  22 44 29.6
      comp=Z,14nm,1.6s
J25K  Salcha River,    51.77 339 P     P     22 44 27.3 +1.1
      baz=127,SNR=5.4
WAT1  Susitna Watana   51.90 336 P     P     22 44 27.3 +0.1
      baz=122
HDA   Harding Lake     52.20 338 P     P     22 44 30.5 +1.1
      baz=125
IL31                   52.39 338 P     P     22 44 30.9 +0.2
IL31                             IAmb  IAmb  22 44 32.7
      comp=Z,13nm,1.4s
ILAR  Eielson Array    52.39 338 P     P     22 44 32.2 +1.5
      comp=Z,1.7nm,1.0s,baz=143,slow=6.7,SNR=17
ILAR                             PcP   PcP   22 45 41.0 -0.7
      comp=Z,0.7nm,0.7s,baz=160,slow=2.7,SNR=6.3
ILAR                             LR    LR    23 08 02.8
      comp=Z,160nm,18.9s,baz=130,slow=38
      comp=Z,1.7nm,1.0s
ILAR  Eielson Array    52.39 338 P     P     22 44 31.2 +0.4
TRF   Thorofare Moun   52.90 336 P     P     22 44 35.5 +0.7
      baz=121,SNR=8.5
NEA2  Nenana           53.06 337 P     P     22 44 36.8 +1.1
      baz=123
P18K  Big Mountain,    53.15 330 P     P     22 44 38.3 +1.7
      baz=113
BMAR  Burnt Mountain   53.28 342 P     P     22 44 36.9 -0.5
H24K  Noodor Dome      53.35 339 P     P     22 44 38.0  0.0
H24K                             IAmb  IAmb  22 44 40.1
      comp=Z,9.9nm,1.2s
H24K  Noodor Dome      53.35 339 P     P     22 44 39.1 +1.2
      baz=125,SNR=7.3
PPLA  Purkeypile       53.37 335 P     P     22 44 39.3 +1.0
      baz=119
I23K  Minto, Yukon-K   53.47 338 P     P     22 44 39.6 +0.9
      baz=123
BPAW  Bear Paw Mtn.    53.50 336 P     P     22 44 39.5 +0.4
      baz=121
CAST  Castle Rocks     53.58 335 P     P     22 44 40.0 +0.4
      baz=119
CHNA  Chernabura Isl   53.85 324 P     P     22 44 40.6 -1.1
      baz=106
H23K  Yukon River      53.91 338 P     P     22 44 42.8 +0.8
      baz=123
N18K  Kilae Creek      53.96 331 P     P     22 44 43.3 +0.8
      baz=113
RES   Resolute Bay     54.12   3 LR    LR    23 09 04.3
      comp=Z,145nm,19.4s,baz=340,slow=38
L19K  White Mountain   54.14 333 P     P     22 44 44.4 +0.6
L19K  White Mountain   54.14 333 P     P     22 44 44.9 +1.2
      baz=115
K20K  Telida           54.34 335 P     P     22 44 46.4 +1.2
      baz=117
I21K  Tanana           54.43 337 P     P     22 44 46.6 +0.8
      baz=120
J20K  Nowinta River    54.75 335 P     P     22 44 48.5 +0.4
      baz=118,SNR=5.7
LVC   Limon Verde      54.77 140 LR    LR    23 05 53.1
      comp=Z,52nm,18.7s,baz=324,slow=34
COLD  Coldfoot         54.91 340 P     P     22 44 50.8 +1.6
      baz=124
TTA   Tatalina         54.95 334 P     P     22 44 50.3 +0.7
      baz=115
H21K  Melozitna Rive   54.96 337 P     P     22 44 50.2 +0.5
      baz=120,SNR=8.3
IMAR  Indian Mountai   55.46 338 P     P     22 44 52.3 -1.0
TOLK  Toolik Lake Re   55.51 341 P     P     22 44 53.9 +0.3
      baz=125
PPT   Papeete          59.12 233 LR    LR    23 05 10.5
      comp=Z,49nm,21.7s,baz=6.5,slow=30
PPT2  Papeete2         59.13 233 eLR   LR    23 02 09.7
```

	comp=Z,201nm,30.5s						
EUNU	**Eureka**	**59.80**	**3**	P	**P**	**22 45 23.3**	**-0.4**
TBI	**Tubuai**	**62.70**	**228**	*e*LR	LR	23 03 58.9	
	comp=Z,101nm,31.5s						
SUMG	**Summit**	**62.90**	**18**	P	**P**	**22 45 45.3**	**+0.1**
BDFB	**Brasilia**	**65.40**	**119**	P	**P**	**22 46 01.0**	**-1.1**
	comp=Z,1.7nm,0.4s,baz=28,slow=5.1,SNR=3.9						
	comp=Z,1.7nm,0.4s						
PLCA	**Paso Flores**	**68.46**	**154**	LR	LR	23 10 27.8	
	comp=Z,62nm,18.4s,baz=292,slow=31						
SHEM	**Shemya Is, Ala**	**69.18**	**320**	LR	LR	23 13 07.0	
	comp=Z,44nm,21.9s,baz=11,slow=33						
RCBR	**Riachuelo**	**71.39**	**104**	LR	LR	23 18 55.3	
	comp=Z,100nm,21.9s,baz=82,slow=37						
AFI	**Afiamalu**	**75.41**	**249**	LR	LR	23 11 59.1	
	comp=Z,53nm,18.2s,baz=110,slow=29						
SPITS	**Spitsbergen Ar**	**75.56**	**11**	LR	LR	23 20 24.7	
	comp=Z,78nm,19.3s,baz=350,slow=36						
SEY	**Seymchan**	**77.91**	**333**	LR	LR	23 24 35.4	
	comp=Z,93nm,18.2s,baz=108,slow=38						
PETK	**Petropavlovsk-**	**78.74**	**323**	P	**P**	**22 47 20.8**	**-0.6**
	comp=Z,2.6nm,1.0s,baz=51,slow=11,SNR=2.5						
PETK				LR	LR	23 16 08.6	
	comp=Z,45nm,22.0s,baz=58,slow=31						
	comp=Z,2.6nm,1.0s						
MA2	**Magadan**	**79.94**	**330**	LR	LR	23 22 41.5	
	comp=Z,61nm,20.0s,baz=58,slow=36						
TIXI	**Tiksi**	**81.15**	**345**	LR	LR	23 26 46.6	
	comp=Z,77nm,21.5s,baz=342,slow=38						
ARCES	**ARCESS Array B**	**82.92**	**16**	LR	LR	23 26 59.1	
	comp=Z,88nm,18.2s,baz=344,slow=37						
NOA	**NORSAR Array B**	**83.22**	**26**	P	**P**	**22 47 47.1**	**+1.9**
	comp=Z,0.9nm,0.9s,baz=303,slow=5.1,SNR=3.9						
NOA				LR	LR	23 26 20.4	
	comp=Z,33nm,18.8s,baz=285,slow=37						
	comp=Z,0.9nm,0.9s						
ESDC	**Sonseca Array**	**83.98**	**50**	P	**P**	**22 47 47.9**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=308,slow=5.0,SNR=1.9						
ESDC				LR	LR	23 27 05.6	
	comp=Z,40nm,18.0s,baz=296,slow=37						
	comp=Z,0.5nm,0.9s						
HFS	**Hagfors**	**84.74**	**27**	LR	LR	23 27 33.5	
	comp=Z,35nm,19.7s,baz=290,slow=37						
MDT	**Midelt**	**86.06**	**57**	LR	LR	23 25 57.8	
	comp=Z,31nm,19.2s,baz=346,slow=35						
YAK	**Yakutsk**	**87.31**	**338**	LR	LR	23 28 56.1	
	comp=Z,105nm,20.1s,baz=89,slow=37						
FINES	**FINESS Array B**	**88.67**	**22**	LR	LR	23 27 33.4	
	comp=Z,61nm,18.7s,baz=324,slow=35						
NRIK	**Noril'sk**	**89.77**	**356**	LR	LR	23 29 39.3	
	comp=Z,34nm,19.0s,baz=30,slow=36						
ASAJ	**Asahikawa**	**91.62**	**319**	LR	LR	23 22 30.2	
	comp=Z,27nm,21.7s,baz=121,slow=31						
VRAC	**Vranov**	**92.30**	**35**	LR	LR	23 31 32.2	
	comp=Z,34nm,18.1s,baz=305,slow=37						
URZ	**Urewera**	**94.71**	**231**	LR	LR	23 21 22.3	
	comp=Z,42nm,21.0s,baz=211,slow=29						
KLR	**Kul'dur**	**94.77**	**327**	LR	LR	23 32 44.5	
	comp=Z,42nm,18.4s,baz=48,slow=36						
DBIC	**Dimbokro**	**95.68**	**81**	LR	LR	23 25 36.6	
	comp=Z,56nm,21.0s,baz=322,slow=32						
OBN	**Obninsk**	**97.08**	**22**	LR	LR	23 33 25.6	
	comp=Z,14nm,18.8s,baz=248,slow=36						
DZM	**Mont Dzumac**	**97.63**	**249**	LR	LR	23 24 14.6	
	comp=Z,36nm,18.2s,baz=4.5,slow=30						
DZM	**Mont Dzumac**	**97.63**	**249**	*e*LR	LR	23 20 26.8	
	comp=Z,217nm,27.5s						
VAE	**Valguarnera**	**97.73**	**45**	LR	LR	23 34 14.4	
	comp=Z,56nm,18.1s,baz=340,slow=36						
MJAR	**Matsushiro Arr**	**98.50**	**314**	LR	LR	23 26 15.6	
	comp=Z,48nm,20.0s,baz=45,slow=31						
PZH	**PanZhiHua**	**126.99**	**331**	PKP	**PKiKP**	**22 54 25.0**	**+0.6**
ASAR	**Alice Springs**	**127.09**	**256**	PKP	**PKPdf**	**22 54 24.7**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=63,slow=2.3,SNR=5.0						

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*NEIC **11** 22:41:55.4±1.7, 29°.86S±0°.03×71°.50W±0°.07, h45^{km}±12^{km}, mb4.1/3, ML3.9(GUC), Error ellipse: s-maj=9.5km s-min=4.2km az=103.0*

*GUC **11** 22:41:55.7±0.5, 29°.92S×71°.45W, h50^{km}±1^{km}, ML3.9*

*IDC **11** 22:42:01.1±7.5, 29°.52S×71°.22W, h80^{km}±55^{km}, mb3.2/1, mbtmp3.6/4, ML3.6/3, MS2.8/3, Error ellipse: s-maj=60.9km s-min=30.7km az=37.0*

ISC 11 22:41:54.9±0.9**, 29°.84S**±0°.04×**71°.53W**±0°.06**, h43**^{km}±8^{km}**, n67,** σ1^{s}**21**/73**, mb4.3**/3**, 6C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.26**	**108**		**Pn**	**22 42 03.5**	**+0.5**
CO05				Sn	**Sn**	**22 42 09.7**	**+1.0**
CO05	**La Serena**	**0.26**	**108**	⇓*i*P	**Pn**	**22 42 03.6**	**+0.5**
CO05				*i* S	**Sn**	**22 42 08.9**	**+0.2**
GO04	**Tololo Observa**	**0.71**	**118**		**Pn**	**22 42 08.5**	**-0.3**
GO04				Sn	**Sn**	**22 42 18.5**	**-0.4**
GO04	**Tololo Observa**	**0.71**	**118**	⇑*i*P	**Pn**	**22 42 08.5**	**-0.3**
GO04				*i* S	**Sn**	**22 42 18.4**	**-0.5**
CO06	**Fray Jorge**	**0.84**	**186**		**Pn**	**22 42 10.2**	**-0.1**
CO06				Sn	**Sn**	**22 42 21.8**	**+0.3**
CO06	**Fray Jorge**	**0.84**	**186**	⇓*i*P	**Pn**	**22 42 10.2**	**-0.1**
CO06				*i* S	**Sn**	**22 42 21.7**	**+0.2**
CO06				IAML		22 42 23.9	
	comp=E,5µm,0.2s						
LCO	**Las Campanas**	**1.09**	**41**	Pn	**Pn**	**22 42 14.3**	**+0.3**
LCO				Sn	**Sn**	**22 42 29.0**	**+0.9**
LCO	**Las Campanas**	**1.09**	**41**	*e*P	**Pn**	**22 42 14.0**	**0.0**
LCO				*i* S	**Sn**	**22 42 28.8**	**+0.8**
CO01	**Juntas del Tor**	**1.25**	**97**		**Pn**	**22 42 16.5**	**+0.3**
CO01	**Juntas del Tor**	**1.25**	**97**	⇓*i*P	**Pn**	**22 42 16.6**	**+0.5**
CO01				*i* S	**Sn**	**22 42 32.6**	**+0.6**
CO01				IAML		22 42 33.1	
	comp=N,2µm,0.1s						
CO02	**Combarbal**	**1.44**	**162**		**Pn**	**22 42 18.6**	**0.0**
CO02	**Combarbal**	**1.44**	**162**	⇑*i*P	**Pn**	**22 42 18.8**	**+0.2**
CO02				*i* S	**Sn**	**22 42 36.4**	**+0.1**
AC04	**Llanos de Chal**	**1.67**	**14**		**Pn**	**22 42 22.0**	**+0.3**
AC04	**Llanos de Chal**	**1.67**	**14**	*e*P	**Pn**	**22 42 21.6**	**-0.1**
AC04				IAML		22 42 55.1	
	comp=E,800nm,0.1s						
GO03	**Copiap**	**2.50**	**27**		**Pn**	**22 42 33.7**	**+0.5**
GO03	**Copiap**	**2.50**	**27**	*e*P	**Pn**	**22 42 35.6**	**+2.4**
GO03				IAML		22 43 20.9	
	comp=N,549nm,0.3s						
AC06	**Mina Casimiro**	**2.67**	**23**		**Pn**	**22 42 34.8**	**-0.7**
AC06	**Mina Casimiro**	**2.67**	**23**	*e*P	**Pn**	**22 42 38.5**	**+3.0**
AC06				IAML		22 43 24.5	
	comp=E,387nm,0.4s						
VA06	**Catapilco**	**2.73**	**176**		**Pn**	**22 42 36.1**	**0.0**
VA06	**Catapilco**	**2.73**	**176**	*e*P	**Pn**	**22 42 36.3**	**+0.2**
VA06				IAML		22 43 22.4	
	comp=N,799nm,0.4s						
ZON	**Zonda**	**2.99**	**126**		**Pn**	**22 42 41.9**	**+2.1**
VA03	**San Esteban**	**3.04**	**164**		**Pn**	**22 42 41.8**	**+1.3**
VA03	**San Esteban**	**3.04**	**164**	⇑*e*P	**Pn**	**22 42 41.7**	**+1.2**
VA03				*i* S	**Sn**	**22 43 15.7**	**0.0**
VA03				IAML		22 43 34.7	
	comp=E,791nm,0.8s						
ROCH	**El Roble**	**3.16**	**172**	*e*P		22 42 43.2	
ROCH				*e*P	**Pn**	**22 42 40.1**	**-2.2**
ROCH				IAML		22 43 37.6	
	comp=N,370nm,0.2s						
ROCH				IAML		22 43 40.0	
	comp=N,552nm,0.3s						
ROC1	**El Roble**	**3.16**	**172**		**Pn**	**22 42 41.8**	**-0.5**
VA01	**Torpederas**	**3.18**	**182**	Pn	**Pn**	**22 42 43.4**	**+1.1**
PEL	**Peldehue**	**3.38**	**168**		**Pn**	**22 42 44.5**	**-0.6**
PEL	**Peldehue**	**3.38**	**168**	*e*P	**Pn**	**22 42 45.6**	**+0.5**
PEL				IAML		22 43 40.8	
	comp=E,208nm,0.3s						
MT02	**Curacav**	**3.43**	**175**		**Pn**	**22 42 45.4**	**-0.4**
MT02	**Curacav**	**3.43**	**175**	*e*P	**Pn**	**22 42 45.8**	**0.0**
MT02				IAML		22 43 43.4	
	comp=E,157nm,0.5s						
MT05	**Renca**	**3.61**	**169**		**Pn**	**22 42 48.4**	**+0.1**
MT05	**Renca**	**3.61**	**169**	*e*P	**Pn**	**22 42 49.1**	**+0.8**
MT05				IAML		22 43 51.9	
	comp=E,497nm,0.5s						
FCH	**Farellones**	**3.64**	**163**	⇑*e*P	**Pn**	**22 42 50.1**	**+1.1**
FCH				IAML		22 43 52.3	
	comp=E,196nm,0.2s						
AC02	**Maricunga**	**3.66**	**36**		**Pn**	**22 42 50.4**	**+0.9**
MT03	**Universidad Ad**	**3.75**	**167**		**Pn**	**22 42 50.8**	**+0.5**
MT03	**Universidad Ad**	**3.75**	**167**	⇑*i*P	**Pn**	**22 42 51.1**	**+0.8**
AC01	**Pan de Azucar**	**3.76**	**13**		**Pn**	**22 42 49.0**	**-1.5**
VA05	**Santo Domingo**	**3.81**	**181**		**Pn**	**22 42 52.5**	**+1.4**
VA05	**Santo Domingo**	**3.81**	**181**	*e*P	**Pn**	**22 42 49.5**	**-1.5**
MT09	**Talagante**	**3.96**	**173**		**Pn**	**22 42 53.6**	**+0.4**
MT09	**Talagante**	**3.96**	**173**	⇑*i*P	**Pn**	**22 42 53.9**	**+0.7**
LMEL	**Las Melosas**	**4.16**	**165**		**Pn**	**22 42 57.7**	**+1.7**
BO04	**La Punta**	**4.21**	**170**		**Pn**	**22 42 57.1**	**+0.5**
GO02	**Mina Guanaco**	**4.96**	**21**		**Pn**	**22 43 08.5**	**+1.3**
GO05	**Huala**	**5.17**	**184**	Pn	**Pn**	**22 43 08.0**	**-1.8**
PB14	**IPOC Station P**	**5.28**	**11**	Pn	**Pn**	**22 43 10.7**	**-0.9**
PB15	**IPOC Station P**	**6.85**	**16**		**Pn**	**22 43 35.3**	**+2.3**
H03N1	**Juan Fernandez**	**7.25**	**238**	T	T	22 51 05.5	
	baz=66,slow=72,SNR=1144						
H03N2	**Juan Fernandez**	**7.26**	**238**	T	T	22 51 06.2	
	baz=66,slow=72,SNR=1241						
H03N3	**Juan Fernandez**	**7.26**	**238**	T	T	22 51 04.8	
	baz=66,slow=72,SNR=983						
LVC	**Limon Verde**	**7.57**	**19**	P	**Pn**	**22 43 43.0**	**0.0**
	comp=E,0.3nm,0.3s,baz=168,slow=6.7,SNR=6.8						
LVC				S	**Sn**	**22 45 04.2**	**-3.5**
	comp=E,4.9nm,0.3s,baz=29,slow=2.3,SNR=6.7						
LVC				LR	LR	22 46 26.0	
	comp=E,48nm,20.8s,baz=208,slow=37						
	comp=E,1.3nm,0.5s						
LVC	**Limon Verde**	**7.57**	**19**	Pn	**Pn**	**22 43 43.3**	**+0.3**
PB01	**IPOC Station P**	**8.95**	**12**	Pn	**Pn**	**22 44 00.1**	**-1.6**
PLCA	**Paso Flores**	**10.90**	**176**	LR	LR	22 49 03.3	
	comp=E,69nm,18.7s,baz=354,slow=38						
TRQA	**Tornquist**	**11.40**	**139**	Pn	**Pn**	**22 44 33.9**	**-1.1**
CPUP	**Villa Florida**	**13.01**	**78**	P	**Pn**	**22 44 59.0**	**+1.9**
	comp=E,0.2nm,0.3s,baz=250,slow=15,SNR=3.5						
CPUP				S	**Sn**	**22 47 18.6**	**-1.9**
	comp=E,1.6nm,0.8s,baz=28,slow=15,SNR=1.7						
CPUP				LR	LR	22 50 00.3	
	comp=E,46nm,20.7s,baz=222,slow=38						
	comp=E,0.8nm,0.4s						
CPUP	**Villa Florida**	**13.01**	**78**	Pn	**Pn**	**22 44 55.0**	**-2.1**
LPAZ	**La Paz**	**13.84**	**14**	P	**Pn**	**22 45 11.5**	**+2.5**
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=2.3						
	comp=E,1.0nm,0.8s						
PLTB	**Pedras Altas**	**15.52**	**102**		**P**	**22 45 32.8**	**-1.8**
PLTB				IAmb	IAmb	22 45 34.9	
	comp=Z,21nm,1.3s						
QSPA	**South Pole Qui**	**60.39**	**180**	P	**P**	**22 51 59.4**	**-0.1**
QSPA				IAmb	IAmb	22 52 10.0	
	comp=Z,3.4nm,1.2s						
TXAR	**Lajitas Array**	**66.35**	**330**	P	**P**	**22 52 40.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=144,slow=7.8,SNR=3.9						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.39**	**70**	P	**P**	**22 54 12.3**	**-0.5**
	comp=Z,4.4nm,0.4s,baz=258,slow=5.6,SNR=0.3						
H11N3	**WAKE ISLAND Hy**	**126.48**	**273**	T	T	01 20 23.0	
	baz=105						
H11N1	**WAKE ISLAND Hy**	**126.49**	**273**	T	T	01 20 26.8	
	baz=105						
H11N2	**WAKE ISLAND Hy**	**126.49**	**273**	T	T	01 20 19.9	
	baz=105						
ZALV	**Zalesovo Beam**	**150.43**	**29**	PKPbc	**PKPbc**	**23 01 41.2**	**0.0**
	comp=Z,2.8nm,0.7s,baz=311,slow=3.0,SNR=12						
SONM	**Songino Array**	**161.96**	**5**	PKPab	**PKPab**	**23 02 39.1**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=336,slow=3.2,SNR=2.0						

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*NEIC **11** 22:58:54.9±1.1, 22°.5S±0°.1×179°.5W±0°.1, h576^{km}±11^{km}, mb4.3/18, Error ellipse: s-maj=21.2km s-min=16.8km az=142.0*

*IDC **11** 22:58:58.1±7.1, 22°.02S×179°.89W, h598^{km}±84^{km}, mb3.3/4, mbtmp4.3/5, Error ellipse: s-maj=102.5km s-min=37.0km az=149.0*

ISC 11 22:58:54.9±0.7**, 22°.5S**±0°.2×**179°.5W**±0°.1**, h579**^{km}**, n32,** σ0^{s}**68**/32**, mb4.3**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**9.60**	**71**	P	**P**	**23 01 08.5**	**-0.8**
MARNC	**Mare, Loyalty**	**11.58**	**272**	P	**P**	**23 01 28.2**	**-1.2**
PINNC	**Pines Island,**	**12.03**	**267**	P	**P**	**23 01 33.9**	**-0.1**
LIFNC	**LIFOU**	**12.41**	**275**	P	**P**	**23 01 37.2**	**-0.7**
DZM	**Mont Dzumac**	**12.99**	**269**	P	**P**	**23 01 44.1**	**+0.2**
	3.0nm,0.6s,baz=82,slow=17,SNR=8.9						
DZM	**Mont Dzumac**	**12.99**	**269**	P	**P**	**23 01 43.8**	**0.0**
ARMA	**Armidale**	**26.96**	**247**	P	**P**	**23 03 52.9**	**+1.3**
ARMA				IAmb	IAmb	23 04 12.5	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**26.99**	**258**	P	**P**	**23 03 51.9**	**+0.1**
EIDS				IAmb	IAmb	23 04 18.2	
	comp=Z,10nm,1.1s						
CAN	**Canberra**	**30.25**	**238**	P	**P**	**23 04 20.8**	**+0.8**
CAN				IAmb	IAmb	23 04 49.8	
	comp=Z,11nm,1.1s						
CTAO	**Charters Tower**	**31.93**	**268**	P	**P**	**23 04 34.9**	**+0.4**
TOO	**Toolangi**	**33.60**	**235**	P	**P**	**23 04 49.0**	**+0.7**
STKA	**Stephens Creek**	**35.67**	**246**	P	**P**	**23 05 06.2**	**+0.6**
	comp=Z,3.3nm,0.4s,baz=88,slow=10,SNR=12						
	comp=Z,3.3nm,0.4s						
STKA	**Stephens Creek**	**35.67**	**246**	P	**P**	**23 05 06.2**	**+0.6**
BBOO	**Buckleboo**	**40.42**	**245**	P	**P**	**23 05 43.8**	**-0.3**
AS31	**Alice Springs**	**42.71**	**259**	P	**P**	**23 06 01.7**	**-0.6**
ASAR	**Alice Springs**	**42.71**	**259**	P	**P**	**23 06 02.4**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=94,slow=8.2,SNR=50						
	comp=Z,5.5nm,0.6s						
ASAR	**Alice Springs**	**42.71**	**259**	P	**P**	**23 06 02.0**	**-0.3**
WR0	**Warramunga Arr**	**42.76**	**264**	P	**P**	**23 06 01.8**	**-0.9**
WR0				IAmb	IAmb	23 06 24.9	
	comp=Z,6.7nm,1.1s						
WRA	**Warramunga Arr**	**42.95**	**264**	P	**P**	**23 06 03.8**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=96,slow=8.4,SNR=57						
	comp=Z,2.2nm,0.3s						
WRA	**Warramunga Arr**	**42.95**	**264**	P	**P**	**23 06 03.3**	**-0.9**
FORT	**Forrest**	**47.23**	**248**	P	**P**	**23 06 36.2**	**-0.5**
FORT				IAmb	IAmb	23 06 37.6	
	comp=Z,13nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.38**	**264**	P	**P**	**23 07 07.9**	**+0.6**
FITZ				IAmb	IAmb	23 07 10.1	
	comp=Z,17nm,1.3s						
MBWA	**Marble Bar**	**56.05**	**259**	P	**P**	**23 07 39.7**	**-0.6**
MORW	**Morawa**	**57.78**	**249**	P	**P**	**23 07 51.6**	**-0.4**
MORW				IAmb	IAmb	23 07 52.9	
	comp=Z,20nm,1.5s						
QSPA	**South Pole Qui**	**67.62**	**180**	P	**P**	**23 08 54.8**	**+0.1**
BELA	**Belgrano 2**	**77.81**	**173**	P	**P**	**23 09 52.4**	**-0.3**
NVAR	**Mina Array Bea**	**83.42**	**44**	P	**P**	**23 10 23.6**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=220,slow=8.3,SNR=4.7						
	comp=Z,0.4nm,0.6s						
L19K	**White Mountain**	**86.62**	**11**	P	**P**	**23 10 36.9**	**-0.3**
L19K				IAmb	IAmb	23 10 58.3	
	comp=Z,9.2nm,1.4s						
SCM	**Sheep Creek Mo**	**87.87**	**15**	P	**P**	**23 10 44.0**	**+0.9**
SCM				IAmb	IAmb	23 10 44.9	
	comp=Z,3.6nm,0.7s						
CAST	**Castle Rocks**	**88.27**	**12**	P	**P**	**23 10 44.2**	**-0.7**
CAST				IAmb	IAmb	23 11 12.1	
	comp=Z,4.4nm,1.4s						
IMAR	**Indian Mountai**	**90.32**	**10**	P	**P**	**23 10 55.4**	**+1.1**
CLL	**Collm**	**149.59**	**344**	*i* PKPbc	**PKPbc**	**23 17 39.4**	**-0.1**
	comp=Z,4.0nm,0.7s						

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*NIED **11** 23:03:15.1, 31°.05N×129°.04E, h14^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.66; M$_{\theta\theta}$3.31; M$_{\phi\phi}$-2.65; M$_{r\theta}$-0.52; M$_{\theta\phi}$0.65; M$_{\phi r}$0.52; Fault plane solution: M$_0$3.15000×10^{14} NP1: φ$_s$219.00000°, δ75.00000°, λ-174.00000°. NP2: φ$_s$128.00000°, δ84.00000°, λ-15.00000°.*

JMA 11 23:03:15.1±0.4**, 31°.1N**±0°.6×**12°9E**±°**, h14**^{km}±3^{km}**,** **MV3.6**/26**, SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.85**	**43**	P	Pg	23 03 30.9	-0.8
JSJ				S	Sg	23 03 42.2	-0.7
JKC	**Kuchinoerabu**	**1.16**	**120**	S	Sb	23 03 51.8	0.0
JSU	**Suzuyama**	**1.30**	**69**	P	Pn	23 03 38.7	-0.2
JNN	**Nakanoshima**	**1.41**	**149**	P	Pn	23 03 40.6	+0.3
JYAK	**Yakushimahirau**	**1.51**	**122**	P	Pn	23 03 41.0	-0.6
JFU	**Fukue jima 2**	**1.62**	**351**	*e*P	Pn	23 03 43.6	+0.4
JTN	**Tanegashima 3**	**1.72**	**103**	P	Pn	23 03 44.7	+0.1
JTZ	**Takazaki**	**1.95**	**64**	P	Pn	23 03 48.6	+0.9

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*IGQ **11** 23:04:46±0.4, 0°S±2°×8°0W±°, h12^{km}*

*NEIC **11** 23:04:47.6±2.9, 0°.03N±0°.07×80°.05W±0°.09, h10^{km}±2^{km}, mb4.2/8, Error ellipse: s-maj=15.5km s-min=11.4km az=291.0*

*IDC **11** 23:04:54.0±3.2, 0°.05S×80°.25W, h88^{km}±28^{km}, mb3.6/5, mbtmp4.0/7, MS3.3/4, Error ellipse: s-maj=32.8km s-min=15.3km az=95.0*

ISC 11 23:04:46.2±1.2**, 0°.02N**±0°.04×**80°.19W**±0°.06**, h14**^{km}±8^{km}**, n86,** σ1^{s}**72**/89**, mb4.1**/8**, MS3.5**/3**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.28**	**183**	P	**Pg**	**23 04 52.0**	**-0.1**
JAMA				S	**Sg**	**23 04 56.0**	**-0.1**
MAG1	**Magdalena**	**0.43**	**102**	P	**Pn**	**23 04 57.0**	**-1.0**
CABP	**Cabo Pasado**	**0.47**	**211**	P	**Pg**	**23 04 55.0**	**-0.5**
CABP				S	**Sb**	**23 05 02.0**	**-1.1**
FLF1	**Flavio Alfaro-**	**0.51**	**137**	P	**Pb**	**23 04 58.0**	**+1.0**
FLF1				S	**Sn**	**23 05 08.0**	**+0.2**
AV21	**Acelerografo,**	**0.91**	**45**	P	**Pn**	**23 05 05.0**	**+0.5**
AV21				S	**Sn**	**23 05 20.0**	**+2.5**
BV15	**Puerto Quito-O**	**0.98**	**82**	P	**Pb**	**23 05 04.0**	**-0.9**
BV15				S	**Sn**	**23 05 21.0**	**+1.8**
AMA1	**Acelerografo,**	**1.02**	**27**	P	**Pn**	**23 05 07.0**	**+0.8**
PAC1	**Pacto, Paraso**	**1.42**	**80**	P	**Pn**	**23 05 11.0**	**-0.8**
GGPT	**Toaza - Volcan**	**1.59**	**99**	P	**Pn**	**23 05 13.0**	**-1.3**
PINO	**Pino**	**1.59**	**96**	P	**Pn**	**23 05 14.0**	**-0.6**
TERV	**Terraza Guagua**	**1.60**	**97**	P	**Pn**	**23 05 14.0**	**-0.6**
JUA2	**San Juan 2**	**1.60**	**98**	P	**Pn**	**23 05 14.0**	**-0.6**
YANA	**Yana**	**1.62**	**95**	P	**Pn**	**23 05 15.0**	**+0.1**
ILLI	**Illinizas Sur**	**1.63**	**117**	P	**Pn**	**23 05 14.0**	**-1.0**
PAST	**Pastocalle**	**1.70**	**115**	P	**Pn**	**23 05 16.0**	**+0.1**
OTAV	**Otavalo**	**1.75**	**83**	Pn	**Pn**	**23 05 16.3**	**-0.3**
OTAV				Sn	**Sn**	**23 05 36.8**	**-2.2**
CUSE	**Cuicocha Este**	**1.81**	**81**	P	**Pn**	**23 05 17.0**	**-0.4**
SUCR	**Mariscal Sucre**	**1.82**	**111**	P	**Pn**	**23 05 18.0**	**+0.5**
CAMI	**Rancho Maria**	**1.82**	**112**	P	**Pn**	**23 05 18.0**	**+0.4**
BNAS	**Cotopaxi Volca**	**1.84**	**112**	P	**Pn**	**23 05 19.0**	**+1.1**
NAS2	**Nasa**	**1.84**	**111**	P	**Pn**	**23 05 18.0**	**0.0**
SLOR	**San Lorenzo -**	**1.85**	**114**	P	**Pn**	**23 05 19.0**	**+1.0**
CUIC	**Cuicocha-Domo**	**1.85**	**81**	P	**Pn**	**23 05 18.0**	**+0.1**
CUSW	**Cuicocha Oeste**	**1.86**	**82**	P	**Pn**	**23 05 18.0**	**0.0**
BREF	**Cotopaxi Volca**	**1.88**	**111**	P	**Pn**	**23 05 19.0**	**+0.5**
BMOR	**Cotopaxi Volca**	**1.89**	**113**	P	**Pn**	**23 05 19.0**	**+0.4**
BRRN	**Barrancas-Volc**	**1.89**	**115**	P	**Pn**	**23 05 19.0**	**+0.4**
BVC2	**Cotopaxi Volca**	**1.90**	**111**	P	**Pn**	**23 05 20.0**	**+1.2**
BTAM	**Cotopaxi Volca**	**1.92**	**111**	P	**Pn**	**23 05 20.0**	**+1.0**
TAMB	**Tambo**	**1.96**	**111**	P	**Pb**	**23 05 21.0**	**-1.0**
VCES	**Cotopaxi**	**1.97**	**114**	P	**Pn**	**23 05 20.0**	**+0.3**
URCU	**Urcuqui**	**1.98**	**78**	P	**Pn**	**23 05 20.0**	**+0.3**
CHSH	**Refugio Sur-Vo**	**2.00**	**139**	P	**Pn**	**23 05 20.0**	**-0.2**
ANTG	**Antisana-Guama**	**2.00**	**105**	P	**Pn**	**23 05 21.0**	**+0.8**
ANTM	**Antisana-La Mi**	**2.04**	**106**	P	**Pn**	**23 05 22.0**	**+1.3**
PORT	**Chimborazo Vol**	**2.04**	**136**	P	**Pn**	**23 05 20.0**	**-0.8**
ANTI	**Antisana**	**2.08**	**103**	P	**Pb**	**23 05 23.0**	**-1.1**
ANTS	**Antisana-Sarah**	**2.08**	**104**	P	**Pn**	**23 05 22.0**	**+0.7**
TAMH	**Tambohuasha Ch**	**2.10**	**138**	P	**Pn**	**23 05 22.0**	**+0.6**
YAHU	**Yahuarcocha**	**2.15**	**81**	P	**Pb**	**23 05 24.0**	**-1.1**
CAYR	**Refugio Cayamb**	**2.18**	**90**	P	**Pb**	**23 05 25.0**	**-0.9**
JUI6	**Juive**	**2.24**	**130**	P	**Pn**	**23 05 25.0**	**+1.8**
RETU	**Refugio**	**2.27**	**130**	P	**Pb**	**23 05 26.0**	**-1.4**
BMAS	**Trigal station**	**2.28**	**131**	P	**Pb**	**23 05 26.0**	**-1.5**
CHMA	**Chilma**	**2.29**	**69**	P	**Pn**	**23 05 24.0**	**+0.2**
LNGL	**El Angel-Carch**	**2.30**	**72**	P	**Pn**	**23 05 26.0**	**+1.8**
ARRY	**Arrayan**	**2.30**	**131**	P	**Pn**	**23 05 26.0**	**+1.9**
CTUM2	**Tumaco**	**2.31**	**39**	*e*P	**Pn**	**23 05 24.7**	**+0.8**
TUMC	**Tumaco**	**2.31**	**39**	Pn	**Pn**	**23 05 25.2**	**+1.3**
ECEN	**Cerro Negro**	**2.36**	**70**	P	**Pn**	**23 05 27.0**	**+1.9**
CHL1	**Volc¡n Chiles**	**2.37**	**71**	P	**Pn**	**23 05 27.0**	**+1.8**
CHL2	**Volc¡n Chiles**	**2.40**	**71**	P	**Pn**	**23 05 27.0**	**+1.4**
CMBC	**Cumbal**	**2.54**	**69**	*e*P	**Pb**	**23 05 31.6**	**-0.2**
GCUF	**Volcan Galeras**	**3.09**	**67**	*e*P	**Pb**	**23 05 38.6**	**-2.7**
CRUC	**La Cruz**	**3.58**	**65**	*e*P	**Pn**	**23 05 43.8**	**+2.0**
GR1C	**Gorgona, Isla**	**3.59**	**34**	*e*P	**Pn**	**23 05 40.3**	**-1.2**
SOTA	**Rioblanco**	**4.15**	**60**	*e*P	**Pn**	**23 05 51.7**	**+2.0**
PCON	**Cinco Dias**	**4.43**	**59**	*e*P	**Pn**	**23 05 56.4**	**+2.8**
MARP	**Paez Belalcaza**	**5.08**	**56**	*e*P	**Pn**	**23 06 05.0**	**+2.8**
GARC	**Garzon, Huila**	**5.17**	**65**	*e*P	**Pn**	**23 06 06.5**	**+3.0**
YOTC	**Yotoco, Valle**	**5.50**	**44**	*e*P	**Pn**	**23 06 08.5**	**+0.6**
PRAC	**Prado**	**6.45**	**55**	*e*P	**Pn**	**23 06 21.3**	**+0.5**
ANIL	**Santa Ana**	**6.53**	**47**	*e*P	**Pn**	**23 06 26.8**	**+4.6**
MACC	**Macarena, Meta**	**6.68**	**72**	*e*P	**Pn**	**23 06 26.7**	**+2.6**
CBOC	**Ciudad Bolivar**	**7.15**	**36**	*e*P	**Pn**	**23 06 33.2**	**+2.6**
ATAH	**Atahualpa**	**7.33**	**166**	P	**Pn**	**23 06 36.8**	**+3.4**
	6.1nm,0.6s,baz=6.6,slow=11,SNR=7.2						
ATAH				S	**Sn**	**23 08 01.6**	**+4.9**
	6.5nm,0.6s,baz=342,slow=18,SNR=2.4						
ATAH				LR	LR	23 09 27.6	
	comp=Z,120nm,19.9s,baz=333,slow=38						
ROSC	**El Rosal**	**7.57**	**51**	P	Pn	23 06 44.2	+7.7
	15nm,0.5s,baz=92,slow=18,SNR=3.5						
ROSC				S	**Sn**	**23 08 08.9**	**+6.4**
	6.8nm,0.3s,baz=115,slow=19,SNR=1.7						
ROSC	**El Rosal**	**7.57**	**51**	Pn	**Pn**	**23 06 38.2**	**+1.6**
PTBC	**PUERTO BERRIO,**	**8.64**	**41**	*e*P	**Pn**	**23 06 53.4**	**+2.4**
ZARC	**Zaragoza, Cauc**	**9.13**	**35**	Pn	**Pn**	**23 07 01.3**	**+3.6**
ZARC	**Zaragoza, Cauc**	**9.13**	**35**	*e*P	Pn	23 07 04.6	+6.9
BAUV	**El Baul**	**15.00**	**53**	Pn	**Pn**	**23 08 18.3**	**+0.3**
BIRV	**Birongo**	**17.31**	**53**	Pn	**Pn**	**23 08 46.0**	**-1.6**
BIRV				IAmb	IAmb	23 09 07.7	
	comp=Z,13nm,1.0s						
LPAZ	**La Paz**	**20.10**	**144**	P	**P**	**23 09 21.0**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=324,slow=11,SNR=12						
	comp=Z,3.0nm,0.8s						
LPAZ	**La Paz**	**20.10**	**144**	P	**P**	**23 09 20.7**	**+0.3**
PB11	**IPOC Station P**	**22.20**	**153**	P	**P**	**23 09 43.8**	**+1.2**
PB11				IAmb	IAmb	23 09 45.5	
	comp=Z,11nm,0.8s						
PB08	**IPOC Station P**	**22.77**	**152**	P	**P**	**23 09 47.2**	**-1.6**
PB08				IAmb	IAmb	23 10 08.4	
	comp=Z,4.7nm,0.9s						
MDP	**Montagnes des**	**27.97**	**79**	LR	LR	23 22 03.6	
	comp=Z,113nm,19.2s,baz=235,slow=37						
CPUP	**Villa Florida**	**34.23**	**142**	LR	LR	23 27 50.4	
	comp=Z,92nm,18.4s,baz=4.5,slow=40						
BDFB	**Brasilia**	**35.38**	**118**	P	**P**	**23 11 42.3**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=169,slow=22,SNR=2.2						
	comp=Z,2.1nm,0.7s						
TKL	**Tuckaleechee C**	**35.61**	**355**	LR	LR	23 26 14.8	
	comp=Z,24nm,18.6s,baz=178,slow=36						
PLCA	**Paso Flores**	**41.50**	**169**	P	**P**	**23 12 31.9**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=340,slow=10,SNR=7.2						
	comp=Z,2.4nm,0.7s						
YKA	**Yellowknife Ar**	**67.46**	**343**	P	**P**	**23 15 40.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=135,slow=6.0,SNR=20						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**79.40**	**50**	P	**P**	**23 16 50.8**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=270,slow=5.3,SNR=3.3						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.09**	**77**	P	**P**	**23 17 06.1**	**-1.0**
	comp=Z,10nm,0.6s,baz=282,slow=6.1,SNR=2.0						
QSPA	**South Pole Qui**	**90.07**	**180**	P	**P**	**23 17 45.8**	**+0.2**
QSPA				IAmb	IAmb	23 18 12.9	
	comp=Z,2.2nm,1.2s						

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*ANF **11** 23:07:26.1±0.3, 36°.39N×97°.33W, h5^{km}, ML3.3/7, Error ellipse: s-maj=3.9km s-min=2.6km az=138.0*

*TUL **11** 23:07:26.2±0.4, 36°.40N±0°.02×97°.32W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg2.9/79(NEIC), Error ellipse: s-maj=2.5km s-min=1.6km az=218.0*

*NEIC **11** 23:07:27.0±0.5, 36°.39N±0°.02×97°.32W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.6km s-min=1.7km az=218.0*

ISC 11 23:07:25.8±1.3**, 36°.39N**±0°.03×**97°.34W**±0°.03**, h1**^{km}±12^{km}**, n73,** σ0^{s}**74**/56**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.85**	**51**	Pg	**Pg**	**23 07 42.3**	**+0.3**
T35B	**Sooner Cattle**	**0.85**	**51**	P	**Pg**	**23 07 42.3**	**+0.3**
	baz=232,SNR=140						
T35B				S	**Sg**	**23 07 53.5**	**+0.4**
	baz=232						
OKCFA	**Oklahoma City**	**0.97**	**185**		**Pg**	**23 07 44.8**	**+0.3**
OKCFA	**Oklahoma City**	**0.97**	**185**	P	**Pg**	**23 07 44.9**	**+0.4**
	baz=6.0,SNR=11						
OKCFA				S	**Sb**	**23 07 59.0**	**+0.2**
	baz=6.0						
OKCSW	**OKLAHOMA CITY**	**0.98**	**185**		**Pg**	**23 07 45.0**	**+0.4**
FNO	**Franklin**	**1.13**	**183**		**Pg**	**23 07 47.5**	**+0.1**
TUL1	**Leonard**	**1.34**	**110**		**Pn**	**23 07 50.6**	**-0.9**
TUL1	**Leonard**	**1.34**	**110**	P	**Pn**	**23 07 50.7**	**-0.9**
	baz=292,SNR=115						
TUL1				S	**Sg**	**23 08 08.8**	**+0.1**
	baz=292						
TUL1	**Leonard**	**1.34**	**110**	P	**Pn**	**23 07 50.7**	**-0.9**
	baz=292						

TUL1				S	**Sg**	**23 08 08.8**	**+0.1**
	baz=292						
U32A	**Winter Ranch,**	**1.34**	**270**		**Pn**	**23 07 51.1**	**-0.6**
U32A	**Winter Ranch,**	**1.34**	**270**	P	**Pn**	**23 07 51.3**	**-0.4**
	baz=89,SNR=54						
U32A				S	**Sn**	**23 08 10.0**	**-0.3**
	baz=89						
X34A	**Smith Ranch, M**	**1.83**	**193**		**Pb**	**23 07 59.7**	**-0.3**
X34A				IAmb_Lg		23 08 24.0	
	comp=Z,50nm,0.7s						
WMOK	**Wichita Mounta**	**2.02**	**216**		**Pn**	**23 08 01.6**	**+0.6**
WMOK				IAmb_Lg		23 08 35.5	
	comp=Z,37nm,0.8s						
WMOK	**Wichita Mounta**	**2.02**	**216**	P	**Pn**	**23 08 01.6**	**+0.6**
	baz=35,SNR=85						
WMOK	**Wichita Mounta**	**2.02**	**216**	P	**Pn**	**23 08 01.9**	**+0.9**
	baz=35						
WMOK				S	**Sb**	**23 08 29.2**	**+0.2**
	baz=35						
R32A	**Long Quarter,**	**2.31**	**332**		**Pn**	**23 08 05.7**	**+0.7**
X37A	**Clayton**	**2.41**	**138**		**Pn**	**23 08 07.0**	**+0.8**
HHAR	**Hobbs**	**2.75**	**91**		**Pn**	**23 08 10.6**	**-0.4**
KSU1	**Kansas State U**	**2.77**	**12**		**Pn**	**23 08 11.6**	**+0.2**
Z35A	**Perchaven, San**	**3.05**	**179**		**Pn**	**23 08 15.2**	**+0.1**
CBKS	**Cedar Bluff**	**3.08**	**323**		**Pn**	**23 08 15.7**	**0.0**
CBKS				IAmb_Lg		23 09 12.3	
	comp=Z,34nm,0.9s						
CBKS	**Cedar Bluff**	**3.08**	**323**	S	**Sb**	**23 09 00.4**	**+0.8**
	baz=141						
W39A	**Magazine**	**3.12**	**111**		**Pn**	**23 08 16.7**	**+0.6**
W39A				IAmb_Lg		23 09 09.2	
	comp=Z,27nm,0.7s						
S39A	**Bolivar**	**3.47**	**67**		**Pn**	**23 08 21.3**	**+0.5**
S39A	**Bolivar**	**3.47**	**67**	P	**Pn**	**23 08 21.4**	**+0.5**
	baz=249,SNR=22						
MIAR	**Mount Ida**	**3.58**	**120**	Pn	**Pn**	**23 08 23.1**	**+0.8**
MIAR				IAmb_Lg		23 09 27.1	
	comp=Z,25nm,0.8s						
MIAR	**Mount Ida**	**3.58**	**120**	P	**Pn**	**23 08 23.2**	**+0.8**
	baz=302,SNR=15						
MIAR	**Mount Ida**	**3.58**	**120**	P	**Pn**	**23 08 23.2**	**+0.8**
	baz=302						
U40A	**Yellville**	**3.62**	**89**		**Pn**	**23 08 23.2**	**+0.2**
AMTX	**Amarillo**	**3.84**	**248**		**Pn**	**23 08 27.5**	**+1.4**
AMTX				IAmb_Lg		23 09 32.7	
	comp=Z,35nm,0.7s						
AMTX	**Amarillo**	**3.84**	**248**	S	**Sg**	**23 09 26.3**	**-2.9**
	baz=66						
X40A	**Basin Creek Fa**	**4.14**	**116**		**Pn**	**23 08 30.8**	**+0.7**
X40A				IAmb_Lg		23 09 36.8	
	comp=Z,21nm,0.7s						
MGMO	**Mountain Grove**	**4.14**	**78**		**Pn**	**23 08 31.1**	**+0.9**
MGMO				IAmb_Lg		23 09 35.6	
	comp=Z,22nm,0.9s						
ABTX	**Abilene, Hawle**	**4.21**	**208**	S	**Sn**	**23 09 21.9**	**+1.0**
	baz=26						
WHAR	**Wooly Hollow**	**4.25**	**103**		**Pn**	**23 08 31.5**	**0.0**
WHAR				IAmb_Lg		23 09 45.8	
	comp=Z,21nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.25**	**95**		**Pn**	**23 08 32.3**	**+0.7**
FCAR				IAmb_Lg		23 09 40.2	
	comp=Z,31nm,0.9s						
W41B	**Gary Mavity, V**	**4.31**	**105**		**Pn**	**23 08 32.1**	**-0.3**
N33A	**J Bar K, Exete**	**4.35**	**359**	IAmb_Lg		23 09 54.1	
	comp=Z,18nm,0.7s						
UALR	**University of**	**4.38**	**110**	IAmb_Lg		23 09 45.7	
	comp=Z,25nm,0.8s						
WHTX	**Lake Whitney,**	**4.38**	**181**	Pn	**Pn**	**23 08 34.5**	**+1.0**
WLAR	**White Oak Lake**	**4.39**	**127**	IAmb_Lg		23 09 47.1	
	comp=Z,27nm,0.8s						
P38A	**Dawn**	**4.41**	**42**	IAmb_Lg		23 09 55.7	
	comp=Z,22nm,0.7s						
R40A	**Maddies Statio**	**4.46**	**63**		**Pn**	**23 08 34.5**	**-0.1**
R40A				IAmb_Lg		23 09 47.0	
	comp=Z,42nm,0.8s						
R40A	**Maddies Statio**	**4.46**	**63**	P	**Pn**	**23 08 35.0**	**+0.4**
	baz=246,SNR=9.3						
237A	**Washetta, Mont**	**4.55**	**163**	Pn	**Pn**	**23 08 36.0**	**+0.2**
N35A	**Tabor**	**4.66**	**16**		**Pn**	**23 08 37.3**	**0.0**
N35A				IAmb_Lg		23 10 05.9	
	comp=Z,44nm,0.8s						
Z41A	**Richland Creek**	**4.86**	**129**	Pn	**Pn**	**23 08 39.8**	**-0.2**
Z41A				IAmb_Lg		23 10 06.6	
	comp=Z,22nm,0.9s						
Z41A	**Richland Creek**	**4.86**	**129**	S	**Sn**	**23 09 35.1**	**-1.9**
	baz=312						
KSCO	**Kaye Shedlock'**	**4.95**	**304**		**Pn**	**23 08 41.6**	**+0.3**
KSCO				IAmb_Lg		23 10 17.2	
	comp=Z,24nm,1.1s						
LCAR	**Lake Charles**	**5.01**	**92**		**Pn**	**23 08 41.8**	**-0.2**
LCAR				IAmb_Lg		23 10 02.4	
	comp=Z,24nm,0.9s						
BGNE	**Belgrade**	**5.06**	**353**		**Pn**	**23 08 42.1**	**-0.6**
BGNE				IAmb_Lg		23 10 16.6	
	comp=Z,37nm,0.9s						
CCM	**Cathedral Cave**	**5.14**	**69**		**Pn**	**23 08 43.3**	**-0.6**
CCM				IAmb_Lg		23 10 08.5	
	comp=Z,33nm,0.9s						
P40A	**Paris**	**5.23**	**51**	IAmb_Lg		23 10 11.8	
	comp=Z,35nm,0.8s						
N38A	**Joes South For**	**5.45**	**35**	Pn	**Pn**	**23 08 48.5**	**+0.3**
PBMO	**Poplar Bluff**	**5.57**	**84**	IAmb_Lg		23 10 29.6	
	comp=Z,26nm,0.8s						
435B	**Jarrell**	**5.59**	**182**	IAmb_Lg		23 10 31.5	
	comp=Z,12nm,0.7s						
T25A	**Trinidad**	**5.73**	**280**		**Pn**	**23 08 52.6**	**+0.4**
T25A				IAmb_Lg		23 10 38.9	
	comp=Z,16nm,0.8s						
OGNE	**Ogallala**	**5.85**	**323**	IAmb_Lg		23 10 41.5	
	comp=Z,26nm,0.7s						
JCT	**Junction City**	**6.24**	**200**	IAmb_Lg		23 10 49.6	
	comp=Z,14nm,0.8s						
LNXT	**Lenox**	**6.35**	**90**	IAmb_Lg		23 10 46.2	
	comp=Z,30nm,0.7s						
SCIA	**State Center**	**6.38**	**29**	IAmb_Lg		23 11 04.9	
	comp=Z,21nm,0.8s						
SIUC	**Southern Illin**	**6.63**	**76**	IAmb_Lg		23 11 01.6	
	comp=Z,27nm,0.8s						
Q24A	**Divide**	**6.71**	**295**	IAmb_Lg		23 11 04.7	
	comp=Z,14nm,0.8s						
L40A	**Anamosa**	**7.39**	**38**	IAmb_Lg		23 11 27.3	
	comp=Z,21nm,0.9s						
PHWY	**Pilot Hill**	**8.01**	**310**	IAmb_Lg		23 11 46.0	
	comp=Z,14nm,1.0s						
N23A	**Red Feather La**	**8.10**	**306**	IAmb_Lg		23 11 52.6	
	comp=Z,16nm,0.8s						
I37A	**Lemond, Waseca**	**8.19**	**20**	IAmb_Lg		23 11 56.4	
	comp=Z,10nm,0.9s						
JFWS	**Jewell Farm**	**8.51**	**38**	IAmb_Lg		23 12 09.0	
	comp=Z,15nm,0.7s						
M44A	**Midewin, Midew**	**8.80**	**53**	IAmb_Lg		23 12 04.4	
	comp=Z,17nm,0.7s						
I40A	**Norwalk**	**9.09**	**32**	IAmb_Lg		23 12 21.5	
	comp=Z,9.2nm,0.7s						
K43A	**Burlington**	**9.39**	**45**	IAmb_Lg		23 12 34.1	
	comp=Z,15nm,0.9s						
K22A	**Casper**	**9.46**	**314**	IAmb_Lg		23 12 37.0	
	comp=Z,7.8nm,0.8s						
I42A	**Draeger Farm,**	**9.88**	**38**	IAmb_Lg		23 13 01.7	
	comp=Z,7.7nm,0.8s						

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*NEIC **11** 23:29:16.2±1.2, 20°.4S±0°.1×178°.0W±0°.1, h540^{km}±11^{km}, mb4.3/20, Error ellipse: s-maj=21.8km s-min=17.1km az=190.0*

*IDC **11** 23:29:19.7±5.9, 20°.24S×178°.28W, h576^{km}±65^{km}, mb3.0/6, mbtmp4.0/7, Error ellipse: s-maj=122.1km s-min=27.0km az=153.0*

ISC 11 23:29:15.6±0.6, **20°.4S**±0°.2×**178°.05W**±0°.10, **h534**^{km}, **n35**, σ**0^{s}.79**/36, **mb4.2**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.76**	**82**	P	**P**	**23 31 09.9**	**-0.6**
MARNC	**Mare, Loyalty**	**13.05**	**263**	P	**P**	**23 32 05.8**	**+0.8**
PINNC	**Pines Island,**	**13.68**	**258**	P	**P**	**23 32 12.7**	**+1.1**
DZM	**Mont Dzumac**	**14.56**	**261**	P	**P**	**23 32 21.4**	**+0.6**
	3.6nm,0.6s,baz=90,slow=19,SNR=6.5						
DZM	**Mont Dzumac**	**14.56**	**261**	P	**P**	**23 32 20.9**	**+0.1**
BFZ	**Birch Farm**	**20.82**	**192**	P	**P**	**23 33 20.7**	**+1.0**
EIDS	**Eidsvold**	**28.83**	**254**	P	**P**	**23 34 31.0**	**0.0**
EIDS				IAmb	IAmb	23 34 45.4	
	comp=Z,19nm,1.4s						
CTAO	**Charters Tower**	**33.45**	**264**	P	**P**	**23 35 10.9**	**+0.3**
COEN	**Coen**	**37.52**	**273**	P	**P**	**23 35 45.2**	**+0.7**
COEN				IAmb	IAmb	23 35 46.8	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**37.80**	**244**	P	**P**	**23 35 46.4**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=89,slow=13,SNR=4.3						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**37.80**	**244**	P	**P**	**23 35 46.4**	**-0.1**
BBOO	**Buckleboo**	**42.56**	**243**	P	**P**	**23 36 24.0**	**-0.6**
BBOO				IAmb	IAmb	23 36 37.2	
	comp=Z,22nm,1.4s						
WR0	**Warramunga Arr**	**44.38**	**262**	P	**P**	**23 36 38.4**	**-0.5**
WR0				IAmb	IAmb	23 36 40.0	
	comp=Z,4.5nm,0.8s						
AS31	**Alice Springs**	**44.50**	**257**	P	**P**	**23 36 39.4**	**-0.5**
ASAR	**Alice Springs**	**44.50**	**257**	P	**P**	**23 36 40.0**	**+0.2**
	comp=Z,6.8nm,0.6s,baz=97,slow=7.6,SNR=66						
ASAR				PcP	**PcP**	**23 38 11.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=106,slow=3.8,SNR=2.4						
	comp=Z,6.8nm,0.6s						
ASAR	**Alice Springs**	**44.50**	**257**	P	**P**	**23 36 39.1**	**-0.7**
WB2	**Warramunga Arr**	**44.56**	**262**	P	**P**	**23 36 40.2**	**-0.1**
WB2				IAmb	IAmb	23 36 40.9	
	comp=Z,7.2nm,0.9s						
WRA	**Warramunga Arr**	**44.57**	**262**	P	**P**	**23 36 40.1**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=96,slow=7.6,SNR=40						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**44.57**	**262**	P	**P**	**23 36 39.8**	**-0.6**
MTN	**Manton Dam**	**49.11**	**270**	P	**P**	**23 37 14.6**	**-0.1**
FORT	**Forrest**	**49.30**	**247**	P	**P**	**23 37 15.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.99**	**262**	P	**P**	**23 37 42.7**	**-0.1**
FITZ				IAmb	IAmb	23 37 54.3	
	comp=Z,19nm,1.4s						
PSA00	**Pilbara Seismi**	**57.65**	**257**	P	**P**	**23 38 14.5**	**-0.8**
PSA00				IAmb	IAmb	23 38 20.5	
	comp=Z,29nm,1.2s						
MBWA	**Marble Bar**	**57.83**	**257**	P	**P**	**23 38 15.6**	**-0.9**
MBWA				IAmb	IAmb	23 38 22.5	
	comp=Z,49nm,1.5s						
MORW	**Morawa**	**59.83**	**248**	P	**P**	**23 38 29.5**	**-0.3**
MORW				IAmb	IAmb	23 38 35.3	
	comp=Z,16nm,1.4s						
CASY	**Casey**	**64.06**	**205**	P	**P**	**23 38 56.2**	**-0.4**
QSPA	**South Pole Qui**	**69.70**	**180**	P	**P**	**23 39 31.9**	**+0.3**
NVAR	**Mina Array Bea**	**80.96**	**43**	P	**P**	**23 40 35.6**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=240,slow=7.2,SNR=2.1						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**87.03**	**57**	P	**P**	**23 41 05.8**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=213,slow=6.5,SNR=3.5						
	comp=Z,0.3nm,0.8s						
H21K	**Melozitna Rive**	**87.89**	**10**		**P**	**23 41 07.6**	**-0.2**
H21K				IAmb	IAmb	23 41 08.7	
	comp=Z,3.1nm,1.4s						
IMAR	**Indian Mountai**	**88.03**	**10**	P	**P**	**23 41 08.7**	**+0.3**
PDAR	**Pinedale Array**	**88.90**	**43**	P	**P**	**23 41 14.1**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=213,slow=6.5,SNR=2.4						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**88.90**	**43**	P	**P**	**23 41 13.6**	**+0.3**
RWWY	**Rawlins**	**89.92**	**45**		**P**	**23 41 19.4**	**+1.3**
AKASG	**Malin Array Be**	**142.87**	**331**	PKP	**PKPdf**	**23 47 45.2**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=43,slow=4.4,SNR=4.1						

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*JMA **11** 23:30:21.7±0.2, 32°N±2°×13°8E±°, h416^{km}, MV3.9/49, NEAR TORISHIMA IS*

*IDC **11** 23:30:23.6±0.7, 31°.96N×137°.82E, h384^{km}±6^{km}, mb3.3/21, mbtmp4.1/26, Error ellipse: s-maj=13.4km s-min=9.7km az=70.0*

ISC 11 23:30:24.7±0.5, **32°.02N**±0°.08×**137°.95E**±0°.07, **h400**^{km}, **n66**, σ**1^{s}.26**/69, **mb3.8**/28, **4C-6D**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.60**	**73**	P	**Pn**	**23 31 17.9**	**-0.5**
TTO1	**TONANKAI O.B.S**	**1.88**	**329**	P	**Pn**	**23 31 19.2**	**-0.2**
JHJ	**Hachijo jima 2**	**1.90**	**54**	P	**Pn**	**23 31 18.9**	**-1.0**
	87nm,0.4s,baz=206,slow=23,SNR=38						
JHJ				S	**S**	**23 32 02.2**	**-2.4**
	116nm,0.3s,baz=324,slow=22,SNR=5.2						
JHJ2	**Mitsune**	**1.92**	**55**	P	**Pn**	**23 31 19.4**	**-0.6**
TK02	**Tokai 2**	**1.93**	**355**	P	**Pn**	**23 31 19.7**	**-0.1**
JIE	**Ise**	**2.59**	**337**	P	**Pn**	**23 31 24.0**	**-0.6**
JKN2	**Miekihoku**	**2.62**	**328**	P	**Pn**	**23 31 23.9**	**-0.9**
JTNC	**Tanabenakahech**	**2.66**	**313**	P	**Pn**	**23 31 24.0**	**-1.2**
HMMJ	**Hamamatsu 2**	**2.84**	**356**	*e*P	**Pn**	**23 31 26.1**	**-0.3**
JWY	**Kouya**	**2.95**	**319**	P	**Pn**	**23 31 26.9**	**-0.6**
JNY	**Yasuok**	**3.33**	**359**	*e*P	**Pn**	**23 31 30.6**	**-0.1**
JOD2	**Odawara 2**	**3.37**	**16**	P	**Pn**	**23 31 30.1**	**-0.8**
JAI	**Aioi**	**3.43**	**302**	P	**Pn**	**23 31 30.3**	**-1.1**
JYN	**Shimob**	**3.50**	**8**	P	**Pn**	**23 31 32.1**	**-0.1**
BSO1	**Boso 1**	**3.65**	**43**	P	**Pn**	**23 31 31.1**	**-1.7**
BSO1				*e*S	**S**	**23 32 22.6**	**-5.6**
JRY	**Ryogami san**	**4.07**	**11**	P	**Pn**	**23 31 36.6**	**-0.7**
JTO	**Tosashimizu**	**4.43**	**282**	*e*P	**Pn**	**23 31 39.5**	**-1.4**
MJAR	**Matsushiro Arr**	**4.52**	**3**	P	**Pn**	**23 31 40.5**	**-1.2**
	92nm,0.7s,baz=223,slow=16,SNR=25						
JHS	**Saijyo**	**5.01**	**308**	P	**Pn**	**23 31 46.0**	**-0.8**
JNU	**Nakatsue**	**6.07**	**282**	P	**Pn**	**23 31 56.8**	**-1.3**
	27nm,0.8s,baz=78,slow=5.8,SNR=12						
CBIJ	**Chichi jima**	**6.14**	**142**	P	**Pn**	**23 31 55.0**	**-3.9**
JCJ	**Chichijima**	**6.14**	**142**	P	Pn	23 31 54.5	-4.3
	70nm,0.3s,baz=13,slow=17,SNR=28						
JCJ				S	S	23 33 07.0	-8.6
	440nm,0.4s,baz=254,slow=23,SNR=26						
JMK	**Ichinoseki**	**7.41**	**20**	P	**Pn**	**23 32 12.1**	**-0.7**
KSRS	**Korea Array**	**9.87**	**306**	P	**P**	**23 32 40.4**	**-0.3**
	5.2nm,0.7s,baz=121,slow=9.5,SNR=19						
KLR	**Kul'dur**	**17.81**	**347**	P	**P**	**23 34 06.3**	**-0.7**
	4.9nm,0.5s,baz=166,slow=10.0,SNR=16						
SONM	**Songino Array**	**28.64**	**313**	P	**P**	**23 35 46.7**	**+0.2**
	2.1nm,0.5s,baz=120,slow=8.3,SNR=25						
	2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.57**	**258**	P	**P**	**23 37 02.0**	**-0.9**
	0.7nm,0.4s,baz=58,slow=7.4,SNR=4.8						
	0.7nm,0.4s						
TIXI	**Tiksi**	**39.99**	**356**	P	**P**	**23 37 22.1**	**+0.1**
	0.8nm,0.3s,baz=91,slow=23,SNR=4.2						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**43.38**	**316**	P	**P**	**23 37 48.9**	**-0.5**
	0.8nm,0.3s,baz=94,slow=8.8,SNR=5.7						
ZALV				PcP	**PcP**	**23 39 29.1**	**-0.3**
	1.0nm,0.6s,baz=116,slow=3.6,SNR=4.7						
	0.8nm,0.3s						
ODAN	**Odare**	**44.01**	**277**	*e*P	**P**	**23 37 54.1**	**-0.9**
	22nm,0.5s						
MKAR	**Makanchi Array**	**44.55**	**306**	P	**P**	**23 37 58.5**	**-0.2**
	5.0nm,0.7s,baz=90,slow=10.0,SNR=44						
MKAR				PcP	**PcP**	**23 39 33.8**	**0.0**
	0.5nm,0.7s,baz=78,slow=5.4,SNR=2.7						
MKAR				ScP	**ScP**	**23 42 47.8**	**+0.8**
	0.8nm,0.6s,baz=76,slow=5.7,SNR=9.2						
	5.0nm,0.7s						
RAMN	**Ramite**	**44.65**	**277**	*e*P	**P**	**23 37 59.4**	**-0.6**
	22nm,0.5s						
JIRN	**Jiri**	**44.76**	**278**	*e*P	**P**	**23 38 01.0**	**-0.1**
PKI	**Pulchoki**	**45.45**	**279**	*e*P	**P**	**23 38 05.3**	**-1.0**
KKN	**Kakani**	**45.49**	**279**	*e*P	**P**	**23 38 05.7**	**-0.8**
	32nm,0.9s						
GKN	**Gorkha**	**45.96**	**279**	*e*P	**P**	**23 38 09.5**	**-0.6**
	22nm,0.7s						
DANN	**Dangsing**	**46.58**	**280**	*e*P	**P**	**23 38 14.8**	**-0.2**
	22nm,0.5s						
NRIK	**Noril'sk**	**46.73**	**338**	P	**P**	**23 38 14.1**	**-1.0**
	1.5nm,0.3s,baz=115,slow=9.2,SNR=3.9						
	1.5nm,0.3s						
KOLN	**Koldanda**	**46.90**	**280**	*e*P	**P**	**23 38 17.0**	**-0.3**
	19nm,0.9s						
PYUN	**Piuthan**	**47.30**	**280**	*e*P	**P**	**23 38 20.0**	**-0.4**
	23nm,0.6s						
WRA	**Warramunga Arr**	**51.78**	**184**	P	**P**	**23 38 53.0**	**-0.4**
	0.9nm,0.4s,baz=359,slow=7.6,SNR=14						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**55.25**	**30**	P	**P**	**23 39 18.5**	**+0.7**
	0.3nm,0.7s,baz=280,slow=5.4,SNR=2.8						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**55.51**	**185**	P	**P**	**23 39 18.8**	**-1.3**
	0.3nm,0.3s,baz=8.5,slow=13,SNR=7.4						
	0.3nm,0.3s						
DZM	**Mont Dzumac**	**60.30**	**149**	P	**P**	**23 39 53.5**	**+0.4**
	2.4nm,0.7s,baz=121,slow=18,SNR=4.0						
	2.4nm,0.7s						
STKA	**Stephens Creek**	**63.64**	**177**	P	**P**	**23 40 15.3**	**+0.6**
	2.2nm,0.7s,baz=337,slow=5.9,SNR=5.0						
	2.2nm,0.7s						
ARCES	**ARCESS Array B**	**67.67**	**339**	P	**P**	**23 40 40.4**	**+0.7**
	1.2nm,0.6s,baz=63,slow=8.2,SNR=13						
	1.2nm,0.6s						
YKA	**Yellowknife Ar**	**69.57**	**28**	P	**P**	**23 40 52.9**	**+1.5**
	0.4nm,0.6s,baz=296,slow=6.1,SNR=6.2						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**71.90**	**332**	P	**P**	**23 41 05.5**	**+0.2**
	2.6nm,0.4s,baz=68,slow=5.5,SNR=56						
	2.6nm,0.4s						
KBZ	**Khabaz**	**71.99**	**311**	P	**P**	**23 41 06.8**	**+0.7**
	4.6nm,0.8s,baz=107,slow=5.6,SNR=10						
	4.6nm,0.8s						
AKASG	**Malin Array Be**	**76.48**	**322**	P	**P**	**23 41 31.6**	**0.0**
	2.0nm,0.4s,baz=50,slow=6.5,SNR=13						
	2.0nm,0.4s						
NB2	**NORSAR Subarra**	**77.66**	**336**	P	**P**	**23 41 38.2**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**77.66**	**336**	P	**P**	**23 41 38.3**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=44,slow=5.5,SNR=6.2						
	comp=Z,0.8nm,0.6s						
SORM	**Soroca**	**78.41**	**320**	⇑P	**P**	**23 41 42.1**	**-0.1**
VLDR	**Vladesti**	**79.89**	**318**	⇓P	**P**	**23 41 50.7**	**+0.5**
BRTR	**Keskin Array B**	**79.98**	**311**	P	**P**	**23 41 51.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=147,slow=2.9,SNR=7.5						
	comp=Z,1.9nm,0.8s						
TPGR	**Topolog**	**80.28**	**317**	⇓P	**P**	**23 41 52.9**	**+0.6**
TESR	**Tescani**	**80.30**	**319**	⇓P	**P**	**23 41 52.9**	**+0.5**
NVAR	**Mina Array Bea**	**80.32**	**51**	P	**P**	**23 41 55.2**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=295,slow=6.3,SNR=4.4						
	comp=Z,0.5nm,0.7s						
BURAR	**Bucovina Array**	**80.42**	**321**	⇓P	**P**	**23 41 52.7**	**-0.4**
VRI	**Vrincioaia**	**80.64**	**319**	⇑P	**P**	**23 41 55.6**	**+1.4**
PLOR	**Plostina**	**80.69**	**319**	⇓P	**P**	**23 41 53.5**	**-1.0**
MLR	**Muntele Rosu**	**81.31**	**319**	⇓P	P	23 41 51.7	-6.1
DOPR	**Dopca**	**81.33**	**319**	⇑P	**P**	**23 41 59.5**	**+1.7**
ARR	**Arges**	**82.11**	**319**	⇑P	**P**	**23 42 03.2**	**+1.3**
PDAR	**Pinedale Array**	**83.24**	**43**	P	**P**	**23 42 10.0**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=270,slow=5.9,SNR=4.6						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**95.47**	**51**	P	**P**	**23 43 07.7**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=297,slow=4.0,SNR=2.2						
	comp=Z,0.2nm,0.7s						

IDC 11 23:40:54.5±11.0, **11°.37N**×**141°.22E**, **h0**^{km}, **mb3.6**/4, **mbtmp3.6**/4, **MS3.2**/5, **Error ellipse: s-maj=340.7km s-min=59.5km az=178.0**, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**21.69**	**357**	LR	LR	23 52 43.3	
	comp=Z,92nm,20.9s,baz=88,slow=33						
KSRS	**Korea Array**	**28.59**	**338**	LR	LR	23 56 27.4	
	comp=Z,11nm,19.5s,baz=20,slow=33						
MKAR	**Makanchi Array**	**60.66**	**318**	P	P	23 51 08.4	+0.9
	0.2nm,0.6s,baz=90,slow=5.8,SNR=2.0						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**72.09**	**25**	P	P	23 52 20.0	-0.4
	0.3nm,0.5s,baz=250,slow=6.5,SNR=5.6						
	0.3nm,0.5s						
BBB	**Bella Bella**	**81.53**	**38**	LR	LR	00 32 28.5	
	comp=Z,30nm,18.2s,baz=121,slow=38						
YKA	**Yellowknife Ar**	**86.45**	**27**	P	P	23 53 40.0	+1.1
	0.2nm,0.5s,baz=292,slow=5.0,SNR=5.1						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**91.63**	**334**	P	P	23 54 01.6	-1.8
	0.7nm,0.7s,baz=65,slow=6.6,SNR=1.8						
	0.7nm,0.7s						
HFS	**Hagfors**	**97.44**	**336**	LR	LR	00 40 05.8	
	comp=Z,27nm,19.6s,baz=142,slow=36						
NOA	**NORSAR Array B**	**97.80**	**338**	LR	LR	00 39 12.8	
	comp=Z,8.0nm,20.5s,baz=330,slow=36						

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*ISK **12** 00:18:36.9, 34°.97N×33°.49E, h27^{km}, ML4.0/32*

*MOS **12** 00:18:36.2±1.4, 34°.80N×33°.51E, h11^{km}, mb4.3/23, Error ellipse: s-maj=6.7km s-min=3.6km az=103.8*

*IDC **12** 00:18:36.8±0.7, 34°.97N×33°.56E, h0^{km}, mb4.1/19, mbtmp4.1/30, ML3.7/10, MS3.1/14, Error ellipse: s-maj=13.0km s-min=12.2km az=20.0*

*NIC **12** 00:18:37.1±0.0, 34°.91N×33°.51E, h4^{km}±2^{km}, Ml4.3/6*

*NEIC **12** 00:18:37.9±1.3, 34°.97N±0°.05×33°.51E±0°.04, h6^{km}±3^{km}, Error ellipse: s-maj=7.8km s-min=4.9km az=158.0*

*GII **12** 00:18:37.7±0.0, 35°.07N×33°.54E, h20^{km}, mb4.1/4, MD3.9/4*

*DDA **12** 00:18:38.0±0.0, 35°.15N×33°.42E, h25^{km}±1^{km}, MW4.0*

*GRAL **12** 00:18:45.9±0.6, 34°.95N×34°.71E, h166^{km}±26^{km}, MD4.1*

*HLW **12** 00:18:47.1, 34°.47N×33°.15E, h20^{km}±13^{km}, Md3.9, Ml3.9*

ISC 12 00:18:38.2±0.7, **34°.97N**±0°.02×**33°.51E**±0°.02, **h14**^{km}±4^{km}, **n425**, σ**1^{s}.81**/416, **mb4.2**/43, **MS3.1**/11, **31C-25D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVOU	**Mavrovouni**	**0.11**	**67**		**Pb**	**00 18 40.5**	**-1.7**
MVOU	**Mavrovouni**	**0.11**	**67**	⇓*i*P	**Pb**	**00 18 40.5**	**-1.7**
MVOU				S	**Sb**	**00 18 42.4**	**-2.3**
MVOU				AML	AML	00 18 43.0	
	2μm,0.8s						
MVOU				AML	AML	00 18 43.0	
	2μm,0.8s						
MVOU				AML	AML	00 18 43.2	
	1μm,0.4s						
MVOU				AML	AML	00 18 43.2	
	1μm,0.4s						
CSS	**Mathiatis**	**0.15**	**266**	PG	**Pb**	**00 18 41.0**	**-1.9**
CSS	**Mathiatis**	**0.15**	**266**		**Pb**	**00 18 40.9**	**-1.9**
CSS				Sg	**Sb**	**00 18 43.5**	**-2.4**
CSS	**Mathiatis**	**0.15**	**266**	⇑*i*P	**Pb**	**00 18 41.0**	**-1.9**
CSS				S	**Sb**	**00 18 43.6**	**-2.3**
CSS				AML	AML	00 18 43.8	
	313nm,0.6s						
CSS				AML	AML	00 18 43.8	
	313nm,0.6s						
CSS				AML	AML	00 18 44.1	
	282nm,0.3s						
CSS				AML	AML	00 18 44.1	
	282nm,0.3s						
ATHAL	**Athalassa**	**0.19**	**331**	⇑*i*P	**Pg**	**00 18 42.8**	**+0.2**
ATHAL				S	**Sg**	**00 18 47.0**	**+1.4**
ASGA	**Asgata**	**0.28**	**229**		**Pb**	**00 18 42.6**	**-2.5**
ASGA					**Sb**	**00 18 46.6**	**-3.2**
ASGA	**Asgata**	**0.28**	**229**	⇑*i*P	**Pb**	**00 18 42.6**	**-2.5**
ASGA				S	**Sb**	**00 18 46.6**	**-3.2**
ASGA				AML	AML	00 18 46.9	
	131nm,0.5s						
ASGA				AML	AML	00 18 46.9	
	131nm,0.5s						
ASGA				AML	AML	00 18 52.1	
	164nm,0.6s						
ASGA				AML	AML	00 18 52.1	
	164nm,0.6s						
LFK	**Lefkose**	**0.31**	**4**	PG	**Pb**	**00 18 44.7**	**-0.9**
LFK				SG	**Sg**	**00 18 50.6**	**+1.7**
PARAL	**Paralimni**	**0.44**	**87**	⇓*i*P	**Pg**	**00 18 46.4**	**-0.5**
PARAL				S	**Sb**	**00 18 53.7**	**-0.4**
PARAL				AML	AML	00 18 58.4	
	129nm,0.7s						
PARAL				AML	AML	00 18 58.4	
	129nm,0.7s						
PARAL				AML	AML	00 18 58.9	
	141nm,0.5s						
PARAL				AML	AML	00 18 58.9	
	141nm,0.5s						
LEF	**Lefka**	**0.53**	**286**	PG	**Pb**	**00 18 47.9**	**-1.4**
LEF	**Lefka**	**0.53**	**286**	P	**Pb**	**00 18 48.3**	**-1.0**
AKDN	**Akdeniz- Kıbrı**	**0.55**	**306**	PG	**Pb**	**00 18 48.7**	**-1.0**
SZAC	**Souni**	**0.56**	**247**	⇑*i*P	**Pb**	**00 18 47.8**	**-2.1**
SZAC				AML	AML	00 18 58.9	
	79nm,0.9s						
SZAC				AML	AML	00 18 58.9	
	79nm,0.9s						
SZAC				S	**Sn**	**00 19 00.4**	**-0.6**
SZAC				AML	AML	00 19 02.3	
	105nm,1.4s						
SZAC				AML	AML	00 19 02.3	
	105nm,1.4s						
ALFC	**Alefka**	**0.77**	**284**	⇑*i*P	**Pb**	**00 18 50.6**	**-2.8**
ALFC				S	**Sb**	**00 19 00.9**	**-2.9**
ALFC				AML	AML	00 19 04.7	
	39nm,0.6s						
ALFC				AML	AML	00 19 04.7	
	39nm,0.6s						
ALFC				AML	AML	00 19 06.9	
	31nm,0.6s						
ALFC				AML	AML	00 19 06.9	
	31nm,0.6s						
EREN	**Erenkoy**	**0.78**	**44**	PG	**Pb**	**00 18 52.1**	**-1.5**
EREN	**Erenkoy**	**0.78**	**44**	P	**Pb**	**00 18 52.0**	**-1.5**

NATA	Nata	0.80	256		Pb	00 18 51.8	-2.0
NATA	Nata	0.80	256	⇑*i*P	Pb	00 18 51.8	-2.0
NATA				S	Sn	00 19 09.8	+3.0
AKMS	Akamas	0.96	273		Pb	00 18 55.3	-1.5
AKMS	Akamas	0.96	273	⇑*e*P	Pb	00 18 55.3	-1.5
AKMS				S	Sn	00 19 13.3	+2.4
AKK2	Akkuyu-Mersin	1.16	2	PN	Pn	00 18 57.6	-2.5
AKK2				SN	Sb	00 19 12.9	-2.2
AKK1	Akkuyu-Mersin	1.17	1	PN	Pn	00 18 57.9	-2.3
AKK1				SN	Sb	00 19 13.3	-2.0
YORU	Yoruktepe-Mers	1.18	356	PN	Pn	00 18 58.3	-2.1
YORU				SN	Sb	00 19 14.2	-1.5
AKKU	Akkuyu-Mersin	1.18	2	PN	Pn	00 18 58.1	-2.3
TISA	Tisan-Mersin	1.20	7	PN	Pn	00 18 57.9	-2.7
GULN	MERSIN_Gulnar	1.21	1	P	Pn	00 18 58.2	-2.5
GULN				S	Sb	00 19 12.7	-3.7
GULN				*i* AML	AML	00 19 14.0	
	comp=N,2µm,0.3s						
GULN				*i* AML	AML	00 19 15.0	
	comp=E,1µm,0.5s						
TEKE	Tekeli-Mersin	1.21	345	PN	Pn	00 18 58.6	-2.2
YESI	Yesilovacik-Me	1.23	5	PN	Pn	00 18 58.8	-2.2
OREN	Orenkoy-Mersin	1.23	358	PN	Pn	00 18 58.7	-2.4
KARG	Kargicak-Mersi	1.24	7	PN	Pn	00 18 58.9	-2.3
KARG				SN	Sb	00 19 14.8	-2.5
TEPK	Tepekoy-MERSIN	1.25	1	PN	Pn	00 18 59.2	-2.2
IKL	Isikli	1.27	6	PN	Pn	00 18 59.2	-2.4
IKL				SN	Sn	00 19 15.5	-3.0
BERE	Bereket-Mersin	1.39	350	PN	Pn	00 19 01.2	-2.2
SILI	Silifke-Mersin	1.43	14	PN	Pn	00 19 01.7	-2.1
TEVE	Tevekalti-Mers	1.46	358	PN	Pn	00 19 02.6	-1.7
TEVE				SN	Sn	00 19 20.8	-2.5
KEBE	Keben-Mersin	1.48	6	PN	Pn	00 19 02.6	-2.0
KEBE				SN	Sn	00 19 21.5	-2.3
GAZI	Gazipasa	1.59	323	PN	Pn	00 19 03.8	-2.2
GAZI	Gazipasa	1.59	323	P	Pn	00 19 03.8	-2.2
GAZI				S	Sn	00 19 23.9	-2.6
GAZI				*i* AML	AML	00 19 28.0	
	comp=N,801nm,0.4s						
GAZI				*i* AML	AML	00 19 30.0	
	comp=E,1µm,0.6s						
ERMK	Ermenek	1.73	344	P	Pn	00 19 07.2	-1.0
ERMK				S	Sn	00 19 28.2	-2.1
MERS	Mersin	2.06	23	PN	Pn	00 19 11.0	-1.6
BHL	Bhannes	2.07	120	*e*P	Pb	00 19 13.8	-1.9
BHL				*e*S	Sn	00 19 34.2	-4.1
DQRL	Deir Qamar	2.12	126	*e*P	Pb	00 19 15.0	-1.6
DQRL				*e*S	Sn	00 19 36.5	-3.2
HWQ	Hawqa	2.13	108	*e*P	Pn	00 19 13.0	-0.5
HWQ				*e*S	Sn	00 19 33.3	-6.5
HDMB	Hadim	2.15	338	PN	Pn	00 19 12.3	-1.7
OSC2	CSNet OBS 4	2.15	209	⇓*e*P	Pn	00 19 13.5	-0.2
KRMN	Karaman	2.21	355	PN	Pn	00 19 12.8	-1.8
DED	Mersin	2.24	27	P	Pn	00 19 13.0	-2.1
ASUZ	Hatay-Arsuz	2.27	54	P	Pb	00 19 19.1	+0.1
KKBE	Karaman, Kazim	2.29	349	P	Pn	00 19 15.7	-0.1
KKBE				S	Sn	00 19 42.0	-1.8
KKBE				*i* AML	AML	00 19 49.0	
	comp=E,893nm,0.5s						
KKBE				*i* AML	AML	00 19 49.0	
	comp=N,577nm,0.6s						
HNTI	Hanita	2.34	143	Pn	Pn	00 19 15.4	-0.9
HNTI				Sn	Sn	00 19 44.1	-0.7
OSC1	CSNet OBS 1	2.36	232	*e*P	Pn	00 19 16.6	0.0
YAYL	Yayladag	2.37	63	PN	Pn	00 19 15.4	-1.4
YAYL	Yayladag	2.37	63	P	Pn	00 19 16.9	+0.1
RCY	Rachaya	2.42	127	*e*P	Pn	00 19 17.4	-0.2
SHBL	Chebaa	2.46	131	*e*P	Pb	00 19 19.2	-3.1
KEPZ	Antalya-Kepez	2.47	322	P	Pn	00 19 17.2	-0.9
KERG	Konya-Eregli	2.49	11	P	Pn	00 19 18.8	+0.3
GEM	Giv'at Ha'Em	2.51	134	Pn	Pn	00 19 18.0	-0.6
GEM				Sn	Sn	00 19 48.2	-0.8
MMA0B	Mount Meron ar	2.51	141	Pn	Pn	00 19 18.7	0.0
MMA0B				Sn	Sn	00 19 49.2	+0.1
MMAI	Mount Meron Ar	2.51	141	Pn	Pn	00 19 15.3	-3.4
	22nm,0.3s,baz=298,slow=12,SNR=93						
MMAI				Sn	Sn	00 19 47.5	-1.6
	52nm,0.3s,baz=18,slow=30,SNR=8.1						
MMAI				LR	LR	00 20 30.6	
	comp=Z,465nm,21.3s,baz=109,slow=46						
NATI	Neve Ativ	2.52	132	Pn	Pn	00 19 17.5	-1.2
GULE	Gulek	2.52	24	P	Pn	00 19 17.8	-1.2
GULE				S	Sn	00 19 49.5	-0.2
GULE				*i* AML	AML	00 20 06.0	
	comp=E,796nm,0.6s						
YURE	YUREGIR	2.53	42	P	Pb	00 19 21.4	-2.1
TAHT	Tahtakopru-Hat	2.59	56	PN	Pn	00 19 18.2	-1.6
KARA	Karaisali	2.60	28	PN	Pn	00 19 18.6	-1.4
BLGI	Bet Lehem HaGe	2.64	147	Pn	Pn	00 19 20.0	-0.4
OFRI	`Ofer	2.65	152	Pn	Pn	00 19 19.4	-1.2
OFRI				Sn	Sn	00 19 51.8	-0.7
CEYT	Ceyhan	2.73	41	PN	Pn	00 19 20.4	-1.2
SEYD	Seydisehir-KON	2.78	331	PN	Pn	00 19 21.1	-1.4
YESY	Yesilyurt	2.81	4	PN	Pn	00 19 21.9	-1.0
SEDI	Konya, Seydise	2.85	331	P	Pn	00 19 24.6	+1.1
SEDI				S	Sb	00 19 59.9	-3.9
SEDI				*i* AML	AML	00 20 03.0	
	comp=E,401nm,0.6s						
SEDI				*i* AML	AML	00 20 07.0	
	comp=N,622nm,0.7s						
AKUM	Antalya-Kumluc	2.91	298	P	Pn	00 19 24.9	+0.7
AKO	Adana	2.94	32	P	Pb	00 19 29.4	-1.0
CMRD	Camardi-Nigde	2.94	24	PN	Pn	00 19 23.4	-1.3
KMER	Konya-Meram	2.94	342	P	Pn	00 19 25.7	+1.0
KMER				S	Sn	00 20 00.8	+0.9
KMER				*i* AML	AML	00 20 02.0	
	comp=E,739nm,0.6s						
KMER				*i* AML	AML	00 20 05.0	
	comp=N,367nm,0.5s						
MMLI	Mount Malkishu	2.99	147	PN	Pn	00 19 23.9	-1.4
MMLI	Mount Malkishu	2.99	147	Pn	Pn	00 19 25.2	-0.1
MMLI				Sn	Sn	00 20 01.8	+0.8
SLTI	Sal'it	3.01	154	Pn	Pn	00 19 26.0	+0.5
SLTI				Sn	Sn	00 20 02.6	+1.2
ANTB	Antalya	3.01	311	PN	Pn	00 19 24.2	-1.3
KONT	Konya--Tatoy	3.11	343	PN	Pn	00 19 26.2	-0.7
KONT	Konya--Tatoy	3.11	343	P	Pn	00 19 28.0	+1.1
KOZT	Kozan	3.13	36	PN	Pn	00 19 26.0	-1.2
HMDT	Nahal Hemdat	3.19	148	Pn	Pn	00 19 27.6	-0.4
HMDT				Sn	Sn	00 20 06.4	+0.5
KORT	Korkueli	3.27	309	P	Pn	00 19 29.2	0.0
BUCA	Burdur, Bucak-	3.35	315	P	Pn	00 19 30.0	-0.3
KAMA	Osmaniye	3.38	48	P	Pn	00 19 31.6	+0.9
ELL	Elmali	3.42	302	Pn	Pn	00 19 32.4	+1.1
ELL	Elmali	3.42	302	P	Pn	00 19 32.4	+1.1
AKAS	Kas	3.42	293		Pn	00 19 31.9	+0.6
UJAP	Al Uja	3.43	151	PN	Pn	00 19 30.3	-0.9
YAHY	KAYSERI_Yahyal	3.46	25	P	Pn	00 19 33.3	+1.5
YAHY				S	Sn	00 20 11.3	-1.3
YAHY				*i* AML	AML	00 20 25.0	
	comp=E,90nm,1.1s						
DOGA	KONYA_Doganhis	3.46	335	P	Pn	00 19 32.3	+0.5
ANDN	Andirin	3.47	41	P	Pn	00 19 33.8	+1.8
AMAZ	Amatzia	3.63	161	Pn	Pn	00 19 34.3	+0.3
AMAZ				Sn	Sn	00 20 17.7	+1.0
HCB	Kahramanmara	3.63	48	P	Pn	00 19 33.5	-0.5
SAIM	ADANA	3.65	34	P	Pb	00 19 37.8	-4.8
AKSY	AKSARAY - Alti	3.68	3	P	Pn	00 19 37.7	+2.9
KDHN	Kadinhani	3.71	343	P	Pn	00 19 35.6	+0.3
BAGO	Egridir - ISPA	3.73	325	P	Pn	00 19 38.2	+2.8
ISP	Isparta	3.73	321	Pn	Pn	00 19 37.3	+1.8
ISP	Isparta	3.73	321	P	Pn	00 19 37.3	+1.8
DSI	Dead Sea	3.74	155	Pn	Pn	00 19 35.7	+0.2
DSI				Sn	Sn	00 20 20.3	+0.9
YVAC	Isparta, Yalva	3.76	332	P	Pn	00 19 37.0	+1.0
KAHM	Kahramanmaras,	3.79	47	P	Pn	00 19 38.7	+2.5
YTIR	Yattir	3.84	159	Pn	Pn	00 19 37.3	+0.2
YTIR				Sn	Sn	00 20 22.6	+0.5
BRDR	BURDUR-Merkez	3.89	315	P	Pn	00 19 39.7	+2.0
GOLH	Golhisar	3.92	306	P	Pb	00 19 41.7	-5.4
FETY	Fethiye	3.96	296	P	Pn	00 19 42.1	+3.5
ASF	Jabal al Asfar	3.97	134	Pn	Pn	00 19 38.4	-0.5
	7.5nm,0.3s,baz=321,slow=11,SNR=21						
ASF				Sn	Sn	00 20 27.1	+1.7
	3.6nm,0.3s,baz=240,slow=20,SNR=3.0						
	10nm,0.3s						
CAEL	Denizli, Camel	4.02	304	P	Pb	00 19 43.2	-5.7
GHAJ	Ghor Haditha	4.04	154	Pn	Pn	00 19 40.2	+0.4
GHAJ	Ghor Haditha	4.04	154	Pn	Pn	00 19 40.4	+0.7
KZIT	Kziot	4.12	169	Pn	Pn	00 19 41.1	+0.3
KZIT				Sn	Sn	00 20 29.3	+0.4
KIRS	Kirsehir-Merke	4.17	4	P	Pn	00 19 41.4	-0.1
KZIL	AFYON_Kizioren	4.25	321	P	Pn	00 19 44.2	+1.5
BNN	Bunyan	4.30	25	Pn	Pn	00 19 42.4	-1.0
TAVA	DENIZLI_Tavas	4.47	305	P	Pn	00 19 48.0	+2.3
TAVA				S	Sn	00 20 39.3	+1.7
TAVA				*i* AML	AML	00 21 00.0	
	comp=N,132nm,1.2s						
SIRC	Yozgat	4.55	16	P	Pn	00 19 51.1	+4.3
SURC	SANLIURFA_SURC	4.56	64	P	Pn	00 19 48.6	+1.7
ARG	Arkhangelos	4.56	287	P	Pn	00 19 47.4	+0.6
ARG				S	Sn	00 20 33.6	-6.0
ARG	Arkhangelos	4.56	287	Pn	Pn	00 19 47.4	+0.6
ARG	Arkhangelos	4.56	287	P	Pn	00 19 47.4	+0.6
BBAL	Bala	4.57	356	P	Pn	00 19 46.2	-0.9
AFYO	Afyonkarahisar	4.59	327	P	Pn	00 19 48.3	+0.9
PASA	Karahalli, USA	4.67	317	P	Pn	00 19 47.6	-0.8
CDAG	Cicekdag	4.69	8	P	Pn	00 19 49.7	+0.9
BRTR	Keskin Array B	4.75	1	Pn	Pn	00 19 50.8	+1.3
	2.1nm,0.3s,baz=190,slow=14,SNR=34						
	14nm,0.7s						
BRTR	Keskin Array B	4.75	1	Pn	Pn	00 19 50.1	+0.6
BR131	Keskin Array S	4.75	1		Pn	00 19 50.4	+0.9
BR131	Keskin Array S	4.75	1	P	Pn	00 19 50.4	+0.9
YER	Yerkesik	4.75	299	P	Pn	00 19 50.4	+0.9
YER				S	Sn	00 20 39.9	-4.6
PRNI	Paran	4.78	164	Pn	Pn	00 19 50.4	+0.5
PRNI				Sn	Sn	00 20 45.2	+0.1
MULA	Mugla, Merkez-	4.78	300	P	Pn	00 19 52.0	+2.1
CUGUR	Gurin_SVAS	4.81	38	P	Pn	00 19 52.4	+2.0
BR231	Keskin MP Arra	4.90	353		Pn	00 19 52.0	+0.4
ANTO	Ankara	4.92	354		Pn	00 19 51.9	0.0
ANTO	Ankara	4.92	354	P	Pn	00 19 51.9	0.0
CUSAR	Sarkisla-SIVAS	4.95	25	P	Pn	00 19 54.0	+1.7
KRMI	Paran Flat	4.95	168	Pn	Pn	00 19 52.9	+0.7
CUAYA	Sivas-Altinyay	5.00	30	P	Pn	00 19 53.8	+0.7
SGAZ	Eskisehir, Sey	5.02	336	P	Pn	00 19 53.5	+0.2
DELI	KIRIKKALE	5.03	4	P	Pn	00 19 53.1	-0.3
HACI	Hacifakili, Ak	5.04	20	P	Pn	00 19 53.1	-0.5
HRFI	Mount Harif	5.09	165	Pn	Pn	00 19 54.4	+0.3
HRFI				Sn	Sn	00 20 53.4	+0.6
DAT	Datca	5.13	292	P	Pn	00 19 55.2	+0.5
DAT	Datca	5.13	292	P	Pn	00 19 56.2	+1.5
USAK	Uak-Merkez	5.19	317	P	Pn	00 19 56.2	+0.7
GDZ	Gediz	5.22	323	P	Pn	00 19 56.2	+0.1
KARP	Karpathos	5.23	278	Pn	Pn	00 19 55.3	-0.7
KULA	Kula-Manisa	5.26	314	P	Pn	00 19 56.8	+0.3
AYDN	Tasoluk	5.28	302	P	Pn	00 19 57.2	+0.4
MBRI	Mt Berech	5.30	167	Pn	Pn	00 19 57.1	0.0
MBRI				Sn	Sn	00 20 59.1	+1.1
MANT	Manisa	5.30	313		Pn	00 19 58.0	+0.7
MANT	Manisa	5.30	313	P	Pn	00 19 57.2	-0.1
CKRK	Yozgat, Cekere	5.33	17	P	Pn	00 19 57.9	+0.4
BDRM	Kayabasi	5.34	295	P	Pn	00 19 57.9	+0.3
CUKAN	kangal_SIVAS	5.37	35	P	Pn	00 20 02.0	+3.9
ANDZ	Kutahya, Merke	5.37	329	P	Pn	00 19 58.7	+0.7
EIL	Elat	5.43	167	Pn	Pn	00 19 58.7	-0.1
	4.1nm,0.3s,baz=18,slow=0.8,SNR=32						
EIL				Sn	Sn	00 21 01.8	+0.8
	3.3nm,0.3s,baz=148,slow=12,SNR=5.0						
EIL				LR	LR	00 22 22.7	
	comp=Z,189nm,20.2s,baz=349,slow=42						
	14nm,0.4s						
EIL	Elat	5.43	167	Pn	Pn	00 19 59.1	+0.3
BODT	Bodrum	5.44	294	P	Pn	00 19 59.5	+0.6
BODT				S	Sn	00 20 56.2	-5.2
BORA	Eskisehir	5.47	335	Pn	Pn	00 19 59.8	+0.3
BORA	Eskisehir	5.47	335	P	Pn	00 19 58.6	-0.8
DEMI	Demirci	5.59	318	P	Pn	00 20 02.0	+1.0
KIBS	BOLU	5.59	347	P	Pn	00 20 04.0	+2.8
GCAM	G?zelcaml?	5.75	300	P	Pn	00 20 01.3	-1.9
MDUB	Mudurnu	5.79	342	Pn	Pn	00 20 05.4	+1.6
HBST	Basata	5.83	169	PN	Pn	00 20 05.0	+0.6
	baz=165						
TOKA	Tokat	5.84	23		Pn	00 20 04.6	+0.1
NUB	Nuweibaa	6.00	170	PN	Pn	00 20 06.9	+0.2
	baz=166						
SMG	Samos	6.04	299	P	Pn	00 20 06.7	-0.4
ILGA	Ilgaz	6.07	1	Pn	Pn	00 20 08.5	+0.7
DGB	zmir	6.16	302	P	Pn	00 20 09.7	+0.9
KAGI	orum-Kargı	6.20	7	P	Pn	00 20 10.8	+1.4
MARD	Mardin	6.33	66		Pn	00 20 11.7	+0.4
STEP	BALIKESIR_Sava	6.38	315	P	Pn	00 20 13.3	+1.4
MATC	Matruh	6.39	237	P	Pn	00 20 11.8	-0.1
	baz=240						
HKAT	Jabal Katrina	6.44	176	PN	Pn	00 20 12.9	-0.1
	baz=172						
KAYN	Sakarya, Kayna	6.49	338	P	Pn	00 20 13.4	+0.1
ZEDA	zmir-Bergama	6.51	310	P	Pn	00 20 16.3	+2.7
HANI	Diyarbakir_Han	6.51	56	P	Pn	00 20 16.2	+2.4
TR2	Tor 2	6.57	178	PN	Pn	00 20 12.8	-1.7
	baz=175						
APE	Apeiranthos	6.79	290	⇓P	Pn	00 20 18.8	+1.2
APE	Apeiranthos	6.79	290	⇓P	Pn	00 20 18.8	+1.2
BUHA	Balikesir, Bur	6.84	313	P	Pn	00 20 21.4	+3.3
BZK	Bozkurt	6.99	3	Pn	Pn	00 20 20.5	+0.4
IDI	Anoyia	7.07	275	Pn	Pn	00 20 21.7	+0.3
	2.4nm,0.3s,baz=85,slow=12,SNR=32						
IDI				Sn	Sn	00 21 41.6	0.0
	1.5nm,0.3s,baz=41,slow=20,SNR=3.9						
	6.7nm,0.3s						
IDI	Anoyia	7.07	275	P	Pn	00 20 20.9	-0.5
IDI				S	Sn	00 21 34.6	-7.0
IDI	Anoyia	7.07	275	Pn	Pn	00 20 21.5	+0.1
PRK	Paraskevi	7.18	309	P	Pn	00 20 26.2	+3.3
BAYC	CANAKKALE_Bayr	7.31	313	P	Pn	00 20 26.2	+1.6
GURO	Guroymak-BITLI	7.72	60		Pn	00 20 30.6	+0.3
SLUM	Salum	7.77	246	P	Pn	00 20 31.5	+0.6
	baz=249						
SLUM				SN	Sn	00 21 47.7	-11
	baz=249						
ALN	Alexandroupoli	8.35	317	Pn	Pn	00 20 39.3	+0.5
ALN	Alexandroupoli	8.35	317	P	Pn	00 20 39.3	+0.5
RDO	Rodhopi	8.80	317	Pn	Pn	00 20 46.4	+1.3
SWA2		8.90	232	P	Pn	00 20 45.4	-1.0
	baz=234						
ITM	Ithomi	9.63	287	Pn	Pn	00 20 56.0	-0.4
CHVG	Ch'k'valeri	10.22	38	⇑P	Pn	00 21 10.3	+5.8
CHVG	Ch'k'valeri	10.22	38	⇑P	Pn	00 21 10.3	+5.8
TIRR	Tirgusor	10.25	339	⇑P	Pn	00 21 10.2	+5.3
TIRR	Tirgusor	10.25	339	Pn	Pn	00 21 04.5	-0.4
TIRR	Tirgusor	10.25	339	⇑P	Pn	00 21 10.2	+5.3
GNI	Garni	10.30	57	Pn	Pn	00 21 06.9	+1.1
	2.9nm,0.9s,baz=333,slow=18,SNR=3.4						
GNI				LR	LR	00 25 09.5	
	comp=Z,31nm,19.6s,baz=248,slow=38						
GNI	Garni	10.30	57	⇑*e*P	Pn	00 21 10.5	+4.7
GNI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GRG	Griva	10.61	308	P	Pn	00 21 13.1	+3.3
HARR	Harsova	10.61	338	⇓P	Pn	00 21 14.6	+4.8
HARR	Harsova	10.61	338	⇓P	Pn	00 21 14.6	+4.8
ONI	Oni	10.86	43	Pn	Pn	00 21 14.5	+1.2
ONI	Oni	10.86	43	P	Pn	00 21 14.5	+1.2
VTS	Vitosha	11.06	317	⇓P	Pn	00 21 20.4	+4.2
VTS	Vitosha	11.06	317	Pn	Pn	00 21 17.4	+1.3
VTS	Vitosha	11.06	317	⇓P	Pn	00 21 20.4	+4.2
ZEI	Tsey	11.24	43	*e*P	Pn	00 21 23.2	+4.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	Khabaz	11.36	37	Pn	Pn	00 21 24.3	+4.2
	comp=Z,0.1nm,0.3s,baz=243,slow=11,SNR=5.8						
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	11.36	37	⇓*e*P	Pn	00 21 26.0	+5.9
KIV	Kislovodsk	11.43	36	⇓P	Pn	00 21 26.2	+5.0
KIV	Kislovodsk	11.43	36	⇓P	Pn	00 21 26.2	+5.1
BISRR	Bisoca	11.77	336	⇓P	Pn	00 21 32.2	+6.5
MLR	Muntele Rosu	11.98	334	⇑P	Pn	00 21 34.5	+5.7
MLR	Muntele Rosu	11.98	334	Pn	Pn	00 21 31.0	+2.3
	baz=142,slow=19,SNR=2.4						
MLR				LR	LR	00 26 57.0	
	comp=Z,149nm,21.6s,baz=158,slow=42						
	comp=Z,1.5nm,1.0s						
MLR	Muntele Rosu	11.98	334	Pn	Pn	00 21 29.8	+1.0
MLR	Muntele Rosu	11.98	334	⇑P	Pn	00 21 34.5	+5.8
VRI	Vrincioaia	12.04	337	⇑P	P	00 21 35.1	-7.2
VRI	Vrincioaia	12.04	337	⇑P	P	00 21 35.1	-7.2
PLOR	Plostina	12.05	336	⇑P	P	00 21 35.3	-7.2
PLOR	Plostina	12.05	336	⇑P	P	00 21 35.3	-7.2
COVR	Voineasa-Covas	12.20	335	⇓P	P	00 21 37.5	-6.5
VOIR		12.28	331	⇓P	P	00 21 38.1	-7.0
VOIR		12.28	331	⇓P	P	00 21 38.1	-7.0
ARR	Arges	12.39	330	⇓P	P	00 21 39.9	-6.4
DOPR	Dopca	12.59	333	⇑P	P	00 21 43.0	-5.5
BIZ	Bicaz	13.19	337	⇑P	P	00 21 51.2	-3.9
GZR	Gura Zlata	13.24	325	⇑P	P	00 21 51.1	-4.7
MAK	Makhachkala	13.49	50	*e*P	Pn	00 21 47.5	-1.6
MAK				*e*S	Sn	00 24 17.1	-1.7
MAK				pmax	pmax		
	comp=Z,128nm,1.1s						
MAK				MLR	MLR		
	comp=Z,32nm,9.0s						
SORM	Soroca	13.70	345	⇑P	P	00 21 58.8	-1.9
SORM	Soroca	13.70	345	⇑P	P	00 21 58.8	-1.9
BZS	Buzias	13.96	323	⇑P	P	00 22 00.6	-3.1
BZS	Buzias	13.96	323	⇑P	P	00 22 00.6	-3.1
TIP	Timpagrande	14.02	292	Pn	Pn	00 21 54.2	-2.2
BURAR	Bucovina Array	14.07	336	⇓P	P	00 22 04.1	-0.9
BURAR	Bucovina Array	14.07	336		Pn	00 21 59.0	+1.8
BURAR	Bucovina Array	14.07	336	⇓P	P	00 22 04.1	-0.9
BUR08	Bucovina Ar. S	14.10	336		Pn	00 21 59.2	+1.6
CUC	Castrocucco	14.91	295		Pn	00 22 06.6	-2.0
LTVH	Ltavrtes, Hu	15.15	328	P	P	00 22 17.5	+0.6
MORH	Mrgy, Hungar	15.89	319	P	P	00 22 26.8	+1.7
UZH	Uzhgorod	15.98	332	*e*P	P	00 22 30.6	+4.6
AKASG	Malin Array Be	16.03	350	Pn	Pn	00 22 21.4	-1.7
	comp=Z,0.5nm,0.3s,baz=166,slow=9.6,SNR=2.5						
AKASG				LR	LR	00 30 26.0	
	comp=Z,25nm,20.1s,baz=182,slow=44						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	16.03	350		P	00 22 24.5	-2.0
AKASG	Malin Array Be	16.03	350	P	P	00 22 24.5	-2.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKBB	Malin Array Si	16.03	350	P	P	00 22 25.2	-1.3
AKBB				IAmb	IAmb	00 22 34.4	
	comp=Z,18nm,1.0s						
AKBB	Malin Array Si	16.03	350	P	P	00 22 25.2	-1.3
AKBB				pmax	pmax		
	comp=Z,18nm,1.0s						
KOVH	Kovagotottos	16.11	318	P	P	00 22 28.4	+0.9
KOLS	Kolonicke sedl	16.23	333	*e*P	P	00 22 32.7	+3.8
KOLS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KOLS	Kolonicke sedl	16.23	333	*e*P	P	00 22 32.7	+3.8
LVV	L'vov	16.38	338	*e*P	P	00 22 33.1	+2.6
PSZ	Piszkesteto	16.44	326	P	P	00 22 34.3	+3.0
CLTB	Caltabellotta	16.57	285	P	P	00 22 33.1	+0.4
CLTB				IAmb	IAmb	00 22 40.1	
	comp=Z,49nm,1.6s						
KWP	Kalwaria Pacla	16.66	335	P	P	00 22 34.4	+0.8
KWP	Kalwaria Pacla	16.66	335	P	P	00 22 34.4	+0.8
KWP				pmax	pmax		
	comp=Z,392nm,1.1s						
CSKK	Cskako	16.84	322	P	P	00 22 38.8	+3.1
VRH	Novokhopyorsk	17.28	18	*e*P	P	00 22 41.3	+0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VYHS	Vyhne	17.35	326	*e*P	P	00 22 44.5	+3.3
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.3s						
VYHS	Vyhne	17.35	326	*e*P	P	00 22 44.5	+3.3
LANS	Liptovska Anna	17.55	328	*e*P	P	00 22 44.5	+1.0
LANS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LANS	Liptovska Anna	17.55	328	*e*P	P	00 22 44.5	+1.0
MODS	Modra-Piesok	18.01	323	*e*P	P	00 22 49.6	+1.0
MODS	Modra-Piesok	18.01	323	*e*P	P	00 22 49.6	+1.0
LPSR	Galich'ya Gora	18.04	11	*e*P	P	00 22 49.0	+0.2
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
RONA	Rosalia, Austr	18.08	320	*e*P	P	00 22 57.6	+8.2
	comp=Z,1.4nm,0.7s						
JAVC	Velka Javorina	18.15	325	*e*P	P	00 22 52.6	+2.4
ARSA	Arzberg	18.23	318	*e*P	P	00 22 55.2	+4.2
	comp=Z,4.4nm,0.8s						
OBKA	Obir	18.37	315	*e*P	Pn	00 22 56.9	+4.3
	comp=Z,4.2nm,0.7s						
CONA	Conrad Observa	18.45	320	*e*P	Pn	00 22 59.6	+6.0
	comp=Z,0.6nm,0.3s						
MORC	Moravsky Berou	18.86	327	*e*P	Pn	00 22 59.9	+1.4
KRUC	Moravsky	18.91	323	*e*P	Pn	00 22 59.8	+0.8
MYKA	Terra Mystica	18.96	314	*e*P	Pn	00 23 02.6	+2.8
	comp=Z,5.0nm,0.5s						
MYKA				*e*S	S	00 26 32.4	-1.8
	comp=Z,1.4nm,0.5s						
VRAC	Vranov	18.98	324	P	Pn	00 22 59.9	0.0
	comp=Z,0.3nm,0.3s,baz=138,slow=12,SNR=2.1						
VRAC				LR	LR	00 32 26.8	
	comp=Z,36nm,19.6s,baz=127,slow=44						
	comp=Z,0.8nm,0.4s						
VRAC	Vranov	18.98	324	*e*P	Pn	00 23 00.3	+0.4
MOA	Molln	19.27	318	*e*P	Pn	00 23 05.1	+1.7
	comp=Z,0.7nm,0.4s						
KBA	Koelnbreinsper	19.37	315	*e*P	Pn	00 23 06.6	+1.8
	comp=Z,2.0nm,0.5s						
KRLC	Kraliky	19.42	326	*e*P	Pn	00 23 07.6	+2.4
KRLC	Kraliky	19.42	326	*e*P	Pn	00 23 07.6	+2.4
TEOL	Teolo	19.59	309	P	Pn	00 23 06.5	-0.8
TEOL				IAmb	IAmb	00 23 28.0	
	comp=Z,19nm,1.0s						
ABTA	Abfaltersbach	19.70	313	*e*P	Pn	00 23 11.4	+2.8
	comp=Z,2.9nm,0.6s						
KEST	Kesra	19.72	279	P	Pn	00 23 09.3	+0.4
	comp=Z,0.1nm,0.3s,baz=80,slow=6.1,SNR=1.7						
	comp=Z,4.2nm,1.1s						
CKRC	Cesky Krumlov	19.82	320	*e*P	Pn	00 23 10.1	+0.2
DPC	Dobruska-Polom	19.82	326	*e*P	Pn	00 23 11.8	+1.8
DPC	Dobruska-Polom	19.82	326	*e*P	Pn	00 23 11.8	+1.8
CTI	Castel Tesino	19.90	310	P	Pn	00 23 09.6	-1.4
CTI				IAmb	IAmb	00 23 20.3	
	comp=Z,17nm,1.3s						
CTI	Castel Tesino	19.90	310	P	Pn	00 23 09.6	-1.4
CTI				pmax	pmax		
	comp=Z,17nm,1.3s						
GEYT	Alibeck	20.00	74	P	Pn	00 23 11.7	-0.6
	comp=Z,0.5nm,0.3s,baz=245,slow=14,SNR=21						
	comp=Z,13nm,0.8s						
GEYT	Alibeck	20.00	74	P	Pn	00 23 11.1	-1.1
GEYT				IAmb	IAmb	00 23 13.6	
	comp=Z,19nm,0.9s						
GYA0B	ALIBECK ARRAY	20.00	74	P	Pn	00 23 11.0	-1.3
GYA0B				IAmb	IAmb	00 23 13.6	
	comp=Z,23nm,0.9s						
OSTC	Ostas	20.02	326	*e*P	Pn	00 23 16.5	+4.2
UPC	Upice	20.07	326	*e*P	Pn	00 23 14.5	+1.5
UPC	Upice	20.07	326	*e*P	Pn	00 23 14.5	+1.5
CHVC	Chvalec	20.11	326	*e*P	Pn	00 23 13.8	+0.4
BELG	Belogornoye	20.12	26	P	Pn	00 23 12.7	-0.7
	comp=Z,14nm,0.9s,baz=36,slow=7.4,SNR=6.2						
	comp=Z,14nm,0.9s						
BELG	Belogornoye	20.12	26	⇓*e*P	Pn	00 23 12.1	-1.3
BELG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GEC2	GERESS Array S	20.15	319	P	Pn	00 23 13.5	-0.5
GEC2				IAmb	IAmb	00 23 21.2	
	comp=Z,38nm,1.8s						
GERES	GERESS Array B	20.15	319	P	Pn	00 23 13.8	-0.2
	comp=Z,3.5nm,0.9s,baz=129,slow=10,SNR=9.4						
GERES				LR	LR	00 32 27.2	
	comp=Z,44nm,20.5s,baz=1.5,slow=41						
	comp=Z,3.5nm,0.9s						
GERES	GERESS Array B	20.15	319	P	Pn	00 23 12.5	-1.5
OBN	Obninsk	20.25	5	P	Pn	00 23 13.1	-1.9
	comp=Z,2.6nm,0.4s,baz=193,slow=20,SNR=4.2						
	comp=Z,2.6nm,0.4s						
OBN	Obninsk	20.25	5	P	P	00 23 12.1	-0.9
OBN				IAmb	IAmb	00 23 21.8	
	comp=Z,39nm,1.3s						
OBN	Obninsk	20.25	5	⇓*e*P	Pn	00 23 16.0	+1.1
OBN				*e**SP	sP	00 23 21.7	+3.1
OBN						00 23 33.0	
OBN				PPP	PPP	00 23 41.0	
OBN				*e*S	S	00 26 59.0	-0.6
OBN				SSS	SSS	00 27 36.0	
OBN				pmax	pmax		
	comp=Z,16nm,1.0s						
OBN				MLR	MLR		
	comp=Z,37nm,15.0s						
SUW	Suwalki	20.37	342	P	Pn	00 23 14.2	-2.1
SUW				IAmb	IAmb	00 23 22.4	
	comp=Z,25nm,1.0s						
SUW	Suwalki	20.37	342	P	Pn	00 23 14.2	-2.2
SUW				pmax	pmax		
	comp=Z,25nm,1.0s						
SUW	Suwalki	20.37	342	*e*P	Pn	00 23 15.0	-1.4
KHC	Kasperske Hory	20.39	320	P	Pn	00 23 14.6	-2.1
KHC				IAmb	IAmb	00 23 22.2	

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       comp=Z,8.7nm,0.7s
KHC    Kasperske Hory     20.39 320⇓eP      Pn       00 23 15.8 -0.9
KHC                                pmax     pmax
       comp=Z,17nm,0.9s
KHC    Kasperske Hory     20.39 320 eP      Pn       00 23 15.6 -1.1
KHC                                 epP     sP       00 23 21.5 +1.2
PRU    Pruhonice          20.43 323 eP      Pn       00 23 23.0 +5.9
PRU    Pruhonice          20.43 323 eP      Pn       00 23 23.0 +5.9
WTTA   Wattenberg         20.47 313 eP      Pn       00 23 20.5 +2.7
       comp=Z,5.0nm,0.6s
NACGM  Naroch             20.47 349⇑eP      Pn       00 23 16.3 -1.2
       baz=162
WATA   Walderalm          20.54 314 eP      Pn       00 23 20.1 +1.5
       comp=Z,2.7nm,0.5s
SQTA   Sankt Quirin       20.70 313 eP      Pn       00 23 21.7 +1.2
       comp=Z,5.7nm,0.8s
PVCC   Panska Ves         20.77 324 eP      Pn       00 23 21.6 +0.5
PVCC                                MLR     MLR
       comp=Z,5µm,14.3s
PVCC   Panska Ves         20.77 324 eP      Pn       00 23 21.6 +0.5
MOTA   Moosalm            20.83 313 eP      Pn       00 23 21.2 -0.8
       comp=Z,5.4nm,0.6s
IDID   Didziasalis        20.88 349 eP      Pn       00 23 20.6 -1.7
FETA   Feichten           20.90 312 eP      Pn       00 23 23.5 +0.6
       comp=Z,13nm,0.9s
MOS    Moscow             20.96   7 eP      Pn       00 23 21.1 -2.1
MOS                                 e                00 23 29.0
MOS                                 pmax    pmax
       comp=Z,35nm,1.2s
IIGN   Ignalina           20.99 348 eP      Pn       00 23 21.5 -2.1
RETA   Reutte             21.10 313 eP      P        00 23 26.3 +4.0
       comp=Z,3.2nm,0.6s
ISAL   Salakas            21.22 348 eP      P        00 23 24.2 +0.7
BRG    Berggiesshubel     21.29 324 eP      P        00 23 26.4 +2.0
BRG                                 Amp              00 23 33.9
       comp=Z,12nm,1.2s
BRG    Berggiesshubel     21.29 324 eP      P        00 23 26.3 +2.0
BRG                                 pmax    pmax
       comp=Z,12nm,1.2s
DAVOX  Davos/Dischmat     21.32 311 P       P        00 23 26.2 +1.4
       comp=Z,1.5nm,0.6s,baz=117,slow=14,SNR=3.1
DAVOX                               LR      LR       00 33 10.5
       comp=Z,53nm,21.3s,baz=98,slow=41
       comp=Z,1.5nm,0.6s
DAVA   Damuels            21.54 312 eP      P        00 23 28.5 +1.3
       comp=Z,3.5nm,0.5s
PABE   Paberze            21.57 345 P       P        00 23 26.2 -0.9
PABE   Paberze            21.57 345 eP      P        00 23 27.8 +0.7
UOSS   Minazif            22.01 111 P       P        00 23 31.1 -1.1
UOSS                                IAmb    IAmb     00 23 37.7
       comp=Z,13nm,0.9s
CLL    Collm              22.03 324 i P     P        00 23 34.7 +2.5
CLL                                 e                00 23 40.0
CLL                                 eS      S        00 27 31.0 -3.7
CLL                                 pmax    pmax
       comp=Z,6.0nm,1.0s
CLL    Collm              22.03 324 i P     P        00 23 34.7 +2.5
       comp=Z,6.0nm,1.0s
CLL                                 ex      x        00 23 40.0
CLL                                 eS      S        00 27 31.0 -3.7
CLL                                 Lm      MLR      00 33 00.0
       comp=Z,100nm,18.2s
MOX    Moxa               22.31 321 P       P        00 23 37.8 +2.6
SENIN  Lac Senin/Sane     22.80 308 P       P        00 23 40.7  0.0
SENIN                               IAmb    IAmb     00 23 45.5
       comp=Z,6.0nm,0.9s
BFO    Black Forest       22.94 313 P       P        00 23 42.1 +0.1
BFO                                 IAmb    IAmb     00 23 46.8
       comp=Z,18nm,1.1s
BFO    Black Forest       22.94 313 P       P        00 23 42.1 +0.1
BFO                                 pmax    pmax
       comp=Z,18nm,1.1s
AKTO   Aktyubinsk         23.58  42 P       P        00 23 48.8 +0.4
       comp=Z,6.2nm,1.0s,baz=235,slow=13,SNR=11
       comp=Z,6.2nm,1.0s
ECH    Echery             23.60 312 P       P        00 23 48.9 +0.3
ECH                                 IAmb    IAmb     00 23 54.1
       comp=Z,8.8nm,1.1s
ECH    Echery             23.60 312 P       P        00 23 48.9 +0.3
ECH                                 pmax    pmax
       comp=Z,9.0nm,1.1s
HRA    Herat              23.61  83 P       P        00 23 48.7 -0.3
HRA                                 IAmb    IAmb     00 23 56.6
       comp=Z,14nm,1.6s
VSU    Vasula             23.93 351⇑eP      P        00 23 53.6 +2.0
VSU                                 pmax    pmax
       comp=Z,27nm,0.9s
ABKAR  Akbulak array      24.09  46 P       P        00 23 53.5 +0.2
ABKAR  Akbulak array      24.09  46 P       P        00 23 53.8 +0.5
ABKAR                               IAmb    IAmb     00 24 21.4
       comp=Z,2.8nm,0.9s
KIRV   Kirov              25.88  19 P       P        00 24 09.0 -0.3
       comp=Z,6.3nm,0.5s,baz=207,slow=4.5,SNR=2.3
       comp=Z,6.3nm,0.5s
KIRV   Kirov              25.88  19deP      P        00 24 14.9 +5.6
MEF    Metsahovi          25.95 350 eP      P        00 24 10.7 +0.8
KLMR   Klimovskoe         26.19   7 eP      P        00 24 11.7 -0.4
KLMR                                pmax    pmax
       comp=Z,30nm,1.1s
KLMR   Klimovskoe         26.19   7 eP      P        00 24 11.8 -0.4
KLMR                                AMP              00 24 16.4
       comp=Z,30nm,1.1s
FIA1   FINESS Array S     26.91 352 P       P        00 24 18.6  0.0
FIA1                                IAmb    IAmb     00 24 23.7
       comp=Z,6.0nm,0.7s
FINES  FINESS Array B     26.91 352 P       P        00 24 18.7  0.0
       comp=Z,4.3nm,0.6s,baz=157,slow=10,SNR=16
FINES                               LR      LR       00 35 49.5
       comp=Z,36nm,18.3s,baz=170,slow=38
       comp=Z,4.3nm,0.6s
FINES  FINESS Array B     26.91 352 i P     P        00 24 19.1 +0.4
FINES                               pmax    pmax
       comp=Z,4.0nm,0.6s
ARU    Arti               27.41  31 P       P        00 24 24.8 +1.6
       comp=Z,0.8nm,0.5s,baz=238,slow=13,SNR=4.0
       comp=Z,0.8nm,0.5s
ARU    Arti               27.41  31 P       P        00 24 26.1 +2.9
ARU                                 IAmb    IAmb     00 24 36.9
       comp=Z,3.0nm,0.7s
ARU    Arti               27.41  31d iP     P        00 24 25.7 +2.5
ARU                                                  00 25 07.2
ARU                                 S       S        00 29 08.1 +5.2
ARU                                 SS      SnSn     00 30 16.1 +3.9
ARU                                 pmax    pmax
       comp=Z,5.0nm,1.3s
PRGR   Permogore          27.78  12 eP      P        00 24 26.3 -0.1
KK31   Karatay Array      29.68  63 P       P        00 24 43.5 -0.1
KK31   Karatay Array      29.68  63 P       P        00 24 43.5 -0.1
KK31                                pmax    pmax
       comp=Z,4.0nm,1.2s
KKAR   Karatay Array      29.68  63 P       P        00 24 43.8 +0.2
KKAR   Karatay Array      29.68  63 P       P        00 24 43.8 +0.2
NB2    NORSAR Subarra     29.74 338 P       P        00 24 44.4 +0.4
       comp=Z,5.1nm,1.2s,baz=141,slow=9.3
NOA    NORSAR Array B     29.74 338 P       P        00 24 45.0 +1.0
       comp=Z,2.9nm,0.9s,baz=140,slow=9.2,SNR=7.1
       comp=Z,2.9nm,0.9s
ESDC   Sonseca Array      30.02 290 P       P        00 24 48.3 +1.6
       comp=Z,1.7nm,0.7s,baz=83,slow=8.5,SNR=11
ESDC                                LR      LR       00 37 10.0
       comp=Z,18nm,20.6s,baz=94,slow=37
       comp=Z,1.7nm,0.7s
ESDC   Sonseca Array      30.02 290 P       P        00 24 48.7 +2.0
ESDC                                IAmb    IAmb     00 25 02.6
       comp=Z,6.1nm,1.6s
BRVK   Borovoye           31.57  44⇑eP      P        00 25 02.3 +2.1
BRVK                                pmax    pmax
       comp=Z,2.0nm,1.0s
AAK    Ala-Archa          32.59  64 P       P        00 25 09.6 +0.1
AAK    Ala-Archa          32.59  64⇑eP      P        00 25 10.7 +1.3
AAK                                 pmax    pmax
       comp=Z,2.0nm,1.0s
PVAQ   Vaqueiros          33.18 286 P       P        00 25 15.3 +0.9
BOOM   Boomskoye usch     33.66  64 P       P        00 25 19.8 +1.0
BOOM   Boomskoye usch     33.66  64 P       P        00 25 19.8 +1.0
BOOM                                pmax    pmax
       comp=Z,3.0nm,1.1s
KDJ    Kajisay            34.59  65 P       P        00 25 27.4 +0.5
KDJ                                 IAmb    IAmb     00 25 31.1
       comp=Z,3.3nm,0.9s
KDJ    Kajisay            34.59  65 P       P        00 25 27.4 +0.5
KDJ                                 pmax    pmax
       comp=Z,3.0nm,0.9s
ARCES  ARCESS Array B     34.90 355 P       P        00 25 29.4 +0.4
       comp=Z,1.7nm,0.6s,baz=168,slow=7.4,SNR=11
       comp=Z,1.7nm,0.6s
ARCES  ARCESS Array B     34.90 355 P       P        00 25 27.1 -1.9
ARCES  ARCESS Array B     34.90 355 P       P        00 25 27.1 -1.9
ARCES                               pmax    pmax
       comp=Z,20nm,1.6s
KURK   Kurchatov          36.01  50 P       P        00 25 38.4 -0.4
KURK   Kurchatov          36.01  50⇑eP      P        00 25 39.8 +1.0
KURK                                pmax    pmax
       comp=Z,3.0nm,1.3s
TOA0   Torodi Ar. Sit     36.02 241 P       P        00 25 38.8 -0.4
TORD   Torodi Ar. Bea     36.02 241 P       P        00 25 40.0 +0.8
       comp=Z,10nm,0.6s,baz=47,slow=6.2,SNR=3.8
MK31   Makanchi Array     38.15  57 P       P        00 25 57.0 -0.1
MK31   Makanchi Array     38.15  57 P       P        00 25 57.0 -0.1
MK31                                pmax    pmax
       comp=Z,2.0nm,0.9s
MKAR   Makanchi Array     38.15  57 P       P        00 25 57.5 +0.4
       comp=Z,2.2nm,0.9s,baz=270,slow=6.1,SNR=15
       comp=Z,2.2nm,0.9s
MKAR   Makanchi Array     38.15  57 P       P        00 25 57.2 +0.2
KOWA   Kowa               39.40 248 P       P        00 26 07.5 -0.2
KOWA                                IAmb    IAmb     00 26 25.3
       comp=Z,26nm,1.8s
ZAA0   Zalesovo Array     40.21  46 P       P        00 26 14.2  0.0
ZALV   Zalesovo Beam      40.21  46 P       P        00 26 14.2 +0.1
       comp=Z,1.0nm,0.6s,baz=255,slow=10,SNR=2.9
       comp=Z,1.0nm,0.6s
ZALV   Zalesovo Beam      40.21  46 P       P        00 26 14.5 +0.4
ZALV   Zalesovo Beam      40.21  46 i P     P        00 26 18.8 +4.7
ZALV                                pmax    pmax
       comp=Z,1.0nm,0.6s
WMQ    Urumqi             42.14  61 eP      P        00 26 33.3 +3.1
SPITS  Spitsbergen Ar     43.93 355 P       P        00 26 45.4 +1.2
SPITS                               pmax    pmax
       comp=Z,72nm,1.4s
BORG   Borgarnes          44.09 330 LR      LR       00 48 03.3
       comp=Z,26nm,19.6s,baz=356,slow=40
NRIK   Noril'sk           45.20  24 P       P        00 26 54.5  0.0
       comp=Z,0.9nm,0.4s,baz=239,slow=12,SNR=2.0
       comp=Z,0.9nm,0.4s
SUMG   Summit             51.63 339 P       P        00 27 44.3 -0.1
SUMG   Summit             51.63 339 P       P        00 27 44.3 -0.1
SUMG                                pmax    pmax
       comp=Z,23nm,1.8s
SONM   Songino Array      54.23  53 P       P        00 28 04.8 +1.1
       comp=Z,1.1nm,0.9s,baz=299,slow=9.2,SNR=8.0
       comp=Z,1.1nm,0.9s
SONM   Songino Array      54.23  53 P       P        00 28 04.8 +1.1
SONM   Songino Array      54.23  53 P       P        00 28 04.9 +1.2
SONM                                pmax    pmax
       comp=Z,1.0nm,1.0s
ULN    Ulaanbaatar        54.66  52 P       P        00 28 07.3 +0.5
ULN                                 IAmb    IAmb     00 28 08.7
       comp=Z,3.3nm,1.1s
ULN    Ulaanbaatar        54.66  52⇑eP      P        00 28 07.7 +0.9
ULN                                 pmax    pmax
       comp=Z,4.0nm,1.7s
TSUM   Tsumeb             55.96 198 P       P        00 28 17.1 +0.8
TSUM                                IAmb    IAmb     00 28 28.0
       comp=Z,4.1nm,1.0s
PZH    PanZhiHua          58.25  78 P       P        00 28 34.0 +1.3
PZH                                 pmax    pmax
       comp=Z,10.0nm,0.5s
PZH                                 pmax    pmax
       comp=Z,100nm,5.0s
CMAR   Chiang Mai Arr     59.76  88 P       P        00 28 43.0 -0.1
       comp=Z,2.3nm,0.2s,baz=298,slow=9.0,SNR=8.0
CMAR                                LR      LR       00 57 22.7
       comp=Z,20nm,18.4s,baz=305,slow=39
       comp=Z,2.3nm,0.2s
HHC    Hu-ho-hao-te       59.95  59 eP      P        00 28 43.7 -0.5
HHC                                 pmax    pmax
       comp=Z,25nm,0.9s
HHC                                 pmax    pmax
       comp=Z,160nm,5.2s
BOSA   Boshof             63.72 188 P       P        00 29 10.9 +1.3
       comp=Z,2.2nm,0.8s,baz=15,slow=8.7,SNR=4.0
       comp=Z,2.2nm,0.8s
BOSA   Boshof             63.72 188 P       P        00 29 11.3 +1.8
BOSA   Boshof             63.72 188 P       P        00 29 11.3 +1.8
BOSA                                pmax    pmax
       comp=Z,16nm,1.6s
FRB    Frobisher Bay      64.23 331 LR      LR       00 58 34.5
       comp=Z,26nm,20.4s,baz=205,slow=37
SCHQ   Schefferville      67.66 322 P       P        00 29 35.3 +0.6
       comp=Z,3.5nm,0.8s,baz=70,slow=2.0,SNR=8.0
       comp=Z,3.5nm,0.8s
SCHQ   Schefferville      67.66 322 P       P        00 29 34.6  0.0
SUR    Sutherland         68.05 192 P       P        00 29 39.4 +1.9
NJ2    Nanjing            69.03  65 eP      P        00 29 45.8 +2.2
NJ2                                 pmax    pmax
       comp=Z,19nm,0.5s
BILL   Bilibino           71.40  17⇓eP      P        00 29 59.6 +2.1
BILL                                e*PP    sP       00 30 04.1 +0.5
BILL                                                 00 30 18.0
BILL                                pmax    pmax
       comp=Z,4.0nm,1.4s
MA2    Magadan            72.56  28 LR      LR       01 04 47.5
       comp=Z,22nm,18.4s,baz=282,slow=38
D62A   Allapoint, All     72.87 316 P       P        00 30 07.3 +0.7
BMAR   Burnt Mountain     77.91 359 P       P        00 30 35.4 +0.1
IMAR   Indian Mountai     79.21   3 P       P        00 30 43.3 +0.8
YKA    Yellowknife Ar     79.54 346 P       P        00 30 44.5 +0.3
       comp=Z,1.0nm,0.9s,baz=32,slow=5.4,SNR=12
       comp=Z,1.0nm,0.9s
YKA    Yellowknife Ar     79.54 346 P       P        00 30 44.7 +0.4
BCAR   Beaver Creek A     82.22 358 P       P        00 30 58.7  0.0
NVL    N'lazarevskaya    106.59 187 eP      Pdif     00 32 56.2 +4.9
NVL                                 pmax    pmax
       comp=Z,9.0nm,1.0s
```

IDC ***12*** *00:21:26.0±0.3, 6°.80S×107°.70E, h166^{km}±2^{km}, mb3.8/16, mbtmp4.3/17, MS2.7/1, Error ellipse: s-maj=15.4km s-min=10.8km az=49.0*

DJA ***12*** *00:21:25.2±0.2, 7°S±3°×10°8E±°, h160^{km}±2^{km}, M4.6/27, mB5.4/6, mb4.5/27, MLv4.5/23, Mw(mB)4.8/6*

NEIC ***12*** *00:21:26.9±2.0, 6°.90S±0°.10×107°.68E±0°.06, h172^{km}±2^{km}, mb4.4/38, Error ellipse: s-maj=14.1km s-min=8.8km az=193.0*

ISC 12 00:21:25.3±0.5, **7°.05S**±0°.05×**107°.60E**±0°.05, **h162**^{km}±3^{km}, **n128**, σ**1^s.51**/137, **mb4.3**/35, **Jawa**

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Code   Station Name        Δ°   AZ°   Phase ID           Time     Res
                                    Op      ISC       h  m  s    ISC
LEM    Lembang             0.22   4 P       Pn       00 21 48.8 +1.6
       4µm,0.7s,baz=339,slow=0.5,SNR=628
LEM                                 S       Sn       00 22 05.9 +1.8
       4µm,0.7s,baz=49,slow=22,SNR=27
LEM    Lembang             0.22   4 P       Pn       00 21 48.6 +1.3
LEM                                 S       Sn       00 22 06.6 +2.5
CNJI   Cibinong            0.54 241 P       Pn       00 21 48.1  0.0
CNJI                                S       Sn       00 22 04.7 -0.9
DBJI   Dramaga             0.98 300 P       Pn       00 21 52.5 +1.5
SKJI   Sukabumi            1.04 272 P       Pn       00 21 51.8 +0.3
CMJI   Cimerak             1.11 131 P       Pn       00 21 51.6 -0.5
TNG    Tangerang           1.29 312 P       Pn       00 21 55.2 +1.5
YOGI   Yogyakarta          2.78 106 P       Pn       00 22 10.6 +0.2
SMRI   Semarang            2.82  90 Pn      Pn       00 22 11.6 +0.8
SMRI   Semarang            2.82  90 P       Pn       00 22 12.3 +1.5
SMRI   Semarang            2.82  90 P       Pn       00 22 12.4 +1.6
UGM    Wanagama            3.02 107 Pn      Pn       00 22 13.4  0.0
UGM    Wanagama            3.02 107 P       Pn       00 22 13.7 +0.3
UGM    Wanagama            3.02 107 P       Pn       00 22 13.8 +0.3
UWJI   Ujung Watu          3.38  80 P       Pn       00 22 20.9 +3.0
WOJI   Wonogiri, Jawa      3.38 104 P       Pn       00 22 17.8 -0.2
KASI   Kota Agung          3.44 296 P       Pn       00 22 20.3 +1.7
PCJI   Pacitan             3.72 108 P       Pn       00 22 22.0 -0.3
XMI    Christmas Isla      3.88 209 P       Pn       00 22 21.8 -2.5
XMIS   Christmas Isla      3.92 209 P       Pn       00 22 22.2 -2.7
LWLI   Liwa                4.06 300 P       Pn       00 22 37.1  +10
MDSI   Maura Dua           4.25 307 P       Pn       00 22 30.4 +1.3
TPI    Tanjungpandan       4.26   1 P       Pn       00 22 30.0 +0.7
PWJI   Pagerwojo           4.28 103 P       Pn       00 22 29.7 +0.3
PPBI   Pangkal Pinang      5.07 343 P       Pn       00 22 41.6 +1.8
MNAI   Manna               5.34 300 Pn      Pn       00 22 44.8 +1.4
MNAI   Manna               5.34 300 P       Pn       00 22 44.4 +1.0
       2.2nm229nm,1.1s
GMJI   Gumukmas            5.92 102 P       Pn       00 22 52.9 +1.9
       0.3nm37nm,2.0s
PBKI   Pangkalan Bun       5.92  43 P       Pn       00 22 52.5 +1.5
       0.9nm9µm233nm,0.9s
KMMI   Kalianget           6.32  90 P       Pn       00 22 56.3  0.0
       0.3nm47nm,0.8s
ABJI   Asem Bagus          6.62  97 P       Pn       00 23 03.7 +3.4
       0.7nm187nm,0.7s
JAGI   Jajag, Banyuwa      6.64 103 Pn      Pn       00 22 59.9 -0.7
JAGI   Jajag, Banyuwa      6.64 103 P       Pn       00 23 00.5 -0.1
       0.4nm2µm41nm,0.5s
SRBI   Singaraja           7.61  98 P       Pn       00 23 14.0 +0.5
       0.3nm48nm,0.5s
KRJI   Kerinci             7.85 309 P       Pn       00 23 19.5 +2.7
BBKI   Banjar Baru         8.04  64 P       Pn       00 23 21.5 +2.3
       3µm27nm,0.4s
STKI   Sintang             8.05  29 P       Pn       00 23 22.7 +3.3
PPSI   Pulau Pagai         8.68 299 P       Pn       00 23 26.3 -1.4
       98nm,1.1s
KSM    Kuching             8.88  18 P       Pn       00 23 39.9  +10
PLAI   Plampang           10.23 101 P       Pn       00 23 46.2 -2.0
       41nm,0.8s
PLAI   Plampang           10.23 101 P       Pn       00 23 46.3 -2.0
BKB    Balikpapan         10.90  59 P       Pn       00 24 00.3 +3.3
       99nm,0.4s
SPSI   Sidrap Palu        12.49  76 P       Pn       00 24 19.4 +1.8
       13nm,0.8s
BKSI   Bulukumba          12.56  83 P       Pn       00 24 20.4 +1.8
       18nm,0.5s
BNSI   Bone               12.71  79 P       Pn       00 24 22.5 +2.0
       22nm,1.0s
GSI    Gunungsitoli       13.00 309         Pn       00 24 20.3 -3.8
GSI    Gunungsitoli       13.00 309 P       Pn       00 24 20.6 -3.5
EDFI   Ende, Flores       14.06  98 P       Pn       00 24 34.9 -2.7
       18nm,0.6s
MPSI   Mapaga             14.29  60 P       P        00 24 43.0 +0.1
       880nm54nm,1.1s
MMRI   Maumere            14.58  97 Pn      Pn       00 24 40.4 -3.7
MMRI   Maumere            14.58  97 P       Pn       00 24 40.4 -3.7
TOLI2  Tolitoli           15.45  59         P        00 24 55.0 -0.7
TOLI2                               IAmb    IAmb     00 24 57.4
       comp=Z,16nm,0.7s
TOLI2  Tolitoli           15.45  59 P       P        00 24 56.9 +1.2
BATI   Baumata            16.18 102 P       P        00 25 04.5 +0.6
       comp=Z,30nm,0.4s,baz=286,slow=3.5,SNR=7.3
BATI                                S       S        00 28 03.5 +0.1
       comp=Z,16nm,0.3s,baz=246,slow=20,SNR=2.4
BATI   Baumata            16.18 102 P       P        00 25 04.9 +1.0
       comp=Z,36nm,0.5s
MYLDM  Lahad Datu         16.30  42         P        00 25 03.5 -1.7
MYLDM                               IAmb    IAmb     00 25 13.7
       comp=Z,26nm,1.0s
SOEI   Soe                16.70 100 P       P        00 25 09.6 -0.2
SOEI   Soe                16.70 100 P       Pn       00 25 11.2 +1.0
       comp=Z,69nm,1.4s
GTOI   Gorontalo          17.16  64 P       P        00 25 13.1 -1.5
       comp=Z,6.6nm,1.0s
TNTI   Ternate            21.19  69 P       P        00 25 57.7 -0.6
DAV    Davao City (W)     22.76  52 LR      LR       00 36 10.6
       comp=Z,20nm,19.2s,baz=184,slow=39
MORW   Morawa             23.31 161 P       P        00 26 18.3 -0.5
MORW                                IAmb    IAmb     00 26 34.5
       comp=Z,8.6nm,1.1s
MTN    Manton Dam         23.87 106 P       P        00 26 24.5 +0.4
SIJI   Sorong             24.38  76 P       P        00 26 27.4 -1.3
       comp=Z,12nm,0.7s,baz=256,slow=7.0,SNR=7.8
       comp=Z,12nm,0.7s
FAKI   Fak Fak            24.89  82 P       P        00 26 32.3 -1.0
FAKI   Fak Fak            24.89  82 P       P        00 26 32.6 -0.8
       comp=Z,15nm,0.8s
CMAR   Chiang Mai Arr     26.74 341 pP      pP       00 27 23.5 -0.1
       comp=Z,1.3nm,0.4s,baz=173,slow=9.2,SNR=1.4
NWAO   Narrogin (SRO)     27.26 162 P       P        00 26 53.8 -0.7
NWAO                                IAmb    IAmb     00 27 20.0
       comp=Z,29nm,1.3s
WRA    Warramunga Arr     28.93 119 P       P        00 27 09.7 +0.3
       comp=Z,0.6nm,0.6s,baz=284,slow=7.2,SNR=2.8
WRA                                 ScP     ScP      00 33 40.9 -0.1
       comp=Z,1.0nm,0.6s,baz=330,slow=2.2,SNR=2.8
       comp=Z,0.6nm,0.6s
WRA    Warramunga Arr     28.93 119 P       P        00 27 09.2 -0.2
WB2    Warramunga Arr     28.94 119 P       P        00 27 09.7 +0.2
WB2                                 IAmb    IAmb     00 27 14.6
       comp=Z,13nm,1.4s
ASAR   Alice Springs      30.18 126 P       P        00 27 21.2 +0.8
       comp=Z,1.2nm,0.6s,baz=304,slow=8.9,SNR=11
ASAR                                PcP     PcP      00 30 18.1 +0.4
       comp=Z,0.4nm,0.3s,baz=305,slow=2.0,SNR=4.2
ASAR                                S       S        00 32 06.3 -1.5
       comp=Z,1.2nm,0.7s,baz=301,slow=16,SNR=4.3
ASAR                                ScP     ScP      00 33 45.5 +0.5
       comp=Z,0.8nm,0.7s,baz=308,slow=2.7,SNR=4.3
       comp=Z,1.2nm,0.6s
PALK   Pallekele          30.37 297 P       P        00 27 22.8 +0.5
PALK                                IAmb    IAmb     00 27 34.7
       comp=Z,11nm,1.1s
COEN   Coen               35.61 104 P       P        00 28 07.2 -0.6
BBOO   Buckleboo          36.81 138 P       P        00 28 17.6 -0.2
STKA   Stephens Creek     40.17 132 P       P        00 28 46.9 +1.2
       comp=Z,7.9nm,0.5s,baz=312,slow=8.3,SNR=21
       comp=Z,7.9nm,0.5s
STKA   Stephens Creek     40.17 132 P       P        00 28 46.6 +0.9
JHS    Saijyo             48.25  28 P       P        00 29 49.1 -0.8
JHS                                 IAmb    IAmb     00 29 51.6
       comp=Z,19nm,1.1s
SONM   Songino Array      54.65 359 P       P        00 30 37.0 -0.4
       comp=Z,1.2nm,0.5s,baz=177,slow=8.1,SNR=8.2
SONM                                pP      pP       00 31 15.1 +0.4
       comp=Z,0.7nm,0.8s,baz=190,slow=7.5,SNR=2.1
SONM                                sP      sP       00 31 29.9 -2.5
       comp=Z,0.3nm,0.3s,baz=181,slow=5.8,SNR=1.4
SONM                                PcP     PcP      00 31 37.3 -0.9
       comp=Z,0.8nm,0.4s,baz=176,slow=4.2,SNR=3.5
SONM                                ScP     ScP      00 35 19.9 -1.5
       comp=Z,2.0nm,0.8s,baz=174,slow=3.9,SNR=11
       comp=Z,1.2nm,0.5s
SONM   Songino Array      54.65 359 P       P        00 30 36.9 -0.4
ULN    Ulaanbaatar        54.67 360 P       P        00 30 37.2 -0.4
ULN                                 IAmb    IAmb     00 30 37.4
       comp=Z,2.4nm,0.5s
MDJ    Mudanjiang         55.11  19 P       P        00 30 40.6  0.0
SOCY   Socotra            56.62 290 P       P        00 30 51.9 -0.1
MK31   Makanchi Array     58.13 340 P       P        00 31 00.2 -1.7
MKAR   Makanchi Array     58.13 340 P       P        00 31 00.4 -1.5
       comp=Z,1.0nm,0.5s,baz=150,slow=8.6,SNR=27
MKAR                                pP      pP       00 31 40.9 +1.3
       comp=Z,0.6nm,0.7s,baz=153,slow=7.6,SNR=2.0
MKAR                                sP      sP       00 31 54.7 -2.6
       comp=Z,1.2nm,0.6s,baz=145,slow=7.0,SNR=4.3
MKAR                                ScP     ScP      00 35 34.9 -1.7
       comp=Z,0.3nm,0.8s,baz=116,slow=3.4,SNR=2.7
       comp=Z,1.0nm,0.5s
MKAR   Makanchi Array     58.13 340 P       P        00 31 00.2 -1.7
CASY   Casey              59.17 179 P       P        00 31 09.5 +0.7
CASY                                IAmb    IAmb     00 31 10.2
       comp=Z,3.6nm,0.9s
OPO    Ambohidratompo     59.77 253 P       P        00 31 16.0 +2.0
       comp=Z,5.9nm,0.7s,baz=120,slow=6.9,SNR=5.5
       comp=Z,5.9nm,0.7s
VOI    Vohitsoka          60.35 249 P       P        00 31 19.4 +1.6
KURK   Kurchatov          62.75 340 P       P        00 31 31.5 -1.5
ZALV   Zalesovo Beam      63.73 345 P       P        00 31 37.5 -2.0
       comp=Z,1.0nm,0.3s,baz=148,slow=6.5,SNR=6.6
       comp=Z,1.0nm,0.3s
ZALV   Zalesovo Beam      63.73 345 P       P        00 31 37.3 -2.2
GEYT   Alibeck            64.20 318 P       P        00 31 42.4 -0.6
       comp=Z,1.3nm,0.4s,baz=88,slow=7.9,SNR=2.3
       comp=Z,1.3nm,0.4s
MAW    Mawson             67.50 197 P       P        00 32 05.1 +1.7
       comp=Z,3.6nm,0.5s,baz=44,slow=6.0,SNR=19
       comp=Z,3.6nm,0.5s
MAW    Mawson             67.50 197 P       P        00 32 05.4 +2.0
RAYN   Ar Rayn            67.79 299 P       P        00 32 04.7 -1.5
KIBK   Kibwezi            69.43 270 P       P        00 32 17.4 +0.8
KIBK                                IAmb    IAmb     00 32 32.5
       comp=Z,13nm,1.5s
ABKAR  Akbulak array      69.76 329 P       P        00 32 16.4 -1.4
ABKAR  Akbulak array      69.76 329 P       P        00 32 16.9 -0.9
ABKAR                               IAmb    IAmb     00 32 18.8
       comp=Z,1.9nm,0.9s
KMBO   Kilima Mbogo       70.36 271 P       P        00 32 23.8 +1.3
       comp=Z,1.1nm,0.5s,baz=229,slow=20,SNR=3.6
       comp=Z,1.1nm,0.5s
VNDA   Vanda              75.81 170 P       P        00 32 54.4 +1.4
       comp=Z,1.8nm,0.4s,baz=318,slow=7.1,SNR=28
       comp=Z,1.8nm,0.4s
VNDA   Vanda              75.81 170 IAmb    IAmb     00 32 54.8
       comp=Z,3.1nm,0.6s
VNDA   Vanda              75.81 170 P       P        00 32 54.3 +1.4
SBA    Scott Base         76.89 169 P       P        00 33 01.3 +2.2
KBZ    Khabaz             77.08 318 P       P        00 33 00.8 +0.1
       comp=Z,1.4nm,0.7s,baz=130,slow=8.3,SNR=4.4
       comp=Z,1.4nm,0.7s
LSZ    Lusaka             78.00 256 P       P        00 33 07.8 +1.2
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LSZ				IAmb	IAmb	00 33 08.7	
	comp=Z,5.5nm,0.8s						
LBTB	Lobatse	79.84	246	P	P	00 33 17.2	+0.8
LBTB				IAmb	IAmb	00 33 18.5	
	comp=Z,4.1nm,0.8s						
BOSA	Boshof	79.97	242	P	P	00 33 18.0	+0.9
	comp=Z,1.3nm,0.5s,baz=84,slow=5.5,SNR=5.1						
	comp=Z,1.3nm,0.5s						
BOSA	Boshof	79.97	242	P	P	00 33 17.9	+0.9
BOSA				IAmb	IAmb	00 33 22.7	
	comp=Z,10nm,1.4s						
CSS	Mathiatis	81.29	307	P	P	00 33 24.9	+1.1
CSS				IAmb	IAmb	00 33 30.5	
	comp=Z,13nm,1.3s						
BRTR	Keskin Array B	82.31	312	P	P	00 33 28.6	-0.6
	comp=Z,1.0nm,0.5s,baz=123,slow=5.1,SNR=5.4						
	comp=Z,1.0nm,0.5s						
QSPA	South Pole Qui	82.94	180	P	P	00 33 32.9	+1.0
QSPA				IAmb	IAmb	00 33 33.9	
	comp=Z,5.9nm,1.0s						
TSUM	Tsumeb	87.74	251	P	P	00 33 57.6	+0.9
TSUM				IAmb	IAmb	00 34 20.3	
	comp=Z,8.4nm,1.4s						
IDI	Anoyia	88.11	306	P	P	00 33 58.3	+0.3
IDI				IAmb	IAmb	00 34 19.3	
	comp=Z,10nm,1.4s						
ALN	Alexandroupoli	88.22	311	P	P	00 33 58.6	+0.3
ALN				IAmb	IAmb	00 33 59.5	
	comp=Z,2.4nm,0.6s						
MLR	Muntele Rosu	89.16	316	P	P	00 34 03.0	+0.2
MLR				IAmb	IAmb	00 34 10.6	
	comp=Z,1.8nm,0.8s						
SNAA	Sanae	89.66	197	P	P	00 34 06.4	+1.9
SNAA				IAmb	IAmb	00 34 27.8	
	comp=Z,5.7nm,1.3s						
FINES	FINESS Array B	92.10	332	P	P	00 34 15.1	-0.7
	comp=Z,0.8nm,0.8s,baz=105,slow=8.9,SNR=2.0						
	comp=Z,0.8nm,0.8s						
FINES	FINESS Array B	92.10	332	P	P	00 34 15.4	-0.4
YKA	Yellowknife Ar	116.70	20	PKP	PKPdf	00 39 48.6	-1.3
	comp=Z,0.1nm,0.3s,baz=326,slow=1.4,SNR=4.9						
YKA	Yellowknife Ar	116.70	20		PKPdf	00 39 48.4	-1.5
PDAR	Pinedale Array	131.68	37	SKPbc	SKPbc	00 43 29.6	-0.6
	comp=Z,1.3nm,0.6s,baz=264,slow=0.9,SNR=13						
SCHQ	Schefferville	132.14	356	SKPbc	SKPbc	00 43 30.3	-0.8
	comp=Z,5.5nm,0.7s,baz=31,slow=2.9,SNR=15						
PLCA	Paso Flores	132.43	182	SKPbc	SKPbc	00 43 33.3	+0.5
	comp=Z,2.6nm,0.9s,baz=220,slow=4.6,SNR=3.9						
ULM	Lac du Bonnet	132.68	20	SKPbc	SKPbc	00 43 32.5	-0.6
	comp=Z,3.0nm,0.6s,baz=290,slow=5.7,SNR=3.5						
TXAR	Lajitas Array	143.15	49	PKP	PKPbc	00 40 38.2	0.0
	comp=Z,0.3nm,0.3s,baz=326,slow=0.7,SNR=7.1						
TXAR				SKPbc	SKPbc	00 44 03.8	-0.4
	comp=Z,0.4nm,0.5s,baz=317,slow=0.7,SNR=7.5						
CPUP	Villa Florida	143.74	203	PKP	PKPbc	00 40 40.8	+1.0
	comp=Z,9.0nm,1.2s,baz=146,slow=3.6,SNR=5.5						
BDFB	Brasilia	146.96	227	PKPbc	PKPbc	00 40 50.7	+0.7
	comp=Z,3.2nm,0.5s,baz=142,slow=2.1,SNR=7.2						

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*IDC **12** 00:23:33.5±1.8, 17.°38S×178.°93W, h523km±19km, mb3.3/7, mbtmp4.2/9, Error ellipse: s-maj=46.4km s-min=13.6km az=151.0*

*NEIC **12** 00:23:33.9±1.3, 17.°5S±0.°1×178.°8W±0.°1, h527km±7km, mb4.4/32, Error ellipse: s-maj=20.5km s-min=15.1km az=152.0*

ISC 12 00:23:34.4±0.5**, 17.°4S**±0.°1×**178.°87W**±0.°08**, h539**km**, n88, σ0.s75**/86**, mb4.4**/22**, 3C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.67	64	P	P	00 25 27.2	-1.5
	31nm,0.5s,baz=45,slow=8.1,SNR=5.1						
AFI	Afiamalu	7.67	64	P	P	00 25 27.3	-1.4
NIUE	Niue	8.66	102	P	P	00 25 39.5	+1.0
MARNC	Mare, Loyalty	13.00	250	P	P	00 26 22.7	-0.6
SANVU	Saraoutou	13.50	276	P	P	00 26 30.6	+2.0
PINNC	Pines Island,	13.86	246	P	P	00 26 31.9	-0.3
OUENC	Ouen Island, N	14.33	247	P	P	00 26 36.7	-0.4
DZM	Mont Dzumac	14.58	249	P	P	00 26 38.9	-0.9
	4.7nm,0.6s,baz=84,slow=19,SNR=6.4						
DZM	Mont Dzumac	14.58	249	P	P	00 26 38.7	-1.1
KNTN	Kanton	16.15	27	P	P	00 26 54.9	-1.0
EIDS	Eidsvold	29.03	249	P	P	00 28 50.7	-0.5
EIDS				IAmb	IAmb	00 29 18.6	
	comp=Z,22nm,1.4s						
ARMA	Armidale	29.82	239	P	P	00 28 58.6	+0.5
CTAO	Charters Tower	33.10	260	P	P	00 29 25.5	-0.6
CTAO				IAmb	IAmb	00 29 33.2	
	comp=Z,17nm,1.3s						
CAN	Canberra	33.66	232	P	P	00 29 30.7	0.0
CAN				IAmb	IAmb	00 29 55.4	
	comp=Z,14nm,1.2s						
COEN	Coen	36.66	270	P	P	00 29 56.2	+0.4
COEN				IAmb	IAmb	00 29 57.2	
	comp=Z,17nm,0.8s						
TOO	Toolangi	37.15	230	P	P	00 30 00.3	+0.7
STKA	Stephens Creek	38.49	240	P	P	00 30 11.2	+0.6
	comp=Z,7.9nm,0.7s,baz=90,slow=11,SNR=8.3						
	comp=Z,7.9nm,0.7s						
STKA	Stephens Creek	38.49	240	P	P	00 30 10.8	+0.2
BBOO	Buckleboo	43.26	240	P	P	00 30 48.5	0.0
BBOO				IAmb	IAmb	00 30 49.0	
	comp=Z,16nm,0.7s						
WR0	Warramunga Arr	44.10	259	P	P	00 30 54.1	-1.1
WR0				IAmb	IAmb	00 31 00.3	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	44.29	259	P	P	00 30 55.7	-1.0
	comp=Z,4.5nm,0.7s,baz=95,slow=7.8,SNR=32						
WRA				PcP	PcP	00 32 28.8	-0.6
	comp=Z,1.1nm,0.8s,baz=99,slow=3.0,SNR=3.6						
	comp=Z,4.5nm,0.7s						
WRA	Warramunga Arr	44.29	259	P	P	00 30 55.4	-1.3
AS31	Alice Springs	44.50	254	P	P	00 30 58.0	-0.3
AS31				IAmb	IAmb	00 30 58.6	
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	44.50	254	P	P	00 30 58.0	-0.3
	comp=Z,47nm,0.7s,baz=88,slow=8.0,SNR=338						
ASAR				PcP	PcP	00 32 29.9	-0.2
	comp=Z,1.6nm,0.6s,baz=104,slow=3.8,SNR=4.7						
ASAR				ScP	ScP	00 35 32.7	+1.7
	comp=Z,0.8nm,0.7s,baz=97,slow=4.8,SNR=3.6						
FORT	Forrest	49.82	244	P	P	00 31 37.2	-0.9
FAKI	Fak Fak	50.05	281	P	P	00 31 39.7	-0.4
FAKI				IAmb	IAmb	00 31 57.5	
	comp=Z,23nm,1.2s						
KNRA	Kununurra	50.10	264	P	P	00 31 40.2	-0.2
KNRA				IAmb	IAmb	00 31 41.0	
	comp=Z,20nm,0.7s						
SOEI	Soe	55.63	270	P	P	00 32 20.9	+0.8
PSA00	Pilbara Seismi	57.61	255	P	P	00 32 33.1	-0.3
PSA00				IAmb	IAmb	00 32 33.8	
	comp=Z,8.1nm,0.9s						
PSA00	Pilbara Seismi	57.61	255	P	P	00 32 33.0	-0.3
PSA00				IAmb	IAmb	00 32 33.7	
	comp=Z,13nm,0.6s						
MBWA	Marble Bar	57.77	256	P	P	00 32 34.0	-0.5
MBWA				IAmb	IAmb	00 32 56.6	
	comp=Z,38nm,1.4s						
NWAO	Narrogin (SRO)	59.06	242	P	P	00 32 42.5	-0.5
NWAO				IAmb	IAmb	00 32 56.5	
	comp=Z,24nm,1.3s						
MORW	Morawa	60.28	246	P	P	00 32 50.3	-0.9
MORW				IAmb	IAmb	00 33 05.5	
	comp=Z,9.9nm,1.3s						
TOLI2	Tolitoli	62.19	281	P	P	00 33 04.8	+0.9
TOLI2				IAmb	IAmb	00 33 30.4	
	comp=Z,3.8nm,0.8s						
GIRL	Giralia	62.62	253	P	P	00 33 06.4	-0.1
UGM	Wanagama	69.22	268	P	P	00 33 47.5	-0.4
QSPA	South Pole Qui	72.64	180	P	P	00 34 07.7	+0.5
LCH	Last Change Ra	79.18	45	P	P	00 34 44.6	+0.8
NVAR	Mina Array Bea	79.37	44	P	P	00 34 45.9	+1.0
	comp=Z,0.6nm,0.7s,baz=222,slow=9.0,SNR=7.3						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	79.37	44	P	P	00 34 45.2	+0.3
KVN	Kaiserville	79.84	44	P	P	00 34 47.6	+0.4
I07A	Izee	81.69	39	P	P	00 34 56.8	+0.2
BELA	Belgrano 2	82.71	173	P	P	00 35 01.1	-0.1
MAW	Mawson	84.18	200	P	P	00 35 08.9	+0.3
	comp=Z,1.6nm,0.6s,baz=91,slow=4.9,SNR=6.8						
	comp=Z,1.6nm,0.6s						
MAW	Mawson	84.18	200	P	P	00 35 08.7	+0.2
LHMI	Lhok Sumawe	86.02	277	P	P	00 35 19.9	+1.4
TXAR	Lajitas Array	86.10	58	P	P	00 35 20.4	+1.7
	comp=Z,0.3nm,0.7s,baz=211,slow=5.3,SNR=5.1						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	86.10	58	P	P	00 35 19.4	+0.6
PDAR	Pinedale Array	87.30	44	P	P	00 35 24.8	+0.5
	comp=Z,0.2nm,0.5s,baz=224,slow=2.9,SNR=4.0						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	87.30	44	P	P	00 35 24.6	+0.4
CMAR	Chiang Mai Arr	88.30	290	P	P	00 35 30.9	+1.7
	comp=Z,1.9nm,0.3s,baz=129,slow=2.5,SNR=5.3						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	88.30	290	P	P	00 35 30.1	+0.9
ULM	Lac du Bonnet	98.81	40	P	Pdif	00 36 14.8	-1.5
	comp=Z,2.1nm,0.5s,baz=315,slow=4.3,SNR=2.2						
MKAR	Makanchi Array	108.47	314	PKiKP	PKiKP	00 41 00.5	-1.4
	comp=Z,0.2nm,0.5s,baz=231,slow=0.4,SNR=4.0						
ARCES	ARCESS Array B	125.75	350	PKP	PKPdf	00 41 33.9	-0.3
	comp=Z,3.4nm,1.1s,baz=355,slow=4.5,SNR=1.1						
BNN	Bunyan	142.99	312		PKPdf	00 42 05.7	-1.7
VASR	Vaslui	143.46	329	⇓P	PKPbc	00 42 06.6	+0.3
LODK	Lodwar	143.67	251		PKPbc	00 42 08.3	+0.3
VLDR	Vladesti	143.86	328	⇓P	PKPdf	00 42 08.2	-0.2
BURAR	Bucovina Array	143.97	332	⇓P	PKPdf	00 42 08.7	0.0
BIZ	Bicaz	144.06	330	⇓P	PKPdf	00 42 09.2	+0.4
TESR	Tescani	144.11	330	⇓P	PKPab	00 42 08.5	-0.1
BRTR	Keskin Array B	144.12	315	PKP	PKPbc	00 42 08.8	0.0
	comp=Z,0.9nm,0.4s,baz=150,slow=1.3,SNR=4.0						
BRTR	Keskin Array B	144.12	315		PKPab	00 42 08.9	-0.2
TPGR	Topolog	144.34	326	⇓P	PKPab	00 42 09.4	-0.1
PLOR	Plostina	144.57	329	⇑P	PKPab	00 42 10.2	-0.3
CLL	Collm	144.88	347	*i* PKPbc	PKPbc	00 42 10.7	+0.2
	comp=Z,6.0nm,0.9s						
DOPR	Dopca	145.10	330	⇓P	PKPab	00 42 12.4	-0.1
MLR	Muntele Rosu	145.18	329	⇓P	PKPbc	00 42 12.0	+0.1
DRGR		145.70	333	⇑P	PKPbc	00 42 13.3	+0.1
ARR	Arges	145.91	330	⇑P	PKPab	00 42 15.0	-0.6
GERES	GERESS Array B	147.02	345	PKPbc	PKPbc	00 42 16.9	+0.1
	comp=Z,1.1nm,0.5s,baz=35,slow=4.9,SNR=8.4						
GERES	GERESS Array B	147.02	345		PKPbc	00 42 16.8	0.0
BZS	Buzias	147.09	333	⇓P	PKiKP	00 42 18.1	-0.7
CONA	Conrad Observa	147.25	342	*e*P	PKPbc	00 42 18.2	+0.8
	comp=Z,1.7nm,0.5s						
RONA	Rosalia, Austr	147.32	341	*e*P	PKiKP	00 42 18.5	-0.7
	comp=Z,1.7nm,0.6s						
BLKB	Belogradchik	148.14	330	⇓P	PKPbc	00 42 19.4	-0.4
RDO	Rodhopi	148.38	323		PKPbc	00 42 19.8	-0.5
SOKA	Soboth	148.62	341	*e*P	PKPbc	00 42 20.6	-0.3
	comp=Z,0.1nm,0.2s						
KBA	Koelnbreinsper	148.74	344	*e*P	PKPbc	00 42 20.9	-0.5
	comp=Z,1.3nm,0.4s						
WATA	Walderalm	148.94	346	*e*P	PKPbc	00 42 21.7	-0.1
	comp=Z,1.5nm,0.3s						
RETA	Reutte	148.97	347	*e*P	PKPbc	00 42 21.9	+0.2
	comp=Z,1.0nm,0.4s						
WTTA	Wattenberg	148.99	346	*e*P	PKPbc	00 42 22.0	+0.1
	comp=Z,2.6nm,0.3s						
MOTA	Moosalm	149.03	347	*e*P	PKPbc	00 42 21.9	-0.1
	comp=Z,1.3nm,0.4s						
SQTA	Sankt Quirin	149.13	347	*e*P	PKPbc	00 42 22.3	+0.1
	comp=Z,2.3nm,0.4s						
ABTA	Abfaltersbach	149.26	345	*i* P	PKPbc	00 42 22.2	-0.3
	comp=Z,3.1nm,0.6s						
FETA	Feichten	149.42	347	*e*P	PKPbc	00 42 23.0	0.0
	comp=Z,1.1nm,0.6s						
FNA	Florina	150.89	327		PKPbc	00 42 25.9	-0.6

IDC 12 01:07:07.7±3.3**, 21.°46S**×**147.°81E, h0**km**, mbtmp3.4**/2**, ML3.2**/2**, Error ellipse: s-maj=57.3km s-min=45.4km az=19.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	11.77	207	Pn	Pn	01 09 56.5	-0.4
	0.1nm,0.3s,baz=353,slow=15,SNR=1.8						
	0.9nm,0.6s						
WRA	Warramunga Arr	12.70	274	Pn	Pn	01 10 09.1	-0.6
	0.1nm,0.3s,baz=97,slow=13,SNR=2.0						
WRA				Lg	Lg	01 13 51.9	
	0.1nm,0.3s,baz=99,slow=27,SNR=4.2						
	0.9nm,1.0s						
ASAR	Alice Springs	13.04	258	Lg	Lg	01 14 00.8	
	baz=90,slow=32,SNR=1.9						
I22FR	PORTLAGUERRE I	17.69	96	*i*		02 54 50.0	
	0.1nm,0.8s,baz=267,slow=306,SNR=4.3						
TORD	Torodi Ar. Bea	146.67	261	PKPbc	PKPbc	01 26 51.8	-0.6
	10nm,0.6s,baz=171,slow=1.5,SNR=1.8						

IDC 12 01:13:10.2±4.5**, 48.°69S**×**125.°17E, h0**km**, mb3.6**/3**, mbtmp3.6**/3**, MS3.3**/7**, Error ellipse: s-maj=277.6km s-min=29.0km az=93.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	16.02	325	T	T	01 34 20.0	
	baz=159,slow=76,SNR=58						
H01W2	Cape Leeuwin H	16.02	325	T	T	01 34 15.0	
	baz=159,slow=76,SNR=51						
H01W3	Cape Leeuwin H	16.04	325	T	T	01 34 21.5	
	baz=159,slow=76,SNR=45						
STKA	Stephens Creek	20.88	42	LR	LR	01 24 08.2	
	comp=Z,60nm,21.2s,baz=205,slow=32						
ASAR	Alice Springs	25.91	19	P	P	01 18 43.5	-0.4
	1.7nm,0.8s,baz=190,slow=9.5,SNR=9.8						
	1.7nm,0.8s						
WRA	Warramunga Arr	29.62	18	P	P	01 19 17.9	+0.8
	0.7nm,0.9s,baz=194,slow=9.2,SNR=2.5						
	0.7nm,0.9s						
VNDA	Vanda	32.16	166	P	P	01 19 39.1	+0.1
	0.4nm,0.7s,baz=322,slow=7.4,SNR=2.4						
VNDA				LR	LR	01 30 56.0	
	comp=Z,66nm,18.1s,baz=281,slow=33						
	0.4nm,0.7s						
CTA	Charters Tower	33.19	38	LR	LR	01 32 09.2	
	comp=Z,45nm,20.7s,baz=260,slow=34						
MAW	Mawson	35.92	215	LR	LR	01 31 28.6	
	comp=Z,44nm,21.0s,baz=38,slow=31						
BATI	Baumata	38.38	358	LR	LR	01 36 11.4	
	comp=Z,56nm,19.6s,baz=173,slow=36						
KAPI	Kappang	43.76	352	LR	LR	01 40 06.7	
	comp=Z,16nm,19.3s,baz=66,slow=37						
SNAA	Sanae	54.45	198	LR	LR	01 44 16.9	
	comp=Z,55nm,20.9s,baz=196,slow=34						
YKA	Yellowknife Ar	144.91	44	PKP	PKPab	01 32 46.8	-0.3
	0.3nm,0.7s,baz=267,slow=3.4,SNR=4.2						

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*GRAL **12** 01:31:39.8±0.3, 33.°65N×35.°60E, h7km±3km, MD2.6*

*GII **12** 01:31:39.4±0.8, 33.°63N×35.°64E, h0km±1km, Mm1.4/4*

ISC 12 01:31:39.6±1.0**, 33.°66N**±0.°03×**35.°64E**±0.°05**, h7**km±8km**, n13, σ0.s54**/24**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.07	312	*e*P	Pg	01 31 41.5	-0.1
QRWL	Qaraoun	0.12	160	*e*P	Pg	01 31 42.1	0.0
QRWL				*e*S	Sg	01 31 44.1	+0.2
RCY	Rachaya	0.23	134	*e*P	Pg	01 31 44.4	+0.1
RCY				*e*S	Sg	01 31 47.9	+0.5
BHL	Bhannes	0.25	4	*e*P	Pg	01 31 44.6	0.0
BHL				*e*S	Sg	01 31 48.2	+0.3
SHBL	Chebaa	0.32	164	*e*P	Pg	01 31 45.8	-0.2
NATI	Neve Ativ	0.40	168	Pg	Pg	01 31 47.6	+0.2
NATI				Sg	Sb	01 31 54.1	-1.3
GEM	Giv'at Ha'Em	0.45	177	Pg	Pg	01 31 48.7	+0.5
GEM				Sg	Sb	01 31 55.8	-0.8
MMA0B	Mount Meron ar	0.67	197	Pg	Pb	01 31 52.9	-0.7
MMA0B				Sg	Sb	01 32 03.7	+0.6
HNTI	Hanita	0.69	214	Pg	Pg	01 31 53.1	+0.2
HNTI				Sg	Sb	01 32 03.6	-0.1
OFRI	`Ofer	1.17	208	Pg	Pg	01 32 01.5	-0.5
OFRI				Sg	Sn	01 32 19.3	+0.7
MMLI	Mount Malkishu	1.23	188	Pg	Pb	01 32 03.0	-0.2
MMLI				Sg	Sn	01 32 20.1	0.0
HMDT	Nahal Hemdat	1.40	184	Pn	Pn	01 32 05.4	-0.2
HMDT				Sn	Sn	01 32 25.3	+1.0
SLTI	Sal'it	1.50	200	Pn	Pn	01 32 07.3	+0.4
SLTI				Sn	Sg	01 32 28.0	+0.2

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*IDC **12** 02:16:22.4±7.7, 34.°68N×34.°18E, h0km, mb3.4/3, mbtmp3.4/5, ML3.1/2, MS3.2/1, Error ellipse: s-maj=112.1km s-min=87.0km az=142.0*

*ISK **12** 02:16:27.5, 35.°10N×33.°49E, h7km, ML3.2/27*

*HLW **12** 02:16:27.0, 35.°23N×33.°55E, h25km±24km, Md2.9*

*NIC **12** 02:16:27.7±0.0, 34.°92N×33.°52E, h6km±1km, Ml3.3/7*

*DDA **12** 02:16:29.4±0.0, 35.°21N×33.°45E, h9km±2km, MW3.5*

*GII **12** 02:16:30.5±0.0, 35.°09N×33.°67E, h40km±1km, Mm2.9/5*

ISC 12 02:16:28.0±0.7**, 35.°04N**±0.°02×**33.°56E**±0.°02**, h16**km±4km**, n81, σ1.s55**/112**, 3C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVOU	Mavrovouni	0.07	111	⇓*i*P	Pg	02 16 30.8	-0.3
MVOU				S	Sg	02 16 32.8	-0.4
MVOU				AML	AML	02 16 33.0	
	96nm,0.5s						
MVOU				AML	AML	02 16 33.0	
	96nm,0.5s						
MVOU				AML	AML	02 16 37.6	
	92nm,0.3s						
MVOU				AML	AML	02 16 37.6	
	92nm,0.3s						
AKIN	Akıncılar- Kıb	0.08	251	PG	Pg	02 16 30.4	-0.8
AKIN				SG	Sg	02 16 31.8	-1.6
ATHAL	Athalassa	0.17	307	⇑*e*P	Pg	02 16 33.2	+0.9
ATHAL				S	Sg	02 16 37.1	+2.0
CSS	Mathiatis	0.20	247	PG	Pg	02 16 31.5	-1.3
CSS	Mathiatis	0.20	247	⇑*i*P	Pg	02 16 31.6	-1.3
CSS				S	Sg	02 16 34.0	-2.0
CSS				AML	AML	02 16 34.4	
	68nm,0.3s						
CSS				AML	AML	02 16 34.4	
	68nm,0.3s						
ASGA	Asgata	0.36	225	⇑*e*P	Pg	02 16 33.4	-2.0
ASGA				S	Sg	02 16 37.6	-2.9
ASGA				AML	AML	02 16 37.6	
	21nm,0.4s						
ASGA				AML	AML	02 16 37.6	
	21nm,0.4s						
PARAL	Paralimni	0.40	96	P	Pb	02 16 37.1	+0.5
PARAL				S	Sb	02 16 43.1	+0.6
PARAL				AML	AML	02 16 45.8	
	11nm,0.4s						
PARAL				AML	AML	02 16 45.8	
	11nm,0.4s						
PARAL				AML	AML	02 16 45.8	
	14nm,0.5s						
PARAL				AML	AML	02 16 45.8	
	14nm,0.5s						
AKDN	Akdeniz- Kıbrı	0.55	298	PG	Pb	02 16 39.0	-0.2
LEF	Lefka	0.55	278	PG	Pg	02 16 38.3	-0.6
LEF	Lefka	0.55	278	P	Pb	02 16 39.9	+0.7
SZAC	Souni	0.62	243	P	Pg	02 16 38.9	-1.4
SZAC				AML	AML	02 16 49.2	
	8.6nm,0.5s						
SZAC				AML	AML	02 16 51.7	
	12nm,0.6s						
EREN	Erenkoy	0.70	46	PG	Pb	02 16 41.4	-0.4
EREN	Erenkoy	0.70	46	P	Pn	02 16 42.5	-0.7
NATA	Nata	0.85	252	P	Pg	02 16 42.9	-1.7
AKMS	Akamas	1.00	269	P	Pg	02 16 46.0	-1.4
AKMS				AML	AML	02 17 04.3	
	2.1nm,0.4s						
AKMS				AML	AML	02 17 05.2	
	1.9nm,0.9s						
AKK2	Akkuyu-Mersin	1.09	360	PG	Pg	02 16 47.9	-1.3
AKK2				SG	Sb	02 17 02.8	+0.3
AKK1	Akkuyu-Mersin	1.10	359	PG	Pb	02 16 48.1	-0.5
AKKU	Akkuyu-Mersin	1.12	360	PG	Pb	02 16 48.5	-0.4
AKKU				SG	Sb	02 17 03.3	+0.1
TISA	Tisan-Mersin	1.12	5	PG	Pb	02 16 48.5	-0.5
TISA				SG	Sb	02 17 03.9	+0.5
GULN	MERSIN_Gulnar	1.14	359	P	Pg	02 16 47.5	-2.5
GULN				S	Sg	02 17 02.3	-2.7
GULN				*i* AML	AML	02 17 04.0	
	comp=N,301nm,0.3s						
GULN				*i* AML	AML	02 17 04.0	
	comp=E,174nm,0.3s						
YESI	Yesilovacik-Me	1.16	3	PN	Pb	02 16 49.1	-0.4
TEKE	Tekeli-Mersin	1.16	342	PN	Pg	02 16 48.7	-1.7
TEKE				SN	Sg	02 17 04.3	-1.2
KARG	Kargicak-Mersi	1.17	6	PN	Pb	02 16 49.3	-0.5
KARG				SN	Sb	02 17 05.3	+0.7
OREN	Orenkoy-Mersin	1.17	356	PN	Pg	02 16 49.2	-1.4
TEPK	Tepekoy-MERSIN	1.18	360	PN	Pg	02 16 49.1	-1.7
TEPK				SN	Sg	02 17 04.6	-1.7
IKL	Isikli	1.20	5	PN	Pg	02 16 49.6	-1.6
IKL				SN	Sb	02 17 06.1	+0.5
BERE	Bereket-Mersin	1.33	348	PN	Pg	02 16 51.8	-1.9
SILI	Silifke-Mersin	1.36	13	PN	Pb	02 16 52.9	-0.1
SILI				SN	Sn	02 17 11.3	+1.4
TEVE	Tevekalti-Mers	1.40	356	PN	Pn	02 16 52.9	+0.1
TEVE				SN	Sb	02 17 11.8	+0.5
KEBE	Keben-Mersin	1.41	5	PN	Pn	02 16 53.5	+0.5
KEBE				SN	Sn	02 17 12.2	+0.9
GAZI	Gazipasa	1.56	320	PN	Pn	02 16 54.4	-0.7
MERS	Mersin	1.98	23	PN	Pn	02 17 02.1	+1.2
HDMB	Hadim	2.11	336	PN	Pn	02 17 03.4	+0.6
HWQ	Hawqa	2.11	110	*e*P	Pn	02 17 03.8	+1.0
KRMN	Karaman	2.14	354	PN	Pn	02 17 04.2	+1.1
DED	Mersin	2.17	27	P	Pb	02 17 05.6	-1.2
ASUZ	Hatay-Arsuz	2.20	55	P	Pg	02 17 08.8	-1.4
KKBE	Karaman, Kazim	2.23	347	P	Pn	02 17 05.3	+0.9
KKBE				S	Sn	02 17 31.4	-0.3
KKBE				*i* AML	AML	02 17 38.0	
	comp=N,50nm,0.5s						
KKBE				*i* AML	AML	02 17 39.0	
	comp=E,53nm,0.4s						
YAYL	Yayladag	2.30	64	PN	Pn	02 17 07.3	+1.9
HNTI	Hanita	2.37	145	Pn	Pn	02 17 06.7	+0.5
HNTI				Sn	Sn	02 17 35.1	+0.2
GULE	Gulek	2.45	23	P	Pn	02 17 09.4	+2.0
SHBL	Chebaa	2.48	132	*e*P	Pn	02 17 09.9	+2.1
KARA	Karaisali	2.53	28	PN	Pn	02 17 10.1	+1.8
GEM	Giv'at Ha'Em	2.53	136	Pn	Pn	02 17 08.4	+0.1
GEM				Sn	Sn	02 17 37.6	-1.2
NATI	Neve Ativ	2.53	134	Pn	Pn	02 17 09.4	+1.0
NATI				Sn	Sn	02 17 37.9	-1.0
MMA0B	Mount Meron ar	2.54	142	Pn	Pn	02 17 09.5	+1.0
MMA0B				Sn	Sn	02 17 39.9	+0.8
OFRI	`Ofer	2.69	153	Pn	Pn	02 17 11.0	+0.4
SEDI	Konya, Seydise	2.81	329	P	Pn	02 17 14.5	+2.1
AKO	Adana	2.86	32	P	Pb	02 17 17.4	-1.2
CMRD	Camardi-Nigde	2.86	23	PN	Pn	02 17 14.4	+1.4
KMER	Konya-Meram	2.89	341	P	Pn	02 17 15.4	+2.0
KMER				S	Sn	02 17 50.6	+2.8
KMER				*i* AML	AML	02 17 59.0	
	comp=E,47nm,0.8s						
KMER				*i* AML	AML	02 18 02.0	
	comp=N,33nm,0.4s						
MMLI	Mount Malkishu	3.02	149	PN	Pn	02 17 16.7	+1.5
MMLI	Mount Malkishu	3.02	149	Pn	Pn	02 17 16.3	+1.1
MMLI				Sn	Sn	02 17 51.6	+0.5
KOZT	Kozan	3.05	36	PN	Pn	02 17 17.4	+1.9
SLTI	Sal'it	3.05	156	Pn	Pn	02 17 17.0	+1.4
KONT	Konya--Tatoy	3.06	342	PN	Pn	02 17 16.9	+1.3
KONT	Konya--Tatoy	3.06	342	P	Pn	02 17 18.3	+2.7
NIDE	Nigde/Merkez-G	3.11	18	P	Pn	02 17 18.0	+1.5
HMDT	Nahal Hemdat	3.23	149	Pn	Pn	02 17 19.2	+1.2
HMDT				Sn	Sn	02 17 57.1	+1.0
LADK	Ladik-KONYA	3.30	343	PN	Pn	02 17 20.2	+1.2
KAMA	Osmaniye	3.31	49	P	Pn	02 17 21.6	+2.5
UJAP	Al Uja	3.47	152	PN	Pn	02 17 24.2	+3.0
DSI	Dead Sea	3.78	156	Pn	Pn	02 17 26.9	+1.3
DSI				Sn	Sn	02 18 10.1	+0.4
BRDR	BURDUR-Merkez	3.87	314	P	Pn	02 17 31.4	+4.5
YTIR	Yattir	3.89	160	Pn	Pn	02 17 29.0	+1.8
YTIR				Sn	Sn	02 18 14.6	+2.0
CAEL	Denizli, Camel	4.01	302	P	Pn	02 17 32.8	+4.0
KZIT	Kziot	4.18	170	Pn	Pn	02 17 32.8	+1.7
KZIT				Sn	Sn	02 18 20.1	+0.5
BRTR	Keskin Array B	4.68	1	Pn	Pn	02 17 40.7	+2.7
	0.2nm,0.3s,baz=193,slow=14,SNR=6.7						
	0.9nm,0.6s						
PRNI	Paran	4.83	165	Pn	Pn	02 17 41.7	+1.7
PRNI				Sn	Sn	02 18 36.2	+0.5
KRMI	Paran Flat	5.01	168	Pn	Pn	02 17 44.1	+1.6
MBRI	Mt Berech	5.36	167	Pn	Pn	02 17 48.5	+1.2
MBRI				Sn	Sn	02 18 49.7	+1.0
EIL	Elat	5.48	167	Pn	Pn	02 17 50.4	+1.4
EIL				Sn	Sn	02 18 53.2	+1.5
NUB	Nuweibaa	6.07	171	PN	Pn	02 17 58.5	+1.6
	baz=171						
HKAT	Jabal Katrina	6.51	177	PN	Pn	02 18 03.6	+0.4
	baz=176						
RYAN	Fayoum	6.56	206	PN	Pn	02 18 04.2	+0.5
	baz=206						

TR2	Tor 2	6.64	179	PN	Pn	02 18 04.2	-0.6
	baz=178						
TR2				S	Sn	02 19 15.4	-4.8
	baz=178						
SWA2		8.97	232	PN	Pn	02 18 35.6	-1.3
	baz=232						
AKASG	Malin Array Be	15.97	350	Pn	Pn	02 20 12.2	+0.4
	0.2nm,0.3s,baz=162,slow=11,SNR=1.5						
	0.3nm,0.3s						
GERES	GERESS Array B	20.13	319	P	Pn	02 21 04.2	+1.2
	0.2nm,0.4s,baz=123,slow=11,SNR=2.5						
	0.2nm,0.4s						
FINES	FINESS Array B	26.85	352	P	P	02 22 08.0	+0.6
	0.5nm,0.5s,baz=147,slow=11,SNR=5.0						
	0.5nm,0.5s						
ARCES	ARCESS Array B	34.84	355	P	P	02 23 18.3	+0.5
	1.3nm,0.8s,baz=165,slow=7.5,SNR=1.4						
ARCES				LR	LR	02 39 08.2	
	comp=Z,36nm,20.6s,baz=153,slow=39						
	1.3nm,0.8s						

IDC 12 02:21:18.8±3.9, 8°.77S×155°.84E, h0^{km}, mb3.6/4, mbtmp3.7/4, Error ellipse: s-maj=111.0km s-min=39.9km az=107.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.57	240	P	P	02 26 30.4	-0.9
	1.6nm,1.0s,baz=68,slow=11,SNR=5.0						
	1.6nm,1.0s						
ASAR	Alice Springs	25.69	232	P	P	02 26 51.7	+0.8
	0.3nm,0.3s,baz=65,slow=10,SNR=4.4						
	0.3nm,0.3s						
STKA	Stephens Creek	26.53	208	P	P	02 26 58.5	+0.1
	1.8nm,0.8s,baz=43,slow=11,SNR=2.9						
	1.8nm,0.8s						
MKAR	Makanchi Array	85.28	319	P	P	02 33 57.6	-0.1
	0.3nm,0.6s,baz=104,slow=4.6,SNR=5.0						
	0.3nm,0.6s						

IDC 12 02:37:57.1±2.1, 1°.15N×126°.42E, h0^{km}, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=176.7km s-min=26.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.36	160	P	P	02 42 56.3	-0.6
	0.6nm,0.4s,baz=339,slow=11,SNR=12						
	0.6nm,0.4s						
ASAR	Alice Springs	25.72	164	P	P	02 43 29.9	+0.6
	0.3nm,0.3s,baz=342,slow=11,SNR=5.8						
	0.3nm,0.3s						
MKAR	Makanchi Array	59.50	326	P	P	02 48 02.0	-0.1
	0.3nm,0.4s,baz=124,slow=7.4,SNR=5.2						
	0.3nm,0.4s						

*ATH **12** 03:00:49.3, 33°.95N×24°.76E, h8^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=3.1km s-min=2.0km az=224.0*
*HLW **12** 03:00:49.2, 33°.97N×25°.50E, h20^{km}±18^{km}, Md3.5, Ml3.5*
*GII **12** 03:00:51.8±0.0, 33°.95N×25°.35E, h20^{km}*
*THE **12** 03:00:51.0, 34°.03N×24°.80E, h2^{km}±2^{km}, ML2.5/1, Error ellipse: s-maj=3.4km s-min=0.9km az=200.0*
*IDC **12** 03:00:56.4±14.0, 34°.93N×25°.85E, h0^{km}, mb3.8/4, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=268.2km s-min=34.9km az=36.0*
ISC 12 03:00:49.4±1.9, 33°.84N±0°.05×25°.01E±0°.06, h29^{km}±15^{km}, n36, σ1^{s}59/49, mb3.8/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMBK	Timbaki Herakl	1.25	351	P	Pn	03 01 10.4	-0.5
TMBK				S	Sn	03 01 25.4	-1.3
TMBK				AML	AML	03 01 45.5	
	comp=E,634μm,0.6s						
TMBK				AML	AML	03 01 46.4	
	comp=N,859μm,0.7s						
GVD	Gavdhos	1.26	323	P	Pn	03 01 09.0	-2.0
GVD				S	Sn	03 01 23.0	-4.0
GVD				AML	AML	03 01 36.0	
	comp=E,463μm,0.4s						
GVD				AML	AML	03 01 48.5	
	comp=N,476μm,0.5s						
GVD	Gavdhos	1.26	323	P	Pn	03 01 09.9	-1.1
GVD				S	Sn	03 01 24.8	-2.2
	comp=N,245nm,0.4s						
IDI	Anoyia	1.45	356	P	Pn	03 01 14.0	+0.3
IDI				S	Sn	03 01 32.1	+0.2
IDI				AML	AML	03 01 48.8	
	comp=N,121μm,0.5s						
IDI				AML	AML	03 01 49.1	
	comp=E,95μm,0.4s						
IDI	Anoyia	1.45	356	P	Pn	03 01 14.1	+0.3
KSTL	Kastelli Herak	1.47	2	P	Pn	03 01 14.1	+0.2
ZKR	Zakros	1.62	38	P	Pb	03 01 19.3	+0.6
KNDR	Palaiochora Ch	1.77	322	P	Pn	03 01 18.2	+0.2
KNDR				S	Sn	03 01 39.4	-0.2
IMMV	Iera Moni Meta	1.83	333	P	Pn	03 01 18.9	0.0
IMMV				S	Sn	03 01 40.5	-0.6
IMMV				AML	AML	03 02 08.5	
	comp=E,165μm,0.7s						
IMMV				AML	AML	03 02 14.5	
	comp=N,252μm,0.8s						
IMMV	Iera Moni Meta	1.83	333	P	Pn	03 01 18.7	-0.2
SLUM	Salum	2.34	176	PN	Pn	03 01 26.3	+0.4
	baz=186						
SLUM				SN	Sn	03 01 53.7	0.0
	baz=186						
KARP	Karpathos	2.46	46	P	Pb	03 01 31.1	-1.9
THR6	Thira Island,	2.54	7	P	Pn	03 01 29.5	+0.9
THR5	Thira Island,	2.59	6	P	Pn	03 01 30.1	+0.7
MHLO	Agia Marina, M	2.89	350	P	Pn	03 01 36.3	+2.8
KTHR	Kythira	2.92	326	P	Pn	03 01 37.4	+3.4
APE	Apeiranthos	3.25	7	Pn	Pn	03 01 38.7	+0.2
SWA2		4.59	175	PN	Pn	03 01 56.6	-0.3
	baz=181						
SWA2				SN	Sn	03 02 46.9	-2.4
	baz=181						
HFRF	Wahat Farafira	7.25	156	PN	Pn	03 02 33.2	-0.1
	baz=159						
KZIT	Kziot	8.46	108	Pn	Pn	03 02 50.7	+0.7
KZIT				Sn	Sn	03 04 22.5	-2.1
MMA0B	Mount Meron ar	8.73	92	Pn	Pn	03 02 53.4	-0.4
MMA0B				Sn	Sn	03 04 28.9	-2.3
MMAI	Mount Meron Ar	8.73	92	Pn	Pn	03 02 56.1	+2.3
	comp=N,0.9nm,0.3s,baz=308,slow=16,SNR=3.9						
MMAI				Sn	Sn	03 04 30.1	-1.1
	comp=N,2.4nm,0.3s,baz=201,slow=29,SNR=6.1						
	comp=N,0.2nm,0.3s						
MMLI	Mount Malkishu	8.85	96	Pn	Pn	03 02 55.6	+0.3
YTIR	Yattir	8.88	103	Pn	Pn	03 02 55.8	0.0
HMDT	Nahal Hemdat	8.97	97	Pn	Pn	03 02 57.9	+0.9
HMDT				Sn	Sn	03 04 35.4	-1.6
DSI	Dead Sea	9.03	102	Pn	Pn	03 03 01.6	+3.8
DSI				Sn	Sn	03 04 36.0	-2.5
KRMI	Paran Flat	9.05	112	Pn	Pn	03 02 59.2	+1.1
MDBI	Mazsada	9.09	103	Pn	Pn	03 02 59.4	+0.8
HDK1	Dakhla	9.10	154	PN	Pn	03 02 58.8	-0.1
	baz=157						
PRNI	Paran	9.16	110	Pn	Pn	03 03 01.2	+1.5
MBRI	Mt Berech	9.34	113	Pn	Pn	03 03 03.1	+0.9
EIL	Elat	9.43	113	Pn	Pn	03 03 04.1	+0.8
FINES	FINESS Array B	27.63	1	P	P	03 06 35.3	+1.1
	comp=N,0.3nm,0.3s,baz=163,slow=9.9,SNR=3.7						
	comp=N,0.3nm,0.3s						
KURBB	Kurchatov Arra	42.06	50	P	P	03 08 40.0	+1.6
	comp=N,0.7nm,0.4s,baz=273,slow=8.3,SNR=2.1						
	comp=N,0.7nm,0.4s						
MKAR	Makanchi Array	44.62	55	P	P	03 09 00.7	+1.6
	comp=N,0.6nm,0.4s,baz=264,slow=7.3,SNR=1.5						
	comp=N,0.6nm,0.4s						
ZALV	Zalesovo Beam	46.02	45	P	P	03 09 11.0	+1.0
	comp=N,1.3nm,0.4s,baz=264,slow=8.2,SNR=1.2						
	comp=N,1.3nm,0.4s						

*MOS **12** 03:02:35.3±0.9, 36°.23N×71°.30E, h100^{km}, mb4.6/29, Error ellipse: s-maj=6.8km s-min=3.6km az=81.4*
*BJI **12** 03:02:35.4±0.0, 36°.22N×71°.36E, h94^{km}, mb4.5/21, mB4.4/10*
*NEIC **12** 03:02:36.8, 36°.22N×71°.20E, h97^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.29; M$_{\theta\theta}$-4.63; M$_{\phi\phi}$-0.66; M$_{r\theta}$1.08; M$_{\theta\phi}$-4.38; M$_{\phi r}$3.53; Fault plane solution: M$_0$7.59000×10^{15} NP1:φ$_s$34.33000°, δ61.76000°, λ61.89000°. NP2:φ$_s$262.80000°, δ39.01000°, λ131.26000°. Principal axes: T 7.0037, Plg62.0000°, Azm259.0000°; N 1.0673, Plg25.0000°, Azm49.0000°; P -8.0710, Plg12.0000°, Azm144.0000°;*
*NEIC **12** 03:02:36.7±1.2, 36°.22N±0°.05×71°.20E±0°.08, h100^{km}±1^{km}, mb4.5/72, Mwr4.5/15 Error ellipse: s-maj=9.4km s-min=7.0km az=119.0*
*NNC **12** 03:02:38.1±1.6, 36°.49N×70°.87E, h119^{km}±20^{km}, mb4.2, mpv4.8, Error ellipse: s-maj=15.9km s-min=9.6km az=175.0*
*IDC **12** 03:02:39.2±2.5, 36°.23N×71°.29E, h123^{km}±23^{km}, mb4.1/29, mbtmp4.5/34, MS3.0/4, Error ellipse: s-maj=12.6km s-min=9.4km az=3.0*
*SOME **12** 03:02:46.3, 37°.23N×71°.58E, h5^{km}*
ISC 12 03:02:36.3±0.3, 36°.17N±0°.03×71°.27E±0°.03, h100^{km}, n446, σ1^{s}73/483, mb4.5/96, 31C-23D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.40	167	⇓P	Pn	03 03 16.4	+2.1
KBL	Kabul	2.44	229	Pn	Pn	03 03 16.2	+1.4
KBL				Sn	Sn	03 03 44.6	+0.3
KBL	Kabul	2.44	229	PN	Pn	03 03 16.2	+1.4
KBL						03 03 44.6	
KBL	Kabul	2.44	229	P	Pn	03 03 16.5	+1.6
	SNR=42						
KBL				S	Sn	03 03 47.7	+3.4
GAR	Garm	2.92	345		Pn	03 03 21.1	-0.1
CHGR	Chuyangaron	3.00	327	Pn	Pn	03 03 21.3	-0.8
CHCP	Chirah Chowk	3.00	146	⇓P	Pn	03 03 24.3	+2.2
DRK	Karamyk	3.33	7		Pn	03 03 26.4	-0.3
THW	Thamme Wali	3.39	173	P	Pn	03 03 28.9	+1.5
BTK	Batken	3.90	355	Pn	Pn	03 03 35.1	+0.9
BTK	Batken	3.90	355	PN	Pn	03 03 35.1	+0.9
SARP	Sargodha	4.40	164	P	Pn	03 03 41.2	+0.3
JMU	Jammu	4.57	138	*e*P	Pn	03 03 44.1	+0.9
JMU				*e*S	Sn	03 04 34.2	-1.0
KSH	Kashi	5.00	47	P	Pn	03 03 45.2	-4.0
KSH				S	Sn	03 04 36.3	-10
KSH				pmax	pmax		
	comp=Z,76nm,0.6s						
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,460nm,0.5s						
THN	Thein Dam	5.24	134	*e*P	Pn	03 03 53.4	+1.1
THN				*e*S	Sn	03 04 50.9	-0.5
TAS	Tashkent	5.37	344	Pn	Pn	03 03 53.6	-0.4
TAS	Tashkent	5.37	344	PN	Pn	03 03 53.6	-0.4
IUG	Iuzhnay	6.04	351	*d i*PN	Pn	03 04 02.9	-0.4
IUG	Iuzhnay	6.04	351	*e*P	Pn	03 04 02.9	-0.4
	2μm,0.3s						
IUG				*e*S	Sn	03 05 03.3	-7.7
	2μm,0.4s						
IUG	Iuzhnay	6.04	351	⇓*i*P	Pn	03 04 02.9	-0.4
	baz=350						
AML	Almayashu	6.24	17	P	Pn	03 04 06.6	+0.4
	SNR=237						
AML	Almayashu	6.24	17	P	Pn	03 04 06.7	+0.4
AML	Almayashu	6.24	17	*i* P	Pn	03 04 06.8	+0.6
	SNR=22						
CHM	Chimkent	6.27	349	*e*P	Pn	03 04 06.2	-0.1
	9.7nm,0.4s						
CHM				*e*S	Sn	03 05 09.3	-7.2
	2μm,0.4s						
BHK	Bhakra	6.39	136	*e*PN	Pn	03 04 06.8	-1.2
BHK				*e*P	Pn	03 04 08.4	+0.4
BHK				*e*S	Sn	03 05 17.6	-1.9
BHK				*e*SN	Sn	03 05 19.0	-0.5
UCH	Uchtor	6.55	22	P	Pn	03 04 10.8	+0.3
	SNR=62						
DZA	Taraz	6.71	0	*e*PN	Pn	03 04 12.0	-0.2
DZA	Taraz	6.71	0	*e*P	Pn	03 04 12.7	+0.4
	517nm,0.3s						
DZA				*e*S	Sn	03 05 21.0	-6.2
	1μm,0.2s						
DZA	Taraz	6.71	0	*e*P	Pn	03 04 12.1	-0.2
	baz=360						
MRKS	Merke	6.74	12	*e*P	Pn	03 04 15.1	+2.4
	80nm,0.4s						
MRKS				*e*S	Sn	03 05 25.4	-2.5
	182nm,0.6s						
EKS2	Erkin-Say	6.77	16	P	Pn	03 04 13.5	+0.4
	SNR=75						
AAK	Ala-Archa	6.92	20	P	Pn	03 04 16.1	+0.9
	SNR=62						
AAK	Ala-Archa	6.92	20	P	Pn	03 04 16.1	+0.9
	40nm,0.4s,baz=204,slow=8.4,SNR=91						
AAK				S	Sn	03 05 31.3	-1.3
	42nm,0.5s,baz=341,slow=16,SNR=7.3						
AAK	Ala-Archa	6.92	20	*ce*PN	Pn	03 04 15.8	+0.5
AAK				pmax	pmax		
	comp=Z,49nm,0.7s						
AAK	Ala-Archa	6.92	20	P	Pn	03 04 15.9	+0.7
AAK				S	Sn	03 05 30.6	-2.0
AAK	Ala-Archa	6.92	20	*i* P	Pn	03 04 15.9	+0.7
	SNR=72						
BRLS	Borolday	6.94	351	*e*PN	Pn	03 04 11.2	-4.1
BRLS	Borolday	6.94	351	*e*P	Pn	03 04 11.3	-4.1
	comp=Z,26nm,0.2s						
BRLS				*e*S	Sn	03 05 18.5	-14
	comp=Z,172nm,0.3s						
BRLS	Borolday	6.94	351	*e*P	Pn	03 04 11.3	-4.1
	baz=349						
KK31	Karatay Array	6.95	355	Pn	Pn	03 04 15.1	-0.4
KK31	Karatay Array	6.95	355	*e*PN	Pn	03 04 14.7	-0.7
KK31	Karatay Array	6.95	355	⇓P	Pn	03 04 14.8	-0.7
	comp=Z,172nm,0.4s,baz=178,slow=12,SNR=2879						
KK31				⇑S	Sn	03 05 28.2	-4.7
	comp=Z,89nm,0.5s,baz=188,slow=23,SNR=8.9						
KKAR	Karatay Array	6.95	355	Pn	Pn	03 04 14.9	-0.5
KKAR	Karatay Array	6.95	355		Pn	03 04 15.0	-0.5
KKAR	Karatay Array	6.95	355	PN	Pn	03 04 15.0	-0.5
SMLA	Simla	7.04	134	*e*P	Pn	03 04 15.6	-1.1
SMLA				*e*S	Sn	03 05 32.4	-2.7
SMLA				IAML		03 05 35.1	
	comp=E,586nm,0.5s						
SMLA				IAML		03 05 36.7	
	comp=E,825nm,0.3s						
SMLA				IAML		03 05 38.2	
	comp=N,763nm,0.3s						
SMLA				IAML		03 05 39.6	
	comp=N,652nm,0.5s						
KBK	Karagaybulak	7.08	23	P	Pn	03 04 18.1	+0.8
	SNR=13						
FRU1	Bishkek	7.12	20		Pn	03 04 17.7	-0.1
FRU1	Bishkek	7.12	20	PN	Pn	03 04 17.7	-0.1
ULHL	Ulahol	7.19	31	P	Pn	03 04 20.5	+1.6
	SNR=9.9						
BOOM	Boomskoye usch	7.27	28	Pn	Pn	03 04 19.8	-0.2
BOOM	Boomskoye usch	7.27	28	PN	Pn	03 04 19.8	-0.2
CHMS	Chumysh	7.33	20	P	Pn	03 04 21.1	+0.5
	SNR=18						
CHMS	Chumysh	7.33	20	⇑P	Pn	03 04 20.5	-0.1
	comp=N,88nm,0.8s						
CHMS				⇓S	Sn	03 05 41.6	-0.7
	comp=N,114nm,1.1s						
USP	Ospenovka	7.51	18	P	Pn	03 04 23.5	+0.4
	SNR=22						
KDJ	Kajisay	7.52	36		Pn	03 04 23.2	-0.1
KDJ	Kajisay	7.52	36	PN	Pn	03 04 23.2	-0.1
TKM2	Tokmak 2	7.52	25	P	Pn	03 04 24.1	+0.7
	SNR=24						
TKM2	Tokmak 2	7.52	25	⇓P	Pn	03 04 24.0	+0.5
	comp=N,35nm,0.5s						
TARG	Taragay, Kyrgy	7.53	41		Pn	03 04 22.3	-1.4
HRA	Herat	7.59	259	Pn	Pn	03 04 24.8	+0.4
SGDS	Sogindy	7.72	19	*d i*PN	Pn	03 04 25.4	-0.6
SGDS				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SGDS	Sogindy	7.72	19	*e*P	Pn	03 04 25.3	-0.6
	comp=Z,32nm,0.4s						
SGDS	Sogindy	7.72	19	⇓*i*P	Pn	03 04 25.4	-0.6
	comp=Z,3.8nm,0.4s,baz=18						
SGDS	Sogindy	7.72	19	P	Pn	03 04 25.3	-0.6
	comp=Z,32nm,0.4s						
KST	Kastek	7.76	26	*e*P	Pn	03 04 26.6	0.0
	comp=Z,30nm,0.6s						
KST	Kastek	7.76	26	P	Pn	03 04 26.6	0.0
	comp=Z,30nm,0.6s						
MTBS	Maitube	8.01	28	*e*P	Pn	03 04 30.7	+0.8
	comp=Z,46nm,0.7s						
MTBS	Maitube	8.01	28	P	Pn	03 04 30.7	+0.8
	comp=Z,46nm,0.7s						
TNSS	Tian-Shan	8.14	31	*e*PN	Pn	03 04 31.5	-0.4
TNSS	Tian-Shan	8.14	31	*e*P	Pn	03 04 31.6	-0.4
	comp=Z,11nm,0.3s						
TNSS	Tian-Shan	8.14	31	*e*P	Pn	03 04 31.6	-0.4
	baz=31						
TNSS	Tian-Shan	8.14	31	P	Pn	03 04 31.6	-0.4
	comp=Z,11nm,0.3s						
KRBS	Karabastau	8.24	23	*e*P	Pn	03 04 32.2	-0.9
	comp=Z,25nm,0.9s						
KRBS	Karabastau	8.24	23	P	Pn	03 04 32.2	-0.9
	comp=Z,25nm,0.9s						
AAA	Alma-Ata	8.27	30	*e*PN	Pn	03 04 33.5	+0.1
AAA	Alma-Ata	8.27	30	*e*P	Pn	03 04 33.6	+0.1
	baz=30						
MDOK	Medeo	8.28	31	*e*PN	Pn	03 04 33.5	-0.2
MDOK	Medeo	8.28	31	*e*P	Pn	03 04 34.4	+0.7
	comp=Z,17nm,0.5s						
MDOK	Medeo	8.28	31	*e*P	Pn	03 04 33.5	-0.2
	baz=31						
MDOK	Medeo	8.28	31	⇑P	Pn	03 04 34.8	+1.1
	comp=Z,19nm,0.6s						
KTBS	Karatobe	8.60	27	*e*P	Pn	03 04 37.2	-0.8
	comp=Z,6.0nm,0.4s						
KTBS	Karatobe	8.60	27	P	Pn	03 04 37.2	-0.8
	comp=Z,6.0nm,0.4s						
KUU	Kurty	8.64	25	*i* PN	Pn	03 04 37.4	-1.0
KUU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KUU	Kurty	8.64	25	⇑*i*P	Pn	03 04 37.7	-0.7
	comp=Z,8.4nm,0.5s						
KUU	Kurty	8.64	25	*i* P	Pn	03 04 37.4	-1.0
	comp=Z,10nm,0.8s,baz=25						
KUU	Kurty	8.64	25	P	Pn	03 04 37.7	-0.7
	comp=Z,8.4nm,0.5s						
SATY	Saty	8.81	37	*e*PN	Pn	03 04 40.2	-0.6
SATY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SATY	Saty	8.81	37	*e*P	Pn	03 04 40.2	-0.6
	comp=Z,4.5nm,0.8s,baz=36						
CHKK	Chushkaly	8.84	28	*e*PN	Pn	03 04 40.9	-0.3
CHKK	Chushkaly	8.84	28	*e*P	Pn	03 04 40.8	-0.3
	comp=Z,22nm,0.5s						
CHKK	Chushkaly	8.84	28	*e*P	Pn	03 04 41.0	-0.3
	baz=28						
CHKK	Chushkaly	8.84	28	P	Pn	03 04 40.8	-0.3
	comp=Z,22nm,0.5s						
ZHN	Zhinishke	8.91	36	*e*PN	Pn	03 04 41.1	-1.1
ZHN	Zhinishke	8.91	36	*e*P	Pn	03 04 41.1	-1.1
	baz=36						
KHET	Khetri	8.94	153	*e*P	Pn	03 04 40.6	-2.1
NDI	New Delhi	9.00	144	*e*P	Pn	03 04 42.0	-1.4
NDI				*e*x	Sn	03 06 17.0	-6.0
KURS	Kuram	9.03	34	*e*P	Pn	03 04 43.0	-0.7
	comp=Z,16nm,0.8s						
KURS	Kuram	9.03	34	P	Pn	03 04 43.0	-0.7
	comp=Z,16nm,0.8s						
BTLS	Baital	9.11	13	*c i*P	Pn	03 04 43.6	-1.2
BTLS	Baital	9.11	13	*e*P	Pn	03 04 43.6	-1.2
	comp=Z,8.4nm,0.4s						
BTLS				*e*S	Sn	03 06 16.6	-8.8
	comp=Z,6.4nm,0.4s						
BTLS	Baital	9.11	13	⇑*i*P	Pn	03 04 43.6	-1.2
	baz=12						
BTLS	Baital	9.11	13	Lg	Lg	03 06 16.6	
	comp=Z,6.4nm,0.4s						
AYAN	Aya Nagar	9.13	145	*e*P	Pn	03 04 43.0	-2.2
KUDL	Kundal	9.14	150	*e*P	Pn	03 04 43.2	-2.2
KUDL				*e*S	Sn	03 06 18.1	-8.4
UZB	Uzynbulak	9.18	38	*e*P	Pn	03 04 45.0	-0.9
UZB	Uzynbulak	9.18	38	*e*P	Pn	03 04 45.0	-0.9
	baz=38						
JASL	Jaisalmer	9.22	182	*e*x	Pn	03 04 45.5	-1.0
KPKS	Kokpek	9.25	36	*e*P	Pn	03 04 46.0	-0.8
KPKS	Kokpek	9.25	36	*e*P	Pn	03 04 46.3	-0.5
	comp=Z,31nm,0.9s						
KPKS	Kokpek	9.25	36	*e*P	Pn	03 04 46.0	-0.8
	baz=36						
PDGK	Podgornoye	9.54	39	⇑P	Pn	03 04 51.3	+0.4
	comp=Z,20nm,1.0s						
PTH	Pithoragarh	10.01	129	*e*P	Pn	03 04 55.0	-2.4
AJM	Ajmer	10.08	162	⇑*i*x	Pn	03 04 57.0	-1.2
AJM				*e*x	Pn	03 04 57.3	-0.9
AJM				*i* x	Sn	03 06 43.0	-6.5
DJR	Jarkent	10.43	36	*e*P	Pn	03 05 03.2	+0.4
	comp=Z,10nm,0.5s						
DJR	Jarkent	10.43	36	P	Pn	03 05 03.2	+0.4
	comp=Z,10nm,0.5s						
GEYT	Alibeck	10.66	283	P	Pn	03 05 02.9	-3.0
	comp=Z,20nm,0.4s,baz=116,slow=10,SNR=33						
GEYT				S	Sn	03 06 52.7	-11
	comp=Z,19nm,0.5s,baz=108,slow=14,SNR=3.6						
GEYT				LR	LR	03 10 35.4	
	comp=Z,72nm,20.3s,baz=180,slow=45						
GYA0	ALIBECK ARRAY	10.66	283	P	Pn	03 05 02.7	-3.2
GYA0				S	Sn	03 06 55.7	-7.5
GYA0B	ALIBECK ARRAY	10.66	283	Pn	Pn	03 05 03.1	-2.8
GYA0B	ALIBECK ARRAY	10.66	283	⇑P	Pn	03 05 02.8	-3.1
GYA0B				⇓S	Sn	03 06 55.8	-7.5
KAPS	Kapalarasan	10.97	31	*e*P	Pn	03 05 09.2	-1.0
	comp=Z,4.5nm,0.3s						
KAPS	Kapalarasan	10.97	31	P	Pn	03 05 09.2	-1.0
	comp=Z,4.5nm,0.3s						
OTUK	Ortayu	12.09	3	P	Pn	03 05 22.6	-2.4
OTUK				S	Sn	03 07 27.9	-10
OTUK	Ortayu	12.09	3	⇓P	Pn	03 05 22.7	-2.4
	comp=Z,12nm,0.6s						
PYUN	Piuthan	12.78	126	*e*P	Pn	03 05 30.6	-3.9
	comp=Z,204nm,0.4s						
DANN	Dangsing	13.13	123	*e*P	Pn	03 05 35.6	-3.6
	comp=Z,74nm,0.3s						
MAKZ	Makanchi	13.30	34		Pn	03 05 39.7	-1.4
MAKZ	Makanchi	13.30	34	P	Pn	03 05 39.7	-1.4
MAKZ	Makanchi	13.30	34	⇑P	Pn	03 05 39.2	-1.9
	comp=Z,7.3nm,0.8s						
KOLN	Koldanda	13.40	125	*e*P	Pn	03 05 38.6	-4.0
	comp=Z,124nm,0.5s						
MK31	Makanchi Array	13.44	34	Pn	Pn	03 05 43.0	+0.2
MK31	Makanchi Array	13.44	34	*i* P	Pn	03 05 42.1	-0.7
MK31	Makanchi Array	13.44	34	P	Pn	03 05 42.1	-0.7
	comp=Z,3.1nm,0.6s,baz=218,slow=13,SNR=32						
MKAR	Makanchi Array	13.44	34	P	Pn	03 05 42.5	-0.2
	comp=Z,4.1nm,0.9s,baz=218,slow=13,SNR=21						
GKN	Gorkha	13.95	122	*e*P	Pn	03 05 46.5	-3.2
	comp=Z,153nm,0.4s						
DMN	Daman	14.52	122	*e*P	Pn	03 05 53.3	-3.8
	comp=Z,96nm,0.4s						
KKN	Kakani	14.52	121	*e*P	Pn	03 05 53.1	-4.1
	comp=Z,94nm,0.5s						
PKI	Pulchoki	14.75	122	*e*P	Pn	03 05 56.9	-3.3
	comp=Z,53nm,0.3s						
ZSN	Zaisan	15.13	38	*e*P	Pn	03 06 04.3	-0.3
ZSN	Zaisan	15.13	38	*e*P	Pn	03 06 04.3	-0.3
	baz=38						
JIRN	Jiri	15.24	120	*e*P	Pn	03 06 02.9	-3.5
KURBB	Kurchatov Arra	15.37	18	P	Pn	03 06 08.1	+0.6
	comp=Z,5.2nm,0.6s,baz=207,slow=10,SNR=24						
AB31	Akbulak array	15.47	331	*e*P	Pn	03 06 05.6	-3.2
AB31	Akbulak array	15.47	331	⇑P	Pn	03 06 05.6	-3.2
	comp=Z,12nm,0.3s,baz=142,slow=11,SNR=1296						
AB31				⇓S	Sn	03 08 45.8	-14
	comp=Z,15nm,0.5s,baz=139,slow=37,SNR=9.5						
ABKAR	Akbulak array	15.47	331		Pn	03 06 05.9	-2.9
ABKAR	Akbulak array	15.47	331		Pn	03 06 06.0	-2.9
ABKAR				IAmb	IAmb	03 06 08.7	
	comp=Z,36nm,0.4s						
KURK	Kurchatov	15.47	18		Pn	03 06 08.5	-0.3
KURK	Kurchatov	15.47	18	*ce*P	P	03 06 10.2	-0.9
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	Kurchatov	15.47	18	P	P	03 06 10.7	-0.4
KURK	Kurchatov	15.47	18	⇓P	Pn	03 06 08.8	0.0
	comp=Z,11nm,0.9s						
SEM	Semipalatinsk	15.64	22	*e*P	Pn	03 06 10.0	-1.1
SEM	Semipalatinsk	15.64	22	*e*P	Pn	03 06 10.1	-1.1
	baz=22						
RAMN	Ramite	15.96	121	*e*P	Pn	03 06 11.7	-3.7
	comp=Z,85nm,0.5s						
BANOM	Banah	16.38	236	P	P	03 06 22.2	+0.9
	SNR=10.0						
BANOM	Banah	16.38	236	*i* P	P	03 06 22.4	+1.0
	SNR=10						

SHME	Shamm	16.40	236	P	P	03 06 23.4	+1.8
	SNR=6.4						
SHME	Shamm	16.40	236	i P	P	03 06 22.9	+1.4
	SNR=6.4						
ODAN	Odare	16.57	120	eP	Pn	03 06 20.0	-2.9
	comp=Z,132nm,0.6s						
MASF	Masafi	16.84	234	P	P	03 06 28.8	+2.3
	SNR=7.7						
MSFE	Esma-Masafi	16.85	234	i P	P	03 06 28.7	+2.2
	SNR=7.6						
BRVK	Borovoye	16.90	358		Pn	03 06 24.5	-2.0
BRVK				IAmb	IAmb	03 06 33.1	
	comp=Z,16nm,0.6s						
BRVK	Borovoye	16.90	358	deP	Pn	03 06 25.4	-1.0
BRVK				pmax	pmax		
	comp=Z,19nm,1.3s						
BRVK	Borovoye	16.90	358	P	Pn	03 06 26.4	0.0
BRVK	Borovoye	16.90	358	⇓P	Pn	03 06 24.7	-1.7
	comp=Z,12nm,0.6s						
WSAR	Wadi Sarin	16.91	224	P	P	03 06 29.0	+1.8
	comp=Z,9.6nm,0.9s,baz=62,slow=6.2,SNR=8.9						
WSAR	Wadi Sarin	16.91	224	P	P	03 06 29.3	+2.1
UOSS	Minazif	17.11	233		Pn	03 06 29.5	+0.3
UOSS				IAmb	IAmb	03 06 31.9	
	comp=Z,16nm,0.8s						
UOSS	Minazif	17.11	233	P	P	03 06 30.5	+1.1
UOSS	Minazif	17.11	233	i P	P	03 06 30.7	+1.3
	SNR=6.3						
AKTO	Aktyubinsk	17.17	330	P	P	03 06 29.5	-0.4
	comp=Z,46nm,0.6s,baz=134,slow=13,SNR=84						
AKTO				S	Sn	03 09 28.4	-12
	comp=Z,5.1nm,0.3s,baz=50,slow=22,SNR=5.9						
AKTO	Aktyubinsk	17.17	330	⇓P	Pn	03 06 28.3	-1.5
	comp=Z,63nm,0.8s						
AKTO				⇑S	Sn	03 09 27.7	-13
	comp=Z,40nm,0.9s						
WBK	Wadi Bani Khal	17.22	222	P	P	03 06 33.6	+2.9
HATD	Hatta, Dubai	17.24	233	P	P	03 06 31.5	+0.7
HATD	Hatta, Dubai	17.24	233	P	P	03 06 31.2	+0.4
JLN	Jalan Bani Buh	17.37	220	P	Pn	03 06 35.8	+3.4
SMDO	Samad	17.38	225	P	Pn	03 06 34.7	+2.1
ASHO	Ashiyiah	17.38	233	P	Pn	03 06 35.0	+2.4
	SNR=20						
ASHO	Ashiyiah	17.38	233	i P	Pn	03 06 34.4	+1.7
	SNR=9.3						
HOQ	Hoqain	17.41	228	P	Pn	03 06 36.3	+3.4
NAZ	Nazwa, Dubai	17.43	235	P	Pn	03 06 35.1	+2.0
	SNR=6.3						
NAZ	Nazwa, Dubai	17.43	235	i P	Pn	03 06 34.6	+1.5
	SNR=6.3						
FAQ	Al Faqa, Dubai	17.64	234	P	Pn	03 06 37.0	+1.3
FAQ	Al Faqa, Dubai	17.64	234	P	Pn	03 06 37.0	+1.3
LSA	Lhasa	17.88	105	P	P	03 06 38.0	-0.3
LSA				IAmb	IAmb	03 06 39.6	
	comp=Z,25nm,1.1s						
LSA	Lhasa	17.88	105	P	P	03 06 38.1	-0.3
LSA				pmax	pmax		
	comp=Z,25nm,1.1s						
JMDO	Jabal Madar	17.89	223	P	Pn	03 06 41.1	+2.4
ASUD	Al Ashush, Dub	17.90	234	P	Pn	03 06 39.9	+1.0
	SNR=5.9						
ASUD	Al Ashush, Dub	17.90	234	i P	Pn	03 06 39.7	+0.9
	SNR=5.8						
BSY	Bisya	18.11	226	P	Pn	03 06 43.8	+2.4
GOMU	GeErMu	19.00	83	⇑iP	Pn	03 06 52.5	+0.2
GOMU				S	S	03 10 23.6	+2.4
GOMU				pmax	pmax		
	comp=Z,20nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,49nm,4.2s						
MHTO	MHTO	19.08	221	P	Pn	03 06 54.2	+1.3
	SNR=5.2						
UMZA	Um Al Zommool	19.37	231	P	Pn	03 06 56.4	+0.2
JRN	Qarnain Island	19.38	240	P	P	03 06 54.6	+0.4
	SNR=9.4						
MZWR	Madinat Zayed	19.45	235	P	P	03 06 55.8	+0.7
MAK	Makhachkala	19.50	298	eP	P	03 06 55.3	-0.1
MAK				eS	S	03 10 30.1	-0.1
MAK				pmax	pmax		
	comp=Z,136nm,1.1s						
HYBB	Hyderabad (bro	19.77	159	eP	P	03 06 58.6	+0.1
HYBB				e		03 10 27.1	
KHOR	Al-Khor Airpor	19.91	244	P	P	03 07 00.5	+0.5
ZAA0	Zalesovo Array	20.13	24	P	P	03 07 01.5	-0.6
ZAA0				IAmb	IAmb	03 07 08.1	
	comp=Z,17nm,0.6s						
ZAA0	Zalesovo Array	20.13	24	⇑P	P	03 07 01.0	-1.1
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	20.13	24	P	P	03 07 01.6	-0.5
	comp=Z,13nm,0.3s,baz=209,slow=11,SNR=61						
ZALV				LR	LR	03 15 28.4	
	comp=Z,43nm,19.3s,baz=289,slow=38						
	comp=Z,13nm,0.3s						
ZALV	Zalesovo Beam	20.13	24	P	P	03 07 01.4	-0.7
SHMA	Al-Shehemyia	20.17	245	P	P	03 07 03.0	+0.1
DQM	DQM	20.18	220	P	Pn	03 07 04.8	-0.9
MZR	Muzera	20.24	234	P	P	03 07 04.4	+0.8
SAKB	Bahrain	20.42	246	P	P	03 07 06.0	+0.5
TRNA	Turayna	20.66	242	P	P	03 07 07.6	-0.6
SLWR	Sila	20.74	240	P	P	03 07 08.6	-0.3
GROC	Groznyy	20.77	298	eP	Pn	03 07 10.5	-2.0
GROC				e*PP	pP	03 07 29.8	+0.8
GROC				eS	S	03 10 58.8	+3.4
GROC				e		03 11 14.5	
GROC				pmax	pmax		
	comp=Z,30nm,0.8s						
GNI	Garni	21.20	289	P	P	03 07 15.5	+1.5
	comp=Z,36nm,0.9s,baz=153,slow=3.2,SNR=22						
	comp=Z,36nm,0.9s						
GNI	Garni	21.20	289	P	P	03 07 13.3	-0.6
GNI	Garni	21.20	289	deP	P	03 07 17.2	+3.2
GNI				pmax	pmax		
	comp=Z,52nm,1.1s						
GNI	Garni	21.20	289	P	P	03 07 18.9	+4.9
SVE	Sverdlovsk	21.87	344	eP	P	03 07 21.6	+0.9
SVE				eS	S	03 11 20.8	+4.6
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
ARU	Arti	22.01	341	P	P	03 07 23.0	+0.7
	comp=Z,5.3nm,0.5s,baz=173,slow=11,SNR=21						
ARU				LR	LR	03 16 36.3	
	comp=Z,32nm,20.6s,baz=168,slow=38						
	comp=Z,5.3nm,0.5s						
ARU	Arti	22.01	341	P	P	03 07 22.4	+0.1
ARU				IAmb	IAmb	03 07 57.4	
	comp=Z,25nm,0.8s						
ARU	Arti	22.01	341	d iP	P	03 07 23.5	+1.3
ARU						03 07 52.0	
ARU				S	S	03 11 22.0	+3.2
ARU				SS	SnSn	03 12 03.8	+9.5
ARU				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEI	Tsey	22.07	296	eP	P	03 07 26.5	+3.2
ZEI				pmax	pmax		
	comp=Z,14nm,1.4s						
ONI	Oni	22.37	295	P	P	03 07 25.8	-0.5
ONI				IAmb	IAmb	03 07 43.2	
	comp=Z,12nm,0.7s						
ONI	Oni	22.37	295	P	P	03 07 25.8	-0.5
ONI				pmax	pmax		
	comp=Z,12nm,0.7s						
GTA	Gaotai	22.75	73	eP	P	03 07 32.5	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	22.94	298	P	P	03 07 32.0	+0.2
	comp=Z,1.4nm,0.5s,baz=81,slow=6.2,SNR=6.5						
KBZ				LR	LR	03 18 15.0	
	comp=Z,53nm,18.4s,baz=44,slow=41						
	comp=Z,1.4nm,0.5s						
KBZ	Khabaz	22.94	298	⇑eP	P	03 07 32.2	+0.3
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOF	Gofitskoye	23.10	301	⇑eP	P	03 07 36.2	+2.8
GOF				pmax	pmax		
	comp=Z,20nm,0.6s						
DOK	Doka	23.11	225	P	P	03 07 35.1	+1.4
	SNR=27						
DOK				P	P	03 07 35.1	+1.4
KVAR	Kislovodsk Arr	23.12	298	P	P	03 07 35.0	+1.2
	comp=Z,1.3nm,0.5s,baz=90,slow=20,SNR=1.6						
	comp=Z,1.3nm,0.5s						
KIV	Kislovodsk	23.13	298	P	P	03 07 33.1	-0.7
KIV				IAmb	IAmb	03 07 49.3	
	comp=Z,19nm,0.6s						
KIV	Kislovodsk	23.13	298	eP	P	03 07 35.5	+1.7
KIV				eS	S	03 11 40.0	+2.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,24nm,14.0s						
DMTO	DMTO	23.38	222	P	P	03 07 38.0	+1.8
	SNR=8.5						
WHFO	Wadi Hawf	23.87	225	P	P	03 07 41.9	+1.2
RBK	Rabkut	23.96	224	P	P	03 07 42.5	+1.0
ABTO	Aybut	24.59	225	P	P	03 07 48.5	+1.2
RAYN	Ar Rayn	25.57	248	P	P	03 07 55.3	-0.8
RAYN	Ar Rayn	25.57	248	P	P	03 07 55.3	-0.8
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VRH	Novokhopyorsk	25.89	315	eP	P	03 08 01.3	+2.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIRV	Kirov	26.63	334	P	P	03 08 06.3	+1.1
	comp=Z,20nm,0.6s,baz=97,slow=1.0,SNR=9.8						
	comp=Z,20nm,0.6s						
KIRV	Kirov	26.63	334	ceP	P	03 08 07.1	+1.9
ANN	Anapa	26.98	299	eP	P	03 08 14.0	+5.5
ANN				e*PP	pP	03 08 32.9	+1.0
ANN				eS	S	03 12 40.3	+1.9
ANN				pmax	pmax		
	comp=Z,112nm,1.0s						
VSR	Storozhevoye	27.38	313	eP	P	03 08 09.5	-2.5
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORR	Voronezh	27.52	314	eP	P	03 08 10.5	-2.8
VORR				pmax	pmax		
	comp=Z,30nm,0.5s						
LPSR	Galich'ya Gora	28.04	316	eP	P	03 08 18.7	+0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	Songino Array	28.35	55	P	P	03 08 22.4	+1.6
	comp=Z,3.0nm,0.7s,baz=256,slow=9.5,SNR=16						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	28.35	55	P	P	03 08 20.5	-0.4
ULN	Ulaanbaatar	28.79	55	deP	P	03 08 26.1	+1.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BR131	Keskin Array S	29.74	288	deP	P	03 08 34.8	+1.5
BRTR	Keskin Array B	29.74	288	P	P	03 08 35.0	+1.7
	comp=Z,1.7nm,0.8s,baz=92,slow=7.8,SNR=7.9						
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	29.74	288	P	P	03 08 31.8	-1.5
CMAR	Chiang Mai Arr	30.11	118	P	P	03 08 38.2	+1.6
	comp=Z,2.0nm,0.3s,baz=304,slow=7.9,SNR=9.9						
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	30.11	118	P	P	03 08 36.3	-0.3
CMAR	Chiang Mai Arr	30.11	118	ceP	P	03 08 38.7	+2.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
OBN	Obninsk	30.33	320	c iP	P	03 08 39.0	+0.9
OBN				*PP	pP	03 09 02.0	+0.5
OBN				*SP	sP	03 09 14.0	+0.4
OBN						03 09 40.0	
OBN						03 11 40.0	
OBN				S	S	03 13 32.0	+1.3
OBN				SS	SnSn	03 15 15.0	-1.1
OBN				pmax	pmax		
	comp=Z,17nm,0.6s						
KLMR	Klimovskoe	31.87	331	P	P	03 08 52.6	+1.0
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLMR	Klimovskoe	31.87	331	P	P	03 08 52.7	+1.1
KLMR				AMP		03 08 54.0	
	comp=Z,5.0nm,0.7s						
ELL	Elmali	33.08	284	P	P	03 09 02.6	-0.1
ELL	Elmali	33.08	284	P	P	03 09 02.6	-0.1
ELL				pmax	pmax		
	comp=Z,39nm,0.6s						
AKASG	Malin Array Be	33.32	309	P	P	03 09 05.1	+0.7
	comp=Z,0.8nm,0.4s,baz=76,slow=7.9,SNR=12						
	comp=Z,0.8nm,0.4s						
AKASG	Malin Array Be	33.32	309	P	P	03 09 04.0	-0.4
AKBB	Malin Array Si	33.32	309	P	P	03 09 02.6	-1.8
AKBB				IAmb	IAmb	03 09 39.4	
	comp=Z,4.9nm,0.8s						
AKBB	Malin Array Si	33.32	309	P	P	03 09 02.6	-1.8
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	34.41	10	P	P	03 09 14.5	+0.9
	comp=Z,4.7nm,0.7s,baz=221,slow=8.1,SNR=5.5						
	comp=Z,4.7nm,0.7s						
NRIK	Noril'sk	34.41	10	P	P	03 09 13.6	0.0
NRIK				IAmb	IAmb	03 09 15.4	
	comp=Z,6.1nm,0.8s						
NRIK	Noril'sk	34.41	10	ceP	P	03 09 14.4	+0.9
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK	Minsk	34.88	316	i P	P	03 09 18.8	+1.0
MNK				i *PP	pP	03 09 41.5	0.0
MNK				i		03 10 38.2	
MNK				i S	S	03 14 44.7	+3.2
MNK				i SS	SnSn	03 17 06.8	+0.5
MNK				pmax	pmax		
	comp=N,19nm,1.3s						
MNK				pmax	pmax		
	comp=Z,20nm,1.3s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.3s						
MNK	Minsk	34.88	316	i P	P	03 09 18.8	+1.0
	comp=E,3.0nm,1.3s,baz=101						
MNK				i P	P	03 09 18.8	+1.0
	comp=N,19nm,1.3s						
MNK				i P	P	03 09 18.8	+1.0
	comp=Z,20nm,1.3s						
MNK				i pP	pP	03 09 41.5	0.0
MNK				i PP	PP	03 10 38.2	-0.4
MNK				i S	S	03 14 44.7	+3.2
MNK				i SS	SnSn	03 17 06.9	+0.5
MLR	Muntele Rosu	35.13	300	P	P	03 09 19.8	-0.4
MLR				IAmb	IAmb	03 09 25.8	
	comp=Z,9.1nm,0.8s						
MLR	Muntele Rosu	35.13	300	P	P	03 09 19.8	-0.4
MLR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NACGM	Naroch	35.60	316	⇑eP	P	03 09 24.5	+0.6
	comp=Z,29nm,1.0s,baz=102						
IDID	Didziasalis	35.72	317	eP	P	03 09 26.5	+1.6
IIGN	Ignalina	36.01	317	eP	P	03 09 29.3	+1.8
VSU	Vasula	36.58	322	deP	P	03 09 32.9	+0.7
VSU	Vasula	36.58	322	eP	P	03 09 33.0	+0.7
PABE	Paberze	37.30	316	eP	P	03 09 39.7	+1.3
KWP	Kalwaria Pacla	37.38	307	P	P	03 09 38.4	-0.8
KWP	Kalwaria Pacla	37.38	307	P	P	03 09 38.4	-0.8
KWP				pmax	pmax		
	comp=Z,96nm,1.3s						
VSVD	Vaisvydziai	37.42	317	eP	P	03 09 41.0	+1.6
UZH	Uzhgorod	37.62	305	eP	P	03 09 41.6	+0.4
FIA1	FINESS Array S	37.88	326	P	P	03 09 43.4	+0.2
FIA1				IAmb	IAmb	03 09 45.0	
	comp=Z,11nm,0.8s						
FINES	FINESS Array B	37.88	326	P	P	03 09 44.0	+0.8
	comp=Z,8.6nm,0.7s,baz=120,slow=8.7,SNR=55						
	comp=Z,8.6nm,0.7s						
FINES	FINESS Array B	37.88	326	P	P	03 09 43.6	+0.4
MTSE	Matsula	38.11	321	eP	P	03 09 46.5	+1.4
MEF	Metsahovi	38.25	324	eP	P	03 09 47.3	+1.0
NJ2	Nanjing	39.31	82	eP	P	03 09 52.3	-3.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
RAF	Rauma	39.73	325	eP	P	03 09 59.2	+0.6
AAL	Aland	40.36	323	eP	P	03 10 04.2	+0.4
UPP	Uppsala	41.46	322	eP	P	03 10 13.5	+0.6
ARA0	ARCESS Array S	41.53	338	eP	P	03 10 14.5	+1.1
ARCES	ARCESS Array B	41.53	338	P	P	03 10 14.4	+1.0
	comp=Z,2.8nm,0.4s,baz=110,slow=7.7,SNR=40						
	comp=Z,2.8nm,0.4s						
ARCES	ARCESS Array B	41.53	338	P	P	03 10 13.5	+0.1
ARCES				IAmb	IAmb	03 10 52.1	
	comp=Z,8.6nm,1.2s						
ARCES	ARCESS Array B	41.53	338	P	P	03 10 13.5	+0.1
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VIKU	Vikbolandet	41.72	320	eP	P	03 10 15.9	+0.9
BLEU	Blekinge	41.96	317	i P	P	03 10 16.8	-0.2
KTK1	Kautokeino	42.00	336	eP	P	03 10 17.7	+0.5
HAMF	Hammerfest	42.61	339	eP	P	03 10 23.4	+1.3
DEL	Delary	43.05	317	eP	P	03 10 27.4	+1.6
DEL	Delary	43.05	317	i P	P	03 10 26.0	+0.2
DEL				IAmb	IAmb	03 10 27.3	
	comp=Z,6.4nm,0.5s						
JETT	Jettan, Norway	43.15	337	eP	P	03 10 27.8	+1.3
GERES	GERESS Array B	43.30	306	P	P	03 10 29.0	+0.9
	comp=Z,0.2nm,0.3s,baz=103,slow=13,SNR=4.0						
GERES				PcP	PcP	03 12 13.8	-1.5
	comp=Z,0.6nm,0.7s,baz=87,slow=4.0,SNR=4.2						
	comp=Z,0.2nm,0.3s						
GERES	GERESS Array B	43.30	306	P	P	03 10 28.4	+0.3
BJUU	Bjuv	43.50	316	eP	P	03 10 29.7	+0.2
TRO	Tromso	43.65	336	eP	P	03 10 31.4	+0.9
FABU	Falkenberg	43.71	318	i P	P	03 10 31.2	+0.1
BORU	Boraas	43.71	318	i P	P	03 10 31.4	+0.3
FAUS	Fauske	44.19	333	eP	P	03 10 35.8	+0.9
MOR8	Moi Rana	44.21	331	eP	P	03 10 35.4	+0.3
STEI	Steigen	44.36	333	eP	P	03 10 37.4	+1.2
NC405	NORSAR Array S	44.54	323	P	P	03 10 38.1	+0.4
NC602	NORSAR Array S	44.58	323	eP	P	03 10 38.6	+0.6
STRU	Stroemstad	44.63	320	i P	P	03 10 38.3	-0.1
NC303	NORSAR Array S	44.72	323	P	P	03 10 39.2	+0.1
NB201	NORSAR Array S	44.73	323	P	P	03 10 39.5	+0.1
NB2	NORSAR Subarra	44.77	323	P	P	03 10 39.7	+0.1
	comp=Z,6.2nm,0.6s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.77	323	P	P	03 10 39.7	+0.1
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.77	323	P	P	03 10 39.8	+0.1
	comp=Z,6.4nm,0.6s,baz=96,slow=7.8,SNR=52						
	comp=Z,6.4nm,0.6s						
KSRS	Korea Array	44.78	71	P	P	03 10 40.8	+0.8
	comp=Z,1.5nm,0.4s,baz=279,slow=6.6,SNR=7.3						
	comp=Z,1.5nm,0.4s						
KONS	Konsvik	44.80	331	eP	P	03 10 40.0	+0.3
NSS	Namsos	44.89	328	eP	P	03 10 42.0	+1.6
NBO00	NORSAR Array S	44.98	323	P	P	03 10 41.3	0.0
NC204	NORSAR Array S	45.01	324	P	P	03 10 41.9	+0.3
LOF	Lofoten	45.03	333	eP	P	03 10 42.5	+1.0
OVD	Ostervraa, Den	45.09	318	eP	P	03 10 42.7	+0.6
KLR	Kul'dur	45.16	54	deP	P	03 10 43.6	+0.7
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KONO	Kongsberg	45.48	321	eP	P	03 10 45.5	+0.4
GOET	G??ttrup	45.62	317	i P	P	03 10 47.7	+1.4
GOET				IAmb	IAmb	03 10 48.4	
	comp=Z,23nm,0.7s						
DOMB	Dombas	45.88	325	eP	P	03 10 49.0	+0.6
TIXI	Tiksi	46.00	22	P	P	03 10 49.0	0.0
	comp=Z,6.7nm,0.3s,baz=270,slow=11,SNR=13						
	comp=Z,6.7nm,0.3s						
TIXI	Tiksi	46.00	22	P	P	03 10 48.8	-0.3
TIXI	Tiksi	46.00	22	P	P	03 10 48.8	-0.3
TIXI				pmax	pmax		
	comp=Z,11nm,0.3s						
HOMB	Homborsund	46.01	319	i P	P	03 10 49.8	+0.5
HOMB	Homborsund	46.01	319	eP	P	03 10 50.3	+1.0
SKAR	Skarslia	46.17	323	eP	P	03 10 52.3	+1.7
SNART	Snartemo	46.69	319	i P	P	03 10 55.6	+1.0
SNART	Snartemo	46.69	319	eP	P	03 10 55.7	+1.0
BLS5	Blasjo	47.07	321	eP	P	03 10 59.2	+1.5
HYA	Hoyanger	47.22	323	eP	P	03 11 00.2	+1.5
BER	Bergen	47.63	322	eP	P	03 11 02.8	+0.9
KMY	Karmoy	47.70	321	eP	P	03 11 03.7	+1.3
ASK	Askoy	47.70	322	eP	P	03 11 03.3	+0.9
SPA0	Spitsbergen Ar	47.86	347	eP	P	03 11 04.9	+1.3
SENIN	Lac Senin/Sane	47.95	303	P	P	03 11 04.6	-0.3
SENIN				IAmb	IAmb	03 11 06.6	
	comp=Z,4.9nm,0.8s						
KMBO	Kilima Mbogo	48.77	228	P	P	03 11 13.6	+2.0
	comp=Z,2.8nm,0.6s,baz=35,slow=15,SNR=4.1						
	comp=Z,2.8nm,0.6s						
KEST	Kesra	49.34	289	P	P	03 11 16.6	+1.1
	comp=Z,3.5nm,0.8s,baz=98,slow=6.9,SNR=6.5						
	comp=Z,3.5nm,0.8s						
KEST	Kesra	49.34	289	P	P	03 11 15.0	-0.6
KEST				IAmb	IAmb	03 11 54.1	
	comp=Z,14nm,1.2s						
MBAR	Mbarara	52.49	235	P	P	03 11 39.5	0.0
MBAR	Mbarara	52.49	235	ceP	P	03 11 41.0	+1.5
MBAR				pmax	pmax		
	comp=Z,11nm,1.7s						
MJAR	Matsushiro Arr	52.88	68	P	P	03 11 42.4	+0.4
	comp=Z,5.6nm,0.9s,baz=293,slow=10.0,SNR=11						
	comp=Z,5.6nm,0.9s						
MJAR	Matsushiro Arr	52.88	68	P	P	03 11 41.5	-0.4
MJAR				IAmb	IAmb	03 12 08.9	
	comp=Z,11nm,1.4s						
MJAR	Matsushiro Arr	52.88	68	P	P	03 11 41.5	-0.4
MJAR				pmax	pmax		
	comp=Z,11nm,1.5s						
SEY	Seymchan	54.57	34	⇑eP	P	03 11 54.8	+1.0
SEY				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SCO	Scoresbysund	57.44	337	i P	P	03 12 19.4	+5.3
ESDC	Sonseca Array	57.80	298	P	P	03 12 17.1	-0.1
	comp=Z,0.7nm,0.6s,baz=58,slow=7.4,SNR=7.8						
	comp=Z,0.7nm,0.6s						
ESDC	Sonseca Array	57.80	298	P	P	03 12 15.6	-1.6
BILL	Bilibino	58.81	26	⇑iP	P	03 12 24.5	+0.8
BILL				*PP	pP	03 12 51.0	+1.6
BILL				*SP	sP	03 13 04.0	+3.1
BILL						03 13 14.0	
BILL				eS	S	03 20 11.9	-9.1
BILL				eSS	SS	03 24 18.8	+3.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SUMG	Summit	61.44	341	P	P	03 12 41.7	-0.4
SUMG	Summit	61.44	341	P	P	03 12 41.7	-0.4
SUMG				pmax	pmax		
	comp=Z,23nm,1.4s						
SUMG	Summit	61.44	341	i P	P	03 12 43.0	+0.9
SUMG				IAmb	IAmb	03 12 45.7	
	comp=Z,24nm,1.4s						
ICESG	Greenland Ices	63.59	338	i P	P	03 12 57.4	+1.0
ICESG				IAmb	IAmb	03 12 58.5	
	comp=Z,3.6nm,0.6s						
TULEG	Thule	64.80	350	i P	P	03 12 55.8	-7.9
LSZ	Lusaka	65.38	226	⇑iP	P	03 13 09.7	+1.2
LSZ				IAmb	IAmb	03 13 10.4	
	comp=Z,115nm,0.8s						
LSZ	Lusaka	65.38	226	P	P	03 13 09.1	+0.6
LSZ	Lusaka	65.38	226	P	P	03 13 09.1	+0.6
LSZ				pmax	pmax		
	comp=Z,13nm,0.7s						
TOA0	Torodi Ar. Sit	65.92	269	P	P	03 13 10.6	-1.3
	SNR=21						
TORD	Torodi Ar. Bea	65.92	269	P	P	03 13 10.7	-1.2
	comp=Z,6.3nm,0.4s,baz=43,slow=5.6,SNR=4.4						
ILULI	Ilulissat	66.78	341	i P	P	03 13 16.4	-0.2
ILULI				IAmb	IAmb	03 13 17.9	
	comp=Z,6.6nm,0.8s						
DY2G	Dye2	67.17	337	i P	P	03 13 19.5	+0.1
DY2G				IAmb	IAmb	03 13 21.2	
	comp=Z,6.1nm,0.6s						
BLWY	Bulawayo	69.02	223	⇑iP	P	03 13 32.3	+0.8
BLWY				IAmb	IAmb	03 13 32.9	
	comp=Z,69nm,0.7s						
BLWY	Bulawayo	69.02	223	i P	P	03 13 32.5	+1.0
BLWY	Bulawayo	69.02	223	i P	P	03 13 32.5	+1.0
RES	Resolute Bay	69.04	356	P	P	03 13 31.1	+0.5
	comp=Z,1.2nm,0.5s,baz=359,slow=4.7,SNR=7.4						
	comp=Z,1.2nm,0.5s						
SHEM	Shemya Is, Ala	69.07	39	LR	LR	03 45 50.5	
	comp=Z,3µm,19.7s,baz=267,slow=38						
MATP	Matopo	69.31	223	i P	P	03 13 34.7	+1.5
MATP	Matopo	69.31	223	i P	P	03 13 34.7	+1.5
KOWA	Kowa	69.80	273	P	P	03 13 35.5	-0.7
MOPA	Mopani	70.31	219	eP	P	03 13 40.5	+1.4
MOPA				IAmb	IAmb	03 13 41.1	
	comp=Z,10nm,1.1s						
TOLK	Toolik Lake Re	71.19	15	P	P	03 13 44.2	+0.3
TOLK				IAmb	IAmb	03 13 44.9	
	comp=Z,6.6nm,0.7s						
COLD	Coldfoot	72.23	16	P	P	03 13 50.5	+0.4
H23K	Yukon River	73.54	16	P	P	03 13 58.5	+0.5
H23K				IAmb	IAmb	03 13 59.8	
	comp=Z,3.9nm,0.8s						
SLR	Silverton	73.73	220	eP	P	03 14 01.6	+1.9
SLR				IAmb	IAmb	03 14 03.2	
	comp=Z,4.0nm,0.6s						
J20K	Nowinta River	73.77	19	P	P	03 13 59.7	+0.4
J20K				IAmb	IAmb	03 14 00.4	
	comp=Z,4.9nm,0.6s						
H24K	Noodor Dome	73.91	16	P	P	03 14 00.6	+0.5
I23K	Minto, Yukon-K	74.16	17	P	P	03 14 01.7	+0.3
C36M	Paulatuk	74.18	6	P	P	03 14 01.5	0.0
INK	Inuvik	74.19	9	P	P	03 14 02.1	+0.5
INK				IAmb	IAmb	03 14 03.0	

	comp=Z,12nm,1.2s						
INK	Inuvik	74.19	9	P	P	03 14 02.1	+0.5
INK				pmax	pmax		
	comp=Z,12nm,1.2s						
K20K	Telida	74.45	19	P	P	03 14 03.8	+0.5
K20K				IAmb	IAmb	03 14 04.4	
	comp=Z,5.3nm,0.6s						
KSR	Koster	74.55	221	eP	P	03 14 05.6	+1.2
KSR				IAmb	IAmb	03 14 07.2	
	comp=Z,3.9nm,0.6s						
MDM	Murphy Dome	74.57	16	P	P	03 14 04.3	+0.3
LBTB	Lobatse	74.58	222	⇑iP	P	03 14 06.1	+1.6
LBTB				IAmb	IAmb	03 14 06.5	
	comp=Z,21nm,0.6s						
LBTB	Lobatse	74.58	222	P	P	03 14 04.8	+0.2
LBTB	Lobatse	74.58	222	P	P	03 14 04.8	+0.2
LBTB				pmax	pmax		
	comp=Z,22nm,0.5s						
LBTB	Lobatse	74.58	222	i P	P	03 14 06.2	+1.6
LBTB	Lobatse	74.58	222	i P	P	03 14 06.2	+1.6
POKR	Poker Plat Res	74.62	16	P	P	03 14 04.4	+0.2
POKR				IAmb	IAmb	03 14 05.5	
	comp=Z,4.6nm,0.8s						
BPAW	Bear Paw Mtn.	74.64	18	P	P	03 14 04.3	0.0
NEA2	Nenana	74.69	17	P	P	03 14 04.7	+0.1
NEA2				IAmb	IAmb	03 14 05.2	
	comp=Z,6.6nm,0.7s						
TCOL	CIGO, UAF Yank	74.73	16	P	P	03 14 04.2	-0.5
TCOL				IAmb	IAmb	03 14 06.0	
	comp=Z,7.0nm,0.6s						
COLA	College	74.73	16	P	P	03 14 04.2	-0.6
COLA				IAmb	IAmb	03 14 05.6	
	comp=Z,7.3nm,0.8s						
COLA	College	74.73	16	deP	P	03 14 05.0	+0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	Dimbokro	74.90	267	P	P	03 14 05.5	-1.0
	comp=Z,5.5nm,0.9s,baz=79,slow=7.2,SNR=4.7						
	comp=Z,5.5nm,0.9s						
DBIC	Dimbokro	74.90	267	P	P	03 14 05.7	-0.9
DBIC				IAmb	IAmb	03 14 32.4	
	comp=Z,11nm,1.1s						
DBIC	Dimbokro	74.90	267	P	P	03 14 05.7	-0.9
DBIC				pmax	pmax		
	comp=Z,11nm,1.1s						
CAST	Castle Rocks	74.92	19	P	P	03 14 06.2	+0.2
CAST				IAmb	IAmb	03 14 06.9	
	comp=Z,7.4nm,0.8s						
KIC	Kosan Boka	74.98	267	eP	P	03 14 05.8	-1.3
	comp=Z,4.1nm,0.5s						
ILAR	Eielson Array	75.03	16	P	P	03 14 05.7	-0.9
	comp=Z,1.4nm,0.7s,baz=320,slow=4.7,SNR=19						
	comp=Z,1.4nm,0.7s						
TIC	Toumodi	75.04	267	eP	P	03 14 04.6	-2.8
	comp=Z,33nm,1.1s						
KTH	Kantishna Hill	75.11	18	P	P	03 14 06.6	-0.5
KTH				IAmb	IAmb	03 14 08.1	
	comp=Z,5.8nm,0.8s						
LIC	Lamto	75.29	267	eP	P	03 14 07.1	-1.7
	comp=Z,23nm,1.7s						
PPLA	Purkeypile	75.33	19	P	P	03 14 08.4	0.0
PPLA				IAmb	IAmb	03 14 09.7	
	comp=Z,5.1nm,0.6s						
J25K	Salcha River,	75.50	15	P	P	03 14 08.9	-0.4
RND	Reindeer	75.74	17	P	P	03 14 10.1	-0.6
RND				IAmb	IAmb	03 14 10.5	
	comp=Z,3.4nm,0.6s						
RND	Reindeer	75.74	17	P	P	03 14 10.1	-0.6
RND				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SNKL	Senekal, Frees	76.07	219	⇑iP	P	03 14 14.1	+1.0
SNKL				IAmb	IAmb	03 14 14.9	
	comp=Z,28nm,0.5s						
I29M	Ogilvie Camp,	76.20	12	P	P	03 14 13.1	-0.1
I29M				IAmb	IAmb	03 14 13.4	
	comp=Z,3.0nm,0.6s						
EGAK	Eagle	76.21	14	P	P	03 14 13.6	+0.3
SCRK	Sand Creek	76.36	15	P	P	03 14 14.5	+0.3
DHY	Denali Highway	76.38	17	P	P	03 14 13.8	-0.6
DHY				IAmb	IAmb	03 14 15.4	
	comp=Z,4.8nm,0.6s						
SWZ	Schweizer	76.45	221	eP	P	03 14 16.3	+1.1
SWZ				IAmb	IAmb	03 14 17.1	
	comp=Z,18nm,0.7s						
K27K	Chicken	76.70	14	P	P	03 14 16.7	+0.7
PAX	Paxson	76.91	16	P	P	03 14 17.1	-0.2
PAX				IAmb	IAmb	03 14 17.7	
	comp=Z,3.3nm,0.6s						
PAX	Paxson	76.91	16	P	P	03 14 17.2	-0.2
PAX				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DAWY	Dawson	77.19	13	P	P	03 14 19.0	+0.1
SML	Sawmill	77.23	18	P	P	03 14 18.9	-0.2
SML				IAmb	IAmb	03 14 19.6	
	comp=Z,8.0nm,0.7s						
L27K	Beaver Creek,	77.62	15		P	03 14 21.7	+0.4
BCAR	Beaver Creek A	77.62	15	P	P	03 14 21.9	+0.6
BOSA	Boshof	77.64	220	⇑iP	P	03 14 22.9	+1.1
BOSA				IAmb	IAmb	03 14 23.5	
	comp=Z,20nm,0.7s						
BOSA	Boshof	77.64	220	P	P	03 14 22.9	+1.1
	comp=Z,23nm,0.7s,baz=24,slow=4.0,SNR=86						
	comp=Z,23nm,0.7s						
BOSA	Boshof	77.64	220	P	P	03 14 22.2	+0.4
BOSA	Boshof	77.64	220	P	P	03 14 22.2	+0.4
BOSA				pmax	pmax		
	comp=Z,21nm,0.7s						
BOSA	Boshof	77.64	220	i P	P	03 14 23.2	+1.4
BOSA	Boshof	77.64	220	i P	P	03 14 23.2	+1.4
HVD	Gariep Dam	79.11	219	eP	P	03 14 30.8	+0.9
HVD				IAmb	IAmb	03 14 31.7	
	comp=Z,8.7nm,0.7s						
KEIM	Keimoes	80.02	223	eP	P	03 14 36.5	+1.6
KEIM				IAmb	IAmb	03 14 37.1	
	comp=Z,14nm,0.8s						
HYT	Haines Junctio	80.52	14	P	P	03 14 37.4	+0.2
HYT				IAmb	IAmb	03 14 38.6	
	comp=Z,5.5nm,0.9s						
YKA	Yellowknife Ar	81.56	3	P	P	03 14 42.6	+0.1
	comp=Z,5.0nm,0.5s,baz=351,slow=5.3,SNR=190						
	comp=Z,5.0nm,0.5s						
YKA	Yellowknife Ar	81.56	3	P	P	03 14 42.8	+0.3
WRA	Warramunga Arr	81.64	122	P	P	03 14 43.6	+0.1
	comp=Z,3.2nm,0.6s,baz=326,slow=4.9,SNR=48						
	comp=Z,3.2nm,0.6s						
WRA	Warramunga Arr	81.64	122	P	P	03 14 43.6	+0.1
WRA	Warramunga Arr	81.64	122	P	P	03 14 43.6	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
GRAN	Grantham	82.17	220	eP	P	03 14 48.1	+1.9
GRAN				IAmb	IAmb	03 14 48.5	
	comp=Z,3.7nm,0.6s						
ASAR	Alice Springs	83.89	125	P	P	03 14 55.1	-0.1
	comp=Z,3.0nm,0.6s,baz=310,slow=5.0,SNR=32						
	comp=Z,3.0nm,0.6s						
EDM	Edmonton	90.88	3		P	03 15 28.7	+0.2
EDM	Edmonton	90.88	3	P	P	03 15 28.7	+0.2
EDM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULM	Lac du Bonnet	93.20	352	P	P	03 15 38.5	-0.7
	comp=Z,4.1nm,0.8s,baz=356,slow=6.1,SNR=3.4						
	comp=Z,4.1nm,0.8s						
CPUP	Villa Florida	135.41	268	PKP	PKPdf	03 21 43.5	-1.2
	comp=Z,1.1nm,0.7s,baz=90,slow=5.3,SNR=3.3						
CPUP	Villa Florida	135.41	268		PKPdf	03 21 43.3	-1.4
PLCA	Paso Flores	149.91	250	PKPbc	PKPbc	03 22 14.6	-0.2
	comp=Z,2.0nm,0.7s,baz=51,slow=1.7,SNR=4.7						
PLCA	Paso Flores	149.91	250		PKPdf	03 22 10.7	+0.8
PLCA	Paso Flores	149.91	250	PKHKP	PKPpre	03 22 10.7	

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*JMA **12** 03:05:41.3±0.1, 24°.7N±0°.3×121°.9E±0°.4, h37^{km}, MV3.1/9, TAIWAN REGION*
*TAP **12** 03:05:41.1, 24°.70N×121°.96E, h9^{km}, ML3.8, B*
ISC 12 03:05:41.2±0.8**, 24°.73N**±0°.02×**121°.98E**±0°.02**, h13^{km}**±5^{km}**, n132,** σ1^{s}.**15**/179**, 20C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.12	341	⇑iP	Pg	03 05 44.9	+0.3
	baz=353						
EGS				i S	Sg	03 05 47.2	+0.3
	baz=353						
TWC	Suao	0.17	224	⇑iP	Pg	03 05 44.3	-0.9
	baz=236						
TWC				S	Sg	03 05 46.0	-1.9
	baz=236						
NTC	Toucheng	0.18	313	eP	Pg	03 05 45.9	+0.4
	baz=321						
ILA	Ilan	0.21	280	i P	Pg	03 05 46.0	+0.1
	baz=279						
ILA				i S	Sg	03 05 49.5	+0.5
	baz=279						
NDS	Dongshan	0.26	248	⇑P	Pg	03 05 46.2	-0.5
	baz=250						
NDS				eS	Sg	03 05 49.0	-1.3
	baz=250						
TIPB	Shuangxi	0.28	331	⇑iP	Pg	03 05 47.7	+0.6
	baz=345						
TWB1	Santiao Chiao	0.28	2	⇑iP	Pg	03 05 47.7	+0.6
	baz=356						
TWB1				S	Sg	03 05 51.6	+0.6
	baz=356						
TWE	Neicheng	0.28	269	⇑iP	Pg	03 05 46.8	-0.3
	baz=270						
TWE				S	Sg	03 05 50.4	-0.7
	baz=270						
EWUT	Wuta	0.34	213	⇑eP	Pg	03 05 47.2	-0.9
	baz=214						
EWUT				eS	Sg	03 05 51.0	-1.7
	baz=214						
FUSB	Fushanzhiwuyua	0.35	275	⇑iP	Pb	03 05 48.4	-1.1
	baz=268						
ENA	Nanau	0.37	216	eP	Pg	03 05 48.3	-0.4
	baz=207						
SXI1	Grass Mountain	0.38	346	⇑iP	Pb	03 05 49.7	-0.1
	baz=354						
SXI1				S	Sb	03 05 55.4	-0.2
	baz=354						
ENTT	Nioudou	0.38	257	⇑P	Pg	03 05 48.4	-0.5
	baz=260						
WFSB	Wu-fen Shan	0.39	333	⇑iP	Pb	03 05 50.0	0.0
	baz=328						
WFSB				S	Sb	03 05 55.4	-0.4
	baz=328						
NWLT	Wulai	0.43	277	⇑P	Pb	03 05 49.8	-1.0
	baz=281						
NWLT				S	Sg	03 05 55.1	-0.6
	baz=281						
TWA	Mucha	0.44	305	⇑iP	Pb	03 05 50.6	-0.2
	baz=309						
TWA				i S	Sb	03 05 57.1	-0.2
	baz=309						
NDT	Datong Townshi	0.44	254	⇑eP	Pg	03 05 49.2	-0.7
	baz=256						
LATG	Datong	0.45	245	⇓P	Pg	03 05 49.8	-0.5
	baz=249						
LATG				S	Sg	03 05 55.6	-0.7
	baz=249						
TNOU	National Taiwa	0.46	336	⇑iP	Pb	03 05 51.3	+0.1
	baz=332						
TNOU				eS	Sb	03 05 58.4	+0.5
	baz=332						
EHP	Heping Village	0.47	207	eP	Pg	03 05 49.7	-0.8
	baz=206						
NHDH	Xindian Distri	0.47	300	eP	Pb	03 05 51.3	-0.1
	baz=303						
NHDH				S	Sb	03 05 57.6	-0.6
	baz=303						
NHY	Taipei	0.48	310	eP	Pb	03 05 52.0	+0.5
	baz=312						
TATO	Taipei	0.51	299	⇑iP	Pb	03 05 51.9	-0.1
	baz=302						
TATO				i S	Sb	03 05 58.1	-1.2
	baz=302						
TAP1	Taipei	0.52	307	eP	Pn	03 05 53.0	-1.2
	baz=309						
TAP1				eS	Sb	03 05 59.8	+0.3
	baz=309						
TAP	Taipei	0.53	306	P	Pb	03 05 52.5	+0.2
	baz=309						
TAP				S	Sb	03 06 00.0	+0.2
	baz=309						
YHNB	Yeheng	0.55	264	⇑iP	Pg	03 05 51.6	-0.4
	baz=267						
YHNB				eS	Sg	03 05 58.0	-1.4
	baz=267						
BACT	New Taipei Cit	0.56	299	eP	Pb	03 05 53.1	+0.3
	baz=301						
YM01	YM01	0.56	319	P	Pb	03 05 53.4	+0.5
	baz=320						
NSK	Sanguang	0.56	265	⇑iP	Pg	03 05 51.8	-0.5
	baz=268						
NSK				eS	Sg	03 05 58.1	-1.8
	baz=268						
YM08	YM08	0.58	323	⇑P	Pb	03 05 53.4	+0.2
	baz=324						
ANP	Anpu	0.62	318	eP	Pb	03 05 53.8	-0.1
	baz=320						
NNSB	Datong	0.62	241	eP	Pg	03 05 52.3	-1.0
	baz=250						
NNS	Nan Shan	0.62	243	eP	Pg	03 05 52.7	-0.7
	baz=245						
NNS				eS	Sg	03 06 00.4	-1.2
	baz=245						
TWS1	Kuangyinshan	0.63	306	eP	Pn	03 05 55.0	-0.9
	baz=308						
TWY	Chenhua	0.64	328	eP	Pn	03 05 54.9	-1.1
	baz=329						
NTST	Danshui	0.65	312	eP	Pn	03 05 55.5	-0.5
	baz=314						
ETL	Fush Village	0.65	210	eP	Pg	03 05 52.8	-1.2
	baz=202						
NACB	Ninganchiao	0.65	212	⇑iP	Pg	03 05 52.7	-1.3
	baz=204						
NACB				eS	Sg	03 05 60.0	-2.6
	baz=204						
NTY	Taoyuan	0.67	294	eP	Pn	03 05 56.9	+0.4
	baz=296						
ETLH	Xiulin Townshi	0.69	221	eP	Pg	03 05 53.9	-0.7
	baz=222						
TWD	Chiawan	0.73	208	P	Pg	03 05 54.3	-1.2
	baz=209						
TWD				S	Sg	03 06 03.3	-1.8
	baz=209						
NCU	National Centr	0.76	289	P	Pn	03 05 56.9	-0.7
	baz=291						
NCU				eS	Sn	03 06 08.8	-0.1
	baz=291						
NCUH	Zhongli	0.76	289	eP	Pn	03 05 57.2	-0.5
	baz=284						
NFF	Wufeng Townshi	0.79	263	eP	Pb	03 05 57.2	+0.4
	baz=256						
FUSS	Fushou	0.82	235	eP	Pg	03 05 56.3	-0.9
	baz=235						
HWA	Hwalien	0.82	204	eP	Pg	03 05 56.8	-0.4
	baz=212						
TWT	Tachien	0.87	237	eP	Pg	03 05 57.6	-0.5
	baz=231						
TWT				eS	Sg	03 06 09.3	-0.3
	baz=231						
WHF	Hehuan Shan	0.87	228	P	Pg	03 05 57.2	-1.0
	baz=230						
WHF				eS	Sg	03 06 08.2	-1.4
	baz=230						
HSN1	Hsinchu	0.87	273	eP	Pn	03 05 59.9	+0.7
	baz=270						
HSN1				eS	Sn	03 06 12.8	+1.0
	baz=270						
ETM	Tongmen	0.88	210	eP	Pg	03 05 56.8	-1.5
	baz=211						
ETM				eS	Sg	03 06 07.4	-2.4
	baz=211						
LIOB	Emei	0.88	265	eP	Pn	03 05 59.2	-0.1
	baz=266						
TDCB	Techi	0.88	238	eP	Pg	03 05 57.5	-0.8
	baz=233						
TDCB				eS	Sg	03 06 08.6	-1.4
	baz=233						
NHW	Xinwu Township	0.89	288	eP	Pn	03 05 59.9	+0.5
	baz=290						
NHW				eS	Sn	03 06 13.0	+0.9
	baz=290						
NSTT	Nanjuang	0.89	264	eP	Pb	03 05 59.1	+0.5
	baz=265						
PCYT	Pengchaiyu	0.90	5	eP	Pn	03 05 59.2	-0.4
	baz=6.0						
SBCB	Hsinchu	0.90	274	i P	Pn	03 06 00.1	+0.5
	baz=271						
SBCB				i S	Sn	03 06 13.5	+1.0
	baz=271						
HSN	Hsinchu	0.92	275	eP	Pb	03 05 59.4	+0.4
	baz=279						
HSN				eS	Sn	03 06 12.7	-0.2
	baz=279						
JYNG	Yonagunijimaku	0.92	107	P	Pg	03 05 58.7	-0.4
JYNG				eS	Sg	03 06 11.7	+0.5
TEYL	Yanliau Villag	0.92	202	eP	Pg	03 05 58.7	-0.4
	baz=211						
YOJ	Yonaguni jima	0.98	106	P	Pg	03 05 59.7	-0.4
	baz=104						
YOJ				eS	Sg	03 06 12.1	-0.8
	baz=104						
YOJ	Yonaguni jima	0.98	106	P	Pg	03 06 00.0	-0.1
YOJ				S	Sg	03 06 12.9	0.0
CHGB	Renai	0.99	228	eP	Pg	03 05 59.2	-1.2
	baz=230						
CHGB				S	Sg	03 06 13.1	-0.3
	baz=230						
NJN	Zhunan	1.01	268	eP	Pn	03 06 02.0	+1.0
	baz=263						
NJN				eS	Sn	03 06 16.5	+1.5
	baz=263						
ESL	Shilin	1.04	209	eP	Pg	03 05 59.5	-1.8
	baz=208						
WHP	Taichung City	1.04	245	eP	Pg	03 06 01.2	-0.2
	baz=245						
OWD	Renai	1.06	224	eP	Pg	03 06 01.0	-0.7
	baz=231						
WUSB	Renai	1.07	227	eP	Pg	03 06 01.1	-0.9
	baz=235						
WUSB				eS	Sg	03 06 14.7	-1.3
	baz=235						
NMLH	Miaoli	1.09	260	eP	Pn	03 06 03.2	+0.9
	baz=260						
NSY	Sanyi	1.15	255	eP	Pn	03 06 04.7	+1.7
	baz=254						
TWQ1	Liyutan	1.16	251	P	Pn	03 06 04.7	+1.5
	baz=253						
TWQ1				eS	Sb	03 06 19.5	+1.4
	baz=253						
EGFH	Guangfu	1.17	206	eP	Pg	03 06 02.5	-1.3
	baz=212						
WPL	Puli Township	1.17	233	eP	Pg	03 06 03.4	-0.5
	baz=239						
WCS	Beigang Elemen	1.18	236	eP	Pg	03 06 03.8	-0.2
	baz=235						
DPDB	Guoxing	1.18	234	eP	Pg	03 06 03.2	-0.8
	baz=234						
VWDT	VWDT	1.23	218	P	Pg	03 06 03.8	-1.2
	baz=220						
VWDT				S	Sg	03 06 19.0	-2.0
	baz=220						
SMLT	Sun Moon Lake	1.29	230	P	Pg	03 06 05.3	-0.9
	baz=231						
SMLT				eS	Sg	03 06 22.4	-0.6
	baz=231						
TYC	Yuchr	1.31	231	eP	Pb	03 06 06.9	+1.2
	baz=237						
SSLB	Suanglung	1.32	225	P	Pn	03 06 05.4	0.0
	baz=218						
SSLB				eS	Sg	03 06 21.2	-2.7
	baz=218						
HGSD	Ruisui	1.33	202	eP	Pn	03 06 05.9	+0.4
	baz=218						
WWF	Wufeng	1.35	240	eP	Pg	03 06 07.9	+0.7
	baz=242						
WWF				eS	Sn	03 06 27.2	+3.6
	baz=242						
EHY	Hungye	1.36	206	eP	Pn	03 06 05.4	-0.4
	baz=217						
WNT	Mingjian	1.45	235	eP	Pg	03 06 09.4	+0.3
	baz=234						
WJS	Zhushan	1.45	232	eP	Pg	03 06 09.9	+0.8
	baz=236						
YULB	Yu-li	1.47	205	eP	Pn	03 06 07.7	+0.3
	baz=215						
EYUL	Yuli	1.50	204	eP	Pn	03 06 09.2	+1.4
	baz=214						
TWF1	Yuli	1.50	205	eP	Pn	03 06 08.2	+0.3
	baz=215						
YUS	Yu-Shan	1.55	217	eP	Pn	03 06 09.5	+0.6
	baz=226						
ALS	Alishan	1.62	222	eP	Pn	03 06 11.1	+1.4
	baz=221						
CHN5	Tsauling	1.64	227	eP	Pb	03 06 12.0	+0.7
	baz=227						
CHN5				eS	Sg	03 06 34.9	+1.0
	baz=227						
IRIF	Iriomote-Funau	1.64	103	P	Pn	03 06 09.1	-0.7
IRIF				S	Sn	03 06 29.8	-1.0
FULB	Fuli	1.65	202	eP	Pn	03 06 11.5	+1.6
	baz=214						
WGK	Gukeng	1.66	232	eP	Pb	03 06 12.6	+1.0
	baz=230						
WDLH	Douliu	1.67	232	eP	Pb	03 06 12.3	+0.4
	baz=231						
WRL	Guolierlin Hig	1.68	241	eP	Pb	03 06 11.8	-0.1
	baz=240						
ELDTW	Lidau	1.77	210	eP	Pn	03 06 13.6	+2.0
	baz=209						
WTK	Tuku	1.78	235	eP	Pg	03 06 14.9	-0.5
	baz=234						
HATJ	Hateruma jima	1.80	111	S	Sn	03 06 34.4	-0.2
EDH	Donghe	1.85	200	eP	Pn	03 06 15.0	+2.3
	baz=199						
CHN4	Tsaushan	1.86	223	eP	Pb	03 06 16.3	+1.1
	baz=223						
CHN4				eS	Sg	03 06 42.2	+0.9
	baz=223						
CHY	Chiayi	1.87	230	eP	Pb	03 06 16.1	+0.8
	baz=228						
TPUB	Ta-pu	1.88	221	eP	Pb	03 06 15.6	+0.1
	baz=205						
STYH	Taoyuan	1.90	216	eP	Pb	03 06 15.7	-0.1
	baz=201						
JKRS	Kuro-shima	1.92	104	P	Pn	03 06 13.2	-0.3
JKRS				S	Sn	03 06 36.8	-0.7
STYT	Tauyuan	1.92	216	eP	Pb	03 06 16.7	+0.6
	baz=214						
WTP	Ta-pu	1.93	220	eP	Pb	03 06 16.7	+0.3
	baz=203						
WSL	Shuilin Townsh	2.00	233	eP	Pn	03 06 16.8	+2.2
	baz=246						
JIJ	Ishigaki jima	2.01	100	eP	Pn	03 06 14.9	+0.1
JIJ				S	Sn	03 06 37.7	-2.0
SNST	Tainan City	2.02	222	eP	Pb	03 06 18.2	+0.4
	baz=221						
CHN1	Nanshi	2.03	221	eP	Pb	03 06 18.3	+0.3
	baz=204						
ICHU	Yijhu	2.06	229	eP	Pb	03 06 18.3	-0.3
	baz=241						
TWG	Pinlang	2.07	204	eP	Pn	03 06 17.9	+2.2
	baz=202						
TWGBT	Beinan	2.07	204	eP	Pn	03 06 17.0	+1.3
	baz=202						
SGST	Jiashian	2.08	218	eP	Pn	03 06 17.7	+1.9
	baz=202						
SLGT	Liugui	2.11	215	eP	Pb	03 06 19.9	+0.5
	baz=213						
VWUC	VWUC	2.31	277	eP	Pn	03 06 18.8	-0.1
	baz=278						
MATB	Ma-tsu	2.32	308	eP	Pn	03 06 19.3	+0.2
	baz=309						
SSD	Sandimen	2.33	212	eP	Pn	03 06 21.9	+2.7
	baz=210						
TSMG	Majia	2.35	211	eP	Pb	03 06 23.9	+0.4
	baz=209						
MASBT	Mashibuluo	2.44	211	eP	Pn	03 06 22.7	+2.0
	baz=208						
PNG	Penghu	2.50	243	eP	Pb	03 06 24.9	-1.0
	baz=242						
PHUB	P'eng-hu	2.51	242	eP	Pn	03 06 24.3	+2.6
	baz=240						
EAST	Anshuo	2.55	204	eP	Pn	03 06 23.7	+1.3
	baz=190						
WDGT	Dungji	2.57	236	eP	Pn	03 06 23.9	+1.3
	baz=234						
SCZT	Fangliau	2.66	208	eP	Pn	03 06 26.3	+2.6
	baz=191						
LYJJ	Jianjiangzhen	2.70	313	eP	Pn	03 06 24.0	-0.4
	baz=314						
XPSS	Dashiqiu	2.72	324	eP	Pn	03 06 24.6	-0.1
	baz=324						
SLIU	Shizi	2.72	204	eP	Pn	03 06 27.4	+2.7
	baz=190						
VCHM	Qimei	2.78	238	eP	Pn	03 06 27.9	+2.5
	baz=236						
TWKBT	Hengchun	2.97	201	eP	Pn	03 06 31.0	+2.9
	baz=187						
MHZQ	Yeshan	2.99	298	eP	Pb	03 06 31.9	-2.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=299						
JMJ	Miyako jima 2	3.02	88	eP	Pn	03 06 31.6	+2.9
	baz=101						
KNMB	Chin-men Tao	3.28	266	eP	Pn	03 06 32.5	+0.2
	baz=267						

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*GUC **12** 03:11:02.9±0.6, 24.°83S×70.°69W, h21km±3km, ML3.8*
*IDC **12** 03:11:04.0±2.1, 24.°27S×71.°42W, h0km, mb3.4/2, mbtmp3.5/5, ML3.6/3, MS2.7/4, Error ellipse: s-maj=48.0km s-min=29.7km az=179.0*
ISC 12 03:11:00.3±0.9**, 24.°85S**±0.°03×**70.°83W**±0.°07**, h10km, n33, σ1s70**/27**, mb3.5**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.17	106	eP	Pg	03 11 22.1	-0.7
GO02				iS	Sg	03 11 35.4	-2.7
GO02				IAML		03 11 36.6	
	comp=E,3µm,0.4s						
AC01	Pan de Azucar	1.31	171	eP	Pn	03 11 25.3	+0.6
AC01				iS	Sb	03 11 42.7	+0.6
AC01				IAML		03 11 45.6	
	comp=E,2µm,0.4s						
PB10	IPOC Station P	1.35	11	eP	Pn	03 11 25.2	0.0
PB10				iS	Sb	03 11 42.6	-0.4
PB15	IPOC Station P	2.05	38	iS	Sn	03 12 02.0	+1.1
PB06	IPOC Station P	2.42	29	iP	Pn	03 11 38.7	-1.4
PB06				IAML		03 12 23.5	
	comp=N,622nm,0.3s						
AC02	Maricunga	2.51	143	eP	Pn	03 11 44.4	+2.8
AC02				IAML		03 12 20.1	
	comp=E,786nm,0.3s						
AC06	Mina Casimiro	2.54	170	eP	Pn	03 11 42.9	+1.3
AC06				iS	Sn	03 12 12.9	+0.3
AC06				IAML		03 12 23.7	
	comp=E,581nm,0.5s						
PB04	IPOC Station P	2.58	14	iS	Sn	03 12 17.0	+3.2
PB04				IAML		03 12 24.9	
	comp=E,670nm,0.4s						
GO03	Copiap	2.79	169	eP	Pn	03 11 46.2	+1.2
GO03				iS	Sn	03 12 19.8	+0.9
GO03				IAML		03 12 31.5	
	comp=E,410nm,0.5s						
LVC	Limon Verde	2.84	39	Pn	Pb	03 11 50.5	-0.7
	comp=E,22nm,0.3s,baz=226,slow=13,SNR=65						
LVC				Sn	Sb	03 12 25.1	-1.2
	comp=E,154nm,0.3s,baz=357,slow=9.2,SNR=23						
LVC				LR	LR	03 12 59.7	
	comp=E,147nm,18.3s,baz=226,slow=41						
	comp=E,97nm,0.3s						
LVC	Limon Verde	2.84	39	eP	Pn	03 11 48.1	+2.1
LVC				iS	Sn	03 12 22.7	+2.2
AF01	San Pedro de A	3.07	53	eP	Pn	03 11 51.4	+2.2
AF01				eS	Sb	03 12 30.4	-2.6
PB07	IPOC Station P	3.22	16	eP	Pn	03 11 48.6	-2.6
PB07				IAML		03 12 47.4	
	comp=E,283nm,0.5s						
AC04	Llanos de Chal	3.35	184	eP	Pn	03 11 51.2	-1.6
AC04				IAML		03 12 58.6	
	comp=E,142nm,0.4s						
PB09	IPOC Station P	3.37	26	eP	Pn	03 11 54.3	+1.2
PB09				IAML		03 12 52.7	
	comp=N,338nm,0.7s						
PB02	IPOC Station P	3.61	14	eP	Pn	03 11 52.1	-4.3
PB01	IPOC Station P	3.98	18	eP	Pn	03 12 01.9	+0.4
PATCX	Punta Patache	4.05	9	eP	Pn	03 11 58.5	-4.0
LPAZ	La Paz	8.88	17	Pn	Pn	03 13 10.2	+0.9
	comp=N,0.2nm,0.3s,baz=214,slow=7.1,SNR=4.9						
LPAZ				LR	LR	03 16 11.3	
	comp=N,24nm,20.3s,baz=250,slow=36						
	comp=N,0.6nm,0.4s						
H03N1	Juan Fernandez	11.10	218	T	T	03 25 20.2	
	baz=44,slow=72,SNR=560						
H03N2	Juan Fernandez	11.11	218	T	T	03 25 16.4	
	baz=44,slow=72,SNR=268						
H03N3	Juan Fernandez	11.11	218	T	T	03 25 15.2	
	baz=44,slow=72,SNR=302						
CPUP	Villa Florida	12.28	100	Pn	Pn	03 14 08.7	+13
	comp=N,0.1nm,0.3s,baz=270,slow=14,SNR=4.2						
CPUP				LR	LR	03 19 06.7	
	comp=N,78nm,19.3s,baz=216,slow=37						
	comp=N,3.0nm,1.0s						
NNA	Nana	14.00	335	LR	LR	03 18 06.1	
	comp=N,19nm,19.1s,baz=179,slow=32						
TXAR	Lajitas Array	62.42	328	P	P	03 21 24.4	+0.6
	comp=N,0.2nm,0.8s,baz=155,slow=4.8,SNR=3.5						
	comp=N,0.2nm,0.8s						
TORD	Torodi Ar. Bea	80.14	71	P	P	03 23 18.8	+7.7
	comp=N,10nm,0.6s,baz=250,slow=2.9,SNR=4.4						
YKA	Yellowknife Ar	93.75	341	P	P	03 24 17.2	+0.3
	comp=N,0.1nm,0.5s,baz=147,slow=3.7,SNR=3.0						
	comp=N,0.1nm,0.5s						
H11S2	WAKE ISLAND Hy	126.48	275	T	T	05 49 29.7	
	baz=108,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	126.49	275	T	T	05 49 33.1	
	baz=108,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	126.49	275	T	T	05 49 36.7	
	baz=108,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	126.65	277	T	T	05 49 51.0	
	baz=106,slow=74						
H11N1	WAKE ISLAND Hy	126.67	277	T	T	05 49 52.0	
	baz=106						
H11N2	WAKE ISLAND Hy	126.67	277	T	T	05 49 49.8	
	baz=106,slow=74						

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*TUL **12** 03:12:45.6±0.5, 36.°327N±0.°010×97.°70W±0.°02, h6km±6km, ML2.5, mb_Lg2.2/24(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=73.0*
NEIC 12 03:12:45.7±0.4**, 36.°33N**±0.°01×**97.°68W**±0.°02**, h4**km±7km**, Error ellipse: s-maj=2.2km s-min=1.5km az=67.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.93	168	Pg	Pg	03 13 03.4	0.0
OKCSW	OKLAHOMA CITY	0.94	168		Pg	03 13 03.6	-0.1
FNO	Franklin	1.09	168	Pg	Pg	03 13 06.2	-0.4
T35A	Sooner Cattle	1.11	58		Pg	03 13 06.8	-0.2
TUL1	Leonard	1.59	105	Pn	Pn	03 13 14.4	-0.1
TUL1				IAmb_Lg		03 13 37.8	
	comp=Z,18nm,0.9s						
X34A	Smith Ranch, M	1.73	184		Pn	03 13 16.1	-0.4
WMOK	Wichita Mounta	1.82	210	Pn	Pn	03 13 17.5	-0.2
R32A	Long Quarter,	2.25	339	Pn	Pn	03 13 23.4	-0.2
X37A	Clayton	2.56	132	Pn	Pn	03 13 27.5	-0.4
X37A				IAmb_Lg		03 14 13.9	
	comp=Z,7.4nm,0.7s						
HHAR	Hobbs	3.02	90	Pn	Pn	03 13 34.2	-0.1
S39A	Bolivar	3.75	67	Pn	Pn	03 13 44.6	+0.4
MIAR	Mount Ida	3.79	117	Pn	Pn	03 13 43.7	-1.2
MIAR				IAmb_Lg		03 14 52.6	
	comp=Z,5.7nm,0.8s						
U40A	Yellville	3.90	88	IAmb_Lg		03 14 51.1	
	comp=Z,6.2nm,0.7s						
X40A	Basin Creek Fa	4.37	113	IAmb_Lg		03 15 06.5	
	comp=Z,5.9nm,0.7s						
MGMO	Mountain Grove	4.43	78	IAmb_Lg		03 15 08.2	
	comp=Z,3.8nm,0.9s						
FCAR	Ozark Folk Cen	4.52	94	IAmb_Lg		03 15 10.2	
	comp=Z,3.4nm,0.8s						
P38A	Dawn	4.65	44	IAmb_Lg		03 15 19.8	
	comp=Z,4.6nm,0.7s						
CCM	Cathedral Cave	5.42	70	IAmb_Lg		03 15 43.6	
	comp=Z,4.4nm,1.0s						
Q24A	Divide	6.48	296	IAmb_Lg		03 16 20.9	
	comp=Z,3.3nm,0.8s						
RSSD	Black Hills	9.17	330	IAmb_Lg		03 17 59.2	
	comp=Z,1.8nm,1.0s						

TAP 12 03:12:51.8, 24.°21N×121.°60E, h17km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.04	183	eP	Pg	03 12 55.4	+0.5
	baz=183						
NACB				eS	Sg	03 12 57.6	+0.6
	baz=183						
ETL	Fush Village	0.06	156	eP	Pg	03 12 55.4	+0.3
	baz=156						
ETL				eS	Sg	03 12 57.8	+0.5
	baz=156						
ETLH	Xiulin Townshi	0.10	267	eP	Pg	03 12 56.0	+0.5
	baz=266						
ETLH				eS	Sg	03 12 58.8	+0.7
	baz=266						
TWD	Chiawan	0.13	180	eP	Pb	03 12 56.5	+0.7
	baz=176						
TWD				eS	Sb	03 12 59.4	+1.0
	baz=176						
NNSB	Datong	0.29	318	eP	Pb	03 12 58.9	+0.3
	baz=317						
NNS	Nan Shan	0.30	318	eP	Pb	03 12 59.1	+0.3
	baz=318						
NNS				eS	Sb	03 13 04.6	+1.0
	baz=318						
LATG	Datong	0.33	349	eP	Pb	03 12 59.4	+0.2
	baz=348						
ENTT	Nioudou	0.43	356	eP	Pb	03 13 01.4	+0.6
	baz=357						
NDS	Dongshan	0.43	14	eP	Pg	03 13 00.5	-0.2
	baz=14						
NDS				eS	Sb	03 13 07.5	+0.4
	baz=14						
WUSB	Renai	0.49	243	eP	Pb	03 13 02.2	+0.2
	baz=243						
WUSB				eS	Sb	03 13 09.8	+0.9
	baz=243						
YHNB	Yeheng	0.50	336	eP	Pb	03 13 02.7	+0.6
	baz=336						
YHNB				eS	Sb	03 13 10.1	+1.0
	baz=336						
NSK	Sanguang	0.51	335	eP	Pb	03 13 02.6	+0.3
	baz=335						
NSK				eS	Sb	03 13 10.7	+1.3
	baz=335						
FUSB	Fushanzhiwuyua	0.54	359	eP	Pb	03 13 03.4	+0.5
	baz=359						
NWLT	Wulai	0.57	351	eP	Pb	03 13 03.6	+0.3
	baz=351						

IDC 12 03:17:06.0±1.4**, 13.°18N×143.°40E, h0km, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=35.3km s-min=22.1km az=148.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.49	74	Pn	Pn	03 17 34.1	+0.1
	12nm,0.3s,baz=187,slow=22,SNR=2.1						
GUMO				Sn	Sn	03 17 55.2	+1.0
	38nm,0.3s,baz=327,slow=23,SNR=8.3						
WRA	Warramunga Arr	34.10	195	P	P	03 23 52.5	0.0
	0.4nm,0.5s,baz=20,slow=9.9,SNR=5.9						
	0.4nm,0.5s						
ASAR	Alice Springs	37.78	194	P	P	03 24 24.1	-0.1
	0.2nm,0.4s,baz=24,slow=9.0,SNR=4.7						
	0.2nm,0.4s						
MKAR	Makanchi Array	60.79	316	P	P	03 27 19.8	-0.2
	4.3nm,0.9s,baz=105,slow=7.9,SNR=1.5						
	4.3nm,0.9s						

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*MOS **12** 03:17:13.5±1.1, 24.°66N×122.°05E, h12km, mb5.8/91, MS5.7/69, Error ellipse: s-maj=6.2km s-min=3.8km az=115.3*
*BJI **12** 03:17:13.0±0.0, 24.°68N×122.°00E, h15km, mb5.2/78, mB6.1/69, ML6.3/11, Ms6.3/96, Ms7 6.3/87*
*ASIES **12** 03:17:14.7, 24.°69N×121.°95E, h17km, MW5.7*
*IDC **12** 03:17:14.0±0.3, 24.°58N×121.°91E, h0km, mb5.1/43, mbtmp5.1/48, ML4.3/4, MS5.5/82, Error ellipse: s-maj=11.5km s-min=8.0km az=61.0*
*JMA **12** 03:17:15.5±0.1, 24.°7N±0.°2×121.°9E±0.°8, h37km±4km, MD6.5/15, MW5.9/15, TAIWAN REGION*
JMA Felt II J1 at TAIWAN REGION .
*NEIC **12** 03:17:15.1±2.0, 24.°70N±0.°04×121.°98E±0.°05, h8km±1km, mb5.6/334, Ms_20 5.7/386, Mwb5.8/59, Mww5.8, ML5.8(TAP), Error ellipse: s-maj=7.2km s-min=6.9km az=31.0*
*NIED **12** 03:17:15.5, 24.°66N×121.°92E, h37km, MW6.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{17}Nm; Mrr-6.73; Mθθ6.47; Mφφ0.26; Mrθ-5.95; Mθφ3.81; Mφr-2.28; Fault plane solution: M0 9.85000×10^{17} NP1: φs240.00000°, δ25.00000°, λ-97.00000°. NP2: φs68.00000°, δ65.00000°, λ-87.00000°.*
*NEIC **12** 03:17:15, 24.°68N×122.°00E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-3.59; Mθθ3.50; Mφφ0.09; Mrθ0.84; Mθφ3.98; Mφr-2.61; Fault plane solution: M0 5.99000×10^{17} NP1: φs269.16000°, δ52.74000°, λ-38.04000°. NP2: φs24.51000°, δ60.63000°, λ-135.99000°. Principal axes: T 6.1786, Plg5.0000°, Azm145.0000°; N -0.3972, Plg39.0000°, Azm51.0000°; P -5.7813, Plg51.0000°, Azm241.0000°;*
*TAP **12** 03:17:15.1, 24.°69N×121.°98E, h9km, ML6.1, C*
*GCMT **12** 03:17:16.1±0.1, 24.°71N×121.°93E, h12km, MW5.8/150, Moment Tensor Solution. s129,c272; s150,c453; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; Mrr-4.97±.05; Mθθ4.44±.05; Mφφ0.52±.05; Mrθ2.57±.14; Mθφ4.49±.04; Mφr0.44±.15; Best double couple: M0 6.78100×10^{17} NP1: φs38.00000°, δ37.00000°, λ-118.00000°. NP2: φs252.00000°, δ58.00000°, λ-70.00000°. Principal axes: T 7.8300, Plg11.0000°, Azm328.0000°; N -2.1090, Plg17.0000°, Azm61.0000°; P -5.7310, Plg70.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **12** 03:17:20, 24.°37N×121.°86E, h16km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; Mrr-4.46; Mθθ3.79; Mφφ0.67; Mrθ2.17; Mθφ4.16; Mφr-2.78; Fault plane solution: M0 6.87000×10^{17} NP1: φs25.00000°, δ54.00000°, λ-136.00000°. NP2: φs266.00000°, δ56.00000°, λ-44.00000°. Principal axes: T 6.6817, Plg1.0000°, Azm326.0000°; N 0.3573, Plg36.0000°, Azm57.0000°; P -7.0389, Plg54.0000°, Azm234.0000°;*
ISC 12 03:17:15.8±0.3**, 24.°67N**±0.°01×**122.°02E**±0.°01**, h12**km±1km**, h12km:pP-P, n1758, σ1s78**/1824**, mb5.6**/390**, MS5.7**/316**, 176C-332D, Fault plane solution: NP1:**φs275.12723°, δ45.32154°, λ-6.96967°. **NP2:**φs10.04004°, δ85.05018°, λ-135.10907°. **Principal axes:** T Plg25.8601°, Azm133.8678°; N Plg44.8950°, Azm14.9902°; P Plg33.9312°, Azm242.8998°; **Fault plane solution: NP1:**φs38.87323°, δ80.36169°, λ-90.49010°. **NP2:** φs221.79797°, δ9.65065°, λ-87.11658°. **Principal axes:** T Plg35.3599°, Azm129.2982°; N Plg0.4832°, Azm38.9553°; P Plg54.6358°, Azm308.2744°; **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.17	248	⇑iP	Pg	03 17 18.4	-1.3
	baz=233						
TWC				iS	Sg	03 17 20.7	-1.8
	baz=233						
EGS		0.19	334	iP	Pg	03 17 19.1	-1.0
	baz=347						
EGS				eS	Sg	03 17 21.5	-1.5
	baz=347						
NTC	Toucheng	0.25	316	⇑iP	Pg	03 17 20.0	-1.1
	baz=319						
NTC				S	Sg	03 17 23.9	-0.8
	baz=319						
ILA	Ilan	0.27	290	⇑iP	Pg	03 17 20.2	-1.2
	baz=279						
ILA				iS	Sg	03 17 24.1	-1.0
	baz=279						
NDS	Dongshan	0.28	262	⇑iP	Pg	03 17 20.4	-1.3
	baz=252						
NDS				S	Sg	03 17 24.0	-1.6
	baz=252						
EWUT	Wuta	0.32	224	⇑iP	Pg	03 17 21.4	-0.9
	baz=207						
EWUT				S	Sg	03 17 25.9	-0.8
	baz=207						
TWE	Neicheng	0.33	278	⇑iP	Pg	03 17 21.0	-1.5
	baz=271						
TWE				iS	Sg	03 17 25.0	-1.9
	baz=271						
TWB1	Santiao Chiao	0.34	355	⇑iP	Pg	03 17 21.8	-0.8
	baz=353						
TWB1				iS	Sg	03 17 26.3	-0.9
	baz=353						
TIPB	Shuangxi	0.35	329	⇑iP	Pg	03 17 21.9	-1.0
	baz=332						
TIPB				S	Sg	03 17 26.8	-0.8
	baz=332						
ENA	Nanau	0.35	226	⇑iP	Pg	03 17 21.9	-1.1
	baz=210						
ENA				S	Sg	03 17 26.9	-0.9
	baz=210						
FUSB	Fushanzhiwuyua	0.41	282	eP	Pg	03 17 22.6	-1.4
	baz=281						
FUSB				eS	Sg	03 17 27.5	-1.9
	baz=281						
ENTT	Nioudou	0.42	266	⇑iP	Pg	03 17 22.5	-1.6
	baz=262						
ENTT				S	Sg	03 17 27.9	-1.9
	baz=262						
SXI1	Grass Mountain	0.44	342	⇑iP	Pg	03 17 23.9	-0.7
	baz=352						
SXI1				eS	Sg	03 17 29.8	-0.7
	baz=352						
EHP	Heping Village	0.44	215	P	Pg	03 17 24.1	-0.6
	baz=201						
EHP				S	Sg	03 17 30.2	-0.3
	baz=201						
NWF	Wu-fen Shan	0.45	331	⇑iP	Pg	03 17 24.1	-0.7
	baz=326						
NWF				iS	Sg	03 17 30.0	-0.9
	baz=326						
LATG	Datong	0.47	253	⇑iP	Pg	03 17 23.8	-1.4
	baz=250						
LATG				S	Sg	03 17 30.4	-1.1
	baz=250						
NWLT	Wulai	0.48	282	⇑P	Pg	03 17 23.9	-1.5
	baz=272						
NWLT				S	Sg	03 17 29.6	-2.3
	baz=272						
TWA	Mucha	0.50	308	⇑iP	Pg	03 17 24.7	-1.0
	baz=308						
TWA				iS	Sg	03 17 31.2	-1.2
	baz=308						
TNOU	National Taiwa	0.53	335	⇑iP	Pg	03 17 25.5	-0.7
	baz=330						
TNOU				eS	Sg	03 17 32.5	-0.7
	baz=330						
NHDH	Xindian Distri	0.54	303	⇑iP	Pg	03 17 25.6	-0.8
	baz=302						
NHDH				S	Sg	03 17 31.6	-1.9
	baz=302						
TATO	Taipei	0.57	302	Pg	Pg	03 17 25.3	-1.8
TATO	Taipei	0.57	302	P	Pg	03 17 26.2	-0.9
YHNB	Yeheng	0.59	270	Pg	Pg	03 17 25.8	-1.6
YHNB				Sg	Sg	03 17 32.6	-2.6
YHNB	Yeheng	0.59	270	P	Pg	03 17 27.1	-0.3
YHNB	Yeheng	0.59	270	eP	Pg	03 17 26.0	-1.3
	baz=268						
YHNB				eS	Sg	03 17 32.4	-2.8
	baz=268						
TAP	Taipei	0.59	308	⇑iP	Pg	03 17 26.8	-0.7
	baz=308						
TAP				iS	Sg	03 17 34.6	-0.8
	baz=308						
NSK	Sanguang	0.60	270	⇑iP	Pg	03 17 26.0	-1.7
	baz=268						
NSK				iS	Sg	03 17 33.2	-2.5
	baz=268						
BACT	New Taipei Cit	0.62	302	eP	Pg	03 17 27.5	-0.4
	baz=301						
BACT				eS	Sg	03 17 36.0	-0.1
	baz=301						
NWRT	Kuosheng	0.62	328	eP	Pg	03 17 27.2	-0.8
	baz=329						
YM01	YM01	0.62	319	⇑iP	Pg	03 17 27.5	-0.5
	baz=319						
ETL	Fush Village	0.63	216	P	Pg	03 17 26.9	-1.2
	baz=203						
ETL				S	Sg	03 17 36.2	-0.2
	baz=203						
NNSB	Datong	0.63	247	⇓iP	Pg	03 17 26.9	-1.3
	baz=245						
NNSB				S	Sg	03 17 35.4	-1.1
	baz=245						
NACB	Ninganchiao	0.63	218	Pg	Pg	03 17 26.9	-1.3
NACB				Sg	Sg	03 17 34.9	-1.6
NACB	Ninganchiao	0.63	218	⇓iP	Pg	03 17 26.9	-1.3
	baz=205						
NACB				S	Sg	03 17 35.7	-0.8
	baz=205						
NNS	Nan Shan	0.64	249	iP	Pg	03 17 26.7	-1.5
	baz=246						
NNS				iS	Sg	03 17 35.6	-1.1
	baz=246						
ETLH	Xiulin Townshi	0.68	227	P	Pg	03 17 28.5	-0.5
	baz=224						
ETLH				eS	Sg	03 17 36.8	-1.2
	baz=224						
ANP	Anpu	0.69	318	⇑iP	Pg	03 17 28.2	-1.0
	baz=319						
TWS1	Kuangyinshan	0.69	308	⇑iP	Pg	03 17 29.1	-0.2
	baz=308						
TWS1				iS	Sg	03 17 38.4	-0.1
	baz=308						
TWD	Chiawan	0.71	213	⇑iP	Pg	03 17 28.4	-1.1
	baz=210						
TWD				iS	Sg	03 17 37.8	-1.0
	baz=210						
TWY	Chenhua	0.71	327	⇑iP	Pg	03 17 29.2	-0.5
	baz=317						
TWY				eS	Sg	03 17 39.1	0.0
	baz=317						
NTST	Danshui	0.71	313	⇑iP	Pg	03 17 29.6	-0.1
	baz=313						
NTST				S	Sb	03 17 40.5	+0.5
	baz=313						
NSM	Shimen	0.73	327	eP	Pg	03 17 29.4	-0.6
	baz=319						
HWA	Hwalien	0.79	209	P	Pg	03 17 30.7	-0.5
	baz=216						
HWA				S	Sb	03 17 42.6	+0.5
	baz=216						
NCU	National Centr	0.81	291	⇑iP	Pg	03 17 31.5	-0.1
	baz=291						
NCU				iS	Sg	03 17 42.3	0.0
	baz=291						
NCUH	Zhongli	0.82	291	⇑iP	Pg	03 17 31.6	-0.1
	baz=291						
NCUH				S	Sg	03 17 42.5	+0.1
	baz=291						
NFF	Wufeng Townshi	0.82	267	P	Pg	03 17 30.4	-1.5
	baz=266						
NFF				eS	Sg	03 17 42.0	-0.6
	baz=266						
FUSS	Fushou	0.83	239	P	Pg	03 17 30.4	-1.5
	baz=228						
FUSS				S	Sg	03 17 42.5	-0.2
	baz=228						
ETM	Tongmen	0.85	215	eP	Pg	03 17 31.2	-1.2
	baz=213						
ETM				eS	Sg	03 17 42.5	-1.0
	baz=213						
WHF	Hehuan Shan	0.87	233	⇑iP	Pg	03 17 31.1	-1.6
	baz=231						
WHF				iS	Sg	03 17 43.5	-0.7
	baz=231						
JYNG	Yonagunijimaku	0.87	105	P	Pg	03 17 32.7	0.0
JYNG				S	Sn	03 17 45.6	-0.8
JYNG	Yonagunijimaku	0.87	105	A	A	03 17 32.7	
	comp=E,2µm,5.3s,comp=E,2µm,1.9s						
TEYL	Yanliau Villag	0.89	206	eP	Pb	03 17 33.2	+0.1
	baz=214						
TEYL				eS	Sn	03 17 46.8	-0.1
	baz=214						
TDCB	Techi	0.89	242	⇓iP	Pg	03 17 31.7	-1.4
	baz=232						
TDCB				S	Sg	03 17 43.0	-1.8
	baz=232						
LIOB	Emei	0.92	268	P	Pg	03 17 32.7	-0.9
	baz=267						
LIOB				S	Sb	03 17 46.4	+0.6
	baz=267						
HSN1	Hsinchu	0.92	277	P	Pb	03 17 33.8	+0.1
	baz=270						
HSN1				S	Sg	03 17 45.6	0.0
	baz=270						
YOJ	Yonaguni jima	0.92	103	Pg	Pg	03 17 33.5	-0.2
YOJ				Sg	Sb	03 17 46.3	+0.3
YOJ	Yonaguni jima	0.92	103	P	Pb	03 17 33.9	+0.1
YOJ	Yonaguni jima	0.92	103	⇑iP	Pg	03 17 33.5	-0.2
	baz=103						
YOJ				iS	Sb	03 17 46.3	+0.3

	baz=103						
YOJ	Yonaguni jima	0.92	103	eP	Pg	03 17 33.4	-0.3
YOJ				eS	Sb	03 17 46.9	+0.9
YOJ	Yonaguni jima	0.92	103	A	A	03 17 33.4	
	comp=E,2µm,6.0s,comp=E,2µm,2.1s						
NSTT	Nanjuang	0.93	268	⇑iP	Pg	03 17 32.6	-1.2
	baz=266						
NSTT				iS	Sg	03 17 45.5	-0.5
	baz=266						
NHW	Xinwu Township	0.95	291	eP	Pg	03 17 33.9	-0.2
	baz=290						
NHW				eS	Sb	03 17 47.2	+0.5
	baz=290						
SBCB	Hsinchu	0.95	277	⇑iP	Pb	03 17 34.3	0.0
	baz=271						
SBCB				iS	Sg	03 17 46.5	-0.1
	baz=271						
PCYT	Pengchaiyu	0.95	3	P	Pg	03 17 33.3	-1.0
	baz=2.0						
PCYT				eS	Sb	03 17 47.0	+0.1
	baz=2.0						
HSN	Hsinchu	0.97	278	⇑iP	Pg	03 17 33.8	-0.7
	baz=298						
HSN				iS	Sg	03 17 46.9	-0.2
	baz=298						
CHGB	Renai	0.99	232	⇓iP	Pg	03 17 33.5	-1.4
	baz=231						
CHGB				iS	Sg	03 17 47.5	-0.3
	baz=231						
ESL	Shilin	1.01	212	⇑iP	Pb	03 17 33.8	-1.5
	baz=210						
ESL				iS	Sb	03 17 47.9	-0.6
	baz=210						
OWD	Renai	1.05	227	P	Pb	03 17 34.8	-1.3
	baz=217						
OWD				S	Sb	03 17 48.8	-1.1
	baz=217						
WHP	Taichung City	1.06	248	⇓iP	Pb	03 17 35.2	-0.9
	baz=247						
WHP				eS	Sn	03 17 50.9	-0.3
	baz=247						
WUSB	Renai	1.07	231	⇓iP	Pb	03 17 35.0	-1.3
	baz=236						
WUSB				iS	Sb	03 17 49.7	-0.6
	baz=236						
NMLH	Miaoli	1.13	263	P	Pg	03 17 37.7	+0.1
	baz=254						
NMLH				S	Sn	03 17 52.7	-0.2
	baz=254						
EGFH	Guangfu	1.14	209	P	Pb	03 17 36.1	-1.3
	baz=215						
EGFH				eS	Sn	03 17 54.4	+1.3
	baz=215						
NSY	Sanyi	1.18	258	⇓iP	Pg	03 17 38.3	-0.2
	baz=248						
NSY				S	Sn	03 17 55.0	+0.9
	baz=248						
TWQ1	Liyutan	1.18	254	⇑iP	Pn	03 17 37.8	-0.4
	baz=253						
TWQ1				S	Sb	03 17 53.6	+0.1
	baz=253						
WCS	Beigang Elemen	1.18	239	P	Pn	03 17 37.2	-1.0
	baz=236						
VWDT	VWDT	1.22	221	⇑iP	Pn	03 17 37.8	-0.9
	baz=220						
VWDT				iS	Sn	03 17 54.7	-0.3
	baz=220						
SMLT	Sun Moon Lake	1.29	233	⇓iP	Pn	03 17 39.3	-0.5
	baz=232						
SMLT				S	Sg	03 17 58.0	+0.4
	baz=232						
HGSD	Ruisui	1.30	205	⇓iP	Pn	03 17 39.5	-0.2
	baz=220						
HGSD				S	Sg	03 17 59.4	+1.7
	baz=220						
WDJ	Dajia District	1.30	256	P	Pb	03 17 40.3	+0.1
	baz=247						
WDJ				S	Sg	03 17 58.5	+0.7
	baz=247						
SSLB	Suanglung	1.31	228	Pn	Pn	03 17 39.3	-0.7
SSLB				Sn	Sb	03 17 57.3	0.0
SSLB	Suanglung	1.31	228	P	Pn	03 17 40.2	+0.2
SSLB	Suanglung	1.31	228	⇓iP	Pn	03 17 39.4	-0.7
	baz=219						
SSLB				S	Sb	03 17 57.4	0.0
	baz=219						
EHY	Hungye	1.33	209	P	Pn	03 17 38.7	-1.4
	baz=214						
EHY				eS	Sg	03 17 58.7	+0.1
	baz=214						
TCU	Taichung	1.33	247	⇓iP	Pg	03 17 41.7	+0.2
	baz=246						
TCU				iS	Sg	03 18 00.4	+1.5
	baz=246						
YULB	Yu-li	1.44	208	Pn	Pb	03 17 42.9	+0.3
YULB	Yu-li	1.44	208	eP	Pn	03 17 40.3	-1.4
	baz=216						
YULB				eS	Sb	03 18 01.4	+0.6
	baz=216						
WJS	Zhushan	1.45	235	P	Pb	03 17 43.2	+0.4
	baz=223						
WJS				S	Sg	03 18 05.1	+2.4
	baz=223						
WNT	Mingjian	1.46	237	⇓iP	Pb	03 17 43.1	+0.3
	baz=225						
WNT				S	Sg	03 18 05.0	+2.3
	baz=225						
WCHH	Zhanghua	1.46	246	⇓P	Pb	03 17 42.7	-0.2
	baz=245						
WCHH				S	Sg	03 18 03.7	+0.8
	baz=245						
EYUL	Yuli	1.47	206	eP	Pg	03 17 44.1	+0.1
	baz=215						
YUS	Yu-Shan	1.53	220	eP	Pg	03 17 44.9	-0.4
	baz=208						
YUS				eS	Sg	03 18 06.5	+1.2
	baz=208						
IRIF	Iriomote-Funau	1.59	102	P	Pn	03 17 42.8	-1.0
IRIF				S	Sn	03 18 03.7	-0.6
IRIF	Iriomote-Funau	1.59	102	A	A	03 17 42.8	
	comp=E,789nm,6.8s,comp=E,851nm,2.6s						
ALS	Alishan	1.61	224	⇓iP	Pb	03 17 45.2	-0.4
	baz=206						
ALS				iS	Sg	03 18 08.0	+0.4
	baz=206						
FULB	Fuli	1.61	205	P	Pb	03 17 44.9	-0.7
	baz=218						
FULB				eS	Sb	03 18 05.8	0.0
	baz=218						
CHN5	Tsauling	1.63	229	⇓iP	Pb	03 17 45.9	0.0
	baz=228						
CHN5				S	Sg	03 18 09.9	+1.6
	baz=228						
WDLH	Douliu	1.67	234	eP	Pb	03 17 47.1	+0.6
	baz=232						
WDLH				eS	Sg	03 18 11.8	+2.1
	baz=232						
CHKT	Chengkung	1.68	201	P	Pn	03 17 44.6	-0.4
	baz=182						
CHKT				eS	Sg	03 18 09.2	-0.7
	baz=182						
WRL	Guolierlin Hig	1.69	243	⇓P	Pn	03 17 45.9	+0.8
	baz=240						
HATJ	Hateruma jima	1.74	110	P	Pn	03 17 45.5	-0.3
HATJ	Hateruma jima	1.74	110	A	A	03 17 45.5	
	comp=E,2µm,5.6s,comp=E,1µm,3.7s						
ELDTW	Lidau	1.74	212	eP	Pn	03 17 46.2	+0.2
	baz=209						
WTCT	Ta-ch'eng	1.78	243	⇑iP	Pb	03 17 47.9	-0.5
	baz=242						
WTCT				iS	Sb	03 18 10.9	+0.3
	baz=242						
WTK	Tuku	1.79	237	⇓P	Pb	03 17 47.7	-0.8
	baz=235						
WTK				S	Sg	03 18 12.7	-0.6
	baz=235						
EDH	Donghe	1.82	201	P	Pn	03 17 47.5	+0.6
	baz=185						
EDH				eS	Sb	03 18 11.5	-0.2
	baz=185						
CHN4	Tsaushan	1.85	225	⇑iP	Pb	03 17 49.8	+0.2
	baz=208						
CHN4				eS	Sg	03 18 16.5	+0.9
	baz=208						
JKRS	Kuro-shima	1.86	103	P	Pn	03 17 47.1	-0.4
JKRS				eS	Sn	03 18 10.5	-0.4
JKRS	Kuro-shima	1.86	103	A	A	03 17 47.1	
	comp=E,1µm,3.1s,comp=E,2µm,4.3s						
TPUB	Ta-pu	1.87	223	Pn	Pn	03 17 47.7	0.0
TPUB	Ta-pu	1.87	223	⇓iP	Pb	03 17 49.5	-0.4
	baz=208						
TPUB				S	Sg	03 18 14.7	-1.3
	baz=208						
CHY	Chiayi	1.87	232	P	Pb	03 17 49.9	0.0
	baz=229						
CHY				eS	Sg	03 18 16.4	+0.3
	baz=229						
STYH	Taoyuan	1.88	218	P	Pb	03 17 50.0	-0.1
	baz=206						
STYH				S	Sg	03 18 15.3	-1.0
	baz=206						
WTP	Ta-pu	1.92	222	⇓iP	Pb	03 17 49.9	-0.8
	baz=206						
WTP				iS	Sg	03 18 17.1	-0.5
	baz=206						
LONT	Longtian	1.94	205	eP	Pn	03 17 49.3	+0.7
	baz=203						
LONT				eS	Sn	03 18 13.8	+0.9
	baz=203						
WSF	Szhu	1.94	238	⇓P	Pn	03 17 49.4	+0.8
	baz=236						
WSF				S	Sb	03 18 15.9	+0.6
	baz=236						
JIJ	Ishigaki jima	1.96	99	P	Pn	03 17 47.8	-1.0
JIJ				S	Sn	03 18 12.4	-0.8
JIJ	Ishigaki jima	1.96	99	A	A	03 17 47.8	
	comp=E,253nm,6.0s,comp=E,441nm,10.9s						
TWK	Hsinying	1.98	225	⇓iP	Pb	03 17 51.0	-0.8
	baz=207						
TWK				iS	Sg	03 18 19.6	0.0
	baz=207						
WSL	Shuilin Townsh	2.00	235	P	Pn	03 17 50.5	+1.1
	baz=247						
WSL				S	Sb	03 18 17.1	+0.1
	baz=247						
SNST	Tainan City	2.01	224	⇓iP	Pb	03 17 51.4	-0.9
	baz=207						
SNST				S	Sb	03 18 18.5	+1.2
	baz=207						
CHN1	Nanshi	2.02	223	⇓iP	Pb	03 17 51.3	-1.1
	baz=206						
CHN1				eS	Sg	03 18 20.6	-0.1
	baz=206						
TWG	Pinlang	2.04	205	Pn	Pn	03 17 48.8	-1.1
TWG	Pinlang	2.04	205	eP	Pn	03 17 48.9	-1.1
	baz=203						
TWG				eS	Sn	03 18 15.4	+0.1
	baz=203						
TWGBT	Beinan	2.04	205	eP	Pn	03 17 50.0	0.0
	baz=202						
LDUT	Ludao	2.05	194	P	Pn	03 17 49.6	-0.6
	baz=180						
LDUT				S	Sn	03 18 14.5	-1.2
	baz=180						
SGST	Jiashian	2.06	220	⇓iP	Pn	03 17 51.4	+1.2
	baz=205						
SGST				iS	Sg	03 18 20.9	-1.2
	baz=205						
ICHU	Yijhu	2.06	231	⇓P	Pb	03 17 51.8	-1.4
	baz=229						
ICHU				S	Sg	03 18 21.6	-0.5
	baz=229						
TTN	Taitung	2.07	203	eP	Pb	03 17 52.1	-1.2
	baz=200						
TTN				eS	Sb	03 18 18.5	-0.6
	baz=200						
JISG	Ishigakijimahi	2.08	92	P	Pn	03 17 49.6	-0.9
CHN8	Yiju	2.12	232	P	Pb	03 17 53.2	-0.9
	baz=230						
CHN8				eS	Sg	03 18 22.9	-1.1
	baz=230						
CHN3	Shinhua	2.20	224	P	Pb	03 17 55.5	0.0
	baz=222						
CHN3				eS	Sg	03 18 26.4	-0.1
	baz=222						
SCLT	Jiali	2.24	229	eP	Pb	03 17 55.4	-0.9
	baz=208						
SCLT				eS	Sg	03 18 26.8	-1.2
	baz=208						
SHHT	Tainan City	2.25	223	eP	Pb	03 17 55.4	-1.0
	baz=221						
SHHT				eS	Sg	03 18 27.4	-0.7
	baz=221						
SCST	Cishan	2.26	219	P	Pb	03 17 55.7	-1.0
	baz=215						
SCST				eS	Sg	03 18 26.8	-1.9
	baz=215						
ECL	Taimali	2.29	206	P	Pn	03 17 53.5	+0.1
	baz=193						
ECL				eS	Sn	03 18 22.4	+1.0
	baz=193						
SSD	Sandimen	2.30	214	⇓P	Pn	03 17 55.3	+1.8
	baz=211						
SSD				eS	Sb	03 18 27.3	+1.6
	baz=211						
TAI1	Yung-k'ang	2.31	226	eP	Pn	03 17 55.3	+1.6
	baz=222						
TSMG	Majia	2.33	213	eP	Pb	03 17 56.7	-1.0
	baz=210						
TSMG				eS	Sb	03 18 28.4	+1.9
	baz=210						
TWM1	Shoushan	2.35	219	P	Pb	03 17 56.9	-1.3
	baz=218						
TWM1				eS	Sb	03 18 28.7	+1.5
	baz=218						
VWUC	VWUC	2.36	278	eP	Pn	03 17 53.0	-1.3
	baz=277						
MATB	Ma-tsu	2.39	309	eP	Pn	03 17 53.0	-1.7
	baz=307						
SGLT	Jiouru	2.39	216	eP	Pb	03 17 58.7	-0.2
	baz=213						
SGLT				eS	Sb	03 18 30.2	+1.9
	baz=213						
MASBT	Mashibuluo	2.42	212	P	Pn	03 17 56.8	+1.6
	baz=209						
MASBT				eS	Sb	03 18 28.4	-0.5
	baz=209						
JTJ	Tarama	2.44	90	P	Pn	03 17 55.6	+0.2
JTJ	Tarama	2.44	90	A	A	03 17 55.6	
	comp=E,440nm,5.0s,comp=E,751nm,6.7s						
PNG	Penghu	2.51	244	P	Pn	03 17 56.3	-0.1
	baz=242						
PNG				S	Sn	03 18 25.9	-1.0
	baz=242						
PHUB	P'eng-hu	2.52	243	eP	Pn	03 17 56.3	-0.2
	baz=242						
PHUB				eS	Sn	03 18 27.5	+0.3
	baz=242						
EAST	Anshuo	2.52	206	eP	Pn	03 17 56.4	-0.2
	baz=194						
TAW	Tawu	2.53	204	eP	Pn	03 17 58.5	+1.9
	baz=193						
TAWH	Dawu Township	2.55	204	eP	Pn	03 17 58.4	+1.5
	baz=193						
SSPT	Xinbi	2.56	212	eP	Pb	03 18 00.7	-0.9
	baz=209						
SSPT				eS	Sb	03 18 34.0	+1.1
	baz=209						
WDGT	Dungji	2.58	237	⇓P	Pn	03 17 57.7	+0.3
	baz=235						
WDGT				S	Sn	03 18 30.1	+1.5
	baz=235						
KAU	Kaohsiung	2.62	217	eP	Pb	03 18 01.7	-1.0
	baz=213						
SCZT	Fangliau	2.63	210	eP	Pn	03 17 59.9	+1.8
	baz=206						
SCZT				eS	Sb	03 18 34.5	-0.5
	baz=206						
LAY	Lan-yu	2.66	189	eP	Pn	03 17 58.7	+0.2
	baz=180						
LAY				eS	Sn	03 18 31.0	+0.3
	baz=180						
PTMZ	Houxiangcun	2.66	278	eP	Pn	03 17 57.2	-1.3
	baz=278						
LYUB	Lan-yu	2.69	189	eP	Pn	03 17 57.1	-1.8
	baz=191						
SLIU	Shizi	2.69	205	eP	Pn	03 18 01.2	+2.3
	baz=194						
WLCH	Liuqiu	2.76	213	eP	Pb	03 18 05.1	0.0
	baz=210						
LYJJ	Jianjiangzhen	2.77	313	eP	Pn	03 17 58.2	-1.8
	baz=312						
VCHM	Qimei	2.79	239	eP	Pn	03 18 00.3	+0.1
	baz=235						
XPSS	Dashiqiu	2.79	324	eP	Pn	03 17 58.2	-2.1
	baz=322						
SMST	Manzhou Townsh	2.86	203	eP	Pn	03 18 02.7	+1.5
	baz=192						
JIRB	Irabujima	2.87	86	P	Pn	03 18 02.1	+0.8
JIRB				S	Sn	03 18 36.5	+0.7
JIRB	Irabujima	2.87	86	A	A	03 18 02.1	
	comp=E,251nm,4.8s,comp=E,352nm,9.8s						
HEN	Hengchun	2.91	204	eP	Pn	03 18 03.8	+1.9
	baz=195						
TWKBT	Hengchun	2.94	202	eP	Pn	03 18 03.6	+1.3
	baz=193						
JIKM	Ikemajima	2.94	84	P	Pn	03 18 03.4	+1.1
JIKM				S	Sn	03 18 38.5	+0.9
JIKM	Ikemajima	2.94	84	A	A	03 18 03.4	
	comp=E,456nm,8.1s,comp=E,537nm,7.8s						
TSEB	Hengchuen, Pin	2.95	201	eP	Pn	03 18 04.5	+2.1
	baz=199						
TSEB				eS	Sn	03 18 40.5	+2.8
	baz=199						
JMJ	Miyako jima 2	2.98	87	P	Pn	03 18 04.5	+1.6
JMJ2	Miyako jima3	3.01	88	P	Pn	03 18 04.1	+0.9
JMJ2	Miyako jima3	3.01	88	A	A	03 18 04.1	
	comp=E,383nm,4.8s,comp=E,666nm,8.0s						
MHZQ	Yeshan	3.06	298	eP	Pn	03 18 02.0	-1.9
	baz=298						
JOGS	Gusukube	3.08	88	P	Pn	03 18 05.1	+0.9
JOGS	Gusukube	3.08	88	A	A	03 18 05.1	
	comp=E,425nm,5.1s,comp=E,710nm,5.7s						
QZH	Quanzhou	3.13	276	⇓iPn	Pn	03 18 03.4	-1.5
QZH				Sn	Sn	03 18 39.5	-2.7
QZH				smax	smax		
	comp=N,36µm,1.1s						
QZH				smax	smax		
	comp=E,13µm,1.0s						
QZH				LR	LR		
	comp=N,626µm,12.6s						
QZH				LR	LR		
	comp=E,209µm,12.1s						
QZH				LR	LR		
	comp=Z,309µm,9.1s						
KNM	Kinmen	3.28	266	eP	Pn	03 18 08.0	+1.0
	baz=265						
KNMB	Chin-men Tao	3.31	267		Pn	03 18 06.3	-1.2
KNMB	Chin-men Tao	3.31	267	eP	Pn	03 18 06.2	-1.2
	baz=266						
AXDP	Jialang	3.69	274	eP	Pn	03 18 11.5	-1.1
	baz=274						
ZPLA	Ao Xicun	3.97	260	eP	Pn	03 18 15.6	-0.9
	baz=258						
BBP	Basco	4.21	181	⇑iP	Pn	03 18 20.0	+0.1
SXFK	Yanhouchang	4.31	294	eP	Pn	03 18 19.3	-1.9
	baz=296						
JKE	Kume jima 2	4.61	68	A	A	03 18 26.2	
	comp=E,48nm,6.4s,comp=E,54nm,6.8s						
JKE	Kume jima 2	4.61	68	P	Pn	03 18 28.5	+3.2
JAGN	Aguni-jima	5.08	67	A	A	03 18 32.9	
	comp=E,78nm,7.8s,comp=E,69nm,4.1s						
JJT3	Tamagusuku3	5.41	73	A	A	03 18 37.5	
	comp=E,167nm,5.0s,comp=E,136nm,5.3s						
JNTH	Nagotoyohara	5.72	70	A	A	03 18 41.8	
	comp=E,38nm,7.9s,comp=E,33nm,5.7s						
JIH	Iheya	5.85	65	A	A	03 18 43.6	
	comp=E,38nm,8.2s,comp=E,37nm,8.5s						
JIH	Iheya	5.85	65	P	Pn	03 18 45.2	+2.9
JOW	Kunigami	6.03	68	Pn	Pn	03 18 47.1	+2.3
	35nm,0.3s,baz=176,slow=12,SNR=116						
JOW				Sn	Sn	03 19 57.4	+3.5
	baz=263,slow=26						
	142nm,0.5s						
JOW	Kunigami	6.03	68	Pn	Pn	03 18 45.5	+0.6
JOW	Kunigami	6.03	68	P	Pn	03 18 47.4	+2.5
	1µm,1.9s						
JOW	Kunigami	6.03	68	A	A	03 18 46.2	
	comp=E,40nm,8.3s,comp=E,30nm,8.9s						
JOW	Kunigami	6.03	68	P	Pn	03 18 46.8	+1.9
JYRO	Yoronjima	6.25	67	A	A	03 18 49.1	
	comp=E,26nm,11.6s,comp=E,23nm,8.9s						
SSE	Sheshan	6.44	354	P	Pn	03 18 47.8	-2.6
SSE				S	Sn	03 20 03.8	-0.1
SSE				smax	smax		
	comp=N,2µm,1.3s						
SSE				smax	smax		
	comp=E,2µm,1.2s						
JOKE	Okinoerabujima	6.47	64	A	A	03 18 52.3	
	comp=E,33nm,6.0s,comp=E,24nm,7.8s						
JOKE	Okinoerabujima	6.47	64	P	Pn	03 18 52.9	+2.0
APYP	Conner	6.82	186	⇓iP	Pn	03 18 57.5	+1.9
APYP	Conner	6.82	186	⇑eP	Sn	03 20 14.7	+1.5
SIPP	Brgy, Tapao	6.87	193	⇓eP	Pn	03 18 60.0	+3.5
SIPP				eS	Pg	03 19 27.9	+0.4
JTK	Tokunoshima	6.95	62	A	A	03 18 58.9	
	comp=E,19nm,7.1s,comp=E,26nm,7.5s						
JTK	Tokunoshima	6.95	62	P	Pn	03 18 59.3	+1.8
JAMN	Amaminishikomi	7.33	59	A	A	03 19 04.2	
	comp=E,17nm,6.6s,comp=E,17nm,8.0s						
JAMN	Amaminishikomi	7.33	59	P	Pn	03 19 05.0	+2.3
HKC	Hong Kong Obse	7.58	253	⇑P	Pn	03 19 07.0	+0.9
HKPS	Hong Kong Po S	7.62	253		Pn	03 19 06.2	-0.5
JAM	Amami Oshima	7.74	60	A	A	03 19 09.9	
	comp=E,22nm,9.4s,comp=E,20nm,9.2s						
JAM	Amami Oshima	7.74	60	P	Pn	03 19 10.8	+2.5
JTAJ	Takarajima	7.81	54	A	A	03 19 10.8	
	comp=E,36nm,8.4s,comp=E,39nm,9.5s						
NJ2	Nanjing	7.86	340	eP	Pn	03 19 07.3	-2.7
NJ2				S	Sn	03 20 34.2	-4.7
NJ2				pmax	pmax		
	comp=Z,200nm,0.7s						
NJ2				smax	smax		
	comp=N,5µm,1.5s						
NJ2				smax	smax		
	comp=E,6µm,1.9s						
NJ2				LR	LR		
	comp=N,98µm,5.9s						
NJ2				LR	LR		
	comp=E,164µm,5.8s						
NJ2				LR	LR		
	comp=Z,173µm,9.2s						
JZK	Kikaishima	7.99	61	A	A	03 19 13.4	
	comp=E,84nm,7.1s,comp=E,64nm,6.1s						
GZH	Guangzhou	8.10	261	P	Pn	03 19 07.8	-5.4
GZH				S	Sn	03 20 36.0	-8.7
GZH				smax	smax		
	comp=N,16µm,1.2s						
GZH				smax	smax		
	comp=E,7µm,1.4s						
MCO	Taipa Grande	8.18	254	P	Pn	03 19 16.0	+1.6
JMZ	Minamidaito 2	8.41	80	A	A	03 19 19.2	
	comp=E,36nm,6.8s,comp=E,63nm,10.0s						
BOLP	Bolinao	8.48	194	⇓eP	Pn	03 19 22.3	+3.7
JKDJ	Kitadaitoujima	8.49	79	A	A	03 19 20.3	
	comp=E,45nm,8.9s,comp=E,55nm,7.5s						
JNN	Nakanoshima	8.68	52	A	A	03 19 22.8	
	comp=E,30nm,9.3s,comp=E,39nm,7.9s						
CNSH	ChangSha	8.87	295	⇑P	Pn	03 19 22.2	-1.6
CNSH				S	Sn	03 21 04.2	+0.6
CNSH				smax	smax		
	comp=N,12µm,1.4s						
CNSH				smax	smax		
	comp=E,20µm,1.5s						
CNSH				LR	LR		
	comp=N,144µm,8.2s						
CNSH				LR	LR		
	comp=E,106µm,10.4s						
WHN	Wuhan	8.97	312	⇓P	Pn	03 19 22.5	-2.7
WHN				S	Sn	03 20 57.5	-8.6
WHN				LR	LR		
	comp=N,308µm,8.0s						
WHN				LR	LR		
	comp=E,308µm,8.3s						
WHN				LR	LR		
	comp=Z,308µm,9.2s						
JYAK	Yakushimahirau	9.35	52	A	A	03 19 32.1	
	comp=E,17nm,9.0s,comp=E,11nm,11.0s						
JMTN	Minamitane	9.72	52	A	A	03 19 37.2	
	comp=E,19nm,6.9s,comp=E,14nm,7.9s						
JSJ	Shimokoshiki	9.73	42	A	A	03 19 37.2	
	comp=E,26nm,8.5s,comp=E,26nm,10.8s						
JTN	Tanegashima 3	9.92	51	A	A	03 19 39.9	
	comp=E,20nm,8.6s,comp=E,19nm,8.4s						
JSU	Suzuyama	10.09	46	Pn	Pn	03 19 40.5	0.0
JSU	Suzuyama	10.09	46	A	A	03 19 42.0	
	comp=E,21nm,8.8s,comp=E,21nm,11.2s						
JTSR	Tashiro 2	10.18	49	A	A	03 19 43.4	
	comp=E,11nm,11.4s,comp=E,25nm,9.8s						
TGY	Tagaytay City	10.57	186	Pn	Pn	03 19 52.6	+5.4
	103nm,0.3s,baz=310,slow=7.2,SNR=6.2						
TGY				LR	LR	03 24 32.7	

	comp=Z,15µm,18.5s,baz=7.5,slow=42						
GULI	GuiLin	10.59	276	⇓P	Pn	03 19 45.1	-2.4
GULI				LR	LR		
	comp=N,58µm,9.8s						
GULI				LR	LR		
	comp=E,173µm,9.2s						
GULI				LR	LR		
	comp=Z,186µm,9.2s						
JZO	Okuchi	10.59	43	A	A	03 19 48.9	
	comp=E,31nm,9.2s,comp=E,22nm,8.3s						
JNAR	Kushima--Naru	10.64	48	A	A	03 19 49.6	
	comp=E,24nm,9.4s,comp=E,17nm,7.7s						
JTZ	Takazaki	10.75	46	A	A	03 19 51.1	
	comp=E,21nm,9.4s,comp=E,19nm,9.2s						
JTZ	Takazaki	10.75	46	P	Pn	03 19 52.9	+3.3
JNKG	Nichinankitago	10.79	48	A	A	03 19 51.6	
	comp=E,18nm,8.4s,comp=E,21nm,8.1s						
JTA	Tamana	11.13	40	A	A	03 19 56.0	
	comp=E,21nm,12.0s,comp=E,32nm,11.4s						
PGP	Puerto Galera	11.16	185	⇓eP	Pn	03 19 57.3	+2.0
JTSN	Tsuno	11.24	46	A	A	03 19 57.7	
	comp=E,9.0nm,11.3s,comp=E,12nm,12.0s						
JII	Iki	11.31	35	P	Pn	03 20 05.9	+8.7
JNU	Nakatsue	11.44	41	Pn	Pn	03 20 04.0	+4.9
	1.1nm,0.3s,baz=221,slow=12,SNR=12						
JNU				LR	LR	03 25 09.7	
	comp=Z,42µm,18.3s,baz=231,slow=41						
JNU	Nakatsue	11.44	41		Pn	03 19 57.6	-1.5
JNU	Nakatsue	11.44	41	P	Pn	03 20 03.2	+4.1
JKIT	Kitakata	11.46	44	A	A	03 20 00.5	
	comp=E,20nm,9.1s,comp=E,16nm,9.6s						
NAWB	Namwon	11.68	22		Pn	03 20 01.4	-0.8
JTU	Tsushima	11.72	31	A	A	03 20 03.9	
	comp=E,24nm,8.7s,comp=E,21nm,8.6s						
JSKE	Saikikamae	11.85	45	A	A	03 20 05.9	
	comp=E,13nm,9.0s,comp=E,18nm,11.4s						
JUS	Usuki	11.94	43	A	A	03 20 06.9	
	comp=E,12nm,9.3s,comp=E,18nm,11.9s						
JKI	Kunimi	12.21	41	A	A	03 20 10.6	
	comp=E,22nm,10.6s,comp=E,18nm,8.7s						
TIA	Tai'an	12.25	341	⇓P	Pn	03 20 10.2	+0.1
TIA				S	Sn	03 22 24.3	-2.2
TIA				pmax	pmax		
	comp=Z,18nm,1.0s						
TIA				pmax	pmax		
	comp=Z,3µm,11.2s						
TIA				LR	LR		
	comp=N,56µm,10.8s						
TIA				LR	LR		
	comp=E,46µm,7.8s						
TIA				LR	LR		
	comp=Z,95µm,9.6s						
JTY	Toyota	12.38	37	A	A	03 20 12.7	
	comp=E,16nm,11.9s,comp=E,13nm,10.5s						
ENH	Enshi	12.45	299	Pn	Pn	03 20 11.7	-1.1
JTO	Tosashimizu	12.48	47	A	A	03 20 14.2	
	comp=E,10.0nm,9.1s,comp=E,14nm,10.7s						
TJN	Taejon	12.54	20	Pn	Pn	03 20 13.2	-0.8
TJN	Taejon	12.54	20	ceP	Pn	03 20 15.1	+1.1
TJN	Taejon	12.54	20	P	Pn	03 20 14.7	+0.7
	692nm,1.6s						
UWA2	Uwa jima 2	12.59	45	A	A	03 20 15.6	
	comp=E,10.0nm,9.9s,comp=E,13nm,9.5s						
QIZ	Qiongzhong	12.62	246		Pn	03 20 13.6	-1.7
QIZ	Qiongzhong	12.62	246	P	Pn	03 20 15.4	+0.1
QIZ				S	Sn	03 22 36.8	+0.9
QIZ				pmax	pmax		
	comp=Z,3µm,6.9s						
QIZ				LR	LR		
	comp=N,75µm,12.4s						
QIZ				LR	LR		
	comp=E,47µm,12.7s						
QIZ				LR	LR		
	comp=Z,51µm,11.6s						
QIZ	Qiongzhong	12.62	246	P	Pn	03 20 16.1	+0.8
	139nm,1.4s						
JHGM	Hagimishima	12.81	36	P	P	03 20 25.0	-3.7
LYN	LuoYang	12.87	322	⇓P	Pn	03 20 16.6	-2.0
LYN				S	Sn	03 22 42.7	+0.9
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				pmax	pmax		
	comp=Z,3µm,12.2s						
LYN				LR	LR		
	comp=N,149µm,10.2s						
LYN				LR	LR		
	comp=E,93µm,9.9s						
LYN				LR	LR		
	comp=Z,154µm,9.4s						
JKU	Kubokawa	12.93	46	A	A	03 20 20.2	
	comp=E,9.0nm,8.1s,comp=E,13nm,11.1s						
RCP	Roxas	13.06	177	⇑eP	Pn	03 20 25.1	+3.8
JHM	Kurahashi	13.14	42	A	A	03 20 22.9	
	comp=E,17nm,9.9s,comp=E,14nm,9.4s						
KSCHJ	Chungju	13.19	21		Pn	03 20 21.2	-1.7
JKHR	Kochiharuno	13.34	46	A	A	03 20 25.6	
	comp=E,15nm,9.5s,comp=E,16nm,8.7s						
INCN	Inchon	13.36	16	P	Pn	03 20 27.5	+2.2
INCN	Inchon	13.36	16	P	Pn	03 20 28.6	+3.3
	205nm,1.2s						
JHT	Toyohira	13.44	40	A	A	03 20 26.8	
	comp=E,16nm,8.7s,comp=E,11nm,9.7s						
JHT	Toyohira	13.44	40	P	Pn	03 20 30.8	+4.5
MRT2	Murotomisaki 2	13.69	48	A	A	03 20 30.3	
	comp=E,16nm,9.9s,comp=E,9.0nm,11.7s						
HJU	Haeju	13.70	12	S	Sn	03 23 03.7	+1.9
HJU	Haeju	13.70	12	AMS	AMS		
	comp=E,55µm,4.2s						
HJU	Haeju	13.70	12	AMS	AMS		
	comp=Z,156µm,11.9s						
HJU	Haeju	13.70	12	AMS	AMS		
	comp=N,172µm,13.1s						
HJU	Haeju	13.70	12	P	Pn	03 20 31.9	+2.1
HJU	Haeju	13.70	12	pP	P	03 20 35.0	-3.6
KSRS	Korea Array	13.70	20	Pn	Pn	03 20 31.7	+1.8
	comp=N,1.1nm,0.3s,baz=204,slow=14,SNR=14						
KSRS				LR	LR	03 26 17.5	
	comp=N,27µm,19.5s,baz=200,slow=39						
	comp=N,5.4nm,0.6s						
JMN	Monobe	13.72	46	A	A	03 20 30.7	
	comp=N,13nm,8.8s,comp=N,16nm,10.3s						
KS19	Wonju Array Si	13.73	20		Pn	03 20 29.1	-1.2
JGT2	ShimaneMisato	13.77	39	A	A	03 20 31.2	
	comp=N,11nm,8.0s,comp=N,13nm,10.2s						
JGT2	ShimaneMisato	13.77	39	P	Pn	03 20 34.6	+3.7
JJG	Jouge	13.86	42	A	A	03 20 32.4	
	comp=N,16nm,8.8s,comp=N,10.0nm,7.9s						
GYA	Guiyang	13.98	281	⇓P	Pn	03 20 35.8	+1.9
GYA				sP	P	03 20 39.2	-2.7
GYA				S	Sn	03 23 11.4	+2.4
GYA				PcP	PcP	03 25 49.3	-5.9
GYA				pmax	pmax		
	comp=N,47nm,1.2s						
GYA				pmax	pmax		
	comp=N,4µm,8.7s						
GYA				LR	LR		
	comp=N,115µm,7.8s						
GYA				LR	LR		
	comp=N,150µm,8.9s						
GYA				LR	LR		
	comp=N,151µm,10.2s						
JHS	Saijyo	14.08	40	Pn	Pn	03 20 35.4	+0.3
JHS	Saijyo	14.08	40	A	A	03 20 35.2	
	comp=N,8.0nm,11.1s,comp=N,11nm,10.5s						
JMAF	Mimaanabuki	14.10	46	A	A	03 20 35.5	
	comp=N,8.0nm,11.5s,comp=N,10.0nm,8.8s						
HNS	HongShan	14.14	335	⇑P	Pn	03 20 33.0	-2.9
HNS				PP	P	03 20 42.7	-0.8
HNS				S	Sn	03 23 10.3	-2.5
HNS				SS	SnSn	03 23 27.4	+1.9
HNS				pmax	pmax		
	comp=N,16nm,1.3s						
HNS				LR	LR		
	comp=N,79µm,10.1s						
HNS				LR	LR		
	comp=N,48µm,9.4s						
HNS				LR	LR		
	comp=N,68µm,11.2s						
JAI	Aioi	14.14	47	A	A	03 20 36.1	
	comp=N,8.0nm,10.7s,comp=N,13nm,12.0s						
DL2	Dalian	14.19	359	⇑iP	Pn	03 20 37.5	+0.9
DL2				S	Sn	03 23 17.0	+3.0
DL2				pmax	pmax		
	comp=N,100nm,1.7s						
DL2				pmax	pmax		
	comp=N,2µm,9.8s						
DL2				LR	LR		
	comp=N,18µm,14.2s						
DL2				LR	LR		
	comp=N,98µm,15.3s						
DL2				LR	LR		
	comp=N,82µm,12.8s						
JISK	Izumosakaura	14.28	38	A	A	03 20 37.8	
	comp=N,15nm,7.7s,comp=N,11nm,8.3s						
JISK	Izumosakaura	14.28	38	P	Pn	03 20 41.2	+3.3
SEHB	SEOHWA	14.55	20	Pn	Pn	03 20 40.4	-1.2
PYAG	Pyongyang	14.68	12	P	Pn	03 20 45.9	+2.6
PYAG				pP	P	03 20 48.8	-0.6
PYAG				S	Sn	03 23 30.4	+4.5
PYAG				AMS	AMS		
	comp=N,5µm,2.0s						
PYAG				AMS	AMS		
	comp=E,20µm,8.3s						
PYAG				AMS	AMS		
	comp=Z,15µm,6.2s						
XAN	Xi'an	14.74	312	⇑P	Pn	03 20 42.7	-1.5
XAN				pP	P	03 20 45.9	-4.3
XAN				sP		03 20 48.9	
XAN				S	Sn	03 23 29.9	+2.5
XAN				SS	S	03 23 45.2	-1.0
XAN				pmax	pmax		
	comp=Z,37nm,1.5s						
XAN				pmax	pmax		
	comp=Z,3µm,8.4s						
XAN				LR	LR		
	comp=Z,116µm,12.4s						
XAN				LR	LR		
	comp=Z,81µm,12.4s						
XAN				LR	LR		
	comp=Z,98µm,10.8s						
CNOP	Candoni, Negro	14.78	178	⇓eP	Pn	03 20 47.4	+2.7
TBP	Tagbilaran	15.00	173	⇑iP	Pn	03 20 49.0	+1.2
SNPH	Sibulan	15.29	175	eP	P	03 20 57.6	+1.1
TIY	Taiyuan	15.36	330	⇑P	Pn	03 20 52.9	+0.5
TIY				PP	sP	03 21 05.8	+3.6
TIY				S	Sn	03 23 48.4	+5.9
TIY				pmax	pmax		
	comp=Z,200nm,2.2s						
TIY				pmax	pmax		
	comp=Z,5µm,4.2s						
TIY				LR	LR		
	comp=Z,35µm,8.8s						
TIY				LR	LR		
	comp=Z,43µm,7.8s						
TIY				LR	LR		
	comp=Z,42µm,10.7s						
SUJ	Sinuiju	15.53	7	P	Pn	03 20 56.1	+1.6
SUJ				pP	P	03 20 58.7	-0.2
SUJ				S	Sn	03 23 48.7	+2.3
SUJ				AMS	AMS		
	comp=N,3µm,10.1s						
SUJ				AMS	AMS		
	comp=E,4µm,14.7s						
SUJ				AMS	AMS		
	comp=Z,486nm,1.8s						
JKN2	Miekihoku	15.63	49	P	Pn	03 20 55.9	-0.1
HHU	Hamhung	15.90	16	P	Pn	03 21 01.1	+1.7
HHU				pP	P	03 21 03.8	+0.8
HHU				S	Sn	03 24 00.8	+5.2
HHU				AMS	AMS		
	comp=N,12µm,8.9s						
HHU				AMS	AMS		
	comp=E,5µm,3.8s						
HHU				AMS	AMS		
	comp=Z,5µm,3.6s						
BJT	Baijiatuau	16.07	344	Pn	Pn	03 21 00.7	-0.9
BJT	Baijiatuau	16.07	344	P	Pn	03 21 00.7	-0.9
BJT				pmax	pmax		
	comp=Z,474nm,1.7s						
BJI	Beijing	16.09	344	P	Pn	03 21 02.5	+0.7
BJI				S	Sn	03 24 04.2	+4.0
BJI				pmax	pmax		
	comp=Z,90nm,1.6s						
BJI				pmax	pmax		
	comp=Z,5µm,6.0s						
BJI				LR	LR		
	comp=Z,44µm,11.3s						
BJI				LR	LR		
	comp=Z,13µm,8.0s						
BJI				LR	LR		
	comp=Z,40µm,11.3s						
BATP	Bataraza	16.29	195	⇓eP	P	03 21 08.9	+1.4
INU	Inuyama	16.77	47	Pn	Pn	03 21 09.4	-1.1
INU	Inuyama	16.77	47	P	P	03 21 12.1	-0.6
	comp=Z,78nm,1.3s						
BIPH	Bislig	16.91	165	⇓eP	Pn	03 21 12.5	+0.1
SLVN	Son La	17.01	262	Pn	Pn	03 21 12.4	-1.3
JGF	Kuroka	17.14	47	Pn	Pn	03 21 14.0	-1.3
SNY	Shenyang	17.16	4	⇑P	P	03 21 16.6	-0.3
SNY				S	Sn	03 24 28.9	+2.9
SNY				pmax	pmax		
	comp=Z,17nm,1.3s						
SNY				pmax	pmax		
	comp=Z,9µm,7.8s						
SNY				LR	LR		
	comp=Z,63µm,12.2s						
SNY				LR	LR		
	comp=Z,31µm,13.0s						
SNY				LR	LR		
	comp=Z,96µm,12.2s						
CD2	Chengdu	17.30	295	P	Pn	03 21 17.1	-0.3
CD2				sP	sP	03 21 25.0	+1.2
CD2				S	Sn	03 24 29.4	-0.5
CD2				pmax	pmax		
	comp=Z,550nm,0.7s						
CD2				pmax	pmax		
	comp=Z,4µm,7.7s						
CD2				LR	LR		
	comp=Z,76µm,10.8s						
CD2				LR	LR		
	comp=Z,53µm,7.6s						
KMI	Kunming	17.50	276	⇓P	Pn	03 21 19.3	-0.7
KMI				pP	P	03 21 21.7	+0.5
KMI				sP	pP	03 21 24.7	+0.1
KMI				PP	PnPn	03 21 37.1	+6.8
KMI				S	Sn	03 24 36.5	+1.5
KMI				pmax	pmax		
	comp=Z,120nm,1.4s						
KMI				pmax	pmax		
	comp=Z,5µm,5.0s						
KMI				LR	LR		
	comp=Z,65µm,11.8s						
KMI				LR	LR		
	comp=Z,137µm,11.2s						
KMI				LR	LR		
	comp=Z,136µm,10.6s						
JHJ	Hachijo jima 2	17.67	58	P	P	03 21 24.8	+2.1
	comp=Z,6.7nm,0.3s,baz=250,slow=18,SNR=3.6						
JHJ				LR	LR	03 27 53.3	
	comp=Z,8µm,21.2s,baz=273,slow=36						
	comp=Z,255nm,0.9s						
JHJ2	Mitsune	17.69	58		Pn	03 21 22.0	0.0
JHJ2	Mitsune	17.69	58	P	P	03 21 25.3	+2.4
	comp=Z,862nm,2.0s						
KCP	Kidapawan	17.81	170	⇓eP	P	03 21 25.3	+0.9
DAV	Davao City (W)	17.83	168	LR	LR	03 28 30.8	
	comp=Z,12µm,19.4s,baz=342,slow=38						
DAV	Davao City (W)	17.83	168	P	P	03 21 27.6	+3.0
MAJO	Matsushiro	18.25	46		Pn	03 21 28.6	-0.3
MAJO	Matsushiro	18.25	46	ceP	P	03 21 29.6	+0.5
MAJO				pmax	pmax		
	comp=Z,101nm,2.0s						
MAJO	Matsushiro	18.25	46	P	P	03 21 31.9	+2.8
	comp=Z,72nm,1.7s						
MAT	Matsushiro	18.25	46	P	P	03 21 31.8	+2.7
MJB9	Matsu-Tunnel	18.25	46		Pn	03 21 28.5	-0.4
MJAR	Matsushiro Arr	18.25	46	P	P	03 21 30.9	+1.8
	comp=Z,0.2nm,0.3s,baz=238,slow=10.0,SNR=17						
MJAR				LR	LR	03 29 22.1	
	comp=Z,21µm,19.5s,baz=236,slow=40						
	comp=Z,26nm,1.1s						
MJAR	Matsushiro Arr	18.25	46		Pn	03 21 28.8	-0.1
MJAR	Matsushiro Arr	18.25	46	P	Pn	03 21 28.8	-0.1
MJAR				pmax	pmax		
	comp=Z,53nm,1.3s						
JCJ	Chichijima	18.30	78	P	P	03 21 31.1	+1.4
	comp=Z,177nm,0.6s,baz=300,slow=9.0,SNR=10						
JCJ				LR	LR	03 27 33.5	
	comp=Z,7µm,21.6s,baz=252,slow=34						
JCJ	Chichijima	18.30	78		Pn	03 21 29.3	-0.3
JCJ	Chichijima	18.30	78	P	P	03 21 30.4	+0.7
	comp=Z,397nm,0.7s						
HHC	Hu-ho-hao-te	18.35	334	⇑iP	P	03 21 32.5	+2.2
HHC				PP	PnPn	03 21 45.0	+3.2
HHC				S	S	03 24 59.2	-0.6
HHC				sS	sS	03 25 04.9	-0.4
HHC				pmax	pmax		
	comp=Z,680nm,2.1s						
HHC				pmax	pmax		
	comp=Z,22µm,6.3s						
HHC				LR	LR		
	comp=Z,75µm,11.6s						
HHC				LR	LR		
	comp=Z,37µm,12.0s						
HHC				LR	LR		
	comp=Z,90µm,11.8s						
PZH	PanZhiHua	18.39	280	P	P	03 21 32.8	+2.0
PZH				pP	pP	03 21 34.7	+0.4
PZH				sP	sP	03 21 39.0	+3.2
PZH				S	Sn	03 24 55.6	-0.6
PZH				sS	S	03 25 02.9	+2.1
PZH				SS	SnSn	03 25 19.5	+10
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,7µm,8.0s						
PZH				LR	LR		
	comp=Z,54µm,12.0s						
PZH				LR	LR		
	comp=Z,51µm,12.4s						
PZH				LR	LR		
	comp=Z,56µm,12.9s						
BTO	Baotou	18.80	331	eP	Pn	03 21 39.2	+3.5
BTO				LR	LR		
	comp=Z,149µm,10.9s						
BTO				LR	LR		
	comp=Z,134µm,12.8s						
CN2	Changchun	19.29	8	eP	Pn	03 21 41.8	+0.4
CN2				eS	Sn	03 25 14.5	-3.0
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				pmax	pmax		
	comp=Z,4µm,6.2s						
CN2				LR	LR		
	comp=Z,61µm,15.0s						
CN2				LR	LR		
	comp=Z,94µm,15.0s						
CN2				LR	LR		
	comp=Z,62µm,13.1s						
LZH	Lanzhou	19.34	310	⇑P	Pn	03 21 43.8	+1.5
LZH				pP	sP	03 21 48.7	+2.4
LZH				sP	pP	03 21 53.0	+8.3
LZH				S	S	03 25 21.3	+1.3
LZH				SS	SnSn	03 25 42.4	+9.0
LZH				pmax	pmax		
	comp=Z,270nm,1.6s						
LZH				pmax	pmax		
	comp=Z,9µm,4.8s						
LZH				LR	LR		
	comp=Z,56µm,10.2s						
LZH				LR	LR		
	comp=Z,53µm,11.8s						
LZH				LR	LR		
	comp=Z,43µm,11.8s						
MSHR	Mys Shultsa	19.39	21	⇑eP	P	03 21 40.7	-0.8
MSHR				pmax	pmax		
	comp=Z,358nm,2.5s						
MSHR				MLR	MLR		
	comp=Z,11µm,14.0s						
JYT	Yasato	19.41	49	P	P	03 21 41.6	-0.2
MYLDM	Lahad Datu	19.68	190		P	03 21 43.4	-1.4
MYLDM				IAmb	IAmb	03 22 07.2	
	comp=Z,489nm,1.2s						
XLT	XiLinHaoTe	19.79	347	⇑iP	Pn	03 21 48.0	+0.5
XLT				pP	sP	03 21 51.2	+0.1
XLT				S	S	03 25 27.2	-1.5
XLT				sS	sS	03 25 32.1	-2.1
XLT				SS	SnSn	03 25 48.7	+4.4
XLT				pmax	pmax		
	comp=Z,250nm,2.2s						
XLT				pmax	pmax		
	comp=Z,7µm,9.6s						
XLT				LR	LR		
	comp=Z,59µm,15.8s						
XLT				LR	LR		
	comp=Z,24µm,20.6s						
VLA	Vladivostok	20.11	21	d iP	Pn	03 21 51.4	+0.2
VLA				pmax	pmax		
	comp=Z,189nm,1.0s						
VLA				MLR	MLR		
	comp=Z,25µm,14.0s						
SPMM	Sapulut	20.56	196	P	Pn	03 21 56.0	-0.7
MDJ	Mudanjiang	20.83	15	P	P	03 21 57.8	+0.6
MDJ				IAmb	IAmb	03 22 04.9	
	comp=Z,435nm,1.3s						
MDJ	Mudanjiang	20.83	15	P	Pn	03 21 58.7	-1.0
MDJ				pP	sP	03 22 01.5	-0.8
MDJ				sP	pP	03 22 03.1	+2.4
MDJ				S	Sn	03 25 53.4	-1.3
MDJ				sS	pS	03 25 57.5	-1.0
MDJ				pmax	pmax		
	comp=Z,75nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,6µm,5.5s						
MDJ				LR	LR		
	comp=Z,53µm,15.0s						
MDJ				LR	LR		
	comp=Z,107µm,15.0s						
MDJ				LR	LR		
	comp=Z,25µm,21.7s						
MDJ	Mudanjiang	20.83	15	P	Pn	03 21 58.6	-1.1
	comp=Z,302nm,2.4s						
USRK	Ussuriysk Ar.	21.11	20	P	P	03 22 02.1	+1.9
	comp=Z,28nm,0.7s,baz=218,slow=12,SNR=31						
USRK				LR	LR	03 30 11.3	
	comp=Z,14µm,18.5s,baz=188,slow=37						
	comp=Z,28nm,0.7s						
BNX	BinXian	21.46	10	⇑P	P	03 22 04.4	+0.4
BNX				pP	sP	03 22 08.4	-0.7
BNX				sP	pP	03 22 10.1	+2.6
BNX				S	S	03 26 03.3	+1.5
BNX				sS	Sn	03 26 11.7	+1.8
BNX				pmax	pmax		
	comp=Z,1µm,1.9s						
BNX				pmax	pmax		
	comp=Z,5µm,5.9s						
BNX				LR	LR		
	comp=Z,72µm,11.3s						
BNX				LR	LR		
	comp=Z,67µm,13.2s						
BNX				LR	LR		
	comp=Z,96µm,12.9s						
CHTO	Chiang Mai	22.20	259	P	P	03 22 11.1	-1.1
CHTO				IAmb	IAmb	03 22 16.7	
	comp=Z,369nm,1.4s						
CHTO	Chiang Mai	22.20	259	P	P	03 22 11.1	-1.1
CHTO				pmax	pmax		
	comp=Z,369nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,17µm,18.0s						
CHTO	Chiang Mai	22.20	259	P	P	03 22 13.7	+1.4
CHTO				P	P	03 22 13.7	+1.4
CHTO	Chiang Mai	22.20	259	P	P	03 22 13.3	+1.1
	comp=Z,123nm,1.4s						
CM31	Chiang Mai Arr	22.32	258	P	P	03 22 13.8	+0.3
CM31				IAmb	IAmb	03 22 32.6	
	comp=Z,567nm,1.8s						
CM31	Chiang Mai Arr	22.32	258	P	P	03 22 15.5	+2.0
	SNR=28						
CM31				P	P	03 22 15.5	+2.0
	SNR=28						
CMAR	Chiang Mai Arr	22.32	258	P	P	03 22 14.9	+1.4
	comp=Z,21nm,0.8s,baz=59,slow=8.2,SNR=82						
CMAR				PcP	PcP	03 26 10.6	+1.5
	comp=Z,5.7nm,0.8s,baz=38,slow=1.1,SNR=3.8						
CMAR				LR	LR	03 30 16.2	
	comp=Z,14µm,19.6s,baz=80,slow=35						
CMAR	Chiang Mai Arr	22.32	258	P	P	03 22 12.6	-0.9
CMAR	Chiang Mai Arr	22.32	258	P	P	03 22 12.6	-0.9
TOLI2	Tolitoli	23.45	183	P	P	03 22 23.9	-1.4
TOLI2				IAmb	IAmb	03 22 37.3	
	comp=Z,218nm,1.4s						
TOLI2	Tolitoli	23.45	183	P	P	03 22 24.1	-1.1
	comp=Z,114nm,2.0s						
TEY	Ternei	23.51	27	deP	P	03 22 22.5	-3.0
TEY				pmax	pmax		
	comp=Z,500nm,4.8s						
TEY				pmax	pmax		

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         comp=N,300nm,4.6s
TEY                                 pmax      pmax
         comp=E,200nm,4.3s
TEY                                 MLR       MLR
         comp=E,1µm,12.0s
TEY                                 MLR       MLR
         comp=N,700nm,13.0s
TEY                                 MLR       MLR
         comp=Z,600nm,15.0s
GTA      Gaotai           23.79 313 ⇓P        P         03 22 28.6  0.0
GTA                                 pP        pP        03 22 32.4 +0.2
GTA                                 sP        sP        03 22 35.6 +1.8
GTA                                 S         S         03 26 40.9 -3.1
GTA                                 sS        sS        03 26 52.1 +2.0
GTA                                 pmax      pmax
         comp=Z,45nm,1.8s
GTA                                 pmax      pmax
         comp=Z,5µm,6.4s
GTA                                 LR        LR
         comp=Z,28µm,13.9s
GTA                                 LR        LR
         comp=Z,20µm,13.9s
GTA                                 LR        LR
         comp=Z,21µm,15.1s
GTOI     Gorontalo        23.91 178 P         P         03 22 29.3 -0.4
         comp=Z,5µmcomp=Z,4µmcomp=Z,168nm,2.0s
KMSI     Cibinong         24.03 175 P         P         03 22 33.2 +2.4
         comp=Z,650nmcomp=Z,164nm,0.9s
MRSI     Marisa           24.05 180 P         P         03 22 31.9 +0.9
         comp=Z,15µmcomp=Z,8µmcomp=Z,200nm,1.9s
JEW      Eniwo            24.17  37 P         P         03 22 32.4 +0.4
GUMO     Guam             24.20 113 P         P         03 22 33.9 +1.5
         comp=Z,177nm,0.9s,baz=215,slow=17,SNR=4.7
GUMO                                LR        LR        03 32 06.2
         comp=Z,9µm,19.1s,baz=302,slow=37
         comp=Z,177nm,0.9s
GUMO     Guam             24.20 113 P         P         03 22 35.2 +2.8
         comp=Z,628nm,1.9s
MPSI     Mapaga           24.28 185 P         P         03 22 32.0 -1.1
         comp=Z,8µmcomp=Z,5µmcomp=Z,148nm,2.2s
TNTI     Ternate          24.32 167 P         P         03 22 33.9 +0.4
TNTI     Ternate          24.32 167 P         P         03 22 34.5 +1.1
         comp=Z,12µmcomp=Z,15µmcomp=Z,500nm,1.8s
TNTI     Ternate          24.32 167 P         P         03 22 33.1 -0.3
         comp=Z,495nm,1.8s
HIA      Hailar           24.61 356 P         P         03 22 34.8 -1.1
HIA      Hailar           24.61 356 IAMs_20   IAMs_20   03 32 35.0
         comp=Z,25µm,19.0s
HIA      Hailar           24.61 356deP        P         03 22 34.6 -1.3
HIA                                 pmax      pmax
         comp=Z,374nm,1.6s
HIA                                 MLR       MLR
         comp=Z,26µm,20.0s
APSI     Ampana           25.43 181 P         P         03 22 42.3 -1.2
         comp=Z,6µmcomp=Z,4µmcomp=Z,244nm,1.2s
LUWI     Luwuk            25.57 178 P         P         03 22 42.5 -2.3
LUWI     Luwuk            25.57 178 P         P         03 22 47.0 +2.2
         comp=Z,8µmcomp=Z,6µmcomp=Z,397nm,1.1s
LUWI     Luwuk            25.57 178 P         P         03 22 44.5 -0.3
         comp=Z,269nm,1.3s
ASAJ     Asahikawa        25.65  36 P         P         03 22 46.9 +1.5
         comp=Z,32nm,0.7s,baz=235,slow=12,SNR=15
ASAJ                                LR        LR        03 33 07.1
         comp=Z,16µm,19.8s,baz=243,slow=37
         comp=Z,32nm,0.7s
ASAJ     Asahikawa        25.65  36 P         P         03 22 46.4 +1.1
ASAJ                                pmax      pmax
         comp=Z,494nm,2.0s
JKA      Kamikawa-asahi   25.65  36 P         P         03 22 46.4 +1.1
KLR      Kul'dur          25.67  15 P         P         03 22 47.2 +1.7
         comp=Z,116nm,0.9s,baz=214,slow=9.1,SNR=66
KLR                                 PcP       PcP       03 26 17.1 +1.3
         comp=Z,2.6nm,0.6s,baz=189,slow=5.6,SNR=1.6
KLR                                 LR        LR        03 32 47.8
         comp=Z,21µm,19.8s,baz=199,slow=36
         comp=Z,116nm,0.9s
KLR      Kul'dur          25.67  15diP        P         03 22 45.7 +0.3
KLR                                 pmax      pmax
         comp=Z,263nm,1.7s
KLR                                 MLR       MLR
         comp=Z,31µm,13.0s
KSM      Kuching          25.69 208 P         P         03 22 45.4 -0.5
KSM      Kuching          25.69 208 P         P         03 22 47.0 +1.1
KSM      Kuching          25.69 208 P         P         03 22 45.5 -0.5
         comp=Z,262nm,2.2s
LBMI     Labuha           25.72 167 P         P         03 22 47.4 +1.3
         comp=Z,9µmcomp=Z,10µmcomp=Z,467nm,1.3s
ULN      Ulaanbaatar      26.01 337 P         P         03 22 47.6 -1.1
ULN                                 IAmb      IAmb      03 22 57.6
         comp=Z,210nm,1.4s
ULN      Ulaanbaatar      26.01 337diP        P         03 22 48.8 +0.1
ULN                                 pmax      pmax
         comp=Z,200nm,1.6s
ULN                                 MLR       MLR
         comp=Z,23µm,15.0s
ULN      Ulaanbaatar      26.01 337 P         P         03 22 49.4 +0.7
ULN                                 P         P         03 22 49.4 +0.7
GOMU     GeErMu           26.03 303⇓eP        P         03 22 49.2 -0.1
GOMU                                pP        pP        03 22 52.8 -0.2
GOMU                                S         S         03 27 21.8 +1.5
GOMU                                pmax      pmax
         comp=Z,16nm,0.9s
GOMU                                pmax      pmax
         comp=Z,3µm,4.4s
GOMU                                LR        LR
         comp=Z,14µm,9.3s
GOMU                                LR        LR
         comp=Z,13µm,12.3s
GOMU                                LR        LR
         comp=Z,16µm,12.4s
SONM     Songino Array    26.23 336 P         P         03 22 51.4 +0.8
         comp=Z,89nm,0.9s,baz=153,slow=9.3,SNR=95
SONM                                LR        LR        03 34 07.2
         comp=Z,31µm,21.4s,baz=146,slow=39
         comp=Z,89nm,0.9s
SONM     Songino Array    26.23 336 P         P         03 22 48.0 -2.7
SONM                                IAmb      IAmb      03 22 59.5
         comp=Z,193nm,1.0s
SONM     Songino Array    26.23 336 P         P         03 22 48.0 -2.7
SONM                                pmax      pmax
         comp=Z,193nm,1.0s
BKB      Balikpapan       26.25 192 P         P         03 22 49.2 -1.8
BKB      Balikpapan       26.25 192 P         P         03 22 52.4 +1.4
         comp=Z,12µmcomp=Z,9µmcomp=Z,314nm,1.0s
BKB      Balikpapan       26.25 192 P         P         03 22 52.0 +1.0
         comp=Z,319nm,1.0s
MTKI     Muara Teweh, K   26.38 196 P         P         03 22 53.1 +0.9
         comp=Z,3µmcomp=Z,250nm,1.1s
STKI     Sintang          26.51 204 P         P         03 22 54.7 +1.4
         comp=Z,123nm,0.9s
SANI     Sanana           26.84 171 P         P         03 22 54.7 -1.6
         comp=Z,11µmcomp=Z,6µmcomp=Z,138nm,1.1s
SANI     Sanana           26.84 171 P         P         03 22 58.6 +2.3
         comp=Z,139nm,1.2s
SWI      Sorong           26.92 159 P         P         03 22 55.7 -1.3
         comp=Z,8µmcomp=Z,3µmcomp=Z,88nm,1.3s
SIJI     Sorong           26.93 159 P         P         03 22 57.2 +0.2
         comp=Z,21nm,0.9s,baz=346,slow=9.9,SNR=16
SIJI                                LR        LR        03 31 30.0
         comp=Z,3µm,21.9s,baz=334,slow=32
         comp=Z,21nm,0.9s
SHL      Shillong         27.28 278 eP        P         03 23 00.7 +0.3
YUK      Yuzh-Kuril'sk    27.41  39 eP        P         03 23 02.0 +0.8
YUK                                 e                   03 23 45.0
YUK                                 ePPP      PPP       03 23 56.4
YUK                                 eS        S         03 27 43.3 +2.2
YUK                                 eSS       SnSn      03 28 53.9 +3.3
YUK                                 eSSS      SSS       03 29 08.2
YUK                                 pmax      pmax
         comp=Z,1µm,2.8s
YUK                                 pmax      pmax
         comp=Z,361nm,1.1s
YUK                                 pmax      pmax
         comp=N,339nm,0.9s
YUK                                 pmax      pmax
         comp=E,247nm,1.0s
YUK                                 MLR       MLR
         comp=Z,7µm,16.0s
YUK                                 MLR       MLR
         comp=E,10µm,13.0s
YUK                                 MLR       MLR
         comp=N,14µm,14.0s
TTSI     Tana Toraja      27.64 185 P         P         03 23 00.6 -2.8
         comp=N,2µmcomp=N,67nm,1.0s
YSS      Yuzh-Sakhalins   27.71  31 P         P         03 23 04.5 +0.6
YSS      Yuzh-Sakhalins   27.71  31 eP        P         03 23 04.6 +0.7
YSS                                 e                   03 23 55.7
YSS                                 eS        S         03 27 46.8 +1.0
YSS                                 eSS       SnSn      03 29 01.8 +3.9
YSS                                 pmax      pmax
         comp=Z,1µm,5.9s
YSS                                 pmax      pmax
         comp=N,400nm,5.3s
YSS                                 pmax      pmax
         comp=E,300nm,5.5s
YSS                                 pmax      pmax
         comp=Z,160nm,1.3s
YSS                                 pmax      pmax
         comp=Z,2µm,5.4s
YSS                                 MLR       MLR
         comp=N,14µm,15.0s
YSS                                 MLR       MLR
         comp=Z,14µm,15.0s
YSS      Yuzh-Sakhalins   27.71  31 P         P         03 23 05.3 +1.4
         comp=Z,223nm,1.2s
LSA      Lhasa            27.87 287 P         P         03 23 04.5 -1.5
LSA                                 IAmb      IAmb      03 23 21.5
         comp=Z,87nm,1.0s
LSA      Lhasa            27.87 287 P         P         03 23 04.5 -1.5
LSA                                 pmax      pmax
         comp=Z,87nm,1.0s
LSA                                 MLR       MLR
         comp=Z,30µm,18.0s
LSA      Lhasa            27.87 287 P         P         03 23 06.6 +0.6
LSA                                 pmax      pmax
         comp=Z,1µm,7.1s
LSA                                 LR        LR
         comp=Z,18µm,9.5s
LSA                                 LR        LR
         comp=Z,21µm,8.7s
LSA                                 LR        LR
         comp=Z,15µm,8.2s
LSA      Lhasa            27.87 287 P         P         03 23 06.6 +0.6
CIT      Chita            28.06 349 eP        P         03 23 07.5 +0.5
CIT                                 e                   03 24 02.2
CIT                                 e                   03 26 27.4
CIT                                 e                   03 27 51.1
CIT                                 e                   03 29 12.3
CIT                                 e                   03 29 33.3
CIT                                 pmax      pmax
         comp=Z,947nm,2.3s
KULM     Kulim            28.16 230 P         P         03 23 06.5 -1.6
KULM     Kulim            28.16 230 P         P         03 23 10.0 +1.9
GRNR     Gornyy           28.33  19 eP        P         03 23 08.9 -0.5
GRNR                                MLR       MLR
         comp=E,10µm,13.0s
GRNR                                MLR       MLR
         comp=N,14µm,12.0s
GRNR                                MLR       MLR
         comp=Z,14µm,11.0s
IPM      Ipoh             28.48 229 P         P         03 23 08.3 -2.8
IPM      Ipoh             28.48 229 P         P         03 23 11.4 +0.4
         comp=Z,235nm,2.0s
SPSI     Sidrap Palu      28.55 185 P         P         03 23 14.9 +3.3
         comp=Z,2µmcomp=Z,69nm,1.4s
MSAI     Masohi           28.65 166 P         P         03 23 16.9 +4.4
         comp=Z,20nm,1.1s
AAI      Ambon            28.82 167 P         P         03 23 15.5 +1.5
         comp=Z,4µmcomp=Z,108nm,1.5s
BBKI     Banjar Baru      28.82 195 P         P         03 23 15.2 +1.1
         comp=Z,5µmcomp=Z,101nm,1.3s
BNSI     Bone             28.96 184 P         P         03 23 18.8 +3.6
         comp=Z,2µmcomp=Z,60nm,1.7s
UGL      Uglegorsk        28.99  28 eP        P         03 23 17.6 +2.4
UGL                                 eS        S         03 28 10.9 +5.1
UGL                                 pmax      pmax
         comp=Z,100nm,0.7s
UGL                                 pmax      pmax
         comp=Z,2µm,3.2s
UGL                                 smax      smax
         comp=N,3µm,19.0s
UGL                                 smax      smax
         comp=E,5µm,19.0s
UGL                                 MLR       MLR
         comp=E,20µm,12.0s
UGL                                 MLR       MLR
         comp=N,17µm,11.0s
UGL                                 MLR       MLR
         comp=Z,15µm,12.0s
FAKI     Fak Fak          29.17 159 P         P         03 23 15.3 -1.9
FAKI                                IAmb      IAmb      03 23 23.0
         comp=Z,195nm,1.2s
FAKI     Fak Fak          29.17 159 P         P         03 23 17.2 +0.1
         comp=Z,6µmcomp=Z,4µmcomp=Z,164nm,1.3s
FAKI     Fak Fak          29.17 159 P         P         03 23 16.7 -0.4
         comp=Z,164nm,1.3s
KUR      Kuril'sk         29.27  39 P         P         03 23 18.7 +0.9
KUR                                 S         S         03 28 12.9 +2.5
KUR                                 eSS       SnSn      03 29 39.8 +3.8
KUR                                 MLR       MLR
         comp=Z,11µm,15.0s
KUR                                 MLR       MLR
         comp=N,9µm,19.0s
KUR                                 MLR       MLR
         comp=E,14µm,18.0s
ZEA      Zeya             29.29   6 eP        P         03 23 17.9 +0.1
ZEA                                 e                   03 24 30.9
ZEA                                 eS        S         03 28 06.1 -4.5
ZEA                                 pmax      pmax
         comp=E,30nm,1.2s
ZEA                                 pmax      pmax
         comp=N,70nm,1.6s
ZEA                                 pmax      pmax
         comp=Z,90nm,1.5s
ZEA                                 pmax      pmax
         comp=E,210nm,3.1s
ZEA                                 pmax      pmax
         comp=N,1µm,5.2s
ZEA                                 pmax      pmax
         comp=Z,1µm,6.1s
ZEA                                 pmax      pmax
         comp=Z,600nm,7.3s
ZEA                                 smax      smax
         comp=E,800nm,10.4s
ZEA                                 MLR       MLR
         comp=N,23µm,11.0s
ZEA                                 MLR       MLR
         comp=Z,22µm,12.0s
ZAK      Zakamensk        29.49 335 eP        P         03 23 18.9 -0.9
ZAK                                 pmax      pmax
         comp=Z,58nm,1.2s
KAPI     Kappang          29.59 185 P         P         03 23 20.0 -0.9
         comp=Z,14nm,0.9s,baz=9.2,slow=7.9,SNR=7.5
KAPI                                LR        LR        03 37 13.2
         comp=Z,3µm,19.5s,baz=352,slow=41
         comp=Z,14nm,0.9s
KAPI     Kappang          29.59 185 P         P         03 23 19.2 -1.6
KAPI                                IAmb      IAmb      03 23 36.0
         comp=Z,195nm,1.7s
KAPI     Kappang          29.59 185 P         P         03 23 19.2 -1.6
KAPI                                pmax      pmax
         comp=Z,195nm,1.7s
KAPI                                MLR       MLR
         comp=Z,3µm,20.0s
DGPR     DIGLIPUR         29.73 253⇓iP        P         03 23 21.9 -0.2
BKSI     Bulukumba        29.87 184 P         P         03 23 20.0 -3.3
         comp=Z,3µmcomp=Z,1µmcomp=Z,22nm,1.5s
SLGI     Shiliguri        30.30 281 eP        P         03 23 28.2 +1.1
PBA      Port Blair       30.60 250 eP        P         03 23 30.1 +0.3
TYV      Tymovskoe        30.61  26 eP        P         03 23 34.0 +4.5
TYV                                 MLR       MLR
         comp=Z,23µm,14.0s
TYV                                 MLR       MLR
         comp=N,23µm,13.0s
TYV                                 MLR       MLR
         comp=E,10µm,13.0s
TPI      Tanjungpandan    30.63 209 P         P         03 23 30.0 -0.1
         comp=E,64nm,2.2s
IRK      Irkutsk          30.67 338 eP        P         03 23 29.9 -0.2
IRK                                 eS        S         03 28 34.7 +2.5
IRK                                 pmax      pmax
         comp=Z,590nm,2.6s
PPBI     Pangkal Pinang   30.81 212 P         P         03 23 33.3 +1.6
         comp=Z,46nm,1.1s
LHMI     Lhok Sumawe      30.88 235 P         P         03 23 32.3  0.0
LHMI     Lhok Sumawe      30.88 235 P         P         03 23 33.4 +1.1
         comp=Z,6µmcomp=Z,6µmcomp=Z,364nm,1.1s
LHMI     Lhok Sumawe      30.88 235 P         P         03 23 33.8 +1.5
         comp=Z,364nm,1.1s
TSI      Tuntungan        30.88 231 P         P         03 23 30.0 -2.3
         comp=Z,6µmcomp=Z,9µmcomp=Z,492nm,1.5s
SMPI     Sarmi            31.06 146 P         P         03 23 36.3 +2.4
         comp=Z,3µmcomp=Z,2µmcomp=Z,88nm,2.1s
PSI      Prapat           31.13 229 LR        LR        03 36 55.1
         comp=Z,10µm,19.2s,baz=30,slow=38
ODAN     Odare            31.21 282 eP        P         03 23 36.3 +0.9
         comp=Z,657nm,1.3s
MOY      Mondy            31.39 335 eP        P         03 23 28.4 -8.2
MOY                                 pmax      pmax
         comp=Z,363nm,2.6s
KCSI     Kotacane, Aceh   31.43 232 P         P         03 23 37.6 +0.4
         comp=Z,2µmcomp=Z,53nm,1.0s
BKNI     Bangkinang       31.60 223 P         P         03 23 38.9 +0.3
         comp=Z,4µmcomp=Z,4µmcomp=Z,141nm,1.2s
BKNI     Bangkinang       31.60 223 P         P         03 23 39.4 +0.8
         comp=Z,142nm,1.2s
JMBI     JAMBI            31.65 217 P         P         03 23 42.9 +3.8
         comp=Z,3µmcomp=Z,168nm,1.1s
NKL      Nikolayevsk      31.73  21 eP        P         03 23 37.9 -1.5
NKL                                 eS        S         03 28 48.7  0.0
NKL                                 pmax      pmax
         comp=E,7.0nm,1.1s
NKL                                 pmax      pmax
         comp=N,1.0nm,1.0s
NKL                                 pmax      pmax
         comp=Z,96nm,1.4s
NKL                                 smax      smax
         comp=E,21nm,2.6s
NKL                                 smax      smax
         comp=N,600nm,6.0s
NKL                                 MLR       MLR
         comp=E,212nm,18.0s
NKL                                 MLR       MLR
         comp=N,13nm,29.0s
NKL                                 MLR       MLR
         comp=Z,25µm,13.0s
RAMN     Ramite           31.91 282 eP        P         03 23 42.4 +0.8
         comp=Z,81nm,0.9s
MNSI     Mandailing Nat   32.17 226 P         P         03 23 43.9 +0.3
         comp=Z,9µmcomp=Z,274nm,1.6s
JIRN     Jiri             32.23 283 eP        P         03 23 46.7 +2.1
         comp=Z,7.4nm,1.0s
GENI     Genyem           32.33 144 P         P         03 23 45.7 +0.7
         comp=Z,112nm,1.8s
KMMI     Kalianget        32.49 195 P         P         03 23 47.0 +0.6
         comp=Z,6µmcomp=Z,4µmcomp=Z,123nm,1.2s
GRJI     Gresik           32.74 198 P         P         03 23 51.9 +3.3
         comp=Z,93nm,0.8s
TBJI     Tambak Boyo      32.83 199 P         P         03 23 50.3 +0.9
         comp=Z,4µmcomp=Z,175nm,1.2s
BOK      Bokaro           32.91 276⇓iP        P         03 23 51.3 +1.2
BOK                                 IAmb      IAmb      03 23 56.3
         comp=Z,122nm,1.0s
PKI      Pulchoki         32.93 283 eP        P         03 23 50.4 -0.2
         comp=Z,392nm,1.4s
KKN      Kakani           33.03 283 eP        P         03 23 51.3 -0.1
         comp=Z,228nm,1.0s
MMRI     Maumere          33.11 180 P         P         03 23 49.6 -2.2
MMRI     Maumere          33.11 180 P         P         03 23 52.5 +0.7
         comp=Z,5µmcomp=Z,4µmcomp=Z,185nm,1.2s
MMRI     Maumere          33.11 180 P         P         03 23 50.6 -1.2
         comp=Z,181nm,1.2s
GSI      Gunungsitoli     33.14 229 P         P         03 23 50.3 -1.8
GSI      Gunungsitoli     33.14 229 P         P         03 23 51.5 -0.6
         comp=Z,6µmcomp=Z,100nm,2.8s
GSI      Gunungsitoli     33.14 229 P         P         03 23 50.2 -1.9
         comp=Z,100nm,1.8s
ABJI     Asem Bagus       33.15 194 P         P         03 23 51.9 -0.3
         comp=Z,5µmcomp=Z,4µmcomp=Z,101nm,2.5s
DMN      Daman            33.19 283 eP        P         03 23 52.9  0.0
         comp=Z,284nm,1.1s
EDFI     Ende, Flores     33.22 181 P         P         03 23 52.4 -0.5
         comp=Z,3µmcomp=Z,2µmcomp=Z,69nm,1.3s
BLJI     Banyuglugur      33.25 195 P         P         03 23 55.5 +2.4
         comp=Z,2µmcomp=Z,108nm,1.0s
KRJI     Kerinci          33.26 220 P         P         03 23 54.9 +1.6
         comp=Z,12µmcomp=Z,560nm,1.6s
SMRI     Semarang         33.49 201 P         P         03 23 53.7 -1.5
SMRI     Semarang         33.49 201 P         P         03 23 53.8 -1.4
         comp=Z,7µmcomp=Z,148nm,2.6s
SMRI     Semarang         33.49 201 P         P         03 23 55.7 +0.5
         comp=Z,146nm,2.5s
PLAI     Plampang         33.55 188 P         P         03 23 54.3 -1.4
         comp=Z,4µmcomp=Z,3µmcomp=Z,134nm,2.1s
PLAI     Plampang         33.55 188 P         P         03 23 56.0 +0.3
         comp=Z,133nm,2.1s
GKN      Gorkha           33.59 284 eP        P         03 23 56.1 -0.1
         comp=Z,295nm,1.1s
BOD      Bodaibo          33.61 352 eP        P         03 23 54.3 -1.5
BOD                                 pmax      pmax
         comp=Z,120nm,2.2s
BWNR     Bhubaneshwar     33.68 270⇓iP        P         03 23 58.7 +1.8
KLI      Kotabumi         33.78 212 P         P         03 23 59.1 +1.4
         comp=Z,296nm,1.3s
MDSI     Maura Dua        33.79 213 P         P         03 23 59.2 +1.5
         comp=Z,2µmcomp=Z,113nm,1.1s
GMJI     Gumukmas         33.80 195 P         P         03 23 59.0 +1.2
         comp=Z,89nm,1.1s
DNP      Denpasar         33.81 192 P         P         03 24 00.4 +2.5
         comp=Z,31µmcomp=Z,472nm,1.6s
WMQ      Urumqi           33.88 313⇓iP        P         03 23 59.0 +0.6
WMQ                                 pP        pP        03 24 02.7 +0.5
WMQ                                 sP        sP        03 24 11.9 +8.2
WMQ                                 S         S         03 29 23.2 +0.6
WMQ                                 sS        sS        03 29 37.2 +8.4
WMQ                                 SS        SnSn      03 31 23.8 -4.2
WMQ                                 pmax      pmax
         comp=Z,20nm,1.3s
WMQ                                 pmax      pmax
         comp=Z,2µm,6.5s
WMQ                                 LR        LR
         comp=Z,38µm,11.9s
WMQ                                 LR        LR
         comp=Z,23µm,9.5s
WMQ                                 LR        LR
         comp=Z,5µm,14.9s
KSI      Kapahiang        33.90 217 P         P         03 24 02.1 +3.2
IGBI     Denpasar         33.96 192 P         P         03 23 59.8 +0.6
         comp=Z,3µmcomp=Z,5µmcomp=Z,170nm,1.3s
PWJI     Pagerwojo        33.99 198 P         P         03 24 00.5 +1.0
         comp=Z,3µmcomp=Z,162nm,0.9s
BLSI     Bandar Lampung   34.03 211 P         P         03 24 01.2 +1.3
         comp=Z,125nm,0.7s
WOJI     Wonogiri, Jawa   34.08 200 P         P         03 24 02.3 +2.0
         comp=Z,4µmcomp=Z,167nm,1.2s
SISI     Saibi            34.10 224 P         P         03 23 59.8 -0.7
         comp=Z,3µmcomp=Z,100nm,1.2s
TNG      Tangerang        34.12 208 P         P         03 24 01.0 +0.3
         comp=Z,1µm,0.4s
WBSI     Waikabubak, Su   34.20 185 P         P         03 24 04.1 +2.7
         comp=Z,1µmcomp=Z,49nm,0.7s
YOGI     Yogyakarta       34.26 201 P         P         03 24 06.2 +4.4
         comp=Z,137nm,1.5s
UGM      Wanagama         34.27 201 P         P         03 24 01.4 -0.6
UGM      Wanagama         34.27 201 P         P         03 24 03.5 +1.5
         comp=Z,226nm,1.4s
UGM      Wanagama         34.27 201 P         P         03 24 02.2 +0.2
         comp=Z,228nm,1.4s
KPJI     Karang Pucung    34.28 204 P         P         03 24 04.0 +2.0
         comp=Z,5µmcomp=Z,183nm,1.9s
VLK      Valmikinagar     34.31 283⇓iP        P         03 24 01.4 -0.8
LEM      Lembang          34.31 206 LR        LR        03 37 18.8
         comp=Z,2µm,20.5s,baz=32,slow=35
LEM      Lembang          34.31 206 P         P         03 24 05.4 +2.9
         comp=Z,4µmcomp=Z,3µmcomp=Z,96nm,1.5s
DANN     Dangsing         34.34 285 eP        P         03 24 02.8 -0.1
         comp=Z,392nm,1.1s
DBJI     Dramaga          34.42 208 P         P         03 24 00.2 -3.1
         comp=Z,104nm,1.3s
KOLN     Koldanda         34.52 284 eP        P         03 24 04.1 -0.2
         comp=Z,218nm,0.9s
KASI     Kota Agung       34.53 212 P         P         03 24 05.3 +1.1
         comp=Z,2µmcomp=Z,158nm,1.1s
BATI     Baumata          34.70 177 P         P         03 24 10.4 +4.7
         comp=Z,3µmcomp=Z,80nm,1.2s
CNJI     Cibinong         34.95 206 P         P         03 24 09.9 +2.1
         comp=Z,4µmcomp=Z,3µmcomp=Z,80nm,1.1s
PYUN     Piuthan          35.03 284 eP        P         03 24 09.0 +0.2
         comp=Z,408nm,1.3s
JHSG     JHARSUGUGA       35.20 273⇓iP        P         03 24 10.9 +0.9
VAR      Varanasi         35.28 279 eP        P         03 24 11.5 +0.9
RAGD     RAYAGADA         36.09 269⇓iP        P         03 24 19.3 +1.6
ALBI     Allahabad        36.36 280 eP        P         03 24 20.1 +0.2
BLSP     Bilaspur         36.61 274⇓iP        P         03 24 22.7 +0.5
SKR      Severo-Kuril’s   36.91  36 eP        P         03 24 20.8 -3.5
SKR                                 eS        S         03 29 58.5  -10
SKR                                 pmax      pmax
         comp=Z,35nm,1.0s
SKR                                 pmax      pmax
         comp=Z,300nm,5.4s
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SKR                                pmax     pmax
      comp=Z,100nm,6.5s
SKR                                MLR      MLR
      comp=Z,5µm,19.0s
SKR                                MLR      MLR
      comp=Z,5µm,17.0s
ZSN   Zaisan            37.16 317  eP       P        03 24 26.3 -0.2
ZSN                                i S      S        03 30 13.3 +0.5
ZSN   Zaisan            37.16 317  eP       P        03 24 26.3 -0.2
      baz=317
ZSN                                i S      S        03 30 13.4 +0.6
      baz=317
LGTI  Lohaghat          37.36 287  eP       P        03 24 30.0 +1.5
PTH   Pithoragarh       37.38 287⇓ iP       P        03 24 29.4 +0.5
YAK   Yakutsk           37.70   6  LR       LR       03 40 38.6
      comp=Z,12µm,19.0s,baz=184,slow=37
YAK   Yakutsk           37.70   6  P        P        03 24 30.0 -0.9
YAK                                IAmb     IAmb     03 24 35.0
      comp=Z,188nm,1.3s
YAK                                IAMs_20  IAMs_20  03 40 27.2
      comp=Z,13µm,19.0s
YAK   Yakutsk           37.70   6c iP       P        03 24 29.8 -1.1
YAK                                e*PP     sP       03 24 39.5 +3.3
YAK                                e                 03 25 55.9
YAK                                e                 03 26 46.5
YAK                                eS       S        03 30 21.3 +0.7
YAK                                eSS      SnSn     03 33 00.2 +0.2
YAK                                e                 03 34 44.3
YAK                                pmax     pmax
      comp=Z,65nm,1.4s
YAK                                pmax     pmax
      comp=N,63nm,1.1s
YAK                                pmax     pmax
      comp=E,43nm,1.3s
YAK                                pmax     pmax
      comp=Z,469nm,4.3s
YAK                                pmax     pmax
      comp=N,302nm,2.8s
YAK                                pmax     pmax
      comp=E,110nm,2.0s
YAK                                smax     smax
      comp=N,887nm,7.8s
YAK                                MLR      MLR
      comp=Z,15µm,16.0s
YAK                                MLR      MLR
      comp=N,11µm,14.0s
MTN   Manton Dam        38.33 166  P        P        03 24 34.9 -1.8
MTN                                IAmb     IAmb     03 24 41.8
      comp=Z,81nm,0.9s
MTN   Manton Dam        38.33 166  P        P        03 24 34.9 -1.8
      comp=Z,122nm,1.4s
JBP   Jabalpur          38.35 277  ex       x        03 24 37.3
JBP                              ⇓ eP       P        03 24 37.3 +0.4
JBP                                IAmb     IAmb     03 24 43.4
      comp=Z,389nm,1.7s
JBP                                eS       S        03 30 34.3 +3.0
KDU   Kakadu            38.51 163  P        P        03 24 37.1 -1.0
MK31  Makanchi Array    38.52 315  P        P        03 24 37.7 -0.4
MK31  Makanchi Array    38.52 315  i P      P        03 24 36.9 -1.2
MK31                               pmax     pmax
      comp=Z,115nm,1.2s
MKAR  Makanchi Array    38.52 315  P        P        03 24 37.8 -0.3
      comp=Z,9.5nm,0.9s,baz=105,slow=9.6,SNR=33
MKAR                               ScP      ScP      03 30 39.0 +0.3
      comp=Z,1.1nm,0.8s,baz=111,slow=3.5,SNR=1.0
MKAR                               LR       LR       03 41 46.6
      comp=Z,13µm,20.2s,baz=107,slow=38
      comp=Z,9.5nm,0.9s
MKAR  Makanchi Array    38.52 315  P        P        03 24 38.0  0.0
MKAR  Makanchi Array    38.52 315  P        P        03 24 38.1  0.0
MAKZ  Makanchi          38.73 315  P        P        03 24 39.7 -0.1
MAKZ                               IAmb     IAmb     03 24 56.8
      comp=Z,158nm,1.2s
MAKZ                               IAMs_20  IAMs_20  03 41 51.2
      comp=Z,18µm,21.0s
MAKZ  Makanchi          38.73 315  P        P        03 24 39.7 -0.1
MAKZ                               pmax     pmax
      comp=Z,158nm,1.3s
MAKZ                               MLR      MLR
      comp=Z,18µm,21.0s
PATS  Pohnpei           38.99 111  IAMs_20  IAMs_20  03 36 45.2
      comp=Z,11µm,22.0s
PEA0B Petropavlovsk-    39.04  34⇓ eP       P        03 24 42.8 +0.6
PETK  Petropavlovsk-    39.04  34  P        P        03 24 44.1 +1.8
      comp=Z,1.6nm,0.7s,baz=230,slow=12,SNR=4.2
DDI   Dehra Dun         39.22 288  eP       P        03 24 45.1 +0.9
JHNI  Jhansi            39.27 281⇓ iP       P        03 24 42.9 -1.6
VJD   Vijayawada        39.45 266⇓ iP       P        03 24 47.5 +1.4
PET   Petropavlovsk     39.48  35  IAMs_20  IAMs_20  03 41 50.9
      comp=Z,9µm,18.0s
PET   Petropavlovsk     39.48  35  eP       P        03 24 45.2 -0.7
PET                                eS       S        03 30 45.7 -1.9
PET                                pmax     pmax
      comp=Z,500nm,6.1s
PET                                pmax     pmax
      comp=Z,1µm,5.7s
PET                                pmax     pmax
      comp=Z,101nm,1.3s
PET                                MLR      MLR
      comp=Z,12µm,18.0s
PET                                MLR      MLR
      comp=Z,11µm,17.0s
UZB   Uzynbulak         39.66 309d iP       P        03 24 48.0 +0.2
UZB                                i S      S        03 30 51.9 +0.9
UZB                                pmax     pmax
      comp=Z,215nm,2.0s
UZB   Uzynbulak         39.66 309⇓ iP       P        03 24 48.0 +0.2
      comp=Z,215nm,2.0s,baz=308
UZB                                i S      S        03 30 52.0 +0.9
      baz=308
SMLA  Simla             39.95 290  eP       P        03 24 50.3 +0.2
KPKS  Kokpek            39.98 309d iP       P        03 24 50.7 +0.4
KPKS                               i S      S        03 30 56.7 +1.1
KPKS                               pmax     pmax
      comp=Z,131nm,1.6s
KPKS  Kokpek            39.98 309⇓ iP       P        03 24 50.7 +0.4
      comp=Z,131nm,1.6s,baz=309
KPKS                               i S      S        03 30 56.7 +1.1
      baz=309
NDI   New Delhi         40.06 286  eP       P        03 24 50.8 -0.4
SATY  Saty              40.08 308d iP       P        03 24 51.8 +0.6
SATY                               i S      S        03 30 58.4 +1.2
SATY                               pmax     pmax
      comp=Z,167nm,2.0s
SATY  Saty              40.08 308⇓ iP       P        03 24 51.9 +0.6
      comp=Z,167nm,2.0s,baz=308
SATY                               i S      S        03 30 58.5 +1.2
      baz=308
ZHN   Zhinishke         40.08 308  eP       P        03 24 51.6 +0.4
ZHN                                i S      S        03 30 58.3 +1.1
ZHN   Zhinishke         40.08 308  eP       P        03 24 51.7 +0.4
      baz=308
ZHN                                i S      S        03 30 58.3 +1.1
      baz=308
AYAN  Aya Nagar         40.16 286  eP       P        03 24 52.0 +0.1
SONA  Sohna             40.22 285  eP       P        03 24 52.5 +0.1
MA2   Magadan           40.24  22  LR       LR       03 41 49.0
      comp=Z,10µm,18.1s,baz=222,slow=36
MA2   Magadan           40.24  22  P        P        03 24 52.5 +0.3
MA2                                IAMs_20  IAMs_20  03 41 28.8
      comp=Z,13µm,18.0s
MA2   Magadan           40.24  22ceP        P        03 24 53.4 +1.2
MA2                                pmax     pmax
      comp=Z,90nm,1.3s
MA2                                MLR      MLR
      comp=Z,12µm,16.0s
MA2   Magadan           40.24  22  P        P        03 24 53.2 +1.0
      comp=Z,65nm,2.7s
ZAA0  Zalesovo Array    40.26 326  P        P        03 24 50.9 -1.4
ZALV  Zalesovo Beam     40.26 326  P        P        03 24 52.2 -0.2
      comp=Z,19nm,0.8s,baz=119,slow=8.3,SNR=31
ZALV                               LR       LR       03 42 34.4
      comp=Z,20µm,19.5s,baz=123,slow=38
      comp=Z,19nm,0.8s
ZALV  Zalesovo Beam     40.26 326  P        P        03 24 51.0 -1.4
ZALV  Zalesovo Beam     40.26 326  i P      P        03 24 51.7 -0.7
ZALV                               pmax     pmax
      comp=Z,20nm,0.8s
TDK   Taldyqorghan      40.55 311d iP       P        03 24 55.7 +0.7
TDK                                pmax     pmax
      comp=Z,421nm,2.3s
TDK                                MLR      MLR
      comp=Z,5µm,11.0s
TDK   Taldyqorghan      40.55 311⇓ iP       P        03 24 55.7 +0.7
      comp=Z,421nm,2.3s,baz=311
TDK                                LR       LR       03 42 26.2
      comp=Z,5µm,11.3s,baz=311
BHK   Bhakra            40.58 290  eP       P        03 24 55.9 +0.5
BHK   Bhakra            40.58 290  ex       x        03 24 56.2
KNRA  Kununurra         40.64 170  P        P        03 24 58.1 +2.2
      comp=Z,71nm,1.2s
BHPL  Bhopal            40.65 278⇓ iP       P        03 24 55.8 -0.3
BHPL                               IAmb     IAmb     03 25 01.0
      comp=Z,211nm,1.6s
KUDL  Kundal            40.75 285  eP       P        03 24 55.9 -0.9
KDJ   Kajisay           40.77 307  P        P        03 24 56.9 -0.2
KDJ   Kajisay           40.77 307  P        P        03 24 56.9 -0.2
KDJ                                pmax     pmax
      comp=Z,91nm,1.4s
KRVT  Keravat (AS076    41.00 131  P        P        03 24 59.4 +0.4
      comp=Z,37nm,0.6s,baz=315,slow=13,SNR=6.1
KRVT                               LR       LR       03 38 49.3
      comp=Z,4µm,21.9s,baz=106,slow=32
      comp=Z,37nm,0.6s
MDRS  Chennai           41.03 261⇓ iP       P        03 25 01.0 +1.8
MDOK  Medeo             41.07 308  i P      P        03 25 00.2 +0.7
MDOK                               i S      S        03 31 13.4 +1.3
MDOK                               MLR      MLR
      comp=Z,6µm,14.0s
MDOK  Medeo             41.07 308  i P      P        03 25 00.3 +0.7
      baz=308
MDOK                               i S      S        03 31 13.5 +1.3
      baz=308
MDOK                               eSS      SS       03 34 16.9 +2.5
      baz=308
MDOK                               LR       LR       03 42 25.2
      comp=Z,6µm,13.6s,baz=308
HYB   Hyderabad         41.07 269⇓ iP       P        03 25 00.5 +0.8
HYBB  Hyderabad (bro    41.08 269  eP       P        03 25 00.5 +0.8
HYBB                               IVmB_BB           03 25 06.2
      comp=Z,1µm,2.9s
HYBB                               eS       S        03 31 13.1 +0.7
HYBB                               IVMs_BB IVMs_BB   03 45 59.7
      comp=Z,2µm,10.7s
TNSS  Tian-Shan         41.12 308  i P      P        03 25 01.1 +1.0
TNSS  Tian-Shan         41.12 308  i P      P        03 25 01.2 +1.0
      baz=308
SEM   Semipalatinsk     41.13 320  eP       P        03 24 58.9 -1.0
SEM                                pmax     pmax
      comp=Z,162nm,1.7s
SEM   Semipalatinsk     41.13 320  eP       P        03 24 59.0 -1.0
      comp=Z,162nm,1.7s,baz=320
THN   Thein Dam         41.15 292  eP       P        03 24 59.7 -0.3
AAA   Alma-Ata          41.18 308  eP       P        03 25 00.7 +0.5
AAA                                eS       S        03 31 14.5 +1.1
AAA                                MLR      MLR
      comp=Z,7µm,12.0s
AAA   Alma-Ata          41.18 308  eP       P        03 25 00.8 +0.5
      baz=308
AAA                                eS       S        03 31 14.6 +1.1
      baz=308
AAA                                LR       LR       03 42 19.3
      comp=Z,7µm,11.8s,baz=308
CHKK  Chushkaly         41.26 309  eP       P        03 25 00.6 -0.2
CHKK  Chushkaly         41.26 309  eP       P        03 25 00.7 -0.2
      baz=309
KSH   Kashi             41.28 302  P        P        03 25 05.1 +3.9
KSH                                PP       PnPn     03 26 45.8 +4.8
KSH                                S        S        03 31 18.2 +3.0
KSH                                pmax     pmax
      comp=Z,38nm,2.2s
KSH                                pmax     pmax
      comp=Z,3µm,7.6s
KSH                                LR       LR
      comp=Z,28µm,17.9s
KSH                                LR       LR
      comp=Z,17µm,15.5s
KSH                                LR       LR
      comp=Z,24µm,16.1s
AKL   Akola             41.58 274⇓ iP       P        03 25 04.5 +0.7
H11N1 WAKE ISLAND Hy    41.70  88  T        T        04 10 35.3
      baz=283
H11N2 WAKE ISLAND Hy    41.70  88  T        T        04 10 37.5
      baz=283
H11N3 WAKE ISLAND Hy    41.72  88  T        T        04 10 34.6
      baz=283
KUU   Kurty             41.73 309d iP       P        03 25 05.0 +0.3
KUU                                i S      S        03 31 22.4 +0.9
KUU                                pmax     pmax
      comp=Z,318nm,2.5s
KUU   Kurty             41.73 309⇓ iP       P        03 25 05.0 +0.3
      comp=Z,318nm,2.5s,baz=309
KUU                                i S      S        03 31 22.4 +0.9
      baz=309
KUU                                eSS      SS       03 34 30.4 +3.2
      baz=309
KUU                                LR       LR       03 43 48.6
      baz=309
PMG   Port Moresby      41.82 141  P        P        03 25 06.2 +0.6
      comp=Z,19nm,0.4s,baz=342,slow=8.7,SNR=7.6
PMG                                LR       LR       03 42 12.2
      comp=Z,4µm,19.2s,baz=308,slow=36
      comp=Z,19nm,0.4s
PMG   Port Moresby      41.82 141  P        P        03 25 05.8 +0.2
PMG   Port Moresby      41.82 141ceP        P        03 25 06.3 +0.6
PMG                                pmax     pmax
      comp=Z,76nm,1.0s
PMG                                MLR      MLR
      comp=Z,3µm,17.0s
PMG   Port Moresby      41.82 141  P        P        03 25 05.8 +0.2
      comp=Z,101nm,1.3s
PMG   Port Moresby      41.82 141  P        P        03 25 05.9 +0.2
      comp=Z,101nm,1.3s
JMU   Jammu             41.83 292  eP       P        03 25 06.6 +1.0
H11S3 WAKE ISLAND Hy    41.85  89  T        T        04 10 58.8
      baz=284
H11S1 WAKE ISLAND Hy    41.85  89  T        T        04 10 41.1
      baz=284
H11S2 WAKE ISLAND Hy    41.86  89  T        T        04 11 00.1
      baz=284
TKM2  Tokmak 2          42.07 307  P        P        03 25 08.6 +0.8
      SNR=51
KURK  Kurchatov         42.21 319  P        P        03 25 08.0 -0.5
KURK  Kurchatov         42.21 319d iP       P        03 25 07.6 -0.9
KURK                               pmax     pmax
      comp=Z,160nm,1.8s
KURK                               MLR      MLR
      comp=Z,6µm,16.0s
KURK  Kurchatov         42.21 319  P        P        03 25 08.2 -0.3
KURK                               P        P        03 25 08.2 -0.3
KURBB Kurchatov Arra    42.23 319  LR       LR       03 43 44.9
      comp=Z,3µm,20.5s,baz=95,slow=38
KBK   Karagaybulak      42.49 307  P        P        03 25 12.3 +1.2
      SNR=20
KBK   Karagaybulak      42.49 307  P        P        03 25 12.9 +1.7
AJM   Ajmer             42.59 283⇓ iP       P        03 25 12.1 +0.1
CHMS  Chumysh           42.70 307  P        P        03 25 16.3 +3.7
      SNR=6.5
UCH   Uchtor            42.74 306  P        P        03 25 15.0 +1.5
      SNR=29
UCH   Uchtor            42.74 306  P        P        03 25 15.3 +1.8
AAK   Ala-Archa         42.82 307  P        P        03 25 16.5 +2.7
      SNR=6.7
AAK   Ala-Archa         42.82 307  LR       LR       03 45 32.9
      comp=Z,13µm,18.1s,baz=90,slow=40
AAK   Ala-Archa         42.82 307  P        P        03 25 13.6 -0.2
AAK   Ala-Archa         42.82 307  IAMs_20  IAMs_20  03 43 23.0
      comp=Z,12µm,19.0s
AAK   Ala-Archa         42.82 307d iP       P        03 25 14.3 +0.5
AAK                                pmax     pmax
      comp=Z,62nm,1.3s
AAK                                MLR      MLR
      comp=Z,11µm,18.0s
AAK   Ala-Archa         42.82 307  P        P        03 25 14.3 +0.5
AAK   Ala-Archa         42.82 307  i P      P        03 25 14.3 +0.5
      SNR=17
SGDS  Sogindy           42.86 308d iP       P        03 25 14.4 +0.4
SGDS                               i S      S        03 31 39.9 +1.6
SGDS  Sogindy           42.86 308⇓ iP       P        03 25 14.5 +0.4
      baz=308
SGDS                               i S      S        03 31 40.0 +1.6
      baz=308
USP   Ospenovka         42.92 308  P        P        03 25 18.0 +3.5
      SNR=7.8
USP   Ospenovka         42.92 308  P        P        03 25 17.6 +3.1
PALK  Pallekele         43.11 253  LR       LR       03 45 15.5
      comp=Z,7µm,19.0s,baz=162,slow=39
PALK  Pallekele         43.11 253  P        P        03 25 16.1 -0.2
PALK                               IAmb     IAmb     03 25 19.8
      comp=Z,201nm,1.4s
PALK  Pallekele         43.11 253  IAMs_20  IAMs_20  03 45 04.5
      comp=Z,8µm,19.0s
PALK  Pallekele         43.11 253  P        P        03 25 16.1 -0.2
PALK                               pmax     pmax
      comp=Z,201nm,1.4s
PALK                               MLR      MLR
      comp=Z,8µm,19.0s
PALK  Pallekele         43.11 253  P        P        03 25 17.4 +1.1
PALK                               P        P        03 25 17.4 +1.1
SEY   Seymchan          43.26  20  LR       LR       03 43 20.3
      comp=Z,8µm,18.7s,baz=215,slow=36
SEY   Seymchan          43.26  20ceP        P        03 25 17.1 +0.3
SEY                                pmax     pmax
      comp=Z,122nm,1.8s
SEY                                MLR      MLR
      comp=Z,7µm,15.0s
AML   Almayashu         43.33 306  P        P        03 25 20.1 +1.9
      SNR=14
AML   Almayashu         43.33 306  P        P        03 25 19.7 +1.5
AML   Almayashu         43.33 306  P        P        03 25 19.4 +1.2
AML   Almayashu         43.33 306  i P      P        03 25 19.0 +0.7
      SNR=17
EKS2  Erkin-Say         43.35 307  P        P        03 25 18.6 +0.6
      SNR=15
EKS2  Erkin-Say         43.35 307  P        P        03 25 20.6 +2.6
SALM  Salem             43.42 261⇓ iP       P        03 25 20.4 +1.6
BTLS  Baital            43.57 310d iP       P        03 25 19.6  0.0
BTLS                               i S      S        03 31 48.6 +0.1
BTLS                               pmax     pmax
      comp=Z,147nm,2.2s
BTLS  Baital            43.57 310⇓ iP       P        03 25 19.6  0.0
      comp=Z,147nm,2.2s,baz=310
BTLS                               i S      S        03 31 48.6 +0.1
      baz=310
COEN  Coen              43.59 149  P        P        03 25 20.3 +0.2
COEN                               IAmb     IAmb     03 25 28.4
      comp=Z,234nm,1.3s
COEN  Coen              43.59 149  P        P        03 25 22.6 +2.5
      comp=Z,143nm,1.3s
KOD   Kodaikanal        44.65 259⇓ iP       P        03 25 30.2 +1.1
POO   Poona             45.03 272  eP       P        03 25 32.2 +0.6
KAD   Karad             45.08 270⇓ iP       P        03 25 32.1  0.0
DZA   Taraz             45.16 307deP        P        03 25 32.8 +0.3
DZA   Taraz             45.16 307⇓ eP       P        03 25 32.8 +0.3
      baz=307
BTK   Batken            45.28 303  P        P        03 25 33.3 -0.2
BTK   Batken            45.28 303  P        P        03 25 33.3 -0.2
BTK                                pmax     pmax
      comp=Z,265nm,2.0s
OTUK  Ortayu            45.40 314  P        P        03 25 33.9 -0.3
PCHI  Peechi            45.53 260⇓ eP       P        03 25 37.1 +1.4
PCHI                               eS       S        03 32 20.9 +3.2
MBWA  Marble Bar        45.61 183  P        P        03 25 34.4 -1.6
MBWA                               IAmb     IAmb     03 25 51.6
      comp=Z,60nm,1.1s
MBWA  Marble Bar        45.61 183  P        P        03 25 34.8 -1.3
      comp=Z,28nm,1.3s
GAR   Garm              45.61 301  P        P        03 25 36.0 -0.2
GAR                                IAmb     IAmb     03 25 51.6
      comp=Z,139nm,1.1s
WB0   Warramunga Arr    45.78 164  P        P        03 25 37.0 -0.5
KK31  Karatay Array     45.79 307  P        P        03 25 37.2 -0.2
KK31                               IAmb     IAmb     03 25 43.2
      comp=Z,142nm,1.9s
KK31  Karatay Array     45.79 307  P        P        03 25 37.2 -0.2
KK31                               pmax     pmax
      comp=Z,142nm,1.9s
KKAR  Karatay Array     45.79 307  P        P        03 25 37.4  0.0
KKAR  Karatay Array     45.79 307  P        P        03 25 37.2 -0.2
KKAR                               IAmb     IAmb     03 25 43.3
      comp=Z,142nm,1.9s
KKAR  Karatay Array     45.79 307  P        P        03 25 37.4  0.0
KKAR                               pmax     pmax
      comp=Z,142nm,1.9s
WRAB  Tennant Creek     45.93 164  P        P        03 25 38.7  0.0
WRAB  Tennant Creek     45.93 164deP        P        03 25 38.0 -0.6
WRAB                               pmax     pmax
      comp=Z,138nm,1.7s
WRAB  Tennant Creek     45.93 164  P        P        03 25 38.8 +0.2
      comp=Z,160nm,1.0s
WRA   Warramunga Arr    45.94 164  P        P        03 25 38.5 -0.2
      comp=Z,44nm,0.8s,baz=347,slow=8.5,SNR=75
WRA                                S        S        03 32 21.5 -1.8
      comp=Z,1.4nm,0.9s,baz=347,slow=14,SNR=5.6
      comp=Z,44nm,0.8s
WRA   Warramunga Arr    45.94 164  P        P        03 25 37.4 -1.3
WRA   Warramunga Arr    45.94 164  i P      P        03 25 37.9 -0.8
WRA                                pmax     pmax
      comp=Z,25nm,0.9s
WB2   Warramunga Arr    45.94 164  P        P        03 25 38.3 -0.4
GOA   Goa               45.98 268⇓ iP       P        03 25 40.2 +1.0
GOA                                i x      x        03 27 28.2
WR0   Warramunga Arr    46.01 164  P        P        03 25 38.5 -0.7
PSA00 Pilbara Seismi    46.02 183  P        P        03 25 37.6 -1.7
PSA00                              IAmb     IAmb     03 25 47.8
      comp=Z,109nm,1.5s
PSA00 Pilbara Seismi    46.02 183  P        P        03 25 37.1 -2.2
PSA00                              IAmb     IAmb     03 25 56.3
      comp=Z,284nm,1.6s
PSA00 Pilbara Seismi    46.02 183  P        P        03 25 37.2 -2.1
      comp=Z,107nm,1.8s
IUG   Iuzhnay           46.04 306  eP       P        03 25 39.9 +0.4
IUG                                eS       S        03 32 26.0 +1.3
IUG   Iuzhnay           46.04 306  eP       P        03 25 40.0 +0.4
      baz=306
IUG                                eS       S        03 32 26.1 +1.3
      baz=306
BRLS  Borolday          46.27 307  eP       P        03 25 43.1 +1.9
BRLS  Borolday          46.27 307  eP       P        03 25 43.2 +2.0
      baz=306
CHGR  Chuyangaron       46.51 301  P        P        03 25 42.8 -0.4
CHGR                               IAmb     IAmb     03 26 21.3
      comp=Z,60nm,1.0s
CHGR  Chuyangaron       46.51 301  P        P        03 25 43.4 +0.2
KBL   Kabul             46.65 295  P        P        03 25 43.9 -0.6
KBL   Kabul             46.65 295  P        P        03 25 43.9 -0.6
KBL                                pmax     pmax
      comp=Z,380nm,1.7s
KBL   Kabul             46.65 295  P        P        03 25 45.2 +0.7
      SNR=96
KBL                                P        P        03 25 45.2 +0.7
      SNR=96
TIXI  Tiksi             47.17   3  LR       LR       03 47 21.5
      comp=Z,18µm,18.1s,baz=180,slow=38
TIXI  Tiksi             47.17   3  P        P        03 25 46.1 -1.6
TIXI  Tiksi             47.17   3d iP       P        03 25 46.0 -1.7
TIXI                               pmax     pmax
      comp=Z,42nm,0.9s
TIXI                               MLR      MLR
      comp=Z,15µm,15.0s
MTSU  Mount Surprise    47.78 151  P        P        03 25 54.7 +1.6
      comp=Z,82nm,0.9s
BRVK  Borovoye          47.85 320  P        P        03 25 53.2 -0.2
BRVK                               IAmb     IAmb     03 26 02.8
      comp=Z,70nm,1.2s
BRVK  Borovoye          47.85 320  IAMs_20  IAMs_20  03 45 47.0
      comp=Z,7µm,20.0s
BRVK  Borovoye          47.85 320d iP       P        03 25 52.4 -1.0
BRVK                               pmax     pmax
      comp=Z,52nm,1.1s
BRVK                               MLR      MLR
      comp=Z,5µm,18.0s
BRVK  Borovoye          47.85 320  P        P        03 25 53.2 -0.2
BRVK                               P        P        03 25 53.2 -0.2
QIS   Mount Isa         48.10 158  P        P        03 25 55.7 +0.1
      comp=Z,204nm,1.1s
NRIK  Noril'sk          49.13 345  P        P        03 26 03.4 +0.5
      comp=Z,42nm,1.2s,baz=142,slow=8.1,SNR=14
NRIK                               LR       LR       03 47 57.8
      comp=Z,13µm,21.0s,baz=142,slow=38
      comp=Z,42nm,1.2s
NRIK  Noril'sk          49.13 345  P        P        03 26 01.4 -1.6
NRIK  Noril'sk          49.13 345  P        P        03 26 01.4 -1.6
NRIK                               pmax     pmax
      comp=Z,272nm,1.7s
AS31  Alice Springs     49.41 166  P        P        03 26 05.7  0.0
ASAR  Alice Springs     49.41 166  P        P        03 26 06.0 +0.4
      comp=Z,15nm,0.8s,baz=349,slow=7.1,SNR=64
ASAR                               PcP      PcP      03 27 28.1 +0.1
      comp=Z,5.3nm,0.5s,baz=353,slow=4.1,SNR=4.5
ASAR                               LR       LR       03 47 02.3
      comp=Z,2µm,20.3s,baz=2.5,slow=36
ASAR                               P4KPbc            04 03 39.7
      comp=Z,1.4nm,0.7s,baz=345,slow=4.3,SNR=4.4
      comp=Z,15nm,0.8s
ASAR  Alice Springs     49.41 166  P        P        03 26 05.0 -0.7
ASAR  Alice Springs     49.41 166  P        P        03 26 05.0 -0.7
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WRKA	Warakurna	49.79	173	P	P	03 26 07.5	-1.0
	comp=Z,50nm,1.3s						
HNR	Honiara	50.17	128	LR	LR	03 42 58.9	
	comp=Z,2µm,21.9s,baz=292,slow=31						
CTA	Charters Tower	50.36	150	LR	LR	03 47 14.9	
	comp=Z,3µm,20.0s,baz=335,slow=36						
CTA	Charters Tower	50.36	150	P	P	03 26 15.4	+2.5
	comp=Z,93nm,0.9s						
CTAO	Charters Tower	50.36	150	P	P	03 26 12.5	-0.4
CTAO				IAmb	IAmb	03 26 29.9	
	comp=Z,88nm,1.1s						
CTAO	Charters Tower	50.36	150	P	P	03 26 12.5	-0.4
CTAO				pmax	pmax		
	comp=Z,88nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,4µm,19.0s						
CTAO	Charters Tower	50.36	150	P	P	03 26 15.4	+2.5
	comp=Z,79nm,1.0s						
BILL	Bilibino	50.97	20	P	P	03 26 15.7	-1.2
BILL				IAMs_20	IAMs_20	03 50 39.1	
	comp=Z,9µm,20.0s						
BILL	Bilibino	50.97	20	*ce*P	P	03 26 15.1	-1.8
BILL				*i* *PP	pP	03 26 17.9	-2.9
BILL				*i* *SP	sP	03 26 20.9	-1.4
BILL				*e*		03 27 31.1	
BILL				*e*PPP	PPP	03 29 13.4	
BILL				*i* S	S	03 33 37.1	+3.8
BILL				pmax	pmax		
	comp=Z,86nm,2.0s						
BILL				MLR	MLR		
	comp=Z,6µm,15.0s						
MEEK	Meekatharra	51.12	184	P	P	03 26 16.6	-1.9
	comp=Z,39nm,1.5s						
HRA	Herat	52.26	295	P	P	03 26 27.4	0.0
HRA				IAmb	IAmb	03 26 34.3	
	comp=Z,214nm,1.9s						
AB31	Akbulak array	53.65	314	*i* P	P	03 26 36.0	-1.1
ABKAR	Akbulak array	53.65	314	P	P	03 26 36.9	-0.2
MORW	Morawa	53.74	186	P	P	03 26 37.0	-0.9
MORW	Morawa	53.74	186	P	P	03 26 36.4	-1.5
	comp=Z,35nm,0.9s						
OOD	Oodnadatta	53.80	165	P	P	03 26 38.2	-0.1
	comp=Z,72nm,1.0s						
SVE	Sverdlovsk	54.10	323	*ce*P	P	03 26 40.0	-0.3
SVE				*e*S	S	03 34 15.2	-1.3
SVE				pmax	pmax		
	comp=Z,159nm,2.0s						
SVE				MLR	MLR		
	comp=Z,11µm,14.0s						
AKTO	Aktyubinsk	54.96	315	P	P	03 26 46.9	+0.2
	comp=Z,11nm,1.0s,baz=89,slow=8.2,SNR=18						
AKTO				LR	LR	03 50 11.3	
	comp=Z,7µm,19.1s,baz=102,slow=36						
	comp=Z,11nm,1.0s						
AKTO	Aktyubinsk	54.96	315	P	P	03 26 45.5	-1.2
INKA	Innaminka	55.15	160	P	P	03 26 48.9	+0.8
	comp=Z,115nm,1.0s						
ARU	Arti	55.18	323	LR	LR	03 51 23.5	
	comp=Z,10µm,20.7s,baz=93,slow=37						
ARU	Arti	55.18	323	P	P	03 26 47.2	-1.0
ARU				IAmb	IAmb	03 27 15.9	
	comp=Z,110nm,1.4s						
ARU	Arti	55.18	323	*d i*P	P	03 26 47.1	-1.0
ARU						03 27 44.4	
ARU						03 28 51.9	
ARU				PPP	PPP	03 30 00.6	
ARU				S	S	03 34 31.5	+0.5
ARU						03 36 30.4	
ARU				SS	SS	03 38 19.8	+5.1
ARU				SSS	SSS	03 40 21.7	
ARU				pmax	pmax		
	comp=Z,82nm,1.7s						
ARU				MLR	MLR		
	comp=Z,8µm,20.0s						
RK1H	Rockhampton Ha	55.18	148	P	P	03 26 50.6	+2.1
	comp=Z,42nm,1.0s						
GEYT	Alibeck	55.21	300	P	P	03 26 49.5	+0.8
	comp=Z,23nm,0.8s,baz=100,slow=6.5,SNR=19						
GEYT				LR	LR	03 54 21.6	
	comp=Z,10µm,18.2s,baz=116,slow=40						
	comp=Z,23nm,0.8s						
GEYT	Alibeck	55.21	300	P	P	03 26 48.6	-0.2
GYA0	ALIBECK ARRAY	55.21	300	P	P	03 26 49.3	+0.6
GYA0B	ALIBECK ARRAY	55.21	300	P	P	03 26 48.7	-0.1
GYA0B				IAmb	IAmb	03 26 58.2	
	comp=Z,72nm,0.8s						
QLP	Quilpie	55.29	156	P	P	03 26 49.0	-0.2
	comp=Z,147nm,1.6s						
FORT	Forrest	55.44	174	P	P	03 26 49.5	-0.7
FORT	Forrest	55.44	174	P	P	03 26 49.9	-0.3
	comp=Z,137nm,1.2s						
MULG	Mulgathing	55.85	167	P	P	03 26 53.0	-0.2
	comp=Z,47nm,1.4s						
KLBR	Kellerberrin	56.10	184	P	P	03 26 54.8	-0.1
	comp=Z,71nm,0.8s						
MUN	Mundaring	56.61	186	P	P	03 26 58.0	-0.5
	comp=Z,32nm,1.1s						
LCRK	Leigh Creek	56.96	163	P	P	03 27 00.9	-0.2
	comp=Z,144nm,1.3s						
RMQ	Roma	57.04	151	P	P	03 27 02.4	+0.6
	comp=Z,85nm,1.0s						
JLN	Jalan Bani Buh	57.07	281	P	P	03 27 03.2	+1.0
	SNR=19						
EIDS	Eidsvold	57.14	148	P	P	03 27 02.7	+0.2
EIDS				IAmb	IAmb	03 27 17.3	
	comp=Z,143nm,1.8s						
EIDS	Eidsvold	57.14	148	P	P	03 27 05.0	+2.5
	comp=Z,42nm,2.4s						
WBK	Wadi Bani Khal	57.34	282	P	P	03 27 05.3	+1.2
	SNR=20						
WBK				P	P	03 27 05.3	+1.2
	SNR=20						
WSAR	Wadi Sarin	57.48	283	LR	LR	03 54 03.7	
	comp=Z,5µm,20.0s,baz=100,slow=38						
WSAR	Wadi Sarin	57.48	283	P	P	03 27 06.5	+1.4
	SNR=15						
GAMB	Gambell	57.69	29	IAMs_20	IAMs_20	03 52 15.3	
	comp=Z,4µm,18.0s						
GAMB	Gambell	57.69	29	P	P	03 27 03.8	-2.0
	baz=260						
BIDO	Bidbid	57.85	283	P	P	03 27 08.4	+0.7
	SNR=30						
BIDO				P	P	03 27 08.4	+0.7
	SNR=30						
SMDO	Samad	58.04	283	P	P	03 27 09.8	+0.7
	SNR=31						
SMDO				P	P	03 27 09.8	+0.7
	SNR=31						
JMDO	Jabal Madar	58.18	282	P	P	03 27 10.3	+0.3
	SNR=15						
JMDO				P	P	03 27 10.3	+0.3
	SNR=15						
HOQ	Hoqain	58.55	284	P	P	03 27 13.2	+0.6
	SNR=41						
MHTO	MHTO	58.68	280	P	P	03 27 13.3	-0.2
	SNR=19						
MHTO				P	P	03 27 13.3	-0.2
	SNR=19						
BBOO	Buckleboo	58.71	166	P	P	03 27 13.2	-0.1
BBOO				IAmb	IAmb	03 27 29.4	
	comp=Z,93nm,1.2s						
BBOO	Buckleboo	58.71	166	P	P	03 27 13.3	-0.1
	comp=Z,61nm,1.1s						
BANOM	Banah	58.85	286	P	P	03 27 15.8	+1.1
	SNR=6.1						
BANOM	Banah	58.85	286	*i* P	P	03 27 15.7	+1.1
	SNR=10						
BSY	Bisya	58.88	283	P	P	03 27 15.7	+0.7
	SNR=23						
BSY				P	P	03 27 15.7	+0.7
	SNR=23						
SHME	Shamm	58.95	287	P	P	03 27 16.3	+0.9
	SNR=6.4						
SHME	Shamm	58.95	287	*i* P	P	03 27 16.3	+0.9
	SNR=12						
SOHO	SOHO	59.09	284	P	P	03 27 16.6	+0.2
SOHO	SOHO	59.09	284	*i* P	P	03 27 16.5	+0.1
	SNR=40						
MASF	Masafi	59.11	286	P	P	03 27 17.0	+0.5
MASF				P	P	03 27 17.0	+0.5
MSFE	Esma-Masafi	59.11	286	*i* P	P	03 27 17.2	+0.7
	SNR=11						
UOSS	Minazif	59.17	285	IAMs_20	IAMs_20	03 53 03.3	
	comp=Z,5µm,22.0s						
UOSS	Minazif	59.17	285	P	P	03 27 17.0	+0.1
UOSS				P	P	03 27 17.0	+0.1
UOSS	Minazif	59.17	285	*i* P	P	03 27 16.8	-0.2
	SNR=9.8						
STKA	Stephens Creek	59.26	161	P	P	03 27 17.3	0.0
	comp=Z,26nm,0.7s,baz=342,slow=6.5,SNR=24						
STKA				LR	LR	03 54 06.6	
	comp=Z,2µm,20.2s,baz=340,slow=37						
	comp=Z,26nm,0.7s						
STKA	Stephens Creek	59.26	161	P	P	03 27 16.1	-1.1
STKA	Stephens Creek	59.26	161	P	P	03 27 16.1	-1.1
STKA				pmax	pmax		
	comp=Z,30nm,1.6s						
STKA	Stephens Creek	59.26	161	P	P	03 27 17.2	0.0
	comp=Z,12nm,0.9s						
HATD	Hatta, Dubai	59.27	285	P	P	03 27 18.6	+1.0
HATD	Hatta, Dubai	59.27	285	*i* P	P	03 27 18.1	+0.6
	SNR=26						
WHYH	Whyalla	59.27	165	P	P	03 27 19.9	+2.7
	comp=Z,37nm,0.8s						
ARQ	Araqi	59.32	283	P	P	03 27 18.5	+0.6
	SNR=31						
ARQ				P	P	03 27 18.5	+0.6
	SNR=31						
ASHO	Ashiyiah	59.37	285	P	P	03 27 19.1	+0.8
ASHO				P	P	03 27 19.1	+0.8
ASHO	Ashiyiah	59.37	285	*i* P	P	03 27 19.0	+0.7
	SNR=15						
DQM	DQM	59.38	279	P	P	03 27 18.3	-0.1
	SNR=9.8						
DQM				P	P	03 27 18.3	-0.1
	SNR=9.8						
SANVU	Saraoutou	59.44	127	P	P	03 27 18.8	+0.1
SANVU	Saraoutou	59.44	127	P	P	03 27 19.2	+0.5
	comp=Z,121nm,0.8s						
UMQ	Umm Al-Quwin	59.50	286	*i* P	P	03 27 20.8	+1.6
	SNR=5.6						
NAPP	Napperby	59.55	164	P	P	03 27 20.4	+1.2
	comp=Z,90nm,0.8s						
TNA	Tin City	59.56	27	P	P	03 27 18.1	-0.8
	baz=263						
TNA				S	S	03 35 27.6	-0.7
	baz=263						
NAZ	Nazwa, Dubai	59.64	286	P	P	03 27 20.9	+0.8
	SNR=13						
NAZ				P	P	03 27 20.9	+0.8
	SNR=13						
NAZ	Nazwa, Dubai	59.64	286	*i* P	P	03 27 20.5	+0.3
	SNR=10.0						
FAQ	Al Faqa, Dubai	59.76	285	P	P	03 27 21.4	+0.4
	SNR=14						
FAQ				P	P	03 27 21.4	+0.4
	SNR=14						
FAQ	Al Faqa, Dubai	59.76	285	*i* P	P	03 27 21.2	+0.2
	SNR=19						
ALNE	Al Ain	59.80	284	P	P	03 27 22.0	+0.7
	SNR=37						
ALNE				P	P	03 27 22.0	+0.7
	SNR=37						
ALNE	Al Ain	59.80	284	*i* P	P	03 27 21.9	+0.6
	SNR=37						
HTT	Hallett	59.98	164	P	P	03 27 22.2	0.0
	comp=Z,60nm,1.6s						
ASUD	Al Ashush, Dub	60.02	285	P	P	03 27 23.8	+1.0
	SNR=15						
ASUD				P	P	03 27 23.8	+1.0
	SNR=15						
ASUD	Al Ashush, Dub	60.02	285	*i* P	P	03 27 23.3	+0.5
	SNR=16						
KIRV	Kirov	60.26	325	P	P	03 27 24.2	+0.4
	comp=Z,65nm,0.9s,baz=93,slow=6.9,SNR=16						
KIRV				LR	LR	03 55 37.4	
	comp=Z,14µm,20.0s,baz=96,slow=38						
	comp=Z,65nm,0.9s						
KIRV	Kirov	60.26	325	*de*P	P	03 27 22.5	-1.3
CMSA	Cobar Meteorol	60.30	157	P	P	03 27 25.1	+0.7
	comp=Z,99nm,1.6s						
AJN	Ajban	60.34	285	P	P	03 27 25.2	+0.3
	SNR=17						
AJN				P	P	03 27 25.2	+0.3
	SNR=17						
AJN	Ajban	60.34	285	*i* P	P	03 27 25.1	+0.1
	SNR=28						
ANM	Nome	60.53	28	IAMs_20	IAMs_20	03 58 13.5	
	comp=Z,4µm,19.0s						
ANM	Nome	60.53	28	P	P	03 27 24.1	-1.5
	baz=266						
ANM				S	S	03 35 41.2	+0.4
	baz=266						
UMZA	Um Al Zommool	60.69	283	P	P	03 27 27.0	-0.4
UMZA				P	P	03 27 27.0	-0.4
TWOA	Tennyson Woods	61.42	165	P	P	03 27 34.5	+2.6
	comp=Z,61nm,0.9s						
MZWR	Madinat Zayed	61.53	285	P	P	03 27 32.5	-0.6
SHAO	Shalim	61.69	278	P	P	03 27 34.1	-0.1
SHAO				P	P	03 27 34.1	-0.1
ARMA	Armidale	61.70	151	P	P	03 27 36.4	+2.4
	comp=Z,44nm,2.8s						
RDOG	Red Dog Mine	61.78	24	P	P	03 27 31.6	-2.5
	baz=266						
MZR	Muzera	62.10	284	P	P	03 27 37.2	+0.3
	SNR=41						
MZR	Muzera	62.10	284	*i* P	P	03 27 37.0	0.0
	SNR=8.7						
JRN	Qarnain Island	62.11	286	P	P	03 27 36.9	-0.1
	SNR=43						
PRGR	Permogore	62.16	328	*e*P	P	03 27 35.5	-1.1
DMTO	DMTO	62.40	278	P	P	03 27 38.5	-0.4
DMTO				P	P	03 27 38.5	-0.4
MAK	Makhachkala	62.60	307	*c i*P	P	03 27 40.4	+0.5
MAK				*e*		03 29 53.7	
MAK				*e*S	S	03 36 08.5	+0.8
MAK				*e*SS	SS	03 40 06.9	-4.8
MAK				*e*SSS	SSS	03 42 58.3	
MAK				pmax	pmax		
	comp=Z,326nm,2.6s						
MAK				MLR	MLR		
	comp=Z,5µm,14.0s						
DOK	Doka	62.84	279	P	P	03 27 41.4	-0.5
	SNR=11						
DOK				P	P	03 27 41.4	-0.5
	SNR=11						
LIFNC	LIFOU	63.05	132	P	P	03 27 44.6	+1.5
	comp=Z,90nm,0.9s						
RBK	Rabkut	63.14	278	P	P	03 27 43.8	-0.1
	SNR=22						
RBK				P	P	03 27 43.8	-0.1
	SNR=22						
NOUC	Port Laguerre	63.34	134	P	P	03 27 44.4	-0.6
	comp=Z,40nm,2.0s						
SLWR	Sila	63.37	286	P	P	03 27 45.6	+0.3
SLWR				P	P	03 27 45.6	+0.3
WHFO	Wadi Hawf	63.39	278	P	P	03 27 44.9	-0.8
	SNR=14						
DZM	Mont Dzumac	63.41	133	LR	LR	03 50 57.1	
	comp=Z,3µm,21.4s,baz=312,slow=32						
DZM	Mont Dzumac	63.41	133	*e*S	S	03 36 47.5	+29
	comp=Z,5µm,27.2s						
DZM	Mont Dzumac	63.41	133	*e*LR	LR	03 47 19.5	
	comp=Z,19µm,25.7s						
DZM	Mont Dzumac	63.41	133	P	P	03 27 45.9	+0.4
DZM				IAmb	IAmb	03 27 56.9	
	comp=Z,69nm,1.2s						
DZM	Mont Dzumac	63.41	133	P	P	03 27 46.0	+0.4
	comp=Z,55nm,2.0s						
SHMA	Al-Shehemyia	63.50	288	P	P	03 27 46.2	0.0
TRNA	Turayna	63.60	287	P	P	03 27 46.8	0.0
YATNC	Mamie plateau,	63.70	133	P	P	03 27 47.9	+0.5
	comp=Z,92nm,1.7s						
GROC	Groznyy	63.80	308	*e*P	P	03 27 47.8	-0.1
GROC				*e*		03 28 23.1	
GROC				*e*S	S	03 36 24.2	+1.5
GROC				pmax	pmax		
	comp=Z,57nm,0.9s						
SAKB	Bahrain	63.84	288	P	P	03 27 48.2	-0.2
DDFL	Dedoflistskaro	63.88	306	P	P	03 27 53.0	+4.5
ARPS	Mount Arapiles	63.91	162	P	P	03 27 47.9	-0.6
	comp=Z,119nm,1.0s						
OUENC	Ouen Island, N	63.91	133	P	P	03 27 49.2	+0.5
OUENC				IAmb	IAmb	03 28 00.4	
	comp=Z,66nm,1.0s						
OUENC	Ouen Island, N	63.91	133	P	P	03 27 49.5	+0.7
	comp=Z,74nm,1.9s						
ABTO	Aybut	64.00	278	P	P	03 27 49.4	-0.3
	SNR=21						
A21K	Barrow	64.09	21	P	P	03 27 47.6	-1.7
A21K				IAMs_20	IAMs_20	03 56 52.9	
	comp=Z,6µm,19.0s						
A21K	Barrow	64.09	21	P	P	03 27 47.8	-1.4
	baz=270						
A21K				S	S	03 36 24.7	-0.6
	baz=270						
GCSA	Galena City Sc	64.19	28	P	P	03 27 48.5	-1.5
	baz=273						
GCSA				S	S	03 36 29.4	+2.6
	baz=273						
PINNC	Pines Island,	64.45	133	P	P	03 27 55.3	+3.0
	comp=Z,67nm,1.9s						
TTA	Tatalina	64.70	30	P	P	03 27 53.2	-0.3
TTA	Tatalina	64.70	30	P	P	03 27 53.2	-0.3
TTA				pmax	pmax		
	comp=Z,29nm,1.2s						
TTA	Tatalina	64.70	30	P	P	03 27 51.9	-1.7
	baz=275						
TTA				S	S	03 36 33.1	-0.4
	baz=275						
GUDG	Gudauri	64.89	307	P	P	03 27 56.1	+0.8
CAN	Canberra	64.91	156	P	P	03 27 55.1	0.0
CAN				IAmb	IAmb	03 28 07.1	
	comp=Z,48nm,1.1s						
CAN	Canberra	64.91	156	P	P	03 27 55.1	0.0
CAN				pmax	pmax		
	comp=Z,48nm,1.1s						
CAN	Canberra	64.91	156	P	P	03 27 54.9	-0.2
	comp=Z,52nm,1.1s						
N18K	Kilae Creek	64.97	33	IAMs_20	IAMs_20	03 58 18.1	
	comp=Z,4µm,18.0s						
N18K	Kilae Creek	64.97	33	P	P	03 27 54.0	-1.3
	baz=276						
N18K				S	S	03 36 40.3	+3.6
	baz=276						
CNB	Canberra Magne	65.04	156	P	P	03 27 58.0	+2.0
	comp=Z,82nm,1.3s						
GNI	Garni	65.16	305	P	P	03 27 57.7	+0.6
	comp=Z,13nm,0.8s,baz=170,slow=3.5,SNR=16						
GNI				LR	LR	04 00 08.8	
	comp=Z,5µm,20.2s,baz=102,slow=40						
	comp=Z,13nm,0.8s						
GNI	Garni	65.16	305	P	P	03 27 56.9	-0.1
GNI				IAmb	IAmb	03 28 27.7	
	comp=Z,72nm,1.1s						
GNI	Garni	65.16	305	IAMs_20	IAMs_20	03 59 47.1	
	comp=Z,5µm,21.0s						
GNI	Garni	65.16	305	*d i*P	P	03 27 57.7	+0.6
GNI				pmax	pmax		
	comp=Z,115nm,2.5s						
GNI				MLR	MLR		
	comp=Z,5µm,20.0s						
GNI	Garni	65.16	305	P	P	03 27 57.9	+0.9
GNI				P	P	03 27 57.9	+0.9
GNI	Garni	65.16	305	P	P	03 27 57.7	+0.6
KZRT	Kazreti	65.16	306	P	P	03 27 57.0	+0.1
KLMR	Klimovskoe	65.16	328	*e*P	P	03 27 53.5	-2.9
KLMR				*e*S	S	03 36 36.2	-2.6
KLMR				*e*SS	SS	03 40 48.1	-2.7
KLMR				pmax	pmax		
	comp=Z,127nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,10µm,18.0s						
KLMR	Klimovskoe	65.16	328	*e*P	P	03 27 53.6	-2.9
KLMR				AMP		03 28 02.8	
	comp=Z,127nm,1.4s						
KLMR				*e*S	S	03 36 36.3	-2.6
KLMR				*e*S	S	03 36 36.3	-2.6
KLMR				*e*SS	SS	03 40 48.1	-2.7
KLMR				*e*SS	SS	03 40 48.1	-2.7
KLMR				LQ	LQ	03 51 47.9	
KLMR				LQ	LQ	03 51 47.9	
KLMR				LR	LR	03 54 17.6	
KLMR				AMP		03 58 30.7	
	comp=Z,10µm,17.9s						
SOCY	Socotra	65.18	272	P	P	03 27 56.0	-1.5
SOCY				IAMs_20	IAMs_20	03 54 11.7	
	comp=Z,6µm,22.0s						
SOCY	Socotra	65.18	272	P	P	03 27 56.5	-1.0
	SNR=9.7						
VRH	Novokhopyorsk	65.22	317	*e*P	P	03 27 55.9	-1.1
VRH				pmax	pmax		
	comp=Z,110nm,1.3s						
VRH				MLR	MLR		
	comp=Z,3µm,12.0s						
BRAT	Ballarat	65.23	161	P	P	03 27 58.6	+1.5
	comp=Z,28nm,1.0s						
ZEI	Tsey	65.24	308	*e*P	P	03 27 56.1	-1.5
ZEI				pmax	pmax		
	comp=Z,34nm,0.9s						
L19K	White Mountain	65.31	31	P	P	03 27 56.8	-0.7
L19K				IAmb	IAmb	03 28 05.1	
	comp=Z,34nm,1.1s						
L19K	White Mountain	65.31	31	P	P	03 27 55.8	-1.6
	baz=276						
L19K				S	S	03 36 41.6	+0.7
	baz=276						
IMAR	Indian Mountai	65.40	27	P	P	03 27 56.6	-1.4
O18K	Koktuh Hills	65.41	33	P	P	03 27 56.5	-1.6
	baz=277						
O18K				S	S	03 36 43.8	+1.7
	baz=277						
GOF	Gofitskoye	65.41	310	⇑*e*P	P	03 27 58.3	-0.1
GOF				pmax	pmax		
	comp=Z,91nm,1.0s						
J20K	Nowinta River	65.42	29	P	P	03 27 57.8	-0.3
J20K				IAmb	IAmb	03 28 14.2	
	comp=Z,129nm,1.8s						
J20K				IAMs_20	IAMs_20	04 00 20.5	
	comp=Z,5µm,18.0s						
J20K	Nowinta River	65.42	29	P	P	03 27 57.6	-0.4
	baz=276,SNR=23						
J20K				S	S	03 36 43.5	+1.5
	baz=276						
P18K	Big Mountain,	65.45	34	P	P	03 27 57.1	-1.3
	baz=277						
K20K	Telida	65.54	30	P	P	03 27 58.1	-0.8
K20K				IAmb	IAmb	03 28 09.2	
	comp=Z,94nm,1.8s						
K20K				IAMs_20	IAMs_20	03 54 59.9	
	comp=Z,4µm,22.0s						
K20K	Telida	65.54	30	P	P	03 27 58.3	-0.6
	baz=276						
K20K				S	S	03 36 43.3	-0.2
	baz=276						
M19K	Big River Lodg	65.56	31	P	P	03 27 59.5	+0.4
M19K				IAmb	IAmb	03 28 09.3	
	comp=Z,35nm,1.2s						
M19K	Big River Lodg	65.56	31	P	P	03 27 57.4	-1.6
	baz=277						
N19K	Bonanza Creek	65.65	32	IAMs_20	IAMs_20	03 57 19.8	
	comp=Z,4µm,19.0s						
N19K	Bonanza Creek	65.65	32	P	P	03 27 58.7	-1.1
	baz=277						
N19K				S	S	03 36 46.8	+1.7
	baz=277						
L20K	Farewell, AK	65.73	30	P	P	03 27 59.2	-1.0
	baz=277						
L20K				S	S	03 36 48.2	+2.3
	baz=277						
CHIR	Chirikof Islan	65.73	38	IAMs_20	IAMs_20	03 56 42.4	
	comp=Z,4µm,20.0s						
TOO	Toolangi	65.73	160	P	P	03 28 00.9	+0.5
TOO	Toolangi	65.73	160	P	P	03 28 00.9	+0.5
TOO				pmax	pmax		
	comp=Z,114nm,1.3s						
TOO	Toolangi	65.73	160	P	P	03 28 01.9	+1.5
	comp=Z,84nm,1.3s						
BGD	Bogdanovka	65.77	306	P	P	03 28 02.6	+1.5
KBZ	Khabaz	65.77	309	P	P	03 28 01.4	+0.7
	comp=Z,29nm,0.9s,baz=99,slow=5.1,SNR=28						
KBZ				LR	LR	03 58 33.2	
	comp=Z,6µm,18.2s,baz=79,slow=38						
	comp=Z,29nm,0.9s						
KBZ	Khabaz	65.77	309	*d i*P	P	03 28 00.7	0.0
KBZ				pmax	pmax		
	comp=Z,200nm,2.5s						
KBZ				MLR	MLR		
	comp=Z,5µm,16.0s						
O19K	Port Alsworth	65.81	33	P	P	03 27 59.0	-1.6
	baz=278						
AKH	Akhalkalaki	65.82	306	⇑P	P	03 28 02.7	+1.4
H21K	Melozitna Rive	65.83	27	P	P	03 28 00.3	-0.5
H21K				IAmb	IAmb	03 28 11.4	
	comp=Z,33nm,1.1s						
H21K	Melozitna Rive	65.83	27	P	P	03 28 00.6	-0.1
	baz=276,SNR=20						
H21K				S	S	03 36 48.1	+1.1
	baz=276						

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KVAR  Kislovodsk Arr    65.87 309  LR       LR       03 58 20.3
      comp=Z,6µm,18.8s,baz=226,slow=38
KIV   Kislovodsk        65.88 309 ⇑P        P        03 28 02.0 +0.5
KIV   Kislovodsk        65.88 309  P        P        03 28 01.5  0.0
KIV                                IAMs_20  IAMs_20  04 00 05.0
      comp=Z,6µm,19.0s
KIV   Kislovodsk        65.88 309 eP        P        03 28 01.6  0.0
KIV                               e                  03 30 26.8
KIV                               eS        S        03 36 49.2 +0.7
KIV                               eSS       SS       03 41 04.8 +1.8
KIV                                pmax     pmax
      comp=Z,90nm,1.1s
KIV                                pmax     pmax
      comp=Z,403nm,4.1s
KIV                                MLR      MLR
      comp=Z,5µm,17.0s
KIV   Kislovodsk        65.88 309  P        P        03 28 01.8 +0.3
KIV   Kislovodsk        65.88 309 i P       P        03 28 01.5  0.0
      SNR=24
I21K  Tanana            66.22  27  P        P        03 28 03.1 -0.2
I21K                               IAmb     IAmb     03 28 18.7
      comp=Z,38nm,1.1s
I21K                               IAMs_20  IAMs_20  03 56 13.8
      comp=Z,3µm,19.0s
I21K  Tanana            66.22  27  P        P        03 28 02.9 -0.3
      baz=277,SNR=12
CHUM  Lake Minchumin    66.25  29  P        P        03 28 02.5 -0.9
      baz=278
CHUM                               S        S        03 36 55.8 +3.6
      baz=278
KARS  Kars              66.29 305  P        P        03 28 04.2 -0.1
KARS  Kars              66.29 305  P        P        03 28 04.3 -0.1
KARS                               pmax     pmax
      comp=Z,1µm,1.8s
Q19K  Cape Douglas,     66.33  34  P        P        03 28 01.4 -2.7
      baz=279
CAST  Castle Rocks      66.42  29  IAMs_20  IAMs_20  03 59 34.0
      comp=Z,4µm,18.0s
CAST  Castle Rocks      66.42  29  S        S        03 36 56.3 +2.0
      baz=278
LVZ   Lovozero          66.42 336  P        P        03 28 04.9 +0.4
LVZ                                IAmb     IAmb     03 28 12.5
      comp=Z,102nm,1.4s
LVZ                                IAMs_20  IAMs_20  03 58 52.7
      comp=Z,6µm,19.0s
LVZ   Lovozero          66.42 336⇓eP        P        03 28 05.6 +1.1
LVZ                                pmax     pmax
      comp=Z,76nm,1.3s
LVZ                                MLR      MLR
      comp=Z,5µm,18.0s
P19K  Oil Pt            66.43  33  P        P        03 28 02.7 -2.0
      baz=279
PPLA  Purkeypile        66.44  30  P        P        03 28 04.5 -0.4
PPLA  Purkeypile        66.44  30  P        P        03 28 04.1 -0.8
      baz=278
RSO   Redoubt South     66.54  33  P        P        03 28 03.1 -2.5
O20K  Slope Mountain    66.66  33  P        P        03 28 04.2 -2.1
      baz=279
COLD  Coldfoot          66.66  25  P        P        03 28 05.2 -0.8
COLD                               IAmb     IAmb     03 28 15.9
      comp=Z,80nm,1.7s
COLD  Coldfoot          66.66  25  P        P        03 28 05.1 -0.9
      baz=278
COLD                               S        S        03 36 58.4 +1.2
      baz=278
SPCR  Spurr Chakacha    66.69  32  P        P        03 28 04.7 -1.7
      baz=279
LPSR  Galich'ya Gora    66.69 319 eP        P        03 28 04.9 -1.5
LPSR                               pmax     pmax
      comp=Z,100nm,1.4s
LPSR                               MLR      MLR
      comp=Z,4µm,16.0s
VORR  Voronezh          66.69 318 eP        P        03 28 05.8 -0.7
VORR                               pmax     pmax
      comp=Z,50nm,0.4s
TOLK  Toolik Lake Re    66.70  23  P        P        03 28 05.5 -0.8
TOLK                               IAmb     IAmb     03 28 21.6
      comp=Z,61nm,1.4s
TOLK  Toolik Lake Re    66.70  23  P        P        03 28 05.5 -0.8
      baz=278,SNR=21
TOLK                               S        S        03 37 02.9 +5.3
      baz=278
SPU   Mount Spurr       66.77  32  P        P        03 28 07.4 +0.5
OHAK  Old Harbor        66.79  36  S        S        03 36 49.4 -9.4
      baz=280
BPAW  Bear Paw Mtn.     66.80  28  P        P        03 28 06.5 -0.6
BPAW                               IAmb     IAmb     03 28 39.2
      comp=Z,81nm,1.6s
BPAW                               IAMs_20  IAMs_20  03 57 09.1
      comp=Z,4µm,19.0s
BPAW  Bear Paw Mtn.     66.80  28  P        P        03 28 06.0 -1.0
      baz=279
VSR   Storozhevoye      66.80 317 eP        P        03 28 05.9 -1.3
VSR                                pmax     pmax
      comp=Z,50nm,1.1s
GEVA  Gevas             66.84 303  P        P        03 28 07.3 -0.6
GEVA                               IAmb     IAmb     03 28 11.4
      comp=Z,55nm,0.9s
MOS   Moscow            66.88 322 eP        P        03 28 03.7 -3.9
MOS                               e                  03 30 30.3
MOS                               eS        S        03 36 53.7 -6.4
MOS                               eSS       SS       03 41 18.7 +0.9
MOS                                pmax     pmax
      comp=Z,264nm,1.9s
MOS                                pmax     pmax
      comp=Z,1µm,2.7s
MOS                                smax     smax
      comp=N,2µm,4.4s
MOS                                MLR      MLR
      comp=Z,5µm,19.0s
KTH   Kantishna Hill    66.91  29  P        P        03 28 03.9 -4.0
KTH                                IAmb     IAmb     03 28 39.6
      comp=Z,60nm,1.5s
KTH                                IAMs_20  IAMs_20  04 01 26.2
      comp=Z,3µm,18.0s
APA   Apatity           66.94 335⇓iP        P        03 28 07.5 -0.2
APA                               i PPP     PPP      03 32 13.0
APA                               i S       S        03 36 58.0 -2.3
APA                                PS       PnS      03 37 18.0 -3.5
APA                               i                  03 37 42.0
APA                               i SS      SS       03 41 22.0 +3.8
APA                                pmax     pmax
      comp=Z,17nm,0.8s
APA                                MLR      MLR
      comp=Z,7µm,14.0s
KDAK  Kodiak Island     67.07  35  LR       LR       03 58 37.6
      comp=Z,4µm,21.1s,baz=286,slow=37
KDAK  Kodiak Island     67.07  35  IAMs_20  IAMs_20  03 58 36.5
      comp=Z,4µm,20.0s
KDAK  Kodiak Island     67.07  35  P        P        03 28 07.8 -1.0
      baz=280
BATM  Batumi            67.09 307  P        P        03 28 06.3 -3.0
H23K  Yukon River       67.14  27  P        P        03 28 09.4 +0.3
H23K                               IAmb     IAmb     03 28 25.3
      comp=Z,49nm,1.1s
H23K  Yukon River       67.14  27  P        P        03 28 08.9 -0.3
      baz=279,SNR=29
H23K                               S        S        03 37 07.4 +4.4
      baz=279
TRF   Thorofare Moun    67.21  29  P        P        03 28 09.0 -0.9
TRF                                IAMs_20  IAMs_20  03 59 59.9
      comp=Z,4µm,20.0s
TRF   Thorofare Moun    67.21  29  P        P        03 28 07.6 -2.2
      baz=280
TRF                                S        S        03 37 06.2 +2.0
      baz=280
I23K  Minto, Yukon-K    67.32  27  P        P        03 28 08.6 -1.6
I23K                               IAmb     IAmb     03 28 20.7
      comp=Z,50nm,1.5s
I23K                               IAMs_20  IAMs_20  03 57 25.8
      comp=Z,3µm,18.0s
I23K  Minto, Yukon-K    67.32  27  P        P        03 28 08.3 -1.9
      baz=280
I23K                               S        S        03 37 06.9 +1.8
      baz=280
CUT   Chulitna          67.40  30  P        P        03 28 08.9 -1.9
      baz=280
BWN   Browne            67.45  28  IAMs_20  IAMs_20  03 57 28.0
      comp=Z,3µm,19.0s
CNPM  China Poot        67.45  33  IAMs_20  IAMs_20  04 00 26.5
      comp=Z,4µm,18.0s
NEA2  Nenana            67.54  28  P        P        03 28 10.7 -1.0
NEA2                               IAmb     IAmb     03 28 20.9
      comp=Z,72nm,1.3s
NEA2  Nenana            67.54  28  P        P        03 28 10.5 -1.2
      baz=280,SNR=29
NEA2                               S        S        03 37 07.2 -0.6
      baz=280
GURO  Guroymak-BITLI    67.56 303  P        P        03 28 12.2 -0.2
GURO                               IAmb     IAmb     03 28 17.4
      comp=Z,26nm,1.0s
BRLK  Bradley Lake      67.58  33  IAMs_20  IAMs_20  03 59 42.7
      comp=Z,5µm,19.0s
M22K  Willow            67.58  31  P        P        03 28 09.7 -2.2
M22K                               IAmb     IAmb     03 28 17.9
      comp=Z,82nm,1.1s
M22K  Willow            67.58  31  P        P        03 28 09.7 -2.2
      baz=280
OBN   Obninsk           67.59 322  P        P        03 28 12.3 +0.2
      comp=Z,3.0nm,0.5s,baz=32,slow=8.4,SNR=9.1
OBN                                LR       LR       04 00 24.6
      comp=Z,2µm,19.5s,baz=75,slow=38
      comp=Z,3.0nm,0.5s
OBN   Obninsk           67.59 322  P        P        03 28 10.9 -1.2
OBN   Obninsk           67.59 322d iP       P        03 28 10.3 -1.8
OBN                               e*PP      pP       03 28 13.6 -2.5
OBN                               e*SP      sP       03 28 18.8 +1.2
OBN                               i S       S        03 37 04.5 -4.1
OBN                               i SSS     SSS      03 44 30.0
OBN                                pmax     pmax
      comp=Z,187nm,2.5s
OBN                                MLR      MLR
      comp=Z,6µm,18.0s
MCK   McKinley          67.76  29  P        P        03 28 11.7 -1.4
MCK                                IAmb     IAmb     03 28 22.6
      comp=Z,59nm,1.4s
MCK                                IAMs_20  IAMs_20  03 57 40.3
      comp=Z,3µm,18.0s
MCK   McKinley          67.76  29  P        P        03 28 11.7 -1.4
MCK                                pmax     pmax
      comp=Z,59nm,1.4s
MCK                                MLR      MLR
      comp=Z,4µm,18.0s
MCK   McKinley          67.76  29  P        P        03 28 10.1 -3.0
      baz=281
MCK                                S        S        03 37 10.8 +0.3
      baz=281
H24K  Noodor Dome       67.81  26  P        P        03 28 13.1 -0.3
H24K                               IAmb     IAmb     03 28 27.3
      comp=Z,77nm,1.4s
H24K                               IAMs_20  IAMs_20  04 02 31.6
      comp=Z,5µm,18.0s
H24K  Noodor Dome       67.81  26  P        P        03 28 13.1 -0.3
      baz=281,SNR=14
H24K                               S        S        03 37 14.3 +3.3
      baz=281
MDM   Murphy Dome       67.83  27  P        P        03 28 11.9 -1.6
RND   Reindeer          67.85  29  P        P        03 28 12.8 -0.9
RND                                IAMs_20  IAMs_20  03 57 45.9
      comp=Z,4µm,19.0s
RND   Reindeer          67.85  29  P        P        03 28 12.9 -0.9
RND                                pmax     pmax
      comp=Z,180nm,1.8s
RND                                MLR      MLR
      comp=Z,4µm,19.0s
RC01  Rabbit Creek A    67.89  32  P        P        03 28 12.6 -1.3
RC01                               IAmb     IAmb     03 28 21.4
      comp=Z,56nm,1.6s
RC01                               IAMs_20  IAMs_20  03 58 37.0
      comp=Z,3µm,18.0s
RC01  Rabbit Creek A    67.89  32  P        P        03 28 11.3 -2.6
      baz=281
RC01                               S        S        03 37 14.3 +2.3
      baz=281
WRH   Wood River Hil    67.98  28  P        P        03 28 13.7 -0.7
WRH                                IAmb     IAmb     03 28 24.3
      comp=Z,73nm,1.6s
WRH                                IAMs_20  IAMs_20  03 59 57.2
      comp=Z,4µm,18.0s
TCOL  CIGO, UAF Yank    68.00  27  P        P        03 28 12.8 -1.7
TCOL                               IAMs_20  IAMs_20  03 57 56.7
      comp=Z,3µm,18.0s
TCOL  CIGO, UAF Yank    68.00  27  P        P        03 28 13.3 -1.3
      baz=281
TCOL                               S        S        03 37 13.4 +0.2
      baz=281
COLA  College           68.00  27  P        P        03 28 12.9 -1.6
COLA  College           68.00  27  IAMs_20  IAMs_20  03 57 56.7
      comp=Z,3µm,18.0s
COLA  College           68.00  27deP        P        03 28 12.6 -1.9
COLA                               pmax     pmax
      comp=Z,56nm,2.4s
COLA                               MLR      MLR
      comp=Z,3µm,17.0s
COLA  College           68.00  27  P        P        03 28 12.9 -1.6
      baz=281
COLA                               S        S        03 37 15.0 +1.8
      baz=281
O22K  Cooper Landing    68.01  32  IAMs_20  IAMs_20  03 59 45.4
      comp=Z,3µm,18.0s
O22K  Cooper Landing    68.01  32  P        P        03 28 11.8 -2.9
      baz=281
SOC   Sochi             68.06 309 eP        P        03 28 13.8 -1.5
SOC                               e                  03 30 42.0
SOC                               ePPP      PPP      03 32 18.2
SOC                               i S       S        03 37 14.4 -0.2
SOC                                pmax     pmax
      comp=Z,57nm,0.9s
SOC                                MLR      MLR
      comp=Z,5µm,17.0s
CCB   Clear Creek Bu    68.07  28  P        P        03 28 13.1 -1.9
CCB                                IAMs_20  IAMs_20  03 59 59.5
      comp=Z,3µm,19.0s
PMR   Palmer            68.08  31  P        P        03 28 13.4 -1.7
PMR                                IAmb     IAmb     03 28 21.4
      comp=Z,68nm,1.6s
PMR   Palmer            68.08  31  P        P        03 28 13.4 -1.7
PMR                                pmax     pmax
      comp=Z,68nm,1.6s
PMR   Palmer            68.08  31  P        P        03 28 12.1 -2.9
      baz=281
PMR                                S        S        03 37 17.2 +2.9
      baz=281
WAT1  Susitna Watana    68.10  30  P        P        03 28 12.6 -2.7
      baz=281
WAT1                               S        S        03 37 14.0 -0.6
      baz=281
POKR  Poker Plat Res    68.13  27  P        P        03 28 14.9 -0.5
POKR                               IAmb     IAmb     03 28 24.7
      comp=Z,81nm,1.5s
POKR                               IAMs_20  IAMs_20  04 02 54.1
      comp=Z,5µm,18.0s
POKR  Poker Plat Res    68.13  27  P        P        03 28 12.4 -3.0
      baz=282
POKR                               S        S        03 37 14.2 -0.7
      baz=282
GHO   Glory Hole Cre    68.14  31  IAMs_20  IAMs_20  03 57 46.6
      comp=Z,4µm,20.0s
SEW   Seward            68.22  33  P        P        03 28 12.1 -3.9
      baz=282
SEW                                S        S        03 37 15.3 -0.6
      baz=282
KOPT  Kop Dagi          68.36 305  P        P        03 28 16.8 -0.8
KOPT                               IAmb     IAmb     03 28 23.9
      comp=Z,62nm,1.0s
SML   Sawmill           68.41  31  IAMs_20  IAMs_20  03 57 41.7
      comp=Z,4µm,22.0s
SML   Sawmill           68.41  31  P        P        03 28 15.2 -2.1
      baz=282
SML                                S        S        03 37 18.1 -0.2
      baz=282
IL31                    68.43  27  P        P        03 28 17.0 -0.2
ILAR  Eielson Array     68.43  27  P        P        03 28 16.5 -0.8
      comp=Z,2.0nm,0.7s,baz=269,slow=4.9,SNR=20
ILAR                               PKP2bc   P'P'df   03 56 34.5 -4.7
      comp=Z,1.0nm,1.1s,baz=156,slow=2.5,SNR=5.7
ILAR                               LR       LR       04 00 51.6
      comp=Z,2µm,18.2s,baz=301,slow=38
      comp=Z,2.0nm,0.7s
KNK   Knik Glacier      68.43  31  IAMs_20  IAMs_20  04 00 59.3
      comp=Z,5µm,18.0s
KNK   Knik Glacier      68.43  31  P        P        03 28 15.3 -2.0
      baz=282
HDA   Harding Lake      68.48  28  P        P        03 28 16.5 -1.1
HDA                                IAmb     IAmb     03 28 25.5
      comp=Z,42nm,1.4s
HDA                                IAMs_20  IAMs_20  04 02 56.4
      comp=Z,4µm,19.0s
HDA   Harding Lake      68.48  28  P        P        03 28 15.1 -2.4
      baz=282,SNR=13
WAT6  Susitna Watana    68.52  30  P        P        03 28 16.2 -1.9
      baz=282
WAT6                               S        S        03 37 19.9  0.0
      baz=282
DHY   Denali Highway    68.58  29  P        P        03 28 18.1 -0.2
DHY                                IAMs_20  IAMs_20  03 57 07.0
      comp=Z,4µm,21.0s
DHY   Denali Highway    68.58  29  P        P        03 28 16.9 -1.5
      baz=282
DHY                                S        S        03 37 20.8 +0.3
      baz=282
M23K  Glacier View      68.69  31  P        P        03 28 16.6 -2.4
      baz=282
BMAR  Burnt Mountain    68.77  24  P        P        03 28 19.5 +0.1
KEV   Kevo              68.81 338  IAMs_20  IAMs_20  04 00 37.8
      comp=Z,7µm,22.0s
MARD  Mardin            68.84 302  P        P        03 28 19.7 -0.7
SCM   Sheep Creek Mo    68.87  31  P        P        03 28 20.2 +0.1
SCM                                IAmb     IAmb     03 28 49.2
      comp=Z,42nm,0.9s
SCM                                IAMs_20  IAMs_20  03 58 28.8
      comp=Z,4µm,20.0s
SCM   Sheep Creek Mo    68.87  31  P        P        03 28 20.2 +0.1
SCM                                pmax     pmax
      comp=Z,42nm,0.9s
SCM                                MLR      MLR
      comp=Z,4µm,20.0s
SCM   Sheep Creek Mo    68.87  31  P        P        03 28 18.4 -1.8
      baz=283,SNR=11
SCM                                S        S        03 37 28.1 +4.2
      baz=283
RAYN  Ar Rayn           68.94 287  P        P        03 28 20.1 -1.1
RAYN  Ar Rayn           68.94 287  P        P        03 28 20.1 -1.1
RAYN                               pmax     pmax
      comp=Z,139nm,1.3s
RAYN                               MLR      MLR
      comp=Z,3µm,21.0s
J25K  Salcha River,     69.10  27  P        P        03 28 21.1 -0.4
J25K                               IAMs_20  IAMs_20  04 03 38.8
      comp=Z,4µm,19.0s
J25K  Salcha River,     69.10  27  P        P        03 28 18.8 -2.7
      baz=283
J25K                               S        S        03 37 26.2 -0.3
      baz=283
K24K  Donnelly Dome     69.11  28  P        P        03 28 19.7 -1.9
      baz=283,SNR=14
K24K                               S        S        03 37 26.9 +0.2
      baz=283
SPITS Spitsbergen Ar    69.17 348  LR       LR       04 02 58.2
      comp=Z,8µm,18.8s,baz=247,slow=40
SPITS Spitsbergen Ar    69.17 348  P        P        03 28 21.6 -0.1
SPITS                              pmax     pmax
      comp=Z,279nm,1.6s
GLI   Glacier Island    69.19  32  P        P        03 28 22.4 +0.3
GLI                                IAmb     IAmb     03 28 28.7
      comp=Z,125nm,1.8s
GLI   Glacier Island    69.19  32  P        P        03 28 20.4 -1.7
      baz=283
M24K  Tolsona, Glenn    69.33  30  P        P        03 28 21.8 -1.2
M24K                               IAMs_20  IAMs_20  04 03 17.2
      comp=Z,3µm,18.0s
M24K  Tolsona, Glenn    69.33  30  P        P        03 28 22.2 -0.8
      baz=284
M24K                               S        S        03 37 32.1 +2.7
      baz=284
ARCES ARCESS Array B    69.37 338  P        P        03 28 23.8 +0.8
      comp=Z,7.2nm,0.9s,baz=49,slow=3.7,SNR=8.5
ARCES                              LR       LR       04 01 39.8
      comp=Z,6µm,21.4s,baz=69,slow=38
      comp=Z,7.2nm,0.9s
ARCES ARCESS Array B    69.37 338  P        P        03 28 22.5 -0.5
ARCES ARCESS Array B    69.37 338  P        P        03 28 22.5 -0.5
ARCES                              pmax     pmax
      comp=Z,192nm,2.0s
PAX   Paxson            69.45  29  P        P        03 28 22.1 -1.6
PAX                                IAmb     IAmb     03 28 35.8
      comp=Z,58nm,1.7s
PAX   Paxson            69.45  29  P        P        03 28 22.1 -1.6
PAX                                pmax     pmax
      comp=Z,58nm,1.7s
PAX   Paxson            69.45  29  P        P        03 28 22.3 -1.5
      baz=284
PAX                                S        S        03 37 32.7 +2.0
      baz=284
DGTI  Dogotuki          69.46 120  P        P        03 28 25.1 +0.7
      comp=Z,43nm,1.0s
RIDG  Independent Ri    69.53  28  IAMs_20  IAMs_20  04 00 47.3
      comp=Z,4µm,18.0s
RIDG  Independent Ri    69.53  28  P        P        03 28 22.1 -2.1
      baz=284,SNR=16
RIDG                               S        S        03 37 30.5 -1.1
      baz=284
KLU   Klutina           69.60  31  IAMs_20  IAMs_20  03 58 53.2
      comp=Z,4µm,19.0s
KLU   Klutina           69.60  31  P        P        03 28 22.9 -1.8
      baz=284
HARP  HAARP             69.73  30  P        P        03 28 23.7 -1.7
      baz=284
DIV   Divide            69.76  31  P        P        03 28 24.2 -1.5
DIV                                IAmb     IAmb     03 28 32.6
      comp=Z,59nm,1.4s
SCRK  Sand Creek        69.84  28  P        P        03 28 24.6 -1.6
SCRK                               IAmb     IAmb     03 28 34.8
      comp=Z,53nm,1.4s
SCRK  Sand Creek        69.84  28  P        P        03 28 24.6 -1.6
      baz=285,SNR=8.5
SCRK                               S        S        03 37 36.8 +1.4
      baz=285
PUL   Pulkovo           69.85 327⇑eP        P        03 28 25.4 -0.7
PUL                                pmax     pmax
      comp=Z,86nm,0.6s
PUL                                MLR      MLR
      comp=Z,12µm,20.0s
J26L  Joseph Creek      69.88  27  P        P        03 28 24.3 -2.1
      baz=285,SNR=22
J26L                               S        S        03 37 34.9 -0.9
      baz=285
DOT   Dot Lake          69.89  28  P        P        03 28 25.1 -1.3
Q23K  Middleton Isla    69.90  33  IAMs_20  IAMs_20  04 01 31.5
      comp=Z,3µm,19.0s
Q23K  Middleton Isla    69.90  33  P        P        03 28 25.8 -0.6
      baz=284
EYAK  Cordova Ski Ar    69.91  32  P        P        03 28 25.2 -1.3
      baz=285
N25K  Chitina, Valde    70.18  30  P        P        03 28 26.7 -1.5
N25K                               IAMs_20  IAMs_20  03 58 50.6
      comp=Z,3µm,19.0s
N25K  Chitina, Valde    70.18  30  P        P        03 28 27.3 -1.0
      baz=285,SNR=6.1
N25K                               S        S        03 37 38.9 -0.5
      baz=285
MENT  Mentasta          70.23  29  P        P        03 28 28.4 -0.1
MENT                               IAmb     IAmb     03 28 41.0
      comp=Z,39nm,1.2s
BMRM  Bremner River     70.35  31  P        P        03 28 28.5 -0.8
BMRM                               IAMs_20  IAMs_20  04 05 03.0
      comp=Z,3µm,18.0s
BMRM  Bremner River     70.35  31  P        P        03 28 27.8 -1.4
      baz=285
L26K  Log Cabin Wild    70.37  29  P        P        03 28 27.9 -1.5
L26K                               IAMs_20  IAMs_20  04 03 13.4
      comp=Z,5µm,20.0s
L26K  Log Cabin Wild    70.37  29  P        P        03 28 28.4 -0.9
      baz=286,SNR=7.3
L26K                               S        S        03 37 43.3 +1.9
      baz=286
RAGM  Ragged Mountai    70.47  32  IAmb     IAmb     03 29 09.6
      comp=Z,53nm,1.2s
RAGM                               IAMs_20  IAMs_20  04 05 09.3
      comp=Z,4µm,19.0s
GLB   Gilahina Butte    70.59  31  P        P        03 28 29.7 -1.0
GLB                                IAMs_20  IAMs_20  04 00 16.4
      comp=Z,4µm,18.0s
K27K  Chicken           70.64  28  IAmb     IAmb     03 28 40.4
      comp=Z,55nm,1.2s
K27K                               IAMs_20  IAMs_20  04 04 30.4
      comp=Z,3µm,18.0s
K27K  Chicken           70.64  28  P        P        03 28 29.5 -1.4
      baz=286
K27K                               S        S        03 37 43.3 -1.1
      baz=286
HMT   Hamilton          70.68  32  IAMs_20  IAMs_20  04 00 45.9
      comp=Z,3µm,20.0s
M26K  Nabesna, AK       70.70  29  P        P        03 28 30.3 -1.1
M26K                               IAmb     IAmb     03 28 38.5
      comp=Z,46nm,1.1s
M26K                               IAMs_20  IAMs_20  03 59 25.1
      comp=Z,3µm,19.0s
M26K  Nabesna, AK       70.70  29  P        P        03 28 29.9 -1.4
      baz=286,SNR=20
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M26K				S	S	03 37 43.7	-1.6
	baz=286						
KAIM	**Kayak Island**	70.72	32	IAMs_20	IAMs_20	03 58 39.9	
	comp=Z,4µm,19.0s						
KAIM	**Kayak Island**	70.72	32	P	P	03 28 30.1	-1.4
	baz=286						
EGAK	**Eagle**	70.80	27	P	P	03 28 30.8	-1.1
EGAK				IAmb	IAmb	03 28 40.5	
	comp=Z,34nm,1.1s						
EGAK	**Eagle**	70.80	27	P	P	03 28 30.5	-1.3
	baz=287						
EGAK				S	S	03 37 45.4	-0.9
	baz=287						
VRDI	**Verde Repeater**	70.82	31	P	P	03 28 31.1	-1.2
VRDI				IAMs_20	IAMs_20	04 00 42.4	
	comp=Z,4µm,19.0s						
MSEY	**Mahe Island**	70.89	255	IAMs_20	IAMs_20	03 59 06.8	
	comp=Z,3µm,19.0s						
BERG	**Berg Lake**	70.93	32	IAMs_20	IAMs_20	04 02 56.6	
	comp=Z,3µm,19.0s						
SUCK	**Suckling Hills**	70.99	32	IAMs_20	IAMs_20	04 05 45.0	
	comp=Z,4µm,19.0s						
L27K	**Beaver Creek,**	71.02	29	P	P	03 28 32.8	-0.5
L27K				IAmb	IAmb	03 28 41.1	
	comp=Z,43nm,1.1s						
L27K				IAMs_20	IAMs_20	04 05 26.8	
	comp=Z,3µm,19.0s						
L27K	**Beaver Creek,**	71.02	29	P	P	03 28 32.5	-0.8
	baz=287,SNR=16						
L27K				S	S	03 37 48.9	-0.1
	baz=287						
BCAR	**Beaver Creek A**	71.04	29	P	P	03 28 33.4	-0.1
M27K	**Edge Creek, AK**	71.21	29	IAMs_20	IAMs_20	04 00 34.7	
	comp=Z,5µm,20.0s						
M27K	**Edge Creek, AK**	71.21	29	P	P	03 28 34.3	-0.3
	baz=287						
TOKA	**Tokat**	71.24	306	P	P	03 28 34.5	-0.6
TOKA				IAmb	IAmb	03 28 43.9	
	comp=Z,86nm,1.3s						
WAX	**Waxell Ridge**	71.32	31	IAMs_20	IAMs_20	03 57 09.8	
	comp=Z,4µm,22.0s						
SNH	**Sunshine Point**	71.41	32	IAMs_20	IAMs_20	03 59 27.1	
	comp=Z,4µm,21.0s						
FIA1	**FINESS Array S**	71.41	330	P	P	03 28 34.9	-0.7
FIA1				IAmb	IAmb	03 28 42.3	
	comp=Z,54nm,1.0s						
FINES	**FINESS Array B**	71.41	330	P	P	03 28 35.6	0.0
	comp=Z,19nm,0.7s,baz=57,slow=4.7,SNR=42						
FINES				LR	LR	04 02 57.5	
	comp=Z,15µm,18.8s,baz=66,slow=38						
	comp=Z,19nm,0.7s						
FINES	**FINESS Array B**	71.41	330	P	P	03 28 34.6	-1.0
FINES	**FINESS Array B**	71.41	330	P	P	03 28 34.6	-1.0
ISLE	**Juniper Island**	71.52	31	P	P	03 28 37.0	+0.5
ISLE				IAMs_20	IAMs_20	04 01 06.0	
	comp=Z,3µm,20.0s						
BVCY	**Beaver Creek**	71.64	29	P	P	03 28 35.3	-1.8
	baz=288						
BARN	**Barnard Glacie**	71.70	31	P	P	03 28 38.4	+0.8
BARN				IAMs_20	IAMs_20	03 59 39.6	
	comp=Z,4µm,19.0s						
DAWY	**Dawson**	71.75	27	P	P	03 28 38.3	+0.5
DAWY	**Dawson**	71.75	27	P	P	03 28 36.4	-1.3
	baz=289,SNR=18						
DAWY				S	S	03 37 57.7	+0.2
	baz=289						
I29M	**Ogilvie Camp,**	71.77	26	IAMs_20	IAMs_20	04 01 26.3	
	comp=Z,5µm,19.0s						
I29M	**Ogilvie Camp,**	71.77	26	P	P	03 28 36.4	-1.4
	baz=289						
I29M				S	S	03 37 57.8	+0.2
	baz=289						
NOR	**Nord**	71.93	354	*i* P	P	03 28 38.3	-0.2
NOR				IAmb	IAmb	03 28 43.8	
	comp=Z,74nm,1.5s						
VSU	**Vasula**	72.00	327	*ce*P	P	03 28 39.0	-0.2
VSU				pmax	pmax		
	comp=Z,140nm,1.1s						
VSU				MLR	MLR		
	comp=Z,30µm,18.0s						
VSU	**Vasula**	72.00	327	*e*P	P	03 28 40.0	+0.8
YUK3	**Moose Creek**	72.02	30	P	P	03 28 38.1	-1.5
	baz=289,SNR=7.7						
J29M	**Klondike Camp**	72.11	27	P	P	03 28 39.1	-0.8
	baz=290						
J29M				S	S	03 38 02.5	+0.9
	baz=290						
TABL	**Table Mountain**	72.13	31	IAMs_20	IAMs_20	04 00 22.2	
	comp=Z,3µm,20.0s						
BNN	**Bunyan**	72.14	305	P	P	03 28 40.0	-0.6
INK	**Inuvik**	72.48	22	LR	LR	04 03 26.1	
	comp=Z,4µm,18.3s,baz=294,slow=38						
INK	**Inuvik**	72.48	22	P	P	03 28 41.1	-0.8
INK	**Inuvik**	72.48	22	P	P	03 28 41.1	-0.8
INK				pmax	pmax		
	comp=Z,24nm,1.0s						
INK	**Inuvik**	72.48	22	P	P	03 28 39.6	-2.3
	baz=293						
INK				S	S	03 38 02.5	-3.0
	baz=293						
BZK	**Bozkurt**	72.54	309	P	P	03 28 42.1	-0.6
MEF	**Metsahovi**	72.58	329	*e*P	P	03 28 43.2	+0.6
MNK	**Minsk**	72.61	322	*i* P	P	03 28 42.4	-0.5
MNK				*i*		03 31 25.2	
MNK				*i* PPP	PPP	03 33 06.6	
MNK				*i* S	S	03 38 09.3	+1.9
MNK				*i* SS	SS	03 42 53.6	+7.7
MNK				pmax	pmax		
	comp=Z,76nm,1.2s						
MNK				pmax	pmax		
	comp=E,10.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,28nm,1.3s						
MNK				MLR	MLR		
	comp=N,3µm,16.0s						
MNK				MLR	MLR		
	comp=Z,4µm,19.0s						
MNK	**Minsk**	72.61	322	*i* P	P	03 28 42.5	-0.5
	comp=E,10.0nm,1.3s,baz=252						
MNK				*i* P	P	03 28 42.5	-0.5
	comp=N,28nm,1.3s						
MNK				*i* P	P	03 28 42.5	-0.5
	comp=Z,76nm,1.2s						
MNK				*i* PP	PP	03 31 25.2	+1.2
MNK				*i* PPP	PPP	03 33 06.6	
MNK				*i* S	S	03 38 09.4	+1.9
MNK				*i* SS	SS	03 42 53.6	+7.7
MNK				*i* SSS	SSS	03 46 14.5	
MNK				*i* LQ	LQ	03 55 57.0	
MNK				*i* LR	LR	04 00 06.0	
MNK				*i* LRM	MLR	04 03 19.3	
	comp=E,668nm,19.9s						
MNK				*i* LRM	MLR	04 03 19.3	
	comp=N,3µm,16.3s						
MNK				*i* LRM	MLR	04 03 19.3	
	comp=Z,4µm,18.9s						
PCA	**Pinnacle**	72.66	31	IAmb	IAmb	03 29 10.2	
	comp=Z,41nm,0.9s						
PINM	**Pinnacle**	72.66	31	P	P	03 28 41.1	-2.2
	baz=289						
PINM				S	S	03 38 05.9	-2.2
	baz=289						
IDID	**Didziasalis**	72.98	323	*e*P	P	03 28 45.6	+0.6
YUK4	**Talbot Arm**	72.98	30	P	P	03 28 44.4	-1.0
	baz=290						
YUK4				S	S	03 38 14.9	+3.0
	baz=290						
ALE	**Alert**	73.00	1	IAMs_20	IAMs_20	03 58 56.7	
	comp=Z,4µm,20.0s						
BCPM	**Bancas Point**	73.00	31	IAMs_20	IAMs_20	04 02 13.2	
	comp=Z,3µm,20.0s						
AKASG	**Malin Array Be**	73.01	318	P	P	03 28 44.3	-1.1
	comp=Z,9.2nm,0.8s,baz=50,slow=6.2,SNR=24						
AKASG				LR	LR	04 01 11.9	
	comp=Z,6µm,21.6s,baz=74,slow=36						
	comp=Z,9.2nm,0.8s						
AKASG	**Malin Array Be**	73.01	318	IAmb	IAmb	03 28 52.9	
	comp=Z,115nm,1.6s						
AKBB	**Malin Array Si**	73.01	318	*d i*P	P	03 28 43.6	-1.8
NACGM	**Naroch**	73.09	323	*i* P	P	03 28 44.6	-1.2
PNL	**Peninsula**	73.21	32	P	P	03 28 44.7	-1.8
	baz=290						
ISAL	**Salakas**	73.23	324	*e*P	P	03 28 47.2	+0.7
IIGN	**Ignalina**	73.25	324	*e*P	P	03 28 46.9	+0.2
YUK6	**Outpost Mounta**	73.25	30	P	P	03 28 46.2	-0.8
	baz=291						
YUK6				S	S	03 38 15.9	+0.8
	baz=291						
MTSE	**Matsula**	73.36	327	*e*P	P	03 28 47.7	+0.4
M30M	**Minto, Yukon**	73.37	28	IAMs_20	IAMs_20	04 01 14.7	
	comp=Z,4µm,19.0s						
M30M	**Minto, Yukon**	73.37	28	P	P	03 28 46.2	-1.2
	baz=291						
M30M				S	S	03 38 17.1	+1.2
	baz=291						
ASF	**Jabal al Asfar**	73.41	298	P	P	03 28 48.8	+0.6
	comp=Z,32nm,0.9s,baz=85,slow=0.8,SNR=30						
ASF				LR	LR	04 04 58.9	
	comp=Z,3µm,18.4s,baz=90,slow=39						
	comp=Z,32nm,0.9s						
A36M	**Sachs Harbour**	73.43	17	IAMs_20	IAMs_20	04 03 03.7	
	comp=Z,5µm,20.0s						
A36M	**Sachs Harbour**	73.43	17	P	P	03 28 45.5	-2.0
	baz=299						
A36M				S	S	03 38 16.3	+0.1
	baz=299						
HWQ	**Hawqa**	73.48	300	*e*P	P	03 28 48.1	-0.6
BR131	**Keskin Array S**	73.50	306	*d i*P	P	03 28 47.9	-0.7
BR131	**Keskin Array S**	73.50	306	P	P	03 28 48.0	-0.7
	SNR=57						
BRTR	**Keskin Array B**	73.50	306	P	P	03 28 48.8	+0.1
	comp=Z,29nm,0.9s,baz=104,slow=5.2,SNR=58						
BRTR				LR	LR	04 06 10.2	
	comp=Z,2µm,18.6s,baz=96,slow=40						
	comp=Z,29nm,0.9s						
BRTR	**Keskin Array B**	73.50	306	*i* P	P	03 28 48.0	-0.7
BRTR				pmax	pmax		
	comp=Z,29nm,0.9s						
RAF	**Rauma**	73.52	330	*e*P	P	03 28 49.1	+0.9
HYT	**Haines Junctio**	73.69	30	IAmb	IAmb	03 28 57.0	
	comp=Z,53nm,1.5s						
HYT	**Haines Junctio**	73.69	30	P	P	03 28 48.1	-1.3
	baz=291						
BHL	**Bhannes**	73.83	300	*e*P	P	03 28 50.0	-0.7
SHBL	**Chebaa**	73.94	300	*e*P	P	03 28 51.0	-0.4
ANTO	**Ankara**	74.07	307	P	P	03 28 51.2	-0.7
ANTO				IAmb	IAmb	03 28 54.7	
	comp=Z,67nm,1.1s						
ANTO				IAMs_20	IAMs_20	04 06 17.9	
	comp=Z,4µm,21.0s						
ANTO	**Ankara**	74.07	307	P	P	03 28 51.2	-0.7
ANTO				pmax	pmax		
	comp=Z,67nm,1.1s						
ANTO				MLR	MLR		
	comp=Z,4µm,21.0s						
BR231	**Keskin MP Arra**	74.09	307	IAmb	IAmb	03 28 59.2	
	comp=Z,70nm,1.1s						
N31M	**Braeburn, Yuko**	74.22	29	IAmb	IAmb	03 29 00.0	
	comp=Z,52nm,1.2s						
N31M				IAMs_20	IAMs_20	04 02 07.2	
	comp=Z,3µm,19.0s						
N31M	**Braeburn, Yuko**	74.22	29	P	P	03 28 51.2	-1.2
	baz=293						
VSVD	**Vaisvydziai**	74.25	325	*e*P	P	03 28 52.2	-0.4
MMAI	**Mount Meron Ar**	74.32	299	LR	LR	04 07 22.4	
	comp=Z,3µm,18.3s,baz=232,slow=40						
SORM	**Soroca**	74.38	316	⇑P	P	03 28 52.2	-1.2
PABE	**Paberze**	74.40	324	P	P	03 28 52.6	-0.8
PABE	**Paberze**	74.40	324	*e*P	P	03 28 54.0	+0.6
KIS	**Kishinev**	74.46	315	⇓*i*P	P	03 28 52.0	-2.0
	comp=Z,400nm,5.0s						
KIS	**Kishinev**	74.46	315	*e*PP	PP	03 31 44.0	+3.9
KIS				*e*S	S	03 38 25.0	-3.7
KIS	**Kishinev**	74.46	315	*d i*P	P	03 28 52.0	-2.0
KIS				*e*		03 31 44.0	
KIS				*e*S	S	03 38 25.0	-3.7
KIS				*e*PS	PnS	03 38 54.0	-8.6
KIS				pmax	pmax		
	comp=Z,400nm,5.0s						
KIS				pmax	pmax		
	comp=N,2µm,14.0s						
KIS				MLR	MLR		
	comp=Z,1µm,18.0s						
MILM	**Milestii Mici**	74.49	315	⇓*i*P	P	03 28 52.0	-2.2
	comp=Z,350nm,2.7s						
MILM	**Milestii Mici**	74.49	315	*e*PP	PP	03 31 46.0	+5.7
MILM				*i* S	S	03 38 24.0	-5.0
	comp=Z,700nm,5.6s						
MILM				*e*LQ	LQ	03 55 55.0	
	comp=Z,4µm,16.5s						
MILM				LRM	MLR	04 06 11.0	
	comp=Z,4µm,17.5s						
MILM	**Milestii Mici**	74.49	315	*d i*P	P	03 28 52.0	-2.2
MILM				*e*		03 29 04.0	
MILM				*e*		03 31 46.0	
MILM				*i* S	S	03 38 24.0	-5.0
MILM				pmax	pmax		
	comp=Z,870nm,5.0s						
MILM				smax	smax		
	comp=N,850nm,6.1s						
MILM				MLR	MLR		
	comp=Z,4µm,17.5s						
M31M	**Drury Creek, Y**	74.54	28	IAMs_20	IAMs_20	04 07 49.8	
	comp=Z,4µm,18.0s						
M31M	**Drury Creek, Y**	74.54	28	P	P	03 28 53.1	-1.2
	baz=294						
M31M				S	S	03 38 28.3	-0.8
	baz=294						
AAL	**Aland**	74.64	330	*e*P	P	03 28 55.6	+0.9
GHAJ	**Ghor Haditha**	74.77	298	IAmb	IAmb	03 29 01.9	
	comp=Z,97nm,1.2s						
GHAJ				IAMs_20	IAMs_20	04 03 11.8	
	comp=Z,3µm,20.0s						
WHY	**Whitehorse**	74.94	30	IAmb	IAmb	03 29 07.3	
	comp=Z,61nm,1.4s						
WHY	**Whitehorse**	74.94	30	P	P	03 28 55.7	-1.0
	baz=294						
WHY				S	S	03 38 34.5	+0.6
	baz=294						
C36M	**Paulatuk**	75.09	20	IAMs_20	IAMs_20	04 05 00.6	
	comp=Z,4µm,19.0s						
C36M	**Paulatuk**	75.09	20	P	P	03 28 54.8	-2.3
	baz=301						
C36M				S	S	03 38 34.1	-0.7
	baz=301						
JURR	**Jurilovca**	75.18	313	⇓P	P	03 28 59.5	+1.3
SKAG	**Skagway**	75.22	31	P	P	03 28 57.0	-1.1
	baz=293						
SKAG				S	S	03 38 37.1	+0.5
	baz=293						
CSS	**Mathiatis**	75.29	302	IAmb	IAmb	03 29 04.0	
	comp=Z,82nm,1.0s						
CSS				IAMs_20	IAMs_20	04 06 35.6	
	comp=Z,5µm,21.0s						
SUW	**Suwalki**	75.37	323	*e*P	P	03 28 57.8	-1.3
SUW				*e*sP	pP	03 29 02.8	-0.3
SUW				*e*S	S	03 38 35.7	-2.8
SUW				*e*L	L	04 06 29.9	
	comp=Z,7µm,17.4s						
SUW	**Suwalki**	75.37	323	IAMs_20	IAMs_20	04 08 18.6	
	comp=Z,4µm,20.0s						
SUW	**Suwalki**	75.37	323	*e*P	P	03 28 59.9	+0.8
TPGR	**Topolog**	75.45	313	⇓P	P	03 28 59.8	0.0
ATD	**Arta Tunnel**	75.53	276	LR	LR	04 00 15.4	
	comp=Z,2µm,21.4s,baz=64,slow=34						
ATD	**Arta Tunnel**	75.53	276	IAmb	IAmb	03 29 10.5	
	comp=Z,67nm,1.1s						
ATD	**Arta Tunnel**	75.53	276	P	P	03 29 01.9	+1.1
	SNR=12						
ATD	**Arta Tunnel**	75.53	276	⇓*e*P	P	03 29 01.4	+0.7
ATD	**Arta Tunnel**	75.53	276	⇓*e*P	P	03 29 01.4	+0.7
ATD	**Arta Tunnel**	75.53	276	*e*P	P	03 29 00.1	-0.6
ATD	**Arta Tunnel**	75.53	276	⇓*i*P	P	03 28 59.8	-1.0
ATD	**Arta Tunnel**	75.53	276	*e*P	P	03 28 59.1	-1.7
CFR	**Carcaliu**	75.53	313	⇓P	P	03 28 58.7	-1.5
TIRR	**Tirgusor**	75.60	312	⇑P	P	03 29 00.1	-0.5
TIRR	**Tirgusor**	75.60	312	IAmb	IAmb	03 29 11.8	
	comp=Z,86nm,1.1s						
BORA	**Eskisehir**	75.76	307	IAmb	IAmb	03 29 04.0	
	comp=Z,102nm,1.4s						
EIL	**Elat**	75.82	296	P	P	03 29 02.7	+0.6
	comp=Z,29nm,1.2s,baz=120,slow=4.9,SNR=18						
EIL				LR	LR	04 04 41.0	
	comp=Z,3µm,18.9s,baz=91,slow=38						
	comp=Z,29nm,1.2s						
HARR	**Harsova**	75.84	313	⇑P	P	03 29 03.7	+1.8
PSN	**Preselentsi**	76.02	312	*i* P	P	03 29 02.1	-0.9
TESR	**Tescani**	76.03	315	⇑P	P	03 29 04.0	+0.9
JIS	**Juneau Island**	76.14	32	IAMs_20	IAMs_20	04 06 06.3	
	comp=Z,3µm,18.0s						
SIT	**Sitka**	76.18	33	P	P	03 29 00.9	-2.7
	baz=294						
VRI	**Vrincioaia**	76.21	314	⇑P	P	03 29 04.3	+0.2
BIZ	**Bicaz**	76.23	315	⇑P	P	03 29 04.0	-0.2
PLOR	**Plostina**	76.27	314	⇓P	P	03 29 04.0	-0.5
ISP	**Isparta**	76.43	305	IAmb	IAmb	03 29 07.4	
	comp=Z,85nm,1.1s						
LVV	**L'vov**	76.45	319	*e*P	P	03 29 06.0	+0.7
LVV				*e*		03 32 00.0	
LVV				*e*S	S	03 38 47.1	-3.5
LVV				*e*SS	SS	03 43 47.2	+2.7
BUR08	**Bucovina Ar. S**	76.54	316	IAmb	IAmb	03 29 19.7	
	comp=Z,49nm,1.4s						
BURAR	**Bucovina Array**	76.54	316	⇑P	P	03 29 05.6	-0.5
COVR	**Voineasa-Covas**	76.56	314	⇑P	P	03 29 07.0	+0.9
PRD	**Provadia**	76.73	312	*i* P	P	03 29 06.2	-0.8
OZUR		76.74	315	⇓P	P	03 29 07.1	-0.1
KLNR	**Kaliningrad**	76.75	324	*de*P	P	03 29 05.6	-1.3
KLNR				pmax	pmax		
	comp=Z,77nm,1.1s						
MLR	**Muntele Rosu**	76.86	314	⇑P	P	03 29 07.8	-0.2
MLR	**Muntele Rosu**	76.86	314	P	P	03 29 08.6	+0.7
	comp=Z,7.0nm,0.8s,baz=3.9,slow=2.6,SNR=12						
MLR				LR	LR	04 06 50.7	
	comp=Z,7µm,20.9s,baz=54,slow=39						
	comp=Z,7.0nm,0.8s						
MLR	**Muntele Rosu**	76.86	314	P	P	03 29 06.8	-1.1
MLR				IAmb	IAmb	03 29 36.1	
	comp=Z,71nm,1.4s						
MLR	**Muntele Rosu**	76.86	314	P	P	03 29 06.8	-1.1
MLR				pmax	pmax		
	comp=Z,71nm,1.4s						
MLR				MLR	MLR		
	comp=Z,7µm,20.0s						
VIKU	**Vikbolandet**	76.87	329	*e*P	P	03 29 08.3	+0.8
OUZ	**Omahuta**	77.02	139	IAMs_20	IAMs_20	03 58 29.6	
	comp=Z,3µm,20.0s						
DOPR	**Dopca**	77.05	315	⇑P	P	03 29 10.1	+1.3
RAZG	**Razgrad**	77.20	312	⇑P	P	03 29 10.6	+0.8
KWP	**Kalwaria Pacla**	77.31	319	*e*P	P	03 29 09.1	-1.1
KWP				*e*sP	pP	03 29 14.1	-0.2
KWP				*e*S	S	03 38 57.7	-2.4
KWP				*e*L	L	04 07 34.0	
	comp=Z,5µm,23.0s						
TGTN	**Hyland Airport**	77.45	28	P	P	03 29 08.6	-2.2
	baz=299						
VOIR		77.47	314	⇑P	P	03 29 13.1	+1.8
HFS	**Hagfors**	77.51	331	P	P	03 29 11.7	+0.6
	comp=Z,5.9nm,0.9s,baz=262,slow=4.1,SNR=12						
HFS				LR	LR	04 06 46.5	
	comp=Z,19µm,18.4s,baz=52,slow=38						
	comp=Z,5.9nm,0.9s						
KULA	**Kula-Manisa**	77.55	307	P	P	03 29 10.5	-1.4
JMB	**Yambol**	77.56	311	*i* P	P	03 29 10.7	-1.0
MANT	**Manisa**	77.63	307	IAmb	IAmb	03 29 19.1	
	comp=Z,92nm,1.5s						
EDRB	**Edirne**	77.68	310	P	P	03 29 11.3	-1.1
AKAS	**Kas**	77.69	304	IAmb	IAmb	03 29 41.1	
	comp=Z,47nm,1.0s						
SZH	**Strazhica**	77.70	312	*i* P	P	03 29 10.9	-1.6
KSL	**Kastellorizon**	77.73	304	P	P	03 29 10.6	-2.2
ARR	**Arges**	77.76	314	⇓P	P	03 29 14.9	+2.0
KOLS	**Kolonicke sedl**	77.85	318	*e*P	P	03 29 13.7	+0.4
KOLS				pmax	pmax		
	comp=Z,23nm,1.6s						
KOLS	**Kolonicke sedl**	77.85	318	*e*P	P	03 29 13.7	+0.4
HUMR	**Humele**	77.86	313	⇑P	P	03 29 14.8	+1.4
WRAK	**Wrangell Islan**	77.94	33	IAMs_20	IAMs_20	04 07 28.9	
	comp=Z,3µm,18.0s						
WRAK	**Wrangell Islan**	77.94	33	P	P	03 29 12.7	-0.8
	baz=296						
UZH	**Uzhgorod**	77.96	318	*e*P	P	03 29 13.0	-0.8
UZH				*i*		03 29 17.9	
UZH				*i*		03 32 07.8	
UZH				*i* S	S	03 39 02.0	-5.0
UZH				*e*PS	SKSac	03 39 29.5	+1.8
UZH				*e*SS	SS	03 44 15.9	+8.6
UZH				MLR	MLR		
	comp=N,1µm,16.0s						
UZH				MLR	MLR		
	comp=E,1µm,16.0s						
UZH				MLR	MLR		
	comp=Z,600nm,16.0s						
CRAG	**Craig**	77.97	34	P	P	03 29 13.2	-0.5
	baz=296						
NC303	**NORSAR Array S**	77.99	332	IAmb	IAmb	03 29 21.2	
	comp=Z,103nm,1.4s						
RES	**Resolute Bay**	78.06	9	LR	LR	04 07 32.2	
	comp=Z,3µm,19.1s,baz=334,slow=39						
DLBC	**Dease Lake**	78.14	31	LR	LR	04 07 35.8	
	comp=Z,2µm,18.3s,baz=318,slow=39						
DLBC	**Dease Lake**	78.14	31	IAmb	IAmb	03 29 24.6	
	comp=Z,48nm,1.4s						
NB2	**NORSAR Subarra**	78.15	332	P	P	03 29 13.8	-0.9
	comp=Z,163nm,1.7s,baz=59,slow=5.6						
NB2	**NORSAR Subarra**	78.15	332	P	P	03 29 13.8	-0.9
	baz=59,slow=5.6						
NOA	**NORSAR Array B**	78.15	332	P	P	03 29 14.1	-0.6
	comp=Z,10nm,0.9s,baz=58,slow=5.7,SNR=20						
NOA				LR	LR	04 07 10.5	
	comp=Z,8µm,19.1s,baz=60,slow=38						
	comp=Z,10nm,0.9s						
DBG	**Daneborg**	78.25	350	*i* P	P	03 29 14.8	-0.2
DBG				IAmb	IAmb	03 29 20.1	
	comp=Z,67nm,1.6s						
YER	**Yerkesik**	78.34	305	P	P	03 29 15.4	-0.9
NAO01	**NORSAR Array S**	78.39	332	IAmb	IAmb	03 29 21.2	
	comp=Z,85nm,1.4s						
DRGR		78.44	316	⇑P	P	03 29 17.7	+1.1
ENEZ	**Enez**	78.51	310	P	P	03 29 16.1	-0.9
ALN	**Alexandroupoli**	78.53	310	P	P	03 29 15.8	-1.3
ALN	**Alexandroupoli**	78.53	310	IAmb	IAmb	03 29 23.9	
	comp=Z,175nm,1.8s						
JMIC	**Jan Mayen**	78.55	345	LR	LR	04 08 21.2	
	comp=Z,4µm,19.0s,baz=64,slow=39						
DESE	**Dese**	78.59	277	*e*P	P	03 29 15.5	-2.8
DESE	**Dese**	78.59	277	*e*P	P	03 29 18.8	+0.5
DESE	**Dese**	78.59	277	*e*P	P	03 29 26.4	+8.1
KDZ	**Kurdzhali**	78.67	311	*i* P	P	03 29 17.3	-0.7
DEV	**Deva**	78.68	315	⇓P	P	03 29 18.9	+1.1
BLCB	**Balcova**	78.78	307	P	P	03 29 17.3	-1.3
RDO	**Rodhopi**	78.78	310	P	P	03 29 17.3	-1.2
RDO	**Rodhopi**	78.78	310	IAmb	IAmb	03 29 26.1	
	comp=Z,52nm,1.4s						
OJC	**Ojcow**	78.79	320	*e*P	P	03 29 17.4	-1.0
OJC				*e*sP	pP	03 29 22.4	-0.1
OJC				*e*S	S	03 39 13.4	-2.6
OJC				*e*L	L	04 04 55.4	
	comp=Z,6µm,20.1s						
OJC	**Ojcow**	78.79	320	IAmb	IAmb	03 29 25.5	
	comp=Z,111nm,1.2s						
TULEG	**Thule**	78.80	3	IAMs_20	IAMs_20	04 02 43.0	
	comp=Z,5µm,21.0s						
ARG	**Arkhangelos**	78.80	305	IAmb	IAmb	03 29 28.4	
	comp=Z,108nm,1.2s						
NIE	**Niedzica**	78.83	319	*e*P	P	03 29 17.9	-0.8
NIE				*e*sP	sP	03 29 23.7	-0.6
NIE				*e*S	S	03 39 16.4	-0.1
NIE				*e*L	L	04 07 17.5	
	comp=Z,3µm,21.0s						
GKP	**Gorka Klasztor**	78.90	324	*e*P	P	03 29 18.4	-0.5
GKP				*e*sP	pP	03 29 22.8	-0.2
GKP				*e*S	S	03 39 17.2	+0.2
GKP				*e*L	L	04 08 22.3	
	comp=Z,8µm,17.6s						
GKP	**Gorka Klasztor**	78.90	324	⇓*e*P	P	03 29 19.1	+0.2
GZR	**Gura Zlata**	78.95	315	⇑P	P	03 29 20.6	+1.0
PLD	**Plovdiv**	78.98	311	*i* P	P	03 29 19.0	-0.6
PRK	**Paraskevi**	79.00	308	P	P	03 29 19.7	-0.1
BODT	**Bodrum**	79.09	306	P	P	03 29 19.0	-1.3
DEL	**Delary**	79.16	328	*e*P	P	03 29 19.8	-0.5
PGB	**Panagyurishte**	79.17	312	*i* P	P	03 29 20.0	-0.8
SMG	**Samos**	79.19	306	P	P	03 29 19.6	-1.3
BSD	**Bornholm Skovb**	79.28	326	*e*P	P	03 29 20.5	-0.4
SIRR	**Siria**	79.31	316	⇑P	P	03 29 22.7	+1.3
SIGR	**SIGRI**	79.31	308	P	P	03 29 20.1	-1.4
NISR	**Nisiros**	79.39	305	P	P	03 29 21.1	-0.9
HERR	**Herculane**	79.40	315	⇑P	P	03 29 21.1	-0.7
LANS	**Liptovska Anna**	79.44	319	*e*P	P	03 29 23.7	+1.6
LANS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LANS	**Liptovska Anna**	79.44	319	*e*P	P	03 29 23.7	+1.6
LIA	**Limnos Island**	79.52	309	P	P	03 29 21.2	-1.4
KONO	**Kongsberg**	79.55	331	P	P	03 29 22.1	-0.3
KONO				IAmb	IAmb	03 29 29.0	
	comp=Z,74nm,1.6s						

KONO	Kongsberg	79.55	331	P	P	03 29 22.1	-0.3
KONO				pmax	pmax		
	comp=Z,73nm,1.7s						
KONO				MLR	MLR		
	comp=Z,13µm,20.0s						
KAVA	Kavala	79.55	310	P	P	03 29 21.5	-1.3
THAS	Thassos island	79.57	310	P	P	03 29 21.2	-1.6
BZS	Buzias	79.61	315	⇑P	P	03 29 22.1	-0.8
PSZ	Piszkesteto	79.71	318	⇑P	P	03 29 24.8	+1.2
PSZ	Piszkesteto	79.71	318	IAmb	IAmb	03 29 35.5	
	comp=Z,68nm,1.5s						
PSZ				IAMs_20	IAMs_20	04 09 55.7	
	comp=Z,4µm,19.0s						
PSZ	Piszkesteto	79.71	318	P	P	03 29 23.1	-0.6
BLKB	Belogradchik	79.74	313	⇑P	P	03 29 25.1	+1.3
VTS	Vitosha	79.78	312	⇑P	P	03 29 24.1	-0.1
VTS	Vitosha	79.78	312	IAmb	IAmb	03 29 33.5	
	comp=Z,86nm,1.3s						
VTS	Vitosha	79.78	312	*i* P	P	03 29 23.6	-0.6
KARP	Karpathos	79.78	304	P	P	03 29 22.8	-1.4
KARP	Karpathos	79.78	304	IAMs_20	IAMs_20	04 09 12.3	
	comp=Z,4µm,22.0s						
MMB	Musomiste	79.86	311	*i* P	P	03 29 22.6	-1.9
NVR	Nevrokopi	79.86	311	P	P	03 29 23.4	-1.1
MDVR	Moldovita	79.89	315	⇑P	P	03 29 24.0	-0.6
OKC	Ostrava-Krasne	79.92	320	*e*P	P	03 29 24.8	+0.2
OKC				*e*S	S	03 39 24.4	-3.5
OKC				MLR	MLR		
	comp=Z,4µm,13.2s						
OKC	Ostrava-Krasne	79.92	320	*e*P	P	03 29 24.8	+0.2
OKC				*e*S	S	03 39 24.4	-3.5
OKC				AMS	AMS	04 10 10.0	
	comp=Z,4µm,13.2s						
KOKK	Kokkinochori,	79.98	310	P	P	03 29 22.9	-2.2
VYHS	Vyhne	80.10	319	*e*P	P	03 29 26.1	+0.5
VYHS				pmax	pmax		
	comp=Z,18nm,1.1s						
VYHS	Vyhne	80.10	319	*e*P	P	03 29 26.1	+0.5
SRS	Serrai	80.14	311	P	P	03 29 24.5	-1.5
KKB	Krupnik	80.19	312	*i* P	P	03 29 25.1	-1.1
OUR	Ouranopolis	80.19	310	P	P	03 29 24.6	-1.6
AAE	Adis Abeba	80.20	275	⇓*e*P	P	03 29 28.5	+1.4
AAE	Adis Abeba	80.20	275	⇓*e*P	P	03 29 28.5	+1.4
AAE	Adis Abeba	80.20	275	*e*P	P	03 29 25.3	-1.8
AAE	Adis Abeba	80.20	275	⇓*i*P	P	03 29 27.1	0.0
AAE	Adis Abeba	80.20	275	*e*P	P	03 29 27.1	0.0
MORC	Moravsky Berou	80.29	320	⇑P	P	03 29 26.2	-0.5
MORC	Moravsky Berou	80.29	320	⇓*i*P	P	03 29 25.7	-1.0
MORC	Moravsky Berou	80.29	320	*e*S	S	03 39 28.9	-3.1
MAUC	Maruska	80.31	320	*e*P	P	03 29 26.2	-0.6
MAUC				*e*S	S	03 39 31.5	-0.7
MAUC				AMS	AMS	04 11 40.0	
	comp=Z,7µm,15.4s						
FURI	Furi	80.33	275	IAMs_20	IAMs_20	04 09 21.3	
	comp=Z,3µm,19.0s						
FURI	Furi	80.33	275	*e*P	P	03 29 22.6	-5.3
FURI	Furi	80.33	275	*e*P	P	03 29 23.2	-4.6
FURI	Furi	80.33	275	⇑*i*P	P	03 29 29.6	+1.8
FURI	Furi	80.33	275	*e*P	P	03 29 29.6	+1.8
APE	Apeiranthos	80.39	306	P	P	03 29 24.8	-2.7
SOH	Sokhos	80.43	310	P	P	03 29 26.0	-1.6
BUD	Budapest	80.43	318	P	P	03 29 28.6	+1.3
KSP	Ksiaz	80.52	322	*e*P	P	03 29 26.9	-0.9
KSP				*e*sP	pP	03 29 31.8	-0.1
KSP				*e*S	S	03 39 32.8	-1.5
KSP				*e*L	L	04 08 38.6	
	comp=Z,7µm,21.3s						
PLG	Polygyros	80.55	310	P	P	03 29 26.0	-2.2
PAIG	Paliouri	80.57	310	P	P	03 29 26.4	-1.9
KRLC	Kraliky	80.60	321	*e*P	P	03 29 28.7	+0.4
KRLC				*e*S	S	03 39 32.4	-2.8
KRLC				MLR	MLR		
	comp=Z,6µm,27.8s						
KRLC	Kraliky	80.60	321	*e*P	P	03 29 28.7	+0.4
KRLC				*e*S	S	03 39 32.4	-2.8
KRLC				AMS	AMS	04 08 10.0	
	comp=Z,6µm,27.8s						
JAVC	Velka Javorina	80.63	320	⇓*i*P	P	03 29 29.4	+0.9
JAVC	Velka Javorina	80.63	320	*e*S	S	03 39 33.9	-1.7
HORT	Hortiatis	80.70	310	P	P	03 29 26.8	-2.3
OSTC	Ostas	80.70	322	*e*P	P	03 29 30.2	+1.4
OSTC				*e*S	S	03 39 28.9	-7.3
OSTC				AMS	AMS	04 08 20.0	
	comp=Z,7µm,14.0s						
DPC	Dobruska-Polom	80.73	321	*e*P	P	03 29 29.6	+0.6
DPC				*e*S	S	03 39 35.9	-0.7
DPC				MLR	MLR		
	comp=Z,5µm,13.4s						
DPC	Dobruska-Polom	80.73	321	*e*P	P	03 29 29.6	+0.6
DPC				*e*S	S	03 39 35.9	-0.7
DPC				AMS	AMS	04 08 20.0	
	comp=Z,5µm,13.4s						
VAY	Valandovo	80.76	311	*i* P	P	03 29 29.1	-0.2
CHVC	Chvalec	80.77	322	*e*P	P	03 29 34.5	+5.3
CHVC				*e*S	S	03 39 33.3	-3.7
CHVC				AMS	AMS	04 08 30.0	
	comp=Z,8µm,26.6s						
KYMI	Kymi, Euboea I	80.80	308	P	P	03 29 28.0	-1.5
UPC	Upice	80.84	322	*e*P	P	03 29 34.2	+4.7
UPC				*e*S	S	03 39 34.2	-3.4
UPC				MLR	MLR		
	comp=Z,7µm,15.9s						
UPC	Upice	80.84	322	*e*P	P	03 29 34.2	+4.7
UPC				*e*S	S	03 39 34.2	-3.4
UPC				AMS	AMS	04 08 20.0	
	comp=Z,7µm,15.9s						
SMOL	Smolenice	80.93	319	*e*P	P	03 29 31.4	+1.3
SMOL				pmax	pmax		
	comp=Z,126nm,2.1s						
SMOL	Smolenice	80.93	319	*e*P	P	03 29 31.4	+1.3
CSKK	Cskako	80.95	318	P	P	03 29 30.9	+0.7
FRGS	Fruska Gora	80.95	316	⇑P	P	03 29 29.7	-0.6
GRG	Griva	81.03	311	P	P	03 29 29.0	-1.8
VRAC	Vranov	81.06	320	⇓P	P	03 29 31.9	+1.2
VRAC	Vranov	81.06	320	P	P	03 29 31.4	+0.6
	comp=Z,2.6nm,0.5s,baz=68,slow=5.0,SNR=14						
VRAC				LR	LR	04 06 27.6	
	comp=Z,3µm,20.5s,baz=68,slow=36						
	comp=Z,2.6nm,0.5s						
VRAC	Vranov	81.06	320	⇓*i*P	P	03 29 30.2	-0.5
VRAC	Vranov	81.06	320	*e*S	S	03 39 37.4	-2.5
MODS	Modra-Piesok	81.08	319	*e*P	P	03 29 31.4	+0.5
MODS				pmax	pmax		
	comp=Z,483nm,2.1s						
MODS	Modra-Piesok	81.08	319	*e*P	P	03 29 31.4	+0.5
RUE	Ruedersdorf	81.13	324	*e*P	P	03 29 31.6	+0.6
XOR	Xorichti	81.14	309	P	P	03 29 28.5	-2.9
URZ	Urewera	81.15	139	LR	LR	04 06 40.1	
	comp=Z,914nm,18.0s,baz=31,slow=37						
PTL	Penteli	81.21	308	P	P	03 29 30.0	-1.8
MORH	Mrgy, Hungar	81.22	317	P	P	03 29 30.6	-1.1
SKO	Skopje	81.26	312	*i* P	P	03 29 31.1	-0.8
ZST	Bratislava	81.27	319	*e*P	P	03 29 33.9	+2.1
ZST	Bratislava	81.27	319	*e*P	P	03 29 33.9	+2.1
KRUC	Moravsky	81.29	320	⇓*i*P	P	03 29 31.2	-0.7
KRUC	Moravsky	81.29	320	*e*S	S	03 39 39.7	-2.6
DIVS	Divibare	81.30	315	IAmb	IAmb	03 29 37.9	
	comp=Z,64nm,1.6s						
DIVS				IAMs_20	IAMs_20	04 10 35.9	
	comp=Z,3µm,19.0s						
LIT	Litokhoron	81.33	310	P	P	03 29 30.2	-2.2
BKZ	Black Stump Fm	81.38	140	IAmb	IAmb	03 29 41.5	
	comp=Z,66nm,1.2s						
BKZ				IAMs_20	IAMs_20	03 59 20.0	
	comp=Z,3µm,22.0s						
MPLH	Magyarpolny	81.47	318	P	P	03 29 33.1	+0.2
EGYH	Egyhazaskeszo	81.49	318	P	P	03 29 34.1	+1.1
ATAL	Atalanti	81.54	309	P	P	03 29 30.6	-2.9
RPZ	Rata Peaks	81.57	146	LR	LR	04 02 48.1	
	comp=Z,1µm,21.9s,baz=327,slow=34						
IDI	Anoyia	81.58	305	⇑P	P	03 29 32.9	-1.0
IDI	Anoyia	81.58	305	P	P	03 29 33.7	-0.2
	comp=Z,7.4nm,0.9s,baz=178,slow=12,SNR=6.1						
IDI				LR	LR	04 11 43.9	
	comp=Z,976nm,20.9s,baz=72,slow=40						
	comp=Z,7.4nm,0.9s						
IDI	Anoyia	81.58	305	P	P	03 29 31.2	-2.7
IDI	Anoyia	81.58	305	IAmb	IAmb	03 29 38.9	
	comp=Z,82nm,1.5s						
KOVH	Kovagotottos	81.62	317	P	P	03 29 32.8	-0.9
PVCC	Panska Ves	81.64	322	*e*S	S	03 39 42.1	-3.8
PVCC				AMS	AMS	04 09 20.0	
	comp=Z,5µm,14.3s						
TREC	Trest	81.70	321	AMS	AMS	04 09 00.0	
	comp=Z,5µm,14.3s						
SCO	Scoresbysund	81.74	348	*i* P	P	03 29 38.1	+4.2
SCO				IAmb	IAmb	03 29 50.2	
	comp=Z,7.9nm,1.0s						
KZN	Kozani	81.74	310	P	P	03 29 32.6	-2.0
OXZ	Oxford	81.79	146	IAMs_20	IAMs_20	03 58 24.6	
	comp=Z,3µm,18.0s						
FNA	Florina	81.81	311	P	P	03 29 32.6	-2.3
FNA	Florina	81.81	311	IAmb	IAmb	03 29 40.7	
	comp=Z,138nm,1.9s						
BRG	Berggiesshubel	81.82	323	*e*P	P	03 29 36.3	+1.5
BRG				Amp		03 29 42.8	
	comp=Z,104nm,1.9s						
BRG				*e*x	x	03 29 49.3	
BRG				Amp		03 29 51.9	
	comp=Z,62nm,1.9s						
BRG	Berggiesshubel	81.82	323	SS	SS	03 45 11.0	+6.1
BRG				Amp		04 10 04.0	
	comp=E,5.2nm,14.6s						
BRG				Amp		04 10 13.0	
	comp=N,3.4nm,12.8s						
BRG				Amp		04 10 16.0	
	comp=Z,7.2nm,14.2s						
BRG	Berggiesshubel	81.82	323	*e*P	P	03 29 36.2	+1.5
BRG				S	S	03 39 49.0	+1.3
BRG				SS	SS	03 45 11.0	+6.1
BRG				pmax	pmax		
	comp=Z,104nm,1.9s						
BRG				pmax	pmax		
	comp=Z,62nm,2.0s						
BRG				pmax	pmax		
	comp=E,5µm,14.6s						
BRG				MLR	MLR		
	comp=N,3µm,12.8s						
BRG				MLR	MLR		
	comp=Z,7µm,14.2s						
THL	Klokotos Trika	81.89	310	P	P	03 29 32.8	-2.5
AGG	Agios Georgios	81.89	309	P	P	03 29 32.6	-2.8
PRU	Pruhonice	81.91	322	*e*P	P	03 29 37.8	+2.6
PRU				*e*S	S	03 39 43.0	-5.7
PRU				MLR	MLR		
	comp=Z,6µm,17.2s						
PRU	Pruhonice	81.91	322	*e*P	P	03 29 37.8	+2.6
PRU				*e*S	S	03 39 43.0	-5.7
PRU				AMS	AMS	04 09 10.0	
	comp=Z,6µm,17.2s						
KHZ	Kahutara	81.94	144	IAMs_20	IAMs_20	04 00 33.5	
	comp=Z,3µm,21.0s						
RONA	Rosalia, Austr	81.98	319	*e*P	P	03 29 38.0	+2.3
	comp=Z,36nm,1.9s,SNR=6.6						
MAKR	Makrakomi, Fth	82.04	309	P	P	03 29 33.6	-2.6
PHP	Peshkopia	82.05	312	P	P	03 29 34.6	-1.6
OHR	Ohrid	82.06	312	*i* P	P	03 29 40.5	+4.3
SUMG	Summit	82.10	354	IAmb	IAmb	03 29 44.5	
	comp=Z,44nm,1.2s						
SUMG				IAMs_20	IAMs_20	04 06 42.0	
	comp=Z,4µm,20.0s						
SUMG	Summit	82.10	354	*i* P	P	03 29 35.0	-1.3
SUMG				IAmb	IAmb	03 29 41.9	
	comp=Z,119nm,1.8s						
CLL	Collm	82.12	323	IAmb	IAmb	03 29 43.0	
	comp=Z,92nm,1.8s						
CLL	Collm	82.12	323	*i* P	P	03 29 36.0	-0.3
CLL				*e*S	S	03 39 50.0	-0.8
CLL				pmax	pmax		
	comp=Z,197nm,2.2s						
CLL				MLR	MLR		
	comp=Z,7µm,18.9s						
CLL	Collm	82.12	323	*i* P	P	03 29 36.0	-0.3
	comp=Z,197nm,2.2s						
CLL				*e*Pmax		03 29 41.0	
CLL				*e*PP	PP	03 32 47.0	+3.1
CLL				*e*PPP	PPP	03 34 36.0	
CLL				*e*(PPPP)		03 36 12.0	
CLL				*e*S	S	03 39 50.0	-0.8
CLL				*e*PS	PnS	03 40 47.0	+7.6
CLL				*e*SS	SS	03 45 08.0	-1.4
CLL				*e*SSS	SSS	03 48 48.0	
CLL				*e*SSSS		03 51 12.0	
CLL				*e*x	x	03 53 24.0	
CLL				*e*x	x	03 54 48.0	
CLL				LmH		04 03 00.0	
	comp=N,7µm,18.6s						
CLL				LmH		04 03 00.0	
	comp=E,4µm,19.5s						
CLL				LmV		04 10 00.0	
	comp=Z,7µm,18.9s						
CLL				Lmax		04 10 00.0	
CONA	Conrad Observa	82.13	319	P	P	03 29 36.6	+0.1
	comp=Z,71nm,1.8s,SNR=20						
BBB	Bella Bella	82.14	36	LR	LR	04 03 57.0	
	comp=Z,795nm,21.2s,baz=344,slow=34						
KPRO	Kipourio	82.17	310	P	P	03 29 33.9	-3.0
YKA	Yellowknife Ar	82.22	23	P	P	03 29 35.6	-1.0
	comp=Z,7.5nm,0.7s,baz=312,slow=5.0,SNR=34						
YKA				PKKPbc	PKKPbc	03 48 03.4	-2.4
	comp=Z,0.4nm,0.7s,baz=130,slow=2.3,SNR=8.2						
	comp=Z,7.5nm,0.7s						
YKA	Yellowknife Ar	82.22	23	*i* P	P	03 29 37.4	+0.8
YKA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBN	Korca	82.28	311	IAmb	IAmb	03 29 42.1	
	comp=Z,83nm,1.3s						
EVR	Evrytania	82.31	309	P	P	03 29 35.6	-2.1
MQZ	McQueen's Vall	82.38	146	IAMs_20	IAMs_20	03 58 07.0	
	comp=Z,3µm,22.0s						
VLI	Veliai	82.43	307	P	P	03 29 35.0	-3.2
KLV	Kalavryta, Ach	82.44	308	P	P	03 29 35.4	-2.9
PDG	Podgorica	82.52	313	IAMs_20	IAMs_20	04 09 47.1	
	comp=Z,3µm,21.0s						
TIR	Tirane	82.59	312	IAMs_20	IAMs_20	04 09 42.2	
	comp=Z,5µm,22.0s						
KOGS	Kog	82.59	318	*e*P	P	03 29 36.7	-2.2
KOGS				*e*S	S	03 39 52.6	-3.2
CKRC	Cesky Krumlov	82.61	321	*e*P	P	03 29 39.2	+0.2
CKRC				*e*S	S	03 39 56.3	+0.3
ARSA	Arzberg	82.65	319	*i* P	P	03 29 41.5	+2.3
	comp=Z,36nm,1.9s						
JAN	Janina	82.66	310	P	P	03 29 38.3	-1.1
KHC	Kasperske Hory	82.88	321	IAmb	IAmb	03 29 46.6	
	comp=Z,108nm,1.8s						
KHC	Kasperske Hory	82.88	321	*e*P	P	03 29 40.7	+0.3
KHC				*e*		03 29 45.5	
KHC				*e*S	S	03 39 52.7	-6.1
KHC				MLR	MLR		
	comp=Z,6µm,23.5s						
KHC	Kasperske Hory	82.88	321	*e*P	P	03 29 40.7	+0.3
KHC				*e*pP	PcP	03 29 45.5	+0.3
KHC				*e*S	S	03 39 52.7	-6.1
KHC				AMS	AMS	04 10 10.0	
	comp=Z,6µm,23.5s						
GEC2	GERESS Array S	82.95	321	IAmb	IAmb	03 29 46.8	
	comp=Z,76nm,1.6s						
GERES	GERESS Array B	82.95	321	P	P	03 29 40.3	-0.5
	comp=Z,3.1nm,1.0s,baz=113,slow=3.0,SNR=12						
GERES				PKKPbc	PKKPbc	03 48 04.7	+0.9
	comp=Z,0.9nm,0.9s,baz=222,slow=1.8,SNR=4.8						
GERES				LR	LR	04 09 14.8	
	comp=Z,3µm,18.4s,baz=66,slow=38						
	comp=Z,3.1nm,1.0s						
NKC	Novy Kostel	82.97	322	*e*S	S	03 39 50.1	-9.5
NKC				AMS	AMS	04 10 40.0	
	comp=Z,9µm,13.3s						
ITM	Ithomi	82.97	308	P	P	03 29 38.7	-2.3
IGT	Igoumenitsa	83.07	310	P	P	03 29 39.4	-2.1
MOA	Molln	83.11	320	*e*P	P	03 29 42.1	+0.6
	comp=Z,67nm,1.8s,SNR=7.8						
SOKA	Soboth	83.22	318	*i* P	P	03 29 42.8	+0.5
	comp=Z,58nm,2.0s,SNR=15						
CRES	Cresnjev	83.37	318	*e*P	P	03 29 41.9	-1.1
BIOA	Bad Ischl, Aus	83.56	320	*i* P	P	03 29 46.4	+2.5
	comp=Z,53nm,1.8s,SNR=6.1						
OBKA	Obir	83.60	318	*i* P	P	03 29 46.0	+1.8
	comp=Z,47nm,1.9s,SNR=6.1						
KBA	Koelnbreinsper	84.03	319	*e*P	P	03 29 46.0	-0.5
	comp=Z,24nm,1.4s						
MYKA	Terra Mystica	84.08	319	*e*P	P	03 29 48.1	+1.5
	comp=Z,41nm,2.1s						
CADS	Cadrg	84.22	319	*e*P	P	03 29 45.1	-2.3
CADS				*e*S	S	03 40 10.8	-1.7
OPO	Ambohidratompo	84.59	247	P	P	03 29 49.2	-0.5
	comp=Z,25nm,0.9s,baz=55,slow=4.9,SNR=12						
	comp=Z,25nm,0.9s						
ABTA	Abfaltersbach	84.69	319	*e*P	P	03 29 50.7	+0.9
	comp=Z,29nm,1.2s						
ABPO	Ambohimpanom	84.76	246	P	P	03 29 50.7	+0.1
ABPO				IAmb	IAmb	03 29 58.8	
	comp=Z,78nm,1.2s						
ABPO	Ambohimpanom	84.76	246	IAMs_20	IAMs_20	04 07 18.4	
	comp=Z,2µm,19.0s						
ABPO	Ambohimpanom	84.76	246	P	P	03 29 50.7	+0.1
ABPO				pmax	pmax		
	comp=Z,79nm,1.2s						
ABPO				MLR	MLR		
	comp=Z,2µm,19.0s						
STAL	STALIGIAL	84.82	319	IAmb	IAmb	03 29 55.1	
	comp=Z,65nm,1.3s						
WATA	Walderalm	84.94	320	*i* P	P	03 29 53.1	+2.0
	comp=Z,33nm,1.4s,SNR=5.8						
WTTA	Wattenberg	84.94	320	*i* P	P	03 29 53.8	+2.6
	comp=Z,52nm,1.3s,SNR=7.3						
MATE	Matera	85.04	313	⇑P	P	03 29 52.8	+1.3
MOTA	Moosalm	85.21	320	*i* P	P	03 29 56.7	+4.3
	comp=Z,33nm,1.3s,SNR=7.9						
SQTA	Sankt Quirin	85.22	320	*i* P	P	03 29 57.0	+4.6
	comp=Z,56nm,1.6s,SNR=9.5						
RETA	Reutte	85.33	321	*e*P	P	03 29 56.7	+3.8
	comp=Z,16nm,1.4s						
KIBK	Kibwezi	85.50	265	IAMs_20	IAMs_20	04 12 55.9	
	comp=Z,2µm,19.0s						
KIBK	Kibwezi	85.50	265	P	P	03 29 55.2	+0.9
	SNR=14						
LODK	Lodwar	85.56	272	IAmb	IAmb	03 29 58.9	
	comp=Z,55nm,1.5s						
LODK				IAMs_20	IAMs_20	04 09 37.0	
	comp=Z,3µm,19.0s						
LODK	Lodwar	85.56	272	P	P	03 29 55.4	+0.7
	SNR=23						
LODK	Lodwar	85.56	272	*e*P	P	03 29 48.5	-6.2
LODK	Lodwar	85.56	272	*e*P	P	03 29 52.6	-2.0
LODK	Lodwar	85.56	272	⇓*e*P	P	03 29 54.5	-0.2
ICESG	Greenland Ices	85.56	353	*i* P	P	03 29 54.2	+0.2
ICESG				IAmb	IAmb	03 30 00.6	
	comp=Z,473nm,2.8s						
FETA	Feichten	85.60	320	*i* P	P	03 29 56.5	+2.1
	comp=Z,39nm,1.4s,SNR=8.0						
TIP	Timpagrande	85.70	311	⇑P	P	03 29 56.5	+1.6
TIP	Timpagrande	85.70	311	IAMs_20	IAMs_20	04 14 06.4	
	comp=Z,4µm,21.0s						
KMBO	Kilima Mbogo	85.71	267	P	P	03 29 55.1	-0.5
	comp=Z,22nm,0.9s,baz=50,slow=5.9,SNR=23						
KMBO				LR	LR	04 09 22.7	
	comp=Z,1µm,19.9s,baz=50,slow=36						
	comp=Z,22nm,0.9s						
KMBO	Kilima Mbogo	85.71	267	P	P	03 29 54.1	-1.5
KMBO	Kilima Mbogo	85.71	267	*i* P	P	03 29 57.2	+1.6
KMBO				pmax	pmax		
	comp=Z,23nm,0.9s						
KMBO	Kilima Mbogo	85.71	267	P	P	03 29 56.4	+0.8
KMBO	Kilima Mbogo	85.71	267	*e*P	P	03 29 54.0	-1.5
KMBO	Kilima Mbogo	85.71	267	*e*P	P	03 29 54.5	-1.1
KMBO	Kilima Mbogo	85.71	267	*e*P	P	03 29 45.5	-10
KMBO	Kilima Mbogo	85.71	267	*i* P	P	03 29 56.5	+0.9
	SNR=14						
TEOL	Teolo	85.91	318	IAmb	IAmb	03 30 03.6	
	comp=Z,39nm,0.9s						
DAVA	Damuels	85.95	321	*e*P	P	03 29 58.3	+2.2
	comp=Z,27nm,1.6s						
BTNL	Ternell	86.18	325	*d*P	P	03 29 56.0	-1.0
DAVOX	Davos/Dischmat	86.22	320	P	P	03 29 57.5	0.0
	comp=Z,9.7nm,1.0s,baz=74,slow=7.1,SNR=9.9						
DAVOX				LR	LR	04 12 35.0	
	comp=Z,6µm,18.1s,baz=38,slow=38						
	comp=Z,9.7nm,1.0s						
MEM	Membach	86.23	325	*d*P	P	03 29 57.0	-0.2
MEM				*d*x	x	03 30 02.0	
ILULI	Ilulissat	86.25	358	IAMs_20	IAMs_20	04 08 26.9	
	comp=Z,4µm,19.0s						
LLLB	Lillooet	86.27	35	IAmb	IAmb	03 30 20.2	
	comp=Z,83nm,1.6s						
BEBN	Eben Emael	86.30	325	*d*P	P	03 29 56.3	-1.2
BHOU	Houvegnez	86.38	325	*d*x	x	03 30 03.0	
BORG	Borgarnes	86.45	345	LR	LR	04 13 10.8	
	comp=Z,3µm,18.5s,baz=29,slow=39						
BSTI	Sart Tilman	86.48	325	*d*P	P	03 29 57.4	-1.1
BSTI				*d*x	x	03 30 03.0	
VOI	Vohitsoka	86.48	244	IAMs_20	IAMs_20	04 07 54.2	
	comp=Z,3µm,19.0s						
WLF	Walferdange	86.70	324	*d*P	P	03 29 59.3	-0.2
WLF				*d*x	x	03 30 04.9	
BCLA	Clavier	86.71	325	*d*P	P	03 29 58.9	-0.6
BCLA				*d*x	x	03 30 04.1	
BGES	Gesves	86.84	325	*d*P	P	03 29 59.3	-0.9
BGES				*d*x	x	03 30 04.8	
RCHB	Rochefort	86.90	325	*d*P	P	03 30 00.0	-0.5
RCHB				*d*x	x	03 30 04.5	
A04D	Lummi Island	86.91	37	P	P	03 30 00.5	-0.1
	baz=305						
ECH	Echery	86.97	323	IAmb	IAmb	03 30 06.5	
	comp=Z,65nm,1.7s						
NLWA	Neilton Lookou	87.01	38	IAmb	IAmb	03 30 11.0	
	comp=Z,40nm,1.2s						
BMRD	Maredsous	87.06	325	*d*P	P	03 30 00.3	-1.0
BMRD				*d*x	x	03 30 05.6	
SNF	Seneffe	87.18	326	*d*P	P	03 30 00.8	-1.1
SNF				*d*x	x	03 30 06.4	
DOU	Dourbes	87.27	325	*d*P	P	03 30 01.2	-1.0
DOU				*d*x	x	03 30 06.9	
D03D	Eldon	87.37	38	P	P	03 30 02.7	-0.1
	baz=304						
D03D				S	S	03 40 44.9	+1.7
	baz=304						
B05A	Bryant	87.51	37	P	P	03 30 03.4	-0.1
	baz=305						
B05A				S	S	03 40 45.5	+1.1
	baz=305						
EKA	Eskdalemuir Ar	87.64	332	LR	LR	04 13 30.5	
	comp=Z,9µm,18.4s,baz=48,slow=38						
B06A	Marblemount	87.69	37	IAmb	IAmb	03 30 13.3	
	comp=Z,40nm,1.0s						
SENIN	Lac Senin/Sane	87.94	321	IAmb	IAmb	03 30 43.1	
	comp=Z,60nm,1.9s						
E04D	Cinebar	88.22	39	P	P	03 30 06.1	-0.8
	baz=305						
F04D	Rainier, OR	88.23	39	P	P	03 30 05.9	-1.1
	baz=304						
C06D	Leavenworth	88.36	37	P	P	03 30 07.1	-0.5
	baz=306						
SFJD	Kangerlussuaq	88.45	357	LR	LR	04 10 05.7	
	comp=Z,2µm,19.9s,baz=350,slow=36						
SFJD	Kangerlussuaq	88.45	357	IAMs_20	IAMs_20	04 14 20.8	
	comp=Z,2µm,19.0s						
G03D	McMinnville, O	88.58	40	P	P	03 30 08.2	-0.5
	baz=304						
G03D				S	S	03 40 53.9	-0.9
	baz=304						
RAR	Rarotonga	88.61	114	LR	LR	04 06 22.8	
	comp=Z,772nm,18.3s,baz=301,slow=33						
ANGG	Ammassalik, Gr	88.65	352	IAMs_20	IAMs_20	04 11 39.2	
	comp=Z,4µm,21.0s						
F04A	Amboy	88.66	39	IAmb	IAmb	03 30 18.2	
	comp=Z,46nm,1.2s						
DY2G	Dye2	88.70	355	*i* P	P	03 30 08.2	-0.9
DY2G				IAmb	IAmb	03 30 49.7	
	comp=Z,131nm,1.8s						
EDM	Edmonton	88.81	30	IAmb	IAmb	03 30 15.0	
	comp=Z,62nm,1.3s						
I02E	Swisshome, OR	88.85	41	P	P	03 30 09.2	-0.8
	baz=304						
I02E				S	S	03 40 59.6	+2.2
	baz=304						
LTY	Liberty	88.87	37	IAmb	IAmb	03 30 44.1	
	comp=Z,84nm,1.9s						
B08A	Colville Reser	88.94	36	IAmb	IAmb	03 30 19.4	
	comp=Z,44nm,1.2s						
BNI	Bardonecchia	89.04	320	IAmb	IAmb	03 30 16.6	
	comp=Z,76nm,1.9s						
F05D	White Salmon	89.23	39	P	P	03 30 11.6	-0.2
	baz=306						
H04D	Lebanon	89.28	40	P	P	03 30 10.8	-1.1
	baz=305						
H04D				S	S	03 41 01.6	+0.1
	baz=305						
J01E	Myrtle Point	89.33	42	P	P	03 30 11.1	-1.1
	baz=304						
J01E				S	S	03 41 02.4	+0.5
	baz=304						
I03D	Drain, OR	89.38	41	P	P	03 30 11.3	-1.1
	baz=304						
I03D				S	S	03 41 02.6	+0.2
	baz=304						

HOOD	Mount Hood Mea	89.45	39	IAmb	IAmb	03 30 27.4	
	comp=Z,36nm,0.9s						
H04A	Detroit Lake	89.51	40	IAmb	IAmb	03 30 22.2	
	comp=Z,56nm,1.3s						
G05D	Wamic, OR	89.69	39	P	P	03 30 13.4	-0.6
	baz=306						
E07A	Sunnyside	89.74	37	IAmb	IAmb	03 30 23.7	
	comp=Z,61nm,1.2s						
K02D	Willamette Mer	89.75	42	P	P	03 30 13.4	-0.9
	baz=304						
C09A	Chrisman Ranch	89.85	36	IAmb	IAmb	03 30 34.1	
	comp=Z,65nm,1.5s						
I04A	Tendick Farm,	89.89	41	P	P	03 30 14.3	-0.6
	baz=305						
I04A				S	S	03 41 03.9	-3.4
	baz=305						
D08A	Wollman Farm,	89.95	37	IAmb	IAmb	03 30 38.7	
	comp=Z,34nm,1.3s						
HAWA	Hanford	90.02	37	IAmb	IAmb	03 30 24.9	
	comp=Z,48nm,1.3s						
F07A	Phinny Hill Vi	90.09	38	IAmb	IAmb	03 30 30.4	
	comp=Z,30nm,1.0s						
L02F	Cave Junction	90.13	43	P	P	03 30 15.2	-0.9
	baz=304						
L02F				S	S	03 41 07.8	-1.7
	baz=304						
SSB	Saint Sauveur	90.14	321	IAmb	IAmb	03 30 21.5	
	comp=Z,73nm,1.9s						
NEW	Newport	90.17	35	IAmb	IAmb	03 30 34.8	
	comp=Z,40nm,1.4s						
NEW	Newport	90.17	35	IAMs_20	IAMs_20	04 14 10.4	
	comp=Z,2µm,18.0s						
NEW	Newport	90.17	35	P	P	03 30 14.9	-1.2
	baz=309						
NEW				S	S	03 41 10.0	+0.3
	baz=309						
I05D	Terrebonne, OR	90.20	40	P	P	03 30 15.5	-0.9
	baz=306						
I05D				S	S	03 41 09.2	-1.0
	baz=306						
E08A	Dider Farm, El	90.22	37	IAmb	IAmb	03 30 25.7	
	comp=Z,38nm,1.4s						
HUMO	Hull Mountain	90.23	42	P	P	03 30 16.1	-0.4
HUMO				IAmb	IAmb	03 30 27.4	
	comp=Z,77nm,2.0s						
J04D	Umpqua Nationa	90.38	41	P	P	03 30 16.6	-0.8
	baz=305						
PINE	Pine Mountain	90.76	40	P	P	03 30 18.2	-0.9
PINE				IAmb	IAmb	03 30 34.1	
	comp=Z,60nm,1.2s						
L04D	Klamath Falls	90.85	42	P	P	03 30 18.5	-1.0
	baz=305						
L04D				S	S	03 41 18.7	+2.3
	baz=305						
J05D	Fort Rock, OR	90.88	41	P	P	03 30 19.3	-0.4
	baz=306						
J05D				S	S	03 41 17.8	+1.1
	baz=306						
YBH	Yreka Blue Hor	90.88	43	LR	LR	04 04 53.2	
	comp=Z,389nm,21.8s,baz=327,slow=31						
YBH	Yreka Blue Hor	90.88	43	IAmb	IAmb	03 30 28.4	
	comp=Z,31nm,1.4s						
K04D	Chiloquin, OR	90.95	41	P	P	03 30 19.3	-0.7
	baz=305						
CASY	Casey	91.09	185	P	P	03 30 18.2	-1.4
CASY				IAmb	IAmb	03 30 25.5	
	comp=Z,61nm,1.4s						
WALA	Waterton Lakes	91.29	33	IAmb	IAmb	03 30 40.3	
	comp=Z,54nm,1.2s						
K05A	Summer Lake	91.41	41	P	P	03 30 20.0	-2.2
MBAR	Mbarara	91.42	270	P	P	03 30 22.5	-0.2
	comp=Z,3.2nm,0.2s,baz=85,slow=3.5,SNR=5.1						
MBAR				LR	LR	04 14 00.3	
	comp=Z,1µm,19.7s,baz=44,slow=37						
	comp=Z,3.2nm,0.2s						
MBAR	Mbarara	91.42	270	P	P	03 30 21.3	-1.4
MBAR				IAmb	IAmb	03 30 29.2	
	comp=Z,52nm,1.9s						
MBAR	Mbarara	91.42	270	IAMs_20	IAMs_20	04 16 24.9	
	comp=Z,3µm,19.0s						
MBAR	Mbarara	91.42	270	P	P	03 30 21.3	-1.4
MBAR				pmax	pmax		
	comp=Z,52nm,1.9s						
MBAR	Mbarara	91.42	270	*i* P	P	03 30 24.3	+1.7
MBAR	Mbarara	91.42	270	⇓*i*P	P	03 30 23.7	+1.0
I07A	Izee	91.42	39	IAmb	IAmb	03 30 31.1	
	comp=Z,66nm,1.9s						
FRB	Frobisher Bay	91.48	5	LR	LR	04 15 46.9	
	comp=Z,2µm,18.7s,baz=352,slow=38						
F10A	Beach Ranch, E	91.54	37	IAmb	IAmb	03 30 37.3	
	comp=Z,24nm,1.2s						
FCC	Fort Churchill	91.65	18	IAmb	IAmb	03 30 25.7	
	comp=Z,79nm,1.9s						
JTMT	Jette	91.97	34	IAmb	IAmb	03 30 34.8	
	comp=Z,23nm,1.0s						
BMO	Blue Mountains	92.19	38	IAmb	IAmb	03 30 44.1	
	comp=Z,36nm,1.5s						
MOD	Modoc Plateau	92.25	41	IAmb	IAmb	03 30 36.1	
	comp=Z,66nm,1.6s						
J08A	Circle Bar Ran	92.45	39	IAmb	IAmb	03 30 40.9	
	comp=Z,23nm,1.0s						
KEST	Kesra	92.52	311	P	P	03 30 27.2	-0.1
	comp=Z,8.6nm,1.0s,baz=81,slow=23,SNR=3.0						
KEST				LR	LR	04 18 51.2	
	comp=Z,3µm,18.9s,baz=338,slow=40						
	comp=Z,8.6nm,1.0s						
KEST	Kesra	92.52	311	P	P	03 30 25.2	-2.1
KEST				IAmb	IAmb	03 31 06.0	
	comp=Z,54nm,1.4s						
MSO	Missoula	92.74	35	IAmb	IAmb	03 30 47.0	
	comp=Z,46nm,1.7s						
MSO				IAMs_20	IAMs_20	04 16 34.5	
	comp=Z,3µm,18.0s						
MSO	Missoula	92.74	35	P	P	03 30 27.4	-0.8
	baz=311						
MSO				S	S	03 41 34.4	+1.2
	baz=311						
PLID	Pearl Lake	92.77	37	IAMs_20	IAMs_20	04 14 33.5	
	comp=Z,2µm,21.0s						
WVOR	Wild Horse Val	92.92	40	IAmb	IAmb	03 30 39.5	
	comp=Z,32nm,1.3s						
MPK	Martis Peak	93.96	43	IAmb	IAmb	03 30 41.5	
	comp=Z,33nm,1.3s						
EGMT	Eagleton	94.02	32	IAmb	IAmb	03 30 53.8	
	comp=Z,36nm,1.6s						
EGMT				IAMs_20	IAMs_20	04 14 02.2	
	comp=Z,3µm,20.0s						
EGMT	Eagleton	94.02	32	P	P	03 30 31.8	-2.2
	baz=314						
EMB	Emerald Bay	94.10	44	IAmb	IAmb	03 30 41.4	
	comp=Z,20nm,0.9s						
PNTR	Pine Nut	94.35	43	IAmb	IAmb	03 30 54.6	
	comp=Z,24nm,1.2s						
DLMT	Dillon	94.41	35	IAmb	IAmb	03 30 46.7	
	comp=Z,22nm,1.1s						
DLMT				IAMs_20	IAMs_20	04 13 55.8	
	comp=Z,3µm,21.0s						
HLID	Hailey	94.62	37	IAMs_20	IAMs_20	04 19 21.5	
	comp=Z,3µm,20.0s						
HLID	Hailey	94.62	37	P	P	03 30 36.4	-0.6
	baz=311						
HLID				S	S	03 41 50.2	+0.2
	baz=311						
BOZ	Bozeman (W)	94.76	35	IAMs_20	IAMs_20	04 18 52.9	
	comp=Z,2µm,18.0s						
BOZ	Bozeman (W)	94.76	35	P	P	03 30 36.0	-1.5
	baz=313						
BOZ				S	S	03 41 49.1	-2.0
	baz=313						
BMN	Battle Mountai	94.99	41	IAmb	IAmb	03 30 47.4	
	comp=Z,44nm,1.9s						
KVN	Kaiserville	95.30	43	IAmb	IAmb	03 30 49.2	
	comp=Z,21nm,1.3s						
LHV	Little Huntoon	95.54	44	IAmb	IAmb	03 30 50.7	
	comp=Z,32nm,1.4s						
NVAR	Mina Array Bea	95.55	43	P	P	03 30 41.0	-0.5
	comp=Z,5.6nm,0.9s,baz=289,slow=4.8,SNR=19						
	comp=Z,5.6nm,0.9s						
NV11	Mina Array Sit	95.64	43	IAmb	IAmb	03 30 49.1	
	comp=Z,27nm,1.7s						
MLAC	Mammoth, Mammo	95.70	44	P	P	03 30 41.1	-1.0
	baz=307						
PPT	Papeete	95.76	107	LR	LR	04 10 53.9	
	comp=Z,643nm,18.2s,baz=289,slow=34						
PPT2	Papeete2	95.77	107	*e*S	S	03 42 26.6	+26
PPT2	Papeete2	95.77	107	*e*LR	LR	04 01 56.3	
	comp=Z,4µm,26.0s,baz=284						
PAGB	Antelope Grade	95.91	46	IAmb	IAmb	03 30 49.5	
	comp=Z,16nm,0.9s						
ELK	Elko	95.96	40	IAmb	IAmb	03 30 53.8	
	comp=Z,25nm,1.8s						
ELK				IAMs_20	IAMs_20	04 17 44.0	
	comp=Z,2µm,18.0s						
H17A	Grant Village	96.12	35	P	P	03 30 43.2	-0.8
	baz=314						
VOG	Valley Oaks Go	96.13	45	P	P	03 30 42.1	-1.6
	baz=307						
DGMT	Dagmar	96.26	29	IAMs_20	IAMs_20	04 14 28.1	
	comp=Z,3µm,20.0s						
DGMT	Dagmar	96.26	29	P	P	03 30 41.7	-2.4
	baz=319						
FLWY	Flagg Ranch	96.28	35	IAMs_20	IAMs_20	04 22 23.1	
	comp=Z,2µm,18.0s						
RLMT	Red Lodge	96.29	34	IAmb	IAmb	03 31 03.9	
	comp=Z,27nm,1.9s						
RLMT				IAMs_20	IAMs_20	04 15 21.4	
	comp=Z,3µm,19.0s						
RLMT	Red Lodge	96.29	34	P	P	03 30 42.9	-1.7
	baz=315						
SMMC	Simmler	96.33	47	P	P	03 30 44.3	-0.4
	baz=306						
TIN	Tinemaha, Big	96.43	44	P	P	03 30 44.1	-1.2
	baz=308						
MOOW	Moose Ponds	96.48	36	IAMs_20	IAMs_20	04 22 31.4	
	comp=Z,2µm,19.0s						
TPAW	Teton Pass	96.55	36	IAMs_20	IAMs_20	04 23 01.3	
	comp=Z,2µm,21.0s						
LAO	LASA Array	96.66	31	IAMs_20	IAMs_20	04 16 07.8	
	comp=Z,3µm,19.0s						
SNOW	Snow King Moun	96.67	36	IAMs_20	IAMs_20	04 16 05.6	
	comp=Z,2µm,19.0s						
REDW	Red Top Meadow	96.69	36	IAMs_20	IAMs_20	04 15 22.0	
	comp=Z,2µm,20.0s						
PKM	Mcpherson Peak	96.70	47	P	P	03 30 43.4	-3.2
	baz=306						
AHID	Auburn Hatcher	96.96	36	IAMs_20	IAMs_20	04 19 21.3	
	comp=Z,2µm,18.0s						
BGU	Big Grassy Mou	97.12	39	IAmb	IAmb	03 30 53.1	
	comp=Z,23nm,1.9s						
ARVC	Arvin	97.20	46	P	P	03 30 47.0	-1.7
	baz=307						
ARVC				S	S	03 42 14.0	+1.7
	baz=307						
R11A	Troy Canyon, C	97.28	42	P	P	03 30 47.9	-1.3
	baz=309						
R11A				S	S	03 42 12.6	-0.6
	baz=309						
HWUT	Hardware Ranch	97.49	37	IAmb	IAmb	03 31 00.0	
	comp=Z,24nm,1.9s						
HWUT				IAMs_20	IAMs_20	04 23 51.5	
	comp=Z,2µm,18.0s						
MPMC	Manual Prospec	97.51	45	P	P	03 30 48.3	-2.0
	baz=308						
OSI	Osito Audit: C	97.58	47	P	P	03 30 49.0	-1.5
	baz=307						
FURC	Furnace Creek,	97.66	44	P	P	03 30 49.3	-1.3
	baz=308						
DUG	Dugway, Tooele	97.73	39	IAMs_20	IAMs_20	04 21 33.6	
	comp=Z,2µm,18.0s						
DUG	Dugway, Tooele	97.73	39	P	P	03 30 49.8	-1.3
	baz=312						
DUG				S	S	03 42 15.7	-1.2
	baz=312						
LRMC	Laurel Mtn Rad	97.74	45	P	P	03 30 50.0	-1.3
	baz=308						
TPNV	Topopah Spring	97.75	43	P	P	03 30 50.0	-1.3
	baz=309						
TPNV				S	S	03 42 16.9	-0.3
	baz=309						
BW06	Boulder Array	97.78	36	IAMs_20	IAMs_20	04 20 06.1	
	comp=Z,2µm,19.0s						
BW06	Boulder Array	97.78	36	S	S	03 42 12.6	-4.9
	baz=314						
PDAR	Pinedale Array	97.78	36	P	Pdif	03 30 52.5	+1.0
	comp=Z,0.2nm,0.3s,baz=297,slow=1.3,SNR=5.4						
PDAR				LR	LR	04 16 23.2	
	comp=Z,759nm,19.0s,baz=346,slow=36						
	comp=Z,0.2nm,0.3s						
EDW2	Edwards Air Fo	97.90	46	P	P	03 30 50.1	-1.8
	baz=308						
QSM	Queen of Sheba	97.97	45	IAmb	IAmb	03 31 00.9	
	comp=Z,16nm,1.3s						
CART	Cartagena	98.15	318	IAMs_20	IAMs_20	04 22 04.6	
	comp=Z,2µm,18.0s						
ULM	Lac du Bonnet	98.20	23	LR	LR	04 18 37.0	
	comp=Z,5µm,18.1s,baz=349,slow=38						
PASC	Pasadena Art C	98.20	47	IAMs_20	IAMs_20	04 22 49.3	
	comp=Z,2µm,18.0s						
SHOC	Shoshone, Teco	98.38	44	P	P	03 30 53.2	-0.8
	baz=309						
GSC	Goldstone, Bar	98.42	45	IAmb	IAmb	03 31 03.9	
	comp=Z,19nm,1.6s						
GSC	Goldstone, Bar	98.42	45	P	P	03 30 52.7	-1.6
	baz=308						
ESDC	Sonseca Array	98.55	321	PP	PP	03 34 54.1	-0.4
	comp=Z,3.1nm,1.2s,baz=46,slow=8.4,SNR=4.2						
ESDC				LR	LR	04 20 54.5	
	comp=Z,4µm,18.8s,baz=35,slow=39						
SHPR	Sheep Range	98.71	43	IAmb	IAmb	03 30 58.9	
	comp=Z,20nm,1.9s						
MVO	Moncorvo	99.24	324	*e*Pdif	Pdif	03 30 57.8	0.0
MVO	Moncorvo	99.24	324	*e*PP	PP	03 34 59.9	+0.2
MVO	Moncorvo	99.24	324	*e*SS	SS	03 49 32.0	+15
MVO	Moncorvo	99.24	324	*e*LQ	LQ	04 04 13.2	
MVO				*e*LR	LR	04 10 03.7	
	comp=Z,4µm,22.0s						
PGAV	Gavieira, Arco	99.33	325	*e*Pdif	Pdif	03 30 59.5	+1.3
PGAV	Gavieira, Arco	99.33	325	*e*PP	PP	03 35 04.1	+3.6
PGAV	Gavieira, Arco	99.33	325	*e*LQ	LQ	04 03 29.5	
PGAV				*e*LR	LR	04 09 27.2	
	comp=Z,4µm,18.0s						
RSSD	Black Hills	99.59	32	IAMs_20	IAMs_20	04 19 57.5	
	comp=Z,3µm,19.0s						
LSZ	Lusaka	99.64	258	P	Pdif	03 30 59.3	-0.6
	comp=Z,6.7nm,0.8s,baz=82,slow=3.3,SNR=14						
LSZ				LR	LR	04 12 09.4	
	comp=Z,3µm,21.9s,baz=72,slow=33						
	comp=Z,6.7nm,0.8s						
LSZ	Lusaka	99.64	258	P	Pdif	03 30 57.7	-2.3
LSZ	Lusaka	99.64	258	IAMs_20	IAMs_20	04 12 09.1	
	comp=Z,3µm,21.0s						
LSZ	Lusaka	99.64	258	P	Pdif	03 30 57.7	-2.3
LSZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RWWY	Rawlins	99.78	35	IAMs_20	IAMs_20	04 21 11.7	
	comp=Z,2µm,20.0s						
MTE	Manteigas	100.05	323	*e*Pdif	Pdif	03 31 02.2	+0.8
MTE	Manteigas	100.05	323	*e*PP	PP	03 35 06.7	+0.8
MTE	Manteigas	100.05	323	*e*LQ	LQ	04 04 35.9	
MTE				*e*LR	LR	04 10 45.0	
	comp=Z,3µm,20.0s						
SCHQ	Schefferville	100.46	5	PKKPbc	PKKPbc	03 47 17.3	-2.2
	comp=Z,2.2nm,0.8s,baz=222,slow=5.8,SNR=3.7						
PMRV	Marv??o	100.65	322	*e*Pdif	Pdif	03 31 17.3	+13
PMRV	Marv??o	100.65	322	*e*PP	PP	03 35 12.4	+2.0
PMRV	Marv??o	100.65	322	*e*LR	LR	04 10 37.4	
	comp=Z,3µm,18.0s						
TAOE	Nuku Hiva Isla	100.72	95	*e*LR	LR	04 04 45.6	
	comp=Z,2µm,24.5s						
PHWY	Pilot Hill	100.97	34	IAMs_20	IAMs_20	04 23 26.2	
	comp=Z,2µm,19.0s						
MATP	Matopo	101.33	253	P	Pdif	03 31 07.0	-0.4
	comp=Z,1.9nm,0.8s,baz=57,slow=6.7,SNR=3.7						
WUAZ	Wupatki	101.68	42	IAMs_20	IAMs_20	04 26 27.5	
	comp=Z,2µm,19.0s						
EYMN	Ely	101.69	22	IAMs_20	IAMs_20	04 20 28.1	
	comp=Z,3µm,18.0s						
SMCO	Snowmass	101.70	37	IAMs_20	IAMs_20	04 25 37.8	
	comp=Z,2µm,18.0s						
ISCO	Idaho Springs	101.98	36	IAMs_20	IAMs_20	04 17 40.1	
	comp=Z,2µm,20.0s						
LIS	Lisbon	102.12	323	*e*PP	PP	03 35 22.3	+0.8
LIS				IAMs_20	IAMs_20	04 19 56.6	
	comp=Z,5µm,20.9s						
MESJ	Messejana	102.22	322	*e*Pdif	Pdif	03 31 11.2	+0.1
MESJ				*e*PP	PP	03 35 23.1	+0.8
MESJ				*e*SS	SS	03 50 01.2	+2.9
MESJ				IAMs_20	IAMs_20	04 19 53.1	
	comp=E,4µm,16.9s						
MESJ	Messejana	102.22	322	*e*P	Pdif	03 31 11.1	+0.1
MESJ				*e*		03 35 23.0	
MESJ				*e*SS	SS	03 50 01.2	+2.9
MVCO	Mesa Verde	102.23	39	IAMs_20	IAMs_20	04 26 14.0	
	comp=Z,2µm,18.0s						
PVAQ	Vaqueiros	102.24	321	*e*PP	PP	03 35 22.7	+0.2
PVAQ	Vaqueiros	102.24	321	*e*LR	LR	04 11 42.7	
	comp=Z,3µm,18.0s						
MORF	Marmelete	102.84	322	*e*PP	PP	03 35 27.7	+0.7
MORF				IAMs_20	IAMs_20	04 14 58.9	
	comp=N,4µm,18.4s						
OGNE	Ogallala	102.96	33	IAMs_20	IAMs_20	04 22 14.7	
	comp=Z,2µm,19.0s						
SDCO	Great Sand Dun	103.53	37	IAMs_20	IAMs_20	04 27 16.9	
	comp=Z,3µm,19.0s						
TUC	Tucson	104.17	44	IAMs_20	IAMs_20	04 27 48.9	
	comp=Z,2µm,18.0s						
VNDA	Vanda	104.67	172	PP	PP	03 35 39.6	-1.0
	comp=Z,2.0nm,1.0s,baz=318,slow=5.3,SNR=3.5						
ANMO	Albuquerque	104.99	40	IAMs_20	IAMs_20	04 24 06.1	
	comp=Z,2µm,19.0s						
Y22D	IRIS PASSCAL I	105.34	40	IAMs_20	IAMs_20	04 25 17.3	
	comp=Z,2µm,18.0s						
CBKS	Cedar Bluff	105.72	33	IAMs_20	IAMs_20	04 27 18.8	
	comp=Z,3µm,18.0s						
KSU1	Kansas State U	106.99	31	IAMs_20	IAMs_20	04 20 59.1	
	comp=Z,3µm,21.0s						
MNTX	Cornudas Mount	107.93	41	IAMs_20	IAMs_20	04 27 27.0	
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	109.37	35	IAMs_20	IAMs_20	04 20 59.5	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	109.39	12	IAMs_20	IAMs_20	04 20 58.3	
	comp=Z,3µm,21.0s						
TSUM	Tsumeb	110.49	258	IAMs_20	IAMs_20	04 23 08.7	
	comp=Z,2µm,20.0s						
TXAR	Lajitas Array	110.64	42	Pdiff	Pdif	03 31 49.7	+0.9
	comp=Z,0.5nm,0.7s,baz=181,slow=6.6,SNR=7.0						
TXAR				PKiKP	PKiKP	03 35 47.7	-1.4
	comp=Z,0.3nm,0.4s,baz=146,slow=0.5,SNR=13						
TXAR	Lajitas Array	110.64	42	Pdif	Pdif	03 31 47.4	-1.4
TXAR	Lajitas Array	110.64	42	P	Pdif	03 31 47.4	-1.4
PMOZ	Porto Moniz, M	110.86	324	*e*PP	PP	03 36 30.8	+4.8
PMOZ	Porto Moniz, M	110.86	324	*e*LR	LR	04 11 17.3	
	comp=Z,2µm,20.0s						
M53A	WI Miller and	110.94	18	IAMs_20	IAMs_20	04 24 52.6	
	comp=Z,2µm,20.0s						
FFD	Franklin Falls	111.04	11	IAMs_20	IAMs_20	04 22 39.9	
	comp=Z,3µm,21.0s						
BINY	Binghamton	111.41	14	IAMs_20	IAMs_20	04 21 38.8	
	comp=Z,3µm,20.0s						
W39A	Magazine	111.47	31	IAMs_20	IAMs_20	04 23 55.9	
	comp=Z,3µm,21.0s						
O53A	New Philadelph	111.88	19	IAMs_20	IAMs_20	04 24 28.6	
	comp=Z,2µm,19.0s						
JCT	Junction City	112.07	38	IAMs_20	IAMs_20	04 32 14.4	
	comp=Z,2µm,19.0s						
435B	Jarrell	113.07	37	IAMs_20	IAMs_20	04 26 49.6	
	comp=Z,2µm,18.0s						
QSPA	South Pole Qui	114.46	180	PKP	PKPdf	03 35 55.0	-0.1
	comp=Z,4.7nm,1.1s,baz=268,slow=1.2,SNR=8.8						
HKT	Hockley	114.66	36	IAMs_20	IAMs_20	04 33 08.4	
	comp=Z,2µm,19.0s						
KVTX	Kingsville	115.38	39	IAMs_20	IAMs_20	04 28 22.1	
	comp=Z,2µm,19.0s						
DBIC	Dimbokro	119.63	294	PKP	PKPdf	03 36 06.1	-0.4
	comp=Z,5.6nm,0.9s,baz=57,slow=4.1,SNR=4.3						
DBIC				PKKPbc	PKKPbc	03 46 16.0	-0.4
	comp=Z,5.2nm,0.9s,baz=216,slow=6.3,SNR=4.2						
NVL	N'lazarevskaya	119.72	201	*e*PKIKP	PKiKP	03 36 12.4	+7.4
NVL				MLR	MLR		
	comp=Z,659nm,18.0s						
UNM	Universidad Na	120.65	46	IAMs_20	IAMs_20	04 33 22.6	
	comp=Z,1µm,20.0s						
TROLL	Troll, Antarti	122.26	199	PKPdf	PKPdf	03 36 09.0	-1.0
BBSR	BB Station	122.91	7	IAMs_20	IAMs_20	04 30 36.8	
	comp=Z,2µm,21.0s						
SNAA	Sanae	123.94	198	PKPdf	PKPdf	03 36 11.5	-1.6
SNAA	Sanae	123.94	198	PKP	PKPdf	03 36 11.8	-1.3
	comp=Z,3.3nm,0.9s,baz=197,slow=11,SNR=10.0						
SNAA				PKKPbc	PKKPbc	03 46 01.2	0.0
	comp=Z,2.0nm,1.0s,baz=294,slow=5.0,SNR=2.7						
BELA	Belgrano 2	125.61	186		PKiKP	03 36 16.7	+0.2
VNA1	Neumayer--Stat	125.98	198	PKPdf	PKPdf	03 36 15.4	-1.5
VNA3	Neumayer Olymp	126.06	197	PKPdf	PKPdf	03 36 16.2	-0.9
MTO3	Montecristo	130.54	42	IAMs_20	IAMs_20	04 40 03.2	
	comp=Z,2µm,22.0s						
SNET	Serv Nac Est T	131.17	42	IAMs_20	IAMs_20	04 38 09.9	
	comp=Z,2µm,22.0s						
TGUH	Tegucigalpa,Un	132.05	40	IAMs_20	IAMs_20	04 45 27.8	
	comp=Z,2µm,20.0s						
GRTK	Grand Turk	132.34	17	IAMs_20	IAMs_20	04 40 00.3	
	comp=Z,2µm,20.0s						
GTBY	Guantanamo Bay	132.63	22	IAMs_20	IAMs_20	04 38 20.5	
	comp=Z,1µm,20.0s						
MTDJ	Mount Denham	133.29	26	IAMs_20	IAMs_20	04 36 59.3	
	comp=Z,2µm,21.0s						
JTS	Las Juntas de	136.41	40	IAMs_20	IAMs_20	04 47 33.6	
	comp=Z,1µm,20.0s						
SJG	San Juan	136.73	11	*e*P	PKPdf	03 36 38.4	-0.5
HDC	Heredia	137.13	40	IAMs_20	IAMs_20	04 45 08.2	
	comp=Z,2µm,21.0s						
SMRT	St. Maarten	137.25	7	IAMs_20	IAMs_20	04 38 00.7	
	comp=Z,2µm,22.0s						
ANWB	Willy Bob	137.75	5	IAMs_20	IAMs_20	04 39 32.8	
	comp=Z,1µm,21.0s						
BRU2	Volcan	138.92	39	*e*P	PKPdf	03 36 41.2	-2.0
GDSD	La Dsirade Is	139.15	5	IAMs_20	IAMs_20	04 43 34.1	
	comp=Z,2µm,21.0s						
BCIP	Isla Barro Col	140.18	35	IAMs_20	IAMs_20	04 43 43.4	
	comp=Z,1µm,20.0s						
BCIP	Isla Barro Col	140.18	35	*e*P	PKiKP	03 36 48.0	+0.2
FDF	Fort de France	140.71	5	IAMs_20	IAMs_20	04 35 30.4	
	comp=Z,2µm,22.0s						
BIM	Bigot	140.93	5	IAMs_20	IAMs_20	04 39 17.3	
	comp=Z,2µm,22.0s						
SMRC	Santa Marta, M	141.01	26	*e*P	PKPdf	03 36 46.0	-0.8
AZU	Azuero	141.09	37	*e*P	PKPdf	03 36 46.0	-0.9
UPD2	Meteti	141.63	33	*e*P	PKPdf	03 36 41.2	-6.7
SJCC	San Jacinto, C	141.76	28	*e*P	PKPdf	03 36 46.0	-2.2
HATO	Hato, Curacao	141.84	18	IAMs_20	IAMs_20	04 35 47.0	
	comp=Z,1µm,21.0s						
ARGC	Ariguani, Magd	142.19	27	*e*P	PKPdf	03 36 43.2	-5.8
LL6C	La Loma 6 Bece	142.69	25	*e*P	PKPdf	03 36 48.0	-1.9
GRGR	Grenville	143.24	6	IAMs_20	IAMs_20	04 41 34.6	
	comp=Z,1µm,20.0s						
UREC	San Jos de Ur	143.51	30	*e*P	PKPab	03 36 43.2	-4.4
DBBC	Dabeiba	143.84	32	*e*P	PKPab	03 36 48.0	-0.9
OCAC	Ocana	144.03	26	*e*P	PKPab	03 36 48.0	-1.7
ZARC	Zaragoza, Cauc	144.04	29	*e*P	PKPab	03 36 47.0	-2.6
SDV	Santo Domingo	144.43	22	PKPdf	PKPab	03 36 49.6	-1.7
SDV	Santo Domingo	144.43	22	IAMs_20	IAMs_20	04 41 06.1	
	comp=Z,1µm,22.0s						
SDV	Santo Domingo	144.43	22	*e*P	PKPab	03 36 49.9	-1.4
SDV	Santo Domingo	144.43	22	*e*P	PKPab	03 36 49.5	-1.8
HELC	Santa Helena	144.88	31	*e*P	PKPab	03 36 48.9	-4.2
BRRC	Barranca, Sant	144.89	28	*e*P	PKPab	03 36 48.9	-3.8
CBOC	Ciudad Bolivar	144.93	32	*e*P	PKPab	03 36 51.8	-1.3
PTBC	PUERTO BERRIO,	145.07	29	*e*P	PKPbc	03 36 49.9	-3.5
PAMC	Pamplona, Colo	145.09	26	*e*P	PKPbc	03 36 51.8	-2.2
BAUV	El Baul	145.18	18		PKPbc	03 36 51.7	-2.0
BARC	Barichara	145.57	27	*e*P	PKPdf	03 36 52.8	-2.4
PLMC	San Jos del P	145.62	34	*e*P	PKPdf	03 36 54.7	-0.4
NORC	Norcasia	145.74	31	*e*P	PKPdf	03 36 52.8	-2.5
SPBC	San Pablo de B	146.03	30	*e*P	PKPdf	03 36 52.8	-3.0
GR1C	Gorgona, Isla	146.21	38	*e*P	PKPdf	03 36 54.7	-1.3
RUSC	La Rusia	146.24	28	*e*P	PKPdf	03 36 55.7	-1.0
TAMC	Tame, Arauca	146.28	25	*e*P	PKPdf	03 36 52.8	-3.4
YOTC	Yotoco, Valle	146.38	35	*e*P	PKPdf	03 36 52.8	-3.6
ANIL	Santa Ana	146.42	33	*e*P	PKPdf	03 36 54.7	-2.0
ROSC	El Rosal	146.63	31	PKPbc	PKPab	03 36 59.6	-0.1
	comp=Z,12nm,0.6s,baz=5.1,slow=3.6,SNR=19						
ROSC	El Rosal	146.63	31	*e*P	PKPdf	03 36 57.6	+0.4
TUMC	Tumaco	146.85	40	*e*P	PKPab	03 37 00.5	+0.4
ORTC	Ortega, Tolima	147.00	33	*e*P	PKPdf	03 36 54.7	-2.7
CHIC	Chingaza	147.09	30	*e*P	PKPdf	03 36 56.6	-1.3
PRAC	Prado	147.34	33	*e*P	PKPdf	03 36 57.6	-0.3
VILC	Villavicencio,	147.56	30	*e*P	PKPdf	03 36 58.6	+0.1
GCUF	Volcan Galeras	148.13	39	*e*P	PKPbc	03 37 01.5	-1.6
PTGC	Puerto Gaitan,	148.17	28	*e*P	PKPdf	03 36 59.5	+0.3
OTAV	Otavalo	148.28	42		PKPdf	03 37 01.6	+1.6
OTAV	Otavalo	148.28	42	IAMs_20	IAMs_20	04 53 25.2	
	comp=Z,2µm,21.0s						
OTAV	Otavalo	148.28	42	PKP2	PKPdf	03 37 01.6	+1.6
OTAV	Otavalo	148.28	42	*e*P	PKPbc	03 37 03.4	0.0
OTAV	Otavalo	148.28	42	*e*P	PKPdf	03 36 56.1	-3.9
GARC	Garzon, Huila	148.34	35	*e*P	PKPdf	03 36 59.5	-0.3
USHA	Ushuaia	148.89	168	PKPbc	PKPbc	03 37 03.4	+0.3
	comp=Z,20nm,0.8s,baz=217,slow=2.6,SNR=16						
MACC	Macarena, Meta	149.21	32	*e*P	PKPdf	03 37 00.5	-0.5
GUVC	San Jose del G	149.43	30	*e*P	PKPdf	03 37 02.4	+1.1
MDP	Montagnes des	149.95	349	PKPbc	PKiKP	03 37 07.8	-0.1

	comp=Z,24nm,0.9s,baz=50,slow=2.9,SNR=3.1						
MG05	Puerto Natales	150.83	161		PKPdf	03 37 03.3	+1.0
NBPV	Pedro Velho	151.68	306	eP	PKPdf	03 37 03.8	-1.0
RCBR	Riachuelo comp=Z,15nm,0.7s,baz=185,slow=1.1,SNR=3.6	151.72	308	PKPbc	PKiKP	03 37 12.2	+0.6
RCBR	Riachuelo comp=Z,2μm,20.0s	151.72	308	IAMs_20	IAMs_20	04 48 01.4	
RCBR	Riachuelo	151.72	308	eP	PKPdf	03 37 03.6	-1.3
NBCL	Cascavel-CE	152.21	314	eP	PKPdf	03 37 03.6	-2.0
NBMO	Morrinhos-CE	152.62	318	eP	PKPdf	03 37 04.0	-2.1
NBCA	Caruaru-PE	153.40	304	eP	PKPdf	03 37 05.9	-1.4
GO08	Villa O'Higgin	153.62	158	PKPdf	PKPdf	03 37 05.8	-0.8
ATAH	Atahualpa comp=Z,3.6nm,0.8s,baz=8.0,slow=4.8,SNR=6.8	153.81	52	PKP	PKPdf	03 37 09.2	+0.8
ATAH	comp=Z,24nm,0.8s,baz=8.6,slow=4.0,SNR=4.4			PKPbc	PKiKP	03 37 18.0	+1.6
COYC	Coyhaique comp=Z,829nm,20.0s	156.24	155	IAMs_20	IAMs_20	04 54 13.4	
TBTG	Tabatinga, AM	156.62	31	eP	PKPdf	03 37 09.0	-2.7
CZSB	Cruzeiro do Su	158.04	42	eP	PKPdf	03 37 11.0	-2.5
NNA	Nana comp=Z,2μm,22.0s	158.13	58	IAMs_20	IAMs_20	04 54 36.4	
NBPN	Ponto Novo - B	158.23	306	eP	PKPdf	03 37 11.9	-1.8
ITTB	Itaituba	159.69	354	eP	PKPdf	03 37 13.0	-2.4
PRPB	Parauapebas	160.01	336	eP	PKPdf	03 37 14.3	-1.5
CMC01	Camacan, BA	160.36	295	eP	PKPdf	03 37 15.2	-0.9
PLCA	Paso Flores comp=Z,3.4nm,1.1s,baz=246,slow=0.9,SNR=3.2	160.84	150	PKP	PKPdf	03 37 15.8	-0.2
PLCA	comp=Z,6.1nm,1.2s,baz=228,slow=22,SNR=3.1			PKPab	PKPab	03 37 57.7	-0.6
GUA01	Guaratinga, BA	161.20	292	eP	PKPdf	03 37 15.1	-1.9
SMTB	Santa Maria do	161.41	326	eP	PKPdf	03 37 15.5	-1.8
ETMB	Extrema	163.27	29	eP	PKPdf	03 37 17.2	-1.9
SJMB	Sao Joao De Ma	163.31	288	eP	PKPdf	03 37 17.2	-1.8
PEXB	Peixe	164.50	322	eP	PKPdf	03 37 18.6	-1.7
SNDB	Serra Nova Dou	165.87	332	eP	PKPdf	03 37 19.1	-2.3
CLDB	Colider	166.12	351	eP	PKPdf	03 37 19.7	-2.0
BDFB	Brasilia comp=Z,8.6nm,1.0s,baz=162,slow=2.3,SNR=6.5	167.03	312	PKP	PKPdf	03 37 22.0	-0.4
BDFB	comp=Z,4.6nm,0.9s,baz=14,slow=3.4,SNR=3.7			PKPab	PKPab	03 38 26.1	-0.1
LPAZ	La Paz comp=Z,7.5nm,1.1s,baz=358,slow=3.2,SNR=14	167.35	51	PKP	PKPdf	03 37 22.9	-0.4
LPAZ	comp=Z,5.6nm,1.0s,baz=16,slow=6.6,SNR=4.1			PKPab	PKPab	03 38 29.2	+1.0
LPAZ	La Paz	167.35	51		PKPdf	03 37 21.7	-1.6
LPAZ	La Paz	167.35	51	PKIKP	PKPdf	03 37 21.7	-1.6
LPAZ	La Paz	167.35	51	eP	PKPdf	03 37 19.8	-3.5
LPAZ	La Paz	167.35	51	eP	PKPdf	03 37 20.9	-2.4
PB11	IPOC Station P	168.13	68		PKPdf	03 37 21.0	-2.2
VILB	Vilhena	168.15	11	eP	PKPdf	03 37 20.7	-2.5
NBRS	Nobres	169.50	348	eP	PKPdf	03 37 21.6	-2.4
LVC	Limon Verde comp=Z,3.0nm,0.7s,baz=323,slow=2.5,SNR=6.1	169.77	81	PKP	PKPdf	03 37 24.0	-0.5
LVC	Limon Verde	169.77	81	eP	PKPdf	03 37 21.1	-3.3
VAO	Valinhos	169.78	277	eP	PKPdf	03 37 21.3	-2.8
PET01	Itanhaem-SP	170.24	270	eP	PKPdf	03 37 21.6	-2.6
SPB	Sao Paulo	170.31	274	eP	PKPdf	03 37 22.3	-1.9
DVLD	Doverlandia	170.33	325	eP	PKPdf	03 37 23.0	-1.4
PTLB	Pontes e Lacer	170.76	7	eP	PKPdf	03 37 22.4	-2.2
SALV	Santo Antonio	171.01	346	eP	PKPdf	03 37 23.2	-1.6
PP1B	Ponte de Pedra	172.39	337	eP	PKPdf	03 37 23.3	-2.1
C2SB	Chapadao do Su	172.43	320	eP	PKPdf	03 37 23.2	-2.2
PCMB	Pacaembu	173.11	295	eP	PKPdf	03 37 25.1	-0.6
ITQB	Itaqui	174.88	193	eP	PKPdf	03 37 23.5	-2.5
AQDB	Aquidauana	175.32	333		PKPdf	03 37 23.9	-2.4
CPUP	Villa Florida comp=Z,1.7nm,0.9s,baz=90,slow=3.0,SNR=2.1	178.25	199	PKP	PKPdf	03 37 25.9	-0.9
CPUP	comp=Z,8.3nm,1.0s,baz=128,slow=4.4,SNR=8.3			PKPab	pPKPab	03 39 14.8	-4.7

TAP 12 03:18:23.5, 24°.70N×121°.90E, h9^{km}, ML4.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao baz=202	0.10	209	i P	Pg	03 18 26.1	+0.2
TWC	baz=202			i S	Sg	03 18 27.8	0.0
NTC	Toucheng baz=343	0.17	337	eP	Pg	03 18 27.6	+0.5
NDS	Dongshan baz=243	0.18	250	P	Pg	03 18 27.9	+0.6
NDS	baz=243			eS	Sg	03 18 30.9	+1.0
EWUT	Wuta baz=209	0.28	204	eP	Pg	03 18 29.2	+0.2
EWUT	baz=209			eS	Sg	03 18 32.9	+0.2
ENA	Nanau baz=212	0.31	209	eP	Pg	03 18 29.9	+0.4
ENA	baz=212			eS	Sg	03 18 33.8	+0.1

JMA 12 03:18:45.5±0.3, 31°N±1°×12°9E±°, h12^{km}, MV2.1/6, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.84	39	eP	Pg	03 19 01.7	-0.1
JSJ				eS	Sg	03 19 12.7	-0.2
JSU	Suzuyama	1.27	67	P	Pn	03 19 08.4	-0.6
JFU	Fukue jima 2	1.65	350	eP	Pn	03 19 14.7	+0.4

TAP 12 03:18:48.2, 24°.68N×121°.94E, h9^{km}, ML4.4, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao baz=228	0.11	230	⇓iP	Pg	03 18 51.0	+0.1
TWC	baz=228			S	Sg	03 18 52.8	0.0
EGS	baz=359	0.16	356	eP	Pg	03 18 51.8	+0.1
EGS	baz=359			eS	Sg	03 18 54.9	+0.8
ILA	Ilan baz=283	0.20	295	eP	Pg	03 18 52.7	+0.4
ILA	baz=283			eS	Sg	03 18 56.3	+1.3
NTC	Toucheng baz=327	0.20	329	eP	Pg	03 18 52.6	+0.3
NDS	Dongshan baz=252	0.21	257	P	Pg	03 18 53.0	+0.4
NDS	baz=252			S	Sg	03 18 56.2	+0.7
TWE	Neicheng baz=278	0.26	279	i P	Pg	03 18 53.7	+0.3
TWE	baz=278			S	Sg	03 18 56.9	+0.1
EWUT	Wuta baz=213	0.28	213	P	Pg	03 18 54.4	+0.6
EWUT	baz=213			S	Sg	03 18 57.9	+0.3
TIPB	Shuangxi baz=338	0.31	340	P	Pg	03 18 54.6	+0.2
TIPB	baz=338			eS	Sg	03 18 58.7	+0.2
ENA	Nanau baz=220	0.31	216	eP	Pg	03 18 54.8	+0.3
ENA	baz=220			eS	Sg	03 18 58.7	0.0
TWB1	Santiao Chiao baz=355	0.33	7	eP	Pg	03 18 54.4	-0.3
TWB1	baz=355			eS	Sg	03 18 58.8	-0.3
ENTT	Nioudou baz=263	0.35	263	eP	Pg	03 18 55.5	+0.4
ENTT	baz=263			eS	Sb	03 19 01.3	-1.0
LATG	Datong baz=249	0.41	249	eP	Pb	03 18 57.1	-0.6
LATG	baz=249			eS	Sb	03 19 03.1	-0.9
NWLT	Wulai baz=283	0.41	283	eP	Pg	03 18 57.0	+0.6
NWLT	baz=283			eS	Sg	03 19 02.1	+0.3
NWF	Wu-fen Shan baz=331	0.41	339	eP	Pg	03 18 57.0	+0.6
NWF	baz=331			eS	Sb	03 19 03.4	-0.8
EHP	Heping Village baz=197	0.41	207	P	Pg	03 18 57.0	+0.7
EHP	baz=197			eS	Sg	03 19 02.1	+0.3
NSK	Sanguang baz=269	0.53	269	P	Pb	03 18 59.4	-0.4
NSK	baz=269			S	Sg	03 19 05.9	+0.3
NNS	Nan Shan baz=245	0.57	245	eP	Pg	03 18 59.6	+0.2
NNS	baz=245			eS	Sg	03 19 07.5	+0.6
ETL	Fush Village baz=200	0.60	209	P	Pg	03 19 00.0	+0.2
ETL	baz=200			S	Sg	03 19 08.0	+0.3
NACB	Ninganchiao baz=203	0.60	212	eS	Sb	03 19 08.8	-0.7
ETLH	Xiulin Townshi baz=222	0.63	222	eP	Pg	03 19 00.4	-0.1
ETLH	baz=222			eS	Sb	03 19 10.4	-0.1
TWD	Chiawan baz=208	0.68	208	eP	Pg	03 19 01.6	+0.2
TWD	baz=208			eS	Sg	03 19 10.3	+0.1

TAP ***12*** *03:20:51.7, 24°.69N×121°.98E, h11^{km}, ML4.6, C*
NEIC ***12*** *03:20:51.5±0.9, 24°.65N±0°.02×122°.05E±0°.03, h10^{km}±8^{km}, Error ellipse: s-maj=4.0km s-min=2.3km az=72.0*
JMA ***12*** *03:20:52.1±0.1, 24°.7N±0°.3×122°.0E±0°.4, h29^{km}, TAIWAN REGION*
ISC 12 03:20:51.4±0.9**, 24°.67N**±0°.02×**122°.02E**±0°.02**, h10**^{km}±7^{km}**, n104, σ0^{s}65**/161**, 16C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao baz=240	0.16	249	⇑iP	Pg	03 20 55.2	+0.2
TWC	baz=240			i S	Sg	03 20 57.4	-0.1
NTC	Toucheng baz=319	0.25	318	⇑iP	Pg	03 20 56.5	-0.1
NTC	baz=319			S	Sg	03 21 00.2	+0.1
ILA	Ilan baz=289	0.26	292	⇑iP	Pg	03 20 57.0	+0.3
ILA	baz=289			i S	Sg	03 21 00.5	+0.1
NDS	Dongshan baz=251	0.28	263	eP	Pg	03 20 57.4	+0.4
NDS	baz=251			S	Sg	03 21 00.7	0.0
EWUT	Wuta baz=211	0.31	225	⇑iP	Pg	03 20 58.1	+0.5
EWUT	baz=211			S	Sg	03 21 02.1	+0.4
TWE	Neicheng baz=271	0.32	280	⇑iP	Pg	03 20 57.9	0.0
TWE	baz=271			i S	Sg	03 21 01.8	-0.4
TWB1	Santiao Chiao baz=354	0.34	356	⇑iP	Pg	03 20 58.1	-0.1
TWB1	baz=354			S	Sg	03 21 02.1	-0.7
ENA	Nanau baz=213	0.35	227	⇑iP	Pg	03 20 58.7	+0.4
ENA	baz=213			i S	Sg	03 21 02.7	-0.2
TIPB	Shuangxi baz=333	0.35	330	⇑iP	Pg	03 20 58.5	0.0
TIPB	baz=333			S	Sg	03 21 02.5	-0.6
FUSB	Fushanzhiwuyua baz=280	0.40	283	P	Pg	03 20 59.5	+0.1
FUSB	baz=280			eS	Sg	03 21 04.3	-0.4
ENTT	Nioudou baz=261	0.41	266	eP	Pg	03 20 59.9	+0.4
ENTT	baz=261			eS	Sg	03 21 03.8	-1.2
EHP	Heping Village baz=199	0.43	215	P	Pb	03 21 01.2	0.0
EHP	baz=199			eS	Sg	03 21 06.3	+0.6
SXI1	Grass Mountain baz=353	0.44	343	⇑iP	Pg	03 21 00.4	+0.2
NWF	Wu-fen Shan baz=327	0.46	332	⇑iP	Pg	03 21 00.7	+0.4
NWF	baz=327			eS	Sg	03 21 06.0	-0.5
LATG	Datong baz=249	0.47	254	P	Pb	03 21 01.4	-0.4
LATG	baz=249			S	Sg	03 21 07.2	+0.5
NWLT	Wulai baz=281	0.48	283	P	Pg	03 21 01.0	+0.2
NWLT	baz=281			eS	Sg	03 21 06.4	-0.8
TWA	Mucha baz=308	0.50	309	P	Pg	03 21 01.4	+0.2
TWA	baz=308			eS	Sg	03 21 08.1	+0.2
NHDH	Xindian Distri baz=303	0.54	304	⇑iP	Pg	03 21 02.3	+0.5
NHDH	baz=303			S	Sg	03 21 08.8	-0.1
TATO	Taipei	0.57	303	Pg	Pb	03 21 03.1	-0.4
TATO				Sg	Sg	03 21 10.0	0.0
YHNB	Yeheng	0.58	270	Pg	Pb	03 21 03.5	-0.2
YHNB				Sg	Sg	03 21 09.6	-0.9
YHNB	Yeheng baz=268	0.58	270	eP	Pg	03 21 02.8	0.0
YHNB	baz=268			eS	Sg	03 21 09.4	-1.0
NSK	Sanguang baz=268	0.60	271	⇓iP	Pg	03 21 03.0	0.0
NSK	baz=268			eS	Sg	03 21 09.4	-1.6
ETL	Fush Village baz=202	0.62	215	⇑iP	Pg	03 21 03.7	+0.2
ETL	baz=202			eS	Sg	03 21 11.9	+0.3
NACB	Ninganchiao	0.62	218	Pg	Pg	03 21 03.8	+0.3
NACB				Sg	Sg	03 21 11.7	0.0
NACB	Ninganchiao baz=204	0.62	218	P	Pg	03 21 03.7	+0.2
NACB	baz=204			S	Sb	03 21 12.2	-0.9
NNSB	Datong baz=234	0.62	248	P	Pb	03 21 04.0	-0.5
NNSB	baz=234			eS	Sg	03 21 11.5	-0.3
YM01	YM01 baz=320	0.63	320	⇑iP	Pb	03 21 04.2	-0.2
NNS	Nan Shan baz=245	0.63	249	⇑eP	Pb	03 21 04.1	-0.4
NNS	baz=245			eS	Sb	03 21 12.5	-0.9
ETLH	Xiulin Townshi baz=223	0.67	227	P	Pb	03 21 05.0	-0.3
ETLH	baz=223			eS	Sb	03 21 14.2	-0.4
ANP	Anpu baz=319	0.69	319	eP	Pg	03 21 04.9	+0.2
TWS1	Kuangyinshan baz=299	0.69	309	⇑iP	Pb	03 21 05.9	+0.3
TWS1	baz=299			eS	Sg	03 21 14.3	+0.3
TWD	Chiawan baz=209	0.70	213	⇑P	Pg	03 21 05.1	+0.2
TWD	baz=209			eS	Sg	03 21 13.7	-0.4
NTST	Danshui baz=314	0.71	314	P	Pb	03 21 06.2	+0.3
NTST	baz=314			eS	Sg	03 21 14.9	+0.3
HWA	Hwalien baz=213	0.78	209	eP	Pn	03 21 08.4	-0.1
HWA	baz=213			eS	Sb	03 21 17.4	-0.4
NCU	National Centr baz=291	0.81	292	eP	Pn	03 21 08.4	-0.5
NCU	baz=291			eS	Sb	03 21 18.6	0.0
NCUH	Zhongli baz=298	0.81	292	eP	Pb	03 21 08.1	+0.5
NCUH	baz=298			eS	Sn	03 21 21.0	0.0
FUSS	Fushou baz=236	0.82	239	eP	Pg	03 21 07.2	-0.1
FUSS	baz=236			eS	Sb	03 21 18.9	-0.1
NFF	Wufeng Townshi baz=266	0.82	268	eP	Pb	03 21 07.9	+0.1
NFF	baz=266			eS	Sg	03 21 16.6	-1.3
WHF	Hehuan Shan baz=230	0.86	233	P	Pb	03 21 08.8	+0.2
WHF	baz=230			eS	Sg	03 21 19.0	-0.3
TWT	Tachien baz=230	0.87	242	eP	Pb	03 21 08.8	+0.1
JYNG	Yonagunijimaku	0.87	104	P	Pb	03 21 08.9	+0.3
JYNG				eS	Sn	03 21 21.7	-0.7
TDCB	Techi baz=232	0.88	242	P	Pg	03 21 08.2	-0.2
TDCB	baz=232			eS	Sg	03 21 19.8	-0.3
LIOB	Emei baz=267	0.91	269	eP	Pn	03 21 10.4	+0.1
LIOB	baz=267			eS	Sn	03 21 22.2	-1.2
NSTT	Nanjuang baz=259	0.93	268	eP	Pn	03 21 10.1	-0.4
NSTT	baz=259			eS	Sb	03 21 22.5	+0.7
YOJ	Yonaguni jima	0.93	103		Pb	03 21 09.8	+0.2
YOJ					Sb	03 21 22.8	+0.8
YOJ	Yonaguni jima baz=96	0.93	103	eP	Pg	03 21 08.8	-0.5
YOJ	Yonaguni jima	0.93	103	P	Pg	03 21 09.6	+0.3
YOJ				eS	Sb	03 21 22.6	+0.7
SBCB	Hsinchu baz=271	0.95	278	eP	Pn	03 21 11.2	+0.5
SBCB	baz=271			eS	Sn	03 21 23.7	-0.6
PCYT	Pengchaiyu baz=5.0	0.96	3	eP	Pg	03 21 09.5	-0.4
HSN	Hsinchu baz=279	0.96	278	eP	Pn	03 21 11.2	+0.3
HSN	baz=279			eS	Sb	03 21 22.8	-0.1
CHGB	Renai baz=229	0.98	232	P	Pb	03 21 10.7	+0.2
CHGB	baz=229			S	Sb	03 21 23.5	-0.1
ESL	Shilin baz=209	1.00	212	P	Pg	03 21 10.6	-0.1
ESL	baz=209			eS	Sb	03 21 24.5	+0.4
OWD	Renai baz=224	1.04	227	eP	Pn	03 21 11.9	-0.3
OWD	baz=224			eS	Sg	03 21 23.6	-1.5
WHP	Taichung City baz=246	1.05	249	P	Pn	03 21 12.1	-0.1
WHP	baz=246			eS	Sb	03 21 25.6	0.0
WUSB	Renai baz=234	1.06	231	P	Pn	03 21 12.1	-0.3
WUSB	baz=234			eS	Sg	03 21 25.4	-0.3
NMLH	Miaoli baz=253	1.12	264	P	Pn	03 21 14.8	+1.6
NMLH	baz=253			eS	Sn	03 21 30.6	+1.9
EGFH	Guangfu baz=213	1.13	209	eP	Pb	03 21 12.7	-0.3
EGFH	baz=213			eS	Sn	03 21 28.9	+0.1
NSY	Sanyi baz=248	1.17	258	eP	Pg	03 21 15.5	+1.6
NSY	baz=248			eS	Sn	03 21 30.1	+0.3
TWQ1	Liyutan baz=253	1.18	255	P	Pg	03 21 15.4	+1.4
TWQ1	baz=253			eS	Sg	03 21 29.0	-0.4
WCS	Beigang Elemen baz=236	1.18	239	eP	Pg	03 21 15.3	+1.2
VWDT	VWDT baz=228	1.21	221	P	Pg	03 21 14.6	-0.1
VWDT	baz=228			eS	Sg	03 21 30.2	-0.2
SMLT	Sun Moon Lake baz=230	1.28	233	P	Pg	03 21 16.7	+0.6
SMLT	baz=230			eS	Sg	03 21 33.0	+0.2
HGSD	Ruisui baz=208	1.29	205	eP	Pg	03 21 18.3	+2.2
WDJ	Dajia District baz=254	1.29	256	eP	Pg	03 21 17.7	+1.4
TYC	Yuchr baz=231	1.30	235	eP	Pg	03 21 17.2	+0.8
SSLB	Suanglung	1.31	228		Pg	03 21 16.5	0.0
SSLB	Suanglung baz=225	1.31	228	P	Pb	03 21 16.0	0.0
EHY	Hungye baz=217	1.32	209	P	Pb	03 21 16.2	-0.1
TCU	Taichung baz=235	1.33	247	eP	Pg	03 21 18.2	+1.3
YULB	Yu-li	1.43	208	Pn	Pb	03 21 17.7	-0.5
YULB	Yu-li baz=215	1.43	208	eP	Pb	03 21 17.7	-0.5
WJS	Zhushan baz=222	1.45	235	eP	Pg	03 21 20.4	+1.2
WJS	baz=222			eS	Sg	03 21 39.6	+1.7
WNT	Mingjian baz=234	1.45	237	eP	Pg	03 21 20.4	+1.2
WCHH	Zhanghua baz=263	1.45	247	eP	Pg	03 21 19.5	+0.2
EYUL	Yuli baz=217	1.46	206	eP	Pg	03 21 19.7	+0.3
YUS	Yu-Shan baz=202	1.52	220	eP	Pb	03 21 20.2	+0.2
IRIF	Iriomote-Funau	1.60	102	P	Pn	03 21 19.1	-0.6
IRIF				eS	Sn	03 21 39.0	-1.3
ALS	Alishan baz=221	1.60	224	eP	Pg	03 21 22.0	-0.1
FULB	Fuli baz=215	1.60	204	eP	Pb	03 21 21.4	+0.3
WDLH	Douliu baz=232	1.67	235	eP	Pg	03 21 23.6	+0.2
WRL	Guolierlin Hig baz=256	1.68	243	eP	Pn	03 21 21.4	+0.6
ELDTW	Lidau baz=197	1.73	212	eP	Pb	03 21 23.1	-0.3
WTK	Tuku baz=234	1.78	237	eP	Pg	03 21 24.7	-0.8
CHN4	Tsaushan baz=222	1.85	225	eP	Pg	03 21 26.6	-0.2
TPUB	Ta-pu baz=220	1.86	223	eP	Pg	03 21 27.0	-0.1
CHY	Chiayi baz=228	1.86	232	eP	Pg	03 21 26.2	-0.9
JKRS	Kuro-shima	1.87	103	P	Pn	03 21 23.9	+0.5
STYH	Taoyuan baz=214	1.87	218	eP	Pb	03 21 26.4	+0.7
WTP	Ta-pu baz=204	1.91	222	eP	Pg	03 21 27.8	-0.3
TWK	Hsinying baz=223	1.97	225	eP	Pg	03 21 28.9	-0.4
WSL	Shuilin Townsh baz=246	1.99	235	eP	Pb	03 21 27.1	-0.6
SNST	Tainan City baz=222	2.00	224	eP	Pb	03 21 28.8	-1.0
CHN1	Nanshi baz=221	2.01	223	eP	Pg	03 21 29.6	-0.4
TWG	Pinlang baz=189	2.03	205	eP	Pg	03 21 27.8	-0.6
SGST	Jiashian baz=202	2.05	220	eP	Pb	03 21 27.3	-1.5
ICHU	Yijhu baz=240	2.05	231	eP	Pb	03 21 29.3	+0.5
SCST	Cishan baz=216	2.26	218	eP	Pb	03 21 32.0	-0.2
SSD	Sandimen baz=210	2.29	214	eP	Pb	03 21 33.1	+0.2
TSMG	Majia baz=210	2.32	213	eP	Pb	03 21 32.6	-0.7
PHUB	P'eng-hu baz=241	2.51	243	eP	Pn	03 21 32.5	+0.2
SSPT	Xinbi	2.55	212	eP	Pb	03 21 36.6	-0.6

	baz=193						
WDGT	Dungji	2.57	237	eP	Pb	03 21 37.4	-0.2
	baz=234						
SCZT	Fangliau	2.62	210	eP	Pb	03 21 37.6	-0.8
	baz=196						
JOW	Kunigami	6.04	68	Pn	Pn	03 22 22.2	+1.4

*TAP **12** 03:21:22.3, 24°.69N×121°.96E, h10km, ML4.5, B*
*JMA **12** 03:21:22.8±0.1, 24°.7N±0°.3×122°.0E±0°.3, h19km, TAIWAN REGION*
*NEIC **12** 03:21:22.3±1.1, 24°.68N±0°.02×121°.96E±0°.03, h18km±3km, ML4.4(TAP), Error ellipse: s-maj=4.0km s-min=3.2km az=104.0*
ISC 12 03:21:22.2±0.9**, 24°.68N**±0°.02×**121°.98E**±0°.02**, h12**km±6km**, n54, σ0^s.56**/87**, 3C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.14	241	⇑iP	Pg	03 21 25.4	-0.1
	baz=236						
TWC				iS	Sg	03 21 27.4	-0.5
	baz=236						
NTC	Toucheng	0.23	322	⇑iP	Pg	03 21 27.1	+0.1
	baz=323						
NTC				eS	Sg	03 21 30.8	+0.5
	baz=323						
ILA	Ilan	0.23	293	iP	Pg	03 21 27.2	+0.1
	baz=281						
ILA				S	Sg	03 21 31.1	+0.7
	baz=281						
NDS	Dongshan	0.25	260	P	Pg	03 21 27.7	+0.4
	baz=251						
NDS				iS	Sg	03 21 30.5	-0.3
	baz=251						
TWE	Neicheng	0.29	279	⇑iP	Pg	03 21 27.9	-0.2
	baz=276						
TWE				eS	Sg	03 21 31.9	-0.2
	baz=276						
EWUT	Wuta	0.30	219	iP	Pg	03 21 28.4	+0.2
	baz=214						
EWUT				S	Sg	03 21 32.4	+0.1
	baz=214						
TIPB	Shuangxi	0.33	334	iP	Pg	03 21 28.8	-0.1
	baz=336						
TIPB				eS	Sb	03 21 34.2	-1.1
	baz=336						
ENA	Nanau	0.33	222	P	Pg	03 21 29.1	+0.3
	baz=216						
ENA				eS	Sg	03 21 33.3	-0.1
	baz=216						
TWB1	Santiao Chiao	0.33	1	P	Pg	03 21 28.6	-0.3
	baz=357						
TWB1				eS	Sg	03 21 32.5	-0.9
	baz=357						
ENTT	Nioudou	0.38	265	P	Pg	03 21 30.1	+0.3
	baz=261						
EHP	Heping Village	0.43	211	eP	Pg	03 21 30.9	+0.3
	baz=198						
EHP				eS	Sg	03 21 36.5	+0.2
	baz=198						
SXI1	Grass Mountain	0.43	347	eP	Pg	03 21 30.6	-0.1
	baz=355						
NWF	Wu-fen Shan	0.43	335	iP	Pg	03 21 31.1	+0.3
	baz=329						
NWF				eS	Sb	03 21 37.7	-0.7
	baz=329						
LATG	Datong	0.44	251	P	Pb	03 21 31.9	-0.1
	baz=249						
LATG				eS	Sb	03 21 37.3	-1.2
	baz=249						
NWLT	Wulai	0.45	283	P	Pg	03 21 31.2	+0.1
	baz=282						
NWLT				eS	Sg	03 21 36.9	-0.2
	baz=282						
TWA	Mucha	0.47	310	P	Pg	03 21 31.6	+0.1
	baz=310						
TWA				eS	Sg	03 21 37.8	0.0
	baz=310						
NHDH	Xindian Distri	0.51	305	eP	Pb	03 21 32.6	-0.4
	baz=304						
NHDH				eS	Sb	03 21 39.2	-1.1
	baz=304						
TATO	Taipei	0.54	304	Pg	Pb	03 21 33.3	-0.3
TATO				Sg	Sg	03 21 39.0	-0.9
YHNB	Yeheng	0.55	269	Pg	Pg	03 21 33.0	0.0
YHNB				Sg	Sg	03 21 39.8	-0.6
NSK	Sanguang	0.57	270	P	Pb	03 21 33.6	-0.6
	baz=268						
NSK				eS	Sg	03 21 39.8	-1.0
	baz=268						
NNSB	Datong	0.60	246	iP	Pb	03 21 34.5	-0.2
	baz=244						
NNSB				eS	Sg	03 21 41.6	-0.3
	baz=244						
YM01	YM01	0.60	321	iP	Pb	03 21 34.7	0.0
	baz=321						
YM01				eS	Sb	03 21 42.4	-0.7
	baz=321						
NNS	Nan Shan	0.60	247	eP	Pb	03 21 34.6	-0.1
	baz=245						
NNS				eS	Sb	03 21 42.6	-0.7
	baz=245						
ETL	Fush Village	0.61	213	P	Pg	03 21 34.0	-0.1
	baz=201						
ETL				eS	Sg	03 21 41.7	-0.5
	baz=201						
NACB	Ninganchiao	0.61	215	Pg	Pb	03 21 34.6	-0.2
NACB				Sg	Sg	03 21 42.0	-0.2
NACB	Ninganchiao	0.61	215	P	Pg	03 21 34.4	+0.2
	baz=203						
NACB				S	Sg	03 21 42.5	+0.3
	baz=203						
ETLH	Xiulin Townshi	0.65	224	P	Pb	03 21 35.9	+0.3
	baz=223						
ETLH				eS	Sg	03 21 43.1	-0.4
	baz=223						
ANP	Anpu	0.66	321	P	Pg	03 21 35.2	+0.1
	baz=321						
TWS1	Kuangyinshan	0.67	310	P	Pb	03 21 36.3	+0.6
	baz=310						
TWS1				eS	Sb	03 21 45.4	+0.4
	baz=310						
NTST	Danshui	0.69	315	P	Pb	03 21 36.5	+0.4
	baz=315						
NTST				eS	Sb	03 21 46.1	+0.5
	baz=315						
TWD	Chiawan	0.69	211	P	Pg	03 21 35.6	0.0
	baz=208						
TWD				eS	Sg	03 21 44.9	+0.3
	baz=208						
HWA	Hwalien	0.78	206	eP	Pb	03 21 38.0	+0.4
	baz=211						
NCU	National Centr	0.78	292	eP	Pn	03 21 39.4	+0.4
	baz=300						
NCU				eS	Sb	03 21 48.9	+0.6
	baz=300						
NCUH	Zhongli	0.78	292	P	Pn	03 21 39.0	-0.1
	baz=284						
NFF	Wufeng Townshi	0.79	267	eP	Pb	03 21 38.1	+0.2
	baz=266						
NFF				eS	Sb	03 21 48.2	-0.4
	baz=266						
FUSS	Fushou	0.80	238	eP	Pb	03 21 38.1	-0.1
	baz=235						
WHF	Hehuan Shan	0.84	231	eP	Pb	03 21 39.2	+0.2
	baz=229						
WHF				eS	Sb	03 21 50.2	-0.2
	baz=229						
TWT	Tachien	0.85	240	eP	Pn	03 21 39.8	-0.3
	baz=229						
LIOB	Emei	0.88	268	eP	Pn	03 21 41.1	+0.7
	baz=266						
NSTT	Nanjuang	0.89	267	eP	Pn	03 21 41.2	+0.6
	baz=265						
HSN	Hsinchu	0.93	278	eP	Pn	03 21 41.6	+0.5
	baz=278						
PCYT	Pengchaiyu	0.95	5	eP	Pg	03 21 40.5	0.0
	baz=6.0						
YOJ	Yonaguni jima	0.96	103		Pg	03 21 41.1	+0.4
YOJ				Sg	Sg	03 21 52.8	-0.5
YOJ	Yonaguni jima	0.96	103	eP	Pg	03 21 40.2	-0.5
	baz=96						
YOJ	Yonaguni jima	0.96	103	P	Pg	03 21 40.6	-0.1
YOJ				S	Sg	03 21 53.5	+0.2
ESL	Shilin	0.99	210	eP	Pg	03 21 40.8	-0.5
	baz=208						
OWD	Renai	1.03	226	eP	Pb	03 21 42.3	+0.3
	baz=228						
NMLH	Miaoli	1.09	263	eP	Pn	03 21 44.6	+1.3
	baz=261						
NSY	Sanyi	1.14	257	eP	Pn	03 21 46.0	+2.0
	baz=255						
TWQ1	Liyutan	1.15	254	eP	Pn	03 21 45.7	+1.5
	baz=251						
VWDT	VWDT	1.20	220	eP	Pb	03 21 43.7	-1.1
	baz=218						
IRIF	Iriomote-Funau	1.63	102	S	Sn	03 22 11.7	+0.2
TPUB	Ta-pu	1.85	222	Pn	Pn	03 21 53.0	-0.8
JKRS	Kuro-shima	1.90	103	P	Pn	03 21 55.3	+0.9

*JMA **12** 03:37:55.6±0.1, 33°N±2°×13°8E±°, h354km, MV3.8/35, FAR S OFF TOKAI DISTRICT*
*IDC **12** 03:37:57.7±0.6, 32°.63N×138°.07E, h335km±6km, mb3.7/15, mbtmp4.3/21, Error ellipse: s-maj=14.4km s-min=11.9km az=69.0*
*NEIC **12** 03:37:57.6±0.7, 32°.7N±0°.1×138°.2E±0°.1, h338km±7km, mb4.0/8, Error ellipse: s-maj=16.7km s-min=12.2km az=141.0*
ISC 12 03:37:58.2±0.6**, 32°.64N**±0°.07×**138°.18E**±0°.07**, h350**km**, n86, σ1^s.46**/92**, mb4.0**/29**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	Tokai 2	1.34	345	eP	Pn	03 38 43.8	-1.4
JAOM	Aogashimamukai	1.35	97	P	Pn	03 38 43.7	-1.9
TTO3	TONANKAI O.B.S	1.38	332	eP	Pn	03 38 44.4	-1.1
TTO3				eS	S	03 39 22.4	-1.0
JHCJ	Hachijojimakas	1.43	72	eP	Pn	03 38 44.4	-1.5
JHJ	Hachijo jima 2	1.43	70	P	Pn	03 38 44.3	-1.7
	178nm,0.3s,baz=335,slow=15,SNR=26						
JHJ				S	S	03 39 22.6	-1.7
	132nm,0.3s,baz=56,slow=23,SNR=6.2						
TTO2	TONANKAI O.B.S	1.45	319	eP	Pn	03 38 44.6	-1.1
JHJ2	Mitsune	1.46	71	Pn	Pn	03 38 44.0	-2.1
JHJ2				Sn	S	03 39 21.6	-2.8
JHJ2	Mitsune	1.46	71	eP	Pn	03 38 43.4	-2.7
TTO1	TONANKAI O.B.S	1.52	310	P	Pn	03 38 44.7	-1.4
JIE	Ise	2.13	325	P	Pn	03 38 48.8	-1.6
JIE				eS	S	03 39 28.8	-3.5
JTNC	Tanabenakahech	2.45	299	P	Pn	03 38 50.6	-2.2
JWY	Kouya	2.67	307	P	Pn	03 38 53.2	-1.5
JOD2	Odawara 2	2.72	16	P	Pn	03 38 53.3	-1.7
INU	Inuyama	2.86	341	Pn	Pn	03 38 54.3	-2.0
JGF	Kuroka	3.03	347	Pn	Pn	03 38 55.9	-1.9
BSO1	Boso 1	3.08	49	eP	Pn	03 38 54.0	-3.6
JYTA	Yamagatataniai	3.17	338	P	Pn	03 38 57.7	-1.4
JAI	Aioi	3.33	291	P	Pn	03 38 58.5	-2.1
JRY	Ryogami san	3.42	10	eP	Pn	03 39 00.1	-1.3
JWT	Wachi	3.50	320	eP	Pn	03 39 00.6	-1.5
JMN	Monobe	3.76	288	P	Pn	03 39 03.0	-1.8
MJAR	Matsushiro Arr	3.89	0	P	Pn	03 39 04.7	-1.4
	11nm,0.6s,baz=180,slow=10.0,SNR=26						
MJAR				S	S	03 39 58.4	-2.4
	3.9nm,0.5s,baz=294,slow=31,SNR=5.5						
MJAR	Matsushiro Arr	3.89	0	Pn	Pn	03 39 03.4	-2.6
MAJO	Matsushiro	3.89	0	Pn	Pn	03 39 03.6	-2.4
MAT	Matsushiro	3.89	0	eP	Pn	03 39 04.5	-1.5
MAT				eS	S	03 39 57.5	-3.2
MJB9	Matsu-Tunnel	3.89	0	Pn	Pn	03 39 03.7	-2.3
JYT	Yasato	3.94	24	Pn	Pn	03 39 05.7	-0.9
JTO	Tosashimizu	4.53	274	P	Pn	03 39 10.8	-2.0
JHS	Saijyo	4.82	301	Pn	Pn	03 39 14.2	-1.7
JHS	Saijyo	4.82	301	eP	Pn	03 39 14.5	-1.4
JSD	Sado	5.38	1	Pn	Pn	03 39 20.6	-1.3
JMM	Marumori	5.63	22	Pn	Pn	03 39 22.8	-2.0
JNU	Nakatsue	6.16	276	P	Pn	03 39 29.1	-1.8
	22nm,0.5s,baz=101,slow=6.1,SNR=17						
JNU	Nakatsue	6.16	276	Pn	Pn	03 39 29.4	-1.5
JCJ	Chichijima	6.53	147	P	Pn	03 39 28.7	-6.6
	31nm,0.3s,baz=276,slow=23,SNR=14						
JCJ				S	S	03 40 42.9	-11
	148nm,0.4s,baz=284,slow=21,SNR=15						
JTU	Tsushima	7.56	287	Pn	Pn	03 39 45.8	-1.4
NAWB	Namwon	9.36	290	P	P	03 40 11.2	+0.7
KSRS	Korea Array	9.68	303	P	Pn	03 40 12.1	-0.2
	4.8nm,0.7s,baz=117,slow=12,SNR=15						
JOW	Kunigami	10.37	239	P	Pn	03 40 19.4	-1.3
	7.7nm,0.6s,baz=90,slow=6.1,SNR=1.7						
JOW	Kunigami	10.37	239	Pn	Pn	03 40 18.9	-1.8
USRK	Ussuriysk Ar.	12.51	339	P	Pn	03 40 45.2	-0.6
	14nm,0.6s,baz=165,slow=10,SNR=17						
NJ2	Nanjing	16.34	273	eP	P	03 41 26.5	-0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KLR	Kul'dur	17.25	346	P	P	03 41 36.7	-0.3
	comp=Z,5.8nm,0.6s,baz=165,slow=8.5,SNR=16						
SONM	Songino Array	28.37	312	P	P	03 43 22.0	+0.6
	comp=Z,3.5nm,0.7s,baz=111,slow=8.0,SNR=11						
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	28.37	312	P	P	03 43 21.1	-0.2
GOMU	GeErMu	35.73	288	P	P	03 44 24.7	-0.6
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,1μm,8.0s						
ZALV	Zalesovo Beam	43.06	316	P	P	03 45 24.8	+0.3
	comp=Z,1.9nm,0.3s,baz=99,slow=7.6,SNR=9.7						
ZALV				PcP	PcP	03 47 08.0	+0.7
	comp=Z,0.8nm,0.4s,baz=118,slow=2.0,SNR=6.6						
	comp=Z,1.9nm,0.3s						
ZALV	Zalesovo Beam	43.06	316	P	P	03 45 24.7	+0.1
ODAN	Odare	44.13	276	eP	P	03 45 33.2	-0.5
	comp=Z,13nm,0.4s						
MKAR	Makanchi Array	44.34	306	P	P	03 45 35.0	+0.1
	comp=Z,3.3nm,0.5s,baz=86,slow=9.9,SNR=46						
MKAR				PcP	PcP	03 47 12.9	+1.0
	comp=Z,0.4nm,0.5s,baz=93,slow=2.9,SNR=3.0						
	comp=Z,3.3nm,0.5s						
RAMN	Ramite	44.76	277	eP	P	03 45 38.2	-0.5
	comp=Z,23nm,0.5s						
JIRN	Jiri	44.86	278	eP	P	03 45 40.1	+0.5
PKI	Pulchoki	45.55	278	eP	P	03 45 44.1	-0.8
	comp=Z,12nm,0.7s						
KKN	Kakani	45.58	278	eP	P	03 45 44.5	-0.5
DMN	Daman	45.79	278	eP	P	03 45 46.1	-0.6
	comp=Z,12nm,0.5s						
GKN	Gorkha	46.05	279	eP	P	03 45 47.9	-0.6
	comp=Z,26nm,0.7s						
NRIK	Noril'sk	46.22	338	P	P	03 45 49.8	+0.7
	comp=Z,6.5nm,0.5s,baz=107,slow=15,SNR=6.1						
	comp=Z,6.5nm,0.5s						
NRIK	Noril'sk	46.22	338	P	P	03 45 49.7	+0.7
NRIK				IAmb	IAmb	03 45 51.7	
	comp=Z,4.8nm,0.6s						
DANN	Dangsing	46.66	280	eP	P	03 45 53.5	+0.1
	comp=Z,14nm,0.3s						
KURBB	Kurchatov Arra	46.73	311	P	P	03 45 53.2	0.0
	comp=Z,7.1nm,0.5s,baz=92,slow=6.8,SNR=60						
	comp=Z,7.1nm,0.5s						
KOLN	Koldanda	46.99	279	eP	P	03 45 55.7	-0.1
	comp=Z,7.6nm,0.3s						
PYUN	Piuthan	47.38	280	eP	P	03 45 58.7	-0.2
	comp=Z,51nm,0.4s						
KSH	Kashi	49.87	296	P	P	03 46 21.5	+4.2
WB2	Warramunga Arr	52.42	185	P	P	03 46 34.8	-1.2
WB2				IAmb	IAmb	03 46 49.5	
	comp=Z,5.4nm,1.1s						
WRA	Warramunga Arr	52.42	185	P	P	03 46 35.6	-0.5
	comp=Z,0.5nm,0.4s,baz=0.7,slow=7.7,SNR=2.9						
	comp=Z,0.5nm,0.4s						
WRA	Warramunga Arr	52.42	185	P	P	03 46 35.1	-0.9
WR0	Warramunga Arr	52.42	184	P	P	03 46 35.8	-0.3
WR0				IAmb	IAmb	03 46 40.5	
	comp=Z,6.4nm,1.1s						
ILAR	Eielson Array	54.62	31	P	P	03 46 52.9	+1.5
	comp=Z,0.2nm,0.5s,baz=253,slow=6.3,SNR=1.9						
ASAR	Alice Springs	56.14	185	P	P	03 47 03.2	+0.6
	comp=Z,0.2nm,0.3s,baz=14,slow=14,SNR=5.1						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	56.14	185	P	P	03 47 02.9	+0.3
ABKAR	Akbulak array	58.78	311	P	P	03 47 21.1	+0.5
ABKAR	Akbulak array	58.78	311	P	P	03 47 21.0	+0.4
ABKAR				IAmb	IAmb	03 47 21.5	
	comp=Z,9.9nm,0.6s						
INK	Inuvik	59.49	26	P	P	03 47 27.0	+2.0
	comp=Z,0.4nm,0.4s,baz=276,slow=6.5,SNR=5.0						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	59.49	26	P	P	03 47 25.7	+0.7
AKTO	Aktyubinsk	59.67	313	P	P	03 47 27.6	+0.9
	comp=Z,6.2nm,0.6s,baz=77,slow=12,SNR=15						
	comp=Z,6.2nm,0.6s						
ARCES	ARCESS Array B	67.16	339	P	P	03 48 15.5	+0.6
	comp=Z,1.2nm,0.5s,baz=68,slow=9.0,SNR=16						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	68.93	28	P	P	03 48 27.6	+1.8
	comp=Z,0.1nm,0.4s,baz=305,slow=6.3,SNR=4.1						
FINES	FINESS Array B	71.44	332	P	P	03 48 41.2	+0.3
	comp=Z,1.8nm,0.6s,baz=64,slow=6.3,SNR=24						
	comp=Z,1.8nm,0.6s						
KBZ	Khabaz	71.73	311	P	P	03 48 44.3	+1.3
	comp=Z,7.7nm,0.8s,baz=116,slow=3.4,SNR=20						
	comp=Z,7.7nm,0.8s						
AKASG	Malin Array Be	76.11	322	P	P	03 49 08.2	+0.2
	comp=Z,2.3nm,0.3s,baz=47,slow=6.3,SNR=18						
	comp=Z,2.3nm,0.3s						
AKBB	Malin Array Si	76.11	322	P	P	03 49 08.4	+0.4
NB2	NORSAR Subarra	77.17	336	P	P	03 49 13.9	+0.1
	comp=Z,0.3nm,0.5s,baz=44,slow=5.9						
NOA	NORSAR Array B	77.17	336	P	P	03 49 14.2	+0.3
	comp=Z,1.4nm,0.6s,baz=45,slow=5.5,SNR=12						
	comp=Z,1.4nm,0.6s						
BR131	Keskin Array S	79.72	311	P	P	03 49 28.2	0.0
BRTR	Keskin Array B	79.72	311	P	P	03 49 29.3	+1.1
	comp=Z,3.8nm,0.8s,baz=109,slow=4.3,SNR=23						
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	79.72	311	P	P	03 49 29.1	+1.0

JMA 12 03:38:25.8±0.1**, 35°.1N**±0°.2×**137°.3E**±0°.3**, h40**km**, MV0.4**/19**, CENTRAL AICHI PREF, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAO	Obara	0.21	350	P	Pn	03 38 33.1	-0.2
JAO				S	Sn	03 38 38.5	+0.1
JYTA	Yamagatataniai	0.71	319	eS	Sn	03 38 49.2	+0.2

TAP 12 03:41:09.3, 24°.37N×121°.67E, h9km**, ML2.0, 1C, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.08	132	eP	Pg	03 41 12.0	+0.5
	baz=129						
EHP				eS	Sg	03 41 13.8	+0.7
	baz=129						
ENA	Nanau	0.09	46	⇑iP	Pg	03 41 12.5	+0.9
	baz=49						
ENA				iS	Sg	03 41 13.8	+0.6
	baz=49						
EWUT	Wuta	0.12	51	P	Pg	03 41 13.1	+0.9
	baz=50						
EWUT				S	Sg	03 41 14.8	+0.7
	baz=50						
NACB	Ninganchiao	0.20	200	eP	Pg	03 41 14.2	+0.7
	baz=200						
NACB				S	Sg	03 41 17.4	+1.1
	baz=200						
ETL	Fush Village	0.21	192	P	Pg	03 41 14.6	+1.0
	baz=192						
ETL				S	Sg	03 41 17.7	+1.1
	baz=192						
LATG	Datong	0.21	322	P	Pg	03 41 15.0	+1.2
	baz=321						
LATG				S	Sg	03 41 18.1	+1.4
	baz=321						
ETLH	Xiulin Townshi	0.23	228	P	Pg	03 41 15.2	+1.1
	baz=227						
ETLH				S	Sg	03 41 18.3	+1.0
	baz=227						
NDS	Dongshan	0.27	9	P	Pb	03 41 16.0	-0.4
	baz=8.0						
NDS				S	Sb	03 41 19.8	-1.3
	baz=8.0						
NNSB	Datong	0.27	283	P	Pb	03 41 16.1	-0.4
	baz=283						
NNSB				S	Sg	03 41 19.8	+1.3
	baz=283						
NNS	Nan Shan	0.28	285	iP	Pb	03 41 16.2	-0.4
	baz=285						
NNS				iS	Sg	03 41 20.0	+1.2
	baz=285						
ENTT	Nioudou	0.29	341	iP	Pb	03 41 16.6	-0.2
	baz=341						
ENTT				iS	Sb	03 41 20.7	-1.0
	baz=341						
TWC	Suao	0.29	34	iP	Pb	03 41 16.1	-0.6
	baz=35						
TWC				S	Sb	03 41 20.9	-0.8
	baz=35						
TWD	Chiawan	0.29	194	iP	Pb	03 41 16.1	-0.6
	baz=192						
TWD				iS	Sg	03 41 20.1	+1.1
	baz=192						
TWE	Neicheng	0.35	359	eP	Pb	03 41 17.3	-0.5
	baz=1.0						
TWE				eS	Sb	03 41 23.6	+0.1
	baz=1.0						
FUSB	Fushanzhiwuyua	0.40	349	eP	Pb	03 41 18.5	-0.1
	baz=348						
FUSB				eS	Sb	03 41 24.5	-0.5
	baz=348						
YHNB	Yeheng	0.41	318	P	Pb	03 41 18.1	-0.7
	baz=318						
YHNB				S	Sb	03 41 24.4	-0.8
	baz=318						
FUSS	Fushou	0.41	253	iP	Pb	03 41 18.8	-0.1
	baz=253						
FUSS				S	Sb	03 41 24.7	-0.6
	baz=253						
NSK	Sanguang	0.42	317	P	Pb	03 41 18.7	-0.3
	baz=317						
NSK				iS	Sb	03 41 24.7	-0.9
	baz=317						
WHF	Hehuan Shan	0.43	239	iP	Pb	03 41 18.9	-0.5
	baz=238						
WHF				iS	Sb	03 41 25.8	-0.3
	baz=238						
NWLT	Wulai	0.44	339	eP	Pb	03 41 19.5	+0.3
	baz=339						
NWLT				eS	Sb	03 41 25.3	-0.7
	baz=339						
TWT	Tachien	0.47	256	eP	Pb	03 41 19.4	-0.5
	baz=256						
TWT				eS	Sb	03 41 27.1	+0.1
	baz=256						
TDCB	Techi	0.48	257	P	Pb	03 41 19.5	-0.6
	baz=256						
TDCB				S	Sb	03 41 27.0	-0.4
	baz=256						
NTC	Toucheng	0.51	16	eP	Pb	03 41 20.0	-0.4
	baz=16						
EGS		0.53	26	eP	Pb	03 41 20.9	+0.1
	baz=27						
EGS				S	Sb	03 41 29.6	+0.9
	baz=27						
CHGB	Renai	0.55	236	P	Pb	03 41 21.3	0.0
	baz=236						
CHGB				S	Sb	03 41 29.8	+0.5
	baz=236						
NFF	Wufeng Townshi	0.57	298	eP	Pb	03 41 22.1	+0.6
	baz=297						
NFF				eS	Sb	03 41 29.8	0.0
	baz=297						
ESL	Shilin	0.59	202	P	Pb	03 41 21.9	0.0
	baz=200						
ESL				S	Sb	03 41 31.0	+0.6
	baz=200						
OWD	Renai	0.61	228	P	Pb	03 41 22.1	-0.2
	baz=227						
OWD				eS	Sb	03 41 30.7	-0.3
	baz=227						
TIPB	Shuangxi	0.62	13	eP	Pb	03 41 22.2	-0.2
	baz=13						
WUSB	Renai	0.63	234	P	Pb	03 41 22.9	+0.3
	baz=233						
WUSB				S	Sb	03 41 31.8	+0.3
	baz=233						
LIOB	Emei	0.66	295	eP	Pb	03 41 23.7	+0.7
	baz=295						
LIOB				eS	Sb	03 41 33.1	+0.8
	baz=295						
NSTT	Nanjuang	0.67	293	P	Pb	03 41 23.2	+0.1
	baz=293						
NSTT				eS	Sb	03 41 33.2	+0.7
	baz=293						
WHP	Taichung City	0.67	263	eP	Pb	03 41 23.1	-0.1

	baz=262						
WHP				S	Sb	03 41 32.8	+0.1
	baz=262						
TWB1	Santiao Chiao	0.70	24	*e*S	Sb	03 41 34.5	+1.0
	baz=24						
NWF	Wu-fen Shan	0.71	8	*e*S	Sb	03 41 34.5	+0.7
	baz=8.0						
SXI1	Grass Mountain	0.75	14	*e*P	Pb	03 41 24.7	+0.1
	baz=14						
SXI1				*e*S	Sb	03 41 35.5	+0.5
	baz=14						
WCS	Beigang Elemen	0.76	246	*e*P	Pb	03 41 25.4	+0.7
	baz=246						
WCS				*e*S	Sb	03 41 36.0	+0.8
	baz=246						
VWDT	VWDT	0.78	219	*e*P	Pb	03 41 25.1	+0.1
	baz=218						
VWDT				*e*S	Sb	03 41 36.0	+0.3
	baz=218						

JMA 12 03:41:13.0±0.1,**24°.3N**±0°.4×**123°.8E**±0°.3,**h14**^{km}±1^{km},
MV1.5/9,**NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.11	316	P	Pg	03 41 16.3	0.0
JKRS	Kuro-shima	0.18	95	*i* P	Pg	03 41 17.3	+0.1
JKRS				S	Sb	03 41 20.8	-0.6
HATJ	Hateruma jima	0.20	183	*i* P	Pg	03 41 17.3	-0.2
HATJ				*e*S	Sg	03 41 20.7	+0.1
JIJ	Ishigaki jima	0.32	70	P	Pg	03 41 19.4	-0.2
JIJ				S	Sg	03 41 24.0	0.0
YOJ	Yonaguni jima	0.76	286	*e*P	Pg	03 41 27.7	-0.1
JYNG	Yonagunijimaku	0.82	284	*e*S	Sb	03 41 40.6	+0.7
JTJ	Tarama	0.90	64	*e*P	Pb	03 41 30.2	-0.1
JTJ				*e*S	Sg	03 41 42.6	+0.6

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*IDC **12** 03:43:46.0±0.9, 52°.67S×138°.95E, h0^{km}, mb4.0/6, mbtmp4.1/6, Error ellipse: s-maj=68.7km s-min=16.9km az=86.0*

*NEIC **12** 03:43:48.0±1.4, 52°.80S±0°.04×139°.2E±0°.7, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=70.5km s-min=5.4km az=87.0*

ISC 12 03:43:47.3±0.7,**52°.7S**±0°.1×**139°.2E**±0°.4,**h10**^{km}**,n30,**
σ**0^{s}.84**/21**,mb4.2**/7**,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	20.88	6	P	P	03 48 28.7	-0.8
	4.7nm,0.9s,baz=164,slow=9.8,SNR=3.8						
	4.7nm,0.9s						
H01W1	Cape Leeuwin H	25.17	305	T	T	04 16 01.5	
	baz=141,slow=75,SNR=38						
H01W2	Cape Leeuwin H	25.18	305	T	T	04 15 59.9	
	baz=141,slow=75,SNR=39						
H01W3	Cape Leeuwin H	25.19	305	T	T	04 16 00.0	
	baz=141,slow=75,SNR=27						
VNDA	Vanda	26.27	169	P	P	03 49 21.9	-0.3
	1.2nm,0.6s,baz=335,slow=11,SNR=11						
	1.2nm,0.6s						
VNDA	Vanda	26.27	169	P	P	03 49 21.4	-0.8
VNDA				IAmb	IAmb	03 49 25.2	
	comp=Z,13nm,1.6s						
SBA	Scott Base	27.15	168	P	P	03 49 29.7	-0.5
ASAR	Alice Springs	29.27	350	P	P	03 49 48.9	-0.7
	comp=Z,0.9nm,0.6s,baz=164,slow=10,SNR=12						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	29.27	350	P	P	03 49 52.0	+2.4
WB2	Warramunga Arr	32.91	352	P	P	03 50 20.7	-1.0
WRA	Warramunga Arr	32.91	352	P	P	03 50 21.2	-0.5
	comp=Z,3.0nm,1.0s,baz=173,slow=7.7,SNR=6.8						
	comp=Z,3.0nm,1.0s						
WB0	Warramunga Arr	33.08	352	P	P	03 50 22.6	-0.6
WB0				IAmb	IAmb	03 50 40.8	
	comp=Z,10nm,1.2s						
QSPA	South Pole Qui	37.41	180	P	P	03 51 00.4	+0.2
	comp=Z,7.3nm,1.1s,baz=302,slow=2.5,SNR=13						
	comp=Z,7.3nm,1.1s						
QSPA	South Pole Qui	37.41	180	P	P	03 51 00.5	+0.2
QSPA				IAmb	IAmb	03 51 03.2	
	comp=Z,12nm,1.3s						
BELA	Belgrano 2	49.63	182	P	P	03 52 37.6	-0.6
BELA				IAmb	IAmb	03 52 39.4	
	comp=Z,4.6nm,0.9s						
SNAA	Sanae	53.07	194	P	P	03 53 04.5	+0.4
	comp=Z,2.4nm,1.1s,baz=82,slow=6.0,SNR=3.7						
	comp=Z,2.4nm,1.1s						
SNAA	Sanae	53.07	194	P	P	03 53 04.3	+0.2
H08S2	Diego Garcia H	69.92	284	T	T	05 12 02.1	
	baz=144,slow=76,SNR=14						
H08S1	Diego Carcia H	69.94	284	T	T	05 12 04.0	
	baz=144,slow=76,SNR=11						
H08S3	Diego Garcia H	69.94	284	T	T	05 12 03.6	
	baz=144,slow=76,SNR=21						
H03S1	Juan Fernandez	87.63	149	T	T	05 34 00.6	
	baz=200						
H03S2	Juan Fernandez	87.63	149	T	T	05 34 00.4	
	baz=200						
H03S3	Juan Fernandez	87.64	149	T	T	05 34 00.6	
	baz=200						
FINES	FINESS Array B	144.17	311	PKP	PKPdf	04 03 21.6	-0.3
	comp=Z,2.8nm,1.0s,baz=324,slow=1.9,SNR=4.3						
TKL	Tuckaleechee C	145.39	102	PKPbc	PKPab	04 03 26.5	+1.5
	comp=Z,2.1nm,0.8s,baz=202,slow=5.4,SNR=2.4						
ARCES	ARCESS Array B	145.98	325	PKPbc	PKPdf	04 03 25.2	+0.3
	comp=Z,3.1nm,0.9s,baz=86,slow=5.0,SNR=7.4						
ARCES	ARCESS Array B	145.98	325		PKPab	04 03 26.6	+0.3
GERES	GERESS Array B	146.02	286	PKPbc	PKPdf	04 03 25.9	+0.2
	comp=Z,1.8nm,0.8s,baz=147,slow=2.7,SNR=3.9						
GERES	GERESS Array B	146.02	286		PKPbc	04 03 26.6	+0.1
ESDC	Sonseca Array	151.71	257	PKPbc	PKPbc	04 03 41.4	-0.1
	comp=Z,0.3nm,0.6s,baz=160,slow=0.2,SNR=2.1						

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*NOU **12** 03:45:40.0, 11°.81S×166°.88E, h62^{km}, mb4.7/21, Santa Cruz Islands*

*NEIC **12** 03:45:46.8±1.4, 12°.47S±0°.08×166°.8E±0°.1, h96^{km}±7^{km}, mb4.6/19, Error ellipse: s-maj=15.8km s-min=9.9km az=57.0*

*IDC **12** 03:45:47.9±5.2, 12°.53S×166°.72E, h103^{km}±47^{km}, mb4.1/9, mbtmp4.4/10, Error ellipse: s-maj=26.7km s-min=25.7km az=79.0*

ISC 12 03:45:47.4±0.7,**12°.55S**±0°.07×**166°.7E**±0°.1,**h100**^{km}**,n64,**
σ**1^{s}.60**/67**,mb4.7**/21**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.92	170	Pn	Pn	03 46 31.3	-0.9
SANVU				Sn	Sn	03 47 04.0	-2.6
SANVU	Saraoutou	2.92	170	P	Pn	03 46 33.6	+1.4
DVP	Devils Point	5.34	164	P	Pn	03 47 07.7	+2.9
RTV	Rentapao	5.47	162	P	Pn	03 47 09.8	+3.2
LIFNC	LIFOU	8.20	176	Pn	Pn	03 47 43.9	+0.3
LIFNC	LIFOU	8.20	176	P	Pn	03 47 45.5	+1.9
MARNC	Mare, Loyalty	8.97	172	Pn	Pn	03 47 54.3	+0.1
DZM	Mont Dzumac	9.47	181	P	Pn	03 48 01.5	+0.5
	8.3nm,0.4s,baz=355,slow=18,SNR=23						
DZM				S	Sn	03 49 42.1	-3.6
	2.6nm,0.3s,baz=338,slow=19,SNR=1.1						
DZM	Mont Dzumac	9.47	181	Pn	Pn	03 48 00.9	-0.1
NOUC	Port Laguerre	9.50	182	P	Pn	03 48 04.7	+3.3
ONTNC	Ouen Toro	9.70	181	Pn	Pn	03 48 04.6	+0.5
ONTNC				Sn	Sn	03 49 47.8	-3.5
ONTNC	Ouen Toro	9.70	181	P	Pn	03 48 08.6	+4.5
OUENC	Ouen Island, N	9.81	179	Pn	Pn	03 48 05.8	+0.2
OUENC				Sn	Sn	03 50 05.3	+11
OUENC	Ouen Island, N	9.81	179	P	Pn	03 48 06.7	+1.1
PINNC	Pines Island,	10.03	176	Pn	Pn	03 48 09.7	+1.1
EIDS	Eidsvold	19.47	227	P	P	03 50 07.0	+0.6
EIDS				IAmb	IAmb	03 50 09.8	
	comp=Z,23nm,0.8s						
EIDS	Eidsvold	19.47	227	P	Pn	03 50 09.4	+0.8
CTA	Charters Tower	20.97	246	P	P	03 50 24.2	+1.5
	comp=Z,12nm,0.7s,baz=219,slow=16,SNR=9.2						
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	20.97	246	P	P	03 50 24.0	+1.3
CTAO				IAmb	IAmb	03 50 27.5	
	comp=Z,16nm,0.8s						
CTAO	Charters Tower	20.97	246	P	P	03 50 23.9	+1.2
RMQ	Roma	21.81	228	P	P	03 50 33.4	+1.8
ARMA	Armidale	22.58	216	P	P	03 50 41.1	+1.3
ARMA				IAmb	IAmb	03 50 42.6	
	comp=Z,17nm,0.8s						
ARMA	Armidale	22.58	216	P	P	03 50 42.1	+2.3
CMSA	Cobar Meteorol	27.02	222	P	P	03 51 23.7	+3.4
URZ	Urewera	27.24	162	P	P	03 51 24.0	+1.9
	comp=Z,120nm,1.6s						
GENI	Genyem	28.05	289	P	P	03 51 27.7	-1.9
	comp=Z,44nm,1.5s						
BHW	Baring Head	29.63	167	P	P	03 51 42.1	-1.2
MSWZ	Moikau Station	29.72	167	P	P	03 51 42.9	-1.2
STKA	Stephens Creek	30.02	226	P	P	03 51 48.1	+1.2
	comp=Z,5.1nm,0.5s,baz=50,slow=10,SNR=13						
	comp=Z,5.1nm,0.5s						
STKA	Stephens Creek	30.02	226	P	P	03 51 47.4	+0.5
STKA	Stephens Creek	30.02	226	P	P	03 51 48.6	+1.7
RPZ	Rata Peaks	31.28	174	P	P	03 51 58.3	+0.4
	comp=Z,12nm,0.7s,baz=34,slow=14,SNR=2.4						
	comp=Z,12nm,0.7s						
RPZ	Rata Peaks	31.28	174	P	P	03 51 58.2	+0.4
WR0	Warramunga Arr	31.68	252	P	P	03 52 01.7	0.0
WR0				IAmb	IAmb	03 52 07.8	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	31.79	253	P	P	03 52 02.8	+0.1
WB0				IAmb	IAmb	03 52 03.4	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	31.85	252	P	P	03 52 02.8	-0.4
WB2				IAmb	IAmb	03 52 09.3	
	comp=Z,18nm,1.3s						
WRAB	Tennant Creek	31.85	252	P	P	03 52 03.4	+0.2
WRA	Warramunga Arr	31.86	252	P	P	03 52 03.2	-0.1
	comp=Z,5.8nm,0.6s,baz=85,slow=9.3,SNR=43						
	comp=Z,5.8nm,0.6s						
WRA	Warramunga Arr	31.86	252	P	P	03 52 01.4	-1.9
SRPI	Serui, Papua	31.96	287	P	P	03 52 02.2	-2.0
	comp=Z,6µmcomp=Z,72nm,0.5s						
HTT	Hallett	32.75	226	P	P	03 52 12.2	+1.2
AS31	Alice Springs	32.97	246	P	P	03 52 12.9	-0.1
AS31				IAmb	IAmb	03 52 13.7	
	comp=Z,3.6nm,0.6s						
ASAR	Alice Springs	32.97	246	P	P	03 52 12.8	-0.1
	comp=Z,10nm,0.7s,baz=68,slow=9.9,SNR=95						
	comp=Z,10nm,0.7s						
ASAR	Alice Springs	32.97	246	P	P	03 52 12.7	-0.3
KMPI	Kaimana, Papua	33.78	282	P	P	03 52 18.4	-1.6
	comp=Z,3µm,0.8s						
BBOO	Buckleboo	34.50	229	P	P	03 52 26.7	+0.5
BBOO				IAmb	IAmb	03 52 27.3	
	comp=Z,20nm,0.9s						
BBOO	Buckleboo	34.50	229	P	P	03 52 27.1	+1.0
MULG	Mulgathing	34.94	235	P	P	03 52 30.1	+0.2
KNRA	Kununurra	36.87	261	P	P	03 52 44.3	-2.2
WRKA	Warakurna	38.26	245	P	P	03 52 58.6	+0.4
FORT	Forrest	39.95	237	P	P	03 53 12.3	+0.1
FORT	Forrest	39.95	237	P	P	03 53 13.4	+1.2
MBWA	Marble Bar	45.60	253	P	P	03 53 56.9	-1.0
MBWA				IAmb	IAmb	03 53 58.6	
	comp=Z,36nm,1.4s						
MORW	Morawa	49.72	243	P	P	03 54 30.7	+0.9
MORW				IAmb	IAmb	03 54 32.6	
	comp=Z,12nm,1.1s						
VNDA	Vanda	65.01	181	P	P	03 56 16.7	+0.3
	comp=Z,0.5nm,0.6s,baz=5.6,slow=6.6,SNR=5.5						
	comp=Z,0.5nm,0.6s						
VNDA	Vanda	65.01	181	P	P	03 56 17.1	+0.7
SBA	Scott Base	65.30	180	P	P	03 56 19.7	+1.5
ADK	Adak	65.77	11	P	P	03 56 20.3	-1.3
KLR	Kul'dur	68.80	336	P	P	03 56 41.9	+1.1
	comp=Z,1.3nm,0.7s,baz=107,slow=3.0,SNR=4.0						
	comp=Z,1.3nm,0.7s						
QSPA	South Pole Qui	77.46	180	P	P	03 57 31.8	0.0
QSPA				IAmb	IAmb	03 57 33.0	
	comp=Z,4.7nm,1.0s						
ILAR	Eielson Array	84.65	18	P	P	03 58 08.9	-0.7
	comp=Z,0.5nm,0.8s,baz=235,slow=5.9,SNR=6.1						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	84.65	18	P	P	03 58 08.7	-0.9
MKAR	Makanchi Array	95.24	317	P	P	03 59 00.2	+0.2
	comp=Z,0.6nm,0.6s,baz=90,slow=6.1,SNR=6.7						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	95.24	317	P	P	03 58 59.5	-0.5

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*UCR **12** 03:54:21.4±1.8, 10°.70N×84°.75W, h180^{km}±4^{km}, ML4.1, MW4.4, mb4.2(NEIC)*

*NEIC **12** 03:54:22.3±1.4, 10°.66N±0°.06×84°.77W±0°.05, h176^{km}±6^{km}, mb4.2/21, Error ellipse: s-maj=9.0km s-min=6.6km az=212.0*

*INET **12** 03:54:22.6±1.3, 10°.68N×84°.78W, h174^{km}±9^{km}, MW3.8*

*IDC **12** 03:54:23.4±1.1, 10°.85N×84°.78W, h192^{km}±9^{km}, mb3.6/9, mbtmp4.2/11, MS3.9/1, Error ellipse: s-maj=26.6km s-min=14.8km az=50.0*

*UPA **12** 03:54:24.4±1.3, 10°.38N×84°.98W, h10^{km}±170^{km}, MD4.3, MW4.5*

*SNET **12** 03:54:27.0±0.8, 11°.01N×85°.10W, h190^{km}±34^{km}, ML4.5*

ISC 12 03:54:21.7±0.5,**10°.70N**±0°.05×**84°.74W**±0°.05,**h179**^{km}±4^{km},
n155,σ**1^{s}.33**/187**,mb4.1**/19**,9C,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACM	Arenal	0.21	187	*i* P	Pn	03 54 47.0	+1.4
ARE1	Arenal 1	0.24	175	*e*P	Pn	03 54 45.8	+0.2
PTEN	Parque Tenorio	0.24	274	⇑*e*P	Pn	03 54 46.0	+0.4
PTEN				*i* S	Sn	03 55 05.4	+1.4
ACAL	Aguas Claras	0.30	258	*i* P	Pn	03 54 46.1	+0.3
CUI	Cuipilapa	0.42	265	⇑*i*P	Pn	03 54 46.2	0.0
HORNC	Hornillas	0.43	272	⇑*i*P	Pn	03 54 46.3	0.0
JTS	Las Juntas de	0.46	207	Pn	Pn	03 54 45.7	-0.6
JTS				Sn	Sn	03 55 04.1	-1.1
JTS	Las Juntas de	0.46	207	*e*P	Pn	03 54 45.7	-0.6
JTS				*e*S	Sn	03 55 04.3	-0.9
JTS	Las Juntas de	0.46	207	*e*P	Pn	03 54 45.7	-0.6
COLC	Colonia	0.46	266	⇑*i*P	Pn	03 54 46.1	-0.1
GUAB	Guayabo de Bag	0.48	271	*i* P	Pn	03 54 46.4	0.0
LIM1	Limonal	0.50	270	⇑*i*P	Pn	03 54 46.3	-0.1
GPS2	Hotel Rincn d	0.60	275	*i* P	Pn	03 54 46.8	-0.1
BUAI	Buenos Aires	0.61	287	*i* P	Pn	03 54 46.9	0.0
GB1A	Borinquen Arri	0.66	281	⇑*i*P	Pn	03 54 47.3	+0.1
BUEV	Buena Vista	0.66	279	⇑*i*P	Pn	03 54 47.2	-0.1
GBS3	Finca Las Img	0.71	277	⇑*i*P	Pn	03 54 47.1	-0.3
ORTG	Ortega, Santa	0.78	245		Pn	03 54 47.6	-0.3
ORTG				Sn	Sn	03 55 07.7	-0.5
HZTE	Horizontes, Gu	0.84	271	Pn	Pn	03 54 48.0	-0.2
HZTE				Sn	Sn	03 55 08.3	-0.3
HZTE	Horizontes, Gu	0.84	271	*e*P	Pn	03 54 48.0	-0.2
GUAI	GUAI	0.87	241	⇑*i*P	Pn	03 54 48.0	-0.3
LAFE	Finca La Fe, P	0.90	191	*e*P	Pn	03 54 48.0	-0.6
HDC	Heredia	0.93	138		Pn	03 54 49.0	+0.1
HDC				Sn	Sn	03 55 10.1	+0.1
HDC	Heredia	0.93	138	*e*P	Pn	03 54 48.9	-0.1
DUNO	Dulce Nombre,	0.96	230		Pn	03 54 48.4	-0.6
DUNO				Sn	Sn	03 55 09.6	-0.6
JACO	JACO, Garabito	1.03	176	Pn	Pn	03 54 49.4	-0.1
JACO				Sn	Sn	03 55 10.8	-0.3
JACO	JACO, Garabito	1.03	176	*e*P	Pn	03 54 49.2	-0.4
CAO2	Cobano, Puntar	1.07	200		Pn	03 54 48.9	-0.9
INDI	Punta indio, G	1.12	222	*e*P	Pn	03 54 49.4	-0.8
CVTR	Volcan Turrial	1.18	125		Pn	03 54 50.8	-0.4
LCR2	La Lucha 2	1.19	143	*e*P	Pn	03 54 51.0	-0.1
CONN	Concepcion	1.22	315	*e*P	Pn	03 54 51.6	+0.5
CONN				*e*S	Sn	03 55 14.8	+0.9
RIMA	Rio Macho	1.27	137		Pn	03 54 51.5	-0.2
ACON	Acoyapa	1.33	341		Pn	03 54 52.3	+0.3
BATAN	Batan	1.47	114	*e*P	Pn	03 54 52.0	-1.2
BATAN				*e*S	Sn	03 55 12.2	-5.4
CDM	Cerro de Muert	1.49	140	*e*P	Pn	03 54 54.1	+0.1
ESPN	Las Esperanzas	1.55	16		Pn	03 54 54.4	+0.3
PEZE	Perez Zeledon,	1.67	141		Pn	03 54 56.1	+0.6
EDDO	Dominical	1.68	149	*e*P	Pn	03 54 56.5	+1.2
BOAB	BOACO BROADBAN	1.96	333		Pn	03 54 58.9	+0.7
BOAB	BOACO BROADBAN	1.96	333	*e*P	Pn	03 54 59.0	+0.7
SRBA	San Rafael, Bu	1.99	137		Pn	03 54 58.9	+0.2
DRK0	Durika	2.05	134		Pn	03 54 59.8	+0.3
DRK0	Durika	2.05	134	*e*P	Pn	03 54 59.8	+0.3
TISN	Laguna Tiscapa	2.08	314	*e*P	Pn	03 55 00.1	+0.6
EDBA	Buenos Aires	2.10	136	*e*P	Pn	03 55 00.5	+0.7
EDPN	Palmar Norte	2.14	144	*e*P	Pn	03 55 01.3	+1.0
COPN	Copaltepe	2.34	309	*e*P	Pn	03 55 03.2	+0.8
MOMN	Momotombo	2.45	314	*e*P	Pn	03 55 04.2	+0.4
MATN	Matagalpa	2.50	332	Pn	Pn	03 55 05.5	+1.0
MATN	Matagalpa	2.50	332	*e*P	Pn	03 55 05.4	+1.0
EDSV	San Vito	2.55	137	*e*P	Pn	03 55 06.2	+1.1
CNI2	El Empalme, Bo	2.57	119	*e*P	Pn	03 55 05.5	+0.4
CNI2				*e*S	Sn	03 55 37.2	-1.7
CNGN	Cerro Negro	2.62	313		Pn	03 55 05.9	0.0
CNGN	Cerro Negro	2.62	313	*e*P	Pn	03 55 06.2	+0.3
PIRO	Carate, Puerto	2.67	149	*e*P	Pn	03 55 07.6	+1.3
PIRO	Carate, Puerto	2.67	149	*e*P	Pn	03 55 07.5	+1.2
MLIR3	Monte Lirio, C	2.67	135	*e*P	Pn	03 55 07.9	+1.3
MLIR3				*e*S	Sn	03 55 39.4	-2.0
BRU2	Volcan	2.77	133		Pn	03 55 08.1	+0.4
BRU2	Volcan	2.77	133	*e*P	Pn	03 55 08.7	+1.0
BRU2				*e*S	Sn	03 55 42.1	-1.4
TEL3	Telica 3	2.78	312	*e*P	Pn	03 55 08.7	+1.0
CDITO	Canoas	2.80	139		Pn	03 55 07.6	-0.4
CDITO	Canoas	2.80	139	*e*P	Pn	03 55 07.8	-0.1
CDITO				*e*S	Sn	03 55 40.4	-3.5
BC3P	Paso Ancho	2.81	132	*e*P	Pn	03 55 09.5	+1.2
BC3P				*e*S	Sn	03 55 43.3	-1.2
BCO2	Palmira	2.94	132	*e*P	Pn	03 55 10.4	+0.7
BCO2				*e*S	Sn	03 55 46.2	-0.9
LNBQ3	Los Naranjos,	2.95	130	*e*P	Pn	03 55 12.0	+2.1
LNBQ3				*e*S	Sn	03 55 46.6	-0.9
CRIN	San Cristobal	3.01	312		Pn	03 55 11.4	+0.8
CRIN	San Cristobal	3.01	312	*e*P	Pn	03 55 11.1	+0.6
PTPM	Petroterminale	3.08	143	*e*P	Pn	03 55 13.1	+1.8
PTPM				*e*S	Sn	03 55 51.3	+1.2
DVD	David	3.19	135	*e*P	Pn	03 55 12.4	-0.2
DVD				*e*S	Sn	03 55 49.8	-2.5
LOCO3	Loma Colorada,	3.23	135	*e*P	Pn	03 55 14.5	+1.4
LOCO3				*e*S	Sn	03 55 54.1	+0.9
CNCH	Conchagua	3.97	311	*e*P	Pn	03 55 23.3	+0.8
CNCH	Conchagua	3.97	311	*e*P	Pn	03 55 23.3	+0.8
CNCH	Conchagua	3.97	311	*e*P	Pn	03 55 23.5	+1.0
LCND	La Caada	4.03	310	*e*P	Pn	03 55 24.1	+1.0
LCND				IAML		03 56 16.5	
	comp=Z,346nm,0.3s						
LCND	La Caada	4.03	310	*e*P	Pn	03 55 24.1	+1.0
LCND				*e*S	Sn	03 56 09.0	-2.3
LCND				IAML		03 56 16.5	
	comp=Z,346nm,0.3s						
TGUH	Tegucigalpa,Un	4.16	324	Pn	Pn	03 55 26.5	+1.6
TGUH	Tegucigalpa,Un	4.16	324	*e*P	Pn	03 55 26.4	+1.5
TGUH	Tegucigalpa,Un	4.16	324	*e*P	Pn	03 55 26.4	+1.5
TGUH	Tegucigalpa,Un	4.16	324	*e*P	Pn	03 55 26.7	+1.8
JUCU	Jucuar¡n	4.27	307	*e*P	Pn	03 55 27.2	+0.9
JUCU				*e*S	Sn	03 56 15.1	-1.9
JUCU				IAML		03 56 21.5	
	comp=Z,657nm,0.4s						
JUCU	Jucuar¡n	4.27	307	*e*P	Pn	03 55 27.2	+0.9
JUCU				*e*S	Sn	03 56 15.1	-1.9
JUCU				IAML		03 56 21.5	
	comp=Z,657nm,0.4s						
VSM	San Miguel	4.39	308	*e*P	Pn	03 55 30.0	+1.9
VSM	San Miguel	4.39	308	*e*P	Pn	03 55 30.0	+1.9
RANC	El Ranchito	4.41	308	*e*P	Pn	03 55 29.4	+1.2
RANC				IAML		03 56 26.1	
	comp=Z,362nm,0.3s						
RANC	El Ranchito	4.41	308	*e*P	Pn	03 55 29.4	+1.2
RANC				*e*S	Sn	03 56 17.6	-2.6
RANC				IAML		03 56 26.1	
	comp=Z,362nm,0.3s						
FAGO	Alcalda de S	4.44	312	*e*P	Pn	03 55 29.8	+1.3
FAGO	Alcalda de S	4.44	312	*e*P	Pn	03 55 29.8	+1.3
FAGO				*e*S	Sn	03 56 17.5	-3.2
PACA	Pacayal	4.46	309	*e*P	Pn	03 55 30.4	+1.7
PACA				IAML		03 56 27.1	
	comp=Z,4µm,0.4s						
PACA	Pacayal	4.46	309	*e*P	Pn	03 55 30.4	+1.7
PACA				*e*S	Sn	03 56 19.6	-1.7
PACA				IAML		03 56 27.1	
	comp=Z,4µm,0.4s						
PACA	Pacayal	4.46	309	*e*P	Pn	03 55 30.7	+1.9
SCLA	Alcaldia de Sa	4.91	308	*e*P	Pn	03 55 35.7	+1.1
SCLA	Alcaldia de Sa	4.91	308	*e*P	Pn	03 55 35.7	+1.1
SCLA				*e*S	Sn	03 56 30.3	-1.5
COEG	Centro de Oper	4.98	306	*e*P	Pn	03 55 37.1	+1.6
COEG				IAML		03 56 39.6	
	comp=Z,217nm,0.3s						
COEG	Centro de Oper	4.98	306	*e*P	Pn	03 55 37.1	+1.6
COEG				*e*S	Sn	03 56 32.0	-1.5
COEG				IAML		03 56 39.6	
	comp=Z,217nm,0.3s						
BCIP	Isla Barro Col	5.06	107	Pn	Pn	03 55 37.6	+1.1
SJTE	Alcalda de S	5.08	305	*e*P	Pn	03 55 38.5	+1.7
SJTE				IAML		03 56 41.3	
	comp=Z,138nm,0.3s						
SJTE	Alcalda de S	5.08	305	*e*P	Pn	03 55 38.5	+1.7
SJTE				*e*S	Sn	03 56 33.6	-2.1
SJTE				IAML		03 56 41.3	
	comp=Z,138nm,0.3s						
LFRS	El Faro	5.13	305	*e*P	Pn	03 55 39.2	+1.7
LFRS	El Faro	5.13	305	*e*P	Pn	03 55 39.2	+1.7
LFRS				*e*S	Sn	03 56 34.9	-2.0
LALI	Alcalda de L	5.27	302	*e*P	Pn	03 55 40.5	+1.3
LALI	Alcalda de L	5.27	302	*e*P	Pn	03 55 40.5	+1.3
SNET	Serv Nac Est T	5.30	305	*e*P	Pn	03 55 41.1	+1.4
SNET	Serv Nac Est T	5.30	305	*e*P	Pn	03 55 41.1	+1.4
BOQS	Boqueron	5.37	305	*e*P	Pn	03 55 42.5	+1.9
BOQS	Boqueron	5.37	305	*e*P	Pn	03 55 42.5	+1.9
JAYA	Jayaque - finc	5.46	303	*e*P	Pn	03 55 42.6	+0.8
JAYA	Jayaque - finc	5.46	303	*e*P	Pn	03 55 42.6	+0.8
JAYA				*e*S	Sn	03 56 42.1	-2.7
CEVE	Cerro Verde	5.70	304	*e*P	Pn	03 55 46.7	+1.7
CEVE				IAML		03 56 56.4	
	comp=Z,702nm,0.3s						
CEVE	Cerro Verde	5.70	304	*e*P	Pn	03 55 46.7	+1.7
CEVE				IAML		03 56 56.4	
	comp=Z,702nm,0.3s						
MTO3	Montecristo	5.82	310		Pn	03 55 47.3	+0.8
MTO3	Montecristo	5.82	310	*e*P	Pn	03 55 48.1	+1.6
MTO3	Montecristo	5.82	310	*e*P	Pn	03 55 48.1	+1.6
NUBE	Las Nubes	5.87	303	*e*P	Pn	03 55 48.5	+1.4
NUBE	Las Nubes	5.87	303	*e*P	Pn	03 55 48.5	+1.4
ESQI	Esquipulas	5.91	311		Pn	03 55 48.0	+0.4
SLOZ	Alcaldia de Sa	5.94	304	*e*P	Pn	03 55 49.5	+1.6
CMIG	Matias Romero	11.72	304	P	Pn	03 57 03.8	+0.2
	comp=Z,8.3nm,0.5s,baz=139,slow=10.0,SNR=34						
CMIG				S	Sn	03 59 09.3	-4.5
	comp=Z,2.1nm,0.4s,baz=24,slow=20,SNR=3.7						
SDV	Santo Domingo	14.02	96	P	P	03 57 35.4	0.0
	comp=Z,14nm,0.9s,baz=299,slow=6.2,SNR=17						
SDV	Santo Domingo	14.02	96		Pn	03 57 32.9	-0.1
TLIG	Tlapa	15.04	299		Pn	03 57 46.0	+0.4
TLIG				IAmb	IAmb	03 57 53.7	
	comp=Z,5.7nm,0.5s						
BAUV	El Baul	16.55	95	P	Pn	03 58 03.6	-0.1
152A	Waverly Hall	21.87	0	P	P	03 59 02.0	+1.7
152A				IAmb	IAmb	03 59 03.1	
	comp=Z,5.8nm,0.7s						
LRAL	Lakeview Retre	22.33	355	P	P	03 59 06.6	+1.9
LRAL				IAmb	IAmb	03 59 07.6	
	comp=Z,6.3nm,0.8s						
GOGA	Godfrey	22.64	3	P	P	03 59 09.1	+1.5
GOGA				IAmb	IAmb	03 59 10.1	
	comp=Z,6.6nm,0.8s						
Y52A	Lilburn	23.07	1	P	P	03 59 12.3	+0.8
Y52A				IAmb	IAmb	03 59 14.0	
	comp=Z,11nm,1.3s						
HODGE	Hodges	23.54	5	P	P	03 59 17.1	+1.4
HODGE				IAmb	IAmb	03 59 18.1	
	comp=Z,6.0nm,0.8s						
BG3	Lake Jocassee	24.24	4	P	P	03 59 23.2	+1.1
BG3				IAmb	IAmb	03 59 24.9	
	comp=Z,6.2nm,0.8s						
W50A	Signal Mountai	24.40	359	P	P	03 59 23.4	-0.2
TXAR	Lajitas Array	25.62	319	P	P	03 59 34.2	-0.6
	comp=Z,0.1nm,0.4s,baz=133,slow=7.7,SNR=1.7						
TXAR				pP	pP	04 00 11.1	-0.1
	comp=Z,0.4nm,0.7s,baz=146,slow=9.1,SNR=5.5						
LCAR	Lake Charles	25.92	348	P	P	03 59 38.8	+1.5
Q51A	Peebles	28.24	2	P	P	03 59 57.8	-0.2
H43A	Windswept, Lux	33.75	356	P	P	04 00 45.4	-0.8
SADO	Sadowa	34.29	7	P	P	04 00 50.6	-0.2
	comp=Z,2.1nm,0.6s,baz=198,slow=6.8,SNR=6.9						
	comp=Z,2.1nm,0.6s						
SADO	Sadowa	34.29	7	P	P	04 00 51.1	+0.2
SPMN	Marine on St.	35.09	350	P	P	04 00 57.0	-0.8
SPMN				IAmb	IAmb	04 00 57.9	
	comp=Z,5.6nm,0.8s						
F36A	Milaca	35.84	349	P	P	04 01 03.3	-0.8
F36A				IAmb	IAmb	04 01 03.7	
	comp=Z,3.7nm,0.7s						
F33A	5 Mile Ranch,	36.39	346	P	P	04 01 07.4	-1.3
F33A				IAmb	IAmb	04 01 08.4	
	comp=Z,3.2nm,0.7s						

AGMN	Agassiz Nation	38.62	348	P	P	04 01 26.5	-1.0
TPH	Tonopah	39.86	319		PcP	04 03 42.1	+1.7
BDFB	Brasilia	44.80	125	P	P	04 02 19.5	+1.3
	comp=Z,3.3nm,0.9s,baz=239,slow=5.1,SNR=4.1						
	comp=Z,3.3nm,0.9s						
CPUP	Villa Florida	45.44	145	LR	LR	04 24 46.1	
	comp=Z,126nm,20.3s,baz=257,slow=40						
SCHQ	Schefferville	46.25	14	P	P	04 02 28.0	-0.9
	comp=Z,2.3nm,0.7s,baz=205,slow=12,SNR=11						
	comp=Z,2.3nm,0.7s						
PLCA	Paso Flores	52.83	166	P	P	04 03 20.4	+1.5
	comp=Z,1.2nm,0.9s,baz=329,slow=6.7,SNR=3.0						
	comp=Z,1.2nm,0.9s						
YKA	Yellowknife Ar	56.01	344	P	P	04 03 40.7	-0.6
	comp=Z,0.6nm,0.7s,baz=140,slow=7.1,SNR=21						
YKA				pP	pP	04 04 24.0	+1.7
	comp=Z,0.4nm,0.7s,baz=138,slow=7.4,SNR=3.3						
	comp=Z,0.6nm,0.7s						
SFJD	Kangerlussuaq	60.70	15	P	P	04 04 12.3	-1.5
	comp=Z,3.6nm,0.6s,baz=100,slow=6.1,SNR=2.6						
	comp=Z,3.6nm,0.6s						
SFJD	Kangerlussuaq	60.70	15	P	P	04 04 12.6	-1.2
ICESG	Greenland Ices	65.09	16	*i*P	P	04 04 40.5	-2.7
SUMG	Summit	67.64	14	*i*P	P	04 04 58.0	-1.3
ILAR	Eielson Array	68.69	336	P	P	04 05 05.2	-0.4
	comp=Z,0.3nm,0.7s,baz=130,slow=5.1,SNR=6.5						
ILAR				pP	pP	04 05 51.1	+3.0
	comp=Z,0.3nm,0.7s,baz=126,slow=4.6,SNR=2.2						
	comp=Z,0.3nm,0.7s						
ESDC	Sonseca Array	76.18	52	P	P	04 05 50.4	0.0
	comp=Z,2.5nm,0.8s,baz=282,slow=5.8,SNR=17						
	comp=Z,2.5nm,0.8s						
ESDC	Sonseca Array	76.18	52	P	P	04 05 50.6	+0.2
DBIC	Dimbokro	78.89	85	P	P	04 06 05.8	0.0
	comp=Z,2.3nm,0.7s,baz=284,slow=4.2,SNR=1.6						
	comp=Z,2.3nm,0.7s						
ASAR	Alice Springs	141.03	246	PKhKP	PKPpre	04 13 25.7	
	comp=Z,0.7nm,0.5s,baz=104,slow=3.3,SNR=7.4						
WRA	Warramunga Arr	141.29	251	PKhKP	PKPpre	04 13 26.6	
	comp=Z,1.2nm,0.8s,baz=92,slow=3.2,SNR=11						

IDC ***12*** *03:55:19.4±6.5, 19°.85S×177°.86W, h477^{km}±70^{km}, mb3.0/7, mbtmp3.8/7, Error ellipse: s-maj=97.3km s-min=23.3km az=155.0*

ISC 12 03:55:27.5±1.8**, 19°.8S**±0°.7×**178°.1W**±0°.4**, h569**^{km}**, n11,** σ**0^{s}.59**/12**, mb3.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.64	256	P	P	04 02 50.0	-0.5
	2.6nm,0.8s,baz=84,slow=8.5,SNR=17						
ASAR				PcP	PcP	04 04 21.5	+0.7
	0.9nm,0.7s,baz=115,slow=3.7,SNR=5.3						
	2.6nm,0.8s						
WRA	Warramunga Arr	44.65	261	P	P	04 02 49.9	-0.7
	0.5nm,0.3s,baz=96,slow=7.8,SNR=23						
WRA				PcP	PcP	04 04 21.7	+0.9
	1.0nm,1.0s,baz=101,slow=3.3,SNR=3.1						
	0.5nm,0.3s						
NVAR	Mina Array Bea	80.54	43	P	P	04 06 41.2	-0.3
	0.2nm,0.6s,baz=218,slow=8.9,SNR=3.5						
	0.2nm,0.6s						
TXAR	Lajitas Array	86.71	57	P	P	04 07 11.6	-0.4
	0.4nm,0.7s,baz=220,slow=5.6,SNR=4.8						
	0.4nm,0.7s						
ANMO	Albuquerque	86.99	51	P	P	04 07 13.3	-0.1
	0.7nm,0.6s,baz=211,slow=5.9,SNR=2.3						
	0.7nm,0.6s						
ILAR	Eielson Array	87.62	13	P	P	04 07 15.3	0.0
	0.4nm,0.8s,baz=226,slow=6.2,SNR=5.2						
	0.4nm,0.8s						
PDAR	Pinedale Array	88.47	43	P	P	04 07 20.2	0.0
	0.3nm,0.6s,baz=212,slow=5.3,SNR=3.9						
	0.3nm,0.6s						
FINES	FINESS Array B	135.07	344	PKP	PKiKP	04 13 43.5	-0.2
	0.6nm,0.5s,baz=297,slow=0.6,SNR=1.6						
AKASG	Malin Array Be	142.36	331	PKhKP	PKPpre	04 13 52.9	
	0.5nm,0.3s,baz=31,slow=4.2,SNR=5.9						
BRTR	Keskin Array B	146.31	313	PKPbc	PKPbc	04 14 06.2	+0.8
	1.1nm,0.6s,baz=140,slow=4.3,SNR=7.5						
GERES	GERESS Array B	149.49	345	PKPbc	PKiKP	04 14 14.3	+0.4
	1.5nm,0.9s,baz=86,slow=4.1,SNR=7.1						

NEIC ***12*** *04:04:39.8±2.1, 9°.0S±0°.1×108°.4W±0°.2, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=26.8km s-min=15.3km az=114.0*

IDC ***12*** *04:04:41.8±3.0, 8°.28S×107°.34W, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=114.3km s-min=24.4km az=48.0*

ISC 12 04:04:39.5±0.9**, 9°.0S**±0°.1×**108°.1W**±0°.2**, h10**^{km}**, n24,** σ**1^{s}.27**/18**, mb4.1**/10**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	38.30	6	P	P	04 11 58.0	-2.5
	0.1nm,0.5s,baz=172,slow=13,SNR=1.7						
	0.1nm,0.5s						
TXAR	Lajitas Array	38.30	6	P	P	04 12 00.1	-0.3
LPAZ	La Paz	39.63	105	P	P	04 12 11.1	-1.3
	1.6nm,0.9s,baz=285,slow=9.8,SNR=5.9						
	1.6nm,0.9s						
LPAZ	La Paz	39.63	105	P	P	04 12 12.2	-0.2
NVAR	Mina Array Bea	48.08	349	P	P	04 13 18.6	-1.0
	0.3nm,0.6s,baz=169,slow=9.8,SNR=2.5						
	0.3nm,0.6s						
CPUP	Villa Florida	51.03	117	P	P	04 13 43.5	+1.3
	1.2nm,0.6s,baz=263,slow=9.4,SNR=3.0						
	1.2nm,0.6s						
CPUP	Villa Florida	51.03	117	P	P	04 13 43.1	+1.0
HLID	Hailey	52.58	354	P	P	04 13 53.0	-0.4
YKA	Yellowknife Ar	71.40	357	P	P	04 16 00.5	+1.0
	1.5nm,0.6s,baz=164,slow=6.1,SNR=32						
	1.5nm,0.6s						
YKA	Yellowknife Ar	71.40	357	P	P	04 16 00.7	+1.2
ILAR	Eielson Array	79.02	344	P	P	04 16 44.6	+1.2
	0.6nm,0.8s,baz=147,slow=5.1,SNR=7.8						
	0.6nm,0.8s						
INK	Inuvik	79.15	351	P	P	04 16 45.1	+1.2
	1.6nm,0.6s,baz=149,slow=5.9,SNR=7.5						
	1.6nm,0.6s						
INK	Inuvik	79.15	351	P	P	04 16 45.5	+1.5
INK				IAmb	IAmb	04 16 46.5	
	comp=Z,2.3nm,0.8s						
QSPA	South Pole Qui	81.13	180	P	P	04 16 54.5	-0.6
VNDA	Vanda	81.33	193	P	P	04 16 55.2	-0.6
VNDA				IAmb	IAmb	04 17 01.4	
	comp=Z,8.8nm,1.8s						
H21K	Melozitna Rive	81.35	343	P	P	04 16 56.7	+0.7
H21K				IAmb	IAmb	04 16 59.0	
	comp=Z,8.6nm,1.6s						
COLD	Coldfoot	81.78	345	P	P	04 16 59.3	+1.1
COLD				IAmb	IAmb	04 17 02.0	
	comp=Z,3.6nm,1.0s						
IMAR	Indian Mountai	81.85	343	P	P	04 16 59.9	+1.3
H11S2	WAKE ISLAND Hy	88.29	289	T	T	05 54 52.0	
	baz=100,slow=74,SNR=178						
H11S1	WAKE ISLAND Hy	88.30	289	T	T	05 54 52.5	
	baz=100,slow=74,SNR=73						
H11S3	WAKE ISLAND Hy	88.31	289	T	T	05 54 51.9	
	baz=100,slow=74,SNR=83						
H11N3	WAKE ISLAND Hy	88.31	290	T	T	05 54 58.4	
	baz=102						
H11N2	WAKE ISLAND Hy	88.32	290	T	T	05 54 59.0	
	baz=102,SNR=7.9						
H11N1	WAKE ISLAND Hy	88.33	290	T	T	05 55 05.6	
	baz=102						

TUL ***12*** *04:09:13.7±0.8, 36°.86N±0°.01×98°.15W±0°.01, h7^{km}±4^{km}, ML2.5, mb_Lg2.2/13(NEIC), Error ellipse: s-maj=2.0km s-min=1.3km az=145.0*

NEIC 12 04:09:13.9±0.6**, 36°.85N**±0°.01×**98°.16W**±0°.01**, h9**^{km}±3^{km}**, Error ellipse: s-maj=1.9km s-min=1.5km az=130.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	1.32	86		Pn	04 09 38.1	-0.5
R32A	Long Quarter,	1.64	345		Pn	04 09 42.5	-0.3
FNO	Franklin	1.70	159	Pn	Pn	04 09 43.9	+0.1
TUL1	Leonard	2.12	115		Pn	04 09 49.8	+0.3
TUL1				IAmb_Lg		04 10 21.5	
	comp=Z,11nm,1.1s						
KSU1	Kansas State U	2.56	28	IAmb_Lg		04 10 39.0	
	comp=Z,6.1nm,0.8s						
X37A	Clayton	3.19	134	Pn	Pn	04 10 04.5	+0.3
X37A				IAmb_Lg		04 11 04.0	
	comp=Z,5.9nm,0.9s						
AMTX	Amarillo	3.47	237	IAmb_Lg		04 11 02.0	
	comp=Z,5.1nm,1.1s						
W39A	Magazine	3.91	114	IAmb_Lg		04 11 21.6	
	comp=Z,4.8nm,0.7s						
N38A	Joes South For	5.50	43	IAmb_Lg		04 12 12.1	
	comp=Z,5.4nm,0.8s						
JCT	Junction City	6.50	193	IAmb_Lg		04 12 51.9	
	comp=Z,3.1nm,0.8s						

IDC ***12*** *04:11:08.0±1.0, 55°.39N×163°.64E, h0^{km}, mb3.4/6, mbtmp3.4/7, ML2.2/1, Error ellipse: s-maj=47.1km s-min=19.4km az=145.0*

KRSC ***12*** *04:11:09.5±1.2, 55°.19N×163°.80E, h50^{km}±23^{km}, ML3.7*

ISC 12 04:11:09.6±3.7**, 55°.24N**±0°.05×**163°.86E**±0°.04**, h15**^{km}±24^{km}**, n45,** σ**1^{s}.53**/53**, mb3.5**/6**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.13	329	*e*P	Pb	04 11 29.9	-1.0
KBTR				*e*S	Sb	04 11 44.3	-1.1
KBG	Krutoberegovo	1.21	328	*e*P	Pn	04 11 30.9	-1.0
KBG				*e*S	Sb	04 11 46.1	-1.4
BKI	Bering	1.21	91	*e*P	Pn	04 11 31.6	-0.3
BKI				*e*S	Sb	04 11 46.5	-1.0
MKZ	Mys Kozlova	1.41	242	*e*P	Pn	04 11 34.0	-0.7
MKZ				*e*S	Sn	04 11 50.6	-2.3
SMKR	Semkarok	1.90	316	*e*P	Pn	04 11 42.2	+0.7
BZGR	Bezymyannyi-Gr	1.93	293	*e*P	Pn	04 11 43.2	+1.3
TUMD	Tumrok D	1.98	270	*e*P	Pn	04 11 43.0	+0.4
BDR	Baidarnaya	2.00	313	*e*P	Pn	04 11 44.0	+1.1
BZWR	Bezymyannyi-We	2.04	292	*e*P	Pn	04 11 44.0	+0.5
SRKR	Sorokina	2.07	314	*e*P	Pn	04 11 45.6	+1.7
KLY	Klyuchi	2.11	302	*e*P	Pn	04 11 43.9	-0.3
KIRR	Kirishev	2.12	291	*e*P	Pn	04 11 46.2	+1.6
KMNR	Kamenistaya	2.13	285	*e*P	Pn	04 11 46.3	+1.7
TUMR	Tumrok	2.13	273	*e*P	Pn	04 11 45.4	+0.7
TUMR				*e*S	Sn	04 12 09.0	-1.8
KPT	Kopyto	2.19	291	*e*P	Pn	04 11 47.0	+1.5
KOZ	Kozyrevsk	2.40	291	*e*P	Pn	04 11 49.9	+1.5
KII	Karymskiy	2.84	247	*e*P	Pn	04 11 55.5	+1.1
ESO	Esso	3.01	285	*e*P	Pn	04 11 57.8	+1.1
SPN	Mys Shipunski	3.12	228	*e*P	Pn	04 11 58.4	+0.3
SPN				*e*S	Sn	04 12 30.8	-4.2
NLC	Nalytchevo	3.37	234	*e*P	Pn	04 12 01.5	-0.1
NLC				*e*S	Sn	04 12 39.7	-1.5
SDLR	Sedlovina	3.52	238	*e*P	Pn	04 12 04.7	+0.9
SMAR	Somma	3.57	238	*e*P	Pn	04 12 05.4	+0.8
KRER	Koryakskii	3.57	239	*e*P	Pn	04 12 06.1	+1.5
KRX	Arik	3.59	240	*e*P	Pn	04 12 06.4	+1.6
UGLR	Uglovaya	3.59	237	*e*P	Pn	04 12 05.8	+1.0
AVH	Avacha	3.60	239	*e*P	Pn	04 12 06.3	+1.4
KOK	Koryaka	3.63	240	*e*P	Pn	04 12 06.8	+1.5
GNL	Ganaly	3.79	248	*e*P	Pn	04 12 09.1	+1.7
OSSR	Ossora	4.04	354	*e*P	Pn	04 12 11.4	+0.6
KRMR	Karymshinskiy	4.16	237	*e*P	Pn	04 12 13.6	+1.2
KRMR				*e*S	Sn	04 13 00.0	-0.6
PETK	Petropavlovsk-	4.21	242	Pn	Pn	04 12 14.2	+1.1
	0.7nm,0.3s,baz=82,slow=13,SNR=8.6						
PETK				Sn	Sn	04 13 03.1	+1.2
	0.6nm,0.3s,baz=85,slow=25,SNR=2.1						
	0.6nm,0.3s						
RUS	Russkaya	4.24	231	*e*P	Pn	04 12 14.3	+0.8
MTVR	Mutnovka	4.35	233	*e*P	Pn	04 12 16.7	+1.5
MTVR				*e*S	Sn	04 13 04.0	-1.7
GRL	Gorelyy	4.36	234	*e*P	Pn	04 12 18.0	+2.7
ASAK	Asacha	4.55	233	*e*P	Pn	04 12 20.1	+2.2
KDTR	Khodutka, Kamc	4.87	227	*e*P	Pn	04 12 22.5	+0.3
KDTR				*e*S	Sn	04 13 14.4	-3.9
ILAR	Eielson Array	25.73	48	P	P	04 16 39.5	+0.6
	0.3nm,0.8s,baz=262,slow=9.1,SNR=4.6						
	0.3nm,0.8s						
H11N2	WAKE ISLAND Hy	35.53	175	T	T	04 57 02.2	
	baz=358,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	35.54	175	T	T	04 57 15.0	
	baz=358,slow=76,SNR=6.8						
H11N1	WAKE ISLAND Hy	35.55	175	T	T	04 57 13.4	
	baz=358,slow=76,SNR=10.0						
YKA	Yellowknife Ar	40.07	46	P	P	04 18 44.3	+0.6
	0.1nm,0.5s,baz=295,slow=7.7,SNR=3.4						
	0.1nm,0.5s						
MKAR	Makanchi Array	49.21	296	P	P	04 19 56.0	-0.8
	0.2nm,0.5s,baz=56,slow=9.4,SNR=3.5						
	0.2nm,0.5s						
TXAR	Lajitas Array	67.79	70	P	P	04 22 08.4	+1.7
	0.3nm,0.6s,baz=308,slow=5.7,SNR=5.8						
	0.3nm,0.6s						
WRA	Warramunga Arr	79.00	208	P	P	04 23 13.3	+0.7
	0.6nm,0.8s,baz=15,slow=5.7,SNR=2.4						
	0.6nm,0.8s						
ASAR	Alice Springs	82.66	207	P	P	04 23 33.5	+1.4
	0.5nm,0.5s,baz=20,slow=5.0,SNR=6.6						
	0.5nm,0.5s						

TAP 12 04:13:19.4, 24°.76N×**121°.89E, h15**^{km}±1^{km}**, ML1.1, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.10	25	*i*P	Pg	04 13 23.1	+0.5
	baz=31						
NTC	Toucheng	0.11	332	P	Pb	04 13 23.1	-0.1
	baz=331						
TWC	Suao	0.15	193	*i*P	Pb	04 13 23.8	-0.2
	baz=189						
NDS	Dongshan	0.20	232	*i*P	Pb	04 13 24.6	-0.2
	baz=231						
TWE	Neicheng	0.20	260	P	Pg	04 13 24.4	+0.4
	baz=258						
TWE				S	Sb	04 13 28.3	-0.2
	baz=258						
TIPB	Shuangxi	0.22	345	*e*P	Pb	04 13 25.7	+0.5
	baz=345						

TAP ***12*** *04:17:55.9, 24°.75N×122°.01E, h9^{km}, ML3.1, C*

JMA ***12*** *04:17:56.4±0.1, 24°.7N±0°.3×122°.0E±0°.3, h36^{km}, MV2.8/9, TAIWAN REGION*

ISC 12 04:17:55.1±0.9**, 24°.78N**±0°.02×**122°.05E**±0°.02**, h15**^{km}±6^{km}**, n76,** σ**0^{s}.96**/144**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.12	301	P	Pg	04 17 59.1	+0.5
	baz=327						
EGS				S	Sg	04 18 01.2	+0.2
	baz=327						
TWB1	Santiao Chiao	0.23	346	P	Pg	04 18 01.7	+1.4
	baz=347						
TWB1				S	Sg	04 18 05.1	+1.4
	baz=347						
TWC	Suao	0.25	227	P	Pb	04 18 00.2	-1.1
	baz=224						
TWC				S	Sg	04 18 02.3	-1.9
	baz=224						
ILA	Ilan	0.27	267	*e*P	Pb	04 18 01.4	-0.4
	baz=274						
ILA				*e*S	Sb	04 18 05.2	-1.0
	baz=274						
TIPB	Shuangxi	0.28	313	P	Pb	04 18 02.2	+0.4
	baz=334						
NDS	Dongshan	0.34	244	P	Pb	04 18 02.0	-0.8
	baz=238						
NDS				*e*S	Sg	04 18 05.7	-1.1
	baz=238						
SXI1	Grass Mountain	0.35	333	*e*P	Pn	04 18 03.9	-1.9
	baz=347						
SXI1				*e*S	Sb	04 18 10.0	+1.5
	baz=347						
TWE	Neicheng	0.35	260	P	Pb	04 18 02.5	-0.6
	baz=265						
TWE				*e*S	Sg	04 18 06.6	-0.6
	baz=265						
EWUT	Wuta	0.41	216	P	Pb	04 18 03.3	-0.9
	baz=215						
EWUT				*e*S	Sg	04 18 08.5	-0.6
	baz=215						
FUSB	Fushanzhiwuyua	0.42	267	*e*P	Pb	04 18 03.9	-0.4
	baz=272						
FUSB				*e*S	Sb	04 18 10.0	-0.5
	baz=272						
ENA	Nanau	0.45	219	P	Pb	04 18 03.9	-0.9
	baz=224						
ENA				*e*S	Sg	04 18 09.9	-0.3
	baz=224						
ENTT	Nioudou	0.46	252	*e*P	Pb	04 18 04.5	-0.4
	baz=255						
ENTT				*e*S	Sb	04 18 10.7	-0.9
	baz=255						
NWLT	Wulai	0.50	270	*e*P	Pb	04 18 05.5	0.0
	baz=274						
NWLT				*e*S	Sb	04 18 12.0	-0.7
	baz=274						
NHDH	Xindian Distri	0.51	291	*e*P	Pn	04 18 06.5	-1.4
	baz=287						
NHDH				*e*S	Sn	04 18 14.8	-1.6
	baz=287						
LATG	Datong	0.54	243	P	Pb	04 18 06.2	-0.1
	baz=245						
LATG				*e*S	Sb	04 18 13.2	-0.7
	baz=245						
TAP	Taipei	0.56	298	*e*P	Pn	04 18 07.8	-0.7
	baz=294						
TAP				*e*S	Sb	04 18 15.5	+1.2
	baz=294						
YM01	YM01	0.57	310	*e*P	Pn	04 18 08.0	-0.7
	baz=304						
YM01				*e*S	Sn	04 18 15.8	-2.0
	baz=304						
YHNB	Yeheng	0.62	260	*e*P	Pb	04 18 06.9	-0.8
	baz=255						
YHNB				*e*S	Sg	04 18 14.7	-0.9
	baz=255						
ANP	Anpu	0.63	310	*e*P	Pn	04 18 09.6	0.0
	baz=314						
NSK	Sanguang	0.64	261	*e*P	Pb	04 18 07.8	-0.2
	baz=263						
NSK				*e*S	Sg	04 18 15.4	-0.7
	baz=263						
TWS1	Kuangyinshan	0.66	299	*e*P	Pn	04 18 09.8	0.0
	baz=294						
TWS1				*e*S	Sn	04 18 18.5	-1.5
	baz=294						
NTST	Danshui	0.67	305	*e*P	Pn	04 18 09.9	-0.1
	baz=308						
NTST				*e*S	Sn	04 18 19.4	-0.8
	baz=308						
NNSB	Datong	0.70	240	*e*P	Pb	04 18 08.7	-0.4
	baz=248						
NNSB				*e*S	Sb	04 18 18.9	+0.3
	baz=248						
NNS	Nan Shan	0.70	241	*e*P	Pb	04 18 08.7	-0.4
	baz=249						
NNS				*e*S	Sg	04 18 18.1	-0.1
	baz=249						
ETL	Fush Village	0.73	212	*e*P	Pg	04 18 08.7	-0.6
	baz=203						
ETL				*e*S	Sb	04 18 19.5	+0.1
	baz=203						
NACB	Ninganchiao	0.73	214	*e*P	Pb	04 18 09.3	-0.3
	baz=203						
NACB				*e*S	Sg	04 18 19.2	+0.1
	baz=203						
ETLH	Xiulin Townshi	0.77	222	*e*P	Pb	04 18 10.3	0.0
	baz=223						
ETLH				*e*S	Sb	04 18 20.6	-0.1
	baz=223						
NCU	National Centr	0.81	284	*e*P	Pn	04 18 12.2	+0.2
	baz=286						
NCU				*e*S	Sn	04 18 23.6	-0.1
	baz=286						
NCUH	Zhongli	0.81	284	*e*P	Pn	04 18 12.2	+0.2
	baz=286						
NCUH				*e*S	Sn	04 18 24.0	+0.3
	baz=286						
TWD	Chiawan	0.81	211	*e*P	Pb	04 18 10.9	0.0
	baz=202						
TWD				*e*S	Sg	04 18 21.8	+0.3
	baz=202						
PCYT	Pengchaiyu	0.84	1	*e*P	Pn	04 18 13.9	+1.4
	baz=357						
PCYT				*e*S	Sn	04 18 26.9	+2.2
	baz=357						
NFF	Wufeng Townshi	0.86	260	*e*P	Pn	04 18 12.6	-0.2
	baz=262						
NFF				*e*S	Sb	04 18 23.1	-0.1
	baz=262						
JYNG	Yonagunijimaku	0.88	112	P	Pn	04 18 13.2	+0.3
JYNG				S	Sn	04 18 25.6	+0.1
FUSS	Fushou	0.91	234	*e*P	Pb	04 18 12.8	+0.1
	baz=235						
FUSS				*e*S	Sb	04 18 25.3	+0.6
	baz=235						
YOJ	Yonaguni jima	0.93	110	*e*P	Pn	04 18 13.8	+0.2
	baz=106						
YOJ				*e*S	Sn	04 18 27.0	+0.2
	baz=106						
YOJ	Yonaguni jima	0.93	110	P	Pn	04 18 14.0	+0.3
YOJ				S	Sn	04 18 27.3	+0.5
LIOB	Emei	0.95	262	*e*P	Pn	04 18 14.2	+0.2
	baz=250						
LIOB				*e*S	Sn	04 18 27.3	+0.1
	baz=250						
WHF	Hehuan Shan	0.95	229	*e*P	Pb	04 18 13.3	-0.3
	baz=229						
WHF				*e*S	Sb	04 18 26.9	+0.7
	baz=229						
NSTT	Nanjuang	0.96	261	*e*P	Pn	04 18 14.5	+0.3
	baz=263						
NSTT				*e*S	Sb	04 18 27.3	+1.2
	baz=263						
SBCB	Hsinchu	0.97	271	*e*P	Pn	04 18 15.0	+0.8
	baz=273						
SBCB				*e*S	Sn	04 18 28.1	+0.4
	baz=273						
TDCB	Techi	0.97	237	*e*P	Pb	04 18 13.7	+0.1
	baz=230						
TDCB				*e*S	Sb	04 18 26.5	+0.1
	baz=230						
HSN	Hsinchu	0.98	271	*e*S	Sb	04 18 27.5	+0.9
	baz=290						
CHGB	Renai	1.07	228	*e*P	Pn	04 18 15.8	0.0
	baz=229						
CHGB				*e*S	Sb	04 18 30.4	+0.9
	baz=229						
ESL	Shilin	1.11	210	*e*P	Pn	04 18 16.3	+0.1
	baz=209						
WHP	Taichung City	1.12	244	*e*P	Pn	04 18 16.9	+0.5
	baz=245						
WHP				*e*S	Sb	04 18 30.9	+0.2
	baz=245						
OWD	Renai	1.15	224	*e*P	Pb	04 18 16.6	-0.1
	baz=231						
OWD				*e*S	Sb	04 18 32.4	+1.0
	baz=231						
WUSB	Renai	1.16	227	*e*P	Pb	04 18 16.6	-0.3
	baz=234						
WUSB				*e*S	Sb	04 18 32.4	+0.7
	baz=234						
NMLH	Miaoli	1.17	258	*e*P	Pn	04 18 17.9	+0.9
	baz=260						
NMLH				*e*S	Sn	04 18 33.9	+1.2
	baz=260						
NSY	Sanyi	1.23	253	*e*P	Pn	04 18 18.3	+0.5
	baz=255						
NSY				*e*S	Sn	04 18 35.6	+1.5
	baz=255						
TWQ1	Liyutan	1.24	250	*e*P	Pn	04 18 19.2	+1.3
	baz=252						
TWQ1				*e*S	Sn	04 18 36.0	+1.5
	baz=252						
EGFH	Guangfu	1.24	207	*e*P	Pn	04 18 18.7	+0.7
	baz=214						
EGFH				*e*S	Sg	04 18 34.1	-1.2
	baz=214						
WCS	Beigang Elemen	1.26	235	*e*P	Pb	04 18 18.3	-0.3
	baz=246						
WCS				*e*S	Sg	04 18 34.9	-1.0
	baz=246						
VWDT	VWDT	1.32	219	*e*P	Pb	04 18 20.1	+0.6
	baz=230						
VWDT				*e*S	Sn	04 18 38.0	+1.7
	baz=230						
WDJ	Dajia District	1.35	252	*e*S	Sn	04 18 39.0	+1.8
	baz=254						
SMLT	Sun Moon Lake	1.38	230	*e*P	Pb	04 18 22.0	+1.4
	baz=231						
SMLT				*e*S	Sn	04 18 39.5	+1.5

	baz=231						
TYC	**Yuchr** baz=233	**1.39**	**231**	eP	**Pg**	**04 18 21.7**	**-0.2**
TYC	baz=233			eS	**Sg**	**04 18 38.9**	**-1.2**
TCU	**Taichung** baz=258	**1.40**	**244**	eP	**Pg**	**04 18 23.1**	**+1.0**
TCU	baz=258			eS	**Sn**	**04 18 41.1**	**+2.7**
HGSD	**Ruisui** baz=193	**1.40**	**204**	eP	**Pg**	**04 18 22.3**	**+0.2**
HGSD	baz=193			eS	**Sn**	**04 18 41.2**	**+2.7**
SSLB	**Suanglung** baz=227	**1.41**	**226**	eP	**Pg**	**04 18 21.7**	**-0.5**
SSLB	baz=227			eS	**Sg**	**04 18 39.8**	**-0.7**
EHY	**Hungye** baz=220	**1.43**	**208**	eP	**Pg**	**04 18 22.0**	**-0.7**
EHY	baz=220			eS	**Sg**	**04 18 41.1**	**-0.3**
WNT	**Mingjian** baz=225	**1.54**	**234**	eP	**Pg**	**04 18 25.4**	**+0.8**
WNT	baz=225			eS	**Sg**	**04 18 46.0**	**+1.3**
YULB	**Yu-li** baz=218	**1.54**	**207**	eP	**Pg**	**04 18 23.6**	**-1.2**
YULB	baz=218			eS	**Sn**	**04 18 43.5**	**+1.6**
EYUL	**Yuli** baz=220	**1.58**	**205**	eP	**Pg**	**04 18 24.7**	**-0.7**
IRIF	**Iriomote-Funau**	**1.59**	**106**	P	**Pb**	**04 18 23.4**	**-0.9**
IRIF				eS	**Sn**	**04 18 43.9**	**+0.7**
ALS	**Alishan** baz=208	**1.70**	**222**	eP	**Pb**	**04 18 26.2**	**-0.1**
ALS	baz=208			eS	**Sb**	**04 18 48.2**	**+0.6**
FULB	**Fuli** baz=221	**1.72**	**204**	eP	**Pb**	**04 18 25.9**	**-0.5**
FULB	baz=221			eS	**Sn**	**04 18 48.5**	**+2.2**
HATJ	**Hateruma jima**	**1.76**	**114**	P	**Pb**	**04 18 26.0**	**-1.0**
HATJ				S	**Sn**	**04 18 47.7**	**+0.6**
WRL	**Guolierlin Hig** baz=261	**1.76**	**240**	eP	**Pg**	**04 18 27.6**	**-1.3**
WRL	baz=261			eS	**Sg**	**04 18 50.6**	**-1.1**
ELDTW	**Lidau** baz=197	**1.84**	**211**	eP	**Pb**	**04 18 27.9**	**-0.8**
JKRS	**Kuro-shima**	**1.87**	**106**	P	**Pb**	**04 18 27.8**	**-1.1**
JKRS				S	**Sn**	**04 18 50.6**	**+0.8**
EDH	**Donghe** baz=180	**1.93**	**201**	eP	**Pb**	**04 18 28.9**	**-1.0**
EDH	baz=180			eS	**Sn**	**04 18 53.4**	**+2.1**
JIJ	**Ishigaki jima**	**1.95**	**102**	P	**Pn**	**04 18 27.9**	**+0.2**
JIJ				S	**Sn**	**04 18 52.4**	**+0.4**
TPUB	**Ta-pu** baz=210	**1.96**	**222**	eP	**Pg**	**04 18 31.4**	**-1.4**
TPUB	baz=210			eS	**Sg**	**04 18 56.9**	**-1.4**
WTP	**Ta-pu** baz=235	**2.01**	**221**	eP	**Pg**	**04 18 32.4**	**-1.3**
WTP	baz=235			eS	**Sg**	**04 18 58.6**	**-1.3**
TWK	**Hsinying** baz=227	**2.08**	**224**	eP	**Pb**	**04 18 33.1**	**+0.5**
TWK	baz=227			eS	**Sg**	**04 19 00.8**	**-1.1**
CHN1	**Nanshi** baz=209	**2.11**	**222**	eP	**Pb**	**04 18 33.3**	**+0.2**
CHN1	baz=209			eS	**Sg**	**04 19 01.7**	**-1.4**

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*TAP **12** 04:24:34.0, 24°.70N×122°.00E, h10^{km}, ML2.9, B*

*JMA **12** 04:24:34.5±0.1, 24°.7N±0°.4×122°.0E±0°.4, h31^{km}, MV2.6/9, TAIWAN REGION*

ISC 12 04:24:33.8±0.8**, 24°.66N**±0°.02×**122°.01E**±0°.02**, h12**^{km}±6^{km}**, n76, σ0^{s}.69**/149**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao** baz=242	**0.16**	**251**	P	**Pg**	**04 24 37.8**	**+0.4**
TWC	baz=242			S	**Sg**	**04 24 40.0**	**0.0**
EGS	baz=341	**0.20**	**338**	P	**Pg**	**04 24 37.9**	**-0.2**
EGS	baz=341			S	**Sg**	**04 24 40.4**	**-0.7**
NTC	**Toucheng** baz=315	**0.26**	**319**	eS	**Sg**	**04 24 43.4**	**+0.7**
ILA	**Ilan** baz=277	**0.26**	**293**	eP	**Pg**	**04 24 39.1**	**-0.1**
ILA	baz=277			eS	**Sg**	**04 24 42.8**	**-0.1**
NDS	**Dongshan** baz=252	**0.27**	**264**	eP	**Pg**	**04 24 39.8**	**+0.4**
NDS	baz=252			eS	**Sg**	**04 24 43.3**	**+0.1**
EWUT	**Wuta** baz=209	**0.30**	**225**	eP	**Pb**	**04 24 40.6**	**-0.5**
EWUT	baz=209			eS	**Sb**	**04 24 44.6**	**-1.5**
TWE	**Neicheng** baz=274	**0.32**	**281**	P	**Pg**	**04 24 40.5**	**+0.2**
TWE	baz=274			S	**Sg**	**04 24 44.4**	**-0.2**
ENA	**Nanau** baz=211	**0.34**	**227**	eP	**Pb**	**04 24 41.2**	**-0.6**
ENA	baz=211			S	**Sb**	**04 24 45.7**	**-1.5**
TWB1	**Santiao Chiao** baz=351	**0.35**	**356**	P	**Pg**	**04 24 40.6**	**-0.2**
TWB1	baz=351			eS	**Sg**	**04 24 44.2**	**-1.2**
TIPB	**Shuangxi** baz=329	**0.35**	**331**	P	**Pg**	**04 24 41.0**	**0.0**
TIPB	baz=329			S	**Sg**	**04 24 45.3**	**-0.4**
FUSB	**Fushanzhiwuyua** baz=279	**0.40**	**284**	eP	**Pg**	**04 24 42.0**	**+0.2**
FUSB	baz=279			eS	**Sg**	**04 24 47.2**	**0.0**
ENTT	**Nioudou** baz=261	**0.41**	**267**	P	**Pb**	**04 24 42.2**	**-0.8**
ENTT	baz=261			eS	**Sb**	**04 24 48.0**	**-1.2**
SXI1	**Grass Mountain** baz=350	**0.45**	**344**	P	**Pg**	**04 24 42.6**	**0.0**
SXI1	baz=350			eS	**Sg**	**04 24 49.0**	**+0.3**
LATG	**Datong** baz=250	**0.46**	**254**	eP	**Pb**	**04 24 43.4**	**-0.5**
LATG	baz=250			eS	**Sb**	**04 24 50.1**	**-0.7**
NWLT	**Wulai** baz=280	**0.48**	**284**	eP	**Pb**	**04 24 43.4**	**-0.8**
NWLT	baz=280			eS	**Sb**	**04 24 50.2**	**-1.0**
TWA	**Mucha** baz=306	**0.50**	**309**	eP	**Pg**	**04 24 43.4**	**-0.3**
TWA	baz=306			eS	**Sg**	**04 24 50.3**	**0.0**
NHDH	**Xindian Distri** baz=301	**0.54**	**304**	eP	**Pg**	**04 24 44.1**	**-0.2**
NHDH	baz=301			eS	**Sg**	**04 24 51.6**	**+0.2**
YHNB	**Yeheng** baz=267	**0.58**	**271**	eP	**Pb**	**04 24 45.2**	**-0.7**
YHNB	baz=267			eS	**Sg**	**04 24 52.5**	**-0.3**
TAP	**Taipei** baz=307	**0.59**	**309**	eP	**Pg**	**04 24 45.5**	**+0.1**
TAP	baz=307			eS	**Sb**	**04 24 53.9**	**-0.6**
NSK	**Sanguang** baz=268	**0.60**	**272**	eP	**Pb**	**04 24 45.5**	**-0.7**
NSK	baz=268			eS	**Sg**	**04 24 53.1**	**-0.2**
ETL	**Fush Village** baz=203	**0.61**	**216**	eP	**Pb**	**04 24 46.3**	**-0.2**
ETL	baz=203			eS	**Sb**	**04 24 55.7**	**+0.6**
NACB	**Ninganchiao** baz=203	**0.62**	**218**	eP	**Pb**	**04 24 46.0**	**-0.6**
NACB	baz=203			eS	**Sb**	**04 24 54.9**	**-0.3**
NNSB	**Datong** baz=245	**0.62**	**248**	eP	**Pb**	**04 24 46.1**	**-0.5**
NNSB	baz=245			eS	**Sb**	**04 24 55.0**	**-0.3**
NNS	**Nan Shan** baz=245	**0.62**	**249**	eP	**Pb**	**04 24 46.1**	**-0.6**
NNS	baz=245			eS	**Sb**	**04 24 54.9**	**-0.6**
YM01	**YM01** baz=318	**0.63**	**320**	eP	**Pb**	**04 24 46.8**	**0.0**
YM01	baz=318			eS	**Sg**	**04 24 54.6**	**+0.3**
ETLH	**Xiulin Townshi** baz=224	**0.66**	**227**	eP	**Pb**	**04 24 47.1**	**-0.2**
ETLH	baz=224			eS	**Sb**	**04 24 57.1**	**+0.6**
ANP	**Anpu** baz=318	**0.69**	**320**	eP	**Pg**	**04 24 47.1**	**-0.1**
ANP	baz=318			eS	**Sg**	**04 24 56.7**	**+0.5**
TWD	**Chiawan** baz=210	**0.69**	**213**	eP	**Pb**	**04 24 47.4**	**-0.4**
TWD	baz=210			eS	**Sb**	**04 24 57.4**	**+0.1**
TWS1	**Kuangyinshan** baz=307	**0.70**	**309**	eP	**Pb**	**04 24 47.7**	**-0.2**
TWS1	baz=307			eS	**Sg**	**04 24 56.8**	**+0.4**
NTST	**Danshui** baz=312	**0.72**	**314**	eP	**Pg**	**04 24 47.6**	**-0.1**
NTST	baz=312			eS	**Sb**	**04 24 57.8**	**-0.3**
TWY	**Chenhua** baz=318	**0.72**	**329**	eP	**Pg**	**04 24 47.6**	**-0.1**
TWY	baz=318			eS	**Sg**	**04 24 57.1**	**-0.1**
FUSS	**Fushou** baz=237	**0.81**	**240**	eP	**Pb**	**04 24 50.3**	**+0.3**
FUSS	baz=237			eS	**Sb**	**04 25 01.7**	**+0.7**
NCUH	**Zhongli** baz=297	**0.81**	**292**	eP	**Pb**	**04 24 49.7**	**-0.1**
NCUH	baz=297			eS	**Sb**	**04 25 01.1**	**+0.3**
NFF	**Wufeng Townshi** baz=265	**0.82**	**268**	eP	**Pb**	**04 24 49.9**	**0.0**
NFF	baz=265			eS	**Sb**	**04 25 00.5**	**-0.4**
WHF	**Hehuan Shan** baz=231	**0.85**	**233**	eP	**Pb**	**04 24 51.0**	**+0.2**
WHF	baz=231			eS	**Sb**	**04 25 02.9**	**+0.5**
TWT	**Tachien** baz=232	**0.86**	**242**	eP	**Pb**	**04 24 51.2**	**+0.3**
TWT	baz=232			eS	**Sn**	**04 25 03.4**	**-1.2**
JYNG	**Yonagunijimaku**	**0.87**	**104**	P	**Pg**	**04 24 50.9**	**+0.3**
JYNG				S	**Sg**	**04 25 02.8**	**+0.7**
TDCB	**Techi** baz=232	**0.88**	**243**	eP	**Pb**	**04 24 51.0**	**-0.1**
TDCB	baz=232			eS	**Sb**	**04 25 03.0**	**+0.2**
LIOB	**Emei** baz=252	**0.91**	**269**	eP	**Pb**	**04 24 51.9**	**+0.4**
LIOB	baz=252			eS	**Sn**	**04 25 04.8**	**-0.7**
NSTT	**Nanjuang** baz=253	**0.92**	**268**	eP	**Pb**	**04 24 51.3**	**-0.4**
NSTT	baz=253			eS	**Sn**	**04 25 04.8**	**-1.0**
YOJ	**Yonaguni jima** baz=103	**0.93**	**102**	eP	**Pb**	**04 24 52.7**	**+0.8**
YOJ	baz=103			eS	**Sn**	**04 25 06.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.93**	**102**	P	**Pg**	**04 24 51.6**	**-0.1**
YOJ				S	**Sg**	**04 25 04.1**	**+0.2**
PCYT	**Pengchaiyu** baz=346	**0.97**	**3**	eP	**Pg**	**04 24 52.5**	**+0.1**
PCYT	baz=346			eS	**Sg**	**04 25 05.9**	**+0.8**
CHGB	**Renai** baz=230	**0.97**	**232**	eP	**Pn**	**04 24 53.0**	**-0.5**
CHGB	baz=230			eS	**Sn**	**04 25 07.2**	**0.0**
ESL	**Shilin** baz=210	**1.00**	**212**	eP	**Pb**	**04 24 52.9**	**-0.1**
ESL	baz=210			eS	**Sn**	**04 25 08.2**	**+0.6**
OWD	**Renai** baz=217	**1.04**	**228**	eP	**Pn**	**04 24 54.3**	**0.0**
OWD	baz=217			eS	**Sn**	**04 25 09.7**	**+0.8**
WHP	**Taichung City** baz=247	**1.04**	**249**	eP	**Pn**	**04 24 54.5**	**+0.2**
WHP	baz=247			eS	**Sn**	**04 25 08.4**	**-0.5**
WUSB	**Renai** baz=235	**1.05**	**231**	eP	**Pn**	**04 24 54.5**	**0.0**
WUSB	baz=235			eS	**Sn**	**04 25 10.0**	**+0.8**
NMLH	**Miaoli** baz=262	**1.12**	**264**	eP	**Pn**	**04 24 55.3**	**0.0**
NMLH	baz=262			eS	**Sn**	**04 25 11.4**	**+0.7**
EGFH	**Guangfu** baz=220	**1.12**	**209**	eP	**Pn**	**04 24 55.7**	**+0.4**
EGFH	baz=220			eS	**Sn**	**04 25 12.4**	**+1.7**
WCS	**Beigang Elemen** baz=246	**1.17**	**239**	eP	**Pn**	**04 24 56.7**	**+0.7**
WCS	baz=246			eS	**Sn**	**04 25 13.3**	**+1.4**
TWQ1	**Liyutan** baz=253	**1.17**	**255**	eP	**Pn**	**04 24 56.5**	**+0.5**
TWQ1	baz=253			eS	**Sn**	**04 25 13.1**	**+1.1**
VWDT	**VWDT** baz=220	**1.20**	**222**	eP	**Pn**	**04 24 57.6**	**+1.1**
VWDT	baz=220			eS	**Sn**	**04 25 14.1**	**+1.4**
SMLT	**Sun Moon Lake** baz=223	**1.28**	**233**	eP	**Pg**	**04 24 58.1**	**-0.3**
SMLT	baz=223			eS	**Sn**	**04 25 15.7**	**+1.0**
HGSD	**Ruisui** baz=221	**1.28**	**205**	eP	**Pg**	**04 24 58.7**	**+0.2**
HGSD	baz=221			eS	**Sn**	**04 25 17.0**	**+2.4**
TYC	**Yuchr** baz=233	**1.30**	**235**	eP	**Pg**	**04 24 58.4**	**-0.3**
TYC	baz=233			eS	**Sn**	**04 25 15.7**	**+0.7**
SSLB	**Suanglung** baz=218	**1.30**	**228**	eP	**Pg**	**04 24 58.6**	**-0.2**
SSLB	baz=218			eS	**Sn**	**04 25 16.5**	**+1.3**
EHY	**Hungye** baz=219	**1.31**	**209**	eP	**Pb**	**04 24 58.2**	**-0.2**
EHY	baz=219			eS	**Sn**	**04 25 17.6**	**+2.2**
YULB	**Yu-li** baz=217	**1.42**	**208**	eP	**Pg**	**04 25 00.5**	**-0.6**
YULB	baz=217			eS	**Sg**	**04 25 19.1**	**-0.5**
YUS	**Yu-Shan** baz=204	**1.52**	**220**	eP	**Pg**	**04 25 02.2**	**-0.8**
YUS	baz=204			eS	**Sg**	**04 25 22.0**	**-0.7**
ALS	**Alishan** baz=206	**1.59**	**224**	eP	**Pg**	**04 25 04.1**	**-0.3**
ALS	baz=206			eS	**Sg**	**04 25 24.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.60**	**101**	P	**Pn**	**04 25 01.0**	**-0.9**
IRIF				S	**Sn**	**04 25 21.6**	**-0.8**
ELDTW	**Lidau** baz=209	**1.73**	**212**	eP	**Pb**	**04 25 04.8**	**-0.7**
ELDTW	baz=209			eS	**Sb**	**04 25 27.4**	**+0.2**
HATJ	**Hateruma jima**	**1.74**	**110**	S	**Sn**	**04 25 25.3**	**-0.6**
EDH	**Donghe** baz=183	**1.80**	**201**	eP	**Pb**	**04 25 05.8**	**-1.0**
EDH	baz=183			eS	**Sb**	**04 25 28.8**	**-0.4**
CHN4	**Tsaushan** baz=208	**1.84**	**225**	eP	**Pg**	**04 25 09.4**	**+0.3**
CHN4	baz=208			eS	**Sg**	**04 25 32.6**	**-0.4**
TPUB	**Ta-pu** baz=207	**1.85**	**223**	eP	**Pg**	**04 25 08.5**	**-0.8**
TPUB	baz=207			eS	**Sg**	**04 25 33.6**	**+0.2**
JKRS	**Kuro-shima**	**1.87**	**103**	P	**Pn**	**04 25 05.3**	**-0.2**
JKRS				S	**Sn**	**04 25 28.6**	**-0.4**
STYH	**Taoyuan** baz=206	**1.87**	**218**	eP	**Pb**	**04 25 08.3**	**+0.4**
STYH	baz=206			eS	**Sg**	**04 25 33.8**	**0.0**
WTP	**Ta-pu** baz=206	**1.90**	**223**	eP	**Pg**	**04 25 09.7**	**-0.7**
WTP	baz=206			eS	**Sg**	**04 25 35.4**	**+0.3**
JIJ	**Ishigaki jima**	**1.96**	**98**	P	**Pn**	**04 25 06.9**	**0.0**
JIJ				S	**Sn**	**04 25 31.4**	**0.0**
TWK	**Hsinying** baz=236	**1.97**	**225**	eP	**Pb**	**04 25 10.1**	**+0.5**
TWK	baz=236			eS	**Sg**	**04 25 37.0**	**-0.1**
CHN1	**Nanshi** baz=206	**2.00**	**223**	eP	**Pb**	**04 25 10.5**	**+0.3**
CHN1	baz=206			eS	**Sg**	**04 25 37.4**	**-0.8**
VWUC	**VWUC** baz=278	**2.35**	**279**	eP	**Pn**	**04 25 13.3**	**+1.1**
VWUC	baz=278			eS	**Sn**	**04 25 42.8**	**+1.8**
MATB	**Ma-tsu** baz=306	**2.39**	**309**	eS	**Sn**	**04 25 41.8**	**-0.1**
MASBT	**Mashibuluo** baz=209	**2.40**	**212**	eP	**Pb**	**04 25 16.9**	**0.0**
MASBT	baz=209			eS	**Sg**	**04 25 48.5**	**-2.5**

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*IDC **12** 04:29:54.0±0.4, 24°.69N×122°.02E, h0^{km}, mb5.1/29, mbtmp5.1/33, ML4.7/4, MS5.2/87, Error ellipse: s-maj=12.7km s-min=9.5km az=72.0*

*MOS **12** 04:29:54.2±1.1, 24°.70N×122°.08E, h11^{km}, mb5.7/67, MS5.5/42, Error ellipse: s-maj=5.7km s-min=3.8km az=111.3*

*NEIC **12** 04:29:55.8±1.9, 24°.68N±0°.05×122°.05E±0°.06, h9^{km}±1^{km}, mb5.5/368, Ms_20 5.4/332, Mwb5.7/25, Mww5.7, ML5.5(TAP), Error ellipse: s-maj=10.1km s-min=6.5km az=313.0*

*TAP **12** 04:29:55.9, 24°.69N×122°.02E, h12^{km}, ML5.7, C*

*GCMT **12** 04:29:55.8±0.1, 24°.76N±0°.01×122°.05E±0°.01, h12^{km}, MW5.7/153, Moment Tensor Solution. s145,c260; s153,c333; Duration: 1^{s}.7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-3.61±.04; M$_{θθ}$3.01±.04; M$_{φφ}$0.60±.04; M$_{rθ}$0.94±.11; M$_{θφ}$1.98±.04; M$_{φr}$0.11±.12; Best double couple: M$_0$3.98500×10^{17} NP1:φ$_s$54.00000°, δ39.00000°, λ-100.00000°. NP2:φ$_s$247.00000°, δ52.00000°, λ-82.00000°. Principal axes: T 4.2220, Plg6.0000°, Azm331.0000°; N -0.4690, Plg6.0000°, Azm62.0000°; P -3.7480, Plg81.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ASIES **12** 04:29:55.8, 24°.68N×122°.00E, h13^{km}, MW5.6*

*JMA **12** 04:29:56.6±0.1, 24°.7N±0°.3×122°.0E±0°.3, h31^{km}, MD6.4/14, MW5.7/14, TAIWAN REGION*

JMA Felt III J1 at TAIWAN REGION .

*BJI **12** 04:29:56.3±0.0, 24°.83N×122°.02E, h15^{km}, mb5.1/55, mB5.9/66, ML6.1/12, Ms6.1/94, Ms7 6.1/86*

*NIED **12** 04:29:56.6, 24°.70N×122°.00E, h31^{km}, MW5.7, Moment Tensor Solution. s1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-4.13; M$_{θθ}$3.51; M$_{φφ}$0.62; M$_{rθ}$-1.95; M$_{θφ}$1.69; M$_{φr}$-0.27; Fault plane solution: M$_0$4.65000×10^{17} NP1: φ$_s$238.00000°, δ33.00000°, λ-102.00000°. NP2: φ$_s$73.00000°, δ57.00000°, λ-82.00000°.*

*NEIC **12** 04:29:56.8, 24°.68N×122°.04E, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.66; M$_{θθ}$2.63; M$_{φφ}$0.03; M$_{rθ}$-2.19; M$_{θφ}$1.64; M$_{φr}$-1.65; Fault plane solution: M$_0$4.14000×10^{17} NP1:φ$_s$55.32000°, δ66.31000°, λ-98.83000°. NP2:φ$_s$256.45000°, δ25.19000°, λ-70.72000°. Principal axes: T 4.4449, Plg21.0000°, Azm152.0000°; N -0.6852, Plg8.0000°, Azm59.0000°; P -3.7597, Plg68.0000°, Azm309.0000°;*

*NEIC **12** 04:30:02, 24°.78N×122°.04E, h12^{km}, Moment Tensor Solution. Duration: 12^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.44; M$_{θθ}$2.78; M$_{φφ}$0.67; M$_{rθ}$1.17; M$_{θφ}$1.83; M$_{φr}$-1.47; Fault plane solution: M$_0$4.11000×10^{17} NP1:φ$_s$37.00000°, δ48.00000°, λ-124.00000°. NP2:φ$_s$263.00000°, δ52.00000°, λ-57.00000°. Principal axes: T 3.8436, Plg2.0000°, Azm331.0000°; N 0.4832, Plg25.0000°, Azm62.0000°; P -4.3267, Plg65.0000°, Azm236.0000°;*

ISC 12 04:29:56.1±0.3**, 24°.67N**±0°.01×**122°.07E**±0°.02**, h12**^{km}±1^{km}**, h12**^{km}**:pP-P, n1629, σ1^{s}.58**/1518**, mb5.5**/337**, MS5.4**/276**, 121C-172D, Fault plane solution: NP1:**φ$_s$15.13137°, δ59.14255°, λ-121.44933°. **NP2:**φ$_s$245.14659°, δ42.91690°, λ-48.87117°. **Principal axes:** T Plg8.9264°, Azm127.0600°; N Plg26.6083°, Azm32.5472°; P Plg61.7054°, Azm234.0242°; **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao** baz=247	**0.21**	**253**	⇑iP	**Pg**	**04 29 60.0**	**-0.5**
TWC	baz=247			iS	**Sg**	**04 30 02.5**	**-1.1**
EGS	baz=329	**0.21**	**325**	⇑iP	**Pg**	**04 30 00.1**	**-0.6**
EGS	baz=329			S	**Sg**	**04 30 03.4**	**-0.4**
NTC	**Toucheng** baz=313	**0.28**	**311**	⇑iP	**Pg**	**04 30 01.4**	**-0.5**
NTC	baz=313			S	**Sg**	**04 30 05.3**	**-0.4**
ILA	**Ilan** baz=286	**0.30**	**288**	⇑iP	**Pg**	**04 30 01.8**	**-0.5**
ILA	baz=286			iS	**Sg**	**04 30 06.2**	**-0.2**
NDS	**Dongshan** baz=253	**0.32**	**264**	⇑iP	**Pg**	**04 30 01.9**	**-0.7**
NDS	baz=253			S	**Sg**	**04 30 05.7**	**-1.2**
EWUT	**Wuta** baz=213	**0.34**	**230**	P	**Pg**	**04 30 02.8**	**-0.2**
EWUT	baz=213			S	**Sg**	**04 30 06.6**	**-1.0**
TWB1	**Santiao Chiao** baz=348	**0.34**	**348**	⇑iP	**Pg**	**04 30 02.6**	**-0.4**
TWB1	baz=348			S	**Sg**	**04 30 06.8**	**-0.8**
TWE	**Neicheng** baz=270	**0.37**	**278**	⇑iP	**Pg**	**04 30 02.6**	**-0.8**
TWE	baz=270			iS	**Sg**	**04 30 07.3**	**-1.0**
TIPB	**Shuangxi** baz=320	**0.37**	**324**	iP	**Pg**	**04 30 03.1**	**-0.5**
TIPB	baz=320			eS	**Sg**	**04 30 06.6**	**-1.9**
ENA	**Nanau** baz=214	**0.38**	**231**	⇑iP	**Pg**	**04 30 03.3**	**-0.4**
ENA	baz=214			iS	**Sg**	**04 30 08.2**	**-0.6**
FUSB	**Fushanzhiwuyua** baz=279	**0.44**	**282**	iP	**Pg**	**04 30 04.2**	**-0.6**
FUSB	baz=279			iS	**Sg**	**04 30 09.4**	**-1.4**
ENTT	**Nioudou** baz=262	**0.46**	**266**	P	**Pg**	**04 30 04.7**	**-0.4**
ENTT	baz=262			eS	**Sg**	**04 30 11.4**	**+0.2**
SXI1	**Grass Mountain** baz=348	**0.46**	**338**	⇑iP	**Pg**	**04 30 05.0**	**-0.1**
EHP	**Heping Village** baz=212	**0.46**	**220**	P	**Pg**	**04 30 05.4**	**+0.2**
EHP	baz=212			S	**Sg**	**04 30 11.7**	**+0.3**
NWF	**Wu-fen Shan** baz=323	**0.48**	**327**	⇑iP	**Pg**	**04 30 05.3**	**-0.2**
NWF	baz=323			eS	**Sg**	**04 30 12.4**	**+0.6**
WFSB	**Wu-fen Shan** baz=323	**0.48**	**327**	⇑iP	**Pg**	**04 30 05.3**	**-0.2**
WFSB	baz=323			S	**Sg**	**04 30 11.3**	**-0.5**

LATG	**Datong** baz=250	**0.51**	**255**	⇑iP	**Pg**	**04 30 05.5**	**-0.6**
LATG	baz=250			S	**Sg**	**04 30 12.5**	**-0.4**
NWLT	**Wulai** baz=279	**0.52**	**282**	P	**Pg**	**04 30 05.5**	**-0.9**
NWLT	baz=279			S	**Sg**	**04 30 11.9**	**-1.4**
TWA	**Mucha** baz=305	**0.54**	**305**	⇑iP	**Pg**	**04 30 06.1**	**-0.5**
TWA	baz=305			iS	**Sg**	**04 30 12.7**	**-1.0**
TNOU	**National Taiwa** baz=327	**0.55**	**331**	⇑iP	**Pg**	**04 30 06.6**	**-0.2**
TNOU	baz=327			eS	**Sb**	**04 30 16.4**	**+0.9**
NHDH	**Xindian Distri** baz=300	**0.57**	**301**	eP	**Pg**	**04 30 07.0**	**-0.3**
NHDH	baz=300			eS	**Sg**	**04 30 13.9**	**-0.9**
TATO	**Taipei**	**0.61**	**300**	Pg	**Pg**	**04 30 07.6**	**-0.3**
TATO				Sg	**Sg**	**04 30 14.9**	**-1.0**
TATO	**Taipei** baz=299	**0.61**	**300**	⇑iP	**Pg**	**04 30 07.6**	**-0.3**
TATO	baz=299			S	**Sg**	**04 30 14.5**	**-1.4**
TAP	**Taipei** baz=306	**0.63**	**306**	⇑iP	**Pg**	**04 30 08.2**	**-0.1**
TAP	baz=306			iS	**Sg**	**04 30 15.8**	**-0.8**
YHNB	**Yeheng**	**0.63**	**270**	Pg	**Pg**	**04 30 07.3**	**-1.0**
YHNB				Sg	**Sg**	**04 30 15.5**	**-1.1**
YHNB	**Yeheng**	**0.63**	**270**	P	**Pb**	**04 30 08.9**	**-0.2**
YHNB	**Yeheng** baz=267	**0.63**	**270**	⇑iP	**Pg**	**04 30 07.5**	**-0.9**
YHNB	baz=267			S	**Sg**	**04 30 14.8**	**-1.8**
NSK	**Sanguang** baz=273	**0.64**	**271**	⇑iP	**Pg**	**04 30 07.6**	**-1.0**
NSK	baz=273			S	**Sg**	**04 30 15.2**	**-1.9**
NWRT	**Kuosheng** baz=327	**0.65**	**325**	eP	**Pg**	**04 30 08.6**	**-0.1**
ETL	**Fush Village** baz=213	**0.65**	**219**	⇑P	**Pg**	**04 30 08.4**	**-0.3**
ETL	baz=213			eS	**Sg**	**04 30 16.3**	**-1.0**
BACT	**New Taipei Cit** baz=300	**0.65**	**300**	P	**Pb**	**04 30 09.1**	**-0.4**
BACT	baz=300			eS	**Sg**	**04 30 17.3**	**-0.1**
NACB	**Ninganchiao**	**0.65**	**221**	Pg	**Pg**	**04 30 08.2**	**-0.5**
NACB				Sg	**Sg**	**04 30 16.1**	**-1.3**
NACB	**Ninganchiao** baz=207	**0.65**	**221**	⇑iP	**Pg**	**04 30 08.3**	**-0.5**
NACB	baz=207			S	**Sg**	**04 30 16.6**	**-0.9**
YM01	**YM01** baz=310	**0.65**	**317**	⇑iP	**Pg**	**04 30 08.8**	**0.0**
YM01	baz=310			eS	**Sb**	**04 30 17.8**	**-0.8**
NNSB	**Datong** baz=236	**0.67**	**249**	⇑iP	**Pg**	**04 30 08.3**	**-0.8**
NNSB	baz=236			S	**Sg**	**04 30 18.1**	**+0.2**
NNS	**Nan Shan** baz=236	**0.67**	**250**	⇑iP	**Pg**	**04 30 08.2**	**-0.9**
NNS	baz=236			S	**Sg**	**04 30 18.2**	**+0.2**
YM08	**YM08** baz=321	**0.67**	**320**	⇑iP	**Pg**	**04 30 08.9**	**-0.2**
ETLH	**Xiulin Townshi** baz=225	**0.70**	**229**	P	**Pg**	**04 30 09.2**	**-0.6**
ETLH	baz=225			S	**Sg**	**04 30 19.1**	**0.0**
ANP	**Anpu** baz=317	**0.71**	**316**	⇑iP	**Pg**	**04 30 09.6**	**-0.3**
ANP	baz=317			eS	**Sb**	**04 30 20.2**	**-0.2**
TWD	**Chiawan** baz=211	**0.73**	**216**	⇑iP	**Pg**	**04 30 09.8**	**-0.4**
TWD	baz=211			iS	**Sg**	**04 30 19.0**	**-0.7**
TWS1	**Kuangyinshan** baz=297	**0.73**	**306**	⇑iP	**Pb**	**04 30 10.5**	**-0.2**
TWS1	baz=297			iS	**Sg**	**04 30 19.8**	**0.0**
NTST	**Danshui** baz=312	**0.75**	**311**	⇑iP	**Pb**	**04 30 10.9**	**-0.1**
NTST	baz=312			eS	**Sb**	**04 30 22.1**	**+0.9**
NSM	**Shimen** baz=320	**0.75**	**325**	iP	**Pb**	**04 30 11.2**	**+0.1**
NTY	**Taoyuan** baz=295	**0.77**	**295**	eP	**Pb**	**04 30 11.4**	**0.0**
HWA	**Hwalien** baz=214	**0.81**	**211**	⇑iP	**Pg**	**04 30 11.9**	**+0.2**
HWA	baz=214			eS	**Sg**	**04 30 20.9**	**-1.3**
JYNG	**Yonagunijimaku**	**0.83**	**105**	P	**Pb**	**04 30 12.9**	**+0.4**
JYNG				S	**Sb**	**04 30 24.7**	**+1.1**
JYNG	**Yonagunijimaku** comp=E,1µm,0.7s,comp=E,3µm,1.9s	**0.83**	**105**	A	A	04 30 12.9	
NCU	**National Centr** baz=295	**0.85**	**291**	⇑iP	**Pb**	**04 30 13.0**	**+0.2**
NCU	baz=295			S	**Sn**	**04 30 25.3**	**-1.1**
NCUH	**Zhongli** baz=295	**0.85**	**291**	⇑P	**Pb**	**04 30 13.1**	**+0.3**
NCUH	baz=295			eS	**Sb**	**04 30 24.6**	**+0.3**
FUSS	**Fushou** baz=237	**0.86**	**241**	P	**Pg**	**04 30 11.9**	**-0.9**
FUSS	baz=237			S	**Sb**	**04 30 24.5**	**-0.2**
NFF	**Wufeng Townshi** baz=256	**0.86**	**268**	eP	**Pg**	**04 30 12.1**	**-0.7**
NFF	baz=256			eS	**Sb**	**04 30 24.4**	**-0.2**
ETM	**Tongmen** baz=213	**0.87**	**217**	eP	**Pg**	**04 30 12.6**	**-0.3**
ETM	baz=213			eS	**Sg**	**04 30 23.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.89**	**103**	Pg	**Pb**	**04 30 13.5**	**+0.1**
YOJ				Sg	**Sb**	**04 30 25.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.89**	**103**	P	**Pb**	**04 30 13.5**	**+0.1**
YOJ						04 30 25.4	
YOJ	**Yonaguni jima**	**0.89**	**103**	P	**Pn**	**04 30 15.0**	**+0.6**
YOJ	**Yonaguni jima** baz=105	**0.89**	**103**	⇑iP	**Pb**	**04 30 13.7**	**+0.3**
YOJ	baz=105			S	**Sb**	**04 30 26.0**	**+0.8**
YOJ	**Yonaguni jima**	**0.89**	**103**	P	**Pb**	**04 30 14.0**	**+0.6**
YOJ				S	**Sn**	**04 30 26.6**	**-0.6**
YOJ	**Yonaguni jima** comp=E,2µm,1.1s,comp=E,3µm,2.3s	**0.89**	**103**	A	A	04 30 14.0	
WHF	**Hehuan Shan** baz=230	**0.90**	**235**	⇑iP	**Pg**	**04 30 12.6**	**-0.9**
WHF	baz=230			iS	**Sg**	**04 30 25.1**	**-0.2**
TEYL	**Yanliau Villag** baz=215	**0.91**	**208**	P	**Pb**	**04 30 13.7**	**0.0**
TDCB	**Techi** baz=233	**0.93**	**244**	P	**Pg**	**04 30 13.1**	**-0.9**
TDCB	baz=233			S	**Sb**	**04 30 26.2**	**-0.3**
LIOB	**Emei** baz=253	**0.96**	**269**	eP	**Pg**	**04 30 14.3**	**-0.2**
LIOB	baz=253			eS	**Sn**	**04 30 28.8**	**-0.2**
PCYT	**Pengchaiyu** baz=4.0	**0.96**	**0**	⇑P	**Pg**	**04 30 14.1**	**-0.5**
PCYT	baz=4.0			eS	**Sg**	**04 30 26.8**	**-0.2**
HSN1	**Hsinchu** baz=261	**0.96**	**277**	iP	**Pn**	**04 30 15.5**	**+0.1**
HSN1	baz=261			eS	**Sn**	**04 30 29.6**	**+0.6**
NSTT	**Nanjuang** baz=252	**0.97**	**268**	⇑P	**Pg**	**04 30 14.1**	**-0.7**
NSTT	baz=252			eS	**Sn**	**04 30 29.5**	**+0.2**
NHW	**Xinwu Township** baz=288	**0.98**	**290**	iP	**Pn**	**04 30 15.6**	**-0.2**
NHW	baz=288			S	**Sn**	**04 30 29.4**	**-0.2**
SBCB	**Hsinchu** baz=293	**0.99**	**277**	⇑iP	**Pn**	**04 30 15.9**	**+0.1**
SBCB	baz=293			S	**Sb**	**04 30 28.7**	**+0.5**
HSN	**Hsinchu** baz=294	**1.01**	**278**	⇑iP	**Pb**	**04 30 15.4**	**-0.1**
HSN	baz=294			iS	**Sb**	**04 30 28.5**	**-0.2**
CHGB	**Renai** baz=230	**1.01**	**233**	⇑iP	**Pg**	**04 30 14.9**	**-0.8**
CHGB	baz=230			S	**Sg**	**04 30 28.8**	**-0.1**
ESL	**Shilin** baz=218	**1.03**	**214**	⇑iP	**Pb**	**04 30 15.1**	**-0.8**
ESL	baz=218			S	**Sb**	**04 30 29.6**	**+0.3**
TEGC	**Jichi Village** baz=205	**1.07**	**207**	iP	**Pn**	**04 30 17.8**	**+0.9**
OWD	**Renai** baz=225	**1.08**	**229**	P	**Pb**	**04 30 16.1**	**-0.7**
OWD	baz=225			eS	**Sb**	**04 30 30.1**	**-0.8**
NJN	**Zhunan** baz=257	**1.09**	**271**	eP	**Pn**	**04 30 18.3**	**+1.1**
NJN	baz=257			eS	**Sn**	**04 30 33.6**	**+1.5**
WHP	**Taichung City** baz=246	**1.09**	**249**	eP	**Pb**	**04 30 16.7**	**-0.3**
WHP	baz=246			eS	**Sn**	**04 30 33.1**	**+0.7**
WUSB	**Renai** baz=221	**1.10**	**232**	⇑P	**Pb**	**04 30 16.5**	**-0.6**
EGFH	**Guangfu** baz=221	**1.15**	**210**	P	**Pb**	**04 30 17.7**	**-0.3**
EGFH	baz=221			eS	**Sn**	**04 30 34.2**	**+0.4**
NMLH	**Miaoli** baz=261	**1.17**	**264**	eP	**Pg**	**04 30 19.2**	**+0.6**
NMLH	baz=261			eS	**Sn**	**04 30 35.0**	**+0.8**
WPL	**Puli Township** baz=236	**1.21**	**237**	iP	**Pb**	**04 30 18.9**	**0.0**
NSY	**Sanyi** baz=247	**1.22**	**258**	P	**Pg**	**04 30 20.0**	**+0.6**
NSY	baz=247			S	**Sn**	**04 30 36.7**	**+1.4**
WCS	**Beigang Elemen** baz=244	**1.22**	**240**	eP	**Pn**	**04 30 18.6**	**-0.3**
WCS	baz=244			eS	**Sn**	**04 30 36.1**	**+0.7**
DPDB	**Guoxing** baz=237	**1.22**	**239**	iP	**Pg**	**04 30 19.2**	**-0.3**
TWQ1	**Liyutan** baz=252	**1.22**	**255**	⇓iP	**Pg**	**04 30 19.8**	**+0.2**
TWQ1	baz=252			eS	**Sn**	**04 30 37.6**	**+2.1**
VWDT	**VWDT** baz=213	**1.24**	**223**	⇑iP	**Pn**	**04 30 19.2**	**-0.1**
VWDT	baz=213			eS	**Sg**	**04 30 37.5**	**+1.3**
HGSD	**Ruisui** baz=220	**1.31**	**207**	⇑iP	**Pg**	**04 30 21.0**	**-0.3**
HGSD	baz=220			S	**Sg**	**04 30 41.1**	**+2.7**
SMLT	**Sun Moon Lake** baz=230	**1.32**	**234**	⇓iP	**Pb**	**04 30 21.0**	**0.0**
SMLT	baz=230			eS	**Sg**	**04 30 39.9**	**+1.3**
WDJ	**Dajia District** baz=253	**1.34**	**256**	eP	**Pg**	**04 30 21.8**	**0.0**
WDJ	baz=253			eS	**Sg**	**04 30 40.3**	**+1.1**
TYC	**Yuchr** baz=234	**1.34**	**236**	eP	**Pb**	**04 30 21.3**	**+0.2**
SSLB	**Suanglung**	**1.34**	**229**	Pn	**Pb**	**04 30 21.1**	**-0.1**
SSLB				Sg	**Sb**	**04 30 38.0**	**-0.4**
SSLB	**Suanglung**	**1.34**	**229**	P	**Pg**	**04 30 21.8**	**-0.1**
SSLB	**Suanglung** baz=226	**1.34**	**229**	⇑P	**Pn**	**04 30 20.9**	**+0.2**
SSLB	baz=226			eS	**Sb**	**04 30 37.7**	**-0.7**
EHY	**Hungye** baz=218	**1.34**	**211**	P	**Pn**	**04 30 20.0**	**-0.7**
EHY	baz=218			eS	**Sg**	**04 30 41.5**	**+2.1**
TCU	**Taichung** baz=255	**1.37**	**248**	⇓iP	**Pg**	**04 30 22.9**	**+0.5**
TCU	baz=255			S	**Sg**	**04 30 42.0**	**+1.8**
WWF	**Wufeng** baz=233	**1.40**	**244**	eP	**Pg**	**04 30 23.6**	**+0.8**
YULB	**Yu-li**	**1.45**	**209**	Pn	**Pn**	**04 30 21.5**	**-0.7**
YULB				Sn	**Sg**	**04 30 42.4**	**-0.5**
YULB	**Yu-li** baz=206	**1.45**	**209**	eP	**Pn**	**04 30 22.1**	**-0.1**
YULB	baz=206			eS	**Sb**	**04 30 41.8**	**+0.3**
ECBN	**Changbin** baz=188	**1.46**	**203**	eP	**Pb**	**04 30 23.6**	**+0.4**
EYUL	**Yuli** baz=222	**1.48**	**208**	eP	**Pb**	**04 30 23.2**	**-0.4**
WJS	**Zhushan** baz=232	**1.48**	**236**	eP	**Pg**	**04 30 25.3**	**+0.7**
WJS	baz=232			eS	**Sg**	**04 30 46.6**	**+2.7**
WNT	**Mingjian** baz=235	**1.49**	**238**	⇓P	**Pg**	**04 30 24.8**	**+0.2**
WNT	baz=235			S	**Sg**	**04 30 46.2**	**+2.2**
TWF1	**Yuli** baz=222	**1.49**	**208**	iP	**Pn**	**04 30 22.7**	**0.0**
WCHH	**Zhanghua** baz=244	**1.50**	**247**	eP	**Pb**	**04 30 24.1**	**+0.3**
WCHH	baz=244			eS	**Sg**	**04 30 47.2**	**+3.0**
IRIF	**Iriomote-Funau**	**1.55**	**102**	P	**Pn**	**04 30 23.3**	**-0.2**
IRIF				S	**Sn**	**04 30 43.4**	**-0.2**
IRIF	**Iriomote-Funau** comp=E,655nm,7.7s,comp=E,1µm,1.1s	**1.55**	**102**	A	A	04 30 23.3	
FULB	**Fuli** baz=217	**1.63**	**206**	eP	**Pn**	**04 30 25.2**	**+0.6**
FULB	baz=217			eS	**Sg**	**04 30 48.9**	**+0.4**
ALS	**Alishan** baz=206	**1.63**	**225**	⇓iP	**Pb**	**04 30 26.0**	**-0.3**
ALS	baz=206			eS	**Sg**	**04 30 50.4**	**+1.8**
CHN5	**Tsauling** baz=239	**1.66**	**230**	eS	**Sg**	**04 30 51.7**	**+2.2**
WGK	**Gukeng** baz=234	**1.69**	**235**	eP	**Pg**	**04 30 28.1**	**-0.4**
CHKT	**Chengkung** baz=180	**1.69**	**202**	eP	**Pn**	**04 30 25.3**	**-0.2**
CHKT	baz=180			eS	**Sg**	**04 30 49.9**	**-0.6**
HATJ	**Hateruma jima**	**1.70**	**111**	P	**Pn**	**04 30 25.7**	**+0.1**
HATJ	**Hateruma jima** comp=E,943nm,6.1s,comp=E,982nm,5.9s	**1.70**	**111**	A	A	04 30 25.7	
WDLH	**Douliu** baz=248	**1.70**	**235**	eP	**Pb**	**04 30 27.8**	**+0.4**
WDLH	baz=248			eS	**Sg**	**04 30 52.5**	**+1.6**
WRL	**Guolierlin Hig** baz=241	**1.72**	**244**	eP	**Pb**	**04 30 27.1**	**-0.5**
WRL	baz=241			eS	**Sg**	**04 30 50.7**	**-0.7**
ELDTW	**Lidau** baz=200	**1.76**	**213**	eP	**Pn**	**04 30 26.9**	**+0.3**
WTCT	**Ta-ch'eng** baz=241	**1.82**	**244**	eP	**Pb**	**04 30 28.9**	**-0.4**
WTCT	baz=241			eS	**Sb**	**04 30 53.0**	**+1.0**
WTK	**Tuku** baz=237	**1.82**	**238**	eP	**Pb**	**04 30 29.2**	**-0.1**
JKRS	**Kuro-shima**	**1.82**	**103**	P	**Pn**	**04 30 27.3**	**+0.1**
JKRS				eS	**Sn**	**04 30 50.4**	**+0.1**
JKRS	**Kuro-shima** comp=E,782nm,3.4s,comp=E,942nm,7.2s	**1.82**	**103**	A	A	04 30 27.3	
EDH	**Donghe** baz=181	**1.83**	**203**	iP	**Pn**	**04 30 27.6**	**+0.3**
EDH	baz=181			eS	**Sn**	**04 30 51.0**	**+0.5**
TPUB	**Ta-pu**	**1.89**	**224**		**Pb**	**04 30 29.9**	**-0.8**
TPUB	**Ta-pu**	**1.89**	**224**	P	**Pg**	**04 30 31.8**	**-0.6**
TPUB	**Ta-pu** baz=207	**1.89**	**224**	eP	**Pg**	**04 30 32.6**	**+0.2**
TPUB	baz=207			eS	**Sg**	**04 30 55.9**	**-1.1**
CHY	**Chiayi** baz=229	**1.90**	**232**	eP	**Pb**	**04 30 31.1**	**+0.3**
CHY	baz=229			eS	**Sg**	**04 30 58.8**	**+1.5**
STYH	**Taoyuan** baz=214	**1.90**	**219**	eP	**Pb**	**04 30 30.4**	**-0.4**
STYH	baz=214			eS	**Sg**	**04 30 57.6**	**+0.3**
JIJ	**Ishigaki jima**	**1.92**	**99**	P	**Pn**	**04 30 28.1**	**-0.5**
JIJ	**Ishigaki jima** comp=E,182nm,7.2s,comp=E,325nm,6.8s	**1.92**	**99**	A	A	04 30 28.1	
STYT	**Tauyuan** baz=219	**1.92**	**219**	P	**Pb**	**04 30 30.7**	**-0.4**
WTP	**Ta-pu** baz=206	**1.94**	**223**	⇓iP	**Pb**	**04 30 31.2**	**-0.3**
WTP	baz=206			S	**Sg**	**04 30 58.1**	**-0.5**
LONT	**Longtian** baz=207	**1.95**	**206**	eP	**Pn**	**04 30 29.6**	**+0.5**
WSF	**Szhu** baz=236	**1.97**	**239**	eP	**Pb**	**04 30 30.9**	**-1.1**
WSF	baz=236			eS	**Sg**	**04 30 58.2**	**-1.3**
TWK	**Hsinying** baz=207	**2.01**	**226**	⇓iP	**Pb**	**04 30 32.3**	**-0.3**
TWK	baz=207			S	**Sg**	**04 31 00.5**	**-0.2**
WSL	**Shuilin Townsh** baz=245	**2.03**	**236**	eP	**Pn**	**04 30 31.0**	**+0.9**
WSL	baz=245			eS	**Sg**	**04 31 01.1**	**-0.3**
SNST	**Tainan City** baz=207	**2.04**	**225**	eP	**Pb**	**04 30 32.9**	**-0.1**
SNST	baz=207			eS	**Sg**	**04 31 01.9**	**+0.4**
CHN1	**Nanshi** baz=220	**2.04**	**224**	⇓iP	**Pb**	**04 30 32.7**	**-0.4**
CHN1	baz=220			S	**Sg**	**04 31 01.3**	**-0.4**
TWG	**Pinlang**	**2.05**	**207**		**Pn**	**04 30 30.0**	**-0.5**
TWG	**Pinlang** baz=193	**2.05**	**207**	eP	**Pn**	**04 30 30.1**	**-0.5**
TWGBT	**Beinan** baz=193	**2.05**	**206**	eP	**Pn**	**04 30 30.1**	**-0.4**
LDUT	**Ludao** baz=178	**2.06**	**196**	eP	**Pn**	**04 30 30.0**	**-0.6**
LDUT	baz=178			eS	**Sn**	**04 30 56.8**	**+0.6**
SGST	**Jiashian** baz=217	**2.08**	**221**	P	**Pb**	**04 30 32.5**	**-1.4**
SGST	baz=217			S	**Sb**	**04 31 00.9**	**+1.1**
TTN	**Taitung** baz=199	**2.08**	**204**	P	**Pn**	**04 30 32.0**	**+1.1**
TTN	baz=199			eS	**Sg**	**04 31 02.0**	**-1.1**
ICHU	**Yijhu** baz=229	**2.09**	**232**	eP	**Pb**	**04 30 34.1**	**+0.2**
ICHU	baz=229			eS	**Sg**	**04 31 02.5**	**-0.8**
CHN8	**Yiju** baz=230	**2.15**	**233**	eP	**Pb**	**04 30 35.1**	**+0.2**
CHN8	baz=230			eS	**Sg**	**04 31 04.6**	**-0.5**
CHN3	**Shinhua** baz=226	**2.22**	**225**	eP	**Pb**	**04 30 37.3**	**+1.1**
SCLT	**Jiali** baz=208	**2.27**	**229**	eP	**Pb**	**04 30 36.3**	**-0.7**
SCLT	baz=208			eS	**Sg**	**04 31 07.7**	**-1.4**
SHHT	**Tainan City** baz=225	**2.27**	**224**	eP	**Pb**	**04 30 38.0**	**+0.9**
SCST	**Cishan** baz=221	**2.29**	**219**	eP	**Pb**	**04 30 36.9**	**-0.4**
ECL	**Taimali** baz=196	**2.30**	**207**	P	**Pn**	**04 30 34.6**	**+0.8**
SSD	**Sandimen** baz=216	**2.32**	**215**	eP	**Pb**	**04 30 37.1**	**-0.9**
TAI1	**Yung-k'ang** baz=227	**2.34**	**226**	eP	**Pb**	**04 30 38.2**	**+0.1**
TSMG	**Majia** baz=215	**2.35**	**214**	eP	**Pb**	**04 30 37.5**	**-0.9**
TWM1	**Shoushan** baz=220	**2.38**	**220**	P	**Pb**	**04 30 39.4**	**+0.6**
JTJ	**Tarama**	**2.40**	**90**	P	**Pn**	**04 30 36.1**	**+0.9**
JTJ				S	**Sn**	**04 31 04.9**	**+0.4**
VWUC	**VWUC** baz=275	**2.40**	**278**	⇑P	**Pn**	**04 30 34.6**	**-0.6**
VWUC	baz=275			eS	**Sn**	**04 31 01.9**	**-2.6**
SGLT	**Jiouru** baz=218	**2.42**	**217**	eP	**Pb**	**04 30 39.7**	**+0.2**
MATB	**Ma-tsu** baz=306	**2.42**	**308**	⇑P	**Pn**	**04 30 34.1**	**-1.4**
MASBT	**Mashibuluo** baz=208	**2.43**	**213**	eP	**Pb**	**04 30 39.2**	**-0.6**
MASBT	baz=208			eS	**Sb**	**04 31 09.3**	**-0.5**
MSUT	**Lienchiang** baz=307	**2.45**	**308**	iP	**Pn**	**04 30 35.0**	**-0.8**
EAST	**Anshuo** baz=197	**2.54**	**206**	P	**Pn**	**04 30 37.5**	**+0.3**
TAW	**Tawu** baz=207	**2.54**	**205**	eP	**Pn**	**04 30 37.9**	**+0.8**
PNG	**Penghu** baz=243	**2.54**	**245**	P	**Pn**	**04 30 37.4**	**+0.2**
PNG	baz=243			eS	**Sn**	**04 31 09.1**	**+1.0**
PHUB	**P'eng-hu** baz=243	**2.55**	**244**	eP	**Pn**	**04 30 37.7**	**+0.3**
SSPT	**Xinbi** baz=198	**2.57**	**213**	eP	**Pb**	**04 30 42.0**	**-0.2**
WDGT	**Dungji** baz=236	**2.61**	**238**	P	**Pn**	**04 30 39.1**	**+1.0**
WDGT	baz=236			eS	**Sb**	**04 31 12.4**	**-2.4**
SCZT	**Fangliau** baz=205	**2.64**	**210**	eP	**Pb**	**04 30 41.3**	**-2.2**
SCZT	baz=205			eS	**Sb**	**04 31 16.0**	**+0.1**
LAY	**Lan-yu** baz=180	**2.66**	**190**	P	**Pn**	**04 30 38.6**	**-0.3**
LYUB	**Lan-yu** baz=178	**2.69**	**190**	eP	**Pn**	**04 30 38.0**	**-1.3**
LYUB	baz=178			eS	**Sn**	**04 31 11.0**	**-0.8**
PTMZ	**Houxiangcun** baz=276	**2.70**	**278**	eP	**Pn**	**04 30 38.6**	**-0.7**
SLIU	**Shizi** baz=197	**2.71**	**206**	eP	**Pb**	**04 30 42.0**	**-2.5**
WLCH	**Liuqiu** baz=233	**2.78**	**214**	eP	**Pb**	**04 30 45.6**	**-0.1**
LYJJ	**Jianjiangzhen** baz=311	**2.80**	**312**	eP	**Pn**	**04 30 39.2**	**-1.5**
XPSS	**Dashiqiu** baz=322	**2.81**	**323**	eP	**Pn**	**04 30 40.1**	**-0.9**
VCHM	**Qimei** baz=239	**2.82**	**239**	eP	**Pn**	**04 30 41.8**	**+0.8**
JIRB	**Irabujima**	**2.83**	**86**	P	**Pn**	**04 30 42.0**	**+0.8**
JIRB	**Irabujima** comp=E,205nm,3.9s,comp=E,282nm,11.1s	**2.83**	**86**	A	A	04 30 42.0	
JIKM	**Ikemajima**	**2.90**	**84**	P	**Pn**	**04 30 43.5**	**+1.4**
JIKM				S	**Sn**	**04 31 18.0**	**+1.0**
JIKM	**Ikemajima** comp=E,251nm,6.6s,comp=E,434nm,8.1s	**2.90**	**84**	A	A	04 30 43.5	
HEN	**Hengchun** baz=193	**2.92**	**205**	eP	**Pb**	**04 30 46.2**	**-1.9**
JMJ	**Miyako jima 2**	**2.94**	**87**	P	**Pn**	**04 30 44.4**	**+1.8**
JMJ	**Miyako jima 2** baz=98	**2.94**	**87**	iP	**Pn**	**04 30 44.9**	**+2.2**
TWKBT	**Hengchun** baz=194	**2.95**	**203**	eP	**Pn**	**04 30 44.0**	**+1.2**
TSEB	**Hengchuen, Pin** baz=193	**2.96**	**201**	eP	**Pn**	**04 30 44.4**	**+1.5**
JMJ2	**Miyako jima3**	**2.97**	**88**	P	**Pn**	**04 30 44.5**	**+1.5**
JMJ2	**Miyako jima3** comp=E,297nm,7.0s,comp=E,523nm,6.4s	**2.97**	**88**	A	A	04 30 44.5	
JOGS	**Gusukube**	**3.04**	**88**	P	**Pn**	**04 30 45.6**	**+1.6**
JOGS	**Gusukube** comp=E,341nm,6.0s,comp=E,493nm,4.8s	**3.04**	**88**	A	A	04 30 45.6	
MHZQ	**Yeshan** baz=296	**3.09**	**298**	eP	**Pn**	**04 30 43.7**	**-1.1**
QZH	**Quanzhou**	**3.17**	**276**	⇓iPn	**Pn**	**04 30 44.8**	**-1.0**
QZH				Sn	**Sn**	**04 31 19.6**	**-4.0**
QZH	comp=N,10µm,1.5s			smax	smax		
QZH	comp=E,5µm,0.8s			smax	smax		
QZH	comp=N,214µm,11.0s			LR	LR		

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QZH                                LR     LR
       comp=E,70µm,10.9s
QZH                                LR     LR
       comp=Z,137µm,9.1s
KNM    Kinmen             3.32 266 eP     Pn     04 30 49.3 +1.5
       baz=264
KNMB   Chin-men Tao       3.35 267        Pn     04 30 47.8 -0.6
KNMB   Chin-men Tao       3.35 267 eP     Pn     04 30 48.1 -0.3
       baz=265
AXDP   Jialang            3.73 274 eP     Pn     04 30 53.1 -0.4
       baz=271
ZPLA   Ao Xicun           4.01 260 eP     Pn     04 30 57.1 -0.2
       baz=256
SXFK   Yanhouchang        4.35 294 eP     Pn     04 31 01.3 -0.8
       baz=292
JKE    Kume jima 2        4.57  68 A      A      04 31 06.6
       comp=E,24nm,7.2s,comp=E,32nm,9.0s
JAGN   Aguni-jima         5.05  67 A      A      04 31 13.2
       comp=E,40nm,8.7s,comp=E,46nm,3.6s
JJT3   Tamagusuku3        5.38  73 A      A      04 31 17.9
       comp=E,91nm,3.3s,comp=E,108nm,5.2s
JNTH   Nagotoyohara       5.68  70 A      A      04 31 22.2
       comp=E,21nm,7.1s,comp=E,17nm,6.3s
JIH    Iheya              5.81  65 A      A      04 31 23.9
       comp=E,25nm,7.6s,comp=E,23nm,8.0s
JOW    Kunigami           6.00  68 Pn     Pn     04 31 26.7 +2.0
       28nm,0.3s,baz=231,slow=14,SNR=20
JOW                                Sn     Sn     04 32 36.6 +3.2
       43nm,0.3s,baz=109,slow=23,SNR=1.3
       106nm,0.3s
JOW    Kunigami           6.00  68        Pn     04 31 24.3 -0.5
JOW                                       Sn     04 32 35.3 +1.9
JOW    Kunigami           6.00  68 P      Pn     04 31 28.8 +4.1
JOW    Kunigami           6.00  68 A      A      04 31 26.5
       comp=E,22nm,8.1s,comp=E,21nm,4.8s
JYRO   Yoronjima          6.21  66 A      A      04 31 29.5
       comp=E,18nm,6.4s,comp=E,18nm,6.8s
JOKE   Okinoerabujima     6.44  64 A      A      04 31 32.6
       comp=E,18nm,5.6s,comp=E,16nm,8.2s
SSE    Sheshan            6.45 353 Pn     Pn     04 31 29.4 -1.5
SSE                                Sn     Sn     04 32 43.2 -1.2
SSE                                smax   smax
       comp=N,760nm,1.0s
SSE                                smax   smax
       comp=E,1µm,1.2s
APYP   Conner             6.82 187⇑eP     Pn     04 31 38.4 +2.4
APYP   Conner             6.82 187⇓eP     Sn     04 32 55.6 +2.0
SIPP   Brgy, Tapao        6.88 193⇓iP     Pn     04 31 40.1 +3.3
SIPP                               eS     Pb     04 31 51.1 -4.5
JTK    Tokunoshima        6.92  62 A      A      04 31 39.3
       comp=E,12nm,8.2s,comp=E,12nm,9.8s
JAMN   Amaminishikomi     7.30  59 A      A      04 31 44.6
       comp=E,11nm,6.8s,comp=E,11nm,7.3s
HKPS   Hong Kong Po S     7.65 253        Pn     04 31 47.3 -0.2
JAM    Amami Oshima       7.71  59 A      A      04 31 50.3
       comp=E,14nm,7.5s,comp=E,11nm,8.0s
JTAJ   Takarajima         7.78  53 A      A      04 31 51.2
       comp=E,17nm,10.2s,comp=E,19nm,9.0s
NJ2    Nanjing            7.88 340 ePn    Pn     04 31 49.4 -1.1
NJ2                                Sn     Sn     04 33 17.7 -2.0
NJ2                                smax   smax
       comp=N,2µm,1.1s
NJ2                                smax   smax
       comp=E,3µm,1.4s
NJ2                                LR     LR
       comp=N,157µm,9.6s
NJ2                                LR     LR
       comp=E,82µm,8.8s
NJ2                                LR     LR
       comp=Z,187µm,9.7s
JZK    Kikaishima         7.96  61 A      A      04 31 53.8
       comp=E,51nm,7.6s,comp=E,45nm,11.4s
GZH    Guangzhou          8.14 261 Pn     Pn     04 31 49.9 -4.2
GZH                                Sn     Sn     04 33 18.8 -7.2
GZH                                smax   smax
       comp=N,4µm,1.0s
GZH                                smax   smax
       comp=E,2µm,1.0s
MCO    Taipa Grande       8.22 254 P      Pn     04 31 54.0 -1.2
JMZ    Minamidaito 2      8.37  80 A      A      04 31 59.7
       comp=E,22nm,5.8s,comp=E,45nm,7.9s
JKDJ   Kitadaitoujima     8.45  79 A      A      04 32 00.8
       comp=E,28nm,6.9s,comp=E,35nm,7.1s
JNN    Nakanoshima        8.65  52 A      A      04 32 03.2
       comp=E,20nm,8.6s,comp=E,23nm,8.0s
CNSH   ChangSha           8.90 295 ⇑P     Pn     04 32 02.9 -1.7
CNSH                               S      Sn     04 33 43.2 -1.7
CNSH                               smax   smax
       comp=N,6µm,0.9s
CNSH                               smax   smax
       comp=E,5µm,1.1s
CNSH                               LR     LR
       comp=N,58µm,8.9s
CNSH                               LR     LR
       comp=E,40µm,8.5s
WHN    Wuhan              9.00 312 ⇓P     Pn     04 32 04.5 -1.4
WHN                                S      Sn     04 33 39.2 -8.1
WHN                                LR     LR
       comp=N,179µm,13.0s
WHN                                LR     LR
       comp=E,148µm,10.6s
WHN                                LR     LR
       comp=Z,160µm,9.9s
JYAK   Yakushimahirau     9.33  52 A      A      04 32 12.5
       comp=E,8.0nm,8.9s,comp=E,5.0nm,9.1s
JMTN   Minamitane         9.70  52 A      A      04 32 17.6
       comp=E,9.0nm,9.6s,comp=E,9.0nm,8.5s
JSJ    Shimokoshiki       9.71  42 A      A      04 32 17.6
       comp=E,14nm,8.2s,comp=E,10.0nm,10.5s
JFU    Fukue jima 2       9.88  35 A      A      04 32 19.9
       comp=E,16nm,11.7s,comp=E,19nm,9.5s
JTN    Tanegashima 3      9.90  51 A      A      04 32 20.3
       comp=E,10.0nm,8.2s,comp=E,9.0nm,8.4s
JSU    Suzuyama          10.06  46 Pn     Pn     04 32 21.4 +0.9
JSU    Suzuyama          10.06  46 A      A      04 32 22.5
       comp=E,11nm,8.1s,comp=E,12nm,8.7s
JTSR   Tashiro 2         10.16  48 A      A      04 32 23.8
       comp=E,6.0nm,10.4s,comp=E,12nm,9.3s
TGY    Tagaytay City     10.57 186 Pn     Pn     04 32 30.9 +3.5
       24nm,0.3s,baz=143,slow=1.1,SNR=12
TGY                                LR     LR     04 36 37.8
       comp=Z,15µm,21.9s,baz=358,slow=38
JZO    Okuchi            10.57  43 A      A      04 32 29.4
       comp=E,17nm,9.1s,comp=E,11nm,10.3s
JNAR   Kushima--Naru     10.61  48 A      A      04 32 30.0
       comp=E,12nm,9.0s,comp=E,8.0nm,9.6s
GULI   GuiLin            10.63 276 ⇓P     Pn     04 32 27.3 -1.0
GULI                               S      Sn     04 34 34.3 +6.9
GULI                               LR     LR
       comp=N,44µm,9.8s
GULI                               LR     LR
       comp=E,62µm,9.2s
GULI                               LR     LR
       comp=Z,66µm,9.8s
GQP    Guinayangan       10.71 178⇓eP     Pn     04 32 32.5 +3.0
JNKG   Nichinankitago    10.77  48 A      A      04 32 32.1
       comp=E,8.0nm,8.9s,comp=E,12nm,8.8s
PGP    Puerto Galera     11.16 186⇓eP     Pn     04 32 36.7 +1.1
JII    Iki               11.29  35 A      A      04 32 38.9
       comp=E,15nm,10.2s,comp=E,9.0nm,8.1s
JNU    Nakatsue          11.42  40 Pn     Pn     04 32 44.2 +5.1
       1.9nm,0.3s,baz=200,slow=6.4,SNR=15
JNU                                LR     LR     04 37 41.4
       comp=Z,18µm,19.1s,baz=228,slow=41
JNU    Nakatsue          11.42  40        Pn     04 32 40.1 +1.0
JNU    Nakatsue          11.42  40 P      Pn     04 32 45.7 +6.6
JKIT   Kitakata          11.43  44 A      A      04 32 41.0
       comp=E,8.0nm,8.8s,comp=E,10.0nm,10.7s
JTSM   Tsushimamitsus    11.55  32 A      A      04 32 42.4
       comp=E,11nm,9.1s,comp=E,12nm,10.4s
NAWB   Namwon            11.66  22        Pn     04 32 43.0 +0.6
JTU    Tsushima          11.71  31 Pn     Pn     04 32 42.8 -0.2
JTU    Tsushima          11.71  31 A      A      04 32 44.5
       comp=E,13nm,9.7s,comp=E,16nm,10.3s
JSKE   Saikikamae        11.83  45 A      A      04 32 46.3
       comp=E,7.0nm,10.9s,comp=E,10.0nm,10.7s
JUS    Usuki             11.91  43 A      A      04 32 47.4
       comp=E,5.0nm,8.7s,comp=E,9.0nm,11.4s
TIA    Tai'an            12.27 341 eP     Pn     04 32 56.0 +5.4
TIA                                S      Sn     04 34 57.2  -10
TIA                                pmax   pmax
       comp=Z,38nm,1.5s
TIA                                LR     LR
       comp=N,56µm,10.4s
TIA                                LR     LR
       comp=E,23µm,9.8s
TIA                                LR     LR
       comp=Z,96µm,10.8s
JTO    Tosashimizu       12.45  47 A      A      04 32 54.7
       comp=Z,6.0nm,11.9s,comp=Z,12nm,11.0s
TJN    Taejon            12.53  20 Pn     Pn     04 32 53.7 -0.5
TJN    Taejon            12.53  20⇑eP     Pn     04 32 51.6 -2.6
TJN    Taejon            12.53  20 P      Pn     04 32 58.7 +4.5
QIZ    Qiongzhong        12.66 246 P      Pn     04 32 58.2 +2.1
QIZ                                S      Sn     04 35 18.9 +1.8
QIZ                                pmax   pmax
       comp=Z,1µm,6.5s
QIZ                                LR     LR
       comp=Z,39µm,15.3s
QIZ                                LR     LR
       comp=Z,22µm,13.3s
QIZ                                LR     LR
       comp=Z,21µm,9.3s
QIZ    Qiongzhong        12.66 246 P      Pn     04 32 59.5 +3.4
JHGM   Hagimishima       12.79  36 A      A      04 32 59.0
       comp=Z,16nm,8.5s,comp=Z,13nm,8.0s
LYN    LuoYang           12.90 322 ⇑P     Pn     04 33 00.1 +0.8
LYN                                sP     P      04 33 06.7 -3.4
LYN                                PP     PnPn   04 33 10.6 +3.3
LYN                                S      Sn     04 35 22.5 -0.4
LYN                                pmax   pmax
       comp=Z,20nm,0.8s
LYN                                pmax   pmax
       comp=Z,2µm,7.7s
LYN                                LR     LR
       comp=Z,62µm,13.5s
LYN                                LR     LR
       comp=Z,66µm,13.4s
LYN                                LR     LR
       comp=Z,79µm,9.9s
JKU    Kubokawa          12.90  46 A      A      04 33 00.7
       comp=Z,4.0nm,11.9s,comp=Z,6.0nm,10.6s
RCP    Roxas             13.05 177⇓eP     Pn     04 33 03.7 +2.2
JHM    Kurahashi         13.12  42 A      A      04 33 03.5
       comp=Z,9.0nm,10.8s,comp=Z,7.0nm,8.8s
JKHR   Kochiharuno       13.31  46 A      A      04 33 06.2
       comp=Z,9.0nm,9.2s,comp=Z,11nm,11.2s
INCN   Inchon            13.36  16 Pn     Pn     04 33 05.9 +0.4
INCN   Inchon            13.36  16 P      Pn     04 33 05.9 +0.4
JHT    Toyohira          13.41  40 A      A      04 33 07.4
       comp=Z,9.0nm,10.0s,comp=Z,9.0nm,8.9s
KSAR   Wonju Array Be    13.67  20 Pn     Pn     04 33 10.9 +1.2
KSAR   Wonju Array Be    13.67  20 P      Pn     04 33 11.0 +1.2
HJU    Haeju             13.69  12 P      Pn     04 33 13.6 +3.5
HJU                                pP     P      04 33 15.1 -3.7
HJU                                S      Sn     04 35 49.7 +7.6
HJU                                AMS    AMS
       comp=N,117µm,11.6s
HJU                                AMS    AMS
       comp=E,121µm,12.1s
HJU                                AMS    AMS
       comp=Z,101µm,10.0s
KSRS   Korea Array       13.69  20 Pn     Pn     04 33 10.6 +0.5
       comp=Z,1.0nm,0.3s,baz=199,slow=12,SNR=13
KSRS                               LR     LR     04 38 46.0
       comp=Z,15µm,20.6s,baz=200,slow=39
       comp=Z,5.4nm,0.9s
JMN    Monobe            13.70  46 A      A      04 33 11.2
       comp=Z,8.0nm,9.5s,comp=Z,9.0nm,8.9s
GYA    Guiyang           14.02 281⇓iP     P      04 33 19.4 -3.3
GYA                                sP     Pn     04 33 22.0 +7.3
GYA                                S      Sn     04 35 54.1 +3.7
GYA                                PcP    PcP    04 38 37.9 +2.3
GYA                                pmax   pmax
       comp=Z,19nm,1.0s
GYA                                LR     LR
       comp=Z,40µm,9.6s
GYA                                LR     LR
       comp=Z,52µm,9.8s
GYA                                LR     LR
       comp=Z,53µm,9.1s
JHS    Saijyo            14.06  40 Pn     Pn     04 33 15.7 +0.5
HNS    HongShan          14.16 335 ⇑P     Pn     04 33 17.4 +0.9
HNS                                S      Sn     04 36 01.3 +7.7
HNS                                pmax   pmax
       comp=Z,3µm,8.4s
HNS                                LR     LR
       comp=Z,62µm,10.8s
HNS                                LR     LR
       comp=Z,79µm,10.7s
HNS                                LR     LR
       comp=Z,86µm,11.0s
DL2    Dalian            14.20 359⇑iP     P      04 33 21.9 -2.6
DL2                                S      Sn     04 35 59.7 +5.2
DL2                                pmax   pmax
       comp=Z,240nm,1.3s
DL2                                pmax   pmax
       comp=Z,1µm,6.2s
DL2                                LR     LR
       comp=Z,14µm,20.4s
DL2                                LR     LR
       comp=Z,39µm,14.7s
DL2                                LR     LR
       comp=Z,65µm,12.3s
SEHB   SEOHWA            14.54  20 Pn     Pn     04 33 22.5 +0.7
PYAG   Pyongyang         14.68  11 P      Pn     04 33 27.8 +4.2
PYAG                               pP     P      04 33 32.4 +2.7
PYAG                               S      Sn     04 36 10.8 +4.7
PYAG                               AMS    AMS
       comp=N,17µm,7.9s
PYAG                               AMS    AMS
       comp=E,21µm,9.7s
PYAG                               AMS    AMS
       comp=Z,17µm,7.9s
XAN    Xi'an             14.77 312 ⇑P     Pn     04 33 23.5 -1.4
XAN                                pP     P      04 33 27.3 -3.6
XAN                                sP            04 33 29.8
XAN                                S      Sn     04 36 10.6 +2.0
XAN                                SS     SnSn   04 36 23.0 +1.7
XAN                                pmax   pmax
       comp=Z,43nm,1.0s
XAN                                pmax   pmax
       comp=Z,2µm,8.1s
XAN                                LR     LR
       comp=Z,54µm,14.6s
XAN                                LR     LR
       comp=Z,42µm,14.3s
XAN                                LR     LR
       comp=Z,43µm,11.4s
TBP    Tagbilaran        14.99 173⇓eP     Pn     04 33 28.8 +0.8
TIY    Taiyuan           15.38 330 ⇑P     Pn     04 33 35.0 +1.9
TIY                                S      Sn     04 36 27.8 +4.4
TIY                                pmax   pmax
       comp=Z,2µm,5.3s
TIY                                LR     LR
       comp=Z,57µm,12.0s
TIY                                LR     LR
       comp=Z,31µm,11.3s
TIY                                LR     LR
       comp=Z,55µm,11.4s
SUJ    Sinuiju           15.52   7 P      P      04 33 38.8 -0.4
SUJ                                pP     pP     04 33 42.6 +0.2
SUJ                                S      Sn     04 36 30.8 +4.1
SUJ                                AMS    AMS
       comp=N,100µm,10.2s
SUJ                                AMS    AMS
       comp=E,77µm,7.9s
SUJ                                AMS    AMS
       comp=Z,104µm,10.6s
HHU    Hamhung           15.89  16 P      P      04 33 44.0 +0.7
HHU                                pP     sP     04 33 49.4 +1.3
HHU                                S      Sn     04 36 34.6 -1.1
HHU                                AMS    AMS
       comp=N,45µm,8.7s
HHU                                AMS    AMS
       comp=E,51µm,9.8s
HHU                                AMS    AMS
       comp=Z,49µm,9.4s
BJT    Baijiatuau        16.09 343 Pn     Pn     04 33 41.5 -0.6
BJT    Baijiatuau        16.09 343 P      Pn     04 33 41.5 -0.6
BJT                                pmax   pmax
       comp=Z,105nm,1.4s
BJI    Beijing           16.11 344 P      Pn     04 33 43.1 +0.7
BJI                                S      Sn     04 36 45.8 +4.9
BJI                                pmax   pmax
       comp=Z,2µm,9.7s
BJI                                LR     LR
       comp=Z,52µm,11.0s
BJI                                LR     LR
       comp=Z,14µm,10.5s
BJI                                LR     LR
       comp=Z,51µm,11.2s
INU    Inuyama           16.74  47        Pn     04 33 51.0 +0.5
INU    Inuyama           16.74  47 P      P      04 33 56.6 +3.9
JGF    Kuroka            17.11  47 Pn     Pn     04 33 53.8 -1.4
SNY    Shenyang          17.16   4 ⇓P     P      04 33 57.7 +0.4
SNY                                pmax   pmax
       comp=Z,7µm,8.0s
SNY                                LR     LR
       comp=Z,56µm,11.0s
SNY                                LR     LR
       comp=Z,32µm,11.6s
SNY                                LR     LR
       comp=Z,86µm,11.8s
CD2    Chengdu           17.34 295 P      Pn     04 33 58.4 +0.3
CD2                                sP     sP     04 34 06.3 +2.0
CD2                                S      Sn     04 37 10.8 -0.4
CD2                                pmax   pmax
       comp=Z,40nm,0.5s
CD2                                pmax   pmax
       comp=Z,2µm,7.8s
CD2                                LR     LR
       comp=Z,35µm,11.7s
CD2                                LR     LR
       comp=Z,29µm,10.3s
KMI    Kunming           17.54 276 ⇓P     P      04 34 01.3 -0.6
KMI                                PP     PnPn   04 34 15.0 +3.9
KMI                                S      Sn     04 37 15.5 -0.8
KMI                                SS     SnSn   04 37 34.3 +4.6
KMI                                pmax   pmax
       comp=Z,73nm,1.5s
KMI                                pmax   pmax
       comp=Z,3µm,6.2s
KMI                                LR     LR
       comp=Z,23µm,11.6s
KMI                                LR     LR
       comp=Z,51µm,10.4s
KMI                                LR     LR
       comp=Z,52µm,10.2s
JHJ    Hachijo jima 2    17.63  57 P      Pn     04 34 02.0 +0.3
       comp=Z,22nm,0.3s,baz=223,slow=9.6,SNR=5.0
JHJ                                LR     LR     04 40 35.4
       comp=Z,4µm,21.4s,baz=270,slow=36
JHJ2   Mitsune           17.66  58 P      P      04 34 06.4 +3.5
KCP    Kidapawan         17.80 170⇓iP     P      04 34 06.8 +2.2
DAV    Davao City (W)    17.82 169 P      P      04 34 09.1 +4.3
       comp=Z,165nm,0.3s,baz=258,slow=1.3,SNR=3.7
DAV                                LR     LR     04 41 12.0
       comp=Z,7µm,19.7s,baz=343,slow=38
DAV    Davao City (W)    17.82 169        Pn     04 34 04.2 +0.1
MAJO   Matsushiro        18.22  46        Pn     04 34 08.3 -0.6
MAJO   Matsushiro        18.22  46ceP     P      04 34 09.2 +0.1
MAJO   Matsushiro        18.22  46 P      P      04 34 13.1 +4.0
MJB9   Matsu-Tunnel      18.22  46        Pn     04 34 07.8 -1.2
MJAR   Matsushiro Arr    18.22  46 P      Pn     04 34 09.0 +0.1
       comp=Z,13nm,0.9s,baz=225,slow=7.9,SNR=19
MJAR   Matsushiro Arr    18.22  46        Pn     04 34 08.3 -0.6
JCJ    Chichijima        18.26  78 P      P      04 34 10.7 +1.1
       comp=Z,14nm,0.3s,baz=302,slow=1.6,SNR=9.8
JCJ                                LR     LR     04 40 59.0
       comp=Z,3µm,19.1s,baz=254,slow=36
       comp=Z,701nm,1.1s
JCJ    Chichijima        18.26  78        Pn     04 34 08.9 -0.6
JCJ    Chichijima        18.26  78 P      P      04 34 12.7 +3.0
HHC    Hu-ho-hao-te      18.37 334 eP     P      04 34 14.2 +3.4
HHC                                pP     sP     04 34 18.7 +3.1
HHC                                sS     sS     04 37 45.7 -0.2
HHC                                pmax   pmax
       comp=Z,130nm,1.3s
HHC                                LR     LR
       comp=Z,81µm,11.0s
HHC                                LR     LR
       comp=Z,24µm,12.3s
HHC                                LR     LR
       comp=Z,92µm,11.0s
PZH    PanZhiHua         18.43 280 P      Pn     04 34 14.3 +2.7
PZH                                sP     sP     04 34 20.0 +3.6
PZH                                S      Sn     04 37 37.0 -0.5
PZH                                SS     SnSn   04 38 01.4  +10
PZH                                pmax   pmax
       comp=Z,40nm,1.1s
PZH                                pmax   pmax
       comp=Z,4µm,7.6s
PZH                                LR     LR
       comp=Z,67µm,17.4s
PZH                                LR     LR
       comp=Z,13µm,17.4s
PZH                                LR     LR
       comp=Z,23µm,13.5s
BTO    Baotou            18.82 330 eP     Pn     04 34 20.3 +4.0
JSD    Sado              19.17  42 P      Pn     04 34 21.2 +0.8
CN2    Changchun         19.29   7 eP     Pn     04 34 22.5 +0.8
CN2                                eS     Sn     04 37 53.9 -4.0
CN2                                pmax   pmax
       comp=Z,100nm,1.3s
CN2                                pmax   pmax
       comp=Z,4µm,8.3s
CN2                                LR     LR
       comp=Z,54µm,12.0s
CN2                                LR     LR
       comp=Z,50µm,12.0s
CN2                                LR     LR
       comp=Z,55µm,11.7s
LZH    Lanzhou           19.37 310 ⇑P     Pn     04 34 24.9 +1.9
LZH                                sP     sP     04 34 36.1 +9.3
LZH                                SS     S      04 38 21.5  +20
LZH                                pmax   pmax
       comp=Z,250nm,1.6s
LZH                                pmax   pmax
       comp=Z,4µm,5.4s
LZH                                LR     LR
       comp=Z,26µm,11.8s
LZH                                LR     LR
       comp=Z,22µm,10.8s
LZH                                LR     LR
       comp=Z,17µm,11.3s
MSHR   Mys Shultsa       19.38  21deP     Pn     04 34 23.7 +0.8
MSHR                               pmax   pmax
       comp=Z,302nm,1.2s
MYLDM  Lahad Datu        19.68 191        P      04 34 25.3 +0.1
MYLDM                              IAmb   IAmb   04 34 35.5
       comp=Z,367nm,1.1s
XLT    XiLinHaoTe        19.80 347⇓iP     Pn     04 34 28.3 +0.3
XLT                                pP     sP     04 34 33.2 +1.9
XLT                                sP     pP     04 34 37.5 +7.8
XLT                                sS     sS     04 38 15.5 +0.9
XLT                                SS     SnSn   04 38 26.5 +1.6
XLT                                pmax   pmax
       comp=Z,150nm,1.3s
XLT                                pmax   pmax
       comp=Z,4µm,5.9s
XLT                                LR     LR
       comp=Z,3µm,11.0s
XLT                                LR     LR
       comp=Z,21µm,10.3s
XLT                                LR     LR
       comp=Z,41µm,10.9s
VLA    Vladivostok       20.10  21d iP    Pn     04 34 32.1 +0.7
VLA                                pmax   pmax
       comp=Z,769nm,1.2s
MDJ    Mudanjiang        20.82  15 P      P      04 34 36.9 -0.5
MDJ                                IAmb   IAmb   04 34 44.3
       comp=Z,188nm,1.0s
MDJ    Mudanjiang        20.82  15 P      Pn     04 34 39.3 -0.6
MDJ                                pP     sP     04 34 42.0 -0.3
MDJ                                sP     pP     04 34 43.4 +2.7
MDJ                                S      Sn     04 38 33.2 -1.7
MDJ                                sS     sS     04 38 36.5 +1.7
MDJ                                pmax   pmax
       comp=Z,97nm,1.5s
MDJ                                pmax   pmax
       comp=Z,4µm,7.5s
MDJ                                LR     LR
       comp=Z,33µm,14.2s
MDJ                                LR     LR
       comp=Z,43µm,12.9s
MDJ                                LR     LR
       comp=Z,53µm,14.1s
MDJ    Mudanjiang        20.82  15 P      Pn     04 34 40.1 +0.2
USRK   Ussuriysk Ar.     21.10  20 P      P      04 34 41.9 +1.4
       comp=Z,86nm,1.1s,baz=203,slow=10,SNR=33
USRK                               LR     LR     04 42 50.9
       comp=Z,6µm,19.1s,baz=187,slow=37
       comp=Z,86nm,1.1s
BNX    BinXian           21.46  10 ⇑P     P      04 34 45.1 +0.8
BNX                                S      S      04 38 45.9 +3.7
BNX                                pmax   pmax
       comp=Z,450nm,1.6s
BNX                                LR     LR
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      comp=Z,41µm,11.0s
BNX                           LR        LR
      comp=Z,38µm,13.2s
BNX                           LR        LR
      comp=Z,65µm,11.6s
CHTO  Chiang Mai       22.24 259  P         P         04 34 53.5 +0.6
CHTO                          IAmb      IAmb      04 34 59.2
      comp=Z,234nm,1.2s
CHTO  Chiang Mai       22.24 259  P         P         04 34 53.5 +0.6
CHTO                          pmax      pmax
      comp=Z,234nm,1.3s
CHTO                          MLR       MLR
      comp=Z,6µm,18.0s
CHTO  Chiang Mai       22.24 259  P         P         04 34 55.5 +2.5
CM31  Chiang Mai Arr   22.36 258  P         P         04 34 55.0 +0.7
CM31                          IAmb      IAmb      04 35 28.8
      comp=Z,258nm,1.6s
CM31  Chiang Mai Arr   22.36 258  P         P         04 34 56.6 +2.4
      SNR=40
CM31                          P         P         04 34 56.6 +2.4
      SNR=40
CMAR  Chiang Mai Arr   22.36 258  P         P         04 34 56.4 +2.2
      comp=Z,30nm,0.9s,baz=60,slow=7.6,SNR=54
CMAR                          PcP       PcP       04 38 48.5 -1.0
      comp=Z,6.9nm,0.9s,baz=54,slow=2.3,SNR=4.8
CMAR                          LR        LR        04 42 58.2
      comp=Z,5µm,18.4s,baz=5.0,slow=35
CMAR  Chiang Mai Arr   22.36 258  P         P         04 34 54.1 -0.1
JTM   Tenmabayashi     22.59  40  P         P         04 34 51.7 -4.8
TOLI2 Tolitoli         23.45 183  P         P         04 35 03.5 -2.0
TOLI2                         IAmb      IAmb      04 35 12.3
      comp=Z,171nm,1.1s
TOLI2 Tolitoli         23.45 183  P         P         04 35 05.3 -0.2
TEY   Ternei           23.49  27deP         P         04 35 03.6 -2.1
TEY                           pmax      pmax
      comp=E,10.0nm,1.4s
TEY                           pmax      pmax
      comp=Z,10.0nm,1.2s
TEY                           pmax      pmax
      comp=Z,400nm,5.1s
TEY                           pmax      pmax
      comp=N,200nm,4.8s
TEY                           pmax      pmax
      comp=E,100nm,4.8s
TEY                           MLR       MLR
      comp=E,600nm,13.0s
TEY                           MLR       MLR
      comp=N,700nm,11.0s
TEY                           MLR       MLR
      comp=Z,700nm,13.0s
GTA   Gaotai           23.82 313 ⇓P         P         04 35 09.3 +0.1
GTA                           sP        sP        04 35 16.1 +1.9
GTA                           S         S         04 39 24.7 -0.2
GTA                           sS        sS        04 39 35.0 +4.3
GTA                           pmax      pmax
      comp=Z,4µm,6.4s
GTA                           LR        LR
      comp=Z,16µm,17.9s
GTA                           LR        LR
      comp=Z,12µm,16.3s
GTA                           LR        LR
      comp=Z,12µm,16.3s
GTOI  Gorontalo        23.91 178  P         P         04 35 07.7 -2.3
      comp=Z,2µmcomp=Z,112nm,1.0s
KMSI  Cibinong         24.02 175  P         P         04 35 23.7  +13
MRSI  Marisa           24.05 180  P         P         04 35 10.5 -0.8
      comp=Z,11µmcomp=Z,3µmcomp=Z,203nm,1.2s
JEW   Eniwo            24.15  37  P         P         04 35 09.9 -2.2
GUMO  Guam             24.16 113  P         P         04 35 13.4 +1.0
      comp=Z,362nm,1.1s,baz=193,slow=9.6,SNR=6.6
GUMO                          LR        LR        04 44 45.9
      comp=Z,3µm,18.6s,baz=301,slow=37
      comp=Z,362nm,1.1s
GUMO  Guam             24.16 113  P         P         04 35 12.0 -0.4
GUMO  Guam             24.16 113  P         P         04 35 12.0 -0.4
GUMO                          pmax      pmax
      comp=Z,1µm,1.5s
GUMO  Guam             24.16 113  P         P         04 35 15.6 +3.2
MPSI  Mapaga           24.28 185  P         P         04 35 12.8 -0.6
      comp=Z,6µmcomp=Z,3µmcomp=Z,114nm,1.2s
TNTI  Ternate          24.30 167  P         P         04 35 13.1 -0.6
TNTI  Ternate          24.30 167  P         P         04 35 14.9 +1.2
      comp=Z,8µmcomp=Z,8µmcomp=Z,271nm,1.2s
TNTI  Ternate          24.30 167  P         P         04 35 15.4 +1.7
ERM   Erimo            24.59  40⇓eP         P         04 35 13.8 -2.2
ERM                           pmax      pmax
      comp=Z,113nm,1.4s
ERM   Erimo            24.59  40  P         P         04 35 23.1 +7.1
      comp=Z,196nm,1.0s
HIA   Hailar           24.62 356  P         P         04 35 15.0 -1.3
HIA   Hailar           24.62 356  IAMs_20   IAMs_20   04 45 15.2
      comp=Z,12µm,21.0s
HIA   Hailar           24.62 356d iP        P         04 35 15.1 -1.3
HIA                           pmax      pmax
      comp=Z,121nm,1.3s
SMKI  Samarinda        25.41 191  P         P         04 35 32.6 +8.9
APSI  Ampana           25.43 181  P         P         04 35 23.7 -0.2
      comp=Z,5µmcomp=Z,2µmcomp=Z,182nm,1.2s
LUWI  Luwuk            25.57 178  P         P         04 35 24.4 -0.7
LUWI  Luwuk            25.57 178  P         P         04 35 25.2 +0.1
      comp=Z,6µmcomp=Z,5µmcomp=Z,359nm,1.2s
LUWI  Luwuk            25.57 178  P         P         04 35 26.4 +1.3
ASAJ  Asahikawa        25.63  36  P         P         04 35 26.3 +0.8
      comp=Z,53nm,0.9s,baz=228,slow=18,SNR=8.5
ASAJ                          LR        LR        04 45 54.7
      comp=Z,9µm,18.5s,baz=242,slow=38
      comp=Z,53nm,0.9s
ASAJ  Asahikawa        25.63  36  P         P         04 35 24.8 -0.7
ASAJ                          pmax      pmax
      comp=Z,72nm,1.0s
JKA   Kamikawa-asahi   25.63  36  P         P         04 35 24.8 -0.7
JKA                           IAmb      IAmb      04 35 31.6
      comp=Z,72nm,1.0s
KLR   Kul'dur          25.66  15  P         P         04 35 26.2 +0.5
      comp=Z,187nm,1.2s,baz=218,slow=7.3,SNR=92
KLR                           PcP       PcP       04 38 55.1 -0.9
      comp=Z,4.2nm,0.7s,baz=227,slow=3.4,SNR=2.3
KLR                           LR        LR        04 45 28.0
      comp=Z,14µm,20.3s,baz=200,slow=36
      comp=Z,187nm,1.2s
LBMI  Labuha           25.70 167  P         P         04 35 25.8 -0.6
      comp=Z,6µmcomp=Z,5µmcomp=Z,354nm,1.3s
KSM   Kuching          25.71 208  P         P         04 35 26.1 -0.3
KSM                           IAmb      IAmb      04 35 33.5
      comp=Z,132nm,0.9s
KSM   Kuching          25.71 208  P         P         04 35 27.0 +0.5
KSM   Kuching          25.71 208  P         P         04 35 26.9 +0.5
ULN   Ulaanbaatar      26.03 337  P         P         04 35 29.3 +0.1
ULN                           IAmb      IAmb      04 35 33.1
      comp=Z,166nm,1.4s
ULN   Ulaanbaatar      26.03 337  IAMs_20   IAMs_20   04 45 56.4
      comp=Z,12µm,19.0s
ULN   Ulaanbaatar      26.03 337deP         P         04 35 29.4 +0.1
ULN                           pmax      pmax
      comp=Z,196nm,1.7s
GOMU  GeErMu           26.07 303⇓eP         P         04 35 31.1 +1.1
GOMU                          pP        sP        04 35 35.0  0.0
GOMU                          S         S         04 40 03.6 +2.3
GOMU                          pmax      pmax
      comp=Z,15nm,1.0s
GOMU                          pmax      pmax
      comp=Z,1µm,4.8s
GOMU                          LR        LR
      comp=Z,7µm,9.3s
GOMU                          LR        LR
      comp=Z,8µm,11.9s
GOMU                          LR        LR
      comp=Z,8µm,11.7s
SONM  Songino Array    26.25 336  P         P         04 35 31.4 +0.2
      comp=Z,92nm,1.1s,baz=155,slow=6.2,SNR=107
SONM                          PcP       PcP       04 38 57.0 -0.6
      comp=Z,3.8nm,0.9s,baz=184,slow=3.6,SNR=1.5
SONM                          LR        LR        04 46 48.2
      comp=Z,18µm,21.4s,baz=151,slow=39
      comp=Z,92nm,1.1s
SONM  Songino Array    26.25 336  P         P         04 35 31.4 +0.2
SONM                          IAmb      IAmb      04 35 39.9
      comp=Z,137nm,1.0s
SONM  Songino Array    26.25 336  P         P         04 35 31.4 +0.2
SONM                          pmax      pmax
      comp=Z,137nm,1.0s
BKB   Balikpapan       26.26 192  P         P         04 35 30.1 -1.3
BKB   Balikpapan       26.26 192  P         P         04 35 33.5 +2.1
      comp=Z,11µmcomp=Z,7µmcomp=Z,302nm,1.2s
BKB   Balikpapan       26.26 192  P         P         04 35 33.5 +2.1
      comp=Z,301nm,1.2s
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MTKI  Muara Teweh, K   26.39 196  P         P         04 35 33.1 +0.5
      comp=Z,9µmcomp=Z,111nm,1.2s
STKI  Sintang          26.52 204  P         P         04 35 35.3 +1.5
      comp=Z,10µmcomp=Z,40nm,0.7s
SRIT  Nakonsritamara   26.74 237  P         P         04 35 36.1 +0.3
SANI  Sanana           26.83 171  P         P         04 35 35.0 -1.5
      comp=Z,7µmcomp=Z,3µmcomp=Z,166nm,1.1s
SANI  Sanana           26.83 171  P         P         04 35 38.1 +1.6
SWI   Sorong           26.90 159  P         P         04 35 37.8 +0.6
      comp=Z,6µmcomp=Z,2µmcomp=Z,112nm,1.2s
SIJI  Sorong           26.91 159  P         P         04 35 38.0 +0.7
      comp=Z,29nm,0.7s,baz=352,slow=14,SNR=9.6
SIJI                          LR        LR        04 45 08.8
      comp=Z,987nm,20.8s,baz=354,slow=34
      comp=Z,29nm,0.7s
SHL   Shillong         27.32 278⇓iP         P         04 35 41.2 +0.1
SHL                           IAmb      IAmb      04 35 44.3
      comp=Z,250nm,1.3s
YUK   Yuzh-Kuril'sk    27.39  39 eP         P         04 35 41.6 +0.3
YUK                          e                    04 36 25.8
YUK                          ePPP       PPP       04 36 35.3
YUK                          eS         S         04 40 22.7 +1.5
YUK                          eSS        SnSn      04 41 33.2 +2.8
YUK                          eSSS       SSS       04 41 47.5
YUK                           pmax      pmax
      comp=Z,601nm,1.6s
YUK                           pmax      pmax
      comp=Z,468nm,1.0s
YUK                           pmax      pmax
      comp=N,407nm,1.3s
YUK                           pmax      pmax
      comp=E,518nm,1.3s
YUK                           MLR       MLR
      comp=Z,7µm,14.0s
YUK                           MLR       MLR
      comp=E,3µm,13.0s
YUK                           MLR       MLR
      comp=N,4µm,14.0s
TTSI  Tana Toraja      27.64 185  P         P         04 35 47.6 +3.8
      comp=N,63nm,0.9s
YSS   Yuzh-Sakhalins   27.70  31  P         P         04 35 45.5 +1.4
YSS   Yuzh-Sakhalins   27.70  31 eP         P         04 35 46.4 +2.3
YSS                          e                    04 36 38.2
YSS                          eS         S         04 40 27.2 +1.2
YSS                           pmax      pmax
      comp=Z,2µm,4.7s
YSS                           pmax      pmax
      comp=N,900nm,4.5s
YSS                           pmax      pmax
      comp=E,900nm,4.9s
YSS                           pmax      pmax
      comp=Z,480nm,1.2s
YSS                           MLR       MLR
      comp=Z,12µm,14.0s
YSS                           MLR       MLR
      comp=N,10µm,15.0s
YSS   Yuzh-Sakhalins   27.70  31  P         P         04 35 47.7 +3.6
LSA   Lhasa            27.91 287  P         P         04 35 47.2 +0.5
LSA                           IAmb      IAmb      04 36 01.4
      comp=Z,187nm,1.8s
LSA                           IAMs_20   IAMs_20   04 47 15.6
      comp=Z,10µm,20.0s
LSA   Lhasa            27.91 287  P         P         04 35 47.2 +0.5
LSA                           pmax      pmax
      comp=Z,187nm,1.8s
LSA                           MLR       MLR
      comp=Z,10µm,20.0s
LSA   Lhasa            27.91 287  P         P         04 35 47.6 +0.9
LSA                           pmax      pmax
      comp=Z,33nm,1.1s
LSA                           LR        LR
      comp=Z,6µm,8.9s
LSA                           LR        LR
      comp=Z,6µm,8.5s
LSA                           LR        LR
      comp=Z,7µm,8.2s
LSA   Lhasa            27.91 287  P         P         04 35 48.1 +1.4
JRMM  Jerantut         27.98 225  P         P         04 35 49.0 +2.1
JRMM  Jerantut         27.98 225  P         P         04 35 49.0 +2.1
CIT   Chita            28.07 349 eP         P         04 35 47.3 -0.2
CIT                          e                    04 36 33.9
CIT                           pmax      pmax
      comp=Z,283nm,2.8s
KULM  Kulim            28.18 230  P         P         04 35 49.6 +0.9
KULM  Kulim            28.18 230  P         P         04 35 51.0 +2.3
GRNR  Gornyy           28.32  19⇑iP         P         04 35 51.0 +1.4
GRNR                          pmax      pmax
      comp=Z,10.0nm,1.4s
GRNR                          MLR       MLR
      comp=E,5µm,13.0s
GRNR                          MLR       MLR
      comp=N,9µm,12.0s
GRNR                          MLR       MLR
      comp=Z,10µm,12.0s
IPM   Ipoh             28.50 229  P         P         04 35 52.2 +0.6
IPM   Ipoh             28.50 229  P         P         04 35 53.0 +1.4
IPM   Ipoh             28.50 229  P         P         04 35 52.7 +1.1
SPSI  Sidrap Palu      28.55 185  P         P         04 36 03.0  +11
MSAI  Masohi           28.64 166  P         P         04 36 02.4  +10
MYKOM Kota Tinggi      28.76 220  P         P         04 35 53.6 -0.2
MYKOM Kota Tinggi      28.76 220  P         P         04 35 55.0 +1.2
AAI   Ambon            28.81 167  P         P         04 35 59.2 +5.0
      comp=Z,3µmcomp=Z,183nm,1.2s
BBKI  Banjar Baru      28.83 195  P         P         04 35 55.1 +0.6
      comp=Z,4µmcomp=Z,99nm,1.5s
BNSI  Bone             28.96 184  P         P         04 35 54.7 -0.9
      comp=Z,1µmcomp=Z,65nm,1.2s
UGL   Uglegorsk        28.97  28 eP         P         04 35 58.3 +2.9
UGL                          eS         S         04 40 42.5 -3.5
UGL                           pmax      pmax
      comp=Z,170nm,1.2s
UGL                           pmax      pmax
      comp=Z,2µm,5.2s
UGL                           smax      smax
      comp=N,4µm,16.0s
UGL                           smax      smax
      comp=E,4µm,16.0s
UGL                           MLR       MLR
      comp=N,8µm,13.0s
UGL                           MLR       MLR
      comp=E,15µm,13.0s
UGL                           MLR       MLR
      comp=Z,14µm,13.0s
TPRI  Tanjung Pinang   29.07 218  P         P         04 36 04.3 +7.7
FAKI  Fak Fak          29.15 159  P         P         04 35 57.0 -0.3
FAKI  Fak Fak          29.15 159  P         P         04 35 57.4 +0.1
      comp=Z,3µmcomp=Z,130nm,1.3s
FAKI  Fak Fak          29.15 159  P         P         04 35 57.8 +0.5
KUR   Kuril'sk         29.25  39  P         P         04 35 58.4 +0.5
KUR                          e                    04 39 04.5
KUR                                               04 46 38.9
KUR                           MLR       MLR
      comp=Z,8µm,17.0s
KUR                           MLR       MLR
      comp=E,6µm,19.0s
KUR                           MLR       MLR
      comp=N,5µm,15.0s
ZEA   Zeya             29.29   6 eP         P         04 35 58.3 +0.1
ZEA                          eS         S         04 40 46.0 -5.0
ZEA                           pmax      pmax
      comp=E,20nm,0.9s
ZEA                           pmax      pmax
      comp=N,60nm,1.5s
ZEA                           pmax      pmax
      comp=Z,140nm,1.3s
ZEA                           pmax      pmax
      comp=E,200nm,3.8s
ZEA                           pmax      pmax
      comp=N,800nm,5.3s
ZEA                           pmax      pmax
      comp=Z,1µm,4.3s
ZEA                           smax      smax
      comp=E,1µm,17.4s
ZEA                           smax      smax
      comp=N,7µm,15.6s
ZEA                           MLR       MLR
      comp=E,6µm,10.0s
ZEA                           MLR       MLR
      comp=N,12µm,11.0s
ZEA                           MLR       MLR
      comp=Z,13µm,12.0s
ZAK   Zakamensk        29.51 335 eP         P         04 36 00.1 -0.2
ZAK                           pmax      pmax
      comp=Z,57nm,1.4s
KAPI  Kappang          29.59 185  P         P         04 36 00.7 -0.5
      comp=Z,4.4nm,0.3s,baz=20,slow=5.1,SNR=5.3
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KAPI                          LR        LR        04 49 54.1
      comp=Z,2µm,20.2s,baz=352,slow=40
      comp=Z,4.4nm,0.3s
KAPI  Kappang          29.59 185  P         P         04 36 02.6 +1.4
SRPI  Serui, Papua     29.75 150  P         P         04 36 07.8 +5.2
      comp=Z,198nm,0.7s
DGPR  DIGLIPUR         29.77 253 eP         P         04 36 03.0 +0.2
TYV   Tymovskoe        30.59  26 eP         P         04 36 14.2 +4.5
TYV                           pmax      pmax
      comp=Z,1µm,4.8s
TYV                           pmax      pmax
      comp=Z,156nm,1.1s
TYV                           MLR       MLR
      comp=Z,14µm,14.0s
TYV                           MLR       MLR
      comp=N,18µm,13.0s
TYV                           MLR       MLR
      comp=E,8µm,13.0s
TPI   Tanjungpandan    30.65 209  P         P         04 36 10.4 -0.1
      comp=E,782nmcomp=E,34nm,1.3s
IRK   Irkutsk          30.68 338 eP         P         04 36 09.9 -0.7
IRK                          eS         S         04 41 17.1 +4.2
IRK                           pmax      pmax
      comp=Z,221nm,3.4s
PPBI  Pangkal Pinang   30.83 212  P         P         04 36 14.8 +2.6
TSI   Tuntungan        30.91 231  P         P         04 36 15.3 +2.4
      comp=Z,178nm,1.1s
LHMI  Lhok Sumawe      30.91 235  P         P         04 36 15.3 +2.4
      comp=Z,131nm,0.4s
LHMI  Lhok Sumawe      30.91 235  P         P         04 36 16.5 +3.6
      comp=Z,123nm,1.1s
SMPI  Sarmi            31.04 146  P         P         04 36 16.7 +2.7
      comp=Z,67nm,1.3s
PSI   Prapat           31.16 229  LR        LR        04 49 35.8
      comp=Z,3µm,18.9s,baz=32,slow=38
ODAN  Odare            31.25 282 eP         P         04 36 16.9 +0.8
      comp=Z,140nm,0.9s
MOY   Mondy            31.41 335 eP         P         04 36 17.8 +0.7
MOY                          e                    04 46 41.8
MOY                           pmax      pmax
      comp=Z,124nm,3.2s
KCSI  Kotacane, Aceh   31.46 232  P         P         04 36 17.7 -0.1
      comp=Z,1µmcomp=Z,28nm,1.5s
BKNI  Bangkinang       31.62 223  P         P         04 36 20.5 +1.3
      comp=Z,106nm,1.3s
BKNI  Bangkinang       31.62 223  P         P         04 36 22.1 +2.9
NKL   Nikolayevsk      31.72  21 eP         P         04 36 19.5 -0.1
NKL                           pmax      pmax
      comp=E,3.0nm,0.7s
NKL                           pmax      pmax
      comp=N,1.0nm,1.4s
NKL                           pmax      pmax
      comp=Z,59nm,1.3s
NKL                           MLR       MLR
      comp=E,70nm,11.0s
NKL                           MLR       MLR
      comp=N,7.0nm,20.0s
NKL                           MLR       MLR
      comp=Z,14µm,12.0s
RAMN  Ramite           31.95 282 eP         P         04 36 23.2 +0.9
      comp=Z,43nm,0.8s
MNSI  Mandailing Nat   32.19 226  P         P         04 36 24.7 +0.5
      comp=Z,3µmcomp=Z,98nm,1.1s
JIRN  Jiri             32.27 283 eP         P         04 36 26.4 +1.2
      comp=Z,1.9nm,1.0s
TBJI  Tambak Boyo      32.84 199  P         P         04 36 33.7 +3.9
      comp=Z,122nm,1.3s
BOK   Bokaro           32.95 276⇓iP         P         04 36 32.7 +1.9
BOK                            ⇑iP         P         04 36 32.7 +1.9
BOK                           IAmb      IAmb      04 36 35.9
      comp=Z,96nm,1.1s
PKI   Pulchoki         32.97 283 eP         P         04 36 31.8 +0.5
      comp=Z,268nm,1.6s
KKN   Kakani           33.07 284 eP         P         04 36 32.8 +0.7
      comp=Z,130nm,1.0s
MMRI  Maumere          33.10 180  P         P         04 36 31.5 -0.6
MMRI  Maumere          33.10 180  P         P         04 36 33.4 +1.3
      comp=Z,2µmcomp=Z,157nm,1.4s
MMRI  Maumere          33.10 180  P         P         04 36 33.4 +1.3
      comp=Z,157nm,1.4s
GSI   Gunungsitoli     33.16 229  P         P         04 36 32.5 -0.2
GSI                           IAmb      IAmb      04 36 50.1
      comp=Z,117nm,1.5s
EDFI  Ende, Flores     33.22 181  P         P         04 36 31.3 -1.9
      comp=Z,1µmcomp=Z,49nm,0.8s
DMN   Daman            33.23 283 eP         P         04 36 34.4 +0.8
      comp=Z,89nm,1.0s
SRBI  Singaraja        33.23 192  P         P         04 36 42.7 +9.5
BLJI  Banyuglugur      33.26 195  P         P         04 36 36.6 +3.1
      comp=Z,82nm,1.2s
KRJI  Kerinci          33.28 220  P         P         04 36 36.6 +2.8
      comp=Z,77µmcomp=Z,879nm,0.6s
PLAI  Plampang         33.55 188  P         P         04 36 35.4 -0.7
      comp=Z,1µmcomp=Z,84nm,1.3s
PLAI  Plampang         33.55 188  P         P         04 36 40.4 +4.3
      comp=Z,83nm,1.4s
BOD   Bodaibo          33.62 352 eP         P         04 36 35.0 -1.2
BOD                           pmax      pmax
      comp=Z,31nm,1.6s
GKN   Gorkha           33.62 284 eP         P         04 36 37.3 +0.4
      comp=Z,436nm,1.6s
BWNR  Bhubaneshwar     33.72 270 i P        P         04 36 39.6 +2.0
KLI   Kotabumi         33.80 212  P         P         04 36 40.3 +2.1
WMQ   Urumqi           33.91 313 eP         P         04 36 39.8 +0.8
WMQ                           pP        sP        04 36 45.1 +1.0
WMQ                           sP        pP        04 36 50.1 +7.5
WMQ                           pmax      pmax
      comp=Z,27nm,1.5s
WMQ                           pmax      pmax
      comp=Z,1µm,5.9s
WMQ                           LR        LR
      comp=Z,11µm,18.1s
WMQ                           LR        LR
      comp=Z,10µm,11.7s
WMQ                           LR        LR
      comp=Z,4µm,21.5s
IGBI  Denpasar         33.96 192  P         P         04 36 50.4  +11
PWJI  Pagerwojo        34.00 198  P         P         04 36 40.6 +0.7
      comp=Z,167nm,1.3s
WOJI  Wonogiri, Jawa   34.09 200  P         P         04 36 41.9 +1.2
      comp=Z,4µmcomp=Z,128nm,1.2s
SISI  Saibi            34.12 224  P         P         04 36 43.1 +2.1
      comp=Z,44nm,1.2s
UGM   Wanagama         34.28 201  P         P         04 36 42.7 +0.3
UGM   Wanagama         34.28 201  P         P         04 36 45.6 +3.1
      comp=Z,293nm,1.6s
UGM   Wanagama         34.28 201  P         P         04 36 45.6 +3.1
      comp=Z,290nm,1.3s
LEM   Lembang          34.33 206  P         P         04 36 44.1 +1.1
      comp=Z,20nm,0.5s,baz=52,slow=9.4,SNR=9.1
LEM                           LR        LR        04 51 19.4
      comp=Z,1µm,19.6s,baz=24,slow=37
      comp=Z,20nm,0.5s
PCJI  Pacitan          34.35 199  P         P         04 36 46.0 +3.1
      comp=Z,93nm,1.4s
DANN  Dangsing         34.38 285 eP         P         04 36 44.3 +0.7
      comp=Z,181nm,1.0s
DBJI  Dramaga          34.44 208  P         P         04 36 46.7 +2.9
      comp=Z,27µmcomp=Z,78nm,1.0s
KASI  Kota Agung       34.54 212  P         P         04 36 45.3 +0.6
      comp=Z,2µmcomp=Z,74nm,1.2s
KOLN  Koldanda         34.55 284 eP         P         04 36 45.6 +0.6
      comp=Z,130nm,0.9s
BATI  Baumata          34.70 177  LR        LR        04 53 03.4
      comp=Z,2µm,20.1s,baz=20,slow=40
BATI  Baumata          34.70 177  P         P         04 37 00.3  +14
CNJI  Cibinong         34.96 206  P         P         04 36 49.8 +1.5
      comp=Z,3µmcomp=Z,94nm,1.1s
PYUN  Piuthan          35.07 284 eP         P         04 36 50.1 +0.6
      comp=Z,334nm,1.6s
JHSG  JHARSUGUGA       35.24 273 i P        P         04 36 52.3 +1.6
RAGD  RAYAGADA         36.13 269⇓iP         P         04 37 00.3 +1.9
MANU  Manus Island     36.17 134  P         P         04 36 59.1 +0.4
ALBI  Allahabad        36.40 280 i P        P         04 37 00.8 +0.2
BLSP  Bilaspur         36.65 274 i P        P         04 37 02.9  0.0
SKR   Severo-Kuril's   36.89  36⇓eP         P         04 37 02.9 -1.6
ZSN   Zaisan           37.19 317d iP        P         04 37 06.7 -0.4
ZSN   Zaisan           37.19 317⇓iP         P         04 37 06.7 -0.4
      baz=317
LGTI  Lohaghat         37.40 287⇓iP         P         04 37 11.2 +2.1
PTH   Pithoragarh      37.42 287 i P        P         04 37 10.1 +0.6
YAK   Yakutsk          37.70   6  LR        LR        04 53 27.4
      comp=Z,7µm,18.3s,baz=182,slow=38
YAK   Yakutsk          37.70   6  P         P         04 37 09.8 -1.4
YAK                           IAmb      IAmb      04 37 14.9
      comp=Z,124nm,1.1s
YAK                           IAMs_20   IAMs_20   04 53 06.6
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	comp=Z,7µm,20.0s						
YAK	Yakutsk	37.70	6	d iP	P	04 37 09.9	-1.3
YAK				e*PP	sP	04 37 17.7	+1.4
YAK				e		04 38 36.3	
YAK				e		04 39 27.2	
YAK				eS	S	04 42 59.7	-1.3
YAK				e		04 47 23.4	
YAK				pmax	pmax		
	comp=Z,117nm,1.4s						
YAK				pmax	pmax		
	comp=N,111nm,1.4s						
YAK				pmax	pmax		
	comp=E,54nm,1.3s						
YAK				pmax	pmax		
	comp=Z,505nm,5.9s						
YAK				pmax	pmax		
	comp=N,128nm,4.0s						
YAK				pmax	pmax		
	comp=E,49nm,3.2s						
YAK				smax	smax		
	comp=E,220nm,4.9s						
YAK				MLR	MLR		
	comp=Z,9µm,14.0s						
MTN	Manton Dam	38.32	166	P	P	04 37 15.3	-1.6
MTN	Manton Dam	38.32	166	P	P	04 37 16.3	-0.6
KDU	Kakadu	38.49	164	P	P	04 37 17.8	-0.5
MK31	Makanchi Array	38.56	315	P	P	04 37 17.8	-0.9
MK31	Makanchi Array	38.56	315	i P	P	04 37 18.1	-0.6
MK31				pmax	pmax		
	comp=Z,39nm,1.1s						
MKAR	Makanchi Array	38.56	315	P	P	04 37 18.4	-0.3
	comp=Z,17nm,1.0s,baz=101,slow=9.1,SNR=35						
MKAR				LR	LR	04 53 39.6	
	comp=Z,7µm,18.2s,baz=110,slow=37						
	comp=Z,17nm,1.0s						
MKAR	Makanchi Array	38.56	315	P	P	04 37 18.8	+0.1
MKAR	Makanchi Array	38.56	315	P	P	04 37 18.8	+0.1
PEA0B	Petropavlovsk-	39.02	34	P	P	04 37 23.4	+0.9
PEA0B	Petropavlovsk-	39.02	34	⇓eP	P	04 37 23.5	+1.1
PETK	Petropavlovsk-	39.02	34	P	P	04 37 22.3	-0.2
	comp=Z,6.4nm,1.0s,baz=183,slow=3.0,SNR=6.1						
PETK				LR	LR	04 52 45.4	
	comp=Z,4µm,21.8s,baz=224,slow=35						
	comp=Z,6.4nm,1.0s						
PETK	Petropavlovsk-	39.02	34	P	P	04 37 20.4	-2.0
DDI	Dehra Dun	39.26	288	eP	P	04 37 22.5	-2.4
JHNI	Jhansi	39.30	281	⇓iP	P	04 37 24.1	-1.1
PET	Petropavlovsk	39.46	35	P	P	04 37 25.2	-0.9
PET				IAMs_20	IAMs_20	04 52 27.8	
	comp=Z,5µm,20.0s						
PET	Petropavlovsk	39.46	35	eP	P	04 37 28.6	+2.5
PET				eS	S	04 43 29.4	+1.7
PET				pmax	pmax		
	comp=Z,83nm,1.2s						
PET				MLR	MLR		
	comp=Z,8µm,17.0s						
PET				MLR	MLR		
	comp=Z,8µm,17.0s						
PET	Petropavlovsk	39.46	35	P	P	04 37 31.9	+5.8
	comp=Z,245nm,1.2s						
VJD	Vijayawada	39.49	266	eP	P	04 37 28.5	+1.7
UZB	Uzynbulak	39.69	309	d iP	P	04 37 29.0	+0.6
UZB				i S	S	04 43 33.2	+1.3
UZB				pmax	pmax		
	comp=Z,95nm,2.1s						
UZB	Uzynbulak	39.69	309	⇓iP	P	04 37 29.1	+0.6
	comp=Z,95nm,2.1s,baz=308						
UZB				i S	S	04 43 33.3	+1.3
	baz=308						
SMLA	Simla	39.99	290	eP	P	04 37 30.7	-0.1
KPKS	Kokpek	40.01	309	d iP	P	04 37 31.4	+0.5
KPKS				eS	S	04 43 37.8	+1.3
KPKS	Kokpek	40.01	309	⇓iP	P	04 37 31.5	+0.5
	baz=309						
KPKS				eS	S	04 43 37.9	+1.3
	baz=309						
NDI	New Delhi	40.10	286	⇓iP	P	04 37 31.4	-0.4
SATY	Saty	40.11	308	d iP	P	04 37 32.8	+1.0
SATY				eS	S	04 43 39.7	+1.6
SATY	Saty	40.11	308	⇓iP	P	04 37 32.9	+1.0
	baz=308						
SATY				eS	S	04 43 39.7	+1.6
	baz=308						
ZHN	Zhinishke	40.12	308	i P	P	04 37 32.5	+0.6
ZHN				i S	S	04 43 39.3	+1.1
ZHN	Zhinishke	40.12	308	i P	P	04 37 32.6	+0.6
	baz=308						
ZHN				i S	S	04 43 39.3	+1.1
	baz=308						
MA2	Magadan	40.23	22	LR	LR	04 54 28.6	
	comp=Z,6µm,18.5s,baz=222,slow=37						
MA2	Magadan	40.23	22	P	P	04 37 31.9	-0.6
MA2				IAMs_20	IAMs_20	04 53 32.1	
	comp=Z,6µm,21.0s						
MA2	Magadan	40.23	22	deP	P	04 37 32.2	-0.3
MA2				pmax	pmax		
	comp=Z,64nm,1.3s						
MA2	Magadan	40.23	22	P	P	04 37 35.0	+2.5
SONA	Sohna	40.26	285	i P	P	04 37 33.2	+0.1
TARG	Taragay, Kyrgy	40.27	306	P	P	04 37 33.5	-0.1
ZAA0	Zalesovo Array	40.28	326	P	P	04 37 31.4	-1.5
ZALV	Zalesovo Beam	40.28	326	P	P	04 37 32.7	-0.3
	comp=Z,14nm,0.6s,baz=115,slow=6.7,SNR=42						
ZALV				LR	LR	04 54 15.3	
	comp=Z,5µm,20.7s,baz=124,slow=36						
	comp=Z,14nm,0.6s						
ZALV	Zalesovo Beam	40.28	326	P	P	04 37 31.4	-1.6
TDK	Taldyqorghan	40.58	311	eP	P	04 37 36.5	+0.9
TDK				eS	S	04 43 46.3	+1.5
TDK				pmax	pmax		
	comp=Z,332nm,1.8s						
TDK	Taldyqorghan	40.58	311	eP	P	04 37 36.5	+0.9
	comp=Z,332nm,1.8s,baz=311						
TDK				eS	S	04 43 46.4	+1.5
	baz=311						
TDK				LR	LR	04 56 01.7	
	baz=311						
BHK	Bhakra	40.62	290	i P	P	04 37 37.6	+1.5
KNRA	Kununurra	40.63	170	P	P	04 37 35.3	-0.9
KNRA				IAmb	IAmb	04 37 48.2	
	comp=Z,198nm,1.6s						
KNRA	Kununurra	40.63	170	P	P	04 37 41.2	+5.1
BHPL	Bhopal	40.69	278	⇓iP	P	04 37 37.0	+0.2
KUDL	Kundal	40.79	285	i P	P	04 37 37.3	-0.2
KDJ	Kajisay	40.81	307	P	P	04 37 37.7	0.0
KDJ	Kajisay	40.81	307	P	P	04 37 37.7	0.0
KDJ				pmax	pmax		
	comp=Z,74nm,1.4s						
KRVT	Keravat (AS076	40.97	131	LR	LR	04 51 04.6	
	comp=Z,3µm,21.7s,baz=107,slow=31						
MDRS	Chennai	41.07	262	⇓iP	P	04 37 41.4	+1.5
MDRS				IAmb	IAmb	04 37 48.1	
	comp=Z,60nm,1.1s						
MDOK	Medeo	41.11	308	i P	P	04 37 40.8	+0.7
MDOK				i S	S	04 43 54.0	+1.0
MDOK				MLR	MLR		
	comp=Z,5µm,14.0s						
MDOK	Medeo	41.11	308	i P	P	04 37 40.9	+0.7
	baz=308						
MDOK				i S	S	04 43 54.1	+1.0
	baz=308						
MDOK				LR	LR	04 55 11.2	
	comp=Z,5µm,14.1s,baz=308						
HYB	Hyderabad	41.11	269	eP	P	04 37 41.1	+0.8
HYB				eP	pP	04 37 41.4	-2.6
HYB				IAmb	IAmb	04 37 42.8	
	comp=E,73nm,1.5s						
HYB				IAmb	IAmb	04 37 43.5	
	comp=Z,129nm,1.4s						
HYBB	Hyderabad (bro	41.11	269	eP	P	04 37 41.5	+1.2
HYBB				IVmBBB		04 37 45.5	
	comp=Z,918nm,3.9s						
HYBB				IVMs_BB	IVMs_BB	04 59 40.2	
	comp=Z,821nm,11.0s						
TNSS	Tian-Shan	41.15	308	eP	P	04 37 42.1	+1.3
TNSS	Tian-Shan	41.15	308	eP	P	04 37 42.1	+1.3
	baz=308						
SEM	Semipalatinsk	41.16	320	d iP	P	04 37 39.9	-0.6
SEM	Semipalatinsk	41.16	320	⇓iP	P	04 37 40.0	-0.6
	baz=320						
SEM				LR	LR	04 55 26.0	
	baz=320						
THN	Thein Dam	41.18	292	eP	P	04 37 40.7	0.0
AAA	Alma-Ata	41.21	308	i P	P	04 37 41.7	+0.9
AAA				MLR	MLR		
	comp=Z,7µm,14.0s						
AAA	Alma-Ata	41.21	308	i P	P	04 37 41.8	+0.9
	baz=308						
AAA				LR	LR	04 55 15.2	
	comp=Z,7µm,13.6s,baz=308						
CHKK	Chushkaly	41.30	309	i P	P	04 37 41.6	+0.1
CHKK	Chushkaly	41.30	309	i P	P	04 37 41.7	+0.1
	baz=309						
KSH	Kashi	41.31	302	P	P	04 37 45.9	+4.1
KSH				pP	sP	04 37 50.7	+3.8
KSH				PP	PnPn	04 39 26.0	+4.3
KSH				pmax	pmax		
	comp=Z,18nm,1.5s						
KSH				pmax	pmax		
	comp=Z,2µm,6.6s						
KSH				LR	LR		
	comp=Z,8µm,15.8s						
KSH				LR	LR		
	comp=Z,9µm,15.5s						
KSH				LR	LR		
	comp=Z,13µm,15.3s						
AKL	Akola	41.62	274	⇓iP	P	04 37 46.1	+1.7
H11N1	WAKE ISLAND Hy	41.66	88	T	T	05 23 20.5	
	baz=283,slow=74						
H11N2	WAKE ISLAND Hy	41.66	88	T	T	05 23 15.1	
	baz=283						
H11N3	WAKE ISLAND Hy	41.68	88	T	T	05 23 18.3	
	baz=283,slow=74						
KUU	Kurty	41.76	309	d iP	P	04 37 45.9	+0.6
KUU				eS	S	04 44 03.4	+1.0
KUU				pmax	pmax		
	comp=Z,289nm,2.4s						
KUU	Kurty	41.76	309	⇓iP	P	04 37 46.0	+0.6
	comp=Z,289nm,2.4s,baz=309						
KUU				eS	S	04 44 03.4	+1.0
	baz=309						
KUU				LR	LR	04 55 36.8	
	baz=309						
PMG	Port Moresby	41.79	141	LR	LR	04 54 30.3	
	comp=Z,2µm,19.4s,baz=307,slow=35						
PMG	Port Moresby	41.79	141	P	P	04 37 46.1	+0.3
PMG				IAmb	IAmb	04 38 07.3	
	comp=Z,96nm,1.0s						
PMG	Port Moresby	41.79	141	deP	P	04 37 46.0	+0.3
PMG				pmax	pmax		
	comp=Z,100nm,1.3s						
PMG	Port Moresby	41.79	141	P	P	04 37 47.1	+1.4
TKM2	Tokmak 2	42.10	307	P	P	04 37 49.6	+1.2
	SNR=26						
KURK	Kurchatov	42.24	319	P	P	04 37 48.1	-1.0
KURK				IAmb	IAmb	04 38 07.6	
	comp=Z,110nm,1.6s						
KURK	Kurchatov	42.24	319	IAMs_20	IAMs_20	04 53 40.3	
	comp=Z,5µm,19.0s						
KURK	Kurchatov	42.24	319	deP	P	04 37 48.6	-0.5
KURK				pmax	pmax		
	comp=Z,66nm,1.4s						
KURBB	Kurchatov Arra	42.26	319	LR	LR	04 57 37.8	
	comp=Z,4µm,18.0s,baz=98,slow=39						
KBK	Karagaybulak	42.53	307	P	P	04 37 53.2	+1.4
	SNR=12						
AJM	Ajmer	42.63	283	i P	P	04 37 52.6	-0.1
CHMS	Chumysh	42.73	307	P	P	04 37 54.2	+0.9
	SNR=8.2						
UCH	Uchtor	42.78	306	P	P	04 37 55.7	+1.5
	SNR=28						
AAK	Ala-Archa	42.86	307	P	P	04 37 55.7	+1.2
	SNR=6.9						
AAK	Ala-Archa	42.86	307	LR	LR	04 56 28.0	
	comp=Z,7µm,18.6s,baz=90,slow=37						
AAK	Ala-Archa	42.86	307	P	P	04 37 54.0	-0.4
AAK	Ala-Archa	42.86	307	deP	P	04 37 55.5	+1.1
AAK				pmax	pmax		
	comp=Z,25nm,1.7s						
AAK	Ala-Archa	42.86	307	i P	P	04 37 55.3	+0.8
	SNR=12						
SGDS	Sogindy	42.89	308	d iP	P	04 37 55.1	+0.5
SGDS				eS	S	04 44 20.6	+1.4
SGDS	Sogindy	42.89	308	⇓iP	P	04 37 55.2	+0.5
	baz=308						
SGDS				eS	S	04 44 20.6	+1.4
	baz=308						
USP	Ospenovka	42.95	308	P	P	04 37 56.0	+0.9
	SNR=6.7						
PALK	Pallekele	43.15	253	P	P	04 37 56.8	-0.1
PALK				IAmb	IAmb	04 38 00.6	
	comp=Z,156nm,1.6s						
PALK	Pallekele	43.15	253	P	P	04 37 56.8	-0.1
PALK				pmax	pmax		
	comp=Z,157nm,1.6s						
PALK				MLR	MLR		
	comp=Z,3µm,20.0s						
SEY	Seymchan	43.25	20	LR	LR	04 55 59.7	
	comp=Z,4µm,18.5s,baz=212,slow=36						
SEY	Seymchan	43.25	20	ceP	P	04 37 58.5	+1.4
SEY				pmax	pmax		
	comp=Z,66nm,1.3s						
AML	Almayashu	43.37	306	P	P	04 38 00.3	+1.5
	SNR=18						
AML	Almayashu	43.37	306	i P	P	04 38 00.3	+1.5
	SNR=18						
EKS2	Erkin-Say	43.38	307	P	P	04 38 00.3	+1.6
	SNR=9.6						
COEN	Coen	43.57	150	P	P	04 38 00.3	+0.1
COEN				IAmb	IAmb	04 38 07.5	
	comp=Z,78nm,0.9s						
COEN	Coen	43.57	150	P	P	04 38 01.8	+1.6
BTLS	Baital	43.60	310	d iP	P	04 38 00.4	+0.2
BTLS				i S	S	04 44 30.6	+1.2
BTLS	Baital	43.60	310	⇓iP	P	04 38 00.5	+0.2
	baz=310						
BTLS				i S	S	04 44 30.6	+1.2
	baz=310						
POO	Poona	45.07	272	eP	P	04 38 12.8	+0.5
POO				IAmb	IAmb	04 38 19.9	
	comp=Z,81nm,1.0s						
KAD	Karad	45.12	270	i P	P	04 38 13.3	+0.5
DZA	Taraz	45.20	307	i P	P	04 38 13.8	+0.7
DZA				eS	S	04 44 54.2	+1.5
DZA	Taraz	45.20	307	i P	P	04 38 13.8	+0.7
	baz=307						
DZA				eS	S	04 44 54.3	+1.5
	baz=307						
BTK	Batken	45.32	303	P	P	04 38 13.1	-1.1
BTK				IAmb	IAmb	04 38 16.7	
	comp=Z,74nm,1.6s						
BTK	Batken	45.32	303	P	P	04 38 13.1	-1.1
BTK				pmax	pmax		
	comp=Z,74nm,1.7s						
OTUK	Ortayu	45.43	314	P	P	04 38 14.8	0.0
PCHI	Peechi	45.57	260	⇓eP	P	04 38 17.3	+0.9
PCHI				eS	S	04 45 07.7	+9.0
MBWA	Marble Bar	45.61	183	P	P	04 38 18.2	+1.8
GAR	Garm	45.65	301	P	P	04 38 17.1	+0.2
GAR				IAmb	IAmb	04 38 40.8	
	comp=Z,66nm,1.0s						
WB0	Warramunga Arr	45.77	164	P	P	04 38 17.2	-0.5
KK31	Karatay Array	45.82	307	P	P	04 38 17.8	-0.1
KK31				IAmb	IAmb	04 38 20.3	
	comp=Z,67nm,1.8s						
KK31	Karatay Array	45.82	307	P	P	04 38 17.9	-0.1
KKAR	Karatay Array	45.82	307	P	P	04 38 17.5	-0.5
KKAR	Karatay Array	45.82	307	P	P	04 38 18.1	+0.1
KKAR				IAmb	IAmb	04 38 20.3	
	comp=Z,67nm,1.8s						
KKAR	Karatay Array	45.82	307	P	P	04 38 18.1	+0.1
KKAR				pmax	pmax		
	comp=Z,67nm,1.8s						
WRAB	Tennant Creek	45.92	164	P	P	04 38 18.6	-0.3
WRAB	Tennant Creek	45.92	164	deP	P	04 38 18.3	-0.6
WRAB				pmax	pmax		
	comp=Z,201nm,1.3s						
WRAB	Tennant Creek	45.92	164	P	P	04 38 19.3	+0.4
WRA	Warramunga Arr	45.92	164	P	P	04 38 18.7	-0.3
	comp=Z,108nm,1.1s,baz=345,slow=7.8,SNR=109						
WRA				PcP	PcP	04 39 55.2	-0.7
	comp=Z,7.4nm,1.0s,baz=344,slow=3.9,SNR=1.4						
	comp=Z,108nm,1.1s						
WRA	Warramunga Arr	45.92	164	P	P	04 38 18.0	-1.0
WRA				PcP	PcP	04 39 55.4	-0.5
WRA	Warramunga Arr	45.92	164	i P	P	04 38 18.5	-0.4
WRA				pmax	pmax		
	comp=Z,109nm,1.1s						
WB2	Warramunga Arr	45.93	164	P	P	04 38 18.1	-0.8
WR0	Warramunga Arr	45.99	164	P	P	04 38 19.2	-0.2
PSA00	Pilbara Seismi	46.02	183	P	P	04 38 18.2	-1.4
PSA00				IAmb	IAmb	04 38 37.7	
	comp=Z,48nm,0.9s						
PSA00	Pilbara Seismi	46.02	183	P	P	04 38 19.0	-0.6
PSA00				IAmb	IAmb	04 38 31.5	
	comp=Z,23nm,0.9s						
PSA00	Pilbara Seismi	46.02	183	P	P	04 38 21.4	+1.8
GOA	Goa	46.02	268	eP	P	04 38 21.0	+1.2
GOA				IAmb	IAmb	04 38 27.0	
	comp=Z,74nm,1.0s						
IUG	Iuzhnay	46.08	306	d iP	P	04 38 20.6	+0.5
IUG	Iuzhnay	46.08	306	⇓iP	P	04 38 20.7	+0.5
	baz=306						
BRLS	Borolday	46.30	307	i P	P	04 38 23.0	+1.2
BRLS				eS	S	04 45 11.1	+2.4
BRLS	Borolday	46.30	307	i P	P	04 38 23.1	+1.2
	baz=306						
BRLS				eS	S	04 45 11.1	+2.4
	baz=306						
CHGR	Chuyangaron	46.54	301	P	P	04 38 23.7	-0.1
CHGR				IAmb	IAmb	04 38 54.2	
	comp=Z,42nm,0.9s						
CHGR	Chuyangaron	46.54	301	P	P	04 38 24.7	+0.9
KBL	Kabul	46.69	295	P	P	04 38 25.8	+0.7
KBL	Kabul	46.69	295	P	P	04 38 25.8	+0.7
KBL				pmax	pmax		
	comp=Z,151nm,1.5s						
KBL	Kabul	46.69	295	P	P	04 38 26.3	+1.1
	SNR=46						
KBL				P	P	04 38 26.3	+1.1
	SNR=46						
TIXI	Tiksi	47.17	3	LR	LR	05 00 01.3	
	comp=Z,11µm,18.7s,baz=180,slow=38						
TIXI	Tiksi	47.17	3	P	P	04 38 26.7	-1.4
TIXI	Tiksi	47.17	3	d iP	P	04 38 26.6	-1.5
TIXI				pmax	pmax		
	comp=Z,162nm,1.3s						
MTSU	Mount Surprise	47.75	151	P	P	04 38 35.9	+2.6
BRVK	Borovoye	47.88	320	P	P	04 38 33.8	-0.2
BRVK				IAmb	IAmb	04 38 35.6	
	comp=Z,87nm,1.5s						
BRVK	Borovoye	47.88	320	IAMs_20	IAMs_20	04 59 29.3	
	comp=Z,5µm,18.0s						
BRVK	Borovoye	47.88	320	deP	P	04 38 33.4	-0.5
BRVK				pmax	pmax		
	comp=Z,66nm,1.5s						
SHEM	Shemya Is, Ala	47.94	40	LR	LR	04 59 03.5	
	comp=Z,1µm,21.7s,baz=270,slow=36						
QIS	Mount Isa	48.09	158	P	P	04 38 36.7	+0.9
NRIK	Noril'sk	49.15	345	P	P	04 38 42.6	-0.8
	comp=Z,23nm,1.1s,baz=132,slow=7.5,SNR=17						
NRIK				LR	LR	05 00 38.8	
	comp=Z,7µm,20.9s,baz=139,slow=38						
	comp=Z,23nm,1.1s						
NRIK	Noril'sk	49.15	345	P	P	04 38 42.0	-1.4
NRIK				IAmb	IAmb	04 38 49.8	
	comp=Z,79nm,1.2s						
NRIK	Noril'sk	49.15	345	P	P	04 38 42.0	-1.4
NRIK				pmax	pmax		
	comp=Z,79nm,1.2s						
AS31	Alice Springs	49.40	166	P	P	04 38 46.0	+0.1
ASAR	Alice Springs	49.40	166	P	P	04 38 46.0	+0.1
	comp=Z,20nm,0.8s,baz=347,slow=6.4,SNR=60						
ASAR				PcP	PcP	04 40 07.6	-0.7
	comp=Z,9.9nm,0.9s,baz=338,slow=3.0,SNR=4.8						
ASAR				LR	LR	04 59 42.0	
	comp=Z,963nm,20.4s,baz=354,slow=36						
	comp=Z,20nm,0.8s						
ASAR	Alice Springs	49.40	166	P	P	04 38 46.0	+0.1
WRKA	Warakurna	49.78	173	P	P	04 38 51.4	+2.6
HNR	Honiara	50.14	128	LR	LR	04 57 52.5	
	comp=Z,914nm,21.6s,baz=296,slow=33						
CTA	Charters Tower	50.33	150	LR	LR	04 57 59.0	
	comp=Z,2µm,21.8s,baz=334,slow=34						
CTA	Charters Tower	50.33	150	P	P	04 38 55.1	+2.1
CTAO	Charters Tower	50.33	150	P	P	04 38 51.8	-1.3
CTAO				IAmb	IAmb	04 39 14.6	
	comp=Z,86nm,1.1s						
CTAO	Charters Tower	50.33	150	P	P	04 38 51.8	-1.3
CTAO				pmax	pmax		
	comp=Z,86nm,1.2s						
CTAO	Charters Tower	50.33	150	P	P	04 38 55.1	+2.1
BILL	Bilibino	50.96	20	P	P	04 38 56.3	-0.9
BILL				IAmb	IAmb	04 39 05.5	
	comp=Z,72nm,1.3s						
BILL				IAMs_20	IAMs_20	05 00 18.4	
	comp=Z,4µm,19.0s						
BILL	Bilibino	50.96	20	ceP	P	04 38 55.7	-1.5
BILL				i *PP	pP	04 39 00.6	-0.3
BILL				i *SP	sP	04 39 03.8	+1.5
BILL				e		04 40 14.0	
BILL				i		04 40 57.1	
BILL				i S	S	04 46 21.0	+7.4
BILL				pmax	pmax		
	comp=Z,39nm,1.7s						
BILL				MLR	MLR		
	comp=Z,4µm,12.0s						
MEEK	Meekatharra	51.12	184	P	P	04 39 02.1	+3.2
HRA	Herat	52.30	295	P	P	04 39 07.4	-0.6
HRA				IAmb	IAmb	04 39 10.4	
	comp=Z,85nm,1.6s						
ABKAR	Akbulak array	53.68	314	P	P	04 39 17.5	-0.2
ABKAR	Akbulak array	53.68	314	P	P	04 39 17.9	+0.2
ABKAR				IAmb	IAmb	04 39 20.1	
	comp=Z,101nm,1.4s						
MORW	Morawa	53.74	187	P	P	04 39 15.9	-2.3
MORW	Morawa	53.74	187	P	P	04 39 20.3	+2.0
OOD	Oodnadatta	53.79	165	P	P	04 39 19.7	+1.1
SVE	Sverdlovsk	54.13	323	ceP	P	04 39 20.7	-0.2
SVE				eS	S	04 47 00.6	+3.3
SVE				pmax	pmax		
	comp=Z,73nm,1.5s						
SVE				MLR	MLR		
	comp=Z,8µm,14.0s						
AKTO	Aktyubinsk	54.99	315	LR	LR	05 02 54.2	
	comp=Z,4µm,19.0s,baz=96,slow=36						
AKTO	Aktyubinsk	54.99	315	P	P	04 39 26.6	-0.6
INKA	Innaminka	55.13	160	P	P	04 39 31.0	+2.6
RK1H	Rockhampton Ha	55.16	148	P	P	04 39 31.4	+2.7
	comp=Z,48nm,1.1s						
ARU	Arti	55.21	323	LR	LR	05 04 05.3	
	comp=Z,4µm,20.6s,baz=94,slow=37						
ARU	Arti	55.21	323	P	P	04 39 27.5	-1.1
ARU				IAmb	IAmb	04 39 30.2	
	comp=Z,106nm,1.5s						
ARU				IAMs_20	IAMs_20	05 03 52.9	
	comp=Z,5µm,20.0s						
ARU	Arti	55.21	323	d iP	P	04 39 27.7	-1.0
ARU						04 40 25.2	
ARU						04 41 28.2	
ARU				PPP	PPP	04 42 42.8	
ARU				S	S	04 47 13.2	+1.5
ARU				SS	SS	04 50 59.2	+3.6
ARU				pmax	pmax		
	comp=Z,82nm,1.5s						
ARU				MLR	MLR		
	comp=Z,4µm,21.0s						
GEYT	Alibeck	55.25	300	P	P	04 39 30.1	+0.7
	comp=Z,20nm,0.9s,baz=188,slow=4.2,SNR=22						
GEYT				LR	LR	05 05 52.4	
	comp=Z,4µm,19.0s,baz=115,slow=39						
	comp=Z,20nm,0.9s						
GEYT	Alibeck	55.25	300	P	P	04 39 28.3	-1.1
GEYT				IAmb	IAmb	04 39 32.3	
	comp=Z,68nm,1.3s						
GYA0	ALIBECK ARRAY	55.25	300	P	P	04 39 30.4	+1.0
GYA0B	ALIBECK ARRAY	55.25	300	P	P	04 39 28.8	-0.6
QLP	Quilpie	55.27	156	P	P	04 39 31.1	+1.7
FORT	Forrest	55.43	174	P	P	04 39 30.0	-0.5
FORT	Forrest	55.43	174	P	P	04 39 31.9	+1.4
MULG	Mulgathing	55.84	167	P	P	04 39 36.2	+2.8
KLBR	Kellerberrin	56.10	184	P	P	04 39 39.5	+4.2
LCRK	Leigh Creek	56.95	163	P	P	04 39 42.5	+1.1
RMQ	Roma	57.02	151	P	P	04 39 44.3	+2.3
JLN	Jalan Bani Buh	57.11	281	P	P	04 39 45.0	+2.1
	SNR=8.5						
JLN				P	P	04 39 45.0	+2.1
	SNR=8.5						
EIDS	Eidsvold	57.12	148	P	P	04 39 42.7	0.0
EIDS	Eidsvold	57.12	148	P	P	04 39 47.4	+4.7
WBK	Wadi Bani Khal	57.38	282	P	P	04 39 48.0	+3.2
	SNR=8.2						
WBK				P	P	04 39 48.0	+3.2
	SNR=8.2						
WSAR	Wadi Sarin	57.51	283	LR	LR	05 06 46.4	
	comp=Z,2µm,19.8s,baz=94,slow=38						

WSAR	**Wadi Sarin**	57.51	283	P	P	04 39 47.0	+1.3
	SNR=13						
SPIA	**Saint Paul Isl**	57.57	37	P	P	04 39 44.9	-0.6
	baz=266						
GAMB	**Gambell**	57.67	29	P	P	04 39 45.5	-0.6
	baz=260						
BIDO	**Bidbid**	57.89	283	P	P	04 39 51.0	+2.7
	SNR=17						
BIDO				P	P	04 39 51.0	+2.7
	SNR=17						
SMDO	**Samad**	58.08	283	P	P	04 39 52.0	+2.2
	SNR=14						
SMDO				P	P	04 39 52.0	+2.2
	SNR=14						
JMDO	**Jabal Madar**	58.22	282	P	P	04 39 53.1	+2.5
	SNR=5.7						
JMDO				P	P	04 39 53.1	+2.5
	SNR=5.7						
HOQ	**Hoqain**	58.59	284	P	P	04 39 55.0	+1.7
	SNR=29						
HOQ				P	P	04 39 55.0	+1.7
	SNR=29						
HOQ				P	P	04 39 55.0	+1.7
	SNR=29						
BBOO	**Buckleboo**	58.70	166	P	P	04 39 53.1	-0.5
BBOO	**Buckleboo**	58.70	166	P	P	04 39 56.1	+2.5
MHTO	**MHTO**	58.72	280	P	P	04 39 56.0	+1.9
	SNR=11						
MHTO				P	P	04 39 56.0	+1.9
	SNR=11						
MHTO				P	P	04 39 56.0	+1.9
	SNR=11						
BANOM	**Banah**	58.88	286	P	P	04 39 56.7	+1.4
BSY	**Bisya**	58.92	283	P	P	04 39 57.0	+1.4
	SNR=12						
BSY				P	P	04 39 57.0	+1.4
	SNR=12						
SHME	**Shamm**	58.99	287	P	P	04 39 57.2	+1.3
SOHO	**SOHO**	59.13	284	*i* P	P	04 39 56.7	-0.3
	SNR=11						
MSFE	**Esma-Masafi**	59.15	286	P	P	04 39 57.3	+0.1
UOSS	**Minazif**	59.21	285	P	P	04 39 56.8	-0.7
STKA	**Stephens Creek**	59.25	161	P	P	04 39 57.5	+0.1
	comp=Z,23nm,0.9s,baz=346,slow=6.3,SNR=18						
STKA				LR	LR	05 06 36.2	
	comp=Z,895nm,20.5s,baz=337,slow=37						
	comp=Z,23nm,0.9s						
STKA	**Stephens Creek**	59.25	161	P	P	04 39 57.0	-0.4
STKA	**Stephens Creek**	59.25	161	P	P	04 39 57.0	-0.4
STKA				pmax	pmax		
	comp=Z,22nm,1.2s						
WHYH	**Whyalla**	59.26	165	P	P	04 40 02.5	+5.1
	comp=Z,24nm,1.1s						
HATD	**Hatta, Dubai**	59.31	285	P	P	04 40 01.0	+2.8
	SNR=9.2						
HATD				P	P	04 40 01.0	+2.8
	SNR=9.2						
HATD	**Hatta, Dubai**	59.31	285	*i* P	P	04 39 58.6	+0.4
	SNR=9.2						
ARQ	**Araqi**	59.36	283	P	P	04 39 60.0	+1.4
	SNR=18						
ARQ				P	P	04 39 60.0	+1.4
	SNR=18						
SANVU	**Saraoutou**	59.40	127	P	P	04 39 58.4	-0.4
SANVU	**Saraoutou**	59.40	127	P	P	04 40 00.1	+1.3
ASHO	**Ashiyiah**	59.41	285	P	P	04 40 01.0	+2.0
	SNR=12						
ASHO				P	P	04 40 01.0	+2.0
	SNR=12						
ASHO	**Ashiyiah**	59.41	285	*i* P	P	04 39 59.8	+0.9
	SNR=12						
DQM	**DQM**	59.42	279	P	P	04 40 01.0	+2.0
	SNR=6.9						
DQM				P	P	04 40 01.0	+2.0
	SNR=6.9						
DQM				P	P	04 40 01.0	+2.0
	SNR=6.9						
NAPP	**Napperby**	59.54	164	P	P	04 40 01.0	+1.6
	comp=Z,127nm,0.9s						
UMQ	**Umm Al-Quwin**	59.54	286	P	P	04 40 01.4	+1.6
TNA	**Tin City**	59.55	27	P	P	04 39 58.6	-0.5
	baz=263						
UNV	**Unalaska Valle**	59.60	41	P	P	04 39 58.3	-1.4
	baz=271						
NAZ	**Nazwa, Dubai**	59.68	286	P	P	04 40 03.0	+2.2
	SNR=11						
NAZ				P	P	04 40 03.0	+2.2
	SNR=11						
NAZ	**Nazwa, Dubai**	59.68	286	*i* P	P	04 40 01.5	+0.7
	SNR=8.0						
FAQ	**Al Faqa, Dubai**	59.80	285	P	P	04 40 04.0	+2.4
	SNR=9.9						
FAQ				P	P	04 40 04.0	+2.4
	SNR=9.9						
FAQ	**Al Faqa, Dubai**	59.80	285	*i* P	P	04 40 02.5	+0.9
	SNR=5.8						
ALNE	**Al Ain**	59.84	284	P	P	04 40 02.4	+0.4
	SNR=23						
ALNE				P	P	04 40 02.4	+0.4
	SNR=23						
ALNE	**Al Ain**	59.84	284	*i* P	P	04 40 03.0	+1.1
	SNR=11						
HTT	**Hallett**	59.97	164	P	P	04 40 02.9	+0.5
ASUD	**Al Ashush, Dub**	60.06	285	P	P	04 40 06.0	+2.6
	SNR=10						
ASUD				P	P	04 40 06.0	+2.6
	SNR=10						
ASUD				P	P	04 40 06.0	+2.6
	SNR=10						
ASUD	**Al Ashush, Dub**	60.06	285	*i* P	P	04 40 04.5	+1.1
	SNR=10						
KIRV	**Kirov**	60.28	325	LR	LR	05 07 43.6	
	comp=Z,7µm,20.4s,baz=98,slow=38						
KIRV	**Kirov**	60.28	325	*d* *i*P	P	04 40 03.3	-1.0
CMSA	**Cobar Meteorol**	60.29	157	P	P	04 40 06.6	+2.0
AJN	**Ajban**	60.38	285	P	P	04 40 07.2	+1.7
	SNR=9.7						
AJN	**Ajban**	60.38	285	*i* P	P	04 40 06.1	+0.6
	SNR=10						
ANM	**Nome**	60.52	28	IAMs_20	IAMs_20	05 10 52.0	
	comp=Z,2µm,19.0s						
ANM	**Nome**	60.52	28	P	P	04 40 05.5	-0.3
	baz=266						
FALS	**False Pass**	61.37	39	P	P	04 40 09.9	-1.9
	baz=273						
TWOA	**Tennyson Woods**	61.41	165	P	P	04 40 16.4	+4.3
	comp=Z,69nm,1.0s						
ARMA	**Armidale**	61.67	151	P	P	04 40 13.7	-0.5
ARMA				IAmb	IAmb	04 40 24.6	
	comp=Z,42nm,1.2s						
ARMA	**Armidale**	61.67	151	P	P	04 40 16.7	+2.5
SHAO	**Shalim**	61.73	278	P	P	04 40 15.4	+0.5
RDOG	**Red Dog Mine**	61.77	24	P	P	04 40 11.7	-2.6
	baz=266						
MZR	**Muzera**	62.14	284	P	P	04 40 18.1	+0.6
	SNR=30						
MZR	**Muzera**	62.14	284	*i* P	P	04 40 17.7	+0.1
	SNR=13						
JRN	**Qarnain Island**	62.15	286	P	P	04 40 17.7	+0.2
	SNR=20						
PRGR	**Permogore**	62.19	328	*e*P	P	04 40 15.0	-2.2
MAK	**Makhachkala**	62.63	307	*e*P	P	04 40 17.2	-3.3
MAK				*e*S	S	04 48 42.6	-6.0
MAK				*e*SSS	SSS	04 55 30.3	
MAK				pmax	pmax		
	comp=Z,131nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3µm,14.0s						
DOK	**Doka**	62.88	279	P	P	04 40 24.0	+1.4
	SNR=7.1						
LIFNC	**LIFOU**	63.01	132	P	P	04 40 22.1	-1.1
LIFNC	**LIFOU**	63.01	132	P	P	04 40 25.2	+2.0
	comp=Z,71nm,1.0s						
SDPT	**Sand Point**	63.03	39	P	P	04 40 21.1	-1.8
	baz=275						
RBK	**Rabkut**	63.18	278	P	P	04 40 26.0	+1.4
	SNR=11						
RBK				P	P	04 40 26.0	+1.4
	SNR=11						
NOUC	**Port Laguerre**	63.31	134	P	P	04 40 28.5	+3.4
DZM	**Mont Dzumac**	63.38	133	P	P	04 40 26.1	+0.3
	comp=Z,42nm,1.1s,baz=340,slow=8.4,SNR=18						
DZM				LR	LR	05 03 24.8	
	comp=Z,2µm,21.5s,baz=312,slow=32						
	comp=Z,42nm,1.1s						
DZM	**Mont Dzumac**	63.38	133	*e*S	S	04 49 20.2	+22
DZM				*e*SS	SS	04 53 01.2	-4.4
	comp=Z,2µm,24.9s						
DZM				*e*LR	LR	04 59 44.9	
	comp=Z,9µm,25.6s						
DZM	**Mont Dzumac**	63.38	133	P	P	04 40 25.3	-0.5
DZM				IAmb	IAmb	04 40 28.4	
	comp=Z,48nm,1.1s						
DZM	**Mont Dzumac**	63.38	133	P	P	04 40 27.2	+1.5
WHFO	**Wadi Hawf**	63.43	278	P	P	04 40 27.0	+0.7
	SNR=8.6						
CHNA	**Chernabura Isl**	63.58	39	P	P	04 40 25.3	-1.2
	baz=276						
YATNC	**Mamie plateau,**	63.66	133	P	P	04 40 29.5	+2.0
GROC	**Groznyy**	63.83	308	*e*P	P	04 40 28.6	+0.2
GROC				*e*		04 41 03.6	
GROC				pmax	pmax		
	comp=Z,82nm,1.4s						
GROC				MLR	MLR		
	comp=Z,610nm,11.0s						
OUENC	**Ouen Island, N**	63.88	133	P	P	04 40 28.7	-0.2
OUENC	**Ouen Island, N**	63.88	133	P	P	04 40 31.1	+2.2
ARPS	**Mount Arapiles**	63.89	162	P	P	04 40 30.1	+1.4
	comp=Z,109nm,0.9s						
ABTO	**Aybut**	64.04	278	P	P	04 40 32.0	+1.7
	SNR=14						
A21K	**Barrow**	64.08	21	P	P	04 40 28.2	-1.3
A21K	**Barrow**	64.08	21	P	P	04 40 29.0	-0.5
	baz=270,SNR=12						
GCSA	**Galena City Sc**	64.17	28	P	P	04 40 29.3	-1.0
	baz=273						
PINNC	**Pines Island,**	64.42	133	P	P	04 40 34.1	+1.7
	comp=Z,45nm,1.2s						
TTA	**Tatalina**	64.69	30	P	P	04 40 33.6	-0.2
TTA				IAmb	IAmb	04 40 44.9	
	comp=Z,30nm,1.1s						
TTA	**Tatalina**	64.69	30	P	P	04 40 33.6	-0.2
TTA				pmax	pmax		
	comp=Z,30nm,1.1s						
TTA	**Tatalina**	64.69	30	P	P	04 40 33.1	-0.7
	baz=275,SNR=17						
N18K	**Kilae Creek**	64.96	33	P	P	04 40 35.9	+0.4
N18K				IAmb	IAmb	04 40 44.1	
	comp=Z,37nm,1.4s						
N18K				IAMs_20	IAMs_20	05 10 59.5	
	comp=Z,2µm,18.0s						
N18K	**Kilae Creek**	64.96	33	P	P	04 40 34.7	-0.8
	baz=276						
CNB	**Canberra Magne**	65.02	156	P	P	04 40 36.6	+0.4
SVW2	**Sparrevohn**	65.06	32	P	P	04 40 35.3	-0.9
KLMR	**Klimovskoe**	65.18	328	*e*P	P	04 40 33.0	-3.9
KLMR				*e*		04 42 56.1	
KLMR				*e*SS	SS	04 53 34.9	+3.3
KLMR				pmax	pmax		
	comp=Z,100nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,5µm,15.0s						
KLMR	**Klimovskoe**	65.18	328	*e*P	P	04 40 33.1	-3.9
KLMR				AMP		04 40 39.4	
	comp=Z,100nm,1.5s						
KLMR				*e*PP	PP	04 42 56.2	-3.8
KLMR				*e*SS	SS	04 53 35.0	+3.4
KLMR				*e*SS	SS	04 53 35.0	+3.4
KLMR				LQ	LQ	05 04 10.4	
KLMR				LQ	LQ	05 04 10.4	
KLMR				LR	LR	05 07 43.3	
KLMR				AMP		05 10 12.9	
	comp=Z,5µm,15.0s						
GNI	**Garni**	65.19	305	LR	LR	05 11 47.7	
	comp=Z,2µm,18.9s,baz=100,slow=39						
GNI	**Garni**	65.19	305	P	P	04 40 38.0	+0.4
GNI	**Garni**	65.19	305	IAMs_20	IAMs_20	05 12 28.7	
	comp=Z,2µm,20.0s						
GNI	**Garni**	65.19	305	*d* *i*P	P	04 40 38.5	+0.9
GNI				pmax	pmax		
	comp=Z,118nm,1.7s						
GNI	**Garni**	65.19	305	P	P	04 40 38.4	+0.7
BRAT	**Ballarat**	65.22	161	P	P	04 40 39.4	+2.1
	comp=Z,37nm,0.9s						
SOCY	**Socotra**	65.22	272	P	P	04 40 35.8	-2.3
SOCY				IAMs_20	IAMs_20	05 07 04.6	
	comp=Z,2µm,21.0s						
VRH	**Novokhopyorsk**	65.25	317	*e*P	P	04 40 36.6	-1.0
VRH				pmax	pmax		
	comp=Z,90nm,1.1s						
VRH				MLR	MLR		
	comp=Z,2µm,14.0s						
ZEI	**Tsey**	65.27	308	*e*P	P	04 40 36.1	-2.1
ZEI				pmax	pmax		
	comp=Z,71nm,1.4s						
L19K	**White Mountain**	65.29	31	P	P	04 40 37.6	-0.1
L19K				IAmb	IAmb	04 40 56.4	
	comp=Z,27nm,1.1s						
L19K	**White Mountain**	65.29	31	P	P	04 40 37.5	-0.2
	baz=276,SNR=13						
O18K	**Koktuh Hills**	65.39	33	P	P	04 40 38.0	-0.4
	baz=277						
IMAR	**Indian Mountai**	65.39	27	P	P	04 40 37.6	-0.6
J20K	**Nowinta River**	65.40	29	P	P	04 40 38.4	0.0
J20K				IAmb	IAmb	04 40 41.1	
	comp=Z,47nm,1.4s						
J20K				IAMs_20	IAMs_20	05 11 41.0	
	comp=Z,2µm,20.0s						
J20K	**Nowinta River**	65.40	29	P	P	04 40 38.2	-0.2
	baz=276,SNR=21						
P18K	**Big Mountain,**	65.44	34	P	P	04 40 37.3	-1.4
	baz=277						
GOF	**Gofitskoye**	65.44	310	⇑*e*P	P	04 40 39.2	+0.3
GOF				pmax	pmax		
	comp=Z,150nm,1.4s						
K20K	**Telida**	65.52	30	P	P	04 40 38.7	-0.5
K20K				IAmb	IAmb	04 40 50.3	
	comp=Z,33nm,1.1s						
K20K				IAMs_20	IAMs_20	05 07 50.2	
	comp=Z,2µm,21.0s						
K20K	**Telida**	65.52	30	P	P	04 40 39.1	-0.1
	baz=276,SNR=17						
M19K	**Big River Lodg**	65.54	31	P	P	04 40 38.9	-0.4
M19K				IAmb	IAmb	04 40 50.6	
	comp=Z,25nm,1.1s						
M19K	**Big River Lodg**	65.54	31	P	P	04 40 39.2	-0.1
	baz=277,SNR=8.3						
N19K	**Bonanza Creek**	65.63	32	P	P	04 40 39.5	-0.5
	baz=277						
ONI	**Oni**	65.64	307	P	P	04 40 40.7	+0.4
ONI	**Oni**	65.64	307	P	P	04 40 40.7	+0.4
ONI				pmax	pmax		
	comp=Z,97nm,1.3s						
L20K	**Farewell, AK**	65.71	30	P	P	04 40 40.0	-0.4
	baz=277,SNR=8.0						
CHIR	**Chirikof Islan**	65.71	38	IAMs_20	IAMs_20	05 09 21.7	
	comp=Z,2µm,19.0s						
CHIR	**Chirikof Islan**	65.71	38	P	P	04 40 39.9	-0.6
	baz=278						
TOO	**Toolangi**	65.71	160	P	P	04 40 41.4	+0.8
TOO	**Toolangi**	65.71	160	P	P	04 40 41.4	+0.8
TOO				pmax	pmax		
	comp=Z,54nm,1.0s						
TOO	**Toolangi**	65.71	160	P	P	04 40 44.2	+3.6
O19K	**Port Alsworth**	65.79	33	P	P	04 40 40.2	-0.6
	baz=278						
KBZ	**Khabaz**	65.80	309	P	P	04 40 41.4	+0.1
	comp=Z,26nm,1.0s,baz=72,slow=5.3,SNR=42						
KBZ				LR	LR	05 11 16.3	
	comp=Z,4µm,18.1s,baz=74,slow=38						
	comp=Z,26nm,1.0s						
KBZ	**Khabaz**	65.80	309	*d* *i*P	P	04 40 41.0	-0.3
KBZ				pmax	pmax		
	comp=Z,68nm,1.4s						
BGD	**Bogdanovka**	65.81	306	P	P	04 40 43.1	+1.5
H21K	**Melozitna Rive**	65.81	27	P	P	04 40 40.2	-0.8
H21K				IAmb	IAmb	04 40 58.2	
	comp=Z,41nm,1.1s						
H21K	**Melozitna Rive**	65.81	27	P	P	04 40 40.7	-0.3
	baz=276,SNR=42						
AKH	**Akhalkalaki**	65.85	306	⇑P	P	04 40 43.1	+1.2
KVAR	**Kislovodsk Arr**	65.90	309	LR	LR	05 11 02.6	
	comp=Z,4µm,18.7s,baz=230,slow=38						
KIV	**Kislovodsk**	65.91	309	⇓P	P	04 40 42.4	+0.3
KIV	**Kislovodsk**	65.91	309	P	P	04 40 42.0	0.0
KIV				IAMs_20	IAMs_20	05 12 07.5	
	comp=Z,3µm,18.0s						
KIV	**Kislovodsk**	65.91	309	*e*P	P	04 40 42.2	+0.1
KIV				*e*		04 43 07.4	
KIV				*e*S	S	04 49 30.1	+0.8
KIV				*e*SS	SS	04 53 46.1	+2.2
KIV				pmax	pmax		
	comp=Z,108nm,1.1s						
KIV				pmax	pmax		
	comp=Z,305nm,4.3s						
KIV				MLR	MLR		
	comp=Z,3µm,17.0s						
KIV	**Kislovodsk**	65.91	309	*i* P	P	04 40 42.5	+0.4
	SNR=19						
I21K	**Tanana**	66.21	27	P	P	04 40 43.5	0.0
I21K				IAmb	IAmb	04 41 19.0	
	comp=Z,34nm,1.1s						
I21K	**Tanana**	66.21	27	P	P	04 40 43.3	-0.2
	baz=277,SNR=16						
CHUM	**Lake Minchumin**	66.24	29	P	P	04 40 43.5	-0.2
	baz=278						
Q19K	**Cape Douglas,**	66.31	34	P	P	04 40 43.6	-0.8
	baz=279						
KARS	**Kars**	66.33	305	P	P	04 40 44.1	-0.8
KARS	**Kars**	66.33	305	P	P	04 40 44.1	-0.8
KARS				pmax	pmax		
	comp=Z,411nm,1.6s						
SII	**Sitkinak Islan**	66.39	37	P	P	04 40 43.4	-1.4
	baz=279						
CAST	**Castle Rocks**	66.40	29	P	P	04 40 43.9	-1.0
CAST				IAmb	IAmb	04 40 47.2	
	comp=Z,36nm,1.4s						
CAST				IAMs_20	IAMs_20	05 08 39.5	
	comp=Z,2µm,21.0s						
CAST	**Castle Rocks**	66.40	29	P	P	04 40 44.4	-0.5
	baz=278,SNR=21						
P19K	**Oil Pt**	66.41	33	P	P	04 40 43.4	-1.5
	baz=279						
PPLA	**Purkeypile**	66.43	30	P	P	04 40 44.3	-0.8
PPLA				IAmb	IAmb	04 40 59.0	
	comp=Z,37nm,1.1s						
PPLA	**Purkeypile**	66.43	30	P	P	04 40 44.5	-0.6
	baz=278,SNR=11						
RSO	**Redoubt South**	66.52	33	P	P	04 40 45.2	-0.6
CHVG	**Ch'k'valeri**	66.60	308	⇑P	P	04 40 47.9	+1.5
O20K	**Slope Mountain**	66.64	33	P	P	04 40 45.2	-1.2
	baz=279						
COLD	**Coldfoot**	66.65	25	P	P	04 40 45.3	-1.0
COLD	**Coldfoot**	66.65	25	P	P	04 40 46.0	-0.3
	baz=278,SNR=13						
SPCR	**Spurr Chakacha**	66.67	32	P	P	04 40 45.5	-1.1
	baz=279						
TOLK	**Toolik Lake Re**	66.69	24	P	P	04 40 46.4	-0.2
TOLK				IAmb	IAmb	04 41 16.6	
	comp=Z,30nm,1.2s						
TOLK	**Toolik Lake Re**	66.69	24	P	P	04 40 46.0	-0.6
	baz=278,SNR=20						
LPSR	**Galich'ya Gora**	66.72	319	*e*P	P	04 40 46.6	-0.4
LPSR				pmax	pmax		
	comp=Z,90nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,3µm,16.0s						
VORR	**Voronezh**	66.72	318	*e*P	P	04 40 46.1	-0.9
VORR				pmax	pmax		
	comp=Z,120nm,0.4s						
SPU	**Mount Spurr**	66.75	32	P	P	04 40 46.3	-0.9
OHAK	**Old Harbor**	66.77	36	P	P	04 40 45.7	-1.5
	baz=280						
BPAW	**Bear Paw Mtn.**	66.78	29	P	P	04 40 46.8	-0.5
BPAW				IAmb	IAmb	04 40 52.6	
	comp=Z,41nm,1.3s						
BPAW				IAMs_20	IAMs_20	05 09 41.6	
	comp=Z,2µm,19.0s						
BPAW	**Bear Paw Mtn.**	66.78	29	P	P	04 40 46.6	-0.7
	baz=279,SNR=17						
VORD	**Divnogorie**	66.80	317	*e*P	P	04 40 46.2	-1.3
VORD				pmax	pmax		
	comp=Z,30nm,1.2s						
VSR	**Storozhevoye**	66.83	317	*e*P	P	04 40 46.7	-1.0
VSR				pmax	pmax		
	comp=Z,90nm,1.4s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
GEVA	**Gevas**	66.88	303	P	P	04 40 47.9	-0.6
GEVA				IAmb	IAmb	04 40 53.2	
	comp=Z,37nm,1.0s						
KTH	**Kantishna Hill**	66.90	29	P	P	04 40 46.8	-1.2
KTH				IAmb	IAmb	04 40 53.1	
	comp=Z,34nm,1.4s						
KTH				IAMs_20	IAMs_20	05 10 25.6	
	comp=Z,2µm,18.0s						
MOS	**Moscow**	66.91	322	*e*P	P	04 40 45.2	-2.9
MOS				*e*		04 43 13.2	
MOS				*e*S	S	04 49 37.4	-3.4
MOS				pmax	pmax		
	comp=Z,122nm,1.7s						
MOS				pmax	pmax		
	comp=Z,300nm,2.0s						
MOS				MLR	MLR		
	comp=Z,3µm,17.0s						
APA	**Apatity**	66.95	335	⇓*i*P	P	04 40 45.5	-2.7
APA				*i*		04 40 54.1	
APA				*i*		04 43 15.0	
APA				*i* PPP	PPP	04 44 59.0	
APA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,4µm,12.0s						
KDAK	**Kodiak Island**	67.05	35	LR	LR	05 11 27.3	
	comp=Z,1µm,20.8s,baz=287,slow=37						
KDAK	**Kodiak Island**	67.05	35	P	P	04 40 47.6	-1.4
KDAK				IAmb	IAmb	04 41 16.5	
	comp=Z,55nm,1.2s						
KDAK	**Kodiak Island**	67.05	35	P	P	04 40 47.6	-1.4
KDAK				pmax	pmax		
	comp=Z,55nm,1.2s						
KDAK	**Kodiak Island**	67.05	35	P	P	04 40 47.5	-1.5
	baz=280						
H23K	**Yukon River**	67.12	27	P	P	04 40 49.0	-0.3
H23K	**Yukon River**	67.12	27	P	P	04 40 49.3	-0.1
	baz=279,SNR=27						
BATM	**Batumi**	67.13	307	P	P	04 40 50.3	+0.5
TRF	**Thorofare Moun**	67.19	29	P	P	04 40 50.5	+0.5
TRF				IAMs_20	IAMs_20	05 12 49.4	
	comp=Z,2µm,19.0s						
TRF	**Thorofare Moun**	67.19	29	P	P	04 40 48.8	-1.2
	baz=280						
HOM	**Homer**	67.20	33	P	P	04 40 48.8	-1.2
	baz=280						
CAPN	**Captain Cook N**	67.25	32	IAMs_20	IAMs_20	05 09 16.1	
	comp=Z,2µm,18.0s						
CAPN	**Captain Cook N**	67.25	32	P	P	04 40 49.8	-0.4
	baz=280						
I23K	**Minto, Yukon-K**	67.31	27	P	P	04 40 50.9	+0.4
I23K				IAmb	IAmb	04 41 20.5	
	comp=Z,47nm,1.4s						
I23K	**Minto, Yukon-K**	67.31	27	P	P	04 40 50.0	-0.5
	baz=280,SNR=13						
CUT	**Chulitna**	67.38	30	P	P	04 40 49.4	-1.6
CUT				IAmb	IAmb	04 41 29.8	
	comp=Z,39nm,1.0s						
CUT	**Chulitna**	67.38	30	P	P	04 40 49.6	-1.4
	baz=280						
NEA2	**Nenana**	67.53	28	P	P	04 40 51.0	-0.9
NEA2				IAmb	IAmb	04 40 58.6	
	comp=Z,64nm,1.3s						
NEA2				IAMs_20	IAMs_20	05 12 15.2	
	comp=Z,2µm,18.0s						
NEA2	**Nenana**	67.53	28	P	P	04 40 51.2	-0.8
	baz=280,SNR=43						
BRLK	**Bradley Lake**	67.56	33	P	P	04 40 52.6	+0.4
BRLK				IAmb	IAmb	04 41 00.5	
	comp=Z,37nm,1.2s						
BRLK				IAMs_20	IAMs_20	05 12 32.1	
	comp=Z,2µm,19.0s						
M22K	**Willow**	67.57	31	P	P	04 40 50.4	-1.8
M22K	**Willow**	67.57	31	P	P	04 40 50.4	-1.8
	baz=280,SNR=11						
GURO	**Guroymak-BITLI**	67.60	303	P	P	04 40 53.6	+0.5
GURO				IAmb	IAmb	04 40 55.4	
	comp=Z,53nm,1.4s						
OBN	**Obninsk**	67.62	322	LR	LR	05 12 16.1	
	comp=Z,787nm,19.2s,baz=76,slow=38						
OBN	**Obninsk**	67.62	322	P	P	04 40 51.1	-1.5
OBN				IAMs_20	IAMs_20	05 13 24.2	
	comp=Z,2µm,18.0s						
OBN	**Obninsk**	67.62	322	*d* *i*P	P	04 40 51.5	-1.1
OBN				*e**PP	pP	04 40 56.2	-0.2
OBN				*e*		04 41 22.8	
OBN				*e*		04 43 22.3	
OBN				S	S	04 49 52.0	+2.7
OBN				*e*		04 50 21.1	
OBN				pmax	pmax		
	comp=Z,87nm,1.7s						

OBN				MLR	MLR		
	comp=Z,3µm,19.0s						
BRSE	**Bradley Lake S**	**67.64**	**33**	P	**P**	**04 40 51.4**	**-1.3**
	baz=281						
MCK	**McKinley**	**67.74**	**29**	P	**P**	**04 40 51.9**	**-1.4**
MCK				IAmb	IAmb	04 41 02.3	
	comp=Z,38nm,1.2s						
MCK				IAMs_20	IAMs_20	05 12 10.8	
	comp=Z,2µm,18.0s						
MCK	**McKinley**	**67.74**	**29**	P	**P**	**04 40 51.9**	**-1.4**
MCK				pmax	pmax		
	comp=Z,38nm,1.2s						
MCK				MLR	MLR		
	comp=Z,2µm,18.0s						
MCK	**McKinley**	**67.74**	**29**	P	**P**	**04 40 51.6**	**-1.8**
	baz=281,SNR=15						
H24K	**Noodor Dome**	**67.80**	**26**	P	**P**	**04 40 53.5**	**-0.2**
H24K				IAmb	IAmb	04 40 59.4	
	comp=Z,35nm,1.2s						
H24K				IAMs_20	IAMs_20	05 15 14.2	
	comp=Z,3µm,21.0s						
H24K	**Noodor Dome**	**67.80**	**26**	P	**P**	**04 40 53.3**	**-0.4**
	baz=281,SNR=35						
MDM	**Murphy Dome**	**67.81**	**27**	P	**P**	**04 40 52.1**	**-1.7**
RND	**Reindeer**	**67.84**	**29**	P	**P**	**04 40 52.3**	**-1.7**
RND				IAmb	IAmb	04 40 58.1	
	comp=Z,53nm,1.2s						
RND				IAMs_20	IAMs_20	05 10 35.4	
	comp=Z,3µm,20.0s						
RND	**Reindeer**	**67.84**	**29**	P	**P**	**04 40 52.3**	**-1.7**
RND				pmax	pmax		
	comp=Z,53nm,1.2s						
RND				MLR	MLR		
	comp=Z,3µm,20.0s						
RC01	**Rabbit Creek A**	**67.87**	**32**	IAMs_20	IAMs_20	05 11 26.4	
	comp=Z,2µm,18.0s						
RC01	**Rabbit Creek A**	**67.87**	**32**	P	**P**	**04 40 52.2**	**-2.0**
	baz=281						
WRH	**Wood River Hil**	**67.97**	**28**	IAmb	IAmb	04 41 00.4	
	comp=Z,28nm,1.2s						
WRH				IAMs_20	IAMs_20	05 12 27.7	
	comp=Z,2µm,18.0s						
TCOL	**CIGO, UAF Yank**	**67.98**	**27**	P	**P**	**04 40 53.7**	**-1.1**
	baz=281						
COLA	**College**	**67.99**	**27**	⇓*e*P	**P**	**04 40 53.6**	**-1.2**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
COLA	**College**	**67.99**	**27**	P	**P**	**04 40 53.7**	**-1.2**
	baz=281						
O22K	**Cooper Landing**	**68.00**	**32**	IAMs_20	IAMs_20	05 16 17.8	
	comp=Z,2µm,19.0s						
O22K	**Cooper Landing**	**68.00**	**32**	P	**P**	**04 40 53.6**	**-1.4**
	baz=281						
CCB	**Clear Creek Bu**	**68.05**	**28**	IAMs_20	IAMs_20	05 12 39.0	
	comp=Z,2µm,19.0s						
PMR	**Palmer**	**68.06**	**31**	P	**P**	**04 40 53.3**	**-2.0**
	baz=281,SNR=8.1						
WAT1	**Susitna Watana**	**68.08**	**30**	P	**P**	**04 40 53.9**	**-1.7**
	baz=281						
SOC	**Sochi**	**68.09**	**309**	*e*P	**P**	**04 40 52.5**	**-3.3**
SOC				*e*		04 43 23.3	
SOC				*e*PPP	PPP	04 44 59.4	
SOC				*e*S	**S**	**04 49 51.4**	**-4.0**
SOC				pmax	pmax		
	comp=Z,39nm,1.1s						
SOC				MLR	MLR		
	comp=Z,3µm,17.0s						
POKR	**Poker Plat Res**	**68.12**	**27**	IAmb	IAmb	04 41 02.5	
	comp=Z,29nm,1.0s						
POKR				IAMs_20	IAMs_20	05 15 32.7	
	comp=Z,2µm,19.0s						
POKR	**Poker Plat Res**	**68.12**	**27**	P	**P**	**04 40 55.1**	**-0.6**
	baz=281						
GHO	**Glory Hole Cre**	**68.12**	**31**	IAMs_20	IAMs_20	05 10 14.0	
	comp=Z,2µm,22.0s						
SEW	**Seward**	**68.20**	**33**	IAmb	IAmb	04 41 05.5	
	comp=Z,56nm,1.2s						
SEW	**Seward**	**68.20**	**33**	P	**P**	**04 40 54.3**	**-1.9**
	baz=282						
KOPT	**Kop Dagi**	**68.39**	**305**	P	**P**	**04 40 57.8**	**-0.3**
SML	**Sawmill**	**68.39**	**31**	P	**P**	**04 40 56.1**	**-1.4**
	baz=282,SNR=11						
KNK	**Knik Glacier**	**68.41**	**31**	IAmb	IAmb	04 41 05.0	
	comp=Z,41nm,1.3s						
KNK				IAMs_20	IAMs_20	05 13 39.7	
	comp=Z,2µm,19.0s						
KNK	**Knik Glacier**	**68.41**	**31**	P	**P**	**04 40 56.3**	**-1.3**
	baz=282,SNR=10						
ILAR	**Eielson Array**	**68.41**	**27**	P	**P**	**04 40 56.1**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=286,slow=5.8,SNR=15						
ILAR				PKP2bc	P'P'df	05 09 09.6	-10
	comp=Z,1.5nm,1.2s,baz=155,slow=1.9,SNR=5.2						
ILAR				LR	LR	05 12 49.6	
	comp=Z,978nm,19.3s,baz=292,slow=38						
HDA	**Harding Lake**	**68.46**	**28**	IAmb	IAmb	04 41 32.4	
	comp=Z,26nm,1.2s						
HDA				IAMs_20	IAMs_20	05 12 33.9	
	comp=Z,2µm,18.0s						
HDA	**Harding Lake**	**68.46**	**28**	P	**P**	**04 40 55.7**	**-2.2**
	baz=282,SNR=20						
WAT6	**Susitna Watana**	**68.50**	**30**	P	**P**	**04 40 56.7**	**-1.6**
	baz=282,SNR=14						
DHY	**Denali Highway**	**68.56**	**29**	IAMs_20	IAMs_20	05 09 56.5	
	comp=Z,2µm,21.0s						
DHY	**Denali Highway**	**68.56**	**29**	P	**P**	**04 40 56.8**	**-1.8**
	baz=282						
M23K	**Glacier View**	**68.67**	**31**	P	**P**	**04 40 57.7**	**-1.5**
	baz=282						
KEV	**Kevo**	**68.83**	**338**	IAMs_20	IAMs_20	05 13 18.6	
	comp=Z,3µm,21.0s						
SCM	**Sheep Creek Mo**	**68.85**	**31**	IAmb	IAmb	04 41 05.1	
	comp=Z,51nm,1.1s						
SCM				IAMs_20	IAMs_20	05 11 18.3	
	comp=Z,2µm,18.0s						
SCM	**Sheep Creek Mo**	**68.85**	**31**	P	**P**	**04 40 59.3**	**-1.1**
	baz=283,SNR=18						
RAYN	**Ar Rayn**	**68.97**	**287**	P	**P**	**04 41 01.5**	**-0.3**
RAYN	**Ar Rayn**	**68.97**	**287**	P	**P**	**04 41 01.5**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,126nm,1.6s						
RAYN				MLR	MLR		
	comp=Z,2µm,20.0s						
RAYN	**Ar Rayn**	**68.97**	**287**	P	**P**	**04 41 01.9**	**+0.1**
J25K	**Salcha River,**	**69.08**	**27**	IAMs_20	IAMs_20	05 16 36.3	
	comp=Z,2µm,19.0s						
J25K	**Salcha River,**	**69.08**	**27**	P	**P**	**04 40 59.7**	**-2.0**
	baz=283,SNR=9.3						
K24K	**Donnelly Dome**	**69.10**	**28**	P	**P**	**04 41 00.5**	**-1.3**
	baz=283,SNR=16						
GLI	**Glacier Island**	**69.17**	**32**	IAmb	IAmb	04 41 09.6	
	comp=Z,39nm,1.2s						
GLI	**Glacier Island**	**69.17**	**32**	P	**P**	**04 41 00.9**	**-1.4**
	baz=283,SNR=9.9						
SPA0	**Spitsbergen Ar**	**69.18**	**348**	*e*P	**P**	**04 41 01.1**	**-1.0**
SPITS	**Spitsbergen Ar**	**69.18**	**348**	LR	LR	05 15 07.7	
	comp=Z,3µm,18.4s,baz=245,slow=39						
M24K	**Tolsona, Glenn**	**69.32**	**30**	IAmb	IAmb	04 41 28.7	
	comp=Z,34nm,0.8s						
M24K	**Tolsona, Glenn**	**69.32**	**30**	P	**P**	**04 41 02.9**	**-0.4**
	baz=284,SNR=11						
ANN	**Anapa**	**69.39**	**311**	*e*P	**P**	**04 41 01.9**	**-2.0**
ANN				*e*S	**S**	**04 50 11.0**	**+0.3**
ANN				pmax	pmax		
	comp=Z,157nm,1.1s						
ANN				MLR	MLR		
	comp=N,3µm,15.0s						
ANN				MLR	MLR		
	comp=Z,2µm,15.0s						
ARA0	**ARCESS Array S**	**69.39**	**338**	*e*P	**P**	**04 41 02.8**	**-0.7**
ARCES	**ARCESS Array B**	**69.39**	**338**	P	**P**	**04 41 02.5**	**-1.0**
	comp=Z,9.8nm,1.0s,baz=63,slow=5.6,SNR=9.7						
ARCES				LR	LR	05 14 20.8	
	comp=Z,3µm,21.9s,baz=71,slow=38						
	comp=Z,9.8nm,1.0s						
DGTI	**Dogotuki**	**69.42**	**120**	P	**P**	**04 41 06.6**	**+2.1**
	comp=Z,57nm,1.1s						
PAX	**Paxson**	**69.43**	**29**	P	**P**	**04 41 02.3**	**-1.6**
	baz=284,SNR=9.3						
FID	**Port Fidalgo**	**69.50**	**32**	IAmb	IAmb	04 41 22.0	
	comp=Z,33nm,1.2s						
RIDG	**Independent Ri**	**69.52**	**28**	IAMs_20	IAMs_20	05 13 35.7	
	comp=Z,2µm,18.0s						
RIDG	**Independent Ri**	**69.52**	**28**	P	**P**	**04 41 03.0**	**-1.5**
	baz=284,SNR=21						
KLU	**Klutina**	**69.58**	**31**	IAmb	IAmb	04 41 40.4	
	comp=Z,55nm,1.7s						
KLU				IAMs_20	IAMs_20	05 10 46.6	
	comp=Z,2µm,20.0s						
KLU	**Klutina**	**69.58**	**31**	P	**P**	**04 41 03.9**	**-1.1**
	baz=284,SNR=5.9						
HAMF	**Hammerfest**	**69.69**	**339**	*e*P	**P**	**04 41 04.4**	**-0.9**
HARP	**HAARP**	**69.71**	**30**	P	**P**	**04 41 04.8**	**-0.9**
	baz=284						
SCRK	**Sand Creek**	**69.83**	**28**	IAmb	IAmb	04 41 13.4	
	comp=Z,29nm,1.0s						
SCRK	**Sand Creek**	**69.83**	**28**	P	**P**	**04 41 05.0**	**-1.5**
	baz=285,SNR=26						
J26L	**Joseph Creek**	**69.87**	**27**	P	**P**	**04 41 04.6**	**-2.1**
	baz=285,SNR=27						
Q23K	**Middleton Isla**	**69.89**	**33**	IAMs_20	IAMs_20	05 14 10.9	
	comp=Z,2µm,19.0s						
EYAK	**Cordova Ski Ar**	**69.90**	**32**	P	**P**	**04 41 05.6**	**-1.2**
	baz=285						
N25K	**Chitina, Valde**	**70.17**	**30**	IAmb	IAmb	04 41 34.4	
	comp=Z,47nm,1.5s						
N25K				IAMs_20	IAMs_20	05 11 31.1	
	comp=Z,2µm,19.0s						
N25K	**Chitina, Valde**	**70.17**	**30**	P	**P**	**04 41 07.8**	**-0.7**
	baz=285,SNR=12						
MENT	**Mentasta**	**70.21**	**29**	IAmb	IAmb	04 41 16.6	
	comp=Z,28nm,1.0s						
KTK1	**Kautokeino**	**70.31**	**338**	*e*P	**P**	**04 41 09.0**	**-0.2**
BMRM	**Bremner River**	**70.33**	**31**	IAmb	IAmb	04 41 36.3	
	comp=Z,39nm,1.1s						
BMRM				IAMs_20	IAMs_20	05 11 02.5	
	comp=Z,2µm,20.0s						
BMRM	**Bremner River**	**70.33**	**31**	P	**P**	**04 41 08.5**	**-1.1**
	baz=285,SNR=9.1						
L26K	**Log Cabin Wild**	**70.35**	**29**	IAMs_20	IAMs_20	05 15 51.9	
	comp=Z,3µm,20.0s						
L26K	**Log Cabin Wild**	**70.35**	**29**	P	**P**	**04 41 08.1**	**-1.5**
	baz=286,SNR=16						
RAGM	**Ragged Mountai**	**70.45**	**32**	IAmb	IAmb	04 41 18.1	
	comp=Z,46nm,1.2s						
RAGM				IAMs_20	IAMs_20	05 15 16.7	
	comp=Z,3µm,18.0s						
GLB	**Gilahina Butte**	**70.58**	**31**	IAmb	IAmb	04 41 13.0	
	comp=Z,57nm,1.6s						
GLB				IAMs_20	IAMs_20	05 13 13.8	
	comp=Z,2µm,19.0s						
K27K	**Chicken**	**70.62**	**28**	IAmb	IAmb	04 41 19.6	
	comp=Z,33nm,1.0s						
K27K	**Chicken**	**70.62**	**28**	P	**P**	**04 41 10.5**	**-0.6**
	baz=286						
HMT	**Hamilton**	**70.67**	**32**	IAMs_20	IAMs_20	05 09 30.3	
	comp=Z,3µm,22.0s						
M26K	**Nabesna, AK**	**70.68**	**29**	IAmb	IAmb	04 41 36.9	
	comp=Z,50nm,1.1s						
M26K				IAMs_20	IAMs_20	05 12 04.6	
	comp=Z,2µm,20.0s						
M26K	**Nabesna, AK**	**70.68**	**29**	P	**P**	**04 41 10.7**	**-0.9**
	baz=286,SNR=47						
KAIM	**Kayak Island**	**70.70**	**32**	IAMs_20	IAMs_20	05 11 19.3	
	comp=Z,2µm,19.0s						
KAIM	**Kayak Island**	**70.70**	**32**	P	**P**	**04 41 09.8**	**-1.9**
	baz=286						
EGAK	**Eagle**	**70.79**	**27**	P	**P**	**04 41 11.4**	**-0.7**
	baz=287,SNR=17						
VRDI	**Verde Repeater**	**70.80**	**31**	IAMs_20	IAMs_20	05 13 20.8	
	comp=Z,2µm,20.0s						
BERG	**Berg Lake**	**70.92**	**32**	IAmb	IAmb	04 41 38.5	
	comp=Z,38nm,1.2s						
SUCK	**Suckling Hills**	**70.97**	**32**	IAMs_20	IAMs_20	05 09 28.4	
	comp=Z,2µm,18.0s						
L27K	**Beaver Creek,**	**71.01**	**29**	IAmb	IAmb	04 41 21.8	
	comp=Z,31nm,1.1s						
L27K				IAMs_20	IAMs_20	05 12 43.2	
	comp=Z,2µm,19.0s						
L27K	**Beaver Creek,**	**71.01**	**29**	P	**P**	**04 41 13.2**	**-0.3**
	baz=287,SNR=34						
JETT	**Jettan, Norway**	**71.09**	**339**	*e*P	**P**	**04 41 13.4**	**-0.6**
M27K	**Edge Creek, AK**	**71.19**	**29**	IAMs_20	IAMs_20	05 13 14.1	
	comp=Z,3µm,20.0s						
M27K	**Edge Creek, AK**	**71.19**	**29**	P	**P**	**04 41 13.9**	**-0.9**
	baz=287						
WAX	**Waxell Ridge**	**71.30**	**31**	IAmb	IAmb	04 41 19.2	
	comp=Z,32nm,1.2s						
WAX				IAMs_20	IAMs_20	05 09 50.2	
	comp=Z,3µm,22.0s						
SNH	**Sunshine Point**	**71.39**	**32**	IAMs_20	IAMs_20	05 12 16.5	
	comp=Z,2µm,19.0s						
FIA1	**FINESS Array S**	**71.43**	**330**	IAmb	IAmb	04 41 22.8	
	comp=Z,30nm,0.9s						
FINES	**FINESS Array B**	**71.43**	**330**	P	**P**	**04 41 15.3**	**-0.7**
	comp=Z,11nm,0.8s,baz=65,slow=5.6,SNR=20						
FINES				LR	LR	05 15 38.1	
	comp=Z,8µm,18.3s,baz=66,slow=38						
	comp=Z,11nm,0.8s						
ISLE	**Juniper Island**	**71.50**	**31**	IAMs_20	IAMs_20	05 12 33.4	
	comp=Z,2µm,19.0s						
TRO	**Tromso**	**71.55**	**339**	*e*P	**P**	**04 41 16.6**	**-0.1**
BVCY	**Beaver Creek**	**71.63**	**29**	P	**P**	**04 41 17.2**	**-0.1**
	baz=288						
LKBA	**Tubou, Lakemba**	**71.66**	**121**	P	**P**	**04 41 21.0**	**+2.9**
	comp=Z,1.4nm,1.1s						
BARN	**Barnard Glacie**	**71.68**	**31**	IAMs_20	IAMs_20	05 12 21.1	
	comp=Z,2µm,20.0s						
DAWY	**Dawson**	**71.74**	**27**	IAmb	IAmb	04 41 21.3	
	comp=Z,36nm,1.3s						
DAWY	**Dawson**	**71.74**	**27**	P	**P**	**04 41 17.3**	**-0.7**
	baz=289,SNR=33						
I29M	**Ogilvie Camp,**	**71.76**	**26**	IAMs_20	IAMs_20	05 12 42.8	
	comp=Z,3µm,18.0s						
I29M	**Ogilvie Camp,**	**71.76**	**26**	P	**P**	**04 41 17.5**	**-0.5**
	baz=289,SNR=18						
DIKM	**Dikmen**	**71.77**	**308**	⇓P	**P**	**04 41 19.2**	**+0.7**
NOR	**Nord**	**71.94**	**354**	*i* P	**P**	**04 41 17.9**	**-1.0**
NOR				IAmb	IAmb	04 41 25.4	
	comp=Z,11nm,0.8s						
YUK3	**Moose Creek**	**72.01**	**30**	P	**P**	**04 41 19.1**	**-0.7**
	baz=288,SNR=14						
VSU	**Vasula**	**72.02**	**327**	*ce*P	**P**	**04 41 19.2**	**-0.5**
VSU				pmax	pmax		
	comp=Z,52nm,1.1s						
VSU	**Vasula**	**72.02**	**327**	*e*P	**P**	**04 41 19.0**	**-0.6**
J29M	**Klondike Camp**	**72.10**	**27**	P	**P**	**04 41 19.9**	**-0.3**
	baz=290						
TABL	**Table Mountain**	**72.11**	**31**	IAMs_20	IAMs_20	05 13 01.6	
	comp=Z,2µm,20.0s						
INK	**Inuvik**	**72.47**	**22**	LR	LR	05 16 47.0	
	comp=Z,2µm,18.2s,baz=298,slow=39						
INK	**Inuvik**	**72.47**	**22**	IAmb	IAmb	04 41 51.2	
	comp=Z,32nm,1.1s						
INK	**Inuvik**	**72.47**	**22**	P	**P**	**04 41 20.8**	**-1.4**
	baz=292,SNR=27						
MEF	**Metsahovi**	**72.60**	**329**	*e*P	**P**	**04 41 22.4**	**-0.7**
MNK	**Minsk**	**72.64**	**322**	*i* P	**P**	**04 41 22.9**	**-0.5**
MNK				*i*		04 44 04.4	
MNK				*i* S	**S**	**04 50 49.6**	**+1.5**
MNK				*i* SS	**SS**	**04 55 29.6**	**+2.8**
MNK				pmax	pmax		
	comp=E,8.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,66nm,1.4s						
MNK				pmax	pmax		
	comp=N,29nm,1.3s						
MNK				MLR	MLR		
	comp=Z,1µm,14.0s						
MNK				MLR	MLR		
	comp=E,224nm,17.0s						
MNK				MLR	MLR		
	comp=N,2µm,17.0s						
MNK	**Minsk**	**72.64**	**322**	*i* P	**P**	**04 41 22.9**	**-0.5**
	comp=E,8.0nm,1.4s						
MNK				*i* P	**P**	**04 41 22.9**	**-0.5**
	comp=N,29nm,1.3s						
MNK				*i* P	**P**	**04 41 22.9**	**-0.5**
	comp=Z,66nm,1.4s,baz=252						
MNK				*i* PP	**PP**	**04 44 04.4**	**-0.2**
MNK				*i* PPP	PPP	04 46 06.0	
MNK				*i* S	**S**	**04 50 49.6**	**+1.5**
MNK				*i* SS	**SS**	**04 55 29.6**	**+2.8**
MNK				*i* SSS	SSS	04 58 50.1	
MNK				*i* LQ	LQ	05 08 25.1	
MNK				*i* LR	LR	05 12 17.6	
MNK				*i* LRM	MLR	05 15 48.6	
	comp=E,224nm,17.1s						
MNK				*i* LRM	MLR	05 15 48.6	
	comp=Z,1µm,14.3s						
MNK				*i* LRM	MLR	05 16 34.4	
	comp=N,2µm,17.5s						
PINM	**Pinnacle**	**72.65**	**31**	P	**P**	**04 41 23.0**	**-0.6**
	baz=289,SNR=14						
YUK4	**Talbot Arm**	**72.97**	**30**	P	**P**	**04 41 24.4**	**-1.2**
	baz=290,SNR=13						
BCPM	**Bancas Point**	**72.99**	**31**	IAmb	IAmb	04 41 28.7	
	comp=Z,33nm,1.2s						
BCPM				IAMs_20	IAMs_20	05 13 47.6	
	comp=Z,2µm,19.0s						
ALE	**Alert**	**73.00**	**1**	IAMs_20	IAMs_20	05 11 37.8	
	comp=Z,2µm,22.0s						
IDID	**Didziasalis**	**73.00**	**323**	*e*P	**P**	**04 41 25.2**	**-0.4**
AKASG	**Malin Array Be**	**73.04**	**318**	P	**P**	**04 41 24.8**	**-1.1**
	comp=Z,11nm,0.9s,baz=56,slow=6.3,SNR=30						
AKASG				LR	LR	05 14 05.6	
	comp=Z,3µm,21.6s,baz=70,slow=36						
	comp=Z,11nm,0.9s						
AKASG	**Malin Array Be**	**73.04**	**318**	IAmb	IAmb	04 41 31.7	
	comp=Z,66nm,1.6s						
AKBB	**Malin Array Si**	**73.04**	**318**	IAmb	IAmb	04 41 33.9	
	comp=Z,40nm,1.2s						
AKBB	**Malin Array Si**	**73.04**	**318**	⇑*e*P	**P**	**04 41 24.9**	**-1.0**
NACGM	**Naroch**	**73.11**	**323**	⇓*e*P	**P**	**04 41 26.6**	**+0.4**
	baz=71						
PNL	**Peninsula**	**73.20**	**32**	P	**P**	**04 41 25.9**	**-0.9**
	baz=290						
YUK6	**Outpost Mounta**	**73.24**	**30**	P	**P**	**04 41 27.2**	**0.0**
	baz=290,SNR=8.4						
ISAL	**Salakas**	**73.25**	**324**	*e*P	**P**	**04 41 27.9**	**+0.8**
IIGN	**Ignalina**	**73.27**	**324**	*e*P	**P**	**04 41 27.6**	**+0.4**
M30M	**Minto, Yukon**	**73.35**	**28**	IAmb	IAmb	04 41 35.8	
	comp=Z,43nm,1.1s						
M30M				IAMs_20	IAMs_20	05 13 55.1	
	comp=Z,3µm,20.0s						
M30M	**Minto, Yukon**	**73.35**	**28**	P	**P**	**04 41 27.3**	**-0.3**
	baz=291,SNR=43						
A36M	**Sachs Harbour**	**73.42**	**17**	IAmb	IAmb	04 41 44.9	
	comp=Z,32nm,1.1s						
A36M				IAMs_20	IAMs_20	05 15 54.4	
	comp=Z,2µm,20.0s						
A36M	**Sachs Harbour**	**73.42**	**17**	P	**P**	**04 41 26.5**	**-1.2**
	baz=299						
ASF	**Jabal al Asfar**	**73.44**	**298**	LR	LR	05 17 41.7	
	comp=Z,1µm,18.8s,baz=92,slow=39						
BR131	**Keskin Array S**	**73.53**	**306**	IAmb	IAmb	04 41 33.2	
	comp=Z,46nm,0.9s						
BR131	**Keskin Array S**	**73.53**	**306**	*d i*P	**P**	**04 41 28.6**	**-0.6**
BR131	**Keskin Array S**	**73.53**	**306**	P	**P**	**04 41 29.0**	**-0.2**
	SNR=28						
BRTR	**Keskin Array B**	**73.53**	**306**	P	**P**	**04 41 28.7**	**-0.5**
	comp=Z,21nm,0.9s,baz=104,slow=4.0,SNR=65						
BRTR				LR	LR	05 16 18.5	
	comp=Z,2µm,22.0s,baz=90,slow=38						
	comp=Z,21nm,0.9s						
RAF	**Rauma**	**73.54**	**330**	*e*P	**P**	**04 41 27.4**	**-1.2**
FAUS	**Fauske**	**73.67**	**337**	*e*P	**P**	**04 41 29.4**	**+0.1**
HYT	**Haines Junctio**	**73.67**	**30**	IAmb	IAmb	04 41 35.4	
	comp=Z,55nm,1.6s						
HYT	**Haines Junctio**	**73.67**	**30**	P	**P**	**04 41 29.3**	**-0.3**
	baz=291,SNR=16						
ANTO	**Ankara**	**74.10**	**307**	P	**P**	**04 41 31.8**	**-0.7**
ANTO				IAmb	IAmb	04 41 36.5	
	comp=Z,46nm,0.9s						
ANTO				IAMs_20	IAMs_20	05 17 54.5	
	comp=Z,2µm,21.0s						
ANTO	**Ankara**	**74.10**	**307**	P	**P**	**04 41 31.8**	**-0.7**
ANTO				pmax	pmax		
	comp=Z,46nm,1.0s						
ANTO				MLR	MLR		
	comp=Z,2µm,21.0s						
N31M	**Braeburn, Yuko**	**74.20**	**29**	IAmb	IAmb	04 41 39.1	
	comp=Z,49nm,1.2s						
N31M				IAMs_20	IAMs_20	05 14 55.7	
	comp=Z,2µm,20.0s						
N31M	**Braeburn, Yuko**	**74.20**	**29**	P	**P**	**04 41 32.4**	**-0.2**
	baz=292,SNR=20						
MMAI	**Mount Meron Ar**	**74.36**	**299**	LR	LR	05 17 50.9	
	comp=Z,2µm,18.4s,baz=228,slow=39						
SORM	**Soroca**	**74.41**	**316**	⇑P	**P**	**04 41 32.8**	**-1.2**
PABE	**Paberze**	**74.43**	**324**	P	**P**	**04 41 32.9**	**-1.1**
PABE				IAmb	IAmb	04 41 40.9	
	comp=Z,61nm,1.0s						
PABE	**Paberze**	**74.43**	**324**	*e*P	**P**	**04 41 33.5**	**-0.4**
MOR8	**Moi Rana**	**74.49**	**336**	*e*P	**P**	**04 41 32.3**	**-1.9**
KIS	**Kishinev**	**74.50**	**315**	*e*P	**P**	**04 41 33.0**	**-1.5**
	comp=Z,310nm,7.2s						
KIS				*e*L	L	05 12 22.0	
KIS				LQM		05 15 30.0	
	comp=Z,900nm,18.0s						
KIS				LRM	MLR	05 19 30.0	
	comp=Z,800nm,16.0s						
KIS	**Kishinev**	**74.50**	**315**	*e*P	**P**	**04 41 33.0**	**-1.5**
KIS				pmax	pmax		
	comp=Z,300nm,7.2s						
KIS				MLR	MLR		
	comp=Z,800nm,16.0s						
MILM	**Milestii Mici**	**74.53**	**315**	⇓*e*P	**P**	**04 41 33.0**	**-1.7**
	comp=Z,720nm,6.8s						
MILM				*e*L	L	05 08 30.0	
MILM				LQM		05 15 37.0	
	comp=Z,2µm,16.0s						
MILM				LRM	MLR	05 18 46.0	
	comp=Z,2µm,15.0s						
MILM	**Milestii Mici**	**74.53**	**315**	*d i*P	**P**	**04 41 33.0**	**-1.7**
MILM				*e*		04 51 03.0	
MILM				pmax	pmax		
	comp=Z,720nm,6.8s						
MILM				MLR	MLR		
	comp=Z,2µm,15.0s						
M31M	**Drury Creek, Y**	**74.53**	**28**	IAMs_20	IAMs_20	05 20 30.2	
	comp=Z,2µm,19.0s						
M31M	**Drury Creek, Y**	**74.53**	**28**	P	**P**	**04 41 33.5**	**-1.0**
	baz=294,SNR=12						
GHAJ	**Ghor Haditha**	**74.80**	**298**	IAMs_20	IAMs_20	05 15 54.5	
	comp=Z,2µm,21.0s						
WHY	**Whitehorse**	**74.93**	**30**	P	**P**	**04 41 36.1**	**-0.9**
	baz=293,SNR=10						
C36M	**Paulatuk**	**75.08**	**20**	IAmb	IAmb	04 41 53.6	
	comp=Z,113nm,1.9s						
C36M				IAMs_20	IAMs_20	05 15 13.3	
	comp=Z,2µm,20.0s						
C36M	**Paulatuk**	**75.08**	**20**	P	**P**	**04 41 35.6**	**-1.8**
	baz=301						
SKAG	**Skagway**	**75.20**	**31**	IAmb	IAmb	04 41 44.1	
	comp=Z,48nm,1.3s						
SKAG	**Skagway**	**75.20**	**31**	P	**P**	**04 41 38.2**	**-0.1**
	baz=293,SNR=12						
HORU	**Horodok**	**75.24**	**318**	P	**P**	**04 41 37.7**	**-1.1**
CSS	**Mathiatis**	**75.33**	**302**	IAMs_20	IAMs_20	05 19 18.2	
	comp=Z,2µm,21.0s						
SUW	**Suwalki**	**75.40**	**323**	*e*P	**P**	**04 41 38.6**	**-1.0**
SUW	**Suwalki**	**75.40**	**323**	*e*P	**P**	**04 41 38.6**	**-1.0**
TPGR	**Topolog**	**75.49**	**313**	⇓P	**P**	**04 41 39.8**	**-0.6**
CFR	**Carcaliu**	**75.56**	**313**	P	**P**	**04 41 40.5**	**-0.2**
ATD	**Arta Tunnel**	**75.57**	**276**	LR	LR	05 13 08.1	
	comp=Z,1µm,21.6s,baz=64,slow=34						
ATD	**Arta Tunnel**	**75.57**	**276**	IAmb	IAmb	04 41 47.3	
	comp=Z,34nm,0.9s						
ATD	**Arta Tunnel**	**75.57**	**276**	*e*P	P	04 41 35.0	-6.4
ATD	**Arta Tunnel**	**75.57**	**276**	*e*P	**P**	**04 41 40.9**	**-0.4**
TIRR	**Tirgusor**	**75.63**	**312**	⇑P	**P**	**04 41 42.3**	**+1.2**
TIRR	**Tirgusor**	**75.63**	**312**	IAmb	IAmb	04 41 49.0	
	comp=Z,56nm,1.1s						
BESE	**Bessie Mountai**	**75.78**	**32**	IAmb	IAmb	04 41 47.5	
	comp=Z,37nm,1.3s						
BORA	**Eskisehir**	**75.80**	**307**	IAmb	IAmb	04 41 45.7	
	comp=Z,39nm,1.0s						
EIL	**Elat**	**75.86**	**296**	LR	LR	05 18 22.3	
	comp=Z,2µm,18.6s,baz=84,slow=38						
UPP	**Uppsala**	**75.89**	**330**	*e*P	**P**	**04 41 42.2**	**0.0**
PSN	**Preselentsi**	**76.06**	**312**	*i* P	**P**	**04 41 44.3**	**+0.7**
TESR	**Tescani**	**76.06**	**315**	⇑P	**P**	**04 41 43.1**	**-0.5**
JIS	**Juneau Island**	**76.13**	**32**	IAMs_20	IAMs_20	05 18 12.7	
	comp=Z,2µm,20.0s						
SIT	**Sitka**	**76.17**	**33**	P	**P**	**04 41 43.5**	**-0.4**
	baz=294						
NSS	**Namsos**	**76.17**	**335**	*e*P	**P**	**04 41 43.4**	**-0.4**
VRI	**Vrincioaia**	**76.24**	**314**	⇑P	**P**	**04 41 44.8**	**+0.1**
BIZ	**Bicaz**	**76.26**	**315**	⇓P	**P**	**04 41 44.3**	**-0.4**
PLOR	**Plostina**	**76.30**	**314**	⇓P	**P**	**04 41 46.4**	**+1.4**
ISP	**Isparta**	**76.46**	**305**	IAmb	IAmb	04 41 50.6	
	comp=Z,49nm,0.9s						
LVV	**L'vov**	**76.47**	**319**	*e*P	**P**	**04 41 44.8**	**-1.1**
BURAR	**Bucovina Array**	**76.57**	**316**	⇑P	**P**	**04 41 46.1**	**-0.4**
PRD	**Provadia**	**76.76**	**312**	*i* P	**P**	**04 41 46.8**	**-0.8**
OZUR		**76.77**	**315**	⇑P	**P**	**04 41 48.0**	**+0.3**
MLR	**Muntele Rosu**	**76.89**	**314**	⇓P	**P**	**04 41 48.0**	**-0.5**
MLR	**Muntele Rosu**	**76.89**	**314**	LR	LR	05 19 32.6	
	comp=Z,3µm,21.6s,baz=56,slow=39						
MLR	**Muntele Rosu**	**76.89**	**314**	IAmb	IAmb	04 42 16.2	

	comp=Z,38nm,1.2s						
VIKU	**Vikbolandet**	**76.90**	**329**	*e*P	**P**	**04 41 48.1**	**+0.1**
DOPR	**Dopca**	**77.08**	**315**	⇑P	**P**	**04 41 49.5**	**+0.1**
KWP	**Kalwaria Pacla**	**77.34**	**319**	*e*P	**P**	**04 41 50.4**	**-0.4**
TGTN	**Hyland Airport**	**77.43**	**28**	P	**P**	**04 41 50.3**	**-0.8**
	baz=299						
VOIR		**77.50**	**314**	⇑P	**P**	**04 41 50.7**	**-1.1**
HFS	**Hagfors**	**77.54**	**331**	LR	LR	05 19 17.5	
	comp=Z,12µm,18.2s,baz=58,slow=38						
MANT	**Manisa**	**77.67**	**307**	IAmb	IAmb	04 42 01.5	
	comp=Z,31nm,1.1s						
AKAS	**Kas**	**77.72**	**304**	IAmb	IAmb	04 42 08.8	
	comp=Z,42nm,1.0s						
SZH	**Strazhica**	**77.73**	**312**	*i* P	**P**	**04 41 52.0**	**-1.1**
TRSU	**Trosnyk**	**77.79**	**317**	P	**P**	**04 41 55.1**	**+1.8**
ARR	**Arges**	**77.79**	**314**	⇑P	**P**	**04 41 53.5**	**+0.1**
KOLS	**Kolonicke sedl**	**77.88**	**318**	*e*P	**P**	**04 41 53.9**	**+0.1**
KOLS	**Kolonicke sedl**	**77.88**	**318**	*e*P	**P**	**04 41 53.9**	**+0.1**
WRAK	**Wrangell Islan**	**77.92**	**33**	IAMs_20	IAMs_20	05 17 08.3	
	comp=Z,1µm,18.0s						
WRAK	**Wrangell Islan**	**77.92**	**33**	P	**P**	**04 41 53.1**	**-0.7**
	baz=296						
CRAG	**Craig**	**77.95**	**34**	P	**P**	**04 41 52.9**	**-1.1**
	baz=296						
UZH	**Uzhgorod**	**77.99**	**318**	*e*P	**P**	**04 41 53.2**	**-1.1**
UZH				*e*		04 41 56.4	
UZH				*i*		04 41 58.9	
UZH				*e*		04 42 05.6	
RES	**Resolute Bay**	**78.06**	**9**	LR	LR	05 20 21.4	
	comp=Z,2µm,18.9s,baz=332,slow=39						
DLBC	**Dease Lake**	**78.12**	**31**	LR	LR	05 17 24.4	
	comp=Z,1µm,20.6s,baz=318,slow=36						
NB2	**NORSAR Subarra**	**78.17**	**332**	P	**P**	**04 41 54.4**	**-0.8**
	comp=Z,379nm,3.3s,baz=60,slow=5.9						
NB2	**NORSAR Subarra**	**78.17**	**332**	P	**P**	**04 41 54.4**	**-0.8**
	baz=60,slow=5.9						
NOA	**NORSAR Array B**	**78.17**	**332**	P	**P**	**04 41 54.4**	**-0.8**
	comp=Z,9.4nm,0.9s,baz=59,slow=5.6,SNR=13						
NOA				LR	LR	05 19 41.6	
	comp=Z,4µm,18.4s,baz=60,slow=38						
	comp=Z,9.4nm,0.9s						
NC602	**NORSAR Array S**	**78.18**	**332**	IAmb	IAmb	04 42 17.4	
	comp=Z,41nm,1.2s						
NC602	**NORSAR Array S**	**78.18**	**332**	*e*P	**P**	**04 41 55.8**	**+0.6**
NC204	**NORSAR Array S**	**78.24**	**333**	IAmb	IAmb	04 42 13.3	
	comp=Z,89nm,1.6s						
DBG	**Daneborg**	**78.26**	**350**	*i* P	**P**	**04 41 56.0**	**+0.7**
DBG				IAmb	IAmb	04 42 04.3	
	comp=Z,7.2nm,0.9s						
NBO00	**NORSAR Array S**	**78.36**	**332**	IAmb	IAmb	04 42 09.5	
	comp=Z,100nm,1.6s						
NAO01	**NORSAR Array S**	**78.41**	**332**	IAmb	IAmb	04 42 02.5	
	comp=Z,49nm,1.3s						
DRGR		**78.47**	**316**	⇑P	**P**	**04 41 57.1**	**-0.1**
DRGR		**78.47**	**316**	P	**P**	**04 41 57.0**	**-0.1**
DOMB	**Dombas**	**78.55**	**334**	*e*P	**P**	**04 41 56.2**	**-1.1**
ALN	**Alexandroupoli**	**78.56**	**310**	P	**P**	**04 41 53.5**	**-4.2**
JMIC	**Jan Mayen**	**78.57**	**345**	LR	LR	05 21 11.8	
	comp=Z,2µm,18.3s,baz=67,slow=39						
DESE	**Dese**	**78.63**	**277**	*e*P	**P**	**04 41 58.4**	**-0.5**
DESE	**Dese**	**78.63**	**277**	*e*P	**P**	**04 41 56.6**	**-2.2**
RAO	**Raoul Island**	**78.72**	**129**	LR	LR	05 10 45.9	
	comp=Z,762nm,21.9s,baz=312,slow=31						
TULEG	**Thule**	**78.80**	**3**	IAMs_20	IAMs_20	05 16 49.1	
	comp=Z,2µm,19.0s						
RDO	**Rodhopi**	**78.82**	**310**	P	**P**	**04 41 58.0**	**-1.1**
OJC	**Ojcow**	**78.82**	**320**	*e*P	**P**	**04 41 58.2**	**-0.7**
OJC				*e*sP	**sP**	**04 42 03.8**	**-0.4**
OJC	**Ojcow**	**78.82**	**320**	IAMs_20	IAMs_20	05 17 38.7	
	comp=Z,2µm,21.0s						
NIE	**Niedzica**	**78.86**	**319**	*e*P	**P**	**04 41 59.9**	**+0.6**
NIE				*e*sP	**sP**	**04 42 05.2**	**+0.7**
GKP	**Gorka Klasztor**	**78.93**	**324**	*e*P	**P**	**04 41 59.0**	**-0.4**
OSL	**Oslo**	**78.94**	**331**	*e*P	**P**	**04 41 59.5**	**+0.2**
PLD	**Plovdiv**	**79.02**	**311**	*i* P	**P**	**04 41 59.2**	**-1.0**
BODT	**Bodrum**	**79.12**	**306**	P	**P**	**04 41 59.5**	**-1.4**
RZN	**Rozhen**	**79.17**	**311**	*i* P	**P**	**04 42 00.1**	**-1.2**
DEL	**Delary**	**79.19**	**328**	*e*P	**P**	**04 41 59.8**	**-1.0**
PGB	**Panagyurishte**	**79.21**	**312**	*i* P	**P**	**04 42 00.7**	**-0.6**
AKN	**Aaknes**	**79.30**	**334**	*e*P	**P**	**04 42 01.2**	**-0.1**
SIRR	**Siria**	**79.34**	**316**	⇓P	**P**	**04 42 02.3**	**+0.4**
SIGR	**SIGRI**	**79.35**	**308**	P	**P**	**04 42 02.9**	**+0.9**
HERR	**Herculane**	**79.43**	**315**	⇑P	**P**	**04 42 01.8**	**-0.5**
LANS	**Liptovska Anna**	**79.47**	**319**	*e*P	**P**	**04 42 02.9**	**+0.3**
LANS	**Liptovska Anna**	**79.47**	**319**	*e*P	**P**	**04 42 02.9**	**+0.3**
CHOS	**Chios island**	**79.53**	**307**	P	**P**	**04 42 04.1**	**+1.0**
KONO	**Kongsberg**	**79.57**	**332**	*e*P	**P**	**04 42 02.2**	**-0.7**
SKAR	**Skarslia**	**79.58**	**333**	*e*P	**P**	**04 42 02.8**	**-0.1**
KAVA	**Kavala**	**79.59**	**310**	P	**P**	**04 42 02.2**	**-1.1**
THAS	**Thassos island**	**79.60**	**310**	P	**P**	**04 42 04.2**	**+0.8**
PSZ	**Piszkesteto**	**79.74**	**318**	⇓P	**P**	**04 42 04.6**	**+0.5**
PSZ	**Piszkesteto**	**79.74**	**318**	IAmb	IAmb	04 42 10.6	
	comp=Z,102nm,1.9s						
PSZ				IAMs_20	IAMs_20	05 16 59.0	
	comp=Z,2µm,18.0s						
PSZ	**Piszkesteto**	**79.74**	**318**	P	**P**	**04 42 04.6**	**+0.5**
PSZ	**Piszkesteto**	**79.74**	**318**	P	**P**	**04 42 03.8**	**-0.4**
BLKB	**Belogradchik**	**79.77**	**313**	⇓P	**P**	**04 42 03.7**	**-0.6**
VTS	**Vitosha**	**79.81**	**312**	⇑P	**P**	**04 42 04.9**	**+0.2**
VTS	**Vitosha**	**79.81**	**312**	IAmb	IAmb	04 42 12.1	
	comp=Z,128nm,2.0s						
VTS	**Vitosha**	**79.81**	**312**	*i* P	**P**	**04 42 04.3**	**-0.4**
KARP	**Karpathos**	**79.82**	**304**	P	**P**	**04 42 03.7**	**-1.0**
KARP	**Karpathos**	**79.82**	**304**	IAmb	IAmb	04 42 13.8	
	comp=Z,75nm,1.0s						
KARP				IAMs_20	IAMs_20	05 21 54.9	
	comp=Z,2µm,20.0s						
MMB	**Musomiste**	**79.89**	**311**	*i* P	**P**	**04 42 04.0**	**-1.0**
MDVR	**Moldovita**	**79.92**	**315**	⇓P	**P**	**04 42 04.2**	**-0.9**
OKC	**Ostrava-Krasne**	**79.94**	**320**	AMS	AMS	05 22 50.0	
	comp=Z,3µm,13.2s						
VYHS	**Vyhne**	**80.13**	**319**	*e*P	**P**	**04 42 05.5**	**-0.6**
VYHS	**Vyhne**	**80.13**	**319**	*e*P	**P**	**04 42 05.5**	**-0.6**
SRS	**Serrai**	**80.18**	**311**	P	**P**	**04 42 07.2**	**+0.7**
KKB	**Krupnik**	**80.22**	**312**	*i* P	**P**	**04 42 04.9**	**-1.8**
AAE	**Adis Abeba**	**80.24**	**275**	*e*P	**P**	**04 42 07.3**	**-0.3**
AAE	**Adis Abeba**	**80.24**	**275**	*e*P	P	04 42 00.4	-7.2
MORC	**Moravsky Berou**	**80.32**	**320**	⇑P	**P**	**04 42 07.0**	**-0.2**
MORC	**Moravsky Berou**	**80.32**	**320**	*e*P	**P**	**04 42 06.2**	**-1.0**
MAUC	**Maruska**	**80.34**	**320**	AMS	AMS	05 22 20.0	
	comp=Z,4µm,13.7s						
FURI	**Furi**	**80.37**	**275**	IAMs_20	IAMs_20	05 22 04.2	
	comp=Z,1µm,20.0s						
FURI	**Furi**	**80.37**	**275**	*e*P	P	04 42 02.8	-5.6
FURI	**Furi**	**80.37**	**275**	*e*P	P	04 41 59.6	-8.8
FOO	**Floro**	**80.39**	**334**	*e*P	**P**	**04 42 04.7**	**-2.5**
KSP	**Ksiaz**	**80.55**	**322**	*e*P	**P**	**04 42 08.1**	**-0.2**
KSP				*e*sP	**sP**	**04 42 13.2**	**-0.4**
KRLC	**Kraliky**	**80.62**	**321**	*e*P	**P**	**04 42 11.8**	**+3.0**
KRLC				MLR	MLR		
	comp=Z,4µm,12.6s						
KRLC	**Kraliky**	**80.62**	**321**	*e*P	**P**	**04 42 11.8**	**+3.0**
KRLC				AMS	AMS	05 21 00.0	
	comp=Z,4µm,12.6s						
JAVC	**Velka Javorina**	**80.66**	**320**	*e*P	**P**	**04 42 09.6**	**+0.6**
OSTC	**Ostas**	**80.72**	**322**	*e*P	P	04 42 15.9	+6.6
OSTC				AMS	AMS	05 21 10.0	
	comp=Z,4µm,12.5s						
DPC	**Dobruska-Polom**	**80.76**	**321**	*e*P	**P**	**04 42 09.5**	**0.0**
DPC				MLR	MLR		
	comp=Z,4µm,12.2s						
DPC	**Dobruska-Polom**	**80.76**	**321**	*e*P	**P**	**04 42 09.5**	**0.0**
DPC				AMS	AMS	05 21 00.0	
	comp=Z,4µm,12.2s						
HOMB	**Homborsund**	**80.78**	**331**	*e*P	**P**	**04 42 08.0**	**-1.4**
VAY	**Valandovo**	**80.80**	**311**	*i* P	**P**	**04 42 08.4**	**-1.4**
CHVC	**Chvalec**	**80.80**	**322**	*e*P	P	04 42 15.7	+6.0
CHVC				AMS	AMS	05 21 10.0	
	comp=Z,3µm,24.7s						
SUE	**Sulen**	**80.81**	**334**	*e*P	**P**	**04 42 08.7**	**-0.8**
KYMI	**Kymi, Euboea I**	**80.83**	**308**	P	**P**	**04 42 10.3**	**+0.2**
UPC	**Upice**	**80.86**	**322**	AMS	AMS	05 21 10.0	
	comp=Z,4µm,12.4s						
ASK	**Askoy**	**80.97**	**333**	*e*P	**P**	**04 42 09.9**	**-0.4**
BER	**Bergen**	**80.97**	**333**	*e*P	**P**	**04 42 09.8**	**-0.5**
FRGS	**Fruska Gora**	**80.99**	**316**	⇑P	**P**	**04 42 10.6**	**-0.2**
BLS5	**Blasjo**	**81.04**	**332**	*e*P	**P**	**04 42 11.2**	**+0.4**
GRG	**Griva**	**81.06**	**311**	P	**P**	**04 42 11.4**	**+0.1**
VRAC	**Vranov**	**81.08**	**320**	⇑P	**P**	**04 42 12.0**	**+0.8**
VRAC	**Vranov**	**81.08**	**320**	LR	LR	05 21 33.1	
	comp=Z,1µm,19.8s,baz=62,slow=38						
VRAC	**Vranov**	**81.08**	**320**	*e*P	**P**	**04 42 10.2**	**-1.0**
MODS	**Modra-Piesok**	**81.11**	**319**	*e*P	**P**	**04 42 10.3**	**-1.1**
MODS				pmax	pmax		
	comp=Z,440nm,3.0s						
MODS	**Modra-Piesok**	**81.11**	**319**	*e*P	**P**	**04 42 10.3**	**-1.1**
URZ	**Urewera**	**81.12**	**139**	LR	LR	05 18 34.4	
	comp=Z,407nm,18.1s,baz=31,slow=36						
RUE	**Ruedersdorf**	**81.15**	**324**	*e*P	**P**	**04 42 11.0**	**-0.5**
XOR	**Xorichti**	**81.17**	**309**	P	**P**	**04 42 11.7**	**-0.2**
SKO	**Skopje**	**81.29**	**312**	*i* P	**P**	**04 42 12.3**	**-0.2**
ZST	**Bratislava**	**81.30**	**319**	*e*P	**P**	**04 42 13.7**	**+1.3**
ZST	**Bratislava**	**81.30**	**319**	*e*P	**P**	**04 42 13.7**	**+1.3**
KRUC	**Moravsky**	**81.31**	**320**	*e*P	**P**	**04 42 12.1**	**-0.3**
SNART	**Snartemo**	**81.32**	**331**	*e*P	**P**	**04 42 12.3**	**+0.1**
LIT	**Litokhoron**	**81.36**	**310**	P	**P**	**04 42 12.9**	**0.0**
MPLH	**Magyarpolny**	**81.50**	**318**	P	**P**	**04 42 12.7**	**-0.8**
RPZ	**Rata Peaks**	**81.54**	**146**	LR	LR	05 18 44.3	
	comp=Z,549nm,18.4s,baz=326,slow=36						
IDI	**Anoyia**	**81.62**	**305**	LR	LR	05 23 46.4	
	comp=Z,682nm,22.0s,baz=69,slow=40						
IDI	**Anoyia**	**81.62**	**305**	P	**P**	**04 42 14.1**	**-0.3**
KOVH	**Kovagotottos**	**81.65**	**317**	P	**P**	**04 42 12.9**	**-1.4**
PVCC	**Panska Ves**	**81.67**	**322**	AMS	AMS	05 22 00.0	
	comp=Z,4µm,14.3s						
TREC	**Trest**	**81.73**	**321**	*e*P	**P**	**04 42 15.9**	**+1.2**
TREC				MLR	MLR		
	comp=Z,5µm,13.1s						
TREC	**Trest**	**81.73**	**321**	*e*P	**P**	**04 42 15.9**	**+1.2**
TREC				AMS	AMS	05 21 40.0	
	comp=Z,5µm,13.1s						
SCO	**Scoresbysund**	**81.75**	**348**	IAmb	IAmb	04 42 37.1	
	comp=Z,75nm,1.9s						
SCO				IAMs_20	IAMs_20	05 20 45.9	
	comp=Z,3µm,20.0s						
SCO	**Scoresbysund**	**81.75**	**348**	*i* P	P	04 42 19.6	+5.3
KZN	**Kozani**	**81.77**	**311**	P	**P**	**04 42 13.2**	**-1.9**
FNA	**Florina**	**81.84**	**311**	P	**P**	**04 42 15.7**	**+0.2**
BRG	**Berggiesshubel**	**81.85**	**323**	*e*P	**P**	**04 42 18.4**	**+3.2**
BRG				Amp		04 42 23.4	
	comp=Z,18nm,1.4s						
BRG	**Berggiesshubel**	**81.85**	**323**	*e*P	**P**	**04 42 18.4**	**+3.2**
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
AGG	**Agios Georgios**	**81.93**	**309**	P	**P**	**04 42 13.1**	**-2.8**
PRU	**Pruhonice**	**81.94**	**322**	*e*P	**P**	**04 42 18.5**	**+2.8**
PRU				MLR	MLR		
	comp=Z,4µm,29.5s						
PRU	**Pruhonice**	**81.94**	**322**	*e*P	**P**	**04 42 18.5**	**+2.8**
PRU				AMS	AMS	05 22 00.0	
	comp=Z,4µm,29.5s						
OHR	**Ohrid**	**82.09**	**312**	*i* P	**P**	**04 42 18.3**	**+1.5**
SUMG	**Summit**	**82.10**	**354**	IAMs_20	IAMs_20	05 19 23.3	
	comp=Z,2µm,20.0s						
SUMG	**Summit**	**82.10**	**354**	*i* P	**P**	**04 42 17.4**	**+0.8**
SUMG				IAmb	IAmb	04 42 24.8	
	comp=Z,12nm,0.8s						
BBB	**Bella Bella**	**82.12**	**36**	LR	LR	05 20 38.6	
	comp=Z,420nm,18.1s,baz=343,slow=37						
CLL	**Collm**	**82.15**	**323**	*e*P	**P**	**04 42 17.0**	**+0.2**
CLL				*e*S	**S**	**04 52 30.0**	**-1.5**
CLL				pmax	pmax		
	comp=Z,16nm,0.9s						
CLL	**Collm**	**82.15**	**323**	*e*P	**P**	**04 42 17.0**	**+0.2**
CLL				*e*Pmax		04 42 19.0	
	comp=Z,16nm,0.9s						
CLL				*e*S	**S**	**04 52 30.0**	**-1.5**
CLL				*e*PS	**PnS**	**04 53 27.0**	**+6.9**
CLL				*e*SS	**SS**	**04 57 54.0**	**+3.8**
CLL				*e*SSS	SSS	05 01 30.0	
CLL				*e*SSSS		05 03 42.0	
CONA	**Conrad Observa**	**82.16**	**319**	*e*P	P	04 42 22.7	+5.6
	comp=Z,0.8nm,0.2s						
YKA	**Yellowknife Ar**	**82.21**	**23**	P	**P**	**04 42 15.7**	**-1.1**
	comp=Z,10.0nm,0.8s,baz=314,slow=4.9,SNR=60						
YKA				PKKPbc	**PKKPbc**	**05 00 42.1**	**-4.0**
	comp=Z,0.5nm,0.8s,baz=129,slow=2.3,SNR=7.0						
YKA				PKPPKP	**P'P'df**	**05 08 48.5**	**-6.3**
	comp=Z,0.3nm,1.0s,baz=120,slow=1.7,SNR=3.9						
YKA				LR	LR	05 22 04.5	
	comp=Z,2µm,18.5s,baz=324,slow=38						
	comp=Z,10.0nm,0.8s						
YKA	**Yellowknife Ar**	**82.21**	**23**	*i* P	**P**	**04 42 15.1**	**-1.8**
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
IMMV	**Iera Moni Meta**	**82.22**	**305**	P	**P**	**04 42 15.9**	**-1.6**
EVR	**Evrytania**	**82.34**	**309**	P	**P**	**04 42 17.8**	**-0.4**
GVD	**Gavdhos**	**82.41**	**305**	P	**P**	**04 42 18.2**	**-0.3**
KLV	**Kalavryta, Ach**	**82.47**	**308**	P	**P**	**04 42 17.9**	**-0.9**
PDG	**Podgorica**	**82.55**	**313**	IAMs_20	IAMs_20	05 24 12.5	
	comp=Z,2µm,21.0s						
TIR	**Tirane**	**82.62**	**312**	IAMs_20	IAMs_20	05 20 04.7	
	comp=Z,2µm,20.0s						
CKRC	**Cesky Krumlov**	**82.64**	**321**	*e*P	**P**	**04 42 22.9**	**+3.4**
KHC	**Kasperske Hory**	**82.91**	**321**	*e*P	**P**	**04 42 20.1**	**-0.8**
KHC				*e*		04 42 26.0	
KHC				MLR	MLR		
	comp=Z,4µm,12.9s						
KHC	**Kasperske Hory**	**82.91**	**321**	*e*P	**P**	**04 42 20.1**	**-0.8**
KHC				*e*pP	**sP**	**04 42 26.0**	**-0.1**
KHC				AMS	AMS	05 22 30.0	
	comp=Z,4µm,12.9s						
GERES	**GERESS Array B**	**82.98**	**321**	P	**P**	**04 42 20.8**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=79,slow=2.9,SNR=10						
GERES				LR	LR	05 20 19.0	
	comp=Z,2µm,20.1s,baz=66,slow=36						
	comp=Z,1.7nm,0.7s						
NKC	**Novy Kostel**	**82.99**	**322**	AMS	AMS	05 24 20.0	
	comp=Z,6µm,13.0s						
ITM	**Ithomi**	**83.00**	**308**	P	**P**	**04 42 19.5**	**-2.1**
ITM	**Ithomi**	**83.00**	**308**	IAmb	IAmb	04 42 26.5	
	comp=Z,40nm,0.8s						
IGT	**Igoumenitsa**	**83.10**	**310**	P	**P**	**04 42 20.8**	**-1.2**
MOA	**Molln**	**83.14**	**320**	*e*P	**P**	**04 42 23.8**	**+1.8**
	comp=Z,2.3nm,0.7s						
JAWL	**J.Aulia**	**83.40**	**284**	*i* P	**P**	**04 42 24.6**	**+0.6**
OBKA	**Obir**	**83.62**	**318**	*e*P	**P**	**04 42 25.1**	**+0.4**
	comp=Z,2.6nm,0.7s						
KBA	**Koelnbreinsper**	**84.06**	**319**	*e*P	**P**	**04 42 26.9**	**-0.1**
	comp=Z,2.8nm,0.5s						
MYKA	**Terra Mystica**	**84.11**	**319**	*e*P	**P**	**04 42 30.7**	**+3.6**
	comp=Z,1.5nm,0.4s						
OPO	**Ambohidratompo**	**84.62**	**247**	LR	LR	05 19 43.1	
	comp=Z,430nm,18.4s,baz=206,slow=35						
ABTA	**Abfaltersbach**	**84.72**	**319**	*e*P	**P**	**04 42 32.2**	**+2.0**
	comp=Z,4.6nm,0.9s						
ABPO	**Ambohimpanom**	**84.80**	**246**	P	**P**	**04 42 29.5**	**-1.6**
ABPO				IAMs_20	IAMs_20	05 17 57.3	
	comp=Z,1µm,20.0s						
ABPO	**Ambohimpanom**	**84.80**	**246**	P	**P**	**04 42 29.5**	**-1.6**
ABPO				pmax	pmax		
	comp=Z,112nm,1.6s						
WTTA	**Wattenberg**	**84.97**	**320**	*e*P	**P**	**04 42 32.0**	**+0.3**
	comp=Z,1.9nm,0.4s						
MOTA	**Moosalm**	**85.24**	**320**	*e*P	**P**	**04 42 32.0**	**-0.9**
	comp=Z,2.3nm,0.5s						
SQTA	**Sankt Quirin**	**85.24**	**320**	*e*P	**P**	**04 42 33.0**	**+0.1**
	comp=Z,1.4nm,0.2s						
SOEG	**Soedalen**	**85.35**	**350**	*i* P	**P**	**04 42 34.7**	**+1.8**
SOEG				IAmb	IAmb	04 42 36.2	
	comp=Z,5.9nm,0.7s						
KIBK	**Kibwezi**	**85.53**	**265**	IAmb	IAmb	04 42 42.0	
	comp=Z,50nm,1.3s						
KIBK	**Kibwezi**	**85.53**	**265**	P	**P**	**04 42 36.7**	**+1.9**
	SNR=6.3						
ICESG	**Greenland Ices**	**85.57**	**354**	*i* P	**P**	**04 42 35.9**	**+1.6**
ICESG				IAmb	IAmb	04 42 40.1	
	comp=Z,39nm,1.7s						
LODK	**Lodwar**	**85.59**	**272**	P	**P**	**04 42 36.1**	**+0.9**
	SNR=6.3						
LODK	**Lodwar**	**85.59**	**272**	*e*P	**P**	**04 42 33.1**	**-2.0**
FETA	**Feichten**	**85.63**	**320**	*e*P	**P**	**04 42 34.1**	**-0.8**
	comp=Z,2.7nm,1.0s						
TIP	**Timpagrande**	**85.73**	**311**	IAMs_20	IAMs_20	05 26 58.9	
	comp=Z,2µm,18.0s						
KMBO	**Kilima Mbogo**	**85.75**	**267**	P	**P**	**04 42 36.5**	**+0.4**
	comp=Z,15nm,0.9s,baz=62,slow=3.7,SNR=11						
KMBO				LR	LR	05 22 05.1	
	comp=Z,870nm,19.5s,baz=50,slow=36						
	comp=Z,15nm,0.9s						
KMBO	**Kilima Mbogo**	**85.75**	**267**	P	**P**	**04 42 32.9**	**-3.2**
KMBO				IAmb	IAmb	04 42 43.1	
	comp=Z,37nm,1.2s						
KMBO	**Kilima Mbogo**	**85.75**	**267**	*i* P	**P**	**04 42 37.7**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,17nm,0.9s						
KMBO	**Kilima Mbogo**	**85.75**	**267**	*e*P	P	04 42 29.1	-7.1
KMBO	**Kilima Mbogo**	**85.75**	**267**	*e*P	P	04 42 29.5	-6.7
KMBO	**Kilima Mbogo**	**85.75**	**267**	*i* P	**P**	**04 42 37.2**	**+1.0**
	SNR=12						
BTNL	**Ternell**	**86.21**	**325**	*d*P	**P**	**04 42 36.5**	**-1.0**
BTNL				*d*x	**pP**	**04 42 41.9**	**+0.5**
DAVOX	**Davos/Dischmat**	**86.25**	**320**	LR	LR	05 24 05.2	
	comp=Z,2µm,18.6s,baz=35,slow=38						
LLLB	**Lillooet**	**86.25**	**35**	IAmb	IAmb	04 42 39.0	
	comp=Z,49nm,1.6s						
MEM	**Membach**	**86.26**	**325**	*d*x	pP	04 42 42.1	+0.5
ILULI	**Ilulissat**	**86.26**	**358**	IAMs_20	IAMs_20	05 23 57.1	
	comp=Z,2µm,20.0s						
AQU	**L'Aquila**	**86.40**	**315**	IAMs_20	IAMs_20	05 23 52.3	
	comp=Z,2µm,20.0s						
BORG	**Borgarnes**	**86.46**	**345**	LR	LR	05 23 44.1	
	comp=Z,1µm,21.5s,baz=28,slow=37						
BORG	**Borgarnes**	**86.46**	**345**	IAMs_20	IAMs_20	05 23 30.6	
	comp=Z,2µm,20.0s						
MURB	**Monte Urbino**	**86.49**	**316**	IAmb	IAmb	04 42 47.2	
	comp=Z,54nm,1.1s						
TUE	**Stuetta**	**86.72**	**320**	P	**P**	**04 42 38.1**	**-2.3**
TUE				IAmb	IAmb	04 42 47.3	
	comp=Z,42nm,1.5s						
BCLA	**Clavier**	**86.73**	**325**	*d*P	**P**	**04 42 38.8**	**-1.2**
BCLA				*d*x	x	04 42 44.7	
A04D	**Lummi Island**	**86.89**	**37**	P	**P**	**04 42 40.7**	**-0.1**
	baz=305						
RCHB	**Rochefort**	**86.93**	**325**	*d*P	**P**	**04 42 39.7**	**-1.3**
NLWA	**Neilton Lookou**	**86.99**	**38**	IAmb	IAmb	04 42 44.0	
	comp=Z,48nm,1.5s						
BMRD	**Maredsous**	**87.08**	**325**	*d*P	**P**	**04 42 40.5**	**-1.2**
D03D	**Eldon**	**87.35**	**38**	P	**P**	**04 42 42.7**	**-0.4**
	baz=304						
B05A	**Bryant**	**87.49**	**37**	P	**P**	**04 42 43.3**	**-0.4**
	baz=305						
EKA	**Eskdalemuir Ar**	**87.66**	**332**	LR	LR	05 26 29.8	
	comp=Z,4µm,18.2s,baz=50,slow=39						
B06A	**Marblemount**	**87.67**	**37**	IAmb	IAmb	04 42 51.9	
	comp=Z,42nm,1.1s						
D04E	**Lakebay**	**87.73**	**38**	P	**P**	**04 42 44.6**	**-0.3**
	baz=305						
VAE	**Valguarnera**	**88.17**	**311**	LR	LR	05 28 35.1	
	comp=Z,444nm,19.5s,baz=38,slow=40						
E04D	**Cinebar**	**88.20**	**39**	IAmb	IAmb	04 42 50.8	
	comp=Z,49nm,1.4s						
E04D	**Cinebar**	**88.20**	**39**	P	**P**	**04 42 47.1**	**-0.1**
	baz=305						
F04D	**Rainier, OR**	**88.21**	**39**	P	**P**	**04 42 46.6**	**-0.7**
	baz=304						
C06D	**Leavenworth**	**88.34**	**37**	P	**P**	**04 42 47.7**	**-0.1**
	baz=306						
SFJD	**Kangerlussuaq**	**88.45**	**357**	LR	LR	05 24 35.9	
	comp=Z,1µm,18.4s,baz=348,slow=37						
SFJD	**Kangerlussuaq**	**88.45**	**357**	IAMs_20	IAMs_20	05 27 02.0	
	comp=Z,2µm,19.0s						
G03D	**McMinnville, O**	**88.56**	**40**	P	**P**	**04 42 48.8**	**-0.1**
	baz=304						
RAR	**Rarotonga**	**88.58**	**114**	LR	LR	05 18 34.4	
	comp=Z,391nm,18.7s,baz=305,slow=33						
F04A	**Amboy**	**88.64**	**39**	IAmb	IAmb	04 42 56.8	
	comp=Z,39nm,1.0s						
ANGG	**Ammassalik, Gr**	**88.66**	**352**	IAMs_20	IAMs_20	05 24 18.5	
	comp=Z,2µm,21.0s						
DY2G	**Dye2**	**88.71**	**355**	*i* P	**P**	**04 42 49.7**	**+0.2**
DY2G				IAmb	IAmb	04 42 54.3	
	comp=Z,11nm,0.8s						
EDM	**Edmonton**	**88.79**	**30**	IAmb	IAmb	04 42 50.8	
	comp=Z,54nm,1.4s						
I02E	**Swisshome, OR**	**88.83**	**41**	P	**P**	**04 42 50.1**	**-0.1**
	baz=304						
LTY	**Liberty**	**88.85**	**37**	IAmb	IAmb	04 42 57.6	
	comp=Z,18nm,0.9s						
COR	**Corvallis**	**88.89**	**41**	P	**P**	**04 42 50.0**	**-0.4**
COR	**Corvallis**	**88.89**	**41**	P	**P**	**04 42 50.0**	**-0.4**
COR				pmax	pmax		
	comp=Z,126nm,1.5s						
B08A	**Colville Reser**	**88.92**	**36**	IAmb	IAmb	04 42 58.0	
	comp=Z,24nm,0.9s						
F05D	**White Salmon**	**89.21**	**39**	P	**P**	**04 42 52.1**	**+0.1**
	baz=306						
H04D	**Lebanon**	**89.25**	**40**	IAmb	IAmb	04 43 00.9	
	comp=Z,40nm,1.1s						
H04D	**Lebanon**	**89.25**	**40**	P	**P**	**04 42 51.2**	**-1.0**
	baz=305,SNR=6.2						
J01E	**Myrtle Point**	**89.31**	**42**	P	**P**	**04 42 51.8**	**-0.7**
	baz=304						
I03D	**Drain, OR**	**89.36**	**41**	P	**P**	**04 42 51.8**	**-0.9**
	baz=304						
G05D	**Wamic, OR**	**89.67**	**39**	P	**P**	**04 42 53.4**	**-0.8**
	baz=306						
E07A	**Sunnyside**	**89.72**	**38**	IAmb	IAmb	04 43 02.8	
	comp=Z,35nm,0.9s						
K02D	**Willamette Mer**	**89.73**	**42**	P	**P**	**04 42 53.6**	**-0.9**
	baz=304						
DBO	**Dodson Butte**	**89.75**	**42**	IAmb	IAmb	04 43 00.4	
	comp=Z,34nm,1.2s						
C09A	**Chrisman Ranch**	**89.83**	**36**	IAmb	IAmb	04 42 56.2	
	comp=Z,66nm,1.5s						
I04A	**Tendick Farm,**	**89.86**	**41**	P	**P**	**04 42 54.7**	**-0.4**
	baz=305,SNR=13						
D08A	**Wollman Farm,**	**89.93**	**37**	IAmb	IAmb	04 42 56.7	
	comp=Z,62nm,1.6s						
HAWA	**Hanford**	**90.00**	**38**	IAmb	IAmb	04 42 57.1	
	comp=Z,56nm,1.4s						
KSXB	**Camp Six Broad**	**90.08**	**43**	IAmb	IAmb	04 42 57.8	
	comp=Z,57nm,1.4s						
L02F	**Cave Junction**	**90.11**	**43**	P	**P**	**04 42 55.6**	**-0.6**
	baz=304						
NEW	**Newport**	**90.15**	**35**	IAmb	IAmb	04 42 58.3	
	comp=Z,37nm,1.3s						
NEW	**Newport**	**90.15**	**35**	IAMs_20	IAMs_20	05 26 58.8	
	comp=Z,1µm,18.0s						
NEW	**Newport**	**90.15**	**35**	P	**P**	**04 42 55.8**	**-0.6**
	baz=309						
SSB	**Saint Sauveur**	**90.17**	**321**	IAMs_20	IAMs_20	05 26 58.6	
	comp=Z,2µm,21.0s						
I05D	**Terrebonne, OR**	**90.18**	**40**	P	**P**	**04 42 56.5**	**-0.1**
	baz=306,SNR=11						
E08A	**Dider Farm, El**	**90.20**	**37**	IAmb	IAmb	04 42 58.1	
	comp=Z,48nm,1.4s						
HUMO	**Hull Mountain**	**90.21**	**42**	IAmb	IAmb	04 42 58.5	
	comp=Z,27nm,1.4s						
J04D	**Umpqua Nationa**	**90.36**	**41**	P	**P**	**04 42 57.5**	**-0.2**
	baz=305,SNR=19						
VSL	**Villasalto**	**90.49**	**314**	IAMs_20	IAMs_20	05 26 09.7	
	comp=Z,1µm,18.0s						
KHMM	**Horse Mountain**	**90.70**	**44**	IAmb	IAmb	04 43 00.9	
	comp=Z,38nm,1.5s						
KMPM	**Mount Pierce**	**90.71**	**44**	IAmb	IAmb	04 43 01.9	
	comp=Z,51nm,1.4s						
L04D	**Klamath Falls**	**90.83**	**42**	P	**P**	**04 42 58.6**	**-1.2**
L04D	**Klamath Falls**	**90.83**	**42**	P	**P**	**04 42 59.8**	**0.0**
	baz=305						
J05D	**Fort Rock, OR**	**90.86**	**41**	P	**P**	**04 42 59.8**	**-0.2**
	baz=306,SNR=21						
YBH	**Yreka Blue Hor**	**90.86**	**43**	P	**P**	**04 42 59.8**	**-0.1**
	comp=Z,27nm,1.2s,baz=136,slow=6.2,SNR=18						
YBH				LR	LR	05 17 51.0	
	comp=Z,312nm,21.3s,baz=330,slow=32						
	comp=Z,27nm,1.2s						
YBH	**Yreka Blue Hor**	**90.86**	**43**	IAmb	IAmb	04 43 02.0	
	comp=Z,49nm,1.4s						
K04D	**Chiloquin, OR**	**90.93**	**41**	P	**P**	**04 42 59.6**	**-0.7**
	baz=305						
G08A	**Pilot Rock**	**90.98**	**38**	IAmb	IAmb	04 43 01.9	
	comp=Z,30nm,1.4s						
KMRM	**Mail Ridge**	**91.08**	**44**	IAmb	IAmb	04 43 05.1	
	comp=Z,36nm,1.3s						
CASY	**Casey**	**91.09**	**185**	P	**P**	**04 42 58.9**	**-1.1**
CASY				IAmb	IAmb	04 43 01.1	
	comp=Z,52nm,1.5s						
WALA	**Waterton Lakes**	**91.27**	**33**	IAmb	IAmb	04 43 06.5	
	comp=Z,43nm,1.2s						
I07A	**Izee**	**91.40**	**39**	IAmb	IAmb	04 43 04.1	
	comp=Z,35nm,1.4s						
MBAR	**Mbarara**	**91.46**	**270**	IAMs_20	IAMs_20	05 29 08.3	
	comp=Z,1µm,20.0s						
MBAR	**Mbarara**	**91.46**	**270**	*e*P	P	04 42 56.4	-6.8
FCC	**Fort Churchill**	**91.64**	**18**	IAmb	IAmb	04 43 36.2	
	comp=Z,25nm,1.2s						
JTMT	**Jette**	**91.95**	**34**	IAmb	IAmb	04 43 06.1	
	comp=Z,32nm,1.4s						
BMO	**Blue Mountains**	**92.17**	**38**	IAmb	IAmb	04 43 09.6	
	comp=Z,20nm,1.2s						
HOPS	**Hopland Field**	**92.18**	**45**	IAmb	IAmb	04 43 08.8	
	comp=Z,45nm,1.4s						
GDXM	**Geysers**	**92.46**	**45**	IAmb	IAmb	04 43 09.3	
	comp=Z,34nm,1.3s						
KEST	**Kesra**	**92.55**	**311**	LR	LR	05 30 15.2	
	comp=Z,1µm,18.0s,baz=328,slow=39						
MSO	**Missoula**	**92.72**	**35**	IAmb	IAmb	04 43 11.1	

	comp=Z,28nm,1.3s						
MSO				IAMs_20	IAMs_20	05 31 17.9	
	comp=Z,2µm,18.0s						
MSO	Missoula	92.72	35	P	P	04 43 07.7	-0.7
	baz=311						
ORV	Oroville	92.86	44	IAmb	IAmb	04 43 09.9	
	comp=Z,30nm,1.2s						
BEKR	Beckworth	93.39	43	IAmb	IAmb	04 43 15.6	
	comp=Z,29nm,1.0s						
MFID	Camas Ranch	93.91	38	IAmb	IAmb	04 43 15.3	
	comp=Z,29nm,1.4s						
EGMT	Eagleton	94.01	32	IAmb	IAmb	04 43 14.8	
	comp=Z,32nm,1.5s						
EGMT				IAMs_20	IAMs_20	05 26 41.6	
	comp=Z,2µm,20.0s						
EGMT	Eagleton	94.01	32	P	P	04 43 13.3	-1.0
	baz=314,SNR=11						
PAHR	Pah Rah Range	94.09	43	IAmb	IAmb	04 43 20.0	
	comp=Z,37nm,1.2s						
VCNR	Virginia City	94.17	43	IAmb	IAmb	04 43 19.4	
	comp=Z,14nm,0.9s						
PNTR	Pine Nut	94.32	43	IAmb	IAmb	04 43 34.3	
	comp=Z,23nm,1.0s						
DLMT	Dillon	94.39	35	IAmb	IAmb	04 43 23.6	
	comp=Z,26nm,1.1s						
DLMT				IAMs_20	IAMs_20	05 26 45.2	
	comp=Z,1µm,21.0s						
CMB	Columbia Colle	94.45	45	IAmb	IAmb	04 43 17.6	
	comp=Z,34nm,1.2s						
HLID	Hailey	94.60	37	IAmb	IAmb	04 43 18.9	
	comp=Z,19nm,1.4s						
HLID				IAMs_20	IAMs_20	05 28 34.8	
	comp=Z,1µm,18.0s						
HLID	Hailey	94.60	37	P	P	04 43 16.8	-0.4
	baz=311						
YERR	Yerington	94.61	43	IAmb	IAmb	04 43 18.9	
	comp=Z,36nm,1.4s						
BOZ	Bozeman (W)	94.74	35	IAMs_20	IAMs_20	05 31 33.2	
	comp=Z,1µm,18.0s						
BOZ	Bozeman (W)	94.74	35	P	P	04 43 17.2	-0.6
	baz=313,SNR=14						
BMN	Battle Mountai	94.97	41	IAmb	IAmb	04 43 23.7	
	comp=Z,34nm,1.2s						
PMPB	Monarch Peak	95.24	46	IAmb	IAmb	04 43 24.1	
	comp=Z,15nm,0.9s						
RYN	Ryan	95.27	43	IAmb	IAmb	04 43 24.6	
	comp=Z,19nm,1.0s						
YHL	Hebgen Lake	95.48	35	IAmb	IAmb	04 43 22.6	
	comp=Z,19nm,1.5s						
MDPB	Devils Postpil	95.52	44	IAmb	IAmb	04 43 22.9	
	comp=Z,15nm,1.1s						
NVAR	Mina Array Bea	95.53	43	P	P	04 43 21.2	-0.4
	comp=Z,9.1nm,0.9s,baz=278,slow=3.6,SNR=50						
NVAR				LR	LR	05 33 43.0	
	comp=Z,221nm,18.4s,baz=334,slow=40						
	comp=Z,9.1nm,0.9s						
OMMB	Old Mammoth Mi	95.58	44	IAmb	IAmb	04 43 23.4	
	comp=Z,22nm,1.3s						
NV11	Mina Array Sit	95.62	43	IAmb	IAmb	04 43 27.3	
	comp=Z,17nm,1.2s						
MLAC	Mammoth, Mammo	95.68	44	P	P	04 43 21.9	-0.4
	baz=307,SNR=8.7						
YMR	Madison River	95.72	35	IAmb	IAmb	04 43 24.5	
	comp=Z,18nm,1.4s						
PPT	Papeete	95.72	107	LR	LR	05 20 01.5	
	comp=Z,336nm,19.8s,baz=290,slow=31						
PPT2	Papeete2	95.73	107	*e*LR	LR	05 13 44.3	
	comp=Z,2µm,26.5s,baz=283						
PAGB	Antelope Grade	95.89	46	IAmb	IAmb	04 43 27.1	
	comp=Z,26nm,1.0s						
ELK	Elko	95.94	40	IAmb	IAmb	04 43 25.8	
	comp=Z,17nm,1.4s						
ELK				IAMs_20	IAMs_20	05 30 23.6	
	comp=Z,1µm,18.0s						
H17A	Grant Village	96.11	35	IAmb	IAmb	04 43 27.5	
	comp=Z,29nm,1.6s						
H17A	Grant Village	96.11	35	P	P	04 43 22.9	-1.3
	baz=314,SNR=8.9						
VOG	Valley Oaks Go	96.11	46	P	P	04 43 22.8	-1.2
	baz=307						
DGMT	Dagmar	96.25	29	IAmb	IAmb	04 43 24.7	
	comp=Z,28nm,1.3s						
DGMT	Dagmar	96.25	29	IAMs_20	IAMs_20	05 26 34.6	
	comp=Z,2µm,21.0s						
DGMT	Dagmar	96.25	29	P	P	04 43 23.3	-1.1
	baz=319						
FLWY	Flagg Ranch	96.26	35	IAmb	IAmb	04 43 33.3	
	comp=Z,30nm,1.7s						
FLWY				IAMs_20	IAMs_20	05 35 03.4	
	comp=Z,1µm,20.0s						
RLMT	Red Lodge	96.28	34	IAmb	IAmb	04 43 26.4	
	comp=Z,17nm,1.4s						
RLMT				IAMs_20	IAMs_20	05 28 00.8	
	comp=Z,2µm,20.0s						
RLMT	Red Lodge	96.28	34	P	P	04 43 24.3	-0.6
	baz=314,SNR=10						
SMMC	Simmler	96.30	47	P	P	04 43 24.9	0.0
	baz=306,SNR=7.8						
MOOW	Moose Ponds	96.46	36	IAMs_20	IAMs_20	05 35 12.8	
	comp=Z,1µm,18.0s						
LOHW	Long Hollow	96.63	36	IAMs_20	IAMs_20	05 35 17.3	
	comp=Z,1µm,19.0s						
LAO	LASA Array	96.64	31	IAmb	IAmb	04 43 27.0	
	comp=Z,23nm,1.6s						
LAO				IAMs_20	IAMs_20	05 28 48.2	
	comp=Z,2µm,20.0s						
LAO	LASA Array	96.64	31	P	P	04 43 25.2	-1.2
	baz=317						
SNOW	Snow King Moun	96.65	36	IAMs_20	IAMs_20	05 28 44.9	
	comp=Z,1µm,19.0s						
REDW	Red Top Meadow	96.67	36	IAMs_20	IAMs_20	05 28 02.4	
	comp=Z,1µm,20.0s						
LCH	Last Change Ra	96.67	44	IAmb	IAmb	04 43 28.2	
	comp=Z,22nm,1.3s						
PKM	Mcpherson Peak	96.67	47	P	P	04 43 26.3	-0.6
	baz=306,SNR=8.1						
CWC	Cottonwood Cre	96.88	45	P	P	04 43 26.7	-1.0
	baz=308						
BCW	Bitter Crk WRg	96.91	47	IAmb	IAmb	04 43 29.4	
	comp=Z,24nm,1.2s						
ISA	Isabella, Lake	97.09	46	P	P	04 43 27.9	-0.7
	baz=307						
ARVC	Arvin	97.18	46	P	P	04 43 28.0	-0.9
	baz=307						
R11A	Troy Canyon, C	97.25	42	P	P	04 43 28.8	-0.6
	baz=309,SNR=7.6						
HWUT	Hardware Ranch	97.47	38	IAMs_20	IAMs_20	05 30 38.8	
	comp=Z,1µm,18.0s						
MPMC	Manual Prospec	97.49	45	P	P	04 43 29.5	-1.0
	baz=308,SNR=10						
S11A	Rachel	97.60	43	IAmb	IAmb	04 44 03.3	
	comp=Z,23nm,1.3s						
FURC	Furnace Creek,	97.64	44	P	P	04 43 30.3	-0.6
	baz=308,SNR=8.4						
DUG	Dugway, Tooele	97.71	39	IAMs_20	IAMs_20	05 35 40.2	
	comp=Z,1µm,18.0s						
DUG	Dugway, Tooele	97.71	39	P	P	04 43 30.5	-0.9
	baz=312						
LRMC	Laurel Mtn Rad	97.72	45	P	P	04 43 30.6	-0.9
	baz=308,SNR=5.7						
TPNV	Topopah Spring	97.72	43	IAmb	IAmb	04 43 32.2	
	comp=Z,18nm,1.4s						
TPNV	Topopah Spring	97.72	43	P	P	04 43 30.5	-1.1
	baz=309,SNR=8.2						
BW06	Boulder Array	97.77	36	P	P	04 43 30.7	-1.0
	baz=314						
PDAR	Pinedale Array	97.77	36	P	P	04 43 31.4	-0.3
	comp=Z,0.6nm,0.8s,baz=347,slow=4.6,SNR=6.6						
PDAR				LR	LR	05 29 03.2	
	comp=Z,621nm,19.6s,baz=347,slow=36						
	comp=Z,0.6nm,0.8s						
EDW2	Edwards Air Fo	97.88	46	P	P	04 43 30.3	-1.9
	baz=307,SNR=6.1						
GWY	Greenwater Val	97.93	44	IAmb	IAmb	04 43 34.5	
	comp=Z,28nm,1.7s						
PASC	Pasadena Art C	98.18	47	IAMs_20	IAMs_20	05 35 38.4	
	comp=Z,1µm,18.0s						
PRN	Pahroc Range	98.18	42	IAmb	IAmb	04 43 35.3	
	comp=Z,11nm,1.2s						
ULM	Lac du Bonnet	98.19	24	LR	LR	05 31 17.5	
	comp=Z,2µm,18.4s,baz=350,slow=38						
GSC	Goldstone, Bar	98.39	45	IAmb	IAmb	04 43 35.8	
	comp=Z,25nm,1.4s						
GSC	Goldstone, Bar	98.39	45	P	P	04 43 32.7	-1.8
	baz=308,SNR=9.1						
BFSC	Mount Baldy Ra	98.48	46	P	P	04 43 34.2	-0.7
	baz=308						
CIS	Catalina Islan	98.48	47	P	P	04 43 34.6	-0.2
	baz=307						
ESDC	Sonseca Array	98.57	321	PP	PP	04 47 30.6	-4.5
	comp=Z,0.5nm,0.5s,baz=54,slow=6.5,SNR=3.0						
ESDC				PKKPbc	PKKPbc	05 00 03.2	-1.5
	comp=Z,1.2nm,1.0s,baz=244,slow=2.5,SNR=6.1						
ESDC				LR	LR	05 32 44.6	
	comp=Z,2µm,18.0s,baz=45,slow=38						
SHPR	Sheep Range	98.68	43		P	04 43 31.9	-3.9
TUQ	Turquoise Moun	98.87	44	P	P	04 43 36.3	-0.4
	baz=309						
PAB	San Pablo	98.88	321	IAMs_20	IAMs_20	05 32 58.3	
	comp=Z,2µm,21.0s						
MURC	Murrieta	99.18	47	P	Pdif	04 43 37.2	-0.8
	baz=308						
MVO	Moncorvo	99.27	324	*e*LQ	LQ	05 18 19.6	
MVO				*e*LR	LR	05 22 47.6	
	comp=Z,2µm,18.0s						
PGAV	Gavieira, Arco	99.36	325	*e*LQ	LQ	05 16 16.6	
PGAV				*e*LR	LR	05 22 08.9	
	comp=Z,2µm,18.0s						
K22A	Casper	99.43	34	P	Pdif	04 43 38.5	-0.5
	baz=316						
MTPU	Mount Pierson	99.50	41	P	Pdif	04 43 37.1	-2.6
Q16A	Castle Valley	99.50	39	P	Pdif	04 43 38.0	-1.5
RSSD	Black Hills	99.58	32	IAMs_20	IAMs_20	05 32 38.0	
	comp=Z,2µm,19.0s						
RSSD	Black Hills	99.58	32	P	Pdif	04 43 39.7	0.0
	baz=318						
PFO	Pinyon Flats O	99.66	46	LR	LR	05 26 34.7	
	comp=Z,403nm,18.8s,baz=326,slow=34						
PFO	Pinyon Flats O	99.66	46	P	Pdif	04 43 39.4	-0.8
	baz=308						
TPFO	Pinon Flats	99.66	46	P	Pdif	04 43 39.5	-0.8
	baz=308						
LSZ	Lusaka	99.67	258	LR	LR	05 25 21.4	
	comp=Z,1µm,21.0s,baz=80,slow=33						
LSZ	Lusaka	99.67	258	IAMs_20	IAMs_20	05 24 03.5	
	comp=Z,1µm,22.0s						
BELC	Belle Mtn. Jos	99.72	46	P	Pdif	04 43 40.2	-0.3
	baz=309						
RWWY	Rawlins	99.76	35	IAMs_20	IAMs_20	05 29 06.2	
	comp=Z,1µm,20.0s						
AGMN	Agassiz Nation	99.80	25	IAMs_20	IAMs_20	05 32 36.3	
	comp=Z,2µm,20.0s						
MTE	Manteigas	100.08	323	*e*LQ	LQ	05 17 19.5	
MTE				*e*LQ	LQ	05 23 43.5	
MTE				A	A	05 34 58.1	
	comp=Z,2µm,16.0s						
MONP2	Monument Peak	100.12	47	P	Pdif	04 43 41.5	-0.9
	baz=308						
IRM	Iron Mountain	100.17	45	P	Pdif	04 43 42.3	-0.1
	baz=309						
BC3	Big Chuckawall	100.29	46	P	Pdif	04 43 42.7	-0.3
	baz=309						
O20A	White River Ci	100.31	37	P	Pdif	04 43 43.3	+0.2
	baz=315						
IKP	In-Ko-Pah, Jac	100.48	47	P	Pdif	04 43 43.6	-0.3
	baz=308						
SWSC	Sam W. Stewart	100.50	46	P	Pdif	04 43 44.1	+0.3
	baz=309						
PMRV	Marv??o	100.67	323	*e*LR	LR	05 23 57.2	
	comp=Z,2µm,20.0s						
TAOE	Nuku Hiva Isla	100.68	95	*e*LR	LR	05 16 47.0	
	comp=Z,1µm,25.6s						
PDMCI	Parker Dam,Lak	100.72	44	P	Pdif	04 43 45.4	+0.6
	baz=310						
PHWY	Pilot Hill	100.95	34	IAMs_20	IAMs_20	05 33 45.6	
	comp=Z,1µm,20.0s						
N23A	Red Feather La	101.00	35	P	Pdif	04 43 46.3	+0.1
	baz=317						
WUAZ	Wupatki	101.66	42	IAMs_20	IAMs_20	05 38 20.0	
	comp=Z,993nm,18.0s						
WUAZ	Wupatki	101.66	42	P	Pdif	04 43 49.1	0.0
	baz=312						
SMCO	Snowmass	101.68	37	IAMs_20	IAMs_20	05 35 58.1	
	comp=Z,1µm,18.0s						
EYMN	Ely	101.68	22	IAMs_20	IAMs_20	05 33 07.8	
	comp=Z,2µm,19.0s						
ISCO	Idaho Springs	101.96	36	IAMs_20	IAMs_20	05 30 20.5	
	comp=Z,1µm,20.0s						
MVCO	Mesa Verde	102.21	39	IAMs_20	IAMs_20	05 38 54.6	
	comp=Z,995nm,18.0s						
PVAQ	Vaqueiros	102.27	321	*e*LR	LR	05 25 37.1	
	comp=Z,2µm,18.0s						
OGNE	Ogallala	102.94	33	IAMs_20	IAMs_20	05 36 16.1	
	comp=Z,1µm,19.0s						
ECSD	EROS Data Cent	103.23	28	P	Pdif	04 43 54.6	-1.2
	baz=324						
SDCO	Great Sand Dun	103.51	37	IAMs_20	IAMs_20	05 33 39.6	
	comp=Z,1µm,19.0s						
TUC	Tucson	104.15	44	IAMs_20	IAMs_20	05 40 38.2	
	comp=Z,1µm,18.0s						
TUC	Tucson	104.15	44	P	Pdif	04 43 59.6	-0.6
	baz=312						
VNDA	Vanda	104.66	172	PP	PP	04 48 21.3	+0.4
	comp=Z,1.8nm,0.8s,baz=324,slow=9.1,SNR=6.1						
ANMO	Albuquerque	104.97	40	IAMs_20	IAMs_20	05 36 46.5	
	comp=Z,1µm,20.0s						
CBKS	Cedar Bluff	105.71	33	IAMs_20	IAMs_20	05 39 59.3	
	comp=Z,1µm,18.0s						
121A	Cookes Peak, D	105.86	42	P	PKiKP	04 48 20.5	0.0
	baz=314						
JFWS	Jewell Farm	106.45	24	P	PKiKP	04 48 20.4	-0.7
	baz=330						
KSU1	Kansas State U	106.97	31	IAMs_20	IAMs_20	05 33 27.6	
	comp=Z,1µm,21.0s						
MSTX	Muleshoe	107.78	38	P	PKiKP	04 48 23.2	-0.7
	baz=318						
MNTX	Cornudas Mount	107.90	41	IAMs_20	IAMs_20	05 38 53.4	
	comp=Z,1µm,20.0s						
MNTX	Cornudas Mount	107.90	41	P	PKiKP	04 48 24.0	-0.1
	baz=315						
WMOK	Wichita Mounta	109.35	35	IAMs_20	IAMs_20	05 41 48.0	
	comp=Z,1µm,20.0s						
LONY	Lake Ozonia	109.39	13	IAMs_20	IAMs_20	05 38 06.0	
	comp=Z,2µm,20.0s						
CCM	Cathedral Cave	110.21	28	P	PKiKP	04 48 28.7	+0.5
	baz=328						
TSUM	Tsumeb	110.53	258	IAMs_20	IAMs_20	05 35 15.1	
	comp=Z,1µm,19.0s						
TXAR	Lajitas Array	110.62	42	Pdiff	Pdif	04 44 27.1	-1.9
	comp=Z,0.2nm,0.9s,baz=266,slow=6.2,SNR=2.2						
TXAR				PKiKP	PKiKP	04 48 28.2	-1.2
	comp=Z,1.7nm,1.0s,baz=207,slow=1.5,SNR=8.1						
PMOZ	Porto Moniz, M	110.89	324	*e*LR	LR	05 23 51.1	
	comp=Z,1µm,20.0s						
M53A	WI Miller and	110.93	18	IAMs_20	IAMs_20	05 37 32.2	
	comp=Z,2µm,20.0s						
M53A	WI Miller and	110.93	18	P	PKiKP	04 48 28.5	-1.0
	baz=338						
U40A	Yellville	110.93	30	P	PKiKP	04 48 28.4	-1.3
	baz=326						
ACSO	Alum Creek Sta	111.34	20	P	PKiKP	04 48 29.1	-1.2
	baz=336						
TRY	Troy	111.38	12	IAMs_20	IAMs_20	05 38 45.1	
	comp=Z,1µm,20.0s						
P49A	Miami Univ. Ec	111.40	22	P	PKiKP	04 48 29.1	-1.3
	baz=334						
BINY	Binghamton	111.41	14	P	PKiKP	04 48 28.8	-1.6
	baz=342						
W39A	Magazine	111.46	31	IAMs_20	IAMs_20	05 36 36.3	
	comp=Z,1µm,21.0s						
W39A	Magazine	111.46	31	P	PKiKP	04 48 29.6	-1.0
	baz=325						
O53A	New Philadelph	111.87	19	IAMs_20	IAMs_20	05 42 19.2	
	comp=Z,1µm,18.0s						
O53A	New Philadelph	111.87	19	P	PKiKP	04 48 30.4	-0.9
	baz=337						
JCT	Junction City	112.05	38	IAMs_20	IAMs_20	05 45 30.8	
	comp=Z,1µm,18.0s						
JCT	Junction City	112.05	38	P	PKiKP	04 48 30.8	-1.2
	baz=319						
MIAR	Mount Ida	112.09	31	IAMs_20	IAMs_20	05 40 23.0	
	comp=Z,1µm,18.0s						
MIAR	Mount Ida	112.09	31	P	PKiKP	04 48 30.9	-0.9
	baz=325						
P52A	Corning	112.16	20	P	PKiKP	04 48 31.1	-0.8
	baz=336						
W41B	Gary Mavity, V	112.18	30	P	PKiKP	04 48 31.5	-0.6
	baz=326						
SSPA	Standing Stone	112.43	16	P	PKiKP	04 48 31.0	-1.3
	baz=340						
X40A	Basin Creek Fa	112.48	31	P	PKiKP	04 48 31.6	-1.1
	baz=326						
435B	Jarrell	113.05	37	IAMs_20	IAMs_20	05 44 06.0	
	comp=Z,983nm,18.0s						
WVT	Waverly	113.26	26	P	PKiKP	04 48 33.2	-0.8
	baz=331						
NATX	Nacogdoches	113.81	34	IAMs_20	IAMs_20	05 44 30.0	
	comp=Z,1µm,20.0s						
833A	Chaparral WMA,	113.90	40	P	PKiKP	04 48 34.9	-0.6
	baz=319						
OXF	Oxford	114.00	28	P	PKiKP	04 48 34.8	-0.7
	baz=329						
QSPA	South Pole Qui	114.46	180	IAMs_20	IAMs_20	05 26 33.6	
	comp=Z,881nm,20.0s						
TZTN	Tazewell	114.49	22	P	PKiKP	04 48 35.4	-1.1
	baz=334						
HKT	Hockley	114.64	36	IAMs_20	IAMs_20	05 45 58.8	
	comp=Z,1µm,20.0s						
V53A	Saluda	115.54	22		PKiKP	04 48 36.8	-1.7
T59A	Double "B" Far	115.96	17		PKiKP	04 48 37.4	-1.8
LRAL	Lakeview Retre	116.28	27	P	PKiKP	04 48 38.9	-1.0
	baz=331						
KMSC	Kings Mountain	116.52	21	P	PKPdf	04 48 39.1	-1.3
	baz=336						
GOGA	Godfrey	117.33	24	P	PKPdf	04 48 40.9	-1.0
	baz=334						
BRAL	Brewton	117.87	28	P	PKPdf	04 48 42.6	-0.5
	baz=330						
NHSC	New Hope	118.76	21	P	PKPdf	04 48 44.6	-0.2
	baz=337						
TIGA	Tifton	119.05	25	P	PKPdf	04 48 44.6	-0.8
	baz=333						
DBIC	Dimbokro	119.67	294	PKP	PKPdf	04 48 46.8	-0.1
	comp=Z,3.8nm,0.8s,baz=217,slow=2.4,SNR=3.6						
DBIC	Dimbokro	119.67	294		PKPdf	04 48 44.8	-2.1
UNM	Universidad Na	120.63	46	IAMs_20	IAMs_20	05 35 48.0	
	comp=Z,786nm,21.0s						
TROLL	Troll, Antarti	122.27	199	PKPdf	PKPdf	04 48 49.7	-0.7
TLIG	Tlapa	122.29	47	PKPdf	PKPdf	04 48 47.6	-4.4
DWPF	Disney Wildern	122.85	25	P	PKPdf	04 48 51.5	-1.2
	baz=335						
BBSR	BB Station	122.91	7	IAMs_20	IAMs_20	05 43 16.8	
	comp=Z,1µm,20.0s						
SNAA	Sanae	123.95	198	PKPdf	PKPdf	04 48 52.1	-1.4
SNAA	Sanae	123.95	198	PKPdf	PKPdf	04 48 50.6	-2.9
SNAA	Sanae	123.95	198	PKIKP	PKPdf	04 48 50.6	-2.9
VNA1	Neumayer--Stat	125.99	198	PKPdf	PKPdf	04 48 56.6	-0.7
VNA3	Neumayer Olymp	126.06	197	PKPdf	PKPdf	04 48 56.5	-1.0
MTO3	Montecristo	130.52	42	IAMs_20	IAMs_20	05 52 19.9	
	comp=Z,1µm,21.0s						
SNET	Serv Nac Est T	131.15	42	IAMs_20	IAMs_20	05 51 26.3	
	comp=Z,1µm,22.0s						
MTDJ	Mount Denham	133.28	26	IAMs_20	IAMs_20	05 51 31.8	
	comp=Z,1µm,21.0s						
ESPN	Las Esperanzas	135.22	38	IAMs_20	IAMs_20	05 54 20.2	
	comp=Z,776nm,22.0s						
DUNO	Dulce Nombre,	136.23	41		PKPdf	04 49 15.4	-3.0
SJG	San Juan	136.73	11	IAMs_20	IAMs_20	05 54 07.1	
	comp=Z,943nm,20.0s						
SMRT	St. Maarten	137.24	7	IAMs_20	IAMs_20	05 50 27.4	
	comp=Z,821nm,21.0s						
SRBA	San Rafael, Bu	138.16	39		PKPdf	04 49 20.6	-1.6
PMSA	Palmer Station	139.70	176	*e*P	PKPdf	04 49 23.2	0.0
BCIP	Isla Barro Col	140.16	35	IAMs_20	IAMs_20	05 56 23.1	
	comp=Z,724nm,20.0s						
HATO	Hato, Curacao	141.83	18	IAMs_20	IAMs_20	05 48 35.5	
	comp=Z,806nm,21.0s						
DBBC	Dabeiba	143.82	32	*e*P	PKPab	04 49 28.1	-1.1
OCAC	Ocana	144.01	27	*e*P	PKPab	04 49 28.1	-1.9
ZARC	Zaragoza, Cauc	144.03	29	*e*P	PKPbc	04 49 31.0	+0.6
SDV	Santo Domingo	144.42	22	PKPdf	PKPab	04 49 30.2	-1.3
SDV	Santo Domingo	144.42	22	IAMs_20	IAMs_20	05 57 46.7	
	comp=Z,783nm,22.0s						
SDV	Santo Domingo	144.42	22	*e*P	PKPab	04 49 30.0	-1.6
SDV	Santo Domingo	144.42	22	*e*P	PKPab	04 49 30.0	-1.6
HELC	Santa Helena	144.86	31	*e*P	PKPab	04 49 31.9	-1.5
BRRC	Barranca, Sant	144.87	28	*e*P	PKPab	04 49 31.9	-1.1
CBOC	Ciudad Bolivar	144.91	32	*e*P	PKPab	04 49 30.0	-3.4
PTBC	PUERTO BERRIO,	145.05	30	*e*P	PKPbc	04 49 30.0	-3.7
PAMC	Pamplona, Colo	145.08	26	*e*P	PKPbc	04 49 31.9	-2.4
BAUV	El Baul	145.17	18		PKPbc	04 49 32.2	-1.7
BARC	Barichara	145.56	28	*e*P	PKPdf	04 49 33.9	-1.7
PLMC	San Jos del P	145.60	34	*e*P	PKPdf	04 49 32.9	-2.5
NORC	Norcasia	145.72	31	*e*P	PKPdf	04 49 31.0	-4.6
MALC	Bahia Malaga	145.81	36	*e*P	PKPdf	04 49 35.8	+0.1
SPBC	San Pablo de B	146.01	30	*e*P	PKPdf	04 49 33.9	-2.3
RUSC	La Rusia	146.23	28	*e*P	PKPdf	04 49 36.8	-0.2
TAMC	Tame, Arauca	146.26	25	*e*P	PKPdf	04 49 35.8	-0.7
YOTC	Yotoco, Valle	146.36	35	*e*P	PKPdf	04 49 36.8	0.0
ROSC	El Rosal	146.61	31	PKPbc	PKPdf	04 49 37.8	+0.3
	comp=Z,22nm,0.8s,baz=7.6,slow=4.0,SNR=27						
ROSC	El Rosal	146.61	31	*e*P	PKPdf	04 49 37.7	+0.2
TUMC	Tumaco	146.82	40	*e*P	PKPbc	04 49 38.7	-0.4
ORTC	Ortega, Tolima	146.98	33	*e*P	PKPdf	04 49 35.8	-1.9
CHIC	Chingaza	147.07	30	*e*P	PKPdf	04 49 38.7	+0.4
PRAC	Prado	147.32	33	*e*P	PKPdf	04 49 38.7	+0.4
MARP	Paez Belalcaza	147.53	35	*e*P	PKPdf	04 49 37.7	-1.2
VILC	Villavicencio,	147.54	30	*e*P	PKPdf	04 49 38.7	-0.1
PCON	Cinco Dias	147.73	36	*e*P	PKPdf	04 49 39.6	0.0
SOTA	Rioblanco	147.77	37	*e*P	PKPdf	04 49 39.6	0.0
BETC	Betania	147.93	34	*e*P	PKPbc	04 49 42.5	+0.3
CMBC	Cumbal	148.06	40	*e*P	PKPbc	04 49 42.5	-0.6
GCUF	Volcan Galeras	148.11	39	*e*P	PKPbc	04 49 42.5	-0.8
PTGC	Puerto Gaitan,	148.15	28	*e*P	PKPdf	04 49 39.6	0.0
OTAV	Otavalo	148.25	42		PKPdf	04 49 38.9	-1.4
OTAV	Otavalo	148.25	42	IAMs_20	IAMs_20	06 06 04.4	
	comp=Z,683nm,22.0s						
OTAV	Otavalo	148.25	42	PKIKP	PKPdf	04 49 38.9	-1.4
OTAV	Otavalo	148.25	42	*e*P	PKPdf	04 49 38.7	-1.7
GARC	Garzon, Huila	148.32	35	*e*P	PKPdf	04 49 39.6	-0.6
MACC	Macarena, Meta	149.19	32	*e*P	PKPdf	04 49 41.6	+0.3
MG05	Puerto Natales	150.81	161	PKPdf	PKPdf	04 49 42.7	+0.1
GO09	Cerro Castillo	151.22	161	PKPdf	PKPdf	04 49 43.2	-0.1
NBPV	Pedro Velho	151.71	306	*e*P	PKPdf	04 49 43.9	-1.3
RCBR	Riachuelo	151.75	308	*e*P	PKPdf	04 49 45.6	+0.3
NBCL	Cascavel-CE	152.24	314	*e*P	PKPdf	04 49 46.4	+0.4
BOAV	Boa Vista	152.98	6	*e*P	PKPdf	04 49 46.4	-0.7
NBPS	Pedro II - PI	154.35	319	*e*P	PKPdf	04 49 49.0	-0.2
NBAN	Anadia - AL	154.55	302	*e*P	PKPdf	04 49 49.1	-0.2
ROSB	Rosrio	154.58	326	*e*P	PKPdf	04 49 50.0	+0.6
NBMA	Muriti-CE	154.85	310	*e*P	PKPdf	04 49 50.1	+0.4
MCPB	Macapa, AP	155.17	346	*e*P	PKPdf	04 49 49.5	-0.7
TMAB	Tom-Au,PA,Br	155.88	335	*e*P	PKPdf	04 49 50.3	-0.9
NBLA	Lagarto - SE	156.53	302	*e*P	PKPdf	04 49 50.3	-1.7
TBTG	Tabatinga, AM	156.60	31	*e*P	PKPdf	04 49 50.8	-1.2
CZSB	Cruzeiro do Su	158.02	42	*e*P	PKPdf	04 49 52.1	-1.7
NNA	Nana	158.10	58	IAMs_20	IAMs_20	06 07 27.5	
	comp=Z,886nm,22.0s						
LL02	Futaleuf	158.27	152	PKPab	PKPab	04 50 25.9	-1.4
MACA	Manacapuru-AM	158.45	7	*e*P	PKPdf	04 49 53.7	-0.6
GDU01	Guandu, BA	159.55	299	*e*P	PKPdf	04 49 55.6	0.0
ITTB	Itaituba	159.70	354	*e*P	PKPdf	04 49 54.5	-1.4
PRPB	Parauapebas	160.03	336	*e*P	PKPdf	04 49 54.0	-2.2
PLCA	Paso Flores	160.82	150	PKP	PKPdf	04 49 55.9	-0.5
	comp=Z,5.7nm,1.2s,baz=292,slow=3.3,SNR=4.1						
PLCA				PKPab	PKPab	04 50 37.0	-1.5
	comp=Z,7.2nm,1.1s,baz=235,slow=4.9,SNR=7.4						
PLCA	Paso Flores	160.82	150	PKPdf	PKPdf	04 49 56.2	-0.2
PLCA					PKPab	04 50 38.9	+0.4
PLCA	Paso Flores	160.82	150	PKIKP	PKPdf	04 49 56.2	-0.2
PLCA	Paso Flores	160.82	150	*e*P	PKPdf	04 49 56.0	-0.3
SMTB	Santa Maria do	161.44	326	*e*P	PKPdf	04 49 57.2	-0.5
NAN01	Guarapari, ES	162.07	289	*e*P	PKPdf	04 49 57.8	-0.4
SDBA	SAO DESIDERIO	162.66	312	*e*P	PKPdf	04 49 58.2	-0.8
ETMB	Extrema	163.26	30	*e*P	PKPdf	04 49 58.1	-1.4
SJMB	Sao Joao De Ma	163.35	288	*e*P	PKPdf	04 49 58.1	-1.4
PEXB	Peixe	164.53	322	*e*P	PKPdf	04 49 59.4	-1.3
DIAM	Diamantina, MG	165.29	293	*e*P	PKPdf	04 50 01.0	-0.4
SNDB	Serra Nova Dou	165.89	332	*e*P	PKPdf	04 50 00.7	-1.1
CLDB	Colider	166.13	351	*e*P	PKPdf	04 50 01.4	-0.6
TRQA	Tornquist	166.22	166		PKPdf	04 49 59.9	-1.6
TRQA	Tornquist	166.22	166	PKIKP	PKPdf	04 49 59.9	-1.6
PDRB	Porto dos Gac	166.96	355	*e*P	PKPdf	04 50 01.8	-0.8
PB12	IPOC Station P	167.00	65		PKPdf	04 50 00.3	-2.3
BDFB	Brasilia	167.07	312	PKP	PKPdf	04 50 02.2	-0.6
	comp=Z,7.1nm,0.9s,baz=50,slow=2.2,SNR=9.3						
BDFB	Brasilia	167.07	312		PKPdf	04 50 01.6	-1.2
LPAZ	La Paz	167.32	51	PKP	PKPdf	04 50 02.9	-0.8
	comp=Z,34nm,1.2s,baz=15,slow=2.4,SNR=37						
LPAZ				PKPab	PKPab	04 51 06.4	-2.0
	comp=Z,16nm,1.1s,baz=341,slow=5.1,SNR=6.3						
LPAZ	La Paz	167.32	51		PKPdf	04 50 01.6	-2.0
LPAZ	La Paz	167.32	51	*e*P	PKPdf	04 50 01.8	-1.8
LPAZ	La Paz	167.32	51	*e*P	PKPdf	04 50 03.0	-0.6
BSCB	Bom Sucesso	167.33	284	*e*P	PKPdf	04 50 01.8	-1.0
GO04	Tololo Observa	167.33	118		PKPdf	04 50 00.7	-2.1
VILB	Vilhena	168.15	11	*e*P	PKPdf	04 50 03.0	-0.5
IPMB	Ipameri, GO	168.76	304	*e*P	PKPdf	04 50 01.8	-2.0
NBRS	Nobres	169.51	348	*e*P	PKPdf	04 50 03.6	-0.8
LVC	Limon Verde	169.73	81	*e*P	PKPdf	04 50 05.2	+0.4

RCLB	**Rio Claro- Sao**	**170.20**	**281**	*e*P	**PKPdf**	**04 50 04.0**	**-0.6**
PET01	**Itanhaem-SP**	**170.28**	**270**	*e*P	**PKPdf**	**04 50 04.0**	**-0.5**
SPB	**Sao Paulo**	**170.35**	**274**	*e*P	**PKPdf**	**04 50 04.4**	**-0.2**
DVLD	**Doverlandia**	**170.36**	**325**	*e*P	**PKPdf**	**04 50 04.3**	**-0.5**
PTLB	**Pontes e Lacer**	**170.76**	**7**	*e*P	**PKPdf**	**04 50 04.0**	**-1.0**
SALV	**Santo Antonio**	**171.03**	**346**	*e*P	**PKPdf**	**04 50 04.3**	**-0.8**
ITRB	**Iturama**	**171.42**	**304**	*e*P	**PKPdf**	**04 50 05.1**	**-0.2**
TIJ01	**Guaruva-PR**	**171.87**	**264**	*e*P	**PKPdf**	**04 50 05.9**	**+0.4**
PLTB	**Pedras Altas**	**171.97**	**207**	*e*P	**PKPdf**	**04 50 05.5**	**+0.3**
PP1B	**Ponte de Pedra**	**172.41**	**337**	*e*P	**PKPdf**	**04 50 04.9**	**-0.9**
CPSB	**Cacapava Do Su**	**173.03**	**214**	*e*P	**PKPdf**	**04 50 04.4**	**-1.3**
PCMB	**Pacaembu**	**173.14**	**295**	*e*P	**PKPdf**	**04 50 04.6**	**-1.4**
ITQB	**Itaqui**	**174.88**	**193**	*e*P	**PKPdf**	**04 50 06.5**	**+0.1**
AQDB	**Aquidauana**	**175.34**	**333**		**PKPdf**	**04 50 03.5**	**-3.2**
AQDB	**Aquidauana**	**175.34**	**333**	*e*P	**PKPdf**	**04 50 05.5**	**-1.3**
CPUP	**Villa Florida** comp=Z,4.6nm,1.2s,baz=270,slow=2.0,SNR=4.8	**178.26**	**198**	PKP	**PKPdf**	**04 50 05.4**	**-1.7**
CPUP	comp=Z,1.8nm,0.8s,baz=185,slow=5.1,SNR=2.8			PKPab	**pPKPab**	**04 51 54.6**	**-5.0**
CPUP	**Villa Florida**	**178.26**	**198**		**PKPdf**	**04 50 05.0**	**-2.1**

TAP 12 04:30:53.8, 24°.72N × 121°.99E, h3^{km}, ML4.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=338	**0.14**	**339**	*i* P	Pg	04 30 57.4	+0.8
EGS	baz=338			*e*S	Sg	04 30 60.0	+1.5
TWC	**Suao** baz=227	**0.16**	**230**	*e*P	Pg	04 30 57.6	+0.6
TWC	baz=227			S	Sg	04 31 00.0	+0.8
NTC	**Toucheng** baz=310	**0.20**	**314**	P	Pg	04 30 58.9	+1.2
NTC	baz=310			S	Sg	04 31 02.8	+2.5
NDS	**Dongshan** baz=241	**0.26**	**252**	*e*P	Pb	04 31 00.1	-1.1
NDS	baz=241			*e*S	Sb	04 31 04.2	-1.8
TWE	**Neicheng** baz=259	**0.29**	**271**	P	Pg	04 31 00.5	+1.0
TWE	baz=259			*e*S	Sg	04 31 04.9	+1.6
TIPB	**Shuangxi** baz=327	**0.29**	**330**	P	Pg	04 31 00.5	+1.0
TIPB	baz=327			S	Sg	04 31 04.7	+1.3

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*JMA **12** 04:35:59.0±0.1, 24°.7N±0°.6 × 122°.0E±0°.7, h26^{km}, MV2.9/7, TAIWAN REGION*
*TAP **12** 04:35:58.3, 24°.69N × 122°.01E, h7^{km}, ML3.5, C*
ISC 12 04:35:57.3±1.0**, 24°.68N**±0°.02 × **122°.11E**±0°.02**, h8**^{km}±9^{km}**,**
n61, σ0^{s}.61/110**, 4C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=336	**0.23**	**316**	*i* P	**Pg**	**04 36 02.5**	**+0.6**
EGS	baz=336			*i* S	**Sg**	**04 36 05.0**	**-0.1**
TWC	**Suao** baz=239	**0.25**	**253**	⇑*i*P	**Pg**	**04 36 02.2**	**0.0**
TWC	baz=239			*i* S	**Sg**	**04 36 04.5**	**-1.1**
NTC	**Toucheng** baz=313	**0.31**	**304**	P	**Pg**	**04 36 03.8**	**+0.4**
NTC	baz=313			S	**Sg**	**04 36 07.8**	**+0.3**
ILA	**Ilan** baz=277	**0.34**	**285**	⇑*i*P	**Pg**	**04 36 04.1**	**+0.1**
ILA	baz=277			*i* S	**Sg**	**04 36 08.4**	**0.0**
TWB1	**Santiao Chiao** baz=344	**0.34**	**342**	⇑*i*P	**Pb**	**04 36 05.0**	**-0.7**
TWB1	baz=344			S	**Sb**	**04 36 10.0**	**-1.4**
NDS	**Dongshan** baz=258	**0.36**	**263**	P	**Pg**	**04 36 04.5**	**+0.1**
NDS	baz=258			*i* S	**Sg**	**04 36 08.3**	**-0.9**
EWUT	**Wuta** baz=221	**0.38**	**232**	*i* P	**Pg**	**04 36 05.1**	**+0.3**
EWUT	baz=221			S	**Sg**	**04 36 09.3**	**-0.5**
TIPB	**Shuangxi** baz=328	**0.39**	**319**	*i* P	**Pg**	**04 36 05.4**	**+0.5**
TIPB	baz=328			*i* S	**Sg**	**04 36 10.0**	**0.0**
TWE	**Neicheng** baz=265	**0.40**	**276**	⇑*i*P	**Pg**	**04 36 05.0**	**-0.2**
TWE	baz=265			*i* S	**Sg**	**04 36 09.3**	**-1.2**
ENA	**Nanau** baz=222	**0.42**	**233**	*i* P	**Pg**	**04 36 05.8**	**+0.3**
ENA	baz=222			*i* S	**Sg**	**04 36 09.9**	**-1.0**
SXI1	**Grass Mountain** baz=352	**0.46**	**333**	P	**Pb**	**04 36 07.3**	**-0.5**
SXI1	baz=352			S	**Sb**	**04 36 14.5**	**-0.4**
FUSB	**Fushanzhiwuyua** baz=280	**0.48**	**280**	P	**Pg**	**04 36 06.4**	**-0.3**
FUSB	baz=280			S	**Sg**	**04 36 12.3**	**-0.7**
ENTT	**Nioudou** baz=262	**0.49**	**265**	*i* P	**Pg**	**04 36 07.4**	**+0.5**
ENTT	baz=262			S	**Sg**	**04 36 12.6**	**-0.8**
EHP	**Heping Village** baz=213	**0.50**	**222**	*e*P	**Pb**	**04 36 08.0**	**-0.3**
EHP	baz=213			S	**Sg**	**04 36 13.4**	**0.0**
LATG	**Datong** baz=260	**0.55**	**255**	P	**Pg**	**04 36 08.4**	**+0.5**
LATG	baz=260			S	**Sg**	**04 36 15.3**	**+0.1**
NWLT	**Wulai** baz=280	**0.56**	**280**	*i* P	**Pg**	**04 36 08.6**	**+0.4**
NWLT	baz=280			*i* S	**Sg**	**04 36 15.0**	**-0.5**
TWA	**Mucha** baz=306	**0.56**	**302**	*i* P	**Pg**	**04 36 08.3**	**+0.1**
TWA	baz=306			*i* S	**Sg**	**04 36 15.2**	**-0.4**
NHDH	**Xindian Distri** baz=301	**0.60**	**298**	*i* P	**Pg**	**04 36 09.6**	**+0.7**
NHDH	baz=301			*i* S	**Sg**	**04 36 16.1**	**-0.7**
YHNB	**Yeheng** baz=268	**0.67**	**269**	P	**Pg**	**04 36 10.8**	**+0.6**
YHNB	baz=268			S	**Sg**	**04 36 18.1**	**-0.8**
YM01	**YM01** baz=318	**0.67**	**314**	P	**Pb**	**04 36 11.1**	**-0.3**
YM01	baz=318			S	**Sg**	**04 36 19.4**	**+0.2**
ETL	**Fush Village** baz=214	**0.68**	**221**	P	**Pg**	**04 36 10.6**	**+0.2**
ETL	baz=214			S	**Sg**	**04 36 19.9**	**+0.6**
NSK	**Sanguang** baz=268	**0.68**	**270**	*i* P	**Pg**	**04 36 10.5**	**0.0**
NSK	baz=268			*i* S	**Sg**	**04 36 17.9**	**-1.6**
NACB	**Ninganchiao** baz=207	**0.69**	**223**	P	**Pg**	**04 36 11.1**	**+0.5**
NACB	baz=207			S	**Sg**	**04 36 18.9**	**-0.7**
NNSB	**Datong** baz=246	**0.71**	**249**	P	**Pg**	**04 36 10.8**	**-0.1**
NNSB	baz=246			S	**Sg**	**04 36 19.9**	**-0.3**
NNS	**Nan Shan** baz=246	**0.71**	**251**	P	**Pg**	**04 36 11.6**	**+0.6**
NNS	baz=246			*i* S	**Sg**	**04 36 20.2**	**-0.1**
ANP	**Anpu** baz=318	**0.73**	**313**	*e*P	**Pg**	**04 36 11.8**	**+0.4**
ANP	baz=318			*e*S	**Sg**	**04 36 21.3**	**+0.3**
ETLH	**Xiulin Townshi** baz=226	**0.74**	**231**	P	**Pg**	**04 36 11.9**	**+0.4**
ETLH	baz=226			S	**Sg**	**04 36 20.8**	**-0.5**
TWS1	**Kuangyinshan** baz=296	**0.75**	**304**	*i* P	**Pb**	**04 36 13.0**	**+0.3**
TWS1	baz=296			*i* S	**Sg**	**04 36 21.9**	**+0.2**
TWD	**Chiawan** baz=212	**0.76**	**218**	*i* P	**Pg**	**04 36 11.8**	**-0.1**
TWD	baz=212			*i* S	**Sg**	**04 36 21.9**	**+0.1**
NTST	**Danshui** baz=312	**0.77**	**309**	*i* P	**Pb**	**04 36 13.2**	**+0.2**
NTST	baz=312			*e*S	**Sg**	**04 36 22.1**	**0.0**
JYNG	**Yonagunijimaku**	**0.80**	**106**	P	**Pn**	**04 36 15.5**	**+0.7**
JYNG				*e*S	**Sn**	**04 36 27.2**	**+0.3**
HWA	**Hwalien** baz=218	**0.84**	**213**	*e*P	**Pg**	**04 36 13.8**	**+0.4**
HWA	baz=218			*e*S	**Sg**	**04 36 24.3**	**0.0**
YOJ	**Yonaguni jima** baz=102	**0.85**	**105**	P	**Pn**	**04 36 16.5**	**+0.9**
YOJ	baz=102			S	**Sn**	**04 36 28.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.85**	**105**	P	**Pn**	**04 36 16.3**	**+0.7**
YOJ				S	**Sn**	**04 36 28.7**	**+0.5**
NCU	**National Centr** baz=300	**0.89**	**289**	*e*P	**Pg**	**04 36 13.7**	**-0.6**
NCU	baz=300			*e*S	**Sg**	**04 36 24.6**	**-1.2**
NCUH	**Zhongli** baz=281	**0.89**	**289**	*e*P	**Pb**	**04 36 15.3**	**+0.3**
FUSS	**Fushou** baz=238	**0.90**	**242**	*e*P	**Pg**	**04 36 14.7**	**+0.1**
FUSS	baz=238			*e*S	**Sg**	**04 36 26.0**	**-0.3**
NFF	**Wufeng Townshi** baz=257	**0.90**	**267**	P	**Pb**	**04 36 16.1**	**+0.8**
WHF	**Hehuan Shan** baz=232	**0.94**	**235**	*i* P	**Pg**	**04 36 15.5**	**+0.2**
WHF	baz=232			S	**Sg**	**04 36 27.2**	**-0.3**
PCYT	**Pengchaiyu** baz=360	**0.95**	**358**	P	**Pb**	**04 36 16.2**	**+0.2**
TWT	**Tachien** baz=232	**0.95**	**244**	P	**Pg**	**04 36 16.1**	**+0.5**
TWT	baz=232			S	**Sg**	**04 36 27.6**	**-0.3**
TDCB	**Techi** baz=233	**0.96**	**244**	P	**Pg**	**04 36 16.1**	**+0.2**
TDCB	baz=233			*e*S	**Sg**	**04 36 28.3**	**-0.1**
NSTT	**Nanjuang** baz=264	**1.01**	**267**	*i* P	**Pb**	**04 36 17.9**	**+0.8**
SBCB	**Hsinchu** baz=290	**1.03**	**276**	*e*P	**Pb**	**04 36 18.1**	**+0.8**
CHGB	**Renai** baz=231	**1.05**	**234**	P	**Pg**	**04 36 17.8**	**+0.2**
CHGB	baz=231			S	**Sg**	**04 36 30.7**	**-0.5**
ESL	**Shilin** baz=221	**1.06**	**216**	*i* P	**Pg**	**04 36 17.9**	**+0.3**
ESL	baz=221			S	**Sg**	**04 36 31.5**	**0.0**
OWD	**Renai** baz=217	**1.12**	**230**	*i* P	**Pg**	**04 36 18.6**	**-0.2**
OWD	baz=217			S	**Sg**	**04 36 32.4**	**-0.8**
WHP	**Taichung City** baz=248	**1.13**	**250**	*i* P	**Pb**	**04 36 19.6**	**+0.4**
WHP	baz=248			S	**Sg**	**04 36 32.2**	**-1.6**
WUSB	**Renai** baz=238	**1.13**	**233**	P	**Pg**	**04 36 19.4**	**+0.3**
WUSB	baz=238			S	**Sg**	**04 36 33.1**	**-0.8**
EGFH	**Guangfu** baz=224	**1.18**	**212**	*e*P	**Pn**	**04 36 20.6**	**+0.4**
EGFH	baz=224			*e*S	**Sg**	**04 36 35.5**	**+0.1**
NMLH	**Miaoli** baz=256	**1.21**	**264**	*e*P	**Pg**	**04 36 19.7**	**-0.8**
NMLH	baz=256			*e*S	**Sg**	**04 36 35.0**	**-1.1**
WCS	**Beigang Elemen** baz=237	**1.25**	**241**	*e*P	**Pn**	**04 36 22.2**	**+1.0**
TWQ1	**Liyutan** baz=251	**1.26**	**255**	*e*P	**Pn**	**04 36 22.0**	**+0.7**
VWDT	**VWDT** baz=214	**1.28**	**224**	P	**Pb**	**04 36 22.0**	**+0.4**
VWDT	baz=214			*e*S	**Sg**	**04 36 37.9**	**-0.5**
SMLT	**Sun Moon Lake** baz=223	**1.36**	**235**	P	**Pn**	**04 36 22.6**	**-0.2**
SMLT	baz=223			*e*S	**Sg**	**04 36 38.9**	**-2.1**
EHY	**Hungye** baz=221	**1.37**	**212**	P	**Pg**	**04 36 23.5**	**-0.1**
SSLB	**Suanglung** baz=237	**1.38**	**230**	P	**Pn**	**04 36 22.9**	**0.0**
TYC	**Yuchr** baz=232	**1.38**	**236**	*e*P	**Pn**	**04 36 23.4**	**+0.5**
IRIF	**Iriomote-Funau**	**1.52**	**103**	*e*P	**Pg**	**04 36 25.6**	**-0.8**
IRIF				S	**Sn**	**04 36 44.9**	**+0.2**
HATJ	**Hateruma jima**	**1.67**	**112**	S	**Sg**	**04 36 50.6**	**-0.3**
JKRS	**Kuro-shima**	**1.79**	**104**	S	**Sb**	**04 36 52.2**	**-0.7**

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*NEIC **12** 04:39:05.3±1.4, 24°.66N±0°.02 × 122°.06E±0°.02, h11^{km}±8^{km}, ML4.0(TAP), Error ellipse: s-maj=3.5km s-min=1.2km az=54.0*
*TAP **12** 04:39:06.0, 24°.70N × 122°.00E, h10^{km}, ML3.8, C*
ISC 12 04:39:05.6±1.0**, 24°.68N**±0°.02 × **122°.04E**±0°.02**, h8**^{km}±7^{km}**,**
n94, σ0^{s}.69/154**, 14C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao** baz=244	**0.19**	**249**	⇑*i*P	**Pg**	**04 39 09.7**	**+0.2**
TWC	baz=244			S	**Sg**	**04 39 11.8**	**-0.3**
EGS	baz=341	**0.20**	**329**	⇑*i*P	**Pg**	**04 39 09.9**	**+0.3**
EGS	baz=341			*e*S	**Sg**	**04 39 13.3**	**+1.0**
NTC	**Toucheng** baz=315	**0.26**	**312**	⇑*i*P	**Pg**	**04 39 11.2**	**+0.3**
NTC	baz=315			*e*S	**Sg**	**04 39 14.7**	**+0.3**
ILA	**Ilan** baz=278	**0.28**	**288**	⇑*i*P	**Pg**	**04 39 11.6**	**+0.3**
ILA	baz=278			*i* S	**Sg**	**04 39 15.4**	**+0.3**
NDS	**Dongshan** baz=253	**0.30**	**262**	P	**Pg**	**04 39 11.7**	**+0.1**
NDS	baz=253			*e*S	**Sg**	**04 39 15.5**	**-0.1**
EWUT	**Wuta** baz=210	**0.33**	**226**	*e*P	**Pg**	**04 39 12.6**	**+0.4**
EWUT	baz=210			*e*S	**Sg**	**04 39 16.6**	**0.0**
TWB1	**Santiao Chiao** baz=351	**0.33**	**351**	⇑*i*P	**Pg**	**04 39 12.4**	**+0.2**
TWB1	baz=351			S	**Sg**	**04 39 16.3**	**-0.3**
TWE	**Neicheng** baz=270	**0.34**	**277**	⇑*i*P	**Pg**	**04 39 12.4**	**0.0**
TWE	baz=270			*i* S	**Sg**	**04 39 16.5**	**-0.4**
TIPB	**Shuangxi** baz=330	**0.35**	**326**	⇑*i*P	**Pg**	**04 39 12.8**	**+0.2**
TIPB	baz=330			S	**Sg**	**04 39 16.9**	**-0.4**
ENA	**Nanau** baz=212	**0.37**	**228**	P	**Pg**	**04 39 13.0**	**+0.1**
ENA	baz=212			S	**Sg**	**04 39 17.5**	**-0.2**
FUSB	**Fushanzhiwuyua** baz=280	**0.42**	**281**	⇑*i*P	**Pg**	**04 39 14.0**	**+0.1**
FUSB	baz=280			*e*S	**Sg**	**04 39 19.1**	**-0.4**
ENTT	**Nioudou** baz=262	**0.44**	**265**	P	**Pg**	**04 39 13.9**	**-0.2**
ENTT	baz=262			*e*S	**Sg**	**04 39 20.6**	**+0.7**
SXI1	**Grass Mountain** baz=350	**0.44**	**340**	*e*P	**Pg**	**04 39 14.7**	**+0.4**
EHP	**Heping Village** baz=211	**0.46**	**217**	*e*P	**Pg**	**04 39 14.3**	**-0.1**
NWF	**Wu-fen Shan** baz=325	**0.46**	**329**	⇑*i*P	**Pg**	**04 39 15.1**	**+0.5**
NWF	baz=325			S	**Sg**	**04 39 20.7**	**0.0**
WFSB	**Wu-fen Shan** baz=325	**0.46**	**329**	⇑*i*P	**Pb**	**04 39 15.1**	**-0.8**
WFSB	baz=325			*e*S	**Sg**	**04 39 21.2**	**+0.6**
LATG	**Datong** baz=250	**0.49**	**253**	P	**Pg**	**04 39 15.4**	**+0.2**
LATG	baz=250			S	**Sb**	**04 39 22.5**	**-1.4**
NWLT	**Wulai** baz=280	**0.50**	**282**	*e*P	**Pg**	**04 39 15.3**	**0.0**
NWLT	baz=280			*e*S	**Sg**	**04 39 21.6**	**-0.3**
TWA	**Mucha** baz=306	**0.52**	**306**	⇑*i*P	**Pg**	**04 39 16.0**	**+0.4**
TWA	baz=306			S	**Sg**	**04 39 22.8**	**+0.4**
TNOU	**National Taiwa** baz=329	**0.53**	**333**	⇑*i*P	**Pg**	**04 39 16.4**	**+0.5**
TNOU	baz=329			*e*S	**Sg**	**04 39 22.6**	**-0.3**
NHDH	**Xindian Distri** baz=301	**0.55**	**301**	P	**Pb**	**04 39 16.9**	**-0.6**
NHDH	baz=301			S	**Sg**	**04 39 23.5**	**0.0**
TATO	**Taipei**	**0.59**	**301**	Pg	**Pb**	**04 39 17.4**	**-0.7**
TATO				Sg	**Sg**	**04 39 24.8**	**+0.1**
TATO	**Taipei** baz=300	**0.59**	**301**	*e*P	**Pb**	**04 39 17.4**	**-0.7**
TATO	baz=300			*e*S	**Sg**	**04 39 24.3**	**-0.3**
YHNB	**Yeheng**	**0.61**	**269**	Pg	**Pg**	**04 39 17.2**	**-0.2**
YHNB				Sg	**Sg**	**04 39 24.3**	**-1.0**
YHNB	**Yeheng** baz=267	**0.61**	**269**	*e*P	**Pg**	**04 39 17.1**	**-0.2**
YHNB	baz=267			*e*S	**Sg**	**04 39 25.0**	**-0.4**
NSK	**Sanguang** baz=268	**0.62**	**270**	P	**Pg**	**04 39 17.4**	**-0.3**
NSK	baz=268			S	**Sg**	**04 39 25.1**	**-0.7**
YM01	**YM01** baz=318	**0.64**	**318**	P	**Pb**	**04 39 18.7**	**-0.3**
YM01	baz=318			*e*S	**Sg**	**04 39 25.9**	**-0.3**
ETL	**Fush Village** baz=203	**0.64**	**217**	*e*P	**Pg**	**04 39 18.0**	**0.0**
ETL	baz=203			*e*S	**Sg**	**04 39 26.5**	**+0.1**
NACB	**Ninganchiao**	**0.65**	**219**	Pg	**Pg**	**04 39 17.9**	**-0.2**
NACB				Sg	**Sg**	**04 39 26.4**	**-0.2**
NACB	**Ninganchiao** baz=206	**0.65**	**219**	*e*P	**Pg**	**04 39 18.0**	**-0.1**
NACB	baz=206			*e*S	**Sg**	**04 39 25.6**	**-0.9**
NNSB	**Datong** baz=245	**0.65**	**248**	*e*P	**Pg**	**04 39 18.2**	**0.0**
NNSB	baz=245			*e*S	**Sb**	**04 39 27.4**	**-1.0**
NNS	**Nan Shan** baz=246	**0.65**	**249**	*e*P	**Pg**	**04 39 18.3**	**0.0**
NNS	baz=246			*e*S	**Sg**	**04 39 26.9**	**+0.1**
YM08	**YM08** baz=322	**0.66**	**321**	*e*P	**Pg**	**04 39 18.6**	**+0.3**
ETLH	**Xiulin Townshi** baz=224	**0.69**	**228**	*e*P	**Pg**	**04 39 19.3**	**+0.3**
ETLH	baz=224			*e*S	**Sg**	**04 39 27.5**	**-0.6**
ANP	**Anpu** baz=318	**0.69**	**317**	*e*P	**Pb**	**04 39 19.4**	**-0.6**
TWS1	**Kuangyinshan** baz=307	**0.71**	**307**	P	**Pb**	**04 39 20.2**	**+0.1**
TWS1	baz=307			*e*S	**Sg**	**04 39 28.7**	**+0.2**
TWD	**Chiawan** baz=211	**0.72**	**215**	⇑*i*P	**Pg**	**04 39 19.3**	**-0.2**
TWD	baz=211			S	**Sg**	**04 39 28.5**	**-0.4**
TWY	**Chenhua** baz=318	**0.72**	**326**	⇑*i*P	**Pb**	**04 39 20.2**	**-0.2**
NTST	**Danshui** baz=312	**0.73**	**312**	*e*P	**Pb**	**04 39 20.6**	**+0.2**
NTST	baz=312			*e*S	**Sn**	**04 39 32.3**	**-1.0**
HWA	**Hwalien** baz=214	**0.80**	**210**	*e*P	**Pn**	**04 39 22.3**	**-0.9**
NCU	**National Centr** baz=298	**0.83**	**291**	*e*P	**Pg**	**04 39 21.4**	**-0.2**
NCU	baz=298			*e*S	**Sn**	**04 39 36.2**	**+0.2**
NCUH	**Zhongli** baz=298	**0.83**	**291**	*e*P	**Pn**	**04 39 22.8**	**-0.7**
NCUH	baz=298			*e*S	**Sn**	**04 39 35.7**	**-0.3**
NFF	**Wufeng Townshi** baz=257	**0.84**	**267**	*e*P	**Pb**	**04 39 22.7**	**+0.2**
FUSS	**Fushou** baz=237	**0.84**	**240**	P	**Pb**	**04 39 22.3**	**-0.3**
FUSS	baz=237			*e*S	**Sb**	**04 39 34.4**	**+0.2**
WHF	**Hehuan Shan** baz=230	**0.89**	**233**	P	**Pg**	**04 39 22.5**	**-0.2**
WHF	baz=230			*e*S	**Sb**	**04 39 35.2**	**-0.3**
YOJ	**Yonaguni jima**	**0.91**	**103**	Pg	**Pg**	**04 39 22.9**	**-0.1**
YOJ				Sn	**Sg**	**04 39 35.5**	**+0.7**
YOJ	**Yonaguni jima** baz=103	**0.91**	**103**	*e*P	**Pg**	**04 39 23.4**	**+0.4**
YOJ	baz=103			*e*S	**Sg**	**04 39 35.5**	**+0.7**
TDCB	**Techi** baz=233	**0.91**	**243**	*e*P	**Pb**	**04 39 23.3**	**-0.4**
TDCB	baz=233			*e*S	**Sb**	**04 39 36.2**	**+0.3**
LIOB	**Emei** baz=266	**0.94**	**268**	*e*P	**Pn**	**04 39 25.4**	**+0.4**
NSTT	**Nanjuang** baz=266	**0.95**	**267**	P	**Pn**	**04 39 25.4**	**+0.2**
NSTT	baz=266			S	**Sn**	**04 39 39.7**	**+0.8**
PCYT	**Pengchaiyu** baz=359	**0.95**	**2**	*e*P	**Pg**	**04 39 23.9**	**0.0**
SBCB	**Hsinchu** baz=271	**0.97**	**277**	P	**Pn**	**04 39 26.1**	**+0.6**
SBCB	baz=271			S	**Sn**	**04 39 39.5**	**+0.1**
HSN	**Hsinchu** baz=278	**0.98**	**278**	*e*P	**Pg**	**04 39 23.0**	**-1.6**
HSN	baz=278			*e*S	**Sn**	**04 39 39.3**	**-0.4**
CHGB	**Renai** baz=230	**1.00**	**232**	*e*P	**Pb**	**04 39 25.0**	**-0.3**
CHGB	baz=230			*e*S	**Sn**	**04 39 39.4**	**-1.1**
ESL	**Shilin** baz=211	**1.02**	**213**	*e*P	**Pg**	**04 39 24.8**	**-0.5**
OWD	**Renai** baz=217	**1.07**	**228**	*e*P	**Pb**	**04 39 26.2**	**-0.2**
OWD	baz=217			*e*S	**Sg**	**04 39 39.4**	**-0.6**
WHP	**Taichung City** baz=247	**1.08**	**249**	*e*P	**Pn**	**04 39 26.7**	**-0.3**
WHP	baz=247			*e*S	**Sb**	**04 39 40.6**	**-0.1**
WUSB	**Renai** baz=219	**1.08**	**231**	*e*P	**Pg**	**04 39 26.3**	**-0.2**
WUSB	baz=219			*e*S	**Sb**	**04 39 40.8**	**-0.2**
NMLH	**Miaoli** baz=254	**1.15**	**263**	*e*P	**Pn**	**04 39 29.3**	**+1.4**
NMLH	baz=254			*e*S	**Sn**	**04 39 45.6**	**+1.8**
EGFH	**Guangfu** baz=213	**1.15**	**209**	*e*P	**Pn**	**04 39 28.3**	**+0.3**
NSY	**Sanyi** baz=248	**1.20**	**258**	*e*P	**Pg**	**04 39 30.0**	**+1.5**
NSY	baz=248			*e*S	**Sn**	**04 39 46.9**	**+1.9**
TWQ1	**Liyutan** baz=253	**1.20**	**254**	*e*P	**Pg**	**04 39 29.9**	**+1.2**
TWQ1	baz=253			*e*S	**Sn**	**04 39 46.6**	**+1.4**
WCS	**Beigang Elemen** baz=237	**1.20**	**239**	*e*P	**Pg**	**04 39 30.2**	**+1.5**

VWDT	VWDT	1.23	222	eP	Pg	04 39 29.1	-0.1
	baz=220						
VWDT				eS	Sn	04 39 46.0	+0.2
	baz=220						
HGSD	Ruisui	1.31	206	eP	Pg	04 39 31.6	+0.8
	baz=210						
SMLT	Sun Moon Lake	1.31	233	eP	Pg	04 39 30.9	+0.2
	baz=230						
WDJ	Dajia District	1.32	256	eP	Pg	04 39 32.4	+1.5
	baz=253						
TYC	Yuchr	1.33	235	eP	Pg	04 39 31.2	+0.1
	baz=232						
SSLB	Suanglung	1.33	229	Pn	Pn	04 39 30.2	-0.2
SSLB	Suanglung	1.33	229	eP	Pg	04 39 30.9	-0.2
	baz=236						
EHY	Hungye	1.34	210	eP	Pb	04 39 30.7	-0.3
	baz=219						
YULB	Yu-li	1.45	208	Pn	Pn	04 39 31.9	-0.2
WJS	Zhushan	1.47	235	eP	Pg	04 39 35.0	+1.2
	baz=232						
WNT	Mingjian	1.47	238	eP	Pg	04 39 35.2	+1.4
	baz=224						
WNT				eS	Sg	04 39 56.0	+3.1
	baz=224						
ALS	Alishan	1.62	225	eP	Pg	04 39 36.7	0.0
	baz=222						
FULB	Fuli	1.62	205	eP	Pb	04 39 35.7	-0.1
	baz=217						
CHN5	Tsauling	1.65	230	eP	Pg	04 39 37.8	+0.6
	baz=227						
CHKT	Chengkung	1.69	202	eP	Pn	04 39 35.6	+0.3
	baz=181						
CHKT				eS	Sb	04 39 58.0	-0.3
	baz=181						
WDLH	Douliu	1.69	235	eP	Pg	04 39 38.4	+0.3
	baz=232						
WRL	Guolierlin Hig	1.71	243	eP	Pb	04 39 37.3	+0.2
	baz=240						
ELDTW	Lidau	1.75	213	eP	Pb	04 39 37.1	-0.9
	baz=199						
CHN4	Tsaushan	1.87	225	eP	Pg	04 39 41.5	0.0
	baz=209						
CHN4				eS	Sg	04 40 07.5	+1.7
	baz=209						
TPUB	Ta-pu	1.88	224	Pn	Pn	04 39 37.9	-0.1
TPUB	Ta-pu	1.88	224	eP	Pg	04 39 41.2	-0.6
	baz=207						
TPUB				eS	Sg	04 40 06.6	+0.5
	baz=207						
WTP	Ta-pu	1.93	223	eP	Pg	04 39 42.1	-0.6
	baz=209						
WTP				eS	Sg	04 40 08.7	+0.9
	baz=209						
WSF	Szhu	1.96	239	eS	Sg	04 40 08.2	-0.3
	baz=236						
TWK	Hsinying	2.00	226	eP	Pb	04 39 42.6	+0.5
	baz=208						
TWK				eS	Sg	04 40 10.1	+0.2
	baz=208						
SNST	Tainan City	2.03	225	eP	Pg	04 39 45.1	+0.6
	baz=208						
SNST				eS	Sg	04 40 11.6	+0.8
	baz=208						
CHN1	Nanshi	2.03	223	eP	Pg	04 39 44.1	-0.5
	baz=207						
CHN1				eS	Sg	04 40 09.8	-1.1
	baz=207						
TWGBT	Beinan	2.05	206	eP	Pn	04 39 39.6	-0.8
	baz=207						
TWG	Pinlang	2.05	206	Pn	Pn	04 39 38.6	-1.8
TWG	Pinlang	2.05	206	eP	Pb	04 39 43.0	-0.1
	baz=207						
SGST	Jiashian	2.08	220	eP	Pb	04 39 44.3	+0.8
	baz=208						
ICHU	Yijhu	2.08	231	eP	Pb	04 39 44.0	+0.5
	baz=239						

NOU 12 04:40:01.7, 15°.59S×167°.39E, h95^{km}, MLv4.3/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.23	308	P	Pn	04 40 16.2	+0.8
DVP	Devils Point	2.26	160	P	Pn	04 40 37.5	0.0
LIFNC	LIFOU	5.16	182	P	Pn	04 41 14.9	-1.7
YATNC	Mamie plateau,	6.45	184	P	Pn	04 41 33.1	-1.0
DZM	Mont Dzumac	6.51	188	P	Pn	04 41 35.6	+0.6
NOUC	Port Laguerre	6.56	189	P	Pn	04 41 36.7	+1.1
ONTNC	Ouen Toro	6.74	187	P	Pn	04 41 38.3	+0.2
OUENC	Ouen Island, N	6.81	184	P	Pn	04 41 39.8	+0.8

IDC 12 04:58:00.6±4.9, 6°.35S×147°.65E, h0^{km}, mb4.0/2, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=71.3km s-min=57.6km az=78.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.07	189	Pn	Pn	04 58 51.8	+1.4
	58nm,0.5s,baz=48,slow=6.6,SNR=11						
PMG				Sn	Sn	04 59 29.0	+1.1
	5.9nm,0.3s,baz=359,slow=17,SNR=1.8						
WRA	Warramunga Arr	18.70	223	P	P	05 02 20.5	-0.2
	0.4nm,0.3s,baz=49,slow=11,SNR=15						
	1.9nm,0.6s						
ASAR	Alice Springs	21.70	216	P	P	05 02 53.3	-0.1
	3.9nm,0.7s,baz=51,slow=9.5,SNR=51						
	3.9nm,0.7s						
STKA	Stephens Creek	26.02	192	P	P	05 03 35.0	-0.4
	1.6nm,0.4s,baz=11,slow=7.5,SNR=5.9						
	1.6nm,0.4s						

JMA 12 05:00:05.8±0.1, 24°.3N±0°.3×123°.8E±0°.3, h16^{km}±1^{km}, MV3.1/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.12	316	P	Pg	05 00 09.3	-0.1
IRIF				S	Sb	05 00 12.0	-0.2
JKRS	Kuro-shima	0.18	95	P	Pg	05 00 10.3	+0.1
JKRS				S	Sb	05 00 13.8	-0.2
HATJ	Hateruma jima	0.20	183	P	Pg	05 00 10.2	-0.2
HATJ				S	Sg	05 00 13.4	-0.2
JIJ	Ishigaki jima	0.32	69	P	Pg	05 00 12.3	-0.1
JIJ				S	Sg	05 00 17.0	0.0
YOJ	Yonaguni jima	0.77	286	P	Pg	05 00 20.7	0.0
YOJ				S	Sb	05 00 31.2	+0.3
JYNG	Yonagunijimaku	0.82	284	P	Pb	05 00 21.7	0.0
JYNG				eS	Sg	05 00 32.7	+0.1
JTJ	Tarama	0.90	64	P	Pb	05 00 22.9	0.0
JTJ				S	Sb	05 00 34.7	0.0

TAP 12 05:00:44.0, 24°.69N×121°.89E, h14^{km}±1^{km}, ML2.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.08	204	iP	Pg	05 00 47.4	+0.4
	baz=197						
TWC				eS	Sg	05 00 49.1	+0.2
	baz=197						
NDS	Dongshan	0.16	252	eP	Pb	05 00 48.9	+0.1
	baz=251						
NDS				eS	Sb	05 00 51.6	-0.5
	baz=251						
EGS		0.17	15	eP	Pb	05 00 49.7	+0.8
	baz=18						
NTC	Toucheng	0.18	343	eP	Pb	05 00 48.7	-0.4
	baz=343						
TWE	Neicheng	0.20	280	eP	Pb	05 00 49.4	-0.1
	baz=280						
TWE				iS	Sb	05 00 52.8	-0.4
	baz=280						
EWUT	Wuta	0.26	202	iP	Pb	05 00 50.3	-0.2
	baz=202						
EWUT				eS	Sb	05 00 54.1	-0.7
	baz=202						
FUSB	Fushanzhiwuyua	0.28	285	eP	Pb	05 00 51.1	+0.1
	baz=285						
ENA	Nanau	0.29	207	P	Pb	05 00 51.0	0.0
	baz=205						
ENA				eS	Sb	05 00 55.0	-0.7
	baz=205						
TIPB	Shuangxi	0.29	349	eP	Pg	05 00 50.5	+0.3
	baz=349						
ENTT	Nioudou	0.29	261	eP	Pb	05 00 51.1	0.0
	baz=260						
ENTT				S	Sb	05 00 55.7	-0.2
	baz=260						
LATG	Datong	0.36	246	eP	Pb	05 00 52.8	+0.5
	baz=245						
LATG				eS	Sb	05 00 58.5	+0.7
	baz=245						
NWLT	Wulai	0.36	285	eP	Pb	05 00 52.4	+0.2
	baz=284						
NWLT				eS	Sb	05 00 57.1	-0.7
	baz=284						
NWF	Wu-fen Shan	0.40	346	P	Pb	05 00 52.7	-0.2
	baz=346						
WFSB	Wu-fen Shan	0.40	346	eP	Pb	05 00 52.7	-0.2
	baz=345						
YHNB	Yeheng	0.46	268	eP	Pb	05 00 54.5	+0.4
	baz=268						
YHNB				eS	Sb	05 01 01.0	+0.2
	baz=268						

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*TAP **12** 05:13:21.3, 24°.70N×122°.01E, h6^{km}, ML2.5, C*

*JMA **12** 05:13:22.8±0.2, 24°N±1°×122°.2E±0°.3, h43^{km}, MV2.1/6, TAIWAN REGION*

ISC 12 05:13:20.2±1.1, 24°.71N±0°.02×122°.11E±0°.03, h10^{km}±9^{km}, n55, σ0^{s}.56/69, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.21	310	iP	Pg	05 13 25.3	+0.7
	baz=335						
EGS				iS	Sg	05 13 27.8	+0.2
	baz=335						
TWC	Suao	0.26	247	iP	Pg	05 13 25.2	-0.3
	baz=228						
TWB1	Santiao Chiao	0.32	339	eP	Pb	05 13 27.9	-0.1
	baz=344						
NDS	Dongshan	0.37	258	eP	Pg	05 13 27.1	-0.4
	baz=254						
TIPB	Shuangxi	0.37	315	P	Pb	05 13 28.3	-0.6
	baz=327						
TIPB				eS	Sg	05 13 32.6	+0.2
	baz=327						
EWUT	Wuta	0.40	229	eP	Pg	05 13 28.4	+0.3
	baz=220						
EWUT				eS	Sg	05 13 32.0	-1.4
	baz=220						
TWE	Neicheng	0.41	272	P	Pg	05 13 27.9	-0.3
	baz=272						
ENA	Nanau	0.44	230	eP	Pg	05 13 29.3	+0.5
	baz=209						
ENA				eS	Sg	05 13 33.1	-1.5
	baz=209						
SXI1	Grass Mountain	0.44	331	eP	Pb	05 13 30.1	0.0
	baz=354						
NWF	Wu-fen Shan	0.47	320	eP	Pb	05 13 30.5	-0.2
	baz=329						
NWF				S	Sb	05 13 37.0	-0.6
	baz=329						
WFSB	Wu-fen Shan	0.47	320	iP	Pb	05 13 30.5	0.0
	baz=329						
WFSB				iS	Sb	05 13 37.3	-0.3
	baz=329						
FUSB	Fushanzhiwuyua	0.48	276	P	Pg	05 13 29.8	+0.2
	baz=278						
FUSB				eS	Sg	05 13 36.2	+0.3
	baz=278						
ENTT	Nioudou	0.50	262	P	Pg	05 13 29.7	-0.3
	baz=259						
TNOU	National Taiwa	0.54	325	eP	Pb	05 13 32.0	+0.3
	baz=321						
TWA	Mucha	0.55	299	eP	Pb	05 13 31.9	0.0
	baz=305						
TWA				eS	Sg	05 13 38.2	0.0
	baz=305						
NWLT	Wulai	0.56	277	iP	Pg	05 13 31.0	0.0
	baz=277						
LATG	Datong	0.56	252	eP	Pg	05 13 31.4	+0.3
	baz=250						
LATG				eS	Sg	05 13 37.8	-0.7
	baz=250						
NHDH	Xindian Distri	0.59	295	eP	Pb	05 13 32.6	0.0
	baz=298						
TATO	Taipei	0.63	295	eP	Pb	05 13 33.1	-0.1
	baz=299						
TATO				eS	Sg	05 13 40.4	-0.2
	baz=299						
YM01	YM01	0.66	312	eP	Pb	05 13 34.1	+0.3
	baz=317						
YHNB	Yeheng	0.67	267	eP	Pg	05 13 33.6	+0.4
	baz=266						
YM08	YM08	0.67	315	eP	Pb	05 13 34.5	+0.4
	baz=321						
NSK	Sanguang	0.69	267	eP	Pg	05 13 33.0	-0.4
	baz=266						
ETL	Fush Village	0.71	219	eP	Pg	05 13 34.0	+0.1
	baz=203						
NACB	Ninganchiao	0.71	222	eP	Pg	05 13 34.0	0.0
	baz=205						
NNSB	Datong	0.72	247	eP	Pg	05 13 34.9	+0.8
	baz=243						
NNS	Nan Shan	0.72	248	eP	Pg	05 13 34.4	+0.2
	baz=244						
TWY	Chenhua	0.73	321	eP	Pn	05 13 36.0	-0.5
	baz=315						
TWY				eS	Sg	05 13 44.2	+0.3
	baz=315						
TWS1	Kuangyinshan	0.74	302	eP	Pn	05 13 36.1	-0.6
	baz=306						
ETLH	Xiulin Townshi	0.76	229	eP	Pb	05 13 35.9	+0.3
	baz=223						
TWD	Chiawan	0.78	217	eP	Pg	05 13 35.0	-0.3
	baz=210						
JYNG	Yonagunijimaku	0.80	109	eP	Pn	05 13 38.8	+1.2
JYNG				eS	Sn	05 13 50.0	+0.5
YOJ	Yonaguni jima	0.85	107	eP	Pn	05 13 39.1	+0.8
	baz=105						
YOJ	Yonaguni jima	0.85	107	P	Pn	05 13 39.4	+1.1
YOJ				S	Sn	05 13 51.5	+0.6
NFF	Wufeng Townshi	0.91	265	eP	Pg	05 13 38.4	+0.7
	baz=254						
FUSS	Fushou	0.92	240	eP	Pg	05 13 38.0	+0.1
	baz=235						
PCYT	Pengchaiyu	0.92	358	eP	Pn	05 13 39.7	+0.6
	baz=359						
TDCB	Techi	0.98	243	eP	Pg	05 13 39.5	+0.4
	baz=228						
LIOB	Emei	1.00	267	eP	Pn	05 13 40.6	+0.3
	baz=265						
NSTT	Nanjuang	1.01	266	eP	Pg	05 13 40.1	+0.4
	baz=264						
CHGB	Renai	1.07	233	eP	Pg	05 13 40.9	0.0
	baz=238						
OWD	Renai	1.14	229	eP	Pb	05 13 42.0	-0.1
	baz=213						
WHP	Taichung City	1.15	248	eP	Pb	05 13 42.1	-0.1
	baz=236						
WUSB	Renai	1.16	232	eP	Pb	05 13 42.4	+0.1
	baz=217						
WCS	Beigang Elemen	1.27	240	eP	Pn	05 13 44.5	+0.5
	baz=235						
VWDT	VWDT	1.30	223	eP	Pb	05 13 45.0	+0.3
	baz=218						
HGSD	Ruisui	1.36	208	eP	Pg	05 13 47.0	+0.6
	baz=221						
SMLT	Sun Moon Lake	1.38	234	eP	Pn	05 13 46.3	+0.7
	baz=229						
EHY	Hungye	1.40	211	eP	Pb	05 13 47.0	+0.6
	baz=219						
SSLB	Suanglung	1.40	229	eP	Pn	05 13 46.4	+0.6
	baz=236						
YULB	Yu-li	1.51	210	eP	Pb	05 13 48.7	+0.5
	baz=217						
IRIF	Iriomote-Funau	1.52	104	P	Pb	05 13 47.3	-1.2
IRIF				S	Sn	05 14 05.9	-1.3
YUS	Yu-Shan	1.61	221	eP	Pb	05 13 50.4	0.0
	baz=227						
ALS	Alishan	1.69	225	eP	Pb	05 13 52.0	+0.5
	baz=207						
JKRS	Kuro-shima	1.79	105	P	Pn	05 13 50.6	-0.5

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*LDG **12** 05:19:29.4±0.2, 51°.51N×16°.19E, h1^{km}, Ml3.5/11, Error ellipse: s-maj=5.2km s-min=3.2km az=7.0, Suspected Mining induced.*

*DNK **12** 05:19:29.9±1.4, 51°.53N×15°.96E, h0^{km}, ML2.9, Suspected explosion*

*IPEC **12** 05:19:29.7±0.3, 51°.57N×16°.26E, h1^{km}, ML3.2/3, Error ellipse: s-maj=3.0km s-min=1.4km az=58.0*

*IDC **12** 05:19:31.3±0.6, 51°.49N×15°.98E, h0^{km}, mb3.6/3, mbtmp3.5/10, ML3.2/6, Error ellipse: s-maj=10.8km s-min=6.1km az=116.0*

*UPP **12** 05:19:31.0±3.3, 51°.41N×15°.21E, h0^{km}, ML3.1, Suspected explosion*

*VIE **12** 05:19:32.9, 51°.42N×15°.93E, h4^{km}, mb3.7/1, ML3.4/4 84 km WNW of Wroclaw Suspected Mining induced.*

*BGR **12** 05:19:32.2±0.4, 51°.47N×16°.13E, h1^{km}, ML3.5/14, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0*

*PRU **12** 05:19:32.2±0.0, 51°.47N×16°.14E, h0^{km}*

ISC 12 05:19:28.8±0.5, 51°.54N±0°.03×16°.10E±0°.02, h0^{km}, n138, σ2^{s}.12/213, mb3.9/3, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	170	ePg	Pb	05 19 44.0	0.0
KSP				eSg	Sg	05 19 52.5	+1.0
KSP	Ksiaz	0.71	170	ePg	Pb	05 19 44.0	0.0
KSP				eSg	Sg	05 19 52.6	+1.1
CHVC	Chvalec	0.95	182	ePG	Pb	05 19 48.7	+0.5
CHVC				eSG	Sg	05 20 01.0	+1.6
	comp=Z,225nm,0.3s						
OSTC	Ostas	0.99	176	ePG	Pb	05 19 49.4	+0.6
OSTC				eSG	Sg	05 20 01.9	+1.4
	comp=Z,300nm,0.5s						
UPC	Upice	1.03	183	ePG	Pb	05 19 50.0	+0.4
UPC				eSG	Sg	05 20 02.7	+0.7
	comp=Z,346nm,0.5s						
DPC	Dobruska-Polom	1.20	173	ePG	Pb	05 19 52.7	+0.3
DPC				eSG	Sg	05 20 07.0	-0.3
	comp=Z,194nm,0.6s						
DPC	Dobruska-Polom	1.20	173	ePg	Pb	05 19 52.8	+0.4
DPC				eSg	Sg	05 20 07.4	+0.1
PVCC	Panska Ves	1.40	224	ePG	Pb	05 19 57.4	+1.6
PVCC				eSG	Sn	05 20 16.1	+1.4
	comp=Z,856nm,0.3s						
BRG	Berggiesshubel	1.51	245	Pn	Pg	05 19 58.2	+0.5
BRG				Pg	Pb	05 19 59.7	+2.0
BRG				Sg	Sn	05 20 20.0	+2.5
BRG				Amp		05 20 21.8	
	comp=Z,390nm,0.4s						
BRG				Amp		05 22 27.0	
	comp=N,1.7nm,12.4s						
BRG				Amp		05 22 35.0	
	comp=Z,6.4nm,13.5s						
BRG				Amp		05 22 38.0	
	comp=E,5.1nm,12.9s						
BRG	Berggiesshubel	1.51	245	ePn	Pg	05 19 58.3	+0.5
BRG				eSg	Sn	05 20 19.9	+2.5
KRLC	Kraliky	1.53	163	ePG	Pb	05 19 58.4	+0.4
KRLC				eSG	Sg	05 20 18.3	+0.4
	comp=E,248nm,0.8s						
FBE	Freiberg	1.83	251	ePn	Pg	05 20 04.1	+0.2
FBE				eSg	Sg	05 20 29.5	+1.8
PRU	Pruhonice	1.84	213	ePG	Pg	05 20 04.3	+0.2
PRU				eSG	Sg	05 20 28.2	+0.3
	comp=E,190nm,1.0s						
CLL	Collm	1.95	264	ePn	Pb	05 20 05.0	-0.2
CLL				ePg	Pg	05 20 07.0	+0.8
CLL				ix	x	05 20 12.0	
CLL				ex	x	05 20 23.0	
CLL				eSg	Sg	05 20 34.0	+2.5
	comp=Z,150nm,0.6s						
CLL	Collm	1.95	264	ePn	Pb	05 20 04.7	-0.6
CLL				eSg	Sg	05 20 34.3	+2.8
RAC	Raciborz	1.97	137	ePG	Pg	05 20 07.8	+1.2
RAC				eSG	Sg	05 20 34.2	+2.1
MORC	Moravsky Berou	1.99	152	ePn	Pn	05 20 04.1	+0.4
	baz=336						
MORC				eSg	Sb	05 20 31.7	+0.5
	comp=Z,122nm,0.5s,baz=336						
MORC	Moravsky Berou	1.99	152	ePN	Pn	05 20 04.1	+0.4
MORC				eSG	Sb	05 20 31.7	+0.5
MORC	Moravsky Berou	1.99	152	ePn	Pn	05 20 04.5	+0.8
OKC	Ostrava-Krasne	2.15	142	ePG	Pb	05 20 09.6	+1.1
OKC				eSG	Sg	05 20 38.4	+0.8
	comp=Z,200nm,0.8s						
OKC	Ostrava-Krasne	2.15	142	ePn	Pn	05 20 06.5	+0.7
OKC				eSg	Sg	05 20 38.5	+0.8
VRAC	Vranov	2.26	172	Pn	Pn	05 20 09.2	+1.9
	comp=Z,14nm,0.3s,baz=346,slow=14,SNR=16						
VRAC				Lg	Lg	05 20 41.8	
	comp=Z,24nm,0.3s,baz=90,slow=20,SNR=6.2						
	comp=Z,22nm,0.3s						
VRAC	Vranov	2.26	172	ePn	Pn	05 20 08.2	+0.8
	baz=355						
VRAC				eSg	Sb	05 20 40.8	+1.9
	comp=Z,112nm,0.7s,baz=355						
VRAC	Vranov	2.26	172	ePN	Pn	05 20 08.2	+0.8
VRAC				eSG	Sg	05 20 40.9	-0.3
TREC	Trest	2.28	190	ePG	Pg	05 20 12.8	+0.3
TREC				eSG	Sg	05 20 42.0	0.0
	comp=Z,150nm,1.1s						
MAUC	Maruska	2.44	152	ePN	Pn	05 20 11.4	+1.5
MAUC				ePG	Pb	05 20 14.9	+1.3
MAUC				eSG	Sg	05 20 47.6	+0.4
	comp=Z,216nm,0.7s						
KRUC	Moravsky	2.49	176	ePn	Pn	05 20 11.5	+1.0
	baz=358						
KRUC				eSg	Sg	05 20 48.3	-0.4
	comp=Z,119nm,0.6s,baz=358						
KRUC	Moravsky	2.49	176	ePN	Pn	05 20 11.5	+1.0
KRUC				eSG	Sg	05 20 48.3	-0.4
TANN	Tannenbergstha	2.56	245	ePn	Pn	05 20 13.7	+2.1
TANN				eSg	Sg	05 20 53.8	+2.8
WERD	Werda	2.63	247	ePn	Pn	05 20 14.6	+2.0
NKC	Novy Kostel	2.66	242	ePN	Pn	05 20 15.1	+2.2
NKC				ePG	Pg	05 20 20.6	+0.9
NKC				eSG	Sg	05 20 57.0	+2.9
	comp=Z,215nm,0.3s						
OJC	Ojcow	2.69	118	ePn	Pn	05 20 13.0	-0.3
OJC				ePg	Pg	05 20 21.9	+1.5
OJC				eSg	Sg	05 20 57.3	+2.1
OJC	Ojcow	2.69	118	ePn	Pn	05 20 14.4	+1.1
OJC				eSg	Sg	05 20 57.1	+2.0
JAVC	Velka Javorina	2.87	159	ePN	Pn	05 20 16.2	+0.4
KHC	Kasperske Hory	2.90	215	ePN	Pn	05 20 18.0	+1.7
KHC				ePG	Pg	05 20 23.8	-0.6
KHC				eSN	Sn	05 20 53.5	+1.6
KHC				eSG	Sg	05 21 02.9	+0.9
	comp=Z,93nm,0.6s						
CKRC	Cesky Krumlov	2.96	204	ePN	Pn	05 20 19.1	+2.1
CKRC				ePG	Pg	05 20 24.8	-0.6
CKRC				eSG	Sg	05 21 03.3	-0.4
MOX	Moxa	2.96	254	ePn	Pn	05 20 19.0	+1.9
MOX				ePg	Pg	05 20 27.1	+1.5
MOX				eSg	Sg	05 21 07.5	+3.4
GEC2	GERESS Array S	3.11	211	ePn	Pn	05 20 21.3	+2.1
GERES	GERESS Array B	3.11	211	Pn	Pn	05 20 20.9	+1.7
	comp=Z,4.6nm,0.3s,baz=30,slow=13,SNR=54						
GERES				Pg	Pb	05 20 26.4	+1.4
	comp=Z,15nm,0.3s,baz=24,slow=15,SNR=32						
GERES				Sn	Sn	05 20 57.2	+0.3
	comp=Z,10.0nm,0.3s,baz=36,slow=25,SNR=7.1						
GERES				Lg	Lg	05 21 07.0	
	comp=Z,19nm,0.3s,baz=36,slow=25,SNR=5.3						
	comp=Z,8.1nm,0.4s						
SMOL	Smolenice	3.15	164	ePG	Pg	05 20 31.2	+2.1
SMOL				eSG	Sg	05 21 11.4	+1.5
SMOL				eLG	Lg	05 21 17.9	
WET	Wettzell	3.16	222	ePn	Pn	05 20 21.5	+1.7
WET				eSg	Sg	05 21 11.1	+0.8
LANS	Liptovska Anna	3.22	137	ePN	Pn	05 20 21.8	+1.1
LANS	Liptovska Anna	3.22	137	ePN	Pn	05 20 22.4	+1.7
LANS				ePG	Pg	05 20 29.6	-0.9
LANS				eSG	Sg	05 21 13.8	+1.6
LANS				eLG	Lg	05 21 23.3	
MODS	Modra-Piesok	3.26	166	ePN	Pn	05 20 22.5	+1.3
MODS				ePG	Pg	05 20 32.3	+1.1
MODS				eSG	Sg	05 21 15.1	+1.6
MODS				eLG	Lg	05 21 21.1	
ZST	Bratislava	3.41	169	ePG	Pg	05 20 33.4	-0.7
ZST				eSG	Sg	05 21 19.4	+1.1
NIE	Niedzica	3.42	127	eP	Pg	05 20 35.5	+1.2
NIE				eS	Sg	05 21 21.4	+2.7
VYHS	Vyhne	3.52	149	ePN	Pn	05 20 25.2	+0.4
VYHS				ePG	Pg	05 20 37.1	+0.8

VYHS				*e*SG	Sg	05 21 20.6	-1.3
CLZ	Clausthal	3.58	277	*e*Pn	Pn	05 20 28.6	+3.0
GRF	Grafenberg Arr	3.62	241	*e*Pn	Pn	05 20 28.3	+2.2
GRF				*e*Sg	Sg	05 21 26.6	+1.7
CONA	Conrad Observa	3.62	183	Pn	Pn	05 20 28.5	+2.4
	comp=Z,5.5nm,0.5s,SNR=6.2						
CONA				*e*Sg	Sg	05 21 25.2	+0.2
	comp=Z,61nm,0.4s						
BSD	Bornholm Skovb	3.65	349	*i* P	Pn	05 20 28.5	+2.0
BSD				*e*S	Sn	05 21 08.9	-1.3
BSD				IAML		05 21 11.8	
	comp=Z,14nm,0.5s						
RONA	Rosalia, Austr	3.85	178	*e*Pn	Pn	05 20 30.8	+1.5
	comp=Z,0.9nm,0.3s						
RONA				*e*Sg	Sg	05 21 31.0	-1.3
	comp=Z,28nm,0.4s						
SOP	Sopron	3.87	175	P	Pb	05 20 38.1	+0.1
MOA	Molln	3.88	199	Pn	Pn	05 20 31.5	+1.8
	comp=Z,4.2nm,0.2s,SNR=16						
MOA				*e*Sg	Sg	05 21 33.6	+0.2
	comp=Z,62nm,0.5s						
BIOA	Bad Ischl, Aus	4.17	204	*e*Pn	Pn	05 20 36.1	+2.4
	comp=Z,4.6nm,0.3s						
BIOA				*e*Sg	Sg	05 21 42.7	0.0
	comp=Z,68nm,0.4s						
ARSA	Arzberg	4.31	185	*e*Pn	Pn	05 20 39.5	+3.9
	comp=Z,3.7nm,0.2s						
ARSA				*e*Sg	Sg	05 21 46.1	-1.1
	comp=Z,64nm,0.8s						
PSZ	Piszkesteto	4.38	144	P	Pn	05 20 38.5	+1.9
LUNU	Lund	4.39	340	P	Pn	05 20 37.8	+1.0
LUNU				S	Sn	05 21 28.6	0.0
LUNU	Lund	4.39	340	P	Pn	05 20 37.8	+1.0
LUNU				S	Sn	05 21 28.6	0.0
CSKK	Cskako	4.41	161	P	Pn	05 20 40.0	+3.0
MPLH	Magyarpolny	4.47	167	P	Pn	05 20 39.7	+1.9
BLEU	Blekinge	4.78	358	*i* P	Pn	05 20 43.8	+1.8
BLEU				*i* S	Sn	05 21 37.6	-0.4
KBA	Koelnbreinsper	4.81	203	Pn	Pn	05 20 44.9	+2.2
	comp=Z,5.9nm,0.4s,SNR=8.6						
KBA				*e*Sg	Sg	05 22 04.6	+1.2
	comp=Z,40nm,0.7s						
BJUU	Bjuv	4.89	339	P	Pn	05 20 44.4	+0.8
BJUU	Bjuv	4.89	339	P	Pn	05 20 44.4	+0.8
SOKA	Soboth	4.92	189	*e*Sg	Sg	05 22 07.2	+0.5
	comp=Z,8.3nm,0.4s						
DEL	Delary	5.11	346	*i* P	Pn	05 20 47.0	+0.4
DEL				P	Pn	05 20 47.7	+1.1
DEL				*i* S	Sn	05 21 44.8	-1.5
DEL	Delary	5.11	346	P	Pn	05 20 47.7	+1.1
OBKA	Obir	5.14	192	*e*Sg	Sg	05 22 15.5	+1.8
	comp=Z,27nm,0.7s						
WATA	Walderalm	5.14	217	*e*Pn	Pn	05 20 50.1	+3.0
	comp=Z,10nm,0.6s						
MYKA	Terra Mystica	5.17	199	*e*Pn	Pb	05 21 01.7	+1.5
	comp=Z,3.7nm,0.4s						
MYKA				*e*Sg	Sg	05 22 15.7	+0.8
	comp=Z,27nm,0.9s						
WTTA	Wattenberg	5.18	216	*e*Pn	Pn	05 20 50.7	+3.0
	comp=Z,6.5nm,0.4s						
WTTA				*e*Sg	Sg	05 22 16.5	+1.5
	comp=Z,31nm,0.8s						
MOTA	Moosalm	5.31	220	*e*Pn	Pn	05 20 51.3	+1.7
	comp=Z,3.3nm,0.2s						
RETA	Reutte	5.34	223	*e*Pn	Pn	05 20 51.4	+1.6
	comp=Z,1.8nm,0.2s						
RETA				*e*Sg	Sg	05 22 23.5	+3.2
	comp=Z,23nm,0.5s						
ABTA	Abfaltersbach	5.34	208	*e*Sg	Sg	05 22 19.8	-0.5
	comp=Z,25nm,0.6s						
SQTA	Sankt Quirin	5.37	218	*e*Pn	Pn	05 20 53.1	+2.8
	comp=Z,8.3nm,0.3s						
GOLS	Golise	5.54	183	*i* Pn	Pn	05 20 54.7	+2.2
MORH	Mrgy, Hungar	5.59	162	P	Pn	05 20 54.8	+1.7
KOVH	Kovagotottos	5.61	166	P	Pn	05 20 56.3	+2.8
FETA	Feichten	5.72	220	*e*Pn	Pn	05 20 57.3	+2.1
	comp=Z,2.6nm,0.5s						
FETA				*e*Sg	Sg	05 22 41.1	+8.4
	comp=Z,14nm,0.8s						
CRES	Cresnjev	5.73	184	*e*Pn	Pn	05 20 57.2	+2.1
DAVA	Damuels	5.88	226	*e*Pn	Pn	05 20 59.6	+2.3
	comp=Z,5.9nm,0.3s						
GNOU	Gnosjoe	5.92	348	P	Pn	05 20 59.2	+1.5
GNOU	Gnosjoe	5.92	348	P	Pn	05 20 59.2	+1.5
BOJS	Bojanci	6.07	186	*e*Pn	Pn	05 21 02.2	+2.5
DAVOX	Davos/Dischmat	6.27	223	Pn	Pn	05 21 03.9	+1.2
	comp=Z,1.1nm,0.3s,baz=25,slow=15,SNR=5.9						
DAVOX				Lg	Lg	05 22 48.0	
	comp=Z,0.8nm,0.3s,baz=310,slow=19,SNR=3.7						
	comp=Z,2.3nm,0.3s						
DRGR		6.43	135	⇑P	Pn	05 21 05.2	+0.5
CDF	Champ du Feu	6.49	245	*e*Pn	Pn	05 21 04.0	-1.7
CDF	Champ du Feu	6.49	245	*e*P	Pn	05 21 07.7	+2.0
CDF				*e*Sn	Sn	05 22 17.4	-3.0
CDF				*e*Sg	Sg	05 22 54.7	-2.6
	comp=Z,15nm,0.6s						
HINF	Hinteralfeld	7.06	242	*e*Pn	Pn	05 21 09.7	-3.7
HINF	Hinteralfeld	7.06	242	*e*Pg	Pg	05 21 41.2	-2.8
HINF				*e*Sg	Sg	05 23 11.7	-3.7
	comp=Z,10nm,0.5s						
BURAR	Bucovina Array	7.11	120	⇓P	Pn	05 21 15.6	+1.5
HAU	Haudompre	7.24	245	*e*Pn	Pn	05 21 13.4	-2.4
HAU	Haudompre	7.24	245	*e*Pg	Pg	05 21 43.6	-3.8
HAU				*e*Sg	Sg	05 23 18.3	-2.8
	comp=Z,21nm,0.6s						
PAGF	Fort de Pagny	7.32	250	*e*P	Pn	05 21 20.4	+3.5
	baz=70						
PAGF				*e*Sg	Sg	05 23 20.1	-3.5
	comp=Z,5.1nm,0.4s						
SFTF	Sexfontaines	7.89	249	*e*P	Pn	05 21 29.8	+5.1
CABF	La Chapelle	8.21	237	*e*Pn	Pn	05 21 26.8	-2.5
CABF	La Chapelle	8.21	237	*e*Pg	Pg	05 22 03.8	-2.3
CABF				*e*Sg	Sg	05 23 47.9	-4.5
	comp=Z,8.5nm,0.6s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	05 21 30.4	0.0
	comp=Z,2.5nm,0.4s,baz=282,slow=11,SNR=20						
AKASG				Sn	Sn	05 23 01.2	-3.6
	comp=Z,2.3nm,0.3s,baz=279,slow=23,SNR=5.0						
LPL	La Plagne	8.65	230	*e*Pn	Pn	05 21 34.7	-0.7
LPL	La Plagne	8.65	230	*e*P	Pn	05 21 37.8	+2.4
LPG	La Plagne	8.66	229	*e*Pn	Pn	05 21 34.4	-1.1
LPG	La Plagne	8.66	229	*e*P	Pn	05 21 38.3	+2.8
LPG				*e*Sn	Sn	05 23 07.6	-6.4
	comp=Z,1.6nm,0.4s						
LPG				*e*Sg	Sg	05 24 02.8	-3.9
HFS	Hagfors	8.72	352	Pn	Pn	05 21 36.2	+0.1
	comp=Z,0.3nm,0.3s,baz=209,slow=46,SNR=1.6						
	comp=Z,0.3nm,0.3s						
LOR	Lormes	9.05	247	*e*Pn	Pn	05 21 39.1	-1.6
LOR	Lormes	9.05	247	*e*Pg	Pn	05 22 18.6	+38
	baz=69						
LOR				*e*Sg	Sn	05 24 13.0	+50
	comp=Z,8.8nm,0.8s						
MBDF	Montbardon	9.23	226	*e*Pn	Pn	05 21 41.0	-2.3
MBDF	Montbardon	9.23	226	*e*P	Pn	05 21 47.3	+4.0
SSF	Saint Saulge	9.37	246	*e*Pn	Pn	05 21 43.3	-1.7
SSF	Saint Saulge	9.37	246	*e*P	Pn	05 21 48.0	+3.0
SSF	Saint Saulge	9.37	246	*e*Pg	Pn	05 22 20.0	+35
SSF				*e*Sg	Sn	05 24 23.0	+52
	comp=Z,3.0nm,0.6s						
SMF	Signal de Mont	9.41	243	*e*Pn	Pn	05 21 43.8	-1.8
SMF	Signal de Mont	9.41	243	*e*P	Pn	05 21 49.5	+3.9
SMF	Signal de Mont	9.41	243	*e*Pg	Pn	05 22 15.8	+30
SMF				*e*Sg	Sn	05 24 23.2	+51
	comp=Z,7.4nm,0.6s						
ORIF	Oris-en-Rattie	9.50	230	*e*P	Pn	05 21 51.5	+4.6
AVF	Avril sur Loir	9.60	245	*e*Pn	Pn	05 21 46.2	-2.0
AVF	Avril sur Loir	9.60	245	*e*P	Pn	05 21 51.8	+3.6
AVF	Avril sur Loir	9.60	245	*e*Pg	Pn	05 22 21.4	+33
AVF				*e*Sg	Sn	05 24 30.9	+54
	comp=Z,1.3nm,0.4s						
SBF	Sospel	9.64	221	*e*Pn	Pn	05 21 46.6	-2.2
SBF	Sospel	9.64	221	*e*P	Pn	05 21 51.0	+2.2
HYF	Humbligny	9.76	249	*e*Pn	Pn	05 21 48.9	-1.4
HYF				*e*Sn	Sn	05 23 33.1	-7.4
NOA	NORSAR Array B	9.90	346	Pn	Pn	05 21 52.0	-0.2
	baz=168,slow=12,SNR=4.4						
	comp=Z,0.2nm,0.4s						
BGF	Bois d'Agland	10.02	245	*e*Sg	Sn	05 24 44.7	+58
	comp=Z,5.7nm,0.5s						
VIVF	Saint-Julien-l	10.14	233	*e*Pn	Pn	05 21 52.6	-2.9
SMRF	Simiane la Rot	10.36	227	*e*Pn	Pn	05 21 55.3	-3.3
LMR	La Mourre	10.46	222	*e*P	Pn	05 22 01.8	+1.9
TCF	Toulx Ste Croi	10.54	246	*e*Pn	Pn	05 21 59.6	-1.4
TCF	Toulx Ste Croi	10.54	246	*e*P	Pn	05 22 03.5	+2.5
LDF	La Druitiere	10.84	261	*e*P	Pn	05 22 10.7	+5.6
FLN	La Foliniere	11.00	262	*e*Pn	Pn	05 22 05.8	-1.5
LASF	Ste Croix	11.10	233	*e*Pn	Pn	05 22 08.0	-0.8
LASF	Ste Croix	11.10	233	*e*P	Pn	05 22 11.9	+3.1
FINES	FINESS Array B	11.34	25	Pn	Pn	05 22 11.5	-0.3
	comp=Z,0.4nm,0.3s,baz=208,slow=10,SNR=13						
FINES				Sn	Sn	05 24 13.0	-6.1
	comp=Z,0.7nm,0.3s,baz=213,slow=20,SNR=6.9						
	comp=Z,1.4nm,0.5s						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	05 22 20.3	-1.8
	baz=99,slow=14						
ARCES	ARCESS Array B	18.59	10	P	P	05 23 45.6	-1.7
	comp=Z,1.3nm,0.4s,baz=196,slow=12,SNR=24						
AKTO	Aktyubinsk	26.15	76	P	P	05 25 06.7	+2.2
	comp=Z,1.6nm,0.6s,baz=280,slow=9.9,SNR=4.5						
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	42.21	69	P	P	05 27 26.1	+2.9
	comp=Z,0.2nm,0.5s,baz=286,slow=5.4,SNR=2.3						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	59.83	336	P	P	05 29 38.2	+2.8
	comp=Z,0.6nm,0.6s,baz=29,slow=6.9,SNR=15						
	comp=Z,0.6nm,0.6s						

DJA 12 05:26:36.7±2.2,**7°S**±16°×**10°6E**±1°1,**h103**^{km}±21^{km},**M3.4**/6, **MLv3.4**/6,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.20	89	P	Pn	05 26 52.8	+1.5
SKJI	Sukabumi	0.20	89	P	Pn	05 26 52.9	+1.6
SKJI				S	Sn	05 27 03.8	+1.6
DBJI	Dramaga	0.60	41	P	Pn	05 26 54.7	+1.1
DBJI	Dramaga	0.60	41	P	Pn	05 26 53.2	-0.4
CBJI	Citeko	0.77	40	P	Pn	05 26 54.8	-0.2
CBJI	Citeko	0.77	40	P	Pn	05 26 54.8	-0.2
CNJI	Cibinong	0.83	111	P	Pn	05 26 55.4	-0.2
CNJI	Cibinong	0.83	111	P	Pn	05 26 55.5	-0.1
LEM	Lembang	1.27	82	P	Pn	05 27 00.9	+0.3
LEM	Lembang	1.27	82	P	Pn	05 26 59.9	-0.7
CMJI	Cimerak	2.22	110	P	Pn	05 27 11.9	-0.3
CMJI	Cimerak	2.22	110	P	Pn	05 27 11.9	-0.3
KASI	Kota Agung	2.36	309	P	Pn	05 27 12.2	-1.9
KPJI	Karang Pucung	2.58	97	P	Pn	05 27 17.0	0.0
KPJI	Karang Pucung	2.58	97	P	Pn	05 27 17.0	0.0
UGM	Wanagama	4.23	102	P	Pn	05 27 38.8	-0.3
PCJI	Pacitan	4.93	104	P	Pn	05 27 48.2	-0.3

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*IASPEI **12** 05:29:55.0±1.2, 38°.81N±0°.03×122°.81W±0°.03, h5^{km}±8^{km}, Error ellipse: s-maj=5.0km s-min=4.1km az=50.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NCEDC **12** 05:29:55.4±1.8, 38°.82N±0°.02×122°.82W±0°.03, h3^{km}±7^{km}, Mwr3.8/5, ML3.2/82(NEIC), Error ellipse: s-maj=3.8km s-min=3.1km az=67.0*

*NEIC **12** 05:29:55.9±2.1, 38°.80N±0°.02×122°.75W±0°.03, h3^{km}±8^{km}, Error ellipse: s-maj=3.3km s-min=2.7km az=81.0*

*NEIC **12** 05:29:55.5, 38°.82N×122°.82W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.75; $M_{\theta\theta}$-4.01; $M_{\phi\phi}$4.76; $M_{r\theta}$-0.44; $M_{\theta\phi}$5.21; $M_{\phi r}$-1.39; Fault plane solution: $M_0$6.99000×10^{14} NP1:ϕ_s250.42000°, δ81.58000°, λ5.78000°. NP2:ϕ_s159.57000°, δ84.28000°, λ171.54000°. Principal axes: T 7.4352, Plg10.0000°, Azm115.0000°; N -0.9987, Plg80.0000°, Azm306.0000°; P -6.4365, Plg2.0000°, Azm205.0000°;*

*IDC **12** 05:29:57.5±3.9, 38°.97N×122°.71W, h0^{km}, mbtmp3.4/4, ML2.5/3 Error ellipse: s-maj=51.0km s-min=13.8km az=46.0*

ISC 12 05:29:56.2±0.9,**38°.80N**±0°.03×**122°.81W**±0°.03,**h10**^{km},**n71**, σ**1^{s}.11**/70,**Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	Geysers	0.02	45		Pg	05 29 56.3	-1.8
GCRM	Castle Rock Sp	0.08	107		Pg	05 29 57.4	-1.1
GSGM	Seigler Mounta	0.11	48		Pg	05 29 58.0	-0.8
GPMM	Pine Mountain	0.12	296		Pg	05 29 57.9	-1.2
HOPS	Hopland Field	0.28	314	Pg	Pg	05 30 01.1	-0.8
HOPS				IAML		05 30 06.0	
	comp=E,6μm,0.7s						
MNRC	McLaughlin Min	0.30	74		Pb	05 30 02.1	-1.6
FTR	Fort Ross	0.39	225		Pg	05 30 03.8	0.0
CVS	Carmenet Viney	0.53	148		Pg	05 30 06.2	-0.2
MCCM	Marconi Confer	0.65	185		Pb	05 30 09.1	-0.5
MCCM	Marconi Confer	0.65	185	IAML		05 30 23.6	
	comp=E,2μm,0.6s						
MCCM				IAML		05 30 23.9	
	comp=N,2μm,0.8s						
GNAM	Navarro Ridge	0.76	302		Pg	05 30 10.4	-0.3
GASB	Alder Springs	0.86	5		Pb	05 30 12.6	-0.7
HERB	Hercules	0.89	151		Pb	05 30 13.3	-0.4
SUTB	Sutter Butte	0.91	61		Pg	05 30 12.0	-1.6
BRK	Berkeley--Havi	1.02	155		Pb	05 30 15.4	-0.4
VAK	Adit at Lawren	1.02	154		Pb	05 30 15.5	-0.4
BL67	Building 67, L	1.02	154		Pb	05 30 15.5	-0.4
BKS	Berkeley--Byer	1.02	154		Pg	05 30 14.5	-1.3
KCPM	Cahto Peak	1.07	326		Pg	05 30 15.9	-0.9
KCPM				IAML		05 30 37.9	
	comp=N,834nm,1.2s						
SMCB	Saint Mary's C	1.10	150		Pb	05 30 16.8	-0.5
FARB	Farallon Islan	1.11	188		Pb	05 30 15.8	-1.5
BDM	Black Diamond	1.12	138		Pn	05 30 17.1	-0.8
ORV	Oroville	1.27	53	Pg	Pn	05 30 18.6	-1.3
WENL	Wente Vineyard	1.44	144		Pn	05 30 21.7	-0.5
KMRM	Mail Ridge	1.58	334		Pn	05 30 23.5	-0.8
KMRM				IAML		05 31 04.0	
	comp=N,364nm,1.9s						
KMRM				IAML		05 31 06.6	
	comp=E,315nm,1.6s						
MHC	Mount Hamilton	1.72	147		Pn	05 30 24.9	-1.4
CMPM	Mikes Peak	1.86	140		Pn	05 30 27.6	-0.5
KMPM	Mount Pierce	1.91	328	Pn	Pn	05 30 28.5	-0.3
KMPM				IAML		05 31 12.7	
	comp=E,258nm,1.8s						
KMPM				IAML		05 31 14.8	
	comp=N,188nm,1.7s						
CMB	Columbia Colle	2.05	111	Pn	Pn	05 30 30.2	-0.5
EMB	Emerald Bay	2.12	84		Pn	05 30 31.9	0.0
EMB				IAML		05 31 07.7	
	comp=E,179nm,0.7s						
HFEM	San Felipe	2.12	148		Pn	05 30 30.7	-1.1
PACP	Pacheco Peak	2.15	146		Pn	05 30 31.3	-0.9
BEKR	Beckworth	2.18	60		Pn	05 30 32.8	+0.1
KHMM	Horse Mountain	2.19	341		Pn	05 30 33.0	+0.2
KHMM				IAML		05 31 27.5	
	comp=N,112nm,1.7s						
KHMM				IAML		05 31 36.8	
	comp=E,154nm,1.9s						
MPK	Martis Peak	2.22	76		Pn	05 30 33.6	+0.3
HSFM	Saint Francis	2.24	152		Pn	05 30 32.6	-0.7
SAO	San Andreas Ge	2.30	152		Pn	05 30 32.9	-1.2
VCNR	Virginia City	2.51	78		Pn	05 30 38.0	+0.7
VCNR				IAML		05 30 53.8	
	comp=E,119nm,0.8s						
VCNR				IAML		05 31 42.4	
	comp=N,89nm,1.2s						
PNTR	Pine Nut	2.52	82		Pn	05 30 38.1	+0.7
HAST	Hastings Reser	2.60	157		Pn	05 30 36.6	-1.8
BBGB	Big Mountain B	2.62	147		Pn	05 30 37.9	-0.7
BSMM	Soledad Missio	2.65	155		Pn	05 30 37.9	-1.1
YERR	Yerington	2.79	85		Pn	05 30 41.6	+0.5
YERR				IAML		05 31 27.4	
	comp=N,110nm,1.2s						
PAHR	Pah Rah Range	2.81	70		Pn	05 30 41.8	+0.5
PAHR				IAML		05 31 42.3	
	comp=N,57nm,1.7s						
YBH	Yreka Blue Hor	2.93	1	Pn	Pn	05 30 44.6	+1.7
	comp=N,0.5nm,0.3s,baz=151,slow=14,SNR=8.6						
YBH	Yreka Blue Hor	2.93	1	Pn	Pn	05 30 44.3	+1.3
PMPB	Monarch Peak	3.03	148		Pn	05 30 44.1	-0.1
PMPB				IAML		05 31 29.0	
	comp=E,88nm,1.5s						
PMPB				IAML		05 31 43.5	
	comp=N,90nm,1.2s						
MDPB	Devils Postpil	3.16	110		Pn	05 30 47.7	+1.5
MDPB				IAML		05 31 36.7	
	comp=E,65nm,1.1s						
OMMB	Old Mammoth Mi	3.23	110	Pn	Pn	05 30 48.6	+1.5
OMMB				IAML		05 31 37.2	
	comp=N,66nm,1.6s						
OMMB				IAML		05 31 38.4	
	comp=E,54nm,1.6s						
RYN	Ryan	3.36	92		Pn	05 30 49.4	+0.6
RYN				IAML		05 31 46.5	
	comp=E,53nm,0.9s						
RYN				IAML		05 31 59.5	
	comp=N,42nm,1.8s						
LHV	Little Huntoon	3.42	98		Pn	05 30 51.0	+1.5
L04D	Klamath Falls	3.44	6		Pn	05 30 51.2	+1.3
L04D				IAML		05 32 11.7	
	comp=E,41nm,2.1s						
NVAR	Mina Array Bea	3.55	95	Pn	Pn	05 30 52.6	+1.1
	comp=E,0.8nm,0.3s,baz=268,slow=15,SNR=36						
NVAR				Pg	Pb	05 30 58.7	-0.5
	comp=E,3.4nm,0.3s,baz=261,slow=18,SNR=55						
	comp=E,2.3nm,0.5s						
NVAR	Mina Array Bea	3.55	95		Pn	05 30 51.8	+0.2
KBO	Bosley Butte	3.58	343	Pn	Pn	05 30 51.1	-0.7
KBO				IAML		05 32 19.0	
	comp=E,64nm,2.3s						
MOD	Modoc Plateau	3.65	31	Pn	Pn	05 30 52.5	-0.3
NV11	Mina Array Sit	3.66	94		Pn	05 30 53.2	+0.2
NV11				IAML		05 31 56.6	
	comp=N,51nm,2.1s						
NV11				IAML		05 32 04.1	
	comp=E,42nm,2.1s						
PAGB	Antelope Grade	3.68	145		Pn	05 30 52.0	-1.1
PAGB				IAML		05 32 15.3	
	comp=E,32nm,1.6s						
KVN	Kaiserville	3.68	85	Pn	Pn	05 30 53.0	-0.3
KVN				IAML		05 32 00.3	
	comp=N,27nm,1.7s						
KVN				IAML		05 32 04.5	
	comp=E,28nm,1.6s						
HUMO	Hull Mountain	3.81	358		Pn	05 30 54.5	-0.4
K05A	Summer Lake	4.19	20		Pn	05 30 59.5	-0.8
K05A				IAML		05 32 40.0	
	comp=E,19nm,2.3s						
KEBM	Edson Butte	4.23	345	Pn	Pn	05 30 59.4	-1.4
DBO	Dodson Butte	4.33	356	Pn	Pn	05 31 01.0	-1.1
DBO				IAML		05 32 04.8	
	comp=N,21nm,2.6s						
DBO				IAML		05 32 48.4	
	comp=E,28nm,3.4s						
LCH	Last Change Ra	4.37	109		Pn	05 31 02.0	-0.7
LCH				IAML		05 32 15.8	
	comp=N,23nm,2.2s						
LCH				IAML		05 32 18.4	
	comp=E,24nm,1.3s						
ISA	Isabella, Lake	4.66	131	Pn	Pn	05 31 06.4	-0.3
ISA				IAML		05 32 20.7	
	comp=E,26nm,2.4s						
ISA				IAML		05 32 25.0	
	comp=N,13nm,1.0s						
BCW	Bitter Crk WRg	4.71	144		Pn	05 31 07.7	+0.2
S11A	Rachel	5.68	99	Pn	Pn	05 31 20.6	-0.1
ELK	Elko	6.15	69	Pn	Pn	05 31 27.9	+0.6
	comp=N,0.1nm,0.3s,baz=255,slow=12,SNR=6.5						
	comp=N,2.1nm,0.9s						
PDAR	Pinedale Array	10.80	64	Pn	Pn	05 32 34.9	+3.8
	comp=N,2.5nm,1.0s,baz=250,slow=12,SNR=15						
PDAR	Pinedale Array	10.80	64		Pn	05 32 36.9	+5.8
TXAR	Lajitas Array	18.43	115	P	P	05 34 15.3	+3.5
	comp=N,2.3nm,1.1s,baz=295,slow=9.5,SNR=8.4						

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*JMA **12** 05:49:39.9±0.1, 24°.7N±0°.3×122°.0E±0°.3, h32^{km}, MV3.2/10, TAIWAN REGION*

*TAP **12** 05:49:39.3, 24°.70N×122°.02E, h13^{km}, ML3.4, C*

ISC 12 05:49:39.3±0.8,**24°.71N**±0°.02×**122°.02E**±0°.02,**h16**^{km}±6^{km}, **n65**,σ**0^{s}.83**/114,**5C-1D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.16	331	*i* P	Pg	05 49 43.3	-0.2
	baz=328						
EGS				*i* S	Sg	05 49 46.5	+0.3
	baz=328						
TWC	Suao	0.18	237	⇓*i*P	Pg	05 49 43.3	-0.5
	baz=238						
TWC				*i* S	Sg	05 49 47.5	+0.7
	baz=238						
ILA	Ilan	0.25	284	*i* S	Sg	05 49 49.4	+0.7
	baz=285						
NDS	Dongshan	0.28	255	P	Pb	05 49 45.5	-0.6
	baz=251						
NDS				S	Sb	05 49 49.7	-0.9
	baz=251						
TWB1	Santiao Chiao	0.30	355	⇑*i*P	Pb	05 49 45.8	-0.6
	baz=348						
TWB1				*i* S	Sb	05 49 51.1	0.0
	baz=348						
TIPB	Shuangxi	0.32	327	⇑*i*P	Pb	05 49 46.2	-0.4
	baz=319						
TIPB				*i* S	Sb	05 49 51.7	+0.2
	baz=319						
TWE	Neicheng	0.32	273	*i* P	Pb	05 49 45.9	-0.7
	baz=269						
TWE				*i* S	Sb	05 49 50.4	-1.2
	baz=269						
EWUT	Wuta	0.34	220	P	Pb	05 49 46.4	-0.6
	baz=212						
EWUT				S	Sb	05 49 50.9	-1.3
	baz=212						
ENA	Nanau	0.37	222	*i* P	Pb	05 49 47.0	-0.6
	baz=214						
ENA				*i* S	Sb	05 49 51.6	-1.5
	baz=214						
FUSB	Fushanzhiwuyua	0.39	278	⇑P	Pb	05 49 47.3	-0.6
	baz=278						
FUSB				S	Sb	05 49 52.4	-1.4
	baz=278						
SXI1	Grass Mountain	0.41	342	⇑P	Pb	05 49 48.2	0.0
	baz=342						
SXI1				S	Sb	05 49 55.1	+0.9
	baz=342						
ENTT	Nioudou	0.41	261	*i* P	Pb	05 49 47.9	-0.4
	baz=261						
ENTT				*i* S	Sb	05 49 53.1	-1.3
	baz=261						
NWF	Wu-fen Shan	0.42	330	⇑*i*P	Pb	05 49 48.4	0.0
	baz=323						
NWF				*i* S	Sb	05 49 55.3	+0.7
	baz=323						
NWLT	Wulai	0.47	279	*i* P	Pb	05 49 49.1	-0.2
	baz=285						
NWLT				S	Sb	05 49 54.8	-1.2
	baz=285						
LATG	Datong	0.48	249	P	Pb	05 49 49.1	-0.3
	baz=249						
LATG				S	Sb	05 49 56.3	+0.1
	baz=249						
TWA	Mucha	0.48	305	*i* P	Pb	05 49 49.3	0.0
	baz=305						
NHDH	Xindian Distri	0.51	300	*i* P	Pn	05 49 50.6	-1.4
	baz=300						
TAP	Taipei	0.57	306	*i* P	Pn	05 49 51.7	-1.0
	baz=298						
TAP				*i* S	Sb	05 49 59.8	+1.0
	baz=298						
YHNB	Yeheng	0.58	267	P	Pb	05 49 51.0	-0.2
	baz=267						
YHNB				S	Sb	05 49 58.9	-0.4
	baz=267						
YM01	YM01	0.60	317	P	Pn	05 49 52.0	-1.1
	baz=317						
NSK	Sanguang	0.60	267	*i* P	Pb	05 49 51.3	-0.2
	baz=267						
NSK				*i* S	Sb	05 49 59.0	-0.7
	baz=267						
NNSB	Datong	0.64	244	P	Pb	05 49 52.0	-0.2
	baz=235						
NNSB				S	Sb	05 50 01.2	+0.3
	baz=235						
NNS	Nan Shan	0.64	246	*i* P	Pb	05 49 52.0	-0.2
	baz=246						
ETL	Fush Village	0.65	213	P	Pb	05 49 51.9	-0.4
	baz=204						
ETL				*e*S	Sb	05 50 01.9	+0.7
	baz=204						
NACB	Ninganchiao	0.66	216	P	Pb	05 49 52.2	-0.2
	baz=206						
NACB				S	Sb	05 50 01.6	+0.3
	baz=206						

ANP	**Anpu** baz=317	**0.66**	**317**	*i* P	**Pn**	**05 49 53.1**	**-0.9**
TWS1	**Kuangyinshan** baz=306	**0.67**	**306**	*i* P	**Pn**	**05 49 53.9**	**-0.3**
NTST	**Danshui** baz=311	**0.69**	**312**	*i* P	**Pn**	**05 49 54.5**	**+0.1**
NTST	baz=311			S	**Sn**	**05 50 04.5**	**-0.2**
ETLH	**Xiulin Townshi** baz=224	**0.70**	**224**	P	**Pn**	**05 49 53.4**	**-1.2**
ETLH	baz=224			S	**Sb**	**05 50 02.9**	**+0.3**
TWD	**Chiawan** baz=211	**0.73**	**212**	*i* P	**Pb**	**05 49 52.9**	**-0.8**
TWD	baz=211			S	**Sb**	**05 50 02.6**	**-0.8**
NCU	**National Centr** baz=295	**0.80**	**289**	*i* P	**Pn**	**05 49 54.9**	**-1.1**
NCU	baz=295			S	**Sn**	**05 50 06.5**	**-1.0**
NCUH	**Zhongli** baz=294	**0.80**	**289**	*e*P	**Pn**	**05 49 56.2**	**+0.3**
NCUH	baz=294			S	**Sn**	**05 50 08.8**	**+1.3**
NFF	**Wufeng Townshi** baz=255	**0.82**	**265**	P	**Pn**	**05 49 57.3**	**+1.1**
NFF	baz=255			S	**Sn**	**05 50 07.7**	**-0.4**
FUSS	**Fushou** baz=236	**0.84**	**237**	*i* P	**Pn**	**05 49 56.2**	**-0.5**
FUSS	baz=236			*i* S	**Sn**	**05 50 08.6**	**-0.2**
JYNG	**Yonagunijimaku**	**0.88**	**107**	P	**Pb**	**05 49 56.4**	**+0.1**
JYNG				S	**Sg**	**05 50 08.0**	**-0.1**
WHF	**Hehuan Shan** baz=238	**0.88**	**231**	*i* P	**Pn**	**05 49 56.7**	**-0.8**
WHF	baz=238			*i* S	**Sn**	**05 50 09.1**	**-1.1**
TWT	**Tachien** baz=232	**0.89**	**240**	P	**Pn**	**05 49 58.4**	**+1.1**
TWT	baz=232			S	**Sn**	**05 50 10.2**	**+0.3**
TDCB	**Techi** baz=232	**0.90**	**240**	P	**Pn**	**05 49 57.1**	**-0.4**
TDCB	baz=232			S	**Sb**	**05 50 08.8**	**+0.3**
LIOB	**Emei** baz=267	**0.91**	**266**	*i* P	**Pn**	**05 49 58.9**	**+1.4**
NSTT	**Nanjuang** baz=253	**0.93**	**266**	*i* P	**Pn**	**05 49 58.4**	**+0.7**
NSTT	baz=253			S	**Sn**	**05 50 11.4**	**+0.8**
YOJ	**Yonaguni jima** baz=105	**0.94**	**105**	P	**Pn**	**05 49 57.7**	**-0.1**
YOJ	baz=105			S	**Sb**	**05 50 10.5**	**+1.1**
YOJ	**Yonaguni jima**	**0.94**	**105**	P	**Pb**	**05 49 57.1**	**-0.1**
YOJ				S	**Sb**	**05 50 09.8**	**+0.4**
SBCB	**Hsinchu** baz=291	**0.94**	**275**	P	**Pn**	**05 49 59.4**	**+1.5**
SBCB	baz=291			S	**Sn**	**05 50 13.0**	**+2.0**
HSN	**Hsinchu** baz=294	**0.96**	**276**	S	**Sn**	**05 50 12.3**	**+0.9**
CHGB	**Renai** baz=229	**1.00**	**230**	P	**Pn**	**05 49 58.5**	**-0.4**
CHGB	baz=229			S	**Sn**	**05 50 11.8**	**-1.0**
ESL	**Shilin** baz=212	**1.04**	**211**	P	**Pn**	**05 49 59.2**	**+0.1**
WHP	**Taichung City** baz=245	**1.06**	**247**	*i* P	**Pn**	**05 50 00.3**	**+0.7**
WHP	baz=245			S	**Sn**	**05 50 14.3**	**+0.2**
OWD	**Renai** baz=225	**1.07**	**226**	*i* P	**Pn**	**05 49 60.0**	**+0.2**
OWD	baz=225			*i* S	**Sn**	**05 50 13.8**	**-0.6**
WUSB	**Renai** baz=228	**1.08**	**229**	P	**Pn**	**05 49 60.0**	**0.0**
WUSB	baz=228			S	**Sn**	**05 50 14.7**	**-0.1**
NMLH	**Miaoli** baz=261	**1.13**	**262**	*e*P	**Pn**	**05 50 00.9**	**+0.5**
NMLH	baz=261			*e*S	**Sn**	**05 50 17.2**	**+1.6**
EGFH	**Guangfu** baz=224	**1.17**	**208**	*e*P	**Pn**	**05 50 02.0**	**+1.0**
NSY	**Sanyi** baz=275	**1.18**	**256**	P	**Pn**	**05 50 01.5**	**+0.4**
TWQ1	**Liyutan** baz=251	**1.19**	**253**	*i* P	**Pn**	**05 50 02.5**	**+1.2**
TWQ1	baz=251			S	**Sn**	**05 50 18.0**	**+0.9**
WCS	**Beigang Elemen** baz=244	**1.20**	**238**	S	**Sn**	**05 50 18.6**	**+1.4**
VWDT	**VWDT** baz=213	**1.24**	**220**	P	**Pn**	**05 50 03.4**	**+1.5**
VWDT	baz=213			S	**Sn**	**05 50 19.1**	**+0.8**
SMLT	**Sun Moon Lake** baz=230	**1.31**	**231**	*i* P	**Pg**	**05 50 04.3**	**-0.3**
SMLT	baz=230			S	**Sn**	**05 50 21.9**	**+1.7**
HGSD	**Ruisui** baz=219	**1.32**	**204**	P	**Pg**	**05 50 04.8**	**-0.2**
HGSD	baz=219			S	**Sn**	**05 50 23.3**	**+2.8**
TYC	**Yuchr** baz=233	**1.33**	**233**	P	**Pg**	**05 50 04.6**	**-0.3**
SSLB	**Suanglung** baz=225	**1.33**	**227**	P	**Pg**	**05 50 04.8**	**-0.3**
SSLB	baz=225			S	**Sn**	**05 50 22.3**	**+1.6**
YULB	**Yu-li** baz=208	**1.46**	**207**	*e*P	**Pb**	**05 50 05.7**	**-0.5**
IRIF	**Iriomote-Funau**	**1.60**	**103**	P	**Pn**	**05 50 06.3**	**-0.6**
IRIF				S	**Sn**	**05 50 26.7**	**-0.6**
HATJ	**Hateruma jima**	**1.75**	**111**	P	**Pn**	**05 50 09.1**	**0.0**
HATJ				S	**Sn**	**05 50 31.2**	**+0.1**
JKRS	**Kuro-shima**	**1.88**	**104**	P	**Pn**	**05 50 10.7**	**-0.1**
JKRS				S	**Sn**	**05 50 33.2**	**-0.8**
JIJ	**Ishigaki jima**	**1.97**	**100**	*e*P	**Pn**	**05 50 12.2**	**+0.2**
JIJ				S	**Sn**	**05 50 35.7**	**-0.6**
JISG	**Ishigakijimahi**	**2.09**	**93**	*e*P	**Pn**	**05 50 14.1**	**+0.4**

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*NOU **12** 06:15:23.3, 41°.10S×175°.66E, h49^{km}, MLv4.0/9, North Island, New Zealand*
*WEL **12** 06:15:23.9, 41°S±2°×17°5E±°, h27^{km}±3^{km}, M3.7/18, ML4.0/18, MLv3.7/18, Error ellipse: s-maj=0.0km s-min=0.0km az=99.5*
ISC 12 06:15:23.9±0.9**, 40°.96S**±0°.02×**175°.52E**±0°.03**, h31**^{km}±6^{km}**, n102,** σ**1ˢ.02**/114**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	**Holdsworth Sta**	**0.07**	**355**	P	**Pb**	**06 15 29.2**	**-0.1**
HOWZ				S	**Sb**	**06 15 32.7**	**-0.2**
MTW	**Mount Morrison**	**0.19**	**185**	P	**Pn**	**06 15 31.0**	**+0.2**
MTW				S	**Sb**	**06 15 36.2**	**+1.7**
OGWZ	**Otaki Gorge**	**0.30**	**299**	P	**Pb**	**06 15 31.0**	**-0.5**
OGWZ				S	**Sb**	**06 15 35.8**	**-0.9**
MRZ	**Mangatainoka R**	**0.31**	**8**	P	**Pb**	**06 15 31.3**	**-0.2**
MRZ				S	**Sb**	**06 15 36.5**	**-0.2**
TMWZ	**Te Maipa**	**0.31**	**117**	P	**Pn**	**06 15 33.2**	**+0.8**
TMWZ				S	**Sn**	**06 15 40.2**	**+2.2**
TIWZ	**Tintock**	**0.33**	**56**	P	**Pn**	**06 15 32.4**	**-0.3**
TIWZ				S	**Sn**	**06 15 39.0**	**+0.5**
CAW	**Cannon Point**	**0.37**	**247**	P	**Pb**	**06 15 32.5**	**0.0**
CAW				S	**Sb**	**06 15 38.2**	**-0.1**
PAWZ	**Paruwai Farm**	**0.42**	**190**	P	**Pn**	**06 15 34.4**	**+0.5**
PAWZ				S	**Sn**	**06 15 42.2**	**+1.5**
TRWZ	**Traveller**	**0.45**	**164**	P	**Pn**	**06 15 35.0**	**+0.7**
TRWZ				S	**Sn**	**06 15 43.7**	**+2.3**
KIW	**Kapiti Island**	**0.48**	**282**	P	**Pb**	**06 15 33.7**	**-0.3**
MSWZ	**Moikau Station**	**0.50**	**204**	P	**Pn**	**06 15 35.2**	**+0.2**
MSWZ				S	**Sn**	**06 15 43.3**	**+0.8**
CPWZ	**Castlepoint**	**0.52**	**84**	P	**Pn**	**06 15 36.3**	**+1.1**
PRWZ	**Pori Road**	**0.53**	**40**	P	**Pn**	**06 15 35.6**	**+0.2**
POWZ	**Post Office Ro**	**0.60**	**18**	P	**Pb**	**06 15 36.0**	**0.0**
POWZ				S	**Sn**	**06 15 44.9**	**-0.1**
BFZ	**Birch Farm**	**0.62**	**63**	P	**Pn**	**06 15 36.9**	**+0.3**
BFZ	**Birch Farm**	**0.62**	**63**	P	**Pn**	**06 15 37.3**	**+0.7**
PLWZ	**Palliser**	**0.64**	**198**	P	**Pn**	**06 15 37.0**	**+0.2**
WEL	**Wellington**	**0.65**	**240**	P	**Pb**	**06 15 36.9**	**0.0**
BHW	**Baring Head**	**0.66**	**228**	P	**Pn**	**06 15 37.2**	**0.0**
SNZO	**South Karori**	**0.71**	**240**	P	**Pn**	**06 15 38.0**	**+0.2**
OHWZ	**Ohakea**	**0.77**	**348**	P	**Pn**	**06 15 39.2**	**+0.5**
DVHZ	**Dannevirke**	**0.83**	**37**	P	**Pn**	**06 15 39.7**	**+0.2**
ANWZ	**Angora Road**	**0.88**	**55**	P	**Pb**	**06 15 40.4**	**-0.3**
TSZ	**Takapari Road**	**0.96**	**20**	P	**Pn**	**06 15 41.6**	**+0.2**
TSZ				S	**Sb**	**06 15 53.9**	**-0.6**
TCW	**Tory Channel**	**0.97**	**255**	P	**Pn**	**06 15 41.5**	**0.0**
PRHZ	**Porangahau**	**1.10**	**51**	P	**Pn**	**06 15 43.1**	**-0.1**
WPHZ	**Waipukurau**	**1.14**	**38**	P	**Pn**	**06 15 44.1**	**+0.4**
PNHZ	**Pukenui**	**1.17**	**26**	P	**Pn**	**06 15 44.3**	**+0.1**
DUWZ	**D’Urville Isla**	**1.22**	**277**	P	**Pn**	**06 15 45.4**	**+0.5**
CMWZ	**Cape Campbell**	**1.26**	**231**	P	**Pn**	**06 15 45.9**	**+0.5**
WAZ	**Wanganui**	**1.28**	**341**	P	**Pb**	**06 15 47.6**	**+0.2**
TUWZ	**Tuamarina**	**1.28**	**248**	P	**Pn**	**06 15 45.2**	**-0.4**
PXZ	**Pawanui**	**1.38**	**48**	P	**Pn**	**06 15 46.7**	**-0.4**
BSWZ	**Blackbirch Sta**	**1.45**	**238**	P	**Pn**	**06 15 47.8**	**-0.2**
KRHZ	**Kereru**	**1.47**	**26**	P	**Pn**	**06 15 48.3**	**0.0**
BHHZ	**Black Hill Sta**	**1.53**	**16**	P	**Pn**	**06 15 49.7**	**+0.5**
KAHZ	**Kahuranaki**	**1.56**	**42**	P	**Pn**	**06 15 49.3**	**-0.3**
MOVZ	**Moawhango**	**1.57**	**7**	P	**Pn**	**06 15 50.2**	**+0.5**
WNVZ	**Wahianoa**	**1.64**	**2**	P	**Pn**	**06 15 51.7**	**+1.0**
NNZ	**Nelson**	**1.64**	**260**	P	**Pn**	**06 15 50.6**	**0.0**
WHVZ	**Whangaehu Hut**	**1.68**	**2**	P	**Pn**	**06 15 52.5**	**+1.1**
KWHZ	**Kaweka Forest**	**1.69**	**24**	P	**Pn**	**06 15 51.6**	**+0.3**
FWVZ	**Far West T-bar**	**1.71**	**1**	P	**Pn**	**06 15 52.9**	**+1.1**
LREZ	**Lake Rotokare**	**1.73**	**330**	P	**Pb**	**06 15 55.1**	**+0.1**
CKHZ	**Cape Kidnapper**	**1.77**	**43**	P	**Pn**	**06 15 51.4**	**-0.9**
MCHZ	**McNeill Hill**	**1.77**	**31**	P	**Pn**	**06 15 52.2**	**-0.1**
NGZ	**Ngauruhoe**	**1.79**	**2**	P	**Pn**	**06 15 54.0**	**+1.2**
OTVZ	**Oturere**	**1.80**	**4**	P	**Pn**	**06 15 54.3**	**+1.3**
ETVZ	**East Tongariro**	**1.83**	**5**	P	**Pb**	**06 15 55.3**	**-1.5**
NNVZ	**North Ngauruho**	**1.83**	**2**	P	**Pn**	**06 15 54.9**	**+1.5**
WTVZ	**West Tongariro**	**1.85**	**2**	P	**Pn**	**06 15 54.7**	**+1.2**
TMVZ	**Te Maari**	**1.85**	**4**	P	**Pn**	**06 15 54.9**	**+1.3**
NTVZ	**North Tongarir**	**1.87**	**4**	P	**Pn**	**06 15 55.2**	**+1.3**
KRVZ	**Karewarewa**	**1.87**	**3**	P	**Pn**	**06 15 55.2**	**+1.3**
TWVZ	**Taurewa**	**1.89**	**358**	P	**Pn**	**06 15 55.2**	**+1.0**
VRZ	**Vera Road**	**1.93**	**342**	P	**Pb**	**06 15 58.7**	**+0.3**
TKNZ	**Takaka Hill**	**1.94**	**267**	P	**Pn**	**06 15 55.2**	**+0.5**
BKZ	**Black Stump Fm**	**1.94**	**23**	P	**Pn**	**06 15 54.5**	**-0.4**
BKZ	**Black Stump Fm**	**1.94**	**23**	P	**Pn**	**06 15 54.4**	**-0.4**
KATZ	**Kakaramea**	**1.99**	**4**	P	**Pb**	**06 16 01.1**	**+1.5**
NMEZ	**Namu Road**	**2.00**	**320**	P	**Pb**	**06 15 58.7**	**-0.9**
RITZ	**Rihia Road**	**2.00**	**8**	P	**Pn**	**06 15 57.4**	**+1.7**
NEZ	**North Egmont**	**2.02**	**327**	P	**Pb**	**06 15 59.5**	**-0.5**
KHEZ	**Kahui Hut**	**2.03**	**325**	P	**Pb**	**06 15 59.1**	**-1.0**
ARHZ	**Aropaoanui**	**2.04**	**34**	P	**Pn**	**06 15 55.7**	**-0.4**
DREZ	**Durham Road**	**2.04**	**330**	P	**Pb**	**06 16 00.2**	**-0.1**
KHZ	**Kahutara**	**2.08**	**225**	P	**Pn**	**06 15 55.7**	**-0.9**
KHZ	**Kahutara**	**2.08**	**225**	P	**Pn**	**06 15 55.8**	**-0.8**
MHEZ	**Mangahewa**	**2.10**	**334**	P	**Pb**	**06 16 02.5**	**+1.2**
RATZ	**Rangitukua**	**2.10**	**5**	P	**Pb**	**06 16 03.0**	**+1.5**
NMHZ	**Naumai**	**2.11**	**28**	P	**Pb**	**06 16 00.0**	**-1.5**
NBEZ	**Newall Road No**	**2.12**	**323**	P	**Pb**	**06 16 01.8**	**+0.2**
PKE	**Pukeiti**	**2.12**	**326**	P	**Pb**	**06 16 00.9**	**-0.9**
THZ	**Tophouse**	**2.12**	**247**	P	**Pn**	**06 15 56.7**	**-0.6**
MRNZ	**Matariki Terra**	**2.13**	**257**	P	**Pn**	**06 15 57.5**	**+0.1**
MRHZ	**Matea Rd**	**2.24**	**18**	P	**Pn**	**06 15 58.3**	**-0.6**
QRZ	**Quartz Range**	**2.27**	**273**	P	**Pn**	**06 15 59.6**	**+0.3**
QRZ	**Quartz Range**	**2.27**	**273**	P	**Pn**	**06 15 59.9**	**+0.6**
HIZ	**Hauiti**	**2.50**	**348**	P	**Pn**	**06 16 05.0**	**+2.5**
HIZ	**Hauiti**	**2.50**	**348**	P	**Pn**	**06 16 04.1**	**+1.6**
KNZ	**Kokohu**	**2.55**	**41**	P	**Pn**	**06 16 01.6**	**-1.4**
TLZ	**Tolley Road**	**2.63**	**0**	P	**Pb**	**06 16 08.8**	**-1.6**
MUGZ	**Murupara**	**2.66**	**22**	P	**Pn**	**06 16 04.2**	**-0.5**
GVZ	**Greta Valley S**	**2.73**	**222**	P	**Pn**	**06 16 04.4**	**-1.2**
PRGZ	**Paritu Road**	**2.73**	**42**	P	**Pn**	**06 16 04.6**	**-1.0**
DSZ	**Denniston Nort**	**2.91**	**253**	P	**Pn**	**06 16 07.4**	**-0.6**
URZ	**Urewera**	**2.97**	**25**	P	**Pn**	**06 16 07.0**	**-1.9**
URZ	**Urewera**	**2.97**	**25**	P	**Pn**	**06 16 08.9**	**0.0**
LTZ	**Lake Taylor**	**3.03**	**232**	P	**Pn**	**06 16 08.5**	**-1.3**
MWZ	**Matawai**	**3.05**	**31**	P	**Pn**	**06 16 08.1**	**-2.0**
OKCZ	**Okains Bay**	**3.31**	**213**	P	**Pn**	**06 16 12.1**	**-1.5**
RUGZ	**Raukumara Rang**	**3.43**	**30**	P	**Pn**	**06 16 14.3**	**-1.1**
MQZ	**McQueen’s Vall**	**3.47**	**217**	P	**Pn**	**06 16 13.3**	**-2.4**
AKCZ	**Akaroa Harbour**	**3.49**	**213**	P	**Pn**	**06 16 14.5**	**-1.5**
PKGZ	**Pakihiroa**	**3.65**	**34**	P	**Pn**	**06 16 17.3**	**-1.0**
WMGZ	**Waiomatatini S**	**3.86**	**36**	P	**Pn**	**06 16 19.1**	**-2.0**
RPZ	**Rata Peaks**	**4.30**	**229**	P	**Pn**	**06 16 25.8**	**-1.4**
RPZ	**Rata Peaks**	**4.30**	**229**	P	**Pn**	**06 16 25.9**	**-1.4**
LBZ	**Lake Benmore**	**5.21**	**227**	P	**Pn**	**06 16 38.6**	**-1.1**
ODZ	**Otahua Downs**	**5.42**	**220**	P	**Pn**	**06 16 40.6**	**-2.0**
ODZ	**Otahua Downs**	**5.42**	**220**	P	**Pn**	**06 16 41.0**	**-1.6**
CTZ	**Chatham Island**	**6.45**	**118**	P	**Pn**	**06 16 56.5**	**-0.1**

IDC 12 06:23:38.8±3.2**, 54°.20N**×**86°.83E, h0**^{km}**, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=27.3km s-min=14.9km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=77,slow=332,SNR=1.4	**1.21**	**259**	*i*		06 32 30.0	
ZALV	**Zalesovo Beam** 1.1nm,0.3s,baz=75,slow=15,SNR=17	**1.21**	**259**	Pg	Pg	06 24 01.4	-0.6
ZALV	0.6nm,0.3s,baz=79,slow=25,SNR=6.3			Lg	Lg	06 24 17.8	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=14,SNR=5.5 0.9nm,0.5s	**6.21**	**238**	Pn	Pn	06 25 12.9	+1.2
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=21,slow=12,SNR=5.3	**7.96**	**203**	Pn	Pn	06 25 36.5	+0.8
MKAR	0.1nm,0.3s,baz=20,slow=28,SNR=3.7			Sn	Sn	06 27 06.2	-0.1
MKAR	0.1nm,0.3s,baz=32,slow=34,SNR=2.0 0.3nm,0.5s			Lg	Lg	06 27 50.9	

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*IDC **12** 06:28:18.5±1.1, 24°.30N×122°.05E, h0^{km}, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=49.2km s-min=22.5km az=68.0*
*JMA **12** 06:28:18.9±0.2, 24°.0N±0°.9×12°2E±°, h13^{km}±1^{km}, MV3.3/9, TAIWAN REGION*
*TAP **12** 06:28:21.0, 24°.16N×121°.74E, h11^{km}, ML3.9, B*
ISC 12 06:28:20.8±0.8**, 24°.14N**±0°.01×**121°.76E**±0°.02**, h15**^{km}±4^{km}**, n160,** σ**0ˢ.73**/224**, mb3.5**/7**, 3C-40D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=273	**0.13**	**277**	⇓*i*P	**Pg**	**06 28 24.1**	**-0.3**
ETL	baz=273			*i* S	**Sg**	**06 28 26.2**	**-0.6**
NACB	**Ninganchiao** baz=280	**0.16**	**281**	⇓*i*P	**Pg**	**06 28 24.4**	**-0.3**
NACB	baz=280			*i* S	**Sg**	**06 28 26.8**	**-0.6**
EHP	**Heping Village** baz=3.0	**0.17**	**353**	P	**Pg**	**06 28 24.8**	**-0.1**
EHP	baz=3.0			S	**Sg**	**06 28 27.7**	**+0.1**
TWD	**Chiawan** baz=248	**0.17**	**247**	⇓*i*P	**Pg**	**06 28 24.7**	**-0.1**
TWD	baz=248			*i* S	**Sg**	**06 28 27.4**	**-0.1**
HWA	**Hwalien** baz=226	**0.22**	**221**	*e*P	**Pg**	**06 28 26.8**	**+1.1**
ETLH	**Xiulin Townshi** baz=283	**0.26**	**284**	⇓*i*P	**Pb**	**06 28 26.4**	**-1.0**
ETLH	baz=283			*i* S	**Sg**	**06 28 30.1**	**-0.3**
ENA	**Nanau** baz=1.0	**0.28**	**356**	⇓P	**Pb**	**06 28 26.8**	**-0.8**
ENA	baz=1.0			*i* S	**Sg**	**06 28 30.9**	**+0.1**
EWUT	**Wuta** baz=6.0	**0.30**	**3**	⇓*i*P	**Pb**	**06 28 27.2**	**-0.7**
EWUT	baz=6.0			S	**Sb**	**06 28 31.7**	**-1.0**
ETM	**Tongmen** baz=232	**0.30**	**234**	⇓*i*P	**Pb**	**06 28 27.2**	**-0.7**
ETM	baz=232			*i* S	**Sb**	**06 28 31.8**	**-1.0**
TEYL	**Yanliau Villag** baz=218	**0.31**	**209**	*e*P	**Pb**	**06 28 28.0**	**-0.1**
LATG	**Datong** baz=332	**0.45**	**331**	⇓P	**Pb**	**06 28 29.9**	**-0.6**
LATG	baz=332			S	**Sg**	**06 28 35.9**	**+0.1**
ESL	**Shilin** baz=227	**0.45**	**223**	⇓*i*P	**Pb**	**06 28 29.8**	**-0.6**
ESL	baz=227			S	**Sb**	**06 28 36.8**	**-0.1**
NNSB	**Datong** baz=310	**0.45**	**309**	⇓*i*P	**Pb**	**06 28 29.8**	**-0.7**
NNSB	baz=310			*i* S	**Sg**	**06 28 35.9**	**0.0**
WHF	**Hehuan Shan** baz=270	**0.46**	**270**	⇓*i*P	**Pb**	**06 28 29.9**	**-0.9**
WHF	baz=270			*i* S	**Sg**	**06 28 36.0**	**-0.3**
NNS	**Nan Shan** baz=311	**0.46**	**310**	⇓*i*P	**Pb**	**06 28 30.0**	**-0.7**
NNS	baz=311			*i* S	**Sg**	**06 28 36.3**	**0.0**
TWC	**Suao** baz=6.0	**0.47**	**10**	⇓*i*P	**Pb**	**06 28 30.4**	**-0.4**
TWC	baz=6.0			S	**Sb**	**06 28 36.8**	**-0.8**
TEGC	**Jichi Village** baz=193	**0.48**	**205**	*e*P	**Pb**	**06 28 31.6**	**+0.7**
FUSS	**Fushou** baz=282	**0.48**	**282**	⇓*i*P	**Pb**	**06 28 30.7**	**-0.5**
FUSS	baz=282			S	**Sg**	**06 28 37.1**	**0.0**
NDS	**Dongshan** baz=356	**0.49**	**355**	⇓P	**Pb**	**06 28 30.8**	**-0.3**
NDS	baz=356			*i* S	**Sb**	**06 28 37.7**	**-0.5**
NDT	**Datong Townshi** baz=334	**0.51**	**333**	⇓P	**Pb**	**06 28 31.1**	**-0.4**
NDT	baz=334			*e*S	**Sg**	**06 28 37.9**	**+0.1**
ENTT	**Nioudou** baz=341	**0.53**	**340**	⇓*i*P	**Pb**	**06 28 31.5**	**-0.3**
ENTT	baz=341			*i* S	**Sb**	**06 28 38.6**	**-0.6**
CHGB	**Renai** baz=254	**0.55**	**261**	⇓*i*P	**Pb**	**06 28 31.8**	**-0.4**
CHGB	baz=254			*i* S	**Sg**	**06 28 38.7**	**-0.2**
TWT	**Tachien** baz=281	**0.55**	**282**	⇓P	**Pb**	**06 28 32.2**	**0.0**
TWT	baz=281			*i* S	**Sb**	**06 28 39.5**	**-0.5**
TDCB	**Techi** baz=281	**0.56**	**281**	⇓*i*P	**Pb**	**06 28 32.2**	**-0.2**
TDCB	baz=281			S	**Sg**	**06 28 39.3**	**-0.2**
EGFH	**Guangfu** baz=221	**0.56**	**213**	*e*P	**Pb**	**06 28 32.7**	**+0.3**
EGFH	baz=221			*e*S	**Sb**	**06 28 41.5**	**+1.2**
OWD	**Renai** baz=251	**0.57**	**251**	⇓P	**Pb**	**06 28 32.0**	**-0.6**
OWD	baz=251			S	**Sg**	**06 28 39.3**	**-0.4**
TWE	**Neicheng** baz=353	**0.58**	**351**	⇓*i*P	**Pb**	**06 28 32.6**	**-0.1**
TWE	baz=353			*i* S	**Sb**	**06 28 40.3**	**-0.5**
WUSB	**Renai** baz=248	**0.61**	**256**	⇓*i*P	**Pb**	**06 28 33.0**	**-0.2**
WUSB	baz=248			S	**Sg**	**06 28 40.1**	**-0.8**
ILA	**Ilan** baz=351	**0.62**	**359**	*e*P	**Pb**	**06 28 33.4**	**+0.1**
YHNB	**Yeheng**	**0.63**	**326**	P	**Pb**	**06 28 33.6**	**0.0**
YHNB	**Yeheng** baz=327	**0.63**	**326**	⇓*i*P	**Pb**	**06 28 33.5**	**-0.1**
YHNB	baz=327			*i* S	**Sg**	**06 28 41.7**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=346	**0.63**	**345**	⇓*i*P	**Pb**	**06 28 33.6**	**-0.1**
FUSB	baz=346			*i* S	**Sg**	**06 28 41.5**	**-0.1**
NSK	**Sanguang** baz=326	**0.65**	**325**	⇓*i*P	**Pb**	**06 28 33.6**	**-0.2**
NSK	baz=326			S	**Sg**	**06 28 41.7**	**-0.3**
NWLT	**Wulai** baz=340	**0.67**	**339**	⇓*i*P	**Pb**	**06 28 34.3**	**0.0**
NWLT	baz=340			S	**Sg**	**06 28 42.8**	**-0.1**
VWDT	**VWDT** baz=236	**0.69**	**236**	⇓*i*P	**Pb**	**06 28 34.5**	**-0.1**
VWDT	baz=236			*e*S	**Sb**	**06 28 44.7**	**+0.9**
NTC	**Toucheng** baz=5.0	**0.71**	**5**	⇓*e*P	**Pg**	**06 28 33.8**	**-0.8**
EGS	baz=20	**0.71**	**12**	*e*P	**Pb**	**06 28 35.7**	**+0.8**
HGSD	**Ruisui** baz=195	**0.72**	**206**	*e*P	**Pb**	**06 28 35.6**	**+0.6**
EHY	**Hungye** baz=225	**0.75**	**213**	*e*P	**Pb**	**06 28 35.0**	**-0.6**
WHP	**Taichung City** baz=280	**0.76**	**280**	⇓P	**Pb**	**06 28 35.9**	**+0.2**
WHP	baz=280			S	**Sb**	**06 28 45.7**	**-0.3**
NFF	**Wufeng Townshi** baz=310	**0.76**	**310**	⇓P	**Pb**	**06 28 35.7**	**-0.1**
NFF	baz=310			S	**Sg**	**06 28 45.1**	**-0.6**
DPDB	**Guoxing** baz=254	**0.77**	**262**	⇓*e*P	**Pb**	**06 28 36.1**	**+0.1**
DPDB	baz=254			*e*S	**Sb**	**06 28 46.2**	**-0.2**
WCS	**Beigang Elemen** baz=256	**0.78**	**264**	⇓*e*P	**Pb**	**06 28 36.2**	**+0.1**
WCS	baz=256			*e*S	**Sg**	**06 28 46.1**	**-0.2**
SSLB	**Suanglung**	**0.82**	**245**	P	**Pb**	**06 28 37.0**	**+0.2**
SSLB	**Suanglung** baz=254	**0.82**	**245**	⇓*i*P	**Pb**	**06 28 36.8**	**0.0**
SSLB	baz=254			S	**Sg**	**06 28 46.6**	**-0.9**
TIPB	**Shuangxi** baz=4.0	**0.83**	**4**	⇓P	**Pb**	**06 28 37.1**	**+0.2**
TIPB	baz=4.0			S	**Sg**	**06 28 47.1**	**-0.6**
SMLT	**Sun Moon Lake** baz=252	**0.83**	**252**	⇓P	**Pb**	**06 28 37.1**	**+0.1**
SMLT	baz=252			*e*S	**Sb**	**06 28 47.8**	**-0.3**
NHDH	**Xindian Distri** baz=345	**0.84**	**345**	*e*P	**Pb**	**06 28 37.5**	**+0.3**
NHDH	baz=345			*e*S	**Sb**	**06 28 48.5**	**+0.2**
LIOB	**Emei** baz=306	**0.84**	**306**	*e*P	**Pb**	**06 28 37.7**	**+0.5**
LIOB	baz=306			*e*S	**Sb**	**06 28 48.9**	**+0.5**
NSTT	**Nanjuang** baz=305	**0.85**	**305**	⇓*i*P	**Pb**	**06 28 37.5**	**+0.3**
NSTT	baz=305			*i* S	**Sg**	**06 28 48.2**	**-0.1**
TWA	**Mucha** baz=349	**0.85**	**349**	P	**Pb**	**06 28 37.7**	**+0.4**
TWA	baz=349			S	**Sb**	**06 28 49.3**	**+0.8**
NJD	**Zhudong** baz=320	**0.85**	**314**	*e*P	**Pn**	**06 28 38.3**	**0.0**
TYC	**Yuchr** baz=255	**0.86**	**254**	*e*P	**Pb**	**06 28 37.4**	**-0.1**
TYC	baz=255			*e*S	**Sg**	**06 28 48.1**	**-0.7**
YULB	**Yu-li** baz=222	**0.86**	**210**	*e*P	**Pg**	**06 28 36.7**	**-0.8**
TATO	**Taipei** baz=343	**0.86**	**343**	⇓*i*P	**Pb**	**06 28 37.9**	**+0.3**
TATO	baz=343			S	**Sb**	**06 28 49.0**	**+0.1**
TWB1	**Santiao Chiao** baz=7.0	**0.88**	**13**	⇑P	**Pb**	**06 28 38.2**	**+0.4**
TWB1	baz=7.0			S	**Sb**	**06 28 49.3**	**-0.2**
EYUL	**Yuli** baz=224	**0.89**	**207**	*e*P	**Pn**	**06 28 39.0**	**+0.2**
TWF1	**Yuli** baz=220	**0.90**	**209**	*e*P	**Pg**	**06 28 37.4**	**-0.8**
TWF1	baz=220			*e*S	**Sb**	**06 28 50.2**	**+0.4**
TAP1	**Taipei** baz=346	**0.92**	**346**	*e*P	**Pn**	**06 28 39.1**	**-0.1**
TAP	**Taipei** baz=346	**0.92**	**345**	*e*P	**Pb**	**06 28 38.5**	**0.0**

NWF	**Wu-fen Shan** baz=353	**0.92**	**1**	*e*P	**Pb**	**06 28 39.0**	**+0.5**
NWF	baz=353			S	**Sb**	**06 28 50.6**	**-0.1**
WFSB	**Wu-fen Shan** baz=353	**0.92**	**1**	⇓*i*P	**Pn**	**06 28 39.3**	**0.0**
WFSB	baz=353			*i* S	**Sb**	**06 28 50.9**	**+0.3**
TWQ1	**Liyutan** baz=284	**0.93**	**283**	*e*P	**Pn**	**06 28 39.3**	**0.0**
SXI1	**Grass Mountain** baz=353	**0.95**	**6**	⇓P	**Pn**	**06 28 39.5**	**-0.2**
SXI1	baz=353			S	**Sb**	**06 28 51.9**	**+0.4**
NSY	**Sanyi** baz=287	**0.95**	**287**	*e*P	**Pn**	**06 28 40.0**	**+0.3**
NSY	baz=287			*e*S	**Sb**	**06 28 51.5**	**0.0**
SBCB	**Hsinchu** baz=313	**0.96**	**312**	*e*P	**Pn**	**06 28 40.5**	**+0.8**
NMLH	**Miaoli** baz=295	**0.97**	**294**	*e*P	**Pn**	**06 28 40.7**	**+0.8**
NCU	**National Centr** baz=328	**0.97**	**328**	*e*P	**Pn**	**06 28 40.3**	**+0.3**
NCU	baz=328			*e*S	**Sn**	**06 28 54.3**	**+0.7**
NCUH	**Zhongli** baz=327	**0.97**	**327**	*e*P	**Pn**	**06 28 40.1**	**+0.1**
NCUH	baz=327			*e*S	**Sn**	**06 28 53.9**	**+0.3**
NJN	**Zhunan** baz=304	**0.97**	**304**	*e*P	**Pn**	**06 28 40.4**	**+0.5**
HSN	**Hsinchu** baz=315	**0.98**	**312**	*e*P	**Pn**	**06 28 40.8**	**+0.8**
HSN	baz=315			*e*S	**Sn**	**06 28 55.4**	**+1.8**
WWF	**Wufeng** baz=261	**0.98**	**264**	*e*P	**Pn**	**06 28 41.0**	**+1.0**
YUS	**Yu-Shan** baz=230	**0.99**	**229**	⇑*i*P	**Pb**	**06 28 40.2**	**+0.3**
YUS	baz=230			*e*S	**Sb**	**06 28 53.8**	**+0.8**
TCU	**Taichung** baz=272	**0.99**	**270**	*e*P	**Pn**	**06 28 40.8**	**+0.6**
WJS	**Zhushan** baz=247	**1.00**	**251**	*e*P	**Pn**	**06 28 41.1**	**+0.8**
TNOU	**National Taiwa**	**1.00**	**1**	*e*P	**Pn**	**06 28 40.5**	**+0.2**
TWS1	**Kuangyinshan** baz=349	**1.00**	**342**	*e*P	**Pn**	**06 28 40.6**	**+0.2**
TWS1	baz=349			*e*S	**Sn**	**06 28 54.8**	**+0.6**
YM01	**YM01** baz=350	**1.01**	**350**	P	**Pn**	**06 28 41.0**	**+0.5**
YM01	baz=350			S	**Sb**	**06 28 54.0**	**+0.8**
WNT1	**Nantou City** baz=258	**1.02**	**257**	*e*P	**Pn**	**06 28 41.5**	**+1.0**
WNT	**Mingjian** baz=251	**1.02**	**255**	*e*P	**Pn**	**06 28 41.2**	**+0.6**
WNT	baz=251			*e*S	**Sn**	**06 28 55.1**	**+0.4**
FULB	**Fuli** baz=223	**1.03**	**205**	*e*P	**Pb**	**06 28 40.5**	**+0.1**
WDJ	**Dajia District** baz=282	**1.04**	**281**	*e*P	**Pn**	**06 28 42.5**	**+1.6**
YM08	**YM08** baz=351	**1.05**	**351**	⇑P	**Pn**	**06 28 41.5**	**+0.5**
NTST	**Danshui** baz=344	**1.05**	**344**	*e*P	**Pn**	**06 28 41.9**	**+0.8**
ANP	**Anpu** baz=348	**1.06**	**348**	*e*P	**Pn**	**06 28 41.5**	**+0.2**
NHW	**Xinwu Township** baz=323	**1.08**	**323**	*e*P	**Pn**	**06 28 42.1**	**+0.7**
ALS	**Alishan** baz=236	**1.08**	**234**	*e*P	**Pn**	**06 28 41.7**	**0.0**
CHKT	**Chengkung** baz=187	**1.10**	**199**	*e*P	**Pn**	**06 28 41.6**	**-0.2**
WCHH	**Zhanghua** baz=268	**1.10**	**267**	*e*P	**Pn**	**06 28 42.9**	**+1.2**
JYNG	**Yonagunijimaku**	**1.12**	**74**	*e*P	**Pn**	**06 28 42.4**	**+0.4**
JYNG				*e*S	**Sn**	**06 28 59.6**	**+2.5**
CHN5	**Tsauling** baz=243	**1.13**	**241**	*e*P	**Pn**	**06 28 43.0**	**+0.8**
CHN5	baz=243			*e*S	**Sn**	**06 28 59.3**	**+1.7**
TWY	**Chenhua** baz=3.0	**1.14**	**353**	*e*P	**Pn**	**06 28 43.3**	**+1.1**
ECS	**Chishang** baz=208	**1.16**	**206**	*e*P	**Pn**	**06 28 43.0**	**+0.5**
ELDTW	**Lidau** baz=205	**1.17**	**216**	*e*P	**Pg**	**06 28 42.3**	**-1.1**
ELDTW	baz=205			*e*S	**Sn**	**06 28 58.9**	**+0.4**
YOJ	**Yonaguni jima**	**1.18**	**74**	P	**Pn**	**06 28 44.0**	**+1.2**
YOJ	**Yonaguni jima** baz=86	**1.18**	**74**	*e*P	**Pn**	**06 28 43.4**	**+0.6**
YOJ	baz=86			*e*S	**Sn**	**06 29 00.3**	**+1.7**
YOJ	**Yonaguni jima**	**1.18**	**74**	P	**Pn**	**06 28 43.5**	**+0.7**
YOJ				S	**Sn**	**06 29 00.6**	**+2.0**
WGK	**Gukeng** baz=250	**1.19**	**248**	*e*P	**Pn**	**06 28 43.5**	**+0.6**
WDLH	**Douliu** baz=251	**1.21**	**248**	*e*P	**Pn**	**06 28 44.3**	**+1.1**
EDH	**Donghe** baz=189	**1.24**	**200**	*e*P	**Pn**	**06 28 43.8**	**+0.2**
WRL	**Guolierlin Hig** baz=262	**1.29**	**259**	*e*P	**Pg**	**06 28 45.6**	**0.0**
STYH	**Taoyuan** baz=226	**1.33**	**223**	*e*P	**Pg**	**06 28 45.4**	**-0.9**
CHN4	**Tsaushan** baz=237	**1.33**	**234**	*e*P	**Pg**	**06 28 46.4**	**0.0**
TPUB	**Ta-pu**	**1.34**	**231**	P	**Pg**	**06 28 46.7**	**+0.2**
TPUB	**Ta-pu** baz=234	**1.34**	**231**	*e*P	**Pg**	**06 28 45.9**	**-0.6**
WTK	**Tuku** baz=238	**1.34**	**250**	*e*P	**Pg**	**06 28 46.6**	**+0.1**
STYT	**Tauyuan** baz=226	**1.34**	**224**	*e*P	**Pg**	**06 28 45.7**	**-1.0**
LONT	**Longtian** baz=208	**1.36**	**205**	*e*P	**Pg**	**06 28 46.8**	**-0.2**
WTP	**Ta-pu** baz=233	**1.38**	**230**	*e*P	**Pg**	**06 28 47.0**	**-0.4**
CHY	**Chiayi** baz=245	**1.39**	**243**	*e*P	**Pg**	**06 28 47.0**	**-0.4**
TWK	**Hsinying** baz=236	**1.46**	**233**	*e*P	**Pg**	**06 28 48.1**	**-0.7**
TWK	baz=236			*e*S	**Sg**	**06 29 09.2**	**+1.3**
TWG	**Pinlang** baz=209	**1.46**	**206**	*e*P	**Pn**	**06 28 46.9**	**+0.2**
TWGBT	**Beinan** baz=209	**1.46**	**206**	*e*P	**Pn**	**06 28 46.6**	**-0.1**
CHN1	**Nanshi** baz=233	**1.48**	**230**	*e*P	**Pg**	**06 28 48.7**	**-0.6**
SNST	**Tainan City** baz=235	**1.48**	**232**	*e*P	**Pg**	**06 28 48.8**	**-0.5**
LDUT	**Ludao** baz=181	**1.49**	**191**	*e*P	**Pg**	**06 28 48.9**	**-0.5**
WSF	**Szhu** baz=253	**1.50**	**251**	*e*P	**Pg**	**06 28 48.5**	**-1.1**
PCYT	**Pengchaiyu** baz=8.0	**1.50**	**11**	*e*P	**Pb**	**06 28 48.0**	**-0.5**
SGST	**Jiashian** baz=229	**1.51**	**226**	*e*P	**Pb**	**06 28 48.6**	**0.0**
WSL	**Shuilin Townsh** baz=250	**1.54**	**247**	*e*P	**Pb**	**06 28 49.0**	**0.0**
ICHU	**Yijhu** baz=244	**1.57**	**240**	*e*P	**Pg**	**06 28 49.8**	**-1.1**
ECL	**Taimali** baz=195	**1.71**	**206**	*e*P	**Pg**	**06 28 52.4**	**-1.3**
SCST	**Cishan** baz=226	**1.71**	**223**	*e*P	**Pg**	**06 28 52.8**	**-0.9**
SHHT	**Tainan City** baz=232	**1.71**	**230**	*e*P	**Pg**	**06 28 52.6**	**-1.1**
SSD	**Sandimen** baz=233	**1.74**	**217**	*e*P	**Pg**	**06 28 52.8**	**-1.3**
TSMG	**Majia** baz=232	**1.76**	**216**	*e*P	**Pb**	**06 28 52.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.81**	**84**	*e*P	**Pb**	**06 28 53.2**	**-0.4**
MASBT	**Mashibuluo** baz=217	**1.84**	**214**	*e*P	**Pn**	**06 28 52.4**	**+0.4**
EAST	**Anshuo** baz=196	**1.94**	**206**	*e*P	**Pb**	**06 28 54.9**	**-1.1**
TAW	**Tawu** baz=195	**1.95**	**204**	*e*P	**Pb**	**06 28 56.1**	**+0.1**
TAWH	**Dawu Township** baz=195	**1.97**	**204**	*e*P	**Pb**	**06 28 56.0**	**-0.3**
JKRS	**Kuro-shima**	**2.05**	**87**	*e*P	**Pn**	**06 28 56.0**	**+1.2**
SCZT	**Fangliau** baz=198	**2.05**	**211**	*e*P	**Pb**	**06 28 56.8**	**-1.0**
PNG	**Penghu** baz=259	**2.10**	**255**	*e*P	**Pn**	**06 28 56.7**	**+1.2**
PHUB	**P'eng-hu** baz=258	**2.10**	**253**	*e*P	**Pn**	**06 28 56.2**	**+0.7**
PHUB	baz=258			*e*S	**Sn**	**06 29 22.9**	**+1.5**
SLIU	**Shizi** baz=197	**2.11**	**205**	*e*P	**Pb**	**06 28 58.7**	**-0.1**
WDGT	**Dungji** baz=250	**2.12**	**246**	*e*P	**Pn**	**06 28 56.9**	**+1.2**
LYUB	**Lan-yu** baz=189	**2.14**	**184**	*e*P	**Pn**	**06 28 55.5**	**-0.5**
JIJ	**Ishigaki jima**	**2.18**	**84**	*e*P	**Pn**	**06 28 57.3**	**+0.7**
JIJ				*e*S	**Sn**	**06 29 24.9**	**+1.5**
VWUC	**VWUC** baz=293	**2.27**	**292**	*e*P	**Pn**	**06 28 57.9**	**+0.2**
VCHM	**Qimei** baz=235	**2.33**	**247**	*e*P	**Pn**	**06 28 59.9**	**+1.2**
TWKBT	**Hengchun** baz=193	**2.36**	**202**	*e*P	**Pb**	**06 29 01.1**	**-1.9**
PTMZ	**Houxiangcun** baz=291	**2.57**	**291**	*e*P	**Pn**	**06 29 02.2**	**+0.4**
MATB	**Ma-tsu** baz=319	**2.59**	**321**	*e*P	**Pn**	**06 29 03.0**	**+0.8**
JTJ	**Tarama**	**2.73**	**79**	*e*S	**Sb**	**06 29 40.9**	**-1.6**
LYJJ	**Jianjiangzhen** baz=322	**3.00**	**323**	*e*P	**Pn**	**06 29 08.2**	**+0.3**
KNM	**Kinmen** baz=277	**3.05**	**276**	*e*P	**Pn**	**06 29 11.7**	**+3.2**
KNMB	**Chin-men Tao** baz=278	**3.10**	**277**	*e*P	**Pn**	**06 29 09.6**	**+0.5**
XPSS	**Dashiqiu** baz=331	**3.12**	**333**	*e*P	**Pn**	**06 29 09.9**	**+0.5**
MHZQ	**Yeshan** baz=308	**3.15**	**309**	*e*P	**Pn**	**06 29 11.4**	**+1.5**
AXDP	**Jialang** baz=283	**3.54**	**283**	*e*P	**Pn**	**06 29 15.2**	**0.0**
ZPLA	**Ao Xicun** baz=270	**3.67**	**267**	*e*P	**Pn**	**06 29 17.5**	**+0.4**
SXFK	**Yanhouchang** baz=300	**4.35**	**302**	*e*P	**Pn**	**06 29 26.8**	**+0.4**
SONM	**Songino Array** 0.6nm,0.6s,baz=164,slow=8.6,SNR=3.3 0.6nm,0.6s	**26.61**	**337**	P	**P**	**06 33 58.7**	**-0.1**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=106,slow=12,SNR=5.0 0.5nm,0.7s	**38.73**	**316**	P	**P**	**06 35 45.0**	**+0.5**
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=100,slow=8.6,SNR=1.7 0.2nm,0.4s	**42.48**	**320**	P	**P**	**06 36 15.6**	**+0.3**
WRA	**Warramunga Arr** 0.6nm,0.9s,baz=344,slow=8.5,SNR=2.3 0.6nm,0.9s	**45.50**	**163**	P	**P**	**06 36 40.4**	**+0.6**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=320,slow=8.5,SNR=2.6 0.2nm,0.5s	**48.97**	**165**	P	**P**	**06 37 07.4**	**+0.6**
INK	**Inuvik** 1.0nm,0.9s,baz=273,slow=6.1,SNR=3.1 1.0nm,0.9s	**73.06**	**22**	P	**P**	**06 39 48.1**	**-1.8**
YKA	**Yellowknife Ar** 0.5nm,0.8s,baz=314,slow=4.7,SNR=12 0.5nm,0.8s	**82.80**	**23**	P	**P**	**06 40 43.3**	**-0.8**

*TAP **12** 06:31:10.8, 24°.70N×121°.99E, h10^{km}, ML2.9, B*
*JMA **12** 06:31:11.7±0.1, 24°.7N±0°.5×122°.0E±0°.5, h29^{km}, MV2.6/7, TAIWAN REGION*
ISC 12 06:31:11.0±0.9**, 24°.69N**±0°.02×**122°.03E**±0°.02**, h12**^{km}±7^{km}**, n52, σ0^{s}44**/73**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=343	**0.18**	**330**	P	**Pg**	**06 31 14.9**	**-0.2**
EGS	baz=343			S	**Sg**	**06 31 18.0**	**0.0**
TWC	**Suao** baz=234	**0.18**	**245**	*i* P	**Pg**	**06 31 14.9**	**-0.2**
NTC	**Toucheng** baz=316	**0.25**	**312**	*i* P	**Pg**	**06 31 16.2**	**0.0**
ILA	**Ilan** baz=287	**0.27**	**287**	*e*P	**Pg**	**06 31 16.3**	**-0.3**
ILA	baz=287			S	**Sg**	**06 31 20.7**	**+0.3**
NDS	**Dongshan** baz=256	**0.29**	**260**	*i* P	**Pg**	**06 31 17.0**	**0.0**
TWB1	**Santiao Chiao**	**0.32**	**353**	*e*P	**Pg**	**06 31 17.4**	**-0.2**
EWUT	**Wuta** baz=217	**0.33**	**224**	*i* P	**Pg**	**06 31 18.2**	**+0.4**
TWE	**Neicheng** baz=274	**0.34**	**276**	P	**Pg**	**06 31 17.6**	**-0.2**
TWE	baz=274			*e*S	**Sg**	**06 31 22.2**	**-0.1**
TIPB	**Shuangxi** baz=331	**0.34**	**326**	*e*P	**Pg**	**06 31 17.8**	**-0.1**
ENA	**Nanau** baz=219	**0.37**	**226**	*i* P	**Pg**	**06 31 18.7**	**+0.3**
ENA	baz=219			*e*S	**Sg**	**06 31 23.2**	**-0.2**
FUSB	**Fushanzhiwuyua** baz=279	**0.41**	**280**	P	**Pg**	**06 31 19.3**	**+0.1**
ENTT	**Nioudou** baz=261	**0.43**	**264**	*i* P	**Pg**	**06 31 19.5**	**0.0**
SXI1	**Grass Mountain** baz=344	**0.43**	**341**	*e*P	**Pg**	**06 31 19.6**	**+0.1**
NWF	**Wu-fen Shan** baz=332	**0.45**	**329**	*i* P	**Pg**	**06 31 20.0**	**+0.2**
WFSB	**Wu-fen Shan** baz=332	**0.45**	**329**	*i* P	**Pg**	**06 31 20.1**	**+0.2**
WFSB	baz=332			S	**Sb**	**06 31 27.0**	**-0.4**
LATG	**Datong** baz=249	**0.48**	**252**	*e*P	**Pg**	**06 31 20.9**	**+0.3**
LATG	baz=249			*i* S	**Sg**	**06 31 27.8**	**+0.8**
NWLT	**Wulai** baz=280	**0.49**	**281**	*e*P	**Pg**	**06 31 20.9**	**+0.2**
TWA	**Mucha** baz=307	**0.50**	**306**	P	**Pg**	**06 31 20.9**	**+0.1**
TWA	baz=307			S	**Sg**	**06 31 27.9**	**+0.3**
TNOU	**National Taiwa** baz=336	**0.52**	**333**	*i* P	**Pg**	**06 31 21.4**	**+0.2**
TNOU	baz=336			S	**Sg**	**06 31 29.1**	**+1.0**
NHDH	**Xindian Distri** baz=302	**0.54**	**301**	*e*P	**Pg**	**06 31 21.6**	**+0.1**
TATO	**Taipei** baz=301	**0.57**	**300**	*e*P	**Pg**	**06 31 22.3**	**+0.1**
TATO	baz=301			*e*S	**Sg**	**06 31 29.9**	**+0.1**
YHNB	**Yeheng** baz=267	**0.60**	**269**	*e*P	**Pg**	**06 31 22.8**	**+0.1**
YHNB	baz=267			*e*S	**Sg**	**06 31 30.4**	**-0.2**
NSK	**Sanguang** baz=267	**0.61**	**269**	P	**Pg**	**06 31 22.9**	**-0.1**
NSK	baz=267			*e*S	**Sg**	**06 31 30.6**	**-0.6**
YM01	**YM01** baz=319	**0.62**	**318**	*e*P	**Pg**	**06 31 23.6**	**+0.5**
YM08	**YM08** baz=323	**0.64**	**321**	*e*P	**Pg**	**06 31 23.7**	**+0.2**
ETL	**Fush Village** baz=212	**0.65**	**216**	*e*P	**Pg**	**06 31 23.6**	**+0.1**
NNSB	**Datong** baz=244	**0.65**	**247**	*i* P	**Pg**	**06 31 23.6**	**0.0**
NNSB	baz=244			*e*S	**Sg**	**06 31 33.0**	**+0.8**
NACB	**Ninganchiao** baz=214	**0.65**	**218**	*i* P	**Pg**	**06 31 23.8**	**+0.2**
NNS	**Nan Shan** baz=245	**0.65**	**248**	*e*P	**Pg**	**06 31 23.7**	**+0.1**
NNS	baz=245			*e*S	**Sg**	**06 31 32.8**	**+0.5**
ETLH	**Xiulin Townshi** baz=223	**0.69**	**227**	P	**Pg**	**06 31 24.7**	**+0.2**
TWS1	**Kuangyinshan** baz=307	**0.69**	**307**	*e*P	**Pb**	**06 31 25.5**	**+0.5**
TWY	**Chenhua** baz=328	**0.71**	**326**	*e*P	**Pg**	**06 31 25.2**	**+0.5**
NTST	**Danshui** baz=313	**0.71**	**312**	*e*P	**Pb**	**06 31 25.7**	**+0.4**
TWD	**Chiawan** baz=209	**0.72**	**214**	P	**Pg**	**06 31 25.2**	**+0.2**
TWD	baz=209			*e*S	**Sg**	**06 31 34.7**	**+0.1**
NFF	**Wufeng Townshi** baz=265	**0.83**	**266**	*e*P	**Pg**	**06 31 27.9**	**+0.8**
FUSS	**Fushou** baz=236	**0.84**	**239**	*e*P	**Pb**	**06 31 27.6**	**-0.1**
FUSS	baz=236			*e*S	**Sb**	**06 31 39.0**	**-0.1**
JYNG	**Yonagunijimaku**	**0.86**	**106**	P	**Pg**	**06 31 28.5**	**+0.9**
JYNG				S	**Sb**	**06 31 39.2**	**-0.2**
ETM	**Tongmen** baz=212	**0.87**	**215**	*e*P	**Pb**	**06 31 27.6**	**-0.4**
TWT	**Tachien** baz=239	**0.89**	**241**	*e*P	**Pb**	**06 31 28.5**	**0.0**
TDCB	**Techi** baz=239	**0.91**	**242**	*e*P	**Pg**	**06 31 29.4**	**+0.8**
YOJ	**Yonaguni jima** baz=103	**0.92**	**104**	*i* P	**Pb**	**06 31 29.3**	**+0.5**
YOJ	**Yonaguni jima**	**0.92**	**104**	P	**Pb**	**06 31 29.2**	**+0.3**
YOJ				S	**Sb**	**06 31 40.6**	**-0.4**
LIOB	**Emei** baz=266	**0.93**	**268**	*e*P	**Pn**	**06 31 29.9**	**+0.1**
NSTT	**Nanjuang** baz=265	**0.94**	**267**	*e*P	**Pg**	**06 31 30.0**	**+0.8**
SBCB	**Hsinchu** baz=275	**0.96**	**277**	*e*P	**Pn**	**06 31 30.5**	**+0.2**
CHGB	**Renai** baz=229	**1.00**	**232**	*e*P	**Pb**	**06 31 30.3**	**-0.1**
CHGB	baz=229			*e*S	**Sg**	**06 31 44.0**	**+0.6**
ESL	**Shilin** baz=209	**1.03**	**212**	*e*P	**Pb**	**06 31 30.8**	**+0.1**
OWD	**Renai** baz=225	**1.07**	**227**	*e*P	**Pb**	**06 31 31.6**	**+0.1**
OWD	baz=225			*e*S	**Sb**	**06 31 45.3**	**-0.2**
WHP	**Taichung City** baz=246	**1.07**	**248**	*e*P	**Pb**	**06 31 31.9**	**+0.4**
WUSB	**Renai** baz=228	**1.08**	**231**	*e*P	**Pb**	**06 31 32.0**	**+0.2**
IRIF	**Iriomote-Funau**	**1.58**	**102**	P	**Pn**	**06 31 37.9**	**-1.0**
IRIF				S	**Sn**	**06 31 58.2**	**-1.1**
JKRS	**Kuro-shima**	**1.85**	**104**	*e*P	**Pn**	**06 31 43.4**	**+0.8**
JKRS				*e*S	**Sn**	**06 32 04.7**	**-1.3**

*NEIC **12** 06:32:29.7±1.9, 43°.33N±0°.07×146°.6E±0°.1, h61^{km}±5^{km}, mb5.0/391, Error ellipse: s-maj=11.0km s-min=9.8km az=110.0*
*BJI **12** 06:32:29.1±0.0, 43°.57N×146°.48E, h64^{km}, mb4.9/67, mB5.1/39, Ms4.3/38, Ms7 4.0/35*
*MOS **12** 06:32:29.4±0.9, 43°.35N×146°.64E, h76^{km}, mb5.4/53, MS3.7/12, Error ellipse: s-maj=5.7km s-min=4.0km az=113.0*
MOS Felt (IV-V) at Malokuril'skoye; (IV) at Goryachiy Plyazh, Lagunnoye, Yuzhno-Kuril'sk; (II) at Kuril'sk.
*JMA **12** 06:32:30.1±0.2, 43°.2N±0°.6×14°7E±°, h67^{km}±1^{km}, MD5.0/40, MW5.0/40, OFF NEMURO PENINSULA*
JMA Felt III J1 at OFF NEMURO PENINSULA .
*SKHL **12** 06:32:30.5±0.1, 43°.30N×146°.80E, h79^{km}±3^{km}, mb6.2/9, ms4.5/8*
*NIED **12** 06:32:30.1, 43°.20N×146°.65E, h67^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.37; $M_{\theta\theta}$1.53; $M_{\phi\phi}$-0.17; $M_{r\theta}$1.85; $M_{\theta\phi}$0.71; $M_{\phi r}$1.98; Fault plane solution: $M_0$3.16000×10^{16} NP1:ϕ_s95.00000°, δ20.00000°, λ-43.00000°. NP2:ϕ_s227.00000°, δ76.00000°, λ-105.00000°.*
*GCMT **12** 06:32:31.7±0.3, 43°.38N±0°.02×146°.80E±0°.03, h70^{km}±4^{km}, MW5.0/101, Moment Tensor Solution. s21,c25; s101,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.85±.21; $M_{\theta\theta}$2.95±.26; $M_{\phi\phi}$-2.10±.24; $M_{r\theta}$2.30±.10; $M_{\theta\phi}$0.76±.14; $M_{\phi r}$2.36±.08; Best double couple: $M_0$4.26400×10^{16} NP1:ϕ_s124.00000°, δ37.00000°, λ-12.00000°. NP2:ϕ_s224.00000°, δ83.00000°, λ-126.00000°. Principal axes: T 4.5030, Plg29.0000°, Azm342.0000°; N -0.4770, Plg36.0000°, Azm229.0000°; P -4.0250, Plg41.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **12** 06:32:31.5±1.4, 43°.32N×146°.65E, h80^{km}±12^{km}, mb4.5/39, mbtmp4.8/46, MS3.8/56 Error ellipse: s-maj=10.0km s-min=8.3km az=156.0*
ISC 12 06:32:29.8±0.4**, 43°.37N**±0°.03×**146°.65E**±0°.03**, h68**^{km}±2^{km}**, h68**^{km}**:pP-P, n996, σ1^{s}40**/886**, mb5.0**/316**, 59C-51D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.52**	**15**	*d i*PN	**Pn**	**06 32 43.9**	**+1.3**
SHO				*i* S	**Sn**	**06 32 53.9**	**+1.8**
SHO	comp=Z,15μm,0.6s			pmax	pmax		
SHO	comp=E,7μm,0.4s			pmax	pmax		
SHO	comp=N,6μm,0.7s			pmax	pmax		
SHO	comp=N,86μm,0.2s			smax	smax		
SHO	comp=E,183μm,0.4s			smax	smax		
SHO	**Shikotan**	**0.52**	**15**	*i* P	**Pn**	**06 32 44.0**	**+1.3**
SHO	comp=E,6μm,0.4s			AMB	AMB	06 32 44.6	
SHO	comp=E,7μm,0.4s			AMB	AMB	06 32 44.6	
SHO	comp=E,15μm,0.4s			AMB	AMB	06 32 44.6	
SHO				*i* S	**Sn**	**06 32 54.1**	**+2.0**
SHO	comp=E,87μm,0.4s			A	A	06 32 54.5	
SHO	comp=E,183μm,0.4s			A	A	06 32 54.5	
NEM2	**Nemuro 2**	**0.66**	**270**	⇓*e*P	**Pn**	**06 32 44.7**	**+0.6**
NEM2				⇓*e*S	**Sn**	**06 32 55.2**	**+0.6**
NEM2	**Nemuro 2** comp=E,93nm,2.8s,comp=E,72nm,1.4s	**0.66**	**270**	A	A	06 32 44.7	
NMR	**Nemuro--Hokkai**	**0.67**	**271**	⇓*i*PN	**Pn**	**06 32 44.7**	**+0.5**
NMR				*e*S	**Sn**	**06 32 55.2**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.67**	**271**	*i* P	**Pn**	**06 32 44.9**	**+0.7**
NMR				*i* S	**Sn**	**06 32 55.6**	**+0.8**
YUK	**Yuzh-Kuril'sk**	**0.88**	**320**	⇓*i*PN	**Pn**	**06 32 48.0**	**+1.3**
YUK				*i* S	**Sn**	**06 33 01.1**	**+1.9**
YUK	comp=N,6μm,0.1s			pmax	pmax		
YUK	comp=Z,13μm,0.1s			pmax	pmax		
YUK	comp=E,387μm,0.5s			smax	smax		
YUK	comp=N,50μm,0.3s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**0.88**	**320**	*i* P	**Pn**	**06 32 48.2**	**+1.5**
YUK	comp=N,13μm,0.3s			AMB	AMB	06 32 49.5	
YUK				*i* S	**Sn**	**06 33 01.5**	**+2.3**
YUK	comp=N,50μm,0.5s			A	A	06 33 03.1	
YUK	comp=N,194μm,0.5s			A	A	06 33 03.1	
JKHN	**Kushirohamanak**	**1.12**	**256**	⇓*e*P	**Pn**	**06 32 50.3**	**+0.6**
JKHN				⇓*e*S	**Sn**	**06 33 05.5**	**+0.8**
JKHN	**Kushirohamanak** comp=N,120nm,2.0s,comp=N,159nm,1.2s	**1.12**	**256**	A	A	06 32 50.3	
JRA	**Rausu**	**1.25**	**298**	⇓P	**Pn**	**06 32 53.1**	**+1.8**
JRA				⇓*e*S	**Sn**	**06 33 10.1**	**+2.6**
JRA	**Rausu** comp=N,131nm,1.9s,comp=N,224nm,0.8s	**1.25**	**298**	A	A	06 32 53.1	
RUSJ	**Misakicho**	**1.25**	**307**	⇓*i*PN	**Pn**	**06 32 53.6**	**+2.1**
RUSJ				*i* S	**Sn**	**06 33 11.5**	**+3.8**
JNSB	**Nemuroshibetsu**	**1.26**	**290**	⇓*e*P	**Pn**	**06 32 52.8**	**+1.2**
JNSB				⇓*e*S	**Sn**	**06 33 10.2**	**+2.3**
JNSB	**Nemuroshibetsu** comp=N,145nm,1.0s,comp=N,326nm,0.9s	**1.26**	**290**	A	A	06 32 52.8	
AKK	**Akkeshi**	**1.36**	**256**	*i* P	**Pn**	**06 32 53.2**	**+0.3**
JNK	**Nakash**	**1.42**	**280**	*e*P	**Pn**	**06 32 54.4**	**+0.7**
JNK				*e*S	**Sn**	**06 33 12.4**	**+0.8**
JNK	**Nakash** comp=N,59nm,0.9s,comp=N,54nm,1.2s	**1.42**	**280**	A	A	06 32 54.4	
JAK	**Akkeshi**	**1.47**	**256**	⇓*e*P	**Pn**	**06 32 54.4**	**+0.1**
JAK				⇓*e*S	**Sn**	**06 33 12.4**	**-0.4**
JAK	**Akkeshi**	**1.47**	**256**	A	A	06 32 54.4	

	comp=N,50nm,1.2s,comp=N,33nm,1.0s						
KUR	**Kuril'sk**	**2.06**	**25**	*c i*PN	**Pn**	**06 33 04.1**	**+1.9**
KUR				*e*S	**Sn**	**06 33 29.0**	**+2.1**
KUR				pmax	pmax		
	comp=Z,3µm,0.4s						
KUR				pmax	pmax		
	comp=N,1µm,0.2s						
KUR				smax	smax		
	comp=E,18µm,0.4s						
KUR				smax	smax		
	comp=N,13µm,0.5s						
KUR	**Kuril'sk**	**2.06**	**25**	*i* P	**Pn**	**06 33 03.0**	**+0.8**
KUR				AMB	AMB	06 33 10.8	
	comp=N,3µm,0.4s						
KUR				*e*S	**Sn**	**06 33 28.3**	**+1.4**
KUR				A	A	06 33 31.5	
	comp=N,13µm,0.4s						
KUR				A	A	06 33 31.5	
	comp=N,18µm,0.4s						
JTKR	**Abashiri--Toko**	**2.08**	**288**	*e*P	**Pn**	**06 33 04.3**	**+1.9**
JTKR				*e*S	**Sn**	**06 33 29.6**	**+2.3**
JTKR	**Abashiri--Toko**	**2.08**	**288**	A	A	06 33 04.3	
	comp=N,22nm,1.2s,comp=N,15nm,1.3s						
JAR	**Ashorobuto**	**2.10**	**269**	⇓*e*P	**Pn**	**06 33 03.7**	**+0.9**
JAR				⇓*e*S	**Sn**	**06 33 28.9**	**+1.0**
JAR	**Ashorobuto**	**2.10**	**269**	A	A	06 33 03.7	
	comp=N,53nm,1.2s,comp=N,41nm,1.2s						
JOB	**Onbets**	**2.11**	**258**	*e*P	**Pn**	**06 33 03.3**	**+0.4**
JOB				*e*S	**Sn**	**06 33 28.0**	**-0.1**
JOB	**Onbets**	**2.11**	**258**	A	A	06 33 03.3	
	comp=N,20nm,1.6s,comp=N,20nm,2.1s						
JMP	**Maruseppu**	**2.47**	**286**	*e*P	**Pn**	**06 33 09.9**	**+2.1**
JMP				*e*S	**Sn**	**06 33 39.5**	**+2.6**
JMP	**Maruseppu**	**2.47**	**286**	A	A	06 33 09.9	
	comp=N,12nm,2.8s,comp=N,20nm,1.5s						
JCH	**Churui**	**2.52**	**254**	*e*P	**Pn**	**06 33 08.6**	**+0.1**
JCH				*e*S	**Sn**	**06 33 36.9**	**-1.2**
JCH	**Churui**	**2.52**	**254**	A	A	06 33 08.6	
	comp=N,13nm,3.9s,comp=N,24nm,1.4s						
JTHR	**Tokachihiroo**	**2.69**	**248**	A	A	06 33 11.2	
	comp=N,12nm,1.4s,comp=N,11nm,1.2s						
JKK2	**Kamakawa 2**	**2.88**	**281**	A	A	06 33 15.2	
	comp=N,10.0nm,2.3s,comp=N,9.0nm,2.9s						
ERM	**Erimo**	**2.91**	**244**	Pn	**Pn**	**06 33 15.5**	**+1.8**
ERM	**Erimo**	**2.91**	**244**	PN	**Pn**	**06 33 15.5**	**+1.8**
JEM	**Erimo**	**2.91**	**244**	*e*P	**Pn**	**06 33 15.3**	**+1.7**
JEM				*e*S	**Sn**	**06 33 48.4**	**+1.0**
JEM	**Erimo**	**2.91**	**244**	A	A	06 33 15.3	
	comp=N,7.0nm,3.5s,comp=N,7.0nm,4.1s						
JFR	**Furan**	**2.97**	**267**	A	A	06 33 15.9	
	comp=N,10.0nm,1.3s,comp=N,14nm,1.7s						
JKA	**Kamikawa-asahi**	**3.03**	**286**		**Pn**	**06 33 17.9**	**+2.6**
JKA	**Kamikawa-asahi**	**3.03**	**286**	*e*P	**Pn**	**06 33 18.1**	**+2.8**
ASAJ	**Asahikawa**	**3.03**	**286**	P	**Pn**	**06 33 18.1**	**+2.7**
	comp=N,948nm,0.6s,baz=108,slow=11,SNR=301						
ASAJ				S	**Sn**	**06 33 54.5**	**+4.0**
	comp=N,2µm,0.7s,baz=271,slow=21,SNR=9.9						
ASAJ				LR	LR	06 34 24.8	
	comp=N,2µm,20.8s,baz=140,slow=37						
ASAJ	**Asahikawa**	**3.03**	**286**	A	A	06 33 17.5	
	comp=N,8.0nm,1.4s,comp=N,9.0nm,2.8s						
JNBK	**Urakawa-nobuka**	**3.06**	**251**	A	A	06 33 16.6	
	comp=N,9.0nm,2.0s,comp=N,9.0nm,2.3s						
JBT2	**Biratori 2**	**3.19**	**261**	A	A	06 33 18.8	
	comp=N,8.0nm,1.3s,comp=N,9.0nm,2.7s						
JSHD	**Hidakashinhida**	**3.22**	**254**	A	A	06 33 18.8	
	comp=N,10.0nm,3.0s,comp=N,13nm,2.2s						
JAB	**Ashibetsu**	**3.23**	**274**	A	A	06 33 19.8	
	comp=N,14nm,2.7s,comp=N,13nm,1.9s						
JIAM	**Iburiatsuma**	**3.55**	**260**	A	A	06 33 23.6	
	comp=N,21nm,1.3s,comp=N,43nm,1.6s						
JHR	**Hokuryu**	**3.60**	**278**	A	A	06 33 25.1	
	comp=N,13nm,4.1s,comp=N,11nm,5.5s						
JSS	**Shosan**	**3.62**	**288**	A	A	06 33 25.8	
	comp=N,11nm,4.5s,comp=N,6.0nm,3.4s						
JISS	**Ishikarishitsu**	**3.82**	**270**	A	A	06 33 27.9	
	comp=N,13nm,3.9s,comp=N,11nm,2.5s						
JEW	**Eniwo**	**3.84**	**264**	Pn	**Pn**	**06 33 28.6**	**+2.2**
JEW	**Eniwo**	**3.84**	**264**	A	A	06 33 28.0	
	comp=N,11nm,1.8s,comp=N,9.0nm,3.6s						
JWK2	**Keihoku**	**3.93**	**301**	A	A	06 33 30.6	
	comp=N,8.0nm,3.4s,comp=N,5.0nm,4.6s						
JAHD	**Aomorihigashid**	**4.46**	**244**	A	A	06 33 35.8	
	comp=N,11nm,0.5s,comp=N,11nm,1.8s						
YSS	**Yuzh-Sakhalins**	**4.52**	**324**		**Pn**	**06 33 38.9**	**+3.2**
YSS	**Yuzh-Sakhalins**	**4.52**	**324**	*αe*PN	**Pn**	**06 33 38.5**	**+2.8**
YSS				*e*S	**Sn**	**06 34 29.6**	**+2.7**
YSS				pmax	pmax		
	comp=Z,790nm,0.6s						
YSS				pmax	pmax		
	comp=Z,1µm,3.1s						
YSS				smax	smax		
	comp=E,860nm,1.2s						
YSS				MLR	MLR		
	comp=Z,4µm,17.0s						
YSS				MLR	MLR		
	comp=N,3µm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.52**	**324**	*e*P	**Pn**	**06 33 38.5**	**+2.8**
YSS				AMB	AMB	06 33 39.5	
	comp=N,790nm,0.6s						
YSS				AMB	AMB	06 33 49.5	
	comp=N,1µm,3.1s						
YSS				*e*S	**Sn**	**06 34 29.6**	**+2.7**
YSS				A	A	06 34 35.0	
	comp=N,860nm,0.8s						
YSS				AMS	AMS	06 35 24.0	
	comp=N,3µm,16.0s						
YSS				AMS	AMS	06 35 24.0	
	comp=N,2µm,16.0s						
YSS				AMS	AMS	06 35 24.0	
	comp=N,4µm,16.0s						
JYM2	**Yakumo 2**	**4.79**	**257**	A	A	06 33 40.9	
	comp=N,2.0nm,2.8s,comp=N,4.0nm,2.0s						
JTM	**Tenmabayashi**	**4.89**	**240**	Pn	**Pn**	**06 33 41.2**	**+0.5**
JSI2	**Shiura 2**	**5.17**	**246**	A	A	06 33 45.9	
	comp=N,3.0nm,2.1s,comp=N,4.0nm,2.6s						
UGL	**Uglegorsk**	**6.54**	**333**	*e*PN	**Pn**	**06 34 06.9**	**+3.7**
UGL				*e*S	**Sn**	**06 35 20.5**	**+4.2**
UGL				pmax	pmax		
	comp=Z,3µm,1.3s						
UGL				pmax	pmax		
	comp=Z,1µm,1.0s						
UGL				smax	smax		
	comp=N,1µm,2.7s						
UGL				smax	smax		
	comp=E,1µm,1.7s						
UGL	**Uglegorsk**	**6.54**	**333**	*e*P	**Pn**	**06 34 06.1**	**+2.9**
UGL				AMB	AMB	06 34 07.9	
	comp=E,3µm,1.3s						
UGL				AMB	AMB	06 34 09.1	
	comp=E,2µm,0.6s						
UGL				*e*S	**Sn**	**06 35 17.2**	**+0.9**
UGL				A	A	06 35 24.1	
	comp=E,1µm,2.2s						
UGL				A	A	06 35 24.1	
	comp=E,1µm,2.2s						
UGL				AMS	AMS	06 37 59.0	
	comp=E,2µm,17.0s						
UGL				AMS	AMS	06 37 59.0	
	comp=E,2µm,17.0s						
UGL				AMS	AMS	06 37 59.0	
	comp=E,2µm,17.0s						
TEY	**Ternei**	**7.41**	**286**	⇑*e*PN	**Pn**	**06 34 17.5**	**+2.3**
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,90nm,1.0s						
TEY				pmax	pmax		
	comp=Z,80nm,1.0s						
TEY	**Ternei**	**7.41**	**286**	*e*P	**Pn**	**06 34 17.5**	**+2.3**
TEY				AMB	AMB	06 34 18.4	
	comp=Z,20nm,1.0s						
TEY				AMB	AMB	06 34 18.4	
	comp=Z,90nm,1.0s						
TEY				AMB	AMB	06 34 18.4	
	comp=Z,80nm,1.0s						
TYV	**Tymovskoe**	**7.98**	**341**	*e*PN	**Pn**	**06 34 26.2**	**+3.3**
TYV				*e*S	**Sn**	**06 35 53.8**	**+2.2**
TYV				pmax	pmax		
	comp=Z,127nm,0.9s						
TYV				pmax	pmax		
	comp=Z,1µm,4.4s						
TYV				smax	smax		
	comp=N,45nm,1.0s						
TYV				smax	smax		
	comp=E,48nm,1.0s						
TYV				smax	smax		
	comp=E,400nm,4.7s						
TYV	**Tymovskoe**	**7.98**	**341**	*e*P	**Pn**	**06 34 25.7**	**+2.8**
TYV				AMB	AMB	06 34 26.8	
	comp=E,1µm,4.4s						
TYV				AMB	AMB	06 34 28.3	
	comp=E,100nm,0.5s						
TYV				*e*S	**Sn**	**06 35 52.1**	**+0.5**
TYV				A	A	06 35 55.7	
	comp=E,400nm,4.7s						
TYV				A	A	06 35 58.6	
	comp=E,40nm,0.6s						
TYV				A	A	06 35 58.6	
	comp=E,90nm,0.6s						
TYV				AMS	AMS	06 37 10.0	
	comp=E,2µm,16.0s						
TYV				AMS	AMS	06 37 10.0	
	comp=E,2µm,16.0s						
TYV				AMS	AMS	06 37 10.0	
	comp=E,1µm,16.0s						
JSD	**Sado**	**8.30**	**233**	Pn	**Pn**	**06 34 27.1**	**-0.3**
JYT	**Yasato**	**8.69**	**217**	Pn	**Pn**	**06 34 36.6**	**+3.9**
MAJO	**Matsushiro**	**9.40**	**226**	Pn	**Pn**	**06 34 42.1**	**-0.3**
MAJO	**Matsushiro**	**9.40**	**226**	⇑*e*PN	**Pn**	**06 34 45.7**	**+3.2**
MJAR	**Matsushiro Arr**	**9.40**	**226**	P	**Pn**	**06 34 44.1**	**+1.6**
	comp=E,4.3nm,0.5s,baz=30,slow=13,SNR=4.3						
MJAR	**Matsushiro Arr**	**9.40**	**226**		**Pn**	**06 34 41.5**	**-1.0**
KHBR	**Khabarovsk**	**9.55**	**306**	*e*P	**Pn**	**06 34 45.4**	**+0.9**
KHBR				AMB	AMB	06 34 46.9	
	comp=E,40nm,0.3s						
SKR	**Severo-Kuril's**	**9.76**	**38**	⇓*e*PN	**Pn**	**06 34 47.0**	**-0.2**
SKR	**Severo-Kuril's**	**9.76**	**38**	*e*P	**Pn**	**06 34 47.1**	**-0.2**
SKR				AMB	AMB	06 35 00.9	
	comp=E,220nm,0.5s						
SKR				*e*S	**Sn**	**06 36 31.0**	**-4.1**
SKR				A	A	06 36 40.9	
	comp=E,140nm,0.3s						
SKR				A	A	06 36 40.9	
	comp=E,80nm,0.3s						
SKR				AMS	AMS	06 38 08.5	
	comp=E,2µm,14.0s						
SKR				AMS	AMS	06 38 08.5	
	comp=E,2µm,14.0s						
SKR				AMS	AMS	06 38 08.5	
	comp=E,1µm,14.0s						
GRNR	**Gornyy**	**10.17**	**320**	*e*P	**Pn**	**06 34 55.3**	**+2.5**
GRNR				AMB	AMB	06 34 58.0	
	comp=E,30nm,0.7s						
OKH	**Okha**	**10.48**	**348**	*de*PN	**Pn**	**06 34 59.2**	**+2.1**
OKH				pmax	pmax		
	comp=Z,300nm,5.9s						
OKH				MLR	MLR		
	comp=N,1µm,15.0s						
OKH				MLR	MLR		
	comp=E,1µm,15.0s						
OKH				MLR	MLR		
	comp=Z,900nm,14.0s						
OKH	**Okha**	**10.48**	**348**	*e*P	**Pn**	**06 34 59.0**	**+1.9**
OKH				AMB	AMB	06 35 01.8	
	comp=Z,130nm,0.8s						
OKH				AMB	AMB	06 35 02.3	
	comp=Z,300nm,5.9s						
OKH				*e*S	**Sn**	**06 36 51.2**	**-1.6**
OKH				A	A	06 37 12.3	
	comp=Z,400nm,12.0s						
OKH				AMS	AMS	06 39 57.0	
	comp=Z,2µm,14.0s						
OKH				AMS	AMS	06 39 57.0	
	comp=Z,1µm,14.0s						
OKH				AMS	AMS	06 39 57.0	
	comp=Z,1µm,14.0s						
JGF	**Kuroka**	**10.56**	**226**		**Pn**	**06 34 58.7**	**+0.4**
NKL	**Nikolayevsk**	**10.56**	**340**	*e*PN	**Pn**	**06 34 55.5**	**-2.7**
NKL				pmax	pmax		
	comp=N,1.0nm,1.2s						
NKL				pmax	pmax		
	comp=E,8.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,169nm,1.1s						
NKL				MLR	MLR		
	comp=E,82nm,11.0s						
NKL				MLR	MLR		
	comp=Z,621nm,20.0s						
NKL	**Nikolayevsk**	**10.56**	**340**	*e*P	**Pn**	**06 35 00.1**	**+1.9**
NKL				AMB	AMB	06 35 02.5	
	comp=Z,880nm,0.6s						
NKL				AMS	AMS	06 39 22.0	
	comp=Z,600nm,20.0s						
PAU	**Pauzhetka**	**10.63**	**37**	*e*P	**Pn**	**06 34 58.6**	**-0.5**
PAU				AMB	AMB	06 35 04.6	
	comp=Z,80nm,0.5s						
USA0B	**Ussuriysk Arra**	**10.64**	**280**	*d i*PN	**Pn**	**06 35 00.5**	**+1.2**
USRK	**Ussuriysk Ar.**	**10.64**	**280**	P	**Pn**	**06 35 00.6**	**+1.4**
	comp=Z,21nm,0.7s,baz=84,slow=14,SNR=23						
USRK				LR	LR	06 39 12.2	
	comp=Z,310nm,19.4s,baz=85,slow=38						
VLA	**Vladivostok**	**10.78**	**274**	*de*PN	**Pn**	**06 35 02.3**	**+1.1**
VLA				MLR	MLR		
	comp=Z,234nm,12.0s						
VLA	**Vladivostok**	**10.78**	**274**	*e*P	**Pn**	**06 35 02.3**	**+1.1**
MSHR	**Mys Shultsa**	**11.38**	**271**	⇑*e*PN	**Pn**	**06 35 09.0**	**-0.4**
MSHR				pmax	pmax		
	comp=Z,116nm,2.5s						
MSHR				MLR	MLR		
	comp=Z,56nm,12.0s						
JHJ2	**Mitsune**	**11.55**	**210**	Pn	**Pn**	**06 35 15.7**	**+3.8**
KLR	**Kul'dur**	**11.85**	**305**	P	**Pn**	**06 35 17.3**	**+1.6**
	comp=Z,38nm,1.0s,baz=109,slow=15,SNR=43						
KLR				LR	LR	06 40 16.5	
	comp=Z,671nm,19.4s,baz=121,slow=39						
KLR	**Kul'dur**	**11.85**	**305**	*ce*PN	**Pn**	**06 35 17.5**	**+1.7**
KLR				pmax	pmax		
	comp=Z,59nm,1.3s						
KLR				MLR	MLR		
	comp=Z,861nm,13.0s						
KLR	**Kul'dur**	**11.85**	**305**	*e*P	**Pn**	**06 35 17.1**	**+1.3**
KLR				AMB	AMB	06 35 19.5	
	comp=Z,70nm,0.8s						
KLR				AMS	AMS	06 40 31.6	
	comp=Z,900nm,13.0s						
PEA0B	**Petropavlovsk-**	**12.20**	**33**		**Pn**	**06 35 20.3**	**-0.3**
PEA0B	**Petropavlovsk-**	**12.20**	**33**	*ce*PN	**Pn**	**06 35 21.2**	**+0.6**
PETK	**Petropavlovsk-**	**12.20**	**33**	P	**Pn**	**06 35 20.7**	**+0.1**
	comp=Z,8.2nm,0.8s,baz=205,slow=13,SNR=18						
PETK				LR	LR	06 40 12.5	
	comp=Z,122nm,19.3s,baz=222,slow=38						
PETK	**Petropavlovsk-**	**12.20**	**33**	Pn	**Pn**	**06 35 20.0**	**-0.6**
PETK	**Petropavlovsk-**	**12.20**	**33**	PN	**Pn**	**06 35 20.0**	**-0.6**
MDJ	**Mudanjiang**	**12.35**	**282**	Pn	**Pn**	**06 35 22.7**	**0.0**
MDJ	**Mudanjiang**	**12.35**	**282**	P	**Pn**	**06 35 22.6**	**-0.1**
MDJ				sP	P	06 35 41.1	+8.8
MDJ				S	**Sn**	**06 37 39.3**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,85nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.6s						
MDJ				LR	LR		
	comp=Z,460nm,10.3s						
MDJ				LR	LR		
	comp=Z,280nm,9.4s						
MDJ				LR	LR		
	comp=Z,500nm,14.7s						
PET	**Petropavlovsk**	**12.53**	**35**	*e*PN	**Pn**	**06 35 26.3**	**+1.2**
PET				*e*S	**Sn**	**06 37 45.5**	**+2.8**
PET				pmax	pmax		
	comp=Z,33nm,1.2s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
PET	**Petropavlovsk**	**12.53**	**35**	*e*P	**Pn**	**06 35 24.0**	**-1.1**
PET				AMB	AMB	06 35 34.1	
	comp=Z,20nm,0.7s						
PET				AMS	AMS	06 40 23.3	
	comp=Z,800nm,14.0s						
JHS	**Saijyo**	**13.40**	**236**		**Pn**	**06 35 34.8**	**-2.2**
BNX	**BinXian**	**13.93**	**286**	⇓P	**Pn**	**06 35 42.9**	**-0.9**
BNX				S	**Sn**	**06 38 14.9**	**-1.8**
BNX				LR	LR		
	comp=Z,500nm,11.9s						
BNX				LR	LR		
	comp=Z,790nm,11.3s						
BNX				LR	LR		
	comp=Z,2µm,25.9s						
CN2	**Changchun**	**15.37**	**279**	*e*P	**Pn**	**06 36 00.5**	**-2.0**
CN2				*e*S	**Sn**	**06 38 47.1**	**-4.6**
CN2				pmax	pmax		
	comp=Z,40nm,1.3s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
KSRS	**Korea Array**	**15.43**	**254**	P	**Pn**	**06 36 03.1**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=61,slow=13,SNR=9.3						
KSRS				LR	LR	06 41 46.0	
	comp=Z,225nm,21.8s,baz=60,slow=36						
KS19	**Wonju Array Si**	**15.44**	**254**	Pn	**Pn**	**06 36 01.7**	**-1.8**
KSAR	**Wonju Array Be**	**15.46**	**254**	Pn	**Pn**	**06 35 60.0**	**-3.7**
KSAR	**Wonju Array Be**	**15.46**	**254**	P	**Pn**	**06 36 00.0**	**-3.7**
TJN	**Taejon**	**16.35**	**251**	⇑*e*P	**Pn**	**06 36 15.6**	**+0.7**
MA2	**Magadan**	**16.43**	**7**	P	**Pn**	**06 36 15.5**	**-0.2**
	comp=Z,16nm,0.6s,baz=186,slow=9.8,SNR=14						
MA2				LR	LR	06 42 55.5	
	comp=Z,280nm,19.2s,baz=182,slow=38						
MA2	**Magadan**	**16.43**	**7**	Pn	**Pn**	**06 36 14.3**	**-1.5**
MA2	**Magadan**	**16.43**	**7**	*de*P	**Pn**	**06 36 14.7**	**-1.1**
MA2				pmax	pmax		
	comp=Z,46nm,1.7s						
MA2				MLR	MLR		
	comp=Z,222nm,16.0s						
MA2	**Magadan**	**16.43**	**7**	*e*P	**Pn**	**06 36 14.7**	**-1.1**
ZEA	**Zeya**	**16.45**	**316**	*e*P	**Pn**	**06 36 15.8**	**-0.3**
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=N,40nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.4s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
ZEA	**Zeya**	**16.45**	**316**	*e*P	**Pn**	**06 36 15.8**	**-0.3**
ZEA				AMB	AMB	06 36 18.0	
	comp=Z,70nm,0.8s						
ZEA				AMS	AMS	06 43 11.0	
	comp=Z,300nm,15.0s						
ZEA				AMS	AMS	06 43 11.0	
	comp=Z,400nm,15.0s						
ZEA				AMS	AMS	06 43 11.0	
	comp=Z,500nm,15.0s						
JCJ	**Chichijima**	**16.63**	**194**	P	**Pn**	**06 36 15.4**	**-3.1**
	comp=Z,26nm,0.3s,baz=282,slow=20,SNR=7.8						
JCJ				S	Sn	06 39 07.4	-15
	comp=Z,46nm,0.5s,baz=285,slow=23,SNR=7.2						
JCJ				LR	LR	06 41 49.8	
	comp=Z,98nm,19.7s,baz=15,slow=34						
JCJ	**Chichijima**	**16.63**	**194**	Pn	**Pn**	**06 36 15.5**	**-3.1**
JCJ				IAmb	IAmb	06 36 28.3	
	comp=Z,54nm,0.6s						
SNY	**Shenyang**	**17.05**	**273**	⇓P	**P**	**06 36 24.5**	**+0.1**
SNY				S	**Sn**	**06 39 24.5**	**-7.8**
SNY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SNY				LR	LR		
	comp=Z,230nm,8.9s						
SNY				LR	LR		
	comp=Z,190nm,9.2s						
SNY				LR	LR		
	comp=Z,430nm,22.7s						
HIA	**Hailar**	**19.44**	**297**	P	**P**	**06 36 48.6**	**-2.0**
HIA				IAmb	IAmb	06 36 51.2	
	comp=Z,127nm,1.6s						
HIA	**Hailar**	**19.44**	**297**	P	**P**	**06 36 48.6**	**-2.0**
HIA				pmax	pmax		
	comp=Z,127nm,1.6s						
SEY	**Seymchan**	**19.89**	**8**	P	**P**	**06 36 53.8**	**-1.5**
	comp=Z,37nm,0.9s,baz=188,slow=8.8,SNR=25						
SEY				LR	LR	06 45 52.9	
	comp=Z,226nm,18.4s,baz=197,slow=40						
SEY	**Seymchan**	**19.89**	**8**	⇓*e*P	**P**	**06 36 53.5**	**-1.8**
SEY				pmax	pmax		
	comp=Z,65nm,1.3s						
SEY				MLR	MLR		
	comp=Z,193nm,15.0s						
SHEM	**Shemya Is, Ala**	**20.49**	**53**	P	**P**	**06 37 03.1**	**+1.1**
	comp=Z,64nm,0.8s,baz=248,slow=4.5,SNR=3.8						
SHEM				LR	LR	06 44 45.8	
	comp=Z,89nm,21.8s,baz=257,slow=36						
	comp=Z,64nm,0.8s						
SMY	**Shemya**	**20.49**	**53**	P	**P**	**06 37 03.0**	**+1.1**
SMY				IAmb	IAmb	06 37 14.6	
	comp=Z,153nm,1.1s						
SMY	**Shemya**	**20.49**	**53**	P	**P**	**06 37 03.0**	**+1.1**
SMY				pmax	pmax		
	comp=Z,153nm,1.1s						
YAK	**Yakutsk**	**21.21**	**338**	P	**P**	**06 37 10.4**	**+0.8**
	comp=Z,14nm,0.3s,baz=139,slow=1.8,SNR=9.1						
YAK				LR	LR	06 45 21.9	
	comp=Z,293nm,21.4s,baz=98,slow=36						
	comp=Z,14nm,0.3s						
YAK	**Yakutsk**	**21.21**	**338**	P	**P**	**06 37 06.0**	**-3.6**
YAK				IAmb	IAmb	06 37 35.5	
	comp=Z,79nm,0.9s						
YAK	**Yakutsk**	**21.21**	**338**	*e*P	**P**	**06 37 06.5**	**-3.1**
YAK				*e*S	**S**	**06 40 57.7**	**-3.6**
YAK				*e*		06 41 09.4	
YAK				*e**SS	**sS**	**06 41 22.0**	**-2.7**
YAK				*e*		06 48 22.6	
YAK				pmax	pmax		
	comp=Z,72nm,1.0s						
YAK				pmax	pmax		
	comp=N,46nm,1.3s						
YAK				pmax	pmax		
	comp=E,16nm,1.4s						
YAK				smax	smax		
	comp=N,86nm,1.9s						
YAK				smax	smax		
	comp=E,43nm,1.5s						
XLT	**XiLinHaoTe**	**22.07**	**282**	⇑*i*P	**P**	**06 37 17.8**	**-1.3**
XLT				pP	pP	06 37 31.2	-2.4
XLT				sP	sP	06 37 39.0	-3.1
XLT				PP		06 37 43.5	
XLT				pmax	pmax		
	comp=E,120nm,0.9s						
JOW	**Kunigami**	**22.24**	**228**	P	**P**	**06 37 21.7**	**+0.8**
	comp=E,11nm,0.8s,baz=61,slow=19,SNR=2.8						
JOW				LR	LR	06 47 11.8	
	comp=E,193nm,18.8s,baz=38,slow=40						
	comp=E,11nm,0.8s						
BJI	**Beijing**	**22.93**	**272**	P	**P**	**06 37 26.8**	**-1.3**
BJI				S	**S**	**06 41 31.8**	**-0.9**
BJI				pmax	pmax		
	comp=E,70nm,0.9s						
BJT	**Baijiatuau**	**22.94**	**272**	P	**P**	**06 37 27.0**	**-1.2**
BJT				IAmb	IAmb	06 37 29.1	
	comp=Z,64nm,0.9s						
BJT	**Baijiatuau**	**22.94**	**272**	P	**P**	**06 37 27.0**	**-1.2**
BJT				pmax	pmax		
	comp=Z,64nm,0.9s						
TIA	**Tai'an**	**23.70**	**262**	⇑P	**P**	**06 37 35.0**	**-0.4**
TIA				pmax	pmax		
	comp=Z,62nm,1.0s						
NJ2	**Nanjing**	**24.61**	**252**	*e*P	**P**	**06 37 44.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
HNS	**HongShan**	**24.95**	**267**	⇑P	**P**	**06 37 47.4**	**+0.7**
HNS				S	**S**	**06 42 05.8**	**+0.5**
HNS				pmax	pmax		
	comp=Z,55nm,1.1s						
HNS				LR	LR		
	comp=Z,290nm,11.4s						
HNS				LR	LR		
	comp=Z,280nm,13.1s						
HNS				LR	LR		
	comp=Z,310nm,13.5s						
BOD	**Bodaibo**	**24.96**	**317**	*e*P	**P**	**06 37 42.0**	**-4.5**
BOD				pmax	pmax		
	comp=Z,47nm,1.2s						
HHC	**Hu-ho-hao-te**	**26.04**	**277**	*e*P	**P**	**06 37 57.1**	**+0.5**
HHC				pmax	pmax		
	comp=Z,59nm,1.0s						
HHC				pmax	pmax		
	comp=Z,400nm,5.0s						
HHC				LR	LR		
	comp=Z,420nm,10.6s						

HHC				LR	LR		
	comp=Z,380nm,14.2s						
HHC				LR	LR		
	comp=Z,490nm,11.9s						
TIY	**Taiyuan**	**26.48**	**269**	*e*P	**P**	**06 38 04.0**	**+3.3**
TIY				pmax	pmax		
	comp=Z,41nm,0.7s						
TIY				pmax	pmax		
	comp=Z,260nm,3.8s						
TIY				LR	LR		
	comp=Z,210nm,13.7s						
TIY				LR	LR		
	comp=Z,240nm,14.4s						
TIY				LR	LR		
	comp=Z,240nm,26.1s						
BILL	**Bilibino**	**26.83**	**16**	P	**P**	**06 38 01.4**	**-2.0**
BILL	**Bilibino**	**26.83**	**16**	⇓*i*P	**P**	**06 38 01.3**	**-2.0**
BILL				*i* *PP	**pP**	**06 38 18.1**	**-1.5**
BILL				*e**SP	**sP**	**06 38 28.2**	**+0.6**
BILL						06 41 24.0	
BILL				*e*S	**S**	**06 42 31.2**	**-3.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,101nm,19.0s						
BTO	**Baotou**	**27.23**	**277**	*e*P	**P**	**06 38 09.0**	**+1.6**
BTO				S	**S**	**06 42 47.6**	**+6.1**
BTO				LR	LR		
	comp=Z,910nm,15.7s						
BTO				LR	LR		
	comp=Z,1µm,17.1s						
LYN	**LuoYang**	**27.84**	**263**	⇓*i*P	**P**	**06 38 13.9**	**+1.2**
LYN				pP	pP	06 38 31.8	+2.8
LYN				S	**S**	**06 42 56.2**	**+5.2**
LYN				SS	**SnSn**	**06 44 12.8**	**+2.5**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
ULN	**Ulaanbaatar**	**27.84**	**293**	P	**P**	**06 38 13.9**	**+1.1**
ULN	**Ulaanbaatar**	**27.84**	**293**	P	**P**	**06 38 13.9**	**+1.1**
ULN				pmax	pmax		
	comp=Z,308nm,1.2s						
ULN	**Ulaanbaatar**	**27.84**	**293**	*e*P	**P**	**06 38 13.9**	**+1.1**
SONM	**Songino Array**	**28.28**	**293**	P	**P**	**06 38 17.9**	**+1.1**
	comp=Z,176nm,0.9s,baz=86,slow=8.4,SNR=557						
SONM				ScP	**ScP**	**06 45 03.1**	**0.0**
	comp=Z,1.1nm,0.9s,baz=44,slow=4.4,SNR=4.1						
SONM				LR	LR	06 50 37.8	
	comp=Z,522nm,18.9s,baz=110,slow=38						
SONM	**Songino Array**	**28.28**	**293**	P	**P**	**06 38 17.8**	**+1.0**
WHN	**Wuhan**	**28.62**	**254**	⇓P	P	06 38 27.6	+7.9
WHN				S	S	06 43 15.7	+12
WHN				LR	LR		
	comp=Z,670nm,30.2s						
H11N2	**WAKE ISLAND Hy**	**29.05**	**138**	T	T	07 09 15.3	
	baz=329,slow=75,SNR=7661						
H11N1	**WAKE ISLAND Hy**	**29.07**	**138**	T	T	07 09 24.8	
	baz=329,slow=75,SNR=4742						
H11N3	**WAKE ISLAND Hy**	**29.07**	**138**	T	T	07 09 19.1	
	baz=329,slow=75,SNR=4960						
IRK	**Irkutsk**	**29.44**	**303**	*e*P	**P**	**06 38 25.9**	**-0.9**
IRK				pmax	pmax		
	comp=Z,60nm,1.3s						
TIXI	**Tiksi**	**29.66**	**349**	LR	LR	06 52 14.9	
	comp=Z,279nm,18.4s,baz=180,slow=40						
TIXI	**Tiksi**	**29.66**	**349**	*i* P	**P**	**06 38 24.5**	**-4.0**
TIXI				MLR	MLR		
	comp=Z,283nm,19.0s						
GUMO	**Guam**	**29.71**	**183**	LR	LR	06 49 05.9	
	comp=Z,53nm,20.5s,baz=66,slow=34						
H11S1	**WAKE ISLAND Hy**	**30.01**	**139**	T	T	07 10 28.4	
	baz=330,slow=76,SNR=702						
H11S3	**WAKE ISLAND Hy**	**30.01**	**139**	T	T	07 10 28.1	
	baz=330,slow=76,SNR=941						
H11S2	**WAKE ISLAND Hy**	**30.02**	**139**	T	T	07 10 26.2	
	baz=330,slow=76,SNR=1814						
ZAK	**Zakamensk**	**30.11**	**299**	*e*P	**P**	**06 38 33.0**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,111nm,1.1s						
SPIA	**Saint Paul Isl**	**30.25**	**48**	P	**P**	**06 38 33.5**	**-0.3**
	baz=262						
XAN	**Xi'an**	**30.66**	**265**	⇑P	**P**	**06 38 40.9**	**+3.1**
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN	**Xi'an**	**30.66**	**265**	P	P	06 38 44.6	+6.8
XAN				sP	sP	06 39 01.2	-0.8
XAN				pP	sP	06 39 01.4	-0.8
NIKH	**Nikolski High**	**30.74**	**56**	P	**P**	**06 38 37.2**	**-1.0**
	baz=270						
GAMB	**Gambell**	**31.23**	**35**	P	**P**	**06 38 44.2**	**+1.8**
GAMB	**Gambell**	**31.23**	**35**	P	**P**	**06 38 42.6**	**+0.2**
	baz=249						
MOY	**Mondy**	**31.48**	**301**	*e*P	**P**	**06 38 44.8**	**-0.2**
MOY				pmax	pmax		
	comp=Z,76nm,1.6s						
TNA	**Tin City**	**33.37**	**33**	P	**P**	**06 39 03.0**	**+1.9**
TNA	**Tin City**	**33.37**	**33**	P	**P**	**06 39 02.0**	**+0.9**
	baz=251,SNR=9.8						
LZH	**Lanzhou**	**33.42**	**272**	*e*P	**P**	**06 39 03.1**	**+1.0**
LZH				pP	pP	06 39 21.7	+3.1
LZH				sP	sP	06 39 30.1	+3.6
LZH				pmax	pmax		
	comp=Z,28nm,1.5s						
LZH				LR	LR		
	comp=Z,150nm,11.3s						
LZH				LR	LR		
	comp=Z,140nm,12.9s						
LZH				LR	LR		
	comp=Z,190nm,11.8s						
ANM	**Nome**	**34.11**	**35**	P	**P**	**06 39 09.8**	**+2.2**
ANM	**Nome**	**34.11**	**35**	P	**P**	**06 39 09.8**	**+2.2**
ANM				pmax	pmax		
	comp=Z,77nm,1.6s						
ANM	**Nome**	**34.11**	**35**	P	**P**	**06 39 09.2**	**+1.6**
	baz=255						
GTA	**Gaotai**	**35.00**	**280**	⇑P	**P**	**06 39 16.4**	**+0.7**
GTA				pP	pP	06 39 34.7	+2.5
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,71nm,6.4s						
GTA				LR	LR		
	comp=Z,180nm,14.3s						
GTA				LR	LR		
	comp=Z,250nm,16.7s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
CD2	**Chengdu**	**36.00**	**264**	P	**P**	**06 39 24.5**	**+0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CHNA	**Chernabura Isl**	**36.15**	**52**	P	**P**	**06 39 24.5**	**-0.6**
	baz=274						
GCSA	**Galena City Sc**	**37.73**	**36**	P	**P**	**06 39 38.8**	**+0.3**
	baz=263,SNR=8.9						
N18K	**Kilae Creek**	**37.94**	**42**	P	**P**	**06 39 42.2**	**+1.8**
N18K				IAmb	IAmb	06 39 53.1	
	comp=Z,35nm,1.1s						
N18K	**Kilae Creek**	**37.94**	**42**	P	**P**	**06 39 40.4**	**0.0**
	baz=270						
TTA	**Tatalina**	**37.96**	**39**	P	**P**	**06 39 42.5**	**+2.0**
TTA				IAmb	IAmb	06 39 46.6	
	comp=Z,22nm,0.8s						
TTA	**Tatalina**	**37.96**	**39**	P	**P**	**06 39 42.5**	**+2.0**
TTA				pmax	pmax		
	comp=Z,22nm,0.8s						
TTA	**Tatalina**	**37.96**	**39**	P	**P**	**06 39 41.9**	**+1.4**
	baz=266,SNR=25						
SVW2	**Sparrevohn**	**38.09**	**42**	P	**P**	**06 39 43.9**	**+2.2**
SVW2				IAmb	IAmb	06 39 54.1	
	comp=Z,15nm,0.8s						
O18K	**Koktuh Hills**	**38.29**	**44**	P	**P**	**06 39 44.6**	**+1.4**
	baz=271						
P18K	**Big Mountain,**	**38.29**	**45**	P	**P**	**06 39 43.8**	**+0.5**
	baz=272						
L19K	**White Mountain**	**38.46**	**40**	P	**P**	**06 39 46.6**	**+1.9**
L19K	**White Mountain**	**38.46**	**40**	P	**P**	**06 39 45.4**	**+0.7**
	baz=268						
N19K	**Bonanza Creek**	**38.63**	**42**	P	**P**	**06 39 48.0**	**+1.8**
N19K				IAmb	IAmb	06 40 14.6	
	comp=Z,15nm,1.0s						
N19K	**Bonanza Creek**	**38.63**	**42**	P	**P**	**06 39 46.8**	**+0.6**
	baz=271						
O19K	**Port Alsworth**	**38.72**	**43**	P	**P**	**06 39 46.8**	**-0.1**
	baz=272						
K20K	**Telida**	**38.86**	**38**	IAmb	IAmb	06 39 54.2	
	comp=Z,20nm,0.9s						
K20K	**Telida**	**38.86**	**38**	P	**P**	**06 39 48.9**	**+0.8**
	baz=268,SNR=18						
J20K	**Nowinta River**	**38.87**	**37**	P	**P**	**06 39 49.5**	**+1.5**
	baz=267,SNR=39						
L20K	**Farewell, AK**	**38.92**	**40**	P	**P**	**06 39 48.5**	**-0.1**
	baz=269						
A21K	**Barrow**	**39.05**	**25**	P	**P**	**06 39 49.2**	**-0.3**
	baz=255,SNR=12						
Q19K	**Cape Douglas,**	**39.12**	**45**	P	**P**	**06 39 51.0**	**+0.7**
Q19K	**Cape Douglas,**	**39.12**	**45**	P	**P**	**06 39 50.6**	**+0.3**
	baz=274						
IMAR	**Indian Mountai**	**39.17**	**34**	P	**P**	**06 39 52.4**	**+1.8**
NRIK	**Noril'sk**	**39.41**	**331**	P	**P**	**06 39 52.4**	**-0.1**
	comp=Z,4.4nm,0.4s,baz=120,slow=6.8,SNR=6.9						
	comp=Z,4.4nm,0.4s						
NRIK	**Noril'sk**	**39.41**	**331**	P	**P**	**06 39 52.1**	**-0.4**
NRIK	**Noril'sk**	**39.41**	**331**	*ce*P	**P**	**06 39 49.8**	**-2.7**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H21K	**Melozitna Rive**	**39.53**	**35**	IAmb	IAmb	06 40 21.9	
	comp=Z,42nm,1.4s						
H21K	**Melozitna Rive**	**39.53**	**35**	P	**P**	**06 39 54.4**	**+0.9**
	baz=266,SNR=38						
O20K	**Slope Mountain**	**39.58**	**43**	P	**P**	**06 39 54.3**	**+0.2**
	baz=273						
CHUM	**Lake Minchumin**	**39.66**	**37**	P	**P**	**06 39 56.3**	**+1.7**
	baz=269,SNR=8.2						
PPLA	**Purkeypile**	**39.71**	**39**	IAmb	IAmb	06 40 02.4	
	comp=Z,37nm,1.1s						
PPLA	**Purkeypile**	**39.71**	**39**	P	**P**	**06 39 56.0**	**+0.8**
	baz=270,SNR=7.3						
SPCR	**Spurr Chakacha**	**39.73**	**42**	P	**P**	**06 39 56.4**	**+1.0**
	baz=272						
CAST	**Castle Rocks**	**39.76**	**38**	IAmb	IAmb	06 40 02.0	
	comp=Z,30nm,0.8s						
CAST	**Castle Rocks**	**39.76**	**38**	P	**P**	**06 39 56.0**	**+0.5**
	baz=270,SNR=38						
KDAK	**Kodiak Island**	**39.78**	**47**	P	**P**	**06 39 56.0**	**+0.4**
	comp=Z,10nm,0.5s,baz=294,slow=4.4,SNR=23						
KDAK				LR	LR	07 01 05.3	
	comp=Z,37nm,18.1s,baz=249,slow=43						
	comp=Z,10nm,0.5s						
KDAK	**Kodiak Island**	**39.78**	**47**	P	**P**	**06 39 56.1**	**+0.4**
KDAK				IAmb	IAmb	06 40 22.2	
	comp=Z,32nm,0.8s						
KDAK	**Kodiak Island**	**39.78**	**47**	P	**P**	**06 39 56.1**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,32nm,0.8s						
KDAK	**Kodiak Island**	**39.78**	**47**	P	**P**	**06 39 56.2**	**+0.5**
	baz=276						
I21K	**Tanana**	**39.85**	**35**	P	**P**	**06 39 56.6**	**+0.4**
	baz=268						
GOMU	**GeErMu**	**39.93**	**278**	P	**P**	**06 39 57.9**	**+0.2**
GOMU				PP	**PP**	**06 41 31.6**	**+1.2**
GOMU				PcP	**PcP**	**06 42 02.3**	**+0.3**
GOMU				S	**S**	**06 45 56.8**	**-1.3**
GOMU				pmax	pmax		
	comp=Z,23nm,1.0s						
GOMU				LR	LR		
	comp=Z,180nm,15.7s						
GOMU				LR	LR		
	comp=Z,140nm,15.9s						
GOMU				LR	LR		
	comp=Z,150nm,16.5s						
PZH	**PanZhiHua**	**39.95**	**260**	P	**P**	**06 39 57.4**	**-0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.1s						
KMI	**Kunming**	**40.08**	**258**	⇑P	P	06 40 06.2	+7.4
KMI				pP	pP	06 40 15.9	+0.3
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
KMI				LR	LR		
	comp=N,400nm,13.5s						
KMI				LR	LR		
	comp=E,130nm,6.0s						
KMI				LR	LR		
	comp=Z,190nm,9.7s						
BPAW	**Bear Paw Mtn.**	**40.25**	**37**	P	**P**	**06 40 00.8**	**+1.2**
BPAW				IAmb	IAmb	06 40 11.0	
	comp=Z,16nm,1.0s						
BPAW	**Bear Paw Mtn.**	**40.25**	**37**	P	**P**	**06 39 59.9**	**+0.3**
	baz=270,SNR=15						
CAPN	**Captain Cook N**	**40.26**	**42**	P	**P**	**06 40 00.2**	**+0.6**
	baz=274						
KTH	**Kantishna Hill**	**40.28**	**38**	P	**P**	**06 40 01.4**	**+1.5**
BRSE	**Bradley Lake S**	**40.55**	**44**	P	**P**	**06 40 01.8**	**-0.2**
	baz=275						
TRF	**Thorofare Moun**	**40.56**	**38**	IAmb	IAmb	06 40 13.5	
	comp=Z,15nm,0.8s						
TRF	**Thorofare Moun**	**40.56**	**38**	P	**P**	**06 40 01.8**	**-0.5**
	baz=271,SNR=7.3						
CUT	**Chulitna**	**40.60**	**40**	P	**P**	**06 40 02.9**	**+0.4**
	baz=272						
DAV	**Davao City (W)**	**40.62**	**213**	LR	LR	06 54 16.1	
	comp=Z,117nm,20.7s,baz=172,slow=32						
COLD	**Coldfoot**	**40.67**	**32**	IAmb	IAmb	06 40 05.2	
	comp=Z,37nm,1.1s						
COLD	**Coldfoot**	**40.67**	**32**	P	**P**	**06 40 03.4**	**+0.4**
	baz=267,SNR=22						
M22K	**Willow**	**40.70**	**41**	P	**P**	**06 40 02.4**	**-0.9**
	baz=273						
H23K	**Yukon River**	**40.88**	**34**	IAmb	IAmb	06 40 16.9	
	comp=Z,28nm,0.8s						
H23K	**Yukon River**	**40.88**	**34**	P	**P**	**06 40 06.3**	**+1.5**
	baz=269,SNR=38						
RC01	**Rabbit Creek A**	**40.93**	**42**	P	**P**	**06 40 05.2**	**0.0**
RC01				IAmb	IAmb	06 40 30.0	
	comp=Z,20nm,0.9s						
RC01	**Rabbit Creek A**	**40.93**	**42**	P	**P**	**06 40 04.3**	**-0.9**
	baz=274						
ZAA0	**Zalesovo Array**	**40.94**	**307**	P	**P**	**06 40 05.4**	**+0.1**
ZALV	**Zalesovo Beam**	**40.94**	**307**	P	**P**	**06 40 05.2**	**-0.2**
	comp=Z,22nm,0.4s,baz=86,slow=7.6,SNR=119						
ZALV				PcP	**PcP**	**06 42 05.1**	**+0.7**
	comp=Z,7.8nm,1.1s,baz=80,slow=2.7,SNR=1.9						
ZALV				LR	LR	06 58 53.3	
	comp=Z,169nm,18.9s,baz=105,slow=39						
	comp=Z,22nm,0.4s						
I23K	**Minto, Yukon-K**	**40.95**	**35**	IAmb	IAmb	06 40 16.7	
	comp=Z,20nm,0.9s						
I23K	**Minto, Yukon-K**	**40.95**	**35**	P	**P**	**06 40 05.8**	**+0.5**
	baz=270,SNR=30						
O22K	**Cooper Landing**	**40.99**	**43**	P	**P**	**06 40 05.5**	**-0.2**
	baz=275						
TOLK	**Toolik Lake Re**	**41.00**	**30**	P	**P**	**06 40 06.8**	**+1.1**
TOLK				IAmb	IAmb	06 40 07.7	
	comp=Z,19nm,0.8s						
TOLK	**Toolik Lake Re**	**41.00**	**30**	P	**P**	**06 40 06.6**	**+0.8**
	baz=266,SNR=26						
NEA2	**Nenana**	**41.08**	**36**	IAmb	IAmb	06 40 18.1	
	comp=Z,36nm,0.8s						
NEA2	**Nenana**	**41.08**	**36**	P	**P**	**06 40 08.0**	**+1.6**
	baz=271,SNR=41						
SEW	**Seward**	**41.16**	**43**	P	**P**	**06 40 06.1**	**-0.9**
	baz=276						
MCK	**McKinley**	**41.16**	**38**	IAmb	IAmb	06 40 13.2	
	comp=Z,25nm,0.9s						
MCK	**McKinley**	**41.16**	**38**	P	**P**	**06 40 08.2**	**+1.1**
	baz=272,SNR=9.9						
PMR	**Palmer**	**41.19**	**41**	P	**P**	**06 40 05.8**	**-1.4**
	baz=274						
RND	**Reindeer**	**41.21**	**38**	IAmb	IAmb	06 40 18.2	
	comp=Z,24nm,0.8s						
GHO	**Glory Hole Cre**	**41.27**	**41**	IAmb	IAmb	06 40 22.9	
	comp=Z,19nm,0.7s						
WAT1	**Susitna Watana**	**41.38**	**39**	P	**P**	**06 40 08.1**	**-0.7**
	baz=273						
MDM	**Murphy Dome**	**41.43**	**36**	IAmb	IAmb	06 40 20.6	
	comp=Z,26nm,0.8s						
WRH	**Wood River Hil**	**41.51**	**36**	IAmb	IAmb	06 40 33.8	
	comp=Z,22nm,0.9s						
KNK	**Knik Glacier**	**41.52**	**41**	IAmb	IAmb	06 40 21.7	
	comp=Z,45nm,1.2s						
KNK	**Knik Glacier**	**41.52**	**41**	P	**P**	**06 40 10.4**	**+0.4**
	baz=275,SNR=5.9						
SML	**Sawmill**	**41.55**	**40**	P	**P**	**06 40 10.7**	**+0.3**
	baz=275,SNR=24						
H24K	**Noodor Dome**	**41.57**	**34**	IAmb	IAmb	06 40 38.2	
	comp=Z,26nm,0.9s						
H24K	**Noodor Dome**	**41.57**	**34**	P	**P**	**06 40 11.2**	**+0.8**
	baz=270,SNR=33						
TCOL	**CIGO, UAF Yank**	**41.59**	**36**	P	**P**	**06 40 09.9**	**-0.6**
	baz=272						
COLA	**College**	**41.60**	**36**	P	**P**	**06 40 12.2**	**+1.6**
COLA	**College**	**41.60**	**36**	*c i*P	**P**	**06 40 12.4**	**+1.9**
COLA				pmax	pmax		
	comp=Z,29nm,0.9s						
COLA	**College**	**41.60**	**36**	P	**P**	**06 40 10.7**	**+0.1**
	baz=272						
COLA	**College**	**41.60**	**36**	P	**P**	**06 40 12.4**	**+1.9**
COLA				pP	**pP**	**06 40 27.0**	**-0.4**
WAT6	**Susitna Watana**	**41.77**	**39**	P	**P**	**06 40 12.3**	**+0.1**
	baz=274						
POKR	**Poker Plat Res**	**41.77**	**35**	P	**P**	**06 40 13.6**	**+1.6**
	baz=272,SNR=13						
M23K	**Glacier View**	**41.84**	**40**	P	**P**	**06 40 12.9**	**+0.3**
	baz=275						
DHY	**Denali Highway**	**41.90**	**39**	IAmb	IAmb	06 40 35.8	
	comp=Z,23nm,0.8s						
DHY	**Denali Highway**	**41.90**	**39**	P	**P**	**06 40 14.1**	**+0.8**
	baz=274,SNR=17						
WMQ	**Urumqi**	**41.90**	**292**	*e*P	**P**	**06 40 14.8**	**+1.4**
WMQ				pP	pP	06 40 30.5	+0.2
WMQ				PcP	**PcP**	**06 42 13.3**	**+5.4**
WMQ				ScP	**ScP**	**06 45 47.9**	**-4.2**
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.9s						
WMQ				LR	LR		
	comp=Z,250nm,17.3s						
WMQ				LR	LR		
	comp=Z,350nm,12.7s						
WMQ				LR	LR		
	comp=Z,220nm,21.1s						
HDA	**Harding Lake**	**42.00**	**36**	IAmb	IAmb	06 40 24.9	
	comp=Z,24nm,1.0s						
HDA	**Harding Lake**	**42.00**	**36**	P	**P**	**06 40 13.9**	**0.0**
	baz=273,SNR=14						
IL31		**42.01**	**36**	IAmb	IAmb	06 40 19.2	
	comp=Z,22nm,0.8s						
ILAR	**Eielson Array**	**42.01**	**36**	P	**P**	**06 40 14.8**	**+0.8**
	comp=Z,16nm,0.9s,baz=254,slow=4.9,SNR=74						
	comp=Z,16nm,0.9s						
SCM	**Sheep Creek Mo**	**42.02**	**40**	P	**P**	**06 40 14.9**	**+0.7**
	baz=275						
GLI	**Glacier Island**	**42.23**	**42**	P	**P**	**06 40 16.4**	**+0.5**
	baz=277						
M24K	**Tolsona, Glenn**	**42.54**	**40**	IAmb	IAmb	06 40 46.7	
	comp=Z,29nm,0.6s						
M24K	**Tolsona, Glenn**	**42.54**	**40**	P	**P**	**06 40 20.1**	**+1.7**
	baz=276						
K24K	**Donnelly Dome**	**42.56**	**37**	P	**P**	**06 40 18.3**	**-0.2**
	baz=275,SNR=20						
ZSN	**Zaisan**	**42.56**	**298**	*c i*P	**P**	**06 40 19.7**	**+1.0**
ZSN				pmax	pmax		
	comp=Z,37nm,1.0s						
ZSN	**Zaisan**	**42.56**	**298**	⇑*i*P	**P**	**06 40 19.8**	**+1.0**
	comp=Z,37nm,1.0s,baz=298						
J25K	**Salcha River,**	**42.67**	**36**	P	**P**	**06 40 19.7**	**+0.2**
	baz=274,SNR=11						
KLU	**Klutina**	**42.73**	**41**	IAmb	IAmb	06 40 45.4	
	comp=Z,26nm,0.9s						
KLU	**Klutina**	**42.73**	**41**	P	**P**	**06 40 20.1**	**+0.2**
	baz=277,SNR=12						
DIV	**Divide**	**42.84**	**41**	IAmb	IAmb	06 40 33.0	
	comp=Z,24nm,0.9s						
BMAR	**Burnt Mountain**	**42.85**	**32**	P	**P**	**06 40 23.0**	**+2.1**
EYAK	**Cordova Ski Ar**	**42.93**	**42**	P	**P**	**06 40 21.5**	**0.0**
	baz=278						
RIDG	**Independent Ri**	**42.98**	**37**	IAmb	IAmb	06 40 51.9	
	comp=Z,18nm,0.8s						
RIDG	**Independent Ri**	**42.98**	**37**	P	**P**	**06 40 22.4**	**+0.6**
	baz=276,SNR=14						
HARP	**HAARP**	**42.98**	**39**	P	**P**	**06 40 22.6**	**+0.8**
	baz=277						
SCRK	**Sand Creek**	**43.33**	**37**	IAmb	IAmb	06 40 29.9	
	comp=Z,21nm,0.8s						
SCRK	**Sand Creek**	**43.33**	**37**	P	**P**	**06 40 24.9**	**+0.1**
	baz=276,SNR=41						
DOT	**Dot Lake**	**43.33**	**37**	IAmb	IAmb	06 40 30.8	
	comp=Z,14nm,0.7s						
BMRM	**Bremner River**	**43.43**	**41**	IAmb	IAmb	06 40 45.4	
	comp=Z,28nm,1.0s						
BMRM	**Bremner River**	**43.43**	**41**	P	**P**	**06 40 25.5**	**-0.1**
	baz=279						
J26L	**Joseph Creek**	**43.46**	**36**	P	**P**	**06 40 26.6**	**+0.7**
	baz=276,SNR=12						
MENT	**Mentasta**	**43.57**	**38**	IAmb	IAmb	06 40 54.8	
	comp=Z,18nm,0.6s						
L26K	**Log Cabin Wild**	**43.73**	**38**	IAmb	IAmb	06 40 40.3	
	comp=Z,21nm,0.8s						
L26K	**Log Cabin Wild**	**43.73**	**38**	P	**P**	**06 40 29.0**	**+1.1**
	baz=278,SNR=20						
VRDI	**Verde Repeater**	**43.94**	**41**	P	**P**	**06 40 31.2**	**+1.4**
VRDI				IAmb	IAmb	06 40 42.1	
	comp=Z,30nm,1.3s						
M26K	**Nabesna, AK**	**43.97**	**39**	IAmb	IAmb	06 40 38.4	
	comp=Z,30nm,1.0s						
M26K	**Nabesna, AK**	**43.97**	**39**	P	**P**	**06 40 31.3**	**+1.4**
	baz=278,SNR=32						
K27K	**Chicken**	**44.16**	**37**	IAmb	IAmb	06 40 37.5	
	comp=Z,30nm,0.8s						
K27K	**Chicken**	**44.16**	**37**	P	**P**	**06 40 31.6**	**+0.3**
	baz=278						
WAX	**Waxell Ridge**	**44.37**	**42**	IAmb	IAmb	06 41 01.8	
	comp=Z,49nm,1.1s						
L27K	**Beaver Creek,**	**44.41**	**38**	IAmb	IAmb	06 40 45.4	
	comp=Z,26nm,0.8s						
L27K	**Beaver Creek,**	**44.41**	**38**	P	**P**	**06 40 34.5**	**+1.1**
	baz=279,SNR=34						
MK31	**Makanchi Array**	**44.44**	**298**	*i* P	**P**	**06 40 34.3**	**+0.5**
MKAR	**Makanchi Array**	**44.44**	**298**	P	**P**	**06 40 34.5**	**+0.6**
	comp=Z,44nm,0.7s,baz=78,slow=8.8,SNR=309						
	comp=Z,44nm,0.7s						
EGAK	**Eagle**	**44.46**	**36**	IAmb	IAmb	06 40 44.9	
	comp=Z,77nm,1.6s						
EGAK	**Eagle**	**44.46**	**36**	P	**P**	**06 40 34.3**	**+0.6**
	baz=278,SNR=33						
M27K	**Edge Creek, AK**	**44.50**	**39**	IAmb	IAmb	06 40 41.9	
	comp=Z,33nm,1.1s						
M27K	**Edge Creek, AK**	**44.50**	**39**	P	**P**	**06 40 35.0**	**+0.8**
	baz=279,SNR=31						
SEM	**Semipalatinsk**	**44.55**	**303**	*ce*P	**P**	**06 40 34.8**	**-0.1**
SEM	**Semipalatinsk**	**44.55**	**303**	⇑*e*P	**P**	**06 40 34.9**	**-0.1**
	baz=303						
ISLE	**Juniper Island**	**44.59**	**42**	IAmb	IAmb	06 41 03.1	
	comp=Z,24nm,0.8s						
MAKZ	**Makanchi**	**44.64**	**298**	P	**P**	**06 40 35.8**	**+0.4**
MAKZ	**Makanchi**	**44.64**	**298**	P	**P**	**06 40 35.8**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,61nm,0.8s						
BARN	**Barnard Glacie**	**44.83**	**41**	IAmb	IAmb	06 41 12.8	
	comp=Z,20nm,0.9s						
BVCY	**Beaver Creek**	**44.95**	**39**	P	**P**	**06 40 38.4**	**+0.7**
	baz=280						
TABL	**Table Mountain**	**45.20**	**42**	IAmb	IAmb	06 41 05.1	
	comp=Z,21nm,1.1s						
YUK3	**Moose Creek**	**45.26**	**40**	P	**P**	**06 40 41.0**	**+0.6**
	baz=281,SNR=9.3						
DAWY	**Dawson**	**45.32**	**36**	P	**P**	**06 40 41.9**	**+1.3**
	baz=280,SNR=8.3						
KURK	**Kurchatov**	**45.44**	**304**	P	**P**	**06 40 42.1**	**+0.4**
KURK	**Kurchatov**	**45.44**	**304**	*c i*P	**P**	**06 40 42.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,151nm,1.1s						
KURK	**Kurchatov**	**45.44**	**304**	*e*P	**P**	**06 40 42.2**	**+0.5**
KURK	**Kurchatov**	**45.44**	**304**	P	**P**	**06 40 42.5**	**+0.8**
KURK				sP	**pP**	**06 41 02.4**	**+3.7**
KURBB	**Kurchatov Arra**	**45.53**	**304**	P	**P**	**06 40 42.7**	**+0.4**
	comp=Z,103nm,0.7s,baz=71,slow=9.0,SNR=328						
KURBB				LR	LR	07 00 57.9	
	comp=Z,192nm,18.5s,baz=52,slow=38						
	comp=Z,103nm,0.7s						
I29M	**Ogilvie Camp,**	**45.57**	**35**	P	**P**	**06 40 43.7**	**+1.2**
	baz=279,SNR=50						
PINM	**Pinnacle**	**45.70**	**42**	P	**P**	**06 40 42.8**	**-0.9**
	baz=283						
SIJI	**Sorong**	**46.15**	**202**	P	**P**	**06 40 47.3**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=351,slow=7.9,SNR=5.7						
SIJI				LR	LR	06 58 30.3	
	comp=Z,57nm,20.8s,baz=20,slow=34						
	comp=Z,3.6nm,0.3s						
YUK4	**Talbot Arm**	**46.20**	**40**	P	**P**	**06 40 47.4**	**-0.4**
	baz=283						
PNL	**Peninsula**	**46.22**	**42**	P	**P**	**06 40 47.9**	**+0.1**
	baz=284						
YUK6	**Outpost Mounta**	**46.42**	**41**	P	**P**	**06 40 49.9**	**+0.4**
	baz=284						
M30M	**Minto, Yukon**	**46.77**	**38**	P	**P**	**06 40 53.4**	**+1.4**
	baz=283,SNR=13						
HYT	**Haines Junctio**	**46.86**	**41**	P	**P**	**06 40 54.7**	**+1.9**
HYT	**Haines Junctio**	**46.86**	**41**	P	**P**	**06 40 54.1**	**+1.2**
	baz=284,SNR=33						
INK	**Inuvik**	**46.92**	**30**	P	**P**	**06 40 54.5**	**+1.6**

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       comp=Z,28nm,0.4s,baz=282,slow=5.7,SNR=179
       comp=Z,28nm,0.4s
INK    Inuvik             46.92  30   P        P        06 40 54.1 +1.1
INK    Inuvik             46.92  30   P        P        06 40 54.3 +1.3
       baz=281,SNR=50
CMAR   Chiang Mai Arr     47.07 254   P        P        06 40 55.2 +0.4
       comp=Z,1.3nm,0.3s,baz=57,slow=6.6,SNR=1.9
CMAR                                  LR       LR       07 00 58.5
       comp=Z,101nm,21.7s,baz=45,slow=36
       comp=Z,1.3nm,0.3s
N31M   Braeburn, Yuko     47.50  39   IAmb     IAmb     06 41 27.0
       comp=Z,21nm,0.8s
N31M   Braeburn, Yuko     47.50  39   P        P        06 40 58.8 +1.1
       baz=285,SNR=7.6
TDK    Taldyqorghan       47.62 297c iP        P        06 40 59.9 +1.0
TDK    Taldyqorghan       47.62 297⇑iP        P        06 40 59.9 +1.0
       baz=297
KRVT   Keravat (AS076     47.70 173   LR       LR       06 57 50.5
       comp=Z,45nm,21.0s,baz=194,slow=32
M31M   Drury Creek, Y     47.95  38   IAmb     IAmb     06 41 13.7
       comp=Z,17nm,1.1s
M31M   Drury Creek, Y     47.95  38   P        P        06 41 02.4 +1.2
       baz=285,SNR=10.0
UZB    Uzynbulak          47.98 294c iP        P        06 41 02.2 +0.5
UZB    Uzynbulak          47.98 294⇑iP        P        06 41 02.3 +0.5
       baz=294
KPKS   Kokpek             48.07 295c iP        P        06 41 03.1 +0.7
KPKS   Kokpek             48.07 295⇑iP        P        06 41 03.1 +0.7
       baz=295
WHY    Whitehorse         48.15  40   P        P        06 41 02.8  0.0
       baz=286
SATY   Saty               48.42 295  eP        P        06 41 06.0 +0.8
SATY   Saty               48.42 295  eP        P        06 41 06.0 +0.8
       baz=294
A36M   Sachs Harbour      48.87  24   P        P        06 41 08.1 +0.1
       baz=285
CHKK   Chushkaly          49.02 296  eP        P        06 41 09.9 +0.3
CHKK   Chushkaly          49.02 296  eP        P        06 41 10.0 +0.3
       baz=296
MDOK   Medeo              49.28 295  eP        P        06 41 12.5 +0.8
MDOK   Medeo              49.28 295  eP        P        06 41 12.6 +0.8
       baz=295
AAA    Alma-Ata           49.35 295  eP        P        06 41 13.0 +0.8
AAA                                   pmax     pmax
       comp=Z,22nm,0.5s
AAA    Alma-Ata           49.35 295  eP        P        06 41 13.0 +0.8
       comp=Z,22nm,0.5s,baz=295
AAA    Alma-Ata           49.35 295  eP        P        06 41 13.0 +0.8
TNSS   Tian-Shan          49.40 295  eP        P        06 41 13.8 +0.8
TNSS   Tian-Shan          49.40 295  eP        P        06 41 13.8 +0.8
       baz=295
TARG   Taragay, Kyrgy     49.40 293   IAmb     IAmb     06 41 19.2
       comp=Z,21nm,0.8s
KUU    Kurty              49.43 296c iP        P        06 41 12.7  0.0
KUU                                   pmax     pmax
       comp=Z,27nm,1.1s
KUU    Kurty              49.43 296⇑iP        P        06 41 12.7  0.0
       comp=Z,27nm,1.1s,baz=296
BRVK   Borovoye           49.51 310   P        P        06 41 13.8 +0.6
BRVK   Borovoye           49.51 310   P        P        06 41 13.8 +0.6
BRVK                                  pmax     pmax
       comp=Z,163nm,1.2s
BRVK   Borovoye           49.51 310  eP        P        06 41 13.8 +0.6
BRVK   Borovoye           49.51 310   P        P        06 41 14.1 +0.9
BRVK                                  sP       sP       06 41 37.5 -0.7
C36M   Paulatuk           49.99  28   P        P        06 41 17.1 +0.6
       baz=288,SNR=9.1
ODAN   Odare              50.17 271  eP        P        06 41 19.7 +0.9
TKM2   Tokmak 2           50.34 296   P        P        06 41 21.4 +1.5
       SNR=23
TKM2   Tokmak 2           50.34 296   P        P        06 41 20.1 +0.2
BTLS   Baital             50.42 299c iP        P        06 41 20.4 +0.2
BTLS                                  pmax     pmax
       comp=Z,20nm,1.3s
BTLS   Baital             50.42 299⇑iP        P        06 41 20.4 +0.2
       comp=Z,20nm,1.3s,baz=299
JIRN   Jiri               50.59 273  eP        P        06 41 23.2 +1.1
RAMN   Ramite             50.69 272  eP        P        06 41 23.5 +0.7
       comp=Z,47nm,0.4s
SGDS   Sogindy            50.74 297c iP        P        06 41 23.3 +0.6
SGDS                                  pmax     pmax
       comp=Z,13nm,0.6s
SGDS   Sogindy            50.74 297⇑iP        P        06 41 23.4 +0.6
       comp=Z,13nm,0.6s,baz=296
CHMS   Chumysh            50.86 296   P        P        06 41 25.6 +2.0
       SNR=6.8
KBK    Karagaybulak       50.89 295   P        P        06 41 24.9 +0.9
       SNR=46
USP    Ospenovka          50.91 296   P        P        06 41 24.9 +0.9
       SNR=24
KKN    Kakani             51.18 274  eP        P        06 41 26.7 +0.3
AAK    Ala-Archa          51.19 296   P        P        06 41 27.0 +0.7
       SNR=14
AAK    Ala-Archa          51.19 296   P        P        06 41 27.0 +0.7
       comp=Z,21nm,0.6s,baz=119,slow=5.4,SNR=43
       comp=Z,21nm,0.6s
AAK    Ala-Archa          51.19 296   P        P        06 41 26.3  0.0
AAK    Ala-Archa          51.19 296c iP        P        06 41 26.7 +0.4
AAK                                   pmax     pmax
       comp=Z,12nm,0.8s
AAK    Ala-Archa          51.19 296  eP        P        06 41 26.7 +0.4
PKI    Pulchoki           51.21 273  eP        P        06 41 26.8 +0.1
DLBC   Dease Lake         51.21  42   P        P        06 41 27.4 +1.4
       comp=Z,2.5nm,0.5s,baz=258,slow=3.8,SNR=12
       comp=Z,2.5nm,0.5s
UCH    Uchtor             51.37 295   P        P        06 41 31.4 +3.4
       SNR=7.8
DMN    Daman              51.41 273  eP        P        06 41 28.5 +0.4
       comp=Z,111nm,1.1s
GKN    Gorkha             51.52 274  eP        P        06 41 29.2 +0.3
EKS2   Erkin-Say          51.65 296   P        P        06 41 30.4 +0.7
       SNR=31
KSH    Kashi              51.66 291   P        P        06 41 34.2 +4.5
KSH                                   pmax     pmax
       comp=Z,8.0nm,0.8s
KSH                                   pmax     pmax
       comp=Z,140nm,3.6s
AML    Almayashu          51.95 295   P        P        06 41 33.3 +1.1
       SNR=20
DANN   Dangsing           51.96 275  eP        P        06 41 33.0 +0.7
       comp=Z,272nm,0.9s
KOLN   Koldanda           52.41 275  eP        P        06 41 35.9 +0.4
       comp=Z,100nm,0.9s
PMG    Port Moresby       52.52 179   LR       LR       07 00 27.9
       comp=Z,25nm,20.8s,baz=164,slow=32
PYUN   Piuthan            52.66 275  eP        P        06 41 37.8 +0.4
       comp=Z,76nm,0.9s
DZA    Taraz              53.14 297c iP        P        06 41 41.2 +0.7
DZA                                   pmax     pmax
       comp=Z,13nm,0.6s
DZA    Taraz              53.14 297⇑iP        P        06 41 41.3 +0.7
       comp=Z,13nm,0.6s,baz=297
SVE    Sverdlovsk         53.17 317deP        P        06 41 41.1 +0.6
SVE                                   pmax     pmax
       comp=Z,237nm,1.0s
SVE    Sverdlovsk         53.17 317  eP        P        06 41 41.1 +0.6
EUNU   Eureka             53.30  10   P        P        06 41 41.6 +0.4
ALE    Alert              53.52   5   P        P        06 41 42.1 -0.7
ALE                                   x        x        06 41 51.9
ALE                                   pP       pP       06 41 58.1 -2.1
KK31   Karatay Array      53.57 298   P        P        06 41 44.1 +0.5
KK31   Karatay Array      53.57 298  i P       P        06 41 44.2 +0.5
KKAR   Karatay Array      53.57 298   P        P        06 41 44.0 +0.4
KKAR   Karatay Array      53.57 298   P        P        06 41 44.2 +0.5
KKAR                                  IAmb     IAmb     06 41 47.2
       comp=Z,51nm,0.7s
KKAR   Karatay Array      53.57 298   P        P        06 41 44.0 +0.4
KKAR                                  pmax     pmax
       comp=Z,51nm,0.7s
RSD    Rainshed           53.81  97   P        P        06 41 42.3 -3.5
HNR    Honiara            53.92 164   LR       LR       07 02 22.6
       comp=Z,108nm,21.5s,baz=340,slow=33
BRLS   Borolday           54.04 298c iP        P        06 41 49.9 +2.8
BRLS   Borolday           54.04 298⇑iP        P        06 41 50.0 +2.8
       baz=298
IUG    Iuzhnay            54.34 297c iP        P        06 41 50.1 +0.7
IUG    Iuzhnay            54.34 297⇑iP        P        06 41 50.1 +0.7
       baz=297
ARU    Arti               54.38 317   LR       LR       07 07 42.4
       comp=Z,238nm,18.1s,baz=92,slow=39
ARU    Arti               54.38 317   P        P        06 41 49.6 +0.3
ARU    Arti               54.38 317c iP        P        06 41 49.3  0.0
ARU                                   *PP      pP       06 42 06.3 -0.5
ARU                                                     06 42 53.1
ARU                                                     06 43 49.5
ARU                                   S        S        06 49 24.7 +2.6
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ARU                                   SS       SS       06 53 02.5 -2.0
ARU                                   pmax     pmax
       comp=Z,170nm,0.7s
ARU                                   MLR      MLR
       comp=Z,316nm,16.0s
ARU    Arti               54.38 317   P        P        06 41 49.8 +0.5
ARU                                   pP       pP       06 42 07.4 +0.6
BBB    Bella Bella        54.80  49   LR       LR       07 05 37.6
       comp=Z,41nm,19.6s,baz=312,slow=36
BTK    Batken             54.86 294   IAmb     IAmb     06 41 58.5
       comp=Z,29nm,1.1s
NOR    Nord               54.97 357  i P       P        06 41 50.6 -2.7
NOR                                   IAmb     IAmb     06 41 53.4
       comp=Z,5.6nm,0.9s
SPA0   Spitsbergen Ar     55.09 349  eP        P        06 41 54.7 +0.5
SPITS  Spitsbergen Ar     55.09 349   P        P        06 41 53.5 -0.7
       comp=Z,1.7nm,0.4s,baz=64,slow=9.4,SNR=16
SPITS                                 LR       LR       07 07 41.1
       comp=Z,45nm,18.7s,baz=240,slow=38
       comp=Z,1.7nm,0.4s
RES    Resolute Bay       55.44  16   P        P        06 41 57.0 +0.4
       comp=Z,49nm,0.6s,baz=343,slow=6.1,SNR=309
RES                                   LR       LR       07 08 21.6
       comp=Z,92nm,19.9s,baz=283,slow=39
       comp=Z,49nm,0.6s
RES    Resolute Bay       55.44  16   P        P        06 41 56.8 +0.2
GAR    Garm               55.73 294   P        P        06 41 59.5 +0.1
YKA    Yellowknife Ar     56.32  33   P        P        06 42 04.1 +1.0
       comp=Z,5.9nm,0.8s,baz=301,slow=8.0,SNR=70
       comp=Z,5.9nm,0.8s
YKA    Yellowknife Ar     56.32  33   P        P        06 42 03.8 +0.7
CHGR   Chuyangaron        56.68 294   P        P        06 42 06.2  0.0
CHGR   Chuyangaron        56.68 294   P        P        06 42 05.7 -0.5
AB31   Akbulak array      57.02 309  eP        P        06 42 08.5 +0.2
ABKAR  Akbulak array      57.02 309   P        P        06 42 09.0 +0.7
ABKAR  Akbulak array      57.02 309   P        P        06 42 09.0 +0.7
ABKAR                                 IAmb     IAmb     06 42 10.3
       comp=Z,63nm,0.7s
AKTO   Aktyubinsk         57.51 311   LR       LR       07 08 53.4
       comp=Z,150nm,18.4s,baz=70,slow=38
AKTO   Aktyubinsk         57.51 311   P        P        06 42 11.8  0.0
KIRV   Kirov              57.67 322c iP        P        06 42 12.7  0.0
PRGR   Permogore          57.69 326⇑iP        P        06 42 13.2 +0.4
LVZ    Lovozero           58.00 336   P        P        06 42 15.5 +0.5
LVZ    Lovozero           58.00 336⇑eP        P        06 42 14.6 -0.4
LVZ                                   pmax     pmax
       comp=Z,40nm,1.7s
LVZ                                   MLR      MLR
       comp=Z,88nm,14.0s
TULEG  Thule              58.26   9   P        P        06 42 16.4 -0.2
TULEG  Thule              58.26   9  i P       P        06 42 14.0 -2.6
APA    Apatity            58.58 336⇓iP        P        06 42 17.2 -1.7
APA                                  i                  06 44 27.0
APA                                  i S       S        06 50 09.0 -8.3
APA                                  i                  06 51 56.0
APA                                  i SS      SS       06 54 08.0 -2.0
APA                                   pmax     pmax
       comp=Z,23nm,0.8s
APA                                   MLR      MLR
       comp=Z,300nm,11.0s
KEV    Kevo               58.94 339   P        P        06 42 21.1 -0.3
KEV    Kevo               58.94 339   P        P        06 42 21.1 -0.3
KEV                                   pmax     pmax
       comp=Z,51nm,0.8s
KBL    Kabul              58.98 290   P        P        06 42 21.6 -0.9
KBL    Kabul              58.98 290   P        P        06 42 21.6 -0.9
KBL                                   pmax     pmax
       comp=Z,23nm,0.7s
HAMF   Hammerfest         59.15 341  eP        P        06 42 22.8 -0.1
ARCES  ARCESS Array B     59.48 340   P        P        06 42 25.6 +0.4
       comp=Z,24nm,0.8s,baz=48,slow=6.8,SNR=42
       comp=Z,24nm,0.8s
ARCES  ARCESS Array B     59.48 340   P        P        06 42 25.4 +0.2
ARCES  ARCESS Array B     59.48 340   P        P        06 42 25.4 +0.2
ARCES                                 pmax     pmax
       comp=Z,134nm,1.8s
D03D   Eldon              59.94  52   P        P        06 42 29.9 +1.2
       baz=303
B05A   Bryant             60.11  50   P        P        06 42 30.3 +0.5
       baz=303
KTK1   Kautokeino         60.42 340  eP        P        06 42 32.2 +0.6
KLMR   Klimovskoe         60.56 328  eP        P        06 42 30.1 -2.6
KLMR                                  pmax     pmax
       comp=Z,139nm,1.0s
KLMR   Klimovskoe         60.56 328  eP        P        06 42 30.1 -2.6
KLMR                                  AMP               06 42 34.0
       comp=Z,139nm,1.0s
JETT   Jettan, Norway     60.72 341  eP        P        06 42 34.2 +0.5
TRO    Tromso             61.01 342  eP        P        06 42 35.9 +0.4
F04A   Amboy              61.20  53   IAmb     IAmb     06 42 58.0
       comp=Z,18nm,0.8s
B08A   Colville Reser     61.59  49   IAmb     IAmb     06 42 51.5
       comp=Z,7.9nm,0.8s
I03D   Drain, OR          61.90  55   P        P        06 42 41.5 -0.5
       baz=304
H04A   Detroit Lake       62.04  54   IAmb     IAmb     06 42 55.1
       comp=Z,11nm,1.0s
K02D   Willamette Mer     62.28  56   P        P        06 42 44.0 -0.6
       baz=305
DBG    Daneborg           62.28 356  i P       P        06 42 42.8 -1.3
DBG                                   IAmb     IAmb     06 42 44.4
       comp=Z,11nm,0.7s
I04A   Tendick Farm,      62.41  55   P        P        06 42 45.6 +0.1
       baz=305
L02F   Cave Junction      62.66  57   P        P        06 42 46.3 -0.8
       baz=305
NEW    Newport            62.86  48   P        P        06 42 49.1 +0.7
       comp=Z,3.2nm,0.9s,baz=349,slow=5.1,SNR=5.7
       comp=Z,3.2nm,0.9s
NEW    Newport            62.86  48   IAmb     IAmb     06 43 00.6
       comp=Z,12nm,0.8s
NEW    Newport            62.86  48   P        P        06 42 48.6 +0.2
       baz=306,SNR=5.5
J04D   Umpqua Nationa     62.90  55   IAmb     IAmb     06 43 01.9
       comp=Z,18nm,0.8s
J04D   Umpqua Nationa     62.90  55   P        P        06 42 49.4 +0.5
       baz=305
STEI   Steigen            63.18 341  eP        P        06 42 50.2 +0.1
PINE   Pine Mountain      63.28  54   IAmb     IAmb     06 42 55.1
       comp=Z,17nm,1.1s
E09A   Wood Farm, Sta     63.31  50   IAmb     IAmb     06 43 03.8
       comp=Z,15nm,0.8s
L04D   Klamath Falls      63.38  56   P        P        06 42 52.7 +0.7
       baz=305,SNR=6.8
J05D   Fort Rock, OR      63.40  55   P        P        06 42 53.0 +0.8
       baz=306,SNR=6.8
LOF    Lofoten            63.41 342  eP        P        06 42 52.0 +0.4
YBH    Yreka Blue Hor     63.41  57   P        P        06 42 53.0 +0.8
       comp=Z,8.0nm,1.1s,baz=4.7,slow=1.0,SNR=12
YBH                                   LR       LR       07 04 09.9
       comp=Z,30nm,21.6s,baz=290,slow=30
       comp=Z,8.0nm,1.1s
YBH    Yreka Blue Hor     63.41  57   P        P        06 42 53.2 +1.0
YBH                                   IAmb     IAmb     06 42 55.1
       comp=Z,16nm,1.2s
YBH    Yreka Blue Hor     63.41  57   P        P        06 42 53.2 +1.0
YBH                                   pmax     pmax
       comp=Z,16nm,1.3s
K04D   Chiloquin, OR      63.47  56   P        P        06 42 52.2 -0.4
       baz=306
HRA    Herat              63.67 293   P        P        06 42 54.6 +0.4
HRA                                   IAmb     IAmb     06 43 04.4
       comp=Z,14nm,0.8s
WB0    Warramunga Arr     63.82 193   P        P        06 42 53.8 -1.1
WB0                                   IAmb     IAmb     06 43 35.8
       comp=Z,20nm,1.2s
WR0    Warramunga Arr     63.99 193   P        P        06 42 53.6 -2.4
WR0                                   IAmb     IAmb     06 42 56.6
       comp=Z,18nm,1.2s
WRAB   Tennant Creek      63.99 193ceP        P        06 42 55.0 -1.0
WRAB                                  pmax     pmax
       comp=Z,29nm,2.5s
WB2    Warramunga Arr     64.00 193   P        P        06 42 55.4 -0.7
WB2                                   IAmb     IAmb     06 42 56.1
       comp=Z,47nm,1.6s
WRA    Warramunga Arr     64.00 193   P        P        06 42 55.2 -0.8
       comp=Z,8.7nm,1.0s,baz=9.9,slow=6.8,SNR=20
       comp=Z,8.7nm,1.0s
KCPM   Cahto Peak         64.06  59   IAmb     IAmb     06 43 17.3
       comp=Z,12nm,1.0s
WALA   Waterton Lakes     64.11  46   IAmb     IAmb     06 43 08.9
       comp=Z,14nm,0.8s
GEYT   Alibeck            64.30 299   P        P        06 42 58.7 +0.6
       comp=Z,9.3nm,0.7s,baz=0.0,slow=0.0,SNR=10.0
       comp=Z,9.3nm,0.7s
GEYT   Alibeck            64.30 299   IAmb     IAmb     06 43 02.1
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       comp=Z,19nm,1.1s
GYA0B  ALIBECK ARRAY      64.30 299   IAmb     IAmb     06 43 05.1
       comp=Z,14nm,0.8s
SUMG   Summit             64.31   2   P        P        06 42 58.7 +0.7
SUMG   Summit             64.31   2   P        P        06 42 58.7 +0.7
SUMG                                  pmax     pmax
       comp=Z,298nm,1.7s
SUMG   Summit             64.31   2  i P       P        06 42 57.6 -0.4
SUMG                                  IAmb     IAmb     06 43 00.6
       comp=Z,37nm,0.6s
MOS    Moscow             64.54 324  eP        P        06 42 56.7 -2.5
MOS                                   pmax     pmax
       comp=Z,144nm,1.2s
MOS                                   pmax     pmax
       comp=Z,400nm,2.0s
JTMT   Jette              64.70  47   IAmb     IAmb     06 43 12.7
       comp=Z,13nm,0.8s
PUL    Pulkovo            64.75 330⇑eP        P        06 43 01.8 +1.3
PUL                                   pmax     pmax
       comp=Z,222nm,1.3s
PUL                                   MLR      MLR
       comp=Z,177nm,23.0s
PUL    Pulkovo            64.75 330  eP        P        06 43 01.8 +1.3
MOR8   Moi Rana           64.78 341  eP        P        06 42 59.7 -1.0
KONS   Konsvik            64.83 341  eP        P        06 43 01.8 +0.8
STOK   Stokkvaagen        64.99 341  eP        P        06 43 02.7 +0.8
FINES  FINESS Array B     65.05 333   P        P        06 43 02.8 +0.4
       comp=Z,73nm,0.9s,baz=48,slow=8.5,SNR=128
       comp=Z,73nm,0.9s
FINES  FINESS Array B     65.05 333   P        P        06 43 03.0 +0.6
FINES  FINESS Array B     65.05 333   P        P        06 43 03.1 +0.6
PLID   Pearl Lake         65.37  51   IAmb     IAmb     06 43 34.7
       comp=Z,14nm,0.9s
OBN    Obninsk            65.41 324   P        P        06 43 05.3 +0.5
       comp=Z,7.6nm,0.3s,baz=70,slow=1.6,SNR=22
OBN                                   LR       LR       07 14 24.3
       comp=Z,44nm,18.1s,baz=5.0,slow=38
       comp=Z,7.6nm,0.3s
OBN    Obninsk            65.41 324   P        P        06 43 05.0 +0.2
OBN    Obninsk            65.41 324ceP        P        06 43 05.1 +0.2
OBN                                  e*PP      pP       06 43 22.0 -0.8
OBN                                                     06 43 33.0
OBN                                   S        S        06 51 59.0  +15
OBN                                   pmax     pmax
       comp=Z,176nm,1.7s
OBN                                   MLR      MLR
       comp=Z,209nm,15.0s
OBN    Obninsk            65.41 324  eP        P        06 43 05.1 +0.2
MSO    Missoula           65.45  48   IAmb     IAmb     06 43 17.2
       comp=Z,12nm,0.8s
MSO    Missoula           65.45  48   P        P        06 43 05.8 +0.4
       baz=308,SNR=11
VRH    Novokhopyorsk      65.56 318  eP        P        06 43 05.9  0.0
VRH                                   pmax     pmax
       comp=Z,30nm,0.6s
BEKR   Beckworth          65.95  57   IAmb     IAmb     06 43 10.8
       comp=Z,18nm,1.0s
LPSR   Galich'ya Gora     66.00 321  eP        P        06 43 08.6 -0.1
LPSR                                  pmax     pmax
       comp=Z,70nm,1.1s
SCO    Scoresbysund       66.16 356  i P       P        06 43 09.0 -0.5
SCO                                   IAmb     IAmb     06 43 10.7
       comp=Z,7.9nm,1.1s
VORR   Voronezh           66.47 320  eP        P        06 43 13.3 +1.6
VORR                                  pmax     pmax
       comp=Z,70nm,0.4s
MEF    Metsahovi          66.51 333  eP        P        06 43 12.4 +0.6
FCC    Fort Churchill     66.54  30   P        P        06 43 12.2 +0.2
FCC                                   IAmb     IAmb     06 43 23.3
       comp=Z,21nm,1.0s
FCC    Fort Churchill     66.54  30   P        P        06 43 12.2 +0.2
FCC                                   pmax     pmax
       comp=Z,21nm,1.0s
PAHR   Pah Rah Range      66.64  57   IAmb     IAmb     06 43 15.4
       comp=Z,22nm,1.2s
EMB    Emerald Bay        66.65  58   IAmb     IAmb     06 43 15.6
       comp=Z,18nm,1.0s
NSS    Namsos             66.72 340  eP        P        06 43 12.6 -0.5
VCNR   Virginia City      66.73  57   IAmb     IAmb     06 43 16.3
       comp=Z,13nm,1.0s
RAF    Rauma              66.77 334  eP        P        06 43 13.8 +0.3
VSR    Storozhevoye       66.79 319  eP        P        06 43 14.1 +0.3
VSR                                   pmax     pmax
       comp=Z,130nm,1.4s
PNTR   Pine Nut           66.89  58   IAmb     IAmb     06 43 17.4
       comp=Z,21nm,1.1s
VORD   Divnogorie         66.89 319  eP        P        06 43 15.0 +0.6
VORD                                  pmax     pmax
       comp=Z,40nm,0.6s
EGMT   Eagleton           66.92  45   P        P        06 43 15.2 +0.4
       baz=310,SNR=8.1
ILULI  Ilulissat          66.97   7   IAmb     IAmb     06 43 24.7
       comp=Z,17nm,0.7s
ILULI  Ilulissat          66.97   7  i P       P        06 43 13.5 -1.2
ILULI                                 IAmb     IAmb     06 43 24.2
       comp=Z,11nm,0.6s
VSU    Vasula             66.99 330c iP        P        06 43 14.9  0.0
VSU                                   pmax     pmax
       comp=Z,244nm,1.0s
VSU    Vasula             66.99 330  eP        P        06 43 15.8 +0.9
CMB    Columbia Colle     67.05  59   IAmb     IAmb     06 43 17.9
       comp=Z,19nm,1.2s
DLMT   Dillon             67.09  49   IAmb     IAmb     06 43 28.5
       comp=Z,11nm,0.8s
YERR   Yerington          67.17  58   IAmb     IAmb     06 43 19.1
       comp=Z,32nm,1.1s
HLID   Hailey             67.20  51   P        P        06 43 17.8 +1.0
       baz=309,SNR=8.0
BOZ    Bozeman (W)        67.47  48   IAmb     IAmb     06 43 30.7
       comp=Z,21nm,0.7s
BOZ    Bozeman (W)        67.47  48   P        P        06 43 19.0 +0.5
       baz=309,SNR=14
BMN    Battle Mountai     67.51  55   IAmb     IAmb     06 43 21.2
       comp=Z,15nm,1.1s
BBGB   Big Mountain B     67.53  61   IAmb     IAmb     06 43 21.2
       comp=Z,26nm,1.1s
DZM    Mont Dzumac        67.61 160   P        P        06 43 19.4 +0.1
       comp=Z,7.3nm,1.0s,baz=7.8,slow=10,SNR=5.8
DZM                                   LR       LR       07 09 31.4
       comp=Z,97nm,21.9s,baz=288,slow=33
       comp=Z,7.3nm,1.0s
DZM    Mont Dzumac        67.61 160   IAmb     IAmb     06 43 22.0
       comp=Z,15nm,1.1s
ASAR   Alice Springs      67.72 193   P        P        06 43 19.9 -0.1
       comp=Z,4.5nm,0.7s,baz=9.7,slow=6.2,SNR=39
       comp=Z,4.5nm,0.7s
ICESG  Greenland Ices     67.77   2  i P       P        06 43 19.9 -0.2
ICESG                                 IAmb     IAmb     06 43 30.1
       comp=Z,35nm,0.7s
KVN    Kaiserville        67.83  57   IAmb     IAmb     06 43 23.2
       comp=Z,23nm,1.0s
MTSE   Matsula            67.83 332  eP        P        06 43 21.0 +0.8
RYN    Ryan               67.83  57   IAmb     IAmb     06 43 23.1
       comp=Z,13nm,1.0s
AAL    Aland              67.97 334  eP        P        06 43 21.0 -0.1
NVAR   Mina Array Bea     68.09  57   P        P        06 43 23.7 +1.1
       comp=Z,8.0nm,0.8s,baz=288,slow=6.5,SNR=66
NVAR                                  LR       LR       07 09 48.5
       comp=Z,32nm,20.9s,baz=270,slow=33
       comp=Z,8.0nm,0.8s
NV11   Mina Array Sit     68.18  57   IAmb     IAmb     06 43 25.3
       comp=Z,12nm,1.1s
YHL    Hebgen Lake        68.19  48   IAmb     IAmb     06 43 43.5
       comp=Z,11nm,0.8s
TBLU   Trondheim          68.21 340  eP        P        06 43 22.1 -0.5
YMR    Madison River      68.42  49   IAmb     IAmb     06 43 54.3
       comp=Z,14nm,0.9s
ELK    Elko               68.49  54   LR       LR       07 11 11.1
       comp=Z,35nm,20.4s,baz=238,slow=34
GROC   Groznyy            68.51 309  eP        P        06 43 25.7 +0.9
GROC                                 e*PP      pP       06 43 42.1 -0.8
GROC                                 e                  06 45 59.2
GROC                                  pmax     pmax
       comp=Z,21nm,0.5s
PCHI   Peechi             68.53 264  eP        P        06 43 34.4 +9.1
PAGB   Antelope Grade     68.55  61   IAmb     IAmb     06 43 27.6
       comp=Z,20nm,1.0s
SOEG   Soedalen           68.75 359  i P       P        06 43 26.0 +0.2
SOEG                                  IAmb     IAmb     06 43 27.3
       comp=Z,18nm,0.6s
H17A   Grant Village      68.81  49   IAmb     IAmb     06 43 41.1
       comp=Z,14nm,0.9s
H17A   Grant Village      68.81  49   P        P        06 43 28.6 +1.6
       baz=310,SNR=8.8
UPP    Uppsala            68.96 335  eP        P        06 43 27.6 +0.3
RLMT   Red Lodge          69.05  47   P        P        06 43 29.6 +1.2
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             baz=311,SNR=10
SFJD  Kangerlussuaq     69.18   7  LR     LR      07 15 07.5
             comp=Z,118nm,19.8s,baz=340,slow=37
SFJD  Kangerlussuaq     69.18   7 i P     P       06 43 27.9  -0.6
SFJD                               IAmb   IAmb    06 43 37.9
             comp=Z,8.6nm,0.8s
SLIT  Slitere, Latvi    69.19 332 eP      P       06 43 28.4  -0.3
TPAW  Teton Pass        69.19  50  IAmb   IAmb    06 44 00.2
             comp=Z,19nm,0.8s
IDID  Didziasalis       69.30 328 eP      P       06 43 30.6  +1.2
LOHW  Long Hollow       69.31  49  IAmb   IAmb    06 43 50.9
             comp=Z,41nm,2.0s
REDW  Red Top Meadow    69.33  50  IAmb   IAmb    06 44 06.9
             comp=Z,14nm,1.1s
ISAL  Salakas           69.34 328 eP      P       06 43 31.0  +1.3
PKM   Mcpherson Peak    69.36  61  P      P       06 43 31.2  +0.8
             baz=309
DGMT  Dagmar            69.43  42  P      P       06 43 31.0  +0.6
             baz=313,SNR=5.8
MOL   Molde             69.44 341 eP      P       06 43 31.0  +0.8
MNK   Minsk             69.45 327 i P     P       06 43 31.7  +1.4
MNK                               i *PP   PcP     06 43 54.0  +0.7
MNK                               i               06 46 05.4
MNK                               i PPP   PPP     06 47 46.9
MNK                               i S     S       06 52 32.2  +0.1
MNK                               i SS    SS      06 57 01.3  +1.8
MNK                                pmax   pmax
             comp=Z,41nm,0.8s
MNK                                pmax   pmax
             comp=N,57nm,0.8s
MNK                                pmax   pmax
             comp=E,4.0nm,0.8s
MNK                                MLR    MLR
             comp=Z,219nm,20.0s
MNK                                MLR    MLR
             comp=N,178nm,18.0s
MNK   Minsk             69.45 327 i P     P       06 43 31.8  +1.4
             comp=E,4.0nm,0.8s,baz=222
MNK                               i P     P       06 43 31.8  +1.4
             comp=N,57nm,0.8s
MNK                               i P     P       06 43 31.8  +1.4
             comp=Z,41nm,0.8s
MNK                               i pP    PcP     06 43 54.0  +0.7
MNK                               i PP    PP      06 46 05.5  +1.5
MNK                               i PPP   PPP     06 47 46.9
MNK                               i S     S       06 52 32.2  +0.1
MNK                               i SS    SS      06 57 01.3  +1.8
MNK                               i SSS   SSS     07 00 46.6
MNK                               i LQ    LQ      07 09 13.9
MNK                               i LR    LR      07 12 28.5
MNK                               i LRM   MLR     07 16 05.0
             comp=E,54nm,33.5s
MNK                               i LRM   MLR     07 16 16.6
             comp=Z,219nm,19.8s
MNK                               i LRM   MLR     07 16 38.5
             comp=N,178nm,18.5s
IIGN  Ignalina          69.47 328 eP      P       06 43 31.7  +1.2
CWC   Cottonwood Cre    69.48  59  P      P       06 43 30.7  -0.5
             baz=309
DOMB  Dombas            69.53 340 eP      P       06 43 31.2  +0.4
NACGM Naroch            69.58 328 i P     P       06 43 31.7  +0.5
             baz=42
LAO   LASA Array        69.61  45  IAmb   IAmb    06 43 44.1
             comp=Z,17nm,0.8s
LAO   LASA Array        69.61  45  P      P       06 43 32.5  +0.9
             baz=312,SNR=6.0
FRB   Frobisher Bay     69.65  16  LR     LR      07 14 25.8
             comp=Z,56nm,21.7s,baz=8.5,slow=36
ISA   Isabella, Lake    69.72  60  P      P       06 43 32.4  -0.1
             baz=309,SNR=5.9
KIV   Kislovodsk        69.75 312  P      P       06 43 33.7  +1.1
KIV   Kislovodsk        69.75 312 eP      P       06 43 33.4  +0.8
KIV                               eS      S       06 52 37.4  +1.2
KIV                                pmax   pmax
             comp=Z,51nm,1.1s
KIV                                MLR    MLR
             comp=Z,236nm,17.0s
KIV   Kislovodsk        69.75 312 eP      P       06 43 33.4  +0.8
KIV   Kislovodsk        69.75 312  P      P       06 43 34.8  +2.2
KIV                                x      x       06 43 43.8
KIV                                pP     pP      06 43 52.3  +1.6
NC204 NORSAR Array S    69.75 339  P      P       06 43 32.4  +0.2
KBZ   Khabaz            69.78 311  P      P       06 43 33.7  +1.1
             comp=Z,22nm,0.9s,baz=47,slow=4.0,SNR=46
             comp=Z,22nm,0.9s
R11A  Troy Canyon, C    69.80  56  P      P       06 43 33.8  +0.6
             baz=310,SNR=15
NB2   NORSAR Subarra    69.83 339  P      P       06 43 33.0  +0.3
             comp=Z,74nm,0.8s,baz=32,slow=6.5
NB2   NORSAR Subarra    69.83 339  P      P       06 43 33.0  +0.3
             baz=32,slow=6.5
NOA   NORSAR Array B    69.83 339  P      P       06 43 33.2  +0.5
             comp=Z,42nm,0.7s,baz=33,slow=6.3,SNR=212
             comp=Z,42nm,0.7s
ZEI   Tsey              69.84 310 eP      P       06 43 31.4  -1.9
ZEI                                pmax   pmax
             comp=Z,20nm,1.0s
VSVD  Vaisvydziai       69.86 330 eP      P       06 43 33.6  +0.8
AKN   Aaknes            69.91 341 eP      P       06 43 34.0  +0.8
NC602 NORSAR Array S    70.00 338 eP      P       06 43 33.6  -0.1
DY2G  Dye2              70.04   5 i P     P       06 43 33.3  -0.9
DY2G                               IAmb   IAmb    06 43 43.9
             comp=Z,19nm,0.8s
MPMC  Manual Prospec    70.09  59  P      P       06 43 35.6  +0.7
             baz=310,SNR=10
S11A  Rachel            70.15  57  IAmb   IAmb    06 43 47.6
             comp=Z,24nm,1.0s
PABE  Paberze           70.20 329 eP      P       06 43 36.0  +1.0
FURC  Furnace Creek,    70.22  58  P      P       06 43 36.2  +0.8
             baz=310,SNR=24
ONI   Oni               70.22 310  IAmb   IAmb    06 43 47.1
             comp=Z,26nm,0.8s
DUG   Dugway, Tooele    70.27  53  P      P       06 43 36.8  +0.9
             baz=310,SNR=13
TPNV  Topopah Spring    70.29  58  IAmb   IAmb    06 43 56.7
             comp=Z,16nm,0.9s
TPNV  Topopah Spring    70.29  58  P      P       06 43 36.8  +0.7
             baz=310,SNR=21
LRMC  Laurel Mtn Rad    70.33  60  P      P       06 43 36.5  +0.1
             baz=310
VIKU  Vikbolandet       70.34 335 eP      P       06 43 36.2  +0.5
BW06  Boulder Array     70.44  49  P      P       06 43 37.2  +0.2
             baz=311,SNR=9.8
PDAR  Pinedale Array    70.44  49  P      P       06 43 37.5  +0.6
             comp=Z,1.2nm,0.5s,baz=304,slow=2.7,SNR=27
PDAR                               LR     LR      07 13 11.9
             comp=Z,26nm,21.8s,baz=317,slow=35
             comp=Z,1.2nm,0.5s
GWY   Greenwater Val    70.52  58  IAmb   IAmb    06 43 39.4
             comp=Z,17nm,1.0s
EDW2  Edwards Air Fo    70.52  60  P      P       06 43 38.1  +0.7
             baz=310,SNR=9.5
QSM   Queen of Sheba    70.53  59  IAmb   IAmb    06 43 39.5
             comp=Z,26nm,1.1s
FOO   Floro             70.87 342 eP      P       06 43 39.6  +0.7
SKAR  Skarslia          70.89 340 eP      P       06 43 39.7  +0.6
HYA   Hoyanger          70.99 341 eP      P       06 43 40.3  +0.6
GSC   Goldstone, Bar    71.00  59  P      P       06 43 40.7  +0.3
             baz=310,SNR=7.6
GNI   Garni             71.09 308  P      P       06 43 41.8  +0.9
GNI                                IAmb   IAmb    06 43 56.5
             comp=Z,34nm,1.1s
GNI   Garni             71.09 308ceP      P       06 43 42.5  +1.6
GNI                                pmax   pmax
             comp=Z,21nm,0.9s
BFSC  Mount Baldy Ra    71.14  61  P      P       06 43 41.5  +0.2
             baz=310,SNR=7.9
SHPR  Sheep Range       71.24  57  IAmb   IAmb    06 43 44.3
             comp=Z,15nm,1.1s
ANGG  Ammassalik, Gr    71.30   2  IAmb   IAmb    06 43 51.4
             comp=Z,22nm,0.7s
ANGG  Ammassalik, Gr    71.30   2 i P     P       06 43 40.8  -0.7
ANGG                               IAmb   IAmb    06 43 50.9
             comp=Z,18nm,0.7s
SUE   Sulen             71.42 342 eP      P       06 43 43.0  +0.8
KONO  Kongsberg         71.44 339  P      P       06 43 42.6  +0.2
KONO                               IAmb   IAmb    06 43 44.3
             comp=Z,14nm,0.7s
KONO  Kongsberg         71.44 339⇑eP      P       06 43 42.4   0.0
KONO                               pmax   pmax
             comp=Z,11nm,0.8s
KONO  Kongsberg         71.44 339 eP      P       06 43 42.9  +0.5
TUQ   Turquoise Moun    71.46  59  P      P       06 43 43.5  +0.3
             baz=310,SNR=5.9
STRU  Stroemstad        71.53 338 i P     P       06 43 42.3  -0.6
HEC   Hector,Ludlow     71.60  59  P      P       06 43 44.4  +0.5
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             baz=310,SNR=5.9
SOC   Sochi             71.60 313 eP      P       06 43 38.9  -4.8
SOC                               e*PP    pP      06 43 58.5  -3.4
SOC                               e*SP    sP      06 44 06.8  -2.6
SOC                               ePPP    PPP     06 48 01.2
SOC                               eS      S       06 52 50.0  -7.5
SOC                               e*SS    sS      06 53 29.0  +0.6
SOC                               eSSS    SSS     07 00 46.8
SOC                                pmax   pmax
             comp=Z,8.0nm,0.4s
SOC                                MLR    MLR
             comp=Z,173nm,18.0s
SUW   Suwalki           71.64 329 eP      P       06 43 43.8  +0.1
SUW   Suwalki           71.64 329  P      P       06 43 43.8  +0.1
SUW   Suwalki           71.64 329  P      P       06 43 43.8  +0.1
SUW                                pmax   pmax
             comp=Z,42nm,0.7s
SUW   Suwalki           71.64 329 eP      P       06 43 44.2  +0.4
AKASG Malin Array Be    71.67 324  P      P       06 43 44.2  +0.2
             comp=Z,18nm,0.5s,baz=39,slow=6.8,SNR=78
AKASG                              LR     LR      07 18 19.2
             comp=Z,231nm,18.5s,baz=352,slow=38
             comp=Z,18nm,0.5s
AKASG Malin Array Be    71.67 324  P      P       06 43 44.1  +0.1
AKASG Malin Array Be    71.67 324  P      P       06 43 44.1  +0.1
AKASG                              pmax   pmax
             comp=Z,144nm,1.2s
AKBB  Malin Array Si    71.67 324c iP     P       06 43 43.8  -0.2
BORG  Borgarnes         71.81 355  LR     LR      07 16 03.7
             comp=Z,48nm,18.3s,baz=346,slow=36
ASK   Askoy             71.82 341 eP      P       06 43 45.6  +0.9
BER   Bergen            71.88 341 eP      P       06 43 45.9  +0.9
RDMU  Red Mountain      71.89  51  IAmb   IAmb    06 43 58.3
             comp=Z,31nm,0.9s
P17A  Butcher Ranch,    71.94  53  IAmb   IAmb    06 43 48.3
             comp=Z,18nm,1.1s
ODD1  Odda              71.97 340 eP      P       06 43 46.2  +0.5
ULM   Lac du Bonnet     72.03  37  P      P       06 43 47.0  +0.9
             comp=Z,2.3nm,0.6s,baz=267,slow=3.6,SNR=3.4
             comp=Z,2.3nm,0.6s
ULM   Lac du Bonnet     72.03  37  IAmb   IAmb    06 43 56.7
             comp=Z,10nm,0.8s
GMRC  Granite Mounta    72.05  59  P      P       06 43 46.5  -0.3
             baz=311,SNR=8.0
LCMT  Little Creek M    72.08  56  IAmb   IAmb    06 43 49.4
             comp=Z,13nm,1.0s
K22A  Casper            72.17  48  IAmb   IAmb    06 43 59.5
             comp=Z,11nm,0.6s
K22A  Casper            72.17  48  P      P       06 43 47.4   0.0
             baz=313,SNR=6.5
K22A  Casper            72.17  48  P      P       06 43 47.3   0.0
             baz=313,SNR=6.5
KLNR  Kaliningrad       72.27 331⇓eP      P       06 43 47.8  +0.3
KLNR                               pmax   pmax
             comp=Z,69nm,1.1s
PFO   Pinyon Flats O    72.31  60  P      P       06 43 48.6  +0.3
             comp=Z,8.4nm,1.0s,baz=291,slow=6.6,SNR=8.9
PFO                                LR     LR      07 10 02.7
             comp=Z,41nm,20.8s,baz=319,slow=31
             comp=Z,8.4nm,1.0s
PFO   Pinyon Flats O    72.31  60  P      P       06 43 48.0  -0.3
PFO   Pinyon Flats O    72.31  60  P      P       06 43 48.0  -0.3
PFO                                pmax   pmax
             comp=Z,9.0nm,1.0s
PFO   Pinyon Flats O    72.31  60  P      P       06 43 48.9  +0.7
             baz=311,SNR=6.3
SRU   San Rafael Swe    72.31  53  IAmb   IAmb    06 44 08.6
             comp=Z,15nm,0.9s
TPFO  Pinon Flats       72.31  60  P      P       06 43 48.9  +0.5
             baz=311,SNR=6.3
BELC  Belle Mtn. Jos    72.34  60  P      P       06 43 48.7  +0.2
             baz=311,SNR=5.3
109C  Camp Elliot, M    72.36  61  IAmb   IAmb    06 43 50.2
             comp=Z,19nm,1.1s
109C  Camp Elliot, M    72.36  61  P      P       06 43 47.5  -0.9
             baz=311
BLEU  Blekinge          72.40 334 i P     P       06 43 46.2  -2.0
BLEU                              i P     P       06 43 47.6  -0.7
BLEU                               IAmb   IAmb    06 43 48.2
             comp=Z,8.6nm,0.8s
BLS5  Blasjo            72.44 340 eP      P       06 43 49.3  +0.8
RWWY  Rawlins           72.45  49  IAmb   IAmb    06 44 00.1
             comp=Z,17nm,0.9s
RSSD  Black Hills       72.49  45  P      P       06 43 49.8  +0.5
RSSD  Black Hills       72.49  45  P      P       06 43 49.8  +0.5
RSSD                               pmax   pmax
             comp=Z,11nm,0.9s
RSSD  Black Hills       72.49  45  P      P       06 43 49.5  +0.2
             baz=314
RSSD  Black Hills       72.49  45  P      P       06 43 48.7  -0.6
             baz=314
ONAU  Onsala            72.70 336 i P     P       06 43 48.5  -1.5
IRM   Iron Mountain     72.78  59  P      P       06 43 51.6  +0.7
             baz=311,SNR=12
FABU  Falkenberg        72.79 336 i P     P       06 43 49.4  -1.1
MONP2 Monument Peak     72.80  61  P      P       06 43 51.3   0.0
             baz=311
DEL   Delary            72.88 335 eP      P       06 43 51.0  -0.1
DEL   Delary            72.88 335 i P     P       06 43 50.4  -0.7
DEL                                IAmb   IAmb    06 43 51.2
             comp=Z,6.2nm,0.9s
BC3   Big Chuckawall    72.91  60  P      P       06 43 51.9   0.0
             baz=311,SNR=8.0
HOMB  Homborsund        72.91 338 i P     P       06 43 50.8  -0.5
HOMB  Homborsund        72.91 338 eP      P       06 43 51.9  +0.7
KMY   Karmoy            72.93 340 eP      P       06 43 52.4  +1.1
O20A  White River Ci    72.93  51  IAmb   IAmb    06 44 04.0
             comp=Z,20nm,1.2s
O20A  White River Ci    72.93  51  P      P       06 43 51.7  -0.3
             baz=313
U15A  North Rim         73.04  56  IAmb   IAmb    06 43 55.3
             comp=Z,16nm,1.0s
WSAR  Wadi Sarin        73.04 286  LR     LR      07 21 24.2
             comp=Z,86nm,18.3s,baz=80,slow=40
IKP   In-Ko-Pah, Jac    73.15  61  P      P       06 43 53.2   0.0
             baz=311
SWSC  Sam W. Stewart    73.16  61  P      P       06 43 53.0  -0.2
             baz=311
SNART Snartemo          73.20 339 i P     P       06 43 52.8  -0.1
SNART Snartemo          73.20 339 eP      P       06 43 53.7  +0.8
OVD   Ostervraa, Den    73.26 337 i P     P       06 43 52.8  -0.5
PDMCI Parker Dam,Lak    73.31  59  P      P       06 43 54.6  +0.6
             baz=311
BLYC  Blythe            73.44  59  IAmb   IAmb    06 43 56.9
             comp=Z,13nm,0.9s
AGMN  Agassiz Nation    73.47  38  P      P       06 43 54.5  -0.3
AGMN                               IAmb   IAmb    06 44 05.6
             comp=Z,13nm,0.9s
AGMN  Agassiz Nation    73.47  38  P      P       06 43 54.6  -0.1
             baz=318,SNR=6.3
AGMN  Agassiz Nation    73.47  38  P      P       06 43 55.2  +0.5
             baz=318,SNR=6.3
BJUU  Bjuv              73.48 335 i P     P       06 43 54.4  -0.2
BJUU                               IAmb   IAmb    06 43 56.1
             comp=Z,1µm,0.5s
KOPT  Kop Dagi          73.59 310  IAmb   IAmb    06 44 18.2
             comp=Z,12nm,0.7s
PV23  Carpenter Ridg    73.63  52  IAmb   IAmb    06 43 58.2
             comp=Z,24nm,1.2s
UOSS  Minazif           73.63 289  P      P       06 43 56.2  +0.2
UOSS                               IAmb   IAmb    06 44 06.4
             comp=Z,21nm,0.9s
PV10  Paradox Valley    73.66  53  IAmb   IAmb    06 43 59.3
             comp=Z,38nm,1.0s
BSD   Bornholm Skovb    73.67 333 eP      P       06 43 55.7  -0.1
N23A  Red Feather La    73.69  49  P      P       06 43 56.1  -0.4
             baz=314,SNR=9.0
GLA   Glamis            73.70  60  P      P       06 43 57.4  +1.0
             baz=311
LUNU  Lund              73.71 334 i P     P       06 43 55.8  -0.2
GURO  Guroymak-BITLI    73.72 308  IAmb   IAmb    06 43 59.3
             comp=Z,26nm,1.0s
PV11  David Mesa, Pa    73.81  52  IAmb   IAmb    06 43 59.9
             comp=Z,22nm,1.0s
PV13  Radium Mtn., P    73.94  53  IAmb   IAmb    06 44 00.6
             comp=Z,24nm,1.2s
HORU  Horodok           73.99 324  P      P       06 43 58.2  +0.5
WUAZ  Wupatki           74.20  56  P      P       06 44 00.0  +0.6
             baz=312,SNR=9.1
BEL   Belsk             74.25 328 eP      P       06 44 00.8  +1.7
MUD   Monsted U'grnd    74.29 337 i P     P       06 43 59.9  +0.6
B35A  Bob, Littlefor    74.37  37  IAmb   IAmb    06 44 10.9
             comp=Z,20nm,0.7s
B35A  Bob, Littlefor    74.37  37  P      P       06 43 59.5  -0.5
             baz=319,SNR=8.6
LVV   L'vov             74.53 326 eP      P       06 44 01.8  +0.9
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ISCO  Idaho Springs     74.63  50  P      P       06 44 01.9  -0.1
             baz=314,SNR=14
ISCO  Idaho Springs     74.63  50  P      P       06 44 02.9  +0.8
             baz=314,SNR=14
MILM  Milestii Mici     74.65 321⇑iP      P       06 44 01.7  +0.1
             comp=Z,70nm,0.6s
MILM                               LRM    MLR     07 20 49.0
             comp=Z,200nm,18.0s
MILM  Milestii Mici     74.65 321c iP     P       06 44 01.7  +0.1
MILM                               pmax   pmax
             comp=Z,70nm,0.6s
MILM                               MLR    MLR
             comp=Z,200nm,18.0s
MVCO  Mesa Verde        74.77  53  P      P       06 44 03.3  +0.5
             baz=313,SNR=9.0
STKA  Stephens Creek    75.02 184  P      P       06 44 03.8   0.0
             comp=Z,3.7nm,0.8s,baz=344,slow=8.5,SNR=5.8
             comp=Z,3.7nm,0.8s
F33A  5 Mile Ranch,     75.09  40  P      P       06 44 04.5  +0.4
             baz=318,SNR=6.1
KWP   Kalwaria Pacla    75.22 326 eP      P       06 44 07.2  +2.3
S22A  4UR Ranch, Cre    75.36  52  P      P       06 44 06.9  +0.6
             baz=314,SNR=11
Q24A  Divide            75.47  50  P      P       06 44 07.0  +0.1
             baz=314
EYMN  Ely               75.66  36  IAmb   IAmb    06 44 18.4
             comp=Z,17nm,0.8s
EYMN  Ely               75.66  36  P      P       06 44 07.4   0.0
             baz=320,SNR=6.5
EYMN  Ely               75.66  36  P      P       06 44 07.2  -0.2
             baz=320,SNR=6.5
214A  Organ Pipe Nat    75.70  60  P      P       06 44 08.6  +0.6
             baz=312,SNR=6.0
BUR08 Bucovina Ar. S    75.71 323  IAmb   IAmb    06 44 10.8
             comp=Z,23nm,0.7s
OGNE  Ogallala          75.77  47  P      P       06 44 07.9  -0.4
             baz=316,SNR=7.4
OGNE  Ogallala          75.77  47  P      P       06 44 08.2  -0.1
             baz=316,SNR=7.4
OJC   Ojcow             75.91 328 eP      P       06 44 09.6  +0.8
KOLS  Kolonicke sedl    75.95 326 eP      P       06 44 09.7  +0.6
KOLS                               pmax   pmax
             comp=Z,17nm,1.0s
KOLS  Kolonicke sedl    75.95 326 eP      P       06 44 09.7  +0.6
SDCO  Great Sand Dun    76.12  51  P      P       06 44 10.7   0.0
             baz=314,SNR=8.0
SDCO  Great Sand Dun    76.12  51  P      P       06 44 10.3  -0.3
             baz=314,SNR=8.0
UZH   Uzhgorod          76.18 326 eP      P       06 44 09.8  -0.5
UZH                               i               06 44 18.6
UZH                               e               06 44 28.2
TRSU  Trosnyk           76.32 325  P      P       06 44 12.1  +1.0
F36A  Milaca            76.35  39  P      P       06 44 10.8  -0.6
             baz=320,SNR=5.7
NIE   Niedzica          76.36 327 eP      P       06 44 13.6  +2.2
ECSD  EROS Data Cent    76.50  42  IAmb   IAmb    06 44 23.7
             comp=Z,14nm,0.9s
ECSD  EROS Data Cent    76.50  42  P      P       06 44 11.6  -0.7
             baz=318,SNR=6.1
ECSD  EROS Data Cent    76.50  42  P      P       06 44 12.4  +0.1
             baz=318,SNR=6.1
KSP   Ksiaz             76.72 330 eP      P       06 44 14.1  +0.7
TUC   Tucson            76.73  58  P      P       06 44 14.3  +0.5
TUC   Tucson            76.73  58  P      P       06 44 14.4  +0.5
TUC                                pmax   pmax
             comp=Z,8.0nm,1.1s
TUC   Tucson            76.73  58  P      P       06 44 13.8   0.0
             baz=313
KSCO  Kaye Shedlock’    76.83  48  IAmb   IAmb    06 44 27.6
             comp=Z,16nm,1.2s
KSCO  Kaye Shedlock’    76.83  48  P      P       06 44 15.5  +1.2
             baz=316
KSCO  Kaye Shedlock’    76.83  48  P      P       06 44 14.7  +0.3
             baz=316
LANS  Liptovska Anna    76.90 328 eP      P       06 44 16.3  +1.8
LANS                               pmax   pmax
             comp=Z,16nm,1.0s
LANS  Liptovska Anna    76.90 328 eP      P       06 44 16.3  +1.8
OSTC  Ostas             76.98 330 eP      P       06 44 15.7  +0.8
OSTC                              ex      x       06 44 23.2
CHVC  Chvalec           77.01 330 eP      P       06 44 15.8  +0.7
CHVC                              ex      x       06 44 24.9
MLR   Muntele Rosu      77.03 322  IAmb   IAmb    06 44 36.9
             comp=Z,14nm,0.9s
UPC   Upice             77.10 330 eP      P       06 44 16.4  +0.9
UPC   Upice             77.10 330 eP      P       06 44 16.4  +0.9
DPC   Dobruska-Polom    77.11 330 eP      P       06 44 16.6  +0.9
DPC                               e               06 44 25.9
DPC   Dobruska-Polom    77.11 330 eP      P       06 44 16.6  +0.9
DPC                               ePCP    PcP     06 44 25.9  -0.4
MORC  Moravsky Berou    77.13 329  P      P       06 44 16.5  +0.7
MORC                               IAmb   IAmb    06 44 35.3
             comp=Z,27nm,1.1s
MORC  Moravsky Berou    77.13 329  P      P       06 44 16.5  +0.7
MORC                               pmax   pmax
             comp=Z,27nm,1.1s
MORC  Moravsky Berou    77.13 329 eP      P       06 44 16.4  +0.6
T25A  Trinidad          77.17  51  P      P       06 44 16.4   0.0
             baz=315,SNR=8.1
KRLC  Kraliky           77.17 330 eP      P       06 44 16.8  +0.8
KRLC                              e               06 44 23.9
KRLC  Kraliky           77.17 330 eP      P       06 44 16.8  +0.8
KRLC                              ex      x       06 44 23.9
MAUC  Maruska           77.36 329 eP      P       06 44 17.7  +0.7
CLL   Collm             77.49 332⇑iP      P       06 44 17.8  +0.2
CLL                               i *PP   pP      06 44 35.7  -0.4
CLL                                pmax   pmax
             comp=Z,40nm,1.0s
CLL   Collm             77.49 332⇑iP      P       06 44 17.8  +0.2
             comp=Z,40nm,1.0s
CLL                               i PcP   PcP     06 44 26.3  -1.5
CLL                               i pP    pP      06 44 35.7  -0.4
CLL                               i sP    sP      06 44 44.5  +0.9
CLL                               eS      S       06 54 12.0  +9.0
CLL                                LmV            07 22 00.0
             comp=Z,100nm,20.2s
ANMO  Albuquerque       77.52  54  LR     LR      07 14 38.0
             comp=Z,26nm,21.8s,baz=318,slow=33
ANMO  Albuquerque       77.52  54  P      P       06 44 18.7  +0.2
ANMO  Albuquerque       77.52  54⇑eP      P       06 44 18.6  +0.2
ANMO                               pmax   pmax
             comp=Z,7.0nm,1.2s
ANMO  Albuquerque       77.52  54  P      P       06 44 19.7  +1.2
             baz=314,SNR=10
ANMO  Albuquerque       77.52  54  P      P       06 44 18.2  -0.2
             baz=314
BRG   Berggiesshubel    77.53 332 eP      P       06 44 18.6  +0.7
BRG                                Amp            06 44 20.0
             comp=Z,12nm,1.0s
BRG                               ex      x       06 44 27.6
BRG                                Amp            06 44 28.5
             comp=Z,9.0nm,0.8s
BRG   Berggiesshubel    77.53 332 eP      P       06 44 18.6  +0.7
BRG                               e               06 44 27.6
BRG                                pmax   pmax
             comp=Z,12nm,1.0s
BR131 Keskin Array S    77.54 313ceP      P       06 44 18.7  +0.3
BRTR  Keskin Array B    77.54 313  P      P       06 44 19.1  +0.7
             comp=Z,5.2nm,0.9s,baz=86,slow=3.3,SNR=18
BRTR                               PP     PP      06 47 09.7  -3.7
             comp=Z,3.8nm,0.8s,baz=75,slow=5.2,SNR=5.0
             comp=Z,5.2nm,0.9s
BRTR  Keskin Array B    77.54 313  P      P       06 44 18.7  +0.3
VYHS  Vyhne             77.67 327 eP      P       06 44 20.1  +1.3
VYHS                               pmax   pmax
             comp=Z,17nm,1.4s
VYHS  Vyhne             77.67 327 eP      P       06 44 20.1  +1.3
PSZ   Piszkesteto       77.72 327  IAmb   IAmb    06 44 21.3
             comp=Z,18nm,0.9s
I37B  Waseca            77.82  40  P      P       06 44 20.2  +0.5
             baz=320,SNR=8.7
JAVC  Velka Javorina    77.83 328 eP      P       06 44 21.5  +1.8
VRAC  Vranov            77.87 329 eP      P       06 44 20.8  +0.9
ANTO  Ankara            77.89 314  P      P       06 44 21.3  +1.1
ANTO                               IAmb   IAmb    06 44 22.3
             comp=Z,29nm,0.9s
ANTO  Ankara            77.89 314  P      P       06 44 21.3  +1.1
ANTO                               pmax   pmax
             comp=Z,29nm,1.0s
Y22A  Socorro           77.93  55  P      P       06 44 21.4  +0.7
             baz=314
PRU   Pruhonice         78.06 331 eP      P       06 44 21.9  +1.1
PRU                               e               06 44 30.6
PRU                               e               06 44 39.5
PRU   Pruhonice         78.06 331 eP      P       06 44 21.9  +1.1
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PRU				*e*PCP	**PcP**	**06 44 30.6**	**+0.3**
PRU				*e*pP	**pP**	**06 44 39.5**	**+0.2**
SCHQ	**Schefferville**	**78.10**	**19**	P	**P**	**06 44 21.6**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=334,slow=3.9,SNR=12						
SCHQ				LR	LR	07 23 55.3	
	comp=Z,66nm,18.1s,baz=94,slow=40						
	comp=Z,2.7nm,0.6s						
SCHQ	**Schefferville**	**78.10**	**19**	IAmb	IAmb	06 44 32.3	
	comp=Z,21nm,0.9s						
COWI	**Conover**	**78.11**	**36**	IAmb	IAmb	06 44 31.7	
	comp=Z,13nm,0.7s						
KRUC	**Moravsky**	**78.15**	**329**	*e*P	**P**	**06 44 22.2**	**+0.8**
319A	**Douglas**	**78.30**	**58**	IAmb	IAmb	06 44 24.9	
	comp=Z,27nm,1.0s						
G40A	**Rib Lake**	**78.30**	**37**	IAmb	IAmb	06 44 32.9	
	comp=Z,11nm,0.7s						
G40A	**Rib Lake**	**78.30**	**37**	P	**P**	**06 44 21.7**	**-0.6**
	baz=322,SNR=7.8						
MODS	**Modra-Piesok**	**78.38**	**328**	*e*P	**P**	**06 44 24.1**	**+1.4**
MODS				pmax	pmax		
	comp=Z,29nm,1.0s						
MODS	**Modra-Piesok**	**78.38**	**328**	*e*P	**P**	**06 44 24.1**	**+1.4**
EKA	**Eskdalemuir Ar**	**78.38**	**343**	LR	LR	07 23 51.8	
	comp=Z,65nm,20.4s,baz=357,slow=39						
121A	**Cookes Peak, D**	**78.41**	**56**	IAmb	IAmb	06 44 26.0	
	comp=Z,19nm,1.1s						
121A	**Cookes Peak, D**	**78.41**	**56**	P	**P**	**06 44 23.1**	**-0.3**
	baz=314,SNR=12						
121A	**Cookes Peak, D**	**78.41**	**56**	P	**P**	**06 44 23.6**	**+0.3**
	baz=314,SNR=12						
CBKS	**Cedar Bluff**	**78.53**	**47**	P	**P**	**06 44 23.4**	**-0.3**
	baz=317						
NKC	**Novy Kostel**	**78.58**	**332**	*e*P	**P**	**06 44 24.4**	**+0.6**
NKC	**Novy Kostel**	**78.58**	**332**	*e*P	**P**	**06 44 24.4**	**+0.6**
ZST	**Bratislava**	**78.59**	**328**	*e*P	**P**	**06 44 23.6**	**-0.2**
ZST	**Bratislava**	**78.59**	**328**	*e*P	**P**	**06 44 23.6**	**-0.2**
CSKK	**Cskako**	**78.82**	**327**	P	**P**	**06 44 29.9**	**+4.8**
CSKK	**Cskako**	**78.82**	**327**	P	**P**	**06 44 29.7**	**+4.6**
CSKK				S	**PcP**	**06 44 31.6**	**-2.1**
CKRC	**Cesky Krumlov**	**79.11**	**330**	*e*P	**P**	**06 44 26.9**	**+0.2**
CKRC				*e*x	x	06 44 45.4	
KHC	**Kasperske Hory**	**79.12**	**331**	IAmb	IAmb	06 44 28.6	
	comp=Z,19nm,0.8s						
KHC	**Kasperske Hory**	**79.12**	**331**	*c i*P	**P**	**06 44 27.3**	**+0.5**
KHC				pmax	pmax		
	comp=Z,39nm,1.0s						
KHC	**Kasperske Hory**	**79.12**	**331**	*e*P	**P**	**06 44 27.4**	**+0.6**
KHC				*e*PCP	**PcP**	**06 44 36.8**	**+1.8**
KHC				*e*pP	**pP**	**06 44 45.5**	**+0.2**
SOP	**Sopron**	**79.22**	**328**	P	**P**	**06 44 28.8**	**+1.5**
RAO	**Raoul Island**	**79.24**	**149**	LR	LR	07 13 09.6	
	comp=Z,74nm,20.1s,baz=86,slow=31						
MPLH	**Magyarpolny**	**79.26**	**327**	P	**P**	**06 44 28.3**	**+0.8**
CONA	**Conrad Observa**	**79.28**	**329**	*i* P	**P**	**06 44 29.1**	**+1.4**
	comp=Z,14nm,1.4s,SNR=7.6						
CONA				*e*P	**PcP**	**06 44 38.5**	**+2.8**
	comp=Z,12nm,0.9s						
CONA				*e*P	**pP**	**06 44 47.5**	**+1.3**
	comp=Z,14nm,0.8s						
RONA	**Rosalia, Austr**	**79.31**	**328**	*i* P	**P**	**06 44 29.1**	**+1.3**
	comp=Z,12nm,0.8s,SNR=7.1						
RONA				*e*P	**PcP**	**06 44 38.2**	**+2.4**
	comp=Z,15nm,0.9s						
RONA				*e*P	**pP**	**06 44 47.7**	**+1.4**
	comp=Z,9.5nm,0.7s						
GERES	**GERESS Array B**	**79.31**	**331**	P	**P**	**06 44 28.5**	**+0.6**
	comp=Z,2.0nm,0.4s,baz=44,slow=4.4,SNR=18						
	comp=Z,2.0nm,0.4s						
GERES	**GERESS Array B**	**79.31**	**331**	P	**P**	**06 44 27.9**	**0.0**
GRFO	**Grafenberg**	**79.46**	**332**	P	**P**	**06 44 29.3**	**+0.7**
GRFO				IAmb	IAmb	06 44 48.7	
	comp=Z,28nm,0.8s						
GRFO	**Grafenberg**	**79.46**	**332**	P	**P**	**06 44 29.3**	**+0.7**
GRFO				pmax	pmax		
	comp=Z,28nm,0.8s						
E46A	**Sault Ste Mari**	**79.89**	**33**	IAmb	IAmb	06 44 42.8	
	comp=Z,9.1nm,0.7s						
KOVH	**Kovagotottos**	**79.92**	**326**	P	**P**	**06 44 31.1**	**0.0**
MOA	**Molln**	**79.94**	**330**	*e*P	**P**	**06 44 32.0**	**+0.7**
	comp=Z,6.4nm,0.9s						
ARSA	**Arzberg**	**79.97**	**329**	*e*P	**P**	**06 44 32.4**	**+1.0**
	comp=Z,6.8nm,1.1s						
ARSA				*e*P	**pP**	**06 44 51.9**	**+2.0**
	comp=Z,8.9nm,1.1s						
PGB	**Panagyurishte**	**80.12**	**321**	*i* P	**P**	**06 44 33.3**	**+1.0**
BIOA	**Bad Ischl, Aus**	**80.31**	**330**	*e*P	**P**	**06 44 34.4**	**+1.2**
	comp=Z,13nm,0.9s						
BTNL	**Ternell**	**80.31**	**336**	*d*P	**P**	**06 44 33.4**	**+0.2**
BTNL				*d*x	x	06 44 42.9	
MEM	**Membach**	**80.32**	**336**	*d*P	**P**	**06 44 33.5**	**+0.4**
MEM				*d*pP	**pP**	**06 44 51.8**	**+0.1**
MSTX	**Muleshoe**	**80.36**	**52**	P	**P**	**06 44 34.5**	**+0.6**
	baz=316						
MNTX	**Cornudas Mount**	**80.45**	**55**	IAmb	IAmb	06 44 36.3	
	comp=Z,13nm,0.9s						
MNTX	**Cornudas Mount**	**80.45**	**55**	P	**P**	**06 44 35.1**	**+0.9**
	baz=315,SNR=28						
MNTX	**Cornudas Mount**	**80.45**	**55**	P	**P**	**06 44 34.7**	**+0.5**
	baz=315,SNR=28						
VTS	**Vitosha**	**80.49**	**321**	IAmb	IAmb	06 44 36.6	
	comp=Z,34nm,1.0s						
VTS	**Vitosha**	**80.49**	**321**	*i* P	**P**	**06 44 35.1**	**+0.6**
ALN	**Alexandroupoli**	**80.51**	**319**	IAmb	IAmb	06 44 36.2	
	comp=Z,32nm,1.1s						
BHOU	**Houvegnez**	**80.55**	**336**	*d*P	**P**	**06 44 35.1**	**+0.7**
BHOU				*d*pP	**pP**	**06 44 52.8**	**-0.1**
RDO	**Rodhopi**	**80.57**	**319**	IAmb	IAmb	06 44 36.8	
	comp=Z,38nm,1.0s						
SOKA	**Soboth**	**80.64**	**329**	*i* P	**P**	**06 44 35.8**	**+0.7**
	comp=Z,16nm,1.0s,SNR=7.3						
BCLA	**Clavier**	**80.70**	**336**	*d*P	**P**	**06 44 35.8**	**+0.5**
BCLA				*d*pP	**pP**	**06 44 53.9**	**+0.2**
BGES	**Gesves**	**80.80**	**336**	*d*P	**P**	**06 44 35.9**	**+0.2**
BGES				*d*PcP	**PcP**	**06 44 42.2**	**0.0**
BGES				*d*pP	**pP**	**06 44 54.2**	**-0.1**
SNF	**Seneffe**	**80.92**	**337**	*d*P	**P**	**06 44 37.0**	**+0.7**
SNF				*d*pP	**pP**	**06 44 55.0**	**+0.1**
KBA	**Koelnbreinsper**	**80.93**	**330**	*i* P	**P**	**06 44 38.0**	**+1.2**
	comp=Z,17nm,0.8s,SNR=9.9						
KBA				*e*P	**pP**	**06 44 56.1**	**+0.8**
	comp=Z,25nm,0.9s						
RCHB	**Rochefort**	**80.96**	**336**	*d*P	**P**	**06 44 36.9**	**+0.3**
RCHB				*d*PcP	**PcP**	**06 44 43.2**	**+0.3**
RCHB				*d*pP	**pP**	**06 44 54.7**	**-0.4**
OBKA	**Obir**	**80.96**	**329**	*e*P	**P**	**06 44 37.6**	**+0.8**
	comp=Z,8.4nm,0.8s						
OBKA				*e*P	**pP**	**06 44 55.9**	**+0.5**
	comp=Z,11nm,0.8s						
BMRD	**Maredsous**	**80.96**	**336**	*d*P	**P**	**06 44 37.1**	**+0.5**
BMRD				*d*x	x	06 44 45.9	
BMRD				*d*pP	**pP**	**06 44 54.9**	**-0.3**
VLDQ	**Val d'Or**	**80.97**	**28**	IAmb	IAmb	06 44 46.8	
	comp=Z,26nm,1.0s						
GLMI	**Grayling**	**81.03**	**34**	P	**P**	**06 44 36.8**	**-0.3**
	baz=325,SNR=5.2						
GLMI	**Grayling**	**81.03**	**34**	P	**P**	**06 44 37.1**	**0.0**
	baz=325,SNR=5.2						
MMB	**Musomiste**	**81.07**	**320**	*i* P	**P**	**06 44 38.2**	**+0.8**
P38A	**Dawn**	**81.11**	**43**	IAmb	IAmb	06 44 48.7	
	comp=Z,12nm,0.7s						
KKB	**Krupnik**	**81.15**	**321**	*i* P	**P**	**06 44 38.5**	**+0.7**
DOU	**Dourbes**	**81.20**	**336**	*d*P	**P**	**06 44 38.2**	**+0.3**
DOU				*d*pP	**pP**	**06 44 56.1**	**-0.3**
MYKA	**Terra Mystica**	**81.20**	**329**	*e*P	**P**	**06 44 39.9**	**+1.9**
	comp=Z,8.3nm,0.8s						
MYKA				*e*P	**pP**	**06 44 57.9**	**+1.3**
	comp=Z,5.9nm,0.7s						
WATA	**Walderalm**	**81.35**	**331**	*e*P	**P**	**06 44 39.4**	**+0.5**
	comp=Z,9.5nm,0.6s						
WATA				*e*P	**pP**	**06 44 58.3**	**+0.8**
	comp=Z,21nm,1.0s						
WTTA	**Wattenberg**	**81.39**	**331**	*i* P	**P**	**06 44 39.9**	**+0.7**
	comp=Z,13nm,0.6s,SNR=5.1						
WTTA				*e*P	**pP**	**06 44 58.4**	**+0.7**
	comp=Z,19nm,0.6s						
RETA	**Reutte**	**81.51**	**331**	*e*P	**P**	**06 44 40.4**	**+0.7**
	comp=Z,14nm,1.1s						
MOTA	**Moosalm**	**81.51**	**331**	*i* P	**P**	**06 44 40.4**	**+0.6**
	comp=Z,24nm,1.0s,SNR=6.9						
MOTA				*e*P	**pP**	**06 44 59.1**	**+0.7**
	comp=Z,29nm,0.9s						
ABTA	**Abfaltersbach**	**81.52**	**330**	*e*P	**P**	**06 44 40.5**	**+0.8**
	comp=Z,4.1nm,0.9s						
ABTA				*e*P	**pP**	**06 44 58.2**	**-0.1**
	comp=Z,7.4nm,0.9s						
SQTA	**Sankt Quirin**	**81.58**	**331**	*e*P	**P**	**06 44 41.1**	**+1.0**
	comp=Z,14nm,0.8s						
SQTA				*e*P	**pP**	**06 44 59.3**	**+0.6**
	comp=Z,19nm,0.7s						
BFO	**Black Forest**	**81.60**	**333**	P	**P**	**06 44 40.2**	**+0.1**
BFO				IAmb	IAmb	06 45 00.9	
	comp=Z,12nm,0.9s						
BFO	**Black Forest**	**81.60**	**333**	P	**P**	**06 44 40.2**	**+0.1**
BFO				pmax	pmax		
	comp=Z,12nm,0.9s						
SKO	**Skopje**	**81.82**	**322**	*i* P	**P**	**06 44 42.8**	**+1.5**
VAY	**Valandovo**	**81.82**	**321**	*i* P	**P**	**06 44 42.1**	**+0.8**
RAYN	**Ar Rayn**	**81.83**	**295**	P	**P**	**06 44 42.0**	**+0.2**
RAYN	**Ar Rayn**	**81.83**	**295**	P	**P**	**06 44 42.0**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,13nm,1.2s						
P40A	**Paris**	**81.91**	**42**	IAmb	IAmb	06 44 53.0	
	comp=Z,14nm,0.7s						
FETA	**Feichten**	**81.92**	**331**	*e*P	**P**	**06 44 42.8**	**+0.8**
	comp=Z,11nm,1.1s						
FETA				*e*P	**pP**	**06 45 00.7**	**+0.2**
	comp=Z,9.0nm,0.9s						
DAVA	**Damuels**	**81.98**	**332**	*e*P	**P**	**06 44 42.8**	**+0.5**
	comp=Z,10nm,0.7s						
DAVA				*e*P	**PcP**	**06 44 52.1**	**+4.4**
	comp=Z,21nm,1.0s						
DAVA				*e*P	**pP**	**06 45 01.4**	**+0.6**
	comp=Z,18nm,0.7s						
ECH	**Echery**	**82.08**	**334**	IAmb	IAmb	06 45 02.0	
	comp=Z,14nm,0.7s						
J47A	**Sunmer**	**82.24**	**35**	P	**P**	**06 44 43.6**	**+0.1**
	baz=325,SNR=6.7						
J47A				P	**P**	**06 44 43.6**	**+0.1**
	baz=325,SNR=6.7						
HDIL	**Hopedale**	**82.42**	**40**	P	**P**	**06 44 44.5**	**0.0**
	baz=322,SNR=5.0						
DAVOX	**Davos/Dischmat**	**82.42**	**332**	LR	LR	07 24 32.6	
	comp=Z,104nm,18.2s,baz=74,slow=38						
CTI	**Castel Tesino**	**82.42**	**330**	IAmb	IAmb	06 45 03.0	
	comp=Z,12nm,0.7s						
LPIG	**La Paz**	**82.68**	**64**	LR	LR	07 13 52.0	
	comp=Z,35nm,20.1s,baz=292,slow=30						
S39A	**Bolivar**	**82.70**	**44**	IAmb	IAmb	06 45 05.7	
	comp=Z,11nm,0.9s						
S39A	**Bolivar**	**82.70**	**44**	P	**P**	**06 44 45.8**	**-0.2**
	baz=321,SNR=6.0						
R40A	**Maddies Statio**	**82.77**	**43**	IAmb	IAmb	06 45 14.9	
	comp=Z,11nm,0.8s						
R40A	**Maddies Statio**	**82.77**	**43**	P	**P**	**06 44 46.2**	**-0.1**
	baz=321,SNR=7.3						
TUL1	**Leonard**	**82.78**	**47**	P	**P**	**06 44 46.4**	**0.0**
	baz=319						
FNA	**Florina**	**82.79**	**321**	IAmb	IAmb	06 44 47.6	
	comp=Z,19nm,1.0s						
OHR	**Ohrid**	**82.79**	**322**	*i* P	**P**	**06 44 47.5**	**+1.0**
LIT	**Litokhoron**	**82.82**	**320**	IAmb	IAmb	06 44 47.5	
	comp=Z,16nm,1.0s						
TUE	**Stuetta**	**82.87**	**332**	IAmb	IAmb	06 45 07.4	
	comp=Z,14nm,0.7s						
ABTX	**Abilene, Hawle**	**83.13**	**51**	P	**P**	**06 44 48.8**	**+0.5**
	baz=318						
TX31	**Lajitas Ar. Si**	**83.17**	**56**	P	**P**	**06 44 49.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**83.17**	**56**	P	**P**	**06 44 49.3**	**+0.6**
	baz=316,SNR=27						
TX32	**Lajitas Array**	**83.17**	**56**	IAmb	IAmb	06 45 09.6	
	comp=Z,26nm,1.3s						
TXAR	**Lajitas Array**	**83.17**	**56**	P	**P**	**06 44 49.4**	**+0.7**
	comp=Z,7.7nm,0.9s,baz=294,slow=4.0,SNR=60						
	comp=Z,7.7nm,0.9s						
SADO	**Sadowa**	**83.22**	**31**	LR	LR	07 23 44.3	
	comp=Z,50nm,19.9s,baz=35,slow=37						
PMOR	**Pomariorio Ree**	**83.30**	**118**	*e*T	T	08 16 42.6	
	comp=Z,48nm,0.2s						
CCM	**Cathedral Cave**	**83.45**	**42**	P	**P**	**06 44 50.1**	**+0.3**
CCM				IAmb	IAmb	06 45 09.7	
	comp=Z,14nm,0.8s						
CCM	**Cathedral Cave**	**83.45**	**42**	P	**P**	**06 44 50.2**	**+0.3**
CCM				pmax	pmax		
	comp=Z,14nm,0.8s						
CCM	**Cathedral Cave**	**83.45**	**42**	P	**P**	**06 44 49.7**	**-0.1**
	baz=322,SNR=5.5						
CCM	**Cathedral Cave**	**83.45**	**42**	P	**P**	**06 44 49.6**	**-0.3**
	baz=322						
L48A	**N Adams**	**83.46**	**36**	P	**P**	**06 44 49.5**	**-0.4**
	baz=325,SNR=11						
L48A				P	**P**	**06 44 49.5**	**-0.4**
	baz=325,SNR=11						
SFIN	**Lafayette**	**83.57**	**38**	P	**P**	**06 44 49.3**	**-1.1**
	baz=324						
TRQ	**Mont Tremblant**	**83.60**	**27**	IAmb	IAmb	06 45 01.4	
	comp=Z,19nm,0.9s						
HPIG		**83.66**	**59**	IAmb	IAmb	06 44 53.2	
	comp=Z,16nm,1.1s						
SENIN	**Lac Senin/Sane**	**83.66**	**333**	IAmb	IAmb	06 45 10.7	
	comp=Z,9.0nm,0.7s						
AGG	**Agios Georgios**	**83.75**	**320**	IAmb	IAmb	06 44 52.1	
	comp=Z,15nm,1.1s						
N47A	**Urbana**	**83.79**	**37**	P	**P**	**06 44 51.9**	**+0.4**
	baz=325,SNR=7.9						
N47A				P	**P**	**06 44 51.9**	**+0.4**
	baz=325,SNR=7.9						
FVM	**French Village**	**83.91**	**42**	P	**P**	**06 44 52.6**	**+0.4**
	baz=322						
U40A	**Yellville**	**83.97**	**44**	IAmb	IAmb	06 45 04.8	
	comp=Z,34nm,1.4s						
U40A	**Yellville**	**83.97**	**44**	P	**P**	**06 44 52.6**	**0.0**
	baz=321						
U40A				P	**P**	**06 44 52.6**	**0.0**
	baz=321						
U40A	**Yellville**	**83.97**	**44**	P	**P**	**06 44 52.1**	**-0.4**
	baz=321,SNR=9.9						
DELO	**Deloro Mine**	**84.00**	**30**	IAmb	IAmb	06 45 03.3	
	comp=Z,16nm,1.3s						
TAOE	**Nuku Hiva Isla**	**84.05**	**108**	*e*LR	LR	07 11 11.0	
	comp=Z,157nm,25.2s						
PPT	**Papeete**	**84.14**	**121**	LR	LR	07 14 02.1	
	comp=Z,82nm,21.6s,baz=332,slow=30						
PPT2	**Papeete2**	**84.15**	**121**	*e*LR	LR	07 10 44.0	
	comp=Z,724nm,31.8s						
PPT2	**Papeete2**	**84.15**	**121**	*e*T	T	08 17 52.4	
	comp=Z,5.6nm,0.3s						
PAE	**Paea**	**84.20**	**121**	*e*T	T	08 17 50.0	
	comp=Z,1.4nm,0.3s						
SSF	**Saint Saulge**	**84.24**	**336**	P	**P**	**06 44 54.5**	**+0.8**
W39A	**Magazine**	**84.39**	**46**	P	**P**	**06 44 55.3**	**+0.7**
	baz=320						
W39A	**Magazine**	**84.39**	**46**	P	**P**	**06 44 54.9**	**+0.2**
	baz=320						
SMF	**Signal de Mont**	**84.51**	**335**	P	**P**	**06 44 55.2**	**+0.1**
D62A	**Allapoint, All**	**84.56**	**24**	IAmb	IAmb	06 45 06.3	
	comp=Z,15nm,0.7s						
LPL	**La Plagne**	**84.59**	**333**	P	**P**	**06 44 56.3**	**+0.5**
LPG	**La Plagne**	**84.60**	**333**	P	**P**	**06 44 56.4**	**+0.4**
JCT	**Junction City**	**84.62**	**53**	IAmb	IAmb	06 45 16.5	
	comp=Z,21nm,1.1s						
JCT	**Junction City**	**84.62**	**53**	P	**P**	**06 44 55.6**	**-0.4**
	baz=318,SNR=6.4						
OSSC	**Osservatorio P**	**84.73**	**329**	IAmb	IAmb	06 44 57.5	
	comp=Z,25nm,1.2s						
PBMO	**Poplar Bluff**	**84.86**	**43**	IAmb	IAmb	06 45 08.8	
	comp=Z,14nm,0.8s						
PBMO	**Poplar Bluff**	**84.86**	**43**	P	**P**	**06 44 57.4**	**+0.4**
	baz=322						
MIAR	**Mount Ida**	**84.99**	**46**	IAmb	IAmb	06 45 18.7	
	comp=Z,16nm,0.9s						
MIAR	**Mount Ida**	**84.99**	**46**	P	**P**	**06 44 57.4**	**-0.4**
	baz=321						
MIAR	**Mount Ida**	**84.99**	**46**	P	**P**	**06 44 57.3**	**-0.4**
	baz=321,SNR=7.6						
BNI	**Bardonecchia**	**85.02**	**333**	IAmb	IAmb	06 45 21.6	
	comp=Z,9.1nm,0.8s						
WHAR	**Wooly Hollow**	**85.09**	**45**	IAmb	IAmb	06 45 18.2	
	comp=Z,15nm,0.9s						
ERPA	**Erie**	**85.15**	**33**	P	**P**	**06 44 58.5**	**+0.1**
	baz=328,SNR=5.8						
W41B	**Gary Mavity, V**	**85.20**	**45**	IAmb	IAmb	06 45 18.7	
	comp=Z,13nm,1.1s						
W41B	**Gary Mavity, V**	**85.20**	**45**	P	**P**	**06 44 58.4**	**-0.3**
	baz=321						
W41B	**Gary Mavity, V**	**85.20**	**45**	P	**P**	**06 44 58.4**	**-0.3**
	baz=321						
X40A	**Basin Creek Fa**	**85.43**	**46**	P	**P**	**06 45 00.4**	**+0.5**
	baz=321						
IDI	**Anoyia**	**85.44**	**316**	LR	LR	07 27 26.2	
	comp=Z,62nm,19.5s,baz=80,slow=38						
ACSO	**Alum Creek Sta**	**85.50**	**36**	P	**P**	**06 44 58.6**	**-1.5**
	baz=326,SNR=5.4						
URZ	**Urewera**	**85.82**	**156**	LR	LR	07 15 57.5	
	comp=Z,96nm,20.6s,baz=31,slow=30						
J59A	**Piesco**	**86.03**	**29**	IAmb	IAmb	06 45 13.7	
	comp=Z,11nm,0.8s						
PKME	**Peaks-Kenny Pk**	**86.13**	**25**	P	**P**	**06 45 02.2**	**-0.9**
	baz=335,SNR=5.9						
TIP	**Timpagrande**	**86.16**	**323**	IAmb	IAmb	06 45 17.5	
	comp=Z,14nm,1.0s						
O53A	**New Philadelph**	**86.22**	**35**	P	**P**	**06 45 03.2**	**-0.6**
	baz=327,SNR=6.9						
T47A	**Sharon Grove**	**86.30**	**40**	IAmb	IAmb	06 45 24.6	
	comp=Z,16nm,0.8s						
833A	**Chaparral WMA,**	**86.45**	**54**	P	**P**	**06 45 04.1**	**-1.0**
	baz=318						
NATX	**Nacogdoches**	**86.55**	**48**	P	**P**	**06 45 06.2**	**+0.7**
	baz=320						
WVT	**Waverly**	**86.64**	**41**	P	**P**	**06 45 06.2**	**+0.4**
WVT				IAmb	IAmb	06 45 17.6	
	comp=Z,21nm,1.5s						
WVT	**Waverly**	**86.64**	**41**	P	**P**	**06 45 06.2**	**+0.4**
WVT				pmax	pmax		
	comp=Z,21nm,1.5s						
WVT	**Waverly**	**86.64**	**41**	P	**P**	**06 45 05.5**	**-0.3**
	baz=324						
M57A	**Sunshine Farm,**	**86.92**	**31**	IAmb	IAmb	06 45 18.6	
	comp=Z,13nm,0.7s						
OXF	**Oxford**	**87.16**	**43**	P	**P**	**06 45 08.8**	**+0.5**
	baz=323						
SSPA	**Standing Stone**	**87.23**	**32**	P	**P**	**06 45 08.3**	**-0.4**
	baz=329						
U49A	**Red Boiling Sp**	**87.30**	**40**	IAmb	IAmb	06 45 29.4	
	comp=Z,13nm,0.8s						
T50A	**Nancy**	**87.32**	**39**	IAmb	IAmb	06 45 29.4	
	comp=Z,14nm,0.8s						
CLTN	**Cedars of Leba**	**87.39**	**40**	IAmb	IAmb	06 45 29.9	
	comp=Z,10nm,0.9s						
L61B	**Northampton**	**87.56**	**28**	P	**P**	**06 45 10.0**	**-0.1**
	baz=332						
HRV	**Adam Dziewonsk**	**87.89**	**27**	P	**P**	**06 45 11.4**	**-0.4**
	baz=333						
SWET	**Sewanee**	**88.28**	**41**	IAmb	IAmb	06 45 33.7	
	comp=Z,17nm,0.9s						
TZTN	**Tazewell**	**88.30**	**38**	P	**P**	**06 45 14.0**	**+0.1**
	baz=326						
R55A	**Marlinton**	**88.34**	**35**	IAmb	IAmb	06 45 34.5	
	comp=Z,15nm,1.0s						
PAL	**Palisades**	**88.40**	**29**	P	**P**	**06 45 13.6**	**-0.6**
	baz=332						
VBMS	**Vicksburg**	**88.40**	**45**	P	**P**	**06 45 13.8**	**-0.5**
	baz=322						
VAE	**Valguarnera**	**88.59**	**324**	LR	LR	07 27 44.0	
	comp=Z,91nm,18.0s,baz=152,slow=37						
CPCT	**Cooper Cave**	**88.76**	**40**	IAmb	IAmb	06 45 36.2	
	comp=Z,10nm,0.8s						
V52A	**Sevierville**	**88.86**	**39**	IAmb	IAmb	06 45 36.9	
	comp=Z,12nm,0.7s						
TKL	**Tuckaleechee C**	**88.93**	**39**	LR	LR	07 26 39.9	
	comp=Z,49nm,21.9s,baz=338,slow=36						
BLA	**Blacksburg**	**89.11**	**36**	P	**P**	**06 45 16.8**	**-0.9**
	baz=328						
LRAL	**Lakeview Retre**	**89.54**	**43**	P	**P**	**06 45 18.1**	**-1.6**
	baz=324						
KMSC	**Kings Mountain**	**90.46**	**38**	P	**P**	**06 45 23.3**	**-0.6**
	baz=327						
GOGA	**Godfrey**	**90.93**	**40**	P	**P**	**06 45 25.8**	**-0.3**
	baz=326						
KEST	**Kesra**	**92.19**	**326**	LR	LR	07 31 54.8	
	comp=Z,117nm,18.0s,baz=324,slow=39						
ESDC	**Sonseca Array**	**93.17**	**338**	P	**P**	**06 45 36.7**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=17,slow=3.4,SNR=7.8						
ESDC				LR	LR	07 34 30.4	
	comp=Z,59nm,19.1s,baz=76,slow=40						
	comp=Z,1.5nm,0.7s						
ESDC	**Sonseca Array**	**93.17**	**338**	IAmb	IAmb	06 45 55.7	
	comp=Z,5.3nm,0.9s						
CMIG	**Matias Romero**	**97.62**	**58**	LR	LR	07 23 42.7	
	comp=Z,34nm,21.9s,baz=303,slow=32						
MDT	**Midelt**	**99.75**	**336**	LR	LR	07 36 52.3	
	comp=Z,79nm,18.4s,baz=354,slow=39						
OTAV	**Otavalo**	**120.80**	**56**	*e*P	**PKiKP**	**06 51 22.1**	**+6.8**
TMAB	**Tom-Au,PA,Br**	**137.12**	**22**	*e*P	**PKiKP**	**06 51 51.7**	**+4.4**
LPAZ	**La Paz**	**140.00**	**58**	PKP	**PKPdf**	**06 51 51.8**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=307,slow=5.1,SNR=3.3						
H03N2	**Juan Fernandez**	**143.33**	**90**	T	T	09 31 59.8	
	baz=302,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**143.34**	**90**	T	T	09 32 02.5	
	baz=302,slow=77,SNR=11						
H03N1	**Juan Fernandez**	**143.34**	**90**	T	T	09 31 46.0	
	baz=302,slow=77,SNR=13						
NBCA	**Caruaru-PE**	**144.92**	**5**	*e*P	**PKiKP**	**06 52 04.8**	**+1.5**
NBAN	**Anadia - AL**	**146.34**	**5**	*e*P	**PKiKP**	**06 52 06.8**	**+0.6**
TROLL	**Troll, Antarti**	**146.51**	**199**	PKPbc	**PKPab**	**06 52 02.8**	**-0.5**
SNAA	**Sanae**	**147.98**	**198**	PKPbc	**PKPbc**	**06 52 06.2**	**0.0**
SNAA	**Sanae**	**147.98**	**198**		**PKPbc**	**06 52 05.5**	**-0.6**
SNAA	**Sanae**	**147.98**	**198**	PKP2	**PKPbc**	**06 52 05.5**	**-0.6**
BDFB	**Brasilia**	**149.66**	**29**	PKPbc	**PKPbc**	**06 52 12.1**	**0.0**
	comp=Z,2.7nm,0.7s,baz=5.9,slow=2.2,SNR=6.0						
BDFB				PKPab	**PKPab**	**06 52 19.8**	**+2.5**
	comp=Z,7.8nm,0.6s,baz=254,slow=2.6,SNR=15						
BDFB	**Brasilia**	**149.66**	**29**		**PKiKP**	**06 52 12.9**	**-0.1**
VNA3	**Neumayer Olymp**	**149.71**	**195**	PKPbc	**PKPbc**	**06 52 10.6**	**+0.1**
VNA1	**Neumayer--Stat**	**149.91**	**196**	PKPbc	**PKiKP**	**06 52 11.4**	**-0.4**
PLCA	**Paso Flores**	**152.40**	**97**	PKPbc	**PKiKP**	**06 52 18.0**	**0.0**
	comp=Z,2.7nm,0.9s,baz=281,slow=6.5,SNR=3.0						
PLCA				PKPab	**PKPab**	**06 52 28.9**	**+0.6**
	comp=Z,6.7nm,0.9s,baz=247,slow=2.7,SNR=6.9						
PLCA	**Paso Flores**	**152.40**	**97**		**PKiKP**	**06 52 18.3**	**+0.3**
PLCA	**Paso Flores**	**152.40**	**97**	PKIKP	**PKiKP**	**06 52 18.3**	**+0.3**
CPUP	**Villa Florida**	**154.14**	**57**	PKPab	**PKPab**	**06 52 35.5**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=32,slow=5.3,SNR=4.3						

IDC 12 06:33:42.6±1.2**, 3°.68S**×**151°.29E, h0**^{km}**, mb3.7**/4**,**
mbtmp3.7/4**, Error ellipse: s-maj=24.4km s-min=12.4km**
az=36.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.97**	**130**	Pg	Pb	06 34 02.4	+0.2
	189nm,0.3s,baz=150,slow=5.3,SNR=125						
KRVT				Lg	Lg	06 34 13.6	
	260nm,0.3s,baz=181,slow=12,SNR=7.8						
WRA	**Warramunga Arr**	**23.12**	**224**	P	P	06 38 50.3	-0.2
	1.6nm,0.7s,baz=53,slow=10,SNR=14						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**26.01**	**219**	P	P	06 39 17.8	+0.2
	0.2nm,0.4s,baz=52,slow=9.1,SNR=5.6						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**81.70**	**22**	P	P	06 46 02.0	-0.6
	1.3nm,0.8s,baz=235,slow=5.1,SNR=7.7						
	1.3nm,0.8s						
YKA	**Yellowknife Ar**	**95.14**	**28**	P	P	06 47 07.8	+0.2
	0.2nm,0.6s,baz=279,slow=5.7,SNR=2.3						
	0.2nm,0.6s						

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*IDC **12** 06:36:25.4±2.2, 24°.76N×121°.72E, h0^{km}, mb3.8/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=71.2km s-min=32.9km az=103.0*
*JMA **12** 06:36:27.8±0.1, 24°.7N±0°.3×122°.0E±0°.7, h41^{km}±4^{km}, MV3.7/11, TAIWAN REGION*
*TAP **12** 06:36:27.0, 24°.69N×122°.05E, h12^{km}, ML4.3, B*
*NIED **12** 06:36:27.8, 24°.66N×121°.97E, h41^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.18; $M_{\phi\phi}$0.07; $M_{r\theta}$-0.38; $M_{\theta\phi}$0.62; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.42000×10^{15} NP1: ϕ_s247.00000°, δ36.00000°, λ-88.00000°. NP2: ϕ_s64.00000°, δ54.00000°, λ-92.00000°.*
ISC 12 06:36:25.7±1.0**, 24°.70N**±0°.02×**122°.13E**±0°.01**, h4**^{km}±8^{km}**,**
n120, σ1^{s}.03/204**, mb3.8**/3**, 12C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EGS		**0.23**	**309**	*i* P	**Pg**	**06 36 31.5**	**+1.3**
	baz=327						
EGS				S	**Sg**	**06 36 34.8**	**+1.5**
	baz=327						
TWC	**Suao**	**0.27**	**251**	⇑*i*P	**Pg**	**06 36 31.3**	**+0.3**
	baz=244						
TWC				S	**Sg**	**06 36 34.4**	**-0.1**
	baz=244						
NTC	**Toucheng**	**0.31**	**299**	*e*P	**Pb**	**06 36 32.5**	**-1.3**
	baz=309						
NTC				*e*S	**Sb**	**06 36 37.2**	**-2.1**
	baz=309						
TWB1	**Santiao Chiao**	**0.33**	**337**	⇑*i*P	**Pb**	**06 36 34.1**	**-0.1**
	baz=351						
TWB1				*e*S	**Sb**	**06 36 38.1**	**-1.8**

	baz=351						
ILA	Ilan baz=285	0.35	281	P	Pb	06 36 33.3	-1.3
ILA	baz=285			eS	Sg	06 36 37.9	+0.8
NDS	Dongshan baz=259	0.38	260	iP	Pg	06 36 33.3	+0.2
NDS	baz=259			S	Sg	06 36 38.0	-0.1
TIPB	Shuangxi baz=324	0.39	314	⇑iP	Pb	06 36 34.5	-0.6
TIPB	baz=324			S	Sb	06 36 39.7	-1.8
EWUT	Wuta baz=225	0.41	232	iP	Pb	06 36 34.0	-1.5
EWUT	baz=225			iS	Sg	06 36 39.0	+0.1
TWE	Neicheng baz=274	0.42	273	⇑iP	Pg	06 36 34.1	+0.2
TWE	baz=274			iS	Sg	06 36 39.1	-0.2
ENA	Nanau baz=226	0.45	233	iP	Pb	06 36 35.3	-0.8
ENA	baz=226			eS	Sg	06 36 40.0	-0.1
SXI1	Grass Mountain baz=338	0.46	330	⇑iP	Pb	06 36 36.4	0.0
SXI1	baz=338			eS	Sb	06 36 41.6	-1.9
NWF	Wu-fen Shan baz=327	0.49	319	⇑iP	Pb	06 36 36.7	-0.2
NWF	baz=327			eS	Sb	06 36 43.8	-0.6
WFSB	Wu-fen Shan baz=327	0.49	319	⇑iP	Pb	06 36 36.7	-0.1
WFSB	baz=327			eS	Sb	06 36 43.6	-0.7
FUSB	Fushanzhiwuyua baz=279	0.50	277	⇑P	Pb	06 36 35.6	-1.4
FUSB	baz=279			eS	Sg	06 36 41.4	-0.3
ENTT	Nioudou baz=263	0.52	263	eP	Pg	06 36 35.6	0.0
ENTT	baz=263			eS	Sb	06 36 43.6	-1.6
EHP	Heping Village baz=216	0.53	222	eP	Pb	06 36 37.5	0.0
EHP	baz=216			eS	Sb	06 36 44.0	-1.4
TNOU	National Taiwa baz=331	0.55	324	eP	Pb	06 36 38.1	+0.1
TNOU	baz=331			eS	Sb	06 36 45.1	-1.1
TWA	Mucha baz=304	0.57	299	P	Pb	06 36 37.6	-0.6
TWA	baz=304			eS	Sg	06 36 44.5	+0.4
NDT	Datong Townshi baz=260	0.57	260	eP	Pb	06 36 37.0	-1.3
NDT	baz=260			eS	Sb	06 36 45.0	-1.7
LATG	Datong baz=252	0.57	253	P	Pb	06 36 36.9	-1.5
LATG	baz=252			S	Sg	06 36 44.4	+0.1
NWLT	Wulai baz=280	0.58	278	⇑eP	Pb	06 36 36.9	-1.4
NWLT	baz=280			eS	Sg	06 36 43.8	-0.5
NHDH	Xindian Distri baz=299	0.61	296	eP	Pb	06 36 38.5	-0.5
NHDH	baz=299			eS	Sg	06 36 45.8	+0.4
NHY	Taipei baz=308	0.61	304	eP	Pb	06 36 38.4	-0.6
TATO	Taipei baz=299	0.64	295	⇑P	Pb	06 36 39.0	-0.5
TATO	baz=299			eS	Sg	06 36 46.8	+0.3
TAP1	Taipei baz=305	0.65	302	eP	Pb	06 36 40.0	+0.5
TAP1	baz=305			eS	Sb	06 36 47.9	-1.0
NWRT	Kuosheng baz=325	0.66	320	eP	Pn	06 36 40.5	-1.2
TAP	Taipei baz=305	0.66	301	eP	Pb	06 36 40.2	+0.4
TAP	baz=305			eS	Sb	06 36 48.0	-1.3
YM01	YM01 baz=316	0.68	311	eP	Pb	06 36 40.2	+0.2
YHNB	Yeheng baz=268	0.69	268	eP	Pg	06 36 38.9	0.0
YHNB	baz=268			eS	Sg	06 36 47.8	0.0
YM08	YM08 baz=320	0.69	315	eP	Pb	06 36 40.8	+0.5
YM08	baz=320			eS	Sb	06 36 51.2	+1.0
BACT	New Taipei Cit baz=299	0.69	295	eP	Pn	06 36 41.1	-1.1
NSK	Sanguang baz=268	0.70	268	eP	Pg	06 36 39.1	-0.1
NSK	baz=268			eS	Sg	06 36 47.7	-0.6
ETL	Fush Village baz=216	0.71	221	eP	Pb	06 36 39.7	-0.9
ETL	baz=216			eS	Sb	06 36 49.1	-1.6
NACB	Ninganchiao baz=219	0.72	223	eP	Pb	06 36 39.7	-1.0
NACB	baz=219			eS	Sg	06 36 48.8	+0.1
NNSB	Datong baz=247	0.73	248	eP	Pb	06 36 40.0	-1.1
NNSB	baz=247			eS	Sg	06 36 49.2	-0.1
ANP	Anpu baz=316	0.74	311	eP	Pb	06 36 41.5	+0.4
ANP	baz=316			eS	Sb	06 36 52.6	+1.1
NNS	Nan Shan baz=247	0.74	250	eP	Pb	06 36 40.2	-0.9
NNS	baz=247			eS	Sg	06 36 49.3	-0.2
TWY	Chenhua baz=325	0.75	320	eP	Pn	06 36 42.0	-1.1
TWY	baz=325			eS	Sb	06 36 52.3	+0.4
TWS1	Kuangyinshan baz=306	0.76	302	eP	Pn	06 36 42.0	-1.2
TWS1	baz=306			eS	Sb	06 36 51.8	-0.4
ETLH	Xiulin Townshi baz=227	0.77	230	P	Pb	06 36 40.6	-1.1
ETLH	baz=227			eS	Sg	06 36 49.8	-0.6
NTST	Danshui baz=311	0.77	307	eP	Pn	06 36 42.5	-0.9
JYNG	Yonagunijimaku	0.78	108	eP	Pn	06 36 44.3	+0.8
JYNG				S	Sn	06 36 56.6	+0.9
TWD	Chiawan baz=214	0.79	218	eP	Pb	06 36 41.0	-1.0
TWD	baz=214			eS	Sg	06 36 51.0	0.0
YOJ	Yonaguni jima baz=104	0.84	106	iP	Pn	06 36 44.9	+0.7
YOJ	baz=104			eS	Sn	06 36 57.7	+0.7
YOJ	Yonaguni jima	0.84	106	P	Pn	06 36 45.2	+1.0
YOJ				S	Sn	06 36 57.8	+0.9
HWA	Hwalien baz=209	0.86	214	eP	Pn	06 36 44.2	-0.4
NCU	National Centr baz=289	0.90	288	eP	Pn	06 36 45.5	+0.4
NCU	baz=289			eS	Sn	06 36 57.5	-1.1
NCUH	Zhongli baz=289	0.90	287	eP	Pn	06 36 45.3	+0.1
NCUH	baz=289			eS	Sb	06 36 56.9	+0.7
NFF	Wufeng Townshi baz=266	0.92	266	eP	Pn	06 36 44.6	-0.9
NFF	baz=266			eS	Sn	06 36 58.2	-1.1
FUSS	Fushou baz=239	0.93	241	eP	Pb	06 36 43.6	-0.9
FUSS				eS	Sb	06 36 56.0	-1.1
	baz=239						
PCYT	Pengchaiyu baz=2.0	0.93	357	eP	Pn	06 36 46.1	+0.6
ETM	Tongmen baz=215	0.93	219	eP	Pb	06 36 44.1	-0.3
ETM	baz=215			eS	Sg	06 36 55.2	-0.6
NJD	Zhudong baz=273	0.95	272	eP	Pn	06 36 46.0	+0.2
NJD	baz=273			eS	Sn	06 37 00.9	+1.1
TEYL	Yanliau Villag baz=208	0.96	210	eP	Pn	06 36 46.0	+0.1
TEYL	baz=208			eS	Sn	06 37 02.0	+2.0
WHF	Hehuan Shan baz=232	0.96	235	P	Pb	06 36 44.8	-0.4
WHF	baz=232			eS	Sb	06 36 58.0	-0.5
TWT	Tachien baz=241	0.98	243	eP	Pn	06 36 45.5	-0.8
TWT	baz=241			eS	Sb	06 36 58.5	-0.1
TDCB	Techi baz=242	0.99	244	eP	Pb	06 36 45.2	-0.3
TDCB	baz=242			eS	Sb	06 36 58.2	-0.8
HSN1	Hsinchu baz=275	1.01	275	eP	Pn	06 36 47.9	+1.2
HSN1	baz=275			eS	Sn	06 37 01.9	+0.5
LIOB	Emei baz=267	1.01	267	eP	Pn	06 36 46.9	+0.1
LIOB	baz=267			eS	Sn	06 37 01.9	+0.5
NSTT	Nanjuang baz=266	1.03	266	eP	Pn	06 36 46.8	-0.1
NSTT	baz=266			eS	Sn	06 37 01.1	-0.6
NHW	Xinwu Township baz=289	1.03	287	eP	Pn	06 36 47.4	+0.5
NHW	baz=289			eS	Sn	06 37 01.5	-0.3
SBCB	Hsinchu baz=276	1.04	275	eP	Pn	06 36 48.1	+1.0
SBCB	baz=276			eS	Sn	06 37 01.9	-0.3
HSN	Hsinchu baz=278	1.06	276	eP	Pn	06 36 47.8	+0.5
HSN	baz=278			eS	Sn	06 37 01.5	-1.0
CHGB	Renai baz=232	1.08	234	eP	Pn	06 36 47.0	-0.8
CHGB	baz=232			eS	Sb	06 37 00.4	-1.2
ESL	Shilin baz=212	1.09	216	eP	Pn	06 36 47.1	-0.6
OWD	Renai baz=227	1.14	230	⇑eP	Pn	06 36 48.1	-0.5
OWD	baz=227			eS	Sg	06 37 02.1	-0.4
NJN	Zhunan baz=270	1.15	269	eP	Pn	06 36 49.5	+1.0
WHP	Taichung City baz=248	1.16	249	eP	Pn	06 36 48.6	-0.2
WHP	baz=248			eS	Sb	06 37 02.6	-1.1
WUSB	Renai baz=231	1.16	233	eP	Pn	06 36 48.4	-0.4
WUSB	baz=231			eS	Sb	06 37 03.2	-0.7
EGFH	Guangfu baz=209	1.21	212	eP	Pn	06 36 49.9	+0.5
NMLH	Miaoli baz=262	1.23	263	eP	Pn	06 36 51.4	+1.8
NMLH	baz=262			eS	Sn	06 37 07.8	+1.1
NSY	Sanyi baz=257	1.28	257	eP	Pn	06 36 52.3	+2.0
NSY	baz=257			eS	Sn	06 37 10.0	+2.1
WCS	Beigang Elemen baz=239	1.28	240	eP	Pn	06 36 51.3	+0.9
WCS	baz=239			eS	Sb	06 37 06.5	-0.7
DPDB	Guoxing baz=237	1.28	239	eP	Pn	06 36 51.0	+0.5
TWQ1	Liyutan baz=254	1.28	254	eP	Pn	06 36 52.3	+1.9
VWDT	VWDT baz=222	1.30	224	⇑eP	Pn	06 36 51.1	+0.4
VWDT	baz=222			eS	Sn	06 37 08.3	-0.2
HGSD	Ruisui baz=206	1.36	208	eP	Pb	06 36 52.8	+0.9
HGSD	baz=206			eS	Sn	06 37 14.1	+4.0
SMLT	Sun Moon Lake baz=232	1.39	234	eP	Pb	06 36 52.9	+0.6
SMLT	baz=232			eS	Sb	06 37 09.8	-0.6
WDJ	Dajia District baz=255	1.40	256	eP	Pb	06 36 54.6	+2.2
WDJ	baz=255			eS	Sn	06 37 12.5	+1.6
SSLB	Suanglung baz=228	1.41	230	eP	Pb	06 36 52.7	+0.2
SSLB	baz=228			eS	Sg	06 37 09.9	-1.0
TYC	Yuchr baz=234	1.41	236	eP	Pb	06 36 53.6	+1.1
TCU	Taichung baz=246	1.44	248	eP	Pg	06 36 55.3	+2.0
TCU	baz=246			eS	Sn	06 37 14.6	+2.8
WWF	Wufeng baz=242	1.46	244	eP	Pg	06 36 55.6	+1.9
IRIF	Iriomote-Funau	1.50	104	P	Pg	06 36 54.4	-0.2
IRIF				eS	Sg	06 37 14.4	+0.4
YULB	Yu-li baz=208	1.51	210	eP	Pg	06 36 54.0	-0.6
YULB	baz=208			eS	Sg	06 37 14.3	+0.1
EYUL	Yuli baz=207	1.54	209	eP	Pg	06 36 55.4	+0.2
TWF1	Yuli baz=207	1.54	210	eP	Pg	06 36 54.6	-0.7
TWF1	baz=207			eS	Sg	06 37 15.9	+0.6
WJS	Zhushan baz=234	1.55	236	eP	Pg	06 36 57.6	+2.1
WNT	Mingjian baz=237	1.55	238	eP	Pg	06 36 57.0	+1.5
WCHH	Zhanghua baz=246	1.56	247	eP	Pg	06 36 56.5	+0.8
YUS	Yu-Shan baz=220	1.62	222	eP	Pg	06 36 57.3	+0.5
YUS	baz=220			eS	Sg	06 37 19.0	+1.3
HATJ	Hateruma jima	1.66	112	P	Pg	06 36 57.7	+0.2
HATJ				eS	Sg	06 37 20.3	+1.4
FULB	Fuli baz=205	1.68	207	eP	Pg	06 36 57.3	-0.6
ALS	Alishan baz=224	1.69	226	eP	Pg	06 36 58.7	+0.5
ALS	baz=224			eS	Sg	06 37 22.2	+2.0
CHN5	Tsauling baz=229	1.72	231	eP	Pg	06 36 60.0	+1.2
CHN5	baz=229			eS	Sg	06 37 22.1	+1.0
CHKT	Chengkung baz=201	1.74	204	eP	Pn	06 36 55.8	-0.9
WGK	Gukeng baz=233	1.75	235	eP	Pg	06 37 00.6	+1.3
WDLH	Douliu baz=234	1.77	236	eP	Pg	06 37 00.3	+0.7
JKRS	Kuro-shima	1.77	105	P	Pg	06 36 58.9	-0.9
JKRS				eS	Sg	06 37 21.6	-1.1
WRL	Guolierlin Hig baz=243	1.79	244	eP	Pg	06 36 59.9	-0.1
WRL	baz=243			eS	Sg	06 37 22.7	-0.4
ELDTW	Lidau baz=212	1.82	214	eP	Pb	06 36 59.2	-0.4
JIJ	Ishigaki jima	1.86	100	P	Pb	06 36 59.8	-0.5
JIJ				S	Sn	06 37 22.4	+0.1
EDH	Donghe	1.88	204	eP	Pb	06 36 59.3	-1.2
	baz=202						
WTK	Tuku baz=237	1.88	238	eP	Pg	06 37 03.2	+1.4
CHN4	Tsaushan baz=225	1.94	227	eP	Pg	06 37 03.0	+0.1
CHN4	baz=225			eS	Sg	06 37 30.4	+2.2
TPUB	Ta-pu baz=223	1.96	225	eP	Pg	06 37 03.4	+0.2
TPUB	baz=223			eS	Sg	06 37 28.1	-0.5
STYH	Taoyuan baz=218	1.96	219	eP	Pg	06 37 02.7	-0.7
STYH	baz=218			eS	Sg	06 37 28.7	-0.1
CHY	Chiayi baz=231	1.97	233	eP	Pg	06 37 03.4	0.0
STYT	Tauyuan baz=218	1.98	220	eP	Pg	06 37 02.7	-1.0
JISG	Ishigakijimahi	1.99	93	eP	Pb	06 37 01.9	-0.6
WTP	Ta-pu baz=222	2.00	224	eP	Pg	06 37 03.6	-0.5
WTP	baz=222			eS	Sg	06 37 30.8	+0.7
LONT	Longtian baz=205	2.01	207	eP	Pn	06 37 00.6	+0.3
TWK	Hsinying baz=225	2.07	227	eP	Pg	06 37 05.3	-0.2
CHN1	Nanshi baz=223	2.10	225	eP	Pg	06 37 05.7	-0.4
CHN1	baz=223			eS	Sg	06 37 33.5	+0.2
JTJ	Tarama	2.34	91	P	Pb	06 37 07.7	-0.8
JTJ				eS	Sb	06 37 37.8	+0.1
JOW	Kunigami 1.7nm,0.3s,baz=210,slow=20,SNR=1.1 15nm,0.7s	5.93	68	Pn	Pn	06 37 59.3	+5.0
KSRS	Korea Array 0.2nm,0.3s,baz=191,slow=12,SNR=1.1	13.64	20	Pn	P	06 39 45.6	-3.4
WRA	Warramunga Arr 2.5nm,0.8s,baz=349,slow=8.1,SNR=4.1 2.5nm,0.8s	45.94	164	P	P	06 44 51.0	+1.2
ASAR	Alice Springs 0.9nm,0.8s,baz=345,slow=6.9,SNR=2.0 0.9nm,0.8s	49.42	166	P	P	06 45 18.7	+1.8
YKA	Yellowknife Ar 0.3nm,0.8s,baz=313,slow=4.7,SNR=4.5 0.3nm,0.8s	82.16	23	P	P	06 48 48.3	+0.8

TRN 12 06:39:56.8, 10°.77N×62°.10W, h57^{km}, MD3.6, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.69	100	eP	Pn	06 40 11.2	+0.4
TRN				eS	Sn	06 40 21.1	+0.2
GRFF	Grenada Fort F	1.32	15	eP	Pn	06 40 19.4	+0.4
GRFF				eS	Sn	06 40 35.1	-0.6
GRGR	Grenville	1.43	18	eP	Pn	06 40 20.3	-0.2
GRGR				eS	Sn	06 40 38.1	-0.1
GRHS	Sauteurs	1.52	17	e	Pn	06 40 19.2	-2.4
GRSS	Sisters	1.60	17	eP	Pn	06 40 22.2	-0.5
GRSS				eS	Sn	06 40 43.4	+1.1
TOSP	Speyside	1.62	71	eP	Pn	06 40 23.2	+0.1
TOSP				eS	Sn	06 40 42.7	-0.2
GCMP	Grenada, Carri	1.83	21	eP	Pn	06 40 26.1	+0.2
GCMP				eS	Sn	06 40 48.0	-0.1
SVOC	Richmond Hill,	2.52	20	eS	Sn	06 41 04.9	-0.1
SVB	Belmont	2.62	18	eP	Pn	06 40 36.8	0.0
SVB				eS	Sn	06 41 06.6	-0.9
MCLT	Moule a Chique	3.14	21	eP	Pn	06 40 44.9	+1.1
MCLT				eS	Sn	06 41 19.6	-0.5
SLCP	Castries, St.	3.40	18	eS	Sn	06 41 25.4	-1.2
SLBI	Saint Lucia, B	3.42	19	eP	Pn	06 40 48.8	+1.2
SLBI				eS	Sn	06 41 25.3	-1.6
MPOM	Morne Pois Mar	3.85	18	eP	Pn	06 40 54.2	+0.7
MPOM				eS	Sn	06 41 35.9	-1.7
BIM	Bigot	3.86	15	eP	Pn	06 40 54.5	+0.8
BIM				eS	Sn	06 41 36.0	-1.8

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*IDC **12** 06:56:29.8±1.2, 14°.33S×167°.19E, h0^{km}, mb3.7/6, mbtmp3.8/7, ML3.6/1, MS3.7/1, Error ellipse: s-maj=37.4km s-min=25.3km az=128.0*

ISC 12 06:56:36.6±1.1, 14°.5S±0°.1×167°.2E±0°.2, h50^{km}, n7, σ0.^{s}86/8, mb3.6/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 1.0nm,0.3s,baz=310,slow=22,SNR=27	7.56	185	Pn	Pn	06 58 23.5	-0.8
DZM	0.4nm,0.3s,baz=145,slow=24,SNR=1.3 4.5nm,0.5s			Sn	Sn	06 59 48.6	-0.1
CTA	Charters Tower 5.0nm,0.7s,baz=75,slow=8.8,SNR=4.7 5.0nm,0.7s	20.76	252	P	P	07 01 14.1	+0.6
WRA	Warramunga Arr 0.5nm,0.8s,baz=85,slow=9.3,SNR=1.8 0.5nm,0.8s	31.83	256	P	P	07 02 56.4	-0.5
ASAR	Alice Springs 0.8nm,0.7s,baz=76,slow=9.4,SNR=8.2	32.70	249	P	P	07 03 04.3	-0.3
ASAR	comp=Z,111nm,18.3s,baz=156,slow=38 0.8nm,0.7s			LR	LR	07 17 03.1	
VNDA	Vanda 0.4nm,0.6s,baz=9.7,slow=3.8,SNR=5.3 0.4nm,0.6s	63.08	181	P	P	07 06 59.8	+1.5
ILAR	Eielson Array 0.8nm,0.7s,baz=238,slow=5.7,SNR=12 0.8nm,0.7s	86.33	18	P	P	07 09 12.6	-0.3
YKA	Yellowknife Ar 0.1nm,0.8s,baz=240,slow=3.3,SNR=2.1 0.1nm,0.8s	97.38	27	P	P	07 10 04.1	-0.2

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*TAP **12** 07:04:25.7, 24°.70N×121°.99E, h9^{km}, ML3.8, C*

*JMA **12** 07:04:26.0±0.1, 24°.7N±0°.3×122°.0E±0°.4, h32^{km}, MV3.3/10, TAIWAN REGION*

ISC 12 07:04:24.4±0.9, 24°.74N±0°.02×122°.09E±0°.02, h11^{km}±7^{km}, n85, σ0.^{s}93/148, 7C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=341	0.18	307	⇑iP	Pg	07 04 29.6	+1.2
EGS	baz=341			iS	Sg	07 04 31.9	+0.8
TWC	Suao baz=232	0.25	240	⇓iP	Pg	07 04 29.4	-0.3
TWC	baz=232			iS	Sg	07 04 31.5	-1.6
NTC	Toucheng baz=314	0.26	296	⇑iP	Pg	07 04 30.9	+1.0
NTC	baz=314			iS	Sg	07 04 34.1	+0.6
TWB1	Santiao Chiao baz=351	0.29	341	⇑iP	Pb	07 04 32.1	+0.6
TWB1	baz=351			S	Sb	07 04 35.9	-0.4
ILA	Ilan baz=276	0.31	275	P	Pb	07 04 31.2	-0.8
ILA	baz=276			S	Sg	07 04 35.0	0.0
TIPB	Shuangxi baz=329	0.34	314	⇑iP	Pb	07 04 32.5	+0.1
TIPB	baz=329			iS	Sb	07 04 36.7	-1.1
NDS	Dongshan baz=251	0.36	253	⇓iP	Pg	07 04 31.4	-0.1
NDS	baz=251			S	Sg	07 04 35.5	-0.8
TWE	Neicheng baz=273	0.39	268	⇓iP	Pg	07 04 32.0	0.0
TWE	baz=273			S	Sg	07 04 37.0	-0.2
EWUT	Wuta baz=208	0.41	224	P	Pg	07 04 32.2	-0.2
EWUT	baz=208			S	Sg	07 04 36.4	-1.4
NWF	Wu-fen Shan baz=324	0.44	320	⇑iP	Pb	07 04 34.7	+0.6
NWF	baz=324			iS	Sb	07 04 40.5	-0.2
ENA	Nanau baz=210	0.44	226	P	Pg	07 04 32.9	-0.2

ENA	baz=210			S	Sg	07 04 37.3	-1.7
ENTT	Nioudou baz=261	0.49	259	⇓*i*P	Pg	07 04 33.6	-0.4
ENTT	baz=261			*e*S	Sg	07 04 39.5	-0.9
TWA	Mucha baz=306	0.52	298	P	Pb	07 04 35.3	-0.2
TWA	baz=306			S	Sb	07 04 41.8	-1.3
EHP	Heping Village baz=201	0.53	217	*e*P	Pg	07 04 35.0	+0.3
EHP	baz=201			*e*S	Sg	07 04 42.2	+0.4
NWLT	Wulai baz=279	0.54	274	*e*P	Pg	07 04 34.9	0.0
NWLT	baz=279			*e*S	Sg	07 04 41.0	-1.0
NHDH	Xindian Distri baz=301	0.56	294	*e*P	Pb	07 04 36.7	+0.5
NHDH	baz=301			*e*S	Sb	07 04 42.8	-1.4
TATO	Taipei baz=300	0.60	294	*e*P	Pb	07 04 36.9	+0.1
TATO	baz=300			*e*S	Sg	07 04 43.6	-0.3
TAP	Taipei baz=306	0.61	300	*e*P	Pn	07 04 37.7	-1.3
TAP	baz=306			*e*S	Sb	07 04 45.3	-0.4
YM01	YM01 baz=318	0.62	311	⇑*i*P	Pn	07 04 38.3	-0.9
YM01	baz=318			S	Sb	07 04 45.5	-0.7
YM08	YM08 baz=312	0.64	315	P	Pn	07 04 38.3	-1.1
YM08	baz=312			*e*S	Sb	07 04 45.4	-1.2
NSK	Sanguang baz=267	0.67	265	⇓*i*P	Pg	07 04 37.0	-0.4
NSK	baz=267			S	Sg	07 04 44.7	-1.5
ANP	Anpu baz=317	0.69	311	*e*P	Pn	07 04 39.0	-1.1
TWS1	Kuangyinshan baz=307	0.71	301	P	Pn	07 04 40.0	-0.3
TWS1	baz=307			S	Sb	07 04 48.7	+0.2
ETL	Fush Village baz=203	0.72	217	*e*P	Pg	07 04 38.0	-0.3
ETL	baz=203			*e*S	Sg	07 04 46.0	-1.7
NNS	Nan Shan baz=245	0.72	246	P	Pg	07 04 37.6	-0.7
NNS	baz=245			*e*S	Sg	07 04 46.1	-1.6
NTST	Danshui baz=312	0.72	306	*e*P	Pn	07 04 40.4	-0.1
NTST	baz=312			*e*S	Sn	07 04 50.0	-1.5
ETLH	Xiulin Townshi baz=224	0.77	227	⇓P	Pg	07 04 38.8	-0.5
ETLH	baz=224			*e*S	Sg	07 04 47.3	-1.9
TWD	Chiawan baz=211	0.79	215	⇑*i*P	Pg	07 04 39.1	-0.6
TWD	baz=211			S	Sg	07 04 48.0	-2.1
JYNG	Yonagunijimaku	0.83	110	*e*P	Pn	07 04 42.6	+0.7
JYNG				*e*S	Sn	07 04 54.3	+0.1
NCU	National Centr baz=290	0.85	286	*e*P	Pn	07 04 42.8	+0.4
NCU	baz=290			*e*S	Sn	07 04 54.3	-0.5
NCUH	Zhongli baz=289	0.85	286	*e*P	Pn	07 04 42.7	+0.3
NCUH	baz=289			*e*S	Sn	07 04 54.5	-0.4
HWA	Hwalien baz=213	0.88	210	*e*P	Pb	07 04 42.2	+0.6
YOJ	Yonaguni jima baz=104	0.88	108	P	Pn	07 04 43.2	+0.5
YOJ	baz=104			S	Sn	07 04 55.5	0.0
YOJ	Yonaguni jima	0.88	108	P	Pn	07 04 43.2	+0.5
YOJ				S	Sn	07 04 56.1	+0.6
PCYT	Pengchaiyu baz=4.0	0.89	359	*e*P	Pn	07 04 43.6	+0.7
NFF	Wufeng Townshi baz=265	0.89	263	*e*P	Pb	07 04 41.9	0.0
NFF	baz=265			*e*S	Sn	07 04 54.9	-0.9
FUSS	Fushou baz=228	0.91	238	*e*P	Pg	07 04 41.2	-0.8
FUSS	baz=228			*e*S	Sg	07 04 52.1	-1.9
WHF	Hehuan Shan baz=231	0.95	232	P	Pg	07 04 42.2	-0.6
WHF	baz=231			S	Sg	07 04 54.5	-0.9
TWT	Tachien baz=231	0.96	240	P	Pb	07 04 43.0	-0.2
TWT	baz=231			*e*S	Sg	07 04 54.6	-0.9
LIOB	Emei baz=265	0.98	265	*e*P	Pn	07 04 43.9	-0.2
NSTT	Nanjuang baz=251	1.00	264	⇓*i*P	Pn	07 04 44.0	-0.3
NSTT	baz=251			S	Sn	07 04 59.1	+0.8
HSN	Hsinchu baz=297	1.02	274	*e*P	Pb	07 04 43.8	-0.2
HSN	baz=297			*e*S	Sn	07 04 58.2	-0.8
CHGB	Renai baz=229	1.07	231	*e*P	Pg	07 04 44.4	-0.7
ESL	Shilin baz=209	1.10	213	*e*P	Pb	07 04 44.4	-1.0
WHP	Taichung City baz=239	1.14	247	P	Pg	07 04 46.1	-0.2
OWD	Renai baz=217	1.14	227	P	Pb	07 04 45.8	-0.4
OWD	baz=217			S	Sg	07 04 58.4	-2.9
NMLH	Miaoli baz=262	1.20	261	*e*P	Pg	07 04 48.7	+1.3
NMLH	baz=262			*e*S	Sn	07 05 05.3	+1.9
EGFH	Guangfu baz=221	1.22	210	*e*P	Pn	07 04 47.6	+0.2
EGFH	baz=221			*e*S	Sb	07 05 03.4	+0.1
NSY	Sanyi baz=248	1.25	256	*e*P	Pg	07 04 49.5	+1.0
NSY	baz=248			*e*S	Sn	07 05 07.0	+2.3
TWQ1	Liyutan baz=253	1.26	252	*e*P	Pg	07 04 49.3	+0.6
TWQ1	baz=253			*e*S	Sn	07 05 07.1	+2.2
WCS	Beigang Elemen baz=224	1.27	238	*e*P	Pg	07 04 49.2	+0.4
VWDT	VWDT baz=211	1.31	222	*e*P	Pn	07 04 48.7	+0.2
WDJ	Dajia District baz=255	1.38	254	*e*P	Pg	07 04 52.0	+1.2
WDJ	baz=255			*e*S	Sg	07 05 10.1	+1.4
SMLT	Sun Moon Lake baz=223	1.38	232	P	Pb	07 04 50.4	+0.1
SMLT	baz=223			*e*S	Sb	07 05 07.7	-0.2
TYC	Yuchr baz=231	1.40	234	*e*P	Pg	07 04 50.9	-0.3
EHY	Hungye baz=206	1.41	210	*e*P	Pn	07 04 50.5	+0.4
TCU	Taichung baz=246	1.42	246	*e*P	Pg	07 04 52.5	+0.9
TCU	baz=246			*e*S	Sg	07 05 10.9	+0.9
WJS	Zhushan baz=223	1.54	234	*e*P	Pg	07 04 54.9	+0.9
WJS	baz=223			*e*S	Sg	07 05 14.3	+0.3
WCHH	Zhanghua baz=263	1.54	245	*e*P	Pg	07 04 53.6	-0.5
WNT	Mingjian baz=225	1.54	237	*e*P	Pg	07 04 54.9	+0.9
WNT	baz=225			*e*S	Sg	07 05 15.5	+1.5
IRIF	Iriomote-Funau	1.55	105	P	Pb	07 04 52.7	-0.4
IRIF				*e*S	Sb	07 05 12.8	+0.2
EYUL	Yuli baz=219	1.55	207	*e*P	Pg	07 04 54.6	+0.4
YUS	Yu-Shan baz=205	1.62	220	P	Pb	07 04 54.9	+0.3
YUS	baz=205			*e*S	Sg	07 05 16.6	0.0
ALS	Alishan baz=207	1.69	224	*e*P	Pg	07 04 56.5	-0.4
ALS	baz=207			*e*S	Sg	07 05 19.6	+0.7
FULB	Fuli baz=217	1.70	206	*e*P	Pb	07 04 55.5	-0.1
HATJ	Hateruma jima	1.70	113	P	Pb	07 04 55.7	0.0
HATJ				*e*S	Sb	07 05 16.9	-0.3
CHKT	Chengkung baz=184	1.76	202	*e*P	Pn	07 04 54.4	-0.4
WDLH	Douliu baz=250	1.76	234	*e*P	Pg	07 04 58.0	-0.2
WDLH	baz=250			*e*S	Sg	07 05 21.2	+0.1
WRL	Guolierlin Hig baz=242	1.77	242	*e*P	Pb	07 04 57.0	+0.1
WRL	baz=242			*e*S	Sb	07 05 19.8	+0.7
JKRS	Kuro-shima	1.82	105	P	Pb	07 04 57.0	-0.7
JKRS				S	Sn	07 05 19.4	+0.8
ELDTW	Lidau baz=198	1.83	213	*e*P	Pn	07 04 56.8	+1.0
WTK	Tuku baz=251	1.87	236	*e*P	Pb	07 04 58.8	+0.2
WTK	baz=251			*e*S	Sg	07 05 23.6	-1.0
EDH	Donghe baz=189	1.90	202	*e*P	Pn	07 04 57.0	+0.3
JIJ	Ishigaki jima	1.91	101	P	Pn	07 04 57.9	+1.1
JIJ				*e*S	Sn	07 05 20.3	-0.5
CHN4	Tsaushan baz=209	1.94	225	*e*P	Pb	07 05 00.7	+0.9
CHN4	baz=209			*e*S	Sg	07 05 27.4	+0.5
STYH	Taoyuan baz=216	1.97	218	*e*P	Pb	07 04 60.0	-0.3
STYH	baz=216			*e*S	Sb	07 05 26.6	+1.8
LONT	Longtian baz=203	2.02	206	*e*P	Pn	07 04 59.8	+1.4
WSL	Shuilin Townsh baz=248	2.09	235	*e*P	Pb	07 05 02.5	+0.2
WSL	baz=248			*e*S	Sb	07 05 28.9	+0.7
CHN1	Nanshi baz=207	2.10	223	*e*P	Pg	07 05 04.2	-0.6
CHN1	baz=207			*e*S	Sb	07 05 30.6	+1.9
TWG	Pinlang baz=203	2.12	206	*e*P	Pn	07 05 01.3	+1.5
ICHU	Yijhu baz=230	2.15	231	*e*P	Pb	07 05 03.7	+0.4
ICHU	baz=230			*e*S	Sb	07 05 31.4	+1.5
JTJ	Tarama	2.38	92	P	Pb	07 05 05.5	-1.7
SSD	Sandimen baz=211	2.39	214	*e*P	Pb	07 05 07.2	-0.2
SSD	baz=211			*e*S	Sb	07 05 37.4	+0.5
TSMG	Majia baz=210	2.42	214	*e*P	Pb	07 05 07.2	-0.7
SCZT	Fangliau baz=198	2.71	210	*e*P	Pb	07 05 11.0	-1.9

IDC 12 07:12:01.1±0.7, 2°.71N×99°.22E, h157^{km}±22^{km}, mb3.2/4, mbtmp3.7/5, Error ellipse: s-maj=117.1km s-min=19.2km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat 71nm,0.3s,baz=180,slow=19,SNR=43	0.31	288	P	Pn	07 12 23.8	+1.2
PSI	200nm,0.6s,baz=31,slow=23,SNR=81			S	Sn	07 12 40.1	+1.1
CMAR	Chiang Mai Arr 1.2nm,0.3s,baz=193,slow=12,SNR=5.4	15.66	359	P	P	07 15 34.4	+0.2
WRA	Warramunga Arr 0.4nm,0.3s,baz=312,slow=9.1,SNR=8.4 0.4nm,0.3s	41.17	125	P	P	07 19 29.6	-0.9
ASAR	Alice Springs 0.4nm,0.4s,baz=299,slow=7.7,SNR=6.6 0.4nm,0.4s	42.75	130	P	P	07 19 43.6	+0.4
MKAR	Makanchi Array 0.2nm,0.5s,baz=154,slow=8.0,SNR=2.8 0.2nm,0.5s	46.32	344	P	P	07 20 10.2	-1.0
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=161,slow=9.2,SNR=2.6 0.6nm,0.4s	52.43	349	P	P	07 20 57.5	+0.2

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*KRNET **12** 07:28:49.7±0.1, 42°.66N×80°.43E, mb3.0*

*NNC **12** 07:28:50.6±0.8, 42°.59N×80°.34E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=4.8km s-min=4.4km az=149.0*

*SOME **12** 07:28:50.8, 42°.58N×80°.25E, h10^{km}*

ISC 12 07:28:51.0±1.9, 42°.60N±0°.05×80°.24E±0°.06, h6^{km}±11^{km}, n41, σ1^{s}61/68, 12C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye 2.6nm,0.3s	0.91	323	⇑P	Pb	07 29 09.2	-0.1
PDGK	9.2nm,0.3s			⇑S	Sn	07 29 23.1	-0.9
UZB	Uzynbulak 9.6nm,0.1s	1.05	302	*e*P	Pn	07 29 12.0	-0.4
UZB	25nm,0.2s			*e*S	Sn	07 29 27.5	+0.1
UZB	Uzynbulak 9.6nm,0.1s	1.05	302	P	Pn	07 29 12.3	0.0
UZB	25nm,0.2s			S	Sn	07 29 27.5	+0.1
PRZ	Przheval'sk baz=65	1.37	266	⇓*i*P	Pg	07 29 17.2	0.0
PRZ	baz=65			⇓*e*S	Sg	07 29 37.4	+2.5
SATY	Saty 3.2nm,0.1s	1.43	289	*e*P	Pg	07 29 19.3	+1.0
SATY	117nm,0.1s			*e*S	Sg	07 29 39.7	+2.9
SATY	Saty 3.2nm,0.1s	1.43	289	P	Pg	07 29 19.3	+1.0
SATY	117nm,0.1s			S	Sg	07 29 39.7	+2.9
KPKS	Kokpek 28nm,0.2s	1.43	308	*e*P	Pg	07 29 18.9	+0.4
KPKS	126nm,0.2s			*e*S	Sg	07 29 38.8	+1.7
KURS	Kuram 5.6nm,0.6s	1.76	301	*e*P	Pb	07 29 24.0	+0.3
KURS	22nm,0.3s			*e*S	Sg	07 29 47.9	+0.4
KURS	Kuram 5.6nm,0.6s	1.76	301	P	Pb	07 29 24.0	+0.3
KURS	22nm,0.3s			S	Sg	07 29 48.7	+1.2
DJR	Jarkent 7.2nm,0.2s	1.76	349	*e*P	Pb	07 29 24.3	+0.5
DJR	65nm,0.3s			*e*S	Sg	07 29 48.3	+0.7
DJR	Jarkent 9.5nm,0.2s	1.76	349	P	Pb	07 29 23.5	-0.3
DJR	65nm,0.3s			S	Sg	07 29 47.3	-0.2
ANVS	Anan'yevo baz=75	1.91	276	⇑*i*P	Pb	07 29 25.6	-0.7
ANVS	baz=75			⇑*i*S	Sg	07 29 52.3	0.0
TARG	Taragay, Kyrgy baz=45	2.01	245	⇓*i*P	Pb	07 29 27.6	-0.6
TARG	baz=45			⇓*e*S	Sg	07 29 55.1	-0.5
KDJ	Kajisay baz=59	2.32	259	⇓*e*P	Pb	07 29 31.6	-1.7
KDJ	baz=59			⇓*i*S	Sb	07 30 02.1	-0.2
MDOK	Medeo 3.2nm,0.2s	2.41	284	*e*P	Pb	07 29 35.9	+1.0
MDOK	39nm,0.4s			*e*S	Sg	07 30 07.9	-0.6
MDOK	Medeo 8.7nm,0.7s	2.41	284	⇓Pg	Pg	07 29 36.7	-0.6
MDOK	28nm,0.5s			⇑Lg	Lg	07 30 08.4	
MDOK	Medeo 3.2nm,0.2s	2.41	284	Pg	Pb	07 29 35.9	+1.0
MDOK	39nm,0.4s			Lg	Lg	07 30 07.9	
TNSS	Tian-Shan 2.4nm,0.1s	2.46	281	*e*P	Pg	07 29 37.0	-1.2
TNSS	14nm,0.3s			*e*S	Sg	07 30 10.4	+0.3
TNSS	Tian-Shan 2.4nm,0.1s	2.46	281	Pg	Pg	07 29 37.0	-1.2
TNSS	14nm,0.3s			Lg	Lg	07 30 10.4	
CHKK	Chushkaly 3.0nm,0.1s	2.69	299	*e*P	Pb	07 29 40.6	+1.1
CHKK	27nm,0.3s			*e*S	Sg	07 30 15.9	-1.4
CHKK	Chushkaly 3.0nm,0.1s	2.69	299	Pg	Pb	07 29 40.6	+1.1
CHKK	27nm,0.3s			Lg	Lg	07 30 15.9	
KAPS	Kapalarasan 2.2nm,0.2s	2.76	347	*e*P	Pb	07 29 41.7	+1.0
KAPS	36nm,0.4s			*e*S	Sg	07 30 18.1	-1.5
KAPS	Kapalarasan 4.2nm,0.2s	2.76	347	Pg	Pb	07 29 40.7	0.0
KAPS	36nm,0.4s			Lg	Lg	07 30 16.3	
KTBS	Karatobe 1.8nm,0.2s	2.83	294	*e*P	Pb	07 29 43.0	+1.0
KTBS	60nm,0.5s			*e*S	Sg	07 30 20.1	-1.8
KTBS	Karatobe 1.8nm,0.2s	2.83	294	Pg	Pb	07 29 43.0	+1.0
KTBS	60nm,0.5s			Lg	Lg	07 30 20.1	
MTBS	Maitube 1.8nm,0.1s	2.85	282	*e*P	Pb	07 29 43.8	+1.4
MTBS	27nm,0.5s			*e*S	Sg	07 30 21.4	-1.2
MTBS	Maitube 1.8nm,0.1s	2.85	282	Pg	Pb	07 29 43.8	+1.4
MTBS	27nm,0.5s			Lg	Lg	07 30 21.4	
ULHL	Ulahol baz=64	2.98	264	⇑*i*P	Pn	07 29 41.2	+2.2
ULHL	baz=64			⇑*i*S	Sb	07 30 18.6	-2.8
KUU	Kurty 0.8nm,0.2s	3.13	296	*e*P	Pb	07 29 47.9	+0.9
KUU	17nm,0.3s			*e*S	Sg	07 30 28.7	-2.8
KUU	Kurty 0.8nm,0.2s	3.13	296	Pg	Pb	07 29 47.9	+0.9
KUU	17nm,0.3s			Lg	Lg	07 30 28.7	
KST	Kastek 2.0nm,0.2s	3.18	279	*e*P	Pb	07 29 49.5	+1.5
KST	16nm,0.5s			*e*S	Sg	07 30 31.6	-1.5
KST	Kastek 2.0nm,0.2s	3.18	279	Pg	Pb	07 29 49.5	+1.5
KST	16nm,0.5s			Lg	Lg	07 30 31.6	
BOOM	Boomskoye usch baz=69	3.18	269	⇑*e*P	Pn	07 29 43.9	+2.2
BOOM	baz=69			⇑*e*S	Sb	07 30 23.1	-4.0
TKM2	Tokmak 2 2.4nm,0.7s	3.44	277	⇓Pg	Pg	07 29 55.4	-1.4
TKM2	5.8nm,0.3s			⇑Lg	Lg	07 30 41.9	
TKM2	Tokmak 2 baz=76	3.44	277	⇓*e*P	Pn	07 29 47.2	+1.9
TKM2	baz=76			⇓*e*S	Sn	07 30 29.4	+3.0
KRBS	Karabastau 0.5nm,0.2s	3.52	290	*e*P	Pb	07 29 55.2	+1.5
KRBS	7.2nm,0.2s			*e*S	Sg	07 30 41.0	-2.9
KRBS	Karabastau 0.5nm,0.2s	3.52	290	Pg	Pb	07 29 55.2	+1.5
CHMS	Chumysh 4.4nm,0.6s	4.06	277	⇓Lg	Lg	07 31 00.5	
SGDS	Sogindy 1.5nm,0.4s	4.20	284	*e*P	Pb	07 30 07.1	+1.7
SGDS	4.8nm,0.6s			*e*S	Sg	07 31 01.3	-4.6
SGDS	Sogindy 1.5nm,0.4s	4.20	284	Pg	Pb	07 30 07.1	+1.7
MK31	Makanchi Array 0.1nm,0.1s,baz=204,slow=14,SNR=17	4.44	18	⇑Pn	Pn	07 29 59.4	+0.5
MK31	0.4nm,0.3s,baz=194,slow=18,SNR=4.7			Sn	Sn	07 30 51.0	+0.2
MK31	1.1nm,0.3s,baz=188,slow=20,SNR=13			⇑Lg	Lg	07 31 09.3	

NNC 12 07:30:32.3±0.3, 50°.02N×78°.78E, h0^{km}, mb3.8, mpv3.5, 8C-4D, Error ellipse: s-maj=4.7km s-min=1.4km az=79.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.59	343	P	Pg	07 30 43.8	+0.3
KUR07				S	Sg	07 30 52.6	+1.4
KUR06	Kurchatov Arra	0.60	344	P	Pg	07 30 44.2	+0.2
KUR06				S	Sb	07 30 53.5	-1.4
KUR14	Kurchatov Arra	0.60	349	P	Pg	07 30 44.1	+0.2
KUR14				S	Sg	07 30 52.9	+1.1
KUR15	Kurchatov Arra	0.61	347	P	Pg	07 30 44.4	+0.3
KUR15				S	Sg	07 30 53.5	+1.5
KURBB	Kurchatov Arra 33nm,0.4s	0.62	345	⇓P	Pg	07 30 44.4	+0.1
KURBB	167nm,0.6s			⇑S	Sg	07 30 53.6	+1.3
KUR16	Kurchatov Arra	0.63	344	P	Pg	07 30 44.6	+0.2
KUR16				S	Sg	07 30 53.9	+1.3
KUR05	Kurchatov Arra	0.64	346	P	Pg	07 30 44.8	+0.2
KUR05				S	Sg	07 30 53.7	+0.8
KUR17	Kurchatov Arra	0.64	342	⇑P	Pg	07 30 44.7	0.0
KUR17				⇑S	Sg	07 30 54.1	+1.1
KUR04	Kurchatov Arra	0.66	347	P	Pg	07 30 45.2	+0.2
KUR04				S	Sg	07 30 53.9	+0.4
KURK	Kurchatov 14nm,0.4s	0.70	352	⇑P	Pg	07 30 45.8	0.0
KURK	48nm,0.8s			⇓S	Sg	07 30 55.8	+0.9
SEM	Semipalatinsk 5.4nm,0.1s	1.02	67	P	Pg	07 30 52.3	+0.4
SEM	28nm,0.1s			S	Sb	07 31 07.6	+0.6
BRZS	Berezniki 20nm,0.5s	3.94	272	Pg	Pg	07 31 45.3	-2.4
BRZS	6.3nm,0.3s			Lg	Lg	07 32 38.0	
MK31	Makanchi Array 0.3nm,0.2s,baz=328,slow=16,SNR=5.1	3.99	143	⇑Pn	Pn	07 31 36.6	+1.9
MK31	2.1nm,0.4s,baz=326,slow=15,SNR=6.8			⇑Pg	Pb	07 31 45.2	+1.7
MK31	12nm,0.6s,baz=311,slow=25,SNR=18			⇑Lg	Lg	07 32 40.3	
OTUK	Ortayu 1.1nm,0.2s	4.59	250	⇓Pn	Pn	07 31 43.8	+0.8
OTUK	0.8nm,0.3s			⇑Pg	Pb	07 31 56.3	+2.6
OTUK	4.7nm,0.5s			⇓Lg	Lg	07 32 57.9	
KAPS	Kapalarasan 5.4nm,0.4s	4.76	175	Pg	Pb	07 31 59.2	+2.6
KAPS	14nm,0.6s			Lg	Lg	07 33 02.2	
ZSN	Zaisan 6.2nm,0.2s	4.78	120	Pg	Pb	07 31 56.4	-0.6
ZSN	7.8nm,0.5s			Lg	Lg	07 32 57.2	
DJR	Jarkent 2.2nm,0.3s	5.73	173	Pg	Pb	07 32 17.4	+4.2
DJR	5.6nm,0.3s			Lg	Lg	07 33 33.4	

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BTLS  Baital            5.92 215  Pg     Pb      07 32 19.4 +2.9
      2.0nm,0.3s
BTLS                              Lg     Lg      07 33 36.7
      3.1nm,0.4s
CHKK  Chushkaly         6.29 192  Pg     Pg      07 32 27.9 -4.9
      1.4nm,0.1s
CHKK                              Lg     Lg      07 33 51.6
      9.8nm,0.2s
KUU   Kurty             6.36 196  Pg     Pb      07 32 27.1 +3.3
      1.4nm,0.1s
KUU                               Lg     Lg      07 33 50.3
      8.9nm,0.4s
PDGK  Podgornoye        6.71 176  Pg     Pg      07 32 35.5 -5.4
      0.7nm,0.3s
PDGK                              Lg     Lg      07 34 04.7
      1.8nm,0.4s
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*TAP **12** 07:31:13.0, 24°.69N×122°.00E, h10km, ML3.1, B*
*JMA **12** 07:31:13.6±0.1, 24°.7N±0°.3×122°.0E±0°.3, h32km, MV2.6/8, TAIWAN REGION*
ISC 12 07:31:12.2±0.9**, 24°.61N**±0°.03×**122°.07E**±0°.02**, h13**km±7km**, n49, σ0ˢ.80**/89**, Taiwan region**

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Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
TWC   Suao              0.20 269  eP     Pg      07 31 17.4 +0.7
      baz=239
TWC                               S      Sg      07 31 19.9 +0.1
      baz=239
EGS                     0.26 331  i P    Pg      07 31 17.2 -0.5
      baz=341
EGS                               S      Sg      07 31 20.4 -1.0
      baz=341
EWUT  Wuta              0.32 238  i P    Pb      07 31 20.2 +0.5
      baz=220
EWUT                              eS     Sb      07 31 24.5 -0.2
      baz=220
NDS   Dongshan          0.33 274  i P    Pg      07 31 19.3 +0.5
      baz=258
NDS                               S      Sg      07 31 23.8 +0.6
      baz=258
NTC   Toucheng          0.33 317  i P    Pg      07 31 18.7 -0.2
      baz=317
NTC                               eS     Sg      07 31 23.3  0.0
      baz=317
ILA   Ilan              0.33 297  P      Pg      07 31 19.1 +0.1
      baz=289
ILA                               eS     Sg      07 31 23.3 -0.2
      baz=289
ENA   Nanau             0.35 239  P      Pb      07 31 20.9 +0.6
      baz=221
ENA                               S      Sb      07 31 25.6 -0.2
      baz=221
TWE   Neicheng          0.39 286  P      Pg      07 31 20.0 +0.1
      baz=276
TWE                               S      Sg      07 31 24.6 -0.5
      baz=276
TWB1  Santiao Chiao     0.40 349  eP     Pg      07 31 19.7 -0.5
      baz=359
TWB1                              eS     Sg      07 31 23.8 -1.8
      baz=359
TIPB  Shuangxi          0.42 328  P      Pg      07 31 20.2 -0.4
      baz=330
TIPB                              eS     Sg      07 31 25.7 -0.6
      baz=330
EHP   Heping Village    0.43 225  P      Pn      07 31 23.2 -0.8
      baz=211
EHP                               eS     Sb      07 31 30.5 +2.5
      baz=211
ENTT  Nioudou           0.46 273  P      Pb      07 31 21.8 -0.4
      baz=263
FUSB  Fushanzhiwuyua    0.47 288  i P    Pg      07 31 21.5 +0.1
      baz=281
FUSB                              S      Sg      07 31 28.5 +0.8
      baz=281
LATG  Datong            0.50 261  P      Pb      07 31 23.0  0.0
      baz=250
LATG                              S      Sb      07 31 30.2  0.0
      baz=250
SXI1  Grass Mountain    0.51 340  P      Pg      07 31 22.0 -0.3
      baz=344
SXI1                              eS     Sg      07 31 29.0 -0.1
      baz=344
WFSB  Wu-fen Shan       0.53 330  i P    Pg      07 31 22.5 -0.1
      baz=332
WFSB                              S      Sg      07 31 29.3 -0.3
      baz=332
NWLT  Wulai             0.54 288  P      Pg      07 31 22.8  0.0
      baz=281
NWLT                              eS     Sg      07 31 29.1 -1.0
      baz=281
TWA   Mucha             0.58 310  P      Pg      07 31 23.4 -0.1
      baz=308
TWA                               S      Sg      07 31 30.3 -0.8
      baz=308
TNOU  National Taiwa    0.60 333  P      Pg      07 31 23.7 -0.2
      baz=335
TNOU                              S      Sg      07 31 31.4 -0.4
      baz=335
NHDH  Xindian Distri    0.61 305  P      Pg      07 31 24.0  0.0
      baz=302
NHDH                              S      Sg      07 31 31.1 -1.0
      baz=302
ETL   Fush Village      0.61 222  P      Pn      07 31 25.8 -0.8
      baz=213
ETL                               S      Sn      07 31 34.5 -1.8
      baz=213
NACB  Ninganchiao       0.62 225  P      Pn      07 31 25.8 -0.8
      baz=216
NACB                              eS     Sb      07 31 34.3 +0.9
      baz=216
YHNB  Yeheng            0.64 275  P      Pb      07 31 25.5 +0.2
      baz=268
YHNB                              S      Sg      07 31 33.1  0.0
      baz=268
TATO  Taipei            0.64 304  P      Pg      07 31 24.8 +0.1
      baz=302
TATO                              S      Sg      07 31 32.3 -0.9
      baz=302
NSK   Sanguang          0.65 276  P      Pg      07 31 25.3 +0.4
      baz=268
NSK                               eS     Sg      07 31 33.0 -0.6
      baz=268
NNSB  Datong            0.66 254  P      Pb      07 31 26.2 +0.6
      baz=245
NNSB                              S      Sb      07 31 35.1 +0.5
      baz=245
NNS   Nan Shan          0.66 255  P      Pb      07 31 25.9 +0.2
      baz=246
TAP   Taipei            0.67 310  eP     Pg      07 31 25.9 +0.7
      baz=308
TAP                               i S    Sg      07 31 33.7 -0.3
      baz=308
ETLH  Xiulin Townshi    0.67 233  P      Pn      07 31 27.1 -0.4
      baz=224
ETLH                              S      Sn      07 31 36.7 -1.2
      baz=224
TWD   Chiawan           0.69 219  P      Pn      07 31 27.2 -0.4
      baz=211
TWD                               eS     Sn      07 31 36.5 -1.6
      baz=211
YM01  YM01              0.70 319  P      Pg      07 31 26.1 +0.3
      baz=319
YM01                              S      Sg      07 31 34.0 -1.1
      baz=319
YM08  YM08              0.72 323  eP     Pg      07 31 26.1 -0.1
      baz=323
ANP   Anpu              0.76 319  P      Pg      07 31 26.9  0.0
      baz=319
TWS1  Kuangyinshan      0.77 309  eP     Pb      07 31 28.0 +0.6
      baz=308
TWY   Chenhua           0.79 327  P      Pg      07 31 27.6 +0.1
      baz=328
TWY                               i S    Sg      07 31 37.5 -0.3
      baz=328
NTST  Danshui           0.79 314  eP     Pg      07 31 28.1 +0.7
      baz=313
NTST                              eS     Sg      07 31 38.9 +1.1
      baz=313
JYNG  Yonagunijimaku    0.81 101  P      Pn      07 31 30.1 +0.8
JYNG                              eS     Sn      07 31 41.7 +0.5
ETM   Tongmen           0.83 220  P      Pn      07 31 29.8 +0.2
      baz=212
ETM                               eS     Sn      07 31 40.6 -1.2
      baz=212
FUSS  Fushou            0.84 244  P      Pn      07 31 29.3 -0.6
      baz=237
FUSS                              eS     Sn      07 31 42.6 +0.3
      baz=237
YOJ   Yonaguni jima     0.87 100  P      Pn      07 31 31.4 +1.3
      baz=103
YOJ                               eS     Sn      07 31 43.8 +1.1
      baz=103
YOJ   Yonaguni jima     0.87 100  P      Pn      07 31 30.9 +0.8
YOJ                               S      Sn      07 31 43.1 +0.5
WHF   Hehuan Shan       0.87 238  eP     Pn      07 31 30.4 -0.2
      baz=230
NCU   National Centr    0.88 294  eP     Pg      07 31 27.3 -1.9
      baz=290
NCU                               eS     Sb      07 31 42.0 +1.0
      baz=290
TDCB  Techi             0.91 247  eP     Pn      07 31 32.4 +1.6
      baz=240
CHGB  Renai             0.99 236  eP     Pn      07 31 32.6 +0.6
      baz=230
PCYT  Pengchaiyu        1.01 360  P      Pg      07 31 31.7 -0.1
      baz=4.0
PCYT                              S      Sg      07 31 44.7 -0.3
      baz=4.0
HATJ  Hateruma jima     1.67 109  eS     Sg      07 32 04.2 -1.8
JKRS  Kuro-shima        1.80 102  eP     Pb      07 31 44.3 -0.8
JKRS                              S      Sn      07 32 06.2 +0.5
JIJ   Ishigaki jima     1.90  97  eP     Pb      07 31 45.8 -1.0
JIJ                               eS     Sn      07 32 09.0 +0.8
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*JMA **12** 07:32:56.9±0.1, 40°.4N±0°.3×142°.3E±0°.6, h40km, MV3.7/40, NE OFF IWATE PREF*
JMA Felt I J1 at NE OFF IWATE PREF .
*IDC **12** 07:32:58.5±2.2, 40°.85N×140°.89E, h0km, mb3.5/3, mbtmp3.5/5, ML2.8/2, MS3.2/1, Error ellipse: s-maj=48.5km s-min=26.0km az=127.0*
ISC 12 07:32:57.1±1.4**, 40°.39N**±0°.04×**142°.20E**±0°.09**, h43**km±13km**, n20, σ1ˢ.00**/22**, mb3.5**/3**, 13D, Near east coast of eastern Honshu**

```
Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
JKEN  Kujiedanarisaw    0.42 244 ⇓iP     Pn      07 33 06.9  0.0
JKEN                             ⇓eS     Sn      07 33 13.8  0.0
JTH   Tanohata          0.52 210  i P    Pn      07 33 07.9 -0.3
JTH                               S      Sn      07 33 15.8 -0.2
JANG  Nango             0.53 268 ⇓iP     Pn      07 33 08.6 +0.3
JANG                             ⇓S      Sn      07 33 16.7 +0.4
JKZ   Kuzumaki          0.78 239 ⇓iP     Pn      07 33 12.2 +0.5
JKZ                              ⇓S      Sn      07 33 22.8 +0.5
JARK  Aomorirokkasho    0.89 314 ⇓iP     Pn      07 33 13.1  0.0
JARK                             ⇓S      Sn      07 33 24.8  0.0
JTM   Tenmabayashi      0.95 295 ⇓iP     Pn      07 33 14.1 +0.1
JOM   Ohasama           1.15 218 ⇓iP     Pn      07 33 17.1 +0.4
JOM                              ⇓S      Sn      07 33 31.5 +0.2
JAH   Hinai             1.22 261 ⇓iP     Pn      07 33 18.2 +0.7
JAH                              ⇓S      Sn      07 33 33.6 +0.8
JOT   Ohata             1.32 319  P      Pn      07 33 19.1 +0.1
JOT                               eS     Sn      07 33 36.5 +1.1
ASAJ  Asahikawa         3.74   4  Pn     Pn      07 33 52.2  0.0
      1.0nm,0.3s,baz=72,slow=9.4,SNR=2.0
ASAJ                              Sn     Sn      07 34 37.3 +2.4
      0.6nm,0.3s,baz=345,slow=33,SNR=1.9
      4.3nm,0.3s
MJAR  Matsushiro Arr    4.96 220  Pn     Pn      07 34 11.2 +2.2
      0.2nm,0.3s,baz=19,slow=14,SNR=4.8
      2.0nm,0.4s
H11N2 WAKE ISLAND Hy   29.50 127  T      T       08 10 22.7
      baz=319,slow=75,SNR=46
H11N1 WAKE ISLAND Hy   29.51 127  T      T       08 10 23.3
      baz=319,slow=75,SNR=49
H11N3 WAKE ISLAND Hy   29.52 127  T      T       08 10 22.7
      baz=319,slow=75,SNR=35
H11S1 WAKE ISLAND Hy   30.32 129  T      T       08 11 22.2
      baz=321,slow=76,SNR=12
H11S3 WAKE ISLAND Hy   30.33 129  T      T       08 11 21.3
      baz=321,slow=76,SNR=11
H11S2 WAKE ISLAND Hy   30.34 129  T      T       08 11 23.7
      baz=321,slow=76,SNR=8.3
ZALV  Zalesovo Beam    40.18 310  P      P       07 40 27.9 -0.9
      0.8nm,0.4s,baz=76,slow=7.6,SNR=2.5
      0.8nm,0.4s
MKAR  Makanchi Array   42.94 299  P      P       07 40 49.8 -1.8
      0.6nm,0.7s,baz=83,slow=9.7,SNR=4.7
      0.6nm,0.7s
ILAR  Eielson Array    46.35  34  P      P       07 41 27.9 +9.5
      0.2nm,0.6s,baz=268,slow=6.3,SNR=2.5
ILAR                              LR     LR      08 04 26.6
      comp=Z,28nm,19.5s,baz=248,slow=41
      0.2nm,0.6s
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*IDC **12** 07:34:48.4±1.4, 6°.39S×103°.62E, h0km, mb4.2/10, mbtmp4.2/11, ML3.6/1, MS3.1/1, Error ellipse: s-maj=48.8km s-min=15.8km az=48.0*
*DJA **12** 07:34:50.6±1.5, 7°S±5°×10°4E±°, h22km±16km, M4.4/7, mb5.0/1, MLv4.1/7*
ISC 12 07:34:53.6±0.8**, 6°.48S**±0°.08×**103°.70E**±0°.07**, h35**km**, n24, σ1ˢ.02**/21**, mb4.2**/9**, Southwest of Sumatera**

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Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
KASI  Kota Agung        1.24  40  P      Pn      07 35 13.6 -0.8
BLSI  Bandar Lampung    1.89  54  P      Pn      07 35 22.1 -1.4
BLSI                              S      Sn      07 35 47.7 +1.5
KLI   Kotabumi          1.98  36  P      Pn      07 35 25.0 +0.4
MDSI  Maura Dua         2.04  14  P      Pn      07 35 25.6 +0.1
MDSI                              S      Sn      07 35 51.7 +2.0
MNAI  Manna             2.23 341  P      Pn      07 35 28.0 -0.1
LEM   Lembang           3.91  95  Pn     Pn      07 35 51.4  0.0
      4.1nm,0.3s,baz=294,slow=20,SNR=1.9
LEM                               Sn     Sn      07 36 36.6 +0.5
      5.4nm,0.3s,baz=7.0,slow=23,SNR=1.9
LEM                               LR     LR      07 37 43.9
      comp=Z,231nm,18.6s,baz=170,slow=44
      16nm,0.4s
PPSI  Pulau Pagai       5.21 315  P      Pn      07 36 09.6 +0.5
BATI  Baumata          20.09 102  P      P       07 39 25.6 +1.1
      35nm,0.7s,baz=287,slow=19,SNR=3.6
      35nm,0.7s
CMAR  Chiang Mai Arr   25.22 349  P      P       07 40 14.6 -1.7
      5.4nm,0.8s,baz=182,slow=8.9,SNR=28
      5.4nm,0.8s
H01W3 Cape Leeuwin H   29.86 163  T      T       08 12 14.6
      baz=340,slow=76,SNR=7.2
H01W2 Cape Leeuwin H   29.87 163  T      T       08 12 20.0
      baz=340,slow=76,SNR=14
H01W1 Cape Leeuwin H   29.88 163  T      T       08 12 17.3
      baz=340,slow=76,SNR=8.3
H08S2 Diego Garcia H   30.99 266  T      T       08 13 41.3
      baz=90,slow=75,SNR=16
H08S3 Diego Garcia H   31.00 266  T      T       08 13 40.7
      baz=90,slow=75,SNR=17
H08S1 Diego Carcia H   31.01 266  T      T       08 13 40.1
      baz=90,slow=75,SNR=15
WRA   Warramunga Arr   32.61 117  P      P       07 41 22.6 +0.2
      1.1nm,0.8s,baz=288,slow=12,SNR=7.7
      1.1nm,0.8s
ASAR  Alice Springs    33.68 124  P      P       07 41 31.6  0.0
      0.6nm,0.7s,baz=308,slow=7.4,SNR=7.8
      0.6nm,0.7s
STKA  Stephens Creek   43.44 131  P      P       07 42 54.4 +0.9
      2.6nm,0.9s,baz=296,slow=8.8,SNR=3.1
      2.6nm,0.9s
KSRS  Korea Array      49.21  26  P      P       07 43 38.0 -0.6
      2.2nm,0.7s,baz=220,slow=7.7,SNR=6.9
      2.2nm,0.7s
SONM  Songino Array    54.13   2  P      P       07 44 15.1 -0.2
      3.8nm,0.8s,baz=181,slow=9.1,SNR=14
      3.8nm,0.8s
MKAR  Makanchi Array   56.35 342  P      P       07 44 29.9 -1.3
      1.3nm,0.5s,baz=144,slow=8.2,SNR=16
      1.3nm,0.5s
ZALV  Zalesovo Beam    62.27 348  P      P       07 45 10.7 -1.2
      1.3nm,0.4s,baz=164,slow=5.9,SNR=11
      1.3nm,0.4s
KBZ   Khabaz           74.09 319  P      P       07 46 26.7 +0.5
      1.9nm,0.7s,baz=164,slow=5.4,SNR=5.0
      1.9nm,0.7s
TXAR  Lajitas Array   145.61  45  PKPbc  PKPab   07 54 29.9 +0.3
      1.7nm,0.6s,baz=288,slow=1.2,SNR=38
```

IDC 12 07:45:12.5±7.9**, 18°.50S**×**174°.24W, h0**km**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=342.9km s-min=39.6km az=142.0, Tonga Islands**

```
Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
WRA   Warramunga Arr   48.42 259  P      P       07 53 56.9  0.0
      0.2nm,0.3s,baz=97,slow=7.8,SNR=8.0
      0.2nm,0.3s
ASAR  Alice Springs    48.45 254  P      P       07 53 57.0 -0.2
      0.4nm,0.5s,baz=94,slow=8.0,SNR=7.4
      0.4nm,0.5s
ILAR  Eielson Array    85.62  11  P      P       07 57 52.4 -0.1
      0.2nm,0.6s,baz=224,slow=5.6,SNR=4.8
      0.2nm,0.6s
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*ISK **12** 07:53:35.5, 39°.68N×28°.24E, h5km, ML2.6/3*
*DDA **12** 07:53:36.5±0.0, 39°.72N×28°.24E, h7km±3km, ML2.0*
ISC 12 07:53:36.2±1.2**, 39°.71N**±0°.02×**28°.25E**±0°.03**, h5**km±12km**, n23, σ0ˢ.74**/36**, Turkey**

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Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
DURS  Dursunbey         0.20 120  P      Pg      07 53 41.0 +0.8
BALY  Balya             0.48 274  P      Pb      07 53 46.4 -0.8
BALY                              S      Sb      07 53 53.0 -1.7
BALY                              i AML  AML     07 53 54.0
      comp=N,75nm,0.3s
BALY                              i AML  AML     07 53 56.0
      comp=E,41nm,0.5s
STEP  BALIKESIR_Sava    0.52 231  P      Pb      07 53 47.3 -0.6
STEP                              S      Sb      07 53 54.8 -1.0
STEP                              i AML  AML     07 53 56.0
      comp=E,144nm,0.3s
STEP                              i AML  AML     07 53 59.0
      comp=N,77nm,0.4s
GONE  Gonen-Balikesi    0.55 309  PG     Pb      07 53 47.6 -0.7
GONE                              SG     Sb      07 53 56.1 -0.4
ORLT  Orhaneli          0.61  56  PG     Pg      07 53 48.5 +0.7
DEMI  Demirci           0.76 151  P      Pb      07 53 52.0 +0.1
DEMI                              i AML  AML     07 54 05.0
      comp=N,76nm,0.3s
DEMI                              i AML  AML     07 54 06.0
      comp=E,84nm,0.2s
ULDT  Uludag            0.81  57  P      Pg      07 53 51.7 -0.1
ULDT                              i AML  AML     07 53 55.0
      comp=N,173nm,1.1s
ULDT                              i AML  AML     07 53 58.0
      comp=E,71nm,1.1s
ULDT                              S      Sg      07 54 02.5 +0.2
STBT  Saitabat          0.88  60  P      Pg      07 53 53.4 +0.3
STBT                              S      Sg      07 54 04.1 -0.4
STBT                              i AML  AML     07 54 07.0
      comp=N,202nm,0.3s
STBT                              i AML  AML     07 54 09.0
      comp=E,154nm,0.5s
AKHS  Akhisar           0.89 202  P      Pb      07 53 54.2  0.0
AKHS                              S      Sb      07 54 06.6 +0.2
AKHS                              i AML  AML     07 54 09.0
      comp=E,89nm,0.5s
AKS   Akhisar           0.89 202  PG     Pg      07 53 53.3 +0.1
AKS                               SG     Sb      07 54 06.1 -0.2
IGD   Bursa             0.92  52  P      Pn      07 53 55.1 -0.7
IGD                               i AML  AML     07 54 08.0
      comp=E,45nm,0.5s
IGD                               i AML  AML     07 54 10.0
      comp=N,34nm,0.4s
ARMT  Armutlu           0.98  29  PG     Pb      07 53 55.5 -0.2
GDZ   Gediz             1.14 122  P      Pn      07 53 58.8 -0.2
GDZ                               i AML  AML     07 54 16.0
      comp=E,45nm,0.5s
GDZ                               i AML  AML     07 54 16.0
      comp=N,44nm,0.6s
KURT  Yalova, Merkez    1.15  40  P      Pg      07 53 58.0 -0.3
KURT                              S      Sg      07 54 12.6 -0.6
KURT                              i AML  AML     07 54 20.0
      comp=N,24nm,0.6s
ZEDA  zmir-Bergama      1.17 231  P      Pg      07 53 58.1 -0.5
ZEDA                              S      Sb      07 54 14.0 -0.4
ZEDA                              i AML  AML     07 54 17.0
      comp=N,29nm,0.6s
ZEDA                              i AML  AML     07 54 17.0
      comp=E,38nm,0.3s
MANT  Manisa            1.24 169  P      Pn      07 54 00.9 +0.5
MANT                              S      Sg      07 54 15.5 -0.4
MANT                              i AML  AML     07 54 19.0
      comp=N,28nm,0.4s
MANT                              i AML  AML     07 54 19.0
      comp=E,34nm,0.3s
GZKV  Gazikoy-Tekird    1.26 326  PN     Pg      07 54 01.3 +1.0
GZKV                              SN     Sn      07 54 19.7 +2.0
MAR3  Marsite Statio    1.27 325  PN     Pg      07 54 01.5 +1.0
BAYC  CANAKKALE_Bayr    1.31 272  P      Pg      07 54 02.7 +1.4
BAYC                              i AML  AML     07 54 20.0
      comp=N,40nm,0.5s
BAYC                              i AML  AML     07 54 21.0
      comp=E,31nm,0.2s
KLYT  Kilyos            1.66  21  PN     Pb      07 54 07.0 -0.3
KLYT                              SN     Sg      07 54 29.8 +0.2
BORA  Eskisehir         1.71  83  PN     Pb      07 54 07.5 -0.7
BORA  Eskisehir         1.71  83  P      Pb      07 54 08.1 -0.1
BORA                              i AML  AML     07 54 33.0
      comp=E,27nm,0.2s
BORA                              i AML  AML     07 54 33.0
      comp=N,18nm,0.5s
CTYL  Yalikoy Yolu      1.77   1  PN     Pb      07 54 08.7 -0.4
CTYL                              SN     Sg      07 54 32.9 -0.1
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*BJI **12** 07:54:12.9±0.0, 24°.47N×94°.16E, h14km, mb4.6/44, mB4.6/24, ML4.8/5, Ms4.1/40, Ms7 3.7/36*
*NDI **12** 07:54:18.8±4.0, 24°.38N×94°.19E, h84km±34km, mb4.6, mb4.8(NEIC)*
*IDC **12** 07:54:18.5±0.4, 24°.29N×94°.28E, h72km±3km, mb4.0/22, mbtmp4.3/23, MS3.5/32, Error ellipse: s-maj=8.7km s-min=7.9km az=95.0*
*NEIC **12** 07:54:19.1±1.4, 24°.27N±0°.07×94°.31E±0°.08, h71km±7km, mb4.8/72, Error ellipse: s-maj=10.9km s-min=10.4km az=89.0*
ISC 12 07:54:18.6±0.3**, 24°.30N**±0°.03×**94°.16E**±0°.03**, h72**km±3km**, h72km:pP-P, n303, σ1ˢ.68**/324**, mb4.8**/73**, 17C-7D, Myanmar-India border region**

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Code  Station Name      Δ°   AZ°  Phase ID       Time       Res
                                  Op     ISC     h  m  s    ISC
SILR  SILCHAR           1.33 291  eP     Pn      07 54 42.8 +1.5
KOHI  KOHIMA            1.41 358  eP     Pn      07 54 42.9 +0.3
AZL   Aizawl            1.46 248  eP     Pn      07 54 44.0 +0.8
MOKO  MOKOCHONG         2.04   9  eP     Pn      07 54 50.8 -0.2
SHL   Shillong          2.42 302  eP     Pn      07 54 56.9 +0.7
JORH  JORHAT            2.43   2  ex     Pn      07 55 00.5 +4.3
TEZP  TEZPUR            2.62 332  eP     Pn      07 54 57.6 -1.0
AGT   Agartala          2.69 262  eP     Pn      07 55 01.1 +1.4
BELO  BELONIA           2.70 248  ex     Pn      07 55 09.2 +9.4
BRDH  Bariadhala        2.82 236  P      Pn      07 55 01.9 +0.5
      0.9nm,0.4s,baz=0.0,slow=20,SNR=15
BRDH                              S      Sn      07 55 36.9 +2.5
      13nm,0.3s,baz=360,slow=24,SNR=37
ITAN  ITANAGAR          2.86 352  eP     Pn      07 55 01.4 -0.5
GUWA  GUWAHATI          2.93 311  eP     Pn      07 55 01.9 -0.9
LKP   Lekhapani         3.38  26  eP     Pn      07 55 08.3 -0.7
TURI  Tura              3.69 290  eP     Pn      07 55 14.2 +0.8
LSA   Lhasa             6.01 334  Pn     Pn      07 55 46.2 +0.8
LSA   Lhasa             6.01 334  P      Pn      07 55 46.7 +1.3
LSA                               S      Sn      07 56 51.4 -1.7
LSA                               LR     LR
      comp=N,360nm,3.4s
LSA                               LR     LR
      comp=E,900nm,3.6s
LSA                               LR     LR
      comp=Z,680nm,3.1s
ODAN  Odare             6.62 294  ePn    Pn      07 55 53.4 -0.2
ODAN                              eSn    Sn      07 57 04.8 -3.0
      comp=Z,890nm,0.6s
CHTO  Chiang Mai        7.04 140  Pn     Pn      07 55 58.3 -0.8
CHTO  Chiang Mai        7.04 140  P      Pn      07 55 59.6 +0.5
PZH   PanZhiHua         7.20  71  Pn     Pn      07 56 03.8 +2.5
PZH                               Sn     Sn      07 57 26.3 +4.7
PZH                               smax   smax
      comp=N,70nm,1.2s
PZH                               smax   smax
      comp=E,60nm,1.3s
PZH                               LR     LR
      comp=N,1µm,4.0s
PZH                               LR     LR
      comp=E,570nm,5.0s
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PZH				LR	LR		
	comp=Z,500nm,5.7s						
RAMN	**Ramite**	**7.32**	**293**	*e*Pn	**Pn**	**07 56 03.0**	**-0.1**
RAMN				*e*Sn	**Sn**	**07 57 22.7**	**-2.1**
CMAR	**Chiang Mai Arr**	**7.32**	**142**	P	**Pn**	**07 56 03.1**	**+0.1**
	comp=Z,46nm,0.7s,baz=317,slow=13,SNR=186						
CMAR				S	**Sn**	**07 57 24.3**	**-0.3**
	comp=Z,35nm,0.8s,baz=315,slow=21,SNR=4.1						
BOK	**Bokaro**	**7.58**	**268**	*e*P	**Pn**	**07 56 06.1**	**-0.4**
KMI	**Kunming**	**7.84**	**82**	⇑P	**Pn**	**07 56 12.7**	**+2.5**
KMI				S	**Sn**	**07 57 39.6**	**+2.0**
KMI				pmax	pmax		
	comp=Z,77nm,1.0s						
KMI				pmax	pmax		
	comp=Z,380nm,3.5s						
KMI				LR	LR		
	comp=N,1µm,9.3s						
KMI				LR	LR		
	comp=E,1µm,6.8s						
KMI				LR	LR		
	comp=Z,1µm,7.7s						
JIRN	**Jiri**	**7.92**	**297**	*e*Pn	**Pn**	**07 56 11.3**	**0.0**
PKI	**Pulchoki**	**8.53**	**294**	*e*Pn	**Pn**	**07 56 19.1**	**-0.6**
PKI				*e*Sn	**Sn**	**07 57 50.2**	**-4.3**
	comp=Z,284nm,0.6s						
KKN	**Kakani**	**8.71**	**295**	*e*Pn	**Pn**	**07 56 21.3**	**-0.8**
KKN				*e*Sn	**Sn**	**07 57 54.1**	**-4.7**
	comp=Z,619nm,0.7s						
DMN	**Daman**	**8.79**	**294**	*e*Pn	**Pn**	**07 56 22.1**	**-1.1**
DMN				*e*Sn	**Sn**	**07 57 56.0**	**-4.9**
	comp=Z,344nm,0.6s						
GKN	**Gorkha**	**9.32**	**295**	*e*Pn	**Pn**	**07 56 28.7**	**-1.6**
GKN				*e*Sn	**Sn**	**07 58 08.8**	**-4.8**
PBKT	**Sadao Pong**	**9.99**	**139**	Pn	**Pn**	**07 56 40.4**	**+1.0**
KOLN	**Koldanda**	**10.11**	**292**	*e*Pn	**Pn**	**07 56 39.6**	**-1.5**
KOLN				*e*Sn	**Sn**	**07 58 27.7**	**-5.3**
	comp=Z,129nm,0.5s						
DANN	**Dangsing**	**10.16**	**296**	*e*Pn	**Pn**	**07 56 39.7**	**-2.3**
DANN				*e*Sn	**Sn**	**07 58 27.1**	**-7.4**
	comp=Z,88nm,0.6s						
PYUN	**Piuthan**	**10.72**	**293**	*e*Pn	**Pn**	**07 56 47.1**	**-2.4**
PYUN				*e*Sn	**Sn**	**07 58 42.1**	**-5.9**
	comp=Z,410nm,0.8s						
DGPR	**DIGLIPUR**	**11.13**	**186**	*e*P	**Pn**	**07 56 53.2**	**-1.6**
GYA	**Guiyang**	**11.51**	**77**	⇓P	**Pn**	**07 57 02.5**	**+2.4**
GYA				S	**Sn**	**07 59 06.7**	**-0.3**
GYA				pmax	pmax		
	comp=Z,28nm,1.0s						
GYA				LR	LR		
	comp=Z,700nm,8.1s						
GYA				LR	LR		
	comp=Z,220nm,5.4s						
GYA				LR	LR		
	comp=Z,330nm,10.7s						
GOMU	**GeErMu**	**11.87**	**3**	P	**Pn**	**07 57 02.7**	**-2.6**
GOMU				pP		07 57 08.3	
GOMU				S	Sn	07 59 06.6	-10
GOMU				pmax	pmax		
	comp=Z,92nm,1.0s						
GOMU				LR	LR		
	comp=Z,170nm,5.7s						
GOMU				LR	LR		
	comp=Z,430nm,7.6s						
GOMU				LR	LR		
	comp=Z,110nm,8.2s						
JBP	**Jabalpur**	**13.04**	**268**	*e*x	**Pn**	**07 57 20.3**	**-0.6**
JBP				*e*P	**Pn**	**07 57 20.3**	**-0.6**
JBP				IAmb	IAmb	07 57 21.9	
	comp=Z,28nm,0.7s						
JBP				*e*S	**Sn**	**07 59 39.2**	**-5.0**
LZH	**Lanzhou**	**14.41**	**33**	⇑P	**Pn**	**07 57 36.6**	**-2.5**
LZH				pP	P	07 57 47.2	+3.2
LZH				PP	**PnPn**	**07 57 50.6**	**+2.4**
LZH				pmax	pmax		
	comp=Z,51nm,1.5s						
LZH				pmax	pmax		
	comp=Z,160nm,4.8s						
LZH				LR	LR		
	comp=Z,440nm,9.1s						
LZH				LR	LR		
	comp=Z,470nm,8.1s						
LZH				LR	LR		
	comp=Z,190nm,9.1s						
BHPL	**Bhopal**	**15.36**	**269**	*e*P	**Pn**	**07 57 50.0**	**-1.4**
BHPL				IAmb	IAmb	07 58 13.3	
	comp=Z,15nm,0.7s						
QIZ	**Qiongzhong**	**15.49**	**107**	P	**Pn**	**07 57 54.1**	**+1.2**
QIZ				S	**Sn**	**08 00 39.4**	**-4.3**
QIZ				pmax	pmax		
	comp=Z,42nm,0.8s						
QIZ				LR	LR		
	comp=Z,320nm,10.7s						
QIZ				LR	LR		
	comp=Z,300nm,9.4s						
QIZ				LR	LR		
	comp=Z,210nm,9.2s						
QIZ	**Qiongzhong**	**15.49**	**107**	P	**P**	**07 57 55.6**	**-0.3**
GTA	**Gaotai**	**15.80**	**16**	*e*P	**Pn**	**07 57 53.7**	**-3.2**
GTA				S	**Sn**	**08 00 53.3**	**+2.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,76nm,5.6s						
GTA				LR	LR		
	comp=Z,180nm,11.2s						
GTA				LR	LR		
	comp=Z,380nm,9.2s						
GTA				LR	LR		
	comp=Z,190nm,11.5s						
HYB	**Hyderabad**	**16.11**	**248**	*e*P	**P**	**07 58 05.0**	**+2.2**
HYBB	**Hyderabad (bro**	**16.11**	**248**	*e*P	**P**	**07 58 03.4**	**+0.6**
XAN	**Xi'an**	**16.12**	**50**	⇑P	**P**	**07 58 02.8**	**0.0**
XAN				S	**Sn**	**08 00 59.4**	**+0.6**
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN				pmax	pmax		
	comp=Z,75nm,6.2s						
XAN				LR	LR		
	comp=Z,270nm,8.6s						
XAN				LR	LR		
	comp=Z,240nm,8.9s						
XAN				LR	LR		
	comp=Z,280nm,9.5s						
SRIT	**Nakonsritamara**	**16.46**	**161**		**Pn**	**07 58 05.5**	**+0.4**
SMLA	**Simla**	**16.51**	**298**	*e*P	**Pn**	**07 58 03.4**	**-2.2**
SMLA				IAmb	IAmb	07 58 13.5	
	comp=Z,93nm,1.1s						
WHN	**Wuhan**	**18.96**	**66**	⇑P	**Pn**	**07 58 39.7**	**+4.2**
WHN				S	**Sn**	**08 02 09.6**	**+2.3**
WHN				LR	LR		
	comp=Z,950nm,6.8s						
WHN				LR	LR		
	comp=Z,440nm,6.0s						
WHN				LR	LR		
	comp=Z,570nm,5.4s						
POO	**Poona**	**19.76**	**257**	*e*x	**pP**	**07 58 57.0**	**-1.0**
	comp=Z,20nm,0.2s						
POO				*e*x	**S**	**08 02 21.0**	**-1.0**
WMQ	**Urumqi**	**20.18**	**346**	⇓*i*P	Pn	07 58 48.8	-1.1
WMQ				S	**S**	**08 02 27.2**	**-2.8**
WMQ				pmax	pmax		
	comp=Z,38nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,7.9s						
WMQ				LR	LR		
	comp=Z,170nm,17.5s						
WMQ				LR	LR		
	comp=Z,120nm,6.3s						
WMQ				LR	LR		
	comp=Z,170nm,15.1s						
IPM	**Ipoh**	**20.79**	**160**	P	**P**	**07 58 52.0**	**-2.1**
IPM	**Ipoh**	**20.79**	**160**	P	**P**	**07 58 52.9**	**-1.2**
KCSI	**Kotacane, Aceh**	**20.95**	**170**	P	Pn	07 58 57.5	-1.6
	comp=Z,40nm,0.8s						
BTO	**Baotou**	**21.00**	**35**	*e*P	**P**	**07 58 55.1**	**-1.2**
BTO				S	**S**	**08 02 41.9**	**-4.4**
BTO				LR	LR		
	comp=Z,590nm,9.2s						
BTO				LR	LR		
	comp=Z,760nm,9.2s						
PALK	**Pallekele**	**21.29**	**220**	P	**P**	**07 59 00.8**	**+1.4**
	comp=Z,24nm,0.8s,baz=134,slow=12,SNR=14						
PALK				S	**S**	**08 02 47.1**	**-5.1**
	comp=Z,5.5nm,0.7s,baz=264,slow=9.8,SNR=2.4						
PALK				LR	LR	08 08 39.5	
	comp=Z,66nm,20.3s,baz=140,slow=40						
	comp=Z,24nm,0.8s						
PALK	**Pallekele**	**21.29**	**220**	P	**P**	**07 59 01.2**	**+1.7**
PALK				IAmb	IAmb	07 59 02.4	
	comp=Z,31nm,0.9s						
THW	**Thamme Wali**	**21.41**	**298**	P	**P**	**07 59 01.9**	**+1.3**
KSH	**Kashi**	**21.58**	**319**	P	**P**	**07 59 04.7**	**+2.1**
KSH				S	**S**	**08 02 58.1**	**+0.2**
KSH				PcP	**PcP**	**08 03 06.3**	**+4.2**
KSH				SS	**SnSn**	**08 03 28.7**	**+1.7**
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				LR	LR		
	comp=Z,150nm,14.1s						
CEP	**Cherat**	**21.61**	**301**	P	**P**	**07 59 02.2**	**-0.7**
PCHI	**Peechi**	**21.79**	**234**	*e*x	**P**	**07 59 05.8**	**+1.0**
PCHI				*e*x	**S**	**08 03 09.8**	**+7.7**
PSI	**Prapat**	**21.86**	**167**	P	**P**	**07 59 07.1**	**+1.4**
	comp=Z,8.3nm,0.4s,baz=357,slow=6.9,SNR=5.8						
PSI				S	**S**	**08 03 01.6**	**-2.0**
	comp=Z,1.7nm,0.3s,baz=348,slow=19,SNR=1.4						
PSI				LR	LR	08 09 03.6	
	comp=Z,142nm,19.1s,baz=341,slow=40						
	comp=Z,8.3nm,0.4s						
RPSI	**Rantau Prapat**	**21.97**	**167**	P	**P**	**07 59 07.1**	**+0.4**
HHC	**Hu-ho-hao-te**	**22.01**	**37**	*e*P	**P**	**07 59 06.7**	**-0.4**
HHC				S	**S**	**08 03 02.5**	**-3.4**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
HHC				LR	LR		
	comp=Z,350nm,14.7s						
HHC				LR	LR		
	comp=Z,350nm,16.5s						
TARG	**Taragay, Kyrgy**	**22.07**	**326**	P	**P**	**07 59 09.3**	**+1.2**
TARG				IAmb	IAmb	07 59 36.5	
	comp=Z,32nm,0.8s						
UZB	**Uzynbulak**	**22.56**	**330**	*e*P	**P**	**07 59 13.4**	**+0.4**
	baz=330						
SATY	**Saty**	**22.78**	**329**	*e*P	**P**	**07 59 16.2**	**+1.0**
	baz=328						
SATY				*e*S	**S**	**08 03 21.6**	**+2.7**
	baz=328						
ZHN	**Zhinishke**	**22.85**	**329**	*e*P	**P**	**07 59 15.8**	**-0.2**
	baz=329						
KPKS	**Kokpek**	**22.96**	**330**	*e*P	**P**	**07 59 17.6**	**+0.5**
	baz=330						
KPKS				*e*S	**S**	**08 03 23.8**	**+2.0**
	baz=330						
NJ2	**Nanjing**	**23.06**	**65**	*e*P	**P**	**07 59 14.8**	**-3.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MDOK	**Medeo**	**23.51**	**327**	*e*P	**P**	**07 59 23.4**	**+1.1**
	baz=327						
MDOK				*e*S	**S**	**08 03 33.7**	**+2.9**
	baz=327						
KBL	**Kabul**	**24.08**	**301**	P	**P**	**07 59 28.6**	**+0.9**
KBL				IAmb	IAmb	07 59 54.0	
	comp=Z,87nm,1.4s						
MYKOM	**Kota Tinggi**	**24.26**	**156**	P	**P**	**07 59 28.7**	**-0.4**
ZSN	**Zaisan**	**24.26**	**345**	*e*P	**P**	**07 59 29.0**	**0.0**
	baz=344						
MK31	**Makanchi Array**	**24.38**	**340**	P	**P**	**07 59 30.9**	**+0.8**
MKAR	**Makanchi Array**	**24.38**	**340**	P	**P**	**07 59 31.4**	**+1.4**
	comp=Z,15nm,0.7s,baz=149,slow=10,SNR=111						
MKAR				sP	**sP**	**07 59 55.0**	**-0.8**
	comp=Z,9.9nm,0.6s,baz=154,slow=9.4,SNR=3.8						
MKAR				ScP	**ScP**	**08 06 40.2**	**+0.1**
	comp=Z,5.3nm,1.0s,baz=157,slow=3.4,SNR=13						
MKAR				LR	LR	08 10 16.1	
	comp=Z,132nm,18.1s,baz=140,slow=39						
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**24.38**	**340**	P	**P**	**07 59 31.0**	**+1.0**
KUU	**Kurty**	**24.39**	**328**	*e*P	**P**	**07 59 31.0**	**+0.8**
	baz=327						
AAK	**Ala-Archa**	**24.47**	**323**	P	**P**	**07 59 33.1**	**+2.1**
	comp=Z,2.4nm,0.7s,baz=169,slow=7.6,SNR=2.4						
AAK				LR	LR	08 11 56.3	
	comp=Z,35nm,18.4s,baz=122,slow=43						
	comp=Z,2.4nm,0.7s						
AAK	**Ala-Archa**	**24.47**	**323**	P	**P**	**07 59 32.8**	**+1.8**
AAK				IAmb	IAmb	08 00 02.1	
	comp=Z,31nm,1.1s						
MAKZ	**Makanchi**	**24.49**	**340**	P	**P**	**07 59 32.3**	**+1.3**
MAKZ				IAmb	IAmb	07 59 57.8	
	comp=Z,55nm,1.3s						
TWG	**Pinlang**	**24.70**	**88**	P	**P**	**07 59 32.1**	**-1.0**
GAR	**Garm**	**24.94**	**312**	P	**P**	**07 59 36.6**	**+1.3**
SGDS	**Sogindy**	**24.95**	**325**	*e*P	**P**	**07 59 36.6**	**+1.3**
	baz=324						
NACB	**Ninganchiao**	**25.00**	**85**	P	**P**	**07 59 35.5**	**-0.4**
NACB				IAmb	IAmb	07 59 38.1	
	comp=Z,71nm,1.5s						
BTK	**Batken**	**25.14**	**314**	P	**P**	**07 59 38.4**	**+1.3**
BTK				IAmb	IAmb	08 00 08.7	
	comp=Z,40nm,0.8s						
SONM	**Songino Array**	**25.42**	**19**	P	**P**	**07 59 40.2**	**+0.6**
	comp=Z,33nm,0.8s,baz=199,slow=9.9,SNR=81						
SONM				LR	LR	08 11 47.7	
	comp=Z,36nm,19.8s,baz=178,slow=41						
	comp=Z,33nm,0.8s						
SONM	**Songino Array**	**25.42**	**19**	P	**P**	**07 59 39.6**	**+0.1**
SONM				IAmb	IAmb	07 59 42.7	
	comp=Z,35nm,0.9s						
CHGR	**Chuyangaron**	**25.58**	**310**	P	**P**	**07 59 42.2**	**+1.1**
ULN	**Ulaanbaatar**	**25.65**	**20**	P	**P**	**07 59 41.3**	**-0.4**
ULN				IAmb	IAmb	07 59 44.2	
	comp=Z,36nm,0.8s						
BTLS	**Baital**	**26.36**	**327**	*e*P	**P**	**07 59 48.7**	**+0.8**
	baz=326						
BTLS				*e*S	**S**	**08 04 18.5**	**+2.6**
	baz=326						
DZA	**Taraz**	**26.42**	**320**	*e*P	**P**	**07 59 49.7**	**+1.1**
	baz=320						
KK31	**Karatay Array**	**27.03**	**320**	P	**P**	**07 59 56.8**	**+2.8**
KKAR	**Karatay Array**	**27.03**	**320**	P	**P**	**07 59 57.8**	**+3.7**
KSM	**Kuching**	**27.55**	**143**	P	**P**	**07 59 56.8**	**-2.1**
KSM				IAmb	IAmb	08 00 00.3	
	comp=Z,31nm,1.0s						
KSM	**Kuching**	**27.55**	**143**	P	**P**	**07 59 59.9**	**+1.0**
	comp=Z,36nm,1.2s						
SBUM	**Sibu**	**27.86**	**138**	P	**P**	**08 00 00.9**	**-0.8**
SBUM				IAmb	IAmb	08 00 02.5	
	comp=Z,42nm,1.5s						
SEM	**Semipalatinsk**	**28.21**	**341**	*e*P	**P**	**08 00 04.6**	**-0.2**
	baz=340						
KURBB	**Kurchatov Arra**	**28.93**	**339**	P	**P**	**08 00 11.9**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=153,slow=8.1,SNR=11						
KURBB				sP	**sP**	**08 00 35.8**	**-0.8**
	comp=Z,5.7nm,0.8s,baz=152,slow=8.5,SNR=6.0						
KURBB				ScP	**ScP**	**08 06 53.8**	**+0.3**
	comp=Z,12nm,0.8s,baz=158,slow=2.7,SNR=19						
	comp=Z,3.2nm,0.9s						
KURK	**Kurchatov**	**28.99**	**339**	P	**P**	**08 00 11.6**	**+0.3**
ZALV	**Zalesovo Beam**	**30.43**	**349**	P	**P**	**08 00 25.1**	**+1.1**
	comp=Z,6.3nm,0.5s,baz=176,slow=8.3,SNR=32						
ZALV				pP	**pP**	**08 00 43.1**	**+1.7**
	comp=Z,4.4nm,0.7s,baz=160,slow=9.5,SNR=3.2						
	comp=Z,6.3nm,0.5s						
JOW	**Kunigami**	**30.82**	**78**	LR	LR	08 12 16.9	
	comp=Z,119nm,20.0s,baz=115,slow=35						
KSAR	**Wonju Array Be**	**31.59**	**58**	P	**P**	**08 00 34.2**	**-0.3**
WSAR	**Wadi Sarin**	**32.48**	**276**	LR	LR	08 15 21.2	
	comp=Z,58nm,18.9s,baz=102,slow=39						
GEYT	**Alibeck**	**33.50**	**303**	pP	**pP**	**08 01 11.4**	**+2.7**
	comp=Z,2.6nm,0.5s,baz=176,slow=11,SNR=2.0						
GEYT				LR	LR	08 17 17.0	
	comp=Z,102nm,21.3s,baz=114,slow=41						
BRVK	**Borovoye**	**33.91**	**334**	P	**P**	**08 00 55.6**	**+1.0**
BBKI	**Banjar Baru**	**34.15**	**141**	P	**P**	**08 00 58.0**	**+0.9**
	comp=Z,8µmcomp=Z,104nm,0.9s						
TOLI2	**Tolitoli**	**34.57**	**128**	P	**P**	**08 00 59.0**	**-1.7**
TOLI2				IAmb	IAmb	08 01 00.7	
	comp=Z,19nm,1.0s						
TOLI2	**Tolitoli**	**34.57**	**128**	P	**P**	**08 01 00.2**	**-0.5**
KPJI	**Karang Pucung**	**34.59**	**154**	P	**P**	**08 01 01.7**	**+0.9**
	comp=Z,14nm,0.7s						
DAV	**Davao City (W)**	**34.63**	**114**	LR	LR	08 14 32.4	
	comp=Z,51nm,22.0s,baz=342,slow=35						
MRSI	**Marisa**	**35.84**	**127**	P	**P**	**08 01 11.9**	**+0.3**
	comp=Z,24nm,0.7s						
ABKAR	**Akbulak array**	**36.53**	**322**	P	**P**	**08 01 18.4**	**+1.2**
ABKAR				IAmb	IAmb	08 01 43.6	
	comp=Z,7.8nm,0.8s						
APSI	**Ampana**	**36.59**	**129**	P	**P**	**08 01 18.6**	**+0.6**
	comp=Z,21nm,1.0s						
TTSI	**Tana Toraja**	**36.90**	**134**	P	**P**	**08 01 21.1**	**+0.5**
SPSI	**Sidrap Palu**	**37.55**	**135**	P	**P**	**08 01 26.7**	**+0.5**
	comp=Z,37nm,1.2s						
AKTO	**Aktyubinsk**	**38.20**	**322**	P	**P**	**08 01 31.4**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=117,slow=8.5,SNR=2.5						
AKTO				pP	**pP**	**08 01 49.2**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=100,slow=9.5,SNR=5.5						
AKTO				LR	LR	08 19 13.0	
	comp=Z,74nm,19.6s,baz=120,slow=39						
	comp=Z,1.6nm,0.8s						
KAPI	**Kappang**	**38.34**	**136**	LR	LR	08 20 52.9	
	comp=Z,65nm,18.1s,baz=304,slow=42						
MJAR	**Matsushiro Arr**	**39.58**	**61**	P	**P**	**08 01 41.5**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=268,slow=6.4,SNR=4.7						
MJAR				pP	**pP**	**08 02 01.1**	**+0.5**
	comp=Z,7.2nm,0.9s,baz=262,slow=6.2,SNR=5.2						
	comp=Z,2.1nm,0.7s						
MJAR	**Matsushiro Arr**	**39.58**	**61**	P	**P**	**08 01 42.6**	**-0.3**
JHJ	**Hachijo jima 2**	**40.70**	**67**	LR	LR	08 19 15.4	
	comp=Z,25nm,20.2s,baz=342,slow=37						
LBMI	**Labuha**	**40.74**	**123**	P	**P**	**08 01 52.2**	**-0.6**
	comp=Z,1µmcomp=Z,16nm,0.4s						
ARU	**Arti**	**41.20**	**331**	P	**P**	**08 01 56.8**	**+0.7**
ARU				IAmb	IAmb	08 02 15.2	
	comp=Z,19nm,1.3s						
JCJ	**Chichijima**	**43.16**	**76**	LR	LR	08 20 08.7	
	comp=Z,35nm,20.6s,baz=153,slow=36						
SIJI	**Sorong**	**43.83**	**119**	P	**P**	**08 02 16.1**	**-1.8**
	comp=Z,11nm,0.2s,baz=331,slow=16,SNR=4.6						
ASAJ	**Asahikawa**	**43.95**	**51**	LR	LR	08 21 46.2	
	comp=Z,57nm,18.0s,baz=156,slow=38						
BATI	**Baumata**	**44.79**	**137**	LR	LR	08 24 32.7	
	comp=Z,86nm,18.1s,baz=131,slow=41						
SOEI	**Soe**	**44.83**	**135**	P	**P**	**08 02 26.1**	**+0.1**
NRIK	**Noril'sk**	**45.23**	**357**	P	**P**	**08 02 28.3**	**0.0**
	comp=Z,2.8nm,0.7s,baz=164,slow=7.3,SNR=8.5						
NRIK				pP	**pP**	**08 02 47.0**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=91,slow=1.3,SNR=3.9						
	comp=Z,2.8nm,0.7s						
FAKI	**Fak Fak**	**45.85**	**121**	P	**P**	**08 02 31.3**	**-2.7**
FAKI	**Fak Fak**	**45.85**	**121**	P	**P**	**08 02 32.8**	**-1.2**
KBZ	**Khabaz**	**45.91**	**308**	pP	pP	08 02 53.2	+1.0
	comp=Z,3.5nm,0.8s,baz=82,slow=7.1,SNR=5.8						
KOPT	**Kop Dagi**	**47.37**	**303**	P	**P**	**08 02 48.8**	**+2.9**
TIXI	**Tiksi**	**51.26**	**13**	P	**P**	**08 03 13.6**	**-1.1**
TIXI				IAmb	IAmb	08 03 50.9	
	comp=Z,14nm,1.3s						
MBWA	**Marble Bar**	**51.58**	**149**	P	**P**	**08 03 16.8**	**-0.9**
MMAI	**Mount Meron Ar**	**51.72**	**294**	LR	LR	08 28 18.0	
	comp=Z,29nm,20.7s,baz=224,slow=39						
KLMR	**Klimovskoe**	**52.02**	**330**	*e*P	**P**	**08 03 21.0**	**+0.4**
KLMR				AMP		08 03 39.9	
	comp=Z,9.0nm,0.8s						
BZK	**Bozkurt**	**52.32**	**305**	⇓P	**P**	**08 03 25.0**	**+1.9**
ILGA	**Ilgaz**	**52.55**	**304**	P	**P**	**08 03 26.1**	**+1.0**
ILGA					**pP**	**08 03 44.2**	**+0.7**
BRTR	**Keskin Array B**	**52.64**	**302**	P	**P**	**08 03 26.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=110,slow=6.3,SNR=2.8						
BRTR				pP	**pP**	**08 03 45.6**	**+1.4**
	comp=Z,3.0nm,0.9s,baz=128,slow=8.0,SNR=6.2						
BRTR				LR	LR	08 28 50.0	
	comp=Z,29nm,18.9s,baz=120,slow=39						
	comp=Z,0.3nm,0.4s						
BORA	**Eskisehir**	**55.09**	**303**	P	**P**	**08 03 45.1**	**+1.6**
BORA					**pP**	**08 04 02.2**	**+0.2**
BORA				IAmb	IAmb	08 04 03.8	
	comp=Z,18nm,1.1s						
ELL	**Elmali**	**55.80**	**299**	P	**P**	**08 03 50.4**	**+1.7**
ELL				pP	**pP**	**08 04 07.9**	**+0.6**
AKASG	**Malin Array Be**	**55.83**	**316**	P	**P**	**08 03 47.3**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=74,slow=6.1,SNR=9.2						
AKASG				pP	**pP**	**08 04 06.7**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=78,slow=7.1,SNR=5.8						
AKASG				LR	LR	08 29 58.8	
	comp=Z,56nm,20.1s,baz=5.0,slow=38						
	comp=Z,0.7nm,0.3s						
AKBB	**Malin Array Si**	**55.83**	**316**	P	**P**	**08 03 50.1**	**+1.6**
AKBB				IAmb	IAmb	08 04 07.5	
	comp=Z,14nm,0.9s						
MEEK	**Meekatharra**	**55.88**	**153**	P	**P**	**08 03 49.0**	**-0.1**
TPGR	**Topolog**	**56.34**	**309**	⇑P	**P**	**08 03 54.0**	**+1.7**
TIRR	**Tirgusor**	**56.36**	**308**	P	**P**	**08 03 53.1**	**+0.8**
CFR	**Carcaliu**	**56.53**	**309**	⇓P	**P**	**08 03 55.3**	**+1.7**
VRI	**Vrincioaia**	**57.49**	**310**	⇑P	**P**	**08 04 02.4**	**+2.0**
PLOR	**Plostina**	**57.55**	**310**	⇑P	**P**	**08 04 02.4**	**+1.6**
COVR	**Voineasa-Covas**	**57.86**	**310**	⇓P	**P**	**08 04 05.4**	**+2.4**
BIZ	**Bicaz**	**57.88**	**311**	⇑P	**P**	**08 04 03.9**	**+0.9**
MLR	**Muntele Rosu**	**58.06**	**310**	⇑P	**P**	**08 04 07.4**	**+2.9**
MLR	**Muntele Rosu**	**58.06**	**310**	LR	LR	08 33 31.9	
	comp=Z,48nm,19.3s,baz=83,slow=40						
MLR	**Muntele Rosu**	**58.06**	**310**	P	**P**	**08 04 06.8**	**+2.2**
BURAR	**Bucovina Array**	**58.46**	**312**	⇓P	**P**	**08 04 08.0**	**+0.8**
FINES	**FINESS Array B**	**58.50**	**328**	P	**P**	**08 04 07.3**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=116,slow=3.2,SNR=8.5						
FINES				pP	**pP**	**08 04 25.4**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=98,slow=10.0,SNR=6.7						
	comp=Z,2.2nm,0.6s						
FINES	**FINESS Array B**	**58.50**	**328**	P	**P**	**08 04 08.5**	**+1.4**
VOIR		**58.69**	**310**	⇓P	**P**	**08 04 12.6**	**+3.8**
WB0	**Warramunga Arr**	**58.77**	**135**	P	**P**	**08 04 07.5**	**-2.1**
WRA	**Warramunga Arr**	**58.86**	**135**	P	**P**	**08 04 08.8**	**-1.4**
	comp=Z,6.1nm,0.9s,baz=320,slow=7.5,SNR=59						
WRA				pP	**pP**	**08 04 28.8**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=322,slow=7.2,SNR=6.2						
WRA				LR	LR	08 36 30.1	
	comp=Z,51nm,19.5s,baz=76,slow=43						
	comp=Z,6.1nm,0.9s						
WRA	**Warramunga Arr**	**58.86**	**135**	P	**P**	**08 04 08.5**	**-1.7**
WRAB	**Tennant Creek**	**58.86**	**135**	P	**P**	**08 04 11.3**	**+1.1**
	comp=Z,20nm,1.2s						
WRKA	**Warakurna**	**59.15**	**144**	P	**P**	**08 04 11.8**	**-0.3**
ARCES	**ARCESS Array B**	**60.01**	**338**	P	**P**	**08 04 16.9**	**-0.5**
	comp=Z,6.0nm,0.9s,baz=79,slow=4.7,SNR=5.8						
ARCES				pP	**pP**	**08 04 36.9**	**+0.6**
	comp=Z,5.7nm,0.7s,baz=86,slow=6.2,SNR=4.6						
ARCES				LR	LR	08 32 22.5	
	comp=Z,60nm,18.3s,baz=117,slow=38						
	comp=Z,6.0nm,0.9s						
KWP	**Kalwaria Pacla**	**60.03**	**315**	*e*P	pP	08 04 37.4	+0.7
IDI	**Anoyia**	**60.03**	**298**	⇑P	pP	08 04 36.8	-0.2
DRGR		**60.21**	**311**	⇑P	**P**	**08 04 23.6**	**+4.2**
VTS	**Vitosha**	**60.25**	**307**	⇑P	P	08 04 30.8	+11
GZR	**Gura Zlata**	**60.29**	**310**	⇑P	P	08 04 26.4	+6.5
BLKB	**Belogradchik**	**60.55**	**308**	⇑P	P	08 04 31.5	+10
MDVR	**Moldovita**	**61.10**	**309**	⇑P	P	08 04 33.1	+7.7
AS31	**Alice Springs**	**61.32**	**138**	P	**P**	**08 04 25.1**	**-1.9**
ASAR	**Alice Springs**	**61.32**	**138**	P	**P**	**08 04 25.8**	**-1.2**
	comp=Z,2.9nm,0.5s,baz=319,slow=6.7,SNR=48						
ASAR				pP	**pP**	**08 04 45.4**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=322,slow=6.6,SNR=5.8						
	comp=Z,2.9nm,0.5s						
ASAR	**Alice Springs**	**61.32**	**138**	P	**P**	**08 04 26.1**	**-0.9**
NIE	**Niedzica**	**61.61**	**315**	*e*P	pP	08 04 49.6	+2.1
PMG	**Port Moresby**	**61.61**	**116**	LR	LR	08 34 10.3	
	comp=Z,35nm,18.1s,baz=148,slow=39						
MORC	**Moravsky Berou**	**63.35**	**315**	⇑P	**P**	**08 04 38.6**	**-1.7**
VRAC	**Vranov**	**64.03**	**315**	⇑P	P	08 04 49.9	+5.2
VRAC	**Vranov**	**64.03**	**315**	LR	LR	08 36 35.9	
	comp=Z,31nm,19.5s,baz=78,slow=40						
OSTC	**Ostas**	**64.11**	**316**	*e*pP	pP	08 05 05.6	+1.4
CHVC	**Chvalec**	**64.20**	**316**	*e*pP	pP	08 05 05.1	+0.2
HFS	**Hagfors**	**64.54**	**327**	LR	LR	08 34 32.2	
	comp=Z,52nm,18.1s,baz=56,slow=37						
SHEM	**Shemya Is, Ala**	**65.05**	**41**	LR	LR	08 34 09.8	
	comp=Z,27nm,20.5s,baz=306,slow=37						
PRU	**Pruhonice**	**65.25**	**316**	*e*pP	pP	08 05 12.6	+0.9
CKRC	**Cesky Krumlov**	**65.58**	**314**	*e*pP	pP	08 05 14.6	+0.7
NB2	**NORSAR Subarra**	**65.67**	**328**	P	**P**	**08 04 55.1**	**-0.1**
	comp=Z,16nm,1.1s,baz=85,slow=6.5						
NOA	**NORSAR Array B**	**65.67**	**328**	P	**P**	**08 04 55.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=83,slow=6.6,SNR=5.8						
NOA				pP	**pP**	**08 05 13.5**	**-0.7**
	comp=Z,6.2nm,0.8s,baz=84,slow=6.4,SNR=15						
NOA				LR	LR	08 34 57.3	
	comp=Z,31nm,18.5s,baz=90,slow=37						
	comp=Z,0.9nm,0.6s						
GERES	**GERESS Array B**	**65.98**	**314**	P	**P**	**08 04 57.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=132,slow=4.4,SNR=1.6						
GERES				pP	**pP**	**08 05 17.0**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=98,slow=4.0,SNR=9.8						
	comp=Z,0.3nm,0.4s						
KHC	**Kasperske Hory**	**66.01**	**315**	*e*pP	pP	08 05 17.3	+0.6
CLL	**Collm**	**66.01**	**317**	*e*pP	pP	08 05 18.0	+1.4
DAVOX	**Davos/Dischmat**	**68.92**	**313**	LR	LR	08 38 07.7	
	comp=Z,50nm,19.6s,baz=78,slow=38						
NOR	**Nord**	**69.08**	**352**	*i* P	**P**	**08 05 15.6**	**-0.8**
NOR				IAmb	IAmb	08 05 58.5	

	comp=Z,91nm,2.9s						
SENIN	**Lac Senin/Sane**	**70.74**	**313**	P	**P**	**08 05 28.7**	**+1.2**
SENIN				IAmb	IAmb	08 06 07.0	
	comp=Z,38nm,2.0s						
STKA	**Stephens Creek**	**71.94**	**139**	P	**P**	**08 05 32.6**	**-1.8**
	comp=Z,2.5nm,0.8s,baz=329,slow=5.9,SNR=2.4						
	comp=Z,2.5nm,0.8s						
KEST	**Kesra**	**72.24**	**302**	pP	pP	08 05 56.6	+0.8
	comp=Z,23nm,0.9s,baz=336,slow=3.4,SNR=13						
KEST	**Kesra**	**72.24**	**302**	P	**P**	**08 05 37.9**	**+1.4**
ANM	**Nome**	**72.69**	**26**	P	**P**	**08 05 38.2**	**-0.3**
	baz=290						
A21K	**Barrow**	**73.10**	**19**	P	**P**	**08 05 41.6**	**+0.8**
A21K				IAmb	IAmb	08 06 06.9	
	comp=Z,11nm,0.8s						
A21K	**Barrow**	**73.10**	**19**	P	**P**	**08 05 41.3**	**+0.6**
	baz=296						
SCO	**Scoresbysund**	**75.50**	**342**	P	**P**	**08 05 55.3**	**+0.6**
SCO				IAmb	IAmb	08 06 19.1	
	comp=Z,15nm,1.3s						
SCO	**Scoresbysund**	**75.50**	**342**	*i* P	P	08 06 02.1	+7.4
SCO				IAmb	IAmb	08 06 18.6	
	comp=Z,17nm,1.4s						
EUNU	**Eureka**	**75.86**	**0**	P	**P**	**08 05 57.6**	**+0.8**
EUNU				IAmb	IAmb	08 06 03.1	
	comp=Z,9.6nm,0.9s						
GCSA	**Galena City Sc**	**75.97**	**25**	P	**P**	**08 05 57.3**	**-0.1**
	baz=297						
IMAR	**Indian Mountai**	**76.53**	**23**	P	**P**	**08 06 00.1**	**-0.5**
TOLK	**Toolik Lake Re**	**76.53**	**20**	P	**P**	**08 06 00.7**	**0.0**
TOLK				IAmb	IAmb	08 06 22.0	
	comp=Z,7.7nm,0.8s						
TOLK	**Toolik Lake Re**	**76.53**	**20**	P	**P**	**08 06 00.9**	**+0.1**
	baz=303						
H21K	**Melozitna Rive**	**77.03**	**23**	P	**P**	**08 06 04.0**	**+0.4**
H21K				IAmb	IAmb	08 06 25.3	
	comp=Z,12nm,0.8s						
H21K	**Melozitna Rive**	**77.03**	**23**	P	**P**	**08 06 03.6**	**+0.1**
	baz=300						
COLD	**Coldfoot**	**77.10**	**21**	P	**P**	**08 06 04.2**	**+0.4**
COLD	**Coldfoot**	**77.10**	**21**	P	**P**	**08 06 03.9**	**0.0**
	baz=302						
TTA	**Tatalina**	**77.15**	**26**	P	**P**	**08 06 04.1**	**-0.2**
	baz=298						
J20K	**Nowinta River**	**77.28**	**25**	P	**P**	**08 06 05.0**	**0.0**
	baz=300						
I21K	**Tanana**	**77.57**	**23**	P	**P**	**08 06 06.8**	**+0.3**
	baz=301						
K20K	**Telida**	**77.72**	**25**	P	**P**	**08 06 07.4**	**0.0**
	baz=300						
H23K	**Yukon River**	**78.08**	**22**	P	**P**	**08 06 09.8**	**+0.4**
	baz=303						
CHUM	**Lake Minchumin**	**78.12**	**24**	P	**P**	**08 06 09.9**	**+0.3**
	baz=301						
SUMG	**Summit**	**78.22**	**347**	*i* P	**P**	**08 06 11.0**	**+0.5**
SUMG				IAmb	IAmb	08 06 32.0	
	comp=Z,9.4nm,1.2s						
L20K	**Farewell, AK**	**78.23**	**26**	P	**P**	**08 06 10.4**	**0.0**
	baz=300						
N18K	**Kilae Creek**	**78.28**	**28**	P	**P**	**08 06 10.5**	**-0.1**
	baz=299						
M19K	**Big River Lodg**	**78.31**	**27**	P	**P**	**08 06 10.6**	**-0.2**
	baz=300						
CAST	**Castle Rocks**	**78.45**	**25**	P	**P**	**08 06 11.6**	**+0.1**
CAST	**Castle Rocks**	**78.45**	**25**	P	**P**	**08 06 11.4**	**-0.1**
	baz=301,SNR=7.7						
BPAW	**Bear Paw Mtn.**	**78.51**	**24**	P	**P**	**08 06 11.2**	**-0.7**
BPAW	**Bear Paw Mtn.**	**78.51**	**24**	P	**P**	**08 06 11.1**	**-0.7**
	baz=302,SNR=5.5						
I23K	**Minto, Yukon-K**	**78.52**	**23**	P	**P**	**08 06 11.5**	**-0.2**
I23K				IAmb	IAmb	08 06 46.0	
	comp=Z,21nm,1.8s						
I23K	**Minto, Yukon-K**	**78.52**	**23**	P	**P**	**08 06 11.7**	**-0.1**
	baz=303						
H24K	**Noodor Dome**	**78.64**	**22**	P	**P**	**08 06 12.8**	**+0.2**
H24K	**Noodor Dome**	**78.64**	**22**	P	**P**	**08 06 12.9**	**+0.4**
	baz=305						
PPLA	**Purkeypile**	**78.69**	**25**	P	**P**	**08 06 12.6**	**-0.3**
	baz=301						
BMAR	**Burnt Mountain**	**78.77**	**20**	P	**P**	**08 06 14.4**	**+1.2**
N19K	**Bonanza Creek**	**78.82**	**28**	P	**P**	**08 06 13.6**	**-0.1**
	baz=300						
NEA2	**Nenana**	**78.94**	**23**	P	**P**	**08 06 13.8**	**-0.3**
	baz=304						
MDM	**Murphy Dome**	**79.03**	**23**	P	**P**	**08 06 14.6**	**0.0**
MDM				IAmb	IAmb	08 06 36.2	
	comp=Z,14nm,0.9s						
POKR	**Poker Plat Res**	**79.21**	**22**	P	**P**	**08 06 15.2**	**-0.4**
POKR				IAmb	IAmb	08 06 37.2	
	comp=Z,11nm,0.9s						
POKR	**Poker Plat Res**	**79.21**	**22**	P	**P**	**08 06 15.1**	**-0.5**
	baz=305						
MCK	**McKinley**	**79.47**	**24**	P	**P**	**08 06 16.3**	**-0.7**
	baz=304						
IL31		**79.60**	**22**	P	**P**	**08 06 17.1**	**-0.6**
ILAR	**Eielson Array**	**79.60**	**22**	P	**P**	**08 06 16.3**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=303,slow=4.6,SNR=22						
ILAR				pP	**pP**	**08 06 37.0**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=300,slow=5.0,SNR=8.2						
ILAR				LR	LR	08 43 28.4	
	comp=Z,38nm,20.2s,baz=260,slow=37						
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**79.60**	**22**	P	**P**	**08 06 16.8**	**-1.0**
HDA	**Harding Lake**	**79.79**	**23**	P	**P**	**08 06 17.6**	**-1.2**
	baz=306						
J25K	**Salcha River,**	**80.22**	**22**	P	**P**	**08 06 20.0**	**-1.2**
	baz=307						
DHY	**Denali Highway**	**80.42**	**24**	P	**P**	**08 06 21.6**	**-0.8**
	baz=306						
K24K	**Donnelly Dome**	**80.57**	**23**	P	**P**	**08 06 22.1**	**-0.9**
	baz=307,SNR=5.9						
WAT6	**Susitna Watana**	**80.57**	**24**	P	**P**	**08 06 22.2**	**-1.0**
	baz=305						
PMR	**Palmer**	**80.60**	**26**	P	**P**	**08 06 22.4**	**-0.7**
	baz=304						
RC01	**Rabbit Creek A**	**80.64**	**26**	P	**P**	**08 06 22.6**	**-0.8**
	baz=304						
ESDC	**Sonseca Array**	**80.75**	**309**	pP	pP	08 06 43.7	-0.5
	comp=Z,4.7nm,1.2s,baz=42,slow=5.0,SNR=9.6						
SML	**Sawmill**	**80.79**	**25**	P	**P**	**08 06 24.0**	**-0.2**
SML				IAmb	IAmb	08 06 48.5	
	comp=Z,7.9nm,0.8s						
SML	**Sawmill**	**80.79**	**25**	P	**P**	**08 06 23.9**	**-0.4**
	baz=305						
CHIR	**Chirikof Islan**	**80.80**	**32**	P	**P**	**08 06 23.6**	**-0.7**
	baz=300						
J26L	**Joseph Creek**	**80.91**	**22**	P	**P**	**08 06 24.1**	**-0.8**
	baz=308,SNR=10						
RIDG	**Independent Ri**	**80.94**	**23**	P	**P**	**08 06 24.0**	**-1.0**
	baz=308,SNR=5.8						
KNK	**Knik Glacier**	**80.97**	**26**	P	**P**	**08 06 24.3**	**-0.9**
	baz=305						
BRSE	**Bradley Lake S**	**80.97**	**28**	P	**P**	**08 06 25.0**	**-0.3**
	baz=303						
M23K	**Glacier View**	**81.03**	**25**	P	**P**	**08 06 25.0**	**-0.5**
	baz=305						
ICESG	**Greenland Ices**	**81.07**	**345**	*i* P	**P**	**08 06 25.3**	**-0.7**
ICESG				IAmb	IAmb	08 06 48.0	
	comp=Z,19nm,1.0s						
SCRK	**Sand Creek**	**81.09**	**22**	P	**P**	**08 06 24.9**	**-1.0**
SCRK				IAmb	IAmb	08 06 47.3	
	comp=Z,9.8nm,1.2s						
SCRK	**Sand Creek**	**81.09**	**22**	P	**P**	**08 06 25.4**	**-0.5**
	baz=308,SNR=7.6						
SCM	**Sheep Creek Mo**	**81.17**	**25**	P	**P**	**08 06 25.7**	**-0.6**
	baz=306						
PAX	**Paxson**	**81.18**	**24**	P	**P**	**08 06 26.5**	**+0.1**
PAX	**Paxson**	**81.18**	**24**	P	**P**	**08 06 26.1**	**-0.3**
	baz=307						
KDAK	**Kodiak Island**	**81.22**	**30**	LR	LR	08 44 31.5	
	comp=Z,42nm,21.1s,baz=7.4,slow=37						
DOT	**Dot Lake**	**81.27**	**23**	P	**P**	**08 06 26.8**	**+0.1**
DOT				IAmb	IAmb	08 06 28.0	
	comp=Z,18nm,1.9s						
INK	**Inuvik**	**81.28**	**16**	P	**P**	**08 06 26.7**	**+0.1**
	baz=317						
M24K	**Tolsona, Glenn**	**81.44**	**24**	P	**P**	**08 06 27.6**	**-0.1**
	baz=307						
EGAK	**Eagle**	**81.53**	**21**	P	**P**	**08 06 27.1**	**-0.9**
EGAK				IAmb	IAmb	08 06 54.6	
	comp=Z,14nm,1.5s						
EGAK	**Eagle**	**81.53**	**21**	P	**P**	**08 06 27.9**	**-0.2**
	baz=311						
HARP	**HAARP**	**81.64**	**24**	P	**P**	**08 06 28.8**	**+0.1**
	baz=307						
K27K	**Chicken**	**81.71**	**22**	P	**P**	**08 06 29.7**	**+0.7**
K27K				IAmb	IAmb	08 07 01.3	
	comp=Z,15nm,1.1s						
K27K	**Chicken**	**81.71**	**22**	P	**P**	**08 06 29.5**	**+0.5**
	baz=310						
KLU	**Klutina**	**81.91**	**25**	P	**P**	**08 06 30.1**	**-0.1**
KLU				IAmb	IAmb	08 07 05.6	
	comp=Z,13nm,1.1s						
KLU	**Klutina**	**81.91**	**25**	P	**P**	**08 06 30.1**	**-0.1**
	baz=307,SNR=6.7						
L26K	**Log Cabin Wild**	**81.91**	**23**	P	**P**	**08 06 30.2**	**+0.1**
	baz=309						
I29M	**Ogilvie Camp,**	**82.04**	**20**	P	**P**	**08 06 30.4**	**-0.3**
	baz=313						
N25K	**Chitina, Valde**	**82.34**	**24**	P	**P**	**08 06 32.1**	**-0.4**
	baz=308,SNR=5.6						
L27K	**Beaver Creek,**	**82.42**	**22**	P	**P**	**08 06 33.1**	**+0.3**
L27K				IAmb	IAmb	08 06 55.3	
	comp=Z,9.0nm,0.9s						
L27K	**Beaver Creek,**	**82.42**	**22**	P	**P**	**08 06 33.0**	**+0.2**
	baz=310,SNR=11						
M26K	**Nabesna, AK**	**82.43**	**23**	P	**P**	**08 06 33.1**	**+0.3**
M26K	**Nabesna, AK**	**82.43**	**23**	P	**P**	**08 06 32.9**	**0.0**
	baz=309,SNR=5.9						
BCAR	**Beaver Creek A**	**82.43**	**22**	P	**P**	**08 06 33.1**	**+0.2**
LBTB	**Lobatse**	**82.51**	**238**	LR	LR	08 42 07.7	
	comp=Z,25nm,18.1s,baz=61,slow=35						
DAWY	**Dawson**	**82.58**	**21**	P	**P**	**08 06 33.4**	**-0.2**
	baz=312						
C36M	**Paulatuk**	**82.63**	**13**	P	**P**	**08 06 33.6**	**-0.1**
	baz=325						
BMRM	**Bremner River**	**82.73**	**25**	P	**P**	**08 06 34.3**	**-0.2**
BMRM				IAmb	IAmb	08 07 05.0	
	comp=Z,12nm,1.0s						
BMRM	**Bremner River**	**82.73**	**25**	P	**P**	**08 06 34.3**	**-0.2**
	baz=308,SNR=6.6						
M27K	**Edge Creek, AK**	**82.86**	**23**	P	**P**	**08 06 35.1**	**-0.1**
M27K				IAmb	IAmb	08 06 37.0	
	comp=Z,8.3nm,1.0s						
M27K	**Edge Creek, AK**	**82.86**	**23**	P	**P**	**08 06 35.2**	**0.0**
	baz=310,SNR=8.9						
BVCY	**Beaver Creek**	**83.18**	**23**	P	**P**	**08 06 37.0**	**+0.3**
	baz=311						
YUK3	**Moose Creek**	**83.75**	**23**	P	**P**	**08 06 39.8**	**-0.1**
	baz=311						
M30M	**Minto, Yukon**	**84.45**	**21**	P	**P**	**08 06 43.3**	**0.0**
	baz=314						
BOSA	**Boshof**	**84.62**	**235**	P	**P**	**08 06 45.7**	**+1.0**
	comp=Z,3.6nm,0.7s,baz=82,slow=2.8,SNR=8.2						
BOSA				LR	LR	08 41 25.8	
	comp=Z,28nm,20.6s,baz=7.0,slow=33						
	comp=Z,3.6nm,0.7s						
YUK4	**Talbot Arm**	**84.68**	**23**	P	**P**	**08 06 44.3**	**-0.3**
	baz=313						
YUK6	**Outpost Mounta**	**85.06**	**23**	P	**P**	**08 06 46.1**	**-0.5**
	baz=313						
HYT	**Haines Junctio**	**85.44**	**23**	P	**P**	**08 06 48.4**	**+0.1**
	baz=314						
M31M	**Drury Creek, Y**	**85.51**	**21**	P	**P**	**08 06 48.7**	**+0.2**
	baz=317						
N31M	**Braeburn, Yuko**	**85.57**	**22**	P	**P**	**08 06 49.2**	**+0.3**
	baz=315						
TORD	**Torodi Ar. Bea**	**86.89**	**283**	P	**P**	**08 06 55.8**	**-0.4**
	comp=Z,11nm,0.6s,baz=78,slow=4.0,SNR=4.4						
TORD				pP	**pP**	**08 07 16.7**	**+0.7**
	comp=Z,8.8nm,0.7s,baz=65,slow=4.8,SNR=2.1						
SUR	**Sutherland**	**89.82**	**234**	LR	LR	08 45 07.2	
	comp=Z,28nm,21.8s,baz=88,slow=34						
YKA	**Yellowknife Ar**	**90.51**	**13**	P	**P**	**08 07 11.7**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=335,slow=5.0,SNR=5.4						
YKA				pP	**pP**	**08 07 31.4**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=338,slow=5.0,SNR=5.4						
YKA				PP	**PP**	**08 10 44.6**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=337,slow=8.0,SNR=2.1						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**123.98**	**19**	PKP	**PKPdf**	**08 13 09.2**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=130,slow=1.3,SNR=9.3						
TXAR				pPKP	**pPKPdf**	**08 13 29.9**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=122,slow=1.2,SNR=7.2						
BDFB	**Brasilia**	**143.52**	**276**	PKP	**PKPdf**	**08 13 45.2**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=175,slow=12,SNR=1.9						
SDV	**Santo Domingo**	**143.83**	**334**	PKP	PKPbc	08 13 45.3	+0.8
	comp=Z,4.1nm,0.5s,baz=13,slow=4.9,SNR=6.7						
ROSC	**El Rosal**	**148.94**	**337**	PKPbc	**PKiKP**	**08 14 00.4**	**-0.6**
	comp=Z,6.3nm,0.6s,baz=7.1,slow=8.1,SNR=5.7						
ROSC				pPKPbc	**pPKPbc**	**08 14 19.0**	**-1.4**
	comp=Z,30nm,0.9s,baz=12,slow=14,SNR=5.3						

ASRS ***12*** *08:00:36.4±0.2,53°N±2°×9°9E±°,h5^{km},MLh4.0/11,Error ellipse: s-maj=3.9km s-min=2.1km az=16.1,confirmed*

BYKL ***12*** *08:00:41.9±0.4,52°.88N×99°.11E*

ISC 12 08:00:37.7±0.7**,52°.93N**±0°.03×**99°.10E**±0°.02**,h10**^{km}**,n37,** σ**2^{s}.31**/84**,3C-1D,Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**0.58**	**132**	⇓ *i*Pg	**Pn**	**08 00 51.6**	**-0.6**
	158nm,0.5s						
ORL				⇑ *i*Pg	**Pn**	**08 00 51.6**	**-0.6**
	175nm,0.5s						
ORL				⇑ *i*Pg	**Pn**	**08 00 51.6**	**-0.6**
	167nm,0.5s						
ORL				*e*Sg	**Sb**	**08 00 59.3**	**+0.9**
ORL				Pmax			
	146nm,0.5s						
ORL				Smax			
	1µm,0.3s						
MOY	**Mondy**	**1.72**	**137**	*e*Pg	**Pg**	**08 01 11.9**	**+1.3**
MOY				*e*		08 01 14.8	
MOY				*e*Sg	**Sg**	**08 01 34.3**	**+1.4**
MOY				*e*		08 01 37.9	
MOY				max			
	251nm,0.5s						
MOY				max			
	651nm,1.0s						
MOY	**Mondy**	**1.72**	**137**	⇑Pg	**Pg**	**08 01 12.0**	**+1.4**
MOY				Sg	**Sg**	**08 01 33.6**	**+0.7**
ARS	**Arshan**	**2.27**	**115**	*e*Pg	**Pg**	**08 01 21.6**	**+0.4**
ARS				*e*Sg	**Sg**	**08 01 51.8**	**+1.2**
ARS				*e*		08 01 57.0	
ARS				Pmax			
	455nm,0.6s						
ARS				Smax			
	942nm,0.7s						
KNGR	**Kungurtug, Tuv**	**2.53**	**204**	*e*Pg	**Pg**	**08 01 27.5**	**+1.3**
KNGR				*e*Sg	**Sg**	**08 02 00.6**	**+1.7**
KNGR	**Kungurtug, Tuv**	**2.53**	**204**	Pg	**Pg**	**08 01 28.3**	**+2.1**
KNGR				Sg	**Sg**	**08 02 02.8**	**+3.8**
TLY	**Talaya**	**3.06**	**112**	*e*Pg	**Pg**	**08 01 35.2**	**-1.0**
TLY				*e*Sg	**Sg**	**08 02 14.9**	**-0.9**
TLY				Pmax			
	54nm,0.5s						
TLY				Smax			
	93nm,0.6s						
KZLR	**Kyzyl**	**3.11**	**249**	*e*Pg	**Pg**	**08 01 37.5**	**+0.4**
KZLR				*e*Sg	**Sg**	**08 02 16.5**	**-0.9**
KZLR	**Kyzyl**	**3.11**	**249**	Pg	**Pg**	**08 01 37.0**	**-0.1**
KZLR				Sg	**Sg**	**08 02 18.6**	**+1.2**
IRK	**Irkutsk**	**3.23**	**100**	Sg	**Sg**	**08 02 19.0**	**-2.3**
IVK	**Ivanovka**	**3.45**	**107**	*e*Pn	**Pb**	**08 01 36.3**	**-2.5**
IVK				*e*Pg	**Pg**	**08 01 43.5**	**-0.2**
IVK				*e*Sg	**Sg**	**08 02 26.8**	**-1.5**
IVK				Pmax			
	28nm,0.8s						
IVK				Smax			
	85nm,0.5s						
ARDR	**Aradan**	**3.46**	**266**	Pg	**Pg**	**08 01 43.9**	**-0.1**
ARDR				Sg	**Sg**	**08 02 28.4**	**-0.4**
MINR	**Mina**	**3.50**	**306**	Pg	**Pg**	**08 01 44.7**	**0.0**
MINR				Sg	**Sg**	**08 02 33.8**	**+3.7**
ERNS	**Erzin**	**3.63**	**224**	Pg	**Pg**	**08 01 46.3**	**-0.9**
ERNS				Sg	**Sg**	**08 02 33.9**	**-0.3**
ZAK	**Zakamensk**	**3.65**	**133**	*e*Pg	**Pg**	**08 01 46.2**	**-1.3**
ZAK				*e*Sg	**Sg**	**08 02 33.3**	**-1.4**
ZAK				Pmax			
	47nm,1.2s						
ZAK				Smax			
	137nm,0.7s						
ZAK	**Zakamensk**	**3.65**	**133**	Pg	**Pg**	**08 01 46.6**	**-0.9**
ZAK				Sg	**Sg**	**08 02 35.8**	**+1.1**
LSTR	**Listvyanka**	**3.67**	**105**	*e*Pn	**Pb**	**08 01 40.2**	**-2.3**
LSTR				*e*Pg	**Pg**	**08 01 47.4**	**-0.5**
LSTR				*e*Sn	**Sn**	**08 02 20.6**	**+2.9**
LSTR				*e*Sg	**Sg**	**08 02 34.9**	**-0.5**
LSTR				Pmax			
	26nm,0.5s						
LSTR				Smax			
	111nm,0.9s						
BGT	**Bolshoye Golou**	**3.96**	**100**	*e*Pn	**Pn**	**08 01 42.5**	**+4.1**
BGT				*e*Pg	**Pg**	**08 01 52.7**	**-0.7**
BGT				*e*Sn	**Sn**	**08 02 28.1**	**+3.3**
BGT				*e*Sg	**Sg**	**08 02 44.4**	**-0.2**
BGT				Pmax			
	34nm,0.4s						
BGT				Smax			
	139nm,0.8s						
TRG	**Tyrgan**	**4.40**	**89**	*e*Pn	**Pn**	**08 01 47.7**	**+3.2**
TRG				*e*Pg	**Pg**	**08 02 01.1**	**-0.7**
TRG				*e*		08 02 43.3	
TRG				*e*Sg	**Sg**	**08 02 58.3**	**-0.4**
TRG				Pmax			
	11nm,0.3s						
TRG				Smax			
	79nm,0.5s						
TRG	**Tyrgan**	**4.40**	**89**	Pn	**Pn**	**08 01 47.2**	**+2.7**
TRG				Pg	**Pg**	**08 02 01.5**	**-0.4**
TRG				Sg	**Sg**	**08 02 59.2**	**+0.4**
STDB	**Stepnoy Dvoret**	**4.50**	**97**	*e*Sg	**Sg**	**08 03 00.9**	**-1.1**
GZLN	**Zheleznogorsk**	**4.64**	**320**	Sg	**Sg**	**08 03 09.4**	**+3.0**
CERR	**Cheremushki**	**4.66**	**272**	Pg	**Pg**	**08 02 07.9**	**+1.1**
CERR				Sg	**Sg**	**08 03 11.3**	**+4.3**
DJOS	**Djoyskaya Sosn**	**4.67**	**271**	Pn	**Pn**	**08 01 47.4**	**-0.8**
DJOS				Pg	**Pg**	**08 02 06.2**	**-0.8**
DJOS				Sg	**Sg**	**08 03 10.1**	**+2.5**
DJO	**Djoy, Khakassi**	**4.78**	**271**	Pn	**Pn**	**08 01 48.9**	**-0.8**
DJO				Pg	**Pg**	**08 02 09.0**	**-0.1**
DJO				Sg	**Sg**	**08 03 15.9**	**+4.9**
OGRR	**Ongureny**	**5.15**	**79**	*e*Pn	**Pn**	**08 01 59.1**	**+4.4**
OGRR				*e*Pg	**Pg**	**08 02 14.9**	**-1.2**
OGRR				*e*Sn	**Sn**	**08 02 58.2**	**+4.1**
OGRR				*e*Sg	**Sg**	**08 03 22.2**	**-0.5**
OGRR				Pmax			
	9.0nm,0.5s						
OGRR				Smax			
	114nm,0.9s						
UUDB	**Ulan-Yde**	**5.35**	**98**	*e*Pn	**Pn**	**08 02 00.5**	**+3.0**
UUDB				*e*Pg	**Pg**	**08 02 17.5**	**-2.6**
UUDB				*e*		08 03 07.9	
UUDB				*e*Sg	**Sg**	**08 03 26.7**	**-2.6**
UUDB				Pmax			
	25nm,1.2s						
UUDB				Smax			
	69nm,1.4s						
MXMB	**Maximikha**	**5.82**	**83**	*e*Pn	Pn	08 02 09.0	+5.0
MXMB				*e*Sn	**Sn**	**08 03 12.2**	**+1.5**
MXMB				*e*Sg	**Sg**	**08 03 42.1**	**-2.3**
LUZB	**Luzhba, Kemero**	**6.16**	**281**	Pg	**Pg**	**08 02 36.7**	**+1.2**
LUZB				Sg	**Sg**	**08 03 57.1**	**+1.8**
SYVR	**Suvo**	**6.58**	**79**	*e*Pn	Pn	08 02 20.8	+6.5
SYVR				*e*Pg	**Pg**	**08 02 41.1**	**-2.4**
SYVR				*e*Sg	**Sg**	**08 04 06.3**	**-2.2**
SYVR				Pmax			
	2.0nm,0.4s						
SYVR				Smax			
	38nm,1.6s						
NIZ	**Nizh Angarsk**	**6.73**	**61**	*e*Pn	Pn	08 02 22.6	+6.1
NIZ				*e*Sn	**Sn**	**08 03 36.5**	**+3.3**
NIZ				*e*Sg	**Sg**	**08 04 11.5**	**-2.1**
NIZ				max			
	20nm,0.3s						
NIZ				Smax			
	132nm,0.9s						
TASR	**Tashtagol**	**6.80**	**273**	Pg	**Pg**	**08 02 45.6**	**-2.2**
TASR				Sg	**Sg**	**08 04 10.5**	**-5.3**
BRCR	**Berchikul'**	**6.87**	**298**	Sg	**Sg**	**08 04 17.9**	**-0.1**
ARTR	**Artybash**	**7.33**	**266**	Pg	**Pg**	**08 02 58.0**	**+0.2**
ARTR				Sg	**Sg**	**08 04 28.1**	**-4.6**
YLYR	**Ulyunkhan**	**7.39**	**70**	*e*Pn	Pn	08 02 31.8	+6.3
YLYR				*e*Sn	**Sn**	**08 03 52.2**	**+2.9**
YLYR				*e*Sg	**Sg**	**08 04 29.8**	**-4.7**
YLYR				max			
	2.0nm,0.4s						
YLYR				Smax			
	35nm,1.1s						
KMO	**Kumora**	**7.65**	**62**	*e*Pn	Pn	08 02 35.6	+6.5
KMO				*e*Sn	**Sn**	**08 03 59.3**	**+3.5**
KMO				*e*Sg	**Sg**	**08 04 39.5**	**-3.6**
KMO				max			
	13nm,0.4s						
KMO				Smax			
	62nm,1.4s						
UKT	**Uakit**	**8.89**	**67**	*e*Pn	Pn	08 02 52.8	+6.7
UKT				*e*Sn	**Sn**	**08 04 27.5**	**+1.2**
UKT				*e*Sg	**Sg**	**08 05 17.3**	**-5.4**
UKT				max			
	1.0nm,0.4s						
UKT				Smax			
	15nm,1.2s						

IDC ***12*** *08:04:23.4±0.8,32°.65N×130°.59E,h0^{km},mb3.8/15, mbtmp3.8/18,ML3.4/3,MS3.4/3,Error ellipse: s-maj=16.6km s-min=8.1km az=122.0*

NIED ***12*** *08:04:25.9,32°.70N×130°.67E,h13^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.13; M$_{\theta\theta}$1.23; M$_{\phi\phi}$-0.10; M$_{r\theta}$-0.10; M$_{\theta\phi}$0.25; M$_{\phi r}$0.32; Fault plane solution: M$_{0}$1.26000×10^{15} NP1: φ$_{s}$243.00000°,δ46.00000°,λ-114.00000°. NP2: φ$_{s}$96.00000°,δ49.00000°,λ-67.00000°.*

NEIC ***12*** *08:04:26.0±1.7,32°.68N±0°.04×130°.63E±0°.06,h9^{km}±3^{km}, mb4.3/19 Error ellipse: s-maj=7.7km s-min=4.8km az=113.0*

JMA ***12*** *08:04:25.9±0.0,32°.7N±0°.1×130°.7E±0°.1,h13^{km},MD4.1/19, MV4.1/19,NW KUMAMOTO PREF*

JMA Felt IV J1 at NW KUMAMOTO PREF .

ISC 12 08:04:25.5±0.5**,32°.65N**±0°.04×**130°.66E**±0°.06**,h11**^{km}**,n79,** σ**1^{s}.07**/57**,mb4.0**/23**,MS3.3**/3**,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.17**	**128**	P	**Pg**	**08 04 30.3**	**+1.0**
JIU3	**Izumi3**	**0.17**	**128**	A	A	08 04 30.3	
	comp=E,23nm,1.1s,comp=E,40nm,1.8s						
JTA	**Tamana**	**0.33**	**342**	*i* P	**Pg**	**08 04 32.1**	**-0.1**
JTA	**Tamana**	**0.33**	**342**	A	A	08 04 32.1	
	comp=E,15nm,0.6s,comp=E,20nm,0.8s						
JHD	**Hondo**	**0.48**	**247**	A	A	08 04 35.7	
	comp=E,9.0nm,0.4s,comp=E,18nm,1.7s						
JNU	**Nakatsue**	**0.51**	**22**	Pg	**Pg**	**08 04 34.6**	**-0.8**
	875nm,0.3s,baz=187,slow=12,SNR=1923						
JNU				Lg	Lg	08 04 40.4	
	2µm,0.3s,baz=109,slow=24,SNR=36						
JNU	**Nakatsue**	**0.51**	**22**		**Pg**	**08 04 35.2**	**-0.2**
JZO	**Okuchi**	**0.51**	**185**	A	A	08 04 36.7	
	comp=E,19nm,0.2s,comp=E,16nm,1.2s						
JUR	**Ureshino**	**0.74**	**307**	A	A	08 04 39.7	
	comp=E,10.0nm,0.8s,comp=E,7.0nm,1.6s						
JFI	**Itaya**	**0.81**	**344**	A	A	08 04 40.5	
	comp=E,11nm,0.3s,comp=E,12nm,0.3s						
JTSN	**Tsuno**	**0.82**	**119**	A	A	08 04 41.7	
	comp=E,7.0nm,3.4s,comp=E,30nm,0.4s						
JTZ	**Takazaki**	**0.83**	**154**	A	A	08 04 42.3	
	comp=E,8.0nm,1.3s,comp=E,11nm,0.9s						
JHHC	**Hyugahichiya**	**0.85**	**104**	A	A	08 04 42.1	
	comp=E,8.0nm,0.6s,comp=E,12nm,0.8s						
JBEP	**Beppuamama**	**0.93**	**43**	A	A	08 04 42.7	
	comp=E,10.0nm,0.8s,comp=E,14nm,1.0s						
JUS	**Usuki**	**1.01**	**66**	A	A	08 04 44.3	
	comp=E,7.0nm,0.6s,comp=E,10.0nm,0.6s						
JFA	**Akaike**	**1.06**	**6**	A	A	08 04 44.9	
	comp=E,8.0nm,2.1s,comp=E,13nm,0.6s						
JSU	**Suzuyama**	**1.16**	**188**	Pn	**Pb**	**08 04 48.0**	**+0.4**
JNKG	**Nichinankitago**	**1.16**	**148**	A	A	08 04 47.9	
	comp=E,8.0nm,0.7s,comp=E,9.0nm,1.8s						
JNAR	**Kushima--Naru**	**1.24**	**155**	A	A	08 04 49.1	
	comp=E,6.0nm,2.0s,comp=E,9.0nm,2.8s						
JKI	**Kunimi**	**1.24**	**38**	A	A	08 04 48.0	
	comp=E,17nm,0.8s,comp=E,12nm,2.0s						
JTSM	**Tsushimamitsus**	**1.99**	**328**	A	A	08 04 59.5	
	comp=E,4.0nm,0.9s,comp=E,4.0nm,0.8s						
JTU	**Tsushima**	**2.14**	**331**		**Pn**	**08 05 00.1**	**-1.1**
JTU	**Tsushima**	**2.14**	**331**	A	A	08 05 01.7	
	comp=E,3.0nm,1.0s,comp=E,3.0nm,1.1s						
JHS	**Saijyo**	**3.11**	**41**	Pn	**Pn**	**08 05 15.4**	**+0.9**
JISK	**Izumosakaura**	**3.37**	**32**	A	A	08 05 19.2	
	comp=E,2.0nm,2.8s,comp=E,2.0nm,3.4s						
NAWB	**Namwon**	**3.87**	**316**		**Pn**	**08 05 27.5**	**+2.5**
TJN	**Taejon**	**4.60**	**325**		**Pn**	**08 05 36.7**	**+1.7**
KSCHJ	**Chungju**	**4.75**	**333**		**Pn**	**08 05 39.6**	**+2.4**

KSRS	Korea Array	5.29	336	Pn	Pn	08 05 45.0	+0.6
	1.1nm,0.3s,baz=150,slow=14,SNR=6.7						
KSRS				Pg	Pb	08 06 01.0	+3.0
	4.3nm,0.3s,baz=153,slow=17,SNR=16						
KSRS				Lg	Lg	08 07 10.2	
	7.2nm,0.3s,baz=159,slow=31,SNR=8.9						
	1.5nm,0.3s						
KS19	Wonju Array Si	5.35	335	Pn	Pn	08 05 46.8	+1.4
INCN	Inchon	5.84	327	Pn	Pn	08 05 53.0	+0.9
INU	Inuyama	5.93	61	Pn	Pn	08 05 53.9	+0.6
JOW	Kunigami	6.16	200	Pn	Pn	08 05 57.1	+0.7
	2.4nm,0.3s,baz=13,slow=12,SNR=6.1						
	8.2nm,0.4s						
JGF	Kuroka	6.29	60	Pn	Pn	08 05 59.1	+0.8
MJAR	Matsushiro Arr	7.34	56	Pn	Pn	08 06 14.4	+1.7
	0.3nm,0.3s,baz=239,slow=12,SNR=9.2						
MJAR				Lg	Lg	08 08 17.7	
	baz=245,slow=23						
	5.6nm,0.5s						
MJAR	Matsushiro Arr	7.34	56	Pn	Pn	08 06 14.1	+1.4
TATO	Taipei	11.09	229	Pn	Pn	08 07 05.1	+1.0
JEW	Eniwo	13.27	37	Pn	Pn	08 07 34.7	+0.9
JKA	Kamikawa-asahi	14.77	36	Pn	Pn	08 07 53.1	-1.2
YSS	Yuzh-Sakhalins	17.01	29	Pn	Pn	08 08 23.7	+0.3
YSS				IAmb	IAmb	08 08 30.9	
	comp=Z,84nm,1.5s						
ULN	Ulaanbaatar	23.43	317	P	P	08 09 34.1	-0.8
SONM	Songino Array	23.80	317	P	P	08 09 36.3	-2.1
	comp=Z,0.4nm,0.5s,baz=130,slow=10,SNR=2.0						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	23.80	317	P	P	08 09 37.3	-1.1
PET	Petropavlovsk	28.61	36	P	P	08 10 21.9	+0.2
MK31	Makanchi Array	39.17	306	P	P	08 11 52.7	-0.7
MKAR	Makanchi Array	39.17	306	P	P	08 11 53.1	-0.3
	comp=Z,0.5nm,0.8s,baz=98,slow=11,SNR=2.8						
MKAR				LR	LR	08 29 08.2	
	comp=Z,42nm,18.9s,baz=354,slow=38						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	39.17	306	P	P	08 11 52.7	-0.7
KURK	Kurchatov	41.89	311	P	P	08 12 15.8	+0.1
KURK	Kurchatov	41.89	311	IAmb	IAmb	08 12 24.1	
	comp=Z,4.9nm,1.2s						
KURBB	Kurchatov Arra	41.94	311	P	P	08 12 15.8	-0.3
	comp=Z,1.1nm,0.6s,baz=96,slow=9.4,SNR=7.4						
	comp=Z,1.1nm,0.6s						
GSTR	Great Sitkin T	42.80	47	P	P	08 12 23.6	+0.4
NRIK	Noril'sk	43.89	340	P	P	08 12 30.4	-1.3
	comp=Z,0.9nm,0.4s,baz=110,slow=10.0,SNR=4.2						
	comp=Z,0.9nm,0.4s						
NRIK	Noril'sk	43.89	340	IAmb	IAmb	08 12 38.1	
	comp=Z,2.1nm,0.8s						
AAK	Ala-Archa	44.84	300	LR	LR	08 31 42.4	
	comp=Z,29nm,19.2s,baz=58,slow=37						
AAK	Ala-Archa	44.84	300	P	P	08 12 40.1	+0.2
AAK				IAmb	IAmb	08 12 41.4	
	comp=Z,5.1nm,1.5s						
BRVK	Borovoye	47.17	314	P	P	08 12 57.5	-0.4
BRVK				IAmb	IAmb	08 13 02.9	
	comp=Z,3.3nm,0.6s						
KK31	Karatay Array	47.69	301	P	P	08 13 02.2	+0.1
KK31				IAmb	IAmb	08 13 03.5	
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	47.69	301	P	P	08 13 02.1	0.0
KKAR				IAmb	IAmb	08 13 03.5	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	52.42	176	P	P	08 13 36.2	-1.8
	comp=Z,1.1nm,1.0s,baz=355,slow=8.1,SNR=3.4						
	comp=Z,1.1nm,1.0s						
ABKAR	Akbulak array	53.97	310	P	P	08 13 48.9	-0.4
ABKAR				IAmb	IAmb	08 13 53.0	
	comp=Z,1.5nm,0.9s						
ABKAR	Akbulak array	53.97	310	P	P	08 13 49.2	-0.1
N18K	Kilae Creek	54.15	36	P	P	08 13 51.7	+1.2
ASAR	Alice Springs	56.09	176	P	P	08 14 04.8	-0.1
	comp=Z,0.8nm,1.0s,baz=6.3,slow=9.3,SNR=2.5						
	comp=Z,0.8nm,1.0s						
MDM	Murphy Dome	57.22	30	P	P	08 14 13.3	+0.8
MDM				IAmb	IAmb	08 14 14.5	
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	57.82	30	P	P	08 14 16.4	-0.3
	comp=Z,0.8nm,0.7s,baz=279,slow=7.8,SNR=9.9						
	comp=Z,0.8nm,0.7s						
HDA	Harding Lake	57.85	31	P	P	08 14 16.4	-0.4
HDA				IAmb	IAmb	08 14 17.5	
	comp=Z,2.7nm,0.8s						
BMAR	Burnt Mountain	58.33	27	P	P	08 14 21.8	+1.5
MENT	Mentasta	59.54	32	P	P	08 14 29.2	+0.5
BCAR	Beaver Creek A	60.37	32	P	P	08 14 35.4	+0.9
DZM	Mont Dzumac	64.27	143	LR	LR	08 38 40.4	
	comp=Z,52nm,21.1s,baz=130,slow=32						
KBZ	Khabaz	66.81	308	P	P	08 15 17.1	-0.1
	comp=Z,1.6nm,0.8s,baz=90,slow=6.1,SNR=3.8						
	comp=Z,1.6nm,0.8s						
FINES	FINESS Array B	68.35	330	P	P	08 15 25.7	-0.9
	comp=Z,0.9nm,0.4s,baz=66,slow=5.6,SNR=14						
	comp=Z,0.9nm,0.4s						
YKA	Yellowknife Ar	71.84	26	P	P	08 15 47.6	-0.4
	comp=Z,0.2nm,0.6s,baz=306,slow=6.4,SNR=5.6						
	comp=Z,0.2nm,0.6s						
AKASG	Malin Array Be	72.06	319	P	P	08 15 48.8	-0.7
	comp=Z,1.4nm,0.5s,baz=60,slow=7.2,SNR=5.6						
	comp=Z,1.4nm,0.5s						
AKASG	Malin Array Be	72.06	319	IAmb	IAmb	08 16 00.9	
	comp=Z,1.4nm,0.9s						
NOA	NORSAR Array B	74.50	334	P	P	08 16 02.9	-0.9
	comp=Z,0.5nm,0.6s,baz=46,slow=6.0,SNR=3.3						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	74.79	308	P	P	08 16 05.9	-0.1
	comp=Z,0.7nm,0.5s,baz=128,slow=2.4,SNR=2.6						
	comp=Z,0.7nm,0.5s						
NVAR	Mina Array Bea	84.58	47	P	P	08 16 59.6	+0.3
	comp=Z,0.3nm,0.5s,baz=294,slow=6.1,SNR=3.7						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	86.87	40	P	P	08 17 10.6	0.0
	comp=Z,0.3nm,0.6s,baz=308,slow=3.0,SNR=4.0						
	comp=Z,0.3nm,0.6s						

*FUNV **12** 08:08:47.2, 10°.80N×62°.20W, h27^{km}, MW3.0*
*TRN **12** 08:08:47.5, 10°.82N×62°.19W, h28^{km}, MD3.2*
ISC 12 08:08:45.8±1.4**, 10°.74N**±0°.05×**62°.24W**±0°.05**, h82**^{km}±15^{km}**, n25, σ1^{s}32**/48**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.83	96	*e*P	Pn	08 09 03.1	+0.1
TRN				*e*S	Sn	08 09 14.1	-1.6
CRUV	Carupano	0.98	267	*e*P	Pn	08 09 05.9	+1.1
CRUV				*e*S	Sn	08 09 18.5	-0.4
GRFF	Grenada Fort F	1.39	21	*e*P	Pn	08 09 09.4	-0.5
GRFF				*e*S	Sn	08 09 26.9	-1.1
GRGR	Grenville	1.50	22	*e*P	Pn	08 09 11.2	-0.1
GRGR				*e*S	Sn	08 09 29.6	-0.9
GRHS	Sauteurs	1.59	22	*e*P	Pn	08 09 13.4	+1.0
GRHS				*e*S	Sn	08 09 32.3	-0.2
COAV	Cumanacoa	1.67	250	*e*P	Pn	08 09 15.4	+1.9
GRSS	Sisters	1.67	22	*e*P	Pn	08 09 14.9	+1.5
GRSS				*e*S	Sn	08 09 33.5	-0.8
TOSP	Speyside	1.76	71	*e*P	Pn	08 09 16.3	+1.6
TOSP				*e*S	Sn	08 09 35.7	-0.9
GCMP	Grenada, Carri	1.91	25	*e*P	Pn	08 09 16.5	-0.1
GCMP				*e*S	Sn	08 09 38.7	-1.4
CUMV	Cumana_UDO	1.95	261	*e*P	Pn	08 09 19.0	+1.9
CUMV				*e*S	Sn	08 09 42.0	+1.2
PCRV	Puerto La Cruz	2.42	257	*e*P	Pn	08 09 24.9	+1.4
PCRV				*e*S	Sn	08 09 52.4	+0.1
SVOC	Richmond Hill,	2.60	22	*e*P	Pn	08 09 26.3	+0.5
SVOC				*e*S	Sn	08 09 56.7	+0.1
SVB	Belmont	2.70	21	*e*P	Pn	08 09 27.9	+0.7
SVB				*e*S	Sn	08 09 59.1	+0.2
SVV	Soufriere Volc	2.75	21	*e*P	Pn	08 09 29.2	+1.2
SVV				*e*S	Sn	08 09 59.1	-1.2
PRGV	PARIAGUAN	3.08	231	*e*P	Pn	08 09 33.2	+0.8
PRGV				*e*S	Sn	08 10 08.7	+0.5
MCLT	Moule a Chique	3.22	23	*e*P	Pn	08 09 35.9	+1.7
MCLT				*e*S	Sn	08 10 09.9	-1.5
SLCP	Castries, St.	3.47	20	*e*P	Pn	08 09 39.5	+1.8
SLCP				*e*S	Sn	08 10 16.1	-1.6
SLBI	Saint Lucia, B	3.49	21	*e*P	Pn	08 09 39.0	+1.1
SLBI				*e*S	Sn	08 10 18.0	-0.1
BIM	Bigot	3.93	17	*e*P	Pn	08 09 45.9	+2.0
BIM				*e*S	Sn	08 10 27.2	-1.6
BIRV	Birongo	3.97	267	*e*P	Pn	08 09 46.2	+1.8
BIRV				*e*S	Sn	08 10 29.2	-0.7
MERV	Las Mercedes	4.26	250	*e*P	Pn	08 09 49.5	+1.1
MERV				*e*S	Sn	08 10 36.4	-0.6
BENV	Beln	5.33	262	*e*P	Pn	08 10 03.1	+0.1
BENV				*e*S	Sn	08 11 01.2	-2.0
BAUV	El Baul	5.99	253	*e*P	Pn	08 10 12.1	+0.1
BAUV				*e*S	Sn	08 11 16.5	-2.7
MAPV	Macapo	6.19	262	*e*P	Pn	08 10 14.8	+0.1
MAPV				*e*S	Sn	08 11 20.9	-3.1
SOCV	Socops	8.84	255	*e*P	Pn	08 10 50.2	-0.7
SOCV				*e*S	Sn	08 12 22.4	-6.6

IDC 12 08:24:54.6±2.3**, 7°.75S**×**127°.46E, h0**^{km}**, mb3.5**/1**, mbtmp3.3**/3**, ML3.4**/2**, Error ellipse: s-maj=260.7km s-min=33.6km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.83	152	Pn	Pn	08 28 10.7	-1.4
	0.2nm,0.3s,baz=329,slow=16,SNR=18						
WRA				Sn	Sn	08 30 33.0	-14
	0.5nm,0.3s,baz=332,slow=23,SNR=9.9						
	0.6nm,0.9s						
ASAR	Alice Springs	16.99	159	Pn	P	08 28 55.1	-0.7
	0.1nm,0.3s,baz=336,slow=8.8,SNR=7.1						
ASAR				Sn	Sn	08 31 54.3	-9.1
	0.1nm,0.3s,baz=354,slow=26,SNR=2.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	67.50	328	P	P	08 35 52.5	0.0
	0.3nm,0.5s,baz=115,slow=7.9,SNR=2.8						
	0.3nm,0.5s						

*IDC **12** 08:55:34.7±0.9, 57°.57N×33°.02W, h0^{km}, mb3.7/12, mbtmp3.7/15, ML3.1/3, MS3.4/34, Error ellipse: s-maj=28.9km s-min=15.2km az=1.0*
ISC 12 08:55:36.1±0.8**, 57°.5N**±0°.1×**33°.05W**±0°.09**, h10**^{km}**, n40, σ0^{s}47**/19**, mb3.7**/12**, MS3.4**/29**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	9.19	33	Pn	Pn	08 57 49.3	+0.9
	0.7nm,0.3s,baz=203,slow=7.7,SNR=2.7						
BORG				Sn	Sn	08 59 31.7	-0.1
	0.3nm,0.3s,baz=332,slow=13,SNR=2.2						
BORG				LR	LR	09 00 25.8	
	comp=Z,296nm,18.6s,baz=255,slow=32						
	9.1nm,0.7s						
SFJD	Kangerlussuaq	12.48	327	LR	LR	09 02 35.4	
	comp=Z,182nm,19.0s,baz=124,slow=34						
EKA	Eskdalemuir Ar	16.61	85	Pn	Pn	08 59 28.7	-0.1
	baz=276,slow=11						
EKA				LR	LR	09 04 45.7	
	comp=Z,137nm,18.3s,baz=355,slow=33						
	0.3nm,0.4s						
FRB	Frobisher Bay	18.29	305	LR	LR	09 05 55.8	
	comp=Z,122nm,18.0s,baz=30,slow=34						
SCHQ	Schefferville	18.88	276	P	P	08 59 56.6	+0.3
	0.1nm,0.3s,baz=69,slow=14,SNR=3.1						
SCHQ				LR	LR	09 06 07.7	
	comp=Z,141nm,18.8s,baz=91,slow=34						
	1.8nm,0.8s						
NOA	NORSAR Array B	22.55	62	P	P	09 00 36.4	+0.4
	0.6nm,0.8s,baz=281,slow=9.5,SNR=3.0						
NOA				LR	LR	09 08 05.8	
	comp=Z,39nm,19.6s,baz=275,slow=33						
	0.6nm,0.8s						
HFS	Hagfors	23.94	64	LR	LR	09 08 46.5	
	comp=Z,42nm,18.2s,baz=322,slow=33						
ESDC	Sonseca Array	25.94	121	P	P	09 01 08.6	+0.2
	1.0nm,0.7s,baz=317,slow=8.4,SNR=5.1						
ESDC				LR	LR	09 09 29.3	
	comp=Z,56nm,19.4s,baz=322,slow=32						
	1.0nm,0.7s						
DAVOX	Davos/Dischmat	27.98	94	LR	LR	09 11 45.6	
	comp=Z,106nm,20.0s,baz=285,slow=35						
RES	Resolute Bay	28.44	331	LR	LR	09 12 11.0	
	comp=Z,27nm,18.7s,baz=346,slow=35						
GERES	GERESS Array B	28.80	87	LR	LR	09 11 53.4	
	comp=Z,43nm,18.8s,baz=288,slow=34						
FINES	FINESS Array B	29.38	57	LR	LR	09 11 55.1	
	comp=Z,29nm,18.3s,baz=22,slow=33						
VRAC	Vranov	30.09	84	LR	LR	09 14 07.3	
	comp=Z,61nm,18.5s,baz=292,slow=37						
SADO	Sadowa	30.97	266	LR	LR	09 13 04.2	
	comp=Z,111nm,19.2s,baz=56,slow=34						
AKASG	Malin Array Be	35.96	73	P	P	09 02 36.1	-0.4
	0.3nm,0.3s,baz=300,slow=8.6,SNR=4.6						
	0.3nm,0.3s						
ULM	Lac du Bonnet	36.51	286	LR	LR	09 15 58.9	
	comp=Z,81nm,21.2s,baz=79,slow=34						
MLR	Muntele Rosu	37.45	83	LR	LR	09 19 13.8	
	comp=Z,70nm,18.5s,baz=312,slow=38						
YKA	Yellowknife Ar	38.51	312	P	P	09 02 57.8	-0.2
	0.7nm,0.9s,baz=60,slow=9.2,SNR=8.8						
YKA				PcP	PcP	09 05 10.3	-0.1
	0.2nm,0.7s,baz=46,slow=3.3,SNR=5.0						
YKA				LR	LR	09 18 12.3	
	comp=Z,174nm,18.4s,baz=270,slow=35						
	0.7nm,0.9s						
TKL	Tuckaleechee C	39.93	259	LR	LR	09 18 44.8	
	comp=Z,128nm,18.8s,baz=4.0,slow=35						
INK	Inuvik	41.83	327	P	P	09 03 24.8	-0.6
	2.3nm,1.1s,baz=27,slow=9.0,SNR=3.1						
INK				LR	LR	09 18 46.7	
	comp=Z,51nm,19.5s,baz=340,slow=33						
	2.3nm,1.1s						
BRTR	Keskin Array B	45.52	83	LR	LR	09 24 00.4	
	comp=Z,25nm,18.8s,baz=320,slow=38						
DLBC	Dease Lake	47.03	314	LR	LR	09 23 20.4	
	comp=Z,102nm,19.3s,baz=68,slow=35						
KBZ	Khabaz	47.55	72	LR	LR	09 23 36.2	
	comp=Z,22nm,21.4s,baz=60,slow=35						
ILAR	Eielson Array	48.14	328	P	P	09 04 15.0	-0.7
	0.9nm,0.9s,baz=35,slow=6.9,SNR=12						
ILAR				PcP	PcP	09 05 43.1	+0.2
	0.9nm,0.8s,baz=356,slow=3.3,SNR=8.1						
	0.9nm,0.9s						
NEW	Newport	48.42	297	LR	LR	09 23 46.2	
	comp=Z,52nm,19.4s,baz=24,slow=35						
PDAR	Pinedale Array	48.52	287	P	P	09 04 19.1	-0.1
	0.4nm,0.5s,baz=55,slow=8.2,SNR=8.1						
PDAR				LR	LR	09 23 36.2	
	comp=Z,61nm,18.7s,baz=72,slow=35						
	0.4nm,0.5s						
AKTO	Aktyubinsk	50.14	56	LR	LR	09 25 13.4	
	comp=Z,43nm,18.8s,baz=306,slow=36						
GNI	Garni	51.08	74	LR	LR	09 26 46.0	
	comp=Z,27nm,18.8s,baz=37,slow=37						
ANMO	Albuquerque	52.65	278	LR	LR	09 26 23.0	
	comp=Z,75nm,18.6s,baz=52,slow=35						
ELK	Elko	52.91	289	LR	LR	09 26 28.4	
	comp=Z,60nm,18.3s,baz=18,slow=35						
MDP	Montagnes des	54.50	204	LR	LR	09 24 49.2	
	comp=Z,25nm,18.0s,baz=244,slow=32						
TXAR	Lajitas Array	55.48	271	P	P	09 05 11.4	+0.4
	0.3nm,0.8s,baz=57,slow=6.7,SNR=3.9						
TXAR				LR	LR	09 28 08.8	
	comp=Z,18nm,20.5s,baz=161,slow=35						
	0.3nm,0.8s						
YBH	Yreka Blue Hor	55.89	295	LR	LR	09 28 17.2	
	comp=Z,48nm,18.9s,baz=50,slow=35						
NVAR	Mina Array Bea	56.20	290	P	P	09 05 16.9	+0.7
	0.4nm,0.7s,baz=56,slow=6.7,SNR=4.6						
NVAR				LR	LR	09 27 52.6	
	comp=Z,68nm,18.7s,baz=251,slow=34						
	0.4nm,0.7s						
PFO	Pinyon Flats O	58.96	285	LR	LR	09 29 58.4	
	comp=Z,48nm,19.1s,baz=69,slow=35						
CMIG	Matias Romero	60.69	255	LR	LR	09 35 29.1	
	comp=Z,23nm,18.1s,baz=56,slow=39						
MKAR	Makanchi Array	63.06	44	P	P	09 06 02.4	-0.7
	0.7nm,0.6s,baz=329,slow=5.2,SNR=5.3						
	0.7nm,0.6s						
SONM	Songino Array	69.76	28	P	P	09 06 45.9	-0.2
	1.2nm,0.8s,baz=335,slow=6.6,SNR=4.5						
	1.2nm,0.8s						
KSRS	Korea Array	84.03	15	P	P	09 08 06.7	+0.3
	1.0nm,0.5s,baz=350,slow=6.2,SNR=2.7						
	1.0nm,0.5s						
ASAR	Alice Springs	144.89	21	PKP	PKPab	09 15 11.8	-0.4
	1.2nm,0.8s,baz=341,slow=2.3,SNR=9.2						

*IDC **12** 09:00:40.5±0.8, 6°.75N×72°.98W, h162^{km}±10^{km}, mb3.0/3, mbtmp3.7/5, MS2.5/1, Error ellipse: s-maj=33.9km s-min=8.1km az=131.0*
*RSNC **12** 09:00:41.8±0.9, 6°.80N×73°.14W, h150^{km}±4^{km}, ML3.7, Mw3.8, Fault plane solution: NP1:ϕ_s48.00000°, δ11.00000°, λ95.00000°.*
ISC 12 09:00:40.6±0.8**, 6°.86N**±0°.03×**73°.12W**±0°.04**, h158**^{km}±5^{km}**, n36, σ1^{s}19**/65**, mb3.1**/3**, 7C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	*e*P	Pn	09 01 02.1	-0.3
BARC				*e*S	Sn	09 01 17.4	-1.6
BARC				*i*		09 01 18.7	
	comp=Z,2μm,0.3s						
PAMC	Pamplona, Colo	0.64	41⇑	*e*P	Pn	09 01 04.9	+0.7
PAMC				*i*		09 01 05.3	
	comp=Z,2μm,0.2s						
PAMC				*e*S	Sn	09 01 22.2	0.0
BRRC	Barranca, Sant	0.64	293⇑	*i*P	Pn	09 01 04.0	+0.4
BRRC				*e*S	Sn	09 01 20.6	-0.6
BRRC				*i*		09 01 21.9	
	comp=Z,761nm,0.4s						
RUSC	La Rusia	0.96	178⇓	*e*P	Pn	09 01 05.9	-0.5
RUSC				*e*S	Sn	09 01 24.4	-1.8
RUSC				*i*		09 01 26.0	
	comp=Z,871nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	257	*e*P	Pn	09 01 08.6	-0.8
PTBC				*e*S	Sn	09 01 29.9	-1.7
PTBC				*i*		09 01 35.4	
	comp=Z,336nm,0.2s						
TAMC	Tame, Arauca	1.38	108⇑	*i*P	Pn	09 01 10.4	+0.7
TAMC				*e*S	Sn	09 01 31.9	-0.1
OCAC	Ocana	1.39	352⇑	*e*P	Pn	09 01 10.1	+0.3
OCAC				*e*S	Sn	09 01 32.2	-0.1
OCAC				*i*		09 01 39.0	
	comp=Z,885nm,0.4s						
SPBC	San Pablo de B	1.53	218	*e*P	Pn	09 01 10.9	-0.2
SPBC				*e*S	Sn	09 01 33.6	-1.0
SPBC				*i*		09 01 37.8	
	comp=Z,764nm,0.5s						
ZARC	Zaragoza, Cauc	1.84	290	*e*P	Pn	09 01 14.4	0.0
ZARC				*e*S	Sn	09 01 40.3	-0.2
ZARC				*i*		09 01 45.8	
	comp=Z,491nm,0.5s						
NORC	Norcasia	2.16	234⇑	*e*P	Pn	09 01 17.9	-0.3
NORC				*e*S	Sn	09 01 45.8	-1.4
NORC				*i*		09 01 50.5	
	comp=Z,476nm,0.4s						
CHIC	Chingaza	2.30	195	*e*P	Pn	09 01 20.1	0.0
CHIC				*e*S	Sn	09 01 48.4	-2.2
CHIC				*i*		09 01 58.2	
	comp=Z,236nm,0.3s						
ROSC	El Rosal	2.33	211	P	Pn	09 01 21.9	+1.4
	comp=Z,210nm,0.3s,baz=351,slow=4.3,SNR=332						
ROSC				S	Sn	09 01 51.3	0.0
	comp=Z,566nm,0.4s,baz=71,slow=23,SNR=10						
ROSC	El Rosal	2.33	211	*e*P	Pn	09 01 21.7	+1.2
ROSC				*e*S	Sn	09 01 50.3	-1.1
ROSC				*i*		09 01 59.8	
	comp=Z,707nm,0.4s						
HELC	Santa Helena	2.48	255	*e*P	Pn	09 01 22.4	+0.1
HELC				*e*S	Sn	09 01 54.1	-0.4
HELC				*i*		09 02 01.1	
	comp=Z,222nm,0.3s						
UREC	San Jos de Ur	2.55	291	*e*P	Pn	09 01 21.9	-0.9
UREC				*e*S	Sn	09 01 54.1	-1.3
UREC				*i*		09 02 03.7	
	comp=Z,226nm,0.2s						
PTGC	Puerto Gaitan,	2.82	160	*e*P	Pn	09 01 25.1	-1.0
PTGC				*e*S	Sn	09 01 58.2	-3.1
LL6C	La Loma 6 Bece	2.86	357⇑	*e*P	Pn	09 01 26.6	0.0
LL6C				*e*S	Sn	09 02 02.0	-0.3
LL6C				*i*		09 02 16.0	
	comp=Z,88nm,0.4s						
CBOC	Ciudad Bolivar	3.04	251	*e*P	Pn	09 01 29.6	+0.6
CBOC				*e*S	Sn	09 02 06.5	+0.1
CBOC				*i*		09 02 14.3	
	comp=Z,62nm,0.6s						
SDV	Santo Domingo	3.18	51	P	Pn	09 01 31.4	+0.7
	comp=Z,126nm,0.3s,baz=202,slow=3.6,SNR=121						
SDV				S	Sn	09 02 09.2	-0.5
	comp=Z,46nm,0.4s,baz=252,slow=20,SNR=8.4						
ANIL	Santa Ana	3.27	224	*e*P	Pn	09 01 32.8	+0.8
ANIL				*e*S	Sn	09 02 12.7	+0.8
PRAC	Prado	3.58	209	*e*P	Pn	09 01 35.5	-0.2
PRAC				*e*S	Sn	09 02 17.6	-1.1
PRAC				*i*		09 02 24.2	
	comp=Z,288nm,0.5s						
SJCC	San Jacinto, C	3.64	326	*e*P	Pn	09 01 35.6	-0.9
SJCC				*e*S	Sn	09 02 17.4	-2.7
SJCC				*i*		09 02 36.4	
	comp=Z,92nm,0.5s						
PLMC	San Jos del P	3.70	239	*e*P	Pn	09 01 37.5	+0.2
PLMC				*e*S	Sn	09 02 20.6	-0.7
PLMC				*i*		09 02 28.8	
	comp=Z,76nm,0.3s						
LCBC	Los crdobas,	3.78	302	*e*P	Pn	09 01 38.2	0.0
LCBC				*e*S	Sn	09 02 22.6	-0.5
LCBC				*i*		09 02 27.1	
	comp=Z,88nm,0.3s						
CRJC	Cerrejon, Guaj	4.14	3	*e*P	Pn	09 01 42.2	-0.8
CRJC				*e*S	Sn	09 02 30.3	-1.4
CRJC				*i*		09 02 31.9	
	comp=Z,124nm,0.5s						
YOTC	Yotoco, Valle	4.30	229⇑	*i*P	Pn	09 01 44.6	-0.4
YOTC				*e*S	Sn	09 02 33.6	-1.7
GUVC	San Jose del G	4.31	173⇓	*e*P	Pn	09 01 44.8	-0.4
GUVC				*e*S	Sn	09 02 34.3	-1.2
GUVC				*i*		09 02 40.1	
	comp=Z,116nm,0.3s						
SMRC	Santa Marta, M	4.42	346	*e*P	Pn	09 01 46.8	+0.3
SMRC				*e*S	Sn	09 02 35.4	-2.6
SMRC				*i*		09 02 41.2	
	comp=Z,49nm,0.2s						
URIC	Uribia, Colomb	4.94	13	*e*P	Pn	09 01 52.6	-0.8
URIC				*e*S	Sn	09 02 46.3	-4.0
URIC				*i*		09 02 55.1	
	comp=Z,22nm,0.5s						
PCON	Cinco Dias	5.56	216	*e*P	Pn	09 02 02.3	+0.2
CMIG	Matias Romero	23.57	298	LR	LR	09 16 26.7	
	comp=Z,10nm,19.7s,baz=63,slow=40						
TXAR	Lajitas Array	36.44	312	P	P	09 07 31.1	+0.6
	comp=Z,0.2nm,0.4s,baz=125,slow=9.3,SNR=5.3						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	48.05	324	P	P	09 09 05.5	+1.2
	comp=Z,0.2nm,0.5s,baz=128,slow=12,SNR=2.3						
	comp=Z,0.2nm,0.5s						
YKA	Yellowknife Ar	63.23	340	P	P	09 10 52.2	+0.4
	comp=Z,0.6nm,0.5s,baz=132,slow=6.7,SNR=40						
YKA				pP	pP	09 11 30.7	+1.4
	comp=Z,0.1nm,0.4s,baz=127,slow=6.4,SNR=2.5						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	09 20 10.3	-0.8
	comp=Z,0.8nm,0.8s,baz=104,slow=3.7,SNR=7.6						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	09 20 13.2	-1.0
	comp=Z,0.3nm,0.4s,baz=107,slow=2.9,SNR=8.9						

*NOU **12** 09:06:04.9, 37°.57S×176°.68E, h301^{km}, mb4.4/6, North Island, New Zealand*
*WEL **12** 09:06:10.6±0.8, 38°S±6°×17°6E±°, h252^{km}±7^{km}, M2.7/27, MLv2.7/27, Error ellipse: s-maj=0.0km s-min=0.0km az=42.4*
ISC 12 09:06:06.4±2.2**, 37°.67S**±0°.09×**176°.43E**±0°.08**, h286**^{km}±13^{km}**, n80, σ1^{s}28**/90**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.20	150	P	Pn	09 06 43.1	+0.3
URZ	Urewera	0.80	138	P	Pn	09 06 44.5	+0.3
URZ				S	S	09 07 11.8	-2.5
URZ	Urewera	0.80	138	P	Pn	09 06 44.7	+0.5
MUGZ	Murupara	0.85	162	P	Pn	09 06 45.2	+0.8
TLZ	Tolley Road	0.96	227	P	Pn	09 06 46.3	+1.3
RUGZ	Raukumara Rang	1.03	107	P	Pn	09 06 45.3	-0.2
RTZ	Ruatahuna	1.04	155	P	Pn	09 06 46.5	+1.1
HAZ	Te Kaha	1.08	95	P	Pn	09 06 45.7	+0.1
KUZ	Kuaotunu	1.08	328	P	Pn	09 06 46.0	+0.3
MWZ	Matawai	1.09	128	P	Pn	09 06 46.4	+0.8
MWZ				S	S	09 07 15.6	-1.2
MKAZ	Moumakai	1.16	299	P	Pn	09 06 47.0	+1.0
MRHZ	Matea Rd	1.16	181	P	Pn	09 06 47.0	+1.0
MRHZ				S	S	09 07 15.8	-1.8
MTHZ	Maungataniwha	1.22	165	P	Pn	09 06 47.5	+1.2
SNGZ	Shannon Statio	1.32	147	P	Pn	09 06 48.4	+1.5
SNGZ				S	S	09 07 17.6	-1.6
PKGZ	Pakihiroa	1.32	100	P	Pn	09 06 48.0	+1.0

TWGZ	Tauwhareparae	1.32	113	P	Pn	09 06 48.4	+1.4
TWGZ				S	S	09 07 18.6	-0.7
RAHZ	Arahi	1.34	158	P	Pn	09 06 48.9	+1.8
RAHZ				S	S	09 07 19.1	-0.3
TKGZ	Te Karaka	1.36	125	P	Pn	09 06 48.5	+1.4
TKGZ				S	S	09 07 17.9	-1.6
ETAZ	East Tamaki Re	1.40	300	P	Pn	09 06 48.5	+1.1
RIGZ	Rimuhau	1.47	135	P	Pn	09 06 49.4	+1.5
RIGZ				S	S	09 07 20.3	-0.6
BKZ	Black Stump Fm	1.49	178	P	Pn	09 06 49.1	+1.0
MXZ	Matakaoa Point	1.49	86	P	Pn	09 06 48.7	+0.7
HIZ	Hauiti	1.50	235	P	Pn	09 06 49.9	+1.9
PUZ	Puketiti	1.50	106	P	Pn	09 06 49.1	+1.0
PUZ				S	S	09 07 18.5	-2.8
MBAZ	Motutapu North	1.52	306	P	Pn	09 06 49.5	+1.3
AWAZ	Awhitu Peninsu	1.55	293	P	Pn	09 06 49.6	+1.2
ETVZ	East Tongariro	1.57	201	P	Pn	09 06 50.1	+1.5
WMGZ	Waiomatatini S	1.58	96	P	Pn	09 06 49.7	+1.0
WTVZ	West Tongariro	1.58	204	P	Pn	09 06 50.0	+1.2
TWVZ	Taurewa	1.60	209	P	Pn	09 06 50.3	+1.4
OTVZ	Oturere	1.60	202	P	Pn	09 06 50.6	+1.6
CNGZ	Carnagh Statio	1.62	121	P	Pn	09 06 50.6	+1.7
ARHZ	Aropaoanui	1.65	165	P	Pn	09 06 50.9	+1.8
ARHZ				S	S	09 07 22.9	-0.1
KNZ	Kokohu	1.67	144	P	Pn	09 06 50.5	+1.4
ABAZ	Army Bay	1.67	309	P	Pn	09 06 50.5	+1.2
PRGZ	Paritu Road	1.69	138	P	Pn	09 06 51.0	+1.6
KWHZ	Kaweka Forest	1.75	180	P	Pn	09 06 51.5	+1.6
WNVZ	Wahianoa	1.78	201	P	Pn	09 06 51.6	+1.3
MCHZ	McNeill Hill	1.78	173	P	Pn	09 06 52.0	+1.9
MOVZ	Moawhango	1.81	197	P	Pn	09 06 51.4	+1.0
BHHZ	Black Hill Sta	1.84	189	P	Pn	09 06 51.9	+1.3
MHGZ	Mahia Peninsul	1.88	142	P	Pn	09 06 52.5	+1.7
VRZ	Vera Road	1.96	222	P	Pn	09 06 53.1	+1.7
KRHZ	Kereru	1.97	181	P	Pn	09 06 52.9	+1.3
CKHZ	Cape Kidnapper	2.05	166	P	Pn	09 06 53.9	+1.8
KAHZ	Kahuranaki	2.15	171	P	Pn	09 06 54.9	+1.8
PNHZ	Pukenui	2.25	185	P	Pn	09 06 55.3	+1.4
WAZ	Wanganui	2.37	208	P	Pn	09 06 56.4	+1.4
PXZ	Pawanui	2.38	172	P	Pn	09 06 56.5	+1.5
WPHZ	Waipukurau	2.39	180	P	Pn	09 06 56.8	+1.6
WCZ	Waipu Caves	2.41	315	P	Pn	09 06 56.5	+1.1
TSZ	Takapari Road	2.41	189	P	Pn	09 06 56.6	+1.2
POWZ	Post Office Ro	2.76	191	P	Pn	09 07 00.3	+1.6
BFZ	Birch Farm	3.01	183	P	Pn	09 07 02.6	+1.4
MRZ	Mangatainoka R	3.06	192	P	Pn	09 07 02.5	+0.9
OGWZ	Otaki Gorge	3.29	197	P	Pn	09 07 05.0	+1.0
OUZ	Omahuta	3.35	316	P	Pn	09 07 05.6	+0.8
KIW	Kapiti Island	3.40	200	P	Pn	09 07 05.9	+0.8
CAW	Cannon Point	3.59	197	P	Pn	09 07 08.3	+1.1
WEL	Wellington	3.83	199	P	Pn	09 07 10.5	+0.7
TCW	Tory Channel	3.91	205	P	Pn	09 07 11.5	+0.8
TUWZ	Tuamarina	4.22	206	P	Pn	09 07 15.1	+1.0
NNZ	Nelson	4.25	213	P	Pn	09 07 14.8	+0.2
QRZ	Quartz Range	4.37	223	P	Pn	09 07 17.4	+1.5
BSWZ	Blackbirch Sta	4.49	205	P	Pn	09 07 18.4	+1.1
MRNZ	Matariki Terra	4.68	216	P	Pn	09 07 19.5	0.0
THZ	Tophouse	4.91	213	P	Pn	09 07 23.0	+0.8
KHZ	Kahutara	5.23	204	P	Pn	09 07 27.0	+1.1
KHZ	Kahutara	5.23	204	P	Pn	09 07 27.2	+1.3
LTZ	Lake Taylor	6.01	211	P	Pn	09 07 35.9	+0.5
OXZ	Oxford	6.56	209	P	Pn	09 07 41.7	-0.3
MQZ	McQueen's Vall	6.67	204	P	Pn	09 07 43.3	0.0
RACZ	Rakaia	6.87	207	P	Pn	09 07 45.7	0.0
WACZ	Wakanui South	7.17	208	P	Pn	09 07 49.6	+0.2
RPZ	Rata Peaks	7.29	212	P	Pn	09 07 51.4	+0.5
ARCZ	Arundel	7.43	211	P	Pn	09 07 52.2	-0.4
TMZ	Timaru	7.86	210	P	Pn	09 07 58.2	+0.3
ODZ	Otahua Downs	8.55	209	P	Pn	09 08 07.7	+1.3
ODZ	Otahua Downs	8.55	209	P	Pn	09 08 07.9	+1.4
HHSZ	Highcliff Hill	9.29	206	P	Pn	09 08 18.0	+2.5

KRSZO 12 09:07:18.4±3.2, 46°.10N×18°.06E, h0^{km}, Error ellipse: s-maj=24.7km s-min=13.3km az=112.0, Explosion., Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOVH	Kovagotottos	0.03	123	Pg	Pg	09 07 19.7	+0.7
KOVH				Lg	Lg	09 07 21.0	
KOVH	Kovagotottos	0.03	123	P	Pg	09 07 19.7	+0.7
KOVH				S	Sg	09 07 21.0	+1.6
MORH	Mrgy, Hungar	0.42	74	Pg	Pg	09 07 27.3	+0.9
MORH				Lg	Lg	09 07 34.1	
MORH	Mrgy, Hungar	0.42	74	P	Pg	09 07 27.3	+0.9
MORH				S	Sb	09 07 34.1	-1.5
MOSL	Moslavina	1.04	242	*e*Pg	Pg	09 07 38.0	-0.4
MOSL				Sg	Sg	09 07 51.6	-0.2

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*VIE **12** 09:31:36.5±0.5, 49°.16N×14°.91E, h0^{km}, mb2.0/6, ml2.5/6, Error ellipse: s-maj=4.0km s-min=2.7km az=19.0 27 km NNW of Litschau Suspected Mining explosion.*

ISC 12 09:31:35.3±1.6, 49°.25N±0°.08×14°.96E±0°.06, h0^{km}, n9, σ0^{s}22/15, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUC	Moravsky	0.96	101	*e*PG	Pb	09 31 54.6	-0.3
KRUC				*e*SG	Sb	09 32 08.3	+0.2
VRAC	Vranov	1.07	86	*e*PG	Pb	09 31 56.6	-0.1
VRAC				*e*SG	Sb	09 32 11.1	-0.2
CONA	Conrad Observa	1.46	155	*i* Pg	Pb	09 32 03.4	+0.1
	2.4nm,0.2s,SNR=7.2						
CONA				*e*Sg	Sn	09 32 22.8	+0.1
	15nm,0.3s						
MOA	Molln	1.48	198	*e*Pg	Pb	09 32 03.7	0.0
	2.0nm,0.2s,SNR=9.6						
MOA				*i* Sg	Sn	09 32 23.4	+0.2
	4.8nm,0.2s						
MORC	Moravsky Berou	1.76	72	*e*PG	Pn	09 32 07.3	+0.2
ZST	Bratislava	1.77	126	*e*SG	Sg	09 32 32.2	0.0
RONA	Rosalia, Austr	1.79	150	Pg	Pg	09 32 09.7	+0.1
	0.7nm,0.2s						
RONA				*i* Sg	Sg	09 32 32.7	-0.2
	12nm,0.5s,SNR=6.3						
BIOA	Bad Ischl, Aus	1.79	210	*e*Pg	Pb	09 32 08.7	-0.3
	8.2nm,0.2s,SNR=4.8						
BIOA				*e*Sg	Sg	09 32 33.0	+0.1
	22nm,0.5s,SNR=5.9						
ARSA	Arzberg	2.04	169	*e*Sg	Sb	09 32 38.8	-0.4
	8.8nm,0.6s						

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*PGC **12** 09:45:22.1±0.2, 49°.95N×130°.06W, h10^{km}, MLSn2.7/17, Mw3.3/17, 205km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **12** 09:45:25.4±2.1, 50°.14N×129°.60W, h0^{km}, mb3.3/3, mbtmp3.2/10, ML2.9/5, MS2.9/7, Error ellipse: s-maj=33.4km s-min=12.6km az=74.0*

ISC 12 09:45:23.5±2.9, 50°.07N±0°.06×129°.82W±0°.07, h9^{km}±17^{km}, n38, σ1^{s}53/38, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.22	62	P	Pb	09 45 45.6	-1.2
HOLB				S	Sg	09 46 03.3	+0.4
BPBC	Brooks Peninsu	1.32	85	P	Pn	09 45 46.1	-2.1
PACB	Port Alice, BC	1.54	75	Pn	Pn	09 45 49.6	-1.5
PACB				Sn	Sn	09 46 10.0	-1.2
PHC	Port Hardy	1.66	66	Pn	Pn	09 45 51.8	-0.9
PHC				Sn	Sn	09 46 14.0	-0.1
MAYB	Maynard	1.73	78	Pn	Pn	09 45 52.3	-1.6
EDB	Eliza Dome	1.75	95	Pn	Pn	09 45 51.9	-2.2
EDB				Sn	Sn	09 46 14.6	-2.0
WOSB	Woss	2.09	86	Pn	Pn	09 45 58.3	-0.6
BBB	Bella Bella	2.38	26	Pn	Pn	09 46 02.2	-0.3
	9.2nm,0.3s,baz=217,slow=7.2,SNR=88						
BBB				Sn	Sn	09 46 30.2	-1.6
	4.7nm,0.3s,baz=309,slow=22,SNR=6.5						
	24nm,0.3s						
BBB	Bella Bella	2.38	26	Pn	Pn	09 46 02.3	-0.3
BBB				Sn	Sn	09 46 30.6	-1.2
HG4B	Hotspring	2.39	339	Sn	Sn	09 46 29.0	-3.2
NCRB	Newcastle Ridg	2.44	81	Pn	Pn	09 46 03.5	-0.2
SPLB	Strathcona Par	2.70	92	Pn	Pn	09 46 06.3	-0.7
CBB	Campbell River	2.87	89	Pn	Pn	09 46 09.1	-0.3
OZB	Mount Ozzard	3.03	110	Pn	Pn	09 46 11.6	-0.1
BUTB	Butedale	3.12	15	Pn	Pn	09 46 12.7	-0.2
BUTB				Sn	Sn	09 46 50.8	+0.5
BNKB	Banks Island	3.27	359	Pn	Pn	09 46 13.0	-1.9
BNKB				Sn	Sn	09 46 51.9	-1.9
TXB	Texada	3.50	94	Pn	Pn	09 46 18.9	+0.8
MGB	Mount Grey	3.51	106	Pn	Pn	09 46 18.8	+0.5
GRNB	Grenville Isla	3.78	359	Pn	Pn	09 46 20.4	-1.6
PFB	Port Renfrew	3.83	111	Pn	Pn	09 46 23.0	+0.4
SHB	Sechelt	3.88	95	Pn	Pn	09 46 24.3	+0.9
DLBC	Dease Lake	8.39	359	Pn	Pn	09 47 27.1	+1.9
	0.1nm,0.3s,baz=191,slow=12,SNR=1.9						
DLBC				LR	LR	09 50 28.6	
	comp=Z,45nm,19.1s,baz=172,slow=36						
	1.3nm,0.8s						
NEW	Newport	8.52	97	Pn	Pn	09 47 27.6	+0.6
	0.1nm,0.3s,baz=275,slow=11,SNR=2.0						
	0.8nm,0.5s						
ELK	Elko	13.83	127	LR	LR	09 54 10.4	
	comp=Z,29nm,19.1s,baz=291,slow=38						
NVAR	Mina Array Bea	14.24	140	Pn	P	09 48 50.8	-2.2
	0.1nm,0.4s,baz=295,slow=6.5,SNR=3.5						
YKA	Yellowknife Ar	14.99	28	Pn	Pn	09 48 54.5	-0.8
	baz=220,slow=11,SNR=3.5						
	0.2nm,0.7s						
KDAK	Kodiak Island	15.41	309	LR	LR	09 53 33.5	
	comp=Z,46nm,19.5s,baz=181,slow=32						
PDAR	Pinedale Array	15.74	110	Pn	P	09 49 09.4	-0.1
	0.7nm,0.7s,baz=315,slow=10,SNR=7.1						
PDAR				LR	LR	09 55 55.2	
	comp=Z,16nm,20.4s,baz=292,slow=40						
ILAR	Eielson Array	17.27	335	P	P	09 49 28.2	+2.1
	baz=156,slow=11,SNR=5.5						
	0.3nm,0.8s						
INK	Inuvik	18.39	356	LR	LR	09 56 27.5	
	comp=Z,40nm,18.5s,baz=13,slow=36						
ULM	Lac du Bonnet	21.64	76	P	P	09 50 15.9	+2.0
	4.9nm,0.8s,baz=286,slow=12,SNR=4.9						
	4.9nm,0.8s						
ANMO	Albuquerque	22.78	123	P	P	09 50 28.9	+2.5
	0.3nm,0.4s,baz=310,slow=16,SNR=1.7						
	0.3nm,0.4s						
TXAR	Lajitas Array	28.62	127	P	P	09 51 22.6	+2.3
	baz=324,slow=12,SNR=1.9						
SADO	Sadowa	34.15	79	LR	LR	10 06 18.0	
	comp=Z,58nm,18.9s,baz=230,slow=37						
TKL	Tuckaleechee C	36.10	96	LR	LR	10 07 44.1	
	comp=Z,33nm,21.5s,baz=312,slow=37						
H11N2	WAKE ISLAND Hy	58.03	263	T	T	10 58 01.1	
	baz=41,slow=74						
H11N3	WAKE ISLAND Hy	58.03	263	T	T	10 58 00.3	
	baz=41,slow=74						
H11N1	WAKE ISLAND Hy	58.04	263	T	T	10 57 57.7	
	baz=41						

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*JMA **12** 09:48:38.6±0.2, 29°.4N±0°.7×14°0E±°, h476^{km}±3^{km}, MV3.7/16, NEAR TORISHIMA IS*

*IDC **12** 09:48:39.5±0.7, 29°.39N×139°.06E, h432^{km}±7^{km}, mb3.3/14, mbtmp4.2/18, Error ellipse: s-maj=17.9km s-min=8.2km az=82.0*

ISC 12 09:48:40.7±0.6, 29°.43N±0°.07×139°.4E±0°.1, h450^{km}, n30, σ1^{s}46/41, mb3.6/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.41	132	P	P	09 49 50.1	-0.8
CBIJ				S	S	09 50 46.7	-1.3
JCJ	Chichijima	3.41	132	P	P	09 49 50.0	-0.9
	68nm,0.3s,baz=288,slow=22,SNR=66						
JCJ				S	S	09 50 46.6	-1.4
	376nm,0.3s,baz=276,slow=23,SNR=21						
JHCJ	Hachijojimakas	3.65	6	*e*P	P	09 49 53.1	+0.5
JHJ2	Mitsune	3.69	6	*e*P	P	09 49 53.6	+0.6
JHJ	Hachijo jima 2	3.69	6	P	P	09 49 53.1	+0.1
	110nm,0.3s,baz=110,slow=22,SNR=52						
JHJ				S	S	09 50 49.6	-2.4
	51nm,0.4s,baz=84,slow=19,SNR=2.1						
JHH2	Haha-jima-NKT2	3.74	138	P	P	09 49 52.9	-0.7
JHH2				S	S	09 50 51.5	-1.4
BSO1	Boso 1	5.38	14	P	P	09 50 08.8	+0.7
BSO1				S	S	09 51 19.3	-0.2
JTNC	Tanabenakahech	5.42	325	P	P	09 50 09.6	+0.6
JIE	Ise	5.43	336	P	P	09 50 10.3	+1.2
JIE				*e*S	S	09 51 22.1	+0.7
JOD2	Odawara 2	5.82	358	*e*P	P	09 50 13.1	0.0
JOD2				*e*S	S	09 51 25.7	-2.8
JRY	Ryogami san	6.58	357	P	P	09 50 21.0	+0.2
JRY				*e*S	S	09 51 38.9	-4.0
MJAR	Matsushiro Arr	7.16	353	P	P	09 50 25.8	-1.1
	2.3nm,0.3s,baz=167,slow=11,SNR=3.9						
MJAR				S	S	09 51 50.9	-3.2
	4.6nm,0.8s,baz=170,slow=16,SNR=4.1						
JHS	Saijyo	7.66	318	*e*P	P	09 50 33.7	+1.4
USRK	Ussuriysk Ar.	15.87	340	P	P	09 52 01.1	+0.3
	9.2nm,0.5s,baz=144,slow=11,SNR=15						
SONM	Songino Array	31.31	315	P	P	09 54 20.8	-1.6
	0.6nm,0.5s,baz=125,slow=8.8,SNR=2.5						
	0.6nm,0.5s						
MKAR	Makanchi Array	47.07	308	P	P	09 56 28.1	-2.1
	0.1nm,0.4s,baz=90,slow=9.5,SNR=2.1						
WRA	Warramunga Arr	49.33	186	P	P	09 56 47.0	-0.4
	2.5nm,0.4s,baz=1.2,slow=7.7,SNR=58						
WRA				PcP	PcP	09 58 02.4	+0.4
	0.5nm,0.7s,baz=360,slow=4.2,SNR=2.1						
WRA				ScP	ScP	10 01 13.1	-0.6
	0.6nm,0.9s,baz=0.4,slow=4.2,SNR=2.4						
	2.5nm,0.4s						
NRIK	Noril'sk	49.57	339	P	P	09 56 48.7	+0.1
	3.6nm,0.6s,baz=103,slow=2.1,SNR=6.0						
	3.6nm,0.6s						
ASAR	Alice Springs	53.05	186	P	P	09 57 14.3	-0.3
	1.5nm,0.5s,baz=5.5,slow=7.5,SNR=28						
	1.5nm,0.5s						
ILAR	Eielson Array	56.89	29	P	P	09 57 41.9	+0.9
	1.0nm,0.9s,baz=272,slow=6.4,SNR=7.9						
	1.0nm,0.9s						
STKA	Stephens Creek	61.01	178	P	P	09 58 09.8	+0.6
	3.1nm,0.7s,baz=352,slow=7.7,SNR=5.4						
	3.1nm,0.7s						
INK	Inuvik	61.96	25	P	P	09 58 16.5	+1.6
	2.9nm,0.4s,baz=273,slow=4.8,SNR=27						
	2.9nm,0.4s						
ARCES	ARCESS Array B	70.51	340	P	P	09 59 08.9	+0.5
	5.0nm,1.0s,baz=67,slow=8.7,SNR=12						
	5.0nm,1.0s						
YKA	Yellowknife Ar	71.27	28	P	P	09 59 14.1	+1.1
	0.7nm,0.5s,baz=300,slow=5.9,SNR=23						
	0.7nm,0.5s						
YKA	Yellowknife Ar	71.27	28	P	P	09 59 14.1	+1.1
FINES	FINESS Array B	74.75	333	P	P	09 59 32.3	-0.7
	1.3nm,0.7s,baz=66,slow=6.5,SNR=5.6						
	1.3nm,0.7s						
NOA	NORSAR Array B	80.51	337	P	P	10 00 04.2	-0.3
	0.3nm,0.4s,baz=52,slow=6.3,SNR=2.8						
	0.3nm,0.4s						
NVAR	Mina Array Bea	81.01	51	P	P	10 00 10.2	+2.4
	0.6nm,0.6s,baz=288,slow=6.7,SNR=7.6						
	0.6nm,0.6s						
PDAR	Pinedale Array	84.28	44	P	P	10 00 26.9	+2.5
	0.2nm,0.3s,baz=282,slow=4.5,SNR=2.2						
	0.2nm,0.3s						
FRB	Frobisher Bay	84.55	12	P	P	10 00 25.6	+0.8
	1.2nm,0.4s,baz=356,slow=5.2,SNR=3.8						
	1.2nm,0.4s						

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*KRSC **12** 09:51:41.9±1.3, 54°.83N×164°.30E, h48^{km}±28^{km}, ML4.2*

*IDC **12** 09:51:41.2±0.9, 55°.05N×164°.31E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML3.5/2, MS3.7/2, Error ellipse: s-maj=31.3km s-min=17.0km az=149.0*

*MOS **12** 09:51:43.4±0.7, 54°.87N×164°.45E, h37^{km}, mb3.8/1, Error ellipse: s-maj=7.5km s-min=6.2km az=135.3*

ISC 12 09:51:42.3±1.7, 54°.88N±0°.04×164°.41E±0°.06, h13^{km}±12^{km}, n90, σ1^{s}61/120, mb3.8/9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.96	69	PN	Pg	09 52 00.4	-0.4
BKI				S	Sg	09 52 13.1	-0.2
BKI	Bering	0.96	69	*i* P	Pg	09 52 00.4	-0.4
BKI				*e*S	Sg	09 52 13.1	-0.2
MKZ	Mys Kozlova	1.59	259	PN	Pn	09 52 09.3	-0.8
MKZ				S	Sn	09 52 27.3	-3.1
MKZ	Mys Kozlova	1.59	259	*e*P	Pn	09 52 09.3	-0.8
MKZ				*e*S	Sn	09 52 27.3	-3.1
KBTR	Krutoberegovo	1.61	327	PN	Pn	09 52 08.3	-2.2
KBTR				S	Sn	09 52 27.7	-3.4
KBTR	Krutoberegovo	1.61	327	*e*P	Pn	09 52 08.3	-2.2
KBTR				*e*S	Sn	09 52 27.7	-3.4
KBG	Krutoberegovo	1.69	326	PN	Pn	09 52 09.3	-2.2
KBG				S	Sn	09 52 29.4	-3.5
KBG	Krutoberegovo	1.69	326	*e*P	Pn	09 52 09.3	-2.2
KBG				*e*S	Sn	09 52 29.4	-3.5
TUMD	Tumrok D	2.33	280	*e*P	Pn	09 52 20.3	0.0
TUMD				*e*S	Sn	09 52 47.2	-1.7
BZGR	Bezymyannyi-Gr	2.37	298	PN	Pn	09 52 22.1	+1.1
BZGR				S	Sn	09 52 50.2	+0.2
BZGR	Bezymyannyi-Gr	2.37	298	*e*P	Pn	09 52 22.1	+1.1
BZGR				*e*S	Sn	09 52 50.2	+0.2
SMKR	Semkarok	2.39	317	PN	Pn	09 52 21.9	+0.7
SMKR				S	Sn	09 52 50.1	-0.2
SMKR	Semkarok	2.39	317	*e*P	Pn	09 52 21.9	+0.7
SMKR				*e*S	Sn	09 52 50.1	-0.2
BDR	Baidarnaya	2.48	314	PN	Pn	09 52 22.6	+0.1
BDR				S	Sn	09 52 53.0	+0.4
BDR	Baidarnaya	2.48	314	*e*P	Pn	09 52 22.6	+0.1
BDR				*e*S	Sn	09 52 53.0	+0.4
BZWR	Bezymyannyi-We	2.48	298	PN	Pn	09 52 23.4	+0.8
BZWR	Bezymyannyi-We	2.48	298	*e*P	Pn	09 52 23.4	+0.8
TUMR	Tumrok	2.48	281	PN	Pn	09 52 20.3	-2.2
TUMR	Tumrok	2.48	281	*e*P	Pn	09 52 23.0	+0.5
TUMR				*e*S	Sn	09 52 51.3	-1.5
KMNR	Kamenistaya	2.54	292	PN	Pn	09 52 23.9	+0.6
KMNR				S	Sn	09 52 52.5	-1.7
KMNR	Kamenistaya	2.54	292	*e*P	Pn	09 52 23.9	+0.6
KMNR				*e*S	Sn	09 52 52.5	-1.7
SRKR	Sorokina	2.56	316	PN	Pn	09 52 24.2	+0.7
SRKR	Sorokina	2.56	316	*e*P	Pn	09 52 24.2	+0.7
KIRR	Kirishev	2.56	297	PN	Pn	09 52 24.5	+0.9
KIRR				S	Sn	09 52 53.6	-1.0
KIRR	Kirishev	2.56	297	*e*P	Pn	09 52 24.5	+0.9
KIRR				*e*S	Sn	09 52 53.6	-1.0
KLY	Klyuchi	2.57	306	PN	Pn	09 52 22.1	-1.5
KLY				S	Sn	09 52 51.7	-3.1
KLY	Klyuchi	2.57	306	*e*P	Pn	09 52 22.1	-1.5
KLY				*e*S	Sn	09 52 51.7	-3.1
KPT	Kopyto	2.62	296	PN	Pn	09 52 25.8	+1.4
KPT	Kopyto	2.62	296	*e*P	Pn	09 52 25.8	+1.4
KOZ	Kozyrevsk	2.84	297	PN	Pn	09 52 28.8	+1.4
KOZ	Kozyrevsk	2.84	297	*e*P	Pn	09 52 28.8	+1.4
KII	Karymskiy	3.02	256	PN	Pn	09 52 30.5	+0.7
KII				S	Sn	09 53 04.0	-1.8
KII	Karymskiy	3.02	256	*e*P	Pn	09 52 30.5	+0.7
KII				*e*S	Sn	09 53 04.0	-1.8
SPN	Mys Shipunski	3.14	237	PN	Pn	09 52 30.5	-1.0
SPN	Mys Shipunski	3.14	237	*e*P	Pn	09 52 30.5	-1.0
SPN				*e*S	Sn	09 53 05.4	-3.4
ESO	Esso	3.42	290	PN	Pn	09 52 35.6	+0.3
ESO	Esso	3.42	290	*e*P	Pn	09 52 35.6	+0.3
NLC	Nalytchevo	3.44	242	PN	Pn	09 52 36.1	+0.6
NLC	Nalytchevo	3.44	242	*e*P	Pn	09 52 36.1	+0.6
NLC				*e*S	Sn	09 53 13.0	-3.1
SDLR	Sedlovina	3.63	246	PN	Pn	09 52 38.6	+0.4
SDLR	Sedlovina	3.63	246	*e*P	Pn	09 52 38.6	+0.4
SMAR	Somma	3.68	246	PN	Pn	09 52 39.7	+0.7
SMAR	Somma	3.68	246	*e*P	Pn	09 52 39.7	+0.7
SMAR				*e*S	Sn	09 53 19.7	-2.6
KRER	Koryakskii	3.69	247	PN	Pn	09 52 40.1	+1.0
KRER	Koryakskii	3.69	247	*e*P	Pn	09 52 40.1	+1.0
KRER				*e*S	Sn	09 53 20.4	-2.1
UGLR	Uglovaya	3.69	245	PN	Pn	09 52 39.6	+0.5
UGLR	Uglovaya	3.69	245	*e*P	Pn	09 52 39.6	+0.5
AVH	Avacha	3.71	247	PN	Pn	09 52 40.1	+0.8
AVH	Avacha	3.71	247	*e*P	Pn	09 52 40.1	+0.8
AVH				*e*S	Sn	09 53 21.4	-1.5
KRX	Arik	3.71	248	PN	Pn	09 52 40.2	+0.7
KRX	Arik	3.71	248	*e*P	Pn	09 52 40.2	+0.7
KOK	Koryaka	3.75	247	PN	Pn	09 52 40.7	+0.8
KOK	Koryaka	3.75	247	*e*P	Pn	09 52 40.7	+0.8
DALK	Dalny	3.82	243	PN	Pn	09 52 41.1	+0.4
DALK	Dalny	3.82	243	*e*P	Pn	09 52 41.1	+0.4
PET	Petropavlovsk	3.87	244	*e*PN	Pn	09 52 42.4	+0.9
PET	Petropavlovsk	3.87	244	*e*P	Pn	09 52 42.3	+0.8
PET				*e*S	Sn	09 53 23.8	-3.0
GNL	Ganaly	3.97	255	PN	Pn	09 52 44.5	+1.6
GNL	Ganaly	3.97	255	*e*P	Pn	09 52 44.5	+1.6
KRMR	Karymshinskiy	4.25	244	PN	Pn	09 52 47.4	+0.8
KRMR	Karymshinskiy	4.25	244	*e*P	Pn	09 52 47.4	+0.8
KRMR				*e*S	Sn	09 53 33.8	-2.2
RUS	Russkaya	4.28	238	PN	Pn	09 52 47.1	+0.1
RUS	Russkaya	4.28	238	*e*P	Pn	09 52 47.1	+0.1
RUS				*e*S	Sn	09 53 33.0	-3.7
PETK	Petropavlovsk-	4.34	249	Pn	Pn	09 52 48.5	+0.6
	3.3nm,0.3s,baz=73,slow=17,SNR=147						
PETK				Sn	Sn	09 53 38.5	+0.2
	4.4nm,0.3s,baz=88,slow=23,SNR=15						
	8.5nm,0.5s						
MTVR	Mutnovka	4.41	240	PN	Pn	09 52 49.7	+0.7
MTVR	Mutnovka	4.41	240	*e*P	Pn	09 52 49.7	+0.7
MTVR				*e*S	Sn	09 53 37.4	-2.8
GRL	Gorelyy	4.42	241	PN	Pn	09 52 50.2	+1.0
GRL	Gorelyy	4.42	241	*e*P	Pn	09 52 50.2	+1.0
ASAK	Asacha	4.61	240	PN	Pn	09 52 52.9	+1.2
ASAK	Asacha	4.61	240	*e*P	Pn	09 52 52.9	+1.2
ASAK				*e*S	Sn	09 53 43.0	-2.1
APC	Apacha	4.71	248	PN	Pn	09 52 55.3	+2.3
APC	Apacha	4.71	248	*e*P	Pn	09 52 55.3	+2.3
KDTR	Khodutka, Kamc	4.88	234	PN	Pn	09 52 54.9	-0.4
KDTR	Khodutka, Kamc	4.88	234	*e*P	Pn	09 52 54.9	-0.4
KDTR				*e*S	Sn	09 53 46.7	-4.9
SHEM	Shemya Is, Ala	6.13	107	LR	LR	09 55 20.6	
	comp=Z,63nm,20.4s,baz=294,slow=35						
ASAJ	Asahikawa	17.71	242	P	P	09 55 49.9	+0.5
	0.6nm,0.3s,baz=298,slow=17,SNR=1.8						
	6.1nm,0.7s						
KDAK	Kodiak Island	23.72	65	LR	LR	10 05 28.2	
	comp=Z,51nm,18.1s,baz=245,slow=35						
MJAR	Matsushiro Arr	25.66	235	P	P	09 57 14.5	+2.9
	1.0nm,0.5s,baz=28,slow=9.9,SNR=2.0						
	1.0nm,0.5s						
ILAR	Eielson Array	25.74	48	P	P	09 57 11.6	-0.5
	0.6nm,0.7s,baz=258,slow=8.7,SNR=9.6						
	0.6nm,0.7s						
H11N2	WAKE ISLAND Hy	35.14	176	T	T	10 36 48.5	
	baz=358,slow=76,SNR=8.8						
H11N3	WAKE ISLAND Hy	35.15	176	T	T	10 36 48.1	
	baz=358,slow=76,SNR=6.7						
H11N1	WAKE ISLAND Hy	35.15	176	T	T	10 36 47.9	
	baz=358,slow=76,SNR=8.6						
SPITS	Spitsbergen Ar	45.78	351	P	P	10 00 03.0	+0.2
	3.0nm,0.6s,baz=61,slow=6.9,SNR=4.5						
	3.0nm,0.6s						
MKAR	Makanchi Array	49.65	297	P	P	10 00 32.6	-0.7
	0.3nm,0.6s,baz=64,slow=6.6,SNR=2.6						
	0.3nm,0.6s						
NVAR	Mina Array Bea	52.77	74	P	P	10 00 58.5	+1.4
	0.2nm,0.5s,baz=305,slow=6.5,SNR=3.1						
	0.2nm,0.5s						
FINES	FINESS Array B	59.45	338	P	P	10 01 43.7	-0.5
	0.8nm,0.6s,baz=28,slow=3.3,SNR=2.0						
	0.8nm,0.6s						
TXAR	Lajitas Array	67.62	71	P	P	10 02 39.9	+1.2
	0.7nm,0.7s,baz=307,slow=5.2,SNR=8.0						
	0.7nm,0.7s						
ASAR	Alice Springs	82.48	208	P	P	10 04 05.2	+0.9
	0.7nm,0.9s,baz=0.9,slow=5.7,SNR=5.4						
	0.7nm,0.9s						
ESDC	Sonseca Array	85.30	351	P	P	10 04 18.8	+0.1
	1.2nm,0.8s,baz=2.6,slow=3.4,SNR=5.4						
	1.2nm,0.8s						
URZ	Urewera	93.41	170	LR	LR	10 40 18.3	
	comp=Z,109nm,21.3s,baz=31,slow=31						

TAP 12 09:53:54.2, 23°.15N×121°.01E, h8^{km}, ML1.9, 4C-1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.04	9	⇓*i*P	Pg	09 53 56.3	+0.4
	baz=20						
ELDTW				*i* S	Sg	09 53 57.0	-0.1
	baz=20						
ECS	Chishang	0.20	107	P	Pg	09 53 59.5	+1.2
	baz=106						
ECS				S	Sg	09 54 03.0	+2.0
	baz=106						
STYH	Taoyuan	0.22	274	P	Pg	09 53 59.7	+1.1
	baz=276						
STYH				S	Sg	09 54 02.9	+1.4
	baz=276						
STYT	Tauyuan	0.23	272	⇑*i*P	Pg	09 53 59.9	+1.0

	baz=271						
STYT				*i* S	Sg	09 54 03.3	+1.2
	baz=271						
FULB	**Fuli**	**0.26**	**80**	⇑*i*P	Pb	09 54 01.1	-0.1
	baz=80						
FULB				*i* S	Sb	09 54 05.6	-0.3
	baz=80						
LONT	**Longtian**	**0.27**	**156**	*i* P	Pb	09 54 00.7	-0.6
	baz=156						
LONT				S	Sg	09 54 04.4	+1.3
	baz=156						
EDH	**Donghe**	**0.33**	**124**	*i* P	Pb	09 54 02.6	+0.3
	baz=123						
EDH				S	Sb	09 54 08.1	+0.5
	baz=123						
TWF1	**Yuli**	**0.33**	**53**	⇑*i*P	Pb	09 54 01.6	-0.7
	baz=54						
TWF1				*i* S	Sb	09 54 06.8	-1.0
	baz=54						
CHKT	**Chengkung**	**0.33**	**99**	*i* P	Pb	09 54 02.8	+0.5
	baz=99						
CHKT				*i* S	Sb	09 54 09.1	+1.4
	baz=99						
TWG	**Pinlang**	**0.34**	**170**	*i* P	Pb	09 54 01.8	-0.6
	baz=169						
TWG				*i* S	Sg	09 54 06.3	+1.0
	baz=169						
YUS	**Yu-Shan**	**0.34**	**351**	P	Pg	09 54 01.8	+0.7
	baz=351						
YUS				*i* S	Sg	09 54 06.3	+0.8
	baz=351						
TWGBT	**Beinan**	**0.34**	**169**	P	Pb	09 54 01.8	-0.7
	baz=169						
TWGBT				S	Sg	09 54 06.2	+0.9
	baz=169						
EYUL	**Yuli**	**0.34**	**56**	*e*P	Pb	09 54 01.8	-0.8
	baz=55						
EYUL				*e*S	Sb	09 54 07.2	-1.0
	baz=55						
YULB	**Yu-li**	**0.35**	**48**	⇑P	Pg	09 54 01.8	+0.7
	baz=47						
YULB				*e*S	Sb	09 54 07.2	-1.3
	baz=47						
WTP	**Ta-pu**	**0.38**	**284**	*i* P	Pb	09 54 03.2	+0.1
	baz=284						
WTP				*i* S	Sb	09 54 09.1	-0.1
	baz=284						
TPUB	**Ta-pu**	**0.38**	**293**	P	Pb	09 54 03.3	+0.1
	baz=292						
TPUB				S	Sb	09 54 09.1	-0.2
	baz=292						
SGST	**Jiashian**	**0.40**	**260**	*i* P	Pb	09 54 02.8	-0.7
	baz=259						
SGST				S	Sb	09 54 09.8	0.0
	baz=259						
ALS	**Alishan**	**0.40**	**332**	*i* P	Pb	09 54 03.4	-0.3
	baz=332						
ALS				*i* S	Sb	09 54 09.3	-0.9
	baz=332						
CHN4	**Tsaushan**	**0.43**	**297**	*i* P	Pb	09 54 04.5	+0.5
	baz=297						
CHN4				*i* S	Sb	09 54 11.5	+0.8
	baz=297						
CHN1	**Nanshi**	**0.45**	**274**	P	Pb	09 54 04.6	+0.3
	baz=274						
CHN1				S	Sb	09 54 10.7	-0.5
	baz=274						
EHY	**Hungye**	**0.45**	**39**	*i* P	Pg	09 54 03.6	+0.6
	baz=40						
EHY				S	Sb	09 54 10.7	-0.7
	baz=40						
SNST	**Tainan City**	**0.48**	**278**	*e*P	Pb	09 54 05.3	+0.5
	baz=277						
SNST				*e*S	Sb	09 54 12.3	+0.3
	baz=277						
TWK	**Hsinying**	**0.49**	**283**	*e*P	Pg	09 54 04.4	+0.7
	baz=283						
TWK				*e*S	Sb	09 54 13.1	+0.5
	baz=283						
HGSD	**Ruisui**	**0.51**	**48**	P	Pb	09 54 05.9	+0.5
	baz=48						
HGSD				*e*S	Sb	09 54 14.2	+1.3
	baz=48						
SSD	**Sandimen**	**0.54**	**221**	*i* P	Pg	09 54 05.1	+0.6
	baz=220						
SSD				*e*S	Sb	09 54 13.9	+0.2
	baz=220						
CHN5	**Tsauling**	**0.54**	**325**	*i* P	Pb	09 54 05.3	-0.6
	baz=325						
CHN5				*i* S	Sb	09 54 13.6	-0.3
	baz=325						
SCST	**Cishan**	**0.55**	**241**	*e*P	Pb	09 54 05.5	-0.5
	baz=240						
SCST				*e*S	Sb	09 54 13.8	-0.2
	baz=240						
ECL	**Taimali**	**0.56**	**185**	*e*P	Pb	09 54 05.8	-0.4
	baz=184						
ECL				*e*S	Sb	09 54 14.6	+0.3
	baz=184						
TSMG	**Majia**	**0.56**	**217**	*e*P	Pg	09 54 05.0	-0.1
	baz=217						
TSMG				S	Sg	09 54 12.8	+0.5
	baz=217						
CHN3	**Shinhua**	**0.60**	**263**	*e*S	Sb	09 54 16.2	+0.7
	baz=262						
VWDT	**VWDT**	**0.61**	**11**	*e*S	Sb	09 54 16.0	+0.2
	baz=11						
SSLB	**Suanglung**	**0.63**	**355**	*e*P	Pg	09 54 06.9	+0.5
	baz=355						
SSLB				*e*S	Sb	09 54 16.9	+0.4
	baz=355						
LDUT	**Ludao**	**0.64**	**138**	*e*P	Pb	09 54 07.3	-0.3
	baz=138						
LDUT				*e*S	Sb	09 54 17.4	+0.8
	baz=138						
EGFH	**Guangfu**	**0.64**	**37**	*e*P	Pb	09 54 07.4	-0.2
	baz=36						
MASBT	**Mashibuluo**	**0.64**	**213**	P	Pg	09 54 06.6	0.0
	baz=212						
MASBT				S	Sb	09 54 16.4	-0.4
	baz=212						
SGLT	**Jiouru**	**0.64**	**228**	*e*P	Pb	09 54 08.5	+0.9
	baz=227						
SGLT				*e*S	Sb	09 54 17.4	+0.7
	baz=227						

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*SOME **12** 09:54:58.6,43°.60N×69°.75E*

*NNC **12** 09:55:00.2±1.8,43°.58N×69°.77E,h0^{km},mb3.6,mpv3.1, Error ellipse: s-maj=10.4km s-min=5.7km az=129.0, Suspected Mining explosion.*

ISC 12 09:55:01.4±2.7**,43°.54N**±0°.10×**69°.7E**±0°.1**,h0**^{km}**,n7, σ1^{s}55**/9**,1C,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.72**	**126**	⇑P	**Pg**	**09 55 13.5**	**-1.7**
	0.9nm,0.4s,baz=312,slow=17,SNR=61						
KK31				S	**Sg**	**09 55 24.6**	**0.0**
	12nm,0.5s,baz=313,slow=31,SNR=112						
IUG	**Iuzhnay**	**1.41**	**170**	P	**Pg**	**09 55 27.8**	**-0.6**
	60nm,0.4s						
IUG				S	**Sn**	**09 55 47.4**	**-0.3**
	21nm,0.3s						
MRKS	**Merke**	**2.69**	**106**	Pg	**Pg**	**09 55 52.0**	**-0.8**
	4.5nm,0.4s						
MRKS				Lg	Lg	09 56 29.1	
	7.0nm,0.3s						
BTLS	**Baital**	**3.45**	**63**	Pg	**Pb**	**09 56 03.5**	**0.0**
	7.6nm,0.6s						
BTLS				Lg	Lg	09 56 48.2	
	3.8nm,0.6s						
KRBS	**Karabastau**	**4.33**	**86**	Pg	**Pb**	**09 56 18.3**	**0.0**
	2.4nm,0.5s						
KRBS				Lg	Lg	09 57 14.3	
	2.7nm,0.5s						
KST	**Kastek**	**4.58**	**94**	Pg	**Pb**	**09 56 25.3**	**+2.5**
	1.7nm,0.5s						
KST				Lg	Lg	09 57 26.0	
	4.4nm,0.4s						
KTBS	**Karatobe**	**5.06**	**86**	Pg	**Pb**	**09 56 32.8**	**+2.0**
	1.1nm,0.5s						
KTBS				Lg	Lg	09 57 38.7	
	6.5nm,0.4s						

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*JMA **12** 10:01:26.9±0.3,31°.1N±0°.4×129°.0E±0°.9,h7^{km}±2^{km}, MD4.0/28,MV4.1/28,SW OFF KYUSHU*

*NIED **12** 10:01:26.9,31°.05N×129°.00E,h7^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.97; M$_{\theta\theta}$5.41; M$_{\phi\phi}$-4.44; M$_{r\theta}$0.79; M$_{\theta\phi}$5.81; M$_{\phi r}$-2.64; Fault plane solution: M$_{0}$8.14000×10^{14} NP1: ϕ_{s}288.00000°,δ74.00000°,λ-13.00000°. NP2:ϕ_{s}22.00000°, δ77.00000°,λ-163.00000°.*

*IDC **12** 10:01:29.6±1.7,31°.15N×129°.00E,h0^{km},mb3.2/3, mbtmp3.3/6,ML3.1/3 Error ellipse: s-maj=30.1km s-min=18.1km az=125.0*

ISC 12 10:01:29.2±1.0**,31°.07N**±0°.04×**129°.15E**±0°.07**,h10**^{km}**,n18, σ1^{s}22**/18**,mb3.2**/3**,3D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.78**	**38**	P	**Pg**	**10 01 43.5**	**-0.8**
JSJ				S	**Sb**	**10 01 55.7**	**+0.2**
JSJ	**Shimokoshiki**	**0.78**	**38**	A	A	10 01 43.5	
	comp=E,7.0nm,1.2s,comp=E,6.0nm,1.2s						
JKC	**Kuchinoerabu**	**1.08**	**124**	*e*P	**Pg**	**10 01 49.1**	**-1.0**
JKC				S	**Sb**	**10 02 04.4**	**+0.1**
JKC	**Kuchinoerabu**	**1.08**	**124**	A	A	10 01 49.1	
	comp=E,5.0nm,1.2s,comp=E,7.0nm,1.6s						
JSU	**Suzuyama**	**1.20**	**68**	⇓P	**Pb**	**10 01 51.6**	**-0.5**
JSU				⇓*e*S	**Sn**	**10 02 09.3**	**+0.9**
JSU	**Suzuyama**	**1.20**	**68**	A	A	10 01 51.6	
	comp=E,3.0nm,2.1s,comp=E,6.0nm,2.6s						
JNN	**Nakanoshima**	**1.37**	**153**	P	**Pn**	**10 01 53.2**	**-1.3**
JYAK	**Yakushimahirau**	**1.44**	**125**	*e*P	**Pn**	**10 01 54.2**	**-1.1**
JYAK				*e*S	**Sb**	**10 02 14.4**	**0.0**
JFU	**Fukue jima 2**	**1.62**	**348**	*e*P	**Pn**	**10 01 56.6**	**-1.3**
JTN	**Tanegashima 3**	**1.63**	**104**	*e*P	**Pn**	**10 01 57.8**	**-0.2**
JTZ	**Takazaki**	**1.85**	**63**	⇓*e*P	**Pn**	**10 02 01.2**	**+0.1**
JNU	**Nakatsue**	**2.52**	**35**	Pn	**Pb**	**10 02 13.0**	**-1.6**
	7.6nm,0.3s,baz=204,slow=8.0,SNR=22						
JNU				Lg	Lg	10 02 49.2	
	12nm,0.3s,baz=255,slow=18,SNR=7.9						
	32nm,0.6s						
JOW	**Kunigami**	**4.29**	**191**	Pn	**Pn**	**10 02 37.0**	**+2.4**
	2.4nm,0.3s,baz=4.7,slow=16,SNR=3.2						
	12nm,0.6s						
KSRS	**Korea Array**	**6.45**	**351**	Pn	**Pn**	**10 03 05.5**	**+1.3**
	0.3nm,0.3s,baz=174,slow=16,SNR=8.1						
KSRS				Lg	Lg	10 04 51.1	
	0.5nm,0.3s,baz=174,slow=28,SNR=4.6						
	2.4nm,0.7s						
JHJ	**Hachijo jima 2**	**9.25**	**74**	LR	LR	10 07 22.1	
	comp=Z,36nm,19.3s,baz=261,slow=38						
SONM	**Songino Array**	**24.13**	**320**	P	**P**	**10 06 44.5**	**-0.9**
	0.5nm,0.4s,baz=129,slow=11,SNR=2.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**39.08**	**307**	P	**P**	**10 08 58.0**	**+1.6**
	0.2nm,0.5s,baz=90,slow=10,SNR=1.9						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**73.82**	**26**	P	**P**	**10 13 04.9**	**+1.2**
	0.2nm,0.8s,baz=309,slow=6.1,SNR=2.1						
	0.2nm,0.8s						

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*MAN **12** 10:03:27.6,5°.27N×126°.81E,h2^{km},mb5.6,ML4.6,MS4.9, Hypocentre not reviewed by the ISC*

*IDC **12** 10:03:29.3±2.6,5°.43N×126°.70E,h21^{km}±16^{km},mb4.4/31, mbtmp4.5/33,ML4.1/2,MS3.9/46,Error ellipse: s-maj=16.7km s-min=10.7km az=77.0*

*DJA **12** 10:03:32.9±0.5,5°N±4°×12°7E±°,h10^{km},M4.7/16, mb4.9/16,mB5.1/12,MLv5.0/13,Mw(mB)4.4/12, MwMwp4.7/7,Mwp5.0/7*

*NEIC **12** 10:03:36.1±2.5,5°.39N±0°.06×126°.68E±0°.09,h68^{km}±6^{km}, mb4.7/85,Error ellipse: s-maj=13.9km s-min=8.2km az=68.0*

ISC 12 10:03:33.3±0.6**,5°.34N**±0°.04×**126°.67E**±0°.06**,h49**^{km}±5^{km}**, n220,σ1^{s}93**/185**,mb4.8**/84**,MS4.0**/63**,21C-24D,Fault plane solution: NP1:**ϕ_{s}26.78076°**,**δ49.51984°**,** λ43.73845°. **NP2:**ϕ_{s}264.93185°**,**δ58.27281°**,**λ130.24912°. **Principal axes:** T Plg56.1906°**,** Azm230.1240°**;** N Plg33.3367°**,** Azm60.9345°**;** P Plg5.0021°**,** Azm327.6339°**; Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.22**	**308**	⇓*e*P	**Pn**	**10 03 52.5**	**-1.5**
DDMP				*e*S	**Sn**	**10 04 14.0**	**+4.7**
MATI	**Mati**	**1.64**	**346**	⇓*e*P	**Pn**	**10 04 00.3**	**+0.5**
MATI				*e*S	Sn	10 04 31.2	+11
GSPH	**General Santos**	**1.86**	**293**	⇓*e*P	**Pn**	**10 04 00.1**	**-2.9**
GSPH				*i* S	**Sn**	**10 04 23.3**	**-2.1**
SGSI	**Sangihe**	**2.00**	**215**	P	**Pn**	**10 04 05.3**	**+0.6**
DAV	**Davao City (W)**	**2.03**	**328**	Pn	**Pn**	**10 04 05.6**	**+0.6**
	122nm,0.3s,baz=128,slow=1.2,SNR=64						
DAV				Sn	Sn	10 04 37.1	+7.9
	184nm,0.3s,baz=141,slow=20,SNR=6.7						
DAV				LR	LR	10 05 05.0	
	comp=Z,6μm,18.3s,baz=165,slow=49						
DAV	**Davao City (W)**	**2.03**	**328**	Pn	**Pn**	**10 04 07.2**	**+2.1**
KCP	**Kidapawan**	**2.28**	**317**	⇑*i*P	**Pn**	**10 04 08.5**	**-0.1**
KCP				*i* S	**Sn**	**10 04 39.9**	**+4.3**
BIPH	**Bislig**	**2.84**	**354**	⇓*e*P	**Pn**	**10 04 15.5**	**-0.7**
BIPH				*e*S	Sn	10 05 03.9	+15
CTBH	**Cotabato--PC H**	**3.05**	**308**	⇓*i*P	**Pn**	**10 04 20.4**	**+1.4**
CTBH				*i* S	**Sn**	**10 04 52.6**	**-1.7**
BUTP	**Butuan**	**3.75**	**344**	⇓*e*P	Pn	10 04 32.6	+3.9
BUTP				*e*S	Sn	10 05 27.0	+15
PAGZ	**Pagadian**	**4.11**	**307**	⇓*e*P	**Pn**	**10 04 34.9**	**+1.3**
GLSP	**General Luna,**	**4.44**	**353**	⇓*e*P	**Pn**	**10 04 40.6**	**+2.4**
GLSP				*e*S	Sn	10 05 41.3	+13
TNTI	**Ternate**	**4.59**	**171**	Pn	**Pn**	**10 04 42.9**	**+2.6**
TNTI	**Ternate**	**4.59**	**171**	P	Pn	10 04 43.4	+3.1
TBP	**Tagbilaran**	**5.14**	**327**	*e*P	**Pn**	**10 04 47.8**	**0.0**
TBP				*i* S	**Sn**	**10 05 51.9**	**+6.1**
SNPH	**Sibulan**	**5.23**	**320**	*e*P	**Pn**	**10 04 50.2**	**+1.1**
KMSI	**Cibinong**	**5.45**	**210**	P	**Pn**	**10 04 54.8**	**+2.8**
	2.1nm5μm416nm,0.8s						
LLP	**Lapu-Lapu**	**5.62**	**332**	⇑*e*P	**Pn**	**10 04 56.7**	**+2.3**
LLP				*e*S	Sn	10 06 06.3	+8.6
GTOI	**Gorontalo**	**5.93**	**218**	P	**Pn**	**10 04 56.5**	**-2.2**
	0.3nm692nm62nm,0.8s						
LBMI	**Labuha**	**6.00**	**172**	P	**Pn**	**10 04 59.9**	**+0.3**
	1.2nm2μm212nm,1.0s						
MRSI	**Marisa**	**6.76**	**224**	P	**Pn**	**10 05 11.6**	**+1.6**
	1.0nm2μm2μm291nm,0.8s						
TOLI2	**Tolitoli**	**7.22**	**235**	Pn	**Pn**	**10 05 16.8**	**+0.3**
RCP	**Roxas**	**7.29**	**328**	⇑*e*P	**Pn**	**10 05 19.9**	**+2.5**
SANI	**Sanana**	**7.38**	**185**	P	**Pn**	**10 05 20.3**	**+1.8**
	0.3nm822nm71nm,0.9s						
LUWI	**Luwuk**	**7.44**	**212**		Pn	10 05 22.9	+3.5
LUWI	**Luwuk**	**7.44**	**212**	P	**Pn**	**10 05 22.2**	**+2.8**
	1.8nm5μm487nm,1.3s						
SWI	**Sorong**	**7.68**	**143**	P	**Pn**	**10 05 24.6**	**+1.9**
	0.2nm2μm61nm,0.9s						
SIJI	**Sorong**	**7.69**	**143**	Pn	**Pn**	**10 05 22.4**	**-0.5**
	1.4nm,0.3s,baz=30,slow=23,SNR=2.9						
SIJI				Sn	**Sn**	**10 06 50.4**	**+1.7**
	1.4nm,0.3s,baz=143,slow=20,SNR=1.4						
	8.8nm,0.5s						
APSI	**Ampana**	**7.98**	**219**	P	**Pn**	**10 05 28.3**	**+1.5**
	0.7nm2μm236nm,1.2s						
MYLDM	**Lahad Datu**	**8.14**	**269**	Pn	**Pn**	**10 05 31.2**	**+2.3**
MPSI	**Mapaga**	**8.39**	**234**	P	**Pn**	**10 05 32.8**	**+0.4**
	2μm515nm46nm,0.9s						
LQP	**Lukban**	**10.07**	**330**	*e*P	Pn	10 05 59.9	+4.3
LQP	**Lukban**	**10.07**	**330**	⇓*e*P	Pn	10 06 02.2	+6.6
TGY	**Tagaytay City**	**10.37**	**327**	Pn	**Pn**	**10 06 02.5**	**+2.9**
	47nm,0.3s,baz=172,slow=6.5,SNR=1.7						
TTSI	**Tana Toraja**	**10.78**	**220**	P	**Pn**	**10 06 06.5**	**+1.3**
	4μm96nm,1.4s						
BAKI	**Biak**	**11.45**	**124**	P	Pn	10 06 18.0	+3.7
SPSI	**Sidrap Palu**	**11.53**	**217**	P	Pn	10 06 18.8	+3.4
	34nm,0.9s						
BNSI	**Bone**	**11.69**	**214**	P	Pn	10 06 23.6	+6.0
KAPI	**Kappang**	**12.39**	**214**	Pn	**Pn**	**10 06 28.0**	**+0.8**
	0.9nm,0.3s,baz=13,slow=16,SNR=4.1						
KAPI				LR	LR	10 11 46.0	
	comp=Z,1μm,20.0s,baz=50,slow=40						
KAPI	**Kappang**	**12.39**	**214**	Pn	**Pn**	**10 06 29.8**	**+2.6**
SBUM	**Sibu**	**14.70**	**259**	Pn	**P**	**10 07 01.7**	**-1.8**
BBKI	**Banjar Baru**	**14.70**	**234**	P	**P**	**10 07 05.1**	**+1.5**
	64nm,1.3s						
EDFI	**Ende, Flores**	**14.85**	**200**	P	**P**	**10 07 03.6**	**-1.8**
BATI	**Baumata**	**15.73**	**191**	Pn	**Pn**	**10 07 13.0**	**+1.1**
	1.7nm,0.3s,baz=285,slow=20,SNR=2.0						
	28nm,0.8s						
BATI	**Baumata**	**15.73**	**191**	P	P	10 07 24.1	+9.0
STKI	**Sintang**	**16.05**	**251**	P	P	10 07 29.1	+10
PLAI	**Plampang**	**16.64**	**212**	P	P	10 07 32.4	+7.3
KSM	**Kuching**	**16.77**	**257**	P	**P**	**10 07 27.6**	**+1.0**
TWG	**Pinlang**	**18.20**	**343**	P	**P**	**10 07 43.3**	**+1.0**
TWG				IAmb	IAmb	10 07 58.7	
	comp=Z,64nm,1.5s						
JAGI	**Jajag, Banyuwa**	**18.55**	**222**	P	**P**	**10 07 45.9**	**-0.4**
JAGI				IAmb	IAmb	10 08 07.0	
	comp=Z,79nm,1.2s						
SSLB	**Suanglung**	**19.15**	**344**	P	**Pn**	**10 07 54.8**	**+0.8**
YHNB	**Yeheng**	**19.88**	**346**	P	**Pn**	**10 08 03.7**	**+1.0**
QZH	**Quanzhou**	**20.97**	**339**	P	**P**	**10 08 12.1**	**-0.4**
QZH				S	**S**	**10 12 01.6**	**-2.0**
QZH				LR	LR		
	comp=N,310nm,17.7s						
QZH				LR	LR		
	comp=E,270nm,16.7s						
QZH				LR	LR		
	comp=Z,360nm,15.8s						
KNRA	**Kununurra**	**20.99**	**174**	P	**P**	**10 08 14.5**	**+1.8**
KNRA				IAmb	IAmb	10 08 34.8	
	comp=Z,51nm,0.8s						
QIZ	**Qiongzhong**	**21.31**	**311**	P	**P**	**10 08 17.4**	**+1.1**
QIZ				IAmb	IAmb	10 08 19.6	
	comp=Z,63nm,1.3s						
QIZ	**Qiongzhong**	**21.31**	**311**	P	**P**	**10 08 16.1**	**-0.1**
QIZ				pP	**sP**	**10 08 30.8**	**-1.9**
QIZ				pmax	pmax		
	comp=Z,20nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,210nm,2.3s						
QIZ				LR	LR		
	comp=N,280nm,16.0s						
QIZ				LR	LR		
	comp=E,370nm,15.2s						
QIZ				LR	LR		
	comp=Z,580nm,19.2s						
KPJI	**Karang Pucung**	**21.72**	**235**	P	P	10 08 33.5	+13
PPBI	**Pangkal Pinang**	**21.82**	**251**	P	**P**	**10 08 26.6**	**+4.8**
LEM	**Lembang**	**22.53**	**238**	P	**P**	**10 08 30.4**	**+0.9**
	comp=Z,15nm,0.5s,baz=119,slow=17,SNR=5.0						
LEM				LR	LR	10 18 27.2	
	comp=Z,518nm,20.5s,baz=14,slow=40						
	comp=Z,15nm,0.5s						
DSRI	**Dabo**	**22.81**	**256**	P	**P**	**10 08 36.3**	**+4.0**
CBJI	**Citeko**	**22.98**	**240**	P	**P**	**10 08 38.6**	**+4.6**
MDSI	**Maura Dua**	**24.49**	**247**	P	P	10 08 54.3	+6.0
PMG	**Port Moresby**	**25.13**	**126**	LR	LR	10 19 50.8	
	comp=Z,236nm,18.2s,baz=304,slow=39						
IPM	**Ipoh**	**25.56**	**269**	P	**P**	**10 08 56.6**	**-1.4**
IPM				IAmb	IAmb	10 09 01.3	
	comp=Z,25nm,0.9s						
KULM	**Kulim**	**25.91**	**271**	P	**P**	**10 09 00.6**	**-0.5**
KULM				IAmb	IAmb	10 09 03.4	
	comp=Z,23nm,1.0s						
KULM					**pwP**	**10 09 14.8**	**-2.3**
WB0	**Warramunga Arr**	**26.09**	**163**	P	**P**	**10 09 03.9**	**+1.2**
JCJ	**Chichijima**	**26.20**	**33**	P	**P**	**10 09 00.6**	**-3.0**
	comp=Z,38nm,0.6s,baz=285,slow=20,SNR=2.2						
	comp=Z,38nm,0.6s						
WRAB	**Tennant Creek**	**26.23**	**163**	P	**P**	**10 09 06.0**	**+2.1**
WRA	**Warramunga Arr**	**26.24**	**163**	P	**P**	**10 09 04.4**	**+0.4**
	comp=Z,7.9nm,0.8s,baz=342,slow=10,SNR=31						
WRA				ScP	**ScP**	**10 16 08.4**	**+2.5**
	comp=Z,1.0nm,0.8s,baz=352,slow=3.4,SNR=5.3						
WRA				LR	LR	10 20 48.8	
	comp=Z,362nm,21.9s,baz=38,slow=40						
	comp=Z,7.9nm,0.8s						
WRA	**Warramunga Arr**	**26.24**	**163**	P	**P**	**10 09 06.6**	**+2.6**
WB2	**Warramunga Arr**	**26.24**	**163**	P	**P**	**10 09 05.5**	**+1.5**
KRJI	**Kerinci**	**26.24**	**254**	P	P	10 09 12.6	+8.3
WR0	**Warramunga Arr**	**26.31**	**163**	P	**P**	**10 09 05.9**	**+1.3**
WR0				IAmb	IAmb	10 09 20.3	
	comp=Z,40nm,1.1s						
SRIT	**Nakonsritamara**	**27.06**	**278**	P	**P**	**10 09 11.8**	**+0.3**
SRIT				IAmb	IAmb	10 09 16.5	
	comp=Z,47nm,1.4s						
KRVT	**Keravat (AS076**	**27.08**	**110**	LR	LR	10 19 18.5	
	comp=Z,384nm,19.1s,baz=65,slow=35						
PSA00	**Pilbara Seismi**	**27.57**	**194**	P	**P**	**10 09 14.1**	**-1.9**
PSA00				IAmb	IAmb	10 09 31.7	
	comp=Z,41nm,1.2s						
WHN	**Wuhan**	**27.62**	**337**	⇓P	**P**	**10 09 18.3**	**+2.0**
WHN				S	**S**	**10 14 02.1**	**+7.3**
WHN				pmax	pmax		
	comp=Z,78nm,1.3s						
WHN				LR	LR		
	comp=N,1μm,20.6s						
WHN				LR	LR		
	comp=E,490nm,15.2s						
WHN				LR	LR		
	comp=Z,1μm,21.9s						
PSI	**Prapat**	**27.79**	**266**	P	**P**	**10 09 18.3**	**+0.1**
	comp=Z,27nm,0.9s,baz=90,slow=5.4,SNR=20						
PSI				LR	LR	10 23 09.7	
	comp=Z,198nm,18.4s,baz=90,slow=42						
	comp=Z,27nm,0.9s						
KCSI	**Kotacane, Aceh**	**28.87**	**268**	P	**P**	**10 09 27.4**	**-0.3**
GSI	**Gunungsitoli**	**29.31**	**263**	P	**P**	**10 09 30.4**	**-1.3**
GSI	**Gunungsitoli**	**29.31**	**263**	P	**P**	**10 09 32.1**	**+0.4**
AS31	**Alice Springs**	**29.68**	**167**	P	**P**	**10 09 35.4**	**+0.6**
ASAR	**Alice Springs**	**29.68**	**167**	P	**P**	**10 09 33.5**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=353,slow=7.8,SNR=2.0						
ASAR				PcP	**PcP**	**10 12 36.9**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=265,slow=1.3,SNR=4.8						
ASAR				ScP	**ScP**	**10 16 19.1**	**+2.7**
	comp=Z,1.8nm,0.8s,baz=354,slow=2.9,SNR=7.1						
ASAR				LR	LR	10 22 09.3	
	comp=Z,133nm,20.2s,baz=25,slow=38						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**29.68**	**167**	P	**P**	**10 09 37.2**	**+2.4**
CM31	**Chiang Mai Arr**	**30.04**	**298**	P	**P**	**10 09 38.7**	**+0.7**
CM31				IAmb	IAmb	10 09 55.1	
	comp=Z,21nm,1.5s						
CMAR	**Chiang Mai Arr**	**30.04**	**298**	P	**P**	**10 09 35.7**	**-2.3**
	comp=Z,1.3nm,0.3s,baz=120,slow=7.0,SNR=15						
CMAR				PcP	**PcP**	**10 12 40.5**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=180,slow=0.5,SNR=1.2						
CMAR				ScP	**ScP**	**10 16 20.8**	**+3.1**
	comp=Z,0.9nm,0.3s,baz=121,slow=1.6,SNR=12						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.04**	**298**	P	**P**	**10 09 38.6**	**+0.6**
CHTO	**Chiang Mai**	**30.17**	**299**	P	**P**	**10 09 39.0**	**-0.2**
JHJ	**Hachijo jima 2**	**30.22**	**22**	LR	LR	10 21 54.4	
	comp=Z,60nm,20.5s,baz=224,slow=37						
KMI	**Kunming**	**30.22**	**313**	⇓P	**P**	**10 09 40.7**	**+0.9**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI				LR	LR		
	comp=N,270nm,18.4s						
KMI				LR	LR		
	comp=E,290nm,15.8s						
KMI				LR	LR		
	comp=Z,470nm,21.8s						
PZH	**PanZhiHua**	**31.77**	**314**	P	P	10 09 57.8	+4.5
PZH				S	**S**	**10 14 57.7**	**-2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,3.8s						
PZH				LR	LR		
	comp=N,850nm,21.2s						
PZH				LR	LR		
	comp=E,880nm,22.5s						
PZH				LR	LR		
	comp=Z,1μm,22.7s						
CTA	**Charters Tower**	**31.77**	**143**	LR	LR	10 22 43.1	
	comp=Z,248nm,21.9s,baz=312,slow=36						
LYN	**LuoYang**	**31.90**	**337**	⇓P	**P**	**10 09 55.9**	**+1.7**
LYN				S	**S**	**10 15 06.7**	**+4.8**
LYN				pmax	pmax		
	comp=Z,20nm,2.1s						
LYN				pmax	pmax		
	comp=Z,50nm,4.1s						
LYN				LR	LR		
	comp=N,400nm,20.6s						
LYN				LR	LR		
	comp=E,230nm,18.9s						
LYN				LR	LR		
	comp=Z,520nm,20.2s						
KSRS	**Korea Array**	**31.98**	**2**	P	**P**	**10 09 54.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=188,slow=9.3,SNR=2.7						
	comp=Z,0.7nm,0.6s						
MJAR	**Matsushiro Arr**	**32.81**	**17**	P	**P**	**10 09 59.9**	**-2.3**
	comp=Z,1.7nm,0.7s,baz=196,slow=8.0,SNR=1.8						
MJAR				PcP	**PcP**	**10 12 47.0**	**+0.6**

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      comp=Z,2.2nm,0.3s,baz=168,slow=3.3,SNR=6.9
      comp=Z,1.7nm,0.7s
XAN   Xi'an             32.96 332 ⇑P      P       10 10 03.4  -0.2
XAN                               pP      pP      10 10 10.0  -5.9
XAN                               pmax    pmax
      comp=Z,12nm,1.0s
XAN                               pmax    pmax
      comp=Z,130nm,6.5s
XAN                               LR      LR
      comp=N,430nm,18.7s
XAN                               LR      LR
      comp=E,250nm,18.7s
XAN                               LR      LR
      comp=Z,790nm,22.2s
HNS   HongShan          33.73 343 ⇓P      P       10 10 11.2  +1.1
HNS                               S       S       10 15 35.3  +5.2
HNS                               pmax    pmax
      comp=Z,24nm,1.2s
HNS                               LR      LR
      comp=N,220nm,15.9s
HNS                               LR      LR
      comp=Z,290nm,18.4s
JMM   Marumori          34.84  20  P      P       10 10 21.1  +1.4
MORW  Morawa            35.71 196  P      P       10 10 27.2  -0.2
MORW                               IAmb   IAmb    10 10 40.2
      comp=Z,15nm,1.0s
BJT   Baijiatuau        35.80 346  P      P       10 10 28.6  +0.7
BJI   Beijing           35.81 346  P      P       10 10 28.5  +0.4
BJI                                pmax   pmax
      comp=Z,25nm,1.0s
FORT  Forrest           35.94 178  P      P       10 10 30.9  +1.6
SNY   Shenyang          36.43 356 ⇑P      P       10 10 34.2  +0.8
SNY                                S      S       10 16 33.8   +22
SNY                                pmax   pmax
      comp=Z,27nm,2.2s
SNY                                pmax   pmax
      comp=Z,170nm,3.5s
SNY                                LR     LR
      comp=N,220nm,7.6s
SNY                                LR     LR
      comp=E,140nm,10.2s
SNY                                LR     LR
      comp=Z,340nm,17.8s
LZH   Lanzhou           37.10 329 ⇑P      P       10 10 40.8  +1.5
LZH                                pP     sP      10 10 55.5  -1.8
LZH                                PP     PnPn    10 12 20.8   +15
LZH                                pmax   pmax
      comp=Z,25nm,1.5s
LZH                                pmax   pmax
      comp=Z,190nm,4.3s
LZH                                LR     LR
      comp=N,350nm,15.7s
LZH                                LR     LR
      comp=E,460nm,16.3s
LZH                                LR     LR
      comp=Z,640nm,15.2s
HHC   Hu-ho-hao-te      37.86 341 eP      P       10 10 47.1  +1.5
HHC                                pmax   pmax
      comp=Z,19nm,1.1s
HHC                                pmax   pmax
      comp=Z,210nm,7.2s
HHC                                LR     LR
      comp=N,260nm,16.7s
HHC                                LR     LR
      comp=Z,310nm,17.0s
BTO   Baotou            38.16 339 eP      P       10 10 54.0  +5.8
BTO                                S      S       10 16 42.9  +4.7
BTO                                LR     LR
      comp=N,1μm,17.4s
BTO                                LR     LR
      comp=E,540nm,17.4s
EIDS  Eidsvold          38.66 143  P      P       10 10 53.6  +1.1
EIDS                               IAmb   IAmb    10 11 05.1
      comp=Z,9.4nm,0.9s
BBOO  Buckleboo         38.98 167  P      P       10 10 56.1  +1.1
BBOO                               IAmb   IAmb    10 11 22.3
      comp=Z,16nm,1.1s
USRK  Ussuriysk Ar.     38.98   6  P      P       10 10 52.5  -2.3
      comp=Z,2.3nm,0.8s,baz=200,slow=12,SNR=2.2
USRK                               LR     LR      10 27 03.4
      comp=Z,79nm,21.4s,baz=180,slow=36
      comp=Z,2.3nm,0.8s
XLT   XiLinHaoTe        39.52 348⇓iP      P       10 11 00.4  +0.9
XLT                                pP     sP      10 11 18.3  +1.1
XLT                                sP     pP      10 11 30.1   +18
XLT                                S      S       10 16 54.0  -4.5
XLT                                sS     sS      10 17 40.9   +22
XLT                                pmax   pmax
      comp=Z,17nm,1.2s
XLT                                pmax   pmax
      comp=Z,120nm,4.9s
XLT                                LR     LR
      comp=N,29nm,15.3s
XLT                                LR     LR
      comp=E,250nm,19.0s
XLT                                LR     LR
      comp=Z,210nm,18.4s
STKA  Stephens Creek    39.65 160  P      P       10 11 00.1  -0.5
      comp=Z,18nm,1.1s,baz=337,slow=7.7,SNR=10.0
STKA                               LR     LR      10 29 25.0
      comp=Z,235nm,19.2s,baz=302,slow=39
      comp=Z,18nm,1.1s
STKA  Stephens Creek    39.65 160  P      P       10 11 01.8  +1.1
STKA                               IAmb   IAmb    10 11 14.3
      comp=Z,7.2nm,1.0s
ASAJ  Asahikawa         41.08  18  P      P       10 11 12.3   0.0
      comp=Z,5.4nm,0.8s,baz=190,slow=12,SNR=1.7
ASAJ                               LR     LR      10 27 24.6
      comp=Z,236nm,21.3s,baz=196,slow=35
      comp=Z,5.4nm,0.8s
H11N1 WAKE ISLAND Hy    41.65  66  T      T       10 55 43.5
      baz=254,slow=75,SNR=28
H11N2 WAKE ISLAND Hy    41.66  66  T      T       10 55 48.5
      baz=254,slow=75,SNR=20
H11N3 WAKE ISLAND Hy    41.66  66  T      T       10 55 48.7
      baz=254,slow=75,SNR=22
GTA   Gaotai            41.70 328 ⇓P      P       10 11 19.6  +2.0
GTA                                pP     sP      10 11 33.4  -2.3
GTA                                pmax   pmax
      comp=Z,13nm,0.7s
GTA                                pmax   pmax
      comp=Z,91nm,6.8s
GTA                                LR     LR
      comp=N,320nm,21.1s
GTA                                LR     LR
      comp=E,320nm,21.1s
GTA                                LR     LR
      comp=Z,540nm,23.1s
GOMU  GeErMu            42.40 321  P      P       10 11 21.3  -2.4
GOMU                               pP     pP      10 11 24.4   -12
GOMU                               sP     pwP     10 11 26.2   -10
GOMU                               PP     PcP     10 13 18.0  +1.7
GOMU                               S      S       10 17 44.3  +2.2
GOMU                               sS     sS      10 17 52.0   -11
ODAN  Odare             43.10 304 eP      P       10 11 28.9  -0.5
      comp=Z,81nm,1.0s
RAMN  Ramite            43.79 304 eP      P       10 11 34.8  -0.1
      comp=Z,52nm,1.0s
JIRN  Jiri              44.40 305 eP      P       10 11 40.0  +0.1
      comp=Z,3.4nm,1.0s
PKI   Pulchoki          45.01 304 eP      P       10 11 43.7  -1.0
      comp=Z,44nm,1.1s
KKN   Kakani            45.19 304 eP      P       10 11 44.9  -1.2
      comp=Z,29nm,0.8s
DMN   Daman             45.27 304 eP      P       10 11 45.7  -1.0
ULN   Ulaanbaatar       45.58 342  P      P       10 11 50.0  +1.3
SONM  Songino Array     45.76 341  P      P       10 11 50.4  +0.2
      comp=Z,6.1nm,0.9s,baz=160,slow=8.3,SNR=23
SONM                               PcP    PcP     10 13 27.9  +0.7
      comp=Z,0.4nm,0.4s,baz=185,slow=3.6,SNR=2.0
SONM                               LR     LR      10 33 43.3
      comp=Z,156nm,20.5s,baz=138,slow=40
      comp=Z,6.1nm,0.9s
SONM  Songino Array     45.76 341  IAmb   IAmb    10 11 52.8
      comp=Z,10nm,1.1s
GKN   Gorkha            45.80 304 eP      P       10 11 49.5  -1.3
KOLN  Koldanda          46.57 304 eP      P       10 11 56.3  -0.6
      comp=Z,40nm,0.7s
DANN  Dangsing          46.65 304 eP      P       10 11 56.8  -0.8
      comp=Z,75nm,0.8s
PYUN  Piuthan           47.19 304 eP      P       10 12 01.0  -0.8
      comp=Z,107nm,1.0s
DZM   Mont Dzumac       47.52 126 eS      S       10 18 59.3  +3.2
      comp=Z,115nm,29.6s
DZM                               eLR     LR      10 26 08.6
      comp=Z,179nm,23.0s
WMQ   Urumqi            51.38 324 eP      P       10 12 36.2  +2.9
WMQ                                LR     LR
      comp=N,450nm,17.5s
WMQ                                LR     LR
      comp=E,380nm,17.5s
WMQ                                LR     LR
      comp=Z,400nm,21.5s
PETK  Petropavlovsk-    53.97  23  P      P       10 12 52.3  +0.1
      comp=Z,6.7nm,0.8s,baz=202,slow=7.3,SNR=14
PETK                               LR     LR      10 34 24.8
      comp=Z,82nm,21.9s,baz=230,slow=34
      comp=Z,6.7nm,0.8s
MK31  Makanchi Array    56.21 325  P      P       10 13 08.1  -0.5
MK31                               IAmb   IAmb    10 13 18.8
      comp=Z,6.9nm,0.8s
MKAR  Makanchi Array    56.21 325  P      P       10 13 07.9  -0.7
      comp=Z,3.8nm,0.4s,baz=118,slow=7.5,SNR=44
MKAR                               PcP    PcP     10 14 05.2  -0.6
      comp=Z,12nm,0.8s,baz=116,slow=5.5,SNR=10
MKAR                               LR     LR      10 38 06.8
      comp=Z,334nm,21.9s,baz=100,slow=37
      comp=Z,3.8nm,0.4s
MKAR  Makanchi Array    56.21 325  P      P       10 13 08.1  -0.4
MAKZ  Makanchi          56.40 325  P      P       10 13 09.3  -0.5
TARG  Taragay, Kyrgy    56.52 317  P      P       10 13 11.0  -0.3
TARG                               IAmb   IAmb    10 13 23.6
      comp=Z,11nm,1.0s
KSH   Kashi             56.87 314  P      P       10 13 15.2  +1.7
KSH                                pmax   pmax
      comp=Z,15nm,1.3s
KSH                                LR     LR
      comp=N,140nm,20.6s
KSH                                LR     LR
      comp=E,210nm,20.4s
KSH                                LR     LR
      comp=Z,270nm,21.0s
AAK   Ala-Archa         59.13 317  P      P       10 13 28.5  -0.9
      comp=Z,0.8nm,0.3s,baz=116,slow=7.2,SNR=6.7
AAK                                LR     LR      10 42 06.4
      comp=Z,187nm,20.5s,baz=93,slow=39
      comp=Z,0.8nm,0.3s
AAK   Ala-Archa         59.13 317  P      P       10 13 30.4  +1.0
AAK                                IAmb   IAmb    10 13 46.5
      comp=Z,13nm,1.5s
ZALV  Zalesovo Beam     59.13 333  P      P       10 13 27.9  -1.0
      comp=Z,3.6nm,0.6s,baz=120,slow=7.5,SNR=10.0
ZALV                               LR     LR      10 40 31.4
      comp=Z,140nm,20.7s,baz=162,slow=38
      comp=Z,3.6nm,0.6s
KURBB Kurchatov Arra    60.36 327  P      P       10 13 36.5  -0.9
      comp=Z,18nm,0.8s,baz=127,slow=5.8,SNR=33
KURBB                              LR     LR      10 41 10.7
      comp=Z,126nm,21.3s,baz=112,slow=38
      comp=Z,18nm,0.8s
KURK  Kurchatov         60.36 327  P      P       10 13 36.2  -1.2
KBL   Kabul             60.51 307  P      P       10 13 38.5  -0.5
SHEM  Shemya Is, Ala    61.11  31  LR     LR      10 35 39.1
      comp=Z,67nm,20.5s,baz=296,slow=32
CHGR  Chuyangaron       61.56 311  P      P       10 13 45.6  -0.3
KK31  Karatay Array     62.02 316  P      P       10 13 49.5  +0.7
KKAR  Karatay Array     62.02 316  P      P       10 13 48.4  -0.5
RPZ   Rata Peaks        63.11 145  LR     LR      10 43 28.8
      comp=Z,123nm,18.1s,baz=281,slow=38
BRVK  Borovoye          66.02 327  P      P       10 14 13.8  -1.1
BILL  Bilibino          68.02  15  P      P       10 14 27.1  -0.2
NRIK  Noril'sk          68.86 346  P      P       10 14 32.1  -0.4
      comp=Z,5.7nm,0.6s,baz=141,slow=7.1,SNR=9.5
NRIK                               LR     LR      10 49 23.6
      comp=Z,157nm,18.2s,baz=150,slow=40
      comp=Z,5.7nm,0.6s
NRIK  Noril'sk          68.86 346  P      P       10 14 32.9  +0.4
NRIK                               IAmb   IAmb    10 14 41.9
      comp=Z,12nm,0.8s
GEYT  Alibeck           69.85 308  P      P       10 14 37.9  -1.4
      comp=Z,2.2nm,0.4s,baz=130,slow=6.4,SNR=6.3
GEYT                               LR     LR      10 49 29.7
      comp=Z,95nm,19.2s,baz=96,slow=40
      comp=Z,2.2nm,0.4s
GEYT  Alibeck           69.85 308  IAmb   IAmb    10 14 41.4
      comp=Z,11nm,1.1s
ABKAR Akbulak array     70.87 320  P      P       10 14 43.9  -1.4
AKTO  Aktyubinsk        72.37 321  P      P       10 14 53.4  -0.9
      comp=Z,8.2nm,0.9s,baz=94,slow=8.7,SNR=15
AKTO                               LR     LR      10 49 20.0
      comp=Z,182nm,20.6s,baz=107,slow=38
      comp=Z,8.2nm,0.9s
ARU   Arti              73.55 327  P      P       10 15 00.4  -0.7
RAR   Rarotonga         76.72 113  LR     LR      10 47 15.9
      comp=Z,28nm,18.7s,baz=248,slow=34
RAYN  Ar Rayn           79.80 293  P      P       10 15 35.9  -1.3
GNI   Garni             80.41 310  LR     LR      10 56 57.1
      comp=Z,59nm,21.1s,baz=59,slow=40
KDAK  Kodiak Island     80.57  32  LR     LR      10 49 56.3
      comp=Z,65nm,20.3s,baz=261,slow=35
IMAR  Indian Mountai    80.90  24  P      P       10 15 42.3  +0.1
CAST  Castle Rocks      81.33  27  IAmb   IAmb    10 16 05.0
      comp=Z,5.2nm,0.8s
ONI   Oni               81.42 312  IAmb   IAmb    10 16 04.5
      comp=Z,14nm,1.0s
I21K  Tanana            81.54  25  IAmb   IAmb    10 15 52.5
      comp=Z,7.9nm,0.9s
KBZ   Khabaz            81.83 313  P      P       10 15 46.0  -1.5
      comp=Z,0.9nm,0.3s,baz=90,slow=1.5,SNR=4.4
KBZ                                LR     LR      10 58 16.5
      comp=Z,92nm,18.1s,baz=67,slow=40
      comp=Z,0.9nm,0.3s
BPAW  Bear Paw Mtn.     81.87  26  IAmb   IAmb    10 15 58.8
      comp=Z,10nm,1.1s
TRF   Thorofare Moun    82.14  27  IAmb   IAmb    10 15 51.4
      comp=Z,11nm,1.2s
GURO  Guroymak-BITLI    82.51 308  IAmb   IAmb    10 16 04.2
      comp=Z,12nm,1.2s
I23K  Minto, Yukon-K    82.64  25  IAmb   IAmb    10 16 08.9
      comp=Z,9.0nm,1.1s
MCK   McKinley          82.75  27  IAmb   IAmb    10 16 08.4
      comp=Z,14nm,1.0s
RND   Reindeer          82.78  27  IAmb   IAmb    10 15 52.4
      comp=Z,9.9nm,1.2s
SML   Sawmill           82.96  28  IAmb   IAmb    10 16 04.1
      comp=Z,7.9nm,1.0s
MDM   Murphy Dome       83.11  25  IAmb   IAmb    10 16 11.1
      comp=Z,13nm,1.4s
CCB   Clear Creek Bu    83.28  26  IAmb   IAmb    10 16 10.6
      comp=Z,11nm,1.3s
H24K  Noodor Dome       83.29  24  P      P       10 15 54.7   0.0
H24K                               IAmb   IAmb    10 16 11.8
      comp=Z,8.2nm,1.1s
POKR  Poker Plat Res    83.46  25  IAmb   IAmb    10 16 00.4
      comp=Z,7.6nm,0.7s
ILAR  Eielson Array     83.68  25  P      P       10 15 55.1  -1.5
      comp=Z,1.9nm,1.0s,baz=251,slow=4.6,SNR=14
ILAR                               LR     LR      10 52 52.0
      comp=Z,37nm,20.0s,baz=268,slow=35
      comp=Z,1.9nm,1.0s
KLMR  Klimovskoe        83.98 331 eP      P       10 15 57.2  -1.0
KLMR                               AMP            10 16 04.5
      comp=Z,41nm,1.3s
PAX   Paxson            84.30  27  IAmb   IAmb    10 16 17.1
      comp=Z,9.8nm,1.3s
BMRM  Bremner River     84.75  29  IAmb   IAmb    10 16 23.0
      comp=Z,14nm,1.1s
VNDA  Vanda             85.02 173  P      P       10 16 03.2   0.0
      comp=Z,3.6nm,1.0s,baz=302,slow=5.8,SNR=16
VNDA                               LR     LR      10 53 24.9
      comp=Z,91nm,20.4s,baz=342,slow=35
      comp=Z,3.6nm,1.0s
VNDA  Vanda             85.02 173  P      P       10 16 03.2   0.0
VNDA                               IAmb   IAmb    10 16 18.1
      comp=Z,6.6nm,1.1s
GLB   Gilahina Butte    85.12  29  IAmb   IAmb    10 16 33.7
      comp=Z,12nm,1.0s
MAW   Mawson            85.24 200  P      P       10 16 04.7  +0.4
      comp=Z,5.5nm,1.0s,baz=77,slow=9.3,SNR=4.6
      comp=Z,5.5nm,1.0s
MAW   Mawson            85.24 200  P      P       10 16 03.7  -0.7
VRDI  Verde Repeater    85.30  29  IAmb   IAmb    10 16 06.7
      comp=Z,7.1nm,1.1s
PPT   Papeete           85.67 108  LR     LR      10 46 59.9
      comp=Z,50nm,21.7s,baz=315,slow=30
PPT2  Papeete2          85.67 108 eS      S       10 26 32.5  -4.5
PPT2  Papeete2          85.67 108 eLR     LR      10 43 38.7
      comp=Z,112nm,23.8s
K27K  Chicken           85.79  26  IAmb   IAmb    10 16 26.1
      comp=Z,7.5nm,1.1s
BARN  Barnard Glacie    86.17  29  IAmb   IAmb    10 16 17.1
      comp=Z,7.1nm,1.1s
MMAI  Mount Meron Ar    88.18 303  LR     LR      11 00 15.9
      comp=Z,44nm,21.1s,baz=218,slow=39
INK   Inuvik            88.69  21  P      P       10 16 20.1  -1.1
      comp=Z,1.5nm,1.0s,baz=312,slow=4.7,SNR=3.6
      comp=Z,1.5nm,1.0s
INK   Inuvik            88.69  21  IAmb   IAmb    10 16 37.0
      comp=Z,6.9nm,1.4s
SPITS Spitsbergen Ar    88.89 349  LR     LR      11 03 00.1
      comp=Z,39nm,18.1s,baz=242,slow=40
ARCES ARCESS Array B    88.92 340  P      P       10 16 20.7  -1.7
      comp=Z,17nm,1.1s,baz=76,slow=5.6,SNR=14
ARCES                              LR     LR      11 01 09.5
      comp=Z,96nm,18.4s,baz=122,slow=39
      comp=Z,17nm,1.1s
BRTR  Keskin Array B    88.95 310  P      P       10 16 21.5  -1.8
      comp=Z,2.1nm,1.0s,baz=104,slow=2.5,SNR=3.9
BRTR                               LR     LR      11 03 15.9
      comp=Z,39nm,18.8s,baz=88,slow=40
      comp=Z,2.1nm,1.0s
KMBO  Kilima Mbogo      89.52 269  LR     LR      10 57 19.7
      comp=Z,44nm,19.1s,baz=97,slow=36
FINES FINESS Array B    90.39 332  P      P       10 16 27.4  -1.8
      comp=Z,2.1nm,0.5s,baz=94,slow=2.7,SNR=14
FINES                              LR     LR      11 00 46.2
      comp=Z,143nm,20.5s,baz=50,slow=38
      comp=Z,2.1nm,0.5s
AKASG Malin Array Be    90.61 321  P      P       10 16 29.6  -1.0
      comp=Z,2.2nm,0.8s,baz=62,slow=5.2,SNR=10.0
AKASG                              LR     LR      10 59 59.4
      comp=Z,76nm,19.6s,baz=3.0,slow=37
      comp=Z,2.2nm,0.8s
AKASG Malin Array Be    90.61 321  P      P       10 16 30.8  +0.3
AKASG                              IAmb   IAmb    10 16 37.9
      comp=Z,5.9nm,1.1s
DLBC  Dease Lake        92.40  31  LR     LR      10 52 37.7
      comp=Z,83nm,20.9s,baz=296,slow=32
MLR   Muntele Rosu      93.70 316  LR     LR      11 04 48.3
      comp=Z,116nm,18.3s,baz=65,slow=39
BBB   Bella Bella       95.05  37  LR     LR      10 52 55.7
      comp=Z,20nm,20.3s,baz=270,slow=31
MBAR  Mbarara           95.96 270  LR     LR      11 00 08.2
      comp=Z,38nm,18.6s,baz=106,slow=35
RES   Resolute Bay      96.25  10  LR     LR      11 04 28.2
      comp=Z,22nm,19.5s,baz=88,slow=38
IDI   Anoyia            96.49 306  LR     LR      11 06 41.1
      comp=Z,24nm,20.2s,baz=40,slow=39
HFS   Hagfors           96.57 332  LR     LR      11 04 04.6
      comp=Z,130nm,21.1s,baz=79,slow=38
NB2   NORSAR Subarra    97.32 334  P      P       10 16 59.9  -1.3
      comp=Z,9.7nm,1.2s,baz=67,slow=4.6
NB2   NORSAR Subarra    97.32 334  P      P       10 16 59.9  -1.3
      baz=67,slow=4.6
NOA   NORSAR Array B    97.32 334  P      P       10 16 59.7  -1.5
      comp=Z,2.1nm,0.8s,baz=66,slow=4.5,SNR=5.6
NOA                                LR     LR      11 05 18.7
      comp=Z,142nm,21.9s,baz=65,slow=38
      comp=Z,2.1nm,0.8s
YKA   Yellowknife Ar    98.06  24  P      P       10 17 03.5  -0.9
      comp=Z,0.3nm,0.8s,baz=296,slow=4.1,SNR=3.9
YKA                                PP     PP      10 21 02.3  -1.2
      comp=Z,0.2nm,0.8s,baz=286,slow=11,SNR=3.8
YKA                                PKKPbc PKKPbc  10 33 36.3  -3.5
      comp=Z,0.3nm,0.8s,baz=114,slow=2.7,SNR=6.4
      comp=Z,0.3nm,0.8s
LSZ   Lusaka            99.55 255  LR     LR      11 00 23.3
      comp=Z,115nm,19.6s,baz=141,slow=34
TXAR  Lajitas Array    120.66  51  PKP    PKPdf   10 22 18.4  -2.3
      comp=Z,0.3nm,0.7s,baz=229,slow=1.0,SNR=5.2
TXAR                               PKKPbc PKKPab  10 32 28.4  +0.7
      comp=Z,0.5nm,0.9s,baz=104,slow=5.3,SNR=4.6
TORD  Torodi Ar. Bea   122.35 289  PKP    PKPdf   10 22 23.6  -0.6
      comp=Z,12nm,0.6s,baz=59,slow=2.0,SNR=4.4
LPAZ  La Paz           161.86 128  PKP    PKPdf   10 23 30.1  -0.9
      comp=Z,0.9nm,1.0s,baz=207,slow=6.8,SNR=1.6
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NNC ***12*** *10:09:27.4±2.9, 54°.84N×83°.69E, h0^{km}, mb3.4, mpv3.1*
Error ellipse: s-maj=22.0km s-min=11.6km az=159.0
IDC ***12*** *10:09:32.2±2.2, 54°.62N×83°.73E, h0^{km}, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=19.3km s-min=11.2km az=172.0*
ISC 12 10:09:28.1±4.1**, 54°.8N**±0°.3×**83°.76E**±0°.09**, h10^{km}, n8, σ2^{s}.33**/11**, 7C-1D, Southwestern Siberia**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
I46RU ZALESOVO INFRA    1.08 144  i                 10 15 10.0
      baz=318,slow=322,SNR=1.6
ZAA0  Zalesovo Array    1.08 144 ⇑P      Pn         10 09 48.9  -0.4
      1.6nm,0.3s,baz=333,slow=17
ZAA0                             ⇑S      Sg         10 10 03.0  +0.2
      7.0nm,0.3s,baz=321,slow=29
ZALV  Zalesovo Beam     1.08 144  Pg     Pn         10 09 49.5  +0.2
      9.4nm,0.3s,baz=314,slow=15,SNR=35
ZALV                              Lg     Lg         10 10 03.5
      16nm,0.3s,baz=315,slow=32,SNR=9.1
KURK  Kurchatov         5.17 219 ⇓Pn     Pn         10 10 44.7  -0.7
      3.0nm,0.7s
KURK                             ⇑Pg     Pb         10 11 00.3  +1.8
      4.5nm,0.8s
KURK                             ⇑Lg     Lg         10 12 10.6
      8.9nm,0.8s
KURBB Kurchatov Arra    5.27 219  Pn     Pn         10 10 50.3  +3.4
      0.1nm,0.3s,baz=40,slow=14,SNR=5.9
KURBB                             Pg     Pg         10 11 05.1  -4.0
      0.2nm,0.3s,baz=40,slow=17,SNR=9.3
KURBB                             Lg     Lg         10 12 13.5
      0.2nm,0.3s,baz=44,slow=32,SNR=5.9
      0.7nm,0.4s
KURBB Kurchatov Arra    5.27 219 ⇑Pn     Pn         10 10 46.7  -0.3
      1.5nm,0.4s
KURBB                            ⇑Pg     Pb         10 11 02.5  +2.1
      1.9nm,0.3s
KURBB                            ⇑Lg     Lg         10 12 13.0
      21nm,0.7s
MK31  Makanchi Array    8.10 187  Pn     Pn         10 11 27.3  +1.6
      0.3nm,0.3s,baz=17,slow=13,SNR=6.0
MKAR  Makanchi Array    8.10 187  Pn     Pn         10 11 27.9  +2.2
      0.2nm,0.3s,baz=9.6,slow=13,SNR=6.8
      0.4nm,0.5s
```

IDC 12 10:20:15.5±3.4**, 2°.22S**×**102°.07E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=200.0km s-min=29.0km az=52.0, Southern Sumatera**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
WRA   Warramunga Arr   36.11 122  P       P         10 27 20.2  +0.6
      0.5nm,0.8s,baz=304,slow=9.2,SNR=5.5
      0.5nm,0.8s
ASAR  Alice Springs    37.46 127  P       P         10 27 31.1   0.0
      0.3nm,0.4s,baz=303,slow=7.9,SNR=8.0
ASAR                              PcP     PcP       10 29 47.8  -2.1
      0.3nm,0.9s,baz=300,slow=2.5,SNR=1.6
      0.3nm,0.4s
MKAR  Makanchi Array   51.82 343  P       P         10 29 25.8  +0.4
      0.4nm,0.5s,baz=146,slow=8.0,SNR=4.6
      0.4nm,0.5s
```

IDC ***12*** *10:40:44.7±0.8, 57°.74N×33°.04W, h0^{km}, mb3.5/11, mbtmp3.5/13, ML3.3/2, MS3.4/11, Error ellipse: s-maj=29.5km s-min=14.5km az=12.0*
ISC 12 10:40:46.2±0.7**, 57°.8N**±0°.2×**33°.02W**±0°.09**, h10^{km}, n22, σ0^{s}.95**/17**, mb3.8**/11**, MS3.6**/6**, Reykjanes Ridge**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
BORG  Borgarnes         8.99  34  LR      LR        10 45 26.0
      comp=Z,75nm,18.7s,baz=249,slow=31
SFJD  Kangerlussuaq    12.30 326  LR      LR        10 47 44.6
      comp=Z,129nm,18.9s,baz=142,slow=34
EKA   Eskdalemuir Ar   16.58  86  Pn      Pn        10 44 37.1  -1.4
      baz=292,slow=8.3
EKA                               LR      LR        10 49 46.4
      comp=Z,89nm,20.9s,baz=354,slow=33
      1.7nm,0.8s
FRB   Frobisher Bay    18.18 304  LR      LR        10 51 14.9
      comp=Z,90nm,18.0s,baz=36,slow=35
SCHQ  Schefferville    18.88 276  P       P         10 45 06.2  -0.1
      0.1nm,0.3s,baz=57,slow=7.4,SNR=6.6
SCHQ                              LR      LR        10 51 16.8
      comp=Z,106nm,18.5s,baz=60,slow=34
      0.9nm,0.6s
NOA   NORSAR Array B   22.43  63  P       P         10 45 46.0  +1.2
      0.8nm,0.8s,baz=281,slow=9.7,SNR=3.2
      0.8nm,0.8s
ESDC  Sonseca Array    26.04 121  P       P         10 46 19.7  +0.3
      1.3nm,0.9s,baz=323,slow=10,SNR=6.2
ESDC                              LR      LR        10 55 48.4
```

	comp=Z,34nm,18.2s,baz=354,slow=35						
	1.3nm,0.9s						
SADO	Sadowa	31.00	266	LR	LR	10 58 13.3	
	comp=Z,54nm,20.4s,baz=356,slow=34						
AKASG	Malin Array Be	35.88	74	P	P	10 47 45.1	-0.9
	1.4nm,0.7s,baz=298,slow=8.6,SNR=4.8						
	1.4nm,0.7s						
YKA	Yellowknife Ar	38.37	312	P	P	10 48 06.7	-0.3
	0.3nm,0.7s,baz=61,slow=8.6,SNR=9.9						
YKA				PcP	PcP	10 50 19.6	-0.6
	0.2nm,0.7s,baz=49,slow=3.5,SNR=4.6						
YKA				LR	LR	11 03 21.0	
	comp=Z,164nm,18.8s,baz=331,slow=35						
	0.3nm,0.7s						
BRTR	Keskin Array B	45.48	83	P	P	10 49 07.2	+1.8
	0.5nm,0.5s,baz=296,slow=4.6,SNR=1.7						
	0.5nm,0.5s						
DLBC	Dease Lake	46.89	314	LR	LR	11 07 56.7	
	comp=Z,86nm,18.9s,baz=356,slow=35						
ILAR	Eielson Array	47.96	328	P	P	10 49 25.3	+0.9
	0.8nm,0.8s,baz=34,slow=6.3,SNR=10						
ILAR				PcP	PcP	10 50 52.5	+0.1
	0.8nm,0.7s,baz=1.5,slow=2.7,SNR=6.9						
	0.8nm,0.8s						
NEW	Newport	48.33	297	LR	LR	11 08 24.0	
	comp=Z,66nm,20.9s,baz=326,slow=34						
PDAR	Pinedale Array	48.47	287	P	P	10 49 29.1	+0.2
	0.6nm,0.7s,baz=70,slow=8.7,SNR=7.3						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	51.67	135	P	P	10 49 52.8	-0.3
	11nm,0.6s,baz=354,slow=7.2,SNR=4.4						
ELK	Elko	52.85	289	LR	LR	11 11 31.1	
	comp=Z,55nm,18.0s,baz=313,slow=35						
TXAR	Lajitas Array	55.49	271	P	P	10 50 22.0	+0.8
	baz=74,slow=6.7,SNR=1.9						
NVAR	Mina Array Bea	56.15	290	P	P	10 50 24.3	-1.7
	0.3nm,0.7s,baz=40,slow=6.3,SNR=4.1						
	0.3nm,0.7s						
MKAR	Makanchi Array	62.88	44	P	P	10 51 12.0	-0.1
	0.7nm,0.7s,baz=332,slow=6.2,SNR=5.3						
	0.7nm,0.7s						
SONM	Songino Array	69.55	28	P	P	10 51 54.2	-0.8
	0.3nm,0.4s,baz=324,slow=3.9,SNR=3.6						
	0.3nm,0.4s						
ASAR	Alice Springs	144.67	21	PKP	PKPab	11 00 21.8	+0.3
	0.7nm,0.9s,baz=348,slow=3.1,SNR=2.7						

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*NOU **12** 11:07:28.7, 16°.07S×166°.97E, h16^{km}, MLv4.8/5, Vanuatu Islands*

*IDC **12** 11:07:37.0±5.0, 16°.50S×167°.21E, h100^{km}±52^{km}, mb3.8/6, mbtmp4.1/7, Error ellipse: s-maj=36.4km s-min=28.0km az=159.0*

ISC 12 11:07:27.4±0.8**, 16°.18S**±0°.07×**167°.1E**±0°.1**, h10^{km}, n9, σ1ˢ59**/10**, mb4.0**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.73	8	P	Pg	11 07 41.9	+0.3
DVP	Devils Point	1.86	146	P	Pb	11 08 02.2	+0.7
DZM	Mont Dzumac	5.89	186	P	Pn	11 08 56.3	+1.3
	8.8nm,0.5s,baz=18,slow=19,SNR=8.2						
DZM				S	Sn	11 10 02.6	-0.1
	5.3nm,0.7s,baz=345,slow=20,SNR=1.0						
AFI	Afiamalu	20.53	87	P	P	11 12 07.3	+1.0
	20nm,0.5s,baz=244,slow=16,SNR=1.6						
	20nm,0.5s						
URZ	Urewera	23.70	160	P	P	11 12 36.0	-3.4
	3.1nm,0.5s,baz=321,slow=13,SNR=2.5						
	3.1nm,0.5s						
WRA	Warramunga Arr	31.34	258	P	P	11 13 48.6	+0.2
	1.0nm,0.7s,baz=84,slow=7.6,SNR=2.4						
	1.0nm,0.7s						
PETK	Petropavlovsk-	69.47	354	P	P	11 18 36.9	+1.0
	1.4nm,0.8s,baz=164,slow=7.0,SNR=3.9						
	1.4nm,0.8s						
ILAR	Eielson Array	87.95	18	P	P	11 20 16.1	-1.0
	0.6nm,0.7s,baz=239,slow=5.1,SNR=15						
	0.6nm,0.7s						
YKA	Yellowknife Ar	98.90	27	P	P	11 21 06.8	-0.7
	0.2nm,0.7s,baz=255,slow=4.8,SNR=5.4						
	0.2nm,0.7s						

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*IDC **12** 11:08:48.4±1.4, 3°.47S×144°.75E, h0^{km}, mb3.9/5, mbtmp4.0/7, ML4.3/1, MS3.2/12, Error ellipse: s-maj=42.8km s-min=21.3km az=83.0*

ISC 12 11:08:52.5±1.1**, 3°.5S**±0°.1×**144°.7E**±0°.2**, h26^{km}, n16, σ0ˢ32**/8**, mb3.8**/5**, MS3.1**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.34	158	Pn	Pn	11 10 24.4	+0.1
	8.9nm,0.3s,baz=325,slow=7.4,SNR=11						
PMG				Sn	Sn	11 11 35.7	-0.2
	1.1nm,0.3s,baz=307,slow=20,SNR=2.4						
PMG				LR	LR	11 13 16.8	
	comp=Z,306nm,18.5s,baz=48,slow=42						
SIJI	Sorong	13.70	281	LR	LR	11 18 03.6	
	comp=Z,85nm,19.0s,baz=166,slow=40						
CTA	Charters Tower	16.55	175	LR	LR	11 18 38.4	
	comp=Z,145nm,18.2s,baz=68,slow=36						
WRA	Warramunga Arr	19.22	211	P	P	11 13 14.8	+0.1
	1.1nm,0.3s,baz=32,slow=11,SNR=77						
WRA				LR	LR	11 21 50.5	
	comp=Z,180nm,18.1s,baz=27,slow=41						
	3.2nm,0.4s						
DAV	Davao City (W)	21.81	299	LR	LR	11 23 05.9	
	comp=Z,24nm,18.2s,baz=132,slow=39						
BATI	Baumata	21.93	251	LR	LR	11 23 14.3	
	comp=Z,87nm,21.7s,baz=120,slow=39						
ASAR	Alice Springs	22.60	207	P	P	11 13 51.6	+0.2
	5.6nm,0.6s,baz=32,slow=10.0,SNR=121						
ASAR				LR	LR	11 23 14.3	
	comp=Z,132nm,18.4s,baz=25,slow=38						
	5.6nm,0.6s						
STKA	Stephens Creek	28.37	186	P	P	11 14 44.5	-0.1
	1.3nm,0.7s,baz=0.2,slow=9.1,SNR=3.1						
	1.3nm,0.7s						
JOW	Kunigami	34.10	333	LR	LR	11 27 30.1	
	comp=Z,15nm,21.5s,baz=160,slow=33						
KSRS	Korea Array	43.65	341	LR	LR	11 34 02.1	
	comp=Z,16nm,19.8s,baz=150,slow=35						
CMAR	Chiang Mai Arr	50.09	298	P	P	11 17 45.9	+0.2
	2.8nm,0.3s,baz=110,slow=5.3,SNR=2.3						
	2.8nm,0.3s						
SONM	Songino Array	61.14	332	LR	LR	11 45 16.0	
	comp=Z,21nm,19.4s,baz=128,slow=36						
MKAR	Makanchi Array	74.14	321	P	P	11 20 26.2	-0.5
	0.2nm,0.5s,baz=131,slow=4.5,SNR=1.6						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	75.71	328	LR	LR	11 52 11.9	
	comp=Z,22nm,21.6s,baz=69,slow=34						
AAK	Ala-Archa	77.99	315	LR	LR	11 56 48.8	
	comp=Z,8.7nm,20.4s,baz=166,slow=37						
ILAR	Eielson Array	84.11	24	P	P	11 21 21.1	+0.3
	0.2nm,0.7s,baz=257,slow=5.2,SNR=2.6						
	0.2nm,0.7s						

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*IDC **12** 11:56:03.7±5.0, 24°.18N×94°.68E, h53^{km}±45^{km}, mb3.3/4, mbtmp3.4/5, ML3.5/1, MS4.1/1, Error ellipse: s-maj=90.2km s-min=20.5km az=67.0*

*NDI **12** 11:56:08.8±2.9, 24°.48N×94°.37E, h20^{km}±78^{km}, ML3.9*

ISC 12 11:56:03.6±0.9**, 24°.19N**±0°.06×**94°.64E**±0°.07**, h50^{km}, n23, σ1ˢ92**/26**, mb3.5**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	KOHIMA	1.60	343	eP	Pn	11 56 32.9	+3.2
KOHI				eS	Sn	11 56 49.8	+0.6
KOHI				IAML		11 56 53.2	
	comp=N,741nm,0.7s						
AZL	Aizawl	1.84	256	eP	Sn	11 56 55.5	+0.5
MOKO	MOKOCHONG	2.13	357	eP	Pn	11 56 39.9	+3.0
MOKO				eS	Sn	11 57 03.1	+1.0
MOKO				IAML		11 57 04.3	
	comp=E,422nm,0.6s						
TEZP	TEZPUR	2.94	326	eP	Pn	11 56 49.3	+1.5
TEZP				eS	Sn	11 57 20.2	-1.6
TEZP				IAML		11 57 21.6	
	comp=E,887nm,0.1s						
TEZP				IAML		11 57 21.8	
	comp=N,1μm,0.1s						
ITAN	ITANAGAR	3.06	344	eS	Sn	11 57 20.0	-4.8
ITAN				IAML		11 57 24.5	
	comp=E,609nm,0.4s						
ITAN				IAML		11 57 24.8	
	comp=N,690nm,0.4s						
TURI	Tura	4.14	290	eP	Pn	11 57 07.0	+2.7
TURI				eS	Sn	11 57 51.0	-0.5
DHUB	DHUBRI	4.59	294	eP	Pn	11 57 38.2	+28
DHUB				eS	Sn	11 57 58.9	-3.6
DHUB				IAML		11 58 02.4	
	comp=E,822nm,0.1s						
DHUB				IAML		11 58 02.5	
	comp=N,692nm,0.1s						
CMAR	Chiang Mai Arr	6.97	144	P	Pn	11 57 42.9	-0.3
	comp=N,0.2nm,0.3s,baz=341,slow=12,SNR=1.7						
	comp=N,0.2nm,0.3s						
ODAN	Odare	7.07	294	eP	Pn	11 57 46.0	+1.3
	comp=N,42nm,0.4s						
RAMN	Ramite	7.76	292	eP	Pn	11 57 55.7	+1.5
	comp=N,22nm,0.3s						
JIRN	Jiri	8.36	296	eP	Pn	11 58 04.2	+1.8
PKI	Pulchoki	8.97	294	eP	Pn	11 58 12.4	+1.6
	comp=N,17nm,0.4s						
KKN	Kakani	9.15	295	eP	Pn	11 58 14.4	+1.2
	comp=N,18nm,0.2s						
DMN	Daman	9.23	294	eP	Pn	11 58 15.8	+1.4
GKN	Gorkha	9.76	295	eP	Pn	11 58 22.6	+1.1
	comp=N,28nm,0.3s						
KOLN	Koldanda	10.55	292	eP	Pn	11 58 32.4	0.0
DANN	Dangsing	10.61	295	eP	Pn	11 58 33.9	+0.7
	comp=N,6.3nm,0.2s						
PYUN	Piuthan	11.17	293	eP	Pn	11 58 41.2	+0.4
MKAR	Makanchi Array	24.64	339	P	P	12 01 19.2	-0.2
	comp=N,0.8nm,0.6s,baz=143,slow=9.7,SNR=7.4						
	comp=N,0.8nm,0.6s						
SONM	Songino Array	25.38	19	P	P	12 01 26.3	+0.1
	comp=N,0.3nm,0.3s,baz=207,slow=9.3,SNR=1.3						
	comp=N,0.3nm,0.3s						
ASAJ	Asahikawa	43.69	51	LR	LR	12 24 37.5	
	comp=N,215nm,18.0s,baz=172,slow=39						
WRA	Warramunga Arr	58.47	135	P	P	12 05 54.3	-0.5
	comp=N,0.5nm,0.6s,baz=325,slow=7.4,SNR=12						
	comp=N,0.5nm,0.6s						
ASAR	Alice Springs	60.94	138	P	P	12 06 11.3	-0.4
	comp=N,0.2nm,0.5s,baz=322,slow=6.7,SNR=9.4						
	comp=N,0.2nm,0.5s						

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*JMA **12** 12:12:07.8±0.2, 31°.0N±0°.3×129°.0E±0°.6, h15^{km}±1^{km}, MD4.4/32, MW4.5/32, SW OFF KYUSHU*

JMA Felt I J1 at SW OFF KYUSHU .

*IDC **12** 12:12:07.2±0.7, 31°.12N×129°.63E, h0^{km}, mb3.9/15, mbtmp3.9/17, ML3.3/2, MS3.7/46, Error ellipse: s-maj=23.9km s-min=13.8km az=77.0*

*NIED **12** 12:12:07.8, 31°.04N×129°.01E, h15^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.37; M$_{\theta\theta}$3.23; M$_{\phi\phi}$-2.86; M$_{r\theta}$-0.33; M$_{\theta\phi}$3.61; M$_{\phi r}$3.77; Fault plane solution: M$_0$5.95000×10^{15} NP1: ϕ_s105.00000°, δ56.00000°, λ-11.00000°. NP2: ϕ_s201.00000°, δ81.00000°, λ-146.00000°.*

*NEIC **12** 12:12:10.2±1.8, 31°.09N±0°.06×129°.41E±0°.05, h10^{km}±1^{km}, mb4.3/10 Error ellipse: s-maj=10.4km s-min=6.4km az=167.0*

ISC 12 12:12:10.6±1.4**, 31°.05N**±0°.04×**129°.32E**±0°.05**, h17**^{km}±9^{km}**, n99, σ1ˢ39**/54**, mb4.0**/20**, MS3.8**/43**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.72	28	eP	Pb	12 12 24.1	-0.6
JSJ				eS	Sn	12 12 35.7	-0.9
JSJ	Shimokoshiki	0.72	28	A	A	12 12 24.1	
	comp=E,16nm,1.1s,comp=E,16nm,2.5s						
JKC	Kuchinoerabu	0.95	127	eP	Pn	12 12 29.3	+0.1
JKC				S	Sn	12 12 44.7	+2.4
JKC	Kuchinoerabu	0.95	127	A	A	12 12 29.3	
	comp=E,26nm,1.1s,comp=E,30nm,1.3s						
JSU	Suzuyama	1.07	64		Pg	12 12 31.9	+0.5
JSU	Suzuyama	1.07	64	⇓eP	Pg	12 12 31.7	+0.2
JSU				⇓eS	Sn	12 12 49.0	+3.6
JSU	Suzuyama	1.07	64	A	A	12 12 31.7	
	comp=E,11nm,1.7s,comp=E,29nm,2.0s						
JNN	Nakanoshima	1.29	158	eP	Pn	12 12 33.0	-0.8
JNN	Nakanoshima	1.29	158	A	A	12 12 33.0	
	comp=E,24nm,1.3s,comp=E,14nm,1.7s						
JYAK	Yakushimahirau	1.30	128	*i* P	Pg	12 12 34.2	-1.5
JYAK				eS	Sg	12 12 54.1	+1.3
JYAK	Yakushimahirau	1.30	128	A	A	12 12 34.2	
	comp=E,6.0nm,2.9s,comp=E,8.0nm,2.6s						
JTN	Tanegashima 3	1.48	105	P	Pg	12 12 37.8	-1.4
JTN				eS	Sg	12 12 59.8	+1.4
JMTN	Minamitane	1.51	115	eP	Pg	12 12 37.9	-1.7
JMTN				eS	Sg	12 12 59.7	+0.4
JZO	Okuchi	1.54	45	A	A	12 12 38.1	
	comp=E,6.0nm,2.4s,comp=E,7.0nm,2.1s						
JFU	Fukue jima 2	1.68	343	P	Pn	12 12 36.8	-2.4
JNAR	Kushima--Naru	1.74	73	A	A	12 12 41.8	
	comp=E,7.0nm,1.6s,comp=E,10.0nm,1.6s						
JNKG	Nichinankitago	1.86	70	A	A	12 12 43.5	
	comp=E,10.0nm,2.1s,comp=E,14nm,1.6s						
JTAJ	Takarajima	1.89	183	eP	Pn	12 12 40.8	-1.2
JTAJ	Takarajima	1.89	183	A	A	12 12 40.8	
	comp=E,5.0nm,3.3s,comp=E,5.0nm,5.0s						
JNU	Nakatsue	2.46	32	Pn	Pn	12 12 50.8	+0.9
	2.2nm,0.3s,baz=210,slow=14,SNR=4.1						
JNU				Pg	Pb	12 12 54.8	+0.4
	16nm,0.3s,baz=215,slow=12,SNR=26						
JNU				Lg	Lg	12 13 25.8	
	10nm,0.3s,baz=49,slow=14,SNR=5.8						
JTU	Tsushima	3.47	1	Pn	Pn	12 13 05.8	+2.0
JOW	Kunigami	4.30	193	Pn	Pn	12 13 14.1	-1.1
	3.7nm,0.3s,baz=16,slow=12,SNR=12						
	53nm,0.8s						
JOW	Kunigami	4.30	193		Pn	12 13 16.9	+1.7
NAWB	Namwon	4.65	340		Pn	12 13 20.9	+0.8
JHS	Saijyo	5.07	38	Pn	Pn	12 13 24.2	-1.7
TJN	Taejon	5.56	343		Pn	12 13 32.5	0.0
KSAR	Wonju Array Be	6.49	350	Pn	Pn	12 13 45.6	+0.4
KSRS	Korea Array	6.50	350	Pn	Pn	12 13 43.9	-1.5
	0.4nm,0.3s,baz=176,slow=15,SNR=13						
KSRS				Lg	Lg	12 15 31.5	
	1.1nm,0.3s,baz=172,slow=30,SNR=4.5						
KSRS				LR	LR	12 16 13.9	
	comp=Z,612nm,21.8s,baz=170,slow=38						
	9.7nm,1.1s						
KS19	Wonju Array Si	6.55	350	Pn	Pn	12 13 45.8	-0.4
JGF	Kuroka	8.12	54	Pn	Pn	12 14 05.8	-1.8
YHNB	Yeheng	9.47	230		Pn	12 14 33.5	+7.2
NACB	Ninganchiao	9.68	227	Pn	Pn	12 14 33.9	+4.8
YULB	Yu-li	10.44	225	Pn	Pn	12 14 41.2	+1.7
JCJ	Chichijima	11.92	106	LR	LR	12 19 02.7	
	comp=Z,106nm,21.3s,baz=136,slow=36						
USRK	Ussuriysk Ar.	13.30	8	LR	LR	12 19 59.1	
	comp=Z,161nm,21.1s,baz=179,slow=36						
GUMO	Guam	22.51	137	LR	LR	12 24 57.6	
	comp=Z,128nm,19.2s,baz=76,slow=34						
ULN	Ulaanbaatar	23.90	321	P	P	12 17 24.1	+0.5
ULN				IAmb	IAmb	12 17 27.3	
	comp=Z,7.4nm,1.2s						
DAV	Davao City (W)	24.11	189	LR	LR	12 28 55.3	
	comp=Z,130nm,18.1s,baz=352,slow=42						
SONM	Songino Array	24.24	320	P	P	12 17 26.9	+0.3
	comp=Z,3.0nm,1.1s,baz=131,slow=9.1,SNR=9.3						
SONM				LR	LR	12 27 21.7	
	comp=Z,319nm,21.3s,baz=128,slow=38						
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	24.24	320	IAmb	IAmb	12 17 30.9	
	comp=Z,2.9nm,1.1s						
PETK	Petropavlovsk-	30.15	35	LR	LR	12 29 39.9	
	comp=Z,76nm,21.6s,baz=173,slow=35						
CMAR	Chiang Mai Arr	30.19	253	P	P	12 18 21.6	+1.4
	comp=Z,1.2nm,0.3s,baz=57,slow=5.8,SNR=5.5						
	comp=Z,1.2nm,0.3s						
SIJI	Sorong	31.79	176	LR	LR	12 30 60.0	
	comp=Z,108nm,19.0s,baz=26,slow=36						
SHEM	Shemya Is, Ala	38.93	43	LR	LR	12 36 33.0	
	comp=Z,33nm,20.1s,baz=318,slow=38						
ZALV	Zalesovo Beam	39.12	319	P	P	12 19 37.7	+0.8
	comp=Z,0.4nm,0.3s,baz=101,slow=6.0,SNR=1.7						
ZALV				LR	LR	12 37 30.7	
	comp=Z,151nm,18.2s,baz=120,slow=39						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	39.21	307	P	P	12 19 38.6	+0.8
	comp=Z,0.3nm,0.4s,baz=98,slow=10,SNR=0.8						
MKAR				LR	LR	12 36 37.6	
	comp=Z,90nm,18.5s,baz=94,slow=37						
	comp=Z,0.3nm,0.4s						
PSI	Prapat	40.15	232	LR	LR	12 36 41.4	
	comp=Z,114nm,19.2s,baz=48,slow=36						
KURK	Kurchatov	42.12	313	P	P	12 20 01.9	+0.2
KURK	Kurchatov	42.12	313	IAmb	IAmb	12 20 05.6	
	comp=Z,3.0nm,0.9s						
KURBB	Kurchatov Arra	42.17	313	P	P	12 20 01.9	-0.1
	comp=Z,1.1nm,1.0s,baz=98,slow=8.8,SNR=7.2						
KURBB				LR	LR	12 39 02.8	
	comp=Z,348nm,18.3s,baz=75,slow=38						
	comp=Z,1.1nm,1.0s						
PMG	Port Moresby	43.71	154	LR	LR	12 35 44.0	
	comp=Z,64nm,21.4s,baz=332,slow=32						
AAK	Ala-Archa	44.67	301	LR	LR	12 40 59.0	
	comp=Z,125nm,19.5s,baz=98,slow=39						
BRVK	Borovoye	47.49	315	P	P	12 20 43.5	-1.0
BRVK				IAmb	IAmb	12 20 48.1	
	comp=Z,5.8nm,1.3s						
KKAR	Karatay Array	47.55	302	P	P	12 20 45.3	+0.2
WRA	Warramunga Arr	50.92	174	P	P	12 21 10.7	-0.3
	comp=Z,2.6nm,0.8s,baz=353,slow=8.0,SNR=12						
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	50.92	174	IAmb	IAmb	12 21 12.1	
	comp=Z,0.2nm,0.9s						
WB2	Warramunga Arr	50.92	174	P	P	12 21 11.4	+0.4
WB2				IAmb	IAmb	12 21 12.1	
	comp=Z,5.7nm,0.9s						
WR0	Warramunga Arr	50.96	174	P	P	12 21 11.1	-0.2
WR0				IAmb	IAmb	12 21 12.0	
	comp=Z,7.2nm,1.1s						
PALK	Pallekele	51.14	253	LR	LR	12 44 18.3	
	comp=Z,76nm,19.3s,baz=169,slow=38						
PSA00	Pilbara Seismi	53.10	191	P	P	12 21 27.9	+0.7
CTA	Charters Tower	53.38	160	LR	LR	12 43 18.4	
	comp=Z,67nm,19.1s,baz=270,slow=35						
CTAO	Charters Tower	53.38	160	P	P	12 21 31.2	+1.9
ABKAR	Akbulak array	54.14	311	P	P	12 21 34.3	-0.4
ASAR	Alice Springs	54.58	175	P	P	12 21 38.0	-0.1
	comp=Z,2.3nm,0.9s,baz=354,slow=5.6,SNR=17						
	comp=Z,2.3nm,0.9s						
AKTO	Aktyubinsk	55.22	312	LR	LR	12 46 25.1	
	comp=Z,191nm,18.6s,baz=83,slow=37						
IMAR	Indian Mountai	56.79	28	P	P	12 21 51.0	-2.5
KDAK	Kodiak Island	58.12	38	LR	LR	12 47 33.1	
	comp=Z,82nm,21.1s,baz=253,slow=37						
ILAR	Eielson Array	59.77	30	P	P	12 22 13.8	-0.5
	comp=Z,0.2nm,0.6s,baz=286,slow=7.4,SNR=2.8						
ILAR				LR	LR	12 48 34.5	
	comp=Z,35nm,18.4s,baz=7.5,slow=37						
	comp=Z,0.2nm,0.6s						
STKA	Stephens Creek	63.65	168	P	P	12 22 40.8	+0.1
	comp=Z,2.6nm,0.7s,baz=346,slow=15,SNR=2.9						
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	63.65	168	IAmb	IAmb	12 22 54.2	
	comp=Z,2.2nm,1.2s						
INK	Inuvik	64.11	24	LR	LR	12 54 07.9	
	comp=Z,60nm,18.1s,baz=129,slow=39						
SPITS	Spitsbergen Ar	64.33	348	LR	LR	12 53 14.4	
	comp=Z,60nm,18.5s,baz=261,slow=38						
ARCES	ARCESS Array B	65.90	338	LR	LR	12 55 42.8	
	comp=Z,98nm,18.6s,baz=86,slow=40						
KBZ	Khabaz	66.90	308	P	P	12 23 02.3	+0.5
	comp=Z,2.4nm,0.7s,baz=93,slow=5.6,SNR=5.1						
	comp=Z,2.4nm,0.7s						
GNI	Garni	66.94	304	LR	LR	12 54 12.2	
	comp=Z,39nm,19.0s,baz=90,slow=38						
FINES	FINESS Array B	69.17	330	P	P	12 23 15.8	+0.1
	comp=Z,0.7nm,0.6s,baz=305,slow=10.0,SNR=1.6						
FINES				LR	LR	12 56 25.6	
	comp=Z,113nm,18.9s,baz=42,slow=38						
	comp=Z,0.7nm,0.6s						
RES	Resolute Bay	70.66	11	LR	LR	12 57 13.6	
	comp=Z,18nm,18.3s,baz=16,slow=38						
AFI	Afiamalu	72.07	119	LR	LR	12 48 46.0	
	comp=Z,71nm,21.4s,baz=168,slow=31						
AKASG	Malin Array Be	72.52	319	LR	LR	12 57 11.7	
	comp=Z,145nm,18.2s,baz=72,slow=37						
YKA	Yellowknife Ar	73.78	26	P	P	12 23 41.5	-2.1
	comp=Z,0.8nm,1.1s,baz=301,slow=5.8,SNR=5.0						
YKA				LR	LR	12 57 56.3	
	comp=Z,17nm,18.8s,baz=302,slow=37						
	comp=Z,0.8nm,1.1s						
BRTR	Keskin Array B	74.86	307	P	P	12 23 51.5	+1.0
	comp=Z,1.0nm,0.6s,baz=116,slow=5.7,SNR=5.3						
BRTR				LR	LR	12 59 17.6	
	comp=Z,43nm,21.9s,baz=68,slow=38						
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	75.02	332	LR	LR	13 01 59.6	
	comp=Z,79nm,18.4s,baz=50,slow=40						
NOA	NORSAR Array B	75.43	334	LR	LR	13 00 33.3	
	comp=Z,34nm,19.7s,baz=30,slow=38						
MLR	Muntele Rosu	76.99	315	LR	LR	13 00 52.5	
	comp=Z,86nm,18.9s,baz=49,slow=38						
VRAC	Vranov	80.16	322	LR	LR	13 03 15.4	
	comp=Z,115nm,18.1s,baz=68,slow=38						
ATD	Arta Tunnel	81.16	278	LR	LR	13 03 34.7	
	comp=Z,20nm,19.2s,baz=88,slow=38						
BORG	Borgarnes	81.80	348	LR	LR	13 01 41.9	
	comp=Z,20nm,18.1s,baz=20,slow=36						
YBH	Yreka Blue Hor	81.83	46	LR	LR	13 06 09.5	
	comp=Z,7.2nm,18.3s,baz=265,slow=40						
GERES	GERESS Array B	81.95	323	LR	LR	13 04 20.6	
	comp=Z,85nm,18.7s,baz=100,slow=38						
SFJD	Kangerlussuaq	82.27	360	LR	LR	13 02 10.8	
	comp=Z,35nm,18.7s,baz=357,slow=36						
FRB	Frobisher Bay	84.47	8	LR	LR	13 03 47.2	
	comp=Z,51nm,20.2s,baz=4.5,slow=37						
EKA	Eskdalemuir Ar	84.84	335	LR	LR	13 04 48.1	
	comp=Z,70nm,18.1s,baz=356,slow=37						
DAVOX	Davos/Dischmat	85.25	323	LR	LR	13 04 35.4	
	comp=Z,82nm,19.3s,baz=76,slow=37						
NVAR	Mina Array Bea	86.50	47	P	P	12 24 50.1	-2.8
	comp=Z,0.4nm,0.8s,baz=292,slow=3.7,SNR=1.9						
	comp=Z,0.4nm,0.8s						
VAE	Valguarnera	88.66	314	LR	LR	13 10 37.0	
	comp=Z,59nm,18.1s,baz=251,slow=40						
PDAR	Pinedale Array	88.83	39	P	P	12 25 01.5	-2.6
	comp=Z,0.1nm,0.3s,baz=304,slow=5.3,SNR=1.9						
	comp=Z,0.1nm,0.3s						
PFO	Pinyon Flats O	90.64	50	LR	LR	13 00 07.5	
	comp=Z,40nm,19.6s,baz=278,slow=32						
SCHQ	Schefferville	93.35	9	LR	LR	13 13 18.8	
	comp=Z,30nm,18.3s,baz=328,slow=39						
ESDC	Sonseca Array	97.34	325	LR	LR	13 12 34.5	
	comp=Z,69nm,19.9s,baz=46,slow=37						

IDC 12 12:18:43.4±3.3**, 0°.20S**×**97°.74E, h0^{km}, mb3.5**/4**, mbtmp3.5**/5**, ML4.0**/1**, MS3.1**/2**, Error ellipse: s-maj=132.4km s-min=24.6km az=59.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.58	4	P	Pn	12 23 03.2	+0.9
	0.2nm,0.3s,baz=196,slow=11,SNR=9.4						
	0.7nm,0.3s						
H08S2	Diego Garcia H	26.23	253	T	T	12 51 22.7	
	baz=72,slow=75,SNR=4.3						
H08S3	Diego Garcia H	26.24	253	T	T	12 51 41.6	
	baz=72,slow=75,SNR=3.9						
H08S1	Diego Carcia H	26.25	253	T	T	12 51 23.7	
	baz=72,slow=75,SNR=3.4						
WRA	Warramunga Arr	40.85	121	P	P	12 26 27.0	-0.4
	0.5nm,0.8s,baz=302,slow=8.9,SNR=3.7						
	0.5nm,0.8s						
ASAR	Alice Springs	42.13	126	P	P	12 26 38.0	+0.1
	0.2nm,0.6s,baz=305,slow=9.1,SNR=2.0						
ASAR				LR	LR	12 43 59.6	
	comp=Z,39nm,20.3s,baz=124,slow=36						
	0.2nm,0.6s						
KSRS	Korea Array	46.70	33	LR	LR	12 46 57.4	
	comp=Z,13nm,19.0s,baz=260,slow=36						
MKAR	Makanchi Array	48.72	346	P	P	12 27 29.0	-0.8
	0.4nm,0.6s,baz=148,slow=8.5,SNR=3.7						
	0.4nm,0.6s						
ZALV	Zalesovo Beam	55.02	351	P	P	12 28 16.7	+0.1
	0.5nm,0.3s,baz=184,slow=6.9,SNR=2.3						
	0.5nm,0.3s						

IDC 12 12:26:21.1±2.5**, 5°.34N**×**126°.05E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=202.8km s-min=29.7km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.42	162	P	P	12 31 58.6	-1.1
	0.3nm,0.8s,baz=339,slow=10,SNR=1.8						
	0.3nm,0.8s						
ASAR	Alice Springs	29.84	165	P	P	12 32 31.5	+1.2

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      0.2nm,0.9s,baz=360,slow=7.6,SNR=1.3
      0.2nm,0.9s
MKAR  Makanchi Array     55.85 325  P      P      12 36 00.4 -0.1
      0.3nm,0.5s,baz=120,slow=6.9,SNR=3.7
      0.3nm,0.5s
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*NEIC **12** 12:39:53.7±1.8, 27°.50N±0°.06×140°.1E±0°.1, h490km±7km, mb4.2/160, Error ellipse: s-maj=16.0km s-min=8.8km az=91.0*

*IDC **12** 12:39:53.6±0.8, 27°.46N×140°.10E, h495km±8km, mb3.7/24, mbtmp4.6/31, Error ellipse: s-maj=10.1km s-min=7.7km az=103.0*

*NIED **12** 12:39:54.6, 27°.71N×140°.45E, h492km, MW4.9, Moment Tensor Solution. s1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.24; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.50; $M_{r\theta}$-0.76; $M_{\theta\phi}$2.12; $M_{\phi r}$-0.32; Fault plane solution: $M_0$2.32000×10^{16} NP1: ϕ_s183.00000°, δ71.00000°, λ169.00000°. NP2: ϕ_s277.00000°, δ80.00000°, λ19.00000°.*

*JMA **12** 12:39:54.6±0.3, 28°N±2°×14°0E±°, h492km±4km, MV4.3/36, W OFF OGASAWARA*

ISC 12 12:39:53.9±0.4**, 27°.50N**±0°.05×**140°.13E**±0°.06**, h500**km**, n185, σ1°.44**/148**, mb4.1**/103**, 1C-1D, Bonin Islands region**

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Code  Station Name         Δ°  AZ°  Phase ID     Time       Res
                                    Op     ISC    h  m  s    ISC
CBIJ  Chichi jima         1.88 102  P      P      12 40 57.6 -0.8
CBIJ                               eS      S      12 41 47.4 -3.3
JCJ   Chichijima          1.88 102  P      P      12 40 57.3 -1.1
      343nm,0.4s,baz=344,slow=0.6,SNR=94
JCJ                                 S      S      12 41 46.0 -4.8
      2µm,0.3s,baz=295,slow=21,SNR=23
JCJ   Chichijima          1.88 102  P      P      12 40 57.6 -0.8
JHH2  Haha-jima-NKT2      2.02 115 eP      P      12 40 59.2 +0.1
JHH2                               eS      S      12 41 49.6 -2.5
JHH2  Haha-jima-NKT2      2.02 115  A      A      12 40 59.2
      comp=E,17nm,0.6s,comp=E,14nm,0.7s
JHCJ  Hachijojimakas      5.56 357 eS      S      12 42 36.8 -4.4
JHJ2  Mitsune             5.60 357  P      P      12 41 25.6 -0.6
JHJ   Hachijo jima 2      5.61 357  P      P      12 41 25.8 -0.5
      36nm,0.3s,baz=350,slow=23,SNR=15
JHJ                                 S      S      12 42 37.6 -4.4
      166nm,0.5s,baz=88,slow=20,SNR=8.5
JMKN  Mikurajimanish      6.39 356 eP      P      12 41 33.7 -0.1
TK02  Tokai 2             6.74 343 eP      P      12 41 39.5 +2.4
BSO1  Boso 1              7.17   6 eP      P      12 41 41.5 +0.5
JTNC  Tanabenakahech      7.40 329 eP      P      12 41 45.7 +1.7
JIE   Ise                 7.47 338  P      P      12 41 46.1 +1.5
JIE                                eS      S      12 43 14.5 -1.0
JOD2  Odawara 2           7.79 354  P      P      12 41 48.2 +0.2
JOD2                               eS      S      12 43 18.6 -3.0
INU   Inuyama             8.26 342         P      12 41 53.5 +0.7
JTO   Tosashimizu         8.29 312 eP      P      12 41 54.9 +1.8
JGF   Kuroka              8.41 344         P      12 41 53.2 -1.3
JRY   Ryogami san         8.55 353  P      P      12 41 55.6 -0.3
JRY                                eS      S      12 43 31.4 -4.8
JYT   Yasato              8.70   0         P      12 41 57.0 -0.3
JHO   Hitachi             9.09   2  P      P      12 42 01.6 +0.1
MJAR  Matsushiro Arr      9.16 350  P      P      12 42 01.0 -1.3
      11nm,0.3s,baz=167,slow=12,SNR=50
MJAR                                S      S      12 43 41.0 -6.8
      3.8nm,0.4s,baz=290,slow=22,SNR=2.3
MJAR  Matsushiro Arr      9.16 350  P      P      12 41 59.5 -2.7
MAJO  Matsushiro          9.16 350         P      12 42 01.7 -0.6
JHS   Saijyo              9.58 323  P      P      12 42 07.9 +1.2
JHS   Saijyo              9.58 323  P      P      12 42 08.6 +1.9
JAMN  Amaminishikomi      9.72 277  P      P      12 42 09.9 +1.7
JNU   Nakatsue            9.76 307  P      P      12 42 07.3 -1.4
      7.8nm,0.5s,baz=27,slow=2.1,SNR=5.3
JNU                                 S      S      12 44 00.1 +0.7
      6.9nm,0.9s,baz=230,slow=12,SNR=1.8
JMM   Marumori           10.35   3  P      P      12 42 15.6 +0.9
JMM                                        S      12 44 08.7 -2.1
JOW   Kunigami           10.58 269  P      P      12 42 18.6 +1.2
      146nm,0.6s,baz=116,slow=20,SNR=51
JOW   Kunigami           10.58 269  P      P      12 42 18.1 +0.7
JOW   Kunigami           10.58 269  P      P      12 42 18.5 +1.2
JSD   Sado               10.62 352  P      P      12 42 16.8 -0.9
JMK   Ichinoseki         11.46   4  P      P      12 42 27.5 +1.0
KSRS  Korea Array        14.29 317  P      P      12 42 55.4 -1.1
      2.7nm,0.6s,baz=130,slow=11,SNR=12
KSRS                                S      S      12 45 35.5 +8.5
      8.0nm,1.2s,baz=151,slow=15,SNR=8.7
JEW   Eniwo              15.34   4  P      P      12 43 08.1 +0.7
ASAJ  Asahikawa          16.70   6  P      P      12 43 22.4 +0.8
      6.8nm,0.3s,baz=208,slow=9.7,SNR=21
JKA   Kamikawa-asahi     16.70   6  P      P      12 43 22.4 +0.8
YHNB  Yeheng             17.08 265  P      P      12 43 23.5 -2.3
YULB  Yu-li              17.49 261  P      P      12 43 28.4 -1.3
SSLB  Suanglung          17.68 262  P      P      12 43 30.5 -0.9
TWG   Pinlang            17.86 259  P      P      12 43 31.1 -2.0
USRK  Ussuriysk Ar.      17.90 341  P      P      12 43 34.1 +1.0
      27nm,0.8s,baz=168,slow=8.7,SNR=24
NJ2   Nanjing            19.01 289 eP      P      12 43 41.3 -2.1
NJ2                                 pmax   pmax
      comp=Z,15nm,0.5s
SNY   Shenyang           19.69 321 ⇓P      P      12 43 49.7 +0.2
SNY                                 S      S      12 46 45.4  -16
SNY                                 pmax   pmax
      comp=Z,13nm,0.6s
SNY                                 pmax   pmax
      comp=Z,10µm,3.1s
BNX   BinXian            20.82 334 ⇑P      P      12 44 00.9 +1.2
BNX                                 pmax   pmax
      comp=Z,64nm,0.7s
BNX                                 pmax   pmax
      comp=Z,150nm,3.5s
TGY   Tagaytay City      22.31 237  P      P      12 44 12.4 -1.2
      comp=Z,137nm,0.4s,baz=316,slow=2.2,SNR=3.5
PETK  Petropavlovsk-     28.72  22  P      P      12 45 10.9 +1.1
      comp=Z,1.3nm,0.5s,baz=204,slow=6.0,SNR=11
      comp=Z,1.3nm,0.5s
SIJI  Sorong             29.47 198  P      P      12 45 16.6 -0.3
      comp=Z,9.0nm,0.8s,baz=336,slow=20,SNR=2.2
      comp=Z,9.0nm,0.8s
MYLDM Lahad Datu         30.28 227  P      P      12 45 23.1 -0.7
MYLDM                               IAmb   IAmb   12 45 26.5
      comp=Z,11nm,1.0s
MA2   Magadan            32.89  10  P      P      12 45 45.2 -0.5
SONM  Songino Array      33.16 317  P      P      12 45 48.5 +0.2
      comp=Z,1.8nm,0.5s,baz=125,slow=8.1,SNR=12
SONM                                PcP    PcP    12 48 17.3 +0.6
      comp=Z,0.5nm,0.4s,baz=172,slow=4.4,SNR=1.6
SONM                                ScP    ScP    12 51 13.7 +0.3
      comp=Z,1.0nm,0.6s,baz=135,slow=3.3,SNR=5.6
      comp=Z,1.8nm,0.5s
SHEM  Shemya Is, Ala     35.65  36  P      P      12 46 10.3 +1.4
      comp=Z,50nm,0.9s,baz=101,slow=5.5,SNR=4.4
      comp=Z,50nm,0.9s
CHTO  Chiang Mai         38.70 266  P      P      12 46 33.6 -0.8
CHTO                                IAmb   IAmb   12 46 35.5
      comp=Z,10nm,0.8s
CMAR  Chiang Mai Arr     38.82 266  P      P      12 46 35.6 +0.1
      comp=Z,3.6nm,0.8s,baz=57,slow=8.5,SNR=24
CMAR                                PcP    PcP    12 48 34.9 +0.6
      comp=Z,0.4nm,0.4s,baz=60,slow=3.6,SNR=2.3
      comp=Z,3.6nm,0.8s
GOMU  GeErMu             39.16 294  P      P      12 46 35.2 -3.3
GOMU                                PcP    PP     12 48 25.4 +2.4
GOMU                                pmax   pmax
      comp=Z,2.0nm,0.5s
GOMU                                pmax   pmax
      comp=Z,33nm,5.3s
BILL  Bilibino           43.49  14  P      P      12 47 12.5 +0.7
KULM  Kulim              43.55 247  P      P      12 47 12.8 -0.3
IPM   Ipoh               43.71 246  P      P      12 47 13.8 -0.6
TIXI  Tiksi              44.63 355  P      P      12 47 19.8 -0.9
TIXI                                IAmb   IAmb   12 47 22.2
      comp=Z,7.5nm,0.8s
ODAN  Odare              46.62 282 eP      P      12 47 37.8 +0.9
      comp=Z,46nm,0.6s
RAMN  Ramite             47.28 282 eP      P      12 47 42.7 +0.8
      comp=Z,34nm,0.5s
WB0   Warramunga Arr     47.32 187  P      P      12 47 41.0 -0.9
JIRN  Jiri               47.47 283 eP      P      12 47 44.8 +1.3
      comp=Z,2.7nm,1.0s
WRAB  Tennant Creek      47.49 187  P      P      12 47 42.1 -1.0
WR0   Warramunga Arr     47.49 187  P      P      12 47 43.0 -0.1
WB2   Warramunga Arr     47.49 187  P      P      12 47 42.9 -0.4
WB2                                 IAmb   IAmb   12 47 44.0
      comp=Z,7.5nm,0.7s
WRA   Warramunga Arr     47.50 187  P      P      12 47 42.6 -0.6
      comp=Z,7.4nm,0.3s,baz=4.4,slow=7.6,SNR=272
WRA                                 PcP    PcP    12 49 04.6 +0.9
      comp=Z,1.1nm,0.6s,baz=4.2,slow=4.0,SNR=3.9
WRA                                 ScP    ScP    12 52 08.8 -1.0
      comp=Z,0.9nm,0.9s,baz=313,slow=15,SNR=3.1
      comp=Z,7.4nm,0.3s
WRA   Warramunga Arr     47.50 187  P      P      12 47 42.2 -1.0
ZAA0  Zalesovo Array     47.98 319  P      P      12 47 46.6 +0.2
ZAA0                                IAmb   IAmb   12 47 47.2
      comp=Z,5.5nm,0.8s
ZALV  Zalesovo Beam      47.98 319  P      P      12 47 46.5 +0.1
      comp=Z,5.1nm,0.3s,baz=102,slow=7.8,SNR=19
ZALV                                PcP    PcP    12 49 04.9 -0.1
      comp=Z,0.6nm,0.3s,baz=101,slow=6.0,SNR=1.9
ZALV                                ScP    ScP    12 52 10.5 -0.9
      comp=Z,1.8nm,0.6s,baz=115,slow=4.3,SNR=7.7
      comp=Z,5.1nm,0.3s
PKI   Pulchoki           48.17 283 eP      P      12 47 49.0 +0.3
      comp=Z,13nm,0.6s
KKN   Kakani             48.23 284 eP      P      12 47 49.9 +0.9
GSI   Gunungsitoli       48.35 245  P      P      12 47 49.0 -0.8
DMN   Daman              48.42 284 eP      P      12 47 51.2 +0.7
      comp=Z,32nm,0.7s
GKN   Gorkha             48.74 284 eP      P      12 47 53.4 +0.7
MK31  Makanchi Array     48.80 309  P      P      12 47 53.2 +0.5
MKAR  Makanchi Array     48.80 309  P      P      12 47 53.4 +0.6
      comp=Z,1.4nm,0.4s,baz=87,slow=10,SNR=36
MKAR                                ScP    ScP    12 52 15.2  0.0
      comp=Z,2.4nm,0.7s,baz=89,slow=5.0,SNR=18
      comp=Z,1.4nm,0.4s
MKAR  Makanchi Array     48.80 309  P      P      12 47 52.8 +0.1
MKAR                                       ScP    12 52 14.9 -0.2
MAKZ  Makanchi           49.02 309  P      P      12 47 54.0 -0.3
DANN  Dangsing           49.41 285 eP      P      12 47 58.8 +0.9
      comp=Z,39nm,0.5s
KOLN  Koldanda           49.68 284 eP      P      12 48 00.3 +0.5
PYUN  Piuthan            50.13 285 eP      P      12 48 04.1 +1.0
      comp=Z,54nm,0.5s
SDPT  Sand Point         50.56  40  P      P      12 48 05.8 +0.4
CNBA  Chernabura Isl     50.99  40  P      P      12 48 09.0 +0.4
AS31  Alice Springs      51.22 187  P      P      12 48 10.6 -0.2
AS31                                IAmb   IAmb   12 48 11.6
      comp=Z,3.7nm,0.5s
ASAR  Alice Springs      51.22 187  P      P      12 48 10.3 -0.4
      comp=Z,3.4nm,0.5s,baz=356,slow=4.9,SNR=130
ASAR                                PcP    PcP    12 49 18.7 +1.3
      comp=Z,0.8nm,0.8s,baz=354,slow=3.7,SNR=2.2
ASAR                                ScP    ScP    12 52 25.8 +0.1
      comp=Z,0.2nm,0.6s,baz=12,slow=5.1,SNR=1.8
      comp=Z,3.4nm,0.5s
KURK  Kurchatov          51.39 314  P      P      12 48 11.9 +0.3
KURK                                IAmb   IAmb   12 48 12.7
      comp=Z,7.3nm,0.8s
NRIK  Noril'sk           51.61 339  P      P      12 48 13.1 +0.2
      comp=Z,12nm,0.6s,baz=111,slow=8.6,SNR=23
      comp=Z,12nm,0.6s
NRIK  Noril'sk           51.61 339  P      P      12 48 13.3 +0.4
NRIK                                IAmb   IAmb   12 48 14.1
      comp=Z,13nm,0.8s
MBWA  Marble Bar         52.25 204  P      P      12 48 18.3 +0.1
MBWA                                IAmb   IAmb   12 48 46.0
      comp=Z,19nm,1.4s
PSA00 Pilbara Seismi     52.58 204  P      P      12 48 20.1 -0.5
PSA00                               IAmb   IAmb   12 48 21.4
      comp=Z,7.5nm,0.8s
CHIR  Chirikof Islan     53.35  39  P      P      12 48 26.3 +0.8
BOOM  Boomskoye usch     53.47 304  P      P      12 48 27.7 +0.8
EIDS  Eidsvold           53.62 168  P      P      12 48 27.6 -0.2
N18K  Kilae Creek        53.73  33  P      P      12 48 30.0 +1.7
SVW2  Sparrevohn         53.94  33  P      P      12 48 31.4 +1.7
SVW2                                IAmb   IAmb   12 48 32.3
      comp=Z,5.1nm,0.6s
TTA   Tatalina           54.02  30  P      P      12 48 32.2 +1.8
N19K  Bonanza Creek      54.43  33  P      P      12 48 34.9 +1.6
N19K                                IAmb   IAmb   12 48 35.8
      comp=Z,5.7nm,0.7s
L19K  White Mountain     54.43  32  IAmb   IAmb   12 48 35.8
      comp=Z,9.9nm,1.1s
K20K  Telida             54.96  30  IAmb   IAmb   12 48 41.0
      comp=Z,7.4nm,0.7s
J20K  Nowinta River      55.05  29  IAmb   IAmb   12 48 40.4
      comp=Z,15nm,1.1s
KDAK  Kodiak Island      55.14  37  P      P      12 48 38.3 +0.2
      comp=Z,4.5nm,0.3s,baz=290,slow=0.8,SNR=24
      comp=Z,4.5nm,0.3s
KDAK  Kodiak Island      55.14  37  IAmb   IAmb   12 48 39.8
      comp=Z,17nm,1.1s
H21K  Melozitna Rive     55.84  27  IAmb   IAmb   12 48 45.9
      comp=Z,9.0nm,0.8s
CAST  Castle Rocks       55.85  30  IAmb   IAmb   12 48 45.2
      comp=Z,7.6nm,0.5s
CNPM  China Poot         55.94  35  IAmb   IAmb   12 48 45.3
      comp=Z,8.6nm,0.6s
I21K  Tanana             56.12  28  IAmb   IAmb   12 48 48.4
      comp=Z,13nm,1.1s
BPAW  Bear Paw Mtn.      56.41  29  IAmb   IAmb   12 48 49.3
      comp=Z,6.1nm,0.4s
BRVK  Borovoye           56.57 317  P      P      12 48 48.8 +0.6
BRVK                                IAmb   IAmb   12 48 49.6
      comp=Z,8.1nm,0.8s
TRF   Thorofare Moun     56.66  30  IAmb   IAmb   12 48 50.7
      comp=Z,11nm,1.2s
SEW   Seward             56.86  34  P      P      12 48 51.0 +1.0
SEW                                 IAmb   IAmb   12 48 51.9
      comp=Z,7.9nm,0.7s
PMR   Palmer             57.08  33  IAmb   IAmb   12 48 52.7
      comp=Z,8.1nm,0.8s
COLD  Coldfoot           57.10  26  IAmb   IAmb   12 48 54.7
      comp=Z,8.0nm,0.8s
GHO   Glory Hole Cre     57.18  32  IAmb   IAmb   12 48 55.6
      comp=Z,7.8nm,0.6s
H23K  Yukon River        57.20  27  IAmb   IAmb   12 48 55.3
      comp=Z,8.0nm,0.9s
MCK   McKinley           57.29  30  IAmb   IAmb   12 48 54.6
      comp=Z,14nm,0.8s
NEA2  Nenana             57.29  29  IAmb   IAmb   12 48 55.1
      comp=Z,9.6nm,0.9s
RND   Reindeer           57.30  30  IAmb   IAmb   12 48 54.4
      comp=Z,11nm,0.6s
SML   Sawmill            57.47  32  IAmb   IAmb   12 48 55.9
      comp=Z,13nm,0.8s
TOLK  Toolik Lake Re     57.51  24  IAmb   IAmb   12 48 57.7
      comp=Z,15nm,1.4s
COLA  College            57.83  29  P      P      12 48 56.5 -0.1
H24K  Noodor Dome        57.88  28  IAmb   IAmb   12 48 59.7
      comp=Z,7.4nm,0.9s
POKR  Poker Plat Res     58.02  28  IAmb   IAmb   12 49 00.1
      comp=Z,10nm,1.0s
HDA   Harding Lake       58.20  29  IAmb   IAmb   12 49 00.2
      comp=Z,5.0nm,0.6s
IL31                     58.24  29  IAmb   IAmb   12 49 00.4
      comp=Z,4.0nm,0.6s
ILAR  Eielson Array      58.24  29  P      P      12 48 59.4 -0.1
      comp=Z,1.8nm,0.3s,baz=250,slow=5.6,SNR=37
      comp=Z,1.8nm,0.3s
M24K  Tolsona, Glenn     58.49  32  IAmb   IAmb   12 49 19.0
      comp=Z,21nm,1.4s
KLU   Klutina            58.61  33  IAmb   IAmb   12 49 04.0
      comp=Z,9.9nm,0.6s
PAX   Paxson             58.82  31  IAmb   IAmb   12 49 05.7
      comp=Z,8.0nm,1.2s
STKA  Stephens Creek     59.07 179  P      P      12 49 05.0 -0.4
      comp=Z,5.2nm,0.7s,baz=340,slow=8.8,SNR=12
      comp=Z,5.2nm,0.7s
RIDG  Independent Ri     59.10  30  IAmb   IAmb   12 49 06.8
      comp=Z,8.6nm,1.0s
N25K  Chitina, Valde     59.24  33  IAmb   IAmb   12 49 08.4
      comp=Z,4.7nm,0.6s
DOT   Dot Lake           59.45  30  IAmb   IAmb   12 49 09.3
      comp=Z,8.6nm,0.8s
SCRK  Sand Creek         59.48  30  IAmb   IAmb   12 49 09.6
      comp=Z,13nm,1.0s
GLB   Gilahina Butte     59.63  33  IAmb   IAmb   12 49 11.0
      comp=Z,11nm,1.1s
VRDI  Verde Repeater     59.81  33  IAmb   IAmb   12 49 11.7
      comp=Z,4.2nm,0.7s
L27K  Beaver Creek,      60.48  31  P      P      12 49 14.7 +0.1
PCA   Pinnacle           61.46  34  IAmb   IAmb   12 49 23.2
      comp=Z,11nm,0.9s
I29M  Ogilvie Camp,      61.86  28  IAmb   IAmb   12 49 25.8
      comp=Z,8.5nm,0.9s
M30M  Minto, Yukon       62.83  31  IAmb   IAmb   12 49 32.1
      comp=Z,3.1nm,0.7s
INK   Inuvik             63.42  25  P      P      12 49 33.9 +0.4
      comp=Z,2.1nm,0.4s,baz=292,slow=6.5,SNR=22
      comp=Z,2.1nm,0.4s
INK   Inuvik             63.42  25  P      P      12 49 32.8 -0.7
INK                                 IAmb   IAmb   12 49 34.4
      comp=Z,2.8nm,0.6s
ABKAR Akbulak array      63.50 314  P      P      12 49 33.9 -0.5
M31M  Drury Creek, Y     63.99  31  IAmb   IAmb   12 49 39.5
      comp=Z,6.8nm,0.8s
WHY   Whitehorse         64.03  33  IAmb   IAmb   12 49 40.3
      comp=Z,6.0nm,0.8s
DLBC  Dease Lake         66.93  35  P      P      12 49 56.1 +0.2
      comp=Z,2.1nm,0.5s,baz=295,slow=4.0,SNR=8.6
      comp=Z,2.1nm,0.5s
DLBC  Dease Lake         66.93  35  P      P      12 49 57.7 +1.8
DLBC                                IAmb   IAmb   12 49 58.8
      comp=Z,10nm,1.4s
ARCES ARCESS Array B     72.55 340  P      P      12 50 29.7 +0.4
      comp=Z,3.3nm,0.5s,baz=35,slow=4.4,SNR=34
      comp=Z,3.3nm,0.5s
ARCES ARCESS Array B     72.55 340  IAmb   IAmb   12 50 30.7
      comp=Z,20nm,1.3s
YKA   Yellowknife Ar     72.65  28  P      P      12 50 30.4 +0.6
      comp=Z,5.8nm,0.6s,baz=297,slow=5.7,SNR=134
      comp=Z,5.8nm,0.6s
KBZ   Khabaz             76.39 312  P      P      12 50 51.6 +0.3
      comp=Z,1.6nm,0.7s,baz=72,slow=7.1,SNR=4.8
      comp=Z,1.6nm,0.7s
B08A  Colville Reser     76.47  42  P      P      12 50 53.5 +1.6
B08A                                IAmb   IAmb   12 50 54.0
      comp=Z,7.0nm,0.8s
FINES FINESS Array B     76.77 333  P      P      12 50 53.2 +0.1
      comp=Z,11nm,0.4s,baz=70,slow=5.1,SNR=93
      comp=Z,11nm,0.4s
PINE  Pine Mountain      77.47  47  P      P      12 50 58.7 +1.1
PINE                                IAmb   IAmb   12 51 00.5
      comp=Z,10nm,0.8s
J08A  Circle Bar Ran     79.27  47  IAmb   IAmb   12 51 09.6
      comp=Z,7.1nm,0.7s
JTMT  Jette              79.76  41  P      P      12 51 10.1 +0.4
PNTR  Pine Nut           80.49  51  IAmb   IAmb   12 51 16.1
      comp=Z,4.6nm,0.8s
YERR  Yerington          80.79  51  IAmb   IAmb   12 51 17.0
      comp=Z,3.6nm,0.5s
MFID  Camas Ranch        80.94  46  IAmb   IAmb   12 51 18.3
      comp=Z,4.9nm,0.8s
AKASG Malin Array Be     81.20 323  P      P      12 51 16.6 -0.2
      comp=Z,0.6nm,0.3s,baz=49,slow=5.6,SNR=10
      comp=Z,0.6nm,0.3s
AKASG Malin Array Be     81.20 323  IAmb   IAmb   12 51 17.4
      comp=Z,1.4nm,0.8s
KVN   Kaiserville        81.54  50  IAmb   IAmb   12 51 21.2
      comp=Z,3.1nm,0.6s
NVAR  Mina Array Bea     81.70  51  P      P      12 51 21.2 +1.2
      comp=Z,1.7nm,0.5s,baz=297,slow=5.8,SNR=30
      comp=Z,1.7nm,0.5s
EGMT  Eagleton           82.22  40  IAmb   IAmb   12 51 24.4
      comp=Z,7.9nm,0.8s
NC405 NORSAR Array S     82.32 337  P      P      12 51 22.2 -0.3
NB2   NORSAR Subarra     82.55 338  P      P      12 51 23.2 -0.4
      comp=Z,1.8nm,0.5s,baz=48,slow=4.6
NOA   NORSAR Array B     82.55 338  P      P      12 51 23.2 -0.4
      comp=Z,3.5nm,0.6s,baz=46,slow=4.9,SNR=14
      comp=Z,3.5nm,0.6s
YHL   Hebgen Lake        83.08  43  IAmb   IAmb   12 51 29.8
      comp=Z,4.7nm,0.8s
YMR   Madison River      83.31  43  IAmb   IAmb   12 51 31.1
      comp=Z,6.6nm,0.8s
H17A  Grant Village      83.69  43  IAmb   IAmb   12 51 34.4
      comp=Z,4.3nm,0.9s
HVU   Hansel Valley      83.71  46  IAmb   IAmb   12 51 32.2
      comp=Z,2.8nm,0.7s
FLWY  Flagg Ranch        83.79  43  IAmb   IAmb   12 51 33.7
      comp=Z,5.6nm,0.8s
TPNV  Topopah Spring     83.84  52  IAmb   IAmb   12 51 32.8
      comp=Z,4.1nm,0.8s
QSM   Queen of Sheba     83.89  53  IAmb   IAmb   12 51 32.9
      comp=Z,4.6nm,0.7s
GWY   Greenwater Val     83.92  52  IAmb   IAmb   12 51 33.1
      comp=Z,3.7nm,0.8s
TPAW  Teton Pass         83.95  44  IAmb   IAmb   12 51 34.1
      comp=Z,3.8nm,0.7s
GSC   Goldstone, Bar     84.26  53  IAmb   IAmb   12 51 34.8
      comp=Z,3.8nm,0.8s
HWUT  Hardware Ranch     84.57  46  IAmb   IAmb   12 51 36.8
      comp=Z,4.9nm,1.1s
PDAR  Pinedale Array     85.20  44  P      P      12 51 38.4 +1.0
      comp=Z,0.8nm,0.7s,baz=236,slow=1.4,SNR=10
      comp=Z,0.8nm,0.7s
KECS  Kecovo             87.10 325 eP      P      12 51 47.4 +1.4
PV13  Radium Mtn., P     88.22  47  IAmb   IAmb   12 51 53.5
      comp=Z,1.9nm,0.6s
ZST   Bratislava         89.00 326 eP      P      12 51 55.7 +0.8
SDCO  Great Sand Dun     90.61  46  IAmb   IAmb   12 52 05.2
      comp=Z,2.5nm,0.9s
TXAR  Lajitas Array      96.81  52  P      P      12 52 32.3 +1.1
      comp=Z,0.6nm,0.7s,baz=305,slow=2.8,SNR=7.0
      comp=Z,0.6nm,0.7s
LPAZ  La Paz            151.57  73  PKPbc  PKPbc  12 58 52.4 -0.2
      comp=Z,1.3nm,0.6s,baz=243,slow=2.3,SNR=5.3
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JMA 12 12:45:27.7±0.2**, 24°.3N**±0°.4×**123°.8E**±0°.4**, h16**km±1km**, MV0.6**/8**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

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Code  Station Name         Δ°  AZ°  Phase ID     Time       Res
                                    Op     ISC    h  m  s    ISC
IRIF  Iriomote-Funau      0.11 319  P      Pg     12 45 31.2  0.0
IRIF                               eS      Sg     12 45 33.4 -0.1
JKRS  Kuro-shima          0.18  94 i P     Pg     12 45 32.1  0.0
JKRS                               eS      Sb     12 45 35.6 -0.4
HATJ  Hateruma jima       0.19 182  P      Pg     12 45 32.1 -0.2
JIJ   Ishigaki jima       0.32  69  P      Pg     12 45 34.2 -0.2
JIJ                                eS      Sg     12 45 38.8 -0.3
YOJ   Yonaguni jima       0.76 286 eS      Sg     12 45 52.2 -0.4
JTJ   Tarama              0.90  64 eP      Pg     12 45 45.1 -0.1
JTJ                                eS      Sg     12 45 57.3 +0.3
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*IDC **12** 12:46:06.5±1.5, 22°.58N×12°.45W, h0km, mb3.6/4, mbtmp3.7/7, ML3.5/3, Error ellipse: s-maj=44.0km s-min=28.2km az=82.0*

ISC 12 12:46:08.2±1.3**, 22°.5N**±0°.1×**12°.0W**±0°.2**, h10**km**, n10, σ1°.19**/10**, mb3.8**/4**, Mauritania**

```
Code  Station Name         Δ°  AZ°  Phase ID     Time       Res
                                    Op     ISC    h  m  s    ISC
TORD  Torodi Ar. Bea     15.99 123  Pn     P      12 49 57.2 +0.3
      0.3nm,0.3s,baz=304,slow=11,SNR=10
TORD                                Sn     Sn     12 52 49.2 -1.7
      1.5nm,0.3s,baz=310,slow=21,SNR=5.2
      11nm,0.6s
DBIC  Dimbokro           17.17 155  P      P      12 50 10.3 +0.4
      0.4nm,0.3s,baz=27,slow=11,SNR=1.6
      1.3nm,0.4s
ESDC  Sonseca Array      18.45  20  P      P      12 50 22.8 -1.2
      baz=208,slow=10,SNR=1.7
      0.3nm,0.6s
I42PT GRACIOSA ISLAN     21.43 324  i             14 58 30.0
      baz=137,slow=330,SNR=3.6
GERES GERESS Array B     33.27  31  P      P      12 52 46.3 +0.4
      0.3nm,0.2s,baz=282,slow=4.9,SNR=1.9
      0.3nm,0.2s
FINES FINESS Array B     46.89  24  P      P      12 54 39.1 +0.6
      0.8nm,0.6s,baz=205,slow=12,SNR=1.2
      0.8nm,0.6s
YKA   Yellowknife Ar     75.93 332  P      P      12 57 53.3 -1.7
      0.1nm,0.5s,baz=65,slow=6.7,SNR=2.7
      0.1nm,0.5s
MKAR  Makanchi Array     76.77  45  P      P      12 58 01.2 +1.1
      0.4nm,0.5s,baz=286,slow=6.9,SNR=4.9
      0.4nm,0.5s
WRA   Warramunga Arr    148.55  92  PKPbc  PKPbc  13 05 56.9 +0.8
      0.4nm,0.7s,baz=283,slow=2.5,SNR=4.7
ASAR  Alice Springs     148.64  99  PKPbc  PKiKP  13 05 58.0 +0.2
      0.6nm,0.7s,baz=271,slow=1.6,SNR=8.4
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TAP 12 12:46:13.9, 24°.41N×121°.78E, h10km**, ML0.8, C, Taiwan**

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Code  Station Name         Δ°  AZ°  Phase ID     Time       Res
                                    Op     ISC    h  m  s    ISC
EWUT  Wuta                0.04 358 i P     Pg     12 46 15.9 +0.1
      baz=357
EWUT                               i S     Sg     12 46 17.3 +0.1
      baz=357
ENA   Nanau               0.04 299 i P     Pg     12 46 16.0 +0.2
      baz=302
ENA                                i S     Sg     12 46 17.3 +0.1
      baz=302
NDS   Dongshan            0.23 345 eP      Pg     12 46 18.8 +0.1
      baz=345
```

NDS				eS	Sg	12 46 22.7	+0.8
	baz=345						
LATG	Datong	0.26	299	i P	Pg	12 46 20.0	+0.7
	baz=299						
LATG				i S	Sg	12 46 23.9	+1.0
	baz=299						
NACB	Ninganchiao	0.29	216	P	Pg	12 46 19.7	0.0
	baz=206						
NACB				S	Sg	12 46 23.9	+0.3
	baz=206						
ENTT	Nioudou	0.30	320	i P	Pg	12 46 20.7	+0.7
	baz=321						
ENTT				S	Sg	12 46 24.8	+0.7
	baz=321						
NDT	Datong Townshi	0.31	309	P	Pg	12 46 20.6	+0.5
	baz=308						
NNSB	Datong	0.36	273	eP	Pg	12 46 21.1	-0.1
	baz=274						
NNSB				S	Sg	12 46 26.6	+0.6
	baz=274						
NNS	Nan Shan	0.37	275	eP	Pg	12 46 21.9	+0.5
	baz=274						
FUSB	Fushanzhiwuyua	0.39	333	eP	Pg	12 46 22.3	+0.6
	baz=333						
YHNB	Yeheng	0.45	305	P	Pb	12 46 23.4	-0.6
	baz=305						
TIPB	Shuangxi	0.56	4	eP	Pg	12 46 24.8	-0.1
	baz=4.0						

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*IDC **12** 12:46:14.0±0.9, 51°.55N×175°.22W, h0^{km}, mb3.6/6, mbtmp3.7/10, ML3.3/3, MS2.8/1, Error ellipse: s-maj=38.6km s-min=18.0km az=153.0*

*AEIC **12** 12:46:19±1.1, 51°.6N±0°.1×175°.22W±0°.04, h26^{km}±7^{km}, ML3.7, Error ellipse: s-maj=15.8km s-min=2.4km az=169.0*

*NEIC **12** 12:46:19.8±1.1, 51°.6N±0°.1×175°.19W±0°.05, h34^{km}±9^{km}, Error ellipse: s-maj=15.6km s-min=1.7km az=165.0*

ISC 12 12:46:19.8±0.8, 51°.6N±0°.1×175°.22W±0°.04, h40^{km}, n48, σ1^{s}13/43, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.70	312		Pn	12 46 33.3	0.0
GSCK	Great Sitkin C	0.73	307		Pn	12 46 33.7	0.0
GSTR	Great Sitkin T	0.73	315		Pn	12 46 34.1	+0.4
GSTD	Great Sitkin T	0.75	310		Pn	12 46 34.1	0.0
ETKA	Kagalaska Isla	0.79	291		Pn	12 46 34.1	-0.4
ETKA					Sn	12 46 44.7	-0.5
ATKA	Atka Island	0.89	45		Pn	12 46 35.3	-0.5
ATKA					Sn	12 46 46.5	-1.0
ADAG	Mount Adagdak	0.95	296		Pn	12 46 37.3	+0.6
ADK	Adak	0.96	289		Pn	12 46 36.5	-0.3
KOKL	Mount Kliuchef	0.97	40		Pn	12 46 37.3	+0.2
KIWB	Kanaga Island	1.23	284		Sn	12 46 56.4	+0.4
KINC	Kanaga Island	1.24	287		Pn	12 46 40.7	+0.1
KIKV	Kanaga Island	1.25	285		Pn	12 46 40.8	-0.1
KIMD	Kanaga Island	1.27	279		Pn	12 46 40.7	-0.4
KICM	Kanaga Island	1.28	286		Pn	12 46 41.3	+0.2
KICM					Sn	12 46 57.2	+0.2
TAPA	Tanaga Point A	1.63	279		Pn	12 46 46.3	+0.2
TAFP	Tanaga Falls P	1.75	282		Pn	12 46 48.2	+0.5
TASE	Tanaga Southea	1.77	279		Pn	12 46 48.5	+0.5
GAEA	Gareloi East	2.21	277		Pn	12 46 54.9	+0.9
GALAA	Gareloi Lava P	2.22	276		Pn	12 46 55.1	+1.0
GANO	Gareloi North	2.25	278		Pn	12 46 54.8	+0.4
NIKH	Nikolski High	4.15	68	Pn	Pn	12 47 23.1	+2.5
UNV	Unalaska Valle	5.76	63	Pn	Pn	12 47 39.0	-3.7
SHEM	Shemya Is, Ala	6.68	284	Pn	Pn	12 47 53.9	-1.4
	1.6nm,0.3s,baz=101,slow=20,SNR=1.6						
SHEM				Sn	Sn	12 49 06.1	-3.8
	1.0nm,0.3s,baz=42,slow=23,SNR=1.4						
	37nm,0.9s						
SMY	Shemya	6.68	284	Pn	Pn	12 47 55.4	+0.1
CNBA	Chernabura Isl	9.92	65	Pn	Pn	12 48 39.7	+0.1
KDAK	Kodiak Island	14.45	56	Pn	Pn	12 49 41.3	-0.1
	1.6nm,0.4s,baz=297,slow=5.7,SNR=22						
KDAK	Kodiak Island	14.45	56	Pn	Pn	12 49 40.8	-0.6
N19K	Bonanza Creek	14.72	43	Pn	Pn	12 49 47.7	+2.5
PETK	Petropavlovsk-	16.59	286	Pn	Pn	12 50 09.4	+0.2
	0.1nm,0.3s,baz=93,slow=15,SNR=1.8						
PETK				LR	LR	12 55 55.2	
	comp=Z,36nm,19.7s,baz=125,slow=35						
	0.9nm,0.8s						
ILAR	Eielson Array	19.71	37	P	P	12 50 44.5	-1.0
	0.3nm,0.3s,baz=222,slow=9.1,SNR=16						
	0.7nm,0.5s						
INK	Inuvik	26.02	34	P	P	12 51 48.3	-0.3
	0.4nm,0.3s,baz=222,slow=7.0,SNR=5.2						
	0.4nm,0.3s						
YKA	Yellowknife Ar	33.46	47	P	P	12 52 54.6	0.0
	0.2nm,0.6s,baz=273,slow=9.3,SNR=3.2						
	0.2nm,0.6s						
H11N2	WAKE ISLAND Hy	34.75	211	T	T	13 30 09.2	
	baz=18,slow=76,SNR=189						
H11N3	WAKE ISLAND Hy	34.76	210	T	T	13 29 56.6	
	baz=18,slow=76,SNR=216						
H11N1	WAKE ISLAND Hy	34.77	211	T	T	13 29 56.6	
	baz=18,slow=76,SNR=250						
H11S1	WAKE ISLAND Hy	35.96	210	T	T	13 31 21.7	
	baz=19,slow=75,SNR=148						
H11S2	WAKE ISLAND Hy	35.98	210	T	T	13 31 50.2	
	baz=19,slow=75,SNR=129						
H11S3	WAKE ISLAND Hy	35.98	210	T	T	13 31 47.3	
	baz=19,slow=75,SNR=83						
PDAR	Pinedale Array	44.10	75	P	P	12 54 24.8	+0.6
	1.5nm,0.6s,baz=304,slow=4.1,SNR=23						
	1.5nm,0.6s						
PDAR	Pinedale Array	44.10	75	P	P	12 54 25.0	+0.8
TXAR	Lajitas Array	56.41	84	P	P	12 55 56.9	-0.4
	0.3nm,0.8s,baz=324,slow=4.5,SNR=2.7						
	0.3nm,0.8s						
WRA	Warramunga Arr	83.75	227	P	P	12 58 44.2	-0.3
	0.3nm,0.5s,baz=35,slow=5.7,SNR=1.7						
	0.3nm,0.5s						
ASAR	Alice Springs	87.19	225	P	P	12 59 01.8	+0.1
	0.4nm,0.6s,baz=22,slow=5.2,SNR=4.7						
	0.4nm,0.6s						
H03N2	Juan Fernandez	119.06	108	T	T	15 15 55.0	
	baz=317,slow=77,SNR=20						
H03N1	Juan Fernandez	119.07	108	T	T	15 15 40.0	
	baz=317,slow=77,SNR=25						
H03N3	Juan Fernandez	119.08	108	T	T	15 15 40.9	
	baz=317,slow=77,SNR=18						
MAW	Mawson	148.01	218	PKPbc	PKPbc	13 05 59.7	+0.3
	0.8nm,0.4s,baz=53,slow=14,SNR=2.0						
BOSA	Boshof	152.41	318	PKPbc	PKPbc	13 06 11.1	-0.3
	1.0nm,0.4s,baz=32,slow=4.4,SNR=7.0						

TAP 12 12:47:55.5, 24°.69N×122°.00E, h11^{km}, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.16	239	i P	Pg	12 47 59.1	0.0
	baz=244						
TWC				i S	Sg	12 48 01.6	0.0
	baz=244						
EGS		0.16	339	eP	Pg	12 47 59.3	+0.1
	baz=341						
EGS				eS	Sg	12 48 02.8	+1.0
	baz=341						
NTC	Toucheng	0.22	317	eP	Pg	12 48 00.4	+0.2
	baz=316						
NDS	Dongshan	0.26	257	P	Pg	12 48 01.2	+0.3
	baz=252						
NDS				i S	Sg	12 48 05.0	+0.5
	baz=252						
TWB1	Santiao Chiao	0.32	358	eP	Pg	12 48 01.5	-0.4
	baz=347						
EWUT	Wuta	0.32	219	P	Pg	12 48 02.0	+0.1
	baz=210						
EWUT				eS	Sg	12 48 06.4	+0.3
	baz=210						
TIPB	Shuangxi	0.32	331	P	Pg	12 48 02.1	+0.1
	baz=330						
TIPB				eS	Sg	12 48 06.4	+0.1
	baz=330						
FUSB	Fushanzhiwuyua	0.38	280	eP	Pg	12 48 03.2	+0.1
	baz=280						
ENTT	Nioudou	0.40	263	S	Sb	12 48 10.0	-0.6
	baz=262						
NDT	Datong Townshi	0.45	259	P	Pb	12 48 04.9	-0.5
	baz=264						
NDT				S	Sb	12 48 11.9	-0.2
	baz=264						
LATG	Datong	0.46	250	S	Sb	12 48 11.9	-0.5
	baz=250						
NWLT	Wulai	0.46	281	eP	Pb	12 48 05.2	-0.3
	baz=274						
YHNB	Yeheng	0.57	268	P	Pg	12 48 06.1	-0.5
	baz=267						
NSK	Sanguang	0.58	269	eP	Pb	12 48 07.3	-0.4
	baz=276						
NNSB	Datong	0.62	245	eP	Pg	12 48 07.9	+0.4
	baz=252						
NNS	Nan Shan	0.62	246	P	Pg	12 48 07.7	+0.1
	baz=245						
NACB	Ninganchiao	0.63	216	P	Pg	12 48 07.6	-0.2
	baz=206						
NACB				eS	Sg	12 48 15.8	-0.3
	baz=206						
WHF	Hehuan Shan	0.86	231	eP	Pg	12 48 11.1	-1.1
	baz=239						
YOJ	Yonaguni jima	0.95	104	eP	Pn	12 48 15.6	+0.9
	baz=103						

DJA 12 12:48:37.4±0.5, 9°S±3°×12°4E±°, h102^{km}±6^{km}, M3.4/8, mb3.9/3, MLv3.1/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.76	150	P	Pn	12 48 56.4	+0.7
BATI	Baumata	1.12	191	P	Pn	12 48 59.8	+0.4
BATI				S	Sn	12 49 16.7	+0.8
MMRI	Maumere	1.69	286	P	Pn	12 49 05.9	-0.2
EDFI	Ende, Flores	2.19	279	P	Pn	12 49 12.6	0.0
WBSI	Waikabubak, Su	4.46	263	P	Pn	12 49 43.3	+0.4
PLAI	Plampang	6.04	272	P	Pn	12 50 03.9	-0.3
	0.2nm23nm,1.5s						

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*IDC **12** 13:07:16.8±2.2, 16°.79S×177°.09W, h426^{km}±33^{km}, mb3.1/4, mbtmp3.9/6, Error ellipse: s-maj=41.9km s-min=23.1km az=137.0*

ISC 12 13:07:15.8±1.1, 16°.7S±0°.3×177°.2W±0°.2, h400^{km}, n6, σ1^{s}64/6, mb3.4/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.94	63	P	Pn	13 08 48.7	+0.8
	41nm,0.8s,baz=222,slow=15,SNR=2.6						
DZM	Mont Dzumac	16.31	248	P	P	13 10 44.8	+2.2
	4.4nm,1.1s,baz=86,slow=19,SNR=2.3						
URZ	Urewera	22.04	192	P	P	13 11 37.9	-0.8
	5.5nm,1.0s,baz=308,slow=20,SNR=1.4						
	5.5nm,1.0s						
WRA	Warramunga Arr	45.98	258	P	P	13 15 00.4	-1.0
	0.2nm,0.3s,baz=90,slow=6.7,SNR=5.3						
	0.2nm,0.3s						
ASAR	Alice Springs	46.22	253	P	P	13 15 02.8	-0.5
	2.7nm,0.6s,baz=90,slow=7.7,SNR=59						
	2.7nm,0.6s						
ILAR	Eielson Array	84.47	13	P	P	13 19 03.5	-0.9
	0.3nm,0.9s,baz=226,slow=4.8,SNR=5.0						
	0.3nm,0.9s						

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*IDC **12** 13:11:05.8±1.0, 41°.18N×143°.50E, h0^{km}, mb3.6/8, mbtmp3.6/8, MS2.5/2, Error ellipse: s-maj=31.6km s-min=24.3km az=104.0*

*JMA **12** 13:11:11.2±0.1, 41°.4N±0°.8×143°.4E±0°.8, h52^{km}±3^{km}, MV3.4/32, E OFF AOMORI PREF*

ISC 12 13:11:10.1±2.1, 41°.32N±0°.07×143°.46E±0°.06, h26^{km}±14^{km}, n32, σ0^{s}83/29, mb3.5/8, 9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	0.73	342	⇓P	Pn	13 11 24.4	-0.4
JEM				⇓eS	Sb	13 11 34.0	+0.2
JTHR	Tokachihiroo	0.98	353	⇓P	Pb	13 11 28.2	-0.2
JNBK	Urakawa-nobuka	1.09	332	⇓P	Pn	13 11 29.7	0.0
JCH	Churui	1.30	357	eP	Pn	13 11 32.5	-0.1
JSHD	Hidakashinhida	1.32	326	⇓eP	Pn	13 11 33.3	+0.5
JARK	Aomorirokkasho	1.61	260	⇓eP	Pn	13 11 36.7	-0.1
JARK				⇓eS	Sn	13 11 55.7	-1.0
JOB	Onbets	1.61	10	eP	Pn	13 11 37.2	+0.4
JANG	Nango	1.75	238	eP	Pn	13 11 38.7	-0.1
JOT	Ohata	1.81	273	eP	Pn	13 11 39.7	+0.1
JOT				eS	Sn	13 12 00.8	-1.0
JTM	Tenmabayashi	1.88	254	eP	Pn	13 11 41.0	+0.5
JTM				eS	Sn	13 12 03.2	-0.3
JKB	Kayabe	1.91	288	eP	Pn	13 11 41.1	+0.2
JAK	Akkeshi	1.91	28	eP	Pn	13 11 41.2	+0.3
JAK				eS	Sn	13 12 03.5	-0.7
JAR	Ashorobuto	1.99	7	⇓eP	Pn	13 11 42.0	-0.1
JAR				⇓eS	Sn	13 12 04.5	-1.7
JNB	Noboribetsu	2.14	303	eP	Pn	13 11 44.6	+0.5
JNB				eS	Sn	13 12 09.0	-0.8
ASAJ	Asahikawa	2.87	348	LR	LR	13 12 44.8	
	comp=Z,23nm,19.7s,baz=32,slow=33						
H11N2	WAKE ISLAND Hy	29.34	130	T	T	13 48 27.4	
	baz=323,slow=75,SNR=98						
H11N1	WAKE ISLAND Hy	29.35	130	T	T	13 48 23.0	
	baz=323,slow=75,SNR=71						
H11N3	WAKE ISLAND Hy	29.36	130	T	T	13 48 27.6	
	baz=323,slow=75,SNR=65						
H11S1	WAKE ISLAND Hy	30.20	132	T	T	13 49 30.4	
	baz=325,slow=76,SNR=52						
H11S3	WAKE ISLAND Hy	30.20	132	T	T	13 49 33.9	
	baz=325,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	30.22	132	T	T	13 49 32.4	
	baz=325,slow=76,SNR=19						
ZALV	Zalesovo Beam	40.34	309	P	P	13 18 47.2	+2.0
	0.6nm,0.5s,baz=86,slow=8.8,SNR=2.3						
	0.6nm,0.5s						
MKAR	Makanchi Array	43.32	299	P	P	13 19 10.7	+0.9
	0.1nm,0.4s,baz=88,slow=9.9,SNR=2.4						
	0.1nm,0.4s						
INK	Inuvik	49.86	29	P	P	13 20 01.8	+1.2
	1.8nm,0.5s,baz=280,slow=5.5,SNR=16						
	1.8nm,0.5s						
YKA	Yellowknife Ar	59.32	32	P	P	13 21 09.3	0.0
	0.2nm,0.6s,baz=302,slow=6.2,SNR=2.9						
	0.2nm,0.6s						
WRA	Warramunga Arr	61.53	190	P	P	13 21 23.9	-1.0
	0.4nm,1.0s,baz=8.0,slow=6.9,SNR=1.5						
	0.4nm,1.0s						
ASAR	Alice Springs	65.26	190	P	P	13 21 48.2	-1.3
	0.2nm,0.8s,baz=8.8,slow=8.4,SNR=1.5						
	0.2nm,0.8s						
FINES	FINESS Array B	65.77	332	P	P	13 21 51.4	-1.0
	1.1nm,0.5s,baz=47,slow=8.0,SNR=8.5						
FINES				LR	LR	13 53 22.3	
	comp=Z,14nm,19.1s,baz=240,slow=38						
	1.1nm,0.5s						
PDAR	Pinedale Array	73.56	47	P	P	13 22 41.6	+0.5
	0.2nm,0.5s,baz=288,slow=3.7,SNR=2.8						
	0.2nm,0.5s						
H03N2	Juan Fernandez	145.69	91	T	T	16 13 55.4	
	baz=300,slow=76,SNR=4.1						
H03N3	Juan Fernandez	145.70	91	T	T	16 13 55.8	
	baz=300,slow=76,SNR=5.6						
H03N1	Juan Fernandez	145.70	91	T	T	16 13 51.6	
	baz=300,slow=76,SNR=5.0						

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*UCR **12** 13:24:27.0±1.1, 14°.11N×89°.75W, h10^{km}±5^{km}, ML4.1*

*SNET **12** 13:24:27.0±1.1, 14°.11N×89°.74W, h10^{km}±5^{km}, ML4.0*

*GCG **12** 13:24:28.8±0.4, 14°.13N×89°.75W, h17^{km}±306^{km}, MD3.5*

ISC 12 13:24:27.3±1.0, 14°.11N±0°.04×89°.74W±0°.04, h15^{km}±7^{km}, n43, σ0^{s}51/48, 21C-13D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.10	207	⇓iP	Pg	13 24 30.3	-0.4
SLOZ				eS	Sg	13 24 32.7	-0.2
NUBE	Las Nubes	0.21	191	⇓iP	Pg	13 24 32.2	-0.1
NUBE				eS	Sg	13 24 35.6	-0.1
NUBE	Las Nubes	0.21	191	⇓iP	Pg	13 24 32.2	-0.1
NUBE				eS	Sg	13 24 35.6	-0.1
SNJE	San Jose	0.27	152	⇓iP	Pg	13 24 33.3	-0.1
SNJE	San Jose	0.27	152	⇓iP	Pg	13 24 33.3	-0.1
SBLS	San Blas	0.29	158	⇓iP	Pg	13 24 33.4	-0.2
SBLS	San Blas	0.29	158	⇓iP	Pg	13 24 33.4	-0.2
CEVE	Cerro Verde	0.30	159	⇓iP	Pg	13 24 33.8	-0.1
CEVE				IAML		13 24 42.2	
	comp=Z,18µm,0.4s						
CEVE	Cerro Verde	0.30	159	⇓iP	Pg	13 24 33.8	-0.1
CEVE				IAML		13 24 42.2	
	comp=Z,18µm,0.4s						
CEDA	San Andres	0.45	133	⇑iP	Pg	13 24 36.1	-0.3
CEDA				IAML		13 24 45.6	
	comp=Z,14µm,0.6s						
CEDA	San Andres	0.45	133	⇑iP	Pg	13 24 36.1	-0.3
CEDA				IAML		13 24 45.6	
	comp=Z,14µm,0.6s						
MTO3	Montecristo	0.46	52	⇑iP	Pg	13 24 36.5	-0.2
MTO3	Montecristo	0.46	52	⇑iP	Pg	13 24 36.5	-0.2
JAYA	Jayaque - finc	0.54	148	⇓eP	Pg	13 24 37.4	-0.6
JAYA				eS	Sg	13 24 45.5	+0.4
JAYA				IAML		13 24 46.3	
	comp=Z,7µm,0.3s						
JAYA	Jayaque - finc	0.54	148	⇓eP	Pg	13 24 37.4	-0.6
JAYA				eS	Sg	13 24 45.5	+0.4
JAYA				IAML		13 24 46.3	
	comp=Z,7µm,0.3s						
BOQS	Boqueron	0.58	130	⇑iP	Pg	13 24 38.7	-0.2
BOQS	Boqueron	0.58	130	⇑iP	Pg	13 24 38.7	-0.2
ESQI	Esquipulas	0.59	41	⇑iP	Pg	13 24 38.9	0.0
SNET	Serv Nac Est T	0.65	131	⇑eP	Pg	13 24 39.5	-0.6
SNET	Serv Nac Est T	0.65	131	⇑eP	Pg	13 24 39.5	-0.6
LFU	La Fuente	0.71	121	⇑iP	Pg	13 24 40.7	-0.4
LFU	La Fuente	0.71	121	⇑iP	Pg	13 24 40.7	-0.4
LALI	Alcalda de L	0.74	147	⇑iP	Pb	13 24 41.9	0.0
LALI	Alcalda de L	0.74	147	⇑iP	Pb	13 24 41.9	0.0
NBG	Las Nubes	0.76	309	eP	Pn	13 24 43.3	-0.4
LBRS	Las Brisas	0.77	119	⇑eP	Pg	13 24 41.9	-0.5
LBRS	Las Brisas	0.77	119	⇑eP	Pg	13 24 41.9	-0.5
LFRS	El Faro	0.82	126	⇑iP	Pg	13 24 42.5	-0.7
LFRS	El Faro	0.82	126	⇑iP	Pg	13 24 42.5	-0.7
SJTE	Alcalda de S	0.87	125	⇑eP	Pg	13 24 43.3	-0.8
SJTE	Alcalda de S	0.87	125	⇑eP	Pg	13 24 43.3	-0.8
PCG	Pacaya	0.89	288	eP	Pn	13 24 45.4	0.0
MRL	Marmol	0.96	3	eP	Pn	13 24 46.7	+0.2
COEG	Centro de Oper	0.97	120	⇑iP	Pg	13 24 45.2	-0.8
COEG	Centro de Oper	0.97	120	⇑iP	Pg	13 24 45.2	-0.8
SCLA	Alcaldia de Sa	1.06	112	eP	Pg	13 24 46.8	-1.1
SCLA	Alcaldia de Sa	1.06	112	eP	Pg	13 24 46.8	-1.1
FUG	Fuego 3	1.12	287	eP	Pn	13 24 49.2	+0.6
PACA	Pacayal	1.52	115	⇓eP	Pn	13 24 54.8	+0.8
PACA	Pacayal	1.52	115	⇓eP	Pn	13 24 54.8	+0.8
CAHU	Cacacuatique	1.52	103	eP	Pn	13 24 54.7	+0.5
CAHU	Cacacuatique	1.52	103	eP	Pn	13 24 54.7	+0.5
STG3	Santiaguito 3,	1.87	289	eP	Pb	13 25 01.5	+0.2

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*DJA **12** 13:44:37.8±4.1, 7°N±24°×12°8E±2°7, h10^{km}, M4.8/6, mB5.3/2, mb4.4/6, MLv5.0/4, Mw(mB)4.7/2*

*IDC **12** 13:44:55.2±1.0, 5°.66N×127°.40E, h0^{km}, mb3.8/6, mbtmp3.8/7, ML4.2/1, MS2.8/1, Error ellipse: s-maj=68.3km s-min=18.2km az=62.0*

*MAN **12** 13:44:58.6, 5°.22N×126°.74E, h6^{km}, mb5.0, ML3.9, MS4.0, Hypocentre not reviewed by the ISC*

ISC 12 13:45:02.9±0.9, 5°.32N±0°.05×126°.8E±0°.1, h50^{km}, n19, σ1^{s}69/20, mb3.7/6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.96	293	⇑eP	Pn	13 45 29.6	-4.3
SGSI	Sangihe	2.04	217	P	Pn	13 45 33.9	-1.0
DAV	Davao City (W)	2.10	326	Pn	Pn	13 45 35.1	-0.6
	57nm,0.3s,baz=149,slow=4.8,SNR=3.9						
DAV				Sn	Sn	13 46 03.9	+3.3
	96nm,0.3s,baz=86,slow=19,SNR=2.4						
DAV				LR	LR	13 46 35.2	
	comp=Z,180nm,19.4s,baz=162,slow=44						
	127nm,0.3s						
KCP	Kidapawan	2.37	315	⇓iP	Pn	13 45 39.1	-0.3
KCP				i S	Sn	13 46 08.1	+0.9
BIPH	Bislig	2.87	352	⇑eP	Pn	13 45 44.9	-1.3
BIPH				eS	Sn	13 46 23.7	+4.2
GTOI	Gorontalo	5.98	219	P	Pn	13 46 29.6	+0.7
	0.4nm9.5nm,0.8s						
MRSI	Marisa	6.81	225	P	Pn	13 46 41.3	+0.9
	25nm,0.6s						
LUWI	Luwuk	7.48	212	P	Pn	13 46 51.5	+2.0
	2µm41nm,0.8s						
APSI	Ampana	8.03	220	P	Pn	13 46 58.9	+1.8
	18nm,0.9s						
MPSI	Mapaga	8.46	234	P	Pn	13 47 01.1	-1.9
WRA	Warramunga Arr	26.19	164	P	P	13 50 33.6	+0.6
	0.9nm,0.8s,baz=345,slow=8.8,SNR=8.7						
	0.9nm,0.8s						
ASAR	Alice Springs	29.64	167	P	P	13 51 04.4	+0.5
	0.3nm,0.9s,baz=341,slow=7.3,SNR=1.9						
ASAR				PcP	PcP	13 54 06.5	-1.1
	0.2nm,0.7s,baz=352,slow=3.2,SNR=1.5						
	0.3nm,0.9s						
H11N1	WAKE ISLAND Hy	41.56	66	T	T	14 37 14.2	
	baz=254,slow=75,SNR=9.8						
H11N2	WAKE ISLAND Hy	41.57	66	T	T	14 37 13.7	
	baz=254,slow=75,SNR=5.8						
H11N3	WAKE ISLAND Hy	41.58	66	T	T	14 37 13.6	
	baz=254,slow=75,SNR=8.4						
SONM	Songino Array	45.81	341	P	P	13 53 19.3	-0.6
	0.3nm,0.7s,baz=165,slow=6.0,SNR=1.4						
	0.3nm,0.7s						
MKAR	Makanchi Array	56.28	325	P	P	13 54 37.4	-1.1
	0.7nm,0.4s,baz=119,slow=8.0,SNR=15						
MKAR				PcP	PcP	13 55 35.3	-0.1
	0.9nm,0.7s,baz=108,slow=4.1,SNR=6.6						
	0.7nm,0.4s						
ARCES	ARCESS Array B	88.98	340	P	P	13 57 51.1	-0.8
	3.8nm,0.9s,baz=90,slow=6.3,SNR=3.9						
	3.8nm,0.9s						
FINES	FINESS Array B	90.45	332	P	P	13 57 58.5	-0.5
	0.7nm,0.6s,baz=74,slow=6.8,SNR=3.4						
	0.7nm,0.6s						

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*IDC **12** 13:59:57.1±6.6, 25°.57S×179°.34W, h483^{km}±55^{km}, mb3.6/5, mbtmp4.5/7, Error ellipse: s-maj=78.7km s-min=39.2km az=69.0*

ISC 12 13:59:58.9±3.1, 25°.6S±0°.2×179°.5W±0°.4, h500^{km}, n7, σ0^{s}58/8, mb4.1/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.91	192	P	P	14 02 46.5	-0.4
	4.9nm,0.3s,baz=240,slow=2.2,SNR=21						
URZ				S	S	14 05 05.6	+0.1
	5.1nm,0.8s,baz=148,slow=23,SNR=1.4						
DZM	Mont Dzumac	13.36	282	P	P	14 02 51.2	-0.9
	10nm,0.7s,baz=98,slow=17,SNR=16						
STKA	Stephens Creek	34.55	250	P	P	14 06 05.7	+0.6
	2.9nm,0.3s,baz=80,slow=12,SNR=5.9						
	2.9nm,0.3s						
ASAR	Alice Springs	42.24	262	P	P	14 07 08.4	+0.5
	3.4nm,0.4s,baz=92,slow=7.2,SNR=252						
	3.4nm,0.4s						
WRA	Warramunga Arr	42.79	268	P	P	14 07 12.2	0.0
	3.0nm,0.4s,baz=108,slow=8.2,SNR=53						
	3.0nm,0.4s						
SIJI	Sorong	53.44	289	P	P	14 08 32.4	+0.4
	6.8nm,0.7s,baz=101,slow=23,SNR=2.7						
	6.8nm,0.7s						
CMAR	Chiang Mai Arr	90.56	290	P	P	14 12 07.6	-0.1
	0.3nm,0.4s,baz=152,slow=4.1,SNR=1.6						
	0.3nm,0.4s						

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*MAN **12** 14:10:20.2, 5°.16N×126°.40E, h2^{km}, mb5.1, ML4.1, MS4.2, Hypocentre not reviewed by the ISC*

*IDC **12** 14:10:22.1±2.3, 5°.34N×126°.46E, h37^{km}±18^{km}, mb3.8/16, mbtmp4.0/17, ML3.6/1, MS3.6/34, Error ellipse: s-maj=31.0km s-min=12.0km az=66.0*

*DJA **12** 14:10:24.0±0.8, 5°N±5°×12°7E±°, h39^{km}±13^{km}, M4.3/13, mB4.8/8, mb4.5/13, MLv4.6/13, Mw(mB)4.0/8*

*NEIC **12** 14:10:25.2±1.6, 5°.48N±0°.04×126°.6E±0°.1, h57^{km}±10^{km}, mb4.5/14, Error ellipse: s-maj=19.2km s-min=5.7km az=83.0*

ISC 12 14:10:23.7±0.5, 5°.39N±0°.05×126°.70E±0°.07, h50^{km}, n89, σ1^{s}97/73, mb4.3/28, MS3.6/31, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.21	306	⇓eP	Pn	14 10 42.0	-2.2
DDMP				eS	Sn	14 11 00.1	+0.5
MATI	Mati	1.61	344	⇓eP	Pn	14 10 54.7	+5.0
MATI				eS	Sn	14 11 21.1	+12
DAV	Davao City (W)	2.00	326	Pn	Pn	14 10 51.5	-3.6
	43nm,0.3s,baz=232,slow=3.0,SNR=1.5						
DAV				Sn	Sn	14 11 20.2	+1.1
	84nm,0.3s,baz=247,slow=20,SNR=6.0						
DAV				LR	LR	14 11 52.7	
	comp=Z,2µm,19.4s,baz=225,slow=47						

SGSI	**Sangihe**	**2.05**	**215**	P	**Pn**	**14 10 55.4**	**-0.4**
KCP	**Kidapawan**	**2.27**	**315**⇓	*i*P	**Pn**	**14 10 57.4**	**-1.3**
KCP				*i* S	**Sn**	**14 11 31.6**	**+6.0**
BIPH	**Bislig**	**2.80**	**353**⇑	*e*P	**Pn**	**14 11 05.8**	**-0.2**
BIPH				*e*S	**Sn**	**14 11 46.1**	**+7.6**
CTBH	**Cotabato--PC H**	**3.04**	**307**⇑	*e*P	**Pn**	**14 11 05.7**	**-3.6**
CTBH				*i* S	**Sn**	**14 11 42.6**	**-1.9**
PAGZ	**Pagadian**	**4.10**	**307**⇑	*e*P	**Pn**	**14 11 24.9**	**+1.1**
GLSP	**General Luna,**	**4.40**	**353**⇓	*e*P	**Pn**	**14 11 31.6**	**+3.6**
GLSP				*e*S	Sn	14 12 33.9	+16
TNTI	**Ternate**	**4.64**	**172**		**Pn**	**14 11 34.0**	**+2.7**
TNTI	**Ternate**	**4.64**	**172**	P	**Pn**	**14 11 31.7**	**+0.5**
KMSI	**Cibinong**	**5.50**	**210**	P	**Pn**	**14 11 44.4**	**+1.3**
	0.6nm124nm,0.6s						
GTOI	**Gorontalo**	**5.99**	**218**	P	**Pn**	**14 11 49.0**	**-0.8**
	0.1nm360nm23nm,0.5s						
LBMI	**Labuha**	**6.04**	**172**	P	**Pn**	**14 11 50.9**	**+0.4**
	0.3nm765nm50nm,0.9s						
MRSI	**Marisa**	**6.81**	**224**	P	**Pn**	**14 12 01.7**	**+0.7**
	0.5nm2µm131nm,0.5s						
TOLI2	**Tolitoli**	**7.27**	**234**		**Pn**	**14 12 06.1**	**-1.3**
SANI	**Sanana**	**7.42**	**185**	P	**Pn**	**14 12 07.9**	**-1.6**
	0.1nm633nm25nm,0.8s						
LUWI	**Luwuk**	**7.49**	**212**	Pn	**Pn**	**14 12 12.9**	**+2.5**
LUWI	**Luwuk**	**7.49**	**212**	P	**Pn**	**14 12 14.0**	**+3.5**
	0.8nm3µm231nm,0.6s						
SIJI	**Sorong**	**7.71**	**144**	Pn	**Pn**	**14 12 13.2**	**-0.2**
	0.9nm,0.3s,baz=183,slow=22,SNR=1.4						
SIJI				Sn	**Sn**	**14 13 35.8**	**-3.8**
	0.9nm,0.3s,baz=243,slow=24,SNR=1.7						
SIJI				LR	LR	14 15 14.2	
	comp=Z,344nm,21.6s,baz=329,slow=37						
	3.1nm,0.3s						
APSI	**Ampana**	**8.04**	**219**	P	**Pn**	**14 12 21.0**	**+3.1**
	781nm63nm,1.4s						
MYLDM	**Lahad Datu**	**8.16**	**269**	Pn	**Pn**	**14 12 21.5**	**+1.9**
MPSI	**Mapaga**	**8.44**	**234**	P	**Pn**	**14 12 27.3**	**+3.9**
	288nm12nm,0.8s						
KAPI	**Kappang**	**12.45**	**214**	LR	LR	14 18 27.1	
	comp=Z,380nm,20.9s,baz=68,slow=40						
BATI	**Baumata**	**15.79**	**191**	Pn	**Pn**	**14 14 03.6**	**+0.8**
	1.3nm,0.3s,baz=203,slow=20,SNR=1.7						
GUMO	**Guam**	**19.68**	**64**	LR	LR	14 21 05.2	
	comp=Z,207nm,20.8s,baz=222,slow=32						
PCJI	**Pacitan**	**20.53**	**229**	P	**P**	**14 15 00.7**	**+2.6**
	50nm,1.2s						
JOW	**Kunigami**	**21.38**	**4**	LR	LR	14 25 44.4	
	comp=Z,67nm,18.1s,baz=185,slow=43						
LEM	**Lembang**	**22.58**	**238**	LR	LR	14 25 17.8	
	comp=Z,183nm,20.6s,baz=29,slow=40						
WB0	**Warramunga Arr**	**26.12**	**163**	P	**P**	**14 15 53.1**	**-0.1**
WB0				IAmb	IAmb	14 16 17.8	
	comp=Z,23nm,1.4s						
JCJ	**Chichijima**	**26.15**	**33**	LR	LR	14 27 07.1	
	comp=Z,47nm,19.3s,baz=195,slow=38						
WRAB	**Tennant Creek**	**26.27**	**164**	P	**P**	**14 15 56.0**	**+1.5**
WRAB				IAmb	IAmb	14 16 05.4	
	comp=Z,7.6nm,0.7s						
WRA	**Warramunga Arr**	**26.27**	**164**	P	**P**	**14 15 53.9**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=342,slow=10,SNR=17						
WRA				PcP	**PcP**	**14 19 20.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=339,slow=2.4,SNR=1.1						
WRA				ScP	**ScP**	**14 22 56.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=332,slow=3.3,SNR=1.7						
	comp=Z,2.8nm,0.6s						
WRA	**Warramunga Arr**	**26.27**	**164**	P	**P**	**14 15 55.8**	**+1.3**
WB2	**Warramunga Arr**	**26.27**	**164**	P	**P**	**14 15 55.4**	**+0.8**
WB2				IAmb	IAmb	14 16 05.5	
	comp=Z,9.1nm,0.7s						
WR0	**Warramunga Arr**	**26.34**	**163**	P	**P**	**14 15 56.4**	**+1.2**
WR0				IAmb	IAmb	14 16 06.1	
	comp=Z,5.4nm,0.8s						
KRVT	**Keravat (AS076**	**27.07**	**110**	LR	LR	14 25 31.1	
	comp=Z,136nm,21.3s,baz=56,slow=33						
PSA00	**Pilbara Seismi**	**27.62**	**194**	P	**P**	**14 16 07.2**	**+0.6**
PSA00				IAmb	IAmb	14 16 30.3	
	comp=Z,12nm,1.1s						
PSI	**Prapat**	**27.82**	**266**	P	**P**	**14 16 05.8**	**-2.9**
	comp=Z,2.2nm,0.2s,baz=346,slow=23,SNR=2.1						
PSI				LR	LR	14 29 32.4	
	comp=Z,86nm,18.3s,baz=94,slow=42						
	comp=Z,2.2nm,0.2s						
AS31	**Alice Springs**	**29.72**	**167**	P	**P**	**14 16 26.8**	**+1.4**
ASAR	**Alice Springs**	**29.72**	**167**	P	**P**	**14 16 25.9**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=343,slow=7.0,SNR=11						
ASAR				PcP	**PcP**	**14 19 28.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=347,slow=2.2,SNR=5.4						
ASAR				ScP	**ScP**	**14 23 07.9**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=338,slow=3.3,SNR=5.1						
ASAR				LR	LR	14 29 56.6	
	comp=Z,138nm,18.1s,baz=332,slow=40						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**29.72**	**167**	P	**P**	**14 16 26.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**30.04**	**298**	P	**P**	**14 16 27.3**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=119,slow=7.9,SNR=5.4						
CMAR				LR	LR	14 29 00.0	
	comp=Z,110nm,18.1s,baz=115,slow=37						
	comp=Z,0.4nm,0.3s						
JHJ	**Hachijo jima 2**	**30.16**	**22**	LR	LR	14 28 40.8	
	comp=Z,42nm,21.3s,baz=220,slow=36						
CTA	**Charters Tower**	**31.79**	**143**	P	**P**	**14 16 45.0**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=319,slow=11,SNR=1.5						
CTA				LR	LR	14 30 25.5	
	comp=Z,199nm,18.1s,baz=288,slow=38						
	comp=Z,2.6nm,0.8s						
KSRS	**Korea Array**	**31.93**	**2**	P	**P**	**14 16 44.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=192,slow=10.0,SNR=1.9						
KSRS				LR	LR	14 32 43.3	
	comp=Z,40nm,18.1s,baz=180,slow=42						
	comp=Z,0.5nm,0.8s						
MJAR	**Matsushiro Arr**	**32.76**	**17**	LR	LR	14 29 09.6	
	comp=Z,105nm,20.8s,baz=207,slow=34						
MORW	**Morawa**	**35.76**	**196**	P	**P**	**14 17 18.2**	**+0.2**
MORW				IAmb	IAmb	14 17 22.2	
	comp=Z,10nm,1.2s						
FORT	**Forrest**	**35.99**	**178**	P	**P**	**14 17 20.0**	**+0.1**
BBOO	**Buckleboo**	**39.02**	**167**	P	**P**	**14 17 45.9**	**+0.4**
STKA	**Stephens Creek**	**39.69**	**160**	P	**P**	**14 17 50.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=339,slow=9.9,SNR=6.5						
STKA				LR	LR	14 35 14.4	
	comp=Z,111nm,18.7s,baz=360,slow=38						
	comp=Z,0.9nm,0.3s						
ASAJ	**Asahikawa**	**41.03**	**17**	LR	LR	14 34 00.8	
	comp=Z,84nm,20.6s,baz=214,slow=34						
H11N1	**WAKE ISLAND Hy**	**41.60**	**66**	T	T	15 02 35.2	
	baz=255,slow=75,SNR=20						
H11N2	**WAKE ISLAND Hy**	**41.61**	**66**	T	T	15 02 36.0	
	baz=255,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**41.62**	**66**	T	T	15 02 34.8	
	baz=255,slow=75,SNR=16						
RAMN	**Ramite**	**43.79**	**304**	*e*P	**P**	**14 18 23.8**	**-1.3**
	comp=Z,5.5nm,0.5s						
PKI	**Pulchoki**	**45.00**	**304**	*e*P	**P**	**14 18 33.9**	**-1.0**
SONM	**Songino Array**	**45.73**	**341**	P	**P**	**14 18 39.6**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=168,slow=7.6,SNR=3.8						
SONM				LR	LR	14 38 50.8	
	comp=Z,78nm,20.8s,baz=145,slow=37						
	comp=Z,0.5nm,0.8s						
PALK	**Pallekele**	**45.74**	**275**	LR	LR	14 39 49.0	
	comp=Z,58nm,19.0s,baz=214,slow=39						
KOLN	**Koldanda**	**46.57**	**304**	*e*P	**P**	**14 18 46.4**	**-0.7**
	comp=Z,12nm,0.6s						
DANN	**Dangsing**	**46.64**	**304**	*e*P	**P**	**14 18 46.5**	**-1.3**
	comp=Z,15nm,0.6s						
PYUN	**Piuthan**	**47.19**	**304**	*e*P	**P**	**14 18 51.0**	**-1.0**
	comp=Z,11nm,0.6s						
PETK	**Petropavlovsk-**	**53.92**	**23**	LR	LR	14 41 24.4	
	comp=Z,32nm,21.4s,baz=228,slow=34						
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**14 19 57.6**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=120,slow=8.4,SNR=21						
MKAR				PcP	**PcP**	**14 20 55.8**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=127,slow=3.2,SNR=5.4						
MKAR				LR	LR	14 45 06.8	
	comp=Z,117nm,21.2s,baz=102,slow=37						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**59.10**	**333**	P	**P**	**14 20 18.4**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=118,slow=7.0,SNR=4.5						
ZALV				LR	LR	14 46 21.7	
	comp=Z,52nm,21.3s,baz=171,slow=37						
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**59.12**	**317**	LR	LR	14 48 45.2	
	comp=Z,82nm,19.6s,baz=89,slow=39						
KURK	**Kurchatov**	**60.34**	**327**	P	**P**	**14 20 26.9**	**-0.5**
KURK				IAmb	IAmb	14 20 38.7	
	comp=Z,4.7nm,0.8s						
SHEM	**Shemya Is, Ala**	**61.06**	**31**	LR	LR	14 41 07.5	
	comp=Z,36nm,21.7s,baz=334,slow=30						
BRVK	**Borovoye**	**65.99**	**327**	P	**P**	**14 21 05.7**	**+0.8**
BRVK				IAmb	IAmb	14 21 12.8	
	comp=Z,3.8nm,0.7s						
WSAR	**Wadi Sarin**	**67.75**	**293**	LR	LR	14 56 14.7	
	comp=Z,14nm,18.0s,baz=132,slow=41						
NRIK	**Noril'sk**	**68.82**	**346**	P	**P**	**14 21 22.6**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=87,slow=9.4,SNR=1.6						
NRIK				LR	LR	14 56 20.7	
	comp=Z,64nm,18.1s,baz=211,slow=40						
	comp=Z,2.0nm,0.4s						
ABKAR	**Akbulak array**	**70.85**	**320**	P	**P**	**14 21 34.1**	**-1.3**
ABKAR	**Akbulak array**	**70.85**	**320**	P	**P**	**14 21 34.4**	**-1.0**
ABKAR				IAmb	IAmb	14 21 39.2	
	comp=Z,1.7nm,0.7s						
AKTO	**Aktyubinsk**	**72.35**	**321**	LR	LR	14 56 19.4	
	comp=Z,91nm,20.4s,baz=107,slow=38						
GNI	**Garni**	**80.40**	**310**	LR	LR	15 03 35.2	
	comp=Z,28nm,19.5s,baz=84,slow=40						
KDAK	**Kodiak Island**	**80.52**	**32**	LR	LR	14 52 40.6	
	comp=Z,40nm,22.0s,baz=241,slow=32						
ILAR	**Eielson Array**	**83.63**	**25**	P	**P**	**14 22 47.0**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=250,slow=5.3,SNR=1.2						
	comp=Z,0.2nm,0.6s						
VNDA	**Vanda**	**85.07**	**173**	P	**P**	**14 22 52.2**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=310,slow=5.3,SNR=2.4						
	comp=Z,0.5nm,0.9s						
MMAI	**Mount Meron Ar**	**88.18**	**303**	LR	LR	15 07 15.5	
	comp=Z,35nm,20.2s,baz=240,slow=39						
ARCES	**ARCESS Array B**	**88.89**	**340**	P	**P**	**14 23 11.3**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=79,slow=3.2,SNR=8.9						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**88.94**	**310**	LR	LR	15 10 05.6	
	comp=Z,28nm,18.7s,baz=95,slow=40						
FINES	**FINESS Array B**	**90.36**	**332**	P	**P**	**14 23 17.9**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=64,slow=4.4,SNR=5.9						
	comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	**90.59**	**321**	LR	LR	15 08 25.5	
	comp=Z,33nm,18.9s,baz=358,slow=38						
DLBC	**Dease Lake**	**92.35**	**31**	LR	LR	14 59 12.7	
	comp=Z,38nm,21.5s,baz=248,slow=32						
QSPA	**South Pole Qui**	**95.28**	**180**	P	**P**	**14 23 43.3**	**+1.2**
HFS	**Hagfors**	**96.54**	**332**	LR	LR	15 11 13.6	
	comp=Z,72nm,18.5s,baz=70,slow=38						
NOA	**NORSAR Array B**	**97.29**	**334**	LR	LR	15 12 48.9	
	comp=Z,56nm,19.6s,baz=65,slow=38						
YKA	**Yellowknife Ar**	**98.01**	**24**	P	**P**	**14 23 55.5**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=302,slow=4.8,SNR=1.2						
	comp=Z,0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**122.36**	**289**	PKP	**PKPdf**	**14 29 13.9**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=45,slow=2.2,SNR=1.8						

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*NEIC **12** 14:21:16.0±0.2, 36°.280N±0°.010×97°.52W±0°.01, h5^{km}±3^{km}, Error ellipse: s-maj=1.7km s-min=1.4km az=95.0*

*TUL **12** 14:21:16.2±0.2, 36°.29N±0°.01×97°.52W±0°.01, h7^{km}±5^{km}, ML3.3, mb_Lg3.3/98(NEIC), Error ellipse: s-maj=1.7km s-min=1.4km az=77.0*

*IDC **12** 14:21:20.4±2.9, 36°.55N×97°.61W, h0^{km}, mb3.2/1, mbtmp3.0/2, ML3.8/1, Error ellipse: s-maj=39.2km s-min=19.2km az=92.0*

ISC 12 14:21:16.5±0.8**, 36°.32N**±0°.04×**97°.53W**±0°.04**, h10**^{km}**, n63,** σ**1^{s}.66**/17**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.90**	**176**	Pg	**Pg**	**14 21 32.6**	**-1.3**
OKCSW	**OKLAHOMA CITY**	**0.91**	**175**		**Pg**	**14 21 32.9**	**-1.2**
T35A	**Sooner Cattle**	**1.01**	**54**		**Pg**	**14 21 35.4**	**-0.6**
FNO	**Franklin**	**1.06**	**174**	Pg	**Pg**	**14 21 35.4**	**-1.5**
U32A	**Winter Ranch,**	**1.19**	**273**		**Pb**	**14 21 38.4**	**-0.8**
TUL1	**Leonard**	**1.46**	**106**		**Pn**	**14 21 42.2**	**-0.8**
TUL1				IAmb_Lg		14 22 04.9	
	comp=Z,116nm,0.8s						
TUL1	**Leonard**	**1.46**	**106**	P	**Pn**	**14 21 42.1**	**-0.8**
	baz=286						
TUL1				S	**Sn**	**14 22 01.9**	**-0.3**
	baz=286						
WMOK	**Wichita Mounta**	**1.88**	**213**		**Pn**	**14 21 48.9**	**+0.2**
WMOK	**Wichita Mounta**	**1.88**	**213**	P	**Pn**	**14 21 48.9**	**+0.2**
	baz=33						
WMOK				S	**Sb**	**14 22 13.8**	**-0.7**
	baz=33						
R32A	**Long Quarter,**	**2.30**	**336**	IAmb_Lg		14 22 34.9	
	comp=Z,99nm,0.9s						
X37A	**Clayton**	**2.46**	**134**	IAmb_Lg		14 22 36.2	
	comp=Z,102nm,0.7s						
KSU1	**Kansas State U**	**2.87**	**14**	P	**Pg**	**14 22 10.4**	**-1.1**
	baz=195						
CBKS	**Cedar Bluff**	**3.05**	**325**	IAmb_Lg		14 22 58.4	
	comp=Z,73nm,0.7s						
CBKS	**Cedar Bluff**	**3.05**	**325**	S	**Sg**	**14 22 53.1**	**-1.3**
	baz=144						
W39A	**Magazine**	**3.24**	**109**	IAmb_Lg		14 23 03.5	
	comp=Z,74nm,0.9s						
S39A	**Bolivar**	**3.63**	**67**	IAmb_Lg		14 23 13.5	
	comp=Z,79nm,0.8s						
AMTX	**Amarillo**	**3.67**	**248**	IAmb_Lg		14 23 15.7	
	comp=Z,66nm,0.7s						
AMTX	**Amarillo**	**3.67**	**248**	S	**Sb**	**14 23 09.9**	**+3.7**
	baz=66						
MIAR	**Mount Ida**	**3.68**	**118**	P	**Pn**	**14 22 14.2**	**+0.7**
	baz=300						
Z38A	**Mt. Pleasant**	**3.70**	**145**	IAmb_Lg		14 23 18.7	
	comp=Z,97nm,0.7s						
U40A	**Yellville**	**3.77**	**88**	IAmb_Lg		14 23 17.0	
	comp=Z,113nm,0.9s						
X40A	**Basin Creek Fa**	**4.25**	**114**	IAmb_Lg		14 23 36.4	
	comp=Z,42nm,0.8s						
MGMO	**Mountain Grove**	**4.30**	**77**	IAmb_Lg		14 23 31.7	
	comp=Z,72nm,0.8s						
WHAR	**Wooly Hollow**	**4.38**	**102**	IAmb_Lg		14 23 40.6	
	comp=Z,34nm,0.8s						
N33A	**J Bar K, Exete**	**4.41**	**1**	IAmb_Lg		14 23 48.7	
	comp=Z,52nm,0.8s						
WLAR	**White Oak Lake**	**4.47**	**125**	IAmb_Lg		14 23 48.6	
	comp=Z,56nm,0.9s						
P38A	**Dawn**	**4.57**	**43**	IAmb_Lg		14 23 43.2	
	comp=Z,72nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.86**	**305**	IAmb_Lg		14 23 56.2	
	comp=Z,41nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.86**	**305**	P	**Pg**	**14 22 47.2**	**-2.3**
	baz=122						
Z41A	**Richland Creek**	**4.94**	**127**	IAmb_Lg		14 23 57.6	
	comp=Z,53nm,0.8s						
BGNE	**Belgrade**	**5.11**	**355**	IAmb_Lg		14 24 11.6	
	comp=Z,87nm,0.9s						
NATX	**Nacogdoches**	**5.13**	**152**	IAmb_Lg		14 24 09.3	
	comp=Z,40nm,0.8s						
LCAR	**Lake Charles**	**5.16**	**91**	IAmb_Lg		14 24 03.8	
	comp=Z,35nm,0.9s						
CCAR	**Cane Creek**	**5.29**	**115**	IAmb_Lg		14 24 10.0	
	comp=Z,53nm,0.9s						
CCM	**Cathedral Cave**	**5.31**	**69**	IAmb_Lg		14 24 03.0	
	comp=Z,81nm,1.0s						
435B	**Jarrell**	**5.52**	**181**	IAmb_Lg		14 24 23.7	
	comp=Z,29nm,0.7s						
T25A	**Trinidad**	**5.59**	**280**	IAmb_Lg		14 24 21.9	
	comp=Z,43nm,0.9s						
N38A	**Joes South For**	**5.59**	**36**	IAmb_Lg		14 24 22.3	
	comp=Z,64nm,0.8s						
L34A	**Svendsen Farm,**	**5.71**	**9**	IAmb_Lg		14 24 32.6	
	comp=Z,60nm,0.8s						
PBMO	**Poplar Bluff**	**5.73**	**83**	IAmb_Lg		14 24 22.1	
	comp=Z,72nm,0.7s						
OGNE	**Ogallala**	**5.81**	**324**	IAmb_Lg		14 24 31.5	
	comp=Z,71nm,0.8s						
FVM	**French Village**	**5.91**	**72**	IAmb_Lg		14 24 27.6	
	comp=Z,69nm,0.9s						
JCT	**Junction City**	**6.13**	**199**	IAmb_Lg		14 24 35.1	
	comp=Z,40nm,0.8s						
SCIA	**State Center**	**6.51**	**30**	IAmb_Lg		14 25 01.1	
	comp=Z,53nm,0.8s						
Q24A	**Divide**	**6.60**	**296**	IAmb_Lg		14 24 49.1	
	comp=Z,40nm,0.8s						
W45A	**Hickory Valley**	**6.88**	**97**	IAmb_Lg		14 24 59.3	
	comp=Z,49nm,1.1s						
PHWY	**Pilot Hill**	**7.94**	**311**	IAmb_Lg		14 25 37.7	
	comp=Z,21nm,0.7s						
MNTX	**Cornudas Mount**	**7.98**	**237**	IAmb_Lg		14 25 39.6	
	comp=Z,23nm,1.2s						
SUSD	**Miller**	**8.19**	**353**	IAmb_Lg		14 25 43.0	
	comp=Z,32nm,0.8s						
I37A	**Lemond, Waseca**	**8.31**	**21**	IAmb_Lg		14 26 02.6	
	comp=Z,20nm,0.8s						
L42A	**Oliver, Polo**	**8.33**	**45**	IAmb_Lg		14 25 53.1	
	comp=Z,42nm,0.9s						
JFWS	**Jewell Farm**	**8.65**	**38**	IAmb_Lg		14 26 12.9	
	comp=Z,34nm,0.8s						
TXAR	**Lajitas Array**	**8.67**	**218**	Pn	Pn	14 23 28.2	+6.1
	comp=Z,0.2nm,0.3s,baz=48,slow=15,SNR=2.4						
TXAR				Pg	Pg	14 23 53.0	-9.5
	comp=Z,0.4nm,0.3s,baz=52,slow=15,SNR=8.3						
TXAR				Lg	Lg	14 25 50.1	
	comp=Z,0.7nm,0.3s,baz=38,slow=27,SNR=14						
	comp=Z,0.2nm,0.4s						
M44A	**Midewin, Midew**	**8.96**	**53**	IAmb_Lg		14 26 08.8	
	comp=Z,30nm,0.7s						
I40A	**Norwalk**	**9.23**	**33**	IAmb_Lg		14 26 14.8	
	comp=Z,34nm,1.3s						
RSSD	**Black Hills**	**9.24**	**329**	IAmb_Lg		14 26 15.9	
	comp=Z,14nm,0.8s						
RWWY	**Rawlins**	**9.25**	**308**	IAmb_Lg		14 26 20.1	
	comp=Z,24nm,1.0s						
K22A	**Casper**	**9.40**	**315**	IAmb_Lg		14 26 39.0	
	comp=Z,39nm,1.1s						
K43A	**Burlington**	**9.54**	**45**	IAmb_Lg		14 26 21.1	
	comp=Z,36nm,0.9s						
F33A	**5 Mile Ranch,**	**9.56**	**5**	IAmb_Lg		14 26 34.9	
	comp=Z,13nm,0.9s						
SPMN	**Marine on St.**	**9.59**	**20**	IAmb_Lg		14 26 45.4	
	comp=Z,17nm,1.1s						
PDAR	**Pinedale Array**	**11.30**	**308**	Pn	Pn	14 24 06.7	+8.5
	comp=Z,0.1nm,0.3s,baz=121,slow=16,SNR=1.8						
PDAR				Pg		14 24 41.1	
	comp=Z,0.1nm,0.3s,baz=122,slow=16,SNR=2.6						
PDAR				Lg	Lg	14 27 06.6	
	comp=Z,0.2nm,0.3s,baz=119,slow=32,SNR=3.3						
ILAR	**Eielson Array**	**40.69**	**330**	P	**P**	**14 28 59.6**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=121,slow=8.5,SNR=3.4						
	comp=Z,0.3nm,0.7s						

IDC 12 14:22:53.8±2.8**, 29°.23S**×**61°.07E, h0**^{km}**, mb3.8**/4**, mbtmp3.8**/4**, Error ellipse: s-maj=87.5km s-min=47.9km az=42.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**24.01**	**29**	T	T	14 52 17.6	
	baz=204,slow=76,SNR=17						
H08S2	**Diego Garcia H**	**24.02**	**29**	T	T	14 52 19.1	
	baz=204,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**24.03**	**29**	T	T	14 52 20.2	
	baz=204,slow=76,SNR=37						
H01W2	**Cape Leeuwin H**	**44.90**	**111**	T	T	15 18 55.6	
	baz=262,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**44.90**	**111**	T	T	15 18 55.8	
	baz=262,slow=75,SNR=17						
H01W1	**Cape Leeuwin H**	**44.91**	**111**	T	T	15 18 52.4	
	baz=262,slow=75,SNR=17						
PSI	**Prapat**	**48.27**	**55**	P	P	14 31 36.9	-0.1
	3.3nm,0.3s,baz=208,slow=13,SNR=4.3						
	3.3nm,0.3s						
ASAR	**Alice Springs**	**64.51**	**104**	P	P	14 33 32.7	-0.2
	0.3nm,0.8s,baz=240,slow=6.5,SNR=4.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**78.07**	**15**	P	P	14 34 53.3	-0.9
	0.3nm,0.8s,baz=183,slow=4.0,SNR=1.7						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**85.36**	**14**	P	P	14 35 32.1	-0.3
	0.3nm,0.2s,baz=204,slow=3.2,SNR=1.5						
	0.3nm,0.2s						
YKA	**Yellowknife Ar**	**146.61**	**356**	PKPbc	PKPbc	14 42 36.8	+0.1
	0.3nm,0.5s,baz=357,slow=3.0,SNR=6.3						

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*IDC **12** 14:27:58.0±4.7, 5°.89N×127°.69E, h22^{km}±29^{km}, mb3.7/8, mbtmp3.8/9, ML4.3/1, MS3.0/4, Error ellipse: s-maj=53.7km s-min=15.3km az=63.0*

*MAN **12** 14:28:00.2, 5°.37N×126°.73E, h8^{km}, mb4.7, ML3.6, MS3.6, Hypocentre not reviewed by the ISC*

ISC 12 14:28:02.3±0.8**, 5°.30N**±0°.08×**126°.7E**±0°.1**, h50**^{km}**, n18,** σ**2^{s}.30**/20**, mb3.9**/8**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.87**	**295**⇑	*i*P	**Pn**	**14 28 29.5**	**-2.6**
GSPH				*i* S	**Sn**	**14 28 53.2**	**-1.5**
DAV	**Davao City (W)**	**2.06**	**329**	Pn	**Pn**	**14 28 36.5**	**+1.9**
	74nm,0.3s,baz=312,slow=11,SNR=5.1						
DAV				Sn	**Sn**	**14 29 04.8**	**+5.7**
	58nm,0.3s,baz=270,slow=15,SNR=3.8						
DAV				LR	LR	14 29 44.6	
	comp=Z,278nm,19.8s,baz=172,slow=44						
	146nm,0.3s						
KCP	**Kidapawan**	**2.31**	**317**⇓	*i*P	**Pn**	**14 28 39.1**	**+1.1**
KCP				*i* S	**Sn**	**14 29 08.1**	**+2.8**
BIPH	**Bislig**	**2.88**	**354**⇓	*e*P	**Pn**	**14 28 44.0**	**-1.8**
BIPH				*e*S	**Sn**	**14 29 18.3**	**-1.0**
SIJI	**Sorong**	**7.66**	**143**	LR	LR	14 33 01.6	
	comp=Z,64nm,19.6s,baz=262,slow=40						
KAPI	**Kappang**	**12.35**	**214**	LR	LR	14 36 16.6	
	comp=Z,51nm,18.5s,baz=62,slow=37						
WRA	**Warramunga Arr**	**26.20**	**163**	P	**P**	**14 33 34.0**	**+1.4**
	0.8nm,0.5s,baz=344,slow=10,SNR=10						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**29.64**	**166**	P	**P**	**14 34 05.6**	**+2.2**
	0.3nm,0.6s,baz=349,slow=6.7,SNR=10						
ASAR				PcP	**PcP**	**14 37 07.7**	**+0.7**
	0.2nm,0.5s,baz=341,slow=2.1,SNR=7.6						
ASAR				ScP	**ScP**	**14 40 48.3**	**+3.2**
	0.3nm,0.9s,baz=339,slow=4.0,SNR=1.9						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**39.62**	**160**	P	**P**	**14 35 29.1**	**-0.1**
	0.7nm,0.4s,baz=330,slow=8.9,SNR=1.1						
STKA				LR	LR	14 53 07.2	
	comp=Z,63nm,18.6s,baz=207,slow=38						
	0.7nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**41.67**	**66**	T	T	15 20 16.2	
	baz=255,slow=75,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**41.68**	**66**	T	T	15 20 14.9	
	baz=255,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**41.69**	**66**	T	T	15 20 17.4	
	baz=255,slow=75,SNR=5.6						
SONM	**Songino Array**	**45.80**	**341**	P	**P**	**14 36 16.5**	**-2.7**
	0.3nm,0.7s,baz=174,slow=5.8,SNR=1.6						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**56.24**	**325**	P	**P**	**14 37 37.5**	**-0.1**
	1.0nm,0.5s,baz=125,slow=8.2,SNR=14						
MKAR				PcP	**PcP**	**14 38 35.2**	**+0.5**
	1.2nm,0.6s,baz=116,slow=3.3,SNR=8.4						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**59.17**	**333**	P	**P**	**14 37 56.7**	**-1.3**
	0.5nm,0.5s,baz=116,slow=6.6,SNR=2.3						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**88.96**	**340**	P	**P**	**14 40 49.6**	**-1.8**
	1.3nm,0.8s,baz=70,slow=6.1,SNR=0.9						
	1.3nm,0.8s						
FINES	**FINESS Array B**	**90.42**	**332**	P	**P**	**14 40 57.3**	**-0.9**
	0.5nm,0.5s,baz=20,slow=6.1,SNR=4.6						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**122.36**	**289**	PKP	**PKiKP**	**14 46 53.5**	**+0.3**
	10nm,0.6s,baz=95,slow=6.7,SNR=5.2						

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*MAN **12** 14:40:55.7, 4°.56N×126°.04E, h33^{km}, mb4.7, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

*IDC **12** 14:40:55.7±1.4, 6°.07N×127°.80E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=57.5km s-min=20.4km az=57.0*

ISC 12 14:41:05.4±1.2**, 5°.0N**±0°.1×**126°.2E**±0°.2**, h50**^{km}**, n7,** σ**2^{s}.89**/10**, mb3.7**/4**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.60**	**312**⇑	*i*P	**Pn**	**14 41 31.2**	**-0.2**
DAV	**Davao City (W)**	**2.12**	**345**	Pn	**Pn**	**14 41 36.6**	**-1.9**
	36nm,0.3s,baz=63,slow=12,SNR=1.4						
DAV				Sn	**Sn**	**14 42 08.7**	**+5.0**
	8.8nm,0.3s,baz=279,slow=22,SNR=1.1						
	104nm,0.3s						
KCP	**Kidapawan**	**2.25**	**332**⇑	*e*P	**Pn**	**14 41 40.8**	**+0.5**
KCP				*i* S	**Sn**	**14 42 08.2**	**+1.4**
WRA	**Warramunga Arr**	**26.07**	**162**	P	**P**	**14 46 36.5**	**+1.9**
	1.2nm,0.3s,baz=346,slow=9.6,SNR=3.3						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**29.49**	**165**	P	**P**	**14 47 07.6**	**+2.6**
	0.4nm,0.9s,baz=349,slow=7.4,SNR=5.9						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**56.18**	**325**	P	**P**	**14 50 38.6**	**-1.7**
	0.3nm,0.5s,baz=123,slow=7.2,SNR=4.8						
MKAR				PcP	**PcP**	**14 51 35.2**	**-2.5**
	0.3nm,0.6s,baz=129,slow=3.3,SNR=4.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.35**	**327**	P	**P**	**14 51 06.4**	**-2.9**

0.4nm,0.4s,baz=126,slow=6.7,SNR=5.3
0.4nm,0.4s

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*IDC **12** 14:55:34.5±3.9, 36°.25N×71°.33E, h64km±31km, mb3.5/7, mbtmp3.8/11, ML3.6/5, Error ellipse: s-maj=34.3km s-min=23.5km az=10.0*
*NNC **12** 14:55:41.2±2.3, 36°.76N×71°.15E, h144km±39km, mb3.4, mpv4.1, Error ellipse: s-maj=20.6km s-min=12.7km az=31.0*
ISC 12 14:55:39.1±1.1, 36°.60N±0°.09×71°.04E±0°.08, h100km, n28, σ1s.67/34, mb3.7/6, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.90	20	P	Pn	14 57 04.6	+0.3
	SNR=45						
UCH	Uchtor	6.23	25	P	Pn	14 57 09.2	+0.3
	SNR=13						
EKS2	Erkin-Say	6.41	18	P	Pn	14 57 11.7	+0.7
	SNR=20						
KK31	Karatay Array	6.51	357	⇑P	Pn	14 57 12.7	+0.5
	5.2nm,0.3s,baz=173,slow=12,SNR=200						
KK31				⇑S	Sn	14 58 24.1	-0.9
	3.7nm,0.4s,baz=177,slow=21,SNR=4.0						
AAK	Ala-Archa	6.59	23	P	Pn	14 57 14.0	+0.4
	SNR=20						
AAK	Ala-Archa	6.59	23	P	Pn	14 57 13.9	+0.4
	5.2nm,0.3s,baz=194,slow=7.1,SNR=46						
AAK				S	Sn	14 58 26.4	-0.9
	3.2nm,0.4s,baz=353,slow=19,SNR=6.6 11nm,0.3s						
KBK	Karagaybulak	6.76	25	P	Pn	14 57 16.9	+1.0
	SNR=9.3						
CHMS	Chumysh	7.00	23	P	Pn	14 57 19.2	+0.2
	SNR=11						
CHMS	Chumysh	7.00	23	⇑P	Pn	14 57 18.9	0.0
	20nm,0.7s						
CHMS				⇑S	Sn	14 58 36.4	-0.6
	7.6nm,0.8s						
USP	Ospenovka	7.17	21	P	Pn	14 57 21.0	-0.3
	SNR=9.8						
TKM2	Tokmak 2	7.22	28	P	Pn	14 57 22.3	+0.1
	SNR=18						
TKM2	Tokmak 2	7.22	28	⇓P	Pn	14 57 22.1	-0.1
	7.6nm,0.5s						
TKM2				⇓S	Sn	14 58 41.2	-1.5
	4.1nm,0.8s						
MDOK	Medeo	8.02	33	⇑P	Pn	14 57 33.1	+0.1
	3.3nm,0.8s						
PDGK	Podgornoye	9.34	41	⇓P	Pn	14 57 48.3	-2.5
	3.2nm,0.8s						
GEYT	Alibeck	10.39	281	P	Pn	14 58 04.5	-0.5
	0.6nm,0.3s,baz=107,slow=13,SNR=1.9						
GEYT				S	Sn	14 59 54.6	-4.8
	5.1nm,0.6s,baz=72,slow=27,SNR=2.5						
MKAR	Makanchi Array	13.19	36	P	Pn	14 58 40.5	-1.9
	0.1nm,0.3s,baz=224,slow=15,SNR=6.0 0.6nm,0.7s						
AB31	Akbulak array	15.01	331	P	Pn	14 59 04.6	-1.2
	0.5nm,0.2s,baz=136,slow=13,SNR=91						
AB31				⇑S	Sn	15 01 49.7	-1.7
	0.7nm,0.5s,baz=157,slow=24,SNR=3.5						
KURBB	Kurchatov Arra	15.02	19	P	Pn	14 59 05.0	-0.9
	0.1nm,0.3s,baz=206,slow=10,SNR=5.5 0.8nm,0.7s						
AKTO	Aktyubinsk	16.71	330	P	Pn	14 59 27.7	+0.7
	0.6nm,0.3s,baz=140,slow=14,SNR=7.1 2.0nm,0.4s						
AKTO	Aktyubinsk	16.71	330	⇓P	Pn	14 59 26.4	-0.6
	5.3nm,0.6s						
ZALV	Zalesovo Beam	19.81	25	P	P	15 00 01.0	-0.5
	4.0nm,0.5s,baz=225,slow=10.0,SNR=23 4.0nm,0.5s						
AKASG	Malin Array Be	32.91	309	P	P	15 02 05.7	+2.2
	0.3nm,0.4s,baz=81,slow=7.0,SNR=8.2 0.3nm,0.4s						
FINES	FINESS Array B	37.42	326	P	P	15 02 44.8	+2.7
	0.7nm,0.3s,baz=116,slow=8.3,SNR=9.2 0.7nm,0.3s						
ARCES	ARCESS Array B	41.07	338	P	P	15 03 15.3	+3.0
	3.3nm,0.7s,baz=113,slow=2.8,SNR=9.5 3.3nm,0.7s						
NB2	NORSAR Subarra	44.32	323	P	P	15 03 41.7	+2.9
	comp=Z,1.1nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.32	323	P	P	15 03 40.7	+1.9
	comp=Z,1.5nm,0.6s,baz=96,slow=7.8,SNR=7.5 comp=Z,1.5nm,0.6s						
YKA	Yellowknife Ar	81.15	3	P	P	15 07 44.4	+1.3
	comp=Z,0.2nm,0.4s,baz=352,slow=5.5,SNR=6.6 comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	84.28	125	P	P	15 07 57.5	-2.4
	comp=Z,0.1nm,0.5s,baz=312,slow=4.7,SNR=5.8 comp=Z,0.1nm,0.5s						

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*IDC **12** 15:03:07.2±2.1, 13°.43N×121°.06E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=91.9km s-min=24.3km az=52.0*
*MAN **12** 15:03:10.4, 13°.29N×120°.58E, h30km, mb4.4, ML3.2, MS3.0, Hypocentre not reviewed by the ISC*
ISC 12 15:03:10.9±0.9, 13°.31N±0°.05×120°.84E±0°.06, h20km±2km, n12, σ1s.48/17, mb3.4/4, 3C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.22	31	⇑eP	Pb	15 03 15.8	-1.0
PGP				i S	Sb	15 03 21.7	+0.8
TGY	Tagaytay City	0.79	7	⇓eP	Pb	15 03 26.1	0.0
TGY				i S	Sb	15 03 36.0	-0.3
SJMP	San Jose	0.89	162	⇓eP	Pn	15 03 28.8	+0.5
MACP	Maragondon, Ca	0.95	353	⇓eP	Pn	15 03 27.1	-2.0
MACP				eS	Sn	15 03 44.4	+2.3
BOAC	Boac	0.99	81	⇓eP	Pn	15 03 31.7	+2.0
BOAC				eS	Sn	15 03 42.2	-0.9
LQP	Lukban	1.05	41	⇑eP	Pn	15 03 31.3	+0.6
LQP				i S	Sn	15 03 46.1	+1.4
GQP	Guinayangan	1.67	69	⇑eP	Pb	15 03 38.5	-2.6
GQP				eS	Sb	15 04 08.6	+6.9
JCNP	Jose Panganiba	2.05	62	⇓eP	Pb	15 03 47.0	-0.5
CMAR	Chiang Mai Arr	21.66	286	P	P	15 08 01.7	+1.3
	0.4nm,0.6s,baz=95,slow=8.6,SNR=4.6 0.4nm,0.6s						
WRA	Warramunga Arr	35.62	158	P	P	15 10 06.5	-1.0
	0.9nm,1.0s,baz=334,slow=9.9,SNR=2.1 0.9nm,1.0s						
ASAR	Alice Springs	38.91	161	P	P	15 10 35.5	0.0
	0.6nm,0.6s,baz=339,slow=7.0,SNR=11 0.6nm,0.6s						
MKAR	Makanchi Array	46.42	324	P	P	15 11 35.7	-0.5
	0.2nm,0.5s,baz=126,slow=7.4,SNR=2.3 0.2nm,0.5s						

TAP 12 15:25:49.5, 23°.17N×120°.90E, h2km, ML0.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	Lidau	0.11	77	i P	Pg	15 25 52.6	+1.0
	baz=79						
ELDTW				S	Sg	15 25 54.5	+1.4
	baz=79						
STYH	Taoyuan	0.12	273	i P	Pg	15 25 52.3	+0.6
	baz=277						
STYH				S	Sg	15 25 54.3	+1.1
	baz=277						
STYT	Tauyuan	0.13	269	i P	Pg	15 25 52.7	+0.6
	baz=268						
STYT				i S	Sg	15 25 54.8	+1.0
	baz=268						
SLGT	Liugui	0.29	234	eP	Pb	15 25 56.9	-0.5
	baz=234						

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*TUL **12** 15:26:43.5±1.5, 36°.95N±0°.02×97°.97W±0°.02, h4km±6km, ML3.0, mb_Lg2.7/56(NEIC), Error ellipse: s-maj=2.3km s-min=1.8km az=160.0*
NEIC 12 15:26:43.7±1.0, 36°.934N±0°.007×97°.95W±0°.02, h7km±6km, Error ellipse: s-maj=1.8km s-min=1.1km az=99.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.01	237		Pg	15 27 02.7	-0.4
U32A				Sg	Sg	15 27 16.2	0.0
T35A	Sooner Cattle	1.15	90	Pg	Pg	15 27 05.5	-0.4
T35A				Sg	Sg	15 27 20.5	-0.3
OKCFA	Oklahoma City	1.57	165	Pn	Pn	15 27 11.9	-0.2
OKCFA				IAmb_Lg		15 27 36.4	
	comp=Z,49nm,0.8s						
OKCSW	OKLAHOMA CITY	1.58	165	Pn	Pn	15 27 11.6	-0.7
R32A	Long Quarter,	1.60	338	Pn	Pn	15 27 12.8	+0.2
FNO	Franklin	1.73	165		Pn	15 27 14.1	-0.1
TUL1	Leonard	2.02	120	Pn	Pn	15 27 18.7	+0.5
TUL1				IAmb_Lg		15 27 50.2	
	comp=Z,25nm,0.8s						
WMOK	Wichita Mounta	2.29	197		Pn	15 27 21.8	-0.3
X34A	Smith Ranch, M	2.33	178		Pn	15 27 21.9	-0.6
CBKS	Cedar Bluff	2.35	324		Pn	15 27 22.4	-0.4
CBKS				IAmb_Lg		15 28 02.5	
	comp=Z,34nm,0.8s						
KSU1	Kansas State U	2.41	26		Pn	15 27 23.5	-0.1
U38A	Gravette	2.91	99	Pn	Pn	15 27 30.7	+0.3
X37A	Clayton	3.14	137		Pn	15 27 33.8	+0.1
HHAR	Hobbs	3.29	100		Pn	15 27 35.4	-0.3
AMTX	Amarillo	3.65	237	Pn	Pn	15 27 39.6	-1.2
S39A	Bolivar	3.77	77		Pn	15 27 41.8	-0.5
S39A				IAmb_Lg		15 28 47.1	
	comp=Z,11nm,0.8s						
W39A	Magazine	3.79	116		Pn	15 27 43.4	+0.7
W39A				IAmb_Lg		15 28 51.2	
	comp=Z,24nm,0.9s						
U40A	Yellville	4.14	96	Pn	Pn	15 27 47.9	+0.5
U40A				IAmb_Lg		15 28 59.9	
	comp=Z,14nm,0.8s						
KSCO	Kaye Shedlock’	4.24	301	Pn	Pn	15 27 47.2	-1.7
KSCO				IAmb_Lg		15 29 04.0	
	comp=Z,13nm,0.7s						
MIAR	Mount Ida	4.28	123	Pn	Pn	15 27 50.9	+1.5
MIAR				IAmb_Lg		15 29 00.4	
	comp=Z,11nm,0.8s						
N35A	Tabor	4.32	24	Pn	Pn	15 27 49.6	-0.2
P38A	Dawn	4.39	51		Pn	15 27 50.1	-0.7
P38A				IAmb_Lg		15 29 05.7	
	comp=Z,15nm,0.8s						
BGNE	Belgrade	4.47	358	Pn	Pn	15 27 52.5	+0.5
BGNE				IAmb_Lg		15 29 17.6	
	comp=Z,15nm,0.7s						
ABTX	Abilene, Hawle	4.52	198	Pn	Pn	15 27 53.8	+1.2
ABTX				IAmb_Lg		15 29 17.8	
	comp=Z,9.1nm,0.9s						
MGMO	Mountain Grove	4.55	86	Pn	Pn	15 27 53.7	+0.7
R40A	Maddies Statio	4.71	72		Pn	15 27 54.1	-1.1
R40A				IAmb_Lg		15 29 20.5	
	comp=Z,12nm,0.9s						
FCAR	Ozark Folk Cen	4.81	101	Pn	Pn	15 27 57.9	+1.3
X40A	Basin Creek Fa	4.83	119	Pn	Pn	15 27 56.3	-0.6
X40A				IAmb_Lg		15 29 25.8	
	comp=Z,9.7nm,0.7s						
WHAR	Wooly Hollow	4.87	108	Pn	Pn	15 27 58.1	+0.7
WHAR				IAmb_Lg		15 29 24.1	
	comp=Z,14nm,0.8s						
MSTX	Muleshoe	4.92	234	Pn	Pn	15 27 56.6	-1.7
W41B	Gary Mavity, V	4.94	109	Pn	Pn	15 27 58.4	0.0
W41B				IAmb_Lg		15 29 26.4	
	comp=Z,14nm,1.1s						
WHTX	Lake Whitney,	4.95	175	Pn	Pn	15 27 57.8	-0.7
UALR	University of	5.04	114	IAmb_Lg		15 29 33.3	
	comp=Z,14nm,1.0s						
OGNE	Ogallala	5.12	323	IAmb_Lg		15 29 37.3	
	comp=Z,18nm,0.8s						
T25A	Trinidad	5.17	274		Pn	15 28 02.1	+0.3
P40A	Paris	5.32	59	Pn	Pn	15 28 05.5	+1.9
P40A				IAmb_Lg		15 29 41.1	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	5.45	76	Pn	Pn	15 28 05.1	-0.3
CCM				IAmb_Lg		15 29 43.7	
	comp=Z,9.0nm,0.7s						
LCAR	Lake Charles	5.54	97	Pn	Pn	15 28 05.7	-1.0
PBMO	Poplar Bluff	6.03	89	Pn	Pn	15 28 13.3	-0.1
PBMO				IAmb_Lg		15 30 06.2	
	comp=Z,7.6nm,0.8s						
Q24A	Divide	6.04	292		Pn	15 28 11.1	-2.7
SDCO	Great Sand Dun	6.07	280	Pn	Pn	15 28 15.2	+1.0
FVM	French Village	6.08	78	Pn	Pn	15 28 13.6	-0.4
FVM				IAmb_Lg		15 30 05.2	
	comp=Z,6.8nm,0.8s						
JCT	Junction City	6.62	194	IAmb_Lg		15 30 27.3	
	comp=Z,8.5nm,1.0s						
ISCO	Idaho Springs	6.67	298	Pn	Pn	15 28 23.0	+0.6
ISCO				IAmb_Lg		15 30 16.3	
	comp=Z,6.3nm,0.8s						
N41A	Harden Midland	6.70	54	Pn	Pn	15 28 23.9	+1.3
ECSD	EROS Data Cent	6.87	8	Pn	Pn	15 28 25.6	+0.7
S44A	Carbondale	6.97	81	IAmb_Lg		15 30 38.6	
	comp=Z,10nm,0.7s						
PHWY	Pilot Hill	7.29	309	IAmb_Lg		15 30 36.2	
	comp=Z,8.3nm,0.9s						
L40A	Anamosa	7.30	43	IAmb_Lg		15 30 33.9	
	comp=Z,8.0nm,0.8s						
L42A	Oliver, Polo	8.16	49	IAmb_Lg		15 31 07.9	
	comp=Z,12nm,0.9s						
JFWS	Jewell Farm	8.40	42	IAmb_Lg		15 31 10.5	
	comp=Z,10.0nm,0.7s						

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*IDC **12** 15:52:42.1±1.3, 45°.16N×107°.10W, h0km, mbtmp3.1/3, ML2.4/2, Error ellipse: s-maj=37.5km s-min=9.1km az=127.0*
*NEIC **12** 15:52:42.9±1.3, 45°.11N±0°.05×106°.73W±0°.03, h0km±2km, ML2.7/48, Error ellipse: s-maj=8.9km s-min=3.1km az=24.0*
ISC 12 15:52:41.6±1.2, 45°.13N±0°.05×106°.75W±0°.06, h0km, n36, σ1s.56/35, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	LASA Array	1.60	13		Pg	15 53 13.6	+1.2
LAO				IAML		15 53 39.0	
	78nm,1.7s						
LAO				IAML		15 53 48.9	
	82nm,0.8s						
RLMT	Red Lodge	1.78	271		Pn	15 53 15.0	+1.1
RLMT				IAML		15 53 42.7	
	55nm,0.5s						
RLMT				IAML		15 53 46.8	
	55nm,0.5s						
GCMT	Greycliff	2.16	289		Pn	15 53 20.2	+1.3
RSSD	Black Hills	2.18	116		Pn	15 53 20.9	+1.6
RSSD				IAML		15 53 55.3	
	62nm,0.8s						
RSSD				IAML		15 53 58.5	
	54nm,0.8s						
K22A	Casper	2.48	176		Pn	15 53 24.0	+0.6
H17A	Grant Village	2.82	256		Pn	15 53 28.7	+0.5
YNR	Norris Junctio	2.82	263		Pn	15 53 30.1	+2.0
YNR				IAML		15 54 11.7	
	comp=E,31nm,0.4s						
YNR				IAML		15 54 15.3	
	comp=N,22nm,0.5s						
YHH	Holmes Hill	2.93	265		Pn	15 53 30.5	+0.8
FLWY	Flagg Ranch	3.01	251		Pn	15 53 31.7	+1.0
FLWY				IAML		15 54 40.4	
	comp=N,33nm,1.7s						
FLWY				IAML		15 54 46.7	
	comp=N,24nm,1.4s						
YPP	Pitchstone Pla	3.02	255		Pn	15 53 31.3	+0.4
YMR	Madison River	3.03	263	Pn	Pn	15 53 31.6	+0.6
BW06	Boulder Array	3.11	222		Pn	15 53 33.5	+1.3
BW06				IAML		15 54 25.4	
	comp=N,14nm,0.6s						
BW06				IAML		15 54 47.4	
	comp=N,14nm,1.7s						
PD31	Pinedale Array	3.11	222		Pn	15 53 33.4	+1.3
PDAR	Pinedale Array	3.11	222	Pn	Pn	15 53 33.5	+1.3
	comp=N,2.4nm,0.4s,baz=51,slow=18,SNR=61						
PDAR				Lg	Lg	15 54 14.8	
	comp=N,4.9nm,0.3s,baz=43,slow=32,SNR=14						
LOHW	Long Hollow	3.15	243		Pn	15 53 33.8	+1.1
YHL	Hebgen Lake	3.16	267		Pn	15 53 34.4	+1.5
YHL				IAML		15 54 30.7	
	comp=N,26nm,1.3s						
MOOW	Moose Ponds	3.18	246		Pn	15 53 34.4	+1.4
SNOW	Snow King Moun	3.32	241	Pn	Pn	15 53 36.6	+1.5
SNOW				IAML		15 54 33.6	
	comp=N,21nm,1.4s						
SNOW				IAML		15 55 11.2	
	comp=N,25nm,1.8s						
QLMT	Earthquake Lak	3.33	267		Pn	15 53 36.8	+1.6
FXWY	Fox Creek	3.41	246	Pn	Pn	15 53 37.8	+1.5
FXWY				IAML		15 54 38.6	
	comp=N,24nm,1.9s						
FXWY				IAML		15 54 56.9	
	comp=N,16nm,1.1s						
TPAW	Teton Pass	3.43	243	Pn	Pn	15 53 36.8	+0.2
TPAW				IAML		15 54 50.0	
	comp=N,10nm,1.3s						
REDW	Red Top Meadow	3.44	241		Pn	15 53 37.6	+1.0
REDW				IAML		15 54 35.9	
	comp=N,21nm,1.7s						
REDW				IAML		15 54 40.4	
	comp=N,13nm,1.5s						
RWWY	Rawlins	3.45	186	Pn	Pn	15 53 37.7	+0.8
BOZ	Bozeman (W)	3.47	280		Pn	15 53 38.4	+1.4
BOZ				IAML		15 54 35.3	
	comp=N,12nm,1.8s						
EGMT	Eagleton	3.56	326		Pn	15 53 38.7	+0.5
DGMT	Dagmar	3.78	27	Pn	Pn	15 53 42.9	+1.8
HRY	Holter Researc	3.88	296	Pn	Pn	15 53 42.9	+0.2
ECR	Eagle Creek	3.92	240	Pn	Pn	15 53 43.1	-0.1
AHID	Auburn Hatcher	3.93	235		Pn	15 53 42.6	-0.7
AHID				IAML		15 54 49.7	
	comp=N,11nm,1.6s						
PHWY	Pilot Hill	3.94	166	Pn	Pn	15 53 44.8	+1.3
PHWY				IAML		15 54 54.3	
	comp=N,12nm,0.5s						
PHWY				IAML		15 55 17.2	
	comp=N,9.4nm,0.5s						
LRM	Limekiln Ridge	4.07	282	Pn	Pn	15 53 46.4	+1.1
N23A	Red Feather La	4.27	172		Pn	15 53 47.9	-0.2
MCMT	McKenzie Canyo	4.34	268		Pn	15 53 51.0	+2.0
I56US	NEWPORT INFRAS	7.79	297	i		16 40 00.0	
	baz=113,slow=320,SNR=2.2						
ULM	Lac du Bonnet	8.95	51	Pn	Pn	15 54 53.0	+1.0
	comp=N,0.3nm,0.3s,baz=240,slow=12,SNR=1.5 comp=N,1.8nm,0.4s						
YKA	Yellowknife Ar	17.98	348	Pn	Pn	15 56 47.2	-5.5
	baz=164,slow=11,SNR=2.3 comp=N,0.1nm,0.4s						

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*ASRS **12** 15:58:09.3±0.2, 54°N±1°×88°.0E±0°.9, h1km, MLh3.0/10, Error ellipse: s-maj=2.3km s-min=1.9km az=34.6, confirmed*
*NNC **12** 15:58:12.0±2.0, 53°.59N×87°.79E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=15.2km s-min=9.5km az=86.0, Suspected Mining explosion.*
ISC 12 15:58:10.3±0.8, 53°.60N±0°.02×87°.87E±0°.02, h0km, n23, σ1s.00/44, 3C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALIN	Malinovka, Kuz	0.40	243	Pg	Pb	15 58 19.8	-0.3
MALIN				Sg	Sb	15 58 25.4	-1.4
ERU	Erunakovo, Kuz	0.61	332	Pg	Pg	15 58 21.5	-0.5
ERU				Sg	Sg	15 58 31.1	+1.2
LUZB	Luzhba, Kemero	0.62	84	Pg	Pg	15 58 21.7	-0.4
LUZB				Sg	Sg	15 58 29.3	-0.8
KOTO	Kotino, Kuzbas	0.81	317	Pg	Pb	15 58 27.0	-0.3
KOTO				Sg	Sb	15 58 38.2	-0.5
TASR	Tashtagol	0.84	180	Pg	Pg	15 58 26.3	-0.1
TASR				Sg	Sg	15 58 37.1	-0.1
VCHU	Verkh-Chumysh,	0.92	293	Pg	Pb	15 58 28.4	-0.7
VCHU				Sg	Sg	15 58 40.5	+0.7
ELT	Eltsovka	1.03	251	Pg	Pg	15 58 29.8	-0.3
ELT				Sg	Sb	15 58 45.2	+0.1
POMOR	Pomortsevo, Ku	1.13	316	Pg	Pn	15 58 33.3	-0.1
POMOR				Sg	Sn	15 58 49.2	-0.4
BJR2	Bachatsky-2, K	1.23	304	Pg	Pg	15 58 32.5	-1.4
BJR2				Sg	Sn	15 58 51.5	-0.7
BJR1	Bachatsky 1, K	1.26	301	Pg	Pg	15 58 33.6	-0.7
BJR1				Sg	Sn	15 58 54.1	+1.4
SALR	Pechorkino, Sa	1.52	303	Pg	Pn	15 58 38.0	-0.7
SALR				Sg	Sn	15 59 01.6	+2.5
ARTR	Artybash	1.84	191	Pg	Pb	15 58 44.5	-0.3
ARTR				Sg	Sg	15 59 10.3	+1.0
ZAA0	Zalesovo Array	1.84	282	⇑Pn	Pb	15 58 43.8	-1.0
	1.0nm,0.3s,baz=99,slow=16						
ZAA0				⇑Sn	Sg	15 59 09.5	+0.1
	3.3nm,0.3s,baz=99,slow=25						
GALT	Gorno-Altaysk,	2.02	216	Pg	Pb	15 58 47.0	-0.8
GALT				Sg	Sg	15 59 14.1	-0.9
KEM	Kemerovo	2.03	330	Pg	Pn	15 58 46.1	+0.4
KEM				Sg	Sb	15 59 14.0	+0.2
BRCR	Berchikul'	2.06	7	Pg	Pn	15 58 46.6	+0.5
BRCR				Sg	Sb	15 59 15.2	+0.5
ABNR	Abakan	2.12	85	Pg	Pb	15 58 48.9	-0.7
ABNR				Sg	Sg	15 59 19.4	+0.9
CERR	Cheremushki	2.26	108	Pg	Pb	15 58 51.6	-0.3
CERR				Sg	Sg	15 59 22.1	-0.6
ULGR	Ulagan, Altay	2.98	179	Pg	Pb	15 59 03.3	-1.0
ULGR				Sg	Sg	15 59 45.4	-0.6
KURK	Kurchatov	6.38	247	⇓Pn	Pn	15 59 47.0	+1.5
	2.7nm,0.6s						
KURK				⇑Sn	Sn	16 00 58.3	-0.6
	3.1nm,0.8s						
KURK				Lg	Lg	16 01 33.3	
	7.0nm,0.7s						
KURBB	Kurchatov Arra	6.48	246	⇓Pn	Pn	15 59 48.6	+1.8
	6.2nm,0.5s						
KURBB				⇓Sn	Sn	16 01 01.0	-0.4
	5.6nm,0.6s						
KURBB				⇓Lg	Lg	16 01 34.1	
	8.5nm,0.8s						
MK31	Makanchi Array	7.70	210	Pn	Pn	16 00 05.7	+2.1
	1.1nm,0.6s,baz=0.0,slow=0.1,SNR=32						
MK31				⇓Lg	Lg	16 02 13.9	
	4.6nm,0.9s,baz=0.0,slow=0.1,SNR=6.3						
MAKZ	Makanchi	7.78	211	Pn	Pn	16 00 06.9	+2.2
	1.8nm,0.9s						
MAKZ				⇓Lg	Lg	16 02 17.7	
	3.2nm,0.8s						

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*ISK **12** 15:59:38.4, 35°.53N×31°.75E, h4km, ML2.8/18*
*GII **12** 15:59:38.9±0.0, 35°.63N×31°.74E, h3km, Mm2.5/2*
*NIC **12** 15:59:38.4±0.0, 35°.43N×31°.47E, h13km±1km, Ml3.1/5*
*DDA **12** 15:59:40.0±0.0, 35°.74N×31°.56E, h20km±1km, ML2.4*
ISC 12 15:59:37.8±1.2, 35°.56N±0°.03×31°.58E±0°.03, h6km±10km, n50, σ1s.16/67, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	Akamas	0.82	131	P	Pg	15 59 52.7	-1.0
AKMS				S	Sg	16 00 05.5	+1.2
AKMS				AML	AML	16 00 09.8	
	2.2nm,0.5s						
AKMS				AML	AML	16 00 09.8	
	2.2nm,0.5s						
AKMS				AML	AML	16 00 11.1	
	2.7nm,0.5s						
AKMS				AML	AML	16 00 11.1	
	2.7nm,0.5s						
GAZI	Gazipasa	0.90	41	PG	Pg	15 59 55.2	0.0
GAZI				SG	Sg	16 00 07.3	+0.4
GAZI	Gazipasa	0.90	41	P	Pg	15 59 54.9	-0.3
GAZI				S	Sg	16 00 06.8	-0.1
GAZI				i AML	AML	16 00 11.0	
	comp=E,111nm,0.3s						
GAZI				i AML	AML	16 00 11.0	
	comp=N,133nm,0.6s						
ALFC	Alefka	0.93	115	S	Sn	16 00 10.9	-0.2
ALFC				AML	AML	16 00 14.1	
	3.5nm,0.6s						
ALFC				AML	AML	16 00 15.0	
	2.3nm,0.4s						
NATA	Nata	1.13	133	P	Pg	16 00 00.0	+0.6
NATA				S	Sg	16 00 15.2	+1.2
NATA				AML	AML	16 00 22.5	
	3.0nm,0.7s						
NATA				AML	AML	16 00 22.5	
	3.0nm,0.7s						
NATA				AML	AML	16 00 27.7	
	5.3nm,0.7s						
NATA				AML	AML	16 00 27.7	
	5.3nm,0.7s						
LEF	Lefka	1.16	112	PG	Pb	15 59 57.8	-2.5
LEF	Lefka	1.16	112	P	Pb	15 59 58.3	-1.9
AKDN	Akdeniz- Kıbrı	1.17	102	PG	Pb	15 59 58.9	-1.4
AKUM	Antalya-Kumluc	1.26	308	P	Pg	16 00 02.5	+0.5
AKUM				i AML	AML	16 00 26.0	
	comp=N,75nm,0.3s						
AKUM				i AML	AML	16 00 30.0	
	comp=E,92nm,0.4s						

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SZAC  Souni            1.34 126  P     Pn    16 00 03.2 +0.2
SZAC                             S     Sn    16 00 21.2 +0.1
SZAC                             AML   AML   16 00 29.7
      0.9nm,0.5s
SZAC                             AML   AML   16 00 29.7
      0.9nm,0.5s
SZAC                             AML   AML   16 00 34.6
      0.9nm,0.6s
SZAC                             AML   AML   16 00 34.6
      0.9nm,0.6s
KEPZ  Antalya-Kepez    1.34   1  P     Pn    16 00 01.4 -1.7
KEPZ                             S     Sb    16 00 18.1 -2.7
TEKE  Tekeli-Mersin    1.38  65  PN    Pn    16 00 03.0 -0.6
BERE  Bereket-Mersin   1.55  59  PN    Pn    16 00 06.1  0.0
CSS   Mathiatis        1.55 112  PN    Pn    16 00 05.6 -0.5
CSS   Mathiatis        1.55 112  P     Pn    16 00 06.5 +0.5
CSS                              S     Sb    16 00 27.3 +0.4
CSS   Mathiatis        1.55 112  Pn    Pn    16 00 05.5 -0.5
ASGA  Asgata           1.57 119  P     Pn    16 00 06.5 +0.3
ASGA                             S     Sb    16 00 28.0 +0.7
ASGA                             AML   AML   16 00 39.4
      0.7nm,0.6s
ASGA                             AML   AML   16 00 39.4
      0.7nm,0.6s
ASGA                             AML   AML   16 00 43.0
      0.7nm,0.9s
ASGA                             AML   AML   16 00 43.0
      0.7nm,0.9s
HDMB  Hadim            1.58  27  PN    Pb    16 00 07.8 +0.2
LFK   Lefkose          1.62  99  PN    Pn    16 00 06.5 -0.5
AKKU  Akkuyu-Mersin    1.71  69  PN    Pn    16 00 08.3 +0.1
GULN  MERSIN_Gulnar    1.72  68  P     Pn    16 00 09.0 +0.8
GULN                             S     Sb    16 00 31.3 -0.2
KSL   Kastellorizon    1.72 291  P     Pn    16 00 07.0 -1.2
KSL                              S     Sn    16 00 30.0 -0.5
AKAS  Kas              1.74 293  PN    Pg    16 00 12.3 +1.2
AKAS  Kas              1.74 293  P     Pg    16 00 12.8 +1.7
AKAS                           i AML   AML   16 00 47.0
      comp=E,46nm,0.6s
AKAS                           i AML   AML   16 00 53.0
      comp=N,58nm,0.8s
KORT  Korkueli         1.75 326  PN    Pg    16 00 11.5 +0.2
TEVE  Tevekalti-Mers   1.75  59  PN    Pn    16 00 08.9 +0.2
ELL   Elmali           1.80 312  PN    Pg    16 00 12.8 +0.5
IKL   Isikli           1.84  68  PN    Pn    16 00 10.2 +0.3
SEYD  Seydisehir-KON   1.86   6  PN    Pb    16 00 11.9 -0.3
SEDI  Konya, Seydise   1.89   4  P     Pn    16 00 10.7 -0.1
SEDI                             S     Sb    16 00 36.1 -0.8
SEDI                           i AML   AML   16 00 48.0
      comp=E,47nm,0.6s
SEDI                           i AML   AML   16 00 52.0
      comp=N,52nm,0.6s
KEBE  Keben-Mersin     1.95  62  PN    Pn    16 00 11.4 -0.1
KKBE  Karaman, Kazim   1.99  33  P     Pn    16 00 13.1 +1.0
KKBE                             S     Sb    16 00 38.8 -0.8
KRMN  Karaman          2.11  40  PN    Pn    16 00 14.7 +1.0
EREN  Erenkoy          2.12  90  PN    Pn    16 00 13.7  0.0
FETY  Fethiye          2.29 299  P     Pn    16 00 16.9 +0.9
KONT  Konya--Tatoy     2.46  15  PN    Pb    16 00 20.7 -1.8
DOGA  KONYA_Doganhis   2.54   2  P     Pn    16 00 21.4 +1.7
DOGA                           i AML   AML   16 01 02.0
      comp=N,26nm,0.6s
LADK  Ladik-KONYA      2.71  13  PN    Pn    16 00 24.2 +2.2
YVAC  Isparta, Yalva   2.72 354  P     Pn    16 00 23.2 +1.0
KERG  Konya-Eregli     2.77  47  P     Pn    16 00 24.4 +1.6
KERG                             S     Sn    16 00 57.3 +0.8
KERG                           i AML   AML   16 01 05.0
      comp=N,17nm,0.6s
KERG                           i AML   AML   16 01 06.0
      comp=E,18nm,0.5s
YESY  Yesilyurt        2.82  37  PN    Pn    16 00 24.7 +1.2
KZIL  AFYON_Kizioren   2.93 337  P     Pb    16 00 27.8 -2.7
KZIL                             S     Sn    16 01 02.2 +1.6
GULE  Gulek            3.10  55  P     Pn    16 00 30.4 +3.0
GULE                           i AML   AML   16 01 20.0
      comp=E,37nm,0.5s
GULE                           i AML   AML   16 01 23.0
      comp=N,29nm,0.5s
CMRD  Camardi-Nigde    3.46  52  PN    Pn    16 00 33.9 +1.6
HNTI  Hanita           3.87 129  Pn    Pn    16 00 38.6 +0.8
MMA0B Mount Meron ar   4.06 128  Pn    Pn    16 00 41.7 +1.2
MMA0B                            Sn    Sn    16 01 29.3 +0.9
GEM   Giv'at Ha'Em     4.11 124  Pn    Pn    16 00 42.1 +0.9
NATI  Neve Ativ        4.13 122  Pn    Pn    16 00 42.6 +1.2
NATI                             Sn    Sn    16 01 29.9 -0.1
MMLI  Mount Malkishu   4.46 133  Pn    Pn    16 00 46.1 +0.1
HMDT  Nahal Hemdat     4.65 134  Pn    Pn    16 00 49.4 +0.8
HMDT                             Sn    Sn    16 01 44.1 +1.2
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*IDC **12** 16:02:01.8±6.3, 35°.93N×69°.19E, h27^{km}±43^{km}, mb3.7/15, mbtmp3.9/19, ML4.3/4, MS3.1/8, Error ellipse: s-maj=20.0km s-min=13.9km az=180.0*

*NEIC **12** 16:02:04.6±2.3, 36°.06N±0°.04×69°.07E±0°.07, h46^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=8.1km s-min=5.6km az=81.0*

*NNC **12** 16:02:05.8±1.0, 36°.25N×68°.99E, h67^{km}±21^{km}, mb4.0, mpv4.2, Error ellipse: s-maj=10.2km s-min=5.4km az=163.0*

ISC 12 16:02:03.1±0.5**, 36°.10N**±0°.04×**69°.13E**±0°.05**, h35**^{km}**, n93,** σ**2**^{s}.**03**/104**, mb4.0**/19**, MS3.1**/6**, 11C-5D, Hindu Kush region**

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Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                 Op    ISC   h  m  s     ISC
KBL   Kabul            1.56 183        Pn    16 02 29.8 +1.1
KBL                              Sn    Sn    16 02 50.0 +2.3
CHGR  Chuyangaron      2.55   0        Pn    16 02 44.3 +2.2
GAR   Garm             3.04  18        Pn    16 02 51.8 +2.9
CEP   Cherat           3.22 134  P     Pn    16 02 55.7 +4.3
CEP                              S     Sn    16 03 42.0  +13
THW   Thamme Wali      3.94 146  P     Pn    16 03 04.1 +2.9
DRK   Karamyk          3.98  31        Pn    16 03 04.8 +2.8
BTK   Batken           4.17  18  Pn    Pn    16 03 07.1 +2.8
BTK                              Sn    Sn    16 03 56.9 +5.1
CHCP  Chirah Chowk     4.18 124  P     Pn    16 03 08.5 +4.0
SARP  Sargodha         5.10 144  P     Pn    16 03 19.0 +1.9
JMU   Jammu            5.84 124  ex    Pn    16 03 39.2  +12
JMU                              eS    Sn    16 04 34.5 +1.5
HRA   Herat            5.89 255  Pn    Pn    16 03 27.9 -0.2
KSH   Kashi            6.40  56  Pn    Pn    16 03 32.4 -2.6
KSH                              Sn    Sn    16 04 42.1 -4.7
KSH                              smax  smax
      comp=N,71nm,1.0s
KSH                              smax  smax
      comp=E,96nm,0.9s
KSH                              LR    LR
      comp=N,220nm,4.0s
KSH                              LR    LR
      comp=E,280nm,4.3s
KSH                              LR    LR
      comp=Z,210nm,11.0s
THN   Thein Dam        6.56 122  eP    Pn    16 03 39.0 +1.9
THN                              ex    Pn    16 03 40.5 +3.3
THN                              ex    Sn    16 04 50.7 -0.1
THN                              eS          16 04 54.7
AML   Almayashu        6.99  29  P     Pn    16 03 45.4 +2.2
      SNR=36
KK31  Karatay Array    7.07   8  Pn    Pn    16 03 46.0 +1.9
KK31                             Sn    Sn    16 05 03.4 +0.1
KK31  Karatay Array    7.07   8 ⇓P     Pn    16 03 44.8 +0.7
      comp=Z,1.7nm,0.2s,baz=199,slow=14,SNR=58
KK31                            ⇓S     Sn    16 05 03.3 +0.1
      comp=Z,8.0nm,0.6s,baz=0.0,slow=0.1,SNR=4.2
KKAR  Karatay Array    7.07   8        Pn    16 03 46.1 +2.0
KKAR                             Sn    Sn    16 05 03.2  0.0
KKAR  Karatay Array    7.07   8  Pn    Pn    16 03 45.9 +1.8
UCH   Uchtor           7.41  33  P     Pn    16 03 51.1 +2.0
      SNR=28
EKS2  Erkin-Say        7.47  27  P     Pn    16 03 52.1 +2.4
      SNR=8.3
BHK   Bhakra           7.66 126  ex    Pn    16 03 53.0 +0.8
BHK                              ex    Sn    16 05 18.9 +1.2
AAK   Ala-Archa        7.73  31  P     Pn    16 03 55.7 +2.3
      SNR=21
AAK   Ala-Archa        7.73  31  Pn    Pn    16 03 55.6 +2.3
      comp=Z,5.9nm,0.3s,baz=207,slow=6.1,SNR=36
AAK                              Sn    Sn    16 05 22.0 +2.3
      comp=Z,2.7nm,0.3s,baz=78,slow=19,SNR=5.6
AAK                              LR    LR    16 07 18.2
      comp=Z,91nm,18.3s,baz=210,slow=40
      comp=Z,14nm,0.3s
AAK   Ala-Archa        7.73  31  Pn    Pn    16 03 55.6 +2.3
AAK                              Sn    Sn    16 05 20.8 +1.1
FRU1  Bishkek          7.93  31        Pn    16 03 57.7 +1.7
KBK   Karagaybulak     7.94  33  P     Pn    16 03 59.0 +2.8
      SNR=8.4
CHMS  Chumysh          8.14  30  P     Pn    16 04 01.0 +2.2
      SNR=13
CHMS  Chumysh          8.14  30 ⇑P     Pn    16 04 00.9 +2.2
      comp=Z,18nm,0.6s
CHMS                            ⇑S     Sn    16 05 30.8 +1.3
      comp=Z,21nm,0.8s
ULHL  Ulahol           8.25  40  P     Pn    16 04 03.0 +2.5
      SNR=11
USP   Ospenovka        8.26  28  P     Pn    16 04 02.2 +1.7
      SNR=10
BOOM  Boomskoye usch   8.28  38  Pn    Pn    16 04 02.3 +1.5
SMLA  Simla            8.34 124  eP    Pn    16 04 03.3 +1.8
SMLA                             eS    Sn    16 05 34.4  0.0
SMLA                             IAML        16 05 37.7
      comp=N,83nm,0.3s
SMLA                             IAML        16 05 38.5
      comp=E,120nm,0.3s
TKM2  Tokmak 2         8.44  34  P     Pn    16 04 05.0 +1.9
      SNR=21
TKM2  Tokmak 2         8.44  34 ⇓P     Pn    16 04 04.8 +1.7
      comp=E,5.7nm,0.5s
KDJ   Kajisay          8.68  44        Pn    16 04 07.6 +1.3
TARG  Taragay, Kyrgy   8.79  48        Pn    16 04 08.5 +0.5
GEYT  Alibeck          9.00 285  Pn    Pn    16 04 11.2 +0.6
      comp=E,1.4nm,0.3s,baz=106,slow=16,SNR=5.8
GEYT                             Sn    Sn    16 05 47.7 -2.9
      comp=E,3.3nm,0.3s,baz=121,slow=17,SNR=11
      comp=E,3.7nm,0.4s
GEYT  Alibeck          9.00 285  Pn    Pn    16 04 09.8 -0.8
GYA0B ALIBECK ARRAY    9.00 285  Pn    Pn    16 04 09.4 -1.2
GYA0B ALIBECK ARRAY    9.00 285 ⇑P     Pn    16 04 11.2 +0.6
GYA0B                           ⇑S     Sn    16 05 49.9 -0.8
MDOK  Medeo            9.32  38  P     Pn    16 04 16.9 +1.7
      comp=E,5.4nm,0.5s
NDI   New Delhi       10.07 135  eS    Sn    16 06 14.0 -2.9
PDGK  Podgornoye      10.75  45 ⇑P     Pn    16 04 35.4 +0.8
      comp=E,2.1nm,0.6s
MAKZ  Makanchi        14.37  38  Pn    Pn    16 05 21.8 -2.2
MAKZ  Makanchi        14.37  38 ⇑P     Pn    16 05 25.3 +1.3
      comp=E,4.5nm,0.8s
MK31  Makanchi Array  14.52  39  Pn    Pn    16 05 24.7 -1.3
MK31  Makanchi Array  14.52  39 ⇓P     Pn    16 05 27.0 +1.0
      comp=E,4.4nm,0.9s,baz=0.0,slow=0.1,SNR=7.3
MKAR  Makanchi Array  14.52  39  Pn    Pn    16 05 25.6 -0.4
      comp=E,5.3nm,0.3s,baz=230,slow=14,SNR=1.9
BHPL  Bhopal          14.70 148  eP    Pn    16 05 26.0 -2.5
BHPL                             eS    Sn    16 08 02.8 -7.4
AB31  Akbulak array   14.76 336  P     Pn    16 05 27.7 -1.5
      comp=E,3.1nm,0.6s,baz=166,slow=11,SNR=36
AB31                            ⇓S     Sn    16 08 08.3 -3.2
      comp=E,1.2nm,0.5s,baz=146,slow=20,SNR=4.1
ABKAR Akbulak array   14.76 336  Pn    Pn    16 05 27.5 -1.8
ABKAR Akbulak array   14.76 336  Pn    Pn    16 05 27.4 -1.8
KURBB Kurchatov Arra  16.02  22  Pn    Pn    16 05 42.8 -2.8
      comp=E,0.5nm,0.5s,baz=211,slow=10,SNR=4.1
KURBB Kurchatov Arra  16.02  22 ⇑P     Pn    16 05 46.6 +1.0
      comp=E,6.7nm,0.8s
KURK  Kurchatov       16.13  22  P     Pn    16 05 46.0 -1.0
KURK  Kurchatov       16.13  22 ⇑P     Pn    16 05 46.6 -0.4
      comp=E,4.6nm,0.9s
WMQ   Urumqi          16.16  56  eP    Pn    16 05 47.3 -0.3
AKTO  Aktyubinsk      16.43 334  Pn    Pn    16 05 50.9 +0.1
      comp=E,0.3nm,0.3s,baz=135,slow=13,SNR=4.6
AKTO                             LR    LR    16 12 56.5
      comp=E,40nm,20.2s,baz=160,slow=39
      comp=E,2.1nm,0.4s
AKTO  Aktyubinsk      16.43 334 ⇑P     Pn    16 05 50.0 -0.8
      comp=E,3.9nm,0.7s
AKTO                            ⇑S     Sn    16 08 50.2 -1.7
      comp=E,2.2nm,0.6s
BRVK  Borovoye        16.97   2  P     Pn    16 05 55.9 -1.8
BRVK  Borovoye        16.97   2 ⇑P     Pn    16 05 56.8 -0.9
      comp=E,4.2nm,0.8s
ZAA0  Zalesovo Array  20.92  27  P     P     16 06 41.6 -0.8
ZAA0                             IAmb  IAmb  16 06 58.0
      comp=Z,8.1nm,0.6s
ZALV  Zalesovo Beam   20.92  27  P     P     16 06 42.4 -0.1
      comp=Z,7.6nm,0.6s,baz=216,slow=9.9,SNR=35
      comp=Z,7.6nm,0.6s
KBZ   Khabaz          21.45 299  P     P     16 06 50.9 +2.6
      comp=Z,0.4nm,0.4s,baz=143,slow=10,SNR=1.6
      comp=Z,0.4nm,0.4s
BRTR  Keskin Array B  28.12 288  P     P     16 07 51.0 -0.9
      comp=Z,0.3nm,0.6s,baz=79,slow=7.5,SNR=1.8
      comp=Z,0.3nm,0.6s
PZH   PanZhiHua       29.34 100  P     P     16 07 58.6 -4.3
SONM  Songino Array   29.80  55  P     P     16 08 08.5 +1.8
      comp=Z,0.8nm,0.6s,baz=258,slow=7.2,SNR=2.8
SONM                             LR    LR    16 21 30.3
      comp=Z,43nm,20.1s,baz=284,slow=39
      comp=Z,0.8nm,0.6s
CMAR  Chiang Mai Arr  31.61 116  P     P     16 08 22.5 -0.3
      comp=Z,0.3nm,0.6s,baz=296,slow=9.0,SNR=4.3
CMAR                             LR    LR    16 23 16.8
      comp=Z,17nm,18.3s,baz=195,slow=40
      comp=Z,0.3nm,0.6s
AKASG Malin Array Be  32.03 310  P     P     16 08 28.0 +1.9
      comp=Z,1.2nm,0.5s,baz=87,slow=7.2,SNR=18
      comp=Z,1.2nm,0.5s
AKASG Malin Array Be  32.03 310  IAmb  IAmb  16 08 28.4
      comp=Z,2.1nm,1.1s
HHC   Hu-ho-hao-te    33.31  69  eP    P     16 08 32.2 -5.5
HHC                              pmax  pmax
      comp=Z,30nm,1.1s
HHC                              pmax  pmax
      comp=Z,77nm,6.1s
NRIK  Noril'sk        34.80  11  P     P     16 08 51.8 +1.8
      comp=Z,2.0nm,0.4s,baz=178,slow=5.6,SNR=3.8
      comp=Z,2.0nm,0.4s
NRIK  Noril'sk        34.80  11  IAmb  IAmb  16 09 02.5
      comp=Z,6.1nm,1.4s
FINES FINESS Array B  36.98 327  P     P     16 09 10.1 +1.3
      comp=Z,1.9nm,0.6s,baz=115,slow=13,SNR=8.2
FINES                            LR    LR    16 25 48.1
      comp=Z,39nm,20.4s,baz=112,slow=38
      comp=Z,1.9nm,0.6s
ARCES ARCESS Array B  40.94 338  P     P     16 09 43.4 +1.5
      comp=Z,3.4nm,0.9s,baz=108,slow=8.6,SNR=1.9
      comp=Z,3.4nm,0.9s
HFS   Hagfors         42.45 322  LR    LR    16 31 07.9
      comp=Z,38nm,18.0s,baz=124,slow=41
NC303 NORSAR Array S  43.74 324  P     P     16 10 03.5 -1.3
NB2   NORSAR Subarra  43.79 323  P     P     16 10 06.3 +1.1
      comp=Z,1.2nm,0.5s,baz=99,slow=8.6
NOA   NORSAR Array B  43.79 323  P     P     16 10 06.1 +0.9
      comp=Z,1.8nm,0.6s,baz=99,slow=8.0,SNR=9.3
NOA                              LR    LR    16 32 09.3
      comp=Z,19nm,18.1s,baz=5.0,slow=41
      comp=Z,1.8nm,0.6s
NC204 NORSAR Array S  44.04 324  P     P     16 10 05.4 -1.8
KSRS  Korea Array     46.43  70  LR    LR    16 32 24.1
      comp=Z,22nm,19.3s,baz=325,slow=39
TIXI  Tiksi           46.71  22  P     P     16 10 28.0 -0.1
TIXI                             IAmb  IAmb  16 10 30.8
      comp=Z,3.4nm,0.9s
ESDC  Sonseca Array   56.30 297  P     P     16 11 40.1 -0.3
      comp=Z,0.5nm,0.7s,baz=54,slow=8.5,SNR=5.7
      comp=Z,0.5nm,0.7s
ESDC  Sonseca Array   56.30 297  IAmb  IAmb  16 12 02.4
      comp=Z,1.7nm,1.2s
TOA0  Torodi Ar. Sit  64.20 268  P     P     16 12 34.7 +0.1
TORD  Torodi Ar. Bea  64.20 268  P     P     16 12 34.3 -0.4
      comp=Z,1.4nm,0.5s,baz=42,slow=5.8,SNR=7.4
TOLK  Toolik Lake Re  71.68  14  P     P     16 13 21.6 +0.7
TOLK                             IAmb  IAmb  16 13 22.7
      comp=Z,2.0nm,0.7s
IMAR  Indian Mountai  73.00  17  P     P     16 13 29.6 +0.8
H24K  Noodor Dome     74.43  15  P     P     16 13 38.5 +1.3
H24K                             IAmb  IAmb  16 14 16.2
      comp=Z,4.1nm,1.6s
ILAR  Eielson Array   75.56  15  P     P     16 13 43.8  0.0
      comp=Z,0.2nm,0.4s,baz=311,slow=4.8,SNR=4.3
      comp=Z,0.2nm,0.4s
YKA   Yellowknife Ar  81.70   2  P     P     16 14 18.3 +0.8
      comp=Z,0.2nm,0.6s,baz=352,slow=5.3,SNR=6.4
      comp=Z,0.2nm,0.6s
WRA   Warramunga Arr  83.08 121  P     P     16 14 24.1 -1.2
      comp=Z,0.6nm,0.7s,baz=324,slow=4.8,SNR=2.2
      comp=Z,0.6nm,0.7s
ASAR  Alice Springs   85.28 124  P     P     16 14 35.3 -1.2
      comp=Z,0.5nm,0.5s,baz=314,slow=4.7,SNR=14
      comp=Z,0.5nm,0.5s
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*IDC **12** 16:03:15.4±0.8, 32°.66N×130°.55E, h0^{km}, mb3.8/16, mbtmp3.8/19, ML3.6/3, MS3.1/8, Error ellipse: s-maj=17.6km s-min=8.2km az=133.0*

*JMA **12** 16:03:18.2±0.0, 32°.7N±0°.1×130°.7E±0°.1, h13^{km}, MD4.1/20, MW4.0/20, NW KUMAMOTO PREF*

JMA Felt IV J1 at NW KUMAMOTO PREF .

*NEIC **12** 16:03:18.1±1.6, 32°.71N±0°.02×130°.57E±0°.07, h8^{km}±5^{km}, mb4.5/19, Error ellipse: s-maj=8.4km s-min=3.1km az=102.0*

*NIED **12** 16:03:18.2, 32°.71N×130°.67E, h13^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.95; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-0.14; $M_{r\theta}$-0.38; $M_{\theta\phi}$-0.02; $M_{\phi r}$0.17; Fault plane solution: $M_0$1.10000×10^{15} NP1: ϕ_s260.00000°, δ36.00000°, λ-107.00000°. NP2: ϕ_s101.00000°, δ56.00000°, λ-78.00000°.*

ISC 12 16:03:18.0±0.9**, 32°.71N**±0°.03×**130°.63E**±0°.05**, h14**^{km}±6^{km}**,** **n100,** σ**1**^{s}.**09**/80**, mb4.2**/28**, MS3.3**/6**, Kyushu**

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Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                 Op    ISC   h  m  s     ISC
JIU3  Izumi3           0.22 135  eP    Pg    16 03 22.6 -0.3
JIU3                             eS    Sg    16 03 25.9 -0.3
JIU3  Izumi3           0.22 135  A     A     16 03 22.6
      comp=E,40nm,0.3s,comp=E,53nm,1.4s
JTA   Tamana           0.27 343  eP    Pg    16 03 24.1 +0.4
JTA                              eS    Sg    16 03 28.0 +0.4
JTA   Tamana           0.27 343  A     A     16 03 24.1
      comp=E,14nm,5.7s,comp=E,17nm,0.3s
JNU   Nakatsue         0.47  27  Pg    Pg    16 03 26.6 -0.7
      799nm,0.3s,baz=180,slow=11,SNR=1653
JNU                              Lg    Lg    16 03 32.9
      5μm,0.3s,baz=252,slow=20,SNR=54
JNU   Nakatsue         0.47  27  Pg    Pg    16 03 27.3 -0.1
JNU                              Sg    Sg    16 03 33.3 -0.3
JNU   Nakatsue         0.47  27  A     A     16 03 27.1
      comp=E,12nm,1.0s,comp=E,9.0nm,0.7s
JHD   Hondo            0.48 240  A     A     16 03 28.1
      comp=E,13nm,2.0s,comp=E,24nm,0.8s
JZO   Okuchi           0.56 182  A     A     16 03 29.1
      comp=E,14nm,0.3s,comp=E,14nm,0.5s
JUR   Ureshino         0.69 304  A     A     16 03 31.9
      comp=E,7.0nm,0.6s,comp=E,5.0nm,6.5s
JKIT  Kitakata         0.70  96  A     A     16 03 31.0
      comp=E,8.0nm,0.3s,comp=E,11nm,0.2s
JFI   Itaya            0.75 345  A     A     16 03 32.5
      comp=E,11nm,0.3s,comp=E,13nm,0.2s
JTSN  Tsuno            0.87 121  A     A     16 03 34.0
      comp=E,6.0nm,0.8s,comp=E,25nm,0.3s
JTZ   Takazaki         0.89 154 i P    Pb    16 03 35.2 -0.1
JTZ                              S     Sb    16 03 47.2 +0.1
JTZ   Takazaki         0.89 154  A     A     16 03 35.2
      comp=E,10.0nm,1.2s,comp=E,9.0nm,0.4s
JHHC  Hyugahichiya     0.89 107  A     A     16 03 34.4
      comp=E,9.0nm,0.6s,comp=E,9.0nm,1.2s
JBEP  Beppuamama       0.91  46  A     A     16 03 34.8
      comp=E,11nm,0.9s,comp=E,14nm,1.1s
JUS   Usuki            1.01  69  A     A     16 03 36.5
      comp=E,6.0nm,0.5s,comp=E,11nm,0.5s
JFA   Akaike           1.01   8  A     A     16 03 37.0
      comp=E,6.0nm,2.2s,comp=E,13nm,0.7s
JSU   Suzuyama         1.20 187        Pb    16 03 40.3 -0.4
JSU   Suzuyama         1.20 187  A     A     16 03 40.4
      comp=E,2.0nm,0.7s,comp=E,5.0nm,0.4s
JKI   Kunimi           1.22  40  A     A     16 03 40.2
      comp=E,16nm,0.9s,comp=E,15nm,0.6s
JNKG  Nichinankitago   1.22 148  A     A     16 03 40.3
      comp=E,6.0nm,0.9s,comp=E,6.0nm,1.6s
JNAR  Kushima--Naru    1.30 155  A     A     16 03 41.5
      comp=E,7.0nm,1.0s,comp=E,5.0nm,1.7s
JII   Iki              1.32 326  A     A     16 03 42.5
      comp=E,11nm,1.7s,comp=E,7.0nm,4.3s
JTY   Toyota           1.60  13  A     A     16 03 46.4
      comp=E,4.0nm,0.5s,comp=E,6.0nm,0.8s
JTU   Tsushima         2.08 331        Pn    16 03 52.3 -0.3
JTU                              Sn    Sb    16 04 22.2 +0.8
JTU   Tsushima         2.08 331  A     A     16 03 53.9
      comp=E,4.0nm,1.4s,comp=E,3.0nm,1.2s
JHIK  Hikimi           2.12  30  A     A     16 03 53.9
      comp=E,2.0nm,7.8s,comp=E,2.0nm,5.9s
JMN   Monobe           2.91  69  Pn    Pn    16 04 05.2 +1.2
JHS   Saijyo           3.09  41        Pn    16 04 07.2 +0.8
NAWB  Namwon           3.81 316        Pn    16 04 16.6 +0.2
TJN   Taejon           4.55 325        Pn    16 04 27.2 +0.7
KSCHJ Chungju          4.70 333        Pn    16 04 29.2 +0.6
KSRS  Korea Array      5.23 336  Pn    Pn    16 04 36.0 +0.1
      0.8nm,0.3s,baz=153,slow=15,SNR=7.1
KSRS                             Lg    Lg    16 05 59.5
      5.6nm,0.3s,baz=161,slow=31,SNR=9.8
KSRS                             LR    LR    16 06 55.6
      comp=Z,111nm,19.9s,baz=165,slow=42
      1.6nm,0.3s
KSAR  Wonju Array Be   5.23 335        Pn    16 04 36.7 +0.8
KS19  Wonju Array Si   5.29 335        Pn    16 04 36.9 +0.2
INCN  Inchon           5.78 327  Pn    Pn    16 04 42.7 -0.8
SEHB  SEOHWA           5.88 341  Pn    Pn    16 04 46.0 +1.2
INU   Inuyama          5.92  62  Pn    Pn    16 04 46.4 +1.0
JOW   Kunigami         6.20 200  Pn    Pn    16 04 52.0 +2.8
      4.6nm,0.3s,baz=91,slow=18,SNR=27
JOW   Kunigami         6.20 200  Pn    Pn    16 04 49.7 +0.5
JGF   Kuroka           6.28  61  Pn    Pn    16 04 50.7 +0.4
MAJO  Matsushiro       7.33  56        Pn    16 05 06.3 +1.7
MJB9  Matsu-Tunnel     7.33  56        Pn    16 05 06.2 +1.5
MJAR  Matsushiro Arr   7.33  56  Pn    Pn    16 05 06.1 +1.4
      0.4nm,0.3s,baz=246,slow=13,SNR=17
MJAR                             Lg    Lg    16 07 09.8
      baz=306,slow=18,SNR=2.5
MJAR                             LR    LR    16 08 16.8
      comp=Z,52nm,21.5s,baz=282,slow=41
      6.5nm,0.5s
MJAR  Matsushiro Arr   7.33  56        Pn    16 05 05.5 +0.8
JHJ   Hachijo jima 2   7.71  84  Pn    Pn    16 05 10.9 +1.0
      25nm,0.3s,baz=260,slow=23,SNR=22
      49nm,0.3s
JHJ2  Mitsune          7.74  85  Pn    Pn    16 05 10.9 +0.6
JSD   Sado             8.19  47  Pn    Pn    16 05 18.0 +1.5
CN2   Changchun       11.80 341  eP    Pn    16 06 03.2 -2.7
CN2                              eS    Sn    16 08 15.2 -2.2
CN2                              pmax  pmax
      comp=Z,10.0nm,1.2s
CN2                              pmax  pmax
      comp=Z,100nm,3.0s
CN2                              LR    LR
      comp=N,400nm,11.0s
CN2                              LR    LR
      comp=E,300nm,11.0s
CN2                              LR    LR
      comp=Z,300nm,14.0s
ASAJ  Asahikawa       14.74  36  LR    LR    16 11 35.8
      comp=Z,35nm,18.9s,baz=33,slow=34
HHC   Hu-ho-hao-te    17.28 303  eP    Pn    16 07 19.0  0.0
HHC                              pmax  pmax
      comp=Z,41nm,0.9s
HHC                              pmax  pmax
      comp=Z,110nm,3.8s
HHC                              LR    LR
      comp=E,310nm,9.5s
HHC                              LR    LR
      comp=Z,300nm,10.5s
BTO   Baotou          18.29 301  eP    P     16 07 34.4 +2.8
BTO                              S     S     16 11 02.4 +1.9
BTO                              LR    LR
      comp=N,350nm,9.9s
BTO                              LR    LR
      comp=E,350nm,9.8s
SONM  Songino Array   23.74 317  P     P     16 08 30.2 +0.3
      comp=E,0.7nm,0.6s,baz=129,slow=8.6,SNR=3.7
      comp=E,0.7nm,0.6s
GTA   Gaotai          25.71 294  eP    P     16 08 50.0 +1.9
GTA                              pP    sP    16 08 53.9  0.0
GTA                              pmax  pmax
      comp=Z,3.0nm,0.9s
GTA                              pmax  pmax
      comp=Z,100nm,4.8s
GTA                              LR    LR
      comp=N,140nm,13.1s
GTA                              LR    LR
      comp=E,97nm,12.3s
GTA                              LR    LR
      comp=Z,130nm,10.8s
PZH   PanZhiHua       25.82 264  P     P     16 08 48.8 -0.3
PZH                              pmax  pmax
      comp=Z,10.0nm,0.5s
PZH                              pmax  pmax
```

	comp=Z,40nm,3.5s						
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,40nm,3.5s						
DAV	Davao City (W)	25.93	192	LR	LR	16 19 10.4	
	comp=Z,89nm,19.9s,baz=286,slow=37						
CMAR	Chiang Mai Arr	31.76	251	P	P	16 09 42.0	0.0
	comp=Z,0.2nm,0.3s,baz=168,slow=9.2,SNR=1.3						
	comp=Z,0.2nm,0.3s						
WMQ	Urumqi	35.13	301	*e*P	P	16 10 12.4	+1.2
ZALV	Zalesovo Beam	38.63	317	P	P	16 10 39.6	-1.2
	comp=Z,0.3nm,0.3s,baz=118,slow=12,SNR=2.2						
	comp=Z,0.3nm,0.3s						
MKAR	Makanchi Array	39.12	306	P	P	16 10 43.8	-1.2
	comp=Z,0.6nm,0.8s,baz=114,slow=6.5,SNR=3.3						
	comp=Z,0.6nm,0.8s						
BILL	Bilibino	40.89	20	P	P	16 10 59.3	0.0
KURK	Kurchatov	41.84	311	P	P	16 11 06.0	-1.4
KURBB	Kurchatov Arra	41.89	311	P	P	16 11 07.8	0.0
	comp=Z,1.4nm,0.8s,baz=97,slow=8.7,SNR=5.6						
	comp=Z,1.4nm,0.8s						
GSTR	Great Sitkin T	42.78	47	P	P	16 11 15.6	+0.5
NRIK	Noril'sk	43.84	340	P	P	16 11 23.0	-0.4
	comp=Z,2.3nm,0.7s,baz=129,slow=9.3,SNR=5.7						
	comp=Z,2.3nm,0.7s						
AAK	Ala-Archa	44.80	300	LR	LR	16 31 03.2	
	comp=Z,33nm,18.4s,baz=216,slow=37						
BRVK	Borovoye	47.11	314	P	P	16 11 50.3	+0.8
BRVK				IAmb	IAmb	16 11 54.7	
	comp=Z,4.2nm,0.6s						
KK31	Karatay Array	47.64	301	P	P	16 11 54.5	+0.7
KK31				IAmb	IAmb	16 11 55.5	
	comp=Z,3.9nm,0.9s						
KKAR	Karatay Array	47.64	301	P	P	16 11 54.1	+0.3
KKAR	Karatay Array	47.64	301	P	P	16 11 54.2	+0.4
KKAR				IAmb	IAmb	16 11 55.5	
	comp=Z,3.9nm,0.9s						
ABKAR	Akbulak array	53.92	310	P	P	16 12 41.2	+0.2
ABKAR	Akbulak array	53.92	310	P	P	16 12 41.4	+0.4
ABKAR				IAmb	IAmb	16 12 45.5	
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	56.14	176	P	P	16 12 55.8	-1.5
	comp=Z,0.3nm,0.9s,baz=358,slow=5.4,SNR=1.7						
	comp=Z,0.3nm,0.9s						
MDM	Murphy Dome	57.19	30	P	P	16 13 05.2	+0.9
MDM				IAmb	IAmb	16 13 06.5	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	57.78	30	P	P	16 13 07.8	-0.7
	comp=Z,0.6nm,0.7s,baz=288,slow=8.3,SNR=10.0						
	comp=Z,0.6nm,0.7s						
N25K	Chitina, Valde	59.40	34	P	P	16 13 21.8	+1.9
M26K	Nabesna, AK	59.95	32	P	P	16 13 25.1	+1.5
M26K				IAmb	IAmb	16 13 25.8	
	comp=Z,4.0nm,0.8s						
VRDI	Verde Repeater	60.02	34	P	P	16 13 25.2	+0.8
BERG	Berg Lake	60.11	35	P	P	16 13 26.2	+1.5
EGAK	Eagle	60.19	30	P	P	16 13 27.2	+2.1
EGAK				IAmb	IAmb	16 14 33.8	
	comp=Z,3.8nm,1.3s						
L27K	Beaver Creek,	60.32	32	P	P	16 13 27.3	+1.1
L27K				IAmb	IAmb	16 13 28.5	
	comp=Z,2.0nm,0.8s						
BCAR	Beaver Creek A	60.34	32	P	P	16 13 27.7	+1.4
M27K	Edge Creek, AK	60.47	32	P	P	16 13 28.1	+0.8
M27K				IAmb	IAmb	16 13 33.8	
	comp=Z,2.4nm,0.8s						
EPYK	Eagle Plains	61.55	27	P	P	16 13 35.0	+0.5
EPYK				IAmb	IAmb	16 13 36.3	
	comp=Z,4.4nm,0.8s						
INK	Inuvik	62.14	25	P	P	16 13 38.5	+0.2
	comp=Z,0.9nm,0.6s,baz=333,slow=5.9,SNR=7.5						
	comp=Z,0.9nm,0.6s						
INK	Inuvik	62.14	25	P	P	16 13 38.1	-0.2
INK				IAmb	IAmb	16 14 46.1	
	comp=Z,3.7nm,1.2s						
KBZ	Khabaz	66.76	308	P	P	16 14 09.1	+0.2
	comp=Z,1.6nm,0.8s,baz=40,slow=14,SNR=2.5						
	comp=Z,1.6nm,0.8s						
FIA1	FINESS Array S	68.29	330	P	P	16 14 17.0	-1.3
FINES	FINESS Array B	68.30	330	P	P	16 14 17.3	-1.0
	comp=Z,1.1nm,0.4s,baz=65,slow=6.4,SNR=15						
	comp=Z,1.1nm,0.4s						
FINES	FINESS Array B	68.30	330	P	P	16 14 17.6	-0.8
RES	Resolute Bay	68.81	12	LR	LR	16 46 47.7	
	comp=Z,13nm,19.0s,baz=66,slow=38						
YKA	Yellowknife Ar	71.80	26	P	P	16 14 39.7	-0.1
	comp=Z,0.2nm,0.6s,baz=354,slow=4.8,SNR=4.8						
	comp=Z,0.2nm,0.6s						
AKASG	Malin Array Be	72.00	319	P	P	16 14 40.5	-0.7
	comp=Z,1.4nm,0.6s,baz=56,slow=7.0,SNR=5.9						
	comp=Z,1.4nm,0.6s						
AKBB	Malin Array Si	72.00	319	P	P	16 14 40.3	-0.9
AKBB				IAmb	IAmb	16 15 04.6	
	comp=Z,4.4nm,0.9s						
NOA	NORSAR Array B	74.44	334	P	P	16 14 54.6	-0.9
	comp=Z,1.4nm,0.8s,baz=48,slow=5.9,SNR=3.5						
NOA				LR	LR	16 53 08.0	
	comp=Z,12nm,18.3s,baz=190,slow=40						
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	74.74	307	P	P	16 14 57.5	-0.3
	comp=Z,1.0nm,0.8s,baz=114,slow=6.1,SNR=6.1						
	comp=Z,1.0nm,0.8s						
FRB	Frobisher Bay	82.68	8	LR	LR	16 53 21.9	
	comp=Z,12nm,19.4s,baz=324,slow=36						
NVAR	Mina Array Bea	84.56	47	P	P	16 15 51.0	-0.3
	comp=Z,0.5nm,0.7s,baz=309,slow=4.9,SNR=3.9						
	comp=Z,0.5nm,0.7s						

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*PGC **12** 16:29:37.8, 56.°09N×130.°24W, h1^{km}, ML3.1/18, 23km Wnw of Stewart, Bc Southeastern Alaska*

*NEIC **12** 16:29:37.8±0.7, 56.°07N±0.°04×130.°25W±0.°07, h4^{km}±7^{km}, Error ellipse: s-maj=7.9km s-min=3.4km az=223.0*

*AEIC **12** 16:29:39±0.7, 56.°05N±0.°04×130.°23W±0.°07, h4^{km}±6^{km}, Error ellipse: s-maj=7.7km s-min=3.1km az=224.0*

ISC 12 16:29:37.0±0.8**, 56.°11N**±0.°02×**130.°19W**±0.°03**, h10**^{km}**, n42, σ1.^{s}98**/62**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAK	Wrangell Islan	1.24	286		Pn	16 30 00.8	+0.4
WRAK	Wrangell Islan	1.24	286		Sn	16 30 17.6	+0.4
CRAG	Craig	1.77	250		Pn	16 30 08.6	+0.9
CRAG	Craig	1.77	250	IAML		16 30 36.8	
	comp=E,174nm,0.6s						
RUBB	Prince Rupert	1.78	181		Pn	16 30 08.3	+0.5
RUBB				IAML		16 30 35.7	
	comp=E,223nm,0.3s						
RUBB				IAML		16 30 36.4	
	comp=N,126nm,0.4s						
RUBB	Prince Rupert	1.78	181	Pn	Pn	16 30 08.8	+1.0
RUBB				Sn	Sn	16 30 31.0	+0.5
RUBB				Sg	Sg	16 30 34.1	-0.2
KITB	Kitimat	2.22	156	Pn	Pn	16 30 14.5	+0.6
KITB				Sg	Sb	16 30 45.9	+1.2
KITB	Kitimat	2.22	156	Pn	Pn	16 30 14.5	+0.6
KITB				Sg	Sb	16 30 45.9	+1.2
MBLB	Minette Bay Lo	2.26	156	Sn	Sn	16 30 40.9	-1.4
MBLB				Sg	Sb	16 30 47.6	+1.7
GRNB	Grenville Isla	2.27	177		Pn	16 30 15.3	+0.8
GRNB				IAML		16 30 49.4	
	comp=E,145nm,0.3s						
GRNB				IAML		16 30 50.7	
	comp=N,98nm,0.3s						
GRNB	Grenville Isla	2.27	177	Pn	Pn	16 30 15.6	+1.0
GRNB				Sn	Sn	16 30 43.9	+1.4
GRNB				Sg	Sg	16 30 48.0	-1.8
DLBC	Dease Lake	2.34	2		Pn	16 30 17.7	+2.1
DLBC				IAML		16 30 53.7	
	comp=E,107nm,0.8s						
DLBC	Dease Lake	2.34	2	Pn	Pn	16 30 18.1	+2.5
DLBC				Sn	Sn	16 30 42.3	-2.2
DLBC				Sg	Sb	16 30 51.0	+2.8
LIB	Langara Island	2.48	223	Pn	Pn	16 30 18.0	+0.6
LIB	Langara Island	2.48	223	Pn	Pn	16 30 18.0	+0.6
HWKB	Hawksbury Isla	2.58	166	Sg	Sb	16 30 57.5	+2.3
BNAB	Bonilla	2.63	186		Pn	16 30 20.2	+0.8
BNAB	Bonilla	2.63	186	Pn	Pn	16 30 20.4	+1.0
BNAB				Sg	Sg	16 30 58.8	-2.6
BNKB	Banks Island	2.79	176	Pn	Pn	16 30 22.6	+1.0
BNKB	Banks Island	2.79	176	Pn	Pn	16 30 22.6	+1.0
BNKB				Sn	Sn	16 30 54.9	-0.4
BNKB				Sg	Sb	16 31 03.2	+2.3
MOBC	Moresby Island	3.14	200		Pn	16 30 27.4	+0.8
MOBC	Moresby Island	3.14	200	Pn	Pn	16 30 27.4	+0.8
MOBC				Sg	Sb	16 31 12.9	+1.6
JIS	Juneau Island	3.15	315		Pn	16 30 28.6	+2.0
JIS				IAML		16 31 25.1	
	comp=N,36nm,0.6s						
JIS				IAML		16 31 25.5	
	comp=E,36nm,0.5s						
DIB	Dawson Inlet,	3.20	205		Pn	16 30 28.3	+1.1
DIB	Dawson Inlet,	3.20	205	Pn	Pn	16 30 28.4	+1.1
DIB				Sn	Sn	16 31 05.6	+0.2
BUTB	Butedale	3.21	161	Pn	Pn	16 30 29.4	+1.9
BUTB				Sg	Sb	16 31 16.4	+3.1
HG1B	Mitchell Dam	3.37	200	Pn	Pn	16 30 31.0	+1.4
BESE	Bessie Mountai	3.54	316		Pn	16 30 33.8	+1.7
BESE	Bessie Mountai	3.54	316	Pn	Pb	16 30 42.2	+2.4
BESE				Sg	Sg	16 31 28.6	-2.1
BNB	Barry Inlet	3.65	195	Pn	Pn	16 30 34.9	+1.2
FSB	Fort Saint Jam	3.73	114	Pg	Pb	16 30 44.3	+1.3
FSJB	Fort St James	3.75	114	Pg	Pb	16 30 45.8	+2.4
FSJB				Sg	Sg	16 31 35.8	-1.6
HG4B	Hotspring	3.87	189	Pn	Pn	16 30 37.9	+1.4
HG4B	Hotspring	3.87	189	Pn	Pn	16 30 38.1	+1.6
HG4B				Sg	Sg	16 31 37.7	-3.3
WTLY	Watson Lake, Y	4.09	10	Sg	Sg	16 31 48.3	+0.2
BBB	Bella Bella	4.11	162	Pg	Pb	16 30 50.6	+1.1
BBB				Sg	Sg	16 31 44.3	-4.7
NBC5	NorthernBC 5	4.37	68	Pn	Pn	16 30 42.9	-0.6
UBRB	Upper Baezaeko	4.80	130		Pn	16 30 49.9	+0.5
UBRB	Upper Baezaeko	4.80	130	Pn	Pn	16 30 49.7	+0.3
UBRB				Sg	Sg	16 32 07.6	-3.4
WHY	Whitehorse	5.19	334	Pn	Pn	16 30 56.4	+1.6
NBC4	NorthernBC 4	5.38	91	Sg	Sg	16 32 24.9	-4.6
HYT	Haines Junctio	6.09	324	Pg	Pg	16 31 30.4	-3.1
HYT				Sg	Sg	16 32 46.7	-5.7

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*IDC **12** 16:36:52.4±5.0, 8.°00S×124.°05E, h150^{km}±60^{km}, mb3.2/4, mbtmp3.7/7, Error ellipse: s-maj=89.6km s-min=26.4km az=47.0*

*DJA **12** 16:36:52.6±0.5, 8°S±8°×12°4E±°, h171^{km}±4^{km}, M3.8/8, mb4.1/7, MLv3.7/8*

ISC 12 16:36:51.5±0.7**, 8.°06S**±0.°07×**124.°11E**±0.°08**, h150**^{km}**, n26, σ2.^{s}52**/29**, mb3.5**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.70	175	P	Pn	16 37 26.4	+3.0
SOEI	Soe	1.70	175	P	Pn	16 37 26.4	+3.0
MMRI	Maumere	1.94	253	P	Pn	16 37 26.9	+0.9
MMRI	Maumere	1.94	253	P	Pn	16 37 27.4	+1.4
BATI	Baumata	2.18	192	P	Pn	16 37 30.9	+2.0
	200nm,0.4s,baz=347,slow=5.3,SNR=115						
BATI				S	Sn	16 37 59.7	+2.0
	91nm,0.3s,baz=295,slow=19,SNR=9.3						
BATI	Baumata	2.18	192	P	Pn	16 37 30.7	+1.8
EDFI	Ende, Flores	2.50	254	P	Pn	16 37 33.6	+0.9
WBSI	Waikabubak, Su	4.93	251	P	Pn	16 38 01.7	-2.3
SANI	Sanana	6.25	17	P	Pn	16 38 19.8	-1.9
PLAI	Plampang	6.32	263	P	Pn	16 38 21.4	-1.1
	0.2nm30nm,0.9s						
PLAI	Plampang	6.32	263	P	Pn	16 38 21.9	-0.6
MTN	Manton Dam	8.38	125	P	Pn	16 38 52.4	+2.3
IGBI	Denpasar	8.90	264	P	Pn	16 38 55.7	-1.4
	37nm,0.9s						
KDU	Kakadu	9.42	120	P	Pn	16 39 06.2	+2.3
UGM	Wanagama	13.46	270	P	Pn	16 39 55.3	-1.5
	137nm,1.6s						
WRA	Warramunga Arr	15.42	141	P	P	16 40 22.9	+0.4
	0.9nm,0.4s,baz=320,slow=13,SNR=18						
WRA				S	Sn	16 43 04.9	-7.9
	0.6nm,0.4s,baz=315,slow=23,SNR=2.6						
WRAB	Tennant Creek	15.42	141	P	P	16 40 24.0	+1.5
WRKA	Warakurna	17.35	167	P	Pn	16 40 46.8	+2.1
ASAR	Alice Springs	18.14	150	P	Pn	16 40 54.8	+0.6
	1.0nm,0.7s,baz=330,slow=12,SNR=26						
ASAR				S	S	16 44 07.0	-5.5
	0.3nm,0.8s,baz=62,slow=3.0,SNR=1.6						
MEEK	Meekatharra	19.20	195	P	Pn	16 41 06.7	+0.1
QIS	Mount Isa	19.46	131	P	Pn	16 41 09.6	0.0
COEN	Coen	19.60	109	P	P	16 41 10.5	+2.1
CMAR	Chiang Mai Arr	36.21	317	P	P	16 43 40.9	+0.8
	0.2nm,0.6s,baz=144,slow=7.8,SNR=2.1						
	0.2nm,0.6s						
SONM	Songino Array	57.81	346	P	P	16 46 27.3	0.0
	0.2nm,0.4s,baz=142,slow=7.3,SNR=1.7						
	0.2nm,0.4s						
MKAR	Makanchi Array	66.06	330	P	P	16 47 22.4	+0.1
	0.8nm,0.5s,baz=133,slow=7.8,SNR=15						
	0.8nm,0.5s						
ZALV	Zalesovo Beam	70.08	337	P	P	16 47 47.1	0.0
	0.4nm,0.4s,baz=108,slow=4.7,SNR=2.0						
	0.4nm,0.4s						

IDC 12 17:00:41.0±423.0**, 50.°90N**×**45.°50E, h0**^{km}**, Error ellipse: s-maj=154.7km s-min=133.7km az=133.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	7.61	323	*i*		17 49 10.0	
	baz=137,slow=331,SNR=1.2						
I31KZ	AKTYUBINSK INF	7.99	89	*i*		17 48 10.0	
	0.1nm,0.7s,baz=280,slow=318,SNR=2.8						
I46RU	ZALESOVO INFRA	23.96	67	*i*		19 28 10.0	
	baz=278,slow=322,SNR=1.8						

KRSC 12 17:01:39.1±1.9**, 51.°69N**×**169.°87E, h20**^{km}±78^{km}**, ML3.9, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	4.22	328	S	Sn	17 03 34.1	+3.2
MKZ	Mys Kozlova	5.68	304	*e*P	Pn	17 03 06.0	+3.8
MKZ				*e*S	Sn	17 04 11.8	+5.0
SPN	Mys Shipunski	6.19	287	*e*P	Pn	17 03 13.4	+4.1
SPN				*e*S	Sn	17 04 24.6	+5.2
NLC	Nalytchevo	6.61	287	*e*S	Sn	17 04 34.9	+5.3
TUMD	Tumrok D	6.66	306	*e*P	Pn	17 03 20.9	+5.1
TUMD				*e*S	Sn	17 04 37.0	+6.0
KII	Karymskiy	6.74	295	*e*P	Pn	17 03 21.1	+4.3
KII				*e*S	Sn	17 04 37.8	+4.9
TUMR	Tumrok	6.83	306	*e*P	Pn	17 03 22.3	+4.2
SDLR	Sedlovina	6.90	288	*e*P	Pn	17 03 24.3	+5.2
UGLR	Uglovaya	6.92	287	*e*P	Pn	17 03 24.8	+5.4
DALK	Dalny	6.94	286	*e*P	Pn	17 03 24.2	+4.6
DALK				*e*S	Sn	17 04 42.6	+4.8
KRER	Koryakskii	6.98	288	*e*P	Pn	17 03 26.8	+6.5
AVH	Avacha	6.98	287	*e*P	Pn	17 03 26.2	+6.0
RUS	Russkaya	7.05	281	*e*P	Pn	17 03 25.7	+4.7
RUS				*e*S	Sn	17 04 45.6	+5.2
KOK	Koryaka	7.05	288	*e*P	Pn	17 03 26.3	+5.2
KRX	Arik	7.05	288	*e*P	Pn	17 03 26.1	+4.9
MTVR	Mutnovka	7.25	281	*e*P	Pn	17 03 28.8	+4.9
MTVR				*e*S	Sn	17 04 50.9	+5.3
KRMR	Karymshinskiy	7.30	284	*e*P	Pn	17 03 30.1	+5.6
KRMR				*e*S	Sn	17 04 52.2	+5.6
GRL	Gorelyy	7.32	281	*e*P	Pn	17 03 31.2	+6.3
KDTR	Khodutka, Kamc	7.33	276	*e*P	Pn	17 03 29.1	+4.3
KDTR				*e*S	Sn	17 04 51.6	+4.3
ASAK	Asacha	7.42	280	*e*P	Pn	17 03 31.6	+5.4
ASAK				*e*S	Sn	17 04 55.6	+5.9
GNL	Ganaly	7.53	290	*e*P	Pn	17 03 34.6	+6.9

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*IDC **12** 17:09:11.0±1.4, 5.°90S×129.°91E, h174^{km}±20^{km}, mb3.3/2, mbtmp4.4/7, MS3.3/1, Error ellipse: s-maj=20.5km s-min=13.2km az=111.0*

*NEIC **12** 17:09:12.1±2.1, 5.°82S±0.°09×129.°94E±0.°06, h196^{km}±10^{km}, mb4.6/10, Error ellipse: s-maj=13.0km s-min=9.0km az=193.0*

*DJA **12** 17:09:13.1±0.2, 6°S±3°×13°0E±°, h211^{km}±5^{km}, M4.5/19, mB5.2/5, mb4.3/19, MLv4.6/13, Mw(mB)4.6/5*

ISC 12 17:09:12.0±0.6**, 5.°91S**±0.°05×**129.°93E**±0.°06**, h200**^{km}**, n66, σ1.^{s}63**/67**, mb4.5**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.38	359	P	Pn	17 09 47.8	+3.1
SAUI	Saumlaki	2.47	147	Pn	Pn	17 09 56.8	+1.3
SAUI	Saumlaki	2.47	147	P	Pn	17 09 57.6	+2.1
MSAI	Masohi	2.73	339	P	Pn	17 10 00.6	+2.0
AAI	Ambon	2.81	322	P	Pn	17 10 02.5	+3.1
SIJI	Sorong	5.18	15	P	Pn	17 10 29.0	+0.2
	172nm,0.3s,baz=207,slow=16,SNR=241						
SIJI				S	Sn	17 11 26.0	-3.4
	104nm,0.2s,baz=210,slow=20,SNR=16						
SWI	Sorong	5.18	15	P	Pn	17 10 29.0	+0.2
	1.8nm7μm212nm,0.4s						
SANI	Sanana	5.49	314	P	Pn	17 10 34.9	+2.1
	0.2nm58nm,0.8s						
SANI	Sanana	5.49	314	P	Pn	17 10 35.3	+2.5
LBMI	Labuha	5.77	335	P	Pn	17 10 38.5	+2.1
	0.5nm35nm,0.7s						
SOEI	Soe	6.79	235	Pn	Pn	17 10 50.6	+0.9
SOEI	Soe	6.79	235	P	Pn	17 10 51.3	+1.7
	0.4nm29nm,0.7s						
SOEI	Soe	6.79	235	P	Pn	17 10 51.5	+1.9
MTN	Manton Dam	6.99	170		Pn	17 10 51.4	-0.8
MTN	Manton Dam	6.99	170	P	Pn	17 10 51.5	-0.7
TNTI	Ternate	7.11	339	Pn	Pn	17 10 54.7	+0.9
KDU	Kakadu	7.19	160	P	Pn	17 10 54.0	-0.7
SRPI	Serui, Papua	7.46	58	P	Pn	17 10 59.1	+0.8
BATI	Baumata	7.53	235	P	Pn	17 10 59.5	+0.2
	60nm,0.5s,baz=67,slow=7.7,SNR=47						
BATI				S	Sn	17 12 21.6	-2.9
	70nm,0.7s,baz=53,slow=20,SNR=4.0						
BATI	Baumata	7.53	235	P	Pn	17 10 59.6	+0.4
	0.3nm67nm,0.6s						
BAKI	Biak	7.74	53	P	Pn	17 11 03.4	+1.5
	170nm,0.7s						
MMRI	Maumere	8.10	250	Pn	Pn	17 11 09.1	+2.4
MMRI	Maumere	8.10	250	P	Pn	17 11 09.0	+2.4
	30nm,1.3s						
EDFI	Ende, Flores	8.65	250	P	Pn	17 11 16.5	+2.7
	8.7nm,0.7s						
GTOI	Gorontalo	9.49	313	P	Pn	17 11 29.7	+5.0
	5.4nm,0.6s						
KNRA	Kununurra	9.78	187		Pn	17 11 26.9	-1.5
KNRA	Kununurra	9.78	187	P	Pn	17 11 27.2	-1.2
WBSI	Waikabubak, Su	11.08	250	P	Pn	17 11 44.5	-0.8
	45nm,1.1s						
PLAI	Plampang	12.40	256	P	Pn	17 12 02.8	+0.8
	30nm,1.5s						
PLAI	Plampang	12.40	256	P	Pn	17 12 02.4	+0.4
WB0	Warramunga Arr	14.44	163	Pn	Pn	17 12 23.9	-3.6
WRAB	Tennant Creek	14.59	163	P	Pn	17 12 28.2	-1.1
WRA	Warramunga Arr	14.59	163	P	Pn	17 12 27.8	-1.6
	0.7nm,0.3s,baz=346,slow=13,SNR=18						
WRA				S	S	17 15 01.6	-10
	4.0nm,0.6s,baz=346,slow=24,SNR=9.1						
WB2	Warramunga Arr	14.60	163	Pn	Pn	17 12 27.3	-2.1
WR0	Warramunga Arr	14.67	163	Pn	Pn	17 12 28.2	-2.0
COEN	Coen	15.29	123	P	Pn	17 12 37.9	0.0
COEN				IAmb	IAmb	17 13 07.5	
	comp=Z,34nm,1.2s						
COEN	Coen	15.29	123	P	Pn	17 12 38.0	+0.1
JAGI	Jajag, Banyuwa	15.86	260		P	17 12 43.9	-0.7
JAGI	Jajag, Banyuwa	15.86	260	P	P	17 12 44.1	-0.4
	comp=Z,34nm,1.9s						
JAGI	Jajag, Banyuwa	15.86	260	P	P	17 12 44.2	-0.3
GMJI	Gumukmas	16.53	261	P	P	17 12 52.6	+0.7
	comp=Z,32nm,1.9s						
QIS	Mount Isa	17.33	148	P	P	17 13 01.2	+0.6
PMG	Port Moresby	17.42	103	P	Pn	17 13 03.8	+0.4
	comp=Z,27nm,0.8s,baz=299,slow=10,SNR=5.3						
AS31	Alice Springs	18.06	168	P	P	17 13 09.7	+1.0
ASAR	Alice Springs	18.07	168	P	P	17 13 09.6	+0.9
	comp=Z,11nm,0.6s,baz=350,slow=11,SNR=79						
ASAR				S	S	17 16 21.6	-3.7
	comp=Z,6.8nm,0.8s,baz=351,slow=21,SNR=24						
ASAR	Alice Springs	18.07	168	P	P	17 13 09.4	+0.8
MBWA	Marble Bar	18.10	212	P	P	17 13 09.5	+0.5
MBWA				IAmb	IAmb	17 13 10.3	
	comp=Z,12nm,0.8s						
MBWA	Marble Bar	18.10	212	P	P	17 13 09.7	+0.7
PSA00	Pilbara Seismi	18.38	211	P	P	17 13 12.7	+0.7
PSA00	Pilbara Seismi	18.38	211	P	P	17 13 11.9	-0.2
PSA00				IAmb	IAmb	17 13 13.9	
	comp=Z,8.2nm,0.9s						
PSA00	Pilbara Seismi	18.38	211	P	P	17 13 12.8	+0.7
MTSU	Mount Surprise	18.57	132	P	P	17 13 15.1	+0.9
WRKA	Warakurna	19.09	185	P	P	17 13 20.4	+0.7
CTA	Charters Tower	21.22	133	P	P	17 13 43.3	+0.8
	comp=Z,6.9nm,1.0s,baz=292,slow=11,SNR=1.9						
	comp=Z,6.9nm,1.0s						
OOD	Oodnadatta	22.44	167	P	P	17 13 54.5	+0.1
INKA	Innaminka	24.02	156	P	P	17 14 08.9	+0.2
MULG	Mulgathing	24.55	171	P	P	17 14 14.1	+0.6
FORT	Forrest	24.80	184	P	P	17 14 15.9	+0.2
FORT				IAmb	IAmb	17 15 06.6	
	comp=Z,14nm,0.8s						
FORT	Forrest	24.80	184	P	P	17 14 15.7	0.0
LCRK	Leigh Creek	25.62	163	P	P	17 14 23.2	+0.1
MORW	Morawa	26.52	208	P	P	17 14 32.0	+0.8
MORW				IAmb	IAmb	17 15 31.6	
	comp=Z,28nm,1.8s						
PSI	Prapat	32.15	285	LR	LR	17 31 28.6	
	comp=Z,48nm,18.6s,baz=142,slow=42						
SLVN	Son La	37.22	317	P	P	17 16 01.6	-2.8
CASY	Casey	61.76	189	P	P	17 19 12.1	+3.0
CASY				IAmb	IAmb	17 20 10.9	
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	67.28	327	P	P	17 19 46.6	+1.4
	comp=Z,0.2nm,0.4s,baz=115,slow=7.8,SNR=4.5						
	comp=Z,0.2nm,0.4s						
YAK	Yakutsk	67.74	360	P	P	17 19 48.4	+0.8
YAK				IAmb	IAmb	17 20 18.2	
	comp=Z,15nm,1.7s						

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*SOF **12** 17:33:21.8, 40.°04N×24.°86E, h3^{km}, MD3.6*

*ISK **12** 17:33:24.8, 40.°14N×24.°87E, h9^{km}, ML3.3/29*

*DDA **12** 17:33:25.3±0.0, 40.°14N×24.°78E, h8^{km}±3^{km}, ML3.2*

*THE **12** 17:33:25.9, 40.°12N×24.°87E, h7^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=1.1km s-min=0.4km az=27.0*

*ATH **12** 17:33:26.0, 40.°13N×24.°89E, h14^{km}±2^{km}, ML3.3/15, Error ellipse: s-maj=2.3km s-min=0.8km az=127.0*

ISC 12 17:33:25.3±1.0**, 40.°14N**±0.°02×**24.°87E**±0.°02**, h8**^{km}±9^{km}**, n118, σ0.^{s}80**/155**, 13C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.34	134	P	Pg	17 33 32.4	+0.5
LIA				S	Sg	17 33 36.7	+0.3
LIA				AML	AML	17 33 37.0	
	comp=N,21118μm,0.2s						
LIA				AML	AML	17 33 37.4	
	comp=E,39240μm,0.2s						
LIA	Limnos Island	0.34	134	P	Pg	17 33 32.5	+0.5
LIA				S	Sg	17 33 36.8	+0.4
	comp=E,15μm,0.2s						
THAS	Thassos island	0.48	347	P	Pb	17 33 35.5	-0.6
THAS				S	Sb	17 33 42.5	-0.9
THAS				AML	AML	17 33 43.0	
	comp=E,7370μm,0.3s						
THAS				AML	AML	17 33 44.2	
	comp=N,5609μm,0.3s						
THAS	Thassos island	0.48	347	P	Pb	17 33 35.7	-0.4
THAS				S	Sb	17 33 42.5	-0.9
	comp=N,3μm,0.2s						
EFSA	Agios Efstrati	0.60	171	P	Pb	17 33 38.2	+0.1
EFSA				S	Sb	17 33 46.5	-0.2
EFSA				AML	AML	17 33 47.2	
	comp=N,2692μm,0.3s						
EFSA				AML	AML	17 33 47.2	
	comp=E,6658μm,0.4s						
SMTH	Samothraki Isl	0.61	56	P	Pg	17 33 37.5	+0.5
SMTH				S	Sb	17 33 46.0	-1.0
SMTH				AML	AML	17 33 47.5	
	comp=E,4386μm,0.5s						
SMTH				AML	AML	17 33 47.5	
	comp=N,4011μm,0.4s						
SMTH	Samothraki Isl	0.61	56	P	Pb	17 33 37.7	-0.5
OUR	Ouranopolis	0.71	287	P	Pb	17 33 39.6	-0.3
OUR				S	Sb	17 33 49.8	0.0
OUR				AML	AML	17 33 51.8	
	comp=N,4258μm,0.4s						
OUR				AML	AML	17 33 52.2	
	comp=E,5024μm,0.4s						
OUR	Ouranopolis	0.71	287	P	Pb	17 33 39.9	0.0
OUR				S	Sb	17 33 50.2	+0.4
GADA	Gvkgeada	0.79	86	PG	Pb	17 33 41.0	-0.3
GADA				SG	Sb	17 33 51.8	-0.4
GOKA	anakkale-Gk	0.80	86	P	Pb	17 33 41.7	+0.2

GOKA				S	Sb	17 33 53.5	+1.1
KVLA	Kavala	0.88	336	P	Pb	17 33 43.2	+0.3
KVLA				S	Sb	17 33 55.6	+0.8
KVLA				AML	AML	17 33 57.1	
	comp=N,11632µm,0.2s						
KVLA				AML	AML	17 33 57.5	
	comp=E,12647µm,0.2s						
KAVA	Kavala	0.90	343	P	Pb	17 33 43.5	+0.3
KAVA				S	Sb	17 33 55.3	-0.1
KAVA				AML	AML	17 33 57.2	
	comp=N,13244µm,0.3s						
KAVA				AML	AML	17 33 57.4	
	comp=E,9854µm,0.2s						
KAVA	Kavala	0.90	343	P	Pn	17 33 43.9	-0.4
PAIG	Paliouri	0.94	258	P	Pb	17 33 43.5	-0.2
PAIG				AML	AML	17 33 59.6	
	comp=N,1104µm,0.5s						
PAIG				AML	AML	17 34 00.5	
	comp=E,719µm,0.5s						
PAIG	Paliouri	0.94	258	P	Pb	17 33 43.6	-0.2
KOKK	Kokkinochori,	0.95	316	P	Pb	17 33 44.2	+0.2
KOKK				S	Sb	17 33 57.1	+0.3
KOKK	Kokkinochori,	0.95	316	P	Pb	17 33 44.3	+0.2
KOKK				S	Sb	17 33 57.5	+0.7
	comp=E,2µm,0.6s						
BOZC	Bozcaada	0.96	107	PG	Pg	17 33 43.6	-0.1
BOZC				SG	Sb	17 33 57.2	+0.2
BOZC	Bozcaada	0.96	107	P	Pg	17 33 43.6	-0.1
BOZC				S	Sb	17 33 57.1	+0.2
BOZC				*i* AML	AML	17 33 59.0	
	comp=E,830nm,0.2s						
BOZC				*i* AML	AML	17 34 00.0	
	comp=E,604nm,0.2s						
ECEA	Canakkale, Ece	1.01	95	P	Pb	17 33 45.1	+0.1
ECEA				S	Sn	17 33 59.6	-0.5
ECEA				*i* AML	AML	17 34 01.0	
	comp=E,872nm,0.2s						
ECEA				*i* AML	AML	17 34 05.0	
	comp=E,741nm,0.6s						
PLG	Polygyros	1.11	283	P	Pg	17 33 46.7	+0.1
PLG				AML	AML	17 34 03.8	
	comp=N,919µm,0.4s						
PLG				AML	AML	17 34 03.8	
	comp=E,790µm,0.3s						
PLG	Polygyros	1.11	283	P	Pg	17 33 46.8	+0.1
PLG				S	Sn	17 34 03.9	+1.0
RDO	Rodhopi	1.13	27	P	Pg	17 33 46.4	-0.6
RDO	Rodhopi	1.13	27	P	Pg	17 33 46.9	-0.1
RDO				S	Sn	17 34 03.2	0.0
RDO	Rodhopi	1.13	27	PN	Pg	17 33 46.6	-0.4
CAVK	Edirne/Enez-Ca	1.14	60	P	Pg	17 33 46.9	-0.2
CAVK				S	Sn	17 34 04.7	+1.3
CAVK				*i* AML	AML	17 34 06.0	
	comp=E,882nm,0.2s						
CAVK				*i* AML	AML	17 34 08.0	
	comp=E,836nm,0.7s						
ENEZ	Enez	1.15	58	P	Pg	17 33 47.2	-0.1
ENEZ				S	Sn	17 34 05.2	+1.5
ENEZ	Enez	1.15	58	PN	Pg	17 33 47.3	-0.1
EZN	Ezine	1.16	105	P	Pg	17 33 47.4	-0.2
EZN				S	Sn	17 34 04.3	+0.3
EZN	Ezine	1.16	105	PN	Pg	17 33 47.2	-0.4
EZN				SN	Sn	17 34 03.7	-0.3
KOCA	Canakkale, Ayv	1.17	122	P	Pn	17 33 47.9	-0.1
KOCA				S	Sn	17 34 03.9	-0.2
KOCA				*i* AML	AML	17 34 05.0	
	comp=E,784nm,0.3s						
KOCA				*i* AML	AML	17 34 06.0	
	comp=E,731nm,0.3s						
ALN	Alexandroupoli	1.18	49	P	Pg	17 33 47.1	-0.8
ALN				AML	AML	17 34 06.4	
	comp=E,2012µm,0.3s						
ALN				AML	AML	17 34 06.9	
	comp=N,1110µm,0.4s						
ALN	Alexandroupoli	1.18	49	P	Pg	17 33 47.7	-0.2
ALN	Alexandroupoli	1.18	49	PN	Pb	17 33 47.9	0.0
ALN				SN	Sn	17 34 04.4	0.0
GPNR	Gulpinar-Canak	1.19	124	PN	Pg	17 33 47.8	-0.3
SIGR	SIGRI	1.20	140	P	Pb	17 33 47.8	-0.4
SIGR				AML	AML	17 34 06.2	
	comp=N,4854µm,0.4s						
SIGR				AML	AML	17 34 06.3	
	comp=E,3315µm,0.4s						
SIGR	SIGRI	1.20	140	P	Pg	17 33 48.2	-0.1
GELI	Tayfur-Gelibol	1.26	77	PN	Pn	17 33 48.6	-0.6
SKY	Skiros Island	1.28	191	P	Pn	17 33 48.5	-1.0
SKY				S	Sg	17 34 06.6	+0.2
SOH	Sokhos	1.34	301	P	Pn	17 33 50.1	-0.3
SOH				AML	AML	17 34 12.1	
	comp=E,5223µm,0.7s						
SOH				AML	AML	17 34 13.4	
	comp=N,3363µm,0.4s						
SOH	Sokhos	1.34	301	P	Pn	17 33 50.2	-0.3
SOH				S	Sn	17 34 09.7	+1.2
	comp=N,2µm,0.6s						
BAYC	CANAKKALE_Bayr	1.35	106	P	Pn	17 33 50.3	-0.2
BAYC				S	Sn	17 34 08.5	-0.1
BAYC				*i* AML	AML	17 34 11.0	
	comp=N,310nm,0.2s						
ERIK	Erikli-Kesan	1.37	66	PN	Pn	17 33 49.7	-1.0
SRS	Serrai	1.38	316	P	Pn	17 33 50.5	-0.4
SRS				AML	AML	17 34 12.1	
	comp=E,1576µm,0.5s						
SRS				AML	AML	17 34 13.2	
	comp=N,1191µm,0.4s						
SRS	Serrai	1.38	316	P	Pn	17 33 50.7	-0.2
PRK	Paraskevi	1.40	129	P	Pn	17 33 51.4	+0.2
PRK				AML	AML	17 34 13.2	
	comp=N,3698µm,0.8s						
PRK				AML	AML	17 34 14.9	
	comp=E,3568µm,0.4s						
PRK	Paraskevi	1.40	129	P	Pb	17 33 51.8	+0.1
PRK				S	Sg	17 34 10.3	0.0
	comp=E,2µm,0.6s						
HORT	Hortiatis	1.43	289	P	Pn	17 33 51.2	-0.5
HORT	Hortiatis	1.43	289	P	Pn	17 33 51.3	-0.3
HORT	Hortiatis	1.43	289	PN	Pn	17 33 51.2	-0.5
NVR	Nevrokopi	1.43	328	P	Pn	17 33 51.5	-0.2
NVR				AML	AML	17 34 17.5	
	comp=N,670µm,0.4s						
NVR				AML	AML	17 34 20.0	
	comp=E,716µm,0.2s						
NVR	Nevrokopi	1.43	328	P	Pn	17 33 51.7	0.0
NVR				S	Sg	17 34 12.0	+0.6
NEO	Neokhori	1.51	237	P	Pn	17 33 51.6	-1.2
NEO				S	Sn	17 34 12.3	-0.4
KESN	Edirne-Kesan	1.54	63	P	Pn	17 33 52.4	-1.1
KESN				*i* AML	AML	17 34 20.0	
	comp=E,573nm,0.4s						
KESN				*i* AML	AML	17 34 22.0	
	comp=E,301nm,0.5s						
RZN	Rozhen	1.56	356	P	Pn	17 33 53.6	+0.1
KDZ	Kurdzhali	1.57	15	P	Pn	17 33 52.7	-0.8
AYVA	Ayvalik	1.63	120	P	Pn	17 33 54.6	+0.3
AYVA				S	Sn	17 34 13.9	-1.6
AYVA				*i* AML	AML	17 34 24.0	
	comp=E,289nm,0.7s						
UKOP	Uzunkopru-Edir	1.67	53	PN	Pn	17 33 54.9	0.0
PSRA	Psara	1.68	161	P	Pn	17 33 55.4	+0.4
MMB	Musomiste	1.69	330	P	Pn	17 33 54.5	-0.7
BUHA	Balikesir, Bur	1.82	110	P	Pn	17 33 57.3	+0.4
BUHA				*i* AML	AML	17 34 28.0	
	comp=E,222nm,0.4s						
RKY	Sarkoy-Tekirda	1.85	72	PN	Pn	17 33 56.6	-0.8
SART	Tekirdag	1.85	72	P	Pn	17 33 56.7	-0.8
KRBG	Karabiga-Canak	1.88	81	PN	Pn	17 33 57.8	+0.1
DKL	Dikili	1.90	123	PN	Pn	17 33 58.0	0.0
MAR6	Marsite Statio	1.92	72	PN	Pn	17 33 58.6	+0.3
MAR3	Marsite Statio	1.95	71	PN	Pn	17 33 58.7	0.0
PLD	Plovdiv	1.97	356	PN	Pn	17 33 59.3	+0.3
PLD	Plovdiv	1.97	356	P	Pg	17 34 03.7	+0.6
GZKV	Gazikoy-Tekird	1.97	71	PN	Pn	17 33 58.5	-0.6
CHOS	Chios island	1.98	152	P	Pn	17 33 58.9	-0.3
CHOS				S	Sn	17 34 24.8	+0.6
CHOS	Chios island	1.98	152	PN	Pn	17 33 58.9	-0.3
DIM	Dimitrovgrad	1.98	15	P	Pn	17 33 59.3	+0.2
ATAL	Atalanti	2.03	225	P	Pn	17 33 59.0	-0.9
KNL	Balıkesir	2.04	85	P	Pn	17 34 00.6	+0.6
KNL				S	Sb	17 34 27.6	-0.6
KNL				*i* AML	AML	17 34 37.0	
	comp=E,202nm,0.7s						
KNL				*i* AML	AML	17 34 41.0	
	comp=E,200nm,0.5s						
MRMT	Marmara Adasi	2.14	76	PN	Pn	17 34 01.2	-0.2
BALY	Balya	2.15	100	P	Pb	17 34 03.5	-1.1
BALY				*i* AML	AML	17 34 36.0	
	comp=E,82nm,0.3s						
BALY				*i* AML	AML	17 34 38.0	
	comp=E,129nm,0.4s						
GONE	Gonen-Balikesi	2.16	91	PN	Pn	17 34 02.1	+0.4
KKB	Krupnik	2.19	323	P	Pn	17 34 01.2	-0.9
EDRB	Edirne	2.22	39	P	Pn	17 34 02.8	+0.3
EDRB	Edirne	2.22	39	PN	Pn	17 34 02.7	+0.3
URLA	Izmir	2.22	142	PN	Pn	17 34 02.6	+0.1
AGG	Agios Georgios	2.25	241	PN	Pn	17 34 02.8	-0.2
THL	Klokotos Trika	2.27	256	P	Pn	17 34 02.9	-0.2
EDC	Edincik	2.30	84	PN	Pn	17 34 04.0	+0.4
MAKR	Makrakomi, Fth	2.39	243	P	Pn	17 34 04.8	-0.1
CRLT	Corlu	2.40	65	PN	Pn	17 34 05.0	+0.1
BLCB	Balcova	2.43	135	PN	Pn	17 34 05.9	+0.6
STIP	Stip	2.56	308	*i* Pn	Pn	17 34 06.2	-0.9
STIP				*i* Sn	Sg	17 34 46.7	-0.8
KCTX	Karacabey (Bur	2.67	86	PN	Pn	17 34 09.2	+0.5
KPRO	Kipourio	2.70	267	P	Pn	17 34 09.0	-0.1
FNA	Florina	2.74	285	PN	Pn	17 34 10.1	+0.4
SLVT	Silivri	2.77	66	PN	Pn	17 34 10.4	+0.4
VTS	Vitosha	2.77	334	⇑P	Pn	17 34 12.0	+1.8
VTS				⇓S	Sg	17 34 55.4	+1.2
VTS	Vitosha	2.77	334	P	Pb	17 34 13.0	-2.1
EFP	Efpalio	2.86	234	P	Pn	17 34 11.4	+0.1
SMG	Samos	2.87	147	P	Pn	17 34 11.4	0.0
CTYL	Yalikoy Yolu	2.92	62	PN	Pn	17 34 12.2	+0.1
LAKA	Lakka	2.94	231	P	Pn	17 34 13.3	+1.0
CTKS	Kestanelik-??a	2.98	67	PN	Pn	17 34 13.7	+0.9
SZH	Strazhica	3.23	14	P	Pn	17 34 16.8	+0.5
ROIA	ROIAK	3.50	32	P	Pn	17 34 20.8	+0.7
PRD	Provadia	3.60	31	P	Pn	17 34 21.3	-0.1
RAZG	Razgrad	3.64	19	⇑P	Pn	17 34 22.3	+0.3
BLKB	Belogradchik	3.85	336	⇑P	Pn	17 34 25.8	+0.9
BLKB				⇑S	Sg	17 35 24.8	-4.1
TIRR	Tirgusor	5.06	30	⇑P	Pn	17 34 41.7	+0.3
MLR	Muntele Rosu	5.41	8	⇑P	Pn	17 34 47.9	+1.5
GZR	Gura Zlata	5.47	344	⇑P	Pn	17 34 47.6	+0.3
CFR	Carcaliu	5.58	24	⇓P	Pn	17 34 49.0	+0.3
COVR	Voineasa-Covas	5.79	9	⇑P	Pn	17 34 53.5	+1.9
DOPR	Dopca	5.84	4	⇑P	Pn	17 34 53.6	+1.4
PLOR	Plostina	5.86	12	⇑P	Pn	17 34 54.6	+2.1
VRI	Vrincioaia	5.89	13	⇓P	Pn	17 34 55.1	+2.2
OZUR		6.00	6	⇑P	Pn	17 34 56.2	+1.8
TESR	Tescani	6.50	11	⇑P	Pn	17 35 03.1	+1.7
BIZ	Bicaz	6.86	7	⇓P	Pn	17 35 08.4	+2.2
BURAR	Bucovina Array	7.48	2	⇑P	Pn	17 35 16.6	+1.8

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*IDC **12** 17:43:37.5±3.7, 37°.55N×141°.95E, h23^{km}±24^{km}, mb4.2/24, mbtmp4.4/31, ML3.9/7, MS3.5/38, Error ellipse: s-maj=13.8km s-min=10.6km az=116.0*

*JMA **12** 17:43:39.0±0.1, 37°.6N±0°.3×141°.9E±0°.6, h37^{km}±1^{km}, MD4.5/40, MW4.5/40, E OFF FUKUSHIMA PREF*

JMA Felt II J1 at E OFF FUKUSHIMA PREF .

*NIED **12** 17:43:39.0, 37°.60N×141°.89E, h37^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.17; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-3.01; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.58; $M_{\phi r}$4.43; Fault plane solution: $M_0$5.46000×10^{15} NP1: ϕ_s194.00000°, δ18.00000°, λ97.00000°. NP2:ϕ_s8.00000°, δ72.00000°, λ88.00000°.*

*NEIC **12** 17:43:39.6±1.2, 37°.55N±0°.05×141°.85E±0°.07, h35^{km}±2^{km}, mb4.7/82 Error ellipse: s-maj=8.2km s-min=7.3km az=119.0*

ISC 12 17:43:38.4±0.7**, 37°.57N**±0°.03×**141°.90E**±0°.04**, h30**^{km}±4^{km}**, n322, σ1^{s}18**/277**, mb4.7**/106**, MS3.7**/43**, 24C-31D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.81	335	⇓*i*P	Pb	17 43 53.7	-0.4
JIKH				⇓S	Sb	17 44 03.6	-1.1
JMST	Minamisoumatoc	0.82	281	⇓*i*P	Pn	17 43 53.9	-0.1
JMST				⇓S	Sb	17 44 04.4	-0.4
JMST	Minamisoumatoc	0.82	281	A	A	17 43 53.9	
	comp=E,20nm,1.9s,comp=E,32nm,0.4s						
JFK	Kawauchi	0.84	256	⇓*i*P	Pn	17 43 54.3	0.0
JFK				⇓S	Sb	17 44 05.2	-0.3
JFK	Kawauchi	0.84	256	A	A	17 43 54.3	
	comp=E,9.0nm,1.0s,comp=E,22nm,1.2s						
JMM	Marumori	0.93	289		Pb	17 43 55.1	-0.8
JMM				Sn	Sb	17 44 07.0	-0.8
JMM	Marumori	0.93	289	⇓*i*P	Pn	17 43 55.5	+0.1
JMM				⇓S	Sb	17 44 07.1	-0.8
JMM	Marumori	0.93	289	A	A	17 43 55.5	
	comp=E,18nm,0.3s,comp=E,18nm,0.4s						
JIO	Ouri	0.98	334	⇓*i*P	Pn	17 43 56.2	0.0
JIO				⇓S	Sb	17 44 07.8	-1.7
JIO	Ouri	0.98	334	A	A	17 43 56.2	
	comp=E,18nm,1.9s,comp=E,8.0nm,1.9s						
ONAJ	Iwakimizuishiy	0.99	242	⇓*i*P	Pb	17 43 56.4	-0.7
ONAJ				⇓S	Sb	17 44 08.8	-1.1
ONAJ	Iwakimizuishiy	0.99	242	A	A	17 43 56.4	
	comp=E,35nm,0.3s,comp=E,28nm,0.3s						
JFFD	Fukushimafurud	1.17	246	A	A	17 43 59.4	
	comp=E,10.0nm,1.3s,comp=E,11nm,0.8s						
JFT	Otama	1.24	268	⇓*i*P	Pb	17 44 00.9	-0.4
JFT				⇓*e*S	Sb	17 44 16.4	-0.6
JFT	Otama	1.24	268	A	A	17 44 00.9	
	comp=E,32nm,0.8s,comp=E,20nm,0.8s						
JOU	Okura	1.26	309	⇓*i*P	Pn	17 44 00.6	+0.6
JOU				⇓S	Sn	17 44 16.7	+0.7
JOU	Okura	1.26	309	A	A	17 44 00.6	
	comp=E,21nm,0.5s,comp=E,27nm,0.6s						
JKMT	Kesennumamotoy	1.28	345	⇓*i*P	Pn	17 44 00.5	+0.2
JKMT				⇓*e*S	Sn	17 44 15.1	-1.4
JKMT	Kesennumamotoy	1.28	345	A	A	17 44 00.5	
	comp=E,7.0nm,4.2s,comp=E,7.0nm,0.5s						
JOFO	Osakifurukawao	1.29	323	A	A	17 44 00.8	
	comp=E,44nm,1.9s,comp=E,40nm,1.5s						
JHO	Hitachi	1.43	228	A	A	17 44 03.4	
	comp=E,4.0nm,4.1s,comp=E,4.0nm,4.8s						
JYAR	Yonezawaarcadi	1.43	284	A	A	17 44 03.1	
	comp=E,39nm,1.4s,comp=E,35nm,0.7s						
JMK	Ichinoseki	1.48	339	⇓*i*P	Pn	17 44 03.6	+0.5
JMK				⇓S	Sn	17 44 21.9	+0.5
JMK	Ichinoseki	1.48	339	A	A	17 44 03.6	
	comp=E,8.0nm,1.0s,comp=E,5.0nm,2.3s						
OFUJ	Ofunato	1.52	353	A	A	17 44 04.2	
	comp=E,5.0nm,1.9s,comp=E,4.0nm,1.3s						
JYS	Shirataka	1.59	295	⇓*i*P	Pn	17 44 05.5	+0.9
JYS				⇓*e*S	Sn	17 44 25.5	+1.4
JYS	Shirataka	1.59	295	A	A	17 44 05.5	
	comp=E,12nm,0.9s,comp=E,11nm,0.8s						
JSB	Shiboa	1.69	250	A	A	17 44 07.0	
	comp=E,15nm,1.2s,comp=E,13nm,0.8s						
JFY	Yanaizu	1.75	265	⇓*i*P	Pn	17 44 08.0	+1.2
JFY				⇓*e*S	Sb	17 44 29.7	-1.8
JFY	Yanaizu	1.75	265	A	A	17 44 08.0	
	comp=E,10.0nm,0.8s,comp=E,5.0nm,0.5s						
JYK	Kaneyama	1.81	318	⇓*i*P	Pn	17 44 08.5	+0.9
JYK	Kaneyama	1.81	318	A	A	17 44 08.5	
	comp=E,4.0nm,1.8s,comp=E,5.0nm,1.5s						
JYT	Yasato	1.92	226	Pn	Pn	17 44 08.5	-0.5
JYT	Yasato	1.92	226	A	A	17 44 10.3	
	comp=E,12nm,0.4s,comp=E,7.0nm,0.4s						
JIHU	Itakohorinouch	1.94	215	A	A	17 44 10.8	
	comp=E,17nm,0.9s,comp=E,16nm,2.8s						
JOM	Ohasama	1.96	346	A	A	17 44 10.6	
	comp=E,8.0nm,0.5s,comp=E,5.0nm,2.0s						
JYA	Atsumi	2.00	301	A	A	17 44 11.2	
	comp=E,7.0nm,0.9s,comp=E,7.0nm,0.7s						
CHOJ	Chosi	2.04	204	A	A	17 44 12.4	
	comp=E,4.0nm,4.8s,comp=E,6.0nm,1.3s						
JRG	Rokugo	2.08	332	A	A	17 44 12.2	
	comp=E,10.0nm,1.5s,comp=E,10.0nm,0.6s						
JYYZ	Yamagatayuza	2.12	314	A	A	17 44 12.8	
	comp=E,12nm,3.8s,comp=E,9.0nm,1.8s						
JSMT	Sammumatsuo	2.25	212	A	A	17 44 15.2	
	comp=E,11nm,3.9s,comp=E,11nm,3.8s						
JKT	Katashina	2.26	250	A	A	17 44 15.2	
	comp=E,3.0nm,4.1s,comp=E,4.0nm,2.7s						
JAG	Ashikaga	2.27	240	A	A	17 44 15.4	
	comp=E,2.0nm,0.4s,comp=E,3.0nm,5.2s						
JYW	Yuwa	2.37	327	A	A	17 44 16.4	
	comp=E,24nm,1.6s,comp=E,15nm,1.1s						
JIZZ	Izumozaki	2.54	270	A	A	17 44 19.1	
	comp=E,8.0nm,3.5s,comp=E,7.0nm,5.5s						
JCN	Nagara	2.55	213	A	A	17 44 19.4	
	comp=E,10.0nm,2.2s,comp=E,9.0nm,1.4s						
TOK	Tokyo	2.55	223	A	A	17 44 19.4	
	comp=E,9.0nm,0.8s,comp=E,10.0nm,3.2s						
JKEN	Kujiedanarisaw	2.63	357	A	A	17 44 20.2	
	comp=E,11nm,0.6s,comp=E,13nm,0.9s						
JKUC	kamogawauchiur	2.77	210	A	A	17 44 22.8	
	comp=E,6.0nm,6.6s,comp=E,7.0nm,3.1s						
JAH	Hinai	2.79	340	A	A	17 44 22.4	
	comp=E,7.0nm,2.0s,comp=E,5.0nm,3.6s						
JGK	Kuni	2.79	250	A	A	17 44 22.9	
	comp=E,4.0nm,1.3s,comp=E,4.0nm,3.3s						
JSD	Sado	2.92	280	Pn	Pn	17 44 23.3	+0.5
TATJ	Tateyama 2	3.01	213	A	A	17 44 26.1	
	comp=E,9.0nm,4.1s,comp=E,13nm,2.1s						
JJN	Nakama	3.01	262	A	A	17 44 25.9	
	comp=E,2.0nm,3.8s,comp=E,4.0nm,5.5s						
JNTW	Noshirotokiwa	3.02	334	A	A	17 44 25.7	
	comp=E,16nm,4.5s,comp=E,12nm,2.1s						
MJAR	Matsushiro Arr	3.12	252	Pn	Pn	17 44 26.2	+0.5
	6.9nm,0.3s,baz=72,slow=16,SNR=105						
MJAR				Sn	Sn	17 45 03.6	+1.5
	4.1nm,0.3s,baz=86,slow=13,SNR=5.0						
MJAR				LR	LR	17 45 56.3	
	comp=Z,1µm,20.0s,baz=108,slow=44 83nm,0.6s						
MJAR	Matsushiro Arr	3.12	252		Pn	17 44 26.7	+0.9
MAJO	Matsushiro	3.13	252	Pn	Pn	17 44 27.8	+2.1
MJB9	Matsu-Tunnel	3.13	252		Pn	17 44 27.8	+2.0
JOG3	Oga3	3.22	318	A	A	17 44 23.4	
	comp=E,4.0nm,4.6s,comp=E,4.0nm,4.0s						
JOD2	Odawara 2	3.23	225	A	A	17 44 29.2	
	comp=E,4.0nm,3.4s,comp=E,5.0nm,1.7s						
JNG	Nsakai	3.26	250	A	A	17 44 29.4	
	comp=E,2.0nm,6.4s,comp=E,2.0nm,4.2s						
JTM	Tenmabayashi	3.27	349	Pn	Pn	17 44 28.8	+1.0
JTM	Tenmabayashi	3.27	349	A	A	17 44 29.4	
	comp=E,3.0nm,7.5s,comp=E,4.0nm,5.2s						
JHHS	Hirosakihyakuz	3.30	339	A	A	17 44 29.7	
	comp=E,8.0nm,6.1s,comp=E,7.0nm,1.9s						
JYN	Shimob	3.40	234	A	A	17 44 31.6	
	comp=E,8.0nm,4.4s,comp=E,8.0nm,5.8s						
JIM2	Oshima 3	3.48	216	A	A	17 44 32.8	
	comp=E,4.0nm,4.4s,comp=E,4.0nm,7.5s						
JHTM	Izuhatsuma	3.50	223	A	A	17 44 33.0	
	comp=E,7.0nm,1.2s,comp=E,7.0nm,0.8s						
JAHD	Aomorihigashid	3.71	353	A	A	17 44 35.5	
	comp=E,7.0nm,5.5s,comp=E,6.0nm,1.7s						
SHZ3	Shizuoka 3	3.89	231	A	A	17 44 38.5	
	comp=E,3.0nm,2.1s,comp=E,3.0nm,7.3s						
JNY	Yasuok	3.93	237	A	A	17 44 39.0	
	comp=E,4.0nm,1.3s,comp=E,4.0nm,1.3s						
JGF	Kuroka	4.15	243	Pn	Pn	17 44 42.2	+2.4
INU	Inuyama	4.52	242	Pn	Pn	17 44 47.2	+2.4
JHJ2	Mitsune	4.76	202	Pn	Pn	17 44 49.1	+0.9
JHJ	Hachijo jima 2	4.77	202	Pn	Pn	17 44 48.2	0.0
	75nm,0.3s,baz=333,slow=16,SNR=73						
JHJ				Sn	Sn	17 45 41.1	-1.4
	88nm,0.3s,baz=118,slow=23,SNR=8.2						
JHJ				LR	LR	17 46 56.6	
	comp=Z,391nm,21.4s,baz=38,slow=42 149nm,0.3s						
JEW	Eniwo	5.27	356	Pn	Pn	17 44 55.7	+0.5
ASAJ	Asahikawa	6.56	4	Pn	Pn	17 45 13.0	+0.1
	3.3nm,0.3s,baz=212,slow=13,SNR=28						
ASAJ				Sn	Sn	17 46 27.1	+0.5
	3.1nm,0.3s,baz=108,slow=20,SNR=3.6 9.1nm,0.4s						
JKA	Kamikawa-asahi	6.56	4		Pn	17 45 13.5	+0.6
JKA	Kamikawa-asahi	6.56	4		Sn	17 46 27.1	+0.5
JHS	Saijyo	7.54	253	Pn	Pn	17 45 30.2	+3.8
USRK	Ussuriysk Ar.	10.00	315	Pn	Pn	17 46 01.6	+1.6
	1.1nm,0.3s,baz=125,slow=15,SNR=12						
USRK				LR	LR	17 49 38.0	
	comp=Z,328nm,19.7s,baz=116,slow=36 3.0nm,0.4s						
JNU	Nakatsue	10.04	247	Pn	Pn	17 46 02.6	+2.0
	0.9nm,0.3s,baz=52,slow=5.4,SNR=6.8 30nm,0.9s						
JNU	Nakatsue	10.04	247		Pn	17 46 02.9	+2.3
JCJ	Chichijima	10.45	179	Pn	Pn	17 46 04.0	-2.3
	4.5nm,0.3s,baz=319,slow=20,SNR=1.5						
JCJ				Sn	Sn	17 47 52.8	-10
	7.8nm,0.3s,baz=322,slow=19,SNR=2.0						
JCJ				LR	LR	17 50 28.1	
	comp=Z,49nm,21.2s,baz=44,slow=39 27nm,0.4s						
SEHB	SEOHWA	10.80	278		Pn	17 46 12.5	+1.4
KSRS	Korea Array	11.10	274	Pn	Pn	17 46 14.7	-0.4
	0.2nm,0.3s,baz=86,slow=14,SNR=1.4						
KSRS				LR	LR	17 50 13.9	
	comp=Z,327nm,19.4s,baz=80,slow=36 0.8nm,0.6s						
BNX	BinXian	13.55	312	⇓P	Pn	17 46 51.9	+3.3
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,280nm,4.4s						
CN2	Changchun	13.94	302	*e*P	Pn	17 46 55.6	+1.7
CN2				*e*S	Sn	17 49 28.3	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,15.1s						
PETK	Petropavlovsk-	19.03	30	P	P	17 47 56.5	-1.3
	comp=Z,0.3nm,0.3s,baz=269,slow=10,SNR=6.1						
PETK				LR	LR	17 55 08.6	
	comp=Z,72nm,20.7s,baz=225,slow=36						
NJ2	Nanjing	19.69	261	*e*P	P	17 48 05.6	+0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TIA	Tai'an	19.85	274	*e*P	P	17 48 06.2	-0.8
TIA				pmax	pmax		
	comp=Z,18nm,1.1s						
BJI	Beijing	20.18	285	P	P	17 48 09.6	-0.9
BJI				pmax	pmax		
	comp=Z,13nm,0.5s						
BJT	Baijiatuau	20.18	285	P	P	17 48 09.8	-0.8
XLT	XiLinHaoTe	20.51	296	*e*P	P	17 48 12.6	-1.6
XLT				pP	sP	17 48 22.6	-3.2
XLT				sP	pP	17 48 26.7	+4.6
XLT				PP	PnPn	17 48 33.4	+1.4
XLT				S	S	17 51 57.1	-5.1
XLT				sS	Sn	17 52 04.9	-2.0
XLT				SS	SnSn	17 52 21.0	-0.6
XLT				pmax	pmax		
	comp=Z,25nm,1.1s						
XLT				pmax	pmax		
	comp=Z,120nm,4.9s						
XLT				LR	LR		
	comp=N,16nm,13.6s						
XLT				LR	LR		
	comp=E,340nm,17.1s						
XLT				LR	LR		
	comp=Z,210nm,18.8s						
HNS	HongShan	21.55	278	⇑P	P	17 48 23.8	-1.6
HNS				S	S	17 52 15.4	-7.3
HNS				pmax	pmax		
	comp=Z,26nm,0.7s						
HNS				LR	LR		
	comp=E,170nm,15.9s						
HNS				LR	LR		
	comp=Z,170nm,20.7s						
MA2	Magadan	22.75	12	P	P	17 48 39.6	+1.6
MA2				IAmb	IAmb	17 48 53.7	
	comp=Z,10nm,0.6s						
HHC	Hu-ho-hao-te	23.67	287	*e*P	P	17 48 46.1	-1.4
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=Z,240nm,14.3s						
LYN	LuoYang	23.94	272	*e*P	P	17 48 49.5	-0.4
LYN				pmax	pmax		
	comp=Z,40nm,0.8s						
LYN				LR	LR		
	comp=N,190nm,13.2s						
LYN				LR	LR		
	comp=E,180nm,16.7s						
LYN				LR	LR		
	comp=Z,190nm,17.6s						
BTO	Baotou	24.86	287	*e*P	P	17 49 00.4	+2.0

BTO				S	**S**	**17 53 22.0**	**+2.5**
BTO				LR	LR		
	comp=N,330nm,13.7s						
BTO				LR	LR		
	comp=E,490nm,15.5s						
YAK	**Yakutsk**	**25.63**	**347**	P	**P**	**17 49 04.4**	**-0.7**
CNSH	**ChangSha**	**25.98**	**257**	⇑P	**P**	**17 49 08.7**	**+0.1**
CNSH				pmax	pmax		
	comp=Z,22nm,0.7s						
XAN	**Xi'an**	**26.90**	**273**	⇓P	**P**	**17 49 16.6**	**-0.3**
XAN				pP	sP	17 49 26.7	-2.3
XAN				sP	pP	17 49 31.5	+6.1
XAN				pmax	pmax		
	comp=Z,22nm,0.6s						
XAN				pmax	pmax		
	comp=Z,93nm,5.9s						
XAN				LR	LR		
	comp=N,89nm,14.6s						
XAN				LR	LR		
	comp=E,120nm,14.3s						
XAN				LR	LR		
	comp=Z,140nm,16.2s						
SHEM	**Shemya Is, Ala**	**27.02**	**46**	LR	LR	17 58 37.4	
	comp=Z,56nm,21.8s,baz=278,slow=33						
ULN	**Ulaanbaatar**	**27.38**	**303**	P	**P**	**17 49 21.2**	**0.0**
ULN				IAmb	IAmb	17 49 24.0	
	comp=Z,18nm,1.3s						
ENH	**Enshi**	**27.77**	**264**	P	**P**	**17 49 24.1**	**-0.6**
SONM	**Songino Array**	**27.81**	**303**	P	**P**	**17 49 25.6**	**+0.6**
	comp=Z,11nm,0.7s,baz=98,slow=8.8,SNR=74						
SONM				PcP	**PcP**	**17 52 41.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=111,slow=4.1,SNR=3.3						
SONM				LR	LR	18 00 50.5	
	comp=Z,80nm,18.2s,baz=98,slow=37						
	comp=Z,11nm,0.7s						
SONM	**Songino Array**	**27.81**	**303**	P	**P**	**17 49 25.4**	**+0.4**
SONM				IAmb	IAmb	17 49 26.5	
	comp=Z,12nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	18 19 00.2	
	baz=315,slow=75,SNR=732						
H11N1	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	18 19 01.0	
	baz=315,slow=75,SNR=609						
H11N3	**WAKE ISLAND Hy**	**28.12**	**122**	T	T	18 19 01.8	
	baz=315,slow=75,SNR=670						
H11S1	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	18 20 01.8	
	baz=316,slow=75,SNR=511						
H11S3	**WAKE ISLAND Hy**	**28.84**	**124**	T	T	18 20 02.0	
	baz=316,slow=75,SNR=495						
H11S2	**WAKE ISLAND Hy**	**28.85**	**124**	T	T	18 20 03.0	
	baz=316,slow=75,SNR=519						
LZH	**Lanzhou**	**30.36**	**279**	⇑P	**P**	**17 49 48.8**	**+1.0**
LZH				sP	pP	17 49 55.4	-1.0
LZH				pmax	pmax		
	comp=Z,24nm,1.5s						
LZH				LR	LR		
	comp=N,110nm,11.4s						
LZH				LR	LR		
	comp=E,160nm,13.0s						
LZH				LR	LR		
	comp=Z,110nm,14.6s						
GYA	**Guiyang**	**31.69**	**260**	⇑P	**P**	**17 49 59.7**	**+0.1**
GYA				pmax	pmax		
	comp=Z,37nm,1.2s						
GTA	**Gaotai**	**32.78**	**286**	*e*P	**P**	**17 50 08.7**	**-0.3**
GTA				pP	pP	17 50 13.2	-4.4
GTA				sP	sP	17 50 16.2	-5.0
GTA				PcP	**PcP**	**17 52 55.0**	**+1.2**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				LR	LR		
	comp=N,65nm,15.1s						
GTA				LR	LR		
	comp=E,120nm,14.3s						
GTA				LR	LR		
	comp=Z,110nm,19.5s						
DAV	**Davao City (W)**	**33.79**	**210**	LR	LR	18 02 12.7	
	comp=Z,64nm,21.9s,baz=336,slow=33						
TIXI	**Tiksi**	**34.80**	**353**	P	**P**	**17 50 25.9**	**-0.2**
KMI	**Kunming**	**35.43**	**261**	⇑P	**P**	**17 50 33.0**	**+0.8**
KMI				pP	sP	17 50 42.8	-1.6
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI				LR	LR		
	comp=N,120nm,14.8s						
KMI				LR	LR		
	comp=E,150nm,18.3s						
KMI				LR	LR		
	comp=Z,150nm,19.7s						
GOMU	**GeErMu**	**37.38**	**283**	P	**P**	**17 50 48.8**	**-0.2**
GOMU				pP	pP	17 50 54.2	-3.4
GOMU				sP	sP	17 50 55.6	-5.6
GOMU				PcP	**PP**	**17 52 10.6**	**-3.8**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,46nm,4.3s						
MYLDM	**Lahad Datu**	**38.67**	**219**	P	**P**	**17 50 56.5**	**-3.0**
MYLDM				IAmb	IAmb	17 51 04.2	
	comp=Z,16nm,0.9s						
KMSI	**Cibinong**	**40.36**	**208**	P	**P**	**17 51 17.3**	**+3.7**
	comp=Z,42nm,0.9s						
GTOI	**Gorontalo**	**40.67**	**210**	P	**P**	**17 51 18.3**	**+2.1**
	comp=Z,13nm,0.8s						
WMQ	**Urumqi**	**40.95**	**296**	*e*P	**P**	**17 51 20.5**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,39nm,0.9s						
WMQ				LR	LR		
	comp=Z,130nm,21.3s						
CHTO	**Chiang Mai**	**41.80**	**256**	P	**P**	**17 51 24.8**	**-0.8**
ZAA0	**Zalesovo Array**	**41.84**	**312**	P	**P**	**17 51 25.4**	**0.0**
ZAA0				IAmb	IAmb	17 51 26.5	
	comp=Z,11nm,0.9s						
ZALV	**Zalesovo Beam**	**41.84**	**312**	P	**P**	**17 51 25.5**	**+0.1**
	comp=Z,9.8nm,0.8s,baz=90,slow=7.4,SNR=39						
ZALV				PcP	**PcP**	**17 53 21.0**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=88,slow=2.9,SNR=5.1						
ZALV				LR	LR	18 09 37.0	
	comp=Z,93nm,18.3s,baz=72,slow=37						
	comp=Z,9.8nm,0.8s						
ZALV	**Zalesovo Beam**	**41.84**	**312**	P	**P**	**17 51 25.0**	**-0.4**
ZALV					**PcP**	**17 53 20.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**42.01**	**255**	P	**P**	**17 51 27.4**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=44,slow=8.1,SNR=9.0						
CMAR				PcP	**PcP**	**17 53 22.9**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=69,slow=1.4,SNR=2.9						
CMAR				LR	LR	18 09 42.8	
	comp=Z,46nm,19.5s,baz=60,slow=37						
	comp=Z,1.1nm,0.6s						
SANI	**Sanana**	**42.09**	**204**	P	**P**	**17 51 27.5**	**-0.3**
	comp=Z,16nm,1.0s						
ZSN	**Zaisan**	**42.32**	**302**	⇑*e*P	**P**	**17 51 29.7**	**+0.2**
	comp=Z,11nm,0.8s,baz=302						
LSA	**Lhasa**	**42.55**	**275**	P	**P**	**17 51 32.5**	**+0.4**
LSA				IAmb	IAmb	17 51 35.2	
	comp=Z,11nm,0.9s						
NRIK	**Noril'sk**	**42.94**	**335**	P	**P**	**17 51 34.0**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=73,slow=8.7,SNR=4.8						
NRIK				LR	LR	18 10 25.5	
	comp=Z,105nm,18.7s,baz=134,slow=37						
	comp=Z,2.0nm,0.5s						
NRIK	**Noril'sk**	**42.94**	**335**	P	**P**	**17 51 34.1**	**-0.1**
MK31	**Makanchi Array**	**44.16**	**302**	P	**P**	**17 51 44.6**	**+0.3**
MK31				IAmb	IAmb	17 51 45.6	
	comp=Z,9.7nm,0.8s						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**17 51 44.7**	**+0.3**
	comp=Z,11nm,0.7s,baz=85,slow=9.6,SNR=104						
MKAR				PcP	**PcP**	**17 53 29.8**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=80,slow=4.4,SNR=2.3						
MKAR				ScP	**ScP**	**17 57 19.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=108,slow=4.7,SNR=1.9						
	comp=Z,11nm,0.7s						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**17 51 44.5**	**+0.1**
MAKZ	**Makanchi**	**44.37**	**302**	P	**P**	**17 51 46.5**	**+0.4**
MAKZ				IAmb	IAmb	17 51 47.4	
	comp=Z,12nm,1.1s						
SEM	**Semipalatinsk**	**44.92**	**307**	*i* P	**P**	**17 51 50.0**	**-0.6**
	baz=307						
KURK	**Kurchatov**	**45.91**	**308**	P	**P**	**17 51 58.1**	**0.0**
KURBB	**Kurchatov Arra**	**45.98**	**308**	LR	LR	18 12 00.5	
	comp=Z,78nm,19.9s,baz=52,slow=37						
BNSI	**Bone**	**46.42**	**211**	P	**P**	**17 52 04.7**	**+2.2**
	comp=Z,21nm,1.0s						
KDAK	**Kodiak Island**	**46.44**	**42**	P	**P**	**17 52 01.8**	**-0.4**
	comp=Z,5.7nm,0.9s,baz=264,slow=17,SNR=2.2						
KDAK				LR	LR	18 11 22.6	
	comp=Z,56nm,20.9s,baz=244,slow=36						
	comp=Z,5.7nm,0.9s						
KDAK	**Kodiak Island**	**46.44**	**42**	IAmb	IAmb	17 52 14.9	
	comp=Z,9.2nm,0.8s						
STKI	**Sintang**	**46.70**	**224**	P	**P**	**17 52 06.6**	**+1.9**
	comp=Z,2µmcomp=Z,4.6nm,0.6s						
ODAN	**Odare**	**46.77**	**273**	*e*P	**P**	**17 52 05.8**	**+0.3**
	comp=Z,34nm,0.9s						
SHLS	**Shalkode**	**46.93**	**297**	⇑*i*P	**P**	**17 52 04.2**	**-2.2**
	baz=297						
TDK	**Taldyqorghan**	**47.20**	**300**	*e*P	**P**	**17 52 08.8**	**+0.4**
	comp=Z,11nm,0.6s,baz=300						
UZB	**Uzynbulak**	**47.24**	**297**	⇑*i*P	**P**	**17 52 09.1**	**+0.1**
	comp=Z,7.1nm,0.9s,baz=298						
RAMN	**Ramite**	**47.35**	**274**	*e*P	**P**	**17 52 10.5**	**+0.4**
	comp=Z,26nm,0.6s						
KPKS	**Kokpek**	**47.40**	**298**	*e*P	**P**	**17 52 10.3**	**+0.2**
	comp=Z,7.7nm,1.1s,baz=298						
ZHN	**Zhinishke**	**47.65**	**298**	*e*P	**P**	**17 52 12.0**	**-0.1**
	baz=298						
SATY	**Saty**	**47.70**	**298**	⇑*i*P	**P**	**17 52 12.7**	**+0.2**
	baz=298						
H23K	**Yukon River**	**47.71**	**31**	P	**P**	**17 52 12.8**	**+0.7**
H23K				IAmb	IAmb	17 52 26.4	
	comp=Z,4.5nm,0.8s						
PKI	**Pulchoki**	**48.01**	**275**	*e*P	**P**	**17 52 15.2**	**-0.1**
	comp=Z,22nm,0.8s						
KKN	**Kakani**	**48.02**	**276**	*e*P	**P**	**17 52 15.8**	**+0.6**
	comp=Z,40nm,0.6s						
GHO	**Glory Hole Cre**	**48.05**	**37**	P	**P**	**17 52 16.1**	**+1.3**
GHO				IAmb	IAmb	17 52 30.8	
	comp=Z,4.3nm,0.7s						
DMN	**Daman**	**48.24**	**275**	*e*P	**P**	**17 52 16.8**	**-0.1**
MDM	**Murphy Dome**	**48.26**	**32**	P	**P**	**17 52 18.4**	**+2.1**
MDM				IAmb	IAmb	17 52 30.1	
	comp=Z,4.3nm,0.8s						
KNK	**Knik Glacier**	**48.30**	**37**	P	**P**	**17 52 15.9**	**-0.8**
KNK				IAmb	IAmb	17 52 26.2	
	comp=Z,7.0nm,0.8s						
H24K	**Noodor Dome**	**48.39**	**31**	P	**P**	**17 52 20.8**	**+3.4**
GKN	**Gorkha**	**48.43**	**276**	*e*P	**P**	**17 52 18.7**	**+0.4**
	comp=Z,107nm,0.8s						
CHKK	**Chushkaly**	**48.48**	**299**	*e*P	**P**	**17 52 18.4**	**+0.1**
	baz=299						
MDOK	**Medeo**	**48.63**	**298**	*i* P	**P**	**17 52 20.0**	**+0.3**
	baz=298						
TNSS	**Tian-Shan**	**48.73**	**298**	*e*P	**P**	**17 52 21.7**	**+0.9**
	baz=298						
SCM	**Sheep Creek Mo**	**48.80**	**37**	P	**P**	**17 52 21.7**	**+1.0**
IL31		**48.83**	**33**	P	**P**	**17 52 21.0**	**+0.4**
ILAR	**Eielson Array**	**48.83**	**33**	P	**P**	**17 52 20.8**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=268,slow=6.4,SNR=8.8						
ILAR				LR	LR	18 15 14.5	
	comp=Z,26nm,18.1s,baz=302,slow=39						
	comp=Z,0.7nm,0.6s						
KDJ	**Kajisay**	**48.84**	**297**	P	**P**	**17 52 21.3**	**0.0**
KDJ				IAmb	IAmb	17 52 24.8	
	comp=Z,8.5nm,0.8s						
KUU	**Kurty**	**48.92**	**299**	⇑*i*P	**P**	**17 52 21.7**	**0.0**
	comp=Z,10nm,0.6s,baz=299						
DANN	**Dangsing**	**48.97**	**277**	*e*P	**P**	**17 52 23.2**	**+0.6**
	comp=Z,178nm,0.7s						
KOLN	**Koldanda**	**49.35**	**276**	*e*P	**P**	**17 52 25.9**	**+0.4**
	comp=Z,45nm,0.9s						
BOOM	**Boomskoye usch**	**49.60**	**298**	P	**P**	**17 52 27.4**	**+0.2**
BOOM				IAmb	IAmb	17 52 28.9	
	comp=Z,7.8nm,0.7s						
PYUN	**Piuthan**	**49.69**	**277**	*e*P	**P**	**17 52 28.3**	**+0.3**
	comp=Z,112nm,1.0s						
IPM	**Ipoh**	**49.75**	**239**	P	**P**	**17 52 28.5**	**+0.1**
IPM				IAmb	IAmb	17 52 29.4	
	comp=Z,7.2nm,0.8s						
SCRK	**Sand Creek**	**50.15**	**34**	P	**P**	**17 52 31.1**	**+0.3**
BTLS	**Baital**	**50.17**	**301**	⇑*i*P	**P**	**17 52 31.1**	**-0.1**
	baz=301						
SGDS	**Sogindy**	**50.23**	**299**	*e*P	**P**	**17 52 31.6**	**-0.1**
	baz=299						
KSH	**Kashi**	**50.54**	**294**	P	P	17 52 39.2	+5.0
KSH				sP	sP	17 52 55.0	+8.4
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				LR	LR		
	comp=N,100nm,16.5s						
KSH				LR	LR		
	comp=E,120nm,16.1s						
KSH				LR	LR		
	comp=Z,180nm,16.1s						
BRVK	**Borovoye**	**50.55**	**312**	P	**P**	**17 52 34.0**	**+0.1**
BRVK				IAmb	IAmb	17 52 35.2	
	comp=Z,7.8nm,1.0s						
AAK	**Ala-Archa**	**50.58**	**298**	LR	LR	18 15 24.0	
	comp=Z,114nm,18.4s,baz=76,slow=38						
AAK	**Ala-Archa**	**50.58**	**298**	P	**P**	**17 52 34.5**	**0.0**
AAK				IAmb	IAmb	17 52 38.0	
	comp=Z,6.6nm,0.7s						
I29M	**Ogilvie Camp,**	**52.39**	**31**	P	**P**	**17 52 49.5**	**+1.9**
PSI	**Prapat**	**52.40**	**239**	P	**P**	**17 52 48.5**	**+0.1**
	comp=Z,5.5nm,0.5s,baz=41,slow=2.8,SNR=7.2						
PSI				LR	LR	18 15 12.9	
	comp=Z,37nm,21.3s,baz=38,slow=36						
	comp=Z,5.5nm,0.5s						
RPSI	**Rantau Prapat**	**52.48**	**239**	P	**P**	**17 52 48.5**	**-0.3**
DZA	**Taraz**	**52.70**	**299**	*e*P	**P**	**17 52 50.4**	**+0.2**
	baz=299						
EPYK	**Eagle Plains**	**52.87**	**30**	P	**P**	**17 52 52.8**	**+1.7**
EPYK				IAmb	IAmb	17 53 10.8	
	comp=Z,8.6nm,1.1s						
KK31	**Karatay Array**	**53.19**	**300**	P	**P**	**17 52 53.5**	**-0.3**
KK31				IAmb	IAmb	17 52 55.1	
	comp=Z,7.2nm,0.9s						
KKAR	**Karatay Array**	**53.19**	**300**	P	**P**	**17 52 53.4**	**-0.4**
KKAR	**Karatay Array**	**53.19**	**300**	P	**P**	**17 52 54.1**	**+0.3**
KKAR				IAmb	IAmb	17 52 55.1	
	comp=Z,7.2nm,0.9s						
INK	**Inuvik**	**53.73**	**27**	P	**P**	**17 52 56.6**	**-0.7**
	comp=Z,1.7nm,1.0s,baz=321,slow=8.7,SNR=4.4						
	comp=Z,1.7nm,1.0s						
IUG	**Iuzhnay**	**53.86**	**299**	⇑*i*P	**P**	**17 52 59.0**	**+0.2**
	baz=299						
BTK	**Batken**	**54.06**	**296**	P	**P**	**17 52 59.4**	**-0.9**
BTK				IAmb	IAmb	17 53 12.0	
	comp=Z,4.6nm,0.8s						
KPJI	**Karang Pucung**	**54.25**	**222**	P	**P**	**17 53 02.2**	**+0.5**
	comp=Z,45nm,2.4s						
GSI	**Gunungsitoli**	**54.41**	**239**	P	**P**	**17 53 04.2**	**+1.2**
	comp=Z,50nm,1.2s						
GAR	**Garm**	**54.82**	**295**	P	**P**	**17 53 04.8**	**-1.1**
CHGR	**Chuyangaron**	**55.78**	**295**	P	**P**	**17 53 12.4**	**-0.4**
ARU	**Arti**	**56.22**	**318**	P	**P**	**17 53 15.5**	**0.0**
KBL	**Kabul**	**57.59**	**291**	P	**P**	**17 53 25.3**	**-0.5**
KBL				IAmb	IAmb	17 53 26.4	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**57.65**	**188**	P	**P**	**17 53 25.9**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=4.7,slow=7.2,SNR=21						
WRA				PcP	**PcP**	**17 54 17.4**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=2.4,slow=7.5,SNR=2.1						
	comp=Z,7.3nm,0.8s						
WRA	**Warramunga Arr**	**57.65**	**188**	P	**P**	**17 53 25.0**	**-1.0**
ABKAR	**Akbulak array**	**57.89**	**310**	P	**P**	**17 53 27.0**	**-0.4**
AKTO	**Aktyubinsk**	**58.60**	**312**	LR	LR	18 19 45.3	
	comp=Z,56nm,19.2s,baz=65,slow=37						
AS31	**Alice Springs**	**61.37**	**188**	P	**P**	**17 53 51.8**	**+0.2**
ASAR	**Alice Springs**	**61.37**	**188**	P	**P**	**17 53 51.6**	**0.0**
	comp=Z,5.7nm,0.7s,baz=10,slow=6.5,SNR=44						
	comp=Z,5.7nm,0.7s						
BBB	**Bella Bella**	**61.41**	**45**	LR	LR	18 17 34.2	
	comp=Z,17nm,20.4s,baz=288,slow=33						
RES	**Resolute Bay**	**61.98**	**15**	LR	LR	18 23 06.3	
	comp=Z,22nm,18.5s,baz=74,slow=38						
PALK	**Pallekele**	**62.86**	**258**	LR	LR	18 24 03.0	
	comp=Z,28nm,19.8s,baz=169,slow=39						
YKA	**Yellowknife Ar**	**63.15**	**30**	P	**P**	**17 54 03.4**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=302,slow=6.3,SNR=12						
YKA				LR	LR	18 24 36.5	
	comp=Z,19nm,18.7s,baz=358,slow=39						
	comp=Z,0.7nm,0.6s						
KLMR	**Klimovskoe**	**63.51**	**328**	*e*P	**P**	**17 54 02.9**	**-2.6**
KLMR				AMP		17 54 06.6	
	comp=Z,6.0nm,0.9s						
KLMR				*e*PP	**PP**	**17 56 22.0**	**-2.8**
ARCES	**ARCESS Array B**	**63.63**	**339**	P	**P**	**17 54 05.5**	**-0.7**
	comp=Z,11nm,1.2s,baz=60,slow=8.5,SNR=5.0						
ARCES				LR	LR	18 26 56.6	
	comp=Z,65nm,18.1s,baz=53,slow=41						
	comp=Z,11nm,1.2s						
DZM	**Mont Dzumac**	**63.67**	**155**	LR	LR	18 19 18.6	
	comp=Z,74nm,20.5s,baz=50,slow=34						
FINES	**FINESS Array B**	**68.52**	**332**	P	**P**	**17 54 37.7**	**0.0**
	comp=Z,7.8nm,0.7s,baz=57,slow=7.0,SNR=24						
FINES				LR	LR	18 26 55.4	
	comp=Z,36nm,19.4s,baz=50,slow=38						
	comp=Z,7.8nm,0.7s						
STKA	**Stephens Creek**	**69.09**	**180**	P	**P**	**17 54 40.6**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=324,slow=7.1,SNR=3.0						
	comp=Z,2.0nm,0.8s						
FORT	**Forrest**	**69.22**	**193**	P	**P**	**17 54 42.6**	**+0.4**
NEW	**Newport**	**69.47**	**44**	LR	LR	18 21 52.7	
	comp=Z,17nm,21.4s,baz=247,slow=33						
SUMG	**Summit**	**70.15**	**0**	P	**P**	**17 54 49.0**	**+1.0**
SUMG				IAmb	IAmb	17 55 02.5	
	comp=Z,8.7nm,1.1s						
RAF	**Rauma**	**70.36**	**333**	*e*P	**P**	**17 54 49.0**	**0.0**
KBZ	**Khabaz**	**70.85**	**311**	P	**P**	**17 54 52.4**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=80,slow=4.8,SNR=17						
KBZ				LR	LR	18 27 25.6	
	comp=Z,13nm,18.6s,baz=32,slow=37						
	comp=Z,5.4nm,0.8s						
KIV	**Kislovodsk**	**70.85**	**311**	⇑P	**P**	**17 54 53.7**	**+1.2**
KIV	**Kislovodsk**	**70.85**	**311**	P	**P**	**17 54 52.6**	**+0.1**
MTSE	**Matsula**	**71.17**	**331**	*e*P	**P**	**17 54 54.4**	**+0.4**
GNI	**Garni**	**71.69**	**307**	LR	LR	18 28 43.6	
	comp=Z,37nm,20.5s,baz=72,slow=38						
ISAL	**Salakas**	**72.33**	**328**	*e*P	**P**	**17 55 01.6**	**+0.6**
IIGN	**Ignalina**	**72.44**	**327**	*e*P	**P**	**17 55 02.2**	**+0.5**
NACGM	**Naroch**	**72.49**	**327**	⇓*e*P	**P**	**17 55 02.8**	**+0.8**
	baz=48						
SLIT	**Slitere, Latvi**	**72.50**	**331**	*e*P	**P**	**17 55 01.5**	**-0.5**
DLMT	**Dillon**	**73.69**	**45**	P	**P**	**17 55 09.6**	**+0.1**
HFS	**Hagfors**	**73.76**	**336**	LR	LR	18 30 24.1	
	comp=Z,103nm,18.9s,baz=32,slow=38						
NC204	**NORSAR Array S**	**73.79**	**338**	P	**P**	**17 55 10.0**	**+0.3**
NB2	**NORSAR Subarra**	**73.84**	**337**	P	**P**	**17 55 10.3**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.84**	**337**	P	**P**	**17 55 09.9**	**0.0**
	comp=Z,5.3nm,0.8s,baz=38,slow=5.9,SNR=15						
NOA				LR	LR	18 29 57.2	
	comp=Z,50nm,21.8s,baz=30,slow=38						
	comp=Z,5.3nm,0.8s						
VIKU	**Vikbolandet**	**73.96**	**333**	*e*P	**P**	**17 55 10.7**	**+0.1**
AKASG	**Malin Array Be**	**74.11**	**322**	P	**P**	**17 55 11.4**	**-0.2**
	comp=Z,5.2nm,0.5s,baz=45,slow=6.4,SNR=64						
AKASG				LR	LR	18 28 10.8	
	comp=Z,46nm,20.1s,baz=354,slow=36						
	comp=Z,5.2nm,0.5s						
AKASG	**Malin Array Be**	**74.11**	**322**	P	**P**	**17 55 11.1**	**-0.6**
AKASG				IAmb	IAmb	17 55 12.5	
	comp=Z,11nm,1.5s						
AKBB	**Malin Array Si**	**74.11**	**322**	P	**P**	**17 55 11.2**	**-0.4**
KVN	**Kaiserville**	**74.12**	**53**		**P**	**17 55 13.1**	**+0.9**
NVAR	**Mina Array Bea**	**74.36**	**53**	P	**P**	**17 55 14.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=270,slow=6.8,SNR=4.0						
	comp=Z,0.8nm,0.8s						
YHL	**Hebgen Lake**	**74.79**	**45**	P	**P**	**17 55 15.1**	**-1.0**
YHL				IAmb	IAmb	17 55 30.4	
	comp=Z,6.3nm,1.1s						
SFJD	**Kangerlussuaq**	**75.32**	**5**	LR	LR	18 28 56.1	
	comp=Z,18nm,21.8s,baz=7.5,slow=36						
MOOW	**Moose Ponds**	**75.72**	**46**		**P**	**17 55 21.8**	**+0.4**
SORM	**Soroca**	**76.22**	**321**	⇑P	**P**	**17 55 23.5**	**-0.3**
TPNV	**Topopah Spring**	**76.55**	**54**	P	**P**	**17 55 26.1**	**0.0**
TPNV				IAmb	IAmb	17 55 40.8	
	comp=Z,5.6nm,1.1s						
HWUT	**Hardware Ranch**	**76.58**	**48**	P	**P**	**17 55 26.4**	**+0.1**
HWUT				IAmb	IAmb	17 55 41.3	
	comp=Z,5.8nm,1.2s						
GWY	**Greenwater Val**	**76.73**	**55**	P	**P**	**17 55 27.9**	**+0.7**
QSM	**Queen of Sheba**	**76.73**	**55**	P	**P**	**17 55 28.5**	**+1.5**
QSM				IAmb	IAmb	17 55 41.7	
	comp=Z,9.5nm,1.2s						
PDAR	**Pinedale Array**	**77.01**	**46**	P	**P**	**17 55 28.6**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=271,slow=1.8,SNR=8.3						
	comp=Z,0.6nm,0.6s						
PDAR	**Pinedale Array**	**77.01**	**46**	P	**P**	**17 55 29.4**	**+0.6**
BZK	**Bozkurt**	**77.15**	**313**	⇑P	**P**	**17 55 28.7**	**-0.5**
KWP	**Kalwaria Pacla**	**77.92**	**325**	P	**P**	**17 55 34.2**	**+0.9**
BUR08	**Bucovina Ar. S**	**78.12**	**322**	P	**P**	**17 55 34.9**	**+0.3**
BUR08				IAmb	IAmb	17 55 36.2	
	comp=Z,8.7nm,1.1s						
BURAR	**Bucovina Array**	**78.13**	**322**	P	**P**	**17 55 34.4**	**-0.3**
BIZ	**Bicaz**	**78.15**	**321**	⇑P	**P**	**17 55 35.5**	**+0.8**
TESR	**Tescani**	**78.17**	**320**	⇑P	**P**	**17 55 34.2**	**-0.6**
CFR	**Carcaliu**	**78.30**	**319**	⇑P	**P**	**17 55 35.6**	**0.0**
TPGR	**Topolog**	**78.37**	**318**	⇑P	**P**	**17 55 35.6**	**-0.4**
RDMU	**Red Mountain**	**78.41**	**48**	P	**P**	**17 55 36.5**	**0.0**
RDMU				IAmb	IAmb	17 55 50.9	
	comp=Z,7.2nm,0.9s						
P17A	**Butcher Ranch,**	**78.41**	**49**	P	**P**	**17 55 36.0**	**-0.5**
P17A				IAmb	IAmb	17 55 50.9	
	comp=Z,4.6nm,0.9s						
LCMT	**Little Creek M**	**78.41**	**52**	P	**P**	**17 55 38.2**	**+1.6**
PFO	**Pinyon Flats O**	**78.42**	**57**	LR	LR	18 22 55.5	
	comp=Z,48nm,19.6s,baz=195,slow=30						
VRI	**Vrincioaia**	**78.57**	**320**	⇑P	**P**	**17 55 37.6**	**+0.5**
P18A	**Preston Nutter**	**78.61**	**49**	P	**P**	**17 55 39.3**	**+1.6**
SRU	**San Rafael Swe**	**78.77**	**49**	P	**P**	**17 55 38.0**	**-0.5**
SRU				IAmb	IAmb	17 55 52.6	
	comp=Z,4.6nm,0.8s						
BR131	**Keskin Array S**	**78.78**	**312**	P	**P**	**17 55 37.4**	**-1.1**
BR131				IAmb	IAmb	17 55 40.0	
	comp=Z,5.0nm,1.0s						
BRTR	**Keskin Array B**	**78.78**	**312**	P	**P**	**17 55 39.0**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=86,slow=5.1,SNR=11						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**78.78**	**312**	P	**P**	**17 55 38.0**	**-0.5**
OJC	**Ojcow**	**78.81**	**326**	P	**P**	**17 55 38.4**	**+0.1**
OJC				IAmb	IAmb	17 55 39.8	
	comp=Z,13nm,1.0s						
OZUR		**78.89**	**320**	⇓P	**P**	**17 55 40.1**	**+1.2**
DOPR	**Dopca**	**79.18**	**321**	⇓P	**P**	**17 55 41.0**	**+0.6**
MLR	**Muntele Rosu**	**79.22**	**320**	⇑P	**P**	**17 55 40.8**	**0.0**
MLR	**Muntele Rosu**	**79.22**	**320**	LR	LR	18 34 23.9	
	comp=Z,51nm,18.4s,baz=42,slow=38						
ARR	**Arges**	**79.98**	**320**	⇑P	**P**	**17 55 46.0**	**+1.1**
PV23	**Carpenter Ridg**	**80.10**	**49**	P	**P**	**17 55 44.4**	**-1.5**
MORC	**Moravsky Berou**	**80.12**	**327**	⇑P	**P**	**17 55 45.6**	**+0.1**
MORC	**Moravsky Berou**	**80.12**	**327**	P	**P**	**17 55 43.5**	**-1.9**
MORC				IAmb	IAmb	17 55 47.1	
	comp=Z,6.5nm,1.0s						
DPC	**Dobruska-Polom**	**80.21**	**328**	*e*P	**P**	**17 55 46.7**	**+0.7**
DPC				*e*pP	**sP**	**17 55 59.8**	**+1.2**
KRLC	**Kraliky**	**80.22**	**328**	*e*P	**P**	**17 55 46.3**	**+0.3**
KRLC				*e*PCP	**PcP**	**17 55 52.7**	**-0.5**
MAUC	**Maruska**	**80.30**	**327**	*e*P	P	17 55 53.7	+7.2
MAUC				*e*x	x	17 56 01.9	
PV13	**Radium Mtn., P**	**80.40**	**49**	P	**P**	**17 55 46.7**	**-0.8**
PV13				IAmb	IAmb	17 56 01.8	
	comp=Z,7.9nm,1.0s						
BRG	**Berggiesshubel**	**80.79**	**330**	*e*P	**P**	**17 55 49.4**	**+0.4**
BRG				Amp		17 55 50.9	
	comp=Z,5.6nm,1.0s						
CLL	**Collm**	**80.82**	**330**	P	**P**	**17 55 49.2**	**+0.1**
CLL				IAmb	IAmb	17 55 50.2	
	comp=Z,8.8nm,1.0s						
CLL	**Collm**	**80.82**	**330**	⇓*i*P	**P**	**17 55 49.6**	**+0.5**
	comp=Z,10.0nm,1.0s						
CLL				*e*pP	**sP**	**17 56 02.0**	**+0.2**
VRAC	**Vranov**	**80.88**	**327**	LR	LR	18 37 01.7	
	comp=Z,35nm,18.5s,baz=26,slow=40						
PRU	**Pruhonice**	**81.22**	**329**	*e*P	**P**	**17 55 52.0**	**+0.7**
MMAI	**Mount Meron Ar**	**81.97**	**306**	LR	LR	18 35 18.8	
	comp=Z,32nm,20.0s,baz=231,slow=38						
CKRC	**Cesky Krumlov**	**82.22**	**328**	*e*P	**P**	**17 55 56.9**	**+0.2**
CKRC				*e*x	x	17 56 09.8	
RONA	**Rosalia, Austr**	**82.23**	**326**	*e*P	**P**	**17 55 58.1**	**+1.4**
	comp=Z,6.3nm,0.9s						
CONA	**Conrad Observa**	**82.24**	**327**	*e*P	**P**	**17 55 58.2**	**+1.3**
	comp=Z,4.1nm,1.0s						
KHC	**Kasperske Hory**	**82.29**	**329**	P	**P**	**17 55 57.4**	**+0.4**
KHC				IAmb	IAmb	17 55 58.5	
	comp=Z,7.3nm,1.0s						
KHC	**Kasperske Hory**	**82.29**	**329**	*e*P	**P**	**17 55 57.5**	**+0.5**
KHC				*e*pP	**sP**	**17 56 09.9**	**+0.2**
KHC				*e*x	x	17 56 22.5	
GERES	**GERESS Array B**	**82.46**	**328**	P	**P**	**17 55 58.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=32,slow=5.5,SNR=12						
	comp=Z,1.6nm,0.6s						
SDCO	**Great Sand Dun**	**82.64**	**48**	P	**P**	**17 55 59.5**	**+0.1**
EKA	**Eskdalemuir Ar**	**82.75**	**341**	LR	LR	18 36 44.5	
	comp=Z,50nm,18.1s,baz=357,slow=38						
ARSA	**Arzberg**	**82.91**	**326**	P	**P**	**17 56 02.1**	**+1.8**
	comp=Z,3.9nm,0.9s						
MOA	**Molln**	**82.99**	**327**	*e*P	**P**	**17 56 00.4**	**-0.3**
	comp=Z,3.1nm,1.3s						
BIOA	**Bad Ischl, Aus**	**83.38**	**328**	*e*P	**P**	**17 56 03.6**	**+0.9**

	comp=Z,3.2nm,0.5s						
E38A	The Farm, Brul	83.48	34	P	P	17 56 03.2	0.0
E38A				IAmb	IAmb	17 56 16.1	
	comp=Z,6.0nm,0.8s						
SOKA	Soboth	83.56	326	*e*P	P	17 56 04.2	+0.5
	comp=Z,5.8nm,0.8s						
ANMO	Albuquerque	83.95	50	P	P	17 56 06.2	+0.1
ANMO				IAmb	IAmb	17 56 21.2	
	comp=Z,5.1nm,1.1s						
KBA	Koelnbreinsper	83.98	327	*e*P	P	17 56 07.1	+1.1
	comp=Z,3.6nm,0.7s						
MYKA	Terra Mystica	84.21	327	*e*P	P	17 56 07.1	+0.1
	comp=Z,2.5nm,0.7s						
MOTA	Moosalm	84.71	329	*e*P	P	17 56 10.2	+0.5
	comp=Z,4.6nm,0.7s						
SCHQ	Schefferville	84.71	16	P	P	17 56 09.6	+0.2
	comp=Z,1.9nm,0.7s,baz=306,slow=5.0,SNR=6.9						
	comp=Z,1.9nm,0.7s						
RETA	Reutte	84.74	329	*e*P	P	17 56 10.2	+0.6
	comp=Z,4.8nm,0.7s						
SQTA	Sankt Quirin	84.77	329	*e*P	P	17 56 10.1	+0.2
	comp=Z,3.2nm,0.7s						
BFO	Black Forest	85.02	331	P	P	17 56 11.2	+0.2
FETA	Feichten	85.13	329	*e*P	P	17 56 11.9	+0.1
	comp=Z,6.2nm,1.2s						
DAVA	Damuels	85.26	330	*e*P	P	17 56 12.4	0.0
	comp=Z,6.6nm,0.8s						
IDI	Anoyia	86.91	313	⇑P	P	17 56 20.1	-0.6
LPIG	La Paz	88.59	61	LR	LR	18 26 15.0	
	comp=Z,28nm,21.9s,baz=229,slow=29						
TX31	Lajitas Ar. Si	89.49	53	P	P	17 56 32.9	-0.2
TX32	Lajitas Array	89.49	53	P	P	17 56 32.9	-0.2
TXAR	Lajitas Array	89.49	53	P	P	17 56 33.0	-0.1
	comp=Z,0.5nm,0.6s,baz=287,slow=3.0,SNR=5.6						
	comp=Z,0.5nm,0.6s						
CCM	Cathedral Cave	90.20	39		P	17 56 35.6	-0.5
U40A	Yellville	90.68	41		P	17 56 37.5	-0.9
TORD	Torodi Ar. Bea	117.22	315	PKP	PKPdf	18 02 20.5	-0.9
	comp=Z,10nm,0.6s,baz=23,slow=1.9,SNR=5.2						
LPAZ	La Paz	146.09	59	PKPbc	PKPdf	18 03 16.4	+0.5
	comp=Z,2.9nm,0.6s,baz=320,slow=1.7,SNR=10.0						
LPAZ	La Paz	146.09	59		PKPdf	18 03 13.1	-2.8
H03N2	Juan Fernandez	146.69	95	T	T	20 47 30.7	
	baz=294,slow=76,SNR=7.0						
H03N3	Juan Fernandez	146.70	95	T	T	20 47 26.7	
	baz=294,slow=76,SNR=6.1						
H03N1	Juan Fernandez	146.71	95	T	T	20 47 30.7	
	baz=294,slow=76,SNR=9.7						
SIV	San Ignacio	150.44	50	PKPbc	PKPbc	18 03 27.8	+0.3
	comp=Z,1.3nm,0.6s,baz=288,slow=3.6,SNR=5.2						

IDC ***12*** *17:47:38.5±0.6, 34°.04S×73°.39W, h0^{km}, mb4.3/11, mbtmp4.2/14, ML4.3/3, MS3.4/12, Error ellipse: s-maj=22.2km s-min=15.1km az=91.0*
NEIC ***12*** *17:47:40.3±2.4, 34°.00S±0°.05×73°.37W±0°.10, h10^{km}±1^{km}, mb4.6/57, ML3.8(GUC), Error ellipse: s-maj=13.6km s-min=8.3km az=280.0*
GUC ***12*** *17:47:40.1±0.8, 33°.95S×73°.36W, h16^{km}±5^{km}, ML4.0*
VAO ***12*** *17:47:41.1±0.9, 34°.11S×73°.54W, h10^{km}, mb4.1*
ISC 12 17:47:38.8±3.9**, 34°.00S**±0°.04×**73°.34W**±0°.05**, h2**^{km}±24^{km}**, n166, σ1^{s}.28**/171**, mb4.6**/38**, MS3.5**/11**, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	1.25	114	*e*P	Pn	17 48 02.4	-0.9
BO03				*e*S	Sb	17 48 17.4	-2.2
VA05	Santo Domingo	1.48	77		Pn	17 48 05.8	-0.7
VA05	Santo Domingo	1.48	77	⇑*i*P	Pn	17 48 05.8	-0.7
VA05				*e*S	Sn	17 48 23.9	-2.4
VA05				IAML		17 48 26.6	
	comp=N,2μm,0.2s						
GO05	Huala	1.54	131		Pn	17 48 06.6	-0.8
GO05	Huala	1.54	131	*e*P	Pn	17 48 06.4	-1.0
GO05				*e*S	Sn	17 48 24.9	-3.1
GO05				IAML		17 48 26.6	
	comp=E,6μm,0.3s						
VA01	Torpederas	1.72	56	Pn	Pn	17 48 08.9	-0.8
VA01	Torpederas	1.72	56	*e*P	Pn	17 48 09.1	-0.6
VA01				*e*S	Sn	17 48 29.6	-2.6
MT01	Popeta	1.74	86		Pn	17 48 08.5	-1.6
MT09	Talagante	1.97	84		Pn	17 48 12.4	-1.0
MT09	Talagante	1.97	84	⇑*i*P	Pn	17 48 12.6	-0.8
MT09				*e*S	Sn	17 48 36.1	-2.6
MT09				IAML		17 48 38.0	
	comp=N,1μm,0.3s						
MT02	Curacav	1.98	69		Pn	17 48 12.7	-0.7
MT02	Curacav	1.98	69	*e*P	Pn	17 48 12.7	-0.7
ROC1	El Roble	2.19	63		Pn	17 48 14.7	-1.8
ROCH	El Roble	2.20	63	*e*P	Pn	17 48 16.3	-0.3
ROCH				*e*S	Sn	17 48 42.7	-1.8
ROCH				IAML		17 48 47.6	
	comp=N,900nm,0.3s						
VA06	Catapilco	2.23	51		Pn	17 48 16.0	-0.9
VA06	Catapilco	2.23	51	*e*P	Pn	17 48 16.1	-0.7
VA06				*e*S	Sn	17 48 42.0	-2.9
MT05	Renca	2.25	75	Pn	Pn	17 48 17.3	+0.1
MT05	Renca	2.25	75	*e*P	Pn	17 48 17.3	+0.1
MT05				IAML		17 48 52.4	
	comp=E,880nm,0.4s						
BO04	La Punta	2.27	91		Pn	17 48 17.3	-0.1
BO04	La Punta	2.27	91	*e*P	Pn	17 48 17.5	+0.1
BO04				*e*S	Sn	17 48 44.7	-1.3
BO04				IAML		17 48 46.0	
	comp=N,1μm,0.3s						
ML02	Panimavida	2.37	139	Pn	Pn	17 48 19.0	+0.3
ML02	Panimavida	2.37	139	*e*P	Pn	17 48 19.1	+0.3
ML02				*e*S	Sn	17 48 47.0	-1.4
PEL	Peldehue	2.38	70		Pn	17 48 19.1	+0.3
PEL	Peldehue	2.38	70	*e*P	Pn	17 48 19.6	+0.7
PEL				*e*S	Sn	17 48 48.1	-0.5
PEL				IAML		17 48 51.1	
	comp=E,859nm,0.3s						
MT03	Universidad Ad	2.41	79		Pn	17 48 19.1	-0.3
MT03	Universidad Ad	2.41	79	*e*P	Pn	17 48 19.8	+0.4
MT03				IAML		17 48 54.6	
	comp=N,797nm,0.5s						
LMEL	Las Melosas	2.61	88		Pn	17 48 22.5	+0.3
FCH	Farellones	2.63	76	*e*P	Pn	17 48 22.8	+0.2
FCH				*e*S	Sn	17 48 54.5	-0.8
FCH				IAML		17 48 56.1	
	comp=N,704nm,0.3s						
VA03	San Esteban	2.64	63		Pn	17 48 22.7	+0.2
VA03	San Esteban	2.64	63	*e*P	Pn	17 48 22.7	+0.2
VA03				IAML		17 48 57.3	
	comp=E,1μm,0.1s						
BI05	Punta Hualpn	2.75	177	Pn	Pn	17 48 22.1	-1.8
BI05	Punta Hualpn	2.75	177	*e*P	Pn	17 48 21.7	-2.2
CO02	Combarbal	3.41	36		Pn	17 48 33.0	-0.2
CO02	Combarbal	3.41	36	*e*P	Pn	17 48 33.0	-0.2
CO02				*e*S	Sn	17 49 13.2	-1.1
CO06	Fray Jorge	3.61	24		Pn	17 48 34.4	-1.4
CO06	Fray Jorge	3.61	24	*e*P	Pn	17 48 34.4	-1.4
CO06				IAML		17 49 21.1	
	comp=E,198nm,0.2s						
GO04	Tololo Observa	4.38	30	Pn	Pn	17 48 46.0	-0.6
GO04	Tololo Observa	4.38	30	*e*P	Pn	17 48 45.7	-0.9
CO05	La Serena	4.44	24		Pn	17 48 46.4	-0.8
CO05	La Serena	4.44	24	*e*P	Pn	17 48 46.6	-0.6
ZON	Zonda	4.63	59	Pn	Pn	17 48 51.5	+1.7
H03S1	Juan Fernandez	4.63	270	Pn	Pn	17 48 47.6	-1.9
H03S1				T	T	17 53 26.0	
	baz=89						
H03S3	Juan Fernandez	4.63	271	Pn	Pn	17 48 47.9	-1.7
H03S3				T	T	17 53 30.6	
	baz=89						
H03S2	Juan Fernandez	4.65	270	Pn	Pn	17 48 47.7	-2.0
H03S2				T	T	17 53 30.4	
	baz=89						
H03N1	Juan Fernandez	4.67	275	Pn	Pn	17 48 49.1	-1.1
	baz=353,slow=79						
H03N1				T	T	17 53 38.5	
	baz=89,slow=74						
H03N3	Juan Fernandez	4.68	275	Pn	Pn	17 48 49.0	-1.3
	baz=353,slow=79						
H03N3				T	T	17 53 35.1	
	baz=89,slow=74						
H03N2	Juan Fernandez	4.69	275	Pn	Pn	17 48 49.2	-1.2
	baz=353,slow=79						
H03N2				T	T	17 53 37.2	
	baz=89,slow=74						
LC02	Puerto Saavedr	4.79	180	*e*P	Pn	17 48 49.5	-2.4
CO01	Juntas del Tor	4.87	35		Pn	17 48 53.8	+0.6
CO01	Juntas del Tor	4.87	35	*e*P	Pn	17 48 53.0	-0.3
LCO	Las Campanas	5.46	25	Pn	Pn	17 49 00.7	-0.7
LR03	Panguipulli	5.68	172		Pn	17 49 03.1	-1.2
LR04	Corral	5.87	181		Pn	17 49 04.8	-2.1
GO03	Copiap	6.92	24		Pn	17 49 20.3	-1.1
PLCA	Paso Flores	7.08	163	Pn	Pn	17 49 22.8	-0.8
	comp=E,3.6nm,0.3s,baz=328,slow=12,SNR=68						
PLCA				Sn	Sn	17 50 47.6	+3.0
	baz=55,slow=20						
	comp=E,14nm,0.5s						
PLCA	Paso Flores	7.08	163	Pn	Pn	17 49 23.5	-0.1
PLCA	Paso Flores	7.08	163	*e*P	Pn	17 49 23.9	+0.4
AC06	Mina Casimiro	7.10	22	Pn	Pn	17 49 22.3	-1.5
LL03	Petrohue	7.17	174	Pn	Pn	17 49 23.5	-1.2
LL05	Los Muermos	7.40	181	Pn	Pn	17 49 25.4	-2.4
AC02	Maricunga	8.01	28	Pn	Pn	17 49 35.4	-1.3
AC01	Pan de Azucar	8.17	18	Pn	Pn	17 49 35.6	-2.9
GO02	Mina Guanaco	9.39	21	Pn	Pn	17 49 53.0	-2.5
LVC	Limon Verde	11.99	20	LR	LR	17 55 02.0	
	comp=E,56nm,20.1s,baz=222,slow=37						
CPUP	Villa Florida	15.80	65	Pn	Pn	17 51 22.7	+0.2
	comp=E,0.2nm,0.3s,baz=241,slow=11,SNR=1.9						
	comp=E,1.2nm,0.8s						
PB16	IPOC Station P	15.97	13		Pn	17 51 23.3	-1.9
LPAZ	La Paz	18.25	16	P	P	17 51 54.1	-0.1
	comp=E,0.1nm,0.3s,baz=170,slow=8.4,SNR=11						
	comp=E,3.1nm,0.8s						
LPAZ	La Paz	18.25	16	Pn	Pn	17 51 52.3	-1.6
LPAZ	La Paz	18.25	16	*e*P	P	17 51 57.6	+3.4
AQDB	Aquidauana	20.63	54	*e*P	Pn	17 52 21.8	-0.1
SIV	San Ignacio	21.06	35	P	P	17 52 25.1	+0.8
	comp=E,4.9nm,0.8s,baz=218,slow=10,SNR=16						
	comp=E,4.9nm,0.8s						
USHA	Ushuaia	21.11	172	P	P	17 52 23.9	-0.7
	comp=E,4.8nm,0.9s,baz=30,slow=14,SNR=2.6						
	comp=E,4.8nm,0.9s						
MG01	Puerto William	21.31	171	P	P	17 52 26.0	-0.7
MG01				IAmb	IAmb	17 52 33.2	
	comp=Z,34nm,0.9s						
NNA	Nana	22.14	351	LR	LR	17 59 26.9	
	comp=Z,41nm,18.4s,baz=186,slow=32						
PTLB	Pontes e Lacer	22.48	38	*e*P	P	17 52 42.6	+3.1
ETMB	Extrema	24.94	17	*e*P	P	17 53 05.1	+1.5
PDRB	Porto dos Gac	26.96	38	*e*P	P	17 53 24.5	+2.6
ATAH	Atahualpa	27.14	349	LR	LR	18 02 55.2	
	comp=Z,42nm,18.1s,baz=205,slow=34						
BSCB	Bom Sucesso	28.35	70	*e*P	P	17 53 38.1	+3.6
BDFB	Brasilia	29.24	58	P	P	17 53 41.7	-0.6
	comp=Z,1.1nm,0.3s,baz=278,slow=14,SNR=3.2						
	comp=Z,1.1nm,0.3s						
BDFB	Brasilia	29.24	58	P	P	17 53 41.5	-0.9
TBTG	Tabatinga, AM	29.83	7	*e*P	P	17 53 49.3	+1.9
PMSA	Palmer Station	31.33	172	LR	LR	18 05 41.5	
	comp=Z,45nm,18.9s,baz=345,slow=35						
RPN	Rapa Nui	31.62	273	LR	LR	18 02 54.1	
	comp=Z,94nm,20.7s,baz=162,slow=29						
PRAC	Prado	37.54	357	*e*P	P	17 54 55.8	+1.3
ORTC	Ortega, Tolima	37.74	357	*e*P	P	17 54 58.6	+2.4
RUSC	La Rusia	39.67	0	*e*P	P	17 55 13.7	+0.7
DBBC	Dabeiba	40.88	356	*e*P	P	17 55 24.0	+1.5
ZARC	Zaragoza, Cauc	41.29	358	P	P	17 55 25.1	-0.7
ZARC	Zaragoza, Cauc	41.29	358	*e*P	P	17 55 26.3	+0.5
SDV	Santo Domingo	42.72	4	P	P	17 55 38.5	+0.8
	comp=Z,3.8nm,0.2s,baz=219,slow=6.5,SNR=1.5						
	comp=Z,3.8nm,0.2s						
BELA	Belgrano 2	47.08	170	P	P	17 56 12.0	+0.5
BELA				IAmb	IAmb	17 56 13.6	
	comp=Z,5.2nm,1.2s						
VNA3	Neumayer Olymp	49.77	158	P	P	17 56 32.4	0.0
SNAA	Sanae	52.00	158	P	P	17 56 49.7	+0.4
SNAA	Sanae	52.00	158	P	P	17 56 48.7	-0.6
TROLL	Troll, Antarti	53.70	158	P	P	17 57 02.6	+0.7
QSPA	South Pole Qui	56.24	180	P	P	17 57 20.9	+0.6
	comp=Z,4.2nm,1.0s,baz=152,slow=1.6,SNR=9.1						
	comp=Z,4.2nm,1.0s						
QSPA	South Pole Qui	56.24	180	P	P	17 57 20.5	+0.2
QSPA				IAmb	IAmb	17 57 21.6	
	comp=Z,6.3nm,1.1s						
TX31	Lajitas Ar. Si	69.21	332	P	P	17 58 47.5	+0.3
TX32	Lajitas Array	69.21	332	P	P	17 58 46.8	-0.4
TXAR	Lajitas Array	69.21	332	P	P	17 58 47.8	+0.6
	comp=Z,1.6nm,0.6s,baz=155,slow=8.4,SNR=16						
TXAR				LR	LR	18 23 44.4	
	comp=Z,39nm,20.8s,baz=196,slow=31						
	comp=Z,1.6nm,0.6s						
X48A	Hartselle	69.29	348	P	P	17 58 47.9	+0.5
W50A	Signal Mountai	69.74	350	P	P	17 58 49.7	-0.5
W50A				IAmb	IAmb	17 58 53.6	
	comp=Z,6.4nm,0.9s						
CPCT	Cooper Cave	69.87	350	P	P	17 58 48.5	-2.5
CPCT				IAmb	IAmb	17 58 51.8	
	comp=Z,3.6nm,0.8s						
TKL	Tuckaleechee C	69.98	351	P	P	17 58 50.6	-1.1
TKL				IAmb	IAmb	17 58 52.1	
	comp=Z,2.8nm,0.7s						
PLAL	Pickwick Lake	69.99	347	P	P	17 58 51.7	0.0
V48A	Smith Brothers	70.51	348	P	P	17 58 55.1	+0.2
CLTN	Cedars of Leba	70.78	349	P	P	17 58 57.1	+0.7
CLTN				IAmb	IAmb	17 59 06.7	
	comp=Z,7.2nm,1.0s						
WVT	Waverly	71.07	348	P	P	17 58 58.6	+0.4
WHAR	Wooly Hollow	71.17	344	P	P	17 58 59.5	+0.6
WHAR				IAmb	IAmb	17 59 00.5	
	comp=Z,6.5nm,1.1s						
W39A	Magazine	71.44	342	P	P	17 59 01.4	+0.9
LCAR	Lake Charles	71.66	345	P	P	17 59 01.9	0.0
FCAR	Ozark Folk Cen	71.71	344	P	P	17 59 01.6	-0.6
FCAR				IAmb	IAmb	17 59 05.2	
	comp=Z,3.3nm,0.9s						
MNTX	Cornudas Mount	71.98	332	P	P	17 59 03.7	-0.3
PBMO	Poplar Bluff	72.19	346	P	P	17 59 05.2	+0.1
U40A	Yellville	72.32	344	P	P	17 59 06.2	+0.4
U40A				IAmb	IAmb	17 59 07.1	
	comp=Z,6.4nm,1.1s						
WMOK	Wichita Mounta	72.41	338	P	P	17 59 05.5	-1.0
WMOK				IAmb	IAmb	17 59 11.2	
	comp=Z,7.2nm,1.0s						
MSTX	Muleshoe	73.03	335	P	P	17 59 10.0	-0.3
MSTX				IAmb	IAmb	17 59 11.7	
	comp=Z,6.0nm,0.8s						
MAW	Mawson	73.49	164	P	P	17 59 12.1	-0.3
	comp=Z,4.9nm,1.0s,baz=265,slow=4.1,SNR=4.6						
MAW				LR	LR	18 31 07.4	
	comp=Z,24nm,19.5s,baz=220,slow=36						
	comp=Z,4.9nm,1.0s						
MAW	Mawson	73.49	164	P	P	17 59 11.4	-1.1
CCM	Cathedral Cave	73.59	345	P	P	17 59 13.6	+0.3
121A	Cookes Peak, D	73.69	330	P	P	17 59 13.4	-0.9
121A				IAmb	IAmb	17 59 16.9	
	comp=Z,3.2nm,0.8s						
R40A	Maddies Statio	74.04	345	P	P	17 59 16.0	0.0
R40A				IAmb	IAmb	17 59 17.1	
	comp=Z,5.1nm,0.9s						
ACSO	Alum Creek Sta	74.39	352	P	P	17 59 16.8	-1.2
O49A	Covington	74.51	351	P	P	17 59 17.4	-1.3
O49A				IAmb	IAmb	17 59 18.8	
	comp=Z,6.1nm,1.0s						
P40A	Paris	75.18	345	P	P	17 59 22.8	+0.3
P40A				IAmb	IAmb	17 59 23.9	
	comp=Z,8.6nm,1.0s						
P38A	Dawn	75.60	344	P	P	17 59 24.8	-0.1
P38A				IAmb	IAmb	17 59 25.8	
	comp=Z,8.6nm,1.1s						
SUR	Sutherland	75.78	119	LR	LR	18 26 14.6	
	comp=Z,47nm,20.2s,baz=234,slow=31						
DBIC	Dimbokro	76.20	72	P	P	17 59 29.6	+0.6
	comp=Z,3.5nm,0.6s,baz=246,slow=4.3,SNR=7.2						
	comp=Z,3.5nm,0.6s						
DBIC	Dimbokro	76.20	72	P	P	17 59 29.5	+0.5
T25A	Trinidad	76.46	335	P	P	17 59 31.8	+1.6
T25A				IAmb	IAmb	17 59 32.9	
	comp=Z,6.1nm,0.9s						
SDCO	Great Sand Dun	77.39	334	P	P	17 59 36.5	+1.0
PV13	Radium Mtn., P	79.00	332	P	P	17 59 45.7	+1.3
PV13				IAmb	IAmb	17 59 46.5	
	comp=Z,4.2nm,1.0s						
SMCO	Snowmass	79.19	334	P	P	17 59 47.4	+1.8
SMCO				IAmb	IAmb	17 59 50.2	
	comp=Z,4.9nm,1.1s						
TSUM	Tsumeb	80.25	107	LR	LR	18 30 05.0	
	comp=Z,40nm,21.9s,baz=230,slow=32						
CCUT	Cedar City	80.33	329	P	P	17 59 52.0	+0.4
P18A	Preston Nutter	80.82	332	P	P	17 59 55.7	+1.4
P18A				IAmb	IAmb	17 59 56.6	
	comp=Z,4.0nm,1.0s						
PRN	Pahroc Range	80.95	328	P	P	17 59 56.9	+2.1
PRN				IAmb	IAmb	17 59 58.0	
	comp=Z,4.5nm,1.0s						
BOSA	Boshof	81.03	118	LR	LR	18 33 31.2	
	comp=Z,17nm,18.4s,baz=188,slow=34						
R11A	Troy Canyon, C	81.97	328	P	P	18 00 02.1	+1.8
HWUT	Hardware Ranch	83.03	332	P	P	18 00 06.5	+0.7
HWUT				IAmb	IAmb	18 00 07.5	
	comp=Z,4.1nm,0.8s						
NVAR	Mina Array Bea	83.27	326	P	P	18 00 07.1	0.0
	comp=Z,0.4nm,0.6s,baz=135,slow=5.2,SNR=4.4						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	83.27	326	P	P	18 00 07.0	-0.1
PDAR	Pinedale Array	83.28	334	P	P	18 00 06.6	-0.4
	comp=Z,0.4nm,0.7s,baz=131,slow=4.1,SNR=4.1						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	83.28	334	P	P	18 00 06.9	-0.1
HVU	Hansel Valley	83.66	331	P	P	18 00 09.5	+0.6
HVU				IAmb	IAmb	18 00 10.5	
	comp=Z,3.4nm,0.8s						
ELK	Elko	83.80	329	LR	LR	18 33 37.9	
	comp=Z,19nm,18.6s,baz=183,slow=33						
ELK	Elko	83.80	329	P	P	18 00 10.8	+1.1
TOA0	Torodi Ar. Sit	85.23	71	P	P	18 00 17.6	+0.3
TOA0				IAmb	IAmb	18 00 18.5	
	comp=Z,3.3nm,0.7s						
TORD	Torodi Ar. Bea	85.23	71	P	P	18 00 17.6	+0.3
	comp=Z,10nm,0.6s,baz=247,slow=4.6,SNR=5.3						
	comp=Z,10nm,0.6s						
HLID	Hailey	85.81	331	P	P	18 00 21.3	+1.6
HLID				IAmb	IAmb	18 00 22.3	
	comp=Z,4.6nm,1.2s						
MCMT	McKenzie Canyo	86.27	333	P	P	18 00 23.4	+1.4
J08A	Circle Bar Ran	87.32	329	P	P	18 00 28.3	+1.2
J08A				IAmb	IAmb	18 00 29.6	
	comp=Z,4.1nm,0.8s						
PLID	Pearl Lake	87.71	331	P	P	18 00 29.6	+0.5
PLID				IAmb	IAmb	18 00 31.0	
	comp=Z,3.0nm,0.8s						
LSZ	Lusaka	90.83	109	LR	LR	18 36 34.9	
	comp=Z,36nm,19.8s,baz=168,slow=32						
ASAR	Alice Springs	117.07	208	PKP	PKPdf	18 06 23.8	-2.2
	comp=Z,0.3nm,0.5s,baz=132,slow=1.4,SNR=2.4						
WRA	Warramunga Arr	120.23	210	PKP	PKiKP	18 06 31.3	-0.9
	comp=Z,0.7nm,0.9s,baz=173,slow=1.7,SNR=4.5						
BRTR	Keskin Array B	122.78	61	PKP	PKiKP	18 06 36.2	-0.5
	comp=Z,1.0nm,0.7s,baz=215,slow=3.6,SNR=7.0						
AKASG	Malin Array Be	122.99	48	PKP	PKiKP	18 06 35.4	-1.1
	comp=Z,1.3nm,0.7s,baz=265,slow=2.5,SNR=8.9						
RPSI	Rantau Prapat	148.03	165		PKPbc	18 07 26.2	-0.4
PSI	Prapat	148.13	165	PKPbc	PKPbc	18 07 26.2	-0.9
	comp=Z,7.2nm,0.6s,baz=168,slow=3.0,SNR=9.1						
ZALV	Zalesovo Beam	154.79	31	PKP	PKPdf	18 07 31.8	-0.7
	comp=Z,1.0nm,0.7s,baz=316,slow=4.1,SNR=5.7						
ZALV				PKPbc	PKiKP	18 07 41.4	+0.3
	comp=Z,3.2nm,0.7s,baz=292,slow=3.8,SNR=13						
ZALV				PKPab	PKPab	18 07 56.7	+0.5
	comp=Z,0.5nm,0.5s,baz=318,slow=4.2,SNR=4.2						
MKAR	Makanchi Array	157.57	48	PKP	PKPdf	18 07 36.2	-0.2
	comp=Z,0.5nm,0.7s,baz=305,slow=5.1,SNR=5.7						
MKAR				PKPab	PKPab	18 08 08.8	+0.4
	comp=Z,1.1nm,0.8s,baz=291,slow=4.4,SNR=7.6						
CMAR	Chiang Mai Arr	163.06	154	PKP	PKPdf	18 07 43.0	-0.4
	comp=Z,0.4nm,0.4s,baz=236,slow=3.3,SNR=5.3						
SONM	Songino Array	166.17	1	PKPab	PKPab	18 08 47.1	+1.1
	comp=Z,0.5nm,0.7s,baz=329,slow=1.7,SNR=4.4						
PZH	PanZhiHua	171.41	149	PKP	PKPdf	18 07 49.0	-0.4

VAO ***12*** *18:03:44.0±2.1, 30°.68S×72°.32W, h10^{km}, mb4.4*
IDC ***12*** *18:03:46.1±0.6, 30°.61S×71°.71W, h0^{km}, mb4.3/11, mbtmp4.2/16, ML4.1/5, MS3.4/8, Error ellipse: s-maj=24.0km s-min=15.9km az=88.0*
SJA ***12*** *18:03:47.1±0.8, 30°.55S×71°.92W, h18^{km}±5^{km}, ML4.4, MW4.3*
GUC ***12*** *18:03:50.6±0.6, 30°.62S×71°.75W, h34^{km}±1^{km}, ML4.6*
NEIC ***12*** *18:03:50.6±2.0, 30°.58S±0°.04×71°.8W±0°.1, h27^{km}±4^{km}, mb4.4/15, Mwr4.1/53, Mwr4.3(GUC), Error ellipse: s-maj=13.2km s-min=6.4km az=96.0*
NEIC ***12*** *18:03:50.3, 30°.57S×71°.85W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.60; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-2.02; $M_{r\theta}$0.51; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.39; Fault plane solution: $M_0$1.96000×10^{15} NP1:ϕ_s160.96000°, δ54.31000°, λ65.76000°. NP2:ϕ_s18.62000°, δ42.22000°, λ119.75000°. Principal axes: T 1.8248, Plg69.0000°, Azm15.0000°; N 0.2422, Plg19.0000°, Azm176.0000°; P -2.0670, Plg6.0000°, Azm268.0000°;*
ISC 12 18:03:49.5±0.8**, 30°.59S**±0°.02×**71°.86W**±0°.04**, h25**^{km}±5^{km}**, n159, σ1^{s}.58**/184**, mb4.4**/14**, MS3.5**/4**, 8C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.21	114		Pb	18 03 56.3	+1.0
CO06	Fray Jorge	0.21	114	⇑*i*P	Pb	18 03 56.3	+1.0
CO06				*i* S	Sb	18 03 59.3	0.0
CO06				IAML		18 04 00.5	
	comp=E,191μm,0.2s						
CO05	La Serena	0.86	39		Pb	18 04 05.8	+0.1
CO05	La Serena	0.86	39	⇓*i*P	Pb	18 04 05.8	+0.1
CO05				*i* S	Sb	18 04 16.7	0.0
CO05				IAML		18 04 19.2	
	comp=N,33μm,0.3s						
CO02	Combarbal	0.96	130	Pn	Pb	18 04 06.7	-0.8
CO02	Combarbal	0.96	130	⇓*i*P	Pb	18 04 06.8	-0.8
CO02				*i* S	Sb	18 04 18.4	-1.5
CO02				IAML		18 04 19.4	
	comp=N,62μm,0.3s						
CO02	Combarbal	0.96	130	*e*P	Pb	18 04 06.8	-0.8
CO02				*e*S	Sb	18 04 18.6	-1.4
CO02				IAML		18 04 19.5	
	comp=Z,12μm,0.5s						
GO04	Tololo Observa	1.01	66	Pn	Pb	18 04 07.6	-0.8
GO04	Tololo Observa	1.01	66	⇓*i*P	Pb	18 04 07.7	-0.8
GO04				*i* S	Sb	18 04 20.5	-0.8
GO04				IAML		18 04 22.2	
	comp=N,60μm,0.5s						
CO01	Juntas del Tor	1.65	69		Pn	18 04 17.9	+0.8
CO01	Juntas del Tor	1.65	69	⇓*e*P	Pn	18 04 17.7	+0.6
CO01				IAML		18 04 40.6	
	comp=E,3μm,0.5s						
CO01	Juntas del Tor	1.65	69	*e*P	Pn	18 04 17.9	+0.8
CO01				*e*S	Sb	18 04 39.4	-0.4
CO01				IAML		18 04 44.9	
	comp=Z,2μm,0.6s						
LCO	Las Campanas	1.87	33		Pn	18 04 21.0	+0.9
LCO	Las Campanas	1.87	33	⇑*e*P	Pn	18 04 21.0	+0.9
LCO				*i* S	Sn	18 04 44.4	+1.4
LCO	Las Campanas	1.87	33	*e*P	Pn	18 04 21.0	+0.9
LCO				*e*S	Sb	18 04 46.9	+0.8
VA06	Catapilco	2.03	166		Pn	18 04 23.0	+1.0
VA06	Catapilco	2.03	166	*e*P	Pn	18 04 22.8	+0.8
VA06				*i* S	Sn	18 04 48.5	+1.9
VA06				IAML		18 04 58.3	
	comp=N,7μm,0.5s						
AROD	Rodeo	2.11	79	*e*P	Pb	18 04 26.1	-1.0
AROD				*e*S	Sb	18 04 53.3	+0.2
ACDV	Cuesta del Vie	2.41	81	*e*P	Pb	18 04 31.2	-1.0
ACDV				IAML		18 05 12.4	
	comp=Z,969nm,0.5s						
ACCO	Cerro Coronel	2.41	91	*e*P	Pb	18 04 31.2	-1.2
ACCO				*e*S	Sb	18 05 02.9	+1.0
VA01	Torpederas	2.44	176		Pn	18 04 27.7	0.0
VA01	Torpederas	2.44	176	*i* S	Sb	18 05 01.7	-0.4
VA01				IAML		18 05 18.1	
	comp=E,2μm,0.8s						
VA03	San Esteban	2.44	153		Pn	18 04 29.4	+1.5
VA03	San Esteban	2.44	153	*e*P	Pn	18 04 29.3	+1.5
VA03				*i* S	Sn	18 04 58.8	+1.8
VA03				IAML		18 05 09.1	
	comp=E,4μm,0.4s						
VA03	San Esteban	2.44	153	*e*P	Pn	18 04 29.8	+1.9
VA03				*e*S	Sn	18 04 59.2	+2.2
VA03				IAML		18 05 09.2	
	comp=Z,2μm,0.5s						
AC04	Llanos de Chal	2.47	16		Pn	18 04 28.7	+0.6
AC04	Llanos de Chal	2.47	16	⇑*i*P	Pn	18 04 28.8	+0.6
AC04				*i* S	Sn	18 04 56.2	-1.4
AC04				IAML		18 05 15.3	
	comp=N,2μm,0.3s						
AC04	Llanos de Chal	2.47	16	*e*P	Pn	18 04 28.8	+0.6

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AC04                               eS     Sn      18 04 58.2 +0.6
AC04                                IAML          18 05 10.0
      comp=Z,1µm,0.5s
ROCH  El Roble             2.49 163 eP     Pn      18 04 29.8 +1.2
ROCH                               i S    Sn      18 04 58.1  -0.1
ROCH                                IAML          18 05 10.8
      comp=N,4µm,0.4s
ROC1  El Roble             2.49 163        Pn      18 04 27.2  -1.5
RTLS  Leoncito             2.51 119 eP     Pb      18 04 32.4  -1.7
RTLS                                IAML          18 05 13.4
      comp=Z,4µm,0.7s
AUSP  Uspallata            2.67 128 eP     Pn      18 04 34.4 +3.2
AUSP                               eS     Sb      18 05 10.7 +1.4
MT02  Curacav              2.73 167        Pn      18 04 33.1 +1.3
MT02  Curacav              2.73 167 eP     Pn      18 04 33.6 +1.8
MT02                               i S    Sn      18 05 06.2 +2.1
MT02                                IAML          18 05 26.7
      comp=E,823nm,0.7s
MT02  Curacav              2.73 167 eP     Pn      18 04 33.6 +1.8
MT02                               eS     Sn      18 05 06.2 +2.1
MT02                                IAML          18 05 18.4
      comp=Z,1µm,0.7s
PEL   Peldehue             2.74 159        Pn      18 04 32.5 +0.6
PEL   Peldehue             2.74 159⇑iP     Pn      18 04 33.3 +1.4
PEL                                i S    Sn      18 05 06.3 +2.0
PEL                                 IAML          18 05 19.2
      comp=N,2µm,0.6s
PEL   Peldehue             2.74 159 eP     Pn      18 04 33.4 +1.4
PEL                                eS     Sb      18 05 08.7  -2.3
ZON   Zonda                2.90 110  Pn    Pn      18 04 37.3 +3.3
ZON   Zonda                2.90 110 eP     Pn      18 04 37.4 +3.3
ZON                                eS     Sn      18 05 03.3  -4.8
ZON                                 IAML          18 05 31.2
      comp=Z,809nm,0.6s
MT05  Renca                2.96 161  Pn    Pn      18 04 36.4 +1.4
MT05  Renca                2.96 161⇑eP     Pn      18 04 36.3 +1.4
MT05                               i S    Sn      18 05 10.9 +1.3
MT05  Renca                2.96 161 eP     Pn      18 04 36.3 +1.4
MT05                                IAML          18 05 27.9
      comp=Z,1µm,0.7s
FCH   Farellones           3.04 154 eP     Pn      18 04 38.0 +1.6
FCH                                 IAML          18 05 25.1
      comp=E,1µm,0.5s
VA05  Santo Domingo        3.07 176        Pn      18 04 35.8  -0.6
VA05  Santo Domingo        3.07 176 eP     Pn      18 04 36.7 +0.3
VA05                                IAML          18 05 32.6
      comp=E,3µm,0.4s
MT03  Universidad Ad       3.12 159        Pn      18 04 37.2   0.0
MT03  Universidad Ad       3.12 159⇑eP     Pn      18 04 38.5 +1.3
MT03                               i S    Sn      18 05 14.9 +1.2
MT03                                IAML          18 05 32.8
      comp=E,3µm,0.6s
MT03  Universidad Ad       3.12 159 eP     Pn      18 04 39.9 +2.7
MT03                               eS     Sb      18 05 18.7  -3.2
MT03                                IAML          18 05 31.1
      comp=Z,2µm,0.8s
RTCV  Cerro Valdivia       3.12 115 eP     Pn      18 04 37.2 +0.1
MT09  Talagante            3.27 167        Pn      18 04 40.5 +1.2
MT09  Talagante            3.27 167 eP     Pn      18 04 40.8 +1.5
MT09                               i S    Sb      18 05 24.1  -2.1
MT09                                IAML          18 05 36.3
      comp=N,1µm,0.3s
GO03  Copiap               3.31  26        Pn      18 04 40.9 +1.1
GO03  Copiap               3.31  26 eP     Pn      18 04 40.8 +1.1
GO03                               i S    Sn      18 05 20.6 +2.3
GO03                                IAML          18 05 32.9
      comp=N,2µm,0.3s
GO03  Copiap               3.31  26 eP     Pn      18 04 40.5 +0.8
GO03                               eS     Sb      18 05 24.2  -3.1
MT01  Popeta               3.31 171        Pn      18 04 40.4 +0.6
AC06  Mina Casimiro        3.48  23  Pn    Pn      18 04 42.6 +0.5
AC06  Mina Casimiro        3.48  23⇑iP     Pn      18 04 42.8 +0.7
AC06                               eS     Sn      18 05 24.4 +1.9
AC06                                IAML          18 05 43.5
      comp=E,944nm,0.3s
LMEL  Las Melosas          3.54 157        Pn      18 04 45.4 +2.4
BO04  La Punta             3.56 163        Pn      18 04 44.6 +1.5
BO04  La Punta             3.56 163 eP     Pn      18 04 44.6 +1.5
BO04                               i S    Sn      18 05 25.2 +0.8
BO04                                IAML          18 05 51.3
      comp=E,1µm,0.4s
AVFE  Valle Fertil         3.80  92 eP     Pn      18 04 48.8 +2.3
AVFE                               eS     Sb      18 05 39.2  -2.3
AVFE                                IAML          18 05 57.2
      comp=Z,569nm,0.5s
BO01  Tunca                3.85 170        Pn      18 04 47.5 +0.4
BO03  Pichilemu            3.90 181 eP     Pn      18 04 47.8   0.0
GO05  Huala                4.41 181        Pn      18 04 54.9   0.0
GO05  Huala                4.41 181 eP     Pn      18 04 54.9   0.0
ACLC  CERRO LA CRUZ        4.41  76 eP     Pn      18 04 57.8 +2.7
ACLC                               eS     Sn      18 05 49.7 +3.9
ACLC                                IAML          18 05 57.3
      comp=Z,866nm,1.1s
AC02  Maricunga            4.44  33  Pn    Pn      18 04 56.9 +1.1
AC02  Maricunga            4.44  33⇑eP     Pn      18 04 57.2 +1.5
ACHE  Chepes               4.51  99 eP     Pn      18 04 58.4 +2.1
ACHE                               eS     Sn      18 05 50.1 +2.1
AC01  Pan de Azucar        4.56  14        Pn      18 04 56.1  -0.9
AC01  Pan de Azucar        4.56  14 eP     Pn      18 04 56.1  -0.9
AC01                               eS     Sb      18 06 03.7 +0.4
AC01                                IAML          18 06 12.8
      comp=Z,302nm,0.6s
APLL  PUNTA DE LOS L       4.61  89 eP     Pn      18 05 00.0 +2.4
APLL                               eS     Sb      18 06 02.9  -1.9
RFA   San Rafael           5.06 146 eP     Pn      18 05 06.0 +2.1
RFA                                 IAML          18 06 36.9
      comp=Z,190nm,0.8s
GO02  Mina Guanaco         5.76  21  Pn    Pn      18 05 13.1  -0.7
BI05  Punta Hualpn         6.24 190  Pn    Pn      18 05 19.7  -0.3
H03N1 Juan Fernandez       6.63 243  Pn    Pn      18 05 25.7 +0.6
      baz=115,slow=18
H03N1                                T     T       18 12 21.7
      baz=71,slow=72,SNR=7128
H03N2 Juan Fernandez       6.64 243  Pn    Pn      18 05 26.0 +0.7
      baz=115,slow=18
H03N2                                T     T       18 12 20.6
      baz=71,slow=72,SNR=5830
H03N3 Juan Fernandez       6.64 243  Pn    Pn      18 05 25.7 +0.4
      baz=115,slow=18
H03N3                                T     T       18 12 19.4
      baz=71,slow=72,SNR=4325
H03S3 Juan Fernandez       6.79 240  Pn    Pn      18 05 27.2  -0.1
H03S3                                T     T       18 12 31.2
      SNR=25
H03S1 Juan Fernandez       6.79 240  Pn    Pn      18 05 26.9  -0.4
H03S1                                T     T       18 12 29.4
      SNR=14
H03S2 Juan Fernandez       6.81 240  Pn    Pn      18 05 27.1  -0.4
H03S2                                T     T       18 12 38.7
      SNR=30
PB10  IPOC Station P       7.14  10  Pn    Pn      18 05 30.1  -2.3
PB15  IPOC Station P       7.65  17        Pn      18 05 38.4  -1.2
PB06  IPOC Station P       8.11  15  Pn    Pn      18 05 43.7  -2.2
PB04  IPOC Station P       8.36  11  Pn    Pn      18 05 47.0  -2.3
LVC   Limon Verde          8.37  19  Pn    Pn      18 05 47.3  -2.4
      comp=Z,0.9nm,0.3s,baz=194,slow=8.7,SNR=2.8
LVC                                  Sn    Sn      18 07 20.1  -3.5
      baz=180,slow=12
LVC                                  LR    LR      18 08 55.2
      comp=Z,243nm,18.4s,baz=212,slow=37
      comp=Z,2.1nm,0.3s
LVC   Limon Verde          8.37  19  Pn    Pn      18 05 47.6  -2.1
LVC   Limon Verde          8.37  19 eP     Pn      18 05 48.8  -0.9
PB07  IPOC Station P       9.00  12  Pn    Pn      18 05 55.3  -2.8
PB09  IPOC Station P       9.06  16  Pn    Pn      18 05 56.6  -2.3
PB02  IPOC Station P       9.40  11  Pn    Pn      18 05 59.9  -3.5
PB01  IPOC Station P       9.74  13  Pn    Pn      18 06 01.7  -6.4
PATCX Punta Patache        9.85   9  Pn    Pn      18 06 06.7  -2.9
PLCA  Paso Flores         10.18 174  Pn    Pn      18 06 13.1  -1.0
      comp=Z,0.3nm,0.3s,baz=332,slow=20,SNR=1.9
PLCA                                 LR    LR      18 10 36.3
      comp=Z,140nm,18.9s,baz=350,slow=40
      comp=Z,0.8nm,0.4s
PB08  IPOC Station P      10.69  14  Pn    Pn      18 06 19.7  -1.7
PB11  IPOC Station P      10.96  11  Pn    Pn      18 06 21.5  -3.5
ITQB  Itaqui              13.22  90  Pn    Pn      18 06 54.0  -1.7
CPUP  Villa Florida       13.47  75  Pn    Pn      18 06 56.0  -3.0
      comp=Z,0.5nm,0.3s,baz=245,slow=7.9,SNR=5.7
CPUP                                 Sn    Sn      18 09 23.9  -4.1
      comp=Z,0.3nm,0.3s,baz=192,slow=19,SNR=1.5
CPUP                                 LR    LR      18 12 28.0
      comp=Z,192nm,19.1s,baz=232,slow=39
      comp=Z,1.2nm,0.4s
CPUP  Villa Florida       13.47  75  Pn    Pn      18 06 55.8  -3.3
CPUP  Villa Florida       13.47  75 eP     Pn      18 06 59.5 +0.4
LPAZ  La Paz              14.64  14  Pn    Pn      18 07 15.5  -0.1
      comp=Z,0.5nm,0.3s,baz=162,slow=11,SNR=16
      comp=Z,4.0nm,0.6s
LPAZ  La Paz              14.64  14        Pn      18 07 17.9 +2.3
PLTB  Pedras Altas        15.68  99  Pn    Pn      18 07 27.2  -1.6
CPSB  Cacapava Do Su      15.89  94 eP     Pn      18 07 32.3 +0.9
SIV   San Ignacio         17.57  37  P     Pn      18 07 50.9  -1.9
      comp=Z,0.1nm,0.3s,baz=215,slow=11,SNR=21
      comp=Z,7.0nm,0.8s
ITAB  Concordia           17.59  84  P     Pn      18 07 53.3 +0.3
ITAB                                 IAmb  IAmb    18 08 05.6
      comp=Z,48nm,1.3s
ITAB  Concordia           17.59  84 eP     P       18 07 56.2 +2.3
PTGB  Pitanga             18.48  76 eP     Pn      18 08 05.5 +1.4
TRCB  Terra Rica          18.84  70  P     P       18 08 08.0 +0.3
PTLB  Pontes e Lacer      19.06  41 eP     P       18 08 09.8  -0.2
NNA   Nana                19.07 345  LR    LR      18 14 13.7
      comp=Z,40nm,18.3s,baz=188,slow=33
TER01 Tubaro-SC           19.88  90 eP     P       18 08 19.5 +0.5
PP1B  Ponte de Pedra      20.15  54 eP     P       18 08 21.7  -0.4
PCMB  Pacaembu            20.52  69 eP     P       18 08 25.5  -0.5
VILB  Vilhena             20.59  34 eP     P       18 08 27.3 +0.5
SALV  Santo Antonio       20.80  49 eP     P       18 08 29.0  -0.1
FRTB  Fartura             21.12  75 eP     P       18 08 34.2 +1.7
ITRB  Iturama             22.24  66 eP     P       18 08 46.6 +2.1
PDRB  Porto dos Gac       23.52  40 eP     P       18 08 58.1 +0.3
ATAH  Atahualpa           24.12 344  LR    LR      18 16 50.1
      comp=Z,48nm,18.6s,baz=178,slow=32
USHA  Ushuaia             24.36 175  P     P       18 09 06.0 +0.8
      comp=Z,3.9nm,0.5s,baz=0.9,slow=8.3,SNR=5.8
      comp=Z,3.9nm,0.5s
BDFB  Brasilia            26.42  61  P     P       18 09 23.7  -0.8
      comp=Z,6.0nm,0.8s,baz=229,slow=9.8,SNR=6.7
      comp=Z,6.0nm,0.8s
BDFB  Brasilia            26.42  61  P     P       18 09 23.7  -0.8
BDFB                                 IAmb  IAmb    18 09 36.0
      comp=Z,8.7nm,0.8s
PEXB  Peixe               28.53  55 eP     P       18 09 43.0  -0.3
JANB  Januaria            29.62  65 eP     P       18 09 52.3  -0.7
CMC01 Camacan, BA         33.27  70 eP     P       18 10 24.9  -0.1
PMSA  Palmer Station      34.55 174  LR    LR      18 23 29.6
      comp=Z,88nm,19.8s,baz=338,slow=34
ZARC  Zaragoza, Cauc      37.97 355  P     P       18 11 06.5 +1.2
ZARC                                 IAmb  IAmb    18 11 09.2
      comp=Z,4.3nm,1.0s
NBMA  Muriti-CE           38.65  60 eP     P       18 11 10.3  -0.9
SDV   Santo Domingo       39.26   2  P     P       18 11 16.4   0.0
SDV                                  IAmb  IAmb    18 11 21.1
      comp=Z,7.4nm,0.9s
BAUV  El Baul             39.47   6  P     P       18 11 18.5 +0.5
BAUV                                 IAmb  IAmb    18 11 19.5
      comp=Z,15nm,0.9s
MDP   Montagnes des       39.97  31  LR    LR      18 29 42.7
      comp=Z,82nm,18.4s,baz=111,slow=39
RCBR  Riachuelo           41.80  61  LR    LR      18 29 53.4
      comp=Z,83nm,20.3s,baz=324,slow=38
CELP  Cerrillos           48.65   7  P     P       18 12 31.4   0.0
SNAA  Sanae               54.69 159  P     P       18 13 16.3 +0.2
      comp=Z,1.6nm,0.5s,baz=290,slow=10,SNR=10
      comp=Z,1.6nm,0.5s
SNAA  Sanae               54.69 159  P     P       18 13 16.6 +0.4
SNAA                                 IAmb  IAmb    18 13 31.3
      comp=Z,2.5nm,0.6s
TXAR  Lajitas Array       66.85 330  P     P       18 14 41.5 +2.1
      comp=Z,0.4nm,0.7s,baz=162,slow=13,SNR=4.5
      comp=Z,0.4nm,0.7s
DBIC  Dimbokro            73.97  72  P     P       18 15 22.8  -0.4
      comp=Z,4.1nm,0.5s,baz=246,slow=7.1,SNR=5.6
      comp=Z,4.1nm,0.5s
MAW   Mawson              76.40 164  P     P       18 15 36.8 +0.5
      comp=Z,3.6nm,0.5s,baz=221,slow=7.4,SNR=26
      comp=Z,3.6nm,0.5s
MAW   Mawson              76.40 164  P     P       18 15 37.3 +1.0
PDAR  Pinedale Array      80.80 333  P     P       18 16 02.2 +1.1
      comp=Z,0.5nm,0.8s,baz=134,slow=6.4,SNR=5.1
      comp=Z,0.5nm,0.8s
NVAR  Mina Array Bea      81.18 325  P     P       18 16 03.9 +0.7
      comp=Z,0.4nm,0.7s,baz=134,slow=6.4,SNR=2.8
      comp=Z,0.4nm,0.7s
BOSA  Boshof              81.53 118  P     P       18 16 05.4   0.0
      comp=Z,2.8nm,0.9s,baz=215,slow=1.9,SNR=4.1
      comp=Z,2.8nm,0.9s
TORD  Torodi Ar. Bea      82.92  70  P     P       18 16 12.6   0.0
      comp=Z,10.0nm,0.6s,baz=278,slow=6.6,SNR=10
      comp=Z,10.0nm,0.6s
BBB   Bella Bella         95.97 329  P     P       18 17 13.4  -0.5
      comp=Z,12nm,0.8s,baz=168,slow=8.7,SNR=2.2
YKA   Yellowknife Ar      98.88 341  P     Pdif    18 17 27.3 +0.5
      comp=Z,0.2nm,0.5s,baz=144,slow=4.8,SNR=3.6
      comp=Z,0.2nm,0.5s
ASAR  Alice Springs      120.66 208  PKP   PKPdf   18 22 39.0  -0.9
      comp=Z,0.2nm,0.5s,baz=122,slow=1.6,SNR=5.5
WRA   Warramunga Arr     123.80 210  PKP   PKPdf   18 22 45.2  -0.7
      comp=Z,0.9nm,0.7s,baz=147,slow=1.7,SNR=7.8
H11S2 WAKE ISLAND Hyl    125.90 272  T     T       20 41 31.3
      baz=115,slow=75,SNR=200
H11S1 WAKE ISLAND Hyl    125.91 272  T     T       20 41 32.7
      baz=115,slow=75,SNR=116
H11S3 WAKE ISLAND Hyl    125.92 272  T     T       20 41 31.9
      baz=115,slow=75,SNR=200
H11N3 WAKE ISLAND Hyl    126.23 273  T     T       20 41 55.2
      baz=116,slow=75,SNR=20
H11N1 WAKE ISLAND Hyl    126.24 273  T     T       20 42 03.2
      baz=116,slow=75,SNR=9.9
H11N2 WAKE ISLAND Hyl    126.24 273  T     T       20 42 05.0
      baz=116,slow=75,SNR=30
ZALV  Zalesovo Beam      151.22  29  PKPbc PKiKP   18 23 41.0 +0.2
      comp=Z,11nm,0.7s,baz=295,slow=3.2,SNR=57
ZALV                                 PKPab sPKPbc  18 23 49.6  -0.7
      comp=Z,12nm,0.7s,baz=321,slow=2.9,SNR=14
MKAR  Makanchi Array     154.30  44  PKPbc PKiKP   18 23 48.0 +0.6
      comp=Z,1.0nm,0.8s,baz=336,slow=2.7,SNR=8.5
SONM  Songino Array      162.72   4  PKPab PKPab   18 24 39.5 +1.6
      comp=Z,0.2nm,0.4s,baz=304,slow=3.1,SNR=4.4
PZH   PanZhiHua          173.06 124  PKP   PKPdf   18 23 57.0  -0.1
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DJA ***12*** *18:23:50.9±0.1, 12°S±2°×11°7E±°, $h10^{km}$, M4.8/56, mB5.3/24, mb5.0/56, MLv5.3/23, Mw(mB)4.7/24*

NEIC ***12*** *18:23:51.5±2.1, 11.°22S±0.°07×117.°03E±0.°06, $h10^{km}\pm 1^{km}$, mb4.9/57, Error ellipse: s-maj=14.0km s-min=7.2km az=211.0*

IDC ***12*** *18:23:57.1±0.6, 11.°20S×117.°14E, $h49^{km}\pm 4^{km}$, mb4.3/18, mbtmp4.6/22, MS3.5/27, Error ellipse: s-maj=13.7km s-min=10.4km az=23.0*

ISC 12 18:23:54.5±0.3**, 11.°39S**±0.°05×**117.°03E**±0.°05**, $h35^{km}$, n257,** σ**1ˢ75**/251**, mb4.9**/72**, MS3.6**/24**, 4C, South of Sumbawa**

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Code  Station Name         Δ°  AZ°    Phase ID              Time     Res
                                     Op    ISC            h  m  s    ISC
PLAI  Plampang             2.65  16  P     Pn      18 24 35.0 +0.3
PLAI  Plampang             2.65  16  P     Pn      18 24 35.9 +1.2
WBSI  Waikabubak, Su       2.90  53  P     Pn      18 24 38.6 +0.4
IGBI  Denpasar             3.16 324  P     Pn      18 24 40.5  -1.2
DNP   Denpasar             3.24 326  P     Pn      18 24 42.5  -0.3
SRBI  Singaraja            3.74 331  P     Pn      18 24 50.5 +0.8
JAGI  Jajag, Banyuwa       4.06 315  Pn    Pn      18 24 51.9  -2.2
JAGI  Jajag, Banyuwa       4.06 315  P     Pn      18 24 51.9  -2.2
JAGI  Jajag, Banyuwa       4.06 315  P     Pn      18 24 53.5  -0.6
ABJI  Asem Bagus           4.51 322  P     Pn      18 25 00.5 +0.2
GMJI  Gumukmas             4.70 311  P     Pn      18 25 00.9  -2.0
BLJI  Banyuglugur          4.96 317  P     Pn      18 25 05.9  -0.6
KMMI  Kalianget            5.27 325  P     Pn      18 25 11.2 +0.5
      1.0nm88nm,1.1s
EDFI  Ende, Flores         5.28  61  P     Pn      18 25 10.2  -0.9
      0.7nm2µm55nm,0.6s
MMRI  Maumere              5.81  62  Pn    Pn      18 25 18.0  -0.2
MMRI  Maumere              5.81  62  P     Pn      18 25 17.9  -0.3
      2.3nm3µm108nm,0.7s
MMRI  Maumere              5.81  62  P     Pn      18 25 18.6 +0.4
PWJI  Pagerwojo            6.14 303  P     Pn      18 25 22.5  -0.3
      1.7nm3µm278nm,0.6s
GRJI  Gresik               6.32 314  P     Pn      18 25 26.5 +1.3
      0.5nm83nm,0.8s
PCJI  Pacitan              6.58 298  P     Pn      18 25 27.3  -1.6
      1.2nm345nm,0.9s
BATI  Baumata              6.62  80  P     Pn      18 25 29.6 +0.3
      36nm,0.3s,baz=284,slow=6.8,SNR=22
BATI                                 S     Sn      18 26 44.0 +0.3
      155nm,0.3s,baz=218,slow=18,SNR=12
BATI                                 LR    LR      18 27 48.2
      comp=Z,73nm,21.3s,baz=273,slow=36
BATI  Baumata              6.62  80  P     Pn      18 25 30.1 +0.7
      0.7nm71nm,1.0s
BKSI  Bulukumba            6.76  27  P     Pn      18 25 33.8 +2.6
      1.8nm4µm398nm,0.6s
KAPI  Kappang              6.88  23  P     Pn      18 25 35.4 +2.5
      86nm,0.6s,baz=198,slow=8.2,SNR=36
KAPI                                 S     Sn      18 26 47.7  -2.3
      117nm,0.3s,baz=333,slow=17,SNR=20
KAPI                                 LR    LR      18 28 20.1
      comp=Z,292nm,20.8s,baz=286,slow=39
KAPI  Kappang              6.88  23  Pn    Pn      18 25 31.6  -1.3
KAPI  Kappang              6.88  23  P     Pn      18 25 35.7 +2.8
WOJI  Wonogiri, Jawa       6.98 300  P     Pn      18 25 33.2  -1.1
      0.6nm133nm,0.8s
BWJI  Bawean               7.00 321  P     Pn      18 25 35.3 +0.8
      1.4nm259nm,0.9s
UGM   Wanagama             7.29 298        Pn      18 25 38.2  -0.3
UGM   Wanagama             7.29 298  P     Pn      18 25 36.4  -2.2
      1.7nm339nm,0.7s
UGM   Wanagama             7.29 298  P     Pn      18 25 37.1  -1.5
SOEI  Soe                  7.29  78        Pn      18 25 38.4  -0.3
SOEI  Soe                  7.29  78  P     Pn      18 25 39.4 +0.7
      1.4nm187nm,0.8s
SOEI  Soe                  7.29  78  P     Pn      18 25 39.9 +1.2
YOGI  Yogyakarta           7.53 298  P     Pn      18 25 40.7  -1.2
      0.7nm112nm,0.7s
BNSI  Bone                 7.58  24  P     Pn      18 25 46.3 +3.8
      0.7nm186nm,0.6s
UWJI  Ujung Watu           7.78 309  P     Pn      18 25 44.8  -0.5
      0.5nm101nm,1.0s
SMRI  Semarang             7.80 303  Pn    Pn      18 25 42.5  -3.2
SMRI  Semarang             7.80 303  P     Pn      18 25 46.1 +0.5
      0.6nm101nm,0.8s
SPSI  Sidrap Palu          7.86  20  P     Pn      18 25 48.5 +2.2
      761nm55nm,0.6s
BBSI  Bau Bau              8.02  44  P     Pn      18 25 50.1 +1.5
      93nm7.2nm,0.7s
BBKI  Banjar Baru          8.17 344  P     Pn      18 25 54.7 +4.1
      75nm,1.1s
TTSI  Tana Toraja          8.74  19  P     Pn      18 26 02.2 +3.8
      869nm85nm,0.7s
KPJI  Karang Pucung        8.95 296  P     Pn      18 26 00.6  -0.8
      2µm97nm,0.5s
CMJI  Cimerak              9.19 292  P     Pn      18 26 02.0  -2.6
      58nm,0.8s
MBWA  Marble Bar          10.06 165        Pn      18 26 12.8  -3.7
MBWA  Marble Bar          10.06 165  P     Pn      18 26 13.1  -3.4
LEM   Lembang             10.34 295  P     Pn      18 26 21.9 +1.3
      21nm,0.6s,baz=151,slow=18,SNR=6.2
LEM                                  S     Sn      18 28 14.4  -1.0
      47nm,0.7s,baz=244,slow=22,SNR=3.7
LEM                                  LR    LR      18 30 53.9
      comp=Z,276nm,18.7s,baz=128,slow=40
LEM   Lembang             10.34 295  P     Pn      18 26 19.6  -1.0
      28nm,0.8s
PSA00 Pilbara Seismi      10.48 165  Pn    Pn      18 26 18.3  -4.0
PSA00 Pilbara Seismi      10.48 165  Pn    Pn      18 26 18.6  -3.8
PSA00 Pilbara Seismi      10.48 165  P     Pn      18 26 19.0  -3.3
CNJI  Cibinong            10.58 292  P     Pn      18 26 22.1  -1.6
MTKI  Muara Teweh, K      10.59 348  P     Pn      18 26 25.3 +1.4
CBJI  Citeko              11.20 295  P     Pn      18 26 28.1  -4.1
      3µm95nm,0.7s
XMIS  Christmas Isla      11.21 274  P     Pn      18 26 30.5  -1.9
DBJI  Dramaga             11.23 294  P     Pn      18 26 30.8  -1.9
      27nm,0.8s
APSI  Ampana              11.37  24  P     Pn      18 26 37.1 +2.6
      38nm,0.9s
GIRL  Giralia             11.51 193        Pn      18 26 32.9  -3.5
GIRL  Giralia             11.51 193  P     Pn      18 26 33.4  -3.0
MPSI  Mapaga              11.99  14  P     Pn      18 26 45.6 +2.6
      274nm15nm,0.9s
KNRA  Kununurra           12.18 112        Pn      18 26 45.8 +0.2
KNRA  Kununurra           12.18 112  P     Pn      18 26 45.9 +0.4
STKI  Sintang             12.65 334  P     Pn      18 26 53.0 +1.0
      17nm,0.8s
SANI  Sanana              12.85  44  P     Pn      18 26 57.1 +2.4
      16nm,1.0s
TOLI2 Tolitoli            12.96  17        Pn      18 26 56.4 +0.1
GTOI  Gorontalo           13.34  27  P     Pn      18 27 05.2 +3.7
      149nm8.9nm,0.8s
KASI  Kota Agung          13.70 294  P     Pn      18 27 03.8  -2.5
      50nm,0.6s
LBMI  Labuha              14.90  45  P     Pn      18 27 24.9 +2.2
      495nm52nm,1.2s
MEEK  Meekatharra         15.24 175  P     Pn      18 27 23.7  -3.5
MNAI  Manna               15.59 295  P     Pn      18 27 29.6  -2.1
      189nm,2.4s
MNAI  Manna               15.59 295  P     Pn      18 27 29.8  -1.9
TNTI  Ternate             15.86  41  Pn    Pn      18 27 31.5  -3.7
TNTI                                 IAmb  IAmb    18 27 46.9
      comp=Z,52nm,0.8s
TNTI  Ternate             15.86  41  P     Pn      18 27 36.8 +1.6
      comp=Z,771nmcomp=Z,71nm,0.8s
MYLDM Lahad Datu          16.52   5        Pn      18 27 39.9  -3.8
WRKA  Warakurna           17.27 143  P     Pn      18 27 51.2  -1.8
SWI   Sorong              17.57  54  P     Pn      18 27 55.4  -1.4
      comp=Z,1µmcomp=Z,99nm,0.8s
SIJI  Sorong              17.58  55  P     Pn      18 27 54.7  -2.1
      comp=Z,29nm,0.7s,baz=290,slow=13,SNR=14
SIJI                                 S     Sn      18 31 10.2  -1.6
      comp=Z,8.1nm,0.8s,baz=135,slow=22,SNR=2.4
MORW  Morawa              17.62 183        Pn      18 27 53.1  -4.1
MORW                                 IAmb  IAmb    18 27 56.9
      comp=Z,67nm,0.9s
MORW  Morawa              17.62 183  P     Pn      18 27 54.3  -3.0
KRJI  Kerinci             18.00 300  P     Pn      18 27 58.2  -3.9
      comp=Z,176nm,0.6s
WB0   Warramunga Arr      18.67 119  P     P       18 28 06.6  -3.1
WRA   Warramunga Arr      18.70 119  P     P       18 28 10.0   0.0
      comp=Z,4.7nm,0.6s,baz=292,slow=12,SNR=50
WRA                                  S     Sn      18 31 25.2   -14
      comp=Z,8.0nm,0.5s,baz=284,slow=23,SNR=13
WRA                                  LR    LR      18 35 51.0
      comp=Z,294nm,18.8s,baz=312,slow=38
WRA   Warramunga Arr      18.70 119  P     P       18 28 09.2  -0.7
WRAB  Tennant Creek       18.70 119  P     P       18 28 10.6 +0.5
WRAB  Tennant Creek       18.70 119  P     Pn      18 28 11.2 +0.6
WB2   Warramunga Arr      18.71 119  P     P       18 28 08.8  -1.2
WR0   Warramunga Arr      18.88 119  P     Pn      18 28 13.1 +0.4
BLDU  Ballidu             19.14 181  P     P       18 28 14.1  -0.6
KLBR  Kellerberrin        20.12 178  P     P       18 28 26.8 +1.4
AS31  Alice Springs       20.17 129  P     P       18 28 27.2 +1.1
ASAR  Alice Springs       20.17 129  P     P       18 28 27.5 +1.4
      comp=Z,8.0nm,0.8s,baz=300,slow=10.0,SNR=113
ASAR                                 S     S       18 32 01.6  -9.2
      comp=Z,8.5nm,0.8s,baz=316,slow=25,SNR=17
ASAR                                 LR    LR      18 36 09.2
      comp=Z,148nm,20.4s,baz=312,slow=36
      comp=Z,8.0nm,0.8s
ASAR  Alice Springs       20.17 129  P     P       18 28 27.2 +1.1
MUN   Mundaring           20.51 182  P     P       18 28 31.2 +1.6
NWAO  Narrogin (SRO)      21.44 180  P     P       18 28 39.9 +0.2
NWAO                                 IAmb  IAmb    18 28 43.7
      comp=Z,56nm,0.8s
FORT  Forrest             21.84 154  P     P       18 28 45.1 +1.2
FORT  Forrest             21.84 154  P     P       18 28 45.3 +1.3
IPM   Ipoh                22.41 314  P     P       18 28 46.0  -4.3
IPM                                  IAmb  IAmb    18 28 59.2
      comp=Z,22nm,1.0s
IPM   Ipoh                22.41 314  P     P       18 28 51.4 +1.1
RPSI  Rantau Prapat       22.81 307        S       18 33 02.7 +1.3
PSI   Prapat              22.87 307  P     P       18 28 56.0 +0.7
      comp=Z,5.1nm,0.5s,baz=154,slow=12,SNR=8.2
PSI                                  S     S       18 33 02.7  -0.1
      comp=Z,2.1nm,0.4s,baz=77,slow=18,SNR=1.4
PSI                                  LR    LR      18 37 57.7
      comp=Z,165nm,19.0s,baz=132,slow=37
      comp=Z,5.1nm,0.5s
GSI   Gunungsitoli        23.09 302  P     P       18 28 58.1 +0.7
KULM  Kulim               23.24 315  P     P       18 28 56.4  -2.5
KULM                                 IAmb  IAmb    18 28 59.8
      comp=Z,12nm,0.7s
QIS   Mount Isa           23.51 116  P     P       18 29 03.6 +2.1
TSI   Tuntungan           23.59 308  P     P       18 29 01.9  -0.3
      comp=Z,2µmcomp=Z,151nm,1.2s
OOD   Oodnadatta          23.93 136  P     P       18 29 07.1 +1.7
KCSI  Kotacane, Aceh      24.22 307  P     P       18 29 07.1  -1.1
      comp=Z,712nmcomp=Z,48nm,1.3s
MULG  Mulgathing          24.57 142  P     P       18 29 13.1 +1.9
LCRK  Leigh Creek         27.32 137  P     P       18 29 38.2 +2.1
INKA  Innaminka           27.55 130  P     P       18 29 41.4 +3.2
BBOO  Buckleboo           27.57 144  P     P       18 29 39.9 +1.6
      comp=Z,30nm,2.1s
CTA   Charters Tower      29.39 111  LR    LR      18 41 23.9
      comp=Z,90nm,20.7s,baz=274,slow=36
PMG   Port Moresby        29.69  89  LR    LR      18 44 45.6
      comp=Z,72nm,18.8s,baz=250,slow=42
HTT   Hallett             29.72 141  P     P       18 30 00.0 +2.5
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STKA	Stephens Creek	30.48	136	P	P	18 30 06.0	+1.9
	comp=Z,10.0nm,0.9s,baz=308,slow=8.8,SNR=11						
STKA				LR	LR	18 43 19.6	
	comp=Z,218nm,18.8s,baz=323,slow=38						
	comp=Z,10.0nm,0.9s						
STKA	Stephens Creek	30.48	136		P	18 30 06.2	+1.9
STKA	Stephens Creek	30.48	136	P	P	18 30 06.1	+1.9
CM31	Chiang Mai Arr	34.61	329	P	P	18 30 40.0	-0.5
CM31				IAmb	IAmb	18 30 48.5	
	comp=Z,8.9nm,0.9s						
CMAR	Chiang Mai Arr	34.61	329	P	P	18 30 40.6	+0.2
	comp=Z,6.3nm,0.9s,baz=157,slow=6.7,SNR=31						
CMAR				PcP	PcP	18 33 16.7	+2.1
	comp=Z,1.8nm,0.7s,baz=173,slow=2.9,SNR=8.2						
CMAR				LR	LR	18 46 17.5	
	comp=Z,54nm,18.7s,baz=145,slow=39						
	comp=Z,6.3nm,0.9s						
CMAR	Chiang Mai Arr	34.61	329	P	P	18 30 40.0	-0.5
CMAR					PcP	18 33 16.5	+1.9
CHTO	Chiang Mai	34.91	329	P	P	18 30 42.6	-0.5
CHTO				IAmb	IAmb	18 30 43.5	
	comp=Z,4.8nm,0.7s						
KMI	Kunming	38.87	339	⇑P	P	18 31 18.4	+1.5
KMI				sP	pP	18 31 25.8	+0.4
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
GYA	Guiyang	38.95	345	⇑P	P	18 31 17.5	+0.1
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
JOW	Kunigami	39.53	16	LR	LR	18 49 38.5	
	comp=Z,33nm,18.2s,baz=70,slow=39						
PZH	PanZhiHua	40.49	339	P	P	18 31 30.2	-0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,50nm,3.5s						
PALK	Pallekele	40.62	295	PcP	PcP	18 33 35.6	+2.4
	comp=Z,4.7nm,0.8s,baz=143,slow=5.1,SNR=2.2						
PALK				LR	LR	18 49 50.6	
	comp=Z,72nm,19.0s,baz=227,slow=38						
HNR	Honiara	42.23	92	PcP	PcP	18 33 41.2	+2.8
	comp=Z,74nm,0.9s,baz=329,slow=5.2,SNR=2.7						
NJ2	Nanjing	43.23	2	*e*P	P	18 31 55.7	+3.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
CD2	Chengdu	43.95	343	*e*P	P	18 31 59.0	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	45.83	351	⇑P	P	18 32 12.0	-1.2
XAN				pP	sP	18 32 24.4	-0.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ODAN	Odare	47.69	323	*e*P	P	18 32 27.8	-0.3
	comp=Z,93nm,0.8s						
LSA	Lhasa	47.87	329	P	P	18 32 29.3	-0.4
LSA				IAmb	IAmb	18 32 31.1	
	comp=Z,12nm,0.7s						
LSA	Lhasa	47.87	329	P	P	18 32 29.6	-0.1
RAMN	Ramite	48.22	323	*e*P	P	18 32 32.2	-0.1
	comp=Z,54nm,0.5s						
DZM	Mont Dzumac	48.31	109	LR	LR	18 52 24.2	
	comp=Z,72nm,21.4s,baz=158,slow=35						
LZH	Lanzhou	48.83	346	*e*P	P	18 32 44.1	+7.4
LZH				pP	sP	18 32 49.4	+0.6
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
JIRN	Jiri	48.99	323	*e*P	P	18 32 38.2	-0.1
	comp=Z,3.0nm,0.7s						
JHJ	Hachijo jima 2	49.29	25	LR	LR	18 54 34.0	
	comp=Z,16nm,18.8s,baz=142,slow=37						
PKI	Pulchoki	49.39	322	*e*P	P	18 32 40.7	-0.6
	comp=Z,65nm,0.7s						
DMN	Daman	49.60	322	*e*P	P	18 32 42.4	-0.5
	comp=Z,136nm,0.8s						
KSAR	Wonju Array Be	49.63	11	P	P	18 32 41.8	-0.7
KKN	Kakani	49.63	322	*e*P	P	18 32 42.6	-0.4
	comp=Z,56nm,0.7s						
KSRS	Korea Array	49.65	11	P	P	18 32 42.5	-0.2
	comp=Z,7.5nm,0.9s,baz=191,slow=7.9,SNR=17						
KSRS				pP	sP	18 32 56.0	+1.2
	comp=Z,6.0nm,0.9s,baz=190,slow=8.7,SNR=6.4						
	comp=Z,7.5nm,0.9s						
GKN	Gorkha	50.17	322	*e*P	P	18 32 46.6	-0.5
	comp=Z,104nm,0.4s						
KOLN	Koldanda	50.64	321	*e*P	P	18 32 50.2	-0.5
	comp=Z,122nm,0.7s						
DANN	Dangsing	50.96	321	*e*P	P	18 32 52.7	-0.5
	comp=Z,256nm,0.6s						
BJT	Baijiatuau	51.15	359	P	P	18 32 51.6	-2.4
BJT				IAmb	IAmb	18 33 00.8	
	comp=Z,9.4nm,0.7s						
BJI	Beijing	51.17	359	P	P	18 32 53.4	-0.7
BJI				pmax	pmax		
	comp=Z,13nm,1.0s						
BJI				LR	LR		
	comp=Z,180nm,14.4s						
BJI				LR	LR		
	comp=Z,150nm,12.7s						
BJI				LR	LR		
	comp=Z,240nm,16.8s						
PYUN	Piuthan	51.25	321	*e*P	P	18 32 54.7	-0.6
	comp=Z,110nm,0.7s						
MJAR	Matsushiro Arr	51.68	22	P	P	18 32 56.3	-1.8
	comp=Z,0.8nm,0.5s,baz=190,slow=9.1,SNR=4.2						
MJAR				LR	LR	18 56 01.2	
	comp=Z,20nm,19.0s,baz=217,slow=37						
	comp=Z,0.8nm,0.5s						
GOMU	GeErMu	51.76	337	P	P	18 32 57.6	-1.5
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,47nm,5.8s						
HHC	Hu-ho-hao-te	52.22	355	*e*P	P	18 33 04.9	+2.8
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.8s						
GTA	Gaotai	53.02	343	*e*P	P	18 32 59.2	-8.9
GTA				sP	pP	18 33 08.2	-8.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JSD	Sado	53.03	21	P	P	18 33 06.7	-1.3
JSD				IAmb	IAmb	18 33 21.9	
	comp=Z,15nm,0.7s						
XLT	XiLinHaoTe	55.03	359	*e*P	P	18 33 21.3	-1.3
XLT				pmax	pmax		
	comp=Z,19nm,0.9s						
XLT				pmax	pmax		
	comp=Z,89nm,5.1s						
MDJ	Mudanjiang	56.89	11	P	P	18 33 35.1	-0.8
USRK	Ussuriysk Ar.	56.97	13	P	P	18 33 35.3	-1.1
	comp=Z,5.3nm,0.6s,baz=179,slow=6.8,SNR=6.5						
USRK				pP	sP	18 33 49.7	+1.5
	comp=Z,8.6nm,0.6s,baz=189,slow=5.4,SNR=7.3						
	comp=Z,5.3nm,0.6s						
BNX	BinXian	57.62	9	⇑P	P	18 33 40.0	-1.0
BNX				pmax	pmax		
	comp=Z,25nm,0.6s						
BNX				pmax	pmax		
	comp=Z,310nm,3.5s						
URZ	Urewera	59.60	128	LR	LR	19 02 09.0	
	comp=Z,87nm,18.5s,baz=211,slow=38						
ULN	Ulaanbaatar	59.65	352	P	P	18 33 54.1	-1.2
ULN				IAmb	IAmb	18 33 55.7	
	comp=Z,8.6nm,0.8s						
SONM	Songino Array	59.71	352	P	P	18 33 55.2	-0.5
	comp=Z,13nm,0.8s,baz=169,slow=8.8,SNR=72						
SONM				pP	sP	18 34 09.3	+1.8
	comp=Z,4.4nm,0.7s,baz=175,slow=7.5,SNR=6.5						
SONM				PcP	PcP	18 34 43.3	+1.0
	comp=Z,1.5nm,0.6s,baz=166,slow=6.1,SNR=1.4						
	comp=Z,13nm,0.8s						
SONM	Songino Array	59.71	352	P	P	18 33 54.8	-0.9
SONM				IAmb	IAmb	18 33 56.1	
	comp=Z,13nm,0.8s						
WMQ	Urumqi	61.09	336	*e*P	P	18 34 06.3	+1.2
RAO	Raoul Island	62.82	117	LR	LR	19 01 07.6	
	comp=Z,84nm,19.0s,baz=160,slow=36						
KSH	Kashi	63.41	325	P	P	18 34 20.7	-0.1
KSH				pP	pP	18 34 26.0	-3.5
KSH				sP	sP	18 34 28.5	-4.3
KSH				pmax	pmax		
	comp=Z,22nm,0.8s						
SHLS	Shalkode	64.21	330	*e*P	P	18 34 24.6	-1.4
	comp=Z,7.9nm,0.5s,baz=330						
UZB	Uzynbulak	64.42	330	*e*P	P	18 34 27.1	-0.3
	comp=Z,14nm,1.0s,baz=330						
KBL	Kabul	64.47	317	P	P	18 34 27.0	-0.9
KDJ	Kajisay	64.61	328	P	P	18 34 27.4	-1.3
KDJ				IAmb	IAmb	18 34 37.3	
	comp=Z,11nm,0.8s						
SATY	Saty	64.66	330	*e*P	P	18 34 28.7	-0.2
	comp=Z,10nm,0.9s,baz=329						
ZHN	Zhinishke	64.72	330	*e*P	P	18 34 29.2	-0.2
	baz=329						
KPKS	Kokpek	64.82	330	*e*P	P	18 34 29.7	-0.3
	comp=Z,12nm,0.8s,baz=330						
ZSN	Zaisan	65.21	337	*e*P	P	18 34 32.0	-0.3
	comp=Z,5.5nm,0.8s,baz=336						
TNSS	Tian-Shan	65.38	329	*e*P	P	18 34 33.9	-0.1
	baz=328						
MDOK	Medeo	65.42	329	*e*P	P	18 34 33.7	-0.2
	baz=329						
BOOM	Boomskoye usch	65.51	328	P	P	18 34 34.2	-0.4
AAA	Alma-Ata	65.52	329	*e*P	P	18 34 34.2	-0.2
	baz=329						
MK31	Makanchi Array	65.73	335	P	P	18 34 35.3	-0.4
MKAR	Makanchi Array	65.73	335	P	P	18 34 35.7	0.0
	comp=Z,23nm,0.5s,baz=149,slow=7.3,SNR=458						
MKAR				pP	sP	18 34 50.2	+2.6
	comp=Z,9.3nm,0.5s,baz=158,slow=6.6,SNR=9.4						
	comp=Z,23nm,0.5s						
MKAR	Makanchi Array	65.73	335	P	P	18 34 35.2	-0.5
MAKZ	Makanchi	65.87	334	P	P	18 34 35.9	-0.6
CHKK	Chushkaly	65.94	329	*e*P	P	18 34 36.3	-0.8
	baz=329						
TKM2	Tokmak 2	65.99	328	P	P	18 34 37.8	+0.1
	SNR=8.3						
UCH	Uchtor	66.08	327	P	P	18 34 39.0	+0.4
	SNR=6.5						
TDK	Taldyqorghan	66.09	331	*e*P	P	18 34 37.8	-0.3
	baz=331						
KBK	Karagaybulak	66.15	327	P	P	18 34 39.6	+1.0
	SNR=7.4						
KUU	Kurty	66.30	329	*e*P	P	18 34 38.6	-0.8
	comp=Z,6.8nm,0.5s,baz=329						
MAW	Mawson	66.35	200	P	P	18 34 41.6	+2.3
	comp=Z,0.8nm,0.6s,baz=37,slow=6.7,SNR=1.4						
	comp=Z,0.8nm,0.6s						
MAW	Mawson	66.35	200	IAmb	IAmb	18 34 47.6	
	comp=Z,2.0nm,1.5s						
GAR	Garm	66.36	322	P	P	18 34 39.9	-0.1
AAK	Ala-Archa	66.38	327	P	P	18 34 40.7	+0.6
	SNR=6.6						
AAK	Ala-Archa	66.38	327	LR	LR	19 06 35.1	
	comp=Z,41nm,18.8s,baz=167,slow=39						
AAK	Ala-Archa	66.38	327	P	P	18 34 40.3	+0.2
AML	Almayashu	66.46	326	P	P	18 34 41.4	+0.5
	SNR=7.6						
WSAR	Wadi Sarin	66.70	301	LR	LR	19 05 14.8	
	comp=Z,74nm,18.5s,baz=199,slow=37						
BTK	Batken	66.73	323	P	P	18 34 41.3	-1.0
BTK				IAmb	IAmb	18 34 57.3	
	comp=Z,9.2nm,0.8s						
EKS2	Erkin-Say	66.78	327	P	P	18 34 43.2	+0.6
	SNR=11						
USP	Ospenovka	66.81	328	P	P	18 34 43.0	+0.3
	SNR=5.1						
SGDS	Sogindy	66.87	328	*e*P	P	18 34 42.4	-0.7
	baz=328						
DZA	Taraz	68.27	326	*e*P	P	18 34 52.5	+0.5
	baz=325						
BTLS	Baital	68.27	329	*e*P	P	18 34 52.0	+0.1
	baz=328						
IUG	Iuzhnay	68.52	324	*e*P	P	18 34 53.5	-0.1
	baz=324						
KK31	Karatay Array	68.86	325	P	P	18 34 54.9	-0.7
KKAR	Karatay Array	68.86	325	P	P	18 34 54.6	-1.0
SEM	Semipalatinsk	69.41	336	*e*P	P	18 34 58.1	-0.9
	comp=Z,3.9nm,0.6s,baz=336						
VNDA	Vanda	69.95	171	LR	LR	19 04 46.3	
	comp=Z,20nm,19.2s,baz=334,slow=35						
KURBB	Kurchatov Arra	70.27	335	LR	LR	19 08 55.9	
	comp=Z,33nm,20.7s,baz=135,slow=38						
KURK	Kurchatov	70.31	335	P	P	18 35 03.8	-0.4
ZAA0	Zalesovo Array	70.60	340	P	P	18 35 04.6	-1.4
ZALV	Zalesovo Beam	70.60	340	P	P	18 35 05.1	-0.9
	comp=Z,9.5nm,0.5s,baz=150,slow=4.9,SNR=66						
ZALV				pP	sP	18 35 19.6	+1.6
	comp=Z,8.6nm,0.6s,baz=146,slow=4.8,SNR=8.5						
	comp=Z,9.5nm,0.5s						
ZALV	Zalesovo Beam	70.60	340	P	P	18 35 04.6	-1.4
PETK	Petropavlovsk-	73.03	24	P	P	18 35 21.0	+0.4
	comp=Z,9.6nm,0.8s,baz=229,slow=2.8,SNR=19						
PETK				pP	PcP	18 35 36.0	-1.3
	comp=Z,6.8nm,0.9s,baz=206,slow=2.5,SNR=4.3						
	comp=Z,9.6nm,0.8s						
PETK	Petropavlovsk-	73.03	24	P	P	18 35 19.9	-0.7
GYA0B	ALIBECK ARRAY	73.72	315	P	P	18 35 24.9	-0.3
GYA0B				IAmb	IAmb	18 35 26.5	
	comp=Z,9.2nm,0.8s						
YAK	Yakutsk	73.86	6	P	P	18 35 23.0	-2.3
YAK				IAmb	IAmb	18 35 25.8	
	comp=Z,13nm,0.9s						
BRVK	Borovoye	75.57	333	P	P	18 35 32.8	-2.7
BRVK				IAmb	IAmb	18 35 54.3	
	comp=Z,9.6nm,1.2s						
ABKAR	Akbulak array	78.41	326	P	P	18 35 51.3	-0.2
ABKAR	Akbulak array	78.41	326	P	P	18 35 51.4	-0.1
ABKAR				IAmb	IAmb	18 35 52.7	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	78.62	180	LR	LR	19 10 19.7	
	comp=Z,53nm,18.2s,baz=350,slow=35						
RAR	Rarotonga	79.69	110	LR	LR	19 11 21.5	
	comp=Z,25nm,19.2s,baz=339,slow=36						
KMBO	Kilima Mbogo	79.76	271	P	P	18 36 02.0	+2.0
	comp=Z,2.2nm,0.5s,baz=68,slow=9.6,SNR=6.9						
KMBO				LR	LR	19 06 06.7	
	comp=Z,25nm,18.9s,baz=93,slow=32						
	comp=Z,2.2nm,0.5s						
KMBO	Kilima Mbogo	79.76	271	IAmb	IAmb	18 36 02.6	
	comp=Z,3.3nm,0.8s						
LODK	Lodwar	82.52	275	P	P	18 36 15.4	+0.9
ARU	Arti	83.01	332	P	P	18 36 14.8	-1.1
ARU				IAmb	IAmb	18 36 16.7	
	comp=Z,9.6nm,1.2s						
NRIK	Noril'sk	83.13	350	P	P	18 36 17.5	+1.2
	comp=Z,1.7nm,0.6s,baz=140,slow=3.1,SNR=3.8						
	comp=Z,1.7nm,0.6s						
NRIK	Noril'sk	83.13	350	IAmb	IAmb	18 36 18.5	
	comp=Z,3.4nm,0.9s						
TIXI	Tiksi	83.23	4	P	P	18 36 15.0	-1.7
TIXI				IAmb	IAmb	18 36 31.2	
	comp=Z,6.6nm,0.8s						
GEVA	Gevas	84.73	311	P	P	18 36 24.8	-0.6
GURO	Guroymak-BITLI	85.57	311	P	P	18 36 30.7	+1.1
GURO				IAmb	IAmb	18 36 32.6	
	comp=Z,16nm,1.3s						
ONI	Oni	85.85	315	P	P	18 36 31.2	+0.4
ONI				IAmb	IAmb	18 36 42.8	
	comp=Z,9.0nm,1.3s						
MARD	Mardin	86.14	309	P	P	18 36 31.5	-0.9
BOSA	Boshof	86.17	242	P	P	18 36 34.1	+1.3
	comp=Z,1.6nm,0.4s,baz=114,slow=3.9,SNR=9.9						
	comp=Z,1.6nm,0.4s						
BOSA	Boshof	86.17	242	IAmb	IAmb	18 36 35.4	
	comp=Z,4.6nm,1.0s						
LBTB	Lobatse	86.55	245	LR	LR	19 08 47.1	
	comp=Z,32nm,19.7s,baz=92,slow=31						
KBZ	Khabaz	86.61	316	P	P	18 36 35.5	+1.2
	comp=Z,4.8nm,0.8s,baz=112,slow=3.9,SNR=15						
	comp=Z,4.8nm,0.8s						
SNAA	Sanae	88.19	196	P	P	18 36 44.0	+2.3
SNAA	Sanae	88.19	196	P	P	18 36 43.2	+1.6
SNAA				IAmb	IAmb	18 36 50.3	
	comp=Z,8.6nm,1.0s						
GHAJ	Ghor Haditha	88.67	302	P	P	18 36 43.2	-1.3
BELA	Belgrano 2	89.47	186	P	P	18 36 48.6	+1.1
BELA				IAmb	IAmb	18 36 55.8	
	comp=Z,5.2nm,1.1s						
PPT	Papeete	89.80	108	LR	LR	19 11 56.4	
	comp=Z,30nm,21.5s,baz=128,slow=32						
VNA1	Neumayer--Stat	90.22	196	P	P	18 36 53.3	+2.2
VNA3	Neumayer Olymp	90.23	195	P	P	18 36 53.4	+2.3
BR131	Keskin Array S	92.17	310	P	P	18 37 00.9	0.0
BR131				IAmb	IAmb	18 37 02.0	
	comp=Z,7.6nm,0.9s						
BRTR	Keskin Array B	92.17	310	P	P	18 37 01.1	+0.2
	comp=Z,3.8nm,0.8s,baz=138,slow=6.0,SNR=24						
BRTR				pP	sP	18 37 15.2	+2.0
	comp=Z,2.5nm,0.9s,baz=129,slow=5.9,SNR=8.3						
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	92.17	310	P	P	18 37 00.5	-0.4
AKASG	Malin Array Be	97.33	320	P	P	18 37 23.6	-0.4
	comp=Z,0.7nm,0.6s,baz=78,slow=4.8,SNR=4.7						
AKASG				LR	LR	19 27 56.9	
	comp=Z,16nm,20.5s,baz=357,slow=40						
	comp=Z,0.7nm,0.6s						
AKASG	Malin Array Be	97.33	320	IAmb	IAmb	18 37 26.5	
	comp=Z,4.0nm,1.5s						
FINES	FINESS Array B	100.36	331	P	Pdif	18 37 36.8	-0.6
	comp=Z,2.3nm,0.8s,baz=35,slow=4.7,SNR=5.0						
ARCES	ARCESS Array B	101.12	339	P	Pdif	18 37 40.0	-0.5
	comp=Z,1.7nm,0.8s,baz=61,slow=7.6,SNR=4.9						
TORD	Torodi Ar. Bea	116.94	279	PKP	PKiKP	18 42 37.2	+0.7
	comp=Z,14nm,0.8s,baz=93,slow=3.2,SNR=5.3						
YKA	Yellowknife Ar	117.15	24	PKP	PKiKP	18 42 36.4	+0.8
	comp=Z,0.5nm,0.5s,baz=300,slow=2.0,SNR=8.5						
YKA				pPKP	sPKPdf	18 42 50.6	+2.7
	comp=Z,0.4nm,0.6s,baz=311,slow=1.9,SNR=5.0						
BDFB	Brasilia	149.34	209	PKPbc	PKiKP	18 43 42.2	+0.2
	comp=Z,2.8nm,0.5s,baz=154,slow=2.3,SNR=3.9						
TKL	Tuckaleechee C	149.35	35	PKPbc	PKPbc	18 43 40.2	0.0
	comp=Z,7.6nm,0.7s,baz=315,slow=1.4,SNR=12						
TKL	Tuckaleechee C	149.35	35		PKPbc	18 43 41.2	+1.0
LPAZ	La Paz	152.03	169	PKPbc	PKiKP	18 43 49.4	+1.2
	comp=Z,2.4nm,0.9s,baz=130,slow=0.8,SNR=7.9						
LPAZ	La Paz	152.03	169		PKPbc	18 43 47.1	-0.7
SIV	San Ignacio	152.73	184	PKPbc	PKiKP	18 43 50.5	+1.6
	comp=Z,0.5nm,0.3s,baz=260,slow=12,SNR=3.7						

NNC ***12*** *18:54:57.1±0.5, 42°.91N×78°.63E, h0^{km}±3^{km}, mb3.4, mpv3.4, Error ellipse: s-maj=5.4km s-min=1.6km az=174.0*

KRNET ***12*** *18:54:58.2±0.1, 42°.92N×78°.56E, h30^{km}, mb3.0*

SOME ***12*** *18:54:58.1, 42°.92N×78°.57E, h15^{km}*

ISC 12 18:54:58.4±0.9**, 42°.94N**±0°.03×**78°.56E**±0°.02**, h11**^{km}±6^{km}**, n51,** σ1^{s}**04**/86**, 28C-18D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.17	318	⇓*e*P	Pg	18 55 02.3	0.0
	246nm,0.2s						
SATY				*e*S	Sg	18 55 05.2	+0.2
	3µm,0.1s						
SATY	Saty	0.17	318	P	Pg	18 55 02.3	0.0
	246nm,0.2s						
SATY				S	Sg	18 55 05.2	+0.2
	3µm,0.1s						
UZB	Uzynbulak	0.40	58	⇑*e*P	Pg	18 55 05.4	-1.0
	69nm,0.1s						
UZB				*e*S	Sg	18 55 10.6	-1.1
	626nm,0.1s						
UZB	Uzynbulak	0.40	58	P	Pg	18 55 05.4	-1.0
	69nm,0.1s						
UZB				S	Sg	18 55 10.7	-1.1
	626nm,0.1s						
PRZ	Przheval'sk	0.47	195	⇑*e*P	Pg	18 55 07.8	+0.2
	baz=96						
PRZ				⇑*i*S	Sg	18 55 14.7	+0.9
	baz=96						
KPKS	Kokpek	0.54	10	⇓*e*P	Pg	18 55 08.6	-0.3
	43nm,0.1s						
KPKS				*e*S	Sb	18 55 16.1	-1.6
	360nm,0.4s						
ANVS	Anan'yevo	0.67	257	⇑*e*P	Pg	18 55 11.3	-0.2
	baz=59						
ANVS				⇑*i*S	Sg	18 55 21.2	+0.8
	baz=59						
SHLS	Shalkode	0.70	71	⇑*e*P	Pn	18 55 16.1	+1.8
	25nm,0.1s						
SHLS				*e*S	Sn	18 55 29.1	+3.9
	62nm,0.2s						
SHLS	Shalkode	0.70	71	P	Pn	18 55 16.1	+1.8
	25nm,0.1s						
SHLS				S	Sn	18 55 29.0	+3.9
	62nm,0.2s						
PDGK	Podgornoye	0.79	60	⇑P	Pg	18 55 12.0	-1.6
	17nm,0.5s						
PDGK				⇑S	Sg	18 55 21.9	-2.0
	30nm,0.5s						
MDOK	Medeo	1.13	282	*e*P	Pb	18 55 19.6	-0.4
	18nm,0.2s						
MDOK				*e*S	Sb	18 55 35.2	+0.4
	73nm,0.4s						
MDOK	Medeo	1.13	282	⇓P	Pb	18 55 19.6	-0.4
	3.1nm,0.2s						
MDOK				⇓S	Sb	18 55 34.9	+0.1
	38nm,0.4s						
MDOK	Medeo	1.13	282	Pg	Pb	18 55 19.7	-0.4
	18nm,0.2s						
MDOK				Lg	Lg	18 55 35.2	
	73nm,0.4s						
TNSS	Tian-Shan	1.19	275	*e*P	Pn	18 55 20.8	-0.6
	2.8nm,0.2s						
TNSS				*e*S	Sg	18 55 37.4	+0.6
	20nm,0.2s						
TNSS	Tian-Shan	1.19	275	P	Pn	18 55 20.8	-0.6
	2.8nm,0.2s						
TNSS				S	Sg	18 55 37.4	+0.6
	20nm,0.2s						
KNDC	Almaty	1.20	284	⇓P	Pn	18 55 20.7	-0.5
	16nm,0.8s						
KNDC				⇑S	Sg	18 55 37.9	+0.8
	72nm,0.6s						
KDJ	Kajisay	1.30	232	⇑*e*P	Pn	18 55 21.8	-0.8
	baz=32						
KDJ				⇑*i*S	Sb	18 55 38.9	-0.8
	baz=32						
TARG	Taragay, Kyrgy	1.33	205	⇓*i*P	Pn	18 55 22.3	-1.0
	baz=6.0						
TARG				⇓*i*S	Sb	18 55 39.6	-1.2
	baz=6.0						
CHKK	Chushkaly	1.47	309	*e*P	Pb	18 55 25.9	+0.2
	15nm,0.2s						
CHKK				*e*S	Sg	18 55 46.0	+0.4
	93nm,0.3s						
CHKK	Chushkaly	1.47	309	P	Pb	18 55 25.9	+0.2
	15nm,0.2s						
CHKK				S	Sg	18 55 46.0	+0.4
	93nm,0.3s						
KTBS	Karatobe	1.57	300	*e*P	Pb	18 55 27.8	+0.3
	37nm,0.1s						
KTBS				*e*S	Sg	18 55 49.4	+0.3
	148nm,0.2s						
KTBS	Karatobe	1.57	300	P	Pb	18 55 27.8	+0.3
	37nm,0.1s						
KTBS				S	Sg	18 55 49.4	+0.3
	148nm,0.2s						
MTBS	Maitube	1.57	278	*e*P	Pb	18 55 28.0	+0.5
	6.6nm,0.1s						
MTBS				*e*S	Sg	18 55 49.6	+0.6
	34nm,0.2s						
MTBS	Maitube	1.57	278	P	Pb	18 55 28.0	+0.5
	6.6nm,0.1s						
MTBS				S	Sg	18 55 49.6	+0.6
	34nm,0.2s						
ULHL	Ulahol	1.84	249	⇓*i*P	Pn	18 55 30.2	0.0
	baz=49						
ULHL				⇓*i*S	Sn	18 55 53.3	-0.3
	baz=49						
KUU	Kurty	1.88	301	*e*P	Pb	18 55 33.0	+0.2
	24nm,0.2s						
KUU				*e*S	Sg	18 55 58.1	-0.7
	160nm,0.3s						
KUU	Kurty	1.88	301	Pg	Pb	18 55 33.0	+0.2
	24nm,0.2s						
KUU				Lg	Lg	18 55 58.1	
	160nm,0.3s						
KST	Kastek	1.91	274	*e*P	Pb	18 55 33.4	+0.2
	2.7nm,0.2s						
KST				*e*S	Sg	18 55 59.1	-0.6
	41nm,0.3s						
KST	Kastek	1.91	274	Pg	Pb	18 55 33.4	+0.2
	2.7nm,0.2s						
KST				Lg	Lg	18 55 59.1	
	41nm,0.3s						
BOOM	Boomskoye usch	1.98	258	⇑*i*P	Pn	18 55 31.8	-0.2
	baz=58						
BOOM				⇑*i*S	Sn	18 55 56.3	-0.6
	baz=58						
TDK	Taldyqorghan	2.07	357	*e*P	Pb	18 55 35.9	0.0
	29nm,0.2s						
TDK				*e*S	Sg	18 56 03.0	-1.9
	252nm,0.4s						
TDK	Taldyqorghan	2.07	357	Pg	Pb	18 55 35.9	0.0
	29nm,0.2s						
TDK				Lg	Lg	18 56 03.0	
	252nm,0.4s						
TKM2	Tokmak 2	2.18	271	⇓Pn	Pb	18 55 37.0	-0.9
	7.3nm,0.6s						
TKM2				⇓Lg	Lg	18 56 08.8	

	48nm,0.8s						
TKM2	Tokmak 2	2.18	271	⇑eP	Pn	18 55 34.8	+0.1
	baz=71						
TKM2				⇑eS	Sn	18 56 01.5	-0.3
	baz=71						
KRBS	Karabastau	2.24	291	eP	Pb	18 55 38.9	0.0
	5.5nm,0.2s						
KRBS				eS	Sb	18 56 08.1	+1.5
	47nm,0.3s						
KRBS	Karabastau	2.24	291	Pg	Pb	18 55 38.9	0.0
	5.5nm,0.2s						
KRBS				Lg	Lg	18 56 08.1	
	47nm,0.3s						
KAPS	Kapalarasan	2.42	13	eP	Pb	18 55 42.3	+0.3
	8.9nm,0.3s						
KAPS				eS	Sg	18 56 13.9	-2.2
	114nm,0.3s						
KAPS	Kapalarasan	2.42	13	Pg	Pb	18 55 42.3	+0.3
	8.9nm,0.3s						
KAPS				Lg	Lg	18 56 13.9	
	114nm,0.3s						
KBK	Karagaybulak	2.67	265	⇓eP	Pn	18 55 41.6	+0.1
	baz=66						
KBK				⇓iS	Sn	18 56 13.2	-0.8
	baz=66						
CHMS	Chumysh	2.80	273	⇑Pg	Pb	18 55 48.6	+0.3
	3.0nm,0.4s						
CHMS				⇓Lg	Lg	18 56 27.1	
	14nm,0.5s						
CHMS	Chumysh	2.80	273	⇑eP	Pn	18 55 43.1	0.0
	baz=73						
CHMS				⇑eS	Sn	18 56 16.1	-0.7
	baz=73						
SGDS	Sogindy	2.92	282	eP	Pb	18 55 51.2	+0.8
	2.8nm,0.2s						
SGDS				eS	Sb	18 56 29.1	+2.9
	13nm,0.3s						
SGDS	Sogindy	2.92	282	Pg	Pb	18 55 51.2	+0.8
	2.8nm,0.2s						
SGDS				Lg	Lg	18 56 29.1	
	13nm,0.3s						
AAK	Ala-Archa	3.01	266	⇓iP	Pn	18 55 46.2	+0.1
	baz=66						
AAK				⇓iS	Sn	18 56 21.2	-1.0
	baz=66						
UCH	Uchtor	3.07	258	⇑eP	Pn	18 55 47.4	+0.2
	baz=58						
UCH				⇑iS	Sn	18 56 23.1	-1.1
	baz=58						
ARLS	Aral	3.32	253	⇓eP	Pn	18 55 50.3	-0.1
	baz=53						
ARLS				⇓iS	Sn	18 56 28.5	-1.3
	baz=53						
MAKZ	Makanchi	4.57	31	⇑Pn	Pn	18 56 08.2	+0.7
	0.4nm,0.2s						
MAKZ				⇑Lg	Lg	18 57 20.5	
	1.9nm,0.3s						
MK31	Makanchi Array	4.68	33	⇑Pn	Pn	18 56 09.3	+0.4
	0.8nm,0.4s,baz=282,slow=4.6,SNR=17						
MK31				⇑Lg	Lg	18 57 23.3	
	0.3nm,0.2s,baz=214,slow=28,SNR=7.2						
KK31	Karatay Array	5.90	274	⇑Pg	Pg	18 56 46.6	-4.8
	0.4nm,0.6s,baz=89,slow=15,SNR=7.0						
KK31				Lg	Lg	18 58 04.6	
	1.8nm,0.5s,baz=86,slow=26,SNR=12						
OTUK	Ortayu	6.87	323	⇑Pn	Pn	18 56 38.8	-0.3
	0.8nm,0.7s						
OTUK				⇑Lg	Lg	18 58 35.8	
	5.1nm,0.8s						
KURK	Kurchatov	7.78	0	⇑Lg	Lg	18 59 03.0	
	11nm,1.1s						

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*IDC **12** 19:04:02.0±0.7, 24°.31N×125°.09E, h0^{km}, mb4.0/21, mbtmp4.0/24, ML3.1/3, MS3.5/24, Error ellipse: s-maj=18.3km s-min=17.0km az=75.0*

*JMA **12** 19:04:06.5±0.2, 24°N±1°×125°.2E±0°.8, h41^{km}, MV3.8/10, NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

*NIED **12** 19:04:06.5, 24°.29N×125°.22E, h41^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.26; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$0.18; $M_{r\theta}$2.57; $M_{\theta\phi}$-0.75; $M_{\phi r}$1.10; Fault plane solution: $M_0$2.88000×10^{15} NP1: ϕ_s199.00000°, δ9.00000°, λ41.00000°. NP2: ϕ_s68.00000°, δ84.00000°, λ96.00000°.*

*NEIC **12** 19:04:08.4±2.5, 24°.55N±0°.10×125°.10E±0°.07, h30^{km}±6^{km}, mb4.5/51 Error ellipse: s-maj=15.2km s-min=8.3km az=157.0*

ISC 12 19:04:07.5±1.0, **24°.36N**±0°.06×**125°.13E**±0°.04, **h35**^{km}±3^{km}, **n133**, σ**1^{s}29**/119, **mb4.3**/53, **MS3.6**/23, **2C-1D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.42	25	i P	Pb	19 04 16.6	-0.5
JMJ2				S	Sb	19 04 24.3	+0.7
JIRB	Irabujima	0.47	5	i P	Pb	19 04 17.4	-0.4
JIRB				S	Sb	19 04 25.4	+0.6
JOGS	Gusukube	0.47	32	i P	Pb	19 04 17.3	-0.6
JOGS				S	Sb	19 04 25.6	+0.7
JTJ	Tarama	0.48	306	i P	Pn	19 04 18.2	+0.2
JTJ				S	Sn	19 04 27.0	+1.8
JIKM	Ikemajima	0.57	11	i P	Pn	19 04 19.1	-0.2
JIKM				S	Sn	19 04 28.5	+1.0
JIJ	Ishigaki jima	0.90	271	i P	Pb	19 04 24.1	-0.7
JIJ				eS	Sb	19 04 37.7	+1.2
JKRS	Kuro-shima	1.03	264	i P	Pb	19 04 26.7	-0.2
HATJ	Hateruma jima	1.25	256	P	Pb	19 04 29.2	-1.3
IRIF	Iriomote-Funau	1.28	269	i P	Pb	19 04 29.9	-1.1
YOJ	Yonaguni jima	1.93	274	Pn	Pn	19 04 37.9	-0.1
NACB	Ninganchiao	3.23	267		Pn	19 04 55.1	-0.7
TATO	Taipei	3.37	281		Pb	19 05 04.4	-2.2
YHNB	Yeheng	3.43	276		Pn	19 04 57.7	-1.0
YULB	Yu-li	3.64	255		Pn	19 05 00.4	-1.0
JOW	Kunigami	3.76	48	Pn	Pn	19 05 02.3	-0.8
	2.9nm,0.3s,baz=144,slow=19,SNR=23						
JOW				Sn	Sn	19 05 46.9	+0.7
	17nm,0.3s,baz=227,slow=20,SNR=5.7						
	6.8nm,0.2s						
JOW	Kunigami	3.76	48		Pn	19 05 01.5	-1.6
SSLB	Suanglung	3.86	262	Pn	Pn	19 05 04.0	-0.5
TWG	Pinlang	4.02	248		Pn	19 05 04.8	-1.9
TPUB	Ta-pu	4.25	257		Pn	19 05 09.8	-0.1
NJ2	Nanjing	9.45	326	eP	Pn	19 06 15.2	-6.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	Korea Array	13.27	10	Pn	Pn	19 07 14.1	+0.6
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=4.1						
KSRS				LR	LR	19 12 49.9	
	comp=Z,152nm,18.5s,baz=190,slow=40						
	comp=Z,0.9nm,0.6s						
JGF	Kuroka	15.40	41	P	P	19 07 45.8	-0.8
JHJ	Hachijo jima 2	15.52	52	LR	LR	19 13 26.1	
	comp=Z,94nm,19.6s,baz=252,slow=36						
HNS	HongShan	15.77	328	⇓P	P	19 07 52.9	+2.4
HNS				eS	S	19 10 50.3	-4.0
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HNS				LR	LR		
	comp=N,200nm,13.3s						
HNS				LR	LR		
	comp=E,230nm,13.3s						
HNS				LR	LR		
	comp=Z,300nm,14.9s						
MAJO	Matsushiro	16.55	40	P	Pn	19 07 57.4	+0.4
MJAR	Matsushiro Arr	16.55	40	Pn	Pn	19 07 58.4	+1.4
	comp=Z,0.1nm,0.3s,baz=227,slow=11,SNR=16						
	comp=Z,6.8nm,0.8s						
MJAR	Matsushiro Arr	16.55	40	P	Pn	19 07 58.6	+1.6
MJB9	Matsu-Tunnel	16.55	40	P	Pn	19 07 57.6	+0.6
XAN	Xi'an	17.11	308	⇑P	P	19 08 06.6	+1.1
XAN				pP	pP	19 08 11.6	-2.7
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,160nm,5.1s						
XAN				LR	LR		
	comp=N,130nm,15.2s						
XAN				LR	LR		
	comp=E,310nm,13.3s						
XAN				LR	LR		
	comp=Z,380nm,14.6s						
DAV	Davao City (W)	17.20	178	LR	LR	19 15 58.9	
	comp=Z,93nm,18.6s,baz=288,slow=42						
BJT	Baijiatuau	17.34	336	Pn	Pn	19 08 04.8	-2.0
JYT	Yasato	17.56	44	Pn	Pn	19 08 07.0	-2.5
JYT				IAmb	IAmb	19 08 20.2	
	comp=Z,25nm,1.0s						
HHC	Hu-ho-hao-te	19.98	329	eP	Pn	19 08 39.1	+0.1
HHC				pmax	pmax		
	comp=Z,76nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.1s						
HHC				LR	LR		
	comp=N,430nm,15.7s						
HHC				LR	LR		
	comp=E,290nm,13.7s						
HHC				LR	LR		
	comp=Z,530nm,14.6s						
KMI	Kunming	20.35	277	⇑P	Pn	19 08 47.7	+4.2
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	20.57	14	LR	LR	19 16 39.2	
	comp=Z,93nm,20.1s,baz=186,slow=37						
PZH	PanZhiHua	21.23	281	P	P	19 08 52.3	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,60nm,3.7s						
GUMO	Guam	21.49	116	LR	LR	19 16 08.5	
	comp=Z,71nm,20.9s,baz=88,slow=34						
LZH	Lanzhou	21.74	307	eP	P	19 09 03.6	+7.4
LZH				pP	pP	19 09 06.8	+1.6
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				LR	LR		
	comp=N,150nm,10.8s						
LZH				LR	LR		
	comp=E,250nm,12.5s						
LZH				LR	LR		
	comp=Z,220nm,10.3s						
ASAJ	Asahikawa	24.34	32	LR	LR	19 19 48.5	
	comp=Z,104nm,18.8s,baz=276,slow=39						
CHTO	Chiang Mai	24.95	262	P	P	19 09 28.7	+0.9
CMAR	Chiang Mai Arr	25.05	262	P	P	19 09 28.8	0.0
	comp=Z,0.5nm,0.4s,baz=67,slow=7.7,SNR=4.6						
CMAR				LR	LR	19 20 14.1	
	comp=Z,54nm,20.7s,baz=95,slow=39						
	comp=Z,0.5nm,0.4s						
HIA	Hailar	25.22	352	P	P	19 09 30.0	-0.1
HIA				IAmb	IAmb	19 09 40.6	
	comp=Z,7.5nm,0.7s						
SIJI	Sorong	25.77	166	LR	LR	19 18 02.7	
	comp=Z,65nm,20.4s,baz=38,slow=33						
GTA	Gaotai	26.10	311	eP	P	19 09 38.2	-0.1
GTA				sP	sP	19 09 46.4	-5.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,50nm,6.0s						
GTA				LR	LR		
	comp=N,81nm,12.7s						
GTA				LR	LR		
	comp=E,110nm,14.3s						
GTA				LR	LR		
	comp=Z,140nm,13.9s						
ULN	Ulaanbaatar	27.50	333	P	P	19 09 49.3	-1.5
SONM	Songino Array	27.75	332	P	P	19 09 52.0	-1.1
	comp=Z,0.8nm,0.8s,baz=144,slow=8.9,SNR=5.5						
SONM				LR	LR	19 22 27.6	
	comp=Z,149nm,20.1s,baz=137,slow=40						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	27.75	332	P	P	19 09 52.8	-0.2
ODAN	Odare	34.04	282	eP	P	19 10 50.3	+1.4
	comp=Z,27nm,1.0s						
PKI	Pulchoki	35.75	284	eP	P	19 11 04.3	+0.6
	comp=Z,14nm,1.0s						
KKN	Kakani	35.85	284	eP	P	19 11 05.1	+0.7
	comp=Z,15nm,0.8s						
DMN	Daman	36.02	284	eP	P	19 11 06.8	+0.9
	comp=Z,18nm,0.8s						
WMQ	Urumqi	36.18	312	eP	P	19 11 09.1	+2.2
GKN	Gorkha	36.41	285	eP	P	19 11 09.7	+0.6
	comp=Z,19nm,1.0s						
DANN	Dangsing	37.16	285	eP	P	19 11 16.7	+1.1
	comp=Z,24nm,0.8s						
KOLN	Koldanda	37.34	284	eP	P	19 11 18.2	+1.1
	comp=Z,25nm,1.0s						
PETK	Petropavlovsk-	37.76	32	P	P	19 11 19.3	-0.8
	comp=Z,1.6nm,0.7s,baz=222,slow=1.9,SNR=4.5						
PETK				LR	LR	19 27 26.4	
	comp=Z,54nm,19.9s,baz=250,slow=37						
	comp=Z,1.6nm,0.7s						
PYUN	Piuthan	37.85	285	eP	P	19 11 22.7	+1.3
	comp=Z,23nm,0.9s						
H11N1	WAKE ISLAND Hy	38.88	88	T	T	19 52 45.2	
	baz=283,slow=74,SNR=3.4						
H11N2	WAKE ISLAND Hy	38.88	88	T	T	19 52 46.0	
	baz=283,slow=74,SNR=5.5						
H11N3	WAKE ISLAND Hy	38.90	88	T	T	19 52 43.6	
	baz=283,slow=74,SNR=6.7						
H11S3	WAKE ISLAND Hy	39.02	90	T	T	19 52 59.4	
	baz=281,slow=74						
H11S1	WAKE ISLAND Hy	39.02	90	T	T	19 52 59.7	
	baz=281,slow=74						
H11S2	WAKE ISLAND Hy	39.03	90	T	T	19 53 28.8	
	baz=281						
MK31	Makanchi Array	40.76	314	P	P	19 11 43.5	-1.7
MKAR	Makanchi Array	40.76	314	P	P	19 11 44.6	-0.6
	comp=Z,4.4nm,0.8s,baz=99,slow=10,SNR=37						
MKAR				LR	LR	19 30 05.1	
	comp=Z,102nm,18.0s,baz=78,slow=38						
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	40.76	314	P	P	19 11 44.8	-0.5
MAKZ	Makanchi	40.97	314	P	P	19 11 45.8	-1.2
MAKZ				IAmb	IAmb	19 11 48.6	
	comp=Z,6.3nm,0.8s						
ZAA0	Zalesovo Array	42.11	325	P	P	19 11 54.5	-1.6
ZAA0				IAmb	IAmb	19 12 06.1	
	comp=Z,8.5nm,1.4s						
ZALV	Zalesovo Beam	42.11	325	P	P	19 11 55.0	-1.2
	comp=Z,2.2nm,0.6s,baz=113,slow=8.4,SNR=13						
ZALV				LR	LR	19 30 54.1	
	comp=Z,74nm,19.5s,baz=132,slow=38						
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	42.11	325	P	P	19 11 54.8	-1.3
KDJ	Kajisay	43.24	306	P	P	19 12 04.7	-1.1
KDJ				IAmb	IAmb	19 12 07.9	
	comp=Z,7.5nm,1.3s						
KSH	Kashi	43.84	302	P	P	19 12 15.1	+4.5
KSH				pP	pP	19 12 21.4	+0.9
KSH				sP	sP	19 12 25.7	+1.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	Kurchatov	44.31	319	P	P	19 12 13.2	-0.8
KURK				IAmb	IAmb	19 12 24.0	
	comp=Z,6.4nm,0.9s						
KURBB	Kurchatov Arra	44.33	319	P	P	19 12 13.4	-0.7
	comp=Z,2.7nm,0.7s,baz=107,slow=8.2,SNR=20						
	comp=Z,2.7nm,0.7s						
WRA	Warramunga Arr	44.94	168	P	P	19 12 17.9	-1.3
	comp=Z,1.3nm,0.7s,baz=349,slow=8.8,SNR=8.0						
	comp=Z,1.3nm,0.7s						
WRA	Warramunga Arr	44.94	168	P	P	19 12 22.2	+2.9
WR0	Warramunga Arr	44.99	167	P	P	19 12 22.5	+2.8
WR0				IAmb	IAmb	19 12 26.3	
	comp=Z,9.6nm,1.0s						
AAK	Ala-Archa	45.28	307	P	P	19 12 23.2	+1.2
	comp=Z,0.5nm,0.3s,baz=50,slow=5.4,SNR=1.5						
AAK				LR	LR	19 35 07.4	
	comp=Z,37nm,18.3s,baz=142,slow=41						
	comp=Z,0.5nm,0.3s						
GAR	Garm	48.20	301	P	P	19 12 45.8	+0.9
KK31	Karatay Array	48.24	307	P	P	19 12 45.6	+0.6
KKAR	Karatay Array	48.24	307	P	P	19 12 46.1	+1.0
KKAR	Karatay Array	48.24	307		P	19 12 45.8	+0.7
KKAR				IAmb	IAmb	19 12 47.1	
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	48.49	169	P	P	19 12 46.5	-0.6
	comp=Z,1.0nm,0.8s,baz=351,slow=9.7,SNR=8.4						
	comp=Z,1.0nm,0.8s						
CTA	Charters Tower	48.73	153	LR	LR	19 34 11.8	
	comp=Z,46nm,18.3s,baz=316,slow=37						
KBL	Kabul	49.34	295	P	P	19 12 54.7	+0.8
BRVK	Borovoye	49.91	320	P	P	19 12 57.1	-0.5
BRVK				IAmb	IAmb	19 12 58.8	
	comp=Z,3.1nm,1.0s						
NRIK	Noril'sk	50.21	344	P	P	19 12 58.8	-0.9
	comp=Z,2.4nm,0.6s,baz=101,slow=8.0,SNR=3.6						
NRIK				LR	LR	19 36 54.9	
	comp=Z,68nm,18.3s,baz=104,slow=39						
	comp=Z,2.4nm,0.6s						
NRIK	Noril'sk	50.21	344	P	P	19 12 58.6	-1.0
NRIK				IAmb	IAmb	19 13 12.1	
	comp=Z,5.4nm,1.3s						
BILL	Bilibino	50.33	19	P	P	19 13 00.6	0.0
BILL				IAmb	IAmb	19 13 01.9	
	comp=Z,3.6nm,0.9s						
ABKAR	Akbulak array	55.90	314	P	P	19 13 42.0	+0.1
ARU	Arti	57.15	323	P	P	19 13 50.2	-0.4
AKTO	Aktyubinsk	57.17	315	P	P	19 13 50.7	-0.2
	comp=Z,2.0nm,0.6s,baz=111,slow=17,SNR=10.0						
AKTO				LR	LR	19 40 43.0	
	comp=Z,71nm,18.3s,baz=69,slow=38						
	comp=Z,2.0nm,0.6s						
GEYT	Alibeck	57.81	301	LR	LR	19 41 24.2	
	comp=Z,56nm,19.2s,baz=168,slow=39						
GYA0B	ALIBECK ARRAY	57.81	301	P	P	19 13 56.6	+0.9
J20K	Nowinta River	64.34	29	P	P	19 14 40.7	+1.3
J20K				IAmb	IAmb	19 14 43.8	
	comp=Z,3.1nm,0.6s						
IMAR	Indian Mountai	64.42	27	P	P	19 14 41.1	+1.1
H21K	Melozitna Rive	64.82	27	P	P	19 14 43.4	+0.8
I21K	Tanana	65.20	27	P	P	19 14 46.1	+1.1
I21K				IAmb	IAmb	19 15 08.1	
	comp=Z,9.7nm,1.4s						
CAST	Castle Rocks	65.30	29	P	P	19 14 46.5	+0.8
CAST				IAmb	IAmb	19 15 03.8	
	comp=Z,2.7nm,0.9s						
BPAW	Bear Paw Mtn.	65.72	29	P	P	19 14 51.4	+2.9
BPAW				IAmb	IAmb	19 14 52.4	
	comp=Z,1.9nm,0.6s						
TOLK	Toolik Lake Re	65.86	24	P	P	19 14 51.4	+2.1
TOLK				IAmb	IAmb	19 14 52.6	
	comp=Z,3.9nm,0.8s						
H23K	Yukon River	66.15	27	P	P	19 14 53.3	+2.0
I23K	Minto, Yukon-K	66.30	27	P	P	19 14 53.9	+1.8
I23K				IAmb	IAmb	19 14 56.0	
	comp=Z,8.3nm,1.5s						
NEA2	Nenana	66.50	28	P	P	19 14 53.9	+0.4
NEA2				IAmb	IAmb	19 14 57.2	
	comp=Z,4.1nm,0.6s						
RND	Reindeer	66.75	29	P	P	19 14 54.7	-0.5
RND				IAmb	IAmb	19 14 58.7	
	comp=Z,3.9nm,0.6s						
MDM	Murphy Dome	66.80	28	P	P	19 14 56.2	+0.8
H24K	Noodor Dome	66.83	27	P	P	19 14 53.8	-1.8
H24K				IAmb	IAmb	19 15 00.4	
	comp=Z,5.9nm,1.3s						
ILAR	Eielson Array	67.40	28	P	P	19 14 59.7	+0.5
	comp=Z,0.3nm,0.5s,baz=299,slow=10,SNR=9.5						
	comp=Z,0.3nm,0.5s						
GNI	Garni	67.66	305	LR	LR	19 47 41.1	
	comp=Z,17nm,18.7s,baz=82,slow=39						
BMAR	Burnt Mountain	67.88	25	P	P	19 15 03.6	+1.4
KBZ	Khabaz	68.17	309	P	P	19 15 05.0	+0.7
	comp=Z,1.5nm,0.7s,baz=108,slow=5.6,SNR=4.9						
	comp=Z,1.5nm,0.7s						
EPYK	Eagle Plains	71.14	25	P	P	19 15 23.4	+1.0
EPYK				IAmb	IAmb	19 15 25.7	
	comp=Z,3.7nm,0.8s						
INK	Inuvik	71.70	23	P	P	19 15 26.8	+1.3
	comp=Z,2.1nm,0.8s,baz=251,slow=5.3,SNR=6.2						
	comp=Z,2.1nm,0.8s						
INK	Inuvik	71.70	23	P	P	19 15 25.4	-0.1
INK				IAmb	IAmb	19 15 38.5	
	comp=Z,4.2nm,1.1s						
FIA1	FINESS Array S	73.10	330	P	P	19 15 34.6	+0.6
FIA1				IAmb	IAmb	19 15 35.0	
	comp=Z,6.6nm,0.8s						
FINES	FINESS Array B	73.10	330	P	P	19 15 34.0	-0.1
	comp=Z,5.2nm,0.7s,baz=72,slow=6.6,SNR=18						
FINES				LR	LR	19 51 22.4	
	comp=Z,134nm,18.3s,baz=11,slow=39						
	comp=Z,5.2nm,0.7s						
FINES	FINESS Array B	73.10	330	P	P	19 15 34.2	+0.2
M31M	Drury Creek, Y	73.47	29	P	P	19 15 36.8	+0.5
M31M				IAmb	IAmb	19 15 45.3	
	comp=Z,4.4nm,1.4s						
AKASG	Malin Array Be	75.12	319	P	P	19 15 45.3	-0.7
	comp=Z,0.6nm,0.5s,baz=56,slow=5.8,SNR=4.6						
	comp=Z,0.6nm,0.5s						
AKASG	Malin Array Be	75.12	319	P	P	19 15 45.3	-0.7
AKASG				IAmb	IAmb	19 15 46.9	
	comp=Z,4.2nm,1.5s						
BR131	Keskin Array S	75.95	307	P	P	19 15 49.5	-1.7
BR131				IAmb	IAmb	19 16 03.4	
	comp=Z,11nm,1.4s						
BRTR	Keskin Array B	75.95	307	P	P	19 15 51.6	+0.3
	comp=Z,0.9nm,0.8s,baz=90,slow=4.9,SNR=5.4						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	75.95	307	P	P	19 15 49.7	-1.6
ASF	Jabal al Asfar	76.04	299	P	P	19 15 51.2	-0.6
	comp=Z,1.6nm,0.9s,baz=85,slow=12,SNR=2.0						
	comp=Z,1.6nm,0.9s						
PABE	Paberze	76.30	325	P	P	19 15 53.2	+0.5
RES	Resolute Bay	77.89	10	LR	LR	19 54 10.2	
	comp=Z,23nm,18.2s,baz=48,slow=39						
EIL	Elat	78.49	297	LR	LR	19 53 34.8	
	comp=Z,37nm,18.3s,baz=356,slow=38						
MLR	Muntele Rosu	79.10	315	LR	LR	19 55 21.9	
	comp=Z,51nm,20.1s,baz=122,slow=39						
NB2	NORSAR Subarra	79.73	333	P	P	19 16 12.3	+0.6
	comp=Z,1.0nm,0.7s,baz=56,slow=5.9						
NOA	NORSAR Array B	79.73	333	P	P	19 16 11.4	-0.3
	comp=Z,1.7nm,0.8s,baz=55,slow=5.6,SNR=6.2						
NOA				LR	LR	19 54 41.0	
	comp=Z,24nm,19.0s,baz=355,slow=38						
	comp=Z,1.7nm,0.8s						
YKA	Yellowknife Ar	81.38	24	P	P	19 16 20.1	-0.4
	comp=Z,1.0nm,0.7s,baz=304,slow=5.0,SNR=13						
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	84.96	322	P	P	19 16 39.1	-0.3
	comp=Z,0.4nm,0.6s,baz=59,slow=11,SNR=5.1						
	comp=Z,0.4nm,0.6s						
FRB	Frobisher Bay	91.53	6	LR	LR	20 03 17.6	
	comp=Z,27nm,18.1s,baz=212,slow=39						

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*NOU **12** 19:22:17.8, 13°.46S×166°.42E, h5^{km}, mb4.1/11, Vanuatu Islands*

*IDC **12** 19:22:21.8±4.2, 15°.14S×167°.18E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=165.0km s-min=32.8km az=141.0*

ISC 12 19:22:32.7±1.1, **14°.4S**±0°.1×**166°.5E**±0°.2, **h50**^{km}, **n11**, σ**1^{s}64**/11, **mb3.5**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.27	149	P	Pn	19 22 53.8	-0.2
DVP	Devils Point	3.71	155	P	Pn	19 23 27.8	+0.3
LIFNC	LIFOU	6.42	174	P	Pn	19 24 04.8	+0.1
YATNC	Mamie plateau,	7.67	177	P	Pn	19 24 22.1	+0.3
DZM	Mont Dzumac	7.67	181	P	Pn	19 24 22.3	+0.3
NOUC	Port Laguerre	7.71	182	P	Pn	19 24 23.6	+1.3
OUENC	Ouen Island, N	8.03	178	P	Pn	19 24 27.6	+0.9
WRA	Warramunga Arr	31.22	255	P	P	19 28 45.2	-2.5
	0.5nm,0.8s,baz=85,slow=7.7,SNR=1.6						
	0.5nm,0.8s						
ASAR	Alice Springs	32.14	248	P	P	19 28 54.9	-0.8
	0.4nm,0.6s,baz=72,slow=9.2,SNR=12						
	0.4nm,0.6s						
SONM	Songino Array	81.77	324	P	P	19 34 49.4	+3.1
	0.2nm,0.4s,baz=142,slow=7.2,SNR=1.9						
	0.2nm,0.4s						
ILAR	Eielson Array	86.40	18	P	P	19 35 07.8	-1.5
	0.6nm,0.7s,baz=238,slow=5.5,SNR=9.5						
	0.6nm,0.7s						

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*NEIC **12** 19:28:30.5±0.8, 25°.1S±0°.1×179°.4E±0°.2, h533^{km}±7^{km}, mb4.6/13, Error ellipse: s-maj=21.8km s-min=18.4km az=57.0*

*IDC **12** 19:28:30.9±13.0, 24°.47S×179°.41E, h542^{km}±100^{km}, mb3.0/2, mbtmp4.1/3, Error ellipse: s-maj=175.5km s-min=54.2km az=134.0*

ISC 12 19:28:28.3±0.8, **24°.9S**±0°.1×**179°.5E**±0°.1, **h507**^{km}, **n27**, σ**1^{s}37**/29, **mb4.5**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.95	153	P	P	19 29 56.5	+1.4
MARNC	Mare, Loyalty	11.07	285	P	P	19 30 57.2	+0.2
PINNC	Pines Island,	11.26	279	P	P	19 31 01.3	+2.2
OUENC	Ouen Island, N	11.85	279	P	P	19 31 06.8	+1.5
DZM	Mont Dzumac	12.30	280	P	P	19 31 11.9	+1.8
	8.8nm,0.7s,baz=91,slow=19,SNR=13						

URZ	**Urewera**	**13.52**	**188**	P	**P**	**19 31 21.5**	**-1.1**
LTZ	**Lake Taylor**	**18.85**	**197**	P	**P**	**19 32 14.2**	**-1.7**
CTAO	**Charters Tower**	**31.04**	**272**	P	**P**	**19 34 04.6**	**+0.2**
CTAO				IAmb	IAmb	19 34 14.6	
	comp=Z,42nm,1.5s						
RABL	**Rabaul**	**33.36**	**304**	P	**P**	**19 34 24.7**	**+0.5**
RABL				IAmb	IAmb	19 35 53.9	
	comp=Z,13nm,0.6s						
BBOO	**Buckleboo**	**38.65**	**248**	P	**P**	**19 35 08.9**	**+1.0**
AS31	**Alice Springs**	**41.43**	**262**	P	**P**	**19 35 29.1**	**-1.3**
ASAR	**Alice Springs**	**41.44**	**262**	P	**P**	**19 35 30.5**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=96,slow=7.5,SNR=25						
ASAR				PcP	**PcP**	**19 37 16.5**	**0.0**
	comp=Z,0.1nm,0.5s,baz=93,slow=5.8,SNR=1.2						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**41.44**	**262**	P	**P**	**19 35 27.9**	**-2.5**
WR0	**Warramunga Arr**	**41.71**	**267**	P	**P**	**19 35 31.6**	**-0.9**
WR0				IAmb	IAmb	19 35 38.8	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**41.88**	**267**	P	**P**	**19 35 33.1**	**-0.8**
WB2				IAmb	IAmb	19 36 38.4	
	comp=Z,31nm,1.7s						
WB0	**Warramunga Arr**	**41.89**	**268**	P	**P**	**19 35 33.0**	**-1.0**
WB0				IAmb	IAmb	19 35 33.3	
	comp=Z,21nm,1.5s						
WRA	**Warramunga Arr**	**41.89**	**267**	P	**P**	**19 35 33.1**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=106,slow=8.3,SNR=24						
	comp=Z,1.4nm,0.4s						
MTN	**Manton Dam**	**47.08**	**276**	P	**P**	**19 36 12.1**	**-2.0**
MTN				IAmb	IAmb	19 36 36.8	
	comp=Z,54nm,1.4s						
KNRA	**Kununurra**	**48.23**	**271**	P	**P**	**19 36 22.0**	**-0.8**
TOLI2	**Tolitoli**	**62.38**	**285**	P	**P**	**19 38 00.6**	**-1.0**
QSPA	**South Pole Qui**	**65.23**	**180**	P	**P**	**19 38 19.4**	**+0.3**
QSPA				IAmb	IAmb	19 38 36.7	
	comp=Z,16nm,1.6s						
LENM	**Lemitar**	**91.15**	**53**	P	**P**	**19 40 40.0**	**+1.0**
BINY	**Binghamton**	**116.68**	**54**		**PKPdf**	**19 46 13.9**	**-0.7**
AKASG	**Malin Array Be**	**145.51**	**326**	PKPbc	**PKPdf**	**19 47 06.0**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=45,slow=4.1,SNR=9.1						
AKASG	**Malin Array Be**	**145.51**	**326**		**PKPdf**	**19 47 06.4**	**-1.6**
BRTR	**Keskin Array B**	**147.77**	**306**	PKPbc	**PKPdf**	**19 47 13.5**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=93,slow=4.3,SNR=2.8						
BRTR				PKPab	**PKiKP**	**19 47 18.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=100,slow=3.4,SNR=7.1						
CLL	**Collm**	**151.63**	**342**	*e*PKPbc	**PKPbc**	**19 47 23.0**	**-1.7**

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*IDC **12** 19:55:17.6±0.8, 3°87N×92°48E, h0^{km}, mb4.0/16, mbtmp4.0/19, ML4.2/3, MS3.7/33, Error ellipse: s-maj=27.8km s-min=14.1km az=43.0*

*NEIC **12** 19:55:19.7±1.8, 3°85N±0°05×92°50E±0°08, h10^{km}±1^{km}, mb4.6/44, Error ellipse: s-maj=13.2km s-min=7.3km az=285.0*

*DJA **12** 19:55:20.4±0.4, 4°N±4°×9°2E±°, h10^{km}, M4.8/21, mB5.2/12, mb4.9/21, MLv5.3/7, Mw(mB)4.5/12*

*GCMT **12** 19:55:22.7±0.4, 4°02N±0°02×92°58E±0°02, h12^{km}, MW4.7/75, Moment Tensor Solution. s7,c7; s75,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.09±.06; M$_{\theta\theta}$-0.77±.05; M$_{\phi\phi}$0.85±.05; M$_{r\theta}$-0.10±.16; M$_{\theta\phi}$-0.84±.05; M$_{\phi r}$-0.88±.16; Best double couple: M$_0$1.44500×10^{16} NP1:φ$_s$110.00000°,δ54.00000°,λ179.00000°. NP2: φ$_s$201.00000°,δ89.00000°,λ36.00000°. Principal axes: T 1.5780, Plg26.0000°, Azm71.0000°; N -0.2670, Plg54.0000°, Azm202.0000°; P -1.3110, Plg24.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 19:55:19.2±0.6, **3°81N**±0°07×**92°52E**±0°06, **h10^{km}, n157,** σ**1^{s}35**/130, **mb4.6**/58, **MS3.8**/40, **3C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**4.64**	**72**	Pn	**Pn**	**19 56 29.9**	**+0.5**
LHMI	**Lhok Sumawe**	**4.64**	**72**	P	**Pn**	**19 56 29.9**	**+0.5**
LHMI	**Lhok Sumawe**	**4.64**	**72**	P	**Pn**	**19 56 30.4**	**+1.0**
KCSI	**Kotacane, Aceh**	**5.25**	**93**	P	**Pn**	**19 56 39.7**	**+1.8**
	3.2nm5μm378nm,0.8s						
GSI	**Gunungsitoli**	**5.63**	**116**	Pn	**Pn**	**19 56 43.0**	**-0.1**
GSI	**Gunungsitoli**	**5.63**	**116**	P	**Pn**	**19 56 43.2**	**+0.1**
	0.9nm122nm,0.6s						
GSI	**Gunungsitoli**	**5.63**	**116**	P	**Pn**	**19 56 43.4**	**+0.3**
TSI	**Tuntungan**	**6.04**	**93**	P	**Pn**	**19 56 50.6**	**+1.9**
	1.3nm3μm278nm,0.6s						
PSI	**Prapat**	**6.47**	**99**	Pn	**Pn**	**19 56 55.7**	**+0.9**
	10nm,0.3s,baz=304,slow=8.1,SNR=31						
PSI				Sn	**Sn**	**19 58 03.6**	**-5.2**
	6.6nm,0.3s,baz=215,slow=20,SNR=1.9						
	25nm,0.3s						
RPSI	**Rantau Prapat**	**6.49**	**100**		**Pn**	**19 56 55.7**	**+0.8**
RPSI					**Sn**	**19 58 03.6**	**-5.4**
MNSI	**Mandailing Nat**	**7.67**	**113**	P	**Pn**	**19 57 11.9**	**+0.9**
	1.0nm2μm89nm,0.5s						
KULM	**Kulim**	**8.24**	**79**	Pn	**Pn**	**19 57 18.4**	**-0.5**
SISI	**Saibi**	**8.32**	**128**	P	**Pn**	**19 57 21.3**	**+1.3**
	60nm,0.6s						
SRIT	**Nakonsritamara**	**8.50**	**56**		**Pn**	**19 57 21.8**	**-0.7**
DGPR	**DIGLIPUR**	**9.32**	**2**	*e*P	**Pn**	**19 57 31.7**	**-2.0**
KRJI	**Kerinci**	**10.69**	**123**	P	**Pn**	**19 57 54.0**	**+1.4**
	4μm302nm,0.9s						
MYKOM	**Kota Tinggi**	**11.49**	**100**		**Pn**	**19 58 03.9**	**+0.3**
PALK	**Pallekele**	**12.25**	**287**	Pn	**Pn**	**19 58 13.9**	**0.0**
	3.1nm,0.3s,baz=149,slow=14,SNR=28						
PALK				Sn	Sn	20 00 16.8	-14
	11nm,0.3s,baz=18,slow=9.1,SNR=8.6						
PALK				LR	LR	20 02 10.3	
	comp=Z,208nm,21.8s,baz=210,slow=34						
	7.5nm,0.3s						
PALK	**Pallekele**	**12.25**	**287**	Pn	**Pn**	**19 58 13.5**	**-0.4**
MNAI	**Manna**	**13.21**	**128**	P	**Pn**	**19 58 29.0**	**+1.9**
	216nm,1.9s						
MNAI	**Manna**	**13.21**	**128**	P	**Pn**	**19 58 27.6**	**+0.5**
KASI	**Kota Agung**	**15.14**	**128**	P	**Pn**	**19 58 56.5**	**+3.2**
	32nm,0.8s						
CM31	**Chiang Mai Arr**	**15.86**	**23**		**Pn**	**19 59 01.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**15.86**	**23**	Pn	**Pn**	**19 59 00.9**	**-1.8**
	0.1nm,0.3s,baz=217,slow=14,SNR=16						
CMAR				LR	LR	20 06 27.8	
	comp=Z,220nm,18.1s,baz=215,slow=42						
	2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.86**	**23**		**Pn**	**19 59 02.2**	**-0.5**
SALM	**Salem**	**16.18**	**300**	*e*x	Pg	20 01 52.4	
CHTO	**Chiang Mai**	**16.18**	**22**	Pn	**Pn**	**19 59 06.1**	**-0.8**
CHTO				P	**P**	**19 59 10.3**	**+0.2**
CHTO				IAmb	IAmb	19 59 20.3	
	comp=Z,33nm,1.4s						
PCHI	**Peechi**	**17.37**	**293**	*e*x	**P**	**19 59 23.4**	**+0.1**
PCHI				*e*S	Sn	20 02 14.8	-21
RAGD	**RAYAGADA**	**17.71**	**331**	*e*x	Sn	20 02 29.9	-14
KSM	**Kuching**	**17.92**	**97**		**Pn**	**19 59 27.6**	**-1.2**
LEM	**Lembang**	**18.41**	**125**	LR	LR	20 07 34.9	
	comp=Z,225nm,18.2s,baz=340,slow=40						
STKI	**Sintang**	**19.31**	**101**	P	**Pn**	**19 59 47.8**	**+2.1**
	comp=Z,23nm,1.2s						
KPJI	**Karang Pucung**	**19.77**	**124**	P	**Pn**	**19 59 52.2**	**+1.0**
	comp=Z,22nm,2.1s						
AZL	**Aizawl**	**19.81**	**0**	*e*P	**P**	**19 59 49.5**	**-0.7**
AZL				IAmb	IAmb	19 59 54.4	
	comp=Z,9.1nm,0.8s						
BLSP	**Bilaspur**	**20.81**	**332**	*e*P	**P**	**20 00 01.1**	**+0.1**
BOK	**Bokaro**	**20.88**	**343**	*e*P	**P**	**20 00 02.1**	**+0.5**
BOK				IAmb	IAmb	20 00 17.8	
	comp=Z,23nm,0.7s						
SHL	**Shillong**	**21.64**	**358**	*e*P	**P**	**20 00 08.3**	**-1.8**
SHL				IAmb	IAmb	20 00 14.6	
	comp=Z,23nm,0.7s						
KOHI	**KOHIMA**	**21.84**	**4**	*e*P	**P**	**20 00 10.4**	**-1.7**
KOHI				IAmb	IAmb	20 00 12.8	
	comp=Z,67nm,1.2s						
MOKO	**MOKOCHONG**	**22.47**	**5**	*e*P	**P**	**20 00 17.1**	**-1.8**
AKL	**Akola**	**22.57**	**319**	*e*P	**P**	**20 00 19.9**	**0.0**
QIZ	**Qiongzhong**	**22.70**	**47**	P	**P**	**20 00 21.4**	**+0.1**
QIZ				S	**S**	**20 04 30.5**	**+0.6**
QIZ				LR	LR		
	comp=N,940nm,17.1s						
QIZ				LR	LR		
	comp=E,430nm,15.9s						
QIZ				LR	LR		
	comp=Z,280nm,16.9s						
H08S2	**Diego Garcia H**	**22.99**	**240**	T	T	20 26 37.1	
	baz=65,slow=74						
H08S3	**Diego Garcia H**	**22.99**	**240**	T	T	20 25 50.4	
	baz=65						
H08S1	**Diego Carcia H**	**23.01**	**240**	T	T	20 26 17.1	
	baz=65,slow=74						
ITAN	**ITANAGAR**	**23.23**	**3**	*e*P	**P**	**20 00 25.7**	**-1.0**
ITAN				IAmb	IAmb	20 00 30.6	
	comp=Z,18nm,0.8s						
KMI	**Kunming**	**23.36**	**24**	⇓P	**P**	**20 00 28.5**	**+0.2**
KMI				pP	pwP	20 00 38.0	+2.4
KMI				S	**S**	**20 04 39.4**	**-2.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				LR	LR		
	comp=N,250nm,15.4s						
KMI				LR	LR		
	comp=E,220nm,12.9s						
KMI				LR	LR		
	comp=Z,270nm,14.7s						
ODAN	**Odare**	**23.44**	**348**	*e*P	**P**	**20 00 28.5**	**-0.6**
GTK	**Tadong**	**23.68**	**351**	*e*P	**P**	**20 00 30.9**	**-0.5**
GTK				IAmb	IAmb	20 00 32.6	
	comp=Z,21nm,1.2s						
RAMN	**Ramite**	**23.70**	**347**	*e*P	**P**	**20 00 32.0**	**+0.4**
	comp=Z,15nm,0.5s						
PZH	**PanZhiHua**	**24.23**	**20**	P	**P**	**20 00 38.1**	**+1.5**
PZH				sP	**pwP**	**20 00 46.3**	**+2.3**
PZH				S	**S**	**20 04 58.4**	**+3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,60nm,5.1s						
PZH				LR	LR		
	comp=N,630nm,17.4s						
PZH				LR	LR		
	comp=E,870nm,19.0s						
PZH				LR	LR		
	comp=Z,550nm,14.7s						
JIRN	**Jiri**	**24.48**	**346**	*e*P	**P**	**20 00 40.1**	**+1.0**
	comp=Z,4.6nm,1.0s						
PKI	**Pulchoki**	**24.59**	**345**	*e*P	**P**	**20 00 40.3**	**+0.3**
	comp=Z,125nm,1.3s						
DMN	**Daman**	**24.70**	**344**	*e*P	**P**	**20 00 42.0**	**+1.0**
	comp=Z,42nm,1.0s						
KKN	**Kakani**	**24.83**	**345**	*e*P	**P**	**20 00 42.2**	**+0.1**
	comp=Z,152nm,1.3s						
GKN	**Gorkha**	**25.20**	**343**	*e*P	**P**	**20 00 45.8**	**+0.4**
	comp=Z,180nm,1.3s						
KOLN	**Koldanda**	**25.30**	**341**	*e*P	**P**	**20 00 47.1**	**+0.8**
	comp=Z,160nm,1.2s						
LSA	**Lhasa**	**25.78**	**357**	P	**P**	**20 00 51.5**	**+0.5**
LSA				IAmb	IAmb	20 01 19.5	
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**25.78**	**357**	Pg	**P**	**20 00 51.9**	**+0.9**
LSA				smax	smax		
	comp=N,22nm,0.8s						
LSA				smax	smax		
	comp=E,12nm,0.7s						
DANN	**Dangsing**	**25.79**	**342**	*e*P	**P**	**20 00 51.3**	**+0.4**
	comp=E,150nm,1.2s						
PYUN	**Piuthan**	**25.81**	**340**	*e*P	**P**	**20 00 51.5**	**+0.6**
	comp=E,121nm,1.1s						
MYLDM	**Lahad Datu**	**25.94**	**86**	P	**P**	**20 00 51.5**	**-0.5**
MPSI	**Mapaga**	**27.57**	**97**	P	**P**	**20 01 08.9**	**+2.1**
	comp=E,389nmcomp=E,37nm,0.8s						
HKPS	**Hong Kong Po S**	**27.86**	**47**	P	**P**	**20 01 09.8**	**+0.5**
LGTI	**Lohaghat**	**28.03**	**337**	*e*P	**P**	**20 01 10.8**	**+0.1**
TOLI2	**Tolitoli**	**28.36**	**95**	P	**P**	**20 01 13.6**	**-0.3**
TOLI2				IAmb	IAmb	20 01 42.2	
	comp=Z,11nm,1.0s						
TOLI2	**Tolitoli**	**28.36**	**95**	P	**P**	**20 01 14.6**	**+0.7**
KAPI	**Kappang**	**28.58**	**108**	LR	LR	20 12 23.7	
	comp=Z,230nm,20.1s,baz=292,slow=36						
LUWI	**Luwuk**	**30.62**	**98**	P	**P**	**20 01 34.2**	**+0.3**
	comp=Z,34nm,1.0s						
GTOI	**Gorontalo**	**30.63**	**95**	P	**P**	**20 01 35.8**	**+1.8**
	comp=Z,11nm,1.3s						
SMLA	**Simla**	**30.79**	**334**	*e*P	**P**	**20 01 35.6**	**+0.5**
SMLA				IAmb	IAmb	20 01 38.3	
	comp=Z,9.4nm,0.4s						
ENH	**Enshi**	**30.82**	**30**	P	**P**	**20 01 33.3**	**-2.2**
ENH				IAmb	IAmb	20 01 53.2	
	comp=Z,7.6nm,0.7s						
DAV	**Davao City (W)**	**33.06**	**83**	LR	LR	20 16 41.4	
	comp=Z,175nm,21.2s,baz=288,slow=39						
XAN	**Xi'an**	**33.73**	**25**	⇑P	**P**	**20 02 00.0**	**-1.0**
XAN				pP	pwP	20 02 09.9	+1.4
XAN				sP	sP	20 02 14.9	+11
XAN				S	**S**	**20 07 29.3**	**+4.7**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,51nm,7.1s						
XAN				LR	LR		
	comp=N,390nm,14.6s						
XAN				LR	LR		
	comp=E,550nm,15.9s						
XAN				LR	LR		
	comp=Z,290nm,17.1s						
LZH	**Lanzhou**	**33.78**	**17**	*e*P	P	20 01 56.9	-4.6
LZH				pP	pP	20 02 01.4	-1.9
LZH				pmax	pmax		
	comp=Z,11nm,1.5s						
LZH				LR	LR		
	comp=N,270nm,12.5s						
LZH				LR	LR		
	comp=E,340nm,13.5s						
LZH				LR	LR		
	comp=Z,360nm,12.5s						
SANI	**Sanana**	**33.95**	**99**	P	**P**	**20 02 04.6**	**+1.4**
GTA	**Gaotai**	**36.05**	**10**	*e*P	**P**	**20 02 21.7**	**+0.6**
GTA				sP	pwP	20 02 31.1	+2.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,35nm,6.0s						
GTA				LR	LR		
	comp=N,96nm,10.8s						
GTA				LR	LR		
	comp=E,130nm,13.9s						
GTA				LR	LR		
	comp=Z,83nm,13.5s						
NJ2	**Nanjing**	**37.42**	**38**	*e*P	**P**	**20 02 34.1**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
WSAR	**Wadi Sarin**	**38.02**	**304**	LR	LR	20 17 35.2	
	comp=Z,76nm,19.0s,baz=128,slow=35						
KSH	**Kashi**	**38.58**	**339**	P	**P**	**20 02 41.6**	**-1.0**
KSH				sP	pwP	20 02 50.6	+0.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH				LR	LR		
	comp=Z,230nm,17.2s						
SIJI	**Sorong**	**39.00**	**96**	P	**P**	**20 02 46.1**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=322,slow=21,SNR=1.7						
SIJI				LR	LR	20 19 36.6	
	comp=Z,83nm,20.0s,baz=340,slow=37						
	comp=Z,4.1nm,0.9s						
HNS	**HongShan**	**39.13**	**28**	⇑P	P	20 02 57.5	+10
HNS				S	S	20 09 01.3	+14
HNS				pmax	pmax		
	comp=Z,17nm,1.1s						
HNS				LR	LR		
	comp=N,220nm,12.6s						
HNS				LR	LR		
	comp=E,120nm,10.5s						
HNS				LR	LR		
	comp=Z,250nm,21.0s						
WMQ	**Urumqi**	**40.07**	**355**	*e*P	**P**	**20 02 56.4**	**+1.5**
WMQ				LR	LR		
	comp=Z,110nm,21.9s						
DRK	**Karamyk**	**40.17**	**335**	P	**P**	**20 02 56.6**	**+0.5**
DRK				IAmb	IAmb	20 03 08.5	
	comp=Z,26nm,1.1s						
GAR	**Garm**	**40.43**	**333**	P	**P**	**20 02 57.1**	**-0.9**
KDJ	**Kajisay**	**40.54**	**342**	P	**P**	**20 02 56.7**	**-2.3**
KDJ				IAmb	IAmb	20 03 09.7	
	comp=Z,8.2nm,1.2s						
HHC	**Hu-ho-hao-te**	**40.67**	**22**	*e*P	**P**	**20 03 00.2**	**+0.3**
HHC				pmax	pmax		
	comp=Z,33nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
HHC				LR	LR		
	comp=N,440nm,13.1s						
HHC				LR	LR		
	comp=E,400nm,13.8s						
HHC				LR	LR		
	comp=Z,390nm,12.8s						
CHGR	**Chuyangaron**	**40.69**	**332**	P	**P**	**20 02 57.6**	**-2.5**
CHGR				IAmb	IAmb	20 03 09.6	
	comp=Z,20nm,0.9s						
BTK	**Batken**	**41.07**	**334**	P	**P**	**20 03 04.2**	**+1.0**
JOW	**Kunigami**	**41.13**	**53**	LR	LR	20 21 53.8	
	comp=Z,66nm,18.9s,baz=134,slow=39						
BOOM	**Boomskoye usch**	**41.26**	**341**	P	**P**	**20 03 03.3**	**-1.5**
BOOM				IAmb	IAmb	20 03 16.5	
	comp=Z,5.7nm,1.0s						
AAK	**Ala-Archa**	**41.87**	**340**	P	**P**	**20 03 10.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=219,slow=7.1,SNR=1.7						
AAK				LR	LR	20 20 52.2	
	comp=Z,137nm,20.8s,baz=176,slow=37						
	comp=Z,0.5nm,0.3s						
AAK	**Ala-Archa**	**41.87**	**340**	P	**P**	**20 03 10.7**	**+0.9**
TAS	**Tashkent**	**42.77**	**334**	P	**P**	**20 03 17.5**	**+0.5**
H01W3	**Cape Leeuwin H**	**43.53**	**154**	T	T	20 50 06.0	
	baz=331,slow=76,SNR=7.6						
H01W2	**Cape Leeuwin H**	**43.54**	**154**	T	T	20 50 27.9	
	baz=331,slow=76,SNR=5.8						
H01W1	**Cape Leeuwin H**	**43.54**	**154**	T	T	20 50 12.8	
	baz=331,slow=76,SNR=5.2						
MK31	**Makanchi Array**	**43.73**	**350**	P	**P**	**20 03 24.4**	**-0.3**
MK31				IAmb	IAmb	20 03 36.2	
	comp=Z,4.6nm,1.0s						
MKAR	**Makanchi Array**	**43.73**	**350**	P	**P**	**20 03 24.6**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=168,slow=8.8,SNR=20						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**43.73**	**350**	P	**P**	**20 03 23.8**	**-0.9**
KK31	**Karatay Array**	**43.74**	**337**	P	**P**	**20 03 24.7**	**-0.1**
KK31				IAmb	IAmb	20 03 35.1	
	comp=Z,5.4nm,0.9s						
KKAR	**Karatay Array**	**43.74**	**337**	P	**P**	**20 03 24.7**	**-0.1**
KKAR				IAmb	IAmb	20 03 35.1	
	comp=Z,5.4nm,0.9s						
KKAR	**Karatay Array**	**43.74**	**337**	P	**P**	**20 03 24.9**	**+0.1**
MAKZ	**Makanchi**	**43.80**	**350**	P	**P**	**20 03 24.2**	**-1.0**
SONM	**Songino Array**	**45.46**	**13**	P	**P**	**20 03 38.5**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=196,slow=8.8,SNR=13						
SONM				LR	LR	20 24 33.1	
	comp=Z,116nm,19.2s,baz=210,slow=39						
	comp=Z,1.6nm,0.7s						
SONM	**Songino Array**	**45.46**	**13**	P	**P**	**20 03 39.3**	**+0.6**
SONM				IAmb	IAmb	20 03 50.1	
	comp=Z,4.2nm,1.0s						
GEYT	**Alibeck**	**46.26**	**322**	LR	LR	20 23 30.8	
	comp=Z,148nm,21.5s,baz=136,slow=37						
KSRS	**Korea Array**	**46.59**	**39**	P	**P**	**20 03 46.9**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=221,slow=8.5,SNR=3.4						
KSRS				LR	LR	20 23 58.7	
	comp=Z,72nm,20.7s,baz=220,slow=37						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**47.38**	**122**	P	**P**	**20 03 53.9**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=299,slow=8.8,SNR=9.3						
	comp=Z,1.3nm,0.7s						
WB2	**Warramunga Arr**	**47.39**	**122**	P	**P**	**20 03 54.3**	**+0.2**
KURBB	**Kurchatov Arra**	**48.12**	**348**	LR	LR	20 25 53.7	
	comp=Z,94nm,20.7s,baz=143,slow=38						
KURK	**Kurchatov**	**48.19**	**348**	P	**P**	**20 03 59.7**	**-0.1**
ASAR	**Alice Springs**	**48.70**	**126**	P	**P**	**20 04 04.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=296,slow=7.3,SNR=9.5						
	comp=Z,0.4nm,0.6s						
OPO	**Ambohidratompo**	**49.87**	**242**	LR	LR	20 21 23.2	
	comp=Z,53nm,21.6s,baz=152,slow=31						
ZAA0	**Zalesovo Array**	**50.38**	**354**	P	**P**	**20 04 16.2**	**-0.2**
ZAA0				IAmb	IAmb	20 04 28.4	
	comp=Z,13nm,1.3s						
ZALV	**Zalesovo Beam**	**50.38**	**354**	P	**P**	**20 04 16.7**	**+0.3**
	comp=Z,4.3nm,0.5s,baz=176,slow=7.2,SNR=29						
ZALV				LR	LR	20 26 56.0	
	comp=Z,83nm,22.0s,baz=162,slow=38						
	comp=Z,4.3nm,0.5s						
ZALV	**Zalesovo Beam**	**50.38**	**354**	P	**P**	**20 04 16.2**	**-0.2**
BNX	**BinXian**	**51.66**	**31**	⇑P	**P**	**20 04 26.9**	**+0.6**
BNX				pmax	pmax		
	comp=Z,11nm,0.6s						
BNX				pmax	pmax		
	comp=Z,160nm,3.5s						
INU	**Inuyama**	**51.70**	**47**	P	**P**	**20 04 26.2**	**-0.5**
INU				IAmb	IAmb	20 04 36.7	
	comp=Z,12nm,0.8s						
JGF	**Kuroka**	**52.06**	**47**	P	**P**	**20 04 29.4**	**-0.1**
JGF				IAmb	IAmb	20 04 39.5	
	comp=Z,12nm,0.9s						
GUMO	**Guam**	**52.55**	**76**	LR	LR	20 27 16.2	
	comp=Z,34nm,20.8s,baz=90,slow=36						
JCJ	**Chichijima**	**52.73**	**59**	LR	LR	20 28 15.0	
	comp=Z,29nm,18.5s,baz=122,slow=38						
JHJ	**Hachijo jima 2**	**52.83**	**51**	LR	LR	20 26 45.0	
	comp=Z,71nm,20.8s,baz=269,slow=36						
ABKAR	**Akbulak array**	**53.07**	**334**	P	**P**	**20 04 35.6**	**-1.1**
ABKAR	**Akbulak array**	**53.07**	**334**	P	**P**	**20 04 35.5**	**-1.2**
ABKAR				IAmb	IAmb	20 04 47.6	
	comp=Z,16nm,1.5s						
MJAR	**Matsushiro Arr**	**53.10**	**46**	P	**P**	**20 04 36.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=197,slow=3.7,SNR=1.8						
MJAR				LR	LR	20 29 05.9	
	comp=Z,79nm,18.6s,baz=240,slow=38						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**53.10**	**46**	P	**P**	**20 04 36.0**	**-1.2**
AKTO	**Aktyubinsk**	**54.79**	**334**	LR	LR	20 29 05.1	
	comp=Z,78nm,20.6s,baz=140,slow=37						
KMBO	**Kilima Mbogo**	**55.45**	**266**	LR	LR	20 24 00.9	
	comp=Z,82nm,21.1s,baz=91,slow=31						
PMG	**Port Moresby**	**56.01**	**104**	LR	LR	20 32 56.8	
	comp=Z,35nm,18.1s,baz=192,slow=40						
GNI	**Garni**	**56.20**	**317**	LR	LR	20 30 35.9	
	comp=Z,29nm,18.5s,baz=117,slow=38						
GURO	**Guroymak-BITLI**	**57.40**	**314**	P	**P**	**20 05 08.6**	**+0.3**
CTA	**Charters Tower**	**57.85**	**116**	LR	LR	20 31 44.1	
	comp=Z,68nm,18.9s,baz=288,slow=38						
STKA	**Stephens Creek**	**58.58**	**131**	P	**P**	**20 05 17.7**	**+1.2**
	comp=Z,4.8nm,0.6s,baz=315,slow=5.2,SNR=14						
STKA				LR	LR	20 31 51.0	
	comp=Z,36nm,19.7s,baz=251,slow=37						
	comp=Z,4.8nm,0.6s						
STKA	**Stephens Creek**	**58.58**	**131**	IAmb	IAmb	20 05 18.7	
	comp=Z,1.3nm,0.8s						
KBZ	**Khabaz**	**59.06**	**320**	LR	LR	20 33 55.8	
	comp=Z,34nm,18.1s,baz=102,slow=39						
ASAJ	**Asahikawa**	**59.54**	**40**	LR	LR	20 32 55.1	
	comp=Z,46nm,18.1s,baz=172,slow=38						
MMAI	**Mount Meron Ar**	**60.59**	**306**	LR	LR	20 32 46.4	
	comp=Z,58nm,21.5s,baz=263,slow=37						
BR131	**Keskin Array S**	**63.91**	**313**	P	**P**	**20 05 50.9**	**-1.8**
BR131				IAmb	IAmb	20 06 11.8	
	comp=Z,2.8nm,0.9s						
BRTR	**Keskin Array B**	**63.91**	**313**	P	**P**	**20 05 50.9**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=134,slow=7.2,SNR=4.8						
	comp=Z,0.5nm,0.6s						
YAK	**Yakutsk**	**64.34**	**18**	P	**P**	**20 05 56.0**	**+1.2**
NRIK	**Noril'sk**	**65.51**	**358**	P	**P**	**20 06 01.1**	**-1.4**
	comp=Z,1.6nm,0.3s,baz=191,slow=14,SNR=2.0						
NRIK				LR	LR	20 37 38.4	
	comp=Z,45nm,20.0s,baz=197,slow=39						
	comp=Z,1.6nm,0.3s						
NRIK	**Noril'sk**	**65.51**	**358**	P	**P**	**20 06 02.3**	**-0.1**
NRIK				IAmb	IAmb	20 06 29.9	
	comp=Z,7.4nm,1.2s						
AKASG	**Malin Array Be**	**70.36**	**323**	P	**P**	**20 06 31.2**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=81,slow=6.0,SNR=2.1						
	comp=Z,0.1nm,0.3s						
TIXI	**Tiksi**	**71.51**	**11**	P	**P**	**20 06 39.2**	**-0.6**
TIXI				IAmb	IAmb	20 07 06.2	
	comp=Z,5.3nm,0.7s						
PETK	**Petropavlovsk-**	**72.23**	**35**	LR	LR	20 42 37.9	
	comp=Z,64nm,19.0s,baz=237,slow=39						
MAW	**Mawson**	**74.25**	**191**	LR	LR	20 35 14.7	
	comp=Z,48nm,18.6s,baz=40,slow=32						
SUW	**Suwalki**	**74.86**	**325**	P	**P**	**20 06 59.6**	**-0.4**
FINES	**FINESS Array B**	**75.55**	**333**	P	**P**	**20 07 02.3**	**-1.5**
	comp=Z,1.5nm,0.9s,baz=85,slow=4.9,SNR=1.8						
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**75.55**	**333**	P	**P**	**20 07 02.9**	**-0.9**
ARCES	**ARCESS Array B**	**78.53**	**341**	LR	LR	20 45 15.8	
	comp=Z,100nm,19.3s,baz=128,slow=38						
GEC2	**GERESS Array S**	**79.78**	**319**	P	**P**	**20 07 26.9**	**-0.9**
GEC2				IAmb	IAmb	20 07 40.4	
	comp=Z,6.9nm,1.2s						
GERES	**GERESS Array B**	**79.78**	**319**	P	**P**	**20 07 28.2**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=126,slow=4.1,SNR=7.9						
	comp=Z,0.9nm,0.8s						
GERES	**GERESS Array B**	**79.78**	**319**	P	**P**	**20 07 27.4**	**-0.5**
KHC	**Kasperske Hory**	**79.89**	**319**	P	**P**	**20 07 27.5**	**-0.9**
SPITS	**Spitsbergen Ar**	**83.46**	**348**	LR	LR	20 50 59.6	

	comp=Z,62nm,18.5s,baz=190,slow=40						
ESDC	**Sonseca Array**	**92.58**	**310**	P	**P**	**20 08 32.2**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=98,slow=15,SNR=1.9						
	comp=Z,0.5nm,0.9s						
ESDC	**Sonseca Array**	**92.58**	**310**	IAmb	IAmb	20 08 37.1	
	comp=Z,1.4nm,1.2s						

*IDC **12** 20:01:53.6±1.6, 43°.99N×105°.84W, h0^{km}, mbtmp3.4/4, ML3.4/4, Error ellipse: s-maj=50.2km s-min=9.4km az=146.0*

*NEIC **12** 20:01:53.1±1.2, 43°.78N±0°.05×105°.24W±0°.04, h0^{km}±2^{km}, ML3.3/56, Error ellipse: s-maj=9.7km s-min=3.1km az=154.0*

ISC 12 20:01:52.3±1.0, **43°.75N**±0°.05×**105°.31W**±0°.05, **h0^{km}**, **n53**, σ**1^{s}40**/54, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.99**	**68**	Pg	**Pb**	**20 02 11.5**	**-1.0**
K22A	**Casper**	**1.41**	**219**		**Pn**	**20 02 18.3**	**-1.1**
K22A				IAML		20 02 43.7	
	comp=N,684nm,0.3s						
PHWY	**Pilot Hill**	**2.45**	**183**		**Pn**	**20 02 34.9**	**+1.1**
RWWY	**Rawlins**	**2.49**	**215**		**Pn**	**20 02 35.2**	**+0.9**
N23A	**Red Feather La**	**2.89**	**190**	Pn	**Pn**	**20 02 41.1**	**+1.2**
N23A				IAML		20 03 28.4	
	comp=N,133nm,0.6s						
N23A				IAML		20 03 30.4	
	comp=E,104nm,0.6s						
LAO	**LASA Array**	**3.01**	**348**	Pn	**Pn**	**20 02 41.3**	**+0.1**
RLMT	**Red Lodge**	**3.15**	**297**		**Pn**	**20 02 44.2**	**+1.0**
RLMT				IAML		20 03 35.2	
	comp=E,76nm,0.3s						
RLMT				IAML		20 03 37.0	
	comp=E,71nm,0.8s						
BW06	**Boulder Array**	**3.25**	**254**		**Pn**	**20 02 45.6**	**+0.9**
BW06				IAML		20 03 34.0	
	comp=E,62nm,0.4s						
BW06				IAML		20 03 41.9	
	comp=E,52nm,0.6s						
PD31	**Pinedale Array**	**3.25**	**254**		**Pn**	**20 02 45.8**	**+1.1**
PDAR	**Pinedale Array**	**3.25**	**254**	Pn	**Pn**	**20 02 45.9**	**+1.1**
	comp=E,5.3nm,0.3s,baz=69,slow=16,SNR=80						
PDAR				Pg	**Pb**	**20 02 49.1**	**-1.9**
	comp=E,18nm,0.3s,baz=74,slow=19,SNR=49						
PDAR				Lg	Lg	20 03 26.9	
	comp=E,2.4nm,0.3s,baz=84,slow=14,SNR=1.3						
	comp=E,6.4nm,0.3s						
GCMT	**Greycliff**	**3.71**	**305**		**Pn**	**20 02 52.2**	**+1.2**
LOHW	**Long Hollow**	**3.84**	**270**		**Pn**	**20 02 55.5**	**+2.7**
FLWY	**Flagg Ranch**	**3.91**	**277**		**Pn**	**20 02 55.3**	**+1.6**
FLWY				IAML		20 04 09.0	
	comp=E,41nm,0.9s						
FLWY				IAML		20 04 30.8	
	comp=E,39nm,1.1s						
MOOW	**Moose Ponds**	**3.94**	**272**		**Pn**	**20 02 54.8**	**+0.7**
ISCO	**Idaho Springs**	**3.96**	**183**		**Pn**	**20 02 56.4**	**+1.9**
SNOW	**Snow King Moun**	**3.96**	**268**		**Pn**	**20 02 56.5**	**+2.0**
SNOW				IAML		20 04 03.8	
	comp=E,35nm,0.9s						
SNOW				IAML		20 04 15.6	
	comp=E,42nm,0.8s						
YPP	**Pitchstone Pla**	**3.99**	**279**		**Pn**	**20 02 56.6**	**+1.6**
REDW	**Red Top Meadow**	**4.04**	**266**		**Pn**	**20 02 57.3**	**+1.7**
REDW				IAML		20 04 12.9	
	comp=E,58nm,0.7s						
TPAW	**Teton Pass**	**4.10**	**268**		**Pn**	**20 02 58.2**	**+1.7**
TPAW				IAML		20 04 18.4	
	comp=E,29nm,0.9s						
TPAW				IAML		20 04 25.6	
	comp=E,51nm,1.0s						
YHH	**Holmes Hill**	**4.11**	**287**		**Pn**	**20 02 58.5**	**+2.0**
O20A	**White River Ci**	**4.22**	**212**		**Pn**	**20 02 58.9**	**+0.8**
O20A				IAML		20 04 15.3	
	comp=E,43nm,0.8s						
O20A				IAML		20 04 16.5	
	comp=N,38nm,1.2s						
E28A	**Huff**	**4.32**	**48**		**Pn**	**20 02 58.8**	**-0.4**
AHID	**Auburn Hatcher**	**4.34**	**259**		**Pn**	**20 03 00.3**	**+0.7**
AHID				IAML		20 04 20.3	
	comp=N,38nm,0.8s						
AHID				IAML		20 05 52.3	
	comp=N,33nm,0.1s						
YHL	**Hebgen Lake**	**4.35**	**287**		**Pn**	**20 03 00.9**	**+0.9**
YHL				IAML		20 04 19.4	
	comp=E,36nm,0.7s						
YHL				IAML		20 04 22.8	
	comp=N,31nm,0.8s						
ECR	**Eagle Creek**	**4.47**	**263**		**Pn**	**20 03 02.0**	**+0.6**
RDMU	**Red Mountain**	**4.48**	**226**		**Pn**	**20 03 02.3**	**+0.6**
RDMU				IAML		20 04 20.3	
	comp=N,30nm,0.9s						
RDMU				IAML		20 04 21.5	
	comp=E,39nm,0.8s						
SMCO	**Snowmass**	**4.74**	**196**		**Pn**	**20 03 03.7**	**-1.6**
SMCO				IAML		20 04 25.7	
	comp=E,27nm,0.4s						
SMCO				IAML		20 04 33.2	
	comp=E,22nm,1.1s						
DGMT	**Dagmar**	**4.78**	**9**		**Pn**	**20 03 07.0**	**+1.4**
Q24A	**Divide**	**4.79**	**178**		**Pn**	**20 03 06.0**	**+0.1**
Q24A				IAML		20 04 26.8	
	comp=E,27nm,0.3s						
Q24A				IAML		20 04 31.1	
	comp=N,18nm,0.6s						
BOZ	**Bozeman (W)**	**4.87**	**294**		**Pn**	**20 03 08.1**	**+1.2**
BOZ				IAML		20 04 25.4	
	comp=N,20nm,0.7s						
BOZ				IAML		20 04 30.5	
	comp=N,17nm,0.8s						
HWUT	**Hardware Ranch**	**5.08**	**247**	Pn	**Pn**	**20 03 10.4**	**+0.6**
KSCO	**Kaye Shedlock'**	**5.15**	**156**		**Pn**	**20 03 11.6**	**+0.8**
EGMT	**Eagleton**	**5.28**	**326**	Pn	**Pn**	**20 03 12.1**	**-0.3**
DLMT	**Dillon**	**5.45**	**290**	Pn	**Pn**	**20 03 13.4**	**-1.5**
HRY	**Holter Researc**	**5.47**	**305**		**Pn**	**20 03 15.8**	**+0.7**
MCMT	**McKenzie Canyo**	**5.51**	**284**		**Pn**	**20 03 17.5**	**+1.7**
P18A	**Preston Nutter**	**5.53**	**224**		**Pn**	**20 03 17.3**	**+1.2**
JLU	**Jordanelle**	**5.54**	**237**	Pn	**Pn**	**20 03 16.2**	**0.0**
HVU	**Hansel Valley**	**5.83**	**253**		**Pn**	**20 03 19.9**	**-0.3**
BCYI	**Bear Canyon**	**5.86**	**278**		**Pn**	**20 03 22.4**	**+1.8**
PV07	**Paradox Valley**	**5.88**	**206**		**Pn**	**20 03 22.1**	**+1.3**
P17A	**Butcher Ranch,**	**5.90**	**225**	Pn	**Pn**	**20 03 22.4**	**+1.3**
SDCO	**Great Sand Dun**	**6.00**	**181**	Pn	**Pn**	**20 03 23.6**	**+1.0**
S22A	**4UR Ranch, Cre**	**6.11**	**191**	Pn	**Pn**	**20 03 24.8**	**+0.8**
PV13	**Radium Mtn., P**	**6.18**	**207**	Pn	**Pn**	**20 03 26.0**	**+1.0**
BGU	**Big Grassy Mou**	**6.38**	**246**		**Pn**	**20 03 29.2**	**+1.6**
HLID	**Hailey**	**6.60**	**271**		**Pn**	**20 03 33.5**	**+2.7**
DUG	**Dugway, Tooele**	**6.62**	**240**		**Pn**	**20 03 31.9**	**+1.0**
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**20 04 05.4**	**-0.1**
	comp=N,1.5nm,0.3s,baz=231,slow=12,SNR=6.7						
ULM				Pg		20 04 39.2	
	comp=N,1.1nm,0.3s,baz=229,slow=12,SNR=4.6						
ULM				Lg	Lg	20 06 29.8	
	comp=N,0.5nm,0.3s,baz=304,slow=12,SNR=1.5						
	comp=N,3.0nm,0.3s						
BMN	**Battle Mountai**	**9.45**	**254**	Pn	**Pn**	**20 04 11.5**	**+1.7**
KVN	**Kaiserville**	**10.69**	**248**	Pn	**Pn**	**20 04 29.3**	**+2.6**
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**20 04 35.6**	**+2.5**
	comp=N,0.1nm,0.3s,baz=44,slow=11,SNR=4.7						
	comp=N,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**20 06 19.8**	**-1.3**
	comp=N,0.1nm,0.3s,baz=159,slow=13,SNR=5.6						
	comp=N,0.3nm,0.6s						

*SOME **12** 20:08:34.8, 45°.62N×82°.82E, h5^{km}*

*NNC **12** 20:08:37.0±0.6, 45°.75N×82°.66E, h3^{km}±5^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=5.4km s-min=1.9km az=104.0*

*IDC **12** 20:08:38.5±1.1, 45°.83N×81°.89E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML2.7/2, Error ellipse: s-maj=22.5km s-min=9.8km az=115.0*

*MOS **12** 20:08:39.1±1.5, 45°.92N×82°.38E, h17^{km}, mb3.9/1, Error ellipse: s-maj=9.7km s-min=7.1km az=86.4*

*ASRS **12** 20:08:44.9±0.5, 46°N±3°×8°3E±°, h9^{km}, MLh4.4/6, Error ellipse: s-maj=6.6km s-min=4.1km az=164.9, confirmed*

ISC 12 20:08:37.0±0.5, **45°.84N**±0°.03×**82°.86E**±0°.03, **h10^{km}**, **n120**, σ**2^{s}23**/175, **mb3.8**/9, **18C-12D**, **Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.03**	**338**	*i* PG	**Pn**	**20 08 57.3**	**-0.3**
MK31				pmax	pmax		
	comp=Z,50nm,0.3s						
MK31	**Makanchi Array**	**1.03**	**338**	⇓P	**Pn**	**20 08 57.3**	**-0.3**
	comp=Z,50nm,0.3s,baz=248,slow=2.8						
MK31				⇑S	**Sn**	**20 09 12.0**	**-0.2**
	comp=Z,408nm,0.3s,baz=154,slow=30,SNR=37						
MKAR	**Makanchi Array**	**1.03**	**338**	Pg	**Pn**	**20 08 57.4**	**-0.3**
	comp=Z,87nm,0.3s,baz=151,slow=17,SNR=3285						
MKAR				Lg	Lg	20 09 12.4	
	comp=Z,360nm,0.3s,baz=155,slow=30,SNR=25						
MKAR	**Makanchi Array**	**1.03**	**338**	Pg	**Pn**	**20 08 57.5**	**-0.1**
MKAR				Sg	**Sn**	**20 09 12.6**	**+0.4**
MAKZ	**Makanchi**	**1.15**	**328**	PG	**Pn**	**20 08 59.4**	**+0.2**
MAKZ				S	**Sn**	**20 09 15.0**	**+0.1**
MAKZ	**Makanchi**	**1.15**	**328**	⇓P	**Pn**	**20 08 59.4**	**+0.2**
	comp=Z,73nm,0.4s						
MAKZ				⇓S	**Sn**	**20 09 15.8**	**+0.8**
	comp=Z,279nm,0.2s						
MAKZ	**Makanchi**	**1.15**	**328**	Pg	**Pn**	**20 08 59.7**	**+0.5**
MAKZ				Sg	**Sn**	**20 09 14.4**	**-0.5**
ZSN	**Zaisan**	**2.13**	**40**	*i* PN	**Pg**	**20 09 15.3**	**-2.5**
ZSN				*e*		20 09 44.6	
ZSN	**Zaisan**	**2.13**	**40**	*e*P	**Pg**	**20 09 15.2**	**-2.5**
	comp=Z,171nm,0.4s						
ZSN				*e*S	**Sg**	**20 09 45.0**	**-0.3**
	comp=Z,335nm,0.5s						
ZSN	**Zaisan**	**2.13**	**40**	*i* Pg	**Pg**	**20 09 15.3**	**-2.5**
	baz=38						
ZSN				*e*Lg	Lg	20 09 44.7	
	baz=38						
ZSN	**Zaisan**	**2.13**	**40**	Pg	**Pg**	**20 09 15.2**	**-2.5**
	comp=Z,171nm,0.4s						
ZSN				Lg	Lg	20 09 45.0	
	comp=Z,335nm,0.5s						
KAPS	**Kapalarasan**	**2.52**	**259**	*e*P	**Pb**	**20 09 20.4**	**-1.9**
	comp=Z,32nm,0.2s						
KAPS				*e*S	**Sb**	**20 09 54.0**	**+0.6**
	comp=Z,490nm,0.2s						
KAPS	**Kapalarasan**	**2.52**	**259**	Pg	**Pb**	**20 09 20.4**	**-1.9**
	comp=Z,32nm,0.2s						
KAPS				Lg	Lg	20 09 54.0	
	comp=Z,490nm,0.2s						
DJR	**Jarkent**	**2.64**	**236**	*e*P	**Pb**	**20 09 22.2**	**-2.2**
	comp=Z,13nm,0.2s						
DJR				*e*S	**Sb**	**20 09 56.8**	**-0.2**
	comp=Z,388nm,0.2s						
DJR	**Jarkent**	**2.64**	**236**	Pg	**Pb**	**20 09 22.2**	**-2.2**
	comp=Z,13nm,0.2s						
DJR				Lg	Lg	20 09 56.8	
	comp=Z,388nm,0.2s						
TDK	**Taldyqorghan**	**3.24**	**257**	*e*PN	**Pb**	**20 09 35.6**	**+1.0**
TDK	**Taldyqorghan**	**3.24**	**257**	*e*P	**Pb**	**20 09 34.6**	**-0.1**
	comp=Z,54nm,0.3s						
TDK				*e*S	**Sg**	**20 10 17.9**	**-3.2**
	comp=Z,455nm,0.5s						
TDK	**Taldyqorghan**	**3.24**	**257**	*e*Pg	**Pb**	**20 09 35.6**	**+1.0**
	baz=258						
TDK	**Taldyqorghan**	**3.24**	**257**	Pg	**Pb**	**20 09 34.6**	**-0.1**
	comp=Z,54nm,0.3s						
TDK				Lg	Lg	20 10 17.9	
	comp=Z,455nm,0.5s						
PDGK	**Podgornoye**	**3.47**	**225**	PN	**Pn**	**20 09 31.0**	**-0.2**
PDGK	**Podgornoye**	**3.47**	**225**	Pg	**Pb**	**20 09 36.1**	**-2.5**
	comp=Z,6.9nm,0.2s						
PDGK				Lg	Lg	20 10 20.9	
	comp=Z,163nm,0.3s						
PDGK	**Podgornoye**	**3.47**	**225**	⇑Pn	**Pn**	**20 09 31.5**	**+0.3**
	comp=Z,2.6nm,0.3s						
PDGK				⇑Pg	**Pb**	**20 09 38.2**	**-0.4**
	comp=Z,36nm,0.5s						
PDGK				⇑Lg	Lg	20 10 21.8	
	comp=Z,249nm,0.5s						
SHLS	**Shalkode**	**3.62**	**223**	*i* PN	**Pb**	**20 09 37.9**	**-3.2**
SHLS				*e*		20 10 20.6	
SHLS	**Shalkode**	**3.62**	**223**	*e*P	**Pn**	**20 09 35.7**	**+2.5**
	comp=Z,8.8nm,0.2s						
SHLS				*e*S	**Sn**	**20 10 20.0**	**+4.1**
	comp=Z,216nm,0.4s						
SHLS	**Shalkode**	**3.62**	**223**	*i* Pg	**Pb**	**20 09 37.9**	**-3.2**
	baz=221						
SHLS				*e*Sb	**Sb**	**20 10 20.7**	**-4.3**
	baz=221						
SHLS	**Shalkode**	**3.62**	**223**	Pg	**Pn**	**20 09 35.7**	**+2.5**
	comp=Z,8.8nm,0.2s						
SHLS				Lg	Lg	20 10 20.0	
	comp=Z,216nm,0.4s						
KPKS	**Kokpek**	**3.81**	**233**	*e*PN	**Pb**	**20 09 45.5**	**+1.3**
KPKS				*e*		20 10 32.7	
KPKS	**Kokpek**	**3.81**	**233**	*e*P	**Pb**	**20 09 42.5**	**-1.7**
	comp=Z,11nm,0.1s						
KPKS				*e*S	**Sb**	**20 10 31.8**	**+1.4**
	comp=Z,746nm,0.4s						
KPKS	**Kokpek**	**3.81**	**233**	*e*Pg	**Pb**	**20 09 45.5**	**+1.3**
	baz=234						
KPKS				*e*Sb	**Sb**	**20 10 32.7**	**+2.3**
	baz=234						
UZB	**Uzynbulak**	**3.84**	**227**	*i* PN	**Pb**	**20 09 45.8**	**+0.9**
UZB				*e*		20 10 33.2	
UZB	**Uzynbulak**	**3.84**	**227**	*i* Pg	**Pb**	**20 09 45.9**	**+0.9**
	baz=228						
UZB				*e*Sb	**Sb**	**20 10 33.3**	**+1.7**
	baz=228						
WMQ	**Urumqi**	**3.99**	**119**	*e*Pn	**Pn**	**20 09 38.5**	**+0.3**
WMQ				Sn	**Sn**	**20 10 23.9**	**-1.2**
WMQ				Sg	**Sb**	**20 10 36.5**	**+0.8**
WMQ				smax	smax		
	comp=N,69nm,0.5s						
WMQ				smax	smax		
	comp=E,110nm,0.7s						
ZHN	**Zhinishke**	**4.14**	**231**	*e*PN	**Pb**	**20 09 51.1**	**+1.2**
ZHN				*e*		20 10 42.7	
ZHN	**Zhinishke**	**4.14**	**231**	*e*Pg	**Pb**	**20 09 51.2**	**+1.2**
	baz=232						
ZHN				*e*Sb	**Sb**	**20 10 42.8**	**+2.7**
	baz=232						
SATY	**Saty**	**4.23**	**231**	*i* PN	**Pb**	**20 09 52.1**	**+0.7**
SATY				*e*		20 10 44.0	
SATY	**Saty**	**4.23**	**231**	*e*P	**Pb**	**20 09 50.7**	**-0.8**
	comp=E,16nm,0.2s						
SATY				*e*S	**Sb**	**20 10 45.8**	**+3.2**
	comp=E,727nm,0.3s						
SATY	**Saty**	**4.23**	**231**	*i* Pg	**Pb**	**20 09 52.2**	**+0.7**
	baz=231						
SATY				*e*Sb	**Sb**	**20 10 44.0**	**+1.4**
	baz=231						
SATY	**Saty**	**4.23**	**231**	Pg	**Pb**	**20 09 50.7**	**-0.8**
	comp=E,16nm,0.2s						
SATY				Lg	Lg	20 10 45.8	
	comp=E,727nm,0.3s						
CHKK	**Chushkaly**	**4.62**	**247**	*e*P	**Pb**	**20 09 58.1**	**0.0**
	comp=E,8.8nm,0.3s						
CHKK				*e*S	**Sb**	**20 10 58.1**	**+4.4**
	comp=E,214nm,0.3s						
CHKK	**Chushkaly**	**4.62**	**247**	*i* Pg	**Pb**	**20 10 00.1**	**+2.0**
	baz=248						
CHKK				*e*Sb	**Sb**	**20 10 56.6**	**+2.8**
	baz=248						
CHKK	**Chushkaly**	**4.62**	**247**	Pg	**Pb**	**20 09 58.1**	**0.0**
	comp=E,8.8nm,0.3s						
CHKK				Lg	Lg	20 10 58.1	
	comp=E,214nm,0.3s						
KTBS	**Karatobe**	**4.88**	**246**	*e*P	**Pb**	**20 10 02.3**	**-0.3**
	comp=E,4.0nm,0.3s						
KTBS				*e*S	**Sb**	**20 11 05.2**	**+3.8**
	comp=E,177nm,0.5s						
KTBS	**Karatobe**	**4.88**	**246**	Pg	**Pb**	**20 10 02.3**	**-0.3**
	comp=E,4.0nm,0.3s						
KTBS				Lg	Lg	20 11 05.2	
	comp=E,177nm,0.5s						
SEM	**Semipalatinsk**	**4.90**	**340**	*e*P	**Pg**	**20 10 08.7**	**-2.0**
	comp=E,24nm,0.8s						
SEM				*e*S	**Sg**	**20 11 16.1**	**+2.0**
	comp=E,303nm,0.6s						
SEM	**Semipalatinsk**	**4.90**	**340**	*e*Pg	**Pg**	**20 10 06.2**	**-4.5**
	baz=340						
SEM				*e*Sb	**Sb**	**20 11 06.2**	**+4.3**
	baz=340						
SEM	**Semipalatinsk**	**4.90**	**340**	Pg	**Pg**	**20 10 08.7**	**-2.0**
	comp=E,24nm,0.8s						
SEM				Lg	Lg	20 11 16.1	
	comp=E,303nm,0.6s						
MDOK	**Medeo**	**4.94**	**239**	PN	**Pb**	**20 10 05.3**	**+1.7**
MDOK	**Medeo**	**4.94**	**239**	*e*P	**Pb**	**20 10 02.1**	**-1.5**
	comp=E,3.6nm,0.4s						
MDOK				*e*S	**Sb**	**20 11 05.8**	**+2.7**
	comp=E,159nm,0.7s						
MDOK	**Medeo**	**4.94**	**239**	*i* Pg	**Pb**	**20 10 05.7**	**+2.0**
	baz=240						
MDOK				*e*Sb	**Sb**	**20 11 06.2**	**+3.0**
	baz=240						
MDOK				*e*Lg	Lg	20 11 12.8	
	baz=240						
MDOK	**Medeo**	**4.94**	**239**	⇑Pg	**Pb**	**20 10 05.3**	**+1.7**
	comp=E,16nm,0.4s						
MDOK				⇓Lg	Lg	20 11 09.1	
	comp=E,119nm,0.6s						
MDOK	**Medeo**	**4.94**	**239**	Pg	**Pb**	**20 10 02.1**	**-1.5**
	comp=E,3.6nm,0.4s						
MDOK				Lg	Lg	20 11 05.8	
	comp=E,159nm,0.7s						
DGZ	**Jazzator, Alta**	**4.95**	**37**	Pn	Pn	20 09 55.4	+4.0
DGZ				Pg	**Pg**	**20 10 10.3**	**-1.4**
DGZ				Sg	**Sg**	**20 11 11.8**	**-4.0**
KNDC	**Almaty**	**4.96**	**240**	PN	**Pb**	**20 10 05.8**	**+1.9**
KNDC	**Almaty**	**4.96**	**240**	⇑Pg	**Pb**	**20 10 05.8**	**+1.9**
	comp=E,72nm,0.8s						
KNDC				⇓Lg	Lg	20 11 09.6	
	comp=E,330nm,0.8s						
AAA	**Alma-Ata**	**4.99**	**240**	*e*Pg	**Pb**	**20 10 06.9**	**+2.4**
	baz=241						
AAA				*e*Sb	**Sb**	**20 11 07.5**	**+2.8**
	baz=241						
AAA				*e*Lg	Lg	20 11 14.9	
	baz=241						
KUU	**Kurty**	**5.02**	**250**	*e*PN	**Pn**	**20 09 52.6**	**+0.2**
KUU				*e*		20 10 08.0	
KUU				*e*		20 11 15.9	
KUU	**Kurty**	**5.02**	**250**	*e*P	**Pb**	**20 10 05.3**	**+0.3**
	comp=E,3.3nm,0.4s						
KUU				*e*S	**Sb**	**20 11 10.9**	**+5.5**
	comp=E,228nm,0.5s						
KUU	**Kurty**	**5.02**	**250**	*e*Pn	**Pn**	**20 09 52.6**	**+0.2**
	baz=250						
KUU				*e*Pg	**Pb**	**20 10 08.1**	**+3.1**
	baz=250						
KUU				*e*Sb	**Sb**	**20 11 08.7**	**+3.3**
	baz=250						
KUU				*e*Lg	Lg	20 11 15.9	
	baz=250						
KUU	**Kurty**	**5.02**	**250**	Pg	**Pb**	**20 10 05.3**	**+0.3**
	comp=E,3.3nm,0.4s						
KUU				Lg	Lg	20 11 10.9	
	comp=E,228nm,0.5s						
TNSS	**Tian-Shan**	**5.07**	**239**	*e*PN	**Pn**	**20 09 53.8**	**+0.4**
TNSS				*e*		20 10 08.4	
TNSS	**Tian-Shan**	**5.07**	**239**	*e*P	**Pb**	**20 10 06.6**	**+0.5**
	comp=E,3.3nm,0.2s						
TNSS				*e*S	**Sb**	**20 11 12.6**	**+5.4**
	comp=E,47nm,0.3s						
TNSS	**Tian-Shan**	**5.07**	**239**	*e*Pn	**Pn**	**20 09 53.8**	**+0.4**
	baz=239						
TNSS				*e*Pg	**Pb**	**20 10 08.4**	**+2.4**
	baz=239						
TNSS	**Tian-Shan**	**5.07**	**239**	Pg	**Pb**	**20 10 06.6**	**+0.5**
	comp=E,3.3nm,0.2s						
TNSS				Lg	Lg	20 11 12.6	
	comp=E,47nm,0.3s						
UKR	**Ust'-Kan**	**5.26**	**13**	Pn	Pn	20 09 59.4	+3.7
UKR				Pg	**Pg**	**20 10 13.9**	**-3.8**
UKR				Sg	**Sg**	**20 11 22.6**	**-3.3**
MTBS	**Maitube**	**5.33**	**242**	*e*P	**Pb**	**20 10 09.5**	**-0.8**
	comp=E,5.2nm,0.3s						
MTBS				*e*S	**Sb**	**20 11 17.5**	**+3.1**
	comp=E,241nm,0.8s						
MTBS	**Maitube**	**5.33**	**242**	Pg	**Pb**	**20 10 09.5**	**-0.8**
	comp=E,5.2nm,0.3s						
MTBS				Lg	Lg	20 11 17.5	
	comp=E,241nm,0.8s						
CHBI	**Chibit, Altay**	**5.46**	**33**	Pn	**Pn**	**20 10 01.3**	**+2.9**
CHBI				Pg	**Pg**	**20 10 21.2**	**-0.2**
CHBI				Sg	**Sg**	**20 11 30.2**	**-1.8**
AKAR	**Aktash**	**5.51**	**34**	Pn	Pn	20 10 02.7	+3.6
AKAR				Sg	**Sg**	**20 11 31.7**	**-1.9**
KRBS	**Karabastau**	**5.54**	**250**	*e*P	**Pb**	**20 10 14.7**	**+0.8**
	comp=E,4.5nm,0.5s						
KRBS				*e*S	**Sb**	**20 11 26.9**	**+6.5**
	comp=E,38nm,0.3s						
KRBS	**Karabastau**	**5.54**	**250**	Pg	**Pb**	**20 10 14.7**	**+0.8**
	comp=E,4.5nm,0.5s						
KRBS				Lg	Lg	20 11 26.9	
	comp=E,38nm,0.3s						
KURBB	**Kurchatov Arra**	**5.59**	**330**	Pn	**Pn**	**20 09 59.2**	**-1.0**
	comp=E,0.4nm,0.3s,baz=327,slow=16,SNR=49						
KURBB				Lg	Lg	20 11 33.0	
	comp=E,6.5nm,0.3s,baz=267,slow=4.9,SNR=5.1						
	comp=E,0.6nm,0.3s						
CUR	**Chagan-Uzun**	**5.64**	**39**	Pn	**Pn**	**20 10 03.9**	**+2.9**
CUR				Pg	**Pg**	**20 10 24.0**	**-1.0**
CUR				Sg	**Sg**	**20 11 36.9**	**-1.1**
KURK	**Kurchatov**	**5.64**	**331**	*i* PN	**Pn**	**20 10 01.4**	**+0.6**
KURK	**Kurchatov**	**5.64**	**331**	⇑Pn	**Pn**	**20 10 01.8**	**+1.0**
	comp=E,1.0nm,0.3s						
KURK				⇑Sn	**Sn**	**20 11 07.5**	**+1.9**
	comp=E,17nm,0.5s						
KURK				⇑Lg	Lg	20 11 36.4	
	comp=E,140nm,0.6s						
KURK	**Kurchatov**	**5.64**	**331**	Pn	**Pn**	**20 10 03.3**	**+2.5**
KURK				Pg	**Pg**	**20 10 20.6**	**-4.4**
KURK				Sg	**Sg**	**20 11 34.6**	**-3.4**
KST	**Kastek**	**5.67**	**243**	*e*P	**Pb**	**20 10 18.0**	**+2.0**
	comp=E,5.1nm,0.4s						
KST				*e*S	**Sg**	**20 11 32.1**	**-6.8**
	comp=E,73nm,0.5s						
KST	**Kastek**	**5.67**	**243**	Pg	**Pb**	**20 10 18.0**	**+2.0**
	comp=E,5.1nm,0.4s						
KST				Lg	Lg	20 11 32.1	
	comp=E,73nm,0.5s						
ULGR	**Ulagan, Altay**	**5.88**	**34**	Pn	Pn	20 10 08.7	+4.4
ULGR				Pg	**Pg**	**20 10 26.7**	**-2.9**
ULGR				Sg	**Sg**	**20 11 43.3**	**-2.3**
TKM2	**Tokmak 2**	**5.96**	**243**	*i* PN	**Pn**	**20 10 06.4**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TKM2	**Tokmak 2**	**5.96**	**243**	⇓Pn	**Pn**	**20 10 05.4**	**-0.1**
	comp=Z,0.9nm,0.4s						
TKM2				⇑Pg	**Pb**	**20 10 24.2**	**+3.1**
	comp=Z,7.2nm,0.5s						
TKM2				⇓Lg	Lg	20 11 39.8	
	comp=Z,34nm,0.5s						
BTLS	**Baital**	**6.25**	**266**	*i* PN	**Pn**	**20 10 09.4**	**+0.2**
BTLS	**Baital**	**6.25**	**266**	*i* Pn	**Pn**	**20 10 09.4**	**+0.2**
	baz=266						
BTLS				*e*Pg	Pg	20 10 31.6	-5.0
	baz=266						
SGDS	**Sogindy**	**6.33**	**251**	*e*PN	**Pn**	**20 10 09.4**	**-1.0**
SGDS				*e*		20 10 29.4	
SGDS	**Sogindy**	**6.33**	**251**	*e*Pn	**Pn**	**20 10 09.4**	**-1.0**
	baz=251						
SGDS				*e*Pg	**Pb**	**20 10 29.4**	**+2.1**
	baz=251						
GALT	**Gorno-Altaysk,**	**6.46**	**17**	Pn	**Pn**	**20 10 15.5**	**+3.5**
GALT				Pg	**Pg**	**20 10 36.0**	**-4.6**
GALT				Sg	**Sg**	**20 12 00.3**	**-3.8**
CHMS	**Chumysh**	**6.46**	**247**	⇓Pg	**Pb**	**20 10 32.4**	**+2.9**
	comp=Z,6.3nm,0.6s						
CHMS				⇑Lg	Lg	20 11 57.9	
	comp=Z,45nm,0.8s						
ARTR	**Artybash**	**6.64**	**24**	Pn	**Pn**	**20 10 17.6**	**+3.0**
ARTR				Pg	**Pg**	**20 10 40.9**	**-3.2**
ARTR				Sg	**Sg**	**20 12 06.2**	**-3.9**
AAK	**Ala-Archa**	**6.80**	**245**	Pn	**Pn**	**20 10 12.4**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=255,slow=5.6,SNR=1.5						
AAK				Lg	Lg	20 12 01.4	
	comp=Z,1.7nm,0.3s,baz=267,slow=21,SNR=1.5						
OTUK	**Ortayu**	**7.58**	**292**	P	**Pn**	**20 10 27.3**	**-0.2**
OTUK	**Ortayu**	**7.58**	**292**	⇓Pn	**Pn**	**20 10 27.4**	**-0.2**
	comp=Z,14nm,0.6s						
OTUK				⇑Sn	**Sn**	**20 11 51.6**	**-1.8**
	comp=Z,12nm,0.5s						
OTUK				⇑Lg	Lg	20 12 35.9	
	comp=Z,34nm,0.6s						
TASR	**Tashtagol**	**7.67**	**24**	Pn	**Pn**	**20 10 30.8**	**+2.2**
TASR				S	**Sn**	**20 11 54.7**	**-0.8**
TASR				Sg	**Sg**	**20 12 40.5**	**-2.4**
ELT	**Eltsovka**	**7.75**	**15**	Pn	**Pn**	**20 10 32.1**	**+2.3**
ELT				Sg	**Sg**	**20 12 44.4**	**-1.1**
BRZS	**Berezniki**	**8.00**	**305**	*e*Pg	Pg	20 11 02.6	-7.3
	baz=305						
ZAA0	**Zalesovo Array**	**8.22**	**8**	⇑Pn	**Pn**	**20 10 37.2**	**+1.0**
	comp=Z,0.8nm,0.9s						
ZAA0				⇑Lg	Lg	20 13 02.1	
	comp=Z,6.2nm,0.8s						
ZALV	**Zalesovo Beam**	**8.22**	**8**	Pn	**Pn**	**20 10 37.4**	**+1.2**

	comp=Z,0.9nm,0.3s,baz=186,slow=12,SNR=14						
ZALV				Sn	Sn	20 12 10.4	+1.4
	comp=Z,1.5nm,0.3s,baz=189,slow=26,SNR=2.7						
ZALV				Lg	Lg	20 12 56.4	
	comp=Z,1.6nm,0.3s,baz=194,slow=26,SNR=7.2						
ZALV	Zalesovo Beam	8.22	8	*i* P	Pn	20 10 37.4	+1.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KK31	Karatay Array	9.24	257	P	Pn	20 10 48.2	-2.1
KK31	Karatay Array	9.24	257	⇓Pn	Pn	20 10 49.7	-0.5
	comp=Z,0.4nm,0.3s,baz=58,slow=13,SNR=11						
KK31				⇑Lg	Lg	20 13 26.5	
	comp=Z,9.8nm,0.6s,baz=77,slow=27,SNR=7.6						
IUG	Iuzhnay	9.95	253	*e*P	Pn	20 10 59.1	-1.0
IUG	Iuzhnay	9.95	253	*e*Pn	Pn	20 10 59.2	-0.9
	baz=253						
IUG				*e*Lg	Lg	20 13 53.0	
	baz=253						
BRVK	Borovoye	10.91	316	*i* P	Pn	20 11 12.9	-0.1
BRVK	Borovoye	10.91	316	⇑Pn	Pn	20 11 13.0	0.0
	comp=Z,2.5nm,0.6s						
BRVK				⇓Sn	Sn	20 13 13.1	-1.9
	comp=Z,3.3nm,0.5s						
BRVK				⇑Lg	Lg	20 14 23.4	
	comp=Z,21nm,1.0s						
GTA	Gaotai	14.03	111	*e*P	Pn	20 12 04.6	+8.8
GTA				pP	P	20 12 09.0	+5.2
GTA				sP		20 12 11.4	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AB31	Akbulak array	15.83	291	P	Pn	20 12 17.1	-2.7
AB31	Akbulak array	15.83	291	P	Pn	20 12 17.1	-2.7
	comp=Z,5.0nm,0.7s,baz=88,slow=12,SNR=62						
SONM	Songino Array	16.22	74	Pn	P	20 12 28.8	+0.7
	comp=Z,0.1nm,0.3s,baz=276,slow=14,SNR=9.9						
SONM				Sn	S	20 15 36.5	-1.5
	baz=128,slow=47,SNR=1.5						
SONM				Lg	Lg	20 17 12.5	
	comp=Z,0.1nm,0.3s,baz=265,slow=31,SNR=6.3						
ULN	Ulaanbaatar	16.66	74	*i* P	Pn	20 12 29.1	-1.5
AKTO	Aktyubinsk	17.17	295	Pn	Pn	20 12 35.1	-1.8
	comp=Z,0.5nm,0.3s,baz=109,slow=14,SNR=10						
AKTO	Aktyubinsk	17.17	295	P	Pn	20 12 36.8	-0.1
AKTO	Aktyubinsk	17.17	295	⇓P	Pn	20 12 36.8	-0.1
	comp=Z,3.5nm,0.7s						
NRIK	Noril'sk	23.69	4	*i* P	P	20 13 48.7	+0.3
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FINES	FINESS Array B	35.80	317	P	P	20 15 36.1	+0.1
	comp=Z,1.1nm,0.8s,baz=54,slow=20,SNR=1.7						
	comp=Z,1.1nm,0.8s						
ARCES	ARCESS Array B	36.68	330	P	P	20 15 44.2	+0.7
	comp=Z,3.7nm,1.0s,baz=83,slow=7.4,SNR=1.7						
	comp=Z,3.7nm,1.0s						
NB2	NORSAR Subarra	42.97	317	P	P	20 16 36.0	+0.1
	comp=Z,0.9nm,0.6s,baz=78,slow=7.9						
NOA	NORSAR Array B	42.97	317	P	P	20 16 35.7	-0.1
	comp=Z,0.5nm,0.4s,baz=81,slow=8.2,SNR=1.4						
	comp=Z,0.5nm,0.4s						
INK	Inuvik	62.97	14	P	P	20 19 09.4	+6.2
	comp=Z,1.6nm,0.8s,baz=2.8,slow=5.4,SNR=3.7						
	comp=Z,1.6nm,0.8s						
ILAR	Eielson Array	63.10	22	P	P	20 19 07.7	+3.5
	comp=Z,0.4nm,0.6s,baz=323,slow=5.8,SNR=5.2						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	71.12	8	P	P	20 19 57.9	+2.9
	comp=Z,0.2nm,0.5s,baz=339,slow=6.4,SNR=3.1						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	83.25	134	P	P	20 21 09.8	+6.1
	comp=Z,0.4nm,0.9s,baz=83,slow=7.8,SNR=6.0						
	comp=Z,0.4nm,0.9s						
DBIC	Dimbokro	83.67	273	P	P	20 21 06.5	+0.4
	comp=Z,14nm,1.2s,baz=133,slow=4.8,SNR=3.0						

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*IDC **12** 20:20:55.6±4.4, 17°.66S×173°.73W, h0^{km}, mb3.8/2, mbtmp3.8/3, ML3.4/1, Error ellipse: s-maj=197.6km s-min=30.4km az=139.0*

ISC 12 20:21:00.3±3.0, **17°.4S**±0°.5×**173°.7W**±0°.7, **h39^{km}, n6, σ0ˢ.58**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.97	28	Pn	Pn	20 21 59.4	+0.7
	2.1nm,0.3s,baz=41,slow=20,SNR=1.8						
AFI				Sn	Sn	20 22 43.5	-0.6
	6.7nm,0.3s,baz=172,slow=22,SNR=2.2						
	40nm,1.0s						
WRA	Warramunga Arr	49.11	258	P	P	20 29 44.4	+0.1
	0.7nm,0.7s,baz=96,slow=6.8,SNR=5.7						
	0.7nm,0.7s						
ASAR	Alice Springs	49.22	254	P	P	20 29 45.2	+0.1
	0.9nm,0.6s,baz=96,slow=7.4,SNR=18						
	0.9nm,0.6s						
BRTR	Keskin Array B	147.50	319	PKPbc	PKiKP	20 40 42.8	+0.1
	1.2nm,0.8s,baz=106,slow=5.3,SNR=6.9						
MLR	Muntele Rosu	147.56	334	PKPbc	PKPab	20 40 42.6	-0.1
	1.7nm,0.9s,baz=299,slow=12,SNR=3.2						
GERES	GERESS Array B	148.09	351	PKPbc	PKiKP	20 40 42.9	-0.7
	0.7nm,0.8s,baz=279,slow=2.6,SNR=5.8						

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*IDC **12** 20:22:51.1±0.9, 3°.89N×92°.43E, h0^{km}, mb4.1/13, mbtmp4.1/16, ML4.2/3, MS3.8/12, Error ellipse: s-maj=32.3km s-min=15.5km az=47.0*

*NEIC **12** 20:22:52.0±1.2, 3°.8N±0°.1×92°.65E±0°.03, h10^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=18.3km s-min=4.5km az=192.0*

*GCMT **12** 20:22:54.0±0.4, 3°.96N±0°.02×92°.54E±0°.02, h12^{km}, MW4.8/85, Moment Tensor Solution. s6,c7; s85,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.06; $M_{\theta\theta}$-0.73±.05; $M_{\phi\phi}$0.90±.06; $M_{r\theta}$-0.37±.16; $M_{\theta\phi}$-0.96±.05; $M_{\phi r}$-1.25±.16; Best double couple: $M_0$1.81900×10^{16} NP1:ϕ_s111.00000°,δ44.00000°,λ-175.00000°. NP2: ϕ_s17.00000°,δ87.00000°,λ-46.00000°. Principal axes: T 1.8780, Plg28.0000°, Azm74.0000°; N -0.1170, Plg44.0000°, Azm195.0000°; P -1.7600, Plg33.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **12** 20:22:55.5±0.9, 4°N±4°×9°3E±1°0, h10^{km}, M4.7/21, mB5.0/7, mb4.7/21, MLv5.1/8, Mw(mB)4.3/7*

ISC 12 20:22:52.5±0.6, **3°.87N**±0°.07×**92°.56E**±0°.06, **h10^{km}, n116, σ1ˢ.90**/110, **mb4.6**/50, **MS3.9**/19, **3C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	3.17	59	P	Pb	20 23 45.3	-3.7
SNSI	Sinabang, Aceh	4.03	111	P	Pn	20 23 56.2	+1.9
LHMI	Lhok Sumawe	4.58	73	Pn	Pn	20 23 59.9	-1.9
LHMI	Lhok Sumawe	4.58	73	P	Pn	20 24 03.0	+1.2
KCSI	Kotacane, Aceh	5.21	94	P	Pn	20 24 12.4	+1.8
	2.1nm2µm195nm,0.8s						
GSI	Gunungsitoli	5.62	117	Pn	Pn	20 24 12.0	-4.2
GSI	Gunungsitoli	5.62	117	P	Pn	20 24 17.1	+0.9
	0.8nm116nm,0.7s						
TSI	Tuntungan	6.01	93	P	Pn	20 24 24.2	+2.7
	1.4nm3µm209nm,0.6s						
PSI	Prapat	6.44	99	Pn	Pn	20 24 29.1	+1.6
	4.3nm,0.3s,baz=306,slow=9.8,SNR=20						
PSI				Sn	Sn	20 25 38.9	-2.5
	4.4nm,0.3s,baz=177,slow=13,SNR=5.0						
	12nm,0.3s						
RPSI	Rantau Prapat	6.46	100		Pn	20 24 29.1	+1.4
RPSI					Sn	20 25 38.9	-2.8
MNSI	Mandailing Nat	7.65	113	P	Pn	20 24 46.2	+2.1
	0.5nm2µm64nm,0.8s						
KULM	Kulim	8.19	80	Pn	Pn	20 24 50.3	-1.2
SISI	Saibi	8.32	128	P	Pn	20 24 53.9	+0.6
	50nm,1.1s						
SRIT	Nakonsritamara	8.43	56		Pn	20 24 52.7	-2.1
BKNI	Bangkinang	9.18	112	Pn	Pn	20 25 02.3	-2.7
BKNI	Bangkinang	9.18	112	P	Pn	20 25 06.8	+1.8
	66nm,0.9s						
DGPR	DIGLIPUR	9.26	2	*e*P	Pn	20 25 05.5	-0.6
KRJI	Kerinci	10.69	123	P	Pn	20 25 28.7	+2.8
	184nm,0.8s						
MYKOM	Kota Tinggi	11.47	100		Pn	20 25 33.1	-3.3
PALK	Pallekele	12.27	287	Pn	Pn	20 25 46.5	-1.0
	1.3nm,0.3s,baz=217,slow=12,SNR=9.8						
PALK				Sn	Sn	20 27 52.6	-12
	3.6nm,0.3s,baz=71,slow=3.2,SNR=9.6						
PALK				LR	LR	20 29 42.2	
	comp=Z,160nm,19.8s,baz=209,slow=34						
	4.6nm,0.4s						
PALK	Pallekele	12.27	287	Pn	Pn	20 25 43.6	-3.9
CM31	Chiang Mai Arr	15.79	23	P	Pn	20 26 32.6	-2.4
CMAR	Chiang Mai Arr	15.79	23	Pn	Pn	20 26 33.5	-1.5
	0.5nm,0.3s,baz=221,slow=14,SNR=18						
CMAR				LR	LR	20 32 15.0	
	comp=Z,216nm,21.6s,baz=210,slow=36						
	3.0nm,1.1s						
CMAR	Chiang Mai Arr	15.79	23	P	Pn	20 26 32.0	-3.0
BWNR	Bhubaneshwar	17.60	339	*e*P	P	20 27 00.3	+1.3
RAGD	RAYAGADA	17.68	331	*e*P	P	20 27 00.2	+0.3
KSM	Kuching	17.89	97	P	P	20 27 00.6	-1.7
LEM	Lembang	18.41	125	LR	LR	20 35 25.7	
	comp=Z,293nm,18.2s,baz=298,slow=41						
HYBB	Hyderabad (bro	19.23	315	*e*P	P	20 27 17.7	+0.6
STKI	Sintang	19.28	101	P	Pn	20 27 18.6	0.0
	1µm11nm,1.4s						
AZL	Aizawl	19.75	0	*e*P	P	20 27 22.4	-0.4
AZL				IAmb	IAmb	20 27 24.8	
	comp=Z,15nm,0.8s						
BLSP	Bilaspur	20.78	332	*e*P	P	20 27 34.0	+0.2
BOK	Bokaro	20.83	343	*e*P	P	20 27 35.8	+1.4
BOK				IAmb	IAmb	20 27 38.9	
	comp=Z,15nm,0.8s						
SHL	Shillong	21.58	358	*e*P	P	20 27 41.6	-1.0
SHL				IAmb	IAmb	20 27 45.7	
	comp=Z,28nm,0.7s						
KOHI	KOHIMA	21.78	4	*e*P	P	20 27 43.6	-1.1
MOKO	MOKOCHONG	22.40	5	*e*P	P	20 27 50.1	-1.3
PWJI	Pagerwojo	22.54	122	P	P	20 27 55.1	+2.2
	comp=Z,44nm,1.4s						
AKL	Akola	22.56	319	*e*P	P	20 27 53.7	+0.7
QIZ	Qiongzhong	22.63	47	P	P	20 27 52.2	-1.6
QIZ				S	S	20 32 02.0	+0.1
QIZ				LR	LR		
	comp=N,1µm,15.2s						
QIZ				LR	LR		
	comp=E,440nm,12.3s						
QIZ				LR	LR		
	comp=Z,350nm,16.1s						
MTKI	Muara Teweh, K	22.83	102	P	P	20 27 58.9	+2.9
	comp=Z,14nm,0.5s						
H08S2	Diego Garcia H	23.06	240	T	T	20 53 41.9	
	baz=60,slow=75,SNR=13						
H08S3	Diego Garcia H	23.06	240	T	T	20 53 29.7	
	baz=60,slow=75,SNR=30						
H08S1	Diego Carcia H	23.07	240	T	T	20 53 36.1	
	baz=60,slow=75,SNR=14						
ITAN	ITANAGAR	23.17	3	*e*P	P	20 27 58.8	-0.6
ITAN				IAmb	IAmb	20 28 02.9	
	comp=Z,26nm,1.1s						
KMI	Kunming	23.29	24	⇓P	P	20 28 05.5	+4.7
KMI				sP	pwP	20 28 11.4	+3.2
KMI				PP	PnPn	20 28 33.7	+7.0
KMI				S	S	20 32 14.3	+0.7
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				LR	LR		
	comp=N,380nm,14.2s						
KMI				LR	LR		
	comp=E,360nm,13.1s						
KMI				LR	LR		
	comp=Z,310nm,15.6s						
ODAN	Odare	23.39	348	*e*P	P	20 28 01.5	-0.3
	comp=Z,80nm,1.4s						
BBKI	Banjar Baru	23.43	108	P	P	20 28 03.3	+1.2
	comp=Z,25nm,1.2s						
GTK	Tadong	23.62	351	*e*P	P	20 28 03.9	-0.2
GTK				IAmb	IAmb	20 28 15.1	
	comp=Z,13nm,0.7s						
RAMN	Ramite	23.65	347	*e*P	P	20 28 04.9	+0.5
	comp=Z,16nm,0.9s						
PZH	PanZhiHua	24.16	20	P	P	20 28 09.7	+0.5
PZH				pP	pwP	20 28 13.7	-2.9
PZH				sP	sP	20 28 18.7	+7.0
PZH				PP	PnPn	20 28 43.8	+5.2
PZH				S	S	20 32 27.3	-0.1
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,80nm,3.9s						
PZH				LR	LR		
	comp=N,760nm,20.0s						
PZH				LR	LR		
	comp=E,980nm,19.8s						
PZH				LR	LR		
	comp=Z,560nm,18.0s						
JIRN	Jiri	24.43	346	*e*P	P	20 28 11.8	-0.1
PKI	Pulchoki	24.54	345	*e*P	P	20 28 12.9	+0.1
	comp=Z,88nm,1.2s						
DMN	Daman	24.66	344	*e*P	P	20 28 14.0	+0.2
	comp=Z,37nm,1.0s						
KKN	Kakani	24.78	344	*e*P	P	20 28 15.2	+0.3
	comp=Z,71nm,1.1s						
GKN	Gorkha	25.16	343	*e*P	P	20 28 18.7	+0.5
	comp=Z,124nm,1.2s						
KOLN	Koldanda	25.26	341	*e*P	P	20 28 20.0	+0.8
	comp=Z,70nm,1.0s						
LSA	Lhasa	25.73	357	P	P	20 28 22.5	-1.2
LSA				IAmb	IAmb	20 28 25.8	
	comp=Z,7.9nm,0.8s						
DANN	Dangsing	25.75	342	*e*P	P	20 28 24.2	+0.5
	comp=Z,43nm,0.9s						
PYUN	Piuthan	25.76	340	*e*P	P	20 28 24.5	+0.7
	comp=Z,98nm,1.2s						
MYLDM	Lahad Datu	25.89	86	P	P	20 28 21.4	-3.5
MPSI	Mapaga	27.54	97	P	P	20 28 41.7	+1.9
	comp=Z,15nm,0.8s						
TOLI2	Tolitoli	28.33	95	P	P	20 28 45.4	-1.4
TOLI2				IAmb	IAmb	20 28 58.6	
	comp=Z,18nm,1.3s						
KAPI	Kappang	28.56	108	LR	LR	20 41 02.1	
	comp=Z,267nm,18.6s,baz=289,slow=38						
SMLA	Simla	30.75	334	*e*P	P	20 29 08.8	+0.8
SMLA				IAmb	IAmb	20 29 11.2	
	comp=Z,5.6nm,0.8s						
GOMU	GeErMu	32.24	3	P	P	20 29 29.6	+8.1
GOMU				pP	pwP	20 29 33.0	+4.1
GOMU				sP	sP	20 29 34.4	+10
GOMU				S	S	20 35 38.7	+64
GOMU				sS	ScP	20 35 57.0	+2.9
DAV	Davao City (W)	33.02	83	LR	LR	20 44 24.4	
	comp=Z,171nm,20.1s,baz=261,slow=39						
WHN	Wuhan	33.57	35	⇑P	P	20 29 43.2	+10
XAN	Xi'an	33.66	25	⇑P	P	20 29 36.8	+3.1
XAN				pP	pwP	20 29 43.0	+1.9
XAN				sP	sP	20 29 47.2	+11
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,75nm,6.7s						
XAN				LR	LR		
	comp=N,540nm,15.5s						
XAN				LR	LR		
	comp=E,630nm,15.9s						
XAN				LR	LR		
	comp=Z,410nm,18.1s						
LZH	Lanzhou	33.71	17	*e*P	P	20 29 45.5	+11
LZH				sP	pwP	20 29 54.0	+12
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
LZH				LR	LR		
	comp=N,420nm,13.0s						
LZH				LR	LR		
	comp=E,390nm,13.0s						
LZH				LR	LR		
	comp=Z,330nm,13.5s						
GTA	Gaotai	35.99	10	⇓P	P	20 29 54.4	+0.6
GTA				sP	pwP	20 30 04.4	+3.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,55nm,6.4s						
GTA				LR	LR		
	comp=N,86nm,13.5s						
GTA				LR	LR		
	comp=E,140nm,14.3s						
GTA				LR	LR		
	comp=Z,110nm,12.7s						
NJ2	Nanjing	37.35	38	*e*P	P	20 30 09.8	+4.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WSAR	Wadi Sarin	38.02	304	LR	LR	20 45 49.0	
	comp=Z,91nm,18.2s,baz=127,slow=36						
KSH	Kashi	38.54	339	P	P	20 30 14.1	-1.4
KSH				sP	pwP	20 30 23.8	+0.9
KSH				PcP	PcP	20 32 28.6	+0.4
KSH				S	S	20 36 10.3	-1.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH				LR	LR		
	comp=N,150nm,17.5s						
KSH				LR	LR		
	comp=E,180nm,19.2s						
KSH				LR	LR		
	comp=Z,240nm,19.6s						
HNS	HongShan	39.06	28	⇑P	P	20 30 30.7	+11
HNS				S	S	20 36 38.1	+19
HNS				pmax	pmax		
	comp=Z,13nm,1.2s						
HNS				LR	LR		
	comp=N,200nm,14.3s						
HNS				LR	LR		
	comp=E,300nm,16.3s						
HNS				LR	LR		
	comp=Z,320nm,19.4s						
WMQ	Urumqi	40.02	355	*e*P	P	20 30 29.2	+1.5
WMQ				LR	LR		
	comp=Z,93nm,20.3s						
GAR	Garm	40.39	333	P	P	20 30 30.1	-0.8
GAR				IAmb	IAmb	20 30 31.6	
	comp=Z,18nm,1.0s						
HHC	Hu-ho-hao-te	40.60	22	*e*P	P	20 30 32.9	+0.3
HHC				pmax	pmax		
	comp=Z,41nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=N,550nm,13.1s						
HHC				LR	LR		
	comp=E,490nm,12.2s						
HHC				LR	LR		
	comp=Z,410nm,12.9s						
CHGR	Chuyangaron	40.66	331	P	P	20 30 31.8	-1.3
CHGR				IAmb	IAmb	20 30 33.4	
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	41.82	340	P	P	20 30 42.9	+0.3
	comp=Z,0.7nm,0.4s,baz=170,slow=8.3,SNR=5.7						
AAK				LR	LR	20 50 21.5	
	comp=Z,162nm,20.0s,baz=167,slow=40						
	comp=Z,0.7nm,0.4s						
AAK	Ala-Archa	41.82	340	P	P	20 30 41.9	-0.8
TAS	Tashkent	42.74	334	P	P	20 30 50.1	+0.1
H01W3	Cape Leeuwin H	43.56	154	T	T	21 17 59.6	
	baz=330,slow=76,SNR=7.1						
H01W2	Cape Leeuwin H	43.58	154	T	T	21 17 58.8	
	baz=330,slow=76,SNR=5.2						
H01W1	Cape Leeuwin H	43.58	154	T	T	21 18 13.0	
	baz=330,slow=76,SNR=5.6						
MK31	Makanchi Array	43.68	350	P	P	20 30 57.4	-0.1
MKAR	Makanchi Array	43.68	350	P	P	20 30 57.6	+0.1
	comp=Z,2.8nm,0.8s,baz=170,slow=8.7,SNR=24						
MKAR				LR	LR	20 52 54.8	
	comp=Z,79nm,18.3s,baz=144,slow=41						
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	43.68	350	P	P	20 30 56.5	-1.0
KK31	Karatay Array	43.70	337	P	P	20 30 57.5	-0.2
KK31				IAmb	IAmb	20 30 58.8	
	comp=Z,5.2nm,0.9s						
KKAR	Karatay Array	43.70	337	P	P	20 30 57.1	-0.7
KKAR				IAmb	IAmb	20 30 58.8	
	comp=Z,5.2nm,0.9s						
KKAR	Karatay Array	43.70	337	P	P	20 30 57.4	-0.4
MAKZ	Makanchi	43.75	349	P	P	20 30 58.0	-0.1
SONM	Songino Array	45.39	13	P	P	20 31 11.6	+0.3
	comp=Z,1.4nm,0.7s,baz=198,slow=8.5,SNR=12						
SONM				LR	LR	20 52 05.8	
	comp=Z,122nm,19.1s,baz=212,slow=39						
	comp=Z,1.4nm,0.7s						
SONM	Songino Array	45.39	13	P	P	20 31 10.7	-0.6
SONM				IAmb	IAmb	20 31 23.1	
	comp=Z,3.3nm,1.0s						
GEYT	Alibeck	46.23	322	LR	LR	20 51 15.1	
	comp=Z,139nm,20.9s,baz=140,slow=37						
WRA	Warramunga Arr	47.37	122	P	P	20 31 27.9	+0.7
	comp=Z,0.7nm,0.7s,baz=298,slow=9.0,SNR=5.7						
	comp=Z,0.7nm,0.7s						
WRAB	Tennant Creek	47.38	122	P	P	20 31 25.0	-2.3
KURBB	Kurchatov Arra	48.07	348	P	P	20 31 32.2	+0.1
	comp=Z,1.9nm,0.7s,baz=170,slow=7.2,SNR=22						
KURBB				LR	LR	20 55 24.3	
	comp=Z,95nm,19.4s,baz=132,slow=41						
	comp=Z,1.9nm,0.7s						
KURK	Kurchatov	48.14	348	P	P	20 31 31.7	-0.9
KURK				IAmb	IAmb	20 31 44.3	
	comp=Z,10nm,1.5s						
ASAR	Alice Springs	48.70	126	P	P	20 31 38.7	+1.2
	comp=Z,0.3nm,0.6s,baz=300,slow=8.0,SNR=2.1						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	48.70	126	P	P	20 31 36.8	-0.7
ZAA0	Zalesovo Array	50.32	354	P	P	20 31 49.3	0.0
ZAA0				IAmb	IAmb	20 31 50.2	
	comp=Z,5.7nm,0.6s						
ZALV	Zalesovo Beam	50.32	354	P	P	20 31 49.7	+0.4
	comp=Z,5.0nm,0.5s,baz=175,slow=7.4,SNR=25						
ZALV				LR	LR	20 55 00.2	
	comp=Z,83nm,20.9s,baz=172,slow=38						
	comp=Z,5.0nm,0.5s						
ZALV	Zalesovo Beam	50.32	354	P	P	20 31 48.9	-0.3
JGF	Kuroka	51.99	47	P	P	20 32 02.0	-0.2
BRVK	Borovoye	52.36	343	P	P	20 32 04.1	-0.5
BRVK				IAmb	IAmb	20 32 15.4	
	comp=Z,7.7nm,1.5s						
ABKAR	Akbulak array	53.04	334	P	P	20 32 09.5	-0.2
ABKAR				IAmb	IAmb	20 32 20.9	
	comp=Z,11nm,1.4s						
ABKAR	Akbulak array	53.04	334	P	P	20 32 09.1	-0.6
STKA	Stephens Creek	58.58	131	P	P	20 32 51.2	+1.5
	comp=Z,3.1nm,0.7s,baz=321,slow=7.0,SNR=8.3						
	comp=Z,3.1nm,0.7s						
BRTR	Keskin Array B	63.90	313	P	P	20 33 25.1	-0.8
	comp=Z,1.1nm,0.9s,baz=121,slow=4.8,SNR=6.0						
	comp=Z,1.1nm,0.9s						
NRIK	Noril'sk	65.45	358	P	P	20 33 35.3	0.0
	comp=Z,1.0nm,0.3s,baz=170,slow=6.1,SNR=3.8						
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	65.45	358	IAmb	IAmb	20 33 36.3	
	comp=Z,6.4nm,1.2s						
TIXI	Tiksi	71.44	11	P	P	20 34 12.1	-0.6
TIXI				IAmb	IAmb	20 34 13.3	
	comp=Z,7.9nm,1.1s						
FINES	FINESS Array B	75.52	333	P	P	20 34 36.3	-0.5
	comp=Z,1.4nm,0.9s,baz=357,slow=32,SNR=1.7						
	comp=Z,1.4nm,0.9s						
GERES	GERESS Array B	79.76	319	P	P	20 35 01.0	0.0
	comp=Z,1.4nm,0.8s,baz=107,slow=4.5,SNR=12						
	comp=Z,1.4nm,0.8s						
GERES	GERESS Array B	79.76	319	P	P	20 35 01.5	+0.5
DAVOX	Davos/Dischmat	82.18	317	P	P	20 35 12.7	-1.3
	comp=Z,3.0nm,0.8s,baz=115,slow=3.7,SNR=4.9						
	comp=Z,3.0nm,0.8s						

IDC 12 20:23:26.9±535.0, **57°.62N**×**29°.47E, h0^{km}, Error ellipse: s-maj=201.1km s-min=105.8km az=101.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.31	99	*i*		20 50 00.0	
	0.1nm,0.8s,baz=284,slow=328,SNR=4.6						
I37NO	I37NO	12.46	342	*i*		21 31 30.0	
	baz=149,slow=327,SNR=1.7						
I26DE	FREYUNG INFRAS	12.86	234	*i*		21 45 30.0	
	baz=40,slow=318,SNR=0.6						
I31KZ	AKTYUBINSK INF	18.17	101	*i*		22 18 00.0	
	baz=305,slow=322,SNR=0.4						

NEIC 12 20:30:46.7±1.5, **42°.43N**±0°.09×**127°.2W**±0°.1, **h10^{km}**±2^{km}, **ML2.7**/34, **Error ellipse: s-maj=16.9km s-min=14.4km az=289.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.19	77	Pn	Pn	20 31 23.2	0.0
KEBM				IAML		20 31 46.2	
	comp=N,48nm,1.9s						
KBO	Bosley Butte	2.25	94	Pn	Pn	20 31 24.0	0.0
KBO				IAML		20 31 48.7	
	comp=N,31nm,2.4s						
KBO				IAML		20 31 55.3	

	comp=E,40nm,2.0s						
J01E	Myrtle Point	2.54	72	Pn	Pn	20 31 27.9	-0.1
J01E				Sn	Sn	20 31 53.5	-5.5
J01E				IAML		20 31 55.1	
	comp=E,36nm,2.3s						
J01E				IAML		20 31 57.7	
	comp=N,24nm,0.3s						
KSXB	Camp Six Broad	2.57	102	Pn	Pn	20 31 28.5	0.0
JCC	Jacoby Creek,	2.90	123	Pn	Pn	20 31 31.9	-0.9
I02E	Swisshome, OR	2.99	55	Pn	Pn	20 31 33.3	-0.9
I02E				IAML		20 32 31.6	
	comp=N,34nm,2.0s						
I02E				IAML		20 33 09.2	
	comp=E,35nm,2.2s						
DBO	Dodson Butte	3.02	75		Pn	20 31 35.8	+1.1
DBO				Sn	Sn	20 32 08.9	-2.0
DBO				IAML		20 32 09.6	
	comp=N,22nm,0.5s						
DBO				IAML		20 32 10.0	
	comp=E,28nm,1.0s						
HUMO	Hull Mountain	3.17	85		Pn	20 31 37.1	+0.4
YBH	Yreka Blue Hor	3.44	100		Pn	20 31 40.3	-0.1
KMRM	Mail Ridge	3.45	128	Pn	Pn	20 31 40.4	-0.2
KMRM				IAML		20 32 51.3	
	comp=N,17nm,3.9s						
KMRM				IAML		20 33 09.2	
	comp=E,15nm,4.0s						
BUCK	Buck Mountain	3.57	59	Pn	Pn	20 31 42.8	+0.6
BUCK				IAML		20 33 35.4	
	comp=N,19nm,3.8s						
L04D	Klamath Falls	3.67	92		Pn	20 31 44.2	+0.6
L04D				IAML		20 32 53.1	
	comp=E,16nm,3.3s						
L04D				IAML		20 34 08.7	
	comp=N,12nm,3.5s						
J04D	Umpqua Nationa	3.86	76		Pn	20 31 45.6	-0.7
H04A	Detroit Lake	4.31	57	Pn	Pn	20 31 51.7	-0.6
PINE	Pine Mountain	4.81	71	Pn	Pn	20 31 59.2	-0.1
PINE				IAML		20 34 19.5	
	comp=E,7.8nm,3.7s						
MCCM	Marconi Confer	5.42	141	Pg	Pg	20 32 28.3	-2.3

KRSC 12 20:41:25.1±1.2**, 52°.83N×160°.57E, h40^{km}**±12^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.42	309	*e*P	Pn	20 41 35.4	+0.6
SPN				*e*S	Sn	20 41 41.3	-0.4
NLC	Nalytchevo	0.82	295	*e*P	Pn	20 41 40.8	+0.7
NLC				*e*S	Sn	20 41 50.9	0.0
SDLR	Sedlovina	1.11	294	*e*P	Pn	20 41 45.5	+1.2
DALK	Dalny	1.12	281	*e*P	Pn	20 41 45.3	+1.1
DALK				*e*S	Sn	20 41 59.6	+1.2
UGLR	Uglovaya	1.12	290	*i* P	Pn	20 41 45.7	+1.3
PET	Petropavlovsk	1.18	280	*e*P	Pn	20 41 46.3	+1.3
PET				*e*S	Sn	20 42 00.9	+1.1
AVH	Avacha	1.19	292	*e*P	Pn	20 41 46.8	+1.5
KRER	Koryakskii	1.20	294	*e*P	Pn	20 41 47.1	+1.6
KOK	Koryaka	1.26	292	*e*P	Pn	20 41 47.7	+1.5
KRX	Arik	1.27	295	*e*P	Pn	20 41 47.9	+1.4
RUS	Russkaya	1.32	253	*e*P	Pn	20 41 48.3	+1.3
RUS				*e*S	Sn	20 42 03.9	+0.6
KII	Karymskiy	1.38	331	*e*P	Pn	20 41 50.1	+2.2
KII				*e*S	Sn	20 42 06.5	+1.6
KRMR	Karymshinskiy	1.48	271	*e*P	Pn	20 41 50.6	+1.4
KRMR				*e*S	Sn	20 42 08.3	+1.0
MTVR	Mutnovka	1.50	257	*e*P	Pn	20 41 51.3	+1.7
MTVR				*e*S	Sn	20 42 09.1	+1.1
GRL	Gorelyy	1.55	260	*e*P	Pn	20 41 52.6	+2.4
GRL				*e*S	Sn	20 42 11.1	+1.9
ASAK	Asacha	1.69	256	*e*P	Pn	20 41 54.6	+2.4
GNL	Ganaly	1.80	300	*e*P	Pn	20 41 56.7	+3.0
GNL				*e*S	Sn	20 42 18.2	+2.8
KDTR	Khodutka, Kamc	1.84	237	*e*P	Pn	20 41 57.0	+2.8
KDTR				*e*S	Sn	20 42 18.2	+2.0
MKZ	Mys Kozlova	1.86	21	*e*P	Pn	20 41 57.4	+3.1
MKZ				*e*S	Sn	20 42 18.9	+2.4
APC	Apacha	2.07	274	*e*P	Pn	20 42 00.4	+3.1
APC				*e*S	Sn	20 42 26.2	+4.4
TUMD	Tumrok D	2.38	358	*e*P	Pn	20 42 04.6	+3.1
TUMD				*e*S	Sn	20 42 32.7	+3.3
MIPR	Malaya Ipel'ka	2.40	258	*e*P	Pn	20 42 05.5	+3.7
TUMR	Tumrok	2.47	354	*e*P	Pn	20 42 06.6	+3.8
PAU	Pauzhetka	2.69	241	*e*P	Pn	20 42 09.5	+3.7
KMNR	Kamenistaya	2.93	356	*e*P	Pn	20 42 14.3	+5.1
KBTR	Krutoberegovo	3.62	20	*e*P	Pn	20 42 23.0	+4.4
BKI	Bering	3.97	51	*e*P	Pn	20 42 27.1	+3.8
BKI				*e*S	Sn	20 43 09.5	+0.9

IDC 12 20:42:25.8±5.5**, 30°.92S×179°.53E, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=362.5km s-min=68.0km az=169.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	40.96	269	P	P	20 50 10.6	0.0
	0.4nm,0.7s,baz=106,slow=7.1,SNR=5.7						
	0.4nm,0.7s						
WRA	Warramunga Arr	42.00	274	P	P	20 50 18.8	-0.2
	0.9nm,0.3s,baz=115,slow=8.5,SNR=23						
	0.9nm,0.3s						
FINES	FINESS Array B	144.87	338	PKP	PKPbc	21 02 03.5	+0.2
	1.6nm,0.8s,baz=45,slow=3.2,SNR=8.0						

BJI ***12*** *20:43:35.7±0.0, 3°.91N×92°.46E, h11^{km}, mb4.5/48, mB4.9/28, Ms4.8/45, Ms7 4.6/42*

IDC ***12*** *20:43:35.7±0.7, 4°.01N×92°.44E, h0^{km}, mb4.1/17, mbtmp4.2/20, ML4.3/3, MS4.4/72, Error ellipse: s-maj=22.3km s-min=15.2km az=43.0*

DJA ***12*** *20:43:36.2±0.3, 4°N±3°×9°3E±°, h10^{km}, M5.0/19, mb5.0/19, mB5.4/12, MLv5.4/7, Mw(mB)4.8/12, MwMwp4.5/3, Mwp4.9/3*

NEIC ***12*** *20:43:36.2±2.1, 3°.82N±0°.07×92°.54E±0°.08, h10^{km}±1^{km}, mb4.7/50, Error ellipse: s-maj=15.2km s-min=9.0km az=235.0*

GCMT ***12*** *20:43:39.2±0.1, 4°.02N±0°.01×92°.57E±0°.01, h12^{km}, MW5.2/131, Moment Tensor Solution. s72,c102; s131,c222; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.10; $M_{\theta\theta}$-3.52±.09; $M_{\phi\phi}$4.01±.10; $M_{r\theta}$-2.07±.26; $M_{\theta\phi}$-4.44±.08; $M_{\phi r}$-3.93±.27; Best double couple: $M_0$7.32900×10^{16} NP1:ϕ_s112.00000°,δ53.00000°, λ-175.00000°. NP2:ϕ_s19.00000°,δ86.00000°, λ-37.00000°. Principal axes: T 7.1560, Plg22.0000°, Azm72.0000°; N 0.3440, Plg53.0000°, Azm193.0000°; P -7.5010, Plg28.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:43:36.4±0.5**, 3°.87N**±0°.05×**92°.53E**±0°.05**, h10^{km}, n213, σ2^{s}.08**/179**, mb4.6**/66**, MS4.5**/85**, 4C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	4.06	111	P	Pn	20 44 39.2	+0.5
LHMI	Lhok Sumawe	4.60	73	Pn	Pn	20 44 46.4	+0.3
LHMI	Lhok Sumawe	4.60	73	P	Pn	20 44 47.0	+0.9
KCSI	Kotacane, Aceh	5.24	94	P	Pn	20 44 56.6	+1.7
	4.0nm4μm333nm,0.6s						
GSI	Gunungsitoli	5.65	117	Pn	Pn	20 45 00.3	-0.3
GSI	Gunungsitoli	5.65	117	P	Pn	20 45 00.4	-0.1
	1.1nm3μm189nm,0.7s						
TSI	Tuntungan	6.03	93	P	Pn	20 45 06.3	+0.5
	2.4nm4μm17μm342nm,0.7s						
PSI	Prapat	6.47	99	Pn	Pn	20 45 12.9	+0.9
	11nm,0.3s,baz=306,slow=7.8,SNR=25						
PSI				Sn	Sn	20 46 24.6	-1.3
	13nm,0.3s,baz=182,slow=22,SNR=2.8						
PSI				LR	LR	20 47 12.1	
	comp=Z,767nm,20.5s,baz=312,slow=33						
	24nm,0.3s						
RPSI	Rantau Prapat	6.49	100		Pn	20 45 12.9	+0.8
MNSI	Mandailing Nat	7.68	113	P	Pn	20 45 29.1	+0.7
PBA	Port Blair	7.74	2	*e*P	Pn	20 45 27.9	-1.3
KULM	Kulim	8.21	80	Pn	Pn	20 45 35.4	-0.4
SISI	Saibi	8.34	128	P	Pn	20 45 36.8	-0.8
	53nm,0.7s						
SRIT	Nakonsritamara	8.45	56		Pn	20 45 37.6	-1.4
BKNI	Bangkinang	9.20	112	Pn	Pn	20 45 47.8	-1.5
BKNI	Bangkinang	9.20	112	P	Pn	20 45 48.7	-0.7
	2μm79nm,0.9s						
DGPR	DIGLIPUR	9.25	2	*e*P	Pn	20 45 46.0	-4.0
PPSI	Pulau Pagai	9.96	131	P	Pn	20 45 59.9	+0.1
	146nm,1.4s						
KRJI	Kerinci	10.71	123	P	Pn	20 46 10.1	-0.1
	4μm265nm,0.8s						
MYKOM	Kota Tinggi	11.49	100		Pn	20 46 20.8	0.0
PALK	Pallekele	12.25	287	Pn	Pn	20 46 30.5	-0.7
	4.1nm,0.3s,baz=216,slow=13,SNR=23						
PALK				Sn	Sn	20 48 35.0	-13
	18nm,0.3s,baz=291,slow=20,SNR=8.9						
PALK				LR	LR	20 50 25.5	
	comp=Z,731nm,20.0s,baz=210,slow=34						
	7.7nm,0.3s						
PALK	Pallekele	12.25	287		Pn	20 46 30.6	-0.5
MNAI	Manna	13.24	128	Pn	Pn	20 46 44.6	-0.1
MNAI	Manna	13.24	128	P	Pn	20 46 44.9	+0.2
	242nm,1.6s						
KLI	Kotabumi	15.06	125	P	Pn	20 47 07.5	-2.0
KASI	Kota Agung	15.16	128	P	Pn	20 47 09.8	-1.1
	59nm,0.9s						
BLSI	Bandar Lampung	15.67	126	P	Pn	20 47 17.2	-0.3
	47nm,0.4s						
CM31	Chiang Mai Arr	15.79	23		Pn	20 47 16.2	-2.9
CMAR	Chiang Mai Arr	15.79	23	Pn	Pn	20 47 17.7	-1.4
	0.1nm,0.3s,baz=218,slow=13,SNR=20						
CMAR				LR	LR	20 52 58.9	
	comp=Z,1μm,21.8s,baz=205,slow=36						
	8.2nm,1.1s						
CMAR	Chiang Mai Arr	15.79	23		Pn	20 47 16.5	-2.7
CHTO	Chiang Mai	16.12	22	Pn	Pn	20 47 20.9	-2.4
CHTO				IAmb	IAmb	20 47 36.4	
	comp=Z,52nm,1.2s						
SALM	Salem	16.16	299	*e*P	Pn	20 47 25.6	+1.8
KOD	Kodaikanal	16.23	294	*e*P	Pn	20 47 25.5	+0.5
DBJI	Dramaga	17.57	126	P	P	20 47 44.0	+1.2
	comp=Z,3μmcomp=Z,24nm,0.8s						
BWNR	Bhubaneshwar	17.59	339	*e*P	Pn	20 47 40.2	-1.6
RAGD	RAYAGADA	17.66	331	*e*P	P	20 47 44.2	+0.5
KSM	Kuching	17.91	97	P	Pn	20 47 44.7	-1.3
KSM				IAmb	IAmb	20 47 59.4	
	comp=Z,37nm,1.1s						
LEM	Lembang	18.43	125	LR	LR	20 56 09.8	
	comp=Z,2μm,18.2s,baz=298,slow=41						
HYBB	Hyderabad (bro	19.21	316	*e*P	P	20 48 01.4	+0.6
STKI	Sintang	19.30	101	P	Pn	20 48 04.2	+1.3
	comp=Z,4μmcomp=Z,22nm,0.8s						
AZL	Aizawl	19.75	0	*e*P	P	20 48 06.9	+0.1
AZL				IAmb	IAmb	20 48 09.5	
	comp=Z,12nm,0.5s						
BLSP	Bilaspur	20.76	332	*e*P	Pn	20 48 20.9	+0.8
BOK	Bokaro	20.82	343	*e*P	P	20 48 16.8	-1.5
UGM	Wanagama	21.43	123	P	P	20 48 24.8	-0.2
SHL	Shillong	21.58	358	*e*P	P	20 48 24.9	-1.7
KOHI	KOHIMA	21.78	4	*e*P	P	20 48 27.1	-1.6
MOKO	MOKOCHONG	22.40	5	*e*P	P	20 48 33.6	-1.9
AKL	Akola	22.54	319	*e*P	P	20 48 37.7	+0.9
QIZ	Qiongzhong	22.65	47	P	P	20 48 38.0	0.0
QIZ				S	S	20 52 45.8	-0.4
QIZ				sS	sS	20 52 50.8	+1.8
QIZ				LR	LR		
	comp=Z,5μm,14.9s						
QIZ				LR	LR		
	comp=Z,2μm,13.0s						
QIZ				LR	LR		
	comp=Z,2μm,17.8s						
H08S2	Diego Garcia H	23.04	240	T	T	21 12 45.4	
	baz=58,slow=74,SNR=7.3						
H08S3	Diego Garcia H	23.04	240	T	T	21 12 41.4	
	baz=246,slow=74,SNR=8.2						
ITAN	ITANAGAR	23.17	3	*e*P	P	20 48 42.4	-0.9
KMI	Kunming	23.30	24	⇓P	P	20 48 46.6	+1.7
KMI				sP	pwP	20 48 54.9	+2.7
KMI				S	S	20 52 56.9	-0.8
KMI				SS	SnSn	20 53 42.9	+11
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
KMI				LR	LR		
	comp=Z,2μm,15.4s						
KMI				LR	LR		
	comp=Z,3μm,19.0s						
KMI				LR	LR		
	comp=Z,1μm,22.6s						
ODAN	Odare	23.38	348	*e*P	P	20 48 45.8	+0.1
	comp=Z,22nm,0.7s						
GTK	Tadong	23.62	351	*e*P	P	20 48 47.4	-0.5
RAMN	Ramite	23.64	347	*e*P	P	20 48 49.3	+1.0
	comp=Z,13nm,0.5s						
PZH	PanZhiHua	24.17	21	P	P	20 48 53.4	+0.2
PZH				pP	sP	20 48 56.3	+0.6
PZH				sP	pwP	20 49 02.8	+2.1
PZH				PP	PnPn	20 49 27.1	+4.4
PZH				S	S	20 53 09.9	-1.6
PZH				sS	sS	20 53 17.2	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,110nm,3.5s						
PZH				LR	LR		
	comp=Z,1μm,13.5s						
PZH				LR	LR		
	comp=Z,2μm,13.0s						
PZH				LR	LR		
	comp=Z,2μm,13.7s						
JIRN	Jiri	24.42	346	*e*P	P	20 48 55.3	-0.5
	comp=Z,2.1nm,1.0s						
PKI	Pulchoki	24.53	345	*e*P	P	20 48 56.6	-0.1
	comp=Z,46nm,0.7s						
DMN	Daman	24.65	344	*e*P	P	20 48 58.3	+0.6
	comp=Z,62nm,0.9s						
KKN	Kakani	24.77	345	*e*P	P	20 48 59.1	+0.3
	comp=Z,54nm,0.9s						
GKN	Gorkha	25.15	343	*e*P	P	20 49 02.2	+0.1
	comp=Z,57nm,0.8s						
KOLN	Koldanda	25.25	341	*e*P	P	20 49 03.5	+0.4
	comp=Z,42nm,0.8s						
LSA	Lhasa	25.72	357	P	P	20 49 08.2	+0.5
LSA				IAmb	IAmb	20 49 34.4	
	comp=Z,16nm,0.9s						
LSA	Lhasa	25.72	357	P	P	20 49 08.5	+0.8
LSA				S	S	20 53 38.0	+1.1
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA				LR	LR		
	comp=Z,500nm,22.6s						
LSA				LR	LR		
	comp=Z,1μm,27.9s						
LSA				LR	LR		
	comp=Z,610nm,14.7s						
DANN	Dangsing	25.73	342	*e*P	P	20 49 07.9	+0.3
	comp=Z,74nm,0.8s						
PYUN	Piuthan	25.75	340	*e*P	P	20 49 07.8	+0.1
	comp=Z,155nm,1.4s						
MYLDM	Lahad Datu	25.92	86	P	P	20 49 08.3	-0.8
GYA	Guiyang	26.22	30	⇓P	P	20 49 14.5	+2.6
GYA				S	S	20 53 43.5	-0.8
GYA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,94nm,4.4s						
GYA				LR	LR		
	comp=Z,2μm,16.4s						
GYA				LR	LR		
	comp=Z,2μm,14.6s						
GYA				LR	LR		
	comp=Z,1μm,18.8s						
PTH	Pithoragarh	28.08	337	*e*P	P	20 49 26.7	-1.9
TOLI2	Tolitoli	28.35	95	P	P	20 49 30.5	-0.5
TOLI2				IAmb	IAmb	20 49 41.8	
	comp=Z,18nm,0.9s						
KAPI	Kappang	28.59	108	LR	LR	21 01 46.5	
	comp=Z,1μm,18.5s,baz=289,slow=38						
CD2	Chengdu	28.90	20	P	P	20 49 35.3	-0.5
CD2				S	S	20 54 27.7	+1.4
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,2μm,13.7s						
CD2				LR	LR		
	comp=Z,940nm,12.7s						
LUWI	Luwuk	30.61	99	P	P	20 49 48.9	-2.2
SMLA	Simla	30.73	334	*e*P	P	20 49 52.1	+0.2
SMLA				IAmb	IAmb	20 49 58.6	
	comp=Z,15nm,1.0s						
ENH	Enshi	30.76	30		P	20 49 51.4	-0.8
ENH				IAmb	IAmb	20 50 17.6	
	comp=Z,12nm,1.0s						
GOMU	GeErMu	32.24	3	P	P	20 49 59.7	-5.8
GOMU				pP	pP	20 50 02.9	-4.4
GOMU				sP	sP	20 50 03.9	-4.1
GOMU				PcP	PP	20 51 14.0	-4.4
GOMU				S	S	20 55 16.1	-3.0
GOMU				sS	sS	20 55 27.0	+5.0
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,110nm,7.1s						
GOMU				LR	LR		
	comp=N,400nm,13.7s						
GOMU				LR	LR		
	comp=E,400nm,15.9s						
GOMU				LR	LR		
	comp=Z,390nm,14.8s						
DAV	Davao City (W)	33.04	83	LR	LR	21 04 58.7	
	comp=Z,826nm,20.9s,baz=270,slow=39						
XAN	Xi'an	33.67	25	⇑P	P	20 50 17.2	-0.5
XAN				pP	pwP	20 50 26.1	+1.0
XAN				sP	sP	20 50 29.6	+9.4
XAN				S	S	20 55 35.1	-5.8
XAN				SS	SnSn	20 57 44.6	-0.1
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,6.2s						
XAN				LR	LR		
	comp=Z,2μm,14.9s						
XAN				LR	LR		
	comp=Z,3μm,15.2s						
XAN				LR	LR		
	comp=Z,2μm,18.4s						
LZH	Lanzhou	33.71	17	*e*P	P	20 50 18.5	+0.3
LZH				pP	sP	20 50 23.2	+2.5
LZH				S	S	20 55 37.6	-4.1
LZH				sS	sS	20 55 48.0	+3.4
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				LR	LR		
	comp=Z,2μm,12.5s						
LZH				LR	LR		
	comp=Z,2μm,13.0s						
LZH				LR	LR		
	comp=Z,2μm,13.0s						
GTA	Gaotai	35.99	10	*e*P	P	20 50 38.0	+0.2
GTA				sP	pwP	20 50 47.9	+2.7
GTA				S	S	20 56 14.4	-2.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				LR	LR		
	comp=Z,400nm,13.5s						
GTA				LR	LR		
	comp=Z,620nm,15.9s						
GTA				LR	LR		
	comp=Z,450nm,13.1s						
WSAR	Wadi Sarin	38.00	304	LR	LR	21 05 40.6	
	comp=Z,460nm,20.1s,baz=136,slow=35						
KSH	Kashi	38.53	339	P	P	20 51 01.0	+1.7
KSH				sP	pwP	20 51 08.0	+1.3
KSH				S	S	20 56 54.6	-0.7
KSH				ScS	ScS	21 01 11.3	+0.5
KSH				LR	LR		
	comp=Z,660nm,21.6s						
KSH				LR	LR		
	comp=Z,780nm,21.6s						
KSH				LR	LR		
	comp=Z,1μm,22.2s						
HNS	HongShan	39.07	28	⇑P	P	20 51 05.4	+1.7
HNS				PP	PnPn	20 52 40.6	+4.8
HNS				S	S	20 57 03.9	+0.7
HNS				SS	SnSn	20 59 41.6	-13
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
HNS				LR	LR		
	comp=Z,890nm,15.5s						
HNS				LR	LR		
	comp=Z,1μm,16.5s						
HNS				LR	LR		
	comp=Z,1μm,19.8s						
BTO	Baotou	39.82	21	*e*P	P	20 51 12.6	+2.5
BTO				S	S	20 57 19.8	+5.1
BTO				LR	LR		
	comp=Z,4μm,13.6s						
BTO				LR	LR		
	comp=Z,6μm,13.3s						
WMQ	Urumqi	40.01	355	*e*P	P	20 51 14.0	+2.4
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				LR	LR		
	comp=Z,370nm,15.9s						
WMQ				LR	LR		
	comp=Z,440nm,15.1s						
WMQ				LR	LR		
	comp=Z,530nm,21.7s						
DRK	Karamyk	40.12	335	P	P	20 51 13.1	+0.2
DRK				IAmb	IAmb	20 51 17.2	
	comp=Z,22nm,0.8s						
GAR	Garm	40.38	333	P	P	20 51 13.5	-1.3
GAR				IAmb	IAmb	20 51 24.8	
	comp=Z,20nm,1.0s						
HHC	Hu-ho-hao-te	40.60	22	*e*P	P	20 51 18.2	+1.6
HHC				sP	pwP	20 51 27.2	+3.2
HHC				S	S	20 57 28.5	+2.1
HHC				sS	sS	20 57 37.6	+8.3
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
HHC				LR	LR		
	comp=Z,3μm,14.0s						
HHC				LR	LR		
	comp=Z,2μm,12.3s						
HHC				LR	LR		
	comp=Z,2μm,15.1s						
CHGR	Chuyangaron	40.64	332	P	P	20 51 15.1	-1.9
CHGR				IAmb	IAmb	20 51 19.5	
	comp=Z,18nm,0.9s						
BTK	Batken	41.02	334	P	P	20 51 21.0	+1.0
JOW	Kunigami	41.09	53	LR	LR	21 08 25.6	
	comp=Z,449nm,21.3s,baz=246,slow=36						
HRA	Herat	41.39	321	P	P	20 51 23.2	-0.1
AAK	Ala-Archa	41.81	340	LR	LR	21 09 09.7	
	comp=Z,981nm,20.7s,baz=162,slow=37						
AAK	Ala-Archa	41.81	340	P	P	20 51 26.8	+0.3
BJT	Baijiatuau	41.85	27	P	P	20 51 27.9	+1.2
BJT				IAmb	IAmb	20 51 38.4	
	comp=Z,25nm,1.3s						
BJI	Beijing	41.87	27	P	P	20 51 28.2	+1.3
BJI				S	S	20 57 46.2	+1.3
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BJI				LR	LR		
	comp=Z,580nm,17.7s						
BJI				LR	LR		
	comp=Z,700nm,19.8s						
BJI				LR	LR		
	comp=Z,890nm,18.0s						
TAS	Tashkent	42.72	334	P	P	20 51 34.6	+0.7
H01W3	Cape Leeuwin H	43.58	154	T	T	21 38 55.9	
	baz=331,slow=76,SNR=34						
H01W2	Cape Leeuwin H	43.59	154	T	T	21 38 55.6	
	baz=331,slow=76,SNR=38						
H01W1	Cape Leeuwin H	43.59	154	T	T	21 38 56.9	
	baz=331,slow=76,SNR=26						
MK31	Makanchi Array	43.67	350	P	P	20 51 40.9	-0.5
MKAR	Makanchi Array	43.67	350	P	P	20 51 41.2	-0.3
	comp=Z,2.6nm,0.7s,baz=170,slow=8.2,SNR=21						
MKAR				LR	LR	21 14 12.7	
	comp=Z,370nm,18.1s,baz=166,slow=42						
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	43.67	350	P	P	20 51 40.8	-0.7
KK31	Karatay Array	43.69	337	P	P	20 51 41.2	-0.4
KKAR	Karatay Array	43.69	337	P	P	20 51 41.4	-0.3
MAKZ	Makanchi	43.74	350	P	P	20 51 41.3	-0.7
SONM	Songino Array	45.40	13	P	P	20 51 55.7	+0.4
	comp=Z,2.3nm,0.9s,baz=198,slow=7.4,SNR=11						
SONM				LR	LR	21 12 50.1	
	comp=Z,665nm,19.2s,baz=194,slow=39						
	comp=Z,2.3nm,0.9s						
SONM	Songino Array	45.40	13	P	P	20 51 55.8	+0.4
SONM				IAmb	IAmb	20 52 07.0	
	comp=Z,8.4nm,1.1s						

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ULN   Ulaanbaatar      45.58  14           P      20 51 55.5 -1.3
ULN                               IAmb     IAmb   20 52 08.1
      comp=Z,9.8nm,1.4s
GEYT  Alibeck          46.22 322  LR       LR     21 11 59.6
      comp=Z,789nm,21.6s,baz=137,slow=37
GYA0B ALIBECK ARRAY    46.22 322  P        P      20 52 01.9  0.0
GYA0B                             IAmb     IAmb   20 52 13.6
      comp=Z,8.2nm,0.9s
KSAR  Wonju Array Be   46.50  39  P        P      20 52 04.4 +0.3
KSRS  Korea Array      46.53  39  P        P      20 52 05.6 +1.3
      comp=Z,2.9nm,1.2s,baz=274,slow=28,SNR=2.3
KSRS                              LR       LR     21 12 15.1
      comp=Z,503nm,20.7s,baz=220,slow=37
      comp=Z,2.9nm,1.2s
WRA   Warramunga Arr   47.40 122  P        P      20 52 12.1 +0.7
      comp=Z,1.3nm,0.8s,baz=299,slow=8.8,SNR=6.5
WRA                               LR       LR     21 13 06.8
      comp=Z,301nm,20.4s,baz=356,slow=37
      comp=Z,1.3nm,0.8s
WRA   Warramunga Arr   47.40 122  P        P      20 52 09.6 -1.8
WB2   Warramunga Arr   47.41 122  P        P      20 52 09.4 -2.1
KURBB Kurchatov Arra   48.06 348  P        P      20 52 15.3 -0.7
      comp=Z,2.7nm,0.8s,baz=171,slow=7.3,SNR=20
KURBB                             LR       LR     21 14 11.0
      comp=Z,545nm,20.4s,baz=144,slow=38
      comp=Z,2.7nm,0.8s
KURK  Kurchatov        48.13 348  P        P      20 52 16.2 -0.3
KURK                              IAmb     IAmb   20 52 27.1
      comp=Z,11nm,1.4s
ASAR  Alice Springs    48.72 126  P        P      20 52 23.2 +1.6
      comp=Z,0.5nm,0.8s,baz=298,slow=7.6,SNR=3.3
      comp=Z,0.5nm,0.8s
ASAR  Alice Springs    48.72 126  P        P      20 52 18.0 -3.6
RAYN  Ar Rayn          49.39 298  P        P      20 52 25.9 -0.9
RAYN                              IAmb     IAmb   20 52 31.5
      comp=Z,4.2nm,0.8s
ATD   Arta Tunnel      49.76 282  LR       LR     21 10 16.3
      comp=Z,130nm,20.2s,baz=46,slow=32
OPO   Ambohidratompo   49.91 242  LR       LR     21 10 31.5
      comp=Z,173nm,18.6s,baz=199,slow=32
ZAA0  Zalesovo Array   50.32 354  P        P      20 52 32.1 -1.1
ZAA0                              IAmb     IAmb   20 52 37.0
      comp=Z,20nm,1.3s
ZALV  Zalesovo Beam    50.32 354  P        P      20 52 33.2  0.0
      comp=Z,8.1nm,0.5s,baz=173,slow=6.7,SNR=42
ZALV                              LR       LR     21 15 44.9
      comp=Z,496nm,20.9s,baz=176,slow=38
      comp=Z,8.1nm,0.5s
ZALV  Zalesovo Beam    50.32 354  P        P      20 52 32.3 -0.9
HIA   Hailar           50.81  23  P        P      20 52 36.3 -0.8
HIA                               IAmb     IAmb   20 52 48.6
      comp=Z,19nm,1.3s
BNX   BinXian          51.60  31 ⇑P        P      20 52 47.9 +4.9
BNX                               pmax     pmax
      comp=Z,35nm,1.2s
BNX                               pmax     pmax
      comp=Z,100nm,4.6s
INU   Inuyama          51.65  47  P        P      20 52 42.9 -0.7
JGF   Kuroka           52.01  47  P        P      20 52 45.9 -0.4
BRVK  Borovoye         52.35 343  P        P      20 52 46.8 -1.7
GUMO  Guam             52.52  76  LR       LR     21 15 43.9
      comp=Z,164nm,20.9s,baz=265,slow=37
JCJ   Chichijima       52.68  59  LR       LR     21 16 12.6
      comp=Z,136nm,19.1s,baz=206,slow=37
JHJ   Hachijo jima 2   52.78  51  LR       LR     21 15 01.8
      comp=Z,388nm,20.7s,baz=263,slow=36
ABKAR Akbulak array    53.02 334  P        P      20 52 52.8 -0.8
ABKAR                             IAmb     IAmb   20 53 04.0
      comp=Z,9.5nm,1.3s
ABKAR Akbulak array    53.02 334  P        P      20 52 52.2 -1.4
MJB9  Matsu-Tunnel     53.04  46  P        P      20 52 52.0 -1.9
MJB9                              IAmb     IAmb   20 53 04.2
      comp=Z,12nm,1.2s
MAJO  Matsushiro       53.04  46  P        P      20 52 51.1 -2.9
MAJO                              IAmb     IAmb   20 53 04.2
      comp=Z,12nm,1.2s
MJAR  Matsushiro Arr   53.05  46  P        P      20 52 53.8 -0.2
      comp=Z,1.3nm,0.7s,baz=217,slow=4.1,SNR=2.1
MJAR                              LR       LR     21 17 23.7
      comp=Z,517nm,18.8s,baz=240,slow=38
      comp=Z,1.3nm,0.7s
MJAR  Matsushiro Arr   53.05  46  P        P      20 52 51.8 -2.2
USRK  Ussuriysk Ar.    53.08  35  LR       LR     21 19 30.1
      comp=Z,365nm,18.7s,baz=215,slow=41
AKTO  Aktyubinsk       54.74 334  LR       LR     21 17 22.9
      comp=Z,429nm,21.4s,baz=145,slow=37
KMBO  Kilima Mbogo     55.47 266  LR       LR     21 12 18.7
      comp=Z,465nm,21.1s,baz=89,slow=31
PMG   Port Moresby     56.01 104  LR       LR     21 19 42.8
      comp=Z,202nm,19.5s,baz=284,slow=39
GNI   Garni            56.16 317  LR       LR     21 19 12.8
      comp=Z,175nm,19.4s,baz=113,slow=38
CTA   Charters Tower   57.86 117  LR       LR     21 19 29.2
      comp=Z,311nm,21.5s,baz=286,slow=37
STKA  Stephens Creek   58.60 131  P        P      20 53 37.5 +3.6
      comp=Z,2.9nm,0.7s,baz=268,slow=7.2,SNR=6.5
      comp=Z,2.9nm,0.7s
STKA  Stephens Creek   58.60 131  P        P      20 53 32.4 -1.6
KBZ   Khabaz           59.02 320  P        P      20 53 35.8 -0.8
      comp=Z,2.7nm,0.9s,baz=122,slow=6.4,SNR=5.9
KBZ                               LR       LR     21 22 13.6
      comp=Z,186nm,19.2s,baz=106,slow=39
      comp=Z,2.7nm,0.9s
ASAJ  Asahikawa        59.48  40  LR       LR     21 21 21.0
      comp=Z,191nm,18.2s,baz=246,slow=38
KRVT  Keravat (AS076   60.00  97  LR       LR     21 21 52.4
      comp=Z,134nm,20.8s,baz=40,slow=38
EIL   Elat             60.09 302  LR       LR     21 20 48.3
      comp=Z,391nm,18.2s,baz=115,slow=37
MMAI  Mount Meron Ar   60.57 306  LR       LR     21 21 14.5
      comp=Z,301nm,21.2s,baz=264,slow=37
MBAR  Mbarara          61.91 267  LR       LR     21 16 21.5
      comp=Z,524nm,21.5s,baz=72,slow=32
BR131 Keskin Array S   63.88 313  P        P      20 54 08.9 -0.9
BR131                             IAmb     IAmb   20 54 20.3
      comp=Z,9.6nm,1.4s
BRTR  Keskin Array B   63.88 313  P        P      20 54 09.3 -0.4
      comp=Z,1.7nm,0.8s,baz=126,slow=7.8,SNR=10
BRTR                              LR       LR     21 23 50.3
      comp=Z,373nm,19.6s,baz=119,slow=38
      comp=Z,1.7nm,0.8s
BRTR  Keskin Array B   63.88 313  P        P      20 54 08.0 -1.7
BZK   Bozkurt          64.33 315  P        P      20 54 11.9 -0.5
NRIK  Noril'sk         65.45 358  P        P      20 54 19.6 +0.4
      comp=Z,2.7nm,0.6s,baz=164,slow=4.6,SNR=4.9
NRIK                              LR       LR     21 27 54.8
      comp=Z,398nm,18.1s,baz=180,slow=41
      comp=Z,2.7nm,0.6s
NRIK  Noril'sk         65.45 358  P        P      20 54 20.6 +1.4
NRIK                              IAmb     IAmb   20 54 22.9
      comp=Z,8.5nm,1.1s
ELL   Elmali           65.89 309  P        P      20 54 22.5 -0.4
LSZ   Lusaka           66.46 252  LR       LR     21 19 40.0
      comp=Z,683nm,19.8s,baz=98,slow=33
MATP  Matopo           67.27 246  LR       LR     21 21 22.1
      comp=Z,744nm,18.3s,baz=60,slow=34
HNR   Honiara          68.46 102  LR       LR     21 28 38.6
      comp=Z,59nm,19.4s,baz=260,slow=39
IDI   Anoyia           69.57 306  LR       LR     21 26 31.7
      comp=Z,94nm,21.9s,baz=98,slow=37
AKASG Malin Array Be   70.32 323  P        P      20 54 49.2 -1.1
      comp=Z,0.2nm,0.4s,baz=90,slow=5.0,SNR=4.3
AKASG                             LR       LR     21 29 59.0
      comp=Z,191nm,18.1s,baz=136,slow=40
      comp=Z,0.2nm,0.4s
MLR   Muntele Rosu     70.94 317  LR       LR     21 30 36.9
      comp=Z,215nm,19.1s,baz=88,slow=40
MLR   Muntele Rosu     70.94 317  P        P      20 54 52.4 -2.0
LBTB  Lobatse          70.95 242  LR       LR     21 21 26.7
      comp=Z,646nm,21.0s,baz=63,slow=32
TIXI  Tiksi            71.44  11  P        P      20 54 55.4 -1.3
BOSA  Boshof           72.13 238  P        P      20 55 02.6 +0.8
      comp=Z,2.5nm,0.8s,baz=89,slow=4.8,SNR=4.5
BOSA                              LR       LR     21 20 58.5
      comp=Z,298nm,21.3s,baz=58,slow=31
      comp=Z,2.5nm,0.8s
PETK  Petropavlovsk-   72.17  35  LR       LR     21 30 41.9
      comp=Z,166nm,18.8s,baz=240,slow=39
NACGM Naroch           73.06 327⇑eP        P      20 55 07.1 +0.5
      baz=108
MAW   Mawson           74.32 191  LR       LR     21 22 45.2
      comp=Z,133nm,18.5s,baz=26,slow=32
FINES FINESS Array B   75.50 333  P        P      20 55 18.8 -2.0
      comp=Z,1.7nm,0.8s,baz=101,slow=7.2,SNR=1.6
FINES                             LR       LR     21 30 11.1
      comp=Z,400nm,21.4s,baz=113,slow=37
      comp=Z,1.7nm,0.8s
DZM   Mont Dzumac      76.62 114  LR       LR     21 33 02.9
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      comp=Z,157nm,18.4s,baz=266,slow=39
SUR   Sutherland       76.76 236  LR       LR     21 25 18.5
      comp=Z,347nm,18.4s,baz=86,slow=33
TSUM  Tsumeb           77.12 249  LR       LR     21 26 50.8
      comp=Z,287nm,18.6s,baz=346,slow=34
VRAC  Vranov           77.91 320  LR       LR     21 35 55.7
      comp=Z,87nm,18.5s,baz=90,slow=40
ARSA  Arzberg          78.35 317  P        P      20 55 41.4 +4.2
      comp=Z,1.1nm,0.4s
ARCES ARCESS Array B   78.48 341  LR       LR     21 33 43.0
      comp=Z,506nm,19.9s,baz=110,slow=38
GEC2  GERESS Array S   79.74 319  P        P      20 55 45.6 +0.7
GEC2                              IAmb     IAmb   20 55 57.1
      comp=Z,10.0nm,1.1s
GERES GERESS Array B   79.74 319  P        P      20 55 45.3 +0.4
      comp=Z,2.8nm,0.8s,baz=121,slow=5.1,SNR=19
GERES                             LR       LR     21 36 23.5
      comp=Z,130nm,18.7s,baz=80,slow=40
      comp=Z,2.8nm,0.8s
GERES GERESS Array B   79.74 319  P        P      20 55 45.1 +0.2
KBA   Koelnbreinsper   79.81 317 i P       P      20 55 47.8 +2.4
      comp=Z,1.5nm,0.5s
BILL  Bilibino         80.37  21  P        P      20 55 49.1 +1.3
BILL                              IAmb     IAmb   20 55 59.0
      comp=Z,6.6nm,1.2s
CLL   Collm            80.44 321 eP        P      20 55 50.0 +1.5
CLL                              eS        S      21 05 54.0 -0.8
CLL                              ex        x      21 10 42.0
CLL                              eSSS      SSS    21 14 36.0
CLL                               Lm       MLR    21 35 00.0
      comp=N,100nm,20.3s
CLL                               Lm       MLR    21 35 00.0
      comp=E,200nm,18.3s
CLL                               Lm       MLR    21 35 00.0
      comp=Z,200nm,18.2s
WTTA  Wattenberg       80.99 317 eP        P      20 55 54.4 +2.6
      comp=Z,4.3nm,0.8s
HFS   Hagfors          81.10 330  LR       LR     21 34 39.2
      comp=Z,294nm,21.6s,baz=98,slow=38
SQTA  Sankt Quirin     81.28 317 i P       P      20 55 53.1 -0.1
      comp=Z,1.3nm,0.5s
MOTA  Moosalm          81.36 317 eP        P      20 55 53.4 -0.2
      comp=Z,4.6nm,0.9s
FETA  Feichten         81.59 317 eP        P      20 55 55.2 +0.2
      comp=Z,2.3nm,0.8s
RETA  Reutte           81.59 317  P        P      20 55 57.4 +2.6
      comp=Z,5.9nm,1.0s
SHEM  Shemya Is, Ala   81.82  37  LR       LR     21 34 48.0
      comp=Z,76nm,20.1s,baz=273,slow=38
DAVOX Davos/Dischmat   82.16 317  LR       LR     21 35 07.5
      comp=Z,116nm,21.5s,baz=78,slow=38
DAVA  Damuels          82.18 317 eP        P      20 56 00.8 +2.8
      comp=Z,8.4nm,1.0s
NOA   NORSAR Array B   82.42 331  LR       LR     21 34 10.0
      comp=Z,288nm,21.5s,baz=85,slow=37
SPITS Spitsbergen Ar   83.41 348  LR       LR     21 36 39.1
      comp=Z,519nm,21.9s,baz=188,slow=38
RPZ   Rata Peaks       84.39 134  LR       LR     21 35 20.9
      comp=Z,170nm,18.3s,baz=271,slow=37
URZ   Urewera          88.12 128  LR       LR     21 38 40.7
      comp=Z,113nm,18.7s,baz=211,slow=37
VNDA  Vanda            89.36 168  LR       LR     21 30 50.2
      comp=Z,402nm,20.2s,baz=300,slow=32
JMIC  Jan Mayen        89.96 341  LR       LR     21 39 56.0
      comp=Z,278nm,20.4s,baz=18,slow=38
EKA   Eskdalemuir Ar   90.08 325  LR       LR     21 42 15.3
      comp=Z,147nm,18.5s,baz=46,slow=39
RAO   Raoul Island     91.48 119  LR       LR     21 37 05.0
      comp=Z,194nm,20.7s,baz=282,slow=35
ESDC  Sonseca Array    92.55 310  P        P      20 56 50.0 +1.5
      comp=Z,0.9nm,0.8s,baz=82,slow=4.6,SNR=5.6
ESDC                              LR       LR     21 41 55.7
      comp=Z,54nm,19.6s,baz=82,slow=38
      comp=Z,0.9nm,0.8s
QSPA  South Pole Qui   93.80 180  LR       LR     21 32 47.0
      comp=Z,291nm,21.3s,baz=312,slow=31
MDT   Midelt           93.91 303  LR       LR     21 43 01.2
      comp=Z,149nm,18.4s,baz=134,slow=38
AFI   Afiamalu         96.44 103  LR       LR     21 41 18.8
      comp=Z,34nm,21.3s,baz=138,slow=36
BORG  Borgarnes        96.46 337  LR       LR     21 43 49.9
      comp=Z,159nm,20.3s,baz=77,slow=38
DBIC  Dimbokro         96.88 277  LR       LR     21 38 14.9
      comp=Z,274nm,20.4s,baz=98,slow=34
ILAR  Eielson Array    99.03  22  LR       LR     21 45 38.0
      comp=Z,195nm,20.8s,baz=328,slow=38
KDAK  Kodiak Island    99.69  30  LR       LR     21 47 24.6
      comp=Z,127nm,19.5s,baz=313,slow=38
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*UCR **12** 20:52:09.3±0.9, 13°.73N×90°.79W, h29km±5km, ML3.8*
*SNET **12** 20:52:09.3±0.9, 13°.71N×90°.79W, h30km±5km, ML3.8*
*GCG **12** 20:52:09.7±0.7, 13°.74N×90°.94W, h64km±36km, MD3.8*
ISC 12 20:52:08.4±1.8**, 13°.59N**±0°.09×**90°.81W**±0°.07**, h29km, n31, σ0s.76**/35**, 1C-6D, Near coast of Guatemala**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op       ISC     h  m  s     ISC
PCG   Pacaya           0.82  14⇑eP        Pn     20 52 25.0 +0.8
FUG   Fuego 3          0.85 358 i P       Pn     20 52 25.2 +0.5
FUG                             eS        Sn     20 52 36.5 +0.3
NUBE  Las Nubes        1.05  73 eP        Pn     20 52 27.4 +0.1
NUBE  Las Nubes        1.05  73 eP        Pn     20 52 27.4 +0.1
NBG   Las Nubes        1.09  24⇓iP        Pb     20 52 29.4 +0.6
NBG                             i S       Sb     20 52 44.3 +1.6
SLOZ  Alcaldia de Sa   1.09  67⇓eP        Pb     20 52 28.1 -0.5
SLOZ                            eS        Sb     20 52 42.3 -0.2
RTR   El Retiro        1.17  75 eP        Pb     20 52 29.7 -0.5
RTR   El Retiro        1.17  75 eP        Pb     20 52 29.7 -0.5
CEVE  Cerro Verde      1.18  78⇓eP        Pn     20 52 29.5 +0.4
CEVE                             IAML            20 52 47.0
      comp=Z,3μm,0.3s
CEVE  Cerro Verde      1.18  78⇓eP        Pn     20 52 29.5 +0.4
CEVE                             IAML            20 52 47.0
      comp=Z,3μm,0.3s
SBLS  San Blas         1.18  78 eP        Pn     20 52 29.5 +0.3
SBLS  San Blas         1.18  78 eP        Pn     20 52 29.5 +0.3
SNJE  San Jose         1.20  77 eP        Pn     20 52 29.9 +0.4
SNJE  San Jose         1.20  77 eP        Pn     20 52 29.9 +0.4
RTAL  Retalhuleu       1.26 317 eP        Pn     20 52 30.3 +0.2
RTAL                            eS        Sn     20 52 45.5 -0.7
JAYA  Jayaque - finc   1.32  87 eP        Pn     20 52 30.9 -0.2
JAYA                             IAML            20 52 51.5
      comp=Z,2μm,0.2s
JAYA  Jayaque - finc   1.32  87 eP        Pn     20 52 30.9 -0.2
JAYA                             IAML            20 52 51.5
      comp=Z,2μm,0.2s
CEDA  San Andres       1.39  81 eP        Pn     20 52 32.5 +0.6
CEDA                             IAML            20 52 54.2
      comp=Z,951nm,0.2s
CEDA  San Andres       1.39  81 eP        Pn     20 52 32.5 +0.6
CEDA                             IAML            20 52 54.2
      comp=Z,951nm,0.2s
BOQS  Boqueron         1.50  84 eP        Pn     20 52 34.4 +0.9
BOQS  Boqueron         1.50  84 eP        Pn     20 52 34.4 +0.9
MTO3  Montecristo      1.62  60⇓iP        Pn     20 52 35.0 -0.2
MTO3  Montecristo      1.62  60⇓iP        Pn     20 52 35.0 -0.2
LFRS  El Faro          1.70  89 eP        Pn     20 52 37.2 +0.9
LFRS  El Faro          1.70  89 eP        Pn     20 52 37.2 +0.9
ESQI  Esquipulas       1.72  56 eP        Pn     20 52 36.5 -0.1
SJTE  Alcalda de S     1.75  89 eP        Pn     20 52 37.8 +0.9
SJTE  Alcalda de S     1.75  89 eP        Pn     20 52 37.8 +0.9
MRL   Marmol           1.84  36 eP        Pb     20 52 39.1 -2.5
SCLA  Alcaldia de Sa   2.03  87 eP        Pn     20 52 41.4 +0.7
SCLA  Alcaldia de Sa   2.03  87 eP        Pn     20 52 41.4 +0.7
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*TUL **12** 20:57:37.4±0.9, 36°.82N±0°.01×98°.04W±0°.01, h5km±4km, ML2.6, mb_Lg2.5/31(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=129.0*
NEIC 12 20:57:37.7±0.8**, 36°.810N**±0°.010×**98°.04W**±0°.01**, h7km**±3km**, Error ellipse: s-maj=1.8km s-min=1.3km az=120.0, Oklahoma**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op       ISC     h  m  s     ISC
U32A  Winter Ranch,    0.89 241  Pg       Pg     20 57 53.6 -1.1
T35A  Sooner Cattle    1.23  85           Pb     20 57 59.4 -1.9
FNO   Franklin         1.63 161           Pn     20 58 05.5 -1.4
R32A  Long Quarter,    1.69 342  Pn       Pn     20 58 06.8 -1.0
WMOK  Wichita Mounta   2.15 196           Pn     20 58 14.2 +0.2
X34A  Smith Ranch, M   2.21 176           Pn     20 58 13.8 -1.1
CBKS  Cedar Bluff      2.41 327  Pn       Pn     20 58 18.3 +0.7
KSU1  Kansas State U   2.55  26           Pn     20 58 19.4 -0.1
KSU1                             IAmb_Lg         20 59 02.3
      comp=Z,20nm,0.9s
X37A  Clayton          3.10 135           Pn     20 58 25.2 -1.9
X37A                             IAmb_Lg         20 59 22.5
      comp=Z,18nm,0.8s
HHAR  Hobbs            3.34  98  Pn       Pn     20 58 29.1 -1.3
AMTX  Amarillo         3.53 238  IAmb_Lg         20 59 39.5
      comp=Z,11nm,0.9s
W39A  Magazine         3.81 114  Pg       Pb     20 58 43.0 -2.2
W39A                             IAmb_Lg         20 59 44.6
      comp=Z,13nm,0.8s
S39A  Bolivar          3.87  75  Pn       Pn     20 58 36.9 -0.7
U40A  Yellville        4.20  95  Pn       Pn     20 58 41.1 -1.1
MIAR  Mount Ida        4.28 121  IAmb_Lg         21 00 01.6
      comp=Z,10.0nm,0.8s
Z38A  Mt. Pleasant     4.34 144  IAmb_Lg         21 00 02.6
      comp=Z,14nm,0.8s
P38A  Dawn             4.53  50  IAmb_Lg         21 00 10.3
      comp=Z,11nm,0.9s
MGMO  Mountain Grove   4.63  84  IAmb_Lg         21 00 11.9
      comp=Z,8.6nm,0.7s
X40A  Basin Creek Fa   4.83 117  IAmb_Lg         21 00 19.9
      comp=Z,9.2nm,0.9s
FCAR  Ozark Folk Cen   4.86  99  IAmb_Lg         21 00 17.0
      comp=Z,7.7nm,0.9s
WHAR  Wooly Hollow     4.90 106  IAmb_Lg         21 00 15.3
      comp=Z,8.2nm,0.8s
UALR  University of    5.06 112  IAmb_Lg         21 00 28.8
      comp=Z,9.7nm,1.0s
T25A  Trinidad         5.11 276  IAmb_Lg         21 00 32.0
      comp=Z,7.6nm,1.1s
P40A  Paris            5.45  58  IAmb_Lg         21 00 33.7
      comp=Z,9.3nm,0.9s
CCM   Cathedral Cave   5.55  75  IAmb_Lg         21 00 35.7
      comp=Z,8.5nm,1.1s
PBMO  Poplar Bluff     6.11  88  IAmb_Lg         21 00 54.7
      comp=Z,6.2nm,0.7s
FVM   French Village   6.17  77  IAmb_Lg         21 00 54.8
      comp=Z,7.8nm,0.8s
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*ASRS **12** 20:57:50.7±0.2, 52°N±1°×9°1E±°, h10km, MLh3.1/14, Error ellipse: s-maj=3.1km s-min=1.7km az=136.9, confirmed*
*IDC **12** 20:57:59.3±3.5, 51°.87N×90°.30E, h0km, mb3.3/1, mbtmp2.9/4, ML2.2/3, Error ellipse: s-maj=37.0km s-min=28.8km az=69.0*
*NNC **12** 20:58:05.0±4.1, 52°.25N×89°.97E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=31.7km s-min=20.6km az=95.0, Suspected Mining explosion.*
ISC 12 20:57:51.9±0.8**, 52°.26N**±0°.03×**90°.89E**±0°.03**, h0km, n26, σ1s.41**/48**, 7C-3D, Southwestern Siberia**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op       ISC     h  m  s     ISC
DJO   Djoy, Khakassi   0.56  21 ⇑Pg       Pg     20 58 02.3 -0.3
DJO                              Sg       Sg     20 58 10.5 +0.6
DJOS  Djoyskaya Sosn   0.62  30 ⇑Pg       Pg     20 58 03.6 -0.2
DJOS                             Sg       Sg     20 58 12.2 +0.4
CERR  Cheremushki      0.67  28 ⇑Pg       Pg     20 58 04.8 -0.1
CERR                             Sg       Sg     20 58 14.2 +0.6
ABNR  Abakan           1.50  12  Pg       Pn     20 58 18.5 -1.6
ABNR                             Sg       Sn     20 58 40.7 +0.3
ARDR  Aradan           1.59  77  Pg       Pb     20 58 22.5 +0.3
ARDR                             Sg       Sn     20 58 40.5 -2.2
LUZB  Luzhba, Kemero   1.85 320  Pg       Pb     20 58 27.0 +0.4
LUZB                             Sg       Sg     20 58 52.6 +1.3
TASR  Tashtagol        1.91 286  Pg       Pg     20 58 29.1 +0.6
TASR                             Sg       Sg     20 58 54.6 +1.4
ARTR  Artybash         2.28 260  Pg       Pb     20 58 34.0 +0.1
ARTR                             Sg       Sg     20 59 05.3 +0.2
ULGR  Ulagan, Altay    2.46 229  Pg       Pb     20 58 36.1 -0.9
ULGR                             Sg       Sg     20 59 10.2 -0.8
MALIN Malinovka, Kuz   2.48 299  Pg       Pb     20 58 38.3 +1.0
MALIN                            Sg       Sg     20 59 12.9 +1.2
CUR   Chagan-Uzun      2.69 217  Pn       Pn     20 58 37.7 +1.1
CUR                              Pg       Pb     20 58 40.3 -0.7
CUR                              Sg       Sb     20 59 16.0 +1.4
AKAR  Aktash           2.83 228  Pn       Pn     20 58 39.9 +1.5
AKAR                             Pg       Pb     20 58 44.0 +0.6
AKAR                             Sg       Sg     20 59 21.7 -1.0
CHBI  Chibit, Altay    2.89 229  Pn       Pn     20 58 41.0 +1.8
CHBI                             Pg       Pb     20 58 45.2 +0.9
CHBI                             Sg       Sg     20 59 23.6 -1.0
ELT   Eltsovka         3.00 291  Pg       Pb     20 58 47.5 +1.3
ELT                              Sg       Sg     20 59 28.0 -0.2
GALT  Gorno-Altaysk,   3.06 266  Pg       Pb     20 58 48.8 +1.5
GALT                             Sg       Sg     20 59 29.2 -1.2
ERNS  Erzin            3.34 125  Pg       Pn     20 58 45.0 -0.5
ERNS                             Sg       Sn     20 59 25.9  0.0
BRCR  Berchikul'       3.71 337  Pg       Pb     20 58 59.7 +1.4
BRCR                             Sg       Sg     20 59 51.6 +0.5
SALR  Pechorkino, Sa   3.79 307  Sg       Sg     20 59 53.3 -0.2
ZAA0  Zalesovo Array   4.03 297 ⇓Pg       Pg     20 59 09.5 +0.4
      0.2nm,0.5s,baz=113,slow=14
ZAA0                            ⇑Lg       Lg     20 59 56.4
      2.3nm,0.9s,baz=118,slow=25
ZALV  Zalesovo Beam    4.03 297  Pn       Pb     20 58 59.9 -3.9
      0.4nm,0.3s,baz=104,slow=12,SNR=5.9
ZALV                             Pg       Pg     20 59 09.4 +0.2
      0.8nm,0.3s,baz=107,slow=15,SNR=8.3
ZALV                             Sn       Sb     20 59 49.0 -4.0
      0.9nm,0.3s,baz=127,slow=26,SNR=7.2
ZALV                             Lg       Lg     20 59 58.2
      1.1nm,0.3s,baz=118,slow=25,SNR=4.5
      1.3nm,0.5s
UKR   Ust'-Kan         4.04 253  Pg       Pb     20 59 06.4 +2.4
UKR                              Sg       Sg     21 00 01.0 -0.6
KURK  Kurchatov        7.82 263 ⇓Pn       Pn     20 59 52.2 +5.3
      3.5nm,1.4s,baz=118,slow=25
KURK                            ⇓Sn       Sn     21 01 16.8 +0.8
      1.2nm,0.6s,baz=118,slow=25
KURK                            ⇑Lg       Lg     21 01 54.2
      4.5nm,1.0s,baz=118,slow=25
MK31  Makanchi Array   7.82 229 ⇑Pn       Pn     20 59 54.4 +7.4
      0.9nm,0.8s,baz=46,slow=12,SNR=6.2
MK31                            ⇑Lg       Lg     21 02 00.3
      3.0nm,1.1s,baz=53,slow=28,SNR=3.2
MKAR  Makanchi Array   7.82 229  Pn       Pn     20 59 47.5 +0.6
      0.1nm,0.3s,baz=46,slow=15,SNR=2.8
      0.2nm,0.4s
KURBB Kurchatov Arra   7.90 263  Pn       Pn     20 59 49.7 +1.8
      0.1nm,0.3s,baz=75,slow=15,SNR=3.6
KURBB                            Sn       Sn     21 01 14.7 -3.3
      baz=74,slow=27,SNR=1.5
      0.3nm,0.4s
BRTR  Keskin Array B  40.66 275  P        P      21 05 39.6 +5.7
      0.5nm,0.9s,baz=68,slow=8.0,SNR=2.3
      0.5nm,0.9s
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*NEIC **12** 21:32:58.6±2.0, 17°.66N±0°.05×145°.7E±0°.1, h288km±7km, mb4.2/40, Error ellipse: s-maj=15.0km s-min=7.7km az=93.0*
*IDC **12** 21:32:59.4±0.7, 17°.59N×145°.64E, h300km±7km, mb3.3/13, mbtmp4.2/17, Error ellipse: s-maj=17.3km s-min=8.6km az=87.0*
ISC 12 21:32:58.9±0.4**, 17°.67N**±0°.05×**145°.64E**±0°.08**, h300km, n69, σ1s.22**/71**, mb4.1**/28**, Mariana Islands**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op       ISC     h  m  s     ISC
GUMO  Guam             4.13 191  P        Pn     21 34 06.2 -0.4
      59nm,0.7s,baz=2.0,slow=21,SNR=2.0
GUMO                             S        S      21 34 57.8 -3.1
      88nm,0.4s,baz=309,slow=23,SNR=6.5
GUMO  Guam             4.13 191           Pn     21 34 04.4 -2.3
JCJ   Chichijima       9.91 342  P        Pn     21 35 16.5 +0.6
      32nm,0.6s,baz=259,slow=22,SNR=2.1
JCJ                              S        S      21 37 02.8 -4.9
      14nm,0.5s,baz=267,slow=22,SNR=1.3
JCJ   Chichijima       9.91 342           Pn     21 35 14.8 -1.1
JHJ2  Mitsune         16.24 342  P        P      21 36 28.8 -0.7
JHJ   Hachijo jima 2  16.26 342  P        P      21 36 29.1 -0.6
      19nm,0.3s,baz=267,slow=21,SNR=9.9
JOW   Kunigami        18.46 303  P        P      21 36 54.8 +1.2
      8.6nm,0.4s,baz=120,slow=18,SNR=7.0
JOW   Kunigami        18.46 303  P        P      21 36 54.8 +1.2
JGF   Kuroka          19.32 339  P        P      21 37 03.2 +0.6
JGF                              IAmb     IAmb   21 37 11.0
      comp=Z,5.8nm,1.0s
MJAR  Matsushiro Arr  19.91 342  P        P      21 37 06.9 -1.9
      comp=Z,1.5nm,0.6s,baz=178,slow=8.6,SNR=5.8
MJAR  Matsushiro Arr  19.91 342  IAmb     IAmb   21 37 07.5
      comp=Z,1.5nm,0.7s
MAJO  Matsushiro      19.91 342  P        P      21 37 07.6 -1.2
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MAJO				IAmb	IAmb	21 37 08.3	
	comp=Z,5.0nm,0.7s						
MJB9	**Matsu-Tunnel**	19.92	342	P	P	21 37 07.5	-1.5
MJB9				IAmb	IAmb	21 37 08.3	
	comp=Z,4.9nm,0.7s						
H11N1	**WAKE ISLAND Hy**	20.23	81	T	T	21 59 07.1	
	baz=265,slow=74,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	20.24	81	T	T	21 59 07.6	
	baz=265,slow=74,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	20.25	81	T	T	21 59 08.4	
	baz=265,slow=74,SNR=4.2						
JSD	**Sado**	21.30	344	P	P	21 37 21.5	-0.9
JSD				IAmb	IAmb	21 37 23.5	
	comp=Z,6.4nm,0.6s						
SIJI	**Sorong**	23.24	219	P	P	21 37 41.0	+0.7
	comp=Z,8.9nm,0.8s,baz=46,slow=5.7,SNR=4.8						
	comp=Z,8.9nm,0.8s						
SSLB	**Suanglung**	23.86	289	P	P	21 37 46.7	+0.7
SSLB				IAmb	IAmb	21 37 48.2	
	comp=Z,11nm,0.8s						
KSRS	**Korea Array**	25.12	325	P	P	21 37 57.3	+0.3
	comp=Z,0.9nm,0.4s,baz=144,slow=8.4,SNR=2.7						
KSRS				pP	pwP	21 38 54.5	-0.9
	comp=Z,0.7nm,0.5s,baz=147,slow=9.5,SNR=1.7						
	comp=Z,0.9nm,0.4s						
TOLI2	**Tolitoli**	29.46	239	P	P	21 38 36.3	+0.5
TOLI2				IAmb	IAmb	21 38 37.1	
	comp=Z,6.5nm,0.7s						
COEN	**Coen**	31.52	185	P	P	21 38 53.5	-0.4
COEN				IAmb	IAmb	21 39 05.4	
	comp=Z,8.9nm,1.0s						
MTN	**Manton Dam**	33.54	206	P	P	21 39 11.2	-0.1
MTN				IAmb	IAmb	21 39 23.0	
	comp=Z,12nm,1.1s						
SOEI	**Soe**	34.48	219	P	P	21 39 21.0	+1.5
KNRA	**Kununurra**	37.08	208	P	P	21 39 41.9	+0.6
KNRA				IAmb	IAmb	21 39 42.9	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	38.81	197	P	P	21 39 56.6	+0.9
WB0				IAmb	IAmb	21 39 57.3	
	comp=Z,9.3nm,0.7s						
WR0	**Warramunga Arr**	38.95	197	P	P	21 39 57.5	+0.6
WR0				IAmb	IAmb	21 39 58.2	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	38.98	197	P	P	21 39 58.0	+0.9
WRAB				IAmb	IAmb	21 39 58.3	
	comp=Z,18nm,1.1s						
WB2	**Warramunga Arr**	38.99	197	P	P	21 39 58.2	+1.1
WB2				IAmb	IAmb	21 39 58.5	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	38.99	197	P	P	21 39 57.7	+0.6
	comp=Z,5.4nm,0.7s,baz=14,slow=8.6,SNR=16						
WRA				PcP	PcP	21 42 00.9	0.0
	comp=Z,0.9nm,0.6s,baz=16,slow=3.5,SNR=3.0						
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	38.99	197	IAmb	IAmb	21 39 58.4	
	comp=Z,0.5nm,0.9s						
SANVU	**Saraoutou**	39.18	146	P	P	21 39 58.1	-0.6
PBKT	**Sadao Pong**	42.63	275	P	P	21 40 25.9	-0.9
AS31	**Alice Springs**	42.66	196	P	P	21 40 27.8	+0.9
ASAR	**Alice Springs**	42.66	196	P	P	21 40 26.7	-0.2
	comp=Z,0.9nm,0.4s,baz=19,slow=12,SNR=15						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	42.66	196	P	P	21 40 27.1	+0.2
EIDS	**Eidsvold**	43.11	173	P	P	21 40 29.7	-0.7
SONM	**Songino Array**	43.91	322	P	P	21 40 37.0	+0.3
	comp=Z,0.8nm,0.6s,baz=148,slow=7.2,SNR=5.9						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	43.91	322	P	P	21 40 37.0	+0.3
CMAR	**Chiang Mai Arr**	44.31	279	P	P	21 40 41.8	+1.7
	comp=Z,0.5nm,0.4s,baz=70,slow=6.5,SNR=6.3						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	44.31	279	P	P	21 40 41.3	+1.2
DZM	**Mont Dzumac**	44.44	152	P	P	21 40 41.8	+0.8
	comp=Z,7.5nm,0.9s,baz=12,slow=8.5,SNR=5.6						
	comp=Z,7.5nm,0.9s						
DZM	**Mont Dzumac**	44.44	152	P	P	21 40 41.0	-0.1
DZM				IAmb	IAmb	21 40 43.6	
	comp=Z,8.9nm,1.0s						
OUENC	**Ouen Island, N**	44.92	152	P	P	21 40 45.0	+0.3
OUENC				IAmb	IAmb	21 40 46.4	
	comp=Z,5.2nm,0.8s						
KULM	**Kulim**	45.65	260	P	P	21 40 51.3	+0.6
KULM				IAmb	IAmb	21 41 08.4	
	comp=Z,9.3nm,1.1s						
MBWA	**Marble Bar**	46.20	214	P	P	21 40 55.1	+0.4
MBWA				IAmb	IAmb	21 40 56.5	
	comp=Z,15nm,1.1s						
PSA00	**Pilbara Seismi**	46.48	214	P	P	21 40 56.7	-0.2
PSA00				IAmb	IAmb	21 41 16.5	
	comp=Z,8.5nm,0.8s						
PSA00	**Pilbara Seismi**	46.48	214	P	P	21 40 56.4	-0.5
PSA00				IAmb	IAmb	21 41 06.7	
	comp=Z,1.9nm,0.8s						
KNTN	**Kanton**	46.68	112	P	P	21 40 57.7	-0.9
MNAI	**Manna**	47.47	247	P	P	21 41 04.2	-0.4
STKA	**Stephens Creek**	49.42	185	P	P	21 41 18.1	-1.0
	comp=Z,3.8nm,0.7s,baz=3.5,slow=7.0,SNR=14						
	comp=Z,3.8nm,0.7s						
STKA	**Stephens Creek**	49.42	185	P	P	21 41 19.4	+0.4
GIRL	**Giralia**	50.49	219	P	P	21 41 28.8	+1.6
MORW	**Morawa**	54.56	212	P	P	21 41 57.1	+0.3
MORW				IAmb	IAmb	21 41 57.6	
	comp=Z,11nm,0.8s						
MLOA	**Mauna Loa Obse**	55.50	78	P	P	21 42 03.7	-0.6
RSD	**Rainshed**	55.79	78	P	P	21 42 07.3	+1.3
OUZ	**Omahuta**	58.92	153	P	P	21 42 28.2	+1.1
MK31	**Makanchi Array**	59.13	314	P	P	21 42 28.9	+0.3
MKAR	**Makanchi Array**	59.13	314	P	P	21 42 29.1	+0.5
	comp=Z,0.5nm,0.7s,baz=90,slow=9.6,SNR=7.4						
	comp=Z,0.5nm,0.7s						
MAKZ	**Makanchi**	59.35	314	P	P	21 42 30.5	+0.4
KURK	**Kurchatov**	62.00	318	P	P	21 42 48.0	+0.3
KDJ	**Kajisay**	62.48	309	P	P	21 42 51.7	+0.4
ILAR	**Eielson Array**	64.58	26	P	P	21 43 04.2	-0.1
	comp=Z,0.2nm,0.6s,baz=262,slow=4.7,SNR=4.2						
	comp=Z,0.2nm,0.6s						
KHZ	**Kahutara**	65.09	158	P	P	21 43 06.0	-1.8
BMAR	**Burnt Mountain**	66.07	23	P	P	21 43 15.6	+1.7
KKAR	**Karatay Array**	67.38	310	P	P	21 43 23.1	+0.6
YKA	**Yellowknife Ar**	78.92	28	P	P	21 44 31.2	+2.0
	comp=Z,0.2nm,0.6s,baz=289,slow=5.1,SNR=3.8						
YKA				pP	pP	21 45 39.3	+1.8
	comp=Z,0.6nm,0.7s,baz=284,slow=5.2,SNR=4.2						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	83.81	52	P	P	21 44 56.9	+1.4
	comp=Z,0.4nm,0.6s,baz=290,slow=5.9,SNR=3.7						
NVAR				pP	pwP	21 46 07.9	-1.8
	comp=Z,0.6nm,0.7s,baz=278,slow=7.0,SNR=3.9						
	comp=Z,0.4nm,0.6s						
FINES	**FINESS Array B**	87.79	335	P	P	21 45 13.5	-0.6
	comp=Z,3.6nm,1.1s,baz=300,slow=13,SNR=2.1						
FINES				pP	pwP	21 46 27.2	-1.7
	comp=Z,2.9nm,1.0s,baz=344,slow=6.2,SNR=2.0						
	comp=Z,3.6nm,1.1s						

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*IDC **12** 21:36:33.7±1.2, 53°.51S×141°.90E, h0^{km}, mb4.4/5, mbtmp4.4/5, MS3.5/9, Error ellipse: s-maj=106.5km s-min=17.2km az=83.0*
*NEIC **12** 21:36:35.3±1.8, 53°.5S±0°.1×141°.3E±0°.3, h10^{km}±2^{km}, mb4.5/18, Error ellipse: s-maj=27.7km s-min=19.6km az=95.0*
ISC 12 21:36:35.1±0.6, **53°.55S**±0°.08×**141°.3E**±0°.2, **h10**^{km}, **n41**, σ**1^{s}07**/27, **mb4.5**/12, **MS3.5**/9, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	16.24	12	P	P	21 40 26.6	+0.3
TOO				IAmb	IAmb	21 40 31.9	
	comp=Z,36nm,1.2s						
CASY	**Casey**	19.73	218	P	P	21 41 03.2	-1.3
LBZ	**Lake Benmore**	20.93	76	P	P	21 41 16.7	-1.0
LBZ				IAmb	IAmb	21 41 16.8	
	comp=Z,86nm,1.5s						
BBOO	**Buckleboo**	21.07	348	P	P	21 41 20.0	+0.7
BBOO				IAmb	IAmb	21 41 30.7	
	comp=Z,24nm,1.2s						
STKA	**Stephens Creek**	21.66	1	P	P	21 41 27.2	+1.5
	comp=Z,14nm,0.7s,baz=158,slow=9.5,SNR=20						
STKA				LR	LR	21 47 34.2	
	comp=Z,64nm,18.7s,baz=202,slow=30						
	comp=Z,14nm,0.7s						
FORT	**Forrest**	24.70	332	P	P	21 41 56.2	-0.1
VNDA	**Vanda**	25.20	170	P	P	21 42 00.6	+0.2
	comp=Z,3.2nm,0.7s,baz=328,slow=9.9,SNR=20						
	comp=Z,3.2nm,0.7s						
VNDA	**Vanda**	25.20	170	P	P	21 42 00.4	0.0
VNDA				IAmb	IAmb	21 42 16.7	
	comp=Z,8.2nm,1.1s						
SBA	**Scott Base**	26.05	168	P	P	21 42 10.9	+2.9
SBA				IAmb	IAmb	21 42 16.4	
	comp=Z,8.8nm,1.5s						
H01W1	**Cape Leeuwin H**	26.70	303	T	T	22 09 51.3	
	baz=142,slow=75,SNR=72						
H01W2	**Cape Leeuwin H**	26.70	303	T	T	22 09 54.0	
	baz=142,slow=75,SNR=64						
H01W3	**Cape Leeuwin H**	26.71	303	T	T	22 09 56.1	
	baz=142,slow=75,SNR=53						
BFZ	**Birch Farm**	26.74	75	P	P	21 42 14.2	-0.3
NWAO	**Narrogin (SRO)**	26.84	311	IAmb	IAmb	21 42 16.4	
	comp=Z,10nm,0.8s						
NWAO	**Narrogin (SRO)**	26.84	311	P	P	21 42 15.4	-0.1
NWAO	**Narrogin (SRO)**	26.84	311	P	P	21 42 15.4	-0.1
ASAR	**Alice Springs**	30.36	346	P	P	21 42 46.4	-0.7
	comp=Z,3.0nm,0.7s,baz=165,slow=10.0,SNR=31						
	comp=Z,3.0nm,0.7s						
AS31	**Alice Springs**	30.36	346	P	P	21 42 46.5	-0.5
CTA	**Charters Tower**	33.62	8	LR	LR	21 55 53.3	
	comp=Z,45nm,18.5s,baz=262,slow=35						
WR0	**Warramunga Arr**	33.93	349	P	P	21 43 17.4	-0.9
WB2	**Warramunga Arr**	33.97	348	P	P	21 43 17.9	-0.7
WB2				IAmb	IAmb	21 43 25.7	
	comp=Z,9.5nm,0.9s						
WRA	**Warramunga Arr**	33.98	348	P	P	21 43 17.2	-1.5
	comp=Z,4.8nm,0.8s,baz=174,slow=7.6,SNR=25						
	comp=Z,4.8nm,0.8s						
WRA	**Warramunga Arr**	33.98	348	P	P	21 43 17.8	-0.9
WB0	**Warramunga Arr**	34.14	348	P	P	21 43 19.0	-1.2
WB0				IAmb	IAmb	21 43 24.5	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	36.56	180	P	P	21 43 39.8	-1.0
	comp=Z,7.2nm,0.9s,baz=333,slow=4.3,SNR=12						
QSPA				LR	LR	21 56 08.5	
	comp=Z,42nm,22.0s,baz=354,slow=32						
	comp=Z,7.2nm,0.9s						
QSPA	**South Pole Qui**	36.56	180	P	P	21 43 40.7	-0.1
QSPA				IAmb	IAmb	21 43 42.5	
	comp=Z,12nm,1.1s						
DZM	**Mont Dzumac**	36.79	41	LR	LR	21 55 05.9	
	comp=Z,87nm,21.9s,baz=251,slow=30						
MAW	**Mawson**	38.09	217	LR	LR	21 57 36.7	
	comp=Z,87nm,20.1s,baz=110,slow=33						
RAO	**Raoul Island**	38.28	67	LR	LR	21 57 03.4	
	comp=Z,50nm,18.2s,baz=339,slow=32						
PMG	**Port Moresby**	44.27	8	LR	LR	22 01 42.9	
	comp=Z,58nm,19.2s,baz=46,slow=34						
BATI	**Baumata**	45.49	335	LR	LR	22 03 46.4	
	comp=Z,48nm,18.3s,baz=192,slow=36						
BELA	**Belgrano 2**	48.81	181	P	P	21 45 19.2	-0.5
BELA				IAmb	IAmb	21 45 21.1	
	comp=Z,6.1nm,1.0s						
SNAA	**Sanae**	52.54	194	LR	LR	22 07 41.6	
	comp=Z,102nm,19.3s,baz=124,slow=36						
SNAA	**Sanae**	52.54	194	P	P	21 45 48.1	+0.2
SNAA				IAmb	IAmb	21 45 48.7	
	comp=Z,5.7nm,1.1s						
H08S2	**Diego Garcia H**	71.35	283	T	T	23 05 35.1	
	baz=145,slow=76,SNR=10.0						
H08S1	**Diego Carcia H**	71.36	283	T	T	23 05 36.1	
	baz=145,slow=76,SNR=5.2						
H08S3	**Diego Garcia H**	71.37	283	T	T	23 05 35.4	
	baz=145,slow=76,SNR=8.5						
FINES	**FINESS Array B**	145.69	310	PKPbc	PKPab	21 56 13.1	0.0
	comp=Z,0.4nm,0.5s,baz=113,slow=29,SNR=3.4						
ARCES	**ARCESS Array B**	147.41	324	PKPbc	PKPab	21 56 19.2	-0.4
	comp=Z,4.9nm,1.0s,baz=70,slow=1.4,SNR=5.0						
GERES	**GERESS Array B**	147.46	283	PKPbc	PKPbc	21 56 19.4	+1.0
	comp=Z,0.6nm,0.7s,baz=145,slow=4.9,SNR=7.0						
ESDC	**Sonseca Array**	152.72	254	PKPbc	PKiKP	21 56 33.9	+2.2
	comp=Z,0.4nm,0.7s,baz=102,slow=1.8,SNR=5.1						

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*MOS **12** 21:51:52.9±1.0, 46°.85N×150°.46E, h175^{km}, mb4.2/12, Error ellipse: s-maj=13.5km s-min=6.8km az=62.1*
*NEIC **12** 21:51:54.6±1.6, 46°.9N±0°.1×150°.4E±0°.1, h169^{km}±4^{km}, mb4.1/83, Error ellipse: s-maj=16.4km s-min=11.9km az=148.0*
*JMA **12** 21:51:54.9±0.6, 46°N±4°×15°1E±°, h200^{km}, MV4.2/13, KURILE ISLANDS REGION*
*SKHL **12** 21:51:54.9±0.2, 46°.60N×150°.30E, h187^{km}±11^{km}, mb5.1/3, msha5.6/3*
*IDC **12** 21:51:55.5±1.9, 46°.85N×150°.48E, h184^{km}±18^{km}, mb3.6/18, mbtmp4.1/22, Error ellipse: s-maj=16.2km s-min=11.3km az=146.0*
ISC 12 21:51:53.1±0.5, **46°.67N**±0°.07×**150°.61E**±0°.07, **h167**^{km}, **n240**, σ**1^{s}48**/238, **mb4.1**/68, **1C**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	2.39	234*c*	*i*PN	Pn	21 52 36.0	+2.3
KUR				*e*S	Sn	21 53 10.0	+4.8
KUR				pmax	pmax		
	comp=Z,412nm,0.5s						
KUR				pmax	pmax		
	comp=N,118nm,0.3s						
KUR				smax	smax		
	comp=N,347nm,0.3s						
KUR				smax	smax		
	comp=E,263nm,0.4s						
KUR	**Kuril'sk**	2.39	234	*i* P	Pn	21 52 36.0	+2.3
KUR				AMB	AMB	21 52 36.4	
	comp=E,410nm,0.5s						
KUR				*e*S	Sn	21 53 08.2	+3.0
KUR				A	A	21 53 14.6	
	comp=E,350nm,0.4s						
KUR				A	A	21 53 14.6	
	comp=E,260nm,0.4s						
SHO	**Shikotan**	3.87	225	*e*PN	Pn	21 52 51.2	-0.8
SHO				pmax	pmax		
	comp=N,31nm,0.3s						
SHO				pmax	pmax		
	comp=E,33nm,0.3s						
SHO				pmax	pmax		
	comp=Z,75nm,0.3s						
SHO	**Shikotan**	3.87	225	*i* P	Pn	21 52 51.7	-0.3
SHO				AMB	AMB	21 52 52.1	
	comp=Z,80nm,0.4s						
SHO				*i* S	Sn	21 53 36.0	-1.9
SHO				A	A	21 53 40.9	
	comp=Z,210nm,0.4s						
SHO				A	A	21 53 40.9	
	comp=Z,400nm,0.4s						
YUK	**Yuzh-Kuril'sk**	4.26	234	*e*PN	Pn	21 52 58.5	+1.5
YUK				*e*S	Sn	21 53 47.4	+0.4
YUK				pmax	pmax		
	comp=Z,210nm,0.2s						
YUK				pmax	pmax		
	comp=N,38nm,0.1s						
YUK				pmax	pmax		
	comp=E,30nm,0.1s						
YUK				smax	smax		
	comp=N,328nm,0.2s						
YUK				smax	smax		
	comp=E,21nm,0.1s						
YUK	**Yuzh-Kuril'sk**	4.26	234	*e*P	Pn	21 52 58.6	+1.5
YUK				AMB	AMB	21 52 59.4	
	comp=E,180nm,0.6s						
YUK				*e*S	Sn	21 53 48.1	+1.1
YUK				A	A	21 53 51.7	
	comp=E,160nm,0.6s						
YUK				A	A	21 53 51.7	
	comp=E,320nm,0.6s						
RUSJ	**Misakicho**	4.56	238	*e*PN	Pn	21 53 03.7	+2.7
RUSJ				*e*S	Sn	21 54 00.9	+6.8
JRA	**Rausu**	4.74	237	*e*P	Pn	21 53 04.8	+1.6
NEM2	**Nemuro 2**	4.78	228	*e*P	Pn	21 53 03.0	-0.8
NEM2				*e*S	Sn	21 53 55.3	-3.8
NMR	**Nemuro--Hokkai**	4.78	228	*e*PN	Pn	21 53 03.1	-0.7
NMR				*e*S	Sn	21 53 54.9	-4.3
NMR	**Nemuro--Hokkai**	4.78	228	*e*P	Pn	21 53 03.2	-0.6
JNK	**Nakash**	5.18	236	*e*P	Pn	21 53 10.4	+1.3
JNK				*e*S	Sn	21 54 09.2	+0.5
YSS	**Yuzh-Sakhalins**	5.40	276	Pn	Pn	21 53 10.8	-1.1
YSS	**Yuzh-Sakhalins**	5.40	276	PN	Pn	21 53 10.8	-1.1
JTKR	**Abashiri--Toko**	5.44	243	*e*P	Pn	21 53 14.5	+2.0
JTKR				*e*S	Sn	21 54 17.0	+2.3
AKK	**Akkeshi**	5.49	230	*e*P	Pn	21 53 12.9	-0.2
JAK	**Akkeshi**	5.58	231	*e*S	Sn	21 54 14.5	-3.6
JAR	**Ashorobuto**	5.91	238	*e*P	Pn	21 53 20.0	+1.4
JAR				*e*S	Sn	21 54 26.6	+0.9
JOB	**Onbets**	6.12	234	*e*P	Pn	21 53 21.5	+0.1
JOB				*e*S	Sn	21 54 28.3	-2.4
JKA	**Kamikawa-asahi**	6.19	249	Pn	Pn	21 53 23.9	+1.6
JKA	**Kamikawa-asahi**	6.19	249	*e*P	Pn	21 53 24.0	+1.6
ASAJ	**Asahikawa**	6.19	249	P	Pn	21 53 25.7	+3.3
	comp=E,26nm,0.4s,baz=66,slow=12,SNR=48						
ASAJ	**Asahikawa**	6.19	249	PN	Pn	21 53 24.0	+1.6
JKK2	**Kamakawa 2**	6.21	246	*e*P	Pn	21 53 25.1	+2.4
JCH	**Churui**	6.57	235	*e*P	Pn	21 53 26.7	-0.7
JCH				*e*S	Sn	21 54 36.7	-4.8
ERM	**Erimo**	7.08	232	Pn	Pn	21 53 34.4	+0.2
ERM	**Erimo**	7.08	232	PN	Pn	21 53 34.4	+0.2
JNBK	**Urakawa-nobuka**	7.13	235	*e*P	Pn	21 53 33.2	-1.6
JNBK				*e*S	Sn	21 54 47.1	-7.7
JEW	**Eniwo**	7.56	243	Pn	Pn	21 53 40.0	-0.5
PEA0B	**Petropavlovsk-**	7.91	33	Pn	Pn	21 53 43.7	-1.3
PEA0B	**Petropavlovsk-**	7.91	33	PN	Pn	21 53 43.7	-1.3
PETK	**Petropavlovsk-**	7.91	33	P	Pn	21 53 44.5	-0.4
	comp=E,2.6nm,0.5s,baz=210,slow=19,SNR=12						
JANG	**Nango**	9.12	230	*e*P	Pn	21 53 57.8	-3.3
JANG				*e*S	Sn	21 55 32.0	-11
JTH	**Tanohata**	9.26	227	*e*P	Pn	21 53 59.1	-3.9
JSD	**Sado**	12.55	231	P	P	21 54 53.2	+2.4
USRK	**Ussuriysk Ar.**	13.31	266	P	Pn	21 54 56.4	+1.0
	comp=E,3.1nm,0.7s,baz=161,slow=30,SNR=2.0						
MJB9	**Matsu-Tunnel**	13.71	227	P	P	21 55 06.1	+2.3
MAJO	**Matsushiro**	13.71	227	P	P	21 55 06.2	+2.4
MAJO	**Matsushiro**	13.71	227	P	P	21 55 06.2	+2.4
MJAR	**Matsushiro Arr**	13.71	227	P	P	21 55 03.9	+0.2
	comp=E,2.7nm,0.7s,baz=30,slow=13,SNR=8.3						
JGF	**Kuroka**	14.87	227		P	21 55 18.6	+2.0
GSTR	**Great Sitkin T**	22.24	64	P	P	21 56 35.5	-0.4
TIXI	**Tiksi**	27.09	345	P	P	21 57 18.0	-1.6
TIXI				IAmb	IAmb	21 57 18.4	
	comp=Z,2.4nm,0.5s						
TIXI	**Tiksi**	27.09	345	P	P	21 57 18.0	-1.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TIXI	**Tiksi**	27.09	345	*e*P	P	21 57 18.0	-1.6
ANM	**Nome**	29.79	37	P	P	21 57 44.7	+1.0
ANM				IAmb	IAmb	21 57 51.9	
	comp=Z,4.5nm,1.0s						
ANM	**Nome**	29.79	37	P	P	21 57 44.7	+1.0
ANM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	30.00	148	T	T	22 29 20.4	
	baz=338,slow=75,SNR=65						
H11N1	**WAKE ISLAND Hy**	30.01	148	T	T	22 29 23.4	
	baz=338,slow=75,SNR=56						
H11N3	**WAKE ISLAND Hy**	30.01	148	T	T	22 29 21.1	
	baz=338,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	31.05	149	T	T	22 30 41.1	
	baz=338,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	31.06	149	T	T	22 30 41.8	
	baz=338,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	31.07	149	T	T	22 30 40.6	
	baz=338,slow=76,SNR=51						
N18K	**Kilae Creek**	33.61	46	P	P	21 58 18.2	+1.0
N18K				IAmb	IAmb	21 58 19.6	
	comp=Z,3.2nm,0.8s						
N18K	**Kilae Creek**	33.61	46	P	P	21 58 18.1	+0.9
	baz=270						
TTA	**Tatalina**	33.62	42	P	P	21 58 17.9	+0.6
TTA	**Tatalina**	33.62	42	P	P	21 58 17.9	+0.6
TTA	**Tatalina**	33.62	42	P	P	21 58 17.8	+0.6
	baz=267						
SVW2	**Sparrevohn**	33.77	45	P	P	21 58 19.2	+0.7
SVW2				IAmb	IAmb	21 58 19.9	
	comp=Z,1.8nm,0.6s						
L19K	**White Mountain**	34.13	43	P	P	21 58 22.3	+0.7
N19K	**Bonanza Creek**	34.30	45	P	P	21 58 23.6	+0.4
N19K	**Bonanza Creek**	34.30	45	P	P	21 58 23.4	+0.2
	baz=272						
M19K	**Big River Lodg**	34.34	43	P	P	21 58 24.0	+0.5
M19K	**Big River Lodg**	34.34	43	P	P	21 58 23.9	+0.5
	baz=270						
O19K	**Port Alsworth**	34.40	46		S	22 03 41.5	+2.5
K20K	**Telida**	34.53	41	P	P	21 58 26.2	+1.2
K20K	**Telida**	34.53	41	P	P	21 58 24.1	-0.8
	baz=268						
J20K	**Nowinta River**	34.53	39	P	P	21 58 26.1	+1.0
J20K				IAmb	IAmb	21 58 27.8	
	comp=Z,2.6nm,0.7s						
J20K	**Nowinta River**	34.53	39	P	P	21 58 25.3	+0.3
	baz=267						
L20K	**Farewell, AK**	34.59	42	P	P	21 58 26.4	+0.8
	baz=270						
Q19K	**Cape Douglas,**	34.82	49	P	P	21 58 28.1	+0.6
A21K	**Barrow**	34.85	27	P	P	21 58 27.2	-0.4
IMAR	**Indian Mountai**	34.85	36	P	P	21 58 27.8	+0.1
H21K	**Melozitna Rive**	35.21	37	P	P	21 58 31.2	+0.4
H21K				IAmb	IAmb	21 58 32.8	
	comp=Z,3.8nm,1.1s						
H21K	**Melozitna Rive**	35.21	37	P	P	21 58 31.3	+0.5
	baz=266,SNR=5.5						
PPLA	**Purkeypile**	35.37	42	P	P	21 58 33.3	+0.9
PPLA				IAmb	IAmb	21 58 39.6	
	comp=Z,4.5nm,0.9s						
PPLA	**Purkeypile**	35.37	42	P	P	21 58 33.8	+1.4
	baz=270						
CAST	**Castle Rocks**	35.42	41	P	P	21 58 34.0	+1.3
CAST				IAmb	IAmb	21 58 34.1	
	comp=Z,2.5nm,0.6s						
CAST	**Castle Rocks**	35.42	41	P	P	21 58 33.6	+0.9
	baz=270,SNR=5.4						
I21K	**Tanana**	35.52	38	P	P	21 58 33.9	+0.5
	baz=268						
BPAW	**Bear Paw Mtn.**	35.92	40	P	P	21 58 37.3	+0.5
BPAW	**Bear Paw Mtn.**	35.92	40	P	P	21 58 37.3	+0.5
	baz=270						
KTH	**Kantishna Hill**	35.94	41	P	P	21 58 38.2	+1.1
CNPM	**China Poot**	36.00	47	P	P	21 58 38.0	+0.4
BRLK	**Bradley Lake**	36.15	47	P	P	21 58 38.8	-0.1
BRLK				IAmb	IAmb	21 58 40.5	
	comp=Z,5.2nm,0.8s						
BRSE	**Bradley Lake S**	36.23	47	P	P	21 58 40.6	+1.0
	baz=276						
TRF	**Thorofare Moun**	36.23	41	P	P	21 58 40.3	+0.6
TRF				IAmb	IAmb	21 58 41.0	
	comp=Z,2.0nm,0.6s						
TRF	**Thorofare Moun**	36.23	41	P	P	21 58 40.6	+0.9
	baz=271						
COLD	**Coldfoot**	36.37	34	P	P	21 58 41.3	+0.7
COLD				IAmb	IAmb	21 58 42.1	
	comp=Z,2.4nm,0.8s						
COLD	**Coldfoot**	36.37	34	P	P	21 58 41.1	+0.4
	baz=266,SNR=5.2						
H23K	**Yukon River**	36.56	37	P	P	21 58 42.9	+0.6
H23K	**Yukon River**	36.56	37	P	P	21 58 43.3	+1.0
	baz=269,SNR=5.2						
I23K	**Minto, Yukon-K**	36.63	38	P	P	21 58 43.7	+0.9
I23K				IAmb	IAmb	21 58 44.1	
	comp=Z,1.7nm,0.5s						
I23K	**Minto, Yukon-K**	36.63	38	P	P	21 58 43.5	+0.7
	baz=270						
TOLK	**Toolik Lake Re**	36.73	32	P	P	21 58 44.4	+0.7
TOLK				IAmb	IAmb	21 58 44.8	
	comp=Z,3.6nm,0.6s						
TOLK	**Toolik Lake Re**	36.73	32	P	P	21 58 44.2	+0.5
	baz=265,SNR=9.0						
MDM	**Murphy Dome**	37.11	38	IAmb	IAmb	21 58 48.5	
	comp=Z,3.7nm,0.9s						
WRH	**Wood River Hil**	37.18	39	P	P	21 58 47.8	+0.3
WRH				IAmb	IAmb	21 58 49.0	
	comp=Z,2.7nm,0.5s						
KNK	**Knik Glacier**	37.19	44	P	P	21 58 47.6	-0.1
	baz=276						
SML	**Sawmill**	37.22	43	P	P	21 58 48.8	+0.9
SML	**Sawmill**	37.22	43	P	P	21 58 48.8	+0.9
SML	**Sawmill**	37.22	43	P	P	21 58 48.1	+0.2
	baz=275,SNR=8.3						
H24K	**Noodor Dome**	37.25	37	P	P	21 58 48.9	+0.8
H24K	**Noodor Dome**	37.25	37	P	P	21 58 49.3	+1.1
	baz=270						
TCOL	**CIGO, UAF Yank**	37.27	38	P	P	21 58 49.1	+0.9
	baz=272						
COLA	**College**	37.27	38	P	P	21 58 49.1	+0.9
	baz=272						
CCB	**Clear Creek Bu**	37.30	39	P	P	21 58 49.2	+0.7
WAT6	**Susitna Watana**	37.43	42	P	P	21 58 49.4	-0.4
	baz=275						
POKR	**Poker Plat Res**	37.44	38	P	P	21 58 50.9	+1.1
POKR	**Poker Plat Res**	37.44	38	P	P	21 58 50.8	+1.1
	baz=272						

DHY	Denali Highway	37.56	41	P	P	21 58 51.2	+0.3
DHY				IAmb	IAmb	21 58 51.6	
	comp=Z,2.4nm,0.7s						
DHY	Denali Highway	37.56	41	P	P	21 58 50.9	0.0
	baz=274						
HDA	Harding Lake	37.67	39	P	P	21 58 51.5	-0.2
	baz=273,SNR=11						
IL31		37.69	38	IAmb	IAmb	21 58 52.8	
	comp=Z,1.9nm,0.6s						
ILAR	Eielson Array	37.69	38	P	P	21 58 52.0	+0.2
	comp=Z,1.5nm,0.5s,baz=266,slow=6.9,SNR=36						
	comp=Z,1.5nm,0.5s						
SCM	Sheep Creek Mo	37.69	43	P	P	21 58 52.9	+1.0
SCM	Sheep Creek Mo	37.69	43	P	P	21 58 52.9	+1.0
SCM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SCM	Sheep Creek Mo	37.69	43	P	P	21 58 53.1	+1.2
	baz=276						
FID	Port Fidalgo	38.22	45	P	P	21 58 53.4	-2.9
FID				IAmb	IAmb	21 58 57.4	
	comp=Z,3.3nm,0.9s						
K24K	Donnelly Dome	38.22	40	P	P	21 58 56.0	-0.3
	baz=275						
J25K	Salcha River,	38.34	39	P	P	21 58 56.8	-0.5
J25K				IAmb	IAmb	21 58 58.2	
	comp=Z,1.7nm,0.5s						
J25K	Salcha River,	38.34	39	P	P	21 58 56.5	-0.9
	baz=274						
KLU	Klutina	38.39	44	P	P	21 58 58.1	+0.4
KLU				IAmb	IAmb	21 58 59.7	
	comp=Z,4.4nm,1.2s						
KLU	Klutina	38.39	44	P	P	21 58 58.2	+0.4
	baz=278						
BMAR	Burnt Mountain	38.55	34	P	P	21 59 00.7	+1.7
HARP	HAARP	38.64	42	P	P	21 59 00.3	+0.5
	baz=277						
RIDG	Independent Ri	38.64	40	P	P	21 58 59.4	-0.4
RIDG				IAmb	IAmb	21 59 00.4	
	comp=Z,2.8nm,0.7s						
RIDG	Independent Ri	38.64	40	P	P	21 58 59.2	-0.6
	baz=276						
SCRK	Sand Creek	39.00	40	P	P	21 59 02.9	0.0
SCRK				IAmb	IAmb	21 59 03.1	
	comp=Z,2.1nm,0.5s						
SCRK	Sand Creek	39.00	40	P	P	21 59 02.6	-0.3
	baz=276,SNR=5.8						
N25K	Chitina, Valde	39.01	43	P	P	21 59 03.3	+0.4
N25K	Chitina, Valde	39.01	43	P	P	21 59 03.4	+0.5
	baz=279						
BMRM	Bremner River	39.10	44	P	P	21 59 04.1	+0.5
	baz=279						
J26L	Joseph Creek	39.13	39	P	P	21 59 03.3	-0.6
	baz=276						
RAGM	Ragged Mountai	39.16	45	P	P	21 59 04.2	+0.1
KAIM	Kayak Island	39.36	46	P	P	21 59 12.7	+6.9
	baz=281						
GLB	Gilahina Butte	39.40	44	P	P	21 59 06.9	+0.7
VRDI	Verde Repeater	39.61	44	P	P	21 59 09.0	+1.0
BERG	Berg Lake	39.63	45	P	P	21 59 09.9	+1.9
BERG				IAmb	IAmb	21 59 21.4	
	comp=Z,4.1nm,1.0s						
M26K	Nabesna, AK	39.64	42	P	P	21 59 09.6	+1.5
M26K	Nabesna, AK	39.64	42	P	P	21 59 09.1	+1.0
	baz=279,SNR=6.1						
K27K	Chicken	39.83	39	P	P	21 59 10.4	+0.8
K27K				IAmb	IAmb	21 59 11.3	
	comp=Z,4.8nm,0.9s						
K27K	Chicken	39.83	39	P	P	21 59 10.5	+0.9
	baz=278						
WAX	Waxell Ridge	40.04	45	P	P	21 59 12.7	+1.2
WAX				IAmb	IAmb	21 59 13.5	
	comp=Z,5.3nm,0.9s						
L27K	Beaver Creek,	40.07	41	P	P	21 59 13.1	+1.5
L27K	Beaver Creek,	40.07	41	P	P	21 59 12.8	+1.1
	baz=279,SNR=14						
BCAR	Beaver Creek A	40.09	41	P	P	21 59 13.4	+1.6
EGAK	Eagle	40.13	38	IAmb	IAmb	21 59 12.5	
	comp=Z,3.1nm,0.6s						
EGAK	Eagle	40.13	38	P	P	21 59 12.1	+0.1
	baz=278,SNR=6.0						
M27K	Edge Creek, AK	40.16	42	P	P	21 59 13.8	+1.2
M27K	Edge Creek, AK	40.16	42	P	P	21 59 13.9	+1.4
	baz=280						
ISLE	Juniper Island	40.26	45	P	P	21 59 14.4	+1.1
ISLE				IAmb	IAmb	21 59 15.0	
	comp=Z,5.3nm,0.9s						
BARN	Barnard Glacie	40.49	44	P	P	21 59 16.6	+1.3
BARN				IAmb	IAmb	21 59 17.4	
	comp=Z,4.2nm,1.1s						
BVCY	Beaver Creek	40.62	42	P	P	21 59 17.2	+1.1
	baz=281						
CTGM	Chitina Glacie	40.67	44	P	P	21 59 17.7	+1.0
CTGM				IAmb	IAmb	21 59 18.6	
	comp=Z,5.9nm,1.0s						
TABL	Table Mountain	40.87	45	P	P	21 59 18.8	+0.4
TABL				IAmb	IAmb	21 59 37.4	
	comp=Z,4.6nm,0.8s						
YUK3	Moose Creek	40.92	43	P	P	21 59 19.7	+0.9
	baz=282						
I29M	Ogilvie Camp,	41.25	37	IAmb	IAmb	21 59 22.9	
	comp=Z,3.9nm,0.7s						
I29M	Ogilvie Camp,	41.25	37	P	P	21 59 22.3	+1.1
	baz=279,SNR=6.6						
ZALV	Zalesovo Beam	41.26	305	PcP	PcP	22 01 16.8	0.0
	comp=Z,0.5nm,0.5s,baz=82,slow=2.1,SNR=3.8						
EPYK	Eagle Plains	41.73	35	IAmb	IAmb	21 59 27.2	
	comp=Z,8.0nm,1.1s						
EPYK	Eagle Plains	41.73	35	P	P	21 59 26.2	+1.0
	baz=279,SNR=6.0						
YUK6	Outpost Mounta	42.09	44	P	P	21 59 29.6	+1.2
	baz=284						
M30M	Minto, Yukon	42.44	41	P	P	21 59 32.8	+1.9
M30M	Minto, Yukon	42.44	41	P	P	21 59 32.6	+1.7
	baz=284						
HYT	Haines Junctio	42.52	44	P	P	21 59 33.1	+1.3
HYT				IAmb	IAmb	21 59 35.0	
	comp=Z,6.1nm,1.0s						
HYT	Haines Junctio	42.52	44	P	P	21 59 33.2	+1.4
	baz=285,SNR=6.5						
N30M	Aishikik Lake	42.56	43	P	P	21 59 33.4	+1.4
	baz=284						
INK	Inuvik	42.64	32	P	P	21 59 33.4	+1.0
INK				IAmb	IAmb	21 59 34.1	
	comp=Z,7.4nm,1.1s						
INK	Inuvik	42.64	32	P	P	21 59 33.4	+1.0
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	42.64	32	P	P	21 59 33.3	+0.9
	baz=280,SNR=6.5						
N31M	Braeburn, Yuko	43.16	42	P	P	21 59 38.5	+1.7
	baz=285						
M31M	Drury Creek, Y	43.61	41	P	P	21 59 41.8	+1.5
M31M				IAmb	IAmb	21 59 42.5	
	comp=Z,3.3nm,0.8s						
M31M	Drury Creek, Y	43.61	41	P	P	21 59 41.8	+1.5
	baz=286,SNR=5.9						
A36M	Sachs Harbour	44.69	26	P	P	21 59 49.6	+0.9
MK31	Makanchi Array	45.45	296	P	P	21 59 54.8	-0.3
MK31	Makanchi Array	45.45	296	P	P	21 59 54.8	-0.3
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	Makanchi Array	45.45	296	P	P	21 59 54.8	-0.3
	comp=Z,0.7nm,0.6s,baz=66,slow=7.2,SNR=8.1						
	comp=Z,0.7nm,0.6s						
MAKZ	Makanchi	45.63	297	P	P	21 59 56.5	0.0
MAKZ	Makanchi	45.63	297	P	P	21 59 56.5	0.0
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
C36M	Paulatuk	45.75	30	P	P	21 59 57.7	+0.7
C36M				IAmb	IAmb	22 00 17.2	
	comp=Z,7.7nm,1.1s						
EUNU	Eureka	49.55	11	P	P	22 00 26.2	-0.1
YKA	Yellowknife Ar	52.01	36	P	P	22 00 45.2	+0.5
	comp=Z,1.7nm,0.5s,baz=299,slow=6.9,SNR=21						
	comp=Z,1.7nm,0.5s						
YKA	Yellowknife Ar	52.01	36	P	P	22 00 44.6	-0.2
YKA	Yellowknife Ar	52.01	36	P	P	22 00 44.6	-0.2
OZB	Mount Ozzard	53.59	55	P	P	22 00 57.2	+0.6
ARU	Arti	53.90	317	P	P	22 00 57.4	-1.3
ARU				IAmb	IAmb	22 00 58.7	
	comp=Z,4.3nm,0.9s						
ARU	Arti	53.90	317	P	P	22 00 57.4	-1.3
ARU	Arti	53.90	317	*e*P	P	22 00 57.4	-1.3
LLLB	Lillooet	54.70	51	P	P	22 01 04.4	-0.1
LLLB				IAmb	IAmb	22 01 05.0	
	comp=Z,2.4nm,0.6s						
LVZ	Lovozero	56.15	336	P	P	22 01 13.1	-1.6
LVZ	Lovozero	56.15	336	P	P	22 01 13.1	-1.6
LVZ				pmax	pmax		
	comp=Z,23nm,1.1s						
GAR	Garm	56.98	294	P	P	22 01 21.1	0.0
ABKAR	Akbulak array	57.15	309	P	P	22 01 21.0	-1.0
ABKAR	Akbulak array	57.15	309	P	P	22 01 21.2	-0.8
ARCES	ARCESS Array B	57.36	340	P	P	22 01 22.2	-0.9
	comp=Z,4.2nm,1.0s,baz=35,slow=3.0,SNR=6.4						
	comp=Z,4.2nm,1.0s						
KEBM	Edson Butte	57.64	60	P	P	22 01 26.9	+1.3
NEW	Newport	58.58	51	P	P	22 01 32.7	+0.7
	comp=Z,1.1nm,0.5s,baz=45,slow=4.3,SNR=1.8						
	comp=Z,1.1nm,0.5s						
NEW	Newport	58.58	51	P	P	22 01 32.4	+0.3
NEW				IAmb	IAmb	22 01 33.4	
	comp=Z,1.5nm,0.5s						
KULM	Kulim	59.50	242	P	P	22 01 39.6	+0.9
WALA	Waterton Lakes	59.81	49	P	P	22 01 41.1	+0.6
WALA				IAmb	IAmb	22 01 41.5	
	comp=Z,2.4nm,0.8s						
COEN	Coen	60.71	188	P	P	22 01 48.3	+1.5
SUMG	Summit	60.89	3	P	P	22 01 47.6	-0.2
SUMG	Summit	60.89	3	P	P	22 01 47.6	-0.2
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SUMG	Summit	60.89	3	*i* P	P	22 01 47.8	0.0
SUMG				IAmb	IAmb	22 01 50.0	
	comp=Z,10.0nm,1.0s						
PLID	Pearl Lake	61.12	54	P	P	22 01 50.2	+0.6
PLID				IAmb	IAmb	22 01 50.6	
	comp=Z,1.8nm,0.6s						
FCC	Fort Churchill	62.26	32	P	P	22 01 56.4	-0.3
FCC	Fort Churchill	62.26	32	P	P	22 01 56.4	-0.3
FCC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LRM	Limekiln Ridge	62.60	51	P	P	22 02 00.3	+0.8
SCO	Scoresbysund	63.04	357	P	P	22 02 01.6	-0.1
SCO				IAmb	IAmb	22 02 11.6	
	comp=Z,2.4nm,1.1s						
SCO	Scoresbysund	63.04	357	P	P	22 02 01.6	-0.1
SCO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BOZ	Bozeman (W)	63.19	51	P	P	22 02 04.4	+1.1
BOZ				IAmb	IAmb	22 02 04.9	
	comp=Z,2.4nm,0.7s						
BOZ	Bozeman (W)	63.19	51	P	P	22 02 04.4	+1.1
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FIA1	FINESS Array S	63.37	334	P	P	22 02 02.4	-1.5
FINES	FINESS Array B	63.37	334	P	P	22 02 02.2	-1.7
	comp=Z,1.3nm,0.4s,baz=35,slow=8.0,SNR=28						
	comp=Z,1.3nm,0.4s						
FINES	FINESS Array B	63.37	334	P	P	22 02 02.6	-1.4
FINES	FINESS Array B	63.37	334	P	P	22 02 02.6	-1.4
NVAR	Mina Array Bea	63.99	61	P	P	22 02 09.4	+0.7
	comp=Z,0.6nm,0.5s,baz=295,slow=7.2,SNR=7.2						
	comp=Z,0.6nm,0.5s						
ICESG	Greenland Ices	64.31	4	*i* P	P	22 02 09.3	-1.2
ICESG				IAmb	IAmb	22 02 11.0	
	comp=Z,14nm,1.0s						
PDAR	Pinedale Array	66.17	52	P	P	22 02 23.1	+0.4
	comp=Z,1.2nm,0.6s,baz=288,slow=1.3,SNR=20						
	comp=Z,1.2nm,0.6s						
DY2G	Dye2	66.45	7	*i* P	P	22 02 23.3	-0.8
DY2G				IAmb	IAmb	22 02 24.8	
	comp=Z,11nm,1.0s						
NB2	NORSAR Subarra	67.73	340	P	P	22 02 30.9	-1.1
	comp=Z,0.5nm,0.3s,baz=30,slow=6.2						
NOA	NORSAR Array B	67.73	340	P	P	22 02 30.9	-1.1
	comp=Z,0.9nm,0.4s,baz=29,slow=6.6,SNR=12						
	comp=Z,0.9nm,0.4s						
NOA	NORSAR Array B	67.73	340	P	P	22 02 31.0	-1.1
NBO00	NORSAR Array S	67.84	340	P	P	22 02 31.7	-1.0
WRA	Warramunga Arr	67.91	197	P	P	22 02 34.2	+0.7
	comp=Z,0.8nm,0.6s,baz=13,slow=6.8,SNR=4.7						
	comp=Z,0.8nm,0.6s						
AKASG	Malin Array Be	70.64	325	P	P	22 02 49.0	-1.0
	comp=Z,1.5nm,0.4s,baz=35,slow=6.5,SNR=8.4						
	comp=Z,1.5nm,0.4s						
AKASG	Malin Array Be	70.64	325	IAmb	IAmb	22 02 52.0	
	comp=Z,1.2nm,0.8s						
AKASG	Malin Array Be	70.64	325	P	P	22 02 49.0	-1.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	71.62	196	P	P	22 02 57.4	+1.2
	comp=Z,1.3nm,0.8s,baz=12,slow=6.1,SNR=9.1						
	comp=Z,1.3nm,0.8s						
SCHQ	Schefferville	74.04	21	P	P	22 03 09.8	-0.3
	comp=Z,1.1nm,0.4s,baz=347,slow=5.7,SNR=11						
	comp=Z,1.1nm,0.4s						
CLL	Collm	75.81	334	*e*P	P	22 03 20.0	-0.3
BRTR	Keskin Array B	77.25	315	P	P	22 03 29.5	+0.7
	comp=Z,0.5nm,0.8s,baz=83,slow=4.9,SNR=4.3						
	comp=Z,0.5nm,0.8s						
GERES	GERESS Array B	77.76	332	P	P	22 03 30.9	-0.5
	comp=Z,0.2nm,0.3s,baz=46,slow=7.6,SNR=4.4						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	79.02	59	P	P	22 03 39.2	+0.6
	comp=Z,0.8nm,0.5s,baz=307,slow=4.2,SNR=5.3						
	comp=Z,0.8nm,0.5s						
EIL	Elat	84.40	308	P	P	22 04 07.3	+0.7
	comp=Z,3.9nm,0.6s,baz=190,slow=3.1,SNR=5.4						
	comp=Z,3.9nm,0.6s						
ESDC	Sonseca Array	91.09	341	P	P	22 04 37.2	-1.4
	comp=Z,0.2nm,0.5s,baz=350,slow=4.6,SNR=1.9						
	comp=Z,0.2nm,0.5s						
H03N2	Juan Fernandez	140.47	89	T	T	00 47 23.9	
	baz=307,slow=77,SNR=4.8						
H03N1	Juan Fernandez	140.49	89	T	T	00 47 25.0	
	baz=307,slow=77,SNR=4.6						
H03N3	Juan Fernandez	140.49	89	T	T	00 47 25.4	
	baz=307,slow=77,SNR=4.8						

PRU 12 22:02:40.9±0.0**, 50°.23N**×**19°.03E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.49	91	*e*Pg	Pg	22 02 50.5	+0.2
OJC				*e*Sg	Sg	22 02 57.7	+0.9
MORC	Moravsky Berou	1.06	245	*e*PG	Pb	22 03 02.1	-0.1
MORC				*e*SG	Sb	22 03 16.9	+0.3
LANS	Liptovska Anna	1.12	165	*e*PG	Pb	22 03 03.2	+0.1
LANS				*e*SG	Sb	22 03 18.0	-0.2
LANS				*e*LG	Lg	22 03 21.6	
MAUC	Maruska	1.16	222	*e*PG	Pg	22 03 01.5	-1.7
MAUC				*e*SG	Sg	22 03 18.4	+0.1
KRLC	Kraliky	1.45	265	*e*PG	Pn	22 03 07.6	-0.9
KRLC				*e*SG	Sb	22 03 27.9	0.0
DPC	Dobruska-Polom	1.74	275	*e*	Sg	22 03 37.0	+0.2
DPC	Dobruska-Polom	1.74	275	*e*PG	Pb	22 03 13.4	-0.3
DPC				*e*SG	Sg	22 03 37.0	+0.2
DPC	Dobruska-Polom	1.74	275	*e*P	Pb	22 03 13.4	-0.3
VYHS	Vyhne	1.74	184	*e*SG	Sn	22 03 35.7	+0.4
OSTC	Ostas	1.83	281	*e*PG	Pn	22 03 13.5	-0.1
OSTC				*e*SG	Sb	22 03 38.8	+0.1
CHVC	Chvalec	1.94	282	*e*SG	Sg	22 03 42.8	-0.3

IDC ***12*** *22:08:30.3±1.2, 3°.95N×92°.44E, h0*^{km}*, mb3.8/9, mbtmp3.9/11, ML4.1/2, MS3.8/23, Error ellipse: s-maj=39.1km s-min=18.8km az=52.0*

DJA ***12*** *22:08:31.6±1.2, 4°N±5°×9°2E±1°2, h10*^{km}*, M4.8/14, mB5.1/5, mb4.7/14, MLv5.0/6, Mw(mB)4.5/5*

NEIC ***12*** *22:08:32.7±1.6, 4°.01N±0°.08×92°.59E±0°.06, h10*^{km}*±1*^{km}*, mb4.5/41, Error ellipse: s-maj=15.7km s-min=7.2km az=215.0*

ISC 12 22:08:32.2±0.5**, 3°.98N**±0°.06×**92°.65E**±0°.06**, h10**^{km}**, n129, σ1**^{s}**.57**/107**, mb4.5**/39**, MS4.0**/29**, 2C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	4.46	74	Pn	Pn	22 09 41.3	+1.4
LHMI	Lhok Sumawe	4.46	74	P	Pn	22 09 42.4	+2.5
KCSI	Kotacane, Aceh	5.13	95	P	Pn	22 09 50.7	+1.5
	1.6nm2µm198nm,0.8s						
GSI	Gunungsitoli	5.59	118	Pn	Pn	22 09 55.8	+0.3
GSI	Gunungsitoli	5.59	118	P	Pn	22 09 55.4	-0.1
	0.5nm57nm,1.0s						
TSI	Tuntungan	5.92	94	P	Pn	22 10 01.5	+1.5
	0.9nm203nm,0.5s						
PSI	Prapat	6.37	100	Pn	Pn	22 10 08.6	+2.3
	6.9nm,0.3s,baz=302,slow=9.5,SNR=29						
PSI				Sn	Sn	22 11 15.4	-3.8
	2.5nm,0.3s,baz=346,slow=23,SNR=1.6						
	14nm,0.3s						
RPSI	Rantau Prapat	6.39	101		Pn	22 10 08.6	+2.1
RPSI					Sn	22 11 15.4	-4.2
MNSI	Mandailing Nat	7.61	114	P	Pn	22 10 23.5	+0.3
PBA	Port Blair	7.63	1	*e*P	Pn	22 10 22.7	-0.8
PBA				*e*S	Sn	22 11 45.5	-4.6
KULM	Kulim	8.08	80	Pn	Pn	22 10 30.9	+1.1
SRIT	Nakonsritamara	8.29	56		Pn	22 10 32.4	-0.2
SISI	Saibi	8.31	129	P	Pn	22 10 31.6	-1.4
	46nm,1.0s						
BKNI	Bangkinang	9.13	113	P	Pn	22 10 46.3	+2.1
	74nm,0.6s						
PPSI	Pulau Pagai	9.94	132	P	Pn	22 10 53.8	-1.5
	99nm,1.0s						
MYKOM	Kota Tinggi	11.39	101		Pn	22 11 15.9	+0.7
PALK	Pallekele	12.34	286	Pn	Pn	22 11 20.6	-7.5
	0.1nm,0.3s,baz=181,slow=4.9,SNR=2.3						
PALK				Sn	Sn	22 13 30.5	-15
	3.5nm,0.3s,baz=8.8,slow=3.5,SNR=5.6						
PALK	Pallekele	12.34	286	Pn	Pn	22 11 26.6	-1.5
MNAI	Manna	13.21	129	Pn	Pn	22 11 39.7	-0.4
CM31	Chiang Mai Arr	15.65	23		Pn	22 12 12.7	-0.4
CMAR	Chiang Mai Arr	15.65	23	Pn	Pn	22 12 12.7	-0.4
	0.2nm,0.3s,baz=213,slow=14,SNR=17						
CMAR				LR	LR	22 19 38.3	
	comp=Z,247nm,18.1s,baz=210,slow=42						
	2.6nm,0.7s						
CMAR	Chiang Mai Arr	15.65	23		Pn	22 12 13.0	-0.1
CHTO	Chiang Mai	15.98	22	Pn	Pn	22 12 17.9	+0.6
CHTO				IAmb	IAmb	22 12 31.6	
	comp=Z,35nm,1.4s						
SALM	Salem	16.21	299	*e*P	Pn	22 12 21.2	+0.9
KOD	Kodaikanal	16.30	293	*e*P	Pn	22 12 20.9	-0.8
VJD	Vijayawada	17.15	317	*e*P	P	22 12 37.5	+3.6
PCHI	Peechi	17.43	293	*e*P	Pn	22 12 35.8	+0.1
PCHI				*e*S	Sn	22 15 29.8	-20
KSM	Kuching	17.81	98	P	Pn	22 12 40.3	-0.1
KSM				IAmb	IAmb	22 12 54.7	
	comp=Z,21nm,1.0s						
LEM	Lembang	18.39	126	LR	LR	22 21 14.3	
	comp=Z,250nm,18.4s,baz=325,slow=41						
STKI	Sintang	19.21	101	P	P	22 12 56.3	-0.3
	comp=Z,16nm,1.1s						
HYBB	Hyderabad (bro	19.22	315	*e*P	Pn	22 12 57.3	-0.4
AZL	Aizawl	19.65	0	*e*P	P	22 13 00.1	-1.3
AZL				IAmb	IAmb	22 13 04.4	
	comp=Z,27nm,1.6s						
SLVN	Son La	20.43	31	P	P	22 13 07.8	-2.1
BOK	Bokaro	20.76	342	*e*P	P	22 13 13.9	+0.5
BOK				IAmb	IAmb	22 13 18.1	
	comp=Z,15nm,0.9s						
SHL	Shillong	21.48	358	*e*x	P	22 13 20.2	-1.1
SHL				IAmb	IAmb	22 13 25.7	
	comp=Z,16nm,0.9s						
KOHI	KOHIMA	21.67	4	*e*P	P	22 13 21.9	-1.4
KOHI				IAmb	IAmb	22 13 26.4	
	comp=Z,28nm,1.0s						
MOKO	MOKOCHONG	22.29	4	*e*P	P	22 13 28.1	-1.9
MOKO				IAmb	IAmb	22 13 32.3	
	comp=Z,81nm,0.2s						
QIZ	Qiongzhong	22.49	47	P	P	22 13 32.6	+0.5
QIZ				S	S	22 17 37.9	-1.2
QIZ				LR	LR		
	comp=N,1µm,13.5s						
QIZ				LR	LR		
	comp=E,550nm,17.6s						
QIZ				LR	LR		
	comp=Z,340nm,15.7s						
MTKI	Muara Teweh, K	22.76	102	P	P	22 13 37.6	+2.6
KMI	Kunming	23.16	24	⇑P	P	22 13 49.8	+11
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI				LR	LR		
	comp=N,260nm,16.0s						
KMI				LR	LR		
	comp=E,370nm,12.0s						
KMI				LR	LR		
	comp=Z,270nm,15.3s						
ODAN	Odare	23.31	348	*e*P	P	22 13 42.6	+1.8
GTK	Tadong	23.53	351	*e*P	P	22 13 42.9	0.0
GTK				IAmb	IAmb	22 13 46.2	
	comp=Z,5.4nm,0.8s						
PZH	PanZhiHua	24.03	20	P	P	22 13 49.9	+2.2
PZH				pP	pwP	22 13 57.5	+2.2
PZH				sP	sP	22 14 06.1	+16
PZH				S	S	22 18 01.1	-4.0
PZH				SS	SnSn	22 18 52.7	+6.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,40nm,4.3s						
PZH				LR	LR		
	comp=N,750nm,18.8s						
PZH				LR	LR		
	comp=E,840nm,18.6s						
PZH				LR	LR		
	comp=Z,850nm,19.0s						
PKI	Pulchoki	24.46	344	*e*P	P	22 13 52.4	+0.5
	comp=Z,21nm,0.8s						
KKN	Kakani	24.70	344	*e*P	P	22 13 54.7	+0.7
	comp=Z,16nm,0.8s						
GKN	Gorkha	25.09	343	*e*P	P	22 13 57.6	+0.3
	comp=Z,28nm,0.7s						
KOLN	Koldanda	25.19	341	*e*P	P	22 13 58.7	+0.4
	comp=Z,31nm,0.8s						
LSA	Lhasa	25.62	357	P	P	22 14 02.4	-0.2
LSA				IAmb	IAmb	22 14 14.6	
	comp=Z,6.2nm,0.6s						
LSA	Lhasa	25.62	357	P	P	22 14 03.5	+0.9
LSA				LR	LR		
	comp=N,250nm,10.9s						
LSA				LR	LR		
	comp=E,260nm,11.1s						
LSA				LR	LR		
	comp=Z,220nm,11.4s						
DANN	Dangsing	25.68	342	*e*P	P	22 14 03.2	+0.3
	comp=Z,35nm,0.9s						
PYUN	Piuthan	25.70	340	*e*P	P	22 14 03.1	+0.1
MYLDM	Lahad Datu	25.79	86	P	P	22 14 05.3	+1.5
MPSI	Mapaga	27.46	97	P	P	22 14 20.2	+1.4
LGTI	Lohaghat	27.93	336	*e*P	P	22 14 23.0	+0.2
PTH	Pithoragarh	28.03	336	*e*P	P	22 14 31.2	+7.2
TOLI2	Tolitoli	28.24	95	P	P	22 14 26.2	+0.4
TOLI2				IAmb	IAmb	22 14 28.9	
	comp=Z,7.4nm,0.9s						
KAPI	Kappang	28.50	108	LR	LR	22 26 40.7	
	comp=Z,250nm,18.6s,baz=290,slow=38						
KAPI	Kappang	28.50	108	P	P	22 14 29.4	+1.2
KAPI				IAmb	IAmb	22 14 48.7	
	comp=Z,17nm,1.2s						
LUWI	Luwuk	30.51	99	P	P	22 14 46.4	+0.4
DAV	Davao City (W)	32.91	83	LR	LR	22 29 32.4	
	comp=Z,150nm,21.9s,baz=254,slow=38						
XAN	Xi'an	33.53	25	⇑P	P	22 15 20.9	+8.6
XAN				pP	pwP	22 15 27.7	+7.9
XAN				sP	sP	22 15 30.6	+16
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				pmax	pmax		
	comp=Z,74nm,6.0s						
XAN				LR	LR		
	comp=N,450nm,15.2s						
XAN				LR	LR		
	comp=E,570nm,15.2s						
XAN				LR	LR		
	comp=Z,270nm,16.2s						
LZH	Lanzhou	33.58	17	*e*P	P	22 15 19.9	+7.1
LZH				pP	pwP	22 15 32.0	+12
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				LR	LR		
	comp=N,290nm,12.5s						
LZH				LR	LR		
	comp=E,320nm,11.9s						
LZH				LR	LR		
	comp=Z,290nm,12.5s						
GTA	Gaotai	35.87	9	*e*P	P	22 15 33.7	+1.2
GTA				sP	pwP	22 15 42.3	+2.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,53nm,6.4s						
GTA				LR	LR		

	comp=N,98nm,13.9s						
GTA				LR	LR		
	comp=E,110nm,15.1s						
GTA				LR	LR		
	comp=Z,110nm,14.7s						
WSAR	Wadi Sarin	38.04	303	LR	LR	22 31 27.3	
	comp=Z,65nm,18.1s,baz=134,slow=36						
KSH	Kashi	38.48	339	P	P	22 15 54.8	+0.1
KSH				pP	pwP	22 16 06.6	+4.4
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH				LR	LR		
	comp=N,150nm,14.8s						
KSH				LR	LR		
	comp=E,190nm,15.1s						
KSH				LR	LR		
	comp=Z,210nm,21.3s						
SOCY	Socotra	39.10	284	P	P	22 16 00.5	+0.3
SOCY				IAmb	IAmb	22 16 02.1	
	comp=Z,20nm,1.1s						
TARG	Taragay, Kyrgy	39.87	343	P	P	22 16 05.0	-1.6
WMQ	Urumqi	39.92	354	eP	P	22 16 08.2	+1.6
DRK	Karamyk	40.08	335	P	P	22 16 07.6	-0.8
DRK				IAmb	IAmb	22 16 19.0	
	comp=Z,9.3nm,0.8s						
HHC	Hu-ho-hao-te	40.46	22	eP	P	22 16 14.1	+2.9
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,93nm,4.5s						
JOW	Kunigami	40.93	53	P	P	22 16 15.9	+0.7
BTK	Batken	40.98	334	P	P	22 16 15.6	0.0
BTK				IAmb	IAmb	22 16 26.7	
	comp=Z,6.2nm,0.8s						
BJT	Baijiatuau	41.70	27	P	P	22 16 21.9	+0.6
BJT				IAmb	IAmb	22 16 33.5	
	comp=Z,5.4nm,0.8s						
AAK	Ala-Archa	41.76	340	LR	LR	22 33 43.3	
	comp=Z,155nm,21.1s,baz=170,slow=36						
MK31	Makanchi Array	43.59	350	P	P	22 16 35.9	-0.7
MKAR	Makanchi Array	43.59	350	P	P	22 16 35.9	-0.7
	comp=Z,0.9nm,0.7s,baz=161,slow=7.9,SNR=7.4						
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	43.59	350	P	P	22 16 36.2	-0.4
H01W3	Cape Leeuwin H	43.62	154	T	T	23 03 31.4	
	baz=330,slow=76,SNR=4.8						
H01W2	Cape Leeuwin H	43.63	154	T	T	23 03 50.4	
	baz=330,slow=76,SNR=4.6						
H01W1	Cape Leeuwin H	43.63	154	T	T	23 03 37.0	
	baz=330,slow=76,SNR=5.8						
KK31	Karatay Array	43.64	336	P	P	22 16 36.0	-1.1
KKAR	Karatay Array	43.64	336	P	P	22 16 36.0	-1.1
KKAR	Karatay Array	43.64	336	P	P	22 16 36.4	-0.7
KKAR				IAmb	IAmb	22 16 47.2	
	comp=Z,2.2nm,0.8s						
JSU	Suzuyama	44.84	48	P	P	22 16 46.4	-0.5
JSU				IAmb	IAmb	22 16 50.0	
	comp=Z,8.5nm,0.9s						
SONM	Songino Array	45.27	13	P	P	22 16 50.7	+0.5
	comp=Z,0.8nm,0.5s,baz=201,slow=7.0,SNR=5.6						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	45.27	13	P	P	22 16 50.5	+0.4
SONM				IAmb	IAmb	22 17 01.6	
	comp=Z,3.5nm,1.2s						
GEYT	Alibeck	46.21	322	LR	LR	22 36 53.9	
	comp=Z,130nm,21.0s,baz=135,slow=37						
KSRS	Korea Array	46.38	39	P	P	22 16 59.2	+0.4
	comp=Z,0.7nm,0.5s,baz=234,slow=8.4,SNR=2.4						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	47.35	122	P	P	22 17 07.2	+0.4
	comp=Z,0.7nm,0.8s,baz=302,slow=8.8,SNR=3.1						
	comp=Z,0.7nm,0.8s						
KURK	Kurchatov	48.05	348	P	P	22 17 11.0	-0.7
ASAR	Alice Springs	48.68	126	P	P	22 17 18.1	+1.0
	comp=Z,0.4nm,0.8s,baz=312,slow=7.3,SNR=2.0						
	comp=Z,0.4nm,0.8s						
ZAA0	Zalesovo Array	50.23	354	P	P	22 17 28.0	-0.3
ZAA0				IAmb	IAmb	22 17 31.2	
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	50.23	354	P	P	22 17 28.4	+0.1
	comp=Z,4.5nm,0.5s,baz=180,slow=7.9,SNR=24						
	comp=Z,4.5nm,0.5s						
INU	Inuyama	51.49	47	P	P	22 17 38.0	-0.2
INU				IAmb	IAmb	22 17 48.3	
	comp=Z,11nm,1.0s						
JGF	Kuroka	51.85	47	P	P	22 17 40.9	-0.1
MDJ	Mudanjiang	51.85	33	P	P	22 17 40.8	0.0
MDJ				IAmb	IAmb	22 17 58.9	
	comp=Z,5.8nm,0.9s						
ABKAR	Akbulak array	52.98	334	P	P	22 17 47.7	-1.4
ABKAR	Akbulak array	52.98	334	P	P	22 17 47.3	-1.8
JMM	Marumori	55.32	46	P	P	22 18 06.8	+0.4
KMBO	Kilima Mbogo	55.59	266	LR	LR	22 37 24.6	
	comp=Z,68nm,20.7s,baz=86,slow=31						
GNI	Garni	56.17	317	LR	LR	22 43 46.7	
	comp=Z,39nm,18.1s,baz=112,slow=38						
STKA	Stephens Creek	58.58	131	P	P	22 18 30.4	+0.8
	comp=Z,2.2nm,0.7s,baz=95,slow=6.6,SNR=3.9						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	58.58	131	P	P	22 18 31.0	+1.5
ERM	Erimo	58.75	42	P	P	22 18 30.4	-0.1
KBZ	Khabaz	59.02	320	LR	LR	22 45 35.6	
	comp=Z,35nm,18.7s,baz=96,slow=38						
MMAI	Mount Meron Ar	60.61	306	LR	LR	22 45 58.1	
	comp=Z,67nm,21.4s,baz=222,slow=37						
MBAR	Mbarara	62.04	267	LR	LR	22 41 16.3	
	comp=Z,111nm,21.6s,baz=68,slow=32						
BR131	Keskin Array S	63.90	313	P	P	22 19 05.6	-0.1
BR131				IAmb	IAmb	22 19 22.4	
	comp=Z,4.6nm,1.2s						
BRTR	Keskin Array B	63.90	313	P	P	22 19 05.6	-0.1
	comp=Z,0.3nm,0.7s,baz=125,slow=6.7,SNR=2.4						
BRTR				LR	LR	22 49 26.0	
	comp=Z,64nm,18.4s,baz=103,slow=38						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	63.90	313	P	P	22 19 06.0	+0.3
BZK	Bozkurt	64.34	315	P	P	22 19 08.2	-0.1
LSZ	Lusaka	66.61	252	LR	LR	22 44 24.7	
	comp=Z,138nm,19.8s,baz=128,slow=32						
MATP	Matopo	67.42	246	LR	LR	22 45 13.3	
	comp=Z,232nm,19.8s,baz=60,slow=33						
LBTB	Lobatse	71.10	242	LR	LR	22 46 21.9	
	comp=Z,105nm,21.1s,baz=68,slow=32						
TIXI	Tiksi	71.32	11	P	P	22 19 51.8	+0.1
TIXI				IAmb	IAmb	22 20 01.1	
	comp=Z,4.6nm,0.6s						
BOSA	Boshof	72.28	238	LR	LR	22 45 53.4	
	comp=Z,50nm,21.2s,baz=35,slow=31						
PET	Petropavlovsk	72.54	35	P	P	22 20 00.4	+1.0
SUR	Sutherland	76.92	236	LR	LR	22 51 34.2	
	comp=Z,65nm,18.8s,baz=68,slow=34						
OUENC	Ouen Island, N	76.97	114	P	P	22 20 26.3	+0.6
TSUM	Tsumeb	77.27	249	LR	LR	22 51 36.2	
	comp=Z,59nm,19.0s,baz=310,slow=34						
MORC	Moravsky Berou	77.37	320	P	P	22 20 27.2	-0.4
MARNC	Mare, Loyalty	77.91	113	P	P	22 20 29.2	-1.8
GERES	GERESS Array B	79.75	319	P	P	22 20 38.1	-2.6
	comp=Z,0.2nm,0.5s,baz=123,slow=4.8,SNR=2.5						
	comp=Z,0.2nm,0.5s						
CLL	Collm	80.44	321	P	P	22 20 43.3	-0.9
CLL				IAmb	IAmb	22 20 47.5	
	comp=Z,3.7nm,1.1s						
NAO01	NORSAR Array S	82.53	331	P	P	22 20 54.2	-1.0
NAO01				IAmb	IAmb	22 21 12.1	
	comp=Z,6.5nm,0.8s						
SPITS	Spitsbergen Ar	83.33	348	LR	LR	23 04 37.7	
	comp=Z,83nm,19.4s,baz=251,slow=40						
VNDA	Vanda	89.44	168	LR	LR	22 55 24.5	
	comp=Z,79nm,20.0s,baz=329,slow=32						
QSPA	South Pole Qui	93.91	180	LR	LR	22 57 31.3	
	comp=Z,81nm,20.9s,baz=312,slow=31						
DBIC	Dimbokro	96.98	277	LR	LR	23 03 49.7	
	comp=Z,58nm,19.8s,baz=83,slow=34						

VAO 12 22:13:05.3±0.3, 0°.79S×60°.23W, h0^{km}, mb4.2, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACA	Manacapuru-AM	2.40	191	eP	Pg	22 13 50.6	-0.8
MACA				eS	Sb	22 14 18.4	-1.3
BOAV	Boa Vista	3.18	355	eP	Pn	22 13 55.9	-0.7
BOAV				eS	Sn	22 14 32.8	-2.4
ITTB	Itaituba	5.73	128	eP	Pn	22 14 35.8	+4.2
ITTB				eS	Sn	22 15 41.0	+2.9
MALB	Monte Alegre	6.05	100	eS	Sn	22 15 48.2	+2.0
MCPB	Macapa, AP	8.18	87	eP	Pn	22 15 07.2	+1.8
MCPB				eS	Sn	22 16 33.7	-5.0
ETMB	Extrema	10.77	213	eP	Pn	22 15 39.8	-1.1
ETMB				eS	Sn	22 17 36.5	-5.8
PDRB	Porto dos Gac	11.30	162	eP	Pn	22 15 50.6	+2.4
PDRB				eS	Sn	22 17 53.5	-1.9
PRPB	Parauapebas	11.69	117	eP	Pn	22 15 54.6	+1.1
PRPB				eS	Sn	22 18 01.5	-3.3
VILB	Vilhena	12.09	180	eP	Pn	22 16 00.6	+1.6
VILB				eS	Sn	22 18 13.2	-1.4
SNDB	Serra Nova Dou	14.22	142	eP	Pn	22 16 29.2	+1.2
SNDB				eS	Sn	22 19 02.7	-4.0
SALV	Santo Antonio	15.67	164	eP	Pn	22 16 48.1	+0.5
LPAZ	La Paz	17.26	206	eP	Pn	22 17 09.2	+0.7

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*IDC **12** 22:27:41.8±4.9, 31°.09N×131°.60E, h46^{km}±22^{km}, mb3.5/5, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=93.0km s-min=18.9km az=91.0*

*JMA **12** 22:27:42.0±0.1, 31°.1N±0°.4×131°.5E±0°.7, h30^{km}±1^{km}, MV3.5/38, SE OFF OSUMI PEN*

ISC 12 22:27:41.2±1.2, 31°.11N±0°.04×131°.52E±0°.10, h32^{km}, n18, σ0^{s}.79/23, mb3.7/5, 6D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.47	334	⇓iP	Pn	22 27 51.7	0.0
JNAR				⇓S	Sb	22 27 58.7	+0.6
JTSR	Tashiro 2	0.51	277	⇓iP	Pn	22 27 52.5	+0.2
JTSR				⇓S	Sn	22 28 00.7	+0.7
JNKG	Nichinankitago	0.57	348	⇓iP	Pn	22 27 53.4	+0.3
JTN	Tanegashima 3	0.64	226	i P	Pn	22 27 54.9	+0.8
JTN				eS	Sn	22 28 04.4	+1.2
JTZ	Takazaki	0.87	335	i P	Pb	22 27 58.2	+0.3
JTZ				eS	Sb	22 28 10.3	+1.1
JMTN	Minamitane	0.88	217	P	Pb	22 27 58.4	+0.3
JSU	Suzuyama	0.99	294	i P	Pb	22 27 59.8	-0.1
JTSN	Tsuno	1.14	360	P	Pn	22 28 01.2	+0.3
JYAK	Yakushimahirau	1.22	225	⇓eP	Pb	22 28 03.2	-0.5
JZO	Okuchi	1.29	323	i P	Pb	22 28 04.2	-0.8
JKC	Kuchinoerabu	1.30	241	P	Pb	22 28 04.1	-1.0
JNU	Nakatsue	2.08	345	P	Pn	22 28 14.4	+0.5
	15nm,0.3s,baz=278,slow=4.6,SNR=31						
JNU				S	Sn	22 28 40.5	+1.8
	124nm,0.7s,baz=98,slow=3.1,SNR=5.5						
	40nm,0.4s						
JOW	Kunigami	5.12	214	P	Pn	22 28 56.3	+0.7
	7.4nm,0.3s,baz=93,slow=16,SNR=29						
	14nm,0.3s						
SONM	Songino Array	25.43	318	P	P	22 33 05.8	-0.2
	1.1nm,0.8s,baz=133,slow=7.9,SNR=6.0						
	1.1nm,0.8s						
MKAR	Makanchi Array	40.68	307	P	P	22 35 17.8	-0.7
	0.3nm,0.6s,baz=92,slow=8.7,SNR=4.2						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	43.51	312	P	P	22 35 40.6	-0.9
	0.8nm,0.4s,baz=98,slow=8.9,SNR=9.3						
	0.8nm,0.4s						
FINES	FINESS Array B	70.05	330	P	P	22 38 48.7	-0.9
	0.3nm,0.3s,baz=61,slow=6.0,SNR=6.7						
	0.3nm,0.3s						
BRTR	Keskin Array B	76.31	308	P	P	22 39 27.2	0.0
	0.7nm,0.8s,baz=98,slow=4.7,SNR=4.8						
	0.7nm,0.8s						

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*NIED **12** 22:28:16.0, 31°.03N×129°.01E, h8^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-0.44; $M_{r\theta}$0.09; $M_{\theta\phi}$0.76; $M_{\phi r}$0.73; Fault plane solution: $M_0$1.16000×10^{16} NP1: ϕ_s104.00000°, δ51.00000°, λ-4.00000°. NP2:ϕ_s196.00000°, δ87.00000°, λ-141.00000°.*

*JMA **12** 22:28:16.0±0.2, 31°.0N±0°.4×129°.0E±0°.7, h8^{km}±1^{km}, MD4.6/26, MW4.7/26, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*IDC **12** 22:28:17.9±0.7, 30°.94N×129°.02E, h0^{km}, mb4.1/18, mbtmp4.1/23, ML3.6/5, MS4.0/29, Error ellipse: s-maj=16.8km s-min=14.6km az=115.0*

*NEIC **12** 22:28:20.1±2.1, 31°.00N±0°.04×129°.17E±0°.06, h10^{km}±1^{km}, mb4.5/61, Mwr4.5/23, Error ellipse: s-maj=10.2km s-min=5.1km az=128.0*

*GCMT **12** 22:28:20.1±0.4, 31°.16N±0°.02×129°.06E±0°.02, h20^{km}±1^{km}, MW4.8/78, Moment Tensor Solution. s5,c5; s78,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.36±.10; $M_{\theta\theta}$1.27±.09; $M_{\phi\phi}$-0.90±.07; $M_{r\theta}$0.32±.15; $M_{\theta\phi}$1.23±.07; $M_{\phi r}$0.60±.17; Best double couple: $M_0$1.78200×10^{16} NP1:ϕ_s110.00000°, δ66.00000°, λ-5.00000°. NP2: ϕ_s202.00000°, δ86.00000°, λ-156.00000°. Principal axes: T 1.9510, Plg13.0000°, Azm334.0000°; N -0.3380, Plg66.0000°, Azm212.0000°; P -1.6130, Plg20.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 22:28:21, 31°.10N×129°.21E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.83; $M_{\theta\theta}$2.00; $M_{\phi\phi}$-2.83; $M_{r\theta}$-3.05; $M_{\theta\phi}$6.63; $M_{\phi r}$1.17; Fault plane solution: $M_0$7.81000×10^{15} NP1:ϕ_s190.51000°, δ65.47000°, λ179.77000°. NP2:ϕ_s280.60000°, δ89.79000°, λ24.53000°. Principal axes: T 7.2087, Plg17.0000°, Azm148.0000°; N 1.0877, Plg65.0000°, Azm281.0000°; P -8.2964, Plg17.0000°, Azm53.0000°;*

ISC 12 22:28:20.2±0.4, 31°.06N±0°.04×129°.31E±0°.03, h11^{km}, n175, σ1^{s}.64/152, mb4.4/50, MS4.2/30, 5C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.70	29	eP	Pg	22 28 32.9	-1.0
JSJ				S	Sb	22 28 44.7	+0.5
JKC	Kuchinoerabu	0.97	128	S	Sn	22 28 53.2	-0.2
JKC	Kuchinoerabu	0.97	128	A	A	22 28 53.2	
	comp=E,26nm,2.3s,comp=E,30nm,2.2s						
JSU	Suzuyama	1.07	65	Pn	Pb	22 28 40.6	-0.2
JSU				Sn	Sn	22 28 58.7	+2.6
JSU	Suzuyama	1.07	65	eP	Pb	22 28 40.2	-0.6
JSU				eS	Sn	22 28 57.8	+1.6
JSU	Suzuyama	1.07	65	A	A	22 28 40.2	
	comp=E,19nm,1.2s,comp=E,41nm,2.1s						
JYAK	Yakushimahirau	1.32	128	eP	Pn	22 28 43.2	-1.4
JTN	Tanegashima 3	1.49	105	eP	Pn	22 28 46.8	-0.1
JTN	Tanegashima 3	1.49	105	A	A	22 28 46.8	
	comp=E,9.0nm,6.5s,comp=E,13nm,4.8s						
JMTN	Minamitane	1.52	115	eS	Sg	22 29 10.1	+0.9
JMTN	Minamitane	1.52	115	A	A	22 29 10.1	
	comp=E,8.0nm,3.5s,comp=E,14nm,2.1s						
JZO	Okuchi	1.54	45	A	A	22 28 47.1	
	comp=E,10.0nm,4.4s,comp=E,10.0nm,0.7s						
JHD	Hondo	1.56	26	A	A	22 28 46.7	
	comp=E,12nm,6.5s,comp=E,9.0nm,2.6s						
JFU	Fukue jima 2	1.66	343	A	A	22 28 45.4	
	comp=E,7.0nm,3.2s,comp=E,6.0nm,4.1s						
JTZ	Takazaki	1.73	61	eP	Pn	22 28 51.2	+0.9
JTZ	Takazaki	1.73	61	A	A	22 28 51.2	
	comp=E,7.0nm,2.9s,comp=E,9.0nm,7.6s						
JNAR	Kushima--Naru	1.74	74	A	A	22 28 50.8	
	comp=E,12nm,2.1s,comp=E,16nm,2.3s						
JNKG	Nichinankitago	1.86	71	A	A	22 28 52.5	
	comp=E,13nm,3.3s,comp=E,17nm,2.3s						
JIU3	Izumi3	1.96	40	A	A	22 28 53.0	
	comp=E,7.0nm,4.7s,comp=E,6.0nm,3.6s						
JNU	Nakatsue	2.45	33	Pn	Pb	22 29 03.6	-0.7
	58nm,0.3s,baz=220,slow=14,SNR=14						
JNU				Sn	Sg	22 29 38.0	-0.9
	44nm,0.3s,baz=211,slow=20,SNR=7.1						
	226nm,0.4s						
JNU	Nakatsue	2.45	33	Pn	Pn	22 29 02.2	+2.1
JUS	Usuki	2.88	45	A	A	22 29 06.4	
	comp=E,4.0nm,3.0s,comp=E,5.0nm,4.2s						
JKI	Kunimi	3.20	36	A	A	22 29 10.6	
	comp=E,3.0nm,5.6s,comp=E,4.0nm,6.4s						
JTU	Tsushima	3.45	1	Pn	Pn	22 29 13.6	-0.3
JOW	Kunigami	4.31	192	Pn	Pn	22 29 24.1	-1.6
	4.0nm,0.3s,baz=2.0,slow=13,SNR=9.6						
	40nm,0.7s						
JOW	Kunigami	4.31	192	Pn	Pn	22 29 24.9	-0.9
NAWB	Namwon	4.63	340	Pn	Pn	22 29 29.5	-0.6
JMN	Monobe	4.69	54	Pn	Pn	22 29 29.2	-1.8
JHS	Saijyo	5.06	38	Pn	Pn	22 29 37.0	+0.9
TJN	Taejon	5.54	344	Pn	Pn	22 29 41.7	-1.0
KSCHJ	Chungju	5.90	350	Pn	Pn	22 29 46.2	-1.4
KSAR	Wonju Array Be	6.47	350	Pn	Pn	22 29 55.3	-0.1
KSRS	Korea Array	6.48	350	Pn	Pn	22 29 54.0	-1.5
	1.3nm,0.3s,baz=174,slow=14,SNR=25						
KSRS				Sn	Sn	22 31 05.9	-3.5
	baz=130,slow=48						
KSRS				Lg	Lg	22 31 34.9	
	0.9nm,0.3s,baz=300,slow=33,SNR=5.0						
KSRS				LR	LR	22 32 49.1	
	comp=Z,569nm,20.4s,baz=170,slow=41						
	8.5nm,0.7s						
KS19	Wonju Array Si	6.53	350		Pn	22 29 55.4	-0.8
INCN	Inchon	6.78	342	Pn	Pn	22 29 59.0	-0.7
INU	Inuyama	7.74	54	Pn	Pn	22 30 13.9	+1.0
JGF	Kuroka	8.11	54	Pn	Pn	22 30 19.2	+1.2
YOJ	Yonaguni jima	8.62	222	Pn	Pn	22 30 27.2	+2.2
JHJ	Hachijo jima 2	9.12	74	LR	LR	22 34 20.1	
	comp=Z,405nm,18.6s,baz=266,slow=38						
MAJO	Matsushiro	9.20	51	Pn	Pn	22 30 33.9	+1.1
MJB9	Matsu-Tunnel	9.20	51	Pn	Pn	22 30 34.1	+1.2
MJAR	Matsushiro Arr	9.20	51	Pn	Pn	22 30 36.8	+4.0
	0.1nm,0.3s,baz=282,slow=27,SNR=4.3						
MJAR				LR	LR	22 34 31.2	
	comp=Z,1μm,18.7s,baz=236,slow=39						
YHNB	Yeheng	9.48	230	Pn	Pn	22 30 37.6	+0.9
NACB	Ninganchiao	9.69	227	Pn	Pn	22 30 41.5	+1.9
SSLB	Suanglung	10.37	228	Pn	Pn	22 30 50.8	+1.8
YULB	Yu-li	10.45	225	Pn	Pn	22 30 52.1	+2.1
JCJ	Chichijima	11.93	106	LR	LR	22 35 10.8	
	comp=Z,115nm,21.9s,baz=10.0,slow=34						
CN2	Changchun	13.08	348	eP	Pn	22 31 27.1	+1.2
CN2				eS	Sn	22 33 53.3	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,13.0s						
CN2				LR	LR		
	comp=E,4μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,14.4s						
USRK	Ussuriysk Ar.	13.28	8	Pn	Pn	22 31 32.0	+3.4
	comp=Z,3.1nm,0.9s,baz=199,slow=13,SNR=3.1						
HNS	HongShan	13.63	302	⇑P	Pn	22 31 35.9	+2.5
HNS				S	Sn	22 34 05.7	+0.9
HNS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HNS				LR	LR		
	comp=N,1μm,15.9s						
HNS				LR	LR		
	comp=E,1μm,16.9s						
HNS				LR	LR		
	comp=Z,640nm,9.5s						
CNSH	ChangSha	14.53	263	⇑P	P	22 31 53.1	+0.6
CNSH				S	S	22 35 39.4	+53
CNSH				pmax	pmax		
	comp=Z,33nm,1.5s						
CNSH				LR	LR		
	comp=N,2μm,13.5s						
CNSH				LR	LR		
	comp=E,1μm,12.6s						
CNSH				LR	LR		
	comp=Z,1μm,12.2s						
LYN	LuoYang	14.59	288	eP	Pn	22 31 47.5	+0.9
LYN				sP	P	22 31 54.7	+1.7
LYN				S	Sn	22 34 27.5	-0.7
LYN				pmax	pmax		
	comp=Z,260nm,13.6s						
LYN				LR	LR		
	comp=N,4μm,14.1s						
LYN				LR	LR		
	comp=E,2μm,14.2s						
LYN				LR	LR		
	comp=Z,940nm,14.6s						
ASAJ	Asahikawa	16.72	35	Pn	P	22 32 17.3	+0.6
	comp=Z,0.3nm,0.3s,baz=140,slow=31,SNR=3.7						
ASAJ				LR	LR	22 38 12.1	
	comp=Z,299nm,19.9s,baz=218,slow=35						
	comp=Z,11nm,0.9s						
JKA	Kamikawa-asahi	16.72	35	P	P	22 32 17.3	+0.6
JKA	Kamikawa-asahi	16.72	35	IAmb	IAmb	22 32 20.4	
	comp=Z,41nm,1.3s						
ENH	Enshi	17.08	272		P	22 32 22.9	+2.1
HHC	Hu-ho-hao-te	17.34	309	eP	Pn	22 32 21.5	-0.9
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.0s						
HHC				LR	LR		
	comp=N,1μm,11.2s						
HHC				LR	LR		
	comp=E,2μm,13.5s						
HHC				LR	LR		
	comp=Z,3μm,13.3s						
XAN	Xi'an	17.44	285	⇑P	P	22 32 24.5	-0.3
XAN				pP	sP	22 32 34.2	+5.2
XAN				sP	pP	22 32 37.9	+10
XAN				S	Sn	22 35 38.0	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,200nm,6.4s						
XAN				LR	LR		
	comp=N,3μm,13.0s						
XAN				LR	LR		
	comp=E,2μm,12.7s						
XAN				LR	LR		
	comp=Z,730nm,12.7s						
BTO	Baotou	18.28	307	eP	P	22 32 37.5	+3.5
BTO				S	S	22 36 04.0	+0.9
BTO				LR	LR		
	comp=N,5μm,16.0s						
BTO				LR	LR		
	comp=E,3μm,15.1s						
LZH	Lanzhou	21.78	290	eP	P	22 33 10.0	-2.2
LZH				sP	sP	22 33 18.0	+1.5
LZH				S	S	22 37 15.7	+2.6
LZH				SS	SnSn	22 37 45.4	+7.7
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				LR	LR		
	comp=N,3μm,13.5s						
LZH				LR	LR		
	comp=E,980nm,13.5s						
LZH				LR	LR		
	comp=Z,1μm,14.1s						
GUMO	Guam	22.52	137	LR	LR	22 41 15.0	
	comp=Z,234nm,18.4s,baz=34,slow=34						
ULN	Ulaanbaatar	23.89	321	P	P	22 33 30.9	-3.1
ULN				IAmb	IAmb	22 33 34.6	
	comp=Z,9.8nm,1.1s						
KMI	Kunming	24.14	262	⇑P	P	22 33 37.4	+0.7
KMI	Kunming	24.14	262	S	S	22 37 52.2	-2.5
SONM	Songino Array	24.23	320	P	P	22 33 35.7	-1.4
	comp=Z,6.4nm,1.0s,baz=133,slow=9.2,SNR=18						
	comp=Z,6.4nm,1.0s						
SONM	Songino Array	24.23	320	P	P	22 33 34.6	-2.5
PZH	PanZhiHua	24.56	266	P	P	22 33 40.6	+0.3
PZH				S	S	22 38 05.3	+4.2
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,160nm,4.8s						
PZH				LR	LR		
	comp=N,740nm,15.3s						
PZH				LR	LR		
	comp=E,400nm,15.7s						
PZH				LR	LR		
	comp=Z,870nm,14.5s						
GTA	Gaotai	25.41	297	⇓P	P	22 33 46.7	-1.2
GTA				pP	pP	22 33 51.3	+0.3
GTA				sP	sP	22 33 55.4	+3.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,90nm,6.0s						
GTA				LR	LR		
	comp=N,1μm,14.3s						
GTA				LR	LR		
	comp=E,630nm,13.5s						
GTA				LR	LR		
	comp=Z,780nm,13.1s						
MYLDM	Lahad Datu	27.68	204	P	P	22 34 10.9	+2.5
GOMU	GeErMu	29.08	290	P	P	22 34 21.4	+0.2
GOMU				pP	pP	22 34 24.9	+0.6
GOMU				sP	sP	22 34 27.3	+1.7
GOMU				S	S	22 39 03.5	-10

GOMU				sS	pS	22 39 12.5	-3.9
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GOMU				LR	LR		
	comp=N,230nm,11.3s						
GOMU				LR	LR		
	comp=E,290nm,14.5s						
GOMU				LR	LR		
	comp=Z,290nm,13.7s						
CMAR	Chiang Mai Arr	30.19	253	P	P	22 34 29.4	-1.3
	comp=Z,1.9nm,0.3s,baz=51,slow=6.4,SNR=7.0						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	30.19	253	P	P	22 34 30.3	-0.5
TOLI2	Tolitoli	30.87	197	P	P	22 34 36.2	-0.5
TOLI2				IAmb	IAmb	22 34 38.2	
	comp=Z,6.5nm,0.9s						
WMQ	Urumqi	35.05	303	*e*P	P	22 35 16.1	+3.0
WMQ				pP	sP	22 35 18.8	+1.2
WMQ				sP	pP	22 35 21.4	+5.1
WMQ				S	S	22 40 45.8	+0.4
WMQ	Urumqi	35.05	303	ScS	ScS	22 45 36.5	+2.3
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.7s						
WMQ				LR	LR		
	comp=N,680nm,14.7s						
WMQ				LR	LR		
	comp=E,530nm,16.1s						
WMQ				LR	LR		
	comp=Z,370nm,18.9s						
SHEM	Shemya Is, Ala	38.93	43	LR	LR	22 51 49.1	
	comp=Z,50nm,21.9s,baz=25,slow=36						
ZAA0	Zalesovo Array	39.11	319	P	P	22 35 45.2	-2.1
ZALV	Zalesovo Beam	39.11	319	P	P	22 35 44.7	-2.6
	comp=Z,0.9nm,0.6s,baz=118,slow=8.6,SNR=4.7						
ZALV				PcP	PcP	22 37 55.9	-1.0
	comp=Z,0.7nm,0.7s,baz=97,slow=4.9,SNR=4.1						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	39.11	319	P	P	22 35 45.5	-1.9
MK31	Makanchi Array	39.20	307	P	P	22 35 46.3	-1.9
MKAR	Makanchi Array	39.20	307	P	P	22 35 45.1	-3.1
	comp=Z,1.5nm,0.8s,baz=93,slow=10,SNR=12						
MKAR				PcP	PcP	22 37 56.9	-0.5
	comp=Z,0.7nm,0.7s,baz=90,slow=0.4,SNR=4.2						
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	39.20	307	P	P	22 35 46.6	-1.6
MAKZ	Makanchi	39.41	307	P	P	22 35 47.6	-2.5
KURK	Kurchatov	42.10	313	P	P	22 36 11.2	-0.9
KURBB	Kurchatov Arra	42.15	313	P	P	22 36 10.2	-2.3
	comp=Z,1.4nm,0.8s,baz=100,slow=9.1,SNR=9.4						
KURBB				LR	LR	22 55 20.4	
	comp=Z,611nm,18.3s,baz=84,slow=39						
	comp=Z,1.4nm,0.8s						
GSI	Gunungsitoli	42.16	232	P	P	22 36 12.7	-0.3
KDJ	Kajisay	42.69	300	P	P	22 36 14.4	-2.9
KSH	Kashi	43.80	296	P	P	22 36 33.1	+6.8
KSH				LR	LR		
	comp=N,230nm,14.8s						
KSH				LR	LR		
	comp=E,410nm,16.1s						
KSH				LR	LR		
	comp=Z,370nm,18.9s						
AAK	Ala-Archa	44.65	301	P	P	22 36 31.1	-2.0
	comp=Z,1.4nm,0.6s,baz=146,slow=7.4,SNR=4.7						
	comp=Z,1.4nm,0.6s						
AAK	Ala-Archa	44.65	301	P	P	22 36 32.4	-0.7
BRVK	Borovoye	47.48	315	P	P	22 36 53.7	-1.3
KK31	Karatay Array	47.53	302	P	P	22 36 55.2	-0.4
KK31				IAmb	IAmb	22 36 56.2	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	47.53	302	P	P	22 36 54.6	-1.0
KKAR	Karatay Array	47.53	302	P	P	22 36 55.5	-0.1
KKAR				IAmb	IAmb	22 36 56.2	
	comp=Z,4.7nm,0.8s						
GAR	Garm	48.22	296	P	P	22 36 59.3	-1.8
GAMB	Gambell	48.97	30	P	P	22 37 05.4	-0.9
GAMB				IAmb	IAmb	22 37 11.4	
	comp=Z,3.7nm,0.8s						
CHGR	Chuyangaron	49.17	296	P	P	22 37 06.2	-2.2
KBL	Kabul	50.13	291	P	P	22 37 15.6	-0.3
KBL				IAmb	IAmb	22 37 21.8	
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	50.94	174	P	P	22 37 19.1	-2.7
	comp=Z,1.6nm,0.7s,baz=353,slow=8.0,SNR=8.4						
	comp=Z,1.6nm,0.7s						
ABKAR	Akbulak array	54.13	311	P	P	22 37 43.9	-1.2
ABKAR	Akbulak array	54.13	311	P	P	22 37 44.0	-1.2
ABKAR				IAmb	IAmb	22 37 45.6	
	comp=Z,3.8nm,0.9s						
ARU	Arti	54.26	320	P	P	22 37 45.0	-1.0
ARU				IAmb	IAmb	22 37 50.8	
	comp=Z,7.1nm,1.2s						
ASAR	Alice Springs	54.60	175	P	P	22 37 47.1	-1.7
	comp=Z,1.8nm,0.8s,baz=352,slow=5.6,SNR=5.8						
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	54.60	175	P	P	22 37 47.8	-1.0
AKTO	Aktyubinsk	55.20	312	LR	LR	23 02 34.7	
	comp=Z,392nm,18.7s,baz=82,slow=37						
HRA	Herat	55.59	293	P	P	22 37 55.4	-0.9
J20K	Nowinta River	56.70	31	P	P	22 38 04.6	+1.2
IMAR	Indian Mountai	56.78	28	P	P	22 38 05.3	+1.3
K20K	Telida	56.78	32	P	P	22 38 04.0	-0.1
N19K	Bonanza Creek	56.78	35	P	P	22 38 03.9	-0.3
N19K				IAmb	IAmb	22 38 13.0	
	comp=Z,5.8nm,1.2s						
H21K	Melozitna Rive	57.19	29	P	P	22 38 07.9	+1.0
H21K				IAmb	IAmb	22 38 12.7	
	comp=Z,5.7nm,1.4s						
I21K	Tanana	57.56	29	P	P	22 38 10.9	+1.4
I21K				IAmb	IAmb	22 38 13.7	
	comp=Z,2.5nm,0.8s						
CAST	Castle Rocks	57.67	31	P	P	22 38 10.9	+0.6
PPLA	Purkeypile	57.67	32	P	P	22 38 11.7	+1.1
PPLA				IAmb	IAmb	22 38 21.2	
	comp=Z,3.4nm,0.8s						
H23K	Yukon River	58.52	28	P	P	22 38 17.1	+0.9
H23K				IAmb	IAmb	22 38 22.5	
	comp=Z,4.0nm,0.7s						
NEA2	Nenana	58.86	30	P	P	22 38 19.8	+1.2
NEA2				IAmb	IAmb	22 38 24.1	
	comp=Z,3.8nm,1.0s						
RND	Reindeer	59.11	31	P	P	22 38 21.4	+0.9
RND				IAmb	IAmb	22 38 25.7	
	comp=Z,3.8nm,0.8s						
MDM	Murphy Dome	59.17	29	P	P	22 38 22.1	+1.4
H24K	Noodor Dome	59.19	28	P	P	22 38 23.1	+2.1
H24K				IAmb	IAmb	22 38 42.0	
	comp=Z,4.4nm,1.2s						
WRH	Wood River Hil	59.29	30	P	P	22 38 23.1	+1.5
WRH				IAmb	IAmb	22 38 33.3	
	comp=Z,7.0nm,1.5s						
KNK	Knik Glacier	59.61	34	P	P	22 38 24.7	+0.9
IL31		59.76	30	P	P	22 38 24.8	0.0
ILAR	Eielson Array	59.76	30	P	P	22 38 26.0	+1.1
	comp=Z,1.1nm,0.7s,baz=281,slow=6.3,SNR=14						
	comp=Z,1.1nm,0.7s						
ILAR	Eielson Array	59.76	30	P	P	22 38 25.5	+0.6
HDA	Harding Lake	59.79	30	P	P	22 38 25.2	+0.1
BMAR	Burnt Mountain	60.26	26	P	P	22 38 29.3	+1.0
GLI	Glacier Island	60.35	34	P	P	22 38 29.3	+0.3
GLI				IAmb	IAmb	22 38 33.9	
	comp=Z,4.8nm,0.9s						
SCRK	Sand Creek	61.15	30	P	P	22 38 35.5	+1.0
SCRK				IAmb	IAmb	22 38 52.5	
	comp=Z,2.9nm,1.1s						
MENT	Mentasta	61.49	31	P	P	22 38 36.7	0.0
MENT				IAmb	IAmb	22 38 44.9	
	comp=Z,4.1nm,0.8s						
M26K	Nabesna, AK	61.94	32	P	P	22 38 40.5	+0.7
L27K	Beaver Creek,	62.30	31	P	P	22 38 43.7	+1.5
L27K				IAmb	IAmb	22 38 46.4	
	comp=Z,2.2nm,0.8s						
BCAR	Beaver Creek A	62.32	31	P	P	22 38 43.8	+1.5
M27K	Edge Creek, AK	62.45	32	P	P	22 38 45.0	+1.7
M27K				IAmb	IAmb	22 38 47.5	
	comp=Z,3.0nm,0.8s						
EPYK	Eagle Plains	63.52	27	P	P	22 38 51.8	+1.6
EPYK				IAmb	IAmb	22 38 54.2	
	comp=Z,3.3nm,0.7s						
KBZ	Khabaz	66.89	308	P	P	22 39 12.6	+0.2
	comp=Z,5.7nm,0.8s,baz=72,slow=2.6,SNR=12						
	comp=Z,5.7nm,0.8s						
ONI	Oni	66.92	307	P	P	22 39 12.9	+0.2
ONI				IAmb	IAmb	22 39 14.2	
	comp=Z,3.3nm,0.9s						
KIV	Kislovodsk	66.94	308	P	P	22 39 12.8	-0.1
DLBC	Dease Lake	69.32	34	LR	LR	23 10 20.0	
	comp=Z,69nm,20.6s,baz=268,slow=36						
GURO	Guroymak-BITLI	69.48	303	P	P	22 39 28.4	-0.5
NACGM	Naroch	71.84	324	⇑*e*P	P	22 39 43.8	+0.9
	baz=62						
AKASG	Malin Array Be	72.50	319	P	P	22 39 45.6	-1.3
	comp=Z,0.3nm,0.4s,baz=56,slow=6.4,SNR=2.2						
AKASG				LR	LR	23 13 21.1	
	comp=Z,298nm,19.1s,baz=76,slow=37						
	comp=Z,0.3nm,0.4s						
YKA	Yellowknife Ar	73.77	26	P	P	22 39 55.7	+1.6
	comp=Z,0.8nm,0.7s,baz=306,slow=5.4,SNR=9.8						
	comp=Z,0.8nm,0.7s						
BR131	Keskin Array S	74.84	307	IAmb	IAmb	22 40 03.7	
	comp=Z,5.3nm,0.9s						
BRTR	Keskin Array B	74.85	307	P	P	22 40 00.6	-0.5
	comp=Z,2.9nm,0.9s,baz=90,slow=4.9,SNR=15						
BRTR				LR	LR	23 17 38.6	
	comp=Z,84nm,18.2s,baz=58,slow=40						
	comp=Z,2.9nm,0.9s						
BRTR	Keskin Array B	74.85	307	P	P	22 40 00.2	-0.9
HFS	Hagfors	75.00	332	LR	LR	23 14 19.5	
	comp=Z,189nm,18.1s,baz=40,slow=37						
NB2	NORSAR Subarra	75.41	334	P	P	22 40 03.0	-0.8
	comp=Z,5.4nm,1.1s,baz=50,slow=5.9						
NOA	NORSAR Array B	75.41	334	P	P	22 40 02.2	-1.6
	comp=Z,1.4nm,0.8s,baz=50,slow=5.8,SNR=3.8						
	comp=Z,1.4nm,0.8s						
NBO00	NORSAR Array S	75.59	334	P	P	22 40 05.7	+1.0
NAO01	NORSAR Array S	75.66	334	P	P	22 40 06.5	+1.3
NAO01				IAmb	IAmb	22 40 25.1	
	comp=Z,4.6nm,1.0s						
OZB	Mount Ozzard	76.24	41	P	P	22 40 08.0	-0.7
MLR	Muntele Rosu	76.97	315	LR	LR	23 17 11.0	
	comp=Z,162nm,19.0s,baz=58,slow=38						
VRAC	Vranov	80.14	322	LR	LR	23 19 25.0	
	comp=Z,201nm,18.0s,baz=64,slow=38						
CLL	Collm	80.74	325	*e*P	P	22 40 32.0	-1.5
CLL				*e*PP	PP	22 43 38.0	+1.2
ATD	Arta Tunnel	81.15	278	LR	LR	23 16 38.5	
	comp=Z,43nm,22.0s,baz=142,slow=36						
NEW	Newport	81.21	38	LR	LR	23 18 07.7	
	comp=Z,42nm,19.5s,baz=2.0,slow=37						
BORG	Borgarnes	81.78	348	LR	LR	23 18 11.1	
	comp=Z,37nm,18.0s,baz=44,slow=37						
YBH	Yreka Blue Hor	81.82	46	LR	LR	23 13 11.9	
	comp=Z,25nm,21.7s,baz=290,slow=33						
GERES	GERESS Array B	81.93	323	P	P	22 40 40.1	+0.1
	comp=Z,0.3nm,0.7s,baz=188,slow=7.8,SNR=3.9						
	comp=Z,0.3nm,0.7s						
SFJD	Kangerlussuaq	82.25	360	LR	LR	23 18 19.9	
	comp=Z,75nm,18.6s,baz=352,slow=36						
IDI	Anoyia	83.08	307	LR	LR	23 24 37.2	
	comp=Z,58nm,18.4s,baz=83,slow=41						
STU	Stuttgart	84.25	325	P	P	22 40 50.8	-1.0
FRB	Frobisher Bay	84.46	8	LR	LR	23 22 16.0	
	comp=Z,67nm,18.2s,baz=10,slow=38						
EKA	Eskdalemuir Ar	84.82	335	LR	LR	23 25 02.2	
	comp=Z,131nm,18.7s,baz=356,slow=40						
MFID	Camas Ranch	84.91	42	P	P	22 40 56.0	+0.5
MFID				IAmb	IAmb	22 41 12.3	
	comp=Z,3.3nm,1.2s						
DAVOX	Davos/Dischmat	85.23	323	LR	LR	23 22 46.8	
	comp=Z,197nm,18.0s,baz=48,slow=38						
KVN	Kaiserville	86.24	46	P	P	22 41 03.1	+0.8
KVN				IAmb	IAmb	22 41 06.0	
	comp=Z,1.8nm,0.9s						
NVAR	Mina Array Bea	86.50	47	P	P	22 41 04.0	+0.5
	comp=Z,0.9nm,0.8s,baz=290,slow=4.3,SNR=6.8						
	comp=Z,0.9nm,0.8s						
VAE	Valguarnera	88.64	314	LR	LR	23 26 37.4	
	comp=Z,140nm,18.9s,baz=278,slow=40						
PDAR	Pinedale Array	88.82	39	P	P	22 41 14.5	-0.2
	comp=Z,0.6nm,0.7s,baz=90,slow=1.5,SNR=7.2						
	comp=Z,0.6nm,0.7s						
ULM	Lac du Bonnet	89.69	27	P	P	22 41 18.1	-0.2
	comp=Z,5.9nm,0.7s,baz=346,slow=4.4,SNR=5.4						
	comp=Z,5.9nm,0.7s						
PFO	Pinyon Flats O	90.63	50	LR	LR	23 15 02.1	
	comp=Z,63nm,20.9s,baz=267,slow=31						
KMBO	Kilima Mbogo	92.34	270	LR	LR	23 22 35.3	
	comp=Z,29nm,21.5s,baz=102,slow=35						
SCHQ	Schefferville	93.33	9	LR	LR	23 25 44.5	
	comp=Z,71nm,19.8s,baz=328,slow=37						
ESDC	Sonseca Array	97.33	325	LR	LR	23 30 12.9	
	comp=Z,130nm,18.5s,baz=34,slow=38						

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*IDC **12** 22:29:05.5±2.0, 15°.27N×121°.14E, h0^{km}, mb3.7/4, mbtmp3.7/4, MS4.3/1, Error ellipse: s-maj=90.4km s-min=19.1km az=77.0*

*MAN **12** 22:29:10.3, 13°.63N×120°.38E, h99^{km}, mb4.0, ML2.7, MS2.3, Hypocentre not reviewed by the ISC*

ISC 12 22:29:10.7±1.7**, 15°.2N**±0°.1×**121°.0E**±0°.5**, h35^{km}, n7, σ0^{s}.07**/6**, mb3.8**/4**, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	1.08	182	Pn	Pn	22 29 29.4	0.0
	163nm,0.3s,baz=236,slow=0.6,SNR=10						
TGY				Sn	Sn	22 29 43.0	-0.1
	276nm,0.3s,baz=27,slow=7.7,SNR=7.2						
PGP	Puerto Galera	1.67	181	⇑*e*P	Pn	22 29 28.0	-10
PGP				*i* S	Sn	22 29 41.1	-17
JNU	Nakatsue	19.99	25	LR	LR	22 41 11.4	
	comp=Z,888nm,21.5s,baz=245,slow=37						
ASAR	Alice Springs	40.63	162	P	P	22 36 47.6	0.0
	0.2nm,0.5s,baz=334,slow=7.5,SNR=1.9						
	0.2nm,0.5s						
MKAR	Makanchi Array	45.01	323	P	P	22 37 22.9	0.0
	0.4nm,0.5s,baz=110,slow=7.9,SNR=7.3						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	47.87	332	P	P	22 37 45.0	-0.1
	0.7nm,0.3s,baz=119,slow=6.2,SNR=5.7						
	0.7nm,0.3s						
KURBB	Kurchatov Arra	49.12	325	P	P	22 37 54.8	0.0
	1.1nm,0.5s,baz=130,slow=7.9,SNR=12						
	1.1nm,0.5s						

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*JMA **12** 22:35:18.9±0.5, 31°.0N±0°.7×12°9E±°, h15^{km}±4^{km}, MD4.2/24, MW4.3/24, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*NIED **12** 22:35:18.9, 30°.99N×129°.14E, h15^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.29; $M_{\theta\theta}$1.59; $M_{\phi\phi}$-1.31; $M_{r\theta}$-0.00; $M_{\theta\phi}$1.88; $M_{\phi r}$3.55; Fault plane solution: $M_0$4.17000×10^{15} NP1: ϕ_s101.00000°, δ35.00000°, λ-4.00000°. NP2: ϕ_s194.00000°, δ88.00000°, λ-125.00000°.*

*IDC **12** 22:35:19.6±1.0, 30°.95N×129°.15E, h0^{km}, mb3.6/10, mbtmp3.6/13, ML3.5/3 Error ellipse: s-maj=25.4km s-min=18.3km az=116.0*

ISC 12 22:35:20.6±0.6**, 31°.03N**±0°.04×**129°.27E**±0°.06**, h11^{km}, n30, σ1^{s}.31**/26**, mb3.5**/11**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.75	30	P	Pg	22 35 34.9	-0.2
JSJ				S	Sb	22 35 46.0	0.0
JSJ	Shimokoshiki	0.75	30	A	A	22 35 34.9	
	comp=E,12nm,1.6s,comp=E,10.0nm,1.0s						
JKC	Kuchinoerabu	0.97	125	*e*P	Pg	22 35 38.1	-1.3
JKC	Kuchinoerabu	0.97	125	A	A	22 35 38.1	
	comp=E,14nm,0.3s,comp=E,18nm,1.5s						
JSU	Suzuyama	1.12	64	A	A	22 35 41.5	
	comp=E,6.0nm,1.0s,comp=E,15nm,2.1s						
JNN	Nakanoshima	1.29	156	*e*P	Pn	22 35 43.2	-1.4
JNN	Nakanoshima	1.29	156	A	A	22 35 43.2	
	comp=E,15nm,1.2s,comp=E,10.0nm,1.3s						
JYAK	Yakushimahirau	1.33	126	*e*P	Pn	22 35 44.4	-0.6
JYAK	Yakushimahirau	1.33	126	A	A	22 35 44.4	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,2.4s						
JTN	Tanegashima 3	1.52	104	*e*P	Pn	22 35 48.0	+0.3
JTN				*e*S	Sg	22 36 08.7	-0.7
JMTN	Minamitane	1.54	114	*e*P	Pn	22 35 47.2	-0.8
JZO	Okuchi	1.58	45	A	A	22 35 48.5	
	comp=E,5.0nm,2.7s,comp=E,5.0nm,5.6s						
JHD	Hondo	1.61	27	*e*P	Pn	22 35 48.5	-0.6
JFU	Fukue jima 2	1.68	345	P	Pn	22 35 47.7	-2.4
JNAR	Kushima--Naru	1.78	73	A	A	22 35 51.5	
	comp=E,4.0nm,5.1s,comp=E,7.0nm,5.4s						
JNKG	Nichinankitago	1.91	70	A	A	22 35 53.4	
	comp=E,4.0nm,1.3s,comp=E,6.0nm,4.5s						
JNU	Nakatsue	2.49	33	Pn	Pb	22 36 05.0	-0.4
	33nm,0.3s,baz=236,slow=6.2,SNR=37						
JNU				Sn	Sb	22 36 35.0	-1.3
	22nm,0.3s,baz=38,slow=17,SNR=3.5						
	118nm,0.5s						
JOW	Kunigami	4.27	192	Pn	Pn	22 36 24.6	-1.0
	3.4nm,0.3s,baz=17,slow=9.7,SNR=7.1						
	22nm,0.6s						
KSRS	Korea Array	6.51	350	Pn	Pn	22 36 56.1	-0.2
	0.7nm,0.3s,baz=178,slow=15,SNR=9.2						
KSRS				Sn	Sn	22 38 07.8	-2.6
	0.5nm,0.3s,baz=59,slow=9.3,SNR=4.2						
KSRS				Lg	Lg	22 38 42.3	
	1.4nm,0.3s,baz=174,slow=28,SNR=5.1						
	5.3nm,0.8s						
SONM	Songino Array	24.23	320	P	P	22 40 37.0	-0.6
	1.4nm,0.9s,baz=134,slow=8.5,SNR=5.7						
	1.4nm,0.9s						
CMAR	Chiang Mai Arr	30.15	253	P	P	22 41 31.4	+0.6
	2.7nm,0.3s,baz=76,slow=5.7,SNR=5.6						
MKAR	Makanchi Array	39.19	307	P	P	22 42 48.6	0.0
	0.8nm,0.9s,baz=102,slow=10,SNR=4.9						
	0.8nm,0.9s						
KURBB	Kurchatov Arra	42.15	313	P	P	22 43 12.3	-0.6
	0.4nm,0.7s,baz=101,slow=9.0,SNR=4.2						
	0.4nm,0.7s						
WRA	Warramunga Arr	50.91	174	P	P	22 44 21.1	-0.9
	0.6nm,0.9s,baz=352,slow=7.9,SNR=3.0						
	0.6nm,0.9s						
ILAR	Eielson Array	59.81	30	P	P	22 45 27.9	+2.3
	0.3nm,0.8s,baz=288,slow=8.4,SNR=4.9						
	0.3nm,0.8s						
FINES	FINESS Array B	69.17	330	P	P	22 46 29.6	+2.8
	2.6nm,1.0s,baz=64,slow=8.7,SNR=4.7						
	2.6nm,1.0s						
AKASG	Malin Array Be	72.51	319	P	P	22 46 47.4	0.0
	0.1nm,0.3s,baz=358,slow=30,SNR=1.6						
	0.1nm,0.3s						
YKA	Yellowknife Ar	73.81	26	P	P	22 46 55.1	+0.3
	0.3nm,0.7s,baz=298,slow=5.7						
	0.3nm,0.7s						
BRTR	Keskin Array B	74.84	307	P	P	22 47 02.4	+0.9
	0.7nm,0.8s,baz=96,slow=8.9,SNR=5.1						
	0.7nm,0.8s						
NOA	NORSAR Array B	75.43	334	P	P	22 47 06.0	+1.6
	0.3nm,0.6s,baz=36,slow=8.9,SNR=1.5						
	0.3nm,0.6s						

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*IDC **12** 22:36:03.4±26.0, 23°.98S×172°.75W, h0^{km}, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=481.8km s-min=154.8km az=81.0*

*NEIC **12** 22:36:09.2±0.5, 23°.3S±0°.1×173°.2W±0°.2, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=33.8km s-min=9.1km az=133.0*

ISC 12 22:36:08.1±1.1**, 23°.4S**±0°.2×**173°.2W**±0°.2**, h10^{km}, n16, σ1^{s}.32**/16**, mb4.4**/10**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.29	36	Pn	Pn	22 37 26.9	-0.3
OUENC	Ouen Island, N	18.42	269	P	P	22 40 23.8	+0.1
OUENC				IAmb	IAmb	22 40 30.4	
	comp=Z,3.1nm,0.8s						
DZM	Mont Dzumac	18.83	270	P	Pn	22 40 31.2	+2.4
CTA	Charters Tower	37.72	267	P	P	22 43 24.7	+0.4
	comp=Z,4.2nm,1.0s,baz=86,slow=13,SNR=1.1						
	comp=Z,4.2nm,1.0s						
STKA	Stephens Creek	40.69	248	P	P	22 43 45.9	-3.1
	comp=Z,1.2nm,0.4s,baz=117,slow=11,SNR=3.9						
	comp=Z,1.2nm,0.4s						
AS31	Alice Springs	48.26	259	P	P	22 44 49.2	-0.5
AS31				IAmb	IAmb	22 44 50.2	
	comp=Z,1.8nm,1.1s						
ASAR	Alice Springs	48.26	259	P	P	22 44 49.1	-0.6
	comp=Z,1.4nm,0.4s,baz=90,slow=7.5,SNR=23						
	comp=Z,1.4nm,0.4s						
WR0	Warramunga Arr	48.47	264	P	P	22 44 51.6	+0.3
WR0				IAmb	IAmb	22 44 53.6	
	comp=Z,6.4nm,1.0s						
WB2	Warramunga Arr	48.65	264	P	P	22 44 53.0	+0.3
WB2				IAmb	IAmb	22 45 02.6	
	comp=Z,6.4nm,1.1s						
WB0	Warramunga Arr	48.66	264	P	P	22 44 53.2	+0.5
WB0				IAmb	IAmb	22 45 07.6	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	48.66	264	P	P	22 44 52.3	-0.5
	comp=Z,1.9nm,0.5s,baz=104,slow=7.6,SNR=22						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	48.66	264	P	P	22 44 53.2	+0.4
FORT	Forrest	52.31	248	P	P	22 45 18.8	-1.4
KNRA	Kununurra	54.94	267	P	P	22 45 40.7	+1.0
QSPA	South Pole Qui	66.67	180	P	P	22 47 00.6	+1.6
QSPA				IAmb	IAmb	22 47 08.0	
	comp=Z,1.4nm,1.1s						
JSD	Sado	76.25	322	P	P	22 47 57.1	+0.2
JSD				IAmb	IAmb	22 47 57.9	
	comp=Z,5.3nm,0.5s						

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*ISK **12** 22:44:45.9, 34°.86N×33°.88E, h68^{km}, ML3.2/38*

*NIC **12** 22:44:48.6±0.0, 35°.00N×33°.84E, h49^{km}±1^{km}, Ml3.0/7*

*GII **12** 22:44:49.6±0.0, 34°.71N×33°.87E, h20^{km}, Mm3.0/3*

*DDA **12** 22:44:49.0±0.0, 35°.00N×33°.87E, h57^{km}±12^{km}, ML2.8*

*GRAL **12** 22:44:54.5±0.4, 34°.51N×34°.36E, h4^{km}±5^{km}, MD3.1*

ISC 12 22:44:48.1±1.2**, 34°.90N**±0°.02×**33°.90E**±0°.03**, h53^{km}**±6^{km}**, n94, σ1^{s}.13**/136**, 2C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARAL	Paralimni	0.15	50	P	Pn	22 44 56.7	+0.1
PARAL				S	Sn	22 45 03.1	+0.5
PARAL				AML	AML	22 45 04.8	
	3.9nm,0.4s						
PARAL				AML	AML	22 45 04.8	
	3.9nm,0.4s						
PARAL				AML	AML	22 45 05.9	
	5.9nm,0.3s						
PARAL				AML	AML	22 45 05.9	
	5.9nm,0.3s						
MVOU	Mavrovouni	0.25	298	⇑*i*P	Pn	22 44 56.7	-0.5
MVOU				S	Sn	22 45 03.0	-0.6
MVOU				AML	AML	22 45 03.5	
	15nm,0.6s						
MVOU				AML	AML	22 45 03.5	
	15nm,0.6s						
MVOU				AML	AML	22 45 04.2	
	7.1nm,0.3s						
MVOU				AML	AML	22 45 04.2	
	7.1nm,0.3s						
AKIN	Akıncılar- Kıb	0.38	288	PG	Pn	22 44 57.9	-0.4
CSS	Mathiatis	0.47	278	PG	Pn	22 44 58.7	-0.7
CSS				SG	Sn	22 45 06.9	-0.5
CSS	Mathiatis	0.47	278	⇑*i*P	Pn	22 44 58.7	-0.7
CSS				S	Sn	22 45 06.4	-1.1
CSS				AML	AML	22 45 07.1	
	2.1nm,0.6s						
CSS				AML	AML	22 45 07.1	
	2.1nm,0.6s						
CSS				AML	AML	22 45 07.5	
	3.9nm,0.4s						
CSS				AML	AML	22 45 07.5	
	3.9nm,0.4s						
CSS	Mathiatis	0.47	278	Pg	Pn	22 44 58.5	-0.8
ATHAL	Athalassa	0.48	300	⇓*i*P	Pn	22 44 58.9	-0.5
ATHAL				S	Sn	22 45 06.6	-0.9
ATHAL				AML	AML	22 45 08.6	
	4.9nm,0.4s						
ATHAL				AML	AML	22 45 08.6	
	4.9nm,0.4s						
ATHAL				AML	AML	22 45 14.4	
	4.8nm,0.5s						
ATHAL				AML	AML	22 45 14.4	
	4.8nm,0.5s						
LFK	Lefkose	0.49	321	PG	Pn	22 44 59.3	-0.2
LFK				SG	Sn	22 45 09.0	+1.3
ASGA	Asgata	0.55	258	⇓*e*P	Pn	22 45 00.1	-0.1
ASGA				S	Sn	22 45 09.3	+0.5
ASGA				AML	AML	22 45 09.7	
	2.3nm,0.3s						
ASGA				AML	AML	22 45 09.7	
	2.3nm,0.3s						
ASGA				AML	AML	22 45 09.8	
	3.7nm,0.2s						
ASGA				AML	AML	22 45 09.8	
	3.7nm,0.2s						
ASGA				AML	AML	22 45 10.0	

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             7.4nm,0.8s
ASGA                                 AML      AML     22 45 10.0
             7.4nm,0.8s
EREN   Erenkoy            0.67  19   PG       Pn      22 45 01.5  -0.1
EREN                                 SG       Sn      22 45 12.8  +1.4
EREN   Erenkoy            0.67  19   P        Pn      22 45 01.5  -0.1
EREN                                 S        Sn      22 45 11.9  +0.5
EREN                               i AML      AML     22 45 14.0
             comp=E,401nm,0.3s
SZAC   Souni              0.85 261⇓eP         Pn      22 45 04.0   0.0
SZAC                                 S        Sn      22 45 16.1  +0.4
SZAC                                 AML      AML     22 45 16.6
             3.6nm,0.5s
SZAC                                 AML      AML     22 45 16.6
             3.6nm,0.5s
SZAC                                 AML      AML     22 45 17.8
             3.4nm,0.2s
SZAC                                 AML      AML     22 45 17.8
             3.4nm,0.2s
LEF    Lefka              0.86 285   PG       Pn      22 45 03.6  -0.5
LEF    Lefka              0.86 285   P        Pn      22 45 05.6  +1.6
LEF                                  S        Sn      22 45 17.5  +1.7
AKDN   Akdeniz- Kıbrı     0.86 298   PG       Pn      22 45 03.9  -0.2
ALFC   Alefka             1.10 284   P        Pn      22 45 06.5  -0.8
ALFC                                 S        Sn      22 45 20.8  -0.8
NATA   Nata               1.10 264   P        Pn      22 45 07.6  +0.3
AKK2   Akkuyu-Mersin      1.27 347   PN       Pn      22 45 09.5   0.0
TISA   Tisan-Mersin       1.27 352   PN       Pn      22 45 09.2  -0.4
AKK1   Akkuyu-Mersin      1.28 347   PN       Pn      22 45 09.1  -0.5
AKKU   Akkuyu-Mersin      1.29 347   PN       Pn      22 45 09.4  -0.4
AKMS   Akamas             1.29 276   P        Pn      22 45 09.9   0.0
AKMS                                 S        Sn      22 45 26.8  +0.6
AKMS                                 AML      AML     22 45 32.4
             0.6nm,0.3s
AKMS                                 AML      AML     22 45 32.4
             0.6nm,0.3s
KARG   Kargicak-Mersi     1.31 353   PN       Pn      22 45 09.8  -0.3
YORU   Yoruktepe-Mers     1.32 342   PN       Pn      22 45 09.7  -0.5
IKL    Isikli             1.35 352   PN       Pn      22 45 10.2  -0.4
TEPK   Tepekoy-MERSIN     1.35 348   PN       Pn      22 45 10.3  -0.5
OREN   Orenkoy-Mersin     1.36 345   PN       Pn      22 45 10.1  -0.6
TEKE   Tekeli-Mersin      1.40 333   PN       Pn      22 45 10.6  -0.7
SILI   Silifke-Mersin     1.47   1   PN       Pn      22 45 12.0  -0.2
BERE   Bereket-Mersin     1.55 339   PN       Pn      22 45 12.9  -0.6
KEBE   Keben-Mersin       1.55 354   PN       Pn      22 45 13.3  -0.2
KEBE                                 SN       Sn      22 45 32.9  +0.4
TEVE   Tevekalti-Mers     1.58 346   PN       Pn      22 45 13.8   0.0
BHL    Bhannes            1.75 124  eP        Pn      22 45 16.1  -0.1
HWQ    Hawqa              1.80 110  eP        Pn      22 45 17.7  +0.9
HWQ                                 eS        Sn      22 45 35.2  -3.4
DQRL   Deir Qamar         1.82 130  eP        Pn      22 45 16.9  -0.2
DQRL                                eS        Sn      22 45 33.7  -5.5
GAZI   Gazipasa           1.86 316   PN       Pn      22 45 17.1  -0.5
GAZI   Gazipasa           1.86 316   P        Pn      22 45 16.8  -0.8
GAZI                                 S        Sn      22 45 36.8  -3.2
ERMK   Ermenek            1.92 335   P        Pn      22 45 19.0  +0.5
ERMK                                 S        Sn      22 45 41.0  -0.6
ERMK                               i AML      AML     22 45 43.0
             comp=E,87nm,0.4s
ERMK                               i AML      AML     22 45 46.0
             comp=N,92nm,0.6s
MERS   Mersin             2.03  14   PN       Pn      22 45 19.4  -0.5
HNTI   Hanita             2.10 149   P        Pn      22 45 21.4  +0.6
HNTI   Hanita             2.10 149   Pn       Pn      22 45 21.3  +0.5
HNTI                                 Sn       Sn      22 45 45.1  -0.6
RCY    Rachaya            2.13 131  eP        Pn      22 45 22.3  +0.9
YAYL   Yayladag           2.13  57   PN       Pn      22 45 21.0  -0.3
YAYL   Yayladag           2.13  57   P        Pn      22 45 21.5  +0.2
YAYL                                 S        Sn      22 45 45.6  -1.0
YAYL                               i AML      AML     22 45 47.0
             comp=N,183nm,0.2s
YAYL                               i AML      AML     22 45 48.0
             comp=E,143nm,0.4s
SHBL   Chebaa             2.17 135  eP        Pn      22 45 22.6  +0.6
SHBL                                eS        Sn      22 45 43.6  -4.2
DED    Mersin             2.18  19   P        Pn      22 45 22.0   0.0
DED                                  S        Sn      22 45 46.6  -1.3
GEM    Giv'at Ha'Em       2.23 139   P        Pn      22 45 23.6  +1.0
GEM    Giv'at Ha'Em       2.23 139   Pn       Pn      22 45 23.6  +1.0
GEM                                  Sn       Sn      22 45 48.4  -0.6
NATI   Neve Ativ          2.23 136   P        Pn      22 45 23.5  +0.9
NATI   Neve Ativ          2.23 136   Pn       Pn      22 45 23.6  +0.9
NATI                                 Sn       Sn      22 45 49.5  +0.5
MMA0B  Mount Meron ar     2.25 146   Pn       Pn      22 45 23.9  +0.9
MMA0B                                Sn       Sn      22 45 49.9  +0.2
KRMN   Karaman            2.33 347   PN       Pn      22 45 24.9  +0.8
HDMB   Hadim              2.36 331   PN       Pn      22 45 24.2  -0.4
TAHT   Tahtakopru-Hat     2.37  51   PN       Pn      22 45 24.7  +0.1
YURE   YUREGIR            2.38  36   P        Pn      22 45 25.3  +0.6
BLGI   Bet Lehem HaGe     2.41 153   P        Pn      22 45 21.1  -4.0
BLGI   Bet Lehem HaGe     2.41 153   Pn       Pn      22 45 25.9  +0.8
BLGI                                 Sn       Sn      22 45 53.2  -0.2
KKBE   Karaman, Kazim     2.44 342   P        Pn      22 45 26.0  +0.3
KKBE                                 S        Sn      22 45 53.5  -0.9
OFRI   `Ofer              2.44 158   P        Pn      22 45 25.9  +0.3
OFRI   `Ofer              2.44 158   Pn       Pn      22 45 25.9  +0.3
OFRI                                 Sn       Sn      22 45 53.6  -0.7
GULE   Gulek              2.48  16   P        Pn      22 45 27.3  +1.0
GULE                                 S        Sn      22 45 55.7  +0.2
GULE                               i AML      AML     22 46 00.0
             comp=N,38nm,0.4s
KERG   Konya-Eregli       2.52   4   P        Pn      22 45 27.4  +0.6
KERG                                 S        Sn      22 45 57.2  +0.9
KARA   Karaisali          2.54  21   PN       Pn      22 45 26.9  +0.1
CEYT   Ceyhan             2.58  35   PN       Pn      22 45 28.0  +0.5
SHMJ   Saham              2.66 144   P        Pn      22 45 30.1  +1.5
SHMJ                                 P        Pn      22 45 30.1  +1.5
MMLI   Mount Malkishu     2.76 152   Pn       Pn      22 45 30.9  +0.9
MMLI                                 Sn       Sn      22 46 03.0  +0.9
SLTI   Sal'it             2.82 160   Pn       Pn      22 45 31.0  +0.3
SLTI                                 Sn       Sn      22 46 01.5  -1.9
AKO    Adana              2.85  26   P        Pn      22 45 32.2  +1.1
YESY   Yesilyurt          2.88 357   PN       Pn      22 45 31.8  +0.1
CMRD   Camardi-Nigde      2.90  17   PN       Pn      22 45 32.3  +0.5
HMDT   Nahal Hemdat       2.97 152   Pn       Pn      22 45 34.2  +1.5
HMDT                                 Sn       Sn      22 46 07.0  -0.1
SEYD   Seydisehir-KON     3.01 327   PN       Pn      22 45 33.8  +0.4
KOZT   Kozan              3.01  31   PN       Pn      22 45 33.1  -0.2
UJAP   Al Uja             3.21 156   Pn       Pn      22 45 36.8  +0.7
UJAP                                 Sn       Sn      22 46 13.2  +0.1
AMAZ   Amatzia            3.46 166   Pn       Pn      22 45 40.5  +0.9
AMAZ                                 Sn       Sn      22 46 18.3  -1.0
DSI    Dead Sea           3.54 159   P        Pn      22 45 42.4  +1.8
DSI    Dead Sea           3.54 159   P        Sn      22 46 23.2  +1.9
DSI    Dead Sea           3.54 159   Pn       Pn      22 45 40.9  +0.3
DSI                                  Sn       Sn      22 46 20.4  -0.9
KORT   Korkueli           3.56 307   PN       Pn      22 45 40.6  -0.4
YTIR   Yattir             3.67 164   Pn       Pn      22 45 43.8  +1.3
YTIR                                 Sn       Sn      22 46 24.1  -0.4
MDBI   Mazsada            3.78 161   Pn       Pn      22 45 45.5  +1.7
GHAJ   Ghor Haditha       3.85 158   Sn       Sn      22 46 28.5  -0.2
KZIT   Kziot              4.00 174   Pn       Pn      22 45 47.8  +0.9
KZIT                                 Sn       Sn      22 46 30.9  -1.7
SARI   SarD1z-Kayseri     4.04  29   PN       Pn      22 45 49.4  +1.8
BNN    Bunyan             4.24  21   PN       Pn      22 45 51.1  +0.8
CAME   Cameli-Denizli     4.25 300   PN       Pn      22 45 50.9  +0.4
FETY   Fethiye            4.29 295   PN       Pn      22 45 50.8   0.0
PRNI   Paran              4.63 168   Pn       Pn      22 45 56.4  +0.9
PRNI                                 Sn       Sn      22 46 47.6  -0.4
DARE   Darende-Malaty     4.66  37   PN       Pn      22 45 56.7  +0.7
DALY   Dalyan (Mula)      4.67 296   PN       Pn      22 45 55.9  -0.2
KRMI   Paran Flat         4.82 171   Pn       Pn      22 45 59.2  +1.1
HRFI   Mount Harif        4.94 169   Pn       Pn      22 46 01.0  +1.2
HRFI                                 Sn       Sn      22 46 55.1  -0.6
MBRI   Mt Berech          5.16 170   P        Pn      22 46 04.2  +1.3
MBRI   Mt Berech          5.16 170   Pn       Pn      22 46 04.2  +1.3
MBRI                                 Sn       Sn      22 47 00.1  -1.1
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ISK ***12*** *22:45:45.5, 34.°84N×33.°84E, h64^{km}, ML3.4/28*
GII ***12*** *22:45:45.4±0.0, 34.°71N×33.°93E, h1^{km}, Mm3.0/1*
DDA ***12*** *22:45:48.7±0.0, 34.°98N×33.°87E, h40^{km}±4^{km}, ML2.9*
NIC ***12*** *22:45:48.5±0.0, 34.°84N×33.°84E, h41^{km}±1^{km}, Ml3.2/8*
ISC 12 22:45:48.0±1.2**, 34.°89N**±0.°03×**33.°90E**±0.°03**, h48**^{km}±7^{km}**, n66, σ1^{s}10**/90**, 5C-1D, Cyprus region**

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Code   Station Name        Δ°   AZ°    Phase ID            Time     Res
                                     Op       ISC       h  m  s   ISC
PARAL  Paralimni          0.16  47   P        Pn      22 45 55.9  +0.1
PARAL                                S        Sn      22 46 02.4  +1.0
PARAL                                AML      AML     22 46 04.1
             6.9nm,0.5s
PARAL                                AML      AML     22 46 04.1
             6.9nm,0.5s
PARAL                                AML      AML     22 46 05.1
             10nm,0.3s
PARAL                                AML      AML     22 46 05.1
             10nm,0.3s
MVOU   Mavrovouni         0.25 300⇑iP         Pn      22 45 56.0  -0.6
MVOU                                 S        Sn      22 46 02.4  -0.2
MVOU                                 AML      AML     22 46 03.0
             12nm,0.4s
MVOU                                 AML      AML     22 46 03.0
             12nm,0.4s
MVOU                                 AML      AML     22 46 03.1
             12nm,0.3s
MVOU                                 AML      AML     22 46 03.1
             12nm,0.3s
AKIN   Akıncılar- Kıb     0.38 290   PG       Pn      22 45 56.8  -0.9
AKIN                                 SG       Sn      22 46 05.3  +0.7
CSS    Mathiatis          0.47 279   PG       Pn      22 45 57.7  -1.1
CSS                                  SG       Sn      22 46 06.4  -0.2
CSS    Mathiatis          0.47 279   P        Pn      22 45 58.0  -0.9
CSS    Mathiatis          0.47 279⇑iP         Pn      22 45 57.9  -0.9
CSS                                  S        Sn      22 46 06.2  -0.4
CSS                                  AML      AML     22 46 06.7
             3.5nm,0.4s
CSS                                  AML      AML     22 46 06.7
             3.5nm,0.4s
CSS                                  AML      AML     22 46 06.8
             2.1nm,0.3s
CSS                                  AML      AML     22 46 06.8
             2.1nm,0.3s
CSS    Mathiatis          0.47 279   Pg       Pn      22 45 57.9  -0.9
CSS                                  Sg       Sn      22 46 05.8  -0.8
ATHAL  Athalassa          0.48 302⇑iP         Pn      22 45 58.1  -0.8
ATHAL                                S        Sn      22 46 07.2  +0.5
ATHAL                                AML      AML     22 46 10.1
             6.6nm,0.3s
ATHAL                                AML      AML     22 46 10.1
             6.6nm,0.3s
LFK    Lefkose            0.49 323   PG       Pn      22 45 58.4  -0.7
LFK                                  SG       Sn      22 46 07.8  +0.8
ASGA   Asgata             0.55 259⇑eP         Pn      22 45 59.3  -0.4
ASGA                                 S        Sn      22 46 07.3  -0.7
ASGA                                 AML      AML     22 46 09.2
             9.1nm,0.2s
ASGA                                 AML      AML     22 46 09.2
             9.1nm,0.2s
ASGA                                 AML      AML     22 46 09.2
             8.3nm,0.4s
ASGA                                 AML      AML     22 46 09.2
             8.3nm,0.4s
EREN   Erenkoy            0.68  19   PG       Pn      22 46 01.1  -0.3
EREN                                 SG       Sn      22 46 12.5  +1.5
EREN   Erenkoy            0.68  19   P        Pn      22 46 00.7  -0.7
EREN                               i AML      AML     22 46 13.0
             comp=E,474nm,0.2s
SZAC   Souni              0.85 261⇓iP         Pn      22 46 03.2  -0.4
SZAC                                 S        Sn      22 46 15.0   0.0
SZAC                                 AML      AML     22 46 15.9
             8.1nm,0.4s
SZAC                                 AML      AML     22 46 15.9
             8.1nm,0.4s
SZAC                                 AML      AML     22 46 16.9
             6.6nm,0.2s
SZAC                                 AML      AML     22 46 16.9
             6.6nm,0.2s
LEF    Lefka              0.86 286   PG       Pn      22 46 02.7  -1.0
LEF                                  SG       Sn      22 46 15.1  -0.2
LEF    Lefka              0.86 286   P        Pn      22 46 04.4  +0.7
AKDN   Akdeniz- Kıbrı     0.87 298   PG       Pn      22 46 02.5  -1.3
NATA   Nata               1.10 265   P        Pn      22 46 07.0   0.0
AKK2   Akkuyu-Mersin      1.28 347   PN       Pn      22 46 08.8  -0.6
TISA   Tisan-Mersin       1.28 352   PN       Pn      22 46 08.8  -0.7
AKK1   Akkuyu-Mersin      1.29 347   PN       Pn      22 46 08.8  -0.7
AKMS   Akamas             1.29 276⇑iP         Pn      22 46 09.4  -0.3
AKMS                                 S        Sn      22 46 26.1  +0.3
AKMS                                 AML      AML     22 46 28.2
             1.4nm,0.2s
AKMS                                 AML      AML     22 46 28.2
             1.4nm,0.2s
AKMS                                 AML      AML     22 46 28.7
             1.5nm,0.2s
AKMS                                 AML      AML     22 46 28.7
             1.5nm,0.2s
AKKU   Akkuyu-Mersin      1.30 347   PN       Pn      22 46 08.9  -0.8
KARG   Kargicak-Mersi     1.32 353   PN       Pn      22 46 09.4  -0.6
YORU   Yoruktepe-Mers     1.33 342   PN       Pn      22 46 09.5  -0.6
IKL    Isikli             1.36 353   PN       Pn      22 46 09.6  -0.9
TEPK   Tepekoy-MERSIN     1.36 348   PN       Pn      22 46 09.9  -0.8
OREN   Orenkoy-Mersin     1.37 345   PN       Pn      22 46 09.9  -0.7
TEKE   Tekeli-Mersin      1.41 333   PN       Pn      22 46 10.3  -0.9
SILI   Silifke-Mersin     1.48   1   PN       Pn      22 46 11.7  -0.4
BERE   Bereket-Mersin     1.56 339   PN       Pn      22 46 12.6  -0.8
KEBE   Keben-Mersin       1.56 354   PN       Pn      22 46 12.8  -0.6
TEVE   Tevekalti-Mers     1.59 347   PN       Pn      22 46 12.9  -0.8
BHL    Bhannes            1.75 124  eP        Pn      22 46 15.3  -0.6
HWQ    Hawqa              1.79 109  eP        Pn      22 46 16.9  +0.4
GAZI   Gazipasa           1.86 317   PN       Pn      22 46 16.3  -1.1
GAZI   Gazipasa           1.86 317   P        Pn      22 46 16.6  -0.8
GAZI                                 S        Sn      22 46 37.4  -2.4
ERMK   Ermenek            1.93 336   P        Pn      22 46 19.6  +1.1
MERS   Mersin             2.04  14   PN       Pn      22 46 19.6  -0.3
RCY    Rachaya            2.12 130  eP        Pn      22 46 21.5  +0.4
YAYL   Yayladag           2.13  57   PN       Pn      22 46 21.1  -0.2
YAYL   Yayladag           2.13  57   P        Pn      22 46 20.9  -0.4
YAYL                                 S        Sn      22 46 45.0  -1.7
SHBL   Chebaa             2.17 135  eP        Pn      22 46 22.3  +0.5
DED    Mersin             2.19  19   P        Pn      22 46 21.9  -0.1
DED                                  S        Sn      22 46 46.8  -1.1
GEM    Giv'at Ha'Em       2.22 138   Pn       Pn      22 46 22.6  +0.2
GEM                                  Sn       Sn      22 46 48.8  +0.2
NATI   Neve Ativ          2.23 136   Pn       Pn      22 46 22.1  -0.3
NATI                                 Sn       Sn      22 46 48.0  -0.6
KRMN   Karaman            2.34 347   PN       Pn      22 46 23.6  -0.4
TAHT   Tahtakopru-Hat     2.38  51   PN       Pn      22 46 24.9  +0.4
YURE   YUREGIR            2.39  36   P        Pn      22 46 26.2  +1.5
KKBE   Karaman, Kazim     2.45 342   P        Pn      22 46 27.6  +2.0
GULE   Gulek              2.50  16   P        Pn      22 46 28.6  +2.4
KERG   Konya-Eregli       2.53   4   P        Pn      22 46 29.5  +2.9
KERG                                 S        Sn      22 46 56.2  -0.1
KARA   Karaisali          2.55  21   PN       Pn      22 46 26.8   0.0
KEPZ   Antalya-Kepez      2.74 318   P        Pn      22 46 34.1  +4.6
CMRD   Camardi-Nigde      2.91  17   PN       Pn      22 46 31.9  +0.1
HMDT   Nahal Hemdat       2.96 152   Sn       Sn      22 47 06.9  +0.2
KOZT   Kozan              3.02  31   PN       Pn      22 46 33.5  +0.2
SEDI   Konya, Seydise     3.09 326   P        Pn      22 46 37.2  +2.9
NIDE   Nigde/Merkez-G     3.19  13   P        Pn      22 46 37.3  +1.7
NIDE                                 S        Sn      22 47 11.3  -1.2
NIDE                               i AML      AML     22 47 15.0
             comp=E,34nm,0.2s
KAMA   Osmaniye           3.21  44   P        Pn      22 46 36.4  +0.4
KAMA                                 S        Sn      22 47 10.5  -2.5
KAMA                               i AML      AML     22 47 12.0
             comp=E,34nm,0.2s
KAMA                               i AML      AML     22 47 13.0
             comp=N,38nm,0.2s
ANDN   Andirin            3.34  36   P        Pn      22 46 37.9  +0.2
ANDN                                 S        Sn      22 47 14.5  -1.6
YAHY   KAYSERI_Yahyal     3.41  20   P        Pn      22 46 40.1  +1.3
YAHY                                 S        Sn      22 47 17.6  -0.4
DSI    Dead Sea           3.53 159   Sn       Sn      22 47 20.0  -0.9
YTIR   Yattir             3.66 163   Sn       Sn      22 47 24.5  +0.4
SARI   SarD1z-Kayseri     4.05  29   PN       Pn      22 46 48.5  +0.9
KRMI   Paran Flat         4.81 171   Sn       Sn      22 47 51.9  -0.4
HRFI   Mount Harif        4.93 168   Pn       Pn      22 46 59.3  -0.3
HRFI                                 Sn       Sn      22 47 55.1  -0.2
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IDC ***12*** *23:09:26.2±0.5, 15.°74S×74.°94W, h0^{km}, mb4.4/15, mbtmp4.4/19, ML4.3/4, MS3.9/37, Error ellipse: s-maj=22.0km s-min=12.6km az=64.0*
ARE ***12*** *23:09:27±1.8, 15.°87S±0.°06×75.°03W±0.°09, h20^{km}±3^{km}, Error ellipse: s-maj=13.2km s-min=8.0km az=67.0*
NEIC ***12*** *23:09:27.7±1.6, 15.°80S±0.°06×75.°07W±0.°09, h10^{km}±1^{km}, mb4.7/302, ML5.1(ARE), Error ellipse: s-maj=15.8km s-min=9.5km az=246.0*
GUC ***12*** *23:09:29.4±0.3, 15.°73S×74.°98W, h21^{km}±5^{km}, ML5.0, MW5.2*
VAO ***12*** *23:09:29.3±0.4, 15.°75S×74.°79W, h10^{km}, mb4.7*
SJA ***12*** *23:09:41.3±2.4, 16.°32S×73.°89W, h10^{km}, MW4.7(GFZ)*
ISC 12 23:09:27.6±0.3**, 15.°77S**±0.°05×**74.°99W**±0.°07**, h10**^{km}**, n441, σ0^{s}98**/370**, mb4.7**/139**, MS3.9**/33**, 14C-14D, Fault plane solution: NP1:**ϕ_s164.34529°**,**δ89.59107°**,**λ104.52419°. **NP2:**ϕ_s255.92333°**,**δ14.52982°**,**λ1.63014°. **Principal axes:** T Plg43.5936°, Azm88.5184°**;** N Plg14.5238°, Azm344.2393°**;** P Plg42.8003°, Azm240.3590°**; Near coast of Peru**

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Code   Station Name        Δ°   AZ°    Phase ID            Time     Res
                                     Op       ISC       h  m  s   ISC
NNA    Nana               4.16 334   Pn       Pn      23 10 31.2   0.0
             11nm,0.3s,baz=166,slow=14,SNR=13
NNA                                  Sn       Sn      23 11 20.6  +0.6
             64nm,0.3s,baz=166,slow=12,SNR=1.7
             47nm,0.3s
AP01   Chacalluta         5.15 121   Pn       Pn      23 10 45.5  +0.8
PB12   IPOC Station P     5.28 123   Pn       Pn      23 10 47.3  +0.6
PB16   IPOC Station P     5.84 117            Pn      23 10 55.6  +0.9
PB11   IPOC Station P     6.45 129   Pn       Pn      23 11 02.3  -0.6
TA01   Diego Aracena      6.61 137            Pn      23 11 04.3  -0.6
TA01   Diego Aracena      6.61 137⇑iP         Pn      23 11 04.3  -0.6
LPAZ   La Paz             6.62  95   Pn       Pn      23 11 10.2  +4.7
             6.0nm,0.3s,baz=277,slow=8.9,SNR=81
LPAZ                                 LR       LR      23 13 59.8
             comp=Z,2μm,18.9s,baz=276,slow=42
LPAZ   La Paz             6.62  95   Pn       Pn      23 11 07.5  +2.0
LPAZ   La Paz             6.62  95  eP        Pn      23 11 08.2  +2.6
LPAZ   La Paz             6.62  95  eP        Pn      23 11 03.2  -2.4
PATCX  Punta Patache      6.81 138   Pn       Pn      23 11 06.9  -0.8
PB08   IPOC Station P     7.06 129            Pn      23 11 11.3  -0.1
PB02   IPOC Station P     7.34 140            Pn      23 11 14.9  -0.1
PB01   IPOC Station P     7.41 136            Pn      23 11 15.2  -0.7
PB07   IPOC Station P     7.65 142            Pn      23 11 18.7  -0.7
PB04   IPOC Station P     7.98 146            Pn      23 11 23.5  -0.3
PB09   IPOC Station P     8.10 139            Pn      23 11 25.9  +0.4
CZSB   Cruzeiro do Su     8.29  16  eP        Pn      23 11 29.2  +1.2
PB06   IPOC Station P     8.60 144            Pn      23 11 31.8  -0.4
PB10   IPOC Station P     8.77 152            Pn      23 11 33.6  -0.9
LVC    Limon Verde        8.91 141   Pn       Pn      23 11 38.0  +1.2
             10nm,0.3s,baz=318,slow=10,SNR=70
LVC                                  Sn       Sn      23 13 08.7  -8.7
             0.2nm,0.3s,baz=321,slow=19,SNR=1.1
LVC                                  LR       LR      23 14 53.5
             comp=Z,702nm,20.7s,baz=308,slow=37
             67nm,0.8s
LVC    Limon Verde        8.91 141   Pn       Pn      23 11 37.3  +0.6
LVC    Limon Verde        8.91 141  eP        Pn      23 11 37.4  +0.7
ATAH   Atahualpa          9.20 338   Pn       Pn      23 11 45.0  +4.1
             0.5nm,0.3s,baz=153,slow=14,SNR=1.6
ATAH                                 Sn       Sn      23 13 22.4  -2.3
             0.8nm,0.3s,baz=144,slow=18,SNR=1.2
ATAH                                 LR       LR      23 15 59.8
             comp=Z,459nm,18.8s,baz=212,slow=43
AF01   San Pedro de A     9.62 139            Pn      23 11 45.9  -0.5
PB14   IPOC Station P     9.81 155   Pn       Pn      23 11 48.5  -0.5
ETMB   Extrema           10.40  56  eP        Pn      23 11 54.9  -2.0
GO02   Mina Guanaco      10.63 152            Pn      23 12 00.1  -0.2
AC02   Maricunga         12.29 155            Pn      23 12 23.5  +0.3
AC06   Mina Casimiro     12.31 160            Pn      23 12 22.8  -0.3
TBTG   Tabatinga, AM     12.55  24  eP        Pn      23 12 25.8  -0.5
TBTG   Tabatinga, AM     12.55  24  eP        Pn      23 12 27.3  +1.0
SIV    San Ignacio       13.40  93   Pn       Pn      23 12 35.2  -2.7
             0.1nm,0.3s,baz=268,slow=9.2,SNR=9.3
             1.5nm,0.4s
LCO    Las Campanas      13.77 164            Pn      23 12 42.6  -0.6
CO05   La Serena         14.50 167   Pn       Pn      23 12 52.1  -0.9
VILB   Vilhena           14.60  81  eP        Pn      23 12 52.8  -1.6
CO01   Juntas del Tor    14.85 163            Pn      23 12 57.3  -0.6
GO04   Tololo Observa    14.85 166            Pn      23 12 57.7  -0.2
CO06   Fray Jorge        15.16 169            Pn      23 13 00.5  -1.3
AROD   Rodeo             15.21 161  eP        Pn      23 13 03.3  +0.5
ACLC   CERRO LA CRUZ     15.48 153  eP        Pn      23 13 07.7  +1.4
ACCO   Cerro Coronel     15.72 161  eP        P       23 13 12.7  -0.9
CO02   Combarbal         15.80 167            Pn      23 13 09.1  -1.2
CO02                                 IAmb     IAmb    23 13 26.2
             comp=Z,57nm,1.1s
OTAV   Otavalo           16.26 348   P        Pn      23 13 16.1  -0.6
OTAV   Otavalo           16.26 348  eP        P       23 13 18.8  -1.0
AVFE   Valle Fertil      16.36 156  eP        P       23 13 19.8  -0.6
APLL   PUNTA DE LOS L    16.50 153  eP        Pn      23 13 20.8  +1.5
ZON    Zonda             16.73 161            Pn      23 13 21.2  -1.0
RTLS   Leoncito          16.79 163  eP        P       23 13 28.9  +3.5
VA06   Catapilco         17.06 169   Pn       Pn      23 13 24.4  -1.8
ACHE   Chepes            17.11 155  eP        P       23 13 28.9  +0.1
AUSP   Uspallata         17.16 164  eP        P       23 13 30.8  +1.3
VA03   San Esteban       17.40 167            Pn      23 13 29.4  -1.2
ROC1   El Roble          17.51 169   Pn       Pn      23 13 30.7  -1.5
PEL    Peldehue          17.74 168   P        Pn      23 13 34.3  -0.4
SOTA   Rioblanco         17.86 355  eP        P       23 13 49.1   +12
H03N1  Juan Fernandez    17.95 191   T        T       23 32 16.4
             baz=13,slow=74
H03N2  Juan Fernandez    17.95 191   T        T       23 32 27.3
             baz=13,slow=74,SNR=9591
H03N3  Juan Fernandez    17.97 191   T        T       23 32 23.7
             baz=13,slow=74
PCON   Cinco Dias        18.03 355  eP        P       23 13 49.9   +10
VA05   Santo Domingo     18.07 171            Pn      23 13 38.4  -0.4
TCA    Tanti             18.18 150  eP        P       23 13 41.1  +0.5
PDRB   Porto dos Gac     18.22  79  eP        Pn      23 13 41.6  +0.8
MT09   Talagante         18.30 169   P        Pn      23 13 41.5  -0.2
H03S3  Juan Fernandez    18.33 190   T        T       23 32 45.2
             SNR=78
MT01   Popeta            18.34 170   P        P       23 13 42.7  +0.5
H03S2  Juan Fernandez    18.34 190   T        T       23 32 45.2
             SNR=72
H03S1  Juan Fernandez    18.34 190   T        T       23 32 38.1
             SNR=61
LMEL   Las Melosas       18.52 167   P        P       23 13 43.6  -0.7
BO04   La Punta          18.57 168   P        P       23 13 44.5  -0.3
MRA    San Martin        18.60 155  eP        Pn      23 13 46.8  +1.4
NBRS   Nobres            18.62  88  eP        P       23 13 45.5  +0.1
MACA   Manacapuru-AM     18.85  50  eP        P       23 13 46.9  -1.0
AQDB   Aquidauana        18.92 107   P        P       23 13 49.1  +0.5
AQDB   Aquidauana        18.92 107  eP        P       23 13 49.2  +0.5
CLDB   Colider           19.30  78  eP        P       23 13 52.9   0.0
PRAC   Prado             19.35   0  eP        Pn      23 13 59.0  +4.4
PP1B   Ponte de Pedra    19.36  98  eP        P       23 13 53.7  +0.2
GO05   Huala             19.36 172   P        Pn      23 13 53.9  -0.6
CPUP   Villa Florida     19.53 125   P        P       23 13 55.3   0.0
             comp=Z,0.3nm,0.3s,baz=305,slow=10,SNR=12
CPUP                                 LR       LR      23 22 50.2
             comp=Z,384nm,18.4s,baz=290,slow=41
             comp=Z,7.1nm,0.9s
CPUP   Villa Florida     19.53 125   P        P       23 13 55.5  +0.2
CPUP   Villa Florida     19.53 125  eP        P       23 13 55.8  +0.5
ORTC   Ortega, Tolima    19.55 359  eP        Pn      23 13 60.0  +3.1
YOTC   Yotoco, Valle     19.67 356  eP        Pn      23 14 08.4   +10
VILC   Villavicencio,    19.79   4  eP        Pn      23 14 09.4  +9.5
ML02   Panimavida        20.17 172   P        P       23 14 02.3  +0.1
ML02                                 IAmb     IAmb    23 14 17.5
             comp=Z,51nm,1.1s
ROSC   El Rosal          20.48   2   LR       LR      23 24 12.6
             comp=Z,1μm,18.4s,baz=215,slow=43
ROSC   El Rosal          20.48   2   P        P       23 14 07.1  +0.9
ROSC                                 IAmb     IAmb    23 14 18.4
             comp=Z,38nm,1.3s
ROSC   El Rosal          20.48   2  eP        Pn      23 14 12.3  +4.0
PLMC   San Jos del P     20.58 356  eP        Pn      23 14 20.1   +11
MCR1   Marechal Candi    21.48 117  eP        P       23 14 17.0  +0.5
CBOC   Ciudad Bolivar    21.51 357  eP        P       23 14 28.4   +11
RUSC   La Rusia          21.60   5  eP        P       23 14 18.1  -0.3
ITQB   Itaqui            21.84 132   P        P       23 14 21.7  +1.5
ITQB   Itaqui            21.84 132  eP        P       23 14 20.8  +0.5
DVLD   Doverlandia       21.94  95  eP        P       23 14 21.2  -0.4
ITTB   Itaituba          22.06  61  eP        P       23 14 21.2  -1.6
TRCB   Terra Rica        22.22 112   P        P       23 14 24.2  -0.4
TRCB   Terra Rica        22.22 112  eP        P       23 14 22.9  -1.6
ARAG   Araguaiana, MT    22.31  93  eP        P       23 14 26.1  +0.6
DBBC   Dabeiba           22.67 357  eP        P       23 14 42.5   +13
BOAV   Boa Vista         23.03  40  eP        P       23 14 35.1  +2.1
ZARC   Zaragoza, Cauc    23.11   0   P        P       23 14 33.3  -0.5
ZARC   Zaragoza, Cauc    23.11   0  eP        P       23 14 26.4  -7.5
PCMB   Pacaembu          23.21 108  eP        P       23 14 34.2  -0.7
PTGB   Pitanga           23.25 116  eP        P       23 14 35.1  -0.3
SNDB   Serra Nova Dou    23.31  84  eP        P       23 14 34.2  -1.8
ITRB   Iturama           23.78 103  eP        P       23 14 40.6   0.0
CPSB   Cacapava Do Su    24.54 130  eP        P       23 14 47.6   0.0
MALB   Monte Alegre      24.67  58  eP        P       23 14 50.9  +2.0
SDV    Santo Domingo     24.87  10   P        P       23 14 51.6  +0.8
             comp=Z,5.2nm,0.5s,baz=198,slow=8.5,SNR=6.9
SDV                                  LR       LR      23 25 44.3
             comp=Z,490nm,18.5s,baz=198,slow=39
             comp=Z,5.2nm,0.5s
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SDV	Santo Domingo	24.87	10	P	P	23 14 51.3	+0.5
SDV				IAmb	IAmb	23 15 06.7	
	comp=Z,21nm,1.2s						
SDV	Santo Domingo	24.87	10	eP	P	23 14 49.9	-0.9
SDV	Santo Domingo	24.87	10	eP	P	23 14 52.6	+1.8
FRTB	Fartura	25.09	111	eP	P	23 14 52.9	+0.2
LL04	Puerto Octay	25.16	175	P	P	23 14 53.0	0.0
PLTB	Pedras Altas	25.16	133	P	P	23 14 52.8	-0.4
PLTB	Pedras Altas	25.16	133	eP	P	23 14 53.2	0.0
PLCA	Paso Flores	25.18	172	P	P	23 14 53.2	0.0
	comp=Z,4.9nm,0.7s,baz=346,slow=9.3,SNR=14						
	comp=Z,4.9nm,0.7s						
PLCA	Paso Flores	25.18	172	P	P	23 14 53.2	0.0
PLCA				IAmb	IAmb	23 15 12.1	
	comp=Z,19nm,1.4s						
PLCA	Paso Flores	25.18	172	eP	P	23 14 54.3	+1.0
BAUV	El Baul	25.50	16	P	P	23 14 56.0	-0.2
BB19B	Bebedouro	25.64	106	eP	P	23 14 58.4	+0.7
IPMB	Ipameri, GO	25.72	99	eP	P	23 14 57.8	-0.6
BDFB	Brasilia	25.97	93	P	P	23 15 00.6	-0.2
	comp=Z,3.4nm,0.5s,baz=238,slow=6.6,SNR=6.8						
BDFB				LR	LR	23 25 56.9	
	comp=Z,264nm,19.8s,baz=283,slow=38						
	comp=Z,3.4nm,0.5s						
BDFB	Brasilia	25.97	93	P	P	23 15 00.5	-0.2
BDFB				IAmb	IAmb	23 15 01.0	
	comp=Z,21nm,1.3s						
CNLB	Canela	25.99	125	eP	P	23 15 00.3	-0.5
TIJ01	Guaruva-PR	26.09	116	eP	P	23 15 01.8	0.0
PEXB	Peixe	26.15	85	eP	P	23 15 01.5	-0.8
PRPB	Parauapebas	26.46	72	eP	P	23 15 03.6	-1.6
RCLB	Rio Claro- Sao	26.76	109	eP	P	23 15 07.5	-0.3
SPB	Sao Paulo	27.06	111	eP	P	23 15 11.1	+0.7
SDBA	SAO DESIDERIO	29.36	87	eP	P	23 15 30.2	-0.9
DIAM	Diamantina, MG	30.04	99	eP	P	23 15 37.2	0.0
MDP	Montagnes des	30.32	49	LR	LR	23 29 39.3	
	comp=Z,116nm,20.1s,baz=228,slow=40						
NAN01	Guarapari, ES	33.42	99	eP	P	23 16 06.2	-0.5
GUA01	Guaratinga, BA	33.78	96	eP	P	23 16 09.9	0.0
RPN	Rapa Nui	33.80	245	LR	LR	23 26 09.4	
	comp=Z,415nm,19.4s,baz=85,slow=30						
NBPN	Ponto Novo - B	34.19	86	eP	P	23 16 12.8	-0.7
GDU01	Guandu, BA	34.29	91	eP	P	23 16 13.8	-0.6
NBLA	Lagarto - SE	36.47	87	eP	P	23 16 31.5	-1.7
CMIG	Matias Romero	38.09	328	LR	LR	23 30 13.5	
	comp=Z,182nm,20.0s,baz=200,slow=33						
NBAN	Anadia - AL	38.21	86	eP	P	23 16 46.7	-1.3
NBCA	Caruaru-PE	38.81	84	eP	P	23 16 52.4	-0.6
USHA	Ushuaia	39.32	174	P	P	23 16 57.5	+0.8
	comp=Z,5.4nm,0.8s,baz=329,slow=4.7,SNR=5.0						
	comp=Z,5.4nm,0.8s						
NBRF	Rio Formoso -	39.54	85	eP	P	23 16 57.9	-1.2
RCBR	Riachuelo	39.58	80	LR	LR	23 34 25.5	
	comp=Z,688nm,19.4s,baz=36,slow=38						
GOGA	Godfrey	49.56	351	P	P	23 18 18.0	-0.8
X58A	Rowland	50.21	355	P	P	23 18 23.0	-0.7
X58A				IAmb	IAmb	23 18 24.5	
	comp=Z,13nm,0.9s						
Z47A	Carrollton	50.27	346	P	P	23 18 23.7	-0.4
Z47A				IAmb	IAmb	23 18 25.9	
	comp=Z,14nm,1.1s						
BIRD	Birdtown, Kers	50.40	354	P	P	23 18 25.1	0.0
BIRD				IAmb	IAmb	23 18 27.1	
	comp=Z,8.2nm,0.7s						
PAULI	Pauline	50.72	353	P	P	23 18 26.8	-0.8
PAULI				IAmb	IAmb	23 18 29.1	
	comp=Z,7.9nm,0.7s						
W57A	Gilead	50.86	355	P	P	23 18 28.1	-0.5
X51A	Calhoun	50.92	350	P	P	23 18 28.3	-0.8
X51A				IAmb	IAmb	23 18 30.2	
	comp=Z,9.8nm,0.9s						
FPAL	Fort Paine	51.04	349	P	P	23 18 28.9	-1.1
FPAL				IAmb	IAmb	23 18 31.2	
	comp=Z,7.3nm,0.8s						
X48A	Hartselle	51.24	347	P	P	23 18 30.6	-0.8
W52A	Murphy	51.28	351	P	P	23 18 31.7	-0.1
W52A				IAmb	IAmb	23 18 42.7	
	comp=Z,9.9nm,1.1s						
V58A	Windy Hill, Pi	51.42	356	IAmb	IAmb	23 18 33.4	
	comp=Z,9.7nm,0.8s						
Z41A	Richland Creek	51.63	341	P	P	23 18 33.4	-1.0
V55A	Taylorsville	51.67	354	P	P	23 18 34.1	-0.6
CPCT	Cooper Cave	51.73	350	P	P	23 18 34.2	-0.9
SWET	Sewanee	51.75	349	IAmb	IAmb	23 18 34.7	
	comp=Z,5.0nm,0.7s						
TKL	Tuckaleechee C	51.81	351	LR	LR	23 42 37.1	
	comp=Z,136nm,18.8s,baz=160,slow=38						
TKL	Tuckaleechee C	51.81	351	P	P	23 18 35.2	-0.5
HPIG		51.85	325	P	P	23 18 36.4	-0.1
HPIG				IAmb	IAmb	23 18 40.9	
	comp=Z,12nm,1.3s						
U59A	Littleton	51.90	357	P	P	23 18 36.0	-0.4
V52A	Sevierville	51.97	351	IAmb	IAmb	23 18 38.0	
	comp=Z,8.7nm,0.8s						
PLAL	Pickwick Lake	51.98	346	P	P	23 18 36.5	-0.4
V51A	Loudon	52.05	350	P	P	23 18 36.8	-0.7
U56A	King	52.08	354	P	P	23 18 37.5	-0.2
U56A				IAmb	IAmb	23 18 40.2	
	comp=Z,13nm,0.9s						
WLAR	White Oak Lake	52.12	341	P	P	23 18 38.9	+0.8
WHTX	Lake Whitney,	52.14	336	P	P	23 18 37.3	-1.0
WHTX				IAmb	IAmb	23 18 41.6	
	comp=Z,11nm,0.8s						
U54A	Nelsons Funny	52.40	353	P	P	23 18 38.8	-1.4
U54A				IAmb	IAmb	23 18 44.0	
	comp=Z,11nm,0.9s						
V48A	Smith Brothers	52.44	348	P	P	23 18 39.3	-1.1
V48A				IAmb	IAmb	23 18 41.9	
	comp=Z,5.7nm,0.8s						
T59A	Double "B" Far	52.51	357	P	P	23 18 40.3	-0.5
T59A				IAmb	IAmb	23 18 41.4	
	comp=Z,6.7nm,0.7s						
LPIG	La Paz	52.53	318	LR	LR	23 36 21.6	
	comp=Z,51nm,21.5s,baz=50,slow=31						
T57A	Hurt	52.63	356	IAmb	IAmb	23 18 42.5	
	comp=Z,12nm,0.8s						
TZTN	Tazewell	52.65	351	P	P	23 18 40.6	-1.4
TZTN				IAmb	IAmb	23 18 43.1	
	comp=Z,5.8nm,0.8s						
CLTN	Cedars of Leba	52.68	348	P	P	23 18 41.0	-1.2
TX31	Lajitas Ar. Si	52.70	328	P	P	23 18 42.3	-0.3
TX31				IAmb	IAmb	23 18 45.5	
	comp=Z,11nm,0.9s						
TX32	Lajitas Array	52.70	328	P	P	23 18 42.4	-0.1
TXAR	Lajitas Array	52.70	328	P	P	23 18 42.9	+0.3
	comp=Z,2.9nm,0.6s,baz=152,slow=8.9,SNR=11						
TXAR				LR	LR	23 39 10.4	
	comp=Z,102nm,18.3s,baz=76,slow=34						
	comp=Z,2.9nm,0.6s						
TXAR	Lajitas Array	52.70	328	P	P	23 18 42.7	+0.1
UALR	University of	52.90	342	P	P	23 18 43.6	-0.2
UALR				IAmb	IAmb	23 18 46.2	
	comp=Z,8.7nm,0.8s						
BLA	Blacksburg	52.94	355	P	P	23 18 43.2	-0.9
BLA				IAmb	IAmb	23 18 57.4	
	comp=Z,13nm,1.2s						
WVT	Waverly	53.02	347	P	P	23 18 43.3	-1.4
JSRW	J. Sargeant Re	53.24	357	P	P	23 18 45.3	-1.0
Z35A	Perchaven, San	53.25	337	P	P	23 18 45.9	-0.6
T50A	Nancy	53.31	350	P	P	23 18 45.7	-1.2
WHAR	Wooly Hollow	53.36	342	P	P	23 18 47.5	+0.2
WHAR				IAmb	IAmb	23 18 58.0	
	comp=Z,8.3nm,1.1s						
S57A	Dark Hollow, R	53.37	356	IAmb	IAmb	23 18 58.7	
	comp=Z,19nm,1.4s						
R58B	Mineral	53.51	357	IAmb	IAmb	23 18 49.5	
	comp=Z,11nm,1.1s						
S54A	Dingess, Beckl	53.61	354	P	P	23 18 48.0	-1.1
S54A				IAmb	IAmb	23 18 50.8	
	comp=Z,8.6nm,0.8s						
X37A	Clayton	53.70	339	P	P	23 18 49.8	+0.1
T47A	Sharon Grove	53.70	348	P	P	23 18 49.0	-0.7
W39A	Magazine	53.73	341	P	P	23 18 50.1	+0.2
W39A				IAmb	IAmb	23 19 03.9	
	comp=Z,9.9nm,1.2s						
S51A	Beattyville	53.73	352	IAmb	IAmb	23 18 49.5	
	comp=Z,4.9nm,0.8s						
HICK	Hickman	53.73	346	P	P	23 18 48.4	-1.5
LCAR	Lake Charles	53.77	344	P	P	23 18 50.4	+0.1
R55A	Marlinton	53.98	355	P	P	23 18 51.2	-0.5
R55A				IAmb	IAmb	23 19 01.1	
	comp=Z,4.8nm,0.7s						
PBMO	Poplar Bluff	54.25	345	P	P	23 18 52.6	-1.1
PBMO				IAmb	IAmb	23 18 55.1	
	comp=Z,6.2nm,0.9s						
R50A	Paris	54.47	351	IAmb	IAmb	23 18 56.8	
	comp=Z,13nm,1.2s						
U40A	Yellville	54.52	342	P	P	23 18 55.1	-0.6
U40A				IAmb	IAmb	23 19 09.3	
	comp=Z,6.3nm,0.8s						
X34A	Smith Ranch, M	54.59	337	P	P	23 18 56.7	+0.4
R49A	Shelbyville	54.61	350	IAmb	IAmb	23 18 57.8	
	comp=Z,11nm,1.2s						
Q54A	Coxs Mills	54.73	354	P	P	23 18 55.5	-1.7
Q54A				IAmb	IAmb	23 19 06.0	
	comp=Z,4.7nm,0.7s						
HHAR	Hobbs	54.78	341	P	P	23 18 56.7	-0.9
HHAR				IAmb	IAmb	23 18 60.0	
	comp=Z,6.3nm,1.0s						
S44A	Carbondale	54.84	346	P	P	23 18 56.3	-1.6
SIUC	Southern Illin	54.85	346	P	P	23 18 56.7	-1.4
P57A	Homestead Farm	55.03	357	P	P	23 18 59.5	+0.2
P57A				IAmb	IAmb	23 19 10.4	
	comp=Z,8.4nm,1.3s						
Q51A	Peebles	55.06	352	P	P	23 18 58.1	-1.4
Q51A				IAmb	IAmb	23 19 10.0	
	comp=Z,5.5nm,0.7s						
WMOK	Wichita Mounta	55.08	336	P	P	23 19 00.2	+0.4
MGMO	Mountain Grove	55.10	343	IAmb	IAmb	23 19 01.9	
	comp=Z,13nm,1.1s						
FVM	French Village	55.40	345	P	P	23 19 01.2	-0.8
FVM				IAmb	IAmb	23 19 03.6	
	comp=Z,10nm,1.2s						
WUPA	West Chester U	55.41	359	P	P	23 19 01.7	-0.4
P51A	Williamsport	55.47	352	P	P	23 19 00.8	-1.7
P51A				IAmb	IAmb	23 19 03.6	
	comp=Z,14nm,1.2s						
MVL	Millersville	55.49	359	IAmb	IAmb	23 19 05.0	
	comp=Z,12nm,1.2s						
P52A	Corning	55.51	353	P	P	23 19 02.1	-0.7
P52A				IAmb	IAmb	23 19 18.2	
	comp=Z,10.0nm,1.2s						
CCM	Cathedral Cave	55.67	344	P	P	23 19 02.4	-1.5
PAGS	Pennsylvania G	55.73	358	P	P	23 19 03.7	-0.6
PAGS				IAmb	IAmb	23 19 14.9	
	comp=Z,8.9nm,0.8s						
P48A	Milroy	55.80	350	P	P	23 19 03.1	-1.7
P48A				IAmb	IAmb	23 19 12.4	
	comp=Z,6.5nm,0.6s						
S39A	Bolivar	55.90	342	P	P	23 19 04.9	-0.7
S39A				IAmb	IAmb	23 19 07.6	
	comp=Z,11nm,0.9s						
O52A	Adamsville	55.95	354	P	P	23 19 04.4	-1.6
O52A				IAmb	IAmb	23 19 07.2	
	comp=Z,6.8nm,0.9s						
LUPA	Lehigh Univers	56.08	360	P	P	23 19 06.7	-0.1
MSTX	Muleshoe	56.09	332	P	P	23 19 06.9	-0.3
MSTX				IAmb	IAmb	23 19 09.5	
	comp=Z,7.8nm,1.1s						
R40A	Maddies Statio	56.16	344	IAmb	IAmb	23 19 09.2	
	comp=Z,11nm,1.0s						
SSPA	Standing Stone	56.17	357	P	P	23 19 06.7	-0.8
SSPA				IAmb	IAmb	23 19 19.4	
	comp=Z,6.0nm,0.9s						
ACSO	Alum Creek Sta	56.20	353	P	P	23 19 06.6	-1.1
ACSO				IAmb	IAmb	23 19 07.6	
	comp=Z,9.3nm,0.8s						
P46A	Rosedale	56.26	349	P	P	23 19 07.1	-1.0
P46A				IAmb	IAmb	23 19 09.7	
	comp=Z,8.7nm,0.8s						
N58A	Sunbury	56.34	358	IAmb	IAmb	23 19 11.0	
	comp=Z,8.0nm,0.8s						
O49A	Covington	56.34	351	P	P	23 19 07.1	-1.6
O49A				IAmb	IAmb	23 19 09.7	
	comp=Z,8.4nm,1.0s						
AMTX	Amarillo	56.39	334	P	P	23 19 09.4	0.0
AMTX				IAmb	IAmb	23 19 10.8	
	comp=Z,12nm,1.2s						
P43A	Skaggs, Pawnee	56.76	347	P	P	23 19 10.5	-1.2
N51A	Ashland	56.81	353	P	P	23 19 10.6	-1.4
N51A				IAmb	IAmb	23 19 13.0	
	comp=Z,6.9nm,0.9s						
M57A	Sunshine Farm,	56.85	358	P	P	23 19 11.9	-0.4
M57A				IAmb	IAmb	23 19 14.6	
	comp=Z,6.6nm,0.8s						
M63A	Gales Ferry	56.94	3	P	P	23 19 12.3	-0.7
M63A				IAmb	IAmb	23 19 26.2	
	comp=Z,6.3nm,0.7s						
SFIN	Lafayette	56.98	349	P	P	23 19 12.9	-0.3
KSPA	Keystone Colle	57.03	359	P	P	23 19 13.8	+0.1
KSPA				IAmb	IAmb	23 19 16.0	
	comp=Z,6.2nm,0.8s						
N49A	Columbus Grove	57.04	352	IAmb	IAmb	23 19 14.9	
	comp=Z,13nm,1.1s						
M55A	Ridgway	57.05	357	P	P	23 19 13.3	-0.5
M55A				IAmb	IAmb	23 19 23.7	
	comp=Z,6.6nm,0.9s						
M53A	WI Miller and	57.16	355	P	P	23 19 14.1	-0.4
M53A				IAmb	IAmb	23 19 24.6	
	comp=Z,13nm,1.4s						
N47A	Urbana	57.22	350	IAmb	IAmb	23 19 14.3	
	comp=Z,10nm,0.9s						
P40A	Paris	57.27	344	P	P	23 19 13.7	-1.6
P40A				IAmb	IAmb	23 19 18.9	
	comp=Z,5.1nm,0.8s						
319A	Douglas	57.28	325	P	P	23 19 14.8	-0.9
319A				IAmb	IAmb	23 19 20.0	
	comp=Z,10.0nm,0.9s						
M52A	Chesterland	57.32	354	P	P	23 19 14.5	-1.2
M52A				IAmb	IAmb	23 19 17.8	
	comp=Z,6.8nm,0.6s						
ALLY	Alegheny Colle	57.32	355	P	P	23 19 14.8	-0.9
M50A	Fremont	57.36	353	P	P	23 19 15.0	-1.0
L56A	Greenwood	57.66	358	P	P	23 19 17.9	-0.2
L56A				IAmb	IAmb	23 19 19.9	
	comp=Z,5.4nm,0.8s						
L59A	Walton	57.66	360	P	P	23 19 18.7	+0.6
BINY	Binghamton	57.68	359	P	P	23 19 18.1	-0.2
BINY				IAmb	IAmb	23 19 20.6	
	comp=Z,9.7nm,0.8s						
P38A	Dawn	57.75	343	P	P	23 19 18.2	-0.5
P38A				IAmb	IAmb	23 19 21.3	
	comp=Z,11nm,1.0s						
WVNY	West Valley, N	57.98	357	P	P	23 19 19.8	-0.5
WVNY				IAmb	IAmb	23 19 30.4	
	comp=Z,12nm,1.1s						
L48A	N Adams	58.08	352	P	P	23 19 19.3	-1.7
N41A	Harden Midland	58.08	346	P	P	23 19 19.9	-1.2
K57A	Scipio Center	58.22	359	P	P	23 19 21.4	-0.6
K57A				IAmb	IAmb	23 19 22.7	
	comp=Z,7.5nm,0.7s						
LENM	Lemitar	58.25	329	P	P	23 19 22.4	-0.1
R32A	Long Quarter,	58.31	338	P	P	23 19 21.3	-1.5
ANMO	Albuquerque	58.62	330	P	P	23 19 25.1	-0.1
TUC	Tucson	58.82	325	P	P	23 19 26.8	+0.4
J58A	Remsen	58.83	360	IAmb	IAmb	23 19 28.1	
	comp=Z,4.8nm,0.6s						
J57A	Williamstown	58.89	359	P	P	23 19 26.2	-0.4
J59A	Piesco	58.94	0	P	P	23 19 25.9	-1.1
J59A				IAmb	IAmb	23 19 38.9	
	comp=Z,6.2nm,1.0s						
CBKS	Cedar Bluff	59.03	338	P	P	23 19 26.3	-1.5
PECO	Prince Edward	59.44	358	P	P	23 19 30.0	-0.4
PECO				IAmb	IAmb	23 19 40.5	
	comp=Z,10.0nm,1.1s						
L40A	Anamosa	59.46	346	P	P	23 19 29.0	-1.6
214A	Organ Pipe Nat	59.71	323	P	P	23 19 32.7	+0.1
214A				IAmb	IAmb	23 19 36.5	
	comp=Z,5.9nm,1.1s						
DELO	Deloro Mine	60.04	358	IAmb	IAmb	23 19 36.0	
	comp=Z,4.1nm,0.7s						
LONY	Lake Ozonia	60.09	0	P	P	23 19 34.5	-0.4
LONY				IAmb	IAmb	23 19 44.3	
	comp=Z,3.8nm,0.8s						
FRNY	Flat Rock	60.32	1	P	P	23 19 36.1	-0.4
FRNY				IAmb	IAmb	23 19 37.7	
	comp=Z,6.4nm,0.9s						
SADO	Sadowa	60.36	357	LR	LR	23 48 01.5	
	comp=Z,60nm,19.9s,baz=174,slow=38						
SADO	Sadowa	60.36	357	IAmb	IAmb	23 19 46.5	
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	60.46	332	P	P	23 19 37.5	-0.5
SDCO				IAmb	IAmb	23 19 41.0	
	comp=Z,6.8nm,0.7s						
L34A	Svendsen Farm,	60.74	342	P	P	23 19 39.0	-0.4
BGNE	Belgrade	60.79	340	P	P	23 19 39.2	-0.6
G62A	West of Eustis	60.83	4	P	P	23 19 39.8	-0.1
G62A				IAmb	IAmb	23 19 41.2	
	comp=Z,6.3nm,0.8s						
113A	Mohawk Valley,	60.85	323	P	P	23 19 40.4	0.0
MNTQ	Montreal, Queb	60.98	1	P	P	23 19 40.1	-0.9
I40A	Norwalk	61.06	347	IAmb	IAmb	23 19 43.0	
	comp=Z,8.4nm,0.9s						
S22A	4UR Ranch, Cre	61.06	331	P	P	23 19 41.9	-0.2
S22A				IAmb	IAmb	23 19 45.1	
	comp=Z,4.2nm,0.8s						
Y14A	Wickenburg	61.27	324	P	P	23 19 43.2	0.0
Y14A				IAmb	IAmb	23 19 56.3	
	comp=Z,4.8nm,0.9s						
MVCO	Mesa Verde	61.42	330	P	P	23 19 44.8	+0.3
MVCO				IAmb	IAmb	23 19 47.4	
	comp=Z,8.7nm,1.4s						
WUAZ	Wupatki	61.56	327	P	P	23 19 45.5	+0.2
WUAZ				IAmb	IAmb	23 19 58.5	
	comp=Z,4.1nm,0.8s						
TRQ	Mont Tremblant	61.70	0	P	P	23 19 45.0	-0.9
K31A	O'Neill	62.08	340	P	P	23 19 48.2	-0.3
SMCO	Snowmass	62.29	332	P	P	23 19 50.7	+0.2
SMCO				IAmb	IAmb	23 19 53.8	
	comp=Z,5.0nm,0.8s						
PV15	Paradox Valley	62.31	331	P	P	23 19 50.4	0.0
PV15				IAmb	IAmb	23 20 00.2	
	comp=Z,7.2nm,1.0s						
PV13	Radium Mtn., P	62.33	330	P	P	23 19 50.7	+0.1
PV13				IAmb	IAmb	23 19 53.1	
	comp=Z,3.3nm,0.7s						
E46A	Sault Ste Mari	62.41	353	P	P	23 19 48.7	-1.9
E46A				IAmb	IAmb	23 20 00.0	
	comp=Z,11nm,1.2s						
W13A	Hualapai Mount	62.62	325	P	P	23 19 52.0	-0.5
U15A	North Rim	62.73	327	P	P	23 19 53.5	+0.2
D62A	Allapoint, All	62.78	5	P	P	23 19 52.9	-0.2
SPMN	Marine on St.	62.82	346	P	P	23 19 52.2	-1.1
PFO	Pinyon Flats O	63.04	322	P	P	23 19 55.1	-0.2
PFO				IAmb	IAmb	23 20 08.6	
	comp=Z,6.4nm,1.0s						
BATG	Bathurst New B	63.26	7	P	P	23 19 56.8	+0.5
F36A	Milaca	63.59	346	P	P	23 19 57.7	-0.7
VLDQ	Val d'Or	63.62	358	IAmb	IAmb	23 20 00.4	
	comp=Z,5.8nm,0.9s						
O20A	White River Ci	63.64	332	P	P	23 19 59.4	+0.2
LCMT	Little Creek M	63.68	326	P	P	23 20 00.2	+0.8
SRU	San Rafael Swe	63.90	330	P	P	23 20 00.5	-0.3
SRU				IAmb	IAmb	23 20 04.1	
	comp=Z,8.3nm,1.2s						
MTPU	Mount Pierson	63.90	328	P	P	23 20 00.8	-0.3
MTPU				IAmb	IAmb	23 20 04.5	
	comp=Z,3.2nm,0.7s						
Q16A	Castle Valley	64.06	329	P	P	23 20 02.2	+0.2
Q16A				IAmb	IAmb	23 20 04.9	
	comp=Z,4.2nm,0.5s						
CCUT	Cedar City	64.14	327	P	P	23 20 02.8	+0.2
CCUT				IAmb	IAmb	23 20 06.9	
	comp=Z,4.0nm,0.9s						
P18A	Preston Nutter	64.17	330	P	P	23 20 02.7	-0.1
P18A				IAmb	IAmb	23 20 06.1	
	comp=Z,4.6nm,0.8s						
MSU	Marysvale	64.25	328	P	P	23 20 03.4	+0.1
F33A	5 Mile Ranch,	64.27	344	P	P	23 20 02.1	-0.9
P17A	Butcher Ranch,	64.28	330	P	P	23 20 03.5	+0.1
SHPR	Sheep Range	64.35	325	P	P	23 20 04.0	+0.1
TMUT	Trail Mountain	64.38	329	P	P	23 20 04.6	+0.5
TMUT				IAmb	IAmb	23 20 07.4	
	comp=Z,4.4nm,1.0s						
RDMU	Red Mountain	64.60	331	P	P	23 20 05.1	-0.4
QSM	Queen of Sheba	64.93	323	P	P	23 20 07.8	+0.3
PRN	Pahroc Range	64.94	326	P	P	23 20 06.1	-1.6
K22A	Casper	64.96	335	P	P	23 20 07.8	0.0
K22A				IAmb	IAmb	23 20 10.5	
	comp=Z,5.8nm,0.7s						
GWY	Greenwater Val	64.97	324	P	P	23 20 08.1	+0.1
PSUT	Pine Spring	65.13	327	P	P	23 20 09.4	+0.4
PSUT				IAmb	IAmb	23 20 13.5	
	comp=Z,5.6nm,1.1s						
BELA	Belgrano 2	65.23	171	P	P	23 20 09.1	+0.2
RSSD	Black Hills	65.23	337	P	P	23 20 09.8	+0.3
RSSD				IAmb	IAmb	23 20 11.9	
	comp=Z,4.3nm,0.7s						
TPNV	Topopah Spring	65.27	324	P	P	23 20 09.5	-0.4
TPNV				IAmb	IAmb	23 20 23.4	
	comp=Z,4.5nm,0.8s						
NLU	North Lily Min	65.31	329	P	P	23 20 09.5	-0.7
JLU	Jordanelle	65.50	330	P	P	23 20 10.7	-0.7
ISA	Isabella, Lake	65.66	322		P	23 20 12.7	+0.4
DUG	Dugway, Tooele	65.86	329	P	P	23 20 13.6	0.0
R11A	Troy Canyon, C	65.92	326	P	P	23 20 14.8	+0.7
E28A	Huff	66.23	341	P	P	23 20 15.1	-0.6
LCH	Last Change Ra	66.26	324	IAmb	IAmb	23 20 15.6	
	comp=Z,6.7nm,1.5s						
HWUT	Hardware Ranch	66.34	331	P	P	23 20 16.3	-0.4
PD31	Pinedale Array	66.35	333	P	P	23 20 16.0	-0.7
PDAR	Pinedale Array	66.35	333	P	P	23 20 16.9	+0.2
	comp=Z,1.1nm,0.5s,baz=128,slow=11,SNR=13						
PDAR				LR	LR	23 51 16.4	
	comp=Z,50nm,18.5s,baz=138,slow=38						
	comp=Z,1.1nm,0.5s						
BGU	Big Grassy Mou	66.52	329	P	P	23 20 18.1	+0.2
AHID	Auburn Hatcher	67.03	332	P	P	23 20 20.7	-0.4
AHID				IAmb	IAmb	23 20 23.9	
	comp=Z,5.3nm,0.9s						
HVU	Hansel Valley	67.05	330	P	P	23 20 20.9	-0.3
OMMB	Old Mammoth Mi	67.30	323	P	P	23 20 21.9	-1.1
OMMB				IAmb	IAmb	23 20 26.9	
	comp=Z,4.6nm,0.8s						
VNA3	Neumayer Olymp	67.32	161	P	P	23 20 23.3	+0.9
MDPB	Devils Postpil	67.36	323	P	P	23 20 23.6	+0.2
MDPB				IAmb	IAmb	23 20 27.2	
	comp=Z,3.5nm,0.6s						
REDW	Red Top Meadow	67.39	332	P	P	23 20 22.6	-0.9
REDW				IAmb	IAmb	23 20 36.6	
	comp=Z,4.5nm,0.9s						
LHV	Little Huntoon	67.46	324	P	P	23 20 23.1	-0.5
LHV				IAmb	IAmb	23 20 28.0	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	67.47	324	P	P	23 20 24.9	+0.9
	comp=Z,1.1nm,0.7s,baz=141,slow=6.9,SNR=9.3						
NVAR				LR	LR	23 47 56.9	
	comp=Z,64nm,18.8s,baz=97,slow=34						
	comp=Z,1.1nm,0.7s						
NVAR	Mina Array Bea	67.47	324	P	P	23 20 24.4	+0.4
LOHW	Long Hollow	67.48	333	P	P	23 20 23.1	-0.9
LOHW				IAmb	IAmb	23 20 26.8	
	comp=Z,3.5nm,0.6s						
ELK	Elko	67.49	328	LR	LR	23 48 26.0	
	comp=Z,155nm,19.6s,baz=143,slow=35						
ELK	Elko	67.49	328	P	P	23 20 24.0	-0.1
TPAW	Teton Pass	67.54	332	P	P	23 20 24.3	-0.1
TPAW				IAmb	IAmb	23 20 26.9	
	comp=Z,4.3nm,0.7s						
MOOW	Moose Ponds	67.65	333	P	P	23 20 24.3	-0.7
FLWY	Flagg Ranch	67.90	333	P	P	23 20 26.7	+0.1
RLMT	Red Lodge	68.12	335	IAmb	IAmb	23 20 29.8	
	comp=Z,11nm,1.2s						
LAO	LASA Array	68.23	337	P	P	23 20 27.8	-0.6
LAO				IAmb	IAmb	23 20 31.1	
	comp=Z,6.0nm,0.8s						
ULM	Lac du Bonnet	68.25	346	P	P	23 20 27.5	-0.9
	comp=Z,4.8nm,0.7s,baz=162,slow=7.9,SNR=3.6						
	comp=Z,4.8nm,0.7s						
YERR	Yerington	68.38	324	P	P	23 20 28.8	-1.0
YERR				IAmb	IAmb	23 20 34.5	
	comp=Z,7.1nm,1.2s						
CMB	Columbia Colle	68.39	323	P	P	23 20 28.4	-1.2
YNR	Norris Junctio	68.39	333	P	P	23 20 29.0	-0.7
YMR	Madison River	68.48	333	P	P	23 20 30.5	+0.3
YHH	Holmes Hill	68.52	333	P	P	23 20 30.2	-0.4
YHH				IAmb	IAmb	23 20 34.3	
	comp=Z,6.0nm,0.7s						
PNTR	Pine Nut	68.66	324	P	P	23 20 31.7	+0.2
PNTR				IAmb	IAmb	23 20 35.8	
	comp=Z,7.2nm,0.9s						
YHL	Hebgen Lake	68.72	333	P	P	23 20 31.0	-0.8
GCMT	Greycliff	68.83	335	P	P	23 20 31.6	-0.7
PAHR	Pah Rah Range	68.96	325	P	P	23 20 32.8	-0.5
PAHR				IAmb	IAmb	23 20 46.9	
	comp=Z,6.4nm,0.9s						
DGMT	Dagmar	69.03	340		P	23 20 32.7	-0.6
HLID	Hailey	69.19	330	P	P	23 20 35.0	+0.4
HLID				IAmb	IAmb	23 20 38.3	
	comp=Z,4.4nm,0.7s						
MCMT	McKenzie Canyo	69.43	332	P	P	23 20 36.3	+0.1
BOZ	Bozeman (W)	69.50	333	P	P	23 20 36.6	+0.1
SNAA	Sanae	69.54	161	P	P	23 20 37.0	+0.7

SNAA	Sanae	69.54	161	LR	LR	23 48 59.6	
	comp=Z,30nm,21.1s,baz=120,slow=34						
SNAA	Sanae	69.54	161	P	P	23 20 37.0	+0.7
SNAA				IAmb	IAmb	23 20 39.7	
	comp=Z,11nm,1.2s						
MFID	Camas Ranch	69.76	329	P	P	23 20 37.6	-0.5
ORV	Oroville	70.06	323	P	P	23 20 40.0	+0.1
SCHQ	Schefferville	70.66	5	P	P	23 20 42.5	-0.7
	comp=Z,5.8nm,0.9s,baz=228,slow=4.6,SNR=11						
SCHQ				LR	LR	23 53 26.8	
	comp=Z,53nm,20.3s,baz=194,slow=37						
	comp=Z,5.8nm,0.9s						
SCHQ	Schefferville	70.66	5	IAmb	IAmb	23 20 52.8	
	comp=Z,7.1nm,0.9s						
TROLL	Troll, Antarti	71.26	161	P	P	23 20 48.0	+1.1
MSO	Missoula	71.47	333	P	P	23 20 48.7	+0.3
BMO	Blue Mountains	71.54	330	P	P	23 20 48.4	-0.4
I07A	Izee	72.08	328	P	P	23 20 52.1	-0.1
YBH	Yreka Blue Hor	72.19	324	LR	LR	23 49 56.0	
	comp=Z,68nm,19.0s,baz=106,slow=34						
YBH	Yreka Blue Hor	72.19	324	P	P	23 20 52.9	0.0
F10A	Beach Ranch, E	72.32	331	P	P	23 20 53.8	+0.3
F10A				IAmb	IAmb	23 20 57.6	
	comp=Z,6.7nm,0.8s						
PINE	Pine Mountain	72.62	327	P	P	23 20 55.6	+0.1
PINE				IAmb	IAmb	23 21 05.4	
	comp=Z,5.7nm,1.1s						
G08A	Pilot Rock	72.67	329	P	P	23 20 54.5	-1.2
DBIC	Dimbokro	72.92	78	P	P	23 20 57.0	-0.7
	comp=Z,4.9nm,0.7s,baz=267,slow=9.1,SNR=4.7						
DBIC				LR	LR	23 51 34.3	
	comp=Z,289nm,19.4s,baz=250,slow=35						
	comp=Z,4.9nm,0.7s						
E09A	Wood Farm, Sta	73.15	330	P	P	23 20 57.2	-1.1
E09A				IAmb	IAmb	23 21 00.3	
	comp=Z,9.7nm,1.1s						
WALA	Waterton Lakes	73.18	334	P	P	23 20 57.7	-0.9
PMOZ	Porto Moniz, M	73.36	48	*e*T	T	00 43 44.3	
FUL	Funchal	73.48	48	*e*T	T	00 43 53.2	
PMAR	Madeira	73.51	48	*e*T	T	00 43 51.2	
HAWA	Hanford	73.73	330	P	P	23 21 01.8	0.0
HAWA				IAmb	IAmb	23 21 05.7	
	comp=Z,4.8nm,0.7s						
NEW	Newport	73.96	332	LR	LR	23 55 44.8	
	comp=Z,25nm,19.6s,baz=142,slow=38						
C09A	Chrisman Ranch	74.15	331	P	P	23 21 03.9	-0.3
QSPA	South Pole Qui	74.39	180	P	P	23 21 06.6	+1.0
QSPA				IAmb	IAmb	23 21 08.1	
	comp=Z,9.1nm,0.8s						
F04A	Amboy	74.86	328	P	P	23 21 08.0	-0.3
B08A	Colville Reser	75.04	331	P	P	23 21 08.7	-0.7
EDM	Edmonton	76.22	337	P	P	23 21 15.3	-0.7
KOWA	Kowa	76.30	70	P	P	23 21 16.2	-1.0
KOWA				IAmb	IAmb	23 21 26.8	
	comp=Z,4.6nm,0.7s						
NLWA	Neilton Lookou	76.58	328	P	P	23 21 18.7	+0.5
NLWA				IAmb	IAmb	23 21 28.5	
	comp=Z,9.3nm,1.0s						
FRB	Frobisher Bay	79.42	3	LR	LR	23 58 33.7	
	comp=Z,55nm,20.1s,baz=191,slow=37						
RAR	Rarotonga	79.69	251	LR	LR	23 48 33.2	
	comp=Z,99nm,18.1s,baz=30,slow=29						
TORD	Torodi Ar. Bea	81.09	74	P	P	23 21 43.4	-0.3
	comp=Z,6.1nm,0.4s,baz=263,slow=4.9,SNR=5.4						
	comp=Z,6.1nm,0.4s						
VNDA	Vanda	81.43	191	P	P	23 21 43.8	-0.6
	comp=Z,1.3nm,0.9s,baz=129,slow=2.8,SNR=8.9						
	comp=Z,1.3nm,0.9s						
VNDA	Vanda	81.43	191	P	P	23 21 44.6	+0.2
YKA	Yellowknife Ar	83.96	343	P	P	23 21 57.0	-0.6
	comp=Z,2.0nm,0.7s,baz=142,slow=5.7,SNR=20						
YKA				LR	LR	00 02 51.6	
	comp=Z,50nm,18.7s,baz=299,slow=38						
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	83.96	343	P	P	23 21 57.3	-0.3
SFJD	Kangerlussuaq	84.47	9	LR	LR	23 59 55.0	
	comp=Z,29nm,20.5s,baz=225,slow=36						
ESDC	Sonseca Array	85.99	47	P	P	23 22 08.8	+0.3
	comp=Z,1.5nm,0.8s,baz=256,slow=4.8,SNR=15						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	85.99	47	P	P	23 22 08.6	+0.2
SUR	Sutherland	86.47	122	LR	LR	23 59 33.3	
	comp=Z,59nm,18.4s,baz=302,slow=35						
DLBC	Dease Lake	86.53	334	LR	LR	00 04 47.0	
	comp=Z,74nm,18.1s,baz=115,slow=38						
DLBC	Dease Lake	86.53	334	P	P	23 22 09.7	-1.0
DLBC				IAmb	IAmb	23 22 13.7	
	comp=Z,3.6nm,0.8s						
TSUM	Tsumeb	87.29	109	LR	LR	23 58 26.2	
	comp=Z,34nm,21.9s,baz=162,slow=34						
RES	Resolute Bay	91.13	355	LR	LR	00 06 45.6	
	comp=Z,38nm,18.2s,baz=108,slow=38						
BOSA	Boshof	91.26	120	LR	LR	00 00 00.5	
	comp=Z,100nm,21.2s,baz=200,slow=33						
MAW	Mawson	91.39	165	P	P	23 22 34.1	+0.7
	comp=Z,3.9nm,0.7s,baz=191,slow=6.8,SNR=11						
MAW				LR	LR	00 00 24.4	
	comp=Z,45nm,21.7s,baz=220,slow=34						
	comp=Z,3.9nm,0.7s						
SUMG	Summit	91.40	10	*i* P	P	23 22 33.0	-0.8
LBTB	Lobatse	92.69	117	LR	LR	00 01 49.4	
	comp=Z,56nm,18.9s,baz=244,slow=34						
INK	Inuvik	93.66	341	LR	LR	00 06 34.1	
	comp=Z,49nm,21.1s,baz=68,slow=37						
ILAR	Eielson Array	96.64	336	LR	LR	00 09 52.6	
	comp=Z,30nm,20.1s,baz=162,slow=38						
LSZ	Lusaka	98.12	108	LR	LR	00 05 01.1	
	comp=Z,102nm,20.8s,baz=256,slow=34						
BRTR	Keskin Array B	114.15	53	PKP	PKPdf	23 28 07.5	-0.3
	comp=Z,0.4nm,0.8s,baz=126,slow=3.2,SNR=3.7						
KBZ	Khabaz	120.83	48	PKP	PKPdf	23 28 20.4	+0.2
	comp=Z,2.5nm,0.8s,baz=358,slow=5.5,SNR=8.1						
H11N3	WAKE ISLAND Hy	121.18	284	T	T	01 41 04.0	
	baz=97,slow=74,SNR=56						
H11N2	WAKE ISLAND Hy	121.19	284	T	T	01 41 04.9	
	baz=97,slow=74,SNR=122						
H11N1	WAKE ISLAND Hy	121.20	284	T	T	01 41 05.3	
	baz=97,slow=74,SNR=46						
H11S2	WAKE ISLAND Hy	121.22	282	T	T	01 41 09.3	
	baz=98,slow=75,SNR=88						
H11S1	WAKE ISLAND Hy	121.23	282	T	T	01 41 09.9	
	baz=98,slow=75,SNR=117						
H11S3	WAKE ISLAND Hy	121.24	282	T	T	01 41 10.7	
	baz=98,slow=75,SNR=116						
PETK	Petropavlovsk-	124.56	324	PKP	PKPdf	23 28 27.2	+0.1
	comp=Z,1.0nm,0.4s,baz=222,slow=42,SNR=2.6						
ABKAR	Akbulak array	130.51	38		pPKPdf	23 28 48.5	+7.0
ASAR	Alice Springs	131.69	216	PKP	PKPdf	23 28 41.8	0.0
	comp=Z,1.6nm,1.0s,baz=132,slow=2.3,SNR=7.2						
WRA	Warramunga Arr	134.28	220	PKP	PKPdf	23 28 46.6	-0.1
	comp=Z,2.1nm,0.7s,baz=138,slow=2.0,SNR=12						
WRA	Warramunga Arr	134.28	220		PKiKP	23 28 47.7	-0.3
ZALV	Zalesovo Beam	138.76	18	PKP	PKPdf	23 28 54.2	+0.4
	comp=Z,5.4nm,0.8s,baz=311,slow=2.4,SNR=19						
KURK	Kurchatov	139.18	26	PKPdf	PKPdf	23 28 55.9	+1.2
MK31	Makanchi Array	143.75	27	PKPdf	PKPdf	23 29 03.8	+0.7
MKAR	Makanchi Array	143.75	27	PKhKP	PKPpre	23 29 00.3	
	comp=Z,1.1nm,0.7s,baz=338,slow=3.5,SNR=9.0						
MJAR	Matsushiro Arr	143.99	311	PKP	PKPbc	23 29 01.5	-0.1
	comp=Z,3.5nm,0.6s,baz=63,slow=3.0,SNR=4.1						
MAJO	Matsushiro	143.99	311	PKPdf	PKPdf	23 29 04.8	+1.0
KSH	Kashi	145.32	41	PKPbc	PKPab	23 29 07.2	+1.1
KSH				pPKP	PKiKP	23 29 15.7	+5.6
KSH				sPKP		23 29 19.4	
ULN	Ulaanbaatar	147.95	357		PKPbc	23 29 14.2	+0.8
SONM	Songino Array	148.00	358	PKP	PKPdf	23 29 11.2	+0.7
	comp=Z,4.0nm,0.6s,baz=328,slow=1.3,SNR=20						
SONM				PKPbc	PKPbc	23 29 14.0	+0.5
	comp=Z,3.9nm,0.6s,baz=331,slow=1.8,SNR=16						
SONM	Songino Array	148.00	358		PKPbc	23 29 13.7	+0.2
WMQ	Urumqi	148.39	24	*e*P	PKPdf	23 29 11.2	+0.1
KSRS	Korea Array	150.37	321	PKP	PKPdf	23 29 14.3	0.0
	comp=Z,1.3nm,0.5s,baz=90,slow=1.3,SNR=6.2						
KSRS				PKPbc	PKiKP	23 29 20.4	0.0
	comp=Z,8.0nm,1.0s,baz=25,slow=1.4,SNR=12						
HHC	Hu-ho-hao-te	154.37	348	*e*P	PKPdf	23 29 15.6	-4.8
PZH	PanZhiHua	168.89	15	PKP	PKPdf	23 29 34.0	-1.8
CMAR	Chiang Mai Arr	173.62	64	PKP	PKPdf	23 29 38.3	+0.1
	comp=Z,1.1nm,0.3s,baz=242,slow=1.9,SNR=4.5						

NEIC 12 23:22:47.4±2.4**, 36°.862N**±0°.009×**98°.05W**±0°.02**, h5**^{km}±1^{km}**,**
mb_Lg2.9/4 **Error ellipse: s-maj=2.9km s-min=2.2km**
az=325.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.90	238	Pg	Pb	23 23 05.7	+0.2
T35A	Sooner Cattle	1.24	87		Pg	23 23 10.2	-1.0
WMOK	Wichita Mounta	2.20	196	Pn	Pn	23 23 25.5	+0.9
X34A	Smith Ranch, M	2.26	175	Pn	Pn	23 23 26.3	+0.8
N41A	Harden Midland	6.81	53	IAmb_Lg		23 26 21.6	
	comp=Z,12nm,0.9s						
Y22D	IRIS PASSCAL I	7.75	252	IAmb_Lg		23 26 54.1	
	comp=Z,18nm,0.7s						

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*IDC **13** 00:04:51.2±0.5, 10°.82N×41°.88W, h0^{km}, mb4.2/21,*
mbtmp4.2/22, ML5.3/2, MS3.6/39, Error ellipse:
s-maj=16.5km s-min=12.7km az=142.0

*NEIC **13** 00:04:53.5±1.2, 10°.7N±0°.1×41°.79W±0°.09, h10^{km}±1^{km},*
mb4.5/84, Error ellipse: s-maj=18.7km s-min=13.7km
az=161.0

ISC 13 00:04:52.8±0.4**, 10°.74N**±0°.05×**41°.79W**±0°.06**, h10**^{km}**, n183,**
$\sigma 1^{s}.33$/150**, mb4.5**/65**, MS3.7**/37**, Northern Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	12.12	243	Pn	Pn	00 07 43.2	-2.5
	116nm,0.3s,baz=48,slow=14,SNR=377						
MDP				Sn	Sn	00 09 47.1	-14
	5.6nm,0.3s,baz=316,slow=0.5,SNR=8.3						
MDP				LR	LR	00 11 39.0	
	comp=Z,276nm,21.8s,baz=42,slow=34						
ROSB	Rosrio	13.75	190	*e*P	Pn	00 08 07.7	-0.2
NBMO	Morrinhos-CE	14.07	173	*e*P	Pn	00 08 12.2	-0.1
TMAB	Tom-Au,PA,Br	14.46	206	*e*P	Pn	00 08 16.7	-1.0
MCPB	Macapa, AP	15.03	223	*e*P	Pn	00 08 22.1	-3.3
NBPS	Pedro II - PI	15.04	179	*e*P	Pn	00 08 27.1	+1.4
NBCL	Cascavel-CE	15.27	167	*e*P	Pn	00 08 29.8	+1.2
NBPB	Pedra_Branca-C	16.32	172	*e*P	Pn	00 08 44.0	+1.7
RCBR	Riachuelo	17.47	160	P	P	00 08 59.6	+1.6
	2.0nm,0.3s,baz=267,slow=18,SNR=14						
RCBR				S	Sn	00 12 04.0	-7.5
	4.9nm,0.6s,baz=44,slow=11,SNR=1.5						
RCBR				LR	LR	00 14 27.6	
	comp=Z,77nm,19.0s,baz=126,slow=33						
	9.3nm,0.5s						
RCBR	Riachuelo	17.47	160	P	P	00 08 58.0	0.0
RCBR	Riachuelo	17.47	160	*e*P	P	00 08 59.9	+2.0
MALB	Monte Alegre	17.63	225	*e*P	Pn	00 08 58.1	-0.6
SACV	Santiago Islan	18.21	75	Pn	Pn	00 09 02.5	-3.5
SACV				IAmb	IAmb	00 09 02.8	
	comp=Z,53nm,1.1s						
NBPV	Pedro Velho	18.23	159	*e*P	P	00 09 09.5	+3.1
PRPB	Parauapebas	18.61	206	*e*P	P	00 09 10.6	+0.1
H05S1	Guadeloupe/Mar	18.95	283	T	T	00 28 31.2	
	SNR=28						
H05N1	Guadeloupe/Mar	19.53	289	T	T	00 29 09.6	
	SNR=9.7						
GDSD	La Dsirade Is	19.54	289	P	P	00 09 20.2	-0.5
SMTB	Santa Maria do	20.31	197	*e*P	Pn	00 09 30.4	-0.8
BOAV	Boa Vista	20.36	247	*e*P	P	00 09 29.9	+0.2
NBRF	Rio Formoso -	20.40	161	*e*P	Pn	00 09 32.2	0.0
ITTB	Itaituba	20.45	223	*e*P	P	00 09 30.8	+0.1
NBAN	Anadia - AL	21.00	165	*e*P	P	00 09 39.8	+3.2
NBPN	Ponto Novo - B	21.50	176	*e*P	P	00 09 42.7	+0.7
NBLA	Lagarto - SE	21.95	169	*e*P	P	00 09 47.3	+0.4
SDBA	SAO DESIDERIO	23.21	188	*e*P	P	00 10 01.7	+1.5
MACA	Manacapuru-AM	23.34	235	*e*P	P	00 10 01.7	+0.2
PEXB	Peixe	23.60	196	*e*P	P	00 10 04.6	+0.5
STVI	Saint Thomas	23.65	291	P	P	00 10 02.8	-1.7
BIRV	Birongo	24.07	272	P	P	00 10 07.9	-0.7
BIRV				IAmb	IAmb	00 10 26.0	
	comp=Z,18nm,1.0s						
GDU01	Guandu, BA	24.40	175	*e*P	P	00 10 11.5	-0.1
HUMP	Col San Antoni	24.42	290	P	P	00 10 10.4	-1.3
SNDB	Serra Nova Dou	24.46	203	*e*P	P	00 10 12.8	+0.6
SJG	San Juan	24.69	290	LR	LR	00 18 52.4	
	comp=Z,132nm,18.8s,baz=88,slow=34						
CLDB	Colider	25.59	213	*e*P	P	00 10 22.7	+0.3
JANB	Januaria	25.75	186	*e*P	P	00 10 24.3	+0.4
BAUV	El Baul	25.93	268	P	P	00 10 25.0	-0.5
CMC01	Camacan, BA	26.03	175	*e*P	P	00 10 28.6	+2.3
HATO	Hato, Curacao	26.66	276	P	P	00 10 32.0	-0.1
PDRB	Porto dos Gac	26.71	214	*e*P	P	00 10 31.7	-0.8
BDFB	Brasilia	26.93	193	P	P	00 10 35.6	+1.1
	comp=Z,3.6nm,1.0s,baz=62,slow=12,SNR=2.5						
BDFB				LR	LR	00 20 29.1	
	comp=Z,317nm,18.3s,baz=306,slow=35						
	comp=Z,3.6nm,1.0s						
GUA01	Guaratinga, BA	27.22	176	*e*P	P	00 10 39.0	+1.9
SDV	Santo Domingo	28.48	269	P	P	00 10 47.3	-1.4
	comp=Z,5.2nm,0.6s,baz=90,slow=7.0,SNR=8.9						
SDV				LR	LR	00 22 20.6	
	comp=Z,43nm,21.0s,baz=70,slow=37						
	comp=Z,5.2nm,0.6s						
SDV	Santo Domingo	28.48	269	P	P	00 10 47.7	-1.0
SDV				IAmb	IAmb	00 10 49.0	
	comp=Z,7.3nm,0.9s						
SDV	Santo Domingo	28.48	269	*e*P	P	00 10 48.2	-0.4
NBRS	Nobres	28.50	209	*e*P	P	00 10 49.3	+0.6
SAML	Samuel	28.91	228	P	P	00 10 52.1	-0.2
DVLD	Doverlandia	29.07	201	*e*P	P	00 10 55.4	+1.7
SJMB	Sao Joao De Ma	29.26	179	*e*P	P	00 10 57.4	+2.1
VILB	Vilhena	29.80	218	*e*P	P	00 11 01.3	+1.1
SALV	Santo Antonio	29.84	208	*e*P	P	00 11 01.1	+0.7
RIB01	Linhares ES	29.90	177	*e*P	P	00 11 03.3	+2.4
PP1B	Ponte de Pedra	30.99	205	*e*P	P	00 11 11.9	+1.3
PTLB	Pontes e Lacer	31.18	214	*e*P	P	00 11 13.1	+0.8
BSCB	Bom Sucesso	31.68	185	*e*P	P	00 11 18.9	+2.3
ETMB	Extrema	31.74	231	*e*P	P	00 11 17.2	0.0
SIV	San Ignacio	32.71	216	P	P	00 11 27.0	+1.2
	comp=Z,6.7nm,0.6s,baz=49,slow=8.9,SNR=31						
	comp=Z,6.7nm,0.6s						
ROSC	El Rosal	32.74	262	P	P	00 11 26.0	-0.6
	comp=Z,7.0nm,0.4s,baz=162,slow=15,SNR=4.2						
ROSC				LR	LR	00 24 00.6	
	comp=Z,143nm,21.9s,baz=36,slow=35						
	comp=Z,7.0nm,0.4s						
ROSC	El Rosal	32.74	262	IAmb	IAmb	00 11 29.4	
	comp=Z,35nm,1.4s						
H10N3	ASCENSION HYDR	32.84	123	T	T	00 46 20.9	
	baz=304,slow=75,SNR=104						
H10N2	ASCENSION HYDR	32.84	123	T	T	00 46 21.5	
	baz=304,slow=75,SNR=133						
H10N1	ASCENSION HYDR	32.86	123	T	T	00 46 22.7	
	baz=304,slow=75,SNR=112						
H10S3	ASCENSION HYDR	33.33	125	T	T	00 46 57.5	
	baz=300,slow=74,SNR=28						
H10S2	ASCENSION HYDR	33.35	125	T	T	00 46 58.5	
	baz=280,slow=74,SNR=5.6						
CZSB	Cruzeiro do Su	35.83	240	*e*P	P	00 11 52.2	-0.7
DBIC	Dimbokro	36.71	93	P	P	00 12 01.3	+0.8
	comp=Z,15nm,0.9s,baz=283,slow=8.1,SNR=10						
DBIC				LR	LR	00 23 57.8	
	comp=Z,82nm,18.3s,baz=283,slow=31						
	comp=Z,15nm,0.9s						
DBIC	Dimbokro	36.71	93	P	P	00 12 00.2	-0.3
LPAZ	La Paz	37.43	225	P	P	00 12 07.3	+0.2
	comp=Z,12nm,0.9s,baz=38,slow=7.9,SNR=43						
LPAZ				PP	PnPn	00 13 38.6	+5.4
	comp=Z,3.3nm,0.8s,baz=42,slow=12,SNR=3.7						
LPAZ				LR	LR	00 28 00.6	
	comp=Z,51nm,20.1s,baz=56,slow=37						
	comp=Z,12nm,0.9s						
LPAZ	La Paz	37.43	225	P	P	00 12 07.3	+0.2
LPAZ				IAmb	IAmb	00 12 09.0	
	comp=Z,16nm,0.9s						
LPAZ	La Paz	37.43	225	*e*P	P	00 12 07.8	+0.6
OTAV	Otavalo	37.90	256	P	P	00 12 10.8	-0.3
OTAV				IAmb	IAmb	00 12 13.2	
	comp=Z,14nm,1.4s						
OTAV	Otavalo	37.90	256	*e*P	P	00 12 12.5	+1.4
ITAB	Concordia	39.06	195	*e*P	P	00 12 22.0	+1.9
TER01	Tubaro-SC	39.68	190	*e*P	P	00 12 26.4	+1.2
PB16	IPOC Station P	39.79	224	P	P	00 12 25.5	-1.5
PB16				IAmb	IAmb	00 12 26.7	
	comp=Z,11nm,1.2s						
CPUP	Villa Florida	39.83	202	LR	LR	00 29 02.8	
	comp=Z,115nm,18.2s,baz=29,slow=36						
ATAH	Atahualpa	40.54	246	LR	LR	00 28 59.0	
	comp=Z,72nm,20.7s,baz=66,slow=36						
MDT	Midelt	40.61	51	LR	LR	00 25 30.0	
	comp=Z,81nm,21.0s,baz=343,slow=30						
NNA	Nana	41.50	238	LR	LR	00 29 44.1	
	comp=Z,78nm,21.6s,baz=54,slow=36						
LUPA	Lehigh Univers	41.98	321	P	P	00 12 45.2	+1.1
LVC	Limon Verde	42.49	219	LR	LR	00 30 58.2	
	comp=Z,82nm,20.9s,baz=32,slow=37						
LVC	Limon Verde	42.49	219	*e*P	P	00 12 47.4	-1.4
TOA0	Torodi Ar. Sit	42.57	82	P	P	00 12 49.9	+0.5
TOA0				IAmb	IAmb	00 12 54.4	
	comp=Z,12nm,1.3s						
TORD	Torodi Ar. Bea	42.57	82	P	P	00 12 50.4	+1.1
	comp=Z,11nm,0.6s,baz=270,slow=13,SNR=6.0						
	comp=Z,11nm,0.6s						
PB15	IPOC Station P	43.27	219	P	P	00 12 54.5	-0.6
SSPA	Standing Stone	43.58	319	P	P	00 12 57.5	+0.3
J58A	Remsen	43.58	324	P	P	00 12 57.9	+0.7
FRNY	Flat Rock	43.59	327	P	P	00 12 57.5	+0.4
FRNY				IAmb	IAmb	00 13 04.8	
	comp=Z,8.0nm,1.1s						
ESDC	Sonseca Array	44.21	43	P	P	00 13 02.8	+0.5
	comp=Z,0.9nm,0.8s,baz=248,slow=9.0,SNR=5.0						
ESDC				LR	LR	00 27 40.6	
	comp=Z,94nm,21.3s,baz=220,slow=31						
	comp=Z,0.9nm,0.8s						
GO02	Mina Guanaco	44.81	217	P	P	00 13 06.8	-0.7
TKL	Tuckaleechee C	45.39	310	LR	LR	00 27 50.8	
	comp=Z,123nm,21.9s,baz=136,slow=30						
TZTN	Tazewell	45.57	311	P	P	00 13 13.6	+0.5
TZTN				IAmb	IAmb	00 13 32.3	
	comp=Z,5.8nm,1.0s						
AC02	Maricunga	45.83	215	P	P	00 13 15.7	-0.1
AC02				IAmb	IAmb	00 13 16.9	
	comp=Z,7.0nm,1.0s						
MTO3	Montecristo	46.52	280	P	P	00 13 20.6	-0.5
MTO3				IAmb	IAmb	00 13 33.3	
	comp=Z,5.7nm,0.8s						
SADO	Sadowa	46.66	324	LR	LR	00 29 39.3	
	comp=Z,26nm,18.2s,baz=181,slow=32						
SWET	Sewanee	46.87	309	P	P	00 13 23.8	+0.4
SWET				IAmb	IAmb	00 13 36.1	
	comp=Z,5.7nm,0.9s						
R49A	Shelbyville	47.45	313	P	P	00 13 29.2	+1.3
R49A				IAmb	IAmb	00 13 38.2	
	comp=Z,5.5nm,0.9s						
P49A	Miami Univ. Ec	47.64	315	P	P	00 13 30.9	+1.6
P49A				IAmb	IAmb	00 13 36.1	
	comp=Z,9.2nm,1.2s						
V48A	Smith Brothers	47.73	309	P	P	00 13 30.9	+0.9
AC04	Llanos de Chal	47.98	216	P	P	00 13 30.6	-1.4
P48A	Milroy	48.10	314	P	P	00 13 34.1	+1.2
SCHQ	Schefferville	48.23	341	P	P	00 13 33.9	+0.2
	comp=Z,5.9nm,0.6s,baz=154,slow=5.9,SNR=15						
SCHQ				LR	LR	00 32 01.1	
	comp=Z,31nm,20.0s,baz=127,slow=34						
	comp=Z,5.9nm,0.6s						
SCHQ	Schefferville	48.23	341	P	P	00 13 34.0	+0.4
T47A	Sharon Grove	48.38	310	P	P	00 13 36.0	+0.9
T47A				IAmb	IAmb	00 14 00.7	
	comp=Z,10nm,1.2s						
PLAL	Pickwick Lake	48.45	308	P	P	00 13 35.9	+0.3
PLAL				IAmb	IAmb	00 14 01.0	
	comp=Z,4.4nm,0.9s						
WVT	Waverly	48.63	309	P	P	00 13 37.4	+0.4
WVT				IAmb	IAmb	00 13 44.8	
	comp=Z,4.6nm,0.9s						
CO01	Juntas del Tor	48.80	213	P	P	00 13 38.0	-0.7
CO01				IAmb	IAmb	00 13 48.8	
	comp=Z,7.2nm,1.2s						
N47A	Urbana	48.89	316	P	P	00 13 39.0	+0.1
N47A				IAmb	IAmb	00 13 44.8	
	comp=Z,6.1nm,0.8s						
W41B	Gary Mavity, V	51.78	306	P	P	00 13 59.9	-1.0
W41B				IAmb	IAmb	00 14 08.3	
	comp=Z,5.5nm,1.0s						
WHAR	Wooly Hollow	51.84	307	P	P	00 14 01.2	-0.2
BO04	La Punta	52.24	210	P	P	00 14 04.0	-0.3
BO04				IAmb	IAmb	00 14 04.7	
	comp=Z,7.0nm,0.8s						
MT09	Talagante	52.26	211	P	P	00 14 03.3	-1.4
KEST	Kesra	52.45	53	LR	LR	00 34 20.7	
	comp=Z,44nm,19.4s,baz=214,slow=34						
R40A	Maddies Statio	52.68	310	P	P	00 14 07.7	+0.2
W39A	Magazine	53.00	306	P	P	00 14 09.6	-0.4
W39A				IAmb	IAmb	00 14 11.0	
	comp=Z,4.6nm,0.8s						
L40A	Anamosa	53.17	315	P	P	00 14 10.9	-0.2
L40A				IAmb	IAmb	00 14 24.4	
	comp=Z,8.0nm,1.1s						
S39A	Bolivar	53.30	309	P	P	00 14 11.9	-0.3
S39A				IAmb	IAmb	00 14 19.3	
	comp=Z,4.9nm,1.1s						
G40A	Rib Lake	53.72	319	P	P	00 14 16.4	+1.3
EKA	Eskdalemuir Ar	53.80	26	LR	LR	00 32 57.9	
	comp=Z,53nm,21.9s,baz=171,slow=31						
BORG	Borgarnes	55.79	10	LR	LR	00 34 10.7	
	comp=Z,45nm,18.1s,baz=180,slow=32						
DAVA	Damuels	56.59	40	*e*P	P	00 14 37.4	+1.3
	comp=Z,8.0nm,1.4s						
RETA	Reutte	57.23	40	*e*P	P	00 14 41.1	+0.7
	comp=Z,6.4nm,1.4s						
MOTA	Moosalm	57.39	40	*e*P	P	00 14 38.5	-3.1
	comp=Z,2.0nm,0.7s						
SQTA	Sankt Quirin	57.41	40	*e*P	P	00 14 41.0	-0.8
	comp=Z,3.7nm,0.7s						
WATA	Walderalm	57.68	40	*e*P	P	00 14 43.9	+0.2
	comp=Z,3.3nm,0.9s						
WTTA	Wattenberg	57.70	40	*e*P	P	00 14 44.9	+1.0
	comp=Z,6.6nm,1.3s						
PLCA	Paso Flores	57.70	206	P	P	00 14 42.4	-1.4
	comp=Z,2.7nm,1.0s,baz=28,slow=9.4,SNR=6.0						
PLCA				LR	LR	00 41 20.8	
	comp=Z,66nm,18.3s,baz=22,slow=38						
	comp=Z,2.7nm,1.0s						
PLCA	Paso Flores	57.70	206	*e*P	P	00 14 43.5	-0.3
ULM	Lac du Bonnet	59.20	323	LR	LR	00 36 45.1	
	comp=Z,43nm,20.5s,baz=97,slow=32						
GERES	GERESS Array B	59.55	39	P	P	00 14 55.9	-0.7
	comp=Z,0.3nm,0.6s,baz=248,slow=10,SNR=2.1						
	comp=Z,0.3nm,0.6s						
TX31	Lajitas Ar. Si	60.35	298	IAmb	IAmb	00 15 22.6	
	comp=Z,7.3nm,1.1s						
TX32	Lajitas Array	60.35	298	P	P	00 15 02.4	-0.2
TXAR	Lajitas Array	60.35	298	P	P	00 15 01.8	-0.8
	comp=Z,1.1nm,0.7s,baz=118,slow=7.5,SNR=5.2						
TXAR				LR	LR	00 42 46.6	
	comp=Z,19nm,18.4s,baz=110,slow=38						
	comp=Z,1.1nm,0.7s						
RONA	Rosalia, Austr	60.83	41	*e*P	P	00 15 05.8	+0.5
	comp=Z,2.4nm,0.8s						
VRAC	Vranov	61.50	39	LR	LR	00 41 01.3	
	comp=Z,46nm,18.6s,baz=279,slow=35						
MNTX	Cornudas Mount	62.01	300	P	P	00 15 13.2	-0.4
SDCO	Great Sand Dun	62.75	307	P	P	00 15 19.0	+0.2
SDCO				IAmb	IAmb	00 15 20.0	
	comp=Z,3.4nm,0.7s						
ISCO	Idaho Springs	63.13	309	P	P	00 15 21.3	-0.1
ISCO				IAmb	IAmb	00 15 22.9	
	comp=Z,2.9nm,0.8s						
ANMO	Albuquerque	63.20	304	LR	LR	00 40 19.1	
	comp=Z,71nm,20.4s,baz=106,slow=34						
NOA	NORSAR Array B	63.28	26	P	P	00 15 21.6	-0.1
	comp=Z,0.8nm,0.7s,baz=218,slow=4.0,SNR=2.5						
NOA				LR	LR	00 37 26.6	
	comp=Z,38nm,21.5s,baz=55,slow=31						
	comp=Z,0.8nm,0.7s						
S22A	4UR Ranch, Cre	63.80	307	P	P	00 15 26.0	+0.2
S22A				IAmb	IAmb	00 15 38.4	
	comp=Z,2.8nm,0.8s						
SMCO	Snowmass	64.08	308	P	P	00 15 27.0	-0.8
121A	Cookes Peak, D	64.10	301	P	P	00 15 26.1	-1.6
121A				IAmb	IAmb	00 15 29.3	
	comp=Z,3.2nm,1.0s						
PV13	Radium Mtn., P	65.41	307	P	P	00 15 36.8	+0.5
PV13				IAmb	IAmb	00 15 49.2	
	comp=Z,4.3nm,1.0s						
BW06	Boulder Array	66.48	312	P	P	00 15 43.5	+0.4
BW06				IAmb	IAmb	00 15 55.4	
	comp=Z,2.4nm,0.8s						
PD31	Pinedale Array	66.48	312	P	P	00 15 42.5	-0.5
PD31				IAmb	IAmb	00 15 50.5	
	comp=Z,4.1nm,1.4s						
PDAR	Pinedale Array	66.48	312	P	P	00 15 41.8	-1.3
	comp=Z,0.5nm,0.7s,baz=98,slow=7.6,SNR=4.3						
PDAR				LR	LR	00 40 60.0	
	comp=Z,73nm,22.0s,baz=95,slow=33						
	comp=Z,0.5nm,0.7s						
TUC	Tucson	66.63	301	P	P	00 15 43.8	-0.2
TUC				IAmb	IAmb	00 16 06.5	
	comp=Z,4.0nm,1.4s						
P18A	Preston Nutter	66.65	309	P	P	00 15 45.3	+1.0

P18A				IAmb	IAmb	00 15 54.6	
	comp=Z,3.2nm,1.0s						
SRU	San Rafael Swe	66.82	308	P	P	00 15 44.9	-0.4
SRU				IAmb	IAmb	00 15 53.2	
	comp=Z,4.6nm,1.3s						
WUAZ	Wupatki	67.25	304	P	P	00 15 48.5	+0.5
HWUT	Hardware Ranch	67.84	311	P	P	00 15 51.0	-0.7
HWUT				IAmb	IAmb	00 15 57.0	
	comp=Z,3.0nm,0.8s						
U15A	North Rim	68.04	305	P	P	00 15 53.5	+0.4
U15A				IAmb	IAmb	00 16 12.1	
	comp=Z,2.6nm,0.9s						
DUG	Dugway, Tooele	68.67	309	P	P	00 15 57.3	+0.5
BGU	Big Grassy Mou	68.88	310	P	P	00 15 58.1	-0.1
W13A	Hualapai Mount	69.29	303	P	P	00 16 01.3	+0.4
W13A				IAmb	IAmb	00 16 02.6	
	comp=Z,2.7nm,0.7s						
AKASG	Malin Array Be	69.74	40	P	P	00 16 03.0	0.0
	comp=Z,0.8nm,0.5s,baz=257,slow=6.4,SNR=4.5						
AKASG				LR	LR	00 44 33.0	
	comp=Z,52nm,20.2s,baz=346,slow=34						
	comp=Z,0.8nm,0.5s						
HLID	Hailey	70.10	312	P	P	00 16 05.5	-0.2
HLID				IAmb	IAmb	00 16 06.4	
	comp=Z,4.6nm,1.4s						
FINES	FINESS Array B	70.10	28	P	P	00 16 04.8	-0.3
	comp=Z,1.0nm,0.5s,baz=209,slow=3.5,SNR=6.6						
	comp=Z,1.0nm,0.5s						
ELK	Elko	70.55	309	LR	LR	00 43 54.4	
	comp=Z,55nm,20.9s,baz=83,slow=33						
ELK	Elko	70.55	309	P	P	00 16 08.6	+0.1
MFID	Camas Ranch	71.11	312	P	P	00 16 11.8	0.0
MFID				IAmb	IAmb	00 16 17.4	
	comp=Z,3.5nm,0.8s						
BR131	Keskin Array S	72.03	52	P	P	00 16 16.8	-0.6
BRTR	Keskin Array B	72.03	52	P	P	00 16 16.7	-0.7
	comp=Z,0.6nm,0.7s,baz=247,slow=6.4,SNR=5.1						
	comp=Z,0.6nm,0.7s						
BMN	Battle Mountai	72.05	309	P	P	00 16 17.7	+0.2
NEW	Newport	72.30	317	LR	LR	00 46 19.1	
	comp=Z,45nm,19.9s,baz=118,slow=34						
YKA	Yellowknife Ar	72.62	332	P	P	00 16 19.9	-0.3
	comp=Z,0.6nm,0.7s,baz=100,slow=6.1,SNR=9.3						
	comp=Z,0.6nm,0.7s						
YKA	Yellowknife Ar	72.62	332	P	P	00 16 20.4	+0.2
KVN	Kaiserville	72.71	308	P	P	00 16 21.2	-0.3
NVAR	Mina Array Bea	72.87	307	P	P	00 16 21.5	-1.0
	comp=Z,0.1nm,0.3s,baz=70,slow=11,SNR=1.7						
	comp=Z,0.1nm,0.3s						
EIL	Elat	73.30	62	LR	LR	00 48 46.1	
	comp=Z,53nm,19.7s,baz=248,slow=36						
LSZ	Lusaka	73.96	109	LR	LR	00 42 23.5	
	comp=Z,51nm,18.8s,baz=203,slow=30						
MOD	Modoc Plateau	74.38	311	P	P	00 16 31.3	0.0
MOD				IAmb	IAmb	00 16 32.8	
	comp=Z,3.9nm,0.7s						
BEKR	Beckworth	74.45	308	P	P	00 16 31.2	-0.6
LBTB	Lobatse	74.63	120	LR	LR	00 43 47.1	
	comp=Z,54nm,19.7s,baz=288,slow=31						
BOSA	Boshof	75.59	123	P	P	00 16 38.5	+0.1
	comp=Z,2.7nm,0.9s,baz=285,slow=5.5,SNR=3.7						
BOSA				LR	LR	00 43 02.8	
	comp=Z,67nm,20.5s,baz=354,slow=30						
	comp=Z,2.7nm,0.9s						
YBH	Yreka Blue Hor	76.18	310	LR	LR	00 48 46.4	
	comp=Z,41nm,19.4s,baz=14,slow=35						
BBB	Bella Bella	79.36	321	LR	LR	00 49 19.4	
	comp=Z,38nm,21.1s,baz=246,slow=34						
KMBO	Kilima Mbogo	79.44	93	LR	LR	00 48 26.3	
	comp=Z,34nm,21.8s,baz=106,slow=33						
ATD	Arta Tunnel	82.71	80	LR	LR	00 54 22.9	
	comp=Z,43nm,18.6s,baz=8.5,slow=36						
ILAR	Eielson Array	86.70	336	P	P	00 17 36.9	+0.2
	comp=Z,0.7nm,0.7s,baz=61,slow=4.6,SNR=9.2						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	86.70	336	P	P	00 17 37.8	+1.1
WSAR	Wadi Sarin	95.21	65	LR	LR	01 02 01.6	
	comp=Z,35nm,19.4s,baz=0.0,slow=36						

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*GCMT **13** 00:07:14.1±0.4, 11°.93N±0°.03×124°.85E±0°.05, h23^{km}±1^{km}, MW4.8/74, Moment Tensor Solution. s19,c22; s74,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.84±.17; $M_{\theta\theta}$1.04±.10; $M_{\phi\phi}$0.80±.12; $M_{r\theta}$0.66±.14; $M_{\theta\phi}$0.94±.07; $M_{\phi r}$0.86±.20; Best double couple: $M_0$2.15000×10^{16} NP1:ϕ_s54.00000°, δ30.00000°, λ-80.00000°. NP2: ϕ_s223.00000°, δ60.00000°, λ-96.00000°. Principal axes: T 2.1560, Plg15.0000°, Azm317.0000°; N -0.0070, Plg5.0000°, Azm226.0000°; P -2.1440, Plg74.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MAN **13** 00:07:16.4, 11°.99N×124°.89E, h22^{km}, mb5.5, ML4.5, MS4.7, Hypocentre not reviewed by the ISC*

*IDC **13** 00:07:18.3±2.0, 11°.88N×125°.14E, h44^{km}±18^{km}, mb4.1/24, mbtmp4.4/26, ML4.8/3, MS3.8/39, Error ellipse: s-maj=17.8km s-min=10.0km az=78.0*

*NEIC **13** 00:07:19.1±1.4, 11°.99N±0°.06×125°.05E±0°.06, h44^{km}±5^{km}, mb4.7/141, Error ellipse: s-maj=10.5km s-min=7.2km az=219.0*

*DJA **13** 00:07:20.1±0.7, 12°N±4°×12°5E±°, h75^{km}±6^{km}, M5.0/54, mb4.9/54, mB5.4/20, MLv5.5/1, Mw(mB)4.8/20, MwMwp4.9/2, Mwp5.2/2*

ISC 13 00:07:19.5±0.3**, 11°.95N**±0°.03×**125°.01E**±0°.05**, h50**^{km}**, n406,** σ**1.**^{s}**70**/395**, mb4.7**/134**, MS3.9**/49**, 5C-17D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.97	204	⇓eP	Pn	00 07 33.9	-2.9
MSLP	Maasin	1.81	185	⇓eP	Pn	00 07 47.9	-0.4
MSLP				eS	Pn	00 07 48.3	0.0
PVCP	Virac	1.84	333	⇓eP	Pn	00 07 44.8	-3.8
SCPH	Surigao	2.20	168	⇑eP	Pn	00 07 53.7	+0.1
SCPH				eS	Sn	00 08 22.9	+3.2
GLSP	General Luna,	2.42	153	⇓eP	Pn	00 07 55.6	-0.9
GLSP				eS	Sn	00 08 33.5	+8.6
GUIM	Jordan	2.71	241	⇓eP	Pn	00 07 58.5	-2.1
GUIM				eS	Sn	00 08 46.7	+14
BUTP	Butuan	3.02	168	⇓eP	Pn	00 08 08.1	+3.2
BUTP				eS	Sn	00 08 44.4	+4.6
CNOP	Candoni, Negro	3.14	228	⇓eP	Pn	00 08 04.2	-2.3
CNOP				eS	Sn	00 08 28.4	-14
GQP	Guinayangan	3.17	308	⇓eP	Pn	00 08 04.0	-2.8
JCNP	Jose Panganiba	3.24	316	⇓eP	Pn	00 08 04.6	-3.2
BIPH	Bislig	3.97	160	⇓eP	Pn	00 08 17.1	-0.8
BIPH				eS	Sn	00 09 04.8	+1.6
LQP	Lukban	4.01	303	⇓eP	Pn	00 08 14.3	-4.2
TGY	Tagaytay City	4.51	299	P	Pn	00 08 25.0	-0.3
	51nm,0.3s,baz=37,slow=20,SNR=9.5						
DAV	Davao City (W)	4.88	173	P	Pn	00 08 27.6	-2.8
	45nm,0.3s,baz=73,slow=4.3,SNR=1.5						
DAV				LR	LR	00 10 48.8	
	comp=Z,5μm,18.8s,baz=346,slow=44						
	138nm,0.3s						
DAV	Davao City (W)	4.88	173	Pn	Pn	00 08 32.5	+2.1
DAV	Davao City (W)	4.88	173	P	Pn	00 08 31.7	+1.3
KCP	Kidapawan	4.91	179	⇑iP	Pn	00 08 33.1	+2.3
PCPH	Palayan	5.23	314	⇓eP	Pn	00 08 33.4	-1.7
MYLDM	Lahad Datu	9.31	224	Pn	Pn	00 09 31.2	+0.1
KMSI	Cibinong	11.35	185	P	Pn	00 10 02.6	+3.6
	174nm,0.8s						
TNTI	Ternate	11.35	168	Pn	Pn	00 09 57.3	-1.7
GTOI	Gorontalo	11.41	190	P	Pn	00 10 00.4	+0.5
	375nm44nm,1.0s						
TWG	Pinlang	11.45	341	Pn	Pn	00 09 57.1	-3.2
TOLI2	Tolitoli	11.56	202	Pn	Pn	00 10 01.3	-0.5
TOLI2	Tolitoli	11.56	202	P	Pn	00 10 04.1	+2.2
MRSI	Marisa	11.80	195	P	Pn	00 10 07.7	+2.6
	35nm,1.2s						
YULB	Yu-li	11.92	343		Pn	00 10 05.2	-1.5
TPUB	Ta-pu	12.04	340		Pn	00 10 07.7	-0.7
TPUB	Ta-pu	12.04	340	P	Pn	00 10 09.6	+1.2
SSLB	Suanglung	12.39	342	Pn	Pn	00 10 12.6	-0.7
SSLB	Suanglung	12.39	342	P	Pn	00 10 13.4	+0.2
YOJ	Yonaguni jima	12.59	352		Pn	00 10 14.4	-1.4
MPSI	Mapaga	12.60	204	P	P	00 10 23.7	-2.6
	13nm,0.9s						
LUWI	Luwuk	13.10	190	Pn	Pn	00 10 24.4	+1.6
LUWI	Luwuk	13.10	190	P	P	00 10 29.2	-2.5
	128nm,0.8s						
YHNB	Yeheng	13.11	345		Pn	00 10 22.8	-0.4
YHNB	Yeheng	13.11	345	P	Pn	00 10 24.3	+1.2
APSI	Ampana	13.21	195	P	Pn	00 10 27.5	+3.1
	46nm,1.1s						
KNMB	Chin-men Tao	13.94	334	Pn	Pn	00 10 33.7	-0.6
SANI	Sanana	13.94	176	P	Pn	00 10 34.7	+0.3
SIJI	Sorong	14.17	154	LR	LR	00 17 40.5	
	comp=Z,217nm,18.5s,baz=292,slow=44						
SMKI	Samarinda	14.55	213	P	P	00 10 46.0	-1.9
	9μm198nm,0.5s						
JMZ	Minamidaito 2	14.99	22	Pn	Pn	00 10 47.0	-1.2
JOW	Kunigami	15.12	11	LR	LR	00 15 57.9	
	comp=Z,390nm,20.2s,baz=302,slow=34						
MSAI	Masohi	15.69	165	P	P	00 10 59.6	-1.0
	13nm,0.5s						
TTSI	Tana Toraja	15.76	199	P	Pn	00 10 59.5	+1.2
	3μm2μm106nm,1.1s						
QIZ	Qiongzhong	16.22	298	P	Pn	00 11 04.8	+0.8
QIZ				S	Sn	00 14 07.0	+3.9
QIZ				LR	LR		
	comp=N,410nm,14.1s						
QIZ				LR	LR		
	comp=E,440nm,14.3s						
QIZ				LR	LR		
	comp=Z,470nm,13.7s						
MTKI	Muara Teweh, K	16.28	219	P	P	00 11 08.5	+1.4
SPSI	Sidrap Palu	16.65	199	P	P	00 11 12.7	+1.5
	comp=Z,2μmcomp=Z,58nm,1.1s						
BNSI	Bone	16.96	197	P	P	00 11 15.8	+1.2
	comp=Z,2μmcomp=Z,120nm,1.5s						
KAPI	Kappang	17.64	198	P	Pn	00 11 20.8	-1.1
	comp=Z,2.4nm,0.3s,baz=50,slow=14,SNR=2.7						
KAPI				LR	LR	00 19 22.6	
	comp=Z,209nm,21.2s,baz=36,slow=41						
	comp=Z,27nm,0.9s						
KAPI	Kappang	17.64	198	P	Pn	00 11 22.0	+0.2
KAPI				IAmb	IAmb	00 11 28.8	
	comp=Z,80nm,1.3s						
KAPI	Kappang	17.64	198	P	P	00 11 22.3	+0.1
BKSI	Bulukumba	17.83	196	P	P	00 11 28.6	+4.3
	comp=Z,411nmcomp=Z,26nm,1.3s						
STKI	Sintang	17.89	230	P	P	00 11 26.7	+1.8
KSM	Kuching	17.91	236	P	Pn	00 11 24.6	-0.6
KSM	Kuching	17.91	236	P	P	00 11 26.9	+1.7
BBKI	Banjar Baru	18.35	214	P	Pn	00 11 31.6	+1.2
	comp=Z,30nm,1.2s						
SSE	Sheshan	19.38	350	P	P	00 11 40.8	-0.4
SSE				S	Sn	00 15 19.1	-0.2
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,88nm,3.1s						
SSE				LR	LR		
	comp=N,170nm,16.2s						
SSE				LR	LR		
	comp=E,130nm,15.8s						
SMPI	Sarmi	19.42	135	P	Pn	00 11 42.5	-0.8
	comp=E,107nm,1.4s						
GUMO	Guam	19.44	83	LR	LR	00 20 48.0	
	comp=E,56nm,18.1s,baz=126,slow=42						
JSU	Suzuyama	20.10	14	P	P	00 11 47.3	-1.8
MMRI	Maumere	20.64	188	P	P	00 11 55.2	+0.3
MMRI	Maumere	20.64	188	P	Pn	00 11 56.6	-1.1
	comp=E,65nm,1.6s						
MMRI	Maumere	20.64	188	P	P	00 11 55.7	+0.8
NJ2	Nanjing	20.80	345	eP	Pn	00 11 58.3	-1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
EDFI	Ende, Flores	20.83	189	P	Pn	00 12 00.7	+0.7
	comp=Z,17nm,1.1s						
GENI	Genyem	20.87	133	P	P	00 11 57.7	+0.2
WHN	Wuhan	20.98	334	⇑P	Pn	00 12 02.9	+1.3
WHN				pP	pP	00 12 07.4	-2.7
WHN				S	S	00 15 47.1	-2.4
WHN				LR	LR		
	comp=N,2μm,18.5s						
WHN				LR	LR		
	comp=E,1μm,21.5s						
WHN				LR	LR		
	comp=Z,1μm,17.5s						
JNU	Nakatsue	21.75	13	P	P	00 12 05.9	-0.9
	comp=Z,10nm,0.8s,baz=166,slow=5.9,SNR=4.2						
	comp=Z,10nm,0.8s						
JNU	Nakatsue	21.75	13	P	P	00 12 04.5	-2.3
JNU				IAmb	IAmb	00 12 21.8	
	comp=Z,28nm,1.1s						
JNU	Nakatsue	21.75	13	P	P	00 12 07.2	+0.4
KMMI	Kalianget	21.84	211	P	P	00 12 08.9	+1.1
	comp=Z,84nm,0.9s						
PLAI	Plampang	21.86	200	P	P	00 12 08.1	0.0
	comp=Z,107nm,0.8s						
PLAI	Plampang	21.86	200	P	P	00 12 08.7	+0.6
BATI	Baumata	22.05	184	P	P	00 12 09.0	-1.2
	comp=Z,22nm,0.4s,baz=279,slow=4.7,SNR=4.9						
BATI				LR	LR	00 21 21.6	
	comp=Z,323nm,20.8s,baz=57,slow=38						
	comp=Z,22nm,0.4s						
JCJ	Chichijima	22.07	44	LR	LR	00 19 52.7	
	comp=Z,143nm,20.1s,baz=161,slow=34						
SRBI	Singaraja	22.16	207	P	P	00 12 11.3	0.0
	comp=Z,74nm,1.6s						
ABJI	Asem Bagus	22.35	209	P	P	00 12 15.0	+1.6
	comp=Z,75nm,1.5s						
GRJI	Gresik	22.50	214	P	P	00 12 17.8	+2.8
	comp=Z,1μmcomp=Z,139nm,1.1s						
TPI	Tanjungpandan	22.61	231	P	P	00 12 15.1	-1.1
	comp=Z,319nmcomp=Z,38nm,1.0s						
BLJI	Banyuglugur	22.62	211	P	P	00 12 17.2	+0.9
	comp=Z,1μmcomp=Z,32nm,1.0s						
IGBI	Denpasar	22.84	206	P	P	00 12 19.5	+0.9
	comp=Z,98nm,1.2s						
JAGI	Jajag, Banyuwa	22.98	209	P	P	00 12 19.2	-0.8
JAGI	Jajag, Banyuwa	22.98	209	P	P	00 12 20.1	+0.1
	comp=Z,4μmcomp=Z,217nm,1.7s						
JAGI	Jajag, Banyuwa	22.98	209	P	P	00 12 19.8	-0.2
JMN	Monobe	23.14	19	P	P	00 12 17.7	-3.8
GMJI	Gumukmas	23.15	210	P	P	00 12 24.3	+2.6
	comp=Z,99nm,1.5s						
ENH	Enshi	23.23	324	IAmb	IAmb	00 12 28.4	
	comp=Z,41nm,1.2s						
MYKOM	Kota Tinggi	23.28	246	P	P	00 12 22.8	-0.2
PWJI	Pagerwojo	23.79	214	P	P	00 12 28.4	+0.6
	comp=Z,96nm,1.1s						
SMRI	Semarang	23.79	218	P	P	00 12 27.8	0.0
SMRI	Semarang	23.79	218	P	P	00 12 29.5	+1.7
	comp=Z,134nm,2.0s						
SMRI	Semarang	23.79	218	P	P	00 12 29.7	+1.9
WOJI	Wonogiri, Jawa	24.14	216	P	P	00 12 32.3	+1.4
	comp=Z,440nm,1.0s						
PCJI	Pacitan	24.28	215	P	P	00 12 33.5	+1.2
	comp=Z,3μmcomp=Z,289nm,1.0s						
UGM	Wanagama	24.43	217	P	P	00 12 34.4	+0.8
UGM	Wanagama	24.43	217	P	P	00 12 35.4	+1.7
	comp=Z,241nm,1.0s						
UGM	Wanagama	24.43	217	P	P	00 12 35.9	+2.2
YOGI	Yogyakarta	24.49	217	P	P	00 12 35.8	+1.6
	comp=Z,151nm,0.8s						
KMI	Kunming	24.80	305	⇓P	P	00 12 42.9	+5.7
KMI				S	S	00 16 59.2	+2.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,86nm,4.5s						
KMI				LR	LR		
	comp=N,230nm,19.7s						
KMI				LR	LR		
	comp=E,250nm,17.5s						
KMI				LR	LR		
	comp=Z,220nm,17.9s						
IPM	Ipoh	24.85	255	P	P	00 12 37.1	-0.5
IPM				IAmb	IAmb	00 12 44.3	
	comp=Z,19nm,0.9s						
IPM	Ipoh	24.85	255	P	P	00 12 38.0	+0.4
KPJI	Karang Pucung	24.95	221	P	P	00 12 39.4	+1.0
	comp=Z,80nm,0.9s						
KULM	Kulim	24.96	257	P	P	00 12 38.2	-0.4
KULM				IAmb	IAmb	00 12 40.0	
	comp=Z,26nm,1.3s						
JHJ	Hachijo jima 2	25.05	30	LR	LR	00 20 30.7	
	comp=Z,204nm,21.6s,baz=252,slow=32						
JHJ2	Mitsune	25.05	30	P	P	00 12 37.2	-1.9
TIA	Tai'an	25.18	345	⇓P	P	00 12 41.6	+1.3
TIA				S	S	00 17 15.1	+13
TIA				pmax	pmax		
	comp=Z,19nm,0.8s						
TIA				LR	LR		
	comp=N,210nm,10.6s						
TIA				LR	LR		
	comp=Z,220nm,17.9s						
SRIT	Nakonsritamara	25.22	265	P	P	00 12 40.8	0.0
SRIT				IAmb	IAmb	00 12 43.2	
	comp=Z,26nm,0.9s						
LYN	LuoYang	25.23	335	eP	P	00 12 41.2	+0.5
LYN				sP	sP	00 13 02.9	+3.3
LYN				S	S	00 17 05.1	+2.3
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				pmax	pmax		
	comp=Z,120nm,4.9s						
LYN				LR	LR		
	comp=N,370nm,17.3s						
LYN				LR	LR		
	comp=E,330nm,18.2s						
LYN				LR	LR		
	comp=Z,410nm,20.4s						
LEM	Lembang	25.44	224	P	P	00 12 43.5	+0.6
	comp=Z,37nm,0.7s,baz=311,slow=19,SNR=6.6						
LEM				LR	LR	00 24 02.4	
	comp=Z,244nm,18.9s,baz=4.0,slow=39						
	comp=Z,37nm,0.7s						
LEM	Lembang	25.44	224	P	P	00 12 44.3	+1.3
	comp=Z,35nm,1.0s						
KSRS	Korea Array	25.53	5	P	P	00 12 43.2	-0.2
	comp=Z,2.5nm,0.9s,baz=182,slow=11,SNR=7.1						
KSRS				LR	LR	00 22 55.8	
	comp=Z,205nm,19.7s,baz=190,slow=37						
	comp=Z,2.5nm,0.9s						
INU	Inuyama	25.71	23	P	P	00 12 44.4	-0.7
INU				IAmb	IAmb	00 12 48.2	
	comp=Z,24nm,1.2s						
INU	Inuyama	25.71	23	P	P	00 12 46.5	+1.4
CMAR	Chiang Mai Arr	25.95	288	P	P	00 12 49.2	+1.7
	comp=Z,1.6nm,0.3s,baz=94,slow=7.5,SNR=9.2						
CMAR				LR	LR	00 24 44.1	
	comp=Z,100nm,18.9s,baz=105,slow=40						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	25.95	288	P	P	00 12 47.3	-0.2
JGF	Kuroka	26.07	23	P	P	00 12 48.0	-0.3
CNJI	Cibinong	26.12	224	P	P	00 12 48.1	-0.9
	comp=Z,67nm,0.9s						
PZH	PanZhiHua	26.24	307	P	P	00 12 55.3	+5.1
PZH				S	S	00 17 17.1	-2.2
PZH				sS	sS	00 17 37.2	-4.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,60nm,4.4s						
PZH				LR	LR		
	comp=N,400nm,16.5s						
PZH				LR	LR		
	comp=E,490nm,15.1s						
PZH				LR	LR		
	comp=Z,660nm,17.7s						
XAN	Xi'an	26.44	329	⇑P	P	00 12 50.6	-1.1
XAN				pP	pP	00 13 04.6	0.0
XAN				sP	sP	00 13 13.2	+2.6
XAN				S	S	00 17 18.9	-3.2
XAN				sS	sS	00 17 41.1	-2.9
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,6.0s						
XAN				LR	LR		
	comp=N,400nm,15.2s						
XAN				LR	LR		
	comp=E,210nm,15.9s						
XAN				LR	LR		
	comp=Z,570nm,15.2s						
BKNI	Bangkinang	26.45	246	P	P	00 12 51.6	-0.3
BKNI	Bangkinang	26.45	246	P	P	00 12 51.9	-0.1
	comp=Z,9μmcomp=Z,51nm,0.4s						
BKNI	Bangkinang	26.45	246	P	P	00 12 52.2	+0.2
HNS	HongShan	26.98	342	⇑P	P	00 13 00.9	+4.4
HNS				S	S	00 17 39.5	+9.2
HNS				pmax	pmax		
	comp=Z,42nm,1.0s						
HNS				LR	LR		
	comp=N,110nm,15.1s						
HNS				LR	LR		
	comp=E,210nm,15.4s						
HNS				LR	LR		
	comp=Z,260nm,16.1s						
MJAR	Matsushiro Arr	27.22	24	P	P	00 12 57.7	-1.0
	comp=Z,1.0nm,0.3s,baz=201,slow=7.2,SNR=2.2						
MJAR				LR	LR	00 22 42.4	
	comp=Z,251nm,19.9s,baz=187,slow=34						
	comp=Z,1.0nm,0.3s						
PSI	Prapat	27.39	253	P	P	00 13 01.2	+0.5
	comp=Z,8.1nm,0.6s,baz=72,slow=4.7,SNR=8.1						
PSI				LR	LR	00 24 25.7	
	comp=Z,253nm,18.2s,baz=79,slow=37						
	comp=Z,8.1nm,0.6s						
MNSI	Mandailing Nat	27.56	248	P	P	00 13 02.4	+0.4
	comp=Z,28nm,0.8s						
BJI	Beijing	29.05	346	P	P	00 13 19.1	+4.2
BJI				sP	sP	00 13 34.7	+0.8
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,74nm,3.9s						
BJI				LR	LR		
	comp=N,150nm,18.7s						
BJI				LR	LR		
	comp=E,170nm,17.6s						
BJI				LR	LR		
	comp=Z,180nm,18.0s						
XMIS	Christmas Isla	29.44	222	P	P	00 13 18.2	-0.5
SNY	Shenyang	29.79	358	⇓P	P	00 13 26.6	+5.1
SNY				S	S	00 18 13.1	-1.4
SNY				pmax	pmax		
	comp=Z,20nm,0.9s						
SNY				pmax	pmax		
	comp=Z,150nm,3.5s						
SNY				LR	LR		
	comp=N,320nm,14.4s						
SNY				LR	LR		
	comp=E,210nm,10.7s						
SNY				LR	LR		
	comp=Z,480nm,18.1s						
LZH	Lanzhou	30.70	325	⇓P	P	00 13 35.1	+5.3
LZH				sP	sP	00 13 57.8	+9.0
LZH				S	S	00 18 40.0	+11
LZH				SS	SnSn	00 20 20.0	+9.0
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,87nm,5.4s						
LZH				LR	LR		
	comp=N,450nm,13.5s						
LZH				LR	LR		
	comp=E,320nm,14.6s						
LZH				LR	LR		
	comp=Z,510nm,14.1s						
HHC	Hu-ho-hao-te	31.12	340	eP	P	00 13 39.1	+5.7
HHC				pmax	pmax		
	comp=Z,43nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.1s						
HHC				LR	LR		
	comp=N,380nm,14.4s						
HHC				LR	LR		
	comp=E,250nm,15.7s						
HHC				LR	LR		
	comp=Z,410nm,16.3s						
USRK	Ussuriysk Ar.	32.69	9	LR	LR	00 26 20.6	
	comp=Z,122nm,20.8s,baz=190,slow=35						
XLT	XiLinHaoTe	32.76	348	eP	P	00 13 51.7	+4.0
XLT				pP	sP	00 14 06.1	-0.7
XLT				sP	pP	00 14 13.6	+13
XLT				PcP	PcP	00 16 30.3	-1.9
XLT				PcS	PcS	00 20 16.5	-0.9
XLT				pmax	pmax		
	comp=Z,18nm,1.1s						
XLT				pmax	pmax		
	comp=Z,100nm,3.6s						
XLT				LR	LR		
	comp=N,41nm,20.2s						
XLT				LR	LR		
	comp=E,630nm,21.5s						
XLT				LR	LR		
	comp=Z,200nm,21.1s						
WB0	Warramunga Arr	32.84	164	P	P	00 13 47.0	-1.6
WRA	Warramunga Arr	32.99	164	P	P	00 13 47.3	-2.6
	comp=Z,2.1nm,0.7s,baz=347,slow=9.4,SNR=9.4						
WRA				PcP	PcP	00 16 32.0	-1.1

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      comp=Z,0.6nm,0.6s,baz=341,slow=3.2,SNR=7.6
WRA                                LR     LR     00 29 57.4
      comp=Z,53nm,18.9s,baz=6.5,slow=41
      comp=Z,2.1nm,0.7s
WRA   Warramunga Arr    32.99 164  P      P      00 13 47.9 -2.0
WB2   Warramunga Arr    33.00 164  P      P      00 13 47.5 -2.4
WB2                                IAmb   IAmb   00 13 53.4
      comp=Z,16nm,1.4s
WR0   Warramunga Arr    33.07 163  P      P      00 13 49.2 -1.3
WR0                                IAmb   IAmb   00 14 06.7
      comp=Z,10nm,1.2s
MBWA  Marble Bar        33.31 189  P      P      00 13 51.2 -1.4
MBWA                               IAmb   IAmb   00 14 08.8
      comp=Z,23nm,1.4s
PSA00 Pilbara Seismi    33.70 189  P      P      00 13 55.1 -0.9
PSA00                              IAmb   IAmb   00 13 59.8
      comp=Z,25nm,1.4s
BNX   BinXian           33.74   3 ⇓P      P      00 13 59.2 +3.1
BNX                                pmax   pmax
      comp=Z,21nm,1.1s
BNX                                pmax   pmax
      comp=Z,300nm,3.9s
GTA   Gaotai            35.31 325 eP      P      00 14 10.4 +0.5
GTA                                pP     pP     00 14 15.3 -7.8
GTA                                sP     sP     00 14 19.2  -10
GTA                                pmax   pmax
      comp=Z,4.0nm,0.6s
MTSU  Mount Surprise    35.45 147  P      P      00 14 10.5 -0.7
ASAJ  Asahikawa         35.45  22  LR     LR     00 28 24.6
      comp=Z,135nm,19.9s,baz=164,slow=36
GIRL  Giralia           35.96 197  P      P      00 14 16.0 +0.5
GOMU  GeErMu            36.38 317  P      P      00 14 24.9 +5.4
GOMU                               pP     pP     00 14 29.4 -3.2
GOMU                               sP     sP     00 14 30.6 -7.9
GOMU                               PP     PP     00 15 47.3 +4.4
GOMU                               PcP    PcP    00 16 49.9 +6.7
GOMU                               S      S      00 20 07.6  +10
GOMU                               sS     sS     00 20 12.0 -7.9
GOMU                               SS     SS     00 22 48.9  +11
GOMU                               pmax   pmax
      comp=Z,7.0nm,1.3s
GOMU                               pmax   pmax
      comp=Z,61nm,4.3s
GOMU                               LR     LR
      comp=N,140nm,13.5s
GOMU                               LR     LR
      comp=E,250nm,13.7s
GOMU                               LR     LR
      comp=Z,230nm,13.6s
AS31  Alice Springs     36.45 166  P      P      00 14 19.7  0.0
ASAR  Alice Springs     36.45 166  P      P      00 14 18.7 -1.0
      comp=Z,4.8nm,0.5s,baz=348,slow=7.0,SNR=35
ASAR                               PcP    PcP    00 16 42.1 -1.0
      comp=Z,2.1nm,0.7s,baz=358,slow=4.1,SNR=6.0
ASAR                               LR     LR     00 30 16.0
      comp=Z,82nm,21.1s,baz=322,slow=38
      comp=Z,4.8nm,0.5s
ASAR  Alice Springs     36.45 166  P      P      00 14 19.1 -0.6
WRKA  Warakurna         36.90 175  P      P      00 14 23.0 -0.6
CTA   Charters Tower    38.09 146  LR     LR     00 32 07.5
      comp=Z,58nm,19.2s,baz=272,slow=39
CTAO  Charters Tower    38.09 146  P      P      00 14 33.2 -0.5
CTAO                               IAmb   IAmb   00 14 34.3
      comp=Z,17nm,1.0s
ODAN  Odare             38.29 298 eP      P      00 14 35.0 -0.6
      comp=Z,38nm,0.8s
ULN   Ulaanbaatar       38.84 341  P      P      00 14 39.5 -0.3
ULN                                IAmb   IAmb   00 14 46.4
      comp=Z,14nm,0.8s
MEEK  Meekatharra       38.85 189  P      P      00 14 39.0 -1.0
RAMN  Ramite            38.99 298 eP      P      00 14 40.7 -0.8
      comp=Z,11nm,0.4s
SONM  Songino Array     39.03 340  P      P      00 14 41.5 +0.1
      comp=Z,5.8nm,1.1s,baz=153,slow=10,SNR=17
SONM                               LR     LR     00 31 12.1
      comp=Z,111nm,19.4s,baz=118,slow=37
      comp=Z,5.8nm,1.1s
SONM  Songino Array     39.03 340  P      P      00 14 42.8 +1.4
SONM                               IAmb   IAmb   00 14 47.4
      comp=Z,9.8nm,1.0s
JIRN  Jiri              39.53 299 eP      P      00 14 46.3 +0.1
      comp=Z,4.1nm,1.0s
PKI   Pulchoki          40.18 299 eP      P      00 14 50.5 -1.0
      comp=Z,20nm,0.9s
KKN   Kakani            40.34 299 eP      P      00 14 52.3 -0.4
      comp=Z,39nm,1.1s
H11S3 WAKE ISLAND Hy    40.67  76  T      T      00 57 59.8
      baz=277,slow=72,SNR=49
H11S1 WAKE ISLAND Hy    40.68  76  T      T      00 57 59.3
      baz=277,slow=72,SNR=24
H11S2 WAKE ISLAND Hy    40.68  76  T      T      00 57 59.1
      baz=277,slow=72,SNR=25
HNR   Honiara           40.71 120  LR     LR     00 28 35.4
      comp=Z,128nm,21.9s,baz=317,slow=32
OOD   Oodnadatta        40.84 165  P      P      00 14 55.5 -0.9
H11N1 WAKE ISLAND Hy    40.94  74  T      T      00 58 20.7
      baz=266,slow=74,SNR=214
H11N2 WAKE ISLAND Hy    40.95  74  T      T      00 58 17.1
      baz=266,slow=74,SNR=152
GKN   Gorkha            40.95 299 eP      P      00 14 56.8 -0.8
      comp=Z,47nm,1.1s
H11N3 WAKE ISLAND Hy    40.96  74  T      T      00 58 22.0
      baz=266,slow=74,SNR=187
MORW  Morawa            41.69 192  P      P      00 15 02.3 -1.1
KOLN  Koldanda          41.78 298 eP      P      00 15 02.8 -1.7
      comp=Z,51nm,1.0s
DANN  Dangsing          41.78 299 eP      P      00 15 03.9 -0.8
      comp=Z,79nm,1.2s
INKA  Innaminka         42.30 159  P      P      00 15 07.6 -0.8
PYUN  Piuthan           42.38 299 eP      P      00 15 07.8 -1.7
      comp=Z,85nm,1.0s
FORT  Forrest           42.58 176  P      P      00 15 09.9 -0.7
FORT  Forrest           42.58 176  P      P      00 15 10.1 -0.5
PALK  Pallekele         43.90 268  P      P      00 15 20.4 -1.2
PALK                               IAmb   IAmb   00 15 22.3
      comp=Z,27nm,1.4s
LCRK  Leigh Creek       44.02 164  P      P      00 15 23.0 +0.7
EIDS  Eidsvold          44.96 146  P      P      00 15 29.4 -0.4
EIDS                               IAmb   IAmb   00 15 29.8
      comp=Z,9.8nm,0.9s
WMQ   Urumqi            45.15 322 eP      P      00 15 33.5 +2.2
WMQ                                LR     LR
      comp=E,410nm,13.9s
WMQ                                LR     LR
      comp=Z,130nm,21.7s
NWAO  Narrogin (SRO)    45.24 189  P      P      00 15 30.9 -1.0
NWAO                               IAmb   IAmb   00 15 49.8
      comp=Z,18nm,1.1s
BBOO  Buckleboo         45.74 167  P      P      00 15 35.5 -0.5
STKA  Stephens Creek    46.38 160  P      P      00 15 39.7 -1.3
      comp=Z,7.6nm,0.6s,baz=334,slow=7.3,SNR=14
STKA                               LR     LR     00 41 01.5
      comp=Z,63nm,18.9s,baz=18,slow=44
      comp=Z,7.6nm,0.6s
STKA  Stephens Creek    46.38 160  P      P      00 15 40.7 -0.3
CMSA  Cobar Meteorol    47.57 156  P      P      00 15 50.8 +0.5
PETK  Petropavlovsk-    48.65  26  P      P      00 15 58.5 +0.2
      comp=Z,1.0nm,0.6s,baz=233,slow=2.9,SNR=2.4
PETK                               LR     LR     00 34 44.5
      comp=Z,109nm,21.3s,baz=218,slow=34
      comp=Z,1.0nm,0.6s
ARMA  Armidale          49.30 149  P      P      00 16 04.0 +0.3
ARMA  Armidale          49.30 149  P      P      00 16 04.8 +1.1
SANVU Saraoutou         49.85 122  P      P      00 16 06.4 -1.6
MK31  Makanchi Array    49.95 322  P      P      00 16 08.3 -0.1
MK31                               IAmb   IAmb   00 16 14.5
      comp=Z,6.0nm,0.8s
MKAR  Makanchi Array    49.95 322  P      P      00 16 08.8 +0.4
      comp=Z,1.7nm,0.8s,baz=125,slow=7.7,SNR=12
MKAR                               ScP    ScP    00 21 19.2 -0.5
      comp=Z,0.5nm,0.7s,baz=122,slow=5.2,SNR=4.6
MKAR                               LR     LR     00 38 39.7
      comp=Z,128nm,20.6s,baz=110,slow=38
      comp=Z,1.7nm,0.8s
MKAR  Makanchi Array    49.95 322  P      P      00 16 08.3 -0.1
MAKZ  Makanchi          50.15 322  P      P      00 16 09.3 -0.6
MAKZ                               IAmb   IAmb   00 16 16.0
      comp=Z,13nm,1.2s
PRZ   Przheval'sk       50.53 316  P      P      00 16 13.1  0.0
TARG  Taragay, Kyrgy    50.65 315  P      P      00 16 13.2 -1.1
TARG                               IAmb   IAmb   00 16 30.9
      comp=Z,8.0nm,1.2s
KSH   Kashi             51.20 311  P      P      00 16 22.9 +4.8
KSH                                pP     sP     00 16 39.8 +2.2
KSH                                PcS    PcS    00 21 36.8 +6.0
KSH                                pmax   pmax
      comp=Z,11nm,1.0s
KSH                                LR     LR
      comp=N,170nm,14.1s
KSH                                LR     LR
      comp=E,220nm,12.7s
KSH                                LR     LR
      comp=Z,210nm,15.1s
KDJ   Kajisay           51.23 315  P      P      00 16 17.4 -0.9
KDJ                                IAmb   IAmb   00 16 24.8
      comp=Z,8.0nm,1.1s
BOOM  Boomskoye usch    52.22 315  P      P      00 16 25.4 -0.3
ZAA0  Zalesovo Array    52.57 331  P      P      00 16 28.7 +0.8
ZAA0                               IAmb   IAmb   00 16 33.2
      comp=Z,8.5nm,1.0s
ZALV  Zalesovo Beam     52.57 331  P      P      00 16 28.6 +0.7
      comp=Z,5.7nm,0.7s,baz=115,slow=6.7,SNR=23
ZALV                               LR     LR     00 39 25.4
      comp=Z,127nm,18.6s,baz=118,slow=37
      comp=Z,5.7nm,0.7s
DZM   Mont Dzumac       52.86 130  LR     LR     00 37 50.5
      comp=Z,42nm,20.1s,baz=126,slow=35
DZM   Mont Dzumac       52.86 130  P      P      00 16 29.8 -0.8
DZM                                IAmb   IAmb   00 16 32.5
      comp=Z,8.4nm,0.7s
AAK   Ala-Archa         53.27 315  LR     LR     00 41 05.0
      comp=Z,147nm,19.7s,baz=102,slow=38
AAK   Ala-Archa         53.27 315  P      P      00 16 34.0 +0.5
PINNC Pines Island,     53.93 130  P      P      00 16 37.1 -1.2
KURK  Kurchatov         53.99 325  P      P      00 16 38.6 +0.2
BTK   Batken            55.16 311  P      P      00 16 46.6 -0.6
BTK                                IAmb   IAmb   00 16 53.2
      comp=Z,14nm,1.1s
GAR   Garm              55.27 309  P      P      00 16 47.8 -0.2
KBL   Kabul             55.37 304  P      P      00 16 48.4 -0.5
KBL                                IAmb   IAmb   00 16 54.5
      comp=Z,10.0nm,1.1s
CHGR  Chuyangaron       56.08 309  P      P      00 16 53.5 -0.3
KK31  Karatay Array     56.20 314  P      P      00 16 54.7 +0.1
KK31                               IAmb   IAmb   00 17 00.3
      comp=Z,9.2nm,1.1s
KKAR  Karatay Array     56.20 314  P      P      00 16 54.9 +0.4
KKAR  Karatay Array     56.20 314  P      P      00 16 55.1 +0.6
KKAR                               IAmb   IAmb   00 17 00.3
      comp=Z,9.2nm,1.1s
SHEM  Shemya Is, Ala    56.42  33  LR     LR     00 36 22.9
      comp=Z,32nm,20.7s,baz=14,slow=31
BRVK  Borovoye          59.66 325  P      P      00 17 19.3 +0.7
TIXI  Tiksi             59.71   1  P      P      00 17 19.1 +0.6
HRA   Herat             60.92 303  P      P      00 17 27.6 -0.2
NRIK  Noril'sk          62.09 346  P      P      00 17 35.6 +0.8
      comp=Z,13nm,0.9s,baz=136,slow=6.2,SNR=22
NRIK                               LR     LR     00 47 30.7
      comp=Z,180nm,18.2s,baz=156,slow=39
      comp=Z,13nm,0.9s
NRIK  Noril'sk          62.09 346  P      P      00 17 35.6 +0.8
BILL  Bilibino          62.14  16  P      P      00 17 34.8 -0.3
BILL                               IAmb   IAmb   00 17 41.8
      comp=Z,9.2nm,1.3s
GEYT  Alibeck           64.56 306  P      P      00 17 53.4 +1.7
      comp=Z,1.4nm,0.5s,baz=28,slow=9.8,SNR=2.4
      comp=Z,1.4nm,0.5s
GYA0B ALIBECK ARRAY     64.56 306  P      P      00 17 51.7  0.0
GYA0B                              IAmb   IAmb   00 17 57.9
      comp=Z,15nm,1.4s
ABKAR Akbulak array     64.81 319  P      P      00 17 52.5 -0.5
ABKAR                              IAmb   IAmb   00 17 58.5
      comp=Z,8.2nm,0.9s
ABKAR Akbulak array     64.81 319  P      P      00 17 52.4 -0.7
NIKH  Nikolski High     66.22  37  P      P      00 18 01.9 -0.2
      baz=258
AKTO  Aktyubinsk        66.25 320  LR     LR     00 48 35.0
      comp=Z,182nm,18.7s,baz=95,slow=37
ARU   Arti              67.15 326  P      P      00 18 07.4 -0.6
ARU                                IAmb   IAmb   00 18 16.2
      comp=Z,6.9nm,0.6s
GAMB  Gambell           67.68  25  P      P      00 18 11.4 +0.2
GAMB                               IAmb   IAmb   00 18 18.5
      comp=Z,7.6nm,1.0s
GAMB  Gambell           67.68  25  P      P      00 18 11.7 +0.5
      baz=251
RPZ   Rata Peaks        69.46 146  P      P      00 18 20.9 -1.6
LTZ   Lake Taylor       69.53 145  P      P      00 18 23.0  0.0
BSWZ  Blackbirch Sta    69.78 143  P      P      00 18 23.8 -0.8
BKZ   Black Stump Fm    69.86 140  P      P      00 18 24.6 -0.6
ANM   Nome              70.56  25  P      P      00 18 28.8 -0.3
      baz=257
BFZ   Birch Farm        70.58 141  P      P      00 18 29.4 -0.1
SDPT  Sand Point        71.45  35  P      P      00 18 34.2 -0.4
      baz=264
CHNA  Chernabura Isl    71.91  36  P      P      00 18 37.0 -0.4
      baz=265
N18K  Kilae Creek       74.33  30  P      P      00 18 51.2 -0.3
      baz=266
TTA   Tatalina          74.42  28  P      P      00 18 52.0 -0.2
TTA   Tatalina          74.42  28  P      P      00 18 51.2 -1.0
      baz=266,SNR=5.5
O18K  Koktuh Hills      74.62  31  P      P      00 18 53.9 +0.6
O18K  Koktuh Hills      74.62  31  P      P      00 18 52.9 -0.4
      baz=267
L19K  White Mountain    74.91  29  P      P      00 18 55.3 +0.4
L19K                               IAmb   IAmb   00 19 02.4
      comp=Z,8.6nm,0.9s
L19K  White Mountain    74.91  29  P      P      00 18 53.7 -1.2
      baz=267,SNR=8.7
GNI   Garni             75.00 309  LR     LR     00 55 54.0
      comp=Z,56nm,18.3s,baz=60,slow=39
GNI   Garni             75.00 309  P      P      00 18 55.6 -0.4
N19K  Bonanza Creek     75.02  30  P      P      00 18 54.8 -0.9
N19K                               IAmb   IAmb   00 19 03.2
      comp=Z,12nm,1.0s
N19K  Bonanza Creek     75.02  30  P      P      00 18 54.3 -1.4
      baz=268,SNR=7.3
M19K  Big River Lodg    75.11  29  P      P      00 18 55.7 -0.4
      baz=267
K20K  Telida            75.33  27  P      P      00 18 57.4 +0.1
K20K  Telida            75.33  27  P      P      00 18 56.7 -0.6
      baz=267
J20K  Nowinta River     75.34  27  P      P      00 18 57.5 +0.2
J20K                               IAmb   IAmb   00 19 04.9
      comp=Z,6.2nm,0.8s
J20K  Nowinta River     75.34  27  P      P      00 18 58.1 +0.8
      baz=267,SNR=6.4
IMAR  Indian Mountai    75.60  25  P      P      00 18 59.3 +0.5
P19K  Oil Pt            75.61  31  P      P      00 18 58.7 -0.4
      baz=269
RAYN  Ar Rayn           75.81 291  P      P      00 18 60.0 -0.9
ONI   Oni               75.83 311  P      P      00 19 00.1 -0.5
ONI                                IAmb   IAmb   00 19 18.2
      comp=Z,13nm,1.4s
O20K  Slope Mountain    75.93  31  P      P      00 19 00.3 -0.5
      baz=269
KDAK  Kodiak Island     75.94  33  LR     LR     00 48 21.9
      comp=Z,46nm,21.2s,baz=262,slow=32
KDAK  Kodiak Island     75.94  33  P      P      00 19 00.2 -0.7
      baz=270
H21K  Melozitna Rive    75.97  25  P      P      00 19 02.0 +1.0
H21K                               IAmb   IAmb   00 19 08.6
      comp=Z,7.5nm,0.8s
H21K  Melozitna Rive    75.97  25  P      P      00 19 02.3 +1.4
      baz=268,SNR=9.1
CHUM  Lake Minchumin    76.13  27  P      P      00 19 02.4 +0.6
      baz=269
KBZ   Khabaz            76.17 312  P      P      00 19 02.5  0.0
      comp=Z,4.3nm,1.1s,baz=105,slow=12,SNR=4.4
KBZ                                LR     LR     00 57 34.8
      comp=Z,80nm,18.7s,baz=64,slow=40
      comp=Z,4.3nm,1.1s
PPLA  Purkeypile        76.17  28  P      P      00 19 01.8 -0.5
      baz=269
CAST  Castle Rocks      76.23  27  P      P      00 19 02.6 +0.1
CAST                               IAmb   IAmb   00 19 09.5
      comp=Z,7.9nm,0.8s
CAST  Castle Rocks      76.23  27  P      P      00 19 03.0 +0.5
      baz=269,SNR=7.2
KARS  Kars              76.23 309  P      P      00 19 03.4 +0.3
I21K  Tanana            76.30  26  P      P      00 19 03.4 +0.7
I21K                               IAmb   IAmb   00 19 10.5
      comp=Z,12nm,0.8s
I21K  Tanana            76.30  26  P      P      00 19 03.5 +0.7
      baz=269,SNR=11
KIV   Kislovodsk        76.31 313  P      P      00 19 03.0 -0.4
KIV                                IAmb   IAmb   00 19 10.4
      comp=Z,6.6nm,0.9s
CNPM  China Poot        76.63  31  P      P      00 19 03.5 -1.2
CNPM                               IAmb   IAmb   00 19 10.8
      comp=Z,11nm,1.0s
BPAW  Bear Paw Mtn.     76.72  27  P      P      00 19 05.6 +0.4
BPAW  Bear Paw Mtn.     76.72  27  P      P      00 19 06.3 +1.1
      baz=270
BRLK  Bradley Lake      76.80  31  P      P      00 19 04.9 -0.9
BRLK                               IAmb   IAmb   00 19 13.8
      comp=Z,7.2nm,0.9s
BRSE  Bradley Lake S    76.88  31  P      P      00 19 05.2 -1.0
      baz=271
TRF   Thorofare Moun    77.03  27  P      P      00 19 07.1 -0.1
TRF                                IAmb   IAmb   00 19 13.6
      comp=Z,5.5nm,0.9s
TRF   Thorofare Moun    77.03  27  P      P      00 19 06.9 -0.3
      baz=271
COLD  Coldfoot          77.05  23  P      P      00 19 07.8 +0.8
COLD                               IAmb   IAmb   00 19 14.7
      comp=Z,6.7nm,0.9s
COLD  Coldfoot          77.05  23  P      P      00 19 07.6 +0.6
      baz=270,SNR=8.6
CUT   Chulitna          77.06  28  P      P      00 19 07.0 -0.1
CUT                                IAmb   IAmb   00 19 15.5
      comp=Z,16nm,1.2s
M22K  Willow            77.14  29  P      P      00 19 07.8 +0.3
GURO  Guroymak-BITLI    77.20 307  P      P      00 19 08.1 -0.5
TOLK  Toolik Lake Re    77.29  22  P      P      00 19 07.4 -0.9
TOLK                               IAmb   IAmb   00 19 15.9
      comp=Z,8.4nm,1.1s
TOLK  Toolik Lake Re    77.29  22         P      00 19 08.2 -0.2
TOLK  Toolik Lake Re    77.29  22  P      P      00 19 07.2 -1.1
      baz=270,SNR=6.0
H23K  Yukon River       77.32  25  P      P      00 19 09.0 +0.4
H23K                               IAmb   IAmb   00 19 16.4
      comp=Z,7.8nm,0.9s
H23K  Yukon River       77.32  25  P      P      00 19 08.8 +0.2
      baz=271,SNR=7.0
I23K  Minto, Yukon-K    77.41  26  P      P      00 19 08.4 -0.6
I23K                               IAmb   IAmb   00 19 16.3
      comp=Z,6.7nm,0.8s
I23K  Minto, Yukon-K    77.41  26  P      P      00 19 08.9 -0.1
      baz=271,SNR=5.7
KLMR  Klimovskoe        77.47 330 eP      P      00 19 08.3 -1.1
KLMR                               AMP           00 19 26.7
      comp=Z,27nm,1.4s
SEW   Seward            77.52  31  P      P      00 19 09.0 -0.6
      baz=272
NEA2  Nenana            77.55  26  P      P      00 19 09.6 -0.2
NEA2                               IAmb   IAmb   00 19 17.2
      comp=Z,9.1nm,0.8s
NEA2  Nenana            77.55  26  P      P      00 19 10.1 +0.3
      baz=272,SNR=8.2
PMR   Palmer            77.62  29  P      P      00 19 10.0 -0.2
PMR                                IAmb   IAmb   00 19 16.3
      comp=Z,12nm,1.2s
PMR   Palmer            77.62  29  P      P      00 19 10.7 +0.5
      baz=272
MCK   McKinley          77.63  27  P      P      00 19 10.2 -0.1
MCK   McKinley          77.63  27  P      P      00 19 10.7 +0.4
      baz=272,SNR=6.4
RND   Reindeer          77.68  27  P      P      00 19 09.7 -1.0
RND                                IAmb   IAmb   00 19 16.7
      comp=Z,6.0nm,1.0s
GHO   Glory Hole Cre    77.71  29  P      P      00 19 09.9 -1.0
GHO                                IAmb   IAmb   00 19 17.2
      comp=Z,6.8nm,0.9s
MDM   Murphy Dome       77.90  26  P      P      00 19 11.0 -0.8
KNK   Knik Glacier      77.95  29  P      P      00 19 12.5 +0.4
KNK                                IAmb   IAmb   00 19 18.7
      comp=Z,11nm,0.9s
KNK   Knik Glacier      77.95  29  P      P      00 19 12.3 +0.2
      baz=273
WRH   Wood River Hil    77.98  26  P      P      00 19 12.0 -0.2
SML   Sawmill           77.99  29  P      P      00 19 11.7 -0.7
SML                                IAmb   IAmb   00 19 18.8
      comp=Z,9.3nm,0.9s
SML   Sawmill           77.99  29  P      P      00 19 12.5 +0.1
      baz=273
H24K  Noodor Dome       78.01  25  P      P      00 19 12.9 +0.4
H24K  Noodor Dome       78.01  25  P      P      00 19 12.8 +0.4
      baz=272,SNR=5.4
WAT6  Susitna Watana    78.22  28  P      P      00 19 14.6 +0.8
      baz=273
POKR  Poker Plat Res    78.23  26  P      P      00 19 13.3 -0.3
      baz=273
M23K  Glacier View      78.28  29  P      P      00 19 13.4 -0.6
      baz=273
DHY   Denali Highway    78.36  28  P      P      00 19 14.3 -0.3
DHY   Denali Highway    78.36  28  P      P      00 19 14.0 -0.6
      baz=273
SCM   Sheep Creek Mo    78.46  29  P      P      00 19 14.9 -0.1
SCM                                IAmb   IAmb   00 19 22.3
      comp=Z,14nm,1.0s
SCM   Sheep Creek Mo    78.46  29  P      P      00 19 14.7 -0.3
      baz=274
HDA   Harding Lake      78.47  26  P      P      00 19 15.1 +0.2
HDA   Harding Lake      78.47  26  P      P      00 19 15.5 +0.5
      baz=273
IL31                    78.48  26  P      P      00 19 14.6 -0.3
ILAR  Eielson Array     78.48  26  P      P      00 19 13.8 -1.1
      comp=Z,0.4nm,0.8s,baz=236,slow=5.7,SNR=4.2
      comp=Z,0.4nm,0.8s
ILAR  Eielson Array     78.48  26  P      P      00 19 15.0  0.0
GLI   Glacier Island    78.64  30  P      P      00 19 15.4 -0.5
GLI                                IAmb   IAmb   00 19 22.4
      comp=Z,9.3nm,0.8s
GLI   Glacier Island    78.64  30  P      P      00 19 15.7 -0.2
      baz=274
CASY  Casey             78.74 186  P      P      00 19 14.2 -2.0
CASY                               IAmb   IAmb   00 19 15.8
      comp=Z,8.5nm,0.8s
M24K  Tolsona, Glenn    78.98  29  P      P      00 19 17.3 -0.6
M24K                               IAmb   IAmb   00 19 25.2
      comp=Z,7.8nm,0.7s
M24K  Tolsona, Glenn    78.98  29  P      P      00 19 17.4 -0.5
      baz=275
K24K  Donnelly Dome     79.03  27  P      P      00 19 18.3 +0.2
      baz=275,SNR=5.8
J25K  Salcha River,     79.14  26  P      P      00 19 18.3 -0.4
      baz=275
KLU   Klutina           79.16  29  P      P      00 19 19.0 +0.2
BMAR  Burnt Mountain    79.22  23  P      P      00 19 19.9 +0.9
PAX   Paxson            79.24  28  P      P      00 19 19.1 -0.2
PAX   Paxson            79.24  28  P      P      00 19 18.7 -0.6
      baz=275
DIV   Divide            79.26  30  P      P      00 19 19.7 +0.3
DIV                                IAmb   IAmb   00 19 26.4
      comp=Z,9.9nm,0.9s
HARP  HAARP             79.43  28  P      P      00 19 20.1 -0.1
      baz=275
RIDG  Independent Ri    79.45  27  P      P      00 19 20.3 -0.1
RIDG                               IAmb   IAmb   00 19 26.7
      comp=Z,10nm,0.9s
RIDG  Independent Ri    79.45  27  P      P      00 19 20.8 +0.4
      baz=276
N25K  Chitina, Valde    79.78  29  P      P      00 19 22.1 -0.1
N25K  Chitina, Valde    79.78  29  P      P      00 19 22.5 +0.3
      baz=276
SCRK  Sand Creek        79.80  27  P      P      00 19 21.4 -1.0
SCRK  Sand Creek        79.80  27  P      P      00 19 21.9 -0.5
      baz=276
BMRM  Bremner River     79.84  30  P      P      00 19 22.3 -0.3
BMRM                               IAmb   IAmb   00 19 29.5
      comp=Z,6.6nm,1.0s
BMRM  Bremner River     79.84  30  P      P      00 19 21.5 -1.1
      baz=276
J26L  Joseph Creek      79.93  26  P      P      00 19 22.9 -0.1
      baz=276
GLB   Gilahina Butte    80.17  29  P      P      00 19 23.1 -1.2
L26K  Log Cabin Wild    80.19  28  P      P      00 19 24.0 -0.4
      baz=277
M26K  Nabesna, AK       80.43  28  P      P      00 19 26.0 +0.3
M26K  Nabesna, AK       80.43  28  P      P      00 19 26.1 +0.3
      baz=277
K27K  Chicken           80.63  26  P      P      00 19 27.3 +0.6
K27K                               IAmb   IAmb   00 19 34.5
      comp=Z,9.7nm,1.1s
K27K  Chicken           80.63  26  P      P      00 19 26.7  0.0
      baz=278
L27K  Beaver Creek,     80.88  27  P      P      00 19 28.0 -0.1
      baz=278
BCAR  Beaver Creek A    80.90  27  P      P      00 19 28.6 +0.4
EGAK  Eagle             80.92  26  P      P      00 19 28.2  0.0
      baz=279
M27K  Edge Creek, AK    80.96  28  P      P      00 19 29.0 +0.4
M27K  Edge Creek, AK    80.96  28  P      P      00 19 28.8 +0.2
      baz=278
BARN  Barnard Glacie    81.25  29  P      P      00 19 30.0 -0.3
BARN                               IAmb   IAmb   00 19 37.8
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	comp=Z,5.9nm,0.8s						
CTGM	**Chitina Glacie**	**81.42**	**29**	P	**P**	**00 19 30.8**	**-0.3**
CTGM				IAmb	IAmb	00 19 38.8	
	comp=Z,8.1nm,1.0s						
TABL	**Table Mountain**	**81.60**	**30**	P	**P**	**00 19 30.5**	**-1.7**
TABL				IAmb	IAmb	00 19 39.0	
	comp=Z,11nm,1.2s						
YUK3	**Moose Creek**	**81.71**	**29**	P	**P**	**00 19 32.5**	**-0.2**
	baz=280						
DAWY	**Dawson**	**81.79**	**26**	P	**P**	**00 19 33.1**	**+0.2**
DAWY	**Dawson**	**81.79**	**26**	P	**P**	**00 19 32.9**	**0.0**
	baz=280						
I29M	**Ogilvie Camp,**	**82.01**	**25**	P	**P**	**00 19 34.9**	**+0.9**
	baz=281						
PCA	**Pinnacle**	**82.09**	**30**	P	**P**	**00 19 33.9**	**-0.7**
PCA				IAmb	IAmb	00 19 44.2	
	comp=Z,6.7nm,0.9s						
PINM	**Pinnacle**	**82.09**	**30**	P	**P**	**00 19 35.2**	**+0.6**
	baz=280						
SPITS	**Spitsbergen Ar**	**82.14**	**349**	LR	LR	00 59 16.8	
	comp=Z,67nm,21.4s,baz=220,slow=38						
ARCES	**ARCESS Array B**	**82.20**	**340**	P	**P**	**00 19 34.7**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=74,slow=7.6,SNR=1.6						
	comp=Z,2.7nm,0.8s						
EPYK	**Eagle Plains**	**82.44**	**24**	P	**P**	**00 19 36.1**	**-0.2**
	baz=282						
PNL	**Peninsula**	**82.60**	**31**	P	**P**	**00 19 36.9**	**-0.3**
	baz=281						
YUK4	**Talbot Arm**	**82.64**	**29**	P	**P**	**00 19 36.7**	**-0.9**
	baz=281						
YUK6	**Outpost Mounta**	**82.85**	**29**	P	**P**	**00 19 38.8**	**0.0**
	baz=282						
INK	**Inuvik**	**83.19**	**22**	P	**P**	**00 19 40.8**	**+0.8**
INK	**Inuvik**	**83.19**	**22**	P	**P**	**00 19 40.5**	**+0.5**
	baz=285						
M30M	**Minto, Yukon**	**83.24**	**27**	P	**P**	**00 19 41.0**	**+0.6**
M30M	**Minto, Yukon**	**83.24**	**27**	P	**P**	**00 19 40.5**	**0.0**
	baz=283						
HYT	**Haines Junctio**	**83.29**	**29**	P	**P**	**00 19 40.0**	**-0.9**
HYT				IAmb	IAmb	00 19 48.6	
	comp=Z,11nm,1.4s						
HYT	**Haines Junctio**	**83.29**	**29**	P	**P**	**00 19 39.6**	**-1.2**
	baz=282						
N30M	**Aishikik Lake**	**83.35**	**29**	P	**P**	**00 19 40.5**	**-0.6**
	baz=283						
BRTR	**Keskin Array B**	**83.52**	**309**	P	**P**	**00 19 41.6**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=69,slow=4.7,SNR=2.9						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**83.83**	**331**	P	**P**	**00 19 43.5**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=73,slow=4.8,SNR=2.5						
	comp=Z,3.2nm,1.0s						
M31M	**Drury Creek, Y**	**84.42**	**28**	P	**P**	**00 19 47.0**	**+0.5**
M31M	**Drury Creek, Y**	**84.42**	**28**	P	**P**	**00 19 46.5**	**0.0**
	baz=285						
AKASG	**Malin Array Be**	**84.49**	**321**	P	**P**	**00 19 46.1**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=61,slow=5.2,SNR=8.0						
	comp=Z,1.6nm,0.8s						
AKBB	**Malin Array Si**	**84.49**	**321**	P	**P**	**00 19 46.2**	**-0.8**
AKBB				IAmb	IAmb	00 19 51.6	
	comp=Z,11nm,1.4s						
CSS	**Mathiatis**	**84.62**	**304**	P	**P**	**00 19 46.9**	**-1.2**
SKAG	**Skagway**	**84.66**	**30**	P	**P**	**00 19 46.4**	**-1.3**
SKAG				IAmb	IAmb	00 19 59.2	
	comp=Z,4.0nm,0.8s						
SKAG	**Skagway**	**84.66**	**30**	P	**P**	**00 19 48.0**	**+0.3**
	baz=284						
A36M	**Sachs Harbour**	**84.68**	**17**	P	**P**	**00 19 47.5**	**0.0**
SIT	**Sitka**	**85.27**	**33**	P	**P**	**00 19 51.0**	**+0.3**
	baz=284						
C36M	**Paulatuk**	**86.08**	**19**	P	**P**	**00 19 54.4**	**-0.1**
	baz=294						
S34M	**Telegraph Cree**	**87.20**	**31**	P	**P**	**00 19 59.9**	**-0.4**
	baz=288						
MLR	**Muntele Rosu**	**87.84**	**316**	LR	LR	01 03 16.6	
	comp=Z,168nm,19.0s,baz=88,slow=38						
HFS	**Hagfors**	**90.00**	**332**	LR	LR	01 02 27.7	
	comp=Z,123nm,18.3s,baz=50,slow=37						
NOA	**NORSAR Array B**	**90.71**	**334**	LR	LR	01 04 37.9	
	comp=Z,145nm,18.0s,baz=60,slow=38						
VNDA	**Vanda**	**91.74**	**173**	P	**P**	**00 20 19.7**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=325,slow=6.7,SNR=7.9						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**91.74**	**173**	P	**P**	**00 20 20.0**	**-1.1**
VNDA				IAmb	IAmb	00 20 21.4	
	comp=Z,5.3nm,1.4s						
VRAC	**Vranov**	**92.68**	**322**	LR	LR	01 07 14.9	
	comp=Z,51nm,18.3s,baz=40,slow=39						
YKA	**Yellowknife Ar**	**92.73**	**24**	P	**P**	**00 20 26.7**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=302,slow=4.4,SNR=6.3						
	comp=Z,0.6nm,0.9s						
YKA	**Yellowknife Ar**	**92.73**	**24**	P	**P**	**00 20 25.1**	**-0.9**
DAVOX	**Davos/Dischmat**	**97.83**	**321**	LR	LR	01 08 54.4	
	comp=Z,67nm,19.8s,baz=54,slow=38						
BORG	**Borgarnes**	**99.41**	**346**	LR	LR	01 10 59.1	
	comp=Z,60nm,18.2s,baz=49,slow=38						
TXAR	**Lajitas Array**	**117.64**	**48**	PKP	**PKiKP**	**00 26 01.3**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=341,slow=1.9,SNR=2.7						
PLCA	**Paso Flores**	**148.22**	**157**	PKPbc	**PKPdf**	**00 26 57.8**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=261,slow=1.5,SNR=7.8						
PLCA	**Paso Flores**	**148.22**	**157**		**PKPbc**	**00 26 59.2**	**-1.2**
CPUP	**Villa Florida**	**165.52**	**172**	PKPab	**PKPab**	**00 28 15.8**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=289,slow=4.8,SNR=3.9						
LPAZ	**La Paz**	**166.55**	**110**	PKP	**PKPdf**	**00 27 20.6**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=71,slow=3.2,SNR=6.1						
LPAZ				PKPab	**PKPab**	**00 28 23.8**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=322,slow=2.0,SNR=7.4						

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*TUL **13** 00:25:46±2.1, 36°.82N±0°.02×98°.04W±0°.05, h5^{km}±7^{km}, ML2.5, mb_Lg2.1/11(NEIC), Error ellipse: s-maj=6.1km s-min=2.5km az=105.0*

NEIC 13 00:25:46.8±1.0**, 36°.79N**±0°.02×**97°.96W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.8km s-min=3.3km az=286.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.17**	**83**	Pg	Pg	00 26 08.8	-0.5
TUL1	**Leonard**	**1.96**	**116**	IAmb_Lg		00 26 52.9	
	comp=Z,13nm,0.9s						
WMOK	**Wichita Mounta**	**2.15**	**198**		Pn	00 26 23.5	+0.1
WMOK				IAmb_Lg		00 26 55.7	
	comp=Z,8.0nm,0.9s						
KSU1	**Kansas State U**	**2.55**	**24**		Pb	00 26 34.1	+1.1
KSU1				IAmb_Lg		00 27 06.8	
	comp=Z,7.3nm,1.0s						
X37A	**Clayton**	**3.04**	**135**	IAmb_Lg		00 27 30.7	
	comp=Z,5.5nm,0.8s						
X40A	**Basin Creek Fa**	**4.76**	**117**	IAmb_Lg		00 28 20.9	
	comp=Z,3.8nm,0.7s						
T25A	**Trinidad**	**5.17**	**276**	IAmb_Lg		00 28 38.0	
	comp=Z,3.0nm,0.8s						
PBMO	**Poplar Bluff**	**6.05**	**88**	IAmb_Lg		00 29 13.0	
	comp=Z,2.3nm,0.8s						

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*UCR **13** 00:35:51.0±0.9, 13°.03N×89°.17W, h52^{km}±8^{km}, ML3.8*

*SNET **13** 00:35:51.0±0.9, 13°.03N×89°.17W, h52^{km}±8^{km}, ML3.8*

*INET **13** 00:35:52.2±0.6, 13°.10N×89°.14W, h50^{km}±10^{km}, MW3.4*

ISC 13 00:35:51.5±1.9**, 13°.0N**±0°.1×**89°.17W**±0°.05**, h49**^{km}±16^{km}**, n55, σ0^{s}.63**/79**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.49**	**343**	*e*P	**Pn**	**00 36 02.5**	**-0.1**
LALI				*e*S	**Sn**	**00 36 10.3**	**-0.3**
LALI	**Alcalda de L**	**0.49**	**343**	*e*P	**Pn**	**00 36 02.5**	**-0.1**
LALI				*e*S	**Sn**	**00 36 10.3**	**-0.3**
LALI	**Alcalda de L**	**0.49**	**343**	*e*P	**Pn**	**00 36 02.6**	**-0.1**
LFRS	**El Faro**	**0.61**	**10**	*e*P	**Pn**	**00 36 03.9**	**-0.4**
LFRS	**El Faro**	**0.61**	**10**	*e*P	**Pn**	**00 36 03.9**	**-0.4**
SJTE	**Alcalda de S**	**0.62**	**15**	*e*P	**Pn**	**00 36 03.9**	**-0.4**
SJTE				*e*S	**Sn**	**00 36 13.7**	**+0.2**
SJTE	**Alcalda de S**	**0.62**	**15**	*e*P	**Pn**	**00 36 03.9**	**-0.4**
SJTE				*e*S	**Sn**	**00 36 13.7**	**+0.2**
COEG	**Centro de Oper**	**0.66**	**25**	*e*P	**Pn**	**00 36 04.5**	**-0.4**
COEG				*e*S	**Sn**	**00 36 14.8**	**+0.3**
COEG				IAML		00 36 16.4	
	comp=Z,3µm,0.4s						
COEG	**Centro de Oper**	**0.66**	**25**	*e*P	**Pn**	**00 36 04.5**	**-0.4**
COEG				*e*S	**Sn**	**00 36 14.8**	**+0.3**
COEG				IAML		00 36 16.4	
	comp=Z,3µm,0.4s						
SNET	**Serv Nac Est T**	**0.67**	**355**	*e*P	**Pn**	**00 36 04.5**	**-0.4**
SNET				*e*S	**Sn**	**00 36 14.9**	**+0.3**
SNET	**Serv Nac Est T**	**0.67**	**355**	*e*P	**Pn**	**00 36 04.5**	**-0.4**
SNET				*e*S	**Sn**	**00 36 14.9**	**+0.3**
SNET	**Serv Nac Est T**	**0.67**	**355**	*e*P	**Pn**	**00 36 04.6**	**-0.4**
SNVI	**San Vicente**	**0.68**	**29**	*e*P	**Pn**	**00 36 04.4**	**-0.8**
SNVI	**San Vicente**	**0.68**	**29**	*e*P	**Pn**	**00 36 04.4**	**-0.8**
JAYA	**Jayaque - finc**	**0.69**	**337**	*e*P	**Pn**	**00 36 04.6**	**-0.8**
JAYA				*e*S	**Sn**	**00 36 14.8**	**-0.5**
JAYA				IAML		00 36 16.4	
	comp=Z,7µm,0.2s						
JAYA	**Jayaque - finc**	**0.69**	**337**	*e*P	**Pn**	**00 36 04.6**	**-0.8**
JAYA				*e*S	**Sn**	**00 36 14.8**	**-0.5**
JAYA				IAML		00 36 16.4	
	comp=Z,7µm,0.2s						
UEES	**Universidad Ev**	**0.70**	**355**	*e*P	**Pn**	**00 36 05.1**	**-0.3**
UEES	**Universidad Ev**	**0.70**	**355**	*e*P	**Pn**	**00 36 05.1**	**-0.3**
BOQS	**Boqueron**	**0.72**	**352**	*e*P	**Pn**	**00 36 05.6**	**-0.2**
BOQS				*e*S	**Sn**	**00 36 17.1**	**+1.0**
BOQS	**Boqueron**	**0.72**	**352**	*e*P	**Pn**	**00 36 05.6**	**-0.2**
BOQS				*e*S	**Sn**	**00 36 17.1**	**+1.0**
COEB	**Comit de Eme**	**0.79**	**52**	*e*P	**Pn**	**00 36 06.4**	**-0.1**
COEB				*e*S	**Sn**	**00 36 18.4**	**+1.0**
COEB				IAML		00 36 20.4	
	comp=Z,2µm,0.3s						
COEB	**Comit de Eme**	**0.79**	**52**	*e*P	**Pn**	**00 36 06.4**	**-0.1**
COEB				*e*S	**Sn**	**00 36 18.4**	**+1.0**
COEB				IAML		00 36 20.4	
	comp=Z,2µm,0.3s						
COEB	**Comit de Eme**	**0.79**	**52**	*e*P	**Pn**	**00 36 06.5**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.81**	**32**	*e*P	**Pn**	**00 36 06.8**	**0.0**
SCLA				*e*S	**Sn**	**00 36 18.8**	**+1.0**
SCLA	**Alcaldia de Sa**	**0.81**	**32**	*e*P	**Pn**	**00 36 06.8**	**0.0**
SCLA				*e*S	**Sn**	**00 36 18.8**	**+1.0**
CEDA	**San Andres**	**0.81**	**345**	*e*S	**Sn**	**00 36 18.3**	**+0.4**
CEDA	**San Andres**	**0.81**	**345**	*e*S	**Sn**	**00 36 18.3**	**+0.4**
CEVE	**Cerro Verde**	**0.92**	**331**	*i* P	**Pn**	**00 36 08.1**	**-0.4**
CEVE				*e*S	**Sn**	**00 36 23.0**	**+2.2**
CEVE				IAML		00 36 23.7	
	comp=Z,2µm,0.3s						
CEVE	**Cerro Verde**	**0.92**	**331**	*i* P	**Pn**	**00 36 08.1**	**-0.4**
CEVE				*e*S	**Sn**	**00 36 23.0**	**+2.2**
CEVE				IAML		00 36 23.7	
	comp=Z,2µm,0.3s						
SBLS	**San Blas**	**0.93**	**332**	*e*P	**Pn**	**00 36 08.2**	**-0.3**
SBLS	**San Blas**	**0.93**	**332**	*e*P	**Pn**	**00 36 08.2**	**-0.3**
JUCU	**Jucuar¡n**	**0.93**	**75**	*e*P	**Pn**	**00 36 08.2**	**-0.2**
JUCU				*e*S	**Sn**	**00 36 21.1**	**+0.3**
JUCU	**Jucuar¡n**	**0.93**	**75**	*e*P	**Pn**	**00 36 08.2**	**-0.2**
JUCU				*e*S	**Sn**	**00 36 21.1**	**+0.3**
SNJE	**San Jose**	**0.95**	**334**	*e*P	**Pn**	**00 36 08.6**	**-0.1**
SNJE	**San Jose**	**0.95**	**334**	*e*P	**Pn**	**00 36 08.6**	**-0.1**
NUBE	**Las Nubes**	**1.06**	**326**	*e*P	**Pn**	**00 36 09.6**	**-0.7**
NUBE				*e*S	**Sn**	**00 36 23.7**	**-0.3**
NUBE	**Las Nubes**	**1.06**	**326**	*e*P	**Pn**	**00 36 09.6**	**-0.7**
NUBE				*e*S	**Sn**	**00 36 23.7**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.17**	**329**	*e*S	**Sn**	**00 36 27.5**	**+1.0**
CAHU	**Cacacuatique**	**1.20**	**51**	*e*P	**Pn**	**00 36 11.7**	**-0.4**
CAHU	**Cacacuatique**	**1.20**	**51**	*e*P	**Pn**	**00 36 11.7**	**-0.4**
FAGO	**Alcalda de S**	**1.24**	**57**	*i* P	**Pn**	**00 36 11.5**	**-1.0**
FAGO				*e*S	**Sn**	**00 36 27.6**	**-0.5**
FAGO	**Alcalda de S**	**1.24**	**57**	*i* P	**Pn**	**00 36 11.5**	**-1.0**
FAGO				*e*S	**Sn**	**00 36 27.6**	**-0.5**
FAGO	**Alcalda de S**	**1.24**	**57**	*e*P	**Pn**	**00 36 11.6**	**-1.0**
LCND	**La Caada**	**1.28**	**77**	*e*P	**Pn**	**00 36 13.1**	**0.0**
LCND	**La Caada**	**1.28**	**77**	*e*P	**Pn**	**00 36 13.1**	**0.0**
CNCH	**Conchagua**	**1.33**	**79**	*e*P	**Pn**	**00 36 13.6**	**-0.2**
CNCH	**Conchagua**	**1.33**	**79**	*e*P	**Pn**	**00 36 13.6**	**-0.2**
MTO3	**Montecristo**	**1.39**	**352**	*i* P	**Pn**	**00 36 14.3**	**-0.4**
MTO3	**Montecristo**	**1.39**	**352**	*i* P	**Pn**	**00 36 14.3**	**-0.4**
MTO3	**Montecristo**	**1.39**	**352**	*e*P	**Pn**	**00 36 14.3**	**-0.4**
ESQI	**Esquipulas**	**1.54**	**354**	*i* P	**Pn**	**00 36 16.7**	**-0.1**
CSGN	**Cosiguina Volc**	**1.57**	**91**	*e*P	**Pn**	**00 36 17.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.12**	**61**	*e*P	**Pn**	**00 36 23.8**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.12**	**61**	*e*P	**Pn**	**00 36 23.8**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.12**	**61**	*e*P	**Pn**	**00 36 24.4**	**-0.2**

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*NEIC **13** 00:54:53.8±1.7, 22°.91S±0°.08×179°.2E±0°.1, h550^{km}±5^{km}, mb4.5/221, Error ellipse: s-maj=13.7km s-min=12.0km az=111.0*

*IDC **13** 00:54:54.9±0.5, 22°.97S×179°.13E, h567^{km}±5^{km}, mb3.9/25, mbtmp4.8/27, Error ellipse: s-maj=9.8km s-min=9.0km az=115.0*

*NOU **13** 00:54:54.7, 22°.85S×179°.31E, h583^{km}, mb5.0/64, South of Fiji Islands*

ISC 13 00:54:55.5±0.4**, 23°.02S**±0°.04×**179°.17E**±0°.05**, h577**^{km}±3^{km}**, h578**^{km}**:pP-P, n713, σ1^{s}.22**/730**, mb4.6**/179**, 58C-23D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.12**	**22**	P	**P**	**00 56 27.8**	**-0.2**
DGTI	**Dogotuki**	**6.70**	**5**	P	**P**	**00 56 41.6**	**-0.3**
	549nm,1.3s						
RIZ	**Raoul Island**	**6.73**	**158**	P	**P**	**00 56 43.7**	**+1.9**
RAO	**Raoul Island**	**6.74**	**158**	P	**P**	**00 56 43.3**	**+1.3**
	177nm,0.3s,baz=95,slow=21,SNR=4.5						
RAO				S	**S**	**00 58 08.2**	**-1.0**
	187nm,0.3s,baz=69,slow=23,SNR=2.8						
RAO	**Raoul Island**	**6.74**	**158**	P	P	00 56 34.6	-7.3
RAO				S	**S**	**00 58 07.6**	**-1.6**
RAO	**Raoul Island**	**6.74**	**158**	P	**P**	**00 56 43.7**	**+1.8**
	254nm,0.7s						
GLKZ	**Green Lake**	**6.75**	**158**	P	**P**	**00 56 42.9**	**+0.9**
GLKZ				S	**S**	**00 58 08.6**	**-0.7**
MARNC	**Mare, Loyalty**	**10.43**	**276**	P	**P**	**00 57 15.3**	**-2.9**
MARNC	**Mare, Loyalty**	**10.43**	**276**	P	**P**	**00 57 17.8**	**-0.4**
	2.1nm,0.6s						
PINNC	**Pines Island,**	**10.82**	**270**	P	**P**	**00 57 20.1**	**-2.0**
NIUE	**Niue**	**10.90**	**71**	P	**P**	**00 57 20.5**	**-2.5**
LIFNC	**LIFOU**	**11.30**	**279**	P	**P**	**00 57 24.5**	**-2.5**
LIFNC	**LIFOU**	**11.30**	**279**	P	**P**	**00 57 26.2**	**-0.8**
	273nm,0.8s						
RTV	**Rentapao**	**11.34**	**295**	P	**P**	**00 57 26.9**	**-0.5**
	248nm,1.1s						
YATNC	**Mamie plateau,**	**11.39**	**272**	P	**P**	**00 57 29.0**	**+1.0**
	24nm,0.7s						
OUENC	**Ouen Island, N**	**11.40**	**271**	P	**P**	**00 57 25.2**	**-2.8**
OUENC	**Ouen Island, N**	**11.40**	**271**	P	**P**	**00 57 28.6**	**+0.6**
	31nm,0.7s						
DVP	**Devils Point**	**11.57**	**295**	P	**P**	**00 57 29.0**	**-0.8**
	646nm,1.1s						
NFK	**Norfolk Island**	**11.75**	**237**	P	**P**	**00 57 33.7**	**+2.2**
	baz=12,SNR=5.9						
ONTNC	**Ouen Toro**	**11.77**	**271**	P	**P**	**00 57 30.2**	**-1.5**
DZM	**Mont Dzumac**	**11.80**	**272**	P	**P**	**00 57 31.0**	**-1.3**
	16nm,0.9s,baz=79,slow=16,SNR=9.9						
DZM				S	**S**	**00 59 39.6**	**-1.5**
	2.3nm,0.5s,baz=15,slow=23,SNR=1.1						
DZM	**Mont Dzumac**	**11.80**	**272**	P	**P**	**00 57 30.6**	**-1.6**
DZM	**Mont Dzumac**	**11.80**	**272**	P	**P**	**00 57 32.3**	**+0.1**
	18nm,1.0s						
AFI	**Afiamalu**	**12.47**	**45**	P	**P**	**00 57 35.0**	**-4.2**
	83nm,0.5s,baz=142,slow=2.8,SNR=21						
AFI				S	S	00 59 43.5	-10
	34nm,0.8s,baz=194,slow=21,SNR=2.0						
AFI	**Afiamalu**	**12.47**	**45**	P	**P**	**00 57 35.3**	**-3.8**
AFI	**Afiamalu**	**12.47**	**45**	P	**P**	**00 57 35.4**	**-3.8**
	119nm,0.5s						
OUZ	**Omahuta**	**13.10**	**201**	P	**P**	**00 57 45.3**	**+0.1**
OUZ	**Omahuta**	**13.10**	**201**	P	**P**	**00 57 47.2**	**+2.0**
OUZ	**Omahuta**	**13.10**	**201**	P	**P**	**00 57 47.6**	**+2.4**
	317nm,0.8s						
WCZ	**Waipu Caves**	**13.54**	**197**	P	**P**	**00 57 51.0**	**+1.2**
SANVU	**Saraoutou**	**13.58**	**302**	P	**P**	**00 57 47.5**	**-2.9**
SANVU	**Saraoutou**	**13.58**	**302**	P	**P**	**00 57 48.1**	**-2.3**
	94nm,0.5s						
GRZ	**Great Barrier**	**13.58**	**193**	P	**P**	**00 57 50.1**	**0.0**
KUZ	**Kuaotunu**	**14.01**	**192**	P	**P**	**00 57 55.3**	**+0.8**
WIAZ	**Waiheke Island**	**14.17**	**193**	P	**P**	**00 57 57.2**	**+1.2**
ETAZ	**East Tamaki Re**	**14.37**	**194**	P	**P**	**00 57 59.4**	**+1.4**
WTAZ	**Waiatarua**	**14.43**	**195**	P	**P**	**00 58 00.2**	**+1.6**
MXZ	**Matakaoa Point**	**14.52**	**183**	P	**P**	**00 57 58.4**	**-1.1**
MXZ	**Matakaoa Point**	**14.52**	**183**	P	**P**	**00 57 56.8**	**-2.6**
AWAZ	**Awhitu Peninsu**	**14.54**	**195**	P	**P**	**00 58 01.0**	**+1.3**
WMGZ	**Waiomatatini S**	**14.77**	**182**	P	**P**	**00 58 00.1**	**-1.8**
WMGZ				S	**S**	**01 00 31.6**	**-3.1**
PKGZ	**Pakihiroa**	**14.85**	**183**	P	**P**	**00 57 59.9**	**-2.9**
PKGZ				S	**S**	**01 00 31.9**	**-4.4**
RUGZ	**Raukumara Rang**	**14.96**	**185**	P	**P**	**00 58 02.1**	**-1.7**
RUGZ				S	**S**	**01 00 35.0**	**-3.2**
PUZ	**Puketiti**	**15.03**	**183**	P	**P**	**00 58 01.4**	**-3.0**
PUZ				S	**S**	**01 00 32.1**	**-7.1**
URZ	**Urewera**	**15.30**	**186**	P	**P**	**00 58 03.9**	**-3.0**
	150nm,0.6s,baz=14,slow=4.2,SNR=32						
URZ				S	**S**	**01 00 37.2**	**-6.5**
	38nm,0.7s,baz=212,slow=20,SNR=5.6						
URZ	**Urewera**	**15.30**	**186**	P	**P**	**00 58 04.3**	**-2.7**
URZ	**Urewera**	**15.30**	**186**	P	**P**	**00 58 03.9**	**-3.0**
URZ				S	**S**	**01 00 38.8**	**-4.9**
URZ	**Urewera**	**15.30**	**186**	P	**P**	**00 58 05.5**	**-1.5**
	812nm,0.7s						
HIZ	**Hauiti**	**15.88**	**192**	P	**P**	**00 58 13.6**	**+1.0**
HIZ	**Hauiti**	**15.88**	**192**	P	**P**	**00 58 13.7**	**+1.1**
	782nm,0.8s						
BKZ	**Black Stump Fm**	**16.26**	**187**	P	**P**	**00 58 13.4**	**-2.7**
BKZ	**Black Stump Fm**	**16.26**	**187**	P	**P**	**00 58 14.8**	**-1.3**
	302nm,0.7s						
BFZ	**Birch Farm**	**17.79**	**187**	P	**P**	**00 58 29.3**	**-0.6**
QRZ	**Quartz Range**	**18.62**	**196**	P	**P**	**00 58 39.2**	**+1.7**
QRZ	**Quartz Range**	**18.62**	**196**	P	**P**	**00 58 38.0**	**+0.5**
QRZ	**Quartz Range**	**18.62**	**196**	P	**P**	**00 58 38.7**	**+1.2**
	390nm,0.7s						
SNZO	**South Karori**	**18.62**	**191**	P	**P**	**00 58 37.7**	**+0.2**
SNZO	**South Karori**	**18.62**	**191**	P	**P**	**00 58 38.0**	**+0.5**
	273nm,1.0s						
MSWZ	**Moikau Station**	**18.64**	**189**	P	**P**	**00 58 38.0**	**+0.3**
BHW	**Baring Head**	**18.69**	**190**	P	**P**	**00 58 37.6**	**-0.5**
PLWZ	**Palliser**	**18.79**	**189**	P	**P**	**00 58 38.9**	**-0.2**
NNZ	**Nelson**	**18.79**	**194**	P	**P**	**00 58 38.7**	**-0.4**
BSWZ	**Blackbirch Sta**	**19.17**	**192**	P	**P**	**00 58 43.1**	**+0.6**
THZ	**Tophouse**	**19.42**	**194**	P	**P**	**00 58 44.3**	**-0.5**
LHI	**Lord Howe Isla**	**19.76**	**240**	P	**P**	**00 58 49.4**	**+1.4**
	baz=20						
KHZ	**Kahutara**	**19.91**	**192**	P	**P**	**00 58 48.7**	**-0.5**
KHZ	**Kahutara**	**19.91**	**192**	P	**P**	**00 58 48.5**	**-0.7**
	152nm,0.7s						
LTZ	**Lake Taylor**	**20.53**	**195**	P	**P**	**00 58 54.4**	**-0.5**
MQZ	**McQueen’s Vall**	**21.33**	**193**	P	**P**	**00 59 01.4**	**-0.5**
MQZ	**McQueen’s Vall**	**21.33**	**193**	P	**P**	**00 59 01.1**	**-0.8**
RPZ	**Rata Peaks**	**21.71**	**196**	P	**P**	**00 59 03.9**	**-1.5**
	14nm,0.4s,baz=29,slow=19,SNR=2.0						
	14nm,0.4s						
FOZ	**Fox Glacier**	**21.88**	**199**	P	**P**	**00 59 07.2**	**+0.4**
KNTN	**Kanton**	**21.97**	**25**	P	**P**	**00 59 06.0**	**-2.1**
KNTN				IAmb	IAmb	00 59 17.0	
	comp=Z,24nm,1.1s						
KNTN	**Kanton**	**21.97**	**25**	P	**P**	**00 59 06.0**	**-2.1**
LBZ	**Lake Benmore**	**22.56**	**197**	P	**P**	**00 59 12.2**	**-0.8**
ODZ	**Otahua Downs**	**23.05**	**196**	P	**P**	**00 59 16.6**	**-0.7**
ODZ				IAmb	IAmb	00 59 25.5	
	comp=Z,20nm,0.9s						
ODZ	**Otahua Downs**	**23.05**	**196**	P	**P**	**00 59 16.6**	**-0.7**
	comp=Z,39nm,1.5s						
WKZ	**Wanaka**	**23.29**	**198**	P	**P**	**00 59 19.3**	**-0.2**
MLZ	**Mavora Lakes**	**24.05**	**199**	P	**P**	**00 59 27.1**	**+0.9**
DCZ	**Deep Cove**	**24.45**	**201**	P	**P**	**00 59 31.5**	**+1.9**
WHZ	**Wether Hill Ro**	**24.58**	**199**	P	**P**	**00 59 31.4**	**+0.6**
ARMA	**Armidale**	**25.64**	**247**	P	**P**	**00 59 42.0**	**+1.4**
	baz=26,SNR=67						
ARMA	**Armidale**	**25.64**	**247**	P	**P**	**00 59 42.0**	**+1.4**
ARMA	**Armidale**	**25.64**	**247**	P	**P**	**00 59 41.9**	**+1.4**
	comp=Z,71nm,0.6s						
EIDS	**Eidsvold**	**25.71**	**259**	P	**P**	**00 59 41.4**	**+0.3**
	baz=26,SNR=13						
EIDS	**Eidsvold**	**25.71**	**259**	P	**P**	**00 59 41.5**	**+0.3**
EIDS	**Eidsvold**	**25.71**	**259**	P	**P**	**00 59 41.5**	**+0.3**
	comp=Z,26nm,0.6s						
MGCD	**Mangrove Creek**	**26.68**	**241**	P	**P**	**00 59 51.0**	**+1.5**
	baz=27,SNR=25						
MGCD	**Mangrove Creek**	**26.68**	**241**	P	**P**	**00 59 51.1**	**+1.5**
	comp=Z,125nm,0.7s						
RMQ	**Roma**	**27.80**	**257**	P	**P**	**01 00 00.8**	**+1.3**
	baz=28,SNR=35						
RMQ	**Roma**	**27.80**	**257**	P	**P**	**01 00 00.9**	**+1.4**
	comp=Z,68nm,0.7s						
CNB	**Canberra Magne**	**28.66**	**238**	P	**P**	**01 00 08.2**	**+1.3**
	baz=29,SNR=32						
CNB	**Canberra Magne**	**28.66**	**238**	P	**P**	**01 00 08.1**	**+1.2**
	comp=Z,82nm,0.8s						
CAN	**Canberra**	**28.94**	**238**	P	**P**	**01 00 10.2**	**+0.9**
CAN	**Canberra**	**28.94**	**238**	P	**P**	**01 00 10.5**	**+1.2**
	comp=Z,91nm,0.8s						
CTA	**Charters Tower**	**30.72**	**269**	P	**P**	**01 00 25.1**	**+0.3**
	comp=Z,43nm,0.5s,baz=95,slow=9.9,SNR=56						
	comp=Z,43nm,0.5s						
CTA	**Charters Tower**	**30.72**	**269**	P	**P**	**01 00 25.0**	**+0.3**
	comp=Z,70nm,0.6s						
CTAO	**Charters Tower**	**30.72**	**269**	P	**P**	**01 00 25.1**	**+0.3**
CTAO	**Charters Tower**	**30.72**	**269**	P	**P**	**01 00 25.1**	**+0.3**
	comp=Z,60nm,0.6s						
CMSA	**Cobar Meteorol**	**30.85**	**247**	P	**P**	**01 00 26.3**	**+0.6**
	baz=31,SNR=47						
CMSA	**Cobar Meteorol**	**30.85**	**247**	P	**P**	**01 00 26.3**	**+0.6**
	comp=Z,71nm,0.7s						
QLP	**Quilpie**	**31.86**	**256**	P	**P**	**01 00 34.6**	**+0.2**
	baz=32,SNR=7.1						
QLP	**Quilpie**	**31.86**	**256**	P	**P**	**01 00 34.5**	**+0.2**
	comp=Z,131nm,0.7s						
TOO	**Toolangi**	**32.30**	**236**	P	**P**	**01 00 38.9**	**+0.9**
	baz=32,SNR=23						
TOO	**Toolangi**	**32.30**	**236**	P	**P**	**01 00 39.0**	**+0.9**
TOO	**Toolangi**	**32.30**	**236**	P	**P**	**01 00 38.9**	**+0.9**
	comp=Z,57nm,0.7s						
MTSU	**Mount Surprise**	**32.94**	**272**	P	**P**	**01 00 43.9**	**+0.2**
	baz=33,SNR=8.5						
TAU	**Tasmania Unive**	**33.00**	**225**	P	**P**	**01 00 44.6**	**+0.8**
TAU	**Tasmania Unive**	**33.00**	**225**	P	**P**	**01 00 44.7**	**+1.0**
	comp=Z,83nm,1.5s						
PMG	**Port Moresby**	**33.49**	**289**	P	**P**	**01 00 47.9**	**-0.3**
	baz=207,slow=2.3						
PMG	**Port Moresby**	**33.49**	**289**	IAmb	IAmb	01 00 49.1	
	comp=Z,59nm,0.7s						
XMAS	**Kiritimati**	**33.76**	**46**	P	**P**	**01 00 50.1**	**-0.4**
STKA	**Stephens Creek**	**34.36**	**247**	P	**P**	**01 00 55.7**	**+0.4**
	comp=Z,31nm,0.5s,baz=93,slow=11,SNR=85						
STKA				ScP	**ScP**	**01 06 06.1**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=181,slow=0.6,SNR=5.2						
	comp=Z,31nm,0.5s						
STKA	**Stephens Creek**	**34.36**	**247**	P	**P**	**01 00 56.0**	**+0.7**
	baz=34,SNR=38						
STKA	**Stephens Creek**	**34.36**	**247**	P	**P**	**01 00 55.9**	**+0.5**
STKA				IAmb	IAmb	01 00 56.4	
	comp=Z,6.4nm,0.6s						
STKA	**Stephens Creek**	**34.36**	**247**	P	**P**	**01 00 55.9**	**+0.5**
	comp=Z,10nm,1.1s						
ARPS	**Mount Arapiles**	**34.92**	**238**	P	**P**	**01 01 00.4**	**+0.5**
	baz=35,SNR=14						
ARPS	**Mount Arapiles**	**34.92**	**238**	P	**P**	**01 01 00.5**	**+0.5**
	comp=Z,79nm,1.0s						
INKA	**Innaminka**	**34.94**	**254**	P	**P**	**01 01 01.2**	**+1.0**
	comp=Z,72nm,1.7s						
COEN	**Coen**	**35.23**	**278**	P	**P**	**01 01 02.9**	**+0.1**
COEN				IAmb	IAmb	01 01 05.1	
	comp=Z,12nm,1.1s						
QIS	**Mount Isa**	**36.75**	**266**	P	**P**	**01 01 14.8**	**-0.5**
	baz=37,SNR=4.9						
QIS	**Mount Isa**	**36.75**	**266**	P	**P**	**01 01 15.1**	**-0.2**
	comp=Z,6.3nm,2.0s						
HTT	**Hallett**	**36.76**	**245**	P	**P**	**01 01 15.3**	**+0.2**
	baz=37,SNR=19						
HTT	**Hallett**	**36.76**	**245**	P	**P**	**01 01 15.5**	**+0.3**
	comp=Z,45nm,0.8s						
LCRK	**Leigh Creek**	**37.17**	**250**	P	**P**	**01 01 18.7**	**+0.2**
	comp=Z,65nm,1.1s						
TWOA	**Tennyson Woods**	**37.23**	**242**	P	**P**	**01 01 19.1**	**+0.2**
	comp=Z,32nm,0.7s						
NAPP	**Napperby**	**37.38**	**245**	P	**P**	**01 01 20.9**	**+0.7**
	comp=Z,40nm,0.7s						
BBOO	**Buckleboo**	**39.10**	**246**	P	**P**	**01 01 33.8**	**-0.3**
	baz=39,SNR=66						
BBOO	**Buckleboo**	**39.10**	**246**	P	**P**	**01 01 33.5**	**-0.6**
BBOO	**Buckleboo**	**39.10**	**246**	P	**P**	**01 01 33.9**	**-0.3**
	comp=Z,40nm,1.0s						
OOD	**Oodnadatta**	**39.42**	**254**	P	**P**	**01 01 37.7**	**+0.9**
	comp=Z,56nm,0.7s						
MULG	**Mulgathing**	**40.76**	**250**	P	**P**	**01 01 47.4**	**0.0**
	comp=Z,114nm,0.6s						
ASAR	**Alice Springs**	**41.44**	**260**	P	**P**	**01 01 52.5**	**-0.4**
	comp=Z,13nm,0.5s,baz=94,slow=7.9,SNR=163						
ASAR				PcP	**PcP**	**01 03 36.8**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=108,slow=3.3,SNR=7.8						
ASAR				ScP	**ScP**	**01 06 34.2**	**+1.7**
	comp=Z,4.6nm,0.8s,baz=106,slow=4.0,SNR=12						
ASAR				S	**S**	**01 07 24.1**	**-3.3**
	comp=Z,2.2nm,0.7s,baz=103,slow=16,SNR=8.3						
	comp=Z,13nm,0.5s						
ASAR	**Alice Springs**	**41.44**	**260**	P	**P**	**01 01 52.7**	**-0.2**
WR0	**Warramunga Arr**	**41.53**	**265**	P	**P**	**01 01 52.4**	**-1.2**

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WR0                              IAmb   IAmb   01 01 53.9
      comp=Z,9.2nm,0.3s
WC3   Warramunga Arr   41.68 265 P      P      01 01 54.0 -0.9
      baz=42
WB0   Warramunga Arr   41.70 266 P      P      01 01 54.0 -1.0
WB0                              IAmb   IAmb   01 01 54.8
      comp=Z,14nm,0.7s
WB2   Warramunga Arr   41.70 265 P      P      01 01 54.1 -1.0
WB2                              IAmb   IAmb   01 01 54.4
      comp=Z,14nm,0.7s
WRAB  Tennant Creek    41.71 265 P      P      01 01 53.5 -1.6
WRAB                             IAmb   IAmb   01 01 57.3
      comp=Z,16nm,0.7s
WRAB  Tennant Creek    41.71 265 P      P      01 01 54.1 -1.0
      comp=Z,13nm,0.9s
WRA   Warramunga Arr   41.71 265 P      P      01 01 54.0 -1.1
      comp=Z,7.9nm,0.5s,baz=96,slow=8.3,SNR=302
WRA                              PcP    PcP    01 03 37.8 -0.1
      comp=Z,2.3nm,0.7s,baz=100,slow=5.9,SNR=4.5
WRA                              ScP    ScP    01 06 35.5 +1.8
      comp=Z,2.8nm,0.8s,baz=94,slow=4.3,SNR=7.8
WRA                              S      S      01 07 26.1 -5.3
      comp=Z,3.2nm,0.8s,baz=99,slow=13,SNR=5.5
      comp=Z,7.9nm,0.5s
WRA   Warramunga Arr   41.71 265 P      P      01 01 52.9 -2.3
FORT  Forrest          45.91 249 P      P      01 02 26.8 -0.6
      baz=46,SNR=62
FORT  Forrest          45.91 249 P      P      01 02 26.7 -0.6
FORT  Forrest          45.91 249 P      P      01 02 26.8 -0.6
      comp=Z,149nm,0.7s
WRKA  Warakurna        46.29 257 P      P      01 02 29.8 -0.6
      baz=46,SNR=147
WRKA  Warakurna        46.29 257 P      P      01 02 29.8 -0.6
      comp=Z,28nm,0.7s
MTN   Manton Dam       46.63 274 P      P      01 02 32.4 -0.6
MTN                              IAmb   IAmb   01 02 41.3
      comp=Z,25nm,1.1s
KNRA  Kununurra        47.94 269 P      P      01 02 42.3 -0.4
      baz=48,SNR=5.8
KNRA  Kununurra        47.94 269 IAmb   IAmb   01 02 45.4
      comp=Z,27nm,1.1s
KNRA  Kununurra        47.94 269 P      P      01 02 42.5 -0.3
      comp=Z,28nm,0.9s
HMH   Humu‘ula Sheep   49.05  32 P      P      01 02 51.5 +0.2
MIDW  Midway           51.04   4 P      P      01 03 04.5 -0.7
MIDW                             IAmb   IAmb   01 03 17.9
      comp=Z,27nm,0.9s
SWI   Sorong           51.45 288 P      P      01 03 08.0 -0.5
      comp=Z,3µmcomp=Z,55nm,0.8s
SOEI  Soe              54.02 275 P      P      01 03 27.9 +1.0
      comp=Z,66nm,1.2s
PSA00 Pilbara Seismi   54.58 259 P      P      01 03 29.9 -0.8
PSA00 Pilbara Seismi   54.58 259 P      P      01 03 29.8 -0.9
PSA00                            IAmb   IAmb   01 03 30.8
      comp=Z,5.8nm,1.1s
PSA00 Pilbara Seismi   54.58 259 P      P      01 03 29.9 -0.8
      comp=Z,21nm,2.6s
KLBR  Kellerberrin     54.63 247 P      P      01 03 30.3 -0.6
      baz=55,SNR=8.9
KLBR  Kellerberrin     54.63 247 P      P      01 03 30.4 -0.6
      comp=Z,47nm,0.8s
MEEK  Meekatharra      54.64 253 P      P      01 03 29.8 -1.2
      baz=55,SNR=7.9
MEEK  Meekatharra      54.64 253 P      P      01 03 30.0 -1.1
      comp=Z,18nm,0.7s
MBWA  Marble Bar       54.78 260 P      P      01 03 31.3 -0.8
MBWA                             IAmb   IAmb   01 03 31.8
      comp=Z,12nm,0.6s
MBWA  Marble Bar       54.78 260 P      P      01 03 31.3 -0.8
      comp=Z,11nm,0.9s
NWAO  Narrogin (SRO)   54.91 245 P      P      01 03 32.5 -0.3
NWAO  Narrogin (SRO)   54.91 245 P      P      01 03 32.7 -0.1
      comp=Z,23nm,1.1s
VNDA  Vanda            55.20 185 P      P      01 03 33.0 -1.0
      comp=Z,2.2nm,0.8s,baz=18,slow=6.4,SNR=16
VNDA                             PcP    PcP    01 04 27.1 +1.0
      comp=Z,3.2nm,0.7s,baz=336,slow=4.0,SNR=8.6
VNDA                             ScP    ScP    01 07 30.6 +0.7
      comp=Z,0.3nm,0.3s,baz=35,slow=1.8,SNR=7.6
      comp=Z,2.2nm,0.8s
VNDA  Vanda            55.20 185 P      P      01 03 35.9 +1.9
VNDA                             PcP    PcP    01 04 27.4 +1.2
SBA   Scott Base       55.21 183 P      P      01 03 37.5 +3.3
SBA                              PcP    PcP    01 04 28.3 +2.1
SANI  Sanana           55.56 284 P      P      01 03 36.8 -0.8
      comp=Z,23nm,0.8s
BLDU  Ballidu          55.65 248 P      P      01 03 37.3 -0.7
      baz=56,SNR=8.0
BLDU  Ballidu          55.65 248 P      P      01 03 37.3 -0.7
      comp=Z,19nm,0.8s
MUN   Mundaring        55.89 246 P      P      01 03 39.5 -0.1
      baz=56,SNR=4.7
MUN   Mundaring        55.89 246 P      P      01 03 39.7 +0.1
      comp=Z,24nm,0.8s
MORW  Morawa           56.47 250 P      P      01 03 43.0 -0.7
      baz=57,SNR=16
MORW  Morawa           56.47 250 IAmb   IAmb   01 03 43.4
      comp=Z,10.0nm,0.6s
MORW  Morawa           56.47 250 P      P      01 03 43.1 -0.6
      comp=Z,14nm,0.9s
EDFI  Ende, Flores     56.75 275 P      P      01 03 45.9  0.0
      comp=Z,20nm,0.8s
GIRL  Giralia          59.38 257 P      P      01 04 04.1 +0.7
      baz=60,SNR=8.3
GIRL  Giralia          59.38 257 P      P      01 04 04.0 +0.7
GIRL                             IAmb   IAmb   01 04 04.3
      comp=Z,25nm,0.8s
GIRL  Giralia          59.38 257 P      P      01 04 04.3 +0.9
      comp=Z,76nm,1.4s
GTOI  Gorontalo        59.42 285 P      P      01 04 04.2 +0.4
      comp=Z,14nm,0.7s
BKSI  Bulukumba        59.49 278 P      P      01 04 03.5 -0.8
      comp=Z,729nmcomp=Z,24nm,0.7s
PLAI  Plampang         60.32 273 P      P      01 04 09.6 -0.1
      comp=Z,64nm,0.9s
CASY  Casey            60.57 206 P      P      01 04 10.6 +0.1
JCJ   Chichijima       61.32 322 P      P      01 04 15.3 -0.6
TOLI2 Tolitoli         61.62 285 P      P      01 04 17.5 -0.8
TOLI2                            IAmb   IAmb   01 04 18.1
      comp=Z,14nm,0.9s
MPSI  Mapaga           62.07 283 P      P      01 04 20.2 -1.0
      comp=Z,32nm,0.8s
JAGI  Jajag, Banyuwa   63.78 272 P      P      01 04 30.9 -1.3
      comp=Z,72nm,2.8s
PWJI  Pagerwojo        66.11 271 P      P      01 04 46.7 -0.1
      comp=Z,28nm,1.3s
PCJI  Pacitan          66.62 271 P      P      01 04 50.4 +0.4
      comp=Z,103nm,1.0s
QSPA  South Pole Qui   67.06 180 P      P      01 04 53.2 +1.3
      comp=Z,28nm,0.6s,baz=338,slow=0.4,SNR=245
      comp=Z,28nm,0.6s
QSPA  South Pole Qui   67.06 180 P      P      01 04 53.6 +1.7
KPJI  Karang Pucung    69.01 271 P      P      01 05 04.4 -0.1
      comp=Z,37nm,0.6s
JGF   Kuroka           70.47 325 P      P      01 05 12.8  0.0
JGF                              IAmb   IAmb   01 05 12.9
      comp=Z,6.3nm,0.6s
MJAR  Matsushiro Arr   70.74 326 P      P      01 05 13.0 -1.3
      comp=Z,9.9nm,0.8s,baz=154,slow=5.7,SNR=16
      comp=Z,9.9nm,0.8s
KSM   Kuching          71.21 280 P      P      01 05 17.0 -0.5
KSM                              IAmb   IAmb   01 05 18.4
      comp=Z,18nm,0.7s
JWT   Wachi            71.29 323 P      P      01 05 18.4 +0.9
JSU   Suzuyama         71.52 317 P      P      01 05 18.1 -0.8
JSD   Sado             71.87 327 P      P      01 05 20.6 -0.2
JSD                              IAmb   IAmb   01 05 22.5
      comp=Z,12nm,0.9s
JHS   Saijyo           72.37 322 P      P      01 05 24.2 +0.5
JHS                              IAmb   IAmb   01 05 25.2
      comp=Z,26nm,1.1s
NACB  Ninganchiao      72.97 306 P      P      01 05 26.4 -1.1
TPUB  Ta-pu            73.19 305 P      P      01 05 27.1 -1.7
SSLB  Suanglung        73.23 306 P      P      01 05 27.5 -1.5
SSLB                             IAmb   IAmb   01 05 28.3
      comp=Z,19nm,0.7s
YHNB  Yeheng           73.42 307 P      P      01 05 30.1  0.0
YHNB                             IAmb   IAmb   01 05 30.5
      comp=Z,19nm,0.7s
KASI  Kota Agung       73.77 271 P      P      01 05 31.1 -1.1
      comp=Z,34nm,0.7s
JTU   Tsushima         74.22 319 P      P      01 05 33.7 -0.5
JTU                              IAmb   IAmb   01 05 42.7
      comp=Z,21nm,1.1s
MDSI  Maura Dua        74.45 272 P      P      01 05 34.8 -1.3
      comp=Z,554nmcomp=Z,4.2nm,0.4s
ADK   Adak             74.66   3 P      P      01 05 35.2 -1.1
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ADK                              IAmb   IAmb   01 05 36.4
      comp=Z,19nm,1.0s
NIKH  Nikolski High    76.38   7 P      P      01 05 45.7 -0.1
NIKH  Nikolski High    76.38   7 P      P      01 05 46.3 +0.5
      baz=191
KSRS  Korea Array      77.08 320 P      P      01 05 50.6 +0.6
      comp=Z,7.0nm,0.8s,baz=132,slow=5.4,SNR=16
      comp=Z,7.0nm,0.8s
SMAI  San Martin Ant   77.20 159 P      P      01 05 52.0 +1.8
BELA  Belgrano 2       77.40 173 P      P      01 05 51.8 +0.7
UNV   Unalaska Valle   77.54   9 P      P      01 05 52.5 +0.5
      baz=194
PEA0B Petropavlovsk-   78.07 347 P      P      01 05 55.2 +0.2
PEA0B                            IAmb   IAmb   01 05 56.2
      comp=Z,14nm,0.9s
PETK  Petropavlovsk-   78.07 347 P      P      01 05 55.1 +0.1
      comp=Z,10nm,0.9s,baz=133,slow=6.5,SNR=13
      comp=Z,10nm,0.9s
PETK  Petropavlovsk-   78.07 347 P      P      01 05 55.5 +0.5
MAW   Mawson           78.31 201 P      P      01 05 57.2 +1.0
      comp=Z,6.9nm,0.8s,baz=123,slow=5.0,SNR=13
      comp=Z,6.9nm,0.8s
MAW   Mawson           78.31 201 P      P      01 05 57.2 +1.0
      baz=78,SNR=7.0
MAW   Mawson           78.31 201 P      P      01 05 57.5 +1.3
NJ2   Nanjing          79.51 311 eP     P      01 06 04.3 +1.2
NJ2                              pmax   pmax
      comp=Z,17nm,0.5s
QIZ   Qiongzhong       79.53 296 P      P      01 06 03.4 -0.1
QIZ                              IAmb   IAmb   01 06 08.1
      comp=Z,25nm,1.2s
USRK  Ussuriysk Ar.    79.61 328 P      P      01 06 03.2 -0.1
      comp=Z,9.1nm,0.8s,baz=121,slow=4.5,SNR=7.7
      comp=Z,9.1nm,0.8s
SDPT  Sand Point       79.96  12 P      P      01 06 04.6 -0.2
SDPT                             IAmb   IAmb   01 06 05.0
      comp=Z,27nm,1.1s
PMSA  Palmer Station   80.02 157 P      P      01 06 06.6 +1.4
PMSA                             IAmb   IAmb   01 06 07.4
      comp=Z,25nm,0.8s
IPM   Ipoh             80.88 279 P      P      01 06 10.5 -0.3
IPM                              IAmb   IAmb   01 06 11.6
      comp=Z,18nm,0.7s
MDJ   Mudanjiang       81.11 327 P      P      01 06 12.1 +1.0
MDJ                              pP     pP     01 08 10.1 -2.3
MDJ                              sP     sP     01 09 06.2 -4.3
MDJ                              S      S      01 15 37.7 +3.9
MDJ   Mudanjiang       81.11 327 sS     sS     01 19 06.7 -3.4
MDJ                              pmax   pmax
      comp=Z,19nm,1.3s
MDJ                              pmax   pmax
      comp=Z,100nm,3.6s
KULM  Kulim            81.55 279 P      P      01 06 13.6 -0.5
KULM                             IAmb   IAmb   01 06 15.3
      comp=Z,13nm,0.9s
SAO   San Andreas Ge   81.65  44 P      P      01 06 13.1 -1.0
PMPB  Monarch Peak     81.75  45 P      P      01 06 13.7 -1.0
FMP   Fort Macarthur   81.98  48 P      P      01 06 15.9 +0.1
      baz=236
KCPM  Cahto Peak       82.10  41 P      P      01 06 16.3 -0.2
KCPM                             IAmb   IAmb   01 06 19.5
      comp=Z,12nm,1.0s
KMPM  Mount Pierce     82.24  40 P      P      01 06 16.2 -0.8
KMPM                             IAmb   IAmb   01 06 21.1
      comp=Z,22nm,1.2s
CBX   Cerro Bola       82.35  50 P      P      01 06 18.9 +1.0
KMRM  Mail Ridge       82.36  40 P      P      01 06 19.4 +1.7
VES   Vestal, Richgr   82.66  46 P      P      01 06 20.2 +1.0
      baz=235
BFSC  Mount Baldy Ra   82.72  48 P      P      01 06 20.4 +0.7
      baz=236
CN2   Changchun        82.73 324 eP     P      01 06 18.5 -0.9
CN2                              epP    pP     01 08 17.7 -3.5
CN2                              esP    sP     01 09 11.3 -8.0
CN2                              eS     S      01 15 54.1 +4.1
CN2                              pmax   pmax
      comp=Z,30nm,1.1s
GSI   Gunungsitoli     82.77 274 P      P      01 06 20.5 +0.1
GSI                              IAmb   IAmb   01 06 21.8
      comp=Z,20nm,0.7s
GSI   Gunungsitoli     82.77 274 P      P      01 06 21.0 +0.7
      comp=Z,33nm,0.7s
MONP2 Monument Peak    82.83  50 P      P      01 06 20.8 +0.4
      baz=237
EDW2  Edwards Air Fo   82.85  47 P      P      01 06 20.7 +0.4
      baz=236
MG05  Puerto Natales   82.89 143 P      P      01 06 21.4 +1.2
MG05                             IAmb   IAmb   01 06 22.9
      comp=Z,24nm,0.8s
IKP   In-Ko-Pah, Jac   82.92  50 P      P      01 06 21.2 +0.4
      baz=237
MG03  Isla Dawson      82.92 146 P      P      01 06 21.4 +1.1
MG03                             IAmb   IAmb   01 06 22.7
      comp=Z,24nm,0.8s
ISA   Isabella, Lake   82.96  47 P      P      01 06 20.4 -0.4
ISA   Isabella, Lake   82.96  47 P      P      01 06 21.5 +0.7
      baz=235
SRIG  Santa Rosalia    83.00  57 P      P      01 06 21.3 +0.2
SRIG                             IAmb   IAmb   01 06 28.5
      comp=Z,12nm,0.8s
BNX   BinXian          83.00 326 ⇑P     P      01 06 20.7  0.0
BNX                              pmax   pmax
      comp=Z,25nm,0.9s
BNX                              pmax   pmax
      comp=Z,440nm,3.7s
SLBS  Sierra La Lagu   83.03  61 P      P      01 06 22.8 +1.3
SLBS                             IAmb   IAmb   01 06 23.9
      comp=Z,7.3nm,0.8s
YUH   Yuha Desert      83.05  50 P      P      01 06 21.8 +0.6
GO09  Cerro Castillo   83.17 143 P      P      01 06 23.3 +1.7
GO09                             IAmb   IAmb   01 06 31.1
      comp=Z,10.0nm,1.0s
PFO   Pinyon Flats O   83.20  49 P      P      01 06 22.4 +0.3
      baz=237
TPFO  Pinon Flats      83.20  49 P      P      01 06 22.3 +0.2
      baz=237
OHAK  Old Harbor       83.21  15 P      P      01 06 22.0 +0.6
      baz=205
BBRC  Big Bear Solar   83.24  49 P      P      01 06 22.3 -0.1
      baz=236
KSXB  Camp Six Broad   83.27  39 P      P      01 06 23.3 +1.0
SWSC  Sam W. Stewart   83.30  50 P      P      01 06 22.6 +0.1
      baz=237
ESPZ  Base Esperanza   83.33 158 P      P      01 06 21.2 -0.8
LRMC  Laurel Mtn Rad   83.39  47 P      P      01 06 23.9 +0.8
      baz=236
L02F  Cave Junction    83.63  39 P      P      01 06 25.3 +1.4
      baz=231
KEBM  Edson Butte      83.66  38 P      P      01 06 23.9 -0.3
KEBM                             IAmb   IAmb   01 06 39.3
      comp=Z,17nm,1.2s
CWC   Cottonwood Cre   83.67  46 P      P      01 06 25.5 +1.0
      baz=236
BELC  Belle Mtn. Jos   83.73  49 P      P      01 06 25.5 +0.7
      baz=237
MG01  Puerto William   83.80 148 P      P      01 06 25.2 +0.6
EMB   Emerald Bay      83.82  43 P      P      01 06 25.6 +0.4
SRIT  Nakonsritamara   83.85 282 P      P      01 06 26.2 +0.6
SRIT                             IAmb   IAmb   01 06 27.9
      comp=Z,26nm,1.2s
GSC   Goldstone, Bar   83.89  48 P      P      01 06 26.7 +1.2
GSC   Goldstone, Bar   83.89  48 P      P      01 06 25.8 +0.3
      baz=236
YBH   Yreka Blue Hor   83.89  40 P      P      01 06 25.9 +0.6
      comp=Z,4.1nm,0.8s,baz=263,slow=0.8,SNR=17
      comp=Z,4.1nm,0.8s
BC3   Big Chuckawall   83.93  50 P      P      01 06 26.5 +0.8
      baz=237
K02D  Willamette Mer   83.93  39 P      P      01 06 27.0 +1.5
      baz=231
HEC   Hector,Ludlow    83.95  48 P      P      01 06 27.0 +1.2
      baz=237
GLA   Glamis           84.05  50 P      P      01 06 27.1 +0.8
GLA                              IAmb   IAmb   01 06 29.4
      comp=Z,10nm,0.9s
GLA   Glamis           84.05  50 P      P      01 06 27.4 +1.2
      baz=238
MPK   Martis Peak      84.05  43 P      P      01 06 26.5  0.0
MPK                              IAmb   IAmb   01 06 28.9
      comp=Z,9.4nm,1.1s
J01E  Myrtle Point     84.08  38 P      P      01 06 27.8 +1.8
      baz=231
BEKR  Beckworth        84.18  42 P      P      01 06 27.3 +0.3
PNTR  Pine Nut         84.20  43 P      P      01 06 27.2 +0.1
PNTR                             IAmb   IAmb   01 06 29.6
      comp=Z,9.8nm,0.8s
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QSM   Queen of Sheba   84.21  47 P      P      01 06 27.4 +0.4
HUMO  Hull Mountain    84.29  39 P      P      01 06 28.0 +0.8
VCNR  Virginia City    84.29  43 P      P      01 06 27.6 +0.1
YERR  Yerington        84.37  44 P      P      01 06 28.1 +0.2
GO08  Villa O’Higgin   84.38 141 P      P      01 06 29.1 +1.5
GO08                             IAmb   IAmb   01 06 31.3
      comp=Z,9.5nm,1.0s
GMRC  Granite Mounta   84.39  49 P      P      01 06 29.0 +1.0
      baz=237
IRM   Iron Mountain    84.41  49 P      P      01 06 29.2 +1.2
      baz=238
L04D  Klamath Falls    84.43  40 P      P      01 06 28.7 +0.7
L04D                             IAmb   IAmb   01 06 31.3
      comp=Z,7.6nm,0.9s
L04D  Klamath Falls    84.43  40 P      P      01 06 29.3 +1.3
      baz=232
GWY   Greenwater Val   84.47  47 P      P      01 06 28.6 +0.2
FURC  Furnace Creek,   84.49  47 P      P      01 06 29.3 +1.1
      baz=236
TUQ   Turquoise Moun   84.56  48 P      P      01 06 29.5 +0.6
      baz=237
SHOC  Shoshone, Teco   84.58  47 P      P      01 06 30.5 +1.7
      baz=237
RYN   Ryan             84.62  44 P      P      01 06 29.8 +0.7
BLYC  Blythe           84.63  50 P      P      01 06 29.8 +0.8
NVAR  Mina Array Bea   84.65  44 P      P      01 06 29.9 +0.6
      comp=Z,1.6nm,0.7s,baz=224,slow=9.1,SNR=18
NVAR                             pP     pP     01 08 33.3 +0.6
      comp=Z,0.4nm,0.7s,baz=221,slow=6.6,SNR=2.8
      comp=Z,1.6nm,0.7s
113A  Mohawk Valley,   84.66  51 P      P      01 06 29.6 +0.5
Q19K  Cape Douglas,    84.68  14 P      P      01 06 28.6 -0.1
Q19K  Cape Douglas,    84.68  14 P      P      01 06 30.1 +1.4
      baz=205
PAHR  Pah Rah Range    84.70  43 P      P      01 06 29.1 -0.3
I03D  Drain, OR        84.74  38 P      P      01 06 30.5 +1.2
      baz=231
NV11  Mina Array Sit   84.75  44 P      P      01 06 30.0 +0.3
HSIG                   84.84  56 P      P      01 06 30.5 +0.3
HSIG                             IAmb   IAmb   01 06 33.0
      comp=Z,9.8nm,0.9s
LHMI  Lhok Sumawe      84.90 278 P      P      01 06 29.7 -1.1
214A  Organ Pipe Nat   84.93  52 P      P      01 06 30.2 -0.4
214A  Organ Pipe Nat   84.93  52 P      P      01 06 31.5 +1.0
      baz=239
KVN   Kaiserville      85.13  44 P      P      01 06 31.6  0.0
TPH   Tonopah          85.15  45 P      P      01 06 31.8 +0.1
TPH                              IAmb   IAmb   01 06 33.9
      comp=Z,15nm,0.8s
J04D  Umpqua Nationa   85.17  39 P      P      01 06 30.5 -1.2
J04D                             IAmb   IAmb   01 06 34.5
      comp=Z,19nm,0.9s
J04D  Umpqua Nationa   85.17  39 P      P      01 06 33.0 +1.3
      baz=232
TPNV  Topopah Spring   85.17  47 P      P      01 06 31.2 -0.6
TPNV  Topopah Spring   85.17  47 P      P      01 06 32.6 +0.8
      baz=237
PDMCI Parker Dam,Lak   85.19  50 P      P      01 06 32.8 +1.0
      baz=238
O18K  Koktuh Hills     85.20  13 P      P      01 06 32.1 +1.0
      baz=204
TROLL Troll, Antarti   85.20 181 P      P      01 06 31.3  0.0
TROLL                            S      S      01 16 14.1 +0.5
I04A  Tendick Farm,    85.33  38 P      P      01 06 32.9 +0.7
      baz=232
LYN   LuoYang          85.34 310 ⇑P     P      01 06 33.9 +1.5
MOD   Modoc Plateau    85.42  41 P      P      01 06 33.8 +1.0
MOD                              IAmb   IAmb   01 06 35.3
      comp=Z,4.7nm,0.7s
P19K  Oil Pt           85.43  14 P      P      01 06 32.8 +0.5
      baz=205
SNAA  Sanae            85.56 179 P      P      01 06 32.3 -0.7
SNAA  Sanae            85.56 179 P      P      01 06 31.9 -1.1
SNAA                             IAmb   IAmb   01 06 33.3
      comp=Z,6.9nm,0.5s
K05A  Summer Lake      85.56  40 P      P      01 06 34.5 +0.9
H04D  Lebanon          85.60  38 P      P      01 06 34.0 +0.5
H04D  Lebanon          85.60  38 P      P      01 06 34.5 +1.1
      baz=232
J05D  Fort Rock, OR    85.70  39 P      P      01 06 35.6 +1.4
      baz=233
HOM   Homer            85.79  14 P      P      01 06 33.7 -0.2
      baz=207
W13A  Hualapai Mount   85.79  49 P      P      01 06 35.2 +0.3
VNA3  Neumayer Olymp   85.79 177 P      P      01 06 33.6 -0.4
VNA3                             S      S      01 16 19.1 +0.1
Y14A  Wickenburg       85.81  51 P      P      01 06 34.3 -0.5
N18K  Kilae Creek      85.83  12 P      P      01 06 35.0 +0.8
      baz=203
BJI   Beijing          85.87 317 P      P      01 06 35.9 +1.1
BJI                              pmax   pmax
      comp=Z,6.0nm,0.8s
O20K  Slope Mountain   85.95  14 P      P      01 06 35.1 +0.3
      baz=206
COYC  Coyhaique        86.06 138 P      P      01 06 37.1 +1.3
BRSE  Bradley Lake S   86.07  15 P      P      01 06 35.9 +0.6
      baz=208
PINE  Pine Mountain    86.18  39 P      P      01 06 37.0 +0.5
PINE                             IAmb   IAmb   01 06 40.2
      comp=Z,9.0nm,0.9s
PRN   Pahroc Range     86.22  47 P      P      01 06 36.8 +0.1
N19K  Bonanza Creek    86.22  13 P      P      01 06 36.0 -0.1
      baz=204
AY01  Puyuhuapi        86.26 137 P      P      01 06 38.0 +1.3
AY01                             IAmb   IAmb   01 06 40.5
      comp=Z,9.1nm,0.9s
I05D  Terrebonne, OR   86.28  38 P      P      01 06 37.2 +0.5
      baz=233
R11A  Troy Canyon, C   86.38  46 P      P      01 06 38.3 +0.8
      baz=237
VNA1  Neumayer--Stat   86.44 178 P      P      01 06 36.9 -0.2
BMN   Battle Mountai   86.47  43 P      P      01 06 38.3 +0.4
BMN                              IAmb   IAmb   01 06 40.3
      comp=Z,5.2nm,0.9s
TUC   Tucson           86.59  53 P      P      01 06 39.2 +0.7
TUC   Tucson           86.59  53 P      P      01 06 39.6 +1.1
      baz=240
SEW   Seward           86.70  15 P      P      01 06 39.1 +0.9
      baz=209
WVOR  Wild Horse Val   86.74  41 P      P      01 06 39.2 +0.2
GAMB  Gambell          86.80   4 P      P      01 06 39.3 +0.8
      baz=188
E04D  Cinebar          86.95  36 P      P      01 06 41.0 +1.2
      baz=232
SPCR  Spurr Chakacha   87.05  13 P      P      01 06 41.7 +1.8
      baz=206
I07A  Izee             87.18  39 IAmb   IAmb   01 06 43.9
      comp=Z,9.4nm,1.1s
D04E  Lakebay          87.23  35 P      P      01 06 43.4 +2.3
      baz=232
LCMT  Little Creek M   87.24  48 P      P      01 06 41.7 +0.2
M19K  Big River Lodg   87.24  12 P      P      01 06 41.8 +1.1
      baz=204
D03D  Eldon            87.28  35 P      P      01 06 42.7 +1.4
      baz=231
LL02  Futaleuf         87.36 136 P      P      01 06 42.6 +0.7
LL02                             IAmb   IAmb   01 06 45.5
      comp=Z,14nm,0.8s
L19K  White Mountain   87.41  12 P      P      01 06 42.3 +0.7
L19K                             IAmb   IAmb   01 06 43.0
      comp=Z,12nm,0.9s
L19K                                    pwP    01 08 51.5 +1.6
L19K  White Mountain   87.41  12 P      P      01 06 41.6  0.0
      baz=204,SNR=12
CCUT  Cedar City       87.44  47 P      P      01 06 42.8 +0.2
RC01  Rabbit Creek A   87.50  15 P      P      01 06 41.5 -0.5
RC01                             IAmb   IAmb   01 06 43.6
      comp=Z,14nm,1.1s
RC01  Rabbit Creek A   87.50  15 P      P      01 06 42.0  0.0
      baz=208,SNR=5.2
U15A  North Rim        87.59  49 P      P      01 06 43.4  0.0
U15A                             IAmb   IAmb   01 06 46.2
      comp=Z,9.2nm,0.8s
XAN   Xi'an            87.60 309 ⇑P     P      01 06 44.5 +1.3
XAN                              pmax   pmax
      comp=Z,19nm,1.2s
SZCU  Shurtz Canyon    87.65  47 P      P      01 06 44.3 +0.8
D05A  Enumclaw         87.66  36 P      P      01 06 44.5 +1.5
CBB   Campbell River   87.72  32 IAmb   IAmb   01 06 46.4
      comp=Z,8.8nm,1.0s
WUAZ  Wupatki          87.77  50 P      P      01 06 44.9 +0.8
      baz=240
BBB   Bella Bella      87.86  29 P      P      01 06 44.8 +0.9
      comp=Z,11nm,0.8s,baz=137,slow=19,SNR=2.1
      comp=Z,11nm,0.8s
BBB   Bella Bella      87.86  29 IAmb   IAmb   01 06 53.9
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	comp=Z,16nm,0.8s						
L20K	Farewell, AK	87.86	12	P	P	01 06 42.9	-0.8
	baz=205,SNR=5.1						
TTA	Tatalina	87.88	11	P	P	01 06 44.4	+0.6
TTA	Tatalina	87.88	11	P	P	01 06 44.0	+0.2
	baz=203,SNR=5.6						
ELK	Elko	87.90	44	P	P	01 06 45.4	+0.6
	comp=Z,3.2nm,0.9s,baz=261,slow=5.6,SNR=14						
	comp=Z,3.2nm,0.9s						
ELK	Elko	87.90	44	P	P	01 06 45.3	+0.6
ELK				IAmb	IAmb	01 06 47.0	
	comp=Z,5.2nm,1.1s						
GLI	Glacier Island	87.95	16	P	P	01 06 43.9	-0.2
	baz=211						
FID	Port Fidalgo	88.00	16	IAmb	IAmb	01 06 45.1	
	comp=Z,11nm,1.0s						
M22K	Willow	88.00	14	P	P	01 06 44.6	+0.4
	baz=208						
EYAK	Cordova Ski Ar	88.01	17	P	P	01 06 44.9	+0.5
	baz=212						
CRAG	Craig	88.08	25	P	P	01 06 46.0	+1.2
	baz=223						
PMR	Palmer	88.08	15	P	P	01 06 44.9	+0.3
	baz=209						
KNK	Knik Glacier	88.08	15	P	P	01 06 44.7	0.0
	baz=210						
PKCU	Pink Cliffs	88.10	48	P	P	01 06 46.9	+1.1
PKCU				IAmb	IAmb	01 06 50.0	
	comp=Z,10nm,1.2s						
LL04	Puerto Octay	88.11	134	P	P	01 06 47.1	+1.6
LL04				IAmb	IAmb	01 06 48.8	
	comp=Z,10nm,0.8s						
ANM	Nome	88.12	7	P	P	01 06 46.0	+1.2
	baz=194						
XLT	XiLinHaoTe	88.12	320	*e*P	P	01 06 46.0	+0.6
XLT				pP	pP	01 08 44.4	-5.0
XLT				sP	sP	01 09 34.0	-13
XLT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,87nm,5.1s						
G08A	Pilot Rock	88.21	39	IAmb	IAmb	01 06 49.0	
	comp=Z,4.9nm,0.8s						
A04D	Lummi Island	88.23	34	P	P	01 06 46.5	+0.9
	baz=232						
B05A	Bryant	88.26	35	P	P	01 06 46.7	+0.9
	baz=232						
LTY	Liberty	88.41	36	P	P	01 06 47.3	+0.7
LTY				IAmb	IAmb	01 06 48.7	
	comp=Z,7.6nm,1.0s						
SML	Sawmill	88.46	15	P	P	01 06 47.3	+0.8
	baz=210						
MTPU	Mount Pierson	88.49	47	P	P	01 06 48.6	+0.9
MTPU				IAmb	IAmb	01 06 51.8	
	comp=Z,5.7nm,0.9s						
DIV	Divide	88.50	16	P	P	01 06 47.1	+0.4
DIV				IAmb	IAmb	01 06 47.9	
	comp=Z,8.2nm,1.0s						
CMAR	Chiang Mai Arr	88.51	291	P	P	01 06 49.6	+1.9
	comp=Z,1.9nm,0.3s,baz=127,slow=3.2,SNR=20						
CMAR				pP	pP	01 08 52.2	+0.5
	comp=Z,1.3nm,0.3s,baz=129,slow=3.2,SNR=2.0						
	comp=Z,1.9nm,0.3s						
CMAR	Chiang Mai Arr	88.51	291	P	P	01 06 48.5	+0.8
HAWA	Hanford	88.53	37	P	P	01 06 47.0	-0.1
HAWA				IAmb	IAmb	01 06 50.3	
	comp=Z,6.9nm,0.8s						
CUT	Chulitna	88.54	14	P	P	01 06 46.2	-0.5
CUT	Chulitna	88.54	14	P	P	01 06 46.3	-0.5
	baz=208						
PPLA	Purkeypile	88.58	13	P	P	01 06 46.9	-0.3
	baz=206						
M23K	Glacier View	88.59	15	P	P	01 06 47.2	+0.2
	baz=210						
K20K	Telida	88.63	12	IAmb	IAmb	01 06 48.2	
	comp=Z,5.9nm,1.0s						
K20K	Telida	88.63	12	P	P	01 06 47.0	-0.2
	baz=204,SNR=6.4						
BMRM	Bremner River	88.67	17	P	P	01 06 47.8	+0.2
BMRM				IAmb	IAmb	01 06 48.7	
	comp=Z,8.3nm,0.9s						
BMRM	Bremner River	88.67	17	P	P	01 06 47.7	+0.2
	baz=213						
SCM	Sheep Creek Mo	88.72	15	P	P	01 06 47.9	+0.1
SCM	Sheep Creek Mo	88.72	15	P	P	01 06 48.0	+0.2
	baz=211,SNR=9.7						
MSU	Marysvale	88.73	47	P	P	01 06 50.0	+1.4
KLU	Klutina	88.77	16	P	P	01 06 48.1	+0.1
	baz=212						
TNA	Tin City	88.85	5	P	P	01 06 48.7	+0.6
	baz=192						
121A	Cookes Peak, D	88.91	54	P	P	01 06 49.4	-0.1
	baz=242						
BMO	Blue Mountains	88.91	40	P	P	01 06 49.3	+0.2
ISLE	Juniper Island	88.99	18	P	P	01 06 49.7	+0.6
ISLE				IAmb	IAmb	01 06 50.5	
	comp=Z,11nm,1.0s						
MFID	Camas Ranch	89.00	41	P	P	01 06 49.8	+0.2
MFID				IAmb	IAmb	01 06 51.9	
	comp=Z,4.5nm,0.9s						
CAST	Castle Rocks	89.07	12	IAmb	IAmb	01 06 49.0	
	comp=Z,7.0nm,0.8s						
CAST	Castle Rocks	89.07	12	P	P	01 06 47.8	-1.5
	baz=206,SNR=13						
WRAK	Wrangell Islan	89.07	25	P	P	01 06 50.8	+1.4
	baz=224						
PNL	Peninsula	89.10	20	P	P	01 06 50.2	+0.7
	baz=218						
DUG	Dugway, Tooele	89.18	45	P	P	01 06 51.2	+0.7
	baz=239						
PINM	Pinnacle	89.19	19	P	P	01 06 50.1	+0.1
	baz=217						
N25K	Chitina, Valde	89.21	16	IAmb	IAmb	01 06 51.4	
	comp=Z,6.0nm,0.9s						
N25K	Chitina, Valde	89.21	16	P	P	01 06 50.4	+0.3
	baz=213						
M24K	Tolsona, Glenn	89.23	16	P	P	01 06 50.4	+0.3
	baz=212						
HHC	Hu-ho-hao-te	89.26	315	*e*P	P	01 06 50.6	-0.2
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,4.5s						
WAT6	Susitna Watana	89.27	15	P	P	01 06 49.9	-0.5
	baz=210,SNR=6.1						
GLB	Gilahina Butte	89.28	17	IAmb	IAmb	01 06 51.6	
	comp=Z,4.6nm,0.9s						
J20K	Nowinta River	89.37	11	P	P	01 06 50.6	0.0
J20K				IAmb	IAmb	01 06 51.1	
	comp=Z,2.5nm,0.7s						
J20K	Nowinta River	89.37	11	P	P	01 06 50.2	-0.4
	baz=204,SNR=5.9						
PLCA	Paso Flores	89.42	135	P	P	01 06 53.4	+1.6
	comp=Z,5.3nm,0.8s,baz=212,slow=4.3,SNR=15						
	comp=Z,5.3nm,0.8s						
PLCA	Paso Flores	89.42	135	P	P	01 06 53.5	+1.7
PLCA				IAmb	IAmb	01 06 54.4	
	comp=Z,5.2nm,0.8s						
KTH	Kantishna Hill	89.43	13	P	P	01 06 50.0	-1.0
KTH				IAmb	IAmb	01 06 50.8	
	comp=Z,4.9nm,0.9s						
CHUM	Lake Minchumin	89.44	12	P	P	01 06 49.8	-1.2
	baz=206,SNR=5.0						
TRF	Thorofare Moun	89.47	13	IAmb	IAmb	01 06 51.5	
	comp=Z,8.1nm,0.9s						
TRF	Thorofare Moun	89.47	13	P	P	01 06 49.7	-1.6
	baz=208,SNR=7.2						
NLU	North Lily Min	89.54	46	P	P	01 06 52.6	+0.3
NLU				IAmb	IAmb	01 06 54.8	
	comp=Z,3.5nm,0.9s						
BARN	Barnard Glacie	89.56	18	IAmb	IAmb	01 06 53.4	
	comp=Z,8.5nm,1.0s						
F10A	Beach Ranch, E	89.59	39	IAmb	IAmb	01 06 53.9	
	comp=Z,6.8nm,0.9s						
PZH	PanZhiHua	89.59	299	P	P	01 06 53.3	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,40nm,5.3s						
Q16A	Castle Valley	89.62	47	IAmb	IAmb	01 06 56.4	
	comp=Z,8.0nm,0.8s						
RND	Reindeer	89.74	14	IAmb	IAmb	01 06 53.1	
	comp=Z,8.5nm,1.0s						
RND					pwP	01 09 02.3	+0.9
DHY	Denali Highway	89.78	15	P	P	01 06 51.6	-1.1
	baz=210						
B08A	Colville Reser	89.79	36	IAmb	IAmb	01 06 54.0	
	comp=Z,2.5nm,0.6s						
MPU	Maple Canyon	89.86	46	P	P	01 06 54.7	+0.9
MPU				IAmb	IAmb	01 06 56.3	
	comp=Z,5.8nm,0.8s						
TLIG	Tlapa	89.90	71	P	P	01 06 54.7	+0.4
TLIG				IAmb	IAmb	01 06 56.4	
	comp=Z,7.5nm,0.8s						
HLID	Hailey	89.94	42	P	P	01 06 54.5	+0.4
HLID	Hailey	89.94	42	P	P	01 06 53.0	-1.0
	baz=238						
MCK	McKinley	90.00	14	IAmb	IAmb	01 06 55.6	
	comp=Z,3.4nm,0.8s						
MCK	McKinley	90.00	14	P	P	01 06 53.5	-0.1
	baz=209						
HVU	Hansel Valley	90.03	44	IAmb	IAmb	01 06 56.7	
	comp=Z,6.3nm,0.7s						
SRU	San Rafael Swe	90.15	47	P	P	01 06 55.7	+0.6
P17A	Butcher Ranch,	90.19	47	IAmb	IAmb	01 06 58.5	
	comp=Z,5.1nm,0.9s						
JLU	Jordanelle	90.28	45	IAmb	IAmb	01 06 58.0	
	comp=Z,3.0nm,0.7s						
M26K	Nabesna, AK	90.29	17	P	P	01 06 55.3	+0.3
	baz=214						
MNTX	Cornudas Mount	90.34	56	IAmb	IAmb	01 06 58.6	
	comp=Z,5.0nm,0.9s						
MNTX	Cornudas Mount	90.34	56	P	P	01 06 56.4	+0.5
	baz=243						
EFI	East Falkland	90.36	148	P	P	01 06 57.0	+1.3
YUK6	Outpost Mounta	90.43	19	P	P	01 06 56.3	+0.4
	baz=218						
YUK3	Moose Creek	90.47	18	P	P	01 06 56.4	+0.3
	baz=217						
M27K	Edge Creek, AK	90.56	17	IAmb	IAmb	01 06 58.0	
	comp=Z,5.2nm,1.1s						
M27K	Edge Creek, AK	90.56	17	P	P	01 06 56.8	+0.4
	baz=215						
P18A	Preston Nutter	90.59	47	IAmb	IAmb	01 06 59.5	
	comp=Z,3.9nm,0.7s						
HYT	Haines Junctio	90.60	20	P	P	01 06 57.1	+0.5
	baz=219						
S34M	Telegraph Cree	90.61	24	P	P	01 06 56.9	+0.4
	baz=225						
TX32	Lajitas Array	90.61	58	P	P	01 06 58.5	+1.2
TX32				IAmb	IAmb	01 07 00.4	
	comp=Z,4.6nm,0.9s						
TXAR	Lajitas Array	90.61	58	P	P	01 06 58.7	+1.3
	comp=Z,3.7nm,0.9s,baz=212,slow=6.1,SNR=18						
	comp=Z,3.7nm,0.9s						
YUK4	Talbot Arm	90.66	19	P	P	01 06 57.4	+0.4
	baz=218						
I21K	Tanana	90.67	12	IAmb	IAmb	01 06 57.5	
	comp=Z,3.2nm,0.8s						
I21K	Tanana	90.67	12	P	P	01 06 56.8	+0.1
	baz=206						
HWUT	Hardware Ranch	90.72	45	P	P	01 06 57.2	-0.4
HWUT				IAmb	IAmb	01 06 59.5	
	comp=Z,3.2nm,0.8s						
K24K	Donnelly Dome	90.78	15	P	P	01 06 57.5	+0.3
	baz=212						
WRH	Wood River Hil	90.83	14	IAmb	IAmb	01 06 57.2	
	comp=Z,2.9nm,0.9s						
H21K	Melozitna Rive	90.95	11	P	P	01 06 59.1	+1.1
	baz=206						
ANMO	Albuquerque	91.02	52	P	P	01 06 59.8	+0.6
	comp=Z,2.0nm,0.8s,baz=230,slow=5.5,SNR=9.8						
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	91.02	52	P	P	01 06 59.6	+0.4
ANMO				IAmb	IAmb	01 07 01.4	
	comp=Z,2.5nm,0.8s						
ANMO	Albuquerque	91.02	52	P	P	01 06 59.4	+0.2
	baz=242						
HDA	Harding Lake	91.03	14	IAmb	IAmb	01 07 00.6	
	comp=Z,3.0nm,1.0s						
HDA	Harding Lake	91.03	14	P	P	01 06 58.7	+0.4
	baz=211						
CCB	Clear Creek Bu	91.05	14	IAmb	IAmb	01 06 59.2	
	comp=Z,2.6nm,0.9s						
IMAR	Indian Mountai	91.08	11	P	P	01 06 58.9	+0.3
N30M	Aishikik Lake	91.22	19	P	P	01 06 59.5	+0.2
	baz=220						
MDM	Murphy Dome	91.23	13	IAmb	IAmb	01 06 59.4	
	comp=Z,4.8nm,1.1s						
MDM					pwP	01 09 08.6	+0.2
ILAR	Eielson Array	91.36	14	P	P	01 06 58.9	-0.9
	comp=Z,0.9nm,0.8s,baz=229,slow=5.8,SNR=13						
ILAR				pP	pP	01 09 03.9	-0.5
	comp=Z,2.1nm,1.1s,baz=194,slow=6.5,SNR=5.5						
	comp=Z,0.9nm,0.8s						
J25K	Salcha River,	91.56	14	P	P	01 07 01.1	+0.3
	baz=212						
MCMT	McKenzie Canyo	91.56	41	P	P	01 07 01.9	+0.4
N31M	Braeburn, Yuko	91.64	20	P	P	01 07 02.2	+0.9
	baz=221						
K27K	Chicken	91.87	16	P	P	01 07 02.4	+0.2
K27K	Chicken	91.87	16	P	P	01 07 03.3	+1.1
	baz=215						
J26L	Joseph Creek	91.89	15	P	P	01 07 03.3	+0.9
	baz=214						
S22A	4UR Ranch, Cre	92.04	50	IAmb	IAmb	01 07 07.0	
	comp=Z,2.7nm,0.9s						
S22A	4UR Ranch, Cre	92.04	50	P	P	01 07 03.8	-0.2
	baz=242						
M30M	Minto, Yukon	92.17	19	IAmb	IAmb	01 07 04.9	
	comp=Z,5.0nm,0.8s						
M30M	Minto, Yukon	92.17	19	P	P	01 07 03.7	0.0
	baz=220						
O20A	White River Ci	92.19	47	P	P	01 07 03.9	-0.6
	baz=242						
LZH	Lanzhou	92.23	308	⇓P	P	01 07 06.2	+1.5
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
MT01	Popeta	92.36	128	P	P	01 07 05.7	+0.4
BW06	Boulder Array	92.59	44	P	P	01 07 06.0	-0.3
BW06	Boulder Array	92.59	44	P	P	01 07 05.8	-0.5
	baz=241						
PD31	Pinedale Array	92.59	44	P	P	01 07 07.1	+0.8
PDAR	Pinedale Array	92.59	44	P	P	01 07 06.3	0.0
	comp=Z,1.4nm,0.6s,baz=200,slow=2.8,SNR=19						
PDAR				pP	pP	01 09 10.8	-0.8
	comp=Z,0.3nm,0.8s,baz=204,slow=2.0,SNR=2.1						
	comp=Z,1.4nm,0.6s						
PDAR	Pinedale Array	92.59	44	P	P	01 07 06.6	+0.3
DAWY	Dawson	92.60	17	P	P	01 07 05.7	0.0
DAWY				IAmb	IAmb	01 07 06.7	
	comp=Z,3.0nm,0.9s						
DAWY	Dawson	92.60	17	P	P	01 07 05.9	+0.3
	baz=218						
SMCO	Snowmass	92.60	48	P	P	01 07 06.7	0.0
SMCO				IAmb	IAmb	01 07 09.7	
	comp=Z,2.3nm,0.7s						
M31M	Drury Creek, Y	92.62	20	P	P	01 07 06.0	+0.3
	baz=222						
BOZ	Bozeman (W)	92.70	41	P	P	01 07 07.0	+0.4
	baz=240						
EGAK	Eagle	92.72	16	P	P	01 07 06.5	+0.5
	baz=216						
COLD	Coldfoot	92.83	11	P	P	01 07 07.7	+1.2
	baz=208						
CMIG	Matias Romero	92.94	73	P	P	01 07 08.7	+0.6
	comp=Z,1.8nm,0.7s,baz=0.6,slow=23,SNR=2.6						
	comp=Z,1.8nm,0.7s						
SDCO	Great Sand Dun	92.98	50	P	P	01 07 09.2	+0.9
SDCO				IAmb	IAmb	01 07 10.1	
	comp=Z,1.9nm,0.8s						
SDCO	Great Sand Dun	92.98	50	P	P	01 07 08.1	-0.2
	baz=243						
T25A	Trinidad	93.48	51	P	P	01 07 10.5	0.0
	baz=244						
Q24A	Divide	93.77	49	P	P	01 07 12.0	+0.1
	baz=244						
ISCO	Idaho Springs	93.82	48	P	P	01 07 11.1	-1.1
	baz=243						
BMAR	Burnt Mountain	94.12	13		pwP	01 09 23.7	+1.9
EPYK	Eagle Plains	95.11	16	P	P	01 07 17.2	+0.3
	baz=220						
SONM	Songino Array	95.94	320	P	P	01 07 21.7	+0.4
	comp=Z,1.1nm,0.7s,baz=125,slow=9.0,SNR=3.7						
	comp=Z,1.1nm,0.7s						
INK	Inuvik	97.39	16		pwP	01 09 34.3	-2.4
GOMU	GeErMu	98.94	305	P	P	01 07 36.6	+1.3
GOMU				pP	Pdif	01 07 39.8	+4.6
GOMU				sP	PcP	01 07 41.1	+5.9
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,53nm,4.5s						
YKA	Yellowknife Ar	99.89	26	P	Pdif	01 07 38.2	-0.1
	comp=Z,0.2nm,0.6s,baz=245,slow=4.6,SNR=3.5						
YKA				PKiKP	PKiKP	01 12 01.9	-0.7
	comp=Z,0.2nm,0.6s,baz=242,slow=1.1,SNR=4.8						
	comp=Z,0.2nm,0.6s						
ZALV	Zalesovo Beam	110.79	321	PKiKP	PKiKP	01 12 21.6	-1.5
	comp=Z,1.3nm,0.5s,baz=156,slow=2.1,SNR=7.3						
MKAR	Makanchi Array	111.00	313	Pdiff	Pdif	01 08 28.7	+0.5
	comp=Z,0.5nm,0.7s,baz=110,slow=5.6,SNR=4.1						
MKAR				PKiKP	PKiKP	01 12 22.6	-1.2
	comp=Z,1.2nm,0.6s,baz=128,slow=0.3,SNR=14						
L61B	Northampton	118.28	53	P	PKPdf	01 12 36.5	-1.3
	baz=264						
KBL	Kabul	118.76	298	PKPdf	PKiKP	01 12 39.4	0.0
LBNH	Lisbon	119.00	51	P	PKPdf	01 12 37.5	-1.7
	baz=265						
BDFB	Brasilia	119.94	125	PKP	PKPdf	01 12 41.4	-0.5
	comp=Z,3.7nm,0.6s,baz=159,slow=4.5,SNR=6.5						
PKME	Peaks-Kenny Pk	120.94	50	P	PKPdf	01 12 41.6	-1.2
	baz=268						
SCHQ	Schefferville	122.27	39	PKP	PKPdf	01 12 44.0	-1.1
	comp=Z,2.5nm,0.7s,baz=303,slow=1.2,SNR=6.6						
BOSA	Boshof	122.84	207	PKP	PKPdf	01 12 47.0	-0.3
	comp=Z,4.3nm,0.8s,baz=67,slow=0.6,SNR=8.4						
BOSA	Boshof	122.84	207		PKiKP	01 12 48.0	+0.4
SPA0	Spitsbergen Ar	124.19	356	*e*PKPdf	PKPdf	01 12 47.7	-0.5
ARU	Arti	125.72	324	PKPdf	PKPdf	01 12 51.4	-0.3
NUUK	Nuuk	127.15	25	*i* P	PKPdf	01 12 53.6	-0.5
DY2G	Dye2	127.99	21	*i* P	PKPdf	01 12 54.3	-1.7
DY2G				IAmb	IAmb	01 12 56.8	
	comp=Z,12nm,0.6s						
HAMF	Hammerfest	130.24	350	*e*PKPdf	PKPdf	01 12 59.6	-0.2
ARA0	ARCESS Array S	130.87	348	*e*PKPdf	PKPdf	01 13 00.6	-0.5
ARCES	ARCESS Array B	130.87	348	PKP	PKPdf	01 13 00.0	-1.1
	comp=Z,6.3nm,0.6s,baz=52,slow=2.0,SNR=20						
ARCES				SKPbc	SKPab	01 15 32.5	-0.3
	comp=Z,2.1nm,0.6s,baz=18,slow=2.4,SNR=3.6						
KTK1	Kautokeino	131.74	349	*e*PKPdf	PKPdf	01 13 02.9	+0.2
STEI	Steigen	133.99	352	*e*PKPdf	PKiKP	01 13 07.8	-0.5
MOR8	Moi Rana	135.75	351	*e*PKPdf	PKPdf	01 13 10.7	+0.3
KMBO	Kilima Mbogo	135.85	242	PKP	PKPdf	01 13 11.9	-0.6
	comp=Z,2.0nm,0.6s,baz=62,slow=4.5,SNR=4.5						
KMBO				SKPbc	SKPbc	01 15 52.0	+1.5
	comp=Z,2.1nm,0.7s,baz=227,slow=7.7,SNR=4.8						
FINES	FINESS Array B	137.37	341	PKhKP	PKPpre	01 13 00.5	
	comp=Z,3.4nm,0.9s,baz=335,slow=8.4,SNR=9.5						
FINES				PKP	PKPdf	01 13 12.8	-0.6
	comp=Z,5.7nm,0.7s,baz=40,slow=1.8,SNR=14						
FINES				SKPbc	SKPbc	01 15 52.6	-0.5
	comp=Z,3.9nm,0.8s,baz=96,slow=5.7,SNR=6.7						
FINES	FINESS Array B	137.37	341		PKPpre	01 13 03.0	
FINES				PKPdf	PKPdf	01 13 13.3	-0.1
KBZ	Khabaz	138.63	311	PKP	PKPdf	01 13 16.6	+0.3
	comp=Z,1.9nm,1.0s,baz=55,slow=18,SNR=4.9						
AAL	Aland	140.10	344	*e*P	PKPdf	01 13 17.8	-0.6
DOMB	Dombas	140.41	353	*e*PKPdf	PKPdf	01 13 19.0	-0.1
NB2	NORSAR Subarra	141.09	351	PKP	PKPpre	01 13 14.6	
	comp=Z,2.0nm,0.6s,baz=14,slow=3.1						
NB2	NORSAR Subarra	141.09	351	PKPab	PKPpre	01 13 14.6	
	baz=14,slow=3.1						
NOA	NORSAR Array B	141.09	351	PKhKP	PKPpre	01 13 14.6	
	comp=Z,1.5nm,0.6s,baz=3.5,slow=2.3,SNR=12						
NOA				PKP	PKPdf	01 13 21.1	+0.9
	comp=Z,1.0nm,0.6s,baz=14,slow=3.8,SNR=4.3						
NOA				SKPbc	SKPbc	01 16 03.2	0.0
	comp=Z,1.1nm,0.7s,baz=13,slow=4.1,SNR=3.5						
FOO	Floro	141.23	356	*e*PKPdf	PKPdf	01 13 18.9	-1.5
NC602	NORSAR Array S	141.33	350	*e*PKPdf	PKPdf	01 13 15.7	-5.0
SUE	Sulen	141.79	356	*e*PKPdf	PKPdf	01 13 19.8	-1.6
IDID	Didziasalis	141.80	335	*e*P	PKPdf	01 13 18.6	-3.0
ISAL	Salakas	141.85	335	*e*P	PKPdf	01 13 19.2	-2.5
IIGN	Ignalina	141.98	335	*e*P	PKPdf	01 13 19.0	-2.9
NACGM	Naroch	142.08	334	⇑*e*PKP	PKPdf	01 13 20.9	-1.2
	baz=44						
VSVD	Vaisvydziai	142.35	337	*e*P	PKPdf	01 13 19.9	-2.7
VIKU	Vikbolandet	142.39	345	*e*P	PKPdf	01 13 19.0	-3.5
KONO	Kongsberg	142.66	351	*e*PKPdf	PKPdf	01 13 19.2	-3.8
PABE	Paberze	142.71	337	*e*P	PKPdf	01 13 21.1	-2.1
ODD1	Odda	142.76	354	*e*PKPdf	PKPdf	01 13 20.9	-2.4
PBUR	Paburge	143.01	339	*e*P	PKPbc	01 13 21.8	-0.1
STRU	Stroemstad	143.01	350	*i* P	PKPab	01 13 20.4	-0.8
BLS5	Blasjo	143.26	354	*e*PKPbc	PKPab	01 13 22.3	0.0
KMY	Karmoy	143.58	355	*e*PKPbc	PKPbc	01 13 23.7	+0.2
AKASG	Malin Array Be	143.82	327	PKP	PKPbc	01 13 23.5	-1.1
	comp=Z,18nm,0.6s,baz=45,slow=4.3,SNR=98						
AKASG				SKPbc	SKiKP	01 16 10.3	-0.5
	comp=Z,3.0nm,0.8s,baz=45,slow=3.4,SNR=6.7						
AKASG	Malin Array Be	143.82	327	PKPbc	PKPbc	01 13 23.7	-0.9
TJOU	Tjoern	143.88	349	*i* P	PKPbc	01 13 23.2	-1.3
BORU	Boraas	144.04	348	*i* P	PKPbc	01 13 23.6	-1.4
HOMB	Homborsund	144.14	352	*i* P	PKPbc	01 13 24.6	-0.7
HOMB	Homborsund	144.14	352	*e*PKPbc	PKPbc	01 13 25.2	-0.1
SUW	Suwalki	144.15	336	*e*PKPbc	PKPbc	01 13 24.9	-0.6
SUW	Suwalki	144.15	336	*e*P	PKPbc	01 13 25.3	-0.2
SNART	Snartemo	144.24	353	*e*PKPbc	PKPbc	01 13 24.9	-0.8
ONAU	Onsala	144.43	348	*i* P	PKPdf	01 13 24.8	-1.3
BLEU	Blekinge	144.57	344	*i* P	PKPdf	01 13 24.9	-1.5
FABU	Falkenberg	144.64	347	*i* P	PKPdf	01 13 25.6	-0.9
DEL	Delary	144.88	346	*e*P	PKPbc	01 13 27.5	-0.2
DEL	Delary	144.88	346	*i* P	PKPdf	01 13 26.5	-0.5
GOET	G??ttrup	145.23	350	*i* P	PKPbc	01 13 28.9	+0.3
GOET				IAmb	IAmb	01 13 29.9	
	comp=Z,16nm,0.5s						
BZK	Bozkurt	145.39	311	⇑P	PKPbc	01 13 29.5	-0.1
BJUU	Bjuv	145.43	346	*i* P	PKPdf	01 13 28.1	+0.2
GID	Gilleleje	145.56	347	*i* P	PKPbc	01 13 29.5	-0.2
LUNU	Lund	145.75	346	*i* P	PKPbc	01 13 29.3	-0.9
MUD	Monsted U'grnd	145.80	350	*i* P	PKPdf	01 13 29.3	+0.8
MUD				IAmb	IAmb	01 13 32.4	
	comp=Z,97nm,1.9s						
SORM	Soroca	145.84	324	⇑P	PKPdf	01 13 28.5	-0.4
BSD	Bornholm Skovb	145.86	344	*e*P	PKPbc	01 13 29.6	-0.9
BSD	Bornholm Skovb	145.86	344	*i* P	PKPdf	01 13 29.4	+0.7
BSD				IAmb	IAmb	01 13 31.1	
	comp=Z,19nm,0.8s						
COP	Copenhagen	145.92	347	*i* P	PKPdf	01 13 29.2	+0.5
COP				IAmb	IAmb	01 13 31.3	
	comp=Z,43nm,0.6s						
MILM	Milestii Mici	146.30	322	⇑P	PKPbc	01 13 31.5	-0.6
BRTR	Keskin Array B	146.44	308	PKPbc	PKPbc	01 13 31.9	-0.9
	comp=Z,6.4nm,0.6s,baz=140,slow=4.6,SNR=33						
BRTR	Keskin Array B	146.44	308		PKPdf	01 13 30.0	-0.4
BRTR				PKPbc	PKPbc	01 13 32.8	-0.1
GHAJ	Ghor Haditha	146.70	292		PKPbc	01 13 33.7	+0.1
BEL	Belsk	146.76	335	*e*PKPbc	PKPbc	01 13 33.3	+0.2
GKP	Gorka Klasztor	146.82	340	*e*PKPbc	PKPbc	01 13 33.1	-0.1
GKP	Gorka Klasztor	146.82	340	*e*P	PKPbc	01 13 33.7	+0.5
LEOM	Leova	146.88	322	⇑P	PKPbc	01 13 33.0	-0.6
ANTO	Ankara	147.00	309		PKPbc	01 13 34.5	+0.2
VASR	Vaslui	147.04	323	⇑P	PKPdf	01 13 31.9	+1.0
TLCR		147.26	320	⇑P	PKPbc	01 13 34.6	0.0
VLDR	Vladesti	147.33	321	⇑P	PKPbc	01 13 35.2	+0.4
VARL	Varlezi	147.43	322	⇑P	PKPbc	01 13 34.3	-0.7
JURR	Jurilovca	147.45	319	⇑P	PKPbc	01 13 33.7	-1.4
SCTR	Scanteiesti	147.47	321	⇓P	PKiKP	01 13 36.0	-0.8
GHRR		147.59	322	⇑P	PKiKP	01 13 36.4	-0.5
KWP	Kalwaria Pacla	147.63	331	*e*PKPbc	PKPbc	01 13 35.8	+0.3
KWP	Kalwaria Pacla	147.63	331		PKPbc	01 13 35.4	-0.1
CFR	Carcaliu	147.67	320	⇑P	PKPbc	01 13 35.7	0.0
TPGR	Topolog	147.68	319	⇑P	PKPbc	01 13 36.0	+0.2
TESR	Tescani	147.75	323	⇓P	PKPbc	01 13 35.8	-0.1
BIZ	Bicaz	147.78	324	⇑P	PKPbc	01 13 36.2	+0.2
BUR01	Bucovina Ar. S	147.81	326	⇑P	PKiKP	01 13 37.6	+0.1
PANC	Panciu	147.85	322	⇓P	PKPbc	01 13 36.5	+0.4
TIRR	Tirgusor	147.89	319	⇓P	PKPbc	01 13 36.2	-0.1
MDUB	Mudurnu	147.91	310		PKPbc	01 13 36.6	-0.1
ODBI	Odobesti	147.96	322	⇑P	PKiKP	01 13 38.1	+0.3
MFTR	Murfatlar	148.04	318	⇑P	PKPbc	01 13 37.0	+0.4
HARR	Harsova	148.06	320	⇑P	PKPbc	01 13 37.0	+0.4
VRI	Vrincioaia	148.09	322	⇑P	PKPbc	01 13 36.5	-0.3
VRI				⇑P	PKiKP	01 13 37.1	-0.9
MANR	Mangalia	148.12	318	⇑P	PKPbc	01 13 37.1	+0.2
PLOR	Plostina	148.14	322	⇑P	PKPbc	01 13 36.5	-0.4
PLOR				⇑P	PKPbc	01 13 36.5	-0.4
BISRR	Bisoca	148.29	322	⇑P	PKPbc	01 13 37.5	+0.2
KOLS	Kolonicke sedl	148.33	330	*e*PKP	PKiKP	01 13 37.9	-0.5
COVR	Voineasa-Covas	148.39	323	⇑P	PKPbc	01 13 36.3	-1.2
OJC	Ojcow	148.41	334	*e*PKPbc	PKPbc	01 13 37.2	-0.2
ICOR	Ion Corvin	148.45	319	⇑P	PKPbc	01 13 37.5	-0.1
OZUR		148.47	323	⇑P	PKPbc	01 13 38.1	+0.3
RUE	Ruedersdorf	148.52	343	*e*P	PKPbc	01 13 37.9	+0.4
NEHR	Nehoiu	148.59	322	⇓P	PKPbc	01 13 38.1	0.0
ARCR	ARCALIA	148.61	326	⇑P	PKPbc	01 13 38.1	+0.1
ISR	Istrita	148.63	321	⇓P	PKPbc	01 13 37.3	-0.9

BORA	Eskisehir	148.67	310		PKPbc	01 13 38.4	-0.1
CRVS	Cervenica-Dubn	148.72	331	ePKP	PKiKP	01 13 38.8	-0.4
MLR	Muntele Rosu	148.75	322	⇑P	PKPbc	01 13 38.1	-0.6
MLR	Muntele Rosu	148.75	322		PKPbc	01 13 38.0	-0.6
DOPR	Dopca	148.77	324	⇑P	PKPbc	01 13 38.1	-0.4
NIE	Niedzica	148.83	333	ePKPbc	PKiKP	01 13 40.2	+0.7
SECR		148.95	322	⇑P	PKPbc	01 13 39.0	+0.1
KSP	Ksiaz	149.19	339	ePKPbc	PKPbc	01 13 39.6	+0.3
CBBR	Cluj-Babes-Bol	149.23	326	⇑P	PKPbc	01 13 39.6	+0.1
CJR	Cluj-Napoca	149.24	326	⇓P	PKPbc	01 13 39.7	+0.1
MESR	Meseseni	149.27	327	⇓P	PKPbc	01 13 39.0	-0.6
VOIR		149.29	323	⇑P	PKPbc	01 13 39.7	-0.1
OKC	Ostrava-Krasne	149.36	336	⇑ePKP	PKPbc	01 13 39.9	+0.2
LANS	Liptovska Anna	149.38	333	ePKP	PKiKP	01 13 40.8	+0.2
OSTC	Ostas	149.46	338	⇑ePKP	PKiKP	01 13 40.7	0.0
CHVC	Chvalec	149.49	339	⇑ePKP	PKPbc	01 13 40.3	+0.3
RAZG	Razgrad	149.53	319	⇓P	PKPbc	01 13 40.3	-0.1
ARR	Arges	149.56	323	⇑P	PKiKP	01 13 41.5	+0.3
UPC	Upice	149.57	339	⇑ePKP	PKiKP	01 13 40.6	-0.3
DPC	Dobruska-Polom	149.60	338	⇑ePKP	PKiKP	01 13 40.7	-0.4
LTVH	Ltavrtes, Hu	149.62	329	⇑P	PKiKP	01 13 41.0	-0.1
DRGR		149.64	327	⇑P	PKPbc	01 13 40.5	-0.1
MORC	Moravsky Berou	149.64	336	⇓P	PKPbc	01 13 40.6	+0.2
MORC	Moravsky Berou	149.64	336	ePKP	PKPbc	01 13 40.3	-0.2
KRLC	Kraliky	149.67	337	⇑ePKP	PKPbc	01 13 40.6	+0.1
CLL	Collm	149.79	343	⇓iPKPbc	PKPbc	01 13 40.6	-0.1
	comp=Z,47nm,0.8s						
CLL				i pPKPab	pPKPab	01 15 54.3	-1.1
CLL				ex	x	01 16 00.0	
MAUC	Maruska	149.87	335	⇑ePKP	PKiKP	01 13 41.5	-0.1
HUMR	Humele	149.88	322	⇑P	PKPbc	01 13 40.6	-0.5
BRG	Berggiesshubel	149.91	341	i PKP	PKPbc	01 13 41.2	+0.2
BRG				Amp		01 13 42.6	
	comp=Z,32nm,0.6s						
BRG				ex	x	01 13 48.6	
BRG				Amp		01 13 49.4	
	comp=Z,11nm,1.0s						
BRG				ex	x	01 15 55.5	
BRG				Amp		01 16 02.9	
	comp=Z,16nm,1.8s						
LOT	Lotru	149.98	324	⇑P	PKPbc	01 13 40.9	-0.6
PVCC	Panska Ves	150.02	340	⇑ePKP	PKiKP	01 13 41.8	0.0
JMB	Yambol	150.08	317	P	PKPbc	01 13 41.0	-0.6
PSZ	Piszkesteto	150.15	331	⇑P	PKPbc	01 13 41.6	-0.2
PSZ	Piszkesteto	150.15	331	PKP	PKiKP	01 13 42.8	+0.5
VYHS	Vyhne	150.16	333	ePKP	PKPbc	01 13 41.8	+0.1
KOLL	Kolacno	150.27	334	ePKP	PKiKP	01 13 42.2	-0.2
JAVC	Velka Javorina	150.34	335	ePKP	PKiKP	01 13 43.0	+0.4
VRAC	Vranov	150.38	337	⇓P	PKiKP	01 13 42.4	-0.2
VRAC	Vranov	150.38	337	ePKP	PKPbc	01 13 41.9	-0.2
VRAC				e		01 13 51.6	
PRU	Pruhonice	150.50	340	⇑ePKP	PKPbc	01 13 42.3	-0.1
SIRR	Siria	150.52	327	⇑P	PKPbc	01 13 42.0	-0.6
GZR	Gura Zlata	150.54	325	⇑P	PKPbc	01 13 42.4	-0.3
KRUC	Moravsky	150.65	337	ePKP	PKPbc	01 13 42.5	-0.3
KRUC				e		01 13 52.4	
TREC	Trest	150.78	338	⇑ePKP	PKPbc	01 13 43.1	0.0
MODS	Modra-Piesok	150.88	335	ePKP	PKiKP	01 13 43.7	0.0
SRO	Srobarova	150.91	333	ePKP	PKiKP	01 13 43.7	0.0
NKC	Novy Kostel	150.91	342	⇑ePKP	PKPbc	01 13 43.3	-0.1
SRO2	Moca	150.92	333	ePKP	PKPbc	01 13 42.8	-0.6
HERR	Herculane	151.07	325	⇑P	PKPbc	01 13 43.6	-0.3
ZST	Bratislava	151.10	335	ePKP	PKPbc	01 13 43.8	0.0
CSKK	Cskako	151.28	332	PKP	PKPbc	01 13 43.8	-0.5
MDVR	Moldovita	151.51	325	⇑P	PKPbc	01 13 43.5	-1.4
KHC	Kasperske Hory	151.56	340	ePKP	PKPbc	01 13 44.8	-0.1
KHC				ePKPAB	PKPab	01 13 56.6	+0.4
CKRC	Cesky Krumlov	151.59	339	⇑ePKP	PKPbc	01 13 45.0	+0.1
CKRC				ePKPAB	PKPab	01 13 56.8	+0.5
EGYH	Egyhazaskeszo	151.63	334	PKP	PKiKP	01 13 45.9	+0.6
MPLH	Magyarpolny	151.74	333	PKP	PKiKP	01 13 45.4	-0.1
BLKB	Belogradchik	151.75	322	⇓P	PKPbc	01 13 44.7	-0.8
GERES	GERESS Array B	151.77	339	PKP	PKPdf	01 13 38.6	+0.2
	comp=Z,4.2nm,0.7s,baz=103,slow=3.1,SNR=3.5						
GERES				PKPbc	PKPbc	01 13 45.2	-0.2
	comp=Z,5.5nm,0.7s,baz=48,slow=2.0,SNR=37						
GERES				pPKPbc	pPKPbc	01 15 55.8	-1.7
	comp=Z,0.8nm,0.9s,baz=333,slow=1.1,SNR=2.7						
CONA	Conrad Observa	151.79	336	eP	PKPbc	01 13 45.4	-0.1
	comp=Z,7.6nm,0.7s						
CONA				eP	PKPab	01 13 58.3	+1.0
	comp=Z,7.5nm,0.7s						
CONA				eP	pPKPab	01 16 02.7	-1.0
	comp=Z,13nm,1.3s						
RONA	Rosalia, Austr	151.81	335	eP	PKPbc	01 13 45.4	-0.1
	comp=Z,15nm,0.7s						
RONA				eP	PKPab	01 13 58.2	+0.9
	comp=Z,7.0nm,1.2s						
RONA				eP	pPKPab	01 16 02.7	-1.1
	comp=Z,9.9nm,1.5s						
MEM	Membach	151.94	351	dPKP	PKPbc	01 13 45.3	-0.3
BTNL	Ternell	151.95	351	dPKP	PKPbc	01 13 45.4	-0.3
BSTI	Sart Tilman	152.03	351	dPKP	PKPbc	01 13 45.6	-0.2
VTS	Vitosha	152.04	320	P	PKPbc	01 13 46.0	-0.3
BHOU	Houvegnez	152.19	351	dPKP	PKiKP	01 13 46.5	+0.1
FRGS	Fruska Gora	152.22	328	⇓P	PKPbc	01 13 46.3	-0.2
KOVH	Kovagotottos	152.34	331	PKP	PKPbc	01 13 46.4	-0.2
MMB	Musomiste	152.34	318	P	PKPbc	01 13 45.0	-1.8
BMRD	Maredsous	152.41	352	dPcP	PKPbc	01 13 46.4	-0.2
BMRD				dPKPab	PKPab	01 13 59.5	-0.2
RCHB	Rochefort	152.50	352	dPKP	PKPbc	01 13 46.4	-0.4
DOU	Dourbes	152.64	352	dPKP	PKPbc	01 13 46.9	-0.2
BIOA	Bad Ischl, Aus	152.79	338	eP	PKPbc	01 13 46.5	-1.1
	comp=Z,3.5nm,0.9s						
BIOA				eP	PKPab	01 14 02.2	+0.7
	comp=Z,3.9nm,0.8s						
BIOA				P	pPKPbc	01 16 01.7	+2.0
	comp=Z,2.7nm,0.7s						
SOKA	Soboth	153.15	335	eP	PKPbc	01 13 48.0	-0.5
	comp=Z,5.1nm,1.0s						
SOKA				eP	PKPab	01 14 03.2	+0.1
	comp=Z,6.4nm,1.3s						
SOKA				eP	pPKPab	01 16 05.6	-3.7
	comp=Z,8.2nm,1.4s						
MYKA	Terra Mystica	153.70	337	eP	PKPbc	01 13 48.3	-1.4
	comp=Z,3.1nm,0.5s						
MYKA				eP	PKPab	01 14 04.8	-0.6
	comp=Z,3.9nm,0.7s						
MYKA				eP	pPKPbc	01 16 05.9	+4.0
	comp=Z,11nm,1.6s						
WATA	Walderalm	153.77	341	eP	PKPbc	01 13 49.2	-0.7
	comp=Z,3.2nm,0.5s						
WATA				eP	PKPab	01 14 06.2	+0.4
	comp=Z,7.8nm,1.1s						
WATA				eP	pPKPdf	01 15 57.7	+2.8
	comp=Z,1.9nm,0.7s						
WTTA	Wattenberg	153.81	341	eP	PKPbc	01 13 49.7	-0.3
	comp=Z,7.3nm,0.5s						
WTTA				eP	PKPab	01 14 06.6	+0.6
	comp=Z,6.3nm,0.7s						
WTTA				eP	pPKPbc	01 16 07.0	+4.7
	comp=Z,3.4nm,0.7s						
RETA	Reutte	153.87	342	eP	PKiKP	01 13 50.4	+0.4
	comp=Z,2.6nm,0.6s						
RETA				eP	PKPab	01 14 06.1	0.0
	comp=Z,6.7nm,1.4s						
RETA				eP	pPKPab	01 16 08.0	-4.4
	comp=Z,5.2nm,1.0s						
MOTA	Moosalm	153.90	341	eP	PKPab	01 14 07.3	+1.0
	comp=Z,11nm,1.3s						
MOTA				eP	pPKPab	01 16 08.6	-4.0
	comp=Z,8.2nm,1.4s						
SQTA	Sankt Quirin	153.98	341	eP	PKPbc	01 13 49.6	-0.7
	comp=Z,5.1nm,0.6s						
SQTA				eP	PKPab	01 14 07.5	+0.9
	comp=Z,10nm,1.3s						
SQTA				eP	pPKPdf	01 15 54.9	-0.3
	comp=Z,4.7nm,0.9s						
ABTA	Abfaltersbach	153.99	339	eP	PKPbc	01 13 49.2	-1.1
	comp=Z,4.7nm,0.6s						
ABTA				eP	pPKPbc	01 16 07.2	+4.7
	comp=Z,7.0nm,1.2s						
DAVA	Damuels	154.30	343	eP	PKPbc	01 13 52.1	+1.1
	comp=Z,3.7nm,0.7s						
DAVA				eP	PKPab	01 14 08.3	+0.2
	comp=Z,0.9nm,0.4s						
DAVA				eP	pPKPbc	01 16 07.0	+3.7
	comp=Z,9.3nm,1.3s						
FETA	Feichten	154.30	342	eP	pPKPbc	01 16 08.4	+5.1
	comp=Z,5.9nm,1.3s						
ESDC	Sonseca Array	163.18	8	PKPab	PKPab	01 14 46.5	-0.3
	comp=Z,1.0nm,0.8s,baz=336,slow=3.6,SNR=6.4						
DBIC	Dimbokro	163.29	166	PKP	PKPdf	01 13 52.9	-0.4
	comp=Z,6.0nm,0.7s,baz=193,slow=3.0,SNR=7.5						
DBIC				PKPab	PKPab	01 14 48.5	+0.7
	comp=Z,8.3nm,0.9s,baz=185,slow=6.5,SNR=4.1						
TORD	Torodi Ar. Bea	169.90	194	PKP	PKPdf	01 13 57.4	-0.8
	comp=Z,1.6nm,1.0s,baz=79,slow=7.5,SNR=6.7						
TORD				PKPab	PKPab	01 15 16.9	-0.1
	comp=Z,6.3nm,0.4s,baz=87,slow=31,SNR=5.3						

IDC 13 00:57:21.3±398.0**, 29°.34N×120°.21W, h0^{km}, Error ellipse: s-maj=172.0km s-min=112.3km az=16.0, Off west coast of Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	PINON FLAT INF	5.32	36	i		01 26 10.0	
	baz=218,slow=316,SNR=1.2						
I10CA	LAC DU BONNET	27.70	34	i		03 51 30.0	
	baz=226,slow=330,SNR=5.1						
I59US	HAWAII INFRASO	33.79	261	i		04 22 50.0	
	baz=59,slow=323,SNR=1.4						

IDC 13 01:17:56.4±2.3**, 1°.86N×126°.65E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=180.1km s-min=28.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.94	161	P	P	01 23 02.0	-0.4
	0.4nm,0.4s,baz=340,slow=11,SNR=9.0 0.4nm,0.4s						
ASAR	Alice Springs	26.34	165	P	P	01 23 34.9	+0.6
	0.2nm,0.4s,baz=355,slow=10,SNR=1.7 0.2nm,0.4s						
MKAR	Makanchi Array	59.04	326	P	P	01 27 58.1	-0.2
	0.2nm,0.5s,baz=131,slow=7.9,SNR=1.9 0.2nm,0.5s						

*ISK **13** 01:25:21.8, 39°.47N×26°.30E, h11^{km}, ML2.5/17*
*DDA **13** 01:25:22.7±0.0, 39°.48N×26°.34E, h10^{km}±1^{km}, ML2.4*
*THE **13** 01:25:23.3, 39°.48N×26°.28E, h5^{km}±2^{km}, ML1.9/5, Error ellipse: s-maj=2.4km s-min=0.6km az=231.0*
*ATH **13** 01:25:23.6, 39°.46N×26°.25E, h16^{km}±3^{km}, ML2.0/2, Error ellipse: s-maj=3.6km s-min=1.3km az=225.0*
ISC 13 01:25:22.6±0.8**, 39°.47N**±0°.01×**26°.32E**±0°.02**, h15^{km}**±6^{km}**, n64, σ0^{s}.38**/90**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.14	283	P	Pg	01 25 26.5	+0.1
KOCA				i AML	AML	01 25 29.0	
	comp=E,910nm,0.2s						
KOCA				i AML	AML	01 25 29.0	
	comp=N,2μm,0.4s						
KOCA				S	Sg	01 25 29.3	+0.3
GPNR	Gulpinar-Canak	0.14	264	PG	Pg	01 25 25.9	-0.5
PRK	Paraskevi	0.23	189	P	Pb	01 25 28.5	+0.1
PRK				S	Sb	01 25 32.5	+0.2
PRK				AML	AML	01 25 35.6	
	comp=N,760μm,0.2s						
PRK				AML	AML	01 25 37.7	
	comp=E,753μm,0.5s						
PRK	Paraskevi	0.23	189	P	Pb	01 25 28.5	+0.1
PRK				S	Sb	01 25 32.1	-0.2
	comp=E,382nm,0.3s						
BAYC	CANAKKALE_Bayr	0.32	33	P	Pg	01 25 29.0	-0.4
BAYC				S	Sg	01 25 33.5	-0.4
AYVA	Ayvalik	0.33	119	P	Pg	01 25 29.4	-0.1
AYVA				i AML	AML	01 25 34.0	
	comp=E,406nm,0.2s						
AYVA				S	Sg	01 25 34.4	+0.2
EZN	Ezine	0.35	1	P	Pg	01 25 30.0	+0.1
EZN				S	Sg	01 25 35.3	+0.4
	comp=E,415nm,0.2s						
EZN	Ezine	0.35	1	PG	Pg	01 25 29.7	-0.2
EZN				SG	Sg	01 25 35.3	+0.4
BOZC	Bozcaada	0.42	331	PG	Pg	01 25 30.9	-0.2
BOZC				SG	Sg	01 25 37.1	+0.2
BOZC	Bozcaada	0.42	331	P	Pg	01 25 31.4	+0.2
BOZC				i AML	AML	01 25 37.0	
	comp=E,349nm,0.3s						
BOZC				i AML	AML	01 25 37.0	
	comp=E,290nm,0.3s						
BOZC				S	Sg	01 25 37.4	+0.4
SIGR	SIGRI	0.44	234	P	Pg	01 25 31.3	-0.2
SIGR				S	Sg	01 25 37.1	-0.3
SIGR				AML	AML	01 25 38.4	
	comp=E,735μm,0.4s						
SIGR				AML	AML	01 25 38.8	
	comp=N,914μm,0.3s						
SIGR	SIGRI	0.44	234	P	Pg	01 25 31.3	-0.2
SIGR				S	Sg	01 25 37.7	+0.3
	comp=N,415nm,0.3s						
ECEA	Canakkale, Ece	0.58	349	P	Pg	01 25 34.4	+0.2
ECEA				i AML	AML	01 25 45.0	
	comp=N,166nm,0.5s						
BUHA	Balikesir, Bur	0.59	87	P	Pg	01 25 34.1	-0.2
BUHA				S	Sg	01 25 42.0	-0.1
DKL	Dikili	0.61	131	PG	Pg	01 25 34.6	+0.1
DKL				SG	Sb	01 25 43.4	+0.2
ZEDA	zmir-Bergama	0.78	130	P	Pb	01 25 37.6	-0.1
ZEDA				S	Sg	01 25 48.4	+0.5
GOKA	anakkale-Gk	0.79	337	P	Pb	01 25 37.6	-0.4
GOKA				S	Sg	01 25 48.7	+0.4
GOKA				i AML	AML	01 25 50.0	
	comp=N,116nm,0.6s						
GADA	Gvkgeada	0.79	336	PG	Pb	01 25 37.7	-0.3
GADA				SG	Sb	01 25 48.3	-0.2
FOCM	Foa	0.82	157	PG	Pb	01 25 38.1	-0.5
GELI	Tayfur-Gelibol	0.94	7	PG	Pb	01 25 40.3	-0.2
GELI				SG	Sn	01 25 53.6	-0.7
LIA	Limnos Island	0.97	296	P	Pn	01 25 41.4	-0.3
LIA	Limnos Island	0.97	296	P	Pn	01 25 41.5	-0.2
LIA				S	Sn	01 25 54.9	-0.3
	comp=N,75nm,0.3s						
BALY	Balya	1.04	75	P	Pn	01 25 42.4	-0.3
BALY				S	Sg	01 25 56.1	-0.3
STEP	BALIKESIR_Sava	1.09	94	P	Pg	01 25 43.9	+0.3
PSRA	Psara	1.10	213	P	Pg	01 25 43.8	0.0
CHOS	Chios island	1.10	191	P	Pb	01 25 42.9	-0.5
CHOS	Chios island	1.10	191	P	Pb	01 25 42.9	-0.5
CHOS	Chios island	1.10	191	PN	Pb	01 25 43.2	-0.2
URLA	Izmir	1.13	169	PN	Pn	01 25 43.5	-0.4
URLA				SN	Sg	01 25 59.4	+0.2
SMTH	Samothraki Isl	1.17	329	P	Pb	01 25 44.5	0.0
SMTH	Samothraki Isl	1.17	329	P	Pb	01 25 44.5	0.0
SMTH				S	Sg	01 26 00.7	+0.3
	comp=N,45nm,0.1s						
KRBG	Karabiga-Canak	1.19	39	PN	Pb	01 25 44.9	0.0
GONE	Gonen-Balikesi	1.20	61	PN	Pb	01 25 45.3	+0.2
ERIK	Erikli-Kesan	1.21	7	PN	Pb	01 25 45.0	-0.2
ERIK				SN	Sn	01 26 01.3	+0.2
BLCB	Balcova	1.22	152	P	Pg	01 25 45.8	-0.4
BLCB	Balcova	1.22	152	PN	Pn	01 25 45.1	0.0
BLCB				SN	Sg	01 26 02.1	0.0
CAVK	Edirne/Enez-Ca	1.23	355	P	Pg	01 25 46.1	-0.1
KNL	Balıkesir	1.23	49	P	Pg	01 25 45.9	-0.4
KNL				i AML	AML	01 26 01.0	
	comp=N,74nm,1.0s						
ENEZ	Enez	1.27	354	P	Pg	01 25 46.9	-0.2
ENEZ	Enez	1.27	354	PN	Pb	01 25 46.1	-0.1
ENEZ				SN	Sg	01 26 03.8	+0.1
KESN	Edirne-Kesan	1.38	12	P	Pb	01 25 48.5	+0.1
KESN				S	Sg	01 26 06.7	-0.7
RKY	Sarkoy-Tekirda	1.38	28	PN	Pb	01 25 47.8	-0.4
SART	Tekirdag	1.39	28	P	Pb	01 25 48.0	-0.2
SART				S	Sb	01 26 06.1	+0.3
MAR6	Marsite Statio	1.43	30	PN	Pn	01 25 48.1	+0.1
ALN	Alexandroupoli	1.44	352	P	Pb	01 25 49.4	+0.3
ALN	Alexandroupoli	1.44	352	P	Pb	01 25 48.8	-0.3
ALN	Alexandroupoli	1.44	352	PN	Pn	01 25 48.3	+0.2
MAR3	Marsite Statio	1.48	30	PN	Pb	01 25 49.1	-0.7
EDC	Edincik	1.48	53	PN	Pb	01 25 49.2	-0.6
GZKV	Gazikoy-Tekird	1.49	31	PN	Pb	01 25 49.3	-0.7
MRMT	Marmara Adasi	1.50	41	PN	Pb	01 25 49.5	-0.7
UKOP	Uzunkopru-Edir	1.67	8	PN	Pn	01 25 51.6	+0.2
KCTX	Karacabey (Bur	1.76	63	PN	Pn	01 25 52.9	+0.3
RDO	Rodhopi	1.78	341	P	Pn	01 25 53.6	+0.8
RDO	Rodhopi	1.78	341	P	Pn	01 25 53.5	+0.8
TKR	Tekirdag	1.78	31	PN	Pn	01 25 53.3	+0.5
SMG	Samos	1.81	167	P	Pb	01 25 56.1	+0.8
GCAM	G?zelcaml?	1.91	158	PN	Pn	01 25 54.8	+0.3
AYDB	Zeytinkoy-Aydi	1.96	141	PN	Pn	01 25 55.5	+0.1
SIMA	Simav-Kutahya	2.10	100	PN	Pn	01 25 57.5	+0.1
EDRB	Edirne	2.40	8	PN	Pn	01 26 01.7	+0.4
TVSB	Tavsanli	2.44	89	PN	Pn	01 26 02.5	+0.6
TRML	Termal-Yalova	2.47	62	PN	Pn	01 26 03.1	+0.8
YLV	Yalova	2.59	64	PN	Pn	01 26 05.0	+1.0

*IDC **13** 01:28:43.5±0.6, 51°.74N×175°.44W, h0^{km}, mb4.0/15, mbtmp4.0/17, ML4.3/2, MS3.2/13, Error ellipse: s-maj=22.9km s-min=14.4km az=155.0*
*NEIC **13** 01:28:48.7±2.0, 51°.54N±0°.07×175°.27W±0°.05, h27^{km}±4^{km}, mb4.1/68, ML4.0(AEIC), Error ellipse: s-maj=10.9km s-min=4.0km az=169.0*
*AEIC **13** 01:28:49±2.4, 51°.62N±0°.07×175°.21W±0°.05, h26^{km}±4^{km}, Error ellipse: s-maj=10.1km s-min=3.9km az=168.0*
ISC 13 01:28:50.8±1.2**, 51°.7N**±0°.1×**175°.28W**±0°.04**, h51^{km}**±9^{km}**, n259, σ1^{s}.10**/228**, mb4.1**/26**, MS3.3**/12**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.52	311		Pn	01 29 01.3	-1.0
GSIG					Sn	01 29 09.8	-0.9
GSMY	Great Sitkin M	0.62	310		Pn	01 29 02.8	-0.7
GSCK	Great Sitkin C	0.66	304		Pn	01 29 03.2	-0.8
GSTD	Great Sitkin T	0.67	308		Pn	01 29 03.5	-0.7
ETKA	Kagalaska Isla	0.73	287		Pn	01 29 03.7	-1.2
ATKA	Atka Island	0.87	50		Pn	01 29 05.0	-1.8
ATKA					Sn	01 29 16.6	-1.9
ADAG	Mount Adagdak	0.88	293		Pn	01 29 06.8	-0.1
ADK	Adak	0.90	286	Pn	Pn	01 29 06.0	-1.1
ADK	Adak	0.90	286		Sn	01 29 18.4	-0.8
KOKL	Mount Kliuchef	0.95	44		Pn	01 29 06.8	-1.1
KIWB	Kanaga Island	1.18	281		Pn	01 29 09.6	-1.3
KINC	Kanaga Island	1.18	285		Pn	01 29 10.2	-0.7
KIKV	Kanaga Island	1.20	282		Pn	01 29 10.3	-0.8
KICM	Kanaga Island	1.22	284		Pn	01 29 10.8	-0.6
KIMD	Kanaga Island	1.22	276		Pn	01 29 10.2	-1.3
TAPA	Tanaga Point A	1.58	277		Pn	01 29 15.9	-0.5
TAFL	Tanaga Flats	1.63	275		Pn	01 29 16.5	-0.5
TAFP	Tanaga Falls P	1.70	280		Pn	01 29 17.7	-0.3
TAFP					Sn	01 29 39.1	+0.6
TASE	Tanaga Southea	1.72	277		Pn	01 29 18.2	-0.1
GAEA	Gareloi East	2.16	275		Pn	01 29 24.5	+0.2
GAEA					Sn	01 29 51.7	+1.9
GALAA	Gareloi Lava P	2.17	274		Pn	01 29 24.5	+0.1
GANO	Gareloi North	2.20	276		Pn	01 29 24.6	-0.1
GANO					Sn	01 29 53.0	+2.2
GASW	Gareloi Southw	2.23	275		Pn	01 29 25.6	+0.4
NIKH	Nikolski High	4.16	69		Pn	01 29 50.7	-1.0
NIKH					Sn	01 30 39.0	0.0
NIKH	Nikolski High	4.16	69	P	Pn	01 29 52.1	+0.5
	baz=253						
OKFG	Magazine Ridge	4.83	66		Pn	01 30 00.5	-0.4
MSW	Makushin Switc	5.64	63		Pn	01 30 12.8	+0.9
MSW					Sn	01 31 18.4	+3.2
UNV	Unalaska Valle	5.77	64		Sn	01 31 20.0	+1.6
UNV	Unalaska Valle	5.77	64	Pn	Pn	01 30 16.1	+2.5
UNV	Unalaska Valle	5.77	64	P	Pn	01 30 16.9	+3.2
	baz=251						
AKBBA	Akutan Broad B	6.17	63		Pn	01 30 20.0	+0.8
SPIA	Saint Paul Isl	6.27	26	Pn	Pn	01 30 23.1	+2.6
SPIA	Saint Paul Isl	6.27	26	P	Pn	01 30 23.0	+2.5
	baz=210,SNR=14						
SMY	Shemya	6.62	284		Pn	01 30 26.4	+1.1
SDPT	Sand Point	9.57	61	Pn	Pn	01 31 07.2	+1.5
SDPT	Sand Point	9.57	61	P	Pn	01 31 06.6	+1.0
	baz=253						
CNBA	Chernabura Isl	9.93	65	Pn	Pn	01 31 10.5	-0.1
CHNA	Chernabura Isl	9.93	65	P	Pn	01 31 10.3	-0.4
	baz=257						
GAMB	Gambell	12.31	7	P	Pn	01 31 44.1	+1.1
	baz=190						
O18K	Koktuh Hills	13.93	46	P	Pn	01 32 07.2	+2.1
	baz=242						
OHAK	Old Harbor	13.93	58	Pn	Pn	01 32 07.2	+2.0
OHAK	Old Harbor	13.93	58	P	Pn	01 32 06.9	+1.7
	baz=256						
ANM	Nome	13.94	18		Pn	01 32 07.6	+2.3
ANM	Nome	13.94	18	P	Pn	01 32 07.6	+2.3
	baz=206,SNR=5.7						
N18K	Kilae Creek	14.04	42	Pn	Pn	01 32 08.0	+1.4
N18K	Kilae Creek	14.04	42	P	Pn	01 32 09.2	+2.6
	baz=238						
Q19K	Cape Douglas,	14.27	51	Pn	Pn	01 32 11.8	+2.0
Q19K	Cape Douglas,	14.27	51	P	Pn	01 32 12.4	+2.6
	baz=248						
SVW2	Sparrevohn	14.39	41		Pn	01 32 12.3	+1.0
KDAK	Kodiak Island	14.44	56	Pn	Pn	01 32 10.3	-1.7
	1.1nm,0.3s,baz=188,slow=2.9,SNR=22 3.3nm,0.3s						
KDAK	Kodiak Island	14.44	56	Pn	Pn	01 32 11.8	-0.2
KDAK	Kodiak Island	14.44	56	P	Pn	01 32 13.5	+1.5
	baz=254						
TNA	Tin City	14.45	12	Pn	Pn	01 32 11.8	-0.3
TNA	Tin City	14.45	12	P	Pn	01 32 14.0	+1.9
	baz=198,SNR=6.5						
N19K	Bonanza Creek	14.70	43		Pn	01 32 16.7	+1.3
N19K	Bonanza Creek	14.70	43	P	Pn	01 32 17.3	+1.8
	baz=240,SNR=9.4						
P19K	Oil Pt	14.74	49	Pn	P	01 32 18.6	-2.4
P19K	Oil Pt	14.74	49	P	Pn	01 32 18.3	+2.3
	baz=247						
L19K	White Mountain	15.27	38		P	01 32 27.4	+0.6
L19K				IAmb	IAmb	01 32 32.9	
	comp=Z,17nm,0.9s						
L19K	White Mountain	15.27	38	P	P	01 32 25.1	-1.8
	baz=235,SNR=20						
TTA	Tatalina	15.29	35	Pn	Pn	01 32 24.5	+1.4
TTA				IAmb	IAmb	01 32 31.3	
	comp=Z,13nm,1.3s						
TTA	Tatalina	15.29	35	P	P	01 32 25.7	-1.4
	baz=231,SNR=10						
RSO	Redoubt South	15.30	46	Pn	Pn	01 32 25.1	+1.8
M19K	Big River Lodg	15.30	40	P	P	01 32 25.5	-1.6
	baz=237						
CNPM	China Poot	15.64	50	IAmb	IAmb	01 32 39.2	
	comp=Z,21nm,1.2s						
L20K	Farewell, AK	15.82	38	P	P	01 32 31.7	-1.2
	baz=236,SNR=5.5						
BRLK	Bradley Lake	15.89	50	IAmb	IAmb	01 32 35.4	
	comp=Z,16nm,1.2s						
BRSE	Bradley Lake S	15.95	50	P	Pn	01 32 31.1	-0.5
	baz=250						
K20K	Telida	16.25	36	P	P	01 32 37.4	-0.2
	baz=233						
PETK	Petropavlovsk-	16.53	286	Pn	Pn	01 32 38.0	-0.9
	comp=Z,0.3nm,0.3s,baz=98,slow=15,SNR=8.2						
PETK				LR	LR	01 38 35.4	
	comp=Z,53nm,21.0s,baz=85,slow=36						
PPLA	Purkeypile	16.70	39	IAmb	IAmb	01 32 51.5	
	comp=Z,12nm,1.2s						
PPLA	Purkeypile	16.70	39	P	P	01 32 43.3	+0.6
	baz=238						
J20K	Nowinta River	16.73	33	P	P	01 32 43.7	+0.8
	baz=231						
CAST	Castle Rocks	17.02	37	P	P	01 32 47.1	+1.0
	baz=237,SNR=13						
CHUM	Lake Minchumin	17.20	36	P	P	01 32 48.9	+0.8
	baz=235,SNR=5.1						
KTH	Kantishna Hill	17.54	38	IAmb	IAmb	01 32 58.7	
	comp=Z,17nm,1.0s						
KNK	Knik Glacier	17.60	46	P	Pn	01 32 51.7	-0.4
	baz=248						
TRF	Thorofare Moun	17.73	39	P	P	01 32 54.9	+0.8
	baz=240						
BPAW	Bear Paw Mtn.	17.80	36		Pn	01 32 54.4	-0.2
BPAW				IAmb	IAmb	01 33 01.7	
	comp=Z,5.6nm,0.6s						
BPAW	Bear Paw Mtn.	17.80	36	P	P	01 32 56.0	+1.2
	baz=237,SNR=16						
SML	Sawmill	17.80	45	P	Pn	01 32 54.0	-0.6
	baz=247						
GLI	Glacier Island	18.04	48	IAmb	IAmb	01 33 00.2	
	comp=Z,23nm,1.8s						
GLI	Glacier Island	18.04	48	P	P	01 32 55.8	-1.6
	baz=252						
M23K	Glacier View	18.07	45	P	P	01 32 56.5	-1.2
	baz=248,SNR=7.3						
I21K	Tanana	18.08	33	IAmb	IAmb	01 33 02.0	
	comp=Z,11nm,1.1s						
I21K	Tanana	18.08	33	P	Pn	01 32 59.1	+1.2
	baz=232,SNR=16						
H21K	Melozitna Rive	18.11	31	P	Pn	01 32 59.6	+1.3

	baz=230,SNR=10						
SCM	Sheep Creek Mo	18.26	45	P	P	01 32 59.0	-0.8
	baz=249,SNR=5.3						
FID	Port Fidalgo	18.29	49	IAmb	IAmb	01 33 02.2	
	comp=Z,7.5nm,0.5s						
WAT6	Susitna Watana	18.37	43	P	P	01 33 00.4	-0.7
	baz=246						
MCK	McKinley	18.39	39	IAmb	IAmb	01 33 10.6	
	comp=Z,12nm,1.2s						
MCK	McKinley	18.39	39	P	Pn	01 33 02.3	+0.5
	baz=241						
DHY	Denali Highway	18.72	42	IAmb	IAmb	01 33 07.2	
	comp=Z,8.6nm,0.4s						
DHY	Denali Highway	18.72	42	P	P	01 33 04.3	-0.7
	baz=245,SNR=18						
BILL	Bilibino	18.73	338	P	Pn	01 33 05.8	+0.1
BILL				IAmb	IAmb	01 33 08.2	
	comp=Z,9.6nm,0.9s						
KLU	Klutina	18.77	47	P	P	01 33 05.0	-0.6
	baz=252						
NEA2	Nenana	18.77	36	P	P	01 33 05.3	-0.1
	baz=239,SNR=8.1						
M24K	Tolsona, Glenn	18.86	45	IAmb	IAmb	01 33 58.4	
	comp=Z,7.8nm,0.7s						
M24K	Tolsona, Glenn	18.86	45	P	P	01 33 06.6	+0.1
	baz=249						
I23K	Minto, Yukon-K	18.96	35	P	Pn	01 33 08.4	-0.1
	baz=237,SNR=18						
BMRM	Bremner River	19.23	49	P	P	01 33 10.0	-0.5
	baz=255						
CCB	Clear Creek Bu	19.27	37	IAmb	IAmb	01 33 13.9	
	comp=Z,4.3nm,0.5s						
MDM	Murphy Dome	19.27	36	P	P	01 33 11.2	+0.3
MDM				IAmb	IAmb	01 33 29.1	
	comp=Z,6.7nm,0.9s						
H23K	Yukon River	19.28	33	IAmb	IAmb	01 33 17.6	
	comp=Z,9.5nm,1.2s						
H23K	Yukon River	19.28	33	P	Pn	01 33 12.0	-0.4
	baz=235,SNR=10						
HARP	HAARP	19.41	45	P	Pn	01 33 13.5	-0.5
	baz=250						
N25K	Chitina, Valde	19.41	47	IAmb	IAmb	01 33 46.5	
	comp=Z,12nm,1.6s						
N25K	Chitina, Valde	19.41	47	P	P	01 33 12.8	+0.3
	baz=253						
PAX	Paxson	19.48	43	P	Pn	01 33 14.1	-0.7
	baz=248						
HDA	Harding Lake	19.48	38	P	P	01 33 13.8	+0.7
HDA	Harding Lake	19.48	38	P	P	01 33 13.2	0.0
	baz=242,SNR=20						
BERG	Berg Lake	19.52	51	IAmb	IAmb	01 33 22.1	
	comp=Z,28nm,1.7s						
POKR	Poker Plat Res	19.64	36	P	P	01 33 15.6	+0.7
	baz=240						
IL31		19.68	37	IAmb	IAmb	01 33 29.8	
	comp=Z,7.9nm,1.1s						
ILAR	Eielson Array	19.68	37	P	P	01 33 13.7	-1.6
	comp=Z,1.0nm,0.3s,baz=221,slow=8.9,SNR=34						
	comp=Z,1.1nm,0.4s						
K24K	Donnelly Dome	19.68	40	P	P	01 33 15.4	0.0
	baz=246,SNR=12						
H24K	Noodor Dome	19.86	34	P	Pn	01 33 18.4	-0.9
H24K				IAmb	IAmb	01 33 39.0	
	comp=Z,11nm,1.1s						
H24K	Noodor Dome	19.86	34	P	P	01 33 18.0	+0.7
	baz=237,SNR=15						
COLD	Coldfoot	19.92	29	IAmb	IAmb	01 33 25.3	
	comp=Z,11nm,1.0s						
COLD	Coldfoot	19.92	29	P	Pn	01 33 19.6	-0.3
	baz=231,SNR=18						
RIDG	Independent Ri	20.03	41	IAmb	IAmb	01 33 25.2	
	comp=Z,9.0nm,0.8s						
J25K	Salcha River,	20.19	39	P	P	01 33 20.3	-0.6
	baz=244,SNR=24						
M26K	Nabesna, AK	20.37	46	P	P	01 33 23.0	+0.1
	baz=253						
L26K	Log Cabin Wild	20.41	44	IAmb	IAmb	01 33 30.2	
	comp=Z,3.9nm,0.5s						
L26K	Log Cabin Wild	20.41	44	P	P	01 33 23.6	+0.4
	baz=251						
J26L	Joseph Creek	20.85	40	P	P	01 33 27.7	-0.4
	baz=247,SNR=58						
M27K	Edge Creek, AK	20.86	46	P	Pn	01 33 29.7	-1.5
	baz=254,SNR=6.8						
TOLK	Toolik Lake Re	21.02	26	P	P	01 33 31.2	+1.4
TOLK				IAmb	IAmb	01 33 43.5	
	comp=Z,7.5nm,0.8s						
TOLK	Toolik Lake Re	21.02	26	P	P	01 33 30.3	+0.5
	baz=229,SNR=11						
L27K	Beaver Creek,	21.08	44	P	P	01 33 31.2	+0.7
L27K	Beaver Creek,	21.08	44	P	P	01 33 30.8	+0.3
	baz=253						
PINM	Pinnacle	21.16	53	P	P	01 33 32.5	+1.0
	baz=262						
K27K	Chicken	21.28	42	IAmb	IAmb	01 33 40.8	
	comp=Z,9.7nm,0.8s						
K27K	Chicken	21.28	42	P	P	01 33 33.0	+0.4
	baz=250						
YUK3	Moose Creek	21.36	48	P	P	01 33 33.5	-0.2
	baz=258,SNR=5.3						
A21K	Barrow	21.46	16	P	P	01 33 35.1	+0.7
	baz=213						
PNL	Peninsula	21.54	54	P	P	01 33 35.5	+0.1
	baz=264						
BMAR	Burnt Mountain	21.82	32	P	P	01 33 39.3	+1.0
EGAK	Eagle	21.91	40	P	P	01 33 39.3	-0.1
	baz=249						
YUK4	Talbot Arm	22.13	50	P	P	01 33 43.3	+1.3
	baz=260						
YUK6	Outpost Mounta	22.21	51	P	P	01 33 43.0	+0.1
	baz=262						
DAWY	Dawson	22.41	43	IAmb	IAmb	01 34 03.5	
	comp=Z,4.5nm,0.7s						
DAWY	Dawson	22.41	43	P	P	01 33 45.4	+0.6
	baz=253						
HYT	Haines Junctio	22.61	51	P	P	01 33 47.3	+0.3
	baz=263						
N30M	Aishikik Lake	22.89	50	P	P	01 33 50.3	+0.4
	baz=262						
I29M	Ogilvie Camp,	23.25	40	P	P	01 33 53.1	-0.3
	baz=252						
EPYK	Eagle Plains	24.19	38	P	P	01 34 02.5	+0.4
	baz=251						
M31M	Drury Creek, Y	24.26	48	P	P	01 34 03.5	+0.7
	baz=263						
CRAG	Craig	25.05	65	P	P	01 34 11.9	+2.1
	baz=279						
WRAK	Wrangell Islan	25.34	62	P	P	01 34 13.3	+0.8
	baz=277						
S34M	Telegraph Cree	25.84	59	P	P	01 34 17.1	+0.1
	baz=275						
INK	Inuvik	25.98	34	P	P	01 34 18.2	-0.1
	comp=Z,1.2nm,0.4s,baz=186,slow=9.1,SNR=7.0						
INK				PcP	PcP	01 37 43.8	-1.2
	comp=Z,0.6nm,0.5s,baz=287,slow=4.2,SNR=3.0						
	comp=Z,1.2nm,0.4s						
INK	Inuvik	25.98	34	IAmb	IAmb	01 34 35.6	
	comp=Z,5.4nm,1.3s						
INK	Inuvik	25.98	34	P	P	01 34 19.0	+0.8
	baz=251						
BBB	Bella Bella	28.70	70	LR	LR	01 44 10.4	
	comp=Z,27nm,19.0s,baz=74,slow=32						
YKA	Yellowknife Ar	33.44	47	P	P	01 35 23.4	-0.9
	comp=Z,0.5nm,0.6s,baz=276,slow=7.3,SNR=8.4						
YKA				PcP	PcP	01 38 04.9	+0.6
	comp=Z,0.4nm,0.4s,baz=286,slow=3.2,SNR=8.4						
YKA				LR	LR	01 50 13.2	
	comp=Z,63nm,19.4s,baz=305,slow=38						
	comp=Z,0.5nm,0.6s						
D03D	Eldon	33.48	76	P	P	01 35 26.3	+1.4
	baz=297						
B05A	Bryant	33.76	74	P	P	01 35 28.2	+1.0
	baz=296						
H11N2	WAKE ISLAND Hy	34.79	210	T	T	02 12 19.1	
	baz=18,slow=76,SNR=970						
H11N3	WAKE ISLAND Hy	34.80	210	T	T	02 12 20.4	
	baz=18,slow=76,SNR=844						
H11N1	WAKE ISLAND Hy	34.81	210	T	T	02 12 19.2	
	baz=18,slow=76,SNR=798						
B08A	Colville Reser	35.37	73	P	P	01 35 41.1	-0.1
MJAR	Matsushiro Arr	36.00	264	LR	LR	01 49 08.2	
	comp=Z,25nm,20.2s,baz=0.5,slow=34						
H11S1	WAKE ISLAND Hy	36.00	210	T	T	02 14 00.9	
	baz=19,slow=75,SNR=668						
H11S2	WAKE ISLAND Hy	36.01	210	T	T	02 14 01.5	
	baz=19,slow=75,SNR=342						
H11S3	WAKE ISLAND Hy	36.02	210	T	T	02 13 59.9	
	baz=19,slow=75,SNR=201						
YBH	Yreka Blue Hor	36.67	84	LR	LR	01 47 17.3	
	comp=Z,34nm,19.5s,baz=278,slow=30						
NEW	Newport	36.72	72	P	P	01 35 53.2	+0.4
	baz=298						
J05D	Fort Rock, OR	36.73	81	P	P	01 35 52.2	-0.8
	baz=302						
WALA	Waterton Lakes	38.23	69	P	P	01 36 06.4	+0.7
WALA				IAmb	IAmb	01 36 07.9	
	comp=Z,5.0nm,0.9s						
WVOR	Wild Horse Val	38.79	81	P	P	01 36 12.6	+2.2
WVOR				IAmb	IAmb	01 36 23.4	
	comp=Z,2.8nm,0.9s						
MSO	Missoula	39.30	72	P	P	01 36 14.9	+0.3
	baz=300						
HLID	Hailey	40.75	77	P	P	01 36 26.9	+0.1
	baz=304						
BOZ	Bozeman (W)	41.31	72	P	P	01 36 32.2	+0.9
BOZ				IAmb	IAmb	01 36 32.4	
	comp=Z,2.3nm,0.7s						
BOZ	Bozeman (W)	41.31	72	P	P	01 36 31.5	+0.2
	baz=302,SNR=8.1						
NVAR	Mina Array Bea	41.34	86	P	P	01 36 32.2	+0.6
	comp=Z,0.4nm,0.7s,baz=291,slow=7.5,SNR=2.4						
	comp=Z,0.4nm,0.7s						
KSRS	Korea Array	41.82	273	P	P	01 36 35.6	+0.3
	comp=Z,4.5nm,1.0s,baz=60,slow=8.5,SNR=5.9						
KSRS				LR	LR	01 53 40.9	
	comp=Z,8.5nm,20.9s,baz=45,slow=36						
	comp=Z,4.5nm,1.0s						
ELK	Elko	41.85	81	LR	LR	01 52 43.1	
	comp=Z,47nm,18.3s,baz=304,slow=34						
YHL	Hebgen Lake	41.98	73	P	P	01 36 38.4	+1.4
YHL				IAmb	IAmb	01 36 43.5	
	comp=Z,6.5nm,1.4s						
RLMT	Red Lodge	42.97	72	P	P	01 36 45.0	+0.1
	baz=303,SNR=7.1						
R11A	Troy Canyon, C	43.07	84	P	P	01 36 45.1	-0.6
	baz=308						
TPNV	Topopah Spring	43.53	86	P	P	01 36 49.5	0.0
	baz=309						
DUG	Dugway, Tooele	43.66	80	P	P	01 36 50.4	0.0
	baz=307						
BW06	Boulder Array	44.13	75	P	P	01 36 54.2	0.0
	baz=305,SNR=12						
PD31	Pinedale Array	44.13	75	P	P	01 36 54.7	+0.5
PDAR	Pinedale Array	44.13	75	P	P	01 36 54.7	+0.5
	comp=Z,4.2nm,0.6s,baz=306,slow=4.1,SNR=54						
	comp=Z,4.2nm,0.6s						
JSU	Suzuyama	44.14	265	P	P	01 36 55.1	+0.9
K22A	Casper	46.01	73	P	P	01 37 09.3	+0.2
	baz=306						
O20A	White River Ci	46.49	77	P	P	01 37 12.2	-0.7
	baz=308,SNR=5.0						
RSSD	Black Hills	46.61	70	P	P	01 37 14.0	+0.1
	baz=306						
MDND	Maddock	47.01	63	P	P	01 37 17.4	+0.7
	baz=304						
PV13	Radium Mtn., P	47.36	79	P	P	01 37 21.2	+1.4
N23A	Red Feather La	47.41	74	P	P	01 37 20.2	0.0
	baz=308						
AGMN	Agassiz Nation	48.80	61	P	P	01 37 29.9	-0.6
	baz=306						
SDCO	Great Sand Dun	49.65	77	P	P	01 37 37.0	-0.5
	baz=310						
HHC	Hu-ho-hao-te	49.71	288	*e*P	P	01 37 38.8	+1.1
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.3s						
SPITS	Spitsbergen Ar	50.24	357	P	P	01 37 40.4	-0.7
	comp=Z,5.0nm,0.8s,baz=42,slow=8.8,SNR=8.3						
	comp=Z,5.0nm,0.8s						
T25A	Trinidad	50.70	77	P	P	01 37 46.1	+0.7
	baz=311						
ECSD	EROS Data Cent	51.13	66	P	P	01 37 47.6	-0.6
	baz=308						
EYMN	Ely	51.37	59	P	P	01 37 49.4	-0.5
	baz=308						
SFJD	Kangerlussuaq	54.55	23	LR	LR	02 04 17.1	
	comp=Z,21nm,18.7s,baz=328,slow=39						
JFWS	Jewell Farm	55.23	63	P	P	01 38 17.1	-1.2
	baz=311						
ZALV	Zalesovo Beam	55.42	315	LR	LR	02 03 42.5	
	comp=Z,42nm,18.1s,baz=360,slow=38						
WMOK	Wichita Mounta	55.70	76	P	P	01 38 22.1	+0.2
WMOK				IAmb	IAmb	01 38 23.7	
	comp=Z,2.6nm,1.1s						
WMOK	Wichita Mounta	55.70	76	P	P	01 38 21.7	-0.2
	baz=313						
TXAR	Lajitas Array	56.44	84	P	P	01 38 27.6	+0.3
	comp=Z,0.4nm,0.5s,baz=298,slow=5.7,SNR=2.4						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	56.44	84	P	P	01 38 28.0	+0.7
U40A	Yellville	58.13	70	P	P	01 38 37.1	-1.9
	baz=313						
ARCES	ARCESS Array B	58.17	352	P	P	01 38 38.0	-0.8
	comp=Z,8.8nm,1.1s,baz=40,slow=5.9,SNR=2.0						
ARCES				PcP	PcP	01 39 29.4	-0.4
	comp=Z,4.7nm,1.0s,baz=18,slow=6.0,SNR=4.7						
	comp=Z,8.8nm,1.1s						
ARCES	ARCESS Array B	58.17	352	P	P	01 38 40.3	+1.5
ARCES	ARCESS Array B	58.17	352	IAmb	IAmb	01 39 38.0	
	comp=Z,101nm,1.9s						
W39A	Magazine	58.38	72	P	P	01 38 39.8	-1.0
	baz=314						
WHTX	Lake Whitney,	58.40	77	P	P	01 38 40.3	-0.6
	baz=314						
SCHQ	Schefferville	58.41	40	P	P	01 38 39.9	-0.8
	comp=Z,0.9nm,0.5s,baz=325,slow=12,SNR=4.5						
	comp=Z,0.9nm,0.5s						
SFIN	Lafayette	58.68	63	P	P	01 38 41.9	-0.9
	baz=313						
MIAR	Mount Ida	58.95	72	P	P	01 38 43.5	-1.2
	baz=314						
W41B	Gary Mavity, V	59.31	71	P	P	01 38 46.0	-1.2
	baz=314						
O48B	Farmland	59.84	62	P	P	01 38 49.5	-1.3
	baz=314,SNR=5.9						
KURK	Kurchatov	60.40	315	P	P	01 38 54.0	-0.5
P49A	Miami Univ. Ec	60.59	63	P	P	01 38 55.1	-0.8
	baz=314						
WMQ	Urumqi	61.02	305	*e*P	P	01 39 02.1	+3.2
WVT	Waverly	61.21	67	P	P	01 38 59.2	-1.0
	baz=315						
ERPA	Erie	61.32	58	P	P	01 39 00.7	-0.1
	baz=315						
M53A	WI Miller and	61.44	59	P	P	01 39 00.6	-1.1
	baz=315,SNR=5.3						
MK31	Makanchi Array	61.56	310	P	P	01 39 03.1	+0.7
MKAR	Makanchi Array	61.56	310	P	P	01 39 00.1	-2.3
	comp=Z,0.3nm,0.3s,baz=42,slow=7.4,SNR=8.1						
	comp=Z,0.3nm,0.3s						
WVNY	West Valley, N	61.84	57	P	P	01 39 04.7	+0.3
O53A	New Philadelph	61.99	60	P	P	01 39 05.3	-0.2
	baz=315						
LONY	Lake Ozonia	62.30	52	P	P	01 39 06.1	-1.2
	baz=316						
MCWV	Mont Chateau	63.15	59	P	P	01 39 12.9	-0.3
	baz=316						
BINY	Binghamton	63.34	55	P	P	01 39 14.8	+0.4
	baz=317						
SSPA	Standing Stone	63.49	57	P	P	01 39 15.3	0.0
	baz=316						
BLA	Blacksburg	64.61	62	P	P	01 39 22.8	0.0
	baz=317						
R58B	Mineral	65.44	60	P	P	01 39 28.1	0.0
PZH	PanZhiHua	65.45	282	P	P	01 39 29.0	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,50nm,6.0s						
CBN	Corbin Frederi	65.53	59	P	P	01 39 28.6	-0.1
	baz=317						
KMSC	Kings Mountain	65.60	64	P	P	01 39 29.3	+0.1
	baz=317						
GOGA	Godfrey	65.66	67	P	P	01 39 29.0	-0.6
	baz=317						
FINES	FINESS Array B	65.97	349	P	P	01 39 30.3	-0.8
	comp=Z,2.2nm,1.0s,baz=22,slow=9.0,SNR=1.6						
	comp=Z,2.2nm,1.0s						
AAK	Ala-Archa	68.35	312	LR	LR	02 11 42.7	
	comp=Z,22nm,18.7s,baz=1.0,slow=38						
AKTO	Aktyubinsk	68.70	327	LR	LR	02 12 25.7	
	comp=Z,35nm,18.2s,baz=4.7,slow=38						
KK31	Karatay Array	69.79	315	P	P	01 39 56.2	+0.7
KKAR	Karatay Array	69.79	315	P	P	01 39 55.7	+0.2
CMAR	Chiang Mai Arr	73.16	278	P	P	01 40 16.8	+0.6
	comp=Z,1.4nm,0.4s,baz=24,slow=7.2,SNR=6.0						
CMAR				LR	LR	02 15 44.6	
	comp=Z,7.3nm,18.4s,baz=0.0,slow=39						
	comp=Z,1.4nm,0.4s						
AKASG	Malin Array Be	75.93	344	P	P	01 40 29.9	-1.8
	comp=Z,0.4nm,0.4s,baz=19,slow=6.2,SNR=3.1						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	83.77	227	P	P	01 41 13.5	-0.8
	comp=Z,0.6nm,0.5s,baz=34,slow=5.9,SNR=7.0						
	comp=Z,0.6nm,0.5s						
AS31	Alice Springs	87.20	225	P	P	01 41 30.4	-1.0
AS31				IAmb	IAmb	01 44 05.2	
	comp=Z,2.1nm,1.2s						
ASAR	Alice Springs	87.21	225	P	P	01 41 31.2	-0.2
	comp=Z,1.3nm,0.8s,baz=18,slow=5.5,SNR=8.9						
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	87.21	225	P	P	01 41 30.4	-1.0
RPN	Rapa Nui	97.38	125	LR	LR	02 15 38.3	
	comp=Z,38nm,20.5s,baz=38,slow=29						
TORD	Torodi Ar. Bea	115.42	3	PKP	PKiKP	01 47 26.7	-0.4
	comp=Z,10nm,0.6s,baz=343,slow=2.6,SNR=5.4						
H03N2	Juan Fernandez	119.12	108	T	T	03 58 14.0	
	baz=317,slow=77,SNR=46						
H03N1	Juan Fernandez	119.13	108	T	T	03 58 15.2	
	baz=317,slow=77,SNR=50						
H03N3	Juan Fernandez	119.14	108	T	T	03 58 14.8	
	baz=317,slow=77,SNR=26						
DBIC	Dimbokro	121.33	11	PKP	PKPdf	01 47 37.9	-0.5
	comp=Z,1.0nm,0.3s,baz=315,slow=2.9,SNR=7.4						
VNDA	Vanda	129.69	186	PKP	PKPdf	01 47 51.6	-0.8
	comp=Z,0.6nm,0.3s,baz=14,slow=3.5,SNR=18						
TSUM	Tsumeb	146.07	338	PKPbc	PKPab	01 48 26.4	+0.6
MAW	Mawson	148.04	218	PKPbc	PKPbc	01 48 29.4	+0.4
	comp=Z,3.1nm,0.5s,baz=122,slow=2.8,SNR=22						
BOSA	Boshof	152.33	318	PKPbc	PKPbc	01 48 40.9	+0.1
	comp=Z,3.4nm,0.5s,baz=20,slow=2.7,SNR=34						

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*TAP **13** 01:37:46.6, 24°.59N×121°.75E, h71^{km}, ML4.0, B*
*JMA **13** 01:37:46.2±0.1, 24°.6N±0°.2×121°.8E±0°.5, h70^{km}±1^{km},*
MV3.4/11, TAIWAN REGION
ISC 13 01:37:46.2±1.2**, 24°.62N**±0°.03×**121°.76E**±0°.02**, h77**^{km}±5^{km}**,**
n160, σ0^{s}.72/255**, 32C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDS	Dongshan	0.04	294	P	Pn	01 37 57.4	+0.1
	baz=315						
NDS				*e*S	Sn	01 38 05.1	-0.3
	baz=315						
TWC	Suao	0.08	95	⇓P	Pn	01 37 57.5	+0.2
	baz=79						
TWC				S	Sn	01 38 05.7	+0.3
	baz=79						
TWE	Neicheng	0.13	322	⇑*i*P	Pn	01 37 57.8	+0.4
	baz=328						
TWE				*i* S	Sn	01 38 05.6	0.0
	baz=328						
ILA	Ilan	0.15	357	P	Pn	01 37 58.1	+0.6
	baz=356						
ILA				*e*S	Sn	01 38 06.9	+1.2
	baz=356						
EWUT	Wuta	0.17	174	P	Pn	01 37 57.7	+0.2
	baz=168						
EWUT				*e*S	Sn	01 38 06.1	+0.3
	baz=168						
ENTT	Nioudou	0.17	277	⇑*i*P	Pn	01 37 57.7	+0.1
	baz=287						
ENTT				*i* S	Sn	01 38 05.8	-0.1
	baz=287						
ENA	Nanau	0.19	184	P	Pn	01 37 57.8	+0.1
	baz=186						
ENA				*e*S	Sn	01 38 06.3	+0.3
	baz=186						
FUSB	Fushanzhiwuyua	0.21	313	⇑*i*P	Pn	01 37 57.8	+0.1
	baz=306						
FUSB				*i* S	Sn	01 38 05.6	-0.7
	baz=306						
NDT	Datong Townshi	0.22	266	⇑P	Pn	01 37 57.6	-0.1
	baz=283						
NDT				S	Sn	01 38 05.5	-0.7
	baz=283						
LATG	Datong	0.23	249	⇑*i*P	Pn	01 37 58.0	+0.1
	baz=265						
LATG				*i* S	Sn	01 38 06.0	-0.4
	baz=265						
NTC	Toucheng	0.24	16	*e*P	Pn	01 37 58.6	+0.7
	baz=8.0						
NTC				*e*S	Sn	01 38 07.6	+1.2
	baz=8.0						
EGS		0.28	35	*e*P	Pn	01 37 59.0	+1.0
	baz=35						
NWLT	Wulai	0.28	305	⇑*i*P	Pn	01 37 58.0	-0.1
	baz=310						
NWLT				S	Sn	01 38 05.9	-0.9
	baz=310						
EHP	Heping Village	0.31	183	*e*P	Pn	01 37 58.4	+0.2
	baz=188						
YHNB	Yeheng	0.35	279	⇑*i*P	Pn	01 37 58.4	-0.2
	baz=293						
YHNB				S	Sn	01 38 06.6	-1.1
	baz=293						
TIPB	Shuangxi	0.36	10	⇑*i*P	Pn	01 37 59.2	+0.6
	baz=2.0						
TIPB				S	Sn	01 38 08.1	+0.4
	baz=2.0						
NSK	Sanguang	0.37	279	⇑*i*P	Pn	01 37 58.5	-0.2
	baz=293						
NSK				*i* S	Sn	01 38 07.1	-0.8
	baz=293						
NNSB	Datong	0.39	241	⇑*i*P	Pn	01 37 59.0	+0.1
	baz=240						
NNSB				S	Sn	01 38 07.5	-0.8
	baz=240						
NNS	Nan Shan	0.39	243	⇑*i*P	Pn	01 37 59.1	+0.1
	baz=242						
NNS				S	Sn	01 38 07.7	-0.6
	baz=242						
TWA	Mucha	0.39	336	⇑*i*P	Pn	01 37 59.0	+0.1
	baz=331						
TWA				S	Sn	01 38 07.8	-0.3
	baz=331						
NHDH	Xindian Distri	0.40	329	⇑P	Pn	01 37 59.0	+0.1
	baz=323						
NHDH				*e*S	Sn	01 38 07.9	-0.3
	baz=323						
TATO	Taipei	0.43	326	⇑*i*P	Pn	01 37 59.0	-0.1
	baz=328						
TATO				*i* S	Sn	01 38 07.6	-1.0
	baz=328						
TWB1	Santiao Chiao	0.44	28	⇓*i*P	Pn	01 37 59.7	+0.5
	baz=29						
TWB1				*i* S	Sn	01 38 09.1	+0.4
	baz=29						
NWF	Wu-fen Shan	0.45	3	⇑*i*P	Pn	01 37 59.9	+0.5
	baz=358						
NWF				S	Sn	01 38 09.5	+0.5
	baz=358						
WFSB	Wu-fen Shan	0.45	3	⇑*i*P	Pn	01 37 59.9	+0.6
	baz=358						
WFSB				*i* S	Sn	01 38 09.6	+0.7
	baz=358						
NHY	Taipei	0.45	338	*e*P	Pn	01 37 59.3	0.0
	baz=332						
NHY				*e*S	Sn	01 38 09.4	+0.5
	baz=332						
NACB	Ninganchiao	0.47	199	⇑*i*P	Pn	01 37 58.4	-1.0
	baz=207						
NACB				*e*S	Sn	01 38 06.9	-2.2
	baz=207						
TAP1	Taipei	0.47	333	*e*P	Pn	01 37 59.6	+0.2
	baz=329						
TAP1				*e*S	Sn	01 38 09.1	0.0
	baz=329						
ETL	Fush Village	0.47	195	*e*P	Pn	01 37 59.2	-0.3
	baz=203						
BACT	New Taipei Cit	0.47	323	*e*P	Pn	01 37 59.7	+0.2
	baz=326						
TAP	Taipei	0.48	332	*e*P	Pn	01 37 59.5	0.0
	baz=329						
TAP				S	Sn	01 38 09.0	-0.3
	baz=329						
ETLH	Xiulin Townshi	0.48	212	⇑*e*P	Pn	01 37 59.2	-0.4
	baz=218						
ETLH				*e*S	Sn	01 38 08.7	-0.8
	baz=218						
SXI1	Grass Mountain	0.49	13	⇑*i*P	Pn	01 38 00.1	+0.4
	baz=6.0						
SXI1				*i* S	Sn	01 38 10.0	+0.4

	baz=6.0						
TNOU	**National Taiwa**	0.53	2	*e*P	Pn	01 38 00.2	+0.3
	baz=357						
TNOU				S	Sn	01 38 10.5	+0.4
	baz=357						
YM01	**YM01**	0.55	342	⇑*i*P	Pn	01 38 00.3	+0.1
	baz=335						
YM01				S	Sn	01 38 11.1	+0.6
	baz=335						
TWD	**Chiawan**	0.56	195	*e*P	Pn	01 37 59.4	-0.8
	baz=202						
NTY	**Taoyuan**	0.56	312	*e*P	Pn	01 38 00.4	+0.1
	baz=315						
NTY				*e*S	Sn	01 38 10.9	+0.3
	baz=315						
TWS1	**Kuangyinshan**	0.57	327	⇑*i*P	Pn	01 38 00.7	+0.3
	baz=320						
TWS1				S	Sn	01 38 11.0	+0.2
	baz=320						
NFF	**Wufeng Townshi**	0.58	272	⇑*i*P	Pn	01 38 00.5	0.0
	baz=283						
NFF				S	Sn	01 38 10.5	-0.6
	baz=283						
YM08	**YM08**	0.59	345	⇑P	Pn	01 38 00.4	-0.1
	baz=338						
YM08				S	Sn	01 38 11.3	+0.2
	baz=338						
NWRT	**Kuosheng**	0.59	351	*e*P	Pn	01 38 00.7	+0.2
	baz=348						
NWRT				*e*S	Sn	01 38 10.5	-0.6
	baz=348						
FUSS	**Fushou**	0.59	232	⇑P	Pn	01 38 01.3	+0.4
	baz=228						
FUSS				*e*S	Sn	01 38 11.5	-0.1
	baz=228						
ANP	**Anpu**	0.61	339	⇑P	Pn	01 38 00.6	-0.2
	baz=335						
ANP				*e*S	Sn	01 38 11.4	-0.1
	baz=335						
NTST	**Danshui**	0.61	333	⇑*e*P	Pn	01 38 01.1	+0.3
	baz=340						
NTST				*e*S	Sn	01 38 11.6	+0.1
	baz=340						
NJD	**Zhudong**	0.62	281	*e*P	Pn	01 38 01.1	+0.3
	baz=293						
NJD				*e*S	Sn	01 38 11.6	0.0
	baz=293						
NCU	**National Centr**	0.63	304	⇑*i*P	Pn	01 38 01.1	+0.3
	baz=298						
NCU				*i* S	Sn	01 38 11.9	+0.2
	baz=298						
NCUH	**Zhongli**	0.63	304	*e*P	Pn	01 38 01.1	+0.2
	baz=298						
NCUH				*e*S	Sn	01 38 11.9	+0.1
	baz=298						
TWT	**Tachien**	0.64	236	*e*P	Pn	01 38 01.9	+0.7
	baz=233						
TWT				*e*S	Sn	01 38 12.7	+0.4
	baz=233						
WHF	**Hehuan Shan**	0.65	224	⇓*i*P	Pn	01 38 01.7	+0.1
	baz=220						
WHF				S	Sn	01 38 12.4	-0.5
	baz=220						
HWA	**Hwalien**	0.65	192	*e*P	Pn	01 38 00.9	-0.3
	baz=201						
TDCB	**Techi**	0.66	237	⇓*i*P	Pn	01 38 01.9	+0.6
	baz=233						
TDCB				*i* S	Sn	01 38 12.0	-0.5
	baz=233						
LIOB	**Emei**	0.68	273	⇑*i*P	Pn	01 38 01.6	+0.2
	baz=274						
LIOB				S	Sn	01 38 12.7	0.0
	baz=274						
NSM	**Shimen**	0.69	347	*e*P	Pn	01 38 01.9	+0.4
	baz=341						
NSM				*e*S	Sn	01 38 13.6	+0.8
	baz=341						
NSTT	**Nanjuang**	0.69	271	⇑*i*P	Pn	01 38 01.6	0.0
	baz=282						
NSTT				*i* S	Sn	01 38 12.5	-0.4
	baz=282						
HSN1	**Hsinchu**	0.69	284	P	Pn	01 38 01.8	+0.2
	baz=294						
HSN1				S	Sn	01 38 13.0	+0.1
	baz=294						
ETM	**Tongmen**	0.69	200	*e*P	Pn	01 38 00.1	-1.4
	baz=200						
SBCB	**Hsinchu**	0.72	284	⇑P	Pn	01 38 02.2	+0.3
	baz=295						
SBCB				S	Sn	01 38 13.4	-0.1
	baz=295						
HSN	**Hsinchu**	0.74	285	P	Pn	01 38 02.0	0.0
	baz=289						
HSN				*i* S	Sn	01 38 13.3	-0.5
	baz=289						
NHW	**Xinwu Township**	0.75	301	⇑P	Pn	01 38 02.5	+0.3
	baz=303						
NHW				S	Sn	01 38 14.3	+0.2
	baz=303						
TEYL	**Yanliau Villag**	0.76	191	*e*P	Pn	01 38 01.9	-0.4
	baz=200						
CHGB	**Renai**	0.77	224	⇓P	Pn	01 38 03.1	+0.4
	baz=218						
CHGB				*i* S	Sn	01 38 14.6	-0.2
	baz=218						
NJN	**Zhunan**	0.81	275	*e*P	Pn	01 38 03.2	+0.4
	baz=281						
NJN				*e*S	Sn	01 38 15.4	+0.2
	baz=281						
WHP	**Taichung City**	0.81	246	P	Pn	01 38 03.7	+0.7
	baz=256						
WHP				S	Sn	01 38 15.7	+0.3
	baz=256						
OWD	**Renai**	0.85	219	*e*P	Pn	01 38 03.5	0.0
	baz=215						
ESL	**Shilin**	0.85	200	*e*P	Pn	01 38 02.0	-1.4
	baz=193						
WUSB	**Renai**	0.85	223	⇓*i*P	Pn	01 38 04.0	+0.5
	baz=219						
WUSB				S	Sn	01 38 15.9	-0.4
	baz=219						
NMLH	**Miaoli**	0.88	265	*e*P	Pn	01 38 04.2	+0.5
	baz=266						
NMLH				*e*S	Sn	01 38 17.1	+0.4
	baz=266						
TEGC	**Jichi Village**	0.93	192	*e*P	Pn	01 38 04.5	+0.3
	baz=199						
NSY	**Sanyi**	0.93	258	P	Pn	01 38 04.7	+0.4
	baz=258						
NSY				S	Sn	01 38 17.9	+0.2
	baz=258						
TWQ1	**Liyutan**	0.94	254	⇓P	Pn	01 38 04.7	+0.3
	baz=254						
TWQ1				*e*S	Sn	01 38 17.6	-0.3
	baz=254						
WPL	**Puli Township**	0.95	231	*e*P	Pn	01 38 05.2	+0.7
	baz=239						
WPL				*e*S	Sn	01 38 19.3	+1.2
	baz=239						
DPDB	**Guoxing**	0.95	233	*e*P	Pn	01 38 05.2	+0.6
	baz=243						
EGFH	**Guangfu**	0.99	198	*e*P	Pn	01 38 04.7	-0.3
	baz=198						
VWDT	**VWDT**	1.03	213	⇓P	Pn	01 38 05.7	+0.3
	baz=209						
VWDT				S	Sn	01 38 20.1	+0.4
	baz=209						
PCYT	**Pengchaiyu**	1.05	16	*e*P	Pn	01 38 06.6	+0.9
	baz=16						
WDJ	**Dajia District**	1.05	255	*e*P	Pn	01 38 06.3	+0.6
	baz=256						
WDJ				*e*S	Sn	01 38 20.9	+0.6
	baz=256						
SMLT	**Sun Moon Lake**	1.07	227	⇓*i*P	Pn	01 38 06.8	+0.7
	baz=236						
SMLT				*e*S	Sn	01 38 21.7	+0.8
	baz=236						
TYC	**Yuchr**	1.09	229	*e*P	Pn	01 38 06.7	+0.6
	baz=238						
TYC				*e*S	Sn	01 38 21.7	+0.7
	baz=238						
TCU	**Taichung**	1.09	245	*e*P	Pn	01 38 06.5	+0.3
	baz=254						
TCU				*e*S	Sn	01 38 21.6	+0.4
	baz=254						
JYNG	**Yonagunijimaku**	1.09	98	P	Pn	01 38 06.2	-0.1
JYNG				S	Sn	01 38 20.4	-0.8
SSLB	**Suanglung**	1.10	222	⇓*i*P	Pn	01 38 07.1	+0.7
	baz=218						
SSLB				*e*S	Sn	01 38 22.2	+0.6
	baz=218						
WWF	**Wufeng**	1.12	240	⇓P	Pn	01 38 07.1	+0.5
	baz=249						
WWF				S	Sn	01 38 22.6	+0.7
	baz=249						
YOJ	**Yonaguni jima**	1.15	97	⇓P	Pn	01 38 06.8	-0.1
	baz=90						
YOJ				*i* S	Sn	01 38 21.8	-0.7
	baz=90						
YOJ	**Yonaguni jima**	1.15	97	P	Pn	01 38 06.8	-0.1
YOJ				S	Sn	01 38 21.9	-0.6
HGSD	**Ruisui**	1.16	195	*e*P	Pn	01 38 07.0	-0.1
	baz=203						
HGSD				*e*S	Sn	01 38 23.0	+0.3
	baz=203						
EHY	**Hungye**	1.18	200	*e*P	Pn	01 38 06.6	-0.7
	baz=193						
WNT1	**Nantou City**	1.21	234	*e*P	Pn	01 38 08.0	+0.3
	baz=245						
WCHH	**Zhanghua**	1.22	244	P	Pn	01 38 08.2	+0.4
	baz=254						
WCHH				*e*S	Sn	01 38 24.5	+0.5
	baz=254						
WNT	**Mingjian**	1.23	233	⇓*i*P	Pn	01 38 08.4	+0.5
	baz=245						
WJS	**Zhushan**	1.23	230	*e*P	Pn	01 38 08.8	+0.9
	baz=242						
WJS				*e*S	Sn	01 38 24.6	+0.4
	baz=242						
WYL	**Yuanlin Townsh**	1.26	239	*e*P	Pn	01 38 08.4	+0.2
	baz=250						
WYL				*e*S	Sn	01 38 25.1	+0.3
	baz=250						
YULB	**Yu-li**	1.29	199	*e*P	Pn	01 38 07.4	-1.3
	baz=194						
ECBN	**Changbin**	1.32	192	*e*P	Pn	01 38 09.7	+0.5
	baz=200						
EYUL	**Yuli**	1.33	198	*e*P	Pn	01 38 10.1	+0.9
	baz=198						
TWF1	**Yuli**	1.33	199	*e*P	Pn	01 38 07.8	-1.4
	baz=199						
YUS	**Yu-Shan**	1.34	213	*e*P	Pn	01 38 10.7	+0.8
	baz=207						
ALS	**Alishan**	1.40	218	*e*P	Pn	01 38 11.2	+0.7
	baz=229						
ALS				*e*S	Sn	01 38 30.6	+1.9
	baz=229						
CHN5	**Tsauling**	1.42	224	*e*P	Pn	01 38 10.6	+0.2
	baz=234						
WGK	**Gukeng**	1.43	230	*e*P	Pn	01 38 11.1	+0.6
	baz=241						
WGK				*e*S	Sn	01 38 28.9	0.0
	baz=241						
WDLH	**Douliu**	1.45	231	*e*P	Pn	01 38 11.3	+0.6
	baz=242						
WRL	**Guolierlin Hig**	1.45	241	*e*P	Pn	01 38 10.8	+0.1
	baz=250						
WRL				*e*S	Sn	01 38 29.4	+0.2
	baz=250						
FULB	**Fuli**	1.47	197	*e*P	Pn	01 38 11.1	-0.1
	baz=197						
FULB				*e*S	Sn	01 38 30.1	+0.2
	baz=197						
WTCT	**Ta-ch'eng**	1.54	241	*e*P	Pn	01 38 12.1	+0.2
	baz=241						
WTCT				*e*S	Sn	01 38 31.3	-0.1
	baz=241						
CHKT	**Chengkung**	1.55	193	*e*P	Pn	01 38 12.4	+0.3
	baz=193						
WTK	**Tuku**	1.56	234	*e*P	Pn	01 38 11.8	-0.3
	baz=234						
WTK				*e*S	Sn	01 38 32.3	+0.6
	baz=234						
ELDTW	**Lidau**	1.57	206	*e*P	Pn	01 38 12.8	+0.3
	baz=199						
ECS	**Chishang**	1.59	198	*e*P	Pn	01 38 13.3	+0.7
	baz=190						
CHN4	**Tsaushan**	1.65	220	*e*P	Pn	01 38 14.0	+0.6
	baz=221						
CHN4				*e*S	Sn	01 38 36.9	+2.9
	baz=221						
CHY	**Chiayi**	1.65	228	*e*P	Pn	01 38 13.4	0.0
	baz=237						
CHY				*e*S	Sn	01 38 34.5	+0.5
	baz=237						
TPUB	**Ta-pu**	1.67	218	*e*P	Pn	01 38 14.3	+0.7
	baz=219						
TPUB				*e*S	Sn	01 38 36.4	+1.9
	baz=219						
EDH	**Donghe**	1.69	194	*e*P	Pn	01 38 13.6	-0.3
	baz=194						
STYH	**Taoyuan**	1.70	212	*e*P	Pn	01 38 14.9	+0.9
	baz=213						
WSF	**Szhu**	1.71	236	*e*P	Pn	01 38 14.0	-0.2
	baz=237						
STYT	**Tauyuan**	1.71	213	*e*P	Pn	01 38 15.3	+1.0
	baz=224						
STYT				*e*S	Sn	01 38 36.7	+1.1
	baz=224						
WTP	**Ta-pu**	1.72	218	*e*P	Pn	01 38 14.4	0.0
	baz=228						
WSL	**Shuilin Townsh**	1.77	232	*e*P	Pn	01 38 14.9	0.0
	baz=242						
TWK	**Hsinying**	1.78	221	*e*P	Pn	01 38 14.9	-0.2
	baz=221						
LONT	**Longtian**	1.80	199	*e*P	Pn	01 38 15.9	+0.5
	baz=191						
SNST	**Tainan City**	1.81	220	*e*P	Pn	01 38 16.2	+0.7
	baz=221						
CHN1	**Nanshi**	1.82	219	*e*P	Pn	01 38 16.1	+0.4
	baz=231						
IRIF	**Iriomote-Funau**	1.82	98	P	Pn	01 38 15.5	-0.1
IRIF				S	Sn	01 38 37.1	-0.8
ICHU	**Yijhu**	1.84	228	*e*P	Pn	01 38 16.5	+0.6
	baz=229						
SGST	**Jiashian**	1.87	215	*e*P	Pn	01 38 16.1	-0.2
	baz=226						
CHN8	**Yiju**	1.90	228	*e*P	Pn	01 38 17.0	+0.4
	baz=229						
HATJ	**Hateruma jima**	1.95	106	P	Pn	01 38 18.0	+0.6
HATJ				S	Sn	01 38 41.7	+0.7
LDUT	**Ludao**	1.95	188	*e*P	Pn	01 38 17.9	+0.5
	baz=196						
JKRS	**Kuro-shima**	2.09	100	P	Pn	01 38 19.5	+0.3
JKRS				*e*S	Sn	01 38 43.8	-0.5
SSD	**Sandimen**	2.13	209	*e*P	Pn	01 38 21.0	+1.2
	baz=221						
VWUC	**VWUC**	2.13	281	⇓*e*P	Pn	01 38 19.4	-0.3
	baz=281						
ECL	**Taimali**	2.14	200	*e*P	Pn	01 38 19.9	-0.1
	baz=194						
TSMG	**Majia**	2.16	208	*e*P	Pn	01 38 21.7	+1.5
	baz=221						
JIJ	**Ishigaki jima**	2.19	96	*i* P	Pn	01 38 20.4	-0.2
JIJ				S	Sn	01 38 45.8	-1.0
MATB	**Ma-tsu**	2.24	313	⇑*e*P	Pn	01 38 20.8	-0.5
	baz=311						
MASBT	**Mashibuluo**	2.25	208	*e*P	Pn	01 38 22.3	+1.0
	baz=221						
MSUT	**Lienchiang**	2.27	313	*e*P	Pn	01 38 21.1	-0.5
	baz=311						
PNG	**Penghu**	2.27	243	*e*P	Pn	01 38 20.6	-1.0
	baz=243						
PNG				*e*S	Sn	01 38 46.9	-1.8
	baz=243						
PHUB	**P'eng-hu**	2.28	242	⇓P	Pn	01 38 20.8	-1.0
	baz=242						
PHUB				*e*S	Sn	01 38 47.2	-1.7
	baz=242						
JISG	**Ishigakijimahi**	2.33	90	*i* P	Pn	01 38 22.4	0.0
JISG				S	Sn	01 38 49.3	-0.7
WDGT	**Dungji**	2.35	235	*e*P	Pn	01 38 22.0	-0.7
	baz=236						
WDGT				*e*S	Sn	01 38 48.6	-2.0
	baz=236						
EAST	**Anshuo**	2.38	201	*e*P	Pn	01 38 24.2	+1.1
	baz=193						
SSPT	**Xinbi**	2.39	207	*e*P	Pn	01 38 26.0	+2.8
	baz=208						
TAWH	**Dawu Township**	2.40	200	*e*P	Pn	01 38 24.6	+1.1
	baz=193						
PTMZ	**Houxiangcun**	2.43	281	⇓*e*P	Pn	01 38 23.4	-0.4
	baz=281						
SCZT	**Fangliau**	2.47	205	*e*P	Pn	01 38 25.5	+1.2
	baz=207						
SCZT				*e*S	Sn	01 38 55.1	+1.6
	baz=207						
SLIU	**Shizi**	2.55	200	*e*P	Pn	01 38 25.8	+0.4
	baz=201						
VCHM	**Qimei**	2.55	237	*e*P	Pn	01 38 24.5	-0.9
	baz=238						
VCHM				*e*S	Sn	01 38 53.7	-1.8
	baz=238						
LAY	**Lan-yu**	2.57	184	*e*P	Pn	01 38 24.6	-1.2
	baz=178						
WLCH	**Liuqiu**	2.59	210	*e*P	Pn	01 38 27.7	+1.8
	baz=223						
LYUB	**Lan-yu**	2.61	184	*e*P	Pn	01 38 24.3	-2.0
	baz=178						
LYJJ	**Jianjiangzhen**	2.64	317	*e*P	Pn	01 38 26.1	-0.5
	baz=314						
JTJ	**Tarama**	2.68	89	P	Pn	01 38 28.1	+0.9
JTJ				*e*S	Sn	01 38 59.3	+0.6
XPSS	**Dashiqiu**	2.70	329	*e*P	Pn	01 38 27.0	-0.5
	baz=325						
TWKBT	**Hengchun**	2.80	198	*e*P	Pn	01 38 29.3	+0.4
	baz=199						
MHZQ	**Yeshan**	2.88	301	*e*P	Pn	01 38 29.2	-0.6
	baz=299						
KNM	**Kinmen**	3.03	267	*e*P	Pn	01 38 33.1	+1.1
	baz=267						
KNMB	**Chin-men Tao**	3.07	268	*e*P	Pn	01 38 31.9	-0.6
	baz=269						
JMJ	**Miyako jima 2**	3.22	86	*e*P	Pn	01 38 34.7	+0.2
	baz=89						
AXDP	**Jialang**	3.45	275	*e*P	Pn	01 38 37.4	-0.2
	baz=275						
ZPLA	**Ao Xicun**	3.72	260	*e*P	Pn	01 38 40.5	-0.8
	baz=261						
SXFK	**Yanhouchang**	4.12	296	*e*P	Pn	01 38 46.9	+0.1
	baz=294						

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*IDC **13** 02:04:57.2±1.0, 28.°88N×43.°41W, h0^{km}, mb3.9/10, mbtmp3.9/10, MS3.5/40, Error ellipse: s-maj=29.7km s-min=19.7km az=180.0*

*NEIC **13** 02:04:59.5±1.6, 28.°83N±0.°10×43.°29W±0.°07, h10^{km}±1^{km}, mb4.4/50, Error ellipse: s-maj=18.0km s-min=8.9km az=202.0*

ISC 13 02:04:59.5±0.6**, 28.°8N**±0.°1×**43.°32W**±0.°09**, h14**^{km}**, n92,** σ**0.^{s}77**/47**, mb4.3**/30**, MS3.5**/40**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSA	**Rosais**	15.95	48	Pn	**Pn**	**02 08 43.3**	**-0.1**
ROSA				IAmb	IAmb	02 08 45.1	
	comp=Z,49nm,1.1s						
PMOZ	**Porto Moniz, M**	22.77	73	P	**P**	**02 09 59.9**	**-1.7**
MDP	**Montagnes des**	25.18	202	LR	LR	02 18 04.5	
	comp=Z,27nm,19.0s,baz=232,slow=31						
QUA2	**Belchertown**	27.03	308	P	**P**	**02 10 40.4**	**-0.8**
QUA2				IAmb	IAmb	02 10 41.4	
	comp=Z,11nm,1.3s						
BAUV	**El Baul**	30.50	235	P	**P**	**02 11 11.7**	**-0.6**
SCHQ	**Schefferville**	31.06	333	LR	LR	02 22 57.6	
	comp=Z,73nm,19.9s,baz=114,slow=35						
MCWV	**Mont Chateau**	31.88	300	P	**P**	**02 11 23.7**	**-0.6**
U56A	**King**	31.98	293	P	**P**	**02 11 25.3**	**+0.2**
SADO	**Sadowa**	32.50	309	LR	LR	02 22 16.1	
	comp=Z,91nm,21.0s,baz=128,slow=32						
MDT	**Midelt**	33.36	73	LR	LR	02 22 00.5	
	comp=Z,97nm,21.4s,baz=343,slow=31						
ESDC	**Sonseca Array**	34.05	61	LR	LR	02 21 56.6	
	comp=Z,66nm,19.8s,baz=297,slow=30						
TKL	**Tuckaleechee C**	34.71	292	LR	LR	02 23 00.5	
	comp=Z,98nm,21.6s,baz=109,slow=31						
SFJD	**Kangerlussuaq**	38.47	355	LR	LR	02 24 35.0	
	comp=Z,41nm,21.3s,baz=108,slow=31						
FRB	**Frobisher Bay**	38.51	342	LR	LR	02 26 31.5	
	comp=Z,42nm,19.5s,baz=196,slow=34						
LCAR	**Lake Charles**	40.69	293	P	**P**	**02 12 38.9**	**-0.6**
SPMN	**Marine on St.**	42.09	307	P	**P**	**02 12 51.0**	**0.0**
DBIC	**Dimbokro**	42.45	114	LR	LR	02 27 51.1	
	comp=Z,118nm,21.4s,baz=328,slow=32						
HHAR	**Hobbs**	42.92	293	P	**P**	**02 12 58.2**	**+0.4**
OTAV	**Otavalo**	43.97	236	P	**P**	**02 13 07.5**	**+0.4**
TORD	**Torodi Ar. Bea**	44.55	101	P	**P**	**02 13 11.7**	**+0.6**
	comp=Z,5.5nm,0.4s,baz=299,slow=8.3,SNR=5.4						
TORD				LR	LR	02 30 02.3	
	comp=Z,81nm,21.6s,baz=242,slow=34						
	comp=Z,5.5nm,0.4s						
ULM	**Lac du Bonnet**	44.76	314	LR	LR	02 30 06.7	
	comp=Z,31nm,20.5s,baz=47,slow=34						
H10N2	**ASCENSION HYDR**	45.82	138	T	T	03 02 20.3	
	baz=324,slow=75,SNR=557						
H10N3	**ASCENSION HYDR**	45.83	138	T	T	03 02 20.3	
	baz=324,slow=75,SNR=603						
H10N1	**ASCENSION HYDR**	45.84	138	T	T	03 02 21.7	
	baz=324,slow=75,SNR=594						
H10S3	**ASCENSION HYDR**	46.63	139	T	T	03 03 27.0	
	baz=323,slow=74,SNR=144						
H10S2	**ASCENSION HYDR**	46.65	139	T	T	03 03 28.1	
	baz=257,slow=74,SNR=43						
NOA	**NORSAR Array B**	48.19	32	LR	LR	02 29 36.4	
	comp=Z,23nm,19.2s,baz=330,slow=31						
CMIG	**Matias Romero**	48.56	268	LR	LR	02 33 56.7	
	comp=Z,39nm,19.7s,baz=72,slow=36						
ATAH	**Atahualpa**	49.19	229	LR	LR	02 35 15.2	
	comp=Z,37nm,19.4s,baz=14,slow=37						
AMTX	**Amarillo**	49.35	293	P	**P**	**02 13 49.1**	**+0.5**
AMTX				IAmb	IAmb	02 13 55.9	
	comp=Z,7.9nm,1.2s						
LPAZ	**La Paz**	50.85	211	P	**P**	**02 14 00.4**	**-0.2**
	comp=Z,2.4nm,1.1s,baz=351,slow=5.5,SNR=4.7						
LPAZ				LR	LR	02 33 59.9	
	comp=Z,30nm,18.7s,baz=22,slow=34						
	comp=Z,2.4nm,1.1s						
LPAZ	**La Paz**	50.85	211	IAmb	IAmb	02 14 07.7	
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	52.21	286	P	**P**	**02 14 09.5**	**-0.8**
	comp=Z,1.1nm,0.9s,baz=99,slow=7.7,SNR=6.9						
TXAR				LR	LR	02 33 13.3	
	comp=Z,17nm,19.2s,baz=93,slow=32						
	comp=Z,1.1nm,0.9s						
TX31	**Lajitas Ar. Si**	52.21	286	P	**P**	**02 14 09.7**	**-0.6**
TX32	**Lajitas Array**	52.21	286	P	**P**	**02 14 09.8**	**-0.5**
RES	**Resolute Bay**	52.62	345	LR	LR	02 35 09.9	
	comp=Z,24nm,18.2s,baz=78,slow=34						
ANMO	**Albuquerque**	53.19	294	LR	LR	02 34 23.0	
	comp=Z,62nm,21.4s,baz=100,slow=33						
ANMO	**Albuquerque**	53.19	294	P	**P**	**02 14 17.9**	**+0.3**
ANMO				IAmb	IAmb	02 14 20.0	
	comp=Z,4.7nm,1.2s						
BNM	**Barren Site**	53.50	293	P	**P**	**02 14 20.5**	**+0.5**
EGMT	**Eagleton**	53.78	310	P	**P**	**02 14 22.6**	**+1.0**
BW06	**Boulder Array**	54.22	304	P	**P**	**02 14 25.8**	**+0.7**
BW06				IAmb	IAmb	02 14 26.6	
	comp=Z,4.4nm,1.1s						
PD31	**Pinedale Array**	54.22	304	P	**P**	**02 14 24.6**	**-0.4**
PD31				IAmb	IAmb	02 14 26.6	
	comp=Z,4.0nm,1.1s						
PDAR	**Pinedale Array**	54.22	304	P	**P**	**02 14 24.0**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=85,slow=9.1,SNR=15						
PDAR				LR	LR	02 35 01.1	
	comp=Z,84nm,21.8s,baz=93,slow=33						
	comp=Z,1.9nm,0.9s						
YMR	**Madison River**	54.97	306	P	**P**	**02 14 31.4**	**+1.0**
YMR				IAmb	IAmb	02 14 34.3	
	comp=Z,7.1nm,1.2s						
P18A	**Preston Nutter**	55.24	300	P	**P**	**02 14 32.6**	**0.0**
P18A				IAmb	IAmb	02 14 38.8	
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	55.33	33	P	**P**	**02 14 31.1**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=305,slow=8.0,SNR=4.1						
	comp=Z,1.6nm,0.7s						
SRU	**San Rafael Swe**	55.55	300	P	**P**	**02 14 35.6**	**+0.9**
YKA	**Yellowknife Ar**	56.27	328	P	**P**	**02 14 38.2**	**-1.0**
	comp=Z,0.9nm,1.0s,baz=89,slow=7.6,SNR=9.8						
YKA				LR	LR	02 38 04.8	
	comp=Z,80nm,19.1s,baz=44,slow=35						
	comp=Z,0.9nm,1.0s						
NLU	**North Lily Min**	56.56	301	P	**P**	**02 14 43.1**	**+1.2**
NLU				IAmb	IAmb	02 14 43.7	
	comp=Z,7.0nm,1.5s						
DUG	**Dugway, Tooele**	57.06	301	P	**P**	**02 14 46.1**	**+0.7**
DUG				IAmb	IAmb	02 14 52.0	
	comp=Z,4.5nm,1.2s						
AKASG	**Malin Array Be**	57.49	46	P	**P**	**02 14 47.8**	**-0.3**
	comp=Z,0.1nm,0.2s,baz=272,slow=6.8,SNR=2.9						
AKASG				LR	LR	02 38 08.4	
	comp=Z,49nm,18.4s,baz=218,slow=35						

	comp=Z,0.1nm,0.2s						
AKASG	Malin Array Be	57.49	46	IAmb	IAmb	02 14 48.5	
	comp=Z,2.6nm,1.2s						
CCUT	Cedar City	58.06	298	IAmb	IAmb	02 14 55.1	
	comp=Z,3.7nm,1.1s						
MFID	Camas Ranch	58.63	306	IAmb	IAmb	02 15 02.9	
	comp=Z,2.6nm,0.8s						
NEW	Newport	58.65	311	LR	LR	02 38 37.8	
	comp=Z,63nm,19.5s,baz=126,slow=34						
ELK	Elko	58.76	302	LR	LR	02 39 02.0	
	comp=Z,59nm,19.4s,baz=97,slow=35						
PRN	Pahroc Range	59.40	299	P	P	02 15 02.6	+0.8
LPIG	La Paz	59.46	282	LR	LR	02 39 36.6	
	comp=Z,31nm,20.4s,baz=170,slow=35						
KVN	Kaiserville	61.30	301	P	P	02 15 14.9	+0.1
KVN				IAmb	IAmb	02 15 16.8	
	comp=Z,5.7nm,1.3s						
PFO	Pinyon Flats O	61.54	295	LR	LR	02 40 21.2	
	comp=Z,37nm,19.2s,baz=40,slow=35						
NVAR	Mina Array Bea	61.62	300	P	P	02 15 15.9	-1.2
	comp=Z,0.5nm,0.8s,baz=72,slow=8.6,SNR=3.8						
	comp=Z,0.5nm,0.8s						
PAHR	Pah Rah Range	62.09	302	P	P	02 15 19.7	-0.4
MOD	Modoc Plateau	62.19	305	P	P	02 15 20.8	0.0
BR131	Keskin Array S	62.75	58	P	P	02 15 25.1	+0.6
BR131				IAmb	IAmb	02 15 27.4	
	comp=Z,4.7nm,1.1s						
BRTR	Keskin Array B	62.75	58	P	P	02 15 25.1	+0.6
	comp=Z,0.7nm,0.9s,baz=266,slow=5.0,SNR=5.5						
	comp=Z,0.7nm,0.9s						
INK	Inuvik	63.65	335	LR	LR	02 42 17.7	
	comp=Z,45nm,18.3s,baz=85,slow=35						
YBH	Yreka Blue Hor	63.97	305	LR	LR	02 41 40.6	
	comp=Z,36nm,20.9s,baz=101,slow=34						
DLBC	Dease Lake	64.26	324	LR	LR	02 43 36.1	
	comp=Z,50nm,19.1s,baz=95,slow=36						
BBB	Bella Bella	64.73	317	LR	LR	02 43 58.7	
	comp=Z,43nm,18.1s,baz=176,slow=36						
IL31		69.82	334	P	P	02 16 10.9	+1.7
IL31				IAmb	IAmb	02 16 15.9	
	comp=Z,2.2nm,0.9s						
ILAR	Eielson Array	69.82	334	P	P	02 16 09.6	+0.3
	comp=Z,0.5nm,0.7s,baz=74,slow=4.4,SNR=6.5						
ILAR				LR	LR	02 46 21.9	
	comp=Z,47nm,18.1s,baz=76,slow=36						
	comp=Z,0.5nm,0.7s						
CCB	Clear Creek Bu	70.23	334	IAmb	IAmb	02 16 18.3	
	comp=Z,6.1nm,1.2s						
H23K	Yukon River	70.37	335	IAmb	IAmb	02 16 20.2	
	comp=Z,3.0nm,0.9s						
NEA2	Nenana	70.75	334	P	P	02 16 15.2	+0.3
NEA2				IAmb	IAmb	02 16 21.5	
	comp=Z,2.4nm,1.0s						
I21K	Tanana	71.57	335	IAmb	IAmb	02 16 27.5	
	comp=Z,5.0nm,1.0s						
H21K	Melozitna Rive	71.64	336	P	P	02 16 20.6	+0.3
H21K				IAmb	IAmb	02 16 27.5	
	comp=Z,2.4nm,1.0s						
BPAW	Bear Paw Mtn.	71.72	334	P	P	02 16 21.3	+0.5
KTH	Kantishna Hill	71.95	333	P	P	02 16 23.3	+1.0
KTH				IAmb	IAmb	02 16 29.2	
	comp=Z,5.6nm,1.0s						
AKTO	Aktyubinsk	75.03	40	LR	LR	02 46 47.7	
	comp=Z,20nm,18.7s,baz=330,slow=34						
KDAK	Kodiak Island	75.54	329	LR	LR	02 49 38.8	
	comp=Z,75nm,21.1s,baz=83,slow=36						
TSUM	Tsumeb	75.73	122	LR	LR	02 42 39.4	
	comp=Z,32nm,20.1s,baz=324,slow=30						
MBAR	Mbarara	76.35	98	LR	LR	02 47 58.5	
	comp=Z,36nm,22.0s,baz=301,slow=34						
TIXI	Tiksi	79.67	3	P	P	02 17 06.9	+0.8
TIXI				IAmb	IAmb	02 17 14.5	
	comp=Z,7.7nm,1.4s						
ATD	Arta Tunnel	81.22	82	LR	LR	02 51 14.1	
	comp=Z,27nm,20.5s,baz=354,slow=34						
LSZ	Lusaka	81.77	112	LR	LR	02 53 51.9	
	comp=Z,20nm,18.5s,baz=294,slow=36						
KMBO	Kilima Mbogo	82.28	96	LR	LR	02 53 10.3	
	comp=Z,65nm,19.5s,baz=256,slow=35						
KURK	Kurchatov	85.70	33	P	P	02 17 39.2	+1.3
KURK				IAmb	IAmb	02 17 51.0	
	comp=Z,3.7nm,0.9s						
KK31	Karatay Array	86.18	42	P	P	02 17 40.5	0.0
KKAR	Karatay Array	86.18	42	P	P	02 17 41.0	+0.5
BOSA	Boshof	86.94	125	LR	LR	02 53 14.3	
	comp=Z,24nm,19.0s,baz=12,slow=33						
SHEM	Shemya Is, Ala	92.48	338	LR	LR	03 00 40.0	
	comp=Z,41nm,19.7s,baz=309,slow=36						
PETK	Petropavlovsk-	96.40	347	LR	LR	03 02 51.6	
	comp=Z,13nm,20.6s,baz=52,slow=36						

IDC 13 02:18:30.0±8.9**, 15°.69S×172°.46W, h0^{km}, mb4.3**/4**, mbtmp4.3**/4**, Error ellipse: s-maj=197.0km s-min=148.5km az=134.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	20.94	249	P	P	02 23 14.6	-0.1
	4.1nm,0.6s,baz=90,slow=19,SNR=6.1						
	4.1nm,0.6s						
STKA	Stephens Creek	44.68	240	P	P	02 26 45.5	+0.6
	2.6nm,0.6s,baz=92,slow=10,SNR=4.0						
	2.6nm,0.6s						
WRA	Warramunga Arr	50.66	257	P	P	02 27 31.0	-0.6
	1.3nm,0.7s,baz=95,slow=7.0,SNR=15						
	1.3nm,0.7s						
ASAR	Alice Springs	50.89	252	P	P	02 27 33.1	-0.1
	11nm,0.5s,baz=89,slow=8.2,SNR=124						
	11nm,0.5s						

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*MDD **13** 02:30:49.0±1.1, 36°.83N×11°.02W, h0^{km}, mb_Lg2.6/7, Error ellipse: s-maj=8.8km s-min=6.7km az=40.0*

*INMG **13** 02:30:50.5±0.9, 36°.64N×11°.18W, h31^{km}, ML2.1, Error ellipse: s-maj=4.1km s-min=3.0km az=80.0*

*IGIL **13** 02:30:51.1, 36°.64N×11°.17W, h31^{km}, ML1.9*

*CNRM **13** 02:30:52.3, 36°.42N×10°.49W, h113^{km}, ml2.2*

ISC 13 02:30:47.5±2.5**, 36°.64N**±0°.07×**11°.2W**±0°.1**, h35^{km}, n44, σ1.ˢ78**/70**, 1C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	1.95	75⇑	*e*Pn	Pn	02 31 19.5	+1.4
PFVI				*e*Sn	Sn	02 31 41.7	+0.3
PFVI				A	A	02 31 42.8	
	14nm,0.1s						
PFVI	Vila Bisbo	1.95	75	P	Pn	02 31 19.4	+1.3
PFVI				S	Sn	02 31 41.0	-0.4
MORF	Marmelete	2.13	71	*e*P	Pn	02 31 22.4	+1.7
MORF				*e*S	Sn	02 31 45.5	-0.4
MORF				IAML		02 31 47.8	
	comp=E,12nm,0.2s						
MORF	Marmelete	2.13	71	*e*Pn	Pn	02 31 22.4	+1.7
MORF				*e*Sn	Sn	02 31 46.2	+0.3
MORF				A	A	02 31 48.3	
	comp=E,9.1nm,0.3s						
PTEO	Sao Teotonio	2.16	65	*e*Pn	Pn	02 31 22.8	+1.8
PTEO				*e*Sn	Sn	02 31 47.4	+0.8
PTEO				A	A	02 31 51.5	
	comp=E,7.9nm,0.5s						
PNCL	Nicolau / Gran	2.57	54	*e*Pn	Pn	02 31 28.6	+1.9
PNCL				*e*Sn	Sn	02 31 57.0	+0.3
PNCL				A	A	02 31 58.6	
	comp=E,5.0nm,0.2s						
PMST	Lisbon--Monsan	2.63	36	*e*Sn	Sn	02 31 59.4	+1.4
MESJ	Messejana	2.65	62	*e*P	Pn	02 31 29.6	+1.9
MESJ				*e*S	Sn	02 31 57.8	-0.8
MESJ				IAML		02 31 58.9	
	comp=E,2.8nm,0.1s						
MESJ	Messejana	2.65	62	*e*Pn	Pn	02 31 29.6	+1.9
MESJ				*e*Sn	Sn	02 31 58.7	+0.1
MESJ				A	A	02 32 00.8	
	comp=E,3.1nm,0.1s						
PBDV	Barranco-do-Ve	2.67	76	*e*Pn	Pn	02 31 29.9	+1.8
PBDV				*e*Sn	Sn	02 31 59.3	+0.1
PBDV				A	A	02 32 07.1	
	comp=E,4.0nm,0.6s						
PCVE	Castro Verde	2.70	67	*e*Pn	Pn	02 31 30.2	+1.8
PCVE				*e*Sn	Sn	02 31 59.9	+0.1
PCVE				A	A	02 32 02.9	
	comp=E,3.2nm,0.2s						
PMAFR	Mafra	2.76	32	*e*Pn	Pn	02 31 30.3	+1.1
PMAFR				*e*Sn	Sn	02 32 01.3	0.0
PMAFR				A	A	02 32 02.5	
	comp=E,16nm,0.7s						
PACT	Alcochete	2.83	40	*e*Pn	Pn	02 31 31.9	+1.8
PACT				*e*Sn	Sn	02 32 04.3	+1.4
PACT				A	A	02 32 10.7	
	comp=E,10nm,0.4s						
PVAQ	Vaqueiros	2.88	74	*e*Pn	Pn	02 31 32.6	+1.8
PVAQ				*e*Sn	Sn	02 32 03.8	-0.4
PVAQ				A	A	02 32 06.8	
	comp=E,2.9nm,0.3s						
PVAQ	Vaqueiros	2.88	74	P	Pn	02 31 31.5	+0.7
PVAQ				S	Sn	02 32 02.0	-2.2
PBEJ	Beja	2.98	61	*e*Sn	Sn	02 32 06.3	-0.5
PBEJ				A	A	02 32 07.9	
	comp=E,2.9nm,0.2s						
EGRO	El Granado	3.09	72	P	Pn	02 31 35.6	+1.8
EGRO				S	Sn	02 32 09.4	0.0
EGRO				*i* Vmb_Lg		02 32 13.3	
PMTG	Montargil	3.37	43	*e*Pn	Pn	02 31 39.3	+1.7
PMTG				*e*Sn	Sn	02 32 16.1	-0.3
PMTG				A	A	02 32 18.2	
	comp=E,3.3nm,0.8s						
PSBE	So Bento	3.43	33	*e*Pn	Pn	02 31 40.0	+1.5
PSBE				*e*Sn	Sn	02 32 17.6	-0.4
PSBE				A	A	02 32 25.6	
	comp=E,3.1nm,0.9s						
PESTR	Estremoz	3.61	51	*e*Sn	Sn	02 32 21.8	-0.6
PESTR				A	A	02 32 29.7	
	comp=E,2.6nm,0.7s						
PESTR	Estremoz	3.61	51	P	Pn	02 31 42.0	+1.0
PESTR				S	Sn	02 32 21.1	-1.3
PBAR	Barrancos	3.64	64	*e*Pn	Pn	02 31 43.3	+2.0
PBAR				*e*Sn	Sn	02 32 22.2	-0.8
PBAR				A	A	02 32 24.4	
	comp=E,1.9nm,0.4s						
EMIN	Mina Concepcio	3.77	71	P	Pn	02 31 44.5	+1.4
EMIN				S	Sn	02 32 25.2	-1.1
EMIN				*i* Vmb_Lg		02 32 28.3	
EBAD	Badajoz	3.92	56	P	Pn	02 31 46.5	+1.3
EBAD				S	Sn	02 32 28.9	-1.1
EBAD				*i* Vmb_Lg		02 32 32.8	
PCAS	Casmilo, Conde	4.01	31	*e*Pn	Pn	02 31 47.8	+1.4
PCAS				*e*Sn	Sn	02 32 31.9	-0.2
PCAS				A	A	02 32 33.9	
	comp=E,2.9nm,0.4s						
PMRV	Marv??o	4.09	46	*e*Pn	Pn	02 31 48.8	+1.3
PMRV				*e*Sn	Sn	02 32 32.5	-1.6
PMRV				A	A	02 32 33.9	
	comp=E,4.0nm,0.3s						
PCBR	Castelo Branco	4.33	41	*e*Sn	Sn	02 32 38.7	-1.2
MTE	Manteigas	4.71	36	*e*Sn	Sn	02 32 48.4	-1.3
MTE				A	A	02 32 49.9	
	comp=E,3.2nm,0.7s						
ECAB	El Cabril	4.81	71	P	Pn	02 31 58.9	+1.4
ECAB				S	Sn	02 32 50.2	-1.8
ECAB				*i* Vmb_Lg		02 32 53.4	
PVIS	Viseu	4.81	31	*e*Pn	Pn	02 31 58.8	+1.3
PVIS				*e*Sn	Sn	02 32 50.6	-1.5
PVIS				A	A	02 32 53.4	
	comp=E,1.9nm,0.3s						
EPLA	Plasencia	5.27	48	S	Sn	02 33 00.5	-2.7
PVRL	Vila Real	5.36	29	*e*Sn	Sn	02 33 03.1	-2.4
POLO	Lamas de Olo	5.41	28	*e*Sn	Sn	02 33 04.4	-2.5
EADA	Adamuz	5.47	72	P	Pn	02 32 08.2	+1.6
EADA				S	Sn	02 33 07.1	-1.3
EADA				*i* Vmb_Lg		02 33 10.8	
ELOB	Lobios	5.76	24	P	Pn	02 32 11.3	+0.8
ELOB				S	Sn	02 33 11.1	-4.2
ELOB				*i* Vmb_Lg		02 33 13.6	
PGAV	Gavieira, Arco	5.78	22	*e*Sn	Sn	02 33 12.8	-3.1
OUK	Oukaimeden	6.08	152	P	Pn	02 32 15.4	+0.2
OUK				S	Sn	02 33 16.2	-7.5
PAB	San Pablo	6.12	60	S	Sn	02 33 20.9	-3.4
PAB				*i* Vmb_Lg		02 33 23.8	
MD31	MD31	6.49	124	P	Pn	02 32 20.5	-0.1
MD31				S	Sn	02 33 23.2	-10
TTIG	Tnine Tigouga,	6.49	159	P	Pn	02 32 17.3	-3.4
EQES	Quesada	6.58	77	S	Sn	02 33 32.5	-3.0
EAGO	Agolada(Pontev	6.60	20	S	Sn	02 33 31.4	-4.6
MDT	Midelt	6.62	123	P	Pn	02 32 20.8	-1.6
MDT				S	Sn	02 33 27.3	-9.4
OUZM	OUZ	6.80	146	P	Pn	02 32 26.2	+1.4
OUZM				S	Sn	02 33 35.9	-5.2

IDC 13 02:33:08.3±4.4**, 30°.43S×178°.81W, h0^{km}, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=236.9km s-min=68.1km az=167.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.41	267	P	P	02 41 04.6	-0.3
	0.3nm,0.3s,baz=109,slow=7.4,SNR=4.2						
	0.3nm,0.3s						
WRA	Warramunga Arr	43.40	273	P	P	02 41 13.0	0.0
	0.6nm,0.4s,baz=113,slow=7.8,SNR=11						
	0.6nm,0.4s						
FINES	FINESS Array B	144.93	339	PKP	PKPbc	02 52 46.1	+0.2
	1.4nm,0.7s,baz=53,slow=2.8,SNR=7.1						

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*ISK **13** 02:46:19.9, 34°.70N×23°.26E, h26^{km}, ML3.4/6*

*THE **13** 02:46:22.4, 34°.78N×23°.28E, h11^{km}±3^{km}, ML3.4/4, Error ellipse: s-maj=3.5km s-min=0.9km az=64.0*

*ATH **13** 02:46:23.2, 34°.87N×23°.47E, h44^{km}±1^{km}, ML3.3/6, Error ellipse: s-maj=3.7km s-min=1.5km az=226.0*

*IDC **13** 02:46:25.5±2.2, 35°.02N×23°.46E, h62^{km}±22^{km}, mb3.7/9, mbtmp3.9/11, MS3.1/1, Error ellipse: s-maj=25.8km s-min=21.5km az=156.0*

*DDA **13** 02:46:25.8±0.0, 35°.30N×23°.93E, h6^{km}±5^{km}, ML2.7*

ISC 13 02:46:24.0±0.9**, 34°.86N**±0°.06×**23°.52E**±0°.05**, h54^{km}**±6^{km}**, n69, σ1.ˢ24**/85**, mb4.2**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.40	20	P	Pn	02 46 32.6	-1.8
KNDR				S	Sn	02 46 40.8	-1.1
KNDR				AML	AML	02 46 45.3	
	comp=E,11327µm,0.5s						
KNDR				AML	AML	02 46 45.4	
	comp=N,19720µm,0.7s						
KNDR	Palaiochora Ch	0.40	20	P	Pn	02 46 32.6	-1.8
KNDR				S	Sn	02 46 40.9	-0.9
	comp=N,3µm,0.6s						
KNDR	Palaiochora Ch	0.40	20	PG	Pn	02 46 32.5	-1.8
KNDR				SG	Sn	02 46 42.6	+0.8
GVD	Gavdhos	0.47	93	P	Pn	02 46 34.9	-0.3
GVD				S	Sn	02 46 43.8	+0.6
GVD				AML	AML	02 46 46.6	
	comp=N,11006µm,0.5s						
GVD				AML	AML	02 46 48.5	
	comp=E,9268µm,0.3s						
GVD	Gavdhos	0.47	93	P	Pn	02 46 34.9	-0.3
GVD				S	Sn	02 46 45.9	+2.7
	comp=E,5µm,0.4s						
GVD	Gavdhos	0.47	93	PG	Pn	02 46 34.5	-0.6
GVD				SG	Sn	02 46 44.9	+1.7
GVDS	Gavdos	0.47	92	P	Pn	02 46 34.5	-0.7
GVDS				S	Sn	02 46 44.6	+1.4
	comp=E,3µm,0.4s						
IMMV	Iera Moni Meta	0.71	32	P	Pn	02 46 38.2	+0.2
IMMV				S	Sn	02 46 49.3	+1.0
IMMV				AML	AML	02 46 53.6	
	comp=E,4348µm,0.4s						
IMMV				AML	AML	02 46 54.3	
	comp=N,5434µm,0.6s						
IMMV	Iera Moni Meta	0.71	32	P	Pn	02 46 38.4	+0.4
IMMV				S	Sn	02 46 51.5	+3.3
	comp=N,2µm,0.5s						
IMMV	Iera Moni Meta	0.71	32	PG	Pn	02 46 38.2	+0.2
IMMV				SG	Sn	02 46 51.3	+3.1
RODP	Rodopos	0.72	16	P	Pn	02 46 38.7	+0.5
RODP	Rodopos	0.72	16	PG	Pn	02 46 38.1	-0.1
RODP				SG	Sn	02 46 51.1	+2.5
CHAN	Chania	0.78	33	P	Pn	02 46 39.8	+0.9
CHAN				S	Sn	02 46 50.9	+1.0
CHAN				AML	AML	02 46 57.6	
	comp=N,3321µm,0.5s						
CHAN				AML	AML	02 46 59.5	
	comp=E,3938µm,0.5s						
ANKY	Antikythira Is	1.02	350	P	Pn	02 46 42.4	+0.4
ANKY				AML	AML	02 47 04.9	
	comp=N,786µm,0.5s						
ANKY				AML	AML	02 47 07.2	
	comp=E,2278µm,0.7s						
ANKY	Antikythira Is	1.02	350	P	Pn	02 46 42.5	+0.4
TMBK	Timbaki Herakl	1.05	78	P	Pn	02 46 43.6	+1.2
IDI	Anoyia	1.20	69	P	Pn	02 46 46.2	+1.6
	comp=E,60nm,0.4s,baz=256,slow=8.6,SNR=114						
IDI				S	Sn	02 47 06.1	+6.1
	comp=E,102nm,0.3s,baz=36,slow=23,SNR=11						
IDI				LR	LR	02 47 33.7	
	comp=E,95nm,20.1s,baz=276,slow=57						
IDI	Anoyia	1.20	69	P	Pn	02 46 45.8	+1.2
IDI				AML	AML	02 47 10.1	
	comp=E,674µm,0.4s						
IDI				AML	AML	02 47 12.1	
	comp=N,1138µm,0.5s						
IDI	Anoyia	1.20	69	P	Pn	02 46 46.0	+1.4
IDI	Anoyia	1.20	69	PN	Pn	02 46 45.3	+0.7
HRKL	Herakleio	1.37	71	PN	Pn	02 46 46.6	-0.2
KTHA	Kythira Island	1.44	345	P	Pn	02 46 48.3	+0.5
KTHA	Kythira Island	1.44	345	P	Pn	02 46 48.4	+0.6
KTHR	Kythira	1.46	343	P	Pn	02 46 48.3	+0.3
VLI	Veliai	1.91	346	P	Pn	02 46 55.1	+0.9
VLI	Veliai	1.91	346	P	Pn	02 46 55.2	+1.0
THR9	Santorini-Faro	2.11	45	P	Pn	02 46 57.6	+0.7
THR6	Thira Island,	2.14	45	P	Pn	02 46 57.8	+0.6
THR6	Thira Island,	2.14	45	P	Pn	02 46 57.8	+0.6
THR5	Thira Island,	2.15	43	P	Pn	02 46 57.8	+0.4
THR5	Thira Island,	2.15	43	P	Pn	02 46 57.8	+0.4
SAP3	Santorini-Thir	2.16	43	P	Pn	02 46 57.9	+0.3
SNT5	Nea Kammeni, S	2.17	44	P	Pn	02 46 58.2	+0.5
THR3	Thira Island,	2.18	44	P	Pn	02 46 58.2	+0.5
THR3	Thira Island,	2.18	44	P	Pn	02 46 58.3	+0.5
THR8	Santorini-Mono	2.22	45	P	Pn	02 46 58.8	+0.4
THR8	Santorini-Mono	2.22	45	P	Pn	02 46 58.8	+0.4
CMBO	Columbo, Santo	2.22	43	P	Pn	02 46 58.9	+0.5
ZKR	Zakros	2.23	83	PN	Pn	02 46 59.6	+1.1
PYL	PYLOS	2.49	325	P	Pn	02 47 01.0	-1.1
ITM	Ithomi	2.65	331	P	Pn	02 47 04.2	0.0
ITM	Ithomi	2.65	331	PN	Pn	02 47 03.0	-1.2
EPID	Epidavros	2.77	353	P	Pn	02 47 07.0	+1.1
KARP	Karpathos	3.06	76	P	Pn	02 47 11.4	+1.5
GUR	Goura	3.21	343	P	Pn	02 47 12.3	+0.3
VILL	Villia	3.30	357	P	Pn	02 47 13.4	+0.2
DAT	Datca	3.79	59	P	Pn	02 47 19.5	-0.5
DAT				*i* AML	AML	02 48 07.0	
	comp=N,23nm,1.5s						
DAT				*i* AML	AML	02 48 12.0	
	comp=N,15nm,0.5s						
TURN	Turunc	4.29	62	P	Pn	02 47 28.0	+1.3
TURN				S	Sn	02 48 14.7	-0.7
TURN				*i* AML	AML	02 48 19.0	
	comp=N,20nm,0.6s						
TURN				*i* AML	AML	02 48 20.0	
	comp=N,14nm,0.5s						
MULA	Mugla, Merkez-	4.56	57	P	Pn	02 47 32.0	+1.5
MULA				S	Sn	02 48 21.2	-1.2
MULA				*i* AML	AML	02 48 28.0	
	comp=N,11nm,0.8s						
FETY	Fethiye	4.86	67	P	Pn	02 47 37.9	+3.4
FETY				S	Sn	02 48 30.7	+1.2
TAVA	DENIZLI_Tavas	5.08	58	P	Pn	02 47 39.5	+1.9
TAVA				S	Sn	02 48 34.8	-0.2
TAVA				*i* AML	AML	02 48 44.0	
	comp=N,6.9nm,1.0s						
AKAS	Kas	5.15	73	P	Pn	02 47 39.2	+0.5
AKAS				S	Sn	02 48 34.2	-2.5
GOLH	Golhisar	5.44	62	P	Pn	02 47 43.6	+1.0
GOLH				S	Sn	02 48 41.4	-2.5
GOLH				*i* AML	AML	02 48 45.0	
	comp=N,15nm,0.5s						
GOLH				*i* AML	AML	02 48 45.0	
	comp=N,24nm,0.7s						
BRTR	Keskin Array B	9.41	56	P	Pn	02 48 38.2	+1.2
	comp=N,0.3nm,0.5s,baz=226,slow=14,SNR=3.6						
EIL	Elat	10.97	115	P	Pn	02 48 55.3	-3.0
	comp=N,0.8nm,0.4s,baz=133,slow=3.9,SNR=1.5						
VRAC	Vranov	15.31	343	P	P	02 50 00.7	+0.3
	comp=N,1.7nm,0.3s,baz=180,slow=17,SNR=2.7						
GERES	GERESS Array B	15.75	335	P	P	02 50 06.3	+1.0
	comp=N,0.7nm,0.5s,baz=135,slow=13,SNR=4.4						
AKASG	Malin Array Be	16.37	13	P	Pn	02 50 09.6	-0.4
	comp=N,0.2nm,0.3s,baz=208,slow=9.5,SNR=6.3						
GNI	Garni	17.63	66	LR	LR	02 58 42.0	
	comp=N,54nm,18.0s,baz=328,slow=42						
FINES	FINESS Array B	26.65	3	P	P	02 51 55.7	-1.7
	comp=N,0.7nm,0.6s,baz=180,slow=12,SNR=6.0						
	comp=N,0.7nm,0.6s						
NOA	NORSAR Array B	27.36	347	P	P	02 52 03.3	-0.6
	comp=N,0.3nm,0.5s,baz=152,slow=10,SNR=4.6						
	comp=N,0.3nm,0.5s						
EKA	Eskdalemuir Ar	27.52	326	P	P	02 52 05.2	-0.1
	comp=N,0.5nm,0.4s,baz=124,slow=7.8,SNR=9.1						
	comp=N,0.5nm,0.4s						
TORD	Torodi Ar. Bea	29.28	228	P	P	02 52 22.1	+0.8
	comp=N,10nm,0.6s,baz=37,slow=9.3,SNR=5.4						
	comp=N,10nm,0.6s						
ARCES	ARCESS Array B	34.74	1	P	P	02 53 07.0	-1.6
	comp=N,4.7nm,1.1s,baz=186,slow=3.4,SNR=4.6						
	comp=N,4.7nm,1.1s						
JMIC	Jan Mayen	39.99	344	P	P	02 53 52.3	-0.7
	comp=N,432nm,0.4s,baz=144,slow=8.7,SNR=8.8						
MKAR	Makanchi Array	45.06	56	P	P	02 54 35.0	+0.6
	comp=N,1.1nm,0.3s,baz=266,slow=7.3,SNR=27						
	comp=N,1.1nm,0.3s						
ZALV	Zalesovo Beam	46.18	46	P	P	02 54 42.0	-1.2
	comp=N,1.6nm,0.4s,baz=264,slow=8.4,SNR=9.1						
	comp=N,1.6nm,0.4s						
SONM	Songino Array	60.71	50	P	P	02 56 31.1	+1.1
	comp=N,1.1nm,0.4s,baz=311,slow=9.4,SNR=2.4						
	comp=N,1.1nm,0.4s						
YKA	Yellowknife Ar	77.31	341	P	P	02 58 13.0	+0.6
	comp=N,0.2nm,0.4s,baz=33,slow=5.0,SNR=4.3						
	comp=N,0.2nm,0.4s						

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*PRU **13** 02:46:31.9±0.0, 51°.55N×16°.09E, h0^{km}*

*VIE **13** 02:46:32.6±0.6, 51°.46N×15°.99E, h0^{km}, mb2.5/4, ml2.4/7, Error ellipse: s-maj=4.0km s-min=3.0km az=2.0 82 km WNW of Wroclaw Suspected Mining induced.*

ISC 13 02:46:30.6±1.6**, 51°.60N**±0°.07×**16°.12E**±0°.05**, h0^{km}, n24, σ0.ˢ82**/46**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.77	172	*e*Pg	Pg	02 46 45.5	+0.1
KSP				*e*Sg	Sg	02 46 55.3	0.0
CHVC	Chvalec	1.02	182	*e*PG	Pg	02 46 50.3	+0.2
CHVC				*e*SG	Sg	02 47 03.1	-0.2
	comp=Z,32nm,0.5s						
OSTC	Ostas	1.05	177	*e*PG	Pg	02 46 50.8	+0.1
OSTC				*e*SG	Sg	02 47 04.4	+0.1
	comp=Z,33nm,0.4s						
UPC	Upice	1.10	184	*e*PG	Pg	02 46 51.6	-0.1
UPC				*e*SG	Sg	02 47 05.4	-0.5
	comp=Z,43nm,0.2s						
DPC	Dobruska-Polom	1.26	174	*e*PG	Pg	02 46 54.3	-0.5
DPC				*e*SG	Sg	02 47 10.3	-0.8
	comp=Z,16nm,0.3s						
PVCC	Panska Ves	1.46	223	*e*PG	Pn	02 46 58.2	0.0
PVCC				*e*SG	Sg	02 47 17.4	+0.1
	comp=Z,67nm,0.4s						
BRG	Berggiesshubel	1.55	243	Pg	Pb	02 47 00.1	-0.1
BRG				Sg	Sn	02 47 20.4	+0.1
BRG				Amp		02 47 21.7	
	comp=Z,29nm,0.4s						
KRLC	Kraliky	1.59	164	*e*PG	Pn	02 46 59.8	-0.2
KRLC				*e*SG	Sn	02 47 20.4	-0.9
	comp=Z,14nm,0.3s						
PRU	Pruhonice	1.90	212	*e*PN	Pn	02 47 03.5	-0.8
PRU				*e*PG	Pb	02 47 05.6	-0.6
PRU				*e*SG	Sb	02 47 30.1	-0.4
	comp=Z,12nm,0.3s						
CLL	Collm	1.97	263	*e*Pn	Pn	02 47 04.0	-1.3
CLL				*e*Pg	Pb	02 47 08.0	+0.6
CLL				*i* x	x	02 47 11.0	
CLL				*e*Sg	Sb	02 47 33.0	+0.5
	comp=Z,10.0nm,0.4s						
MORC	Moravsky Berou	2.04	153	*e*PN	Pn	02 47 05.7	-0.6
MORC				*e*SG	Sb	02 47 34.2	-0.3
VRAC	Vranov	2.32	172	*e*PN	Pn	02 47 10.3	+0.3
VRAC				*e*SG	Sb	02 47 43.5	+1.0
TREC	Trest	2.35	190	*e*SG	Sb	02 47 44.3	+1.0
KRUC	Moravsky	2.55	176	*e*PN	Pn	02 47 13.1	-0.1
KRUC				*e*SG	Sb	02 47 50.0	+0.9
KHC	Kasperske Hory	2.96	214	*e*PN	Pn	02 47 20.0	+1.1
KHC				*e*PG	Pb	02 47 24.8	+0.5

KHC				*e*SN	**Sn**	**02 47 55.3**	**+0.1**
KHC				*e*SG	**Sg**	**02 48 04.1**	**-1.6**
CKRC	**Cesky Krumlov**	**3.02**	**203**	*e*PN	**Pn**	**02 47 20.6**	**+0.9**
CKRC				*e*PG	**Pb**	**02 47 25.9**	**+0.6**
LANS	**Liptovska Anna**	**3.26**	**138**	*e*SG	**Sg**	**02 48 16.8**	**+1.5**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*SG	**Sg**	**02 48 16.2**	**-1.0**
CONA	**Conrad Observa**	**3.68**	**183**	*e*Pn	**Pn**	**02 47 28.7**	**-0.1**
	comp=Z,0.3nm,0.1s						
CONA				*e*Sg	**Sg**	**02 48 29.2**	**+0.3**
	comp=Z,5.3nm,0.4s						
RONA	**Rosalia, Austr**	**3.91**	**178**	*e*Pn	**Pn**	**02 47 31.9**	**-0.1**
	comp=Z,0.2nm,0.2s						
RONA				*e*Sg	**Sg**	**02 48 36.3**	**+0.1**
	comp=Z,1.3nm,0.2s						
MOA	**Molln**	**3.95**	**198**	*e*Pn	**Pn**	**02 47 32.3**	**-0.1**
	comp=Z,0.9nm,0.2s						
MOA				*e*Sg	**Sg**	**02 48 37.0**	**-0.3**
	comp=Z,0.9nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.24**	**203**	*e*Sg	**Sg**	**02 48 45.2**	**-1.5**
	comp=Z,2.0nm,0.3s						
ARSA	**Arzberg**	**4.38**	**185**	*e*Sn	**Sn**	**02 48 28.6**	**-1.4**
	comp=Z,0.8nm,0.3s						
WTTA	**Wattenberg**	**5.24**	**216**	*e*Sg	**Sg**	**02 49 21.4**	**+2.7**
	comp=Z,2.6nm,0.5s						

PRU 13 02:49:10.4±0.0**, 50°.26N×18°.77E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.93**	**239**	*e*PG	Pg	02 49 28.5	+0.3
MORC				*e*SG	Sg	02 49 40.7	+0.5
LANS	**Liptovska Anna**	**1.20**	**158**	*e*PG	Pg	02 49 33.0	-0.4
LANS	**Liptovska Anna**	**1.20**	**158**	*e*SG	Sb	02 49 49.5	-0.6
KRLC	**Kraliky**	**1.29**	**263**	*e*PG	Pg	02 49 34.8	-0.3
KRLC				*e*SG	Sg	02 49 50.7	-1.2
DPC	**Dobruska-Polom**	**1.57**	**274**	*e*PG	Pn	02 49 39.9	+0.3
DPC				*e*SG	Sn	02 49 59.7	-1.0

*CNRM **13** 02:52:59.4, 35°.51N×3°.78W, h22^{km}, ml2.3*
*SFS **13** 02:53:00.0, 35°.49N×3°.77W, h3^{km}, ML2.6, ALBORAN SUR*
*MDD **13** 02:53:00.4±0.5, 35°.50N×3°.77W, h3^{km}±3^{km}, mb_Lg2.6/8, Error ellipse: s-maj=3.9km s-min=2.9km az=173.0*
*INMG **13** 02:53:01.7±1.8, 35°.50N×3°.72W, h20^{km}±6^{km}, ML2.0, Error ellipse: s-maj=4.7km s-min=3.8km az=17.0*
ISC 13 02:52:59.6±1.0**, 35°.47N**±0°.02×**3°.77W**±0°.02**, h17**^{km}±8^{km}**, n38,** σ1^{s}.**67**/70**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.29**	**209**	P	**Pg**	**02 53 06.2**	**+0.3**
PALE				S	**Sg**	**02 53 10.9**	**+0.6**
PVLZ	**Peæn de**	**0.53**	**236**	P	**Pg**	**02 53 10.6**	**+0.4**
PVLZ				S	**Sg**	**02 53 17.3**	**0.0**
GOG	**Mont Gurugu**	**0.68**	**111**	P	**Pg**	**02 53 12.9**	**-0.1**
GOG				S	**Sg**	**02 53 22.2**	**+0.2**
EMEL	**Melilla**	**0.68**	**104**	Pg	**Pg**	**02 53 13.4**	**+0.3**
EMEL				Sg	**Sg**	**02 53 23.2**	**+1.0**
WMELI	**Melilla**	**0.68**	**103**	P	**Pg**	**02 53 13.0**	**-0.1**
WMELI				S	**Sg**	**02 53 22.6**	**+0.5**
EALB	**Alboran**	**0.76**	**52**	Pg	**Pg**	**02 53 15.0**	**+0.5**
EALB				Sg	**Sg**	**02 53 24.5**	**0.0**
EALB				*i* Vmb_Lg		02 53 28.7	
AKLM	**AKL**	**0.96**	**185**	P	**Pg**	**02 53 18.7**	**+0.4**
AKLM				S	**Sg**	**02 53 29.8**	**-1.2**
CHAS	**Isla Isabel II**	**1.13**	**104**	P	**Pg**	**02 53 19.4**	**-2.1**
CHAS				S	**Sg**	**02 53 33.7**	**-2.6**
TAF	**Taforalt**	**1.29**	**120**	P	**Pg**	**02 53 21.9**	**-2.6**
TAF				S	**Sg**	**02 53 42.3**	**+0.9**
SMIR	**Smir Dam**	**1.33**	**280**	P	**Pn**	**02 53 21.0**	**-2.4**
SMIR				S	**Sg**	**02 53 39.4**	**-3.4**
CHEFC	**Chefchaouen**	**1.34**	**255**	P	**Pn**	**02 53 23.9**	**+0.4**
CHEFC				S	**Sg**	**02 53 40.8**	**-2.1**
EMIJ	**Mijas**	**1.36**	**324**	Pg	**Pn**	**02 53 23.9**	**0.0**
EMIJ				Sg	**Sn**	**02 53 44.0**	**+2.4**
EMIJ				*i* Vmb_Lg		02 53 45.3	
ECEU	**Ceuta**	**1.38**	**289**	Pg	**Pn**	**02 53 23.6**	**-0.5**
ECEU				Sg	**Sg**	**02 53 41.2**	**-3.0**
ECEU				*i* Vmb_Lg		02 53 42.2	
EMAL	**Malaga-Limoner**	**1.40**	**338**	P	**Pn**	**02 53 24.3**	**0.0**
EMAL				S	**Sg**	**02 53 42.2**	**-2.6**
ELGU	**Los Guajares,**	**1.40**	**5**	Pg	**Pn**	**02 53 24.4**	**-0.1**
ELGU				Sg	**Sg**	**02 53 44.4**	**-0.5**
ELGU				*i* Vmb_Lg		02 53 45.4	
JBK	**JBK**	**1.50**	**139**	P	**Pn**	**02 53 25.1**	**-0.9**
JBK				S	**Sn**	**02 53 43.4**	**-1.8**
EBER	**Berja**	**1.59**	**26**	Pg	**Pn**	**02 53 26.9**	**-0.3**
EBER				Sg	**Sn**	**02 53 48.2**	**+0.7**
EGOR	**Sierra Gorda,**	**1.66**	**351**	Pg	**Pn**	**02 53 28.7**	**+0.6**
EGOR				Sg	**Sg**	**02 53 53.3**	**+0.1**
EGOR				*i* Vmb_Lg		02 54 07.0	
ENIJ	**Nijar**	**1.96**	**40**	Sn	**Sn**	**02 53 54.8**	**-1.5**
LCRM	**LCR**	**1.99**	**207**	P	**Pn**	**02 53 32.7**	**0.0**
LCRM				S	**Sn**	**02 54 02.0**	**+4.7**
EQES	**Quesada**	**2.40**	**13**	Pn	**Pn**	**02 53 40.8**	**+2.7**
EQES				Sn	**Sn**	**02 54 10.2**	**+3.0**
MD31	**MD31**	**2.72**	**198**	P	**Pn**	**02 53 43.4**	**+0.8**
MD31				S	**Sn**	**02 54 15.7**	**+0.5**
MDT	**Midelt**	**2.74**	**195**	P	**Pn**	**02 53 42.8**	**0.0**
MDT				S	**Sn**	**02 54 16.6**	**+0.9**
EADA	**Adamuz**	**2.77**	**347**	Pn	**Pn**	**02 53 45.0**	**+1.8**
EADA				Sn	**Sn**	**02 54 15.3**	**-1.0**
EADA				*i* Vmb_Lg		02 54 28.3	
TDRA	**Tendrara**	**2.82**	**149**	P	**Pn**	**02 53 44.0**	**-0.1**
TDRA				S	**Sn**	**02 54 18.3**	**+0.6**
ECAB	**El Cabril**	**2.92**	**333**	Pn	**Pn**	**02 53 44.7**	**-0.6**
ECAB				Sn	**Sn**	**02 54 19.6**	**-0.4**
EMUR	**La Murta**	**3.12**	**40**	Sn	**Sn**	**02 54 24.2**	**-0.7**
EMIN	**Mina Concepcio**	**3.27**	**315**	Pn	**Pn**	**02 53 52.7**	**+2.6**
EMIN				*i* Vmb_Lg		02 54 22.3	
EMIN				Sn	**Sn**	**02 54 29.2**	**+0.5**
ETOB	**Tobarra**	**3.63**	**29**	Pn	**Pn**	**02 53 56.8**	**+1.6**
ETOB				Sn	**Sn**	**02 54 35.2**	**-2.4**
ETOB				*i* Vmb_Lg		02 54 48.8	
PVAQ	**Vaqueiros**	**3.72**	**302**	*e*Pn	**Pn**	**02 53 58.0**	**+1.7**
PVAQ				*e*Sn	**Sn**	**02 54 38.7**	**-1.1**
PVAQ				A	A	02 54 46.5	
	2.5nm,0.8s						
PVAQ	**Vaqueiros**	**3.72**	**302**	P	**Pn**	**02 53 57.4**	**+1.1**
PVAQ				S	**Sn**	**02 54 38.4**	**-1.4**
PBAR	**Barrancos**	**3.77**	**317**	*e*Pn	**Pn**	**02 53 59.8**	**+2.9**
PBAR				*e*Sn	**Sn**	**02 54 41.0**	**+0.2**
PBAR				A	A	02 54 55.3	
	1.8nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.80**	**299**	*e*Pn	**Pn**	**02 53 59.1**	**+1.7**
PBDV				*e*Sn	**Sn**	**02 54 40.5**	**-1.2**
EBAD	**Badajoz**	**4.18**	**323**	Pn	**Pn**	**02 54 05.5**	**+2.9**
EBAD				Sn	**Sn**	**02 54 51.0**	**-0.1**
MESJ	**Messejana**	**4.29**	**305**	*e*Pn	**Pn**	**02 54 06.1**	**+2.0**
PTEO	**Sao Teotonio**	**4.50**	**299**	*e*Sn	**Sn**	**02 54 58.0**	**-0.9**
PNCL	**Nicolau / Gran**	**4.64**	**306**	*e*Pn	**Pn**	**02 54 10.5**	**+1.6**
PMTG	**Montargil**	**5.05**	**317**	*e*Pn	**Pn**	**02 54 18.4**	**+3.8**

IDC 13 03:23:39.6±2.7**, 27°.18N×97°.20E, h0**^{km}**, mb3.5**/4**, mbtmp3.6**/4**, MS3.2**/2**, Error ellipse: s-maj=364.2km s-min=22.0km az=58.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.84**	**333**	P	P	03 28 43.3	-1.0
	1.0nm,0.8s,baz=148,slow=10,SNR=6.3 1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**27.39**	**334**	P	P	03 29 27.2	+0.6
	0.5nm,0.5s,baz=144,slow=11,SNR=7.8 0.5nm,0.5s						
DAV	**Davao City (W)**	**33.55**	**121**	LR	LR	03 44 32.0	
	comp=Z,39nm,19.2s,baz=295,slow=37						
MA2	**Magadan**	**48.67**	**33**	LR	LR	03 55 24.6	
	comp=Z,21nm,19.2s,baz=310,slow=39						
WRA	**Warramunga Arr**	**59.07**	**139**	P	P	03 33 40.5	-1.3
	0.3nm,0.5s,baz=326,slow=7.8,SNR=6.6 0.3nm,0.5s						
ASAR	**Alice Springs**	**61.74**	**142**	P	P	03 34 01.6	+1.5
	0.3nm,0.5s,baz=324,slow=6.7,SNR=4.1 0.3nm,0.5s						

WEL 13 03:27:41.5±0.6**, 32°S**±13°×**18°0E**±3°2**, h285**^{km}±19^{km}**, M4.0**/13**, mB4.4**/8**, MLv4.4**/13**, Mw(mB)3.6**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.84**	**35**	P	Pn	03 28 44.8	-0.5
GLKZ				S	S	03 29 34.5	-1.7
MXZ	**Matakaoa Point**	**5.21**	**191**	P	Pn	03 29 02.8	+2.0
MXZ				S	S	03 30 06.5	+2.0
WMGZ	**Waiomatatini S**	**5.45**	**189**	P	Pn	03 29 05.7	+2.1
WMGZ				S	S	03 30 10.9	+1.3
HAZ	**Te Kaha**	**5.50**	**195**	P	Pn	03 29 06.0	+1.8
HAZ				S	S	03 30 11.4	+0.7
PKGZ	**Pakihiroa**	**5.57**	**192**	P	Pn	03 29 06.2	+1.0
PKGZ				S	S	03 30 12.8	+0.4
PUZ	**Puketiti**	**5.72**	**190**	P	Pn	03 29 08.1	+1.2
RUGZ	**Raukumara Rang**	**5.72**	**195**	P	Pn	03 29 08.3	+1.2
RUGZ				S	S	03 30 15.6	-0.3
TWGZ	**Tauwhareparae**	**5.87**	**192**	P	Pn	03 29 11.0	+2.3
TWGZ				S	S	03 30 17.6	-1.2
CNGZ	**Carnagh Statio**	**6.13**	**190**	P	Pn	03 29 14.1	+2.3
URZ	**Urewera**	**6.14**	**198**	P	Pn	03 29 12.4	+0.5
URZ				S	S	03 30 24.8	0.0
RIGZ	**Rimuhau**	**6.42**	**193**	P	Pn	03 29 16.6	+1.2
RIGZ				S	S	03 30 31.3	+0.2
MUGZ	**Murupara**	**6.43**	**200**	P	Pn	03 29 16.5	+0.9
SNGZ	**Shannon Statio**	**6.58**	**195**	P	Pn	03 29 17.6	+0.3
SNGZ				S	S	03 30 36.2	+1.5
PRGZ	**Paritu Road**	**6.61**	**191**	P	Pn	03 29 19.4	+1.7
KNZ	**Kokohu**	**6.74**	**193**	P	Pn	03 29 19.2	-0.1
RAHZ	**Arahi**	**6.76**	**197**	P	Pn	03 29 19.7	0.0
RAHZ				S	S	03 30 37.1	-1.7
WHHZ	**Waihua**	**6.88**	**195**	P	Pn	03 29 15.7	-5.3
NMHZ	**Naumai**	**7.01**	**198**	P	Pn	03 29 22.8	+0.2
BKZ	**Black Stump Fm**	**7.16**	**199**	P	Pn	03 29 23.2	-1.2
HIZ	**Hauiti**	**7.17**	**211**	P	Pn	03 29 27.6	+3.0
MCHZ	**McNeill Hill**	**7.36**	**197**	P	Pn	03 29 27.3	+0.4
WTVZ	**West Tongariro**	**7.39**	**205**	P	Pn	03 29 27.5	0.0
KWHZ	**Kaweka Forest**	**7.42**	**199**	P	Pn	03 29 27.2	-0.5
KWHZ				S	S	03 30 50.4	-3.1
CKHZ	**Cape Kidnapper**	**7.47**	**195**	P	Pn	03 29 28.3	0.0
CKHZ				S	S	03 30 51.9	-2.8
BHHZ	**Black Hill Sta**	**7.58**	**201**	P	Pn	03 29 28.7	-1.0
KAHZ	**Kahuranaki**	**7.65**	**196**	P	Pn	03 29 29.3	-1.2
PXZ	**Pawanui**	**7.88**	**195**	P	Pn	03 29 32.1	-1.2
PNHZ	**Pukenui**	**7.93**	**199**	P	Pn	03 29 32.4	-1.7
TSZ	**Takapari Road**	**8.13**	**200**	P	Pn	03 29 34.5	-2.0

*SFS **13** 03:30:50.0, 34°.80N×4°.00W, h11^{km}, ML3.4, BOU ZINEB (MARRUECOS)*
*IGIL **13** 03:30:50.4, 34°.89N×4°.05W, h11^{km}, ML3.2*
*MDD **13** 03:30:50.2±0.5, 34°.92N×4°.05W, h4^{km}±4^{km}, mb_Lg3.5/22, Error ellipse: s-maj=5.8km s-min=2.4km az=176.0*
*CRAAG **13** 03:30:51.6, 35°.13N×4°.08W, Ml3.5*
*LDG **13** 03:30:51.3±0.2, 34°.91N×4°.02W, h10^{km}, Ml3.4/7, Error ellipse: s-maj=4.9km s-min=2.2km az=175.0*
*IDC **13** 03:30:51.2±0.9, 35°.29N×3°.98W, h0^{km}, mb4.0/8, mbtmp3.9/11, ML3.8/3, MS3.0/1, Error ellipse: s-maj=26.4km s-min=16.7km az=99.0*
*CNRM **13** 03:30:52.2, 35°.33N×4°.10W, h15^{km}, ml4.0*
*INMG **13** 03:30:52.3±1.4, 35°.17N×4°.10W, h1^{km}±11^{km}, ML3.1, Error ellipse: s-maj=10.1km s-min=4.1km az=160.0*
ISC 13 03:30:52.8±0.8**, 35°.24N**±0°.02×**4°.06W**±0°.02**, h15**^{km}±5^{km}**, n134,** σ1^{s}.**47**/211**, mb4.1**/8**, 3C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.10**	**102**	P	**Pg**	**03 30 55.3**	**-0.7**
PALE				S	**Sg**	**03 30 58.9**	**+0.7**
PVLZ	**Peæn de**	**0.21**	**252**	P	**Pg**	**03 30 57.8**	**+0.2**
PVLZ				S	**Sg**	**03 31 01.2**	**+0.5**
AKLM	**AKL**	**0.74**	**167**	P	**Pg**	**03 31 06.9**	**-0.4**
AKLM				S	**Sb**	**03 31 18.2**	**+0.6**
GOG	**Mont Gurugu**	**0.87**	**91**	P	**Pn**	**03 31 13.0**	**+2.3**
GOG	**Mont Gurugu**	**0.87**	**91**	P	**Pb**	**03 31 09.0**	**-0.7**
GOG				S	**Sg**	**03 31 21.0**	**-0.1**
EMEL	**Melilla**	**0.90**	**86**	P	**Pb**	**03 31 09.6**	**-0.6**
EMEL				S	**Sg**	**03 31 22.3**	**+0.1**
WMELI	**Melilla**	**0.91**	**85**	P	**Pb**	**03 31 09.7**	**-0.6**
WMELI				S	**Sb**	**03 31 20.2**	**-2.0**
CHEFC	**Chefchaouen**	**1.06**	**263**	P	**Pg**	**03 31 15.0**	**+1.7**
CHEFC	**Chefchaouen**	**1.06**	**263**	P	**Pg**	**03 31 13.8**	**+0.5**
EALB	**Alboran**	**1.09**	**50**	P	**Pb**	**03 31 13.3**	**0.0**
EALB				S	**Sb**	**03 31 27.0**	**-0.4**
EALB				*i* Vmb_Lg		03 31 30.3	
SMIR	**Smir Dam**	**1.17**	**293**	P	**Pn**	**03 31 12.2**	**-2.5**
SMIR				S	**Sb**	**03 31 26.5**	**-3.2**
ECEU	**Ceuta**	**1.26**	**302**	P	**Pn**	**03 31 13.8**	**-2.1**
ECEU				S	**Sb**	**03 31 32.0**	**-0.3**
ECEU				*i* Vmb_Lg		03 31 35.3	
CHAS	**Isla Isabel II**	**1.33**	**92**	P	**Pn**	**03 31 15.7**	**-1.2**
CHAS				S	**Sn**	**03 31 32.0**	**-2.4**
TAF	**Taforalt**	**1.41**	**107**	P	**Pn**	**03 31 17.6**	**-0.5**
TAF				S	**Sg**	**03 31 39.0**	**+0.6**
EMIJ	**Mijas**	**1.45**	**337**	P	**Pn**	**03 31 16.7**	**-1.8**
EMIJ				S	**Sg**	**03 31 38.8**	**-0.6**
EMIJ				*i* Vmb_Lg		03 31 44.3	
JBK	**JBK**	**1.52**	**126**	P	**Pg**	**03 31 23.0**	**+0.9**
JBK	**JBK**	**1.52**	**126**	P	**Pn**	**03 31 19.0**	**-0.7**
JBK				S	**Sn**	**03 31 39.2**	**-0.2**
EMAL	**Malaga-Limoner**	**1.55**	**349**	P	**Pn**	**03 31 19.4**	**-0.5**
EMAL				S	**Sn**	**03 31 37.0**	**-2.8**
ELGU	**Los Guajares,**	**1.66**	**12**	P	**Pn**	**03 31 20.4**	**-1.2**
ELGU				S	**Sg**	**03 31 46.5**	**+0.1**
ELGU				*i* Vmb_Lg		03 31 50.1	
LCRM	**LCR**	**1.68**	**203**	P	**Pb**	**03 31 23.3**	**-0.3**
LCRM				S	**Sg**	**03 31 46.9**	**-0.1**
EGOR	**Sierra Gorda,**	**1.87**	**359**	P	**Pn**	**03 31 24.6**	**+0.2**
EGOR				S	**Sb**	**03 31 50.3**	**+0.3**
EGOR				*i* Vmb_Lg		03 31 57.1	
EBER	**Berja**	**1.91**	**29**	P	**Pn**	**03 31 23.8**	**-1.3**
EBER				S	**Sg**	**03 31 53.6**	**-0.7**
EBER				*i* Vmb_Lg		03 32 04.5	
LIJA	**Lijar**	**1.99**	**327**	P	**Pb**	**03 31 28.9**	**+0.1**
LIJA				S	**Sb**	**03 31 54.0**	**+0.6**
EQUE	**Quentar**	**2.02**	**14**	P	**Pn**	**03 31 27.4**	**+0.8**
EQUE				S	**Sg**	**03 31 56.9**	**-1.1**
EQUE				*i* Vmb_Lg		03 32 04.4	
ENIJ	**Nijar**	**2.29**	**40**	P	**Pn**	**03 31 29.4**	**-0.7**
ENIJ				S	**Sn**	**03 31 57.6**	**-0.5**
ENIJ				*i* Vmb_Lg		03 32 00.3	
CZD	**Col de Zad**	**2.35**	**201**	P	**Pn**	**03 31 32.8**	**+1.6**
CZD				S	**Sb**	**03 32 04.6**	**+0.7**
MD31	**MD31**	**2.44**	**194**	P	**Pn**	**03 31 33.0**	**+0.8**
MD31				S	**Sn**	**03 32 02.8**	**+1.0**
MDT	**Midelt**	**2.46**	**191**	Pn	**Pn**	**03 31 33.5**	**+0.9**
	7.3nm,0.3s,baz=196,slow=10,SNR=156						
MDT				Sn	**Sb**	**03 32 05.6**	**-1.4**
	24nm,0.3s,baz=214,slow=24,SNR=7.7 26nm,0.4s						
MDT	**Midelt**	**2.46**	**191**	P	**Pb**	**03 31 35.7**	**-1.1**
MDT	**Midelt**	**2.46**	**191**	P	**Pn**	**03 31 34.2**	**+1.7**
MDT				S	**Sn**	**03 32 02.8**	**+0.4**
OTSS	**Djebel Tessala**	**2.67**	**88**	P	**Pb**	**03 31 40.0**	**-0.4**
EQES	**Quesada**	**2.68**	**17**	P	**Pn**	**03 31 37.6**	**+2.0**
EQES				S	**Sn**	**03 32 09.9**	**+2.1**
EQES				*i* Vmb_Lg		03 32 15.1	
TDRA	**Tendrara**	**2.76**	**142**	P	**Pb**	**03 31 40.0**	**-2.1**
TDRA	**Tendrara**	**2.76**	**142**	P	**Pn**	**03 31 37.8**	**+1.0**
EADA	**Adamuz**	**2.95**	**352**	P	**Pn**	**03 31 40.2**	**+1.0**
EADA				S	**Sn**	**03 32 16.2**	**+1.7**
EADA				*i* Vmb_Lg		03 32 24.1	
ECAB	**El Cabril**	**3.04**	**339**	P	**Pn**	**03 31 40.9**	**+0.6**
ECAB				S	**Sn**	**03 32 18.0**	**+1.5**
ECAB				*i* Vmb_Lg		03 32 28.9	
TLOR	**Lorca, Murcia**	**3.08**	**38**	S	**Sn**	**03 32 19.4**	**+1.9**
ODJA	**Bouhanifia**	**3.20**	**87**	P	**Pn**	**03 31 46.0**	**+3.4**
EZAR	**Zarzadilla de**	**3.25**	**35**	P	**Pn**	**03 31 44.8**	**+1.4**
EZAR				S	**Sn**	**03 32 22.8**	**+1.0**
EMIN	**Mina Concepcio**	**3.29**	**321**	P	**Pn**	**03 31 43.7**	**-0.1**
EMIN				S	**Sn**	**03 32 23.8**	**+1.1**
EMIN				*i* Vmb_Lg		03 32 29.6	
AVE	**Averroes**	**3.39**	**236**	P	**Pn**	**03 31 47.9**	**+2.8**
AVE				S	**Sn**	**03 32 27.0**	**+1.9**
AVE	**Averroes**	**3.39**	**236**	P	**Pn**	**03 31 46.5**	**+1.4**
CART	**Cartagena**	**3.40**	**46**	P	**Pn**	**03 31 45.8**	**+0.4**
CART				S	**Sn**	**03 32 21.8**	**-3.7**
CART	**Cartagena**	**3.40**	**46**	P	**Pn**	**03 31 45.8**	**+0.4**
EMUR	**La Murta**	**3.45**	**40**	P	**Pn**	**03 31 47.3**	**+1.3**
EMUR				S	**Sn**	**03 32 25.2**	**-1.5**
EMUR				*i* Vmb_Lg		03 32 26.9	
EGRO	**El Granado**	**3.59**	**311**	P	**Pn**	**03 31 47.8**	**-0.2**
EGRO				S	**Sn**	**03 32 30.1**	**0.0**
EGRO				*i* Vmb_Lg		03 32 35.1	
GOLM	**Goulmima**	**3.60**	**192**	P	**Pb**	**03 31 53.0**	**-3.4**
PVAQ	**Vaqueiros**	**3.66**	**307**	*e*Pn	**Pn**	**03 31 48.6**	**-0.3**
PVAQ				*e*Sn	**Sn**	**03 32 31.2**	**-0.7**
PVAQ				A	A	03 32 33.6	
	38nm,0.3s						
PVAQ	**Vaqueiros**	**3.66**	**307**	P	**Pn**	**03 31 48.7**	**-0.3**
PVAQ				S	**Sn**	**03 32 29.7**	**-2.1**
PBDV	**Barranco-do-Ve**	**3.71**	**304**	*e*Pn	**Pn**	**03 31 49.5**	**-0.2**
PBDV				*e*Sn	**Sn**	**03 32 32.7**	**-0.6**
PBDV				A	A	03 32 49.1	
	24nm,0.4s						
PBAR	**Barrancos**	**3.79**	**322⇑**	*e*Pn	**Pn**	**03 31 50.8**	**+0.2**
PBAR				*e*Sn	**Sn**	**03 32 35.9**	**+1.0**
PBAR				A	A	03 32 49.0	
	26nm,0.3s						
FIGM	**Figuig**	**3.88**	**142**	P	**Pn**	**03 31 53.6**	**+1.6**
ETOB	**Tobarra**	**3.95**	**30**	P	**Pn**	**03 31 55.7**	**+2.7**
ETOB				S	**Sn**	**03 32 41.9**	**+2.8**
ETOB				*i* Vmb_Lg		03 32 42.6	
PCVE	**Castro Verde**	**4.00**	**308**	*e*Pn	**Pn**	**03 31 53.3**	**-0.3**
PCVE				*e*Sn	**Sn**	**03 32 39.9**	**-0.4**
PCVE				A	A	03 32 44.7	
	22nm,0.4s						
PBEJ	**Beja**	**4.14**	**313**	*e*Pn	**Pn**	**03 31 56.0**	**+0.5**
PBEJ				*e*Sn	**Sn**	**03 32 43.8**	**+0.2**
PBEJ				A	A	03 32 52.6	
	18nm,0.4s						
SRHM	**Skhour des Reh**	**4.22**	**230**	P	**Pn**	**03 31 57.7**	**+0.9**
EBAD	**Badajoz**	**4.23**	**327**	P	**Pn**	**03 31 57.3**	**+0.5**
EBAD				*i* Vmb_Lg		03 32 47.3	
EBAD				S	**Sn**	**03 32 47.4**	**+1.4**
MESJ	**Messejana**	**4.24**	**309**	*e*P	**Pn**	**03 31 56.2**	**-0.7**
MESJ				*e*S	**Sn**	**03 32 44.4**	**-1.8**
MESJ				IAML		03 32 50.6	
	comp=E,48nm,0.3s						
MESJ	**Messejana**	**4.24**	**309**	*e*Pn	**Pn**	**03 31 56.9**	**0.0**
MESJ				*e*Sn	**Sn**	**03 32 46.4**	**+0.3**
MESJ				A	A	03 32 52.4	
	comp=E,38nm,0.4s						
MORF	**Marmelete**	**4.25**	**300**	*e*Pn	**Pn**	**03 31 57.6**	**+0.6**
MORF				*e*Sn	**Sn**	**03 32 46.1**	**-0.3**
MORF				A	A	03 32 55.7	
	comp=E,21nm,0.5s						
PFVI	**Vila Bisbo**	**4.29**	**297**	*e*Pn	**Pn**	**03 31 58.3**	**+0.6**
PFVI				*e*Sn	**Sn**	**03 32 46.0**	**-1.5**
PFVI				A	A	03 33 04.0	
	comp=E,30nm,0.6s						
PFVI	**Vila Bisbo**	**4.29**	**297**	P	**Pn**	**03 31 58.8**	**+1.2**
PFVI	**Vila Bisbo**	**4.29**	**297**	P	**Pn**	**03 31 58.8**	**+1.2**
PAB	**San Pablo**	**4.31**	**357**	P	**Pn**	**03 31 59.0**	**+1.1**
PAB				S	**Sn**	**03 32 50.1**	**+2.2**
PAB				*i* Vmb_Lg		03 33 06.3	
PAB	**San Pablo**	**4.31**	**357**	P	**Pn**	**03 31 59.3**	**+1.4**
PTEO	**Sao Teotonio**	**4.41**	**303**	*e*Pn	**Pn**	**03 31 59.2**	**-0.1**
PTEO				*e*Sn	**Sn**	**03 32 49.4**	**-1.0**
PTEO				A	A	03 33 00.4	
	comp=E,32nm,0.5s						
ESDC	**Sonseca Array**	**4.43**	**1**	Pn	**Pn**	**03 32 01.0**	**+1.5**
	comp=E,3.2nm,0.3s,baz=181,slow=12,SNR=135						
ESDC				Sn	**Sn**	**03 32 51.0**	**+0.1**
	comp=E,0.9nm,0.3s,baz=193,slow=18,SNR=4.4 comp=E,8.7nm,0.3s						
ESDC	**Sonseca Array**	**4.43**	**1**	P	**Pn**	**03 32 00.9**	**+1.3**
ESDC				S	**Sn**	**03 32 53.4**	**+2.5**
ESDC				*i* Vmb_Lg		03 33 18.6	
PESTR	**Estremoz**	**4.59**	**323**	*e*Pn	**Pn**	**03 32 02.4**	**+0.6**
PESTR				*e*Sn	**Sn**	**03 32 53.8**	**-1.1**
PESTR				A	A	03 33 15.6	
	comp=E,14nm,0.5s						
PESTR	**Estremoz**	**4.59**	**323**	P	**Pn**	**03 32 02.4**	**+0.6**
PNCL	**Nicolau / Gran**	**4.60**	**310**	*e*Pn	**Pn**	**03 32 01.7**	**-0.1**
PNCL				*e*Sn	**Sn**	**03 32 53.7**	**-1.2**
PNCL				A	A	03 33 00.0	
	comp=E,15nm,0.3s						
TZRR	**Tazzarine**	**4.62**	**196**	P	**Pn**	**03 32 06.0**	**+3.7**
TZRR	**Tazzarine**	**4.62**	**196**	P	**Pn**	**03 32 05.1**	**+2.9**
OUZM	**OUZ**	**4.88**	**208**	P	**Pn**	**03 32 06.9**	**+1.1**
PMRV	**Marv??o**	**4.95**	**329**	*e*Pn	**Pn**	**03 32 07.3**	**+0.6**
PMRV				*e*Sn	**Sn**	**03 33 03.5**	**-0.3**
PMRV				A	A	03 33 26.2	
	comp=E,17nm,0.5s						
ECHE	**Chera**	**4.99**	**29**	P	**Pn**	**03 32 08.4**	**+1.1**
PMTG	**Montargil**	**5.07**	**320**	*e*Pn	**Pn**	**03 32 08.8**	**+0.5**
PMTG				*e*Sn	**Sn**	**03 33 05.7**	**-0.9**
PMTG				A	A	03 33 32.8	
	comp=E,12nm,0.4s						
EPLA	**Plasencia**	**5.08**	**342**	P	**Pn**	**03 32 09.1**	**+0.6**
EPLA				S	**Sn**	**03 33 08.6**	**+1.7**
EPLA				*i* Vmb_Lg		03 33 19.2	
UCM	**Universidad Co**	**5.10**	**7**	P	**Pn**	**03 32 10.3**	**+1.6**
UCM				S	**Sn**	**03 33 07.0**	**-0.4**
OUK	**Oukaimeden**	**5.13**	**219**	P	**Pn**	**03 32 09.8**	**+0.3**
PACT	**Alcochete**	**5.20**	**314**	*e*Pn	**Pn**	**03 32 10.9**	**+0.9**
PACT				*e*Sn	**Sn**	**03 33 10.4**	**+0.7**
PACT				A	A	03 33 37.4	
	comp=E,28nm,0.6s						
ZGR	**Zagora**	**5.27**	**195**	P	**Pn**	**03 32 13.9**	**+2.7**
PCBR	**Castelo Branco**	**5.34**	**330**	*e*Pn	**Pn**	**03 32 12.7**	**+0.7**
PCBR				*e*Sn	**Sn**	**03 33 12.0**	**-1.2**
PCBR				A	A	03 33 22.3	
	comp=E,12nm,0.6s						
LIS	**Lisbon**	**5.35**	**312**	*e*Pn	**Pn**	**03 32 13.0**	**+0.8**
PMST	**Lisbon--Monsan**	**5.39**	**312**	*e*Pn	**Pn**	**03 32 13.2**	**+0.6**
PMST				*e*Sn	**Sn**	**03 33 14.7**	**+0.3**
PMST				A	A	03 33 28.9	
	comp=E,18nm,0.5s						
GUD	**Guadarrama**	**5.40**	**359**	P	**Pn**	**03 32 14.1**	**+1.1**
GUD				S	**Sn**	**03 33 17.4**	**+2.5**
PMAFR	**Mafra**	**5.58**	**313**	*e*Pn	**Pn**	**03 32 16.1**	**+0.7**
PMAFR				*e*Sn	**Sn**	**03 33 18.5**	**-0.8**
PMAFR				A	A	03 33 32.8	
	comp=E,24nm,0.6s						
PSBE	**So Bento**	**5.70**	**320**	*e*Pn	**Pn**	**03 32 17.6**	**+0.7**
PSBE				*e*Sn	**Sn**	**03 33 21.0**	**-1.1**
PSBE				A	A	03 33 38.5	
	comp=E,11nm,0.5s						
ETOR	**Torete**	**5.79**	**15**	P	**Pn**	**03 32 19.3**	**+1.0**
EAH	**EAH**	**5.84**	**234**	P	**Pn**	**03 32 19.4**	**+0.4**
MTE	**Manteigas**	**5.84**	**333**	*e*Pn	**Pn**	**03 32 19.8**	**+0.8**
MTE				*e*Sn	**Sn**	**03 33 25.5**	**-0.3**
MTE				A	A	03 34 02.2	
	comp=E,20nm,0.6s						
EMOS	**Mosqueruela**	**5.85**	**28**	P	**Pn**	**03 32 21.7**	**+2.5**
TTIG	**Tnine Tigouga,**	**5.96**	**219**	P	**Pn**	**03 32 19.4**	**-1.2**
PCAS	**Casmilo, Conde**	**5.96**	**325**	*e*Pn	**Pn**	**03 32 21.3**	**+0.8**
PCAS				*e*Sn	**Sn**	**03 33 26.6**	**-1.9**
PCAS				A	A	03 33 39.2	
	comp=E,10nm,0.5s						
COI	**Coimbra**	**6.04**	**326**	*e*Pn	**Pn**	**03 32 22.6**	**+1.0**
COI				*e*Sn	**Sn**	**03 33 30.0**	**-0.5**
PVIS	**Viseu**	**6.25**	**332**	*e*Pn	**Pn**	**03 32 25.0**	**+0.4**
PVIS				*e*Sn	**Sn**	**03 33 33.6**	**-2.2**
PVIS				A	A	03 33 41.2	
	comp=E,13nm,0.9s						
MVO	**Moncorvo**	**6.36**	**339⇑**	*e*Pn	**Pn**	**03 32 27.1**	**+1.0**
MVO				*e*Sn	**Sn**	**03 33 36.6**	**-1.9**
MVO				A	A	03 33 38.3	
	comp=E,10nm,0.5s						
ERTA	**Horta de San J**	**6.68**	**30**	P	**Pn**	**03 32 32.2**	**+1.8**
PVRL	**Vila Real**	**6.68**	**336**	*e*Pn	**Pn**	**03 32 31.2**	**+0.8**
PVRL				*e*Sn	**Sn**	**03 33 43.3**	**-3.0**
PVRL				A	A	03 33 48.4	
	comp=E,14nm,0.3s						
POLO	**Lamas de Olo**	**6.79**	**336**	*e*Pn	**Pn**	**03 32 33.2**	**+1.1**
POLO				*e*Sn	**Sn**	**03 33 46.2**	**-3.0**
POLO				A	A	03 33 59.2	
	comp=E,4.9nm,0.7s						
PBRG	**Braganca**	**6.88**	**343⇑**	*e*Pn	**Pn**	**03 32 34.5**	**+1.2**
PBRG				*e*Sn	**Sn**	**03 33 50.2**	**-1.2**
PBRG				A	A	03 33 51.4	
	comp=E,9.3nm,0.7s						
PTO	**Porto**	**6.89**	**330**	*e*Pn	**Pn**	**03 32 34.0**	**+0.7**
PTO				*e*Sn	**Sn**	**03 33 50.4**	**-1.0**
PTO				A	A	03 33 56.8	
	comp=E,12nm,0.6s						
ETOS	**Mallorca**	**7.09**	**48**	P	**Pn**	**03 32 37.7**	**+1.6**

PCAB	**Cabril**	**7.17**	**335**	*e*Pn	**Pn**	**03 32 38.5**	**+1.3**
PCAB				*e*Sn	**Sn**	**03 33 54.7**	**-3.7**
PCAB				A	A	03 34 24.5	
	comp=E,11nm,0.7s						
ELOB	**Lobios**	**7.32**	**336**	P	**Pn**	**03 32 40.1**	**+0.7**
ELOB				*i* Vmb_Lg		03 34 21.6	
PGAV	**Gavieira, Arco**	**7.48**	**335**	*e*Pn	**Pn**	**03 32 42.7**	**+1.2**
PGAV				*e*Sn	**Sn**	**03 34 03.7**	**-2.4**
PGAV				A	A	03 34 05.4	
	comp=E,8.3nm,0.8s						
EORO	**Oroz-Betelu**	**7.94**	**15**	P	**Pn**	**03 32 49.2**	**+1.5**
ELAN	**Lanestosa**	**8.00**	**3**	P	**Pn**	**03 32 49.6**	**+1.1**
ETSF	**Etsaut**	**8.12**	**19**	*e*Pn	**Pn**	**03 32 52.6**	**+2.4**
ETSF				*e*Sn	**Sn**	**03 34 19.9**	**-1.9**
	comp=E,1.3nm,0.3s						
SJPF	**Ste Jean**	**8.16**	**15**	*e*Pn	**Pn**	**03 32 52.4**	**+1.6**
SJPF				*e*Sn	**Sn**	**03 34 20.8**	**-2.0**
	comp=E,7.3nm,0.8s						
EPF	**Esparros**	**8.50**	**22**	*e*Pn	**Pn**	**03 32 55.9**	**+0.5**
EPF				*e*Sn	**Sn**	**03 34 29.1**	**-1.9**
	comp=E,8.1nm,1.0s						
TANT	**Tantan**	**9.14**	**224**	P	**Pn**	**03 33 03.8**	**-0.4**
MTLF	**Montolieu**	**9.44**	**29**	*e*Pn	**Pn**	**03 33 08.2**	**0.0**
MTLF				*e*Sn	**Sn**	**03 34 50.8**	**-3.3**
	comp=E,0.3nm,0.2s						
LFF	**La Frestale**	**10.36**	**19**	*e*Pn	**Pn**	**03 33 20.8**	**-0.1**
LFF				*e*Sn	**Sn**	**03 35 13.5**	**-3.2**
	comp=E,3.1nm,0.5s						
RJF	**Les Rejaudoux**	**10.91**	**21**	*e*Pn	**Pn**	**03 33 28.7**	**+0.2**
KEST	**Kesra**	**10.94**	**84**	LR	LR	03 37 54.5	
	comp=E,78nm,18.3s,baz=308,slow=39						
MFF	**Saint Martin d**	**11.73**	**13**	*e*Pn	**Pn**	**03 33 40.0**	**+0.4**
PGF	**Pioggiola**	**12.51**	**50**	*e*Pn	**Pn**	**03 33 49.4**	**-1.0**
PGF				*e*Sn	**Sn**	**03 36 03.2**	**-6.3**
	comp=E,1.0nm,0.4s						
QUIF	**Quistinic**	**12.69**	**3**	*e*Pn	**Pn**	**03 33 53.4**	**+0.8**
SMF	**Signal de Mont**	**12.86**	**25**	*e*Pn	**Pn**	**03 33 54.9**	**-0.1**
SGMF	**Saint Gilles**	**13.05**	**4**	*e*Pn	**Pn**	**03 33 58.2**	**+0.5**
ROSF	**Rostrenen**	**13.10**	**2**	*e*Pn	**Pn**	**03 33 59.0**	**+0.7**
GRR	**Gorron**	**13.35**	**9**	*e*Pn	**Pn**	**03 34 02.4**	**+0.7**
FLN	**La Foliniere**	**13.77**	**10**	*e*Pn	**Pn**	**03 34 08.0**	**+0.6**
	baz=190						
GERES	**GERESS Array B**	**18.88**	**39**	P	**Pn**	**03 35 13.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=214,slow=9.3,SNR=8.0						
	comp=E,0.8nm,0.6s						
CLL	**Collm**	**20.22**	**32**	*e*P	Pn	03 35 30.0	+0.9
TORD	**Torodi Ar. Bea**	**22.60**	**165**	P	**P**	**03 35 54.8**	**+1.8**
	comp=E,13nm,0.8s,baz=350,slow=11,SNR=5.4						
	comp=E,13nm,0.8s						
FINES	**FINESS Array B**	**32.45**	**27**	P	**P**	**03 37 21.6**	**-0.5**
	comp=E,1.1nm,0.6s,baz=235,slow=6.7,SNR=4.4						
	comp=E,1.1nm,0.6s						
SCHQ	**Schefferville**	**46.75**	**315**	P	**P**	**03 39 22.0**	**+0.7**
	comp=E,1.9nm,0.8s,baz=79,slow=10,SNR=2.1						
	comp=E,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**59.33**	**47**	P	**P**	**03 40 54.8**	**+0.7**
	comp=E,3.2nm,0.6s,baz=294,slow=7.7,SNR=23						
	comp=E,3.2nm,0.6s						
ZALV	**Zalesovo Beam**	**61.78**	**42**	P	**P**	**03 41 09.5**	**-1.3**
	comp=E,0.4nm,0.4s,baz=302,slow=8.3,SNR=1.9						
	comp=E,0.4nm,0.4s						
MKAR	**Makanchi Array**	**63.05**	**50**	P	**P**	**03 41 18.9**	**-0.5**
	comp=E,0.8nm,0.6s,baz=296,slow=5.0,SNR=7.3						
	comp=E,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**67.95**	**332**	P	**P**	**03 41 51.4**	**+0.6**
	comp=E,1.5nm,0.7s,baz=61,slow=6.5,SNR=24						
	comp=E,1.5nm,0.7s						
PDAR	**Pinedale Array**	**76.85**	**313**	P	**P**	**03 42 45.4**	**+0.9**
	comp=E,0.3nm,0.6s,baz=60,slow=5.8,SNR=4.1						
	comp=E,0.3nm,0.6s						

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*IDC **13** 03:36:15.7±0.7, 7°.03S×125°.15E, h502^{km}±8^{km}, mb3.9/20, mbtmp4.7/23, Error ellipse: s-maj=13.7km s-min=7.4km az=75.0*

*NEIC **13** 03:36:15.6±2.3, 7°.01S±0°.09×125°.1E±0°.1, h501^{km}±6^{km}, mb4.6/58, Error ellipse: s-maj=16.3km s-min=13.2km az=68.0*

*DJA **13** 03:36:16.2±0.2, 7°S±2°×12°5E±°, h491^{km}±2^{km}, M4.5/28, mB5.0/25, mb4.9/28, MLv4.9/23, Mw(mB)4.3/25*

ISC 13 03:36:15.6±0.5, **7°.11S**±0°.04×**125°.17E**±0°.05, **h510**^{km}±5^{km}, **n216,**σ**1^{s}63**/226, **mb4.5**/64, **1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.78**	**199**	P	**P**	**03 37 27.1**	**+0.9**
SOEI	**Soe**	**2.78**	**199**	P	**P**	**03 37 27.0**	**+0.9**
SOEI				S	**S**	**03 38 22.6**	**-0.9**
SOEI	**Soe**	**2.78**	**199**	P	**P**	**03 37 27.2**	**+1.0**
BBSI	**Bau Bau**	**3.04**	**302**	P	**P**	**03 37 29.7**	**+1.9**
BBSI				S	**S**	**03 38 28.6**	**+2.3**
MMRI	**Maumere**	**3.28**	**242**	P	**P**	**03 37 29.3**	**-0.1**
MMRI	**Maumere**	**3.28**	**242**	P	**P**	**03 37 29.3**	**-0.1**
MMRI				S	**S**	**03 38 29.3**	**0.0**
MMRI	**Maumere**	**3.28**	**242**	P	**P**	**03 37 29.6**	**+0.3**
BATI	**Baumata**	**3.42**	**206**	P	**P**	**03 37 31.6**	**+1.1**
	1μm,0.4s,baz=79,slow=1.9,SNR=133						
BATI				S	**S**	**03 38 31.1**	**-0.2**
	832nm,0.5s,baz=163,slow=1.3,SNR=10						
BATI	**Baumata**	**3.42**	**206**	P	**P**	**03 37 31.5**	**+1.1**
BATI				S	**S**	**03 38 31.0**	**-0.2**
EDFI	**Ende, Flores**	**3.81**	**244**	P	**P**	**03 37 32.7**	**-0.7**
EDFI				S	**S**	**03 38 34.0**	**-2.7**
AAI	**Ambon**	**4.54**	**42**	P	**P**	**03 37 39.2**	**0.0**
AAI				S	**S**	**03 38 44.9**	**-2.4**
SANI	**Sanana**	**5.09**	**9**	P	**P**	**03 37 43.9**	**-0.1**
	3.1nm10μm1μm,0.8s						
SANI	**Sanana**	**5.09**	**9**	P	**P**	**03 37 44.1**	**+0.1**
MSAI	**Masohi**	**5.29**	**45**	P	**P**	**03 37 44.7**	**-1.1**
	0.2nm10nm,0.6s						
MSAI				S	**S**	**03 38 54.3**	**-5.1**
	0.2nm10nm,0.6s						
BKSI	**Bulukumba**	**5.32**	**289**	P	**P**	**03 37 47.2**	**+1.1**
	0.4nm2μm114nm,0.6s						
BKSI				S	**S**	**03 39 01.0**	**+1.1**
	0.4nm2μm114nm,0.6s						
WSI	**Waingapu**	**5.45**	**242**	S	**S**	**03 39 00.7**	**-1.4**
BNSI	**Bone**	**5.71**	**298**	P	**P**	**03 37 51.6**	**+1.9**
	0.8nm2μm229nm,0.7s						
KAPI	**Kappang**	**5.77**	**291**	P	**P**	**03 37 52.3**	**+2.0**
	80nm,0.6s,baz=103,slow=5.3,SNR=45						
KAPI	**Kappang**	**5.77**	**291**		**P**	**03 37 50.4**	**+0.1**
KAPI	**Kappang**	**5.77**	**291**	P	**P**	**03 37 52.3**	**+2.0**
SAUI	**Saumlaki**	**6.14**	**99**	S	**S**	**03 39 11.6**	**-2.4**
SPSI	**Sidrap Palu**	**6.21**	**300**	P	**P**	**03 37 55.2**	**+0.7**
	0.4nm1μm102nm,0.9s						
WBSI	**Waikabubak, Su**	**6.25**	**246**	P	**P**	**03 37 54.0**	**-0.9**
	3.7nm13μm725nm,0.8s						
WBSI				S	**S**	**03 39 10.5**	**-5.5**
	3.7nm13μm725nm,0.8s						
LUWI	**Luwuk**	**6.48**	**338**	P	**P**	**03 37 56.7**	**-0.4**
LUWI	**Luwuk**	**6.48**	**338**	P	**P**	**03 37 58.2**	**+1.1**
	2.4nm9μm826nm,0.9s						
LUWI	**Luwuk**	**6.48**	**338**	P	**P**	**03 37 58.4**	**+1.3**
TTSI	**Tana Toraja**	**6.68**	**307**	P	**P**	**03 38 01.2**	**+2.1**
	0.8nm2μm136nm,0.8s						
LBMI	**Labuha**	**6.83**	**20**	P	**P**	**03 38 00.6**	**0.0**
	0.6nm2μm159nm,1.2s						
APSI	**Ampana**	**7.08**	**330**	P	**P**	**03 38 04.6**	**+1.5**
	1.6nm6μm512nm,0.9s						
PLAI	**Plampang**	**7.52**	**256**	P	**P**	**03 38 06.9**	**-0.5**
	1.1nm1μm113nm,0.9s						
PLAI	**Plampang**	**7.52**	**256**	P	**P**	**03 38 06.7**	**-0.7**
KMSI	**Cibinong**	**7.72**	**351**	P	**P**	**03 38 10.7**	**+1.2**
	5.7nm17μm1μm,0.6s						
TNTI	**Ternate**	**8.13**	**16**	P	**P**	**03 38 12.8**	**-0.9**
TNTI	**Ternate**	**8.13**	**16**	P	**P**	**03 38 12.6**	**-1.1**
	1μm112nm,0.9s						
TNTI	**Ternate**	**8.13**	**16**	P	**P**	**03 38 13.1**	**-0.6**
MTN	**Manton Dam**	**8.19**	**135**	P	**P**	**03 38 14.7**	**+0.5**
MTN	**Manton Dam**	**8.19**	**135**	P	**P**	**03 38 15.2**	**+1.0**
MRSI	**Marisa**	**8.19**	**337**	P	**P**	**03 38 15.1**	**+0.8**
	9μm996nm,0.8s						
SIJI	**Sorong**	**8.68**	**45**	P	**P**	**03 38 19.4**	**+0.1**
	68nm,0.5s,baz=224,slow=6.0,SNR=51						
SWI	**Sorong**	**8.68**	**45**	P	**P**	**03 38 19.1**	**-0.3**
MPSI	**Mapaga**	**9.07**	**324**	P	**P**	**03 38 25.0**	**+1.6**
	2μm149nm,0.8s						
KDU	**Kakadu**	**9.08**	**128**	P	**P**	**03 38 23.7**	**+0.2**
KNRA	**Kununurra**	**9.22**	**158**		**P**	**03 38 25.9**	**+1.0**
KNRA	**Kununurra**	**9.22**	**158**	P	**P**	**03 38 26.4**	**+1.5**
TOLI2	**Tolitoli**	**9.26**	**332**	P	**P**	**03 38 25.4**	**-0.1**
TOLI2	**Tolitoli**	**9.26**	**332**	P	**P**	**03 38 25.8**	**+0.4**
SMKI	**Samarinda**	**10.33**	**309**	P	**P**	**03 38 39.3**	**+2.6**
BBKI	**Banjar Baru**	**10.90**	**289**	P	**P**	**03 38 45.4**	**+2.7**
	4μm89nm,1.0s						
JAGI	**Jajag, Banyuwa**	**11.00**	**262**	P	**P**	**03 38 43.3**	**-0.4**
BLJI	**Banyuglugur**	**11.49**	**266**	P	**P**	**03 38 50.6**	**+1.7**
MTKI	**Muara Teweh, K**	**11.93**	**300**	P	**P**	**03 38 55.6**	**+2.0**
MYLDM	**Lahad Datu**	**13.90**	**331**	P	**P**	**03 39 14.7**	**+0.5**
MBWA	**Marble Bar**	**14.93**	**200**	P	**P**	**03 39 24.5**	**-0.5**
MBWA	**Marble Bar**	**14.93**	**200**	P	**P**	**03 39 25.4**	**+0.4**
PSA00	**Pilbara Seismi**	**15.28**	**199**	P	**P**	**03 39 28.3**	**-0.3**
PSA00				IAmb	IAmb	03 39 30.2	
	comp=Z,20nm,0.7s						
PSA00	**Pilbara Seismi**	**15.28**	**199**	P	**P**	**03 39 29.9**	**+1.3**
STKI	**Sintang**	**15.40**	**297**	P	**P**	**03 39 25.6**	**-4.4**
WB0	**Warramunga Arr**	**15.45**	**145**	P	**P**	**03 39 29.7**	**-0.7**
WRAB	**Tennant Creek**	**15.56**	**146**	P	**P**	**03 39 30.9**	**-0.6**
WRAB	**Tennant Creek**	**15.56**	**146**	P	**P**	**03 39 31.6**	**+0.1**
WRA	**Warramunga Arr**	**15.56**	**146**	P	**P**	**03 39 31.3**	**-0.3**
	comp=Z,25nm,0.5s,baz=324,slow=11,SNR=368						
WRA				S	**S**	**03 42 14.4**	**+1.4**
	comp=Z,9.8nm,0.8s,baz=326,slow=16,SNR=3.4						
WB2	**Warramunga Arr**	**15.56**	**146**	P	**P**	**03 39 30.7**	**-1.0**
GENI	**Genyem**	**15.60**	**74**	P	**P**	**03 39 31.7**	**-0.4**
	comp=Z,2μmcomp=Z,48nm,0.7s						
WR0	**Warramunga Arr**	**15.68**	**145**	P	**P**	**03 39 32.0**	**-0.8**
SBUM	**Sibu**	**16.03**	**306**	P	**P**	**03 39 35.7**	**-0.9**
SBUM				IAmb	IAmb	03 39 37.4	
	comp=Z,24nm,0.8s						
KPJI	**Karang Pucung**	**16.11**	**268**	P	**P**	**03 39 37.6**	**+0.2**
KSM	**Kuching**	**17.10**	**299**	P	**P**	**03 39 46.3**	**-1.1**
KSM	**Kuching**	**17.10**	**299**	P	**P**	**03 39 46.9**	**-0.5**
	comp=Z,65nm,0.7s						
WRKA	**Warakurna**	**18.08**	**171**	P	**P**	**03 39 57.8**	**+1.5**
AS31	**Alice Springs**	**18.48**	**154**	P	**P**	**03 40 00.6**	**+0.7**
ASAR	**Alice Springs**	**18.48**	**154**	P	**P**	**03 40 01.2**	**+1.3**
	comp=Z,41nm,0.6s,baz=329,slow=8.2,SNR=450						
ASAR				S	**S**	**03 43 05.1**	**+2.4**
	comp=Z,24nm,0.9s,baz=346,slow=23,SNR=21						
ASAR				ScP	**ScP**	**03 46 49.5**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=332,slow=1.8,SNR=4.3						
COEN	**Coen**	**18.96**	**113**	P	**P**	**03 40 04.1**	**-0.3**
COEN	**Coen**	**18.96**	**113**	P	**P**	**03 40 05.6**	**+1.2**
QIS	**Mount Isa**	**19.35**	**135**	P	**P**	**03 40 09.4**	**+1.5**
MEEK	**Meekatharra**	**20.40**	**197**	P	**P**	**03 40 18.7**	**+1.3**
OOD	**Oodnadatta**	**22.87**	**155**	P	**P**	**03 40 41.0**	**+1.4**
FORT	**Forrest**	**23.71**	**174**	P	**P**	**03 40 47.4**	**+0.4**
FORT	**Forrest**	**23.71**	**174**	P	**P**	**03 40 48.2**	**+1.2**
CTA	**Charters Tower**	**24.18**	**124**	P	**P**	**03 40 51.6**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=310,slow=14,SNR=2.3						
	comp=Z,3.8nm,0.6s						
MULG	**Mulgathing**	**24.52**	**161**	P	**P**	**03 40 55.7**	**+1.4**
INKA	**Innaminka**	**25.28**	**146**	P	**P**	**03 41 03.0**	**+1.9**
LCRK	**Leigh Creek**	**26.25**	**154**	P	**P**	**03 41 11.2**	**+1.6**
QLP	**Quilpie**	**26.54**	**139**	P	**P**	**03 41 13.6**	**+1.4**
	comp=Z,78nm,0.6s						
BBOO	**Buckleboo**	**27.51**	**160**	P	**P**	**03 41 21.1**	**+0.5**
BBOO	**Buckleboo**	**27.51**	**160**	P	**P**	**03 41 21.9**	**+1.3**
RPSI	**Rantau Prapat**	**27.94**	**290**	P	**P**	**03 41 24.6**	**-0.1**
PSI	**Prapat**	**27.98**	**290**	P	**P**	**03 41 24.6**	**-0.6**
	comp=Z,6.2nm,0.2s,baz=117,slow=16,SNR=17						
	comp=Z,6.2nm,0.2s						
WHYH	**Whyalla**	**28.25**	**158**	P	**P**	**03 41 28.6**	**+1.5**
	comp=Z,37nm,0.8s						
STKA	**Stephens Creek**	**29.02**	**150**	P	**P**	**03 41 35.4**	**+1.5**
	comp=Z,14nm,0.4s,baz=326,slow=9.1,SNR=54						
	comp=Z,14nm,0.4s						
STKA	**Stephens Creek**	**29.02**	**150**	P	**P**	**03 41 34.0**	**+0.1**
STKA	**Stephens Creek**	**29.02**	**150**	P	**P**	**03 41 35.4**	**+1.5**
HTT	**Hallett**	**29.13**	**156**	P	**P**	**03 41 36.8**	**+1.9**
CMSA	**Cobar Meteorol**	**30.96**	**144**	P	**P**	**03 41 52.4**	**+1.8**
ARPS	**Mount Arapiles**	**33.22**	**155**	P	**P**	**03 42 11.8**	**+2.0**
ARMA	**Armidale**	**33.97**	**136**	P	**P**	**03 42 18.1**	**+1.7**
ARMA				IAmb	IAmb	03 42 20.1	
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.26**	**315**	P	**P**	**03 42 35.7**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=142,slow=6.5,SNR=4.7						
CMAR				PcP	**PcP**	**03 44 48.9**	**+1.8**
	comp=Z,3.5nm,0.4s,baz=165,slow=3.0,SNR=13						
	comp=Z,1.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**36.26**	**315**	P	**P**	**03 42 33.9**	**-1.7**
CMAR				PcP	**PcP**	**03 44 47.7**	**+0.7**
CHTO	**Chiang Mai**	**36.49**	**315**	P	**P**	**03 42 35.5**	**-2.0**
JCJ	**Chichijima**	**37.78**	**25**	P	**P**	**03 42 47.1**	**-0.9**
	comp=Z,57nm,0.7s,baz=287,slow=17,SNR=5.4						
	comp=Z,57nm,0.7s						
JCJ	**Chichijima**	**37.78**	**25**	IAmb	IAmb	03 42 48.1	
	comp=Z,97nm,1.0s						
JSU	**Suzuyama**	**38.72**	**7**	P	**P**	**03 42 54.0**	**-1.6**
JSU				IAmb	IAmb	03 42 56.1	
	comp=Z,9.7nm,0.8s						
PZH	**PanZhiHua**	**40.41**	**327**	P	**P**	**03 43 10.0**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
KSRS	**Korea Array**	**44.40**	**3**	P	**P**	**03 43 41.0**	**+0.6**
	comp=Z,2.2nm,0.4s,baz=177,slow=8.7,SNR=11						
KSRS				PcP	**PcP**	**03 45 14.2**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=189,slow=3.3,SNR=6.2						
	comp=Z,2.2nm,0.4s						
MJAR	**Matsushiro Arr**	**45.11**	**15**	P	**P**	**03 43 45.3**	**-0.7**
	comp=Z,7.5nm,0.8s,baz=191,slow=8.8,SNR=5.4						
MJAR	**Matsushiro Arr**	**45.11**	**15**	IAmb	IAmb	03 43 51.7	
	comp=Z,120nm,0.8s						
MJB9	**Matsu-Tunnel**	**45.11**	**15**	P	**P**	**03 43 45.1**	**-0.8**
LZH	**Lanzhou**	**47.41**	**336**	⇓P	**P**	**03 44 05.0**	**+1.4**
LZH				pP	PP	03 45 55.5	-6.0
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LSA	**Lhasa**	**49.07**	**320**	P	**P**	**03 44 17.2**	**+0.7**
LSA				IAmb	IAmb	03 44 18.8	
	comp=Z,14nm,0.6s						
HHC	**Hu-ho-hao-te**	**49.33**	**346**	*e*P	**P**	**03 44 21.8**	**+4.0**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
ODAN	**Odare**	**49.80**	**314**	*e*P	**P**	**03 44 22.4**	**+0.7**
	comp=Z,16nm,0.6s						
JTM	**Tenmabayashi**	**49.85**	**16**	P	**P**	**03 44 21.1**	**-0.4**
JTM				IAmb	IAmb	03 44 22.9	
	comp=Z,40nm,1.2s						
RAMN	**Ramite**	**50.41**	**314**	*e*P	**P**	**03 44 27.2**	**+1.0**
	comp=Z,29nm,0.5s						
JIRN	**Jiri**	**51.13**	**314**	*e*P	**P**	**03 44 30.4**	**-1.2**
XLT	**XiLinHaoTe**	**51.43**	**352**	*e*P	**P**	**03 44 36.8**	**+3.7**
XLT				pP	pP	03 46 07.5	-2.1
XLT				sP	sP	03 47 11.5	+6.6
XLT				ScP	**ScP**	**03 48 47.5**	**+1.0**
XLT				pmax	pmax		
	comp=Z,18nm,0.9s						
XLT				pmax	pmax		
	comp=Z,71nm,4.6s						
USRK	**Ussuriysk Ar.**	**51.44**	**6**	P	**P**	**03 44 32.4**	**-0.6**
	comp=Z,5.8nm,0.6s,baz=160,slow=4.6,SNR=6.8						
	comp=Z,5.8nm,0.6s						
PKI	**Pulchoki**	**51.63**	**314**	*e*P	**P**	**03 44 35.2**	**0.0**
	comp=Z,9.7nm,0.4s						
MDJ	**Mudanjiang**	**51.64**	**4**	P	**P**	**03 44 34.2**	**-0.3**
MDJ				IAmb	IAmb	03 44 36.2	
	comp=Z,16nm,0.9s						
MDJ	**Mudanjiang**	**51.64**	**4**	P	**P**	**03 44 34.9**	**+0.4**
MDJ				pP	pwP	03 46 17.9	-0.2
MDJ				sP	sP	03 47 18.4	+12
MDJ				ScP	**ScP**	**03 48 39.4**	**-7.9**
MDJ				S	**S**	**03 51 21.5**	**+4.4**
MDJ				ScS	**ScS**	**03 53 25.5**	**-4.8**
MDJ	**Mudanjiang**	**51.64**	**4**	SS	**SS**	**03 55 11.8**	**+9.2**
MDJ				pmax	pmax		
	comp=Z,28nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.6s						
GOMU	**GeErMu**	**51.65**	**329**	P	**P**	**03 44 35.6**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,47nm,4.1s						
KKN	**Kakani**	**51.85**	**314**	*e*P	**P**	**03 44 36.8**	**+0.1**
	comp=Z,17nm,0.6s						
DMN	**Daman**	**51.88**	**313**	*e*P	**P**	**03 44 37.4**	**+0.5**
	comp=Z,15nm,0.7s						
GKN	**Gorkha**	**52.44**	**314**	*e*P	**P**	**03 44 41.0**	**+0.2**
	comp=Z,20nm,0.3s						
KOLN	**Koldanda**	**53.06**	**313**	*e*P	**P**	**03 44 45.7**	**+0.4**
	comp=Z,31nm,0.8s						
DANN	**Dangsing**	**53.27**	**313**	*e*P	**P**	**03 44 47.0**	**+0.1**
	comp=Z,20nm,0.7s						
ASAJ	**Asahikawa**	**53.36**	**16**	P	**P**	**03 44 46.6**	**-0.3**
	comp=Z,6.6nm,0.6s,baz=224,slow=17,SNR=4.0						
	comp=Z,6.6nm,0.6s						
JKA	**Kamikawa-asahi**	**53.36**	**16**	IAmb	IAmb	03 45 04.8	
	comp=Z,31nm,1.4s						
PYUN	**Piuthan**	**53.69**	**313**	*e*P	**P**	**03 44 50.2**	**+0.4**
	comp=Z,39nm,0.8s						
KLR	**Kul'dur**	**56.39**	**5**	P	**P**	**03 45 08.1**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=180,slow=10,SNR=4.3						
KLR				PcP	**PcP**	**03 45 58.1**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=230,slow=2.9,SNR=4.3						
	comp=Z,1.2nm,0.3s						
ULN	**Ulaanbaatar**	**57.02**	**346**	P	**P**	**03 45 12.4**	**-0.2**
SONM	**Songino Array**	**57.16**	**345**	P	**P**	**03 45 13.9**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=169,slow=8.6,SNR=7.3						
	comp=Z,4.1nm,0.7s						
SONM	**Songino Array**	**57.16**	**345**	P	**P**	**03 45 13.1**	**-0.4**
WMQ	**Urumqi**	**60.97**	**330**	*e*P	**P**	**03 45 39.8**	**+0.7**
KSH	**Kashi**	**64.93**	**320**	P	**P**	**03 46 05.8**	**+1.0**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MK31	**Makanchi Array**	**65.77**	**329**	P	**P**	**03 46 09.4**	**-0.4**
MKAR	**Makanchi Array**	**65.77**	**329**	P	**P**	**03 46 10.4**	**+0.6**
	comp=Z,6.8nm,0.5s,baz=130,slow=7.9,SNR=79						
	comp=Z,6.8nm,0.5s						
MKAR	**Makanchi Array**	**65.77**	**329**	P	**P**	**03 46 09.6**	**-0.2**
PEA0B	**Petropavlovsk-**	**66.02**	**21**	P	**P**	**03 46 10.5**	**-0.7**
PEA0B				IAmb	IAmb	03 46 12.6	
	comp=Z,9.5nm,0.7s						
PETK	**Petropavlovsk-**	**66.02**	**21**	P	**P**	**03 46 11.9**	**+0.7**
	comp=Z,7.3nm,0.6s,baz=210,slow=3.1,SNR=31						
	comp=Z,7.3nm,0.6s						
PETK	**Petropavlovsk-**	**66.02**	**21**	P	**P**	**03 46 10.8**	**-0.4**
BOOM	**Boomskoye usch**	**66.63**	**322**	P	**P**	**03 46 15.1**	**-0.3**
BOOM				IAmb	IAmb	03 46 16.9	
	comp=Z,5.5nm,0.7s						
KBL	**Kabul**	**67.22**	**312**	P	**P**	**03 46 18.9**	**-0.4**
KBL				IAmb	IAmb	03 46 20.6	
	comp=Z,8.4nm,0.8s						
AAK	**Ala-Archa**	**67.59**	**322**	P	**P**	**03 46 21.7**	**+0.4**
AAK				IAmb	IAmb	03 46 23.0	
	comp=Z,5.3nm,0.7s						
GAR	**Garm**	**68.40**	**317**	P	**P**	**03 46 26.1**	**-0.2**
GAR				IAmb	IAmb	03 46 28.0	
	comp=Z,11nm,0.8s						
ZAA0	**Zalesovo Array**	**69.64**	**336**	IAmb	IAmb	03 46 33.5	
	comp=Z,9.9nm,0.8s						
ZALV	**Zalesovo Beam**	**69.64**	**336**	P	**P**	**03 46 32.7**	**-0.6**
	comp=Z,8.3nm,0.5s,baz=139,slow=4.8,SNR=38						
	comp=Z,8.3nm,0.5s						
ZALV	**Zalesovo Beam**	**69.64**	**336**	P	**P**	**03 46 32.2**	**-1.1**
KURK	**Kurchatov**	**70.18**	**331**	P	**P**	**03 46 36.0**	**-0.5**
KURK				IAmb	IAmb	03 46 37.7	
	comp=Z,13nm,0.9s						
KK31	**Karatay Array**	**70.32**	**321**	P	**P**	**03 46 36.8**	**-0.8**
KKAR	**Karatay Array**	**70.32**	**321**	P	**P**	**03 46 36.6**	**-1.0**
VNDA	**Vanda**	**72.96**	**172**	P	**P**	**03 46 52.6**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=320,slow=8.2,SNR=8.7						
	comp=Z,0.9nm,0.7s						
BRVK	**Borovoye**	**75.72**	**329**	P	**P**	**03 47 08.4**	**0.0**
BRVK				IAmb	IAmb	03 47 09.6	
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	**78.63**	**1**	P	**P**	**03 47 22.9**	**-0.9**
TIXI				IAmb	IAmb	03 47 24.2	
	comp=Z,14nm,0.5s						
ABKAR	**Akbulak array**	**79.65**	**323**	P	**P**	**03 47 28.8**	**-0.9**
NRIK	**Noril'sk**	**80.55**	**347**	P	**P**	**03 47 34.6**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=150,slow=6.7,SNR=5.3						
	comp=Z,2.2nm,0.3s						
QSPA	**South Pole Qui**	**82.87**	**180**	P	**P**	**03 47 46.8**	**+0.6**
RAYN	**Ar Rayn**	**83.42**	**295**	P	**P**	**03 47 49.4**	**-0.3**
RAYN				IAmb	IAmb	03 47 51.3	
	comp=Z,10nm,1.0s						
GNI	**Garni**	**87.27**	**311**	P	**P**	**03 48 05.6**	**-2.5**
KBZ	**Khabaz**	**89.31**	**314**	P	**P**	**03 48 17.6**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=95,slow=1.7,SNR=5.4						
	comp=Z,2.0nm,0.8s						
IMAR	**Indian Mountai**	**92.82**	**24**	P	**P**	**03 48 32.0**	**-1.1**
H21K	**Melozitna Rive**	**93.14**	**24**	IAmb	IAmb	03 48 35.1	
	comp=Z,6.4nm,1.4s						
COLD	**Coldfoot**	**94.42**	**23**	IAmb	IAmb	03 48 41.2	
	comp=Z,3.9nm,0.9s						
KNK	**Knik Glacier**	**94.45**	**29**	IAmb	IAmb	03 48 40.6	
	comp=Z,5.8nm,0.7s						
I23K	**Minto, Yukon-K**	**94.49**	**25**	IAmb	IAmb	03 48 41.0	
	comp=Z,7.2nm,0.9s						
H23K	**Yukon River**	**94.50**	**24**	IAmb	IAmb	03 48 41.3	
	comp=Z,4.6nm,0.8s						
RND	**Reindeer**	**94.50**	**27**	IAmb	IAmb	03 48 40.0	
	comp=Z,5.7nm,0.8s						
TOLK	**Toolik Lake Re**	**94.83**	**21**	IAmb	IAmb	03 48 43.1	
	comp=Z,3.0nm,0.8s						
CCB	**Clear Creek Bu**	**95.09**	**26**	P	**P**	**03 48 41.5**	**-1.8**
CCB				IAmb	IAmb	03 48 42.4	
	comp=Z,3.9nm,0.8s						
H24K	**Noodor Dome**	**95.18**	**24**	IAmb	IAmb	03 48 45.0	
	comp=Z,5.1nm,0.9s						
BOSA	**Boshof**	**95.26**	**240**	P	**P**	**03 48 46.1**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=129,slow=4.2,SNR=4.2						
	comp=Z,1.4nm,0.6s						
HDA	**Harding Lake**	**95.44**	**26**	IAmb	IAmb	03 48 44.7	
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**95.50**	**25**	P	**P**	**03 48 43.0**	**-2.2**
	comp=Z,1.0nm,0.8s,baz=246,slow=5.1,SNR=12						
ILAR				PKKP	**PKKPdf**	**04 05 34.4**	**-2.2**
	comp=Z,0.4nm,0.7s,baz=52,slow=1.5,SNR=4.6						
BRTR	**Keskin Array B**	**95.66**	**309**	P	**P**	**03 48 45.9**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=134,slow=5.6,SNR=8.1						
	comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**95.66**	**309**	P	**P**	**03 48 45.1**	**-1.6**
BMAR	**Burnt Mountain**	**96.61**	**23**	P	**P**	**03 48 49.9**	**-0.3**
DOT	**Dot Lake**	**96.66**	**27**	IAmb	IAmb	03 48 50.8	
	comp=Z,1.9nm,0.6s						
AKASG	**Malin Array Be**	**99.22**	**320**	P	**Pdif**	**03 49 00.7**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=74,slow=4.5,SNR=6.0						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**100.00**	**339**	P	**Pdif**	**03 49 04.3**	**-1.0**
	comp=Z,4.8nm,1.0s,baz=73,slow=3.1,SNR=7.3						
ARCES				PKiKP	**PKiKP**	**03 53 30.0**	**+0.1**
	comp=Z,9.0nm,1.1s,baz=90,slow=1.8,SNR=4.9						
	comp=Z,4.8nm,1.0s						
FINES	**FINESS Array B**	**100.55**	**331**	PKiKP	**PKiKP**	**03 53 31.4**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=108,slow=3.1,SNR=3.8						
NACGM	**Naroch**	**100.60**	**324**	⇑*e*P	**Pdif**	**03 49 14.0**	**+5.8**
	baz=87						
GERES	**GERESS Array B**	**109.40**	**319**	PKiKP	**PKiKP**	**03 53 47.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=64,slow=6.1,SNR=4.0						
YKA	**Yellowknife Ar**	**109.92**	**25**	PKiKP	**PKiKP**	**03 53 48.1**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=307,slow=1.6,SNR=13						
YKA				PKKPbc	**PKKPbc**	**04 04 52.7**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=114,slow=3.3,SNR=7.2						
NVAR	**Mina Array Bea**	**115.10**	**51**	PKP	**PKiKP**	**03 54 00.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=240,slow=2.9,SNR=5.3						
HLID	**Hailey**	**116.72**	**45**		**PKiKP**	**03 54 02.4**	**+0.2**
EGMT	**Eagleton**	**118.29**	**39**		**PKPdf**	**03 54 03.9**	**-1.0**
PD31	**Pinedale Array**	**120.34**	**44**		**PKPdf**	**03 54 08.4**	**-0.8**
PDAR	**Pinedale Array**	**120.34**	**44**	PKP	**PKiKP**	**03 54 09.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=165,slow=1.2,SNR=8.2						
PDAR				PKKPab	**PKKPbc**	**04 04 20.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=100,slow=5.0,SNR=3.7						
PDAR	**Pinedale Array**	**120.34**	**44**	PKPdf	**PKiKP**	**03 54 09.8**	**+0.4**
MVCO	**Mesa Verde**	**122.92**	**50**		**PKPdf**	**03 54 14.2**	**-0.2**
RSSD	**Black Hills**	**123.52**	**41**		**PKPdf**	**03 54 14.0**	**-1.3**
TORD	**Torodi Ar. Bea**	**124.12**	**281**	PKP	**PKiKP**	**03 54 17.4**	**+0.1**
	comp=Z,7.5nm,0.4s,baz=36,slow=3.2,SNR=5.6						
ESDC	**Sonseca Array**	**124.16**	**314**	PKP	**PKiKP**	**03 54 17.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=21,slow=3.1,SNR=5.1						
ANMO	**Albuquerque**	**125.18**	**52**		**PKPdf**	**03 54 17.9**	**-0.8**
TXAR	**Lajitas Array**	**129.07**	**58**	PKP	**PKiKP**	**03 54 27.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=194,slow=2.6,SNR=14						
TXAR	**Lajitas Array**	**129.07**	**58**	PKPdf	**PKiKP**	**03 54 27.0**	**+0.1**
DBIC	**Dimbokro**	**130.40**	**273**	PKP	**PKiKP**	**03 54 29.9**	**0.0**
	comp=Z,2.9nm,0.5s,baz=85,slow=3.2,SNR=5.6						
SCHQ	**Schefferville**	**131.44**	**9**	PKP	**PKPdf**	**03 54 30.0**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=306,slow=5.9,SNR=7.8						
U40A	**Yellville**	**134.72**	**44**	PKPdf	**PKPdf**	**03 54 36.0**	**-0.5**
L48A	**N Adams**	**136.52**	**32**	PKPdf	**PKPdf**	**03 54 39.3**	**-0.4**
M55A	**Ridgway**	**139.71**	**28**	PKPdf	**PKPdf**	**03 54 44.6**	**-0.9**
S54A	**Dingess, Beckl**	**141.14**	**34**	PKPdf	**PKPdf**	**03 54 47.2**	**-1.0**
V53A	**Saluda**	**141.72**	**38**	PKPdf	**PKPdf**	**03 54 45.9**	**-3.5**
ITQB	**Itaqui**	**143.40**	**177**		PKPbc	03 54 51.2	+0.4
AC02	**Maricunga**	**143.53**	**158**		**PKPdf**	**03 54 53.0**	**-0.4**
BIRD	**Birdtown, Kers**	**143.83**	**37**		PKPab	03 54 50.6	-1.4
PETF	**Flores**	**144.43**	**71**	PKPdf	PKPbc	03 54 54.4	0.0
CNNC	**Cliffs of the**	**144.89**	**34**	PKPdf	**PKPdf**	**03 54 53.8**	**-1.0**
MTO3	**Montecristo**	**145.35**	**75**	PKPbc	**PKPdf**	**03 54 56.6**	**+0.1**

456A	**Hilliard**	**145.35**	**44**	PKPbc	**PKPbc**	**03 54 56.6**	**-0.2**
SNET	**Serv Nac Est T**	**145.57**	**76**	PKPdf	**PKPdf**	**03 54 56.1**	**-0.5**
CPUP	**Villa Florida**	**146.68**	**176**	PKPbc	**PKPbc**	**03 55 01.6**	**+0.9**
	comp=Z,4.4nm,0.5s,baz=167,slow=2.6,SNR=17						
CPUP	**Villa Florida**	**146.68**	**176**	PKPbc	**PKPbc**	**03 55 00.5**	**-0.2**
TGUH	**Tegucigalpa,Un**	**147.40**	**75**	PKPbc	**PKPdf**	**03 54 59.8**	**0.0**
PB08	**IPOC Station P**	**149.48**	**153**	PKPbc	**PKPbc**	**03 55 07.7**	**-0.8**
LPAZ	**La Paz**	**153.29**	**151**	PKP	**PKPdf**	**03 55 10.9**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=214,slow=3.6,SNR=3.6						
LPAZ				PKPbc	**PKiKP**	**03 55 19.6**	**+2.1**
	comp=Z,1.0nm,0.4s,baz=291,slow=2.6,SNR=11						
LPAZ				PKPab	**PKPab**	**03 55 33.5**	**+1.8**
	comp=Z,2.9nm,0.6s,baz=195,slow=6.4,SNR=11						
BDFB	**Brasilia**	**156.41**	**197**	PKPab	**PKPab**	**03 55 45.5**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=158,slow=5.4,SNR=1.8						

JMA 13 03:49:53.3±0.1, 24°.3N±0°.3×123°.8E±0°.3, h17km±1km, MV0.2/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.11**	**321**	P	Pg	03 49 57.0	0.0
IRIF				*e*S	Sb	03 49 59.3	0.0
JKRS	**Kuro-shima**	**0.19**	**94**	P	Pg	03 49 58.0	0.0
JKRS				*e*S	Sg	03 50 01.1	-0.1
HATJ	**Hateruma jima**	**0.19**	**180**	P	Pg	03 49 57.9	-0.2
HATJ				*e*S	Sg	03 50 01.2	-0.1
JIJ	**Ishigaki jima**	**0.33**	**70**	*e*P	Pg	03 50 00.2	-0.1
JIJ				*e*S	Sg	03 50 04.9	-0.2
JISG	**Ishigakijimahi**	**0.57**	**54**	*i* P	Pg	03 50 04.0	-0.7
JYNG	**Yonagunijimaku**	**0.81**	**285**	*e*S	Sg	03 50 20.2	+0.4
JTJ	**Tarama**	**0.91**	**64**	S	Sn	03 50 23.4	-0.5

TAP 13 03:49:58.7, 25°.09N×122°.25E, h16km, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.25**	**252**	*e*P	Pg	03 50 04.5	+0.2
	baz=250						
TWB1				*e*S	Sb	03 50 09.5	+0.5
	baz=250						
SXI1	**Grass Mountain**	**0.34**	**271**	*e*P	Pb	03 50 06.3	-0.2
	baz=270						
SXI1				*e*S	Sb	03 50 11.2	-0.5
	baz=270						
EGS		**0.38**	**230**	*e*P	Pg	03 50 06.5	+0.1
	baz=228						
TIPB	**Shuangxi**	**0.41**	**253**	P	Pb	03 50 07.5	-0.1
	baz=253						
TIPB				*e*S	Sb	03 50 13.9	+0.4
	baz=253						
NWF	**Wu-fen Shan**	**0.43**	**268**	*e*P	Pb	03 50 07.9	0.0
	baz=267						
NWF				*e*S	Sb	03 50 14.8	+0.6
	baz=267						
WFSB	**Wu-fen Shan**	**0.43**	**268**	*e*P	Pb	03 50 08.0	+0.1
	baz=267						
TNOU	**National Taiwa**	**0.44**	**278**	*e*P	Pb	03 50 08.0	-0.1
	baz=277						
TWC	**Suao**	**0.60**	**218**	*e*P	Pb	03 50 10.9	0.0
	baz=216						
TWC				*e*S	Sb	03 50 19.8	+0.7
	baz=216						
TWA	**Mucha**	**0.62**	**260**	*e*P	Pg	03 50 10.6	-0.2
	baz=259						
TWA				*e*S	Sb	03 50 20.2	+0.6
	baz=259						
YM01	**YM01**	**0.62**	**275**	P	Pb	03 50 11.5	+0.3
	baz=275						
YM01				*e*S	Sn	03 50 21.2	-1.4
	baz=275						
TWE	**Neicheng**	**0.65**	**236**	*e*P	Pb	03 50 11.5	-0.1
	baz=234						
FUSB	**Fushanzhiwuyua**	**0.69**	**242**	*e*P	Pb	03 50 12.5	+0.1
	baz=241						
FUSB				*e*S	Sb	03 50 22.5	+0.8
	baz=241						
NWLT	**Wulai**	**0.75**	**246**	*e*P	Pb	03 50 13.7	+0.3
	baz=245						
NWLT				*e*S	Sb	03 50 24.1	+0.8
	baz=245						
ENTT	**Nioudou**	**0.77**	**235**	*e*P	Pb	03 50 13.8	+0.1
	baz=233						
LATG	**Datong**	**0.86**	**230**	*e*P	Pg	03 50 15.8	+0.4
	baz=230						
YHNB	**Yeheng**	**0.90**	**243**	*e*P	Pg	03 50 16.2	+0.1
	baz=242						
NSK	**Sanguang**	**0.91**	**243**	*e*P	Pg	03 50 16.4	0.0
	baz=242						
NACB	**Ninganchiao**	**1.09**	**213**	*e*S	Sn	03 50 34.4	+0.3
	baz=213						

GUC 13 04:14:23.7±0.7, 30°.40S×71°.87W, h27km±3km, ML3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.34**	**143**	*e*P	Pb	04 14 31.9	+0.4
CO06				*i* S	Sn	04 14 37.8	-1.0
CO06				IAML		04 14 42.9	
	comp=E,6μm,0.2s						
CO05	**La Serena**	**0.73**	**49**	*e*P	Pn	04 14 38.5	+0.2
CO05				*i* S	Sn	04 14 51.1	+2.6
CO05				IAML		04 14 52.9	
	comp=N,3μm,0.3s						
GO04	**Tololo Observa**	**0.96**	**76**	*e*P	Pb	04 14 42.7	+0.9
GO04				*i* S	Sn	04 14 56.7	+2.2
CO02	**Combarbal**	**1.10**	**137**	*e*P	Pb	04 14 44.4	+0.2
CO02				*i* S	Sb	04 15 00.6	+2.5
CO02				IAML		04 15 03.5	
	comp=E,4μm,0.2s						
CO01	**Juntas del Tor**	**1.60**	**75**	*e*P	Pb	04 14 53.0	+0.3
CO01				*i* S	Sb	04 15 15.5	+2.9
CO01				IAML		04 15 18.9	
	comp=N,409nm,0.1s						
LCO	**Las Campanas**	**1.72**	**37**	*e*P	Pb	04 14 53.6	-1.3
LCO				*i* S	Sb	04 15 18.2	+2.0
VA06	**Catapilco**	**2.21**	**167**	*e*P	Pn	04 14 59.1	+0.6
VA06				IAML		04 15 37.1	
	comp=E,840nm,0.5s						
AC04	**Llanos de Chal**	**2.30**	**18**	*i* P	Pn	04 14 59.6	-0.2
AC04				IAML		04 15 48.9	
	comp=E,214nm,0.4s						
VA03	**San Esteban**	**2.61**	**155**	*e*P	Pn	04 15 06.8	+2.6
VA03				*i* S	Sb	04 15 40.7	-0.8
ROCH	**El Roble**	**2.66**	**164**	*e*P	Pn	04 15 06.0	+1.0
ROCH				IAML		04 15 48.7	
	comp=N,444nm,0.4s						
MT02	**Curacav**	**2.92**	**168**	*e*P	Pn	04 15 08.8	+0.5
MT03	**Universidad Ad**	**3.29**	**160**	*e*P	Pn	04 15 15.8	+2.2
AC06	**Mina Casimiro**	**3.31**	**24**	*e*P	Pn	04 15 14.3	+0.5
MT09	**Talagante**	**3.44**	**168**	*e*P	Pn	04 15 16.8	+1.1
MT01	**Popeta**	**3.49**	**171**	*e*P	Pn	04 15 16.4	+0.2
BO04	**La Punta**	**3.73**	**164**	*e*P	Pn	04 15 21.2	+1.7
BO01	**Tunca**	**4.03**	**171**	*e*P	Pn	04 15 24.1	+0.5
AC02	**Maricunga**	**4.30**	**35**	*e*P	Pn	04 15 29.6	+1.9
AC01	**Pan de Azucar**	**4.39**	**15**	*e*P	Pn	04 15 26.9	-1.6
GO05	**Huala**	**4.59**	**181**	*e*P	Pn	04 15 30.2	-1.2

IDC 13 04:21:57.9±61.0, 21°.42S×177°.06W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=1128.0km s-min=173.6km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.19**	**245**	P	P	04 29 17.9	-1.6
	0.8nm,0.4s,baz=107,slow=14,SNR=3.6						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**45.17**	**257**	P	P	04 30 16.6	-0.2
	1.6nm,0.5s,baz=98,slow=7.2,SNR=18						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**45.35**	**263**	P	P	04 30 19.2	+0.9
	2.1nm,0.4s,baz=92,slow=8.3,SNR=83						
	2.1nm,0.4s						

IDC ***13*** *04:37:01.4±0.8, 6°.26N×73°.37W, h140km±14km, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=48.2km s-min=8.5km az=133.0*

RSNC ***13*** *04:37:02.4±1.3, 6°.34N×73°.59W, h112km±5km, ML3.4, Mw3.7, Fault plane solution: NP1:φs68.00000°, δ12.00000°, λ140.00000°.*

ISC 13 04:37:01.2±0.9, 6°.34N±0°.03×73°.56W±0°.03, h120km±6km, n36, σ1s.42/69, 3C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.45**	**57**	⇓*i*P	**Pn**	**04 37 19.6**	**+0.4**
BARC				*e*S	**Sn**	**04 37 32.8**	**+0.1**
BARC				*i*		04 37 33.9	
	comp=Z,2μm,0.4s						
RUSC	**La Rusia**	**0.65**	**133**	⇓*i*P	**Pn**	**04 37 20.9**	**+0.1**
RUSC				*e*S	**Sn**	**04 37 35.3**	**-0.2**
RUSC				*i*		04 37 36.5	
	comp=Z,186nm,0.1s						
BRRC	**Barranca, Sant**	**0.77**	**349**	⇑*i*P	**Pn**	**04 37 21.2**	**0.0**
BRRC				*e*S	**Sn**	**04 37 36.1**	**-0.2**
BRRC				*i*		04 37 45.3	
	comp=Z,353nm,0.4s						
SPBC	**San Pablo de B**	**0.85**	**217**	*e*P	**Pn**	**04 37 21.6**	**-0.4**
SPBC				*e*S	**Sn**	**04 37 37.0**	**-0.7**
SPBC				*i*		04 37 39.0	
	comp=Z,1μm,0.2s						
PTBC	**PUERTO BERRIO,**	**0.91**	**282**	⇑*i*P	**Pn**	**04 37 21.3**	**-1.1**
PTBC				*e*S	**Sn**	**04 37 36.4**	**-2.0**
PTBC				*i*		04 37 39.2	
	comp=Z,596nm,0.3s						
PAMC	**Pamplona, Colo**	**1.31**	**41**	*e*P	**Pn**	**04 37 27.6**	**+0.7**
PAMC				*e*S	**Sn**	**04 37 47.5**	**+1.0**
PAMC				*i*		04 37 50.8	
	comp=Z,202nm,0.4s						
NORC	**Norcasia**	**1.52**	**239**	⇑*e*P	**Pn**	**04 37 28.1**	**-0.8**
NORC				*e*S	**Sn**	**04 37 49.3**	**-0.7**
NORC				*i*		04 37 51.3	
	comp=Z,749nm,0.2s						
ROSC	**El Rosal**	**1.67**	**207**	P	**Pn**	**04 37 32.3**	**+1.2**
	comp=Z,62nm,0.3s,baz=119,slow=19,SNR=34						
ROSC				S	**Sn**	**04 37 57.0**	**+3.2**
	comp=Z,359nm,0.5s,baz=52,slow=19,SNR=12						
ROSC	**El Rosal**	**1.67**	**207**	*e*P	**Pn**	**04 37 32.2**	**+1.2**
ROSC				*e*S	**Sn**	**04 37 56.8**	**+3.0**
ROSC				*i*		04 38 02.1	
	comp=Z,300nm,0.3s						
CHIC	**Chingaza**	**1.71**	**186**	*e*P	**Pn**	**04 37 31.5**	**-0.1**
CHIC				*e*S	**Sn**	**04 37 54.4**	**-0.3**
CHIC				*i*		04 37 58.9	
	comp=Z,122nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.72**	**312**	*e*P	**Pn**	**04 37 31.0**	**-0.3**
ZARC				*e*S	**Sn**	**04 37 54.1**	**-0.2**
ZARC				*i*		04 38 01.5	
	comp=Z,636nm,0.4s						
TAMC	**Tame, Arauca**	**1.76**	**87**	⇓*i*P	**Pn**	**04 37 32.4**	**+0.6**
TAMC				*e*S	**Sn**	**04 37 54.1**	**-1.0**
TAMC				*i*		04 37 55.3	
	comp=Z,223nm,0.2s						
OCAC	**Ocana**	**1.90**	**7**	*e*P	**Pn**	**04 37 33.6**	**0.0**
OCAC				*e*S	**Sn**	**04 37 59.0**	**+0.8**
OCAC				*i*		04 38 04.7	
	comp=Z,548nm,0.2s						
HELC	**Santa Helena**	**1.96**	**266**	*e*P	**Pn**	**04 37 34.3**	**-0.2**
HELC				*e*S	**Sn**	**04 38 00.5**	**+0.5**
HELC				*i*		04 38 02.5	
	comp=Z,207nm,0.3s						
VILC	**Villavicencio,**	**2.22**	**183**	*e*P	**Pn**	**04 37 37.7**	**+0.1**
VILC				*e*S	**Sn**	**04 38 06.5**	**+1.0**
UREC	**San Jos de Ur**	**2.41**	**306**	*e*P	**Pn**	**04 37 38.4**	**-1.4**
UREC				*e*S	**Sn**	**04 38 07.2**	**-2.3**
UREC				*i*		04 38 08.8	
	comp=Z,350nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.48**	**259**	*e*P	**Pn**	**04 37 41.4**	**+0.4**
CBOC				*e*S	**Sn**	**04 38 11.1**	**-0.4**
CBOC				*i*		04 38 15.2	
	comp=Z,83nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.56**	**146**	⇓*i*P	**Pn**	**04 37 41.0**	**-0.8**
PTGC				⇓*e*P	**Pn**	**04 37 41.0**	**-0.8**
PTGC				*e*S	**Sn**	**04 38 11.7**	**-1.3**
PTGC				*i*		04 38 15.4	
	comp=Z,82nm,0.4s						
ANIL	**Santa Ana**	**2.60**	**225**	*e*P	**Pn**	**04 37 43.7**	**+1.1**
ANIL				*e*S	**Sn**	**04 38 15.8**	**+1.5**
ANIL				*i*		04 38 22.4	
	comp=Z,370nm,0.3s						
PRAC	**Prado**	**2.93**	**207**	*e*P	**Pn**	**04 37 46.6**	**0.0**
PRAC				*e*S	**Sn**	**04 38 23.0**	**+1.4**
PRAC				*i*		04 38 32.2	
	comp=Z,181nm,0.3s						
ORTC	**Ortega, Tolima**	**2.94**	**215**	*e*P	**Pn**	**04 37 47.0**	**+0.2**
ORTC				*e*S	**Sn**	**04 38 23.9**	**+1.9**
ORTC				*i*		04 38 28.8	
	comp=Z,113nm,0.5s						
PLMC	**San Jos del P**	**3.06**	**242**	*e*P	**Pn**	**04 37 48.6**	**+0.2**
PLMC				*e*S	**Sn**	**04 38 23.6**	**-1.2**
PLMC				*i*		04 38 28.3	
	comp=Z,59nm,0.2s						
LL6C	**La Loma 6 Bece**	**3.38**	**5**	*e*P	**Pn**	**04 37 53.9**	**+1.3**
LL6C				*e*S	**Sn**	**04 38 35.4**	**+3.1**
LL6C				*i*		04 38 47.6	
	comp=Z,46nm,0.4s						
ARGC	**Ariguani, Magd**	**3.56**	**349**	*e*P	**Pn**	**04 37 56.0**	**+1.1**
ARGC				*e*S	**Sn**	**04 38 40.7**	**+4.2**
ARGC				*i*		04 38 52.3	
	comp=Z,32nm,0.6s						
YOTC	**Yotoco, Valle**	**3.63**	**230**	*e*P	**Pn**	**04 37 55.4**	**-0.6**
YOTC				*e*S	**Sn**	**04 38 40.6**	**+2.3**
SOLC	**Bahia Solano**	**3.83**	**268**	*e*P	**Pn**	**04 37 58.3**	**-0.1**
SDV	**Santo Domingo**	**3.85**	**49**	P	**Pn**	**04 37 59.7**	**+0.8**
	comp=Z,20nm,0.3s,baz=213,slow=3.8,SNR=106						
SDV				S	**Sn**	**04 38 42.8**	**-0.8**
	comp=Z,44nm,0.6s,baz=34,slow=21,SNR=19						
SDV	**Santo Domingo**	**3.85**	**49**	*e*P	**Pn**	**04 37 59.4**	**+0.5**
SDV				*e*S	**Sn**	**04 38 42.5**	**-1.1**
SDV				*i*		04 38 46.9	
	comp=Z,38nm,0.4s						
SJCC	**San Jacinto, C**	**3.88**	**336**	*e*P	**Pn**	**04 37 57.6**	**-1.6**
SJCC				*e*S	**Sn**	**04 38 41.3**	**-2.8**
SJCC				*i*		04 38 46.7	
	comp=Z,35nm,0.3s						
GUVC	**San Jose del G**	**3.89**	**166**	*e*P	**Pn**	**04 37 58.4**	**-0.9**
GUVC				*e*S	**Sn**	**04 38 42.1**	**-2.2**
GUVC				*i*		04 38 49.7	
	comp=Z,103nm,0.3s						
MACC	**Macarena, Meta**	**4.18**	**184**	*e*P	**Pn**	**04 38 01.3**	**-1.9**
MACC				*e*S	**Sn**	**04 38 49.0**	**-2.4**
MACC				*i*		04 38 56.4	
	comp=Z,35nm,0.6s						
MARP	**Paez Belalcaza**	**4.22**	**215**	*e*P	**Pn**	**04 38 04.6**	**+0.6**
MARP				*e*S	**Sn**	**04 38 53.4**	**+0.8**
CRJC	**Cerrejon, Guaj**	**4.69**	**8**	*e*P	**Pn**	**04 38 10.2**	**0.0**
CRJC				*e*S	**Sn**	**04 39 01.8**	**-2.0**
CRJC				*i*		04 39 15.0	
	comp=Z,55nm,0.2s						
TXAR	**Lajitas Array**	**36.46**	**313**	P	**P**	**04 43 54.6**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=123,slow=9.1,SNR=3.8						
	comp=Z,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**63.56**	**340**	P	**P**	**04 47 17.7**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=133,slow=6.6,SNR=23						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**149.72**	**241**	PKPbc	**PKPdf**	**04 56 35.5**	**+2.4**
	comp=Z,0.3nm,0.4s,baz=107,slow=2.9,SNR=6.4						

JMA ***13*** *04:40:36.7±0.2, 38°.3N±0°.9×13°5E±°, h382km±1km, MV4.0/36, SEA OF JAPAN*

NIED ***13*** *04:40:36.7, 38°.27N×135°.39E, h382km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.86; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-0.29; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.60; $M_{\phi r}$-1.95; Fault plane solution: $M_0$2.22000×10^{15} NP1: φs75.00000°, δ19.00000°, λ144.00000°. NP2: φs199.00000°, δ79.00000°, λ75.00000°.*

IDC ***13*** *04:40:37.4±0.9, 38°.30N×135°.21E, h363km±9km, mb3.6/22, mbtmp4.4/29 Error ellipse: s-maj=9.9km s-min=8.8km az=80.0*

NEIC ***13*** *04:40:37.5±1.2, 38°.29N±0°.09×135°.26E±0°.10, h366km±7km, mb4.1/132, Error ellipse: s-maj=12.7km s-min=10.7km az=159.0*

ISC 13 04:40:37.4±0.5, 38°.28N±0°.06×135°.23E±0°.05, h366km±5km, n295, σ0s.84/255, mb4.1/89, 3C-1D, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHG	**Hegura jima**	**1.41**	**107**	P	**Pn**	**04 41 27.4**	**+0.8**
JHG				*e*S	**S**	**04 42 06.5**	**+0.3**
JJH	**Hakui**	**1.83**	**137**	S	**S**	**04 42 11.2**	**+0.6**
JSZ	**Suzu**	**1.89**	**115**	P	**Pn**	**04 41 29.8**	**+0.4**
JKG	**Kaga**	**2.19**	**156**	P	**Pn**	**04 41 32.0**	**+0.5**
JKG				*e*S	**S**	**04 42 16.0**	**+1.0**
JSD	**Sado**	**2.41**	**95**		**Pn**	**04 41 33.1**	**0.0**
JSD	**Sado**	**2.41**	**95**	*i* P	**Pn**	**04 41 33.0**	**0.0**
JSD				*e*S	**S**	**04 42 16.6**	**-1.3**
JOI	**OKI**	**2.53**	**219**	P	**Pn**	**04 41 35.0**	**+0.9**
MJB9	**Matsu-Tunnel**	**2.94**	**125**		**Pn**	**04 41 37.0**	**-0.5**
MAJO	**Matsushiro**	**2.94**	**125**		**Pn**	**04 41 37.1**	**-0.4**
MAT	**Matsushiro**	**2.94**	**125**	P	**Pn**	**04 41 37.1**	**-0.4**
JYTA	**Yamagatataniai**	**2.94**	**155**	P	**Pn**	**04 41 37.4**	**-0.1**
JYTA				*e*S	**S**	**04 42 25.5**	**-0.4**
MJAR	**Matsushiro Arr**	**2.94**	**125**	P	**Pn**	**04 41 36.9**	**-0.6**
	60nm,0.5s,baz=269,slow=7.3,SNR=87						
JWT	**Wachi**	**2.99**	**177**	*i* P	**Pn**	**04 41 38.7**	**+0.8**
JWT				*e*S	**S**	**04 42 26.6**	**-0.1**
JAW	**Awa shima**	**3.17**	**86**	P	**Pn**	**04 41 39.1**	**-0.2**
JGF	**Kuroka**	**3.17**	**147**		**Pn**	**04 41 39.6**	**0.0**
INU	**Inuyama**	**3.26**	**153**		**Pn**	**04 41 39.8**	**-0.5**
JHS	**Saijyo**	**3.69**	**208**	Pn	**Pn**	**04 41 44.6**	**+0.2**
JHS	**Saijyo**	**3.69**	**208**	P	**Pn**	**04 41 45.7**	**+1.3**
JHS				*e*S	**S**	**04 42 39.7**	**+1.3**
JRY	**Ryogami san**	**3.71**	**126**	P	**Pn**	**04 41 43.6**	**-0.9**
JIE	**Ise**	**4.06**	**162**	*i* P	**Pn**	**04 41 48.6**	**+0.6**
JIE				S	**S**	**04 42 44.2**	**-0.9**
JOD2	**Odawara 2**	**4.32**	**133**	P	**Pn**	**04 41 50.0**	**-0.7**
JMM	**Marumori**	**4.41**	**94**		**Pn**	**04 41 50.6**	**-0.9**
JYT	**Yasato**	**4.46**	**116**		**Pn**	**04 41 49.6**	**-2.4**
JTNC	**Tanabenakahech**	**4.46**	**176**	*e*P	**Pn**	**04 41 52.0**	**-0.2**
JTNC				S	**S**	**04 42 51.1**	**-1.5**
JMK	**Ichinoseki**	**4.74**	**80**	P	**Pn**	**04 41 54.3**	**-0.6**
TTO1	**TONANKAI O.B.S**	**4.82**	**164**	P	**Pn**	**04 41 56.2**	**+0.6**
JTM	**Tenmabayashi**	**5.17**	**59**	Pn	**Pn**	**04 41 57.2**	**-2.2**
JOT	**Ohata**	**5.45**	**54**	P	**Pn**	**04 42 02.5**	**0.0**
SEHB	**SEOHWA**	**5.49**	**272**	Pn	**Pn**	**04 42 03.2**	**+0.2**
JTO	**Tosashimizu**	**5.76**	**201**	P	**Pn**	**04 42 07.2**	**+1.1**
KSRS	**Korea Array**	**5.84**	**264**	P	**Pn**	**04 42 08.8**	**+1.9**
	49nm,0.6s,baz=79,slow=12,SNR=120						
KSAR	**Wonju Array Be**	**5.87**	**264**		**Pn**	**04 42 08.3**	**+1.0**
KS19	**Wonju Array Si**	**5.87**	**265**		**Pn**	**04 42 08.3**	**+1.0**
BSO1	**Boso 1**	**5.88**	**126**	*i* P	**Pn**	**04 42 04.8**	**-2.1**
KSCHJ	**Chungju**	**5.93**	**259**		**Pn**	**04 42 08.2**	**+0.2**
JTU	**Tsushima**	**6.01**	**233**		**Pn**	**04 42 08.3**	**-0.6**
JTU	**Tsushima**	**6.01**	**233**	P	**Pn**	**04 42 09.7**	**+0.8**
JNU	**Nakatsue**	**6.24**	**216**	P	**Pn**	**04 42 12.3**	**+0.7**
	26nm,0.4s,baz=22,slow=1.0,SNR=19						
JNU	**Nakatsue**	**6.24**	**216**		**Pn**	**04 42 11.7**	**+0.1**
JHJ	**Hachijo jima 2**	**6.34**	**143**	P	**Pn**	**04 42 12.2**	**-0.5**
	74nm,0.3s,baz=111,slow=24,SNR=11						
USRK	**Ussuriysk Ar.**	**6.40**	**339**	P	**Pn**	**04 42 14.1**	**+1.1**
	22nm,0.4s,baz=149,slow=9.8,SNR=38						
ERM	**Erimo**	**7.13**	**56**	Pn	**Pn**	**04 42 20.2**	**-1.3**
MDJ	**Mudanjiang**	**7.61**	**328**	Pn	**Pn**	**04 42 27.6**	**+0.6**
ASAJ	**Asahikawa**	**8.05**	**41**	P	**Pn**	**04 42 30.9**	**-1.3**
	16nm,0.5s,baz=244,slow=7.7,SNR=12						
ASAJ				S	S	04 43 58.2	-7.9
	32nm,0.7s,baz=41,slow=24,SNR=8.4						
JKA	**Kamikawa-asahi**	**8.05**	**41**		**Pn**	**04 42 30.3**	**-1.9**
CN2	**Changchun**	**9.22**	**310**	*e*P	**Pn**	**04 42 46.0**	**+0.1**
CN2				*e*PP		04 43 55.3	
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
BNX	**BinXian**	**9.45**	**325**	⇓P	**Pn**	**04 42 49.3**	**+0.6**
BNX				pmax	pmax		
	comp=Z,140nm,1.0s						
BNX				pmax	pmax		
	comp=Z,210nm,3.5s						
KLR	**Kul'dur**	**11.23**	**348**	P	**P**	**04 43 08.8**	**-0.7**
	comp=Z,10nm,0.3s,baz=152,slow=9.6,SNR=39						
JCJ	**Chichijima**	**12.59**	**150**	P	P	04 43 19.1	-5.9
	comp=Z,30nm,0.4s,baz=5.0,slow=18,SNR=19						
JCJ				S	S	04 45 30.9	-13
	comp=Z,42nm,0.3s,baz=286,slow=22,SNR=2.5						
JOW	**Kunigami**	**12.82**	**209**	P	P	04 43 20.7	-6.8
	comp=Z,52nm,0.2s,baz=156,slow=7.2,SNR=9.4						
TIA	**Tai'an**	**14.57**	**267**	⇑P	**Pn**	**04 43 47.8**	**-1.0**
TIA				pmax	pmax		
	comp=Z,16nm,0.6s						
XLT	**XiLinHaoTe**	**15.48**	**297**	*e*P	**P**	**04 43 56.9**	**+0.5**
XLT				sP	sP	04 45 21.3	-14
XLT				PcP	**PcP**	**04 48 38.0**	**+2.8**
XLT				pmax	pmax		
	comp=Z,73nm,0.7s						
XLT				pmax	pmax		
	comp=Z,92nm,4.0s						
HIA	**Hailar**	**15.64**	**320**	P	**P**	**04 43 57.8**	**-0.3**
HNS	**HongShan**	**16.23**	**273**	⇑P	**P**	**04 44 04.8**	**+0.2**
HNS				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC	**Hu-ho-hao-te**	**18.41**	**285**	*e*P	**P**	**04 44 26.4**	**-1.5**
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.7s						
PETK	**Petropavlovsk-**	**21.46**	**39**	P	**P**	**04 44 57.4**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=173,slow=3.5,SNR=8.6						
	comp=Z,1.9nm,0.5s						
XAN	**Xi'an**	**21.63**	**267**	⇑P	**P**	**04 44 58.4**	**-0.6**
XAN				pmax	pmax		
	comp=Z,18nm,1.0s						
XAN				pmax	pmax		
	comp=Z,84nm,5.6s						
XAN				LR	LR		
	comp=N,120nm,15.2s						
XAN				LR	LR		
	comp=E,120nm,14.3s						
XAN				LR	LR		
	comp=Z,81nm,17.5s						
ULN	**Ulaanbaatar**	**22.59**	**304**	P	**P**	**04 45 07.1**	**-0.7**
ULN				IAmb	IAmb	04 45 08.5	
	comp=Z,11nm,1.1s						
ENH	**Enshi**	**22.67**	**257**	P	**P**	**04 45 07.5**	**-1.1**
SONM	**Songino Array**	**23.01**	**304**	P	**P**	**04 45 11.4**	**-0.2**
	comp=Z,4.2nm,0.5s,baz=110,slow=9.0,SNR=7.8						
	comp=Z,4.2nm,0.5s						
SONM	**Songino Array**	**23.01**	**304**	P	**P**	**04 45 10.9**	**-0.6**
SONM				IAmb	IAmb	04 45 12.4	
	comp=Z,18nm,1.5s						
LZH	**Lanzhou**	**25.04**	**275**	*e*P	**P**	**04 45 29.6**	**-0.4**
LZH				pP	PP	04 46 39.6	+4.0
LZH				pmax	pmax		
	comp=Z,31nm,1.5s						
GUMO	**Guam**	**26.04**	**158**	P	**P**	**04 45 39.4**	**+0.6**
	comp=Z,94nm,0.7s,baz=196,slow=19,SNR=2.2						
GTA	**Gaotai**	**27.50**	**284**	*e*P	**P**	**04 45 51.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
PZH	**PanZhiHua**	**30.45**	**257**	P	**P**	**04 46 16.8**	**-1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,60nm,4.9s						
GOMU	**GeErMu**	**32.06**	**279**	P	**P**	**04 46 30.3**	**-1.7**
GOMU				PP	**PnPn**	**04 47 53.8**	**-1.9**
GOMU				PcP	**PcP**	**04 49 09.8**	**-1.6**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,61nm,4.9s						
TIXI	**Tiksi**	**33.60**	**356**	P	**P**	**04 46 43.8**	**-0.4**
BILL	**Bilibino**	**34.39**	**20**	P	**P**	**04 46 51.3**	**+0.3**
BILL				IAmb	IAmb	04 46 52.9	
	comp=Z,9.8nm,1.4s						
WMQ	**Urumqi**	**35.87**	**294**	*e*P	**P**	**04 47 05.0**	**+1.0**
WMQ				S	**S**	**04 52 15.6**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
CHTO	**Chiang Mai**	**36.99**	**249**	P	**P**	**04 47 13.2**	**-0.3**
CHTO				IAmb	IAmb	04 47 14.9	
	comp=Z,7.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.22**	**248**	P	**P**	**04 47 15.9**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=42,slow=7.8,SNR=13						
	comp=Z,2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**37.43**	**311**	P	**P**	**04 47 15.6**	**-1.1**
	comp=Z,2.8nm,0.3s,baz=99,slow=7.1,SNR=14						
	comp=Z,2.8nm,0.3s						
ZALV	**Zalesovo Beam**	**37.43**	**311**	P	**P**	**04 47 15.2**	**-1.4**
MK31	**Makanchi Array**	**39.27**	**300**	P	**P**	**04 47 31.2**	**-0.8**
MKAR	**Makanchi Array**	**39.27**	**300**	P	**P**	**04 47 31.5**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=84,slow=11,SNR=44						
	comp=Z,3.8nm,0.5s						
MAKZ	**Makanchi**	**39.48**	**300**	P	**P**	**04 47 32.9**	**-0.8**
NRIK	**Noril'sk**	**40.11**	**336**	P	**P**	**04 47 38.3**	**-0.1**

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            comp=Z,11nm,0.5s,baz=112,slow=6.6,SNR=11
            comp=Z,11nm,0.5s
NRIK   Noril'sk           40.11 336  P      P      04 47 38.0 -0.5
KURK   Kurchatov          41.27 306  P      P      04 47 47.3 -0.8
KURK                                 IAmb   IAmb   04 47 48.1
            comp=Z,9.5nm,0.8s
TNA    Tin City           42.27  31  P      P      04 47 55.5 -0.3
TNA    Tin City           42.27  31  P      P      04 47 56.7 +0.9
            baz=258
ANM    Nome               43.16  33  IAmb   IAmb   04 48 05.3
            comp=Z,6.0nm,0.7s
ANM    Nome               43.16  33  P      P      04 48 04.1 +1.1
            baz=262
TARG   Taragay, Kyrgy     43.42 293  IAmb   IAmb   04 48 07.4
            comp=Z,8.9nm,0.7s
BOOM   Boomskoye usch     44.56 295  P      P      04 48 14.3 -0.2
KSH    Kashi              45.39 291  P      P      04 48 25.4 +4.4
KSH                                  pmax   pmax
            comp=Z,7.0nm,0.8s
AAK    Ala-Archa          45.55 296  P      P      04 48 21.9 -0.3
AAK                                  IAmb   IAmb   04 48 22.7
            comp=Z,5.0nm,0.5s
TTA    Tatalina           47.23  36  P      P      04 48 34.8 +0.1
TTA    Tatalina           47.23  36  P      P      04 48 35.7 +1.0
            baz=272
N18K   Kilae Creek        47.42  39  P      P      04 48 37.3 +1.1
            baz=274
L19K   White Mountain     47.81  36  P      P      04 48 39.9 +0.8
            baz=274
O18K   Koktuh Hills       47.84  40  IAmb   IAmb   04 48 43.1
            comp=Z,8.0nm,0.5s
O18K   Koktuh Hills       47.84  40  P      P      04 48 40.1 +0.8
            baz=276
P18K   Big Mountain,      47.87  40  P      P      04 48 40.6 +1.0
            baz=276
J20K   Nowinta River      48.02  34  P      P      04 48 41.8 +1.2
            baz=273,SNR=8.2
K20K   Telida             48.09  35  IAmb   IAmb   04 48 43.4
            comp=Z,6.9nm,0.6s
K20K   Telida             48.09  35  P      P      04 48 42.3 +1.1
            baz=274,SNR=12
N19K   Bonanza Creek      48.10  38  P      P      04 48 42.4 +1.0
            baz=276
KK31   Karatay Array      48.22 297  P      P      04 48 42.6 +0.2
KKAR   Karatay Array      48.22 297  P      P      04 48 42.6 +0.2
L20K   Farewell, AK       48.24  36  P      P      04 48 43.5 +1.2
            baz=274,SNR=5.3
O19K   Port Alsworth      48.24  39  P      P      04 48 43.6 +1.3
            baz=276
H21K   Melozitna Rive     48.52  32  P      P      04 48 45.5 +1.1
            baz=273,SNR=6.7
CHUM   Lake Minchumin     48.84  34  P      P      04 48 48.0 +1.2
            baz=275
P19K   Oil Pt             48.85  40  P      P      04 48 47.3 +0.3
            baz=278
I21K   Tanana             48.89  32  P      P      04 48 48.3 +1.2
            baz=274,SNR=8.4
CAST   Castle Rocks       48.98  35  IAmb   IAmb   04 48 50.0
            comp=Z,7.0nm,0.6s
CAST   Castle Rocks       48.98  35  P      P      04 48 48.7 +0.8
            baz=275,SNR=21
PPLA   Purkeypile         48.98  35  IAmb   IAmb   04 48 50.4
            comp=Z,17nm,1.4s
PPLA   Purkeypile         48.98  35  P      P      04 48 49.0 +1.0
            baz=276
O20K   Slope Mountain     49.10  39  P      P      04 48 49.8 +0.9
            baz=278
BPAW   Bear Paw Mtn.      49.40  34  IAmb   IAmb   04 48 54.5
            comp=Z,3.6nm,0.4s
BPAW   Bear Paw Mtn.      49.40  34  P      P      04 48 52.1 +1.1
            baz=276,SNR=5.2
KDAK   Kodiak Island      49.47  42  P      P      04 48 52.1 +0.5
            baz=280
COLD   Coldfoot           49.48  30  P      P      04 48 52.3 +0.8
            baz=274
KTH    Kantishna Hill     49.49  34  IAmb   IAmb   04 48 53.8
            comp=Z,11nm,0.9s
TOLK   Toolik Lake Re     49.63  28  P      P      04 48 53.1 +0.4
            baz=273
GAR    Garm               49.70 292  P      P      04 48 52.8 -1.0
TRF    Thorofare Moun     49.78  35  P      P      04 48 54.4 +0.4
            baz=277
H23K   Yukon River        49.85  31  IAmb   IAmb   04 48 56.9
            comp=Z,10nm,0.8s
H23K   Yukon River        49.85  31  P      P      04 48 55.9 +1.6
            baz=275,SNR=20
I23K   Minto, Yukon-K     49.99  32  P      P      04 48 56.4 +1.1
            baz=276,SNR=6.6
BRSE   Bradley Lake S     50.09  39  P      P      04 48 57.0 +0.8
            baz=279
NEA2   Nenana             50.18  33  IAmb   IAmb   04 48 58.6
            comp=Z,6.4nm,0.6s
NEA2   Nenana             50.18  33  P      P      04 48 57.5 +0.8
            baz=277,SNR=8.5
MCK    McKinley           50.35  34  IAmb   IAmb   04 48 59.4
            comp=Z,5.3nm,0.5s
MCK    McKinley           50.35  34  P      P      04 48 58.8 +0.8
            baz=278
MDM    Murphy Dome        50.49  32  IAmb   IAmb   04 49 01.2
            comp=Z,11nm,1.1s
H24K   Noodor Dome        50.53  31  P      P      04 49 00.6 +1.2
            baz=277,SNR=7.6
TCOL   CIGO, UAF Yank     50.66  33  P      P      04 49 01.1 +0.9
            baz=278
POKR   Poker Plat Res     50.81  32  P      P      04 49 02.7 +1.3
            baz=278
SML    Sawmill            50.91  36  P      P      04 49 03.4 +1.2
            baz=280
KNK    Knik Glacier       50.92  37  P      P      04 49 02.9 +0.6
            baz=280
ILAR   Eielson Array      51.09  33  P      P      04 49 03.5  0.0
            comp=Z,2.3nm,0.5s,baz=266,slow=6.1,SNR=73
            comp=Z,2.3nm,0.5s
HDA    Harding Lake       51.11  33  IAmb   IAmb   04 49 04.5
            comp=Z,10.0nm,0.8s
HDA    Harding Lake       51.11  33  P      P      04 49 03.8 +0.1
            baz=279,SNR=16
DHY    Denali Highway     51.14  35  IAmb   IAmb   04 49 05.3
            comp=Z,6.0nm,0.7s
DHY    Denali Highway     51.14  35  P      P      04 49 04.5 +0.5
            baz=279
M23K   Glacier View       51.20  36  P      P      04 49 04.8 +0.5
            baz=280
SCM    Sheep Creek Mo     51.38  36  P      P      04 49 06.3 +0.5
            baz=280
BMAR   Burnt Mountain     51.62  29  P      P      04 49 07.6 +0.2
K24K   Donnelly Dome      51.72  34  P      P      04 49 08.4 +0.3
            baz=280
J25K   Salcha River,      51.76  33  P      P      04 49 08.5  0.0
            baz=280
M24K   Tolsona, Glenn     51.86  36  P      P      04 49 08.8 -0.5
            baz=281
FID    Port Fidalgo       51.99  38  IAmb   IAmb   04 49 10.9
            comp=Z,8.5nm,0.6s
PAX    Paxson             52.01  35  P      P      04 49 10.5 +0.1
            baz=281
KLU    Klutina            52.10  37  P      P      04 49 10.1 -1.0
            baz=282,SNR=12
ARU    Arti               52.13 317  P      P      04 49 11.1 -0.1
RIDG   Independent Ri     52.14  34  IAmb   IAmb   04 49 47.8
            comp=Z,7.5nm,0.6s
DIV    Divide             52.25  37  IAmb   IAmb   04 49 15.9
            comp=Z,5.5nm,0.6s
KBL    Kabul              52.37 288  P      P      04 49 12.9 -0.7
KBL                                  IAmb   IAmb   04 49 14.0
            comp=Z,6.2nm,0.7s
J26L   Joseph Creek       52.54  33  P      P      04 49 14.1 -0.1
            baz=282
N25K   Chitina, Valde     52.70  36  IAmb   IAmb   04 49 30.8
            comp=Z,3.5nm,0.5s
N25K   Chitina, Valde     52.70  36  P      P      04 49 15.9 +0.5
            baz=283
MENT   Mentasta           52.80  35  IAmb   IAmb   04 49 18.1
            comp=Z,9.3nm,0.9s
BMRM   Bremner River      52.84  37  P      P      04 49 16.8 +0.4
            baz=283
L26K   Log Cabin Wild     52.95  34  P      P      04 49 17.5 +0.4
            baz=283,SNR=7.8
M26K   Nabesna, AK        53.25  35  IAmb   IAmb   04 49 21.4
            comp=Z,15nm,1.1s
M26K   Nabesna, AK        53.25  35  P      P      04 49 20.1 +0.8
            baz=284,SNR=12
K27K   Chicken            53.28  33  IAmb   IAmb   04 49 21.0
            comp=Z,4.8nm,0.5s
K27K   Chicken            53.28  33  P      P      04 49 20.4 +1.0
            baz=283
ABKAR  Akbulak array      53.34 308  P      P      04 49 19.5 -0.6
BERG   Berg Lake          53.41  38  P      P      04 49 20.5 +0.1
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BERG                                 IAmb   IAmb   04 49 22.4
            comp=Z,11nm,0.9s
EGAK   Eagle              53.49  32  P      P      04 49 21.2 +0.3
            baz=283,SNR=8.5
L27K   Beaver Creek,      53.61  34  P      P      04 49 22.2 +0.3
L27K                                 IAmb   IAmb   04 49 24.2
            comp=Z,7.6nm,0.7s
L27K   Beaver Creek,      53.61  34  P      P      04 49 22.9 +1.0
            baz=284,SNR=19
M27K   Edge Creek, AK     53.77  35  IAmb   IAmb   04 49 25.2
            comp=Z,6.9nm,0.9s
M27K   Edge Creek, AK     53.77  35  P      P      04 49 24.1 +1.0
            baz=284
BARN   Barnard Glacie     54.20  37  IAmb   IAmb   04 49 28.0
            comp=Z,7.1nm,0.7s
CTGM   Chitina Glacie     54.38  37  IAmb   IAmb   04 50 39.6
            comp=Z,5.8nm,0.7s
DAWY   Dawson             54.41  33  P      P      04 49 28.4 +0.8
            baz=285
I29M   Ogilvie Camp,      54.52  31  P      P      04 49 29.2 +0.9
            baz=285,SNR=5.9
YUK3   Moose Creek        54.56  35  P      P      04 49 29.8 +0.9
            baz=286
EPYK   Eagle Plains       54.88  30  P      P      04 49 31.7 +0.8
            baz=286,SNR=27
INK    Inuvik             55.51  27  P      P      04 49 35.0 -0.2
INK    Inuvik             55.51  27  P      P      04 49 35.7 +0.6
            baz=287,SNR=8.6
YUK4   Talbot Arm         55.52  36  P      P      04 49 36.4 +0.8
            baz=288,SNR=11
PNL    Peninsula          55.69  38  P      P      04 49 37.5 +0.8
            baz=288
YUK6   Outpost Mounta     55.77  36  P      P      04 49 38.1 +0.6
            baz=288,SNR=5.9
M30M   Minto, Yukon       55.97  34  IAmb   IAmb   04 49 41.1
            comp=Z,4.1nm,0.7s
M30M   Minto, Yukon       55.97  34  P      P      04 49 40.0 +1.4
            baz=288,SNR=8.5
N30M   Aishikik Lake      56.20  35  P      P      04 49 41.8 +1.6
            baz=289
HYT    Haines Junctio     56.21  36  IAmb   IAmb   04 49 43.0
            comp=Z,8.1nm,0.8s
HYT    Haines Junctio     56.21  36  P      P      04 49 42.0 +1.6
            baz=289,SNR=12
N31M   Braeburn, Yuko     56.78  35  IAmb   IAmb   04 49 46.8
            comp=Z,8.2nm,0.9s
N31M   Braeburn, Yuko     56.78  35  P      P      04 49 45.6 +1.4
            baz=290,SNR=7.9
A36M   Sachs Harbour      56.92  21  IAmb   IAmb   04 49 46.4
            comp=Z,8.6nm,0.8s
A36M   Sachs Harbour      56.92  21  P      P      04 49 45.4 +0.4
            baz=292,SNR=5.2
M31M   Drury Creek, Y     57.15  34  IAmb   IAmb   04 49 48.4
            comp=Z,3.4nm,0.6s
M31M   Drury Creek, Y     57.15  34  P      P      04 49 47.9 +1.0
            baz=290,SNR=6.9
HRA    Herat              57.50 290  P      P      04 49 48.9 -1.0
SKAG   Skagway            57.70  37  P      P      04 49 51.5 +0.9
            baz=291
WRA    Warramunga Arr     57.92 181  P      P      04 49 52.3 -0.3
            comp=Z,2.3nm,0.5s,baz=355,slow=7.6,SNR=33
            comp=Z,2.3nm,0.5s
C36M   Paulatuk           58.34  24  P      P      04 49 55.1 +0.3
            baz=295,SNR=6.4
SIT    Sitka              58.61  40  P      P      04 49 57.5 +0.7
            baz=293
TGTN   Hyland Airport     60.08  33  P      P      04 50 07.4 +0.6
            baz=296
S34M   Telegraph Cree     60.33  38  P      P      04 50 09.6 +1.1
            baz=295
WRAK   Wrangell Islan     60.37  40  P      P      04 50 10.2 +1.4
            baz=295
CRAG   Craig              60.38  41  P      P      04 50 09.8 +1.0
            baz=295
ARCES  ARCESS Array B     61.05 338  P      P      04 50 13.2 +0.1
            comp=Z,1.5nm,0.6s,baz=56,slow=7.2,SNR=12
            comp=Z,1.5nm,0.6s
ASAR   Alice Springs      61.63 181  P      P      04 50 17.9 +0.4
            comp=Z,1.2nm,0.7s,baz=354,slow=5.1,SNR=9.6
            comp=Z,1.2nm,0.7s
YKA    Yellowknife Ar     65.14  29  P      P      04 50 39.9 +0.1
            comp=Z,1.7nm,0.7s,baz=311,slow=5.6,SNR=49
            comp=Z,1.7nm,0.7s
FINES  FINESS Array B     65.36 330  P      P      04 50 41.0 -0.1
            comp=Z,4.6nm,0.7s,baz=75,slow=5.8,SNR=32
            comp=Z,4.6nm,0.7s
KBZ    Khabaz             66.31 308  P      P      04 50 47.9 +0.4
            comp=Z,2.7nm,0.8s,baz=8.7,slow=7.0,SNR=6.8
            comp=Z,2.7nm,0.8s
KIV    Kislovodsk         66.33 308  P      P      04 50 48.3 +0.6
A04D   Lummi Island       69.31  44  P      P      04 51 06.3 +0.3
            baz=305
GURO   Guroymak-BITLI     69.60 303  P      P      04 51 08.0 -0.1
GURO                                 IAmb   IAmb   04 51 09.8
            comp=Z,5.1nm,1.0s
D03D   Eldon              69.78  45  P      P      04 51 09.5 +0.7
            baz=305
STKA   Stephens Creek     70.05 174  P      P      04 51 10.9 +0.5
            comp=Z,0.7nm,0.3s,baz=16,slow=4.9,SNR=4.0
            comp=Z,0.7nm,0.3s
STKA   Stephens Creek     70.05 174  IAmb   IAmb   04 52 51.1
            comp=Z,9.8nm,1.9s
AKASG  Malin Array Be     70.23 319  P      P      04 51 11.1 -0.4
            comp=Z,0.9nm,0.4s,baz=46,slow=7.2,SNR=12
            comp=Z,0.9nm,0.4s
NB2    NORSAR Subarra     71.05 335  P      P      04 51 15.9 -0.4
            comp=Z,0.7nm,0.4s,baz=44,slow=6.2
NOA    NORSAR Array B     71.05 335  P      P      04 51 15.9 -0.4
            comp=Z,2.2nm,0.9s,baz=56,slow=8.1,SNR=8.5
            comp=Z,2.2nm,0.9s
I03D   Drain, OR          71.84  48  P      P      04 51 22.2 +1.0
            baz=306
K02D   Willamette Mer     72.24  49  P      P      04 51 24.1 +0.4
            baz=306
C09A   Chrisman Ranch     72.25  43  P      P      04 51 24.0 +0.5
C09A                                 IAmb   IAmb   04 51 25.0
            comp=Z,5.4nm,0.8s
I04A   Tendick Farm,      72.34  48  P      P      04 51 24.7 +0.5
            baz=306
NEW    Newport            72.57  42  P      P      04 51 25.8 +0.3
            baz=308
I05D   Terrebonne, OR     72.64  47  P      P      04 51 26.3 +0.4
            baz=307
L02F   Cave Junction      72.64  50  P      P      04 51 26.8 +0.9
            baz=306
J04D   Umpqua Nationa     72.84  48  P      P      04 51 28.0 +0.7
            baz=307
PINE   Pine Mountain      73.19  47  P      P      04 51 29.5 +0.2
J05D   Fort Rock, OR      73.33  48  P      P      04 51 31.4 +1.3
            baz=307
L04D   Klamath Falls      73.34  49  P      P      04 51 31.3 +1.2
            baz=307
BRTR   Keskin Array B     74.29 308  P      P      04 51 35.9 +0.2
            comp=Z,1.4nm,0.6s,baz=73,slow=4.3,SNR=9.1
            comp=Z,1.4nm,0.6s
BRTR   Keskin Array B     74.29 308  P      P      04 51 35.3 -0.4
BMO    Blue Mountains     74.60  45  P      P      04 51 37.1 -0.2
BMO                                  IAmb   IAmb   04 51 38.9
            comp=Z,3.0nm,0.7s
MSO    Missoula           75.15  42  P      P      04 51 40.9 +0.5
            baz=310
BEKR   Beckworth          75.93  50  IAmb   IAmb   04 51 46.6
            comp=Z,3.0nm,0.8s
EGMT   Eagleton           76.48  39  P      P      04 51 48.2 +0.4
EGMT   Eagleton           76.48  39  P      P      04 51 48.1 +0.4
            baz=313,SNR=5.3
PAHR   Pah Rah Range      76.62  50  IAmb   IAmb   04 51 50.5
            comp=Z,3.2nm,0.9s
HLID   Hailey             77.02  44  P      P      04 51 51.7 +0.7
            baz=311
YERR   Yerington          77.16  50  IAmb   IAmb   04 51 53.7
            comp=Z,3.7nm,0.8s
BOZ    Bozeman (W)        77.17  41  IAmb   IAmb   04 51 53.4
            comp=Z,3.7nm,0.8s
BOZ    Bozeman (W)        77.17  41  P      P      04 51 52.6 +0.9
            baz=312,SNR=11
CLL    Collm              77.48 327  eP     P      04 51 53.0 -0.1
KVN    Kaiserville        77.81  50  P      P      04 51 55.0 -0.4
KVN                                  IAmb   IAmb   04 51 57.4
            comp=Z,4.3nm,1.0s
YHL    Hebgen Lake        77.90  42  IAmb   IAmb   04 51 58.0
            comp=Z,4.1nm,0.9s
NVAR   Mina Array Bea     78.08  50  P      P      04 51 58.0 +1.1
            comp=Z,1.8nm,0.6s,baz=298,slow=5.1,SNR=24
            comp=Z,1.8nm,0.6s
H17A   Grant Village      78.53  42  P      P      04 52 01.3 +2.0
            baz=313,SNR=5.1
RLMT   Red Lodge          78.71  41  IAmb   IAmb   04 52 02.7
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            comp=Z,2.4nm,0.7s
RLMT   Red Lodge          78.71  41  P      P      04 52 00.9 +0.7
            baz=314,SNR=5.4
MOOW   Moose Ponds        78.88  42  IAmb   IAmb   04 52 46.2
            comp=Z,9.9nm,1.9s
R11A   Troy Canyon, C     79.76  49  P      P      04 52 06.6 +0.7
            baz=311
HWUT   Hardware Ranch     79.89  44  IAmb   IAmb   04 52 08.6
            comp=Z,4.9nm,1.1s
DUG    Dugway, Tooele     80.15  46  P      P      04 52 08.4 +0.5
            baz=312
BW06   Boulder Array      80.19  43  IAmb   IAmb   04 52 09.8
            comp=Z,3.1nm,0.9s
BW06   Boulder Array      80.19  43  P      P      04 52 08.4 +0.2
            baz=314,SNR=5.9
PD31   Pinedale Array     80.19  43  IAmb   IAmb   04 52 09.8
            comp=Z,2.9nm,0.9s
PDAR   Pinedale Array     80.19  43  P      P      04 52 08.3 +0.1
            comp=Z,2.0nm,0.8s,baz=338,slow=1.6,SNR=20
            comp=Z,2.0nm,0.8s
FURC   Furnace Creek,     80.22  51  P      P      04 52 08.9 +0.8
            baz=311
TPNV   Topopah Spring     80.28  50  P      P      04 52 09.4 +0.8
            baz=311,SNR=5.9
EDW2   Edwards Air Fo     80.54  53  P      P      04 52 10.4 +0.5
            baz=310
SHOC   Shoshone, Teco     80.94  51  P      P      04 52 12.8 +0.8
            baz=311
GSC    Goldstone, Bar     81.01  52  P      P      04 52 13.0 +0.6
            baz=311
ULM    Lac du Bonnet      81.04  30  P      P      04 52 11.5 -0.7
            comp=Z,3.8nm,0.7s,baz=336,slow=1.6,SNR=3.5
            comp=Z,3.8nm,0.7s
ULM    Lac du Bonnet      81.04  30  IAmb   IAmb   04 52 12.4
            comp=Z,3.9nm,0.8s
BFSC   Mount Baldy Ra     81.16  53  P      P      04 52 13.5 +0.2
            baz=311
SHPR   Sheep Range        81.23  50  IAmb   IAmb   04 52 15.7
            comp=Z,2.2nm,0.8s
TUQ    Turquoise Moun     81.46  51  P      P      04 52 15.4 +0.5
            baz=311
P17A   Butcher Ranch,     81.81  46  IAmb   IAmb   04 52 18.6
            comp=Z,4.2nm,0.8s
MTPU   Mount Pierson      81.96  47  IAmb   IAmb   04 52 20.3
            comp=Z,3.3nm,0.8s
RSSD   Black Hills        82.05  39  P      P      04 52 18.4 +0.6
            baz=317
GMRC   Granite Mounta     82.06  52  P      P      04 52 18.7 +0.7
            baz=312
PFO    Pinyon Flats O     82.33  53  P      P      04 52 19.5 +0.1
PFO                                  IAmb   IAmb   04 52 20.8
            comp=Z,5.5nm,1.1s
PFO    Pinyon Flats O     82.33  53  P      P      04 52 19.7 +0.4
            baz=311
TPFO   Pinon Flats        82.33  53  P      P      04 52 19.7 +0.3
            baz=311
BELC   Belle Mtn. Jos     82.36  53  P      P      04 52 19.9 +0.4
            baz=311
O20A   White River Ci     82.73  44  P      P      04 52 21.7 +0.4
            baz=315
IRM    Iron Mountain      82.79  52  P      P      04 52 22.5 +1.0
            baz=312
BC3    Big Chuckawall     82.93  52  P      P      04 52 23.1 +0.8
            baz=312
SWSC   Sam W. Stewart     83.18  53  P      P      04 52 24.4 +0.9
            baz=312
PDMCI  Parker Dam,Lak     83.31  51  P      P      04 52 24.8 +0.7
            baz=312
PV13   Radium Mtn., P     83.80  45  IAmb   IAmb   04 52 29.5
            comp=Z,7.3nm,1.4s
WUAZ   Wupatki            84.16  49  IAmb   IAmb   04 52 30.8
            comp=Z,2.8nm,0.8s
WUAZ   Wupatki            84.16  49  P      P      04 52 29.7 +1.1
            baz=314
Y14A   Wickenburg         84.25  51  IAmb   IAmb   04 52 30.8
            comp=Z,3.7nm,1.2s
ISCO   Idaho Springs      84.38  43  P      P      04 52 30.0 +0.2
            baz=316
113A   Mohawk Valley,     84.57  52  IAmb   IAmb   04 52 31.8
            comp=Z,1.9nm,0.7s
MVCO   Mesa Verde         84.65  46  P      P      04 52 31.3 +0.2
            baz=315
S22A   4UR Ranch, Cre     85.20  45  P      P      04 52 34.2 +0.3
            baz=316
SCHQ   Schefferville      85.34  13  P      P      04 52 34.4 +0.5
            comp=Z,3.4nm,0.9s,baz=22,slow=4.3,SNR=5.2
            comp=Z,3.4nm,0.9s
OGNE   Ogallala           85.39  40  P      P      04 52 34.6 +0.1
            baz=318
214A   Organ Pipe Nat     85.72  52  P      P      04 52 36.7 +0.5
            baz=313
ECSD   EROS Data Cent     85.84  35  P      P      04 52 36.5  0.0
            baz=322
SDCO   Great Sand Dun     85.93  44  P      P      04 52 37.6 +0.1
            baz=317
GLMI   Grayling           89.81  27  P      P      04 52 55.6 +0.4
            baz=330
MNTX   Cornudas Mount     90.38  48  P      P      04 52 58.4 +0.2
            baz=317
CCM    Cathedral Cave     92.82  35  P      P      04 53 09.2  0.0
            baz=325
TX32   Lajitas Array      93.12  48  IAmb   IAmb   04 53 12.4
            comp=Z,1.5nm,0.9s
TXAR   Lajitas Array      93.12  48  P      P      04 53 11.8 +0.9
            comp=Z,1.1nm,0.6s,baz=287,slow=3.2,SNR=18
            comp=Z,1.1nm,0.6s
TXAR   Lajitas Array      93.12  48  P      P      04 53 11.0 +0.1
MIAR   Mount Ida          94.57  39  P      P      04 53 17.5 +0.2
            baz=324
SDV    Santo Domingo     127.24  33  PKP    PKiKP  04 58 59.7 -0.4
            comp=Z,1.0nm,0.5s,baz=225,slow=1.4,SNR=3.8
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*IDC **13** 04:51:52.6±2.6, 14°.27N×91°.89W, h0^{km}, mb3.8/5, mbtmp3.8/7, ML3.8/2, MS3.0/4, Error ellipse: s-maj=59.1km s-min=42.8km az=22.0*

*UCR **13** 04:52:04.9±1.0, 14°.56N×92°.32W, h68^{km}±9^{km}, ML3.9, mb4.2(NEIC)*

*NEIC **13** 04:52:04.2±1.7, 14°.61N±0°.03×92°.39W±0°.06, h69^{km}±4^{km}, mb4.2/20, Md4.4/45(MEX), Error ellipse: s-maj=8.9km s-min=1.5km az=62.0*

*SNET **13** 04:52:04.8±1.1, 14°.56N×92°.32W, h68^{km}±9^{km}, ML4.2*

*MEX **13** 04:52:05.0±1.6, 14°.62N×92°.34W, h70^{km}±15^{km}, MD4.4*

*GCG **13** 04:52:09.3±0.8, 14°.77N×92°.03W, h50^{km}±247^{km}, MD4.4*

ISC 13 04:52:04.0±0.8**, 14°.61N**±0°.05×**92°.40W**±0°.04**, h68**^{km}±6^{km}**, n101,** σ1^{s}.**45**/125**, mb4.1**/10**, 1C, Near coast of Chiapas**

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Code   Station Name       Δ°    AZ°    Phase ID       Time      Res
                                     Op     ISC     h  m  s    ISC
THIG                       0.32  23         Pn     04 52 14.8 -0.3
THIG                                        Sn     04 52 23.0 -0.1
THIG                       0.32  23  i P    Pn     04 52 14.8 -0.3
THIG                                 eS     Sn     04 52 23.0 -0.1
PATR   El Naranjo          0.53  17  eP     Pn     04 52 16.1 -1.0
PATR                                 eS     Sn     04 52 25.9 -0.9
CHUJ   Union Juarez        0.56  30  eP     Pn     04 52 16.8 -0.7
CHUJ                                 eS     Sn     04 52 26.3 -1.0
PAVE   Pavencul            0.62  20  eP     Pn     04 52 17.6 -0.5
RTAL   Retalhuleu          0.68  97         Pn     04 52 18.2 -0.3
RTAL   Retalhuleu          0.68  97  eP     Pn     04 52 18.3 -0.3
RTAL                                 eS     Sn     04 52 29.6 +0.3
HUEH   Huehuetenango       1.11  51         Pn     04 52 24.7 +0.7
HUEH   Huehuetenango       1.11  51  i P    Pn     04 52 24.8 +0.7
HUEH                                 eS     Sn     04 52 41.5 +2.5
HUEH   Huehuetenango       1.11  51  i P    Pn     04 52 24.8 +0.7
HUEH                                 eS     Sn     04 52 41.5 +2.5
PCIG                       1.35 324         Pn     04 52 27.0 +0.2
PCIG                                        Sn     04 52 43.6 -0.5
PCIG                       1.35 324  eP     Pn     04 52 27.0 +0.2
PCIG                                 eS     Sn     04 52 43.6 -0.5
FUG    Fuego 3             1.51  96⇑eP     Pn     04 52 30.0 +0.7
FUG                                  eS     Sn     04 52 46.7 -1.5
CCIG   Comitan             1.68   8         Pn     04 52 32.5 +1.0
CCIG                                        Sn     04 52 51.5 -0.8
CCIG   Comitan             1.68   8  eP     Pn     04 52 32.5 +1.0
CCIG                                 i S    Sn     04 52 51.5 -0.8
PCG    Pacaya              1.75  97  eP     Pn     04 52 33.6 +1.2
PCG                                  eS     Sn     04 52 55.6 +1.7
NBG    Las Nubes           1.98  90  eS     Sn     04 52 54.0 -5.7
TGIG                       2.27 342         Pn     04 52 38.8 -0.5
TGIG                                        Sn     04 53 05.2 -1.0
TGIG                       2.27 342  eP     Pn     04 52 38.8 -0.5
TGIG                                 eS     Sn     04 53 05.2 -1.0
NUBE   Las Nubes           2.63 105  eP     Pn     04 52 44.7 +0.4
NUBE                                 eS     Sn     04 53 14.1 -1.1
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NUBE	Las Nubes	2.63	105	eP	Pn	04 52 44.7	+0.4
NUBE				eS	Sn	04 53 14.1	-1.1
MRL	Marmol	2.66	80	eP	Pn	04 52 45.9	+1.1
RTR	El Retiro	2.76	105	eP	Pn	04 52 46.2	+0.2
RTR	El Retiro	2.76	105	eP	Pn	04 52 46.2	+0.2
SBLS	San Blas	2.79	106	eP	Pn	04 52 46.8	+0.2
SBLS	San Blas	2.79	106	eP	Pn	04 52 46.8	+0.2
CEVE	Cerro Verde	2.80	106	eP	Pn	04 52 47.6	+0.9
CEVE				eS	Sn	04 53 20.3	+0.9
CEVE				IAML		04 53 30.6	
	comp=Z,1μm,0.4s						
CEVE	Cerro Verde	2.80	106	eP	Pn	04 52 47.6	+0.9
CEVE				eS	Sn	04 53 20.3	+0.9
CEVE				IAML		04 53 30.6	
	comp=Z,1μm,0.4s						
MTO3	Montecristo	2.95	94		Pn	04 52 47.9	-0.8
JAYA	Jayaque - finc	3.01	108	eP	Pn	04 52 49.4	-0.2
JAYA	Jayaque - finc	3.01	108	eP	Pn	04 52 49.4	-0.2
CEDA	San Andres	3.02	105	IAML		04 53 52.5	
	comp=Z,518nm,0.3s						
CEDA	San Andres	3.02	105	IAML		04 53 52.5	
	comp=Z,518nm,0.3s						
UXUV	UXUV	3.18	328	eP	Pn	04 52 52.5	+0.9
UXUV				i S	Sn	04 53 30.4	+2.1
SNET	Serv Nac Est T	3.20	106		Pn	04 52 52.9	+0.9
PETF	Flores	3.34	46		Pn	04 52 54.3	+0.4
LFRS	El Faro	3.38	106	eP	Pn	04 52 55.0	+0.5
LFRS	El Faro	3.38	106	eP	Pn	04 52 55.0	+0.5
SJTE	Alcalda de S	3.43	106	eP	Pn	04 52 55.2	0.0
SJTE	Alcalda de S	3.43	106	eP	Pn	04 52 55.2	0.0
CMIG	Matias Romero	3.44	316	Pn	Pn	04 52 55.5	+0.4
	comp=Z,8.3nm,0.3s,baz=162,slow=9.9,SNR=63						
CMIG				Sn	Sn	04 53 35.3	+0.5
	comp=Z,42nm,0.3s,baz=286,slow=19,SNR=9.5						
	comp=Z,21nm,0.3s						
CMIG	Matias Romero	3.44	316		Pn	04 52 55.3	+0.1
CMIG					Sn	04 53 37.0	+2.2
CMIG	Matias Romero	3.44	316	eP	Pn	04 52 55.3	+0.1
CMIG				i S	Sn	04 53 37.0	+2.2
COEG	Centro de Oper	3.55	106	eP	Pn	04 52 57.3	+0.6
COEG	Centro de Oper	3.55	106	eP	Pn	04 52 57.3	+0.6
HUIG	Huatulco	3.77	288		Pn	04 53 00.0	+0.4
HUIG					Sn	04 53 38.7	-4.0
HUIG	Huatulco	3.77	288	eP	Pn	04 53 00.0	+0.4
HUIG				eS	Sn	04 53 38.7	-4.0
COEB	Comit de Eme	3.91	106	eP	Pn	04 53 03.1	+1.4
COEB				eS	Sn	04 53 46.7	+0.3
COEB	Comit de Eme	3.91	106	eP	Pn	04 53 03.1	+1.4
COEB				eS	Sn	04 53 46.7	+0.3
PACA	Pacayal	4.11	106	eP	Pn	04 53 04.5	0.0
PACA	Pacayal	4.11	106	eP	Pn	04 53 04.5	0.0
SCIG	Sabancuy	4.49	15		Pn	04 53 09.2	-0.2
SCIG					Sn	04 53 57.0	-3.3
SCIG	Sabancuy	4.49	15	eP	Pn	04 53 09.2	-0.2
SCIG				i S	Sn	04 53 57.0	-3.3
NEUV	Arroyo Zacate	4.50	314	e	Pn	04 53 10.2	+0.5
NEUV				e		04 53 55.0	
PEIG	Puerto Escondi	4.79	287	e	Pn	04 53 13.9	+0.2
PEIG				i		04 54 01.1	
VHO	Vista Hermosa	4.84	301	e	Pn	04 53 17.8	+3.3
VHO				e		04 54 08.1	
TGUH	Tegucigalpa,Un	5.00	96	Pn	Pn	04 53 17.0	+0.4
YOIG	Yosondua	5.44	295	e	Pn	04 53 25.5	+2.7
YOIG				e		04 54 21.4	
TOIG	Toxpalan	5.67	308	e	Pn	04 53 27.7	+1.9
TOIG				i		04 54 29.0	
TXIG	Tlaxiaco	5.80	298	e	Pn	04 53 29.3	+1.6
TXIG				i		04 54 30.4	
CNGN	Cerro Negro	5.92	110	Pn	Pn	04 53 30.4	+1.1
TPIG	Tehuac#an	6.09	309	e	Pn	04 53 35.3	+3.8
TPIG				i		04 54 37.6	
FTIG	Fresnillo de T	6.41	302	e	Pn	04 53 39.3	+3.3
FTIG				i		04 54 44.6	
MATN	Matagalpa	6.50	104		Pn	04 53 37.6	+0.4
MGIG	Malinaltepec	6.54	294	e	Pn	04 53 39.9	+2.1
MGIG				e		04 54 46.0	
TLIG	Tlapa	6.62	297		Pn	04 53 39.2	+0.4
TLIG	Tlapa	6.62	297	e	Pn	04 53 40.7	+1.9
TLIG				i		04 54 45.1	
PPM	Popocatepetl	7.43	307	e	Pn	04 53 52.6	+2.4
PPM				i		04 55 11.0	
ORTG	Ortega, Santa	7.98	121	Pn	Pn	04 53 57.6	+0.2
RIMA	Rio Macho	9.63	119	Pn	Pn	04 54 19.4	-0.7
DWPF	Disney Wildern	16.86	35	Pn	Pn	04 55 54.8	-0.8
TXAR	Lajitas Array	17.98	326	P	Pn	04 56 12.3	+2.8
	comp=Z,0.1nm,0.3s,baz=153,slow=13,SNR=6.1						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	17.98	326	P	P	04 56 09.2	+0.1
250A	Grady	18.17	17	P	P	04 56 11.4	+0.3
250A				IAmb	IAmb	04 56 47.9	
	comp=Z,21nm,1.1s						
LRAL	Lakeview Retre	18.99	14	P	P	04 56 18.6	-1.5
MIAR	Mount Ida	19.88	357	P	P	04 56 30.3	+0.6
MIAR				IAmb	IAmb	04 56 35.0	
	comp=Z,7.5nm,0.8s						
X37A	Clayton	20.07	353	P	P	04 56 30.9	-1.0
X37A				IAmb	IAmb	04 57 00.6	
	comp=Z,6.0nm,0.8s						
UALR	University of	20.08	0	P	P	04 56 31.2	-0.7
UALR				IAmb	IAmb	04 56 57.1	
	comp=Z,12nm,0.8s						
X48A	Hartselle	20.34	13	P	P	04 56 33.2	-1.6
MNTX	Cornudas Mount	20.75	327	P	P	04 56 38.8	-0.5
W50A	Signal Mountai	21.47	16	P	P	04 56 46.4	-0.5
W50A				IAmb	IAmb	04 57 02.2	
	comp=Z,6.0nm,0.9s						
TKL	Tuckaleechee C	22.34	19	P	P	04 56 55.6	-0.7
	comp=Z,1.7nm,0.6s,baz=203,slow=7.7,SNR=5.0						
TKL				LR	LR	05 08 21.6	
	comp=Z,5.7nm,19.0s,baz=168,slow=44						
	comp=Z,1.7nm,0.6s						
TKL	Tuckaleechee C	22.34	19	IAmb	IAmb	04 57 13.9	
	comp=Z,6.5nm,1.1s						
MGMO	Mountain Grove	22.45	0	P	P	04 56 58.5	+1.0
MGMO				IAmb	IAmb	04 57 23.1	
	comp=Z,20nm,1.9s						
U49A	Red Boiling Sp	22.60	14	P	P	04 56 57.2	-1.8
121A	Cookes Peak, D	22.69	324	P	P	04 56 58.8	-1.5
SIUC	Southern Illin	23.18	6	P	P	04 57 03.1	-1.8
SIUC				IAmb	IAmb	04 58 00.8	
	comp=Z,8.8nm,0.6s						
ANMO	Albuquerque	23.88	330	P	P	04 57 13.1	+1.5
	comp=Z,0.8nm,0.5s,baz=138,slow=14,SNR=4.2						
	comp=Z,0.8nm,0.5s						
SADO	Sadowa	32.10	18	LR	LR	05 12 58.5	
	comp=Z,36nm,18.4s,baz=51,slow=39						
NVAR	Mina Array Bea	32.96	321	P	P	04 58 35.0	+2.4
	comp=Z,1.7nm,0.6s,baz=130,slow=8.4,SNR=20						
	comp=Z,1.7nm,0.6s						
NVAR	Mina Array Bea	32.96	321	P	P	04 58 33.1	+0.6
F10A	Beach Ranch, E	37.59	331	P	P	04 59 12.3	+0.1
MDP	Montagnes des	40.23	99	LR	LR	05 16 29.5	
	comp=Z,26nm,19.2s,baz=351,slow=37						
SCHQ	Schefferville	44.79	21	LR	LR	05 19 31.0	
	comp=Z,35nm,18.8s,baz=146,slow=37						
YKA	Yellowknife Ar	50.35	347	P	P	05 00 52.4	-1.4
	comp=Z,0.8nm,0.5s,baz=151,slow=7.3,SNR=24						
YKA				PcP	PcP	05 02 10.8	-0.7
	comp=Z,0.4nm,0.6s,baz=148,slow=3.9,SNR=7.4						
	comp=Z,0.8nm,0.5s						
IL31		62.13	337	P	P	05 02 17.8	+0.1
IL31				IAmb	IAmb	05 02 18.9	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	62.13	337	P	P	05 02 17.9	+0.2
	comp=Z,1.0nm,0.6s,baz=128,slow=5.9,SNR=14						
	comp=Z,1.0nm,0.6s						
RND	Reindeer	62.32	335	P	P	05 02 18.5	-0.5
BMAR	Burnt Mountain	62.59	340	P	P	05 02 20.1	-0.8
I23K	Minto, Yukon-K	63.24	337	P	P	05 02 24.1	-0.9
I23K				IAmb	IAmb	05 02 26.1	
	comp=Z,2.8nm,0.7s						
CMAR	Chiang Mai Arr	145.29	341	PKPbc	PKPbc	05 11 34.8	0.0
	comp=Z,4.8nm,0.2s,baz=339,slow=3.7,SNR=12						

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*ASRS **13** 05:16:37.0±0.2, 51°N±1°×8°9E±°, h10^{km}, MLh3.7/16, Error ellipse: s-maj=3.4km s-min=1.9km az=125.0, confirmed*

*NNC **13** 05:16:43.8±2.5, 51°.27N×88°.72E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=21.5km s-min=11.0km az=99.0*

ISC 13 05:16:37.6±1.2, **51°.22N**±0°.03×**89°.32E**±0°.03, **h2**^{km}±11^{km}, **n24**, σ**1^{s}.73**/58, **9C-9D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULGR	Ulagan, Altay	1.04	236	⇓Pg	Pg	05 16 58.3	+0.7
ULGR				Sg	Sg	05 17 11.1	0.0
CUR	Chagan-Uzun	1.28	209	⇓Pg	Pn	05 17 01.0	-1.5
CUR				Sg	Sb	05 17 16.8	-2.5
AKAR	Aktash	1.40	231	Pg	Pn	05 17 03.9	-0.4
AKAR				Sg	Sb	05 17 21.3	-1.6
ARTR	Artybash	1.40	295	⇑Pg	Pn	05 17 04.0	-0.2
ARTR				Sg	Sg	05 17 22.7	+0.1
CHBI	Chibit, Altay	1.47	233	Pg	Pb	05 17 06.1	+0.5
CHBI				Sg	Sb	05 17 24.9	+0.3
TASR	Tashtagol	1.79	331	Pn	Pb	05 17 10.5	-0.5
TASR				Pg	Pg	05 17 12.3	+0.5
TASR				Sg	Sg	05 17 36.6	+1.7
DGZ	Jazzator, Alta	1.94	219	Pn	Pn	05 17 10.1	-1.6
DGZ				Pg	Pb	05 17 13.8	+0.1
DGZ				Sg	Sg	05 17 41.0	+1.2
DJO	Djoy, Khakassi	1.96	36	Pn	Pn	05 17 10.8	-1.0
DJO				Pg	Pb	05 17 14.5	+0.6
DJO				Sg	Sb	05 17 39.2	+0.3
DJOS	Djoyskaya Sosn	2.04	38	⇓Pn	Pb	05 17 14.8	-0.5
DJOS				Sg	Sg	05 17 43.1	+0.1
CERR	Cheremushki	2.09	37	Pn	Pn	05 17 12.1	-1.5
CERR				Pg	Pb	05 17 16.3	+0.1
CERR				Sg	Sg	05 17 45.2	+0.6
LUZB	Luzhba, Kemero	2.46	354	Pg	Pb	05 17 21.8	-0.8
LUZB				Sg	Sg	05 17 55.0	-1.6
MALIN	Malinovka, Kuz	2.54	331	Pg	Pg	05 17 25.7	-0.6
MALIN				Sg	Sg	05 17 59.9	+0.8
ELT	Eltsovka	2.79	318	Pn	Pn	05 17 24.9	+1.7
ELT				Pg	Pg	05 17 29.9	-1.1
ELT				Sg	Sg	05 18 05.7	-1.5
ABNR	Abakan	2.83	26	Pg	Pb	05 17 28.4	-0.4
ABNR				Sg	Sg	05 18 09.6	+1.3
UKR	Ust'-Kan	2.88	266	Pg	Pb	05 17 31.1	+1.4
UKR				S	Sn	05 17 58.3	-1.5
UKR				Sg	Sg	05 18 11.0	+1.0
ERNS	Erzin	3.83	102	Pg	Pb	05 17 43.6	-2.2
ERNS				Sg	Sb	05 18 33.0	+0.5
ZAA0	Zalesovo Array	3.88	317	⇓Pn	Pn	05 17 40.0	+1.9
	0.2nm,0.2s						
ZAA0				⇓Pg	Pg	05 17 50.1	-1.7
	1.6nm,0.5s						
ZAA0				⇑Lg	Lg	05 18 39.7	
	5.0nm,0.5s						
SALR	Pechorkino, Sa	3.89	327	Pn	Pn	05 17 36.0	-2.3
SALR				Pg	Pg	05 17 49.8	-2.2
SALR				S	Sn	05 18 26.5	+2.1
SALR				Sg	Sg	05 18 44.1	+1.7
BRCR	Berchikul'	4.47	353	Pn	Pn	05 17 47.8	+1.5
BRCR				Pg	Pb	05 17 56.6	-0.2
BRCR				Sg	Sg	05 18 58.9	-2.2
MINR	Mina	4.72	37	Pn	Pn	05 17 51.0	+1.3
MINR				Pg	Pb	05 18 05.0	+4.0
MINR				Sg	Sg	05 19 11.7	+2.6
MK31	Makanchi Array	6.40	229	Pn	Pn	05 18 15.2	+2.4
	4.1nm,0.6s,baz=52,slow=12,SNR=36						
MK31				⇑Sn	Sn	05 19 28.3	+1.9
	1.9nm,0.4s						
MK31				⇓Lg	Lg	05 19 59.9	
	8.9nm,0.6s,baz=40,slow=29,SNR=8.0						
MAKZ	Makanchi	6.54	230	⇓Pn	Pn	05 18 16.6	+1.9
	1.3nm,0.5s						
MAKZ				⇑Sn	Sn	05 19 34.0	+4.1
	2.2nm,0.5s						
MAKZ				⇓Lg	Lg	05 20 01.6	
	7.3nm,0.6s						
KURK	Kurchatov	6.78	270	⇑Pn	Pn	05 18 19.9	+1.9
	2.4nm,0.6s						
KURK				⇑Sn	Sn	05 19 32.9	-2.7
	3.0nm,0.5s						
KURK				⇑Lg	Lg	05 20 11.7	
	19nm,0.8s						
KURBB	Kurchatov Arra	6.85	269	⇑Pn	Pn	05 18 20.9	+2.0
	2.6nm,0.3s						
KURBB				⇓Sn	Sn	05 19 33.6	-3.8
	8.5nm,0.4s						
KURBB				⇑Lg	Lg	05 20 11.5	
	51nm,0.8s						

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*IDC **13** 05:45:49.6±1.7, 9°.23N×126°.28E, h0^{km}, mb4.0/7, mbtmp4.0/7, MS2.5/1, Error ellipse: s-maj=210.6km s-min=19.0km az=67.0*

*MAN **13** 05:45:56.1, 9°.13N×126°.24E, h23^{km}, mb4.5, ML3.3, MS3.1, Hypocentre not reviewed by the ISC*

ISC 13 05:45:56.6±0.9, **9°.21N**±0°.05×**126°.38E**±0°.10, **h54**^{km}, **n20**, σ**0^{s}.95**/17, **mb3.9**/7, **2C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	General Luna,	0.62	337	⇓eP	Pn	05 46 09.5	-0.1
BIPH	Bislig	1.01	181	⇑iP	Pn	05 46 13.5	-1.1
BIPH				i S	Sn	05 46 26.7	-1.3
SCPH	Surigao	1.05	303	⇓eP	Pn	05 46 13.5	-1.5
SCPH				eS	Sn	05 46 28.2	-0.5
BUKP	Musuan	1.85	225	⇓eP	Pn	05 46 25.4	-0.6
BUKP				eS	Sn	05 46 49.5	+1.2
DAV	Davao City (W)	2.26	200	LR	LR	05 47 17.0	
	comp=Z,89nm,18.2s,baz=334,slow=39						
KCP	Kidapawan	2.53	210	⇑iP	Pn	05 46 35.2	-0.1
KCP				i S	Sn	05 47 04.2	-0.8
PAGZ	Pagadian	3.25	246	⇓eP	Pn	05 46 45.1	0.0
WRA	Warramunga Arr	30.01	165	P	P	05 51 59.9	-0.5
	0.5nm,0.7s,baz=343,slow=8.0,SNR=7.1						
	0.5nm,0.7s						
ASAR	Alice Springs	33.49	167	P	P	05 52 30.9	-0.1
	0.3nm,0.3s,baz=350,slow=6.9,SNR=6.0						
	0.3nm,0.3s						
H11S3	WAKE ISLAND Hy	40.13	72	T	T	06 36 21.2	
	baz=262,slow=74,SNR=106						
H11S1	WAKE ISLAND Hy	40.15	72	T	T	06 36 22.0	
	baz=262,slow=74,SNR=96						
H11S2	WAKE ISLAND Hy	40.15	72	T	T	06 36 22.2	
	baz=262,slow=74,SNR=106						
H11N1	WAKE ISLAND Hy	40.50	70	T	T	06 36 56.2	
	baz=266,slow=75,SNR=29						
H11N2	WAKE ISLAND Hy	40.51	70	T	T	06 36 58.5	
	baz=266,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	40.52	70	T	T	06 36 58.6	
	baz=266,slow=75,SNR=32						
STKA	Stephens Creek	43.37	161	P	P	05 53 55.4	+1.6
	1.1nm,0.5s,baz=345,slow=12,SNR=3.8						
	1.1nm,0.5s						
MKAR	Makanchi Array	52.93	323	P	P	05 55 07.6	+0.1
	0.4nm,0.5s,baz=130,slow=7.8,SNR=5.6						
	0.4nm,0.5s						
KURBB	Kurchatov Arra	57.00	326	P	P	05 55 36.1	-0.6
	0.6nm,0.4s,baz=127,slow=7.1,SNR=5.9						
	0.6nm,0.4s						
ARCES	ARCESS Array B	85.22	340	P	P	05 58 26.6	-0.4
	4.0nm,1.0s,baz=88,slow=5.9,SNR=1.6						
	4.0nm,1.0s						
FINES	FINESS Array B	86.87	332	P	P	05 58 36.4	+1.1
	4.2nm,1.0s,baz=74,slow=6.9,SNR=5.3						
	4.2nm,1.0s						

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*SNET **13** 05:49:46.9±1.1, 12°.96N×89°.12W, h55^{km}±12^{km}, ML3.5*

*INET **13** 05:49:47.3±0.6, 12°.94N×89°.12W, h48^{km}±7^{km}, MW3.2*

ISC 13 05:49:47.3±1.9, **12°.92N**±0°.10×**89°.13W**±0°.05, **h43**^{km}±34^{km}, **n33**, σ**0^{s}.54**/53, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.60	342	eP	Pn	05 49 59.3	-0.2
LALI				IAML		05 50 11.4	
	comp=Z,1μm,0.3s						
LALI	Alcalda de L	0.60	342	eP	Pn	05 49 59.3	-0.2
LALI				eS	Sn	05 50 08.1	-0.1
SJTE	Alcalda de S	0.71	10	i P	Pn	05 50 00.4	-0.6
LFRS	El Faro	0.71	6	eP	Pn	05 50 00.5	-0.5
COEG	Centro de Oper	0.74	19	eP	Pn	05 50 00.7	-0.8
COEG				IAML		05 50 17.5	
	comp=Z,654nm,0.2s						
SNET	Serv Nac Est T	0.77	353	eP	Pn	05 50 01.6	-0.4
SNET	Serv Nac Est T	0.77	353	eP	Pn	05 50 01.4	-0.5
SNET				eS	Sn	05 50 12.5	+0.1
JAYA	Jayaque - finc	0.80	337	eP	Pn	05 50 01.8	-0.5
JAYA				eS	Sn	05 50 13.5	+0.4
UEES	Universidad Ev	0.80	353	eP	Pn	05 50 01.1	-1.2
LBRS	Las Brisas	0.82	6	eP	Pn	05 50 02.4	-0.2
COEB	Comit de Eme	0.82	45	eP	Pn	05 50 02.4	-0.2
COEB				eS	Sn	05 50 14.3	+0.6
COEB				IAML		05 50 16.5	
	comp=Z,2μm,0.3s						
COEB	Comit de Eme	0.82	45	eP	Pn	05 50 02.2	-0.4
COEB				eS	Sn	05 50 14.3	+0.6
BOQS	Boqueron	0.83	350	eP	Pn	05 50 02.5	-0.3
BOQS				eS	Sn	05 50 14.4	+0.5
LFU	La Fuente	0.83	1	eP	Pn	05 50 02.4	-0.3
SCLA	Alcaldia de Sa	0.88	27	eP	Pn	05 50 03.0	-0.3
SCLA				eS	Sn	05 50 16.1	+1.2
PQSS	Presa 15 de Se	0.90	38	eP	Pn	05 50 03.4	-0.1
CEDA	San Andres	0.92	344	eP	Pn	05 50 03.7	-0.2
CEDA				eS	Sn	05 50 16.3	+0.4
CEDA				IAML		05 50 22.2	
	comp=Z,2μm,0.2s						
CEDA	San Andres	0.92	344	eP	Pn	05 50 03.6	-0.3
CEDA				eS	Sn	05 50 16.3	+0.4
JUCU	Jucuar¡n	0.93	69	eP	Pn	05 50 03.2	-0.7
JUCU				eS	Sn	05 50 16.6	+0.4
LCY	Lacayo	0.96	58	eP	Pn	05 50 04.3	-0.1
CEVE	Cerro Verde	1.02	332	eP	Pn	05 50 05.4	-0.1
CEVE				eS	Sn	05 50 19.5	+0.6
CEVE				IAML		05 50 25.1	
	comp=Z,1μm,0.4s						
SBLS	San Blas	1.03	333	eP	Pn	05 50 05.4	-0.2
SNJE	San Jose	1.05	334	eP	Pn	05 50 05.7	-0.1
NUBE	Las Nubes	1.17	327	eP	Pn	05 50 06.8	-0.5
NUBE				eS	Sn	05 50 22.2	+0.1
CAHU	Cacacuatique	1.24	46	eP	Pn	05 50 08.2	-0.2
FAGO	Alcalda de S	1.27	52	eP	Pn	05 50 07.5	-1.0
FAGO				eS	Sn	05 50 24.5	+0.2
FAGO	Alcalda de S	1.27	52	eP	Pn	05 50 07.5	-1.0
FAGO				eS	Sn	05 50 24.0	-0.4
LCND	La Caada	1.27	72	eP	Pn	05 50 08.4	-0.3
LCND				eS	Sn	05 50 25.1	+0.5
LCND				eS	Sn	05 50 25.6	+1.1
SLOZ	Alcaldia de Sa	1.27	330	eP	Pn	05 50 08.3	-0.4
SLOZ				eS	Sn	05 50 25.6	+1.0
CNCH	Conchagua	1.32	74	eP	Pn	05 50 09.0	-0.4
CNCH				eS	Sn	05 50 26.5	+0.7
MTO3	Montecristo	1.49	351	i P	Pn	05 50 11.7	-0.2
MTO3				eS	Sn	05 50 30.1	-0.2
MTO3	Montecristo	1.49	351	eP	Pn	05 50 11.7	-0.2
MTO3				eS	Sn	05 50 30.6	+0.3
COPN	Copaltepe	2.59	106	eP	Pn	05 50 26.4	-0.3

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*IDC **13** 06:12:39.0±2.9, 3°.85N×92°.59E, h0^{km}, mb3.5/4, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=76.3km s-min=27.9km az=51.0*

ISC 13 06:12:45.4±2.0, **4°.0N**±0°.2×**92°.8E**±0°.2, **h35**^{km}, **n6**, σ**1^{s}.35**/7, **mb3.5**/4, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.21	101	Pn	Pn	06 14 16.5	+1.7
	1.7nm,0.3s,baz=321,slow=12,SNR=5.1						
PSI				Sn	Sn	06 15 23.8	-1.0
	0.9nm,0.3s,baz=12,slow=11,SNR=2.1						
	3.2nm,0.3s						
CMAR	Chiang Mai Arr	15.54	22	Pn	Pn	06 16 20.9	-1.1
	1.1nm,0.3s,baz=215,slow=14,SNR=5.6						
MKAR	Makanchi Array	43.56	350	P	P	06 20 45.6	-0.4
	0.3nm,0.7s,baz=182,slow=10,SNR=2.2						
	0.3nm,0.7s						
SONM	Songino Array	45.17	13	P	P	06 20 59.8	+0.9
	0.3nm,0.3s,baz=189,slow=7.2,SNR=1.9						
	0.3nm,0.3s						
WRA	Warramunga Arr	47.24	122	P	P	06 21 14.3	-1.2
	1.4nm,1.2s,baz=298,slow=9.1,SNR=2.7						
	1.4nm,1.2s						
KURBB	Kurchatov Arra	47.96	348	P	P	06 21 20.8	+0.2
	0.2nm,0.5s,baz=159,slow=8.0,SNR=1.2						
	0.2nm,0.5s						

DJA 13 06:26:46.2±0.7, **0°S**±2°×**12°4E**±°, **h21**^{km}±6^{km}, **M4.0**/13, **mb4.7**/2, **MLv3.7**/13, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.92	327	P	Pb	06 27 02.8	-0.6
KMSI				S	Sb	06 27 15.3	+0.1
LUWI	Luwuk	1.90	244	P	Pn	06 27 17.9	+0.5
LUWI				S	Sb	06 27 43.7	+0.2
SANI	Sanana	2.38	141	P	Pn	06 27 20.5	-3.5
SANI				S	Sb	06 27 55.6	-1.6
MRSI	Marisa	2.63	285	P	Pn	06 27 26.4	-1.0
MRSI				S	Sn	06 28 00.5	+1.8
APSI	Ampana	2.92	256	P	Pn	06 27 32.5	+1.1
APSI				S	Sn	06 28 08.0	+2.1
TNTI	Ternate	3.04	72	P	Pn	06 27 33.8	+0.7
LBMI	Labuha	3.05	98	P	Pn	06 27 35.4	+2.1
LBMI				S	Sn	06 28 07.7	-1.5
SGSI	Sangihe	4.00	15	P	Pn	06 27 48.0	+1.7
MPSI	Mapaga	4.61	277	P	Pn	06 27 55.0	+0.3
TTSI	Tana Toraja	5.45	239	S	Sn	06 29 07.0	-1.3

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*IDC **13** 06:50:11.6±3.2, 53°.81N×88°.30E, h0^{km}, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=28.6km s-min=18.6km az=56.0*

*NNC **13** 06:50:11.6±3.0, 53°.45N×88°.31E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=25.7km s-min=13.4km az=65.0, Suspected Mining explosion.*

ISC 13 06:50:09.0±4.8, **53°.7N**±0°.1×**88°.7E**±0°.3, **h0**^{km}, **n8**, σ**2^{s}.87**/10, **4C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.31	279	i		07 03 12.8	
	0.2nm,0.7s,baz=93,slow=332,SNR=3.4						
ZAA0	Zalesovo Array	2.31	279	⇓Pn	Pn	06 50 48.4	+0.2
	1.5nm,0.7s						
ZAA0				⇑Sn	Sn	06 51 16.4	-0.8
	3.0nm,0.5s						
ZALV	Zalesovo Beam	2.31	279	Pn	Pn	06 50 48.4	+0.2
	3.2nm,0.3s,baz=95,slow=10,SNR=23						
ZALV				Lg	Lg	06 51 16.5	
	4.8nm,0.3s,baz=89,slow=24,SNR=14						
	6.5nm,0.4s						
KURK	Kurchatov	6.84	249	⇑Pn	Pn	06 51 50.4	-0.1
	2.5nm,1.0s						
KURK				⇓Lg	Lg	06 53 40.4	
	2.1nm,0.6s						
KURBB	Kurchatov Arra	6.94	248	Pn	Pn	06 51 53.1	+1.3
	0.3nm,0.3s,baz=61,slow=14,SNR=15						
KURBB				Lg	Lg	06 53 46.0	
	baz=59,slow=30,SNR=5.3						
	1.5nm,0.3s						
KURBB	Kurchatov Arra	6.94	248	⇓Pn	Pn	06 51 52.4	+0.6
	0.8nm,0.5s						
KURBB				⇑Lg	Lg	06 53 47.4	
	3.1nm,0.7s						
MK31	Makanchi Array	7.98	213	⇓Pn	Pn	06 52 02.7	-3.6
	0.2nm,0.5s,baz=31,slow=12,SNR=5.1						
MK31				⇑Sn	Sn	06 53 33.1	-4.1
	0.6nm,0.6s						
MK31				⇓Lg	Lg	06 54 16.2	
	1.4nm,0.8s,baz=290,slow=28,SNR=4.2						
MKAR	Makanchi Array	7.98	213	Pn	Pn	06 52 09.4	+3.1
	0.2nm,0.3s,baz=28,slow=14,SNR=6.0						
MKAR				Sn	Sn	06 53 41.2	+4.0
	0.2nm,0.3s,baz=35,slow=28,SNR=4.3						
	0.3nm,0.4s						

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*JMA **13** 06:51:41.1±0.1, 24°N±2°×123°.0E±0°.6, h50^{km}±1^{km}, MV2.7/9, NW OFF ISHIGAKIJIMA IS*

*TAP **13** 06:51:41.6, 24°.33N×122°.88E, h43^{km}±1^{km}, ML2.8, D*

ISC 13 06:51:41.1±1.3, **24°.35N**±0°.08×**122°.95E**±0°.03, **h48**^{km}±7^{km}, **n26**, σ**0^{s}.76**/46, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.10	356	i P	Pn	06 51 48.7	0.0
JYNG				S	Sn	06 51 54.0	+0.1
YOJ	Yonaguni jima	0.12	26	P	Pn	06 51 48.7	-0.1
	baz=40						
YOJ				S	Sn	06 51 54.4	+0.2
	baz=40						
YOJ	Yonaguni jima	0.12	26	P	Pn	06 51 48.8	+0.1
YOJ				S	Sn	06 51 54.2	+0.1
IRIF	Iriomote-Funau	0.71	91	P	Pn	06 51 54.6	-0.2

IRIF				S	Sn	06 52 04.5	-0.3
HATJ	Hateruma jima	0.83	110	P	Pn	06 51 56.7	+0.2
HATJ				S	Sn	06 52 08.8	+1.1
JKRS	Kuro-shima	0.97	96	P	Pn	06 51 58.7	+0.4
JKRS				S	Sn	06 52 11.4	+0.3
TWC	Suao	1.04	285	eP	Pn	06 51 58.6	-0.7
	baz=286						
TWC				eS	Sn	06 52 10.7	-2.0
	baz=286						
EWUT	Wuta	1.07	275	eP	Pn	06 51 59.6	-0.1
	baz=276						
EWUT				eS	Sn	06 52 12.2	-1.4
	baz=276						
JIJ	Ishigaki jima	1.09	89	P	Pn	06 51 59.6	-0.3
JIJ				S	Sn	06 52 12.8	-1.0
TWB1	Santiao Chiao	1.09	307	eP	Pn	06 52 00.1	+0.1
	baz=310						
ENA	Nanau	1.11	274	eP	Pn	06 52 00.1	-0.1
	baz=275						
NDS	Dongshan	1.16	284	P	Pn	06 52 01.0	+0.1
	baz=285						
NDS				S	Sn	06 52 15.0	-0.7
	baz=285						
TIPB	Shuangxi	1.20	301	P	Pn	06 52 01.5	+0.1
	baz=303						
TIPB				S	Sn	06 52 16.0	-0.6
	baz=303						
SXI1	Grass Mountain	1.23	307	P	Pn	06 52 02.4	+0.5
	baz=309						
SXI1				eS	Sn	06 52 17.4	-0.1
	baz=309						
TWE	Neicheng	1.23	288	eP	Pn	06 52 02.1	+0.3
	baz=289						
NACB	Ninganchiao	1.25	262	P	Pn	06 52 02.1	-0.1
	baz=262						
NACB				eS	Sn	06 52 17.8	-0.1
	baz=262						
JISG	Ishigakijimahi	1.26	79	S	Sn	06 52 17.4	-0.7
NWF	Wu-fen Shan	1.28	304	eP	Pn	06 52 02.8	+0.1
	baz=306						
NWF				eS	Sn	06 52 18.2	-0.6
	baz=306						
WFSB	Wu-fen Shan	1.28	304	eP	Pn	06 52 03.1	+0.5
	baz=306						
FUSB	Fushanzhiwuyua	1.31	288	eP	Pn	06 52 03.6	+0.6
	baz=289						
FUSB				eS	Sn	06 52 18.8	-0.6
	baz=289						
LATG	Datong	1.31	278	eP	Pn	06 52 04.2	+1.1
	baz=279						
LATG				eS	Sn	06 52 20.0	+0.5
	baz=279						
ETM	Tongmen	1.39	254	eP	Pn	06 52 04.0	-0.1
	baz=253						
ETM				eS	Sn	06 52 20.1	-1.2
	baz=253						
NWLT	Wulai	1.39	288	eP	Pn	06 52 05.3	+1.2
	baz=289						
NWLT				eS	Sn	06 52 20.6	-0.6
	baz=289						
NNSB	Datong	1.43	273	eP	Pn	06 52 05.3	+0.5
	baz=274						
YHNB	Yeheng	1.47	283	eP	Pn	06 52 07.0	+1.8
	baz=283						
YHNB				eS	Sn	06 52 24.3	+1.0
	baz=283						
NSK	Sanguang	1.49	283	eP	Pn	06 52 07.0	+1.6
	baz=283						
NSK				eS	Sn	06 52 24.8	+1.0
	baz=283						

*BJI **13** 06:59:29.0±0.0, 30°.70N×66°.50E, h10^{km}, mb4.9/70, mB5.1/43, Ms5.7/70, Ms7 5.5/66*

*IDC **13** 06:59:29.6±0.4, 30°.66N×66°.48E, h0^{km}, mb4.9/47, mbtmp4.9/49, ML4.7/2, Error ellipse: s-maj=10.3km s-min=9.1km az=164.0*

*MOS **13** 06:59:31.3±1.2, 30°.80N×66°.62E, h18^{km}, mb5.3/63, MS5.1/15, Error ellipse: s-maj=5.1km s-min=3.1km az=81.2*

*NEIC **13** 06:59:32.0±1.8, 30°.66N±0°.07×66°.42E±0°.08, h10^{km}±1^{km}, mb5.3/147, Mwb5.2/32, Error ellipse: s-maj=12.7km s-min=10.0km az=134.0*

*NEIC **13** 06:59:32.1, 30°.68N×66°.42E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.37; $M_{\theta\theta}$-8.31; $M_{\phi\phi}$5.94; $M_{r\theta}$-2.52; $M_{\theta\phi}$-3.13; $M_{\phi r}$1.48; Fault plane solution: $M_0$8.56000×10^{16} NP1:ϕ_s34.15000°, δ66.43000°, λ8.72000°. NP2:ϕ_s300.64000°, δ82.01000°, λ156.18000°. Principal axes: T 7.4062, Plg22.0000°, Azm255.0000°; N 1.9689, Plg65.0000°, Azm103.0000°; P -9.3751, Plg11.0000°, Azm349.0000°;*

ISC 13 06:59:31.8±0.5**, 30°.63N**±0°.03×**66°.47E**±0°.03**, h13**^{km}±3^{km}**, h13**^{km}**:pP-P, n867, σ1.55**/946**, mb5.2**/208**, MS5.4**/50**, 100C-93D, Fault plane solution: NP1:**ϕ_s31.36647°, δ67.65710°, λ-4.02980°. **NP2:**ϕ_s122.90056°, δ86.27318°, λ-157.60719°. **Principal axes:** T Plg12.8761°, Azm255.0179°**;** N Plg67.3149°, Azm131.8655°**;** P Plg18.3468°, Azm349.3654°**; Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	4.46	28	Pn	Pn	07 00 40.5	+1.2
KBL				Sn	Sn	07 01 32.0	+0.8
KBL	Kabul	4.46	28	P	Pn	07 00 40.9	+1.5
KBL	Kabul	4.46	28	P	Pn	07 00 41.1	+1.7
	SNR=437						
THW	Thamme Wali	4.98	63	P	Pn	07 00 45.5	-0.9
HRA	Herat	5.17	317	Pn	Pn	07 00 50.2	+1.1
SARP	Sargodha	5.46	75	P	Pn	07 00 51.4	-1.5
CEP	Cherat	5.60	54	P	Pn	07 00 54.5	-0.4
CHCP	Chirah Chowk	6.50	61	P	Pn	07 01 06.5	-0.7
JMU	Jammu	7.48	72	eP	Pn	07 01 20.0	-0.6
THN	Thein Dam	8.09	75	eP	Pn	07 01 28.7	-0.3
AJM	Ajmer	8.29	118	ex	Pn	07 01 28.0	-3.8
AJM				ex	x	07 01 34.1	
AJM				i x	x	07 02 58.0	
CHGR	Chuyangaron	8.30	15	Pn	Pn	07 01 33.1	+1.1
CHGR	Chuyangaron	8.30	15	P	Pn	07 01 33.1	+1.1
KHET	Khetri	8.54	105	eP	Pn	07 01 33.8	-1.4
BHK	Bhakra	8.57	82	ePN	Pn	07 01 33.8	-1.8
BHK				eP	Pn	07 01 34.1	-1.5
BHK				eS	Sn	07 03 07.6	-4.6
GAR	Garm	8.93	20	Pn	Pn	07 01 40.7	+0.2
SMLA	Simla	9.21	84	eP	Pn	07 01 43.3	-0.9
NDI	New Delhi	9.55	99	eP	Pn	07 01 47.0	-2.0
NDI				eS	Sn	07 03 29.0	-7.3
DRK	Karamyk	9.85	25		Pn	07 01 53.4	+0.1
DDI	Dehra Dun	10.00	89	eP	Pn	07 01 56.0	+0.7
GEYT	Alibeck	10.03	319	Pn	Pn	07 01 56.4	+0.7
	baz=144,slow=17						
GYA0	ALIBECK ARRAY	10.03	319	P	Pn	07 01 56.2	+0.5
GYA0B	ALIBECK ARRAY	10.03	319		Pn	07 01 56.5	+0.8
BTK	Batken	10.05	19		Pn	07 01 56.4	+0.5
BTK	Batken	10.05	19	P	Pn	07 01 56.4	+0.5
BANOM	Banah	10.12	245	P	Pn	07 01 55.9	-1.0
	SNR=15						
BANOM				P	Pn	07 01 55.9	-1.0
	SNR=15						
BANOM	Banah	10.12	245	i P	Pn	07 01 55.9	-1.0
	SNR=15						
BANOM				S	Sn	07 03 34.0	-16
WSAR	Wadi Sarin	10.15	225	Pn	Pn	07 01 56.0	-1.3
	7.2nm,0.3s,baz=89,slow=10.0,SNR=53						
	50nm,0.6s						
WSAR	Wadi Sarin	10.15	225	P	Pn	07 01 55.2	-2.2
	SNR=38						
SHME	Shamm	10.18	246	P	Pn	07 01 57.3	-0.4
	SNR=17						
SHME				P	Pn	07 01 57.3	-0.4
	SNR=17						
SHME	Shamm	10.18	246	i P	Pn	07 01 57.2	-0.4
	SNR=17						
BIDO	Bidbid	10.27	228	P	Pn	07 01 57.4	-1.5
	SNR=23						
WBK	Wadi Bani Khal	10.43	222	P	Pn	07 01 59.3	-1.8
	SNR=37						
MASF	Masafi	10.51	243	P	Pn	07 02 00.2	-2.0
	SNR=36						
MASF				P	Pn	07 02 00.2	-2.0
	SNR=36						
MSFE	Esma-Masafi	10.52	243	i P	Pn	07 02 02.0	-0.4
	SNR=25						
SMDO	Samad	10.65	227	P	Pn	07 02 03.3	-0.9
	SNR=74						
SMDO				P	Pn	07 02 03.3	-0.9
	SNR=74						
SMDO				P	Pn	07 02 03.3	-0.9
	SNR=74						
UOSS	Minazif	10.71	241	Pn	Pn	07 02 02.8	-2.2
UOSS	Minazif	10.71	241	P	Pn	07 02 03.2	-1.7
UOSS				P	Pn	07 02 03.2	-1.7
UOSS	Minazif	10.71	241	i P	Pn	07 02 01.7	-3.2
	SNR=40						
HOQ	Hoqain	10.76	231	P	Pn	07 02 04.4	-1.3
HOQ				P	Pn	07 02 04.4	-1.3
HOQ				P	Pn	07 02 04.4	-1.3
UMQ	Umm Al-Quwin	10.81	245	i P	Pn	07 02 05.3	-1.1
	SNR=11						
HATD	Hatta, Dubai	10.83	240	P	Pn	07 02 04.5	-2.1
HATD				P	Pn	07 02 04.5	-2.1
HATD	Hatta, Dubai	10.83	240	i P	Pn	07 02 03.9	-2.7
	SNR=20						
TAS	Tashkent	10.91	11	Pn	Pn	07 02 08.8	+1.1
TAS	Tashkent	10.91	11	P	Pn	07 02 08.8	+1.1
SOHO	SOHO	10.95	236	P	Pn	07 02 05.7	-2.4
SOHO				P	Pn	07 02 05.7	-2.4
SOHO	SOHO	10.95	236	i P	Pn	07 02 05.9	-2.2
	SNR=32						
ASHO	Ashiyiah	10.97	240	P	Pn	07 02 07.5	-1.0
	SNR=89						
ASHO				P	Pn	07 02 07.5	-1.0
	SNR=89						
ASHO	Ashiyiah	10.97	240	i P	Pn	07 02 06.4	-2.1
	SNR=57						
NAZ	Nazwa, Dubai	11.10	242	P	Pn	07 02 10.5	+0.2
	SNR=33						
NAZ				P	Pn	07 02 10.5	+0.2
	SNR=33						
NAZ				P	Pn	07 02 10.5	+0.2
	SNR=33						
NAZ	Nazwa, Dubai	11.10	242	i P	Pn	07 02 10.3	0.0
	SNR=33						
JMDO	Jabal Madar	11.12	224	P	Pn	07 02 11.0	+0.3
	SNR=95						
JMDO				P	Pn	07 02 11.0	+0.3
	SNR=95						
JMDO				P	Pn	07 02 11.0	+0.3
	SNR=95						
FAQ	Al Faqa, Dubai	11.28	241	P	Pn	07 02 12.9	+0.2
	SNR=34						
FAQ				P	Pn	07 02 12.9	+0.2
	SNR=34						
FAQ				P	Pn	07 02 12.9	+0.2
	SNR=34						
FAQ	Al Faqa, Dubai	11.28	241	i P	Pn	07 02 13.0	+0.2
	SNR=34						
BSY	Bisya	11.42	229	P	Pn	07 02 15.1	+0.5
	SNR=157						
BSY				P	Pn	07 02 15.1	+0.5
	SNR=157						
ARQ	Araqi	11.46	233	P	Pn	07 02 15.8	+0.5
	SNR=98						
ARQ				P	Pn	07 02 15.8	+0.5
	SNR=98						
ARQ				P	Pn	07 02 15.8	+0.5
	SNR=98						
ASUD	Al Ashush, Dub	11.55	241	P	Pn	07 02 16.8	+0.4
	SNR=37						
ASUD				P	Pn	07 02 16.8	+0.4
	SNR=37						
ASUD				P	Pn	07 02 16.8	+0.4
	SNR=37						
ASUD	Al Ashush, Dub	11.55	241	i P	Pn	07 02 17.0	+0.6
	SNR=37						
ALNE	Al Ain	11.56	238	P	Pn	07 02 17.0	+0.4
	SNR=68						
ALNE				P	Pn	07 02 17.0	+0.4
	SNR=68						
ALNE	Al Ain	11.56	238	i P	Pn	07 02 16.0	-0.6
	SNR=31						
KSH	Kashi	11.79	39	P	Pn	07 02 13.4	-6.4
KSH				sP		07 02 20.0	
KSH				S	Sn	07 04 18.1	-13
KSH				LR	LR		
	comp=N,36μm,13.4s						
KSH				LR	LR		
	comp=E,41μm,13.1s						
KSH				LR	LR		
	comp=Z,24μm,12.0s						
AJN	Ajban	11.84	242	P	Pn	07 02 19.7	-0.8
	SNR=7.3						
AJN				P	Pn	07 02 19.7	-0.8
	SNR=7.3						
AJN	Ajban	11.84	242	i P	Pn	07 02 19.5	-0.9
	SNR=7.3						
IUG	Iuzhnay	11.84	13	d iP	Pn	07 02 20.5	+0.1
IUG	Iuzhnay	11.84	13	⇓iP	Pn	07 02 20.6	+0.1
	baz=13						
BHPL	Bhopal	12.23	124	ex	Pn	07 02 26.6	+0.8
MHTO	MHTO	12.28	221	P	Pn	07 02 25.8	-0.7
	SNR=20						
MHTO				P	Pn	07 02 25.8	-0.7
	SNR=20						
UMZA	Um Al Zommool	12.82	235	P	Pn	07 02 33.4	-0.4
UMZA				P	Pn	07 02 33.4	-0.4
DZA	Taraz	12.84	16	eP	Pn	07 02 32.7	-1.3
DZA	Taraz	12.84	16	eP	Pn	07 02 32.8	-1.3
	baz=16						
KK31	Karatay Array	12.86	13	Pn	Pn	07 02 32.7	-1.6
KK31	Karatay Array	12.86	13	i P	Pn	07 02 32.7	-1.6
KKAR	Karatay Array	12.86	13	Pn	Pn	07 02 33.7	-0.6
KKAR	Karatay Array	12.86	13		Pn	07 02 33.4	-0.9
KKAR	Karatay Array	12.86	13	P	Pn	07 02 33.7	-0.6
AML	Almayashu	12.86	25	P	Pn	07 02 32.8	-1.8
	SNR=137						
AML	Almayashu	12.86	25	P	Pn	07 02 33.2	-1.4
MZWR	Madinat Zayed	13.12	242	P	Pn	07 02 36.4	-1.6
MZWR				P	Pn	07 02 36.4	-1.6
UCH	Uchtor	13.25	27	P	Pn	07 02 38.1	-1.9
	SNR=238						
UCH	Uchtor	13.25	27	P	Pn	07 02 38.5	-1.5
UCH				pmax	pmax		
	comp=Z,220nm,1.2s						
JRN	Qarnain Island	13.32	248	P	Pn	07 02 38.9	-1.8
	SNR=21						
EKS2	Erkin-Say	13.35	24	P	Pn	07 02 40.5	-0.7
	SNR=32						
EKS2	Erkin-Say	13.35	24	P	Pn	07 02 39.9	-1.2
EKS2				pmax	pmax		
	comp=Z,78nm,1.0s						
DQM	DQM	13.37	219	P	Pn	07 02 41.6	+0.3
	SNR=12						
DQM				P	Pn	07 02 41.6	+0.3
	SNR=12						
AAK	Ala-Archa	13.59	26	P	Pn	07 02 43.7	-0.7
	SNR=73						
AAK	Ala-Archa	13.59	26	Pn	Pn	07 02 43.2	-1.3
	comp=Z,3.4nm,0.3s,baz=216,slow=7.4,SNR=107						
	comp=Z,71nm,0.8s						
AAK	Ala-Archa	13.59	26	Pn	Pn	07 02 42.8	-1.7
AAK	Ala-Archa	13.59	26	d iP	Pn	07 02 43.0	-1.4
AAK				pmax	pmax		
	comp=Z,263nm,1.7s						
KBK	Karagaybulak	13.78	27	P	Pn	07 02 47.7	+0.6
	SNR=76						
POO	Poona	13.79	149	ex	Pn	07 02 50.0	+2.9
	comp=Z,60nm,0.3s						
POO				ex	Sn	07 05 22.0	+1.8
GHWR	Ruwais	13.79	244	P	Pn	07 02 44.5	-2.5
FRU1	Bishkek	13.79	26		Pn	07 02 45.7	-1.4
FRU1	Bishkek	13.79	26	P	Pn	07 02 45.7	-1.4
MZR	Muzera	13.86	240	P	Pn	07 02 46.9	-1.1
	SNR=36						
MZR				P	Pn	07 02 46.9	-1.1
	SNR=36						
MZR	Muzera	13.86	240	P	Pn	07 02 45.5	-2.5
MZR				i P	Pn	07 02 45.7	-2.3
	SNR=17						
ULHL	Ulahol	13.99	31	P	Pn	07 02 47.7	-2.3
	SNR=37						
ULHL	Ulahol	13.99	31	P	Pn	07 02 47.9	-2.1
ULHL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHMS	Chumysh	14.00	26	P	Pn	07 02 48.8	-1.1
	SNR=34						
CHMS	Chumysh	14.00	26	i P	Pn	07 02 46.6	-3.3
CHMS				pmax	pmax		
	comp=Z,166nm,1.4s						
BOOM	Boomskoye usch	14.06	30		Pn	07 02 49.2	-1.6
BOOM	Boomskoye usch	14.06	30	P	Pn	07 02 49.2	-1.6
KHOR	Al-Khor Airpor	14.11	253	P	Pn	07 02 49.8	-1.6
USP	Ospenovka	14.14	25	P	Pn	07 02 50.0	-1.8
	SNR=24						
TKM2	Tokmak 2	14.27	28	P	Pn	07 02 51.8	-1.9
	SNR=215						
TKM2	Tokmak 2	14.27	28	i P	Pn	07 02 50.8	-2.9
TKM2				pmax	pmax		
	comp=Z,249nm,0.9s						
KDJ	Kajisay	14.34	34		Pn	07 02 52.2	-2.5
KDJ	Kajisay	14.34	34	P	Pn	07 02 52.2	-2.5
SGDS	Sogindy	14.35	25	eP	Pn	07 02 51.9	-2.8
SGDS				pmax	pmax		
	comp=Z,26nm,0.7s						
SGDS	Sogindy	14.35	25	eP	Pn	07 02 51.9	-2.8
	comp=Z,26nm,0.7s,baz=24						
SHMA	Al-Shehemyia	14.47	255	P	Pn	07 02 53.8	-2.5
PYUN	Piuthan	14.62	96	eP	Pn	07 02 53.4	-5.3
	comp=Z,1μm,1.1s						
SLWR	Sila	14.66	247	P	Pn	07 02 57.0	-2.0
SLWR				P	Pn	07 02 57.0	-2.0
TRNA	Turayna	14.73	250	P	Pn	07 02 57.0	-3.0
SAKB	Bahrain	14.78	256	P	Pn	07 02 57.8	-2.8
TNSS	Tian-Shan	14.94	31	eP	Pn	07 02 59.9	-3.1
TNSS	Tian-Shan	14.94	31	eP	Pn	07 02 59.9	-3.1
	baz=31						
KAD	Karad	15.01	150	⇓iP	Pn	07 03 01.8	-2.0
AAA	Alma-Ata	15.06	31	eP	Pn	07 03 01.6	-2.7
AAA	Alma-Ata	15.06	31	eP	Pn	07 03 02.7	-1.7
	baz=30						
MDOK	Medeo	15.08	31	i P	Pn	07 03 01.2	-3.5
MDOK	Medeo	15.08	31	i P	Pn	07 03 01.3	-3.5
	baz=31						
KNDC	Almaty	15.09	31	P	Pn	07 03 02.3	-2.4
DANN	Dangsing	15.23	94	eP	Pn	07 03 02.1	-4.8
	comp=Z,2μm,0.7s						
KOLN	Koldanda	15.23	97	eP	Pn	07 03 01.8	-5.0
	comp=Z,1μm,1.3s						
KUU	Kurty	15.37	28	eP	Pn	07 03 05.0	-3.4
KUU				pmax	pmax		
	comp=Z,29nm,0.8s						
KUU	Kurty	15.37	28	eP	Pn	07 03 05.1	-3.4
	comp=Z,29nm,0.8s,baz=28						
BTLS	Baital	15.57	20	eP	Pn	07 03 09.1	-1.8
BTLS	Baital	15.57	20	eP	Pn	07 03 09.1	-1.8
	baz=20						
CHKK	Chushkaly	15.61	29	eP	Pn	07 03 08.3	-3.2
CHKK	Chushkaly	15.61	29	eP	Pn	07 03 08.3	-3.2
	baz=29						
SATY	Saty	15.63	34	i P	Pn	07 03 08.6	-3.3
SATY	Saty	15.63	34	i P	Pn	07 03 08.7	-3.3
	baz=34						
ZHN	Zhinishke	15.73	34	eP	Pn	07 03 09.3	-3.9
ZHN	Zhinishke	15.73	34	eP	Pn	07 03 09.3	-3.9
	baz=34						
SHAO	Shalim	15.96	221	P	Pn	07 03 15.0	-1.2
UZB	Uzynbulak	16.00	35	d iP	Pn	07 03 13.2	-3.5
UZB	Uzynbulak	16.00	35	⇓iP	Pn	07 03 13.3	-3.5
	baz=35						
GKN	Gorkha	16.06	95	eP	Pn	07 03 12.3	-5.3
	comp=Z,238nm,0.5s						
KPKS	Kokpek	16.07	34	d iP	Pn	07 03 14.6	-3.0
KPKS	Kokpek	16.07	34	⇓iP	Pn	07 03 14.6	-3.0
	baz=34						
SHLS	Shalkode	16.23	36	d iP	Pn	07 03 19.2	-0.4
SHLS	Shalkode	16.23	36	⇓iP	Pn	07 03 19.2	-0.4
	baz=37						
DOK	Doka	16.38	226	P	Pn	07 03 19.7	-1.9
	SNR=9.3						
DOK				P	Pn	07 03 19.7	-1.9
	SNR=9.3						
DMTO	DMTO	16.59	222	P	Pn	07 03 22.5	-1.8
	SNR=5.9						
KKN	Kakani	16.66	95	eP	Pn	07 03 19.9	-5.4
	comp=Z,321nm,0.5s						
WHFO	Wadi Hawf	17.13	225	P	Pn	07 03 28.5	-2.6
	SNR=15						
WHFO				P	Pn	07 03 28.5	-2.6
	SNR=15						
TDK	Taldyqorghan	17.14	30	eP	Pn	07 03 28.0	-3.0
TDK	Taldyqorghan	17.14	30	eP	Pn	07 03 28.0	-3.0
	baz=30						
HYBB	Hyderabad (bro	17.15	137	eP	Pn	07 03 30.2	-1.2
HYBB				IVMs_BB	IVMs_BB	07 13 08.9	
	comp=Z,5μm,8.5s						
RBK	Rabkut	17.19	223	P	Pn	07 03 29.3	-2.6
	SNR=16						
RBK				P	Pn	07 03 29.3	-2.6
	SNR=16						
ABTO	Aybut	17.86	225	P	Pn	07 03 37.4	-2.7
ABTO				P	Pn	07 03 37.4	-2.7
OTUK	Ortayu	18.15	13	P	Pn	07 03 40.8	-2.8
BOK	Bokaro	18.55	107	ex	Pn	07 03 44.6	-4.0
BOK				IAmb	IAmb	07 03 52.7	
	comp=Z,586nm,1.9s						
AB31	Akbulak array	19.25	347	i P	P	07 03 55.2	-0.6
ABKAR	Akbulak array	19.25	347	P	P	07 03 55.1	-0.7
ABKAR	Akbulak array	19.25	347	P	P	07 03 55.8	0.0
MAK	Makhachkala	19.49	314	eP	Pn	07 03 59.8	0.0
MAK				eS	S	07 07 41.4	+2.9
MAK				pmax	pmax		
	comp=Z,156nm,1.0s						
MAK				MLR	MLR		
	comp=Z,4μm,11.0s						
RAYN	Ar Rayn	19.95	254	P	P	07 04 01.4	-2.4
RAYN	Ar Rayn	19.95	254	P	P	07 04 01.4	-2.4
RAYN				pmax	pmax		
	comp=Z,82nm,1.1s						
RAYN	Ar Rayn	19.95	254	P	P	07 04 01.3	-2.4
GNI	Garni	20.06	304	eP	Pn	07 04 07.0	+0.3
GNI	Garni	20.06	304	P	Pn	07 04 06.7	-0.1
GNI				IAmb	IAmb	07 04 16.6	
	comp=Z,252nm,1.1s						
GNI	Garni	20.06	304	ceP	Pn	07 04 07.1	+0.4
GNI				pmax	pmax		
	comp=Z,353nm,1.7s						
GNI	Garni	20.06	304	P	Pn	07 04 06.7	0.0
GNI				P	Pn	07 04 06.7	0.0
CUKT	Cukurca	20.06	295	eP	P	07 04 05.8	+0.9
MAKZ	Makanchi	20.12	32	P	P	07 04 04.5	-0.9
MAKZ				IAmb	IAmb	07 04 08.3	
	comp=Z,107nm,0.8s						
MAKZ	Makanchi	20.12	32	P	P	07 04 04.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,107nm,0.8s						
MK31	Makanchi Array	20.25	33	i P	P	07 04 05.2	-1.7
MKAR	Makanchi Array	20.25	33	P	P	07 04 05.5	-1.4
	comp=Z,44nm,0.7s,baz=208,slow=9.4,SNR=72						
	comp=Z,44nm,0.7s						
MKAR	Makanchi Array	20.25	33	P	P	07 04 04.9	-2.0
MKAR	Makanchi Array	20.25	33	i P	P	07 04 05.4	-1.4
MKAR				pmax	pmax		
	comp=Z,52nm,0.8s						
CLDR	Caldiran	20.32	301	eP	Pn	07 04 09.4	-0.5
VANB	Van	20.56	299	eP	Pn	07 04 11.5	-1.0
GROC	Groznyy	20.69	313	eP	Pn	07 04 13.1	-0.8
GROC				e		07 04 27.8	
GROC				eS	S	07 08 02.8	+0.5
GROC				pmax	pmax		
	comp=Z,181nm,0.9s						
GEVA	Gevas	20.73	298	P	P	07 04 12.8	+0.6
AKTO	Aktyubinsk	20.77	345	P	P	07 04 12.1	-0.3
	comp=Z,114nm,1.0s,baz=165,slow=9.8,SNR=86						
	comp=Z,114nm,1.0s						
AKDM	Akdamar-Van	20.80	298	eP	P	07 04 14.1	+1.1
AGRB	Hanur-Agry	21.13	301	eP	P	07 04 18.5	+1.9
WMQ	Urumqi	21.34	46	⇓P	P	07 04 19.3	+0.6
WMQ				pP	sP	07 04 24.9	+0.1
WMQ				sP	pP	07 04 30.9	+8.0
WMQ				S	S	07 08 14.4	-1.1
WMQ				pmax	pmax		
	comp=Z,210nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1μm,3.9s						
WMQ				LR	LR		
	comp=Z,31μm,18.5s						
WMQ				LR	LR		
	comp=Z,14μm,21.5s						
WMQ				LR	LR		
	comp=Z,6μm,19.3s						
LSA	Lhasa	21.35	86	P	P	07 04 19.5	+0.2
LSA				IAmb	IAmb	07 04 23.7	
	comp=Z,322nm,1.6s						
LSA	Lhasa	21.35	86	P	P	07 04 19.5	+0.2

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LSA                                    pmax   pmax
      comp=Z,322nm,1.6s
LSA   Lhasa               21.35  86    P      P      07 04 20.3 +0.9
LSA                                    LR     LR
      comp=Z,10µm,14.3s
LSA                                    LR     LR
      comp=Z,8µm,16.3s
LSA                                    LR     LR
      comp=Z,3µm,8.5s
LSA   Lhasa               21.35  86    P      P      07 04 20.2 +0.9
LSA                                    P      P      07 04 20.2 +0.9
AKH   Akhalkalaki         21.41 306  ⇓P      P      07 04 21.8 +2.3
AKH   Akhalkalaki         21.41 306   eP      P      07 04 19.3 -0.3
KARS  Kars                21.41 304   eP      P      07 04 21.0 +1.4
KARS  Kars                21.41 304    P      P      07 04 21.3 +1.7
KARS  Kars                21.41 304    P      P      07 04 21.3 +1.7
KARS                                   pmax   pmax
      comp=Z,784nm,1.4s
GURO  Guroymak-BITLI      21.57 298   eP      P      07 04 22.5 +1.2
GURO  Guroymak-BITLI      21.57 298    P      P      07 04 22.8 +1.5
GURO                                   IAmb   IAmb   07 04 31.5
      comp=Z,109nm,1.1s
MDRS  Chennai             21.62 141   ex      P      07 04 23.2 +1.5
MDRS                                   IAmb   IAmb   07 04 29.7
      comp=Z,78nm,0.7s
SOCY  Socotra             21.69 215    P      P      07 04 19.5 -3.2
SOCY                                   IAmb   IAmb   07 04 27.0
      comp=Z,120nm,1.1s
SOCY  Socotra             21.69 215    P      P      07 04 20.0 -2.7
      SNR=10
ZEI   Tsey                21.71 310   eP      P      07 04 25.7 +2.9
ZEI                                    pmax   pmax
      comp=Z,84nm,1.2s
KURBB Kurchatov Arra      21.91  21    P      P      07 04 22.7 -2.0
      comp=Z,18nm,0.8s,baz=210,slow=11,SNR=76
      comp=Z,18nm,0.8s
ZSN   Zaisan              21.96  35d iP      P      07 04 23.7 -1.5
ZSN   Zaisan              21.96  35⇓iP      P      07 04 23.7 -1.5
      baz=35
KURK  Kurchatov           22.02  21    P      P      07 04 24.7 -1.1
KURK                                   IAmb   IAmb   07 04 32.6
      comp=Z,163nm,1.1s
KURK  Kurchatov           22.02  21d iP      P      07 04 24.7 -1.1
KURK                                   pmax   pmax
      comp=Z,55nm,1.3s
KURK  Kurchatov           22.02  21    P      P      07 04 24.9 -0.9
KOPR  Koprukoy-ERZUR      22.10 302   eP      P      07 04 30.7 +3.8
SVAN  Silvan-Diyarba      22.12 297   eP      P      07 04 27.6 +0.5
VRTB  Varto-Mus           22.16 299   eP      P      07 04 29.5 +1.9
NCK   Nalchik             22.23 312⇑iP      P      07 04 30.4 +2.2
NCK                                    pmax   pmax
      comp=Z,230nm,1.3s
MARD  Mardin              22.29 294    P      P      07 04 29.6 +0.6
MARD                                   IAmb   IAmb   07 04 37.5
      comp=Z,220nm,1.2s
SEM   Semipalatinsk       22.29  24   eP      P      07 04 27.5 -1.4
SEM   Semipalatinsk       22.29  24   eP      P      07 04 27.6 -1.4
      baz=24
MAZI  Mazidag             22.57 295   eP      P      07 04 32.8 +0.8
BRVK  Borovoye            22.58   6    P      P      07 04 31.0 -0.8
BRVK                                   IAmb   IAmb   07 04 36.5
      comp=Z,137nm,1.0s
BRVK  Borovoye            22.58   6d iP      P      07 04 31.2 -0.6
BRVK                                   pmax   pmax
      comp=Z,208nm,1.3s
BRVK  Borovoye            22.58   6    P      P      07 04 31.6 -0.2
NEY   Neytrino            22.69 310ceP      P      07 04 35.3 +2.0
NEY                                    pmax   pmax
      comp=Z,33nm,1.3s
BNGB  Bingl               22.70 299   eP      P      07 04 34.9 +1.5
KBZ   Khabaz              22.79 312    P      P      07 04 34.3 +0.3
      comp=Z,11nm,0.8s,baz=88,slow=11,SNR=19
      comp=Z,11nm,0.8s
CHVG  Ch'k'valeri         22.89 309  ⇓P      P      07 04 37.2 +2.0
CHVG  Ch'k'valeri         22.89 309    P      P      07 04 37.2 +2.0
DYBB  Diyarbakir          22.90 296   eP      P      07 04 36.4 +1.0
SHL   Shillong            22.96  96   ex      P      07 04 37.7 +1.5
SHL                                    IAmb   IAmb   07 04 42.4
      comp=Z,23nm,0.7s
KVAR  Kislovodsk Arr      23.02 312    P      P      07 04 39.6 +2.9
      comp=Z,2.7nm,0.3s,baz=53,slow=20,SNR=15
KIV   Kislovodsk          23.03 312  ⇑P      P      07 04 37.0 +0.3
KIV   Kislovodsk          23.03 312    P      P      07 04 36.9 +0.2
KIV   Kislovodsk          23.03 312   eP      P      07 04 39.0 +2.3
KIV                                   eS      S      07 08 50.9 +3.7
KIV                                    pmax   pmax
      comp=Z,50nm,1.1s
KIV   Kislovodsk          23.03 312    P      P      07 04 38.2 +1.5
KIV                                    P      P      07 04 38.2 +1.5
KOPT  Kop Dagi            23.10 301    P      P      07 04 39.1 +1.3
KOPT                                   IAmb   IAmb   07 05 04.0
      comp=Z,136nm,1.4s
GOF   Gofitskoye          23.33 315⇑eP      P      07 04 42.2 +2.5
GOF                                    pmax   pmax
      comp=Z,93nm,1.2s
SVRC  Sivrice-ELAZID      23.62 296   eP      P      07 04 43.4 +0.6
KTUT  Trabzon             23.91 303   eP      P      07 04 46.3 +1.0
GOMU  GeErMu              24.25  69    P      P      07 04 49.3 +0.2
GOMU                                   pP     pP     07 04 53.3 -0.1
GOMU                                   sP     sP     07 04 56.9 +1.6
GOMU                                   S      S      07 09 08.6 +0.9
GOMU                                   sS     pS     07 09 12.1 -0.3
GOMU                                   pmax   pmax
      comp=Z,15nm,0.8s
GOMU                                   pmax   pmax
      comp=Z,400nm,3.8s
GOMU                                   LR     LR
      comp=Z,3µm,13.3s
GOMU                                   LR     LR
      comp=Z,2µm,15.8s
GOMU                                   LR     LR
      comp=Z,4µm,16.9s
ARPR  Arapgir-MALATY      24.51 298   eP      P      07 04 51.7 +0.6
ESPY  Espiye-Giresun      24.64 302   eP      P      07 04 52.9 +0.7
SOC   Sochi               24.82 309d iP      P      07 04 56.1 +2.4
SOC                                   ePPP    PPP    07 05 32.3
SOC                                   eSS     S      07 10 05.6  +50
SOC                                    pmax   pmax
      comp=Z,38nm,0.9s
SOC                                    MLR    MLR
      comp=Z,3µm,15.0s
DARE  Darende-Malaty      25.07 296   eP      P      07 04 56.9 +0.8
ASF   Jabal al Asfar      25.26 281    P      P      07 04 58.8 +1.0
      comp=Z,91nm,1.1s,baz=106,slow=4.4,SNR=60
      comp=Z,91nm,1.1s
SVSK  Karacayir           25.69 299   eP      P      07 05 02.8 +1.3
BELG  Belogornoye         25.77 333    P      P      07 05 01.8 -0.4
      comp=Z,58nm,0.9s,baz=320,slow=7.7,SNR=11
      comp=Z,58nm,0.9s
BELG  Belogornoye         25.77 333c iP      P      07 05 02.5 +0.4
BELG                                   pmax   pmax
      comp=Z,22nm,1.0s
TAHT  Tahtakopru-Hat      25.83 291   eP      P      07 05 03.4 +0.5
SARI  SarD1z-Kayseri      25.87 296   eP      P      07 05 03.9 +0.5
YAYL  Yayladag            25.88 290   eP      P      07 05 04.0 +0.5
TOKT  Tokat               26.11 300   eP      P      07 05 06.3 +0.8
SHBL  Chebaa              26.16 284   eP      P      07 05 06.9 +0.8
TOKA  Tokat               26.16 300    P      P      07 05 06.7 +0.7
TOKA                                   IAmb   IAmb   07 05 19.8
      comp=Z,64nm,1.2s
BHL   Bhannes             26.21 285   eP      P      07 05 07.0 +0.4
KOZT  Kozan               26.21 293   eP      P      07 05 06.9 +0.5
CEYT  Ceyhan              26.23 292   eP      P      07 05 07.6 +1.1
BNN   Bunyan              26.38 296    P      P      07 05 07.9 -0.1
ARU   Arti                26.38 350    P      P      07 05 08.2 +0.5
      comp=Z,15nm,0.9s,baz=173,slow=8.0,SNR=26
      comp=Z,15nm,0.9s
ARU   Arti                26.38 350    P      P      07 05 07.6  0.0
ARU                                    IAmb   IAmb   07 05 14.1
      comp=Z,73nm,1.0s
ARU   Arti                26.38 350d iP      P      07 05 08.3 +0.6
ARU                                                  07 05 44.1
ARU                                    PPP    PPP    07 05 56.9
ARU                                    S      S      07 09 43.3 +2.8
ARU                                    SS     SnSn   07 10 44.4 +3.4
ARU                                    SSS    SSS    07 10 59.3
ARU                                    pmax   pmax
      comp=Z,81nm,1.1s
ARU                                    MLR    MLR
      comp=Z,5µm,13.0s
MMAI  Mount Meron Ar      26.46 283    P      P      07 05 07.5 -1.2
      comp=Z,1.8nm,0.5s,baz=61,slow=18,SNR=9.1
      comp=Z,1.8nm,0.5s
GHAJ  Ghor Haditha        26.47 279    P      P      07 05 09.3 +0.7
MMLI  Mount Malkishu      26.48 282   eP      P      07 05 09.9 +1.0
UJAP  Al Uja              26.49 281   eP      P      07 05 09.9 +1.1
SVE   Sverdlovsk          26.50 353   eP      P      07 05 09.3 +0.5
SVE                                    pmax   pmax
      comp=Z,57nm,1.5s
PALK  Pallekele           26.80 147    P      P      07 05 12.6 +0.8
      comp=Z,36nm,1.0s,baz=77,slow=9.4,SNR=9.4
      comp=Z,36nm,1.0s
PALK  Pallekele           26.80 147    P      P      07 05 13.3 +1.6
PALK                                   IAmb   IAmb   07 05 17.9
      comp=Z,58nm,1.1s
PALK  Pallekele           26.80 147    P      P      07 05 13.4 +1.6
PALK                                   pmax   pmax
      comp=Z,58nm,1.1s
PALK  Pallekele           26.80 147    P      P      07 05 13.1 +1.3
ANN   Anapa               26.80 310   eP      P      07 05 11.5 -0.1
ANN                                   e*PP    pP     07 05 14.8 -1.3
ANN                                   eS      S      07 09 49.2 +1.8
ANN                                    pmax   pmax
      comp=Z,45nm,1.1s
ANN                                    MLR    MLR
      comp=Z,4µm,13.0s
ANN                                    MLR    MLR
      comp=N,2µm,15.0s
ANN                                    MLR    MLR
      comp=E,2µm,11.0s
ZALV  Zalesovo Beam       26.80  24    P      P      07 05 10.9 -0.6
      comp=E,24nm,0.8s,baz=230,slow=9.3,SNR=8.4
      comp=E,24nm,0.8s
ZALV  Zalesovo Beam       26.80  24   i P     P      07 05 13.6 +2.1
ZALV                                   pmax   pmax
      comp=Z,24nm,0.8s
KARA  Karaisali           26.81 293   eP      P      07 05 11.9 +0.1
CMRD  Camardi-Nigde       26.89 294   eP      P      07 05 13.4 +0.7
YOZ   Yozgat              26.91 298   eP      P      07 05 12.9 +0.1
EIL   Elat                27.23 276    P      P      07 05 15.4 -0.2
      comp=Z,39nm,1.1s,baz=120,slow=6.4,SNR=18
      comp=Z,39nm,1.1s
EIL   Elat                27.23 276   eP      P      07 05 15.8 +0.2
DIKM  Dikmen              27.36 302  ⇑P      P      07 05 18.2 +1.6
EREN  Erenkoy             27.43 289   eP      P      07 05 17.6 +0.3
CORM  Corum               27.52 299   eP      P      07 05 17.7 -0.6
VRH   Novokhopyorsk       27.56 325   eP      P      07 05 21.8 +3.5
VRH                                    pmax   pmax
      comp=Z,70nm,1.2s
KEBE  Keben-Mersin        27.83 291   eP      P      07 05 21.2 +0.2
IKL   Isikli              27.84 290   eP      P      07 05 20.5 -0.5
AKKU  Akkuyu-Mersin       27.95 290   eP      P      07 05 21.6 -0.4
YAYX  Yaylak              27.96 296   eP      P      07 05 22.2  0.0
KAMT  Kaman               28.09 297   eP      P      07 05 22.7 -0.7
CSS   Mathiatis           28.12 288   eP      P      07 05 22.5 -1.0
CSS   Mathiatis           28.12 288    P      P      07 05 22.7 -0.9
BR131 Keskin Array S      28.20 298    P      P      07 05 23.5 -0.9
BR131 Keskin Array S      28.20 298c iP      P      07 05 23.8 -0.6
BR131 Keskin Array S      28.20 298    P      P      07 05 23.7 -0.7
      SNR=11
BRTR  Keskin Array B      28.20 298    P      P      07 05 23.6 -0.7
      comp=Z,3.4nm,0.8s,baz=118,slow=8.2,SNR=19
      comp=Z,3.4nm,0.8s
BRTR  Keskin Array B      28.20 298   eP      P      07 05 23.5 -0.9
BRTR  Keskin Array B      28.20 298    P      P      07 05 24.0 -0.4
BRTR  Keskin Array B      28.20 298   i P     P      07 05 24.2 -0.2
BRTR                                   pmax   pmax
      comp=Z,4.0nm,0.8s
TEKE  Tekeli-Mersin       28.30 290   eP      P      07 05 24.0 -1.1
BZK   Bozkurt             28.34 303  ⇑P      P      07 05 26.2 +0.8
BZK   Bozkurt             28.34 303   eP      P      07 05 25.5 +0.1
BZK   Bozkurt             28.34 303    P      P      07 05 25.4  0.0
LEF   Lefka               28.48 288   eP      P      07 05 27.0 +0.3
GTA   Gaotai              28.55  63  ⇓P      P      07 05 27.9 +0.4
GTA                                    sP     sP     07 05 37.0 +3.3
GTA                                    S      S      07 10 17.3 +2.0
GTA                                    pmax   pmax
      comp=Z,17nm,1.5s
GTA                                    pmax   pmax
      comp=Z,260nm,7.2s
GTA                                    LR     LR
      comp=Z,12µm,16.3s
GTA                                    LR     LR
      comp=Z,7µm,15.1s
GTA                                    LR     LR
      comp=Z,9µm,14.3s
VORD  Divnogorie          28.64 323   eP      P      07 05 27.9 -0.1
VORD                                   pmax   pmax
      comp=Z,20nm,1.5s
VSR   Storozhevoye        28.85 323   eP      P      07 05 28.6 -1.2
VSR                                    pmax   pmax
      comp=Z,20nm,1.4s
GAZI  Gazipasa            28.95 290   eP      P      07 05 30.4 -0.5
ATD   Arta Tunnel         29.00 234    P      P      07 05 33.1 +1.6
      comp=Z,4.0nm,0.5s,baz=14,slow=7.5,SNR=15
      comp=Z,4.0nm,0.5s
ATD   Arta Tunnel         29.00 234    P      P      07 05 32.9 +1.4
ATD                                    IAmb   IAmb   07 05 35.4
      comp=Z,94nm,1.6s
KONT  Konya--Tatoy        29.00 294   eP      P      07 05 31.4 +0.1
LADK  Ladik-KONYA         29.01 294   eP      P      07 05 31.5 -0.1
SIM   Simferopol'         29.07 309    P      P      07 05 28.6 -3.3
SIM                                    pmax   pmax
      comp=Z,21nm,0.8s
VORR  Voronezh            29.09 324   eP      P      07 05 32.4 +0.4
VORR                                   S      S      07 10 22.1 -1.2
VORR                                   pmax   pmax
      comp=Z,49nm,2.0s
YUVA  Yuva-Kibriscik      29.78 299   eP      P      07 05 37.9 -0.5
LPSR  Galich'ya Gora      29.78 325   eP      P      07 05 37.3 -0.8
LPSR                                   pmax   pmax
      comp=Z,20nm,1.0s
KIRV  Kirov               30.29 342    P      P      07 05 43.1 +0.7
      comp=Z,12nm,0.5s,baz=142,slow=11,SNR=7.9
      comp=Z,12nm,0.5s
KNGR  Kungurtug, Tuv      30.54  40⇑eP      P      07 05 46.6 +1.7
KORT  Korkueli            30.55 292   eP      P      07 05 44.9 -0.3
ELL   Elmali              30.90 291   eP      P      07 05 48.2 -0.1
ELL   Elmali              30.90 291    P      P      07 05 48.0 -0.3
ELL   Elmali              30.90 291    P      P      07 05 48.0 -0.3
ELL                                    pmax   pmax
      comp=Z,221nm,0.8s
PZH   PanZhiHua           31.17  89    P      P      07 05 50.9 +0.1
PZH                                    pP     pP     07 05 53.6 -1.6
PZH                                    PP     PnPn   07 06 52.8 +0.4
PZH                                    S      S      07 10 58.3 +1.6
PZH                                    SS     SnSn   07 12 44.0 +5.5
PZH                                    pmax   pmax
      comp=Z,30nm,1.4s
PZH                                    pmax   pmax
      comp=Z,90nm,3.5s
PZH                                    LR     LR
      comp=Z,5µm,12.9s
PZH                                    LR     LR
      comp=Z,4µm,14.3s
PZH                                    LR     LR
      comp=Z,6µm,15.5s
TVSB  Tavsanli            31.38 296   eP      P      07 05 51.9 -0.6
LZH   Lanzhou             31.55  70  ⇑P      P      07 05 56.8 +2.7
LZH                                    pP     sP     07 06 00.8 +0.4
LZH                                    sP     pP     07 06 04.8 +6.3
LZH                                    S      S      07 11 04.8 +2.2
LZH                                    sS     sS     07 11 15.3 +5.5
LZH                                    pmax   pmax
      comp=Z,42nm,1.5s
LZH                                    pmax   pmax
      comp=Z,200nm,4.9s
LZH                                    LR     LR
      comp=Z,8µm,14.1s
LZH                                    LR     LR
      comp=Z,5µm,14.6s
LZH                                    LR     LR
      comp=Z,5µm,15.7s
CHTO  Chiang Mai          31.64 104    P      P      07 05 54.4 -0.5
CHTO  Chiang Mai          31.64 104    P      P      07 05 54.2 -0.7
CHTO                                   P      P      07 05 54.2 -0.7
CHTO  Chiang Mai          31.64 104    P      P      07 05 54.7 -0.2
CMAR  Chiang Mai Arr      31.81 105    P      P      07 05 55.8 -0.6
      comp=Z,8.5nm,0.9s,baz=300,slow=7.7,SNR=18
      comp=Z,8.5nm,0.9s
CMAR  Chiang Mai Arr      31.81 105   i P     P      07 05 55.7 -0.6
CMAR                                   pmax   pmax
      comp=Z,8.0nm,0.9s
CD2   Chengdu             31.94  80    P      P      07 05 59.6 +2.1
CD2                                    sP     sP     07 06 04.3 +0.5
CD2                                    S      S      07 11 09.9 +1.4
CD2                                    sS     sS     07 11 17.6 +1.8
CD2                                    pmax   pmax
      comp=Z,30nm,0.8s
CD2                                    pmax   pmax
      comp=Z,90nm,3.2s
CD2                                    LR     LR
      comp=Z,7µm,17.5s
CD2                                    LR     LR
      comp=Z,7µm,15.7s
MOS   Moscow              32.31 329   eP      P      07 06 01.3 +0.9
MOS                                    pmax   pmax
      comp=Z,67nm,1.1s
MOS                                    MLR    MLR
      comp=Z,8µm,21.0s
OBN   Obninsk             32.41 328    P      P      07 06 01.9 +0.7
      comp=Z,4.0nm,0.3s,baz=136,slow=12,SNR=8.1
      comp=Z,4.0nm,0.3s
OBN   Obninsk             32.41 328    IAmb   IAmb   07 06 29.3
      comp=Z,52nm,1.1s
OBN   Obninsk             32.41 328ceP      P      07 06 01.6 +0.4
OBN                                   e*PP    pP     07 06 05.5 -0.1
OBN                                   e              07 07 07.5
OBN                                   ePPP    PPP    07 07 18.9
OBN                                    pmax   pmax
      comp=Z,84nm,1.7s
OBN                                    MLR    MLR
      comp=Z,5µm,16.0s
KMI   Kunming             32.43  91  ⇑P      P      07 06 04.5 +2.5
KMI                                    sP     sP     07 06 10.9 +2.6
KMI                                    S      S      07 11 15.8 -0.8
KMI                                    sS     sS     07 11 23.1 -0.7
KMI                                    pmax   pmax
      comp=Z,42nm,0.9s
KMI                                    pmax   pmax
      comp=Z,190nm,3.5s
KMI                                    LR     LR
      comp=Z,3µm,13.8s
KMI                                    LR     LR
      comp=Z,4µm,15.8s
KMI                                    LR     LR
      comp=Z,6µm,16.3s
TPGR  Topolog             32.95 306  ⇑P      P      07 06 06.5 +0.4
MOY   Mondy               32.97  40   eP      P      07 06 07.0 +0.7
MOY                                    pmax   pmax
      comp=Z,64nm,2.0s
KARP  Karpathos           33.14 289    P      P      07 06 07.5 -0.5
CFR   Carcaliu            33.22 307  ⇑P      P      07 06 08.7 +0.4
ICOR  Ion Corvin          33.24 305  ⇑P      P      07 06 09.7 +1.1
ZAK   Zakamensk           33.77  44   eP      P      07 06 14.0 +0.7
ZAK                                    pmax   pmax
      comp=Z,62nm,1.5s
SORM  Soroca              33.83 312  ⇑P      P      07 06 13.9 +0.2
PRGR  Permogore           33.89 342   eP      P      07 06 13.6 -0.4
AKASG Malin Array Be      34.15 317    P      P      07 06 15.7 -0.7
      comp=Z,18nm,1.1s,baz=102,slow=7.6,SNR=82
      comp=Z,18nm,1.1s
AKASG Malin Array Be      34.15 317    P      P      07 06 16.0 -0.4
AKBB  Malin Array Si      34.15 317    P      P      07 06 16.0 -0.4
AKBB                                   IAmb   IAmb   07 06 17.7
      comp=Z,40nm,1.0s
VRI   Vrincioaia          34.33 308  ⇑P      P      07 06 19.6 +1.4
PLOR  Plostina            34.38 308  ⇑P      P      07 06 19.6 +1.1
RDO   Rodhopi             34.50 299    P      P      07 06 19.2 -0.5
RDO                                    IAmb   IAmb   07 06 23.8
      comp=Z,55nm,1.4s
TESR  Tescani             34.53 309  ⇓P      P      07 06 20.4 +0.6
JAWL  J.Aulia             34.68 251   i P     P      07 06 20.1 -1.3
COVR  Voineasa-Covas      34.69 307  ⇓P      P      07 06 22.0 +0.8
MLR   Muntele Rosu        34.79 307  ⇑P      P      07 06 23.5 +1.2
MLR   Muntele Rosu        34.79 307    P      P      07 06 23.5 +1.2
MLR                                    IAmb   IAmb   07 06 31.3
      comp=Z,43nm,1.1s
MLR   Muntele Rosu        34.79 307    P      P      07 06 23.5 +1.2
MLR                                    pmax   pmax
      comp=Z,43nm,1.1s
SONM  Songino Array       34.91  49    P      P      07 06 23.8 +0.5
      comp=Z,6.3nm,0.8s,baz=268,slow=10,SNR=4.3
      comp=Z,6.3nm,0.8s
BIZ   Bicaz               34.99 309  ⇑P      P      07 06 24.2 +0.5
IDI   Anoyia              35.01 289  ⇓P      P      07 06 24.4 +0.1
IDI   Anoyia              35.01 289    P      P      07 06 24.3 +0.1
IDI                                    IAmb   IAmb   07 06 25.5
      comp=Z,32nm,0.9s
IRK   Irkutsk             35.05  41   eP      P      07 06 23.9 -0.4
IRK                                    pmax   pmax
      comp=Z,122nm,2.0s
KLMR  Klimovskoe          35.09 337   eP      P      07 06 23.3 -1.2
KLMR                                   pmax   pmax
      comp=Z,40nm,1.2s
KLMR  Klimovskoe          35.09 337   eP      P      07 06 23.3 -1.2
KLMR                                   AMP           07 06 28.1
      comp=Z,40nm,1.2s
KLMR                                   LQ     LQ     07 17 01.6
KLMR                                   LQ     LQ     07 17 01.6
KLMR                                   LR     LR     07 20 17.3
RZN   Rozhen              35.16 300   eP      P      07 06 25.0 -0.6
DOPR  Dopca               35.27 307  ⇑P      P      07 06 26.9 +0.7
ULN   Ulaanbaatar         35.35  49    P      P      07 06 27.8 +0.7
ULN   Ulaanbaatar         35.35  49⇑eP      P      07 06 27.8 +0.7
ULN                                    pmax   pmax
      comp=Z,13nm,1.3s
VOIR                      35.40 306  ⇑P      P      07 06 27.2 -0.3
GYA   Guiyang             35.42  87  ⇑P      P      07 06 29.6 +1.7
GYA                                    PP     PP     07 07 47.5 -0.8
GYA                                    S      S      07 11 59.8 -2.8
GYA                                    sS     sS     07 12 14.9 +5.0
GYA                                    pmax   pmax
      comp=Z,40nm,1.2s
GYA                                    pmax   pmax
      comp=Z,170nm,3.5s
GYA                                    LR     LR
      comp=Z,3µm,14.6s
GYA                                    LR     LR
      comp=Z,1µm,16.6s
GYA                                    LR     LR
      comp=Z,960nm,11.6s
ARR   Arges               35.68 306  ⇑P      P      07 06 29.8  0.0
BUR01 Bucovina Ar. S      35.73 310  ⇑P      P      07 06 30.2 -0.1
BUR08 Bucovina Ar. S      35.75 310    P      P      07 06 29.5 -0.9
XAN   Xi'an               35.84  73  ⇑P      P      07 06 32.8 +1.5
XAN                                    pP     sP     07 06 36.8 -0.9
XAN                                    sP     pP     07 06 39.4 +3.7
XAN                                    pmax   pmax
      comp=Z,23nm,1.3s
XAN                                    pmax   pmax
      comp=Z,160nm,6.4s
XAN                                    LR     LR
      comp=Z,12µm,16.5s
XAN                                    LR     LR
      comp=Z,6µm,17.5s
XAN                                    LR     LR
      comp=Z,10µm,18.7s
MMB   Musomiste           35.89 300   eP      P      07 06 31.0 -0.7
VTS   Vitosha             36.34 301  ⇑P      P      07 06 36.7 +1.1
VTS   Vitosha             36.34 301    P      P      07 06 35.6  0.0
VTS   Vitosha             36.34 301    P      P      07 06 35.6  0.0
VTS                                    pmax   pmax
      comp=Z,40nm,1.4s
VTS   Vitosha             36.34 301   eP      P      07 06 35.0 -0.6
MNK   Minsk               36.41 322   i P     P      07 06 34.7 -1.1
MNK                                   i              07 07 55.5
MNK                                   i              07 09 00.0
MNK                                   i S     S      07 12 17.1 +0.2
MNK                                   i SS    SnSn   07 14 45.7 +1.0
MNK                                   i SSS   SSS    07 15 03.0
MNK                                   i              07 16 50.2
MNK                                    pmax   pmax
      comp=E,3.0nm,0.7s
MNK                                    pmax   pmax
      comp=Z,18nm,0.9s
MNK                                    pmax   pmax
      comp=N,24nm,1.0s
MNK                                    MLR    MLR
      comp=E,328nm,16.0s
MNK                                    MLR    MLR
      comp=N,7µm,17.0s
MNK                                    MLR    MLR
      comp=Z,2µm,16.0s
MNK   Minsk               36.41 322   i P     P      07 06 34.7 -1.1
      comp=E,3.0nm,0.8s
MNK                                   i P     P      07 06 34.7 -1.1
      comp=N,24nm,1.0s
MNK                                   i P     P      07 06 34.7 -1.1
      comp=Z,18nm,0.8s,baz=115
MNK                                   i PP    PP     07 07 55.5 -3.1
MNK                                   i S     S      07 12 17.1 +0.2
MNK                                   i SS    SnSn   07 14 45.8 +1.0
MNK                                   i SSS   SSS    07 15 03.0
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MNK				*i* LQ	LQ	07 18 51.9	
MNK				*i* LR	LR	07 21 32.6	
MNK				*i* LRM	MLR	07 25 02.8	
	comp=E,328nm,16.1s						
MNK				*i* LRM	MLR	07 25 04.8	
	comp=N,7µm,17.4s						
MNK				*i* LRM	MLR	07 25 19.6	
	comp=Z,2µm,16.1s						
BTO	**Baotou**	**36.45**	**62**	*e*P	**P**	**07 06 35.3**	**-1.3**
BTO				S	**S**	**07 12 17.8**	**-0.4**
BTO				LR	LR		
	comp=Z,19µm,14.9s						
BTO				LR	LR		
	comp=Z,18µm,13.2s						
BLKB	**Belogradchik**	**36.84**	**303**	⇓P	**P**	**07 06 40.2**	**+0.5**
ENH	**Enshi**	**36.92**	**79**	P	**P**	**07 06 42.5**	**+2.0**
ENH				IAmb	IAmb	07 06 48.9	
	comp=Z,57nm,1.1s						
GZR	**Gura Zlata**	**36.98**	**306**	⇑P	**P**	**07 06 41.0**	**+0.1**
LVV	**L'vov**	**37.03**	**313**	*e*P	**P**	**07 06 40.6**	**-0.6**
LVV				*e*		07 08 08.9	
LVV				MLR	MLR		
	comp=Z,2µm,16.0s						
NACGM	**Naroch**	**37.16**	**322**	⇓*e*P	**P**	**07 06 42.7**	**+0.5**
	baz=114						
HERR	**Herculane**	**37.16**	**305**	⇑P	**P**	**07 06 43.5**	**+1.1**
BOVS	**Bovan**	**37.54**	**303**	⇑P	**P**	**07 06 46.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**37.63**	**62**	*e*P	**P**	**07 06 49.1**	**+2.5**
HHC				sS	sS	07 12 45.3	+1.9
HHC				pmax	pmax		
	comp=Z,53nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.5s						
HHC				LR	LR		
	comp=Z,7µm,15.1s						
HHC				LR	LR		
	comp=Z,7µm,15.5s						
HHC				LR	LR		
	comp=Z,9µm,14.2s						
FNA	**Florina**	**37.63**	**298**	P	**P**	**07 06 46.1**	**-0.4**
FNA				IAmb	IAmb	07 06 50.2	
	comp=Z,138nm,1.9s						
FNA	**Florina**	**37.63**	**298**	P	**P**	**07 06 46.1**	**-0.4**
FNA				pmax	pmax		
	comp=Z,138nm,1.9s						
MDVR	**Moldovita**	**37.65**	**305**	⇑P	**P**	**07 06 47.4**	**+0.9**
UZH	**Uzhgorod**	**37.87**	**311**	*e*P	**P**	**07 06 48.0**	**-0.3**
UZH				*e*S	**S**	**07 12 39.0**	**-0.2**
KBN	**Korca**	**38.08**	**298**	P	**P**	**07 06 49.2**	**-1.0**
KBN				IAmb	IAmb	07 07 17.3	
	comp=Z,40nm,0.8s						
KBN	**Korca**	**38.08**	**298**	P	**P**	**07 06 49.3**	**-1.0**
KBN				pmax	pmax		
	comp=Z,41nm,0.8s						
TIY	**Taiyuan**	**38.37**	**67**	P	**P**	**07 06 55.0**	**+2.2**
TIY				S	**S**	**07 12 53.1**	**+5.8**
TIY				LR	LR		
	comp=Z,7µm,16.5s						
TIY				LR	LR		
	comp=Z,3µm,17.2s						
TIY				LR	LR		
	comp=Z,5µm,14.4s						
CRVS	**Cervenica-Dubn**	**38.46**	**311**	*e*P	**P**	**07 06 53.9**	**+0.6**
CRVS	**Cervenica-Dubn**	**38.46**	**311**	*e*P	**P**	**07 06 53.9**	**+0.6**
LYN	**LuoYang**	**38.70**	**72**	*e*P	**P**	**07 06 55.9**	**+0.4**
LYN				pP	pP	07 06 58.9	-1.0
LYN				S	**S**	**07 12 53.3**	**+1.2**
LYN				pmax	pmax		
	comp=Z,50nm,1.7s						
LYN				LR	LR		
	comp=Z,14µm,17.7s						
LYN				LR	LR		
	comp=Z,3µm,15.9s						
LYN				LR	LR		
	comp=Z,5µm,17.5s						
VSU	**Vasula**	**38.77**	**328**	⇓*i*P	**P**	**07 06 55.3**	**-0.4**
VSU				pmax	pmax		
	comp=Z,131nm,1.6s						
PABE	**Paberze**	**38.88**	**322**	P	**P**	**07 06 55.6**	**-1.0**
PDG	**Podgorica**	**39.26**	**301**	⇑P	**P**	**07 07 00.3**	**+0.2**
NIE	**Niedzica**	**39.31**	**312**	*e*P	**P**	**07 07 02.1**	**+1.6**
PSZ	**Piszkesteto**	**39.31**	**310**	⇑P	**P**	**07 07 01.1**	**+0.5**
PSZ	**Piszkesteto**	**39.31**	**310**	P	**P**	**07 07 00.9**	**+0.4**
PSZ	**Piszkesteto**	**39.31**	**310**	P	**P**	**07 07 01.0**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,69nm,1.6s						
PSZ	**Piszkesteto**	**39.31**	**310**	P	**P**	**07 07 01.2**	**+0.5**
BEL	**Belsk**	**39.53**	**316**	*e*P	**P**	**07 07 02.9**	**+0.6**
LANS	**Liptovska Anna**	**39.79**	**311**	*e*P	**P**	**07 07 06.2**	**+1.7**
LANS	**Liptovska Anna**	**39.79**	**311**	*e*P	**P**	**07 07 06.2**	**+1.7**
LODK	**Lodwar**	**39.94**	**233**	P	**P**	**07 07 07.5**	**+1.4**
MORH	**Mrgy, Hungar**	**39.95**	**307**	P	**P**	**07 07 05.5**	**-0.2**
HNS	**HongShan**	**40.20**	**67**	⇓P	**P**	**07 07 09.9**	**+2.0**
HNS				PP	**PnPn**	**07 08 44.8**	**+0.9**
HNS				S	**S**	**07 13 14.3**	**-0.3**
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				LR	LR		
	comp=Z,6µm,15.9s						
HNS				LR	LR		
	comp=Z,4µm,19.6s						
KOVH	**Kovagotottos**	**40.31**	**306**	P	**P**	**07 07 08.2**	**-0.6**
CNSH	**ChangSha**	**40.33**	**81**	⇓P	**P**	**07 07 07.4**	**-1.8**
CNSH				S	**S**	**07 13 14.3**	**-2.5**
CNSH				pmax	pmax		
	comp=Z,63nm,1.0s						
CNSH				LR	LR		
	comp=Z,11µm,17.7s						
CNSH				LR	LR		
	comp=Z,5µm,18.9s						
CNSH				LR	LR		
	comp=Z,5µm,16.4s						
CSKK	**Cskako**	**40.33**	**308**	P	**P**	**07 07 09.4**	**+0.5**
KOLL	**Kolacno**	**40.40**	**310**	*e*P	**P**	**07 07 11.0**	**+1.5**
CIT	**Chita**	**40.42**	**44**	*e*P	**P**	**07 07 09.2**	**-0.5**
CIT				*e*		07 08 47.6	
CIT				pmax	pmax		
	comp=Z,131nm,2.4s						
FINES	**FINESS Array B**	**40.53**	**331**	P	**P**	**07 07 10.2**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=119,slow=12,SNR=7.7						
	comp=Z,4.7nm,0.7s						
FINES	**FINESS Array B**	**40.53**	**331**	*i* P	**P**	**07 07 12.6**	**+2.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NRIK	**Noril'sk**	**40.59**	**11**	P	**P**	**07 07 11.3**	**+0.5**
	comp=Z,32nm,1.1s,baz=199,slow=4.6,SNR=16						
	comp=Z,32nm,1.1s						
NRIK	**Noril'sk**	**40.59**	**11**	P	**P**	**07 07 10.8**	**0.0**
NRIK	**Noril'sk**	**40.59**	**11**	⇓*i*P	**P**	**07 07 10.9**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,52nm,1.1s						
QIZ	**Qiongzhong**	**40.79**	**96**	P	**P**	**07 07 13.8**	**+0.7**
QIZ				S	**S**	**07 13 24.8**	**+0.9**
QIZ				LR	LR		
	comp=Z,4µm,20.2s						
QIZ				LR	LR		
	comp=Z,3µm,18.0s						
QIZ				LR	LR		
	comp=Z,3µm,18.4s						
MPLH	**Magyarpolny**	**40.80**	**308**	P	**P**	**07 07 13.1**	**+0.2**
MAUC	**Maruska**	**40.89**	**311**	*e*P	**P**	**07 07 14.2**	**+0.6**
JAVC	**Velka Javorina**	**40.92**	**311**	*e*P	**P**	**07 07 14.6**	**+0.7**
XLT	**XiLinHaoTe**	**41.05**	**57**	*e*P	**P**	**07 07 18.3**	**+3.2**
XLT				pP	sP	07 07 22.3	+0.9
XLT				sP	pP	07 07 25.3	+5.8
XLT				PP	**PnPn**	**07 08 53.5**	**-0.6**
XLT				PcP	**PcP**	**07 09 10.3**	**-4.5**
XLT				S	**S**	**07 13 34.9**	**+7.4**
XLT				pmax	pmax		
	comp=Z,33nm,1.3s						
XLT				pmax	pmax		
	comp=Z,140nm,3.6s						
XLT				LR	LR		
	comp=Z,1µm,15.6s						
XLT				LR	LR		
	comp=Z,5µm,13.9s						
XLT				LR	LR		
	comp=Z,6µm,17.7s						
MODS	**Modra-Piesok**	**41.11**	**310**	*e*P	**P**	**07 07 15.3**	**-0.1**
MODS	**Modra-Piesok**	**41.11**	**310**	*e*P	**P**	**07 07 15.3**	**-0.1**
MORC	**Moravsky Berou**	**41.14**	**312**	⇑P	**P**	**07 07 15.4**	**-0.2**
MORC	**Moravsky Berou**	**41.14**	**312**	P	**P**	**07 07 15.1**	**-0.5**
MORC	**Moravsky Berou**	**41.14**	**312**	P	**P**	**07 07 15.1**	**-0.5**
MORC				pmax	pmax		
	comp=Z,22nm,1.3s						
MORC	**Moravsky Berou**	**41.14**	**312**	*e*P	**P**	**07 07 15.4**	**-0.2**
BJT	**Baijiatuau**	**41.16**	**63**	P	**P**	**07 07 16.6**	**+0.7**
BJT	**Baijiatuau**	**41.16**	**63**	P	**P**	**07 07 16.6**	**+0.7**
BJT				pmax	pmax		
	comp=Z,65nm,1.8s						
BJI	**Beijing**	**41.16**	**63**	P	**P**	**07 07 16.8**	**+0.9**
BJI				pP	**pP**	**07 07 19.3**	**-1.0**
BJI				PP	**PP**	**07 08 52.6**	**+1.8**
BJI				S	**S**	**07 13 27.5**	**-1.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,130nm,3.7s						
BJI				LR	LR		
	comp=Z,3µm,17.0s						
BJI				LR	LR		
	comp=Z,4µm,16.9s						
BJI				LR	LR		
	comp=Z,6µm,22.2s						
SOP	**Sopron**	**41.51**	**309**	P	**P**	**07 07 19.1**	**+0.4**
IPM	**Ipoh**	**41.66**	**122**	P	**P**	**07 07 20.4**	**+0.2**
IPM	**Ipoh**	**41.66**	**122**	P	**P**	**07 07 22.7**	**+2.4**
KRLC	**Kraliky**	**41.67**	**312**	AMS	AMS	07 30 40.0	
	comp=Z,3µm,14.2s						
VRAC	**Vranov**	**41.68**	**311**	*e*P	**P**	**07 07 19.4**	**-0.7**
RONA	**Rosalia, Austr**	**41.69**	**309**	*e*P	**P**	**07 07 21.7**	**+1.4**
	comp=Z,17nm,1.2s						
KRUC	**Moravsky**	**41.78**	**311**	*e*P	**P**	**07 07 20.7**	**-0.1**
APA	**Apatity**	**41.81**	**342**	⇓*i*P	**P**	**07 07 16.5**	**-4.3**
APA				pmax	pmax		
	comp=Z,18nm,0.8s						
APA				MLR	MLR		
	comp=Z,4µm,21.0s						
CUC	**Castrocucco**	**41.90**	**297**	P	**P**	**07 07 22.3**	**+0.3**
CUC				IAmb	IAmb	07 07 26.1	
	comp=Z,52nm,0.9s						
DPC	**Dobruska-Polom**	**42.00**	**313**	AMS	AMS	07 31 40.0	
	comp=Z,3µm,12.8s						
CONA	**Conrad Observa**	**42.01**	**309**	*e*P	**P**	**07 07 24.2**	**+1.4**
	comp=Z,5.0nm,1.0s						
KMBO	**Kilima Mbogo**	**42.08**	**227**	P	**P**	**07 07 25.4**	**+1.5**
	comp=Z,40nm,1.0s,baz=31,slow=11,SNR=38						
	comp=Z,40nm,1.0s						
KMBO	**Kilima Mbogo**	**42.08**	**227**	P	**P**	**07 07 25.0**	**+1.1**
KMBO				IAmb	IAmb	07 07 26.9	
	comp=Z,65nm,1.1s						
KMBO	**Kilima Mbogo**	**42.08**	**227**	*i* P	**P**	**07 07 25.6**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,41nm,1.0s						
KMBO	**Kilima Mbogo**	**42.08**	**227**	P	**P**	**07 07 25.6**	**+1.6**
KMBO				P	**P**	**07 07 25.6**	**+1.6**
OSTC	**Ostas**	**42.10**	**313**	AMS	AMS	07 31 50.0	
	comp=Z,3µm,13.8s						
ARSA	**Arzberg**	**42.17**	**308**	*e*P	**P**	**07 07 24.2**	**0.0**
	comp=Z,12nm,1.1s						
CHVC	**Chvalec**	**42.20**	**313**	*e*P	**P**	**07 07 25.4**	**+1.0**
CHVC				AMS	AMS	07 31 40.0	
	comp=Z,4µm,13.1s						
UPC	**Upice**	**42.22**	**313**	AMS	AMS	07 32 00.0	
	comp=Z,3µm,13.8s						
TIA	**Tai'an**	**42.25**	**68**	⇑P	**P**	**07 07 25.8**	**+0.9**
TIA				pmax	pmax		
	comp=Z,23nm,1.4s						
TIA				LR	LR		
	comp=Z,5µm,14.8s						
TIA				LR	LR		
	comp=Z,4µm,14.2s						
TIA				LR	LR		
	comp=Z,6µm,15.0s						
BOD	**Bodaibo**	**42.29**	**36**	*e*P	**P**	**07 07 24.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,770nm,1.9s						
SOKA	**Soboth**	**42.47**	**307**	*e*P	**P**	**07 07 27.6**	**+1.0**
	comp=Z,14nm,1.4s						
KIBK	**Kibwezi**	**42.54**	**225**	P	**P**	**07 07 28.5**	**+1.0**
KIBK	**Kibwezi**	**42.54**	**225**	P	**P**	**07 07 29.3**	**+1.8**
	SNR=12						
OBKA	**Obir**	**42.79**	**307**	*e*P	**P**	**07 07 30.8**	**+1.5**
	comp=Z,18nm,1.6s						
MOA	**Molln**	**43.07**	**309**	*e*P	**P**	**07 07 31.4**	**0.0**
	comp=Z,18nm,1.0s						
PRU	**Pruhonice**	**43.09**	**312**	AMS	AMS	07 31 30.0	
	comp=Z,3µm,14.3s						
CKRC	**Cesky Krumlov**	**43.12**	**310**	AMS	AMS	07 28 10.0	
	comp=Z,2µm,17.9s						
PVCC	**Panska Ves**	**43.14**	**313**	AMS	AMS	07 32 10.0	
	comp=Z,3µm,11.7s						
MYKA	**Terra Mystica**	**43.42**	**307**	*e*P	**P**	**07 07 34.7**	**+0.4**
	comp=Z,9.4nm,1.3s						
BIOA	**Bad Ischl, Aus**	**43.48**	**309**	*e*P	**P**	**07 07 34.9**	**+0.1**
	comp=Z,3.4nm,0.4s						
GEC2	**GERESS Array S**	**43.52**	**310**	P	**P**	**07 07 35.4**	**+0.3**
GERES	**GERESS Array B**	**43.52**	**310**	P	**P**	**07 07 35.1**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=112,slow=6.3,SNR=14						
	comp=Z,2.8nm,0.9s						
GERES	**GERESS Array B**	**43.52**	**310**	P	**P**	**07 07 34.8**	**-0.3**
BRG	**Berggiesshubel**	**43.57**	**313**	*e*P	**P**	**07 07 36.8**	**+1.4**
BRG				Amp		07 07 42.0	
	comp=Z,29nm,1.1s						
BRG				*e*x	x	07 07 45.8	
BRG				Amp		07 07 47.3	
	comp=Z,18nm,1.1s						
BRG	**Berggiesshubel**	**43.57**	**313**	*e*P	**P**	**07 07 36.8**	**+1.4**
BRG				*e*		07 07 45.8	
BRG				pmax	pmax		
	comp=Z,29nm,1.1s						
BRG				pmax	pmax		
	comp=Z,18nm,1.1s						
KHC	**Kasperske Hory**	**43.63**	**311**	P	**P**	**07 07 35.9**	**0.0**
KHC	**Kasperske Hory**	**43.63**	**311**	⇑*e*P	**P**	**07 07 36.6**	**+0.7**
KHC				pmax	pmax		
	comp=Z,37nm,1.9s						
KHC	**Kasperske Hory**	**43.63**	**311**	*e*P	**P**	**07 07 39.3**	**+3.4**
KHC				AMS	AMS	07 28 40.0	
	comp=Z,3µm,19.7s						
KBA	**Koelnbreinsper**	**43.65**	**308**	*e*P	**P**	**07 07 36.5**	**+0.2**
	comp=Z,12nm,1.4s						
NRCA	**Norcia**	**43.79**	**301**	P	**P**	**07 07 36.4**	**-1.0**
NRCA				IAmb	IAmb	07 08 32.4	
	comp=Z,104nm,2.0s						
ABTA	**Abfaltersbach**	**44.21**	**307**	*e*P	**P**	**07 07 40.7**	**+0.1**
	comp=Z,19nm,1.6s						
CLL	**Collm**	**44.21**	**314**	P	**P**	**07 07 40.7**	**+0.1**
CLL	**Collm**	**44.21**	**314**	*e*P	**P**	**07 07 41.0**	**+0.5**
CLL				*e*S	**S**	**07 14 19.0**	**+5.5**
CLL				pmax	pmax		
	comp=Z,27nm,1.5s						
CLL				MLR	MLR		
	comp=Z,3µm,19.8s						
CLL	**Collm**	**44.21**	**314**	*e*P	**P**	**07 07 41.0**	**+0.5**
	comp=Z,27nm,1.5s						
CLL				*e*PP	**PP**	**07 09 22.0**	**-1.5**
	comp=Z,25nm,1.0s						
CLL				*e*PPPP		07 10 08.0	
CLL				*e*S	**S**	**07 14 19.0**	**+5.5**
CLL				*e*SS	**SS**	**07 17 24.0**	**-7.3**
CLL				LmH		07 28 00.0	
	comp=N,6µm,20.5s						
CLL				LmH		07 28 00.0	
	comp=E,3µm,21.0s						
CLL				LmV		07 30 00.0	
	comp=Z,3µm,19.8s						
NJ2	**Nanjing**	**44.40**	**74**	*e*P	**P**	**07 07 40.0**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NKC	**Novy Kostel**	**44.45**	**312**	AMS	AMS	07 34 20.0	
	comp=Z,3µm,12.6s						
CTI	**Castel Tesino**	**44.79**	**306**	P	**P**	**07 07 44.9**	**-0.5**
CTI	**Castel Tesino**	**44.79**	**306**	P	**P**	**07 07 44.9**	**-0.5**
CTI				pmax	pmax		
	comp=Z,24nm,1.2s						
WTTA	**Wattenberg**	**44.82**	**308**	*e*P	**P**	**07 07 46.0**	**+0.3**
	comp=Z,33nm,1.9s						
WATA	**Walderalm**	**44.86**	**308**	*e*P	**P**	**07 07 45.8**	**-0.2**
	comp=Z,30nm,1.4s						
SQTA	**Sankt Quirin**	**45.11**	**308**	*e*P	**P**	**07 07 47.2**	**-0.7**
	comp=Z,19nm,1.3s						
MOTA	**Moosalm**	**45.18**	**308**	*e*P	**P**	**07 07 47.2**	**-1.4**
	comp=Z,9.5nm,1.1s						
ARA0	**ARCESS Array S**	**45.29**	**341**	*e*P	**P**	**07 07 48.5**	**-0.3**
ARCES	**ARCESS Array B**	**45.29**	**341**	P	**P**	**07 07 48.6**	**-0.3**
	comp=Z,15nm,0.6s,baz=132,slow=6.6,SNR=37						
	comp=Z,15nm,0.6s						
RETA	**Reutte**	**45.42**	**308**	*e*P	**P**	**07 07 49.1**	**-1.2**
	comp=Z,3.0nm,0.5s						
FETA	**Feichten**	**45.43**	**307**	*e*P	**P**	**07 07 50.1**	**-0.4**
	comp=Z,13nm,1.1s						
DL2	**Dalian**	**45.46**	**64**	⇑*i*P	**P**	**07 07 48.4**	**-2.3**
DL2				S	**S**	**07 14 29.0**	**-3.0**
DL2				pmax	pmax		
	comp=Z,25nm,0.8s						
DL2				pmax	pmax		
	comp=Z,100nm,4.7s						
DL2				LR	LR		
	comp=Z,1µm,11.8s						
DL2				LR	LR		
	comp=Z,4µm,16.9s						
DL2				LR	LR		
	comp=Z,5µm,18.2s						
KTK1	**Kautokeino**	**45.64**	**340**	*e*P	**P**	**07 07 51.5**	**-0.1**
DAVA	**Damuels**	**46.02**	**308**	*i* P	**P**	**07 07 54.4**	**-0.8**
	comp=Z,19nm,1.4s,SNR=7.0						
MBAR	**Mbarara**	**46.02**	**234**	P	**P**	**07 07 56.1**	**+0.6**
MBAR	**Mbarara**	**46.02**	**234**	*ce*P	**P**	**07 07 56.8**	**+1.3**
MBAR				pmax	pmax		
	comp=Z,40nm,1.7s						
MBAR	**Mbarara**	**46.02**	**234**	P	**P**	**07 07 55.5**	**0.0**
MBAR				P	**P**	**07 07 55.5**	**0.0**
HAMF	**Hammerfest**	**46.46**	**342**	*e*P	**P**	**07 07 58.5**	**+0.5**
NC602	**NORSAR Array S**	**46.77**	**327**	*e*P	**P**	**07 08 00.9**	**+0.3**
JETT	**Jettan, Norway**	**46.78**	**340**	*e*P	**P**	**07 08 00.2**	**-0.4**
NC405	**NORSAR Array S**	**46.78**	**327**	P	**P**	**07 07 60.0**	**-0.8**
OSL	**Oslo**	**46.98**	**325**	*e*P	**P**	**07 08 02.3**	**+0.1**
NB2	**NORSAR Subarra**	**47.00**	**327**	P	**P**	**07 08 00.7**	**-1.8**
	comp=Z,23nm,1.2s,baz=107,slow=7.9						
NB2	**NORSAR Subarra**	**47.00**	**327**	P	**P**	**07 08 00.7**	**-1.8**
	baz=107,slow=7.9						
NOA	**NORSAR Array B**	**47.00**	**327**	P	**P**	**07 08 01.0**	**-1.5**
	comp=Z,4.5nm,0.8s,baz=107,slow=7.6,SNR=17						
	comp=Z,4.5nm,0.8s						
NOA	**NORSAR Array B**	**47.00**	**327**	P	**P**	**07 08 01.0**	**-1.5**
MOR8	**Moi Rana**	**47.26**	**334**	*e*P	**P**	**07 08 03.8**	**-0.6**
TRO	**Tromso**	**47.26**	**339**	*e*P	**P**	**07 08 04.5**	**+0.1**
FAUS	**Fauske**	**47.43**	**336**	*e*P	**P**	**07 08 05.7**	**+0.1**
KONO	**Kongsberg**	**47.47**	**325**	*e*P	**P**	**07 08 06.2**	**+0.1**
KEST	**Kesra**	**47.51**	**292**	P	**P**	**07 08 07.3**	**+0.3**
	comp=Z,28nm,0.8s,baz=232,slow=1.7,SNR=23						
	comp=Z,28nm,0.8s						
KEST	**Kesra**	**47.51**	**292**	P	**P**	**07 08 07.0**	**+0.1**
KEST				IAmb	IAmb	07 08 08.5	
	comp=Z,41nm,0.9s						
KEST	**Kesra**	**47.51**	**292**	P	**P**	**07 08 07.2**	**+0.3**
	SNR=14						
KEST				P	**P**	**07 08 07.2**	**+0.3**
	SNR=14						
NSS	**Namsos**	**47.66**	**332**	*e*P	**P**	**07 08 07.7**	**+0.2**
CN2	**Changchun**	**47.83**	**57**	*e*P	**P**	**07 08 07.3**	**-1.8**
CN2				*e*PP	**PP**	**07 09 58.3**	**-2.6**
CN2				*e*S	**S**	**07 15 01.3**	**-4.4**
CN2				*e*sS	sS	07 15 15.1	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CN2				LR	LR		
	comp=Z,6µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,5µm,16.0s						
ECH	**Echery**	**47.85**	**309**	P	**P**	**07 08 08.5**	**-0.8**
ECH				IAmb	IAmb	07 09 52.3	
	comp=Z,26nm,1.2s						
ECH	**Echery**	**47.85**	**309**	P	**P**	**07 08 08.5**	**-0.8**
ECH				pmax	pmax		
	comp=Z,26nm,1.2s						
DOMB	**Dombas**	**48.24**	**328**	*e*P	**P**	**07 08 12.1**	**0.0**
SKAR	**Skarslia**	**48.31**	**326**	*e*P	**P**	**07 08 12.4**	**-0.2**
BNI	**Bardonecchia**	**48.32**	**305**	P	**P**	**07 08 12.0**	**-1.1**
BNI				IAmb	IAmb	07 10 04.4	
	comp=Z,24nm,1.1s						
BNI	**Bardonecchia**	**48.32**	**305**	P	**P**	**07 08 12.0**	**-1.1**
BNI				pmax	pmax		
	comp=Z,24nm,1.1s						
WLF	**Walferdange**	**48.49**	**311**	*d*P	**P**	**07 08 15.8**	**+1.6**
BTNL	**Ternell**	**48.51**	**312**	*d*P	**P**	**07 08 15.2**	**+0.9**
SSLB	**Suanglung**	**48.54**	**84**	P	**P**	**07 08 16.0**	**+1.0**
SSLB				IAmb	IAmb	07 10 02.6	
	comp=Z,30nm,0.9s						
ZEA	**Zeya**	**48.87**	**44**	*e*P	**P**	**07 08 18.9**	**+1.9**
ZEA				pmax	pmax		
	comp=Z,20nm,1.6s						
YULB	**Yu-li**	**48.98**	**85**	P	**P**	**07 08 18.8**	**+0.5**
BNX	**BinXian**	**49.07**	**54**	⇓P	**P**	**07 08 20.9**	**+2.2**
BNX				pmax	pmax		
	comp=Z,67nm,1.4s						
BNX				pmax	pmax		
	comp=Z,220nm,5.0s						
RCHB	**Rochefort**	**49.09**	**312**	*d*P	**P**	**07 08 19.3**	**+0.6**
BGES	**Gesves**	**49.17**	**312**	*d*P	**P**	**07 08 20.3**	**+0.9**
AKN	**Aaknes**	**49.22**	**328**	*e*P	**P**	**07 08 19.4**	**-0.2**
BMRD	**Maredsous**	**49.38**	**312**	*d*P	**P**	**07 08 20.9**	**-0.1**
DOU	**Dourbes**	**49.49**	**312**	*d*P	**P**	**07 08 22.5**	**+0.7**
SNF	**Seneffe**	**49.69**	**312**	*d*P	**P**	**07 08 24.2**	**+0.9**
SSB	**Saint Sauveur**	**49.80**	**305**	P	**P**	**07 08 24.1**	**-0.3**
SSB				IAmb	IAmb	07 10 07.5	
	comp=Z,71nm,1.9s						
SSB	**Saint Sauveur**	**49.80**	**305**	P	**P**	**07 08 24.1**	**-0.3**
SSB				pmax	pmax		
	comp=Z,71nm,1.9s						
BJO1	**Bjornoya**	**49.84**	**345**	*e*P	**P**	**07 08 23.4**	**-0.7**
KSAR	**Wonju Array Be**	**50.56**	**65**	P	**P**	**07 08 29.4**	**-0.8**
KSAR	**Wonju Array Be**	**50.56**	**65**	P	**P**	**07 08 29.4**	**-0.8**
KSRS	**Korea Array**	**50.59**	**65**	P	**P**	**07 08 28.7**	**-1.7**
	comp=Z,6.9nm,0.8s,baz=268,slow=7.2,SNR=20						
	comp=Z,6.9nm,0.8s						
KSM	**Kuching**	**50.62**	**116**	P	**P**	**07 08 33.4**	**+2.6**
SEHB	**SEOHWA**	**50.69**	**64**	P	**P**	**07 08 32.5**	**+1.4**
SEHB				IAmb	IAmb	07 10 13.3	
	comp=Z,44nm,1.2s						
MDJ	**Mudanjiang**	**50.71**	**55**	P	**P**	**07 08 30.3**	**-0.9**
MDJ				pP	pP	07 08 33.8	-1.9
MDJ				sP	sP	07 08 35.6	-2.0
MDJ				S	**S**	**07 15 41.9**	**-4.3**
MDJ				ScS	**ScS**	**07 18 20.8**	**-1.1**
MDJ				SS	**SS**	**07 19 17.1**	**-3.2**
MDJ				pmax	pmax		
	comp=Z,14nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.1s						
MDJ				LR	LR		
	comp=Z,4µm,14.0s						
MDJ				LR	LR		
	comp=Z,6µm,14.0s						
MDJ				LR	LR		
	comp=Z,8µm,14.0s						
YAK	**Yakutsk**	**50.93**	**33**	P	**P**	**07 08 32.3**	**-0.3**
YAK	**Yakutsk**	**50.93**	**33**	*c i*P	**P**	**07 08 34.4**	**+1.9**
YAK				*e**PP	**sP**	**07 08 43.2**	**+4.3**
YAK				*e*		07 09 52.0	
YAK				*e*		07 10 29.8	
YAK				*e*S	**S**	**07 15 48.3**	**-0.3**
YAK				*e*SS	**SS**	**07 19 15.8**	**-7.3**
YAK				*e*SSS	SSS	07 20 50.3	
YAK				pmax	pmax		
	comp=Z,75nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,67nm,1.5s						
YAK				pmax	pmax		
	comp=Z,68nm,0.8s						
YAK				pmax	pmax		
	comp=E,26nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,0.8s						
YAK				smax	smax		
	comp=N,136nm,2.3s						
YAK				smax	smax		
	comp=E,57nm,2.0s						
YAK				MLR	MLR		
	comp=Z,3µm,12.0s						
YAK				MLR	MLR		
	comp=E,2µm,12.0s						
YAK				MLR	MLR		
	comp=N,4µm,17.0s						
SBUM	**Sibu**	**51.50**	**114**	P	**P**	**07 08 37.4**	**-0.1**
SBUM				IAmb	IAmb	07 08 41.6	
	comp=Z,73nm,1.8s						
KLR	**Kul'dur**	**51.74**	**49**	P	**P**	**07 08 38.6**	**-0.2**
	comp=Z,10nm,1.1s,baz=276,slow=8.5,SNR=12						
	comp=Z,10nm,1.1s						
KLR	**Kul'dur**	**51.74**	**49**	⇑*e*P	**P**	**07 08 38.7**	**-0.2**

KLR				pmax	pmax		
	comp=Z,33nm,1.5s						
SPA0	**Spitsbergen Ar**	**52.40**	**348**	*e*P	**P**	**07 08 43.4**	**0.0**
TIXI	**Tiksi**	**52.60**	**21**	P	**P**	**07 08 44.2**	**-0.6**
	comp=Z,13nm,0.8s,baz=90,slow=20,SNR=18						
	comp=Z,13nm,0.8s						
TIXI	**Tiksi**	**52.60**	**21**	P	**P**	**07 08 45.5**	**+0.6**
TIXI	**Tiksi**	**52.60**	**21**	P	**P**	**07 08 45.5**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,24nm,0.9s						
KBS	**Kingsbay**	**53.55**	**349**	*e*P	**P**	**07 08 52.4**	**+0.6**
JNU	**Nakatsue**	**53.97**	**69**	P	**P**	**07 08 57.6**	**+1.9**
JNU				IAmb	IAmb	07 10 53.6	
	comp=Z,28nm,1.1s						
JNU	**Nakatsue**	**53.97**	**69**	P	**P**	**07 08 58.4**	**+2.8**
GRNR	**Gornyy**	**54.60**	**47**⇑	*i*P	**P**	**07 09 00.5**	**+0.6**
GRNR				*e*S	**S**	**07 16 43.3**	**+4.2**
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,2µm,16.0s						
GRNR				MLR	MLR		
	comp=N,2µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,18.0s						
VOI	**Vohitsoka**	**55.55**	**202**	P	**P**	**07 09 08.3**	**+1.2**
ESDC	**Sonseca Array**	**56.96**	**300**	P	**P**	**07 09 15.6**	**-1.5**
	comp=Z,6.0nm,1.0s,baz=62,slow=7.1,SNR=20						
	comp=Z,6.0nm,1.0s						
ESDC	**Sonseca Array**	**56.96**	**300**	P	**P**	**07 09 15.4**	**-1.7**
INU	**Inuyama**	**58.22**	**65**	P	**P**	**07 09 26.4**	**+0.5**
INU				IAmb	IAmb	07 11 06.2	
	comp=Z,27nm,0.8s						
INU	**Inuyama**	**58.22**	**65**	P	**P**	**07 09 27.3**	**+1.4**
UGL	**Uglegorsk**	**58.47**	**48**	*e*P	**P**	**07 09 29.9**	**+2.5**
UGL				pmax	pmax		
	comp=Z,90nm,0.7s						
UGL				MLR	MLR		
	comp=E,5µm,20.0s						
UGL				MLR	MLR		
	comp=N,2µm,10.0s						
UGL				MLR	MLR		
	comp=Z,4µm,14.0s						
LSZ	**Lusaka**	**58.65**	**224**	P	**P**	**07 09 28.8**	**-0.4**
LSZ				IAmb	IAmb	07 09 31.0	
	comp=Z,43nm,1.2s						
LSZ	**Lusaka**	**58.65**	**224**	P	**P**	**07 09 28.8**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,43nm,1.2s						
MAJO	**Matsushiro**	**58.79**	**63**	P	**P**	**07 09 30.2**	**+0.2**
MAJO				IAmb	IAmb	07 11 09.9	
	comp=Z,49nm,1.8s						
MAJO	**Matsushiro**	**58.79**	**63**⇓	*e*P	**P**	**07 09 30.4**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,28nm,2.0s						
MAJO	**Matsushiro**	**58.79**	**63**	P	**P**	**07 09 31.4**	**+1.5**
MJAR	**Matsushiro Arr**	**58.80**	**63**	P	**P**	**07 09 31.1**	**+1.1**
	comp=Z,3.7nm,0.9s,baz=289,slow=8.7,SNR=9.5						
	comp=Z,3.7nm,0.9s						
MJAR	**Matsushiro Arr**	**58.80**	**63**	P	**P**	**07 09 30.3**	**+0.4**
MJAR				IAmb	IAmb	07 09 33.3	
	comp=Z,37nm,2.0s						
YSS	**Yuzh-Sakhalins**	**59.38**	**51**⇑	*e*P	**P**	**07 09 36.9**	**+3.1**
YSS				*e*		07 11 49.4	
YSS				*e*PPP	PPP	07 13 17.0	
YSS				*e*S	**S**	**07 17 42.2**	**0.0**
YSS				*e*PS	**PnS**	**07 17 55.2**	**+0.8**
YSS				*e*		07 19 16.9	
YSS				*e*SS	**SS**	**07 21 39.4**	**+2.7**
YSS				*e*SSS	SSS	07 23 54.1	
YSS				pmax	pmax		
	comp=Z,50nm,1.6s						
YSS				MLR	MLR		
	comp=Z,5µm,19.0s						
YSS				MLR	MLR		
	comp=N,3µm,15.0s						
YSS				MLR	MLR		
	comp=E,3µm,20.0s						
YSS	**Yuzh-Sakhalins**	**59.38**	**51**	P	**P**	**07 09 36.5**	**+2.7**
MDT	**Midelt**	**59.41**	**292**	P	**P**	**07 09 33.9**	**-0.5**
	comp=E,8.3nm,0.9s,baz=86,slow=11,SNR=8.5						
	comp=E,8.3nm,0.9s						
MTE	**Manteigas**	**59.43**	**301**	*e*P	**P**	**07 09 34.3**	**-0.1**
	comp=E,40nm,1.5s						
PCBR	**Castelo Branco**	**59.53**	**301**	*e*P	**P**	**07 09 34.8**	**-0.2**
	comp=E,32nm,1.4s						
PMRV	**Marv??o**	**59.59**	**300**	*e*P	**P**	**07 09 34.4**	**-1.0**
PVIS	**Viseu**	**59.60**	**302**	*e*P	**P**	**07 09 35.5**	**0.0**
	comp=E,41nm,1.4s						
PBAR	**Barrancos**	**59.68**	**299**	*e*P	**P**	**07 09 35.5**	**-0.5**
	comp=E,48nm,1.3s						
PBEJ	**Beja**	**60.34**	**299**	*e*P	**P**	**07 09 40.4**	**-0.2**
PCVE	**Castro Verde**	**60.59**	**299**	*e*P	**P**	**07 09 41.4**	**-0.9**
PNCL	**Nicolau / Gran**	**60.82**	**299**	*e*P	**P**	**07 09 44.1**	**+0.3**
APSI	**Ampana**	**61.04**	**110**	P	**P**	**07 09 45.1**	**-0.5**
	comp=E,361nmcomp=E,30nm,1.3s						
MORF	**Marmelete**	**61.16**	**298**	*e*P	**P**	**07 09 45.8**	**-0.4**
MA2	**Magadan**	**61.31**	**35**	P	**P**	**07 09 46.1**	**-0.7**
	comp=E,27nm,1.1s,baz=143,slow=20,SNR=5.0						
	comp=E,27nm,1.1s						
MA2	**Magadan**	**61.31**	**35**⇑	*e*P	**P**	**07 09 49.0**	**+2.2**
MA2				pmax	pmax		
	comp=Z,68nm,1.3s						
MA2	**Magadan**	**61.31**	**35**	P	**P**	**07 09 49.8**	**+3.0**
SEY	**Seymchan**	**61.38**	**31**	P	**P**	**07 09 46.5**	**-0.7**
	comp=Z,9.3nm,0.7s,baz=286,slow=7.8,SNR=21						
	comp=Z,9.3nm,0.7s						
SEY	**Seymchan**	**61.38**	**31**⇓	*i*P	**P**	**07 09 47.4**	**+0.2**
SEY				pmax	pmax		
	comp=Z,67nm,1.7s						
TORD	**Torodi Ar. Bea**	**61.81**	**269**	P	**P**	**07 09 48.8**	**-2.1**
	comp=Z,39nm,1.0s,baz=71,slow=9.6,SNR=9.7						
	comp=Z,39nm,1.0s						
BLWY	**Bulawayo**	**62.23**	**221**⇑	*i*P	**P**	**07 09 53.5**	**-0.2**
BLWY				IAmb	IAmb	07 09 54.4	
	comp=Z,141nm,1.0s						
BLWY	**Bulawayo**	**62.23**	**221**	*i* P	**P**	**07 09 53.2**	**-0.5**
BLWY	**Bulawayo**	**62.23**	**221**	*i* P	**P**	**07 09 53.2**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**62.25**	**53**⇓	*e*P	**P**	**07 09 54.5**	**+1.2**
MATP	**Matopo**	**62.52**	**221**	*i* P	**P**	**07 09 56.4**	**+0.9**
MATP	**Matopo**	**62.52**	**221**	*i* P	**P**	**07 09 56.4**	**+0.9**
MOPA	**Mopani**	**63.49**	**216**	*e*P	**P**	**07 10 01.6**	**-0.2**
MOPA				IAmb	IAmb	07 10 02.3	
	comp=Z,18nm,0.9s						
SUMG	**Summit**	**65.38**	**341**	P	**P**	**07 10 13.8**	**-0.3**
SUMG	**Summit**	**65.38**	**341**	P	**P**	**07 10 13.8**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,47nm,0.9s						
BILL	**Bilibino**	**65.51**	**24**	P	**P**	**07 10 16.5**	**+2.0**
BILL	**Bilibino**	**65.51**	**24***c*	*i*P	**P**	**07 10 16.4**	**+2.0**
BILL				*e*		07 10 47.5	
BILL				*e*		07 12 37.8	
BILL				*e*PPP	PPP	07 14 09.7	
BILL				pmax	pmax		
	comp=Z,44nm,1.7s						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s						
KOWA	**Kowa**	**66.11**	**273**	P	**P**	**07 10 17.7**	**-1.4**
POGA	**Pongola**	**66.53**	**214**	*e*P	**P**	**07 10 20.9**	**-0.6**
POGA				IAmb	IAmb	07 10 22.5	
	comp=Z,29nm,1.2s						
PEA0B	**Petropavlovsk-**	**66.84**	**41**⇑	*e*P	**P**	**07 10 22.1**	**-1.1**
PETK	**Petropavlovsk-**	**66.84**	**41**	P	**P**	**07 10 23.8**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=20,slow=2.1,SNR=6.9						
	comp=Z,3.5nm,0.8s						
PET	**Petropavlovsk**	**67.40**	**41**⇓	*e*P	**P**	**07 10 27.4**	**+0.6**
PET				pmax	pmax		
	comp=Z,29nm,1.0s						
NWCL	**Newcastle**	**67.74**	**215**	*e*P	**P**	**07 10 28.7**	**-0.6**
NWCL				IAmb	IAmb	07 10 30.0	
	comp=Z,21nm,0.9s						
KSR	**Koster**	**67.74**	**218**	*e*P	**P**	**07 10 29.8**	**+0.3**
KSR				IAmb	IAmb	07 10 30.4	
	comp=Z,14nm,1.1s						
LBTB	**Lobatse**	**67.78**	**220**⇑	*i*P	**P**	**07 10 30.1**	**+0.5**
LBTB				IAmb	IAmb	07 10 30.6	
	comp=Z,32nm,0.8s						
LBTB	**Lobatse**	**67.78**	**220**	P	**P**	**07 10 29.1**	**-0.5**
LBTB	**Lobatse**	**67.78**	**220**	P	**P**	**07 10 29.1**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,32nm,0.8s						
LBTB	**Lobatse**	**67.78**	**220**	*i* P	**P**	**07 10 30.3**	**+0.7**
LBTB	**Lobatse**	**67.78**	**220**	*i* P	**P**	**07 10 30.3**	**+0.7**
TSUM	**Tsumeb**	**68.29**	**230**	*e*P	**P**	**07 10 32.4**	**-0.5**
TSUM				IAmb	IAmb	07 10 34.4	
	comp=Z,228nm,1.1s						
TSUM	**Tsumeb**	**68.29**	**230**	P	**P**	**07 10 33.1**	**+0.2**
TSUM				IAmb	IAmb	07 10 34.7	
	comp=Z,29nm,1.1s						
EUNU	**Eureka**	**68.54**	**355**	P	**P**	**07 10 34.5**	**+0.8**
EUNU				IAmb	IAmb	07 10 49.8	
	comp=Z,16nm,0.7s						
PMAR	**Madeira**	**69.12**	**296**	*e*P	**P**	**07 10 38.9**	**+0.7**
	comp=Z,97nm,2.0s						
SNKL	**Senekal, Frees**	**69.24**	**216**	*e*P	**P**	**07 10 38.2**	**-0.6**
SNKL				IAmb	IAmb	07 10 39.6	
	comp=Z,61nm,1.1s						
SWZ	**Schweizer**	**69.64**	**219**	*e*P	**P**	**07 10 40.5**	**-0.7**
SWZ				IAmb	IAmb	07 10 41.6	
	comp=Z,25nm,0.9s						
GIRL	**Giralia**	**70.05**	**133**	P	**P**	**07 10 47.5**	**+3.9**
DBIC	**Dimbokro**	**70.57**	**266**⇑	*i*P	**P**	**07 10 45.6**	**-1.5**
DBIC				IAmb	IAmb	07 10 46.5	
	comp=Z,225nm,2.5s						
DBIC	**Dimbokro**	**70.57**	**266**	P	**P**	**07 10 45.7**	**-1.4**
	comp=Z,8.9nm,0.9s,baz=49,slow=10.0,SNR=5.2						
	comp=Z,8.9nm,0.9s						
DBIC	**Dimbokro**	**70.57**	**266**	IAmb	IAmb	07 10 48.1	
	comp=Z,29nm,1.3s						
KIC	**Kosan Boka**	**70.63**	**266**	*e*P	**P**	**07 10 45.6**	**-1.9**
	comp=Z,22nm,0.9s						
ILULI	**Ilulissat**	**70.66**	**340**	P	**P**	**07 10 47.0**	**+0.2**
ILULI				IAmb	IAmb	07 12 28.4	
	comp=Z,46nm,1.2s						
ILULI	**Ilulissat**	**70.66**	**340**	P	**P**	**07 10 47.0**	**+0.2**
ILULI				pmax	pmax		
	comp=Z,46nm,1.2s						
TIC	**Toumodi**	**70.73**	**266**	*e*P	**P**	**07 10 46.4**	**-1.7**
BOSA	**Boshof**	**70.82**	**218**	*e*P	**P**	**07 10 48.0**	**-0.4**
BOSA				IAmb	IAmb	07 10 49.0	
	comp=Z,32nm,0.9s						
BOSA	**Boshof**	**70.82**	**218**	P	**P**	**07 10 48.2**	**-0.1**
	comp=Z,21nm,0.7s,baz=37,slow=6.2,SNR=43						
	comp=Z,21nm,0.7s						
BOSA	**Boshof**	**70.82**	**218**	P	**P**	**07 10 47.8**	**-0.6**
BOSA				IAmb	IAmb	07 10 49.2	
	comp=Z,31nm,0.8s						
BOSA	**Boshof**	**70.82**	**218**	P	**P**	**07 10 47.8**	**-0.6**
BOSA				pmax	pmax		
	comp=Z,31nm,0.9s						
BOSA	**Boshof**	**70.82**	**218**	*i* P	**P**	**07 10 47.5**	**-0.9**
BOSA	**Boshof**	**70.82**	**218**	*i* P	**P**	**07 10 47.5**	**-0.9**
LIC	**Lamto**	**70.94**	**266**	*e*P	**P**	**07 10 48.2**	**-1.2**
	comp=Z,43nm,1.6s						
UPI	**Upington**	**72.81**	**221**⇑	*i*P	**P**	**07 11 00.7**	**+0.3**
UPI				IAmb	IAmb	07 11 01.6	
	comp=Z,22nm,1.1s						
PSA00	**Pilbara Seismi**	**72.94**	**129**	P	**P**	**07 11 02.6**	**+1.4**
KEIM	**Keimoes**	**73.23**	**221**	*e*P	**P**	**07 11 03.3**	**+0.5**
KEIM				IAmb	IAmb	07 11 03.8	
	comp=Z,27nm,0.8s						
A21K	**Barrow**	**73.91**	**13**	P	**P**	**07 11 06.0**	**-0.1**
A21K	**Barrow**	**73.91**	**13**	P	**P**	**07 11 05.1**	**-1.0**
	baz=322						
SOE	**Somerset East**	**73.95**	**215**	*e*P	**P**	**07 11 06.9**	**-0.1**
SOE				IAmb	IAmb	07 11 08.4	
	comp=Z,52nm,1.3s						
RDOG	**Red Dog Mine**	**75.00**	**17**	P	**P**	**07 11 12.7**	**+0.2**
RDOG				IAmb	IAmb	07 12 51.9	
	comp=Z,84nm,1.7s						
RDOG	**Red Dog Mine**	**75.00**	**17**	P	**P**	**07 11 11.0**	**-1.5**
	baz=317						
GRAN	**Grantham**	**75.36**	**218**	*e*P	**P**	**07 11 15.4**	**+0.3**
GRAN				IAmb	IAmb	07 11 17.1	
	comp=Z,4.4nm,0.8s						
GAMB	**Gambell**	**75.39**	**23**	P	**P**	**07 11 15.7**	**+0.9**
GAMB	**Gambell**	**75.39**	**23**	P	**P**	**07 11 13.8**	**-1.0**
	baz=311,SNR=9.0						
TNA	**Tin City**	**75.39**	**20**	P	**P**	**07 11 15.1**	**+0.4**
TNA	**Tin City**	**75.39**	**20**	P	**P**	**07 11 13.8**	**-1.0**
	baz=314,SNR=5.8						
MEEK	**Meekatharra**	**75.68**	**133**	P	**P**	**07 11 19.3**	**+2.3**
MORW	**Morawa**	**75.86**	**137**	P	**P**	**07 11 19.9**	**+1.9**
CVNA	**Calvinia**	**76.03**	**220**	*e*P	**P**	**07 11 19.4**	**+0.4**
CVNA				IAmb	IAmb	07 11 19.9	
	comp=Z,29nm,1.1s						
ANM	**Nome**	**76.86**	**20**	P	**P**	**07 11 25.2**	**+2.0**
ANM	**Nome**	**76.86**	**20**	P	**P**	**07 11 25.2**	**+2.0**
ANM				pmax	pmax		
	comp=Z,82nm,1.7s						
ANM	**Nome**	**76.86**	**20**	P	**P**	**07 11 22.6**	**-0.6**
	baz=316,SNR=14						
MATJ	**Matjiesfontein**	**76.95**	**218**	*e*P	**P**	**07 11 23.7**	**-0.5**
MATJ				IAmb	IAmb	07 11 25.7	
	comp=Z,50nm,1.2s						
A36M	**Sachs Harbour**	**77.33**	**4**	P	**P**	**07 11 25.7**	**0.0**
A36M	**Sachs Harbour**	**77.33**	**4**	P	**P**	**07 11 25.1**	**-0.6**
	baz=350,SNR=29						
GENI	**Genyem**	**77.35**	**101**	P	**P**	**07 11 30.9**	**+4.1**
BLDU	**Ballidu**	**77.39**	**137**	P	**P**	**07 11 28.5**	**+1.9**
TOLK	**Toolik Lake Re**	**77.50**	**13**	P	**P**	**07 11 27.4**	**+0.5**
TOLK	**Toolik Lake Re**	**77.50**	**13**	P	**P**	**07 11 25.9**	**-0.9**
	baz=329						
CER	**Ceres**	**77.71**	**219**	*e*P	**P**	**07 11 29.1**	**+0.7**
CER				IAmb	IAmb	07 11 30.3	
	comp=Z,86nm,2.1s						
COLD	**Coldfoot**	**78.59**	**14**	P	**P**	**07 11 31.9**	**-0.9**
	baz=328,SNR=76						
GCSA	**Galena City Sc**	**79.10**	**17**	P	**P**	**07 11 34.8**	**-0.8**
	baz=323,SNR=17						
H21K	**Melozitna Rive**	**79.35**	**15**	P	**P**	**07 11 36.9**	**-0.2**
H21K				IAmb	IAmb	07 11 41.0	
	comp=Z,46nm,1.1s						
H21K	**Melozitna Rive**	**79.35**	**15**	P	**P**	**07 11 36.4**	**-0.6**
	baz=326,SNR=66						
BMAR	**Burnt Mountain**	**79.48**	**12**	P	**P**	**07 11 38.7**	**+0.9**
H23K	**Yukon River**	**79.93**	**14**	P	**P**	**07 11 40.9**	**+0.7**
H23K				IAmb	IAmb	07 13 22.8	
	comp=Z,46nm,1.1s						
H23K	**Yukon River**	**79.93**	**14**	P	**P**	**07 11 39.5**	**-0.7**
	baz=329,SNR=40						
I21K	**Tanana**	**79.94**	**15**	P	**P**	**07 11 39.5**	**-0.7**
	baz=327,SNR=6.0						
C36M	**Paulatuk**	**80.02**	**4**	P	**P**	**07 11 39.0**	**-1.5**
C36M				IAmb	IAmb	07 11 43.0	
	comp=Z,21nm,0.8s						
C36M	**Paulatuk**	**80.02**	**4**	P	**P**	**07 11 39.0**	**-1.5**
	baz=351,SNR=23						
INK	**Inuvik**	**80.24**	**7**	P	**P**	**07 11 42.1**	**+0.3**
	comp=Z,29nm,1.0s,baz=352,slow=8.1,SNR=29						
	comp=Z,29nm,1.0s						
INK	**Inuvik**	**80.24**	**7**	P	**P**	**07 11 40.8**	**-0.9**
	baz=343,SNR=50						
J20K	**Nowinta River**	**80.26**	**17**	P	**P**	**07 11 41.9**	**0.0**
J20K				IAmb	IAmb	07 11 46.1	
	comp=Z,42nm,1.1s						
J20K	**Nowinta River**	**80.26**	**17**	P	**P**	**07 11 41.3**	**-0.7**
	baz=325,SNR=48						
H24K	**Noodor Dome**	**80.26**	**14**	P	**P**	**07 11 42.4**	**+0.3**
H24K				IAmb	IAmb	07 13 23.8	
	comp=Z,46nm,1.2s						
H24K	**Noodor Dome**	**80.26**	**14**	P	**P**	**07 11 41.3**	**-0.8**
	baz=330,SNR=31						
SPIA	**Saint Paul Isl**	**80.35**	**28**	P	**P**	**07 11 41.8**	**-0.7**
	baz=313						
I23K	**Minto, Yukon-K**	**80.55**	**15**	P	**P**	**07 11 44.2**	**+0.7**
I23K				IAmb	IAmb	07 13 25.7	
	comp=Z,54nm,1.2s						
I23K	**Minto, Yukon-K**	**80.55**	**15**	P	**P**	**07 11 42.7**	**-0.8**
	baz=329,SNR=33						
TTA	**Tatalina**	**80.79**	**18**	P	**P**	**07 11 44.5**	**-0.4**
TTA				IAmb	IAmb	07 13 26.1	
	comp=Z,35nm,1.4s						
TTA	**Tatalina**	**80.79**	**18**	P	**P**	**07 11 44.5**	**-0.4**
TTA				pmax	pmax		
	comp=Z,35nm,1.4s						
TTA	**Tatalina**	**80.79**	**18**	P	**P**	**07 11 44.0**	**-0.9**
	baz=324,SNR=21						
CHUM	**Lake Minchumin**	**80.95**	**16**	P	**P**	**07 11 44.9**	**-0.8**
	baz=327,SNR=27						
K20K	**Telida**	**80.95**	**17**	P	**P**	**07 11 44.8**	**-1.0**
	baz=326,SNR=43						
MDM	**Murphy Dome**	**80.96**	**14**	P	**P**	**07 11 46.0**	**+0.2**
POKR	**Poker Plat Res**	**80.98**	**14**	P	**P**	**07 11 46.0**	**+0.1**
POKR	**Poker Plat Res**	**80.98**	**14**	P	**P**	**07 11 44.9**	**-1.0**
	baz=331,SNR=42						
WRKA	**Warakurna**	**81.04**	**126**	P	**P**	**07 11 49.6**	**+2.9**
BPAW	**Bear Paw Mtn.**	**81.08**	**16**	P	**P**	**07 11 46.5**	**+0.1**
BPAW				IAmb	IAmb	07 13 29.0	
	comp=Z,41nm,1.1s						
BPAW	**Bear Paw Mtn.**	**81.08**	**16**	P	**P**	**07 11 45.6**	**-0.9**
	baz=328,SNR=33						
NEA2	**Nenana**	**81.09**	**15**	P	**P**	**07 11 45.5**	**-1.0**
	baz=330,SNR=98						
TCOL	**CIGO, UAF Yank**	**81.11**	**14**	P	**P**	**07 11 45.3**	**-1.1**
	baz=331,SNR=20						
COLA	**College**	**81.11**	**14***d*	*i*P	**P**	**07 11 46.9**	**+0.4**
COLA				pmax	pmax		
	comp=Z,77nm,1.1s						
COLA	**College**	**81.11**	**14**	P	**P**	**07 11 45.3**	**-1.1**
	baz=331						
CCB	**Clear Creek Bu**	**81.32**	**14**	P	**P**	**07 11 46.9**	**-0.7**
CAST	**Castle Rocks**	**81.40**	**16**	P	**P**	**07 11 48.2**	**+0.1**
CAST	**Castle Rocks**	**81.40**	**16**	P	**P**	**07 11 47.8**	**-0.3**
	baz=327,SNR=126						
IL31		**81.40**	**14**	P	**P**	**07 11 46.9**	**-1.1**
IL31				IAmb	IAmb	07 11 51.8	
	comp=Z,35nm,1.1s						
ILAR	**Eielson Array**	**81.40**	**14**	P	**P**	**07 11 47.4**	**-0.7**
	comp=Z,32nm,1.1s,baz=325,slow=3.5,SNR=96						
ILAR				PKKPbc	**PKKPbc**	**07 30 21.1**	**-1.8**
	comp=Z,0.8nm,0.9s,baz=184,slow=2.7,SNR=6.9						
	comp=Z,32nm,1.1s						
ILAR	**Eielson Array**	**81.40**	**14**	P	**P**	**07 11 46.9**	**-1.2**
ILAR	**Eielson Array**	**81.40**	**14**	P	**P**	**07 11 46.9**	**-1.2**
WRH	**Wood River Hil**	**81.41**	**14**	P	**P**	**07 11 47.6**	**-0.5**
EPYK	**Eagle Plains**	**81.69**	**9**	P	**P**	**07 11 50.0**	**+0.4**
EPYK				IAmb	IAmb	07 13 30.4	
	comp=Z,42nm,1.1s						
EPYK	**Eagle Plains**	**81.69**	**9**	P	**P**	**07 11 49.1**	**-0.5**
	baz=340,SNR=14						
HDA	**Harding Lake**	**81.71**	**14**	P	**P**	**07 11 49.0**	**-0.7**
HDA				IAmb	IAmb	07 11 52.3	
	comp=Z,21nm,1.0s						
HDA	**Harding Lake**	**81.71**	**14**	P	**P**	**07 11 48.8**	**-0.9**
	baz=331,SNR=34						
L19K	**White Mountain**	**81.72**	**18**	P	**P**	**07 11 49.8**	**0.0**
L19K	**White Mountain**	**81.72**	**18**	P	**P**	**07 11 49.0**	**-0.8**
	baz=325,SNR=19						
L20K	**Farewell, AK**	**81.73**	**18**	P	**P**	**07 11 48.9**	**-1.0**
	baz=326,SNR=19						
TRF	**Thorofare Moun**	**81.80**	**16**	P	**P**	**07 11 49.8**	**-0.6**
TRF				IAmb	IAmb	07 11 53.9	
	comp=Z,25nm,1.1s						
TRF	**Thorofare Moun**	**81.80**	**16**	P	**P**	**07 11 49.7**	**-0.7**
	baz=329,SNR=14						
PPLA	**Purkeypile**	**81.81**	**17**	P	**P**	**07 11 49.2**	**-1.3**
	baz=327						
J25K	**Salcha River,**	**81.85**	**13**	P	**P**	**07 11 50.6**	**+0.1**
J25K				IAmb	IAmb	07 13 31.2	
	comp=Z,33nm,1.1s						
J25K	**Salcha River,**	**81.85**	**13**	P	**P**	**07 11 49.8**	**-0.7**
	baz=333,SNR=25						
MCK	**McKinley**	**81.87**	**15**	P	**P**	**07 11 50.9**	**+0.3**
MCK	**McKinley**	**81.87**	**15**	P	**P**	**07 11 50.9**	**+0.3**
MCK				pmax	pmax		
	comp=Z,46nm,1.2s						
MCK	**McKinley**	**81.87**	**15**	P	**P**	**07 11 50.3**	**-0.3**
	baz=330,SNR=15						
M19K	**Big River Lodg**	**82.07**	**18**	P	**P**	**07 11 53.1**	**+1.5**
M19K	**Big River Lodg**	**82.07**	**18**	P	**P**	**07 11 51.0**	**-0.6**
	baz=325						
WB0	**Warramunga Arr**	**82.26**	**118**	P	**P**	**07 11 54.0**	**+0.8**
J26L	**Joseph Creek**	**82.30**	**13**	P	**P**	**07 11 52.4**	**-0.5**
	baz=334,SNR=66						
WRA	**Warramunga Arr**	**82.32**	**118**	P	**P**	**07 11 53.6**	**0.0**
	comp=Z,11nm,1.0s,baz=315,slow=4.8,SNR=20						
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**82.32**	**118**	P	**P**	**07 11 54.6**	**+1.0**
WRAB	**Tennant Creek**	**82.33**	**118**⇑	*e*P	**P**	**07 11 53.3**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,47nm,1.2s						
WRAB	**Tennant Creek**	**82.33**	**118**	P	**P**	**07 11 55.4**	**+1.8**
WB2	**Warramunga Arr**	**82.33**	**118**	P	**P**	**07 11 53.4**	**-0.3**
I29M	**Ogilvie Camp,**	**82.40**	**10**	P	**P**	**07 11 52.4**	**-0.9**
	baz=339,SNR=63						
EGAK	**Eagle**	**82.48**	**12**	P	**P**	**07 11 54.6**	**+0.9**
EGAK				IAmb	IAmb	07 13 35.6	
	comp=Z,56nm,1.2s						
EGAK	**Eagle**	**82.48**	**12**	P	**P**	**07 11 52.9**	**-0.9**
	baz=336,SNR=31						
K24K	**Donnelly Dome**	**82.48**	**14**	P	**P**	**07 11 52.2**	**-1.6**
	baz=332,SNR=77						
N18K	**Kilae Creek**	**82.65**	**20**	P	**P**	**07 11 54.9**	**+0.1**
N18K	**Kilae Creek**	**82.65**	**20**	P	**P**	**07 11 54.3**	**-0.4**
	baz=324,SNR=6.3						
RIDG	**Independent Ri**	**82.73**	**13**	P	**P**	**07 11 56.0**	**+0.8**
RIDG				IAmb	IAmb	07 13 36.3	
	comp=Z,46nm,1.2s						
DHY	**Denali Highway**	**82.79**	**15**	P	**P**	**07 11 55.1**	**-0.5**
	baz=331,SNR=41						
N19K	**Bonanza Creek**	**82.94**	**19**	P	**P**	**07 11 55.2**	**-1.1**
	baz=325,SNR=19						
K27K	**Chicken**	**83.00**	**12**	P	**P**	**07 11 56.5**	**+0.1**
K27K	**Chicken**	**83.00**	**12**	P	**P**	**07 11 55.3**	**-1.1**
	baz=336						
WAT6	**Susitna Watana**	**83.14**	**15**	P	**P**	**07 11 55.8**	**-1.7**
	baz=331,SNR=13						
SPCR	**Spurr Chakacha**	**83.24**	**18**	P	**P**	**07 11 56.1**	**-1.8**
	baz=327						
J29M	**Klondike Camp**	**83.27**	**11**	P	**P**	**07 11 55.9**	**-2.0**
	baz=339						
PAX	**Paxson**	**83.29**	**14**	P	**P**	**07 11 57.7**	**-0.4**
PAX	**Paxson**	**83.29**	**14**	P	**P**	**07 11 57.7**	**-0.4**
PAX				pmax	pmax		
	comp=Z,52nm,1.1s						
PAX	**Paxson**	**83.29**	**14**	P	**P**	**07 11 56.8**	**-1.4**
	baz=333,SNR=53						
SPU	**Mount Spurr**	**83.29**	**18**	P	**P**	**07 11 58.5**	**+0.5**
M22K	**Willow**	**83.30**	**17**	P	**P**	**07 11 56.0**	**-2.0**
	baz=329,SNR=8.1						
DAWY	**Dawson**	**83.44**	**11**	P	**P**	**07 11 59.7**	**+0.9**
DAWY	**Dawson**	**83.44**	**11**	P	**P**	**07 11 57.7**	**-1.1**
	baz=338,SNR=91						
O19K	**Port Alsworth**	**83.50**	**19**	P	**P**	**07 11 57.8**	**-1.3**
	baz=326						
O18K	**Koktuh Hills**	**83.53**	**20**	P	**P**	**07 11 57.8**	**-1.5**
	baz=325						
GHO	**Glory Hole Cre**	**83.57**	**16**	P	**P**	**07 11 59.9**	**+0.4**
L26K	**Log Cabin Wild**	**83.67**	**13**	P	**P**	**07 11 59.5**	**-0.5**
	baz=334,SNR=52						
PMR	**Palmer**	**83.68**	**16**	P	**P**	**07 12 00.9**	**+1.0**
PMR				IAmb	IAmb	07 12 04.1	
	comp=Z,29nm,1.0s						
PMR	**Palmer**	**83.68**	**16**	P	**P**	**07 12 00.9**	**+1.0**
PMR				pmax	pmax		
	comp=Z,29nm,1.0s						
PMR	**Palmer**	**83.68**	**16**	P	**P**	**07 11 59.1**	**-0.8**
	baz=330,SNR=22						
SML	**Sawmill**	**83.68**	**16**	P	**P**	**07 11 59.0**	**-1.1**
	baz=330,SNR=40						
M23K	**Glacier View**	**83.83**	**16**	P	**P**	**07 11 59.3**	**-1.5**
	baz=331,SNR=15						
NIKH	**Nikolski High**	**83.84**	**30**	P	**P**	**07 11 59.4**	**-1.6**
	baz=315						
HARP	**HAARP**	**83.87**	**14**	P	**P**	**07 12 00.6**	**-0.4**
	baz=333,SNR=38						
SCM	**Sheep Creek Mo**	**83.89**	**15**	P	**P**	**07 11 60.0**	**-1.2**
	baz=331,SNR=7.1						
P18K	**Big Mountain,**	**83.90**	**20**	P	**P**	**07 12 02.6**	**+1.4**
P18K				IAmb	IAmb	07 12 04.9	
	comp=Z,40nm,1.1s						
P18K	**Big Mountain,**	**83.90**	**20**	P	**P**	**07 12 00.2**	**-1.0**
	baz=325						
M24K	**Tolsona, Glenn**	**83.91**	**15**	P	**P**	**07 12 03.0**	**+1.7**
M24K	**Tolsona, Glenn**	**83.91**	**15**	P	**P**	**07 12 00.3**	**-1.0**
	baz=332,SNR=42						
L27K	**Beaver Creek,**	**83.93**	**13**	P	**P**	**07 12 00.0**	**-1.3**
	baz=336,SNR=102						
BCAR	**Beaver Creek A**	**83.94**	**13**	P	**P**	**07 12 02.1**	**+0.7**
RC01	**Rabbit Creek A**	**83.96**	**17**	P	**P**	**07 11 60.0**	**-1.5**
	baz=329,SNR=8.5						
KNK	**Knik Glacier**	**84.00**	**16**	P	**P**	**07 12 00.6**	**-1.0**
	baz=330,SNR=17						
O20K	**Slope Mountain**	**84.07**	**19**	P	**P**	**07 12 00.3**	**-1.8**
	baz=327						
ASAR	**Alice Springs**	**84.21**	**122**	P	**P**	**07 12 02.1**	**-1.1**
	comp=Z,14nm,0.9s,baz=308,slow=5.4,SNR=47						
	comp=Z,14nm,0.9s						
ASAR	**Alice Springs**	**84.21**	**122**	P	**P**	**07 12 03.6**	**+0.3**
ASAR	**Alice Springs**	**84.21**	**122**	P	**P**	**07 12 03.6**	**+0.3**
AS31	**Alice Springs**	**84.21**	**122**	P	**P**	**07 12 03.8**	**+0.5**
UNV	**Unalaska Valle**	**84.21**	**28**	P	**P**	**07 12 01.2**	**-1.6**
	baz=316						
P19K	**Oil Pt**	**84.26**	**19**	P	**P**	**07 12 01.4**	**-1.6**
	baz=326						

M26K	Nabesna, AK	84.31	13	P	P	07 12 03.6	+0.3
M26K	Nabesna, AK	84.31	13	P	P	07 12 02.3	-1.0
	baz=335,SNR=43						
O22K	Cooper Landing	84.49	17	P	P	07 12 04.7	+0.6
O22K	Cooper Landing	84.49	17	P	P	07 12 02.3	-1.8
	baz=329						
KLU	Klutina	84.51	15	P	P	07 12 03.0	-1.4
	baz=332,SNR=29						
FORT	Forrest	84.56	130	P	P	07 12 07.8	+3.0
M27K	Edge Creek, AK	84.57	13	P	P	07 12 05.2	+0.5
M27K	Edge Creek, AK	84.57	13	P	P	07 12 03.4	-1.3
	baz=336,SNR=114						
FALS	False Pass	84.69	26	P	P	07 12 04.4	-0.8
	baz=319						
HOM	Homer	84.69	18	P	P	07 12 04.5	-0.7
	baz=328						
N25K	Chitina, Valde	84.70	14	P	P	07 12 07.0	+1.7
N25K	Chitina, Valde	84.70	14	P	P	07 12 04.4	-0.9
	baz=334,SNR=23						
BVCY	Beaver Creek	84.71	12	P	P	07 12 04.6	-0.6
	baz=337,SNR=30						
Q19K	Cape Douglas,	84.74	20	P	P	07 12 04.1	-1.4
	baz=326						
GLI	Glacier Island	84.78	16	P	P	07 12 06.2	+0.5
GLI	Glacier Island	84.78	16	P	P	07 12 04.4	-1.3
	baz=332,SNR=11						
BRLK	Bradley Lake	84.81	18	P	P	07 12 06.0	+0.2
BRSE	Bradley Lake S	84.86	18	P	P	07 12 04.7	-1.4
	baz=328						
DIV	Divide	84.87	15	P	P	07 12 07.0	+0.8
DIV				IAmb	IAmb	07 12 10.1	
	comp=Z,32nm,1.1s						
SEW	Seward	84.89	17	P	P	07 12 05.0	-1.1
	baz=330,SNR=13						
CNPM	China Poot	84.92	18	P	P	07 12 07.1	+0.8
CNPM				IAmb	IAmb	07 12 09.1	
	comp=Z,36nm,1.2s						
M30M	Minto, Yukon	85.25	11	P	P	07 12 09.0	+1.0
M30M				IAmb	IAmb	07 13 49.3	
	comp=Z,19nm,1.0s						
M30M	Minto, Yukon	85.25	11	P	P	07 12 06.8	-1.2
	baz=340,SNR=27						
BMRM	Bremner River	85.27	15	P	P	07 12 06.7	-1.5
	baz=334,SNR=39						
YUK3	Moose Creek	85.37	12	P	P	07 12 07.6	-1.2
	baz=337,SNR=64						
EYAK	Cordova Ski Ar	85.39	15	P	P	07 12 07.7	-0.9
	baz=333,SNR=7.9						
SDPT	Sand Point	85.41	25	P	P	07 12 07.8	-1.0
	baz=321						
SCHQ	Schefferville	85.90	335	P	P	07 12 10.4	-1.0
	comp=Z,7.2nm,1.0s,baz=31,slow=5.7,SNR=8.4						
	comp=Z,7.2nm,1.0s						
HMT	Hamilton	85.91	15	P	P	07 12 11.3	0.0
HMT				IAmb	IAmb	07 13 54.8	
	comp=Z,32nm,1.1s						
CTGM	Chitina Glacie	85.95	13	P	P	07 12 12.4	+0.8
M31M	Drury Creek, Y	85.97	10	P	P	07 12 11.0	-0.5
	baz=342,SNR=28						
KDAK	Kodiak Island	86.01	20	P	P	07 12 11.9	+0.1
	comp=Z,49nm,1.2s,baz=360,slow=4.1,SNR=11						
	comp=Z,49nm,1.2s						
KDAK	Kodiak Island	86.01	20	P	P	07 12 12.7	+0.9
KDAK	Kodiak Island	86.01	20	P	P	07 12 12.7	+0.9
KDAK				pmax	pmax		
	comp=Z,69nm,1.3s						
KDAK	Kodiak Island	86.01	20	P	P	07 12 10.3	-1.5
	baz=327						
GRNC	Granite Creek	86.08	13	P	P	07 12 13.9	+1.5
GRNC				IAmb	IAmb	07 12 17.2	
	comp=Z,38nm,1.0s						
YUK4	Talbot Arm	86.10	12	P	P	07 12 11.5	-1.0
	baz=339,SNR=32						
WAX	Waxell Ridge	86.11	14	P	P	07 12 13.2	+0.9
CHNA	Chernabura Isl	86.13	25	P	P	07 12 11.2	-1.2
	baz=322						
LOGN	Logan Glacier	86.14	13	P	P	07 12 12.8	+0.2
Q23K	Middleton Isla	86.24	16	P	P	07 12 11.6	-1.2
	baz=332						
KAIM	Kayak Island	86.25	15	P	P	07 12 11.3	-1.6
	baz=334						
SUCK	Suckling Hills	86.26	15	P	P	07 12 13.8	+0.8
N30M	Aishikik Lake	86.26	11	P	P	07 12 13.5	+0.4
	baz=340,SNR=44						
OHAK	Old Harbor	86.27	20	P	P	07 12 12.9	-0.2
OHAK	Old Harbor	86.27	20	P	P	07 12 11.6	-1.4
	baz=327						
N31M	Braeburn, Yuko	86.44	10	P	P	07 12 13.5	-0.5
	baz=341,SNR=25						
YUK6	Outpost Mounta	86.53	12	P	P	07 12 14.0	-0.6
	baz=339,SNR=16						
SII	Sitkinak Islan	86.55	21	P	P	07 12 13.0	-1.5
	baz=326						
CHIR	Chirikof Islan	86.70	22	P	P	07 12 14.3	-0.9
	baz=325						
QIS	Mount Isa	86.71	116	P	P	07 12 17.9	+2.1
HYT	Haines Junctio	86.78	12	P	P	07 12 15.4	-0.3
	baz=340,SNR=42						
PINM	Pinnacle	86.96	13	P	P	07 12 14.7	-1.9
	baz=337						
YKA	Yellowknife Ar	87.20	1	P	P	07 12 17.3	-0.2
	comp=Z,38nm,1.0s,baz=351,slow=4.7,SNR=170						
YKA				PKKPbc	PKKPbc	07 30 06.2	-3.2
	comp=Z,0.5nm,0.8s,baz=174,slow=2.9,SNR=8.9						
	comp=Z,38nm,1.0s						
YKA	Yellowknife Ar	87.20	1	P	P	07 12 16.9	-0.6
YKA	Yellowknife Ar	87.20	1	*i* P	P	07 12 17.2	-0.3
YKA				pmax	pmax		
	comp=Z,39nm,1.0s						
TGTN	Hyland Airport	87.39	7	P	P	07 12 17.9	-0.6
	baz=347,SNR=6.8						
PNL	Peninsula	87.52	13	P	P	07 12 18.2	-1.0
	baz=338,SNR=5.4						
OOD	Oodnadatta	87.95	124	P	P	07 12 22.6	+1.0
MULG	Mulgathing	88.29	127	P	P	07 12 25.6	+2.5
SKAG	Skagway	88.44	11	P	P	07 12 24.7	+1.2
SKAG	Skagway	88.44	11	P	P	07 12 22.8	-0.7
	baz=341,SNR=11						
DLBC	Dease Lake	90.20	9	P	P	07 12 31.9	0.0
	comp=Z,17nm,1.1s,baz=334,slow=5.0,SNR=19						
	comp=Z,17nm,1.1s						
S34M	Telegraph Cree	90.56	9	P	P	07 12 32.2	-1.3
	baz=345						
SIT	Sitka	90.72	12	P	P	07 12 33.0	-1.2
	baz=341						
INKA	Innaminka	91.59	121	P	P	07 12 43.1	+4.5
WRAK	Wrangell Islan	91.83	10	P	P	07 12 40.5	+1.2
WRAK	Wrangell Islan	91.83	10	P	P	07 12 37.8	-1.5
	baz=344						
CRAG	Craig	92.61	11	P	P	07 12 41.5	-1.5
	baz=343						
D62A	Allapoint, All	92.88	331	P	P	07 12 43.9	-0.5
STKA	Stephens Creek	94.48	124	P	P	07 12 51.6	-0.3
	comp=Z,5.3nm,1.0s,baz=334,slow=4.5,SNR=4.3						
	comp=Z,5.3nm,1.0s						
STKA	Stephens Creek	94.48	124	IAmb	IAmb	07 12 55.5	
	comp=Z,3.3nm,1.2s						
LBNH	Lisbon	96.36	331	P	P	07 12 59.4	-1.1
	baz=35						
RMQ	Roma	96.96	117	P	P	07 13 07.6	+4.2
MAW	Mawson	97.97	181	P	Pdif	07 13 08.0	+1.2
	comp=Z,16nm,1.0s,baz=356,slow=4.8,SNR=14						
	comp=Z,16nm,1.0s						
MAW	Mawson	97.97	181	P	Pdif	07 13 07.4	+0.5
MAW	Mawson	97.97	181	P	Pdif	07 13 07.4	+0.5
MAW				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DZM	Mont Dzumac	109.14	105	*e*LR	LR	07 50 57.6	
	comp=Z,1µm,25.1s						
NVAR	Mina Array Bea	111.15	4	PKiKP	PKiKP	07 18 06.8	+1.0
	comp=Z,0.6nm,0.7s,baz=314,slow=1.1,SNR=5.9						
TXAR	Lajitas Array	119.63	350	PKP	PKPdf	07 18 21.4	-0.6
	comp=Z,1.6nm,0.9s,baz=76,slow=1.2,SNR=11						
QSPA	South Pole Qui	120.45	180	PKPdf	PKPdf	07 18 21.4	-0.8
VNDA	Vanda	120.83	165	PKP	PKPdf	07 18 22.1	-0.5
	comp=Z,0.9nm,0.8s,baz=266,slow=7.2,SNR=6.0						
BELA	Belgrano 2	122.05	194	PKPdf	PKPdf	07 18 24.6	-0.4
SALV	Santo Antonio	125.42	272	*e*P	PKiKP	07 18 33.4	-0.2
PP1B	Ponte de Pedra	125.46	269	*e*P	PKiKP	07 18 33.8	+0.1
TRCB	Terra Rica	125.61	263	*e*P	PKPdf	07 18 32.3	-1.2
PTGB	Pitanga	125.82	260	*e*P	PKPdf	07 18 34.0	+0.1
AQDB	Aquidauana	127.34	267	*e*P	PKPdf	07 18 36.5	-0.3
VILB	Vilhena	127.94	278	*e*P	PKiKP	07 18 38.7	0.0
PTLB	Pontes e Lacer	128.18	274	*e*P	PKPdf	07 18 37.2	-1.2
ROSC	El Rosal	128.54	306	PKP	PKPdf	07 18 39.0	-0.8
	comp=Z,12nm,0.9s,baz=149,slow=5.9,SNR=2.7						
CPUP	Villa Florida	130.84	260	PKP	PKPdf	07 18 42.5	-0.8
	comp=Z,7.4nm,0.9s,baz=63,slow=2.5,SNR=16						
TBTG	Tabatinga, AM	131.23	294	*e*P	PKPdf	07 18 44.0	-0.5
ITQB	Itaqui	131.25	256	*e*P	PKPdf	07 18 44.4	+0.4
ETMB	Extrema	131.44	285	*e*P	PKPdf	07 18 44.7	-0.1
OTAV	Otavalo	134.69	306	*e*P	PKPdf	07 18 51.5	0.0
LPAZ	La Paz	136.27	278	PKP	PKPdf	07 18 54.5	0.0
	comp=Z,2.4nm,0.8s,baz=71,slow=3.4,SNR=10						
LPAZ	La Paz	136.27	278	*e*P	PKPdf	07 18 54.9	+0.3
LVC	Limon Verde	139.53	270	*e*P	PKiKP	07 19 01.8	-0.6
PLCA	Paso Flores	143.98	242	PKP	PKPbc	07 19 05.6	+0.6
	comp=Z,7.4nm,0.9s,baz=136,slow=1.8,SNR=13						
LL02	Futaleuf	144.75	237	PKPdf	PKPab	07 19 07.0	-0.2
PPT2	Papeete2	144.79	77	*e*LR	LR	08 07 35.5	
	comp=Z,1µm,23.5s						
GO05	Huala	144.95	252	PKPdf	PKPab	07 19 07.9	-0.3
AY01	Puyuhuapi	145.15	235		PKPbc	07 19 07.6	-0.9
LL03	Petrohue	145.35	241		PKPbc	07 19 08.7	-0.6
TAOE	Nuku Hiva Isla	147.04	54	*e*LR	LR	08 08 31.5	
	comp=Z,1µm,25.4s						
TBI	Tubuai	147.27	86	*e*LR	LR	08 08 10.1	

*UPA **13** 07:00:20.8±1.9, 7°.76N×82°.44W, h9^{km}±7^{km}, MD3.3, MW4.1*

*UCR **13** 07:00:22.1±1.9, 7°.90N×82°.36W, h26^{km}±12^{km}, MW3.6*

ISC 13 07:00:21.1±1.7, **7°.77N**±0°.08×**82°.43W**±0°.04, **h21**^{km}±5^{km}, **n16**, σ1^{s}.**14**/28, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.62	314	*e*P	Pb	07 00 33.3	-0.2
PTPM				*e*S	Sb	07 00 41.8	0.0
CHIR3	Chiriqui UPA,	0.63	9	*e*P	Pb	07 00 33.2	-0.4
CHIR3				*e*S	Sn	07 00 42.8	-1.4
LOCO3	Loma Colorada,	0.64	1	*e*P	Pb	07 00 32.7	-1.0
LOCO3				*e*S	Sn	07 00 43.0	-1.5
DVD	David	0.66	358	*e*P	Pb	07 00 33.7	-0.4
DVD				*e*S	Sn	07 00 44.5	-0.5
LESP3	La Esperanza,	0.73	330	*e*P	Pb	07 00 34.8	-0.3
REME3	Remedios, Chir	0.74	52	*e*P	Pb	07 00 35.4	0.0
REME3				*e*S	Sn	07 00 48.0	+1.0
CDITO	Canoas	0.91	331	*e*P	Pb	07 00 37.7	-0.6
CDITO				*e*S	Sn	07 00 51.2	0.0
BCO2	Palmira	0.95	354	*e*P	Pn	07 00 39.6	+0.2
BCO2				*e*S	Sn	07 00 51.7	-0.7
BRU2	Volcan	1.05	346	*e*P	Pn	07 00 42.4	+1.6
BRU2				*e*S	Sn	07 00 55.1	+0.2
PIRO	Carate, Puerto	1.10	305	*e*P	Pn	07 00 41.2	-0.1
PIRO				*e*S	Sn	07 00 57.7	+1.9
EDSV	San Vito	1.18	333	*e*P	Pn	07 00 41.7	-0.8
GMAL	Guarumal, Vera	1.18	90	*e*P	Pn	07 00 42.6	+0.1
GMAL				*e*S	Sb	07 00 57.1	-0.6
CHGR2	Aguacate	1.20	14	*e*P	Pb	07 00 44.3	+1.2
CHGR2				*e*S	Sb	07 00 56.0	-2.2
EDPN	Palmar Norte	1.56	319	*e*P	Pn	07 00 47.7	0.0
CNI2	El Empalme, Bo	1.65	358	*e*P	Pb	07 00 51.4	+0.6
CNI2				*e*S	Sb	07 01 14.0	+2.9
EDDO	Dominical	2.05	316	*e*S	Sn	07 01 18.0	-1.3

*IDC **13** 07:00:46.6±3.5, 30°.35N×66°.56E, h0^{km}, mb4.7/7, mbtmp4.8/8, ML4.7/1, MS5.2/1, Error ellipse: s-maj=78.3km s-min=25.7km az=146.0*

*NEIC **13** 07:00:51.3±1.9, 30°.65N±0°.07×66°.44E±0°.07, h10^{km}±1^{km}, mb4.7/34, Error ellipse: s-maj=14.6km s-min=7.2km az=140.0*

ISC 13 07:00:50.9±0.4, **30°.63N**±0°.06×**66°.53E**±0°.06, **h12**^{km}, **n68**, σ1^{s}.**29**/64, **mb4.8**/22, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	4.44	28	Pn	Pn	07 01 58.3	0.0
HRA	Herat	5.21	317	Pn	Pn	07 02 07.0	-1.8
JMU	Jammu	7.43	72	*e*P	Pn	07 02 40.2	+1.0
JMU	Jammu	7.43	72	*e*P	Pb	07 02 56.6	-3.2
THN	Thein Dam	8.05	75	*e*P	Pn	07 02 50.0	+2.3
AJM	Ajmer	8.25	118	*e*P	Pn	07 02 52.1	+1.6
GAR	Garm	8.91	19	Pn	Pn	07 03 00.5	+0.9
SMLA	Simla	9.16	84	IAML		07 04 48.7	
	comp=E,854nm,0.6s						
SMLA	Simla	9.16	84	*e*P	Pn	07 03 04.0	+1.1
SMLA	Simla	9.16	84	IAML		07 04 47.4	
	comp=N,735nm,0.6s						
NDI	New Delhi	9.50	99	*e*P	Pn	07 03 09.3	+1.6
UOSS	Minazif	10.75	241	Pn	Pn	07 03 26.1	+1.4
KK31	Karatay Array	12.85	13	Pn	Pn	07 03 54.8	+1.4
KKAR	Karatay Array	12.85	13	Pn	Pn	07 03 52.7	-0.7
AAK	Ala-Archa	13.57	26	Pn	Pn	07 04 02.8	-0.6
	comp=N,3.5nm,0.3s,baz=160,slow=5.3,SNR=5.4						
	comp=N,31nm,0.6s						
TARG	Taragay, Kyrgy	14.32	36	Pn	Pn	07 04 11.9	-2.0
ABKAR	Akbulak array	19.26	347	P	P	07 05 15.0	-0.2
ABKAR	Akbulak array	19.26	347	P	P	07 05 14.7	-0.5
ABKAR				IAmb	IAmb	07 05 16.6	
	comp=Z,41nm,0.9s						
MAKZ	Makanchi	20.09	32	P	P	07 05 23.0	-1.3
MK31	Makanchi Array	20.23	33	P	P	07 05 25.1	-0.7
MK31				IAmb	IAmb	07 05 31.5	
	comp=Z,49nm,1.1s						
MKAR	Makanchi Array	20.23	33	P	P	07 05 25.3	-0.6
	comp=Z,12nm,0.5s,baz=214,slow=10,SNR=9.7						
	comp=Z,12nm,0.5s						
MKAR	Makanchi Array	20.23	33	P	P	07 05 25.0	-0.9
SOCY	Socotra	21.72	215	P	P	07 05 39.0	-3.2
SOCY				IAmb	IAmb	07 05 53.2	
	comp=Z,43nm,1.1s						
KURBB	Kurchatov Arra	21.90	21	P	P	07 05 45.0	+1.3
	comp=Z,75nm,1.0s,baz=212,slow=11,SNR=7.0						
	comp=Z,75nm,1.0s						
SHL	Shillong	22.91	96	IAmb	IAmb	07 06 24.4	
	comp=Z,298nm,1.6s						
PALK	Pallekele	26.77	147	P	P	07 06 31.1	+0.3
ZAA0	Zalesovo Array	26.79	24	P	P	07 06 30.5	-0.1
ZAA0				IAmb	IAmb	07 06 33.1	
	comp=Z,22nm,0.9s						
ZALV	Zalesovo Beam	26.79	24	P	P	07 06 30.7	+0.1
	comp=Z,8.4nm,0.6s,baz=221,slow=9.6,SNR=1.2						
	comp=Z,8.4nm,0.6s						
ZALV	Zalesovo Beam	26.79	24	P	P	07 06 31.4	+0.8
AKASG	Malin Array Be	34.18	317	P	P	07 07 35.2	-0.7
	comp=Z,5.1nm,0.8s,baz=110,slow=11,SNR=5.3						
	comp=Z,5.1nm,0.8s						
AKASG	Malin Array Be	34.18	317	P	P	07 07 35.0	-1.0
IDI	Anoyia	35.06	289	P	P	07 07 42.4	-1.5
VTS	Vitosha	36.38	301	P	P	07 07 54.5	-0.7
LIT	Litokhoron	36.81	297	P	P	07 07 58.4	-0.4
LIT				IAmb	IAmb	07 07 59.4	
	comp=Z,7.8nm,0.8s						
ENH	Enshi	36.87	79	P	P	07 07 59.2	-0.2
ENH				IAmb	IAmb	07 08 05.3	
	comp=Z,15nm,0.8s						
ITM	Ithomi	37.32	292	P	P	07 08 02.9	-0.3
ITM				IAmb	IAmb	07 08 03.3	
	comp=Z,17nm,1.0s						
LODK	Lodwar	39.98	234	P	P	07 08 25.1	-0.6
FIA1	FINESS Array S	40.55	331		P	07 08 29.9	0.0
FINES	FINESS Array B	40.55	331	P	P	07 08 30.2	+0.3
	comp=Z,6.7nm,1.0s,baz=120,slow=7.3,SNR=1.6						
	comp=Z,6.7nm,1.0s						
FINES	FINESS Array B	40.55	331	P	P	07 08 30.6	+0.7
KULM	Kulim	40.80	121	P	P	07 08 33.0	+0.6
IPM	Ipoh	41.62	122	P	P	07 08 39.5	+0.3
IPM				IAmb	IAmb	07 08 52.8	
	comp=Z,12nm,1.1s						
KMBO	Kilima Mbogo	42.11	227	P	P	07 08 43.0	-0.4
CLL	Collm	44.25	314	*e*Px	P	07 09 04.0	+3.9
KEV	Kevo	45.03	342	P	P	07 09 06.7	+0.7
ARCES	ARCESS Array B	45.31	341	P	P	07 09 07.2	-1.1
	comp=Z,3.9nm,0.6s,baz=124,slow=8.0,SNR=1.7						
	comp=Z,3.9nm,0.6s						
ARCES	ARCESS Array B	45.31	341	P	P	07 09 06.9	-1.4
ARCES				IAmb	IAmb	07 09 12.0	
	comp=Z,12nm,1.1s						
KSAR	Wonju Array Be	50.52	65	P	P	07 09 50.3	+1.2
SBUM	Sibu	51.46	114	P	P	07 09 55.7	-0.7
SBUM				IAmb	IAmb	07 09 58.2	
	comp=Z,7.9nm,1.0s						
TGY	Tagaytay City	52.45	96	LR	LR	07 35 03.9	
	comp=Z,2µm,20.1s,baz=306,slow=39						
VOI	Vohitsoka	55.57	202	P	P	07 10 26.9	+0.3
TORD	Torodi Ar. Bea	61.86	269	P	P	07 11 08.1	-2.3
	comp=Z,12nm,0.6s,baz=54,slow=6.6,SNR=5.1						
	comp=Z,12nm,0.6s						
SUMG	Summit	65.40	341	P	P	07 11 35.2	+1.7
SUMG				IAmb	IAmb	07 11 44.6	
	comp=Z,6.5nm,0.9s						
KOWA	Kowa	66.16	273	P	P	07 11 38.0	-0.7
LBTB	Lobatse	67.81	220	P	P	07 11 49.3	+0.2
EUNU	Eureka	68.54	355	P	P	07 11 53.4	+0.5
EUNU				IAmb	IAmb	07 11 59.5	
	comp=Z,8.8nm,1.1s						
GIRL	Giralia	70.01	133	P	P	07 12 02.7	0.0
BOSA	Boshof	70.85	218	P	P	07 12 06.8	-1.0
BOSA				IAmb	IAmb	07 12 07.6	
	comp=Z,4.1nm,0.9s						
GAMB	Gambell	75.37	23	P	P	07 12 35.5	+1.6
KNRA	Kununurra	75.48	118	P	P	07 12 36.7	+1.3
KNRA				IAmb	IAmb	07 12 41.6	
	comp=Z,6.6nm,0.9s						
SUR	Sutherland	76.17	219	P	P	07 12 38.8	-0.4
IMAR	Indian Mountai	78.85	16	P	P	07 12 52.8	-0.8
I21K	Tanana	79.93	15	P	P	07 13 00.4	+1.0
I21K				IAmb	IAmb	07 13 02.4	
	comp=Z,6.7nm,0.9s						
CAST	Castle Rocks	81.39	16	P	P	07 13 08.9	+1.6
CAST				IAmb	IAmb	07 13 14.9	
	comp=Z,8.8nm,0.9s						
ILAR	Eielson Array	81.39	14	P	P	07 13 07.5	+0.2
KDAK	Kodiak Island	86.00	20	P	P	07 13 32.3	+1.3
KDAK				IAmb	IAmb	07 13 36.8	
	comp=Z,6.6nm,0.9s						
ISLE	Juniper Island	86.07	14	P	P	07 13 32.9	+1.4
ISLE				IAmb	IAmb	07 13 33.0	
	comp=Z,6.3nm,0.9s						
D62A	Allapoint, All	92.90	331	P	P	07 14 03.4	-0.4

*IDC **13** 07:01:07.5±0.4, 30°.64N×66°.49E, h0^{km}, mb5.0/46, mbtmp5.0/48, ML5.1/2, Error ellipse: s-maj=11.3km s-min=10.4km az=166.0*

*GCMT **13** 07:01:08.3±0.1, 30°.69N±0°.01×66°.57E±0°.01, h22^{km}, MW5.6/157, Moment Tensor Solution. s133,c225; s157,c334; Duration: $1^{s}.6$ Moment tensor: Scale 10^{17} Nm; M_{rr}0.33±.04; $M_{\theta\theta}$-2.44±.04; $M_{\phi\phi}$2.11±.04; $M_{r\theta}$-0.30±.08; $M_{\theta\phi}$-2.35±.04; $M_{\phi r}$-1.14±.09; Best double couple: $M_0$3.48500×10^{17} NP1:ϕ_s111.00000°, δ70.00000°, λ175.00000°. NP2:ϕ_s203.00000°, δ85.00000°, λ20.00000°. Principal axes: T 3.3980, Plg17.0000°, Azm69.0000°; N 0.1760, Plg69.0000°, Azm215.0000°; P -3.5720, Plg11.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **13** 07:01:09.0±0.0, 30°.97N×66°.61E, h6^{km}, mb5.1/44, mB5.4/31, Ms5.8/41, Ms7 5.6/40*

*MOS **13** 07:01:09.4±1.3, 30°.80N×66°.55E, h15^{km}, mb5.5/61, MS5.3/21, Error ellipse: s-maj=7.2km s-min=4.0km az=81.8*

*NEIC **13** 07:01:10.3±1.9, 30°.66N±0°.07×66°.39E±0°.08, h10^{km}±1^{km}, mb5.5/110, Ms_20 5.5/389, Mwb5.5/32, Error ellipse: s-maj=13.4km s-min=10.9km az=137.0*

*NEIC **13** 07:01:10.3, 30°.66N×66°.38E, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$1.37; $M_{r\theta}$-0.05; $M_{\theta\phi}$-1.54; $M_{\phi r}$-0.60; Fault plane solution: $M_0$2.12000×10^{17} NP1:ϕ_s109.78000°, δ74.35000°, λ177.13000°. NP2:ϕ_s200.56000°, δ87.24000°, λ15.67000°. Principal axes: T 2.1978, Plg13.0000°, Azm66.0000°; N -0.1762, Plg74.0000°, Azm210.0000°; P -2.0215, Plg9.0000°, Azm334.0000°;*

ISC 13 07:01:10.2±0.5, **30°.64N**±0°.04×**66°.42E**±0°.03, **h15**^{km}±3^{km}, **h15**^{km}**:pP-P**, **n791**, σ1^{s}.**71**/624, **mb5.3**/182, **MS5.5**/223, **22C-31D**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	4.48	29	Pn	Pn	07 02 18.1	+0.4
KBL	Kabul	4.48	29	P	Pn	07 02 18.2	+0.4
HRA	Herat	5.14	318	Pn	Pn	07 02 24.5	-2.4
JASL	Jaisalmer	5.40	132	*e*P	Pn	07 02 30.4	+0.2
THN	Thein Dam	8.13	75	*e*P	Pn	07 02 59.4	-8.3
CHGR	Chuyangaron	8.31	15	Pn	Pn	07 03 10.2	-0.1
CHGR	Chuyangaron	8.31	15	P	Pn	07 03 10.2	-0.1
AJM	Ajmer	8.33	118	*e*P	Pn	07 03 02.3	-8.2
BHK	Bhakra	8.61	82	*e*x	Sn	07 04 47.3	-4.0
BHK	Bhakra	8.61	82	*e*P	Pn	07 03 09.4	-4.9
GAR	Garm	8.94	20	Pn	Pn	07 03 19.7	+0.8
AYAN	Aya Nagar	9.57	100	*e*P	Pn	07 03 27.6	+0.2
DRK	Karamyk	9.86	25	Pn	Pn	07 03 32.8	+1.1
BTK	Batken	10.06	20	Pn	Pn	07 03 34.7	+0.4
BTK	Batken	10.06	20	P	Pn	07 03 34.7	+0.4
WSAR	Wadi Sarin	10.12	225	Pn	Pn	07 03 34.4	-0.7
	8.9nm,0.3s,baz=70,slow=9.7,SNR=5.8						
WSAR				Sn	Sn	07 05 22.3	-6.2
	4.7nm,0.3s,baz=126,slow=8.7,SNR=1.9						
	54nm,0.6s						
UOSS	Minazif	10.67	240	Pn	Pn	07 03 41.8	-0.8
TAS	Tashkent	10.92	11	Pn	Pn	07 03 44.9	-1.0
TAS	Tashkent	10.92	11	P	Pn	07 03 44.9	-1.0
KSH	Kashi	11.81	39	P	Pn	07 03 51.3	-7.0
KSH				pP		07 03 56.3	
KSH				sP		07 04 00.1	
KSH				S	Sn	07 05 56.8	-13
KSH				LR	LR		
	comp=Z,63µm,13.4s						
IUG	Iuzhnay	11.85	13	*i* P	Pn	07 03 58.1	-0.6
IUG	Iuzhnay	11.85	13	*i* P	Pn	07 03 58.1	-0.6
	baz=13						
JHNI	Jhansi	11.87	113	*e*P	Pn	07 03 57.0	-2.0
PTH	Pithoragarh	12.00	92	*e*P	Pn	07 04 01.2	+0.3
LGTI	Lohaghat	12.04	92	*e*P	Pn	07 03 59.3	-1.9
DZA	Taraz	12.85	16	*e*P	Pn	07 04 11.1	-1.2
DZA	Taraz	12.85	16	*e*P	Pn	07 04 11.1	-1.2
	baz=16						
KK31	Karatay Array	12.87	14	Pn	Pn	07 04 11.3	-1.2
KK31	Karatay Array	12.87	14	P	Pn	07 04 11.3	-1.2
KKAR	Karatay Array	12.87	14	Pn	Pn	07 04 10.9	-1.7
KKAR	Karatay Array	12.87	14	Pn	Pn	07 04 11.6	-0.9
KKAR	Karatay Array	12.87	14	P	Pn	07 04 11.6	-0.9
EKS2	Erkin-Say	13.37	24	P	Pn	07 04 23.2	+3.7
BRCI	Bahraich	13.60	99	*e*P	Pn	07 04 23.8	+1.1
AAK	Ala-Archa	13.61	26	Pn	Pn	07 04 20.7	-2.1
	14nm,0.3s,baz=173,slow=2.2,SNR=9.7						
AAK				Sn	Sn	07 06 47.0	-6.8
	1.1nm,0.3s,baz=191,slow=16,SNR=1.8						
	51nm,0.4s						
AAK	Ala-Archa	13.61	26	Pn	Pn	07 04 21.9	-1.0
AAK	Ala-Archa	13.61	26	*d i*P	Pn	07 04 21.6	-1.2
AKL	Akola	13.74	134	*e*P	Pn	07 04 25.8	+1.2
FRU1	Bishkek	13.81	26	Pn	Pn	07 04 24.8	-0.7
FRU1	Bishkek	13.81	26	P	Pn	07 04 24.8	-0.7
BOOM	Boomskoye usch	14.07	30	Pn	Pn	07 04 27.0	-2.2
BOOM	Boomskoye usch	14.07	30	P	Pn	07 04 27.0	-2.2
SGDS	Sogindy	14.36	25	*e*P	Pn	07 04 30.8	-2.2
SGDS				pmax	pmax		
	comp=Z,75nm,1.1s						
SGDS	Sogindy	14.36	25	*e*P	Pn	07 04 30.8	-2.2
	comp=Z,75nm,1.1s,baz=25						
TARG	Taragay, Kyrgy	14.37	37	Pn	Pn	07 04 31.5	-2.0
ALBI	Allahabad	14.59	108	*e*x	Pn	07 04 32.5	-3.6
TNSS	Tian-Shan	14.96	31	*i* P	Pn	07 04 38.8	-2.7
TNSS	Tian-Shan	14.96	31	*i* P	Pn	07 04 38.8	-2.7
	baz=31						
AAA	Alma-Ata	15.08	31	*i* P	Pn	07 04 40.6	-2.1
AAA	Alma-Ata	15.08	31	*i* P	Pn	07 04 40.7	-2.1
	baz=31						
MDOK	Medeo	15.10	31	*i* P	Pn	07 04 41.4	-1.7
MDOK	Medeo	15.10	31	*i* P	Pn	07 04 41.4	-1.7
	baz=31						
PRZ	Przheval'sk	15.23	36	Pn	Pn	07 04 42.9	-1.9
PRZ				IAmb	IAmb	07 04 47.4	
	comp=Z,299nm,1.1s						
PRZ	Przheval'sk	15.23	36	P	Pn	07 04 42.9	-1.9
PRZ				pmax	pmax		
	comp=Z,299nm,1.1s						
KUU	Kurty	15.39	28	*e*P	Pn	07 04 45.0	-1.8
KUU	Kurty	15.39	28	*e*P	Pn	07 04 45.1	-1.8
	baz=28						
BTLS	Baital	15.58	20	*i* P	Pn	07 04 47.4	-1.8
BTLS	Baital	15.58	20	*i* P	Pn	07 04 47.4	-1.8
	baz=20						
VAR	Varanasi	15.59	106	*e*x	x	07 05 01.5	
VLK	Valmikinagar	15.62	98	*e*x	P	07 04 55.0	+1.1

SATY	Saty	15.65	34	d iP	Pn	07 04 48.6	-1.7
SATY	Saty	15.65	34	⇓iP	Pn	07 04 48.7	-1.7
	baz=34						
SHLS	Shalkode	16.25	36	eP	Pn	07 04 58.6	+0.5
SHLS	Shalkode	16.25	36	eP	Pn	07 04 58.6	+0.5
	baz=37						
BLSP	Bilaspur	16.42	117	ex	x	07 05 16.6	
GOA	Goa	16.53	154	eP	Pn	07 05 02.0	+0.4
TDK	Taldyqorghan	17.16	30	eP	Pn	07 05 08.5	-0.8
TDK	Taldyqorghan	17.16	30	eP	Pn	07 05 08.6	-0.8
	baz=30						
HYBB	Hyderabad (bro	17.18	137	eP	Pn	07 05 08.6	-1.3
BOK	Bokaro	18.59	107	ex	P	07 05 24.6	-2.4
VJD	Vijayawada	19.14	134	ex	Pn	07 05 36.3	+2.4
ABKAR	Akbulak array	19.24	347	P	P	07 05 33.1	-0.7
ABKAR	Akbulak array	19.24	347	P	P	07 05 33.3	-0.5
ABKAR				IAmb	IAmb	07 05 34.9	
	comp=Z,147nm,0.8s						
MAK	Makhachkala	19.46	314	eP	P	07 05 33.3	-3.0
MAK				eS	Sn	07 09 12.5	-3.1
GNI	Garni	20.02	304	P	P	07 05 41.4	-1.3
	comp=Z,22nm,0.3s,baz=108,slow=16,SNR=1.8						
	comp=Z,22nm,0.3s						
GNI	Garni	20.02	304	P	P	07 05 41.4	-1.3
GNI	Garni	20.02	304	⇓eP	P	07 05 42.6	-0.1
GNI				pmax	pmax		
	comp=Z,429nm,1.5s						
MAKZ	Makanchi	20.14	32	P	P	07 05 43.0	-0.7
MAKZ				IAmb	IAmb	07 05 49.7	
	comp=Z,350nm,1.3s						
MAKZ	Makanchi	20.14	32	P	P	07 05 43.1	-0.7
MAKZ				pmax	pmax		
	comp=Z,350nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,7µm,19.0s						
MK31	Makanchi Array	20.27	33	P	P	07 05 43.7	-1.5
MK31	Makanchi Array	20.27	33	P	P	07 05 43.7	-1.5
MK31				pmax	pmax		
	comp=Z,97nm,0.9s						
MKAR	Makanchi Array	20.27	33	P	P	07 05 43.4	-1.8
	comp=Z,85nm,0.8s,baz=209,slow=11,SNR=17						
	comp=Z,85nm,0.8s						
MKAR	Makanchi Array	20.27	33	P	P	07 05 43.5	-1.7
SEAG	Tbilisi Sea	20.62	309	P	Pn	07 05 53.5	+2.2
GROC	Groznyy	20.65	313	eP	Pn	07 05 52.9	+1.3
GROC				e		07 06 10.7	
GROC				eS	Sn	07 09 44.7	+0.4
GROC				pmax	pmax		
	comp=Z,219nm,0.8s						
AKTO	Aktyubinsk	20.76	345	P	P	07 05 49.2	-1.1
	comp=Z,158nm,1.0s,baz=159,slow=12,SNR=11						
	comp=Z,158nm,1.0s						
GUDG	Gudauri	21.15	310	P	P	07 05 58.4	+3.5
WMQ	Urumqi	21.37	46	⇑P	P	07 05 57.6	+0.4
WMQ				pP	pP	07 06 00.0	-1.9
WMQ				sP	sP	07 06 06.5	+2.5
WMQ				PP	PnPn	07 06 23.1	+6.0
WMQ				S	S	07 09 51.9	-2.1
WMQ				pmax	pmax		
	comp=Z,410nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,7.3s						
WMQ				LR	LR		
	comp=Z,31µm,19.9s						
WMQ				LR	LR		
	comp=Z,18µm,11.7s						
WMQ				LR	LR		
	comp=Z,8µm,20.5s						
LSA	Lhasa	21.39	86	P	P	07 05 58.3	+0.4
LSA				pmax	pmax		
	comp=Z,560nm,1.6s						
LSA				MLR	MLR		
	comp=Z,14µm,19.0s						
LSA	Lhasa	21.39	86	P	P	07 05 58.3	+0.4
LSA	Lhasa	21.39	86	IAMs_20	IAMs_20	07 15 17.6	
	comp=Z,13µm,19.0s						
MDRS	Chennai	21.65	141	IAmb	IAmb	07 06 12.0	
	comp=Z,139nm,0.2s						
MDRS	Chennai	21.65	141	eP	P	07 06 02.9	+2.7
SOCY	Socotra	21.67	215	P	P	07 05 57.3	-3.2
SOCY				IAmb	IAmb	07 06 04.6	
	comp=Z,498nm,1.9s						
SALM	Salem	21.82	147	eP	P	07 06 04.4	+2.4
KURBB	Kurchatov Arra	21.93	21	P	P	07 06 01.8	-1.1
	comp=Z,159nm,0.9s,baz=211,slow=11,SNR=12						
	comp=Z,159nm,0.9s						
ZSN	Zaisan	21.98	35	eP	P	07 06 01.8	-1.7
ZSN				pmax	pmax		
	comp=Z,99nm,1.5s						
ZSN	Zaisan	21.98	35	eP	P	07 06 01.9	-1.7
	comp=Z,99nm,1.5s,baz=35						
KURK	Kurchatov	22.03	21	c iP	P	07 06 06.1	+2.0
KURK				pmax	pmax		
	comp=Z,358nm,1.5s						
KURK	Kurchatov	22.03	21	P	P	07 06 05.6	+1.5
NCK	Nalchik	22.20	312	⇓eP	P	07 06 06.7	+0.7
NCK				pmax	pmax		
	comp=Z,214nm,1.1s						
SEM	Semipalatinsk	22.30	24	eP	P	07 06 06.1	-1.1
SEM				pmax	pmax		
	comp=Z,177nm,2.0s						
SEM	Semipalatinsk	22.30	24	eP	P	07 06 06.2	-1.1
	comp=Z,177nm,2.0s,baz=24						
BRVK	Borovoye	22.58	6	P	P	07 06 08.9	-1.1
BRVK	Borovoye	22.58	6	c iP	P	07 06 09.5	-0.4
BRVK				pmax	pmax		
	comp=Z,354nm,1.3s						
KOD	Kodaikanal	22.75	151	ex	P	07 06 18.2	+5.9
KBZ	Khabaz	22.76	312	P	P	07 06 13.0	+1.2
	comp=Z,15nm,0.9s,baz=93,slow=14,SNR=1.4						
	comp=Z,15nm,0.9s						
KIV	Kislovodsk	23.00	312	eP	P	07 06 15.5	+1.0
KIV				eS	S	07 10 27.1	+2.6
KIV				pmax	pmax		
	comp=Z,87nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,14.0s						
SHL	Shillong	23.00	96	ex	P	07 06 20.9	+6.2
GOF	Gofitskoye	23.30	315	⇑eP	P	07 06 18.1	+0.6
GOF				pmax	pmax		
	comp=Z,160nm,1.1s						
GOMU	GeErMu	24.29	69	P	P	07 06 27.3	-0.2
GOMU				pP	pP	07 06 30.6	-2.0
GOMU				sP	sP	07 06 34.5	-0.2
GOMU				pmax	pmax		
	comp=Z,64nm,2.3s						
GOMU				pmax	pmax		
	comp=Z,750nm,6.2s						
GOMU				LR	LR		
	comp=Z,5µm,13.0s						
GOMU				LR	LR		
	comp=Z,7µm,14.9s						
GOMU				LR	LR		
	comp=Z,6µm,15.4s						
SOC	Sochi	24.79	309	eP	P	07 06 31.3	-0.2
SOC				ePPP	PPP	07 07 08.8	
SOC				eS	S	07 10 55.8	+2.4
SOC				eSSS	SSS	07 11 48.3	
SOC				pmax	pmax		
	comp=Z,48nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2µm,14.0s						
ASF	Jabal al Asfar	25.21	281	P	P	07 06 36.5	+1.0
	comp=Z,20nm,0.7s,baz=75,slow=7.1,SNR=1.7						
	comp=Z,20nm,0.7s						
BELG	Belogornoye	25.75	333	P	P	07 06 39.7	-0.3
	comp=Z,58nm,0.7s,baz=317,slow=2.0,SNR=5.2						
	comp=Z,58nm,0.7s						
BELG	Belogornoye	25.75	333	P	P	07 06 39.7	-0.3
BELG	Belogornoye	25.75	333	d iP	P	07 06 40.6	+0.6
BELG				pmax	pmax		
	comp=Z,42nm,1.3s						
ARU	Arti	26.37	350	P	P	07 06 46.1	+0.5
	comp=Z,13nm,0.8s,baz=126,slow=0.9,SNR=7.5						
	comp=Z,13nm,0.8s						
ARU	Arti	26.37	350	P	P	07 06 46.1	+0.5
ARU	Arti	26.37	350	IAmb	IAmb	07 06 51.2	
	comp=Z,78nm,1.0s						
ARU				IAMs_20	IAMs_20	07 15 31.4	
	comp=Z,3µm,18.0s						
ARU	Arti	26.37	350	c iP	P	07 06 46.1	+0.5
ARU						07 07 26.0	
ARU				PPP	PPP	07 07 37.0	
ARU				S	S	07 11 21.4	+3.2
ARU				SS	SnSn	07 12 25.4	+6.6
ARU				SSS	SSS	07 12 44.4	
ARU				pmax	pmax		
	comp=Z,63nm,1.0s						
SVE	Sverdlovsk	26.50	353	eP	P	07 06 46.6	-0.2
SVE				eS	S	07 11 20.2	0.0
SVE				pmax	pmax		
	comp=Z,77nm,1.5s						
SVE				MLR	MLR		
	comp=Z,8µm,15.0s						
ANN	Anapa	26.77	310	eP	P	07 06 48.9	-0.5
ANN				e*PP	pP	07 06 52.2	-2.2
ANN				e		07 07 30.6	
ANN				eS	S	07 11 26.5	+1.8
ANN				pmax	pmax		
	comp=Z,90nm,1.3s						
ANN				MLR	MLR		
	comp=Z,4µm,13.0s						
ANN				MLR	MLR		
	comp=N,2µm,15.0s						
ANN				MLR	MLR		
	comp=E,2µm,11.0s						
PALK	Pallekele	26.82	147	P	P	07 06 50.7	+0.6
	comp=E,36nm,0.9s,baz=63,slow=11,SNR=9.1						
	comp=E,36nm,0.9s						
PALK	Pallekele	26.82	147	P	P	07 06 50.3	+0.2
ZAA0	Zalesovo Array	26.82	24	P	P	07 06 48.8	-0.9
ZAA0				IAmb	IAmb	07 07 32.9	
	comp=Z,145nm,1.4s						
ZALV	Zalesovo Beam	26.82	24	P	P	07 06 49.2	-0.5
	comp=Z,20nm,0.5s,baz=211,slow=9.4,SNR=6.9						
	comp=Z,20nm,0.5s						
ZALV	Zalesovo Beam	26.82	24	i P	P	07 06 53.0	+3.3
ZALV				pmax	pmax		
	comp=Z,30nm,0.6s						
VRH	Novokhopyorsk	27.53	325	eP	P	07 06 59.4	+3.3
VRH				eS	S	07 11 43.1	+6.5
VRH				pmax	pmax		
	comp=Z,80nm,0.9s						
VRH				smax	smax		
	comp=N,2µm,13.6s						
VRH				MLR	MLR		
	comp=Z,3µm,13.0s						
CSS	Mathiatis	28.07	288	P	P	07 07 01.8	+0.5
BRTR	Keskin Array B	28.16	298	P	P	07 07 03.3	+1.2
	comp=Z,5.4nm,0.8s,baz=120,slow=5.9,SNR=1.8						
	comp=Z,5.4nm,0.8s						
GTA	Gaotai	28.58	63	eP	P	07 07 08.4	+2.5
GTA				sP	sP	07 07 14.8	+1.7
GTA				pmax	pmax		
	comp=Z,65nm,1.9s						
GTA				pmax	pmax		
	comp=Z,420nm,6.4s						
GTA				LR	LR		
	comp=Z,12µm,15.5s						
GTA				LR	LR		
	comp=Z,7µm,15.5s						
GTA				LR	LR		
	comp=Z,9µm,14.7s						
VORD	Divnogorie	28.61	323	eP	P	07 07 07.5	+1.7
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	Storozhevoye	28.82	323	eP	P	07 07 07.0	-0.7
VSR				eS	S	07 12 00.2	+3.2
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
VSR				smax	smax		
	comp=N,2µm,13.1s						
VSR				MLR	MLR		
	comp=Z,1µm,11.0s						
SIM	Simferopol'	29.04	309	eP	P	07 07 09.0	-0.7
SIM				S	S	07 11 59.8	-0.7
SIM				pmax	pmax		
	comp=Z,65nm,1.3s						
VORR	Voronezh	29.07	324	eP	P	07 07 08.4	-1.4
VORR				pmax	pmax		
	comp=Z,80nm,0.5s						
LPSR	Galich'ya Gora	29.76	325	eP	P	07 07 17.7	+1.8
LPSR				eS	S	07 12 16.4	+4.8
LPSR				pmax	pmax		
	comp=Z,70nm,1.1s						
LPSR				smax	smax		
	comp=N,2µm,16.6s						
LPSR				MLR	MLR		
	comp=Z,4µm,16.0s						
KIRV	Kirov	30.27	342	deP	P	07 07 22.9	+2.5
KNGR	Kungurtug, Tuv	30.56	40	⇓eP	P	07 07 23.7	+0.4
ELL	Elmali	30.86	291	P	P	07 07 27.0	+1.0
ELL	Elmali	30.86	291	P	P	07 07 27.0	+1.0
ELL				pmax	pmax		
	comp=Z,170nm,0.8s						
PZH	PanZhiHua	31.21	89	P	P	07 07 30.3	+1.0
PZH				S	S	07 12 35.3	+0.1
PZH				SS	SnSn	07 14 16.8	-0.8
PZH				pmax	pmax		
	comp=Z,30nm,1.5s						
PZH				pmax	pmax		
	comp=Z,350nm,3.5s						
PZH				LR	LR		
	comp=Z,5µm,12.9s						
PZH				LR	LR		
	comp=Z,4µm,14.3s						
PZH				LR	LR		
	comp=Z,6µm,15.5s						
LZH	Lanzhou	31.59	70	⇑P	P	07 07 34.0	+1.4
LZH				pP	pP	07 07 38.3	+0.6
LZH				sP	sP	07 07 41.4	+1.6
LZH				pmax	pmax		
	comp=Z,50nm,1.5s						
CHTO	Chiang Mai	31.68	104	P	P	07 07 35.0	+1.7
CMAR	Chiang Mai Arr	31.85	105	P	P	07 07 32.9	-1.9
	comp=Z,14nm,1.0s,baz=302,slow=9.7,SNR=5.3						
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	31.85	105	P	P	07 07 32.9	-1.9
CMAR	Chiang Mai Arr	31.85	105	i P	P	07 07 36.7	+1.9
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	32.38	328	P	P	07 07 38.3	-0.7
	comp=Z,6.0nm,0.3s,baz=271,slow=9.1,SNR=3.7						
	comp=Z,6.0nm,0.3s						
OBN	Obninsk	32.38	328	⇑eP	P	07 07 39.8	+0.8
OBN				e*PP	pP	07 07 43.2	-0.8
OBN				e		07 08 46.7	
OBN				ePPP	PPP	07 08 57.3	
OBN				e		07 10 27.1	
OBN				pmax	pmax		
	comp=Z,74nm,1.0s						
OBN				MLR	MLR		
	comp=Z,5µm,13.0s						
KMI	Kunming	32.47	91	⇑P	P	07 07 41.9	+1.4
KMI				pmax	pmax		
	comp=Z,43nm,1.2s						
KMI				pmax	pmax		
	comp=Z,250nm,3.7s						
KMI				LR	LR		
	comp=Z,4µm,12.8s						
KMI				LR	LR		
	comp=Z,3µm,13.8s						
KMI				LR	LR		
	comp=Z,3µm,15.0s						
TIRR	Tirgusor	32.84	306	IAMs_20	IAMs_20	07 22 52.0	
	comp=Z,10µm,19.0s						
KARP	Karpathos	33.10	289	P	P	07 07 45.2	-0.5
FURI	Furi	33.73	236	IAMs_20	IAMs_20	07 23 29.0	
	comp=Z,6µm,19.0s						
ZAK	Zakamensk	33.80	44	eP	P	07 07 52.4	+0.8
ZAK				pmax	pmax		
	comp=Z,99nm,1.5s						
PRGR	Permogore	33.87	342	eP	P	07 07 53.1	+1.1
AKASG	Malin Array Be	34.12	317	P	P	07 07 53.7	-0.6
	comp=Z,19nm,0.9s,baz=101,slow=7.5,SNR=7.7						
	comp=Z,19nm,0.9s						
AKASG	Malin Array Be	34.12	317	P	P	07 07 54.3	+0.1
AKBB	Malin Array Si	34.12	317	P	P	07 07 54.2	-0.1
AKBB				IAmb	IAmb	07 07 59.5	
	comp=Z,44nm,0.9s						
AKBB	Malin Array Si	34.12	317	ceP	P	07 07 54.3	+0.1
AKBB				pmax	pmax		
	comp=Z,45nm,0.9s						
SONM	Songino Array	34.94	49	P	P	07 08 01.3	-0.4
	comp=Z,15nm,1.0s,baz=271,slow=8.9,SNR=6.5						
	comp=Z,15nm,1.0s						
SONM	Songino Array	34.94	49	P	P	07 08 01.3	-0.4
SONM	Songino Array	34.94	49	IAmb	IAmb	07 08 04.0	
	comp=Z,28nm,1.2s						
IDI	Anoyia	34.97	289	P	P	07 08 01.8	-0.1
IDI				IAmb	IAmb	07 08 06.6	
	comp=Z,100nm,1.5s						
KLMR	Klimovskoe	35.08	337	eP	P	07 08 02.9	+0.5
KLMR				pmax	pmax		
	comp=Z,61nm,1.0s						
KLMR	Klimovskoe	35.08	337	AMP		07 08 04.7	
	comp=Z,61nm,1.0s						
KLMR	Klimovskoe	35.08	337	eP	P	07 08 02.9	+0.5
IRK	Irkutsk	35.08	41	eP	P	07 08 03.4	+0.8
IRK				pmax	pmax		
	comp=Z,242nm,2.1s						
ULN	Ulaanbaatar	35.38	49	IAMs_20	IAMs_20	07 24 48.4	
	comp=Z,8µm,19.0s						
GYA	Guiyang	35.46	87	⇓P	P	07 08 07.5	+1.2
GYA				PP	PnPn	07 09 24.9	-0.2
GYA				S	S	07 13 41.8	+0.6
GYA				pmax	pmax		
	comp=Z,41nm,1.3s						
GYA				pmax	pmax		
	comp=Z,300nm,3.5s						
GYA				LR	LR		
	comp=Z,6µm,14.7s						
GYA				LR	LR		
	comp=Z,3µm,17.0s						
GYA				LR	LR		
	comp=Z,3µm,14.4s						
XAN	Xi'an	35.88	73	⇑P	P	07 08 10.1	+0.3
XAN				pmax	pmax		
	comp=Z,33nm,1.2s						
MNK	Minsk	36.38	322	i P	P	07 08 12.1	-1.6
MNK				i		07 09 34.2	
MNK				i		07 10 36.5	
MNK				i S	S	07 13 54.1	-0.2
MNK				i SS	SnSn	07 16 20.5	-1.6
MNK				i		07 18 29.8	
MNK				pmax	pmax		
	comp=N,27nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,41nm,1.0s						
MNK				MLR	MLR		
	comp=N,6µm,16.0s						
MNK				MLR	MLR		
	comp=E,781nm,17.0s						
MNK				MLR	MLR		
	comp=Z,5µm,14.0s						
MNK	Minsk	36.38	322	i P	P	07 08 12.1	-1.6
	comp=E,5.0nm,0.8s						
MNK				i P	P	07 08 12.1	-1.6
	comp=N,27nm,1.0s						
MNK				i P	P	07 08 12.1	-1.6
	comp=Z,41nm,1.0s,baz=115						
MNK				i S	S	07 13 54.1	-0.2
MNK				i LR	LR	07 23 09.3	
MNK				i LRM	MLR	07 26 16.9	
	comp=N,6µm,16.1s						
MNK				i LRM	MLR	07 26 49.8	
	comp=E,781nm,16.8s						
MNK				i LRM	MLR	07 26 50.5	
	comp=Z,5µm,13.5s						
ENH	Enshi	36.96	79	IAMs_20	IAMs_20	07 25 40.3	
	comp=Z,7µm,20.0s						
ENH	Enshi	36.96	79	P	P	07 08 20.0	+1.0
ENH	Enshi	36.96	79	IAmb	IAmb	07 08 21.6	
	comp=Z,51nm,0.7s						
NACGM	Naroch	37.13	322	⇓eP	P	07 08 19.6	-0.4
	baz=114						
IDID	Didziasalis	37.33	323	eP	P	07 08 22.7	+1.0
IIGN	Ignalina	37.61	323	eP	P	07 08 25.2	+1.1
ISAL	Salakas	37.75	323	eP	P	07 08 26.2	+0.9
UZH	Uzhgorod	37.83	311	eP	P	07 08 31.0	+4.9
UZH				e		07 08 38.6	
PUL	Pulkovo	37.84	331	⇓eP	P	07 08 28.8	+2.8
PUL				pmax	pmax		
	comp=Z,98nm,1.1s						
KOLS	Kolonicke sedl	37.91	312	eP	P	07 08 29.9	+3.1
KOLS	Kolonicke sedl	37.91	312	eP	P	07 08 29.9	+3.1
LHMI	Lhok Sumawe	38.25	125	IAMs_20	IAMs_20	07 26 24.2	
	comp=Z,6µm,20.0s						
TIY	Taiyuan	38.41	67	P	P	07 08 28.8	-2.4
TIY				S	S	07 14 22.3	-3.5
TIY				LR	LR		
	comp=Z,7µm,15.8s						
TIY				LR	LR		
	comp=Z,3µm,17.2s						
TIY				LR	LR		
	comp=Z,5µm,16.5s						
CRVS	Cervenica-Dubn	38.42	311	eP	P	07 08 34.9	+3.8
CRVS	Cervenica-Dubn	38.42	311	eP	P	07 08 34.9	+3.8
LYN	LuoYang	38.73	72	eP	P	07 08 35.3	+1.4
LYN				sP	sP	07 08 40.6	-0.6
LYN				PP	PnPn	07 10 10.3	+5.6
LYN				S	S	07 14 28.9	-1.7
LYN				pmax	pmax		
	comp=Z,40nm,0.8s						
LYN				pmax	pmax		
	comp=Z,360nm,6.3s						
LYN				LR	LR		
	comp=Z,6µm,17.3s						
LYN				LR	LR		
	comp=Z,10µm,16.3s						
LYN				LR	LR		
	comp=Z,10µm,16.6s						
VSU	Vasula	38.74	328	d iP	P	07 08 33.5	-0.1
VSU				pmax	pmax		
	comp=Z,95nm,0.7s						
VSU	Vasula	38.74	328	eP	P	07 08 33.6	0.0
KEK	Kerkira	38.80	297	P	P	07 08 35.4	+1.0
PABE	Paberze	38.85	322	eP	P	07 08 32.0	-2.6
VSVD	Vaisvydziai	39.05	323	eP	P	07 08 36.8	+0.5
LANS	Liptovska Anna	39.76	311	eP	P	07 08 44.7	+2.4
LANS	Liptovska Anna	39.76	311	eP	P	07 08 44.7	+2.4
LODK	Lodwar	39.91	233	P	P	07 08 45.5	+1.6
MTSE	Matsula	40.22	327	eP	P	07 08 46.1	+0.2
HNS	HongShan	40.23	67	⇑P	P	07 08 46.3	0.0
HNS				PP	PnPn	07 10 23.1	+0.6
HNS				S	S	07 14 56.3	+3.3
HNS				pmax	pmax		
	comp=Z,17nm,0.8s						
HNS				pmax	pmax		
	comp=Z,320nm,7.3s						
HNS				LR	LR		
	comp=Z,6µm,17.4s						
HNS				LR	LR		
	comp=Z,6µm,17.3s						
KOLL	Kolacno	40.36	310	eP	P	07 08 50.2	+2.9
FINES	FINESS Array B	40.51	331	P	P	07 08 49.7	+1.5
	comp=Z,20nm,0.9s,baz=116,slow=13,SNR=8.2						
	comp=Z,20nm,0.9s						
NRIK	Noril'sk	40.59	11	P	P	07 08 48.8	-0.1
	comp=Z,18nm,1.0s,baz=203,slow=7.7,SNR=7.1						
	comp=Z,18nm,1.0s						
NRIK	Noril'sk	40.59	11	P	P	07 08 48.8	-0.1
NRIK	Noril'sk	40.59	11	IAmb	IAmb	07 08 52.0	
	comp=Z,77nm,1.4s						
NRIK	Noril'sk	40.59	11	d iP	P	07 08 51.3	+2.4
NRIK				pmax	pmax		
	comp=Z,114nm,2.2s						
MEF	Metsahovi	40.63	329	eP	P	07 08 48.0	-1.3
MAUC	Maruska	40.86	311	eP	P	07 08 53.9	+2.5
KULM	Kulim	40.88	121	P	P	07 08 52.0	+0.1
KULM				IAmb	IAmb	07 09 51.9	
	comp=Z,86nm,0.9s						
MODS	Modra-Piesok	41.08	310	eP	P	07 08 59.4	+6.2
MODS	Modra-Piesok	41.08	310	eP	P	07 08 59.4	+6.2
MORC	Moravsky Berou	41.10	312	P	P	07 08 54.1	+0.6
MORC	Moravsky Berou	41.10	312	P	P	07 08 54.1	+0.6
MORC				pmax	pmax		
	comp=Z,21nm,1.0s						
MORC	Moravsky Berou	41.10	312	eP	P	07 08 54.0	+0.6
ZST	Bratislava	41.17	310	eP	P	07 08 58.3	+4.3
ZST	Bratislava	41.17	310	eP	P	07 08 58.2	+4.3
BJT	Baijiatuau	41.19	63	IAMs_20	IAMs_20	07 26 41.8	
	comp=Z,6µm,22.0s						
BJI	Beijing	41.20	63	P	P	07 08 54.3	0.0
BJI				pP	pP	07 08 56.6	-2.9
BJI				PP	PP	07 10 28.9	-0.4
BJI				S	S	07 15 06.8	-0.5
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
BJI				pmax	pmax		
	comp=Z,120nm,3.5s						
BJI				LR	LR		
	comp=Z,3µm,11.2s						
BJI				LR	LR		

	comp=Z,3µm,11.2s						
BJI				LR	LR		
	comp=Z,4µm,12.2s						
KRLC	Kraliky	41.63	312	eP	P	07 08 57.9	+0.1
KRLC	Kraliky	41.63	312	eP	P	07 08 57.9	+0.1
RONA	Rosalia, Austr	41.66	309	eP	P	07 08 59.2	+1.2
	comp=Z,14nm,1.1s						
IPM	Ipoh	41.70	122	P	P	07 09 00.4	+1.7
LVZ	Lovozero	41.70	343	P	P	07 08 57.4	-0.7
LVZ				IAmb	IAmb	07 09 04.0	
	comp=Z,210nm,1.8s						
LVZ	Lovozero	41.70	343	deP	P	07 08 58.8	+0.7
LVZ				pmax	pmax		
	comp=Z,226nm,3.4s						
APA	Apatity	41.79	342	⇓iP	P	07 08 59.7	+0.9
APA				MLR	MLR		
	comp=Z,5µm,13.0s						
DPC	Dobruska-Polom	41.97	313	eP	P	07 09 01.1	+0.6
DPC	Dobruska-Polom	41.97	313	eP	P	07 09 01.1	+0.6
CONA	Conrad Observa	41.97	309	eP	P	07 09 00.4	-0.3
	comp=Z,21nm,1.5s						
KMBO	Kilima Mbogo	42.05	227	P	P	07 09 02.9	+1.1
	comp=Z,29nm,1.0s,baz=35,slow=11,SNR=9.7						
	comp=Z,29nm,1.0s						
KMBO	Kilima Mbogo	42.05	227	P	P	07 09 02.9	+1.1
KMBO	Kilima Mbogo	42.05	227	i P	P	07 09 03.5	+1.7
KMBO				pmax	pmax		
	comp=Z,29nm,1.0s						
ARSA	Arzberg	42.14	308	eP	P	07 09 06.4	+4.4
	comp=Z,27nm,1.0s						
RAF	Rauma	42.15	329	eP	P	07 09 00.7	-1.1
CHVC	Chvalec	42.17	313	eP	P	07 09 02.4	+0.2
CHVC	Chvalec	42.17	313	ex	x	07 09 03.2	
BOD	Bodaibo	42.31	36	eP	P	07 09 02.8	-0.4
BOD				pmax	pmax		
	comp=Z,73nm,2.2s						
SOKA	Soboth	42.44	307	eP	P	07 09 06.2	+1.7
	comp=Z,27nm,2.0s						
OBKA	Obir	42.76	307	eP	P	07 09 09.1	+2.0
	comp=Z,24nm,1.1s						
MOA	Molln	43.03	309	eP	P	07 09 10.0	+0.8
	comp=Z,7.1nm,0.8s						
MNSI	Mandailing Nat	43.24	127	P	P	07 09 13.2	+2.0
MYKA	Terra Mystica	43.39	307	eP	P	07 09 15.3	+3.1
	comp=Z,11nm,1.0s						
BIOA	Bad Ischl, Aus	43.45	309	eP	P	07 09 15.0	+2.5
	comp=Z,9.7nm,0.8s						
BLEU	Blekinge	43.46	321	i P	P	07 09 11.1	-1.4
GERES	GERESS Array B	43.49	310	P	P	07 09 12.7	-0.2
	comp=Z,3.8nm,0.8s,baz=103,slow=5.9,SNR=4.6						
GERES				PcP	PcP	07 11 01.6	+0.8
	comp=Z,3.5nm,0.8s,baz=86,slow=4.0,SNR=2.4						
	comp=Z,3.8nm,0.8s						
BRG	Berggiesshubel	43.54	313	Amp		07 32 47.0	
	comp=N,3.2nm,12.0s						
BRG	Berggiesshubel	43.54	313	⇑iP	P	07 09 14.4	+1.2
BRG				pmax	pmax		
	comp=Z,41nm,1.1s						
BRG	Berggiesshubel	43.54	313	⇑iP	P	07 09 14.4	+1.2
BRG	Berggiesshubel	43.54	313	Amp		07 09 19.8	
	comp=Z,41nm,1.1s						
BRG	Berggiesshubel	43.54	313	ex	x	07 09 27.6	
BRG	Berggiesshubel	43.54	313	Amp		07 09 30.6	
	comp=Z,32nm,1.4s						
BRG	Berggiesshubel	43.54	313	Amp		07 32 41.0	
	comp=Z,3.7nm,14.9s						
BRG	Berggiesshubel	43.54	313	Amp		07 32 45.0	
	comp=E,2.1nm,13.7s						
UPP	Uppsala	43.59	327	eP	P	07 09 13.3	-0.2
KHC	Kasperske Hory	43.59	311	⇓iP	P	07 09 14.5	+0.8
KHC				pmax	pmax		
	comp=Z,19nm,1.1s						
KHC	Kasperske Hory	43.59	311	eP	P	07 09 14.2	+0.5
VIKU	Vikbolandet	43.61	324	eP	P	07 09 13.6	-0.1
KBA	Koelnbreinsper	43.61	308	eP	P	07 09 13.9	-0.1
	comp=Z,31nm,1.4s						
BSD	Bornholm Skovb	43.68	319	eP	P	07 09 14.7	+0.5
BSD	Bornholm Skovb	43.68	319	i P	P	07 09 12.4	-1.8
BSD				IAmb	IAmb	07 09 18.3	
	comp=Z,17nm,0.7s						
RUE	Ruedersdorf	43.86	315	eP	P	07 09 16.8	+1.1
HIA	Hailar	43.91	49	IAMs_20	IAMs_20	07 29 30.2	
	comp=Z,5µm,18.0s						
HIA	Hailar	43.91	49	deP	P	07 09 16.5	+0.2
HIA				pmax	pmax		
	comp=Z,20nm,0.9s						
ABTA	Abfaltersbach	44.17	307	eP	P	07 09 19.2	+0.7
	comp=Z,27nm,1.4s						
CLL	Collm	44.18	314	i P	P	07 09 18.7	+0.3
CLL				eS	S	07 15 56.0	+5.1
CLL				pmax	pmax		
	comp=Z,22nm,1.3s						
CLL	Collm	44.18	314	eSS	SS	07 19 12.0	+3.4
CLL	Collm	44.18	314	i P	P	07 09 18.7	+0.3
	comp=Z,22nm,1.3s						
CLL	Collm	44.18	314	ePP	PP	07 11 04.0	+2.8
CLL	Collm	44.18	314	eS	S	07 15 56.0	+5.1
NJ2	Nanjing	44.44	74	eP	P	07 09 21.8	+1.2
NJ2				sP	sP	07 09 29.1	+1.2
NJ2				S	S	07 15 56.3	+1.2
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
NJ2				LR	LR		
	comp=Z,8µm,22.1s						
NJ2				LR	LR		
	comp=Z,4µm,22.6s						
NJ2				LR	LR		
	comp=Z,7µm,17.2s						
DEL	Delary	44.55	321	eP	P	07 09 22.2	+1.0
DEL	Delary	44.55	321	i P	P	07 09 21.0	-0.2
BKNI	Bangkinang	44.59	126	IAMs_20	IAMs_20	07 28 23.1	
	comp=Z,5µm,22.0s						
LUNU	Lund	44.61	320	i P	P	07 09 19.9	-1.8
WTTA	Wattenberg	44.78	308	eP	P	07 09 24.7	+1.2
	comp=Z,30nm,1.3s						
WATA	Walderalm	44.83	308	eP	P	07 09 24.9	+1.1
	comp=Z,23nm,1.3s						
BJUU	Bjuv	44.93	320	i P	P	07 09 24.1	-0.1
SQTA	Sankt Quirin	45.08	308	eP	P	07 09 26.5	+0.8
	comp=Z,20nm,1.1s						
MOTA	Moosalm	45.15	308	eP	P	07 09 27.6	+1.3
	comp=Z,28nm,1.5s						
LLD	Lille Linde	45.24	319	IAmb	IAmb	07 09 29.3	
	comp=Z,35nm,0.8s						
LLD	Lille Linde	45.24	319	i P	P	07 09 27.4	+0.7
ARA0	ARCESS Array S	45.27	341	eP	P	07 09 26.6	-0.2
ARCES	ARCESS Array B	45.27	341	P	P	07 09 26.4	-0.4
	comp=Z,32nm,0.7s,baz=132,slow=7.9,SNR=13						
	comp=Z,32nm,0.7s						
ARCES	ARCESS Array B	45.27	341	P	P	07 09 26.2	-0.6
ARCES				IAmb	IAmb	07 09 29.6	
	comp=Z,37nm,0.8s						
FABU	Falkenberg	45.28	322	i P	P	07 09 25.9	-1.1
RETA	Reutte	45.38	308	eP	P	07 09 29.2	+1.1
	comp=Z,20nm,1.4s						
BORU	Boraas	45.40	323	i P	P	07 09 27.5	-0.4
FETA	Feichten	45.40	307	eP	P	07 09 29.3	+1.0
	comp=Z,32nm,1.0s						
DL2	Dalian	45.50	64	P	P	07 09 27.3	-1.7
DL2				S	S	07 16 08.8	-1.6
DL2				pmax	pmax		
	comp=Z,22nm,0.8s						
DL2				pmax	pmax		
	comp=Z,140nm,6.1s						
DL2				LR	LR		
	comp=Z,3µm,17.8s						
DL2				LR	LR		
	comp=Z,4µm,15.6s						
DL2				LR	LR		
	comp=Z,3µm,15.9s						
KTK1	Kautokeino	45.62	340	eP	P	07 09 28.3	-1.3
DAVA	Damuels	45.98	308	eP	P	07 09 31.6	-1.3
	comp=Z,18nm,1.3s						
MBAR	Mbarara	45.99	234	IAMs_20	IAMs_20	07 31 05.0	
	comp=Z,5µm,18.0s						
KNMB	Chin-men Tao	46.15	84	IAMs_20	IAMs_20	07 30 32.9	
	comp=Z,6µm,18.0s						
MSSA	Maissana	46.30	304	P	P	07 09 35.3	-0.2
HAMF	Hammerfest	46.44	342	eP	P	07 09 35.7	-0.3
STRU	Stroemstad	46.52	324	i P	P	07 09 46.1	+9.4
SSE	Sheshan	46.59	75	P	P	07 09 38.3	+0.5
SSE				S	S	07 16 25.0	-1.3
SSE				pmax	pmax		
	comp=Z,17nm,0.8s						
SSE				LR	LR		
	comp=Z,4µm,19.5s						
SSE				LR	LR		
	comp=Z,2µm,17.0s						
SNY	Shenyang	46.67	60	⇓P	P	07 09 36.8	-1.4
SNY				S	S	07 16 14.8	-12
SNY				pmax	pmax		
	comp=Z,28nm,0.9s						
SNY				pmax	pmax		
	comp=Z,230nm,3.5s						
SNY				LR	LR		
	comp=Z,3µm,15.1s						
SNY				LR	LR		
	comp=Z,4µm,17.3s						
SNY				LR	LR		
	comp=Z,6µm,15.5s						
NC602	NORSAR Array S	46.74	327	eP	P	07 09 37.0	-1.5
JETT	Jettan, Norway	46.76	340	eP	P	07 09 37.9	-0.7
NC300	NORSAR Array S	46.94	327	P	P	07 09 39.8	-0.3
NC300				IAmb	IAmb	07 09 51.4	
	comp=Z,37nm,1.1s						
OSL	Oslo	46.95	325	eP	P	07 09 39.7	-0.4
NB2	NORSAR Subarra	46.98	327	P	P	07 09 39.0	-1.4
	comp=Z,36nm,1.4s,baz=106,slow=7.9						
NB2	NORSAR Subarra	46.98	327	P	P	07 09 39.0	-1.4
	baz=106,slow=7.9						
NOA	NORSAR Array B	46.98	327	P	P	07 09 39.1	-1.3
	comp=Z,6.5nm,0.7s,baz=107,slow=7.6,SNR=7.6						
	comp=Z,6.5nm,0.7s						
MOR8	Moi Rana	47.23	334	eP	P	07 09 42.9	+0.6
TRO	Tromso	47.25	339	eP	P	07 09 41.4	-0.9
FAUS	Fauske	47.41	336	eP	P	07 09 44.8	+1.2
KONO	Kongsberg	47.44	325	eP	P	07 09 45.6	+1.6
KEST	Kesra	47.47	292	P	P	07 09 45.4	+0.7
	comp=Z,17nm,0.7s,baz=334,slow=3.8,SNR=5.8						
	comp=Z,17nm,0.7s						
KEST	Kesra	47.47	292	P	P	07 09 45.4	+0.7
KEST	Kesra	47.47	292	IAmb	IAmb	07 09 54.8	
	comp=Z,27nm,0.8s						
NSS	Namsos	47.63	332	eP	P	07 09 46.2	+0.8
STEI	Steigen	47.65	337	eP	P	07 09 46.4	+0.9
KONS	Konsvik	47.85	334	eP	P	07 09 48.3	+1.3
CN2	Changchun	47.86	57	eP	P	07 09 43.5	-4.0
CN2				ePP	PP	07 11 34.4	-4.9
CN2				eS	S	07 16 37.5	-6.6
CN2				esS	pS	07 16 51.3	+1.0
CN2				LR	LR		
	comp=Z,5µm,14.0s						
CN2				LR	LR		
	comp=Z,6µm,14.0s						
CN2				LR	LR		
	comp=Z,7µm,14.0s						
LPG	La Plagne	48.20	305	P	P	07 09 52.5	+2.1
DOMB	Dombas	48.22	328	eP	P	07 09 49.7	-0.3
SKAR	Skarslia	48.28	326	eP	P	07 09 51.6	+1.0
SNART	Snartemo	48.44	323	i P	P	07 09 50.5	-1.2
SNART	Snartemo	48.44	323	eP	P	07 09 51.7	0.0
BTNL	Ternell	48.48	312	dP	P	07 09 52.6	+0.5
TPUB	Ta-pu	48.48	85	IAMs_20	IAMs_20	07 32 12.5	
	comp=Z,5µm,18.0s						
KSI	Kapahiang	48.52	128	P	P	07 09 59.2	+6.2
BHOU	Houvegnez	48.55	312	dP	P	07 09 54.1	+1.3
MEM	Membach	48.55	312	dP	P	07 09 54.4	+1.7
SSLB	Suanglung	48.59	84	IAMs_20	IAMs_20	07 32 26.3	
	comp=Z,5µm,18.0s						
TATO	Taipei	48.63	82	IAMs_20	IAMs_20	07 32 04.8	
	comp=Z,5µm,18.0s						
ZEA	Zeya	48.89	44	eP	P	07 09 58.0	+2.7
ZEA				e		07 17 00.5	
ZEA				e		07 20 25.0	
ZEA				pmax	pmax		
	comp=E,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
ZEA				MLR	MLR		
	comp=E,3µm,15.0s						
ZEA				MLR	MLR		
	comp=N,1µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,15.0s						
ODD1	Odda	48.97	325	eP	P	07 09 56.8	+1.0
BLS5	Blasjo	48.98	324	eP	P	07 09 55.4	-0.5
BCLA	Clavier	49.00	312	dP	P	07 09 57.4	+1.3
YULB	Yu-li	49.02	85	P	P	07 09 56.9	+0.2
YULB				IAmb	IAmb	07 10 06.3	
	comp=Z,46nm,1.0s						
YULB				IAMs_20	IAMs_20	07 32 37.8	
	comp=Z,5µm,19.0s						
RCHB	Rochefort	49.05	312	dP	P	07 09 57.5	+0.9
BGES	Gesves	49.14	312	dP	P	07 09 57.2	0.0
BMRD	Maredsous	49.35	312	dP	P	07 09 59.3	+0.5
DOU	Dourbes	49.46	312	dP	P	07 10 00.5	+0.8
	comp=Z,21nm,1.1s						
INCN	Inchon	49.62	65	IAMs_20	IAMs_20	07 32 07.7	
	comp=Z,4µm,18.0s						
SNF	Seneffe	49.65	312	dP	P	07 10 02.2	+1.1
	comp=Z,46nm,0.9s						
BER	Bergen	49.68	325	eP	P	07 10 01.8	+0.7
ASK	Askoy	49.76	325	eP	P	07 10 00.6	-1.2
BJO1	Bjornoya	49.82	345	eP	P	07 10 03.5	+1.4
KSAR	Wonju Array Be	50.60	65	P	P	07 10 09.1	+0.6
KSAR	Wonju Array Be	50.60	65	P	P	07 10 09.1	+0.6
KSRS	Korea Array	50.63	65	P	P	07 10 06.8	-1.9
	comp=Z,12nm,0.8s,baz=271,slow=6.8,SNR=7.4						
	comp=Z,12nm,0.8s						
KSM	Kuching	50.66	116	P	P	07 10 09.8	+0.6
SEHB	SEOHWA	50.73	64	P	P	07 10 10.6	+1.1
MDJ	Mudanjiang	50.75	55	P	P	07 10 09.1	-0.4
MDJ				S	S	07 17 25.5	+1.0
MDJ				ScS	ScS	07 20 00.6	+0.7
MDJ				pmax	pmax		
	comp=Z,23nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,270nm,4.1s						
MDJ				LR	LR		
	comp=Z,4µm,12.4s						
MDJ				LR	LR		
	comp=Z,6µm,14.5s						
MDJ				LR	LR		
	comp=Z,8µm,14.0s						
MDJ	Mudanjiang	50.75	55	P	P	07 10 11.2	+1.7
MDJ	Mudanjiang	50.75	55	IAMs_20	IAMs_20	07 34 24.3	
	comp=Z,5µm,20.0s						
YAK	Yakutsk	50.95	33	IAMs_20	IAMs_20	07 33 58.4	
	comp=Z,3µm,20.0s						
YAK	Yakutsk	50.95	33	eP	P	07 10 10.4	-0.4
YAK				e*PP	sP	07 10 20.4	+2.3
YAK				e		07 11 24.3	
YAK				e		07 12 14.1	
YAK				eS	S	07 17 26.2	-0.6
YAK				pmax	pmax		
	comp=Z,80nm,0.9s						
YAK				pmax	pmax		
	comp=E,47nm,1.1s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,13nm,0.5s						
YAK				pmax	pmax		
	comp=E,58nm,1.3s						
YAK				smax	smax		
	comp=N,66nm,1.6s						
YAK				smax	smax		
	comp=E,283nm,2.7s						
YAK				MLR	MLR		
	comp=Z,3µm,13.0s						
YAK				MLR	MLR		
	comp=E,1µm,13.0s						
YAK				MLR	MLR		
	comp=N,998nm,14.0s						
COCO	West Island	51.65	141	IAMs_20	IAMs_20	07 29 59.3	
	comp=Z,4µm,22.0s						
KLR	Kul'dur	51.77	49	P	P	07 10 16.1	-1.1
	comp=Z,8.4nm,0.7s,baz=270,slow=7.2,SNR=5.9						
	comp=Z,8.4nm,0.7s						
KLR	Kul'dur	51.77	49	c iP	P	07 10 17.9	+0.7
KLR				pmax	pmax		
	comp=Z,46nm,1.8s						
SPA0	Spitsbergen Ar	52.39	348	eP	P	07 10 22.4	+1.0
SPITS	Spitsbergen Ar	52.39	348	P	P	07 10 20.6	-0.8
	comp=Z,30nm,0.9s,baz=126,slow=2.0,SNR=3.7						
	comp=Z,30nm,0.9s						
SPITS	Spitsbergen Ar	52.39	348	P	P	07 10 20.6	-0.8
STKI	Sintang	52.45	117	P	P	07 10 25.9	+3.3
USRK	Ussuriysk Ar.	52.51	56	P	P	07 10 23.3	+0.6
	comp=Z,4.9nm,0.7s,baz=264,slow=6.7,SNR=3.2						
	comp=Z,4.9nm,0.7s						
USRK	Ussuriysk Ar.	52.51	56	P	P	07 10 23.3	+0.6
VLA	Vladivostok	52.60	57	ceP	P	07 10 24.2	+0.9
VLA				pmax	pmax		
	comp=Z,127nm,2.5s						
TIXI	Tiksi	52.61	21	P	P	07 10 22.0	-1.0
	comp=Z,16nm,0.8s,baz=270,slow=20,SNR=5.0						
	comp=Z,16nm,0.8s						
TIXI	Tiksi	52.61	21	P	P	07 10 22.4	-0.6
TIXI				IAMs_20	IAMs_20	07 34 00.6	
	comp=Z,4µm,18.0s						
TIXI	Tiksi	52.61	21	deP	P	07 10 23.5	+0.5
TIXI				pmax	pmax		
	comp=Z,29nm,0.9s						
KBS	Kingsbay	53.54	349	P	P	07 10 30.0	+0.2
KBS				IAmb	IAmb	07 10 33.7	
	comp=Z,64nm,0.8s						
KBS				IAMs_20	IAMs_20	07 34 53.3	
	comp=Z,3µm,19.0s						
KBS	Kingsbay	53.54	349	P	P	07 10 30.0	+0.2
KBS				pmax	pmax		
	comp=Z,64nm,0.9s						
KBS				MLR	MLR		
	comp=Z,3µm,19.0s						
KBS	Kingsbay	53.54	349	eP	P	07 10 29.9	+0.2
GRNR	Gornyy	54.63	47	⇓iP	P	07 10 36.8	-1.4
GRNR				eS	S	07 18 18.2	+0.8
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,3µm,15.0s						
GRNR				MLR	MLR		
	comp=N,2µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,14.0s						
MYLDM	Lahad Datu	55.03	107	IAMs_20	IAMs_20	07 36 06.9	
	comp=Z,4µm,21.0s						
VOI	Vohitsoka	55.54	202	IAmb	IAmb	07 10 46.0	
	comp=Z,26nm,0.7s						
VOI	Vohitsoka	55.54	202	P	P	07 10 48.8	+3.6
VOI	Vohitsoka	55.54	202	P	P	07 10 44.4	-0.7
SMRI	Semarang	56.40	124	IAMs_20	IAMs_20	07 36 19.2	
	comp=Z,3µm,20.0s						
ESDC	Sonseca Array	56.93	300	P	P	07 10 54.0	-0.9
	comp=Z,5.0nm,0.9s,baz=63,slow=6.4,SNR=4.9						
	comp=Z,5.0nm,0.9s						
ESDC	Sonseca Array	56.93	300	P	P	07 10 54.0	-0.9
BKB	Balikpapan	57.50	114	IAMs_20	IAMs_20	07 39 08.9	
	comp=Z,4µm,21.0s						
INU	Inuyama	58.26	65	IAMs_20	IAMs_20	07 37 22.8	
	comp=Z,3µm,19.0s						
TYV	Tymovskoe	58.52	46	eP	P	07 11 07.6	+1.8
TYV				pmax	pmax		
	comp=Z,27nm,1.2s						
TYV				pmax	pmax		
	comp=Z,300nm,4.0s						
TYV				MLR	MLR		
	comp=Z,4µm,18.0s						
LSZ	Lusaka	58.62	224	P	P	07 11 06.8	-0.3
LSZ	Lusaka	58.62	224	P	P	07 11 06.8	-0.3
LSZ				pmax	pmax		
	comp=Z,31nm,1.3s						
LSZ				MLR	MLR		
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	58.83	63	ceP	P	07 11 08.2	-0.1
MAJO				pmax	pmax		
	comp=Z,28nm,1.8s						
MJAR	Matsushiro Arr	58.83	63	P	P	07 11 06.9	-1.4
	comp=Z,5.3nm,1.0s,baz=288,slow=6.2,SNR=3.1						
	comp=Z,5.3nm,1.0s						
MDT	Midelt	59.38	292	P	P	07 11 11.8	-0.4
	comp=Z,5.7nm,0.8s,baz=101,slow=12,SNR=5.6						
	comp=Z,5.7nm,0.8s						
MDT	Midelt	59.38	292	P	P	07 11 11.8	-0.4
MTE	Manteigas	59.39	301	eP	P	07 11 15.4	+3.2
YSS	Yuzh-Sakhalins	59.41	51	eP	P	07 11 11.4	-0.7
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
PCBR	Castelo Branco	59.50	301	eP	P	07 11 13.1	+0.3
PGAV	Gavieira, Arco	59.50	303	eP	P	07 11 15.3	+2.3
PBAR	Barrancos	59.64	299	eP	P	07 11 16.1	+2.3
SCO	Scoresbysund	60.94	337	IAMs_20	IAMs_20	07 38 33.8	
	comp=Z,3µm,19.0s						
MA2	Magadan	61.34	35	P	P	07 11 25.0	0.0
	comp=Z,21nm,1.0s,baz=226,slow=8.0,SNR=5.1						
	comp=Z,21nm,1.0s						
MA2	Magadan	61.34	35	c iP	P	07 11 26.2	+1.2
MA2				pmax	pmax		
	comp=Z,88nm,1.5s						
MA2	Magadan	61.34	35	P	P	07 11 27.0	+2.0
SEY	Seymchan	61.40	31	P	P	07 11 25.0	-0.4
	comp=Z,26nm,0.7s,baz=275,slow=7.2,SNR=14						
	comp=Z,26nm,0.7s						
SEY	Seymchan	61.40	31	P	P	07 11 25.0	-0.4
SEY	Seymchan	61.40	31	P	P	07 11 25.0	-0.4
TORD	Torodi Ar. Bea	61.77	269	P	P	07 11 27.2	-1.4
	comp=Z,24nm,0.9s,baz=74,slow=11,SNR=5.1						
	comp=Z,24nm,0.9s						
TORD	Torodi Ar. Bea	61.77	269	P	P	07 11 27.2	-1.4
BLWY	Bulawayo	62.21	221	⇑iP	P	07 11 31.0	-0.5
BLWY				IAmb	IAmb	07 11 31.9	
	comp=Z,87nm,0.9s						
MOPA	Mopani	63.47	216	eP	P	07 11 39.0	-0.7
MOPA				IAmb	IAmb	07 11 39.8	
	comp=Z,9.9nm,0.8s						
ALE	Alert	64.42	353	IAMs_20	IAMs_20	07 44 21.9	
	comp=Z,3µm,18.0s						
BILL	Bilibino	65.52	24	ceP	P	07 11 54.7	+2.1
BILL				e		07 12 25.4	
BILL				ePPP	PPP	07 15 53.4	
BILL				pmax	pmax		
	comp=Z,45nm,1.5s						
BILL				MLR	MLR		
	comp=Z,5µm,17.0s						
BILL	Bilibino	65.52	24	P	P	07 11 54.1	+1.5
BILL	Bilibino	65.52	24	IAmb	IAmb	07 11 56.7	
	comp=Z,68nm,1.6s						
KOWA	Kowa	66.07	273	P	P	07 11 55.5	-1.4
KOWA				IAmb	IAmb	07 11 59.6	
	comp=Z,27nm,0.8s						
MMRI	Maumere	66.22	117	IAMs_20	IAMs_20	07 43 16.4	
	comp=Z,2µm,22.0s						
SKR	Severo-Kuril's	66.79	44	eP	P	07 12 16.2	+15
SKR				eS	S	07 21 08.6	+16
SKR				eSSS	SSS	07 28 10.7	
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
PEA0B	Petropavlovsk-	66.86	41	ceP	P	07 12 01.2	-0.3
PETK	Petropavlovsk-	66.86	41	P	P	07 12 01.1	-0.4
	comp=Z,5.3nm,1.1s,baz=247,slow=5.9,SNR=4.3						
	comp=Z,5.3nm,1.1s						
PET	Petropavlovsk	67.43	41	IAMs_20	IAMs_20	07 42 30.6	
	comp=Z,3µm,20.0s						
PET	Petropavlovsk	67.43	41	eP	P	07 12 05.3	+0.3
PET				eS	S	07 20 55.8	-4.5
PET				MLR	MLR		
	comp=Z,4µm,19.0s						
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
NWCL	Newcastle	67.72	215	eP	P	07 12 06.9	-0.4
NWCL				IAmb	IAmb	07 12 07.5	
	comp=Z,18nm,0.8s						
LBTB	Lobatse	67.76	220	⇑iP	P	07 12 07.5	-0.1
LBTB				IAmb	IAmb	07 12 08.5	
	comp=Z,28nm,0.7s						
LBTB	Lobatse	67.76	220	P	P	07 12 07.4	-0.1
LBTB				IAmb	IAmb	07 12 08.7	
	comp=Z,30nm,0.8s						
LBTB	Lobatse	67.76	220	P	P	07 12 07.4	-0.1
LBTB				pmax	pmax		
	comp=Z,30nm,0.8s						
ANGG	Ammassalik, Gr	68.02	334	IAMs_20	IAMs_20	07 42 39.9	
	comp=Z,2µm,21.0s						
TSUM	Tsumeb	68.26	230	eP	P	07 12 11.3	+0.4
TSUM				IAmb	IAmb	07 12 15.4	
	comp=Z,906nm,2.0s						
TSUM	Tsumeb	68.26	230	P	P	07 12 11.1	+0.3
TSUM	Tsumeb	68.26	230	IAMs_20	IAMs_20	07 44 42.4	
	comp=Z,3µm,19.0s						
EUNU	Eureka	68.53	355	P	P	07 12 12.0	+0.3
SNKL	Senekal, Frees	69.22	216	eP	P	07 12 15.1	-1.6
SNKL				IAmb	IAmb	07 12 41.4	
	comp=Z,46nm,1.2s						

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TULEG Thule             69.54 350  IAMs_20  IAMs_20  07 46 04.1
      comp=Z,2µm,20.0s
SWZ   Schweizer         69.62 219 eP        P        07 12 17.5 -1.6
SWZ                                IAmb     IAmb     07 12 19.1
      comp=Z,8.3nm,0.7s
GIRL  Giralia           70.08 133  P        P        07 12 24.5 +2.6
GIRL  Giralia           70.08 133  P        P        07 12 22.5 +0.6
DBIC  Dimbokro          70.53 266 eP        P        07 12 22.6 -2.3
DBIC                               IAmb     IAmb     07 12 22.8
      comp=Z,79nm,2.1s
DBIC  Dimbokro          70.53 266  P        P        07 12 23.3 -1.6
      comp=Z,6.5nm,0.9s,baz=63,slow=8.2,SNR=2.9
      comp=Z,6.5nm,0.9s
KIC   Kosan Boka        70.59 266 eP        P        07 12 23.5 -1.8
      comp=Z,11nm,0.6s
ILULI Ilulissat         70.64 340  IAMs_20  IAMs_20  07 46 04.3
      comp=Z,3µm,19.0s
TIC   Toumodi           70.68 266 eP        P        07 12 24.1 -1.8
BOSA  Boshof            70.80 218⇑iP        P        07 12 25.4 -0.9
BOSA                               IAmb     IAmb     07 12 26.5
      comp=Z,24nm,0.8s
BOSA  Boshof            70.80 218  P        P        07 12 25.7 -0.7
      comp=Z,22nm,0.7s,baz=38,slow=6.1,SNR=14
      comp=Z,22nm,0.7s
BOSA  Boshof            70.80 218  P        P        07 12 25.6 -0.7
BOSA                               IAmb     IAmb     07 12 26.7
      comp=Z,25nm,0.8s
LIC   Lamto             70.90 266 eP        P        07 12 26.5 -0.7
      comp=Z,44nm,1.5s
SFJD  Kangerlussuaq     71.81 338  IAMs_20  IAMs_20  07 44 57.0
      comp=Z,3µm,19.0s
UPI   Upington          72.79 221 eP        P        07 12 38.3  0.0
UPI                                IAmb     IAmb     07 12 38.7
      comp=Z,9.2nm,0.8s
KEIM  Keimoes           73.21 221 eP        P        07 12 40.5 -0.3
KEIM                               IAmb     IAmb     07 12 41.7
      comp=Z,28nm,1.0s
NRS   Narsarsuaq        73.26 332  IAMs_20  IAMs_20  07 45 20.6
      comp=Z,3µm,20.0s
A21K  Barrow            73.92  13  P        P        07 12 45.3 +1.1
A21K                               IAmb     IAmb     07 12 47.4
      comp=Z,55nm,1.2s
A21K                               IAMs_20  IAMs_20  07 51 18.3
      comp=Z,2µm,19.0s
A21K  Barrow            73.92  13  P        P        07 12 44.4 +0.1
      baz=322
RDOG  Red Dog Mine      75.01  17  P        P        07 12 49.7 -0.9
      baz=318
GRAN  Grantham          75.33 218 eP        P        07 12 50.9 -2.1
GRAN                               IAmb     IAmb     07 12 54.1
      comp=Z,5.5nm,0.8s
TNA   Tin City          75.40  20  P        P        07 12 52.3 -0.7
      baz=314
GAMB  Gambell           75.40  23  P        P        07 12 53.5 +0.6
GAMB                               IAMs_20  IAMs_20  07 51 10.2
      comp=Z,2µm,18.0s
GAMB  Gambell           75.40  23  P        P        07 12 51.8 -1.1
      baz=311
MEEK  Meekatharra       75.71 133  P        P        07 12 56.3 +1.0
MORW  Morawa            75.89 137  IAmb     IAmb     07 12 58.8
      comp=Z,44nm,1.5s
MORW  Morawa            75.89 137  P        P        07 12 58.1 +1.9
MORW  Morawa            75.89 137  P        P        07 12 56.1 -0.1
CVNA  Calvinia          76.00 220 eP        P        07 12 55.0 -1.9
CVNA                               IAmb     IAmb     07 13 03.6
      comp=Z,156nm,2.4s
SUR   Sutherland        76.12 219  P        P        07 12 58.2 +0.5
SUR                                IAmb     IAmb     07 12 58.7
      comp=Z,47nm,1.4s
ANM   Nome              76.87  20  P        P        07 13 03.2 +1.8
ANM                                pmax     pmax
      comp=Z,82nm,1.7s
ANM   Nome              76.87  20  P        P        07 12 58.9 -2.5
      baz=316,SNR=6.2
ANM   Nome              76.87  20  P        P        07 13 03.2 +1.8
ANM   Nome              76.87  20  IAmb     IAmb     07 13 05.7
      comp=Z,82nm,1.7s
MATJ  Matjiesfontein    76.92 218 eP        P        07 13 02.1  0.0
MATJ                               IAmb     IAmb     07 13 04.1
      comp=Z,77nm,1.7s
A36M  Sachs Harbour     77.33   4  P        P        07 13 02.1 -1.7
      baz=350
BLDU  Ballidu           77.42 137  P        P        07 13 05.9 +1.1
TOLK  Toolik Lake Re    77.51  13  IAMs_20  IAMs_20  07 46 43.2
      comp=Z,2µm,21.0s
TOLK  Toolik Lake Re    77.51  13  P        P        07 13 02.6 -2.3
      baz=329,SNR=8.0
CER   Ceres             77.69 219 eP        P        07 13 05.5 -0.8
CER                                IAmb     IAmb     07 13 11.3
      comp=Z,69nm,2.1s
COLD  Coldfoot          78.59  14  P        P        07 13 08.9 -2.0
      baz=328,SNR=11
IMAR  Indian Mountai    78.87  16  P        P        07 13 12.5  0.0
GCSA  Galena City Sc    79.11  17  P        P        07 13 12.8 -0.9
      baz=323,SNR=6.2
H21K  Melozitna Rive    79.36  15  IAMs_20  IAMs_20  07 55 24.4
      comp=Z,2µm,18.0s
H21K  Melozitna Rive    79.36  15  P        P        07 13 13.4 -1.8
      baz=326
H23K  Yukon River       79.94  14  IAMs_20  IAMs_20  07 52 59.5
      comp=Z,2µm,19.0s
H23K  Yukon River       79.94  14  P        P        07 13 16.2 -2.1
      baz=329,SNR=8.4
I21K  Tanana            79.95  15  P        P        07 13 17.0 -1.3
      baz=327
I21K  Tanana            79.95  15  P        P        07 13 20.0 +1.7
C36M  Paulatuk          80.02   4  IAMs_20  IAMs_20  07 52 01.1
      comp=Z,2µm,21.0s
C36M  Paulatuk          80.02   4  P        P        07 13 16.9 -1.7
      baz=351
INK   Inuvik            80.24   7  P        P        07 13 19.6 -0.3
      comp=Z,21nm,0.9s,baz=338,slow=7.2,SNR=10
      comp=Z,21nm,0.9s
INK   Inuvik            80.24   7  P        P        07 13 19.6 -0.3
INK   Inuvik            80.24   7  IAmb     IAmb     07 13 23.0
      comp=Z,34nm,1.1s
INK   Inuvik            80.24   7  P        P        07 13 18.7 -1.2
      baz=343,SNR=8.0
J20K  Nowinta River     80.27  17  P        P        07 13 21.0 +1.0
J20K                               IAmb     IAmb     07 13 23.4
      comp=Z,60nm,1.2s
J20K                               IAMs_20  IAMs_20  07 52 17.4
      comp=Z,2µm,19.0s
J20K  Nowinta River     80.27  17  P        P        07 13 19.2 -0.9
      baz=325,SNR=7.6
H24K  Noodor Dome       80.27  14  P        P        07 13 19.1 -1.1
      baz=330,SNR=7.9
SPIA  Saint Paul Isl    80.37  27  P        P        07 13 19.4 -1.3
      baz=313
I23K  Minto, Yukon-K    80.56  15  IAMs_20  IAMs_20  07 48 53.0
      comp=Z,3µm,21.0s
I23K  Minto, Yukon-K    80.56  15  P        P        07 13 20.8 -0.8
      baz=329,SNR=6.3
TTA   Tatalina          80.80  18  P        P        07 13 23.2 +0.1
      baz=324,SNR=6.3
CHUM  Lake Minchumin    80.96  16  P        P        07 13 22.7 -1.0
      baz=327,SNR=8.0
K20K  Telida            80.96  17  P        P        07 13 22.5 -1.3
      baz=326,SNR=7.7
MDM   Murphy Dome       80.96  14  IAMs_20  IAMs_20  07 53 37.6
      comp=Z,2µm,20.0s
POKR  Poker Plat Res    80.99  14  P        P        07 13 22.1 -1.8
      baz=331,SNR=10.0
POKR  Poker Plat Res    80.99  14  P        P        07 13 25.1 +1.2
POKR  Poker Plat Res    80.99  14  IAMs_20  IAMs_20  07 55 56.4
      comp=Z,2µm,18.0s
ADK   Adak              81.01  34  IAMs_20  IAMs_20  07 54 14.3
      comp=Z,2µm,19.0s
WRKA  Warakurna         81.07 126  P        P        07 13 26.1 +1.1
BPAW  Bear Paw Mtn.     81.09  16  IAMs_20  IAMs_20  07 55 56.1
      comp=Z,2µm,20.0s
BPAW  Bear Paw Mtn.     81.09  16  P        P        07 13 23.1 -1.4
      baz=328,SNR=6.1
NEA2  Nenana            81.10  15  IAMs_20  IAMs_20  07 53 33.3
      comp=Z,2µm,19.0s
NEA2  Nenana            81.10  15  P        P        07 13 23.4 -1.1
      baz=330,SNR=10
TCOL  CIGO, UAF Yank    81.12  14  P        P        07 13 25.6 +1.0
TCOL                               IAMs_20  IAMs_20  07 52 00.7
      comp=Z,2µm,20.0s
TCOL  CIGO, UAF Yank    81.12  14  P        P        07 13 23.5 -1.1
      baz=331,SNR=7.5
COLA  College           81.12  14  IAMs_20  IAMs_20  07 52 00.7
      comp=Z,2µm,20.0s
COLA  College           81.12  14deP        P        07 13 24.3 -0.3
COLA                               pmax     pmax
      comp=Z,69nm,1.0s
COLA  College           81.12  14  P        P        07 13 23.3 -1.3
      baz=331
COLA  College           81.12  14  P        P        07 13 26.1 +1.5
CCB   Clear Creek Bu    81.33  14  IAMs_20  IAMs_20  07 52 05.3
      comp=Z,2µm,19.0s
BWN   Browne            81.38  15  IAMs_20  IAMs_20  07 54 02.6
      comp=Z,2µm,20.0s
CAST  Castle Rocks      81.41  16  IAMs_20  IAMs_20  07 55 21.5
      comp=Z,2µm,19.0s
CAST  Castle Rocks      81.41  16  P        P        07 13 25.2 -1.1
      baz=327,SNR=9.8
IL31                    81.41  14  P        P        07 13 26.6 +0.6
IL31                               IAmb     IAmb     07 13 29.1
      comp=Z,50nm,1.2s
ILAR  Eielson Array     81.41  14  P        P        07 13 25.6 -0.6
      comp=Z,26nm,1.1s,baz=322,slow=4.0,SNR=15
      comp=Z,26nm,1.1s
ILAR  Eielson Array     81.41  14  P        P        07 13 27.1 +0.9
ILAR  Eielson Array     81.41  14  P        P        07 13 27.1 +0.9
WRH   Wood River Hil    81.42  14  IAMs_20  IAMs_20  07 49 17.7
      comp=Z,2µm,22.0s
KTH   Kantishna Hill    81.57  16  IAMs_20  IAMs_20  07 55 59.9
      comp=Z,2µm,19.0s
EPYK  Eagle Plains      81.69   9  P        P        07 13 26.4 -1.3
      baz=340,SNR=5.3
HDA   Harding Lake      81.72  14  IAMs_20  IAMs_20  07 52 19.5
      comp=Z,2µm,20.0s
HDA   Harding Lake      81.72  14  P        P        07 13 26.4 -1.4
      baz=331,SNR=7.6
L19K  White Mountain    81.73  18  IAMs_20  IAMs_20  07 50 19.0
      comp=Z,2µm,20.0s
L19K  White Mountain    81.73  18  P        P        07 13 26.6 -1.3
      baz=325,SNR=9.6
L19K  White Mountain    81.73  18  P        P        07 13 29.8 +1.8
L19K  White Mountain    81.73  18  IAmb     IAmb     07 13 31.8
      comp=Z,41nm,1.2s
L20K  Farewell, AK      81.74  18  P        P        07 13 26.3 -1.8
      baz=326,SNR=8.3
TRF   Thorofare Moun    81.81  16  P        P        07 13 26.2 -2.3
      baz=329
TRF   Thorofare Moun    81.81  16  P        P        07 13 29.7 +1.2
TRF   Thorofare Moun    81.81  16  IAMs_20  IAMs_20  07 56 49.3
      comp=Z,1µm,18.0s
PPLA  Purkeypile        81.82  17  P        P        07 13 26.6 -2.0
      baz=327
J25K  Salcha River,     81.85  13  IAMs_20  IAMs_20  07 54 13.1
      comp=Z,2µm,20.0s
J25K  Salcha River,     81.85  13  P        P        07 13 26.5 -2.1
      baz=333,SNR=7.5
MCK   McKinley          81.88  15  P        P        07 13 29.4 +0.7
MCK                                IAmb     IAmb     07 13 31.9
      comp=Z,46nm,1.2s
MCK                                IAMs_20  IAMs_20  07 54 07.8
      comp=Z,2µm,20.0s
MCK   McKinley          81.88  15  P        P        07 13 29.4 +0.7
MCK                                pmax     pmax
      comp=Z,46nm,1.2s
MCK                                MLR      MLR
      comp=Z,2µm,20.0s
MCK   McKinley          81.88  15  P        P        07 13 26.4 -2.3
      baz=330,SNR=6.6
M19K  Big River Lodg    82.08  18  P        P        07 13 27.7 -2.1
      baz=325
M19K  Big River Lodg    82.08  18  P        P        07 13 30.9 +1.1
M19K  Big River Lodg    82.08  18  IAMs_20  IAMs_20  07 52 55.1
      comp=Z,2µm,21.0s
RND   Reindeer          82.18  15  IAMs_20  IAMs_20  07 54 37.8
      comp=Z,2µm,20.0s
WB0   Warramunga Arr    82.30 118  P        P        07 13 31.9 +0.4
WB0                                IAmb     IAmb     07 13 33.7
      comp=Z,31nm,1.1s
J26L  Joseph Creek      82.30  13  P        P        07 13 28.8 -2.2
      baz=334,SNR=10
WRA   Warramunga Arr    82.36 118  P        P        07 13 31.1 -0.7
      comp=Z,26nm,1.1s,baz=323,slow=4.6,SNR=10
      comp=Z,26nm,1.1s
WRA   Warramunga Arr    82.36 118  P        P        07 13 32.0 +0.1
WRA   Warramunga Arr    82.36 118  P        P        07 13 32.0 +0.1
WRAB  Tennant Creek     82.36 118d iP       P        07 13 31.8 -0.1
WRAB                               pmax     pmax
      comp=Z,41nm,1.1s
WB2   Warramunga Arr    82.37 118  P        P        07 13 32.0 +0.1
WB2                                IAmb     IAmb     07 13 34.2
      comp=Z,26nm,0.9s
I29M  Ogilvie Camp,     82.41  10  P        P        07 13 29.8 -1.6
      baz=339,SNR=12
EGAK  Eagle             82.48  12  IAMs_20  IAMs_20  07 55 46.7
      comp=Z,2µm,20.0s
EGAK  Eagle             82.48  12  P        P        07 13 30.3 -1.5
      baz=336,SNR=8.0
K24K  Donnelly Dome     82.49  14  P        P        07 13 30.8 -1.1
      baz=332,SNR=9.1
N18K  Kilae Creek       82.67  20  P        P        07 13 31.5 -1.4
      baz=324,SNR=6.6
N18K  Kilae Creek       82.67  20  P        P        07 13 34.7 +1.8
N18K  Kilae Creek       82.67  20  IAmb     IAmb     07 13 36.5
      comp=Z,41nm,1.4s
CUT   Chulitna          82.71  16  IAMs_20  IAMs_20  07 53 13.0
      comp=Z,2µm,20.0s
CUT   Chulitna          82.71  16  P        P        07 13 31.0 -2.0
      baz=329
DHY   Denali Highway    82.80  15  IAMs_20  IAMs_20  07 51 37.1
      comp=Z,2µm,20.0s
DHY   Denali Highway    82.80  15  P        P        07 13 31.6 -2.0
      baz=331,SNR=6.3
N19K  Bonanza Creek     82.95  19  P        P        07 13 34.8 +0.3
N19K                               IAmb     IAmb     07 13 39.3
      comp=Z,30nm,0.9s
N19K                               IAMs_20  IAMs_20  07 51 51.6
      comp=Z,2µm,19.0s
N19K  Bonanza Creek     82.95  19  P        P        07 13 32.5 -2.0
      baz=325,SNR=6.1
K27K  Chicken           83.01  12  IAMs_20  IAMs_20  07 49 50.4
      comp=Z,2µm,21.0s
K27K  Chicken           83.01  12  P        P        07 13 32.5 -2.1
      baz=336
WAT6  Susitna Watana    83.15  15  P        P        07 13 33.2 -2.3
      baz=331
J29M  Klondike Camp     83.27  10  P        P        07 13 34.1 -2.0
      baz=339
PAX   Paxson            83.30  14  P        P        07 13 33.7 -2.5
      baz=333,SNR=8.8
SPU   Mount Spurr       83.30  18  P        P        07 13 36.1 -0.1
M22K  Willow            83.31  17  P        P        07 13 36.8 +0.7
M22K                               IAMs_20  IAMs_20  07 57 07.7
      comp=Z,2µm,18.0s
M22K  Willow            83.31  17  P        P        07 13 33.7 -2.4
      baz=329,SNR=5.5
DAWY  Dawson            83.44  11  P        P        07 13 34.6 -2.3
      baz=338,SNR=12
O19K  Port Alsworth     83.51  19  P        P        07 13 37.2  0.0
O19K                               IAmb     IAmb     07 13 40.7
      comp=Z,21nm,1.0s
O19K  Port Alsworth     83.51  19  P        P        07 13 35.6 -1.6
      baz=326
O18K  Koktuh Hills      83.54  20  P        P        07 13 35.0 -2.4
      baz=325
O18K  Koktuh Hills      83.54  20  P        P        07 13 39.0 +1.6
GHO   Glory Hole Cre    83.58  16  IAMs_20  IAMs_20  07 55 46.9
      comp=Z,2µm,18.0s
L26K  Log Cabin Wild    83.68  13  P        P        07 13 36.2 -1.9
      baz=335,SNR=11
L26K  Log Cabin Wild    83.68  13  P        P        07 13 39.4 +1.4
L26K  Log Cabin Wild    83.68  13  IAMs_20  IAMs_20  07 50 57.4
      comp=Z,2µm,22.0s
MENT  Mentasta          83.69  13  IAmb     IAmb     07 13 42.1
      comp=Z,33nm,1.1s
MENT  Mentasta          83.69  13  P        P        07 13 39.5 +1.3
PMR   Palmer            83.69  16  IAmb     IAmb     07 13 40.6
      comp=Z,36nm,1.2s
PMR   Palmer            83.69  16  P        P        07 13 39.3 +1.2
PMR                                pmax     pmax
      comp=Z,36nm,1.2s
PMR   Palmer            83.69  16  P        P        07 13 36.2 -1.8
      baz=330,SNR=5.4
PMR   Palmer            83.69  16  P        P        07 13 39.2 +1.2
SML   Sawmill           83.69  16  IAMs_20  IAMs_20  07 55 17.8
      comp=Z,2µm,21.0s
SML   Sawmill           83.69  16  P        P        07 13 36.0 -2.2
      baz=330,SNR=5.4
RSO   Redoubt South     83.72  18  P        P        07 13 39.4 +0.9
FIS   Fire Island       83.81  17  IAMs_20  IAMs_20  07 54 21.0
      comp=Z,2µm,22.0s
M23K  Glacier View      83.84  16  P        P        07 13 37.3 -1.7
      baz=331,SNR=7.5
NIKH  Nikolski High     83.86  30  P        P        07 13 37.3 -1.8
      baz=315
HARP  HAARP             83.88  14  P        P        07 13 37.4 -1.7
      baz=333,SNR=9.9
SCM   Sheep Creek Mo    83.90  15  P        P        07 13 40.6 +1.3
SCM                                pmax     pmax
      comp=Z,93nm,1.6s
SCM   Sheep Creek Mo    83.90  15  P        P        07 13 37.6 -1.7
      baz=331
SCM   Sheep Creek Mo    83.90  15  P        P        07 13 40.6 +1.3
SCM   Sheep Creek Mo    83.90  15  IAMs_20  IAMs_20  07 57 34.3
      comp=Z,1µm,19.0s
P18K  Big Mountain,     83.91  20  IAMs_20  IAMs_20  07 53 04.6
      comp=Z,2µm,20.0s
P18K  Big Mountain,     83.91  20  P        P        07 13 37.4 -1.9
      baz=325
P18K  Big Mountain,     83.91  20  P        P        07 13 40.8 +1.4
P18K  Big Mountain,     83.91  20  IAmb     IAmb     07 13 42.8
      comp=Z,35nm,1.1s
M24K  Tolsona, Glenn    83.92  15  IAMs_20  IAMs_20  07 53 44.7
      comp=Z,2µm,21.0s
M24K  Tolsona, Glenn    83.92  15  P        P        07 13 37.6 -1.7
      baz=332,SNR=8.1
L27K  Beaver Creek,     83.94  13  IAMs_20  IAMs_20  07 57 53.2
      comp=Z,2µm,19.0s
L27K  Beaver Creek,     83.94  13  P        P        07 13 38.7 -0.7
      baz=336,SNR=20
RC01  Rabbit Creek A    83.97  17  P        P        07 13 40.7 +1.1
RC01                               IAmb     IAmb     07 13 42.0
      comp=Z,39nm,1.1s
RC01                               IAMs_20  IAMs_20  07 54 36.4
      comp=Z,2µm,19.0s
RC01  Rabbit Creek A    83.97  17  P        P        07 13 37.5 -2.1
      baz=329,SNR=5.3
KNK   Knik Glacier      84.00  16  P        P        07 13 38.6 -1.2
      baz=330,SNR=6.2
KNK   Knik Glacier      84.00  16  P        P        07 13 41.1 +1.3
KNK   Knik Glacier      84.00  16  IAMs_20  IAMs_20  07 55 29.1
      comp=Z,2µm,20.0s
AS31  Alice Springs     84.25 122  P        P        07 13 40.5 -1.0
ASAR  Alice Springs     84.25 122  P        P        07 13 40.2 -1.3
      comp=Z,8.9nm,0.5s,baz=308,slow=5.3,SNR=16
ASAR                               PKKPbc   PKKPbc   07 31 55.8 +1.3
      comp=Z,0.5nm,0.7s,baz=119,slow=2.9,SNR=5.8
      comp=Z,8.9nm,0.5s
P19K  Oil Pt            84.27  19  IAMs_20  IAMs_20  07 57 43.3
      comp=Z,2µm,18.0s
M26K  Nabesna, AK       84.32  13  P        P        07 13 42.2 +0.8
M26K                               IAmb     IAmb     07 13 45.4
      comp=Z,44nm,1.1s
M26K                               IAMs_20  IAMs_20  07 55 38.2
      comp=Z,2µm,19.0s
M26K  Nabesna, AK       84.32  13  P        P        07 13 39.4 -2.0
      baz=335,SNR=8.9
O22K  Cooper Landing    84.50  17  P        P        07 13 43.2 +0.9
KLU   Klutina           84.52  15  P        P        07 13 43.2 +0.8
KLU                                IAmb     IAmb     07 13 47.7
      comp=Z,41nm,1.0s
KLU                                IAMs_20  IAMs_20  07 51 19.6
      comp=Z,2µm,20.0s
KLU   Klutina           84.52  15  P        P        07 13 40.7 -1.7
      baz=332,SNR=8.5
M27K  Edge Creek, AK    84.57  13  IAMs_20  IAMs_20  07 55 01.0
      comp=Z,1µm,21.0s
M27K  Edge Creek, AK    84.57  13  P        P        07 13 41.0 -1.8
      baz=336,SNR=11
FORT  Forrest           84.59 130  P        P        07 13 45.5 +2.4
HOM   Homer             84.70  18  IAMs_20  IAMs_20  07 55 48.7
      comp=Z,2µm,20.0s
N25K  Chitina, Valde    84.70  14  P        P        07 13 44.4 +1.0
N25K                               IAmb     IAmb     07 13 47.5
      comp=Z,49nm,1.2s
N25K                               IAMs_20  IAMs_20  07 52 56.5
      comp=Z,2µm,21.0s
N25K  Chitina, Valde    84.70  14  P        P        07 13 42.1 -1.3
      baz=334,SNR=8.0
BVCY  Beaver Creek      84.71  12  P        P        07 13 41.9 -1.4
      baz=337,SNR=10
Q19K  Cape Douglas,     84.76  20  IAMs_20  IAMs_20  07 52 09.2
      comp=Z,2µm,22.0s
Q19K  Cape Douglas,     84.76  20  P        P        07 13 41.0 -2.7
      baz=326
GLI   Glacier Island    84.79  16  IAMs_20  IAMs_20  07 53 28.0
      comp=Z,2µm,19.0s
GLI   Glacier Island    84.79  16  P        P        07 13 41.6 -2.1
      baz=332,SNR=6.2
BRLK  Bradley Lake      84.82  18  P        P        07 13 43.8 -0.1
BRLK                               IAMs_20  IAMs_20  07 56 06.8
      comp=Z,2µm,21.0s
BRSE  Bradley Lake S    84.87  18  P        P        07 13 41.5 -2.7
      baz=329
DIV   Divide            84.88  15  P        P        07 13 45.2 +0.9
DIV                                IAmb     IAmb     07 13 48.0
      comp=Z,28nm,1.1s
SEW   Seward            84.90  17  P        P        07 13 41.6 -2.6
      baz=330
SEW   Seward            84.90  17  P        P        07 13 45.4 +1.2
CNPM  China Poot        84.93  18  IAMs_20  IAMs_20  07 56 45.6
      comp=Z,2µm,18.0s
FID   Port Fidalgo      85.05  16  P        P        07 13 45.4 +0.4
FID                                IAmb     IAmb     07 13 50.0
      comp=Z,28nm,1.0s
FID                                IAMs_20  IAMs_20  07 53 46.6
      comp=Z,2µm,20.0s
M30M  Minto, Yukon      85.26  11  P        P        07 13 43.9 -2.2
      baz=340,SNR=6.5
BMRM  Bremner River     85.28  15  IAMs_20  IAMs_20  07 56 47.7
      comp=Z,1µm,19.0s
BMRM  Bremner River     85.28  15  P        P        07 13 44.5 -1.7
      baz=334,SNR=9.8
VRDI  Verde Repeater    85.29  14  IAMs_20  IAMs_20  07 55 28.9
      comp=Z,2µm,21.0s
YUK3  Moose Creek       85.38  12  P        P        07 13 45.7 -1.2
      baz=337,SNR=12
EYAK  Cordova Ski Ar    85.40  15  P        P        07 13 47.7 +1.0
EYAK                               IAmb     IAmb     07 13 50.9
      comp=Z,33nm,1.1s
EYAK  Cordova Ski Ar    85.40  15  P        P        07 13 45.6 -1.1
      baz=333,SNR=5.6
BARN  Barnard Glacie    85.81  13  IAmb     IAmb     07 13 53.2
      comp=Z,50nm,1.2s
BARN  Barnard Glacie    85.81  13  P        P        07 13 50.4 +1.3
SCHQ  Schefferville     85.88 335  P        P        07 13 49.1 -0.2
      comp=Z,6.6nm,1.0s,baz=19,slow=2.8,SNR=6.2
SCHQ                               PKKPbc   PKKPbc   07 31 46.3 -4.1
      comp=Z,2.4nm,1.0s,baz=174,slow=3.8,SNR=3.6
      comp=Z,6.6nm,1.0s
HMT   Hamilton          85.92  15  IAMs_20  IAMs_20  07 55 51.7
      comp=Z,1µm,20.0s
HMT   Hamilton          85.92  15  P        P        07 13 50.8 +1.4
HMT   Hamilton          85.92  15  IAmb     IAmb     07 15 57.2
      comp=Z,24nm,0.9s
CTGM  Chitina Glacie    85.96  13  P        P        07 13 50.9 +1.1
CTGM                               IAmb     IAmb     07 13 53.9
      comp=Z,39nm,1.0s
CTGM                               IAMs_20  IAMs_20  07 58 26.4
      comp=Z,2µm,19.0s
M31M  Drury Creek, Y    85.98  10  P        P        07 13 50.3 +0.6
M31M                               IAmb     IAmb     07 13 53.3
      comp=Z,38nm,1.1s
M31M                               IAMs_20  IAMs_20  07 59 19.9
      comp=Z,2µm,19.0s
M31M  Drury Creek, Y    85.98  10  P        P        07 13 47.9 -1.7
      baz=342,SNR=9.2
BERG  Berg Lake         85.99  14  P        P        07 13 50.6 +0.9
BERG                               IAMs_20  IAMs_20  07 55 53.5
      comp=Z,2µm,19.0s
KDAK  Kodiak Island     86.02  20  P        P        07 13 49.3 -0.6
      comp=Z,19nm,0.9s,baz=91,slow=4.0,SNR=7.1
      comp=Z,19nm,0.9s
KDAK  Kodiak Island     86.02  20  P        P        07 13 49.8 -0.1
KDAK                               IAmb     IAmb     07 13 53.3
      comp=Z,51nm,1.2s
KDAK  Kodiak Island     86.02  20  P        P        07 13 49.8 -0.1
KDAK                               pmax     pmax
      comp=Z,51nm,1.2s
KDAK                               MLR      MLR
      comp=Z,3µm,19.0s
KDAK  Kodiak Island     86.02  20  P        P        07 13 47.3 -2.6
      baz=327
GRNC  Granite Creek     86.09  13  IAmb     IAmb     07 13 54.4
      comp=Z,55nm,1.2s
GRNC  Granite Creek     86.09  13  P        P        07 13 52.1 +1.7
ISLE  Juniper Island    86.09  14  IAMs_20  IAMs_20  07 55 53.0
      comp=Z,1µm,20.0s
ISLE  Juniper Island    86.09  14  P        P        07 13 51.5 +1.2
ISLE  Juniper Island    86.09  14  IAmb     IAmb     07 13 53.5
      comp=Z,25nm,1.0s
YUK4  Talbot Arm        86.11  12  P        P        07 13 48.5 -2.0
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	baz=339,SNR=8.5						
WAX	Waxell Ridge	86.12	14	IAMs_20	IAMs_20	07 51 41.8	
	comp=Z,2µm,21.0s						
WAX	Waxell Ridge	86.12	14	P	P	07 13 52.2	+1.7
WAX	Waxell Ridge	86.12	14	IAmb	IAmb	07 13 54.1	
	comp=Z,35nm,1.1s						
CNBA	Chernabura Isl	86.16	25	IAMs_20	IAMs_20	07 55 32.4	
	comp=Z,2µm,19.0s						
SUCK	Suckling Hills	86.26	15	P	P	07 13 53.1	+2.0
N30M	Aishikik Lake	86.27	11	P	P	07 13 49.4	-1.8
	baz=340,SNR=10						
OHAK	Old Harbor	86.28	20	P	P	07 13 51.0	-0.1
OHAK	Old Harbor	86.28	20	P	P	07 13 48.6	-2.6
	baz=327						
SNH	Sunshine Point	86.37	14	P	P	07 13 52.0	+0.4
SNH				IAMs_20	IAMs_20	07 51 50.5	
	comp=Z,2µm,21.0s						
N31M	Braeburn, Yuko	86.45	10	P	P	07 13 51.9	-0.1
N31M				IAmb	IAmb	07 13 55.7	
	comp=Z,38nm,1.0s						
N31M				IAMs_20	IAMs_20	07 53 51.3	
	comp=Z,2µm,22.0s						
N31M	Braeburn, Yuko	86.45	10	P	P	07 13 50.3	-1.7
	baz=341,SNR=5.4						
TABL	Table Mountain	86.48	13	IAMs_20	IAMs_20	07 56 57.3	
	comp=Z,2µm,19.0s						
YUK6	Outpost Mounta	86.53	12	P	P	07 13 51.7	-1.0
	baz=339,SNR=6.1						
QIS	Mount Isa	86.75	116	P	P	07 13 55.3	+1.2
HYT	Haines Junctio	86.79	11	P	P	07 13 52.5	-1.4
	baz=340,SNR=9.2						
PCA	Pinnacle	86.97	13	P	P	07 13 55.4	+0.8
PINM	Pinnacle	86.97	13	P	P	07 13 53.6	-1.0
	baz=337,SNR=7.5						
YKA	Yellowknife Ar	87.19	0	P	P	07 13 55.6	+0.1
	comp=Z,36nm,1.0s,baz=350,slow=4.9,SNR=14						
YKA				PKKPbc	PKKPbc	07 31 45.5	-2.0
	comp=Z,0.5nm,0.9s,baz=169,slow=2.7,SNR=5.4						
	comp=Z,36nm,1.0s						
YKA	Yellowknife Ar	87.19	0	*i* P	P	07 13 57.0	+1.5
YKA				pmax	pmax		
	comp=Z,38nm,0.9s						
BCPM	Bancas Point	87.22	13	IAMs_20	IAMs_20	08 00 46.9	
	comp=Z,1µm,18.0s						
TGTN	Hyland Airport	87.39	7	P	P	07 13 55.4	-1.3
	baz=347,SNR=6.8						
PNL	Peninsula	87.53	13	P	P	07 13 56.3	-1.0
	baz=338,SNR=9.4						
SKAG	Skagway	88.45	11	P	P	07 14 00.1	-1.4
	baz=341,SNR=8.2						
SKAG	Skagway	88.45	11	P	P	07 14 03.1	+1.5
BESE	Bessie Mountai	89.36	11	P	P	07 14 06.8	+0.8
JIS	Juneau Island	89.73	11	IAMs_20	IAMs_20	08 00 15.1	
	comp=Z,1µm,21.0s						
DLBC	Dease Lake	90.20	9	P	P	07 14 11.1	+1.1
	comp=Z,18nm,1.1s,baz=360,slow=4.6,SNR=8.8						
	comp=Z,18nm,1.1s						
DLBC	Dease Lake	90.20	9	P	P	07 14 09.8	-0.2
DLBC				IAmb	IAmb	07 14 14.6	
	comp=Z,43nm,1.4s						
S34M	Telegraph Cree	90.57	9	P	P	07 14 09.6	-2.0
	baz=345						
SIT	Sitka	90.73	12	P	P	07 14 13.4	+1.1
SIT				IAmb	IAmb	07 14 17.1	
	comp=Z,31nm,1.2s						
SIT	Sitka	90.73	12	P	P	07 14 13.4	+1.1
SIT				pmax	pmax		
	comp=Z,31nm,1.2s						
SIT	Sitka	90.73	12	P	P	07 14 10.6	-1.7
	baz=341						
WRAK	Wrangell Islan	91.83	10	IAMs_20	IAMs_20	08 03 27.7	
	comp=Z,1µm,18.0s						
WRAK	Wrangell Islan	91.83	10	P	P	07 14 15.7	-1.8
	baz=344						
CRAG	Craig	92.62	11	P	P	07 14 17.3	-3.8
	baz=343						
PQI	Presque Isle	92.75	331	IAMs_20	IAMs_20	07 56 47.2	
	comp=Z,1µm,19.0s						
D62A	Allapoint, All	92.85	331	P	P	07 14 22.7	+0.3
LMQ	La Malbaie	93.00	332	IAmb	IAmb	07 14 27.1	
	comp=Z,30nm,1.1s						
LMQ	La Malbaie	93.00	332	P	P	07 14 24.5	+1.4
EMMW	East Machias	94.05	329	IAMs_20	IAMs_20	07 57 17.6	
	comp=Z,2µm,20.0s						
PKME	Peaks-Kenny Pk	94.40	330	IAMs_20	IAMs_20	07 57 47.8	
	comp=Z,2µm,19.0s						
STKA	Stephens Creek	94.52	124	P	P	07 14 29.4	-0.8
	comp=Z,3.7nm,0.9s,baz=278,slow=7.1,SNR=3.0						
	comp=Z,3.7nm,0.9s						
GRNB	Grenville Isla	94.68	10	P	P	07 14 31.6	+0.9
WVL	Waterville	95.12	330	IAMs_20	IAMs_20	07 58 18.0	
	comp=Z,2µm,19.0s						
LBNH	Lisbon	96.34	331	IAMs_20	IAMs_20	07 59 08.9	
	comp=Z,1µm,19.0s						
EDM	Edmonton	96.50	360	P	P	07 14 39.3	+0.3
EDM	Edmonton	96.50	360	P	P	07 14 39.3	+0.3
EDM				pmax	pmax		
	comp=Z,38nm,1.3s						
VT1	Waterbury	96.60	332	IAMs_20	IAMs_20	07 59 00.3	
	comp=Z,1µm,20.0s						
FFD	Franklin Falls	96.85	331	IAMs_20	IAMs_20	07 59 02.8	
	comp=Z,1µm,20.0s						
HNH	Hanover	96.92	331	IAMs_20	IAMs_20	08 01 11.7	
	comp=Z,1µm,20.0s						
LONY	Lake Ozonia	97.09	333	IAMs_20	IAMs_20	07 59 24.8	
	comp=Z,1µm,20.0s						
BCX	Boston College	97.57	330	IAMs_20	IAMs_20	08 00 07.8	
	comp=Z,1µm,19.0s						
WES	Weston	97.59	330	IAMs_20	IAMs_20	08 00 17.4	
	comp=Z,2µm,19.0s						
M65A	Busby, Falmout	97.96	329	IAMs_20	IAMs_20	07 59 14.0	
	comp=Z,1µm,21.0s						
M65A	Busby, Falmout	97.96	329	P	P	07 14 42.9	-2.8
	baz=36						
MAW	Mawson	97.97	181	P	Pdif	07 14 45.9	+1.0
	comp=Z,16nm,1.1s,baz=354,slow=8.7,SNR=7.5						
	comp=Z,16nm,1.1s						
MAW	Mawson	97.97	181	P	Pdif	07 14 45.6	+0.7
BRYW	Bryant College	98.06	330	IAMs_20	IAMs_20	08 00 24.0	
	comp=Z,1µm,19.0s						
L61B	Northampton	98.12	331	IAMs_20	IAMs_20	08 01 38.1	
	comp=Z,1µm,19.0s						
QUA2	Belchertown	98.12	330	IAMs_20	IAMs_20	08 01 37.4	
	comp=Z,1µm,19.0s						
TRY	Troy	98.30	331	IAMs_20	IAMs_20	08 00 01.0	
	comp=Z,1µm,20.0s						
YLE	Yale	99.16	330	IAMs_20	IAMs_20	08 03 10.6	
	comp=Z,1µm,20.0s						
EYMN	Ely	99.30	345	IAMs_20	IAMs_20	08 01 43.9	
	comp=Z,2µm,22.0s						
WSPT	Westport, CT	99.45	330	IAMs_20	IAMs_20	08 00 56.5	
	comp=Z,1µm,19.0s						
BINY	Binghamton	99.68	333	IAMs_20	IAMs_20	08 01 03.3	
	comp=Z,1µm,19.0s						
COWI	Conover	100.48	343	IAMs_20	IAMs_20	08 03 57.0	
	comp=Z,2µm,22.0s						
DGMT	Dagmar	100.81	354	IAMs_20	IAMs_20	08 06 12.6	
	comp=Z,1µm,19.0s						
NEW	Newport	101.40	2	IAMs_20	IAMs_20	08 05 17.4	
	comp=Z,2µm,20.0s						
EGMT	Eagleton	101.62	357	IAMs_20	IAMs_20	08 07 43.3	
	comp=Z,1µm,20.0s						
SSPA	Standing Stone	101.76	333	IAMs_20	IAMs_20	08 02 44.4	
	comp=Z,1µm,19.0s						
NLWA	Neilton Lookou	101.78	7	IAMs_20	IAMs_20	08 06 28.8	
	comp=Z,2µm,19.0s						
CASY	Casey	102.32	163	IAMs_20	IAMs_20	08 02 05.7	
	comp=Z,1µm,19.0s						
AAM	Ann Arbor	102.37	338	IAMs_20	IAMs_20	08 03 33.3	
	comp=Z,2µm,20.0s						
E04D	Cinebar	102.74	6	IAMs_20	IAMs_20	08 10 51.1	
	comp=Z,1µm,20.0s						
LAO	LASA Array	102.75	355	IAMs_20	IAMs_20	08 03 29.0	
	comp=Z,2µm,21.0s						
HAWA	Hanford	103.14	4	IAMs_20	IAMs_20	08 08 55.7	
	comp=Z,1µm,20.0s						
MCWV	Mont Chateau	103.36	334	IAMs_20	IAMs_20	08 01 06.6	
	comp=Z,1µm,22.0s						
F05D	White Salmon	103.50	6	IAMs_20	IAMs_20	08 08 49.3	
	comp=Z,940nm,19.0s						
RCBR	Riachuelo	103.54	271	IAMs_20	IAMs_20	08 01 58.1	
	comp=Z,1µm,18.0s						
CBN	Corbin Frederi	103.63	331	IAMs_20	IAMs_20	08 03 38.9	
	comp=Z,1µm,18.0s						
G03D	McMinnville, O	104.00	7	IAMs_20	IAMs_20	08 08 48.5	
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	104.11	359	IAMs_20	IAMs_20	08 09 57.0	
	comp=Z,2µm,19.0s						
RLMT	Red Lodge	104.50	357	IAMs_20	IAMs_20	08 06 47.4	
	comp=Z,1µm,20.0s						
COR	Corvallis	104.61	7	IAMs_20	IAMs_20	08 01 08.7	
	comp=Z,1µm,22.0s						
BMO	Blue Mountains	104.80	3	IAMs_20	IAMs_20	08 06 26.4	
	comp=Z,2µm,21.0s						
I02E	Swisshome, OR	105.03	8	IAMs_20	IAMs_20	08 08 03.7	
	comp=Z,1µm,22.0s						
SCIA	State Center	105.41	344	IAMs_20	IAMs_20	08 05 02.6	
	comp=Z,2µm,22.0s						
FLWY	Flagg Ranch	105.60	358	IAMs_20	IAMs_20	08 04 51.4	
	comp=Z,2µm,22.0s						
MOOW	Moose Ponds	105.93	358	IAMs_20	IAMs_20	08 08 22.3	
	comp=Z,1µm,20.0s						
J01E	Myrtle Point	105.95	8	IAMs_20	IAMs_20	08 06 48.1	
	comp=Z,1µm,22.0s						
LOHW	Long Hollow	106.06	358	IAMs_20	IAMs_20	08 08 36.7	
	comp=Z,2µm,21.0s						
J04D	Umpqua Nationa	106.07	6	IAMs_20	IAMs_20	08 06 00.2	
	comp=Z,1µm,22.0s						
HLID	Hailey	106.16	1	IAMs_20	IAMs_20	08 08 45.4	
	comp=Z,2µm,20.0s						
TPAW	Teton Pass	106.20	358	IAMs_20	IAMs_20	08 04 59.3	
	comp=Z,1µm,22.0s						
SNOW	Snow King Moun	106.22	358	IAMs_20	IAMs_20	08 08 31.8	
	comp=Z,1µm,20.0s						
REDW	Red Top Meadow	106.32	358	IAMs_20	IAMs_20	08 05 03.6	
	comp=Z,1µm,22.0s						
CNNC	Cliffs of the	106.37	330	IAMs_20	IAMs_20	08 05 27.5	
	comp=Z,1µm,21.0s						
HUMO	Hull Mountain	106.61	7	IAMs_20	IAMs_20	08 07 28.5	
	comp=Z,1µm,22.0s						
BW06	Boulder Array	106.86	357	IAMs_20	IAMs_20	08 08 48.0	
	comp=Z,1µm,19.0s						
AHID	Auburn Hatcher	106.92	358	IAMs_20	IAMs_20	08 10 48.5	
	comp=Z,1µm,20.0s						
L04D	Klamath Falls	107.06	7	IAMs_20	IAMs_20	08 07 01.5	
	comp=Z,1µm,22.0s						
WVOR	Wild Horse Val	107.14	4	IAMs_20	IAMs_20	08 14 02.5	
	comp=Z,1µm,18.0s						
RWWY	Rawlins	107.80	355	IAMs_20	IAMs_20	08 09 51.6	
	comp=Z,2µm,21.0s						
HWUT	Hardware Ranch	108.09	358	IAMs_20	IAMs_20	08 09 53.5	
	comp=Z,1µm,20.0s						
JCC	Jacoby Creek,	108.25	8	IAMs_20	IAMs_20	08 07 30.0	
	comp=Z,1µm,22.0s						
KSU1	Kansas State U	108.84	346	IAMs_20	IAMs_20	08 06 38.4	
	comp=Z,2µm,22.0s						
ELK	Elko	108.96	1	IAMs_20	IAMs_20	08 11 01.6	
	comp=Z,1µm,21.0s						
NHSC	New Hope	109.17	331	IAMs_20	IAMs_20	08 11 11.6	
	comp=Z,965nm,18.0s						
DUG	Dugway, Tooele	109.52	359	IAMs_20	IAMs_20	08 11 22.4	
	comp=Z,1µm,20.0s						
CBKS	Cedar Bluff	109.71	349	IAMs_20	IAMs_20	08 12 11.3	
	comp=Z,1µm,19.0s						
ORV	Oroville	109.78	7	IAMs_20	IAMs_20	08 08 15.4	
	comp=Z,1µm,21.0s						
HOPS	Hopland Field	110.17	8	IAMs_20	IAMs_20	08 07 13.7	
	comp=Z,1µm,21.0s						
PLAL	Pickwick Lake	110.45	338	IAMs_20	IAMs_20	08 08 31.2	
	comp=Z,1µm,20.0s						
MCCM	Marconi Confer	111.03	8	IAMs_20	IAMs_20	08 08 01.4	
	comp=Z,966nm,22.0s						
NVAR	Mina Array Bea	111.15	4	PKiKP	PKiKP	07 19 44.4	+0.6
	comp=Z,0.5nm,0.7s,baz=326,slow=1.3,SNR=4.5						
CMB	Columbia Colle	111.39	6	IAMs_20	IAMs_20	08 08 19.0	
	comp=Z,1µm,21.0s						
ABD	La Joyeuse, An	111.42	306	IAMs_20	IAMs_20	08 03 10.3	
	comp=Z,972nm,20.0s						
SAO	San Andreas Ge	112.55	7	IAMs_20	IAMs_20	08 08 04.7	
	comp=Z,1µm,22.0s						
WMOK	Wichita Mounta	113.50	347	IAMs_20	IAMs_20	08 13 39.5	
	comp=Z,1µm,21.0s						
DWPF	Disney Wildern	114.02	329	IAMs_20	IAMs_20	08 06 23.1	
	comp=Z,1µm,22.0s						
WUAZ	Wupatki	114.17	358	IAMs_20	IAMs_20	08 15 18.2	
	comp=Z,1µm,21.0s						
PASC	Pasadena Art C	115.39	4	IAMs_20	IAMs_20	08 13 21.9	
	comp=Z,1µm,21.0s						
PFO	Pinyon Flats O	116.04	3	IAMs_20	IAMs_20	08 17 38.0	
	comp=Z,1µm,18.0s						
SDDR	Presa de Saban	116.07	315	IAMs_20	IAMs_20	08 09 04.6	
	comp=Z,983nm,22.0s						
109C	Camp Elliot, M	116.73	3	IAMs_20	IAMs_20	08 10 28.3	
	comp=Z,898nm,22.0s						
TXAR	Lajitas Array	119.62	350	PKP	PKPdf	07 19 59.9	-0.2
	comp=Z,1.7nm,0.9s,baz=104,slow=0.2,SNR=6.8						
QSPA	South Pole Qui	120.45	180	PKPdf	PKPdf	07 19 59.9	-0.4
BELA	Belgrano 2	122.04	194		PKiKP	07 20 03.1	-0.1
TGUH	Tegucigalpa,Un	128.86	326	IAMs_20	IAMs_20	08 25 39.6	
	comp=Z,795nm,18.0s						
MTO3	Montecristo	129.52	329	IAMs_20	IAMs_20	08 23 58.2	
	comp=Z,1µm,21.0s						
CRIN	San Cristobal	129.93	325	IAMs_20	IAMs_20	08 22 13.2	
	comp=Z,721nm,20.0s						
SNET	Serv Nac Est T	130.09	328	IAMs_20	IAMs_20	08 24 17.1	
	comp=Z,803nm,21.0s						
HDC	Heredia	130.67	320	IAMs_20	IAMs_20	08 26 02.0	
	comp=Z,813nm,18.0s						
CPUP	Villa Florida	130.80	260	PKP	PKPdf	07 20 19.9	-1.4
	comp=Z,8.6nm,1.1s,baz=32,slow=3.7,SNR=5.3						
EFI	East Falkland	134.48	226	IAMs_20	IAMs_20	08 20 03.9	
	comp=Z,832nm,19.0s						
OTAV	Otavalo	134.66	306	IAMs_20	IAMs_20	08 22 13.1	
	comp=Z,707nm,21.0s						
LPAZ	La Paz	136.22	278	PKP	PKPdf	07 20 31.6	-0.9
	comp=Z,3.6nm,1.0s,baz=28,slow=4.9,SNR=4.8						
PLCA	Paso Flores	143.94	242	PKP	PKPdf	07 20 45.6	+0.5
	comp=Z,9.0nm,1.2s,baz=178,slow=3.4,SNR=5.4						
PLCA	Paso Flores	143.94	242		PKPdf	07 20 45.6	+0.5
AY01	Puyuhuapi	145.11	235		PKPbc	07 20 45.5	-0.9
LL04	Puerto Octay	145.34	241		PKPbc	07 20 45.6	-1.7
LR03	Panguipulli	145.36	244		PKPbc	07 20 46.5	-0.9

IDC ***13*** *07:07:16.5±1.4, 54°.27N×163°.48W, h0^{km}, mb3.6/6, mbtmp3.5/8, ML2.9/2, Error ellipse: s-maj=32.2km s-min=22.7km az=2.0*

NEIC ***13*** *07:07:24.0±0.8, 54°.3N±0°.1×163°.1W±0°.1, h63^{km}±15^{km}, Error ellipse: s-maj=17.2km s-min=5.7km az=155.0*

AEIC ***13*** *07:07:24±0.9, 54°.26N±0°.06×163°.10W±0°.07, h50^{km}±9^{km}, ML3.5/58, ML3.3/6(NEIC), Error ellipse: s-maj=9.0km s-min=5.5km az=158.0*

ISC 13 07:07:24.4±0.9**, 54°.37N**±0°.10×**163°.13W**±0°.05**, h65**^{km}±11^{km}**, n78, σ1^{s}.18**/82**, mb3.6**/6**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRPK	Brown Peak	0.45	308		Pn	07 07 35.9	-0.3
ISLZ	Isanotski Laza	0.49	317		Pn	07 07 36.4	-0.3
ISLZ					Sn	07 07 45.9	+0.2
FALS	False Pass	0.52	341		Pn	07 07 36.7	-0.2
FALS					Sn	07 07 46.3	+0.3
FALS	False Pass	0.52	341	P	Pn	07 07 36.7	-0.2
	baz=163						
FALS				S	Sn	07 07 46.3	+0.3
	baz=163						
ISNN	Isanotski Nort	0.60	321		Pn	07 07 37.9	+0.1
SSLN	Shishaldin Nor	0.67	312		Pn	07 07 38.7	+0.1
BALA	Baldy Mountain	0.85	13		Pn	07 07 41.2	+0.5
WESE	West Dahl East	0.86	278		Pn	07 07 40.7	-0.1
DT1	Dutton Round H	0.89	33		Pn	07 07 41.0	-0.2
WECS	Westdahl Cape	0.98	280		Pn	07 07 42.2	-0.1
HAG	Hague Volcano	1.19	36		Pn	07 07 45.5	+0.5
PS4A	Pavlof South-4	1.23	36		Pn	07 07 46.0	+0.5
PVV	Pavlof Volcano	1.27	37		Pn	07 07 46.6	+0.5
PS1A	Pavlof South-1	1.33	37		Pn	07 07 47.5	+0.7
BLHA	Black Hill	1.47	24		Pn	07 07 48.8	+0.1
BLHA	Black Hill	1.47	24	P	Pn	07 07 48.8	+0.1
	baz=203						
AKSA	Akutan Strait	1.52	262		Pn	07 07 49.4	-0.1
AKSA					Sn	07 08 08.3	0.0
AKSA	Akutan Strait	1.52	262		Pn	07 07 49.2	-0.2
AKSA					Sn	07 08 08.5	+0.1
AKUT	Akutan	1.57	263		Pn	07 07 49.9	-0.1
AKUT					Sn	07 08 09.1	-0.3
AKUT	Akutan	1.57	263	IAML		07 08 10.4	
	comp=E,371nm,0.8s						
AKUT				IAML		07 08 12.2	
	comp=N,537nm,0.3s						
HSB	Akutan Spr's B	1.64	265		Pn	07 07 50.7	-0.4
AKBBA	Akutan Broad B	1.67	262		Pn	07 07 51.0	-0.4
AKGG	Akutan Green G	1.69	265		Pn	07 07 51.3	-0.3
SDPT	Sand Point	1.82	56		Pn	07 07 53.7	+0.2
SDPT					Sn	07 08 15.4	-0.1
SDPT	Sand Point	1.82	56	IAML		07 08 16.9	
	comp=N,374nm,0.3s						
SDPT	Sand Point	1.82	56	P	Pn	07 07 53.7	+0.2
	baz=235						
SDPT				S	Sn	07 08 15.4	-0.1
	baz=235						
UNV	Unalaska Valle	2.06	257		Pn	07 07 55.8	-0.7
UNV	Unalaska Valle	2.06	257	P	Pn	07 07 55.8	-0.7
	baz=77						
CNBA	Chernabura Isl	2.11	76		Pn	07 07 56.7	-0.6
CNBA	Chernabura Isl	2.11	76	IAML		07 08 37.4	
	comp=N,115nm,1.0s						
CHNA	Chernabura Isl	2.11	76	P	Pn	07 07 56.7	-0.6
	baz=256						
MTBL	Makushin Table	2.12	261		Pn	07 07 57.2	-0.4
MSW	Makushin Switc	2.20	260		Pn	07 07 57.8	-0.7
MSW					Sn	07 08 22.8	-1.8
MGOD	Makushin Gods	2.28	257		Pn	07 07 59.1	-0.6
OKFG	Magazine Ridge	2.99	253		Pn	07 08 09.2	-0.1
NIKH	Nikolski High	3.68	250		Pn	07 08 18.3	-0.5
NIKH	Nikolski High	3.68	250	P	Pn	07 08 18.3	-0.5
	baz=67						
SPIA	Saint Paul Isl	4.91	308		Pn	07 08 35.4	0.0
SPIA	Saint Paul Isl	4.91	308	P	Pn	07 08 35.4	0.0
	baz=123						
SII	Sitkinak Islan	5.54	63		Pn	07 08 44.1	0.0
SII	Sitkinak Islan	5.54	63	P	Pn	07 08 44.2	0.0
	baz=249						
OHAK	Old Harbor	6.24	59		Pn	07 08 52.2	-1.5
OHAK	Old Harbor	6.24	59	P	Pn	07 08 52.2	-1.5
	baz=246						
P18K	Big Mountain,	6.64	37		Pn	07 08 59.8	+0.6
P18K	Big Mountain,	6.64	37	P	Pn	07 08 59.8	+0.6
	baz=223						
KDAK	Kodiak Island	6.82	56	Pn	Pn	07 09 00.2	-1.4
	comp=N,0.4nm,0.3s,baz=263,slow=8.1,SNR=1.4						
KDAK				Sn	Sn	07 10 11.1	-6.6
	comp=N,0.5nm,0.3s,baz=126,slow=23,SNR=6.9						
	comp=N,1.7nm,0.4s						
KDAK	Kodiak Island	6.82	56	P	Pn	07 09 00.4	-1.3
	baz=244						
Q19K	Cape Douglas,	6.94	45		Pn	07 09 03.4	0.0
Q19K	Cape Douglas,	6.94	45	P	Pn	07 09 03.4	0.0
	baz=232						
ATKA	Atka Island	6.98	256		Pn	07 09 03.0	-0.8
O18K	Koktuh Hills	6.99	35		Pn	07 09 03.7	-0.2
O18K	Koktuh Hills	6.99	35	P	Pn	07 09 03.7	-0.2
	baz=221						
N19K	Bonanza Creek	7.95	32		Pn	07 09 17.9	+0.7
N19K	Bonanza Creek	7.95	32	P	Pn	07 09 17.9	+0.7
	baz=219						
GSMY	Great Sitkin M	8.10	259		Pn	07 09 18.9	-0.3
GSTD	Great Sitkin T	8.15	259		Pn	07 09 19.2	-0.7
GSCK	Great Sitkin C	8.18	259		Pn	07 09 19.5	-0.7
CNPM	China Poot	8.30	47		Pn	07 09 21.2	-0.7
ADK	Adak	8.52	259		Pn	07 09 24.4	-0.6
BRSE	Bradley Lake S	8.63	46		Pn	07 09 25.2	-1.2
BRSE	Bradley Lake S	8.63	46	P	Pn	07 09 25.2	-1.2
	baz=236						
KIMD	Kanaga Island	8.89	259		Pn	07 09 29.0	-0.9
L19K	White Mountain	8.96	26		Pn	07 09 30.8	0.0
L19K	White Mountain	8.96	26	P	Pn	07 09 30.8	0.0
	baz=212						
SLKM	Skilak Lake	9.28	43		Pn	07 09 34.4	-0.9
TT01	Tatalina	9.32	20		Pn	07 09 35.1	-0.7
SEW	Seward	9.37	47		Pn	07 09 35.1	-1.3
SEW	Seward	9.37	47	P	Pn	07 09 35.1	-1.3
	baz=238						
ILAR	Eielson Array	13.23	32	Pn	Pn	07 10 26.2	-2.8
	baz=218,slow=12,SNR=2.1						
	comp=N,0.1nm,0.7s						
PETK	Petropavlovsk-	23.01	283	P	P	07 12 20.9	-2.6
	comp=N,2.5nm,0.5s,baz=81,slow=13,SNR=15						
	comp=N,2.5nm,0.5s						
YKA	Yellowknife Ar	26.08	52	P	P	07 12 51.6	+0.1
	comp=N,1.0nm,0.8s,baz=275,slow=7.5,SNR=10						
	comp=N,1.0nm,0.8s						
YBH	Yreka Blue Hor	29.40	99	P	P	07 13 24.4	+3.0
	comp=N,0.5nm,0.5s,baz=307,slow=10,SNR=4.7						
	comp=N,0.5nm,0.5s						
NVAR	Mina Array Bea	34.11	99	P	P	07 14 04.9	+2.0
	comp=N,0.8nm,0.7s,baz=308,slow=8.9,SNR=8.5						
	comp=N,0.8nm,0.7s						
PDAR	Pinedale Array	36.44	86	P	P	07 14 25.4	+2.6
	comp=N,0.1nm,0.4s,baz=320,slow=11,SNR=2.1						
	comp=N,0.1nm,0.4s						
H11N2	WAKE ISLAND Hy	41.44	225	T	T	07 59 19.4	
	baz=26,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	41.45	225	T	T	07 59 17.3	
	baz=26,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	41.46	225	T	T	07 59 18.5	
	baz=26,slow=76,SNR=13						
TXAR	Lajitas Array	49.09	96	P	P	07 16 05.8	+0.7
	comp=N,0.8nm,0.8s,baz=304,slow=5.5,SNR=9.9						
	comp=N,0.8nm,0.8s						

IDC 13 07:14:55.5±1.7**, 5°.51S**×**152°.86E, h0**^{km}**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=45.0km s-min=24.2km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.46	325	Pn	Pn	07 15 22.9	-0.1
	201nm,0.3s,baz=282,slow=2.1,SNR=80						
KRVT				Sn	Sg	07 15 35.8	-6.5
	502nm,0.3s,baz=158,slow=19,SNR=14						
WRA	Warramunga Arr	23.03	230	P	P	07 20 02.0	-0.4
	5.6nm,0.8s,baz=54,slow=9.9,SNR=28						
	5.6nm,0.8s						
ASAR	Alice Springs	25.67	223	P	P	07 20 27.8	+0.4
	3.2nm,0.7s,baz=61,slow=9.0,SNR=32						
	3.2nm,0.7s						
ILAR	Eielson Array	82.79	22	P	P	07 27 21.7	+0.5
	0.4nm,0.7s,baz=258,slow=5.0,SNR=5.1						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	150.58	287	PKPbc	PKPbc	07 34 49.6	-0.9
	11nm,0.6s,baz=66,slow=3.0,SNR=5.2						

TUL ***13*** *07:28:18±0.3, 35°.87N±0°.02×97°.05W±0°.01, h5^{km}±3^{km}, ML2.7, mb_Lg2.3/29(NEIC), Error ellipse: s-maj=2.2km s-min=1.5km az=159.0*

NEIC 13 07:28:18.7±0.3**, 35°.87N**±0°.02×**97°.06W**±0°.01**, h4**^{km}±4^{km}**, Error ellipse: s-maj=2.6km s-min=1.0km az=144.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.55	215	Pg	Pg	07 28 28.8	-0.5
OKCSW	OKLAHOMA CITY	0.55	214		Pg	07 28 28.8	-0.4
FNO	Franklin	0.67	205	Pg	Pg	07 28 30.7	-0.8
TUL1	Leonard	1.03	87		Pg	07 28 37.1	-1.4
T35A	Sooner Cattle	1.14	23		Pg	07 28 39.3	-1.2
X34A	Smith Ranch, M	1.41	207		Pn	07 28 44.4	-0.7
U32A	Winter Ranch,	1.65	289		Pn	07 28 48.2	-0.3
WMOK	Wichita Mounta	1.80	232		Pn	07 28 50.2	-0.3
X37A	Clayton	1.88	132		Pn	07 28 51.6	+0.1
X37A				IAmb_Lg		07 29 22.2	
	comp=Z,15nm,0.8s						
Z38A	Mt. Pleasant	3.11	146	IAmb_Lg		07 30 02.7	
	comp=Z,9.2nm,0.8s						
MIAR	Mount Ida	3.14	114		Pn	07 29 08.9	0.0
MIAR				IAmb_Lg		07 30 05.5	
	comp=Z,6.7nm,1.0s						
KSU1	Kansas State U	3.25	6	IAmb_Lg		07 30 04.8	
	comp=Z,7.5nm,0.8s						
S39A	Bolivar	3.51	58	IAmb_Lg		07 30 11.2	
	comp=Z,6.4nm,0.7s						
CBKS	Cedar Bluff	3.63	325	IAmb_Lg		07 30 17.2	
	comp=Z,7.9nm,0.7s						
AMTX	Amarillo	3.90	257	IAmb_Lg		07 30 25.0	
	comp=Z,8.3nm,0.8s						
FCAR	Ozark Folk Cen	4.01	88	IAmb_Lg		07 30 28.3	
	comp=Z,5.8nm,0.7s						
MGMO	Mountain Grove	4.07	70	IAmb_Lg		07 30 34.1	
	comp=Z,8.1nm,0.9s						
CCM	Cathedral Cave	5.14	63	IAmb_Lg		07 31 06.9	
	comp=Z,6.6nm,0.8s						
P40A	Paris	5.40	46	IAmb_Lg		07 31 12.8	
	comp=Z,6.9nm,0.7s						
FVM	French Village	5.72	66	IAmb_Lg		07 31 24.2	
	comp=Z,5.3nm,0.7s						
JCT	Junction City	5.84	204	IAmb_Lg		07 31 37.4	

	comp=Z,3.4nm,0.7s						
S44A	Carbondale	6.53	71	IAmb_Lg		07 31 58.2	
	comp=Z,6.1nm,0.7s						
SIUC	Southern Illin	6.56	71	IAmb_Lg		07 31 44.1	
	comp=Z,6.1nm,0.7s						

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*IDC **13** 07:35:43.7±1.9,18°.81N×81°.35W,h0^{km},mb3.2/3,mbtmp3.4/4,ML3.8/2,MS3.3/1,Error ellipse: s-maj=45.3km s-min=35.1km az=60.0*

*SSNC **13** 07:35:53.1±3.3,18°.81N×80°.85W,h27^{km}±72^{km},MD4.0,ML3.8,MW4.3*

*JSN **13** 07:35:57.3±0.4,20°.14N×79°.83W,h15^{km},MD4.2*

ISC 13 07:35:44.8±0.9,**19°.31N**±0°.06×**80°.48W**±0°.06,**h10**^{km},**n19**,σ**1^{s}.89**/22,**mb3.1**/3,**Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGV	Manicaragua	2.83	9	*e*P	Pn	07 36 29.9	-0.2
MGV				*e*S	Sb	07 37 08.7	-1.5
MGV				IAML		07 37 11.5	
	comp=E,223nm,0.3s						
MGV				IAML		07 37 12.4	
	comp=N,173nm,0.3s						
MTDJ	Mount Denham	2.98	111	*e*P	Pb	07 36 40.5	+2.2
MTDJ				*e*S	Sg	07 37 19.9	-0.9
CCCC	Cccc	3.17	53	*e*P	Pg	07 36 51.4	+5.8
CCCC				IAML		07 37 46.2	
	comp=E,45nm,0.6s						
CCCC				IAML		07 37 46.5	
	comp=N,34nm,0.4s						
LMGC	Las Mercedes	3.36	76	*e*P	Pg	07 36 49.2	0.0
LMGC				*e*S	Sg	07 37 35.6	+2.9
LMGC				IAML		07 37 40.3	
	comp=E,130nm,0.3s						
LMGC				IAML		07 37 40.4	
	comp=N,102nm,0.1s						
STH	Stony Hill	3.68	109	*i* P	Pb	07 36 50.5	+0.4
GWJ	Greenwich	3.76	108	*i* P	Pb	07 36 51.6	+0.2
HOJ	Hope	3.76	110	*i* P	Pb	07 36 52.0	+0.6
HOJ				*i* S	Sb	07 37 32.8	-4.3
SOR	Soroa	4.20	326	*e*P	Pn	07 36 50.1	+1.1
RCC	Rio Carpintero	4.56	81	*e*P	Pb	07 37 06.2	+1.2
GTBY	Guantanamo Bay	5.09	82	*e*P	Pb	07 37 13.8	-0.3
GTBY				*e*S	Sb	07 38 15.1	-0.4
MOAC	Moa	5.36	75	*e*P	Pb	07 37 18.5	-0.1
MASC	Masc	5.94	81	*e*P	Pb	07 37 26.9	-1.7
SDV	Santo Domingo	14.08	136	Pn	Pn	07 39 06.8	+2.2
	comp=N,3.9nm,0.3s,baz=344,slow=17,SNR=27						
SDV				Sn	Sn	07 41 40.0	-1.2
	comp=N,0.3nm,0.3s,baz=262,slow=14,SNR=1.3						
ROSC	El Rosal	15.58	157	LR	LR	07 45 43.0	
	comp=N,97nm,18.1s,baz=220,slow=39						
TKL	Tuckaleechee C	16.55	351	Pn	P	07 39 40.4	+0.8
	comp=N,0.3nm,0.3s,baz=170,slow=15,SNR=9.2						
	comp=N,2.8nm,0.6s						
TXAR	Lajitas Array	23.33	300	P	P	07 40 49.2	-4.3
	comp=N,0.2nm,0.5s,baz=122,slow=12,SNR=2.6						
	comp=N,0.2nm,0.5s						
SCHQ	Schefferville	36.96	13	P	P	07 43 01.1	+7.0
	comp=N,2.2nm,1.0s,baz=216,slow=12,SNR=5.4						
	comp=N,2.2nm,1.0s						
YKA	Yellowknife Ar	49.15	340	P	P	07 44 33.3	+0.7
	comp=N,0.1nm,0.5s,baz=131,slow=7.9,SNR=1.5						
	comp=N,0.1nm,0.5s						
ASAR	Alice Springs	147.76	256	PKPbc	PKPdf	07 55 28.5	+0.7
	comp=N,0.2nm,0.5s,baz=100,slow=4.0,SNR=2.4						

IDC 13 07:48:43.0±2.5,**3°.56S**×**151°.68E**,**h0**^{km},**mb3.7**/2,**mbtmp3.7**/2,**Error ellipse: s-maj=48.8km s-min=22.4km az=49.0**,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.82	155	Pn	Pn	07 49 03.0	+1.1
	17nm,0.3s,baz=146,slow=3.6,SNR=3.8						
KRVT				Sn	Sn	07 49 14.9	+0.1
	82nm,0.3s,baz=267,slow=22,SNR=19						
WRA	Warramunga Arr	23.48	225	P	P	07 53 55.2	+0.6
	1.7nm,0.6s,baz=53,slow=9.8,SNR=25						
	1.7nm,0.6s						
ASAR	Alice Springs	26.36	219	P	P	07 54 20.2	-0.9
	0.6nm,0.6s,baz=56,slow=9.1,SNR=9.5						
	0.6nm,0.6s						
TORD	Torodi Ar. Bea	148.85	290	PKPbc	PKPbc	08 08 33.0	-0.9
	9.8nm,0.6s,baz=71,slow=2.0,SNR=5.2						

IDC 13 08:19:58.8±434.0,**54°.05N**×**2°.86E**,**h0**^{km},**Error ellipse: s-maj=163.0km s-min=59.2km az=20.0**,**North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I26DE	FREYUNG INFRAS	8.54	123	*i*		09 13 20.0	
	baz=310,slow=326,SNR=3.0						
I37NO	I37NO	16.74	20	*i*		10 03 50.0	
	baz=214,slow=328,SNR=2.4						
I43RU	DUBNA INFRASON	19.58	68	*i*		10 23 40.0	
	baz=280,slow=329,SNR=1.0						

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*ASIES **13** 08:24:11.9,24°.69N×121°.97E,h20^{km},MW4.9*

*BJI **13** 08:24:12.5±0.0,24°.86N×121°.90E,h6^{km},mb4.6/74,mB5.1/56,ML5.1/12,Ms5.2/93,Ms7 5.0/82*

*NIED **13** 08:24:12.1,24°.60N×121°.92E,h56^{km},MW5.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.76; $M_{\theta\theta}$3.91; $M_{\phi\phi}$0.84; $M_{r\theta}$-1.39; $M_{\theta\phi}$2.06; $M_{\phi r}$-0.51; Fault plane solution: $M_0$5.07000×10^{16} NP1: ϕ_s241.00000°,δ37.00000°,λ-93.00000°. NP2:ϕ_s65.00000°,δ53.00000°,λ-88.00000°.*

*JMA **13** 08:24:12.1±0.1,24°.6N±0°.2×121°.9E±0°.4,h56^{km}±2^{km},MD5.5/15,MW5.1/15,TAIWAN REGION*

JMA Felt II J1 at TAIWAN REGION .

*TAP **13** 08:24:12.0,24°.68N×121°.98E,h10^{km},ML5.2,C*

*GCMT **13** 08:24:12.4±0.2,24°.78N±0°.01×122°.12E±0°.02,h12^{km},MW5.1/103,Moment Tensor Solution. s55,c65; s103,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.95±.13; $M_{\theta\theta}$2.84±.10; $M_{\phi\phi}$1.11±.13; $M_{r\theta}$2.18±.31; $M_{\theta\phi}$2.56±.10; $M_{\phi r}$-3.10±.45; Best double couple: $M_0$5.56700×10^{16} NP1:ϕ_s263.00000°,δ54.00000°,λ-47.00000°. NP2:ϕ_s25.00000°,δ54.00000°,λ-133.00000°. Principal axes: T 4.6770, Plg0.0000°, Azm144.0000°; N 1.7790, Plg33.0000°, Azm54.0000°; P -6.4570, Plg57.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 08:24:12.4±1.8,24°.72N±0°.05×122°.02E±0°.06,h9^{km}±4^{km},mb5.1/129,ML5.1(TAP) Error ellipse: s-maj=9.9km s-min=6.1km az=129.0*

*MOS **13** 08:24:14.4±1.1,24°.74N×122°.10E,h40^{km},mb5.2/61,MS4.6/7,Error ellipse: s-maj=6.5km s-min=4.2km az=104.7*

*IDC **13** 08:24:18.9±1.9,24°.71N×122°.09E,h68^{km}±18^{km},mb4.5/44,mbtmp4.8/50,MS4.4/70,Error ellipse: s-maj=10.1km s-min=8.8km az=93.0*

ISC 13 08:24:13.2±0.4,**24°.68N**±0°.01×**122°.02E**±0°.02,**h17**^{km}±2^{km},**h18**^{km}**:pP-P**,**n831**,σ**1^{s}.63**/943,**mb5.0**/171,**MS4.5**/82,**79C-40D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.17	247	⇑*i*P	Pg	08 24 15.5	-2.2
	baz=245						
TWC				*i* S	Sg	08 24 17.5	-3.1
	baz=245						
EGS		0.19	336	⇑*i*P	Pg	08 24 16.1	-1.8
	baz=346						
EGS				S	Sg	08 24 18.9	-2.2
	baz=346						
NTC	Toucheng	0.25	316	⇑*i*P	Pg	08 24 17.2	-1.7
	baz=319						
NTC				S	Sg	08 24 22.5	-0.2
	baz=319						
ILA	Ilan	0.26	290	⇑*i*P	Pg	08 24 17.4	-1.7
	baz=281						
ILA				*i* S	Sg	08 24 21.1	-1.9
	baz=281						
NDS	Dongshan	0.28	262	⇑*i*P	Pg	08 24 17.5	-1.9
	baz=254						
NDS				S	Sg	08 24 21.2	-2.3
	baz=254						
EWUT	Wuta	0.32	224	P	Pg	08 24 18.4	-1.6
	baz=209						
EWUT				*e*S	Sg	08 24 22.6	-2.0
	baz=209						
TWE	Neicheng	0.32	278	⇑*i*P	Pg	08 24 18.1	-2.0
	baz=272						
TWE				S	Sg	08 24 22.2	-2.5
	baz=272						
TWB1	Santiao Chiao	0.33	356	⇑*i*P	Pg	08 24 18.7	-1.6
	baz=352						
TWB1				*e*S	Sg	08 24 22.8	-2.3
	baz=352						
TIPB	Shuangxi	0.34	330	⇑*i*P	Pg	08 24 18.9	-1.6
	baz=332						
TIPB				S	Sg	08 24 23.7	-1.8
	baz=332						
FUSB	Fushanzhiwuyua	0.40	282	⇑*i*P	Pg	08 24 19.7	-1.8
	baz=282						
FUSB				S	Sg	08 24 25.1	-2.0
	baz=282						
ENTT	Nioudou	0.41	265	⇑*i*P	Pg	08 24 19.7	-2.0
	baz=263						
ENTT				S	Sg	08 24 23.7	-3.7
	baz=263						
SXI1	Grass Mountain	0.44	343	⇑*i*P	Pg	08 24 20.9	-1.3
	baz=352						
SXI1				*e*S	Sg	08 24 27.3	-1.0
	baz=352						
EHP	Heping Village	0.44	215	P	Pg	08 24 21.2	-1.0
	baz=201						
EHP				*e*S	Sg	08 24 27.6	-0.6
	baz=201						
NWF	Wu-fen Shan	0.45	332	⇑*i*P	Pg	08 24 21.2	-1.2
	baz=327						
NWF				S	Sg	08 24 28.1	-0.5
	baz=327						
WFSB	Wu-fen Shan	0.45	332	⇑*i*P	Pg	08 24 21.2	-1.2
	baz=327						
WFSB				*e*S	Sg	08 24 27.3	-1.3
	baz=327						
LATG	Datong	0.47	253	⇑*i*P	Pg	08 24 20.9	-1.8
	baz=251						
LATG				S	Sg	08 24 27.8	-1.3
	baz=251						
NWLT	Wulai	0.48	282	⇑*i*P	Pg	08 24 21.0	-1.9
	baz=282						
NWLT				S	Sg	08 24 27.8	-1.7
	baz=282						
TWA	Mucha	0.50	308	⇑*i*P	Pg	08 24 21.9	-1.4
	baz=309						
TWA				*i* S	Sg	08 24 29.6	-0.4
	baz=309						
TNOU	National Taiwa	0.52	335	⇑*i*P	Pg	08 24 22.5	-1.2
	baz=330						
TNOU				*e*S	Sg	08 24 29.3	-1.5
	baz=330						
NHDH	Xindian Distri	0.53	303	⇑*i*P	Pg	08 24 22.7	-1.2
	baz=303						
NHDH				S	Sg	08 24 28.9	-2.1
	baz=303						
TATO	Taipei	0.57	302		Pg	08 24 23.2	-1.3
TATO				Sg	Sg	08 24 29.7	-2.5
TATO	Taipei	0.57	302	P	Pg	08 24 23.4	-1.2
TATO	Taipei	0.57	302	⇑*i*P	Pg	08 24 23.3	-1.2
	baz=302						
TATO				*e*S	Sg	08 24 31.2	-1.0
	baz=302						
YHNB	Yeheng	0.58	270		Pg	08 24 22.8	-2.1
YHNB	Yeheng	0.58	270	P	Pg	08 24 23.4	-1.5
YHNB	Yeheng	0.58	270	⇑*i*P	Pg	08 24 22.9	-1.9
	baz=269						
YHNB				S	Sg	08 24 30.9	-1.8
	baz=269						
TAP	Taipei	0.59	308	⇑*i*P	Pg	08 24 23.9	-1.0
	baz=309						
TAP				S	Sg	08 24 31.7	-1.2
	baz=309						
BACT	New Taipei Cit	0.61	302	*e*P	Pg	08 24 24.7	-0.7
	baz=302						
NWRT	Kuosheng	0.62	328	P	Pg	08 24 24.3	-1.2
	baz=319						
NWRT				*e*S	Sg	08 24 33.5	-0.2
	baz=319						
YM01	YM01	0.62	319	⇑*i*P	Pg	08 24 24.6	-0.9
	baz=320						
ETL	Fush Village	0.63	215	P	Pg	08 24 24.1	-1.5
	baz=203						
ETL				*e*S	Sg	08 24 33.1	-0.9
	baz=203						
NNSB	Datong	0.63	247	⇑*i*P	Pg	08 24 23.7	-2.0
	baz=236						
NNSB				S	Sg	08 24 33.2	-0.9
	baz=236						
NACB	Ninganchiao	0.63	218		Pg	08 24 24.4	-1.3
NACB	Ninganchiao	0.63	218	⇑*i*P	Pg	08 24 23.9	-1.8
	baz=206						
NACB				S	Sg	08 24 32.6	-1.5
	baz=206						
NNS	Nan Shan	0.63	248	⇑*i*P	Pg	08 24 23.7	-2.1
	baz=246						
NNS				S	Sg	08 24 32.6	-1.6
	baz=246						
ETLH	Xiulin Townshi	0.67	226	*e*P	Pg	08 24 24.7	-1.8
	baz=224						
ETLH				S	Sg	08 24 34.1	-1.4
	baz=224						
ANP	Anpu	0.68	319	⇑*i*P	Pg	08 24 25.2	-1.5
	baz=319						
TWS1	Kuangyinshan	0.69	308	⇑*i*P	Pb	08 24 26.2	-0.6
	baz=308						
TWD	Chiawan	0.70	213	⇑*i*P	Pb	08 24 25.4	-1.6
	baz=210						
TWD				S	Sb	08 24 34.5	-2.0
	baz=210						
TWY	Chenhua	0.71	328	⇑*i*P	Pb	08 24 26.3	-0.8
	baz=320						
TWY				*e*S	Sg	08 24 37.5	+0.9
	baz=320						
NTST	Danshui	0.71	314	P	Pb	08 24 26.6	-0.5
	baz=314						
NTST				*e*S	Sn	08 24 37.7	-1.2
	baz=314						
NSM	Shimen	0.72	328	P	Pb	08 24 27.0	-0.4
	baz=319						
NTY	Taoyuan	0.73	296	*e*P	Pg	08 24 27.5	-0.1
	baz=296						
NTY				*e*S	Sb	08 24 37.0	-0.1
	baz=296						
HWA	Hwalien	0.79	208	P	Pb	08 24 27.5	-1.0
	baz=216						
HWA				*e*S	Sn	08 24 40.8	-0.1
	baz=216						
NCU	National Centr	0.81	291	P	Pb	08 24 28.6	-0.2
	baz=299						
NCU				*e*S	Sn	08 24 40.7	-0.7
	baz=299						
NCUH	Zhongli	0.81	291	P	Pb	08 24 28.6	-0.2
	baz=299						
NCUH				*e*S	Sb	08 24 39.2	-0.3
	baz=299						
NFF	Wufeng Townshi	0.82	267	*e*P	Pb	08 24 27.4	-1.7
	baz=258						
FUSS	Fushou	0.82	239	P	Pb	08 24 27.5	-1.7
	baz=238						
FUSS				*e*S	Sb	08 24 40.0	-0.1
	baz=238						
ETM	Tongmen	0.85	214	*i* P	Pb	08 24 28.1	-1.5
	baz=206						
WHF	Hehuan Shan	0.86	233	⇑*i*P	Pb	08 24 28.1	-1.9
	baz=231						
WHF				*i* S	Sb	08 24 41.1	-0.3
	baz=231						
JYNG	Yonagunijimaku	0.87	105	P	Pb	08 24 29.3	-0.7
JYNG				S	Sg	08 24 42.3	+0.5
JYNG	Yonagunijimaku	0.87	105	A	A	08 24 29.3	
	comp=E,307nm,0.9s,comp=E,338nm,1.5s						
TWT	Tachien	0.87	241	P	Pb	08 24 28.6	-1.4
	baz=230						
TDCB	Techi	0.89	242	P	Pb	08 24 28.5	-1.7
	baz=234						
TDCB				*e*S	Sb	08 24 40.5	-1.3
	baz=234						
TEYL	Yanliau Villag	0.89	206	*i* P	Pb	08 24 29.6	-0.6
	baz=213						
LIOB	Emei	0.91	268	P	Pb	08 24 29.5	-1.1
	baz=267						
HSN1	Hsinchu	0.91	277	P	Pn	08 24 31.2	-0.1
	baz=261						
HSN1				*e*S	Sn	08 24 44.7	+0.7
	baz=261						
NSTT	Nanjuang	0.93	268	⇑*i*P	Pb	08 24 29.7	-1.2
	baz=253						
NSTT				S	Sn	08 24 45.1	+0.8
	baz=253						
YOJ	Yonaguni jima	0.93	103	Pg	Pb	08 24 30.1	-0.8
YOJ				Sg	Sg	08 24 43.5	-0.1
YOJ	Yonaguni jima	0.93	103	P	Pb	08 24 30.1	-0.8
YOJ						08 24 43.5	
YOJ	Yonaguni jima	0.93	103	P	Pb	08 24 31.0	+0.1
YOJ	Yonaguni jima	0.93	103	⇑*i*P	Pb	08 24 30.2	-0.7
	baz=103						
YOJ				S	Sb	08 24 42.5	-0.4
	baz=103						
YOJ	Yonaguni jima	0.93	103	P	Pb	08 24 30.1	-0.7
YOJ				S	Sg	08 24 43.5	-0.1
YOJ	Yonaguni jima	0.93	103	A	A	08 24 30.1	
	comp=E,441nm,1.0s,comp=E,484nm,1.2s						
NHW	Xinwu Township	0.94	291	*i* P	Pb	08 24 31.2	+0.1
	baz=305						
NHW				*e*S	Sn	08 24 44.9	+0.2
	baz=305						
SBCB	Hsinchu	0.94	277	⇑*i*P	Pb	08 24 31.3	+0.1
	baz=295						
SBCB				S	Sg	08 24 44.3	+0.3
	baz=295						
PCYT	Pengchaiyu	0.95	3	⇑*i*P	Pb	08 24 30.3	-1.0
	baz=4.0						
HSN	Hsinchu	0.96	278	P	Pb	08 24 30.9	-0.5
	baz=298						
HSN				S	Sg	08 24 44.4	-0.1
	baz=298						
CHGB	Renai	0.98	232	⇑*i*P	Pb	08 24 30.2	-1.7
	baz=230						
CHGB				S	Sb	08 24 44.4	-0.2
	baz=230						
ESL	Shilin	1.01	212	⇑*i*P	Pb	08 24 30.8	-1.4
	baz=209						
OWD	Renai	1.05	227	P	Pb	08 24 31.6	-1.4
	baz=217						
OWD				*e*S	Sb	08 24 45.5	-1.1
	baz=217						
WHP	Taichung City	1.05	248	P	Pb	08 24 32.1	-1.0
	baz=246						
TEGC	Jichi Village	1.05	204	*e*P	Pg	08 24 34.4	+0.6
	baz=202						
WUSB	Renai	1.06	231	P	Pb	08 24 31.9	-1.4
	baz=235						
WUSB				*e*S	Sb	08 24 47.1	+0.1
	baz=235						
NMLH	Miaoli	1.12	263	*e*P	Pb	08 24 34.6	+0.4
	baz=262						
NMLH				*e*S	Sg	08 24 50.3	+0.6
	baz=262						
EGFH	Guangfu	1.14	208	*i* P	Pn	08 24 33.5	-0.8
	baz=221						
WPL	Puli Township	1.17	236	*i* P	Pn	08 24 34.8	0.0
	baz=233						
NSY	Sanyi	1.17	258	P	Pb	08 24 35.3	+0.3
	baz=256						
NSY				S	Sg	08 24 53.0	+1.7
	baz=256						
TWQ1	Liyutan	1.18	254	⇑P	Pn	08 24 34.8	-0.1
	baz=253						
TWQ1				S	Sg	08 24 52.7	+1.2
	baz=253						
DPDB	Guoxing	1.18	238	*i* P	Pn	08 24 34.8	-0.2
	baz=235						
VWDT	VWDT	1.22	221	⇑*i*P	Pn	08 24 34.9	-0.5
	baz=220						
VWDT				S	Sg	08 24 52.3	-0.4
	baz=220						
SMLT	Sun Moon Lake	1.29	233	P	Pn	08 24 36.2	-0.3
	baz=230						
WDJ	Dajia District	1.29	256	P	Pg	08 24 37.8	-0.5
	baz=255						
WDJ				*e*S	Sg	08 24 55.7	+0.5
	baz=255						
HGSD	Ruisui	1.30	205	⇑P	Pn	08 24 36.7	+0.2
	baz=219						
HGSD				S	Sg	08 24 57.6	+2.4
	baz=219						
TYC	Yuchr	1.31	234	*e*P	Pn	08 24 36.6	-0.1
	baz=231						
SSLB	Suanglung	1.31	228		Pn	08 24 36.2	-0.5
SSLB	Suanglung	1.31	228	P	Pn	08 24 37.1	+0.3
SSLB	Suanglung	1.31	228	⇑*i*P	Pn	08 24 36.3	-0.5
	baz=218						
SSLB				*e*S	Sn	08 24 53.8	-0.1
	baz=218						
EHY	Hungye	1.32	209	P	Pn	08 24 36.1	-0.9
	baz=217						
TCU	Taichung	1.33	247	⇓*i*P	Pg	08 24 38.7	-0.2
	baz=246						
TCU				S	Sg	08 24 57.1	+0.8
	baz=246						
WWF	Wufeng	1.36	243	*e*P	Pg	08 24 39.5	0.0
	baz=231						
YULB	Yu-li	1.44	207		Pn	08 24 38.2	-0.2
YULB	Yu-li	1.44	207	⇑P	Pn	08 24 38.6	+0.1
	baz=214						
YULB				S	Sb	08 24 58.1	+0.5
	baz=214						
ECBN	Changbin	1.45	201	*e*P	Pn	08 24 39.2	+0.6
	baz=188						
WJS	Zhushan	1.45	234	*e*P	Pb	08 24 40.5	+0.7
	baz=232						
WNT	Mingjian	1.45	237	*e*P	Pb	08 24 40.5	+0.7
	baz=235						
WNT				*e*S	Sg	08 25 01.6	+1.4
	baz=235						
WCHH	Zhanghua	1.46	246	*e*P	Pb	08 24 40.0	+0.2
	baz=244						
WCHH				*e*S	Sg	08 25 00.5	+0.2
	baz=244						
EYUL	Yuli	1.47	206	*e*P	Pn	08 24 39.3	+0.4
	baz=218						
TWF1	Yuli	1.47	207	*i* P	Pn	08 24 38.5	-0.5
	baz=215						
YUS	Yu-Shan	1.53	220	⇑*i*P	Pn	08 24 40.5	+0.3
	baz=203						
YUS				S	Sg	08 25 01.9	-0.9
	baz=203						
IRIF	Iriomote-Funau	1.60	102	P	Pn	08 24 39.5	-1.2
IRIF				S	Sn	08 24 59.4	-1.4
IRIF	Iriomote-Funau	1.60	102	A	A	08 24 39.5	
	comp=E,77nm,2.4s,comp=E,160nm,1.0s						
ALS	Alishan	1.60	224	⇓*i*P	Pb	08 24 42.6	0.0
	baz=206						
ALS				*e*S	Sg	08 25 04.0	-1.1
	baz=206						
FULB	Fuli	1.61	204	P	Pn	08 24 41.2	+0.3
	baz=216						
FULB				*e*S	Sb	08 25 03.2	+0.6
	baz=216						
CHN5	Tsauling	1.63	229	⇓*i*P	Pb	08 24 42.9	+0.1
	baz=227						
CHN5				S	Sg	08 25 07.4	+1.6
	baz=227						
WGK	Gukeng	1.65	234	*e*P	Pb	08 24 43.9	+0.6
	baz=230						
WDLH	Douliu	1.67	234	P	Pb	08 24 43.6	+0.1
	baz=232						
WDLH				S	Sg	08 25 08.2	+1.1
	baz=232						
CHKT	Chengkung	1.68	201	P	Pn	08 24 41.1	-0.7
	baz=181						
CHKT				*e*S	Sb	08 25 05.5	+1.0
	baz=181						
WRL	Guolierlin Hig	1.68	243	*e*P	Pb	08 24 43.1	-0.6
	baz=241						
WRL				*e*S	Sb	08 25 05.2	+0.6
	baz=241						
ELDTW	Lidau	1.74	212	*e*P	Pn	08 24 43.1	+0.4
	baz=209						
ELDTW				*e*S	Sb	08 25 07.7	+1.3
	baz=209						
HATJ	Hateruma jima	1.74	110	P	Pn	08 24 41.9	-0.8
HATJ				S	Sn	08 25 03.1	-1.3
HATJ	Hateruma jima	1.74	110	A	A	08 24 41.9	
	comp=E,160nm,4.8s,comp=E,150nm,4.4s						
WTK	Tuku	1.78	237	*e*P	Pb	08 24 44.9	-0.6
	baz=234						
CHN2	Minshiung	1.81	231	*e*P	Pb	08 24 46.3	+0.4
	baz=228						
CHN2				*e*S	Sg	08 25 12.3	+0.7

	baz=228						
EDH	**Donghe**	1.82	201	*e*P	Pn	08 24 43.3	-0.4
	baz=189						
CHN4	**Tsaushan**	1.85	225	⇓*i*P	Pb	08 24 46.5	-0.1
	baz=207						
CHN4				S	Sg	08 25 13.8	+0.9
	baz=207						
TPUB	**Ta-pu**	1.87	223		Pb	08 24 46.2	-0.7
TPUB	**Ta-pu**	1.87	223	P	Pg	08 24 48.5	-0.6
TPUB	**Ta-pu**	1.87	223	⇓*i*P	Pb	08 24 46.2	-0.7
	baz=207						
TPUB				S	Sg	08 25 12.5	-0.9
	baz=207						
JKRS	**Kuro-shima**	1.87	103	P	Pn	08 24 43.7	-0.7
JKRS				S	Sn	08 25 06.8	-0.7
JKRS	**Kuro-shima**	1.87	103	A	A	08 24 43.7	
	comp=E,123nm,2.3s,comp=E,130nm,2.0s						
CHY	**Chiayi**	1.87	231	⇓P	Pb	08 24 46.4	-0.5
	baz=228						
CHY				*e*S	Sg	08 25 13.8	+0.4
	baz=228						
STYH	**Taoyuan**	1.88	217	*e*P	Pn	08 24 45.8	+1.3
	baz=205						
STYH				*e*S	Sb	08 25 11.8	+1.5
	baz=205						
STYT	**Tauyuan**	1.90	218	P	Pb	08 24 46.4	-1.0
	baz=214						
WTP	**Ta-pu**	1.92	222	⇓P	Pb	08 24 47.0	-0.7
	baz=205						
WTP				S	Sg	08 25 14.9	-0.1
	baz=205						
WSF	**Szhu**	1.94	238	*e*P	Pb	08 24 46.8	-1.2
	baz=235						
WSF				*e*S	Sb	08 25 13.7	+1.8
	baz=235						
LONT	**Longtian**	1.94	205	*e*P	Pn	08 24 45.5	+0.1
	baz=202						
JIJ	**Ishigaki jima**	1.96	99	P	Pn	08 24 44.4	-1.3
JIJ				S	Sn	08 25 08.9	-0.9
JIJ	**Ishigaki jima**	1.96	99	A	A	08 24 44.4	
	comp=E,28nm,2.9s,comp=E,41nm,4.9s						
TWK	**Hsinying**	1.98	225	⇓P	Pb	08 24 48.1	-0.7
	baz=206						
TWK				S	Sg	08 25 16.0	-1.1
	baz=206						
WSL	**Shuilin Townsh**	2.00	235	*e*P	Pb	08 24 48.2	-0.9
	baz=232						
SNST	**Tainan City**	2.01	224	*e*P	Pb	08 24 48.5	-0.8
	baz=221						
CHN1	**Nanshi**	2.01	223	⇓*i*P	Pb	08 24 48.6	-0.8
	baz=206						
CHN1				S	Sg	08 25 17.1	-1.0
	baz=206						
TWG	**Pinlang**	2.04	205	⇓P	Pn	08 24 46.6	-0.2
	baz=202						
LDUT	**Ludao**	2.05	194	*e*P	Pn	08 24 46.0	-0.9
	baz=184						
ICHU	**Yijhu**	2.06	231	*e*P	Pb	08 24 50.5	+0.4
	baz=240						
SGST	**Jiashian**	2.06	220	P	Pb	08 24 48.9	-1.2
	baz=216						
TTN	**Taitung**	2.07	203	*e*P	Pn	08 24 48.5	+1.3
	baz=199						
JISG	**Ishigakijimahi**	2.09	92	P	Pn	08 24 46.5	-0.9
JISG				S	Sn	08 25 12.9	-0.2
CHN8	**Yiju**	2.12	232	*e*P	Pb	08 24 51.0	-0.1
	baz=229						
CHN8				*e*S	Sb	08 25 19.3	+2.2
	baz=229						
CHN3	**Shinhua**	2.19	224	*e*P	Pb	08 24 52.8	+0.3
	baz=221						
CHN3				*e*S	Sg	08 25 23.3	-0.6
	baz=221						
SCLT	**Jiali**	2.24	229	*e*P	Pb	08 24 53.1	-0.1
	baz=208						
SCLT				*e*S	Sg	08 25 23.5	-1.8
	baz=208						
SHHT	**Tainan City**	2.25	223	*e*P	Pb	08 24 54.7	+1.3
	baz=220						
SCST	**Cishan**	2.26	218	*e*P	Pb	08 24 53.3	-0.3
	baz=215						
ECL	**Taimali**	2.29	205	*e*P	Pb	08 24 52.4	-1.7
	baz=196						
SSD	**Sandimen**	2.30	214	P	Pn	08 24 52.4	+2.0
	baz=210						
SSD				*e*S	Sb	08 25 23.5	+1.1
	baz=210						
TAI1	**Yung-k'ang**	2.31	226	*e*P	Pb	08 24 55.6	+1.2
	baz=222						
TSMG	**Majia**	2.33	213	*e*P	Pb	08 24 53.1	-1.7
	baz=209						
TWM1	**Shoushan**	2.35	219	*e*P	Pb	08 24 55.7	+0.5
	baz=215						
VWUC	**VWUC**	2.35	278	*e*P	Pn	08 24 50.1	-0.9
	baz=277						
MATB	**Ma-tsu**	2.38	309	*e*P	Pn	08 24 50.3	-1.2
	baz=307						
SGLT	**Jiouru**	2.39	216	*e*P	Pb	08 24 56.0	+0.2
	baz=212						
MASBT	**Mashibuluo**	2.41	212	*e*P	Pb	08 24 54.2	-2.0
	baz=208						
JTJ	**Tarama**	2.44	90	P	Pn	08 24 52.2	-0.1
JTJ				S	Sn	08 25 22.2	+0.5
JTJ	**Tarama**	2.44	90	A	A	08 24 52.2	
	comp=E,62nm,2.1s,comp=E,57nm,7.0s						
PNG	**Penghu**	2.50	244	*e*P	Pn	08 24 52.9	-0.2
	baz=242						
PHUB	**P'eng-hu**	2.52	243	*e*P	Pn	08 24 52.2	-1.1
	baz=240						
EAST	**Anshuo**	2.52	205	*e*P	Pn	08 24 54.0	+0.5
	baz=197						
TAW	**Tawu**	2.52	204	*e*P	Pn	08 24 54.8	+1.4
	baz=201						
TAWH	**Dawu Township**	2.54	204	*e*P	Pn	08 24 54.4	+0.6
	baz=197						
SSPT	**Xinbi**	2.55	212	*e*P	Pb	08 24 57.4	-1.2
	baz=200						
WDGT	**Dungji**	2.58	237	*e*P	Pn	08 24 54.7	+0.6
	baz=234						
SCZT	**Fangliau**	2.63	210	*e*P	Pb	08 24 57.9	-1.9
	baz=198						
PTMZ	**Houxiangcun**	2.66	278	*e*P	Pn	08 24 54.5	-0.7
	baz=278						
LAY	**Lan-yu**	2.66	189	*e*P	Pn	08 24 54.3	-1.0
	baz=181						
LYUB	**Lan-yu**	2.69	189	*e*P	Pn	08 24 53.6	-2.1
	baz=192						
SLIU	**Shizi**	2.69	205	*e*P	Pn	08 24 57.5	+1.8
	baz=197						
WLCH	**Liuqiu**	2.76	213	*e*P	Pb	08 25 02.6	+0.5
	baz=210						
LYJJ	**Jianjiangzhen**	2.76	313	*e*P	Pn	08 24 55.4	-1.3
	baz=312						
VCHM	**Qimei**	2.78	239	*e*P	Pn	08 24 57.0	+0.1
	baz=236						
XPSS	**Dashiqiu**	2.79	324	*e*P	Pn	08 24 55.5	-1.5
	baz=322						
JIRB	**Irabujima**	2.87	86	P	Pn	08 24 59.0	+0.8
JIRB	**Irabujima**	2.87	86	A	A	08 24 59.0	
	comp=E,23nm,2.5s,comp=E,30nm,5.5s						
HEN	**Hengchun**	2.91	204	*e*P	Pb	08 25 02.7	-1.9
	baz=198						
TWKBT	**Hengchun**	2.94	202	*e*P	Pn	08 24 59.8	+0.7
	baz=194						
TSEB	**Hengchuen, Pin**	2.95	201	*e*P	Pn	08 25 00.7	+1.5
	baz=194						
JIKM	**Ikemajima**	2.95	84	P	Pn	08 25 00.5	+1.2
JIKM				S	Sn	08 25 34.1	0.0
JIKM	**Ikemajima**	2.95	84	A	A	08 25 00.5	
	comp=E,29nm,6.1s,comp=E,35nm,6.9s						
JMJ	**Miyako jima 2**	2.98	87	P	Pn	08 25 01.1	+1.4
JMJ	**Miyako jima 2**	2.98	87	*i*P	Pn	08 25 01.1	+1.4
	baz=99						
JMJ2	**Miyako jima3**	3.01	88	P	Pn	08 25 00.8	+0.6
JMJ2	**Miyako jima3**	3.01	88	A	A	08 25 00.8	
	comp=E,36nm,6.0s,comp=E,56nm,6.6s						
MHZQ	**Yeshan**	3.05	298	*e*P	Pn	08 24 59.5	-1.2
	baz=298						
JOGS	**Gusukube**	3.08	88	P	Pn	08 25 02.1	+1.0
JOGS	**Gusukube**	3.08	88	A	A	08 25 02.1	
	comp=E,37nm,4.7s,comp=E,55nm,5.8s						
QZH	**Quanzhou**	3.12	276	⇑*i*Pn	Pn	08 25 00.9	-0.8
QZH				Sn	Sn	08 25 37.3	-1.3
QZH				smax	smax		
	comp=N,3µm,0.8s						
QZH				smax	smax		
	comp=E,1µm,0.6s						
QZH				LR	LR		
	comp=N,19µm,9.4s						
QZH				LR	LR		
	comp=E,16µm,7.3s						
QZH				LR	LR		
	comp=Z,15µm,7.7s						
KNM	**Kinmen**	3.27	266	*e*P	Pn	08 25 05.1	+1.4
	baz=264						
KNMB	**Chin-men Tao**	3.31	267		Pn	08 25 03.1	-1.1
KNMB	**Chin-men Tao**	3.31	267	*e*P	Pn	08 25 03.9	-0.3
	baz=265						
AXDP	**Jialang**	3.69	274	*e*P	Pn	08 25 09.0	-0.4
	baz=274						
ZPLA	**Ao Xicun**	3.96	260	*e*P	Pn	08 25 12.8	-0.4
	baz=258						
BBP	**Basco**	4.21	181	⇓*i*P	Pn	08 25 16.6	0.0
BBP				*e*S	Sn	08 26 06.7	+1.3
SXFK	**Yanhouchang**	4.31	294	*e*P	Pn	08 25 16.8	-1.2
	baz=296						
JKE	**Kume jima 2**	4.61	68	A	A	08 25 22.5	
	comp=E,3.0nm,8.4s,comp=E,3.0nm,6.6s						
JAGN	**Aguni-jima**	5.09	67	A	A	08 25 29.2	
	comp=E,5.0nm,6.4s,comp=E,5.0nm,3.8s						
JJT3	**Tamagusuku3**	5.42	73	A	A	08 25 33.7	
	comp=E,9.0nm,3.6s,comp=E,11nm,6.5s						
JOW	**Kunigami**	6.04	68	P	Pn	08 25 43.5	+1.8
	70nm,0.5s,baz=244,slow=8.8,SNR=22						
JOW				S	Sn	08 26 53.7	+3.3
	62nm,0.9s,baz=105,slow=22,SNR=1.4						
JOW	**Kunigami**	6.04	68		Pn	08 25 41.5	-0.3
SSE	**Sheshan**	6.44	354	P	Pn	08 25 46.3	-0.9
SSE				S	Sn	08 27 08.3	+8.0
SSE				smax	smax		
	comp=N,230nm,1.0s						
SSE				smax	smax		
	comp=E,400nm,1.1s						
SSE				LR	LR		
	comp=N,4µm,9.4s						
SSE				LR	LR		
	comp=E,5µm,6.3s						
HKPS	**Hong Kong Po S**	7.61	253	Pn	Pn	08 26 02.1	-1.3
NJ2	**Nanjing**	7.86	340	*e*P	Pn	08 26 04.4	-2.3
NJ2				S	Sn	08 27 35.4	+0.1
NJ2				smax	smax		
	comp=N,1µm,1.2s						
NJ2				smax	smax		
	comp=E,990nm,1.3s						
NJ2				LR	LR		
	comp=N,12µm,9.5s						
NJ2				LR	LR		
	comp=E,4µm,4.5s						
NJ2				LR	LR		
	comp=Z,13µm,10.0s						
GZH	**Guangzhou**	8.09	261	P	Pn	08 26 04.3	-5.7
GZH				S	Sn	08 27 32.8	-8.3
GZH				smax	smax		
	comp=N,1µm,1.2s						
GZH				smax	smax		
	comp=E,820nm,0.9s						
CNSH	**ChangSha**	8.86	295	⇓P	Pn	08 26 15.6	-4.9
CNSH				S	Sn	08 27 53.3	-6.6
CNSH				smax	smax		
	comp=N,2µm,1.1s						
CNSH				smax	smax		
	comp=E,1µm,1.6s						
WHN	**Wuhan**	8.97	312	⇓P	Pn	08 26 20.3	-1.6
WHN				S	Sn	08 27 55.6	-6.9
WHN				pmax	pmax		
	comp=E,56nm,0.6s						
WHN				LR	LR		
	comp=E,22µm,9.0s						
WHN				LR	LR		
	comp=E,19µm,8.5s						
WHN				LR	LR		
	comp=E,18µm,10.0s						
JSU	**Suzuyama**	10.09	46	Pn	Pn	08 26 36.4	-0.9
LQP	**Lukban**	10.52	183	⇓*e*P	Pn	08 26 44.2	+0.8
TGY	**Tagaytay City**	10.57	186	P	Pn	08 26 48.4	+4.4
	comp=E,194nm,0.3s,baz=174,slow=10,SNR=5.5						
GULI	**GuiLin**	10.59	276	⇓P	Pn	08 26 46.8	+2.6
GULI				LR	LR		
	comp=E,6µm,9.8s						
GULI				LR	LR		
	comp=E,8µm,9.2s						
GULI				LR	LR		
	comp=E,8µm,9.2s						
JNU	**Nakatsue**	11.45	41	P	Pn	08 26 59.9	+3.9
	comp=E,52nm,1.0s,baz=205,slow=13,SNR=8.3						
NAWB	**Namwon**	11.68	22	Pn	Pn	08 26 59.8	+0.8
TIA	**Tai'an**	12.25	341	*e*P	Pn	08 27 06.0	-0.8
TIA				pmax	pmax		
	comp=E,3.0nm,0.6s						
TIA				pmax	pmax		
	comp=E,200nm,5.9s						
TIA				LR	LR		
	comp=E,4µm,9.7s						
TIA				LR	LR		
	comp=E,3µm,8.7s						
TIA				LR	LR		
	comp=E,7µm,10.8s						
TJN	**Taejon**	12.54	20	Pn	Pn	08 27 11.7	+0.9
TJN	**Taejon**	12.54	20	P	Pn	08 27 11.7	+0.9
QIZ	**Qiongzhong**	12.62	246	P	Pn	08 27 12.3	+0.3
QIZ				S	Sn	08 29 33.1	+0.9
QIZ				LR	LR		
	comp=E,4µm,11.9s						
QIZ				LR	LR		
	comp=E,2µm,12.6s						
QIZ				LR	LR		
	comp=E,2µm,9.8s						
LYN	**LuoYang**	12.87	322	*e*P	Pn	08 27 20.3	+4.9
LYN				sP	P	08 27 25.8	-0.3
LYN				PP	PnPn	08 27 30.3	+7.0
LYN				S	Sn	08 29 44.0	+5.8
LYN				pmax	pmax		
	comp=E,20nm,1.4s						
LYN				pmax	pmax		
	comp=E,330nm,9.4s						
LYN				LR	LR		
	comp=E,9µm,10.8s						
LYN				LR	LR		
	comp=E,6µm,9.6s						
LYN				LR	LR		
	comp=E,10µm,9.8s						
INCN	**Inchon**	13.36	16		Pn	08 27 21.8	-0.3
INCN	**Inchon**	13.36	16	P	Pn	08 27 21.8	-0.3
KSRS	**Korea Array**	13.70	20	P	Pn	08 27 28.1	+1.5
	comp=E,1.7nm,0.6s,baz=201,slow=11,SNR=2.8						
KSRS				LR	LR	08 33 13.1	
	comp=E,1µm,21.3s,baz=205,slow=39						
KS19	**Wonju Array Si**	13.73	20		Pn	08 27 26.2	-0.9
GYA	**Guiyang**	13.97	281	⇓P	Pn	08 27 32.4	+1.8
GYA				sP	P	08 27 36.3	-2.2
GYA				S	Sn	08 30 09.3	+3.9
GYA				pmax	pmax		
	comp=E,11nm,1.0s						
GYA				pmax	pmax		
	comp=E,250nm,7.5s						
GYA				LR	LR		
	comp=E,7µm,9.4s						
GYA				LR	LR		
	comp=E,7µm,8.5s						
GYA				LR	LR		
	comp=E,7µm,8.2s						
JHS	**Saijyo**	14.08	41	Pn	Pn	08 27 30.1	-1.8
HNS	**HongShan**	14.14	335	⇓P	Pn	08 27 32.8	+0.1
HNS				PP	PnPn	08 27 44.8	+4.1
HNS				S	Sn	08 30 17.5	+8.4
HNS				pmax	pmax		
	comp=E,13nm,1.2s						
HNS				LR	LR		
	comp=E,5µm,10.2s						
HNS				LR	LR		
	comp=E,4µm,10.4s						
HNS				LR	LR		
	comp=E,5µm,11.8s						
DL2	**Dalian**	14.19	359	P	Pn	08 27 33.8	+0.4
DL2				S	Sn	08 30 10.8	+0.4
DL2				pmax	pmax		
	comp=E,24nm,0.9s						
DL2				pmax	pmax		
	comp=E,160nm,4.9s						
DL2				LR	LR		
	comp=E,2µm,14.7s						
DL2				LR	LR		
	comp=E,2µm,11.8s						
DL2				LR	LR		
	comp=E,4µm,12.0s						
XAN	**Xi'an**	14.73	312	⇓P	Pn	08 27 39.5	-1.4
XAN				pP	P	08 27 44.4	-2.5
XAN				sP		08 27 47.3	
XAN				S	Sn	08 30 23.6	-0.2
XAN				SS	S	08 30 39.6	-2.8
XAN				pmax	pmax		
	comp=E,12nm,1.0s						
XAN				pmax	pmax		
	comp=E,250nm,8.3s						
XAN				LR	LR		
	comp=E,8µm,12.4s						
XAN				LR	LR		
	comp=E,5µm,11.7s						
XAN				LR	LR		
	comp=E,7µm,10.8s						
TIY	**Taiyuan**	15.35	330	⇑P	P	08 27 58.8	+5.0
TIY				PP	sP	08 28 06.0	+5.1
TIY				S	Sn	08 30 44.4	+5.5
TIY				LR	LR		
	comp=N,4µm,12.2s						
TIY				LR	LR		
	comp=E,3µm,9.4s						
TIY				LR	LR		
	comp=Z,3µm,11.4s						
BJI	**Beijing**	16.09	344	P	P	08 28 00.4	-1.4
BJI				S	Sn	08 31 00.8	+4.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,310nm,7.5s						
BJI				LR	LR		
	comp=Z,3µm,10.3s						
BJI				LR	LR		
	comp=Z,1µm,9.6s						
BJI				LR	LR		
	comp=Z,3µm,13.2s						
INU	**Inuyama**	16.77	47		Pn	08 28 06.9	-0.4
SNY	**Shenyang**	17.16	4	⇑P	P	08 28 15.3	+1.7
SNY				pmax	pmax		
	comp=Z,30nm,1.1s						
SNY				pmax	pmax		
	comp=Z,880nm,7.3s						
SNY				LR	LR		
	comp=Z,2µm,17.6s						
SNY				LR	LR		
	comp=Z,8µm,14.2s						
SNY				LR	LR		
	comp=Z,5µm,11.2s						
CD2	**Chengdu**	17.30	295	P	Pn	08 28 14.6	+0.6
CD2				sP	pP	08 28 20.1	-0.2
CD2				S	Sn	08 31 30.0	+3.8
CD2				pmax	pmax		
	comp=Z,150nm,0.8s						
CD2				pmax	pmax		
	comp=Z,220nm,4.4s						
CD2				LR	LR		
	comp=Z,3µm,4.8s						
CD2				LR	LR		
	comp=Z,4µm,7.8s						
KMI	**Kunming**	17.50	276	⇑P	Pn	08 28 16.8	+0.1
KMI				sP	pP	08 28 21.4	-1.3
KMI				SS	S	08 31 50.1	+11
KMI				pmax	pmax		
	comp=Z,29nm,1.5s						
KMI				pmax	pmax		
	comp=Z,120nm,3.8s						
KMI				LR	LR		
	comp=Z,3µm,10.4s						
KMI				LR	LR		
	comp=Z,6µm,10.5s						
KMI				LR	LR		
	comp=Z,6µm,10.5s						
JHJ	**Hachijo jima 2**	17.67	58	P	P	08 28 20.9	+1.5
	comp=Z,228nm,0.9s,baz=241,slow=8.8,SNR=8.7						
JHJ				LR	LR	08 35 46.6	
	comp=Z,316nm,18.5s,baz=262,slow=39						
JHJ2	**Mitsune**	17.69	58	P	Pn	08 28 18.1	-0.7
KCP	**Kidapawan**	17.81	170	⇓*i*P	P	08 28 25.0	+3.9
DAV	**Davao City (W)**	17.84	168	LR	LR	08 35 16.1	
	comp=Z,798nm,20.2s,baz=342,slow=37						
MAJO	**Matsushiro**	18.25	46		P	08 28 25.8	0.0
MAJO	**Matsushiro**	18.25	46	⇓*e*P	Pn	08 28 25.0	-0.7
MJAR	**Matsushiro Arr**	18.25	46	P	P	08 28 26.6	+0.8
	comp=Z,8.9nm,1.0s,baz=237,slow=9.1,SNR=16						
MJAR				LR	LR	08 36 28.2	
	comp=Z,1µm,19.2s,baz=236,slow=40						
MJAR	**Matsushiro Arr**	18.25	46	P	Pn	08 28 25.5	-0.2
MJAR	**Matsushiro Arr**	18.25	46	P	Pn	08 28 25.5	-0.2
MJAR				pmax	pmax		
	comp=Z,13nm,1.1s						
JCJ	**Chichijima**	18.31	78	P	P	08 28 27.4	+0.9
	comp=Z,54nm,0.7s,baz=203,slow=7.7,SNR=3.7						
JCJ				LR	LR	08 35 24.1	
	comp=Z,312nm,18.3s,baz=207,slow=36						
JCJ	**Chichijima**	18.31	78	P	P	08 28 27.1	+0.6
JCJ				IAmb	IAmb	08 28 33.2	
	comp=Z,192nm,1.0s						
HHC	**Hu-ho-hao-te**	18.34	334	*e*P	P	08 28 32.0	+5.1
HHC				sP	sP	08 28 39.6	+5.5
HHC				pmax	pmax		
	comp=Z,100nm,1.6s						
HHC				pmax	pmax		
	comp=Z,2µm,4.7s						
HHC				LR	LR		
	comp=Z,6µm,12.8s						
HHC				LR	LR		
	comp=Z,2µm,12.7s						
HHC				LR	LR		
	comp=Z,7µm,12.1s						
PZH	**PanZhiHua**	18.38	280	⇑P	Pn	08 28 30.3	+2.8
PZH				sP	sP	08 28 34.3	-0.3
PZH				PP	PnPn	08 28 47.4	+8.4
PZH				SS	S	08 32 17.3	+20
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,470nm,7.6s						
PZH				LR	LR		
	comp=Z,5µm,11.0s						
PZH				LR	LR		
	comp=Z,4µm,13.7s						
PZH				LR	LR		
	comp=Z,7µm,17.5s						
BTO	**Baotou**	18.80	331	*e*P	Pn	08 28 35.4	+3.0
BTO				LR	LR		
	comp=Z,11µm,11.4s						
BTO				LR	LR		
	comp=Z,13µm,12.6s						
CN2	**Changchun**	19.29	8	*e*P	P	08 28 35.6	-1.5
CN2				*e*pP	Pn	08 28 39.3	+1.1
CN2				*e*PP	PnPn	08 28 52.8	+1.5
CN2				*e*S	Sn	08 32 06.1	-7.8
CN2				*e*sS	S	08 32 11.9	-2.9
CN2				pmax	pmax		
	comp=Z,70nm,0.9s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
LZH	**Lanzhou**	19.34	310	⇑P	Pn	08 28 41.1	+2.1
LZH				sP	sP	08 28 50.1	+5.1
LZH				PP	PnPn	08 29 00.3	+8.2
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,880nm,6.0s						
LZH				LR	LR		
	comp=Z,4µm,10.3s						
LZH				LR	LR		
	comp=Z,3µm,10.3s						
LZH				LR	LR		
	comp=Z,4µm,10.8s						
MSHR	**Mys Shultsa**	19.39	21	⇓*e*P	Pn	08 28 39.2	-0.2
JYT	**Yasato**	19.41	49	P	Pn	08 28 39.2	-0.5
MYLDM	**Lahad Datu**	19.68	190		P	08 28 42.0	+0.4
MYLDM				IAmb	IAmb	08 28 51.2	
	comp=Z,132nm,1.2s						
XLT	**XiLinHaoTe**	19.78	347	*e*P	Pn	08 28 45.0	+0.8
XLT				pP	pP	08 28 47.4	-0.1
XLT				sP	sP	08 28 51.5	+1.7
XLT				S	Sn	08 32 27.9	+1.8
XLT				SS	SnSn	08 32 50.0	+9.3

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XLT                                 pmax    pmax
       comp=Z,48nm,1.1s
XLT                                 pmax    pmax
       comp=Z,420nm,4.6s
XLT                                 LR      LR
       comp=Z,3µm,18.5s
XLT                                 LR      LR
       comp=Z,2µm,10.5s
VLA    Vladivostok       20.11  21⇓eP       P       08 28 45.5  -0.6
VLA                                 pmax    pmax
       comp=Z,264nm,1.3s
MDJ    Mudanjiang        20.83  15  P       P       08 28 53.8  -0.1
MDJ                                 IAmb    IAmb    08 28 59.6
       comp=Z,100nm,1.1s
MDJ    Mudanjiang        20.83  15  P       Pn      08 28 55.1  -1.3
MDJ                                 pP      pP      08 28 58.1  -0.7
MDJ                                 sP      sP      08 28 59.3  -1.7
MDJ                                 S       Sn      08 32 49.3  -1.8
MDJ                                 sS      sS      08 32 53.8  +0.4
MDJ                                 ScP     ScP     08 36 37.3  -0.9
MDJ                                 ScS     ScS     08 40 22.0  +0.5
MDJ                                 pmax    pmax
       comp=Z,48nm,1.7s
MDJ                                 pmax    pmax
       comp=Z,670nm,3.7s
MDJ                                 LR      LR
       comp=Z,2µm,14.7s
MDJ                                 LR      LR
       comp=Z,7µm,16.8s
MDJ                                 LR      LR
       comp=Z,2µm,19.9s
USRK   Ussuriysk Ar.     21.11  20  P       P       08 28 57.1  +0.2
       comp=Z,12nm,0.8s,baz=208,slow=6.2,SNR=21
USRK                                LR      LR      08 37 15.8
       comp=Z,967nm,18.1s,baz=189,slow=37
       comp=Z,12nm,0.8s
BNX    BinXian           21.46  10 ⇑P       P       08 29 01.5  +0.8
BNX                                 pP      pP      08 29 05.4  -0.2
BNX                                 sP      sP      08 29 08.6  +0.7
BNX                                 PP      PnPn    08 29 26.8  +5.7
BNX                                 S       S       08 32 56.8  -1.3
BNX                                 sS      sS      08 33 04.9  -1.0
BNX                                 pmax    pmax
       comp=Z,160nm,1.1s
BNX                                 pmax    pmax
       comp=Z,770nm,5.6s
BNX                                 LR      LR
       comp=Z,2µm,9.4s
BNX                                 LR      LR
       comp=Z,4µm,13.8s
BNX                                 LR      LR
       comp=Z,5µm,12.6s
CHTO   Chiang Mai        22.20 259  P       P       08 29 08.6  -0.2
CHTO                                IAmb    IAmb    08 29 14.2
       comp=Z,78nm,1.3s
CHTO   Chiang Mai        22.20 259  P       P       08 29 08.6  -0.2
CHTO                                pmax    pmax
       comp=Z,78nm,1.3s
CHTO   Chiang Mai        22.20 259  P       P       08 29 11.0  +2.1
CMAR   Chiang Mai Arr    22.32 258  P       P       08 29 12.8  +2.7
       comp=Z,4.5nm,0.7s,baz=57,slow=7.9,SNR=29
CMAR                                PcP     PcP     08 33 05.5  -0.1
       comp=Z,1.4nm,0.4s,baz=36,slow=1.1,SNR=4.1
CMAR                                LR      LR      08 39 06.3
       comp=Z,651nm,20.3s,baz=70,slow=40
       comp=Z,4.5nm,0.7s
CMAR   Chiang Mai Arr    22.32 258  P       P       08 29 10.9  +0.8
TOLI2  Tolitoli          23.46 183  P       P       08 29 21.1  -0.8
TOLI2                               IAmb    IAmb    08 29 47.6
       comp=Z,46nm,1.1s
GTA    Gaotai            23.79 313 ⇓P       P       08 29 25.6  +0.4
GTA                                 pP      pP      08 29 29.5  -0.9
GTA                                 sP      sP      08 29 33.3  +0.8
GTA                                 S       S       08 33 40.0  -0.1
GTA                                 pmax    pmax
       comp=Z,14nm,1.2s
GTA                                 pmax    pmax
       comp=Z,500nm,6.0s
GTA                                 LR      LR
       comp=Z,2µm,13.5s
GTA                                 LR      LR
       comp=Z,2µm,14.3s
GTA                                 LR      LR
       comp=Z,2µm,14.3s
GTOI   Gorontalo         23.92 178  P       P       08 29 24.7  -1.6
       comp=Z,416nmcomp=Z,21nm,0.7s
SBUM   Sibu              24.03 205  P       P       08 29 26.6  -0.9
SBUM                                IAmb    IAmb    08 29 28.7
       comp=Z,80nm,0.9s
MRSI   Marisa            24.05 180  P       P       08 29 27.0  -0.6
       comp=Z,1µmcomp=Z,51nm,0.7s
GUMO   Guam              24.20 113  LR      LR      08 39 10.5
       comp=Z,442nm,19.3s,baz=296,slow=37
MPSI   Mapaga            24.28 185  P       P       08 29 29.2  -0.5
TNTI   Ternate           24.32 167  P       P       08 29 30.9  +0.8
TNTI   Ternate           24.32 167  P       P       08 29 31.1  +1.0
       comp=Z,2µmcomp=Z,102nm,1.2s
ERM    Erimo             24.61  40⇓eP       P       08 29 30.2  -2.3
ERM                                 pmax    pmax
       comp=Z,30nm,1.0s
HIA    Hailar            24.61 356  P       P       08 29 31.8  -0.8
HIA                                 IAmb    IAmb    08 29 37.0
       comp=Z,64nm,1.0s
HIA    Hailar            24.61 356  P       P       08 29 31.8  -0.8
HIA                                 pmax    pmax
       comp=Z,64nm,1.0s
APSI   Ampana            25.44 181  P       P       08 29 39.9  -0.3
       comp=Z,1µmcomp=Z,78nm,1.2s
LUWI   Luwuk             25.57 178  P       P       08 29 41.9  +0.4
LUWI   Luwuk             25.57 178  P       P       08 29 40.7  -0.8
       comp=Z,9µmcomp=Z,56nm,0.5s
ASAJ   Asahikawa         25.65  36  P       P       08 29 42.4  +0.4
       comp=Z,31nm,0.9s,baz=248,slow=12,SNR=8.1
       comp=Z,31nm,0.9s
KLR    Kul'dur           25.67  15  P       P       08 29 42.5  +0.4
       comp=Z,102nm,1.1s,baz=233,slow=7.7,SNR=68
KLR                                 LR      LR      08 39 43.8
       comp=Z,1µm,20.1s,baz=200,slow=36
       comp=Z,102nm,1.1s
KLR    Kul'dur           25.67  15deP       P       08 29 42.4  +0.3
KLR                                 pmax    pmax
       comp=Z,101nm,1.0s
KSM    Kuching           25.69 208  P       P       08 29 42.2  -0.4
KSM                                 IAmb    IAmb    08 29 44.4
       comp=Z,51nm,0.7s
LBMI   Labuha            25.72 167  P       P       08 29 44.0  +1.2
       comp=Z,3µmcomp=Z,136nm,2.3s
ULN    Ulaanbaatar       26.01 337  P       P       08 29 45.7  +0.4
ULN                                 IAmb    IAmb    08 29 52.9
       comp=Z,116nm,1.6s
ULN    Ulaanbaatar       26.01 337d iP      P       08 29 45.6  +0.2
ULN                                 pmax    pmax
       comp=Z,63nm,1.7s
ULN    Ulaanbaatar       26.01 337  P       P       08 29 45.7  +0.4
GOMU   GeErMu            26.03 303  P       P       08 29 47.8  +1.9
GOMU                                pP      pP      08 29 51.4  +0.2
GOMU                                sP      sP      08 29 52.5  -0.8
GOMU                                S       S       08 34 22.6  +6.2
GOMU                                pmax    pmax
       comp=Z,5.0nm,0.8s
GOMU                                pmax    pmax
       comp=Z,170nm,6.6s
GOMU                                LR      LR
       comp=Z,1µm,9.7s
GOMU                                LR      LR
       comp=Z,800nm,15.6s
GOMU                                LR      LR
       comp=Z,1µm,13.0s
SONM   Songino Array     26.22 336  P       P       08 29 47.8  +0.5
       comp=Z,41nm,0.9s,baz=154,slow=8.2,SNR=34
SONM                                LR      LR      08 40 52.7
       comp=Z,2µm,20.4s,baz=160,slow=38
       comp=Z,41nm,0.9s
SONM   Songino Array     26.22 336  P       P       08 29 48.3  +1.1
BKB    Balikpapan        26.25 192  P       P       08 29 47.7  +0.1
STKI   Sintang           26.51 204  P       P       08 29 51.7  +1.8
SIJI   Sorong            26.93 159  P       P       08 29 53.2  -0.5
       comp=Z,7.4nm,0.5s,baz=0.0,slow=20,SNR=1.7
SIJI                                LR      LR      08 39 33.5
       comp=Z,269nm,20.9s,baz=322,slow=34
       comp=Z,7.4nm,0.5s
YSS    Yuzh-Sakhalins    27.71  31 eP       P       08 29 58.6  -1.9
YSS                                e                08 30 08.1
YSS                                eS       S       08 34 39.8  -2.2
YSS                                eSSS     SSS     08 36 21.4
YSS                                 pmax    pmax
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       comp=Z,20nm,1.6s
YSS                                 pmax    pmax
       comp=Z,80nm,1.2s
YSS                                 MLR     MLR
       comp=Z,1µm,13.0s
YSS                                 MLR     MLR
       comp=N,1µm,15.0s
LSA    Lhasa             27.86 287  P       P       08 30 02.7  +0.1
LSA    Lhasa             27.86 287  P       P       08 30 02.7  +0.1
LSA                                 pmax    pmax
       comp=Z,17nm,0.9s
LSA    Lhasa             27.86 287  P       P       08 30 05.3  +2.7
LSA                                 LR      LR
       comp=Z,4µm,14.5s
LSA                                 LR      LR
       comp=Z,790nm,12.9s
LSA                                 LR      LR
       comp=Z,290nm,6.0s
KULM   Kulim             28.15 230  P       P       08 30 04.7  -0.1
KULM                                IAmb    IAmb    08 30 07.7
       comp=Z,80nm,1.6s
GRNR   Gornyy            28.33  19 eP       P       08 30 06.5  +0.5
GRNR                                MLR     MLR
       comp=E,730nm,16.0s
GRNR                                MLR     MLR
       comp=N,690nm,20.0s
GRNR                                MLR     MLR
       comp=Z,700nm,11.0s
IPM    Ipoh              28.48 229  P       P       08 30 07.6  -0.1
ZEA    Zeya              29.29   6 eP       P       08 30 15.1  +0.6
ZEA                                 pmax    pmax
       comp=E,10.0nm,0.9s
ZEA                                 pmax    pmax
       comp=N,30nm,1.1s
ZEA                                 pmax    pmax
       comp=Z,30nm,1.1s
ZEA                                 pmax    pmax
       comp=Z,200nm,2.2s
ZEA                                 MLR     MLR
       comp=N,1µm,12.0s
ZEA                                 MLR     MLR
       comp=Z,1µm,12.0s
ZAK    Zakamensk         29.48 335 eP       P       08 30 15.9  -0.5
ZAK                                 pmax    pmax
       comp=Z,24nm,1.3s
KAPI   Kappang           29.59 185  P       P       08 30 20.5  +3.0
TYV    Tymovskoe         30.61  26 eP       P       08 30 33.5  +7.3
TYV                                 pmax    pmax
       comp=Z,200nm,2.2s
TYV                                 pmax    pmax
       comp=Z,32nm,1.3s
IRK    Irkutsk           30.66 338 eP       P       08 30 27.2  +0.5
IRK                                 pmax    pmax
       comp=Z,112nm,2.1s
PSI    Prapat            31.13 229  P       P       08 30 31.9  +0.6
       comp=Z,20nm,0.9s,baz=32,slow=5.0,SNR=20
PSI                                 LR      LR      08 43 51.0
       comp=Z,475nm,18.9s,baz=35,slow=38
       comp=Z,20nm,0.9s
MOY    Mondy             31.39 335 eP       P       08 30 33.7  +0.5
MOY                                 pmax    pmax
       comp=Z,67nm,2.3s
PKI    Pulchoki          32.92 283 eP       P       08 30 48.5  +1.3
       comp=Z,60nm,1.2s
KKN    Kakani            33.02 283 eP       P       08 30 49.5  +1.5
DMN    Daman             33.19 283 eP       P       08 30 50.9  +1.4
       comp=Z,70nm,1.0s
GKN    Gorkha            33.58 284 eP       P       08 30 54.0  +1.2
       comp=Z,90nm,1.1s
BOD    Bodaibo           33.61 352 eP       P       08 30 51.5  -0.9
BOD                                 pmax    pmax
       comp=Z,21nm,2.1s
WMQ    Urumqi            33.87 313 eP       P       08 30 55.9  +0.9
WMQ                                 pP      pP      08 31 01.1  +0.8
WMQ                                 S       S       08 36 16.9  -1.7
WMQ                                 pmax    pmax
       comp=Z,39nm,1.3s
WMQ                                 pmax    pmax
       comp=Z,170nm,5.7s
WMQ                                 LR      LR
       comp=Z,2µm,11.1s
WMQ                                 LR      LR
       comp=Z,1µm,11.1s
LEM    Lembang           34.31 206  LR      LR      08 45 36.5
       comp=Z,183nm,19.7s,baz=14,slow=37
DANN   Dangsing          34.34 285 eP       P       08 31 00.3  +0.8
KOLN   Koldanda          34.51 284 eP       P       08 31 02.5  +1.6
       comp=Z,86nm,1.0s
PYUN   Piuthan           35.03 284 eP       P       08 31 06.9  +1.5
       comp=Z,58nm,0.9s
YAK    Yakutsk           37.70   6  P       P       08 31 26.7  -0.8
       comp=Z,9.9nm,0.3s,baz=268,slow=1.4
YAK                                 LR      LR      08 47 43.8
       comp=Z,771nm,18.8s,baz=198,slow=37
       comp=Z,9.9nm,0.3s
YAK    Yakutsk           37.70   6 eP       P       08 31 27.0  -0.5
YAK                                e                08 32 55.5
YAK                                e                08 33 40.0
YAK                                eS       S       08 37 20.4  +3.7
YAK                                e*SS     ScP     08 37 37.9  +6.8
YAK                                eSS      SS      08 40 13.7  +11
YAK                                 pmax    pmax
       comp=Z,62nm,1.0s
YAK                                 pmax    pmax
       comp=E,4.0nm,0.9s
YAK                                 pmax    pmax
       comp=N,27nm,1.1s
YAK                                 pmax    pmax
       comp=Z,12nm,0.6s
YAK                                 smax    smax
       comp=E,52nm,12.0s
YAK                                 smax    smax
       comp=N,164nm,18.5s
YAK                                 MLR     MLR
       comp=Z,1µm,13.0s
YAK                                 MLR     MLR
       comp=N,671nm,11.0s
YAK                                 MLR     MLR
       comp=E,517nm,11.0s
MK31   Makanchi Array    38.52 315  P       P       08 31 35.0  +0.3
MK31                                IAmb    IAmb    08 31 40.4
       comp=Z,31nm,1.3s
MK31   Makanchi Array    38.52 315  P       P       08 31 35.0  +0.3
MK31                                pmax    pmax
       comp=Z,31nm,1.3s
MKAR   Makanchi Array    38.52 315  P       P       08 31 34.2  -0.4
       comp=Z,7.2nm,0.8s,baz=103,slow=10,SNR=24
MKAR                                LR      LR      08 48 43.0
       comp=Z,1000nm,18.6s,baz=108,slow=38
       comp=Z,7.2nm,0.8s
MKAR   Makanchi Array    38.52 315  P       P       08 31 34.5  -0.2
MKAR   Makanchi Array    38.52 315 i P      P       08 31 34.9  +0.2
MKAR                                pmax    pmax
       comp=Z,7.0nm,0.8s
MAKZ   Makanchi          38.73 315  P       P       08 31 36.3  -0.1
MAKZ                                IAmb    IAmb    08 31 42.2
       comp=Z,46nm,1.3s
MAKZ   Makanchi          38.73 315  P       P       08 31 36.3  -0.1
MAKZ                                pmax    pmax
       comp=Z,46nm,1.3s
TARG   Taragay, Kyrgy    40.24 306  P       P       08 31 48.6  -0.9
MA2    Magadan           40.24  22  P       P       08 31 48.6  -0.2
       comp=Z,25nm,1.1s,baz=175,slow=14,SNR=3.2
MA2                                 LR      LR      08 48 44.4
       comp=Z,616nm,18.9s,baz=254,slow=36
       comp=Z,25nm,1.1s
MA2    Magadan           40.24  22  IAmb    IAmb    08 31 53.5
       comp=Z,28nm,1.1s
MA2    Magadan           40.24  22⇑eP       P       08 31 50.2  +1.4
MA2                                 pmax    pmax
       comp=Z,36nm,1.2s
ZAA0   Zalesovo Array    40.25 326  P       P       08 31 48.6  -0.4
ZAA0                                IAmb    IAmb    08 31 54.4
       comp=Z,27nm,0.9s
ZALV   Zalesovo Beam     40.25 326  P       P       08 31 48.7  -0.3
       comp=Z,12nm,0.8s,baz=108,slow=7.3,SNR=19
ZALV                                LR      LR      08 49 31.2
       comp=Z,1µm,18.6s,baz=130,slow=38
       comp=Z,12nm,0.8s
ZALV   Zalesovo Beam     40.25 326  P       P       08 31 48.2  -0.8
KDJ    Kajisay           40.77 307  P       P       08 31 54.1  +0.4
KDJ    Kajisay           40.77 307  P       P       08 31 54.1  +0.4
KDJ                                 pmax    pmax
       comp=Z,14nm,1.0s
KRVT   Keravat (AS076    41.01 131  LR      LR      08 45 32.2
       comp=Z,277nm,21.3s,baz=101,slow=31
HYBB   Hyderabad (bro    41.07 269 eP       P       08 31 57.3  +1.1
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KSH    Kashi             41.27 302  P       P       08 32 02.3  +4.5
KSH                                 pP      sP      08 32 07.6  +2.3
KSH                                 sP      pP      08 32 10.1  +6.9
KSH                                 ScS     ScS     08 42 03.8  +2.3
KSH                                 pmax    pmax
       comp=Z,8.0nm,1.1s
KSH                                 pmax    pmax
       comp=Z,340nm,7.9s
KSH                                 LR      LR
       comp=Z,2µm,16.5s
KSH                                 LR      LR
       comp=Z,1µm,14.8s
KSH                                 LR      LR
       comp=Z,1µm,16.5s
ULHL   Ulahol            41.48 307  P       P       08 32 00.9  +1.3
       SNR=16
BOOM   Boomskoye usch    41.74 307  P       P       08 32 01.8  +0.1
BOOM   Boomskoye usch    41.74 307  P       P       08 32 01.8  +0.1
BOOM                                pmax    pmax
       comp=Z,10.0nm,1.2s
TKM2   Tokmak 2          42.06 307  P       P       08 32 05.8  +1.4
       SNR=21
TKM2   Tokmak 2          42.06 307 i P      P       08 32 05.5  +1.2
TKM2                                pmax    pmax
       comp=Z,23nm,0.9s
KURK   Kurchatov         42.21 319  P       P       08 32 04.9  -0.2
KURK                                IAmb    IAmb    08 32 10.5
       comp=Z,43nm,1.4s
KURK   Kurchatov         42.21 319d iP      P       08 32 04.9  -0.2
KURK                                pmax    pmax
       comp=Z,65nm,2.5s
KURK   Kurchatov         42.21 319  P       P       08 32 05.0  -0.1
KURBB  Kurchatov Arra    42.23 319  P       P       08 32 04.5  -0.7
       comp=Z,5.0nm,0.9s,baz=114,slow=7.9,SNR=22
KURBB                               LR      LR      08 51 45.1
       comp=Z,107nm,20.4s,baz=92,slow=39
       comp=Z,5.0nm,0.9s
KBK    Karagaybulak      42.49 307  P       P       08 32 09.8  +2.0
       SNR=7.9
KBK    Karagaybulak      42.49 307  P       P       08 32 09.9  +2.1
UCH    Uchtor            42.74 306  P       P       08 32 12.7  +2.5
       SNR=25
UCH    Uchtor            42.74 306  P       P       08 32 12.5  +2.4
AAK    Ala-Archa         42.82 307  P       P       08 32 11.0  +0.6
       comp=Z,4.4nm,0.7s,baz=209,slow=13,SNR=3.9
AAK                                 LR      LR      08 52 30.2
       comp=Z,765nm,18.5s,baz=91,slow=40
       comp=Z,4.4nm,0.7s
AAK    Ala-Archa         42.82 307  P       P       08 32 11.3  +0.9
AAK    Ala-Archa         42.82 307ceP       P       08 32 12.1  +1.7
AAK                                 pmax    pmax
       comp=Z,8.0nm,1.0s
AAK    Ala-Archa         42.82 307  P       P       08 32 11.7  +1.3
PALK   Pallekele         43.11 253  P       P       08 32 13.8  +0.9
       comp=Z,19nm,1.1s,baz=212,slow=5.0,SNR=4.6
       comp=Z,19nm,1.1s
PALK   Pallekele         43.11 253  P       P       08 32 15.2  +2.3
PALK                                P       P       08 32 15.2  +2.3
SEY    Seymchan          43.26  20  P       P       08 32 14.6  +1.1
       comp=Z,12nm,1.0s,baz=210,slow=6.1,SNR=16
SEY                                 LR      LR      08 50 15.8
       comp=Z,471nm,19.1s,baz=217,slow=36
       comp=Z,12nm,1.0s
SEY    Seymchan          43.26  20⇑eP       P       08 32 15.1  +1.7
SEY                                 pmax    pmax
       comp=Z,27nm,1.3s
AML    Almayashu         43.33 306  P       P       08 32 16.9  +2.1
       SNR=9.3
AML    Almayashu         43.33 306  P       P       08 32 17.1  +2.3
AML    Almayashu         43.33 306  P       P       08 32 16.4  +1.5
COEN   Coen              43.60 149  P       P       08 32 17.0  +0.3
COEN                                IAmb    IAmb    08 32 22.0
       comp=Z,47nm,1.2s
POO    Poona             45.02 272 eP       P       08 32 23.0  -5.3
BTK    Batken            45.28 303  P       P       08 32 30.3  +0.2
BTK    Batken            45.28 303  P       P       08 32 30.3  +0.2
BTK                                 pmax    pmax
       comp=Z,10.0nm,1.1s
PCHI   Peechi            45.53 260 eP       P       08 32 30.6  -1.6
GAR    Garm              45.61 301  P       P       08 32 33.2  +0.4
GAR                                 IAmb    IAmb    08 32 39.3
       comp=Z,35nm,1.1s
KK31   Karatay Array     45.78 307  P       P       08 32 34.6  +0.7
KK31   Karatay Array     45.78 307 i P      P       08 32 34.7  +0.7
KKAR   Karatay Array     45.78 307  P       P       08 32 34.8  +0.8
KKAR   Karatay Array     45.78 307  P       P       08 32 34.4  +0.4
KKAR   Karatay Array     45.78 307  P       P       08 32 34.4  +0.4
KKAR                                pmax    pmax
       comp=Z,4.0nm,0.8s
WRAB   Tennant Creek     45.94 164  P       P       08 32 34.7  -0.6
WRAB   Tennant Creek     45.94 164d iP      P       08 32 34.3  -1.0
WRAB                                pmax    pmax
       comp=Z,44nm,1.0s
WRA    Warramunga Arr    45.94 164  P       P       08 32 35.4   0.0
       comp=Z,25nm,0.9s,baz=344,slow=8.7,SNR=83
WRA                                 PcP     PcP     08 34 10.8  -1.4
       comp=Z,2.0nm,0.6s,baz=352,slow=3.5,SNR=4.9
       comp=Z,25nm,0.9s
WR0    Warramunga Arr    46.01 164  P       P       08 32 35.6  -0.3
CHGR   Chuyangaron       46.50 301  P       P       08 32 40.4  +0.6
CHGR                                IAmb    IAmb    08 33 08.4
       comp=Z,20nm,1.0s
CHGR   Chuyangaron       46.50 301  P       P       08 32 40.4  +0.6
CHGR                                pmax    pmax
       comp=Z,20nm,1.0s
KBL    Kabul             46.64 295  P       P       08 32 41.6  +0.5
KBL    Kabul             46.64 295  P       P       08 32 41.6  +0.5
KBL                                 pmax    pmax
       comp=Z,40nm,1.2s
KBL    Kabul             46.64 295  P       P       08 32 42.2  +1.1
       SNR=24
TIXI   Tiksi             47.17   3  P       P       08 32 43.1  -1.2
       comp=Z,26nm,0.9s,baz=267,slow=23,SNR=27
TIXI                                LR      LR      08 54 17.3
       comp=Z,1µm,19.1s,baz=180,slow=38
       comp=Z,26nm,0.9s
TIXI   Tiksi             47.17   3  P       P       08 32 42.9  -1.4
TIXI   Tiksi             47.17   3d iP      P       08 32 42.9  -1.4
TIXI                                pmax    pmax
       comp=Z,50nm,1.3s
BRVK   Borovoye          47.85 320  P       P       08 32 49.6  -0.3
BRVK   Borovoye          47.85 320d iP      P       08 32 49.7  -0.3
BRVK                                pmax    pmax
       comp=Z,49nm,2.5s
BRVK   Borovoye          47.85 320  P       P       08 32 49.9  -0.1
SHEM   Shemya Is, Ala    47.97  40  LR      LR      08 53 20.3
       comp=Z,142nm,21.8s,baz=280,slow=36
NRIK   Noril'sk          49.13 345  P       P       08 32 57.9  -1.6
       comp=Z,8.7nm,1.0s,baz=124,slow=5.2,SNR=11
NRIK                                LR      LR      08 54 54.5
       comp=Z,751nm,21.6s,baz=142,slow=37
       comp=Z,8.7nm,1.0s
NRIK   Noril'sk          49.13 345  P       P       08 32 58.1  -1.4
NRIK                                IAmb    IAmb    08 33 05.2
       comp=Z,37nm,1.4s
NRIK   Noril'sk          49.13 345⇓eP       P       08 32 58.1  -1.4
NRIK                                pmax    pmax
       comp=Z,29nm,1.4s
AS31   Alice Springs     49.42 166  P       P       08 33 02.4  +0.1
ASAR   Alice Springs     49.42 166  P       P       08 33 02.0  -0.3
       comp=Z,3.7nm,0.3s,baz=19,slow=11,SNR=56
ASAR                                PcP     PcP     08 34 23.1  -1.4
       comp=Z,4.2nm,0.8s,baz=345,slow=2.7,SNR=5.8
ASAR                                LR      LR      08 55 09.9
       comp=Z,113nm,19.8s,baz=358,slow=37
       comp=Z,3.7nm,0.3s
ASAR   Alice Springs     49.42 166  P       P       08 33 02.5  +0.2
HNR    Honiara           50.18 128  LR      LR      08 53 01.8
       comp=Z,176nm,20.4s,baz=308,slow=34
CTA    Charters Tower    50.36 150  LR      LR      08 52 24.4
       comp=Z,228nm,20.5s,baz=334,slow=34
BILL   Bilibino          50.97  20  P       P       08 33 13.2  -0.4
BILL   Bilibino          50.97  20d iP      P       08 33 12.7  -0.8
BILL                               e                08 34 30.2
BILL                               e                08 35 10.0
BILL                               ePPP     PPP     08 36 06.6
BILL                                pmax    pmax
       comp=Z,10.0nm,1.0s
BILL                                MLR     MLR
       comp=Z,605nm,11.0s
HRA    Herat             52.25 295  P       P       08 33 24.6  +0.6
HRA                                 IAmb    IAmb    08 33 26.2
       comp=Z,51nm,2.0s
KAAM   Kaadhehdhoo       53.12 251  P       P       08 33 31.0  +0.7
AB31   Akbulak array     53.65 314 i P      P       08 33 33.9  +0.2
ABKAR  Akbulak array     53.65 314  P       P       08 33 33.4  -0.3
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ABKAR				IAmb	IAmb	08 33 35.3	
	comp=Z,36nm,1.4s						
SVE	**Sverdlovsk**	54.10	323	*e*P	P	08 33 37.4	+0.5
AKTO	**Aktyubinsk**	54.96	315	P	P	08 33 42.9	-0.4
	comp=Z,6.3nm,0.9s,baz=89,slow=6.7,SNR=11						
AKTO				LR	LR	08 57 08.0	
	comp=Z,427nm,19.1s,baz=95,slow=36						
	comp=Z,6.3nm,0.9s						
ARU	**Arti**	55.18	323	LR	LR	08 58 19.8	
	comp=Z,572nm,19.8s,baz=94,slow=37						
ARU	**Arti**	55.18	323	c *i*P	P	08 33 44.5	-0.2
ARU						08 34 39.3	
ARU						08 35 47.0	
ARU				S	S	08 41 29.6	+2.6
ARU				SS	SS	08 45 04.7	-6.1
ARU				pmax	pmax		
	comp=Z,19nm,1.1s						
GEYT	**Alibeck**	55.21	300	P	P	08 33 45.6	+0.3
	comp=Z,11nm,0.8s,baz=74,slow=6.2,SNR=9.2						
GEYT				LR	LR	09 01 18.7	
	comp=Z,663nm,18.0s,baz=116,slow=40						
	comp=Z,11nm,0.8s						
GYA0B	**ALIBECK ARRAY**	55.21	300	P	P	08 33 46.2	+0.9
GYA0B				IAmb	IAmb	08 33 50.5	
	comp=Z,22nm,0.8s						
FORT	**Forrest**	55.44	174	P	P	08 33 46.5	-0.3
FORT				IAmb	IAmb	08 34 17.8	
	comp=Z,33nm,0.9s						
JLN	**Jalan Bani Buh**	57.06	281	P	P	08 34 00.0	+1.3
JLN				P	P	08 34 00.0	+1.3
WBK	**Wadi Bani Khal**	57.33	282	P	P	08 34 02.4	+1.7
WSAR	**Wadi Sarin**	57.47	283	P	P	08 34 02.4	+0.8
	comp=Z,8.5nm,0.9s,baz=82,slow=6.5,SNR=5.5						
WSAR				LR	LR	09 01 10.8	
	comp=Z,282nm,19.2s,baz=96,slow=38						
	comp=Z,8.5nm,0.9s						
WSAR	**Wadi Sarin**	57.47	283	P	P	08 34 04.0	+2.4
SPIA	**Saint Paul Isl**	57.59	37	P	P	08 34 01.6	-0.3
	baz=266						
GAMB	**Gambell**	57.69	29	P	P	08 34 02.1	-0.3
	baz=260						
BIDO	**Bidbid**	57.84	283	P	P	08 34 06.5	+2.2
	SNR=7.1						
BIDO				P	P	08 34 06.5	+2.2
	SNR=7.1						
SMDO	**Samad**	58.03	283	P	P	08 34 06.0	+0.2
	SNR=7.8						
SMDO				P	P	08 34 06.0	+0.2
	SNR=7.8						
JMDO	**Jabal Madar**	58.17	282	P	P	08 34 07.8	+1.2
NIKH	**Nikolski High**	58.22	42	P	P	08 34 05.6	-0.8
	baz=270						
HOQ	**Hoqain**	58.55	284	P	P	08 34 10.4	+1.2
	SNR=8.7						
MHTO	**MHTO**	58.68	280	P	P	08 34 10.5	+0.4
MHTO				P	P	08 34 10.5	+0.4
BBOO	**Buckleboo**	58.71	166	P	P	08 34 09.6	-0.4
BANOM	**Banah**	58.84	286	P	P	08 34 13.2	+2.0
BSY	**Bisya**	58.87	283	P	P	08 34 12.4	+0.9
	SNR=5.1						
BSY				P	P	08 34 12.4	+0.9
	SNR=5.1						
SOHO	**SOHO**	59.09	284	P	P	08 34 14.2	+1.2
SOHO				P	P	08 34 14.2	+1.2
UOSS	**Minazif**	59.17	285	P	P	08 34 13.9	+0.4
UOSS	**Minazif**	59.17	285	P	P	08 34 13.8	+0.4
STKA	**Stephens Creek**	59.27	161	P	P	08 34 13.1	-0.8
	comp=Z,14nm,0.7s,baz=333,slow=6.2,SNR=21						
STKA				LR	LR	09 01 02.1	
	comp=Z,123nm,20.6s,baz=16,slow=37						
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	59.27	161	P	P	08 34 14.1	+0.3
STKA	**Stephens Creek**	59.27	161	P	P	08 34 14.1	+0.3
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARQ	**Araqi**	59.31	283	P	P	08 34 15.5	+1.0
	SNR=5.8						
ASHO	**Ashiyiah**	59.37	285	P	P	08 34 16.1	+1.2
	SNR=6.1						
ASHO				P	P	08 34 16.1	+1.2
	SNR=6.1						
DQM	**DQM**	59.37	279	P	P	08 34 14.7	-0.2
DQM				P	P	08 34 14.7	-0.2
TNA	**Tin City**	59.56	27	P	P	08 34 14.7	-0.8
	baz=263						
ALNE	**Al Ain**	59.80	284	P	P	08 34 19.4	+1.6
	SNR=10						
KIRV	**Kirov**	60.26	325	P	P	08 34 19.5	-0.9
	comp=Z,9.9nm,0.5s,baz=314,slow=2.3,SNR=8.0						
KIRV				LR	LR	09 02 34.5	
	comp=Z,860nm,19.8s,baz=98,slow=38						
	comp=Z,9.9nm,0.5s						
KIRV	**Kirov**	60.26	325	c *i*P	P	08 34 19.9	-0.4
ANM	**Nome**	60.54	28	P	P	08 34 21.4	-0.9
	baz=266						
UMZA	**Um Al Zommool**	60.69	283	P	P	08 34 24.4	+0.4
UMZA				P	P	08 34 24.4	+0.4
BELG	**Belogornoye**	61.44	318	P	P	08 34 27.6	-0.9
	comp=Z,31nm,1.0s,baz=76,slow=5.9,SNR=4.7						
BELG				LR	LR	09 01 24.3	
	comp=Z,334nm,19.7s,baz=66,slow=36						
	comp=Z,31nm,1.0s						
BELG	**Belogornoye**	61.44	318	d *i*P	P	08 34 28.0	-0.5
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RDOG	**Red Dog Mine**	61.78	24	P	P	08 34 29.2	-1.4
	baz=266						
MZR	**Muzera**	62.09	284	P	P	08 34 34.0	+0.5
	SNR=13						
JRN	**Qarnain Island**	62.11	286	P	P	08 34 33.9	+0.4
	SNR=12						
PRGR	**Permogore**	62.16	328	*e*P	P	08 34 32.3	-0.9
PRGR				*e*		08 35 16.5	
DMTO	**DMTO**	62.39	278	P	P	08 34 36.3	+0.8
MAK	**Makhachkala**	62.60	307	*e*P	P	08 34 35.1	-1.4
MAK				*e*S	S	08 43 01.5	-2.2
MAK				pmax	pmax		
	comp=Z,46nm,0.3s						
MAK				MLR	MLR		
	comp=Z,420nm,15.0s						
DOK	**Doka**	62.84	279	P	P	08 34 38.5	0.0
DOK				P	P	08 34 38.5	0.0
SDPT	**Sand Point**	63.05	39	P	P	08 34 37.7	-1.5
	baz=275						
RBK	**Rabkut**	63.13	278	P	P	08 34 40.9	+0.4
SLWR	**Sila**	63.36	286	P	P	08 34 42.9	+1.1
SLWR				P	P	08 34 42.9	+1.1
WHFO	**Wadi Hawf**	63.39	278	P	P	08 34 42.2	+0.1
DZM	**Mont Dzumac**	63.41	133	LR	LR	08 57 52.6	
	comp=Z,155nm,20.4s,baz=312,slow=32						
TRNA	**Turayna**	63.59	287	P	P	08 34 43.7	+0.3
CHNA	**Chernabura Isl**	63.61	39	P	P	08 34 41.7	-1.3
	baz=276						
ABTO	**Aybut**	64.00	278	P	P	08 34 46.8	+0.6
	SNR=5.3						
ABTO				P	P	08 34 46.8	+0.6
	SNR=5.3						
A21K	**Barrow**	64.09	21	P	P	08 34 45.7	-0.1
A21K	**Barrow**	64.09	21	P	P	08 34 45.0	-0.8
	baz=270						
GCSA	**Galena City Sc**	64.19	28	P	P	08 34 45.9	-0.8
	baz=273						
TTA	**Tatalina**	64.70	30	P	P	08 34 49.4	-0.8
TTA	**Tatalina**	64.70	30	P	P	08 34 49.4	-0.8
TTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TTA	**Tatalina**	64.70	30	P	P	08 34 49.3	-0.8
	baz=275,SNR=14						
N18K	**Kilae Creek**	64.98	33	P	P	08 34 50.6	-1.4
	baz=276						
GNI	**Garni**	65.15	305	LR	LR	09 06 02.3	
	comp=Z,257nm,20.1s,baz=98,slow=38						
GNI	**Garni**	65.15	305	d *i*P	P	08 34 54.7	+1.1
GNI				pmax	pmax		
	comp=Z,27nm,2.5s						
KLMR	**Klimovskoe**	65.16	328	*e*P	P	08 34 51.4	-1.6
KLMR				*e*		08 37 14.7	
KLMR				pmax	pmax		
	comp=Z,33nm,1.1s						
KLMR	**Klimovskoe**	65.16	328	*e*P	P	08 34 51.5	-1.6
KLMR				AMP		08 34 57.6	
	comp=Z,33nm,1.1s						
KLMR				*e*PP	PP	08 37 14.7	-1.4
KLMR				LQ	LQ	08 59 45.6	
KLMR				LQ	LQ	08 59 45.6	
KLMR				LR	LR	09 02 15.3	
SOCY	**Socotra**	65.17	272	P	P	08 34 52.9	-1.1
VRH	**Novokhopyorsk**	65.22	317	*e*P	P	08 34 53.1	-0.5
VRH				pmax	pmax		
	comp=Z,60nm,1.5s						
ZEI	**Tsey**	65.23	308	*e*P	P	08 34 53.5	-0.6
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s						
L19K	**White Mountain**	65.31	31	P	P	08 34 53.3	-0.8
L19K	**White Mountain**	65.31	31	P	P	08 34 53.2	-0.9
	baz=276,SNR=7.0						
IMAR	**Indian Mountai**	65.41	27	P	P	08 34 53.8	-0.8
GOF	**Gofitskoye**	65.41	310	⇑*e*P	P	08 34 54.8	-0.1
O18K	**Koktuh Hills**	65.41	33	P	P	08 34 53.6	-1.1
	baz=277						
J20K	**Nowinta River**	65.42	29	P	P	08 34 54.1	-0.5
J20K				IAmb	IAmb	08 34 59.9	
	comp=Z,9.8nm,1.1s						
J20K	**Nowinta River**	65.42	29	P	P	08 34 54.0	-0.7
	baz=276,SNR=10.0						
P18K	**Big Mountain,**	65.45	34	P	P	08 34 54.2	-0.8
	baz=277						
K20K	**Telida**	65.54	30	P	P	08 34 55.6	+0.1
K20K	**Telida**	65.54	30	P	P	08 34 55.3	-0.2
	baz=276,SNR=8.0						
M19K	**Big River Lodg**	65.56	31	P	P	08 34 54.8	-0.9
	baz=277						
ONI	**Oni**	65.60	307	P	P	08 34 57.6	+1.3
ONI	**Oni**	65.60	307	P	P	08 34 57.6	+1.3
ONI				pmax	pmax		
	comp=Z,27nm,0.9s						
N19K	**Bonanza Creek**	65.65	32	P	P	08 34 54.6	-1.8
	baz=277						
L20K	**Farewell, AK**	65.73	30	P	P	08 34 55.3	-1.5
	baz=277						
KBZ	**Khabaz**	65.77	309	P	P	08 34 57.5	+0.2
	comp=Z,11nm,0.9s,baz=100,slow=2.3,SNR=17						
KBZ				LR	LR	09 07 01.6	
	comp=Z,320nm,18.7s,baz=77,slow=39						
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	65.77	309	c *e*P	P	08 34 57.2	-0.1
KBZ				pmax	pmax		
	comp=Z,25nm,1.1s						
AKH	**Akhalkalaki**	65.81	306	⇑P	P	08 34 58.1	+0.2
H21K	**Melozitna Rive**	65.83	27	P	P	08 34 56.7	-0.6
	baz=276,SNR=17						
KVAR	**Kislovodsk Arr**	65.86	309	P	P	08 34 57.7	-0.4
	comp=Z,3.8nm,0.3s,baz=270,slow=5.1,SNR=2.8						
KVAR				LR	LR	09 05 16.8	
	comp=Z,451nm,18.9s,baz=268,slow=37						
	comp=Z,3.8nm,0.3s						
KIV	**Kislovodsk**	65.87	309	P	P	08 34 58.2	+0.1
KIV	**Kislovodsk**	65.87	309	*e*P	P	08 34 58.9	+0.8
KIV				pmax	pmax		
	comp=Z,40nm,1.1s						
KIV				MLR	MLR		
	comp=Z,274nm,17.0s						
I21K	**Tanana**	66.23	27	P	P	08 34 59.3	-0.6
	baz=277						
CHUM	**Lake Minchumin**	66.25	29	P	P	08 34 59.6	-0.5
	baz=278						
CAST	**Castle Rocks**	66.42	29	P	P	08 35 00.3	-0.8
CAST	**Castle Rocks**	66.42	29	P	P	08 35 00.4	-0.8
	baz=278,SNR=8.6						
P19K	**Oil Pt**	66.43	33	P	P	08 34 59.5	-1.8
	baz=279						
PPLA	**Purkeypile**	66.45	30	P	P	08 35 00.3	-1.2
	baz=278						
COLD	**Coldfoot**	66.67	25	P	P	08 35 02.9	+0.2
COLD				IAmb	IAmb	08 35 05.8	
	comp=Z,11nm,1.4s						
COLD	**Coldfoot**	66.67	25	P	P	08 35 01.4	-1.3
	baz=278						
LPSR	**Galich'ya Gora**	66.69	319	*e*P	P	08 35 01.2	-1.8
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VORR	**Voronezh**	66.69	318	⇑*i*P	P	08 35 03.0	0.0
VORR				pmax	pmax		
	comp=Z,31nm,1.6s						
SPCR	**Spurr Chakacha**	66.69	32	P	P	08 35 01.8	-1.2
	baz=279						
TOLK	**Toolik Lake Re**	66.70	23	P	P	08 35 01.7	-1.2
	baz=278,SNR=14						
VORD	**Divnogorie**	66.77	317	*e*P	P	08 35 02.8	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SPU	**Mount Spurr**	66.77	32	P	P	08 35 02.2	-1.2
OHAK	**Old Harbor**	66.79	36	P	P	08 35 02.0	-1.6
	baz=280						
VSR	**Storozhevoye**	66.80	317	*e*P	P	08 35 02.9	-0.9
VSR				pmax	pmax		
	comp=Z,30nm,1.3s						
BPAW	**Bear Paw Mtn.**	66.80	28	P	P	08 35 02.9	-0.7
BPAW	**Bear Paw Mtn.**	66.80	28	P	P	08 35 02.6	-1.0
	baz=279,SNR=12						
MOS	**Moscow**	66.88	322	*e*P	P	08 35 02.4	-1.8
MOS				pmax	pmax		
	comp=Z,29nm,0.8s						
APA	**Apatity**	66.93	335	⇓*i*P	P	08 35 02.2	-2.1
APA				pmax	pmax		
	comp=Z,13nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,11.0s						
KDAK	**Kodiak Island**	67.07	35	P	P	08 35 04.5	-0.8
	comp=Z,3.8nm,0.8s,baz=259,slow=6.5,SNR=4.7						
KDAK				LR	LR	09 06 05.0	
	comp=Z,170nm,20.8s,baz=256,slow=37						
	comp=Z,3.8nm,0.8s						
H23K	**Yukon River**	67.14	27	P	P	08 35 05.7	0.0
H23K				IAmb	IAmb	08 35 09.9	
	comp=Z,29nm,1.3s						
H23K	**Yukon River**	67.14	27	P	P	08 35 05.5	-0.2
	baz=279,SNR=30						
TRF	**Thorofare Moun**	67.21	29	P	P	08 35 04.7	-1.7
	baz=280						
HOM	**Homer**	67.22	33	P	P	08 35 05.3	-1.0
	baz=280						
I23K	**Minto, Yukon-K**	67.33	27	P	P	08 35 05.8	-1.1
	baz=280,SNR=5.7						
CUT	**Chulitna**	67.40	30	P	P	08 35 05.6	-1.7
	baz=280						
NEA2	**Nenana**	67.54	28	P	P	08 35 07.5	-0.8
NEA2				IAmb	IAmb	08 35 15.5	
	comp=Z,12nm,0.9s						
NEA2	**Nenana**	67.54	28	P	P	08 35 07.3	-1.0
	baz=280,SNR=20						
M22K	**Willow**	67.59	31	P	P	08 35 06.8	-1.8
	baz=280						
OBN	**Obninsk**	67.59	322	LR	LR	09 07 21.1	
	comp=Z,119nm,19.6s,baz=34,slow=38						
OBN	**Obninsk**	67.59	322	*e*P	P	08 35 08.6	-0.1
OBN				*e*		08 35 35.3	
OBN				*e*		08 37 34.7	
OBN				*e*PPP	PPP	08 39 15.1	
OBN				pmax	pmax		
	comp=Z,136nm,3.8s						
OBN				MLR	MLR		
	comp=Z,337nm,6.0s						
BRSE	**Bradley Lake S**	67.66	33	P	P	08 35 07.2	-1.9
	baz=281						
MCK	**McKinley**	67.76	29	P	P	08 35 09.1	-0.6
MCK				IAmb	IAmb	08 35 39.6	
	comp=Z,7.8nm,1.0s						
MCK	**McKinley**	67.76	29	P	P	08 35 09.1	-0.6
MCK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MCK	**McKinley**	67.76	29	P	P	08 35 08.3	-1.4
	baz=281						
H24K	**Noodor Dome**	67.81	26	P	P	08 35 10.0	0.0
	baz=281,SNR=16						
MDM	**Murphy Dome**	67.83	27	P	P	08 35 09.8	-0.3
MDM				IAmb	IAmb	08 35 17.0	
	comp=Z,17nm,1.0s						
RND	**Reindeer**	67.86	29	P	P	08 35 09.1	-1.2
RND				IAmb	IAmb	08 35 19.3	
	comp=Z,13nm,0.8s						
RND	**Reindeer**	67.86	29	P	P	08 35 09.1	-1.2
RND				pmax	pmax		
	comp=Z,13nm,0.8s						
RC01	**Rabbit Creek A**	67.89	32	P	P	08 35 08.6	-1.9
	baz=281						
WRH	**Wood River Hil**	67.98	28	P	P	08 35 11.3	+0.3
WRH				IAmb	IAmb	08 35 14.2	
	comp=Z,9.1nm,1.2s						
TCOL	**CIGO, UAF Yank**	68.00	27	P	P	08 35 10.2	-1.0
	baz=281						
COLA	**College**	68.01	27	⇓*e*P	P	08 35 11.9	+0.8
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
COLA	**College**	68.01	27	P	P	08 35 09.9	-1.2
	baz=281						
O22K	**Cooper Landing**	68.02	32	P	P	08 35 09.8	-1.4
	baz=281						
SOC	**Sochi**	68.05	309	*e*P	P	08 35 09.8	-2.0
SOC				*e*		08 37 36.6	
SOC				*e*PPP	PPP	08 39 17.3	
SOC				*e*S	S	08 44 07.9	-2.7
SOC				pmax	pmax		
	comp=Z,18nm,0.8s						
PMR	**Palmer**	68.08	31	P	P	08 35 10.7	-1.0
	baz=281						
POKR	**Poker Plat Res**	68.13	27	P	P	08 35 11.7	-0.3
POKR				IAmb	IAmb	08 35 19.9	
	comp=Z,11nm,0.8s						
POKR	**Poker Plat Res**	68.13	27	P	P	08 35 11.0	-1.0
	baz=282						
GHO	**Glory Hole Cre**	68.14	31	P	P	08 35 11.1	-1.1
SEW	**Seward**	68.22	33	P	P	08 35 10.9	-1.7
	baz=282						
KOPT	**Kop Dagi**	68.35	305	P	P	08 35 14.6	+0.5
KOPT				IAmb	IAmb	08 35 25.1	
	comp=Z,21nm,1.0s						
SML	**Sawmill**	68.41	31	P	P	08 35 12.8	-1.0
SML				IAmb	IAmb	08 35 22.6	
	comp=Z,12nm,0.9s						
SML	**Sawmill**	68.41	31	P	P	08 35 11.9	-1.9
	baz=282						
ILAR	**Eielson Array**	68.43	27	P	P	08 35 12.0	-1.9
	comp=Z,1.0nm,0.8s,baz=294,slow=6.2,SNR=9.7						
	comp=Z,1.0nm,0.8s						
KNK	**Knik Glacier**	68.43	31	P	P	08 35 12.2	-1.7
	baz=282						
HDA	**Harding Lake**	68.48	28	P	P	08 35 13.0	-1.1
	baz=282,SNR=8.0						
WAT6	**Susitna Watana**	68.52	30	P	P	08 35 13.0	-1.7
	baz=282						
DHY	**Denali Highway**	68.58	29	P	P	08 35 12.8	-2.2
	baz=282						
M23K	**Glacier View**	68.69	31	P	P	08 35 13.6	-2.0
	baz=282						
BMAR	**Burnt Mountain**	68.77	24	P	P	08 35 16.1	+0.1
MARD	**Mardin**	68.83	302	P	P	08 35 17.4	+0.3
SCM	**Sheep Creek Mo**	68.87	31	P	P	08 35 15.1	-1.6
SCM				IAmb	IAmb	08 35 23.8	
	comp=Z,10nm,0.7s						
SCM	**Sheep Creek Mo**	68.87	31	P	P	08 35 15.1	-1.6
SCM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SCM	**Sheep Creek Mo**	68.87	31	P	P	08 35 15.1	-1.6
	baz=283,SNR=10						
RAYN	**Ar Rayn**	68.93	287	P	P	08 35 17.8	+0.1
RAYN	**Ar Rayn**	68.93	287	P	P	08 35 17.8	+0.1
RAYN				pmax	pmax		
	comp=Z,35nm,1.3s						
RAYN	**Ar Rayn**	68.93	287	P	P	08 35 18.3	+0.6
J25K	**Salcha River,**	69.10	27	P	P	08 35 16.6	-1.6
	baz=283						
K24K	**Donnelly Dome**	69.11	28	P	P	08 35 16.8	-1.4
	baz=283,SNR=10						
SPITS	**Spitsbergen Ar**	69.17	348	P	P	08 35 17.0	-1.2
	comp=Z,9.4nm,0.8s,baz=72,slow=6.3,SNR=6.7						
SPITS				LR	LR	09 10 02.6	
	comp=Z,549nm,18.5s,baz=244,slow=40						
	comp=Z,9.4nm,0.8s						
GLI	**Glacier Island**	69.19	32	P	P	08 35 17.1	-1.6
	baz=283						
M24K	**Tolsona, Glenn**	69.34	30	P	P	08 35 17.9	-1.7
	baz=284						
ANN	**Anapa**	69.35	311	*e*P	P	08 35 18.0	-1.9
ANN				*e**PP	sP	08 35 27.8	+0.2
ANN				*e*S	S	08 44 23.9	-2.0
ANN				pmax	pmax		
	comp=Z,67nm,1.1s						
ARCES	**ARCESS Array B**	69.37	338	P	P	08 35 19.0	-0.6
	comp=Z,4.7nm,0.8s,baz=48,slow=1.8,SNR=5.5						
ARCES				LR	LR	09 10 40.6	
	comp=Z,298nm,18.5s,baz=84,slow=40						
	comp=Z,4.7nm,0.8s						
PAX	**Paxson**	69.45	29	P	P	08 35 19.4	-0.9
PAX	**Paxson**	69.45	29	P	P	08 35 19.4	-0.9
PAX				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PAX	**Paxson**	69.45	29	P	P	08 35 19.1	-1.3
	baz=284						
RIDG	**Independent Ri**	69.53	28	P	P	08 35 19.5	-1.3
RIDG				IAmb	IAmb	08 35 52.3	
	comp=Z,11nm,1.0s						
KLU	**Klutina**	69.60	31	P	P	08 35 20.0	-1.3
	baz=284						
HARP	**HAARP**	69.73	30	P	P	08 35 20.1	-1.9
	baz=284						
J26L	**Joseph Creek**	69.89	27	P	P	08 35 21.1	-1.9
	baz=285						
DOT	**Dot Lake**	69.89	28	P	P	08 35 21.8	-1.2
N25K	**Chitina, Valde**	70.19	30	P	P	08 35 23.3	-1.6
	baz=285						
BMRM	**Bremner River**	70.35	31	P	P	08 35 24.0	-1.8
	baz=285						
L26K	**Log Cabin Wild**	70.37	29	P	P	08 35 25.3	-0.6
L26K	**Log Cabin Wild**	70.37	29	P	P	08 35 24.3	-1.7
	baz=286						
K27K	**Chicken**	70.64	28	P	P	08 35 26.3	-1.2
	baz=286						
M26K	**Nabesna, AK**	70.70	29	P	P	08 35 27.5	-0.5
M26K				IAmb	IAmb	08 35 34.8	
	comp=Z,16nm,1.1s						
M26K	**Nabesna, AK**	70.70	29	P	P	08 35 26.7	-1.2
	baz=286						
EGAK	**Eagle**	70.81	27	P	P	08 35 27.2	-1.2
EGAK	**Eagle**	70.81	27	P	P	08 35 27.1	-1.4
	baz=287,SNR=8.8						
L27K	**Beaver Creek,**	71.02	29	P	P	08 35 29.0	-0.9
L27K				IAmb	IAmb	08 35 37.3	
	comp=Z,9.6nm,1.0s						
L27K	**Beaver Creek,**	71.02	29	P	P	08 35 29.3	-0.7
	baz=287,SNR=17						
BCAR	**Beaver Creek A**	71.04	29	P	P	08 35 30.0	-0.1
M27K	**Edge Creek, AK**	71.21	29	P	P	08 35 30.0	-1.1
	baz=287						
FIA1	**FINESS Array S**	71.41	330	P	P	08 35 32.1	-0.1
FIA1				IAmb	IAmb	08 35 35.0	
	comp=Z,13nm,0.8s						
FINES	**FINESS Array B**	71.41	330	P	P	08 35 32.0	-0.2
	comp=Z,9.3nm,0.8s,baz=71,slow=5.9,SNR=19						
FINES				LR	LR	09 09 54.9	
	comp=Z,978nm,18.6s,baz=38,slow=38						
	comp=Z,9.3nm,0.8s						
FINES	**FINESS Array B**	71.41	330	P	P	08 35 31.8	-0.4
DIKM	**Dikmen**	71.73	308	⇑P	P	08 35 34.2	-0.4
DAWY	**Dawson**	71.75	27	P	P	08 35 33.2	-1.1
	baz=289,SNR=12						
I29M	**Ogilvie Camp,**	71.77	26	P	P	08 35 33.6	-0.7
	baz=289						
CTGM	**Chitina Glacie**	71.88	31	P	P	08 35 34.2	-1.1
CTGM				IAmb	IAmb	08 35 42.7	
	comp=Z,9.3nm,0.8s						
NOR	**Nord**	71.93	354	*i* P	P	08 35 32.5	-2.6
NOR				IAmb	IAmb	08 35 38.2	
	comp=Z,9.3nm,1.1s						
VSU	**Vasula**	71.99	327	⇓*e*P	P	08 35 35.4	-0.3
VSU				pmax	pmax		
	comp=Z,104nm,1.7s						
VSU	**Vasula**	71.99	327	*e*P	P	08 35 35.9	+0.2
YUK3	**Moose Creek**	72.02	30	P	P	08 35 34.9	-1.2
	baz=289						
EPYK	**Eagle Plains**	72.04	25	P	P	08 35 34.1	-1.9
	baz=290,SNR=14						
LOGN	**Logan Glacier**	72.08	31	P	P	08 35 35.7	-0.8
LOGN				IAmb	IAmb	08 35 43.3	
	comp=Z,19nm,1.3s						
BNN	**Bunyan**	72.13	305	P	P	08 35 35.7	-1.5
INK	**Inuvik**	72.48	22	P	P	08 35 37.1	-1.3
	comp=Z,8.9nm,0.9s,baz=291,slow=7.3,SNR=12						
	comp=Z,8.9nm,0.9s						
INK	**Inuvik**	72.48	22	P	P	08 35 37.2	-1.3
	baz=293,SNR=14						
BZK	**Bozkurt**	72.54	309	⇑P	P	08 35 39.3	0.0
BZK	**Bozkurt**	72.54	309	P	P	08 35 38.8	-0.5
MEF	**Metsahovi**	72.57	329	*e*P	P	08 35 39.2	0.0
MNK	**Minsk**	72.60	322	*i* P	P	08 35 37.4	-2.0
MNK				*i*		08 38 19.4	
MNK				*i* PPP	PPP	08 40 03.8	
MNK				*i* S	S	08 45 00.5	-2.9

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MNK                                i SS    SS      08 49 40.4 -1.6
MNK                                  pmax  pmax
       comp=Z,13nm,0.8s
MNK                                  pmax  pmax
       comp=E,3.0nm,1.1s
MNK                                  pmax  pmax
       comp=N,22nm,0.8s
MNK                                  MLR   MLR
       comp=Z,235nm,14.0s
MNK                                  MLR   MLR
       comp=E,21nm,11.0s
MNK                                  MLR   MLR
       comp=N,288nm,17.0s
MNK    Minsk              72.60 322 i P    P       08 35 37.5 -2.0
       comp=E,3.0nm,1.1s
MNK                                i P     P       08 35 37.5 -2.0
       comp=N,22nm,0.8s
MNK                                i P     P       08 35 37.5 -2.0
       comp=Z,13nm,0.8s,baz=72
MNK                                i PP    PP      08 38 19.4 -1.2
MNK                                i PPP   PPP     08 40 03.9
MNK                                i S     S       08 45 00.5 -2.9
MNK                                i SS    SS      08 49 40.5 -1.6
MNK                                i SSS   SSS     08 53 03.0
MNK                                i LQ    LQ      09 02 30.6
MNK                                i LR    LR      09 08 06.0
MNK                                i LRM   MLR     09 10 04.7
       comp=Z,235nm,14.1s
MNK                                i LRM   MLR     09 10 06.5
       comp=E,21nm,10.8s
MNK                                i LRM   MLR     09 10 19.9
       comp=N,288nm,17.2s
PINM   Pinnacle           72.67  31   P    P       08 35 38.8 -1.1
       baz=289
YUK4   Talbot Arm         72.99  30   P    P       08 35 40.6 -1.3
       baz=290
AKASG  Malin Array Be     73.01 318   P    P       08 35 40.1 -1.8
       comp=N,2.0nm,0.6s,baz=58,slow=6.3,SNR=14
AKASG                                 LR   LR      09 08 50.7
       comp=N,247nm,18.7s,baz=61,slow=37
       comp=N,2.0nm,0.6s
AKASG  Malin Array Be     73.01 318   P    P       08 35 41.2 -0.7
AKASG                                 IAmb IAmb    08 35 47.9
       comp=Z,18nm,1.4s
AKBB   Malin Array Si     73.01 318⇓i P    P       08 35 40.4 -1.6
AKBB                                  pmax pmax
       comp=Z,41nm,3.5s
NACGM  Naroch             73.08 323⇓e P    P       08 35 42.6 +0.3
       baz=71
PNL    Peninsula          73.22  32   P    P       08 35 41.9 -1.2
       baz=290
YUK6   Outpost Mounta     73.26  30   P    P       08 35 42.3 -1.3
       baz=291
MTSE   Matsula            73.36 327  eP    P       08 35 44.1 +0.3
M30M   Minto, Yukon       73.37  28   P    P       08 35 43.6 -0.4
       baz=291,SNR=16
A36M   Sachs Harbour      73.43  17   P    P       08 35 43.0 -1.1
       baz=299
BR131  Keskin Array S     73.49 306   P    P       08 35 44.5 -0.8
BR131                                 IAmb IAmb    08 35 48.6
       comp=Z,37nm,1.2s
BR131  Keskin Array S     73.49 306deP    P        08 35 44.8 -0.4
BR131  Keskin Array S     73.49 306   P    P       08 35 45.6 +0.4
       SNR=14
BRTR   Keskin Array B     73.49 306   P    P       08 35 44.8 -0.4
       comp=Z,13nm,0.9s,baz=104,slow=5.2,SNR=36
BRTR                                  LR   LR      09 10 33.3
       comp=Z,221nm,22.0s,baz=78,slow=38
       comp=Z,13nm,0.9s
BRTR   Keskin Array B     73.49 306 i P    P       08 35 45.5 +0.3
BRTR                                  pmax pmax
       comp=Z,13nm,0.9s
N30M   Aishikik Lake      73.65  29   P    P       08 35 44.8 -0.9
       baz=292
HYT    Haines Junctio     73.69  30   P    P       08 35 46.4 +0.4
HYT    Haines Junctio     73.69  30   P    P       08 35 45.2 -0.8
       baz=291,SNR=12
N31M   Braeburn, Yuko     74.22  29   P    P       08 35 48.6 -0.3
N31M                                  IAmb IAmb    08 35 56.3
       comp=Z,14nm,1.1s
N31M   Braeburn, Yuko     74.22  29   P    P       08 35 48.2 -0.7
       baz=292
MMAI   Mount Meron Ar     74.32 299   LR   LR      09 12 13.9
       comp=Z,221nm,18.1s,baz=226,slow=39
SORM   Soroca             74.38 316 ⇑P    P        08 35 49.1 -0.9
PABE   Paberze            74.40 324  eP    P       08 35 50.1 +0.1
M31M   Drury Creek, Y     74.55  28   P    P       08 35 49.9 -0.9
       baz=294
GHAJ   Ghor Haditha       74.76 298   P    P       08 35 52.6  0.0
GHAJ                                  IAmb IAmb    08 35 56.9
       comp=Z,28nm,1.1s
C36M   Paulatuk           75.09  20   P    P       08 35 51.6 -2.1
C36M                                  IAmb IAmb    08 35 56.6
       comp=Z,12nm,0.8s
C36M   Paulatuk           75.09  20   P    P       08 35 51.9 -1.8
       baz=301,SNR=9.9
AFI    Afiamalu           75.09 113   LR   LR      09 01 47.9
       comp=Z,126nm,20.5s,baz=121,slow=30
HORU   Horodok            75.21 318   P    P       08 35 53.7 -1.2
SKAG   Skagway            75.22  31   P    P       08 35 55.2 +0.6
SKAG   Skagway            75.22  31   P    P       08 35 54.0 -0.6
       baz=293
CSS    Mathiatis          75.29 302   P    P       08 35 55.5 -0.1
TPGR   Topolog            75.45 313 ⇑P    P        08 35 56.2 -0.1
ATD    Arta Tunnel        75.52 276   LR   LR      09 07 23.3
       comp=Z,101nm,21.9s,baz=56,slow=34
ATD    Arta Tunnel        75.52 276   P    P       08 35 57.7 +0.4
ATD                                   IAmb IAmb    08 36 00.1
       comp=Z,22nm,1.1s
EIL    Elat               75.82 296   LR   LR      09 12 36.7
       comp=Z,189nm,18.1s,baz=94,slow=38
HARR   Harsova            75.83 313 ⇑P    P        08 35 57.4 -1.1
UPP    Uppsala            75.86 330  eP    P       08 35 59.1 +0.8
TESR   Tescani            76.03 315 ⇑P    P        08 35 59.4 -0.3
SIT    Sitka              76.19  33   P    P       08 35 59.8 -0.4
       baz=294
VRI    Vrincioaia         76.21 314 ⇑P    P        08 36 01.2 +0.5
BIZ    Bicaz              76.22 315 ⇑P    P        08 36 01.0 +0.2
PLOR   Plostina           76.27 314 ⇑P    P        08 35 60.0 -1.0
KSV    Kosov              76.37 317   P    P       08 36 05.7 +4.2
BUR01  Bucovina Ar. S     76.54 316 ⇑P    P        08 36 01.6 -1.0
NEHR   Nehoiu             76.65 314 ⇑P    P        08 36 02.8 -0.4
MLR    Muntele Rosu       76.86 314 ⇑P    P        08 36 04.5  0.0
MLR    Muntele Rosu       76.86 314   P    P       08 36 04.8 +0.3
       comp=Z,5.2nm,0.7s,baz=346,slow=19,SNR=5.3
MLR                                   LR   LR      09 13 58.6
       comp=Z,445nm,20.2s,baz=58,slow=39
       comp=Z,5.2nm,0.7s
VIKU   Vikbolandet        76.87 329  eP    P       08 36 04.9 +0.8
TGTN   Hyland Airport     77.45  28   P    P       08 36 06.5 -0.9
       baz=299
HFS    Hagfors            77.51 331   LR   LR      09 13 43.0
       comp=Z,1µm,18.2s,baz=48,slow=38
ARR    Arges              77.76 314 ⇑P    P        08 36 09.8 +0.3
S34M   Telegraph Cree     77.86  32   P    P       08 36 08.7 -0.9
       baz=297
WRAK   Wrangell Islan     77.94  33   P    P       08 36 09.1 -1.0
       baz=296
CRAG   Craig              77.97  34   P    P       08 36 09.7 -0.6
       baz=296
RES    Resolute Bay       78.06   9   P    P       08 36 09.9 -0.5
       comp=Z,7.4nm,1.0s,baz=338,slow=11,SNR=4.2
RES                                   LR   LR      09 14 37.4
       comp=Z,212nm,19.0s,baz=62,slow=39
       comp=Z,7.4nm,1.0s
RES    Resolute Bay       78.06   9   P    P       08 36 10.0 -0.5
DLBC   Dease Lake         78.14  31   P    P       08 36 10.1 -1.3
       comp=Z,1.8nm,0.8s,baz=312,slow=8.1,SNR=6.1
       comp=Z,1.8nm,0.8s
NB2    NORSAR Subarra     78.15 332   P    P       08 36 10.7 -0.6
       comp=Z,35nm,1.4s,baz=62,slow=5.6
NB2    NORSAR Subarra     78.15 332   P    P       08 36 10.7 -0.6
       baz=62,slow=5.6
NOA    NORSAR Array B     78.15 332   P    P       08 36 10.1 -1.2
       comp=Z,6.6nm,0.9s,baz=59,slow=5.6,SNR=11
NOA                                   LR   LR      09 14 16.9
       comp=Z,560nm,18.6s,baz=65,slow=38
       comp=Z,6.6nm,0.9s
JMIC   Jan Mayen          78.55 345   LR   LR      09 15 07.5
       comp=Z,282nm,19.3s,baz=64,slow=39
RAO    Raoul Island       78.76 129   LR   LR      09 04 37.4
       comp=Z,209nm,21.5s,baz=90,slow=31
OJC    Ojcow              78.79 320   P    P       08 36 14.5 -0.5
OJC                                   IAmb IAmb    08 36 21.6
       comp=Z,28nm,1.2s
OJC    Ojcow              78.79 320   P    P       08 36 14.5 -0.5
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OJC                                   pmax pmax
       comp=Z,28nm,1.2s
GZR    Gura Zlata         78.95 315 ⇑P    P        08 36 15.9 -0.1
HERR   Herculane          79.39 315 ⇑P    P        08 36 17.4 -1.0
PSZ    Piszkesteto        79.71 318   P    P       08 36 20.7 +0.5
BLKB   Belogradchik       79.74 313 ⇑P    P        08 36 20.3  0.0
VTS    Vitosha            79.77 312 ⇑P    P        08 36 21.0 +0.2
VTS    Vitosha            79.77 312   P    P       08 36 20.2 -0.5
VTS                                   IAmb IAmb    08 36 27.9
       comp=Z,49nm,1.8s
VTS    Vitosha            79.77 312   P    P       08 36 20.2 -0.5
VTS                                   pmax pmax
       comp=Z,49nm,1.8s
VYHS   Vyhne              80.10 319  eP    P       08 36 23.3 +1.1
VYHS   Vyhne              80.10 319  eP    P       08 36 23.3 +1.1
MORC   Moravsky Berou     80.29 320  eP    P       08 36 24.8 +1.6
BUD    Budapest           80.43 318   P    P       08 36 25.0 +1.1
KRLC   Kraliky            80.59 321  eP    P       08 36 25.5 +0.6
KRLC   Kraliky            80.59 321  eP    P       08 36 25.5 +0.6
JAVC   Velka Javorina     80.63 320  eP    P       08 36 27.0 +1.9
DPC    Dobruska-Polom     80.73 321  eP    P       08 36 26.5 +0.9
DPC    Dobruska-Polom     80.73 321  eP    P       08 36 26.5 +0.9
CHVC   Chvalec            80.77 322  eP    P       08 36 29.6 +3.8
CSKK   Cskako             80.94 318   P    P       08 36 27.6 +0.9
FRGS   Fruska Gora        80.95 316 ⇑P    P        08 36 26.7 -0.1
VRAC   Vranov             81.05 320   LR   LR      09 13 24.5
       comp=Z,207nm,18.5s,baz=60,slow=36
THZ    Tophouse           81.15 144   P    P       08 36 26.6 -1.2
URZ    Urewera            81.15 139   LR   LR      09 11 36.2
       comp=Z,179nm,19.3s,baz=31,slow=35
URZ    Urewera            81.15 139   P    P       08 36 27.8  0.0
MORH   Mrgy, Hungar       81.22 317   P    P       08 36 28.0 -0.2
MPLH   Magyarpolny        81.47 318   P    P       08 36 33.9 +4.4
RPZ    Rata Peaks         81.57 146   LR   LR      09 12 25.3
       comp=Z,146nm,19.3s,baz=286,slow=35
IDI    Anoyia             81.58 305   P    P       08 36 29.5 -1.0
       comp=Z,5.2nm,0.7s,baz=86,slow=14,SNR=2.7
IDI                                   LR   LR      09 17 37.8
       comp=Z,74nm,21.4s,baz=80,slow=39
       comp=Z,5.2nm,0.7s
KOVH   Kovagotottos       81.61 317   P    P       08 36 30.5 +0.2
PRU    Pruhonice          81.91 322  eP    P       08 36 34.6 +2.8
PRU    Pruhonice          81.91 322  eP    P       08 36 34.6 +2.8
SUMG   Summit             82.09 354   P    P       08 36 32.8  0.0
SUMG                                  IAmb IAmb    08 36 39.2
       comp=Z,9.6nm,0.9s
SUMG   Summit             82.09 354   P    P       08 36 32.8  0.0
SUMG   Summit             82.09 354 i P    P       08 36 34.0 +1.1
SUMG                                  IAmb IAmb    08 36 38.9
       comp=Z,11nm,1.0s
CLL    Collm              82.12 323   P    P       08 36 32.4 -0.4
CLL    Collm              82.12 323 i P    P       08 36 33.0 +0.2
CLL                                   pmax pmax
       comp=Z,7.0nm,1.0s
CLL    Collm              82.12 323 i P    P       08 36 33.0 +0.2
       comp=Z,7.0nm,1.0s
CLL                                   Lm   MLR     09 17 00.0
       comp=N,400nm,18.8s
CLL                                   Lm   MLR     09 17 00.0
       comp=E,300nm,18.9s
CONA   Conrad Observa     82.13 319  eP    P       08 36 35.4 +2.3
       comp=E,12nm,1.4s
YKA    Yellowknife Ar     82.22  23   P    P       08 36 31.4 -1.8
       comp=E,6.1nm,0.9s,baz=309,slow=4.7,SNR=40
       comp=E,6.1nm,0.9s
YKA    Yellowknife Ar     82.22  23   P    P       08 36 31.2 -1.9
CKRC   Cesky Krumlov      82.61 321  eP    P       08 36 36.2 +0.7
ARSA   Arzberg            82.65 319  eP    P       08 36 36.0 +0.3
       comp=E,8.7nm,1.2s
KHC    Kasperske Hory     82.88 321⇑eP    P        08 36 36.6 -0.3
KHC                                   pmax pmax
       comp=Z,14nm,1.2s
KHC    Kasperske Hory     82.88 321  eP    P       08 36 38.9 +2.0
KHC                                   AMS  AMS     09 17 10.0
       comp=Z,400nm,17.3s
GERES  GERESS Array B     82.94 321   P    P       08 36 37.1 -0.3
       comp=Z,3.5nm,0.9s,baz=67,slow=3.5,SNR=10.0
GERES                                 LR   LR      09 17 33.0
       comp=Z,206nm,20.1s,baz=59,slow=38
       comp=Z,3.5nm,0.9s
GERES  GERESS Array B     82.94 321   P    P       08 36 37.3  0.0
MOA    Molln              83.11 320  eP    P       08 36 41.1 +3.0
       comp=Z,9.7nm,1.3s
SOKA   Soboth             83.22 318  eP    P       08 36 40.3 +1.5
       comp=Z,11nm,1.0s
OBKA   Obir               83.59 318  eP    P       08 36 42.1 +1.3
       comp=Z,21nm,1.3s
KBA    Koelnbreinsper     84.03 319  eP    P       08 36 42.8 -0.3
       comp=Z,14nm,1.3s
ABTA   Abfaltersbach      84.69 319  eP    P       08 36 45.8 -0.5
       comp=Z,14nm,1.3s
WATA   Walderalm          84.94 320  eP    P       08 36 48.8 +1.2
       comp=Z,8.1nm,0.9s
WTTA   Wattenberg         84.94 320  eP    P       08 36 47.2 -0.5
       comp=Z,10nm,0.9s
MOTA   Moosalm            85.21 320  eP    P       08 36 49.1 +0.1
       comp=Z,7.7nm,1.0s
SQTA   Sankt Quirin       85.21 320  eP    P       08 36 47.9 -1.0
       comp=Z,16nm,1.3s
SOEG   Soedalen           85.33 350 i P    P       08 36 38.9  -10
SOEG                                  IAmb IAmb    08 36 45.3
       comp=Z,5.6nm,0.3s
ICESG  Greenland Ices     85.56 353 i P    P       08 36 49.5 -1.0
ICESG                                 IAmb IAmb    08 36 55.8
       comp=Z,14nm,1.3s
FETA   Feichten           85.59 320  eP    P       08 36 50.8 -0.2
       comp=Z,5.8nm,1.3s
KMBO   Kilima Mbogo       85.70 267   P    P       08 36 52.9 +0.7
       comp=Z,6.1nm,0.9s,baz=21,slow=6.8,SNR=9.9
KMBO                                  LR   LR      09 16 20.0
       comp=Z,131nm,19.7s,baz=76,slow=36
       comp=Z,6.1nm,0.9s
KMBO   Kilima Mbogo       85.70 267   P    P       08 36 53.8 +1.7
DAVOX  Davos/Dischmat     86.22 320   LR   LR      09 19 31.8
       comp=Z,391nm,18.9s,baz=43,slow=38
LLLB   Lillooet           86.28  35   P    P       08 36 54.7 +0.6
BORG   Borgarnes          86.45 345   LR   LR      09 20 06.8
       comp=Z,238nm,18.4s,baz=24,slow=39
A04D   Lummi Island       86.92  37   P    P       08 36 56.6 -0.5
       baz=305
D03D   Eldon              87.37  38   P    P       08 36 59.0 -0.5
       baz=304
B05A   Bryant             87.51  37   P    P       08 36 59.5 -0.6
       baz=305
EKA    Eskdalemuir Ar     87.64 332   LR   LR      09 20 37.1
       comp=Z,538nm,19.2s,baz=7.0,slow=38
D04E   Lakebay            87.75  38   P    P       08 37 00.3 -0.9
       baz=305
E04D   Cinebar            88.22  39   P    P       08 37 02.0 -1.5
       baz=305
SFJD   Kangerlussuaq      88.44 357   LR   LR      09 18 33.2
       comp=Z,148nm,19.1s,baz=334,slow=37
G03D   McMinnville, O     88.58  40   P    P       08 37 04.3 -0.9
       baz=304
ANGG   Ammassalik, Gr     88.65 352 i P    P       08 37 02.1 -3.0
I02E   Swisshome, OR      88.86  41   P    P       08 37 06.2 -0.4
       baz=304
LTY    Liberty            88.88  37   P    P       08 37 05.9 -0.8
LTY                                   IAmb IAmb    08 37 15.8
       comp=Z,6.2nm,0.9s
B08A   Colville Reser     88.94  36   P    P       08 37 06.5 -0.4
B08A                                  IAmb IAmb    08 37 14.0
       comp=Z,6.7nm,0.8s
F05D   White Salmon       89.24  39   P    P       08 37 07.7 -0.7
       baz=306
H04D   Lebanon            89.28  40   P    P       08 37 07.6 -1.0
       baz=305
J01E   Myrtle Point       89.33  42   P    P       08 37 07.8 -0.9
       baz=304
I03D   Drain, OR          89.38  41   P    P       08 37 07.4 -1.6
       baz=304
G05D   Wamic, OR          89.69  39   P    P       08 37 08.9 -1.6
       baz=306
K02D   Willamette Mer     89.75  42   P    P       08 37 09.5 -1.4
       baz=304
I04A   Tendick Farm,      89.89  41   P    P       08 37 10.4 -1.1
       baz=305
HAWA   Hanford            90.02  37   P    P       08 37 11.6 -0.4
HAWA                                  IAmb IAmb    08 37 13.2
       comp=Z,17nm,1.4s
L02F   Cave Junction      90.13  43   P    P       08 37 10.6 -2.0
       baz=304
NEW    Newport            90.17  35   P    P       08 37 10.7 -2.0
       baz=309
I05D   Terrebonne, OR     90.21  40   P    P       08 37 11.7 -1.3
       baz=306
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J04D   Umpqua Nationa     90.39  41   P    P       08 37 14.1 +0.1
J04D   Umpqua Nationa     90.39  41   P    P       08 37 12.6 -1.4
       baz=305
PINE   Pine Mountain      90.76  40   P    P       08 37 15.7  0.0
L04D   Klamath Falls      90.85  42   P    P       08 37 15.7 -0.4
L04D   Klamath Falls      90.85  42   P    P       08 37 14.3 -1.9
       baz=305
J05D   Fort Rock, OR      90.88  41   P    P       08 37 14.8 -1.4
       baz=306
YBH    Yreka Blue Hor     90.88  43   P    P       08 37 15.9 -0.3
YBH                                   IAmb IAmb    08 37 20.0
       comp=Z,10.0nm,1.1s
YBH    Yreka Blue Hor     90.88  43   P    P       08 37 15.9 -0.3
YBH                                   pmax pmax
       comp=Z,10.0nm,1.1s
G08A   Pilot Rock         91.00  38   P    P       08 37 17.0 +0.2
K05A   Summer Lake        91.41  41   P    P       08 37 19.2 +0.4
I07A   Izee               91.42  39   P    P       08 37 18.6 -0.1
I07A                                  IAmb IAmb    08 37 20.0
       comp=Z,11nm,1.3s
FRB    Frobisher Bay      91.48   5   LR   LR      09 22 32.4
       comp=Z,106nm,18.6s,baz=1.0,slow=38
MOD    Modoc Plateau      92.25  41   P    P       08 37 22.2 -0.4
MOD                                   IAmb IAmb    08 37 23.6
       comp=Z,15nm,1.1s
J08A   Circle Bar Ran     92.45  39   P    P       08 37 23.4 -0.1
J08A                                  IAmb IAmb    08 37 27.5
       comp=Z,11nm,1.1s
KEST   Kesra              92.52 311   LR   LR      09 25 57.4
       comp=Z,142nm,18.1s,baz=312,slow=40
MSO    Missoula           92.74  35   P    P       08 37 22.8 -1.9
       baz=311
WVOR   Wild Horse Val     92.92  40   P    P       08 37 25.2 -0.5
WVOR                                  IAmb IAmb    08 37 29.4
       comp=Z,8.5nm,1.1s
WVOR   Wild Horse Val     92.92  40   P    P       08 37 25.2 -0.5
WVOR                                  pmax pmax
       comp=Z,9.0nm,1.1s
MPK    Martis Peak        93.96  43   P    P       08 37 30.1 -0.6
MPK                                   IAmb IAmb    08 37 31.3
       comp=Z,14nm,1.1s
EGMT   Eagleton           94.03  32   P    P       08 37 28.5 -2.0
       baz=314
PNTR   Pine Nut           94.35  43   P    P       08 37 32.2 -0.3
PNTR                                  IAmb IAmb    08 37 35.8
       comp=Z,9.4nm,1.0s
CMB    Columbia Colle     94.48  45   P    P       08 37 31.5 -1.3
CMB                                   IAmb IAmb    08 37 35.7
       comp=Z,9.9nm,1.0s
CMB    Columbia Colle     94.48  45   P    P       08 37 31.5 -1.3
CMB                                   pmax pmax
       comp=Z,10.0nm,1.0s
HLID   Hailey             94.62  37   P    P       08 37 32.2 -1.4
       baz=311
BOZ    Bozeman (W)        94.76  35   P    P       08 37 32.7 -1.4
       baz=313
RYN    Ryan               95.30  43   P    P       08 37 36.2 -0.5
RYN                                   IAmb IAmb    08 37 40.1
       comp=Z,7.5nm,1.0s
NVAR   Mina Array Bea     95.56  43   P    P       08 37 37.4 -0.6
       comp=Z,3.8nm,0.9s,baz=283,slow=5.0,SNR=25
       comp=Z,3.8nm,0.9s
PPT    Papeete            95.76 107   LR   LR      09 11 09.8
       comp=Z,103nm,20.8s,baz=283,slow=29
VES    Vestal, Richgr     96.61  46   P    P       08 37 41.4 -1.2
       baz=307
PKM    Mcpherson Peak     96.70  47   P    P       08 37 41.8 -1.4
       baz=306
CWC    Cottonwood Cre     96.90  45   P    P       08 37 42.9 -1.2
       baz=308
ISA    Isabella, Lake     97.12  46   P    P       08 37 43.5 -1.4
       baz=307
R11A   Troy Canyon, C     97.28  42   P    P       08 37 43.8 -1.9
       baz=309
FURC   Furnace Creek,     97.66  44   P    P       08 37 46.0 -1.2
       baz=308
LRMC   Laurel Mtn Rad     97.74  45   P    P       08 37 46.9 -1.0
       baz=308
TPNV   Topopah Spring     97.75  43   P    P       08 37 46.9 -1.0
       baz=309
BW06   Boulder Array      97.79  36   P    P       08 37 46.4 -1.6
       baz=314
EDW2   Edwards Air Fo     97.90  46   P    P       08 37 47.8 -0.6
       baz=308
ULM    Lac du Bonnet      98.20  23   LR   LR      09 25 33.6
       comp=Z,210nm,18.4s,baz=332,slow=37
SHOC   Shoshone, Teco     98.39  44   P    P       08 37 50.1 -0.5
       baz=309
GSC    Goldstone, Bar     98.42  45   P    P       08 37 50.1 -0.7
       baz=308
ESDC   Sonseca Array      98.54 321   LR   LR      09 27 08.9
       comp=Z,230nm,18.5s,baz=27,slow=38
TUQ    Turquoise Moun     98.90  44   P    P       08 37 51.8 -1.3
       baz=309
PFO    Pinyon Flats O     99.68  46   P    Pdif    08 37 55.9 -0.7
       baz=308
TPFO   Pinon Flats        99.69  46   P    Pdif    08 37 55.9 -0.7
       baz=308
TXAR   Lajitas Array     110.65  42   PKiKP PKiKP  08 42 43.7 -1.9
       comp=Z,0.4nm,0.7s,baz=266,slow=4.0,SNR=6.6
OCAC   Ocana             144.03  26  eP    PKPab   08 43 44.6 -1.7
ZARC   Zaragoza, Cauc    144.04  29  eP    PKPab   08 43 42.7 -3.5
SDV    Santo Domingo     144.43  22   PKP  PKPab   08 43 47.0 -0.8
       comp=Z,14nm,0.7s,baz=36,slow=3.8,SNR=11
SDV    Santo Domingo     144.43  22  eP    PKPab   08 43 46.5 -1.3
CBOC   Ciudad Bolivar    144.93  32⇑eP    PKPab    08 43 48.5 -1.2
PAMC   Pamplona, Colo    145.10  26  eP    PKPbc   08 43 47.5 -3.1
BARC   Barichara         145.57  27  eP    PKPdf   08 43 50.4 -1.3
PLMC   San Jos del P     145.62  34  eP    PKPdf   08 43 49.4 -2.2
NORC   Norcasia          145.74  31⇑eP    PKPdf    08 43 49.4 -2.4
SPBC   San Pablo de B    146.03  30  eP    PKPdf   08 43 50.4 -1.9
GR1C   Gorgona, Isla     146.22  38  eP    PKPdf   08 43 52.3 -0.2
RUSC   La Rusia          146.25  28  eP    PKPdf   08 43 53.3 +0.1
YOTC   Yotoco, Valle     146.38  35  eP    PKPdf   08 43 51.4 -1.6
ROSC   El Rosal          146.63  31   PKPbc PKPdf  08 43 53.6 -0.1
       comp=Z,11nm,0.6s,baz=6.6,slow=7.3,SNR=9.4
ROSC   El Rosal          146.63  31  eP    PKPdf   08 43 53.3 -0.4
ORTC   Ortega, Tolima    147.00  33  eP    PKPdf   08 43 54.3 +0.3
CHIC   Chingaza          147.09  30  eP    PKPdf   08 43 54.3 -0.3
PRAC   Prado             147.34  33  eP    PKPdf   08 43 54.3 -0.2
MARP   Paez Belalcaza    147.55  35  eP    PKPdf   08 43 54.3 -0.9
VILC   Villavicencio,    147.56  30  eP    PKPdf   08 43 56.2 +1.2
SOTA   Rioblanco         147.80  37  eP    PKPdf   08 43 55.2 -0.6
GCUF   Volcan Galeras    148.13  39  eP    PKPab   08 44 03.0 +0.6
GARC   Garzon, Huila     148.35  35  eP    PKPdf   08 43 56.2 -0.2
MACC   Macarena, Meta    149.21  32  eP    PKPdf   08 43 55.2 -2.3
PLCA   Paso Flores       160.84 150   PKPab PKPab  08 44 53.9 -1.0
       comp=Z,1.5nm,0.8s,baz=248,slow=10,SNR=2.9
LPAZ   La Paz            167.35  51   PKP  PKPdf   08 44 19.0 -0.8
       comp=Z,5.3nm,1.2s,baz=14,slow=3.0,SNR=10
LPAZ                                  PKPab PKPab  08 45 22.7 -2.1
       comp=Z,3.0nm,1.0s,baz=335,slow=6.7,SNR=3.8
SIV    San Ignacio       170.89  19   PKP  PKPdf   08 44 20.2 -1.2
       comp=Z,6.8nm,0.9s,baz=344,slow=1.8,SNR=15
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*JMA **13** 08:33:05.7±0.1, 36°.3N±0°.3×140°.5E±0°.5, h52^{km}±1^{km}, MV3.2/39, NORTHERN IBARAKI PREF*
JMA Felt I J1 at NORTHERN IBARAKI PREF .
*IDC **13** 08:33:12.3±1.3, 35°.93N×139°.52E, h90^{km}±10^{km}, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=25.9km s-min=7.4km az=65.0*
ISC 13 08:33:03.9±1.1, **36°.15N**±0°.03×**140°.45E**±0°.04, **h36**^{km}**, n18, σ2ˢ.45**/25**, mb3.8**/4**, 7D, Near east coast of eastern Honshu**

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Code   Station Name         Δ°   AZ°    Phase ID         Time      Res
                                       Op     ISC      h  m  s    ISC
JIHU   Itakohorinouch     0.19 162  i P    Pn      08 33 15.6 +2.3
JIHU                                 eS    Sn      08 33 23.0 +0.8
JHYU   Hitachinakayam     0.22  29  i P    Pn      08 33 13.9 +1.3
JHYU                                 eS    Sn      08 33 19.6 -1.3
JYT    Yasato             0.22 291  ⇓P     Pn      08 33 14.7 +2.2
JYT                                 ⇓S     Sn      08 33 20.9 +0.3
JHO    Hitachi            0.47  11    P    Pn      08 33 15.5 +1.5
JHO                                   S    Sn      08 33 22.4 +1.2
JAG    Ashikaga           0.85 289  ⇓P     Pn      08 33 21.5 +2.1
JKT    Katashina          1.15 303  ⇓P     Pn      08 33 25.4 +1.8
JKT                                 ⇓S     Sn      08 33 40.3 +2.2
JFK    Kawauchi           1.26  15    P    Pn      08 33 25.1 +0.1
JRY    Ryogami san        1.26 264  ⇓P     Pn      08 33 27.6 +2.6
JFT    Otama              1.37 356  ⇓P     Pn      08 33 27.2 +0.7
JFY    Yanaizu            1.39 335    P    Pn      08 33 28.2 +1.4
MJAR   Matsushiro Arr     1.85 283    P    Pn      08 33 34.6 +1.4
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	36nm,0.7s,baz=112,slow=9.6,SNR=70						
MJAR				S	Sn	08 33 50.7	-4.7
	74nm,0.9s,baz=124,slow=14,SNR=16						
JHJ	Hachijo jima 2	3.07	191	P	Pn	08 33 54.0	+4.2
	40nm,0.3s,baz=94,slow=21,SNR=6.6						
JHJ				S	Sn	08 34 29.6	+4.3
	122nm,0.3s,baz=61,slow=23,SNR=9.9						
JCJ	Chichijima	9.14	170	P	Pn	08 35 12.6	-0.7
	16nm,0.4s,baz=348,slow=20,SNR=1.6						
JCJ				S	Sn	08 36 49.9	-5.0
	22nm,0.8s,baz=288,slow=19,SNR=1.2						
PETK	Petropavlovsk-	20.84	30	P	Pn	08 37 52.1	+7.2
	1.2nm,0.8s,baz=175,slow=9.7,SNR=5.3 1.2nm,0.8s						
ZALV	Zalesovo Beam	41.95	313	P	P	08 40 50.8	-0.1
	1.5nm,0.6s,baz=94,slow=6.3,SNR=5.1 1.5nm,0.6s						
MKAR	Makanchi Array	43.94	303	P	P	08 41 06.5	-0.6
	1.1nm,0.8s,baz=90,slow=7.6,SNR=7.4 1.1nm,0.8s						
KURBB	Kurchatov Arra	45.94	309	P	P	08 41 22.4	-0.6
	1.9nm,0.7s,baz=84,slow=8.2,SNR=18 1.9nm,0.7s						
WRA	Warramunga Arr	56.08	187	P	P	08 42 39.5	+0.1
	0.5nm,0.7s,baz=0.5,slow=7.6,SNR=10 0.5nm,0.7s						

JMA ***13*** *08:43:41.7±0.1, 24°.7N±0°.3×122°.0E±0°.3, h34^{km}, MD4.2/13, MV4.1/13, TAIWAN REGION*
ASIES ***13*** *08:43:41.9, 24°.68N×121°.94E, h19^{km}, MW3.9*
TAP ***13*** *08:43:41.2, 24°.69N×122°.02E, h11^{km}, ML4.4, B*
NIED ***13*** *08:43:41.7, 24°.66N×121°.98E, h34^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.22; $M_{\phi\phi}$0.03; $M_{r\theta}$0.65; $M_{\theta\phi}$0.78; $M_{\phi r}$-0.50; Fault plane solution: $M_0$1.67000×10^{15} NP1:ϕ_s38.00000°, δ45.00000°, λ-132.00000°. NP2:ϕ_s270.00000°, δ59.00000°, λ-57.00000°.*
IDC ***13*** *08:43:49.2±4.8, 24°.72N×122°.34E, h70^{km}±48^{km}, mb3.6/8, mbtmp3.9/9, ML3.5/1, MS3.4/2 Error ellipse: s-maj=38.0km s-min=16.2km az=69.0*
ISC 13 08:43:41.1±0.9**, 24°.66N**±0°.01×**122°.03E**±0°.02**, h9**^{km}±6^{km}**, n134,** σ1^{s}.**09**/214**, mb3.9**/8**, 27C-20D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.17	254	⇓*i*P	Pg	08 43 45.1	+0.3
	baz=240						
TWC				*e*S	Sg	08 43 47.3	+0.1
	baz=240						
EGS		0.21	334	⇑*i*P	Pg	08 43 45.4	+0.1
	baz=335						
EGS				*i* S	Sg	08 43 48.3	0.0
	baz=335						
NTC	Toucheng	0.27	316	⇑*i*P	Pg	08 43 46.7	+0.2
	baz=313						
NTC				*e*S	Sg	08 43 50.8	+0.6
	baz=313						
ILA	Ilan	0.28	292	⇑*i*P	Pg	08 43 47.0	+0.3
	baz=286						
ILA				*e*S	Sg	08 43 51.0	+0.5
	baz=286						
NDS	Dongshan	0.29	265	⇓*i*P	Pg	08 43 47.1	+0.2
	baz=258						
NDS				*e*S	Sg	08 43 50.8	0.0
	baz=258						
EWUT	Wuta	0.32	228	⇓*i*P	Pb	08 43 47.9	-1.1
	baz=222						
EWUT				S	Sg	08 43 51.8	+0.3
	baz=222						
TWE	Neicheng	0.34	281	⇑*i*P	Pg	08 43 47.9	0.0
	baz=275						
TWE				*e*S	Sg	08 43 52.1	-0.2
	baz=275						
TWB1	Santiao Chiao	0.35	353	⇑*i*P	Pg	08 43 48.0	0.0
	baz=356						
TWB1				*i* S	Sg	08 43 52.3	-0.5
	baz=356						
ENA	Nanau	0.35	229	⇓*i*P	Pb	08 43 48.5	-1.1
	baz=223						
ENA				*i* S	Sg	08 43 52.9	+0.2
	baz=223						
TIPB	Shuangxi	0.36	329	⇑*i*P	Pg	08 43 48.4	0.0
	baz=327						
TIPB				*e*S	Sg	08 43 53.4	+0.2
	baz=327						
FUSB	Fushanzhiwuyua	0.42	284	⇑*i*P	Pg	08 43 49.4	+0.1
	baz=280						
FUSB				*e*S	Sb	08 43 55.8	-1.5
	baz=280						
ENTT	Nioudou	0.43	268	⇓*i*P	Pg	08 43 49.5	0.0
	baz=262						
ENTT				*e*S	Sb	08 43 56.4	-1.0
	baz=262						
EHP	Heping Village	0.44	218	*e*P	Pb	08 43 50.6	-0.4
	baz=213						
EHP				*e*S	Sb	08 43 56.3	-1.5
	baz=213						
SXI1	Grass Mountain	0.46	342	⇑*i*P	Pg	08 43 50.3	+0.2
	baz=342						
SXI1				*e*S	Sg	08 43 56.9	+0.8
	baz=342						
NWF	Wu-fen Shan	0.47	331	⇑*i*P	Pg	08 43 50.6	+0.3
	baz=330						
NWF				*e*S	Sb	08 43 57.8	-1.0
	baz=330						
WFSB	Wu-fen Shan	0.47	331	⇑*i*P	Pg	08 43 50.6	+0.3
	baz=330						
WFSB				*e*S	Sg	08 43 57.0	+0.5
	baz=330						
LATG	Datong	0.48	255	⇓*i*P	Pg	08 43 50.6	+0.2
	baz=251						
LATG				*e*S	Sb	08 43 58.0	-1.1
	baz=251						
NDT	Datong Townshi	0.48	263	⇓*e*P	Pg	08 43 50.5	+0.1
	baz=259						
NDT				*e*S	Sb	08 43 58.8	-0.1
	baz=259						
NWLT	Wulai	0.50	284	⇑*i*P	Pg	08 43 50.7	-0.1
	baz=280						
NWLT				*e*S	Sb	08 43 58.4	-1.1
	baz=280						
TWA	Mucha	0.52	308	⇑*i*P	Pg	08 43 51.5	+0.2
	baz=306						
TWA				*e*S	Sg	08 43 58.9	+0.8
	baz=306						
TNOU	National Taiwa	0.54	334	⇑*i*P	Pg	08 43 51.9	+0.3
	baz=334						
TNOU				*e*S	Sg	08 43 59.2	+0.4
	baz=334						
NHDH	Xindian Distri	0.55	303	⇑*i*P	Pb	08 43 52.3	-0.7
	baz=301						
NHDH				*e*S	Sg	08 43 58.9	-0.3
	baz=301						
NHY	Taipei	0.57	312	*e*P	Pg	08 43 52.5	+0.4
	baz=310						
NHY				*e*S	Sb	08 44 01.4	-0.1
	baz=310						
TATO	Taipei	0.59	303	⇑*e*P	Pg	08 43 52.9	+0.3
	baz=300						
TAP1	Taipei	0.60	309	*e*P	Pb	08 43 53.6	-0.2
	baz=307						
TAP1				*e*S	Sb	08 44 02.0	-0.4
	baz=307						
YHNB	Yeheng	0.60	271	⇑*e*P	Pg	08 43 52.7	-0.1
	baz=268						
YHNB				*e*S	Sg	08 44 00.9	+0.3
	baz=268						
TAP	Taipei	0.61	308	⇑*e*P	Pb	08 43 53.6	-0.4
	baz=307						
TAP				*e*S	Sb	08 44 02.1	-0.7
	baz=307						
NSK	Sanguang	0.61	272	⇑*e*P	Pg	08 43 52.9	-0.2
	baz=268						
NSK				*e*S	Sg	08 44 01.0	-0.1
	baz=268						
ETL	Fush Village	0.62	217	*e*P	Pb	08 43 53.7	-0.6
	baz=214						
ETL				*e*S	Sb	08 44 02.6	-0.5
	baz=214						
NACB	Ninganchiao	0.63	220	⇓*i*P	Pb	08 43 53.4	-0.9
	baz=217						
NACB				*e*S	Sb	08 44 02.0	-1.2
	baz=217						
BACT	New Taipei Cit	0.64	302	*e*P	Pb	08 43 54.4	-0.1
	baz=300						
NNSB	Datong	0.64	249	⇓*e*P	Pg	08 43 53.4	-0.1
	baz=246						
NNSB				*e*S	Sb	08 44 02.8	-0.7
	baz=246						
NNS	Nan Shan	0.64	250	⇓P	Pg	08 43 53.4	-0.1
	baz=246						
NNS				*e*S	Sb	08 44 03.5	-0.2
	baz=246						
NWRT	Kuosheng	0.64	328	*e*P	Pg	08 43 53.7	+0.2
	baz=327						
YM01	YM01	0.64	319	⇑*e*P	Pb	08 43 54.2	-0.4
	baz=318						
YM01				*e*S	Sn	08 44 05.1	-1.8
	baz=318						
ETLH	Xiulin Townshi	0.68	228	⇓P	Pb	08 43 54.3	-0.9
	baz=225						
ETLH				*e*S	Sb	08 44 03.8	-0.8
	baz=225						
TWD	Chiawan	0.70	215	⇑*e*P	Pb	08 43 55.0	-0.5
	baz=212						
TWD				*e*S	Sb	08 44 03.9	-1.4
	baz=212						
ANP	Anpu	0.70	319	⇑*e*P	Pg	08 43 55.0	+0.3
	baz=318						
TWS1	Kuangyinshan	0.71	308	⇑*e*P	Pb	08 43 55.8	+0.1
	baz=307						
TWS1				*e*S	Sb	08 44 05.3	-0.4
	baz=307						
TWY	Chenhua	0.73	327	⇑*e*P	Pb	08 43 55.8	-0.3
	baz=327						
TWY				*e*S	Sb	08 44 05.8	-0.4
	baz=327						
NTST	Danshui	0.73	314	⇑*e*P	Pb	08 43 56.2	+0.1
	baz=312						
NTST				*e*S	Sn	08 44 07.8	-1.2
	baz=312						
HWA	Hwalien	0.78	210	*e*P	Pn	08 43 57.6	-0.8
	baz=208						
HWA				*e*S	Sn	08 44 08.3	-1.9
	baz=208						
FUSS	Fushou	0.83	241	⇓P	Pg	08 43 56.9	-0.2
	baz=238						
FUSS				*e*S	Sn	08 44 09.3	-2.4
	baz=238						
NCU	National Centr	0.83	292	*e*P	Pn	08 43 58.3	-0.7
	baz=290						
NCUH	Zhongli	0.83	292	⇑*e*P	Pn	08 43 58.3	-0.7
	baz=290						
NCUH				*e*S	Sn	08 44 10.7	-0.8
	baz=290						
NFF	Wufeng Townshi	0.83	268	*e*P	Pb	08 43 57.4	-0.5
	baz=266						
NFF				*e*S	Sn	08 44 12.0	+0.4
	baz=266						
ETM	Tongmen	0.85	216	*e*P	Pb	08 43 57.7	-0.4
	baz=214						
ETM				*e*S	Sb	08 44 08.9	-0.6
	baz=214						
JYNG	Yonagunijimaku	0.85	104	P	Pb	08 43 58.2	+0.1
JYNG				S	Sb	08 44 10.2	+0.5
JYNG	Yonagunijimaku	0.85	104	A	A	08 43 58.2	
	comp=E,14nm,0.6s,comp=E,16nm,1.3s						
NJD	Zhudong	0.86	275	*e*P	Pn	08 43 59.5	0.0
	baz=273						
WHF	Hehuan Shan	0.87	234	⇓*e*P	Pb	08 43 57.8	-0.9
	baz=231						
WHF				*e*S	Sn	08 44 10.9	-2.1
	baz=231						
TWT	Tachien	0.88	243	⇑*e*P	Pn	08 43 59.0	-0.9
	baz=241						
TWT				*e*S	Sn	08 44 12.2	-0.7
	baz=241						
TEYL	Yanliau Villag	0.88	207	*e*P	Pn	08 43 58.5	-1.3
	baz=206						
TDCB	Techi	0.89	243	*e*P	Pn	08 43 59.0	-1.1
	baz=241						
TDCB				*e*S	Sn	08 44 11.8	-1.5
	baz=241						
YOJ	Yonaguni jima	0.91	102	⇑*i*P	Pb	08 43 59.0	-0.1
	baz=104						
YOJ				S	Sb	08 44 11.3	0.0
	baz=104						
YOJ	Yonaguni jima	0.91	102	P	Pb	08 43 59.0	-0.1
YOJ				S	Sb	08 44 11.6	+0.2
YOJ	Yonaguni jima	0.91	102	A	A	08 43 59.0	
	comp=E,20nm,1.0s,comp=E,20nm,1.4s						
LIOB	Emei	0.93	269	⇓*e*P	Pn	08 43 59.9	-0.5
	baz=267						
LIOB				*e*S	Sn	08 44 15.0	+1.1
	baz=267						
HSN1	Hsinchu	0.93	278	*e*P	Pn	08 44 00.6	+0.2
	baz=275						
NSTT	Nanjuang	0.94	269	*e*P	Pn	08 43 59.6	-0.9
	baz=266						
NSTT				*e*S	Sn	08 44 14.8	+0.7
	baz=266						
NHW	Xinwu Township	0.96	291	*e*P	Pn	08 44 01.0	+0.1
	baz=289						
SBCB	Hsinchu	0.96	278	*e*P	Pn	08 44 01.3	+0.4
	baz=276						
SBCB				*e*S	Sn	08 44 14.7	0.0
	baz=276						
PCYT	Pengchaiyu	0.97	2	P	Pb	08 43 59.6	-0.5
	baz=3.0						
PCYT				*e*S	Sg	08 44 12.5	+0.1
	baz=3.0						
HSN	Hsinchu	0.98	279	*e*P	Pn	08 44 00.7	-0.4
	baz=278						
HSN				*e*S	Sn	08 44 14.7	-0.4
	baz=278						
CHGB	Renai	0.98	233	⇓*e*P	Pb	08 43 60.0	-0.5
	baz=231						
CHGB				*e*S	Sn	08 44 13.8	-1.8
	baz=231						
ESL	Shilin	1.00	213	⇓*e*P	Pn	08 44 00.5	-0.9
	baz=211						
ESL				*e*S	Sn	08 44 14.9	-0.9
	baz=211						
TEGC	Jichi Village	1.05	206	*e*P	Pn	08 44 02.4	+0.4
	baz=204						
OWD	Renai	1.05	228	⇓*e*P	Pg	08 44 01.1	-0.2
	baz=226						
OWD				*e*S	Sn	08 44 15.2	-1.8
	baz=226						
WHP	Taichung City	1.06	249	*e*P	Pn	08 44 01.7	-0.6
	baz=247						
WHP				*e*S	Sn	08 44 16.5	-0.8
	baz=247						
WUSB	Renai	1.07	232	*e*P	Pn	08 44 01.8	-0.6
	baz=230						
WUSB				*e*S	Sn	08 44 16.4	-1.1
	baz=230						
EGFH	Guangfu	1.13	209	*e*P	Pg	08 44 03.1	+0.2
	baz=208						
EGFH				*e*S	Sn	08 44 19.6	+0.7
	baz=208						
NMLH	Miaoli	1.14	264	*e*P	Pg	08 44 04.3	+1.3
	baz=262						
NMLH				*e*S	Sn	08 44 20.8	+1.8
	baz=262						
WPL	Puli Township	1.17	237	*e*P	Pg	08 44 03.9	+0.2
	baz=235						
NSY	Sanyi	1.18	259	*e*P	Pg	08 44 05.0	+1.2
	baz=256						
NSY				*e*S	Sn	08 44 22.6	+2.3
	baz=256						
DPDB	Guoxing	1.19	239	*e*P	Pg	08 44 03.9	0.0
	baz=237						
TWQ1	Liyutan	1.19	255	*e*P	Pg	08 44 05.1	+1.1
	baz=253						
TWQ1				*e*S	Sn	08 44 22.3	+1.9
	baz=253						
HGSD	Ruisui	1.29	206	*e*P	Pg	08 44 06.1	+0.2
	baz=205						
HGSD				*e*S	Sg	08 44 27.3	+4.8
	baz=205						
SMLT	Sun Moon Lake	1.29	234	⇓*e*P	Pg	08 44 05.8	-0.1
	baz=232						
SMLT				*e*S	Sg	08 44 24.0	+1.3
	baz=232						
WDJ	Dajia District	1.31	257	*e*P	Pg	08 44 07.9	+1.7
	baz=255						
TYC	Yuchr	1.31	235	*e*P	Pg	08 44 06.0	-0.3
	baz=233						
SSLB	Suanglung	1.31	229	*e*P	Pg	08 44 05.8	-0.5
	baz=227						
SSLB				*e*S	Sn	08 44 22.3	-1.1
	baz=227						
TCU	Taichung	1.34	248	⇓*e*P	Pg	08 44 08.4	+1.6
	baz=246						
TCU				*e*S	Sg	08 44 27.8	+3.6
	baz=246						
WWF	Wufeng	1.36	244	*e*P	Pg	08 44 08.1	+0.8
	baz=242						
YULB	Yu-li	1.43	208	*e*P	Pg	08 44 07.8	-0.8
	baz=207						
YULB				*e*S	Sg	08 44 27.5	+0.4
	baz=207						
WJS	Zhushan	1.45	235	*e*P	Pg	08 44 10.4	+1.3
	baz=234						
WNT	Mingjian	1.46	238	*e*P	Pg	08 44 10.4	+1.3
	baz=236						
EYUL	Yuli	1.46	207	*e*P	Pg	08 44 09.0	-0.1
	baz=206						
TWF1	Yuli	1.46	208	*e*P	Pb	08 44 08.3	-0.3
	baz=206						
YUS	Yu-Shan	1.53	221	*e*P	Pg	08 44 10.2	-0.3
	baz=219						
YUS				*e*S	Sg	08 44 32.3	+2.0
	baz=219						
IRIF	Iriomote-Funau	1.58	101	P	Pn	08 44 08.5	-0.9
IRIF				S	Sn	08 44 27.8	-2.2
IRIF	Iriomote-Funau	1.58	101	A	A	08 44 08.5	
	comp=E,4.0nm,1.7s,comp=E,7.0nm,1.0s						
ALS	Alishan	1.60	225	*e*P	Pg	08 44 11.9	0.0
	baz=223						
ALS				*e*S	Sg	08 44 36.4	+3.7
	baz=223						
FULB	Fuli	1.60	205	*e*P	Pb	08 44 10.4	-0.6
	baz=204						
CHN5	Tsauling	1.63	230	⇓*e*P	Pg	08 44 12.3	0.0
	baz=228						
CHN5				*e*S	Sg	08 44 36.5	+3.0
	baz=228						
WGK	Gukeng	1.66	235	*e*P	Pg	08 44 13.2	+0.3
	baz=233						
WDLH	Douliu	1.67	235	*e*P	Pg	08 44 13.6	+0.4
	baz=234						
WRL	Guolierlin Hig	1.69	244	*e*P	Pb	08 44 12.1	-0.3
	baz=242						
HATJ	Hateruma jima	1.72	110	P	Pn	08 44 11.4	+0.1
HATJ	Hateruma jima	1.72	110	A	A	08 44 11.4	
	comp=E,5.0nm,4.0s,comp=E,5.0nm,3.5s						
ELDTW	Lidau	1.73	213	*e*P	Pb	08 44 12.6	-0.7
	baz=211						
EDH	Donghe	1.81	202	*e*P	Pn	08 44 12.6	+0.1
	baz=201						
EDH				*e*S	Sb	08 44 36.9	-0.3
	baz=201						
JKRS	Kuro-shima	1.85	103	P	Pn	08 44 12.7	-0.3
JKRS				S	Sn	08 44 35.6	-1.0
CHN4	Tsaushan	1.85	226	*e*P	Pg	08 44 15.8	-0.8
	baz=224						
CHN4				*e*S	Sg	08 44 42.7	+2.0
	baz=224						
TPUB	Ta-pu	1.86	224	*e*P	Pg	08 44 15.9	-1.0
	baz=223						
TPUB				*e*S	Sg	08 44 41.4	+0.3
	baz=223						
CHY	Chiayi	1.87	232	*e*P	Pg	08 44 16.7	-0.3
	baz=231						
STYH	Taoyuan	1.88	218	*e*P	Pb	08 44 15.5	-0.1
	baz=217						
STYH				*e*S	Sg	08 44 41.2	-0.3
	baz=217						
STYT	Tauyuan	1.89	218	*e*P	Pb	08 44 15.8	-0.1
	baz=217						
STYT				*e*S	Sg	08 44 43.0	+1.0
	baz=217						
WTP	Ta-pu	1.91	223	*e*P	Pg	08 44 16.6	-1.2
	baz=222						
WTP				*e*S	Sg	08 44 44.4	+1.7
	baz=222						
JIJ	Ishigaki jima	1.94	98	P	Pn	08 44 13.5	-0.9
JIJ				S	Sn	08 44 36.6	-2.3
TWK	Hsinying	1.98	226	*e*P	Pg	08 44 17.7	-1.4
	baz=224						
CHN1	Nanshi	2.01	224	*e*P	Pb	08 44 18.0	0.0
	baz=222						
LDUT	Ludao	2.04	195	*e*P	Pn	08 44 15.4	-0.3
	baz=194						
LDUT				*e*S	Sb	08 44 41.6	-2.3
	baz=194						
VWUC	VWUC	2.37	279	*e*P	Pn	08 44 19.8	-0.5
	baz=277						
VWUC				*e*S	Sn	08 44 47.1	-2.4
	baz=277						
MATB	Ma-tsu	2.40	309	*e*P	Pn	08 44 20.1	-0.6
	baz=307						
MATB				*e*S	Sn	08 44 48.1	-2.2
	baz=307						
MASBT	Mashibuluo	2.41	213	*e*P	Pb	08 44 23.7	-1.0
	baz=212						
JTJ	Tarama	2.43	90	P	Pn	08 44 21.5	+0.5
JTJ				S	Sn	08 44 50.2	-0.7
PHUB	P'eng-hu	2.52	244	*e*P	Pn	08 44 22.8	+0.4
	baz=242						
WDGT	Dungji	2.58	238	*e*P	Pn	08 44 24.6	+1.5
	baz=236						
LAY	Lan-yu	2.65	190	*e*P	Pn	08 44 24.3	+0.2
	baz=189						
LYUB	Lan-yu	2.68	189	*e*P	Pn	08 44 23.3	-1.1
	baz=189						
JIKM	Ikemajima	2.93	84	P	Pn	08 44 29.1	+1.1
JMJ2	Miyako jima3	3.00	88	P	Pn	08 44 29.9	+1.0
JOGS	Gusukube	3.07	87	P	Pn	08 44 30.9	+1.1
QZH	Quanzhou	3.14	276	Pn	Pn	08 44 31.4	+0.6
QZH				Sn	Sn	08 45 06.8	-1.7
QZH				smax	smax		
	comp=N,230nm,0.8s						
QZH				smax	smax		
	comp=E,140nm,0.8s						
QZH				LR	LR		
	comp=N,880nm,8.6s						
QZH				LR	LR		
	comp=E,850nm,6.9s						
QZH				LR	LR		
	comp=Z,870nm,8.7s						
JOW	Kunigami	6.03	68	P	Pn	08 45 11.7	+1.1
	comp=Z,2.8nm,0.3s,baz=113,slow=25,SNR=7.9 comp=Z,4.2nm,0.3s						
KSRS	Korea Array	13.71	20	P	P	08 47 01.9	-2.7
	comp=Z,2.0nm,0.8s,baz=200,slow=10,SNR=5.0						
KSRS				LR	LR	08 52 21.4	
	comp=Z,128nm,18.2s,baz=215,slow=38						
KLR	Kul'dur	25.68	15	P	P	08 49 12.2	+0.7
	comp=Z,1.6nm,0.6s,baz=220,slow=8.4,SNR=4.2						
KLR				LR	LR	09 00 09.2	
	comp=Z,78nm,19.9s,baz=218,slow=38 comp=Z,1.6nm,0.6s						
SONM	Songino Array	26.24	336	P	P	08 49 19.0	+2.3
	comp=Z,4.3nm,1.0s,baz=138,slow=7.1,SNR=2.4 comp=Z,4.3nm,1.0s						
MKAR	Makanchi Array	38.54	315	P	P	08 51 04.4	+0.3
	comp=Z,0.7nm,0.8s,baz=103,slow=9.0,SNR=4.6 comp=Z,0.7nm,0.8s						
ZALV	Zalesovo Beam	40.27	326	P	P	08 51 21.4	+3.0
	comp=Z,0.6nm,0.3s,baz=114,slow=10,SNR=2.2 comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	42.25	319	P	P	08 51 36.8	+2.1
	comp=Z,0.7nm,0.2s,baz=102,slow=9.9,SNR=2.5 comp=Z,0.7nm,0.2s						
WRA	Warramunga Arr	45.92	164	P	P	08 52 04.6	+0.1
	comp=Z,1.3nm,0.5s,baz=346,slow=8.7,SNR=16 comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	49.40	166	P	P	08 52 32.5	+1.0
	comp=Z,0.9nm,0.6s,baz=347,slow=9.7,SNR=19 comp=Z,0.9nm,0.6s						
YKA	Yellowknife Ar	82.23	23	P	P	08 56 01.0	-1.6
	comp=Z,0.2nm,0.7s,baz=312,slow=4.8,SNR=6.3 comp=Z,0.2nm,0.7s						

IDC ***13*** *08:48:18.1±7.7, 16°.67N×85°.45W, h0^{km}, mb3.2/3, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=139.6km s-min=45.2km az=153.0*
SSNC ***13*** *08:48:50.6±3.1, 18°.34N×82°.78W, h26^{km}±401^{km}, MD3.9, ML3.4*
ISC 13 08:48:22.7±2.1**, 17°.0N**±0°.2×**85°.6W**±0°.1**, h10**^{km}**, n8,** σ1^{s}.**14**/7**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOR	Soroa	6.25	23	*e*P	Pn	08 49 54.5	-0.5
MGV	Manicaragua	7.34	45	*e*P	Pn	08 49 58.4	-12
MGV				*e*S	Pg	08 50 51.5	+8.1

CCCC	Cccc	8.51	60	*e*P	Pn	08 50 25.9	-0.2
CMIG	Matias Romero	8.86	272	Pn	Pn	08 50 30.8	-0.1
	0.2nm,0.3s,baz=70,slow=14,SNR=2.2						
CMIG				Sn	Sn	08 52 00.2	-11
	0.4nm,0.3s,baz=31,slow=23,SNR=1.6						
	2.2nm,0.6s						
TKL	Tuckaleechee C	18.64	5	P	Pn	08 52 41.2	+0.3
	0.3nm,0.3s,baz=169,slow=8.1,SNR=5.0						
TKL				S	Sn	08 55 58.7	-11
	1.6nm,0.5s,baz=19,slow=5.1,SNR=4.3						
	1.6nm,0.6s						
TXAR	Lajitas Array	20.59	310	P	P	08 53 02.0	-0.1
	1.3nm,0.8s,baz=121,slow=11,SNR=13						
TXAR				S	S	08 56 39.9	-13
	0.1nm,0.5s,baz=102,slow=18,SNR=1.9						
	1.3nm,0.8s						
YKA	Yellowknife Ar	49.74	343	P	P	08 57 16.7	+1.7
	0.1nm,0.6s,baz=133,slow=7.6,SNR=2.0						
	0.1nm,0.6s						
ILAR	Eielson Array	62.62	335	P	P	08 58 45.6	-1.3
	0.5nm,0.7s,baz=121,slow=6.6,SNR=7.7						
	0.5nm,0.7s						

NOU 13 08:52:57.5, 16°.30S×167°.46E, h13^{km}, MLv4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.88	344	P	Pg	08 53 14.5	-0.1
DVP	Devils Point	1.58	154	P	Pn	08 53 25.3	+0.1
RTV	Rentapao	1.75	148	P	Pn	08 53 27.1	-0.4
YATNC	Mamie plateau,	5.75	185	P	Pn	08 54 22.0	-0.7
DZM	Mont Dzumac	5.82	189	P	Pn	08 54 23.2	-0.5
OUENC	Ouen Island, N	6.11	185	P	Pn	08 54 27.8	+0.2

NOU 13 08:54:59.2, 16°.30S×167°.46E, h12^{km}, MLv4.5/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.88	344	P	Pg	08 55 16.0	-0.3
DVP	Devils Point	1.58	154	P	Pn	08 55 26.9	-0.1
RTV	Rentapao	1.75	148	P	Pn	08 55 29.2	-0.2
MARNC	Mare, Loyalty	5.18	174	P	Pn	08 56 16.1	-0.5
DZM	Mont Dzumac	5.82	189	P	Pn	08 56 24.8	-0.7
NOUC	Port Laguerre	5.87	191	P	Pn	08 56 26.4	+0.3
ONTNC	Ouen Toro	6.05	189	P	Pn	08 56 29.0	+0.5
OUENC	Ouen Island, N	6.11	185	P	Pn	08 56 29.3	-0.1

TRN 13 08:57:22.2, 17°.82N×61°.10W, h27^{km}, MD4.1, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.67	257	⇑*i*P	Pn	08 57 37.2	+1.2
ANWB				*e*S	Sn	08 57 49.0	+3.3
ANDO	Antigua, Disas	0.99	225	*e*P	Pb	08 57 41.4	+0.6
ANDO				*e*S	Sn	08 57 55.5	+1.9
ANBD	Bethesda, Anti	1.00	220	*e*P	Pb	08 57 41.6	+0.7
ANBD				*e*S	Sn	08 57 56.4	+2.7
BPA	Boggy Peak	1.06	223	*e*P	Pb	08 57 42.1	+0.2
BPA				*e*S	Sb	08 57 57.4	+2.0
ABD	La Joyeuse, An	1.39	196	*e*P	Pb	08 57 46.8	-0.8
ABD				*e*S	Sb	08 58 06.0	+1.1
MBFL	Flemmings, Mon	1.51	225	*e*P	Pb	08 57 49.4	-0.2
MBFL				*e*S	Sb	08 58 08.8	+0.5
MLYT	Lee's Yard	1.51	224	*e*P	Pb	08 57 49.8	+0.1
MLYT				*e*S	Sb	08 58 09.1	+0.6
CBE	Ff, Capester	1.81	196	*e*P	Pb	08 57 53.8	-0.9
CBE				*e*S	Sb	08 58 16.3	-0.7
SEUS	St. Eustatius	1.83	260	*e*P	Pb	08 57 54.4	-0.5
SEUS				*e*S	Sb	08 58 16.1	-1.3
MAGL	Barre de l’ile	1.87	185	*e*P	Pn	08 57 53.9	+1.4
MAGL				*e*S	Sb	08 58 17.8	-1.0
SMRT	St. Maarten	1.90	277	*e*P	Pn	08 57 54.5	+1.6
TBG	Guadaloupe-3	2.03	195	*e*P	Pn	08 57 56.3	+1.6
TBG				*e*S	Sb	08 58 22.0	-1.3
TDBA	Terre de Bas,	2.03	195	*e*P	Pb	08 57 56.7	-1.7
TDBA				*e*S	Sb	08 58 22.0	-1.3
DSLB	Salisbury	2.39	188	*e*P	Pn	08 58 01.9	+2.3
DSLB				*e*S	Sn	08 58 30.7	+2.5
MPOM	Morne Pois Mar	3.37	176	*e*P	Pn	08 58 14.2	+1.1
MPOM				*e*S	Sn	08 58 53.6	+1.4
CDVI	St. Croix	3.50	269	*e*P	Pn	08 58 17.7	+2.8
SLBI	Saint Lucia, B	3.78	178	*e*P	Pn	08 58 20.9	+2.1
SLBI				*e*S	Sn	08 59 03.4	+1.0

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*ECGS **13** 09:12:34.6, 0°.8S±0°.2×29°.23E±0°.04, h0^{km}±6^{km}, ML2.6, Error ellipse: s-maj=31.9km s-min=7.0km az=1.6, smi:local/ceb269d7-92ec-4762-80f0-f7cfff0b65db Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 26.9753 Y 99.8058 Z 10.0508 CovXX 21.554 XY 11.8737 XZ 6.90915 YY 442.5 YZ -32.4092 ZZ 43.6203 EllAz1 273.115 Dip1 19.0355 Len1 8.08563 Az2 78.5335 Dip2 70.3786 Len2 12.4255 Len3 3.965247e+01*

ISC 13 09:12:33.6±1.3, **0°.80S**±0°.06×**29°.24E**±0°.08, **h10^{km}, n14, σ0^s.27**/16, **Zaire**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTSH	Kitshanga	0.47	203	*i* P	Pg	09 12 43.2	+0.2
RGB	Rumangabo	0.56	167	*i* S	Sb	09 12 53.8	+0.1
RGB	Rumangabo	0.56	167	*i* P	Pg	09 12 44.8	+0.2
KBTI	Kibati	0.77	177	*i* S	Sb	09 13 00.4	+0.6
KBTI	Kibati	0.77	177	*i* P	Pg	09 12 48.5	0.0
RSY	Rusayo	0.77	184	*i* P	Pb	09 12 49.1	-0.2
SAHA	Sahara	0.81	158	*i* P	Pg	09 12 49.1	-0.2
GOM	Goma	0.88	181	*i* P	Pg	09 12 50.8	+0.3
BOBN	Bobandana	0.93	194	*i* P	Pg	09 12 51.4	-0.2
KIL	Kilembe	1.26	38	*e*P	Pn	09 12 57.5	+0.1
KIL				*e*S	Sb	09 13 13.7	-0.1
IDJ	Idjwi	1.27	188	*i* P	Pn	09 12 57.2	-0.4
LWI	Lwiro	1.50	197	*i* P	Pn	09 13 00.8	0.0
MBAR	Mbarara	1.51	83	*i* P	Pb	09 13 01.9	0.0
MBAR	Mbarara	1.51	83	*e*P	Pb	09 13 01.9	0.0
MBAR				*e*S	Sn	09 13 20.8	0.0

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*SOME **13** 09:14:46.6, 39°.88N×76°.08E, h0^{km}*

*NNC **13** 09:14:49.5±2.3, 39°.94N×76°.07E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=15.8km s-min=14.9km az=71.0*

*KRNET **13** 09:14:54.4±0.1, 39°.87N×76°.11E, mb2.9*

ISC 13 09:14:46.0±3.1, **39°.7N**±0°.1×**76°.05E**±0°.04, **h10^{km}, n34, σ1^s.75**/56, **18C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	2.46	32	⇑*e*P	Pg	09 15 33.2	+0.1
	baz=34						
TARG				⇑*i*S	Sb	09 16 01.5	+0.6
	baz=34						
ARLS	Aral	2.55	330	⇓*i*P	Pg	09 15 35.1	+0.2
	baz=26						
ARLS				⇓*i*S	Sb	09 16 04.9	+1.4
	baz=26						
ULHL	Ulahol	2.58	3	⇑*i*P	Pg	09 15 34.8	-0.6
	baz=2.0						
ULHL				⇑*i*S	Sb	09 16 04.3	0.0
	baz=2.0						
KDJ	Kajisay	2.61	19	⇑*e*P	Pg	09 15 35.2	-0.7
	baz=20						
KDJ				⇑*i*S	Sb	09 16 04.9	-0.1
	baz=20						
UCH	Uchtor	2.81	336	⇓*e*P	Pg	09 15 38.7	-1.1
	baz=33						
UCH				⇓*i*S	Sb	09 16 10.6	-0.5
	baz=33						
BOOM	Boomskoye usch	2.82	358	⇑*e*P	Pb	09 15 38.1	+1.6
	baz=57						
BOOM				⇑*i*S	Sb	09 16 10.1	-1.1
	baz=57						
AAK	Ala-Archa	3.19	339	⇑*e*P	Pb	09 15 43.9	+1.1
	baz=37						
AAK				⇑*i*S	Sb	09 16 19.6	-2.2
	baz=37						
TKM2	Tokmak 2	3.27	354	⇓Pg	Pb	09 15 44.9	+0.6
	2.2nm,0.3s						
TKM2				⇑Lg	Lg	09 16 25.8	
	5.5nm,0.4s						
TKM2	Tokmak 2	3.27	354	⇑*e*P	Pb	09 15 44.8	+0.6
	baz=53						
TKM2				⇑*i*S	Sb	09 16 20.9	-3.2
	baz=53						
PRZ	Przheval'sk	3.33	32	⇑*i*P	Pb	09 15 45.4	+0.2
	baz=33						
PRZ				⇑*i*S	Sb	09 16 22.7	-3.1
	baz=33						
ANVS	Anan'yevo	3.34	21	⇑*i*P	Pb	09 15 45.2	-0.3
	baz=21						
ANVS				⇑*i*S	Sb	09 16 23.1	-3.2
	baz=21						
KST	Kastek	3.37	359	*e*P	Pb	09 15 46.3	+0.3
	5.4nm,0.4s						
KST				*e*S	Sb	09 16 29.4	+2.3
	8.6nm,0.3s						
KST	Kastek	3.37	359	Pg	Pb	09 15 46.3	+0.3
	5.4nm,0.4s						
KST				Lg	Lg	09 16 29.4	
	8.6nm,0.3s						
TNSS	Tian-Shan	3.44	11	*e*P	Pb	09 15 46.8	-0.3
	6.1nm,0.4s						
TNSS				*e*S	Sb	09 16 30.5	+1.4
	3.6nm,0.6s						
TNSS	Tian-Shan	3.44	11	Pg	Pb	09 15 46.8	-0.3
	6.1nm,0.4s						
TNSS				Lg	Lg	09 16 30.7	
	3.6nm,0.6s						
MTBS	Maitube	3.47	5	*e*P	Pb	09 15 48.4	+0.8
	5.8nm,0.3s						
MTBS				*e*S	Sb	09 16 33.0	+3.2
	5.7nm,0.4s						
MTBS	Maitube	3.47	5	Pg	Pb	09 15 48.4	+0.8
	5.8nm,0.3s						
MTBS				Lg	Lg	09 16 33.0	
	5.7nm,0.4s						
MDOK	Medeo	3.57	12	*e*P	Pb	09 15 48.6	-0.7
	2.8nm,0.3s						
MDOK				*e*S	Sb	09 16 33.4	+0.6
	11nm,0.7s						
MDOK	Medeo	3.57	12	Pg	Pg	09 15 54.0	-0.4
	2.3nm,0.4s						
MDOK				⇑Lg	Lg	09 16 34.2	
	11nm,0.8s						
MDOK	Medeo	3.57	12	Pg	Pb	09 15 48.6	-0.7
	2.8nm,0.3s						
MDOK				Lg	Lg	09 16 33.4	
	11nm,0.7s						
MRKS	Merke	3.74	326	*e*P	Pg	09 15 55.3	-2.3
	1.5nm,0.2s						
MRKS				*e*S	Sg	09 16 44.9	-1.1
	8.8nm,0.6s						
SATY	Saty	3.83	27	*e*P	Pb	09 15 54.1	+0.4
	0.3nm,0.0s						
SATY				*e*S	Sb	09 16 42.7	+2.7
	2.5nm,0.1s						
SATY	Saty	3.83	27	Pg	Pb	09 15 54.1	+0.4
	0.3nm,0.0s						
SATY				Lg	Lg	09 16 42.7	
	2.5nm,0.1s						
KTBS	Karatobe	4.07	7	*e*P	Pb	09 15 57.6	-0.2
	2.5nm,0.3s						
KTBS				*e*S	Sb	09 16 48.8	+1.8
	14nm,0.3s						
KTBS	Karatobe	4.07	7	Pg	Pb	09 15 57.6	-0.2
	2.5nm,0.3s						
KTBS				Lg	Lg	09 16 48.8	
	14nm,0.3s						
UZB	Uzynbulak	4.13	32	*e*P	Pb	09 16 01.4	+2.4
	2.1nm,0.2s						
UZB				*e*S	Sg	09 16 55.2	-3.5
	5.3nm,0.7s						
UZB	Uzynbulak	4.13	32	Pg	Pb	09 16 01.3	+2.4
	2.1nm,0.2s						
UZB				Lg	Lg	09 16 55.2	
	5.3nm,0.7s						
KUU	Kurty	4.23	3	*e*P	Pb	09 16 01.1	+0.7
	1.9nm,0.1s						
KUU				*e*S	Sb	09 16 54.8	+3.3
	11nm,0.5s						
KUU	Kurty	4.23	3	Pg	Pb	09 16 01.1	+0.7
	1.9nm,0.1s						
KUU				Lg	Lg	09 16 54.8	
	11nm,0.5s						
KPKS	Kokpek	4.28	27	*e*P	Pb	09 16 01.6	+0.2
	2.5nm,0.1s						
KPKS				*e*S	Sb	09 16 55.6	+2.5
	16nm,0.5s						
SHLS	Shalkode	4.33	35	*e*P	Pg	09 16 07.9	-1.0
	2.3nm,0.4s						
SHLS				*e*S	Sg	09 17 06.4	+1.4
	4.8nm,0.5s						
SHLS	Shalkode	4.33	35	Pg	Pg	09 16 07.9	-1.0
	2.3nm,0.4s						
SHLS				Lg	Lg	09 17 06.4	
	4.8nm,0.5s						
BTLS	Baital	5.57	345	*e*P	Pb	09 16 24.6	+1.3
	2.5nm,0.9s						
BTLS				*e*S	Sb	09 17 35.4	+5.3
	3.2nm,1.1s						
BTLS	Baital	5.57	345	Pg	Pb	09 16 24.6	+1.3
	2.5nm,0.9s						
BTLS				Lg	Lg	09 17 35.4	
	3.2nm,1.1s						

IDC 13 09:15:06.9±2.5, **4°.71N×123°.55E, h0^{km}, mb3.6**/3, **mbtmp3.6**/3, **Error ellipse: s-maj=301.7km s-min=29.1km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.70	157	P	P	09 20 48.4	+0.3
	0.4nm,0.3s,baz=336,slow=9.6,SNR=6.1						
	0.4nm,0.3s						
ASAR	Alice Springs	29.96	161	P	P	09 21 16.9	-0.3
	0.3nm,0.5s,baz=342,slow=7.8,SNR=6.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	54.97	326	P	P	09 24 39.9	-0.1
	0.2nm,0.3s,baz=129,slow=8.1,SNR=2.2						
	0.2nm,0.3s						

ISC 13 09:22:44.2±1.3, **49°.03N**±0°.06×**18°.40E**±0°.08, **h10^{km}, n4, σ0^s.48**/8, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOLL	Kolacno	0.46	180	*e*PG	Pg	09 22 52.9	-0.2
KOLL				*e*SG	Sg	09 22 59.6	+0.5
JAVC	Velka Javorina	0.51	250	*e*PG	Pg	09 22 54.3	+0.1
JAVC				*e*SG	Sb	09 23 02.7	-0.2
VYHS	Vyhne	0.61	152	*e*PG	Pn	09 22 58.6	-0.4
VYHS				*e*SG	Sg	09 23 04.9	+0.8
MORC	Moravsky Berou	0.93	323	*e*PG	Pg	09 23 02.3	+0.1
MORC				*e*SG	Sn	09 23 16.7	-0.2

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*IDC **13** 09:32:47.2±2.7, 32°.17S×178°.27W, h0^{km}, mb4.0/2, mbtmp4.1/4, ML4.2/2, MS2.9/2, Error ellipse: s-maj=66.1km s-min=25.5km az=116.0*

*NEIC **13** 09:32:51.5±2.0, 32°.17S±0°.09×178°.0W±0°.2, h35^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=26.0km s-min=13.2km az=111.0*

ISC 13 09:32:48.8±1.3, **32°.32S**±0°.09×**178°.0W**±0°.2, **h20^{km}, n16, σ1^s.65**/16, **mb4.4**/6, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.06	1	Pn	Pn	09 33 34.9	-1.1
	41nm,0.3s,baz=59,slow=18,SNR=2.4						
RAO				Sn	Sn	09 34 11.4	-0.5
	55nm,0.3s,baz=119,slow=22,SNR=2.3						
RAO				LR	LR	09 34 11.8	
	comp=Z,70nm,19.8s,baz=138,slow=29						
	88nm,0.2s						
RAO	Raoul Island	3.06	1		Pn	09 33 34.3	-1.6
URZ	Urewera	7.16	213	Pn	Pn	09 34 31.5	-0.8
	2.8nm,0.3s,baz=297,slow=21,SNR=21						
URZ				Sn	Sn	09 35 49.5	-3.5
	1.7nm,0.3s,baz=218,slow=5.7,SNR=2.0						
	7.5nm,0.3s						
OUZ	Omahuta	7.59	245	Pn	Pn	09 34 40.9	+2.6
DZM	Mont Dzumac	17.20	303	LR	LR	09 41 53.6	
	comp=Z,135nm,21.1s,baz=68,slow=32						
AS31	Alice Springs	43.07	269	P	P	09 40 48.1	+0.6
ASAR	Alice Springs	43.07	269	P	P	09 40 47.0	-0.5
	1.4nm,0.8s,baz=111,slow=7.7,SNR=11						
	1.4nm,0.8s						
WR0	Warramunga Arr	44.05	274	P	P	09 40 55.5	+0.1
WR0				IAmb	IAmb	09 41 02.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	44.22	274	P	P	09 40 56.1	-0.7
WRAB	Tennant Creek	44.22	274	P	P	09 40 56.9	0.0
WRAB				IAmb	IAmb	09 41 15.4	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	44.23	274	P	P	09 40 56.5	-0.4
	comp=Z,1.2nm,0.4s,baz=112,slow=7.8,SNR=40						
	comp=Z,1.2nm,0.4s						
WRA	Warramunga Arr	44.23	274	IAmb	IAmb	09 40 57.8	
	comp=Z,0.5nm,1.3s						
WB0	Warramunga Arr	44.26	274	P	P	09 40 55.9	-1.2
WB0				IAmb	IAmb	09 41 22.8	
	comp=Z,9.3nm,1.2s						
FORT	Forrest	45.61	257	P	P	09 41 07.1	-0.6
QSPA	South Pole Qui	57.80	180	P	P	09 42 41.2	+2.8
QSPA				IAmb	IAmb	09 42 51.6	
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	146.95	339	PKPbc	PKPbc	09 52 29.6	+0.6
	comp=Z,0.8nm,0.4s,baz=56,slow=3.8,SNR=12						

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*JMA **13** 09:35:38.0±0.1, 33°.3N±0°.4×14°1E±°, h61^{km}±4^{km}, MV3.4/32, E OFF HACHIJOJIMA ISLAND*

*IDC **13** 09:35:39.3±2.5, 33°.11N×141°.01E, h48^{km}±28^{km}, mb3.4/5, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=27.2km s-min=20.1km az=101.0*

ISC 13 09:35:38.4±0.8, **33°.21N**±0°.04×**141°.10E**±0°.06, **h50^{km}, n27, σ2^s.01**/30, **mb3.7**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.08	265	P	Pn	09 35 57.1	-0.1
JHJ2				S	Sn	09 36 11.2	0.0
JHCJ	Hachijojimakas	1.10	263	P	Pn	09 35 57.2	-0.3
JHJ	Hachijo jima 2	1.11	265	P	Pn	09 35 57.1	-0.5
	753nm,0.3s,baz=100,slow=23,SNR=289						
JHJ				S	Sn	09 36 10.5	-1.3
	1μm,0.3s,baz=52,slow=19,SNR=15						
JAOM	Aogashimamukai	1.35	237	P	Pn	09 36 01.1	+0.2
JAOM				*e*S	Sn	09 36 17.3	-0.4
JMKN	Mikurajimanish	1.43	299	*i* P	Pn	09 36 01.6	-0.4
JMKN				*e*S	Sn	09 36 18.7	-1.0
BSO1	Boso 1	1.44	356	P	Pn	09 36 01.9	+0.3
BSO1				S	Sn	09 36 19.2	+0.2
BSO3	Boso 3	1.66	343	P	Pn	09 36 04.7	-0.1
BSO3				S	Sn	09 36 24.8	0.0
JIM2	Oshima 3	2.04	318	P	Pn	09 36 09.9	-0.5
JIZS	Izushimoda	2.38	310	P	Pn	09 36 15.2	+0.3
JOD2	Odawara 2	2.64	321	P	Pn	09 36 18.4	-0.1
JOD2				S	Sn	09 36 46.5	-2.8
TK02	Tokai 2	2.89	286	P	Pn	09 36 22.6	+1.0
JRY	Ryogami san	3.33	328	P	Pn	09 36 28.3	+0.2
JAG	Ashikaga	3.48	338	P	Pn	09 36 30.0	0.0
MJAR	Matsushiro Arr	4.08	325	P	Pn	09 36 39.1	+0.8
	2.2nm,0.3s,baz=145,slow=11,SNR=5.8						
MJAR				S	Sn	09 37 24.9	0.0
	69nm,0.2s,baz=85,slow=29,SNR=4.2						
JCJ	Chichijima	6.17	171	P	Pn	09 37 06.3	-0.7
	1.7nm,0.3s,baz=285,slow=20,SNR=1.4						
JCJ				S	Sn	09 38 11.3	-4.9
	7.9nm,0.3s,baz=287,slow=19,SNR=1.2						
	14nm,0.5s						
ASAJ	Asahikawa	10.95	6	S	Sn	09 40 05.7	-7.6
	12nm,1.0s,baz=180,slow=20,SNR=1.9						
H11N2	WAKE ISLAND Hy	26.62	114	T	T	10 10 10.8	
	baz=306,slow=75						
H11N1	WAKE ISLAND Hy	26.63	114	T	T	10 10 16.5	
	baz=306,slow=75						
H11N3	WAKE ISLAND Hy	26.64	114	T	T	10 10 12.3	
	baz=306,slow=75						
H11S3	WAKE ISLAND Hy	27.20	116	T	T	10 10 56.4	
	baz=307						
H11S1	WAKE ISLAND Hy	27.20	116	T	T	10 10 59.2	
	baz=307						
H11S2	WAKE ISLAND Hy	27.21	116	T	T	10 10 55.6	
	baz=307						
WRA	Warramunga Arr	53.25	188	P	P	09 44 52.1	+0.1
	1.5nm,0.6s,baz=3.1,slow=7.6,SNR=22						
	1.5nm,0.6s						
ASAR	Alice Springs	56.98	188	P	P	09 45 18.9	0.0
	0.4nm,0.5s,baz=5.2,slow=6.5,SNR=8.2						
	0.4nm,0.5s						
YKA	Yellowknife Ar	67.25	29	P	P	09 46 27.8	+0.5
	0.1nm,0.5s,baz=294,slow=6.1,SNR=3.1						
	0.1nm,0.5s						
NVAR	Mina Array Bea	77.50	52	P	P	09 47 31.7	+2.6
	0.3nm,0.6s,baz=294,slow=4.5,SNR=4.8						
	0.3nm,0.6s						
TXAR	Lajitas Array	92.66	52	P	P	09 48 47.9	+2.6
	0.3nm,0.7s,baz=316,slow=3.8,SNR=4.2						
	0.3nm,0.7s						

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*IDC **13** 09:41:17.5±1.1, 21°.41S×67°.87W, h132^{km}±14^{km}, mb3.4/1, mbtmp3.9/3, Error ellipse: s-maj=33.2km s-min=12.7km az=107.0*

*GUC **13** 09:41:18.0±0.7, 21°.32S×68°.23W, h147^{km}±5^{km}, ML3.6*

ISC 13 09:41:17.5±0.9, **21°.28S**±0°.04×**68°.17W**±0°.08, **h137^{km}**±10^{km}, **n20, σ1^s.67**/38, **5C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.12	242	⇑*i*P	Pn	09 41 42.8	+0.4
PB09				*e*S	Sn	09 42 02.4	+1.1
PB01	IPOC Station P	1.25	280	*e*P	Pn	09 41 43.4	-0.2
PB01				*e*S	Sn	09 42 03.4	+0.1
PB01				IAML		09 42 05.7	
	comp=N,557nm,0.3s						
PB08	IPOC Station P	1.46	321	*e*P	Pn	09 41 47.1	+1.0
PB08				*e*S	Sn	09 42 09.3	+1.5
LVC	Limon Verde	1.49	207	P	Pn	09 41 46.6	+0.1
	comp=N,125nm,0.3s,baz=43,slow=9.5,SNR=564						
LVC				S	Sn	09 42 08.6	+0.1
	comp=N,26nm,0.3s,baz=339,slow=14,SNR=9.3						
LVC	Limon Verde	1.49	207	⇑*e*P	Pn	09 41 46.4	-0.1
LVC				*e*S	Sn	09 42 09.1	+0.6
PB02	IPOC Station P	1.61	268	*e*P	Pn	09 41 47.2	-0.2
PB02				*e*S	Sn	09 42 09.6	-0.6
PB02				IAML		09 42 11.1	
	comp=N,1μm,0.3s						
PB07	IPOC Station P	1.66	254	⇑*i*P	Pn	09 41 47.7	-0.3
PB07				*e*S	Sn	09 42 10.6	-0.8
PB07				IAML		09 42 12.1	
	comp=E,628nm,0.3s						
PATCX	Punta Patache	1.91	283	*e*P	Pn	09 41 50.7	-0.2
PATCX				*e*S	Sn	09 42 15.8	-0.5
PATCX				IAML		09 42 17.4	
	comp=E,994nm,0.2s						
PB06	IPOC Station P	1.93	222	⇑*e*P	Pn	09 41 51.0	-0.2
PB06				*e*S	Sn	09 42 16.8	-0.1
PB06				IAML		09 42 19.6	
	comp=E,174nm,0.2s						
TA01	Diego Aracena	2.01	290	*e*P	Pn	09 41 51.7	-0.3
TA01				*e*S	Sn	09 42 17.3	-1.0
TA01				IAML		09 42 19.1	
	comp=E,494nm,0.4s						
PB11	IPOC Station P	2.05	317	*e*P	Pn	09 41 52.9	+0.2
PB11				*e*S	Sn	09 42 19.8	+0.2
PB11				IAML		09 42 23.4	
	comp=N,298nm,0.1s						
PB04	IPOC Station P	2.12	240	*e*P	Pn	09 41 52.7	-0.8
PB04				*e*S	Sn	09 42 19.9	-1.2
PB04				IAML		09 42 24.3	
	comp=E,141nm,0.3s						
PB15	IPOC Station P	2.27	212	⇑*e*P	Pn	09 41 55.7	+0.4
PB15				*e*S	Sn	09 42 23.2	-1.2
PB16	IPOC Station P	3.19	337	*e*P	Pn	09 42 08.9	+1.6
PB16				*e*S	Sn	09 42 46.7	+1.0
PB12	IPOC Station P	3.34	322	*e*P	Pn	09 42 08.0	-0.9
PB12				*e*S	Sn	09 42 47.1	-1.5
GO02	Mina Guanaco	4.08	198	*e*P	Pn	09 42 18.4	-0.5
GO02				*e*S	Sn	09 43 04.1	-2.3
GO02				IAML		09 43 07.6	
	comp=E,83nm,0.1s						

LPAZ	**La Paz**	**4.96**	**0**	P	**Pn**	**09 42 33.2**	**+2.3**
	comp=E,2.9nm,0.3s,baz=173,slow=7.2,SNR=19						
LPAZ				S	**Sn**	**09 43 31.3**	**+3.5**
	comp=E,0.6nm,0.4s,baz=166,slow=10,SNR=1.2						
SIV	**San Ignacio**	**8.54**	**53**	P	**Pn**	**09 43 15.6**	**-2.7**
	comp=E,7.2nm,0.4s,baz=244,slow=9.9,SNR=68						
SIV				S	**Sn**	**09 44 46.4**	**-6.7**
	comp=E,0.4nm,0.4s,baz=304,slow=21,SNR=1.5						
TORD	**Torodi Ar. Bea**	**76.63**	**70**	P	**P**	**09 52 53.5**	**-0.2**
	comp=E,0.6nm,0.5s,baz=253,slow=5.4,SNR=3.9						
YKA	**Yellowknife Ar**	**91.21**	**340**	P	**P**	**09 54 07.9**	**+1.3**
	comp=E,0.2nm,0.4s,baz=136,slow=4.6,SNR=14						
	comp=E,0.2nm,0.4s						

ISU ***13*** *09:48:11, 40°.26N×72°.07E, h22^{km}*

KRNET ***13*** *09:48:14.6±0.1, 39°.93N×71°.90E, h35^{km}, mb2.6*

ISC 13 09:48:14.4±1.2**, 40°.13N**±0°.03×**71°.96E**±0°.05**, h9**^{km}±10^{km}**, n10, σ2^{s}07**/20**, 10C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAK	**Shakhimardan**	**0.24**	**224**	P	**Pg**	**09 48 20.6**	**+1.2**
SHAK				S	**Sg**	**09 48 26.8**	**+4.1**
FRG	**Fergana**	**0.28**	**332**	P	**Pg**	**09 48 17.4**	**-2.6**
FRG				S	**Sg**	**09 48 22.0**	**-1.8**
CHMI	**Chimion**	**0.36**	**293**	P	**Pg**	**09 48 20.6**	**-0.9**
CHMI				S	**Sg**	**09 48 27.1**	**+0.8**
DRK	**Karamyk**	**0.66**	**191**	⇑*i*P	**Pb**	**09 48 25.4**	**-2.8**
	baz=89						
DRK				⇑*i*S	**Sb**	**09 48 33.7**	**-3.8**
	baz=89						
OHH	**Osh**	**0.75**	**58**	⇑*i*P	**Pn**	**09 48 31.8**	**+0.6**
	baz=48						
OHH				⇑*i*S	**Sn**	**09 48 45.1**	**+2.5**
	baz=48						
BTK	**Batken**	**0.88**	**266**	⇓*i*P	**Pb**	**09 48 31.2**	**-0.6**
	baz=79						
BTK				⇓*i*S	**Sg**	**09 48 43.3**	**+0.6**
	baz=79						
TRKS	**Terek-Say**	**1.53**	**336**	⇑*i*P	**Pn**	**09 48 42.3**	**+0.3**
	baz=41						
TRKS				⇑*i*S	**Sn**	**09 49 01.8**	**-0.4**
	baz=41						
ARK	**Arkit**	**1.67**	**0**	⇓*i*P	**Pb**	**09 48 45.5**	**+0.2**
	baz=2.0						
ARK				⇓*i*S	**Sb**	**09 49 07.5**	**+1.0**
	baz=2.0						
UCH	**Uchtor**	**2.85**	**42**	⇑*i*P	**Pn**	**09 49 01.3**	**+0.9**
	baz=40						
UCH				⇑*i*S	**Sn**	**09 49 35.6**	**+0.5**
	baz=40						
KKAR	**Karatay Array**	**3.17**	**340**	⇑*i*P	**Pn**	**09 49 06.4**	**+2.1**
	baz=42						
KKAR				⇑*i*S	**Sn**	**09 49 43.7**	**+1.5**
	baz=42						

IDC 13 09:57:33.6±1.3**, 11°.63N**×**145°.29E, h0**^{km}**, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=65.5km s-min=26.1km az=103.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.17**	**199**	P	P	10 04 12.0	-0.1
	0.3nm,0.5s,baz=22,slow=9.8,SNR=5.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**36.80**	**198**	P	P	10 04 43.5	+0.1
	0.2nm,0.6s,baz=22,slow=10,SNR=1.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**63.18**	**317**	P	P	10 08 03.6	-0.1
	0.2nm,0.5s,baz=95,slow=7.7,SNR=3.3						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**70.16**	**25**	P	P	10 08 47.9	0.0
	0.4nm,0.6s,baz=247,slow=5.9,SNR=7.1						
	0.4nm,0.6s						

GCMT ***13*** *10:03:14.3±0.2, 4°.98N±0°.01×127°.55E±0°.01, h118^{km}±1^{km}, MW5.1/129, Moment Tensor Solution. s72,c84; s129,c181; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.97±.11; $M_{\theta\theta}$0.64±.13; $M_{\phi\phi}$-4.61±.14; $M_{r\theta}$-1.27±.09; $M_{\theta\phi}$0.07±.14; $M_{\phi r}$-2.33±.11; Best double couple: $M_0$5.06900×10^{16} NP1:ϕ_s342.00000°,δ33.00000°, λ62.00000°. NP2:ϕ_s195.00000°,δ61.00000°,λ107.00000°. Principal axes: T 4.9260, Plg69.0000°, Azm141.0000°; N 0.2890, Plg15.0000°, Azm7.0000°; P -5.2120, Plg15.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***13*** *10:03:15.3±0.0, 4°.82N×127°.68E, h122^{km}, mb4.9/65, mB4.8/36*

IDC ***13*** *10:03:16.4±0.6, 4°.93N×127°.51E, h110^{km}±5^{km}, mb4.6/34, mbtmp5.0/39, MS3.6/53, Error ellipse: s-maj=11.5km s-min=6.4km az=70.0*

MOS ***13*** *10:03:17.5±0.9, 4°.90N×127°.43E, h134^{km}, mb5.0/48, Error ellipse: s-maj=9.1km s-min=4.8km az=102.4*

NEIC ***13*** *10:03:17.3±1.4, 4°.97N±0°.07×127°.56E±0°.08, h111^{km}±5^{km}, mb5.1/219, Error ellipse: s-maj=12.4km s-min=9.0km az=69.0*

MAN ***13*** *10:03:17.6, 5°.14N×127°.37E, h128^{km}, mb5.5, ML4.5, MS4.8, Hypocentre not reviewed by the ISC*

DJA ***13*** *10:03:18.1±0.3, 5°N±2°×12°7E±°, h113^{km}±2^{km}, M5.0/66, mb5.1/66, mB5.5/36, MLv5.5/12, Mw(mB)4.9/36, MwMwp4.6/7, Mwp4.9/7*

ISC 13 10:03:17.4±0.3**, 4°.91N**±0°.03×**127°.49E**±0°.04**, h118**^{km}±2^{km}**, h119**^{km}**:pP-P, n751, σ1^{s}32**/760**, mb5.0**/206**, 21C-24D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.13**	**304**	⇓*e*P	**Pn**	**10 03 50.6**	**-1.8**
DDMP				*e*S	**Sn**	**10 04 16.6**	**-2.5**
SGSI	**Sangihe**	**2.30**	**238**	P	**Pn**	**10 03 53.6**	**-0.9**
SGSI				S	**Sn**	**10 04 22.0**	**-1.0**
MATI	**Mati**	**2.36**	**329**	⇓*e*P	**Pn**	**10 03 53.6**	**-1.8**
MATI				*e*S	**Sn**	**10 04 20.2**	**-4.3**
GSPH	**General Santos**	**2.78**	**295**	⇑*i*P	**Pn**	**10 03 58.0**	**-2.9**
GSPH				*i* S	**Sn**	**10 04 30.1**	**-4.3**
DAV	**Davao City (W)**	**2.87**	**319**	P	**Pn**	**10 04 01.4**	**-0.5**
	1µm,0.4s,baz=57,slow=0.9,SNR=38						
DAV				S	**Sn**	**10 04 35.3**	**-0.8**
	5µm,0.8s,baz=75,slow=19,SNR=7.2						
DAV				LR	LR	10 05 18.9	
	comp=Z,4µm,18.8s,baz=100,slow=43						
DAV	**Davao City (W)**	**2.87**	**319**		**Pn**	**10 04 01.2**	**-0.7**
DAV	**Davao City (W)**	**2.87**	**319**	P	**Pn**	**10 04 02.6**	**+0.7**
KCP	**Kidapawan**	**3.17**	**311**	⇓*i*P	**Pn**	**10 04 09.3**	**+3.4**
KCP				*i* S	**Sn**	**10 04 41.4**	**-1.9**
BIPH	**Bislig**	**3.44**	**341**	⇑*i*P	**Pn**	**10 04 06.8**	**-2.7**
BIPH				*i* S	**Sn**	**10 04 41.7**	**-8.1**
TNTI	**Ternate**	**4.11**	**182**	Pn	**Pn**	**10 04 19.0**	**+0.6**
TNTI	**Ternate**	**4.11**	**182**	P	**Pn**	**10 04 19.1**	**+0.7**
TNTI				S	**Sn**	**10 05 05.8**	**+0.1**
TNTI	**Ternate**	**4.11**	**182**	P	**Pn**	**10 04 20.2**	**+1.8**
BUTP	**Butuan**	**4.44**	**335**	⇓*e*P	**Pn**	**10 04 23.6**	**+0.8**
BUTP				*e*S	**Sn**	**10 05 14.3**	**+0.7**
PAGZ	**Pagadian**	**5.02**	**306**	⇓*e*P	**Pn**	**10 04 29.0**	**-1.6**
GLSP	**General Luna,**	**5.03**	**345**	⇓*e*P	**Pn**	**10 04 28.2**	**-2.5**
GLSP				*e*S	**Sn**	**10 05 19.4**	**-8.4**
SCPH	**Surigao**	**5.23**	**338**	⇓*i*P	**Pn**	**10 04 32.6**	**-0.8**
LBMI	**Labuha**	**5.51**	**180**	P	**Pn**	**10 04 38.8**	**+1.6**
	2.1nm4µm3µm371nm,1.1s						
KMSI	**Cibinong**	**5.55**	**219**	P	**Pn**	**10 04 38.7**	**+1.0**
	9.1nm492nm14µm1µm,1.1s						
ZCP	**Zamboanga City**	**5.75**	**291**	⇑*e*P	**Pn**	**10 04 38.7**	**-1.7**
ZCP				*e*S	**Sn**	**10 05 40.1**	**-5.0**
GTOI	**Gorontalo**	**6.16**	**227**	P	**Pn**	**10 04 46.1**	**+0.1**
	1.9nm6µm512nm,1.2s						
GTOI				S	**Sn**	**10 05 51.8**	**-3.4**
	1.9nm6µm512nm,1.2s						
SWI	**Sorong**	**6.86**	**147**	P	**Pn**	**10 04 55.8**	**+0.3**
	1.1nm2µm4µm203nm,0.5s						
SWI				S	**Sn**	**10 06 09.8**	**-2.4**
	1.1nm2µm4µm203nm,0.5s						
SIJI	**Sorong**	**6.87**	**147**	P	**Pn**	**10 04 55.7**	**0.0**
	116nm,0.5s,baz=338,slow=19,SNR=62						
SIJI				S	**Sn**	**10 06 08.4**	**-4.1**
	73nm,0.3s,baz=23,slow=24,SNR=16						
SANI	**Sanana**	**7.07**	**192**	P	**Pn**	**10 04 55.7**	**-2.7**
	1.1nm2µm3µm79nm,0.6s						
SANI				S	**Sn**	**10 06 11.4**	**-5.9**
	1.1nm2µm3µm79nm,0.6s						
MRSI	**Marisa**	**7.07**	**232**	P	**Pn**	**10 04 59.4**	**+1.0**
	6.6nm2µm17µm2µm,0.8s						
MRSI				S	**Sn**	**10 06 14.2**	**-3.1**
	6.6nm2µm17µm2µm,0.8s						
LUWI	**Luwuk**	**7.56**	**219**	Pn	**Pn**	**10 05 06.5**	**+1.5**
LUWI	**Luwuk**	**7.56**	**219**	P	**Pn**	**10 05 07.3**	**+2.4**
	3.4nm12µm1µm,1.1s						
LUWI	**Luwuk**	**7.56**	**219**	P	**Pn**	**10 05 07.0**	**+2.1**
TOLI2	**Tolitoli**	**7.68**	**241**	Pn	**Pn**	**10 05 05.4**	**-1.2**
APSI	**Ampana**	**8.21**	**225**	P	**Pn**	**10 05 15.8**	**+2.0**
	3µm354nm,0.9s						
MPSI	**Mapaga**	**8.83**	**239**	P	**Pn**	**10 05 22.1**	**-0.1**
	2µm2µm204nm,1.0s						
MYLDM	**Lahad Datu**	**8.96**	**272**	Pn	**Pn**	**10 05 24.8**	**+1.0**
BAKI	**Biak**	**10.53**	**125**	P	**Pn**	**10 05 48.1**	**+2.9**
	5µm451nm,1.2s						
LQP	**Lukban**	**10.86**	**328**	*e*P	**Pn**	**10 05 50.2**	**+0.4**
TTSI	**Tana Toraja**	**11.00**	**224**	P	**Pn**	**10 05 51.3**	**-0.2**
	2µm153nm,1.0s						
SRPI	**Serui, Papua**	**11.04**	**127**	P	**Pn**	**10 05 55.5**	**+3.5**
	236nm,0.8s						
TGY	**Tagaytay City**	**11.19**	**325**	P	**Pn**	**10 05 55.1**	**+1.1**
	204nm,0.4s,baz=150,slow=12,SNR=5.9						
SMKI	**Samarinda**	**11.56**	**243**	P	**Pn**	**10 06 01.9**	**+2.9**
	12µm1µm,1.0s						
SPSI	**Sidrap Palu**	**11.71**	**221**	P	**Pn**	**10 06 00.4**	**-0.5**
	876nm58nm,1.1s						
BNSI	**Bone**	**11.82**	**219**	P	**Pn**	**10 06 02.6**	**+0.2**
	802nm81nm,1.3s						
BKB	**Balikpapan**	**12.22**	**240**	Pn	**Pn**	**10 06 08.5**	**+0.8**
BKB	**Balikpapan**	**12.22**	**240**	P	**Pn**	**10 06 08.9**	**+1.2**
	5µm553nm,0.9s						
BKB	**Balikpapan**	**12.22**	**240**	P	**Pn**	**10 06 09.3**	**+1.6**
	553nm,0.9s						
KAPI	**Kappang**	**12.52**	**218**	P	**Pn**	**10 06 10.6**	**-1.0**
	21nm,0.8s,baz=14,slow=4.7,SNR=9.7						
KAPI				LR	LR	10 11 40.2	
	comp=Z,255nm,18.1s,baz=40,slow=40						
KAPI	**Kappang**	**12.52**	**218**	Pn	**Pn**	**10 06 11.2**	**-0.4**
BKSI	**Bulukumba**	**12.54**	**216**	P	**Pn**	**10 06 11.6**	**-0.2**
	564nm48nm,1.0s						
SMPI	**Sarmi**	**13.14**	**121**	P	**Pn**	**10 06 21.6**	**+1.9**
	2µm118nm,1.6s						
MTKI	**Muara Teweh, K**	**13.85**	**246**	P	**Pn**	**10 06 29.8**	**+0.9**
MMRI	**Maumere**	**14.44**	**201**	Pn	**Pn**	**10 06 37.1**	**+0.8**
MMRI	**Maumere**	**14.44**	**201**	P	**Pn**	**10 06 37.5**	**+1.2**
	269nm,1.8s						
MMRI	**Maumere**	**14.44**	**201**	P	**Pn**	**10 06 37.9**	**+1.6**
EDFI	**Ende, Flores**	**14.75**	**203**	P	**Pn**	**10 06 40.9**	**+0.6**
	2µm156nm,1.6s						
SOEI	**Soe**	**14.91**	**192**	Pn	**Pn**	**10 06 43.0**	**+0.5**
SOEI	**Soe**	**14.91**	**192**	P	**P**	**10 06 44.2**	**-1.0**
	2µm149nm,1.3s						
SOEI	**Soe**	**14.91**	**192**	P	**Pn**	**10 06 43.6**	**+1.1**
BBKI	**Banjar Baru**	**15.12**	**237**	P	**Pn**	**10 06 45.8**	**+0.8**
	3µm230nm,1.1s						
SBUM	**Sibu**	**15.43**	**261**	Pn	**Pn**	**10 06 49.4**	**+0.6**
BATI	**Baumata**	**15.49**	**194**	P	**P**	**10 06 50.9**	**-0.6**
	72nm,0.9s,baz=56,slow=3.6,SNR=4.1						
BATI	**Baumata**	**15.49**	**194**	P	**P**	**10 06 51.3**	**-0.1**
	47nm,1.0s						
WBSI	**Waikabubak, Su**	**16.55**	**209**	P	**P**	**10 07 04.7**	**+1.5**
	1µm150nm,0.9s						
STKI	**Sintang**	**16.70**	**254**	P	**P**	**10 07 05.5**	**+0.7**
	127nm,1.2s						
PLAI	**Plampang**	**16.73**	**215**	P	**P**	**10 07 06.3**	**+1.2**
	2µm148nm,1.0s						
PLAI	**Plampang**	**16.73**	**215**	P	**P**	**10 07 06.9**	**+1.8**
KSM	**Kuching**	**17.48**	**259**	P	**Pn**	**10 07 14.2**	**+0.1**
KSM	**Kuching**	**17.48**	**259**	P	**Pn**	**10 07 15.1**	**+1.1**
PBKI	**Pangkalan Bun**	**17.52**	**245**	P	**Pn**	**10 07 14.6**	**+0.2**
	285nm,0.9s						
MTN	**Manton Dam**	**18.00**	**168**	P	**P**	**10 07 19.6**	**+0.4**
	baz=18,SNR=21						
MTN	**Manton Dam**	**18.00**	**168**	P	**P**	**10 07 19.0**	**-0.1**
MTN	**Manton Dam**	**18.00**	**168**	P	**P**	**10 07 19.5**	**+0.4**
KDU	**Kakadu**	**18.17**	**164**	P	**Pn**	**10 07 21.6**	**-0.6**
	baz=18,SNR=12						
KDU	**Kakadu**	**18.17**	**164**	P	**Pn**	**10 07 21.8**	**-0.4**
JAGI	**Jajag, Banyuwa**	**18.80**	**225**	P	**Pn**	**10 07 29.5**	**-0.2**
JAGI	**Jajag, Banyuwa**	**18.80**	**225**	P	**Pn**	**10 07 32.1**	**+2.4**
	189nm,1.1s						
JAGI	**Jajag, Banyuwa**	**18.80**	**225**	P	**Pn**	**10 07 29.2**	**-0.5**
GMJI	**Gumukmas**	**19.17**	**227**	P	**Pn**	**10 07 35.3**	**+1.2**
	93nm,1.1s						
GUMO	**Guam**	**19.19**	**62**	P	**Pn**	**10 07 34.5**	**+0.2**
	59nm,0.3s,baz=202,slow=5.4,SNR=12						
GUMO				LR	LR	10 14 33.3	
	comp=Z,199nm,20.6s,baz=241,slow=35						
GUMO	**Guam**	**19.19**	**62**	P	**P**	**10 07 30.4**	**-1.7**
GUMO	**Guam**	**19.19**	**62**	P	**P**	**10 07 30.4**	**-1.7**
GUMO				pmax	pmax		
	comp=Z,263nm,1.1s						
YULB	**Yu-li**	**19.32**	**343**	P	**P**	**10 07 32.8**	**-0.7**
TPUB	**Ta-pu**	**19.45**	**341**	P	**P**	**10 07 34.1**	**-0.8**
TPUB				IAmb	IAmb	10 07 40.8	
	comp=Z,57nm,0.9s						
TPUB	**Ta-pu**	**19.45**	**341**	P	**P**	**10 07 34.5**	**-0.4**
SSLB	**Suanglung**	**19.80**	**342**	P	**P**	**10 07 38.1**	**-0.6**
SSLB	**Suanglung**	**19.80**	**342**	P	**P**	**10 07 38.9**	**+0.2**
YOJ	**Yonaguni jima**	**19.91**	**348**	P	**P**	**10 07 38.9**	**-1.0**
YOJ				IAmb	IAmb	10 08 19.7	
	comp=Z,61nm,0.9s						
YOJ	**Yonaguni jima**	**19.91**	**348**	P	**P**	**10 07 38.9**	**-1.0**
YOJ				pmax	pmax		
	comp=Z,61nm,0.9s						
NACB	**Ninganchiao**	**19.98**	**344**	P	**P**	**10 07 40.0**	**-0.5**
KNRA	**Kununurra**	**20.49**	**176**	P	**P**	**10 07 46.6**	**+0.5**
	baz=21,SNR=27						
KNRA	**Kununurra**	**20.49**	**176**	P	**P**	**10 07 46.4**	**+0.2**
KNRA				IAmb	IAmb	10 07 50.4	
	comp=Z,163nm,1.1s						
KNRA	**Kununurra**	**20.49**	**176**	P	**P**	**10 07 46.9**	**+0.8**
YHNB	**Yeheng**	**20.51**	**344**	P	**P**	**10 07 45.8**	**-0.5**
YHNB	**Yeheng**	**20.51**	**344**	P	**P**	**10 07 46.8**	**+0.5**
TPI	**Tanjungpandan**	**21.23**	**249**	P	**P**	**10 07 54.9**	**+0.8**
	comp=Z,483nmcomp=Z,32nm,0.9s						
KNMB	**Chin-men Tao**	**21.32**	**337**	P	**P**	**10 07 55.7**	**+0.7**
KNMB				IAmb	IAmb	10 07 55.8	
	comp=Z,77nm,0.7s						
HKPS	**Hong Kong Po S**	**21.56**	**324**	P	**P**	**10 07 57.7**	**0.0**
HKPS				IAmb	IAmb	10 08 00.9	
	comp=Z,74nm,0.8s						
JOW	**Kunigami**	**21.82**	**2**	P	**P**	**10 08 02.0**	**+1.8**
	comp=Z,32nm,0.6s,baz=208,slow=9.4,SNR=14						
JOW				LR	LR	10 15 23.8	
	comp=Z,117nm,21.8s,baz=192,slow=33						
JOW	**Kunigami**	**21.82**	**2**	P	**P**	**10 08 00.8**	**+0.6**
KPJI	**Karang Pucung**	**22.15**	**237**	P	**P**	**10 08 05.5**	**+1.6**
	comp=Z,82nm,1.0s						
QIZ	**Qiongzhong**	**22.21**	**311**	P	**P**	**10 08 04.5**	**0.0**
QIZ	**Qiongzhong**	**22.21**	**311**	P	**P**	**10 08 02.8**	**-1.6**
QIZ				S	**S**	**10 12 00.6**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,74nm,1.8s						
PPBI	**Pangkal Pinang**	**22.46**	**252**	P	**P**	**10 08 06.4**	**-0.6**
	comp=Z,28nm,1.0s						
LEM	**Lembang**	**23.00**	**240**	P	**P**	**10 08 12.8**	**+0.3**
	comp=Z,87nm,0.9s,baz=337,slow=9.3,SNR=9.9						
LEM				LR	LR	10 17 20.7	
	comp=Z,162nm,21.6s,baz=8.5,slow=37						
	comp=Z,87nm,0.9s						
LEM	**Lembang**	**23.00**	**240**	P	**P**	**10 08 13.1**	**+0.6**
	comp=Z,61nm,0.9s						
CBJI	**Citeko**	**23.47**	**242**	P	**P**	**10 08 17.9**	**+1.3**
DSRI	**Dabo**	**23.50**	**257**	P	**P**	**10 08 17.3**	**+0.4**
	comp=Z,16nm,0.8s						
DBJI	**Dramaga**	**23.62**	**241**	P	**P**	**10 08 19.2**	**+1.2**
MYKOM	**Kota Tinggi**	**23.79**	**263**	P	**P**	**10 08 20.2**	**+0.6**
PMG	**Port Moresby**	**24.22**	**126**	LR	LR	10 19 05.6	
	comp=Z,78nm,18.8s,baz=303,slow=39						
COEN	**Coen**	**24.37**	**140**	P	**P**	**10 08 23.9**	**-0.8**
	baz=24,SNR=8.7						
COEN	**Coen**	**24.37**	**140**	P	**P**	**10 08 24.4**	**-0.3**
MDSI	**Maura Dua**	**25.08**	**249**	P	**P**	**10 08 32.7**	**+1.5**
	comp=Z,5.8nm,0.4s						
KASI	**Kota Agung**	**25.19**	**246**	P	**P**	**10 08 33.9**	**+1.7**
	comp=Z,49nm,1.0s						
WB0	**Warramunga Arr**	**25.45**	**165**	P	**P**	**10 08 34.0**	**-0.5**
WB0				IAmb	IAmb	10 09 16.1	
	comp=Z,69nm,0.9s						
WRAB	**Tennant Creek**	**25.59**	**165**	P	**P**	**10 08 35.6**	**-0.2**
WRAB				IAmb	IAmb	10 08 42.2	
	comp=Z,49nm,0.8s						
WRAB	**Tennant Creek**	**25.59**	**165**	*c i*P	**P**	**10 08 35.2**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,80nm,1.7s						
WRA	**Warramunga Arr**	**25.60**	**165**	P	**P**	**10 08 34.8**	**-1.1**
	comp=Z,10nm,0.5s,baz=345,slow=10,SNR=71						
WRA				pP	**pP**	**10 08 59.4**	**-1.7**
	comp=Z,26nm,0.8s,baz=343,slow=10,SNR=4.8						
WRA				S	**S**	**10 12 53.2**	**-2.1**
	comp=Z,5.2nm,1.0s,baz=345,slow=15,SNR=4.5						
WRA				ScP	**ScP**	**10 15 33.6**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=335,slow=3.2,SNR=4.7						
WRA				LR	LR	10 19 21.4	
	comp=Z,124nm,20.1s,baz=102,slow=38						
	comp=Z,10nm,0.5s						
WRA	**Warramunga Arr**	**25.60**	**165**	P	**P**	**10 08 34.8**	**-1.1**
WB2	**Warramunga Arr**	**25.60**	**165**	P	**P**	**10 08 35.4**	**-0.4**
WB2				IAmb	IAmb	10 08 42.3	
	comp=Z,55nm,0.9s						
WR0	**Warramunga Arr**	**25.67**	**165**	P	**P**	**10 08 35.9**	**-0.6**
WR0				IAmb	IAmb	10 08 43.0	
	comp=Z,47nm,0.9s						
JCJ	**Chichijima**	**26.14**	**31**	P	**P**	**10 08 38.5**	**-2.2**
	comp=Z,88nm,0.4s,baz=252,slow=8.8,SNR=24						
	comp=Z,88nm,0.4s						
JCJ	**Chichijima**	**26.14**	**31**	P	**P**	**10 08 39.4**	**-1.3**
JCJ	**Chichijima**	**26.14**	**31**	P	**P**	**10 08 39.8**	**-0.9**
KRVT	**Keravat (AS076**	**26.17**	**110**	LR	LR	10 17 23.8	
	comp=Z,110nm,18.0s,baz=73,slow=32						
IPM	**Ipoh**	**26.37**	**270**	P	**P**	**10 08 43.0**	**+0.1**
IPM				IAmb	IAmb	10 08 43.6	
	comp=Z,31nm,0.8s						
IPM	**Ipoh**	**26.37**	**270**	P	**P**	**10 08 43.3**	**+0.3**
JSU	**Suzuyama**	**26.61**	**6**	P	**P**	**10 08 44.4**	**-0.4**
KULM	**Kulim**	**26.73**	**272**	P	**P**	**10 08 46.4**	**+0.3**
KULM				IAmb	IAmb	10 08 47.0	
	comp=Z,46nm,0.9s						
BKNI	**Bangkinang**	**26.80**	**261**	P	**P**	**10 08 46.8**	**0.0**
CNSH	**ChangSha**	**26.97**	**331**	⇑P	P	10 09 00.0	+12
CNSH				S	S	10 13 39.8	+23
CNSH				LR	LR		
	comp=N,200nm,14.7s						
CNSH				LR	LR		
	comp=E,140nm,14.9s						
CNSH				LR	LR		
	comp=Z,220nm,16.3s						
MBWA	**Marble Bar**	**27.00**	**196**	P	**P**	**10 08 49.2**	**+0.8**
MBWA				IAmb	IAmb	10 08 51.1	
	comp=Z,57nm,1.2s						
MBWA	**Marble Bar**	**27.00**	**196**	P	**P**	**10 08 50.1**	**+1.7**
PSA00	**Pilbara Seismi**	**27.36**	**196**	P	**P**	**10 08 51.5**	**-0.1**
PSA00	**Pilbara Seismi**	**27.36**	**196**	P	**P**	**10 08 51.2**	**-0.5**
PSA00				IAmb	IAmb	10 09 32.5	
	comp=Z,48nm,0.9s						
PSA00	**Pilbara Seismi**	**27.36**	**196**	P	**P**	**10 08 52.9**	**+1.2**
SRIT	**Nakonsritamara**	**27.93**	**279**	P	**P**	**10 08 57.3**	**+0.5**
SRIT				IAmb	IAmb	10 08 57.9	
	comp=Z,31nm,0.8s						
QIS	**Mount Isa**	**27.97**	**155**	P	**P**	**10 08 57.0**	**-0.1**
	baz=28,SNR=24						
QIS	**Mount Isa**	**27.97**	**155**	P	**P**	**10 08 57.3**	**+0.2**
SLVN	**Son La**	**28.10**	**308**	P	**P**	**10 08 56.6**	**-1.7**
JNU	**Nakatsue**	**28.25**	**6**	P	**P**	**10 08 57.5**	**-2.0**
	comp=Z,29nm,0.9s,baz=172,slow=4.1,SNR=12						
	comp=Z,29nm,0.9s						
JNU	**Nakatsue**	**28.25**	**6**	P	**P**	**10 08 57.5**	**-2.0**
JNU				IAmb	IAmb	10 09 00.8	
	comp=Z,34nm,0.9s						
JNU	**Nakatsue**	**28.25**	**6**	P	**P**	**10 09 00.3**	**+0.8**
MTSU	**Mount Surprise**	**28.28**	**144**	P	**P**	**10 09 00.0**	**+0.1**
	baz=28,SNR=14						
WHN	**Wuhan**	**28.35**	**336**	⇓P	**P**	**10 09 03.1**	**+2.8**
PSI	**Prapat**	**28.57**	**267**	P	**P**	**10 09 01.6**	**-1.1**
	comp=Z,12nm,0.7s,baz=78,slow=3.7,SNR=18						
PSI				LR	LR	10 22 43.3	
	comp=Z,85nm,18.5s,baz=84,slow=41						
	comp=Z,12nm,0.7s						
RPSI	**Rantau Prapat**	**28.58**	**267**	P	**P**	**10 09 01.6**	**-1.0**
AS31	**Alice Springs**	**29.08**	**168**	P	**P**	**10 09 05.2**	**-1.8**
ASAR	**Alice Springs**	**29.08**	**168**	P	**P**	**10 09 06.7**	**-0.3**
	comp=Z,8.0nm,0.6s,baz=351,slow=7.8,SNR=109						
ASAR				PcP	**PcP**	**10 12 12.9**	**+0.5**
	comp=Z,4.3nm,0.3s,baz=349,slow=2.5,SNR=12						
ASAR				S	**S**	**10 13 51.0**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=358,slow=20,SNR=5.7						
ASAR				ScP	**ScP**	**10 15 44.3**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=332,slow=2.4,SNR=1.9						
ASAR				LR	LR	10 22 15.5	
	comp=Z,142nm,18.5s,baz=318,slow=39						
	comp=Z,8.0nm,0.6s						
GYA	**Guiyang**	**29.25**	**319**	⇓P	**P**	**10 09 10.3**	**+1.8**
GYA				pmax	pmax		
	comp=Z,19nm,0.7s						
KCSI	**Kotacane, Aceh**	**29.66**	**269**	P	**P**	**10 09 11.3**	**-1.0**
	comp=Z,26nm,0.6s						
WRKA	**Warakurna**	**29.78**	**179**	P	**P**	**10 09 13.6**	**+0.4**
	baz=30,SNR=22						
WRKA	**Warakurna**	**29.78**	**179**	P	**P**	**10 09 13.5**	**+0.4**
GSI	**Gunungsitoli**	**30.07**	**264**	P	**P**	**10 09 15.4**	**-0.5**
GSI				IAmb	IAmb	10 09 41.4	
	comp=Z,48nm,1.0s						
GIRL	**Giralia**	**30.29**	**205**	P	**P**	**10 09 19.5**	**+1.9**
	baz=30,SNR=7.3						
GIRL	**Giralia**	**30.29**	**205**	P	**P**	**10 09 19.8**	**+2.2**
JHS	**Saijyo**	**30.39**	**9**	P	**P**	**10 09 19.0**	**+0.6**
JHS				IAmb	IAmb	10 09 21.7	
	comp=Z,28nm,0.8s						
ENH	**Enshi**	**30.41**	**328**	P	**P**	**10 09 19.1**	**+0.4**
ENH				IAmb	IAmb	10 09 26.3	
	comp=Z,28nm,0.8s						
LHMI	**Lhok Sumawe**	**30.42**	**272**	P	**P**	**10 09 19.3**	**+0.4**
CTA	**Charters Tower**	**30.94**	**144**	P	**P**	**10 09 23.6**	**+0.2**
	comp=Z,12nm,0.8s,baz=333,slow=11,SNR=8.4						
CTA				LR	LR	10 22 33.6	
	comp=Z,130nm,19.8s,baz=312,slow=37						
	comp=Z,12nm,0.8s						
CTAO	**Charters Tower**	**30.94**	**144**	P	**P**	**10 09 23.6**	**+0.2**
CTAO	**Charters Tower**	**30.94**	**144**	P	**P**	**10 09 23.6**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
CM31	**Chiang Mai Arr**	**30.96**	**298**	P	**P**	**10 09 24.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**30.96**	**298**	P	**P**	**10 09 24.0**	**+0.4**
	comp=Z,9.0nm,0.7s,baz=116,slow=7.1,SNR=60						
CMAR				ScP	**ScP**	**10 15 49.6**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=129,slow=2.5,SNR=4.5						
CMAR				LR	LR	10 22 06.7	
	comp=Z,134nm,19.6s,baz=115,slow=36						
	comp=Z,9.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.96**	**298**	P	**P**	**10 09 23.6**	**0.0**
CHTO	**Chiang Mai**	**31.09**	**299**	P	**P**	**10 09 24.5**	**-0.3**
CHTO				IAmb	IAmb	10 09 25.8	
	comp=Z,26nm,0.8s						
CHTO	**Chiang Mai**	**31.09**	**299**	P	**P**	**10 09 24.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,27nm,0.8s						
CHTO	**Chiang Mai**	**31.09**	**299**	P	**P**	**10 09 25.4**	**+0.6**
CHTO	**Chiang Mai**	**31.09**	**299**	P	**P**	**10 09 24.8**	**0.0**
KMI	**Kunming**	**31.11**	**313**	⇑P	**P**	**10 09 26.5**	**+1.3**
KMI				pP	pwP	10 09 53.5	-0.9
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				LR	LR		
	comp=Z,170nm,19.0s						
KMI				LR	LR		
	comp=Z,160nm,15.0s						
KMI				LR	LR		
	comp=Z,230nm,19.0s						
TJN	**Taejon**	**31.32**	**360**	*ce*P	**P**	**10 09 27.9**	**+1.4**
INU	**Inuyama**	**31.55**	**15**	P	**P**	**10 09 27.8**	**-0.8**
INU	**Inuyama**	**31.55**	**15**	P	**P**	**10 09 29.5**	**+1.0**
INU	**Inuyama**	**31.55**	**15**	P	**P**	**10 09 28.2**	**-0.4**
INU				pP	**pwP**	**10 09 57.4**	**-4.3**
KSCHJ	**Chungju**	**31.82**	**1**	P	**P**	**10 09 30.8**	**-0.1**
KSCHJ				IAmb	IAmb	10 09 33.0	
	comp=Z,23nm,0.9s						
JGF	**Kuroka**	**31.87**	**15**	P	**P**	**10 09 28.7**	**-2.8**
JGF				IAmb	IAmb	10 10 00.8	
	comp=Z,20nm,0.8s						
KSAR	**Wonju Array Be**	**32.38**	**1**	P	**P**	**10 09 35.2**	**-0.6**
KSAR	**Wonju Array Be**	**32.38**	**1**	P	**P**	**10 09 35.2**	**-0.6**
KSRS	**Korea Array**	**32.40**	**1**	P	**P**	**10 09 36.6**	**+0.7**
	comp=Z,17nm,0.8s,baz=178,slow=10.0,SNR=64						
KSRS				ScP	**ScP**	**10 15 54.9**	**+0.9**
	comp=Z,2.3nm,1.0s,baz=172,slow=3.7,SNR=5.2						
KSRS				LR	LR	10 22 26.2	
	comp=Z,34nm,21.1s,baz=195,slow=36						
	comp=Z,17nm,0.8s						
KS19	**Wonju Array Si**	**32.44**	**1**	P	**P**	**10 09 36.0**	**-0.4**

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KS19                                 IAmb  IAmb    10 09 37.8
      comp=Z,19nm,0.8s
MEEK  Meekatharra        32.52 195   P     P       10 09 37.3 +0.2
      baz=33,SNR=17
MEEK  Meekatharra        32.52 195   P     P       10 09 38.0 +0.8
LYN   LuoYang            32.62 337 ⇓P     P       10 09 39.3 +1.4
LYN                                  S     S       10 14 48.4 +3.2
LYN                                  pmax  pmax
      comp=Z,20nm,0.7s
LYN                                  pmax  pmax
      comp=Z,80nm,4.5s
LYN                                  LR    LR
      comp=Z,170nm,15.9s
LYN                                  LR    LR
      comp=Z,160nm,17.6s
PZH   PanZhiHua          32.65 314   P     P       10 09 39.0 +0.5
PZH                                  S     S       10 14 44.8 -1.4
PZH                                  SS    SnSn    10 16 59.4 +4.9
PZH                                  pmax  pmax
      comp=Z,10.0nm,1.2s
PZH                                  pmax  pmax
      comp=Z,50nm,4.1s
PZH                                  LR    LR
      comp=Z,620nm,20.6s
PZH                                  LR    LR
      comp=Z,350nm,19.1s
PZH                                  LR    LR
      comp=Z,500nm,21.2s
MAJO  Matsushiro         32.99  16   P     P       10 09 38.8 -2.3
MAJO                                 IAmb  IAmb    10 10 09.9
      comp=Z,18nm,0.7s
MAJO  Matsushiro         32.99  16ceP      P       10 09 38.7 -2.5
MAJO  Matsushiro         32.99  16   P     P       10 09 41.0 -0.2
MAJO  Matsushiro         32.99  16   P     P       10 09 41.2  0.0
MAJO                                 pP    pP      10 10 09.3 +4.4
MJAR  Matsushiro Arr     32.99  16   P     P       10 09 39.1 -2.0
      comp=Z,8.9nm,0.9s,baz=171,slow=8.5,SNR=6.7
      comp=Z,8.9nm,0.9s
MJAR  Matsushiro Arr     32.99  16   P     P       10 09 39.2 -2.0
MJAR  Matsushiro Arr     32.99  16   P     P       10 09 39.2 -2.0
MJAR                                 pmax  pmax
      comp=Z,4.0nm,0.9s
MJB9  Matsu-Tunnel       32.99  16   P     P       10 09 39.0 -2.2
MJB9                                 IAmb  IAmb    10 10 09.8
      comp=Z,17nm,0.7s
JYT   Yasato             33.29  19   P     P       10 09 41.6 -2.2
JYT                                  IAmb  IAmb    10 09 48.8
      comp=Z,19nm,0.8s
OOD   Oodnadatta         33.46 167   P     P       10 09 46.5 +1.2
XAN   Xi'an              33.73 332 ⇑P     P       10 09 47.9 +0.2
XAN                                  pP    pP      10 10 14.6 +2.4
XAN                                  sP    sP      10 10 29.8 +4.6
XAN                                  PcP   PcP     10 12 21.9 -2.8
XAN                                  S     S       10 15 01.6 -0.9
XAN                                  pmax  pmax
      comp=Z,59nm,0.9s
XAN                                  pmax  pmax
      comp=Z,93nm,7.0s
XAN                                  LR    LR
      comp=Z,170nm,18.1s
XAN                                  LR    LR
      comp=Z,100nm,16.8s
XAN                                  LR    LR
      comp=Z,200nm,19.0s
CD2   Chengdu            34.16 322   P     P       10 09 52.3 +0.8
CD2                                  pmax  pmax
      comp=Z,50nm,0.7s
HNS   HongShan           34.39 342 ⇓P     P       10 09 54.3 +1.1
HNS                                  pmax  pmax
      comp=Z,30nm,0.9s
JSD   Sado               34.41  15   P     P       10 09 51.6 -1.8
JSD                                  IAmb  IAmb    10 10 22.6
      comp=Z,42nm,0.9s
INKA  Innaminka          34.89 159   P     P       10 09 58.4 +0.7
JMM   Marumori           34.98  19   P     P       10 09 57.0 -1.3
QLP   Quilpie            35.26 153   P     P       10 10 00.7 -0.2
      baz=35,SNR=4.9
QLP   Quilpie            35.26 153   P     P       10 10 00.8 -0.1
HNR   Honiara            35.35 114   LR    LR      10 24 20.9
      comp=Z,58nm,19.7s,baz=317,slow=36
FORT  Forrest            35.49 179   P     P       10 10 03.1 +0.3
      baz=36,SNR=28
FORT  Forrest            35.49 179   P     P       10 10 02.7 -0.1
FORT  Forrest            35.49 179   P     P       10 10 03.2 +0.4
MORW  Morawa             35.53 197   P     P       10 10 03.9 +0.7
      baz=36,SNR=10
MORW  Morawa             35.53 197   P     P       10 10 03.7 +0.5
MORW                                 IAmb  IAmb    10 10 04.8
      comp=Z,40nm,1.1s
MORW  Morawa             35.53 197   P     P       10 10 04.5 +1.4
MULG  Mulgathing         35.55 170   P     P       10 10 03.7 +0.4
RK1H  Rockhampton Ha     35.99 142   P     P       10 10 08.1 +0.9
BJT   Baijiatuau         36.41 345   P     P       10 10 11.2 +0.6
BJT                                  IAmb  IAmb    10 10 16.1
      comp=Z,27nm,0.7s
BJT   Baijiatuau         36.41 345   P     P       10 10 11.2 +0.6
BJT                                  pmax  pmax
      comp=Z,27nm,0.7s
BJI   Beijing            36.43 345   P     P       10 10 11.4 +0.7
BJI                                  pP    pP      10 10 35.6 +0.4
BJI                                  PP    PnPn    10 11 36.8 -0.4
BJI                                  S     S       10 15 44.8 +1.1
BJI                                  pmax  pmax
      comp=Z,23nm,0.9s
BJI                                  pmax  pmax
      comp=Z,110nm,4.7s
LCRK  Leigh Creek        36.63 164   P     P       10 10 13.5 +1.0
BLDU  Ballidu            36.80 196   P     P       10 10 14.9 +1.0
      baz=37,SNR=5.3
BLDU  Ballidu            36.80 196   P     P       10 10 15.1 +1.2
RMQ   Roma               37.40 148   P     P       10 10 18.8 -0.3
      baz=38,SNR=5.6
RMQ   Roma               37.40 148   P     P       10 10 18.7 -0.3
KLBR  Kellerberrin       37.46 194   P     P       10 10 20.7 +1.1
      baz=38,SNR=13
KLBR  Kellerberrin       37.46 194   P     P       10 10 21.0 +1.4
MSHR  Mys Shultsa        37.66   4⇑eP     P       10 10 21.9 +0.9
MSHR                                 pmax  pmax
      comp=Z,44nm,1.7s
EIDS  Eidsvold           37.83 144   P     P       10 10 22.3 -0.5
      baz=38,SNR=7.2
EIDS  Eidsvold           37.83 144   P     P       10 10 22.3 -0.5
EIDS                                 IAmb  IAmb    10 10 23.2
      comp=Z,21nm,0.8s
EIDS  Eidsvold           37.83 144   P     P       10 10 22.2 -0.5
LZH   Lanzhou            37.89 328 ⇓P     P       10 10 25.3 +2.0
LZH                                  pP    pwP     10 10 52.8 -1.2
LZH                                  sP    sP      10 11 04.5 +3.1
LZH                                  S     S       10 16 07.3 +1.0
LZH                                  pmax  pmax
      comp=Z,39nm,1.4s
LZH                                  pmax  pmax
      comp=Z,130nm,5.4s
LZH                                  LR    LR
      comp=Z,240nm,14.6s
LZH                                  LR    LR
      comp=Z,260nm,14.6s
LZH                                  LR    LR
      comp=Z,280nm,15.7s
MUN   Mundaring          38.22 196   P     P       10 10 26.9 +1.0
      baz=38,SNR=7.6
BBOO  Buckleboo          38.38 168   P     P       10 10 27.2 -0.1
      baz=39,SNR=5.4
BBOO  Buckleboo          38.38 168   P     P       10 10 27.6 +0.3
BBOO                                 IAmb  IAmb    10 10 28.5
      comp=Z,49nm,1.2s
BBOO  Buckleboo          38.38 168   P     P       10 10 27.9 +0.6
HHC   Hu-ho-hao-te       38.53 340  eP     P       10 10 30.0 +1.4
HHC                                  pmax  pmax
      comp=Z,35nm,0.9s
HHC                                  pmax  pmax
      comp=Z,130nm,5.8s
CN2   Changchun          38.77 358  eP     P       10 10 27.6 -2.8
CN2                                 epP    pP      10 10 53.0 -1.5
BTO   Baotou             38.85 339  eP     P       10 10 34.5 +3.2
BTO                                  S     S       10 16 27.8 +7.2
BTO                                  LR    LR
      comp=Z,510nm,11.2s
BTO                                  LR    LR
      comp=Z,670nm,16.3s
WHYH  Whyalla            38.93 166   P     P       10 10 33.0 +1.2
      comp=Z,21nm,1.1s
STKA  Stephens Creek     38.97 161   P     P       10 10 32.0 -0.2
      comp=Z,16nm,0.4s,baz=340,slow=8.3,SNR=41
STKA                                 LR    LR      10 30 30.4
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      comp=Z,100nm,19.5s,baz=0.2,slow=42
      comp=Z,16nm,0.4s
STKA  Stephens Creek     38.97 161   P     P       10 10 32.2  0.0
      baz=39,SNR=30
STKA  Stephens Creek     38.97 161   P     P       10 10 32.2  0.0
STKA  Stephens Creek     38.97 161   P     P       10 10 32.2  0.0
STKA                                 pmax  pmax
      comp=Z,7.0nm,0.9s
STKA  Stephens Creek     38.97 161   P     P       10 10 32.5 +0.3
USRK  Ussuriysk Ar.      39.33   5   P     P       10 10 35.1 +0.1
      comp=Z,11nm,0.7s,baz=195,slow=7.6,SNR=17
USRK                                 LR    LR      10 25 38.7
      comp=Z,41nm,21.6s,baz=168,slow=34
      comp=Z,11nm,0.7s
MDJ   Mudanjiang         39.59   2   P     P       10 10 37.1 -0.1
MDJ                                  IAmb  IAmb    10 10 39.5
      comp=Z,37nm,0.9s
MDJ   Mudanjiang         39.59   2   P     P       10 10 38.1 +0.9
MDJ                                  pP    pP      10 11 01.8 +0.5
MDJ                                  sP    sP      10 11 15.9 +2.2
MDJ                                  ScP   ScP     10 16 18.4 -1.8
MDJ                                  PcS   PcS     10 16 29.8 -2.3
MDJ                                  S     S       10 16 37.8 +6.5
MDJ                                  pmax  pmax
      comp=Z,48nm,0.7s
MDJ                                  pmax  pmax
      comp=Z,130nm,5.4s
MDJ   Mudanjiang         39.59   2   P     P       10 10 38.9 +1.7
HTT   Hallett            39.64 165   P     P       10 10 39.5 +1.7
      baz=40,SNR=4.7
HTT   Hallett            39.64 165   P     P       10 10 38.4 +0.6
XLT   XiLinHaoTe         40.11 347  eP     P       10 10 41.0 -0.6
XLT                                  pP    pP      10 11 06.6 -0.1
XLT                                  sP    sP      10 11 21.3 +1.9
XLT                                  S     S       10 16 36.8 -2.5
XLT                                  pmax  pmax
      comp=Z,25nm,0.9s
XLT                                  pmax  pmax
      comp=Z,210nm,5.8s
CMSA  Cobar Meteorol     40.19 156   P     P       10 10 42.7 +0.4
      baz=40,SNR=9.7
CMSA  Cobar Meteorol     40.19 156   P     P       10 10 43.2 +0.9
RKGY  Rocky Gully        40.54 193   P     P       10 10 46.7 +1.6
      baz=41,SNR=5.8
RKGY  Rocky Gully        40.54 193   P     P       10 10 47.6 +2.5
BNX   BinXian            40.67 360 ⇑P     P       10 10 46.3 +0.2
BNX                                  pmax  pmax
      comp=Z,25nm,0.8s
BNX                                  pmax  pmax
      comp=Z,300nm,3.6s
TWOA  Tennyson Woods     41.08 166   P     P       10 10 51.0 +1.5
ASAJ  Asahikawa          41.25  17   P     P       10 10 51.1 +0.3
      comp=Z,23nm,0.4s,baz=231,slow=11,SNR=21
ASAJ                                 LR    LR      10 29 19.6
      comp=Z,106nm,18.8s,baz=168,slow=38
      comp=Z,23nm,0.4s
JKA   Kamikawa-asahi     41.25  17   P     P       10 10 51.1 +0.3
ARMA  Armidale           42.05 148   P     P       10 10 57.9 +0.3
      baz=42,SNR=14
ARMA  Armidale           42.05 148   P     P       10 10 58.0 +0.3
ARMA                                 IAmb  IAmb    10 10 59.2
      comp=Z,25nm,0.9s
ARMA  Armidale           42.05 148   P     P       10 10 58.3 +0.6
GTA   Gaotai             42.49 328  eP     P       10 11 02.8 +1.6
GTA                                  pP    pP      10 11 28.9 +2.2
GTA                                  sP    sP      10 11 41.8 +2.3
GTA                                  pmax  pmax
      comp=Z,11nm,1.2s
GTA                                  pmax  pmax
      comp=Z,58nm,8.0s
GTA                                  LR    LR
      comp=Z,120nm,17.5s
GTA                                  LR    LR
      comp=Z,290nm,18.7s
GTA                                  LR    LR
      comp=Z,230nm,19.9s
GOMU  GeErMu             43.25 320   P     P       10 11 09.3 +1.7
GOMU                                 PP    PP      10 12 49.8 -0.7
GOMU                                 PcP   PcP     10 12 56.9 +2.1
GOMU                                 S     S       10 17 28.3 +2.0
GOMU                                 pmax  pmax
      comp=Z,5.0nm,0.8s
GOMU                                 pmax  pmax
      comp=Z,65nm,5.1s
ARPS  Mount Arapiles     43.58 163   P     P       10 11 10.5 +0.7
      baz=44,SNR=17
ARPS  Mount Arapiles     43.58 163   P     P       10 11 10.6 +0.8
YSS   Yuzh-Sakhalins     43.91  15   P     P       10 11 13.5 +1.2
YSS   Yuzh-Sakhalins     43.91  15deP      P       10 11 12.8 +0.5
KLR   Kul'dur            44.31   4   P     P       10 11 15.2 -0.3
      comp=Z,20nm,0.7s,baz=206,slow=4.8,SNR=62
      comp=Z,20nm,0.7s
KLR   Kul'dur            44.31   4ceP      P       10 11 15.3 -0.2
KLR                                  pmax  pmax
      comp=Z,25nm,0.8s
RIV   Riverview          44.56 152   P     P       10 11 18.7 +1.1
      baz=45,SNR=4.0
HIA   Hailar             44.69 353   P     P       10 11 18.4  0.0
HIA   Hailar             44.69 353   P     P       10 11 18.5  0.0
HIA                                  pmax  pmax
      comp=Z,16nm,0.9s
CAN   Canberra           44.84 155   P     P       10 11 20.4 +0.5
CAN                                  IAmb  IAmb    10 11 22.0
      comp=Z,30nm,1.1s
CAN   Canberra           44.84 155   P     P       10 11 20.4 +0.5
CAN                                  pmax  pmax
      comp=Z,30nm,1.1s
CAN   Canberra           44.84 155   P     P       10 11 21.5 +1.6
TOO   Toolangi           45.47 160   P     P       10 11 27.7 +2.9
      baz=46,SNR=4.2
UGL   Uglegorsk          45.73  13  eP     P       10 11 27.3 +0.7
UGL                                  pmax  pmax
      comp=E,140nm,0.5s
UGL                                  pmax  pmax
      comp=Z,150nm,0.9s
PKI   Pulchoki           45.92 304  eP     P       10 11 29.0  0.0
KKN   Kakani             46.11 304  eP     P       10 11 30.3  0.0
      comp=Z,76nm,0.8s
ULN   Ulaanbaatar        46.25 341   P     P       10 11 30.8 -0.2
ULN                                  IAmb  IAmb    10 11 38.2
      comp=Z,15nm,0.7s
ULN   Ulaanbaatar        46.25 341c iP     P       10 11 31.6 +0.6
ULN                                  pmax  pmax
      comp=Z,23nm,1.0s
GRNR  Gornyy             46.32   8⇓iP     P       10 11 32.4 +1.1
GRNR                                 pmax  pmax
      comp=Z,20nm,0.7s
SONM  Songino Array      46.44 340   P     P       10 11 32.9 +0.4
      comp=Z,8.3nm,1.0s,baz=156,slow=9.0,SNR=12
      comp=Z,8.3nm,1.0s
SONM  Songino Array      46.44 340   P     P       10 11 31.3 -1.1
DZM   Mont Dzumac        46.61 127   LR    LR      10 30 21.4
      comp=Z,92nm,18.6s,baz=324,slow=35
DZM   Mont Dzumac        46.61 127  eLR    LR      10 25 16.0
      comp=Z,460nm,34.2s
DZM   Mont Dzumac        46.61 127   P     P       10 11 33.7 -0.5
DZM                                  IAmb  IAmb    10 11 34.6
      comp=Z,23nm,0.5s
DZM   Mont Dzumac        46.61 127   P     P       10 11 33.7 -0.5
LIFNC LIFOU              46.62 125   P     P       10 11 33.2 -0.9
GKN   Gorkha             46.72 304  eP     P       10 11 34.6 -0.4
      comp=Z,71nm,1.0s
ONTNC Ouen Toro          46.74 127   P     P       10 11 33.8 -1.3
ONTNC                                IAmb  IAmb    10 11 35.6
      comp=Z,22nm,0.7s
YATNC Mamie plateau,     46.96 126   P     P       10 11 37.0 +0.2
OUENC Ouen Island, N     47.10 127   P     P       10 11 36.5 -1.4
OUENC                                IAmb  IAmb    10 11 41.1
      comp=Z,105nm,2.0s
KOLN  Koldanda           47.49 304  eP     P       10 11 41.3 +0.2
      comp=Z,277nm,0.8s
TYV   Tymovskoe          47.53  13  eP     P       10 11 42.6 +1.9
TYV                                 eS     S       10 18 30.1 +3.4
TYV                                  pmax  pmax
      comp=Z,27nm,0.8s
TYV                                  pmax  pmax
      comp=Z,100nm,2.4s
TYV                                  smax  smax
      comp=N,400nm,4.2s
TYV                                  smax  smax
      comp=E,300nm,4.2s
DANN  Dangsing           47.56 304  eP     P       10 11 41.7  0.0
      comp=E,193nm,0.7s
PYUN  Piuthan            48.11 304  eP     P       10 11 46.1 +0.2
      comp=E,177nm,0.9s
ZEA   Zeya               48.68 360  eP     P       10 11 49.4 -0.1
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ZEA                                  pmax  pmax
      comp=Z,10.0nm,1.2s
HYBB  Hyderabad (bro     49.44 289  eP     P       10 11 56.7 +0.8
ZAK   Zakamensk          49.68 340  eP     P       10 11 56.6 -0.7
ZAK                                  pmax  pmax
      comp=Z,6.0nm,1.3s
WMQ   Urumqi             52.21 324  eP     P       10 12 18.3 +2.0
WMQ                                  pP    pP      10 12 43.3 +0.6
WMQ                                  pmax  pmax
      comp=Z,28nm,1.1s
WMQ                                  pmax  pmax
      comp=Z,230nm,5.9s
WMQ                                  LR    LR
      comp=Z,170nm,19.7s
BOD   Bodaibo            53.82 351  eP     P       10 12 27.2 -0.6
BOD                                  pmax  pmax
      comp=Z,30nm,1.4s
PEA0B Petropavlovsk-     54.06  22   P     P       10 12 29.8 +0.1
PEA0B Petropavlovsk-     54.06  22ceP      P       10 12 30.4 +0.7
PETK  Petropavlovsk-     54.06  22   P     P       10 12 30.2 +0.6
      comp=Z,50nm,0.8s,baz=200,slow=6.9,SNR=57
PETK                                 LR    LR      10 38 44.7
      comp=Z,14nm,18.1s,baz=215,slow=39
      comp=Z,50nm,0.8s
PETK  Petropavlovsk-     54.06  22   P     P       10 12 29.6  0.0
PET   Petropavlovsk      54.36  23   P     P       10 12 32.4 +0.7
PET   Petropavlovsk      54.36  23  eP     P       10 12 32.1 +0.4
PET                                  pmax  pmax
      comp=Z,95nm,1.2s
PET   Petropavlovsk      54.36  23   P     P       10 12 32.9 +1.2
YAK   Yakutsk            57.02   1   P     P       10 12 50.8 +0.2
YAK   Yakutsk            57.02   1  eP     P       10 12 50.1 -0.5
YAK                                 e              10 13 20.8
YAK                                 e              10 14 57.8
YAK                                 eS     S       10 20 33.4 -2.4
YAK                                 eSS    SS      10 24 32.2 +6.0
YAK                                  pmax  pmax
      comp=Z,115nm,0.9s
YAK                                  pmax  pmax
      comp=E,12nm,1.3s
YAK                                  pmax  pmax
      comp=N,48nm,1.3s
YAK                                  pmax  pmax
      comp=Z,10.0nm,0.3s
YAK                                  pmax  pmax
      comp=N,23nm,1.3s
YAK                                  smax  smax
      comp=E,110nm,3.7s
YAK                                  smax  smax
      comp=N,38nm,1.9s
MK31  Makanchi Array     57.03 324   P     P       10 12 51.8 +0.7
MK31                                 IAmb  IAmb    10 13 24.4
      comp=Z,19nm,0.7s
MK31  Makanchi Array     57.03 324 i P     P       10 12 51.4 +0.3
MKAR  Makanchi Array     57.03 324   P     P       10 12 51.9 +0.8
      comp=Z,16nm,0.6s,baz=119,slow=8.1,SNR=92
MKAR                                 S     S       10 20 36.9 +0.3
      comp=Z,2.6nm,1.0s,baz=118,slow=15,SNR=8.4
MKAR                                 LR    LR      10 39 29.8
      comp=Z,80nm,18.7s,baz=107,slow=38
      comp=Z,16nm,0.6s
MAKZ  Makanchi           57.22 324   P     P       10 12 53.1 +0.7
MAKZ  Makanchi           57.22 324   P     P       10 12 53.1 +0.7
MAKZ                                 pmax  pmax
      comp=Z,30nm,0.9s
MA2   Magadan            57.39  14   LR    LR      10 36 22.8
      comp=Z,20nm,21.6s,baz=272,slow=35
MA2   Magadan            57.39  14⇓eP     P       10 12 54.2 +0.9
MA2                                  pmax  pmax
      comp=Z,32nm,1.7s
TARG  Taragay, Kyrgy     57.39 317   P     P       10 12 53.6 -0.6
TARG                                 IAmb  IAmb    10 13 31.2
      comp=Z,10nm,0.7s
KSH   Kashi              57.76 314   P     P       10 13 00.8 +4.4
KSH                                  pP    pwP     10 13 28.4 +0.9
KSH                                  sP    sP      10 13 40.0 +3.5
KSH                                  pmax  pmax
      comp=Z,18nm,1.2s
KDJ   Kajisay            57.98 318   P     P       10 12 58.1 +0.1
KDJ                                  IAmb  IAmb    10 13 02.3
      comp=Z,22nm,0.8s
KDJ   Kajisay            57.98 318   P     P       10 12 58.1 +0.1
KDJ                                  pmax  pmax
      comp=Z,22nm,0.8s
ULHL  Ulahol             58.66 317   P     P       10 13 06.3 +3.5
      SNR=11
BOOM  Boomskoye usch     58.97 317   P     P       10 13 04.7 -0.1
BOOM                                 IAmb  IAmb    10 13 08.4
      comp=Z,8.7nm,0.8s
BOOM  Boomskoye usch     58.97 317   P     P       10 13 04.7 -0.1
BOOM                                 pmax  pmax
      comp=Z,9.0nm,0.8s
TKM2  Tokmak 2           59.38 318   P     P       10 13 08.7 +1.0
      SNR=20
TKM2  Tokmak 2           59.38 318 i P     P       10 13 08.1 +0.4
TKM2                                 pmax  pmax
      comp=Z,13nm,0.7s
UCH   Uchtor             59.83 317   P     P       10 13 12.6 +1.5
      SNR=36
ZAA0  Zalesovo Array     59.89 332   P     P       10 13 09.8 -0.9
ZAA0                                 IAmb  IAmb    10 13 41.3
      comp=Z,16nm,0.8s
ZALV  Zalesovo Beam      59.89 332   P     P       10 13 10.0 -0.7
      comp=Z,3.2nm,0.5s,baz=103,slow=6.5,SNR=14
ZALV                                 LR    LR      10 40 37.0
      comp=Z,75nm,20.2s,baz=4.5,slow=37
      comp=Z,3.2nm,0.5s
ZALV  Zalesovo Beam      59.89 332   P     P       10 13 09.6 -1.1
ZALV  Zalesovo Beam      59.89 332 i P     P       10 13 10.6 -0.1
ZALV                                 pmax  pmax
      comp=Z,3.0nm,0.5s
AAK   Ala-Archa          60.00 317   LR    LR      10 43 01.9
      comp=Z,70nm,18.1s,baz=100,slow=40
AAK   Ala-Archa          60.00 317   P     P       10 13 11.7 -0.2
AAK                                  IAmb  IAmb    10 13 17.9
      comp=Z,10nm,1.0s
AAK   Ala-Archa          60.00 317⇑eP     P       10 13 13.0 +1.1
AAK                                  pmax  pmax
      comp=Z,19nm,1.7s
USP   Ospenovka          60.25 318   P     P       10 13 16.9 +3.5
      SNR=15
AML   Almayashu          60.35 316   P     P       10 13 15.7 +1.0
      SNR=17
EKS2  Erkin-Say          60.50 317   P     P       10 13 16.6 +1.3
      SNR=18
SEY   Seymchan           60.72  13   LR    LR      10 39 44.5
      comp=Z,37nm,20.2s,baz=230,slow=36
SEY   Seymchan           60.72  13⇓iP     P       10 13 17.3 +1.1
SEY                                  pmax  pmax
      comp=Z,30nm,1.3s
SHEM  Shemya Is, Ala     61.07  30   LR    LR      10 33 08.6
      comp=Z,53nm,21.9s,baz=288,slow=29
KURK  Kurchatov          61.16 327   P     P       10 13 19.8 +0.4
KURK  Kurchatov          61.16 327c iP     P       10 13 19.7 +0.3
KURK                                 pmax  pmax
      comp=Z,50nm,1.3s
KURK  Kurchatov          61.16 327   P     P       10 13 20.1 +0.7
KURK                                 pP    pwP     10 13 50.3 -2.3
KURBB Kurchatov Arra     61.17 327   S     S       10 21 28.1 -1.6
      comp=Z,0.2nm,0.2s,baz=128,slow=12,SNR=7.4
KBL   Kabul              61.42 307   P     P       10 13 22.1 +0.4
KBL                                  IAmb  IAmb    10 13 24.1
      comp=Z,13nm,0.6s
KBL   Kabul              61.42 307   P     P       10 13 22.1 +0.4
KBL                                  pmax  pmax
      comp=Z,13nm,0.6s
BTK   Batken             61.66 313   P     P       10 13 23.4 +0.3
BTK   Batken             61.66 313   P     P       10 13 23.4 +0.3
BTK                                  pmax  pmax
      comp=Z,66nm,1.7s
GAR   Garm               61.69 312   P     P       10 13 23.8 +0.3
RPZ   Rata Peaks         62.29 146   LR    LR      10 41 58.0
      comp=Z,135nm,18.2s,baz=260,slow=37
RAO   Raoul Island       62.41 127   LR    LR      10 36 50.6
      comp=Z,19nm,20.1s,baz=304,slow=32
CHGR  Chuyangaron        62.45 311   P     P       10 13 28.4  0.0
CHGR                                 IAmb  IAmb    10 14 04.3
      comp=Z,22nm,0.8s
CHGR  Chuyangaron        62.45 311   P     P       10 13 28.4  0.0
CHGR                                 pmax  pmax
      comp=Z,22nm,0.8s
URZ   Urewera            62.89 138   LR    LR      10 41 21.2
      comp=Z,53nm,18.3s,baz=211,slow=36
KK31  Karatay Array      62.90 316   P     P       10 13 31.2 -0.1
KK31                                 IAmb  IAmb    10 13 34.9
      comp=Z,19nm,1.0s
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KK31  Karatay Array      62.90 316  i P      P        10 13 31.5 +0.3
KKAR  Karatay Array      62.90 316    P      P        10 13 31.2  0.0
KKAR  Karatay Array      62.90 316    P      P        10 13 31.2  0.0
AFI   Afiamalu           63.09 108    LR     LR       10 38 06.3
      comp=Z,38nm,18.6s,baz=278,slow=33
TIXI  Tiksi              66.66   0    LR     LR       10 50 20.8
      comp=Z,25nm,18.0s,baz=181,slow=42
TIXI  Tiksi              66.66   0    P      P        10 13 54.2 -0.9
TIXI  Tiksi              66.66   0c iP       P        10 13 54.0 -1.0
TIXI                                  pmax   pmax
      comp=Z,58nm,1.5s
BRVK  Borovoye           66.83 327    P      P        10 13 55.5 -0.9
BRVK  Borovoye           66.83 327c iP       P        10 13 56.5 +0.1
BRVK                                  pmax   pmax
      comp=Z,31nm,1.0s
BRVK  Borovoye           66.83 327    P      P        10 13 57.1 +0.7
BRVK                                  pP     pwP      10 14 27.6 -2.1
BILL  Bilibino           68.23  15    P      P        10 14 04.5 -0.5
BILL  Bilibino           68.23  15  eP       P        10 14 04.4 -0.6
BILL                                e                 10 14 28.0
BILL                                e*PP     pP       10 14 36.6 +4.9
BILL                                e*SP     sP       10 14 52.6 +8.9
BILL                                e                 10 16 35.4
BILL                                  pmax   pmax
      comp=Z,26nm,2.5s
NRIK  Noril'sk           69.47 346    P      P        10 14 12.5 -0.2
      comp=Z,6.9nm,0.7s,baz=141,slow=5.9,SNR=14
      comp=Z,6.9nm,0.7s
NRIK  Noril'sk           69.47 346    P      P        10 14 12.4 -0.2
NRIK  Noril'sk           69.47 346c iP       P        10 14 12.2 -0.5
NRIK                                  pmax   pmax
      comp=Z,15nm,1.0s
NIKH  Nikolski High      70.42  35    P      P        10 14 19.7 +0.9
      baz=251
GEYT  Alibeck            70.75 308    P      P        10 14 22.4 +1.2
      comp=Z,11nm,0.8s,baz=122,slow=7.3,SNR=7.1
GEYT                                  LR     LR       10 49 34.6
      comp=Z,66nm,18.9s,baz=88,slow=39
      comp=Z,11nm,0.8s
GEYT  Alibeck            70.75 308    P      P        10 14 22.6 +1.4
GYA0B ALIBECK ARRAY      70.75 308    P      P        10 14 22.4 +1.3
GYA0B                                 IAmb   IAmb     10 14 25.1
      comp=Z,29nm,1.1s
SPIA  Saint Paul Isl     71.11  31    P      P        10 14 24.0 +1.2
      baz=249
AB31  Akbulak array      71.72 320  i P      P        10 14 26.4 -0.3
ABKAR Akbulak array      71.72 320    P      P        10 14 26.8 +0.1
ABKAR                                 IAmb   IAmb     10 14 58.9
      comp=Z,20nm,0.8s
UNV   Unalaska Valle     72.03  35    IAmb   IAmb     10 14 29.8
      comp=Z,38nm,1.1s
UNV   Unalaska Valle     72.03  35    P      P        10 14 28.0 -0.4
      baz=253
UNV   Unalaska Valle     72.03  35    P      P        10 14 28.7 +0.3
CASY  Casey              72.07 187    P      P        10 14 29.3 +0.9
AKUT  Akutan             72.53  35    P      P        10 14 31.3  0.0
GAMB  Gambell            73.02  24    P      P        10 14 34.4 +0.3
GAMB                                  IAmb   IAmb     10 14 35.7
      comp=Z,24nm,1.0s
GAMB  Gambell            73.02  24    P      P        10 14 34.1 +0.1
      baz=245
AKTO  Aktyubinsk         73.21 321    LR     LR       10 49 54.6
      comp=Z,68nm,18.9s,baz=109,slow=38
SVE   Sverdlovsk         73.36 328  eP       P        10 14 36.6 +0.4
SVE                                   pmax   pmax
      comp=Z,25nm,1.1s
FALS  False Pass         74.04  34    P      P        10 14 39.9 -0.4
      baz=255
ARU   Arti               74.35 327    LR     LR       10 49 05.9
      comp=Z,66nm,18.4s,baz=116,slow=37
ARU   Arti               74.35 327    P      P        10 14 41.5 -0.5
ARU                                   IAmb   IAmb     10 15 15.2
      comp=Z,14nm,0.7s
ARU   Arti               74.35 327d iP       P        10 14 42.1 +0.1
ARU                                   *PP    pP       10 15 11.2 +1.0
ARU                                                   10 17 28.4
ARU                                   S      S        10 24 08.5 +1.8
ARU                                   SS     SS       10 28 55.0 -0.1
ARU                                   pmax   pmax
      comp=Z,17nm,1.2s
TNA   Tin City           75.22  23    P      P        10 14 46.9 +0.1
TNA   Tin City           75.22  23    P      P        10 14 46.6 -0.2
      baz=248
SDPT  Sand Point         75.80  34    P      P        10 14 50.3 -0.1
SDPT  Sand Point         75.80  34    P      P        10 14 49.8 -0.6
      baz=258,SNR=7.3
ANM   Nome               75.89  24    P      P        10 14 51.4 +0.7
ANM   Nome               75.89  24    P      P        10 14 51.4 +0.7
ANM                                   pmax   pmax
      comp=Z,11nm,1.0s
ANM   Nome               75.89  24    P      P        10 14 50.8 +0.1
      baz=251
CHNA  Chernabura Isl     76.20  35    P      P        10 14 52.1 -0.5
      baz=259
RDOG  Red Dog Mine       77.92  21    P      P        10 15 00.4 -1.7
      baz=253
CHIR  Chirikof Islan     78.60  34    P      P        10 15 06.7 +0.7
      baz=262
N18K  Kilae Creek        79.20  29    P      P        10 15 09.9 +0.7
      baz=261,SNR=19
P18K  Big Mountain,      79.33  31    P      P        10 15 09.4 -0.6
      baz=261
O18K  Koktuh Hills       79.41  30    P      P        10 15 10.7 +0.3
O18K                                  IAmb   IAmb     10 15 12.2
      comp=Z,36nm,0.9s
O18K  Koktuh Hills       79.41  30    P      P        10 15 10.6 +0.3
      baz=261
SVW2  Sparrevohn         79.41  29    P      P        10 15 10.8 +0.4
GCSA  Galena City Sc     79.47  25    P      P        10 15 10.9 +0.4
      baz=259,SNR=26
SII   Sitkinak Islan     79.49  33    P      P        10 15 11.3 +0.4
      baz=263
SII   Sitkinak Islan     79.49  33    P      P        10 15 12.0 +1.1
TTA   Tatalina           79.52  27    P      P        10 15 11.4 +0.4
TTA   Tatalina           79.52  27    P      P        10 15 11.4 +0.4
TTA                                   pmax   pmax
      comp=Z,10.0nm,0.8s
TTA   Tatalina           79.52  27    P      P        10 15 11.3 +0.4
      baz=260,SNR=16
KIRV  Kirov              79.61 329    P      P        10 15 11.1 -0.3
      comp=Z,11nm,0.4s,baz=87,slow=1.4,SNR=6.2
      comp=Z,11nm,0.4s
KIRV  Kirov              79.61 329⇓iP        P        10 15 11.6 +0.2
O19K  Port Alsworth      79.89  30    P      P        10 15 12.9 -0.1
      baz=262,SNR=6.1
N19K  Bonanza Creek      79.90  29    P      P        10 15 13.8 +0.7
N19K                                  IAmb   IAmb     10 15 15.1
      comp=Z,78nm,1.6s
N19K  Bonanza Creek      79.90  29    P      P        10 15 13.9 +0.8
      baz=262,SNR=23
L19K  White Mountain     79.92  28    IAmb   IAmb     10 15 15.1
      comp=Z,21nm,1.0s
L19K  White Mountain     79.92  28    P      P        10 15 13.7 +0.6
      baz=261,SNR=30
BELG  Belogornoye        79.94 322    P      P        10 15 12.8 -0.5
      comp=Z,21nm,0.8s,baz=147,slow=3.1
      comp=Z,21nm,0.8s
BELG  Belogornoye        79.94 322deP        P        10 15 12.4 -0.9
BELG                                  pmax   pmax
      comp=Z,5.0nm,0.8s
OHAK  Old Harbor         80.06  33    P      P        10 15 13.6 -0.3
OHAK                                  IAmb   IAmb     10 15 15.2
      comp=Z,26nm,0.8s
OHAK  Old Harbor         80.06  33    P      P        10 15 14.0 +0.1
      baz=264,SNR=10
Q19K  Cape Douglas,      80.07  31    P      P        10 15 13.5 -0.5
Q19K                                  IAmb   IAmb     10 15 14.3
      comp=Z,41nm,0.8s
Q19K  Cape Douglas,      80.07  31    P      P        10 15 13.2 -0.8
      baz=263,SNR=7.7
M19K  Big River Lodg     80.10  28    P      P        10 15 14.7 +0.6
      baz=262
P19K  Oil Pt             80.37  30    P      P        10 15 16.2 +0.6
      baz=263
L20K  Farewell, AK       80.42  28    P      P        10 15 16.4 +0.6
      baz=262,SNR=28
K20K  Telida             80.45  27    IAmb   IAmb     10 15 18.2
      comp=Z,35nm,1.1s
K20K  Telida             80.45  27    P      P        10 15 16.7 +0.7
      baz=262,SNR=41
KDAK  Kodiak Island      80.50  32    LR     LR       10 45 03.0
      comp=Z,38nm,20.9s,baz=260,slow=31
KDAK  Kodiak Island      80.50  32    P      P        10 15 16.4 +0.2
KDAK                                  IAmb   IAmb     10 15 17.6
      comp=Z,30nm,0.7s
KDAK  Kodiak Island      80.50  32    P      P        10 15 16.4 +0.2
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KDAK                                  pmax   pmax
      comp=Z,30nm,0.7s
J20K  Nowinta River      80.54  26    P      P        10 15 17.1 +0.9
J20K                                  IAmb   IAmb     10 15 18.6
      comp=Z,54nm,1.4s
J20K  Nowinta River      80.54  26    P      P        10 15 17.2 +0.9
      baz=262,SNR=49
RSO   Redoubt South      80.70  30    P      P        10 15 17.6 +0.1
RAYN  Ar Rayn            80.72 293    P      P        10 15 18.2  0.0
RAYN                                  IAmb   IAmb     10 15 19.8
      comp=Z,27nm,0.8s
RAYN  Ar Rayn            80.72 293    P      P        10 15 18.2  0.0
RAYN                                  pmax   pmax
      comp=Z,27nm,0.8s
O20K  Slope Mountain     80.72  30    P      P        10 15 17.8 +0.3
      baz=264
A21K  Barrow             80.87  18    P      P        10 15 17.9 -0.1
A21K                                  IAmb   IAmb     10 15 19.7
      comp=Z,36nm,0.9s
A21K  Barrow             80.87  18    P      P        10 15 18.5 +0.5
      baz=258,SNR=6.8
IMAR  Indian Mountai     80.97  24    P      P        10 15 18.6  0.0
SPCR  Spurr Chakacha     81.05  29    P      P        10 15 18.9 -0.3
      baz=264
SPU   Mount Spurr        81.12  29    P      P        10 15 19.3 -0.3
HOM   Homer              81.17  30    P      P        10 15 20.0 +0.2
      baz=264
PPLA  Purkeypile         81.24  27    P      P        10 15 20.6 +0.3
PPLA                                  IAmb   IAmb     10 15 21.7
      comp=Z,16nm,0.8s
PPLA  Purkeypile         81.24  27    P      P        10 15 20.4 +0.1
      baz=264,SNR=18
CHUM  Lake Minchumin     81.30  26    P      P        10 15 21.1 +0.8
      baz=263,SNR=8.8
H21K  Melozitna Rive     81.31  24    P      P        10 15 21.2 +0.7
H21K                                  IAmb   IAmb     10 15 22.5
      comp=Z,25nm,0.9s
H21K  Melozitna Rive     81.31  24    P      P        10 15 21.1 +0.7
      baz=263,SNR=39
GNI   Garni              81.31 310    LR     LR       10 57 03.2
      comp=Z,27nm,19.0s,baz=100,slow=40
CAST  Castle Rocks       81.35  27    IAmb   IAmb     10 15 22.2
      comp=Z,23nm,0.8s
CAST  Castle Rocks       81.35  27    P      P        10 15 20.9 +0.2
      baz=264,SNR=48
BRLK  Bradley Lake       81.56  30    P      P        10 15 21.5 -0.4
BRLK                                  IAmb   IAmb     10 15 25.0
      comp=Z,31nm,1.0s
I21K  Tanana             81.59  25    IAmb   IAmb     10 15 24.1
      comp=Z,33nm,0.8s
I21K  Tanana             81.59  25    P      P        10 15 22.7 +0.8
      baz=263,SNR=15
BRSE  Bradley Lake S     81.64  30    P      P        10 15 21.7 -0.6
      baz=265,SNR=10
PRGR  Permogore          81.83 331  eP       P        10 15 23.5 +0.3
KTH   Kantishna Hill     81.88  27    P      P        10 15 23.4 -0.2
KTH                                   IAmb   IAmb     10 15 25.4
      comp=Z,44nm,1.2s
BPAW  Bear Paw Mtn.      81.90  26    P      P        10 15 23.2 -0.4
BPAW                                  IAmb   IAmb     10 15 25.2
      comp=Z,41nm,1.0s
BPAW  Bear Paw Mtn.      81.90  26    P      P        10 15 23.9 +0.2
      baz=264,SNR=62
ZEI   Tsey               81.98 312  eP       P        10 15 24.3 -0.4
ZEI                                   pmax   pmax
      comp=Z,24nm,1.4s
CUT   Chulitna           82.08  28    P      P        10 15 24.4 -0.1
CUT                                   IAmb   IAmb     10 15 26.6
      comp=Z,58nm,1.3s
CUT   Chulitna           82.08  28    P      P        10 15 23.7 -0.8
      baz=265,SNR=6.1
M22K  Willow             82.10  28    P      P        10 15 24.1 -0.5
M22K  Willow             82.10  28    P      P        10 15 23.9 -0.7
      baz=266,SNR=14
TRF   Thorofare Moun     82.16  27    IAmb   IAmb     10 15 26.0
      comp=Z,31nm,1.0s
TRF   Thorofare Moun     82.16  27    P      P        10 15 24.7 -0.4
      baz=265,SNR=29
O22K  Cooper Landing     82.20  30    P      P        10 15 24.6 -0.6
      baz=266,SNR=9.4
RC01  Rabbit Creek A     82.23  29    P      P        10 15 24.8 -0.6
RC01  Rabbit Creek A     82.23  29    P      P        10 15 24.7 -0.6
      baz=266,SNR=23
SEW   Seward             82.31  30    IAmb   IAmb     10 15 26.6
      comp=Z,19nm,0.9s
SEW   Seward             82.31  30    P      P        10 15 25.3 -0.5
      baz=266,SNR=9.0
COLD  Coldfoot           82.52  23    P      P        10 15 27.0 +0.3
COLD                                  IAmb   IAmb     10 15 29.0
      comp=Z,55nm,1.4s
COLD  Coldfoot           82.52  23    P      P        10 15 27.7 +1.0
      baz=265,SNR=38
PMR   Palmer             82.56  29    P      P        10 15 26.5 -0.5
PMR                                   IAmb   IAmb     10 15 27.6
      comp=Z,26nm,0.9s
PMR   Palmer             82.56  29    P      P        10 15 26.5 -0.5
PMR                                   pmax   pmax
      comp=Z,26nm,0.9s
PMR   Palmer             82.56  29    P      P        10 15 26.4 -0.5
      baz=266,SNR=26
GEVA  Gevas              82.61 308    P      P        10 15 28.1 +0.1
GEVA                                  IAmb   IAmb     10 16 03.2
      comp=Z,20nm,0.8s
GHO   Glory Hole Cre     82.67  28    P      P        10 15 27.3 -0.3
GHO                                   IAmb   IAmb     10 15 32.0
      comp=Z,13nm,0.8s
H23K  Yukon River        82.67  24    P      P        10 15 27.8 +0.2
H23K                                  IAmb   IAmb     10 15 29.7
      comp=Z,39nm,0.9s
H23K  Yukon River        82.67  24    P      P        10 15 28.5 +0.9
      baz=266,SNR=77
I23K  Minto, Yukon-K     82.69  25    P      P        10 15 28.2 +0.6
I23K  Minto, Yukon-K     82.69  25    P      P        10 15 28.4 +0.7
      baz=266,SNR=69
KBZ   Khabaz             82.72 313    P      P        10 15 29.3 +1.1
      comp=Z,1.9nm,0.7s,baz=133,slow=7.6,SNR=5.4
KBZ                                   LR     LR       10 56 57.4
      comp=Z,32nm,19.3s,baz=85,slow=39
      comp=Z,1.9nm,0.7s
KBZ   Khabaz             82.72 313⇓iP        P        10 15 29.4 +1.2
KBZ                                   pmax   pmax
      comp=Z,4.0nm,0.9s
NEA2  Nenana             82.78  26    P      P        10 15 27.4 -0.7
NEA2                                  IAmb   IAmb     10 15 30.3
      comp=Z,30nm,0.9s
NEA2  Nenana             82.78  26    P      P        10 15 27.6 -0.5
      baz=266,SNR=49
MCK   McKinley           82.78  26    P      P        10 15 27.5 -0.7
MCK   McKinley           82.78  26    P      P        10 15 27.5 -0.7
MCK                                   pmax   pmax
      comp=Z,57nm,1.0s
MCK   McKinley           82.78  26    P      P        10 15 27.7 -0.5
      baz=266,SNR=28
RND   Reindeer           82.80  27    P      P        10 15 27.6 -0.7
RND                                   IAmb   IAmb     10 15 28.9
      comp=Z,31nm,0.9s
RND   Reindeer           82.80  27    P      P        10 15 27.6 -0.7
RND                                   pmax   pmax
      comp=Z,31nm,0.9s
KNK   Knik Glacier       82.87  29    P      P        10 15 28.5 -0.1
KNK   Knik Glacier       82.87  29    P      P        10 15 28.7  0.0
      baz=267,SNR=22
KIV   Kislovodsk         82.88 314  eP       P        10 15 28.2 -1.0
KIV                                   pmax   pmax
      comp=Z,10.0nm,1.0s
KIV                                   MLR    MLR
      comp=Z,51nm,19.0s
TOLK  Toolik Lake Re     82.88  21    IAmb   IAmb     10 15 30.9
      comp=Z,44nm,1.1s
TOLK  Toolik Lake Re     82.88  21    P      P        10 15 29.4 +0.8
      baz=265,SNR=39
SML   Sawmill            82.95  28    P      P        10 15 29.1  0.0
SML   Sawmill            82.95  28    P      P        10 15 29.2 +0.1
      baz=267,SNR=38
MDM   Murphy Dome        83.16  25    P      P        10 15 29.8 -0.3
MDM                                   IAmb   IAmb     10 15 30.8
      comp=Z,16nm,1.0s
WRH   Wood River Hil     83.19  26    IAmb   IAmb     10 15 31.0
      comp=Z,34nm,1.1s
M23K  Glacier View       83.24  28    P      P        10 15 30.1 -0.4
      baz=268,SNR=19
WAT6  Susitna Watana     83.26  28    P      P        10 15 30.8 -0.1
      baz=268,SNR=52
TCOL  CIGO, UAF Yank     83.31  25    P      P        10 15 30.0 -0.8
TCOL                                  IAmb   IAmb     10 15 32.4
      comp=Z,12nm,0.8s
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TCOL  CIGO, UAF Yank     83.31  25    P      P        10 15 29.9 -1.0
      baz=267,SNR=7.7
COLA  College            83.31  25    P      P        10 15 30.1 -0.7
COLA                                  IAmb   IAmb     10 15 32.4
      comp=Z,11nm,0.8s
COLA  College            83.31  25c iP       P        10 15 29.7 -1.1
COLA                                  pmax   pmax
      comp=Z,11nm,0.8s
COLA  College            83.31  25    P      P        10 15 29.9 -0.9
      baz=267
CCB   Clear Creek Bu     83.32  26    P      P        10 15 30.0 -0.8
CCB                                   IAmb   IAmb     10 15 31.4
      comp=Z,39nm,1.2s
H24K  Noodor Dome        83.35  24    P      P        10 15 31.6 +0.5
H24K                                  IAmb   IAmb     10 15 34.0
      comp=Z,28nm,0.8s
H24K  Noodor Dome        83.35  24    P      P        10 15 31.6 +0.5
      baz=267,SNR=60
GURO  Guroymak-BITLI     83.42 308    IAmb   IAmb     10 16 06.4
      comp=Z,25nm,0.9s
SCM   Sheep Creek Mo     83.43  28    P      P        10 15 31.3 -0.3
SCM   Sheep Creek Mo     83.43  28    P      P        10 15 31.3 -0.3
SCM   Sheep Creek Mo     83.43  28    P      P        10 15 31.6  0.0
      baz=268,SNR=35
DHY   Denali Highway     83.45  27    P      P        10 15 31.4 -0.4
DHY                                   IAmb   IAmb     10 15 34.8
      comp=Z,16nm,1.0s
DHY   Denali Highway     83.45  27    P      P        10 15 31.4 -0.4
      baz=268,SNR=19
POKR  Poker Plat Res     83.50  25    P      P        10 15 31.7 -0.2
POKR                                  IAmb   IAmb     10 15 34.0
      comp=Z,17nm,0.8s
POKR  Poker Plat Res     83.50  25    P      P        10 15 31.0 -0.8
      baz=268
GLI   Glacier Island     83.51  29    P      P        10 15 31.9  0.0
      baz=268,SNR=16
HDA   Harding Lake       83.68  26    IAmb   IAmb     10 15 32.9
      comp=Z,19nm,0.8s
HDA   Harding Lake       83.68  26    P      P        10 15 31.5 -1.3
      baz=268,SNR=35
IL31                     83.72  25    P      P        10 15 31.9 -1.0
IL31                                  IAmb   IAmb     10 15 33.4
      comp=Z,12nm,0.7s
ILAR  Eielson Array      83.72  25    P      P        10 15 31.8 -1.2
      comp=Z,11nm,0.8s,baz=244,slow=5.1,SNR=90
ILAR                                  pP     pP       10 16 01.5 +0.7
      comp=Z,6.7nm,1.0s,baz=289,slow=6.5,SNR=6.5
      comp=Z,11nm,0.8s
ILAR  Eielson Array      83.72  25    P      P        10 15 31.3 -1.7
ATD   Arta Tunnel        83.79 281    LR     LR       10 50 55.5
      comp=Z,32nm,20.5s,baz=40,slow=34
ATD   Arta Tunnel        83.79 281    IAmb   IAmb     10 15 37.5
      comp=Z,19nm,1.0s
FID   Port Fidalgo       83.81  30    P      P        10 15 33.3 -0.1
Q23K  Middleton Isla     83.85  31    P      P        10 15 33.4 -0.2
      baz=269
M24K  Tolsona, Glenn     83.98  28    P      P        10 15 35.1 +0.7
      baz=269,SNR=16
KLU   Klutina            84.09  29    P      P        10 15 35.4 +0.4
KLU   Klutina            84.09  29    P      P        10 15 35.1 +0.1
      baz=269,SNR=32
EYAK  Cordova Ski Ar     84.16  30    IAmb   IAmb     10 15 36.9
      comp=Z,22nm,1.0s
EYAK  Cordova Ski Ar     84.16  30    P      P        10 15 35.7 +0.4
      baz=270,SNR=5.5
K24K  Donnelly Dome      84.18  26    P      P        10 15 34.9 -0.4
      baz=269,SNR=23
PAX   Paxson             84.31  27    P      P        10 15 36.4 +0.3
PAX                                   IAmb   IAmb     10 15 37.5
      comp=Z,17nm,0.8s
PAX   Paxson             84.31  27    P      P        10 15 36.4 +0.3
PAX                                   pmax   pmax
      comp=Z,17nm,0.8s
PAX   Paxson             84.31  27    P      P        10 15 36.1  0.0
      baz=270,SNR=30
J25K  Salcha River,      84.37  26    P      P        10 15 35.2 -1.1
      baz=270,SNR=13
HARP  HAARP              84.46  28    P      P        10 15 37.1 +0.3
      baz=270,SNR=12
VNDA  Vanda              84.49 173    P      P        10 15 36.2 -0.3
      comp=Z,5.5nm,0.9s,baz=317,slow=6.4,SNR=21
VNDA                                  LR     LR       10 49 47.5
      comp=Z,41nm,21.5s,baz=322,slow=33
      comp=Z,5.5nm,0.9s
VNDA  Vanda              84.49 173    P      P        10 15 36.8 +0.2
VNDA  Vanda              84.49 173    P      P        10 15 36.8 +0.2
VNDA                                  pmax   pmax
      comp=Z,6.0nm,0.9s
KOPT  Kop Dagi           84.57 310    IAmb   IAmb     10 15 41.8
      comp=Z,52nm,1.4s
RIDG  Independent Ri     84.60  27    IAmb   IAmb     10 15 38.5
      comp=Z,32nm,1.0s
BMAR  Burnt Mountain     84.71  23    P      P        10 15 38.1 +0.2
N25K  Chitina, Valde     84.72  29    P      P        10 15 37.9 -0.3
N25K                                  IAmb   IAmb     10 15 40.0
      comp=Z,24nm,0.8s
N25K  Chitina, Valde     84.72  29    P      P        10 15 38.6 +0.4
      baz=270,SNR=27
BMRM  Bremner River      84.73  29    P      P        10 15 38.0 -0.2
BMRM  Bremner River      84.73  29    P      P        10 15 38.4 +0.2
      baz=270,SNR=27
KLMR  Klimovskoe         84.75 331  eP       P        10 15 36.4 -1.8
KLMR                                e*PP     pP       10 16 08.1 +1.3
KLMR                                  pmax   pmax
      comp=Z,29nm,1.2s
KLMR  Klimovskoe         84.75 331  eP       P        10 15 36.4 -1.8
KLMR                                  AMP             10 15 39.5
      comp=Z,29nm,1.2s
KLMR                                epP      pP       10 16 08.2 +1.4
PPT   Papeete            84.76 108    LR     LR       10 51 15.0
      comp=Z,55nm,18.3s,baz=292,slow=34
PPT2  Papeete2           84.76 108  eLR      LR       10 41 45.2
      comp=Z,334nm,40.0s
KAIM  Kayak Island       84.83  30    P      P        10 15 39.2 +0.5
      baz=271
HMT   Hamilton           84.90  30    IAmb   IAmb     10 15 40.8
      comp=Z,30nm,0.8s
DOT   Dot Lake           84.95  27    P      P        10 15 39.3 +0.1
DOT                                   IAmb   IAmb     10 15 40.3
      comp=Z,21nm,1.2s
SOC   Sochi              85.03 313  eP       P        10 15 38.9 -1.1
SOC                                 e                 10 18 57.2
SOC                                 eS       SKSac    10 25 50.7 -3.2
SOC                                 eSS      SS       10 31 31.5 -3.8
SOC                                 eSSS     SSS      10 35 08.7
SOC                                   pmax   pmax
      comp=Z,21nm,0.9s
MAW   Mawson             85.11 200    P      P        10 15 40.0 +0.2
      comp=Z,3.6nm,0.9s,baz=62,slow=5.1,SNR=5.5
      comp=Z,3.6nm,0.9s
MAW   Mawson             85.11 200    P      P        10 15 40.2 +0.4
MAW   Mawson             85.11 200    P      P        10 15 40.2 +0.4
MENT  Mentasta           85.11  27    IAmb   IAmb     10 15 42.1
      comp=Z,13nm,0.7s
VORR  Voronezh           85.11 321⇓iP        P        10 15 40.3 +0.1
VORR                                  pmax   pmax
      comp=Z,47nm,1.4s
J26L  Joseph Creek       85.15  26    P      P        10 15 39.9 -0.3
      baz=271,SNR=17
VSR   Storozhevoye       85.16 321  eP       P        10 15 36.5 -3.9
VSR                                   pmax   pmax
      comp=Z,20nm,0.6s
LPSR  Galich'ya Gora     85.26 322  eP       P        10 15 38.8 -2.1
LPSR                                  pmax   pmax
      comp=Z,30nm,0.8s
VRDI  Verde Repeater     85.28  29    IAmb   IAmb     10 15 42.6
      comp=Z,21nm,0.8s
L26K  Log Cabin Wild     85.28  27    P      P        10 15 40.7 -0.2
L26K  Log Cabin Wild     85.28  27    P      P        10 15 40.8  0.0
      baz=271,SNR=14
SBA   Scott Base         85.39 172    P      P        10 15 41.6 +0.6
SBA   Scott Base         85.39 172    P      P        10 15 41.6 +0.6
SBA                                   pmax   pmax
      comp=Z,8.0nm,1.2s
BGLC  Bering Glacier     85.40  30    P      P        10 15 41.8 +0.4
      baz=272
M26K  Nabesna, AK        85.46  28    P      P        10 15 42.4 +0.5
M26K  Nabesna, AK        85.46  28    P      P        10 15 41.7 -0.1
      baz=272,SNR=11
TBI   Tubuai             85.57 114  eLR      LR       10 43 13.8
      comp=Z,157nm,31.5s
WAX   Waxell Ridge       85.60  30    P      P        10 15 43.0 +0.5
SNH   Sunshine Point     85.62  30    P      P        10 15 42.9 +0.2
K27K  Chicken            85.82  26    P      P        10 15 43.3 -0.2
K27K                                  IAmb   IAmb     10 15 46.6
      comp=Z,15nm,0.9s
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K27K  Chicken           85.82  26   P        P        10 15 44.0 +0.5
      baz=272
ISLE  Juniper Island    85.85  30   IAmb     IAmb     10 15 45.6
      comp=Z,26nm,0.8s
MOS   Moscow            85.90 325  eP        P        10 15 42.5  -1.5
MOS                                e                  10 19 08.4
MOS                                e                  10 26 02.2
MOS                                 pmax     pmax
      comp=Z,31nm,0.8s
L27K  Beaver Creek,     85.97  27   P        P        10 15 44.5 +0.2
      baz=273
M27K  Edge Creek, AK    85.98  28   P        P        10 15 44.6 +0.1
      baz=273,SNR=7.8
BCAR  Beaver Creek A    85.99  27   P        P        10 15 44.6 +0.2
GRNC  Granite Creek     86.13  30   P        P        10 15 45.1  -0.2
GRNC                                IAmb     IAmb     10 15 47.4
      comp=Z,25nm,0.8s
BARN  Barnard Glacie    86.16  29   P        P        10 15 46.1 +0.6
BARN                                IAmb     IAmb     10 15 47.7
      comp=Z,23nm,0.8s
EGAK  Eagle             86.18  25   P        P        10 15 45.6 +0.4
EGAK  Eagle             86.18  25   P        P        10 15 44.8  -0.4
      baz=273,SNR=7.2
BVCY  Beaver Creek      86.45  28   P        P        10 15 46.5  -0.2
      baz=274
OBN   Obninsk           86.54 325  eP        P        10 15 48.7 +1.6
OBN                                e                  10 19 12.2
OBN                                ePPP     PPP       10 21 08.0
OBN                                 pmax     pmax
      comp=Z,14nm,0.9s
ANN   Anapa             86.61 315  eP        P        10 15 45.8  -2.0
ANN                                e*PP     pP        10 16 18.3 +1.9
ANN                                eS       SKSac     10 25 59.5  -4.2
ANN                                 pmax     pmax
      comp=Z,84nm,1.2s
YUK3  Moose Creek       86.69  28   P        P        10 15 48.3 +0.2
      baz=274
PINM  Pinnacle          86.91  30   P        P        10 15 48.8  -0.2
      baz=274
DAWY  Dawson            86.99  26   P        P        10 15 49.2  -0.1
      baz=275,SNR=9.7
APA   Apatity           87.06 337⇓iP        P        10 15 47.3  -2.1
APA                                 pmax     pmax
      comp=Z,15nm,0.9s
APA                                 MLR      MLR
      comp=Z,1μm,23.0s
I29M  Ogilvie Camp,     87.33  25   P        P        10 15 50.2  -0.7
I29M  Ogilvie Camp,     87.33  25   P        P        10 15 51.0 +0.2
      baz=276
PNL   Peninsula         87.38  30   P        P        10 15 51.9 +0.7
      baz=275
YUK4  Talbot Arm        87.59  29   P        P        10 15 52.8 +0.4
      baz=276
YUK6  Outpost Mounta    87.77  29   P        P        10 15 53.3   0.0
      baz=276
EPYK  Eagle Plains      87.87  24   P        P        10 15 52.7  -0.7
EPYK                                IAmb     IAmb     10 15 55.0
      comp=Z,13nm,1.1s
EPYK  Eagle Plains      87.87  24   P        P        10 15 53.8 +0.3
      baz=277
HYT   Haines Junctio    88.20  29   P        P        10 15 55.4 +0.2
      baz=277,SNR=8.2
M30M  Minto, Yukon      88.32  27   P        P        10 15 55.6  -0.1
      baz=277,SNR=15
N30M  Aishikik Lake     88.32  29   P        P        10 15 55.8 +0.1
      baz=277,SNR=11
INK   Inuvik            88.80  22   P        P        10 15 56.9  -0.8
INK   Inuvik            88.80  22   P        P        10 15 56.9  -0.8
INK                                 pmax     pmax
      comp=Z,8.0nm,1.0s
INK   Inuvik            88.80  22   P        P        10 15 56.8  -0.8
      baz=280
N31M  Braeburn, Yuko    88.94  28   P        P        10 15 59.2 +0.6
N31M                                IAmb     IAmb     10 16 00.0
      comp=Z,7.3nm,0.7s
N31M  Braeburn, Yuko    88.94  28   P        P        10 15 58.7 +0.1
      baz=278
MMAI  Mount Meron Ar    89.10 303   LR       LR       11 03 19.0
      comp=Z,22nm,18.9s,baz=244,slow=40
SKAG  Skagway           89.46  30   P        P        10 16 01.2 +0.2
      baz=279
SPITS Spitsbergen Ar    89.48 349   P        P        10 15 59.6  -1.1
      comp=Z,12nm,1.0s,baz=79,slow=7.5,SNR=2.4
      comp=Z,12nm,1.0s
M31M  Drury Creek, Y    89.48  28   P        P        10 16 00.7  -0.4
M31M  Drury Creek, Y    89.48  28   P        P        10 16 00.7  -0.4
      baz=279
ARCES ARCESS Array B    89.61 340   P        P        10 16 00.7  -0.8
      comp=Z,3.3nm,0.4s,baz=86,slow=6.4,SNR=32
ARCES                               pP       pP       10 16 29.6  -0.4
      comp=Z,4.4nm,0.8s,baz=74,slow=5.2,SNR=2.1
      comp=Z,3.3nm,0.4s
SIT   Sitka             89.83  33   P        P        10 16 02.8 +0.1
      baz=279
BR131 Keskin Array S    89.85 310   P        P        10 16 02.8  -0.7
BR131 Keskin Array S    89.85 310⇑eP        P        10 16 04.6 +1.1
BRTR  Keskin Array B    89.85 310   P        P        10 16 01.7  -1.8
      comp=Z,2.5nm,0.8s,baz=106,slow=5.4,SNR=14
      comp=Z,2.5nm,0.8s
BRTR  Keskin Array B    89.85 310   P        P        10 16 01.8  -1.6
BRTR  Keskin Array B    89.85 310 i P        P        10 16 05.3 +1.8
BRTR                                pmax     pmax
      comp=Z,3.0nm,0.8s
KMBO  Kilima Mbogo      90.33 269   LR       LR       10 51 47.5
      comp=Z,23nm,21.6s,baz=70,slow=32
A36M  Sachs Harbour     90.64  17   P        P        10 16 05.7  -0.6
A36M  Sachs Harbour     90.64  17   P        P        10 16 05.9  -0.3
      baz=288
FINES FINESS Array B    91.16 332   P        P        10 16 07.6  -1.2
      comp=Z,1.8nm,0.3s,baz=78,slow=3.6,SNR=20
FINES                               LR       LR       11 04 01.4
      comp=Z,75nm,18.9s,baz=118,slow=40
      comp=Z,1.8nm,0.3s
FINES FINESS Array B    91.16 332 i P        P        10 16 08.5  -0.3
FINES                               pmax     pmax
      comp=Z,2.0nm,0.3s
CRAG  Craig             91.30  34   P        P        10 16 08.7  -0.9
      baz=280
VSU   Vasula            91.45 329⇓eP        P        10 16 09.0  -1.2
VSU                                 pmax     pmax
      comp=Z,66nm,1.9s
AKASG Malin Array Be    91.46 321   P        P        10 16 09.5  -0.9
      comp=Z,1.2nm,0.4s,baz=67,slow=4.9,SNR=12
AKASG                               LR       LR       11 00 17.5
      comp=Z,37nm,18.0s,baz=43,slow=37
      comp=Z,1.2nm,0.4s
AKASG Malin Array Be    91.46 321   P        P        10 16 09.2  -1.3
AKBB  Malin Array Si    91.46 321⇓eP        P        10 16 09.6  -0.8
AKBB                                pmax     pmax
      comp=Z,17nm,2.3s
WRAK  Wrangell Islan    91.55  33   P        P        10 16 09.8  -0.9
WRAK                                IAmb     IAmb     10 16 12.1
      comp=Z,12nm,0.9s
WRAK  Wrangell Islan    91.55  33   P        P        10 16 10.7  -0.1
      baz=281
C36M  Paulatuk          91.86  20   P        P        10 16 11.1  -0.8
C36M                                IAmb     IAmb     10 16 12.2
      comp=Z,17nm,1.1s
C36M  Paulatuk          91.86  20   P        P        10 16 11.4  -0.4
      baz=289
S34M  Telegraph Cree    91.90  32   P        P        10 16 12.6 +0.3
      baz=282
DLBC  Dease Lake        92.35  31   LR       LR       10 51 03.3
      comp=Z,44nm,21.8s,baz=276,slow=31
DLBC  Dease Lake        92.35  31   P        P        10 16 14.7 +0.2
DLBC                                IAmb     IAmb     10 16 16.0
      comp=Z,9.6nm,1.4s
TGTN  Hyland Airport    92.46  28   P        P        10 16 15.1 +0.1
      baz=285
TAOE  Nuku Hiva Isla    93.08  99  eLR       LR       10 44 59.7
      comp=Z,186nm,30.4s
MLR   Muntele Rosu      94.58 316   LR       LR       11 03 04.5
      comp=Z,68nm,21.4s,baz=70,slow=38
QSPA  South Pole Qui    94.81 180   LR       LR       11 02 18.4
      comp=Z,27nm,18.0s,baz=40,slow=37
BBB   Bella Bella       94.91  37   LR       LR       10 51 42.5
      comp=Z,34nm,20.5s,baz=271,slow=31
UZH   Uzhgorod          96.29 320  eP        P        10 16 35.2 +2.5
RES   Resolute Bay      96.53  10   LR       LR       11 05 35.6
      comp=Z,20nm,18.6s,baz=60,slow=39
MBAR  Mbarara           96.77 270   LR       LR       11 01 36.8
      comp=Z,15nm,18.2s,baz=126,slow=36
HFS   Hagfors           97.33 332   P        P        10 16 36.0  -1.1
      comp=Z,0.9nm,0.5s,baz=335,slow=6.4,SNR=9.0
HFS                                 LR       LR       11 09 04.1
      comp=Z,106nm,18.6s,baz=34,slow=41
      comp=Z,0.9nm,0.5s
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HFS   Hagfors           97.33 332   P        P        10 16 36.0  -1.1
IDI   Anoyia            97.40 306   LR       LR       11 06 04.2
      comp=Z,18nm,20.8s,baz=82,slow=39
NB2   NORSAR Subarra    98.07 334   P        pP       10 17 10.0 +0.6
      comp=Z,3.1nm,0.8s,baz=64,slow=4.6
NOA   NORSAR Array B    98.07 334   P        P        10 16 39.2  -1.3
      comp=Z,1.0nm,0.7s,baz=66,slow=4.5,SNR=2.9
NOA                                 pP       pP       10 17 09.7 +0.3
      comp=Z,2.1nm,0.7s,baz=66,slow=4.6,SNR=5.1
NOA                                 LR       LR       11 05 11.2
      comp=Z,44nm,20.4s,baz=70,slow=38
      comp=Z,1.0nm,0.7s
YKA   Yellowknife Ar    98.12  24   P        P        10 16 40.0  -0.6
      comp=Z,2.4nm,0.7s,baz=301,slow=4.6,SNR=45
YKA                                 PP       PP       10 20 44.7 +3.9
      comp=Z,1.0nm,0.9s,baz=299,slow=7.2,SNR=4.7
YKA                                 PKiKP    PKiKP    10 21 13.3 +0.4
      comp=Z,0.1nm,0.3s,baz=313,slow=1.7,SNR=6.4
YKA                                 PKKPbc   PKKPbc   10 33 13.0  -2.4
      comp=Z,0.1nm,0.5s,baz=122,slow=3.0,SNR=3.7
YKA                                 PKPPKP   P'P'df   10 41 26.2  -1.6
      comp=Z,0.3nm,1.0s,baz=121,slow=3.1,SNR=3.6
      comp=Z,2.4nm,0.7s
YKA   Yellowknife Ar    98.12  24 i P        P        10 16 40.2  -0.4
YKA                                 pmax     pmax
      comp=Z,2.0nm,0.7s
A04D  Lummi Island      99.20  39   P        Pdif     10 16 45.3  -0.4
      baz=288
D03D  Eldon             99.33  40   P        Pdif     10 16 46.0  -0.4
      baz=288
VRAC  Vranov            99.69 322   LR       LR       11 04 14.0
      comp=Z,35nm,18.4s,baz=56,slow=37
B05A  Bryant            99.73  39   P        Pdif     10 16 47.8  -0.3
      baz=289
I04A  Tendick Farm,    100.92  44   P        Pdif     10 16 53.5  -0.1
      baz=288
L04D  Klamath Falls    101.47  45   P        Pdif     10 16 55.3  -0.9
      baz=288
I05D  Terrebonne, OR   101.48  43   P        Pdif     10 16 55.9  -0.3
      baz=289
GERES GERESS Array B   101.63 322   P        Pdif     10 16 57.1 +0.4
      comp=Z,0.2nm,0.4s,baz=123,slow=4.8,SNR=1.8
NVAR  Mina Array Bea   105.56  48   Pdiff    Pdif     10 17 14.4  -0.2
      comp=Z,0.3nm,0.5s,baz=277,slow=3.5,SNR=6.0
NVAR                                PKKPab   PKKPab   10 33 09.7  -0.8
      comp=Z,0.4nm,0.8s,baz=133,slow=5.0,SNR=4.1
NVAR  Mina Array Bea   105.56  48   Pdif     Pdif     10 17 14.3  -0.4
PDAR  Pinedale Array   109.98  41   PKKPbc   PKKPbc   10 32 48.8 +9.2
      comp=Z,0.4nm,0.7s,baz=99,slow=5.6,SNR=4.8
RSSD  Black Hills      112.80  38   P        PKiKP    10 21 41.0 +0.1
      baz=302
ANMO  Albuquerque      115.68  47   P        PKPdf    10 21 46.9 +0.2
      baz=297
OGNE  Ogallala         115.75  40   P        PKiKP    10 21 46.5   0.0
      baz=303
T25A  Trinidad         116.12  44   P        PKiKP    10 21 47.6 +0.1
      baz=299
ECSD  EROS Data Cent   117.39  35   P        PKiKP    10 21 49.6 +0.1
      baz=309
MNTX  Cornudas Mount   117.92  50   P        PKiKP    10 21 51.1 +0.2
      baz=296
SPMN  Marine on St.    118.49  31   P        PKiKP    10 21 52.2 +0.7
      baz=313
MSTX  Muleshoe         118.83  47   P        PKiKP    10 21 52.8 +0.1
      baz=299
SCHQ  Schefferville    119.29   9   PKP      PKiKP    10 21 53.0 +0.2
      comp=Z,1.7nm,0.3s,baz=13,slow=3.1,SNR=16
SCHQ  Schefferville    119.29   9            PKPdf    10 21 51.7  -1.1
PMSA  Palmer Station   119.68 174   PKP      PKPdf    10 21 51.6  -1.5
      comp=Z,10nm,0.5s,baz=161,slow=9.0,SNR=12
KSU1  Kansas State U   120.23  39   P        PKiKP    10 21 55.3 +0.2
      baz=307
TXAR  Lajitas Array    120.28  52   PKP      PKiKP    10 21 55.6   0.0
      comp=Z,0.9nm,0.6s,baz=20,slow=0.7,SNR=13
TXAR                                PKKP     PKKPdf   10 32 34.2  -1.5
      comp=Z,0.5nm,0.9s,baz=118,slow=5.5,SNR=4.2
WMOK  Wichita Mounta   121.27  44   P        PKPdf    10 21 57.0  -0.2
      baz=303
JFWS  Jewell Farm      121.42  32            PKiKP    10 21 57.6 +0.3
JFWS  Jewell Farm      121.42  32   PKIKP    PKiKP    10 21 57.6 +0.3
JFWS  Jewell Farm      121.42  32   P        PKPdf    10 21 56.9  -0.3
      baz=314
P38A  Dawn             121.78  37   PKPdf    PKPdf    10 21 57.6  -0.4
JCT   Junction City    122.72  49   P        PKPdf    10 22 00.0  -0.1
      baz=300,SNR=9.9
S39A  Bolivar          123.13  38            PKPdf    10 22 00.7   0.0
L44A  Lake County Fo   123.15  31   P        PKPdf    10 22 00.0  -0.5
      baz=316
TORD  Torodi Ar. Bea   123.26 289   PKP      PKPdf    10 22 01.1  -0.4
      comp=Z,3.3nm,0.7s,baz=60,slow=2.2,SNR=13
R40A  Maddies Statio   123.39  37            PKiKP    10 22 01.2  -0.1
HDIL  Hopedale         123.57  33   P        PKiKP    10 22 01.6  -0.1
      baz=314
833A  Chaparral WMA,   124.08  51   P        PKiKP    10 22 02.9  -0.1
      baz=299
MGMO  Mountain Grove   124.12  38            PKPdf    10 22 02.3  -0.3
CCM   Cathedral Cave   124.16  37   PKPdf    PKiKP    10 22 02.9   0.0
CCM   Cathedral Cave   124.16  37   PKIKP    PKiKP    10 22 02.9   0.0
CCM   Cathedral Cave   124.16  37   P        PKiKP    10 22 02.7  -0.1
      baz=311
U40A  Yellville        124.26  39   PKPdf    PKPdf    10 22 02.8  -0.1
U40A  Yellville        124.26  39   P        PKPdf    10 22 02.6  -0.2
      baz=309,SNR=10
W39A  Magazine         124.37  41            PKPdf    10 22 02.1  -1.0
W39A  Magazine         124.37  41   P        PKPdf    10 22 03.2 +0.1
      baz=307
MIAR  Mount Ida        124.90  41   P        PKPdf    10 22 04.0  -0.2
      baz=307,SNR=8.2
W41B  Gary Mavity, V   125.38  40   P        PKPdf    10 22 05.1 +0.1
      baz=309
X40A  Basin Creek Fa   125.42  41   P        PKiKP    10 22 05.6 +0.1
      baz=308
O48B  Farmland         125.97  31   P        PKPdf    10 22 05.9  -0.1
      baz=318
LONY  Lake Ozonia      126.86  20   P        PKiKP    10 22 08.0  -0.1
      baz=332
ERPA  Erie             126.94  25   P        PKiKP    10 22 08.2  -0.1
      baz=325
ACSO  Alum Creek Sta   127.07  29   P        PKiKP    10 22 08.5  -0.1
      baz=321
M53A  WI Miller and    127.19  26   P        PKPdf    10 22 08.2  -0.1
      baz=324
WVT   Waverly          127.47  36   PKPdf    PKiKP    10 22 09.3  -0.2
WVT   Waverly          127.47  36   PKIKP    PKiKP    10 22 09.3  -0.2
WVT   Waverly          127.47  36   P        PKiKP    10 22 09.4  -0.2
      baz=314
OXF   Oxford           127.60  39   P        PKiKP    10 22 09.6  -0.2
      baz=311
O53A  New Philadelph   127.90  28   P        PKPdf    10 22 09.7   0.0
      baz=323
P52A  Corning          127.95  29   P        PKPdf    10 22 10.0 +0.2
      baz=321
LBNH  Lisbon           128.05  18   P        PKiKP    10 22 10.4  -0.1
      baz=335
PLAL  Pickwick Lake    128.10  37            PKPdf    10 22 10.1  -0.1
BINY  Binghamton       128.48  22   P        PKiKP    10 22 11.7 +0.2
      baz=330
SSPA  Standing Stone   129.05  25   P        PKiKP    10 22 12.2  -0.3
      baz=327
L61B  Northampton      129.43  19   P        PKiKP    10 22 13.3   0.0
      baz=334
TZTN  Tazewell         129.58  33   P        PKPdf    10 22 13.1   0.0
      baz=318
HRV   Adam Dziewonsk   129.74  18   P        PKiKP    10 22 13.8   0.0
      baz=335
LRAL  Lakeview Retre   130.07  38   PKPdf    PKPdf    10 22 13.8  -0.3
LRAL  Lakeview Retre   130.07  38   P        PKiKP    10 22 14.7  -0.1
      baz=313
PAL   Palisades        130.28  21   P        PKiKP    10 22 14.9  -0.1
      baz=332
BLA   Blacksburg       130.68  30   P        PKiKP    10 22 15.8  -0.2
      baz=322
DBIC  Dimbokro         131.06 283   PKP      PKPdf    10 22 14.9  -1.4
      comp=Z,2.3nm,0.6s,baz=11,slow=5.2,SNR=1.7
DBIC                                SKPbc    SKPab    10 25 31.3 +0.6
      comp=Z,6.4nm,0.7s,baz=73,slow=4.0,SNR=5.6
DBIC  Dimbokro         131.06 283            PKPdf    10 22 14.4  -1.9
DBIC  Dimbokro         131.06 283   PKIKP    PKPdf    10 22 15.0  -1.4
KMSC  Kings Mountain   131.82  32   P        PKiKP    10 22 18.3  -0.1
      baz=320
TIGA  Tifton           133.26  37   P        PKiKP    10 22 20.8  -0.5
      baz=315
PLCA  Paso Flores      140.82 158   PKP      PKPdf    10 22 32.4  -1.5
      comp=Z,2.3nm,0.7s,baz=217,slow=5.5,SNR=5.2
ACON  Acoyapa          143.45  62            PKPbc    10 22 37.5 +0.8
ORTG  Ortega, Santa    143.85  65            PKPbc    10 22 37.7  -0.3
ROC1  El Roble         147.17 151            PKPdf    10 22 46.1 +0.7
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OTAV  Otavalo          153.59  80  eP        PKPdf    10 22 55.6  -0.6
ATAH  Atahualpa        154.17  96   PKPbc    PKiKP    10 23 07.0 +1.7
      comp=Z,10nm,0.7s,baz=343,slow=0.8,SNR=7.7
CBOC  Ciudad Bolivar   154.21  66  eP        PKiKP    10 23 06.1 +1.1
CRJC  Cerrejon, Guaj   154.28  52  eP        PKiKP    10 23 05.3 +0.3
PLMC  San Jos del P    154.34  68  eP        PKPbc    10 23 04.9  -0.2
ZARC  Zaragoza, Cauc   154.53  61  eP        PKPdf    10 22 57.6 +0.7
CPSB  Cacapava Do Su   154.62 178  eP        PKPdf    10 22 56.6   0.0
ANIL  Santa Ana        155.30  68  eP        PKPdf    10 23 08.7  +10
MARP  Paez Belalcaza   155.35  72  eP        PKPdf    10 23 09.4  +11
ORTC  Ortega, Tolima   155.66  69  eP        PKPdf    10 23 08.7  +10
CNLB  Canela           155.67 184  eP        PKPdf    10 22 59.4 +1.3
PRAC  Prado            156.07  69  eP        PKPdf    10 23 09.4  +10
BARC  Barichara        156.42  61  eP        PKPab    10 23 29.7 +1.0
CHIC  Chingaza         156.79  66  eP        PKPdf    10 23 12.8  +12
CPUP  Villa Florida    158.21 168   PKPab    PKPab    10 23 36.2 +0.7
      comp=Z,3.2nm,0.9s,baz=220,slow=4.6,SNR=3.9
CAM01 Campos-RJ        160.16 211  eP        PKPdf    10 23 04.3 +0.6
PTGB  Pitanga          160.30 181  eP        PKPdf    10 23 03.8  -0.1
LPAZ  La Paz           160.96 128   PKP      PKPdf    10 23 06.4 +0.9
      comp=Z,3.0nm,0.9s,baz=257,slow=2.8,SNR=9.8
LPAZ                                PKPab    sPKPdf   10 23 47.8 +0.2
      comp=Z,4.0nm,0.9s,baz=279,slow=8.9,SNR=5.6
LPAZ  La Paz           160.96 128            PKPdf    10 23 05.4  -0.1
LPAZ  La Paz           160.96 128  eP        PKPdf    10 23 04.9  -0.6
VAO   Valinhos         161.23 196  eP        PKPdf    10 23 04.7  -0.3
ABR01 Abrolhos, BA     161.26 225  eP        PKPdf    10 23 05.0 +0.1
TRCB  Terra Rica       162.22 180  eP        PKPdf    10 23 04.8  -1.1
TBTG  Tabatinga, AM    162.65  88  eP        PKPdf    10 23 06.5  -0.1
SIV   San Ignacio      166.15 143   PKP      PKPdf    10 23 10.5 +0.8
      comp=Z,1.8nm,0.7s,baz=193,slow=2.4,SNR=8.6
NBPN  Ponto Novo - B   166.45 243  eP        PKPdf    10 23 10.2 +0.3
```

ISU ***13*** *10:19:14, 41°.37N×70°.21E, h5^{km}*

NNC ***13*** *10:19:16.9±3.7, 40°.84N×70°.01E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=26.8km s-min=18.7km az=35.0*

KRNET ***13*** *10:19:18.3±0.1, 41°.18N×70°.14E, h10^{km}, mb3.1*

SOME ***13*** *10:19:18.0, 40°.93N×69°.88E, h20^{km}*

ISC 13 10:19:19.1±0.8**, 41°.14N**±0°.03×**70°.14E**±0°.03**, h10^{km}, n17, σ1^s.88**/30**, 11C-4D, Kyrgyzstan**

```
Code  Station Name          Δ°   AZ°    Phase ID            Time     Res
                                        Op       ISC       h  m  s   ISC
CHDK  Chadak               0.49 110     P        Pg       10 19 26.0  -2.8
CHDK                                    S        Sg       10 19 35.1  -0.2
TAS   Tashkent             0.66 286⇑eP           Pg       10 19 30.8  -1.2
      baz=84
TAS                                 ⇑eS          Sg       10 19 39.4  -1.3
      baz=84
TRKS  Terek-Say            0.85  62⇓iP           Pg       10 19 33.8  -1.7
      baz=70
TRKS                                ⇓iS          Sg       10 19 45.1  -1.5
      baz=70
IUG   Iuzhnay              1.01 355    eP        Pn       10 19 41.2 +1.7
      370nm,0.3s
IUG                                    eS        Sn       10 19 58.0 +4.2
      140nm,0.3s
IUG   Iuzhnay              1.01 355     P        Pn       10 19 42.2 +2.7
      370nm,0.3s
IUG                                     S        Sn       10 20 01.0 +7.2
      140nm,0.3s
BTK   Batken               1.20 154⇑iP           Pg       10 19 41.9  -0.3
      baz=55
BTK                                 ⇑iS          Sn       10 19 58.6 +0.2
      baz=55
FRG   Fergana              1.47 121     P        Pn       10 19 45.0  -0.7
ARK   Arkit                1.52  64⇑iP           Pg       10 19 46.9  -1.4
      baz=65
ARK                                 ⇑iS          Sg       10 20 07.0  -1.0
      baz=65
SHAK  Shakhimardan         1.70 134     P        Pb       10 19 49.9  -0.7
BRLS  Borolday             1.90 353    eP        Pb       10 19 51.5  -2.4
      4.1nm,0.2s
BRLS                                   eS        Sb       10 20 15.8  -1.9
      14nm,0.5s
BRLS  Borolday             1.90 353     P        Pb       10 19 51.5  -2.4
      14nm,0.3s
BRLS                                    S        Sb       10 20 15.8  -1.9
      10nm,0.3s
KK31  Karatay Array        1.98   8     P        Pg       10 19 56.2  -0.9
      1.6nm,0.3s,baz=190,slow=15,SNR=25
KK31                                  ⇑S         Sg       10 20 25.1 +2.3
      3.6nm,0.4s,baz=190,slow=25,SNR=3.5
KKAR  Karatay Array        1.98   8⇓iP           Pb       10 19 54.6  -0.7
      baz=8.0
KKAR                                ⇓iS          Sg       10 20 20.9  -1.9
      baz=8.0
GAR   Garm                 2.14 176⇑iP           Pb       10 19 57.9  -0.2
      baz=76
GAR                                 ⇑iS          Sb       10 20 26.5 +1.7
      baz=76
MRKS  Merke                2.81  54    eP        Pg       10 20 12.8  -0.1
      4.9nm,0.4s
MRKS                                   eS        Sg       10 20 51.9 +2.7
      9.8nm,0.5s
MRKS  Merke                2.81  54     Pg       Pg       10 20 13.1 +0.2
      4.9nm,0.4s
MRKS                                    Lg       Lg       10 20 52.1
      9.8nm,0.5s
UCH   Uchtor               3.45  70⇑iP           Pn       10 20 15.2 +1.9
      baz=71
UCH                                 ⇑iS          Sn       10 20 56.5 +2.0
      baz=71
```

IDC ***13*** *10:22:16.6±2.8, 32°.18S×178°.33W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=62.5km s-min=44.4km az=122.0*

NEIC ***13*** *10:22:40.6±0.9, 33°.63S±0°.10×179°.6W±0°.2, h138^{km}±12^{km}, mb4.1/9, Error ellipse: s-maj=27.2km s-min=4.1km az=120.0*

ISC 13 10:22:40.2±1.1**, 33°.6S**±0°.1×**179°.6W**±0°.2**, h150^{km}, n17, σ1^s.61**/17**, mb4.2**/8**, South of Kermadec Islands**

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Code  Station Name          Δ°   AZ°    Phase ID            Time     Res
                                        Op       ISC       h  m  s   ISC
MXZ   Matakaoa Point       4.32 202     Pn       Pn       10 23 44.6   0.0
RAO   Raoul Island         4.55  19     Pn       Pn       10 23 48.3 +0.5
URZ   Urewera              5.37 209     Pn       Pn       10 24 00.4 +1.9
      0.9nm,0.3s,baz=77,slow=19,SNR=8.3
URZ                                     Sn       Sn       10 25 19.0  +19
      0.9nm,0.3s,baz=217,slow=22,SNR=1.8
      4.0nm,0.4s
URZ   Urewera              5.37 209              Pn       10 23 58.3  -0.2
BKZ   Black Stump Fm       6.40 208     Pn       Pn       10 24 11.5  -0.7
STKA  Stephens Creek      32.55 262     P        P        10 28 57.0  -0.1
CTA   Charters Tower      33.13 285     P        P        10 29 00.9  -1.4
      4.7nm,1.0s,baz=94,slow=9.4,SNR=1.9
      4.7nm,1.0s
CTAO  Charters Tower      33.13 285     P        P        10 29 01.5  -0.8
AS31  Alice Springs       41.68 271     P        P        10 30 16.2 +1.9
AS31                                    IAmb     IAmb     10 30 32.7
      comp=Z,1.7nm,1.2s
ASAR  Alice Springs       41.69 271     P        P        10 30 16.2 +1.9
      comp=Z,0.4nm,0.4s,baz=109,slow=7.5,SNR=9.8
      comp=Z,0.4nm,0.4s
WR0   Warramunga Arr      42.79 277     P        P        10 30 24.3 +1.1
WR0                                     IAmb     IAmb     10 30 31.6
      comp=Z,10nm,1.4s
WB2   Warramunga Arr      42.95 276     P        P        10 30 25.4 +0.8
WB2                                     IAmb     IAmb     10 30 45.8
      comp=Z,7.1nm,1.1s
WRAB  Tennant Creek       42.96 276     P        P        10 30 25.4 +0.8
WRA   Warramunga Arr      42.97 276     P        P        10 30 25.2 +0.5
      comp=Z,0.8nm,0.5s,baz=112,slow=7.7,SNR=16
      comp=Z,0.8nm,0.5s
WB0   Warramunga Arr      43.00 277     P        P        10 30 25.7 +0.7
WB0                                     IAmb     IAmb     10 30 52.1
      comp=Z,9.1nm,1.4s
QSPA  South Pole Qui      56.54 180     P        P        10 32 07.7 +1.0
QSPA                                    IAmb     IAmb     10 32 29.5
      comp=Z,4.5nm,1.4s
FINES FINESS Array B     147.59 337     PKPbc    PKPdf    10 41 59.0  -4.2
      comp=Z,0.7nm,0.4s,baz=19,slow=4.7,SNR=9.3
```

RSNC ***13*** *10:32:02.0±1.0, 6°.79N×73°.12W, h144^{km}±3^{km}, ML3.2, Mw3.7, Fault plane solution: NP1:ϕ_s18.00000°, δ78.00000°, λ-162.00000°.*

IDC ***13*** *10:32:04.7±4.5, 6°.81N×73°.90W, h170^{km}±25^{km}, mb2.8/1, mbtmp3.3/1, Error ellipse: s-maj=206.1km s-min=37.1km az=93.0*

ISC 13 10:32:01.1±0.9, 6°.83N±0°.03×73°.11W±0°.04, h148^{km}±6^{km}, n37, σ1^{s}.77/69, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	197	⇓iP	Pn	10 32 21.6	0.0
BARC				eS	Sn	10 32 36.2	-1.0
BARC				i		10 32 37.5	
	comp=Z,464nm,0.2s						
PAMC	Pamplona, Colo	0.65	39	⇓eP	Pn	10 32 24.5	+0.8
PAMC				eS	Sn	10 32 41.4	+0.5
PAMC				i		10 32 43.8	
	comp=Z,872nm,0.6s						
BRRC	Barranca, Sant	0.66	295	⇑iP	Pn	10 32 23.6	+0.4
BRRC				eS	Sn	10 32 40.2	+0.3
BRRC				i		10 32 44.9	
	comp=Z,318nm,0.1s						
RUSC	La Rusia	0.93	178	eP	Pn	10 32 25.6	-0.2
RUSC				eS	Sn	10 32 43.8	-0.7
RUSC				i		10 32 45.3	
	comp=Z,260nm,0.3s						
PTBC	PUERTO BERRIO,	1.37	258	eP	Pn	10 32 28.4	-0.8
PTBC				eS	Sn	10 32 49.3	-1.3
PTBC				i		10 32 52.2	
	comp=Z,265nm,0.2s						
TAMC	Tame, Arauca	1.37	107	⇓iP	Pn	10 32 29.9	+0.7
TAMC				eS	Sn	10 32 50.7	0.0
TAMC				i		10 32 55.8	
	comp=Z,99nm,0.3s						
OCAC	Ocana	1.41	352	⇑iP	Pn	10 32 29.9	+0.1
OCAC				eS	Sn	10 32 51.7	-0.1
SPBC	San Pablo de B	1.51	219	eP	Pn	10 32 30.6	-0.2
SPBC				eS	Sn	10 32 52.6	-0.8
SPBC				i		10 32 55.9	
	comp=Z,205nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	291	eP	Pn	10 32 34.7	+0.2
ZARC				eS	Sn	10 32 60.0	-0.1
ZARC				i		10 33 05.8	
	comp=Z,353nm,0.3s						
NORC	Norcasia	2.15	234	eP	Pn	10 32 37.8	-0.2
NORC				eS	Sn	10 33 06.3	-0.1
NORC				i		10 33 08.2	
	comp=Z,141nm,0.4s						
CHIC	Chingaza	2.27	196	eP	Pn	10 32 39.8	0.0
CHIC				eS	Sn	10 33 08.6	-0.9
CHIC				i		10 33 12.8	
	comp=Z,43nm,0.3s						
ROSC	El Rosal	2.31	211	P	Pn	10 32 41.9	+1.6
	comp=Z,53nm,0.3s,baz=36,slow=17,SNR=28						
ROSC				S	Sn	10 33 10.2	-0.1
	comp=Z,92nm,0.3s,baz=121,slow=17,SNR=9.3						
ROSC	El Rosal	2.31	211	eP	Pn	10 32 41.6	+1.3
ROSC				eS	Sn	10 33 11.1	+0.7
ROSC				i		10 33 19.4	
	comp=Z,127nm,0.4s						
HELC	Santa Helena	2.48	255	eP	Pn	10 32 42.8	+0.5
HELC				eS	Sn	10 33 13.4	-0.6
HELC				i		10 33 20.7	
	comp=Z,95nm,0.3s						
UREC	San Jos de Ur	2.57	291	eP	Pn	10 32 42.2	-0.8
UREC				eS	Sn	10 33 12.8	-2.6
UREC				i		10 33 23.3	
	comp=Z,114nm,0.3s						
LL1C	La Loma 1 Cana	2.73	351	eP	Pn	10 32 44.9	-0.1
LL1C				eS	Sn	10 33 20.4	+1.4
PTGC	Puerto Gaitan,	2.79	160	⇑eP	Pn	10 32 44.8	-1.0
PTGC				eS	Sn	10 33 17.5	-2.8
PTGC				i		10 33 20.4	
	comp=Z,103nm,0.3s						
LL6C	La Loma 6 Bece	2.89	357	eP	Pn	10 32 46.3	-0.7
LL6C				eS	Sn	10 33 20.4	-2.1
LL6C				i		10 33 23.4	
	comp=Z,33nm,0.3s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	10 32 49.7	+0.7
CBOC				eS	Sn	10 33 25.9	-0.3
CBOC				i		10 33 30.7	
	comp=Z,43nm,0.3s						
SDV	Santo Domingo	3.19	50	eP	Pn	10 32 51.4	+0.3
SDV				eS	Sn	10 33 28.1	-1.6
SDV				i		10 33 33.2	
	comp=Z,57nm,0.6s						
ARGC	Ariguani, Magd	3.21	340	eP	Pn	10 32 52.8	+1.7
ARGC				eS	Sn	10 33 31.4	+1.5
ARGC				i		10 33 37.5	
	comp=Z,25nm,0.4s						
ANIL	Santa Ana	3.26	225	eP	Pn	10 32 52.4	+0.4
ANIL				eS	Sn	10 33 31.6	+0.2
PRAC	Prado	3.56	210	eP	Pn	10 32 55.2	-0.5
PRAC				eS	Sn	10 33 36.8	-1.3
PRAC				i		10 33 42.3	
	comp=Z,88nm,0.3s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	10 32 56.0	-0.1
ORTC				eS	Sn	10 33 37.8	-1.0
ORTC				i		10 33 44.7	
	comp=Z,58nm,0.3s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	10 32 56.0	-1.1
SJCC				eS	Sn	10 33 37.0	-3.5
SJCC				i		10 33 41.0	
	comp=Z,37nm,0.5s						
PLMC	San Jos del P	3.69	239	eP	Pn	10 32 57.7	+0.4
PLMC				eS	Sn	10 33 39.5	-1.5
PLMC				i		10 33 43.0	
	comp=Z,41nm,0.2s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	10 33 02.3	-1.4
CRJC				eS	Sn	10 33 48.4	-3.9
CRJC				i		10 33 54.4	
	comp=Z,47nm,0.4s						
GUVC	San Jose del G	4.28	174	eP	Pn	10 33 04.4	-0.7
GUVC				eS	Sn	10 33 52.6	-2.3
GUVC				i		10 33 56.1	
	comp=Z,68nm,0.3s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	10 33 04.8	-0.4
YOTC				eS	Sn	10 33 54.8	-0.3
YOTC				i		10 34 04.2	
	comp=Z,9.0nm,0.3s						
SMRC	Santa Marta, M	4.44	346	eS	Sn	10 33 54.4	-4.2
MACC	Macarena, Meta	4.71	189	eP	Pn	10 33 08.6	-2.2
MACC				eS	Sn	10 34 00.3	-4.7
MACC				i		10 34 06.8	
	comp=Z,17nm,0.5s						
MARP	Paez Belalcaza	4.87	216	eP	Pn	10 33 13.0	-0.1
URIC	Uribia, Colomb	4.96	13	eP	Pn	10 33 12.0	-2.0
URIC				eS	Sn	10 34 06.7	-4.2
GARC	Garzon, Huila	5.19	207	eP	Pn	10 33 15.5	-1.8
GARC				eS	Sn	10 34 12.3	-4.3
GARC				i		10 34 16.1	
	comp=Z,25nm,0.2s						
YKA	Yellowknife Ar	63.26	340	P	P	10 42 13.1	-0.5
	comp=Z,0.2nm,0.6s,baz=133,slow=6.9,SNR=6.8						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	149.12	234	PKPbc	PKPdf	10 51 31.5	+2.9
	comp=Z,0.3nm,0.8s,baz=114,slow=2.9,SNR=2.6						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPdf	10 51 34.8	+4.3
	comp=Z,0.2nm,0.7s,baz=104,slow=3.2,SNR=1.4						

IDC 13 10:38:23.4±2.3, 10°.28S×73°.11W, h0^{km}, mb3.4/2, mbtmp3.2/3, ML3.2/1, MS3.3/3, Error ellipse: s-maj=106.7km s-min=31.9km az=45.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	7.69	141	Pn	Pn	10 40 17.3	0.0
	0.2nm,0.3s,baz=321,slow=13,SNR=2.2						
LPAZ				Lg	Lg	10 42 11.7	
	0.5nm,0.3s,baz=153,slow=12,SNR=5.9						
	0.3nm,0.5s						
SDV	Santo Domingo	19.20	7	LR	LR	10 51 44.4	
	comp=Z,39nm,20.0s,baz=338,slow=42						
TXAR	Lajitas Array	49.19	324	P	P	10 47 13.6	0.0
	0.1nm,0.5s,baz=159,slow=8.7,SNR=2.4						
	0.1nm,0.5s						
PMSA	Palmer Station	54.78	175	LR	LR	11 12 53.2	
	comp=Z,60nm,18.2s,baz=248,slow=38						
SNAA	Sanae	74.14	162	LR	LR	11 22 26.8	
	comp=Z,21nm,18.4s,baz=332,slow=36						
TORD	Torodi Ar. Bea	77.81	74	P	P	10 50 23.3	0.0
	0.6nm,0.8s,baz=241,slow=5.9,SNR=2.1						
YKA	Yellowknife Ar	79.32	342	P	P	10 50 30.6	0.0
	0.5nm,0.8s,baz=140,slow=6.1,SNR=14						
	0.5nm,0.8s						

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*HEL **13** 10:45:30.1±0.1, 64°.68N×30°.66E, h0^{km}, ML2.0, Explosion*

*IDC **13** 10:45:31.2±1.6, 64°.60N×30°.64E, h0^{km}, mbtmp3.0/3, ML1.9/3, Error ellipse: s-maj=21.5km s-min=8.0km az=117.0*

*KOLA **13** 10:45:33.0, 64°.71N×30°.03E, h0^{km}, ML2.2*

ISC 13 10:45:29.4±1.1, 64°.75N±0°.03×31°.09E±0°.05, h0^{km}, n25, σ1^{s}.50/34, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	Riekki	1.38	339	PG	Pg	10 45 55.0	-0.7
	baz=167						
KU6				MSG		10 46 12.1	
	comp=Z,8.2nm,0.2s						
KU6				SN	Sb	10 46 14.3	+0.2
MSF	Maaselka	1.45	325	PG	Pn	10 45 55.6	-1.2
	baz=154						
MSF				SN	Sg	10 46 15.5	-0.4
OLKF	Oulanka, Finla	1.73	337	PG	Pn	10 46 01.2	+0.6
JOF	Joensuu	1.84	177	PG	Pn	10 46 02.1	0.0
JOF				SG	Sn	10 46 26.6	+0.6
OUL	Oulu	2.24	281	PG	Pn	10 46 07.3	-0.3
	baz=104						
OUL				SG	Sn	10 46 33.6	-2.2
OUF	Merijarvi	2.77	265	PB	Pn	10 46 14.6	-0.3
	baz=77						
OUF				MSG		10 46 46.3	
	comp=Z,11nm,0.2s						
OUF				SG	Sn	10 46 48.8	-0.2
RNF	Rovaniemi	2.81	314	PB	Pn	10 46 17.2	+1.7
	baz=129						
OBF0	Syolatti, Pyha	2.96	268	PB	Pn	10 46 18.0	+0.5
	baz=80						
OBF0				SG	Sb	10 46 58.7	-0.9
APA0	Apatity Array	2.98	14	S	Sb	10 47 00.1	+0.1
SUF	Sumiainen	2.99	229	PB	Pn	10 46 18.7	+0.8
	baz=42						
SUF				MSG		10 46 52.8	
	comp=Z,3.3nm,0.2s						
SUF				SG	Sn	10 46 55.8	+1.2
VRF	Varrio	3.07	349	PB	Pn	10 46 21.1	+2.0
VRF				MSG		10 47 01.6	
	comp=Z,3.1nm,0.2s						
TOF	Tornio	3.13	298	PG	Pb	10 46 23.7	-2.1
TOF				MSG		10 46 58.2	
	comp=Z,4.6nm,0.2s						
KAF	Kangasniemi	3.41	221	PB	Pn	10 46 25.9	+2.2
LVZ	Lovozero	3.48	23	S	Sb	10 47 14.9	+0.4
KEF	Keuruu	3.81	230	PB	Pn	10 46 30.1	+1.0
KLF	Kolari	3.83	314	PB	Pn	10 46 31.5	+2.0
PAJU	Pajala	3.99	309	PG	Pb	10 46 41.6	+1.2
FIA0	FINESS Array S	4.02	217	PN	Pn	10 46 31.3	-0.8
	baz=32						
FIA0				SG	Sb	10 47 30.2	+0.1
FINES	FINESS Array B	4.02	217	Pn	Pn	10 46 31.2	-0.8
	comp=Z,0.1nm,0.3s,baz=34,slow=13,SNR=5.1						
FINES				Lg	Lg	10 47 28.8	
	comp=Z,1.0nm,0.3s,baz=37,slow=26,SNR=10						
	comp=Z,3.7nm,1.1s						
ERTU	Ertsjaerv	4.11	300	PN	Pn	10 46 34.0	+0.8
ERTU				SG	Sb	10 47 36.0	+3.5
HEF	Hetta	4.72	324	SG	Sb	10 47 53.8	+3.6
ARCES	ARCESS Array B	5.28	338	Pn	Pn	10 46 49.7	+0.4
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=23						
ARCES				Sn	Sn	10 47 49.4	-1.4
	comp=Z,0.1nm,0.3s,baz=154,slow=22,SNR=1.7						
ARCES				Lg	Lg	10 48 08.0	
	comp=Z,0.3nm,0.3s,baz=158,slow=27,SNR=5.7						
	comp=Z,0.6nm,0.3s						
ARCES	ARCESS Array B	5.28	338	P	Pn	10 46 50.0	+0.7
ARCES				S	Sn	10 47 48.3	-2.5
I37NO	I37NO	6.54	317	i		11 26 00.0	
	baz=128,slow=325,SNR=1.8						
NOA	NORSAR Array B	9.78	257	Pn	Pn	10 47 46.7	-4.4
	baz=55,slow=11,SNR=1.6						
NOA				Lg	Lg	10 50 30.5	
	baz=29,slow=21,SNR=1.6						
	comp=Z,0.7nm,0.8s						

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*IDC **13** 11:05:27.1±0.9, 28°.86N×43°.48W, h0^{km}, mb3.6/8, mbtmp3.6/8, MS3.4/21, Error ellipse: s-maj=30.5km s-min=21.8km az=11.0*

ISC 13 11:05:29.1±0.8, 28°.8N±0°.2×43°.5W±0°.1, h14^{km}, n34, σ0^{s}.26/11, mb3.8/9, MS3.4/21, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	San Juan	23.33	248	LR	LR	11 20 24.0	
	comp=Z,25nm,19.0s,baz=3.5,slow=38						
SADO	Sadowa	32.39	309	LR	LR	11 24 12.9	
	comp=Z,51nm,18.5s,baz=97,slow=35						
TKL	Tuckaleechee C	34.58	292	LR	LR	11 23 29.8	
	comp=Z,36nm,19.5s,baz=77,slow=31						
DBIC	Dimbokro	42.58	114	LR	LR	11 28 31.1	
	comp=Z,49nm,19.3s,baz=292,slow=32						
TORD	Torodi Ar. Bea	44.68	101	P	P	11 13 41.6	-0.3
	11nm,0.6s,baz=298,slow=9.6,SNR=5.1						
H10N2	ASCENSION HYDR	45.93	138	T	T	12 02 39.5	
	baz=323,slow=75,SNR=564						
H10N3	ASCENSION HYDR	45.93	138	T	T	12 02 36.4	
	baz=323,slow=75,SNR=480						
H10N1	ASCENSION HYDR	45.95	138	T	T	12 02 39.8	
	baz=323,slow=75,SNR=531						
H10S3	ASCENSION HYDR	46.73	139	T	T	12 03 33.7	
	baz=323,slow=74,SNR=166						
H10S2	ASCENSION HYDR	46.75	139	T	T	12 03 34.9	
	baz=257,slow=74,SNR=32						
LPAZ	La Paz	50.79	211	P	P	11 14 30.1	+0.2
	0.9nm,0.6s,baz=45,slow=8.6,SNR=2.4						
	0.9nm,0.6s						
TXAR	Lajitas Array	52.07	286	P	P	11 14 38.9	0.0
	0.5nm,0.7s,baz=102,slow=7.5,SNR=10						
TXAR				LR	LR	11 35 50.4	
	comp=Z,19nm,20.2s,baz=114,slow=35						
	0.5nm,0.7s						
RES	Resolute Bay	52.57	345	LR	LR	11 34 25.5	
	comp=Z,25nm,20.3s,baz=34,slow=33						
ANMO	Albuquerque	53.06	294	LR	LR	11 34 06.2	
	comp=Z,41nm,21.9s,baz=65,slow=32						
PDAR	Pinedale Array	54.09	304	P	P	11 14 53.8	0.0
	0.8nm,0.8s,baz=84,slow=8.3,SNR=5.5						
PDAR				LR	LR	11 36 43.1	
	comp=Z,52nm,18.9s,baz=83,slow=35						
	0.8nm,0.8s						
FINES	FINESS Array B	55.39	33	P	P	11 15 02.6	0.0
	1.7nm,0.8s,baz=243,slow=6.1,SNR=1.3						
	1.7nm,0.8s						
YKA	Yellowknife Ar	56.18	328	P	P	11 15 07.9	-0.3
	0.4nm,0.8s,baz=91,slow=7.5,SNR=6.5						
YKA				LR	LR	11 39 03.1	
	comp=Z,36nm,18.1s,baz=306,slow=36						
	0.4nm,0.8s						
NEW	Newport	58.54	311	LR	LR	11 39 17.6	
	comp=Z,31nm,19.0s,baz=30,slow=35						
ELK	Elko	58.63	302	LR	LR	11 38 52.7	
	comp=Z,30nm,20.2s,baz=121,slow=34						
LPIG	La Paz	59.32	282	LR	LR	11 41 00.9	
	comp=Z,15nm,19.6s,baz=28,slow=36						
PFO	Pinyon Flats O	61.41	295	LR	LR	11 39 51.3	
	comp=Z,31nm,20.8s,baz=78,slow=34						
NVAR	Mina Array Bea	61.49	300	P	P	11 15 45.9	+0.1
	0.1nm,0.3s,baz=61,slow=7.3,SNR=1.9						
	0.1nm,0.3s						
BRTR	Keskin Array B	62.85	58	P	P	11 15 55.4	+0.5
	0.7nm,0.7s,baz=266,slow=6.9,SNR=3.8						
	0.7nm,0.7s						
INK	Inuvik	63.58	335	LR	LR	11 41 54.8	
	comp=Z,30nm,19.1s,baz=184,slow=34						
YBH	Yreka Blue Hor	63.85	305	LR	LR	11 43 17.2	
	comp=Z,23nm,18.1s,baz=120,slow=36						
DLBC	Dease Lake	64.17	324	LR	LR	11 43 36.9	
	comp=Z,41nm,18.8s,baz=301,slow=36						
ILAR	Eielson Array	69.75	334	P	P	11 16 38.6	+0.2
	0.5nm,0.8s,baz=65,slow=3.8,SNR=9.3						
	0.5nm,0.8s						
KDAK	Kodiak Island	75.45	328	LR	LR	11 50 18.3	
	comp=Z,41nm,20.1s,baz=122,slow=36						
TIXI	Tiksi	79.66	2	LR	LR	11 48 58.1	
	comp=Z,12nm,20.5s,baz=184,slow=33						
LSZ	Lusaka	81.91	112	LR	LR	11 53 29.7	
	comp=Z,34nm,18.4s,baz=291,slow=35						
SUR	Sutherland	86.19	130	LR	LR	11 49 05.8	
	comp=Z,48nm,18.4s,baz=260,slow=30						
PETK	Petropavlovsk-	96.35	347	LR	LR	12 05 34.8	
	comp=Z,21nm,18.2s,baz=277,slow=38						
CMAR	Chiang Mai Arr	120.60	42	PKP	PKiKP	11 24 21.0	-0.3
	1.2nm,0.3s,baz=321,slow=1.3,SNR=1.8						
VNDA	Vanda	129.85	187	PKP	PKiKP	11 24 37.9	0.0
	0.3nm,0.9s,baz=236,slow=2.5,SNR=4.7						

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*TAP **13** 11:13:04.6, 24°.69N×122°.01E, h7^{km}, ML3.0, C*

*JMA **13** 11:13:05.3±0.1, 24°.7N±0°.4×122°.0E±0°.4, h35^{km}, MV2.4/8, TAIWAN REGION*

ISC 13 11:13:04.0±1.0, 24°.68N±0°.02×122°.08E±0°.03, h9^{km}±8^{km}, n78, σ0^{s}.48/123, 6C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.21	320	⇑iP	Pg	11 13 08.9	+0.5
	baz=337						
EGS				iS	Sg	11 13 11.2	-0.1
	baz=337						
TWC	Suao	0.22	251	⇓iP	Pg	11 13 08.6	0.0
	baz=240						
TWC				iS	Sg	11 13 10.7	-0.9
	baz=240						
NTC	Toucheng	0.28	307	P	Pg	11 13 10.0	+0.3
	baz=314						
NTC				eS	Sg	11 13 13.7	+0.1
	baz=314						
ILA	Ilan	0.31	286	P	Pg	11 13 10.5	+0.2
	baz=278						
ILA				eS	Sg	11 13 14.4	-0.1
	baz=278						
NDS	Dongshan	0.34	262	⇓iP	Pg	11 13 10.6	0.0
	baz=259						
NDS				S	Sg	11 13 15.3	+0.2
	baz=259						
TWB1	Santiao Chiao	0.34	346	⇑iP	Pb	11 13 11.5	-0.7
	baz=344						
TWB1				eS	Sb	11 13 16.6	-1.1
	baz=344						
EWUT	Wuta	0.36	230	P	Pg	11 13 11.4	+0.3
	baz=221						
EWUT				eS	Sg	11 13 15.7	-0.2
	baz=221						
TIPB	Shuangxi	0.37	321	⇑iP	Pg	11 13 11.8	+0.5
	baz=328						
TIPB				iS	Sg	11 13 16.0	-0.3
	baz=328						
TWE	Neicheng	0.38	276	⇓iP	Pg	11 13 11.3	-0.2
	baz=274						
ENA	Nanau	0.40	231	eP	Pg	11 13 12.0	+0.2
	baz=223						
ENA				eS	Sg	11 13 16.4	-0.7
	baz=223						
SXI1	Grass Mountain	0.45	336	⇑iP	Pb	11 13 13.7	-0.5
	baz=353						
SXI1				S	Sb	11 13 20.2	-0.9
	baz=353						
FUSB	Fushanzhiwuyua	0.46	280	⇓iP	Pg	11 13 12.8	-0.1
	baz=280						
FUSB				S	Sg	11 13 19.1	+0.2
	baz=280						
ENTT	Nioudou	0.47	265	⇓iP	Pg	11 13 12.8	-0.4
	baz=263						
ENTT				eS	Sg	11 13 19.4	0.0
	baz=263						
NWF	Wu-fen Shan	0.47	325	⇑iP	Pb	11 13 14.1	-0.5
	baz=321						
NWF				S	Sg	11 13 20.3	+0.8
	baz=321						
WFSB	Wu-fen Shan	0.47	325	⇑iP	Pb	11 13 14.1	-0.5
	baz=321						
WFSB				S	Sg	11 13 20.3	+0.8
	baz=321						
EHP	Heping Village	0.48	220	eP	Pg	11 13 13.2	-0.2
	baz=212						
NDT	Datong Townshi	0.52	261	eP	Pg	11 13 13.7	-0.5
	baz=258						
LATG	Datong	0.53	254	⇓iP	Pg	11 13 14.0	-0.2
	baz=260						
LATG				S	Sg	11 13 21.1	0.0
	baz=260						
NWLT	Wulai	0.53	280	eP	Pg	11 13 14.3	-0.1
	baz=270						
TWA	Mucha	0.54	304	P	Pg	11 13 14.7	+0.2
	baz=306						
TWA				eS	Sg	11 13 21.4	-0.3
	baz=306						
TNOU	National Taiwa	0.54	329	eP	Pb	11 13 15.3	-0.4
	baz=326						
TNOU				eS	Sg	11 13 21.8	0.0
	baz=326						
NHDH	Xindian Distri	0.58	299	eP	Pg	11 13 15.4	+0.2
	baz=300						
TATO	Taipei	0.61	299	P	Pg	11 13 16.3	+0.4
	baz=300						
TATO				iS	Sg	11 13 23.0	-0.9
	baz=300						
TAP1	Taipei	0.62	305	eP	Pg	11 13 16.1	+0.1
	baz=296						
TAP	Taipei	0.63	304	P	Pg	11 13 16.2	-0.1
	baz=307						
TAP				S	Sg	11 13 24.9	+0.3
	baz=307						
YHNB	Yeheng	0.64	269	eP	Pg	11 13 16.2	-0.3
	baz=268						
YHNB				S	Sg	11 13 24.4	-0.5
	baz=268						
NWRT	Kuosheng	0.64	324	eP	Pg	11 13 16.4	-0.1
	baz=327						
YM01	YM01	0.66	315	P	Pb	11 13 17.5	-0.2
	baz=318						
YM01				eS	Sg	11 13 24.8	-0.5
	baz=318						
NSK	Sanguang	0.66	270	P	Pg	11 13 16.3	-0.5
	baz=269						
NSK				S	Sg	11 13 24.6	-0.7
	baz=269						
ETL	Fush Village	0.67	219	eP	Pg	11 13 17.1	+0.1
	baz=215						
ETL				eS	Sg	11 13 24.9	-0.8
	baz=215						
NACB	Ninganchiao	0.67	221	eP	Pg	11 13 17.4	+0.4
	baz=208						
NACB				eS	Sg	11 13 25.6	-0.2
	baz=208						
YM08	YM08	0.67	319	eP	Pb	11 13 17.6	-0.3
	baz=322						
NNSB	Datong	0.68	249	eP	Pg	11 13 17.1	-0.1
	baz=246						
NNSB				eS	Sg	11 13 25.7	-0.5
	baz=246						
NNS	Nan Shan	0.69	250	eP	Pg	11 13 17.1	-0.3
	baz=247						
NNS				eS	Sg	11 13 25.6	-0.7
	baz=247						
ANP	Anpu	0.71	315	eP	Pb	11 13 18.7	0.0
	baz=317						
ETLH	Xiulin Townshi	0.72	229	eP	Pg	11 13 18.3	+0.4
	baz=226						
ETLH				eS	Sg	11 13 27.9	+0.5
	baz=226						
TWS1	Kuangyinshan	0.73	305	P	Pb	11 13 19.3	+0.4
	baz=296						
TWS1				S	Sg	11 13 28.5	+0.7
	baz=296						
TWY	Chenhua	0.73	324	eP	Pg	11 13 18.3	0.0
	baz=316						
TWY				S	Sg	11 13 28.3	+0.4
	baz=316						
TWD	Chiawan	0.74	216	P	Pg	11 13 18.5	+0.2
	baz=212						
TWD				S	Sg	11 13 28.2	+0.1
	baz=212						
JYNG	Yonagunijimaku	0.82	106	P	Pn	11 13 22.0	+0.3
JYNG				S	Sn	11 13 34.0	+0.1
NCU	National Centr	0.86	290	eP	Pg	11 13 20.0	-0.6
	baz=300						
NCU				eS	Sg	11 13 31.4	-0.4
	baz=300						
YOJ	Yonaguni jima	0.88	104	eP	Pn	11 13 22.9	+0.4
	baz=102						
YOJ				eS	Sn	11 13 35.8	+0.5
	baz=102						
YOJ	Yonaguni jima	0.88	104	P	Pn	11 13 23.0	+0.5
YOJ				S	Sn	11 13 35.8	+0.5
FUSS	Fushou	0.88	241	P	Pg	11 13 21.1	+0.1
	baz=239						
FUSS				eS	Sg	11 13 32.4	0.0
	baz=239						
ETM	Tongmen	0.89	217	eP	Pg	11 13 21.0	-0.2
	baz=208						

WHF	Hehuan Shan	0.92	234	P	Pg	11 13 22.1	+0.3
	baz=232						
WHF				*e*S	Sg	11 13 33.5	-0.1
	baz=232						
TDCB	Techi	0.94	243	*e*P	Pg	11 13 22.1	0.0
	baz=232						
LIOB	Emei	0.97	268	*e*P	Pb	11 13 23.4	+0.4
	baz=266						
NSTT	Nanjuang	0.98	267	*e*P	Pg	11 13 22.1	-0.8
	baz=260						
NSTT				*e*S	Sg	11 13 35.0	-0.7
	baz=260						
SBCB	Hsinchu	1.00	277	*e*P	Pb	11 13 24.1	+0.5
	baz=267						
CHGB	Renai	1.03	233	*e*P	Pg	11 13 23.4	-0.5
	baz=232						
CHGB				*e*S	Sg	11 13 37.4	+0.1
	baz=232						
ESL	Shilin	1.05	215	*e*P	Pg	11 13 24.1	-0.1
	baz=211						
OWD	Renai	1.10	229	*e*P	Pg	11 13 25.1	-0.1
	baz=219						
OWD				*e*S	Sg	11 13 38.5	-1.0
	baz=219						
WUSB	Renai	1.11	232	*e*P	Pg	11 13 25.2	-0.2
	baz=221						
WUSB				*e*S	Sg	11 13 39.5	-0.5
	baz=221						
EGFH	Guangfu	1.17	211	*e*P	Pg	11 13 26.5	0.0
	baz=215						
NMLH	Miaoli	1.18	263	*e*P	Pn	11 13 27.6	+0.9
	baz=261						
NSY	Sanyi	1.23	258	*e*P	Pn	11 13 28.3	+0.9
	baz=255						
TWQ1	Liyutan	1.24	255	*e*P	Pn	11 13 28.8	+1.3
	baz=252						
VWDT	VWDT	1.26	223	*e*P	Pg	11 13 28.3	+0.1
	baz=216						
VWDT				*e*S	Sg	11 13 44.3	-0.3
	baz=216						
HGSD	Ruisui	1.33	207	*e*P	Pb	11 13 29.7	+0.6
	baz=223						
SMLT	Sun Moon Lake	1.34	234	*e*P	Pn	11 13 28.6	-0.4
	baz=231						
SSLB	Suanglung	1.36	229	*e*P	Pn	11 13 29.3	+0.1
	baz=238						
YULB	Yu-li	1.47	209	*e*P	Pn	11 13 30.2	-0.5
	baz=219						
TWF1	Yuli	1.50	209	*e*P	Pn	11 13 31.1	-0.1
	baz=218						
IRIF	Iriomote-Funau	1.54	103	P	Pn	11 13 32.1	+0.4
IRIF				S	Sn	11 13 52.3	+0.5
YUS	Yu-Shan	1.57	221	*e*P	Pg	11 13 34.4	+0.1
	baz=228						
ALS	Alishan	1.65	225	*e*P	Pg	11 13 35.8	+0.1
	baz=215						
CHN5	Tsauling	1.68	230	*e*P	Pg	11 13 36.7	+0.5
	baz=228						
JKRS	Kuro-shima	1.81	104	P	Pb	11 13 36.6	-0.8
JKRS				S	Sn	11 13 58.9	+0.5
JIJ	Ishigaki jima	1.91	99	P	Pn	11 13 37.4	+0.7
JIJ				S	Sn	11 14 00.1	-0.7
TPUB	Ta-pu	1.91	224	*e*P	Pb	11 13 40.0	+0.9
	baz=223						
STYH	Taoyuan	1.92	219	*e*P	Pb	11 13 38.8	-0.4
	baz=218						
STYT	Tauyuan	1.94	219	*e*P	Pb	11 13 39.9	+0.4
	baz=218						
WTP	Ta-pu	1.96	223	*e*P	Pb	11 13 40.0	+0.1
	baz=210						
TWK	Hsinying	2.03	226	*e*P	Pb	11 13 41.5	+0.4
	baz=225						
VWUC	VWUC	2.41	278	*e*P	Pn	11 13 43.6	0.0
	baz=275						
MASBT	Mashibuluo	2.45	213	*e*P	Pb	11 13 47.3	-1.0
	baz=214						
MASBT				*e*S	Sb	11 14 19.2	+0.6
	baz=214						
SLIU	Shizi	2.72	206	*e*P	Pn	11 13 48.4	+0.5
	baz=197						

IDC 13 11:17:33.0±7.6**,14°.80S**×**179°.55W,h478**^{km}±92^{km}**, mb2.7**/4**,mbtmp3.7**/5**,Error ellipse: s-maj=92.1km s-min=33.7km az=151.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.12	239	P	P	11 20 45.3	+0.2
	5.4nm,0.7s,baz=63,slow=16,SNR=2.6						
STKA	Stephens Creek	39.26	237	P	P	11 24 19.2	-0.4
	1.2nm,0.7s,baz=86,slow=12,SNR=2.8						
	1.2nm,0.7s						
WRA	Warramunga Arr	44.20	257	P	P	11 24 58.7	-0.3
	0.5nm,0.3s,baz=93,slow=7.8,SNR=18						
	0.5nm,0.3s						
ASAR	Alice Springs	44.66	251	P	P	11 25 02.6	+0.1
	8.2nm,0.3s,baz=85,slow=8.6,SNR=270						
ILAR	Eielson Array	83.13	13	P	P	11 29 07.2	-0.4
	0.1nm,0.4s,baz=229,slow=5.7,SNR=8.0						
	0.1nm,0.4s						
TXAR	Lajitas Array	85.28	58	P	P	11 29 19.6	+0.4
	0.1nm,0.6s,baz=224,slow=3.8,SNR=1.9						
	0.1nm,0.6s						

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*NEIC **13** 11:31:47.2±1.4,20°.61S±0°.04×69°.01W±0°.06,h109^{km}±4^{km}, Error ellipse: s-maj=8.0km s-min=5.0km az=82.0*

*GUC **13** 11:31:48.3±0.7,20°.60S×68°.90W,h97^{km}±3^{km},ML3.7*

ISC 13 11:31:47.1±0.8**,20°.61S**±0°.03×**69°.00W**±0°.07**,h109**^{km}±7^{km}**, n41,**σ**0**^{s}**83**/63**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.49	342		Pn	11 32 03.4	-0.8
PB08				Sn	Sn	11 32 16.7	-0.3
PB08	IPOC Station P	0.49	342	*e*P	Pn	11 32 04.2	0.0
PB08				*i* S	Sn	11 32 16.5	-0.5
PB01	IPOC Station P	0.63	227		Pn	11 32 04.5	-0.4
PB01				Sn	Sn	11 32 17.9	-0.3
PB01	IPOC Station P	0.63	227	*e*P	Pn	11 32 04.8	-0.2
PB01				*i* S	Sn	11 32 18.0	-0.3
PB01				IAML		11 32 18.8	
	comp=N,6μm,0.2s						
PB11	IPOC Station P	1.05	323		Pn	11 32 08.8	-0.1
PB11				Sn	Sn	11 32 25.5	+0.2
PB11	IPOC Station P	1.05	323	*e*P	Pn	11 32 09.1	+0.2
PB11				*i* S	Sn	11 32 25.5	+0.2
PB11				IAML		11 32 28.2	
	comp=N,2μm,0.2s						
PB02	IPOC Station P	1.10	230		Pn	11 32 09.7	+0.3
PB02				Sn	Sn	11 32 26.5	+0.3
PB02	IPOC Station P	1.10	230	*e*P	Pn	11 32 09.7	+0.3
PB02				*i* S	Sn	11 32 26.8	+0.6
PATCX	Punta Patache	1.10	259		Pn	11 32 09.3	-0.1
PATCX				Sn	Sn	11 32 27.4	+1.2
PATCX	Punta Patache	1.10	259	*e*P	Pn	11 32 09.8	+0.4
PATCX				*i* S	Sn	11 32 27.1	+0.8
PATCX				IAML		11 32 33.0	
	comp=E,3μm,0.4s						
TA01	Diego Aracena	1.11	272		Pn	11 32 09.3	0.0
TA01				Sn	Sn	11 32 27.1	+0.9
TA01	Diego Aracena	1.11	272	*e*P	Pn	11 32 09.5	+0.1
TA01				*i* S	Sn	11 32 26.9	+0.7
TA01				IAML		11 32 32.4	
	comp=E,2μm,0.7s						
PB09	IPOC Station P	1.21	191		Pn	11 32 11.2	+0.6
PB09				Sn	Sn	11 32 29.2	+0.8
PB09	IPOC Station P	1.21	191	*e*P	Pn	11 32 11.2	+0.6
PB09				*i* S	Sn	11 32 28.9	+0.6
PB09				IAML		11 32 32.1	
	comp=N,947nm,0.4s						
PB07	IPOC Station P	1.39	217		Pn	11 32 12.9	+0.1
PB07				Sn	Sn	11 32 32.4	+0.2
PB07	IPOC Station P	1.39	217	*e*P	Pn	11 32 13.1	+0.4
PB07				*i* S	Sn	11 32 32.8	+0.6
PB07				IAML		11 32 34.0	
	comp=E,1μm,0.3s						
LVC	Limon Verde	1.99	178		Pn	11 32 21.5	+1.1
LVC	Limon Verde	1.99	178	*e*P	Pn	11 32 21.4	+1.0
LVC				*i* S	Sn	11 32 46.8	+1.1
PB04	IPOC Station P	2.03	212		Pn	11 32 20.4	-0.2
PB04	IPOC Station P	2.03	212	*e*P	Pn	11 32 21.7	+1.2
PB04				*i* S	Sn	11 32 47.4	+1.3
PB04				IAML		11 32 56.5	
	comp=E,577nm,0.3s						
PB06	IPOC Station P	2.16	194		Pn	11 32 23.4	+1.2
PB06	IPOC Station P	2.16	194	*e*P	Pn	11 32 23.0	+0.8
PB06				*i* S	Sn	11 32 49.7	+0.6
PB06				IAML		11 32 57.1	
	comp=E,546nm,0.3s						
PB16	IPOC Station P	2.31	348		Pn	11 32 26.2	+1.6
PB16	IPOC Station P	2.31	348	*e*P	Pn	11 32 26.2	+1.6
PB16				*i* S	Sn	11 32 55.3	+2.0
PB12	IPOC Station P	2.35	327		Pn	11 32 24.7	0.0
PB12	IPOC Station P	2.35	327	*e*P	Pn	11 32 24.7	0.0
PB12				*i* S	Sn	11 32 54.4	+1.0
AP01	Chacalluta	2.56	330	Pn	Pn	11 32 26.5	-0.9
PB15	IPOC Station P	2.63	190		Pn	11 32 27.7	-0.6
PB10	IPOC Station P	3.23	206	Pn	Pn	11 32 34.2	-2.0
LPAZ	La Paz	4.37	11		Pn	11 32 50.9	-1.2
GO02	Mina Guanaco	4.57	187		Pn	11 32 54.2	-0.2
AC01	Pan de Azucar	5.71	195	Pn	Pn	11 33 08.0	-1.5
AC02	Maricunga	6.20	181		Pn	11 33 16.2	-0.5
AC06	Mina Casimiro	6.83	190	Pn	Pn	11 33 24.6	-0.2
CO05	La Serena	9.49	192	Pn	Pn	11 33 59.6	-1.1
GO04	Tololo Observa	9.66	189	Pn	Pn	11 34 02.8	-0.6
BI05	Punta Hualpn	16.49	192	Pn	Pn	11 35 31.0	-1.0
ITAB	Concordia	16.76	116	Pn	Pn	11 35 35.4	0.0
ITAB					P	11 35 35.8	0.0
ITAB				IAmb	IAmb	11 35 36.4	
	comp=Z,20nm,1.4s						
TRQA	Tornquist	18.42	162	P	P	11 35 54.0	+0.1
SNAA	Sanae	63.15	161	P	P	11 42 03.9	+0.8
SNAA				IAmb	IAmb	11 42 30.9	
	comp=Z,5.9nm,1.5s						
QSPA	South Pole Qui	69.58	180	P	P	11 42 43.4	-0.8
QSPA				IAmb	IAmb	11 43 06.5	
	comp=Z,3.6nm,1.4s						

JMA 13 11:43:15.7±0.2**,24°.2N**±0°.3×**123°.8E**±0°.4**,h16**^{km}±1^{km}**, MV0.4**/6**,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.12	319	*e*P	Pg	11 43 19.2	0.0
JKRS	Kuro-shima	0.18	92	P	Pg	11 43 20.1	+0.1
JKRS				*e*S	Sg	11 43 22.9	-0.1
HATJ	Hateruma jima	0.19	183	P	Pg	11 43 20.0	-0.2
HATJ				*e*S	Sg	11 43 23.4	+0.2
JIJ	Ishigaki jima	0.32	68	P	Pg	11 43 22.2	-0.2
JIJ				*e*S	Sg	11 43 26.8	-0.2
JISG	Ishigakijimahi	0.57	53	*e*P	Pg	11 43 26.9	0.0
JISG				*e*S	Sb	11 43 34.9	-0.2

JMA 13 11:43:17.5±0.0**,34°.03N**±0°.06×**135°.2E**±0°.1**,h5**^{km}**, MV1.9**/20**,NW WAKAYAMA PREF,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWM	Minabe	0.22	148	P	Pg	11 43 21.9	+0.2
JWM				S	Sg	11 43 25.0	+0.4
JWY	Kouya	0.36	60	P	Pg	11 43 24.5	0.0
JWY				S	Sg	11 43 30.0	+0.7
JTNC	Tanabenakahech	0.39	123	P	Pg	11 43 25.4	+0.4
JTNC				S	Sg	11 43 30.7	+0.5
JAWN	Awajishima-nag	0.52	330	P	Pg	11 43 27.6	+0.1
JAI	Aioi	0.68	249	P	Pg	11 43 30.3	-0.2
JHE	Heguri	0.73	32	S	Sg	11 43 41.3	+0.3

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*IDC **13** 11:43:19.1±0.7,34°.22N×136°.73E,h357^{km}±6^{km},mb3.0/12, mbtmp3.8/19,Error ellipse: s-maj=15.0km s-min=10.3km az=92.0*

ISC 13 11:43:18.9±0.6**,34°.25N**±0°.08×**136°.67E**±0°.09**,h350**^{km}**,n19,** σ**1**^{s}**03**/21**,mb3.2**/12**,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	2.62	28	P	Pn	11 44 15.6	+0.7
	30nm,0.6s,baz=190,slow=8.4,SNR=80						
MJAR				S	S	11 45 00.5	+0.6
	3.8nm,0.5s,baz=199,slow=16,SNR=6.9						
JHJ	Hachijo jima 2	2.83	112	P	Pn	11 44 18.3	+1.5
	28nm,0.4s,baz=348,slow=12,SNR=21						
JHJ				S	S	11 45 05.0	+1.6
	43nm,0.4s,baz=78,slow=20,SNR=2.1						
KSRS	Korea Array	7.79	297	P	Pn	11 45 12.9	+2.5
	2.0nm,0.5s,baz=113,slow=12,SNR=12						
JOW	Kunigami	10.34	227	P	P	11 45 42.3	+0.1
	12nm,0.8s,baz=50,slow=14,SNR=2.8						
USRK	Ussuriysk Ar.	10.58	341	P	P	11 45 45.0	+0.4
	9.0nm,0.6s,baz=149,slow=10.0,SNR=12						
ASAJ	Asahikawa	10.88	23	P	Pn	11 45 47.4	+0.2
	6.0nm,1.0s,baz=170,slow=11,SNR=5.0						
KLR	Kul'dur	15.41	348	P	P	11 46 37.3	-0.5
	0.9nm,0.5s,baz=134,slow=4.0,SNR=3.8						
CMAR	Chiang Mai Arr	37.04	255	P	P	11 49 56.7	-0.1
	0.3nm,0.3s,baz=57,slow=8.7,SNR=1.5						
	0.3nm,0.3s						
MKAR	Makanchi Array	42.39	304	P	P	11 50 39.8	-0.4
	0.3nm,0.6s,baz=90,slow=8.6,SNR=2.3						
	0.3nm,0.6s						
ILAR	Eielson Array	53.89	31	P	P	11 52 06.2	-0.6
	0.5nm,0.7s,baz=258,slow=5.1,SNR=8.1						
	0.5nm,0.7s						
WRA	Warramunga Arr	53.93	183	P	P	11 52 06.3	-1.4
	0.3nm,0.3s,baz=0.3,slow=7.6,SNR=22						
	0.3nm,0.3s						
ASAR	Alice Springs	57.65	183	P	P	11 52 32.6	-1.2
	0.1nm,0.3s,baz=0.9,slow=6.9,SNR=7.1						
	0.1nm,0.3s						
INK	Inuvik	58.60	26	P	P	11 52 39.6	-0.1
	0.6nm,0.5s,baz=327,slow=4.5,SNR=3.3						
	0.6nm,0.5s						
ARCES	ARCESS Array B	65.22	339	P	P	11 53 22.9	-0.4
	2.5nm,0.8s,baz=46,slow=5.2,SNR=4.0						
	2.5nm,0.8s						
RES	Resolute Bay	66.22	13	P	P	11 53 29.2	-0.4
	2.0nm,0.9s,baz=240,slow=5.3,SNR=4.2						
	2.0nm,0.9s						
YKA	Yellowknife Ar	68.12	28	P	P	11 53 40.9	-0.7
	0.1nm,0.5s,baz=301,slow=5.8,SNR=4.6						
	0.1nm,0.5s						
FINES	FINESS Array B	69.44	331	P	P	11 53 48.3	-1.3
	1.8nm,0.8s,baz=42,slow=6.5,SNR=1.9						
	1.8nm,0.8s						
NVAR	Mina Array Bea	79.75	50	P	P	11 54 49.2	+0.1
	0.3nm,0.7s,baz=299,slow=6.1,SNR=2.3						
	0.3nm,0.7s						
PDAR	Pinedale Array	82.36	43	P	P	11 55 02.1	-0.6
	0.5nm,1.0s,baz=316,slow=3.8,SNR=1.9						
	0.5nm,1.0s						

TAP 13 11:43:27.1,24°.68N×**121°.95E,h9**^{km}**,ML0.9,D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.11	235	P	Pg	11 43 30.4	+0.6
	baz=231						
TWC				S	Sg	11 43 32.6	+0.9
	baz=231						
NDS	Dongshan	0.22	259	*e*P	Pg	11 43 32.6	+1.1
	baz=259						
NDS				*e*S	Sg	11 43 36.1	+1.5
	baz=259						
TWE	Neicheng	0.26	280	*e*P	Pb	11 43 33.3	-0.7
	baz=279						
TWE				*e*S	Sb	11 43 37.5	-1.1
	baz=279						
EWUT	Wuta	0.28	215	*e*P	Pb	11 43 33.6	-0.7
	baz=214						
EWUT				*e*S	Sg	11 43 37.4	+1.0
	baz=214						
TIPB	Shuangxi	0.32	339	*e*P	Pg	11 43 34.1	+0.7
	baz=338						
TIPB				*e*S	Sg	11 43 38.6	+0.9
	baz=338						
FUSB	Fushanzhiwuyua	0.34	284	*e*P	Pb	11 43 35.0	-0.4
	baz=284						
FUSB				*e*S	Sb	11 43 39.7	-1.3
	baz=284						
LATG	Datong	0.41	250	*e*P	Pb	11 43 36.2	-0.4
	baz=250						
LATG				*e*S	Sb	11 43 42.9	-0.2
	baz=250						
YHNB	Yeheng	0.52	270	*e*P	Pb	11 43 39.0	+0.5
	baz=269						
YHNB				*e*S	Sb	11 43 46.7	+0.5
	baz=269						
NACB	Ninganchiao	0.60	213	*e*P	Pb	11 43 40.3	+0.6
	baz=213						
NACB				*e*S	Sb	11 43 48.0	-0.3
	baz=213						

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*JMA **13** 11:47:59.2±0.1,29°N±1°×14°0E±°,h486^{km},MV3.7/17,W OFF OGASAWARA*

*IDC **13** 11:48:01.2±1.0,28°.67N×139°.56E,h452^{km}±12^{km}, mb3.2/13,mbtmp4.0/19,Error ellipse: s-maj=17.2km s-min=10.7km az=84.0*

ISC 13 11:48:01.3±0.6**,28°.76N**±0°.07×**139°.75E**±0°.09**,h450**^{km}**,n32,** σ**1**^{s}**28**/40**,mb3.5**/13**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.72	127	P	P	11 49 06.4	0.0
CBIJ				S	S	11 49 58.8	-0.4
JCJ	Chichijima	2.72	127	P	P	11 49 06.4	0.0
	90nm,0.3s,baz=280,slow=23,SNR=44						
JCJ				S	S	11 49 58.6	-0.6
	536nm,0.4s,baz=268,slow=21,SNR=48						
JHH2	Haha-jima-NKT2	3.02	134	P	P	11 49 08.6	+0.1
JHH2				S	S	11 50 03.2	+0.2
JHJ	Hachijo jima 2	4.35	0	P	P	11 49 20.6	+1.2
	69nm,0.3s,baz=146,slow=3.6,SNR=22						
JHJ				S	S	11 50 21.5	-1.7
	60nm,0.6s,baz=59,slow=21,SNR=2.5						
TTO1	TONANKAI O.B.S	5.47	333	P	P	11 49 32.9	+3.0
BSO1	Boso 1	5.97	10	*e*P	P	11 49 35.7	+1.2
BSO1				*e*S	S	11 50 51.6	+0.6
JTNC	Tanabenakahech	6.16	326	*e*P	P	11 49 39.8	+2.6
JIE	Ise	6.19	336	*e*P	P	11 49 39.6	+2.2
JOD2	Odawara 2	6.51	355	*e*P	P	11 49 41.3	+0.5
JTO	Tosashimizu	7.24	306	*e*P	P	11 49 49.5	+1.0
JRY	Ryogami san	7.27	355	P	P	11 49 49.0	+0.2
JRY				*e*S	S	11 51 14.3	-2.6
MJAR	Matsushiro Arr	7.87	351	P	P	11 49 54.3	-0.9
	2.7nm,0.4s,baz=171,slow=11,SNR=15						
MJAR				S	S	11 51 27.5	-1.2
	0.7nm,0.5s,baz=159,slow=18,SNR=1.7						
JHS	Saijyo	8.39	320	*e*P	P	11 50 02.2	+1.3
JMK	Ichinoseki	10.24	6	*e*P	P	11 50 22.2	+1.4
JMK				*e*S	S	11 52 14.5	-1.3
JOW	Kunigami	10.34	262	P	P	11 50 22.4	+0.2
	15nm,0.7s,baz=97,slow=11,SNR=5.4						
JOW	Kunigami	10.34	262	P	P	11 50 22.7	+0.5
KSRS	Korea Array	13.16	314	P	P	11 50 52.2	-0.4
	2.0nm,0.7s,baz=130,slow=10.0,SNR=8.4						
JOSM	Okushiri--Mats	13.30	359	*e*P	P	11 50 55.8	+1.8
USRK	Ussuriysk Ar.	16.61	340	P	P	11 51 30.9	+1.6
	2.9nm,0.6s,baz=137,slow=9.0,SNR=5.0						
KLR	Kul'dur	21.34	345	P	P	11 52 15.5	+0.9
	2.9nm,0.5s,baz=168,slow=6.8,SNR=18						
	2.9nm,0.5s						
SONM	Songino Array	32.02	316	P	P	11 53 48.7	-0.5
	1.2nm,0.4s,baz=132,slow=9.9,SNR=3.2						
	1.2nm,0.4s						
ZALV	Zalesovo Beam	46.82	318	P	P	11 55 47.7	-1.1
	0.4nm,0.3s,baz=95,slow=10,SNR=1.8						
	0.4nm,0.3s						
MKAR	Makanchi Array	47.76	309	P	P	11 55 54.8	-1.3
	1.1nm,0.6s,baz=93,slow=9.4,SNR=9.8						
	1.1nm,0.6s						
WRA	Warramunga Arr	48.70	187	P	P	11 56 02.0	-1.3
	3.5nm,0.4s,baz=1.6,slow=7.9,SNR=158						
	3.5nm,0.4s						
ASAR	Alice Springs	52.42	187	P	P	11 56 29.6	-1.1
	1.0nm,0.4s,baz=7.6,slow=8.4,SNR=39						
	1.0nm,0.4s						
ILAR	Eielson Array	57.31	29	P	P	11 57 05.5	+1.0
	0.3nm,0.6s,baz=253,slow=5.7,SNR=5.1						
	0.3nm,0.6s						
INK	Inuvik	62.42	25	P	P	11 57 38.9	+0.2
	0.2nm,0.3s,baz=236,slow=3.6,SNR=4.4						
	0.2nm,0.3s						
ARCES	ARCESS Array B	71.26	340	P	P	11 58 33.3	-0.2
	3.8nm,1.0s,baz=72,slow=8.6,SNR=15						
	3.8nm,1.0s						
YKA	Yellowknife Ar	71.70	28	P	P	11 58 36.7	+0.5
	0.2nm,0.3s,baz=298,slow=6.0,SNR=14						
	0.2nm,0.3s						
KBZ	Khabaz	75.30	312	P	P	11 58 56.8	-0.3
	1.9nm,0.8s,baz=111,slow=5.5,SNR=4.1						
	1.9nm,0.8s						
FINES	FINESS Array B	75.50	333	P	P	11 58 57.0	-1.0
	0.9nm,0.3s,baz=67,slow=3.8,SNR=14						
	0.9nm,0.3s						
NVAR	Mina Array Bea	81.17	51	P	P	11 59 31.0	+1.7
	0.6nm,0.7s,baz=294,slow=5.0,SNR=7.0						
	0.6nm,0.7s						

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*NEIC **13** 12:04:32.6±0.3,30°.51S±0°.10×178°.4W±0°.2,h71^{km}±10^{km}, mb4.4/8,Error ellipse: s-maj=28.9km s-min=5.9km az=117.0*

*IDC **13** 12:04:33.9±1.4,30°.48S×178°.50W,h85^{km}±14^{km},mb3.5/3, mbtmp3.9/4,Error ellipse: s-maj=36.2km s-min=14.9km az=116.0*

ISC 13 12:04:33.7±0.9**,30°.48S**±0°.09×**178°.3W**±0°.2**,h100**^{km}**,n17,** σ**1**^{s}**51**/19**,mb4.2**/6**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.26	14	P	Pn	12 04 56.9	-0.1
	209nm,0.3s,baz=254,slow=19,SNR=3.2						
RAO				S	Sn	12 05 14.6	-0.2
	435nm,0.3s,baz=189,slow=21,SNR=6.8						
RAO	Raoul Island	1.26	14		Pn	12 04 55.1	-1.9
URZ	Urewera	8.64	205	P	Pn	12 06 33.8	-2.1
	9.5nm,1.0s,baz=308,slow=19,SNR=1.5						
URZ				S	Sn	12 08 10.0	-1.5
	4.8nm,0.4s,baz=344,slow=23,SNR=7.2						
CTAO	Charters Tower	33.58	280	P	P	12 11 05.5	+1.1
STKA	Stephens Creek	34.23	257	P	P	12 11 10.2	+0.3
	0.7nm,0.3s,baz=100,slow=12,SNR=2.1						
	0.7nm,0.3s						
STKA	Stephens Creek	34.23	257	P	P	12 11 10.2	+0.3
STKA				IAmb	IAmb	12 11 25.0	
	comp=Z,2.0nm,1.5s						
BBOO	Buckleboo	38.72	254	P	P	12 11 48.2	+0.1
BBOO				IAmb	IAmb	12 11 52.3	
	comp=Z,11nm,1.2s						
ASAR	Alice Springs	42.87	267	P	P	12 12 22.6	+0.2
	comp=Z,0.4nm,0.5s,baz=105,slow=8.2,SNR=7.0						
	comp=Z,0.4nm,0.5s						
WR0	Warramunga Arr	43.69	272	P	P	12 12 29.4	+0.5
WR0				IAmb	IAmb	12 12 33.6	
	comp=Z,8.9nm,1.4s						
WB2	Warramunga Arr	43.86	272	P	P	12 12 30.5	+0.2
WRA	Warramunga Arr	43.87	272	P	P	12 12 30.5	+0.1
	comp=Z,0.8nm,0.3s,baz=110,slow=8.1,SNR=46						
	comp=Z,0.8nm,0.3s						
WB0	Warramunga Arr	43.89	273	P	P	12 12 30.9	+0.4
WB0				IAmb	IAmb	12 12 55.9	
	comp=Z,14nm,1.4s						
VNDA	Vanda	47.99	186	P	P	12 13 04.1	+2.2
FINES	FINESS Array B	145.14	340	PKPbc	PKPdf	12 23 58.0	-0.7
	comp=Z,1.3nm,0.3s,baz=45,slow=4.2,SNR=17						
FINES	FINESS Array B	145.14	340		PKiKP	12 23 59.6	-3.0
AKASG	Malin Array Be	151.23	322	PKPbc	PKiKP	12 24 16.4	+0.9
	comp=Z,0.8nm,0.6s,baz=53,slow=3.0,SNR=4.8						
TORD	Torodi Ar. Bea	162.75	180	PKPab	PKPab	12 25 16.6	+3.0
	comp=Z,10nm,0.6s,baz=143,slow=3.5,SNR=5.2						

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*DJA **13** 12:13:56.9±0.2,2°N±2°×12°7E±°,h103^{km}±2^{km},M4.5/31, mB5.0/8,mb4.8/31,MLv4.6/15,Mw(mB)4.3/8*

*MAN **13** 12:13:57.8,2°.09N×127°.02E,h1^{km},mb5.1,ML4.0,MS4.1, Hypocentre not reviewed by the ISC*

*NEIC **13** 12:13:57.9±1.7,1°.76N±0°.06×127°.36E±0°.08,h105^{km}±7^{km}, mb4.5/50,Error ellipse: s-maj=11.8km s-min=9.0km az=72.0*

*IDC **13** 12:13:58.3±1.6,1°.70N×127°.37E,h108^{km}±15^{km},mb4.1/14, mbtmp4.5/18,MS2.9/4,Error ellipse: s-maj=21.9km s-min=9.3km az=79.0*

ISC 13 12:13:58.5±0.4**,1°.76N**±0°.04×**127°.25E**±0°.06**,h112**^{km}**,n137,** σ**1**^{s}**39**/146**,mb4.5**/51**,2C-2D,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.98	173	Pn	Pn	12 14 18.6	-1.1
TNTI	Ternate	0.98	173	P	Pn	12 14 18.8	-1.0

TNTI				S	Sn	12 14 34.9	-0.9
TNTI	Ternate	0.98	173	P	Pn	12 14 18.9	-0.9
LBMI	Labuha	2.39	174	P	Pn	12 14 37.4	+0.7
LBMI				S	Sn	12 15 07.1	+1.2
SGSI	Sangihe	2.58	318	P	Pn	12 14 37.6	-1.4
SGSI				S	Sn	12 15 07.6	-2.6
KMSI	Cibinong	3.47	250	P	Pn	12 14 52.0	+1.1
SANI	Sanana	3.99	198	P	Pn	12 14 56.3	-1.5
SANI	Sanana	3.99	198	P	Pn	12 14 56.8	-1.0
GTOI	Gorontalo	4.38	255	P	Pn	12 15 05.0	+1.9
SWI	Sorong	4.78	123	P	Pn	12 15 07.2	-1.2
SIJI	Sorong	4.79	123	P	Pn	12 15 07.6	-1.0
	8.9nm,0.4s,baz=322,slow=6.6,SNR=8.9						
SIJI				LR	LR	12 16 33.3	
	comp=Z,78nm,20.5s,baz=115,slow=33						
GSPH	General Santos	4.88	332	⇓*i*P	Pn	12 15 08.0	-1.8
LUWI	Luwuk	5.27	238	Pn	Pn	12 15 16.3	+1.2
LUWI	Luwuk	5.27	238	P	Pn	12 15 17.2	+2.1
	3.5nm9µm129nm,0.8s						
LUWI	Luwuk	5.27	238	P	Pn	12 15 18.2	+3.1
MRSI	Marisa	5.46	257	P	Pn	12 15 17.9	+0.3
	0.5nm1µm84nm,0.5s						
AAI	Ambon	5.49	170	P	Pn	12 15 19.1	+1.1
	0.4nm102nm,0.6s						
DAV	Davao City (W)	5.54	343	P	Pn	12 15 18.2	-0.4
	162nm,0.4s,baz=76,slow=4.2,SNR=1.6						
DAV				S	Sn	12 16 19.5	-1.6
	112nm,0.3s,baz=93,slow=24,SNR=1.4						
DAV				LR	LR	12 17 01.7	
	comp=Z,74nm,19.6s,baz=116,slow=33						
KCP	Kidapawan	5.64	338	⇑*i*P	Pn	12 15 19.6	-0.7
KCP				*i* S	Sn	12 16 22.9	-0.9
APSI	Ampana	6.20	245	P	Pn	12 15 28.5	+0.9
	0.8nm1µm58nm,0.5s						
BIPH	Bislig	6.45	352	⇓*e*P	Pn	12 15 31.3	+0.3
BIPH				*e*S	Sn	12 16 42.8	-0.4
TOLI2	Tolitoli	6.50	264	Pn	Pn	12 15 32.1	+0.4
TOLI2	Tolitoli	6.50	264	P	Pn	12 15 32.6	+0.9
MPSI	Mapaga	7.49	259	P	Pn	12 15 46.6	+1.5
	0.1nm8.3nm,0.5s						
BBSI	Bau Bau	8.58	213	P	Pn	12 16 01.2	+1.2
	8.9nm,0.7s						
TTSI	Tana Toraja	8.83	237	P	Pn	12 16 03.4	+0.1
	2µm158nm,0.7s						
MYLDM	Lahad Datu	9.37	291	Pn	Pn	12 16 12.1	+1.4
SPSI	Sidrap Palu	9.39	233	P	Pn	12 16 11.2	+0.3
	2µm190nm,0.7s						
BNSI	Bone	9.40	229	P	Pn	12 16 10.4	-0.7
	50nm,0.9s						
BKSI	Bulukumba	10.01	225	P	Pn	12 16 20.4	+1.1
	526nm48nm,0.5s						
KAPI	Kappang	10.07	228	P	Pn	12 16 20.9	+0.8
	21nm,0.3s,baz=17,slow=12,SNR=15						
KAPI				S	Sn	12 18 07.4	-3.8
	20nm,0.4s,baz=195,slow=11,SNR=2.2						
KAPI				LR	LR	12 20 02.7	
	comp=Z,34nm,18.2s,baz=65,slow=36						
KAPI	Kappang	10.07	228	Pn	Pn	12 16 20.8	+0.6
KAPI	Kappang	10.07	228	P	Pn	12 16 21.4	+1.3
SAUI	Saumlaki	10.48	157	Pn	Pn	12 16 23.7	-2.0
SOEI	Soe	11.82	195	Pn	Pn	12 16 42.1	-1.6
EDFI	Ende, Flores	11.82	208	P	Pn	12 16 44.8	+1.1
	11nm,0.7s						
BATI	Baumata	12.41	197	P	Pn	12 16 52.5	+1.0
	15nm,0.6s,baz=304,slow=18,SNR=2.1						
BATI	Baumata	12.41	197	P	Pn	12 16 52.6	+1.2
	32nm,1.2s						
WBSI	Waikabubak, Su	13.77	215	P	Pn	12 17 10.8	+1.7
	74nm,0.9s						
PLAI	Plampang	14.13	222	P	P	12 17 16.0	-1.9
	1µm132nm,0.9s						
PLAI	Plampang	14.13	222	P	P	12 17 18.2	+0.3
MTN	Manton Dam	15.01	165	Pn	Pn	12 17 23.2	-1.7
SBUM	Sibu	15.04	273	Pn	Pn	12 17 25.8	+0.4
KMMI	Kalianget	15.88	236	P	P	12 17 37.9	+0.6
	75nm,0.8s						
IGBI	Denpasar	16.00	229	P	P	12 17 43.5	+4.9
JAGI	Jajag, Banyuwa	16.55	232	Pn	Pn	12 17 42.9	-1.1
JAGI				IAmb	IAmb	12 17 54.1	
	comp=Z,26nm,0.6s						
JAGI	Jajag, Banyuwa	16.55	232	P	P	12 17 45.3	+0.6
	comp=Z,41nm,0.9s						
GMJI	Gumukmas	16.99	234	P	P	12 17 50.4	+0.8
	comp=Z,33nm,0.9s						
KNRA	Kununurra	17.39	175		P	12 17 52.0	-1.9
KNRA				IAmb	IAmb	12 17 55.2	
	comp=Z,27nm,0.7s						
KNRA	Kununurra	17.39	175	P	P	12 17 53.8	-0.1
PWJI	Pagerwojo	18.21	238	P	Pn	12 18 03.8	-0.4
	comp=Z,33nm,0.8s						
PCJI	Pacitan	18.83	238	P	P	12 18 10.8	+1.0
	comp=Z,60nm,1.6s						
YULB	Yu-li	22.27	345	P	P	12 18 43.9	-2.6
YULB				IAmb	IAmb	12 18 50.9	
	comp=Z,29nm,1.2s						
YULB	Yu-li	22.27	345	*i* P	P	12 18 44.0	-2.6
	baz=64						
TPUB	Ta-pu	22.36	344	P	P	12 18 41.4	-6.1
TPUB				IAmb	IAmb	12 18 58.3	
	comp=Z,29nm,0.9s						
WB0	Warramunga Arr	22.51	162	P	P	12 18 47.6	-1.5
WB0				IAmb	IAmb	12 18 48.1	
	comp=Z,20nm,0.5s						
WRAB	Tennant Creek	22.65	162	P	P	12 18 49.4	-1.1
WRAB				IAmb	IAmb	12 18 57.4	
	comp=Z,18nm,0.7s						
WRAB	Tennant Creek	22.65	162	P	P	12 18 49.4	-1.1
WRA	Warramunga Arr	22.66	162	P	P	12 18 49.0	-1.6
	comp=Z,13nm,0.4s,baz=340,slow=10,SNR=184						
	comp=Z,13nm,0.4s						
WRA	Warramunga Arr	22.66	162	P	P	12 18 48.4	-2.2
WB2	Warramunga Arr	22.66	162	P	P	12 18 49.0	-1.6
WB2				IAmb	IAmb	12 18 57.4	
	comp=Z,20nm,0.7s						
SSLB	Suanglung	22.73	345	P	P	12 18 49.0	-2.3
SSLB	Suanglung	22.73	345	P	P	12 18 53.1	+1.8
	comp=Z,37nm,1.0s						
WR0	Warramunga Arr	22.74	162	P	P	12 18 50.0	-1.3
WR0				IAmb	IAmb	12 18 50.4	
	comp=Z,12nm,0.5s						
YOJ	Yonaguni jima	22.94	350	P	P	12 18 52.7	-0.6
NACB	Ninganchiao	22.95	347	P	P	12 18 51.5	-1.8
NACB				IAmb	IAmb	12 19 08.2	
	comp=Z,16nm,0.9s						
MYKOM	Kota Tinggi	23.39	270	P	P	12 18 56.8	-0.8
MBWA	Marble Bar	23.93	198	P	P	12 19 02.0	-0.4
MBWA				IAmb	IAmb	12 19 03.1	
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	24.29	197	P	P	12 19 05.5	-0.1
PSA00				IAmb	IAmb	12 19 06.5	
	comp=Z,18nm,0.9s						
JOW	Kunigami	24.95	2	P	P	12 19 09.4	-2.2
JOW				IAmb	IAmb	12 19 14.3	
	comp=Z,20nm,1.0s						
QIS	Mount Isa	25.27	152	P	P	12 19 15.1	+0.6
AS31	Alice Springs	26.09	166	P	P	12 19 21.0	-0.9
ASAR	Alice Springs	26.09	166	P	P	12 19 21.0	-0.9
	comp=Z,6.4nm,0.5s,baz=351,slow=7.6,SNR=151						
ASAR				S	S	12 23 44.7	-0.5
	comp=Z,0.4nm,0.8s,baz=354,slow=18,SNR=2.1						
ASAR				ScP	ScP	12 26 16.8	+0.2
	comp=Z,0.2nm,0.7s,baz=339,slow=2.8,SNR=4.0						
	comp=Z,6.4nm,0.5s						
WRKA	Warakurna	26.65	178	P	P	12 19 26.7	-0.3
GIRL	Giralia	27.37	207	P	P	12 19 35.0	+1.5
CMAR	Chiang Mai Arr	32.34	303	P	P	12 20 18.8	+1.3
	comp=Z,0.8nm,0.3s,baz=126,slow=6.8,SNR=7.1						
	comp=Z,0.8nm,0.3s						
FORT	Forrest	32.36	179	P	P	12 20 16.8	-0.7
MORW	Morawa	32.48	198	P	P	12 20 18.1	-0.4
MORW				IAmb	IAmb	12 20 19.1	
	comp=Z,5.4nm,0.8s						
LCRK	Leigh Creek	33.69	163	P	P	12 20 28.5	-0.5
INU	Inuyama	34.63	14	P	P	12 20 35.9	-1.2
INU				IAmb	IAmb	12 20 37.2	
	comp=Z,7.8nm,0.6s						
PZH	PanZhiHua	34.73	317	P	P	12 20 41.4	+3.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.9s						
JGF	Kuroka	34.96	14	P	P	12 20 39.4	-0.6
JGF				IAmb	IAmb	12 20 41.3	
	comp=Z,7.0nm,1.2s						
BBOO	Buckleboo	35.37	167	P	P	12 20 42.8	-0.7
LYN	LuoYang	35.42	339	*e*P	P	12 20 44.5	+0.6
LYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSRS	Korea Array	35.53	1	P	P	12 20 44.5	-0.2
	comp=Z,2.6nm,0.8s,baz=178,slow=10.0,SNR=9.9						
	comp=Z,2.6nm,0.8s						
WHYH	Whyalla	35.95	165	P	P	12 20 47.8	-0.6
MAJO	Matsushiro	36.07	15	P	P	12 20 48.1	-1.2
MAJO				IAmb	IAmb	12 20 49.9	
	comp=Z,6.2nm,0.6s						
MJAR	Matsushiro Arr	36.07	15	P	P	12 20 47.2	-2.2
	comp=Z,3.2nm,0.5s,baz=184,slow=9.1,SNR=6.4						
MJB9	Matsu-Tunnel	36.07	15	P	P	12 20 48.2	-1.3
MJB9				IAmb	IAmb	12 20 49.8	
	comp=Z,6.0nm,0.6s						
STKA	Stephens Creek	36.11	159	P	P	12 20 49.2	-0.6
	comp=Z,18nm,0.6s,baz=331,slow=8.8,SNR=44						
STKA				LR	LR	12 39 13.2	
	comp=Z,70nm,18.1s,baz=24,slow=42						
	comp=Z,18nm,0.6s						
STKA	Stephens Creek	36.11	159	P	P	12 20 49.5	-0.4
STKA	Stephens Creek	36.11	159	P	P	12 20 49.4	-0.4
	comp=Z,5.2nm,1.4s						
XAN	Xi'an	36.40	334	⇑P	P	12 20 53.1	+0.8
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
BJT	Baijiatuau	39.40	347	P	P	12 21 17.9	+0.6
BJT				IAmb	IAmb	12 21 18.8	
	comp=Z,9.1nm,0.9s						
BJI	Beijing	39.41	347	P	P	12 21 18.3	+0.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	Lanzhou	40.46	330	*e*P	P	12 21 28.5	+2.1
LZH				pP	pP	12 21 44.0	-7.2
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
HHC	Hu-ho-hao-te	41.42	342	*e*P	P	12 21 35.8	+1.6
HHC				pmax	pmax		
	comp=Z,36nm,1.1s						
HHC				pmax	pmax		
	comp=Z,88nm,6.5s						
ASAJ	Asahikawa	44.33	16	P	P	12 21 57.9	+0.5
	comp=Z,3.1nm,0.5s,baz=235,slow=12,SNR=1.4						
	comp=Z,3.1nm,0.5s						
GTA	Gaotai	45.05	330	*e*P	P	12 22 04.9	+1.5
GTA				sP	sP	12 22 49.0	+7.9
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOMU	GeErMu	45.55	323	P	P	12 22 08.8	+1.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,54nm,7.0s						
GUN	Gumba	47.31	307	*e*P	P	12 22 21.8	+0.2
	comp=Z,23nm,0.6s						
KLR	Kul'dur	47.45	4	P	P	12 22 21.3	-0.6
	comp=Z,1.3nm,0.6s,baz=156,slow=3.0,SNR=4.8						
	comp=Z,1.3nm,0.6s						
PKI	Pulchoki	47.54	307	*e*P	P	12 22 23.9	+0.5
DMN	Daman	47.80	307	*e*P	P	12 22 26.1	+0.8
KOLN	Koldanda	49.08	306	*e*P	P	12 22 36.0	+1.0
	comp=Z,24nm,0.7s						
ULN	Ulaanbaatar	49.14	342	P	P	12 22 35.4	+0.3
ULN				IAmb	IAmb	12 22 37.0	
	comp=Z,7.0nm,1.1s						
DANN	Dangsing	49.19	307	*e*P	P	12 22 36.9	+0.9
	comp=Z,23nm,0.7s						
SONM	Songino Array	49.32	342	P	P	12 22 37.3	+0.9
	comp=Z,2.2nm,0.6s,baz=146,slow=6.0,SNR=3.6						
	comp=Z,2.2nm,0.6s						
SONM	Songino Array	49.32	342	P	P	12 22 36.2	-0.2
PYUN	Piuthan	49.71	306	*e*P	P	12 22 41.0	+1.2
	comp=Z,22nm,0.8s						
PETK	Petropavlovsk-	57.06	21	P	P	12 23 33.2	+0.4
	comp=Z,3.0nm,0.9s,baz=193,slow=6.1,SNR=4.1						
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	59.47	326	P	P	12 23 51.0	+1.2
MK31				IAmb	IAmb	12 23 51.6	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	59.47	326	P	P	12 23 51.0	+1.2
	comp=Z,6.4nm,0.5s,baz=121,slow=8.1,SNR=43						
	comp=Z,6.4nm,0.5s						
MKAR	Makanchi Array	59.47	326	P	P	12 23 50.8	+1.0
MAKZ	Makanchi	59.65	326	P	P	12 23 52.0	+1.0
YAK	Yakutsk	60.16	1	P	P	12 23 54.0	0.0
KDJ	Kajisay	60.16	319	P	P	12 23 55.9	+1.1
BOOM	Boomskoye usch	61.14	319	P	P	12 24 01.0	-0.4
BOOM				IAmb	IAmb	12 24 04.9	
	comp=Z,2.7nm,0.8s						
AAK	Ala-Archa	62.16	318	P	P	12 24 08.8	+0.5
AAK				IAmb	IAmb	12 24 12.7	
	comp=Z,2.3nm,0.6s						
ZAA0	Zalesovo Array	62.57	333	P	P	12 24 10.0	-0.6
ZALV	Zalesovo Beam	62.57	333	P	P	12 24 11.7	+1.1
	comp=Z,0.8nm,0.3s,baz=111,slow=8.0,SNR=3.9						
	comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	62.57	333	P	P	12 24 10.4	-0.2
KBL	Kabul	63.13	308	P	P	12 24 14.6	-0.3
KBL				IAmb	IAmb	12 24 21.9	
	comp=Z,3.0nm,0.6s						
GAR	Garm	63.64	313	P	P	12 24 18.3	+0.2
KURK	Kurchatov	63.67	328	P	P	12 24 18.1	+0.2
SEY	Seymchan	63.83	13	P	P	12 24 20.0	+1.3
	comp=Z,2.8nm,0.8s,baz=169,slow=3.9,SNR=7.2						
	comp=Z,2.8nm,0.8s						
CHGR	Chuyangaron	64.37	313	P	P	12 24 24.0	+1.2
CHGR				IAmb	IAmb	12 24 25.6	
	comp=Z,7.7nm,0.8s						
KK31	Karatay Array	65.03	317	P	P	12 24 27.6	+0.7
KKAR	Karatay Array	65.03	317	P	P	12 24 28.0	+1.1
KKAR	Karatay Array	65.03	317	P	P	12 24 27.6	+0.6
KKAR				IAmb	IAmb	12 24 30.2	
	comp=Z,2.9nm,0.7s						
BRVK	Borovoye	69.32	327	P	P	12 24 54.5	+0.7
BRVK				IAmb	IAmb	12 24 57.9	
	comp=Z,4.9nm,0.7s						
ABKAR	Akbulak array	74.00	321	P	P	12 25 22.3	+0.4
VNDA	Vanda	81.42	173	P	P	12 26 02.2	-0.3
	comp=Z,2.0nm,0.6s,baz=311,slow=6.0,SNR=27						
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	81.42	173	P	P	12 26 02.3	-0.3
MAW	Mawson	82.10	200	P	P	12 26 06.5	+0.3
	comp=Z,2.2nm,0.6s,baz=102,slow=4.6,SNR=11						
	comp=Z,2.2nm,0.6s						
BORA	Eskisehir	94.11	310	P	P	12 27 04.3	-0.6
TORD	Torodi Ar. Bea	124.01	287	PKP	PKPdf	12 32 44.9	+0.1
	comp=Z,11nm,0.6s,baz=59,slow=2.9,SNR=5.3						

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*NNC **13** 12:14:52.6±3.6, 41°.31N×80°.76E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=42.5km s-min=23.8km az=59.0*

SOME 13 12:14:50.7, 41°.33N×80°.80E, h10^{km}, 2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	2.08	332	*e*P	Pn	12 15 27.1	+1.4
	3.6nm,0.3s						
SHLS				*e*S	Sb	12 15 53.3	-1.1
	2.9nm,0.4s						
SHLS	Shalkode	2.08	332	Pg	Pn	12 15 27.1	+1.4
	3.6nm,0.3s						
SHLS				Lg	Lg	12 15 53.3	
	2.9nm,0.4s						
PDGK	Podgornoye	2.22	334	Pg	Pg	12 15 32.3	-0.9
	2.7nm,0.3s						
PDGK				Lg	Lg	12 16 02.5	
	3.3nm,0.6s						
PDGK	Podgornoye	2.22	334	⇓P	Pb	12 15 31.7	+0.7
	3.7nm,0.6s						
PDGK				⇓S	Sg	12 16 01.8	-0.2
	9.8nm,0.6s						
UZB	Uzynbulak	2.24	325	*e*P	Pg	12 15 33.5	-0.1
	14nm,0.2s						
UZB				*e*S	Sg	12 16 04.4	+1.6
	10nm,0.6s						
UZB	Uzynbulak	2.24	325	Pg	Pg	12 15 33.5	-0.1
	14nm,0.2s						
UZB				Lg	Lg	12 16 04.4	
	10nm,0.6s						
SATY	Saty	2.48	315	*e*P	Pg	12 15 37.6	-0.6
	3.5nm,0.3s						
SATY				*e*S	Sg	12 16 11.4	+1.1
	3.4nm,0.1s						
SATY	Saty	2.48	315	Pg	Pg	12 15 37.6	-0.6
	3.5nm,0.3s						
SATY				Lg	Lg	12 16 11.4	
	3.4nm,0.1s						
KPKS	Kokpek	2.65	324	*e*P	Pb	12 15 39.3	+1.1
	7.7nm,0.4s						
KPKS				*e*S	Sg	12 16 14.3	-1.4
	16nm,0.3s						

TAP 13 12:18:30.9, 23°.07N×120°.55E, h8^{km}, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	Jiashian	0.04	62	*i* P	Pg	12 18 32.8	+0.3
	baz=68						
SGST				*i* S	Sg	12 18 34.6	+1.0
	baz=68						
CHN1	Nanshi	0.12	351	*i* P	Pg	12 18 34.3	+0.6
	baz=350						
CHN1				*i* S	Sg	12 18 36.6	+1.1
	baz=350						
SNST	Tainan City	0.16	343	*i* P	Pg	12 18 35.2	+0.8
	baz=342						
SNST				*i* S	Sg	12 18 37.7	+1.0
	baz=342						
SCST	Cishan	0.19	196	*i* P	Pg	12 18 37.1	+2.4
	baz=195						
WTP	Ta-pu	0.19	18	*i* P	Pg	12 18 35.7	+0.8
	baz=20						
WTP				*i* S	Sg	12 18 39.5	+2.0
	baz=20						
TWK	Hsinying	0.21	344	*i* P	Pg	12 18 36.2	+1.0
	baz=347						
TWK				*i* S	Sg	12 18 39.8	+1.7
	baz=347						
STYH	Taoyuan	0.23	63	P	Pg	12 18 37.4	+1.8
	baz=61						
STYH				S	Sg	12 18 41.5	+2.8
	baz=61						
TPUB	Ta-pu	0.25	18	*i* P	Pg	12 18 36.8	+0.9
	baz=17						
TPUB				*i* S	Sg	12 18 40.9	+1.6
	baz=17						
SSD	Sandimen	0.33	166	S	Sb	12 18 44.6	+0.2
	baz=165						
TSMG	Majia	0.37	166	*i* S	Sg	12 18 43.4	+0.4
	baz=166						
ELDTW	Lidau	0.45	74	*i* S	Sg	12 18 46.5	+0.9
	baz=74						
MASBT	Mashibuluo	0.46	170	P	Pg	12 18 39.9	0.0
	baz=170						
ALS	Alishan	0.50	28	*i* P	Pb	12 18 42.1	-0.1
	baz=28						
ALS				*i* S	Sb	12 18 50.5	+0.7
	baz=28						
WSL	Shuilin Townsh	0.54	327	S	Sb	12 18 51.6	+0.9
	baz=327						
YUS	Yu-Shan	0.56	41	S	Sg	12 18 49.9	+0.5
	baz=41						
EHY	Hungye	0.83	58	*e*P	Pn	12 18 48.6	-0.4
	baz=58						
VWDT	VWDT	0.88	38	*i* P	Pn	12 18 49.9	+0.3
	baz=38						
HGSD	Ruisui	0.91	62	*i* P	Pg	12 18 48.1	-0.3
	baz=62						
WUSB	Renai	1.06	29	*i* P	Pn	12 18 52.6	+0.4
	baz=29						

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*SOME **13** 12:21:55.4, 43°.50N×81°.22E, h10^{km}*

*NNC **13** 12:21:56.4±2.6, 43°.51N×81°.16E, h0^{km}, mb2.5, mpv2.9, Error ellipse: s-maj=17.9km s-min=10.7km az=117.0*

ISC 13 12:21:55.3±1.6, 43°.46N±0°.06×81°.23E±0°.05, h15^{km}±13^{km}, n18, σ2^{s}.58/31, 2C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.28	265	P	Pn	12 22 18.5	-0.2
	1.0nm,0.4s						
PDGK				S	Sb	12 22 35.3	0.0
	10nm,0.5s						
PDGK	Podgornoye	1.28	265	⇑P	Pn	12 22 18.5	-0.2
	0.7nm,0.3s						
PDGK				⇑S	Sb	12 22 35.5	+0.1
	8.9nm,0.6s						
SHLS	Shalkode	1.33	257	*e*P	Pn	12 22 14.9	-4.4
	5.3nm,0.2s						
SHLS				*e*S	Sb	12 22 29.2	-7.7
	19nm,0.6s						
SHLS	Shalkode	1.33	257	P	Pn	12 22 14.9	-4.5
	5.3nm,0.2s						
SHLS				S	Sb	12 22 29.2	-7.7
	19nm,0.6s						
DJR	Jarkent	1.36	310	*e*P	Pb	12 22 20.3	-0.1
	2.3nm,0.2s						
DJR				*e*S	Sg	12 22 38.6	-0.5
	5.2nm,0.5s						
DJR	Jarkent	1.36	310	P	Pb	12 22 20.3	-0.1
	2.3nm,0.2s						
DJR				S	Sg	12 22 38.6	-0.5
	5.2nm,0.5s						
UZB	Uzynbulak	1.65	260	*e*P	Pg	12 22 27.3	+0.3
	5.9nm,0.4s						
UZB				*e*S	Sg	12 22 50.5	+2.2
	20nm,0.5s						
UZB	Uzynbulak	1.65	260	P	Pg	12 22 27.3	+0.3
	5.9nm,0.4s						
UZB				S	Sg	12 22 50.5	+2.2
	20nm,0.5s						
KPKS	Kokpek	1.86	271	*e*P	Pb	12 22 29.3	+0.3
	3.9nm,0.1s						
KPKS				*e*S	Sg	12 22 53.7	-1.4
	13nm,0.5s						
SATY	Saty	2.10	260	*e*P	Pg	12 22 34.7	-1.0
	5.5nm,0.1s						
SATY				*e*S	Sg	12 23 03.0	0.0
	14nm,0.6s						
SATY	Saty	2.10	260	Pg	Pg	12 22 34.7	-1.0
	5.5nm,0.1s						
SATY				Lg	Lg	12 23 03.0	
	14nm,0.6s						
KAPS	Kapalarasan	2.26	324	*e*P	Pb	12 22 36.6	+0.7
	4.7nm,0.5s						
KAPS				*e*S	Sg	12 23 06.3	-1.7
	8.7nm,0.5s						
KAPS	Kapalarasan	2.26	324	Pg	Pb	12 22 36.6	+0.7
	4.7nm,0.5s						
KAPS				Lg	Lg	12 23 06.4	
	8.7nm,0.5s						
MDOK	Medeo	3.07	266	*e*P	Pb	12 22 50.7	+1.0
	1.4nm,0.3s						
MDOK				*e*S	Sb	12 23 30.3	+3.4
	4.0nm,0.6s						
TNSS	Tian-Shan	3.16	264	*e*P	Pb	12 22 51.7	+0.4
	0.6nm,0.1s						
TNSS				*e*S	Sb	12 23 32.0	+2.2
	1.8nm,0.7s						
KTBS	Karatobe	3.32	276	*e*P	Pb	12 22 54.4	+0.6
	0.9nm,0.6s						
KTBS				*e*S	Sb	12 23 36.7	+2.7
	8.3nm,0.7s						
KUU	Kurty	3.58	279	*e*P	Pb	12 22 59.5	+1.3
	1.1nm,0.3s						
KUU				*e*S	Sb	12 23 45.4	+4.0
	2.7nm,0.5s						
WMQ	Urumqi	4.70	83	*e*P	Pb	12 23 18.3	+0.8

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*IDC **13** 12:28:53.5±1.6, 26°.66N×143°.83E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.2/2, Error ellipse: s-maj=34.8km s-min=27.5km az=69.0*

ISC 13 12:28:55.6±1.3, 26°.8N±0°.1×143°.7E±0°.1, h10^{km}, n13, σ2^{s}.04/9, mb3.7/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.39	281	Pn	Pb	12 29 21.9	+0.2
	10nm,0.3s,baz=27,slow=20,SNR=26						
JCJ				Sn	Sn	12 29 39.1	-0.5
	72nm,0.3s,baz=302,slow=23,SNR=11						
JHJ	Hachijo jima 2	7.13	332	Pn	Pn	12 30 41.5	+1.5
	4.2nm,0.3s,baz=53,slow=20,SNR=6.4						
JHJ				Sn	Sn	12 31 57.4	-3.8
	3.7nm,0.3s,baz=252,slow=20,SNR=1.5						
	39nm,0.8s						
MJAR	Matsushiro Arr	10.75	336	Pn	Pn	12 31 29.9	+0.2
	0.1nm,0.3s,baz=158,slow=11,SNR=3.1						
H11N2	WAKE ISLAND Hy	22.42	103	T	T	12 57 19.7	
	baz=290						
H11N1	WAKE ISLAND Hy	22.42	104	T	T	12 57 30.1	

	baz=290						
H11N3	**WAKE ISLAND Hy**	**22.43**	**104**	T	T	12 57 11.4	
	baz=290						
H11S3	**WAKE ISLAND Hy**	**22.74**	**107**	T	T	12 58 14.0	
	baz=295						
H11S1	**WAKE ISLAND Hy**	**22.74**	**107**	T	T	12 57 38.9	
	baz=295						
H11S2	**WAKE ISLAND Hy**	**22.75**	**107**	T	T	12 58 15.9	
	baz=295						
KLR	**Kul'dur**	**24.21**	**341**	P	**P**	**12 34 14.2**	**+1.8**
	1.0nm,0.6s,baz=169,slow=10,SNR=2.2						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**47.38**	**192**	P	**P**	**12 37 28.2**	**-1.9**
	0.7nm,0.9s,baz=15,slow=8.7,SNR=2.3						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**51.69**	**310**	P	**P**	**12 38 04.0**	**+1.0**
	0.5nm,0.4s,baz=90,slow=8.9,SNR=6.2						
	0.5nm,0.4s						
YKA	**Yellowknife Ar**	**71.72**	**29**	P	**P**	**12 40 17.7**	**+0.1**
	0.1nm,0.5s,baz=292,slow=6.4,SNR=1.8						
	0.1nm,0.5s						

*IDC **13** 12:42:10.2±2.3, 17°.25N×83°.32W, h0^{km}, mb3.4/8, mbtmp3.5/10, ML3.7/2, MS2.9/2, Error ellipse: s-maj=50.9km s-min=28.5km az=178.0*

*SSNC **13** 12:42:28.6±3.4, 18°.39N×82°.70W, h23^{km}±99^{km}, MD4.0, ML4.4*

ISC 13 12:42:11.6±1.1,**17°.3N**±0°.1×**83°.30W**±0°.10,**h10**^{km}**,n16,** σ**1^{s}.03**/14,**mb3.5**/8,**North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOR	**Soroa**	**5.45**	**3**	*e*P	**Pn**	**12 43 32.3**	**-0.6**
SOR				*e*S	Sn	12 44 19.6	-16
SOR				IAML		12 44 34.5	
	comp=E,221nm,0.3s						
SOR				IAML		12 44 35.0	
	comp=N,172nm,0.6s						
MTDJ	**Mount Denham**	**5.56**	**80**	*e*P	**Pn**	**12 43 34.0**	**-0.6**
MGV	**Manicaragua**	**5.69**	**33**	*e*P	**Pn**	**12 43 34.2**	**-2.1**
CCCC	**Cccc**	**6.49**	**53**	*e*P	Pn	12 43 51.8	+4.5
CMIG	**Matias Romero**	**11.07**	**271**	Pn	**Pn**	**12 44 48.8**	**-1.4**
	comp=N,0.3nm,0.3s,baz=129,slow=10.0,SNR=2.7						
CMIG				Sn	Sn	12 46 42.5	-12
	baz=267,slow=22,SNR=1.5						
	comp=N,1.9nm,0.5s						
SJG	**San Juan**	**16.36**	**85**	LR	LR	12 52 08.6	
	comp=N,44nm,19.2s,baz=86,slow=36						
TKL	**Tuckaleechee C**	**18.26**	**359**	P	**P**	**12 46 25.9**	**+0.5**
	comp=N,0.4nm,0.3s,baz=180,slow=7.1,SNR=1.7						
	comp=N,1.0nm,0.4s						
TXAR	**Lajitas Array**	**22.16**	**306**	P	**P**	**12 47 08.5**	**+0.6**
	comp=N,0.3nm,0.5s,baz=120,slow=13,SNR=17						
	comp=N,0.3nm,0.5s						
ANMO	**Albuquerque**	**27.10**	**315**	P	**P**	**12 47 55.8**	**+0.9**
	comp=N,0.5nm,0.3s,baz=117,slow=11,SNR=2.3						
ANMO				LR	LR	12 59 49.1	
	comp=N,25nm,18.3s,baz=168,slow=39						
	comp=N,0.5nm,0.3s						
PDAR	**Pinedale Array**	**33.79**	**324**	P	**P**	**12 48 54.9**	**+0.8**
	comp=N,0.3nm,0.6s,baz=120,slow=8.9,SNR=2.4						
	comp=N,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**37.09**	**312**	P	**P**	**12 49 23.1**	**+0.6**
	comp=N,0.6nm,0.8s,baz=123,slow=8.1,SNR=4.7						
	comp=N,0.6nm,0.8s						
SCHQ	**Schefferville**	**39.52**	**15**	P	**P**	**12 49 42.5**	**0.0**
	comp=N,2.2nm,0.6s,baz=240,slow=8.1,SNR=2.1						
	comp=N,2.2nm,0.6s						
YKA	**Yellowknife Ar**	**50.13**	**342**	P	**P**	**12 51 07.7**	**+0.9**
	comp=N,0.1nm,0.5s,baz=138,slow=8.7,SNR=1.7						
	comp=N,0.1nm,0.5s						
ILAR	**Eielson Array**	**63.29**	**335**	P	**P**	**12 52 39.9**	**-0.5**
	comp=N,0.4nm,0.8s,baz=128,slow=5.2,SNR=4.7						
	comp=N,0.4nm,0.8s						
ESDC	**Sonseca Array**	**71.06**	**53**	P	**P**	**12 53 31.3**	**+1.1**
	comp=N,0.3nm,0.6s,baz=296,slow=4.0,SNR=2.3						
	comp=N,0.3nm,0.6s						
ASAR	**Alice Springs**	**144.66**	**253**	PKP	**PKPdf**	**13 01 49.0**	**-0.5**
	comp=N,0.5nm,0.8s,baz=96,slow=4.0,SNR=5.3						

*MOS **13** 12:57:26.4±0.9, 25°.42S×179°.32E, h502^{km}, mb5.3/41, Error ellipse: s-maj=8.3km s-min=7.1km az=73.6*

*BJI **13** 12:57:26.4±0.0, 25°.35S×179°.33E, h504^{km}, mb4.9/53, mB4.9/35*

*NEIC **13** 12:57:27.3±1.7, 25°.48S±0°.08×179°.34E±0°.09, h506^{km}±4^{km}, mb5.2/455, Mww5.6, Error ellipse: s-maj=12.3km s-min=11.0km az=99.0*

*IDC **13** 12:57:27.3±0.5, 25°.44S×179°.29E, h505^{km}±5^{km}, mb4.8/35, mbtmp5.6/37, Error ellipse: s-maj=8.0km s-min=6.6km az=34.0*

*NOU **13** 12:57:29.6, 25°.40S×179°.33E, h526^{km}, mb5.4/43, South of Fiji Islands*

*GCMT **13** 12:57:32.3±0.2, 25°.58S±0°.01×179°.23E±0°.02, h536^{km}±1^{km}, MW5.7/135, Moment Tensor Solution. s135,c229; Duration: 1^{s}.7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.00±.04; M$_{\theta\theta}$-2.74±.07; M$_{\phi\phi}$0.73±.07; M$_{r\theta}$0.60±.07; M$_{\theta\phi}$-2.08±.07; M$_{\phi r}$-2.31±.07; Best double couple: M$_0$3.98500×10^{17} NP1:ϕ$_s$99.00000°,δ55.00000°, λ146.00000°. NP2:ϕ$_s$210.00000°,δ63.00000°,λ41.00000°. Principal axes: T 4.2190, Plg47.0000°, Azm68.0000°; N -0.4680, Plg43.0000°, Azm238.0000°; P -3.7520, Plg5.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*NEIC **13** 12:57:34, 25°.53S×179°.34E, h540^{km}, Moment Tensor Solution. Duration: 10^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.81; M$_{\theta\theta}$-2.62; M$_{\phi\phi}$0.81; M$_{r\theta}$0.15; M$_{\theta\phi}$-1.91; M$_{\phi r}$-1.97; Fault plane solution: M$_0$3.60000×10^{17} NP1: ϕ$_s$101.00000°,δ52.00000°,λ148.00000°. NP2: ϕ$_s$211.00000°,δ66.00000°,λ42.00000°. Principal axes: T 3.6274, Plg46.0000°, Azm72.0000°; N -0.0637, Plg42.0000°, Azm236.0000°; P -3.5637, Plg8.0000°, Azm333.0000°;*

ISC 13 12:57:27.9±0.3,**25°.53S**±0°.03×**179°.33E**±0°.04,**h517**^{km}±2^{km}, **h518**^{km}**:pP-P,n1368,**σ**1^{s}.25**/1466,**mb5.2**/355,**62C-61D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**4.43**	**147**	P	**P**	**12 58 53.2**	**+2.4**
RIZ				S	**S**	**13 00 06.5**	**+7.9**
RAO	**Raoul Island**	**4.44**	**147**	P	**P**	**12 58 51.7**	**+0.8**
	5µm,0.2s,baz=243,slow=14,SNR=110						
RAO				S	**S**	**12 59 58.5**	**-0.3**
	548nm,0.3s,baz=83,slow=22,SNR=0.5						
RAO	**Raoul Island**	**4.44**	**147**	P	**P**	**12 58 49.9**	**-1.0**
RAO	**Raoul Island**	**4.44**	**147**	P	**P**	**12 58 53.2**	**+2.3**
RAO	**Raoul Island**	**4.44**	**147**	P	**P**	**12 58 52.9**	**+2.0**
GLKZ	**Green Lake**	**4.45**	**147**	P	**P**	**12 58 52.3**	**+1.4**
GLKZ				S	**S**	**13 00 04.0**	**+5.2**
LKBA	**Tubou, Lakemba**	**7.46**	**14**	P	**P**	**12 59 20.5**	**+1.1**
DGTI	**Dogotuki**	**9.19**	**2**	P	**P**	**12 59 37.9**	**+0.8**
OUZ	**Omahuta**	**10.85**	**206**	P	**P**	**12 59 57.1**	**+2.9**
MARNC	**Mare, Loyalty**	**11.12**	**289**	P	**P**	**12 59 58.6**	**+1.3**
MARNC	**Mare, Loyalty**	**11.12**	**289**	P	**P**	**12 59 59.4**	**+2.1**
GRZ	**Great Barrier**	**11.19**	**196**	P	**P**	**13 00 00.0**	**+2.3**
WCZ	**Waipu Caves**	**11.22**	**201**	P	**P**	**13 00 01.6**	**+3.5**
PINNC	**Pines Island,**	**11.24**	**282**	P	**P**	**12 59 58.7**	**+0.2**
KUZ	**Kuaotunu**	**11.60**	**195**	P	**P**	**13 00 04.4**	**+2.4**
WIAZ	**Waiheke Island**	**11.79**	**197**	P	**P**	**13 00 06.5**	**+2.6**
NIUE	**Niue**	**11.83**	**59**	P	**P**	**13 00 03.9**	**-0.8**
	baz=12,SNR=17						
NIUE	**Niue**	**11.83**	**59**	P	**P**	**13 00 02.7**	**-2.0**
OUENC	**Ouen Island, N**	**11.83**	**283**	P	**P**	**13 00 04.7**	**0.0**
MXZ	**Matakaoa Point**	**12.03**	**184**	P	**P**	**13 00 05.4**	**-1.1**
MXZ	**Matakaoa Point**	**12.03**	**184**	P	**P**	**13 00 05.4**	**-1.1**
MXZ				S	**S**	**13 02 15.4**	**-1.8**
LIFNC	**LIFOU**	**12.09**	**291**	P	**P**	**13 00 06.5**	**-0.9**
WIZ	**White Island**	**12.10**	**188**	P	**P**	**13 00 08.8**	**+1.6**
ONTNC	**Ouen Toro**	**12.21**	**283**	P	**P**	**13 00 07.2**	**-1.4**
HAZ	**Te Kaha**	**12.26**	**186**	P	**P**	**13 00 09.4**	**+0.5**
WMGZ	**Waiomatatini S**	**12.28**	**183**	P	**P**	**13 00 08.6**	**-0.5**
WMGZ				S	**S**	**13 02 18.8**	**-3.1**
DZM	**Mont Dzumac**	**12.29**	**284**	P	**P**	**13 00 11.3**	**+1.7**
	208nm,0.8s,baz=96,slow=14,SNR=91						
DZM				S	**S**	**13 02 21.3**	**-1.5**
	13nm,0.7s,baz=58,slow=20,SNR=1.1						
DZM	**Mont Dzumac**	**12.29**	**284**	*e*P	**P**	**13 00 10.8**	**+1.2**
	529nm,0.9s						
DZM				*e*S	**S**	**13 02 31.6**	**+8.8**
	153nm,1.1s						
DZM	**Mont Dzumac**	**12.29**	**284**	P	**P**	**13 00 09.2**	**-0.5**
PKGZ	**Pakihiroa**	**12.37**	**185**	P	**P**	**13 00 09.2**	**-0.9**
PKGZ				S	**S**	**13 02 20.7**	**-3.2**
TGRZ	**Tauranga**	**12.44**	**191**	P	**P**	**13 00 13.0**	**+2.1**
WHRZ	**Whale Island**	**12.45**	**189**	P	**P**	**13 00 12.5**	**+1.5**
WHRZ				S	**S**	**13 02 29.7**	**+4.4**
RUGZ	**Raukumara Rang**	**12.48**	**186**	P	**P**	**13 00 10.5**	**-0.9**
RUGZ				S	**S**	**13 02 22.1**	**-3.9**
OPRZ	**Ohinepanea**	**12.50**	**190**	P	**P**	**13 00 13.0**	**+1.6**
PUZ	**Puketiti**	**12.54**	**184**	P	**P**	**13 00 10.0**	**-1.9**
PUZ				S	**S**	**13 02 23.5**	**-3.5**
KMRZ	**Kaimai**	**12.61**	**192**	P	**P**	**13 00 14.8**	**+2.1**
MARZ	**Manawahe**	**12.62**	**190**	P	**P**	**13 00 13.9**	**+1.1**
TWGZ	**Tauwhareparae**	**12.66**	**185**	P	**P**	**13 00 12.5**	**-0.7**
TWGZ				S	**S**	**13 02 28.4**	**-1.1**
LIRZ	**Lichensteins R**	**12.68**	**191**	P	**P**	**13 00 15.9**	**+2.5**
KARZ	**Kaharoa**	**12.72**	**191**	P	**P**	**13 00 16.3**	**+2.5**
EDRZ	**Edgecumbe**	**12.73**	**189**	P	**P**	**13 00 15.6**	**+1.6**
OMRZ	**Omania**	**12.79**	**191**	P	**P**	**13 00 16.7**	**+2.1**
URZ	**Urewera**	**12.83**	**188**	P	**P**	**13 00 11.9**	**-3.0**
	484nm,0.5s,baz=39,slow=2.4,SNR=260						
URZ				S	**S**	**13 02 27.2**	**-5.4**
	298nm,0.8s,baz=199,slow=18,SNR=11						
URZ	**Urewera**	**12.83**	**188**	P	**P**	**13 00 13.6**	**-1.3**
URZ	**Urewera**	**12.83**	**188**	P	**P**	**13 00 12.0**	**-3.0**
URZ				S	**S**	**13 02 29.2**	**-3.4**
MWZ	**Matawai**	**12.86**	**186**	P	**P**	**13 00 13.8**	**-1.5**
MWZ				S	**S**	**13 02 31.0**	**-2.2**
UTU	**Utuhina**	**12.89**	**191**	P	**P**	**13 00 18.0**	**+2.5**
TARZ	**Mount Tarawera**	**12.89**	**190**	P	**P**	**13 00 18.2**	**+2.5**
HLRZ	**Highlands Stat**	**12.93**	**191**	P	**P**	**13 00 17.6**	**+1.6**
TKGZ	**Te Karaka**	**12.93**	**185**	P	**P**	**13 00 14.9**	**-1.1**
CNGZ	**Carnagh Statio**	**12.95**	**184**	P	**P**	**13 00 15.8**	**-0.3**
RRRZ	**Republican Roa**	**12.99**	**190**	P	**P**	**13 00 17.6**	**+1.0**
HSRZ	**Hossack Road**	**13.01**	**191**	P	**P**	**13 00 18.6**	**+1.7**
RAGZ	**Rawiri**	**13.03**	**187**	P	**P**	**13 00 16.1**	**-1.0**
RAGZ				S	**S**	**13 02 32.8**	**-3.7**
GRRZ	**Galatos Road**	**13.07**	**191**	P	**P**	**13 00 19.5**	**+2.0**
HRRZ	**Handcock Road**	**13.08**	**191**	P	**P**	**13 00 19.2**	**+1.6**
MUGZ	**Murupara**	**13.09**	**189**	P	**P**	**13 00 16.4**	**-1.2**
PRRZ	**Plateau Road**	**13.17**	**190**	P	**P**	**13 00 18.6**	**+0.1**
RTZ	**Ruatahuna**	**13.20**	**188**	P	**P**	**13 00 17.3**	**-1.5**
RIGZ	**Rimuhau**	**13.20**	**185**	P	**P**	**13 00 17.3**	**-1.6**
RIGZ				S	**S**	**13 02 36.8**	**-3.0**
WPRZ	**Whakapapatarin**	**13.22**	**191**	P	**P**	**13 00 19.6**	**+0.5**
ALRZ	**Allen Road**	**13.24**	**190**	P	**P**	**13 00 19.4**	**+0.2**
KUTZ	**Kaahu Road**	**13.26**	**192**	P	**P**	**13 00 22.1**	**+2.7**
SNGZ	**Shannon Statio**	**13.32**	**187**	P	**P**	**13 00 18.7**	**-1.4**
SNGZ				S	**S**	**13 02 39.4**	**-2.6**
WHTZ	**Whakaora**	**13.40**	**191**	P	**P**	**13 00 23.1**	**+2.0**
PRGZ	**Paritu Road**	**13.41**	**185**	P	**P**	**13 00 20.3**	**-0.7**
PRGZ				S	**S**	**13 02 41.7**	**-2.1**
MTHZ	**Maungataniwha**	**13.45**	**188**	P	**P**	**13 00 20.4**	**-1.0**
RAHZ	**Arahi**	**13.48**	**188**	P	**P**	**13 00 20.9**	**-0.9**
RAHZ				S	**S**	**13 02 40.9**	**-4.3**
HIZ	**Hauiti**	**13.49**	**195**	P	**P**	**13 00 22.6**	**+0.7**
MRHZ	**Matea Rd**	**13.49**	**190**	P	**P**	**13 00 20.7**	**-1.3**
KNZ	**Kokohu**	**13.53**	**186**	P	**P**	**13 00 19.7**	**-2.5**
KNZ				S	**S**	**13 02 43.1**	**-2.7**
HATZ	**Hinemaiaia**	**13.60**	**191**	P	**P**	**13 00 23.1**	**+0.1**
RITZ	**Rihia Road**	**13.72**	**191**	P	**P**	**13 00 24.7**	**+0.4**
BKZ	**Black Stump Fm**	**13.80**	**189**	P	**P**	**13 00 23.4**	**-1.8**
AFI	**Afiamalu**	**14.27**	**38**	P	**P**	**13 00 26.1**	**-4.3**
	427nm,1.0s,baz=255,slow=10,SNR=20						
AFI				S	S	13 02 51.4	-9.4
	83nm,0.4s,baz=17,slow=24,SNR=8.5						
AFI	**Afiamalu**	**14.27**	**38**		**P**	**13 00 26.7**	**-3.7**
AFI	**Afiamalu**	**14.27**	**38**	P	**P**	**13 00 26.7**	**-3.7**
SANVU	**Saraoutou**	**15.15**	**309**	P	**P**	**13 00 37.9**	**-1.6**
BFZ	**Birch Farm**	**15.33**	**189**	P	**P**	**13 00 38.9**	**-2.2**
SNZO	**South Karori**	**16.20**	**193**	P	**P**	**13 00 49.0**	**-1.0**
BHW	**Baring Head**	**16.26**	**192**	P	**P**	**13 00 48.9**	**-1.7**
QRZ	**Quartz Range**	**16.27**	**199**	P	**P**	**13 00 50.9**	**+0.1**
NNZ	**Nelson**	**16.41**	**196**	P	**P**	**13 00 50.9**	**-1.3**
TUWZ	**Tuamarina**	**16.48**	**194**	P	**P**	**13 00 51.1**	**-1.6**
CMWZ	**Cape Campbell**	**16.72**	**193**	P	**P**	**13 00 54.7**	**-0.6**
BSWZ	**Blackbirch Sta**	**16.76**	**194**	P	**P**	**13 00 54.2**	**-1.4**
FUNA	**Funafuti**	**16.91**	**360**	P	**P**	**13 00 56.3**	**-1.1**
THZ	**Tophouse**	**17.04**	**197**	P	**P**	**13 00 58.0**	**-0.4**
KHZ	**Kahutara**	**17.51**	**194**	P	**P**	**13 01 01.6**	**-1.1**
LTZ	**Lake Taylor**	**18.16**	**197**	P	**P**	**13 01 07.6**	**-1.1**
LHI	**Lord Howe Isla**	**18.77**	**247**	P	**P**	**13 01 14.2**	**-0.2**
	baz=19,SNR=6.0						
LHI	**Lord Howe Isla**	**18.77**	**247**	P	**P**	**13 01 15.2**	**+0.8**
MQZ	**McQueen's Vall**	**18.93**	**195**		**P**	**13 01 15.4**	**-0.2**
RPZ	**Rata Peaks**	**19.36**	**198**	P	**P**	**13 01 19.2**	**-0.3**
	113nm,0.5s,baz=355,slow=1.6,SNR=54						
RPZ				S	**S**	**13 04 23.2**	**-4.8**
	16nm,0.7s,baz=332,slow=24,SNR=1.4						
RPZ	**Rata Peaks**	**19.36**	**198**		**P**	**13 01 19.3**	**-0.3**
FOZ	**Fox Glacier**	**19.57**	**201**	P	**P**	**13 01 21.7**	**+0.2**
RAR	**Rarotonga**	**19.65**	**82**	P	**P**	**13 01 22.1**	**-0.4**
	92nm,0.9s,baz=232,slow=8.2,SNR=6.1						
RAR	**Rarotonga**	**19.65**	**82**	P	**P**	**13 01 20.5**	**-2.0**
RAR	**Rarotonga**	**19.65**	**82**	P	**P**	**13 01 24.0**	**+1.5**
	276nm,2.3s						
LBZ	**Lake Benmore**	**20.23**	**199**	P	**P**	**13 01 25.6**	**-1.8**
LBZ				IAmb	IAmb	13 01 33.9	
	comp=Z,49nm,0.8s						
MLZ	**Mavora Lakes**	**21.76**	**202**	P	**P**	**13 01 41.6**	**+0.3**
MLZ				IAmb	IAmb	13 01 44.2	
	comp=Z,46nm,0.6s						
WHZ	**Wether Hill Ro**	**22.28**	**201**	P	**P**	**13 01 45.5**	**-0.4**
KNTN	**Kanton**	**24.21**	**22**	P	**P**	**13 02 02.5**	**-1.1**
KNTN	**Kanton**	**24.21**	**22**	P	**P**	**13 02 03.8**	**+0.2**
HNR	**Honiara**	**24.40**	**308**	P	**P**	**13 02 04.2**	**-1.1**
	comp=Z,836nm,0.5s,baz=173,slow=2.7,SNR=58						
HNR	**Honiara**	**24.40**	**308**	P	**P**	**13 02 03.9**	**-1.4**
HNR	**Honiara**	**24.40**	**308**	P	**P**	**13 02 05.1**	**-0.2**
ARMA	**Armidale**	**24.92**	**252**	P	**P**	**13 02 11.5**	**+1.7**
	baz=25,SNR=46						
ARMA	**Armidale**	**24.92**	**252**	P	**P**	**13 02 10.6**	**+0.8**
ARMA				IAmb	IAmb	13 02 13.0	
	comp=Z,45nm,0.7s						
ARMA	**Armidale**	**24.92**	**252**	P	**P**	**13 02 11.7**	**+1.9**
EIDS	**Eidsvold**	**25.49**	**264**	P	**P**	**13 02 15.5**	**+0.6**
	baz=26,SNR=90						
EIDS	**Eidsvold**	**25.49**	**264**	P	**P**	**13 02 15.4**	**+0.5**
EIDS	**Eidsvold**	**25.49**	**264**	P	**P**	**13 02 15.9**	**+1.1**
MGCD	**Mangrove Creek**	**25.70**	**246**	P	**P**	**13 02 18.6**	**+2.0**
	baz=26,SNR=41						
MGCD	**Mangrove Creek**	**25.70**	**246**	P	**P**	**13 02 19.5**	**+2.9**
RIV	**Riverview**	**25.78**	**245**	P	**P**	**13 02 19.2**	**+2.0**
	baz=26,SNR=4.5						
SYDH	**Sydney Hard Ro**	**26.11**	**245**	P	**P**	**13 02 22.8**	**+2.7**
	comp=Z,56nm,0.7s						
RK1H	**Rockhampton Ha**	**26.32**	**268**	P	**P**	**13 02 23.0**	**+0.9**
	comp=Z,112nm,0.8s						
TARA	**Tarawa**	**27.44**	**346**	P	**P**	**13 02 31.9**	**-0.1**
TARA	**Tarawa**	**27.44**	**346**	P	**P**	**13 02 31.9**	**-0.1**
RMQ	**Roma**	**27.46**	**261**	P	**P**	**13 02 33.8**	**+1.6**
	baz=28,SNR=203						
RMQ	**Roma**	**27.46**	**261**	P	**P**	**13 02 34.6**	**+2.4**
CNB	**Canberra Magne**	**27.53**	**242**	P	**P**	**13 02 32.1**	**-0.7**
	baz=28,SNR=18						
CNB	**Canberra Magne**	**27.53**	**242**	P	**P**	**13 02 35.1**	**+2.3**
CAN	**Canberra**	**27.82**	**242**	P	**P**	**13 02 36.4**	**+1.1**
CAN	**Canberra**	**27.82**	**242**	P	**P**	**13 02 36.4**	**+1.1**
CAN				pmax	pmax		
	comp=Z,40nm,1.4s						
TBI	**Tubuai**	**28.46**	**92**	*e*P	**P**	**13 02 42.2**	**+1.2**
	comp=Z,313nm,1.0s						
TBI				*e*LR	LR	13 09 08.2	
	comp=Z,907nm,32.2s						
PAE	**Paea**	**29.89**	**81**	*e*P	**P**	**13 02 54.0**	**+0.6**
	comp=Z,58nm,1.1s						
PPT2	**Papeete2**	**29.92**	**81**	*e*P	**P**	**13 02 54.8**	**+1.0**
	comp=Z,241nm,1.2s						
PPT2				*e*LR	LR	13 09 33.8	
	comp=Z,2µm,26.8s						
PPT	**Papeete**	**29.93**	**81**	P	**P**	**13 02 54.5**	**+0.7**
	comp=Z,189nm,1.0s,baz=314,slow=8.3,SNR=8.8						
	comp=Z,189nm,1.0s						
PPTF	**Pamatai, Papee**	**29.93**	**81**	P	**P**	**13 02 53.9**	**+0.1**
PPTF	**Pamatai, Papee**	**29.93**	**81**	P	**P**	**13 02 54.7**	**+0.8**
CMSA	**Cobar Meteorol**	**30.08**	**251**	P	**P**	**13 02 55.6**	**+0.7**
	baz=30,SNR=71						
CMSA	**Cobar Meteorol**	**30.08**	**251**	P	**P**	**13 02 55.7**	**+0.8**
CTA	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 02.9**	**+0.6**
	comp=Z,184nm,0.4s,baz=96,slow=9.8,SNR=405						
CTA				S	**S**	**13 07 28.9**	**-1.1**
	comp=Z,8.8nm,0.6s,baz=195,slow=22,SNR=5.7						
CTA				ScP	**ScP**	**13 08 39.5**	**+2.7**
	comp=Z,40nm,0.9s,baz=147,slow=3.0,SNR=10						
	comp=Z,184nm,0.4s						
CTA	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 03.2**	**+0.9**
CTAO	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 02.5**	**+0.3**
CTAO	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 02.6**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,306nm,0.8s						
CTAO	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 03.2**	**+0.9**
CTAO	**Charters Tower**	**30.92**	**273**	P	**P**	**13 03 03.0**	**+0.7**
CORO	**Coronation Par**	**30.97**	**231**	P	**P**	**13 03 05.4**	**+3.0**
	comp=Z,108nm,0.8s						
TOO	**Toolangi**	**31.07**	**239**	P	**P**	**13 03 04.5**	**+1.1**
	baz=31,SNR=25						
TOO	**Toolangi**	**31.07**	**239**	P	**P**	**13 03 03.9**	**+0.5**
TOO	**Toolangi**	**31.07**	**239**	P	**P**	**13 03 03.9**	**+0.5**
TOO				pmax	pmax		
	comp=Z,20nm,0.8s						
TOO	**Toolangi**	**31.07**	**239**	P	**P**	**13 03 05.2**	**+1.8**
MOO	**Moorlands**	**31.30**	**229**	P	**P**	**13 03 07.3**	**+2.0**
	baz=31,SNR=6.5						
TAU	**Tasmania Unive**	**31.39**	**228**	P	**P**	**13 03 08.0**	**+2.0**
TAU				IAmb	IAmb	13 04 45.7	
	comp=Z,144nm,1.5s						
TAU	**Tasmania Unive**	**31.39**	**228**	P	**P**	**13 03 08.0**	**+2.0**
TAU				pmax	pmax		
	comp=Z,144nm,1.5s						
QLP	**Quilpie**	**31.49**	**260**	P	**P**	**13 03 07.4**	**+0.3**
	baz=32,SNR=53						
QLP	**Quilpie**	**31.49**	**260**	P	**P**	**13 03 08.4**	**+1.3**
GEXS	**Deakin Univers**	**32.14**	**238**	P	**P**	**13 03 14.7**	**+2.2**
	comp=Z,141nm,0.7s						
BRAT	**Ballarat**	**32.28**	**240**	P	**P**	**13 03 15.9**	**+2.2**
	comp=Z,41nm,0.9s						
PMOR	**Pomariorio Ree**	**32.40**	**78**	*e*P	**P**	**13 03 15.7**	**+0.8**
	comp=Z,279nm,1.1s						
VAH	**Vaihoa**	**32.54**	**78**	*e*P	**P**	**13 03 16.5**	**+0.4**
	comp=Z,234nm,1.1s						
MTSU	**Mount Surprise**	**33.25**	**276**	P	**P**	**13 03 23.0**	**+0.7**
	baz=33,SNR=494						
MTSU	**Mount Surprise**	**33.25**	**276**	P	**P**	**13 03 23.2**	**+0.9**
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**13 03 25.2**	**+0.5**
	comp=Z,45nm,0.5s,baz=97,slow=12,SNR=157						
STKA				PcP	**PcP**	**13 05 50.7**	**+0.4**
	comp=Z,14nm,0.6s,baz=127,slow=5.1,SNR=4.3						
STKA				ScP	**ScP**	**13 08 47.3**	**+1.5**
	comp=Z,37nm,0.9s,baz=73,slow=4.5,SNR=17						
	comp=Z,45nm,0.5s						
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**13 03 25.3**	**+0.5**
	baz=34,SNR=162						
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**13 03 24.9**	**+0.1**
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**13 03 25.5**	**+0.7**
RABL	**Rabaul**	**33.61**	**305**	P	**P**	**13 03 24.6**	**-0.7**
RABL	**Rabaul**	**33.61**	**305**	P	**P**	**13 03 25.3**	**0.0**
KRVT	**Keravat (AS076**	**33.64**	**304**	P	**P**	**13 03 23.9**	**-1.6**
	comp=Z,555nm,0.5s,baz=151,slow=0.3,SNR=121						
	comp=Z,555nm,0.5s						
ARPS	**Mount Arapiles**	**33.79**	**241**	P	**P**	**13 03 27.6**	**+1.1**
	baz=34,SNR=12						
ARPS	**Mount Arapiles**	**33.79**	**241**	P	**P**	**13 03 28.3**	**+1.8**
INKA	**Innaminka**	**34.47**	**258**	P	**P**	**13 03 33.7**	**+1.4**
PMG	**Port Moresby**	**34.49**	**292**	P	**P**	**13 03 32.6**	**-0.1**
	comp=Z,367nm,0.7s,baz=108,slow=5.4,SNR=95						
PMG				ScP	**ScP**	**13 08 52.1**	**+2.8**
	comp=Z,34nm,0.9s,baz=121,slow=5.9,SNR=4.5						
	comp=Z,367nm,0.7s						
PMG	**Port Moresby**	**34.49**	**292**	P	**P**	**13 03 32.3**	**-0.4**
PMG	**Port Moresby**	**34.49**	**292**	P	**P**	**13 03 33.1**	**+0.4**
PMG	**Port Moresby**	**34.49**	**292**	P	**P**	**13 03 32.9**	**+0.2**
PMG				pP	pP	13 04 52.6	-8.1
PMG				sP	**PcP**	**13 05 55.4**	**+2.1**
XMAS	**Kiritimati**	**35.46**	**43**	P	**P**	**13 03 41.3**	**+0.6**
XMAS	**Kiritimati**	**35.46**	**43**	P	**P**	**13 03 41.4**	**+0.7**
COEN	**Coen**	**35.81**	**282**	P	**P**	**13 03 44.2**	**+0.5**
	baz=36,SNR=371						
COEN	**Coen**	**35.81**	**282**	P	**P**	**13 03 44.1**	**+0.5**
COEN	**Coen**	**35.81**	**282**	P	**P**	**13 03 44.5**	**+0.8**
HTT	**Hallett**	**35.87**	**248**	P	**P**	**13 03 44.2**	**+0.1**
	baz=36,SNR=66						
HTT	**Hallett**	**35.87**	**248**	P	**P**	**13 03 44.7**	**+0.7**
TWOA	**Tennyson Woods**	**36.24**	**245**	P	**P**	**13 03 47.6**	**+0.7**
	comp=Z,65nm,0.7s						
LCRK	**Leigh Creek**	**36.49**	**253**	P	**P**	**13 03 49.7**	**+0.6**
NAPP	**Napperby**	**36.51**	**248**	P	**P**	**13 03 50.1**	**+0.8**
	comp=Z,112nm,0.9s						
QIS	**Mount Isa**	**36.80**	**269**	P	**P**	**13 03 51.5**	**-0.2**
	baz=37,SNR=110						
QIS	**Mount Isa**	**36.80**	**269**	P	**P**	**13 03 51.9**	**+0.1**
BBOO	**Buckleboo**	**38.27**	**249**	P	**P**	**13 04 02.8**	**-0.8**
	baz=38,SNR=87						
BBOO	**Buckleboo**	**38.27**	**249**	P	**P**	**13 04 03.1**	**-0.6**
BBOO				IAmb	IAmb	13 04 04.7	
	comp=Z,71nm,0.8s						
BBOO	**Buckleboo**	**38.27**	**249**	P	**P**	**13 04 03.8**	**+0.1**
MANU	**Manus Island**	**38.63**	**302**	P	**P**	**13 04 07.0**	**+0.1**
OOD	**Oodnadatta**	**38.92**	**257**	P	**P**	**13 04 09.9**	**+0.9**
MMPI	**Merauke**	**40.73**	**288**	P	**P**	**13 04 23.2**	**-0.5**
	comp=Z,9µmcomp=Z,731nm,0.7s						
AS31	**Alice Springs**	**41.20**	**263**	P	**P**	**13 04 27.2**	**-0.1**
AS31				IAmb	IAmb	13 04 29.2	
	comp=Z,65nm,0.6s						
ASAR	**Alice Springs**	**41.20**	**263**	P	**P**	**13 04 27.2**	**-0.2**
	comp=Z,98nm,0.3s,baz=90,slow=7.3,SNR=2093						
ASAR				ScP	**ScP**	**13 09 15.8**	**+0.9**
	comp=Z,11nm,0.9s,baz=104,slow=3.8,SNR=8.5						
ASAR				S	**S**	**13 09 57.8**	**-5.8**
	comp=Z,36nm,1.0s,baz=100,slow=15,SNR=5.2						
ASAR				PKiKP	**PKiKP**	**13 13 19.1**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=104,slow=0.9,SNR=1.5						
ASAR				ScS	**ScS**	**13 13 33.4**	**+0.3**
	comp=Z,3.0nm,1.0s,baz=89,slow=7.0,SNR=4.7						
ASAR				P3KPbc		13 33 51.9	
	comp=Z,0.5nm,0.9s,baz=302,slow=4.5,SNR=4.6						
	comp=Z,98nm,0.3s						
WR0	**Warramunga Arr**	**41.53**	**268**	P	**P**	**13 04 29.6**	**-0.5**
WB2	**Warramunga Arr**	**41.71**	**268**	P	**P**	**13 04 30.5**	**-1.0**
WRAB	**Tennant Creek**	**41.71**	**268**	P	**P**	**13 04 31.0**	**-0.5**
WRAB	**Tennant Creek**	**41.71**	**268**	*d i*P	**P**	**13 04 31.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,263nm,0.8s						
WRAB	**Tennant Creek**	**41.71**	**268**	P	**P**	**13 04 31.8**	**+0.3**
WB0	**Warramunga Arr**	**41.72**	**268**	P	**P**	**13 04 30.9**	**-0.6**
WRA	**Warramunga Arr**	**41.72**	**268**	P	**P**	**13 04 30.8**	**-0.8**
	comp=Z,299nm,0.6s,baz=104,slow=7.8,SNR=115						
WRA				pP	**pP**	**13 06 03.4**	**-0.1**
	comp=Z,5.1nm,0.4s,baz=107,slow=7.8,SNR=1.2						
WRA				ScP	**ScP**	**13 09 19.1**	**+2.1**
	comp=Z,13nm,0.7s,baz=102,slow=4.6,SNR=8.6						
WRA				S	**S**	**13 10 08.4**	**-2.8**
	comp=Z,33nm,1.0s,baz=103,slow=13,SNR=16						
WRA				P3KPbc		13 33 48.5	
	comp=Z,0.7nm,0.9s,baz=304,slow=2.8,SNR=7.0						
	comp=Z,299nm,0.6s						
WRA	**Warramunga Arr**	**41.72**	**268**	P	**P**	**13 04 30.7**	**-0.8**
TAOE	**Nuku Hiva Isla**	**41.90**	**74**	*e*P	**P**	**13 04 34.7**	**+1.6**
	comp=Z,676nm,0.9s						
TAOE	**Nuku Hiva Isla**	**41.90**	**74**	P	**P**	**13 04 32.8**	**-0.3**
FORT	**Forrest**	**45.19**	**251**	P	**P**	**13 04 57.4**	**-1.0**
	baz=45,SNR=143						
FORT	**Forrest**	**45.19**	**251**	P	**P**	**13 04 57.6**	**-0.8**
PTCN	**Pitcairn Islan**	**45.49**	**101**	P	**P**	**13 04 60.0**	**-0.9**
SMPI	**Sarmi**	**45.56**	**294**	P	**P**	**13 05 02.1**	**+0.6**
	comp=Z,60nm,1.4s						
KDU	**Kakadu**	**45.86**	**277**	P	**P**	**13 05 02.8**	**-0.9**
	baz=46,SNR=96						
WRKA	**Warakurna**	**45.91**	**259**	P	**P**	**13 05 03.4**	**-0.7**
	baz=46,SNR=600						
WAKE	**Wake Island**	**46.22**	**343**	P	**P**	**13 05 05.3**	**-1.0**
MTN	**Manton Dam**	**47.00**	**276**	P	**P**	**13 05 11.2**	**-1.2**
MTN				IAmb	IAmb	13 05 12.8	
	comp=Z,41nm,0.8s						
SRPI	**Serui, Papua**	**47.68**	**293**	P	**P**	**13 05 17.7**	**+0.2**
	comp=Z,5µmcomp=Z,417nm,0.7s						
DRV	**Dumont d'Urvil**	**47.81**	**200**	P	**P**	**13 05 18.0**	**+0.3**
KNRA	**Kununurra**	**48.10**	**272**	P	**P**	**13 05 20.5**	**-0.1**
	baz=48,SNR=404						
KNRA	**Kununurra**	**48.10**	**272**	P	**P**	**13 05 20.5**	**-0.1**
BAKI	**Biak**	**48.16**	**293**	P	**P**	**13 05 21.6**	**+0.5**
	comp=Z,4µmcomp=Z,437nm,0.7s						
KHLU	**Kahalu`u**	**50.91**	**31**	P	**P**	**13 05 41.1**	**-0.3**
MWH	**Moku'aweowe**	**50.95**	**31**	P	**P**	**13 05 42.9**	**+0.7**
MLOA	**Mauna Loa Obse**	**51.01**	**31**	P	**P**	**13 05 42.5**	**0.0**
MLOA				IAmb	IAmb	13 05 44.1	
	comp=Z,124nm,1.0s						
MLH	**Mauna Loa**	**51.06**	**31**	P	**P**	**13 05 42.1**	**-0.5**
HMH	**Humu'ula Sheep**	**51.11**	**31**	P	**P**	**13 05 43.8**	**+0.8**

POHA	Pohakuloa	51.22	31	P	P	13 05 43.6	-0.1
GUMO	Guam	51.37	315	P	P	13 05 43.8	-0.8
	comp=Z,121nm,0.5s,baz=145,slow=6.1,SNR=9.8						
	comp=Z,121nm,0.5s						
GUMO	Guam	51.37	315	P	P	13 05 44.3	-0.4
GUMO	Guam	51.37	315	P	P	13 05 44.3	-0.4
GUMO				pmax	pmax		
	comp=Z,951nm,1.9s						
HPAH	Hawaii Prepara	51.38	31	P	P	13 05 45.0	+0.3
MHA	Mahukona	51.42	30	P	P	13 05 45.8	+0.9
MHA	Mahukona	51.42	30	P	P	13 05 45.8	+0.9
HON	Honolulu	51.51	27	P	P	13 05 46.5	+1.0
HON	Honolulu	51.51	27	P	P	13 05 46.5	+1.0
HON				pmax	pmax		
	comp=Z,155nm,0.7s						
KIP	Kipapa	51.60	27	P	P	13 05 46.1	0.0
KIP				IAmb	IAmb	13 06 11.2	
	comp=Z,287nm,1.8s						
KIP	Kipapa	51.60	27	⇓iP	P	13 05 47.0	+0.9
HLK	Haleakala	51.77	30	P	P	13 05 48.1	+0.4
HLK				IAmb	IAmb	13 05 49.4	
	comp=Z,221nm,1.1s						
OPA	Opana	51.83	27	P	P	13 05 48.3	+0.4
OPA				IAmb	IAmb	13 05 49.5	
	comp=Z,129nm,1.0s						
OPA	Opana	51.83	27	P	P	13 05 48.3	+0.4
OPA				pmax	pmax		
	comp=Z,129nm,1.0s						
SIJI	Sorong	52.40	290	P	P	13 05 51.6	-0.5
	comp=Z,334nm,0.6s,baz=96,slow=6.3,SNR=254						
	comp=Z,334nm,0.6s						
SWI	Sorong	52.41	290	P	P	13 05 51.6	-0.6
	comp=Z,5µmcomp=Z,575nm,0.8s						
VNDA	Vanda	52.71	185	P	P	13 05 54.7	+1.3
	comp=Z,5.4nm,0.7s,baz=5.3,slow=8.3,SNR=50						
VNDA				PcP	PcP	13 06 56.5	+1.9
	comp=Z,7.1nm,0.9s,baz=309,slow=4.3,SNR=5.0						
VNDA				ScP	ScP	13 10 03.9	+1.6
	comp=Z,2.9nm,0.6s,baz=342,slow=5.9,SNR=5.1						
VNDA	Vanda	52.71	185	P	P	13 05 54.7	+1.3
VNDA	Vanda	52.71	185	P	P	13 05 55.0	+1.6
VNDA				x	x	13 06 57.0	
VNDA				pP	pP	13 07 33.6	+1.6
VNDA				PP	PP	13 07 55.3	-4.3
SBA	Scott Base	52.72	183	P	P	13 05 55.9	+2.4
SBA	Scott Base	52.72	183	P	P	13 05 55.9	+2.4
SBA				pmax	pmax		
	comp=Z,27nm,1.0s						
SBA	Scott Base	52.72	183	P	P	13 05 56.3	+2.8
SBA				pP	pP	13 07 27.1	-4.9
SBA				PP	PP	13 07 54.5	-5.2
SBA				sP	sP	13 08 22.8	-5.6
MSAI	Masohi	53.15	286	P	P	13 05 58.3	+0.8
	comp=Z,32nm,0.6s						
MIDW	Midway	53.53	4	P	P	13 05 59.6	-0.3
AAI	Ambon	53.62	285	P	P	13 06 01.5	+0.6
	comp=Z,2µmcomp=Z,66nm,0.4s						
KLBR	Kellerberrin	53.81	248	P	P	13 06 01.2	-0.8
	baz=54,SNR=49						
MEEK	Meekatharra	54.08	255	P	P	13 06 02.7	-1.4
	baz=54,SNR=21						
PSA00	Pilbara Seismi	54.29	261	P	P	13 06 05.2	-0.4
PSA00				IAmb	IAmb	13 07 48.0	
	comp=Z,151nm,1.7s						
PSA00	Pilbara Seismi	54.29	261	P	P	13 06 04.2	-1.3
PSA00				IAmb	IAmb	13 07 48.1	
	comp=Z,76nm,1.6s						
SOEI	Soe	54.40	276	P	P	13 06 06.6	0.0
SOEI				IAmb	IAmb	13 06 24.5	
	comp=Z,176nm,0.9s						
SOEI	Soe	54.40	276	P	P	13 06 08.3	+1.8
	comp=Z,3µmcomp=Z,257nm,0.9s						
MBWA	Marble Bar	54.51	261	P	P	13 06 06.3	-0.8
BATI	Baumata	54.76	276	P	P	13 06 10.6	+1.7
	comp=Z,119nm,0.7s						
BLDU	Ballidu	54.87	249	P	P	13 06 08.3	-1.2
	baz=55,SNR=57						
MUN	Mundaring	55.04	248	P	P	13 06 10.5	-0.2
	baz=55,SNR=5.1						
LBMI	Labuha	55.73	288	P	P	13 06 15.8	+0.1
	comp=Z,1µmcomp=Z,97nm,0.5s						
MORW	Morawa	55.76	251	P	P	13 06 15.6	-0.1
	baz=56,SNR=17						
MORW	Morawa	55.76	251	P	P	13 06 15.1	-0.6
SANI	Sanana	56.34	286	P	P	13 06 18.9	-1.0
	comp=Z,2µmcomp=Z,186nm,0.8s						
TNTI	Ternate	56.57	289	P	P	13 06 20.5	-1.0
TNTI				IAmb	IAmb	13 06 21.9	
	comp=Z,79nm,0.8s						
TNTI	Ternate	56.57	289	P	P	13 06 21.0	-0.5
	comp=Z,1µmcomp=Z,138nm,0.9s						
MMRI	Maumere	56.68	277	P	P	13 06 21.6	-0.7
MMRI	Maumere	56.68	277	P	P	13 06 22.4	+0.1
	comp=Z,155nm,0.8s						
EDFI	Ende, Flores	57.13	276	P	P	13 06 25.1	-0.4
	comp=Z,1µmcomp=Z,89nm,0.9s						
BBSI	Bau Bau	57.74	280	P	P	13 06 30.0	+0.4
	comp=Z,11nm,0.8s						
CASY	Casey	58.39	206	P	P	13 06 29.1	-3.9
CASY				pP	pP	13 08 16.4	+2.1
WBSI	Waikabubak, Su	58.83	274	P	P	13 06 38.1	+1.1
	comp=Z,1µmcomp=Z,86nm,0.6s						
GIRL	Giralia	58.97	258	P	P	13 06 38.3	+0.6
	baz=59,SNR=22						
GIRL	Giralia	58.97	258	P	P	13 06 36.4	-1.3
GIRL				IAmb	IAmb	13 06 39.8	
	comp=Z,119nm,0.9s						
KMSI	Cibinong	59.38	287	P	P	13 06 40.2	-0.4
	comp=Z,188nm,0.8s						
LUWI	Luwuk	59.63	285	P	P	13 06 41.6	-0.7
LUWI				IAmb	IAmb	13 06 43.0	
	comp=Z,112nm,0.7s						
LUWI	Luwuk	59.63	285	P	P	13 06 42.2	-0.1
	comp=Z,2µmcomp=Z,195nm,1.1s						
BKSI	Bulukumba	60.00	279	P	P	13 06 43.8	-0.9
	comp=Z,2µmcomp=Z,200nm,0.7s						
BNSI	Bone	60.42	280	P	P	13 06 47.8	+0.3
	comp=Z,914nmcomp=Z,83nm,1.1s						
KAPI	Kappang	60.47	279	P	P	13 06 47.5	-0.3
	comp=Z,22nm,0.5s,baz=122,slow=4.3,SNR=10						
	comp=Z,22nm,0.5s						
KAPI	Kappang	60.47	279	P	P	13 06 47.6	-0.2
KAPI				IAmb	IAmb	13 06 49.1	
	comp=Z,151nm,1.6s						
KAPI	Kappang	60.47	279	P	P	13 06 47.6	-0.2
KAPI				pmax	pmax		
	comp=Z,151nm,1.7s						
KAPI	Kappang	60.47	279	P	P	13 06 48.1	+0.3
KAPI	Kappang	60.47	279	P	P	13 06 47.9	+0.1
KAPI				sP	sP	13 09 20.4	-4.3
PLAI	Plampang	60.62	274	P	P	13 06 48.6	-0.2
	comp=Z,4µmcomp=Z,337nm,0.8s						
APSI	Ampana	60.68	284	P	P	13 06 49.5	+0.3
	comp=Z,768nmcomp=Z,80nm,1.0s						
SPSI	Sidrap Palu	60.92	280	P	P	13 06 49.5	-1.3
	comp=Z,640nmcomp=Z,62nm,0.8s						
MRSI	Marisa	61.10	286	P	P	13 06 50.8	-1.2
	comp=Z,528nmcomp=Z,49nm,0.7s						
TTSI	Tana Toraja	61.29	281	P	P	13 06 52.9	-0.3
	comp=Z,33nm,0.9s						
BIPH	Bislig	61.45	296	⇓iP	P	13 06 52.3	-1.9
TOLI2	Tolitoli	62.42	286	P	P	13 06 59.6	-1.0
TOLI2				IAmb	IAmb	13 07 01.9	
	comp=Z,79nm,1.0s						
MPSI	Mapaga	62.81	285	P	P	13 07 02.2	-0.9
	comp=Z,928nmcomp=Z,73nm,0.8s						
IGBI	Denpasar	62.99	273	P	P	13 07 04.8	+0.5
	comp=Z,3µmcomp=Z,315nm,0.8s						
RPN	Rapa Nui	63.12	109	P	P	13 07 05.4	+0.4
	comp=Z,63nm,0.7s,baz=284,slow=5.8,SNR=3.1						
	comp=Z,63nm,0.7s						
SRBI	Singaraja	63.23	274	P	P	13 07 06.0	+0.2
	comp=Z,1µmcomp=Z,134nm,1.0s						
JCJ	Chichijima	63.40	323	P	P	13 07 05.8	-0.8
	comp=Z,40nm,0.5s,baz=198,slow=20,SNR=10.0						
	comp=Z,40nm,0.5s						
JCJ	Chichijima	63.40	323	P	P	13 07 05.4	-1.2
JCJ				IAmb	IAmb	13 07 07.8	
	comp=Z,82nm,1.0s						
JAGI	Jajag, Banyuwa	64.03	273	P	P	13 07 09.8	-1.2
JAGI	Jajag, Banyuwa	64.03	273	P	P	13 07 10.1	-0.9
	comp=Z,152nm,0.6s						
ABJI	Asem Bagus	64.23	274	P	P	13 07 12.4	+0.2
	comp=Z,55nm,0.5s						
QSPA	South Pole Qui	64.56	180	P	P	13 07 15.1	+1.5
	comp=Z,23nm,0.7s,baz=2.3,slow=0.8,SNR=82						
QSPA				pP	pwP	13 09 03.2	+0.8
	comp=Z,16nm,1.0s,baz=12,slow=3.6,SNR=4.0						
QSPA				S	S	13 15 14.9	+2.7
	comp=Z,1.4nm,0.8s,baz=180,slow=15,SNR=9.0						
	comp=Z,23nm,0.7s						
QSPA	South Pole Qui	64.56	180	P	P	13 07 14.2	+0.6
QSPA	South Pole Qui	64.56	180	P	P	13 07 15.2	+1.5
QSPA				pP	pwP	13 09 03.7	+1.3
KMMI	Kalianget	64.78	274	P	P	13 07 15.3	-0.4
	comp=Z,2µmcomp=Z,149nm,1.1s						
SMKI	Samarinda	64.80	282	P	P	13 07 16.1	+0.2
	comp=Z,7µmcomp=Z,182nm,0.5s						
BBKI	Banjar Baru	65.54	278	P	P	13 07 21.5	+1.0
	comp=Z,9µmcomp=Z,40nm,0.5s						
GRJI	Gresik	66.18	274	P	P	13 07 25.3	+0.8
	comp=Z,3µmcomp=Z,314nm,0.8s						
PWJI	Pagerwojo	66.33	272	P	P	13 07 25.5	+0.1
	comp=Z,106nm,0.7s						
MYLDM	Lahad Datu	66.42	288	P	P	13 07 25.2	-0.7
MYLDM				IAmb	IAmb	13 07 55.2	
	comp=Z,73nm,1.5s						
MTKI	Muara Teweh, K	66.62	281	P	P	13 07 27.4	+0.1
	comp=Z,35nm,0.8s						
PCJI	Pacitan	66.83	272	P	P	13 07 29.0	+0.5
	comp=Z,210nm,0.8s						
WOJI	Wonogiri, Jawa	67.20	272	P	P	13 07 31.4	+0.6
	comp=Z,81nm,2.0s						
UGM	Wanagama	67.53	272	P	P	13 07 32.5	-0.4
	comp=Z,86nm,1.5s						
PBKI	Pangkalan Bun	68.71	277	P	P	13 07 40.6	+0.6
	comp=Z,258nm,0.8s						
KPJI	Karang Pucung	69.21	272	P	P	13 07 43.9	+0.9
	comp=Z,44nm,1.3s						
JHJ2	Mitsune	69.39	325	P	P	13 07 43.2	-0.5
JHJ	Hachijo jima 2	69.42	325	P	P	13 07 43.8	0.0
	comp=Z,64nm,0.4s,baz=69,slow=17,SNR=18						
	comp=Z,64nm,0.4s						
STKI	Sintang	70.12	280	P	P	13 07 49.1	+0.6
	comp=Z,13µmcomp=Z,86nm,0.7s						
SBUM	Sibu	70.56	283	P	P	13 07 51.1	0.0
LEM	Lembang	70.60	272	P	P	13 07 51.7	+0.1
	comp=Z,84nm,0.8s						
CNJI	Cibinong	70.85	271	P	P	13 07 51.9	-0.9
	comp=Z,1µmcomp=Z,156nm,0.9s						
XMIS	Christmas Isla	70.90	267	P	P	13 07 53.8	+0.7
XMIS				IAmb	IAmb	13 07 54.2	
	comp=Z,69nm,0.7s						
CBJI	Citeko	71.47	272	P	P	13 07 55.4	-1.0
	comp=Z,81nm,0.8s						
DBJI	Dramaga	71.50	272	P	P	13 07 56.6	-0.1
	comp=Z,6µmcomp=Z,62nm,0.6s						
JOW	Kunigami	71.64	313	P	P	13 07 57.5	+0.3
	comp=Z,53nm,0.6s,baz=122,slow=12,SNR=20						
	comp=Z,53nm,0.6s						
JOW	Kunigami	71.64	313	P	P	13 07 57.2	+0.1
JOW				IAmb	IAmb	13 07 58.4	
	comp=Z,65nm,0.8s						
JYT	Yasato	71.68	327	P	P	13 07 56.8	-0.3
JYT				IAmb	IAmb	13 07 58.5	
	comp=Z,148nm,1.2s						
KSM	Kuching	71.80	281	P	P	13 07 57.9	-0.5
KSM				IAmb	IAmb	13 07 59.5	
	comp=Z,64nm,0.7s						
TPI	Tanjungpandan	72.29	276	P	P	13 08 01.5	+0.3
	comp=Z,21nm,1.1s						
INU	Inuyama	72.59	325	P	P	13 08 02.3	-0.1
JGF	Kuroka	72.61	325	P	P	13 08 02.1	-0.5
JMM	Marumori	72.70	329	P	P	13 08 02.6	-0.5
MJAR	Matsushiro Arr	72.90	326	P	P	13 08 03.4	-0.8
	comp=Z,126nm,0.9s,baz=155,slow=5.9,SNR=78						
	comp=Z,126nm,0.9s						
MAJO	Matsushiro	72.91	326	P	P	13 08 03.5	-0.7
MAJO				IAmb	IAmb	13 08 05.4	
	comp=Z,59nm,0.9s						
MAJO	Matsushiro	72.91	326	d iP	P	13 08 04.2	-0.1
MAJO				pmax	pmax		
	comp=Z,63nm,1.0s						
MJB9	Matsu-Tunnel	72.91	326	P	P	13 08 03.5	-0.8
MJB9				IAmb	IAmb	13 08 05.4	
	comp=Z,58nm,0.9s						
JSU	Suzuyama	73.46	318	P	P	13 08 06.6	-1.0
JSU				IAmb	IAmb	13 08 08.2	
	comp=Z,43nm,0.6s						
YOJ	Yonaguni jima	73.74	308	P	P	13 08 08.6	-0.6
YOJ	Yonaguni jima	73.74	308	P	P	13 08 08.6	-0.6
YOJ				pmax	pmax		
	comp=Z,178nm,1.1s						
PPBI	Pangkal Pinang	73.91	275	P	P	13 08 11.2	+0.6
	comp=Z,67nm,1.5s						
KASI	Kota Agung	73.96	272	P	P	13 08 10.1	-0.7
	comp=Z,87nm,1.0s						
JSD	Sado	74.05	327	P	P	13 08 10.8	+0.1
JSD				IAmb	IAmb	13 08 11.8	
	comp=Z,52nm,0.7s						
YULB	Yu-li	74.32	306	P	P	13 08 10.8	-1.8
YULB				IAmb	IAmb	13 08 12.1	
	comp=Z,29nm,0.6s						
JNU	Nakatsue	74.35	319	P	P	13 08 12.0	-0.6
	comp=Z,28nm,0.7s,baz=94,slow=0.5,SNR=14						
	comp=Z,28nm,0.7s						
JNU	Nakatsue	74.35	319	P	P	13 08 12.0	-0.6
JHS	Saijyo	74.42	322	P	P	13 08 11.8	-1.2
JHS				IAmb	IAmb	13 08 14.7	
	comp=Z,56nm,1.1s						
NACB	Ninganchiao	74.58	307	P	P	13 08 11.9	-2.1
TPUB	Ta-pu	74.76	305	P	P	13 08 13.3	-1.8
TPUB				IAmb	IAmb	13 08 14.4	
	comp=Z,93nm,0.7s						
SMAI	San Martin Ant	74.81	159	P	P	13 08 14.9	+0.4
SSLB	Suanglung	74.81	306	P	P	13 08 13.4	-2.0
SSLB				IAmb	IAmb	13 08 15.0	
	comp=Z,62nm,0.6s						
BELA	Belgrano 2	74.90	173	P	P	13 08 14.4	-0.6
JTM	Tenmabayashi	74.95	331	P	P	13 08 16.4	+0.7
JTM				IAmb	IAmb	13 08 17.7	
	comp=Z,82nm,0.9s						
MAW	Mawson	76.02	201	P	P	13 08 22.6	+1.3
	comp=Z,16nm,0.8s,baz=125,slow=7.1,SNR=32						
	comp=Z,16nm,0.8s						
MAW	Mawson	76.02	201	P	P	13 08 21.4	+0.1
	baz=76,SNR=26						
DSRI	Dabo	76.05	276	P	P	13 08 23.1	+0.6
	comp=Z,1µmcomp=Z,32nm,0.7s						
ASAJ	Asahikawa	77.05	334	P	P	13 08 29.1	+1.9
	comp=Z,31nm,0.6s,baz=211,slow=5.6,SNR=28						
	comp=Z,31nm,0.6s						
KIWB	Kanaga Island	77.11	2	P	P	13 08 27.2	-0.2
ADK	Adak	77.16	3	P	P	13 08 27.2	-0.4
ADK				IAmb	IAmb	13 08 29.8	
	comp=Z,86nm,0.8s						
ADK	Adak	77.16	3	P	P	13 08 27.2	-0.4
ADK				pmax	pmax		
	comp=Z,86nm,0.8s						
GSTR	Great Sitkin T	77.39	3	P	P	13 08 28.4	-0.6
PMSA	Palmer Station	77.65	157	P	P	13 08 31.5	+1.2
	comp=Z,15nm,0.7s,baz=263,slow=4.7,SNR=4.8						
	comp=Z,15nm,0.7s						
MYKOM	Kota Tinggi	77.70	278	P	P	13 08 31.3	-0.2
SHEM	Shemya Is, Ala	78.06	357	P	P	13 08 32.7	+0.2
	comp=Z,41nm,0.7s,baz=241,slow=15						
	comp=Z,41nm,0.7s						
KSCHJ	Chungju	78.68	320	P	P	13 08 36.2	-0.1
TJN	Taejon	78.69	320	P	P	13 08 36.1	-0.2
TJN	Taejon	78.69	320	deP	P	13 08 37.1	+0.8
NIKH	Nikolski High	78.84	7	P	P	13 08 36.6	-0.2
	baz=191,SNR=12						
KSRS	Korea Array	79.11	321	P	P	13 08 39.0	+0.5
	comp=Z,19nm,0.7s,baz=134,slow=5.8,SNR=81						
	comp=Z,19nm,0.7s						
KSAR	Wonju Array Be	79.12	321	P	P	13 08 38.7	+0.1
KSAR	Wonju Array Be	79.12	321	P	P	13 08 38.7	+0.1
KS19	Wonju Array Si	79.18	321	P	P	13 08 38.5	-0.4
YSS	Yuzh-Sakhalins	79.35	335	P	P	13 08 41.0	+1.5
YSS				IAmb	IAmb	13 08 42.0	
	comp=Z,66nm,0.9s						
YSS	Yuzh-Sakhalins	79.35	335	eP	P	13 08 40.9	+1.4
YSS				e		13 11 24.1	
YSS				eS	S	13 18 01.0	+3.5
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				pmax	pmax		
	comp=Z,400nm,3.5s						
YSS				smax	smax		
	comp=N,1µm,5.1s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
INCN	Inchon	79.87	320	P	P	13 08 42.6	0.0
INCN	Inchon	79.87	320	P	P	13 08 42.6	0.0
INCN				pmax	pmax		
	comp=Z,47nm,1.1s						
UNV	Unalaska Valle	79.99	8	P	P	13 08 42.3	-0.4
UNV				IAmb	IAmb	13 08 44.6	
	comp=Z,58nm,0.8s						
UNV	Unalaska Valle	79.99	8	P	P	13 08 42.5	-0.2
	baz=193						
PET	Petropavlovsk	80.27	348	eP	P	13 08 44.3	+0.1
PET				e*SP	sP	13 11 28.7	+1.5
PET				eS	S	13 18 07.0	+0.4
PET				pmax	pmax		
	comp=Z,15nm,0.6s						
PET				pmax	pmax		
	comp=Z,100nm,16.1s						
PEA0B	Petropavlovsk-	80.54	347	P	P	13 08 45.3	-0.4
PEA0B	Petropavlovsk-	80.54	347	⇑eP	P	13 08 48.3	+2.6
PETK	Petropavlovsk-	80.54	347	P	P	13 08 46.4	+0.8
	comp=Z,13nm,0.7s,baz=166,slow=9.2,SNR=16						
	comp=Z,13nm,0.7s						
PETK	Petropavlovsk-	80.54	347	P	P	13 08 45.5	-0.1
QIZ	Qiongzhong	80.76	296	P	P	13 08 45.9	-1.7
QIZ				pP	pwP	13 10 42.0	-1.8
QIZ				S	S	13 18 12.8	-0.3
QIZ				pmax	pmax		
	comp=Z,100nm,3.8s						
GO10	Punta Arenas	80.82	145	P	P	13 08 48.7	+1.3
GO10				IAmb	IAmb	13 08 50.9	
	comp=Z,68nm,1.0s						
VLA	Vladivostok	81.06	327	⇓eP	P	13 08 49.6	+1.1
VLA				pmax	pmax		
	comp=Z,47nm,0.8s						
GO09	Cerro Castillo	81.08	143	P	P	13 08 49.5	+0.7
MNSI	Mandailing Nat	81.09	275	P	P	13 08 48.3	-1.2
	comp=Z,2µmcomp=Z,50nm,0.8s						
NJ2	Nanjing	81.28	312	eP	P	13 08 50.8	+0.8
NJ2				pmax	pmax		
	comp=Z,27nm,0.8s						
IPM	Ipoh	81.41	279	P	P	13 08 50.7	-0.5
IPM				IAmb	IAmb	13 08 51.8	
	comp=Z,37nm,0.7s						
USRK	Ussuriysk Ar.	81.81	328	P	P	13 08 53.7	+1.3
	comp=Z,24nm,0.6s,baz=139,slow=3.5,SNR=30						
	comp=Z,24nm,0.6s						
CNBA	Chernabura Isl	82.05	12	P	P	13 08 53.5	+0.2
CNBA				IAmb	IAmb	13 08 55.9	
	comp=Z,59nm,1.2s						
CHNA	Chernabura Isl	82.06	12	P	P	13 08 53.6	+0.2
	baz=199						
KULM	Kulim	82.11	280	P	P	13 08 53.7	-1.0
KULM				IAmb	IAmb	13 08 57.1	
	comp=Z,82nm,1.7s						
GO08	Villa O'Higgin	82.36	140	P	P	13 08 56.6	+1.2
SDPT	Sand Point	82.39	11	P	P	13 08 54.8	-0.3
SDPT				IAmb	IAmb	13 08 56.8	
	comp=Z,67nm,0.8s						
SDPT	Sand Point	82.39	11	P	P	13 08 56.1	+1.1
	baz=198						
TYV	Tymovskoe	82.67	338	eP	P	13 08 59.8	+3.2
TYV				eS	S	13 18 30.5	-0.4
TYV				pmax	pmax		
	comp=Z,100nm,1.8s						
TYV				pmax	pmax		
	comp=Z,29nm,1.0s						
TYV				smax	smax		
	comp=N,100nm,2.9s						
TYV				smax	smax		
	comp=E,200nm,2.9s						
TROLL	Troll, Antarti	82.70	181	P	P	13 08 56.7	-0.1
TROLL	Troll, Antarti	82.70	181	pP	pP	13 10 53.2	+5.2
SPIA	Saint Paul Isl	82.85	6	IAmb	IAmb	13 09 00.6	
	comp=Z,156nm,1.2s						
SPIA	Saint Paul Isl	82.85	6	P	P	13 08 59.1	+1.8
	baz=190						
SCI2	San Clemente I	82.94	48	P	P	13 08 59.7	+1.3
	baz=233,SNR=6.7						
SBC	Santa Barbara	83.04	47	P	P	13 08 59.6	+0.8
	baz=233						
SNAA	Sanae	83.05	179	P	P	13 08 57.8	-0.6
SNAA	Sanae	83.05	179	pP	pP	13 10 58.1	+8.3
SNAA	Sanae	83.05	179	P	P	13 08 58.7	+0.2
SNAA	Sanae	83.05	179	ceP	P	13 08 58.2	-0.3
SNAA				pmax	pmax		
	comp=Z,18nm,1.0s						
GSI	Gunungsitoli	83.12	275	P	P	13 08 59.9	+0.1
GSI				IAmb	IAmb	13 09 04.7	
	comp=Z,47nm,0.7s						
GSI	Gunungsitoli	83.12	275	P	P	13 09 00.9	+1.1
	comp=Z,89nm,0.8s						
PKM	Mcpherson Peak	83.24	46	P	P	13 09 01.8	+1.6
	baz=232						
CIS	Catalina Islan	83.28	48	P	P	13 09 01.3	+1.1
	baz=234,SNR=7.7						
MDJ	Mudanjiang	83.28	327	IAmb	IAmb	13 09 04.2	
	comp=Z,50nm,1.1s						
MDJ	Mudanjiang	83.28	327	P	P	13 09 01.1	+1.3
MDJ				pP	pwP	13 10 56.8	+0.3
MDJ				S	S	13 18 35.8	-1.5
MDJ				SS	SS	13 24 15.6	-2.3
MDJ				pmax	pmax		
	comp=Z,43nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.3s						
VNA3	Neumayer Olymp	83.29	177	P	P	13 08 59.7	+0.1
VNA3				SKS	SKSac	13 18 32.9	+1.0
VNA3	Neumayer Olymp	83.29	177	pP	pP	13 10 52.2	+1.2
MCCM	Marconi Confer	83.33	42	P	P	13 09 00.4	+0.2
MCCM				IAmb	IAmb	13 09 02.9	
	comp=Z,96nm,1.1s						
SAO	San Andreas Ge	83.35	44	P	P	13 09 01.3	+0.9
SAO				IAmb	IAmb	13 09 03.2	
	comp=Z,66nm,1.1s						
SAO	San Andreas Ge	83.35	44	P	P	13 09 01.3	+0.9
SAO				pmax	pmax		
	comp=Z,66nm,1.1s						
SMMC	Simmler	83.38	46	P	P	13 09 02.6	+2.0
	baz=232						
PMPB	Monarch Peak	83.42	45	IAmb	IAmb	13 09 03.8	
	comp=Z,83nm,1.1s						
PAGB	Antelope Grade	83.47	45	P	P	13 09 00.5	-0.5
PAGB				IAmb	IAmb	13 09 03.5	
	comp=Z,36nm,0.8s						
BBGB	Big Mountain B	83.49	44	P	P	13 09 00.9	-0.3
BBGB				IAmb	IAmb	13 09 04.6	
	comp=Z,122nm,1.3s						
WHN	Wuhan	83.52	308	⇑P	P	13 09 02.3	+1.0
BCW	Bitter Crk WRg	83.54	46	IAmb	IAmb	13 09 04.5	
	comp=Z,91nm,0.8s						
FMP	Fort Macarthur	83.55	48	P	P	13 09 02.9	+1.5
	baz=234,SNR=5.1						
NVL	N'lazarevskaya	83.56	184	⇓iP	P	13 09 00.6	-0.3
NVL				i S	SKSac	13 18 31.5	-2.1
NVL				pmax	pmax		
	comp=Z,34nm,0.8s						
VNA2	Neumayer--Watz	83.69	178	P	P	13 09 00.7	-0.9
VNA2	Neumayer--Watz	83.69	178	pP	pP	13 10 58.7	+5.5
HOPS	Hopland Field	83.76	41	P	P	13 09 02.8	+0.4
HOPS				IAmb	IAmb	13 09 05.9	
	comp=Z,82nm,0.9s						
OSI	Osito Audit: C	83.80	47	P	P	13 09 04.3	+1.5
	baz=233						
GDXM	Geysers	83.81	42	P	P	13 09 03.8	+1.1
GDXM				IAmb	IAmb	13 09 05.9	
	comp=Z,86nm,1.4s						
DECC	Green Verdugo	83.84	48	P	P	13 09 03.9	+1.0
	baz=234						
CBX	Cerro Bola	83.84	50	P	P	13 09 03.9	+0.8
109C	Camp Elliot, M	83.87	49	P	P	13 09 03.1	0.0
109C				IAmb	IAmb	13 09 06.3	
	comp=Z,65nm,0.8s						
109C	Camp Elliot, M	83.87	49	P	P	13 09 04.5	+1.4
	baz=234,SNR=8.6						
PASC	Pasadena Art C	83.89	48	P	P	13 09 03.7	+0.6
PASC				IAmb	IAmb	13 09 05.4	
	comp=Z,43nm,0.8s						
KCPM	Cahto Peak	83.90	41	IAmb	IAmb	13 09 06.3	
	comp=Z,112nm,1.3s						
KCSI	Kotacane, Aceh	83.90	277	P	P	13 09 03.1	-0.6
	comp=Z,17nm,0.7s						
VNA1	Neumayer--Stat	83.94	177	P	P	13 09 02.5	-0.3
VNA1	Neumayer--Stat	83.94	177	pP	pP	13 10 59.3	+4.9
TKX	Tecate	84.03	50	P	P	13 09 04.8	+0.9
TKX				IAmb	IAmb	13 09 06.8	
	comp=Z,100nm,1.2s						

ARVC	**Arvin**	84.03	47	P	P	13 09 05.2	+1.4
	baz=233,SNR=13						
BAR	**Barrett**	84.05	50	IAmb	IAmb	13 09 06.9	
	comp=Z,80nm,1.4s						
LPIG	**La Paz**	84.06	60	P	P	13 09 05.4	+1.3
	comp=Z,23nm,0.3s,baz=324,slow=7.4,SNR=3.9						
	comp=Z,23nm,0.3s						
ELS	**Elsinore Mount**	84.09	48	P	P	13 09 04.7	+0.5
ELS				IAmb	IAmb	13 09 06.9	
	comp=Z,77nm,1.2s						
COYC	**Coyhaique**	84.10	138	P	P	13 09 04.3	+0.2
COYC				IAmb	IAmb	13 09 07.6	
	comp=Z,34nm,0.7s						
SLBS	**Sierra La Lagu**	84.13	60	P	P	13 09 05.1	+0.4
KMRM	**Mail Ridge**	84.18	40	IAmb	IAmb	13 09 07.8	
	comp=Z,106nm,1.1s						
MURC	**Murrieta**	84.22	49	P	P	13 09 06.3	+1.5
	baz=234,SNR=22						
BFSC	**Mount Baldy Ra**	84.28	48	P	P	13 09 06.3	+1.1
	baz=234,SNR=31						
VES	**Vestal, Richgr**	84.29	46	P	P	13 09 06.2	+1.2
	baz=233						
AY01	**Puyuhuapi**	84.33	137	P	P	13 09 05.9	+0.6
MONP2	**Monument Peak**	84.34	50	P	P	13 09 06.6	+0.9
	baz=235,SNR=92						
JCC	**Jacoby Creek,**	84.38	40	P	P	13 09 05.0	-0.3
JCC				IAmb	IAmb	13 09 08.6	
	comp=Z,84nm,1.4s						
VOG	**Valley Oaks Go**	84.39	45	P	P	13 09 06.4	+0.9
	baz=233						
RMX	**La Rumorosa**	84.41	50	P	P	13 09 06.3	+0.4
RMX				IAmb	IAmb	13 09 10.1	
	comp=Z,89nm,0.8s						
IKP	**In-Ko-Pah, Jac**	84.42	50	P	P	13 09 06.8	+0.9
	baz=235,SNR=63						
EDW2	**Edwards Air Fo**	84.44	47	P	P	13 09 06.4	+0.5
	baz=234,SNR=71						
YUH	**Yuha Desert**	84.55	50	P	P	13 09 07.7	+1.4
YUH				IAmb	IAmb	13 09 09.4	
	comp=Z,109nm,1.2s						
CCAC	**Calif City Air**	84.58	47	IAmb	IAmb	13 09 10.4	
	comp=Z,46nm,0.9s						
ISA	**Isabella, Lake**	84.58	46	P	P	13 09 07.4	+0.8
	baz=233,SNR=105						
KHMM	**Horse Mountain**	84.59	40	P	P	13 09 07.1	+0.5
KHMM				IAmb	IAmb	13 09 10.9	
	comp=Z,97nm,1.3s						
KRPM	**Rodgers**	84.60	39	IAmb	IAmb	13 09 10.0	
	comp=Z,80nm,1.1s						
PFO	**Pinyon Flats O**	84.73	49	P	P	13 09 08.2	+0.7
	comp=Z,47nm,1.1s,baz=250,slow=2.9,SNR=33						
	comp=Z,47nm,1.1s						
PFO	**Pinyon Flats O**	84.73	49	P	P	13 09 07.4	0.0
PFO				IAmb	IAmb	13 09 10.3	
	comp=Z,87nm,1.4s						
PFO	**Pinyon Flats O**	84.73	49	P	P	13 09 07.4	0.0
PFO				pmax	pmax		
	comp=Z,87nm,1.4s						
PFO	**Pinyon Flats O**	84.73	49	P	P	13 09 08.2	+0.7
	baz=235,SNR=36						
TPFO	**Pinon Flats**	84.73	49	P	P	13 09 08.2	+0.7
	baz=235,SNR=35						
BBRC	**Big Bear Solar**	84.79	48	P	P	13 09 08.5	+0.6
	baz=234,SNR=6.1						
SII	**Sitkinak Islan**	84.79	14	P	P	13 09 06.7	-0.3
SII	**Sitkinak Islan**	84.79	14	P	P	13 09 07.7	+0.6
	baz=204						
CMB	**Columbia Colle**	84.80	44	P	P	13 09 07.3	-0.3
CMB				IAmb	IAmb	13 09 11.1	
	comp=Z,49nm,0.9s						
CMB	**Columbia Colle**	84.80	44	P	P	13 09 07.3	-0.3
CMB				pmax	pmax		
	comp=Z,49nm,1.0s						
SWSC	**Sam W. Stewart**	84.80	50	P	P	13 09 08.7	+1.0
	baz=235,SNR=45						
CN2	**Changchun**	84.84	324	*e*P	P	13 09 07.6	+0.1
CN2				*e*pP	pP	13 11 00.4	+1.0
CN2				*e*S	S	13 18 53.3	+0.8
CN2				*e*sS	sS	13 22 11.6	-1.0
CN2				pmax	pmax		
	comp=Z,90nm,0.9s						
CPBX	**Cerro Prieto**	84.85	51	IAmb	IAmb	13 09 14.2	
	comp=Z,84nm,0.9s						
GRNR	**Gornyy**	84.89	334	⇓*i*P	P	13 09 09.6	+2.0
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
TIA	**Tai'an**	84.92	314	⇑P	P	13 09 08.8	+0.7
TIA				pmax	pmax		
	comp=Z,41nm,0.8s						
LRMC	**Laurel Mtn Rad**	85.00	47	P	P	13 09 09.4	+0.6
	baz=234,SNR=49						
ORV	**Oroville**	85.06	42	P	P	13 09 09.6	+0.8
ORV				IAmb	IAmb	13 09 11.3	
	comp=Z,59nm,1.2s						
ORV	**Oroville**	85.06	42	P	P	13 09 09.6	+0.8
ORV				pmax	pmax		
	comp=Z,59nm,1.2s						
RRX	**Edison Barstow**	85.10	48	P	P	13 09 10.2	+1.1
	baz=234,SNR=5.6						
KSXB	**Camp Six Broad**	85.12	39	IAmb	IAmb	13 09 12.4	
	comp=Z,69nm,1.1s						
BNX	**BinXian**	85.17	326	⇓P	P	13 09 09.3	+0.2
BNX				S	S	13 18 59.3	+3.7
BNX				pmax	pmax		
	comp=Z,57nm,1.0s						
BNX				pmax	pmax		
	comp=Z,100nm,3.9s						
KBO	**Bosley Butte**	85.18	38	P	P	13 09 10.4	+1.0
KBO				IAmb	IAmb	13 09 12.8	
	comp=Z,79nm,1.1s						
BELC	**Belle Mtn. Jos**	85.27	49	P	P	13 09 10.9	+0.8
	baz=235,SNR=97						
CWC	**Cottonwood Cre**	85.30	46	P	P	13 09 11.2	+1.0
	baz=234						
LHMI	**Lhok Sumawe**	85.39	278	P	P	13 09 10.0	-0.9
LHMI	**Lhok Sumawe**	85.39	278	P	P	13 09 12.7	+1.8
	comp=Z,137nm,0.8s						
BC3	**Big Chuckawall**	85.44	49	P	P	13 09 12.0	+1.1
	baz=235,SNR=46						
LL02	**Futaleuf**	85.46	136	P	P	13 09 11.6	+0.8
LL02				IAmb	IAmb	13 09 14.1	
	comp=Z,37nm,0.8s						
GSC	**Goldstone, Bar**	85.47	47	IAmb	IAmb	13 09 13.6	
	comp=Z,82nm,1.1s						
GSC	**Goldstone, Bar**	85.47	47	P	P	13 09 11.6	+0.6
	baz=234,SNR=38						
L02F	**Cave Junction**	85.49	39	P	P	13 09 12.0	+1.2
	baz=229,SNR=34						
HEC	**Hector,Ludlow**	85.51	48	P	P	13 09 11.9	+0.7
	baz=235,SNR=99						
MLAC	**Mammoth, Mammo**	85.53	45	P	P	13 09 12.3	+0.9
	baz=233						
GLA	**Glamis**	85.53	50	P	P	13 09 12.7	+1.5
	baz=236						
KEBM	**Edson Butte**	85.55	38	P	P	13 09 12.9	+1.8
EMB	**Emerald Bay**	85.55	43	IAmb	IAmb	13 09 14.4	
	comp=Z,31nm,0.7s						
TIN	**Tinemaha, Big**	85.57	45	P	P	13 09 12.4	+1.0
	baz=233						
OHAK	**Old Harbor**	85.60	15	P	P	13 09 11.1	+0.2
OHAK				IAmb	IAmb	13 09 13.8	
	comp=Z,37nm,0.9s						
OHAK	**Old Harbor**	85.60	15	P	P	13 09 11.1	+0.2
	baz=205						
KLR	**Kul'dur**	85.65	331	P	P	13 09 12.3	+0.9
	comp=Z,18nm,0.9s,baz=113,slow=3.1,SNR=36						
	comp=Z,18nm,0.9s						
KLR	**Kul'dur**	85.65	331	*d* *i*P	P	13 09 12.7	+1.4
KLR				pmax	pmax		
	comp=Z,71nm,1.7s						
YBH	**Yreka Blue Hor**	85.73	40	IAmb	IAmb	13 09 15.1	
	comp=Z,32nm,0.9s						
MPK	**Martis Peak**	85.79	43	P	P	13 09 12.9	+0.3
K02D	**Willamette Mer**	85.81	38	P	P	13 09 13.4	+1.1
	baz=229,SNR=36						
QSM	**Queen of Sheba**	85.81	47	IAmb	IAmb	13 09 15.0	
	comp=Z,73nm,1.6s						
PNTR	**Pine Nut**	85.93	43	P	P	13 09 13.9	+0.6
PNTR				IAmb	IAmb	13 09 15.7	
	comp=Z,54nm,0.8s						
IRM	**Iron Mountain**	85.94	49	P	P	13 09 14.1	+1.0
	baz=235,SNR=79						
BEKR	**Beckworth**	85.94	42	IAmb	IAmb	13 09 15.0	
	comp=Z,22nm,0.7s						
GMRC	**Granite Mounta**	85.94	48	P	P	13 09 14.0	+0.7
	baz=235,SNR=47						
J01E	**Myrtle Point**	85.96	38	IAmb	IAmb	13 09 16.0	
	comp=Z,81nm,1.1s						
J01E	**Myrtle Point**	85.96	38	P	P	13 09 14.4	+1.5
	baz=229,SNR=15						
LCH	**Last Change Ra**	86.05	45	P	P	13 09 14.1	+0.3
GWY	**Greenwater Val**	86.08	47	IAmb	IAmb	13 09 17.0	
	comp=Z,22nm,0.7s						
YERR	**Yerington**	86.09	43	P	P	13 09 12.6	-1.4
YERR				IAmb	IAmb	13 09 16.4	
	comp=Z,87nm,1.5s						
LHV	**Little Huntoon**	86.11	44	P	P	13 09 14.1	+0.3
LHV				IAmb	IAmb	13 09 16.6	
	comp=Z,74nm,1.3s						
FURC	**Furnace Creek,**	86.11	46	P	P	13 09 14.8	+1.0
	baz=234,SNR=15						
113A	**Mohawk Valley,**	86.12	51	P	P	13 09 15.4	+1.4
113A				IAmb	IAmb	13 09 17.1	
	comp=Z,64nm,1.2s						
BLYC	**Blythe**	86.14	50	IAmb	IAmb	13 09 17.1	
	comp=Z,55nm,1.1s						
HSIG		86.14	55	P	P	13 09 13.5	-0.6
TUQ	**Turquoise Moun**	86.14	48	P	P	13 09 14.7	+0.5
	baz=235,SNR=48						
HUMO	**Hull Mountain**	86.15	39	IAmb	IAmb	13 09 17.4	
	comp=Z,110nm,1.4s						
SHOC	**Shoshone, Teco**	86.17	47	P	P	13 09 14.8	+0.6
	baz=235,SNR=29						
L04D	**Klamath Falls**	86.27	39	P	P	13 09 15.7	+1.1
L04D	**Klamath Falls**	86.27	39	P	P	13 09 15.3	+0.7
	baz=230,SNR=50						
KDAK	**Kodiak Island**	86.27	15	P	P	13 09 14.8	+0.7
KDAK				IAmb	IAmb	13 09 17.0	
	comp=Z,141nm,1.9s						
KDAK	**Kodiak Island**	86.27	15	P	P	13 09 14.8	+0.7
KDAK				pmax	pmax		
	comp=Z,141nm,1.9s						
DBO	**Dodson Butte**	86.32	38	IAmb	IAmb	13 09 17.9	
	comp=Z,84nm,1.3s						
RYN	**Ryan**	86.32	44	P	P	13 09 15.2	+0.2
NVAR	**Mina Array Bea**	86.34	44	P	P	13 09 15.8	+0.6
	comp=Z,46nm,0.9s,baz=225,slow=8.1,SNR=166						
NVAR				PKPPKP	P'P'df	13 35 21.0	+5.8
	comp=Z,0.8nm,0.9s,baz=116,slow=4.1,SNR=4.5						
	comp=Z,46nm,0.9s						
NVAR	**Mina Array Bea**	86.34	44	P	P	13 09 15.4	+0.2
214A	**Organ Pipe Nat**	86.35	52	IAmb	IAmb	13 09 17.9	
	comp=Z,44nm,0.8s						
214A	**Organ Pipe Nat**	86.35	52	P	P	13 09 16.1	+1.0
	baz=237						
NV11	**Mina Array Sit**	86.44	44	P	P	13 09 16.3	+0.8
NV11				IAmb	IAmb	13 09 18.9	
	comp=Z,40nm,1.0s						
PAHR	**Pah Rah Range**	86.44	43	IAmb	IAmb	13 09 17.4	
	comp=Z,28nm,0.8s						
I02E	**Swisshome, OR**	86.62	37	IAmb	IAmb	13 09 24.4	
	comp=Z,50nm,1.1s						
I02E	**Swisshome, OR**	86.62	37	P	P	13 09 17.1	+1.1
	baz=229						
I03D	**Drain, OR**	86.63	38	P	P	13 09 17.1	+1.0
	baz=230,SNR=24						
NEE2	**Needles Airpor**	86.64	49	P	P	13 09 17.1	+0.7
	baz=236						
PDMCI	**Parker Dam,Lak**	86.71	50	P	P	13 09 17.0	+0.3
	baz=236						
TPNV	**Topopah Spring**	86.79	46	P	P	13 09 16.9	-0.4
TPNV				IAmb	IAmb	13 09 19.8	
	comp=Z,50nm,0.9s						
TPNV	**Topopah Spring**	86.79	46	P	P	13 09 16.9	-0.4
TPNV				pmax	pmax		
	comp=Z,50nm,1.0s						
TPNV	**Topopah Spring**	86.79	46	P	P	13 09 17.9	+0.6
	baz=235,SNR=98						
KVN	**Kaiserville**	86.84	44	P	P	13 09 17.9	+0.4
KVN				IAmb	IAmb	13 09 19.6	
	comp=Z,96nm,1.5s						
KVN	**Kaiserville**	86.84	44	P	P	13 09 17.9	+0.4
KVN				pmax	pmax		
	comp=Z,97nm,1.5s						
K04D	**Chiloquin, OR**	86.84	39	P	P	13 09 18.2	+0.9
	baz=231,SNR=6.6						
ORCD	**Orcadas**	86.88	160	P	P	13 09 17.3	+0.2
ORCD				IAmb	IAmb	13 09 20.1	
	comp=Z,36nm,0.8s						
ENH	**Enshi**	86.89	306	IAmb	IAmb	13 09 19.4	
	comp=Z,37nm,0.9s						
J04D	**Umpqua Nationa**	87.03	39	P	P	13 09 19.1	+0.8
	baz=230,SNR=67						
GYA	**Guiyang**	87.06	301	⇑P	P	13 09 19.5	+0.8
GYA				pmax	pmax		
	comp=Z,12nm,1.0s						
LYN	**LuoYang**	87.08	311	⇓P	P	13 09 19.6	+1.1
LYN				SKS	SKSac	13 18 55.3	-1.0
LYN				S	ScS	13 19 16.8	-2.4
LYN				pmax	pmax		
	comp=Z,30nm,1.9s						
LYN				pmax	pmax		
	comp=Z,140nm,4.1s						
Q19K	**Cape Douglas,**	87.08	14	P	P	13 09 17.8	-0.2
Q19K	**Cape Douglas,**	87.08	14	P	P	13 09 17.3	-0.6
	baz=204,SNR=17						
P18K	**Big Mountain,**	87.18	13	IAmb	IAmb	13 09 20.4	
	comp=Z,28nm,0.9s						
P18K	**Big Mountain,**	87.18	13	P	P	13 09 17.5	-0.9
	baz=203,SNR=21						
HNS	**HongShan**	87.19	314	⇑P	P	13 09 20.3	+1.4
HNS				pP	pP	13 11 12.0	+0.6
HNS				SKS	SKSac	13 18 55.3	-1.5
HNS				S	ScS	13 19 18.3	-1.6
HNS				pmax	pmax		
	comp=Z,34nm,1.8s						
I04A	**Tendick Farm,**	87.21	38	P	P	13 09 19.3	+0.4
	baz=230,SNR=36						
COR	**Corvallis**	87.23	37	P	P	13 09 20.4	+1.5
COR	**Corvallis**	87.23	37	P	P	13 09 20.4	+1.5
COR				pmax	pmax		
	comp=Z,125nm,1.5s						
MOD	**Modoc Plateau**	87.23	41	P	P	13 09 19.6	+0.4
MOD				IAmb	IAmb	13 09 22.4	
	comp=Z,63nm,0.9s						
SHPR	**Sheep Range**	87.25	47	IAmb	IAmb	13 09 22.5	
	comp=Z,50nm,1.3s						
Y14A	**Wickenburg**	87.29	50	P	P	13 09 19.1	-0.5
Y14A				IAmb	IAmb	13 09 22.9	
	comp=Z,28nm,0.9s						
W13A	**Hualapai Mount**	87.32	49	P	P	13 09 20.5	+0.6
W13A				IAmb	IAmb	13 09 22.9	
	comp=Z,55nm,1.4s						
K05A	**Summer Lake**	87.40	40	P	P	13 09 20.0	-0.1
H04D	**Lebanon**	87.50	37	P	P	13 09 21.1	+0.9
	baz=230,SNR=26						
S11A	**Rachel**	87.52	46	P	P	13 09 22.0	+1.3
S11A				IAmb	IAmb	13 09 23.2	
	comp=Z,47nm,1.0s						
J05D	**Fort Rock, OR**	87.55	39	P	P	13 09 21.8	+1.1
	baz=231,SNR=45						
PLCA	**Paso Flores**	87.56	134	P	P	13 09 22.1	+1.1
	comp=Z,9.9nm,0.8s,baz=235,slow=4.8,SNR=19						
PLCA				pP	pwP	13 11 20.3	+3.6
	comp=Z,5.2nm,1.0s,baz=228,slow=5.7,SNR=4.6						
	comp=Z,9.9nm,0.8s						
PLCA	**Paso Flores**	87.56	134	P	P	13 09 21.8	+0.9
O18K	**Koktuh Hills**	87.61	13	P	P	13 09 19.4	-1.0
O18K				IAmb	IAmb	13 09 22.6	
	comp=Z,66nm,0.9s						
O18K	**Koktuh Hills**	87.61	13	P	P	13 09 19.6	-0.7
	baz=203						
G03D	**McMinnville, O**	87.66	37	P	P	13 09 22.2	+1.3
	baz=230,SNR=6.2						
BJI	**Beijing**	87.79	317	P	P	13 09 22.8	+1.1
BJI				pP	pP	13 11 16.3	+1.9
BJI				SKS	SKSac	13 18 58.4	-1.8
BJI				S	ScS	13 19 23.8	-1.0
BJI				pmax	pmax		
	comp=Z,16nm,0.9s						
BJI				pmax	pmax		
	comp=Z,120nm,3.5s						
P19K	**Oil Pt**	87.83	14	P	P	13 09 21.2	-0.2
P19K	**Oil Pt**	87.83	14	P	P	13 09 21.5	+0.1
	baz=205,SNR=31						
PRN	**Pahroc Range**	87.84	47	P	P	13 09 23.3	+1.1
H04A	**Detroit Lake**	87.91	37	IAmb	IAmb	13 09 25.1	
	comp=Z,59nm,1.0s						
TUC	**Tucson**	87.99	53	P	P	13 09 24.4	+1.5
TUC	**Tucson**	87.99	53	P	P	13 09 24.4	+1.5
TUC				pmax	pmax		
	comp=Z,69nm,1.0s						
TUC	**Tucson**	87.99	53	P	P	13 09 24.1	+1.2
	baz=238						
MA2	**Magadan**	88.00	346	⇓*e*P	P	13 09 22.3	+0.1
MA2				pmax	pmax		
	comp=Z,51nm,1.6s						
R11A	**Troy Canyon, C**	88.03	46	P	P	13 09 24.0	+0.9
R11A	**Troy Canyon, C**	88.03	46	P	P	13 09 23.9	+0.8
	baz=235,SNR=36						
O19K	**Port Alsworth**	88.10	13	P	P	13 09 21.9	-0.7
O19K	**Port Alsworth**	88.10	13	P	P	13 09 22.5	-0.1
	baz=204,SNR=32						
CNPM	**China Poot**	88.15	15	P	P	13 09 23.2	+0.3
CNPM				IAmb	IAmb	13 09 25.7	
	comp=Z,58nm,1.0s						
EFI	**East Falkland**	88.15	148	P	P	13 09 24.1	+0.9
EFI	**East Falkland**	88.15	148	⇑*i*P	P	13 09 24.2	+0.9
EFI				pmax	pmax		
	comp=Z,84nm,0.8s						
I05D	**Terrebonne, OR**	88.16	38	P	P	13 09 24.1	+0.7
	baz=231,SNR=56						
HOM	**Homer**	88.18	14	P	P	13 09 23.4	+0.5
HOM	**Homer**	88.18	14	P	P	13 09 23.2	+0.2
	baz=206,SNR=11						
N18K	**Kilae Creek**	88.25	12	P	P	13 09 22.8	-0.5
N18K	**Kilae Creek**	88.25	12	P	P	13 09 22.4	-0.9
	baz=202,SNR=12						
O20K	**Slope Mountain**	88.35	14	P	P	13 09 23.2	-0.6
	baz=205,SNR=7.4						
F04D	**Rainier, OR**	88.36	36	P	P	13 09 25.0	+0.8
	baz=230,SNR=5.2						
E03A	**Lebam**	88.37	35	P	P	13 09 25.0	+0.9
BRLK	**Bradley Lake**	88.44	15	P	P	13 09 24.6	+0.3
BRLK				IAmb	IAmb	13 09 26.8	
	comp=Z,49nm,1.0s						
BRSE	**Bradley Lake S**	88.46	15	P	P	13 09 24.0	-0.3
	baz=207,SNR=28						
WVOR	**Wild Horse Val**	88.54	41	P	P	13 09 26.0	+0.7
WVOR	**Wild Horse Val**	88.54	41	P	P	13 09 26.0	+0.7
WVOR				pmax	pmax		
	comp=Z,100nm,1.2s						
F04A	**Amboy**	88.58	36	P	P	13 09 26.0	+0.8
HOOD	**Mount Hood Mea**	88.60	37	P	P	13 09 25.2	-0.4
HOOD				IAmb	IAmb	13 09 28.0	
	comp=Z,49nm,1.2s						
WISH	**Wishkah**	88.63	35	P	P	13 09 26.0	+0.6
WISH				IAmb	IAmb	13 09 28.6	
	comp=Z,59nm,0.9s						
N19K	**Bonanza Creek**	88.64	12	P	P	13 09 24.7	-0.5
	baz=204,SNR=14						
SVW2	**Sparrevohn**	88.69	12	P	P	13 09 24.6	-0.8
G05D	**Wamic, OR**	88.74	37	P	P	13 09 27.0	+1.0
	baz=231,SNR=10						
NLWA	**Neilton Lookou**	88.76	35	P	P	13 09 27.1	+1.1
NLWA				IAmb	IAmb	13 09 30.1	
	comp=Z,48nm,0.9s						
LCMT	**Little Creek M**	88.81	48	P	P	13 09 26.6	-0.1
LCMT				IAmb	IAmb	13 09 29.6	
	comp=Z,59nm,1.2s						
TIY	**Taiyuan**	88.85	313	P	P	13 09 28.6	+1.8
TIY				SKS	SKSac	13 19 04.3	-2.5
TIY				S	ScS	13 19 33.1	-0.9
TIY				pmax	pmax		
	comp=Z,40nm,0.6s						
DIB	**Dawson Inlet,**	88.86	27	P	P	13 09 26.5	+0.2
DIB				IAmb	IAmb	13 09 29.9	
	comp=Z,58nm,1.0s						
E04D	**Cinebar**	88.90	36	IAmb	IAmb	13 09 30.3	
	comp=Z,64nm,1.0s						
E04D	**Cinebar**	88.90	36	P	P	13 09 27.7	+1.1
	baz=230,SNR=20						
CCUT	**Cedar City**	89.03	47	P	P	13 09 28.8	+1.0
CCUT				IAmb	IAmb	13 09 31.5	
	comp=Z,37nm,0.9s						
I07A	**Izee**	89.03	39	P	P	13 09 28.8	+1.3
F05D	**White Salmon**	89.06	37	P	P	13 09 28.0	+0.5
	baz=231						
SEW	**Seward**	89.08	15	P	P	13 09 27.0	-0.2
SEW	**Seward**	89.08	15	P	P	13 09 27.1	0.0
	baz=208,SNR=5.8						
HPIG		89.11	60	IAmb	IAmb	13 09 30.8	
	comp=Z,47nm,1.0s						
U15A	**North Rim**	89.14	49	P	P	13 09 29.6	+1.2
J08A	**Circle Bar Ran**	89.19	40	P	P	13 09 29.0	+0.7
D04E	**Lakebay**	89.19	35	P	P	13 09 30.1	+2.1
	baz=230,SNR=12						
SZCU	**Shurtz Canyon**	89.24	47	P	P	13 09 30.2	+1.4
SZCU				IAmb	IAmb	13 09 31.8	
	comp=Z,62nm,1.2s						
PSUT	**Pine Spring**	89.25	46	P	P	13 09 29.1	+0.2
PSUT				IAmb	IAmb	13 09 31.5	
	comp=Z,49nm,1.3s						
D03D	**Eldon**	89.25	35	P	P	13 09 29.5	+1.2
	baz=230,SNR=20						
XAN	**Xi'an**	89.27	309	⇑P	P	13 09 29.8	+1.0
XAN				PP	PP	13 13 06.0	-3.2
XAN				SKS	SKSac	13 19 06.4	-3.0
XAN				S	S	13 19 35.3	+0.7
XAN				SS	SS	13 25 42.5	-2.7
XAN				pmax	pmax		
	comp=Z,38nm,1.0s						
XAN				pmax	pmax		
	comp=Z,180nm,6.8s						
WUAZ	**Wupatki**	89.27	50	P	P	13 09 28.7	-0.2
WUAZ				IAmb	IAmb	13 09 31.8	
	comp=Z,41nm,1.0s						
WUAZ	**Wupatki**	89.27	50	P	P	13 09 29.5	+0.6
	baz=238						
GAMB	**Gambell**	89.28	4	IAmb	IAmb	13 09 31.5	
	comp=Z,35nm,1.3s						
GAMB	**Gambell**	89.28	4	P	P	13 09 28.6	+0.6
	baz=188						
CAPN	**Captain Cook N**	89.29	14	P	P	13 09 29.3	+1.2
	baz=206						
O22K	**Cooper Landing**	89.35	15	P	P	13 09 27.7	-0.7
	baz=208,SNR=11						
B04A	**Port Angeles**	89.38	34	P	P	13 09 29.2	+0.3
B04A				IAmb	IAmb	13 09 33.0	
	comp=Z,58nm,1.0s						
SPCR	**Spurr Chakacha**	89.45	13	P	P	13 09 28.2	-0.8
	baz=206,SNR=11						
SPU	**Mount Spurr**	89.47	13	P	P	13 09 28.2	-0.8
KMI	**Kunming**	89.49	298	⇓P	P	13 09 31.6	+1.4
KMI				SKS	SKSac	13 19 12.3	+0.9
KMI				S	S	13 19 38.1	+0.8
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						
CM31	**Chiang Mai Arr**	89.53	291	P	P	13 09 30.7	+0.4
CMAR	**Chiang Mai Arr**	89.53	291	P	P	13 09 31.4	+1.1
	comp=Z,11nm,0.8s,baz=140,slow=3.5,SNR=65						
CMAR				pP	pP	13 11 23.9	+0.5
	comp=Z,4.2nm,1.1s,baz=138,slow=3.4,SNR=4.2						
CMAR				PP	PP	13 13 10.2	-1.1
	comp=Z,3.7nm,0.8s,baz=125,slow=6.2,SNR=10						
CMAR				PKKPbc	PKKPbc	13 27 02.6	+1.3
	comp=Z,1.2nm,0.5s,baz=283,slow=4.3,SNR=8.1						
CMAR				PKPPKP	P'P'df	13 35 10.3	-0.5
	comp=Z,0.4nm,0.3s,baz=255,slow=2.7,SNR=5.2						
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	89.53	291	P	P	13 09 30.9	+0.6
CLRS	**Cowichan Lake**	89.57	33	P	P	13 09 30.7	+1.0
CLRS				IAmb	IAmb	13 09 32.2	
	comp=Z,42nm,0.9s						
ZAIG	**Zacatecas**	89.60	65	P	P	13 09 32.1	+1.2
ZAIG				IAmb	IAmb	13 09 35.0	
	comp=Z,34nm,1.0s						
D05A	**Enumclaw**	89.61	36	P	P	13 09 31.4	+1.4
ELK	**Elko**	89.61	44	P	P	13 09 30.9	+0.4
ELK				IAmb	IAmb	13 09 33.4	
	comp=Z,24nm,0.8s						
ELK	**Elko**	89.61	44	P	P	13 09 30.9	+0.4
GO05	**Huala**	89.62	129	P	P	13 09 31.1	+0.6
GO05				IAmb	IAmb	13 09 33.1	
	comp=Z,22nm,0.8s						
M19K	**Big River Lodg**	89.66	12	P	P	13 09 29.5	-0.4
X18A	**Snowflake**	89.75	51	P	P	13 09 32.2	+1.0
X18A				IAmb	IAmb	13 09 33.5	
	comp=Z,30nm,0.7s						
PGC	**Sidney**	89.80	34	P	P	13 09 31.8	+1.0
PGC				IAmb	IAmb	13 09 34.3	
	comp=Z,49nm,0.9s						
L19K	**White Mountain**	89.83	12	P	P	13 09 30.7	0.0
L19K	**White Mountain**	89.83	12	P	P	13 09 30.4	-0.3
	baz=203,SNR=97						
RC01	**Rabbit Creek A**	89.89	14	P	P	13 09 30.4	-0.5
RC01	**Rabbit Creek A**	89.89	14	P	P	13 09 31.3	+0.4
	baz=208,SNR=31						

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F07A Phinny Hill Vi   89.91  38  IAmb    IAmb     13 09 33.9
          comp=Z,26nm,1.0s
BBB  Bella Bella      89.97  29  P       P        13 09 31.5 +0.1
BBB                              IAmb    IAmb     13 09 34.7
          comp=Z,35nm,0.9s
G08A Pilot Rock       90.08  38  P       P        13 09 32.7 +0.4
G08A                             IAmb    IAmb     13 09 35.0
          comp=Z,72nm,1.4s
XLT  XiLinHaoTe       90.13 320 eP       P        13 09 32.6  0.0
XLT                              pP      pP       13 11 27.9 +2.0
XLT                              SKS     SKSac    13 19 10.4 -3.5
XLT                              S       ScS      13 19 44.0 -0.3
XLT                              pmax    pmax
          comp=Z,41nm,0.9s
XLT                              pmax    pmax
          comp=Z,100nm,3.9s
W18A Petrified Fore   90.20  51  IAmb    IAmb     13 09 36.5
          comp=Z,36nm,0.9s
W18A Petrified Fore   90.20  51  P       P        13 09 32.6 -0.6
          baz=238
TCRU Three Creeks R   90.22  47  IAmb    IAmb     13 09 36.4
          comp=Z,32nm,0.9s
A04D Lummi Island     90.22  34  P       P        13 09 34.2 +1.5
          baz=230,SNR=53
B05A Bryant           90.24  35  P       P        13 09 33.3 +0.4
          baz=230,SNR=17
121A Cookes Peak, D   90.27  54  IAmb    IAmb     13 09 37.0
          comp=Z,49nm,1.4s
121A Cookes Peak, D   90.27  54  P       P        13 09 34.7 +1.0
          baz=240
121A Cookes Peak, D   90.27  54  P       P        13 09 32.9 -0.7
          baz=240
L20K Farewell, AK     90.28  12  P       P        13 09 32.4 -0.4
          baz=204,SNR=25
CRAG Craig            90.29  25  P       P        13 09 32.1 -0.8
          baz=222
TTA  Tatalina         90.31  11  P       P        13 09 32.9  0.0
TTA                              IAmb    IAmb     13 09 35.7
          comp=Z,24nm,1.1s
TTA  Tatalina         90.31  11  P       P        13 09 32.9  0.0
TTA                              pmax    pmax
          comp=Z,24nm,1.1s
TTA  Tatalina         90.31  11  P       P        13 09 33.0  0.0
          baz=202,SNR=44
GLI  Glacier Island   90.32  16  P       P        13 09 32.4 -0.5
          baz=210,SNR=35
MSU  Marysvale        90.34  47  P       P        13 09 33.5 -0.4
MSU  Marysvale        90.34  47  P       P        13 09 33.5 -0.4
LTY  Liberty          90.35  36  P       P        13 09 33.0 -0.5
LTY                              IAmb    IAmb     13 09 35.7
          comp=Z,20nm,0.8s
E07A Sunnyside        90.36  37  P       P        13 09 33.3 -0.2
E07A                             IAmb    IAmb     13 09 36.1
          comp=Z,34nm,0.8s
GRNB Grenville Isla   90.36  27  P       P        13 09 34.1 +0.8
GRNB                             IAmb    IAmb     13 09 36.0
          comp=Z,27nm,1.0s
FID  Port Fidalgo     90.36  16  P       P        13 09 33.0 -0.1
FID                              IAmb    IAmb     13 09 35.4
          comp=Z,34nm,1.1s
EYAK Cordova Ski Ar   90.37  16  P       P        13 09 33.5 +0.4
EYAK                             IAmb    IAmb     13 09 35.3
          comp=Z,17nm,0.8s
EYAK Cordova Ski Ar   90.37  16  P       P        13 09 33.0 -0.1
          baz=211,SNR=8.3
M22K Willow           90.39  14  P       P        13 09 33.1 -0.1
M22K Willow           90.39  14  P       P        13 09 32.9 -0.3
          baz=207,SNR=16
HAWA Hanford          90.43  37  P       P        13 09 34.5 +0.7
HAWA                             IAmb    IAmb     13 09 36.4
          comp=Z,46nm,1.4s
KNK  Knik Glacier     90.47  15  P       P        13 09 33.4 -0.2
          baz=209,SNR=21
PMR  Palmer           90.47  14  P       P        13 09 33.3 -0.3
PMR                              IAmb    IAmb     13 09 35.9
          comp=Z,20nm,0.8s
PMR  Palmer           90.47  14  P       P        13 09 33.3 -0.3
PMR                              pmax    pmax
          comp=Z,19nm,0.8s
PMR  Palmer           90.47  14  P       P        13 09 33.5  0.0
          baz=208,SNR=32
TLIG Tlapa            90.58  71  IAmb    IAmb     13 09 38.6
          comp=Z,50nm,1.4s
HMT  Hamilton         90.58  17  P       P        13 09 34.6 +0.4
HMT                              IAmb    IAmb     13 09 36.9
          comp=Z,21nm,0.8s
ANM  Nome             90.59   7  P       P        13 09 34.7 +0.6
ANM  Nome             90.59   7  P       P        13 09 34.7 +0.6
ANM                              pmax    pmax
          comp=Z,4.0nm,0.8s
ANM  Nome             90.59   7  P       P        13 09 34.3 +0.2
          baz=194,SNR=6.3
GHO  Glory Hole Cre   90.68  14  P       P        13 09 34.3 -0.3
SIT  Sitka            90.69  23  IAmb    IAmb     13 09 38.1
          comp=Z,27nm,1.3s
SIT  Sitka            90.69  23  P       P        13 09 34.5 -0.1
          baz=220
MT01 Popeta           90.70 128  P       P        13 09 35.7 +0.1
B06A Marblemount      90.71  35  P       P        13 09 35.0  0.0
B06A                             IAmb    IAmb     13 09 37.0
          comp=Z,44nm,1.3s
SEY  Seymchan         90.73 348⇓iP       P        13 09 35.2 +0.4
SEY                              pmax    pmax
          comp=Z,15nm,0.9s
BMO  Blue Mountains   90.75  39  P       P        13 09 35.7 +0.2
BMO  Blue Mountains   90.75  39  P       P        13 09 35.7 +0.2
BMO                              pmax    pmax
          comp=Z,7.0nm,0.7s
MFID Camas Ranch      90.78  41  P       P        13 09 36.0 +0.3
MFID                             IAmb    IAmb     13 09 39.1
          comp=Z,30nm,0.9s
KIDD KIDD Seismic O   90.83  55  P       P        13 09 37.4 +1.2
          baz=240
DUG  Dugway, Tooele   90.84  45  P       P        13 09 36.3 +0.2
DUG                              IAmb    IAmb     13 09 38.4
          comp=Z,44nm,1.4s
DUG  Dugway, Tooele   90.84  45  P       P        13 09 36.3 +0.2
DUG                              pmax    pmax
          comp=Z,44nm,1.4s
DUG  Dugway, Tooele   90.84  45  P       P        13 09 36.7 +0.6
          baz=237,SNR=26
SML  Sawmill          90.84  15  P       P        13 09 35.1 -0.3
          baz=209,SNR=6.1
ZEA  Zeya             90.86 332 eP       P        13 09 36.6 +1.0
ZEA                              pmax    pmax
          comp=N,10.0nm,0.9s
ZEA                              pmax    pmax
          comp=Z,20nm,0.8s
DIV  Divide           90.87  16  IAmb    IAmb     13 09 38.0
          comp=Z,18nm,0.8s
MT09 Talagante        90.93 128  IAmb    IAmb     13 09 39.6
          comp=Z,23nm,0.9s
PZH  PanZhiHua        90.93 299  P       P        13 09 37.1 +0.3
PZH                              SKS     SKSac    13 19 17.8 -1.5
PZH                              S       S        13 19 48.5 -1.5
PZH                              sS      sS       13 23 14.3 +1.1
PZH                              pmax    pmax
          comp=Z,10.0nm,0.9s
PZH                              pmax    pmax
          comp=Z,60nm,5.6s
CUT  Chulitna         90.94  14  P       P        13 09 35.2 -0.5
CUT  Chulitna         90.94  14  P       P        13 09 35.3 -0.5
          baz=207,SNR=9.6
M23K Glacier View     90.97  15  P       P        13 09 35.6 -0.3
          baz=209,SNR=7.7
PPLA Purkeypile       90.99  13  P       P        13 09 34.7 -1.5
PPLA Purkeypile       90.99  13  P       P        13 09 35.1 -1.1
          baz=206,SNR=5.7
BMRM Bremner River    91.03  17  P       P        13 09 36.2 -0.1
BMRM                             IAmb    IAmb     13 09 38.9
          comp=Z,23nm,0.8s
BMRM Bremner River    91.03  17  P       P        13 09 35.8 -0.5
          baz=212,SNR=21
K20K Telida           91.05  12  P       P        13 09 36.0 -0.3
K20K Telida           91.05  12  P       P        13 09 36.1 -0.2
          baz=204,SNR=27
WAX  Waxell Ridge     91.06  18  P       P        13 09 36.9 +0.4
WAX                              IAmb    IAmb     13 09 39.2
          comp=Z,36nm,0.8s
SCM  Sheep Creek Mo   91.10  15  P       P        13 09 35.9 -0.7
SCM                              IAmb    IAmb     13 09 37.8
          comp=Z,35nm,0.7s
SCM  Sheep Creek Mo   91.10  15  P       P        13 09 35.9 -0.7
SCM                              pmax    pmax
          comp=Z,35nm,0.7s
SCM  Sheep Creek Mo   91.10  15  P       P        13 09 36.3 -0.3
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          baz=210,SNR=33
BGU  Big Grassy Mou   91.10  44  IAmb    IAmb     13 09 39.6
          comp=Z,24nm,1.3s
KLU  Klutina          91.14  16  P       P        13 09 36.8 -0.1
KLU  Klutina          91.14  16  P       P        13 09 35.0 -1.8
          baz=211,SNR=14
HHC  Hu-ho-hao-te     91.14 315 eP       P        13 09 39.4 +2.0
HHC                              SKS     SKSac    13 19 20.3 +0.5
HHC                              S       ScS      13 19 58.0 +5.0
HHC                              pmax    pmax
          comp=Z,63nm,0.9s
HHC                              pmax    pmax
          comp=Z,190nm,5.9s
D08A Wollman Farm,    91.17  37  P       P        13 09 38.0 +0.8
NLU  North Lily Min   91.19  46  P       P        13 09 38.5 +0.8
NLU                              IAmb    IAmb     13 09 40.2
          comp=Z,21nm,1.0s
Q16A Castle Valley    91.22  47  P       P        13 09 38.7 +0.8
Q16A                             IAmb    IAmb     13 09 41.6
          comp=Z,30nm,0.8s
E09A Wood Farm, Sta   91.27  38  P       P        13 09 38.2 +0.6
E09A                             IAmb    IAmb     13 09 40.1
          comp=Z,16nm,0.9s
WRAK Wrangell Islan   91.29  25  P       P        13 09 37.7 +0.3
          baz=222
ISLE Juniper Island   91.33  18  P       P        13 09 37.9 +0.1
ISLE                             IAmb    IAmb     13 09 40.6
          comp=Z,19nm,0.9s
TNA  Tin City         91.33   5  IAmb    IAmb     13 09 40.4
          comp=Z,34nm,0.9s
TNA  Tin City         91.33   5  P       P        13 09 37.5 +0.1
          baz=192
PNL  Peninsula        91.42  20  P       P        13 09 37.9 -0.1
          baz=216
F10A Beach Ranch, E   91.46  39  P       P        13 09 37.7 -1.0
F10A                             IAmb    IAmb     13 09 42.6
          comp=Z,31nm,0.8s
CD2  Chengdu          91.47 304  P       P        13 09 40.5 +1.4
CD2                              pmax    pmax
          comp=Z,40nm,0.7s
PEL  Peldehue         91.48 128  IAmb    IAmb     13 09 41.8
          comp=Z,32nm,1.0s
CAST Castle Rocks     91.48  12  P       P        13 09 36.7 -1.6
CAST                             IAmb    IAmb     13 09 39.3
          comp=Z,27nm,0.9s
CAST Castle Rocks     91.48  12  P       P        13 09 36.9 -1.4
          baz=206,SNR=46
MPU  Maple Canyon     91.50  46  IAmb    IAmb     13 09 41.7
          comp=Z,30nm,0.9s
PCA  Pinnacle         91.50  19  P       P        13 09 37.9 -0.6
PCA                              IAmb    IAmb     13 13 24.2
          comp=Z,14nm,0.8s
PINM Pinnacle         91.51  19  P       P        13 09 38.7 +0.2
          baz=216,SNR=8.6
TABL Table Mountain   91.53  18  P       P        13 09 38.9 +0.1
TABL                             IAmb    IAmb     13 09 41.5
          comp=Z,29nm,0.7s
VRDI Verde Repeater   91.55  17  P       P        13 09 38.8 -0.1
N25K Chitina, Valde   91.57  16  P       P        13 09 38.8  0.0
N25K                             IAmb    IAmb     13 09 41.5
          comp=Z,20nm,1.0s
N25K Chitina, Valde   91.57  16  P       P        13 09 38.5 -0.3
          baz=212,SNR=30
Y22A Socorro          91.57  53  P       P        13 09 40.1 +0.5
          baz=240
BCPM Bancas Point     91.57  19  P       P        13 09 39.5 +0.7
M24K Tolsona, Glenn   91.61  15  P       P        13 09 39.6 +0.7
M24K                             IAmb    IAmb     13 09 41.9
          comp=Z,23nm,1.0s
M24K Tolsona, Glenn   91.61  15  P       P        13 09 39.2 +0.3
          baz=211,SNR=13
GLB  Gilahina Butte   91.64  17  P       P        13 09 39.3 +0.3
GLB                              IAmb    IAmb     13 09 41.6
          comp=Z,14nm,0.7s
MNTX Cornudas Mount   91.64  56  P       P        13 09 39.6 -0.1
MNTX Cornudas Mount   91.64  56  P       P        13 09 39.8 +0.1
          baz=241
MNTX Cornudas Mount   91.64  56  P       P        13 09 39.3 -0.4
          baz=241
WAT6 Susitna Watana   91.66  15  P       P        13 09 38.9 -0.4
          baz=209,SNR=28
HLID Hailey           91.71  42  P       P        13 09 41.0 +0.9
HLID Hailey           91.71  42  P       P        13 09 39.5 -0.5
          baz=236,SNR=22
HVU  Hansel Valley    91.73  44  P       P        13 09 40.6 +0.5
HVU  Hansel Valley    91.73  44  P       P        13 09 40.6 +0.5
HVU                              pmax    pmax
          comp=Z,38nm,0.7s
B08A Colville Reser   91.74  36  P       P        13 09 39.5 -0.3
J20K Nowinta River    91.79  11  P       P        13 09 38.4 -1.3
          baz=204,SNR=20
P17A Butcher Ranch,   91.80  47  P       P        13 09 40.5  0.0
P17A                             IAmb    IAmb     13 09 43.8
          comp=Z,48nm,1.1s
TX31 Lajitas Ar. Si   91.80  58  P       P        13 09 41.5 +0.8
TX31 Lajitas Ar. Si   91.80  58  P       P        13 09 41.4 +0.7
          baz=242
TX32 Lajitas Array    91.80  58  P       P        13 09 41.5 +0.8
TX32                             IAmb    IAmb     13 09 43.5
          comp=Z,37nm,1.1s
TXAR Lajitas Array    91.80  58  P       P        13 09 41.6 +1.0
          comp=Z,22nm,0.8s,baz=215,slow=5.6,SNR=156
TXAR                             PP      PP       13 13 32.7 +3.6
          comp=Z,4.7nm,1.0s,baz=225,slow=11,SNR=7.7
TXAR                             PKKPbc  PKKPbc   13 26 57.4 +1.2
          comp=Z,1.2nm,0.9s,baz=100,slow=2.7,SNR=3.7
          comp=Z,22nm,0.8s
TXAR Lajitas Array    91.80  58  P       P        13 09 41.0 +0.3
TXAR Lajitas Array    91.80  58  P       P        13 09 41.0 +0.3
KTH  Kantishna Hill   91.83  13  P       P        13 09 38.6 -1.4
KTH                              IAmb    IAmb     13 09 41.7
          comp=Z,16nm,0.9s
LLLB Lillooet         91.84  33  P       P        13 09 40.8 +0.6
CHUM Lake Minchumin   91.86  12  P       P        13 09 38.3 -1.6
          baz=205,SNR=16
GCSA Galena City Sc   91.87  10  P       P        13 09 39.4 -0.5
          baz=201,SNR=9.0
TRF  Thorofare Moun   91.87  13  IAmb    IAmb     13 09 42.6
          comp=Z,23nm,0.8s
TRF  Thorofare Moun   91.87  13  P       P        13 09 39.3 -0.9
          baz=207,SNR=35
LOGN Logan Glacier    91.88  18  P       P        13 09 40.7 +0.4
LOGN                             IAmb    IAmb     13 09 43.0
          comp=Z,20nm,0.8s
BARN Barnard Glacie   91.89  18  IAmb    IAmb     13 09 43.3
          comp=Z,25nm,0.8s
CTGM Chitina Glacie   91.91  18  IAmb    IAmb     13 09 41.9
          comp=Z,18nm,0.7s
BNM  Barren Site      91.92  53  P       P        13 09 40.6 -0.7
JLU  Jordanelle       91.94  45  P       P        13 09 41.6 +0.3
C09A Chrisman Ranch   91.97  37  P       P        13 09 41.1 +0.3
HARP HAARP            92.11  16  P       P        13 09 40.5 -0.7
          baz=212,SNR=7.5
RND  Reindeer         92.13  14  P       P        13 09 41.1 -0.3
RND                              IAmb    IAmb     13 09 43.9
          comp=Z,27nm,0.9s
RND  Reindeer         92.13  14  P       P        13 09 41.1 -0.3
RND                              pmax    pmax
          comp=Z,27nm,0.9s
MVCO Mesa Verde       92.14  50  P       P        13 09 43.1 +0.9
MVCO Mesa Verde       92.14  50  P       P        13 09 42.7 +0.5
          baz=239
DHY  Denali Highway   92.17  14  P       P        13 09 41.5 -0.1
DHY  Denali Highway   92.17  14  P       P        13 09 41.1 -0.5
          baz=210,SNR=11
P18A Preston Nutter   92.21  47  IAmb    IAmb     13 09 44.8
          comp=Z,19nm,1.0s
CO02 Combarbal        92.27 126  P       P        13 09 42.6 -0.3
CO02                             IAmb    IAmb     13 09 45.6
          comp=Z,35nm,0.9s
BPAW Bear Paw Mtn.    92.31  13  P       P        13 09 41.5 -0.5
          baz=207,SNR=7.3
PV10 Paradox Valley   92.36  48  IAmb    IAmb     13 09 46.1
          comp=Z,21nm,1.1s
PV13 Radium Mtn., P   92.40  49  P       P        13 09 43.2 -0.2
PV13                             IAmb    IAmb     13 09 47.0
          comp=Z,17nm,0.9s
HWUT Hardware Ranch   92.40  45  P       P        13 09 42.2 -1.1
HWUT                             IAmb    IAmb     13 09 46.1
          comp=Z,13nm,0.8s
MCK  McKinley         92.41  14  IAmb    IAmb     13 09 45.8
          comp=Z,15nm,0.8s
MCK  McKinley         92.41  14  P       P        13 09 41.7 -0.8
          baz=208,SNR=14
PV23 Carpenter Ridg   92.42  48  IAmb    IAmb     13 09 47.0
          comp=Z,23nm,0.7s
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ANMO Albuquerque      92.43  52  P       P        13 09 44.1 +0.6
          comp=Z,14nm,0.9s,baz=211,slow=5.1,SNR=33
          comp=Z,14nm,0.9s
ANMO Albuquerque      92.43  52  P       P        13 09 43.2 -0.4
ANMO                             IAmb    IAmb     13 09 45.8
          comp=Z,14nm,0.9s
ANMO Albuquerque      92.43  52deP       P        13 09 43.9 +0.3
ANMO                             pmax    pmax
          comp=Z,16nm,1.0s
ANMO Albuquerque      92.43  52  P       P        13 09 44.5 +0.9
          baz=240
ANMO Albuquerque      92.43  52  P       P        13 09 43.3 -0.3
          baz=240
PV11 David Mesa, Pa   92.43  48  IAmb    IAmb     13 09 50.1
          comp=Z,13nm,0.7s
PAX  Paxson           92.52  15  P       P        13 09 42.5 -0.7
          baz=211,SNR=13
M26K Nabesna, AK      92.65  17  P       P        13 09 44.0 +0.3
M26K                             IAmb    IAmb     13 09 46.4
          comp=Z,17nm,1.1s
M26K Nabesna, AK      92.65  17  P       P        13 09 43.6 -0.2
          baz=214,SNR=20
PV07 Paradox Valley   92.66  48  P       P        13 09 43.3 -1.3
PV07                             IAmb    IAmb     13 09 46.5
          comp=Z,22nm,1.3s
PV15 Paradox Valley   92.72  49  IAmb    IAmb     13 09 46.7
          comp=Z,21nm,1.1s
YUK6 Outpost Mounta   92.75  19  P       P        13 09 44.1 -0.3
          baz=218
YUK3 Moose Creek      92.81  18  P       P        13 09 45.1 +0.4
          baz=216,SNR=70
S34M Telegraph Cree   92.84  24  P       P        13 09 45.2 +0.6
          baz=223,SNR=5.8
NEW  Newport          92.86  37  P       P        13 09 44.7 -0.3
NEW  Newport          92.86  37  P       P        13 09 44.7 -0.3
NEW                              pmax    pmax
          comp=Z,5.0nm,0.7s
NEW  Newport          92.86  37  P       P        13 09 44.7 -0.3
          baz=234
M27K Edge Creek, AK   92.91  17  P       P        13 09 45.1 +0.1
M27K                             IAmb    IAmb     13 09 48.0
          comp=Z,39nm,1.0s
M27K Edge Creek, AK   92.91  17  P       P        13 09 44.9 -0.1
          baz=214,SNR=53
HYT  Haines Junctio   92.91  20  P       P        13 09 45.0  0.0
HYT  Haines Junctio   92.91  20  P       P        13 09 45.0  0.0
          baz=218,SNR=8.2
MENT Mentasta         92.92  16  P       P        13 09 44.9  0.0
MENT                             IAmb    IAmb     13 09 47.5
          comp=Z,15nm,0.7s
YUK4 Talbot Arm       92.98  19  P       P        13 09 45.1 -0.4
          baz=217,SNR=8.0
L26K Log Cabin Wild   93.09  16  P       P        13 09 45.4 -0.2
L26K                             IAmb    IAmb     13 09 48.2
          comp=Z,26nm,1.4s
L26K Log Cabin Wild   93.09  16  P       P        13 09 45.5 -0.1
          baz=213,SNR=14
I21K Tanana           93.10  12  P       P        13 09 45.2 -0.4
I21K Tanana           93.10  12  P       P        13 09 45.2 -0.4
          baz=206,SNR=12
NEA2 Nenana           93.14  13  P       P        13 09 44.7 -1.2
NEA2 Nenana           93.14  13  P       P        13 09 44.6 -1.2
          baz=208,SNR=5.9
RDMU Red Mountain     93.14  46  P       P        13 09 47.2 +0.5
RDMU                             IAmb    IAmb     13 09 49.6
          comp=Z,14nm,0.8s
K24K Donnelly Dome    93.16  15  P       P        13 09 45.1 -0.9
          baz=211,SNR=23
BVCY Beaver Creek     93.22  17  P       P        13 09 45.3 -1.0
          baz=215,SNR=13
WRH  Wood River Hil   93.23  14  P       P        13 09 45.8 -0.5
WRH                              IAmb    IAmb     13 09 48.0
          comp=Z,16nm,0.9s
AHID Auburn Hatcher   93.31  44  IAmb    IAmb     13 09 52.3
          comp=Z,19nm,1.1s
RIDG Independent Ri   93.33  15  P       P        13 09 46.7 -0.1
RIDG                             IAmb    IAmb     13 09 49.1
          comp=Z,15nm,0.9s
MCMT McKenzie Canyo   93.35  41  P       P        13 09 48.6 +1.0
H21K Melozitna Rive   93.38  11  P       P        13 09 46.6 -0.3
H21K Melozitna Rive   93.38  11  P       P        13 09 46.0 -1.0
          baz=205,SNR=15
HDA  Harding Lake     93.42  14  IAmb    IAmb     13 09 48.2
          comp=Z,11nm,0.6s
HDA  Harding Lake     93.42  14  P       P        13 09 46.0 -1.1
          baz=210,SNR=22
DOT  Dot Lake         93.44  15  P       P        13 09 47.2 -0.1
DOT                              IAmb    IAmb     13 09 49.5
          comp=Z,16nm,0.9s
CCB  Clear Creek Bu   93.45  14  P       P        13 09 46.1 -1.2
CCB                              IAmb    IAmb     13 09 48.7
          comp=Z,14nm,0.9s
L27K Beaver Creek,    93.50  17  P       P        13 09 47.5 -0.1
L27K Beaver Creek,    93.50  17  P       P        13 09 46.4 -1.2
          baz=215,SNR=19
BCAR Beaver Creek A   93.52  17  P       P        13 09 47.7  0.0
IMAR Indian Mountai   93.52  11  P       P        13 09 46.7 -0.9
CMIG Matias Romero    93.54  73  P       P        13 09 49.0 +0.2
          baz=286,slow=5.5
S22A 4UR Ranch, Cre   93.55  50  P       P        13 09 49.2 +0.5
S22A                             IAmb    IAmb     13 09 51.2
          comp=Z,43nm,1.3s
S22A 4UR Ranch, Cre   93.55  50  P       P        13 09 48.4 -0.3
          baz=240
I23K Minto, Yukon-K   93.57  13  P       P        13 09 47.3 -0.5
I23K Minto, Yukon-K   93.57  13  P       P        13 09 46.4 -1.4
          baz=208,SNR=8.7
MDM  Murphy Dome      93.63  13  IAmb    IAmb     13 09 49.6
          comp=Z,15nm,1.0s
TCOL CIGO, UAF Yank   93.63  13  P       P        13 09 47.3 -0.7
TCOL                             IAmb    IAmb     13 09 50.1
          comp=Z,18nm,0.9s
TCOL CIGO, UAF Yank   93.63  13  P       P        13 09 46.9 -1.2
          baz=209,SNR=8.4
COLA College          93.64  13  P       P        13 09 47.1 -0.9
COLA                             IAmb    IAmb     13 09 50.2
          comp=Z,18nm,0.9s
COLA College          93.64  13c iP      P        13 09 46.9 -1.1
COLA                             pmax    pmax
          comp=Z,21nm,1.1s
COLA College          93.64  13  P       P        13 09 46.7 -1.3
          baz=209
IL31                  93.75  14  P       P        13 09 47.9 -0.6
ILAR Eielson Array    93.75  14  P       P        13 09 47.4 -1.2
          comp=Z,5.2nm,0.8s,baz=221,slow=5.3,SNR=40
ILAR                             pP      pP       13 11 43.7 +0.9
          comp=Z,0.5nm,0.7s,baz=226,slow=4.9,SNR=1.8
ILAR                             PP      PP       13 13 43.0 -0.3
          comp=Z,1.9nm,0.9s,baz=235,slow=7.8,SNR=4.8
ILAR                             PKiKP   PKiKP    13 14 29.5 -0.6
          comp=Z,0.5nm,0.5s,baz=271,slow=3.0,SNR=1.8
ILAR                             PKKP    PKKPdf   13 26 50.8 -0.6
          comp=Z,0.1nm,0.5s,baz=23,slow=1.2,SNR=4.9
          comp=Z,5.2nm,0.8s
ILAR Eielson Array    93.75  14  P       P        13 09 47.2 -1.5
REDW Red Top Meadow   93.78  43  P       P        13 09 50.1 +0.6
TPAW Teton Pass       93.78  43  P       P        13 09 50.7 +1.0
O20A White River Ci   93.79  47  P       P        13 09 49.4 -0.3
O20A                             IAmb    IAmb     13 09 52.6
          comp=Z,11nm,0.8s
O20A White River Ci   93.79  47  P       P        13 09 48.5 -1.2
          baz=240
BILL Bilibino         93.79 355  P       P        13 09 49.8 +1.0
BILL Bilibino         93.79 355⇓eP       P        13 09 49.0 +0.3
BILL                            e*SP     sP       13 12 34.5 +0.3
BILL                            e                 13 13 43.7
BILL                             pmax    pmax
          comp=Z,12nm,1.1s
MSO  Missoula         93.81  39  P       P        13 09 48.5 -1.0
          baz=236
SNOW Snow King Moun   93.89  43  IAmb    IAmb     13 09 54.5
          comp=Z,11nm,0.9s
LZH  Lanzhou          93.90 308 ⇓P       P        13 09 51.8 +1.6
LZH                              SKS     SKSac    13 19 35.1 -0.1
LZH                              S       ScS      13 20 21.3 +5.0
LZH                              pmax    pmax
          comp=Z,20nm,1.5s
LZH                              pmax    pmax
          comp=Z,98nm,5.4s
POKR Poker Plat Res   93.94  13  P       P        13 09 48.5 -1.0
          baz=210
J25K Salcha River,    93.95  14  P       P        13 09 49.3 -0.4
J25K Salcha River,    93.95  14  P       P        13 09 48.5 -1.1
          baz=212,SNR=16
N31M Braeburn, Yuko   93.95  20  P       P        13 09 50.3 +0.6
N31M Braeburn, Yuko   93.95  20  P       P        13 09 48.7 -1.0
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	baz=220,SNR=9.4						
MOOW	Moose Ponds	94.05	43	P	P	13 09 50.8	0.0
LOHW	Long Hollow	94.06	43	P	P	13 09 50.5	-0.4
LRM	Limekiln Ridge	94.13	41	P	P	13 09 50.6	-0.5
H23K	Yukon River	94.14	12	P	P	13 09 50.0	-0.4
H23K	Yukon River	94.14	12	P	P	13 09 49.5	-0.9
	baz=208						
SMCO	Snowmass	94.16	48	P	P	13 09 51.8	+0.1
SMCO				IAmb	IAmb	13 09 54.6	
	comp=Z,21nm,0.9s						
RDOG	Red Dog Mine	94.23	7	P	P	13 09 49.5	-1.2
	baz=196						
K27K	Chicken	94.24	16	P	P	13 09 51.2	+0.4
K27K				IAmb	IAmb	13 09 53.9	
	comp=Z,14nm,0.9s						
K27K	Chicken	94.24	16	P	P	13 09 50.4	-0.4
	baz=214,SNR=24						
FLWY	Flagg Ranch	94.25	43	IAmb	IAmb	13 09 55.5	
	comp=Z,19nm,0.9s						
J26L	Joseph Creek	94.27	15	P	P	13 09 51.0	-0.1
	baz=213,SNR=58						
BW06	Boulder Array	94.28	44	IAmb	IAmb	13 13 47.3	
	comp=Z,18nm,1.4s						
BW06	Boulder Array	94.28	44	P	P	13 09 50.8	-1.1
	baz=239						
PD31	Pinedale Array	94.28	44	P	P	13 09 50.5	-1.4
PDAR	Pinedale Array	94.28	44	P	P	13 09 51.8	-0.1
	comp=Z,6.7nm,0.9s,baz=199,slow=4.1,SNR=42						
PDAR				PP	PP	13 13 45.8	-2.3
	comp=Z,4.4nm,1.1s,baz=258,slow=6.8,SNR=9.9						
	comp=Z,6.7nm,0.9s						
PDAR	Pinedale Array	94.28	44	P	P	13 09 51.5	-0.3
YHL	Hebgen Lake	94.36	42	IAmb	IAmb	13 09 56.1	
	comp=Z,24nm,1.1s						
YMR	Madison River	94.40	42	P	P	13 09 53.0	+0.6
YMR				IAmb	IAmb	13 09 57.8	
	comp=Z,19nm,1.2s						
SDCO	Great Sand Dun	94.47	50	P	P	13 09 53.3	+0.3
SDCO	Great Sand Dun	94.47	50	P	P	13 09 53.1	+0.1
	baz=241						
SDCO	Great Sand Dun	94.47	50	P	P	13 09 52.1	-0.9
	baz=241						
BOZ	Bozeman (W)	94.49	41	P	P	13 09 52.6	-0.1
	baz=238,SNR=16						
H17A	Grant Village	94.49	43	P	P	13 09 53.0	+0.1
	baz=238,SNR=14						
M30M	Minto, Yukon	94.50	19	P	P	13 09 52.4	+0.2
M30M				IAmb	IAmb	13 09 54.2	
	comp=Z,15nm,0.7s						
M30M	Minto, Yukon	94.50	19	P	P	13 09 51.8	-0.4
	baz=219,SNR=42						
YHH	Holmes Hill	94.53	42	P	P	13 09 54.2	+1.2
MSTX	Muleshoe	94.64	55	P	P	13 09 53.2	-0.4
	baz=242						
833A	Chaparral WMA,	94.67	61	P	P	13 09 53.2	-0.5
	baz=244						
LKWY	Lake	94.69	42	P	P	13 09 54.3	+0.6
LKWY				IAmb	IAmb	13 09 58.6	
	comp=Z,14nm,1.0s						
LKWY	Lake	94.69	42	P	P	13 09 54.3	+0.6
LKWY				pmax	pmax		
	comp=Z,14nm,1.0s						
M31M	Drury Creek, Y	94.93	20	P	P	13 09 53.9	-0.2
M31M	Drury Creek, Y	94.93	20	P	P	13 09 54.0	-0.1
	baz=221						
T25A	Trinidad	94.94	51	P	P	13 09 55.6	+0.6
T25A	Trinidad	94.94	51	P	P	13 09 54.9	-0.1
	baz=242						
DAWY	Dawson	94.96	17	P	P	13 09 54.2	0.0
DAWY				IAmb	IAmb	13 09 57.3	
	comp=Z,12nm,0.9s						
DAWY	Dawson	94.96	17	P	P	13 09 54.5	+0.3
	baz=217,SNR=22						
HRY	Holter Researc	94.97	40	P	P	13 09 55.7	+0.9
WALA	Waterton Lakes	95.07	37	P	P	13 09 54.8	-0.4
EGAK	Eagle	95.08	16	P	P	13 09 54.5	-0.2
EGAK				IAmb	IAmb	13 09 57.0	
	comp=Z,15nm,0.8s						
EGAK	Eagle	95.08	16	P	P	13 09 54.6	0.0
	baz=215,SNR=32						
COLD	Coldfoot	95.26	11	P	P	13 09 55.6	+0.2
COLD	Coldfoot	95.26	11	P	P	13 09 55.9	+0.5
	baz=207						
Q24A	Divide	95.30	49	P	P	13 09 56.2	-0.5
Q24A				IAmb	IAmb	13 09 58.8	
	comp=Z,15nm,1.0s						
Q24A	Divide	95.30	49	P	P	13 09 57.1	+0.4
	baz=241						
JCT	Junction City	95.31	59	P	P	13 09 56.7	+0.1
JCT				IAmb	IAmb	13 09 59.1	
	comp=Z,14nm,1.1s						
JCT	Junction City	95.31	59	P	P	13 09 56.7	+0.1
JCT				pmax	pmax		
	comp=Z,14nm,1.1s						
JCT	Junction City	95.31	59	P	P	13 09 56.7	+0.1
	baz=244						
JCT	Junction City	95.31	59	P	P	13 09 56.2	-0.4
	baz=244						
ISCO	Idaho Springs	95.38	48	P	P	13 09 57.3	+0.2
ISCO	Idaho Springs	95.38	48	P	P	13 09 57.3	+0.2
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ISCO	Idaho Springs	95.38	48	P	P	13 09 57.2	+0.2
	baz=241						
ISCO	Idaho Springs	95.38	48	P	P	13 09 57.4	+0.2
	baz=241						
RLMT	Red Lodge	95.67	42	P	P	13 09 58.1	+0.1
RLMT	Red Lodge	95.67	42	P	P	13 09 58.7	+0.6
	baz=239						
N23A	Red Feather La	95.69	47	P	P	13 09 58.8	+0.4
N23A	Red Feather La	95.69	47	P	P	13 09 59.0	+0.7
	baz=241						
GCMT	Greycliff	95.77	42	P	P	13 09 59.0	+0.6
K22A	Casper	96.16	46	IAmb	IAmb	13 14 01.9	
	comp=Z,17nm,1.2s						
K22A	Casper	96.16	46	P	P	13 10 00.7	+0.4
	baz=241						
K22A	Casper	96.16	46	P	P	13 10 00.8	+0.5
	baz=241						
I29M	Ogilvie Camp,	96.28	17	P	P	13 09 59.8	-0.3
I29M	Ogilvie Camp,	96.28	17	P	P	13 09 59.2	-0.9
	baz=218,SNR=6.3						
ABTX	Abilene, Hawle	96.38	57	P	P	13 10 01.9	+0.6
ABTX				IAmb	IAmb	13 10 03.2	
	comp=Z,27nm,1.5s						
ABTX	Abilene, Hawle	96.38	57	P	P	13 10 00.5	-0.9
	baz=244						
GO02	Mina Guanaco	96.50	122	P	P	13 10 01.4	-1.1
GO02				IAmb	IAmb	13 10 04.6	
	comp=Z,20nm,1.2s						
BMAR	Burnt Mountain	96.52	13	P	P	13 10 02.0	+0.8
TOLK	Toolik Lake Re	96.63	11	P	P	13 10 01.3	-0.3
TOLK	Toolik Lake Re	96.63	11	P	P	13 10 01.7	+0.1
	baz=208						
EGMT	Eagleton	96.86	40	P	P	13 10 03.5	+0.3
EGMT	Eagleton	96.86	40	P	P	13 10 03.2	0.0
	baz=239						
KSCO	Kaye Shedlock'	97.06	50	P	Pdif	13 10 04.5	+0.1
	baz=243						
MTO3	Montecristo	97.23	78	IAmb	IAmb	13 13 35.3	
	comp=Z,27nm,1.9s						
ULN	Ulaanbaatar	97.57	320	P	Pdif	13 10 05.1	-1.3
ULN				IAmb	IAmb	13 10 09.9	
	comp=Z,6.2nm,0.8s						
ULN	Ulaanbaatar	97.57	320	⇓*e*P	P	13 10 06.7	+0.2
ULN				pmax	pmax		
	comp=Z,15nm,1.7s						
SONM	Songino Array	97.94	319	P	P	13 10 08.9	+0.7
	comp=Z,3.1nm,0.7s,baz=114,slow=6.5,SNR=2.9						
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	97.94	319	IAmb	IAmb	13 14 13.1	
	comp=Z,20nm,1.8s						
GTA	Gaotai	98.26	310	*e*P	P	13 10 10.6	+0.8
GTA				SKS	SKSac	13 19 55.8	-1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LAO	LASA Array	98.29	42	P	P	13 10 10.2	+0.6
	baz=242						
OGNE	Ogallala	98.33	49	P	P	13 10 10.2	+0.1
	baz=243						
RSSD	Black Hills	98.45	45	P	Pdif	13 10 10.1	-0.4
	baz=243						
INK	Inuvik	99.75	16	Pdif	Pdif	13 10 15.3	-0.2
INK				IAmb	IAmb	13 10 17.6	
	comp=Z,7.7nm,1.1s						
INK	Inuvik	99.75	16	P	Pdif	13 10 15.3	-0.2
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
INK	Inuvik	99.75	16	P	Pdif	13 10 16.0	+0.5
	baz=222						
GOMU	GeErMu	100.50	305	P	Pdif	13 10 21.0	+0.9
GOMU				SS	SS	13 28 27.8	+4.5
GOMU				AMB	AMB		
	comp=Z,42nm,4.1s						
YKA	Yellowknife Ar	102.09	26	P	Pdif	13 10 26.1	+0.2
	comp=Z,0.4nm,0.6s,baz=242,slow=4.2,SNR=12						
YKA				PKiKP	PKiKP	13 14 43.2	-1.8
	comp=Z,1.9nm,0.9s,baz=261,slow=1.5,SNR=4.4						
YKA				SKP		13 17 29.8	
	comp=Z,0.3nm,0.6s,baz=266,slow=1.7,SNR=6.0						
YKA				PKKPbc	PKKPbc	13 26 26.9	-2.3
	comp=Z,0.6nm,0.5s,baz=43,slow=2.4,SNR=13						
YKA	Yellowknife Ar	102.09	26		PKiKP	13 14 44.4	-0.6
TIXI	Tiksi	102.97	345	PP	PP	13 14 45.4	-6.9
	comp=Z,1.3nm,0.5s,baz=98,slow=14,SNR=6.0						
ECSD	EROS Data Cent	103.15	48	P	Pdif	13 10 31.5	+0.3
	baz=247						
A36M	Sachs Harbour	104.35	15	P	Pdif	13 10 36.7	+0.9
	baz=230						
ULM	Lac du Bonnet	106.02	42	PP	PP	13 15 13.5	-1.7
	comp=Z,6.7nm,0.9s,baz=248,slow=8.9,SNR=5.0						
TKL	Tuckaleechee C	109.70	59	PP	PP	13 15 41.5	-0.6
	comp=Z,4.2nm,1.0s,baz=250,slow=12,SNR=4.5						
MKAR	Makanchi Array	112.80	312	PKiKP	PKiKP	13 15 05.2	-0.4
	comp=Z,0.8nm,0.3s,baz=80,slow=1.6,SNR=9.2						
MKAR				PP	PP	13 16 03.5	-0.3
	comp=Z,1.6nm,0.8s,baz=107,slow=7.9,SNR=3.7						
MKAR				SKP	SKPdf	13 17 52.3	+0.5
	comp=Z,0.9nm,0.6s,baz=114,slow=1.7,SNR=2.9						
MKAR				PKKPbc	PKKPbc	13 25 55.6	+0.1
	comp=Z,2.5nm,0.6s,baz=273,slow=3.3,SNR=14						
MKAR	Makanchi Array	112.80	312	PKiKP	PKiKP	13 15 04.9	-0.7
MKAR	Makanchi Array	112.80	312	*i* PKIKP	PKiKP	13 15 04.9	-0.7
ZALV	Zalesovo Beam	112.81	320	PKiKP	PKiKP	13 15 04.5	-0.8
	comp=Z,1.9nm,0.5s,baz=113,slow=2.0,SNR=10						
ZALV	Zalesovo Beam	112.81	320		PKiKP	13 15 04.1	-1.2
ZALV	Zalesovo Beam	112.81	320	*i* PKIKP	PKiKP	13 15 04.1	-1.2
O53A	New Philadelph	112.92	55	P	PKiKP	13 15 04.6	-1.4
	baz=255						
NRIK	Noril'sk	114.25	337	PKP	PKPdf	13 15 07.1	-0.5
	comp=Z,2.4nm,0.5s,baz=85,slow=3.6,SNR=6.3						
NRIK	Noril'sk	114.25	337	*c i*PKIKP	PKiKP	13 15 08.4	+0.8
TARG	Taragay, Kyrgy	114.80	306		PKPdf	13 15 08.7	-1.3
SSPA	Standing Stone	115.48	55	P	PKPdf	13 15 10.0	-0.9
	baz=257						
KSH	Kashi	115.67	303	PKP	PKiKP	13 15 12.4	+1.0
KURK	Kurchatov	115.95	316		PKPdf	13 15 10.6	-0.9
KURK	Kurchatov	115.95	316	*c i*PKIKP	PKPdf	13 15 10.7	-0.7
KURK				pmax	pmax		
	comp=Z,19nm,1.0s						
KURBB	Kurchatov Arra	115.99	316	PKP	PKPdf	13 15 10.9	-0.6
	comp=Z,8.6nm,0.8s,baz=104,slow=2.0,SNR=23						
KURBB				PKKPbc	PKKPbc	13 25 44.9	+0.1
	comp=Z,2.3nm,0.2s,baz=280,slow=4.0,SNR=6.3						
KURBB				SKKPbc	SKKPbc	13 28 39.6	-2.9
	comp=Z,0.8nm,0.2s,baz=270,slow=3.8,SNR=4.1						
M57A	Sunshine Farm,	116.19	55		PKPdf	13 15 11.3	-0.9
BOOM	Boomskoye usch	116.31	307	PKPdf	PKPdf	13 15 11.7	-1.0
BOOM	Boomskoye usch	116.31	307	PKIKP	PKPdf	13 15 11.7	-1.0
N58A	Sunbury	116.39	55		PKPdf	13 15 11.6	-1.0
MVL	Millersville	116.49	56		PKPdf	13 15 12.0	-0.8
VLDQ	Val d'Or	117.17	47	PKPdf	PKPdf	13 15 12.8	-1.0
BINY	Binghamton	117.19	54	P	PKPdf	13 15 13.3	-0.8
	baz=259						
KSPA	Keystone Colle	117.23	55		PKPdf	13 15 12.3	-1.9
AAK	Ala-Archa	117.39	307	PKP	PKPdf	13 15 14.3	-0.4
	comp=Z,4.6nm,0.8s,baz=196,slow=3.3,SNR=4.6						
AAK				PKKPbc	PKKPbc	13 25 41.0	+1.1
	comp=Z,5.5nm,0.6s,baz=228,slow=2.7,SNR=8.8						
AAK	Ala-Archa	117.39	307		PKPdf	13 15 14.2	-0.5
AAK	Ala-Archa	117.39	307	⇓*i*PKIKP	PKiKP	13 15 14.9	+0.2
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ODNJ	Ogdensburg	118.01	55		PKPdf	13 15 14.4	-1.3
TRNY	Table Rock, Ra	118.30	55		PKPdf	13 15 15.4	-0.9
BDFB	Brasilia	118.36	126	PKP	PKPdf	13 15 16.4	-0.8
	comp=Z,2.1nm,0.4s,baz=191,slow=5.2,SNR=4.9						
BDFB				PKKPab	PKKPab	13 25 42.6	+0.3
	comp=Z,1.4nm,0.4s,baz=124,slow=3.6,SNR=4.0						
J59A	Piesco	118.49	53		PKPdf	13 15 15.6	-1.0
PAL	Palisades	118.51	56		PKPdf	13 15 15.5	-1.1
PAL	Palisades	118.51	56	PKIKP	PKPdf	13 15 15.5	-1.1
PAL	Palisades	118.51	56	P	PKPdf	13 15 15.9	-0.7
	baz=260						
LONY	Lake Ozonia	118.61	51	P	PKPdf	13 15 16.0	-0.7
	baz=261						
NCB	Newcomb	118.77	52	PKPdf	PKPdf	13 15 15.6	-1.5
KSCT	Kent School, K	118.95	55		PKPdf	13 15 16.0	-1.5
SJG	San Juan	119.28	83	PKP	PKPdf	13 15 17.4	-1.3
	comp=Z,17nm,0.5s,baz=348,slow=2.9,SNR=8.4						
SJG	San Juan	119.28	83		PKPdf	13 15 17.7	-1.1
SJG	San Juan	119.28	83	PKIKP	PKPdf	13 15 17.7	-1.1
GCPR	Guaynabo City	119.40	83		PKPdf	13 15 17.2	-1.8
HUMP	Col San Antoni	119.56	83		PKPdf	13 15 18.2	-1.1
L61B	Northampton	119.65	54		PKPdf	13 15 18.4	-0.5
L61B	Northampton	119.65	54	P	PKPdf	13 15 17.8	-1.0
	baz=261						
BTK	Batken	119.67	303	PKPdf	PKPdf	13 15 18.8	-0.3
BTK	Batken	119.67	303	PKIKP	PKPdf	13 15 18.8	-0.3
GAR	Garm	119.87	302	PKPdf	PKiKP	13 15 19.6	0.0
J61A	Chester	119.87	53		PKPdf	13 15 18.7	-0.5
UCCT	U. Connecticut	119.89	55	PKPdf	PKPdf	13 15 17.5	-1.8
KBL	Kabul	120.04	297	PKPdf	PKPdf	13 15 19.9	-0.2
KBL	Kabul	120.04	297	PKIKP	PKPdf	13 15 19.9	-0.2
KK31	Karatay Array	120.35	307		PKPdf	13 15 19.7	-0.5
KK31	Karatay Array	120.35	307	PKIKP	PKPdf	13 15 19.7	-0.5
KKAR	Karatay Array	120.35	307		PKPdf	13 15 19.7	-0.5
KKAR	Karatay Array	120.35	307	PKPdf	PKPdf	13 15 19.6	-0.6
KKAR	Karatay Array	120.35	307	PKIKP	PKPdf	13 15 19.6	-0.6
LBNH	Lisbon	120.44	52		PKPdf	13 15 19.6	-0.7
LBNH	Lisbon	120.44	52	PKIKP	PKPdf	13 15 19.6	-0.7
LBNH	Lisbon	120.44	52	P	PKPdf	13 15 19.7	-0.6
	baz=263						
HRV	Adam Dziewonsk	120.48	54	P	PKPdf	13 15 20.2	-0.2
	baz=262						
BOSA	Boshof	120.68	207	PKP	PKiKP	13 15 21.7	0.0
	comp=Z,10nm,0.8s,baz=87,slow=0.6,SNR=13						
BRVK	Borovoye	121.31	318	PKPdf	PKPdf	13 15 21.7	0.0
BRVK	Borovoye	121.31	318	*ce*PKIKP	PKPdf	13 15 21.2	-0.5
G62A	West of Eustis	121.54	51		PKPdf	13 15 22.0	-0.4
PKME	Peaks-Kenny Pk	122.41	51		PKPdf	13 15 23.9	-0.2
PKME	Peaks-Kenny Pk	122.41	51	P	PKPdf	13 15 23.4	-0.6
	baz=265						
SCHQ	Schefferville	124.11	40	PKP	PKPdf	13 15 26.2	-0.8
	comp=Z,18nm,1.1s,baz=333,slow=4.9,SNR=10						
HAL	Halifax	126.42	52	PKPdf	PKPdf	13 15 31.3	-0.4
HAL	Halifax	126.42	52	PKIKP	PKPdf	13 15 31.3	-0.4
SPA0	Spitsbergen Ar	126.69	356	*e*PKPdf	PKiKP	13 15 31.8	-0.1
SPB2	Spitsbergen Ar	126.70	356		PKiKP	13 15 31.9	0.0
ILULI	Ilulissat	127.29	20		PKPdf	13 15 32.2	-0.4
ILULI	Ilulissat	127.29	20	PKIKP	PKPdf	13 15 32.2	-0.4
ILULI	Ilulissat	127.29	20	*i* P	PKPdf	13 15 32.4	-0.2
ARU	Arti	127.82	323	PKP	PKPdf	13 15 34.0	0.0
	comp=Z,7.6nm,0.4s,baz=105,slow=1.7,SNR=24						
ARU	Arti	127.82	323	*i* PKIKP	PKPdf	13 15 34.3	+0.3
ARU						13 17 43.1	
ARU						13 21 57.2	
ARU				SS	SS	13 34 18.5	+2.0
GBN	Guysborough	127.90	51	PKPdf	PKPdf	13 15 34.4	-0.1
ABKAR	Akbulak array	127.90	314	PKPdf	PKiKP	13 15 35.0	-0.1
SFJD	Kangerlussuaq	128.51	23		PKPdf	13 15 35.0	0.0
SFJD	Kangerlussuaq	128.51	23	PKIKP	PKPdf	13 15 35.0	0.0
SFJD	Kangerlussuaq	128.51	23	*i* P	PKPdf	13 15 34.5	-0.5
UOSS	Minazif	128.90	282	PKPdf	PKPdf	13 15 36.1	-1.0
AKTO	Aktyubinsk	129.04	315	PKP	PKPdf	13 15 36.8	+0.3
	comp=Z,11nm,0.7s,baz=95,slow=3.3,SNR=32						
AKTO				SKPbc	SKPbc	13 18 09.5	+0.3
	comp=Z,5.3nm,0.7s,baz=78,slow=4.9,SNR=6.5						
GEYT	Alibeck	129.25	299	PKP	PKiKP	13 15 38.5	+0.3
	comp=Z,8.8nm,0.7s,baz=90,slow=6.5,SNR=7.9						
GEYT				SKPbc	SKPbc	13 18 12.6	+2.1
	comp=Z,7.7nm,0.7s,baz=164,slow=1.0,SNR=7.2						
DBG	Daneborg	130.10	7	*i* P	PKPdf	13 15 37.7	-0.2
DY2G	Dye2	130.27	22	*i* P	PKPdf	13 15 39.1	+0.4
KIRV	Kirov	131.97	327	PKP	PKiKP	13 15 43.0	0.0
	comp=Z,15nm,0.4s,baz=42,slow=3.1,SNR=5.0						
KIRV				SKPbc	SKPab	13 18 20.4	-0.7
	comp=Z,35nm,0.7s,baz=119,slow=1.5,SNR=9.1						
KIRV	Kirov	131.97	327	*c i*PKIKP	PKiKP	13 15 42.7	-0.2
IVI	Ivigtut	132.11	29	*i* P	PKPdf	13 15 42.0	0.0
PRGR	Permogore	132.43	332	*e*PKIKP	PKPdf	13 15 42.1	-0.5
PRGR				*e*		13 18 19.0	
HAMF	Hammerfest	132.73	349	*e*PKPdf	PKiKP	13 15 43.6	-0.5
ARA0	ARCESS Array S	133.35	348	*e*PKPdf	PKPdf	13 15 44.3	+0.2
ARCES	ARCESS Array B	133.35	348	PKhKP	PKPpre	13 15 31.6	
	comp=Z,1.2nm,0.3s,baz=322,slow=1.3,SNR=13						
ARCES				PKP	PKPdf	13 15 43.7	-0.5
	comp=Z,11nm,0.6s,baz=59,slow=1.8,SNR=9.7						
ARCES				SKPbc	SKPbc	13 18 23.9	0.0
	comp=Z,21nm,0.6s,baz=41,slow=3.9,SNR=18						
SCO	Scoresbysund	133.37	10	*i* P	PKPdf	13 15 42.4	-1.8
RCBR	Riachuelo	133.71	127	SKPbc	SKPbc	13 18 26.5	-0.4
	comp=Z,19nm,0.7s,baz=311,slow=2.9,SNR=15						
KTK1	Kautokeino	134.22	348	*e*PKPdf	PKPdf	13 15 46.0	+0.2
JETT	Jettan, Norway	134.23	350	*e*PKPdf	PKPdf	13 15 46.2	+0.4
TRO	Tromso	134.39	351	*e*PKPdf	PKPdf	13 15 46.0	0.0
KMBO	Kilima Mbogo	134.77	240	PKP	PKPdf	13 15 49.4	+0.6
	comp=Z,7.0nm,0.9s,baz=58,slow=4.3,SNR=6.0						
KMBO				SKPbc	SKPbc	13 18 31.8	+1.2
	comp=Z,26nm,1.0s,baz=61,slow=2.9,SNR=24						
BELG	Belogornoye	135.00	320	PKP	PKPdf	13 15 48.0	+0.4
	comp=Z,43nm,0.7s,baz=133,slow=2.1,SNR=6.3						
BELG				SKPbc	SKPbc	13 18 30.6	+0.9
	comp=Z,88nm,0.9s,baz=114,slow=1.6,SNR=8.3						
BELG	Belogornoye	135.00	320	*d i*PKIKP	PKiKP	13 15 49.0	-0.2
KLMR	Klimovskoe	135.37	333	*e*PKIKP	PKPdf	13 15 46.6	-1.5
KLMR				*e*		13 18 29.4	
KLMR				pmax	pmax		
	comp=Z,20nm,1.0s						
KLMR	Klimovskoe	135.37	333	*e*PKPdf	PKPdf	13 15 46.6	-1.5
KLMR				AMP		13 15 49.8	
	comp=Z,20nm,1.0s						
KLMR				*e*PP	PP	13 18 29.5	-2.5
STEI	Steigen	136.49	351	*e*PKPdf	PKiKP	13 15 50.9	-0.9
FAUS	Fauske	136.99	351	*e*PKPdf	PKPdf	13 15 47.9	-3.1
VRH	Novokhopyorsk	138.85	320	*e*PKIKP	PKPdf	13 15 54.3	-0.5
VRH				*e*		13 18 39.4	
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
MOS	Moscow	138.99	328	*e*PKHKP	PKPpre	13 15 48.7	
FINES	FINESS Array B	139.78	340	PKhKP	PKPpre	13 15 47.6	
	comp=Z,5.6nm,0.6s,baz=50,slow=3.8,SNR=23						
FINES				PKP	PKiKP	13 15 58.1	-0.7
	comp=Z,6.2nm,0.5s,baz=98,slow=2.2,SNR=8.2						
FINES				SKPbc	SKPbc	13 18 42.6	-0.5
	comp=Z,26nm,0.8s,baz=48,slow=2.1,SNR=19						
OBN	Obninsk	139.83	327	*e*PKIKP	PKPdf	13 15 54.7	-1.7
OBN				*e*		13 19 00.9	
OBN				*e*PPP	PPP	13 22 08.9	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	139.84	323	*e*PKIKP	PKPdf	13 15 56.6	0.0
LPSR				*e*		13 18 44.3	
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MBAR	Mbarara	140.05	234	SKPbc	SKiKP	13 18 47.0	-1.0
	comp=Z,4.0nm,0.2s,baz=104,slow=4.2,SNR=6.0						
VORR	Voronezh	140.10	322	*e*PKIKP	PKPdf	13 15 57.5	+0.4
VORR				pmax	pmax		
	comp=Z,80nm,0.4s						
NSS	Namsos	140.15	352	*e*PKPdf	PKPdf	13 15 53.0	-3.8
KBZ	Khabaz	140.34	308	PKhKP	PKPpre	13 15 52.7	
	comp=Z,2.7nm,0.7s,baz=57,slow=4.6,SNR=5.9						
KBZ	Khabaz	140.34	308	⇓*e*PKIKP	PKPdf	13 15 57.8	+0.1
KIV	Kislovodsk	140.44	309	*e*PKIKP	PKiKP	13 15 59.5	-1.3
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
MEF	Metsahovi	141.26	340	*e*P	PKPdf	13 15 54.7	-4.1
RAF	Rauma	141.36	343	*e*P	PKPdf	13 15 55.1	-3.9
VSU	Vasula	141.84	337	⇓*i*PKIKP	PKPdf	13 16 01.1	+1.1
VSU	Vasula	141.84	337	*e*P	PKPdf	13 15 56.6	-3.4
AAL	Aland	142.54	343	*e*P	PKPdf	13 15 58.1	-3.0
MOL	Molde	142.56	354	*e*PKPdf	PKPdf	13 15 58.7	-2.4
MTSE	Matsula	142.63	339	*e*P	PKPdf	13 15 58.6	-2.8
KOPT	Kop Dagi	142.83	303	PKPdf	PKPdf	13 16 01.4	-1.4
DOMB	Dombas	142.91	352	*e*PKPdf	PKPdf	13 15 59.2	-2.6
AKN	Aaknes	143.00	354	*e*PKPdf	PKPbc	13 15 59.8	-0.1
MARD	Mardin	143.00	299		PKPbc	13 16 01.7	+0.8
KTUT	Trabzon	143.19	305	⇓P	PKPbc	13 16 01.4	+0.2
NC303	NORSAR Array S	143.38	350	PKPdf	PKPab	13 16 00.4	-0.4
UPP	Uppsala	143.41	345	*e*P	PKPab	13 16 00.7	-0.2
NC405	NORSAR Array S	143.44	350		PKPab	13 16 00.9	-0.2
NB2	NORSAR Subarra	143.59	350	PKP	PKPab	13 16 00.8	-0.9
	comp=Z,59nm,0.9s,baz=16,slow=3.2						
NB2	NORSAR Subarra	143.59	350	PKPab	PKPab	13 16 00.8	-0.9
	baz=16,slow=3.2						
NOA	NORSAR Array B	143.59	350	PKP	PKPab	13 16 00.9	-0.8
	comp=Z,62nm,0.7s,baz=22,slow=3.8,SNR=193						
NOA				SKPbc	SKiKP	13 18 53.6	0.0
	comp=Z,2.8nm,0.8s,baz=14,slow=4.3,SNR=3.3						
FOO	Floro	143.74	355	*e*PKPbc	PKPab	13 16 02.1	0.0
ANN	Anapa	143.82	312	*i* PKIKP	PKPab	13 16 03.1	+0.1
ANN				*e*		13 18 03.3	
ANN				pmax	pmax		
	comp=Z,243nm,0.8s						
NAO01	NORSAR Array S	143.82	350		PKPbc	13 16 02.1	-0.4
NC602	NORSAR Array S	143.82	350	*e*PKPbc	PKPbc	13 16 02.1	-0.3
SLIT	Slitere, Latvi	143.99	339	*e*P	PKPbc	13 16 02.9	-0.2
HYA	Hoyanger	144.07	354	*e*PKPbc	PKPbc	13 16 03.2	0.0
IDID	Didziasalis	144.12	333	*e*P	PKPdf	13 16 04.1	+0.1
ISAL	Salakas	144.18	334	*e*P	PKPab	13 16 04.0	0.0
MNK	Minsk	144.20	332	*i* PKIKP	PKPdf	13 16 04.8	+0.6
MNK				*i*		13 18 03.3	
MNK				*i*		13 18 51.2	
MNK				*i*		13 19 28.6	
MNK				*i*		13 22 26.5	
MNK				*i* PPP	PPP	13 22 46.8	
MNK				*i* SS	SS	13 37 38.0	+9.1
MNK				pmax	pmax		
	comp=Z,204nm,1.1s						
MNK				pmax	pmax		
	comp=N,72nm,1.1s						
MNK				pmax	pmax		
	comp=E,12nm,1.5s						
MNK				MLR	MLR		
	comp=E,45nm,15.0s						
MNK				MLR	MLR		
	comp=N,182nm,15.0s						
MNK				MLR	MLR		
	comp=Z,53nm,15.0s						
MNK	Minsk	144.20	332	*i* PKP	PKPdf	13 16 04.8	+0.6
	comp=Z,204nm,1.1s,baz=46						
MNK				*i* PKP	PKPab	13 16 05.3	+1.2
	comp=N,72nm,1.1s						
MNK				*i* PKP	PKPbc	13 16 05.7	+1.9
	comp=E,12nm,1.4s						
MNK				*i* pPKP	pPKPdf	13 18 03.4	-2.0
MNK				*i* SKP		13 18 51.2	
MNK				*i* PP	PP	13 19 28.6	+3.1
MNK				*i* PKS	PKSdf	13 19 41.0	+1.5
MNK				*i* SKS	SKSdf	13 22 26.5	+2.3
MNK				*i* PPP	PPP	13 22 46.8	
MNK				*i* SKKS	SKKSdf	13 31 36.5	-2.0
MNK				*i* SS	SS	13 37 38.0	+9.1
MNK				*i* SSS	SSS	13 43 13.5	
MNK				*i* LRM	MLR	14 21 59.0	
	comp=E,45nm,14.8s						
MNK				*i* LRM	MLR	14 22 02.8	
	comp=N,182nm,14.8s						
MNK				*i* LRM	MLR	14 22 06.1	
	comp=Z,53nm,15.4s						
SUE	Sulen	144.29	355	*e*PKPbc	PKPbc	13 16 04.0	+0.1
IIGN	Ignalina	144.30	334	*e*P	PKPab	13 16 04.7	+0.3
SKAR	Skarslia	144.33	352	*e*PKPdf	PKPab	13 16 04.5	0.0
NACGM	Naroch	144.39	333	⇑*e*PKP	PKPab	13 16 04.8	0.0
	baz=46						
VSVD	Vaisvydziai	144.71	336	*e*P	PKPab	13 16 05.7	-0.2
OSL	Oslo	144.71	350	*e*PKPdf	PKPdf	13 16 05.0	+0.1
ASK	Askoy	144.83	355	*e*PKPdf	PKPdf	13 16 05.3	+0.2
VIKU	Vikbolandet	144.84	344	*e*P	PKPdf	13 16 05.4	+0.2
BER	Bergen	144.92	355	*e*PKPdf	PKPdf	13 16 05.5	+0.2
PABE	Paberze	145.06	336	*e*P	PKPab	13 16 07.0	-0.3
KONO	Kongsberg	145.16	351	PKPbc	PKPbc	13 16 06.2	-0.5
KONO	Kongsberg	145.16	351	⇓PKIKP	PKPbc	13 16 06.1	-0.5
KONO	Kongsberg	145.16	351	*e*PKPbc	PKPbc	13 16 06.5	-0.2
ODD1	Odda	145.26	354	*e*PKPbc	PKPbc	13 16 06.9	-0.1
PBUR	Paburge	145.39	338	*e*P	PKPbc	13 16 07.3	-0.1
STRU	Stroemstad	145.50	349	*i* P	PKPbc	13 16 07.4	-0.2
BLS5	Blasjo	145.76	354	*e*PKPbc	PKPbc	13 16 08.5	+0.1
SIM	Simferopol'	145.97	314	*e*PKP2	PKPbc	13 16 09.7	+0.3
SIM				pmax	pmax		
	comp=Z,119nm,0.9s						
AKASG	Malin Array Be	145.99	325	PKPbc	PKPdf	13 16 08.2	+0.8
	comp=Z,14nm,0.5s,baz=46,slow=4.5,SNR=92						

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AKASG                                pPKP     pPKPab   13 18 06.2 -1.2
      comp=Z,1.6nm,0.5s,baz=48,slow=4.0,SNR=1.6
AKASG                                SKPbc    SKiKP    13 18 59.1 +0.3
      comp=Z,1.6nm,0.5s,baz=52,slow=3.0,SNR=3.3
AKASG                                SKKPbc   SKKPbc   13 26 54.3 -0.5
      comp=Z,0.6nm,0.6s,baz=239,slow=3.4,SNR=4.2
AKASG Malin Array Be    145.99 325            PKPdf    13 16 07.5 +0.1
AKBB  Malin Array Si    145.99 325            PKPbc    13 16 08.7 -0.6
AKBB  Malin Array Si    145.99 325 dePKIKP    PKPdf    13 16 08.2 +0.8
KMY   Karmoy            146.08 355  ePKPdf    PKPdf    13 16 06.8 -0.5
DIKM  Dikmen            146.31 308 ⇓P         PKiKP    13 16 13.8 +0.9
TJOU  Tjoern            146.37 348  i P       PKPbc    13 16 09.6 -0.4
SUW   Suwalki           146.48 334  eP        PKPbc    13 16 11.3 +0.7
BORU  Boraas            146.51 347  i P       PKPdf    13 16 09.0 +0.9
BORU                                eP        PKPbc    13 16 09.7 -0.8
BNN   Bunyan            146.59 302            PKPbc    13 16 10.6 -1.0
HOMB  Homborsund        146.64 351  ePKPbc    PKPbc    13 16 10.0 -0.8
SNART Snartemo          146.74 352  i P       PKPbc    13 16 11.5 +0.4
SNART Snartemo          146.74 352  ePKPbc    PKPbc    13 16 11.3 +0.2
ONAU  Onsala            146.91 348  i P       PKPbc    13 16 11.1 -0.4
BLEU  Blekinge          147.01 343  i P       PKPbc    13 16 11.1 -0.8
BZK   Bozkurt           147.11 309 ⇓P         PKPbc    13 16 12.8 +0.2
BZK   Bozkurt           147.11 309   PKPbc    PKPbc    13 16 12.2 -0.4
FABU  Falkenberg        147.11 347  i P       PKPbc    13 16 11.6 -0.5
LEWI  Lewis, Hebride    147.11   6  eP        PKPbc    13 16 12.0 -0.2
KLNR  Kaliningrad       147.12 338⇑ ePKIKP    PKPdf    13 16 09.3 +0.2
LINV  Loch Inver, As    147.25   4  eP        PKPbc    13 16 11.4 -1.0
DEL   Delary            147.34 345  eP        PKPbc    13 16 12.8  0.0
DEL   Delary            147.34 345  i P       PKPbc    13 16 12.8  0.0
SHBL  Chebaa            147.47 292  eP        PKiKP    13 16 15.2 -0.5
BHL   Bhannes           147.50 294  eP        PKiKP    13 16 14.9 -0.8
ILGA  Ilgaz             147.60 307   PKPbc    PKPbc    13 16 14.4 +0.1
GHAJ  Ghor Haditha      147.72 289   PKPbc    PKPbc    13 16 15.2 +0.6
KAC   Achnashellach     147.88   5  eP        PKPbc    13 16 13.8 -0.4
BJUU  Bjuv              147.90 346  i P       PKPbc    13 16 14.2  0.0
SORM  Soroca            147.94 322 ⇑P         PKPbc    13 16 14.5  0.0
SORM  Soroca            147.94 322 ⇑PKP2      PKPbc    13 16 14.5  0.0
MDO   Dochfour          148.00   4  eP        PKPbc    13 16 14.3 -0.2
KPL   Plockton          148.02   5  eP        PKPbc    13 16 14.1 -0.3
BR131 Keskin Array S    148.04 305   PKPbc    PKPbc    13 16 15.4 +0.1
BR131 Keskin Array S    148.04 305   PKP2     PKPbc    13 16 15.4 +0.1
BRTR  Keskin Array B    148.04 305   PKP      PKPdf    13 16 11.3 -0.1
      comp=Z,6.4nm,0.6s,baz=146,slow=0.9,SNR=15
BRTR                                 PKPbc    PKPbc    13 16 15.3 +0.1
      comp=Z,7.8nm,0.6s,baz=142,slow=4.3,SNR=24
BRTR                                 pPKPbc   pPKPdf   13 18 12.7 +0.2
      comp=Z,1.1nm,1.0s,baz=126,slow=30,SNR=2.2
BRTR  Keskin Array B    148.04 305   PKPbc    PKPbc    13 16 14.6 -0.8
LUNU  Lund              148.21 345  i P       PKPbc    13 16 14.0 -1.0
LUNU                                eP        PKiKP    13 16 14.8 -1.4
BSD   Bornholm Skovb    148.30 343  eP        PKPbc    13 16 15.7 +0.5
BSD   Bornholm Skovb    148.30 343  i P       PKPbc    13 16 15.3 +0.1
MILM  Milestii Mici     148.34 320 ⇓P         PKPbc    13 16 14.0 -1.6
COP   Copenhagen        148.39 346  i P       PKPbc    13 16 15.5 +0.1
LLD   Lille Linde       148.76 346  i P       PKPbc    13 16 16.2 -0.2
EDU   Dundee            148.96   3  eP        PKPbc    13 16 16.2 -0.6
INVG  Invergeldie, C    149.03   4  eP        PKPbc    13 16 16.2 -0.8
BEL   Belsk             149.08 334  ePKPbc    PKiKP    13 16 18.1 -0.1
VASR  Vaslui            149.09 320 ⇓P         PKiKP    13 16 19.2 +0.8
LAWE  Loch Awe, Argy    149.11   5  eP        PKPbc    13 16 16.7 -0.4
LVV   L'vov             149.12 328  ePKHKP    PKPpre   13 16 17.1
LVV                                  MLR      MLR
      comp=Z,600nm,25.0s
GKP   Gorka Klasztor    149.21 339  ePKPbc    PKiKP    13 16 18.0 -0.4
GKP   Gorka Klasztor    149.21 339  eP        PKiKP    13 16 18.4  0.0
TLCR                    149.23 317 ⇓P         PKiKP    13 16 18.3 -0.4
EAB   Aberfoyle         149.25   4  eP        PKPbc    13 16 17.1 -0.4
VLDR  Vladesti          149.34 319 ⇑P         PKiKP    13 16 19.1 +0.2
JURR  Jurilovca         149.40 316 ⇑P         PKPbc    13 16 18.3 +0.1
SCTR  Scanteiesti       149.48 319 ⇑P         PKiKP    13 16 19.5 +0.3
EDI   Edinburgh         149.58   3  eP        PKPbc    13 16 17.9 -0.4
ESY   Stoneypath        149.61   2  eP        PKPbc    13 16 18.1 -0.3
PGBU  Gleniffferbraes    149.62   4  eP        PKPbc    13 16 18.5  0.0
GHRR                    149.62 320 ⇓P         PKiKP    13 16 20.0 +0.5
TPGR  Topolog           149.64 317 ⇑P         PKiKP    13 16 19.4 -0.2
CFR   Carcaliu          149.65 318 ⇑P         PKiKP    13 16 19.4 -0.2
EBL   Broad Law         149.74   3  eP        PKPbc    13 16 18.7  0.0
TESR  Tescani           149.81 321 ⇑P         PKPbc    13 16 19.4 +0.2
TIRR  Tirgusor          149.84 316 ⇑P         PKiKP    13 16 20.0  0.0
TIRR  Tirgusor          149.84 316 ⇑P         PKiKP    13 16 20.0  0.0
BIZ   Bicaz             149.87 322 ⇑P         PKiKP    13 16 20.2 +0.2
KWP   Kalwaria Pacla    149.87 329  ePKPbc    PKiKP    13 16 19.9 -0.1
PANC  Panciu            149.88 319 ⇓P         PKiKP    13 16 20.0  0.0
EFOR  EFORIE            149.88 315 ⇑P         PKPbc    13 16 19.3 -0.1
BUR08 Bucovina Ar. S    149.94 324   PKPbc    PKiKP    13 16 20.1 -0.2
BUR01 Bucovina Ar. S    149.95 324 ⇓P         PKiKP    13 16 21.0 +0.7
MFTR  Murfatlar         149.97 316 ⇓P         PKPbc    13 16 18.5 -1.1
HARR  Harsova           150.02 317 ⇑P         PKiKP    13 16 20.2 -0.2
TLBR  Topalu            150.02 317 ⇓P         PKiKP    13 16 20.8 +0.4
MANR  Mangalia          150.03 315 ⇑P         PKPbc    13 16 20.0 +0.2
VRI   Vrincioaia        150.13 320 ⇑P         PKPbc    13 16 19.1 -0.9
VRI                                ⇑P         PKiKP    13 16 20.4 -0.2
VRI   Vrincioaia        150.13 320 ⇑PKIKP     PKiKP    13 16 20.4 -0.2
EKA   Eskdalemuir Ar    150.17   3   PKP      PKPdf    13 16 13.9 -0.1
      comp=Z,6.5nm,0.5s,baz=2.9,slow=1.7,SNR=5.2
EKA                                  PKPbc    PKPbc    13 16 19.0 -0.8
      comp=Z,5.8nm,0.3s,baz=350,slow=2.7,SNR=84
EKA                                  PKPab    PKPab    13 16 27.8 -0.3
      comp=Z,6.8nm,0.7s,baz=347,slow=1.8,SNR=6.5
PLOR  Plostina          150.18 320 ⇑P         PKPbc    13 16 20.2  0.0
PLOR  Plostina          150.18 320 ⇑PKIKP     PKPbc    13 16 20.2  0.0
BISRR Bisoca            150.31 319 ⇓P         PKiKP    13 16 21.6 +0.6
NEWG  New Galloway      150.33   4  eP        PKPbc    13 16 19.8 -0.3
COVR  Voineasa-Covas    150.44 320 ⇑P         PKPbc    13 16 20.8  0.0
OZUR                    150.54 321 ⇑P         PKiKP    13 16 21.6 +0.2
GAL1  Galloway          150.54   5  eP        PKPbc    13 16 19.9 -0.8
KOLS  Kolonicke sedl    150.56 328  ePKIKP    PKPdf    13 16 16.9 +2.0
KOLS  Kolonicke sedl    150.56 328  ePKP      PKPdf    13 16 16.8 +1.9
KOLS                                e         PKPbc    13 16 22.3 +1.4
NEHR  Nehoiu            150.62 319 ⇑P         PKPbc    13 16 21.4 +0.2
ISR   Istrita           150.64 319 ⇓P         PKiKP    13 16 21.7  0.0
ISR   Istrita           150.64 319 ⇓PKIKP     PKiKP    13 16 21.7  0.0
EDMD  Edmundbyers       150.72   2  eP        PKPbc    13 16 20.1 -1.0
OJC   Ojcow             150.72 333  ePKPbc    PKiKP    13 16 21.7  0.0
OJC   Ojcow             150.72 333   PKPbc    PKiKP    13 16 21.7  0.0
OJC   Ojcow             150.72 333   PKIKP    PKiKP    13 16 21.7  0.0
ARCR  ARCALIA           150.74 324 ⇑P         PKiKP    13 16 22.0 +0.2
UZH   Uzhgorod          150.76 328  ePKIKP    PKiKP    13 16 22.0 +0.2
UZH                                 e                  13 16 30.0
UZH                                 e                  13 18 22.6
MLR   Muntele Rosu      150.79 320 ⇓P         PKPbc    13 16 21.6 -0.1
MLR                                ⇓P         PKiKP    13 16 22.0 -0.1
MLR   Muntele Rosu      150.79 320   PKPbc    PKPbc    13 16 21.6 -0.1
      comp=Z,20nm,0.6s,baz=43,slow=3.5,SNR=19
MLR   Muntele Rosu      150.79 320 ⇓PKIKP     PKiKP    13 16 22.0 -0.1
BMR   Baia Mare         150.81 325 ⇓P         PKiKP    13 16 22.0 +0.1
BMR   Baia Mare         150.81 325 ⇓PKIKP     PKiKP    13 16 22.0 +0.1
DOPR  Dopca             150.84 321 ⇑P         PKiKP    13 16 22.7 +0.6
RUE   Ruedersdorf       150.95 342  eP        PKiKP    13 16 22.5 +0.5
CRVS  Cervenica-Dubn    150.97 329  ePKIKP    PKiKP    13 16 22.6 +0.4
CRVS  Cervenica-Dubn    150.97 329  ePKP      PKiKP    13 16 22.6 +0.4
PRD   Provadia          151.09 315  eP        PKiKP    13 16 23.0 +0.4
NIE   Niedzica          151.11 331  ePKPbc    PKiKP    13 16 24.0 +1.5
IOMK  Kirk Michael      151.16   5  eP        PKPbc    13 16 20.8 -1.2
INCR  INCERC-Sediu C    151.24 318 ⇑P         PKPdf    13 16 15.8 -0.2
WIM   Isle of Man       151.26   5  eP        PKPbc    13 16 21.7 -0.6
VOIR                    151.34 320 ⇓P         PKPbc    13 16 22.0 -0.9
VOIR                    151.34 320 ⇓PKIKP     PKPbc    13 16 22.0 -0.9
CJR   Cluj-Napoca       151.38 324 ⇑P         PKiKP    13 16 23.8 +0.6
CJR   Cluj-Napoca       151.38 324 ⇑PKIKP     PKiKP    13 16 23.8 +0.6
KSP   Ksiaz             151.57 337  ePKPbc    PKiKP    13 16 24.0 +0.6
ARR   Arges             151.62 321 ⇑P         PKPdf    13 16 19.7 +3.0
LANS  Liptovska Anna    151.67 332  ePKIKP    PKiKP    13 16 24.8 +1.1
LANS  Liptovska Anna    151.67 332  ePKP      PKiKP    13 16 24.8 +1.1
OKC   Ostrava-Krasne    151.69 334  ePKIKP    PKiKP    13 16 23.7  0.0
OKC   Ostrava-Krasne    151.69 334⇑ ePKP      PKiKP    13 16 23.7  0.0
OSTC  Ostas             151.83 337⇑ ePKP      PKiKP    13 16 24.5 +0.5
CHVC  Chvalec           151.86 337⇑ ePKP      PKiKP    13 16 24.4 +0.4
HUMR  Humele            151.90 319 ⇓P         PKPbc    13 16 23.5 -0.6
UPC   Upice             151.94 337  ePKIKP    PKiKP    13 16 24.6 +0.4
UPC   Upice             151.94 337⇑ ePKP      PKiKP    13 16 24.6 +0.4
DPC   Dobruska-Polom    151.97 337  ePKIKP    PKiKP    13 16 24.9 +0.6
DPC   Dobruska-Polom    151.97 337⇑ ePKP      PKiKP    13 16 24.9 +0.6
MORC  Moravsky Berou    151.97 334 ⇓P         PKPdf    13 16 18.4 +1.4
MORC  Moravsky Berou    151.97 334 ⇓PKIKP     PKPdf    13 16 18.4 +1.4
MORC  Moravsky Berou    151.97 334  ePKP      PKPdf    13 16 17.4 +0.3
MORC                                e         PKPbc    13 16 24.5 +0.4
MORC                                e         PKPab    13 16 37.3 +1.4
SZH   Strazhica         151.99 316  eP        PKPbc    13 16 24.0 -0.3
KRLC  Kraliky           152.02 336  ePKIKP    PKiKP    13 16 24.7 +0.3
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KRLC  Kraliky           152.02 336⇑ ePKP      PKiKP    13 16 24.7 +0.3
WLF1  Llynfaes          152.13   5  eP        PKPbc    13 16 23.7 -0.5
LBWR  Ladybower, Pea    152.15   1  eP        PKPbc    13 16 23.9 -0.4
MAUC  Maruska           152.19 334  ePKPDF    PKPdf    13 16 17.8 +0.4
MAUC                              ⇑ ePKP      PKiKP    13 16 25.6 +0.8
CLL   Collm             152.22 341            PKPbc    13 16 24.4 -0.1
CLL                                  PKPab    PKPab    13 16 37.0 +0.2
CLL   Collm             152.22 341  ePKIKP    PKPdf    13 16 18.0 +0.7
CLL                                 i                  13 16 37.2
CLL                                  pmax     pmax
      comp=Z,32nm,0.8s
CLL                                  pmax     pmax
      comp=Z,16nm,0.7s
CLL   Collm             152.22 341  ePKPdf    PKPdf    13 16 18.0 +0.7
CLL                                 i PKPbc   PKPbc    13 16 24.6 +0.1
      comp=Z,32nm,0.8s
CLL                                 i PKPbc(2)         13 16 26.3
      comp=Z,71nm,0.9s
CLL                                 i PKPab   PKPab    13 16 37.2 +0.4
      comp=Z,16nm,0.7s
CLL                                 i PKPab(2)         13 16 38.3
      comp=Z,29nm,0.9s
CLL                                 epPKPab   pPKPab   13 18 32.0  0.0
CLL                                 ex        x        13 18 43.0
BRG   Berggiesshubel    152.32 340   Amp               13 16 20.0
      comp=Z,11nm,1.1s
BRG                               ⇓ ePKPf     PKPdf    13 16 18.3 +0.9
BRG                               ⇑ iPKP      PKiKP    13 16 25.4 +0.5
BRG                                  Amp               13 16 27.1
      comp=Z,36nm,0.8s
BRG                                 ex        x        13 16 32.7
BRG                                  Amp               13 16 34.3
      comp=Z,9.3nm,0.8s
BRG                                 ex        x        13 16 37.5
BRG                                  Amp               13 16 39.9
      comp=Z,28nm,1.1s
BRG                                 ex        x        13 17 15.5
BRG                                  Amp               13 17 17.0
      comp=Z,8.2nm,0.9s
BRG                                  pPKP     pPKPab   13 18 31.4 -1.0
BRG                                  Amp               13 18 34.7
      comp=Z,9.9nm,1.4s
BRG   Berggiesshubel    152.32 340  i PKIKP   PKiKP    13 16 25.4 +0.5
BRG                                 e                  13 16 37.5
BRG                                  pmax     pmax
      comp=Z,36nm,0.8s
BRG                                  pmax     pmax
      comp=Z,9.0nm,0.8s
BRG                                  pmax     pmax
      comp=Z,28nm,1.1s
BRG                                  pmax     pmax
      comp=Z,8.0nm,0.9s
BRG                                  pmax     pmax
      comp=Z,10.0nm,1.4s
PSZ   Piszkesteto       152.40 329 ⇓P         PKPbc    13 16 23.6 -1.6
PSZ   Piszkesteto       152.40 329            PKPbc    13 16 25.0 -0.1
PSZ                                  PKPab    PKPab    13 16 37.2 -0.7
PSZ   Piszkesteto       152.40 329 ⇓PKIKP     PKPbc    13 16 23.6 -1.6
PVCC  Panska Ves        152.42 339  ePKIKP    PKiKP    13 16 25.6 +0.5
PVCC  Panska Ves        152.42 339⇑ ePKP      PKiKP    13 16 25.6 +0.5
VYHS  Vyhne             152.44 331  ePKIKP    PKiKP    13 16 25.7 +0.4
VYHS                                e         PKPab    13 16 38.8 +0.9
VYHS  Vyhne             152.44 331  ePKP      PKiKP    13 16 25.7 +0.4
VYHS                                e         PKPab    13 16 38.8 +0.9
KOLL  Kolacno           152.56 332  ePKP      PKiKP    13 16 25.9 +0.4
FOEL  Foel Wylfa        152.61   3  eP        PKPbc    13 16 25.1 -0.2
GZR   Gura Zlata        152.65 322 ⇓P         PKPbc    13 16 25.7 -0.1
GZR   Gura Zlata        152.65 322 ⇓PKIKP     PKPbc    13 16 25.7 -0.1
JAVC  Velka Javorina    152.65 333  ePKP      PKPdf    13 16 19.4 +1.3
JAVC                                e         PKPbc    13 16 27.3 +1.6
JAVC                                e         PKPab    13 16 40.6 +1.8
SIRR  Siria             152.68 325 ⇑P         PKiKP    13 16 26.3 +0.5
VRAC  Vranov            152.72 335 ⇑P         PKPbc    13 16 25.7 -0.1
VRAC  Vranov            152.72 335   PKP      PKPdf    13 16 17.7 -0.4
      comp=Z,2.5nm,0.5s,baz=63,slow=2.3,SNR=4.2
VRAC                                 PKPbc    PKPbc    13 16 25.6 -0.1
      comp=Z,4.4nm,0.8s,baz=54,slow=5.0,SNR=7.3
VRAC                                 PKPab    PKPab    13 16 38.8 -0.3
      comp=Z,3.6nm,0.5s,baz=16,slow=2.4,SNR=7.1
VRAC  Vranov            152.72 335  ePKP      PKPdf    13 16 18.1  0.0
VRAC                                e         PKPbc    13 16 26.0 +0.3
VRAC                                e         PKPab    13 16 39.9 +0.8
PRU   Pruhonice         152.89 338  ePKIKP    PKiKP    13 16 26.2 +0.1
PRU   Pruhonice         152.89 338⇑ ePKP      PKiKP    13 16 26.2 +0.1
KRUC  Moravsky          153.00 335  ePKP      PKPdf    13 16 18.4 -0.1
KRUC                                e         PKPbc    13 16 26.7 +0.4
KRUC                                e         PKPab    13 16 40.8 +0.6
HERR  Herculane         153.17 322 ⇑P         PKPbc    13 16 26.6 -0.2
MODS  Modra-Piesok      153.19 333  ePKIKP    PKPdf    13 16 20.2 +1.4
MODS  Modra-Piesok      153.19 333  ePKP      PKPdf    13 16 20.2 +1.4
MODS                                e         PKPbc    13 16 27.6 +0.8
MODS                                e         PKPab    13 16 43.9 +2.8
MCH1  Michaelchurch     153.51   3  eP        PKPbc    13 16 26.7 -0.6
MDVR  Moldovita         153.62 322 ⇓P         PKPbc    13 16 26.3 -1.6
BLKB  Belogradchik      153.78 319 ⇓P         PKPbc    13 16 27.4 -0.8
KHC   Kasperske Hory    153.95 338            PKPdf    13 16 17.9 -2.0
KHC                                           PKiKP    13 16 28.6 +0.2
KHC                                  PKPab    PKPab    13 16 44.0 -0.3
KHC   Kasperske Hory    153.95 338  ePKIKP    PKPdf    13 16 20.0 +0.1
KHC                                 e         PKPab    13 16 44.7 +0.4
KHC   Kasperske Hory    153.95 338  ePKPDF    PKPdf    13 16 20.0 +0.1
KHC                               ⇑ ePKP      PKiKP    13 16 28.5 +0.1
KHC                                 ePKPAB    PKPab    13 16 44.7 +0.4
CKRC  Cesky Krumlov     153.96 337  ePKPDF    PKPdf    13 16 21.4 +1.5
CKRC                              ⇑ ePKP      PKiKP    13 16 28.7 +0.3
VTS   Vitosha           154.01 317 ⇑P         PKPab    13 16 45.9 +0.9
VTS   Vitosha           154.01 317   PKPdf    PKPdf    13 16 19.2 -1.1
VTS                                           PKPbc    13 16 28.8 -0.1
VTS                                  PKPab    PKPab    13 16 45.6 +0.6
VTS   Vitosha           154.01 317 ⇑PKP2      PKPab    13 16 45.9 +0.9
VTS   Vitosha           154.01 317  eP        PKiKP    13 16 29.0 +0.1
CONA  Conrad Observa    154.12 334  eP        PKPdf    13 16 20.6 +0.4
      comp=Z,7.7nm,1.0s
CONA                                eP        PKiKP    13 16 29.2 +0.3
      comp=Z,21nm,1.7s
CONA                                eP        PKPab    13 16 46.6 +1.4
      comp=Z,11nm,0.7s
RONA  Rosalia, Austr    154.13 333  eP        PKPdf    13 16 20.3 +0.1
      comp=Z,7.4nm,1.0s
RONA                                i P       PKiKP    13 16 28.9 +0.1
      comp=Z,14nm,1.1s
RONA                                eP        PKPab    13 16 46.5 +1.3
      comp=Z,21nm,1.3s
GEC2  GERESS Array S    154.15 338            PKPdf    13 16 18.9 -1.4
GEC2                                          PKPbc    13 16 28.9 -0.1
GEC2                                 PKPab    PKPab    13 16 45.4 +0.1
GERES GERESS Array B    154.15 338   PKP      PKPdf    13 16 20.2 -0.1
      comp=Z,2.8nm,0.8s,baz=75,slow=1.1,SNR=17
GERES                                PKPbc    PKPbc    13 16 28.7 -0.2
      comp=Z,2.5nm,0.7s,baz=75,slow=1.5,SNR=9.1
GERES                                PKPab    PKPab    13 16 45.1 -0.2
      comp=Z,1.9nm,0.7s,baz=46,slow=3.9,SNR=5.3
GERES GERESS Array B    154.15 338   PKPdf    PKPdf    13 16 18.7 -1.5
GERES                                         PKPbc    13 16 28.0 -0.9
GERES                                PKPab    PKPab    13 16 44.6 -0.7
MORH  Mrgy, Hungar      154.22 328 ⇓P         PKPdf    13 16 19.4 -0.9
MMB   Musomiste         154.25 315  eP        PKiKP    13 16 30.0 +0.7
BTNL  Ternell           154.44 350  dPKPab    PKPab    13 16 46.3  0.0
BCLA  Clavier           154.73 351  dPKPab    PKPab    13 16 47.7 +0.2
SNF   Seneffe           154.77 353  dPKPab    PKPab    13 16 49.2 +1.5
BGES  Gesves            154.79 351  dPKPab    PKPab    13 16 48.5 +0.7
MOA   Molln             154.80 336  i P       PKPab    13 16 49.1 +1.1
      comp=Z,16nm,1.3s
ARSA  Arzberg           154.81 333  eP        PKPab    13 16 49.0 +0.9
      comp=Z,8.1nm,1.1s
BMRD  Maredsous         154.91 352  dPKPab    PKPab    13 16 49.8 +1.4
VAY   Valandovo         155.13 315  i P       PKPab    13 16 50.4 +0.8
BIOA  Bad Ischl, Aus    155.16 337  eP        PKPdf    13 16 22.0 +0.4
      comp=Z,3.4nm,0.5s
BIOA                                eP        PKPab    13 16 50.6 +1.0
      comp=Z,17nm,1.0s
STIP  Stip              155.17 316  i P       PKPab    13 16 49.6 -0.2
SOKA  Soboth            155.47 333  i P       PKPdf    13 16 22.0 -0.1
      comp=Z,7.8nm,1.1s
SOKA                                eP        PKPab    13 16 51.4 +0.4
      comp=Z,14nm,1.2s
SKO   Skopje            155.47 317  i P       PKPab    13 16 52.7 +1.6
KBA   Koelnbreinsper    155.78 336  eP        PKPdf    13 16 23.5 +0.9
      comp=Z,7.4nm,1.2s
KBA                                 i P       PKPab    13 16 52.8 +0.3
      comp=Z,8.1nm,1.0s
LIT   Litokhoron        155.81 313            PKPab    13 16 52.0 -0.7
LIT   Litokhoron        155.81 313   PKP2     PKPab    13 16 52.0 -0.7
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IDI   Anoyia            155.97 300   PKP      PKPdf    13 16 25.2 +2.1
      comp=Z,11nm,0.8s,baz=339,slow=2.6,SNR=4.4
IDI                                  PKPab    PKPab    13 16 54.4 +0.8
      comp=Z,19nm,0.8s,baz=121,slow=5.9,SNR=6.3
MYKA  Terra Mystica     156.05 335  eP        PKPdf    13 16 23.6 +0.7
      comp=Z,5.7nm,0.9s
MYKA                                i P       PKPab    13 16 53.5  0.0
      comp=Z,5.5nm,0.5s
WATA  Walderalm         156.17 339  eP        PKPdf    13 16 23.1  0.0
      comp=Z,11nm,1.4s
WATA                                eP        PKPab    13 16 54.9 +0.8
      comp=Z,16nm,1.0s
WTTA  Wattenberg        156.21 339  eP        PKPdf    13 16 23.5 +0.3
      comp=Z,9.2nm,0.9s
WTTA                                eP        PKPab    13 16 55.3 +1.0
      comp=Z,15nm,1.1s
RETA  Reutte            156.29 340  eP        PKPab    13 16 55.6 +1.1
      comp=Z,25nm,1.2s
MOTA  Moosalm           156.31 340  eP        PKPdf    13 16 23.2 -0.1
      comp=Z,6.4nm,0.8s
MOTA                                eP        PKPab    13 16 55.2 +0.5
      comp=Z,30nm,1.2s
OHR   Ohrid             156.36 316  i P       PKPab    13 16 56.0 +0.9
ABTA  Abfaltersbach     156.37 337  eP        PKPdf    13 16 23.1 -0.2
      comp=Z,12nm,1.0s
ABTA                                i P       PKPab    13 16 55.4 +0.6
      comp=Z,6.2nm,0.7s
SQTA  Sankt Quirin      156.39 339  eP        PKPdf    13 16 24.7 +1.3
      comp=Z,9.0nm,1.2s
SQTA                                eP        PKPab    13 16 55.9 +0.9
      comp=Z,18nm,1.0s
FETA  Feichten          156.72 340  eP        PKPdf    13 16 24.2 +0.4
      comp=Z,9.6nm,0.9s
FETA                                 P        PKPab    13 16 57.3 +0.9
      comp=Z,12nm,1.0s
DAVA  Damuels           156.73 342  eP        PKPab    13 16 57.5 +1.0
      comp=Z,31nm,1.1s
TIR   Tirane            156.80 318 ⇑P         PKPab    13 16 58.1 +1.2
TIR   Tirane            156.80 318 ⇑PKP2      PKPab    13 16 58.1 +1.2
DAVOX Davos/Dischmat    157.19 341   PKPab    PKPab    13 16 58.8 +0.2
      comp=Z,8.7nm,0.7s,baz=25,slow=5.6,SNR=8.1
DBIC  Dimbokro          160.82 167   PKP      PKPdf    13 16 28.9 -0.4
      comp=Z,11nm,1.0s,baz=290,slow=0.9,SNR=6.7
DBIC                                 PKPab    PKPab    13 17 15.6 +0.8
      comp=Z,16nm,1.0s,baz=204,slow=2.8,SNR=7.8
DBIC  Dimbokro          160.82 167            PKPdf    13 16 27.0 -2.3
PGAV  Gavieira, Arco    162.44  19  ePKPdf    PKPdf    13 16 28.3 -2.0
PBRG  Braganca          163.01  16  ePKPab    PKPab    13 17 24.9 +1.0
POLO  Lamas de Olo      163.13  19  ePKPdf    PKPdf    13 16 29.7 -1.3
MVO   Moncorvo          163.54  17  ePKPab    PKPab    13 17 27.0 +0.7
PVIS  Viseu             163.70  20  ePKPab    PKPab    13 17 27.5 +0.5
MTE   Manteigas         164.10  19  ePKPdf    PKPdf    13 16 34.0 +2.1
MTE   Manteigas         164.10  19  ePKPab    PKPab    13 17 29.2 +0.4
PCAS  Casmilo, Conde    164.10  22  ePKPdf    PKPdf    13 16 32.8 +1.0
PCAS  Casmilo, Conde    164.10  22  ePKPab    PKPab    13 17 29.0 +0.2
PSBE  So Bento          164.47  24  ePKPab    PKPab    13 17 30.9 +0.4
PCBR  Castelo Branco    164.63  20  ePKPdf    PKPdf    13 16 34.4 +2.1
PMAFR Mafra             164.77  26  ePKPab    PKPab    13 17 33.0 +1.2
PMTG  Montargil         165.07  23  ePKPab    PKPab    13 17 32.7 -0.4
PESTR Estremoz          165.48  22  ePKPdf    PKPdf    13 16 34.9 +1.9
PESTR Estremoz          165.48  22  ePKPab    PKPab    13 17 34.4 -0.5
PESTR Estremoz          165.48  22            PKPab    13 17 34.7 -0.2
ESBB  Sonseca Array     165.63  10            PKPab    13 17 35.6 +0.1
ESDC  Sonseca Array     165.63  10   PKP      PKPdf    13 16 34.1 +1.0
      comp=Z,0.6nm,0.8s,baz=326,slow=3.9,SNR=4.5
ESDC                                 PKPab    PKPab    13 17 35.4 -0.2
      comp=Z,11nm,0.8s,baz=342,slow=3.9,SNR=30
ESDC  Sonseca Array     165.63  10   PKPab    PKPab    13 17 36.2 +0.6
PNCL  Nicolau / Gran    165.80  26  ePKPdf    PKPdf    13 16 33.9 +0.6
PNCL  Nicolau / Gran    165.80  26  ePKPab    PKPab    13 17 36.5 +0.2
PBEJ  Beja              166.13  24  ePKPdf    PKPdf    13 16 36.2 +2.6
MESJ  Messejana         166.15  26  ePKPdf    PKPdf    13 16 32.8 -0.8
MESJ  Messejana         166.15  26  ePKPdf    PKPdf    13 16 34.4 +0.8
MESJ  Messejana         166.15  26  ePKPab    PKPab    13 17 37.8 -0.1
PTEO  Sao Teotonio      166.20  28  ePKPab    PKPab    13 17 37.7 -0.4
PBAR  Barrancos         166.29  22  ePKPdf    PKPdf    13 16 35.0 +1.3
PBAR  Barrancos         166.29  22  ePKPab    PKPab    13 17 38.2 -0.2
PCVE  Castro Verde      166.41  26  ePKPdf    PKPdf    13 16 35.1 +1.3
PCVE  Castro Verde      166.41  26  ePKPab    PKPab    13 17 39.4 +0.4
MORF  Marmelete         166.43  28  ePKPdf    PKPdf    13 16 33.0 -0.9
MORF  Marmelete         166.43  28  ePKPdf    PKPdf    13 16 34.5 +0.6
PFVI  Vila Bisbo        166.50  29  ePKPdf    PKPdf    13 16 36.5 +2.6
KEST  Kesra             166.68 322   PKPab    PKPab    13 17 41.0 +0.6
      comp=Z,5.8nm,0.8s,baz=19,slow=2.2,SNR=8.0
PVAQ  Vaqueiros         166.73  25  ePKPab    PKPab    13 17 40.8 +0.4
PBDV  Barranco-do-Ve    166.78  26  ePKPdf    PKPdf    13 16 34.1  0.0
TOA0  Torodi Ar. Sit    167.48 191            PKPdf    13 16 34.1 -1.1
TOA0                                 PKPab    PKPab    13 17 44.8 +0.6
TORD  Torodi Ar. Bea    167.48 191   PKP      PKPdf    13 16 34.3 -0.9
      comp=Z,10nm,1.0s,baz=220,slow=1.6,SNR=26
TORD                                 PKPab    PKPab    13 17 44.4 +0.3
      comp=Z,23nm,0.8s,baz=175,slow=2.5,SNR=6.4
TORD                                 pPKPab   pPKPab   13 19 38.4 -0.1
      comp=Z,5.2nm,1.3s,baz=195,slow=2.6,SNR=4.2
TORD                                 PP       PP       13 21 35.3 +2.9
      comp=Z,10nm,0.6s,baz=214,slow=3.1,SNR=5.1
MDT   Midelt            171.97  24   PKP      PKPdf    13 16 38.5 +1.0
      comp=Z,7.0nm,0.9s,baz=11,slow=5.2,SNR=9.0
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*IDC **13** 12:58:53.5±27.0, 53°.47N×167°.08W, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=519.8km s-min=79.2km az=78.0*

*NEIC **13** 12:59:04.3±1.3, 53°.46N±0°.05×165°.08W±0°.06, h21km±8km, mb3.6/5, ML3.0/6, ML3.1/25(AEIC), Error ellipse: s-maj=7.8km s-min=4.9km az=173.0*

*AEIC **13** 12:59:05±1.2, 53°.46N±0°.05×165°.11W±0°.06, h26km±6km, Error ellipse: s-maj=7.5km s-min=5.0km az=178.0*

ISC 13 12:59:04.7±1.0, **53°.50N**±0°.09×**165°.09W**±0°.05, **h22**km±8km, **n57**, σ1s07/55, **mb3.3**/4, **Fox Islands**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
AKSA  Akutan Strait      0.73 331            Pn       12 59 20.0 +0.3
AKSA                                         Sb       12 59 28.9 +0.7
AKSA  Akutan Strait      0.73 331            Pn       12 59 19.7  0.0
AKUT  Akutan             0.75 328    Pn      Pn       12 59 20.2 +0.3
AKUT                                 Sn      Sn       12 59 31.3 +0.7
AKUT                                 IAML             12 59 32.7
      comp=E,647nm,0.7s
AKUT                                 IAML             12 59 36.5
      comp=N,436nm,0.8s
AKBBA Akutan Broad B     0.78 320            Pn       12 59 20.8 +0.4
AKBBA                                        Sn       12 59 32.4 +1.1
UNV   Unalaska Valle     0.91 293            Pn       12 59 21.9 -0.2
UNV                                          Sn       12 59 34.5 +0.1
WESE  West Dahl East     1.01  17            Pb       12 59 23.7 +0.1
MTBL  Makushin Table     1.05 297            Pn       12 59 24.4 +0.2
MSW   Makushin Switc     1.08 293            Pb       12 59 24.7  0.0
MSW                                          Sb       12 59 38.2 -0.3
MGOD  Makushin Gods      1.10 286            Pb       12 59 24.8 -0.2
SSLN  Shishaldin Nor     1.46  26            Pn       12 59 30.0 +0.2
ISLZ  Isanotski Laza     1.47  33            Pn       12 59 29.7 -0.3
FALS  False Pass         1.68  35            Pn       12 59 32.5 -0.2
OKFG  Magazine Ridge     1.69 268            Pn       12 59 33.2 +0.4
NIKH  Nikolski High      2.32 258            Pn       12 59 42.2 +0.6
SDPT  Sand Point         3.27  54            Pn       12 59 55.5 +0.9
SDPT                                         Sn       13 00 33.6 +0.9
SDPT  Sand Point         3.27  54    IAML             13 00 50.9
      comp=N,49nm,1.0s
CNBA  Chernabura Isl     3.49  66            Pn       12 59 57.8 +0.1
CNBA  Chernabura Isl     3.49  66    IAML             13 02 15.6
      comp=N,22nm,2.9s
SPIA  Saint Paul Isl     4.71 323    Pn      Pn       13 00 14.7 +0.3
CHIR  Chirikof Islan     5.97  63    Pn      Pn       13 00 31.8 +0.2
ADK   Adak               7.23 262    Pn      Pn       13 00 47.2 -1.7
OHAK  Old Harbor         7.69  56    Pn      Pn       13 00 53.9 -1.3
KDAK  Kodiak Island      8.27  54    Pn      Pn       13 01 01.8 -1.4
O18K  Koktuh Hills       8.37  37    Pn      Pn       13 01 02.6 -1.9
Q19K  Cape Douglas,      8.38  45    Pn      Pn       13 01 03.1 -1.6
N18K  Kilae Creek        8.76  31    Pn      Pn       13 01 08.0 -1.9
M19K  Big River Lodg    10.17  30    Pn      Pn       13 01 26.9 -2.3
L19K  White Mountain    10.26  28    Pn      Pn       13 01 27.8 -2.6
TTA   Tatalina          10.58  23    Pn      Pn       13 01 33.1 -1.8
GAMB  Gambell           10.85 344    Pn      Pn       13 01 38.0 -0.5
RC01  Rabbit Creek A    11.23  41    Pn      Pn       13 01 44.1 +0.4
K20K  Telida            11.42  26    Pn      Pn       13 01 46.2 -0.1
PPLA  Purkeypile        11.59  31    Pn      Pn       13 01 48.7  0.0
SCM   Sheep Creek Mo    12.61  42    Pn      Pn       13 02 02.2 -0.4
KLU   Klutina           13.01  44    Pn      Pn       13 02 07.0 -1.1
M24K  Tolsona, Glenn    13.22  42    Pn      Pn       13 02 09.8 -1.1
N25K  Chitina, Valde    13.62  45    Pn      Pn       13 02 16.0 -0.3
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WAX	Waxell Ridge	13.93	51	Pn	Pn	13 02 20.5	-0.1
VRDI	Verde Repeater	13.95	48	Pn	Pn	13 02 22.4	+1.4
ISLE	Juniper Island	14.22	51	Pn	Pn	13 02 22.2	-2.5
L27K	Beaver Creek,	15.44	43	Pn	Pn	13 02 41.0	0.0
L27K				IAmb	IAmb	13 02 59.7	
	comp=Z,2.2nm,1.4s						
BCAR	Beaver Creek A	15.46	43	Pn	Pn	13 02 40.2	-1.0
EGAK	Eagle	16.55	38	Pn	Pn	13 02 53.8	-1.3
EGAK				IAmb	IAmb	13 03 16.9	
	comp=Z,2.9nm,1.5s						
HYT	Haines Junctio	16.56	53	Pn	Pn	13 02 54.9	-0.5
C36M	Paulatuk	24.54	34	P	P	13 04 22.2	0.0
YKA	Yellowknife Ar	27.53	51	P	P	13 04 49.9	+0.6
	comp=Z,0.2nm,0.7s,baz=276,slow=9.9,SNR=2.9						
	comp=Z,0.2nm,0.7s						
NVAR	Mina Array Bea	35.15	96	P	P	13 05 59.0	+2.2
	comp=Z,0.3nm,0.6s,baz=303,slow=8.4,SNR=4.6						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	35.15	96	P	P	13 05 55.8	-1.0
H11N2	WAKE ISLAND Hy	40.01	223	T	T	13 49 22.1	
	baz=25,slow=76,SNR=6.6						
H11N3	WAKE ISLAND Hy	40.02	223	T	T	13 49 21.8	
	baz=25,slow=76,SNR=7.0						
H11N1	WAKE ISLAND Hy	40.03	223	T	T	13 49 26.7	
	baz=25,slow=76,SNR=5.4						
H11S1	WAKE ISLAND Hy	41.19	223	T	T	13 50 47.1	
	baz=25,slow=76,SNR=7.2						
H11S2	WAKE ISLAND Hy	41.20	223	T	T	13 50 48.3	
	baz=25,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	41.20	223	T	T	13 50 49.6	
	baz=25,slow=76,SNR=6.6						
TXAR	Lajitas Array	50.18	93	P	P	13 07 59.7	+1.0
	comp=Z,0.2nm,0.6s,baz=305,slow=6.3,SNR=4.2						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	50.18	93	P	P	13 07 58.1	-0.6
ABTX	Abilene, Hawle	50.23	87	P	P	13 07 58.2	-0.7
ABTX				IAmb	IAmb	13 08 06.7	
	comp=Z,5.5nm,1.1s						

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*ASIES **13** 13:02:45.6, 24°.19N×121°.73E, h23^{km}, MW3.7*
*TAP **13** 13:02:45.4, 24°.17N×121°.75E, h12^{km}, ML4.0, B*
*JMA **13** 13:02:45.1±0.1, 24°.1N±0°.6×121°.7E±0°.7, h17^{km}±1^{km}, MV3.5/10, TAIWAN REGION*
*NIED **13** 13:02:45.1, 24°.10N×121°.70E, h17^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.82; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$-0.15; $M_{r\theta}$0.82; $M_{\theta\phi}$-0.28; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.23000×10^{15} NP1: ϕ_s250.00000°, δ21.00000°, λ96.00000°. NP2: ϕ_s63.00000°, δ69.00000°, λ88.00000°.*
*IDC **13** 13:02:48.5±4.0, 23°.73N×121°.99E, h71^{km}±32^{km}, mb3.3/4, mbtmp3.8/7, ML3.6/3 Error ellipse: s-maj=54.5km s-min=25.8km az=165.0*
ISC 13 13:02:44.8±0.8, **24°.15N**±0°.01×**121°.79E**±0°.01, **h15**^{km}±4^{km}, **n173**, σ0^{s}.**77**/264, **mb3.6**/4, **6C-36D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.15	273	⇓*i*P	Pg	13 02 48.8	+0.1
	baz=265						
ETL				*i* S	Sg	13 02 51.4	+0.1
	baz=265						
EHP	Heping Village	0.16	345	⇓*i*P	Pg	13 02 49.0	+0.1
	baz=357						
EHP				*i* S	Sg	13 02 51.8	+0.2
	baz=357						
NACB	Ninganchiao	0.18	277	⇓*i*P	Pg	13 02 49.1	0.0
	baz=272						
NACB				*i* S	Sg	13 02 51.6	-0.3
	baz=272						
TWD	Chiawan	0.19	248	⇓*i*P	Pg	13 02 49.5	+0.3
	baz=244						
TWD				*i* S	Sg	13 02 52.5	+0.3
	baz=244						
HWA	Hwalien	0.24	224	*e*P	Pb	13 02 51.4	+0.5
	baz=225						
ENA	Nanau	0.28	351	⇓*i*P	Pg	13 02 51.0	+0.2
	baz=358						
ENA				*i* S	Sg	13 02 54.8	+0.1
	baz=358						
ETLH	Xiulin Townshi	0.28	281	⇓*i*P	Pg	13 02 50.9	+0.1
	baz=279						
ETLH				*i* S	Sg	13 02 54.9	-0.1
	baz=279						
EWUT	Wuta	0.29	359	⇓*i*P	Pg	13 02 51.3	+0.4
	baz=4.0						
EWUT				S	Sg	13 02 55.4	+0.2
	baz=4.0						
ETM	Tongmen	0.33	235	⇓*i*P	Pg	13 02 52.0	+0.4
	baz=231						
ETM				S	Sg	13 02 56.6	+0.4
	baz=231						
TEYL	Yanliau Villag	0.33	211	*e*P	Pb	13 02 52.9	+0.5
	baz=218						
LATG	Datong	0.45	328	⇓*i*P	Pg	13 02 54.0	+0.2
	baz=330						
LATG				*i* S	Sg	13 03 00.6	+0.6
	baz=330						
TWC	Suao	0.46	7	⇓*i*P	Pg	13 02 54.5	+0.5
	baz=5.0						
TWC				S	Sg	13 03 00.7	+0.5
	baz=5.0						
NNSB	Datong	0.46	307	⇓*i*P	Pg	13 02 54.2	+0.2
	baz=307						
NNSB				*i* S	Sg	13 03 00.2	-0.1
	baz=307						
ESL	Shilin	0.47	224	⇓*i*P	Pg	13 02 54.7	+0.6
	baz=227						
ESL				*e*S	Sb	13 03 01.7	+0.2
	baz=227						
NNS	Nan Shan	0.47	307	⇓*i*P	Pg	13 02 54.5	+0.2
	baz=308						
NNS				*i* S	Sg	13 03 00.5	-0.2
	baz=308						
WHF	Hehuan Shan	0.48	269	⇓*i*P	Pg	13 02 54.6	+0.2
	baz=268						
WHF				S	Sg	13 03 00.9	0.0
	baz=268						
NDS	Dongshan	0.48	352	⇓*i*P	Pg	13 02 54.9	+0.5
	baz=355						
NDS				S	Sg	13 03 01.3	+0.4
	baz=355						
TEGC	Jichi Village	0.49	207	*e*P	Pb	13 02 56.3	+1.1
	baz=197						
TEGC				*e*S	Sn	13 03 04.8	-0.9
	baz=197						
FUSS	Fushou	0.50	281	⇓*i*P	Pg	13 02 55.3	+0.4
	baz=280						
FUSS				*i* S	Sg	13 03 01.9	+0.2
	baz=280						
NDT	Datong Townshi	0.51	331	⇓*i*P	Pg	13 02 55.3	+0.3
	baz=332						
NDT				S	Sg	13 03 02.2	+0.3
	baz=332						
ENTT	Nioudou	0.53	338	⇓*i*P	Pg	13 02 55.7	+0.4
	baz=340						
ENTT				*i* S	Sg	13 03 02.7	+0.4
	baz=340						
TWT	Tachien	0.57	280	⇓*i*P	Pb	13 02 56.8	+0.2
	baz=279						
TWT				*i* S	Sb	13 03 04.3	-0.2
	baz=279						
CHGB	Renai	0.57	261	⇓*i*P	Pg	13 02 56.5	+0.4
	baz=253						
CHGB				*i* S	Sg	13 03 03.8	+0.2
	baz=253						
TWE	Neicheng	0.58	349	⇓*i*P	Pg	13 02 56.6	+0.4
	baz=352						
TWE				*i* S	Sg	13 03 04.3	+0.4
	baz=352						
EGFH	Guangfu	0.58	214	*e*P	Pb	13 02 57.1	+0.3
	baz=219						
TDCB	Techi	0.58	280	⇓*i*P	Pb	13 02 56.9	0.0
	baz=279						
TDCB				*i* S	Sg	13 03 04.1	0.0
	baz=279						
OWD	Renai	0.59	251	⇓*i*P	Pg	13 02 56.8	+0.3
	baz=249						
OWD				S	Sg	13 03 04.8	+0.4
	baz=249						
ILA	Ilan	0.61	357	⇓P	Pb	13 02 57.5	+0.2
	baz=354						
ILA				S	Sb	13 03 06.2	+0.5
	baz=354						
FUSB	Fushanzhiwuyua	0.63	343	⇓*i*P	Pg	13 02 57.6	+0.3
	baz=345						
FUSB				*i* S	Sg	13 03 05.8	+0.1
	baz=345						
WUSB	Renai	0.63	256	⇓*i*P	Pb	13 02 57.7	+0.1
	baz=247						
WUSB				S	Sg	13 03 05.5	-0.1
	baz=247						
YHNB	Yeheng	0.64	324	⇓*i*P	Pb	13 02 57.8	0.0
	baz=325						
YHNB				*i* S	Sg	13 03 05.8	0.0
	baz=325						
NSK	Sanguang	0.65	323	⇓*i*P	Pg	13 02 57.9	+0.3
	baz=324						
NSK				S	Sg	13 03 06.3	0.0
	baz=324						
NWLT	Wulai	0.67	338	⇓*i*P	Pb	13 02 58.5	+0.2
	baz=339						
NWLT				S	Sg	13 03 07.1	+0.2
	baz=339						
EGS		0.70	11	*e*P	Pg	13 02 59.0	+0.4
	baz=20						
VWDT	VWDT	0.71	236	⇓*i*P	Pb	13 02 59.2	+0.3
	baz=235						
VWDT				*e*S	Sb	13 03 09.0	+0.5
	baz=235						
HGSD	Ruisui	0.74	207	*e*P	Pn	13 03 00.6	-0.1
	baz=194						
HGSD				*e*S	Sn	13 03 12.5	+0.8
	baz=194						
WPL	Puli Township	0.77	260	P	Pb	13 03 00.2	+0.3
	baz=251						
WPL				S	Sg	13 03 10.1	+0.1
	baz=251						
EHY	Hungye	0.77	214	*e*P	Pg	13 03 00.1	+0.3
	baz=224						
NFF	Wufeng Townshi	0.77	308	*e*P	Pg	13 03 00.1	+0.1
	baz=308						
NFF				S	Sg	13 03 10.0	-0.2
	baz=308						
WHP	Taichung City	0.78	279	P	Pb	13 03 00.6	+0.5
	baz=279						
WHP				S	Sb	13 03 10.9	+0.4
	baz=279						
DPDB	Guoxing	0.79	262	*e*P	Pb	13 03 00.7	+0.3
	baz=253						
DPDB				*e*S	Sb	13 03 10.9	-0.1
	baz=253						
TIPB	Shuangxi	0.82	3	⇓*i*P	Pb	13 03 01.2	+0.4
	baz=4.0						
TIPB				*i* S	Sg	13 03 11.1	-0.3
	baz=4.0						
NHDH	Xindian Distri	0.84	344	*e*P	Pg	13 03 01.7	+0.5
	baz=344						
NHDH				S	Sg	13 03 12.4	+0.1
	baz=344						
SSLB	Suanglung	0.84	245	⇓*i*P	Pb	13 03 01.6	+0.3
	baz=253						
SSLB				*i* S	Sg	13 03 11.7	-0.6
	baz=253						
TWA	Mucha	0.84	347	P	Pg	13 03 01.7	+0.5
	baz=349						
SMLT	Sun Moon Lake	0.85	252	⇑*i*P	Pb	13 03 01.9	+0.4
	baz=251						
SMLT				S	Sg	13 03 12.2	-0.5
	baz=251						
LIOB	Emei	0.86	305	*e*P	Pn	13 03 02.1	-0.3
	baz=306						
NSTT	Nanjuang	0.86	304	⇓P	Pg	13 03 01.9	+0.3
	baz=304						
NSTT				S	Sb	13 03 13.0	+0.2
	baz=304						
NJD	Zhudong	0.86	313	*e*P	Pn	13 03 02.6	+0.2
	baz=313						
NJD				*e*S	Sn	13 03 15.1	+0.3
	baz=313						
TATO	Taipei	0.86	342	*i* P	Pg	13 03 02.0	+0.4
	baz=342						
TATO				*i* S	Sb	13 03 12.8	-0.1
	baz=342						
TWB1	Santiao Chiao	0.87	12	P	Pb	13 03 02.1	+0.4
	baz=8.0						
TWB1				*e*S	Sb	13 03 12.7	-0.5
	baz=8.0						
YULB	Yu-li	0.88	211	*e*P	Pb	13 03 01.1	-0.7
	baz=221						
TYC	Yuchr	0.89	254	*e*P	Pg	13 03 02.5	+0.5
	baz=254						
TYC				S	Sg	13 03 14.1	+0.5
	baz=254						
ECBN	Changbin	0.89	200	*e*P	Pg	13 03 02.6	+0.6
	baz=188						
BACT	New Taipei Cit	0.90	340	*e*P	Pn	13 03 03.1	+0.2
	baz=349						
BACT				*e*S	Sg	13 03 14.9	+0.8
	baz=349						
NHY	Taipei	0.91	347	*e*P	Pg	13 03 02.8	+0.4
	baz=348						
EYUL	Yuli	0.91	208	*e*P	Pn	13 03 03.9	+0.8
	baz=224						
TWF1	Yuli	0.91	209	*e*P	Pb	13 03 01.8	-0.6
	baz=223						
NWF	Wu-fen Shan	0.92	360	⇓*i*P	Pg	13 03 03.2	+0.6
	baz=354						
NWF				*i* S	Sb	13 03 14.5	0.0
	baz=354						
TAP1	Taipei	0.92	345	*e*P	Pb	13 03 02.4	0.0
	baz=345						
TAP1				*e*S	Sg	13 03 15.1	+0.6
	baz=345						
WFSB	Wu-fen Shan	0.92	360	⇓*i*P	Pn	13 03 03.3	+0.1
	baz=354						
WFSB				*i* S	Sb	13 03 14.5	+0.1
	baz=354						
TAP	Taipei	0.92	344	*e*P	Pn	13 03 03.2	0.0
	baz=345						
TAP				*e*S	Sg	13 03 15.4	+0.7
	baz=345						
HSN1	Hsinchu	0.94	312	*e*P	Pn	13 03 04.2	+0.7
	baz=312						
HSN1				*e*S	Sn	13 03 16.8	+0.1
	baz=312						
SXI1	Grass Mountain	0.94	5	⇓*i*P	Pg	13 03 03.6	+0.5
	baz=6.0						
SXI1				*e*S	Sg	13 03 15.7	+0.3
	baz=6.0						
TWQ1	Liyutan	0.94	282	*e*P	Pn	13 03 04.1	+0.5
	baz=282						
NTY	Taoyuan	0.95	332	*e*P	Pn	13 03 04.4	+0.6
	baz=333						
SBCB	Hsinchu	0.97	311	*e*P	Pn	13 03 04.9	+1.0
	baz=311						
SBCB				*e*S	Sn	13 03 17.6	+0.1
	baz=311						
NSY	Sanyi	0.97	286	*e*P	Pn	13 03 04.8	+0.8
	baz=286						
NSY				*e*S	Sg	13 03 16.7	+0.4
	baz=286						
NCU	National Centr	0.98	326	*e*P	Pn	13 03 04.7	+0.6
	baz=326						
NCU				*e*S	Sn	13 03 18.6	+0.9
	baz=326						
NCUH	Zhongli	0.98	326	*e*P	Pn	13 03 04.7	+0.6
	baz=326						
NMLH	Miaoli	0.98	293	*e*P	Pn	13 03 04.9	+0.7
	baz=293						
HSN	Hsinchu	0.99	311	*e*P	Pn	13 03 04.3	+0.2
	baz=314						
HSN				*e*S	Sn	13 03 19.3	+1.4
	baz=314						
NJN	Zhunan	0.99	303	*e*P	Pn	13 03 05.3	+1.1
	baz=303						
TNOU	National Taiwa	0.99	359	*e*P	Pg	13 03 04.3	+0.3
WWF	Wufeng	1.00	264	*e*P	Pn	13 03 05.4	+1.0
	baz=258						
TWS1	Kuangyinshan	1.00	341	*e*P	Pn	13 03 05.1	+0.7
	baz=349						
TWS1				*e*S	Sn	13 03 18.6	+0.3
	baz=349						
YM01	YM01	1.01	349	*e*P	Pg	13 03 04.7	+0.3
	baz=349						
YM01				*e*S	Sn	13 03 18.4	-0.2
	baz=349						
YUS	Yu-Shan	1.01	229	⇑*i*P	Pb	13 03 04.6	+0.3
	baz=229						
TCU	Taichung	1.01	270	*e*P	Pn	13 03 06.5	+1.9
	baz=270						
TCU				*e*S	Sn	13 03 21.1	+2.6
	baz=270						
WJS	Zhushan	1.02	251	*e*P	Pn	13 03 05.7	+1.1
	baz=247						
WJS				*e*S	Sn	13 03 19.8	+1.0
	baz=247						
WNT1	Nantou City	1.04	257	*e*P	Pg	13 03 05.9	+1.0
	baz=257						
WNT	Mingjian	1.04	255	*e*P	Pg	13 03 06.1	+1.1
	baz=248						
YM08	YM08	1.05	350	⇑P	Pg	13 03 05.6	+0.5
	baz=335						
FULB	Fuli	1.05	206	*e*P	Pb	13 03 05.2	+0.4
	baz=221						
NTST	Danshui	1.05	343	*e*P	Pg	13 03 05.6	+0.4
	baz=343						
ANP	Anpu	1.06	347	*e*P	Pb	13 03 05.0	0.0
	baz=347						
WDJ	Dajia District	1.06	281	*e*P	Pg	13 03 06.3	+0.9
	baz=281						
WDJ				*e*S	Sn	13 03 21.3	+1.5
	baz=281						
NHW	Xinwu Township	1.08	322	*e*P	Pg	13 03 06.0	+0.2
	baz=321						
NHW				*e*S	Sn	13 03 22.0	+1.7
	baz=321						
JYNG	Yonagunijimaku	1.10	74	P	Pg	13 03 06.9	+0.8
JYNG				S	Sn	13 03 21.8	+1.1
ALS	Alishan	1.10	235	⇑*i*P	Pg	13 03 06.4	+0.2
	baz=226						
ALS				S	Sn	13 03 21.2	0.0
	baz=226						
CHKT	Chengkung	1.12	200	*e*P	Pb	13 03 05.7	-0.2
	baz=181						
CHKT				*e*S	Sn	13 03 22.1	+1.0
	baz=181						
WYL	Yuanlin Townsh	1.12	260	*e*P	Pg	13 03 06.8	+0.3
	baz=261						
WCHH	Zhanghua	1.12	267	*e*P	Pg	13 03 07.7	+1.2
	baz=267						
TWY	Chenhua	1.13	351	*e*P	Pg	13 03 07.0	+0.3
	baz=337						
YOJ	Yonaguni jima	1.16	74	⇑P	Pg	13 03 07.7	+0.5
	baz=89						
YOJ				*e*S	Sg	13 03 24.0	+1.7
	baz=89						
YOJ	Yonaguni jima	1.16	74	P	Pg	13 03 07.6	+0.5
YOJ				S	Sg	13 03 24.2	+1.9
ECS	Chishang	1.17	206	*e*P	Pb	13 03 07.5	+0.7
	baz=207						
ELDTW	Lidau	1.19	216	*e*P	Pn	13 03 06.8	-0.3
	baz=202						
WGK	Gukeng	1.21	248	*e*P	Pg	13 03 08.4	+0.2
	baz=248						
WDLH	Douliu	1.23	248	*e*P	Pg	13 03 08.5	-0.1
	baz=232						
EDH	Donghe	1.25	201	*e*P	Pn	13 03 07.5	-0.4
	baz=188						
WRL	Guolierlin Hig	1.31	259	*e*P	Pb	13 03 09.8	+0.6
	baz=260						
STYH	Taoyuan	1.35	224	*e*P	Pb	13 03 10.0	+0.2
	baz=225						
STYH				*e*S	Sg	13 03 29.1	+0.8
	baz=225						
CHN2	Minshiung	1.35	243	*e*P	Pg	13 03 11.3	+0.5
	baz=244						
CHN4	Tsaushan	1.35	234	*e*P	Pg	13 03 10.8	-0.1
	baz=235						
CHN4				*e*S	Sg	13 03 30.6	+2.1
	baz=235						
TPUB	Ta-pu	1.36	232	P	Pg	13 03 11.0	+0.1
	baz=222						
TPUB				S	Sg	13 03 29.1	+0.5
	baz=222						
WTK	Tuku	1.36	250	*e*P	Pg	13 03 10.8	-0.2
	baz=252						
WTK				*e*S	Sg	13 03 30.1	+1.4
	baz=252						
STYT	Tauyuan	1.36	224	*e*P	Pb	13 03 10.3	+0.2
	baz=225						
LONT	Longtian	1.38	206	*e*P	Pn	13 03 09.2	-0.4
	baz=207						
WTP	Ta-pu	1.40	230	*e*P	Pb	13 03 11.4	+0.7
	baz=231						
WTP				*e*S	Sg	13 03 30.9	+0.8
	baz=231						
WTCT	Ta-ch'eng	1.41	259	*e*P	Pb	13 03 11.0	+0.2
	baz=260						
CHY	Chiayi	1.41	243	*e*P	Pg	13 03 11.6	-0.3
	baz=244						
CHY				*e*S	Sg	13 03 32.8	+2.5
	baz=244						
TWG	Pinlang	1.48	206	*e*P	Pn	13 03 10.0	-0.9
	baz=191						
TWK	Hsinying	1.48	234	*e*P	Pb	13 03 12.7	+0.6
	baz=234						
TWK				*e*S	Sg	13 03 32.2	-0.4
	baz=234						
PCYT	Pengchaiyu	1.49	10	*e*P	Pb	13 03 12.4	+0.1
	baz=8.0						
LDUT	Ludao	1.50	191	*e*P	Pn	13 03 09.2	-2.0
	baz=180						
CHN1	Nanshi	1.50	230	*e*P	Pb	13 03 12.8	+0.3
	baz=231						
CHN1				*e*S	Sg	13 03 33.9	+0.6
	baz=231						
SNST	Tainan City	1.50	232	*e*P	Pb	13 03 13.2	+0.8
	baz=233						
TTN	Taitung	1.51	203	*e*P	Pg	13 03 13.9	0.0
	baz=204						
WSF	Szhu	1.52	251	*e*P	Pb	13 03 12.9	+0.2
	baz=252						
WSF				*e*S	Sg	13 03 33.7	-0.1
	baz=252						
SGST	Jiashian	1.53	226	*e*P	Pb	13 03 12.9	-0.1
	baz=228						
SGST				*e*S	Sg	13 03 33.5	-0.7
	baz=228						
SLGT	Liugui	1.56	222	*e*P	Pb	13 03 13.5	+0.1
	baz=224						
WSL	Shuilin Townsh	1.56	247	*e*P	Pn	13 03 12.9	+0.9
	baz=248						
WSL				*e*S	Sg	13 03 35.4	+0.3
	baz=248						
ICHU	Yijhu	1.59	241	*e*P	Pb	13 03 14.3	+0.4
	baz=242						
ICHU				*e*S	Sg	13 03 37.0	+1.0
	baz=242						
CHN8	Yiju	1.65	241	*e*P	Pb	13 03 14.5	-0.4
	baz=242						
CHN8				*e*S	Sg	13 03 38.1	+0.1
	baz=242						
ECL	Taimali	1.73	206	*e*P	Pn	13 03 14.9	+0.5
	baz=193						
SCST	Cishan	1.73	224	*e*P	Pb	13 03 16.4	0.0
	baz=224						
SHHT	Tainan City	1.73	230	*e*P	Pb	13 03 17.4	+1.0
	baz=230						
SCLT	Jiali	1.75	237	*e*P	Pb	13 03 17.3	+0.6
	baz=238						
SSD	Sandimen	1.76	217	*e*P	Pb	13 03 16.7	-0.1
	baz=202						
TSMG	Majia	1.78	216	*e*P	Pb	13 03 17.6	+0.4
	baz=201						
IRIF	Iriomote-Funau	1.78	84	P	Pn	13 03 16.4	+1.3
IRIF				S	Sb	13 03 39.7	+0.3
TWM1	Shoushan	1.82	224	*e*P	Pb	13 03 18.6	+0.7
	baz=224						
HATJ	Hateruma jima	1.85	93	P	Pb	13 03 17.8	-0.5
HATJ				S	Sb	13 03 41.7	+0.5
MASBT	Mashibuluo	1.86	215	*e*P	Pn	13 03 16.5	+0.3
	baz=214						
MASBT				*e*S	Sb	13 03 42.9	+1.1
	baz=214						
EAST	Anshuo	1.96	206	*e*P	Pb	13 03 20.3	0.0
	baz=195						
TAWH	Dawu Township	1.98	205	*e*P	Pn	13 03 19.0	+1.1
	baz=194						
SSPT	Xinbi	2.00	214	*e*P	Pb	13 03 20.0	-0.9
	baz=214						
JKRS	Kuro-shima	2.03	87	P	Pb	13 03 20.8	-0.7
JKRS				S	Sb	13 03 46.1	-0.5
SCZT	Fangliau	2.07	211	*e*P	Pb	13 03 21.0	-1.1
	baz=210						
SCZT				*e*S	Sb	13 03 48.2	+0.5
	baz=210						
LAY	Lan-yu	2.12	186	*e*P	Pn	13 03 18.4	-1.3
	baz=188						
PNG	Penghu	2.12	255	*e*P	Pn	13 03 20.8	+1.0
	baz=258						
PNG				*e*S	Sb	13 03 48.5	-0.7

	baz=258						
PHUB	**P'eng-hu**	**2.12**	**253**	*e*P	**Pn**	**13 03 20.8**	**+0.9**
	baz=257						
PHUB				*e*S	**Sn**	**13 03 47.6**	**+1.6**
	baz=257						
SLIU	**Shizi**	**2.13**	**205**	*e*P	**Pb**	**13 03 22.6**	**-0.6**
	baz=195						
WDGT	**Dungji**	**2.14**	**246**	⇑P	**Pn**	**13 03 21.0**	**+1.0**
	baz=250						
WDGT				*e*S	**Sn**	**13 03 48.0**	**+1.6**
	baz=250						
LYUB	**Lan-yu**	**2.15**	**185**	*e*P	**Pn**	**13 03 18.5**	**-1.6**
	baz=187						
JIJ	**Ishigaki jima**	**2.16**	**84**	P	**Pn**	**13 03 21.4**	**+1.1**
JIJ				S	**Sn**	**13 03 48.4**	**+1.5**
WLCH	**Liuqiu**	**2.21**	**216**	*e*P	**Pb**	**13 03 24.4**	**-0.1**
	baz=216						
VWUC	**VWUC**	**2.29**	**292**	*e*P	**Pn**	**13 03 22.1**	**+0.1**
	baz=292						
JISG	**Ishigakijimahi**	**2.34**	**79**	P	**Pn**	**13 03 24.3**	**+1.5**
JISG				S	**Sb**	**13 03 54.2**	**-1.3**
VCHM	**Qimei**	**2.36**	**247**	P	**Pn**	**13 03 24.1**	**+1.1**
	baz=231						
VCHM				*e*S	**Sn**	**13 03 53.4**	**+1.7**
	baz=231						
TWKBT	**Hengchun**	**2.38**	**202**	*e*P	**Pn**	**13 03 25.4**	**+2.1**
	baz=192						
TSEB	**Hengchuen, Pin**	**2.38**	**200**	*e*P	**Pb**	**13 03 27.2**	**-0.3**
	baz=193						
PTMZ	**Houxiangcun**	**2.58**	**291**	*e*P	**Pn**	**13 03 26.1**	**0.0**
	baz=290						
MATB	**Ma-tsu**	**2.60**	**320**	*e*P	**Pn**	**13 03 26.5**	**+0.2**
	baz=319						
LYJJ	**Jianjiangzhen**	**3.01**	**323**	*e*P	**Pn**	**13 03 32.9**	**+0.9**
	baz=321						
QZH	**Quanzhou**	**3.01**	**286**	Pn	**Pn**	**13 03 32.4**	**+0.4**
QZH				Sn	**Sn**	**13 04 06.4**	**-1.5**
QZH				smax	smax		
	comp=N,220nm,0.8s						
QZH				smax	smax		
	comp=E,100nm,1.0s						
QZH				LR	LR		
	comp=E,310nm,9.4s						
QZH				LR	LR		
	comp=Z,410nm,8.6s						
KNM	**Kinmen**	**3.07**	**276**	*e*P	**Pn**	**13 03 35.6**	**+2.8**
	baz=276						
KNMB	**Chin-men Tao**	**3.12**	**276**	*e*P	**Pn**	**13 03 33.5**	**0.0**
	baz=277						
XPSS	**Dashiqiu**	**3.12**	**333**	*e*P	**Pn**	**13 03 33.8**	**+0.3**
	baz=330						
MHZQ	**Yeshan**	**3.16**	**308**	*e*P	**Pn**	**13 03 34.0**	**-0.1**
	baz=307						
JMJ	**Miyako jima 2**	**3.26**	**78**	*e*P	**Pn**	**13 03 37.5**	**+2.0**
	baz=78						
AXDP	**Jialang**	**3.56**	**283**	*e*P	**Pn**	**13 03 39.9**	**+0.4**
	baz=283						
ZPLA	**Ao Xicun**	**3.70**	**267**	*e*P	**Pn**	**13 03 41.2**	**-0.2**
	baz=269						
SXFK	**Yanhouchang**	**4.37**	**302**	*e*P	**Pn**	**13 03 51.8**	**+1.1**
	baz=300						
JOW	**Kunigami**	**6.44**	**64**	P	**Pn**	**13 04 19.9**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=176,slow=15,SNR=8.2						
JOW				S	Sn	13 05 20.9	-12
	comp=Z,2.3nm,0.4s,baz=273,slow=28,SNR=1.1						
	comp=Z,9.3nm,0.8s						
JNU	**Nakatsue**	**11.98**	**40**	P	Pn	13 05 40.3	+5.1
	comp=Z,1.5nm,0.3s,baz=197,slow=11,SNR=5.8						
	comp=Z,5.2nm,0.4s						
KSRS	**Korea Array**	**14.26**	**20**	P	**P**	**13 06 12.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=11						
	comp=Z,2.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**22.01**	**259**	P	**P**	**13 07 38.8**	**0.0**
	comp=Z,0.3nm,0.4s,baz=66,slow=9.0,SNR=1.3						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**38.74**	**316**	P	**P**	**13 10 09.4**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=99,slow=9.6,SNR=6.9						
	comp=Z,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**40.57**	**327**	P	**P**	**13 10 23.6**	**0.0**
	comp=Z,1.2nm,0.6s,baz=108,slow=7.7,SNR=5.0						
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**13 15 06.1**	**-2.0**
	comp=Z,0.7nm,0.6s,baz=315,slow=4.3,SNR=10						
	comp=Z,0.7nm,0.6s						
SDV	**Santo Domingo**	**145.00**	**22**	PKPbc	**PKPab**	**13 22 19.1**	**-2.8**
	comp=Z,6.1nm,0.3s,baz=348,slow=9.4,SNR=3.4						

PRU 13 13:18:17.1±0.0, 50°.40N×18°.98E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAUC	**Maruska**	**1.28**	**216**	*e*SG	Sg	13 18 57.3	-0.7
KRLC	**Kraliky**	**1.45**	**258**	*e*SG	Sb	13 19 03.9	-0.1
DPC	**Dobruska-Polom**	**1.70**	**269**	*e*SG	Sn	13 19 09.7	-0.9
DPC	**Dobruska-Polom**	**1.70**	**269**	*e*	Sn	13 19 09.7	-0.9

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*IDC **13** 13:19:10.6±0.8, 24°.01N×125°.81E, h0^{km}, mb4.1/21, mbtmp4.2/23, ML3.6/2, MS3.5/7, Error ellipse: s-maj=20.3km s-min=17.5km az=122.0*

*NIED **13** 13:19:14.7, 24°.03N×125°.84E, h83^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.81; $M_{\theta\theta}$3.55; $M_{\phi\phi}$-2.74; $M_{r\theta}$2.04; $M_{\theta\phi}$1.73; $M_{\phi r}$0.26; Fault plane solution: $M_0$3.98000×10^{15} NP1:ϕ_s28.00000°, δ70.00000°, λ171.00000°. NP2:ϕ_s121.00000°, δ82.00000°, λ20.00000°.*

*NEIC **13** 13:19:14.7±1.9, 24°.08N±0°.08×125°.82E±0°.03, h19^{km}±5^{km}, mb4.5/38 Error ellipse: s-maj=11.8km s-min=3.1km az=186.0*

*JMA **13** 13:19:14.7±0.2, 24°N±2°×125°.8E±0°.8, h83^{km}±3^{km}, MD4.3/18, MV4.3/18, NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

ISC 13 13:19:13.7±1.3, 23°.98N±0°.05×125°.89E±0°.03, h19^{km}±5^{km}, n113, σ1^{s}.14/113, mb4.4/39, MS3.5/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.89**	**331**	P	**Pn**	**13 19 32.2**	**+1.0**
JOGS				S	**Sn**	**13 19 45.1**	**+1.5**
JOGS	**Gusukube**	**0.89**	**331**	A	A	13 19 32.2	
	comp=E,25nm,0.4s,comp=E,18nm,1.2s						
JMJ2	**Miyako jima3**	**0.91**	**326**	*i* P	**Pn**	**13 19 32.3**	**+0.8**
JMJ2				*e*S	**Sn**	**13 19 45.3**	**+1.2**
JMJ2	**Miyako jima3**	**0.91**	**326**	A	A	13 19 32.3	
	comp=E,14nm,1.3s,comp=E,18nm,2.1s						
JIRB	**Irabujima**	**1.07**	**322**	*i* P	**Pg**	**13 19 34.0**	**-0.4**
JIRB				*e*S	**Sn**	**13 19 48.4**	**+0.5**
JIRB	**Irabujima**	**1.07**	**322**	A	A	13 19 34.0	
	comp=E,10.0nm,1.3s,comp=E,13nm,1.4s						
JIKM	**Ikemajima**	**1.11**	**328**	*i* P	**Pg**	**13 19 34.8**	**-0.4**
JIKM				*e*S	**Sn**	**13 19 50.2**	**+1.3**
JIKM	**Ikemajima**	**1.11**	**328**	A	A	13 19 34.8	
	comp=E,13nm,1.5s,comp=E,12nm,0.9s						
JTJ	**Tarama**	**1.27**	**302**	P	**Pb**	**13 19 36.5**	**-0.4**
JTJ				S	**Sg**	**13 19 52.6**	**-2.2**
JTJ	**Tarama**	**1.27**	**302**	A	A	13 19 36.5	
	comp=E,20nm,0.5s,comp=E,15nm,0.7s						
JISG	**Ishigakijimahi**	**1.56**	**293**	P	**Pn**	**13 19 40.8**	**+0.4**
JISG				*e*S	**Sb**	**13 19 60.0**	**-1.4**
JISG	**Ishigakijimahi**	**1.56**	**293**	A	A	13 19 40.8	
	comp=E,19nm,0.7s,comp=E,17nm,0.5s						
JIJ	**Ishigaki jima**	**1.64**	**284**	P	**Pn**	**13 19 41.6**	**+0.1**
JIJ				S	**Sn**	**13 20 01.2**	**-0.8**
JIJ	**Ishigaki jima**	**1.64**	**284**	A	A	13 19 41.6	
	comp=E,5.0nm,6.6s,comp=E,6.0nm,4.7s						
JKRS	**Kuro-shima**	**1.74**	**279**	P	**Pn**	**13 19 43.3**	**+0.5**
JKRS				S	**Sn**	**13 20 04.2**	**-0.2**
JKRS	**Kuro-shima**	**1.74**	**279**	A	A	13 19 43.3	
	comp=E,11nm,1.7s,comp=E,13nm,1.7s						
HATJ	**Hateruma jima**	**1.91**	**273**	P	**Pn**	**13 19 45.1**	**0.0**
HATJ				S	**Sn**	**13 20 06.9**	**-1.7**
HATJ	**Hateruma jima**	**1.91**	**273**	A	A	13 19 45.1	
	comp=E,5.0nm,0.6s,comp=E,6.0nm,1.7s						
IRIF	**Iriomote-Funau**	**2.00**	**281**	P	**Pn**	**13 19 46.7**	**+0.2**
IRIF				S	**Sn**	**13 20 09.9**	**-1.0**
IRIF	**Iriomote-Funau**	**2.00**	**281**	A	A	13 19 46.7	
	comp=E,7.0nm,2.6s,comp=E,7.0nm,4.4s						
JKE	**Kume jima 2**	**2.47**	**19**	P	**Pn**	**13 19 52.9**	**0.0**
JKE				S	**Sn**	**13 20 21.2**	**-1.4**
YOJ	**Yonaguni jima**	**2.67**	**281**		**Pn**	**13 19 56.0**	**+0.4**
YOJ	**Yonaguni jima**	**2.67**	**281**	P	**Pn**	**13 19 55.9**	**+0.2**
YOJ				S	**Sn**	**13 20 25.5**	**-2.0**
JYNG	**Yonagunijimaku**	**2.73**	**280**	P	**Pn**	**13 19 56.7**	**+0.3**
JYNG				S	**Sn**	**13 20 27.4**	**-1.4**
JJT3	**Tamagusuku3**	**2.76**	**38**	P	**Pn**	**13 19 57.1**	**+0.3**
JJT3				S	**Sn**	**13 20 28.1**	**-1.5**
JAGN	**Aguni-jima**	**2.87**	**25**	P	**Pn**	**13 19 58.2**	**-0.2**
JAGN				*e*S	**Sn**	**13 20 32.0**	**-0.4**
JNTH	**Nagotoyohara**	**3.18**	**37**	P	**Pn**	**13 20 02.3**	**-0.3**
JNTH				S	**Sn**	**13 20 37.0**	**-3.1**
JOW	**Kunigami**	**3.57**	**37**	Pn	**Pn**	**13 20 07.8**	**-0.2**
	17nm,0.3s,baz=158,slow=18,SNR=77						
JOW				Sn	**Sn**	**13 20 46.0**	**-3.6**
	35nm,0.3s,baz=181,slow=12,SNR=5.3						
	119nm,0.6s						
JOW	**Kunigami**	**3.57**	**37**		**Pn**	**13 20 07.5**	**-0.5**
NACB	**Ninganchiao**	**3.93**	**274**		**Pn**	**13 20 12.0**	**-1.0**
TATO	**Taipei**	**4.13**	**285**		**Pn**	**13 20 16.3**	**+0.6**
YHNB	**Yeheng**	**4.17**	**280**		**Pn**	**13 20 17.1**	**+0.7**
YULB	**Yu-li**	**4.25**	**263**		**Pn**	**13 20 15.4**	**-2.0**
SSLB	**Suanglung**	**4.52**	**269**	Pn	**Pn**	**13 20 19.6**	**-1.5**
TPUB	**Ta-pu**	**4.87**	**263**		**Pn**	**13 20 25.9**	**0.0**
KNMB	**Chin-men Tao**	**6.86**	**276**	Pn	**Pn**	**13 20 52.6**	**-0.7**
JSU	**Suzuyama**	**8.52**	**27**	Pn	**Pn**	**13 21 15.8**	**-0.2**
KSRS	**Korea Array**	**13.54**	**7**	Pn	**Pn**	**13 22 25.1**	**+0.3**
	0.1nm,0.3s,baz=182,slow=12,SNR=10						
KSRS				LR	LR	13 28 10.7	
	comp=Z,123nm,18.2s,baz=160,slow=40						
	2.3nm,0.8s						
JHJ	**Hachijo jima 2**	**15.22**	**50**	LR	LR	13 27 56.7	
	comp=Z,88nm,18.9s,baz=98,slow=34						
MJAR	**Matsushiro Arr**	**16.41**	**37**	Pn	**P**	**13 23 06.5**	**+0.8**
	0.1nm,0.3s,baz=229,slow=9.6,SNR=7.4						
JMM	**Marumori**	**18.81**	**39**	P	**Pn**	**13 23 33.5**	**+0.8**
USRK	**Ussuriysk Ar.**	**20.78**	**12**	P	**P**	**13 23 54.9**	**+1.4**
	4.3nm,0.5s,baz=190,slow=11,SNR=9.3						
	4.3nm,0.5s						
ERM	**Erimo**	**23.01**	**34**	P	**P**	**13 24 17.4**	**0.0**
ASAJ	**Asahikawa**	**24.31**	**30**	P	**P**	**13 24 29.0**	**-0.9**
	13nm,0.7s,baz=215,slow=10,SNR=8.6						
	13nm,0.7s						
JKA	**Kamikawa-asahi**	**24.31**	**30**	P	**P**	**13 24 29.5**	**-0.4**
JKA				IAmb	IAmb	13 24 33.1	
	comp=Z,19nm,1.0s						
SBUM	**Sibu**	**25.16**	**214**	P	**P**	**13 24 37.4**	**-0.4**
SBUM				IAmb	IAmb	13 24 40.2	
	comp=Z,8.4nm,1.1s						
KLR	**Kul'dur**	**25.62**	**9**	P	**P**	**13 24 40.0**	**-1.7**
	comp=Z,4.7nm,0.9s,baz=231,slow=5.1,SNR=11						
	comp=Z,4.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**25.69**	**263**	P	**P**	**13 24 43.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=68,slow=6.7,SNR=4.4						
	comp=Z,0.5nm,0.4s						
YSS	**Yuzh-Sakhalins**	**26.61**	**26**	P	**P**	**13 24 50.6**	**-0.1**
SONM	**Songino Array**	**28.41**	**332**	P	**P**	**13 25 06.9**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=148,slow=9.5,SNR=2.5						
	comp=Z,1.5nm,0.5s						
PETK	**Petropavlovsk-**	**37.72**	**31**	P	**P**	**13 26 28.6**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=228,slow=15,SNR=2.5						
PETK				LR	LR	13 42 05.1	
	comp=Z,86nm,21.4s,baz=171,slow=36						
	comp=Z,3.4nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**38.20**	**88**	T	T	14 07 17.4	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**38.20**	**88**	T	T	14 07 16.3	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**38.22**	**88**	T	T	14 07 18.0	
	baz=283						
KNRA	**Kununurra**	**39.51**	**176**	P	**P**	**13 26 46.6**	**+3.3**
KNRA				IAmb	IAmb	13 27 10.0	
	comp=Z,20nm,1.2s						
MA2	**Magadan**	**39.63**	**20**	LR	LR	13 44 06.6	
	comp=Z,49nm,18.1s,baz=153,slow=38						
MKAR	**Makanchi Array**	**41.52**	**314**	P	**P**	**13 26 59.1**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=97,slow=9.8,SNR=15						
MKAR				LR	LR	13 46 04.7	
	comp=Z,88nm,20.1s,baz=112,slow=39						
	comp=Z,1.2nm,0.3s						
MKAR	**Makanchi Array**	**41.52**	**314**	P	**P**	**13 26 59.0**	**-0.7**
MAKZ	**Makanchi**	**41.73**	**314**	P	**P**	**13 27 01.2**	**-0.2**
ZAA0	**Zalesovo Array**	**42.81**	**325**	P	**P**	**13 27 08.8**	**-1.3**
ZALV	**Zalesovo Beam**	**42.81**	**325**	P	**P**	**13 27 08.2**	**-1.9**
	comp=Z,2.1nm,0.4s,baz=113,slow=8.2,SNR=9.7						
	comp=Z,2.1nm,0.4s						
ZALV	**Zalesovo Beam**	**42.81**	**325**	P	**P**	**13 27 08.6**	**-1.4**
TARG	**Taragay, Kyrgy**	**43.50**	**306**	P	**P**	**13 27 17.0**	**+0.6**
KDJ	**Kajisay**	**44.02**	**306**	P	**P**	**13 27 21.3**	**+1.0**
KDJ				IAmb	IAmb	13 27 22.0	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**44.27**	**168**	P	**P**	**13 27 24.1**	**+2.0**
WB0				IAmb	IAmb	13 27 30.6	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**44.43**	**169**	P	**P**	**13 27 23.1**	**-0.3**
	comp=Z,3.0nm,1.0s,baz=348,slow=8.7,SNR=3.0						
	comp=Z,3.0nm,1.0s						
WB2	**Warramunga Arr**	**44.43**	**169**	P	**P**	**13 27 25.4**	**+2.0**
WB2				IAmb	IAmb	13 27 38.8	
	comp=Z,7.0nm,0.8s						
WR0	**Warramunga Arr**	**44.48**	**168**	P	**P**	**13 27 24.4**	**+0.5**
WR0				IAmb	IAmb	13 27 31.6	
	comp=Z,5.6nm,0.8s						
BOOM	**Boomskoye usch**	**44.98**	**307**	P	**P**	**13 27 26.9**	**-1.0**
KURK	**Kurchatov**	**45.05**	**319**	P	**P**	**13 27 28.1**	**0.0**
KURK				IAmb	IAmb	13 27 28.6	
	comp=Z,6.0nm,1.0s						
KURBB	**Kurchatov Arra**	**45.07**	**319**	P	**P**	**13 27 27.4**	**-0.9**
	comp=Z,4.4nm,0.7s,baz=108,slow=8.0,SNR=14						
	comp=Z,4.4nm,0.7s						
AAK	**Ala-Archa**	**46.06**	**307**	P	**P**	**13 27 34.4**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=67,slow=14,SNR=4.3						
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**47.73**	**1**	P	**P**	**13 27 48.0**	**-0.8**
TIXI				IAmb	IAmb	13 27 48.8	
	comp=Z,5.0nm,0.8s						
ASAR	**Alice Springs**	**48.00**	**170**	P	**P**	**13 27 51.4**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=355,slow=7.0,SNR=2.8						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**48.00**	**170**	P	**P**	**13 27 54.1**	**+2.6**
CTA	**Charters Tower**	**48.09**	**154**	LR	LR	13 49 00.4	
	comp=Z,42nm,18.8s,baz=312,slow=37						
GAR	**Garm**	**48.98**	**302**	P	**P**	**13 27 59.1**	**-0.1**
KKAR	**Karatay Array**	**49.02**	**307**	P	**P**	**13 28 00.4**	**+1.1**
BILL	**Bilibino**	**50.47**	**18**	P	**P**	**13 28 12.1**	**+2.2**
BILL				IAmb	IAmb	13 28 12.7	
	comp=Z,5.3nm,0.9s						
NRIK	**Noril'sk**	**50.77**	**343**	P	**P**	**13 28 10.7**	**-1.4**
	comp=Z,5.2nm,0.8s,baz=116,slow=6.1,SNR=8.4						
	comp=Z,5.2nm,0.8s						
NRIK	**Noril'sk**	**50.77**	**343**	P	**P**	**13 28 11.8**	**-0.3**
NRIK				IAmb	IAmb	13 28 12.4	
	comp=Z,6.6nm,0.9s						
ABKAR	**Akbulak array**	**56.66**	**314**	P	**P**	**13 28 56.1**	**+0.5**
ABKAR	**Akbulak array**	**56.66**	**314**	P	**P**	**13 28 56.5**	**+0.9**
ABKAR				IAmb	IAmb	13 28 56.9	
	comp=Z,9.2nm,0.7s						
ARU	**Arti**	**57.87**	**323**	P	**P**	**13 29 03.6**	**-0.4**
O18K	**Koktuh Hills**	**64.04**	**33**	P	**P**	**13 29 46.6**	**+0.7**
O18K				IAmb	IAmb	13 29 56.6	
	comp=Z,4.0nm,0.9s						
J20K	**Nowinta River**	**64.33**	**29**	P	**P**	**13 29 48.3**	**+0.5**
IMAR	**Indian Mountai**	**64.44**	**27**	P	**P**	**13 29 49.2**	**+0.7**
H21K	**Melozitna Rive**	**64.84**	**27**	P	**P**	**13 29 51.4**	**+0.3**
H21K				IAmb	IAmb	13 29 59.0	
	comp=Z,6.2nm,1.4s						
CAST	**Castle Rocks**	**65.29**	**29**	P	**P**	**13 29 55.1**	**+1.1**
CAST				IAmb	IAmb	13 30 05.0	
	comp=Z,2.2nm,1.0s						
H23K	**Yukon River**	**66.17**	**27**	P	**P**	**13 30 01.3**	**+1.6**
H23K				IAmb	IAmb	13 30 10.5	
	comp=Z,2.9nm,0.8s						
MDM	**Murphy Dome**	**66.82**	**28**	P	**P**	**13 30 04.4**	**+0.6**
MDM				IAmb	IAmb	13 30 25.3	
	comp=Z,2.4nm,0.9s						
H24K	**Noodor Dome**	**66.86**	**27**	P	**P**	**13 30 04.8**	**+0.8**
H24K				IAmb	IAmb	13 30 32.6	
	comp=Z,3.3nm,1.1s						
IL31		**67.41**	**28**	P	**P**	**13 30 07.1**	**-0.4**
ILAR	**Eielson Array**	**67.41**	**28**	P	**P**	**13 30 08.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=282,slow=7.7,SNR=4.5						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**67.41**	**28**	P	**P**	**13 30 08.0**	**+0.4**
BMAR	**Burnt Mountain**	**67.93**	**25**	P	**P**	**13 30 12.9**	**+2.0**
KBZ	**Khabaz**	**68.94**	**310**	P	**P**	**13 30 18.1**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=118,slow=4.7,SNR=6.4						
	comp=Z,3.0nm,0.8s						
L27K	**Beaver Creek,**	**69.93**	**29**	P	**P**	**13 30 25.4**	**+2.1**
SPB2	**Spitsbergen Ar**	**70.58**	**348**	P	**P**	**13 30 28.1**	**+1.0**
ARCES	**ARCESS Array B**	**71.32**	**339**	P	**P**	**13 30 31.8**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=45,slow=2.1,SNR=4.3						
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**71.78**	**23**	P	**P**	**13 30 35.2**	**+0.8**
INK				IAmb	IAmb	13 30 35.9	
	comp=Z,3.1nm,1.1s						
FIA1	**FINESS Array S**	**73.77**	**330**	P	**P**	**13 30 46.2**	**-0.1**
FIA1				IAmb	IAmb	13 30 55.5	
	comp=Z,6.5nm,1.1s						
FINES	**FINESS Array B**	**73.77**	**330**	P	**P**	**13 30 46.2**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=62,slow=5.2,SNR=27						
	comp=Z,3.6nm,0.5s						
EUNU	**Eureka**	**74.72**	**6**	P	**P**	**13 30 51.6**	**-0.1**
EUNU				IAmb	IAmb	13 30 56.3	
	comp=Z,3.7nm,0.8s						
AKASG	**Malin Array Be**	**75.85**	**319**	P	**P**	**13 30 57.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=58,slow=6.8,SNR=5.1						
	comp=Z,0.2nm,0.3s						
BRTR	**Keskin Array B**	**76.73**	**308**	P	**P**	**13 31 04.0**	**-0.1**
	comp=Z,2.3nm,1.0s,baz=98,slow=5.1,SNR=6.1						
	comp=Z,2.3nm,1.0s						
HG4B	**Hotspring**	**78.85**	**38**	P	**P**	**13 31 14.5**	**-0.9**
NC405	**NORSAR Array S**	**80.13**	**333**	P	**P**	**13 31 22.6**	**+0.4**
NB2	**NORSAR Subarra**	**80.38**	**333**	P	**P**	**13 31 22.9**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=58,slow=5.6						
NOA	**NORSAR Array B**	**80.38**	**333**	P	**P**	**13 31 23.3**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=57,slow=5.4,SNR=6.9						
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**81.44**	**24**	P	**P**	**13 31 29.5**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=301,slow=5.2,SNR=25						
	comp=Z,1.8nm,0.8s						
YKA	**Yellowknife Ar**	**81.44**	**24**	P	**P**	**13 31 28.9**	**-0.3**
FRB	**Frobisher Bay**	**91.83**	**6**	LR	LR	14 14 26.0	
	comp=Z,40nm,21.5s,baz=359,slow=36						

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*KRNET **13** 13:23:41.0±0.1, 43°.89N×69°.09E, mb2.8*

*NNC **13** 13:24:08.2±1.1, 42°.97N×71°.10E, h0^{km}, mpv1.7, Error ellipse: s-maj=97.5km s-min=5.5km az=17.0, Suspected Mining explosion.*

ISC 13 13:24:02.2±1.1, 42°.57N±0°.05×70°.52E±0°.07, h0^{km}, n15, σ0^{s}.50/25, 9C-3D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK07	**Karatay Array**	**0.52**	**358**	P	**Pn**	**13 24 16.7**	**-0.3**
KK07				S	**Sb**	**13 24 22.5**	**+0.1**
KK06	**Karatay Array**	**0.53**	**0**	P	**Pn**	**13 24 16.4**	**-0.6**
KK06				S	**Sb**	**13 24 22.3**	**-0.2**
KK02	**Karatay Array**	**0.53**	**359**	P	**Pn**	**13 24 16.7**	**-0.5**
KK02				S	**Sb**	**13 24 22.8**	**0.0**
KK03	**Karatay Array**	**0.53**	**358**	P	**Pn**	**13 24 16.7**	**-0.4**
KK03				S	**Sb**	**13 24 22.9**	**+0.1**
KK31	**Karatay Array**	**0.53**	**359**	⇑P	**Pn**	**13 24 16.8**	**-0.4**
	1.5nm,0.5s,baz=118,slow=17,SNR=35						
KK31				⇓S	**Sb**	**13 24 22.8**	**0.0**
	5.5nm,0.3s,baz=120,slow=32,SNR=19						
KK01	**Karatay Array**	**0.54**	**359**	P	**Pn**	**13 24 16.8**	**-0.4**
KK01				S	**Sb**	**13 24 22.9**	**0.0**
KK08	**Karatay Array**	**0.54**	**357**	P	**Pn**	**13 24 16.9**	**-0.3**
KK08				S	**Sb**	**13 24 23.0**	**+0.1**
KK04	**Karatay Array**	**0.54**	**359**	P	**Pn**	**13 24 16.7**	**-0.5**
KK04				S	**Sb**	**13 24 22.9**	**-0.1**
KK05	**Karatay Array**	**0.55**	**0**	P	**Pb**	**13 24 16.1**	**+1.4**
KK05				S	**Sb**	**13 24 22.6**	**-0.5**
KK09	**Karatay Array**	**0.55**	**358**	P	**Pn**	**13 24 16.9**	**-0.5**
KK09				S	**Sb**	**13 24 23.0**	**-0.3**
TRKS	**Terek-Say**	**1.14**	**156**	⇑*i*P	**Pn**	**13 24 26.0**	**+0.5**
	baz=47						
TRKS				⇑*i*S	Sn	13 24 58.7	+17
	baz=47						
ARK	**Arkit**	**1.32**	**125**	⇓*i*P	**Pg**	**13 24 27.1**	**-0.4**
	baz=34						
ARK				⇓*i*S	Sn	13 25 00.4	+14
	baz=34						
TAS	**Tashkent**	**1.54**	**217**	⇑*e*P	Pn	13 24 21.3	-10
	baz=76						
TAS				⇑*e*S	**Sn**	**13 24 50.9**	**-0.9**
	baz=76						
EKS2	**Erkin-Say**	**2.40**	**87**	⇑*i*P	Pn	13 24 36.5	-6.5
	baz=8.0						
EKS2				⇑*i*S	**Sb**	**13 25 16.5**	**-0.2**
	baz=8.0						
UCH	**Uchtor**	**2.98**	**95**	⇑*i*P	Pn	13 24 46.0	-5.1
	baz=11						
UCH				⇑*i*S	**Sb**	**13 25 33.0**	**-0.4**
	baz=11						

TEH 13 13:24:18.3, 36°.03N×59°.22E, h9^{km}, ML3.5, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMOG	**Moghan**	**0.12**	**48**	*e*Pg	Pg	13 24 22.1	+0.7
IPAY	**Payeh**	**0.46**	**337**	*e*Pg	Pb	13 24 28.7	-0.1
IPAY				*e*Sg	Sb	13 24 35.0	-0.8
IPAY				*e*		13 24 36.2	
	comp=Z,67μm,0.2s						
TBHD	**Torbat heydari**	**0.61**	**179**	*e*Pg	Pb	13 24 30.8	-0.4
IAKL	**Akhelmad**	**0.69**	**327**	*e*Pg	Pg	13 24 31.8	+0.1
IAKL				*e*Sg	Sg	13 24 41.1	+0.4
IMYA	**Miami**	**0.78**	**66**	*e*Pg	Pb	13 24 34.0	-0.1
IKRD	**Kardeh**	**0.79**	**17**	*e*Pg	Pb	13 24 34.5	+0.2
IKRD				*e*Sg	Sb	13 24 45.7	+0.6
IKRD				*e*		13 24 47.8	
	comp=Z,26μm,0.3s						
JRKH	**Jarkhoshk**	**0.92**	**97**	*e*Pg	Pg	13 24 36.2	+0.2
JRKH				*e*Sg	Sb	13 24 48.8	0.0
TBJM	**Torbat-e-JAM**	**1.18**	**130**	*e*Pg	Pb	13 24 40.8	-0.1
ISFR	**Sfrayin**	**1.42**	**317**	*e*Pg	Pb	13 24 45.0	-0.2
ISFR				*e*Sg	Sg	13 25 06.0	+1.9
ISFR				*e*		13 25 18.1	
	comp=Z,11μm,0.5s						
IEMG	**Emamgholi**	**1.46**	**342**	*e*Pg	Pg	13 24 46.5	+0.1
BJRD	**Bojnurd**	**2.22**	**319**	*e*Pn	Pb	13 24 57.8	-0.8
AFRZ	**Afriz**	**2.60**	**184**	*e*Pn	Pn	13 25 02.3	+1.7
SHRO	**Shahrood**	**2.61**	**270**	*e*Pn	Pn	13 25 02.2	+1.5
TKDS	**Koohdasht(Taba**	**2.96**	**216**	*e*		13 25 57.7	
	comp=Z,2μm,0.6s						
TKDS				*e*Pn	Pn	13 25 08.0	+2.4
TNSJ	**Nastanj**	**2.97**	**227**	*e*Pn	Pn	13 25 07.8	+2.1
TNSJ				*e*		13 26 13.7	
	comp=Z,3μm,0.8s						
MRVT	**Maraveh tapeh**	**3.00**	**304**	*e*Pn	Pn	13 25 08.3	+2.3
TPRV	**Parvadeh(Tabas**	**3.65**	**216**	*e*Pn	Pn	13 25 17.1	+2.1
TPRV				*e*		13 26 20.6	
	comp=Z,1μm,0.6s						
BSRN	**Basiran**	**4.05**	**181**	*e*Pn	Pn	13 25 21.0	+0.4
IGLO	**Ghaloghah**	**4.38**	**278**	*e*Pn	Pn	13 25 28.1	+2.9
IGLO				*e*		13 26 44.2	
	comp=Z,399nm,0.8s						
NHDN	**Nehbandan**	**4.67**	**171**	*e*Pn	Pn	13 25 31.1	+2.0
ISHM	**Shahmirzad**	**4.82**	**269**	*e*Pn	Pn	13 25 33.2	+1.9
YZKH	**Yazd**	**5.28**	**228**	*e*Pn	Pn	13 25 39.9	+2.5
ANAR	**Anarak**	**5.34**	**240**	*e*Pn	Pn	13 25 39.7	+1.4
ISFB	**Sefidab**	**5.96**	**256**	*e*Pn	Pn	13 25 49.0	+2.3
KRSH	**Karshahi**	**6.17**	**253**	*e*Pn	Pn	13 25 52.2	+2.5

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*IDC **13** 13:25:24.4±1.2, 6°.86N×73°.00W, h163^{km}±15^{km}, mb3.4/5, mbtmp4.0/7, Error ellipse: s-maj=32.6km s-min=14.5km az=128.0*

*NEIC **13** 13:25:24.3±2.4, 6°.92N±0°.06×73°.07W±0°.08, h146^{km}±5^{km}, mb4.2/19, ML3.8(RSNC), Error ellipse: s-maj=10.8km s-min=8.4km az=96.0*

*RSNC **13** 13:25:25.1±0.9, 6°.81N×73°.15W, h149^{km}±3^{km}, ML3.8, Mw3.9, Fault plane solution: NP1:ϕ_s48.00000°, δ88.00000°, λ-142.00000°.*

ISC 13 13:25:23.9±0.6, 6°.82N±0°.03×73°.12W±0°.04, h154^{km}±5^{km}, n82, σ1^{s}.57/123, mb4.1/16, 5C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**195**	⇓*i*P	**Pn**	**13 25 45.2**	**+0.1**
BARC				*e*S	**Sn**	**13 26 00.4**	**-0.9**
BARC				*i*		13 26 01.9	
	comp=Z,2μm,0.3s						
BRRC	**Barranca, Sant**	**0.65**	**296**	⇑*i*P	**Pn**	**13 25 47.0**	**+0.5**
BRRC				*e*S	**Sn**	**13 26 04.0**	**+0.1**
BRRC				*i*		13 26 08.2	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**39**	⇑*i*P	**Pn**	**13 25 48.1**	**+0.9**
PAMC				*e*S	**Sn**	**13 26 05.1**	**+0.1**
PAMC				*i*		13 26 07.5	
	comp=Z,1μm,0.5s						

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RUSC  La Rusia          0.92 178⇓iP       Pn      13 25 49.1  0.0
RUSC                             eS       Sn      13 26 08.1 -0.2
RUSC                             i                13 26 09.0
      comp=Z,649nm,0.2s
PTBC  PUERTO BERRIO,    1.35 258 eP       Pn      13 25 51.7 -0.7
PTBC                             eS       Sn      13 26 12.9 -1.2
PTBC                             i                13 26 19.4
      comp=Z,646nm,0.2s
TAMC  Tame, Arauca      1.38 106 eP       Pn      13 25 53.6 +1.0
TAMC                             eS       Sn      13 26 14.2 -0.3
TAMC                             i                13 26 14.6
      comp=Z,460nm,0.4s
OCAC  Ocana             1.42 352  Pn      Pn      13 25 53.1 -0.1
OCAC  Ocana             1.42 352⇑iP       Pn      13 25 53.4 +0.2
OCAC                             eS       Sn      13 26 15.5 -0.2
OCAC                             i                13 26 18.6
      comp=Z,2µm,0.3s
SPBC  San Pablo de B    1.50 219 eP       Pn      13 25 54.1 +0.2
SPBC                             eS       Sn      13 26 16.2 -0.6
SPBC                             i                13 26 21.2
      comp=Z,2µm,0.2s
ZARC  Zaragoza, Cauc    1.85 291  Pn      Pn      13 25 57.6  0.0
ZARC  Zaragoza, Cauc    1.85 291 eP       Pn      13 25 57.5 -0.1
ZARC                             eS       Sn      13 26 23.0 -0.5
ZARC                             i                13 26 28.6
      comp=Z,1µm,0.3s
NORC  Norcasia          2.14 234 eP       Pn      13 26 00.9 -0.1
NORC                             eS       Sn      13 26 28.6 -1.0
NORC                             i                13 26 35.2
      comp=Z,474nm,0.4s
CHIC  Chingaza          2.26 196 eP       Pn      13 26 03.4 +0.6
CHIC                             eS       Sn      13 26 32.8  0.0
CHIC                             i                13 26 36.6
      comp=Z,589nm,0.5s
ROSC  El Rosal          2.30 211  P       Pn      13 26 05.1 +1.9
      comp=Z,261nm,0.3s,baz=302,slow=17,SNR=109
ROSC                              S       Sn      13 26 32.9 -0.7
      comp=Z,1µm,0.4s,baz=95,slow=17,SNR=18
ROSC  El Rosal          2.30 211          Pn      13 26 05.0 +1.7
ROSC  El Rosal          2.30 211 eP       Pn      13 26 05.0 +1.7
ROSC                             eS       Sn      13 26 32.9 -0.7
HELC  Santa Helena      2.47 255 eP       Pn      13 26 05.5 +0.2
HELC                             eS       Sn      13 26 37.5 +0.4
HELC                             i                13 26 43.4
      comp=Z,449nm,0.3s
UREC  San Jos de Ur     2.56 291 eP       Pn      13 26 05.0 -1.1
UREC                             eS       Sn      13 26 36.0 -2.6
UREC                             i                13 26 43.7
      comp=Z,362nm,0.2s
LL1C  La Loma 1 Cana    2.74 351 eP       Pn      13 26 09.6 +1.4
LL1C                             eS       Sn      13 26 45.2 +2.8
PTGC  Puerto Gaitan,    2.78 159⇓eP       Pn      13 26 08.4 -0.4
PTGC                             eS       Sn      13 26 42.2 -1.3
PTGC                             i                13 26 44.5
      comp=Z,228nm,0.4s
LL6C  La Loma 6 Bece    2.90 357⇑iP       Pn      13 26 09.9 -0.3
LL6C                             eS       Sn      13 26 44.6 -1.5
LL6C                             i                13 26 51.4
      comp=Z,222nm,0.4s
LL5C  La Loma 5 El P    2.97 349 eS       Sn      13 26 49.4 +1.7
CBOC  Ciudad Bolivar    3.03 252 eP       Pn      13 26 12.7 +0.8
CBOC                             eS       Sn      13 26 48.9 -0.2
CBOC                             i                13 26 57.6
      comp=Z,124nm,0.4s
SDV   Santo Domingo     3.21  50  P       Pn      13 26 14.7 +0.5
      comp=Z,196nm,0.3s,baz=230,slow=9.3,SNR=82
SDV                               S       Sn      13 26 51.9 -1.3
      comp=Z,119nm,0.5s,baz=253,slow=19,SNR=8.6
SDV   Santo Domingo     3.21  50 eP       Pn      13 26 14.7 +0.5
SDV                              eS       Sn      13 26 51.8 -1.5
SDV                              i                13 26 55.5
      comp=Z,85nm,0.5s
ARGC  Ariguani, Magd    3.22 340 eP       Pn      13 26 15.3 +1.1
ARGC                             eS       Sn      13 26 53.2 -0.1
ARGC                             i                13 27 03.8
      comp=Z,106nm,0.3s
ANIL  Santa Ana         3.24 225 eP       Pn      13 26 15.4 +0.5
ANIL                             eS       Sn      13 26 55.5 +1.3
PRAC  Prado             3.55 210 eP       Pn      13 26 18.5  0.0
PRAC                             eS       Sn      13 27 00.3 -0.7
PRAC                             i                13 27 07.6
      comp=Z,582nm,0.5s
ORTC  Ortega, Tolima    3.58 216 eP       Pn      13 26 19.4 +0.5
ORTC                             eS       Sn      13 27 01.9 +0.2
ORTC                             i                13 27 06.7
      comp=Z,230nm,0.3s
SJCC  San Jacinto, C    3.67 326  Pn      Pn      13 26 19.1 -1.0
SJCC  San Jacinto, C    3.67 326 eP       Pn      13 26 18.9 -1.2
SJCC                             eS       Sn      13 27 00.1 -3.7
SJCC                             i                13 27 15.2
      comp=Z,134nm,0.6s
PLMC  San Jos del P     3.68 239 eP       Pn      13 26 20.8 +0.6
PLMC                             eS       Sn      13 27 02.3 -1.5
PLMC                             i                13 27 09.8
      comp=Z,96nm,0.4s
LCBC  Los crdobas,      3.80 302 eP       Pn      13 26 21.6  0.0
LCBC                             eS       Sn      13 27 06.1 -0.5
LCBC                             i                13 27 10.2
      comp=Z,161nm,0.4s
CRJC  Cerrejon, Guaj    4.18   3⇑iP       Pn      13 26 25.5 -1.2
CRJC                             eS       Sn      13 27 12.0 -3.7
CRJC                             i                13 27 20.7
      comp=Z,220nm,0.3s
YOTC  Yotoco, Valle     4.27 229 eP       Pn      13 26 27.5 -0.5
YOTC                             eS       Sn      13 27 14.8 -3.1
GUVC  San Jose del G    4.28 173 eP       Pn      13 26 27.8 -0.2
GUVC                             eS       Sn      13 27 15.8 -2.0
GUVC                             i                13 27 20.4
      comp=Z,227nm,0.2s
SMRC  Santa Marta, M    4.45 346 eP       Pn      13 26 30.5 +0.3
SMRC                             eS       Sn      13 27 18.2 -3.6
SMRC                             i                13 27 21.0
      comp=Z,95nm,0.3s
MACC  Macarena, Meta    4.70 189 eP       Pn      13 26 32.4 -1.2
MACC                             eS       Sn      13 27 23.7 -4.1
MACC                             i                13 27 48.1
      comp=Z,93nm,0.5s
BETC  Betania           4.72 209 eP       Pn      13 26 33.5 -0.3
BETC                             eS       Sn      13 27 21.2 -7.1
BETC                             i                13 27 31.5
      comp=Z,74nm,0.3s
MARP  Paez Belalcaza    4.86 216 eP       Pn      13 26 36.1 +0.3
MARP                             eS       Sn      13 27 31.6 -0.2
URIC  Uribia, Colomb    4.98  13  Pn      Pn      13 26 35.2 -1.9
URIC  Uribia, Colomb    4.98  13 eP       Pn      13 26 35.6 -1.4
URIC                             eS       Sn      13 27 30.6 -3.6
URIC                             i                13 27 37.1
      comp=Z,30nm,0.2s
MALC  Bahia Malaga      5.04 237 eP       Pn      13 26 39.1 +1.1
MALC                             eS       Sn      13 27 38.6 +2.9
MALC                             i                13 27 50.6
      comp=Z,34nm,0.5s
GARC  Garzon, Huila     5.17 207 eP       Pn      13 26 39.4 -0.6
GARC                             eS       Sn      13 27 36.7 -2.7
GARC                             i                13 27 41.8
      comp=Z,122nm,0.3s
BAUV  El Baul           5.46  67          Pn      13 26 41.0 -2.4
PCON  Cinco Dias        5.53 216 eP       Pn      13 26 46.3 +1.3
PCON                             eS       Sn      13 27 42.3 -5.9
PCON                             i                13 27 58.0
      comp=Z,32nm,0.4s
BCIP  Isla Barro Col    7.05 290  Pn      Pn      13 27 02.5 -2.1
BIRV  Birongo           7.69  61          Pn      13 27 11.2 -1.9
OTAV  Otavalo           8.43 219  Pn      Pn      13 27 24.6 +1.1
MTDJ  Mount Denham     12.12 340  Pn      Pn      13 28 14.5 +2.7
WVT   Waverly          32.13 337  P       P       13 31 37.7 +1.0
WVT                               IAmb    IAmb    13 31 39.0
      comp=Z,3.9nm,1.1s
U40A  Yellville        34.49 331  P       P       13 31 57.8 +0.6
CCM   Cathedral Cave   35.17 335  P       P       13 32 03.8 +0.8
CCM                               IAmb    IAmb    13 32 04.4
      comp=Z,6.6nm,0.7s
SFIN  Lafayette        35.68 342  P       P       13 32 08.4 +1.1
TXAR  Lajitas Array    36.46 312  P       P       13 32 14.8 +0.5
      comp=Z,0.5nm,0.4s,baz=126,slow=8.9,SNR=10
      comp=Z,0.5nm,0.4s
TXAR  Lajitas Array    36.46 312  P       P       13 32 14.6 +0.3
TX31  Lajitas Ar. Si   36.46 312  P       P       13 32 14.3 +0.1
TX31                              IAmb    IAmb    13 32 19.9
      comp=Z,7.1nm,1.5s
MNTX  Cornudas Mount   38.97 314  P       P       13 32 36.0 +0.8
LMN   Caledonia Moun   39.55   9  P       P       13 32 38.9 -0.8
LMN                               IAmb    IAmb    13 32 40.1
      comp=Z,14nm,1.4s
D62A  Allapoint, All   40.27   4  P       P       13 32 47.0 +1.4
D62A                              IAmb    IAmb    13 33 08.8
      comp=Z,4.9nm,1.1s
BATG  Bathurst New B   40.76   7  P       P       13 32 50.2 +0.5
BATG                              IAmb    IAmb    13 33 03.2
      comp=Z,7.7nm,1.2s
EYMN  Ely              43.87 342  P       P       13 33 14.0 -0.8
EYMN                              IAmb    IAmb    13 33 15.5
      comp=Z,4.7nm,0.6s
ULM   Lac du Bonnet    47.28 340  P       P       13 33 40.5 -1.2
      comp=Z,3.3nm,0.5s,baz=175,slow=8.6,SNR=2.4
      comp=Z,3.3nm,0.5s
PDAR  Pinedale Array   48.08 324  P       P       13 33 48.5 +0.3
      comp=Z,0.5nm,0.5s,baz=132,slow=9.1,SNR=6.7
      comp=Z,0.5nm,0.5s
GCMT  Greycliff        50.02 327  P       P       13 34 03.2 +0.5
NVAR  Mina Array Bea   51.48 315  P       P       13 34 12.5 -1.5
      comp=Z,0.3nm,0.5s,baz=109,slow=7.4,SNR=3.6
      comp=Z,0.3nm,0.5s
LRM   Limekiln Ridge   51.58 326  P       P       13 34 14.0 -0.5
G08A  Pilot Rock       55.12 322  P       P       13 34 40.6 +0.4
G08A                              IAmb    IAmb    13 34 41.6
      comp=Z,1.7nm,0.7s
KBO   Bosley Butte     57.17 317  P       P       13 34 55.5 +0.6
DSPA  Despedida        60.69 177  P       P       13 35 19.2 +0.6
YKA   Yellowknife Ar   63.26 340  P       P       13 35 35.6 -0.1
      comp=Z,1.5nm,0.5s,baz=132,slow=6.7,SNR=51
      comp=Z,1.5nm,0.5s
YKA   Yellowknife Ar   63.26 340  P       P       13 35 34.8 -1.0
M30M  Minto, Yukon     72.03 334  P       P       13 36 31.5 +0.7
A36M  Sachs Harbour    72.43 345  P       P       13 36 32.5 -0.4
A36M                              IAmb    IAmb    13 36 33.6
      comp=Z,3.9nm,0.8s
INK   Inuvik           73.03 340  P       P       13 36 36.5 +0.1
INK                               IAmb    IAmb    13 37 02.8
      comp=Z,4.3nm,1.4s
BCAR  Beaver Creek A   74.36 334  P       P       13 36 45.0 +0.5
RND   Reindeer         77.55 333  P       P       13 37 02.5 -0.1
PPLA  Purkeypile       78.98 333  P       P       13 37 10.8 +0.3
PPLA                              IAmb    IAmb    13 37 11.1
      comp=Z,1.9nm,0.7s
SVW2  Sparrevohn       80.42 331  P       P       13 37 17.8 -0.3
ASAR  Alice Springs   149.11 234  PKPbc   PKPbc   13 44 54.0 -0.9
      comp=Z,0.3nm,0.6s,baz=122,slow=3.5,SNR=4.4
ASAR  Alice Springs   149.11 234  PKPdf   PKPdf   13 44 50.9 +0.3
ASAR                              PKPbc   PKPbc   13 44 54.5 -0.4
ASAR                              PKPab   PKPab   13 45 00.8 +1.2
WRA   Warramunga Arr  150.34 241  PKPbc   PKPbc   13 44 57.3 -0.6
      comp=Z,0.3nm,0.4s,baz=106,slow=2.9,SNR=4.6
```

WEL 13 13:33:29.6±0.2,**40°S**±2°×**17°6E**±°,**h30**km±3km,**M3.7**/59, **ML4.0**/59,**MLv3.7**/59,**Error ellipse: s-maj=0.0km s-min=0.0km az=80.3,North Island**

```
Code  Station Name         Δ°  AZ°    Phase ID         Time     Res
                                    Op      ISC      h  m  s   ISC
TSZ   Takapari Road      0.30 132   P       Pn      13 33 38.7 +0.7
PNHZ  Pukenui            0.41  98   P       Pn      13 33 40.1 +0.6
OHWZ  Ohakea             0.44 218   P       Pn      13 33 40.4 +0.6
MOVZ  Moawhango          0.45   8   P       Pn      13 33 39.9 -0.2
BHHZ  Black Hill Sta     0.48  40   P       Pn      13 33 40.5 +0.1
MTVZ  Mangateitei        0.50 342   P       Pn      13 33 40.8 +0.1
WNVZ  Wahianoa           0.53 354   P       Pn      13 33 41.2 -0.1
WAZ   Wanganui           0.54 281   P       Pn      13 33 41.6 +0.5
POWZ  Post Office Ro     0.54 172   P       Pn      13 33 41.4 +0.1
TRVZ  Turoa              0.56 351   P       Pn      13 33 41.8  0.0
WHVZ  Whangaehu Hut      0.58 354   P       Pn      13 33 41.9 -0.1
KRHZ  Kereru             0.58  69   P       Pn      13 33 42.6 +0.8
DVHZ  Dannevirke         0.58 139   P       Pn      13 33 42.2 +0.3
DRZ   Dome Shelter       0.59 352   P       Pn      13 33 42.2  0.0
TUVZ  Tukino             0.59 359   P       Pn      13 33 42.1  0.0
FWVZ  Far West T-bar     0.61 352   P       Pn      13 33 42.3 -0.1
PKVZ  Pokaka             0.62 336   P       Pn      13 33 42.2 -0.2
WPHZ  Waipukurau         0.63 109   P       Pn      13 33 43.1 +0.6
SNVZ  South Ngauruho     0.67 358   P       Pn      13 33 43.1 -0.1
NGZ   Ngauruhoe          0.68 356   P       Pn      13 33 43.3 -0.1
OTVZ  Oturere            0.69 360   P       Pn      13 33 43.4 -0.1
ETVZ  East Tongariro     0.72   3   P       Pb      13 33 43.7  0.0
NNVZ  North Ngauruho     0.72 357   P       Pn      13 33 44.0  0.0
KWHZ  Kaweka Forest      0.73  54   P       Pn      13 33 44.8 +0.9
PRWZ  Pori Road          0.73 162   P       Pn      13 33 44.2 +0.2
TMVZ  Te Maari           0.74   2   P       Pb      13 33 44.0 -0.1
WTVZ  West Tongariro     0.74 355   P       Pn      13 33 44.1  0.0
NTVZ  North Tongarir     0.76   0   P       Pb      13 33 44.3 -0.1
KRVZ  Karewarewa         0.76 358   P       Pb      13 33 44.4  0.0
TWVZ  Taurewa            0.81 347   P       Pn      13 33 44.5 -0.4
MRZ   Mangatainoka R     0.81 185   P       Pn      13 33 44.9  0.0
MRZ                                 S       Sn      13 33 56.6 +0.8
PRHZ  Porangahau         0.85 119   P       Pn      13 33 45.6 +0.1
PRHZ                                S       Sn      13 33 58.1 +1.2
ANWZ  Angora Road        0.86 134   P       Pb      13 33 45.9 -0.1
ANWZ                                S       Sn      13 33 58.5 +1.2
KATZ  Kakaramea          0.88   1   P       Pn      13 33 46.0  0.0
RITZ  Rihia Road         0.89  10   P       Pn      13 33 46.0 -0.1
MCHZ  McNeill Hill       0.90  63   P       Pb      13 33 47.0 +0.5
KAHZ  Kahuranaki         0.93  87   P       Pb      13 33 47.0 -0.2
KAHZ                                S       Sb      13 34 03.6 +4.3
TIWZ  Tintock            0.93 170   P       Pn      13 33 46.5 -0.2
TIWZ                                S       Sb      13 33 59.4 +0.1
BFZ   Birch Farm         0.94 152   P       Pn      13 33 46.4 -0.3
PXZ   Pawanui            0.94 101   P       Pn      13 33 46.4 -0.3
BKZ   Black Stump Fm     0.94  43   P       Pb      13 33 47.4  0.0
BKZ                                 S       Sb      13 34 01.6 +2.1
RATZ  Rangitukua         0.99   5   P       Pn      13 33 47.2 -0.4
VRZ   Vera Road          1.01 316   P       Pn      13 33 47.4 -0.4
VRZ                                 S       Sb      13 34 01.9 +0.3
HATZ  Hinemaiaia         1.02  19   P       Pn      13 33 47.3 -0.6
HATZ                                S       Sn      13 34 01.1 -0.1
OGWZ  Otaki Gorge        1.03 201   P       Pn      13 33 47.9 -0.1
OGWZ                                S       Sb      13 34 01.7 -0.3
HOWZ  Holdsworth Sta     1.05 186   P       Pn      13 33 47.8 -0.5
LREZ  Lake Rotokare      1.05 292   P       Pn      13 33 48.5 +0.2
LREZ                                S       Sb      13 34 03.7 +1.0
CKHZ  Cape Kidnapper     1.10  80   P       Pn      13 33 49.2 +0.2
CPWZ  Castlepoint        1.13 159   P       Pn      13 33 49.2 -0.1
WATZ  Wairara            1.15   3   P       Pn      13 33 49.0 -0.6
KIW   Kapiti Island      1.16 210   P       Pn      13 33 49.6 -0.2
NMHZ  Naumai             1.16  50   P       Pb      13 33 50.6 -0.5
MRHZ  Matea Rd           1.18  30   P       Pn      13 33 49.5 -0.5
WHTZ  Whakaora           1.21  11   P       Pn      13 33 50.4 -0.1
TMWZ  Te Maipa           1.26 172   P       Pn      13 33 50.4 -0.8
PREZ  Palmer Road        1.27 293   P       Pn      13 33 52.0 +0.6
MHEZ  Mangahewa          1.30 306   P       Pn      13 33 52.2 +0.5
MTW   Mount Morrison     1.31 186   P       Pn      13 33 50.9 -0.9
DREZ  Durham Road        1.32 300   P       Pn      13 33 52.3 +0.4
CAW   Cannon Point       1.33 200   P       Pn      13 33 51.4 -0.7
NEZ   North Egmont       1.35 295   P       Pn      13 33 52.9 +0.5
MTHZ  Maungataniwha      1.35  43   P       Pn      13 33 52.7 +0.3
KUTZ  Kaahu Road         1.37   5   P       Pn      13 33 52.1 -0.6
WPRZ  Whakapapatarin     1.39  16   P       Pn      13 33 52.3 -0.6
ALRZ  Allen Road         1.40  22   P       Pn      13 33 52.4 -0.7
KHEZ  Kahui Hut          1.40 293   P       Pn      13 33 53.5 +0.4
RAHZ  Arahi              1.45  50   P       Pn      13 33 53.9 +0.2
NMEZ  Namu Road          1.45 287   P       Pn      13 33 54.2 +0.4
PKE   Pukeiti            1.46 296   P       Pn      13 33 54.6 +0.7
PRRZ  Plateau Road       1.47  23   P       Pn      13 33 53.3 -0.7
HIZ   Hauiti             1.48 335   P       Pn      13 33 53.7 -0.5
NBEZ  Newall Road No     1.51 292   P       Pn      13 33 55.2 +0.6
TLZ   Tolley Road        1.53 356   P       Pn      13 33 53.9 -1.0
PAWZ  Paruwai Farm       1.53 187   P       Pn      13 33 52.6 -2.3
TRWZ  Traveller          1.54 179   P       Pn      13 33 53.8 -1.2
HRRZ  Handcock Road      1.54  18   P       Pn      13 33 54.9 -0.2
GRRZ  Galatos Road       1.54  13   P       Pn      13 33 54.7 -0.4
WEL   Wellington         1.58 205   P       Pn      13 33 54.5 -1.1
MSWZ  Moikau Station     1.59 191   P       Pn      13 33 54.2 -1.5
RTZ   Ruatahuna          1.60  40   P       Pn      13 33 56.0 +0.1
HSRZ  Hossack Road       1.61  16   P       Pn      13 33 55.7 -0.3
MUGZ  Murupara           1.62  32   P       Pn      13 33 55.4 -0.7
DUWZ  D'Urville Isla     1.64 234   P       Pn      13 33 56.0 -0.4
RRRZ  Republican Roa     1.65  24   P       Pn      13 33 56.0 -0.6
BHW   Baring Head        1.66 201   P       Pn      13 33 55.2 -1.5
SNGZ  Shannon Statio     1.68  51   P       Pn      13 33 57.0  0.0
HLRZ  Highlands Stat     1.69  19   P       Pn      13 33 56.2 -0.8
TCW   Tory Channel       1.72 218   P       Pn      13 33 56.3 -1.2
UTU   Utuhina            1.73  14   P       Pn      13 33 57.2 -0.4
PLWZ  Palliser           1.74 190   P       Pn      13 33 56.2 -1.6
TARZ  Mount Tarawera     1.75  22   P       Pn      13 33 57.8 -0.1
KNZ   Kokohu             1.76  62   P       Pn      13 33 56.9 -1.2
RAGZ  Rawiri             1.92  46   P       Pb      13 34 03.0 -0.9
EDRZ  Edgecumbe          1.94  26   P       Pn      13 34 00.3 -0.2
URZ   Urewera            1.95  36   P       Pn      13 33 59.7 -0.9
PRGZ  Paritu Road        1.95  62   P       Pn      13 33 59.6 -1.1
RIGZ  Rimuhau            1.99  55   P       Pn      13 34 00.8 -0.4
MARZ  Manawahe           2.03  23   P       Pn      13 34 01.8 +0.1
TUWZ  Tuamarina          2.05 219   P       Pn      13 34 00.5 -1.4
MWZ   Matawai            2.10  44   P       Pn      13 34 01.8 -1.0
OPRZ  Ohinepanea         2.13  19   P       Pn      13 34 02.4 -0.7
TOZ   Tahuroa Road       2.13 356   P       Pn      13 34 01.9 -1.2
TGRZ  Tauranga           2.17  12   P       Pn      13 34 03.2 -0.5
NNZ   Nelson             2.21 231   P       Pn      13 34 04.0 -0.2
WHRZ  Whale Island       2.24  27   P       Pn      13 34 05.8 +1.1
BSWZ  Blackbirch Sta     2.30 216   P       Pn      13 34 04.0 -1.4
TKNZ  Takaka Hill        2.38 239   P       Pn      13 34 05.3 -1.3
RUGZ  Raukumara Rang     2.46  40   P       Pn      13 34 07.1 -0.6
TWGZ  Tauwhareparae      2.46  48   P       Pn      13 34 07.9 +0.2
QRZ   Quartz Range       2.59 247   P       Pn      13 34 07.7 -1.6
PUZ   Puketiti           2.69  49   P       Pn      13 34 09.3 -1.6
MRNZ  Matariki Terra     2.70 234   P       Pn      13 34 09.9 -1.0
PKGZ  Pakihiroa          2.72  44   P       Pn      13 34 10.1 -1.2
MKAZ  Moumakai           2.78 352   P       Pn      13 34 11.5 -0.5
THZ   Tophouse           2.83 227   P       Pn      13 34 12.6 -0.2
AWAZ  Awhitu Peninsu     2.90 344   P       Pn      13 34 14.3 +0.6
ETAZ  East Tamaki Re     2.96 348   P       Pn      13 34 14.3 -0.2
WMGZ  Waiomatatini S     2.96  47   P       Pn      13 34 12.8 -1.7
KHZ   Kahutara           3.02 211   P       Pn      13 34 12.7 -2.6
WTAZ  Waiatarua          3.04 343   P       Pn      13 34 16.3 +0.6
EPAZ  Eden Park BICE     3.06 346   P       Pn      13 34 16.0  0.0
MXZ   Matakaoa Point     3.08  43   P       Pn      13 34 15.4 -0.8
KUZ   Kuaotunu           3.11   1   P       Pn      13 34 16.8 +0.3
MBAZ  Motutapu North     3.14 349   P       Pn      13 34 17.0  0.0
RVAZ  Riverhead Bore     3.20 344   P       Pn      13 34 17.8  0.0
DSZ   Denniston Nort     3.49 236   P       Pn      13 34 21.7 -0.1
GRZ   Great Barrier      3.60 357   P       Pn      13 34 23.8 +0.5
LTZ   Lake Taylor        3.88 220   P       Pn      13 34 29.8 +2.6
OKCZ  Okains Bay         4.33 206   P       Pn      13 34 29.8 -3.5
OUZ   Omahuta            4.91 340   P       Pn      13 34 41.3  0.0
TMZ   Timaru             5.70 216   P       Pn      13 34 49.9 -2.2
CTZ   Chatham Island     6.95 126   P       Pn      13 35 07.4 -1.8
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*IDC **13** 14:05:26.4±0.7, 44°62N×34°49E, h0km, mb3.4/4, mbtmp3.5/9, ML3.8/5, MS3.6/1, Error ellipse: s-maj=10.7km s-min=9.0km az=38.0*

*SIGU **13** 14:05:27.8, 44°63N×34°41E, h13km, Mc3.2, MD3.1/6, msh3.3/4, Black Sea region 3*

*MCSM **13** 14:05:28.1±0.4, 45°N±3°×3°5E±°, h8km±2km, mb4.2*

ISC 13 14:05:27.5±0.8,**44°64N**±0°04×**34°45E**±0°03,**h13**km±5km, **n87,**σ1s**52**/109,**mb3.4**/4,**34C-17D,Crimea region**

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Code  Station Name         Δ°  AZ°    Phase ID         Time     Res
                                    Op      ISC      h  m  s   ISC
ALU   Alushta            0.05 318⇓iPg       Pg      14 05 29.9 -0.1
ALU                                 Pgm             14 05 30.9
      comp=Z,235nm,0.2s
ALU                                e(Sg)    Sg      14 05 31.8  0.0
YAL   Yalta              0.26 234⇑iPg       Pg      14 05 33.0  0.0
YAL                                 Pgm             14 05 34.3
      comp=Z,695nm,0.2s
YAL                                eSg      Sg      14 05 36.8 +0.1
YAL                                 Sgm             14 05 40.6
      comp=E,2µm,0.2s
YAL                                 Sgm             14 05 40.8
      comp=N,4µm,0.3s
SIM   Simferopol'        0.39 322⇑iPg       Pg      14 05 35.6 +0.3
SIM                                 Pgm             14 05 37.0
      comp=Z,260nm,0.2s
SIM                                eSg      Sg      14 05 41.5 +1.0
SIM                                 Sgm             14 05 43.0
      comp=E,2µm,0.2s
SIM                                 Sgm             14 05 43.1
      comp=N,1µm,0.2s
SUDU  Sudak              0.46  58⇓iPg       Pg      14 05 37.0 +0.4
SUDU                                Pgm             14 05 37.3
      comp=Z,580nm,0.2s
SUDU                               e(Sg)    Sg      14 05 43.6 +0.8
SEV   Sevastopol'        0.57 260⇑iPg       Pg      14 05 38.3 -0.3
SEV                                 Pgm             14 05 40.8
      comp=Z,183nm,0.2s
SEV                                eSg      Sg      14 05 45.9 -0.3
SEV                                 Sgm             14 05 47.6
      comp=N,552nm,0.2s
SEV                                 Sgm             14 05 47.6
      comp=E,704nm,0.2s
FEO   Feodosiya          0.77  60  i Pg     Pb      14 05 42.9 +0.2
FEO                                 Pgm             14 05 44.6
      comp=Z,321nm,0.2s
FEO                                eSg      Sb      14 05 54.7 +1.7
FEO                                 Sgm             14 05 55.4
      comp=E,708nm,0.2s
FEO                                 Sgm             14 06 00.3
      comp=N,949nm,0.2s
BZK   Bozkurt            2.70 187  ⇓P       Pn      14 06 11.4 +0.8
BZK                                ⇑S       Sn      14 06 41.2 -1.9
DIKM  Dikmen             3.05 169  ⇑P       Pn      14 06 16.2 +0.8
PURM  Purcari            3.73 302  ⇓P       Pn      14 06 26.9 +2.3
PURM                               ⇑S       Sn      14 07 10.3 +1.9
JURR  Jurilovca          3.98 274  ⇓P       Pn      14 06 29.4 +1.3
TLCR                     4.04 280  ⇑P       Pn      14 06 30.5 +1.5
TLCR                               ⇓S       Sn      14 07 16.8 +0.6
MANR  Mangalia           4.29 261  ⇑P       Pn      14 06 34.0 +1.5
MANR                               ⇓S       Sn      14 07 23.3 +0.9
TPGR  Topolog            4.30 275  ⇑P       Pn      14 06 33.9 +1.3
TIRR  Tirgusor           4.32 270  ⇓P       Pn      14 06 34.1 +1.3
CFR   Carcaliu           4.52 279  ⇑P       Pn      14 06 36.6 +1.0
MILM  Milestii Mici      4.55 302  eP       Pn      14 06 37.0 +1.0
MILM                               eS       Sn      14 07 29.0 +0.2
      comp=N,130nm,0.9s
TLBR  Topalu             4.58 271  ⇓P       Pn      14 06 38.1 +1.8
HARR  Harsova            4.65 273  ⇑P       Pn      14 06 39.2 +1.8
VLDR  Vladesti           4.66 287  ⇑P       Pn      14 06 39.4 +2.0
VLDR                               ⇑S       Sn      14 07 33.4 +2.0
SCTR  Scanteiesti        4.68 285  ⇑P       Pn      14 06 39.8 +2.0
ICOR  Ion Corvin         4.80 266  ⇓P       Pn      14 06 41.2 +1.8
BR106 Keskin Array S     4.95 187   Pn      Pn      14 06 43.8 +2.2
BRTR  Keskin Array B     4.95 187   Pn      Pn      14 06 43.2 +1.5
      comp=N,1.3nm,0.3s,baz=358,slow=15,SNR=27
BRTR                                Sn      Sn      14 07 38.9  0.0
      comp=N,1.2nm,0.3s,baz=18,slow=15,SNR=2.9
      comp=N,2.0nm,0.3s
BR105 Keskin Array S     4.96 187   Pn      Pn      14 06 44.0 +2.2
BR104 Keskin Array S     4.97 187   Pn      Pn      14 06 43.8 +1.9
ODBI  Odobesti           5.34 285  ⇓P       Pn      14 06 49.5 +2.6
BISRR Bisoca             5.55 282  ⇑P       Pn      14 06 51.6 +1.7
BISRR                              ⇑S       Sn      14 07 56.0 +2.4
VRI   Vrincioaia         5.59 285  ⇓P       Pn      14 06 52.6 +2.3
VRI                                ⇓S       Sn      14 07 56.0 +1.7
PLOR  Plostina           5.64 285  ⇑P       Pn      14 06 53.5 +2.4
ISR   Istrita            5.64 278  ⇑P       Pn      14 06 52.1 +1.1
TESR  Tescani            5.79 292  ⇑P       Pn      14 06 55.0 +2.0
NEHR  Nehoiu             5.83 281  ⇑P       Pn      14 06 55.4 +1.7
CHVG  Ch'k'valeri        5.86 107  ⇑S       Sn      14 08 02.5 +1.5
COVR  Voineasa-Covas     5.95 285  ⇓P       Pn      14 06 57.7 +2.5
COVR                               ⇑S       Sn      14 08 04.6 +1.4
MLR   Muntele Rosu       6.08 281  ⇑P       Pn      14 06 59.3 +2.1
MLR                                ⇓S       Sn      14 08 09.0 +2.3
MLR   Muntele Rosu       6.08 281   Pn      Pn      14 07 00.0 +2.8
      comp=N,6.5nm,0.3s,baz=183,slow=11,SNR=34
MLR                                 Sn      Sn      14 08 07.5 +0.8
      comp=N,0.6nm,0.3s,baz=357,slow=21,SNR=1.3
MLR   Muntele Rosu       6.08 281   Pn      Pn      14 06 58.4 +1.2
MLR                                 Sn      Sn      14 08 09.8 +3.1
BATM  Batumi             6.11 117  ⇑P       Pn      14 06 58.1 +0.7
KBZ   Khabaz             6.14  96   Pn      Pn      14 06 59.9 +2.1
      comp=N,0.5nm,0.3s,baz=304,slow=3.6,SNR=1.7
KBZ                                 Sn      Sn      14 08 08.6 +0.7
      comp=N,0.3nm,0.3s,baz=216,slow=19,SNR=1.5
BIZ   Bicaz              6.27 294  ⇑P       Pn      14 07 01.4 +1.7
DOPR  Dopca              6.53 285  ⇑P       Pn      14 07 05.1 +1.9
VOIR                     6.71 280  ⇑P       Pn      14 07 08.1 +2.4
VOIR                               ⇑S       Sn      14 08 23.0 +1.0
AK07  Malin Array Si     6.89 331   Pn      Pn      14 07 08.8 +0.7
AK10  Malin Array Si     6.92 331   Pn      Pn      14 07 09.0 +0.5
AK09  Malin Array Si     6.92 332   Pn      Pn      14 07 08.9 +0.4
AK06  Malin Array Si     6.92 331   Pn      Pn      14 07 09.2 +0.6
AK08  Malin Array Si     6.94 332   Pn      Pn      14 07 09.3 +0.5
AK05  Malin Array Si     6.95 331   Pn      Pn      14 07 09.5 +0.6
LUBAR Lubar, Ukraine     6.97 322   Pn      Pn      14 07 09.9 +0.7
      comp=N,11nm,1.0s
LUBAR                               pP      Pb      14 07 12.4  -16
      comp=N,11nm,1.0s
LUBAR                               Sn      Sn      14 08 29.4 +1.1
      comp=N,11nm,1.0s
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AK02	**Malin Array Si**	6.98	331	Pn	Pn	14 07 09.8	+0.5
AK14	**Malin Array Si**	6.99	331	Pn	Pn	14 07 10.0	+0.5
ARR	**Arges**	7.00	279	⇓P	Pn	14 07 11.2	+1.5
AK01	**Malin Array Si**	7.01	332	Pn	Pn	14 07 09.9	+0.2
AK11	**Malin Array Si**	7.01	331	Pn	Pn	14 07 09.9	+0.1
AKASG	**Malin Array Be**	7.01	332	Pn	Pn	14 07 10.2	+0.4
	comp=N,8.8nm,0.3s,baz=149,slow=9.3,SNR=32						
AKASG				Sn	Sn	14 08 25.1	-4.2
	comp=N,5.7nm,0.3s,baz=145,slow=24,SNR=8.4						
	comp=N,3.4nm,0.3s						
AKBB	**Malin Array Si**	7.01	332	Pn	Pn	14 07 10.1	+0.3
	comp=N,4.7nm,0.7s						
AKBB				pP	Pb	14 07 11.9	-17
	comp=N,4.7nm,0.7s						
AK16	**Malin Array Si**	7.03	331	Pn	Pn	14 07 10.2	+0.2
AK03	**Malin Array Si**	7.03	332	Pn	Pn	14 07 10.5	+0.4
AK03				pP	Pb	14 07 12.5	-17
AK15	**Malin Array Si**	7.04	331	Pn	Pn	14 07 10.8	+0.6
AK04	**Malin Array Si**	7.05	332	Pn	Pn	14 07 10.8	+0.5
AK17	**Malin Array Si**	7.05	331	Pn	Pn	14 07 11.0	+0.6
BUR01	**Bucovina Ar. S**	7.07	298	⇑P	Pn	14 07 11.8	+1.1
AK18	**Malin Array Si**	7.08	331	Pn	Pn	14 07 11.3	+0.6
AK18				pP	Pb	14 07 13.6	-17
AK23	**Malin Array Si**	7.10	331	Pn	Pn	14 07 11.5	+0.6
AK19	**Malin Array Si**	7.10	331	Pn	Pn	14 07 11.0	0.0
AK22	**Malin Array Si**	7.11	331	Pn	Pn	14 07 11.6	+0.4
AK20	**Malin Array Si**	7.12	331	Pn	Pn	14 07 12.0	+0.7
AK21	**Malin Array Si**	7.14	331	Pn	Pn	14 07 12.3	+0.8
AK21				pP	Pb	14 07 14.1	-17
MI29	**MI29, Kamyanyy**	7.30	325	Pn	Pn	14 07 14.9	+1.1
	comp=N,3.8nm,0.7s						
MI30	**MI30,Zelenitsa**	7.42	328	Pn	Pn	14 07 16.1	+0.7
MI30				Sn	Sn	14 08 41.3	+1.9
LOT	**Lotru**	7.61	280	⇑P	Pn	14 07 19.2	+1.1
GZR	**Gura Zlata**	8.31	279	⇑P	Pn	14 07 30.0	+2.3
VTS	**Vitosha**	8.38	260	⇓P	Pn	14 07 30.6	+1.8
HERR	**Herculane**	8.57	276	⇑P	Pn	14 07 31.4	+0.3
MDVR	**Moldovita**	9.07	275	⇑P	Pn	14 07 38.6	+0.5
KOLS	**Kolonicke sedl**	9.39	301	ePN	Pn	14 07 43.1	+0.7
CRVS	**Cervenica-Dubn**	9.88	300	ePN	Pn	14 07 48.7	-0.4
NACGM	**Naroch**	11.39	337	⇑eP	Pn	14 08 08.5	-1.3
	baz=151						
CLL	**Collm**	15.80	303	ePx	Px	14 09 12.0	
CLL				ePP	pP	14 09 16.0	-1.2
VAE	**Valguarnera**	16.70	252	Pn	Pn	14 09 21.0	-0.2
	baz=88,slow=4.6						
AKTO	**Aktyubinsk**	16.90	62	Pn	Pn	14 09 20.1	-3.4
	comp=N,0.2nm,0.3s,baz=209,slow=22,SNR=2.0						
	comp=N,0.6nm,0.4s						
FINES	**FINESS Array B**	17.54	347	Pn	Pn	14 09 26.8	-4.6
	comp=N,0.2nm,0.3s,baz=158,slow=16,SNR=7.8						
	comp=N,1.8nm,0.6s						
NOA	**NORSAR Array B**	21.41	328	P	P	14 10 13.9	-0.8
	comp=N,0.3nm,0.5s,baz=135,slow=11,SNR=2.1						
	comp=N,0.3nm,0.5s						
ARCES	**ARCESS Array B**	25.37	353	P	P	14 10 53.5	-0.5
	comp=N,3.2nm,0.9s,baz=173,slow=8.2,SNR=1.9						
	comp=N,3.2nm,0.9s						
MKAR	**Makanchi Array**	33.07	69	P	P	14 12 02.8	+0.2
	comp=N,0.3nm,0.6s,baz=291,slow=8.8,SNR=1.9						
	comp=N,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	42.01	232	LR	LR	14 34 14.8	
	comp=N,67nm,18.3s,baz=205,slow=41						
YKA	**Yellowknife Ar**	70.37	345	P	P	14 16 40.4	-0.1
	comp=N,0.2nm,0.7s,baz=26,slow=5.9,SNR=2.5						
	comp=N,0.2nm,0.7s						

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*IDC **13** 14:23:50.5±11.0, 24°.74S×178°.61W, h519^{km}±117^{km}, mb3.0/2, mbtmp4.1/3, Error ellipse: s-maj=103.5km s-min=51.0km az=26.0*

*NEIC **13** 14:23:51.8±0.6, 24°.6S±0°.2×179°.0W±0°.3, h490^{km}±29^{km}, mb4.1/10, Error ellipse: s-maj=46.9km s-min=28.2km az=56.0*

ISC 13 14:23:54.4±2.2, **24°.9S**±0°.2×**179°.3W**±0°.3, **h500**^{km}, **n16**, σ**0^{s}67**/17, **mb4.0**/8, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	13.70	192	P	P	14 26 49.7	-1.1
	5.7nm,0.5s,baz=124,slow=17,SNR=6.5						
URZ				S	S	14 29 15.7	-0.6
	9.3nm,1.0s,baz=70,slow=6.9,SNR=2.0						
URZ	**Urewera**	13.70	192	P	P	14 26 51.9	+1.1
QRZ	**Quartz Range**	17.32	201	P	P	14 27 28.8	+0.5
CTAO	**Charters Tower**	32.11	271	P	P	14 29 40.7	+0.6
CTAO				IAmb	IAmb	14 30 00.0	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	42.50	261	P	P	14 31 05.2	-0.2
AS31				IAmb	IAmb	14 31 08.5	
	comp=Z,1.5nm,1.4s						
ASAR	**Alice Springs**	42.50	261	P	P	14 31 05.2	-0.1
	comp=Z,0.4nm,0.3s,baz=94,slow=7.0,SNR=37						
	comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	42.50	261	P	P	14 31 05.0	-0.4
WR0	**Warramunga Arr**	42.78	267	P	P	14 31 07.0	-0.6
WR0				IAmb	IAmb	14 31 15.6	
	comp=Z,6.9nm,1.4s						
WB2	**Warramunga Arr**	42.96	267	P	P	14 31 08.3	-0.7
WB2				IAmb	IAmb	14 31 35.9	
	comp=Z,9.8nm,1.3s						
WB0	**Warramunga Arr**	42.97	267	P	P	14 31 08.4	-0.7
WB0				IAmb	IAmb	14 31 13.6	
	comp=Z,7.9nm,1.2s						
WRA	**Warramunga Arr**	42.97	267	P	P	14 31 08.7	-0.4
	comp=Z,1.5nm,0.5s,baz=104,slow=7.7,SNR=41						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	42.97	267	P	P	14 31 08.6	-0.4
KNRA	**Kununurra**	49.31	270	P	P	14 31 57.9	+0.5
VNDA	**Vanda**	53.48	185	P	P	14 32 27.3	+0.6
MORW	**Morawa**	57.14	250	P	P	14 32 53.1	0.0
MORW				IAmb	IAmb	14 33 10.8	
	comp=Z,18nm,1.5s						
BRTR	**Keskin Array B**	148.64	306	PKPbc	PKPdf	14 42 39.9	-0.8
	comp=Z,0.4nm,0.6s,baz=60,slow=6.8,SNR=2.7						

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*KRSC **13** 14:39:45.7±0.6, 54°.13N×160°.12E, h120^{km}±7^{km}, ML4.1*

*MOS **13** 14:39:46.1±0.5, 54°.17N×159°.93E, h128^{km}, mb3.8/5, Error ellipse: s-maj=15.9km s-min=4.2km az=73.6*

*NEIC **13** 14:39:47.5±2.1, 54°.2N±0°.1×159°.5E±0°.2, h128^{km}±12^{km}, mb3.9/31, Error ellipse: s-maj=19.7km s-min=16.0km az=146.0*

*IDC **13** 14:39:48.5±1.0, 54°.23N×159°.52E, h137^{km}±14^{km}, mb3.3/9, mbtmp3.8/12, Error ellipse: s-maj=18.7km s-min=17.6km az=95.0*

ISC 13 14:39:46.6±0.6, **54°.15N**±0°.03×**160°.00E**±0°.04, **h122**^{km}±5^{km}, **n148**, σ**1^{s}29**/199, **mb3.8**/28, **4C-4D**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	0.34	250	PN	Pn	14 40 04.1	+0.1
KII				S	Sn	14 40 17.7	+0.5
KII	**Karymskiy**	0.34	250	eP	Pn	14 40 04.1	+0.1
KII				eS	Sn	14 40 17.7	+0.5
NLC	**Nalytchevo**	1.06	202	PN	Pn	14 40 09.6	+0.3
NLC				S	Sn	14 40 26.9	+0.4
NLC	**Nalytchevo**	1.06	202	eP	Pn	14 40 09.6	+0.3
NLC				eS	Sn	14 40 26.9	+0.4
SPN	**Mys Shipunski**	1.06	179	PN	Pn	14 40 09.4	+0.1
SPN				S	Sn	14 40 26.1	-0.4
SPN	**Mys Shipunski**	1.06	179	eP	Pn	14 40 09.4	+0.1
SPN				eS	Sn	14 40 26.1	-0.4
TUMD	**Tumrok D**	1.08	12	eP	Pn	14 40 09.5	-0.1
TUMD				eS	Sn	14 40 26.7	-0.3
MKZ	**Mys Kozlova**	1.09	68	PN	Pn	14 40 09.7	+0.1
MKZ				S	Sn	14 40 26.5	-0.6
MKZ	**Mys Kozlova**	1.09	68	eP	Pn	14 40 09.7	+0.1
MKZ				eS	Sn	14 40 26.5	-0.6
SDLR	**Sedlovina**	1.10	218	PN	Pn	14 40 10.4	+0.5
SDLR	**Sedlovina**	1.10	218	eP	Pn	14 40 10.4	+0.5
KRER	**Koryakskii**	1.13	222	PN	Pn	14 40 11.0	+0.7
KRER				S	Sn	14 40 29.1	+0.9
KRER	**Koryakskii**	1.13	222	eP	Pn	14 40 11.0	+0.7
KRER				eS	Sn	14 40 29.1	+0.9
KRX	**Arik**	1.13	226	PN	Pn	14 40 10.8	+0.6
KRX				S	Sn	14 40 29.0	+0.9
KRX	**Arik**	1.13	226	eP	Pn	14 40 10.8	+0.6
KRX				eS	Sn	14 40 29.0	+0.9
TUMR	**Tumrok**	1.14	4	PN	Pn	14 40 10.7	+0.4
TUMR				S	Sn	14 40 28.5	+0.3
TUMR	**Tumrok**	1.14	4	eP	Pn	14 40 10.7	+0.4
TUMR				eS	Sn	14 40 28.5	+0.3
SMAR	**Somma**	1.14	219	PN	Pn	14 40 10.9	+0.5
SMAR				S	Sn	14 40 29.1	+0.7
SMAR	**Somma**	1.14	219	eP	Pn	14 40 10.9	+0.5
SMAR				eS	Sn	14 40 29.1	+0.7
AVH	**Avacha**	1.16	221	PN	Pn	14 40 11.3	+0.8
AVH				S	Sn	14 40 30.2	+1.6
AVH	**Avacha**	1.16	221	eP	Pn	14 40 11.3	+0.8
AVH				eS	Sn	14 40 30.2	+1.6
UGLR	**Uglovaya**	1.17	217	PN	Pn	14 40 11.3	+0.7
UGLR				S	Sn	14 40 30.0	+1.1
UGLR	**Uglovaya**	1.17	217	eP	Pn	14 40 11.3	+0.7
UGLR				eS	Sn	14 40 30.0	+1.1
KOK	**Koryaka**	1.18	224	PN	Pn	14 40 11.6	+0.9
KOK				S	Sn	14 40 30.4	+1.4
KOK	**Koryaka**	1.18	224	eP	Pn	14 40 11.6	+0.9
KOK				eS	Sn	14 40 30.4	+1.4
DALK	**Dalny**	1.34	214	PN	Pn	14 40 12.9	+0.6
DALK	**Dalny**	1.34	214	eP	Pn	14 40 12.9	+0.6
PET	**Petropavlovsk**	1.39	216		Pn	14 40 13.2	+0.4
PET	**Petropavlovsk**	1.39	216	ePN	Pn	14 40 13.2	+0.4
PET				eS	Sn	14 40 33.3	+0.6
PET				pmax	pmax		
	comp=Z,193nm,0.4s						
PET				smax	smax		
	comp=E,778nm,0.5s						
PET				smax	smax		
	comp=N,1µm,0.7s						
PET	**Petropavlovsk**	1.39	216	eP	Pn	14 40 13.3	+0.5
PET				eS	Sn	14 40 33.2	+0.6
KMNR	**Kamenistaya**	1.61	5	PN	Pn	14 40 16.2	+0.7
KMNR				S	Sn	14 40 38.6	+1.0
KMNR	**Kamenistaya**	1.61	5	eP	Pn	14 40 16.2	+0.7
KMNR				eS	Sn	14 40 38.6	+1.0
PEA0B	**Petropavlovsk-**	1.72	234		Pn	14 40 16.6	-0.1
PEA0B	**Petropavlovsk-**	1.72	234	c iPN	Pn	14 40 17.0	+0.3
PETK	**Petropavlovsk-**	1.72	234	P	Pn	14 40 16.4	-0.4
	comp=N,189nm,0.5s,baz=74,slow=13,SNR=768						
PETK				S	Sn	14 40 40.5	+0.7
	comp=N,34nm,0.6s,baz=61,slow=19,SNR=5.8						
PETK	**Petropavlovsk-**	1.72	234		Pn	14 40 16.0	-0.7
KRMR	**Karymshinskiy**	1.73	221	PN	Pn	14 40 17.4	+0.6
KRMR				S	Sn	14 40 40.4	+0.6
KRMR	**Karymshinskiy**	1.73	221	eP	Pn	14 40 17.4	+0.6
KRMR				eS	Sn	14 40 40.4	+0.6
KIRR	**Kirishev**	1.82	6	PN	Pn	14 40 18.4	+0.4
KIRR				S	Sn	14 40 42.1	+0.1
KIRR	**Kirishev**	1.82	6	eP	Pn	14 40 18.4	+0.4
KIRR				eS	Sn	14 40 42.1	+0.1
KPT	**Kopyto**	1.82	4	PN	Pn	14 40 18.4	+0.4
KPT				S	Sn	14 40 42.3	+0.3
KPT	**Kopyto**	1.82	4	eP	Pn	14 40 18.4	+0.4
KPT				eS	Sn	14 40 42.3	+0.3
BZGR	**Bezymyannyi-Gr**	1.84	12	PN	Pn	14 40 18.9	+0.7
BZGR				S	Sn	14 40 43.2	+0.8
BZGR	**Bezymyannyi-Gr**	1.84	12	eP	Pn	14 40 18.9	+0.7
BZGR				eS	Sn	14 40 43.2	+0.8
BZWR	**Bezymyannyi-We**	1.84	9	PN	Pn	14 40 19.2	+0.9
BZWR				S	Sn	14 40 43.5	+1.0
BZWR	**Bezymyannyi-We**	1.84	9	eP	Pn	14 40 19.2	+0.9
BZWR				eS	Sn	14 40 43.5	+1.0
KOZ	**Kozyrevsk**	1.91	358	PN	Pn	14 40 19.2	+0.2
KOZ				S	Sn	14 40 43.5	-0.3
KOZ	**Kozyrevsk**	1.91	358	eP	Pn	14 40 19.2	+0.2
KOZ				eS	Sn	14 40 43.5	-0.3
ESO	**Esso**	1.93	338	PN	Pn	14 40 18.9	-0.3
ESO	**Esso**	1.93	338	eP	Pn	14 40 18.9	-0.3
RUS	**Russkaya**	1.94	208	PN	Pn	14 40 19.6	+0.3
RUS				S	Sn	14 40 44.1	-0.2
RUS	**Russkaya**	1.94	208	eP	Pn	14 40 19.6	+0.3
RUS				eS	Sn	14 40 44.1	-0.2
GRL	**Gorelyy**	1.97	216	PN	Pn	14 40 21.0	+1.1
GRL				S	Sn	14 40 46.9	+1.5
GRL	**Gorelyy**	1.97	216	eP	Pn	14 40 21.0	+1.1
GRL				eS	Sn	14 40 46.9	+1.5
MTVR	**Mutnovka**	1.99	214	PN	Pn	14 40 21.0	+0.8
MTVR				S	Sn	14 40 46.7	+0.9
MTVR	**Mutnovka**	1.99	214	eP	Pn	14 40 21.0	+0.8
MTVR				eS	Sn	14 40 46.7	+0.9
APC	**Apacha**	2.09	235	PN	Pn	14 40 22.1	+0.9
APC	**Apacha**	2.09	235	eP	Pn	14 40 22.1	+0.9
KRSR	**Krestovskiy**	2.10	9	PN	Pn	14 40 21.8	+0.4
KRSR	**Krestovskiy**	2.10	9	eP	Pn	14 40 21.8	+0.4
ASAK	**Asacha**	2.17	216	PN	Pn	14 40 23.3	+0.9
ASAK				S	Sn	14 40 50.6	+0.9
ASAK	**Asacha**	2.17	216	eP	Pn	14 40 23.3	+0.9
ASAK				eS	Sn	14 40 50.6	+0.9
KLY	**Klyuchi**	2.20	10	PN	Pn	14 40 23.4	+0.9
KLY	**Klyuchi**	2.20	10	eP	Pn	14 40 23.4	+0.9
BDR	**Baidarnaya**	2.52	15	PN	Pn	14 40 28.1	+1.4
BDR				S	Sn	14 40 58.8	+1.3
BDR	**Baidarnaya**	2.52	15	eP	Pn	14 40 28.1	+1.4
BDR				eS	Sn	14 40 58.8	+1.3
SRKR	**Sorokina**	2.60	14	PN	Pn	14 40 28.9	+1.2
SRKR	**Sorokina**	2.60	14	eP	Pn	14 40 28.9	+1.2
KBG	**Krutoberegovo**	2.62	35	PN	Pn	14 40 28.5	+0.6
KBG				S	Sn	14 40 59.4	-0.2
KBG	**Krutoberegovo**	2.62	35	eP	Pn	14 40 28.5	+0.6
KBG				eS	Sn	14 40 59.4	-0.2
KDTR	**Khodutka, Kamc**	2.62	207	PN	Pn	14 40 28.4	+0.5
KDTR				S	Sn	14 40 58.5	-1.2
KDTR	**Khodutka, Kamc**	2.62	207	eP	Pn	14 40 28.4	+0.5
KDTR				eS	Sn	14 40 58.5	-1.2
KBTR	**Krutoberegovo**	2.62	37	PN	Pn	14 40 28.6	+0.7
KBTR	**Krutoberegovo**	2.62	37	eP	Pn	14 40 28.6	+0.7
MIPR	**Malaya Ipel'ka**	2.71	227	PN	Pn	14 40 29.9	+0.8
MIPR	**Malaya Ipel'ka**	2.71	227	eP	Pn	14 40 29.9	+0.8
PAU	**Pauzhetka**	3.31	217	PN	Pn	14 40 38.6	+1.6
PAU	**Pauzhetka**	3.31	217	eP	Pn	14 40 38.6	+1.6
BKI	**Bering**	3.63	71	PN	Pn	14 40 41.1	0.0
BKI				S	Sn	14 41 20.2	-3.0
BKI	**Bering**	3.63	71	eP	Pn	14 40 41.1	0.0
BKI				eS	Sn	14 41 20.2	-3.0
SKR	**Severo-Kuril's**	4.21	216	⇑iPN	Pn	14 40 50.0	+1.2
SKR	**Severo-Kuril's**	4.21	216	eP	Pn	14 40 49.8	+1.0
MA2	**Magadan**	7.42	321	P	Pn	14 41 32.1	+0.1
	comp=N,15nm,0.6s,baz=151,slow=11,SNR=8.6						
MA2	**Magadan**	7.42	321		Pn	14 41 30.9	-1.1
SHEM	**Shemya Is, Ala**	8.54	94	S	Sn	14 43 19.2	-2.5
	comp=N,16nm,0.5s,baz=308,slow=19,SNR=8.4						
SEY	**Seymchan**	9.65	339	P	Pn	14 42 03.0	+0.9
	comp=N,1.8nm,0.7s,baz=94,slow=21,SNR=4.4						
SEY	**Seymchan**	9.65	339	⇓ePN	Pn	14 41 54.8	-7.3
YSS	**Yuzh-Sakhalins**	13.10	244	⇓ePN	Pn	14 42 43.9	-3.9
BILL	**Bilibino**	14.25	10	eP	Pn	14 43 02.0	-0.4
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ERM	**Erimo**	16.50	229	⇑eP	Pn	14 43 30.1	-0.5
YAK	**Yakutsk**	17.71	309	P	P	14 43 41.7	-2.6
	comp=Z,5.5nm,0.5s,baz=179,slow=1.3,SNR=4.9						
YAK	**Yakutsk**	17.71	309	P	P	14 43 42.5	-1.8
UNV	**Unalaska Valle**	19.59	77	P	P	14 44 07.0	+2.1
JMM	**Marumori**	20.94	227	P	P	14 44 20.1	+0.6
TIXI	**Tiksi**	22.10	334	P	P	14 44 30.2	-1.2
	comp=Z,1.5nm,0.3s,baz=90,slow=20,SNR=4.5						
	comp=Z,1.5nm,0.3s						
MJAR	**Matsushiro Arr**	23.18	229	P	P	14 44 39.9	-2.4
MJAR				IAmb	IAmb	14 44 40.9	
	comp=Z,11nm,1.4s						
MJAR	**Matsushiro Arr**	23.18	229	P	P	14 44 39.9	-2.4
MJAR				pmax	pmax		
	comp=Z,11nm,1.4s						
TTA	**Tatalina**	24.12	51		P	14 44 52.4	+1.7
TTA				IAmb	IAmb	14 44 54.1	
	comp=Z,4.2nm,1.0s						
TTA	**Tatalina**	24.12	51	P	P	14 44 52.4	+1.7
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
N18K	**Kilae Creek**	24.24	57		P	14 44 54.6	+2.9
N18K				IAmb	IAmb	14 44 55.2	
	comp=Z,3.7nm,0.8s						
SVW2	**Sparrevohn**	24.36	56	P	P	14 44 54.4	+1.6
SVW2				IAmb	IAmb	14 44 56.4	
	comp=Z,3.2nm,1.0s						
O18K	**Koktuh Hills**	24.66	58	P	P	14 44 58.2	+2.7
O18K				IAmb	IAmb	14 44 59.9	
	comp=Z,6.0nm,1.0s						
L19K	**White Mountain**	24.66	53	P	P	14 44 58.3	+2.8
L19K				IAmb	IAmb	14 44 58.8	
	comp=Z,7.2nm,1.4s						
N19K	**Bonanza Creek**	24.92	56	P	P	14 45 00.8	+2.8
N19K				IAmb	IAmb	14 45 01.0	
	comp=Z,3.5nm,0.8s						
J20K	**Nowinta River**	24.98	48	P	P	14 44 59.8	+1.4
J20K				IAmb	IAmb	14 45 02.0	
	comp=Z,4.2nm,0.9s						
K20K	**Telida**	25.00	50	P	P	14 45 00.2	+1.6
IMAR	**Indian Mountai**	25.27	44	P	P	14 45 01.1	+0.2
H21K	**Melozitna Rive**	25.63	45	P	P	14 45 04.2	0.0
RSO	**Redoubt South**	25.80	57	P	P	14 45 07.5	+1.3
OHAK	**Old Harbor**	26.11	64	P	P	14 45 09.1	+0.5
TRF	**Thorofare Moun**	26.70	50	P	P	14 45 15.0	+0.9
TRF				IAmb	IAmb	14 45 16.3	
	comp=Z,4.0nm,1.1s						
I23K	**Minto, Yukon-K**	27.05	46	P	P	14 45 21.2	+4.2
TOLK	**Toolik Lake Re**	27.16	38	P	P	14 45 19.1	+1.1
HDA	**Harding Lake**	28.12	47	P	P	14 45 26.7	+0.2
HDA				IAmb	IAmb	14 45 28.2	
	comp=Z,1.8nm,0.8s						
IL31		28.12	47	P	P	14 45 27.1	+0.6
IL31				IAmb	IAmb	14 45 28.7	
	comp=Z,1.9nm,0.9s						
ILAR	**Eielson Array**	28.12	47	P	P	14 45 27.5	+1.0
	comp=Z,0.8nm,0.8s,baz=255,slow=7.0,SNR=11						
	comp=Z,0.8nm,0.8s						
J25K	**Salcha River,**	28.78	47	P	P	14 45 32.1	-0.4
BMAR	**Burnt Mountain**	28.97	41	P	P	14 45 35.5	+1.4
SCRK	**Sand Creek**	29.45	48	P	P	14 45 39.0	+0.5
SCRK				IAmb	IAmb	14 45 40.0	
	comp=Z,3.2nm,1.0s						
K27K	**Chicken**	30.28	48	P	P	14 45 47.1	+1.5
K27K				IAmb	IAmb	14 45 48.1	
	comp=Z,3.5nm,1.1s						
EGAK	**Eagle**	30.56	46	P	P	14 45 48.7	+0.6
EGAK				IAmb	IAmb	14 45 49.7	
	comp=Z,2.4nm,0.9s						
BCAR	**Beaver Creek A**	30.57	50	P	P	14 45 49.9	+1.6
M27K	**Edge Creek, AK**	30.66	51	P	P	14 45 50.7	+1.6
HYT	**Haines Junctio**	33.06	53	P	P	14 46 12.9	+2.7
HYT				IAmb	IAmb	14 46 18.0	
	comp=Z,2.5nm,1.2s						
INK	**Inuvik**	33.07	39	P	P	14 46 10.8	+0.8
	comp=Z,0.4nm,0.4s,baz=302,slow=13,SNR=2.1						
	comp=Z,0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	34.77	169	T	T	15 24 07.1	
	baz=355,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	34.78	169	T	T	15 24 08.3	
	baz=355,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	34.78	169	T	T	15 24 08.7	
	baz=355,slow=76,SNR=28						
YKA	**Yellowknife Ar**	42.43	43	P	P	14 47 29.2	+0.7
	comp=Z,0.5nm,0.7s,baz=298,slow=8.2,SNR=6.1						
	comp=Z,0.5nm,0.7s						
KURK	**Kurchatov**	47.13	301	P	P	14 48 03.1	-2.9
KURK	**Kurchatov**	47.13	301	⇓iP	P	14 48 03.2	-2.9
KURK				pmax	pmax		
	comp=Z,5.0nm,2.7s						
MK31	**Makanchi Array**	47.65	295	P	P	14 48 07.5	-2.7
MK31	**Makanchi Array**	47.65	295	P	P	14 48 07.5	-2.7
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	47.65	295	P	P	14 48 07.5	-2.7
	comp=Z,0.4nm,0.5s,baz=58,slow=7.7,SNR=6.1						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	47.65	295	P	P	14 48 07.7	-2.5
MKAR	**Makanchi Array**	47.65	295	P	P	14 48 07.7	-2.5
AAK	**Ala-Archa**	54.56	295	⇓eP	P	14 48 56.5	-5.5
AAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
NVAR	**Mina Array Bea**	55.44	71	P	P	14 49 10.9	+2.5
	comp=Z,0.7nm,0.7s,baz=296,slow=7.3,SNR=6.6						
	comp=Z,0.7nm,0.7s						
BW06	**Boulder Array**	57.06	61	P	P	14 49 22.5	+2.6
PD31	**Pinedale Array**	57.06	61	P	P	14 49 21.6	+1.7
PD31				IAmb	IAmb	14 49 23.0	
	comp=Z,2.2nm,1.1s						
PDAR	**Pinedale Array**	57.06	61	P	P	14 49 22.2	+2.4
	comp=Z,0.8nm,0.5s,baz=336,slow=3.3,SNR=4.0						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	57.06	61	P	P	14 49 22.0	+2.1
BTLR	**Botlikh**	68.21	313	⇑eP	P	14 50 27.9	-5.8
TX31	**Lajitas Ar. Si**	70.28	67	P	P	14 50 48.0	+1.4
TX32	**Lajitas Array**	70.28	67	P	P	14 50 48.0	+1.4
TX32				IAmb	IAmb	14 50 49.4	
	comp=Z,1.7nm,1.1s						
TXAR	**Lajitas Array**	70.28	67	P	P	14 50 48.6	+2.0
	comp=Z,0.8nm,0.5s,baz=294,slow=5.2,SNR=18						
	comp=Z,0.8nm,0.5s						
TXAR	**Lajitas Array**	70.28	67	P	P	14 50 48.2	+1.6
ASAR	**Alice Springs**	80.70	204	P	P	14 51 46.3	+0.5
	comp=Z,0.3nm,1.0s,baz=19,slow=4.0,SNR=1.9						
ASAR				pP	pP	14 52 16.9	+0.1
	comp=Z,0.2nm,0.7s,baz=20,slow=6.5,SNR=4.4						
	comp=Z,0.3nm,1.0s						

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*ANF **13** 14:50:39.2±0.1, 36°.37N×117°.48W, h14^{km}±1^{km}, ML3.5/31, Error ellipse: s-maj=1.3km s-min=1.0km az=8.0*

*PAS **13** 14:50:39.8±1.6, 36°.38N±0°.02×117°.47W±0°.02, h1^{km}±7^{km}, ML3.5/102, ML3.2/124(NEIC), Mwr3.3(REN), Error ellipse: s-maj=2.7km s-min=2.6km az=198.0*

*NEIC **13** 14:50:39.4±1.4, 36°.37N±0°.02×117°.49W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=2.2km az=61.0*

*REN **13** 14:50:39.5±1.7, 36°.37N±0°.02×117°.48W±0°.03, h18^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=3.0km az=181.0*

*NEIC **13** 14:50:40, 36°.37N×117°.48W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.67; M$_{\theta\theta}$-0.44; M$_{\phi\phi}$1.11; M$_{r\theta}$-0.65; M$_{\theta\phi}$0.09; M$_{\phi r}$-0.52; Fault plane solution: M$_{0}$1.28000×10^{14} NP1:ϕ_{s}35.00000°, δ70.00000°, λ-55.00000°. NP2:ϕ_{s}151.00000°, δ40.00000°, λ-148.00000°. Principal axes: T 1.2930, Plg18.0000°, Azm100.0000°; N -0.0266, Plg33.0000°, Azm202.0000°; P -1.2665, Plg52.0000°, Azm346.0000°;*

ISC 13 14:50:39.6±1.0, **36°.35N**±0°.02×**117°.46W**±0°.02, **h10**^{km}±9^{km}, **n106**, σ**0^{s}99**/134, **California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FURC	**Furnace Creek,**	0.50	76	P	Pg	14 50 49.7	+0.4
	baz=259,SNR=1000						
FURC				S	Sg	14 50 56.7	+0.9
	baz=259						
CWC	**Cottonwood Cre**	0.51	280	P	Pg	14 50 49.5	0.0
	baz=98						
CWC				S	Sg	14 50 56.4	+0.2
	baz=98						
QSM	**Queen of Sheba**	0.62	129		Pg	14 50 52.0	+0.4
QSM				Sg	Sb	14 51 00.8	-0.3
GWY	**Greenwater Val**	0.66	104		Pg	14 50 52.8	+0.4
GWY				Sg	Sg	14 51 01.9	+0.8
LRMC	**Laurel Mtn Rad**	0.89	192	P	Pg	14 50 56.9	+0.2
	baz=11,SNR=280						
LRMC				S	Sb	14 51 09.0	0.0
	baz=11						
LCH	**Last Change Ra**	0.89	351		Pg	14 50 55.9	-0.9
LCH				Sg	Sg	14 51 08.1	-0.4
LCH				IAML		14 51 09.6	
	comp=E,802nm,0.4s						
TIN	**Tinemaha, Big**	0.93	319	P	Pg	14 50 56.7	-0.9
	baz=138,SNR=35						
TIN				S	Sg	14 51 09.6	-0.2
	baz=138						
SHOC	**Shoshone, Teco**	1.06	115	P	Pb	14 50 59.4	-0.6
	baz=296,SNR=695						
SHOC				S	Sg	14 51 14.5	+0.7
	baz=296						
ISA	**Isabella, Lake**	1.07	230		Pb	14 51 00.2	0.0
ISA				Sg	Sg	14 51 13.5	-0.5
ISA				IAML		14 51 14.8	
	comp=E,746nm,0.4s						
ISA				IAML		14 51 15.0	
	comp=N,759nm,0.5s						
ISA	**Isabella, Lake**	1.07	230	Pg	Pb	14 51 00.2	0.0
	baz=49,SNR=202						
ISA				S	Sb	14 51 14.2	0.0
	baz=49						
TPNV	**Topopah Spring**	1.14	58		Pb	14 51 01.1	-0.4
TPNV	**Topopah Spring**	1.14	58		Sb	14 51 17.2	+0.8
TPNV				IAML		14 51 23.6	
	comp=N,882nm,0.7s						
TPNV	**Topopah Spring**	1.14	58	P	Pb	14 51 01.1	-0.4
	baz=240,SNR=1000						
TPNV				S	Sb	14 51 16.1	-0.4
	baz=240						

GSC	Goldstone, Bar	1.18	153	Pg	Pb	14 51 01.6	-0.4
GSC				Sg	Sn	14 51 18.1	-0.1
GSC				IAML		14 51 21.3	
	comp=E,772nm,0.6s						
GSC				IAML		14 51 26.8	
	comp=N,453nm,0.8s						
GSC	Goldstone, Bar	1.18	153	P	Pb	14 51 01.6	-0.4
	baz=333,SNR=76						
GSC				S	Sn	14 51 18.0	-0.1
	baz=333						
CCAC	Calif City Air	1.28	201		Pb	14 51 03.8	+0.1
CCAC				Sg	Sg	14 51 20.9	+0.2
CCAC				IAML		14 51 27.4	
	comp=N,293nm,0.8s						
CCAC				IAML		14 51 27.5	
	comp=E,380nm,0.7s						
HELL	Mitchell Peak,	1.30	285		Pn	14 51 03.5	-0.3
HELL					Sb	14 51 20.4	-0.4
MTUM	Tungsten Hills	1.33	319		Pn	14 51 04.2	-0.2
VES	Vestal, Richgr	1.41	249	Pg	Pb	14 51 06.3	+0.5
	baz=68,SNR=114						
VES				Sb	Sg	14 51 24.5	-0.4
	baz=68						
RRX	Edison Barstow	1.52	165	Pg	Pg	14 51 09.1	+0.3
	baz=346						
RRX				Sg	Sg	14 51 30.4	+1.9
	baz=346						
EDW2	Edwards Air Fo	1.53	197	Pb	Pb	14 51 08.2	+0.2
	baz=16,SNR=128						
EDW2				Sb	Sg	14 51 28.3	-0.5
	baz=16						
TUQ	Turquoise Moun	1.55	126	P	Pn	14 51 06.5	-0.7
	baz=307,SNR=434						
TUQ				Sb	Sg	14 51 29.9	+0.5
	baz=307						
VOG	Valley Oaks Go	1.55	269	Pg	Pb	14 51 08.5	+0.2
	baz=88						
ARVC	Arvin	1.65	223	Pg	Pg	14 51 10.9	-0.3
	baz=41						
MLAC	Mammoth, Mammo	1.68	320	Pg	Pb	14 51 11.3	+0.5
	baz=139,SNR=16						
MLAC				Sg	Sg	14 51 33.8	+0.1
	baz=139						
TPH	Tonopah	1.73	6		Pn	14 51 10.0	+0.2
OMMB	Old Mammoth Mi	1.76	316		Pn	14 51 10.5	+0.2
HEC	Hector,Ludlow	1.77	148	P	Pn	14 51 09.8	-0.5
	baz=329,SNR=30						
HEC				Sb	Sg	14 51 36.5	-0.2
	baz=329						
KCC	Kaiser Creek	1.78	304		Pn	14 51 10.7	+0.3
MDPB	Devils Postpil	1.82	315		Pn	14 51 12.5	+1.4
MDPB				IAML		14 51 39.2	
	comp=E,216nm,0.9s						
MDPB				IAML		14 51 39.6	
	comp=N,219nm,0.8s						
SHPR	Sheep Range	1.86	85		Pn	14 51 11.8	+0.1
S11A	Rachel	1.89	46		Pb	14 51 13.8	-0.3
LHV	Little Huntoon	2.07	337		Pn	14 51 14.7	+0.4
LHV				IAML		14 51 50.3	
	comp=N,235nm,0.8s						
BFSC	Mount Baldy Ra	2.11	184	Pg	Pg	14 51 20.0	-0.1
	baz=4.0						
BFSC				Sb	Sg	14 51 46.7	-0.8
	baz=4.0						
BBRC	Big Bear Solar	2.13	168	Pg	Pg	14 51 20.3	-0.1
	baz=348						
BBRC				Sb	Sg	14 51 47.6	-0.5
	baz=348						
GMRC	Granite Mounta	2.15	136	P	Pn	14 51 14.4	-1.0
	baz=318,SNR=31						
GMRC				Sb	Sg	14 51 48.3	-0.3
	baz=318						
NV11	Mina Array Sit	2.15	345		Pn	14 51 15.5	0.0
NVAR	Mina Array Bea	2.18	342		Pn	14 51 15.9	-0.1
PRN	Pahroc Range	2.20	61		Pn	14 51 16.4	+0.2
DECC	Green Verdugo	2.21	199	Sb	Sg	14 51 49.9	-0.7
	baz=18						
PASC	Pasadena Art C	2.25	195		Pn	14 51 18.1	+1.3
SMMC	Simmler	2.30	244	Pb	Pb	14 51 21.1	-0.1
	baz=62,SNR=17						
SMMC				Sb	Sb	14 51 51.4	+1.7
	baz=62						
PAGB	Antelope Grade	2.34	255		Pb	14 51 21.2	-0.6
PAGB				IAML		14 52 02.6	
	comp=N,225nm,0.7s						
PAGB				IAML		14 52 05.7	
	comp=E,179nm,1.5s						
PKM	Mcpherson Peak	2.41	233	Pb	Pb	14 51 22.9	-0.2
	baz=52,SNR=20						
PKM				Sb	Sb	14 51 54.6	+1.8
	baz=52						
RYN	Ryan	2.42	340		Pn	14 51 19.6	+0.3
R11A	Troy Canyon, C	2.49	36		Pn	14 51 20.8	+0.5
R11A				IAML		14 51 58.5	
	comp=N,116nm,0.5s						
R11A				IAML		14 51 58.5	
	comp=E,136nm,0.5s						
R11A	Troy Canyon, C	2.49	36	Pb	Pb	14 51 24.3	-0.2
	baz=218,SNR=64						
R11A				Sb	Sb	14 51 57.4	+2.1
	baz=218						
BELC	Belle Mtn. Jos	2.63	152	P	Pn	14 51 22.1	-0.1
	baz=333,SNR=24						
BELC				Sb	Sg	14 52 03.3	-1.0
	baz=333						
ELS	Elsinore Mount	2.70	179		Pn	14 51 24.0	+1.0
PMPB	Monarch Peak	2.70	268		Pn	14 51 25.4	+2.4
PMPB				IAML		14 52 17.0	
	comp=E,98nm,0.7s						
PMPB				IAML		14 52 20.4	
	comp=N,110nm,0.8s						
KVN	Kaiserville	2.74	350		Pn	14 51 23.9	+0.2
KVN				IAML		14 52 09.6	
	comp=N,59nm,0.8s						
MURC	Murrieta	2.75	175	Sb	Sg	14 52 06.6	-1.4
	baz=355						
NEE2	Needles Airpor	2.81	123	Pg	Pg	14 51 32.6	-0.7
	baz=305						
PFO	Pinyon Flats O	2.85	163		Pn	14 51 25.6	+0.4
PFO	Pinyon Flats O	2.85	163	P	Pn	14 51 24.8	-0.4
	baz=344,SNR=8.2						
CMB	Columbia Colle	2.88	307	Pg	Pb	14 51 29.6	-1.4
CMB				IAML		14 52 09.2	
	comp=E,73nm,0.6s						
CMB				IAML		14 52 12.0	
	comp=N,96nm,0.6s						
BBGB	Big Mountain B	2.89	276		Pn	14 51 25.9	+0.2
IRM	Iron Mountain	2.90	138	P	Pn	14 51 24.9	-0.8
	baz=320,SNR=20						
ICU	Indian Springs	2.95	73		Pn	14 51 27.1	+0.5
YERR	Yerington	2.98	332		Pn	14 51 27.3	+0.2
YERR				IAML		14 52 22.5	
	comp=E,53nm,0.8s						
YERR				IAML		14 52 24.1	
	comp=N,48nm,0.9s						
CIS	Catalina Islan	3.04	195	Pg	Pg	14 51 37.6	-0.3
	baz=14						
BC3	Big Chuckawall	3.15	148	P	Pn	14 51 28.6	-0.7
	baz=329						
W13A	Hualapai Mount	3.17	112		Pn	14 51 30.3	+0.7
W13A				IAML		14 52 23.9	
	comp=N,59nm,0.4s						
W13A				IAML		14 52 26.4	
	comp=E,50nm,0.5s						
PNTR	Pine Nut	3.21	329		Pn	14 51 30.1	-0.2
PNTR				IAML		14 52 28.6	
	comp=N,45nm,0.8s						
PNTR				IAML		14 52 30.0	
	comp=E,44nm,1.1s						
SAO	San Andreas Ge	3.23	278		Pn	14 51 33.1	+2.8
EMB	Emerald Bay	3.35	322		Pn	14 51 32.4	+0.2
EMB				IAML		14 52 39.5	
	comp=N,48nm,0.9s						
EMB				IAML		14 52 44.6	
	comp=E,42nm,1.0s						
VCNR	Virginia City	3.41	330		Pn	14 51 33.9	+0.9
VCNR				IAML		14 52 32.5	
	comp=E,40nm,0.7s						
LCMT	Little Creek M	3.46	78		Pn	14 51 34.2	+0.7
CCUT	Cedar City	3.50	69		Pn	14 51 34.6	+0.4
BLYC	Blythe	3.54	136		Pn	14 51 34.3	-0.3
MONP2	Monument Peak	3.56	166	Pg	Pg	14 51 45.9	-1.8
	baz=346						
MPK	Martis Peak	3.57	326		Pn	14 51 35.0	-0.2
MPK				IAML		14 52 40.0	
	comp=E,40nm,1.1s						
MPK				IAML		14 52 43.1	
	comp=N,74nm,1.0s						
PSUT	Pine Spring	3.60	52		Pb	14 51 40.3	-3.2
PAHR	Pah Rah Range	3.68	336		Pn	14 51 36.9	+0.3
SZCU	Shurtz Canyon	3.72	69		Pn	14 51 37.8	+0.7
SZCU				IAML		14 52 46.3	
	comp=N,25nm,0.3s						
BAR	Barrett	3.72	170		Pn	14 51 38.1	+1.1
BAR				IAML		14 52 39.1	
	comp=E,32nm,0.6s						
BAR				IAML		14 52 40.3	
	comp=N,33nm,0.6s						
YUH	Yuha Desert	3.91	161		Pn	14 51 41.1	+1.5
GLA	Glamis	3.94	146		Pn	14 51 41.8	+1.6
BMN	Battle Mountai	4.08	3		Pn	14 51 42.8	+0.7
BMN				IAML		14 52 55.8	
	comp=N,21nm,0.9s						
CBX	Cerro Bola	4.08	170		Pn	14 51 44.4	+2.3
CBX				IAML		14 52 50.4	
	comp=N,38nm,0.6s						
CBX				IAML		14 52 55.6	
	comp=E,36nm,0.8s						
U15A	North Rim	4.17	87		Pn	14 51 45.3	+1.8
U15A				IAML		14 52 58.7	
	comp=E,20nm,1.1s						
U15A				IAML		14 52 59.7	
	comp=N,30nm,1.0s						
BEKR	Beckworth	4.19	328		Pn	14 51 45.2	+1.6
BEKR				IAML		14 53 07.1	
	comp=E,28nm,0.7s						
PKCU	Pink Cliffs	4.27	74		Pn	14 51 46.6	+1.7
PKCU				IAML		14 52 56.6	
	comp=E,47nm,0.4s						
PKCU				IAML		14 53 05.2	
	comp=N,33nm,1.1s						
Y14A	Wickenburg	4.38	122		Pn	14 51 49.3	+3.3
MTPU	Mount Pierson	4.54	67		Pn	14 51 50.8	+2.2
TCRU	Three Creeks R	4.58	59		Pn	14 51 49.5	+0.4
TCRU				IAML		14 53 08.4	
	comp=N,23nm,1.0s						
TCRU				IAML		14 53 13.6	
	comp=E,31nm,1.0s						
MCCM	Marconi Confer	4.68	294	Pn	Pn	14 51 51.4	+1.3
MCCM				IAML		14 53 08.4	
	comp=N,22nm,1.3s						
MCCM				IAML		14 53 24.4	
	comp=E,26nm,1.7s						
113A	Mohawk Valley,	4.70	138		Pn	14 51 51.9	+1.5
113A				IAML		14 53 11.9	
	comp=N,14nm,0.9s						
113A				IAML		14 53 14.7	
	comp=E,17nm,0.9s						
ELK	Elko	4.72	21	Pn	Pn	14 51 51.9	+0.9
ELK				IAML		14 53 11.5	
	comp=E,15nm,0.7s						
ELK				IAML		14 53 11.8	
	comp=E,20nm,0.4s						
MSU	Marysvale	4.73	61		Pn	14 51 50.4	-0.7
WUAZ	Wupatki	5.01	98		Pn	14 51 55.6	+0.7
WUAZ				IAML		14 52 45.2	
	comp=E,16nm,0.7s						
WUAZ				IAML		14 53 29.6	
	comp=E,20nm,0.5s						
DUG	Dugway, Tooele	5.30	42		Pn	14 51 59.7	+0.8
NLU	North Lily Min	5.56	48		Pn	14 52 02.0	-0.5
Q16A	Castle Valley	5.61	61		Pn	14 52 03.0	-0.2
BGU	Big Grassy Mou	5.74	36		Pn	14 52 07.3	+2.4
TMUT	Trail Mountain	5.76	57		Pn	14 52 08.2	+2.9
214A	Organ Pipe Nat	5.84	137		Pn	14 52 06.3	+0.1
WVOR	Wild Horse Val	6.14	352	Pn	Pn	14 52 09.8	-0.6
SRU	San Rafael Swe	6.15	61		Pn	14 52 09.5	-1.1
HVU	Hansel Valley	6.53	33		Pn	14 52 15.5	-0.3
P18A	Preston Nutter	6.57	58	Pn	Pn	14 52 16.6	+0.1
HWUT	Hardware Ranch	6.97	39	Pn	Pn	14 52 21.8	-0.1
PV23	Carpenter Ridg	7.05	70		Pn	14 52 22.9	0.0
MFID	Camas Ranch	7.17	10		Pn	14 52 24.3	-0.1
MVCO	Mesa Verde	7.25	81		Pn	14 52 25.8	+0.1
HLID	Hailey	7.57	17		Pn	14 52 31.0	+0.9

MAN ***13*** *15:13:38±3.3, 10°.14N±0°.09×126°.2E±0°.1, h19^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=183.0*

NEIC ***13*** *15:13:39.2±1.1, 10°.25N±0°.10×126°.08E±0°.04, h44^{km}±8^{km}, mb4.5/15, Error ellipse: s-maj=13.9km s-min=6.3km az=181.0*

IDC ***13*** *15:13:44.3±3.0, 10°.05N×126°.15E, h102^{km}±31^{km}, mb3.7/11, mbtmp4.1/12, MS3.2/21, Error ellipse: s-maj=33.2km s-min=19.4km az=69.0*

ISC 13 15:13:36.7±1.7**, 10°.25N**±0°.05×**126°.28E**±0°.06**, h24**^{km}±12^{km}**, n60, σ1^{s}34**/49**, mb4.4**/18**, MS3.2**/16**, 8D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.48	198	⇓*e*P	Pb	15 13 46.8	+0.1
GLSP				*e*S	Sb	15 13 53.1	-0.3
SCPH	Surigao	0.91	239	⇓*e*P	Pb	15 13 52.9	-0.8
SCPH				*e*S	Sb	15 14 05.0	-0.3
MSLP	Maasin	1.40	265	⇓*e*P	Pb	15 14 01.6	-0.5
MSLP				*e*S	Sb	15 14 19.3	-0.3
BUTP	Butuan	1.43	207	⇓*e*P	Pn	15 14 01.1	+0.1
BUTP				*e*S	Sn	15 14 19.3	+0.2
BIPH	Bislig	2.05	178	⇓*i*P	Pn	15 14 09.7	0.0
BIPH				*i* S	Sn	15 14 36.2	+1.7
DAV	Davao City (W)	3.23	192	P	Pn	15 14 28.9	+3.0
	138nm,0.4s,baz=87,slow=3.5,SNR=6.9						
DAV				S	Sn	15 15 06.9	+3.3
	321nm,0.5s,baz=105,slow=22,SNR=9.1						
DAV				LR	LR	15 16 01.9	
	comp=Z,725nm,19.7s,baz=40,slow=46						
DAV	Davao City (W)	3.23	192		Pn	15 14 26.8	+0.9
CNOP	Candoni, Negro	3.61	264	⇓*e*P	Pn	15 14 33.1	+2.0
CNOP				*e*S	Sn	15 15 13.9	+1.0
PAGZ	Pagadian	3.73	230	⇓*e*P	Pn	15 14 35.0	+2.4
PAGZ				*e*S	Sn	15 15 16.0	+0.2
LQP	Lukban	6.02	310	⇓*e*P	Pn	15 15 07.1	+2.7
MYLDM	Lahad Datu	9.21	237	Pn	Pn	15 15 46.6	-1.4
SIJI	Sorong	12.11	156	LR	LR	15 21 06.5	
	comp=Z,56nm,21.6s,baz=8.5,slow=37						
TPUB	Ta-pu	14.06	338	P	P	15 17 01.1	-0.9
SBUM	Sibu	15.97	242		Pn	15 17 19.2	-0.7
KAPI	Kappang	16.50	204	P	P	15 17 31.6	+2.5
	9.6nm,0.3s,baz=58,slow=19,SNR=1.9						
KAPI				LR	LR	15 24 56.1	
	comp=Z,52nm,19.4s,baz=13,slow=41						
JOW	Kunigami	16.60	6	LR	LR	15 24 51.5	
	comp=Z,26nm,18.4s,baz=166,slow=40						
GUMO	Guam	18.49	78	LR	LR	15 25 56.9	
	comp=Z,51nm,18.9s,baz=234,slow=39						
BATI	Baumata	20.49	187	P	P	15 18 11.7	-1.3
	13nm,0.8s,baz=39,slow=6.5,SNR=1.8						
	13nm,0.8s						
JCJ	Chichijima	22.49	40	LR	LR	15 25 36.0	
	comp=Z,51nm,20.8s,baz=206,slow=31						
MTN	Manton Dam	23.44	168	P	P	15 18 44.9	+0.5
MTN				IAmb	IAmb	15 18 50.8	
	comp=Z,20nm,1.0s						
LEM	Lembang	25.16	228	LR	LR	15 28 50.1	
	comp=Z,73nm,19.3s,baz=14,slow=36						
KNRA	Kununurra	25.88	175	P	P	15 19 07.0	+0.3
JHJ	Hachijo jima 2	25.94	27	LR	LR	15 29 25.0	
	comp=Z,30nm,20.4s,baz=358,slow=36						
KSRS	Korea Array	27.13	3	LR	LR	15 28 36.7	
	comp=Z,20nm,21.6s,baz=195,slow=33						
CMAR	Chiang Mai Arr	27.68	290	P	P	15 19 23.0	-0.1
	comp=Z,0.9nm,0.8s,baz=117,slow=6.2,SNR=4.3						
CMAR				LR	LR	15 30 18.8	
	comp=Z,32nm,18.4s,baz=175,slow=36						
	comp=Z,0.9nm,0.8s						
MJAR	Matsushiro Arr	28.32	21	LR	LR	15 28 55.0	
	comp=Z,46nm,21.4s,baz=188,slow=32						
MBWA	Marble Bar	31.87	192	P	P	15 19 59.1	-0.9
MBWA				IAmb	IAmb	15 20 03.6	
	comp=Z,6.8nm,0.9s						
PSA00	Pilbara Seismi	32.25	191	P	P	15 20 03.5	+0.1
PSA00				IAmb	IAmb	15 20 11.8	
	comp=Z,7.7nm,0.9s						
USRK	Ussuriysk Ar.	34.19	7	LR	LR	15 32 27.8	
	comp=Z,19nm,21.4s,baz=241,slow=33						
ASAR	Alice Springs	34.52	168	P	P	15 20 20.7	-2.5
	comp=Z,1.0nm,0.4s,baz=352,slow=6.7,SNR=10						
	comp=Z,1.0nm,0.4s						
ASAJ	Asahikawa	36.58	20	LR	LR	15 37 11.5	
	comp=Z,20nm,18.6s,baz=192,slow=38						
H11N1	WAKE ISLAND Hy	40.25	72	T	T	16 04 30.7	
	baz=265,slow=74,SNR=108						
H11N2	WAKE ISLAND Hy	40.26	72	T	T	16 04 32.3	
	baz=265,slow=74,SNR=60						
H11N3	WAKE ISLAND Hy	40.27	72	T	T	16 04 32.3	
	baz=265,slow=74,SNR=95						
MORW	Morawa	40.32	194	P	P	15 21 11.0	-1.2
MORW				IAmb	IAmb	15 21 40.2	
	comp=Z,11nm,1.4s						
FORT	Forrest	40.83	178	P	P	15 21 15.4	-1.0
SONM	Songino Array	41.04	340	P	P	15 21 17.8	-0.4
	comp=Z,0.8nm,0.5s,baz=148,slow=8.8,SNR=4.0						
	comp=Z,0.8nm,0.5s						
BBOO	Buckleboo	43.82	168	P	P	15 21 40.5	-0.3
PETK	Petropavlovsk-	49.65	24	P	P	15 22 28.1	+1.8
	comp=Z,3.7nm,0.9s,baz=222,slow=2.0,SNR=4.6						
PETK				LR	LR	15 44 29.6	
	comp=Z,20nm,19.3s,baz=185,slow=37						
	comp=Z,3.7nm,0.9s						
MK31	Makanchi Array	52.05	323	P	P	15 22 42.9	-1.5
MKAR	Makanchi Array	52.05	323	P	P	15 22 43.7	-0.8
	comp=Z,1.1nm,0.6s,baz=124,slow=7.5,SNR=7.6						
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	52.05	323	P	P	15 22 44.0	-0.5
ZALV	Zalesovo Beam	54.65	331	P	P	15 23 02.4	-1.0
	comp=Z,0.7nm,0.4s,baz=125,slow=7.7,SNR=4.5						
ZALV				LR	LR	15 47 55.6	
	comp=Z,22nm,18.6s,baz=68,slow=38						
	comp=Z,0.7nm,0.4s						
AAK	Ala-Archa	55.35	315	LR	LR	15 49 28.5	
	comp=Z,46nm,18.4s,baz=84,slow=39						
KURK	Kurchatov	56.09	326	P	P	15 23 12.9	-0.9
TIXI	Tiksi	61.37	1	P	P	15 23 50.6	+0.4
TIXI				IAmb	IAmb	15 23 52.3	
	comp=Z,7.2nm,1.1s						
AKTO	Aktyubinsk	68.34	320	LR	LR	15 59 45.7	
	comp=Z,41nm,18.4s,baz=92,slow=40						
O18K	Koktuh Hills	75.43	31	P	P	15 25 18.7	+0.3
O18K				IAmb	IAmb	15 25 21.6	
	comp=Z,11nm,1.2s						
H21K	Melozitna Rive	76.98	25	P	P	15 25 28.3	+1.2
H21K				IAmb	IAmb	15 25 30.3	
	comp=Z,4.6nm,1.2s						
ILAR	Eielson Array	79.45	26	P	P	15 25 39.0	-1.8
	comp=Z,0.2nm,0.5s,baz=241,slow=6.6,SNR=3.5						
	comp=Z,0.2nm,0.5s						
BMAR	Burnt Mountain	80.28	23	P	P	15 25 45.1	-0.2
RIDG	Independent Ri	80.39	27	P	P	15 25 46.1	+0.2
RIDG				IAmb	IAmb	15 25 48.5	
	comp=Z,6.3nm,1.2s						
ARCES	ARCESS Array B	84.22	340	P	P	15 26 05.4	-0.4
	comp=Z,8.6nm,1.2s,baz=73,slow=6.7,SNR=1.5						
	comp=Z,8.6nm,1.2s						
FINES	FINESS Array B	85.91	332	P	P	15 26 13.6	-0.8
	comp=Z,0.8nm,0.5s,baz=108,slow=4.2,SNR=7.9						
	comp=Z,0.8nm,0.5s						
FINES	FINESS Array B	85.91	332	P	P	15 26 12.8	-1.6
VNDA	Vanda	89.91	173	LR	LR	16 06 09.8	
	comp=Z,22nm,19.0s,baz=342,slow=35						
NOA	NORSAR Array B	92.78	334	LR	LR	16 16 04.0	
	comp=Z,20nm,19.3s,baz=340,slow=40						
YKA	Yellowknife Ar	93.77	24	P	P	15 26 52.0	+0.6
	comp=Z,1.5nm,0.8s,baz=302,slow=4.5,SNR=22						
	comp=Z,1.5nm,0.8s						
MBAR	Mbarara	95.56	270	LR	LR	16 10 11.8	
	comp=Z,23nm,18.4s,baz=61,slow=36						
NEW	Newport	99.38	37	LR	LR	16 07 24.5	
	comp=Z,16nm,19.7s,baz=70,slow=32						

IDC ***13*** *15:16:01.2±0.8, 25°.35S×178°.21E, h605^{km}±9^{km}, mb3.9/20, mbtmp4.9/23, Error ellipse: s-maj=11.4km s-min=9.2km az=42.0*

NEIC ***13*** *15:16:01.2±1.1, 25°.3S±0°.1×178°.4E±0°.1, h620^{km}±10^{km}, mb4.6/38, Error ellipse: s-maj=18.4km s-min=14.9km az=91.0*

NOU ***13*** *15:16:01.0, 25°.33S×178°.40E, h623^{km}, mb4.8/63, South of Fiji Islands*

ISC 13 15:16:00.3±0.3**, 25°.37S**±0°.06×**178°.29E**±0°.06**, h600**^{km}**, n235, σ1^{s}29**/242**, mb4.7**/56**, 7C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.13	140	P	P	15 17 36.4	+2.3
	409nm,0.3s,baz=260,slow=20,SNR=12						
RAO				S	S	15 18 52.8	+1.9
	514nm,0.6s,baz=263,slow=23,SNR=1.9						
RAO	Raoul Island	5.13	140	P	P	15 17 36.0	+1.9
MARNC	Mare, Loyalty	10.18	290	P	P	15 18 22.5	+1.6
MARNC	Mare, Loyalty	10.18	290	P	P	15 18 22.6	+1.6
PINNC	Pines Island,	10.28	283	P	P	15 18 23.6	+1.7
PINNC	Pines Island,	10.28	283	P	P	15 18 23.8	+1.9
OUZ	Omahuta	10.62	201	P	P	15 18 27.2	+2.2
OUZ	Omahuta	10.62	201	P	P	15 18 27.7	+2.7
OUENC	Ouen Island, N	10.88	283	P	P	15 18 29.6	+1.8
OUENC	Ouen Island, N	10.88	283	P	P	15 18 29.7	+1.9
YATNC	Mamie plateau,	10.95	285	P	P	15 18 30.4	+1.8
LIFNC	LIFOU	11.15	292	P	P	15 18 31.8	+1.2
LIFNC	LIFOU	11.15	292	P	P	15 18 31.7	+1.2
ONTNC	Ouen Toro	11.25	283	P	P	15 18 33.1	+1.5
ONTNC	Ouen Toro	11.25	283	P	P	15 18 33.4	+1.8
DZM	Mont Dzumac	11.34	284	P	P	15 18 34.3	+1.7
	139nm,0.6s,baz=99,slow=12,SNR=179						
DZM	Mont Dzumac	11.34	284	P	P	15 18 34.6	+2.0
DZM	Mont Dzumac	11.34	284	P	P	15 18 34.5	+2.0
NOUC	Port Laguerre	11.45	284	P	P	15 18 35.5	+1.9
RTV	Rentapao	11.87	308	P	P	15 18 38.5	+0.6
NIUE	Niue	12.58	62	P	P	15 18 45.8	+0.8
	baz=12,SNR=4.4						
NIUE	Niue	12.58	62	P	P	15 18 44.3	-0.7
URZ	Urewera	12.89	184	P	P	15 18 45.6	-2.1
	20nm,0.3s,baz=315,slow=20,SNR=42						
URZ				S	S	15 20 58.8	-6.6
	7.5nm,0.5s,baz=273,slow=21,SNR=1.3						
URZ	Urewera	12.89	184	P	P	15 18 45.8	-1.9
HIZ	Hauiti	13.42	192	P	P	15 18 55.1	+1.9
BKZ	Black Stump Fm	13.84	186	P	P	15 18 54.6	-2.9
SANVU	Saraoutou	14.32	311	P	P	15 19 03.4	+1.0
SANVU	Saraoutou	14.32	311	P	P	15 19 03.4	+1.0
AFI	Afiamalu	14.74	41	P	P	15 19 03.3	-3.1
	39nm,0.6s,baz=244,slow=18,SNR=7.4						
AFI	Afiamalu	14.74	41	P	P	15 19 04.1	-2.3
AFI	Afiamalu	14.74	41	P	P	15 19 05.2	-1.2
QRZ	Quartz Range	16.14	196	P	P	15 19 19.8	+1.1
SNZO	South Karori	16.17	190	P	P	15 19 19.0	+0.1
SNZO	South Karori	16.17	190	P	P	15 19 19.2	+0.2
TUWZ	Tuamarina	16.41	192	P	P	15 19 20.9	-0.3
KHZ	Kahutara	17.45	192	P	P	15 19 30.5	-0.2
KHZ	Kahutara	17.45	192	P	P	15 19 30.4	-0.2
OXZ	Oxford	18.63	194	P	P	15 19 41.2	-0.2
RPZ	Rata Peaks	19.23	196	P	P	15 19 47.8	+0.9
	18nm,0.4s,baz=13,slow=1.1,SNR=14						
RPZ	Rata Peaks	19.23	196	P	P	15 19 47.7	+0.9
RPZ				IAmb	IAmb	15 19 52.4	
	comp=Z,22nm,0.5s						
RPZ	Rata Peaks	19.23	196	P	P	15 19 47.7	+0.8
ODZ	Otahua Downs	20.58	196	P	P	15 19 58.7	-0.3
HNR	Honiara	23.56	309	P	P	15 20 25.4	-0.6
	comp=Z,51nm,0.5s,baz=145,slow=1.8,SNR=9.9						
	comp=Z,51nm,0.5s						
ARMA	Armidale	24.06	252	P	P	15 20 32.3	+1.9
	baz=24,SNR=12						
ARMA	Armidale	24.06	252	P	P	15 20 31.7	+1.2
ARMA				IAmb	IAmb	15 20 33.2	
	comp=Z,21nm,0.8s						
KNTN	Kanton	24.44	25	P	P	15 20 34.2	+0.4
EIDS	Eidsvold	24.57	264	P	P	15 20 35.5	+0.7
	baz=25,SNR=13						
EIDS	Eidsvold	24.57	264	P	P	15 20 34.9	+0.1
EIDS				IAmb	IAmb	15 20 36.7	
	comp=Z,30nm,0.8s						
EIDS	Eidsvold	24.57	264	P	P	15 20 35.8	+1.0
MGCD	Mangrove Creek	24.91	245	P	P	15 20 39.6	+1.9
	baz=25,SNR=19						
MGCD	Mangrove Creek	24.91	245	P	P	15 20 39.6	+1.9
RMQ	Roma	26.55	261	P	P	15 20 53.9	+1.6
	baz=27,SNR=30						
RMQ	Roma	26.55	261	P	P	15 20 54.2	+1.9
CNB	Canberra Magne	26.77	241	P	P	15 20 55.8	+1.7
	baz=27,SNR=12						
CNB	Canberra Magne	26.77	241	P	P	15 20 55.9	+1.7
CAN	Canberra	27.06	242	P	P	15 20 58.0	+1.3
CMSA	Cobar Meteorol	29.24	250	P	P	15 21 16.1	+0.5
	baz=29,SNR=55						

CMSA	Cobar Meteorol	29.24	250	P	P	15 21 16.0	+0.5
CTA	Charters Tower	29.96	274	P	P	15 21 22.9	+0.9
	comp=Z,61nm,0.7s,baz=99,slow=10,SNR=61						
	comp=Z,61nm,0.7s						
CTA	Charters Tower	29.96	274	P	P	15 21 22.9	+0.9
CTAO	Charters Tower	29.96	274	P	P	15 21 22.8	+0.9
CTAO	Charters Tower	29.96	274	P	P	15 21 22.6	+0.7
TOO	Toolangi	30.35	238	P	P	15 21 25.8	+0.8
	baz=30,SNR=9.6						
TOO	Toolangi	30.35	238	P	P	15 21 26.2	+1.2
TOO				IAmb	IAmb	15 21 26.9	
	comp=Z,12nm,0.7s						
TOO	Toolangi	30.35	238	P	P	15 21 26.2	+1.2
QLP	Quilpie	30.59	260	P	P	15 21 27.5	+0.4
	baz=31,SNR=17						
QLP	Quilpie	30.59	260	P	P	15 21 27.8	+0.7
TAU	Tasmania Unive	30.79	228	P	P	15 21 28.6	0.0
TAU				IAmb	IAmb	15 21 32.4	
	comp=Z,28nm,1.0s						
TAU	Tasmania Unive	30.79	228	P	P	15 21 30.2	+1.6
MTSU	Mount Surprise	32.30	276	P	P	15 21 42.9	+1.0
	baz=32,SNR=31						
MTSU	Mount Surprise	32.30	276	P	P	15 21 42.8	+1.0
STKA	Stephens Creek	32.74	250	P	P	15 21 45.2	-0.2
	comp=Z,18nm,0.6s,baz=93,slow=10,SNR=52						
STKA				PcP	PcP	15 24 12.0	-0.3
	comp=Z,1.9nm,0.6s,baz=153,slow=4.5,SNR=1.6						
	comp=Z,18nm,0.6s						
STKA	Stephens Creek	32.74	250	P	P	15 21 45.2	-0.2
	baz=33,SNR=48						
STKA	Stephens Creek	32.74	250	IAmb	IAmb	15 21 47.0	
	comp=Z,3.7nm,0.7s						
STKA	Stephens Creek	32.74	250	P	P	15 21 45.2	-0.2
STKA	Stephens Creek	32.74	250	P	P	15 21 45.2	-0.2
KRVT	Keravat (AS076	32.77	305	P	P	15 21 45.6	-0.2
	comp=Z,18nm,0.3s,baz=148,slow=13,SNR=8.5						
	comp=Z,18nm,0.3s						
ARPS	Mount Arapiles	33.04	241	P	P	15 21 48.6	+0.9
	baz=33,SNR=11						
ARPS	Mount Arapiles	33.04	241	P	P	15 21 48.6	+0.9
PMG	Port Moresby	33.56	293	P	P	15 21 52.7	+0.3
	comp=Z,45nm,0.9s,baz=121,slow=3.8,SNR=8.0						
	comp=Z,45nm,0.9s						
PMG	Port Moresby	33.56	293	P	P	15 21 52.9	+0.5
INKA	Innaminka	33.58	258	P	P	15 21 53.7	+1.3
COEN	Coen	34.85	282	P	P	15 22 04.1	+0.9
	baz=35,SNR=22						
COEN	Coen	34.85	282	P	P	15 22 04.2	+1.0
COEN	Coen	34.85	282	P	P	15 22 04.2	+1.0
HTT	Hallett	35.06	247	P	P	15 22 04.8	0.0
	baz=35,SNR=25						
HTT	Hallett	35.06	247	P	P	15 22 05.1	+0.4
LCRK	Leigh Creek	35.64	253	P	P	15 22 09.9	+0.4
QIS	Mount Isa	35.85	270	P	P	15 22 11.5	+0.1
	baz=36,SNR=11						
QIS	Mount Isa	35.85	270	P	P	15 22 11.6	+0.1
BBOO	Buckleboo	37.45	249	P	P	15 22 23.9	-0.3
	baz=38,SNR=7.1						
BBOO	Buckleboo	37.45	249	P	P	15 22 23.7	-0.5
BBOO				IAmb	IAmb	15 22 24.9	
	comp=Z,22nm,0.8s						
OOD	Oodnadatta	38.03	257	P	P	15 22 30.0	+0.9
MULG	Mulgathing	39.23	253	P	P	15 22 38.4	-0.3
AS31	Alice Springs	40.28	263	P	P	15 22 47.0	-0.2
AS31				IAmb	IAmb	15 22 48.7	
	comp=Z,17nm,1.1s						
ASAR	Alice Springs	40.28	263	P	P	15 22 47.2	0.0
	comp=Z,48nm,0.9s,baz=100,slow=8.2,SNR=155						
ASAR				PcP	pwP	15 24 35.1	+1.6
	comp=Z,0.7nm,0.4s,baz=116,slow=3.2,SNR=2.0						
ASAR				ScP	ScP	15 27 28.5	-0.2
	comp=Z,0.8nm,0.7s,baz=108,slow=5.0,SNR=4.0						
ASAR				S	S	15 28 10.7	-2.2
	comp=Z,3.6nm,0.8s,baz=98,slow=16,SNR=18						
ASAR				PKiKP	PKiKP	15 31 42.0	-1.8
	comp=Z,0.5nm,0.9s,baz=98,slow=1.5,SNR=5.0						
	comp=Z,48nm,0.9s						
ASAR	Alice Springs	40.28	263	P	P	15 22 46.9	-0.3
WR0	Warramunga Arr	40.59	268	P	P	15 22 49.0	-0.6
WR0				IAmb	IAmb	15 22 50.2	
	comp=Z,36nm,1.1s						
WB2	Warramunga Arr	40.77	268	P	P	15 22 50.7	-0.4
WB2				IAmb	IAmb	15 22 51.7	
	comp=Z,48nm,0.9s						
WRAB	Tennant Creek	40.77	268	P	P	15 22 50.7	-0.4
WRAB				IAmb	IAmb	15 22 51.6	
	comp=Z,34nm,0.8s						
WRAB	Tennant Creek	40.77	268	P	P	15 22 50.8	-0.4
WB0	Warramunga Arr	40.78	269	P	P	15 22 50.8	-0.4
WRA	Warramunga Arr	40.78	268	P	P	15 22 50.7	-0.5
	comp=Z,31nm,0.6s,baz=103,slow=8.0,SNR=94						
WRA				ScP	ScP	15 27 31.5	+0.8
	comp=Z,1.8nm,0.6s,baz=101,slow=3.7,SNR=6.3						
WRA				S	S	15 28 14.8	-5.3
	comp=Z,5.8nm,1.0s,baz=102,slow=14,SNR=9.1						
WRA				PKiKP	PKiKP	15 31 42.4	-1.9
	comp=Z,0.8nm,1.0s,baz=126,slow=0.3,SNR=4.8						
	comp=Z,31nm,0.6s						
WRA	Warramunga Arr	40.78	268	P	P	15 22 49.7	-1.5
FORT	Forrest	44.35	251	P	P	15 23 18.0	-0.8
	baz=44,SNR=39						
FORT	Forrest	44.35	251	P	P	15 23 17.9	-0.9
FORT	Forrest	44.35	251	P	P	15 23 18.0	-0.8
SMPI	Sarmi	44.64	295	P	P	15 23 20.7	-0.5
	comp=Z,14nm,1.3s						
KDU	Kakadu	44.90	278	P	P	15 23 22.6	-0.6
	baz=45,SNR=8.5						
KDU	Kakadu	44.90	278	P	P	15 23 22.6	-0.6
WRKA	Warakurna	45.01	259	P	P	15 23 23.6	-0.4
	baz=45,SNR=43						
WRKA	Warakurna	45.01	259	P	P	15 23 23.7	-0.4
MTN	Manton Dam	46.04	277	P	P	15 23 31.2	-0.7
	baz=46,SNR=6.6						
MTN	Manton Dam	46.04	277	P	P	15 23 31.1	-0.7
MTN				IAmb	IAmb	15 23 38.1	
	comp=Z,12nm,1.1s						
MTN	Manton Dam	46.04	277	P	P	15 23 31.4	-0.5
SRPI	Serui, Papua	46.74	293	P	P	15 23 37.9	+0.7
KNRA	Kununurra	47.15	272	P	P	15 23 40.3	+0.2
	baz=47,SNR=63						
KNRA	Kununurra	47.15	272	P	P	15 23 40.4	+0.2
KNRA	Kununurra	47.15	272	P	P	15 23 40.5	+0.3
BAKI	Biak	47.23	294	P	P	15 23 40.5	-0.3
	comp=Z,58nm,0.8s						
SIJI	Sorong	51.46	291	P	P	15 24 11.8	0.0
	comp=Z,53nm,0.7s,baz=92,slow=5.0,SNR=40						
	comp=Z,53nm,0.7s						
SWI	Sorong	51.47	291	P	P	15 24 11.7	-0.2
	comp=Z,858nmcomp=Z,92nm,0.8s						
VNDA	Vanda	52.79	184	P	P	15 24 21.4	+1.0
	comp=Z,1.9nm,0.5s,baz=10,slow=8.1,SNR=29						
	comp=Z,1.9nm,0.5s						
VNDA	Vanda	52.79	184	P	P	15 24 21.5	+1.2
SBA	Scott Base	52.83	183	P	P	15 24 22.6	+2.0
SBA				IAmb	IAmb	15 24 24.4	
	comp=Z,14nm,1.0s						
KLBR	Kellerberrin	52.99	248	P	P	15 24 22.0	-0.6
	baz=53,SNR=20						
KLBR	Kellerberrin	52.99	248	P	P	15 24 22.0	-0.6
MEEK	Meekatharra	53.21	255	P	P	15 24 23.1	-1.1
	baz=53,SNR=3.3						
MEEK	Meekatharra	53.21	255	P	P	15 24 23.1	-1.1
PSA00	Pilbara Seismi	53.38	261	P	P	15 24 24.6	-0.9
PSA00				IAmb	IAmb	15 24 25.0	
	comp=Z,8.6nm,0.5s						
PSA00	Pilbara Seismi	53.38	261	P	P	15 24 24.5	-0.9
SOEI	Soe	53.44	277	P	P	15 24 25.9	-0.2
	comp=Z,50nm,1.0s						
MBWA	Marble Bar	53.60	262	P	P	15 24 26.2	-0.8
MBWA	Marble Bar	53.60	262	P	P	15 24 26.1	-0.9
BATI	Baumata	53.80	276	P	P	15 24 29.6	+1.0
	comp=Z,26nm,0.5s,baz=160,slow=2.7,SNR=7.5						
	comp=Z,26nm,0.5s						
BATI	Baumata	53.80	276	P	P	15 24 29.7	+1.2
	comp=Z,29nm,0.6s						
BLDU	Ballidu	54.04	249	P	P	15 24 29.1	-0.8
	baz=54,SNR=15						
BLDU	Ballidu	54.04	249	P	P	15 24 29.2	-0.8
MUN	Mundaring	54.23	248	P	P	15 24 30.7	-0.5
	baz=54,SNR=3.4						
MUN	Mundaring	54.23	248	P	P	15 24 30.7	-0.5
LBMI	Labuha	54.79	289	P	P	15 24 35.9	+0.5
	comp=Z,13nm,1.0s						
MORW	Morawa	54.92	251	P	P	15 24 35.6	-0.5
	baz=55,SNR=5.8						
MORW	Morawa	54.92	251	P	P	15 24 34.5	-1.6
MORW	Morawa	54.92	251	P	P	15 24 35.5	-0.5
SANI	Sanana	55.39	286	P	P	15 24 38.8	-0.7
	comp=Z,31nm,0.8s						
SANI	Sanana	55.39	286	P	P	15 24 39.1	-0.4
TNTI	Ternate	55.63	290	P	P	15 24 41.1	-0.1
	comp=Z,24nm,0.9s						
EDFI	Ende, Flores	56.17	277	P	P	15 24 45.0	-0.1
	comp=Z,18nm,0.9s						
GIRL	Giralia	58.08	258	P	P	15 24 58.5	+0.8
	baz=58,SNR=6.9						
GIRL	Giralia	58.08	258	P	P	15 24 56.8	-0.9
GIRL				IAmb	IAmb	15 24 59.4	
	comp=Z,49nm,0.9s						
GIRL	Giralia	58.08	258	P	P	15 24 58.7	+0.9
CASY	Casey	58.11	206	P	P	15 24 57.0	-0.2
CASY				IAmb	IAmb	15 24 57.6	
	comp=Z,15nm,0.6s						
BKSI	Bulukumba	59.04	279	P	P	15 25 03.9	-0.5
	comp=Z,298nmcomp=Z,34nm,0.8s						
PLAI	Plampang	59.66	275	P	P	15 25 08.8	+0.3
	comp=Z,85nm,0.8s						
PLAI	Plampang	59.66	275	P	P	15 25 08.1	-0.4
TOLI2	Tolitoli	61.46	286	P	P	15 25 20.2	-0.1
QSPA	South Pole Qui	64.72	180	P	P	15 25 41.1	+0.7
	comp=Z,23nm,0.9s,baz=12,slow=1.2,SNR=112						
	comp=Z,23nm,0.9s						
QSPA	South Pole Qui	64.72	180	P	P	15 25 40.6	+0.2
QSPA				IAmb	IAmb	15 25 42.5	
	comp=Z,19nm,0.8s						
PWJI	Pagerwojo	65.38	273	P	P	15 25 44.7	-0.6
	comp=Z,33nm,0.7s						
PCJI	Pacitan	65.88	272	P	P	15 25 48.5	+0.1
	comp=Z,85nm,1.0s						
WOJI	Wonogiri, Jawa	66.25	273	P	P	15 25 50.4	-0.3
	comp=Z,45nm,1.8s						
LEM	Lembang	69.65	272	P	P	15 26 11.5	0.0
	comp=Z,13nm,0.5s,baz=34,slow=3.2,SNR=4.9						
	comp=Z,13nm,0.5s						
KSM	Kuching	70.84	281	P	P	15 26 18.0	-0.3
KSM				IAmb	IAmb	15 26 19.1	
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	72.25	327	P	P	15 26 25.4	-0.6
	comp=Z,1.1nm,0.5s,baz=154,slow=4.5,SNR=4.6						
MAJO	Matsushiro	72.25	327	P	P	15 26 25.2	-0.8
TPUB	Ta-pu	73.90	306	P	P	15 26 33.3	-2.3
TPUB				IAmb	IAmb	15 26 34.3	
	comp=Z,15nm,0.9s						
BELA	Belgrano 2	75.17	173	P	P	15 26 41.6	-0.3
MAW	Mawson	75.83	201	P	P	15 26 45.8	+0.2
	comp=Z,5.1nm,0.6s,baz=138,slow=5.9,SNR=19						
	comp=Z,5.1nm,0.6s						
MAW	Mawson	75.83	201	P	P	15 26 45.4	-0.2
ADK	Adak	77.05	3	P	P	15 26 52.5	+0.2
KSRS	Korea Array	78.39	321	P	P	15 27 00.7	+0.7
	comp=Z,1.1nm,0.7s,baz=135,slow=6.6,SNR=6.7						
	comp=Z,1.1nm,0.7s						
PETK	Petropavlovsk-	80.18	348	P	P	15 27 09.1	+0.2
	comp=Z,2.3nm,0.6s,baz=121,slow=5.4,SNR=10.0						
	comp=Z,2.3nm,0.6s						
IPM	Ipoh	80.45	280	P	P	15 27 11.4	0.0
KULM	Kulim	81.15	280	P	P	15 27 14.7	-0.2
TROLL	Troll, Antarti	82.84	181	P	P	15 27 22.3	-0.2
SNAA	Sanae	83.22	180	P	P	15 27 23.8	-0.5
SNAA	Sanae	83.22	180	P	P	15 27 23.9	-0.5
VNA3	Neumayer Olymp	83.49	177	P	P	15 27 25.2	-0.4
VNA1	Neumayer--Stat	84.13	178	P	P	15 27 27.0	-1.8
NVAR	Mina Array Bea	86.89	45	P	P	15 27 44.2	+1.5
	comp=Z,1.8nm,0.7s,baz=223,slow=8.3,SNR=21						
	comp=Z,1.8nm,0.7s						
BJI	Beijing	87.03	317	P	P	15 27 43.3	+0.2
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	88.59	291	P	P	15 27 52.3	+1.5
	comp=Z,0.7nm,0.6s,baz=120,slow=3.2,SNR=8.5						
CMAR				PP	PP	15 31 31.2	+0.2
	comp=Z,0.2nm,0.5s,baz=150,slow=5.1,SNR=5.5						
	comp=Z,0.7nm,0.6s						
L19K	White Mountain	89.87	12	P	P	15 27 56.2	+0.4
L19K				IAmb	IAmb	15 27 57.7	
	comp=Z,4.6nm,0.8s						
PZH	PanZhiHua	90.03	299	P	P	15 27 59.0	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,4.1s						
HHC	Hu-ho-hao-te	90.37	316	*e*P	P	15 28 00.8	+2.1
HHC				pmax	pmax		
	comp=Z,43nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
TRF	Thorofare Moun	91.94	14	P	P	15 28 04.8	-0.7
TRF				IAmb	IAmb	15 28 06.7	
	comp=Z,3.5nm,0.8s						
TXAR	Lajitas Array	92.53	59	P	P	15 28 09.9	+1.0
	comp=Z,1.0nm,0.8s,baz=216,slow=6.2,SNR=7.0						
	comp=Z,1.0nm,0.8s						
LZH	Lanzhou	93.06	309	*e*P	P	15 28 15.8	+4.5
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	93.83	14	P	P	15 28 13.0	-0.9
	comp=Z,0.4nm,0.7s,baz=222,slow=5.8,SNR=5.4						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	94.83	45	P	P	15 28 19.1	-0.2
	comp=Z,0.4nm,0.7s,baz=204,slow=3.3,SNR=4.4						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	102.36	26	PP	PP	15 33 11.3	-3.4
	comp=Z,0.1nm,0.3s,baz=246,slow=7.2,SNR=3.7						
BOSA	Boshof	120.39	208	PKP	PKPdf	15 33 44.9	-0.3
	comp=Z,1.2nm,0.9s,baz=119,slow=3.9,SNR=3.5						
SPA0	Spitsbergen Ar	126.46	355	*e*PKPdf	PKPdf	15 33 54.4	-0.8
ARA0	ARCESS Array S	132.99	347	*e*PKPdf	PKPdf	15 34 06.0	-1.6
ARCES	ARCESS Array B	132.99	347	PKhKP	PKPpre	15 34 00.2	
	comp=Z,3.2nm,0.9s,baz=48,slow=1.8,SNR=4.9						
ARCES				PKP	PKPdf	15 34 07.9	+0.3
	comp=Z,2.0nm,0.5s,baz=26,slow=0.4,SNR=16						
ARCES				SKPbc	SKPbc	15 36 39.7	-0.4
	comp=Z,3.1nm,0.8s,baz=24,slow=2.5,SNR=6.2						
KTK1	Kautokeino	133.87	348	*e*PKPdf	PKPdf	15 34 08.2	-1.1
TRO	Tromso	134.07	350	*e*PKPdf	PKPdf	15 34 08.1	-1.5
STEI	Steigen	136.18	351	*e*PKPdf	PKPdf	15 34 11.5	-2.0
FINES	FINESS Array B	139.31	340	PKhKP	PKPpre	15 34 10.4	
	comp=Z,1.8nm,0.7s,baz=73,slow=3.4,SNR=12						
FINES				PKP	PKPdf	15 34 19.9	+0.4
	comp=Z,1.3nm,0.4s,baz=29,slow=4.8,SNR=8.0						
FINES				SKPbc	SKPbc	15 36 58.9	-0.2
	comp=Z,1.2nm,0.5s,baz=24,slow=3.8,SNR=7.2						
MTSE	Matsula	142.14	339	*e*P	PKPdf	15 34 21.2	-3.4
DOMB	Dombas	142.63	352	*e*PKPdf	PKPdf	15 34 22.8	-2.7
AKN	Aaknes	142.74	353	*e*PKPdf	PKPdf	15 34 23.8	-1.9
UPP	Uppsala	143.00	344	*e*P	PKPdf	15 34 23.9	-2.2
NB2	NORSAR Subarra	143.26	350	PKP	PKPab	15 34 24.3	-0.7
	comp=Z,5.3nm,0.5s,baz=15,slow=3.2						
NOA	NORSAR Array B	143.26	350	PKhKP	PKPpre	15 34 22.1	
	comp=Z,6.3nm,0.6s,baz=21,slow=3.8,SNR=25						
NOA				PKP	PKPab	15 34 24.6	-0.4
	comp=Z,6.3nm,0.6s,baz=21,slow=3.8,SNR=40						
FOO	Floro	143.50	355	*e*PKPbc	PKPab	15 34 24.0	-1.7
NC602	NORSAR Array S	143.50	349	*e*PKPdf	PKPab	15 34 25.2	-0.6
ISAL	Salakas	143.62	333	*e*P	PKPbc	15 34 26.7	+0.3
IIGN	Ignalina	143.74	333	*e*P	PKPbc	15 34 27.4	+0.6
NACGM	Naroch	143.81	332⇓	*e*PKP	PKPbc	15 34 24.4	-2.6
	baz=47						
HYA	Hoyanger	143.81	354	*e*PKPab	PKPbc	15 34 25.6	-1.2
SKAR	Skarslia	144.04	352	*e*PKPbc	PKPbc	15 34 25.9	-1.7
SUE	Sulen	144.06	355	*e*PKPab	PKPbc	15 34 27.3	-0.3
VIKU	Vikbolandet	144.42	343	*e*P	PKPdf	15 34 28.0	-0.6
PABE	Paberze	144.52	335	*e*P	PKPdf	15 34 29.4	+0.5
ASK	Askoy	144.58	354	*e*PKPdf	PKPdf	15 34 27.0	-1.9
BER	Bergen	144.67	354	*e*PKPbc	PKPdf	15 34 27.9	-1.1
KONO	Kongsberg	144.84	350	*e*PKPab	PKPdf	15 34 30.2	+0.8
ODD1	Odda	145.00	353	*e*PKPab	PKPdf	15 34 30.2	+0.5
AKASG	Malin Array Be	145.32	325	PKPbc	PKPdf	15 34 30.9	+0.5
	comp=Z,2.2nm,0.4s,baz=44,slow=4.0,SNR=21						
AKASG				SKPbc	SKPbc	15 37 14.1	-0.1
	comp=Z,0.5nm,0.5s,baz=41,slow=3.2,SNR=4.2						
BLS5	Blasjo	145.49	353	*e*PKPab	PKPbc	15 34 32.3	+0.2
SNART	Snartemo	146.45	351	*e*PKPab	PKPbc	15 34 35.2	+0.6
DEL	Delary	146.94	344	*e*P	PKPdf	15 34 34.9	+2.0
DEL	Delary	146.94	344	*i* P	PKPdf	15 34 35.0	+2.0
BRTR	Keskin Array B	147.17	305	PKPbc	PKPbc	15 34 37.2	-0.2
	comp=Z,1.7nm,0.6s,baz=137,slow=6.1,SNR=10						
KOLS	Kolonicke sedl	149.93	328	*e*PKP	PKiKP	15 34 45.6	+1.3
OSTC	Ostas	151.31	336⇑	*e*PKP	PKPbc	15 34 47.5	+0.7
UPC	Upice	151.42	336⇑	*e*PKP	PKPbc	15 34 47.7	+0.7
DPC	Dobruska-Polom	151.44	335⇑	*e*PKP	PKPbc	15 34 47.5	+0.4
KRLC	Kraliky	151.48	335⇑	*e*PKP	PKPbc	15 34 47.7	+0.4
MAUC	Maruska	151.62	333⇑	*e*PKP	PKPbc	15 34 48.5	+0.9
CLL	Collm	151.76	340	*e*PKPdf	PKPdf	15 34 40.0	-0.7
CLL				*i* PKPbc	PKPbc	15 34 48.2	+0.5
	comp=Z,5.0nm,0.4s						
CLL				*i* PKPab	PKPab	15 35 00.1	+0.5
	comp=Z,4.0nm,0.6s						
CKRC	Cesky Krumlov	153.44	336⇑	*e*PKP	PKPbc	15 34 51.6	+0.1
KHC	Kasperske Hory	153.44	337⇑	*e*PKP	PKPbc	15 34 51.7	+0.2
KHC				*e*PKPAB	PKPab	15 35 07.1	+0.1
GERES	GERESS Array B	153.64	337	PKPbc	PKPbc	15 34 51.1	-0.9
	comp=Z,0.3nm,0.4s,baz=48,slow=2.0,SNR=5.0						
GERES				PKPab	PKPab	15 35 07.6	-0.3
	comp=Z,0.6nm,0.6s,baz=44,slow=5.9,SNR=6.0						

DJA 13 15:16:42.4±0.2,**2°S**±2°×**12°1E**±°,**h10**^{km},**M4.1**/15,**mb4.2**/2,
MLv4.0/15,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.16	38	P	Pb	15 17 03.4	-1.1
APSI				S	Sn	15 17 20.3	-0.2
TTSI	Tana Toraja	1.65	223	P	Pn	15 17 09.7	-1.7
TTSI				S	Sn	15 17 31.4	-1.2
LUWI	Luwuk	1.99	67	P	Pn	15 17 14.6	-1.6
LUWI				S	Sn	15 17 42.0	+0.8
MPSI	Mapaga	2.39	334	P	Pn	15 17 22.6	+0.9
SPSI	Sidrap Palu	2.42	209	P	Pn	15 17 21.8	-0.3
MRSI	Marisa	2.50	24	P	Pn	15 17 22.8	-0.4
MRSI				S	Sn	15 17 54.5	+0.8
BNSI	Bone	2.69	198	P	Pn	15 17 25.6	-0.1
BNSI				S	Sn	15 17 59.0	+0.7
GTOI	Gorontalo	3.21	40	P	Pn	15 17 32.4	-0.5
GTOI				S	Sn	15 18 12.2	+1.0
BKSI	Bulukumba	3.56	193	P	Pn	15 17 39.0	+1.2
KMSI	Cibinong	3.87	52	P	Pn	15 17 42.1	+0.1
BBSI	Bau Bau	3.98	156	P	Pn	15 17 44.7	+1.1
BKB	Balikpapan	4.08	278	P	Pn	15 17 44.6	-0.3
LBMI	Labuha	6.67	80	P	Pn	15 18 20.0	-0.5
	0.1nm25nm,0.8s						

ISK ***13*** *15:54:38.3, 37.°85N×26.°69E, h13^{km}, ML3.2/23*
DDA ***13*** *15:54:39.6±0.0, 37.°85N×26.°68E, h5^{km}±2^{km}, MW3.3*
THE ***13*** *15:54:39.2, 37.°88N×26.°72E, h4^{km}±1^{km}, ML3.0/5, Error ellipse: s-maj=1.8km s-min=0.6km az=86.0*
ATH ***13*** *15:54:39.2, 37.°93N×26.°79E, h9^{km}±3^{km}, ML3.0/6, Error ellipse: s-maj=3.9km s-min=1.1km az=82.0*
ISC 13 15:54:39.4±0.9,**37.°88N**±0.°02×**26.°72E**±0.°02,**h12**^{km}±7^{km},
n50,σ**0.°70**/74,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.19	151	P	Pg	15 54 43.6	0.0
SMG				S	Sg	15 54 46.8	+0.2
SMG				AML	AML	15 54 47.0	
	comp=E,25391µm,0.4s						
SMG				AML	AML	15 54 47.5	
	comp=N,20121µm,0.2s						
SMG	Samos	0.19	151	P	Pg	15 54 43.6	0.0
SMG				S	Sg	15 54 46.8	+0.2
	comp=N,11µm,0.3s						
ZEYE	Izmir, Urla-Ze	0.40	335	P	Pg	15 54 46.9	-0.5
ZEYE				S	Sb	15 54 53.4	-1.1
ZEYE				*i* AML	AML	15 54 54.0	
	comp=N,1µm,0.4s						
ZEYE				*i* AML	AML	15 55 00.0	
	comp=N,922nm,0.6s						
GCAM	G?zelcaml?	0.44	113	PG	Pg	15 54 47.9	-0.2
GCAM				SG	Sg	15 54 54.6	+0.6
URLA	Izmir	0.49	348	PG	Pg	15 54 48.8	-0.3
URLA				SG	Sb	15 54 56.5	-0.7
URLA	Izmir	0.49	348	P	Pg	15 54 48.1	-0.9
URLA				S	Sb	15 54 56.4	-0.7
URLA				*i* AML	AML	15 54 59.0	
	comp=N,781nm,0.4s						
URLA				*i* AML	AML	15 55 00.0	
	comp=N,689nm,0.4s						
BLCB	Balcova	0.57	27	P	Pg	15 54 50.2	-0.3
BLCB				S	Sg	15 54 58.1	+0.1
BLCB	Balcova	0.57	27	PG	Pg	15 54 50.2	-0.3
BLCB				SG	Sg	15 54 57.9	-0.1
DDIM	Aydin, Didim	0.59	135	P	Pg	15 54 50.9	0.0
DDIM				S	Sb	15 54 59.5	-0.4
DDIM				*i* AML	AML	15 55 02.0	
	comp=N,1µm,0.4s						
DDIM				*i* AML	AML	15 55 03.0	
	comp=N,1µm,0.4s						
CHOS	Chios island	0.73	314	P	Pg	15 54 53.3	-0.3
CHOS				S	Sg	15 55 03.3	+0.1
CHOS				AML	AML	15 55 05.1	
	comp=N,5410µm,0.3s						
CHOS				AML	AML	15 55 05.6	
	comp=E,5422µm,0.2s						
CHOS	Chios island	0.73	314	P	Pg	15 54 53.2	-0.4
CHOS				S	Sb	15 55 04.2	+0.1
	comp=E,3µm,0.2s						
CHOS	Chios island	0.73	314	PG	Pg	15 54 53.3	-0.3
FOCM	Foa	0.83	1	PG	Pg	15 54 54.9	-0.6
YKAV	Yalikavak-Bodr	0.87	149	PG	Pg	15 54 55.5	-0.8
AYDB	Zeytinkoy-Aydi	0.93	85	PG	Pg	15 54 57.2	-0.1
BODT	Bodrum	0.94	150	P	Pg	15 54 57.5	0.0
BODT				S	Sb	15 55 10.8	+0.7
BODT	Bodrum	0.94	150	PG	Pg	15 54 56.8	-0.7
MLSB	Milas	1.02	124	PG	Pg	15 54 58.5	-0.6
CAND	Candarli	1.08	3	PN	Pb	15 54 59.9	-0.1
CAND				SN	Sn	15 55 15.9	+0.7
ZEDA	zmir-Bergama	1.12	14	P	Pg	15 55 00.1	-0.9
ZEDA				S	Sn	15 55 16.5	+0.2
ZEDA				*i* AML	AML	15 55 18.0	
	comp=E,234nm,0.3s						
ZEDA				*i* AML	AML	15 55 22.0	
	comp=E,204nm,0.5s						
PSRA	Psara	1.13	306	P	Pn	15 55 01.2	+0.2
PSRA				S	Sb	15 55 16.1	+0.7
PSRA				AML	AML	15 55 19.9	
	comp=N,976µm,0.2s						
PSRA				AML	AML	15 55 20.2	
	comp=E,697µm,0.2s						
DKL	Dikili	1.20	7	PN	Pb	15 55 01.3	-0.8
APE	Apeiranthos	1.25	230	P	Pn	15 55 02.8	+0.1
APE				S	Sn	15 55 20.8	+1.4
APE				AML	AML	15 55 23.4	
	comp=N,487µm,0.2s						
APE				AML	AML	15 55 23.6	
	comp=E,510µm,0.2s						
APE	Apeiranthos	1.25	230	P	Pn	15 55 01.4	-1.3
APE				S	Sn	15 55 19.6	+0.2
	comp=E,252nm,0.2s						
APE	Apeiranthos	1.25	230	PN	Pn	15 55 01.1	-1.6
GOMA	Golmarmara-Man	1.25	48	PN	Pn	15 55 02.8	+0.1
NISR	Nisiros	1.31	165	P	Pb	15 55 04.1	+0.3
AKS	Akhisar	1.32	40	PN	Pn	15 55 03.7	+0.1
DAT	Datca	1.33	149	PN	Pn	15 55 02.9	-1.0
DAT	Datca	1.33	149	P	Pn	15 55 02.9	-1.0
DAT				S	Sg	15 55 23.2	+0.8
DAT				*i* AML	AML	15 55 31.0	
	comp=E,71nm,0.4s						
DAT				*i* AML	AML	15 55 31.0	
	comp=E,75nm,0.5s						
PRK	Paraskevi	1.41	346	P	Pn	15 55 04.8	-0.1
PRK				AML	AML	15 55 28.4	
	comp=E,1052µm,0.9s						
PRK				AML	AML	15 55 32.8	
	comp=N,1136µm,0.7s						
PRK	Paraskevi	1.41	346	P	Pn	15 55 04.9	0.0
PRK				S	Sn	15 55 23.7	+0.3
	comp=N,548nm,0.8s						
MULA	Mugla, Merkez-	1.42	116	P	Pn	15 55 04.5	-0.6
MULA				S	Sb	15 55 23.5	-0.3
MULA				*i* AML	AML	15 55 29.0	
	comp=N,60nm,0.7s						
MULA				*i* AML	AML	15 55 31.0	
	comp=N,75nm,0.4s						
YER	Yerkesik	1.45	120	PN	Pn	15 55 05.0	-0.5
SIGR	SIGRI	1.49	333	P	Pn	15 55 05.3	-0.7
SIGR				AML	AML	15 55 30.3	
	comp=E,326µm,0.6s						
SIGR				AML	AML	15 55 32.9	
	comp=N,416µm,0.3s						
SIGR	SIGRI	1.49	333	P	Pn	15 55 05.2	-0.8
SIGR				S	Sb	15 55 26.4	+0.4
	comp=N,210nm,0.3s						

TURN	Turunc	1.64	132	PN	Pn	15 55 07.2	-0.8
BUHA	Balikesir, Bur	1.64	10	P	Pn	15 55 07.4	-0.7
BUHA				S	Sg	15 55 33.6	+1.3
BUHA				*i* AML	AML	15 55 35.0	
	comp=N,97nm,0.5s						
BUHA				*i* AML	AML	15 55 36.0	
	comp=N,102nm,0.3s						
KULA	Kula-Manisa	1.66	67	PN	Pn	15 55 08.5	+0.2
KOCA	Canakkale, Ayv	1.68	344	P	Pg	15 55 11.5	-0.3
KOCA				S	Sg	15 55 36.4	+2.8
KOCA				*i* AML	AML	15 55 40.0	
	comp=N,99nm,0.4s						
KOCA				*i* AML	AML	15 55 46.0	
	comp=N,117nm,0.4s						
STEP	BALIKESIR_Sava	1.69	27	P	Pb	15 55 10.6	+0.2
STEP				S	Sg	15 55 33.9	+0.2
STEP				*i* AML	AML	15 55 37.0	
	comp=N,186nm,0.3s						
STEP				*i* AML	AML	15 55 38.0	
	comp=N,135nm,0.9s						
TAVA	DENIZLI_Tavas	1.79	103	P	Pn	15 55 10.0	-0.2
TAVA				*i* AML	AML	15 55 45.0	
	comp=N,26nm,0.7s						
TAVA				*i* AML	AML	15 55 46.0	
	comp=N,21nm,0.7s						
SNT5	Nea Kammeni, S	1.81	216	P	Pg	15 55 13.9	-0.3
BAYC	CANAKKALE_Bayr	1.86	356	P	Pn	15 55 10.2	-1.0
BAYC				*i* AML	AML	15 55 46.0	
	comp=N,40nm,0.3s						
BAYC				*i* AML	AML	15 55 48.0	
	comp=N,31nm,0.2s						
DALY	Dalyan (Mula)	1.87	124	PN	Pn	15 55 11.2	0.0
EZN	Ezine	1.97	351	PN	Pn	15 55 12.9	+0.3
USAK	Uak-Merkez	1.99	65	P	Pg	15 55 16.6	-1.0
USAK				*i* AML	AML	15 56 33.0	
	comp=N,33nm,2.4s						
USAK				*i* AML	AML	15 56 33.0	
	comp=N,56nm,2.6s						
ARG	Arkhangelos	2.00	145	PN	Pn	15 55 12.8	-0.2
SIMA	Simav-Kutahya	2.15	55	PN	Pn	15 55 15.7	+0.6
KARP	Karpathos	2.35	171	PN	Pn	15 55 17.2	-0.7

IDC 13 16:03:35.3±60.0**, 17°.48S×180°.00W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=1090.0km s-min=168.0km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.52	240	P	P	16 10 52.0	+0.8
	0.7nm,0.4s,baz=57,slow=6.0,SNR=4.5 0.7nm,0.4s						
WRA	Warramunga Arr	43.22	259	P	P	16 11 38.7	0.0
	0.4nm,0.8s,baz=97,slow=7.4,SNR=1.8 0.4nm,0.8s						
ASAR	Alice Springs	43.45	254	P	P	16 11 39.6	-0.8
	1.0nm,0.7s,baz=89,slow=8.8,SNR=16 1.0nm,0.7s						

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*IDC **13** 16:18:19.6±3.2, 17°.51S×69°.36W, h168^{km}±11^{km}, mb4.0/2, mbtmp4.2/4, Error ellipse: s-maj=66.5km s-min=12.9km az=106.0*

*GUC **13** 16:18:20.2±0.7, 17°.46S×69°.57W, h170^{km}±5^{km}, ML3.4*

ISC 13 16:18:19.2±1.2**, 17°.49S**±0°.07×**69°.4W**±0°.1**, h169**^{km}±9^{km}**, n13, σ1^{s}.60**/22**, 2C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.86	189	⇑*i*P	Pn	16 18 46.7	+1.3
PB16				*i* S	Sn	16 19 07.1	+1.5
PB12	IPOC Station P	1.45	219	⇑*i*P	Pn	16 18 48.9	-1.0
PB12				*i* S	Sn	16 19 11.2	-2.4
PB12				IAML		16 19 12.8	
	comp=E,248nm,0.5s						
LPAZ	La Paz	1.68	45	P	Pn	16 18 53.6	+0.9
	comp=E,243nm,0.3s,baz=239,slow=6.2,SNR=922						
LPAZ				S	Sn	16 19 18.9	+0.3
	comp=E,25nm,0.6s,baz=130,slow=17,SNR=4.0						
PB11	IPOC Station P	2.28	187	*e*P	Pn	16 18 59.4	+0.5
PB11				*i* S	Sn	16 19 29.6	-0.1
PB11				IAML		16 19 32.0	
	comp=N,168nm,0.3s						
PB08	IPOC Station P	2.65	176	⇓*i*P	Pn	16 19 05.9	+2.5
PB08				*i* S	Sn	16 19 39.3	+1.5
PB08				IAML		16 19 41.4	
	comp=E,62nm,0.5s						
HMBC	Humberstone	2.82	190	*e*P	Pn	16 19 05.4	+0.1
HMBC				*i* S	Sn	16 19 39.2	-2.0
HMBC				IAML		16 19 44.3	
PB01	IPOC Station P	3.54	182	*e*P	Pn	16 19 14.8	+0.6
PB01				*i* S	Sn	16 19 55.1	-2.1
PB02	IPOC Station P	3.85	187	*e*P	Pn	16 19 18.6	+0.5
LVC	Limon Verde	5.12	175	P	Pn	16 19 35.9	+1.1
	comp=E,1.5nm,0.3s,baz=38,slow=12,SNR=1.8						
LVC				S	Sn	16 20 33.2	-0.8
	comp=E,4.5nm,0.3s,baz=221,slow=19,SNR=5.8						
PB15	IPOC Station P	5.69	181	*e*P	Pn	16 19 43.1	+0.8
SIV	San Ignacio	8.08	81	P	Pn	16 20 15.2	+1.4
	comp=E,3.7nm,0.3s,baz=265,slow=11,SNR=20						
SIV				S	Sn	16 21 40.7	-3.5
	comp=E,2.4nm,0.6s,baz=300,slow=20,SNR=6.5						
DBIC	Dimbokro	68.06	75	P	P	16 29 01.6	+0.5
	comp=E,3.1nm,0.5s,baz=233,slow=4.0,SNR=4.4 comp=E,3.1nm,0.5s						
TORD	Torodi Ar. Bea	76.45	71	P	P	16 29 51.2	+0.4
	comp=E,1.3nm,0.3s,baz=256,slow=5.5,SNR=14 comp=E,1.3nm,0.3s						

IDC 13 16:23:51.6±397.0**, 58°.57N×55°.47E, h0**^{km}**, Error ellipse: s-maj=133.7km s-min=38.2km az=138.0, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.31	169	*i*		17 16 10.0	
	baz=350,slow=328,SNR=2.7						
I43RU	DUBNA INFRASON	9.95	267	*i*		17 26 40.0	
	baz=72,slow=328,SNR=1.1						
I37NO	I37NO	19.01	319	*i*		18 23 10.0	
	baz=105,slow=328,SNR=1.3						

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*IDC **13** 16:42:07.1±1.9, 37°.09S×177°.51E, h132^{km}±11^{km}, mb3.9/8, mbtmp4.3/8, Error ellipse: s-maj=34.6km s-min=17.5km az=56.0*

*WEL **13** 16:42:10.3±0.7, 37°S±4°×17°7E±°, h134^{km}±6^{km}, M4.0/43, ML4.2/30, MLv4.0/43, Error ellipse: s-maj=0.0km s-min=0.0km az=28.9*

ISC 13 16:42:10.2±0.7**, 37°.33S**±0°.05×**177°.32E**±0°.04**, h144**^{km}±5^{km}**, n143, σ1^{s}.18**/156**, mb4.1**/8**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSRZ	White Island S	0.21	210	P	Pn	16 42 29.9	+0.2
WIZ	White Island	0.22	207	P	Pn	16 42 28.5	-1.2
HAZ	Te Kaha	0.56	139	P	Pn	16 42 30.3	-0.8
HAZ				S	Sn	16 42 46.7	-0.4
WHRZ	Whale Island	0.59	207	P	Pn	16 42 31.1	-0.2
RUGZ	Raukumara Rang	0.69	156	P	Pn	16 42 31.1	-1.0
OPRZ	Ohinepanea	0.79	230	P	Pn	16 42 32.2	-0.5
PKGZ	Pakihiroa	0.82	133	P	Pn	16 42 33.0	0.0
PKGZ				S	Sn	16 42 50.9	+0.6
MXZ	Matakaoa Point	0.82	107	P	Pn	16 42 32.7	-0.2
MXZ				S	Sn	16 42 50.5	+0.4
MARZ	Manawahe	0.83	218	P	Pn	16 42 32.8	-0.2
MYRZ	Mayor Island	0.86	273	P	Pn	16 42 32.6	-0.6
EDRZ	Edgecumbe	0.90	210	P	Pn	16 42 33.6	+0.1
TGRZ	Tauranga	0.93	244	P	Pn	16 42 33.3	-0.4
URZ	Urewera	0.94	190	P	Pn	16 42 33.3	-0.5
	946nm,0.3s,baz=293,slow=2.3,SNR=5180						
URZ				S	Sn	16 42 51.2	-0.7
	2µm,0.4s,baz=36,slow=12,SNR=57						
URZ				LR	LR	16 43 15.1	
	comp=Z,176nm,20.0s,baz=31,slow=56						
URZ	Urewera	0.94	190	P	Pn	16 42 33.6	-0.2
URZ				S	Sn	16 42 51.4	-0.5
TWGZ	Tauwhareparae	0.99	148	P	Pn	16 42 34.8	+0.5
TWGZ				S	Sn	16 42 54.9	+2.1
LIRZ	Lichensteins R	1.00	228	P	Pn	16 42 34.4	+0.1
WMGZ	Waiomatatini S	1.00	119	P	Pn	16 42 34.6	+0.2
WMGZ				S	Sn	16 42 53.4	+0.7
MWZ	Matawai	1.01	171	P	Pn	16 42 34.4	-0.1
MWZ				S	Sn	16 42 53.1	0.0
MKRZ	Makatiti	1.05	220	P	Pn	16 42 35.5	+0.7
PUZ	Puketiti	1.05	135	P	Pn	16 42 34.8	0.0
PUZ				S	Sn	16 42 53.3	-0.3
OMRZ	Omania	1.07	224	P	Pn	16 42 34.9	-0.1
KARZ	Kaharoa	1.09	231	P	Pn	16 42 35.1	-0.1
TARZ	Mount Tarawera	1.11	215	P	Pn	16 42 35.8	+0.4
RAGZ	Rawiri	1.16	176	P	Pn	16 42 35.9	0.0
NGRZ	Ngongotaha	1.18	229	P	Pn	16 42 36.3	+0.2
TKGZ	Te Karaka	1.18	159	P	Pn	16 42 35.9	-0.1
TKGZ				S	Sn	16 42 55.6	-0.2
RRRZ	Republican Roa	1.19	212	P	Pn	16 42 36.1	0.0
HLRZ	Highlands Stat	1.19	219	P	Pn	16 42 36.4	+0.3
KMRZ	Kaimai	1.21	244	P	Pn	16 42 36.3	0.0
KMRZ				S	Sn	16 42 56.5	+0.3
MUGZ	Murupara	1.22	200	P	Pn	16 42 36.2	-0.2
UTU	Utuhina	1.23	226	P	Pn	16 42 37.1	+0.6
HSRZ	Hossack Road	1.29	221	P	Pn	16 42 37.6	+0.5
RTZ	Ruatahuna	1.31	192	P	Pn	16 42 36.8	-0.5
HRRZ	Handcock Road	1.33	217	P	Pn	16 42 37.8	+0.3
CNGZ	Carnagh Statio	1.35	149	P	Pn	16 42 38.2	+0.5
PRRZ	Plateau Road	1.37	212	P	Pn	16 42 38.1	+0.2
PRRZ				S	Sn	16 42 59.0	-0.2
GRRZ	Galatos Road	1.39	223	P	Pn	16 42 38.6	+0.4
KUZ	Kuaotunu	1.40	294	P	Pn	16 42 37.0	-1.3
RIGZ	Rimuhau	1.42	166	P	Pn	16 42 38.3	-0.1
RIGZ				S	Sn	16 43 01.1	+1.1
SNGZ	Shannon Statio	1.45	179	P	Pn	16 42 38.5	-0.3
SNGZ				S	Sn	16 43 00.9	+0.3
ALRZ	Allen Road	1.45	212	P	Pn	16 42 38.9	+0.2
TOZ	Tahuroa Road	1.50	254	P	Pn	16 42 39.3	+0.1
WPRZ	Whakapapatarin	1.50	217	P	Pn	16 42 39.6	+0.4
MTHZ	Maungataniwha	1.56	194	P	Pn	16 42 39.7	-0.3
RAHZ	Arahi	1.59	186	P	Pn	16 42 40.3	0.0
RAHZ				S	Sn	16 43 04.1	+0.7
PRGZ	Paritu Road	1.65	164	P	Pn	16 42 40.8	-0.2
KUTZ	Kaahu Road	1.65	225	P	Pn	16 42 41.5	+0.6
MRHZ	Matea Rd	1.66	205	P	Pn	16 42 40.8	-0.2
KNZ	Kokohu	1.71	171	P	Pn	16 42 41.1	-0.4
WHTZ	Whakaora	1.71	218	P	Pn	16 42 42.6	+1.0
TLZ	Tolley Road	1.72	234	P	Pn	16 42 42.1	+0.3
MKAZ	Moumakai	1.73	277	P	Pn	16 42 41.6	-0.2
MKAZ				S	Sn	16 43 06.0	0.0
NMHZ	Naumai	1.81	193	P	Pn	16 42 43.1	+0.4
WIAZ	Waiheke Island	1.83	286	P	Pn	16 42 42.5	-0.4
HATZ	Hinemaiaia	1.83	211	P	Pn	16 42 42.9	-0.1
GRZ	Great Barrier	1.84	305	P	Pn	16 42 42.0	-1.1
WATZ	Wairara	1.86	222	P	Pn	16 42 43.8	+0.5
MHGZ	Mahia Peninsul	1.88	166	P	Pn	16 42 43.6	+0.2
BKZ	Black Stump Fm	1.94	199	P	Pn	16 42 43.5	-0.8
BKZ				S	Sn	16 43 09.6	-0.9
ETAZ	East Tamaki Re	1.94	280	P	Pn	16 42 44.2	0.0
RATZ	Rangitukua	1.96	218	P	Pn	16 42 44.8	+0.4
RITZ	Rihia Road	2.00	215	P	Pn	16 42 45.5	+0.5
MBAZ	Motutapu North	2.01	285	P	Pn	16 42 44.9	-0.2
EPAZ	Eden Park BICE	2.11	282	P	Pn	16 42 46.3	+0.1
ABAZ	Army Bay	2.12	289	P	Pn	16 42 46.1	-0.2
HBAZ	Herne Bay Bore	2.12	282	P	Pn	16 42 46.5	+0.1
AWAZ	Awhitu Peninsu	2.15	276	P	Pn	16 42 46.6	-0.1
MCHZ	McNeill Hill	2.16	193	P	Pn	16 42 46.8	-0.1
NTVZ	North Tongarir	2.19	216	P	Pn	16 42 47.6	+0.3
TMVZ	Te Maari	2.19	215	P	Pn	16 42 47.2	0.0
KRVZ	Karewarewa	2.20	216	P	Pn	16 42 47.9	+0.5
ETVZ	East Tongariro	2.20	215	P	Pn	16 42 47.3	-0.2
KWHZ	Kaweka Forest	2.20	198	P	Pn	16 42 47.0	-0.4
WTAZ	Waiatarua	2.23	280	P	Pn	16 42 47.7	+0.1
WTVZ	West Tongariro	2.24	217	P	Pn	16 42 47.9	0.0
NNVZ	North Ngauruho	2.24	216	P	Pn	16 42 48.1	+0.1
OTVZ	Oturere	2.24	215	P	Pn	16 42 48.0	0.0
OTVZ				S	Sn	16 43 17.2	+0.1
RVAZ	Riverhead Bore	2.26	284	P	Pn	16 42 47.8	-0.2
SNVZ	South Ngauruho	2.27	215	P	Pn	16 42 48.3	0.0
HIZ	Hauiti	2.27	238	P	Pn	16 42 48.9	+0.7
TWVZ	Taurewa	2.28	220	P	Pn	16 42 48.5	+0.1
NGZ	Ngauruhoe	2.28	216	P	Pn	16 42 48.7	+0.2
CKHZ	Cape Kidnapper	2.33	185	P	Pn	16 42 48.0	-0.8
TUVZ	Tukino	2.33	214	P	Pn	16 42 48.8	-0.2
BHHZ	Black Hill Sta	2.37	204	P	Pn	16 42 48.5	-0.9
FWVZ	Far West T-bar	2.37	215	P	Pn	16 42 49.3	-0.3
WHVZ	Whangaehu Hut	2.37	214	P	Pn	16 42 49.3	-0.4
TRVZ	Turoa	2.41	215	P	Pn	16 42 49.7	-0.3
WNVZ	Wahianoa	2.41	214	P	Pn	16 42 49.5	-0.5
MOVZ	Moawhango	2.41	210	P	Pn	16 42 48.7	-1.2
KRHZ	Kereru	2.42	198	P	Pn	16 42 48.8	-1.2
KAHZ	Kahuranaki	2.48	188	P	Pn	16 42 49.9	-0.9
PKVZ	Pokaka	2.49	218	P	Pn	16 42 50.6	-0.4
MTVZ	Mangateitei	2.51	215	P	Pn	16 42 50.8	-0.3
VRZ	Vera Road	2.69	228	P	Pn	16 42 53.8	+0.4
PXZ	Pawanui	2.72	187	P	Pn	16 42 52.3	-1.3
PNHZ	Pukenui	2.72	198	P	Pn	16 42 52.2	-1.6
WCZ	Waipu Caves	2.76	299	P	Pn	16 42 53.5	-0.8
WPHZ	Waipukurau	2.81	194	P	Pn	16 42 53.4	-1.5
TSZ	Takapari Road	2.92	201	P	Pn	16 42 54.4	-1.9
MHEZ	Mangahewa	2.93	233	P	Pn	16 42 58.8	+2.4
PRHZ	Porangahau	2.98	190	P	Pn	16 42 55.2	-1.8
WAZ	Wanganui	3.03	216	P	Pn	16 42 56.9	-0.8
DREZ	Durham Road	3.07	232	P	Pn	16 42 59.5	+1.3
DVHZ	Dannevirke	3.10	196	P	Pn	16 42 56.3	-2.2
LREZ	Lake Rotokare	3.12	226	P	Pn	16 42 59.4	+0.6
NEZ	North Egmont	3.19	232	P	Pn	16 43 01.4	+1.7
ANWZ	Angora Road	3.19	192	P	Pn	16 42 58.0	-1.7
PKE	Pukeiti	3.21	234	P	Pn	16 43 02.8	+2.8
KHEZ	Kahui Hut	3.25	232	P	Pn	16 43 02.7	+2.1
OHWZ	Ohakea	3.27	208	P	Pn	16 42 59.6	-1.0
POWZ	Post Office Ro	3.29	201	P	Pn	16 42 58.8	-2.1
NBEZ	Newall Road No	3.33	233	P	Pn	16 43 02.6	+1.2
PRWZ	Pori Road	3.38	198	P	Pn	16 43 00.2	-2.0
BFZ	Birch Farm	3.45	194	P	Pn	16 43 00.7	-2.3
MRZ	Mangatainoka R	3.59	202	P	Pn	16 43 02.1	-2.7
TIWZ	Tintock	3.61	197	P	Pn	16 43 02.8	-2.4
OUZ	Omahuta	3.67	304	P	Pn	16 43 05.0	-0.9
CPWZ	Castlepoint	3.68	193	P	Pn	16 43 04.1	-1.8
CTZ	Chatham Island	7.89	146	P	Pn	16 44 04.9	+3.0
RPZ	Rata Peaks	7.96	215	P	Pn	16 43 57.5	-5.4
	7.9nm,0.3s,baz=303,slow=2.2,SNR=11						
RPZ				S	Sn	16 45 20.9	-11
	17nm,0.4s,baz=291,slow=23,SNR=11						
STKA	Stephens Creek	29.78	270	P	P	16 48 03.6	+0.3
	1.6nm,0.7s,baz=127,slow=10,SNR=3.8 1.6nm,0.7s						
ASAR	Alice Springs	39.47	278	P	P	16 49 25.3	-1.3
	2.0nm,0.5s,baz=119,slow=7.2,SNR=91						
ASAR				PcP	PcP	16 51 28.5	-3.1
	0.5nm,0.3s,baz=122,slow=3.9,SNR=4.3 2.0nm,0.5s						
KRVT	Keravat (AS076	40.20	319	P	P	16 49 31.9	-0.8
	13nm,0.5s,baz=183,slow=5.8,SNR=4.5 13nm,0.5s						
WRA	Warramunga Arr	41.12	283	P	P	16 49 38.7	-1.5
	1.8nm,0.5s,baz=127,slow=6.3,SNR=43 1.8nm,0.5s						
QSPA	South Pole Qui	52.79	180	P	P	16 51 12.1	+1.8
	1.5nm,0.5s,baz=48,slow=12,SNR=19 1.5nm,0.5s						
MAW	Mawson	64.44	203	P	P	16 52 30.2	-0.4
	2.0nm,0.8s,baz=125,slow=7.4,SNR=2.6 2.0nm,0.8s						
TROLL	Troll, Antarti	70.90	182	P	P	16 53 11.1	-0.1
SNAA	Sanae	71.30	180	P	P	16 53 11.6	-2.0
VNA3	Neumayer Olymp	71.61	178	P	P	16 53 14.7	-0.7
H03S2	Juan Fernandez	79.81	125	T	T	18 20 56.3	
	baz=232						
H03S1	Juan Fernandez	79.82	125	T	T	18 20 59.5	
	baz=232						
H03S3	Juan Fernandez	79.83	125	T	T	18 20 59.1	
	baz=232						
H03N3	Juan Fernandez	80.05	124	T	T	18 21 03.6	
	baz=233,slow=72,SNR=7.3						
H03N2	Juan Fernandez	80.05	124	T	T	18 21 04.8	
	baz=233,slow=72,SNR=6.9						
H03N1	Juan Fernandez	80.06	124	T	T	18 21 02.9	
	baz=233,slow=72,SNR=8.8						
KSRS	Korea Array	87.29	323	P	P	16 54 40.0	-0.4
	2.4nm,0.9s,baz=144,slow=5.9,SNR=9.4 2.4nm,0.9s						
CMAR	Chiang Mai Arr	92.15	292	P	P	16 55 02.4	-1.2
	0.9nm,0.7s,baz=145,slow=3.6,SNR=7.4 0.9nm,0.7s						
ARCES	ARCESS Array B	144.33	343	PKP	PKPab	17 01 24.0	-2.4
	4.2nm,0.7s,baz=23,slow=2.3,SNR=30						
DBIC	Dimbokro	149.41	176	PKPbc	PKPdf	17 01 40.5	+2.3
	1.4nm,0.4s,baz=273,slow=1.7,SNR=4.9						
FINES	FINESS Array B	149.92	333	PKPbc	PKPdf	17 01 38.8	+1.3
	1.4nm,0.4s,baz=35,slow=7.0,SNR=20						
BRTR	Keskin Array B	151.60	286	PKPbc	PKPdf	17 01 44.0	+3.0
	1.2nm,0.6s,baz=124,slow=4.7,SNR=7.0						
TORD	Torodi Ar. Bea	155.60	190	PKPbc	PKPdf	17 01 54.1	+6.8
	0.5nm,0.4s,baz=154,slow=3.0,SNR=11						
TORD				PKPab	PKPab	17 02 12.4	-1.3
	1.0nm,0.4s,baz=163,slow=3.5,SNR=7.5						

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*IDC **13** 17:06:03.5±0.6, 55°.29S×26°.83W, h0^{km}, mb4.2/10, mbtmp4.2/11, ML4.3/1, MS3.6/20, Error ellipse: s-maj=21.3km s-min=18.4km az=52.0*

*NEIC **13** 17:06:07.6±2.1, 55°.4S±0°.1×26°.9W±0°.2, h27^{km}±5^{km}, mb4.8/27, Error ellipse: s-maj=15.9km s-min=13.7km az=193.0*

ISC 13 17:06:07.2±0.6**, 55°.33S**±0°.09×**27°.00W**±0°.08**, h25**^{km}**, n58, σ1^{s}.13**/47**, mb4.6**/17**, MS3.7**/19**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.59	277		Pn	17 07 26.6	-2.0
VNA1	Neumayer--Stat	17.43	159	P	Pn	17 10 09.0	+0.9
VNA3	Neumayer Olymp	17.64	161	P	Pn	17 10 10.8	0.0
EFI	East Falkland	18.75	268	P	Pn	17 10 27.0	+2.5
EFI				IAmb	IAmb	17 11 05.9	
	comp=Z,182nm,1.9s						
SNAA	Sanae	19.36	157	P	P	17 10 29.7	-0.9
SNAA	Sanae	19.36	157	P	P	17 10 30.9	+0.4
	comp=Z,1.0nm,0.3s,baz=303,slow=9.6,SNR=20						
SNAA				LR	LR	17 16 49.5	
	comp=Z,112nm,20.0s,baz=344,slow=33 comp=Z,6.2nm,0.7s						
SNAA	Sanae	19.36	157	P	P	17 10 29.1	-1.4
PMSA	Palmer Station	20.46	228	P	P	17 10 44.9	+2.4
	comp=Z,16nm,0.9s,baz=337,slow=6.3,SNR=2.0						
PMSA				LR	LR	17 17 01.2	
	comp=Z,85nm,21.5s,baz=80,slow=32 comp=Z,16nm,0.9s						
PMSA	Palmer Station	20.46	228	IAmb	IAmb	17 11 10.0	
	comp=Z,58nm,1.2s						
TROLL	Troll, Antarti	20.84	155	P	P	17 10 48.1	+1.3
SMAI	San Martin Ant	22.39	219	P	P	17 11 04.2	+1.0
BELA	Belgrano 2	22.80	184	P	P	17 11 05.1	-2.5
BELA				IAmb	IAmb	17 11 08.3	
	comp=Z,19nm,0.9s						
DSPA	Despedida	23.68	256	P	P	17 11 14.5	-2.0
MG02	Cerro Sombrero	24.64	258	P	P	17 11 26.6	+1.2
TRQA	Tornquist	29.15	292	P	P	17 12 06.3	+0.2
TRQA				IAmb	IAmb	17 12 29.6	
	comp=Z,28nm,1.9s						
PLCA	Paso Flores	31.99	279	LR	LR	17 27 26.6	
	comp=Z,83nm,18.2s,baz=144,slow=40						
QSPA	South Pole Qui	34.92	180	P	P	17 12 56.2	-0.4
CPUP	Villa Florida	36.42	310	P	P	17 13 09.6	0.0
	comp=Z,2.3nm,0.8s,baz=145,slow=6.9,SNR=3.5						
CPUP				LR	LR	17 27 27.4	
	comp=Z,116nm,19.4s,baz=194,slow=35 comp=Z,2.3nm,0.8s						
CPUP	Villa Florida	36.42	310	P	P	17 13 09.1	-0.5
CPUP				IAmb	IAmb	17 14 04.2	
	comp=Z,24nm,1.8s						
MT09	Talagante	37.20	287		P	17 13 15.9	-0.4
MT09				IAmb	IAmb	17 13 54.8	
	comp=Z,9.7nm,1.1s						
MT02	Curacav	37.67	287	P	P	17 13 20.7	+0.5
MT02				IAmb	IAmb	17 13 55.4	
	comp=Z,27nm,1.6s						
MT02					S	17 19 06.6	-2.0
VA03	San Esteban	37.73	288	P	P	17 13 20.6	-0.2
VA03				IAmb	IAmb	17 13 23.7	
	comp=Z,17nm,1.0s						
VA03					S	17 19 09.7	+0.1
VA06	Catapilco	38.29	288	P	P	17 13 25.3	0.0
VA06				IAmb	IAmb	17 13 28.2	
	comp=Z,25nm,1.1s						
CO02	Combarbal	39.17	290	P	P	17 13 32.8	-0.1
CO02				IAmb	IAmb	17 13 49.1	
	comp=Z,29nm,1.4s						
CO01	Juntas del Tor	39.65	292	P	P	17 13 38.7	+1.6
SUR	Sutherland	40.35	76	LR	LR	17 26 26.9	
	comp=Z,64nm,18.4s,baz=214,slow=30						
MAW	Mawson	40.66	144	P	P	17 13 45.3	+0.5
	comp=Z,5.6nm,0.6s,baz=237,slow=7.5,SNR=20						
MAW				LR	LR	17 29 01.4	
	comp=Z,87nm,21.7s,baz=224,slow=34 comp=Z,5.6nm,0.6s						
MAW	Mawson	40.66	144	P	P	17 13 45.3	+0.5
AQDB	Aquidauana	40.95	317	P	P	17 13 47.2	-0.3
LVC	Limon Verde	45.04	299	LR	LR	17 32 50.7	
	comp=Z,45nm,21.2s,baz=188,slow=36						
BOSA	Boshof	45.69	76	P	P	17 14 24.7	-1.2
	comp=Z,1.3nm,0.8s,baz=164,slow=9.7,SNR=3.1						
BOSA				LR	LR	17 29 51.0	
	comp=Z,83nm,18.5s,baz=190,slow=31 comp=Z,1.3nm,0.8s						
PB07	IPOC Station P	46.27	299	P	P	17 14 31.5	+0.9
PB01	IPOC Station P	46.64	300	P	P	17 14 34.7	+1.2
PB01				IAmb	IAmb	17 14 45.8	
	comp=Z,23nm,1.6s						
SBA	Scott Base	46.80	184	P	P	17 14 34.9	+0.9
VNDA	Vanda	47.30	183	P	P	17 14 37.4	-0.4
	comp=Z,3.0nm,0.7s,baz=192,slow=6.1,SNR=22						
VNDA				LR	LR	17 35 47.6	
	comp=Z,35nm,18.2s,baz=198,slow=38 comp=Z,3.0nm,0.7s						
VNDA	Vanda	47.30	183	P	P	17 14 37.0	-0.8
VNDA				IAmb	IAmb	17 14 41.0	
	comp=Z,15nm,1.6s						
PB11	IPOC Station P	47.81	301	P	P	17 14 43.3	+0.7
PB11				IAmb	IAmb	17 15 06.9	
	comp=Z,8.6nm,1.0s						
LBTB	Lobatse	48.70	74	P	P	17 14 49.2	-0.2
	comp=Z,1.8nm,0.8s,baz=230,slow=15,SNR=2.1						
LBTB				LR	LR	17 32 03.3	
	comp=Z,75nm,18.6s,baz=189,slow=32 comp=Z,1.8nm,0.8s						
TSUM	Tsumeb	49.24	61	LR	LR	17 32 15.3	
	comp=Z,48nm,18.0s,baz=169,slow=32						
LPAZ	La Paz	50.06	305	P	P	17 15 01.2	+0.7
	comp=Z,1.9nm,0.6s,baz=212,slow=11,SNR=7.5						
LPAZ				LR	LR	17 35 58.1	
	comp=Z,26nm,21.1s,baz=236,slow=36 comp=Z,1.9nm,0.6s						
LPAZ	La Paz	50.06	305	P	P	17 15 00.7	+0.3
LPAZ				IAmb	IAmb	17 15 26.7	
	comp=Z,9.3nm,1.4s						
MATP	Matopo	53.96	73	P	P	17 15 28.8	-0.2
	comp=Z,1.6nm,0.8s,baz=272,slow=6.9,SNR=4.4 comp=Z,1.6nm,0.8s						
LSZ	Lusaka	58.01	69	LR	LR	17 38 31.6	
	comp=Z,81nm,18.1s,baz=168,slow=34						
MDP	Montagnes des	63.86	331	LR	LR	17 44 40.8	
	comp=Z,56nm,18.0s,baz=64,slow=36						
DBIC	Dimbokro	64.47	25	LR	LR	17 37 31.3	
	comp=Z,46nm,18.5s,baz=167,slow=29						
ROSC	El Rosal	71.51	309	LR	LR	17 50 58.0	
	comp=Z,50nm,19.3s,baz=232,slow=38						
MBAR	Mbarara	71.72	63	LR	LR	17 45 17.4	
	comp=Z,47nm,19.5s,baz=150,slow=33						
TORD	Torodi Ar. Bea	72.38	29	P	P	17 17 31.0	+0.2
	comp=Z,1.4nm,0.6s,baz=200,slow=5.3,SNR=8.0 comp=Z,1.4nm,0.6s						
RPZ	Rata Peaks	80.14	193	LR	LR	17 51 31.7	
	comp=Z,61nm,19.1s,baz=277,slow=34						
ATD	Arta Tunnel	88.28	67	LR	LR	17 56 31.8	
	comp=Z,41nm,18.2s,baz=35,slow=34						
ESDC	Sonseca Array	96.66	18	LR	LR	17 59 16.2	
	comp=Z,22nm,19.1s,baz=115,slow=33						
ASAR	Alice Springs	99.64	162	P	Pdif	17 19 47.5	-1.1
	comp=Z,0.3nm,0.7s,baz=181,slow=3.8,SNR=4.7 comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	135.71	318	PKP	PKPdf	17 25 23.8	0.0
	comp=Z,0.4nm,0.5s,baz=125,slow=2.6,SNR=6.4						
INK	Inuvik	145.31	321	PKPbc	PKPbc	17 25 41.4	+0.5
	comp=Z,6.9nm,0.9s,baz=118,slow=3.3,SNR=9.4						
NRIK	Noril'sk	148.38	38	PKPbc	PKPdf	17 25 48.1	+2.0
	comp=Z,0.6nm,0.2s,baz=197,slow=11,SNR=1.3						
ILAR	Eielson Array	149.72	313	PKPbc	PKPbc	17 25 53.1	-0.1
	comp=Z,1.8nm,0.6s,baz=128,slow=2.5,SNR=19						
SONM	Songino Array	150.56	85	PKPbc	PKPbc	17 25 54.5	-1.4
	comp=Z,1.3nm,0.6s,baz=333,slow=0.3,SNR=4.5						
KDAK	Kodiak Island	150.59	297	PKPbc	PKPbc	17 25 55.5	+0.1
	comp=Z,2.5nm,0.5s,baz=166,slow=3.7,SNR=7.8						

*IDC **13** 17:07:32.2±2.5, 32°.49S×178°.01W, h0^{km}, mb4.0/3, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=58.7km s-min=31.1km az=121.0*
*NEIC **13** 17:07:38.3±1.0, 31°.6S±0°.1×178°.59W±0°.07, h10^{km}±2^{km}, mb4.6/7, Error ellipse: s-maj=17.9km s-min=9.4km az=171.0*
ISC 13 17:07:33.4±2.0, **32°.5S**±0°.1×**178°.1W**±0°.3, **h10^{km}, n16,** σ**1ˢ.73**/17, **mb4.5**/8, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.22**	**2**	Pn	**Pn**	**17 08 24.3**	**+0.4**
	47nm,0.3s,baz=87,slow=23,SNR=1.9						
RAO				Sn	**Sn**	**17 09 00.0**	**-2.4**
	29nm,0.3s,baz=108,slow=22,SNR=1.3						
	112nm,0.4s						
RAO	**Raoul Island**	**3.22**	**2**		Pn	17 08 17.9	-6.0
URZ	**Urewera**	**6.99**	**213**	Pn	**Pn**	**17 09 15.4**	**-0.3**
	0.5nm,0.3s,baz=7.1,slow=14,SNR=7.7						
URZ				Sn	**Sn**	**17 10 30.9**	**-4.3**
	0.3nm,0.3s,baz=342,slow=19,SNR=1.4						
	7.5nm,0.9s						
BKZ	**Black Stump Fm**	**8.00**	**212**		**Pn**	**17 09 28.8**	**-1.0**
FOZ	**Fox Glacier**	**14.58**	**217**	Pn	**P**	**17 11 09.6**	**+3.4**
CTA	**Charters Tower**	**34.13**	**282**	P	**P**	**17 14 19.9**	**+1.2**
	4.4nm,0.9s,baz=182,slow=14,SNR=1.8						
	4.4nm,0.9s						
AS31	**Alice Springs**	**42.98**	**269**	P	**P**	**17 15 33.4**	**+0.4**
AS31				IAmb	IAmb	17 16 21.6	
	comp=Z,1.7nm,1.4s						
ASAR	**Alice Springs**	**42.98**	**269**	P	**P**	**17 15 33.8**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=109,slow=7.3,SNR=18						
ASAR				PcP	**PcP**	**17 17 22.9**	**-0.6**
	comp=Z,0.2nm,0.8s,baz=115,slow=3.9,SNR=1.8						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**42.98**	**269**	P	**P**	**17 15 33.1**	**+0.1**
WR0	**Warramunga Arr**	**43.98**	**274**	P	**P**	**17 15 41.3**	**+0.2**
WR0				IAmb	IAmb	17 17 12.1	
	comp=Z,23nm,1.7s						
WB2	**Warramunga Arr**	**44.15**	**274**	P	**P**	**17 15 42.9**	**+0.5**
WB2				IAmb	IAmb	17 16 24.5	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**17 15 43.0**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=113,slow=7.8,SNR=32						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**17 15 42.1**	**-0.4**
WB0	**Warramunga Arr**	**44.19**	**275**	P	**P**	**17 15 43.2**	**+0.5**
WB0				IAmb	IAmb	17 16 52.5	
	comp=Z,16nm,1.4s						
QSPA	**South Pole Qui**	**57.64**	**180**	P	P	17 17 34.5	+11
QSPA				IAmb	IAmb	17 18 51.1	
	comp=Z,24nm,2.0s						
FINES	**FINESS Array B**	**147.07**	**339**	PKPbc	**PKPab**	**17 27 15.9**	**-1.3**
	comp=Z,3.4nm,1.0s,baz=49,slow=4.2,SNR=10						

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*DDA **13** 17:11:10.6±0.0, 37°.45N×26°.63E, h7^{km}±1^{km}, ML2.4*
*ISK **13** 17:11:10.9, 37°.48N×26°.69E, h15^{km}, ML2.8/15*
*ATH **13** 17:11:12.2, 37°.50N×26°.63E, h9^{km}±5^{km}, ML2.7/5, Error ellipse: s-maj=5.6km s-min=1.1km az=76.0*
ISC 13 17:11:11.4±1.0, **37°.48N**±0°.02×**26°.66E**±0°.02, **h15^{km}**±8^{km}, **n30,** σ**0ˢ.51**/48, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.27**	**32**	P	**Pg**	**17 11 17.0**	**-0.1**
SMG				S	**Sg**	**17 11 21.3**	**+0.2**
SMG				AML	AML	17 11 21.7	
	comp=N,9974µm,0.4s						
SMG				AML	AML	17 11 22.0	
	comp=E,7626µm,0.2s						
DDIM	**Aydin, Didim**	**0.47**	**93**	P	**Pg**	**17 11 20.1**	**-0.5**
DDIM				S	**Sg**	**17 11 27.4**	**+0.5**
DDIM				*i* AML	AML	17 11 34.0	
	comp=E,128nm,0.7s						
DDIM				*i* AML	AML	17 11 34.0	
	comp=E,185nm,0.7s						
GCAM	**G?zelcaml?**	**0.51**	**64**	PG	**Pg**	**17 11 21.5**	**+0.1**
GCAM				SG	**Sg**	**17 11 28.9**	**+0.7**
GCAM	**G?zelcaml?**	**0.51**	**64**	P	**Pg**	**17 11 21.6**	**+0.2**
GCAM				S	**Sg**	**17 11 28.4**	**+0.2**
GCAM				*i* AML	AML	17 11 29.0	
	comp=E,872nm,0.3s						
GCAM				*i* AML	AML	17 11 30.0	
	comp=E,541nm,0.5s						
DGB	**zmir**	**0.60**	**17**	P	**Pg**	**17 11 23.0**	**-0.1**
DGB				S	**Sb**	**17 11 32.3**	**+0.5**
DGB				*i* AML	AML	17 11 34.0	
	comp=E,376nm,0.5s						
DGB				*i* AML	AML	17 11 35.0	
	comp=E,124nm,0.9s						
BODT	**Bodrum**	**0.67**	**128**	PG	**Pg**	**17 11 24.1**	**-0.3**
BODT				SG	**Sb**	**17 11 34.0**	**+0.2**
BDRM	**Kayabasi**	**0.75**	**123**	P	**Pg**	**17 11 25.2**	**-0.8**
BDRM				S	**Sn**	**17 11 38.5**	**-0.2**
BDRM				*i* AML	AML	17 11 41.0	
	comp=E,75nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.77**	**351**	P	**Pb**	**17 11 26.2**	**-0.2**
ZEYE				S	**Sb**	**17 11 37.5**	**+0.8**
ZEYE				*i* AML	AML	17 11 39.0	
	comp=E,479nm,0.4s						
ZEYE				*i* AML	AML	17 11 39.0	
	comp=E,267nm,0.3s						
KOSK	**Kos Island**	**0.77**	**160**	P	**Pn**	**17 11 27.9**	**+0.2**
KOSK				S	**Sb**	**17 11 37.0**	**+0.3**
KOSK				AML	AML	17 11 41.0	
	comp=N,4630µm,0.4s						
KOSK				AML	AML	17 11 43.7	
	comp=E,4947µm,0.4s						
KOSK	**Kos Island**	**0.77**	**160**	PG	**Pb**	**17 11 26.3**	**-0.2**
KOSK				SG	**Sb**	**17 11 37.1**	**+0.3**
URLA	**Izmir**	**0.88**	**357**	PG	**Pb**	**17 11 28.2**	**-0.2**
URLA				SG	**Sn**	**17 11 41.3**	**-0.5**
URLA	**Izmir**	**0.88**	**357**	P	**Pb**	**17 11 28.1**	**-0.2**
URLA				S	**Sn**	**17 11 41.7**	**-0.1**
URLA				*i* AML	AML	17 11 44.0	
	comp=E,180nm,0.7s						
URLA				*i* AML	AML	17 11 45.0	
	comp=E,124nm,0.3s						
MLSB	**Milas**	**0.91**	**101**	PG	**Pg**	**17 11 27.9**	**-1.1**
MLSB				SG	**Sg**	**17 11 40.6**	**-0.4**
NISR	**Nisiros**	**0.94**	**156**	P	**Pn**	**17 11 30.2**	**+0.1**
NISR				S	**Sn**	**17 11 43.8**	**+0.4**
BLCB	**Balcova**	**0.95**	**18**	PG	**Pg**	**17 11 29.3**	**-0.5**
APE	**Apeiranthos**	**0.99**	**246**	P	**Pb**	**17 11 30.2**	**0.0**
APE				S	**Sb**	**17 11 43.7**	**+0.7**
APE				AML	AML	17 11 47.2	
	comp=E,495µm,0.2s						
APE				AML	AML	17 11 47.9	
	comp=N,468µm,0.2s						
APE	**Apeiranthos**	**0.99**	**246**	PG	**Pn**	**17 11 30.6**	**-0.1**
AYDN	**Tasoluk**	**0.99**	**79**	P	**Pg**	**17 11 29.7**	**-0.7**
AYDN				S	**Sn**	**17 11 44.8**	**+0.3**
AYDN				*i* AML	AML	17 11 48.0	
	comp=N,52nm,0.3s						
AYDN				*i* AML	AML	17 11 49.0	
	comp=N,69nm,0.4s						
CHOS	**Chios island**	**1.02**	**332**	P	**Pb**	**17 11 30.8**	**0.0**
CHOS				S	**Sb**	**17 11 44.8**	**+0.7**
CHOS				AML	AML	17 11 46.8	
	comp=E,670µm,0.8s						
CHOS				AML	AML	17 11 47.5	
	comp=N,540µm,0.7s						
CHOS	**Chios island**	**1.02**	**332**	PG	**Pn**	**17 11 31.0**	**-0.3**
DAT	**Datca**	**1.05**	**135**	PG	**Pb**	**17 11 31.5**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.08**	**64**	PG	**Pg**	**17 11 31.9**	**-0.4**
TNSA	**Tinos**	**1.19**	**273**	P	**Pn**	**17 11 34.9**	**+1.5**
TNSA				S	**Sg**	**17 11 48.9**	**-0.9**
TNSA				AML	AML	17 11 50.9	
	comp=E,296µm,0.4s						
TNSA				AML	AML	17 11 51.9	
	comp=N,372µm,0.2s						
YER	**Yerkesik**	**1.34**	**104**	PN	**Pn**	**17 11 35.6**	**0.0**
TURN	**Turunc**	**1.45**	**119**	PN	**Pn**	**17 11 36.7**	**-0.3**
THR3	**Thira Island,**	**1.47**	**224**	P	**Pg**	**17 11 39.6**	**0.0**
DKL	**Dikili**	**1.60**	**7**	PN	**Pn**	**17 11 38.9**	**-0.2**
ARG	**Arkhangelos**	**1.73**	**137**	PN	**Pn**	**17 11 40.8**	**0.0**
KARY	**Karystos**	**1.84**	**288**	P	**Pg**	**17 11 45.6**	**-1.1**
KARP	**Karpathos**	**1.97**	**168**	PN	**Pn**	**17 11 44.7**	**+0.4**

NNC 13 17:21:31.2±4.7, **36°.74N×69°.97E, h0^{km}, mb3.8, mpv3.5, 3D, Error ellipse: s-maj=59.4km s-min=32.2km az=128.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.37**	**4**	P	Pn	17 23 06.2	0.0
	1.5nm,0.3s,baz=182,slow=12,SNR=25						
KK31				⇓S	Sn	17 24 20.9	+1.3
	0.9nm,0.4s,baz=187,slow=24,SNR=4.0						
AB31	**Akbulak array**	**14.48**	**333**	⇓P	Pn	17 24 56.6	-0.7
	0.5nm,0.3s,baz=160,slow=12,SNR=41						
AKTO	**Aktyubinsk**	**16.16**	**332**	⇓P	Pn	17 25 20.5	+0.9
	0.9nm,0.5s						

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*TUL **13** 17:23:23.2±1.4, 36°.13N±0°.01×97°.30W±0°.01, h5^{km}±6^{km}, ML2.7, mb_Lg2.5/34(NEIC), Error ellipse: s-maj=1.5km s-min=1.4km az=182.0*
NEIC 13 17:23:23.2±1.2, **36°.138N**±0°.006×**97°.31W**±0°.01, **h5^{km}**±2^{km}, **Error ellipse: s-maj=3.0km s-min=1.7km az=47.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.73**	**189**	Pg	Pg	17 23 37.0	-0.2
OKCFA				Sg	Sg	17 23 45.2	-1.5
OKCSW	**OKLAHOMA CITY**	**0.74**	**188**		Pg	17 23 37.3	-0.1
OKCSW				Sg	Sg	17 23 47.2	+0.2
FNO	**Franklin**	**0.88**	**185**	Pg	Pg	17 23 39.8	-0.3
FNO				Sg	Sg	17 23 51.7	+0.1
T35A	**Sooner Cattle**	**1.01**	**39**		Pg	17 23 42.0	-0.5
T35A				Sg	Sg	17 23 55.6	0.0
TUL1	**Leonard**	**1.25**	**100**	Pn	Pg	17 23 45.8	-1.4
U32A	**Winter Ranch,**	**1.39**	**280**	Pn	Pn	17 23 48.9	-0.4
X34A	**Smith Ranch, M**	**1.59**	**196**		Pn	17 23 52.0	-0.1
WMOK	**Wichita Mounta**	**1.84**	**221**	Pn	Pn	17 23 55.9	+0.3
WMOK				IAmb_Lg		17 24 23.8	
	comp=Z,29nm,0.8s						
X37A	**Clayton**	**2.21**	**134**	Pn	Pn	17 24 00.0	-0.5
R32A	**Long Quarter,**	**2.54**	**334**		Pn	17 24 03.5	-1.6
R32A				IAmb_Lg		17 24 45.1	
	comp=Z,20nm,0.8s						
KSU1	**Kansas State U**	**3.01**	**10**	IAmb_Lg		17 25 04.7	
	comp=Z,10nm,0.7s						
W39A	**Magazine**	**3.02**	**107**	Pn	Pn	17 24 11.5	-0.1
W39A				IAmb_Lg		17 25 06.0	
	comp=Z,16nm,1.0s						
CBKS	**Cedar Bluff**	**3.30**	**325**	Pn	Pn	17 24 15.4	-0.2
CBKS				IAmb_Lg		17 25 17.1	
	comp=Z,15nm,0.8s						
MIAR	**Mount Ida**	**3.44**	**116**	Pn	Pn	17 24 17.8	+0.4
MIAR				IAmb_Lg		17 25 19.7	
	comp=Z,12nm,0.8s						
Z38A	**Mt. Pleasant**	**3.45**	**146**	Pn	Pn	17 24 16.8	-0.7
Z38A				IAmb_Lg		17 25 18.7	
	comp=Z,12nm,0.8s						
S39A	**Bolivar**	**3.55**	**63**	Pn	Pn	17 24 19.3	+0.3
AMTX	**Amarillo**	**3.78**	**252**	IAmb_Lg		17 25 32.8	
	comp=Z,9.9nm,0.7s						
X40A	**Basin Creek Fa**	**4.01**	**113**	Pn	Pn	17 24 23.9	-1.4
X40A				IAmb_Lg		17 25 35.4	
	comp=Z,11nm,0.7s						
WHTX	**Lake Whitney,**	**4.14**	**182**	IAmb_Lg		17 25 34.4	
	comp=Z,7.5nm,0.8s						
WHAR	**Wooly Hollow**	**4.17**	**100**	IAmb_Lg		17 25 37.2	
	comp=Z,12nm,0.8s						
MGMO	**Mountain Grove**	**4.18**	**74**	IAmb_Lg		17 25 37.4	
	comp=Z,8.5nm,0.7s						
W41B	**Gary Mavity, V**	**4.23**	**102**	Pn	Pn	17 24 27.3	-1.0
W41B				IAmb_Lg		17 25 41.8	
	comp=Z,8.1nm,0.8s						
UALR	**University of**	**4.27**	**107**	IAmb_Lg		17 25 37.9	
	comp=Z,9.5nm,0.7s						
LCAR	**Lake Charles**	**4.98**	**89**	IAmb_Lg		17 26 01.8	
	comp=Z,6.9nm,0.9s						
CCM	**Cathedral Cave**	**5.21**	**67**	IAmb_Lg		17 26 07.2	
	comp=Z,6.0nm,0.7s						
PBMO	**Poplar Bluff**	**5.58**	**81**	IAmb_Lg		17 26 21.0	
	comp=Z,11nm,0.7s						

NOU 13 17:31:39.2, 17°.29S×167°.61E, h84^{km}, MLv4.1/15, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.70**	**128**	P	Pn	17 31 55.9	+0.7
RTV	**Rentapao**	**0.92**	**123**	P	Pn	17 31 59.2	+1.6
SANVU	**Saraoutou**	**1.87**	**348**	P	Pn	17 32 07.8	-1.8
LIFNC	**LIFOU**	**3.49**	**186**	P	Pn	17 32 29.8	-1.4
MARNC	**Mare, Loyalty**	**4.19**	**175**	P	Pn	17 32 39.8	-0.9
YATNC	**Mamie plateau,**	**4.79**	**188**	P	Pn	17 32 48.7	-0.3
DZM	**Mont Dzumac**	**4.88**	**193**	P	Pn	17 32 50.9	+0.6
NOUC	**Port Laguerre**	**4.94**	**194**	P	Pn	17 32 51.8	+0.8
ONTNC	**Ouen Toro**	**5.11**	**192**	P	Pn	17 32 54.4	+1.1
OUENC	**Ouen Island, N**	**5.15**	**188**	P	Pn	17 32 53.2	-0.7
PINNC	**Pines Island,**	**5.30**	**182**	P	Pn	17 32 57.4	+1.6

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*IDC **13** 17:49:14.2±2.1, 30°.44S×177°.45W, h0^{km}, mb4.2/4, mbtmp4.2/5, ML3.3/1, MS3.2/1, Error ellipse: s-maj=46.7km s-min=25.8km az=110.0*
*NEIC **13** 17:49:19.7±1.6, 30°.26S±0°.04×177°.9W±0°.2, h19^{km}±4^{km}, mb4.4/12, Error ellipse: s-maj=18.9km s-min=5.7km az=84.0*
ISC 13 17:49:21.4±1.0, **30°.28S**±0°.07×**178°.0W**±0°.2, **h35^{km}, n24,** σ**1ˢ.89**/21, **mb4.4**/10, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.03**	**3**	Pn	**Pn**	**17 49 39.4**	**+0.1**
	119nm,0.3s,baz=188,slow=19,SNR=12						
RAO				Sn	**Sn**	**17 49 49.6**	**-2.8**
	640nm,0.3s,baz=75,slow=24,SNR=11						
URZ	**Urewera**	**8.93**	**206**	Pn	**Pn**	**17 51 25.7**	**-2.1**
	0.3nm,0.3s,baz=144,slow=19,SNR=1.0						
URZ				Sn	**Sn**	**17 53 03.9**	**-3.3**
	0.8nm,0.3s,baz=140,slow=18,SNR=2.1						
	4.2nm,0.7s						
URZ	**Urewera**	**8.93**	**206**	Pn	**Pn**	**17 51 27.3**	**-0.6**
BKZ	**Black Stump Fm**	**9.96**	**206**	Pn	**Pn**	**17 51 39.5**	**-2.5**
HNR	**Honiara**	**29.24**	**311**	LR	LR	18 04 33.8	
	comp=Z,44nm,19.9s,baz=200,slow=31						
CTA	**Charters Tower**	**33.80**	**279**	P	**P**	**17 56 03.3**	**+3.0**
	3.3nm,0.4s,baz=101,slow=9.7,SNR=10						
	3.3nm,0.4s						
CTAO	**Charters Tower**	**33.80**	**279**	P	**P**	**17 56 00.3**	**+0.1**
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**17 56 09.1**	**+2.7**
	3.0nm,0.8s,baz=76,slow=9.8,SNR=6.2						
	3.0nm,0.8s						
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**17 56 08.0**	**+1.5**
BBOO	**Buckleboo**	**39.02**	**254**	P	**P**	**17 56 44.8**	**+0.1**
BBOO				IAmb	IAmb	17 56 45.2	
	comp=Z,32nm,1.5s						
AS31	**Alice Springs**	**43.14**	**267**	P	**P**	**17 57 19.2**	**+0.5**
AS31				IAmb	IAmb	17 57 51.9	
	comp=Z,2.5nm,1.6s						
ASAR	**Alice Springs**	**43.14**	**267**	P	**P**	**17 57 19.2**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=104,slow=7.4,SNR=29						
	comp=Z,0.8nm,0.5s						
WR0	**Warramunga Arr**	**43.94**	**272**	P	**P**	**17 57 25.1**	**0.0**
WR0				IAmb	IAmb	17 57 59.0	
	comp=Z,10nm,1.6s						
WRA	**Warramunga Arr**	**44.12**	**272**	P	**P**	**17 57 26.9**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=112,slow=7.8,SNR=36						
	comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**44.12**	**272**	IAmb	IAmb	17 57 28.9	
	comp=Z,0.3nm,1.2s						
WB0	**Warramunga Arr**	**44.14**	**272**	P	**P**	**17 57 26.0**	**-0.7**
WB0				IAmb	IAmb	17 57 52.5	
	comp=Z,14nm,1.5s						
SBA	**Scott Base**	**48.15**	**184**	P	**P**	**17 58 00.6**	**+3.1**
SBA				IAmb	IAmb	17 58 40.5	
	comp=Z,7.2nm,1.6s						
KNRA	**Kununurra**	**50.72**	**274**	P	**P**	**17 58 17.5**	**-0.4**
QSPA	**South Pole Qui**	**59.83**	**180**	P	**P**	**17 59 23.8**	**+0.8**
QSPA				IAmb	IAmb	17 59 30.3	
	comp=Z,2.2nm,0.7s						
H03S2	**Juan Fernandez**	**80.51**	**124**	T	T	19 28 52.0	
	baz=243						
H03S1	**Juan Fernandez**	**80.52**	**124**	T	T	19 28 54.5	
	baz=243						
H03S3	**Juan Fernandez**	**80.53**	**124**	T	T	19 28 48.4	
	baz=243						
FINES	**FINESS Array B**	**145.04**	**340**	PKPbc	**PKPdf**	**18 08 52.8**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=56,slow=3.9,SNR=16						
AKASG	**Malin Array Be**	**151.22**	**323**	PKPbc	**PKPbc**	**18 09 09.2**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=55,slow=3.1,SNR=4.5						

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*IDC **13** 17:52:07.2±2.1, 20°.01S×168°.98E, h0^{km}, mb3.9/4, mbtmp3.9/5, ML3.5/1, MS3.3/2, Error ellipse: s-maj=83.3km s-min=28.4km az=144.0*
*NOU **13** 17:52:09.9, 20°.24S×168°.93E, h0^{km}, MLv4.1/15, Loyalty Islands*
*NEIC **13** 17:52:12.3±1.3, 20°.23S±0°.05×168°.91E±0°.07, h31^{km}±7^{km}, mb4.7/7, Error ellipse: s-maj=10.4km s-min=5.9km az=121.0*
ISC 13 17:52:12.1±0.9, **20°.25S**±0°.05×**168°.95E**±0°.10, **h35^{km}, n38,** σ**1ˢ.06**/37, **mb4.4**/8, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.50**	**215**		**Pn**	**17 52 36.9**	**+0.4**
MARNC				Sn	**Sn**	**17 52 55.0**	**+0.1**
MARNC	**Mare, Loyalty**	**1.50**	**215**	P	**Pn**	**17 52 37.1**	**+0.6**
LIFNC	**LIFOU**	**1.69**	**251**		**Pn**	**17 52 38.6**	**-0.4**
LIFNC				Sn	**Sn**	**17 52 59.1**	**-0.3**
LIFNC	**LIFOU**	**1.69**	**251**	P	**Pn**	**17 52 39.4**	**+0.4**
RTV	**Rentapao**	**2.49**	**348**	P	**Pn**	**17 52 51.5**	**+1.4**
DVP	**Devils Point**	**2.61**	**344**	P	**Pn**	**17 52 53.1**	**+1.4**
YATNC	**Mamie plateau,**	**2.63**	**226**	P	**Pn**	**17 52 52.3**	**+0.2**
PINNC	**Pines Island,**	**2.74**	**210**		**Pn**	**17 52 54.4**	**+0.8**
PINNC				Sn	**Sn**	**17 53 26.3**	**+0.8**
PINNC	**Pines Island,**	**2.74**	**210**	P	**Pn**	**17 52 54.9**	**+1.4**
PINNC	**Pines Island,**	**2.74**	**210**	P	**Pn**	**17 52 54.4**	**+0.8**
OUENC	**Ouen Island, N**	**2.92**	**222**		**Pn**	**17 52 57.2**	**+1.2**
OUENC	**Ouen Island, N**	**2.92**	**222**	P	**Pn**	**17 52 58.0**	**+2.0**
OUENC	**Ouen Island, N**	**2.92**	**222**		**Pn**	**17 52 56.9**	**+0.9**
DZM	**Mont Dzumac**	**2.96**	**232**	Pn	**Pn**	**17 52 57.8**	**+1.1**
	5.9nm,0.3s,baz=86,slow=11,SNR=59						
DZM				Sn	**Sn**	**17 53 32.4**	**+1.4**
	9.2nm,0.3s,baz=118,slow=20,SNR=9.5						
	20nm,0.4s						
DZM	**Mont Dzumac**	**2.96**	**232**		**Pn**	**17 52 57.1**	**+0.5**
DZM	**Mont Dzumac**	**2.96**	**232**	P	**Pn**	**17 52 58.1**	**+1.4**
NOUC	**Port Laguerre**	**3.08**	**233**	P	**Pn**	**17 53 00.1**	**+1.8**
ONTNC	**Ouen Toro**	**3.10**	**228**		**Pn**	**17 52 58.9**	**+0.3**
ONTNC	**Ouen Toro**	**3.10**	**228**	P	**Pn**	**17 53 00.6**	**+2.1**
SANVU	**Saraoutou**	**5.05**	**341**	Pn	**Pn**	**17 53 25.3**	**0.0**
SANVU	**Saraoutou**	**5.05**	**341**	P	**Pn**	**17 53 26.9**	**+1.5**
URZ	**Urewera**	**19.30**	**160**	LR	LR	18 02 21.3	
	comp=Z,70nm,21.2s,baz=211,slow=32						
LTZ	**Lake Taylor**	**22.64**	**174**	P	**P**	**17 57 08.9**	**-1.2**
LTZ				IAmb	IAmb	17 57 11.9	
	comp=Z,117nm,1.6s						
RABL	**Rabaul**	**22.84**	**312**	P	**P**	**17 57 11.0**	**-1.4**
WR0	**Warramunga Arr**	**32.28**	**264**	P	**P**	**17 58 37.8**	**+0.1**
WR0				IAmb	IAmb	17 59 26.4	
	comp=Z,23nm,1.7s						
WB2	**Warramunga Arr**	**32.46**	**264**	P	**P**	**17 58 40.1**	**+0.7**
WB2				IAmb	IAmb	17 59 15.2	
	comp=Z,15nm,1.6s						
WRA	**Warramunga Arr**	**32.47**	**264**	P	**P**	**17 58 39.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=91,slow=8.3,SNR=5.0						
	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**32.63**	**258**	P	**P**	**17 58 40.4**	**-0.5**
ASAR	**Alice Springs**	**32.63**	**258**	P	**P**	**17 58 41.8**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=86,slow=9.0,SNR=22						
ASAR				LR	LR	18 12 20.0	
	comp=Z,65nm,18.4s,baz=129,slow=37						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**32.63**	**258**	P	**P**	**17 58 39.4**	**-1.5**
QSPA	**South Pole Qui**	**69.81**	**180**	P	**P**	**18 03 18.8**	**0.0**
QSPA				IAmb	IAmb	18 03 54.6	
	comp=Z,7.8nm,1.5s						
SONM	**Songino Array**	**87.86**	**323**	P	**P**	**18 04 58.4**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=108,slow=4.7,SNR=3.6						
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	**87.86**	**323**	IAmb	IAmb	18 04 59.4	
	comp=Z,1.4nm,0.9s						
NVAR	**Mina Array Bea**	**89.67**	**49**	P	**P**	**18 05 06.2**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=217,slow=7.4,SNR=3.1						
	comp=Z,0.3nm,0.6s						
H03S2	**Juan Fernandez**	**95.95**	**129**	T	T	19 51 04.3	
	baz=241						
H03S1	**Juan Fernandez**	**95.96**	**129**	T	T	19 50 54.9	
	baz=241						
H03S3	**Juan Fernandez**	**95.97**	**129**	T	T	19 50 59.1	
	baz=241						
GERES	**GERESS Array B**	**145.24**	**331**	PKPbc	**PKPbc**	**18 11 45.3**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=41,slow=4.3,SNR=13						

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*DJA **13** 18:10:47.4±0.3, 7°S±2°×11°4E±°, h10^{km}, M4.2/17, mb4.3/2, MLv4.1/17*
*IDC **13** 18:10:52.5±2.2, 7°.96S×114°.40E, h0^{km}, mb3.6/3, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=41.7km s-min=30.1km az=2.0*
ISC 13 18:10:47.1±1.7, **6°.84S**±0°.04×**114°.39E**±0°.04, **h11^{km}**±13^{km}, **n24,** σ**1ˢ.73**/29, **mb3.5**/3, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMMI	**Kalianget**	**0.47**	**244**	P	**Pg**	**18 10 57.3**	**+1.0**
KMMI				S	**Sb**	**18 11 06.7**	**+2.4**
ABJI	**Asem Bagus**	**0.96**	**189**	P	**Pn**	**18 11 07.1**	**+0.6**
ABJI				S	**Sn**	**18 11 21.0**	**+0.8**
SRBI	**Singaraja**	**1.48**	**147**	P	**Pn**	**18 11 13.7**	**0.0**
SRBI				S	**Sn**	**18 11 33.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**1.63**	**188**	P	**Pn**	**18 11 16.5**	**+0.7**
JAGI				S	**Sb**	**18 11 38.9**	**+1.0**
GRJI	**Gresik**	**1.90**	**268**	P	**Pn**	**18 11 21.2**	**+1.7**
GRJI				S	**Sb**	**18 11 45.9**	**+0.3**
BWJI	**Bawean**	**1.98**	**300**	P	**Pn**	**18 11 21.8**	**+1.2**
BWJI				S	**Sb**	**18 11 47.8**	**-0.2**
DNP	**Denpasar**	**2.00**	**156**	P	**Pn**	**18 11 20.6**	**-0.2**
IGBI	**Denpasar**	**2.10**	**159**	P	**Pn**	**18 11 22.9**	**+0.7**
TBJI	**Tambak Boyo**	**2.53**	**270**	P	**Pn**	**18 11 29.2**	**+1.1**
PWJI	**Pagerwojo**	**2.82**	**245**	P	**Pn**	**18 11 31.6**	**-0.5**
BBKI	**Banjar Baru**	**3.39**	**8**	P	**Pn**	**18 11 41.0**	**+1.0**
UWJI	**Ujung Watu**	**3.45**	**277**	P	**Pn**	**18 11 41.4**	**+0.6**
PCJI	**Pacitan**	**3.46**	**247**	P	**Pn**	**18 11 40.8**	**-0.1**
WOJI	**Wonogiri, Jawa**	**3.58**	**254**	P	**Pn**	**18 11 41.9**	**-0.7**
PLAI	**Plampang**	**3.89**	**121**	P	**Pn**	**18 11 46.7**	**-0.2**
UGM	**Wanagama**	**3.98**	**254**	P	**Pn**	**18 11 48.2**	**0.0**
PBKI	**Pangkalan Bun**	**4.92**	**326**	P	**Pn**	**18 12 02.5**	**+1.4**
KAPI	**Kappang**	**5.63**	**71**	Pn	**Pb**	**18 12 23.1**	**-2.4**
	1.3nm,0.3s,baz=240,slow=14,SNR=2.0						
KAPI				Sn	**Sb**	**18 13 36.1**	**+3.0**
	2.9nm,0.3s,baz=2.1,slow=22,SNR=2.0						
	6.8nm,0.4s						
LEM	**Lembang**	**6.73**	**270**	Pn	Pn	18 12 34.2	+8.1
	0.7nm,0.3s,baz=98,slow=19,SNR=1.9						
LEM				Sn	**Sb**	**18 13 58.4**	**-6.3**
	1.8nm,0.3s,baz=289,slow=21,SNR=1.3						
	11nm,0.8s						
SKJI	**Sukabumi**	**7.78**	**268**	P	Pn	18 12 26.3	-14
PCI	**Palu**	**8.02**	**43**	P	Pn	18 12 38.2	-5.4
WRA	**Warramunga Arr**	**23.33**	**126**	P	**P**	**18 15 55.0**	**-0.5**
	1.4nm,0.9s,baz=302,slow=12,SNR=6.6						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**25.12**	**134**	P	**P**	**18 16 12.8**	**+0.5**
	0.8nm,0.7s,baz=300,slow=7.9,SNR=18						
	0.8nm,0.7s						
STKA	**Stephens Creek**	**35.56**	**138**	P	**P**	**18 17 44.8**	**+0.3**
	1.5nm,0.9s,baz=311,slow=12,SNR=3.6						
	1.5nm,0.9s						

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*IGIL **13** 18:14:52.5, 35°.74N×10°.06W, h32^{km}, ML3.2*
*MDD **13** 18:14:52.2±0.6, 35°.89N×9°.81W, h0^{km}, mb_Lg3.5/20, Error ellipse: s-maj=5.0km s-min=4.5km az=41.0*
*SFS **13** 18:14:52.0, 35°.89N×9°.80W, ML3.5, SW. CABO DE SAN VICENTE*
*INMG **13** 18:14:52.9±1.1, 35°.76N×10°.06W, h31^{km}, MD2.8, ML3.0, Error ellipse: s-maj=4.0km s-min=2.8km az=70.0*
*LDG **13** 18:14:53.8±0.3, 35°.86N×9°.83W, h10^{km}, Ml3.4/3, Error ellipse: s-maj=5.7km s-min=5.4km az=149.0*
*CNRM **13** 18:15:17.0, 34°.17N×8°.44W, h32^{km}, ml3.4*
ISC 13 18:14:49.5±1.5, **35°.73N**±0°.05×**10°.03W**±0°.06, **h35^{km}, n67,** σ**2ˢ.10**/119, **8D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.71**	**34**	⇓*i*Pn	**Pn**	**18 15 18.9**	**+2.2**
PFVI				*e*Sn	**Sn**	**18 15 38.1**	**+0.8**
PFVI				A	A	18 15 39.6	

	112nm,0.2s						
MORF	Marmelete	1.93	35	eP	Pn	18 15 21.9	+2.1
MORF				eS	Sn	18 15 43.3	+0.5
MORF				IAML		18 15 45.6	
	comp=N,319nm,0.2s						
MORF	Marmelete	1.93	35⇓	ePn	Pn	18 15 21.9	+2.1
MORF				eSn	Sn	18 15 43.4	+0.5
MORF				A	A	18 15 45.8	
	comp=N,254nm,0.1s						
PTEO	Sao Teotonio	2.10	30⇓	ePn	Pn	18 15 24.1	+2.0
PTEO				eSn	Sn	18 15 47.6	+0.7
PTEO				A	A	18 15 50.6	
	comp=N,77nm,0.2s						
PBDV	Barranco-do-Ve	2.27	48	ePn	Pn	18 15 27.0	+2.5
PBDV				eSn	Sn	18 15 51.8	+0.6
PBDV				A	A	18 15 54.4	
	comp=N,50nm,0.1s						
PCVE	Castro Verde	2.48	40⇓	ePn	Pn	18 15 29.9	+2.5
PCVE				eSn	Sn	18 15 57.1	+0.6
PCVE				A	A	18 15 59.3	
	comp=N,78nm,0.2s						
PVAQ	Vaqueiros	2.50	47⇓	ePn	Pn	18 15 30.1	+2.4
PVAQ				eSn	Sn	18 15 57.2	+0.2
PVAQ				A	A	18 16 00.9	
	comp=N,89nm,0.1s						
MESJ	Messejana	2.56	34	eP	Pn	18 15 30.6	+2.1
MESJ				eS	Sn	18 15 58.7	+0.3
MESJ				IAML		18 16 01.8	
	comp=N,77nm,0.1s						
MESJ	Messejana	2.56	34⇓	ePn	Pn	18 15 30.6	+2.1
MESJ				eSn	Sn	18 15 58.7	+0.3
MESJ				A	A	18 16 01.6	
	comp=N,52nm,0.2s						
PNCL	Nicolau / Gran	2.67	26⇓	ePn	Pn	18 15 31.6	+1.7
PNCL				eSn	Sn	18 16 01.0	0.0
PNCL				A	A	18 16 02.6	
	comp=N,37nm,0.1s						
EGRO	El Granado	2.73	48	P	Pn	18 15 33.1	+2.3
EGRO				S	Sn	18 16 02.4	-0.1
EGRO				i Vmb_Lg		18 16 05.6	
PBEJ	Beja	2.88	36⇓	ePn	Pn	18 15 34.8	+2.0
PBEJ				eSn	Sn	18 16 06.3	+0.1
PBEJ				A	A	18 16 09.2	
	comp=N,30nm,0.2s						
LIS	Lisbon	3.06	13	eS	Sn	18 16 10.3	-0.5
LIS				IAML		18 16 13.2	
	comp=N,75nm,0.2s						
PMST	Lisbon--Monsan	3.08	12	ePn	Pn	18 15 37.0	+1.4
PMST				eSn	Sn	18 16 10.9	-0.2
PMST				A	A	18 16 14.0	
	comp=N,57nm,0.2s						
PACT	Alcochete	3.18	17	ePn	Pn	18 15 39.3	+2.3
PACT				eSn	Sn	18 16 14.0	+0.3
PACT				A	A	18 16 19.4	
	comp=N,50nm,0.4s						
AVE	Averroes	3.25	138	P	Pn	18 15 39.3	+1.4
AVE				S	Sn	18 16 13.5	-1.8
PMAFR	Mafra	3.28	10	ePn	Pn	18 15 39.5	+1.2
PMAFR				eSn	Sn	18 16 15.8	-0.3
PMAFR				A	A	18 16 19.0	
	comp=N,69nm,0.6s						
EMIN	Mina Concepcio	3.38	52	P	Pn	18 15 41.9	+2.2
EMIN				S	Sn	18 16 17.5	-1.0
EMIN				i Vmb_Lg		18 16 21.1	
PBAR	Barrancos	3.42	44	ePn	Pn	18 15 42.3	+2.0
PBAR				eSn	Sn	18 16 19.4	-0.2
PBAR				A	A	18 16 22.2	
	comp=N,32nm,0.3s						
ESPR	Espera	3.56	70	P	Pn	18 15 44.5	+2.4
ESPR				S	Sn	18 16 22.9	0.0
ESPR				i Vmb_Lg		18 16 24.8	
PMTG	Montargil	3.63	23	ePn	Pn	18 15 44.9	+1.7
PMTG				eSn	Sn	18 16 23.7	-1.1
PMTG				A	A	18 16 25.8	
	comp=N,24nm,0.1s						
PESTR	Estremoz	3.69	31	ePn	Pn	18 15 45.4	+1.4
PESTR				eSn	Sn	18 16 25.5	-0.7
PESTR				A	A	18 16 28.3	
	comp=N,15nm,0.2s						
PESTR	Estremoz	3.69	31	P	Sn	18 16 26.2	0.0
EJIF	Jimena Fronter	3.76	78	P	Pn	18 15 47.9	+2.9
EJIF				S	Sn	18 16 23.5	-4.6
CEU	Ceuta	3.79	86	P	Pn	18 15 48.5	+3.2
CEU				S	Sn	18 16 27.0	-1.6
EBAD	Badajoz	3.86	38	P	Pn	18 15 48.0	+1.6
EBAD				S	Sn	18 16 29.9	-0.6
EBAD				i Vmb_Lg		18 16 34.2	
PSBE	So Bento	3.91	14	ePn	Pn	18 15 48.5	+1.5
PSBE				eSn	Sn	18 16 30.7	-0.9
PSBE				A	A	18 16 35.4	
	comp=N,22nm,0.7s						
PMRV	Marv??o	4.25	29	ePn	Pn	18 15 53.3	+1.6
PMRV				eSn	Sn	18 16 38.6	-1.4
PMRV				A	A	18 16 40.6	
	comp=N,21nm,0.5s						
EMIJ	Mijas	4.34	77	P	Pn	18 15 53.6	+0.7
EMIJ				S	Sn	18 16 40.4	-1.9
EMIJ				i Vmb_Lg		18 16 46.2	
ECAB	El Cabril	4.38	56	P	Pn	18 15 55.3	+1.9
ECAB				S	Sn	18 16 40.7	-2.6
ECAB				i Vmb_Lg		18 16 45.9	
PCAS	Casmilo, Conde	4.49	15	ePn	Pn	18 15 56.4	+1.5
PCAS				eSn	Sn	18 16 44.3	-1.5
PCAS				A	A	18 16 49.2	
	comp=N,14nm,0.3s						
PCBR	Castelo Branco	4.58	25	ePn	Pn	18 15 57.9	+1.8
PCBR				eSn	Sn	18 16 46.8	-1.3
PCBR				A	A	18 16 51.3	
	comp=N,16nm,0.6s						
OUK	Oukaimeden	4.86	158	P	Pn	18 16 02.0	+1.6
EGOR	Sierra Gorda,	4.97	72	P	Pn	18 16 02.8	+1.1
EGOR				S	Sn	18 16 56.3	-1.8
EGOR				i Vmb_Lg		18 17 04.2	
EADA	Adamuz	5.00	59	P	Pn	18 16 04.0	+1.9
EADA				S	Sn	18 16 56.7	-1.9
EADA				i Vmb_Lg		18 17 00.3	
MTE	Manteigas	5.06	22	ePn	Pn	18 16 04.6	+1.7
MTE				eSn	Sn	18 16 58.2	-1.9
MTE				A	A	18 17 02.4	
	comp=N,14nm,0.4s						
PVIS	Viseu	5.26	18	ePn	Pn	18 16 06.7	+1.2
PVIS				eSn	Sn	18 17 03.4	-1.5
PVIS				A	A	18 17 06.4	
	comp=N,14nm,0.1s						
ELGU	Los Guajares,	5.30	76	P	Pn	18 16 06.7	+0.6
ELGU				S	Sn	18 17 03.8	-2.2
ELGU				i Vmb_Lg		18 17 11.7	
EPLA	Plasencia	5.34	35	P	Pn	18 16 08.2	+1.6
EPLA				S	Sn	18 17 04.8	-2.1
EPLA				i Vmb_Lg		18 17 09.6	
MDT	Midelt	5.35	121	P	Pn	18 16 08.4	+1.6
OUZM	OUZ	5.53	149	P	Pn	18 16 11.0	+1.6
PVRL	Vila Real	5.83	17	ePn	Pn	18 16 14.4	+1.0
PVRL				eSn	Sn	18 17 16.6	-2.4
PVRL				A	A	18 17 20.1	
	comp=N,17nm,0.1s						
PMPST	Porto Santo, M	5.84	245	ePn	Pn	18 16 13.0	-0.6
PMPST				eSn	Sn	18 17 13.2	-6.1
EBER	Berja	5.88	76	P	Pn	18 16 16.1	+1.8
EBER				S	Sn	18 17 17.8	-2.7
PAB	San Pablo	5.90	48	P	Pn	18 16 16.5	+2.1
PAB				S	Sn	18 17 17.3	-3.6
PAB				i Vmb_Lg		18 17 22.8	
POLO	Lamas de Olo	5.90	17	ePn	Pn	18 16 15.4	+0.9
POLO				eSn	Sn	18 17 17.5	-3.4
POLO				A	A	18 17 22.0	
	comp=N,4.0nm,0.5s						
MVO	Moncorvo	5.92	23	ePn	Pn	18 16 16.0	+1.4
MVO				eSn	Sn	18 17 19.0	-2.2
MVO				A	A	18 17 22.1	
	comp=N,9.7nm,0.4s						
EQES	Quesada	5.96	68	P	Pn	18 16 17.2	+2.0
EQES				S	Sn	18 17 19.7	-2.6
EQES				i Vmb_Lg		18 17 24.2	
PCAB	Cabril	6.17	14	ePn	Pn	18 16 19.3	+1.2
PCAB				eSn	Sn	18 17 24.8	-2.7
PCAB				A	A	18 17 29.6	
	comp=N,6.6nm,0.1s						
ESDC	Sonseca Array	6.22	49	P	Pn	18 16 20.9	+2.1
ESDC				S	Sn	18 17 24.2	-4.4
ESDC				i Vmb_Lg		18 17 30.6	
JBK	JBK	6.28	101	P	Pn	18 16 26.4	+6.7
ELOB	Lobios	6.32	13	P	Pn	18 16 21.0	+0.8
ELOB				S	Sn	18 17 26.6	-4.6
ELOB				i Vmb_Lg		18 17 32.3	
PGAV	Gavieira, Arco	6.38	12	ePn	Pn	18 16 21.9	+0.9
PGAV				eSn	Sn	18 17 28.5	-4.1
PGAV				A	A	18 17 44.9	
	comp=N,6.0nm,0.4s						
EZAM	Zamans	6.50	9	P	Pn	18 16 23.3	+0.8
EZAM				S	Sn	18 17 31.0	-4.4
EZAM				i Vmb_Lg		18 17 37.7	
PBRG	Braganca	6.59	22	ePn	Pn	18 16 25.1	+1.3
PBRG				eSn	Sn	18 17 35.0	-2.7
PBRG				A	A	18 17 38.5	
	comp=N,4.8nm,0.3s						
GUD	Guadarrama	6.74	42	P	Pn	18 16 27.8	+1.8
GUD				S	Sn	18 17 38.2	-3.5
GUD				i Vmb_Lg		18 17 42.9	
EZAR	Zarzadilla de	7.02	70	S	Sn	18 17 43.9	-4.6
UCM	Universidad Co	7.04	47	P	Pn	18 16 32.4	+2.4
UCM				S	Sn	18 17 47.7	-1.2
EMAZ	Mazaricos	7.26	6	P	Pn	18 16 32.9	-0.1
EMAZ				S	Sn	18 17 47.6	-6.5
EMAZ				i Vmb_Lg		18 17 51.1	
ETOB	Tobarra	7.37	64	P	Pn	18 16 35.9	+1.4
ETOB				S	Sn	18 17 51.9	-5.1
ETOR	Torete	8.07	49	P	Pn	18 16 46.6	+2.4
ETOR				S	Sn	18 18 10.5	-3.7
ETOR				i Vmb_Lg		18 18 20.0	
ECHE	Chera	8.15	59	P	Pn	18 16 47.4	+2.1
ECHE				i Vmb_Lg		18 18 20.1	
EMOS	Mosqueruela	8.85	56	P	Pn	18 16 58.4	+3.5
EMOS				S	Sn	18 18 29.9	-3.5
SJPF	Ste Jean	10.04	40	ePn	Pn	18 17 12.9	+1.8
SJPF				eSn	Sn	18 18 56.2	-6.2
	comp=N,0.8nm,0.3s						
ETSF	Etsaut	10.25	43	ePn	Pn	18 17 15.9	+1.9
ETSF				eSn	Sn	18 19 01.3	-6.4
	comp=N,1.4nm,0.3s						
EPF	Esparros	10.84	45	ePn	Pn	18 17 23.2	+1.1
EPF				eSn	Sn	18 19 15.5	-6.6
	comp=N,1.9nm,0.3s						
RJF	Les Rejaudoux	12.97	39	ePn	Pn	18 17 52.2	+1.0

INMG ***13*** *18:29:23.8±1.8, 35°.47N×3°.86W, h18km±6km, ML2.1, Error ellipse: s-maj=6.5km s-min=4.0km az=26.0*

MDD ***13*** *18:29:23.8±0.5, 35°.54N×3°.83W, h3km±3km, mb_Lg2.6/15, Error ellipse: s-maj=3.9km s-min=2.8km az=169.0*

SFS ***13*** *18:29:23.0, 35°.54N×3°.82W, h3km, ML2.6, ALBORAN SUR*

CNRM ***13*** *18:29:24.7, 35°.50N×3°.79W, h22km, ml2.6*

ISC 13 18:29:23.9±1.0**, 35°.53N**±0°.02×**3°.80W**±0°.02**, h17**km±8km**,**
n41, σ1^{s}55/67**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.33	200	P	Pb	18 29 31.7	+0.3
PALE				S	Sg	18 29 35.0	-0.7
PVLZ	Peæn de	0.54	229	P	Pn	18 29 35.7	-1.1
PVLZ				S	Sb	18 29 42.1	-0.3
WMELI	Melilla	0.73	107	P	Pb	18 29 38.1	0.0
WMELI				S	Sb	18 29 46.5	-1.2
EMEL	Melilla	0.73	108	Pg	Pb	18 29 37.9	-0.2
EMEL				Sg	Sb	18 29 47.9	+0.2
GOG	Mont Gurugu	0.73	115	P	Pn	18 29 40.0	+0.6
GOG				S	Sb	18 29 47.6	-0.2
EALB	Alboran	0.74	57	Pg	Pg	18 29 38.9	+0.5
EALB				Sg	Sn	18 29 49.6	-0.9
EALB				i Vmb_Lg		18 29 50.5	
CHAS	Isla Isabel II	1.17	107	P	Pn	18 29 44.9	-0.5
CHAS				S	Sb	18 29 58.6	-1.9
SMIR	Smir Dam	1.30	277	P	Pg	18 29 50.0	+1.1
SMIR				S	Sb	18 30 03.2	-0.9
EMIJ	Mijas	1.30	323	Pg	Pb	18 29 47.8	0.0
EMIJ				Sg	Sg	18 30 05.0	-0.9
EMIJ				i Vmb_Lg		18 30 10.9	
CHEFC	Chefchaouen	1.33	252	P	Pg	18 29 49.3	-0.2
CEU	Ceuta	1.33	286	P	Pb	18 29 48.5	+0.1
CEU				S	Sn	18 30 01.8	-3.2
ECEU	Ceuta	1.33	286	Pg	Pn	18 29 44.6	-3.1
ECEU				Sg	Sn	18 30 02.2	-2.9
ECEU				i Vmb_Lg		18 30 05.9	
ELGU	Los Guajares,	1.34	6	Pg	Pb	18 29 48.2	-0.3
ELGU				Sg	Sn	18 30 04.9	-0.4
ELGU				i Vmb_Lg		18 30 13.5	
TAF	Taforalt	1.34	122	P	Pb	18 29 49.3	+0.7
EBER	Berja	1.55	28	Pn	Pn	18 29 50.9	+0.1
EBER				Sn	Sn	18 30 11.0	+0.3
EBER				i Vmb_Lg		18 30 16.7	
JBK	JBK	1.57	139	P	Pn	18 29 51.3	+0.3
JBK				S	Sn	18 30 07.3	-3.8
EGOR	Sierra Gorda,	1.59	351	Pg	Pb	18 29 53.5	+0.5
EGOR				Sg	Sg	18 30 15.1	-0.3
EGOR				i Vmb_Lg		18 30 21.4	
EJIF	Jimena Fronter	1.63	305	Pn	Pn	18 29 48.6	-3.3
ENIJ	Nijar	1.93	41	Pn	Pn	18 29 55.2	-0.8
ENIJ				Sn	Sn	18 30 19.1	-0.7
ENIJ				i Vmb_Lg		18 30 19.4	
EQES	Quesada	2.34	14	Pg	Pb	18 30 05.2	-0.5
EQES				Sn	Sn	18 30 30.1	0.0
EQES				Sg	Sb	18 30 34.6	+0.3
EQES				i Vmb_Lg		18 30 38.2	
EADA	Adamuz	2.70	347	Pn	Pn	18 30 06.2	-0.4
EADA				i Vmb_Lg		18 30 53.7	
MD31	MD31	2.77	197	P	Pn	18 30 08.8	+1.2
MDT	Midelt	2.79	194	P	Pn	18 30 09.1	+1.3
ECAB	El Cabril	2.85	333	Pn	Pn	18 30 08.1	-0.6
ECAB				Sn	Sn	18 30 41.0	-1.6
ECAB				i Vmb_Lg		18 30 56.1	
TDRA	Tendrara	2.89	149	P	Pn	18 30 12.0	+2.7
EZAR	Zarzadilla de	2.89	35	Sn	Sn	18 30 44.0	+0.5
EMUR	La Murta	3.09	41	Pn	Pn	18 30 10.1	-1.9
EMUR				Sn	Sn	18 30 47.7	-0.8
EMUR				i Vmb_Lg		18 30 58.1	
EMIN	Mina Concepcio	3.21	315	Pn	Pn	18 30 12.1	-1.5
EMIN				Sn	Sn	18 30 51.0	-0.4
EMIN				i Vmb_Lg		18 31 06.3	
EGRO	El Granado	3.58	305	Pn	Pn	18 30 17.1	-1.5
EGRO				Sn	Sn	18 30 59.7	-0.7
EGRO				i Vmb_Lg		18 31 27.3	
ETOB	Tobarra	3.59	29	Pn	Pn	18 30 21.5	+2.6
ETOB				Sn	Sn	18 31 01.4	+0.5
ETOB				i Vmb_Lg		18 31 32.6	
PVAQ	Vaqueiros	3.67	302	ePn	Pn	18 30 22.0	+2.2
PVAQ				eSn	Sn	18 31 03.4	+0.7
PVAQ				A	A	18 31 14.3	
	4.0nm,0.5s						
PVAQ	Vaqueiros	3.67	302	P	Pn	18 30 22.3	+2.5
PBAR	Barrancos	3.70	316	eSn	Sn	18 31 05.9	+2.4
PBAR				A	A	18 31 20.4	
	2.7nm,0.7s						
PBDV	Barranco-do-Ve	3.74	298	ePn	Pn	18 30 22.6	+1.7
PBDV				eSn	Sn	18 31 06.8	+2.2
PCVE	Castro Verde	4.00	303	eSn	Sn	18 31 13.1	+2.2
PCVE				A	A	18 31 21.9	
	3.3nm,0.6s						
EBAD	Badajoz	4.12	322	Pn	Pn	18 30 25.5	-0.5
EBAD				Sn	Sn	18 31 13.4	-0.3
EBAD				i Vmb_Lg		18 31 28.9	
MESJ	Messejana	4.23	304	eSn	Sn	18 31 19.1	+2.5
MESJ				A	A	18 31 25.9	
	2.9nm,0.5s						
PTEO	Sao Teotonio	4.44	298	eSn	Sn	18 31 22.8	+1.0
PNCL	Nicolau / Gran	4.58	306	ePn	Pn	18 30 34.7	+2.3
PNCL				eSn	Sn	18 31 26.3	+1.1
PNCL				A	A	18 31 45.8	
	2.4nm,0.7s						
PMRV	Marv??o	4.83	325	ePn	Pn	18 30 40.7	+5.0
PMTG	Montargil	4.99	316	ePn	Pn	18 30 41.2	+3.2

IDC ***13*** *18:48:33.3±0.7, 22°.82S×179°.10E, h550km±6km, mb3.6/19, mbtmp4.4/21, Error ellipse: s-maj=13.5km s-min=10.6km az=123.0*

NEIC ***13*** *18:48:35.5±1.9, 23°.02S±0°.08×179°.13E±0°.09, h571km±5km, mb4.5/155, Error ellipse: s-maj=12.7km s-min=11.7km az=128.0*

NOU ***13*** *18:48:35.0, 22°.90S×179°.28E, h579km, ML4.2/54, South of Fiji Islands*

ISC 13 18:48:35.1±0.4**, 22°.97S**±0°.05×**179°.14E**±0°.05**, h575**km±4km**,**
h576km:pP-P, n414, σ1^{s}68/428**, mb4.4**/104**, 22C-21D,**
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	5.09	23	P	P	18 50 07.7	+0.5
	21nm,0.6s						
DGTI	Dogotuki	6.66	5	P	P	18 50 21.3	+0.3
RAO	Raoul Island	6.79	158	S	S	18 51 45.5	-4.0
	102nm,0.3s,baz=76,slow=23,SNR=1.5						
RAO	Raoul Island	6.79	158	P	P	18 50 20.3	-1.7
GLKZ	Green Lake	6.80	158	P	P	18 50 21.5	-0.6
GLKZ				S	S	18 51 51.8	+2.2
MARNC	Mare, Loyalty	10.39	276	P	P	18 50 57.6	+0.3
MARNC				S	S	18 52 53.9	-0.4
MARNC	Mare, Loyalty	10.39	276	P	P	18 50 57.8	+0.4
	2.0nm,0.5s						
PINNC	Pines Island,	10.79	270	P	P	18 51 02.0	+0.6
PINNC	Pines Island,	10.79	270	P	P	18 51 02.4	+1.0
	131nm,0.8s						
NIUE	Niue	10.92	71	P	P	18 51 02.1	-0.6
NIUE				S	S	18 53 06.0	+1.8
NIUE	Niue	10.92	71	P	P	18 51 02.5	-0.3
	262nm,1.1s						
LIFNC	LIFOU	11.26	279	P	P	18 51 05.5	-0.7
LIFNC	LIFOU	11.26	279	P	P	18 51 06.2	0.0
	155nm,1.3s						
OUENC	Ouen Island, N	11.36	270	P	P	18 51 07.4	+0.1
OUENC	Ouen Island, N	11.36	270	P	P	18 51 07.9	+0.7
ONTNC	Ouen Toro	11.73	271	P	P	18 51 11.6	+0.6
DZM	Mont Dzumac	11.77	272	P	P	18 51 07.8	-3.6
	5.0nm,0.7s,baz=53,slow=15,SNR=2.1						
DZM	Mont Dzumac	11.77	272	P	P	18 51 10.4	-1.1
DZM	Mont Dzumac	11.77	272	P	P	18 51 11.7	+0.2
	16nm,1.1s						
NOUC	Port Laguerre	11.89	272	P	P	18 51 13.5	+0.9
	16nm,0.8s						
AFI	Afiamalu	12.47	45	P	P	18 51 14.5	-4.2
	35nm,0.3s,baz=8.4,slow=8.2,SNR=5.7						
AFI				S	S	18 53 22.4	-11
	37nm,0.8s,baz=132,slow=19,SNR=1.6						
OUZ	Omahuta	13.13	200	P	P	18 51 27.6	+2.6
OUZ	Omahuta	13.13	200	P	P	18 51 28.0	+2.9
	172nm,1.0s						
SANVU	Saraoutou	13.52	302	P	P	18 51 30.1	+0.6
WCZ	Waipu Caves	13.57	197	P	P	18 51 32.7	+3.0
GRZ	Great Barrier	13.61	193	P	P	18 51 31.7	+1.6
KUZ	Kuaotunu	14.04	191	P	P	18 51 35.7	+1.3
ABAZ	Army Bay	14.08	194	P	P	18 51 37.0	+2.1
WIAZ	Waiheke Island	14.20	193	P	P	18 51 37.9	+1.9
ETAZ	East Tamaki Re	14.40	194	P	P	18 51 40.1	+2.2
WTAZ	Waiatarua	14.46	195	P	P	18 51 40.8	+2.2
MKAZ	Moumakai	14.50	193	P	P	18 51 40.5	+1.6
MXZ	Matakaoa Point	14.56	183	P	P	18 51 37.9	-1.7
MXZ	Matakaoa Point	14.56	183	P	P	18 51 37.4	-2.1
AWAZ	Awhitu Peninsu	14.57	194	P	P	18 51 40.8	+1.2
HAZ	Te Kaha	14.78	184	P	P	18 51 39.2	-2.5
HAZ				S	S	18 54 11.1	-3.6
WMGZ	Waiomatatini S	14.81	182	P	P	18 51 39.6	-2.3
WMGZ				S	S	18 54 13.6	-1.6
PKGZ	Pakihiroa	14.89	183	P	P	18 51 40.2	-2.7
PKGZ				S	S	18 54 11.2	-5.6
OPRZ	Ohinepanea	14.99	188	P	P	18 51 44.6	+0.9
RUGZ	Raukumara Rang	15.00	184	P	P	18 51 42.5	-1.4
RUGZ				S	S	18 54 14.6	-4.1
TOZ	Tahuroa Road	15.04	191	P	P	18 51 45.6	+1.5
PUZ	Puketiti	15.07	183	P	P	18 51 41.4	-3.1
PUZ				S	S	18 54 17.1	-2.6
MARZ	Manawahe	15.11	187	P	P	18 51 45.5	+0.5
TWGZ	Tauwhareparae	15.19	183	P	P	18 51 43.7	-1.9
TWGZ				S	S	18 54 19.4	-2.3
KARZ	Kaharoa	15.20	189	P	P	18 51 47.2	+1.4
OMRZ	Omania	15.27	188	P	P	18 51 47.9	+1.5
NGRZ	Ngongotaha	15.29	189	P	P	18 51 48.4	+1.7
URZ	Urewera	15.34	186	P	P	18 51 44.5	-2.5
	53nm,0.3s,baz=272,slow=1.8,SNR=41						
URZ				S	S	18 54 17.3	-6.8
	26nm,0.6s,baz=222,slow=19,SNR=3.5						
URZ	Urewera	15.34	186	P	P	18 51 43.8	-3.2
URZ	Urewera	15.34	186	P	P	18 51 44.3	-2.7
URZ				S	S	18 54 17.1	-7.1
URZ	Urewera	15.34	186	P	P	18 51 45.6	-1.4
MWZ	Matawai	15.38	185	P	P	18 51 45.1	-2.4
MWZ				S	S	18 54 18.2	-6.7
TARZ	Mount Tarawera	15.38	188	P	P	18 51 49.6	+2.0
TKGZ	Te Karaka	15.46	184	P	P	18 51 47.3	-0.9
RRRZ	Republican Roa	15.48	188	P	P	18 51 49.5	+1.0
CNGZ	Carnagh Statio	15.48	183	P	P	18 51 47.7	-0.7
MUGZ	Murupara	15.59	187	P	P	18 51 48.2	-1.3
TLZ	Tolley Road	15.62	191	P	P	18 51 51.1	+1.3
PRRZ	Plateau Road	15.65	188	P	P	18 51 48.0	-2.1
RTZ	Ruatahuna	15.70	186	P	P	18 51 45.8	-4.9
WPRZ	Whakapapatarin	15.71	189	P	P	18 51 51.5	+0.9
RIGZ	Rimuhau	15.73	184	P	P	18 51 47.4	-3.4
SNGZ	Shannon Statio	15.83	185	P	P	18 51 50.5	-1.4
SNGZ				S	S	18 54 29.6	-2.8
HIZ	Hauiti	15.92	192	P	P	18 51 53.5	+0.9
HIZ	Hauiti	15.92	192	P	P	18 51 54.7	+2.1
HIZ	Hauiti	15.92	192	P	P	18 51 55.0	+2.4
	490nm,1.3s						
PRGZ	Paritu Road	15.94	184	P	P	18 51 53.2	+0.3
PRGZ				S	S	18 54 34.8	+0.7
MTHZ	Maungataniwha	15.95	187	P	P	18 51 52.4	-0.6
MTHZ				S	S	18 54 30.6	-3.7
WATZ	Wairara	15.95	190	P	P	18 51 54.2	+1.2
MRHZ	Matea Rd	15.98	188	P	P	18 51 52.9	-0.4
RAHZ	Arahi	15.99	186	P	P	18 51 52.4	-1.0
RAHZ				S	S	18 54 34.4	-0.5
KNZ	Kokohu	16.05	184	P	P	18 51 51.1	-2.7
KNZ				S	S	18 54 32.8	-3.0
RATZ	Rangitukua	16.10	190	P	P	18 51 54.7	+0.3
WHHZ	Waihua	16.14	185	P	P	18 51 48.0	-6.6
WHHZ				S	S	18 54 29.2	-8.1
MHGZ	Mahia Peninsul	16.16	183	P	P	18 51 54.6	-0.3
NMHZ	Naumai	16.20	187	P	P	18 51 54.7	-0.6
NMHZ				S	S	18 54 36.4	-2.1
RITZ	Rihia Road	16.20	189	P	P	18 51 52.2	-3.1
BKZ	Black Stump Fm	16.30	187	P	P	18 51 53.9	-2.3
BKZ	Black Stump Fm	16.30	187	P	P	18 51 54.1	-2.1
BKZ				S	S	18 54 34.0	-6.1
BKZ	Black Stump Fm	16.30	187	P	P	18 51 54.5	-1.7
	203nm,0.5s						
TMVZ	Te Maari	16.36	190	P	P	18 51 56.9	+0.1
WTVZ	West Tongariro	16.37	190	P	P	18 51 57.7	+0.8
ETVZ	East Tongariro	16.38	189	P	P	18 51 57.2	+0.2
NNVZ	North Ngauruho	16.39	190	P	P	18 51 58.2	+1.0
OTVZ	Oturere	16.41	190	P	P	18 51 57.3	-0.1
NGZ	Ngauruhoe	16.43	190	P	P	18 51 58.3	+0.8
TUVZ	Tukino	16.51	190	P	P	18 51 58.3	0.0
VRZ	Vera Road	16.53	192	P	P	18 52 00.6	+2.4
MCHZ	McNeill Hill	16.55	187	P	P	18 51 58.1	-0.4
MHEZ	Mangahewa	16.57	193	P	P	18 52 03.8	+5.2
WNVZ	Wahianoa	16.58	190	P	P	18 51 58.7	-0.1
PKVZ	Pokaka	16.58	190	P	P	18 51 59.1	+0.3
MOVZ	Moawhango	16.64	189	P	P	18 51 59.1	-0.1
BHHZ	Black Hill Sta	16.67	188	P	P	18 51 58.1	-1.5
CKHZ	Cape Kidnapper	16.73	186	P	P	18 51 59.7	-0.3
KRHZ	Kereru	16.79	187	P	P	18 51 59.3	-1.3
KHEZ	Kahui Hut	16.85	194	P	P	18 52 05.6	+4.5
PREZ	Palmer Road	16.86	193	P	P	18 52 05.8	+4.5
KAHZ	Kahuranaki	16.88	186	P	P	18 52 01.2	-0.2
WAZ	Wanganui	17.10	191	P	P	18 52 04.4	+1.1
PXZ	Pawanui	17.12	186	P	P	18 52 02.6	-0.8
TSZ	Takapari Road	17.25	188	P	P	18 52 04.7	0.0
BFZ	Birch Farm	17.82	187	P	P	18 52 08.7	-1.3
BFZ	Birch Farm	17.82	187	P	P	18 52 09.6	-0.4
BFZ	Birch Farm	17.82	187	P	P	18 52 09.5	-0.4
QRZ	Quartz Range	18.65	196	P	P	18 52 18.4	+0.9
QRZ	Quartz Range	18.65	196	P	P	18 52 18.9	+1.4
SNZO	South Karori	18.66	190	P	P	18 52 17.7	+0.1
SNZO	South Karori	18.66	190	P	P	18 52 18.2	+0.7
MSWZ	Moikau Station	18.68	189	P	P	18 52 17.1	-0.6
BHW	Baring Head	18.73	190	P	P	18 52 17.4	-0.8
NNZ	Nelson	18.82	194	P	P	18 52 19.2	+0.1
PLWZ	Palliser	18.83	189	P	P	18 52 18.9	-0.3
TUWZ	Tuamarina	18.91	192	P	P	18 52 19.1	-0.8
BSWZ	Blackbirch Sta	19.20	192	P	P	18 52 22.3	-0.3
THZ	Tophouse	19.45	194	P	P	18 52 24.7	-0.2
THZ					S	18 55 28.1	-3.0
RAR	Rarotonga	19.62	89	P	P	18 52 26.4	-0.2
KHZ	Kahutara	19.94	192	P	P	18 52 28.5	-0.7

KHZ	Kahutara	19.94	192	P	P	18 52 28.5	-0.7
LTZ	Lake Taylor	20.56	195	P	P	18 52 34.3	-0.6
OXZ	Oxford	21.14	194	P	P	18 52 39.1	-0.8
MQZ	McQueen’s Vall	21.36	193	P	P	18 52 41.3	-0.7
RPZ	Rata Peaks	21.74	196	P	P	18 52 44.6	-0.7
	23nm,0.5s,baz=181,slow=1.7,SNR=26						
	23nm,0.5s						
RPZ	Rata Peaks	21.74	196	P	P	18 52 45.9	+0.5
RPZ	Rata Peaks	21.74	196	P	P	18 52 44.7	-0.7
FOZ	Fox Glacier	21.91	198	P	P	18 52 47.5	+0.7
KNTN	Kanton	21.95	25	P	P	18 52 45.5	-2.2
KNTN	Kanton	21.95	25	P	P	18 52 46.5	-1.1
LBZ	Lake Benmore	22.59	197	P	P	18 52 51.5	-1.5
ODZ	Otahua Downs	23.09	195	P	P	18 52 56.8	-0.6
WKZ	Wanaka	23.32	198	P	P	18 52 59.6	+0.1
MLZ	Mavora Lakes	24.08	199	P	P	18 53 06.5	+0.3
WHZ	Wether Hill Ro	24.61	199	P	P	18 53 11.5	+0.7
TARA	Tarawa	24.93	345	P	P	18 53 12.8	-1.2
ARMA	Armidale	25.63	247	P	P	18 53 22.1	+1.9
ARMA	Armidale	25.63	247	P	P	18 53 22.0	+1.8
EIDS	Eidsvold	25.69	259	P	P	18 53 21.6	+0.9
EIDS				IAmb	IAmb	18 53 22.5	
	comp=Z,7.0nm,0.8s						
MGCD	Mangrove Creek	26.67	241	P	P	18 53 31.4	+2.2
SYDH	Sydney Hard Ro	27.12	240	P	P	18 53 35.1	+2.0
RMQ	Roma	27.78	257	P	P	18 53 41.0	+2.0
CNB	Canberra Magne	28.65	238	P	P	18 53 48.3	+1.8
CAN	Canberra	28.94	238	P	P	18 53 50.3	+1.3
CAN				IAmb	IAmb	18 53 51.6	
	comp=Z,22nm,0.9s						
CAN	Canberra	28.94	238	P	P	18 53 50.8	+1.8
CTA	Charters Tower	30.69	269	P	P	18 54 05.1	+0.8
CTAO	Charters Tower	30.69	269	P	P	18 54 05.2	+1.0
CTAO				IAmb	IAmb	18 54 07.5	
	comp=Z,8.7nm,0.8s						
CTAO	Charters Tower	30.69	269	P	P	18 54 05.0	+0.8
CMSA	Cobar Meteorol	30.84	247	P	P	18 54 06.3	+1.0
QLP	Quilpie	31.83	256	P	P	18 54 14.8	+0.9
TOO	Toolangi	32.30	235	P	P	18 54 19.1	+1.4
TOO				IAmb	IAmb	18 54 19.5	
	comp=Z,16nm,0.6s						
TOO	Toolangi	32.30	235	P	P	18 54 19.1	+1.4
MTSU	Mount Surprise	32.91	272	P	P	18 54 25.2	+2.1
TAU	Tasmania Unive	33.00	225	P	P	18 54 24.5	+1.0
TAU	Tasmania Unive	33.00	225	P	P	18 54 24.7	+1.2
PMG	Port Moresby	33.45	289	P	P	18 54 29.9	+2.3
PMG				IAmb	IAmb	18 54 51.9	
	comp=Z,22nm,1.0s						
XMAS	Kiritimati	33.75	46	P	P	18 54 30.3	+0.1
STKA	Stephens Creek	34.34	247	P	P	18 54 35.9	+1.0
	comp=Z,8.0nm,0.4s,baz=92,slow=11,SNR=47						
STKA				ScP	ScP	18 59 48.6	+3.4
	comp=Z,3.8nm,0.9s,baz=55,slow=7.5,SNR=4.5						
	comp=Z,8.0nm,0.4s						
STKA	Stephens Creek	34.34	247	P	P	18 54 36.0	+1.0
STKA	Stephens Creek	34.34	247	P	P	18 54 36.1	+1.1
ARPS	Mount Arapiles	34.92	238	P	P	18 54 40.7	+1.1
INKA	Innaminka	34.92	254	P	P	18 54 41.4	+1.6
HTT	Hallett	36.74	244	P	P	18 54 55.5	+0.7
LCRK	Leigh Creek	37.15	250	P	P	18 54 58.8	+0.7
NAPP	Napperby	37.36	245	P	P	18 55 00.8	+1.0
BBOO	Buckleboo	39.09	246	P	P	18 55 14.0	+0.2
BBOO				IAmb	IAmb	18 55 14.4	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	39.09	246	P	P	18 55 13.9	+0.1
OOD	Oodnadatta	39.40	254	P	P	18 55 17.6	+1.3
MULG	Mulgathing	40.74	250	P	P	18 55 27.2	+0.2
AS31	Alice Springs	41.41	260	P	P	18 55 32.2	-0.2
ASAR	Alice Springs	41.41	260	P	P	18 55 32.6	+0.2
	comp=Z,3.1nm,0.7s,baz=85,slow=6.3,SNR=45						
ASAR				PcP	PcP	18 57 15.8	-0.8
	comp=Z,2.0nm,0.6s,baz=95,slow=4.8,SNR=11						
ASAR				ScP	ScP	19 00 15.4	+3.0
	comp=Z,2.4nm,0.8s,baz=109,slow=4.0,SNR=9.8						
ASAR				S	S	19 01 04.6	-2.3
	comp=Z,0.9nm,0.7s,baz=94,slow=14,SNR=5.2						
	comp=Z,3.1nm,0.7s						
ASAR	Alice Springs	41.41	260	P	P	18 55 32.0	-0.5
WR0	Warramunga Arr	41.49	265	P	P	18 55 32.8	-0.4
WR0				IAmb	IAmb	18 55 49.3	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	41.67	266	P	P	18 55 34.0	-0.5
WB0				IAmb	IAmb	18 55 48.3	
	comp=Z,11nm,1.2s						
WB2	Warramunga Arr	41.67	265	P	P	18 55 34.1	-0.5
WB2				IAmb	IAmb	18 55 51.3	
	comp=Z,23nm,1.6s						
WRAB	Tennant Creek	41.67	265	P	P	18 55 34.1	-0.5
WRAB				IAmb	IAmb	18 55 56.0	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	41.67	265	P	P	18 55 34.4	-0.2
WRA	Warramunga Arr	41.68	265	P	P	18 55 34.3	-0.3
	comp=Z,1.2nm,0.6s,baz=96,slow=8.2,SNR=36						
WRA				pP	pP	18 57 12.1	-1.7
	comp=Z,0.3nm,0.4s,baz=111,slow=6.3,SNR=1.1						
WRA				ScP	ScP	19 00 16.8	+3.2
	comp=Z,1.9nm,0.8s,baz=94,slow=4.1,SNR=8.3						
WRA				S	S	19 01 03.9	-7.0
	comp=Z,0.6nm,0.7s,baz=95,slow=16,SNR=2.0						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	41.68	265	P	P	18 55 34.3	-0.3
KDU	Kakadu	45.42	275	P	P	18 56 04.4	+0.8
FORT	Forrest	45.90	249	P	P	18 56 06.9	-0.2
FORT	Forrest	45.90	249	P	P	18 56 06.3	-0.7
	comp=Z,40nm,0.7s						
WRKA	Warakurna	46.27	257	P	P	18 56 10.1	+0.1
MTN	Manton Dam	46.60	274	P	P	18 56 11.3	-1.2
MTN				IAmb	IAmb	18 56 22.1	
	comp=Z,32nm,1.4s						
MTN	Manton Dam	46.60	274	P	P	18 56 11.8	-0.7
	comp=Z,19nm,1.6s						
KNRA	Kununurra	47.90	269	P	P	18 56 22.2	-0.1
KNRA				IAmb	IAmb	18 56 31.3	
	comp=Z,38nm,1.6s						
KNRA	Kununurra	47.90	269	P	P	18 56 22.3	0.0
HMH	Humu‘ula Sheep	49.04	32	P	P	18 56 29.9	-1.0
MBWA	Marble Bar	54.75	260	P	P	18 57 11.1	-0.6
VNDA	Vanda	55.23	185	P	P	18 57 16.2	+2.1
	comp=Z,0.6nm,0.6s,baz=3.8,slow=7.4,SNR=9.1						
VNDA				PcP	PcP	18 58 07.0	+0.9
	comp=Z,1.8nm,0.7s,baz=344,slow=4.8,SNR=7.8						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	55.23	185	P	P	18 57 16.1	+2.1
VNDA				PcP	PcP	18 58 06.6	+0.5
SBA	Scott Base	55.25	183	P	P	18 57 17.3	+3.1
SBA				PcP	PcP	18 58 07.9	+1.7
BLDU	Ballidu	55.64	248	P	P	18 57 17.5	-0.2
MORW	Morawa	56.45	250	P	P	18 57 23.2	-0.1
LUWI	Luwuk	58.84	283	P	P	18 57 36.8	-2.9
LUWI				IAmb	IAmb	18 57 52.5	
	comp=Z,21nm,1.2s						
GIRL	Giralia	59.36	257	P	P	18 57 39.3	-3.7
PLAI	Plampang	60.28	273	P	P	18 57 49.0	-0.3
CASY	Casey	60.60	206	P	P	18 57 50.8	+0.4
QSPA	South Pole Qui	67.11	180	P	P	18 58 33.2	+1.3
QSPA				IAmb	IAmb	18 58 34.8	
	comp=Z,15nm,0.8s						
MJAR	Matsushiro Arr	70.69	326	P	P	18 58 52.0	-1.7
	comp=Z,1.1nm,0.7s,baz=164,slow=7.1,SNR=3.5						
TPUB	Ta-pu	73.14	305	P	P	18 59 06.6	-1.6
TPUB				IAmb	IAmb	18 59 23.9	
	comp=Z,40nm,1.3s						
KSRS	Korea Array	77.03	320	P	P	18 59 29.4	-0.1
	comp=Z,1.7nm,0.8s,baz=135,slow=5.8,SNR=8.6						
	comp=Z,1.7nm,0.8s						
SMAI	San Martin Ant	77.25	159	P	P	18 59 32.3	+2.1
SMAI				IAmb	IAmb	18 59 33.3	
	comp=Z,24nm,0.9s						
BELA	Belgrano 2	77.45	173	P	P	18 59 31.5	+0.3
BELA				IAmb	IAmb	18 59 32.7	
	comp=Z,16nm,0.7s						
PETK	Petropavlovsk-	78.02	347	P	P	18 59 34.7	+0.2
	comp=Z,1.5nm,0.6s,baz=112,slow=6.4,SNR=2.1						
	comp=Z,1.5nm,0.6s						
MAW	Mawson	78.34	201	P	P	18 59 37.2	+1.1
	comp=Z,3.7nm,0.7s,baz=123,slow=6.0,SNR=9.5						
	comp=Z,3.7nm,0.7s						
MAW	Mawson	78.34	201	P	P	18 59 37.2	+1.1
NJ2	Nanjing	79.45	311	*e*P	P	18 59 43.3	+0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	Ussuriysk Ar.	79.56	328	P	P	18 59 43.1	+0.3
	comp=Z,3.0nm,0.8s,baz=134,slow=14,SNR=3.2						
	comp=Z,3.0nm,0.8s						
PMSA	Palmer Station	80.07	157	P	P	18 59 46.8	+1.5
IPM	Ipoh	80.84	279	P	P	18 59 49.9	-0.4
KULM	Kulim	81.51	279	P	P	18 59 53.3	-0.4
SAO	San Andreas Ge	81.65	44	P	P	18 59 54.3	+0.4
PMPB	Monarch Peak	81.74	45	P	P	18 59 56.0	+1.5
PMPB				IAmb	IAmb	18 59 56.6	
	comp=Z,6.7nm,0.7s						
KCPM	Cahto Peak	82.09	41	P	P	18 59 57.7	+1.5
KCPM				IAmb	IAmb	18 59 59.1	
	comp=Z,11nm,1.1s						
KMPM	Mount Pierce	82.23	40	P	P	18 59 58.5	+1.7
KMPM				IAmb	IAmb	18 59 59.9	
	comp=Z,19nm,1.2s						
CBX	Cerro Bola	82.34	50	P	P	18 59 58.6	+0.9
KMRM	Mail Ridge	82.35	40	P	P	18 59 59.2	+1.8
KMRM				IAmb	IAmb	19 00 00.5	
	comp=Z,19nm,1.2s						
SII	Sitkinak Islan	82.37	15	P	P	18 59 57.5	+0.5
SII				IAmb	IAmb	18 59 58.9	
	comp=Z,16nm,0.8s						
GSI	Gunungsitoli	82.73	274	P	P	18 59 59.9	0.0
GSI				IAmb	IAmb	19 00 04.8	
	comp=Z,35nm,1.2s						
KHMM	Horse Mountain	82.74	40	P	P	18 59 59.3	-0.2
KHMM				IAmb	IAmb	19 00 02.4	
	comp=Z,11nm,1.1s						
KRPM	Rodgers	82.75	40	P	P	19 00 01.1	+1.7
KRPM				IAmb	IAmb	19 00 02.7	
	comp=Z,8.8nm,1.0s						
MG05	Puerto Natales	82.94	143	P	P	19 00 00.3	+0.1
MG05				IAmb	IAmb	19 00 02.9	
	comp=Z,15nm,0.8s						
ISA	Isabella, Lake	82.96	47	P	P	19 00 01.6	+1.0
ISA				IAmb	IAmb	19 00 03.0	
	comp=Z,9.5nm,0.9s						
SLBS	Sierra La Lagu	83.04	61	P	P	19 00 03.3	+2.0
SLBS				IAmb	IAmb	19 00 04.2	
	comp=Z,18nm,1.2s						
YUH	Yuha Desert	83.05	50	P	P	19 00 01.8	+0.7
CMB	Columbia Colle	83.08	44	P	P	19 00 01.4	+0.2
CMB				IAmb	IAmb	19 00 03.1	
	comp=Z,7.4nm,0.9s						
PFO	Pinyon Flats O	83.20	49	P	P	19 00 02.5	+0.6
GO09	Cerro Castillo	83.22	143	P	P	19 00 03.1	+1.4
GO09				IAmb	IAmb	19 00 06.6	
	comp=Z,24nm,1.4s						
KSXB	Camp Six Broad	83.26	39	P	P	19 00 03.0	+1.0
ORV	Oroville	83.28	42	P	P	19 00 02.5	+0.5
KBO	Bosley Butte	83.30	39	P	P	19 00 03.7	+1.6
KBO				IAmb	IAmb	19 00 23.8	
	comp=Z,30nm,1.7s						
ESPZ	Base Esperanza	83.38	158	P	P	19 00 02.3	+0.1
USHA	Ushuaia	83.51	147	P	P	19 00 04.9	+1.9
	comp=Z,9.8nm,1.0s,baz=23,slow=13,SNR=2.8						
	comp=Z,9.8nm,1.0s						
KEBM	Edson Butte	83.65	38	P	P	19 00 05.4	+1.5
KEBM				IAmb	IAmb	19 00 07.5	
	comp=Z,36nm,1.5s						
MDPB	Devils Postpil	83.69	45	P	P	19 00 05.2	+0.8
OMMB	Old Mammoth Mi	83.72	45	P	P	19 00 06.0	+1.3
EMB	Emerald Bay	83.81	43	P	P	19 00 06.0	+1.0
KDAK	Kodiak Island	83.85	15	P	P	19 00 04.7	+0.3
	comp=Z,3.4nm,0.9s,baz=190,slow=6.1,SNR=2.9						
	comp=Z,3.4nm,0.9s						
YBH	Yreka Blue Hor	83.88	40	P	P	19 00 06.3	+1.2
	comp=Z,2.8nm,0.6s,baz=271,slow=2.0,SNR=14						
	comp=Z,2.8nm,0.6s						
YBH	Yreka Blue Hor	83.88	40	P	P	19 00 05.9	+0.9
GSC	Goldstone, Bar	83.89	48	P	P	19 00 06.2	+0.9
MPK	Martis Peak	84.05	43	P	P	19 00 07.5	+1.3
MPK				IAmb	IAmb	19 00 08.4	
	comp=Z,11nm,1.1s						
GLA	Glamis	84.05	50	P	P	19 00 07.0	+0.9
GLA				IAmb	IAmb	19 00 08.8	
	comp=Z,9.0nm,0.9s						
J01E	Myrtle Point	84.06	38	P	P	19 00 07.5	+1.8
J01E				IAmb	IAmb	19 00 08.3	
	comp=Z,7.2nm,0.8s						
BEKR	Beckworth	84.17	42	P	P	19 00 07.5	+0.8
PNTR	Pine Nut	84.19	43	P	P	19 00 07.2	+0.3
PNTR				IAmb	IAmb	19 00 09.1	
	comp=Z,9.2nm,0.8s						
QSM	Queen of Sheba	84.21	47	P	P	19 00 07.5	+0.8
HUMO	Hull Mountain	84.28	39	P	P	19 00 08.2	+1.2
HUMO				IAmb	IAmb	19 00 09.8	
	comp=Z,6.8nm,1.1s						
L04D	Klamath Falls	84.42	40	IAmb	IAmb	19 00 10.1	
	comp=Z,10nm,1.0s						
NVAR	Mina Array Bea	84.64	44	P	P	19 00 10.0	+0.9
	comp=Z,1.8nm,0.6s,baz=225,slow=8.9,SNR=5.0						
	comp=Z,1.8nm,0.6s						
HSIG		84.84	56	P	P	19 00 10.5	+0.6
HSIG				IAmb	IAmb	19 00 12.5	
	comp=Z,9.3nm,0.8s						
KVN	Kaiserville	85.13	44	IAmb	IAmb	19 00 13.1	
	comp=Z,4.1nm,0.6s						
TPH	Tonopah	85.15	45	IAmb	IAmb	19 00 13.4	
	comp=Z,19nm,0.8s						
TPNV	Topopah Spring	85.17	47	P	P	19 00 12.2	+0.7
TROLL	Troll, Antarti	85.24	181	P	P	19 00 11.5	+0.2
P19K	Oil Pt	85.39	14	IAmb	IAmb	19 00 12.7	
	comp=Z,11nm,0.9s						
SNAA	Sanae	85.60	179	P	P	19 00 12.8	-0.2
O19K	Port Alsworth	85.66	13	IAmb	IAmb	19 00 13.6	
	comp=Z,8.6nm,0.9s						
O19K					pwP	19 02 19.8	-0.1
BJI	Beijing	85.81	317	P	P	19 00 15.3	+1.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VNA3	Neumayer Olymp	85.84	177	P	P	19 00 13.8	-0.3
VNA3				S	S	19 09 59.3	-0.1
PINE	Pine Mountain	86.17	39	P	P	19 00 16.8	+0.6
PINE				IAmb	IAmb	19 00 19.6	
	comp=Z,9.0nm,0.9s						
PRN	Pahroc Range	86.22	47	IAmb	IAmb	19 00 19.1	
	comp=Z,8.4nm,1.2s						
BMN	Battle Mountai	86.47	43	IAmb	IAmb	19 00 19.8	
	comp=Z,4.9nm,0.9s						
TUC	Tucson	86.59	53	P	P	19 00 19.4	+1.1
TUC				IAmb	IAmb	19 00 21.4	
	comp=Z,6.5nm,1.2s						
I07A	Izee	87.17	39	IAmb	IAmb	19 00 23.3	
	comp=Z,7.3nm,1.0s						
319A	Douglas	87.25	54	P	P	19 00 23.8	+2.3
319A				IAmb	IAmb	19 00 24.7	
	comp=Z,12nm,1.1s						
J08A	Circle Bar Ran	87.36	40	IAmb	IAmb	19 00 24.0	
	comp=Z,16nm,1.2s						
LL02	Futaleuf	87.42	136	P	P	19 00 23.4	+1.3
LL02				IAmb	IAmb	19 00 25.1	
	comp=Z,12nm,0.9s						
XAN	Xi'an	87.55	309	⇑P	P	19 00 24.3	+1.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
U15A	North Rim	87.59	49	IAmb	IAmb	19 00 25.7	
	comp=Z,7.8nm,0.7s						
ELK	Elko	87.90	44	P	P	19 00 25.5	+1.0
ELK				IAmb	IAmb	19 00 26.0	
	comp=Z,2.9nm,0.8s						
GLI	Glacier Island	87.92	16	IAmb	IAmb	19 00 24.5	
	comp=Z,10nm,0.6s						
G08A	Pilot Rock	88.19	39	P	P	19 00 25.7	+0.1
G08A				IAmb	IAmb	19 00 27.7	
	comp=Z,5.5nm,0.8s						
GHO	Glory Hole Cre	88.25	15	IAmb	IAmb	19 00 26.3	
	comp=Z,9.0nm,0.8s						
LTY	Liberty	88.40	36	IAmb	IAmb	19 00 28.1	
	comp=Z,7.1nm,1.1s						
CMAR	Chiang Mai Arr	88.46	291	P	P	19 00 28.4	+1.2
	comp=Z,2.1nm,1.1s,baz=134,slow=3.3,SNR=10						
CMAR				pP	pP	19 02 28.0	-2.8
	comp=Z,1.0nm,0.9s,baz=141,slow=3.5,SNR=4.0						
CMAR				PKKPbc	PKKPbc	19 18 06.8	+1.3
	comp=Z,0.7nm,0.6s,baz=282,slow=4.6,SNR=6.4						
	comp=Z,2.1nm,1.1s						
CMAR	Chiang Mai Arr	88.46	291	P	P	19 00 26.9	-0.4
CMAR					pP	19 02 30.2	-0.6
DIV	Divide	88.47	16	IAmb	IAmb	19 00 27.4	
	comp=Z,4.2nm,0.9s						
CHTO	Chiang Mai	88.61	291	P	P	19 00 27.7	-0.3
CHTO				IAmb	IAmb	19 00 30.0	
	comp=Z,7.0nm,1.2s						
CHTO				pP	pP	19 02 32.1	+0.6
BMRM	Bremner River	88.64	17	IAmb	IAmb	19 00 28.2	
	comp=Z,4.3nm,0.9s						
SCM	Sheep Creek Mo	88.69	15	IAmb	IAmb	19 00 28.4	
	comp=Z,6.8nm,0.8s						
MFID	Camas Ranch	88.99	41	P	P	19 00 28.9	-0.4
MFID				IAmb	IAmb	19 00 31.9	
	comp=Z,4.6nm,0.9s						
CAST	Castle Rocks	89.04	13	IAmb	IAmb	19 00 28.5	
	comp=Z,4.1nm,0.8s						
HHC	Hu-ho-hao-te	89.20	315	*e*P	P	19 00 34.5	+4.1
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,6.0s						
MCARA	McCarthy VSAT	89.41	17	P	P	19 00 31.2	+0.5
MCARA				IAmb	IAmb	19 00 50.5	
	comp=Z,9.8nm,1.3s						
TRF	Thorofare Moun	89.43	13	P	P	19 00 29.6	-1.3
TRF				IAmb	IAmb	19 00 31.1	
	comp=Z,4.0nm,0.8s						
PLCA	Paso Flores	89.48	135	P	P	19 00 33.9	+2.1
	comp=Z,3.1nm,0.8s,baz=256,slow=3.4,SNR=8.1						
	comp=Z,3.1nm,0.8s						
LOGN	Logan Glacier	89.52	18	IAmb	IAmb	19 00 47.2	
	comp=Z,13nm,1.0s						
CTGM	Chitina Glacie	89.54	18	IAmb	IAmb	19 00 50.6	
	comp=Z,14nm,0.9s						
PZH	PanZhiHua	89.54	299	P	P	19 00 33.3	+1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.2s						
F10A	Beach Ranch, E	89.58	39	IAmb	IAmb	19 00 33.3	
	comp=Z,4.7nm,0.8s						
Q16A	Castle Valley	89.61	47	P	P	19 00 32.8	+0.3
Q16A				IAmb	IAmb	19 00 35.9	
	comp=Z,6.4nm,0.7s						
RND	Reindeer	89.70	14	P	P	19 00 31.1	-1.0
RND				IAmb	IAmb	19 00 32.7	
	comp=Z,3.8nm,0.9s						
RND					pwP	19 02 41.3	+0.7
B08A	Colville Reser	89.78	36	IAmb	IAmb	19 00 34.0	
	comp=Z,3.7nm,0.8s						
HVU	Hansel Valley	90.02	44	IAmb	IAmb	19 00 36.2	
	comp=Z,7.8nm,0.7s						
SRU	San Rafael Swe	90.15	47	P	P	19 00 35.5	+0.6
P17A	Butcher Ranch,	90.18	47	IAmb	IAmb	19 00 52.4	
	comp=Z,5.0nm,0.5s						
MNTX	Cornudas Mount	90.34	56	P	P	19 00 36.3	+0.6
MNTX				IAmb	IAmb	19 00 38.0	
	comp=Z,4.5nm,0.8s						
M27K	Edge Creek, AK	90.52	17	IAmb	IAmb	19 00 37.5	
	comp=Z,3.5nm,0.9s						
TXAR	Lajitas Array	90.62	58	P	P	19 00 38.6	+1.4
	comp=Z,3.7nm,0.9s,baz=218,slow=5.9,SNR=17						
	comp=Z,3.7nm,0.9s						
ANMO	Albuquerque	91.02	52	P	P	19 00 39.5	+0.5
ANMO				IAmb	IAmb	19 00 40.9	
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	91.32	14	P	P	19 00 38.9	-0.5
	comp=Z,0.4nm,0.6s,baz=223,slow=5.6,SNR=9.1						
ILAR				pP	pP	19 02 40.5	-3.2
	comp=Z,0.4nm,0.9s,baz=230,slow=5.6,SNR=2.1						
	comp=Z,0.4nm,0.6s						
M30M	Minto, Yukon	92.14	19	IAmb	IAmb	19 00 44.5	
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	92.18	308	*e*P	P	19 00 42.4	-1.9
LZH				pP	pP	19 02 46.3	-2.2
LZH				sP	sP	19 03 39.8	-5.5
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
PDAR	Pinedale Array	92.58	44	P	P	19 00 46.6	+0.5
	comp=Z,1.3nm,0.7s,baz=195,slow=2.7,SNR=8.1						
	comp=Z,1.3nm,0.7s						
CO02	Combarbal	93.92	126	P	P	19 00 52.0	-0.4
GOMU	GeErMu	98.88	305	P	Pdif	19 01 14.8	0.0
GOMU				pP	P	19 01 18.8	+3.9
GOMU				sP	PcP	19 01 20.5	+5.7
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,100nm,5.1s						
YKA	Yellowknife Ar	99.87	26	P	Pdif	19 01 18.0	0.0
	comp=Z,0.2nm,0.6s,baz=264,slow=3.7,SNR=3.9						
	comp=Z,0.2nm,0.6s						
ZALV	Zalesovo Beam	110.73	321	PKiKP	PKiKP	19 06 01.8	-1.0
	comp=Z,0.9nm,0.6s,baz=90,slow=2.9,SNR=2.9						
MKAR	Makanchi Array	110.94	313	PKiKP	PKiKP	19 06 03.0	-0.5
	comp=Z,0.7nm,0.5s,baz=169,slow=0.9,SNR=8.8						
MKAR				PKKPbc	PKKPbc	19 17 03.4	+0.1
	comp=Z,1.4nm,1.1s,baz=289,slow=0.8,SNR=2.3						
MKAR				PKKPab	PKKPab	19 17 14.0	+0.3
	comp=Z,0.7nm,0.6s,baz=265,slow=4.2,SNR=3.0						
BDFB	Brasilia	119.99	125	PKP	PKPdf	19 06 20.8	-1.1
	comp=Z,2.9nm,0.6s,baz=157,slow=7.7,SNR=4.6						
SCHQ	Schefferville	122.25	39	PKP	PKPdf	19 06 23.9	-1.0
	comp=Z,1.5nm,0.6s,baz=219,slow=6.5,SNR=3.5						
BOSA	Boshof	122.87	207	PKP	PKiKP	19 06 27.4	0.0
	comp=Z,2.5nm,0.8s,baz=306,slow=0.3,SNR=5.2						
ARU	Arti	125.67	324	PKPdf	PKPdf	19 06 30.6	-0.8
DY2G	Dye2	127.97	21	*i* P	PKPdf	19 06 35.0	-0.8
DY2G				IAmb	IAmb	19 06 36.4	
	comp=Z,7.3nm,0.7s						
ARCES	ARCESS Array B	130.82	348	PKP	PKPdf	19 06 40.3	-0.6
	comp=Z,4.2nm,0.7s,baz=35,slow=3.0,SNR=22						
FINES	FINESS Array B	137.32	341	PKhKP	PKPpre	19 06 42.4	
	comp=Z,1.0nm,0.6s,baz=90,slow=3.8,SNR=7.0						
FINES				PKP	PKiKP	19 06 54.8	-0.4
	comp=Z,1.9nm,0.4s,baz=93,slow=2.1,SNR=12						
FINES				SKPbc	SKPbc	19 09 33.4	+0.5
	comp=Z,3.9nm,0.9s,baz=20,slow=6.1,SNR=5.5						
NB2	NORSAR Subarra	141.04	351	PKP	PKPpre	19 06 54.9	
	comp=Z,0.8nm,0.5s,baz=14,slow=3.0						
NOA	NORSAR Array B	141.04	351	PKhKP	PKPpre	19 06 54.8	
	comp=Z,0.3nm,0.4s,baz=12,slow=1.6,SNR=5.9						
VIKU	Vikbolandet	142.34	345	*e*P	PKPdf	19 06 58.5	-3.8
PABE	Paberze	142.66	337	*e*P	PKPdf	19 07 00.6	-2.3
AKASG	Malin Array Be	143.76	327	PKP	PKPbc	19 07 03.6	-0.6
	comp=Z,9.5nm,0.5s,baz=45,slow=4.1,SNR=57						
AKASG				SKPbc	SKiKP	19 09 50.9	+0.1
	comp=Z,0.6nm,0.6s,baz=39,slow=2.8,SNR=5.8						
AKASG	Malin Array Be	143.76	327		PKPbc	19 07 03.7	-0.5
AKBB	Malin Array Si	143.76	327		PKPbc	19 07 03.0	-1.2
BORU	Boraas	143.99	348	*i* P	PKPbc	19 07 02.7	-2.0
HOMB	Homborsund	144.10	352	*i* P	PKPbc	19 07 03.8	-1.1
SUW	Suwalki	144.10	336		PKPbc	19 07 04.5	-0.6
BLEU	Blekinge	144.52	344	*i* P	PKPdf	19 07 04.1	-2.0
DEL	Delary	144.83	346	*e*P	PKPdf	19 07 06.7	0.0
DEL	Delary	144.83	346	*i* P	PKPdf	19 07 06.4	-0.3
BNN	Bunyan	145.02	305		PKPbc	19 07 08.8	+0.2
BJUU	Bjuv	145.38	346	*i* P	PKPdf	19 07 07.1	-0.6
LUNU	Lund	145.70	346	*i* P	PKPdf	19 07 08.2	0.0
SORM	Soroca	145.79	324	⇓P	PKPbc	19 07 10.3	0.0
BSD	Bornholm Skovb	145.81	344	*e*P	PKPbc	19 07 09.8	-0.4
BSD	Bornholm Skovb	145.81	344	*i* P	PKPbc	19 07 09.8	-0.4
BSD				IAmb	IAmb	19 07 11.0	
	comp=Z,42nm,1.5s						
BR131	Keskin Array S	146.39	308		PKPbc	19 07 12.1	-0.4
BRTR	Keskin Array B	146.39	308	PKPbc	PKPbc	19 07 12.2	-0.3
	comp=Z,3.1nm,0.6s,baz=127,slow=3.9,SNR=14						
BRTR	Keskin Array B	146.39	308		PKPdf	19 07 09.5	-0.6
BRTR				PKPbc	PKPbc	19 07 12.1	-0.4
BEL	Belsk	146.70	335	*e*PKPbc	PKPbc	19 07 13.4	+0.7
GKP	Gorka Klasztor	146.76	340	*e*PKPbc	PKPbc	19 07 13.6	+0.7
ANTO	Ankara	146.95	309	⇓P	PKPbc	19 07 14.7	+0.7
TLCR		147.21	320	⇓P	PKPbc	19 07 14.5	+0.2
VLDR	Vladesti	147.27	321	⇓P	PKPbc	19 07 14.8	+0.3
GHRR		147.53	322	⇓P	PKiKP	19 07 16.2	-0.4
CFR	Carcaliu	147.61	320	⇓P	PKPbc	19 07 15.6	+0.2
TPGR	Topolog	147.62	319	⇓P	PKPbc	19 07 15.1	-0.4
TESR	Tescani	147.69	323	⇑P	PKPbc	19 07 15.1	-0.5
BIZ	Bicaz	147.72	324	⇓P	PKiKP	19 07 16.7	-0.4
BURAR	Bucovina Array	147.76	326	⇓P	PKiKP	19 07 17.1	-0.1
CSS	Mathiatis	147.94	300		PKPbc	19 07 15.8	-0.8
HARR	Harsova	148.00	320	⇓P	PKPbc	19 07 16.9	+0.5
VRI	Vrincioaia	148.03	322	⇑P	PKPbc	19 07 15.9	-0.5
SHAB	Shabla	148.20	317	⇓P	PKPab	19 07 21.7	-0.4
BISRR	Bisoca	148.23	322	⇓P	PKiKP	19 07 17.8	-0.5
KOLS	Kolonicke sedl	148.28	330	*e*PKP	PKiKP	19 07 18.0	-0.2
OJC	Ojcow	148.36	334	*e*PKPbc	PKPbc	19 07 17.4	+0.2
OJC	Ojcow	148.36	334		PKPbc	19 07 16.8	-0.3
CRVS	Cervenica-Dubn	148.66	331	*e*PKP	PKiKP	19 07 18.8	-0.2
MLR	Muntele Rosu	148.70	322	⇓P	PKPbc	19 07 18.2	-0.1
MLR	Muntele Rosu	148.70	322		PKPbc	19 07 18.2	-0.1
DOPR	Dopca	148.72	324	⇑P	PKPbc	19 07 18.6	+0.4
NIE	Niedzica	148.78	333	*e*PKPbc	PKiKP	19 07 19.9	+0.7
KSP	Ksiaz	149.14	339	*e*PKPbc	PKiKP	19 07 19.8	-0.1

CJR	Cluj-Napoca	149.19	326	⇑P	PKPbc	19 07 17.6	-1.7
VOIR		149.23	323	⇑P	PKPbc	19 07 19.5	0.0
OKC	Ostrava-Krasne	149.31	336	⇑ePKP	PKiKP	19 07 19.9	-0.3
LANS	Liptovska Anna	149.33	333	ePKP	PKiKP	19 07 21.1	+0.7
OSTC	Ostas	149.41	338	⇑ePKP	PKiKP	19 07 20.8	+0.4
CHVC	Chvalec	149.44	339	⇑ePKP	PKiKP	19 07 20.5	0.0
ARR	Arges	149.50	323	⇓P	PKiKP	19 07 21.5	+0.6
UPC	Upice	149.52	339	⇑ePKP	PKiKP	19 07 20.6	-0.1
DPC	Dobruska-Polom	149.55	338	⇑ePKP	PKiKP	19 07 20.8	0.0
DRGR		149.58	327	⇓P	PKPbc	19 07 20.3	0.0
MORC	Moravsky Berou	149.59	336	⇑P	PKiKP	19 07 21.0	+0.1
MORC	Moravsky Berou	149.59	336	ePKP	PKiKP	19 07 20.6	-0.3
KRLC	Kraliky	149.62	337	⇑ePKP	PKiKP	19 07 20.8	-0.1
CLL	Collm	149.74	343		PKPbc	19 07 20.5	+0.2
CLL	Collm	149.74	343	⇓iPKPbc	PKiKP	19 07 20.8	-0.2
	comp=Z,29nm,0.8s						
CLL				ePKPab	PKPab	19 07 28.0	-0.2
CLL				epPKPab	pPKPab	19 09 38.0	+3.4
MAUC	Maruska	149.81	335	⇑ePKP	PKiKP	19 07 21.6	+0.3
BRG	Berggiesshubel	149.86	341	i PKP	PKiKP	19 07 21.3	0.0
BRG				Amp		19 07 22.1	
	comp=Z,19nm,0.8s						
PVCC	Panska Ves	149.97	340	⇑ePKP	PKiKP	19 07 21.7	+0.1
PSZ	Piszkesteto	150.09	331	⇑P	PKPbc	19 07 21.4	0.0
VYHS	Vyhne	150.10	333	ePKP	PKiKP	19 07 22.0	+0.1
KOLL	Kolacno	150.22	334	ePKP	PKiKP	19 07 22.4	+0.3
JAVC	Velka Javorina	150.28	335	ePKP	PKiKP	19 07 23.2	+0.8
VRAC	Vranov	150.32	337	⇓P	PKPbc	19 07 21.5	-0.4
VRAC	Vranov	150.32	337	ePKP	PKiKP	19 07 22.2	-0.2
PRU	Pruhonice	150.45	340	⇑ePKP	PKiKP	19 07 22.7	+0.1
GZR	Gura Zlata	150.49	325	⇓P	PKPbc	19 07 22.1	-0.3
KRUC	Moravsky	150.60	337	ePKP	PKPbc	19 07 22.6	+0.1
MODS	Modra-Piesok	150.83	335	ePKP	PKiKP	19 07 23.9	+0.5
NKC	Novy Kostel	150.86	342	⇑ePKP	PKiKP	19 07 23.5	0.0
HERR	Herculane	151.02	325	⇓P	PKPbc	19 07 23.4	-0.2
MDVR	Moldovita	151.46	325	⇓P	PKPbc	19 07 24.7	0.0
KHC	Kasperske Hory	151.50	340	⇑ePKP	PKiKP	19 07 24.9	+0.1
KHC				ePKPAB	PKPab	19 07 36.3	+0.5
CKRC	Cesky Krumlov	151.54	339	⇑ePKP	PKiKP	19 07 25.2	+0.3
GEC2	GERESS Array S	151.72	339		PKPbc	19 07 25.1	-0.1
GERES	GERESS Array B	151.72	339	PKPbc	PKPbc	19 07 25.2	0.0
	comp=Z,7.7nm,1.0s,baz=50,slow=2.1,SNR=26						
GERES				pPKPbc	pPKPdf	19 09 32.3	+1.1
	comp=Z,0.1nm,0.3s,baz=112,slow=1.1,SNR=1.2						
CONA	Conrad Observa	151.74	336	i P	PKiKP	19 07 25.8	+0.4
	comp=Z,5.4nm,0.6s						
RONA	Rosalia, Austr	151.76	335	i P	PKiKP	19 07 25.8	+0.4
	comp=Z,9.4nm,0.5s						
MORH	Mrgy, Hungar	151.94	330	⇑P	PKPbc	19 07 25.4	-0.2
VTS	Vitosha	151.98	320	⇓P	PKPbc	19 07 26.1	+0.1
FRGS	Fruska Gora	152.17	328	⇑P	PKPbc	19 07 25.6	-0.6
MOA	Molln	152.38	338	i P	PKPbc	19 07 26.6	0.0
	comp=Z,2.1nm,0.6s						
ARSA	Arzberg	152.43	335	i P	PKPbc	19 07 26.7	0.0
	comp=Z,4.5nm,0.9s						
SOKA	Soboth	153.09	335	i P	PKPbc	19 07 27.9	-0.3
	comp=Z,2.6nm,0.7s						
MYKA	Terra Mystica	153.65	337	i P	PKPbc	19 07 28.7	-0.7
	comp=Z,2.2nm,0.5s						
WATA	Walderalm	153.72	341	i P	PKPbc	19 07 29.4	-0.2
	comp=Z,2.5nm,0.5s						
WTTA	Wattenberg	153.76	341	i P	PKiKP	19 07 29.9	+0.1
	comp=Z,3.6nm,0.4s						
SQTA	Sankt Quirin	153.93	341	i P	PKiKP	19 07 30.1	+0.1
	comp=Z,2.3nm,0.5s						
ABTA	Abfaltersbach	153.94	339	i P	PKPbc	19 07 29.5	-0.5
	comp=Z,3.6nm,0.5s						
ESDC	Sonseca Array	163.14	8	PKPab	PKPab	19 08 25.5	-1.0
	comp=Z,0.4nm,0.7s,baz=324,slow=7.3,SNR=4.4						
DBIC	Dimbokro	163.34	166	PKP	PKPdf	19 07 33.3	0.0
	comp=Z,7.6nm,1.0s,baz=212,slow=1.5,SNR=4.6						
TORD	Torodi Ar. Bea	169.93	194	PKP	PKPdf	19 07 37.1	-1.0
	comp=Z,1.7nm,1.0s,baz=302,slow=1.4,SNR=5.9						
TORD				PKPab	PKPab	19 08 57.4	+0.5
	comp=Z,2.6nm,0.8s,baz=158,slow=4.8,SNR=10						

IDC 13 19:02:19.6±3.2**, 6°.46S**×**153°.20E, h0**^{km}**, mb3.4**/2**,**
mbtmp3.7/4**, ML1.6**/1**, Error ellipse: s-maj=71.6km**
s-min=30.2km az=100.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.44	331	Pn	Pn	19 03 01.2	+0.5
	59nm,0.3s,baz=311,slow=1.5,SNR=58						
KRVT				Sn	Sn	19 03 27.9	-3.4
	66nm,0.3s,baz=253,slow=22,SNR=7.7						
PMG	Port Moresby	6.66	244	Pn	Pn	19 03 59.4	+0.5
	0.7nm,0.3s,baz=313,slow=8.8,SNR=1.7						
PMG				Sn	Sn	19 05 11.7	-3.8
	0.4nm,0.3s,baz=302,slow=24,SNR=1.7						
	12nm,0.8s						
WRA	Warramunga Arr	22.70	232	P	P	19 07 22.1	-1.0
	0.7nm,0.7s,baz=53,slow=9.8,SNR=4.2						
	0.7nm,0.7s						
ASAR	Alice Springs	25.23	225	P	P	19 07 47.9	+0.3
	1.0nm,0.7s,baz=58,slow=9.3,SNR=24						
	1.0nm,0.7s						
TORD	Torodi Ar. Bea	151.16	286	PKPbc	PKPbc	19 22 15.7	-0.3
	0.4nm,0.7s,baz=63,slow=0.6,SNR=3.9						

JMA ***13*** *19:05:46.9±0.3, 31°.0N±0°.4×129°.0E±0°.8, h10^{km}±2^{km}, MD5.1/37, MW5.0/37, SW OFF KYUSHU*
JMA Felt II J1 at SW OFF KYUSHU .
NIED ***13*** *19:05:46.9, 31°.02N×129°.00E, h10^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.56; M$_{\theta\theta}$1.86; M$_{\phi\phi}$-0.31; M$_{r\theta}$-0.59; M$_{\theta\phi}$2.98; M$_{\phi r}$2.13; Fault plane solution: M$_0$4.09000×10^{16} NP1:φ$_s$93.00000°, δ56.00000°, λ-25.00000°. NP2:φ$_s$197.00000°, δ70.00000°, λ-144.00000°.*
IDC ***13*** *19:05:48.3±0.4, 31°.14N×129°.16E, h0^{km}, mb4.5/27, mbtmp4.5/32, ML3.6/6, MS4.4/85 Error ellipse: s-maj=12.4km s-min=9.4km az=91.0*
BJI ***13*** *19:05:48.6±0.0, 31°.10N×129°.40E, h10^{km}, mb4.6/64, mB4.9/55, Ms5.3/85, Ms7 5.0/78*
NEIC ***13*** *19:05:49.2±1.6, 31°.11N±0°.06×129°.25E±0°.07, h8^{km}±4^{km}, mb4.9/197, Error ellipse: s-maj=9.8km s-min=7.2km az=129.0*
MOS ***13*** *19:05:49.7±1.2, 31°.07N×129°.23E, h23^{km}, mb4.9/29, MS4.9/15, Error ellipse: s-maj=7.3km s-min=4.6km az=94.8*
GCMT ***13*** *19:05:51.2±0.2, 31°.07N±0°.01×129°.06E±0°.01, h12^{km}, MW5.1/119, Moment Tensor Solution. s57,c82; s119,c207; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.34±.10; M$_{\theta\theta}$2.89±.10; M$_{\phi\phi}$-0.55±.11; M$_{r\theta}$0.61±.26; M$_{\theta\phi}$4.57±.07; M$_{\phi r}$2.23±.28; Best double couple: M$_0$5.58700×10^{16} NP1:φ$_s$97.00000°, δ57.00000°, λ-18.00000°. NP2:φ$_s$197.00000°, δ75.00000°, λ-145.00000°. Principal axes: T 6.4180, Plg12.0000°, Azm324.0000°; N -1.6650, Plg53.0000°, Azm218.0000°; P -4.7560, Plg35.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 19:05:50.2±0.6**, 31°.05N**±0°.03×**129°.33E**±0°.03**, h13**^{km}±3^{km}**, n667,** σ1^s.**81**/567**, mb4.9**/198**, MS4.6**/107**, 35C-39D, Fault plane solution: NP1:**φ$_s$121.39356°**,** δ68.94881°**,** λ-30.21683°. **NP2:**φ$_s$223.20952°**,** δ61.98613°**,** λ-155.99141°. **Principal axes:** T Plg4.4807°**,** Azm173.5938°**;** N Plg53.7510°**,** Azm269.7292°**;** P Plg35.8816°**,** Azm80.3442°**; Fault plane solution: NP1:**φ$_s$75.53439°**,** δ35.01926°**,** λ-27.90307°. **NP2:** φ$_s$188.97945°**,** δ74.42203°**,** λ-121.76765°. **Principal axes:** T Plg22.9046°**,** Azm302.8167°**;** N Plg30.4733°**,** Azm198.4212°**;** P Plg50.2628°**,** Azm63.3637°**; Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.71	28	i P	Pg	19 06 03.7	-0.2
JSJ	Shimokoshiki	0.71	28	A	A	19 06 03.7	
	comp=E,76nm,1.6s,comp=E,88nm,8.1s						
JKC	Kuchinoerabu	0.95	128	i P	Pb	19 06 08.7	+0.2
JKC				S	Sn	19 06 23.9	+1.3
JKC	Kuchinoerabu	0.95	128	A	A	19 06 08.7	
	comp=E,90nm,2.5s,comp=E,128nm,2.3s						
JSU	Suzuyama	1.06	65		Pn	19 06 11.4	+0.6
JSU	Suzuyama	1.06	65	P	Pn	19 06 11.5	+0.6
JSU				eS	Sn	19 06 30.4	+4.9
JSU	Suzuyama	1.06	65	A	A	19 06 11.5	
	comp=E,72nm,1.9s,comp=E,138nm,2.0s						
JNN	Nakanoshima	1.29	159	P	Pn	19 06 12.3	-1.7
JNN	Nakanoshima	1.29	159	A	A	19 06 12.3	
	comp=E,118nm,2.2s,comp=E,92nm,3.3s						
JYAK	Yakushimahirau	1.30	128	⇓iP	Pn	19 06 13.7	-0.4
JYAK				⇓eS	Sg	19 06 33.5	+1.3
JYAK	Yakushimahirau	1.30	128	A	A	19 06 13.7	
	comp=E,32nm,4.4s,comp=E,42nm,9.9s						
JTSR	Tashiro 2	1.37	85	A	A	19 06 16.3	
	comp=E,27nm,8.0s,comp=E,43nm,5.2s						
JTN	Tanegashima 3	1.47	105	⇓P	Pn	19 06 17.2	+0.8
JTN	Tanegashima 3	1.47	105	A	A	19 06 17.2	
	comp=E,33nm,5.7s,comp=E,53nm,4.0s						
JMTN	Minamitane	1.50	115	P	Pn	19 06 17.3	+0.4
JMTN	Minamitane	1.50	115	A	A	19 06 17.3	
	comp=E,34nm,2.6s,comp=E,57nm,2.1s						
JZO	Okuchi	1.53	45	A	A	19 06 18.0	
	comp=E,25nm,2.1s,comp=E,30nm,4.9s						
JHD	Hondo	1.57	26	A	A	19 06 17.6	
	comp=E,29nm,6.1s,comp=E,22nm,6.0s						
NGSJ	Nagasakinomoza	1.63	14	A	A	19 06 17.7	
	comp=E,34nm,3.8s,comp=E,23nm,8.2s						
JFU	Fukue jima 2	1.67	343	P	Pn	19 06 16.6	-2.6
JFU	Fukue jima 2	1.67	343	A	A	19 06 16.6	
	comp=E,31nm,12.6s,comp=E,15nm,2.5s						
JTZ	Takazaki	1.72	60	⇓P	Pb	19 06 21.1	-0.7
JTZ	Takazaki	1.72	60	A	A	19 06 21.1	
	comp=E,21nm,6.8s,comp=E,32nm,8.1s						
JNAR	Kushima--Naru	1.73	74	A	A	19 06 21.6	
	comp=E,22nm,7.5s,comp=E,49nm,5.7s						
JNKG	Nichinankitago	1.85	70	A	A	19 06 23.3	
	comp=E,29nm,3.8s,comp=E,47nm,1.7s						
JTAJ	Takarajima	1.90	183	P	Pn	19 06 20.4	-1.8
JTAJ	Takarajima	1.90	183	A	A	19 06 20.4	
	comp=E,41nm,4.6s,comp=E,40nm,4.8s						
JIU3	Izumi3	1.96	40	P	Pn	19 06 23.7	+0.6
JIU3	Izumi3	1.96	40	A	A	19 06 23.7	
	comp=E,21nm,8.7s,comp=E,15nm,5.2s						
JUR	Ureshino	2.10	14	A	A	19 06 24.6	
	comp=E,35nm,14.0s,comp=E,19nm,6.3s						
JTA	Tamana	2.16	28	A	A	19 06 26.3	
	comp=E,18nm,11.1s,comp=E,13nm,4.7s						
JTSN	Tsuno	2.20	57	A	A	19 06 28.1	
	comp=E,13nm,12.2s,comp=E,15nm,3.7s						
JKIT	Kitakata	2.39	48	A	A	19 06 30.5	
	comp=E,16nm,8.8s,comp=E,11nm,12.0s						
JHHC	Hyugahichiya	2.41	54	A	A	19 06 30.9	
	comp=E,11nm,2.3s,comp=E,7.0nm,4.9s						
JNU	Nakatsue	2.45	32	Pn	Pn	19 06 30.1	+0.2
	2.9nm,0.3s,baz=192,slow=10,SNR=24						
JNU				Pg	Pg	19 06 35.8	-1.3
	63nm,0.3s,baz=277,slow=6.0,SNR=62						
JNU				Lg	Lg	19 07 08.5	
	170nm,0.3s,baz=245,slow=24,SNR=9.1						
JNU	Nakatsue	2.45	32		Pn	19 06 30.9	+1.0
JNU	Nakatsue	2.45	32	A	A	19 06 30.6	
	comp=E,15nm,6.8s,comp=E,17nm,5.8s						
JFI	Itaya	2.53	20	A	A	19 06 31.2	
	comp=E,21nm,11.8s,comp=E,12nm,10.2s						
JAM	Amami Oshima	2.64	175	A	A	19 06 30.8	
	comp=E,16nm,9.9s,comp=E,8.0nm,7.8s						
JII	Iki	2.76	7	A	A	19 06 33.5	
	comp=E,17nm,12.7s,comp=E,15nm,4.1s						
JZK	Kikaishima	2.78	168	A	A	19 06 33.3	
	comp=E,49nm,3.3s,comp=E,36nm,11.1s						
JSKE	Saikikamae	2.79	51	A	A	19 06 36.4	
	comp=E,11nm,8.8s,comp=E,8.0nm,4.1s						
JAMN	Amaminishikomi	2.80	183	A	A	19 06 32.6	
	comp=E,17nm,10.1s,comp=E,6.0nm,8.6s						
JUS	Usuki	2.87	45	A	A	19 06 37.3	
	comp=E,12nm,5.5s,comp=E,12nm,4.7s						
JBEP	Beppuamama	2.88	37	A	A	19 06 37.0	
	comp=E,16nm,6.8s,comp=E,21nm,10.2s						
JFA	Akaike	2.93	25	A	A	19 06 37.0	
	comp=E,12nm,6.2s,comp=E,9.0nm,9.2s						
JKI	Kunimi	3.20	36	A	A	19 06 41.4	
	comp=E,8.0nm,5.1s,comp=E,11nm,4.5s						
JTK	Tokunoshima	3.27	186	A	A	19 06 39.0	
	comp=E,12nm,9.0s,comp=E,5.0nm,8.8s						
JTO	Tosashimizu	3.46	58	A	A	19 06 46.0	
	comp=E,4.0nm,6.4s,comp=E,7.0nm,6.2s						
JTU	Tsushima	3.46	1		Pn	19 06 42.8	-1.0
JTU	Tsushima	3.46	1	A	A	19 06 43.1	
	comp=E,10.0nm,13.8s,comp=E,5.0nm,8.0s						
JTY	Toyota	3.52	24	A	A	19 06 45.4	
	comp=E,12nm,13.1s,comp=E,10.0nm,11.0s						
UWA2	Uwa jima 2	3.53	51	A	A	19 06 46.8	
	comp=E,6.0nm,6.6s,comp=E,10.0nm,7.6s						
JHGM	Hagimishima	4.02	22	A	A	19 06 52.3	
	comp=E,15nm,13.1s,comp=E,15nm,8.2s						
JHM	Kurahashi	4.09	40	A	A	19 06 54.3	
	comp=E,8.0nm,9.8s,comp=E,7.0nm,8.5s						
JET	Tanbara	4.16	48	A	A	19 06 55.5	
	comp=E,4.0nm,6.5s,comp=E,7.0nm,8.3s						
JIH	Iheya	4.18	197	A	A	19 06 51.0	
	comp=E,11nm,14.1s,comp=E,6.0nm,9.5s						
JOW	Kunigami	4.30	193	Pn	Pn	19 06 55.5	+0.1
	6.0nm,0.3s,baz=70,slow=17,SNR=42						
JOW				Sn	Sn	19 07 49.2	+3.7
	4.3nm,0.3s,baz=2.8,slow=20,SNR=1.4						
JOW				LR	LR	19 08 46.9	
	comp=Z,5μm,18.6s,baz=63,slow=41						
	70nm,0.5s						
JOW	Kunigami	4.30	193		Pn	19 06 55.1	-0.3
JOW	Kunigami	4.30	193	A	A	19 06 53.1	
	comp=E,6.0nm,9.3s,comp=E,5.0nm,7.8s						
NAWB	Namwon	4.65	340		Pn	19 06 59.3	-0.9
JMN	Monobe	4.68	54	A	A	19 07 03.1	
	comp=E,10.0nm,8.2s,comp=E,6.0nm,5.4s						
JJG	Jouge	4.81	41	A	A	19 07 04.4	
	comp=E,6.0nm,8.7s,comp=E,7.0nm,8.3s						
JHS	Saijyo	5.06	38		Pn	19 07 07.4	+1.6
JKE	Kume jima 2	5.21	206	A	A	19 07 05.0	
	comp=E,6.0nm,7.4s,comp=E,5.0nm,9.6s						
TJN	Taejon	5.56	343		Pn	19 07 12.0	-0.6
TJN	Taejon	5.56	343	ceP	Pn	19 07 13.0	+0.4
KSCHJ	Chungju	5.92	349		Pn	19 07 17.4	-0.1
KSAR	Wonju Array Be	6.49	350	Pn	Pn	19 07 25.4	+0.1
KSAR	Wonju Array Be	6.49	350	P	Pn	19 07 25.4	+0.1
KSRS	Korea Array	6.49	350	Pn	Pn	19 07 25.0	-0.4
	3.1nm,0.3s,baz=171,slow=14,SNR=51						
KSRS				Sn	Sn	19 08 38.2	-1.1
	2.1nm,0.3s,baz=184,slow=17,SNR=4.8						
KSRS				Lg	Lg	19 09 11.9	
	5.3nm,0.3s,baz=161,slow=33,SNR=5.4						
	14nm,0.6s						
KS19	Wonju Array Si	6.55	350		Pn	19 07 25.7	-0.5
JWT	Wachi	6.61	49	Pn	Pn	19 07 27.2	+0.1
INCN	Inchon	6.79	342		Pn	19 07 29.8	+0.2
INCN	Inchon	6.79	342	P	Pn	19 07 29.8	+0.2
SSE	Sheshan	6.99	272	Pn	Pn	19 07 30.1	-2.1
SSE				Sn	Sn	19 08 55.8	+4.3
SSE				LR	LR		
	comp=N,8μm,10.6s						
SSE				LR	LR		
	comp=E,2μm,11.8s						
SEHB	SEOHWA	7.25	353		Pn	19 07 36.9	+0.9
INU	Inuyama	7.74	54		Pn	19 07 42.1	-0.4
JGF	Kuroka	8.10	54	Pn	Pn	19 07 47.6	0.0
YOJ	Yonaguni jima	8.62	222	Pn	Pn	19 07 57.1	+2.3
YOJ	Yonaguni jima	8.62	222	P	Pn	19 07 57.1	+2.3
NJ2	Nanjing	9.00	279	S	Sn	19 09 33.0	-8.0
NJ2	Nanjing	9.00	279	pmax	pmax		
	comp=Z,27nm,0.8s						
NJ2	Nanjing	9.00	279	LR	LR		
	comp=Z,8μm,10.4s						
NJ2	Nanjing	9.00	279	LR	LR		
	comp=E,7μm,10.9s						
NJ2	Nanjing	9.00	279	LR	LR		
	comp=N,10μm,10.9s						
NJ2	Nanjing	9.00	279	smax	smax		
	comp=E,230nm,1.1s						
NJ2	Nanjing	9.00	279	smax	smax		
	comp=N,220nm,1.2s						
NJ2	Nanjing	9.00	279	⇓P	Pg	19 08 57.5	+15
JHJ	Hachijo jima 2	9.11	74	Pn	Pn	19 08 04.1	+2.8
	comp=N,12nm,0.3s,baz=64,slow=23,SNR=10						
JHJ				LR	LR	19 10 34.6	
	comp=N,270nm,20.9s,baz=265,slow=31						
	comp=N,80nm,0.7s						
JHJ2	Mitsune	9.13	74		Pn	19 07 59.7	-1.9
MJB9	Matsu-Tunnel	9.19	51	Pn	Pn	19 08 01.3	-1.2
MAJO	Matsushiro	9.19	51	Pn	Pn	19 08 01.5	-1.0
MAJO	Matsushiro	9.19	51	⇑eP	Pn	19 08 06.3	+3.8
MJAR	Matsushiro Arr	9.19	51	Pn	Pn	19 08 04.8	+2.2
	comp=N,0.2nm,0.3s,baz=247,slow=16,SNR=15						
	comp=N,35nm,0.5s						
MJAR	Matsushiro Arr	9.19	51	Pn	Pn	19 08 01.3	-1.3
TATO	Taipei	9.20	231	Pn	Pn	19 08 00.1	-2.5
YHNB	Yeheng	9.48	230		Pn	19 08 04.9	-1.7
NACB	Ninganchiao	9.69	227		Pn	19 08 08.1	-1.3
DL2	Dalian	10.06	323	⇑iP	Pn	19 08 14.6	+0.2
DL2				S	Sn	19 10 10.8	+3.7
DL2				pmax	pmax		
	comp=N,12nm,1.1s						
DL2				pmax	pmax		
	comp=N,250nm,8.4s						
DL2				LR	LR		
	comp=N,8μm,11.8s						
DL2				LR	LR		
	comp=N,5μm,11.4s						
DL2				LR	LR		
	comp=N,10μm,11.8s						
SSLB	Suanglung	10.38	228	Pn	Pn	19 08 17.4	-1.4
YULB	Yu-li	10.45	225		Pn	19 08 18.9	-0.9
TPUB	Ta-pu	10.93	227		Pn	19 08 25.5	-0.9
QZH	Quanzhou	11.27	240	eP	Pn	19 08 35.1	+4.1
QZH				S	Sn	19 10 48.8	+12
QZH				LR	LR		
	comp=N,4μm,13.6s						
QZH				LR	LR		
	comp=N,5μm,11.5s						
QZH				LR	LR		
	comp=N,5μm,9.5s						
TIA	Tai'an	11.40	300	⇑P	Pn	19 08 31.1	-1.6
TIA				S	Sn	19 10 53.3	+13
TIA				pmax	pmax		
	comp=N,8.0nm,0.5s						
TIA				pmax	pmax		
	comp=N,160nm,6.2s						
TIA				LR	LR		
	comp=N,8μm,12.7s						
TIA				LR	LR		
	comp=N,5μm,15.5s						
TIA				LR	LR		
	comp=N,4μm,12.9s						
JMM	Marumori	11.64	51		Pn	19 08 34.6	-1.4
SNY	Shenyang	11.71	338	⇑P	Pn	19 08 36.0	-0.9
SNY				pmax	pmax		
	comp=N,5.0nm,0.5s						
SNY				pmax	pmax		
	comp=N,380nm,9.6s						
SNY				LR	LR		
	comp=N,11μm,12.2s						
SNY				LR	LR		
	comp=N,17μm,11.8s						
SNY				LR	LR		
	comp=N,18μm,11.0s						
WHN	Wuhan	12.89	272	⇑P	Pn	19 08 45.8	-7.3
WHN				S	Sn	19 11 05.5	-11
WHN				LR	LR		
	comp=N,12μm,15.3s						
WHN				LR	LR		
	comp=E,14μm,14.0s						
WHN				LR	LR		
	comp=Z,13μm,12.7s						
CN2	Changchun	13.09	348	eP	Pn	19 08 54.5	-1.3
CN2				eS	Sn	19 11 20.1	-1.2
CN2				LR	LR		
	comp=Z,5μm,14.0s						
CN2				LR	LR		
	comp=Z,15μm,14.0s						
CN2				LR	LR		
	comp=Z,8μm,15.0s						
USRK	Ussuriysk Ar.	13.29	8	LR	LR	19 13 40.2	
	comp=Z,1μm,21.1s,baz=178,slow=36						
MDJ	Mudanjiang	13.54	1	P	Pn	19 09 04.5	+2.5
MDJ				S	Sn	19 11 32.8	+0.5
MDJ				pmax	pmax		
	comp=Z,380nm,8.4s						
MDJ				LR	LR		
	comp=Z,3μm,13.4s						
MDJ				LR	LR		
	comp=Z,6μm,13.4s						
MDJ				LR	LR		
	comp=Z,3μm,16.8s						
JTM	Tenmabayashi	13.58	41	Pn	Pn	19 08 55.7	-6.8
HNS	HongShan	13.65	302	⇑P	Pn	19 09 02.6	-0.8
HNS				S	Sn	19 11 40.3	+5.4
HNS				pmax	pmax		
	comp=Z,20nm,1.1s						
HNS				LR	LR		
	comp=Z,5μm,17.5s						
HNS				LR	LR		
	comp=Z,6μm,15.9s						
HNS				LR	LR		
	comp=Z,3μm,14.7s						
BJT	Baijiatuau	13.95	313	Pn	Pn	19 09 04.0	-3.5
BJT	Baijiatuau	13.95	313	P	Pn	19 09 04.0	-3.5
BJI	Beijing	13.96	314	P	Pn	19 09 06.8	-0.8
BJI				S	Sn	19 11 45.0	+2.6
BJI				pmax	pmax		
	comp=Z,16nm,2.0s						
BJI				pmax	pmax		
	comp=Z,500nm,5.6s						
BJI				LR	LR		
	comp=Z,4μm,13.6s						
BJI				LR	LR		
	comp=Z,4μm,10.8s						
BJI				LR	LR		
	comp=Z,6μm,11.1s						
CNSH	ChangSha	14.55	263	⇑P	Pn	19 09 15.3	-0.5
CNSH				S	Sn	19 11 58.4	+1.4
CNSH				LR	LR		
	comp=Z,9μm,14.2s						
CNSH				LR	LR		
	comp=Z,6μm,11.1s						
CNSH				LR	LR		
	comp=Z,6μm,11.0s						
LYN	LuoYang	14.60	288	⇓P	Pn	19 09 15.6	-1.0
LYN				S	Sn	19 12 06.3	+8.0
LYN				SS	S	19 12 22.0	+4.5
LYN				pmax	pmax		
	comp=Z,340nm,4.7s						
LYN				LR	LR		
	comp=Z,17μm,14.9s						
LYN				LR	LR		
	comp=Z,7μm,14.3s						
LYN				LR	LR		
	comp=Z,5μm,13.7s						
BNX	BinXian	14.74	355	⇑P	P	19 09 31.3	+6.9
BNX				pmax	pmax		
	comp=Z,60nm,1.3s						
BNX				pmax	pmax		
	comp=Z,550nm,4.8s						
TEY	Ternei	15.08	20	ceP	P	19 09 27.9	-0.2
TEY				pmax	pmax		
	comp=Z,100nm,6.7s						
TEY				pmax	pmax		
	comp=N,100nm,4.0s						
TEY				MLR	MLR		
	comp=E,100nm,11.0s						
TEY				MLR	MLR		
	comp=N,100nm,13.0s						
TEY				MLR	MLR		
	comp=Z,100nm,13.0s						
JEW	Eniwo	15.22	36	Pn	Pn	19 09 24.9	+0.1
ERM	Erimo	15.57	42	Pn	Pn	19 09 27.7	-1.7
ERM				IAmb	IAmb	19 10 19.4	
	comp=Z,108nm,1.4s						
ERM	Erimo	15.57	42	P	Pn	19 09 27.7	-1.7
ERM				pmax	pmax		
	comp=Z,109nm,1.4s						
HKPS	Hong Kong Po S	16.13	241	Pn	Pn	19 09 35.1	-1.6
HKPS				IAmb	IAmb	19 10 27.6	
	comp=Z,132nm,1.6s						
XLT	XiLinHaoTe	16.56	324	eP	Pn	19 09 42.3	+0.2
XLT				pP	P	19 09 46.0	+1.3
XLT				sP	sP	19 09 49.3	-0.5
XLT				PP	PnPn	19 09 56.3	+4.9
XLT				S	Sn	19 12 50.1	+4.3
XLT				sS	S	19 12 53.0	-4.5
XLT				PcP	PcP	19 14 36.3	+3.6
XLT				pmax	pmax		
	comp=Z,520nm,4.8s						
XLT				LR	LR		
	comp=Z,510nm,13.5s						
XLT				LR	LR		
	comp=Z,4μm,13.5s						
XLT				LR	LR		
	comp=Z,7μm,13.9s						
ASAJ	Asahikawa	16.72	35	Pn	Pn	19 09 45.1	+1.0
	comp=Z,1.0nm,0.3s,baz=203,slow=11,SNR=20						

	comp=Z,13nm,0.6s						
ASAJ	**Asahikawa**	**16.72**	**35**	P	**Pn**	**19 09 44.1**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,75nm,1.7s						
JKA	**Kamikawa-asahi**	**16.72**	**35**	P	**Pn**	**19 09 44.1**	**-0.1**
ENH	**Enshi**	**17.09**	**272**		**Pn**	**19 09 48.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**17.36**	**309**	*e*P	**Pn**	**19 09 52.6**	**+0.3**
HHC				pP	pP	19 09 56.0	-1.2
HHC				S	**S**	**19 13 11.5**	**-2.5**
HHC				SS	**SnSn**	**19 13 23.6**	**+4.8**
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,940nm,6.5s						
HHC				LR	LR		
	comp=Z,4µm,11.0s						
HHC				LR	LR		
	comp=Z,9µm,11.0s						
HHC				LR	LR		
	comp=Z,10µm,12.8s						
XAN	**Xi'an**	**17.46**	**285**	⇓P	**Pn**	**19 09 52.3**	**-1.2**
XAN				pP	pP	19 09 57.1	-1.1
XAN				sP	sP	19 10 00.0	+0.2
XAN				S	**Sn**	**19 13 11.0**	**+3.2**
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN				pmax	pmax		
	comp=Z,380nm,6.0s						
XAN				LR	LR		
	comp=Z,12µm,13.6s						
XAN				LR	LR		
	comp=Z,6µm,12.4s						
XAN				LR	LR		
	comp=Z,3µm,12.7s						
KLR	**Kul'dur**	**18.25**	**5**	P	**P**	**19 10 06.1**	**+2.9**
	comp=Z,19nm,0.8s,baz=186,slow=10,SNR=40						
KLR				LR	LR	19 16 25.1	
	comp=Z,712nm,21.8s,baz=180,slow=35						
KLR	**Kul'dur**	**18.25**	**5**	*d i*P	**P**	**19 10 05.7**	**+2.5**
KLR				pmax	pmax		
	comp=Z,112nm,2.5s						
BTO	**Baotou**	**18.30**	**307**	*e*P	**P**	**19 10 05.0**	**+1.0**
BTO				S	**S**	**19 13 35.6**	**+2.6**
BTO				LR	LR		
	comp=Z,17µm,20.6s						
BTO				LR	LR		
	comp=Z,11µm,15.1s						
YSS	**Yuzh-Sakhalins**	**18.95**	**29**	*e*P	**Pn**	**19 10 14.1**	**+2.4**
YSS				*e*S	**S**	**19 13 46.5**	**+0.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
HIA	**Hailar**	**19.58**	**341**		**P**	**19 10 15.8**	**-2.1**
HIA	**Hailar**	**19.58**	**341**	P	**P**	**19 10 15.8**	**-2.1**
HIA				pmax	pmax		
	comp=Z,49nm,1.2s						
KUR	**Kuril'sk**	**20.25**	**40**	*e*P	**P**	**19 10 24.9**	**-0.3**
KUR				*e*		19 10 41.9	
KUR				MLR	MLR		
	comp=Z,2µm,16.0s						
GYA	**Guiyang**	**20.38**	**263**	⇓P	Pn	19 10 28.3	-0.7
GYA				S	Sn	19 14 16.6	-2.0
GYA				ScP	**ScP**	**19 18 11.8**	**-3.9**
GYA				pmax	pmax		
	comp=Z,25nm,0.9s						
GYA				pmax	pmax		
	comp=Z,520nm,3.5s						
GYA				LR	LR		
	comp=Z,3µm,10.8s						
GYA				LR	LR		
	comp=Z,2µm,11.8s						
GYA				LR	LR		
	comp=Z,3µm,12.0s						
GRNR	**Gornyy**	**20.39**	**13**	⇑*i*P	**P**	**19 10 27.2**	**+0.5**
GRNR				*e*S	Sn	19 14 19.5	+1.1
GRNR				pmax	pmax		
	comp=N,2.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,1µm,12.0s						
GRNR				MLR	MLR		
	comp=E,3µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,12.0s						
QIZ	**Qiongzhong**	**21.29**	**240**	P	**P**	**19 10 36.8**	**+0.2**
QIZ				S	**S**	**19 14 33.3**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,140nm,2.7s						
QIZ				LR	LR		
	comp=Z,3µm,11.6s						
QIZ				LR	LR		
	comp=Z,3µm,12.4s						
QIZ				LR	LR		
	comp=Z,3µm,11.1s						
LZH	**Lanzhou**	**21.80**	**290**	⇑P	**P**	**19 10 43.3**	**+1.2**
LZH				sP	sP	19 10 54.4	+7.1
LZH				S	**S**	**19 14 42.9**	**-0.1**
LZH				SS	**SnSn**	**19 15 19.8**	**+12**
LZH				pmax	pmax		
	comp=Z,43nm,1.5s						
LZH				pmax	pmax		
	comp=Z,390nm,4.9s						
LZH				LR	LR		
	comp=Z,8µm,13.0s						
LZH				LR	LR		
	comp=Z,4µm,13.0s						
LZH				LR	LR		
	comp=Z,6µm,13.0s						
CD2	**Chengdu**	**21.91**	**276**	P	**P**	**19 10 42.1**	**-1.2**
CD2				S	**S**	**19 14 41.4**	**-3.8**
CD2				sS	sS	19 14 50.6	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=Z,6µm,11.0s						
CD2				LR	LR		
	comp=Z,6µm,11.7s						
TYV	**Tymovskoe**	**22.14**	**23**	*e*P	**P**	**19 10 51.8**	**+6.4**
TYV				pmax	pmax		
	comp=Z,16nm,1.6s						
TYV				pmax	pmax		
	comp=Z,300nm,3.1s						
TYV				MLR	MLR		
	comp=N,3µm,13.0s						
TYV				MLR	MLR		
	comp=Z,3µm,13.0s						
GUMO	**Guam**	**22.51**	**137**	LR	LR	19 18 46.3	
	comp=Z,821nm,18.6s,baz=329,slow=34						
ZEA	**Zeya**	**22.72**	**357**	*e*P	**P**	**19 10 53.3**	**+1.6**
ZEA				*e*		19 15 01.7	
ZEA				pmax	pmax		
	comp=N,200nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=E,2µm,10.0s						
ZEA				MLR	MLR		
	comp=N,1µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
NKL	**Nikolayevsk**	**23.58**	**17**	*e*P	**P**	**19 10 59.7**	**-0.6**
NKL				*e*S	**S**	**19 15 15.4**	**+1.3**
NKL				pmax	pmax		
	comp=E,4.0nm,0.7s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,22nm,1.1s						
NKL				smax	smax		
	comp=E,2.0nm,0.8s						
NKL				smax	smax		
	comp=N,1.0nm,1.5s						
NKL				MLR	MLR		
	comp=E,14nm,17.0s						
NKL				MLR	MLR		
	comp=N,3.0nm,15.0s						
NKL				MLR	MLR		
	comp=Z,2µm,12.0s						
ULN	**Ulaanbaatar**	**23.90**	**321**	P	**P**	**19 11 02.3**	**-1.5**
ULN	**Ulaanbaatar**	**23.90**	**321**	*c e*P	**P**	**19 11 04.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,26nm,1.1s						
CIT	**Chita**	**23.95**	**336**	*e*P	**P**	**19 11 05.5**	**+1.4**
CIT				*e*		19 11 36.8	
CIT				*e*		19 11 51.3	
CIT				pmax	pmax		
	comp=Z,102nm,2.6s						
DAV	**Davao City (W)**	**24.12**	**189**	LR	LR	19 22 43.1	
	comp=Z,864nm,18.1s,baz=346,slow=42						
KMI	**Kunming**	**24.16**	**262**	⇑P	**P**	**19 11 04.8**	**-1.7**
KMI				pP	pP	19 11 08.3	-1.9
KMI				S	**S**	**19 15 22.0**	**-2.4**
KMI				pmax	pmax		
	comp=Z,36nm,1.2s						
KMI				pmax	pmax		
	comp=Z,270nm,4.7s						
KMI				LR	LR		
	comp=Z,2µm,14.4s						
KMI				LR	LR		
	comp=Z,3µm,14.0s						
KMI				LR	LR		
	comp=Z,3µm,14.8s						
SONM	**Songino Array**	**24.24**	**320**	P	**P**	**19 11 06.3**	**-0.7**
	comp=Z,8.1nm,0.8s,baz=133,slow=8.4,SNR=23						
SONM				LR	LR	19 21 14.3	
	comp=Z,3µm,20.6s,baz=130,slow=38						
	comp=Z,8.1nm,0.8s						
SONM	**Songino Array**	**24.24**	**320**	P	**P**	**19 11 05.6**	**-1.4**
SONM				IAmb	IAmb	19 11 11.6	
	comp=Z,43nm,1.6s						
SONM	**Songino Array**	**24.24**	**320**	P	**P**	**19 11 05.6**	**-1.4**
SONM				pmax	pmax		
	comp=Z,43nm,1.6s						
PZH	**PanZhiHua**	**24.57**	**266**	P	**P**	**19 11 08.4**	**-1.7**
PZH				pP	**pP**	**19 11 11.8**	**-2.1**
PZH				PP	**PnPn**	**19 11 48.3**	**+7.0**
PZH				S	**S**	**19 15 26.1**	**-4.8**
PZH				SS	**SnSn**	**19 16 20.1**	**+4.2**
PZH				pmax	pmax		
	comp=Z,40nm,1.9s						
PZH				pmax	pmax		
	comp=Z,320nm,3.5s						
PZH				LR	LR		
	comp=Z,3µm,12.4s						
PZH				LR	LR		
	comp=Z,2µm,11.8s						
PZH				LR	LR		
	comp=Z,2µm,13.2s						
GTA	**Gaotai**	**25.43**	**297**	⇑P	**P**	**19 11 16.8**	**-0.9**
GTA				pP	pP	19 11 20.8	-0.7
GTA				sP	sP	19 11 24.6	+1.6
GTA				S	**S**	**19 15 41.3**	**-3.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,280nm,5.6s						
GTA				LR	LR		
	comp=Z,4µm,15.5s						
GTA				LR	LR		
	comp=Z,3µm,14.7s						
GTA				LR	LR		
	comp=Z,4µm,13.5s						
ZAK	**Zakamensk**	**27.39**	**322**	*e*P	**P**	**19 11 35.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
SGSI	**Sangihe**	**27.46**	**188**	P	**P**	**19 11 40.4**	**+4.3**
MYLDM	**Lahad Datu**	**27.68**	**204**	P	**P**	**19 11 37.3**	**-0.8**
MYLDM				IAmb	IAmb	19 12 13.5	
	comp=Z,31nm,1.4s						
IRK	**Irkutsk**	**28.02**	**326**	*e*P	**P**	**19 11 43.8**	**+3.0**
IRK				pmax	pmax		
	comp=Z,51nm,2.2s						
GOMU	**GeErMu**	**29.10**	**290**	P	**P**	**19 11 51.0**	**0.0**
GOMU				pP	sP	19 11 55.6	-0.8
GOMU				sP	pP	19 11 57.9	+3.1
GOMU				S	**S**	**19 16 42.8**	**0.0**
GOMU				sS	sS	19 16 49.8	+0.8
GOMU				pmax	pmax		
	comp=Z,20nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.3s						
GOMU				LR	LR		
	comp=Z,1µm,11.6s						
GOMU				LR	LR		
	comp=Z,1µm,14.9s						
GOMU				LR	LR		
	comp=Z,1µm,15.5s						
MOY	**Mondy**	**29.30**	**323**	*e*P	**P**	**19 11 53.8**	**+1.4**
MOY				pmax	pmax		
	comp=Z,17nm,2.6s						
CHTO	**Chiang Mai**	**30.03**	**253**	P	**P**	**19 11 57.0**	**-2.0**
CHTO	**Chiang Mai**	**30.03**	**253**	P	**P**	**19 11 57.0**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**30.14**	**35**	P	**P**	**19 11 55.7**	**-4.0**
PEA0B	**Petropavlovsk-**	**30.14**	**35**	P	**P**	**19 11 55.7**	**-4.0**
PEA0B				pmax	pmax		
	comp=Z,89nm,1.9s						
PETK	**Petropavlovsk-**	**30.14**	**35**	P	**P**	**19 12 00.4**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=184,slow=5.6,SNR=4.0						
PETK				LR	LR	19 23 21.3	
	comp=Z,527nm,20.6s,baz=221,slow=35						
	comp=Z,5.6nm,1.0s						
PETK	**Petropavlovsk-**	**30.14**	**35**	P	**P**	**19 11 55.5**	**-4.1**
CM31	**Chiang Mai Arr**	**30.20**	**253**	P	**P**	**19 11 58.2**	**-2.3**
CMAR	**Chiang Mai Arr**	**30.20**	**253**	P	**P**	**19 12 00.8**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=59,slow=6.2,SNR=22						
CMAR				PcP	**PcP**	**19 15 01.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=42,slow=1.8,SNR=6.4						
CMAR				LR	LR	19 25 22.9	
	comp=Z,668nm,19.2s,baz=50,slow=39						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.20**	**253**	P	**P**	**19 11 59.5**	**-1.1**
PET	**Petropavlovsk**	**30.57**	**36**	P	**P**	**19 12 03.5**	**+0.1**
PET	**Petropavlovsk**	**30.57**	**36**	*c i*P	**P**	**19 12 05.8**	**+2.4**
PET				pmax	pmax		
	comp=Z,19nm,1.0s						
GTOI	**Gorontalo**	**30.84**	**192**	P	**P**	**19 12 10.0**	**+3.9**
	comp=Z,4.5nm,0.9s						
YAK	**Yakutsk**	**30.99**	**0**	LR	LR	19 24 04.7	
	comp=Z,368nm,18.3s,baz=176,slow=36						
YAK	**Yakutsk**	**30.99**	**0**	P	**P**	**19 12 05.5**	**-1.5**
YAK	**Yakutsk**	**30.99**	**0**	*e*P	**P**	**19 12 06.5**	**-0.5**
YAK				e*PP	**sP**	**19 12 15.3**	**+3.0**
YAK				*e*		19 13 05.9	
YAK				*e*S	**S**	**19 17 12.1**	**+1.0**
YAK				*e*SS	**SnSn**	**19 18 50.3**	**-1.2**
YAK				*e*SSS	SSS	19 19 09.5	
YAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=Z,57nm,2.3s						
YAK				smax	smax		
	comp=E,102nm,14.6s						
YAK				smax	smax		
	comp=N,310nm,14.4s						
YAK				MLR	MLR		
	comp=Z,898nm,9.0s						
YAK				MLR	MLR		
	comp=E,610nm,6.0s						
YAK				MLR	MLR		
	comp=N,1µm,12.0s						
MRSI	**Marisa**	**31.20**	**194**	P	**P**	**19 12 13.0**	**+3.7**
	comp=N,397nmcomp=N,8.0nm,0.8s						
LBMI	**Labuha**	**31.56**	**183**	P	**P**	**19 12 16.0**	**+3.5**
	comp=N,19nm,1.5s						
SIJI	**Sorong**	**31.80**	**176**	P	**P**	**19 12 15.3**	**+0.7**
	comp=N,3.6nm,0.7s,baz=145,slow=18,SNR=2.4						
SIJI				LR	LR	19 24 48.7	
	comp=N,906nm,18.7s,baz=18,slow=36						
	comp=N,3.6nm,0.7s						
MPSI	**Mapaga**	**31.83**	**198**	P	**P**	**19 12 19.1**	**+4.3**
	comp=N,395nmcomp=N,9.8nm,2.7s						
MA2	**Magadan**	**31.96**	**21**	LR	LR	19 23 48.1	
	comp=N,140nm,21.8s,baz=251,slow=34						
SBUM	**Sibu**	**32.72**	**213**	P	**P**	**19 12 19.7**	**-3.0**
SBUM				IAmb	IAmb	19 12 27.7	
	comp=Z,39nm,1.8s						
PCI	**Palu**	**33.04**	**198**	P	**P**	**19 12 28.0**	**+2.6**
	comp=Z,10µmcomp=Z,417nm,1.0s						
SANI	**Sanana**	**33.07**	**186**	P	**P**	**19 12 28.8**	**+3.1**
	comp=Z,14nm,0.9s						
SRPI	**Serui, Papua**	**33.39**	**167**	P	**P**	**19 12 30.8**	**+2.3**
	comp=Z,28nm,0.8s						
KSM	**Kuching**	**34.49**	**215**	P	**P**	**19 12 37.5**	**-0.6**
KSM				IAmb	IAmb	19 12 43.2	
	comp=Z,14nm,0.9s						
AAI	**Ambon**	**34.56**	**182**	P	**P**	**19 12 41.0**	**+2.3**
	comp=Z,31nm,0.7s						
WMQ	**Urumqi**	**35.07**	**303**	⇓P	**P**	**19 12 43.3**	**+0.3**
WMQ				pP	pP	19 12 46.8	0.0
WMQ				sP	sP	19 12 52.0	+3.7
WMQ				PP	**PP**	**19 14 01.6**	**-0.9**
WMQ				S	**S**	**19 18 18.0**	**+2.8**
WMQ				pmax	pmax		
	comp=Z,49nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.3s						
WMQ				LR	LR		
	comp=Z,3µm,12.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,15.5s						
SEY	**Seymchan**	**35.15**	**18**	LR	LR	19 26 28.4	
	comp=Z,803nm,18.1s,baz=215,slow=35						
SEY	**Seymchan**	**35.15**	**18**	⇓*i*P	**P**	**19 12 45.2**	**+1.9**
SEY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SRIT	**Nakonsritamara**	**35.59**	**237**	P	**P**	**19 12 48.4**	**+0.8**
SPSI	**Sidrap Palu**	**36.00**	**196**	P	**P**	**19 12 54.7**	**+3.7**
	comp=Z,7.6nm,1.3s						
BBKI	**Banjar Baru**	**37.00**	**205**	P	**P**	**19 13 01.9**	**+2.3**
	comp=Z,11µmcomp=Z,61nm,0.5s						
KAPI	**Kappang**	**37.01**	**196**	LR	LR	19 27 48.1	
	comp=Z,304nm,20.0s,baz=4.5,slow=36						
KAPI	**Kappang**	**37.01**	**196**	P	**P**	**19 12 59.7**	**0.0**
KAPI	**Kappang**	**37.01**	**196**	P	**P**	**19 12 59.7**	**0.0**
KAPI				pmax	pmax		
	comp=Z,18nm,1.2s						
BKSI	**Bulukumba**	**37.22**	**195**	P	**P**	**19 13 05.3**	**+3.8**
	comp=Z,13nm,1.0s						
IPM	**Ipoh**	**37.52**	**231**	P	**P**	**19 13 02.4**	**-1.7**
GUN	**Gumba**	**37.78**	**277**	*e*P	**P**	**19 13 05.8**	**-0.8**
	comp=Z,198nm,1.4s						
MYKOM	**Kota Tinggi**	**37.79**	**225**	P	**P**	**19 13 05.8**	**-0.5**
PKI	**Pulchoki**	**38.27**	**276**	*e*P	**P**	**19 13 09.5**	**-1.3**
	comp=Z,93nm,1.3s						
PKIN	**Phulchoki**	**38.28**	**276**	*e*P	**P**	**19 13 09.5**	**-1.3**
	comp=Z,28nm,0.7s						
KKN	**Kakani**	**38.32**	**277**	*e*P	**P**	**19 13 10.4**	**-0.7**
	comp=Z,258nm,1.7s						
DMN	**Daman**	**38.52**	**276**	*e*P	**P**	**19 13 12.3**	**-0.5**
	comp=Z,247nm,1.6s						
GKN	**Gorkha**	**38.81**	**277**	*e*P	**P**	**19 13 15.1**	**0.0**
	comp=Z,157nm,1.7s						
SHEM	**Shemya Is, Ala**	**38.92**	**43**	LR	LR	19 30 15.3	
	comp=Z,228nm,20.9s,baz=278,slow=38						
ZAA0	**Zalesovo Array**	**39.13**	**319**	P	**P**	**19 13 12.8**	**-4.4**
ZALV	**Zalesovo Beam**	**39.13**	**319**	P	**P**	**19 13 15.6**	**-1.6**
	comp=Z,2.7nm,0.9s,baz=101,slow=9.5,SNR=3.7						
ZALV				LR	LR	19 30 38.4	
	comp=Z,1µm,18.6s,baz=121,slow=38						
	comp=Z,2.7nm,0.9s						
ZALV	**Zalesovo Beam**	**39.13**	**319**	P	**P**	**19 13 13.6**	**-3.6**
ZALV	**Zalesovo Beam**	**39.13**	**319**	*i* P	**P**	**19 13 17.1**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**39.21**	**307**	P	**P**	**19 13 14.1**	**-4.0**
MK31	**Makanchi Array**	**39.21**	**307**	P	**P**	**19 13 14.1**	**-4.0**
MK31				pmax	pmax		
	comp=Z,30nm,1.8s						
MKAR	**Makanchi Array**	**39.21**	**307**	P	**P**	**19 13 16.8**	**-1.3**
	comp=Z,8.3nm,1.0s,baz=96,slow=10,SNR=18						
MKAR				PcP	**PcP**	**19 15 25.7**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=79,slow=4.2,SNR=4.9						
MKAR				LR	LR	19 30 36.6	
	comp=Z,736nm,19.1s,baz=94,slow=38						
	comp=Z,8.3nm,1.0s						
MKAR	**Makanchi Array**	**39.21**	**307**	P	**P**	**19 13 14.3**	**-3.8**
DANN	**Dangsing**	**39.47**	**278**	*e*P	**P**	**19 13 21.5**	**+0.8**
	comp=Z,98nm,1.4s						
KOLN	**Koldanda**	**39.76**	**277**	*e*P	**P**	**19 13 22.4**	**-0.7**
	comp=Z,114nm,1.6s						
PSI	**Prapat**	**40.16**	**232**	LR	LR	19 29 50.9	
	comp=Z,654nm,20.9s,baz=47,slow=36						
PYUN	**Piuthan**	**40.19**	**278**	*e*P	**P**	**19 13 26.9**	**+0.2**
	comp=Z,174nm,1.7s						
RGRI	**Rengat**	**40.40**	**224**	P	P	19 13 33.8	+5.6
	comp=Z,99µmcomp=Z,939nm,0.4s						
TIXI	**Tiksi**	**40.65**	**360**	LR	LR	19 30 11.8	
	comp=Z,781nm,19.0s,baz=180,slow=36						
TIXI	**Tiksi**	**40.65**	**360**	P	**P**	**19 13 28.6**	**-1.0**
TIXI	**Tiksi**	**40.65**	**360**	*c i*P	**P**	**19 13 30.4**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,22nm,2.5s						
KRVT	**Keravat (AS076**	**41.30**	**144**	LR	LR	19 30 33.4	
	comp=Z,339nm,18.3s,baz=112,slow=36						
BATI	**Baumata**	**41.38**	**188**	LR	LR	19 29 57.3	
	comp=Z,176nm,21.0s,baz=57,slow=35						
PRZ	**Przheval'sk**	**41.80**	**300**	P	**P**	**19 13 37.5**	**-2.1**
PRZ	**Przheval'sk**	**41.80**	**300**	P	**P**	**19 13 37.6**	**-2.1**
PRZ				pmax	pmax		
	comp=Z,94nm,1.8s						
JAGI	**Jajag, Banyuwa**	**41.90**	**203**	P	**P**	**19 13 41.3**	**+0.8**
KURK	**Kurchatov**	**42.12**	**313**	P	**P**	**19 13 41.1**	**-1.0**
KURK	**Kurchatov**	**42.12**	**313**	⇓*e*P	**P**	**19 13 41.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,35nm,2.0s						
KURBB	**Kurchatov Arra**	**42.17**	**313**	P	**P**	**19 13 41.3**	**-1.1**
	comp=Z,4.7nm,0.9s,baz=97,slow=8.7,SNR=25						
KURBB				PcP	**PcP**	**19 15 36.0**	**-0.5**
	comp=Z,1.3nm,1.0s,baz=105,slow=3.9,SNR=2.6						
KURBB				LR	LR	19 32 13.9	
	comp=Z,2µm,21.2s,baz=81,slow=38						
	comp=Z,4.7nm,0.9s						
TARG	**Taragay, Kyrgy**	**42.27**	**299**	P	**P**	**19 13 41.3**	**-2.5**
TARG				IAmb	IAmb	19 13 49.7	
	comp=Z,35nm,1.4s						
KLI	**Kotabumi**	**42.68**	**218**	P	P	19 13 51.7	+4.8
	comp=Z,74nm,0.8s						
KDJ	**Kajisay**	**42.71**	**300**	P	**P**	**19 13 44.8**	**-2.4**
KDJ	**Kajisay**	**42.71**	**300**	P	**P**	**19 13 44.8**	**-2.4**
KDJ				pmax	pmax		
	comp=Z,23nm,1.4s						
BILL	**Bilibino**	**42.81**	**19**	P	**P**	**19 13 47.7**	**+0.3**
BILL				IAmb	IAmb	19 13 49.9	
	comp=Z,38nm,1.7s						
BILL	**Bilibino**	**42.81**	**19**	*c i*P	**P**	**19 13 48.1**	**+0.7**
BILL				*e*		19 15 38.8	
BILL				*e*PPP	PPP	19 16 00.7	
BILL				pmax	pmax		
	comp=Z,22nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
DBJI	**Dramaga**	**43.19**	**214**	P	P	19 13 55.9	+4.9
	comp=Z,3µmcomp=Z,16nm,0.9s						
BOOM	**Boomskoye usch**	**43.62**	**301**	P	**P**	**19 13 52.8**	**-1.6**
BOOM	**Boomskoye usch**	**43.62**	**301**	P	**P**	**19 13 52.8**	**-1.6**
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MTN	**Manton Dam**	**43.68**	**177**	P	**P**	**19 13 54.2**	**-0.7**
MTN				IAmb	IAmb	19 13 58.8	
	comp=Z,26nm,0.8s						
PMG	**Port Moresby**	**43.71**	**154**	LR	LR	19 29 43.8	
	comp=Z,591nm,20.7s,baz=336,slow=33						
KSH	**Kashi**	**43.82**	**296**	P	P	19 14 00.9	+4.8
KSH				S	S	19 20 39.3	+13
KSH				pmax	pmax		
	comp=Z,12nm,1.8s						
KSH				LR	LR		
	comp=Z,2µm,14.1s						
KSH				LR	LR		
	comp=Z,690nm,16.8s						
KSH				LR	LR		
	comp=Z,2µm,19.6s						
FRU1	**Bishkek**	**44.56**	**301**	P	**P**	**19 14 00.7**	**-1.3**
FRU1	**Bishkek**	**44.56**	**301**	P	**P**	**19 14 00.7**	**-1.3**
FRU1				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	**Ala-Archa**	**44.67**	**301**	P	**P**	**19 14 01.9**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=160,slow=3.4,SNR=8.3						
AAK				LR	LR	19 34 48.1	
	comp=Z,2µm,18.1s,baz=98,slow=39						
	comp=Z,2.8nm,0.7s						
AAK	**Ala-Archa**	**44.67**	**301**	P	**P**	**19 14 01.5**	**-1.5**
AAK	**Ala-Archa**	**44.67**	**301**	⇑*e*P	**P**	**19 14 02.6**	**-0.3**
AAK				pmax	pmax		
	comp=Z,14nm,2.5s						
GSTR	**Great Sitkin T**	**44.72**	**46**	P	**P**	**19 14 02.3**	**-0.7**
NRIK	**Noril'sk**	**45.01**	**340**	P	**P**	**19 14 03.9**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=109,slow=7.5,SNR=5.8						

NRIK				LR	LR	19 32 14.9	
	comp=Z,995nm,18.1s,baz=126,slow=35						
	comp=Z,4.0nm,0.7s						
NRIK	**Noril'sk**	45.01	340	P	P	19 14 03.6	-1.4
NRIK	**Noril'sk**	45.01	340	*ce*P	P	19 14 04.2	-0.8
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KNRA	**Kununurra**	46.46	181	P	P	19 14 16.6	-0.4
DRK	**Karamyk**	47.03	297	P	P	19 14 19.5	-2.2
XMIS	**Christmas Isla**	47.13	213	P	P	19 14 21.3	-1.0
BRVK	**Borovoye**	47.49	315	P	P	19 14 22.8	-2.0
BRVK	**Borovoye**	47.49	315	*c i*P	P	19 14 23.7	-1.1
BRVK				pmax	pmax		
	comp=Z,23nm,1.0s						
KK31	**Karatay Array**	47.55	302	P	P	19 14 23.5	-2.0
KK31				IAmb	IAmb	19 14 29.0	
	comp=Z,12nm,0.9s						
KK31	**Karatay Array**	47.55	302	*i* P	P	19 14 24.5	-0.9
KKAR	**Karatay Array**	47.55	302	P	P	19 14 24.0	-1.4
KKAR	**Karatay Array**	47.55	302	P	P	19 14 23.8	-1.7
KKAR				IAmb	IAmb	19 14 29.1	
	comp=Z,12nm,0.9s						
KKAR	**Karatay Array**	47.55	302	P	P	19 14 24.0	-1.4
KKAR				pmax	pmax		
	comp=Z,12nm,1.0s						
BTK	**Batken**	47.70	298	P	P	19 14 25.9	-0.8
BTK				IAmb	IAmb	19 14 30.7	
	comp=Z,15nm,1.5s						
BTK	**Batken**	47.70	298	P	P	19 14 25.9	-0.8
BTK				pmax	pmax		
	comp=Z,15nm,1.5s						
HYBB	**Hyderabad (bro**	47.87	266	*e*P	P	19 14 28.2	0.0
GAR	**Garm**	48.24	296	P	P	19 14 29.3	-1.7
SPIA	**Saint Paul Isl**	48.61	39	P	P	19 14 31.5	-1.8
	baz=264						
GAMB	**Gambell**	48.97	30	P	P	19 14 35.7	-0.3
GAMB				IAmb	IAmb	19 14 39.1	
	comp=Z,15nm,1.4s						
GAMB	**Gambell**	48.97	30	P	P	19 14 34.7	-1.3
	baz=257,SNR=7.5						
NIKH	**Nikolski High**	49.16	45	P	P	19 14 36.7	-1.0
	baz=269						
CHGR	**Chuyangaron**	49.19	296	P	P	19 14 35.7	-2.5
CHGR	**Chuyangaron**	49.19	296	P	P	19 14 35.7	-2.5
CHGR				pmax	pmax		
	comp=Z,24nm,0.9s						
HNR	**Honiara**	49.82	139	LR	LR	19 34 49.8	
	comp=Z,137nm,18.7s,baz=316,slow=35						
KBL	**Kabul**	50.15	291	P	P	19 14 43.8	-1.9
KBL				IAmb	IAmb	19 14 49.9	
	comp=Z,18nm,1.4s						
KBL	**Kabul**	50.15	291	P	P	19 14 43.8	-1.9
KBL				pmax	pmax		
	comp=Z,19nm,1.4s						
UNV	**Unalaska Valle**	50.58	44	P	P	19 14 47.4	-0.9
	baz=270						
WB0	**Warramunga Arr**	50.76	174	P	P	19 14 50.4	+0.3
WB0				IAmb	IAmb	19 14 54.1	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	50.92	174	P	P	19 14 50.1	-1.2
WRAB				IAmb	IAmb	19 14 55.4	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	50.92	174	⇓*e*P	P	19 14 51.2	-0.1
WRAB				pmax	pmax		
	comp=Z,44nm,2.2s						
WRA	**Warramunga Arr**	50.93	174	P	P	19 14 52.0	+0.7
	comp=Z,8.0nm,0.7s,baz=354,slow=8.0,SNR=37						
WRA				PcP	PcP	19 16 09.5	+1.8
	comp=Z,0.5nm,0.6s,baz=5.0,slow=4.8,SNR=1.2						
WRA				LR	LR	19 35 03.0	
	comp=Z,228nm,21.4s,baz=23,slow=34						
	comp=Z,8.0nm,0.7s						
WRA	**Warramunga Arr**	50.93	174	P	P	19 14 51.9	+0.5
WB2	**Warramunga Arr**	50.93	174	P	P	19 14 51.5	+0.2
WB2				IAmb	IAmb	19 14 55.5	
	comp=Z,16nm,0.8s						
TNA	**Tin City**	50.93	28	P	P	19 14 50.1	-0.8
TNA				IAmb	IAmb	19 14 53.8	
	comp=Z,26nm,1.4s						
TNA	**Tin City**	50.93	28	P	P	19 14 51.0	+0.2
	baz=259,SNR=9.3						
WR0	**Warramunga Arr**	50.97	174	IAmb	IAmb	19 14 55.9	
	comp=Z,10nm,0.8s						
PALK	**Pallekele**	51.15	253	LR	LR	19 37 37.9	
	comp=Z,485nm,20.3s,baz=154,slow=37						
ANM	**Nome**	51.84	30	P	P	19 14 55.8	-1.9
ANM				IAmb	IAmb	19 15 01.1	
	comp=Z,23nm,1.5s						
ANM	**Nome**	51.84	30	P	P	19 14 55.8	-1.9
ANM				pmax	pmax		
	comp=Z,23nm,1.5s						
ANM	**Nome**	51.84	30	P	P	19 14 58.0	+0.3
	baz=263,SNR=7.1						
FALS	**False Pass**	52.36	42	P	P	19 15 01.3	-0.5
	baz=272						
MBWA	**Marble Bar**	52.72	191	P	P	19 15 03.5	-1.2
MBWA				IAmb	IAmb	19 15 09.4	
	comp=Z,19nm,1.0s						
PCHI	**Peechi**	53.04	259	*e*P	P	19 15 03.0	-4.3
PSA00	**Pilbara Seismi**	53.11	191	P	P	19 15 07.4	-0.2
PSA00				IAmb	IAmb	19 15 12.2	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	53.11	191	P	P	19 15 07.1	-0.5
PSA00				IAmb	IAmb	19 15 12.2	
	comp=Z,33nm,0.8s						
SVE	**Sverdlovsk**	53.12	320	*e*P	P	19 15 07.8	+0.5
SVE				pmax	pmax		
	comp=Z,28nm,1.8s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
RDOG	**Red Dog Mine**	53.29	26	P	P	19 15 07.3	-1.1
RDOG				IAmb	IAmb	19 15 08.7	
	comp=Z,9.3nm,0.7s						
RDOG	**Red Dog Mine**	53.29	26	P	P	19 15 07.0	-1.5
	baz=262						
CTA	**Charters Tower**	53.38	160	P	P	19 15 11.1	+1.5
	comp=Z,8.2nm,0.7s,baz=326,slow=7.6,SNR=9.1						
CTA				LR	LR	19 37 08.5	
	comp=Z,328nm,19.8s,baz=339,slow=35						
	comp=Z,8.2nm,0.7s						
SDPT	**Sand Point**	54.03	42	P	P	19 15 13.2	-0.8
	baz=274						
AB31	**Akbulak array**	54.15	311	*i* P	P	19 15 13.6	-1.4
ABKAR	**Akbulak array**	54.15	311	P	P	19 15 13.3	-1.7
ABKAR				IAmb	IAmb	19 15 18.5	
	comp=Z,11nm,1.0s						
ARU	**Arti**	54.28	320	LR	LR	19 40 37.1	
	comp=Z,2µm,20.6s,baz=82,slow=39						
ARU	**Arti**	54.28	320	P	P	19 15 14.2	-1.6
ARU				IAmb	IAmb	19 15 20.5	
	comp=Z,15nm,1.0s						
ARU	**Arti**	54.28	320	*d i*P	P	19 15 13.8	-2.0
ARU				S	S	19 22 53.1	+0.2
ARU				SS	SS	19 26 31.2	-3.3
ARU				pmax	pmax		
	comp=Z,22nm,3.8s						
ARU				MLR	MLR		
	comp=Z,2µm,15.0s						
CHNA	**Chernabura Isl**	54.58	42	P	P	19 15 17.3	-0.7
	baz=275						
AS31	**Alice Springs**	54.58	175	P	P	19 15 17.5	-0.8
ASAR	**Alice Springs**	54.58	175	P	P	19 15 19.4	+1.0
	comp=Z,5.2nm,0.7s,baz=5.7,slow=14,SNR=47						
ASAR				PcP	PcP	19 16 23.5	+2.1
	comp=Z,1.0nm,0.6s,baz=359,slow=3.7,SNR=4.1						
ASAR				LR	LR	19 37 07.5	
	comp=Z,154nm,22.0s,baz=4.0,slow=34						
	comp=Z,5.2nm,0.7s						
ASAR	**Alice Springs**	54.58	175	P	P	19 15 18.5	+0.2
AKTO	**Aktyubinsk**	55.22	312	LR	LR	19 40 31.4	
	comp=Z,2µm,19.1s,baz=86,slow=38						
GIRL	**Giralia**	55.32	197	P	P	19 15 23.1	-0.5
GCSA	**Galena City Sc**	55.50	30	P	P	19 15 24.2	-0.2
	baz=270						
HRA	**Herat**	55.60	293	P	P	19 15 24.8	-1.2
A21K	**Barrow**	55.81	22	P	P	19 15 26.7	0.0
	baz=266						
TTA	**Tatalina**	55.92	32	P	P	19 15 27.3	-0.4
	baz=272						
N18K	**Kilae Creek**	56.10	35	P	P	19 15 28.5	-0.4
N18K	**Kilae Creek**	56.10	35	P	P	19 15 28.8	-0.2
	baz=274						
L19K	**White Mountain**	56.50	33	P	P	19 15 31.0	-0.7
L19K	**White Mountain**	56.50	33	P	P	19 15 30.9	-0.9
	baz=274,SNR=5.6						
O18K	**Koktuh Hills**	56.51	36	P	P	19 15 32.2	+0.4
O18K				IAmb	IAmb	19 15 34.9	
	comp=Z,24nm,1.4s						
O18K	**Koktuh Hills**	56.51	36	P	P	19 15 31.4	-0.4
	baz=275,SNR=9.1						
P18K	**Big Mountain,**	56.54	36	IAmb	IAmb	19 15 34.7	
	comp=Z,20nm,1.4s						
P18K	**Big Mountain,**	56.54	36	P	P	19 15 31.9	-0.2
	baz=275						
J20K	**Nowinta River**	56.70	31	P	P	19 15 32.4	-0.7
J20K				IAmb	IAmb	19 15 36.3	
	comp=Z,7.2nm,0.7s						
J20K				PcP	PcP	19 16 29.8	+0.7
J20K	**Nowinta River**	56.70	31	P	P	19 15 32.1	-1.0
	baz=273,SNR=11						
CHIR	**Chirikof Islan**	56.72	41	P	P	19 15 32.8	-0.5
	baz=278						
M19K	**Big River Lodg**	56.74	33	IAmb	IAmb	19 15 35.9	
	comp=Z,20nm,1.8s						
M19K	**Big River Lodg**	56.74	33	P	P	19 15 33.1	-0.4
	baz=274						
N19K	**Bonanza Creek**	56.78	35	IAmb	IAmb	19 15 36.8	
	comp=Z,16nm,1.6s						
N19K	**Bonanza Creek**	56.78	35	P	P	19 15 33.1	-0.8
	baz=275						
K20K	**Telida**	56.78	32	P	P	19 15 33.7	0.0
K20K				IAmb	IAmb	19 15 37.0	
	comp=Z,24nm,1.5s						
K20K	**Telida**	56.78	32	P	P	19 15 33.5	-0.3
	baz=274,SNR=13						
IMAR	**Indian Mountai**	56.78	28	P	P	19 15 33.4	-0.3
IMAR				PcP	PcP	19 16 30.6	+1.3
O19K	**Port Alsworth**	56.92	35	P	P	19 15 34.5	-0.2
	baz=276						
L20K	**Farewell, AK**	56.93	33	P	P	19 15 34.8	-0.1
	baz=274,SNR=11						
H21K	**Melozitna Rive**	57.19	29	P	P	19 15 35.9	-0.7
	baz=273,SNR=7.6						
Q19K	**Cape Douglas,**	57.40	37	P	P	19 15 37.6	-0.6
Q19K				IAmb	IAmb	19 15 38.9	
	comp=Z,9.3nm,0.8s						
Q19K	**Cape Douglas,**	57.40	37	P	P	19 15 37.0	-1.2
	baz=277						
SII	**Sitkinak Islan**	57.42	40	P	P	19 15 37.3	-1.1
	baz=278						
P19K	**Oil Pt**	57.52	36	P	P	19 15 37.8	-1.2
	baz=277						
CHUM	**Lake Minchumin**	57.52	31	P	P	19 15 39.1	+0.1
	baz=275,SNR=12						
I21K	**Tanana**	57.56	29	IAmb	IAmb	19 15 46.0	
	comp=Z,8.0nm,0.8s						
I21K	**Tanana**	57.56	29	P	P	19 15 39.0	-0.2
	baz=274						
RSO	**Redoubt South**	57.67	35	P	P	19 15 39.2	-1.1
CAST	**Castle Rocks**	57.67	31	IAmb	IAmb	19 15 43.0	
	comp=Z,7.0nm,0.7s						
CAST	**Castle Rocks**	57.67	31	P	P	19 15 39.6	-0.4
	baz=276,SNR=19						
PPLA	**Purkeypile**	57.67	32	IAmb	IAmb	19 15 43.3	
	comp=Z,11nm,0.6s						
PPLA	**Purkeypile**	57.67	32	P	P	19 15 39.5	-0.7
	baz=276,SNR=13						
O20K	**Slope Mountain**	57.78	35	P	P	19 15 39.8	-1.1
	baz=277						
GEYT	**Alibeck**	57.81	298	P	P	19 15 40.6	-0.8
	comp=Z,2.9nm,0.8s,baz=29,slow=13,SNR=2.4						
GEYT				LR	LR	19 43 59.9	
	comp=Z,706nm,18.7s,baz=116,slow=40						
	comp=Z,2.9nm,0.8s						
OHAK	**Old Harbor**	57.81	39	P	P	19 15 40.1	-0.9
	baz=278						
SPCR	**Spurr Chakacha**	57.84	34	P	P	19 15 40.4	-1.0
	baz=277						
BPAW	**Bear Paw Mtn.**	58.09	31	P	P	19 15 42.9	0.0
BPAW	**Bear Paw Mtn.**	58.09	31	P	P	19 15 42.5	-0.4
	baz=276,SNR=9.1						
KDAK	**Kodiak Island**	58.11	38	LR	LR	19 41 25.3	
	comp=Z,450nm,21.1s,baz=263,slow=37						
KDAK	**Kodiak Island**	58.11	38	P	P	19 15 43.2	+0.1
KDAK				IAmb	IAmb	19 15 48.2	
	comp=Z,8.4nm,0.8s						
KDAK	**Kodiak Island**	58.11	38	P	P	19 15 43.2	+0.1
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDAK	**Kodiak Island**	58.11	38	P	P	19 15 41.6	-1.5
	baz=279						
COLD	**Coldfoot**	58.12	27	P	P	19 15 42.3	-0.8
	baz=275						
TOLK	**Toolik Lake Re**	58.25	25	P	P	19 15 43.6	-0.4
TOLK				IAmb	IAmb	19 15 46.5	
	comp=Z,14nm,1.5s						
TOLK	**Toolik Lake Re**	58.25	25	P	P	19 15 43.6	-0.4
	baz=274,SNR=6.0						
HOM	**Homer**	58.32	36	P	P	19 15 44.8	+0.3
	baz=278						
TRF	**Thorofare Moun**	58.47	31	IAmb	IAmb	19 16 03.2	
	comp=Z,17nm,1.7s						
TRF	**Thorofare Moun**	58.47	31	P	P	19 15 45.5	-0.2
	baz=277						
H23K	**Yukon River**	58.52	28	P	P	19 15 46.4	+0.4
H23K	**Yukon River**	58.52	28	P	P	19 15 45.9	-0.1
	baz=276,SNR=8.8						
CUT	**Chulitna**	58.61	33	P	P	19 15 45.9	-0.6
	baz=278						
I23K	**Minto, Yukon-K**	58.67	29	P	P	19 15 47.0	+0.1
I23K				IAmb	IAmb	19 15 49.8	
	comp=Z,20nm,1.8s						
I23K	**Minto, Yukon-K**	58.67	29	P	P	19 15 47.0	+0.1
	baz=277						
BRSE	**Bradley Lake S**	58.76	36	P	P	19 15 47.0	-0.7
	baz=279						
M22K	**Willow**	58.77	33	P	P	19 15 47.4	-0.2
M22K	**Willow**	58.77	33	P	P	19 15 46.8	-0.8
	baz=278						
NEA2	**Nenana**	58.86	30	P	P	19 15 47.8	-0.5
	baz=277,SNR=11						
KIRV	**Kirov**	58.94	323	⇓*e*P	P	19 15 47.5	-1.4
MCK	**McKinley**	59.03	31	P	P	19 15 49.3	-0.2
MCK				IAmb	IAmb	19 15 51.6	
	comp=Z,6.5nm,0.8s						
MCK	**McKinley**	59.03	31	P	P	19 15 49.3	-0.2
MCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MCK	**McKinley**	59.03	31	P	P	19 15 48.5	-1.1
	baz=278						
RC01	**Rabbit Creek A**	59.05	34	IAmb	IAmb	19 15 51.4	
	comp=Z,9.7nm,1.0s						
RC01	**Rabbit Creek A**	59.05	34	P	P	19 15 48.6	-1.0
	baz=279						
RND	**Reindeer**	59.11	31	P	P	19 15 49.1	-1.1
RND	**Reindeer**	59.11	31	P	P	19 15 49.1	-1.1
RND				pmax	pmax		
	comp=Z,51nm,1.7s						
O22K	**Cooper Landing**	59.15	35	P	P	19 15 49.7	-0.6
	baz=279						
H24K	**Noodor Dome**	59.20	28	IAmb	IAmb	19 15 53.9	
	comp=Z,6.3nm,0.8s						
H24K	**Noodor Dome**	59.20	28	P	P	19 15 49.7	-1.0
	baz=278,SNR=9.9						
PMR	**Palmer**	59.26	33	P	P	19 15 50.6	-0.5
	baz=279						
WRH	**Wood River Hil**	59.30	30	P	P	19 15 50.6	-0.7
GHO	**Glory Hole Cre**	59.33	33	IAmb	IAmb	19 15 54.7	
	comp=Z,24nm,1.6s						
WAT1	**Susitna Watana**	59.34	32	P	P	19 15 50.4	-1.2
	baz=279						
TCOL	**CIGO, UAF Yank**	59.34	30	P	P	19 15 50.5	-1.0
	baz=278						
COLA	**College**	59.34	30	⇑*e*P	P	19 15 51.1	-0.5
COLA				pmax	pmax		
	comp=Z,15nm,1.9s						
COLA	**College**	59.34	30	P	P	19 15 50.9	-0.7
	baz=278						
SEW	**Seward**	59.34	35	IAmb	IAmb	19 15 52.5	
	comp=Z,9.7nm,0.7s						
SEW	**Seward**	59.34	35	P	P	19 15 51.1	-0.6
	baz=280						
POKR	**Poker Plat Res**	59.48	29	P	P	19 15 52.1	-0.5
POKR	**Poker Plat Res**	59.48	29	P	P	19 15 53.0	+0.4
	baz=278						
SML	**Sawmill**	59.60	33	IAmb	IAmb	19 16 01.2	
	comp=Z,9.4nm,1.2s						
SML	**Sawmill**	59.60	33	P	P	19 15 52.8	-0.7
	baz=280						
KNK	**Knik Glacier**	59.61	34	P	P	19 15 53.0	-0.6
KNK	**Knik Glacier**	59.61	34	P	P	19 15 53.5	-0.1
	baz=280,SNR=7.7						
WAT6	**Susitna Watana**	59.74	32	P	P	19 15 53.6	-1.1
	baz=280,SNR=7.4						
ILAR	**Eielson Array**	59.76	30	P	P	19 15 54.4	-0.1
	comp=Z,3.0nm,0.6s,baz=269,slow=5.7,SNR=38						
	comp=Z,3.0nm,0.6s						
HDA	**Harding Lake**	59.80	30	IAmb	IAmb	19 15 56.1	
	comp=Z,25nm,1.6s						
HDA	**Harding Lake**	59.80	30	P	P	19 15 53.8	-1.0
	baz=279						
DHY	**Denali Highway**	59.83	32	IAmb	IAmb	19 17 59.9	
	comp=Z,18nm,1.9s						
DHY	**Denali Highway**	59.83	32	P	P	19 15 54.6	-0.6
	baz=280						
M23K	**Glacier View**	59.89	33	P	P	19 15 54.7	-0.8
	baz=280						
SCM	**Sheep Creek Mo**	60.06	33	IAmb	IAmb	19 15 59.0	
	comp=Z,25nm,1.6s						
SCM	**Sheep Creek Mo**	60.06	33	P	P	19 15 56.0	-0.7
	baz=280,SNR=5.9						
BMAR	**Burnt Mountain**	60.26	26	P	P	19 15 58.2	+0.3
GLI	**Glacier Island**	60.35	34	P	P	19 15 58.4	-0.3
	baz=281						
K24K	**Donnelly Dome**	60.41	31	P	P	19 15 58.2	-0.8
	baz=281						
J25K	**Salcha River,**	60.43	30	P	P	19 15 58.1	-1.2
	baz=281						
M24K	**Tolsona, Glenn**	60.55	33	P	P	19 15 59.5	-0.5
	baz=281						
FID	**Port Fidalgo**	60.67	34	P	P	19 16 00.1	-0.8
FID				IAmb	IAmb	19 16 08.3	
	comp=Z,11nm,1.1s						
PAX	**Paxson**	60.70	31	P	P	19 15 59.5	-1.6
PAX	**Paxson**	60.70	31	P	P	19 15 59.5	-1.6
PAX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PAX	**Paxson**	60.70	31	P	P	19 16 00.6	-0.5
	baz=281						
KLU	**Klutina**	60.79	33	P	P	19 16 01.7	0.0
KLU	**Klutina**	60.79	33	P	P	19 16 00.7	-1.0
	baz=282						
RIDG	**Independent Ri**	60.82	31	IAmb	IAmb	19 16 03.7	
	comp=Z,26nm,1.7s						
RIDG	**Independent Ri**	60.82	31	P	P	19 16 01.2	-0.7
	baz=282						
DIV	**Divide**	60.94	34	IAmb	IAmb	19 16 05.1	
	comp=Z,25nm,1.5s						
HARP	**HAARP**	60.96	32	P	P	19 16 02.4	-0.3
	baz=282						
Q23K	**Middleton Isla**	61.02	36	P	P	19 16 01.9	-1.3
	baz=283						
EYAK	**Cordova Ski Ar**	61.07	34	P	P	19 16 02.6	-0.9
	baz=282						
MORW	**Morawa**	61.11	193	P	P	19 16 03.5	-0.6
SCRK	**Sand Creek**	61.15	30	IAmb	IAmb	19 16 05.9	
	comp=Z,6.2nm,0.8s						
SCRK	**Sand Creek**	61.15	30	P	P	19 16 03.0	-1.2
	baz=282						
BELG	**Belogornoye**	61.22	316	LR	LR	19 44 35.3	
	comp=Z,1µm,18.5s,baz=48,slow=38						
J26L	**Joseph Creek**	61.22	30	P	P	19 16 04.2	-0.4
	baz=282,SNR=6.2						
N25K	**Chitina, Valde**	61.38	33	IAmb	IAmb	19 16 08.5	
	comp=Z,5.5nm,0.8s						
N25K	**Chitina, Valde**	61.38	33	P	P	19 16 04.2	-1.6
	baz=283,SNR=7.1						
MENT	**Mentasta**	61.49	31	IAmb	IAmb	19 16 15.4	
	comp=Z,15nm,0.9s						
FORT	**Forrest**	61.50	181	P	P	19 16 06.7	0.0
BMRM	**Bremner River**	61.52	34	P	P	19 16 06.2	-0.5
BMRM				IAmb	IAmb	19 16 18.4	
	comp=Z,8.2nm,0.9s						
BMRM	**Bremner River**	61.52	34	P	P	19 16 06.4	-0.3
	baz=283						
L26K	**Log Cabin Wild**	61.63	31	P	P	19 16 07.1	-0.3
	baz=283						
GLB	**Gilahina Butte**	61.79	33	IAmb	IAmb	19 16 11.0	
	comp=Z,18nm,1.6s						
M26K	**Nabesna, AK**	61.94	32	P	P	19 16 08.6	-0.9
M26K	**Nabesna, AK**	61.94	32	P	P	19 16 09.3	-0.2
	baz=284,SNR=23						
K27K	**Chicken**	61.96	30	IAmb	IAmb	19 16 12.1	
	comp=Z,15nm,1.4s						
K27K	**Chicken**	61.96	30	P	P	19 16 09.3	-0.2
	baz=284						
VRDI	**Verde Repeater**	62.01	33	P	P	19 16 09.2	-0.9
VRDI				IAmb	IAmb	19 16 11.6	
	comp=Z,6.7nm,0.7s						
EGAK	**Eagle**	62.17	29	P	P	19 16 10.8	-0.1
	baz=284						
MCARA	**McCarthy VSAT**	62.17	33	P	P	19 16 10.7	-0.3
	baz=284						
L27K	**Beaver Creek,**	62.30	31	P	P	19 16 12.4	+0.5
L27K				IAmb	IAmb	19 16 14.0	
	comp=Z,6.1nm,0.8s						
L27K	**Beaver Creek,**	62.30	31	P	P	19 16 11.0	-0.8
	baz=284,SNR=14						
M27K	**Edge Creek, AK**	62.45	32	P	P	19 16 12.2	-0.8
M27K				IAmb	IAmb	19 16 14.8	
	comp=Z,6.3nm,0.7s						
M27K	**Edge Creek, AK**	62.45	32	P	P	19 16 12.2	-0.8
	baz=285,SNR=12						
WSAR	**Wadi Sarin**	62.47	282	LR	LR	19 45 20.2	
	comp=Z,214nm,18.9s,baz=94,slow=38						
ISLE	**Juniper Island**	62.69	34	IAmb	IAmb	19 18 18.0	
	comp=Z,6.0nm,0.7s						
BARN	**Barnard Glacie**	62.89	33	IAmb	IAmb	19 16 17.6	
	comp=Z,5.3nm,0.6s						
BVCY	**Beaver Creek**	62.90	32	P	P	19 16 15.3	-0.5
	baz=286						
CTG	**Chitna Glacier**	63.07	33	P	P	19 16 16.7	-0.4
	baz=286						
DAWY	**Dawson**	63.09	30	IAmb	IAmb	19 16 18.6	
	comp=Z,12nm,1.6s						
DAWY	**Dawson**	63.09	30	P	P	19 16 16.9	-0.2
	baz=286						
I29M	**Ogilvie Camp,**	63.18	28	P	P	19 16 17.2	-0.5
	baz=286						
YUK3	**Moose Creek**	63.25	32	P	P	19 16 17.7	-0.7
	baz=286,SNR=5.9						
KLMR	**Klimovskoe**	63.32	327	P	P	19 16 19.8	+1.2
KLMR				pmax	pmax		
	comp=Z,13nm,1.3s						
KLMR	**Klimovskoe**	63.32	327	P	P	19 16 19.8	+1.2
KLMR				AMP		19 16 33.9	
	comp=Z,13nm,1.3s						
KLMR				LQ	LQ	19 39 22.6	
KLMR				LQ	LQ	19 39 22.6	
KLMR				LR	LR	19 42 55.5	
STKA	**Stephens Creek**	63.66	168	P	P	19 16 21.5	+0.5
	comp=Z,3.7nm,0.8s,baz=345,slow=11,SNR=4.8						
STKA				LR	LR	19 44 25.0	
	comp=Z,102nm,21.8s,baz=359,slow=36						
	comp=Z,3.7nm,0.8s						
DZM	**Mont Dzumac**	63.70	141	P	P	19 16 22.6	+0.9
	comp=Z,6.1nm,0.8s,baz=28,slow=22,SNR=1.7						
	comp=Z,6.1nm,0.8s						
DZM	**Mont Dzumac**	63.70	141	*e*LR	LR	19 34 59.0	
	comp=Z,632nm,28.3s						
PCA	**Pinnacle**	63.83	34	P	P	19 16 21.6	-0.5
PCA				IAmb	IAmb	19 17 47.8	
	comp=Z,8.6nm,0.8s						
PINM	**Pinnacle**	63.83	34	P	P	19 16 22.3	+0.3
	baz=287						
MAK	**Makhachkala**	64.02	306	*e*P	P	19 16 17.4	-6.1
MAK				*e*S	S	19 24 49.6	-10
MAK				pmax	pmax		
	comp=Z,58nm,1.3s						
MAK				MLR	MLR		
	comp=Z,776nm,15.0s						
INK	**Inuvik**	64.10	24	LR	LR	19 47 49.1	
	comp=Z,478nm,18.3s,baz=280,slow=39						
INK	**Inuvik**	64.10	24	P	P	19 16 23.9	+0.3
	baz=289						
YUK4	**Talbot Arm**	64.21	32	P	P	19 16 24.3	-0.4
	baz=288,SNR=11						
SPITS	**Spitsbergen Ar**	64.33	348	LR	LR	19 46 46.2	
	comp=Z,559nm,18.3s,baz=262,slow=38						
PNL	**Peninsula**	64.37	34	P	P	19 16 26.4	+0.8
	baz=288						
YUK6	**Outpost Mounta**	64.46	33	P	P	19 16 27.2	+0.7
	baz=288,SNR=12						
M30M	**Minto, Yukon**	64.66	31	P	P	19 16 28.4	+1.0
	baz=289,SNR=8.9						
HYT	**Haines Junctio**	64.90	33	P	P	19 16 29.2	0.0
HYT	**Haines Junctio**	64.90	33	P	P	19 16 29.0	-0.2
	baz=289,SNR=5.9						
A36M	**Sachs Harbour**	65.37	19	IAmb	IAmb	19 16 37.7	
	comp=Z,12nm,0.8s						

A36M	Sachs Harbour	65.37	19	P	P	19 16 31.9	+0.1
	baz=295						
N31M	Braeburn, Yuko	65.47	32	P	P	19 16 32.7	0.0
N31M				IAmb	IAmb	19 16 35.5	
	comp=Z,28nm,1.8s						
N31M	Braeburn, Yuko	65.47	32	P	P	19 16 33.7	+1.0
	baz=290,SNR=6.3						
M31M	Drury Creek, Y	65.83	31	P	P	19 16 35.7	+0.6
	baz=291,SNR=6.0						
MOS	Moscow	65.87	322	*e*P	P	19 16 37.4	+2.1
MOS				*e*		19 16 50.8	
MOS				MLR	MLR		
	comp=Z,2μm,18.0s						
ARCES	ARCESS Array B	65.90	338	P	P	19 16 34.0	-1.3
	comp=Z,5.8nm,0.9s,baz=67,slow=3.2,SNR=6.2						
ARCES				LR	LR	19 49 24.4	
	comp=Z,825nm,19.0s,baz=49,slow=40						
	comp=Z,5.8nm,0.9s						
ARCES	ARCESS Array B	65.90	338	P	P	19 16 34.0	-1.3
WHY	Whitehorse	66.17	32	IAmb	IAmb	19 16 40.2	
	comp=Z,24nm,2.0s						
WHY	Whitehorse	66.17	32	P	P	19 16 38.0	+0.7
	baz=291,SNR=6.2						
GOF	Gofitskoye	66.33	309⇑	*e*P	P	19 16 41.5	+3.0
SKAG	Skagway	66.39	34	P	P	19 16 39.3	+0.7
	baz=291						
VORR	Voronezh	66.39	317	*e*P	P	19 16 39.5	+0.7
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
ZEI	Tsey	66.56	307	*e*P	P	19 16 39.1	-1.2
ZEI				pmax	pmax		
	comp=Z,14nm,1.4s						
OBN	Obninsk	66.65	321	LR	LR	19 48 12.9	
	comp=Z,347nm,18.7s,baz=48,slow=38						
OBN	Obninsk	66.65	321	*e*P	P	19 16 41.6	+1.3
OBN				*e*		19 17 10.0	
OBN				*e*PPP	PPP	19 20 44.5	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,1μm,16.0s						
C36M	Paulatuk	66.86	22	P	P	19 16 40.5	-1.0
	baz=297						
KBZ	Khabaz	66.91	308	P	P	19 16 42.2	0.0
	comp=Z,11nm,0.9s,baz=123,slow=3.1,SNR=14						
KBZ				LR	LR	19 47 13.6	
	comp=Z,369nm,18.6s,baz=80,slow=37						
	comp=Z,11nm,0.9s						
KBZ	Khabaz	66.91	308⇓	*i*P	P	19 16 43.1	+0.9
KBZ				pmax	pmax		
	comp=Z,18nm,1.0s						
GNI	Garni	66.94	304	LR	LR	19 47 11.6	
	comp=Z,359nm,21.7s,baz=80,slow=37						
GNI	Garni	66.94	304⇓	*e*P	P	19 16 43.4	+0.7
GNI				pmax	pmax		
	comp=Z,21nm,1.5s						
ONI	Oni	66.94	307	P	P	19 16 42.4	-0.1
ONI	Oni	66.94	307	P	P	19 16 42.4	-0.1
ONI				pmax	pmax		
	comp=Z,53nm,1.9s						
KVAR	Kislovodsk Arr	66.96	308	LR	LR	19 48 11.0	
	comp=Z,529nm,20.1s,baz=288,slow=38						
KIV	Kislovodsk	66.96	308	P	P	19 16 42.3	-0.4
KIV	Kislovodsk	66.96	308	*e*P	P	19 16 43.1	+0.4
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV				MLR	MLR		
	comp=Z,371nm,17.0s						
EUNU	Eureka	67.40	6	IAmb	IAmb	19 16 45.8	
	comp=Z,5.6nm,0.8s						
TGTN	Hyland Airport	68.77	30	P	P	19 16 54.0	+0.3
	baz=296						
SOC	Sochi	69.10	309	*e*P	P	19 16 53.7	-2.3
SOC				*e*		19 19 28.3	
SOC				*e*PPP	PPP	19 21 07.6	
SOC				*e*S	S	19 25 59.7	-1.3
SOC				*e*SS	SS	19 30 24.6	-1.9
SOC				MLR	MLR		
	comp=Z,461nm,20.0s						
FINES	FINESS Array B	69.17	330	P	P	19 16 54.8	-1.3
	comp=Z,1.7nm,0.5s,baz=65,slow=6.6,SNR=18						
FINES				LR	LR	19 51 50.1	
	comp=Z,569nm,18.2s,baz=54,slow=40						
	comp=Z,1.7nm,0.5s						
FINES	FINESS Array B	69.17	330	*i* P	P	19 16 55.4	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DLBC	Dease Lake	69.32	34	LR	LR	19 47 41.7	
	comp=Z,180nm,19.7s,baz=289,slow=36						
GURO	Guroymak-BITLI	69.50	303	IAmb	IAmb	19 17 03.4	
	comp=Z,14nm,1.0s						
ANN	Anapa	70.11	311	*e*P	P	19 16 59.6	-2.6
ANN				*e**PP	pP	19 17 03.8	-2.4
ANN				*e*S	S	19 26 11.5	-1.4
ANN				pmax	pmax		
	comp=Z,64nm,1.2s						
RES	Resolute Bay	70.65	11	LR	LR	19 48 57.0	
	comp=Z,155nm,21.9s,baz=314,slow=37						
MARD	Mardin	70.91	302	P	P	19 17 06.4	-1.0
MNK	Minsk	71.48	323	*i* P	P	19 17 08.9	-1.4
MNK				*i*		19 19 46.4	
MNK				*i* PPP	PPP	19 21 29.3	
MNK				*i* S	S	19 26 27.6	-0.9
MNK				*i* SS	SS	19 31 01.7	-0.9
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,2.0s						
MNK				MLR	MLR		
	comp=Z,2μm,19.0s						
MNK				MLR	MLR		
	comp=E,211nm,18.0s						
MNK				MLR	MLR		
	comp=N,299nm,10.0s						
MNK	Minsk	71.48	323	*i* P	P	19 17 09.0	-1.4
	comp=E,4.0nm,2.0s						
MNK				*i* P	P	19 17 09.0	-1.4
	comp=N,17nm,1.0s						
MNK				*i* P	P	19 17 09.0	-1.4
	comp=Z,9.0nm,1.0s,baz=63						
MNK				*i* PP	PP	19 19 46.4	-2.1
MNK				*i* PPP	PPP	19 21 29.3	
MNK				*i* S	S	19 26 27.7	-0.9
MNK				*i* SS	SS	19 31 01.8	-0.9
MNK				*i* SSS	SSS	19 34 24.2	
MNK				*i* LQ	LQ	19 43 38.8	
MNK				*i* LR	LR	19 48 53.4	
MNK				*i* LRM	MLR	19 51 19.5	
	comp=Z,2μm,18.9s						
MNK				*i* LRM	MLR	19 51 20.3	
	comp=E,211nm,18.0s						
MNK				*i* LRM	MLR	19 51 23.8	
	comp=N,299nm,10.3s						
NACGM	Naroch	71.86	324	*e*P	P	19 17 17.9	+5.2
	baz=61						
AFI	Afiamalu	72.06	119	LR	LR	19 41 46.1	
	comp=N,148nm,20.4s,baz=198,slow=30						
AKASG	Malin Array Be	72.52	319	P	P	19 17 15.1	-1.6
	comp=N,3.8nm,0.8s,baz=56,slow=6.5,SNR=6.3						
AKASG				LR	LR	19 50 53.2	
	comp=N,1μm,19.6s,baz=66,slow=37						
	comp=N,3.8nm,0.8s						
AKASG	Malin Array Be	72.52	319	*i* P	P	19 17 19.2	+2.5
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKBB	Malin Array Si	72.52	319	IAmb	IAmb	19 17 17.9	
	comp=Z,39nm,2.0s						
AKBB	Malin Array Si	72.52	319⇑	*e*P	P	19 17 16.4	-0.3
AKBB				pmax	pmax		
	comp=Z,61nm,5.6s						
BBB	Bella Bella	73.17	39	LR	LR	19 48 36.0	
	comp=Z,113nm,20.5s,baz=300,slow=35						
YKA	Yellowknife Ar	73.77	26	P	P	19 17 23.6	-0.2
	comp=Z,3.3nm,0.8s,baz=304,slow=5.6,SNR=30						
YKA				LR	LR	19 53 18.8	
	comp=Z,168nm,18.6s,baz=280,slow=39						
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	73.77	26	*i* P	P	19 17 24.6	+0.8
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JMIC	Jan Mayen	73.95	347	LR	LR	19 53 21.9	
	comp=Z,184nm,18.2s,baz=63,slow=39						
BR131	Keskin Array S	74.86	307	IAmb	IAmb	19 17 34.8	
	comp=Z,16nm,0.9s						
BR131	Keskin Array S	74.86	307⇓	*e*P	P	19 17 30.4	-0.4
BRTR	Keskin Array B	74.86	307	P	P	19 17 30.2	-0.7
	comp=Z,5.9nm,0.8s,baz=93,slow=5.1,SNR=20						
BRTR				LR	LR	19 55 20.8	
	comp=Z,320nm,19.7s,baz=63,slow=40						
	comp=Z,5.9nm,0.8s						
HFS	Hagfors	75.02	332	LR	LR	19 55 22.3	
	comp=Z,774nm,18.1s,baz=40,slow=40						
NB2	NORSAR Subarra	75.43	334	P	P	19 17 32.1	-1.5
	comp=Z,3.5nm,0.8s,baz=51,slow=6.2						
NOA	NORSAR Array B	75.43	334	P	P	19 17 31.5	-2.1
	comp=Z,2.9nm,0.8s,baz=50,slow=5.6,SNR=3.2						
NOA				LR	LR	19 55 23.5	
	comp=Z,265nm,18.5s,baz=45,slow=40						
	comp=Z,2.9nm,0.8s						
ASF	Jabal al Asfar	76.05	299	LR	LR	19 55 04.7	
	comp=Z,324nm,19.1s,baz=106,slow=39						
SUMG	Summit	76.31	356	P	P	19 17 38.2	-0.6
SUMG				IAmb	IAmb	19 17 53.0	
	comp=Z,26nm,1.8s						
SUMG	Summit	76.31	356	P	P	19 17 38.2	-0.6
SUMG				pmax	pmax		
	comp=Z,26nm,1.8s						
BUR08	Bucovina Ar. S	76.32	318	P	P	19 17 38.8	-0.2
BUR08				IAmb	IAmb	19 18 12.2	
	comp=Z,24nm,1.7s						
MMAI	Mount Meron Ar	76.76	301	LR	LR	19 53 28.3	
	comp=Z,165nm,21.5s,baz=239,slow=37						
MLR	Muntele Rosu	76.99	315	LR	LR	19 54 43.5	
	comp=Z,800nm,18.3s,baz=56,slow=38						
RAO	Raoul Island	78.20	135	LR	LR	19 46 12.9	
	comp=Z,140nm,21.8s,baz=326,slow=31						
EIL	Elat	78.71	298	LR	LR	19 57 39.7	
	comp=Z,305nm,19.3s,baz=88,slow=40						
MORC	Moravsky Berou	79.38	322	*e*P	P	19 17 56.2	+0.3
VRAC	Vranov	80.16	322	LR	LR	19 56 57.1	
	comp=Z,968nm,18.4s,baz=64,slow=38						
VRAC	Vranov	80.16	322	*e*P	P	19 18 00.5	+0.4
I03D	Drain, OR	80.33	45	P	P	19 18 00.3	-0.7
	baz=304						
MODS	Modra-Piesok	80.35	321	*e*P	P	19 18 05.1	+4.0
MODS	Modra-Piesok	80.35	321	*e*P	P	19 18 05.1	+4.0
CSKK	Cskako	80.41	320	P	P	19 18 00.5	-1.0
KRUC	Moravsky	80.41	322	*e*P	P	19 18 01.7	+0.3
K02D	Willamette Mer	80.69	46	P	P	19 18 02.6	-0.5
	baz=304						
CLL	Collm	80.76	325	P	P	19 18 01.4	-1.8
CLL	Collm	80.76	325	*e*P	P	19 18 03.0	-0.2
CLL				*e*S	S	19 28 12.0	+1.3
CLL				pmax	pmax		
	comp=Z,57nm,2.2s						
CLL				MLR	MLR		
	comp=Z,1μm,18.3s						
CLL	Collm	80.76	325	*e*P	P	19 18 03.0	-0.2
	comp=Z,57nm,2.2s						
CLL				*e*PP	PP	19 21 07.0	+0.3
CLL				*e*S	S	19 28 12.0	+1.3
CLL				*e*PS	PnS	19 28 59.0	+2.5
CLL				*e*PPS	PPS	19 29 24.0	
CLL				*e*SS	SS	19 33 30.0	+7.1
CLL				*e*(SSS)		19 37 24.0	
CLL				Lm	MLR	19 57 00.0	
	comp=Z,1μm,18.3s						
I04A	Tendick Farm,	80.84	44	P	P	19 18 03.3	-0.6
	baz=304						
MORH	Mrgy, Hungar	80.86	319	P	P	19 18 01.3	-2.6
I05D	Terrebonne, OR	81.16	43	P	P	19 18 05.8	+0.1
	baz=305						
ATD	Arta Tunnel	81.17	278	LR	LR	19 54 56.9	
	comp=Z,120nm,20.3s,baz=44,slow=36						
NEW	Newport	81.21	38	LR	LR	19 55 19.8	
	comp=Z,167nm,19.5s,baz=316,slow=37						
NEW	Newport	81.21	38	P	P	19 18 05.0	-0.8
	baz=307						
KOVH	Kovagotottos	81.24	319	P	P	19 18 05.0	-0.9
RONA	Rosalia, Austr	81.28	321	*e*P	P	19 18 09.5	+3.4
	comp=Z,4.5nm,1.0s						
J04D	Umpqua Nationa	81.33	44	P	P	19 18 06.4	-0.4
	baz=305						
CONA	Conrad Observa	81.37	321	*e*P	P	19 18 09.1	+2.4
	comp=Z,8.0nm,1.1s						
PINE	Pine Mountain	81.71	44	P	P	19 18 07.7	-1.1
PINE				IAmb	IAmb	19 18 11.7	
	comp=Z,24nm,1.6s						
L04D	Klamath Falls	81.79	45	IAmb	IAmb	19 18 11.7	
	comp=Z,13nm,1.2s						
L04D	Klamath Falls	81.79	45	P	P	19 18 08.6	-0.5
	baz=305						
BORG	Borgarnes	81.79	348	LR	LR	19 57 15.2	
	comp=Z,141nm,18.4s,baz=30,slow=38						
YBH	Yreka Blue Hor	81.82	46	LR	LR	19 51 49.0	
	comp=Z,49nm,19.4s,baz=315,slow=34						
YBH	Yreka Blue Hor	81.82	46	P	P	19 18 08.2	-1.0
YBH	Yreka Blue Hor	81.82	46	P	P	19 18 08.2	-1.0
YBH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
J05D	Fort Rock, OR	81.83	44	P	P	19 18 08.8	-0.5
	baz=305						
GERES	GERESS Array B	81.95	323	P	P	19 18 09.8	+0.1
	comp=Z,0.2nm,0.3s,baz=53,slow=5.0,SNR=2.7						
GERES				LR	LR	19 58 02.3	
	comp=Z,750nm,18.6s,baz=60,slow=38						
	comp=Z,0.2nm,0.3s						
URZ	Urewera	82.10	144	LR	LR	19 49 59.8	
	comp=Z,63nm,19.0s,baz=30,slow=32						
SFJD	Kangerlussuaq	82.26	360	LR	LR	19 55 42.2	
	comp=Z,329nm,19.5s,baz=350,slow=36						
SOKA	Soboth	82.58	321	*i* P	P	19 18 17.0	+3.9
	comp=Z,15nm,1.9s						
IDI	Anoyia	83.10	307	LR	LR	20 01 16.3	
	comp=Z,211nm,20.5s,baz=50,slow=40						
BMO	Blue Mountains	83.18	41	P	P	19 18 14.8	-1.5
BMO				IAmb	IAmb	19 20 48.1	
	comp=Z,8.4nm,1.1s						
BMO	Blue Mountains	83.18	41	P	P	19 18 14.8	-1.5
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
J08A	Circle Bar Ran	83.42	43	P	P	19 18 16.5	-1.0
J08A				IAmb	IAmb	19 18 24.4	
	comp=Z,6.3nm,0.8s						
RPZ	Rata Peaks	83.63	151	LR	LR	19 50 25.1	
	comp=Z,130nm,19.6s,baz=293,slow=32						
MSO	Missoula	83.79	38	P	P	19 18 19.5	+0.1
	baz=310						
ABTA	Abfaltersbach	83.89	322	*e*P	P	19 18 23.1	+3.2
	comp=Z,12nm,1.1s						
WATA	Walderalm	84.01	323	*e*P	P	19 18 24.2	+3.7
	comp=Z,5.9nm,1.0s						
WTTA	Wattenberg	84.02	323	*e*P	P	19 18 23.4	+2.8
	comp=Z,6.7nm,1.0s						
MOTA	Moosalm	84.25	323	*e*P	P	19 18 25.1	+3.4
	comp=Z,7.0nm,1.0s						
SQTA	Sankt Quirin	84.27	323	*e*P	P	19 18 25.7	+3.9
	comp=Z,4.5nm,0.8s						
FRB	Frobisher Bay	84.47	8	LR	LR	19 57 06.6	
	comp=Z,306nm,21.4s,baz=356,slow=36						
FETA	Feichten	84.65	323	*i* P	P	19 18 26.0	+2.2
	comp=Z,7.7nm,1.2s						
EKA	Eskdalemuir Ar	84.84	335	LR	LR	20 01 50.1	
	comp=Z,453nm,18.5s,baz=28,slow=40						
DAVA	Damuels	84.91	323	*e*P	P	19 18 29.0	+3.9
	comp=Z,7.5nm,1.1s						
EMB	Emerald Bay	85.04	47	P	P	19 18 24.7	-1.3
EMB				IAmb	IAmb	19 18 28.5	
	comp=Z,14nm,1.2s						
PAHR	Pah Rah Range	85.05	46	IAmb	IAmb	19 18 28.4	
	comp=Z,17nm,1.4s						
EGMT	Eagleton	85.16	35	P	P	19 18 26.0	-0.2
	baz=312						
DAVOX	Davos/Dischmat	85.25	323	LR	LR	20 01 09.7	
	comp=Z,596nm,19.1s,baz=50,slow=39						
CMB	Columbia Colle	85.41	48	P	P	19 18 26.4	-1.3
CMB				IAmb	IAmb	19 18 29.9	
	comp=Z,22nm,1.6s						
CMB	Columbia Colle	85.41	48	P	P	19 18 26.4	-1.3
CMB				pmax	pmax		
	comp=Z,22nm,1.6s						
DLMT	Dillon	85.45	39	IAmb	IAmb	19 18 30.5	
	comp=Z,19nm,1.3s						
RAR	Rarotonga	85.56	118	LR	LR	19 47 58.7	
	comp=Z,99nm,21.7s,baz=309,slow=30						
YERR	Yerington	85.57	47	IAmb	IAmb	19 18 31.2	
	comp=Z,11nm,1.2s						
HLID	Hailey	85.61	41	IAmb	IAmb	19 18 31.8	
	comp=Z,8.7nm,1.4s						
HLID	Hailey	85.61	41	P	P	19 18 28.7	-0.1
	baz=310						
BOZ	Bozeman (W)	85.81	38	IAmb	IAmb	19 18 32.0	
	comp=Z,8.9nm,1.3s						
BOZ	Bozeman (W)	85.81	38	P	P	19 18 29.7	+0.1
	baz=311						
BMN	Battle Mountai	85.93	45	P	P	19 18 29.3	-1.1
BMN				IAmb	IAmb	19 18 33.4	
	comp=Z,7.6nm,1.2s						
BMN	Battle Mountai	85.93	45	P	P	19 18 29.3	-1.1
BMN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RYN	Ryan	86.23	47	IAmb	IAmb	19 18 37.7	
	comp=Z,7.5nm,1.1s						
KVN	Kaiserville	86.24	46	P	P	19 18 30.5	-1.4
KVN				IAmb	IAmb	19 18 34.6	
	comp=Z,20nm,1.5s						
KVN	Kaiserville	86.24	46	P	P	19 18 30.5	-1.4
KVN				pmax	pmax		
	comp=Z,20nm,1.5s						
NVAR	Mina Array Bea	86.49	47	P	P	19 18 34.3	+1.1
	comp=Z,1.9nm,0.7s,baz=302,slow=5.2,SNR=20						
NVAR				LR	LR	19 51 02.6	
	comp=Z,83nm,21.9s,baz=297,slow=31						
	comp=Z,1.9nm,0.7s						
H17A	Grant Village	87.17	38	P	P	19 18 36.4	-0.1
	baz=312						
SMMC	Simmler	87.27	50	P	P	19 18 36.4	-0.4
	baz=307						
RLMT	Red Lodge	87.37	37	P	P	19 18 36.3	-1.1
RLMT				IAmb	IAmb	19 18 44.0	
	comp=Z,7.7nm,0.8s						
RLMT	Red Lodge	87.37	37	P	P	19 18 36.9	-0.5
	baz=313						
TIN	Tinemaha, Big	87.37	48	P	P	19 18 37.4	0.0
	baz=308						
DGMT	Dagmar	87.50	32	P	P	19 18 37.8	+0.1
	baz=316						
PKM	Mcpherson Peak	87.65	50	P	P	19 18 38.2	-0.6
	baz=307						
LAO	LASA Array	87.82	35	P	P	19 18 38.3	-1.0
	baz=315						
SBC	Santa Barbara	87.98	51	P	P	19 18 40.7	+0.6
	baz=307						
BGU	Big Grassy Mou	88.09	42	IAmb	IAmb	19 18 44.0	
	comp=Z,13nm,1.7s						
R11A	Troy Canyon, C	88.22	45	P	P	19 18 41.8	+0.3
	baz=309						
HWUT	Hardware Ranch	88.48	41	IAmb	IAmb	19 18 45.8	
	comp=Z,13nm,1.2s						
FURC	Furnace Creek,	88.60	48	P	P	19 18 43.1	+0.1
	baz=308						
VAE	Valguarnera	88.66	314	LR	LR	20 02 44.7	
	comp=Z,476nm,18.8s,baz=59,slow=39						
TPNV	Topopah Spring	88.68	47	P	P	19 18 44.2	+0.5
	baz=309						
DUG	Dugway, Tooele	88.69	43	P	P	19 18 42.6	-1.1
DUG				IAmb	IAmb	19 18 46.8	
	comp=Z,9.0nm,1.2s						
DUG	Dugway, Tooele	88.69	43	P	P	19 18 42.6	-1.1
DUG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DUG	Dugway, Tooele	88.69	43	P	P	19 18 43.8	+0.2
	baz=311						
PDAR	Pinedale Array	88.81	39	P	P	19 18 42.7	-1.6
	comp=Z,2.2nm,0.6s,baz=338,slow=6.8,SNR=7.3						
PDAR				LR	LR	19 59 52.6	
	comp=Z,73nm,19.0s,baz=345,slow=36						
	comp=Z,2.2nm,0.6s						
EDW2	Edwards Air Fo	88.84	49	P	P	19 18 44.2	-0.2
	baz=308						
QSM	Queen of Sheba	88.90	48	IAmb	IAmb	19 18 47.7	
	comp=Z,5.5nm,1.0s						
PRN	Pahroc Range	89.14	46	P	P	19 18 44.2	-1.7
PRN				IAmb	IAmb	19 19 10.3	
	comp=Z,14nm,1.3s						
GSC	Goldstone, Bar	89.35	48	P	P	19 18 46.4	-0.4
GSC	Goldstone, Bar	89.35	48	P	P	19 18 46.4	-0.4
GSC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GSC	Goldstone, Bar	89.35	48	P	P	19 18 47.2	+0.4
	baz=308						
CIS	Catalina Islan	89.47	51	P	P	19 18 47.6	+0.4
	baz=308						
ULM	Lac du Bonnet	89.69	27	P	P	19 18 47.4	-0.6
	comp=Z,12nm,0.7s,baz=311,slow=5.8,SNR=7.4						
ULM				LR	LR	20 03 55.8	
	comp=Z,177nm,18.3s,baz=338,slow=39						
	comp=Z,12nm,0.7s						
TUQ	Turquoise Moun	89.83	48	P	P	19 18 49.2	+0.1
	baz=309						
HEC	Hector,Ludlow	89.95	49	P	P	19 18 49.9	+0.3
	baz=309						
GMRC	Granite Mounta	90.41	48	P	P	19 18 52.7	+0.8
	baz=309						
PFO	Pinyon Flats O	90.62	50	LR	LR	19 52 58.4	
	comp=Z,141nm,21.4s,baz=284,slow=31						
PFO	Pinyon Flats O	90.62	50	P	P	19 18 52.5	-0.3
	baz=309						
TPFO	Pinon Flats	90.63	50	P	P	19 18 52.7	-0.1
	baz=309						
BELC	Belle Mtn. Jos	90.68	49	P	P	19 18 52.7	-0.4
	baz=309						
RSSD	Black Hills	90.73	35	P	P	19 18 53.0	-0.2
RSSD	Black Hills	90.73	35	P	P	19 18 53.0	-0.2
RSSD				pmax	pmax		
	comp=Z,98nm,1.5s						
RSSD	Black Hills	90.73	35	P	P	19 18 52.9	-0.4
	baz=317						
IRM	Iron Mountain	91.14	48	P	P	19 18 55.5	+0.5
	baz=309						
AGMN	Agassiz Nation	91.25	28	P	P	19 18 55.3	+0.1
	baz=323						
BC3	Big Chuckawall	91.25	49	P	P	19 18 55.4	-0.3
	baz=309						
O20A	White River Ci	91.33	40	P	P	19 18 55.9	-0.2
	baz=314						
IKP	In-Ko-Pah, Jac	91.45	50	P	P	19 18 56.3	-0.3
	baz=309						
SWSC	Sam W. Stewart	91.47	50	P	P	19 18 56.8	+0.3
	baz=309						
PPT	Papeete	91.56	109	LR	LR	19 53 09.6	
	comp=Z,87nm,20.4s,baz=290,slow=31						
PPT2	Papeete2	91.57	109	*e*LR	LR	19 47 59.6	
	comp=Z,274nm,26.8s						
PDMCI	Parker Dam,Lak	91.68	48	P	P	19 18 58.1	+0.5
	baz=310						
GLA	Glamis	92.04	49	P	P	19 18 59.2	-0.1
	baz=310						
KMBO	Kilima Mbogo	92.36	270	LR	LR	20 02 21.9	
	comp=Z,87nm,18.2s,baz=90,slow=37						
WUAZ	Wupatki	92.62	45	P	P	19 19 01.4	-0.7
	baz=312						
SMCO	Snowmass	92.70	40	IAmb	IAmb	19 19 28.0	
	comp=Z,12nm,1.4s						
KEST	Kesra	92.90	315	LR	LR	20 05 32.6	
	comp=Z,476nm,18.1s,baz=330,slow=39						
SUSD	Miller	92.92	32	P	P	19 19 03.1	0.0
	baz=320						
MVCO	Mesa Verde	93.20	43	P	P	19 19 04.5	-0.3
	baz=314						
SCHQ	Schefferville	93.34	9	LR	LR	20 03 08.0	
	comp=Z,258nm,20.1s,baz=338,slow=37						
Q24A	Divide	93.86	39	P	P	19 19 07.9	0.0
	baz=316						
TBI	Tubuai	94.69	114	*e*LR	LR	19 49 00.5	
	comp=Z,194nm,30.5s						
ESDC	Sonseca Array	97.34	326	LR	LR	20 07 53.7	
	comp=Z,479nm,18.3s,baz=18,slow=38						
MBAR	Mbarara	97.68	274	LR	LR	20 04 40.4	
	comp=Z,116nm,19.5s,baz=21,slow=36						
PKME	Peaks-Kenny Pk	102.18	13	P	Pdif	19 19 43.0	-1.8
	baz=344						
LPAZ	La Paz	158.33	51	PKPab	PKPab	19 26 22.2	-0.6
	comp=Z,3.2nm,0.9s,baz=311,slow=5.4,SNR=5.8						
LPAZ	La Paz	158.33	51		PKPab	19 26 22.9	+0.2
LPAZ	La Paz	158.33	51	PKP2	PKPab	19 26 23.0	+0.2

TAP 13 19:06:40.5, 23°.22N×121°.01E, h3^{km}±1^{km}, ML0.9, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	Lidau	0.03	158	*i* P	Pg	19 06 42.0	+0.6
	baz=147						
ELDTW				*i* S	Sg	19 06 42.7	+0.6
	baz=147						
STYH	Taoyuan	0.22	258	P	Pg	19 06 45.7	+1.0
	baz=259						

STYH				S	Sg	19 06 48.6	+1.0
	baz=259						
FULB	**Fuli**	0.27	94	*e*P	Pb	19 06 46.9	-1.1
	baz=93						
FULB				S	Sb	19 06 51.7	-1.2
	baz=93						
YUS	**Yu-Shan**	0.28	350	*e*P	Pg	19 06 47.0	+1.1
	baz=351						
YUS				*e*S	Sg	19 06 51.5	+1.8
	baz=351						
YULB	**Yu-li**	0.32	57	*e*P	Pg	19 06 47.6	+0.9
	baz=56						
YULB				*e*S	Sg	19 06 52.4	+1.5
	baz=56						
ALS	**Alishan**	0.35	328	*e*P	Pb	19 06 48.5	-1.0
	baz=328						
WTP	**Ta-pu**	0.36	275	*e*P	Pb	19 06 49.9	+0.4
	baz=274						
WTP				*e*S	Sb	19 06 55.2	-0.4
	baz=274						
TWG	**Pinlang**	0.40	171	*e*P	Pb	19 06 50.0	-0.2
	baz=170						
TTN	**Taitung**	0.48	164	*e*P	Pb	19 06 51.6	+0.1
	baz=163						
VWDT	**VWDT**	0.55	13	*e*P	Pb	19 06 53.5	+0.7
	baz=13						

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*SFS **13** 19:09:23.0, 35°.57N×3°.73W, h2^{km}, ML2.3, ALBORAN SUR*

*MDD **13** 19:09:23.8±0.7, 35°.58N×3°.74W, h2^{km}±4^{km}, mb_Lg2.3/10, Error ellipse: s-maj=6.1km s-min=3.7km az=27.0*

*CNRM **13** 19:09:24.5, 35°.54N×3°.79W, h22^{km}, ml2.7*

ISC 13 19:09:24.2±1.2**, 35°.54N**±0°.03×**3°.75W**±0°.02**, h22**^{km}±4^{km}**, n23, σ1^{s}.17**/45**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	0.36	205	P	**Pb**	**19 09 32.0**	**+0.1**
PALE				S	**Sb**	**19 09 37.2**	**+0.1**
PVLZ	**Peæn de**	0.58	231	P	**Pb**	**19 09 33.6**	**-2.2**
PVLZ				S	**Sb**	**19 09 42.9**	**-0.8**
WMELI	**Melilla**	0.69	109	P	**Pn**	**19 09 38.1**	**-0.6**
WMELI				S	**Sb**	**19 09 47.1**	**+0.5**
EMEL	**Melilla**	0.69	110	Pg	**Pb**	**19 09 37.8**	**+0.2**
EMEL				Sg	**Sb**	**19 09 46.7**	**0.0**
GOG	**Mont Gurugu**	0.69	117	P	**Pn**	**19 09 38.5**	**-0.3**
GOG				S	**Sb**	**19 09 47.6**	**+0.7**
EALB	**Alboran**	0.70	56	Pg	**Pb**	**19 09 38.0**	**+0.2**
EALB				Sg	**Sn**	**19 09 48.7**	**-0.4**
EALB				*i* Vmb_Lg		19 09 50.2	
CHAS	**Isla Isabel II**	1.14	108	P	**Pn**	**19 09 43.8**	**-1.0**
CHAS				S	**Sb**	**19 09 58.1**	**-1.4**
EMIJ	**Mijas**	1.31	321	Pg	**Pn**	**19 09 47.3**	**0.0**
EMIJ				Sg	**Sb**	**19 10 05.5**	**+0.9**
EMIJ				*i* Vmb_Lg		19 10 10.3	
TAF	**Taforalt**	1.31	123	P	**Pn**	**19 09 47.6**	**+0.3**
TAF				S	**Sb**	**19 10 05.9**	**+1.2**
ELGU	**Los Guajares,**	1.32	4	Pg	**Pb**	**19 09 48.4**	**0.0**
ELGU				Sg	**Sn**	**19 10 04.5**	**0.0**
ELGU				*i* Vmb_Lg		19 10 09.1	
SMIR	**Smir Dam**	1.34	276	P	**Pn**	**19 09 47.6**	**0.0**
SMIR				S	**Sn**	**19 10 02.0**	**-2.8**
CHEFC	**Chefchaouen**	1.37	252	P	**Pn**	**19 09 47.6**	**-0.6**
CHEFC				S	**Sn**	**19 10 05.9**	**+0.1**
EBER	**Berja**	1.52	27	Pg	**Pn**	**19 09 49.9**	**-0.4**
EBER				Sg	**Sn**	**19 10 08.7**	**-0.8**
EBER				*i* Vmb_Lg		19 10 18.8	
JBK	**JBK**	1.55	141	P	**Pn**	**19 09 50.9**	**+0.2**
JBK				S	**Sn**	**19 10 10.4**	**+0.2**
ENIJ	**Nijar**	1.89	41	Pn	**Pn**	**19 09 53.9**	**-1.4**
ENIJ				Sn	**Sn**	**19 10 17.7**	**-0.8**
ENIJ				*i* Vmb_Lg		19 10 23.6	
EQES	**Quesada**	2.32	13	Pn	**Pn**	**19 10 02.2**	**+0.9**
EQES				Sn	**Sn**	**19 10 30.7**	**+1.5**
EQES				*i* Vmb_Lg		19 10 40.7	
EADA	**Adamuz**	2.70	346	Pn	**Pn**	**19 10 06.5**	**+0.1**
EADA				Sn	**Sn**	**19 10 40.2**	**+1.8**
EADA				*i* Vmb_Lg		19 10 45.8	
MD31	**MD31**	2.80	198	P	**Pn**	**19 10 09.1**	**+1.3**
MD31				S	**Sn**	**19 10 42.3**	**+1.4**
MDT	**Midelt**	2.81	195	P	**Pn**	**19 10 09.8**	**+1.7**
MDT				S	**Sn**	**19 10 42.3**	**+1.0**
ECAB	**El Cabril**	2.86	333	Pn	**Pn**	**19 10 08.1**	**-0.5**
ECAB				Sn	**Sn**	**19 10 44.3**	**+2.0**
ECAB				*i* Vmb_Lg		19 10 52.3	
ETOB	**Tobarra**	3.56	29	Pn	**Pn**	**19 10 19.8**	**+1.5**
ETOB				Sn	**Sn**	**19 10 57.5**	**-2.2**
ETOB				*i* Vmb_Lg		19 11 08.9	
EGRO	**El Granado**	3.60	305	Pn	**Pn**	**19 10 18.6**	**-0.1**
EGRO				Sn	**Sn**	**19 11 00.1**	**-0.5**
EGRO				*i* Vmb_Lg		19 11 03.3	
PVAQ	**Vaqueiros**	3.70	301	P	**Pn**	**19 10 22.8**	**+2.7**

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*NEIC **13** 19:11:35.6±2.9, 22°.82S±0°.10×179°.3E±0°.1, h562^{km}±5^{km}, mb4.5/121, Error ellipse: s-maj=14.3km s-min=13.4km az=135.0*

*NOU **13** 19:11:36.9, 22°.91S×179°.45E, h607^{km}, mb4.7/50, South of Fiji Islands*

*IDC **13** 19:11:36.4±0.6, 22°.89S×179°.12E, h568^{km}±5^{km}, mb3.7/17, mbtmp4.6/19, Error ellipse: s-maj=11.4km s-min=10.4km az=107.0*

ISC 13 19:11:36.6±0.5**, 22°.93S**±0°.05×**179°.17E**±0°.05**, h579**^{km}±4^{km}**, n360, σ1^{s}.52**/375**, mb4.4**/80**, 30C-15D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	5.04	22	P	**P**	**19 13 08.9**	**+0.3**
RAO	**Raoul Island**	6.82	158	P	**P**	**19 13 23.7**	**-0.2**
	94nm,0.3s,baz=101,slow=22,SNR=2.0						
RAO				S	**S**	**19 14 52.4**	**+0.6**
	194nm,0.5s,baz=106,slow=22,SNR=1.7						
RAO	**Raoul Island**	6.82	158	P	**P**	**19 13 25.2**	**+1.4**
GLKZ	**Green Lake**	6.83	158	P	**P**	**19 13 24.5**	**+0.6**
GLKZ				S	**S**	**19 14 53.6**	**+1.7**
MARNC	**Mare, Loyalty**	10.42	276	P	**P**	**19 13 58.5**	**-0.7**
PINNC	**Pines Island,**	10.82	269	P	**P**	**19 14 02.9**	**-0.3**
NIUE	**Niue**	10.88	71	P	**P**	**19 14 02.2**	**-1.7**
NIUE	**Niue**	10.88	71	P	**P**	**19 14 03.5**	**-0.4**
LIFNC	**LIFOU**	11.28	279	P	**P**	**19 14 06.5**	**-1.4**
OUENC	**Ouen Island, N**	11.39	270	P	**P**	**19 14 12.1**	**+3.0**
DZM	**Mont Dzumac**	11.79	272	P	**P**	**19 14 12.5**	**-0.7**
	6.9nm,0.8s,baz=94,slow=20,SNR=2.7						
AFI	**Afiamalu**	12.42	45	P	**P**	**19 14 15.8**	**-3.9**
	67nm,0.7s,baz=50,slow=3.2,SNR=6.5						
AFI				S	S	19 16 22.8	-11
	23nm,0.7s,baz=199,slow=21,SNR=2.4						
AFI	**Afiamalu**	12.42	45		**P**	**19 14 15.9**	**-3.8**
OUZ	**Omahuta**	13.17	200	P	**P**	**19 14 27.8**	**+0.8**
OUZ	**Omahuta**	13.17	200	P	**P**	**19 14 28.3**	**+1.2**
OUZ	**Omahuta**	13.17	200	P	**P**	**19 14 29.1**	**+2.0**
WCZ	**Waipu Caves**	13.62	197	P	**P**	**19 14 33.7**	**+2.1**
KUZ	**Kuaotunu**	14.09	191	P	**P**	**19 14 36.7**	**+0.4**
ABAZ	**Army Bay**	14.13	194	P	**P**	**19 14 38.8**	**+2.0**
MKAZ	**Moumakai**	14.54	193	P	**P**	**19 14 41.9**	**+1.1**
MXZ	**Matakaoa Point**	14.60	183	P	**P**	**19 14 38.2**	**-3.2**
MXZ	**Matakaoa Point**	14.60	183	P	**P**	**19 14 39.7**	**-1.7**
TGRZ	**Tauranga**	14.96	189	P	**P**	**19 14 46.5**	**+1.7**
OPRZ	**Ohinepanea**	15.03	188	P	**P**	**19 14 46.1**	**+0.6**
RUGZ	**Raukumara Rang**	15.04	185	P	**P**	**19 14 44.2**	**-1.5**
TOZ	**Tahuroa Road**	15.08	191	P	**P**	**19 14 47.1**	**+1.1**
PUZ	**Puketiti**	15.11	183	P	**P**	**19 14 45.5**	**-0.8**
PUZ				S	**S**	**19 17 18.2**	**-3.4**
KMRZ	**Kaimai**	15.12	190	P	**P**	**19 14 48.7**	**+2.3**
TWGZ	**Tauwhareparae**	15.23	184	P	**P**	**19 14 44.1**	**-3.3**
TWGZ				S	**S**	**19 17 21.6**	**-2.1**
OMRZ	**Omania**	15.31	188	P	**P**	**19 14 49.5**	**+1.2**
NGRZ	**Ngongotaha**	15.34	189	P	**P**	**19 14 47.0**	**-1.5**
URZ	**Urewera**	15.38	186	P	**P**	**19 14 45.8**	**-3.1**
	65nm,0.5s,baz=318,slow=4.0,SNR=24						
URZ				S	**S**	**19 17 19.5**	**-6.5**
	44nm,0.7s,baz=224,slow=22,SNR=21						
URZ	**Urewera**	15.38	186	P	**P**	**19 14 45.2**	**-3.6**
URZ					**S**	**19 17 19.0**	**-7.0**
URZ	**Urewera**	15.38	186	P	**P**	**19 14 45.6**	**-3.2**
URZ				S	**S**	**19 17 21.4**	**-4.7**
URZ	**Urewera**	15.38	186	P	**P**	**19 14 47.0**	**-1.8**
MWZ	**Matawai**	15.42	185	P	**P**	**19 14 46.4**	**-2.9**
MWZ				S	**S**	**19 17 21.3**	**-5.5**
TKGZ	**Te Karaka**	15.50	184	P	**P**	**19 14 48.4**	**-1.6**
CNGZ	**Carnagh Statio**	15.53	183	P	**P**	**19 14 47.9**	**-2.4**
RRRZ	**Republican Roa**	15.53	188	P	**P**	**19 14 50.7**	**+0.4**
MUGZ	**Murupara**	15.63	187	P	**P**	**19 14 49.4**	**-1.9**
TLZ	**Tolley Road**	15.66	191	P	**P**	**19 14 52.6**	**+1.0**
PRRZ	**Plateau Road**	15.70	188	P	**P**	**19 14 51.1**	**-0.8**
RTZ	**Ruatahuna**	15.75	186	P	**P**	**19 14 48.5**	**-3.9**
RIGZ	**Rimuhau**	15.77	184	P	**P**	**19 14 48.3**	**-4.3**
RIGZ				S	**S**	**19 17 28.7**	**-3.9**
SNGZ	**Shannon Statio**	15.88	185	P	**P**	**19 14 49.9**	**-3.7**
SNGZ				S	**S**	**19 17 31.9**	**-2.4**
HIZ	**Hauiti**	15.96	192	P	**P**	**19 14 54.6**	**+0.2**
HIZ	**Hauiti**	15.96	192	P	**P**	**19 14 55.2**	**+0.8**
PRGZ	**Paritu Road**	15.98	184	P	**P**	**19 14 55.0**	**+0.5**
PRGZ				S	**S**	**19 17 34.5**	**-1.4**
MTHZ	**Maungataniwha**	15.99	187	P	**P**	**19 14 53.8**	**-0.9**
MTHZ				S	**S**	**19 17 32.1**	**-4.2**
MRHZ	**Matea Rd**	16.02	188	P	**P**	**19 14 53.5**	**-1.5**
RAHZ	**Arahi**	16.03	186	P	**P**	**19 14 53.6**	**-1.5**
KNZ	**Kokohu**	16.09	184	P	**P**	**19 14 53.3**	**-2.2**
KNZ				S	**S**	**19 17 35.0**	**-2.7**
RATZ	**Rangitukua**	16.15	190	P	**P**	**19 14 56.0**	**-0.1**
BKZ	**Black Stump Fm**	16.34	187	P	**P**	**19 14 55.2**	**-2.7**
BKZ	**Black Stump Fm**	16.34	187	P	**P**	**19 14 55.7**	**-2.2**
BKZ	**Black Stump Fm**	16.34	187	P	**P**	**19 14 55.8**	**-2.2**
TMVZ	**Te Maari**	16.40	190	P	**P**	**19 14 58.3**	**-0.2**
WTVZ	**West Tongariro**	16.42	190	P	**P**	**19 15 00.0**	**+1.3**
ETVZ	**East Tongariro**	16.42	190	P	**P**	**19 14 58.8**	**+0.1**
OTVZ	**Oturere**	16.45	190	P	**P**	**19 14 57.5**	**-1.6**
NGZ	**Ngauruhoe**	16.48	190	P	**P**	**19 14 59.1**	**-0.2**
TUVZ	**Tukino**	16.56	190	P	**P**	**19 14 58.5**	**-1.5**
VRZ	**Vera Road**	16.57	192	P	**P**	**19 15 02.3**	**+2.4**
MCHZ	**McNeill Hill**	16.60	187	P	**P**	**19 14 59.4**	**-0.7**
WNVZ	**Wahianoa**	16.62	190	P	**P**	**19 15 00.0**	**-0.6**
MOVZ	**Moawhango**	16.68	189	P	**P**	**19 15 00.2**	**-0.8**
MOVZ				S	**S**	**19 17 44.8**	**-2.7**
BHHZ	**Black Hill Sta**	16.72	188	P	**P**	**19 14 59.3**	**-2.1**
CKHZ	**Cape Kidnapper**	16.77	186	P	**P**	**19 15 01.1**	**-0.6**
CKHZ				S	**S**	**19 17 44.9**	**-3.9**
KRHZ	**Kereru**	16.83	187	P	**P**	**19 15 00.8**	**-1.5**
NEZ	**North Egmont**	16.85	194	P	**P**	**19 15 06.8**	**+4.3**
KHEZ	**Kahui Hut**	16.89	194	P	**P**	**19 15 06.9**	**+4.0**
PREZ	**Palmer Road**	16.91	193	P	**P**	**19 15 07.7**	**+4.7**
KAHZ	**Kahuranaki**	16.92	186	P	**P**	**19 15 02.5**	**-0.7**
WPHZ	**Waipukurau**	17.24	187	P	**P**	**19 15 05.1**	**-0.9**
TSZ	**Takapari Road**	17.29	188	P	**P**	**19 15 06.3**	**-0.1**
BFZ	**Birch Farm**	17.87	187	P	**P**	**19 15 10.2**	**-1.5**
QRZ	**Quartz Range**	18.70	196	P	**P**	**19 15 19.0**	**-0.3**
QRZ	**Quartz Range**	18.70	196	P	**P**	**19 15 20.4**	**+1.1**
SNZO	**South Karori**	18.71	191	P	**P**	**19 15 18.6**	**-0.7**
SNZO	**South Karori**	18.71	191	P	**P**	**19 15 19.8**	**+0.5**
BHW	**Baring Head**	18.77	190	P	**P**	**19 15 18.9**	**-1.0**
NNZ	**Nelson**	18.87	194	P	**P**	**19 15 20.0**	**-0.8**
PLWZ	**Palliser**	18.87	189	P	**P**	**19 15 19.3**	**-1.6**
TUWZ	**Tuamarina**	18.96	192	P	**P**	**19 15 20.3**	**-1.4**
BSWZ	**Blackbirch Sta**	19.25	192	P	**P**	**19 15 23.3**	**-1.0**
THZ	**Tophouse**	19.50	194	P	**P**	**19 15 25.8**	**-0.8**
KHZ	**Kahutara**	19.99	192	P	**P**	**19 15 29.6**	**-1.3**
KHZ	**Kahutara**	19.99	192	P	**P**	**19 15 30.0**	**-0.9**
LTZ	**Lake Taylor**	20.61	195	P	**P**	**19 15 35.3**	**-1.4**
OXZ	**Oxford**	21.18	195	P	**P**	**19 15 40.1**	**-1.6**
MQZ	**McQueen's Vall**	21.41	193	P	**P**	**19 15 42.5**	**-1.2**
RPZ	**Rata Peaks**	21.79	196	P	**P**	**19 15 45.9**	**-1.2**
	22nm,0.5s,baz=32,slow=2.1,SNR=18						
	22nm,0.5s						
RPZ	**Rata Peaks**	21.79	196	P	**P**	**19 15 47.5**	**+0.4**
LBZ	**Lake Benmore**	22.64	197	P	**P**	**19 15 53.3**	**-1.4**
ODZ	**Otahua Downs**	23.13	196	P	**P**	**19 15 58.5**	**-0.6**
WKZ	**Wanaka**	23.37	198	P	**P**	**19 16 00.6**	**-0.6**
MLZ	**Mavora Lakes**	24.13	199	P	**P**	**19 16 07.5**	**-0.5**
WHZ	**Wether Hill Ro**	24.66	199	P	**P**	**19 16 11.9**	**-0.6**
ARMA	**Armidale**	25.67	247	P	**P**	**19 16 22.2**	**+0.4**
ARMA	**Armidale**	25.67	247	P	**P**	**19 16 23.4**	**+1.5**
EIDS	**Eidsvold**	25.72	259	P	**P**	**19 16 22.8**	**+0.5**
EIDS				IAmb	IAmb	19 16 23.7	
	comp=Z,8.5nm,0.7s						
NTLH	**Newcastle Hard**	26.15	242	P	**P**	**19 16 27.3**	**+1.4**
MGCD	**Mangrove Creek**	26.72	241	P	**P**	**19 16 32.6**	**+1.7**
RMQ	**Roma**	27.82	256	P	**P**	**19 16 42.0**	**+1.3**
	comp=Z,36nm,0.8s						
CNB	**Canberra Magne**	28.70	238	P	**P**	**19 16 49.7**	**+1.5**
CAN	**Canberra**	28.98	238	P	**P**	**19 16 51.2**	**+0.6**
CAN	**Canberra**	28.98	238	P	**P**	**19 16 52.0**	**+1.3**
CTA	**Charters Tower**	30.72	269	P	**P**	**19 17 06.5**	**+0.7**
	comp=Z,16nm,0.3s,baz=95,slow=10,SNR=40						
	comp=Z,16nm,0.3s						
CTA	**Charters Tower**	30.72	269	P	**P**	**19 17 06.7**	**+0.9**
CTAO	**Charters Tower**	30.72	269	P	**P**	**19 17 06.4**	**+0.7**
CTAO				IAmb	IAmb	19 17 07.1	
	comp=Z,19nm,0.6s						
CTAO	**Charters Tower**	30.72	269	P	**P**	**19 17 06.7**	**+0.9**
CMSA	**Cobar Meteorol**	30.88	247	P	**P**	**19 17 08.0**	**+1.0**
QLP	**Quilpie**	31.87	256	P	**P**	**19 17 16.4**	**+0.9**
TOO	**Toolangi**	32.35	235	P	**P**	**19 17 19.9**	**+0.5**
TOO				IAmb	IAmb	19 17 20.9	
	comp=Z,16nm,0.6s						
TOO	**Toolangi**	32.35	235	P	**P**	**19 17 20.6**	**+1.2**
MTSU	**Mount Surprise**	32.93	272	P	**P**	**19 17 25.5**	**+0.9**
TAU	**Tasmania Unive**	33.05	225	P	**P**	**19 17 26.0**	**+0.8**
TAU	**Tasmania Unive**	33.05	225	P	**P**	**19 17 26.2**	**+1.0**
PMG	**Port Moresby**	33.46	288	P	**P**	**19 17 28.8**	**-0.3**
PMG				IAmb	IAmb	19 17 29.4	
	comp=Z,18nm,0.8s						
STKA	**Stephens Creek**	34.38	247	P	**P**	**19 17 37.0**	**+0.4**
	comp=Z,12nm,0.5s,baz=90,slow=9.6,SNR=28						
STKA				ScP	**ScP**	**19 22 48.0**	**+1.8**
	comp=Z,4.2nm,0.9s,baz=94,slow=1.7,SNR=5.2						
	comp=Z,12nm,0.5s						
STKA	**Stephens Creek**	34.38	247	P	**P**	**19 17 37.0**	**+0.4**
STKA				IAmb	IAmb	19 17 37.9	
	comp=Z,3.0nm,0.6s						
STKA	**Stephens Creek**	34.38	247	P	**P**	**19 17 37.5**	**+0.9**
INKA	**Innaminka**	34.96	254	P	**P**	**19 17 43.0**	**+1.6**
ARPS	**Mount Arapiles**	34.96	238	P	**P**	**19 17 41.9**	**+0.6**
COEN	**Coen**	35.21	278	P	**P**	**19 17 44.0**	**+0.3**
COEN				IAmb	IAmb	19 17 47.5	
	comp=Z,31nm,1.4s						
PATS	**Pohnpei**	35.94	323	P	**P**	**19 17 49.9**	**+0.2**
PATS	**Pohnpei**	35.94	323	P	**P**	**19 17 49.5**	**-0.1**
HTT	**Hallett**	36.78	244	P	**P**	**19 17 57.0**	**+0.5**
LCRK	**Leigh Creek**	37.19	249	P	**P**	**19 18 00.2**	**+0.5**
TWOA	**Tennyson Woods**	37.26	242	P	**P**	**19 18 00.6**	**+0.4**
NAPP	**Napperby**	37.41	245	P	**P**	**19 18 02.4**	**+0.9**
BBOO	**Buckleboo**	39.13	246	P	**P**	**19 18 15.2**	**-0.2**
BBOO				IAmb	IAmb	19 18 16.1	
	comp=Z,14nm,0.8s						
BBOO	**Buckleboo**	39.13	246	P	**P**	**19 18 15.4**	**0.0**
OOD	**Oodnadatta**	39.43	254	P	**P**	**19 18 19.3**	**+1.4**
MULG	**Mulgathing**	40.78	250	P	**P**	**19 18 28.8**	**+0.2**
TAOE	**Nuku Hiva Isla**	41.40	77	P	**P**	**19 18 31.0**	**-2.9**
AS31	**Alice Springs**	41.44	260	P	**P**	**19 18 33.7**	**-0.3**
AS31				IAmb	IAmb	19 18 35.0	
	comp=Z,5.5nm,0.3s						
ASAR	**Alice Springs**	41.44	260	P	**P**	**19 18 33.9**	**-0.1**
	comp=Z,10.0nm,0.7s,baz=88,slow=8.4,SNR=90						
ASAR				PcP	**PcP**	**19 20 17.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=95,slow=5.5,SNR=5.6						
ASAR				ScP	**ScP**	**19 23 15.8**	**+2.3**
	comp=Z,2.7nm,0.8s,baz=110,slow=4.4,SNR=9.2						
ASAR				S	**S**	**19 24 04.8**	**-3.7**
	comp=Z,3.2nm,1.2s,baz=92,slow=16,SNR=6.8						
	comp=Z,10.0nm,0.7s						
ASAR	**Alice Springs**	41.44	260	P	**P**	**19 18 33.4**	**-0.6**
WR0	**Warramunga Arr**	41.52	265	P	**P**	**19 18 33.8**	**-0.9**
WR0				IAmb	IAmb	19 19 02.4	
	comp=Z,21nm,1.6s						
WB2	**Warramunga Arr**	41.70	265	P	**P**	**19 18 35.1**	**-1.0**
WB2				IAmb	IAmb	19 18 36.2	
	comp=Z,8.3nm,0.8s						
WRAB	**Tennant Creek**	41.71	265	P	**P**	**19 18 35.5**	**-0.6**
WRA	**Warramunga Arr**	41.71	265	P	**P**	**19 18 35.4**	**-0.7**
	comp=Z,2.6nm,0.2s,baz=96,slow=8.3,SNR=322						
WRA				pP	**PcP**	**19 20 17.6**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=107,slow=6.5,SNR=1.7						
WRA				ScP	**ScP**	**19 23 16.2**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=91,slow=3.9,SNR=7.7						
WRA				S	**S**	**19 24 04.5**	**-7.9**
	comp=Z,0.6nm,0.6s,baz=96,slow=17,SNR=1.7						
	comp=Z,2.6nm,0.2s						
WRA	**Warramunga Arr**	41.71	265	P	**P**	**19 18 34.3**	**-1.8**
KDU	**Kakadu**	45.44	275	P	**P**	**19 19 04.4**	**-0.6**
FORT	**Forrest**	45.94	249	P	**P**	**19 19 08.1**	**-0.5**
FORT	**Forrest**	45.94	249	P	**P**	**19 19 08.4**	**-0.2**
WRKA	**Warakurna**	46.30	257	P	**P**	**19 19 11.4**	**-0.1**
MTN	**Manton Dam**	46.62	274	P	**P**	**19 19 12.9**	**-1.1**
MTN				IAmb	IAmb	19 19 14.5	
	comp=Z,40nm,1.4s						
MTN	**Manton Dam**	46.62	274	P	**P**	**19 19 13.4**	**-0.6**
KNRA	**Kununurra**	47.93	269	P	**P**	**19 19 23.3**	**-0.4**
KNRA				IAmb	IAmb	19 19 31.4	
	comp=Z,41nm,1.6s						
KNRA	**Kununurra**	47.93	269	P	**P**	**19 19 23.6**	**-0.1**
PSA00	**Pilbara Seismi**	54.59	259	P	**P**	**19 20 10.9**	**-0.8**
PSA00	**Pilbara Seismi**	54.59	259	P	**P**	**19 20 11.1**	**-0.6**
PSA00				IAmb	IAmb	19 20 20.5	
	comp=Z,28nm,1.5s						
MEEK	**Meekatharra**	54.66	253	P	**P**	**19 20 11.8**	**-0.4**
KLBR	**Kellerberrin**	54.66	247	P	**P**	**19 20 11.2**	**-0.9**
	comp=Z,34nm,0.8s						
MBWA	**Marble Bar**	54.79	260	P	**P**	**19 20 12.4**	**-0.7**
MBWA	**Marble Bar**	54.79	260	P	**P**	**19 20 13.0**	**-0.1**
VNDA	**Vanda**	55.28	185	P	**P**	**19 20 17.5**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=12,slow=7.6,SNR=16						
VNDA				PcP	**PcP**	**19 21 08.1**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=351,slow=4.2,SNR=5.4						
	comp=Z,1.6nm,0.7s						
SBA	**Scott Base**	55.30	183	P	**P**	**19 20 18.6**	**+2.9**
SBA				PcP	**PcP**	**19 21 08.8**	**+1.3**
BLDU	**Ballidu**	55.68	248	P	**P**	**19 20 19.0**	**-0.2**
MUN	**Mundaring**	55.92	246	P	**P**	**19 20 21.4**	**+0.6**
MORW	**Morawa**	56.49	249	P	**P**	**19 20 24.5**	**-0.3**
MORW	**Morawa**	56.49	249	P	**P**	**19 20 24.8**	**0.0**
GIRL	**Giralia**	59.39	256	P	**P**	**19 20 45.3**	**+0.8**
GIRL	**Giralia**	59.39	256	P	**P**	**19 20 45.8**	**+1.3**
PLAI	**Plampang**	60.31	273	P	**P**	**19 20 50.4**	**-0.3**
CASY	**Casey**	60.65	206	P	**P**	**19 20 51.9**	**-0.1**
CASY				IAmb	IAmb	19 20 53.0	
	comp=Z,12nm,0.9s						
TOLI2	**Tolitoli**	61.59	285	P	**P**	**19 20 56.9**	**-2.2**
TOLI2	**Tolitoli**	61.59	285	P	**P**	**19 20 59.7**	**+0.6**
JAGI	**Jajag, Banyuwa**	63.77	272	P	**P**	**19 21 11.6**	**-1.6**
JAGI	**Jajag, Banyuwa**	63.77	272	P	**P**	**19 21 12.1**	**-1.0**
QSPA	**South Pole Qui**	67.15	180	P	**P**	**19 21 35.0**	**+1.6**
QSPA				IAmb	IAmb	19 21 36.0	
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	70.67	326	P	**P**	**19 21 54.4**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=149,slow=5.6,SNR=8.6						
	comp=Z,3.1nm,0.9s						
MJAR	**Matsushiro Arr**	70.67	326	IAmb	IAmb	19 21 56.0	
	comp=Z,1.8nm,1.1s						
KSM	**Kuching**	71.19	280	P	**P**	**19 21 58.6**	**+0.2**
KSM				IAmb	IAmb	19 21 59.0	
	comp=Z,6.3nm,0.7s						
SSLB	**Suanglung**	73.17	306	P	**P**	**19 22 08.8**	**-0.8**
SSLB				IAmb	IAmb	19 22 33.7	
	comp=Z,26nm,1.3s						
YHNB	**Yeheng**	73.37	307	P	**P**	**19 22 10.5**	**-0.3**
KSRS	**Korea Array**	77.02	320	P	**P**	**19 22 31.9**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=134,slow=5.7,SNR=12						
	comp=Z,2.5nm,0.8s						
SMAI	**San Martin Ant**	77.28	159	P	**P**	**19 22 33.5**	**+1.9**
SMAI				IAmb	IAmb	19 22 34.6	
	comp=Z,25nm,0.9s						
BELA	**Belgrano 2**	77.48	173	P	**P**	**19 22 33.1**	**+0.5**
BELA				IAmb	IAmb	19 22 34.0	
	comp=Z,15nm,0.7s						
PETK	**Petropavlovsk-**	77.98	347	P	**P**	**19 22 36.0**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=185,slow=9.6,SNR=3.3						
	comp=Z,3.0nm,0.8s						
MAW	**Mawson**	78.39	201	P	**P**	**19 22 38.2**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=130,slow=4.2,SNR=14						
	comp=Z,4.0nm,0.7s						
MAW	**Mawson**	78.39	201	P	**P**	**19 22 38.6**	**+1.0**
MDJ	**Mudanjiang**	81.04	327	P	**P**	**19 22 53.0**	**+1.3**
MDJ				pP	pwP	19 24 56.4	-0.7
MDJ				S	**S**	**19 32 16.6**	**+2.7**
MDJ				ScS	**ScS**	**19 32 30.3**	**+3.0**
MDJ	**Mudanjiang**	81.04	327	sS	sS	19 35 54.4	+3.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1µm,7.4s						
KULM	**Kulim**	81.53	279	P	**P**	**19 22 54.0**	**-1.0**
KMPM	**Mount Pierce**	82.18	40	P	**P**	**19 22 57.6**	**-0.1**
KMPM				IAmb	IAmb	19 23 01.2	
	comp=Z,26nm,1.4s						
KMRM	**Mail Ridge**	82.30	40	P	**P**	**19 22 59.3**	**+0.9**
KMRM				IAmb	IAmb	19 23 02.4	
	comp=Z,18nm,1.2s						
ISA	**Isabella, Lake**	82.91	47	P	**P**	**19 23 02.4**	**+0.8**
ISA				IAmb	IAmb	19 23 04.2	
	comp=Z,7.7nm,0.9s						
MG05	**Puerto Natales**	82.96	143	P	**P**	**19 23 02.0**	**+0.5**
MG05				IAmb	IAmb	19 23 04.2	
	comp=Z,20nm,0.9s						
CMB	**Columbia Colle**	83.03	44	P	**P**	**19 23 01.5**	**-0.6**
KSXB	**Camp Six Broad**	83.21	39	P	**P**	**19 23 04.4**	**+1.4**
USHA	**Ushuaia**	83.53	147	P	**P**	**19 23 06.0**	**+1.8**
	comp=Z,8.0nm,0.8s,baz=356,slow=5.7,SNR=3.8						
	comp=Z,8.0nm,0.8s						
YBH	**Yreka Blue Hor**	83.83	40	P	**P**	**19 23 06.6**	**+0.6**
GSC	**Goldstone, Bar**	83.84	48	P	**P**	**19 23 07.0**	**+0.8**
HUMO	**Hull Mountain**	84.23	39	P	**P**	**19 23 09.0**	**+1.1**
HUMO				IAmb	IAmb	19 23 11.1	
	comp=Z,7.0nm,1.1s						
L04D	**Klamath Falls**	84.37	40	IAmb	IAmb	19 23 11.3	
	comp=Z,8.0nm,1.1s						
RYN	**Ryan**	84.57	44	P	**P**	**19 23 10.7**	**+0.9**
NVAR	**Mina Array Bea**	84.59	44	P	**P**	**19 23 11.2**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=224,slow=8.8,SNR=11						
	comp=Z,1.5nm,0.7s						
KVN	**Kaiserville**	85.08	44	P	**P**	**19 23 12.1**	**-0.2**
TPH	**Tonopah**	85.10	45	IAmb	IAmb	19 23 14.7	
	comp=Z,18nm,0.8s						
TPNV	**Topopah Spring**	85.12	47	P	**P**	**19 23 12.8**	**+0.3**
TROLL	**Troll, Antarti**	85.28	181	P	**P**	**19 23 12.7**	**0.0**
K05A	**Summer Lake**	85.50	40	P	**P**	**19 23 14.8**	**+0.5**
K05A				IAmb	IAmb	19 23 17.2	
	comp=Z,22nm,1.6s						
SNAA	**Sanae**	85.64	179	P	**P**	**19 23 14.1**	**-0.2**
SNAA	**Sanae**	85.64	179	P	**P**	**19 23 13.9**	**-0.5**
SNAA				IAmb	IAmb	19 23 14.8	
	comp=Z,3.8nm,0.5s						
VNA3	**Neumayer Olymp**	85.88	177	P	**P**	**19 23 15.1**	**-0.3**
VNA3				S	**S**	**19 32 59.7**	**-0.9**
PINE	**Pine Mountain**	86.12	39	IAmb	IAmb	19 23 20.2	
	comp=Z,24nm,1.6s						
COYC	**Coyhaique**	86.13	138	P	**P**	**19 23 19.0**	**+1.9**
BMN	**Battle Mountai**	86.42	43	P	**P**	**19 23 18.1**	**-0.5**
VNA1	**Neumayer--Stat**	86.53	178	P	**P**	**19 23 18.4**	**-0.1**
TUC	**Tucson**	86.54	53	P	**P**	**19 23 20.1**	**+0.8**
L19K	**White Mountain**	87.33	12	IAmb	IAmb	19 23 23.8	
	comp=Z,5.8nm,0.9s						
LL02	**Futaleuf**	87.43	136	P	**P**	**19 23 24.2**	**+0.9**
LL02				IAmb	IAmb	19 23 26.4	
	comp=Z,12nm,1.0s						
U15A	**North Rim**	87.54	49	IAmb	IAmb	19 23 27.0	
	comp=Z,7.3nm,0.7s						
XAN	**Xi'an**	87.54	309	⇑P	**P**	**19 23 25.3**	**+1.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	**Elko**	87.85	44	P	**P**	**19 23 26.0**	**+0.6**
GLI	**Glacier Island**	87.87	16	IAmb	IAmb	19 23 25.7	
	comp=Z,11nm,0.7s						
G08A	**Pilot Rock**	88.14	39	P	**P**	**19 23 27.6**	**+1.1**
G08A				IAmb	IAmb	19 23 29.0	
	comp=Z,4.6nm,0.8s						
GHO	**Glory Hole Cre**	88.21	15	IAmb	IAmb	19 23 27.6	
	comp=Z,9.7nm,0.8s						
LTY	**Liberty**	88.35	36	IAmb	IAmb	19 23 29.4	
	comp=Z,5.3nm,0.8s						
MTPU	**Mount Pierson**	88.44	47	IAmb	IAmb	19 23 32.5	
	comp=Z,5.7nm,1.0s						
CMAR	**Chiang Mai Arr**	88.47	291	P	**P**	**19 23 29.9**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=121,slow=2.9,SNR=10						
CMAR				pP	**pP**	**19 25 31.8**	**-1.1**
	comp=Z,1.7nm,1.0s,baz=135,slow=4.2,SNR=2.6						
CMAR				PKKPbc	**PKKPbc**	**19 41 07.8**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=284,slow=4.6,SNR=6.5						
	comp=Z,1.2nm,0.8s						
K20K	**Telida**	88.55	12	P	**P**	**19 23 27.9**	**+0.1**
BMRM	**Bremner River**	88.59	17	P	**P**	**19 23 28.0**	**-0.1**
BMRM				IAmb	IAmb	19 23 29.6	
	comp=Z,5.9nm,1.0s						
MFID	**Camas Ranch**	88.94	41	P	**P**	**19 23 31.3**	**+1.0**
MFID				IAmb	IAmb	19 23 32.6	
	comp=Z,4.3nm,0.9s						
CAST	**Castle Rocks**	88.99	12	IAmb	IAmb	19 23 29.8	

	comp=Z,4.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.19**	**315**	*e*P	**P**	**19 23 30.0**	**-1.5**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,690nm,6.9s						
KTH	**Kantishna Hill**	**89.35**	**13**	P	**P**	**19 23 30.5**	**-1.1**
KTH				IAmb	IAmb	19 23 31.6	
	comp=Z,3.6nm,1.0s						
MCARA	**McCarthy VSAT**	**89.36**	**17**	IAmb	IAmb	19 23 34.0	
	comp=Z,4.1nm,0.9s						
TRF	**Thorofare Moun**	**89.39**	**13**	IAmb	IAmb	19 23 32.3	
	comp=Z,5.5nm,0.9s						
BARN	**Barnard Glacie**	**89.48**	**18**	IAmb	IAmb	19 23 34.8	
	comp=Z,5.1nm,1.2s						
PLCA	**Paso Flores**	**89.49**	**135**	P	**P**	**19 23 35.0**	**+2.0**
	comp=Z,2.8nm,0.8s,baz=214,slow=6.1,SNR=9.1						
	comp=Z,2.8nm,0.8s						
PLCA	**Paso Flores**	**89.49**	**135**	IAmb	IAmb	19 23 36.0	
	comp=Z,4.7nm,0.9s						
F10A	**Beach Ranch, E**	**89.53**	**39**	P	**P**	**19 23 32.8**	**-0.1**
F10A				IAmb	IAmb	19 23 34.6	
	comp=Z,4.6nm,0.8s						
PZH	**PanZhiHua**	**89.55**	**299**	P	**P**	**19 23 33.9**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
Q16A	**Castle Valley**	**89.57**	**47**	IAmb	IAmb	19 23 37.2	
	comp=Z,5.7nm,0.8s						
RND	**Reindeer**	**89.66**	**14**	IAmb	IAmb	19 23 34.0	
	comp=Z,4.3nm,1.0s						
TMUT	**Trail Mountain**	**89.73**	**47**	P	**P**	**19 23 35.4**	**+1.1**
TMUT				IAmb	IAmb	19 23 37.2	
	comp=Z,11nm,0.8s						
HVU	**Hansel Valley**	**89.97**	**44**	IAmb	IAmb	19 23 37.5	
	comp=Z,6.2nm,0.7s						
MNTX	**Cornudas Mount**	**90.30**	**56**	P	**P**	**19 23 36.8**	**+0.1**
MNTX				IAmb	IAmb	19 23 39.3	
	comp=Z,3.8nm,0.8s						
M27K	**Edge Creek, AK**	**90.48**	**17**	IAmb	IAmb	19 23 40.6	
	comp=Z,3.2nm,1.0s						
P18A	**Preston Nutter**	**90.54**	**47**	IAmb	IAmb	19 23 40.3	
	comp=Z,3.2nm,0.8s						
TX31	**Lajitas Ar. Si**	**90.57**	**58**	P	**P**	**19 23 38.3**	**+0.2**
TX31				IAmb	IAmb	19 23 41.1	
	comp=Z,12nm,1.1s						
TX32	**Lajitas Array**	**90.57**	**58**	IAmb	IAmb	19 23 41.1	
	comp=Z,4.1nm,1.1s						
TXAR	**Lajitas Array**	**90.57**	**58**	P	**P**	**19 23 40.2**	**+2.0**
	comp=Z,3.0nm,0.9s,baz=214,slow=6.0,SNR=17						
TXAR				pP	**pP**	**19 25 43.6**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=269,slow=3.6,SNR=1.5						
	comp=Z,3.0nm,0.9s						
WRH	**Wood River Hil**	**90.75**	**14**	IAmb	IAmb	19 23 38.1	
	comp=Z,2.8nm,1.0s						
ANMO	**Albuquerque**	**90.97**	**52**	P	**P**	**19 23 41.0**	**+1.0**
ANMO				IAmb	IAmb	19 23 42.1	
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**91.28**	**14**	P	**P**	**19 23 40.7**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=231,slow=5.8,SNR=7.9						
ILAR				pP	**pP**	**19 25 46.0**	**+0.7**
	comp=Z,0.6nm,1.0s,baz=224,slow=6.2,SNR=2.2						
	comp=Z,0.5nm,0.6s						
M30M	**Minto, Yukon**	**92.09**	**19**	IAmb	IAmb	19 23 45.7	
	comp=Z,3.1nm,0.7s						
DAWY	**Dawson**	**92.53**	**17**	P	**P**	**19 23 46.2**	**-0.1**
DAWY				IAmb	IAmb	19 23 47.2	
	comp=Z,1.7nm,0.8s						
BW06	**Boulder Array**	**92.53**	**44**	IAmb	IAmb	19 23 59.7	
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**92.53**	**44**	P	**P**	**19 23 47.8**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=198,slow=1.6,SNR=11						
PDAR				pP	**pP**	**19 25 51.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=299,slow=1.9,SNR=1.6						
	comp=Z,1.0nm,0.7s						
CO02	**Combarbal**	**93.92**	**126**	P	**P**	**19 23 54.5**	**+0.9**
MKAR	**Makanchi Array**	**110.94**	**313**	PKiKP	**PKiKP**	**19 29 03.5**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=184,slow=1.5,SNR=5.2						
MKAR				PKKPbc	**PKKPbc**	**19 40 04.2**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=292,slow=3.3,SNR=2.8						
MKAR				PKKPab	**PKKPab**	**19 40 13.5**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=325,slow=2.1,SNR=5.0						
KURK	**Kurchatov**	**113.97**	**317**		**PKiKP**	**19 29 09.3**	**-0.9**
KURBB	**Kurchatov Arra**	**114.02**	**317**	PKiKP	PKPdf	19 29 09.3	-1.0
	comp=Z,1.4nm,0.7s,baz=100,slow=1.9,SNR=15						
KSH	**Kashi**	**114.10**	**304**	PKP	**PKiKP**	**19 29 12.8**	**+1.8**
KK31	**Karatay Array**	**118.67**	**308**	PKPdf	**PKPdf**	**19 29 18.9**	**-0.6**
KKAR	**Karatay Array**	**118.67**	**308**	PKPdf	**PKPdf**	**19 29 19.1**	**-0.5**
BDFB	**Brasilia**	**119.99**	**125**	PKP	**PKPdf**	**19 29 22.4**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=157,slow=9.7,SNR=3.4						
SCHQ	**Schefferville**	**122.20**	**39**	PKP	**PKPdf**	**19 29 24.8**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=30,slow=5.0,SNR=4.3						
BOSA	**Boshof**	**122.92**	**207**	PKP	**PKPdf**	**19 29 28.4**	**0.0**
	comp=Z,1.0nm,0.5s,baz=42,slow=3.3,SNR=5.1						
HRA	**Herat**	**124.26**	**297**		**PKPdf**	**19 29 30.6**	**-0.2**
ARU	**Arti**	**125.65**	**324**	PKP	**PKPdf**	**19 29 32.5**	**0.0**
	comp=Z,1.9nm,0.5s,baz=130,slow=6.5,SNR=11						
AKTO	**Aktyubinsk**	**127.07**	**317**	PKP	**PKiKP**	**19 29 35.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=158,slow=4.8,SNR=4.2						
KIRV	**Kirov**	**129.70**	**328**	PKP	**PKPdf**	**19 29 39.0**	**-1.1**
	comp=Z,7.9nm,0.5s,baz=104,slow=0.5,SNR=4.5						
ARCES	**ARCESS Array B**	**130.79**	**348**	PKP	**PKPdf**	**19 29 41.4**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=22,slow=2.1,SNR=13						
FINES	**FINESS Array B**	**137.29**	**341**	PKhKP	PKPpre	19 29 45.2	
	comp=Z,0.7nm,0.6s,baz=83,slow=6.3,SNR=4.6						
FINES				PKP	**PKPdf**	**19 29 55.0**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=66,slow=1.8,SNR=8.5						
FINES				SKPbc	**SKPbc**	**19 32 34.5**	**+0.8**
	comp=Z,3.8nm,0.9s,baz=26,slow=4.9,SNR=5.2						
NB2	**NORSAR Subarra**	**141.01**	**351**	PKP	PKPpre	19 29 56.2	
	comp=Z,1.0nm,0.6s,baz=14,slow=3.1						
NOA	**NORSAR Array B**	**141.01**	**351**	PKhKP	PKPpre	19 29 55.0	
	comp=Z,1.5nm,0.7s,baz=15,slow=2.3,SNR=5.3						
AKASG	**Malin Array Be**	**143.75**	**327**	PKP	PKPbc	19 30 04.8	-0.5
	comp=Z,5.8nm,0.5s,baz=45,slow=4.6,SNR=48						
AKASG				SKPbc	**SKiKP**	**19 32 51.5**	**-0.1**
	comp=Z,0.1nm,0.2s,baz=54,slow=2.2,SNR=4.0						
AKASG	**Malin Array Be**	**143.75**	**327**		PKPbc	19 30 04.5	-0.8
AKBB	**Malin Array Si**	**143.75**	**327**		PKPbc	19 30 04.6	-0.7
SUW	**Suwalki**	**144.07**	**336**		PKPbc	19 30 05.6	-0.6
ASF	**Jabal al Asfar**	**145.45**	**294**	PKPbc	**PKPbc**	**19 30 11.6**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=135,slow=3.6,SNR=12						
SORM	**Soroca**	**145.77**	**324**	⇑P	**PKPbc**	**19 30 11.4**	**-0.1**
MILM	**Milestii Mici**	**146.23**	**322**	⇓P	**PKPbc**	**19 30 12.8**	**0.0**
BR131	**Keskin Array S**	**146.38**	**308**	PKPdf	**PKPdf**	**19 30 08.7**	**-2.6**
BR131					**PKPbc**	**19 30 13.2**	**-0.4**
BRTR	**Keskin Array B**	**146.38**	**308**	PKPbc	**PKPbc**	**19 30 13.4**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=132,slow=4.2,SNR=13						
BRTR	**Keskin Array B**	**146.38**	**308**		**PKPbc**	**19 30 13.3**	**-0.4**
MMAI	**Mount Meron Ar**	**146.60**	**296**	PKPbc	**PKPbc**	**19 30 14.6**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=8.3,slow=40,SNR=11						
GHAJ	**Ghor Haditha**	**146.66**	**292**		**PKPbc**	**19 30 14.1**	**-0.4**
GKP	**Gorka Klasztor**	**146.74**	**340**	*e*PKPbc	**PKPbc**	**19 30 14.4**	**+0.4**
TLCR		**147.19**	**320**	⇓P	**PKPbc**	**19 30 15.2**	**-0.3**
VLDR	**Vladesti**	**147.26**	**321**	⇓P	**PKiKP**	**19 30 16.6**	**-0.7**
EIL	**Elat**	**147.32**	**290**	PKPbc	**PKPbc**	**19 30 16.9**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=76,slow=8.7,SNR=4.3						
SCTR	**Scanteiesti**	**147.41**	**321**	⇓P	**PKiKP**	**19 30 17.0**	**-0.6**
GHRR		**147.52**	**322**	⇑P	**PKiKP**	**19 30 17.2**	**-0.6**
CFR	**Carcaliu**	**147.60**	**320**	⇓P	**PKPbc**	**19 30 15.9**	**-0.6**
TPGR	**Topolog**	**147.61**	**320**	⇑P	**PKPbc**	**19 30 17.3**	**+0.7**
TESR	**Tescani**	**147.67**	**323**	⇑P	**PKPbc**	**19 30 16.0**	**-0.7**
BIZ	**Bicaz**	**147.71**	**324**	⇓P	**PKiKP**	**19 30 17.7**	**-0.5**
BURAR	**Bucovina Array**	**147.74**	**326**	⇑P	**PKiKP**	**19 30 18.2**	**-0.1**
CSS	**Mathiatis**	**147.94**	**300**		**PKPbc**	**19 30 16.6**	**-1.2**
VRI	**Vrincioaia**	**148.02**	**322**	⇓P	**PKPbc**	**19 30 17.5**	**-0.1**
PLOR	**Plostina**	**148.07**	**322**	⇓P	**PKPbc**	**19 30 17.9**	**+0.2**
KOLS	**Kolonicke sedl**	**148.26**	**331**	*e*PKP	**PKiKP**	**19 30 19.3**	**+0.1**
OJC	**Ojcow**	**148.34**	**334**	*e*PKPbc	**PKPbc**	**19 30 18.5**	**+0.3**
OZUR		**148.40**	**323**	⇑P	**PKiKP**	**19 30 19.5**	**-0.2**
CRVS	**Cervenica-Dubn**	**148.64**	**331**	*e*PKP	**PKiKP**	**19 30 19.9**	**-0.1**
MLR	**Muntele Rosu**	**148.68**	**322**	⇑P	**PKPbc**	**19 30 19.7**	**+0.4**
DOPR	**Dopca**	**148.70**	**324**	⇑P	**PKiKP**	**19 30 20.1**	**-0.2**
NIE	**Niedzica**	**148.75**	**333**	*e*PKPbc	**PKiKP**	**19 30 21.1**	**+0.8**
SECR		**148.88**	**322**	⇑P	**PKPbc**	**19 30 20.1**	**+0.3**
KSP	**Ksiaz**	**149.11**	**339**	*e*PKPbc	**PKiKP**	**19 30 21.0**	**0.0**
CJR	**Cluj-Napoca**	**149.17**	**326**	⇓P	**PKiKP**	**19 30 20.9**	**-0.4**
VOIR		**149.21**	**323**	⇑P	**PKPbc**	**19 30 20.9**	**+0.3**
OKC	**Ostrava-Krasne**	**149.28**	**336**	⇑*e*PKP	**PKPbc**	**19 30 20.8**	**+0.3**
LANS	**Liptovska Anna**	**149.31**	**333**	*e*PKP	**PKiKP**	**19 30 22.3**	**+0.9**
OSTC	**Ostas**	**149.38**	**338**	⇑*e*PKP	**PKiKP**	**19 30 21.8**	**+0.3**
CHVC	**Chvalec**	**149.41**	**339**	⇑*e*PKP	**PKiKP**	**19 30 21.3**	**-0.3**
UPC	**Upice**	**149.49**	**339**	⇑*e*PKP	**PKiKP**	**19 30 21.8**	**+0.1**
DPC	**Dobruska-Polom**	**149.52**	**338**	⇑*e*PKP	**PKiKP**	**19 30 22.0**	**+0.1**
LTVH	**Ltavrtes, Hu**	**149.54**	**329**	⇑P	**PKiKP**	**19 30 22.4**	**+0.6**
MORC	**Moravsky Berou**	**149.56**	**336**	⇓P	**PKPbc**	**19 30 21.2**	**0.0**
MORC	**Moravsky Berou**	**149.56**	**336**	*e*PKP	**PKiKP**	**19 30 22.0**	**0.0**
DRGR		**149.56**	**327**	⇓P	**PKPbc**	**19 30 21.6**	**+0.2**
KRLC	**Kraliky**	**149.59**	**337**	⇑*e*PKP	**PKiKP**	**19 30 21.8**	**-0.2**
KRLC				*e*PKPAB	**PKPab**	**19 30 29.5**	**+0.6**
CLL	**Collm**	**149.71**	**343**	PKPdf	**PKPdf**	**19 30 16.2**	**+0.2**
CLL					**PKPbc**	**19 30 21.2**	**-0.2**
CLL	**Collm**	**149.71**	**343**	⇓*i*PKPbc	**PKiKP**	**19 30 21.9**	**-0.2**
	comp=Z,27nm,0.8s						
CLL				*e*(pPKPab)		19 32 39.0	
CLL				*e*SKPdf	**SKPdf**	**19 32 56.0**	**+0.7**
MAUC	**Maruska**	**149.79**	**335**	⇑*e*PKP	**PKiKP**	**19 30 22.9**	**+0.5**
BRG	**Berggiesshubel**	**149.83**	**341**	*i* PKP	**PKiKP**	**19 30 22.5**	**+0.1**
BRG				Amp		19 30 23.4	
	comp=Z,19nm,0.8s						
BRG				*e*x	**PKPab**	**19 30 29.4**	**-0.3**
BRG				Amp		19 30 30.6	
	comp=Z,6.5nm,1.0s						
BRG				Amp		19 57 26.0	
	comp=N,0.7nm,12.0s						
BRG				Amp		19 57 29.0	
	comp=Z,1.3nm,15.1s						
BRG				Amp		19 57 34.0	
	comp=E,1.0nm,15.1s						
PVCC	**Panska Ves**	**149.94**	**340**	⇑*e*PKP	**PKiKP**	**19 30 23.0**	**+0.4**
PSZ	**Piszkesteto**	**150.07**	**331**	⇓P	**PKiKP**	**19 30 22.9**	**-0.2**
VYHS	**Vyhne**	**150.08**	**333**	*e*PKP	**PKiKP**	**19 30 23.1**	**+0.1**
KOLL	**Kolacno**	**150.19**	**334**	*e*PKP	**PKiKP**	**19 30 23.4**	**+0.2**
JAVC	**Velka Javorina**	**150.26**	**335**	*e*PKP	**PKiKP**	**19 30 24.6**	**+1.2**
VRAC	**Vranov**	**150.30**	**337**	⇑P	**PKPab**	**19 30 32.9**	**+1.1**
VRAC	**Vranov**	**150.30**	**337**	*e*PKP	**PKPbc**	**19 30 23.2**	**+0.3**
VRAC				*e*	**PKPab**	**19 30 32.6**	**+0.8**
PRU	**Pruhonice**	**150.42**	**340**	⇑*e*PKP	**PKPbc**	**19 30 23.2**	**0.0**
GZR	**Gura Zlata**	**150.47**	**325**	⇓P	**PKPbc**	**19 30 23.1**	**-0.4**
KRUC	**Moravsky**	**150.57**	**337**	*e*PKP	**PKPbc**	**19 30 23.6**	**0.0**
KRUC				*e*	**PKPab**	**19 30 33.8**	**+0.8**
MODS	**Modra-Piesok**	**150.80**	**335**	*e*PKP	**PKiKP**	**19 30 25.2**	**+0.7**
NKC	**Novy Kostel**	**150.83**	**342**	⇑*e*PKP	**PKiKP**	**19 30 24.6**	**+0.1**
HERR	**Herculane**	**151.00**	**325**	⇑P	**PKPbc**	**19 30 24.6**	**0.0**
MDVR	**Moldovita**	**151.44**	**325**	⇑P	**PKPbc**	**19 30 25.3**	**-0.4**
KHC	**Kasperske Hory**	**151.47**	**340**	PKPdf	**PKPdf**	**19 30 18.6**	**-0.3**
KHC					**PKPbc**	**19 30 25.1**	**-0.6**
KHC	**Kasperske Hory**	**151.47**	**340**	⇑*e*PKP	**PKiKP**	**19 30 26.0**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**19 30 37.8**	**+1.0**
CKRC	**Cesky Krumlov**	**151.51**	**339**	⇑*e*PKP	**PKiKP**	**19 30 26.2**	**+0.2**
BLKB	**Belogradchik**	**151.67**	**322**	⇓P	**PKPbc**	**19 30 26.0**	**-0.3**
GERES	**GERESS Array B**	**151.69**	**340**	PKPbc	**PKPbc**	**19 30 26.4**	**+0.1**
	comp=E,3.0nm,0.7s,baz=48,slow=2.0,SNR=24						
GERES				pPKPbc	**pPKPbc**	**19 32 37.4**	**-1.1**
	comp=E,0.2nm,0.3s,baz=2.9,slow=3.9,SNR=2.7						
CONA	**Conrad Observa**	**151.71**	**336**	*i* P	**PKiKP**	**19 30 27.1**	**+0.5**
	comp=E,4.4nm,0.6s						
RONA	**Rosalia, Austr**	**151.74**	**335**	*e*P	**PKiKP**	**19 30 27.0**	**+0.5**
	comp=E,8.3nm,0.5s						
MORH	**Mrgy, Hungar**	**151.92**	**331**	⇑P	**PKPbc**	**19 30 25.2**	**-1.5**
VTS	**Vitosha**	**151.97**	**320**	⇑P	**PKPbc**	**19 30 27.1**	**0.0**
FRGS	**Fruska Gora**	**152.15**	**328**	⇑P	**PKPbc**	**19 30 27.0**	**-0.3**
MOA	**Molln**	**152.36**	**338**	*i* P	**PKiKP**	**19 30 27.9**	**+0.1**
	comp=E,1.9nm,0.6s						
SOKA	**Soboth**	**153.07**	**335**	*e*P	**PKPbc**	**19 30 29.2**	**-0.1**
	comp=E,2.1nm,0.9s						
OBKA	**Obir**	**153.39**	**336**	*e*P	**PKPbc**	**19 30 28.3**	**-1.7**
	comp=E,7.0nm,1.1s						
MYKA	**Terra Mystica**	**153.62**	**337**	*i* P	**PKPbc**	**19 30 30.0**	**-0.4**
	comp=E,5.2nm,0.9s						
WATA	**Walderalm**	**153.69**	**341**	*i* P	**PKiKP**	**19 30 32.1**	**+1.4**
	comp=E,4.7nm,0.9s						
WTTA	**Wattenberg**	**153.73**	**341**	*i* P	**PKiKP**	**19 30 31.1**	**+0.3**
	comp=E,4.3nm,0.5s						
SQTA	**Sankt Quirin**	**153.90**	**341**	*i* P	**PKiKP**	**19 30 31.3**	**+0.2**
	comp=E,2.2nm,0.6s						
ABTA	**Abfaltersbach**	**153.91**	**339**	*i* P	**PKPbc**	**19 30 30.2**	**-0.9**
	comp=E,8.0nm,1.2s						
DAVA	**Damuels**	**154.22**	**343**	*i* P	**PKiKP**	**19 30 31.5**	**-0.3**
	comp=E,4.5nm,0.9s						
ESDC	**Sonseca Array**	**163.10**	**8**	PKPab	**PKPab**	**19 31 27.2**	**-0.3**
	comp=E,0.7nm,0.7s,baz=335,slow=3.9,SNR=3.2						
DBIC	**Dimbokro**	**163.38**	**166**	PKP	**PKPdf**	**19 30 33.3**	**-1.1**
	comp=E,3.6nm,0.7s,baz=251,slow=2.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**169.98**	**194**	PKP	**PKPdf**	**19 30 38.7**	**-0.6**
	comp=E,1.9nm,1.0s,baz=294,slow=2.3,SNR=5.3						
TORD				PKPab	**PKPab**	**19 31 58.4**	**+0.1**
	comp=E,2.3nm,0.8s,baz=161,slow=4.5,SNR=8.9						

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*JMA **13** 19:12:16.4±0.2, 31°.0N±0°.3×129°.0E±0°.8, h17^{km}±2^{km}, MD4.2/33, MV4.2/33, SW OFF KYUSHU*
*IDC **13** 19:12:17.3±0.8, 31°.11N×129°.12E, h0^{km}, mb3.7/10, mbtmp3.7/12, ML3.0/3, Error ellipse: s-maj=22.3km s-min=12.8km az=114.0*
ISC 13 19:12:17.7±0.7**, 31°.06N**±0°.04×**129°.19E**±0°.06**, h6^{km}, n26, σ0^{s}.99**/28**, mb3.7**/10**, 1D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.76**	**36**	*e*P	**Pb**	**19 12 32.8**	**-0.6**
JSJ				*e*S	**Sb**	**19 12 44.7**	**+0.7**
JSJ	**Shimokoshiki**	**0.76**	**36**	A	A	19 12 32.8	
	comp=E,13nm,1.2s,comp=E,11nm,0.8s						
JKC	**Kuchinoerabu**	**1.05**	**124**	*e*P	**Pb**	**19 12 37.5**	**-0.7**
JKC				*e*S	**Sb**	**19 12 52.2**	**0.0**
JSU	**Suzuyama**	**1.17**	**67**	⇓*e*P	**Pn**	**19 12 40.3**	**-0.3**
JNN	**Nakanoshima**	**1.35**	**154**	*e*P	**Pn**	**19 12 40.9**	**-2.1**
JNN	**Nakanoshima**	**1.35**	**154**	A	A	19 12 40.9	
	comp=E,12nm,1.2s,comp=E,9.0nm,1.8s						
JYAK	**Yakushimahirau**	**1.40**	**125**	*e*P	**Pn**	**19 12 42.4**	**-1.3**
JTN	**Tanegashima 3**	**1.59**	**104**	*e*P	**Pn**	**19 12 45.9**	**-0.5**
JTN				*e*S	**Sn**	**19 13 06.6**	**-0.6**
JMTN	**Minamitane**	**1.61**	**114**	*e*P	**Pn**	**19 12 46.0**	**-0.6**
JFU	**Fukue jima 2**	**1.64**	**347**	*e*P	**Pn**	**19 12 45.6**	**-1.4**
JTZ	**Takazaki**	**1.82**	**62**	*e*P	**Pn**	**19 12 49.6**	**+0.1**
JIU3	**Izumi3**	**2.03**	**42**	*e*P	**Pn**	**19 12 52.7**	**+0.3**
JNU	**Nakatsue**	**2.51**	**34**	Pg	**Pg**	**19 13 04.7**	**-1.0**
	19nm,0.3s,baz=285,slow=7.0,SNR=17						
JNU				Lg	Lg	19 13 38.2	
	30nm,0.3s,baz=336,slow=16,SNR=6.7						
JOW	**Kunigami**	**4.29**	**191**	Pn	**Pn**	**19 13 24.4**	**+0.9**
	2.4nm,0.3s,baz=81,slow=24,SNR=6.7						
	20nm,1.0s						
KSRS	**Korea Array**	**6.47**	**351**	Pn	**Pn**	**19 13 54.4**	**+1.0**
	0.6nm,0.3s,baz=170,slow=14,SNR=2.7						
KSRS				Sn	**Sn**	**19 15 06.9**	**-0.6**
	0.9nm,0.3s,baz=171,slow=25,SNR=4.3						
KSRS				Lg	Lg	19 15 40.9	
	1.2nm,0.3s,baz=174,slow=29,SNR=2.8						
	1.9nm,0.4s						
MJAR	**Matsushiro Arr**	**9.28**	**51**	Pn	**Pn**	**19 14 33.4**	**+1.3**
	baz=275,slow=14,SNR=2.6						
SONM	**Songino Array**	**24.16**	**320**	P	**P**	**19 17 35.9**	**+1.2**
	0.7nm,0.6s,baz=132,slow=11,SNR=3.0						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.09**	**252**	P	**P**	**19 18 28.6**	**+0.4**
	0.6nm,0.8s,baz=65,slow=7.2,SNR=4.6						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**50.95**	**174**	P	**P**	**19 21 22.1**	**+2.0**
	0.7nm,0.7s,baz=360,slow=8.0,SNR=2.8						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**54.60**	**175**	P	**P**	**19 21 48.6**	**+1.6**
	0.6nm,0.8s,baz=4.9,slow=13,SNR=3.1						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**59.82**	**30**	P	**P**	**19 22 23.1**	**-0.4**
	0.3nm,0.6s,baz=277,slow=6.9,SNR=5.7						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**69.11**	**330**	P	**P**	**19 23 23.8**	**-0.5**
	1.4nm,0.8s,baz=67,slow=7.0,SNR=2.0						
	1.4nm,0.8s						
YKA	**Yellowknife Ar**	**73.81**	**26**	P	**P**	**19 23 52.1**	**-0.6**
	0.6nm,0.9s,baz=302,slow=5.8,SNR=5.4						
	0.6nm,0.9s						
BRTR	**Keskin Array B**	**74.77**	**307**	P	**P**	**19 23 59.3**	**+0.4**
	0.7nm,0.8s,baz=72,slow=7.9,SNR=4.0						
	0.7nm,0.8s						
NVAR	**Mina Array Bea**	**86.57**	**47**	P	**P**	**19 25 02.4**	**+0.1**
	0.5nm,0.7s,baz=280,slow=5.5,SNR=4.7						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**88.88**	**39**	P	**P**	**19 25 13.2**	**-0.1**
	0.4nm,0.7s,baz=345,slow=4.6,SNR=3.9						
	0.4nm,0.7s						

RSNC 13 19:47:56.7±1.2**, 6°.83N**×**73°.13W, h148**^{km}±4^{km}**, ML3.3, Mw3.6, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**193**	⇓*i*P	Pn	19 48 16.8	-0.4
BARC				*e*S	Sn	19 48 32.0	-0.7
BARC				*i*		19 48 33.0	
	comp=Z,485nm,0.3s						
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑*i*P	Pn	19 48 18.6	0.0
BRRC				*e*S	Sn	19 48 35.4	+0.1
BRRC				*i*		19 48 38.9	
	comp=Z,370nm,0.4s						
PAMC	**Pamplona, Colo**	**0.66**	**40**	*e*P	Pn	19 48 19.7	+0.4
PAMC				*e*S	Sn	19 48 36.8	+0.3
PAMC				*i*		19 48 39.4	
	comp=Z,163nm,0.3s						
RUSC	**La Rusia**	**0.93**	**177**	⇓*i*P	Pn	19 48 20.7	-0.5
RUSC				*e*S	Sn	19 48 39.2	-0.8
RUSC				*i*		19 48 42.2	
	comp=Z,117nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*e*P	Pn	19 48 23.3	-1.3
PTBC				*e*S	Sn	19 48 44.5	-1.3
PTBC				*i*		19 48 49.7	
	comp=Z,194nm,0.2s						
TAMC	**Tame, Arauca**	**1.38**	**106**	*e*P	Pn	19 48 25.1	+0.2
TAMC				*e*S	Sn	19 48 45.5	-1.0
TAMC				*i*		19 48 46.3	
	comp=Z,140nm,0.3s						
OCAC	**Ocana**	**1.41**	**352**	*e*P	Pn	19 48 25.1	-0.2
OCAC				*e*S	Sn	19 48 47.0	-0.4
OCAC				*i*		19 48 52.1	
	comp=Z,372nm,0.4s						
SPBC	**San Pablo de B**	**1.50**	**219**	*e*P	Pn	19 48 25.7	-0.5
SPBC				*e*S	Sn	19 48 47.5	-1.3
SPBC				*i*		19 48 52.9	
	comp=Z,328nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	Pn	19 48 28.7	-1.1
ZARC				*e*S	Sn	19 48 54.7	-0.6
ZARC				*i*		19 48 59.6	
	comp=Z,187nm,0.3s						
NORC	**Norcasia**	**2.14**	**234**	*e*P	Pn	19 48 32.8	-0.6
NORC				*e*S	Sn	19 49 01.0	-0.6
NORC				*i*		19 49 05.8	
	comp=Z,145nm,0.2s						
CHIC	**Chingaza**	**2.27**	**195**	*e*P	Pn	19 48 35.2	-0.1
CHIC				*e*S	Sn	19 49 04.6	-0.3
CHIC				*i*		19 49 09.4	
	comp=Z,102nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	*e*P	Pn	19 48 36.8	+1.1
ROSC				*e*S	Sn	19 49 06.9	+1.2
ROSC				*i*		19 49 11.3	
	comp=Z,247nm,0.3s						
HELC	**Santa Helena**	**2.47**	**255**	*e*P	Pn	19 48 38.3	+0.6
HELC				*e*S	Sn	19 49 08.9	-0.2
HELC				*i*		19 49 15.5	
	comp=Z,129nm,0.4s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	Pn	19 48 36.9	-1.5
UREC				*e*S	Sn	19 49 06.8	-3.8
UREC				*i*		19 49 19.0	
	comp=Z,152nm,0.2s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	Pn	19 48 40.3	-0.7
VILC				*e*S	Sn	19 49 14.5	-0.8
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*e*P	Pn	19 48 40.0	-1.4
PTGC				*e*S	Sn	19 49 13.2	-2.7
PTGC				*i*		19 49 14.7	
	comp=Z,87nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*e*P	Pn	19 48 42.0	-0.7
LL6C				*e*S	Sn	19 49 16.9	-1.3
LL6C				*i*		19 49 24.2	
	comp=Z,27nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	Pn	19 48 44.0	-0.4
CBOC				*e*S	Sn	19 49 21.1	-0.2
CBOC				*i*		19 49 37.9	
	comp=Z,32nm,0.7s						
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	Pn	19 48 44.2	-0.7
DBBC				*e*S	Sn	19 49 21.0	-1.2
DBBC				*i*		19 49 29.4	
	comp=Z,162nm,0.3s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	Pn	19 48 47.2	+0.5
ARGC				*e*S	Sn	19 49 24.4	-1.0
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	Pn	19 48 45.5	-1.4
SDV				*e*S	Sn	19 49 22.7	-2.9
ANIL	**Santa Ana**	**3.24**	**224**	*e*P	Pn	19 48 47.9	+0.5
ANIL				*e*S	Sn	19 49 27.2	+0.6
PRAC	**Prado**	**3.56**	**210**	*e*P	Pn	19 48 50.5	-0.7
PRAC				*e*S	Sn	19 49 32.8	-0.6
PRAC				*i*		19 49 37.0	
	comp=Z,86nm,0.3s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	*e*P	Pn	19 48 51.3	-0.3
ORTC				*e*S	Sn	19 49 34.6	+0.5
ORTC				*i*		19 49 40.6	
	comp=Z,46nm,0.4s						
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	Pn	19 48 51.0	-1.6
SJCC				*e*S	Sn	19 49 31.2	-4.7
SJCC				*i*		19 49 39.6	
	comp=Z,31nm,0.3s						
PLMC	**San Jos del P**	**3.67**	**239**	*e*P	Pn	19 48 52.3	-0.5
PLMC				*e*S	Sn	19 49 36.2	0.0
PLMC				*i*		19 49 46.0	
	comp=Z,18nm,0.3s						
LCBC	**Los crdobas,**	**3.79**	**302**	*e*S	Sn	19 49 37.1	-1.7
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	Pn	19 48 57.1	-2.1
CRJC				*e*S	Sn	19 49 44.3	-3.7
CRJC				*i*		19 49 51.9	
	comp=Z,37nm,0.2s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	Pn	19 48 58.9	-1.7
YOTC				*e*S	Sn	19 49 58.0	+7.7
MARP	**Paez Belalcaza**	**4.86**	**216**	*e*P	Pn	19 49 08.5	0.0
MARP				*e*S	Sn	19 50 00.5	-3.9
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	Pn	19 49 11.1	-1.7
GARC				*e*S	Sn	19 50 08.3	-3.7
GARC				*i*		19 50 12.9	
	comp=Z,37nm,0.2s						

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*IDC **13** 19:58:41.9±3.3, 59°.30S×151°.92E, h0^{km}, mb4.0/4, mbtmp3.9/5, ML3.3/1, MS3.8/8, Error ellipse: s-maj=204.2km s-min=20.7km az=78.0*
*NEIC **13** 19:58:44.9±1.2, 59°.4S±0°.1×151°.3E±0°.4, h14^{km}±5^{km}, mb4.2/9, Error ellipse: s-maj=28.7km s-min=14.1km az=104.0*
ISC 13 19:58:44.0±0.8**, 59°.4S**±0°.1×**150°.9E**±0°.2**, h10^{km}, n31, σ1^{s}.33**/14**, mb4.2**/5**, MS3.8**/7**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.58**	**45**	Pn	**Pn**	**20 00 19.4**	**-1.3**
VNDA	**Vanda**	**18.59**	**173**	P	**P**	**20 03 00.0**	**-0.7**
	0.1nm,0.3s,baz=328,slow=11,SNR=10						
	1.0nm,0.7s						
VNDA	**Vanda**	**18.59**	**173**	IAmb	IAmb	20 03 37.2	
	comp=Z,5.6nm,0.6s						
SBA	**Scott Base**	**19.28**	**170**	P	**P**	**20 03 09.3**	**+0.9**
CASY	**Casey**	**19.37**	**232**	P	**P**	**20 03 06.0**	**-3.4**
CASY				IAmb	IAmb	20 03 52.1	
	comp=Z,15nm,1.5s						
RPZ	**Rata Peaks**	**19.95**	**47**	LR	LR	20 09 41.5	
	comp=Z,204nm,18.0s,baz=212,slow=34						
URZ	**Urewera**	**26.97**	**50**	LR	LR	20 13 07.8	
	comp=Z,110nm,21.1s,baz=211,slow=33						
QSPA	**South Pole Qui**	**30.71**	**180**	P	**P**	**20 04 59.4**	**+0.6**
	comp=Z,1.8nm,1.0s,baz=241,slow=5.0,SNR=3.0						
	comp=Z,1.8nm,1.0s						
QSPA	**South Pole Qui**	**30.71**	**180**	IAmb	IAmb	20 05 37.4	
	comp=Z,5.5nm,1.4s						
H01W1	**Cape Leeuwin H**	**34.28**	**299**	T	T	20 41 07.9	
	baz=145,slow=74,SNR=54						
H01W2	**Cape Leeuwin H**	**34.28**	**299**	T	T	20 41 08.2	
	baz=145,slow=74,SNR=70						
H01W3	**Cape Leeuwin H**	**34.30**	**299**	T	T	20 41 12.9	
	baz=145,slow=74,SNR=40						
ASAR	**Alice Springs**	**37.66**	**334**	P	**P**	**20 06 00.2**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=166,slow=9.1,SNR=7.2						
	comp=Z,1.1nm,0.9s						
DZM	**Mont Dzumac**	**38.89**	**23**	LR	LR	20 17 53.9	
	comp=Z,193nm,19.6s,baz=265,slow=30						
CTA	**Charters Tower**	**39.40**	**353**	LR	LR	20 19 34.4	
	comp=Z,114nm,18.3s,baz=172,slow=32						
WR0	**Warramunga Arr**	**41.11**	**336**	P	**P**	**20 06 29.0**	**+1.1**
WB2	**Warramunga Arr**	**41.17**	**336**	P	**P**	**20 06 29.0**	**+0.6**
WB2				IAmb	IAmb	20 06 53.0	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**41.17**	**336**	P	**P**	**20 06 28.6**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=166,slow=7.5,SNR=7.6						
	comp=Z,1.8nm,0.3s						
WRA	**Warramunga Arr**	**41.17**	**336**	IAmb	IAmb	20 06 30.5	
	comp=Z,0.3nm,0.6s						
WB0	**Warramunga Arr**	**41.33**	**336**	P	**P**	**20 06 30.2**	**+0.5**
SNAA	**Sanae**	**47.95**	**191**	P	**P**	**20 07 22.6**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=201,slow=8.6,SNR=2.9						

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SNAA                             LR     LR     20 27 46.1
       comp=Z,115nm,18.3s,baz=115,slow=36
       comp=Z,1.5nm,0.8s
SNAA   Sanae             47.95 191 IAmb   IAmb   20 07 23.0
       comp=Z,4.1nm,1.2s
PMG    Port Moresby      49.95 355 LR     LR     20 26 06.4
       comp=Z,93nm,18.2s,baz=296,slow=33
KAPI   Kappang           59.28 323 LR     LR     20 32 26.3
       comp=Z,41nm,19.0s,baz=174,slow=34
H08S2  Diego Garcia H    77.56 276 T      T      21 35 05.6
       baz=150,slow=76
H08S1  Diego Carcia H    77.57 276 T      T      21 35 10.1
       baz=150
H08S3  Diego Garcia H    77.58 276 T      T      21 35 04.7
       baz=150,slow=76
LBTB   Lobatse           84.67 228 LR     LR     20 47 30.9
       comp=Z,55nm,18.0s,baz=336,slow=34
GERES  GERESS Array B   153.26 266 PKPbc  PKPbc  20 18 41.8 +0.7
       comp=Z,0.1nm,0.3s,baz=180,slow=2.0,SNR=1.5
FINES  FINESS Array B   153.37 298 PKPbc  PKPbc  20 18 41.0 +0.2
       comp=Z,1.0nm,0.9s,baz=52,slow=2.3,SNR=1.2
ESDC   Sonseca Array    154.68 230 PKPab  PKPab  20 19 00.3 +1.0
       comp=Z,0.7nm,0.9s,baz=144,slow=4.9,SNR=3.0
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IDC ***13*** *20:05:30.3±3.4, 51°.50N×176°.70W, h45^{km}±30^{km}, mb3.4/9, mbtmp3.8/12, ML3.4/3, MS2.2/1, Error ellipse: s-maj=37.8km s-min=14.4km az=167.0*

AEIC ***13*** *20:05:30±3.6, 51°.51N±0°.04×176°.67W±0°.07, h41^{km}±6^{km}, Error ellipse: s-maj=6.2km s-min=5.8km az=135.0*

NEIC ***13*** *20:05:30.9±2.7, 51°.66N±0°.09×176°.75W±0°.08, h50^{km}±6^{km}, mb3.8/55, ML3.8(AEIC), Error ellipse: s-maj=13.9km s-min=6.3km az=164.0*

ISC 13 20:05:30.1±0.7, **51°.54N**±0°.08×**176°.70W**±0°.03, **h47**^{km}, **n177**, σ$1\overset{s}{.}$**19**/174, **mb3.8**/11, **Andreanof Islands**

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Code   Station Name         Δ°  AZ°   Phase ID            Time     Res
                                      Op     ISC       h  m  s     ISC
ADK    Adak               0.35   2           Pn     20 05 39.4  0.0
ADK                                   Sn     Sn     20 05 46.6 +0.6
ETKA   Kagalaska Isla     0.37  29           Pn     20 05 40.0 +0.3
KIMD   Kanaga Island      0.40 304           Pn     20 05 40.5 +0.4
KIWB   Kanaga Island      0.42 319           Pn     20 05 40.9 +0.6
KIRH   Kanaga Island      0.44 326           Pn     20 05 41.3 +0.8
KIRH                                         Sn     20 05 49.5 +1.7
KIKV   Kanaga Island      0.45 320           Pn     20 05 41.3 +0.7
KICM   Kanaga Island      0.49 321           Pn     20 05 41.9 +0.8
GSCK   Great Sitkin C     0.58  35           Pn     20 05 43.0 +0.7
GSTD   Great Sitkin T     0.62  33           Pn     20 05 43.5 +0.7
GSTD                                         Sn     20 05 52.7 +0.7
GSMY   Great Sitkin M     0.65  38           Pn     20 05 43.8 +0.7
GSTR   Great Sitkin T     0.69  35           Pn     20 05 44.6 +1.0
TAPA   Tanaga Point A     0.75 292           Pn     20 05 45.1 +0.7
TAFP   Tanaga Falls P     0.88 295           Pn     20 05 47.0 +0.9
TASE   Tanaga Southea     0.88 290           Pn     20 05 47.4 +1.1
GAEA   Gareloi East       1.30 282           Pn     20 05 53.2 +1.4
GALAA  Gareloi Lava P     1.31 281           Pn     20 05 53.3 +1.4
GASW   Gareloi Southw     1.36 281           Pn     20 05 53.8 +1.1
ATKA   Atka Island        1.69  66           Pn     20 05 57.7 +0.5
ATKA                                         Sn     20 06 18.0 +0.4
KOKL   Mount Kliuchef     1.74  62           Pn     20 05 59.5 +1.6
NIKH   Nikolski High      5.03  70    Pn     Pn     20 06 45.6 +2.6
SHEM   Shemya Is, Ala     5.79 285    P      Pn     20 06 53.0 -0.4
       3.8nm,0.3s,baz=86,slow=1.5,SNR=5.3
SHEM                                  S      Sn     20 07 59.9 +1.5
       17nm,0.6s,baz=136,slow=19,SNR=1.6
SHEM                                  LR     LR     20 08 18.4
       comp=Z,21nm,20.2s,baz=71,slow=29
       21nm,0.5s
SMY    Shemya             5.79 285    Pn     Pn     20 06 53.8 +0.5
SMY                                   Sn     Sn     20 07 57.1 -1.3
UNV    Unalaska Valle     6.62  66    Pn     Pn     20 07 07.7 +3.1
SPIA   Saint Paul Isl     6.79  31    Pn     Pn     20 07 08.4 +1.4
AKUT   Akutan             7.11  64    Pn     Pn     20 07 11.8 +0.3
GAMB   Gambell           12.55  10    Pn     Pn     20 08 27.5 +1.8
GAMB   Gambell           12.55  10    P      Pn     20 08 25.3 -0.5
       baz=194
CHIR   Chirikof Islan    13.19  63    Pn     Pn     20 08 36.0 +1.5
SII    Sitkinak Islan    14.12  60           P      20 08 52.0 -1.7
SII    Sitkinak Islan    14.12  60    P      Pn     20 08 47.3 +0.1
       baz=258
ANM    Nome              14.34  20    P      P      20 08 54.1 -1.9
ANM    Nome              14.34  20    P      Pn     20 08 49.3 -0.7
       baz=210
P18K   Big Mountain,     14.44  49    P      Pn     20 08 54.2 +2.7
P18K   Big Mountain,     14.44  49    P      Pn     20 08 51.3 -0.2
       baz=246
O18K   Koktuh Hills      14.64  47    P      P      20 08 58.4 -1.1
O18K   Koktuh Hills      14.64  47    P      Pn     20 08 53.3 -0.8
       baz=245
N18K   Kilae Creek       14.72  43    P      P      20 08 59.5 -0.9
N18K   Kilae Creek       14.72  43    P      Pn     20 08 56.6 +1.4
       baz=241
OHAK   Old Harbor        14.74  58    P      Pn     20 08 56.6 +1.2
       baz=257
TNA    Tin City          14.77  14    P      Pn     20 08 58.1 +2.4
TNA    Tin City          14.77  14    P      Pn     20 08 57.0 +1.4
       baz=202
Q19K   Cape Douglas,     15.03  52    P      Pn     20 09 01.2 +1.9
SVW2   Sparrevohn        15.06  42    P      P      20 09 04.0  0.0
PET    Petropavlovsk     15.14 285           Pn     20 09 00.3 -0.3
KDAK   Kodiak Island     15.24  56    P      Pn     20 09 00.6 -1.3
       0.3nm,0.3s,baz=117,slow=10,SNR=2.3
KDAK                                  S      Sn     20 11 50.1 +0.7
       1.4nm,0.8s,baz=325,slow=14,SNR=1.7
       1.5nm,0.3s
KDAK   Kodiak Island     15.24  56    P      Pn     20 09 02.7 +0.8
KDAK   Kodiak Island     15.24  56    P      Pn     20 09 02.3 +0.4
       baz=256
N19K   Bonanza Creek     15.39  44    P      Pn     20 09 05.8 +1.8
N19K   Bonanza Creek     15.39  44    P      Pn     20 09 04.5 +0.6
       baz=243
P19K   Oil Pt            15.48  49           Pn     20 09 06.8 +1.7
P19K                                  IAmb   IAmb   20 09 14.6
       comp=Z,5.8nm,0.8s
P19K   Oil Pt            15.48  49    P      Pn     20 09 04.6 -0.5
       baz=248
PETK   Petropavlovsk-    15.71 286    P      Pn     20 09 08.1 +0.1
       comp=Z,0.1nm,0.3s,baz=90,slow=15,SNR=2.1
       comp=Z,2.9nm,0.9s
TTA    Tatalina          15.90  36    P      P      20 09 14.1 +0.7
TTA                                   IAmb   IAmb   20 09 20.0
       comp=Z,3.9nm,0.7s
TTA    Tatalina          15.90  36    P      Pn     20 09 10.8 +0.4
       baz=234
L19K   White Mountain    15.92  40    P      P      20 09 13.7 +0.1
L19K                                  IAmb   IAmb   20 09 19.6
       comp=Z,7.8nm,0.8s
L19K   White Mountain    15.92  40    P      Pn     20 09 11.2 +0.6
       baz=238,SNR=14
M19K   Big River Lodg    15.96  41    P      P      20 09 15.4 +1.4
M19K                                  IAmb   IAmb   20 09 20.4
       comp=Z,5.1nm,0.7s
M19K   Big River Lodg    15.96  41    P      Pn     20 09 11.4 +0.2
       baz=239,SNR=8.1
L20K   Farewell, AK      16.46  39    P      Pn     20 09 18.3 +0.8
       baz=239
K20K   Telida            16.86  37    P      Pn     20 09 23.9 +1.3
K20K                                  IAmb   IAmb   20 09 42.5
       comp=Z,6.3nm,0.7s
K20K   Telida            16.86  37    P      Pn     20 09 23.6 +1.1
       baz=236
J20K   Nowinta River     17.31  34    P      Pn     20 09 28.1  0.0
J20K   Nowinta River     17.31  34    P      P      20 09 29.3 +0.3
       baz=234
PPLA   Purkeypile        17.35  40           Pn     20 09 28.5 -0.1
PPLA   Purkeypile        17.35  40    P      P      20 09 30.1 +0.6
       baz=240,SNR=6.7
O22K   Cooper Landing    17.42  49    P      Pn     20 09 29.6 +0.2
SEW    Seward            17.43  50    P      Pn     20 09 29.2 -0.4
SEW                                   IAmb   IAmb   20 09 49.2
       comp=Z,4.9nm,0.9s
SEW    Seward            17.43  50    P      Pn     20 09 30.3 +0.8
       baz=252
CAST   Castle Rocks      17.65  38    P      P      20 09 34.0 +1.2
CAST                                  IAmb   IAmb   20 09 43.2
       comp=Z,3.8nm,0.6s
CAST   Castle Rocks      17.65  38    P      P      20 09 33.8 +1.0
       baz=239
KTH    Kantishna Hill    18.17  39    P      P      20 09 37.4 -1.1
KTH                                   IAmb   IAmb   20 09 43.4
       comp=Z,8.1nm,0.8s
GHO    Glory Hole Cre    18.23  45    P      P      20 09 38.2 -1.0
KNK    Knik Glacier      18.32  46    P      P      20 09 38.3 -1.7
KNK    Knik Glacier      18.32  46    P      P      20 09 39.2 -0.9
       baz=250
TRF    Thorofare Moun    18.37  39    P      P      20 09 40.3 -0.5
TRF                                   IAmb   IAmb   20 10 00.0
       comp=Z,10nm,1.3s
TRF    Thorofare Moun    18.37  39    P      P      20 09 40.9 +0.1
       baz=242
BPAW   Bear Paw Mtn.     18.42  37    P      P      20 09 40.4 -0.8
BPAW   Bear Paw Mtn.     18.42  37    P      P      20 09 41.8 +0.6
       baz=239,SNR=5.8
SML    Sawmill           18.51  45           P      20 09 40.9 -1.3
SML                                   IAmb   IAmb   20 10 30.7
       comp=Z,10nm,1.6s
BILL   Bilibino          18.51 340           P      20 09 40.3 -1.9
IMAR   Indian Mountai    18.57  30    P      P      20 09 43.6 +0.8
I21K   Tanana            18.66  33    P      P      20 09 44.3 +0.6
       baz=235
H21K   Melozitna Rive    18.66  32    P      P      20 09 43.6 -0.2
H21K                                  IAmb   IAmb   20 09 48.2
       comp=Z,13nm,1.9s
H21K   Melozitna Rive    18.66  32    P      P      20 09 44.1 +0.2
       baz=232
RND    Reindeer          18.93  40    P      P      20 09 46.4 -0.4
SCM    Sheep Creek Mo    18.97  46    P      P      20 09 47.2  0.0
SCM    Sheep Creek Mo    18.97  46    P      Pn     20 09 48.6 +0.3
       baz=250
FID    Port Fidalgo      19.03  49    P      P      20 09 47.2 -0.7
FID                                   IAmb   IAmb   20 10 13.2
       comp=Z,4.6nm,0.9s
MCK    McKinley          19.04  39    P      P      20 09 47.5 -0.5
MCK    McKinley          19.04  39    P      P      20 09 47.9 -0.1
       baz=243
WAT6   Susitna Watana    19.05  43    P      P      20 09 48.5 +0.2
       baz=248
DHY    Denali Highway    19.40  42    P      P      20 09 51.4 -0.6
DHY    Denali Highway    19.40  42    P      P      20 09 52.8 +0.8
       baz=247,SNR=12
DIV    Divide            19.46  48    P      P      20 09 53.0 +0.3
KLU    Klutina           19.50  47    P      P      20 09 52.8 -0.3
KLU                                   IAmb   IAmb   20 10 01.6
       comp=Z,13nm,1.9s
KLU    Klutina           19.50  47    P      P      20 09 53.6 +0.6
       baz=253
I23K   Minto, Yukon-K    19.57  35    P      P      20 09 53.4 -0.2
I23K   Minto, Yukon-K    19.57  35    P      P      20 09 54.9 +1.3
       baz=239
M24K   Tolsona, Glenn    19.57  45    P      P      20 09 53.1 -0.8
M24K   Tolsona, Glenn    19.57  45    P      P      20 09 55.2 +1.4
       baz=251
WRH    Wood River Hil    19.71  38    P      P      20 09 53.8 -1.4
WRH                                   IAmb   IAmb   20 10 10.5
       comp=Z,3.0nm,0.8s
H23K   Yukon River       19.86  34    P      P      20 09 54.6 -2.3
H23K                                  IAmb   IAmb   20 10 29.9
       comp=Z,10nm,1.8s
H23K   Yukon River       19.86  34    P      P      20 09 57.7 +0.7
       baz=237
MDM    Murphy Dome       19.89  37    P      P      20 09 55.5 -1.7
MDM                                   IAmb   IAmb   20 10 18.2
       comp=Z,6.1nm,1.0s
CCB    Clear Creek Bu    19.90  38    P      P      20 09 55.3 -2.0
CCB                                   IAmb   IAmb   20 10 12.1
       comp=Z,5.0nm,1.3s
BMRM   Bremner River     19.97  49    P      P      20 09 56.1 -2.1
BMRM                                  IAmb   IAmb   20 10 06.7
       comp=Z,6.3nm,1.3s
SEY    Seymchan          20.02 317    P      Pn     20 10 00.8 +0.2
       comp=Z,1.0nm,0.5s,baz=6.6,slow=23,SNR=2.0
       comp=Z,1.0nm,0.5s
HDA    Harding Lake      20.12  39    P      P      20 09 58.3 -1.4
HDA    Harding Lake      20.12  39    P      P      20 10 01.2 +1.5
       baz=244
N25K   Chitina, Valde    20.14  48    P      P      20 09 58.6 -1.4
N25K   Chitina, Valde    20.14  48    P      P      20 10 01.3 +1.2
       baz=254
PAX    Paxson            20.17  43    P      P      20 09 58.9 -1.5
PAX                                   IAmb   IAmb   20 10 05.0
       comp=Z,3.4nm,0.6s
PAX    Paxson            20.17  43    P      Pn     20 10 02.1 -0.5
       baz=250,SNR=8.0
SUCK   Suckling Hills    20.19  52    P      P      20 10 00.1 -0.4
POKR   Poker Plat Res    20.26  37    P      P      20 10 00.6 -0.6
       baz=242
ILAR   Eielson Array     20.30  38    P      P      20 10 02.8 +1.0
       comp=Z,0.5nm,0.5s,baz=239,slow=9.9,SNR=11
       comp=Z,0.5nm,0.5s
ILAR   Eielson Array     20.30  38    P      P      20 10 00.0 -1.7
K24K   Donnelly Dome     20.34  41    P      P      20 10 02.5 +0.3
       baz=247
H24K   Noodor Dome       20.45  35    P      P      20 10 00.6 -2.7
H24K   Noodor Dome       20.45  35    P      P      20 10 04.6 +1.3
       baz=239
COLD   Coldfoot          20.45  30    P      P      20 10 02.2 -1.1
COLD                                  IAmb   IAmb   20 10 10.1
       comp=Z,2.8nm,0.8s
COLD   Coldfoot          20.45  30    P      P      20 10 04.1 +0.8
       baz=233
GLB    Gilahina Butte    20.46  48    P      P      20 10 01.9 -1.6
GLB                                   IAmb   IAmb   20 10 12.1
       comp=Z,11nm,1.9s
VRDI   Verde Repeater    20.58  49    P      P      20 10 02.9 -2.1
VRDI                                  IAmb   IAmb   20 10 42.3
       comp=Z,13nm,1.9s
RIDG   Independent Ri    20.70  42    P      P      20 10 04.0 -2.1
RIDG                                  IAmb   IAmb   20 10 28.8
       comp=Z,9.2nm,1.3s
RIDG   Independent Ri    20.70  42    P      P      20 10 06.1 +0.1
       baz=249,SNR=5.4
J25K   Salcha River,     20.83  39    P      P      20 10 04.0 -3.4
J25K                                  IAmb   IAmb   20 10 14.2
       comp=Z,11nm,1.8s
J25K   Salcha River,     20.83  39    P      P      20 10 07.3 -0.2
       baz=246
DOT    Dot Lake          21.00  42    P      P      20 10 05.9 -3.4
DOT                                   IAmb   IAmb   20 10 14.8
       comp=Z,4.3nm,0.7s
L26K   Log Cabin Wild    21.10  44    P      P      20 10 08.8 -1.6
L26K                                  IAmb   IAmb   20 10 14.1
       comp=Z,3.3nm,0.7s
L26K   Log Cabin Wild    21.10  44    P      P      20 10 11.4 +1.0
       baz=252
SCRK   Sand Creek        21.14  41    P      P      20 10 08.6 -2.3
SCRK                                  IAmb   IAmb   20 10 22.7
       comp=Z,5.2nm,0.8s
SCRK   Sand Creek        21.14  41    P      P      20 10 11.3 +0.4
       baz=249,SNR=7.9
J26L   Joseph Creek      21.50  40    P      P      20 10 14.5 -0.2
       baz=248,SNR=6.8
TOLK   Toolik Lake Re    21.52  27    P      P      20 10 13.5 -1.2
TOLK   Toolik Lake Re    21.52  27    P      P      20 10 14.8 +0.1
       baz=231
M27K   Edge Creek, AK    21.57  46    P      P      20 10 15.2 -0.3
M27K   Edge Creek, AK    21.57  46    P      P      20 10 16.6 +1.1
       baz=256
L27K   Beaver Creek,     21.78  45    P      P      20 10 17.7 +0.1
L27K                                  IAmb   IAmb   20 10 26.0
       comp=Z,5.1nm,1.6s
L27K   Beaver Creek,     21.78  45    P      P      20 10 18.5 +0.9
       baz=254
BCAR   Beaver Creek A    21.80  45    P      P      20 10 17.3 -0.5
K27K   Chicken           21.95  42    P      P      20 10 18.7 -0.8
K27K   Chicken           21.95  42    P      P      20 10 20.3 +0.9
       baz=252
YUK3   Moose Creek       22.10  48    P      P      20 10 21.7 +0.5
       baz=259
BMAR   Burnt Mountain    22.39  33    P      P      20 10 24.1  0.0
EGAK   Eagle             22.57  40    P      P      20 10 24.9 -1.1
EGAK   Eagle             22.57  40    P      P      20 10 26.4 +0.4
       baz=251
I29M   Ogilvie Camp,     23.90  40    P      P      20 10 36.6 -2.5
I29M                                  IAmb   IAmb   20 10 38.9
       comp=Z,2.7nm,0.8s
I29M   Ogilvie Camp,     23.90  40    P      P      20 10 38.3 -0.8
       baz=253
YKA    Yellowknife Ar    34.17  47    P      P      20 12 10.1 -0.2
       comp=Z,0.4nm,0.6s,baz=278,slow=8.7,SNR=4.4
YKA                                   PcP    PcP    20 14 46.8 +0.6
       comp=Z,0.9nm,0.8s,baz=282,slow=2.7,SNR=9.4
       comp=Z,0.4nm,0.6s
H11N2  WAKE ISLAND Hy    34.26 208    T      T      20 48 34.9
       baz=17,slow=76,SNR=916
H11N3  WAKE ISLAND Hy    34.27 208    T      T      20 48 34.4
       baz=17,slow=76,SNR=803
H11N1  WAKE ISLAND Hy    34.28 208    T      T      20 48 34.8
       baz=17,slow=76,SNR=868
H11S1  WAKE ISLAND Hy    35.47 208    T      T      20 50 08.6
       baz=17,slow=76,SNR=580
H11S2  WAKE ISLAND Hy    35.49 208    T      T      20 50 09.9
       baz=17,slow=76,SNR=431
H11S3  WAKE ISLAND Hy    35.49 208    T      T      20 50 13.0
       baz=17,slow=76,SNR=298
NEW    Newport           37.59  71    P      P      20 12 38.1 -1.8
       baz=298
EGMT   Eagleton          42.01  67    P      P      20 13 14.9 -1.7
       baz=301
BOZ    Bozeman (W)       42.19  71    P      P      20 13 16.6 -1.6
       baz=302
PDAR   Pinedale Array    45.01  74    P      P      20 13 41.9 +0.9
       comp=Z,0.8nm,0.6s,baz=322,slow=3.8,SNR=10.0
       comp=Z,0.8nm,0.6s
TXAR   Lajitas Array     57.33  83    P      P      20 15 14.1 +0.7
       comp=Z,0.4nm,0.4s,baz=295,slow=4.9,SNR=1.6
       comp=Z,0.4nm,0.4s
CCM    Cathedral Cave    58.77  67    P      P      20 15 22.0 -1.1
       baz=313
U40A   Yellville         59.00  69    P      P      20 15 23.7 -1.1
       baz=314
W39A   Magazine          59.26  71    P      P      20 15 24.5 -2.1
       baz=314
W41B   Gary Mavity, V    60.18  70    P      P      20 15 32.1 -0.8
       baz=314
WVT    Waverly           62.07  66    P      P      20 15 44.8 -0.9
       baz=315
TZTN   Tazewell          64.19  63    P      P      20 16 00.0 +0.2
       baz=316
KMSC   Kings Mountain    66.44  63    P      P      20 16 14.0 -0.4
       baz=317
GOGA   Godfrey           66.51  66    P      P      20 16 14.0 -0.8
       baz=317
CMAR   Chiang Mai Arr    72.30 277    P      P      20 16 51.6 +0.9
       comp=Z,0.4nm,0.3s,baz=34,slow=6.7,SNR=4.8
       comp=Z,0.4nm,0.3s
WRA    Warramunga Arr    83.05 226    P      P      20 17 50.1 -0.3
       comp=Z,0.5nm,0.6s,baz=35,slow=6.2,SNR=2.9
       comp=Z,0.5nm,0.6s
BRTR   Keskin Array B    85.33 337    P      P      20 18 02.0 -0.1
       comp=Z,0.7nm,0.8s,baz=100,slow=3.0,SNR=4.6
       comp=Z,0.7nm,0.8s
ASAR   Alice Springs     86.50 224    P      P      20 18 08.2 +0.5
       comp=Z,0.7nm,0.8s,baz=25,slow=5.0,SNR=6.4
       comp=Z,0.7nm,0.8s
H03N2  Juan Fernandez   119.93 107    T      T      22 35 58.9
       baz=317,slow=77,SNR=59
H03N1  Juan Fernandez   119.94 107    T      T      22 36 00.2
       baz=317,slow=77,SNR=37
H03N3  Juan Fernandez   119.95 107    T      T      22 35 55.8
       baz=317,slow=77,SNR=94
BOSA   Boshof           151.81 316    PKPbc  PKPbc  20 25 18.9 -0.5
       comp=Z,2.0nm,0.5s,baz=3.9,slow=2.3,SNR=9.9
```

TUL ***13*** *20:30:04.9±1.6, 36°.375N±0°.009×97°.72W±0°.01, h5^{km}±7^{km}, ML2.5, mb_Lg2.2/21(NEIC), Error ellipse: s-maj=1.6km s-min=0.7km az=139.0*

NEIC 13 20:30:04.9±1.5, **36°.38N**±0°.01×**97°.71W**±0°.01, **h7**^{km}±7^{km}, **Error ellipse: s-maj=1.7km s-min=1.6km az=50.0, Oklahoma**

```
Code   Station Name         Δ°  AZ°   Phase ID            Time     Res
                                      Op     ISC       h  m  s     ISC
OKCFA  Oklahoma City      0.99 167    Pg     Pg     20 30 23.0 -0.8
OKCSW  OKLAHOMA CITY      1.00 167    Pg     Pg     20 30 23.6 -0.4
U32A   Winter Ranch,      1.04 270    Pg     Pg     20 30 24.3 -0.6
T35A   Sooner Cattle      1.10  61    Pg     Pg     20 30 26.0 -0.1
FNO    Franklin           1.15 167    Pg     Pg     20 30 25.6 -1.4
TUL1   Leonard            1.62 106           Pn     20 30 32.6 -1.4
X34A   Smith Ranch, M     1.78 183           Pb     20 30 37.0 -0.8
X34A                                  IAmb_Lg       20 31 00.5
       comp=Z,10nm,1.2s
WMOK   Wichita Mounta     1.86 208           Pn     20 30 37.8 +0.6
R32A   Long Quarter,      2.19 339           Pn     20 30 41.3 -0.4
X37A   Clayton            2.62 132    Pn     Pn     20 30 47.3 -0.3
X37A                                  IAmb_Lg       20 31 32.0
       comp=Z,8.8nm,0.7s
HHAR   Hobbs              3.05  91    Pn     Pn     20 30 52.2 -1.4
W39A   Magazine           3.41 109    Pn     Pn     20 30 59.9 +1.5
AMTX   Amarillo           3.56 246    IAmb_Lg       20 31 57.9
       comp=Z,6.3nm,0.9s
S39A   Bolivar            3.75  68           Pn     20 31 03.1 -0.1
MIAR   Mount Ida          3.84 117           Pn     20 31 03.3 -1.1
U40A   Yellville          3.92  89           Pn     20 31 05.1 -0.5
ABTX   Abilene, Hawle     4.07 204    IAmb_Lg       20 32 24.6
       comp=Z,4.2nm,0.8s
X40A   Basin Creek Fa     4.41 114    Pn     Pn     20 31 11.1 -1.2
MGMO   Mountain Grove     4.44  78    Pn     Pn     20 31 11.9 -0.8
MGMO                                  IAmb_Lg       20 32 24.3
       comp=Z,3.5nm,0.7s
WHAR   Wooly Hollow       4.54 102    Pn     Pn     20 31 14.2 +0.2
WHAR                                  IAmb_Lg       20 32 37.2
       comp=Z,5.5nm,0.8s
FCAR   Ozark Folk Cen     4.55  95    Pn     Pn     20 31 15.1 +0.9
W41B   Gary Mavity, V     4.60 104    Pn     Pn     20 31 16.0 +1.1
P38A   Dawn               4.62  44           Pn     20 31 15.8 +0.6
P38A                                  IAmb_Lg       20 32 38.4
       comp=Z,5.4nm,0.7s
Z41A   Richland Creek     5.10 126    IAmb_Lg       20 32 43.1
       comp=Z,5.0nm,0.7s
LCAR   Lake Charles       5.31  91    Pn     Pn     20 31 26.4 +1.8
CCM    Cathedral Cave     5.43  70    Pn     Pn     20 31 27.5 +1.3
P40A   Paris              5.47  53    Pn     Pn     20 31 25.3 -1.5
N38A   Joes South For     5.63  37    Pn     Pn     20 31 27.6 -1.5
JCT    Junction City      6.14 197    IAmb_Lg       20 33 35.6
       comp=Z,4.2nm,0.8s
```

DDA ***13*** *20:40:02.8±0.0, 37°.45N×26°.66E, h5^{km}±2^{km}, ML2.4*

ISK ***13*** *20:40:02.9, 37°.45N×26°.68E, h8^{km}, ML2.7/17*

ATH ***13*** *20:40:03.9, 37°.48N×26°.69E, h14^{km}±4^{km}, ML2.8/5, Error ellipse: s-maj=5.5km s-min=1.1km az=76.0*

THE ***13*** *20:40:03.7, 37°.49N×26°.69E, h13^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=1.3km s-min=0.3km az=59.0*

ISC 13 20:40:03.4±0.9, **37°.47N**±0°.02×**26°.67E**±0°.02, **h12**^{km}±8^{km}, **n40**, σ$0\overset{s}{.}$**56**/60, **Dodecanese Islands**

```
Code   Station Name         Δ°  AZ°   Phase ID            Time     Res
                                      Op     ISC       h  m  s     ISC
SMG    Samos              0.28  28    P      Pg     20 40 09.0 -0.2
SMG                                   S      Sg     20 40 13.4 +0.4
SMG                                   AML    AML    20 40 13.8
       comp=N,9148µm,0.3s
SMG                                   AML    AML    20 40 13.8
       comp=E,8326µm,0.2s
SMG    Samos              0.28  28    P      Pg     20 40 08.9 -0.2
SMG                                   S      Sg     20 40 13.0  0.0
       comp=E,4µm,0.2s
DDIM   Aydin, Didim       0.45  91    P      Pg     20 40 12.2 -0.2
DDIM                                  S      Sg     20 40 19.0 +0.6
DDIM                                i AML    AML    20 40 19.0
       comp=E,228nm,0.6s
DDIM                                i AML    AML    20 40 24.0
       comp=E,201nm,0.5s
GCAM   G?zelcaml?         0.50  62    PG     Pg     20 40 13.3  0.0
GCAM                                  SG     Sb     20 40 21.1 -0.3
GCAM   G?zelcaml?         0.50  62    P      Pg     20 40 13.3  0.0
GCAM                                  S      Sg     20 40 20.6 +0.7
GCAM                                i AML    AML    20 40 22.0
       comp=E,846nm,0.4s
DGB    zmir               0.61  16    P      Pg     20 40 14.9 -0.4
DGB                                   S      Sb     20 40 24.4 -0.1
DGB                                 i AML    AML    20 40 26.0
       comp=E,520nm,0.5s
DGB                                 i AML    AML    20 40 27.0
       comp=E,186nm,0.6s
BODT   Bodrum             0.65 128    PG     Pg     20 40 15.7 -0.4
BODT                                  SG     Sg     20 40 24.9 +0.3
BDRM   Kayabasi           0.73 123    P      Pg     20 40 16.7 -1.0
BDRM                                  S      Sb     20 40 28.0 -0.1
BDRM                                i AML    AML    20 40 31.0
       comp=E,104nm,0.3s
KOSK   Kos Island         0.75 161    P      Pg     20 40 18.3 +0.3
KOSK                                  S      Sb     20 40 28.9 +0.3
KOSK                                  AML    AML    20 40 32.9
       comp=N,6642µm,0.3s
KOSK                                  AML    AML    20 40 34.6
       comp=E,6974µm,0.4s
KOSK   Kos Island         0.75 161    PG     Pg     20 40 17.7 -0.3
KOSK                                  SG     Sg     20 40 28.4 +0.5
ZEYE   Izmir, Urla-Ze     0.78 350    P      Pg     20 40 18.4 -0.2
ZEYE                                  S      Sb     20 40 29.3 -0.3
ZEYE                                i AML    AML    20 40 31.0
       comp=E,298nm,0.3s
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE				i AML	AML	20 40 32.0	
	comp=E,505nm,0.5s						
URLA	Izmir	0.89	356	PG	Pg	20 40 20.3	-0.5
URLA				SG	Sn	20 40 34.1	-0.6
URLA	Izmir	0.89	356	P	Pg	20 40 20.2	-0.5
URLA				S	Sn	20 40 34.7	0.0
URLA				i AML	AML	20 40 37.0	
	comp=E,217nm,1.0s						
URLA				i AML	AML	20 40 38.0	
	comp=E,248nm,0.5s						
MLSB	Milas	0.90	101	PG	Pg	20 40 20.3	-0.4
NISR	Nisiros	0.93	157	P	Pn	20 40 22.2	-0.1
NISR				S	Sn	20 40 34.9	-0.6
NISR				AML	AML	20 40 39.9	
	comp=E,1126µm,0.3s						
NISR				AML	AML	20 40 40.5	
	comp=N,779µm,0.3s						
NISR	Nisiros	0.93	157	P	Pg	20 40 21.2	-0.1
NISR				S	Sb	20 40 34.6	+0.9
	comp=N,465nm,0.3s						
BLCB	Balcova	0.96	18	PG	Pg	20 40 21.8	-0.2
AYDN	Tasoluk	0.98	78	P	Pg	20 40 21.7	-0.6
AYDN				S	Sb	20 40 35.1	-0.1
AYDN				i AML	AML	20 40 36.0	
	comp=N,86nm,0.4s						
AYDN				i AML	AML	20 40 40.0	
	comp=N,85nm,0.3s						
APE	Apeiranthos	0.99	247	P	Pg	20 40 22.2	-0.4
APE				S	Sb	20 40 36.8	+1.2
APE				AML	AML	20 40 38.5	
	comp=N,461µm,0.4s						
APE				AML	AML	20 40 40.6	
	comp=E,467µm,0.5s						
APE	Apeiranthos	0.99	247	P	Pg	20 40 22.2	-0.4
APE				S	Sb	20 40 36.7	+1.0
	comp=E,235nm,0.3s						
APE	Apeiranthos	0.99	247	PG	Pg	20 40 22.2	-0.4
DAT	Datca	1.03	135	P	Pb	20 40 22.6	-0.7
DAT				i AML	AML	20 40 41.0	
	comp=E,75nm,0.2s						
DAT				i AML	AML	20 40 41.0	
	comp=E,118nm,0.3s						
CHOS	Chios island	1.04	332	P	Pb	20 40 22.9	-0.5
CHOS				AML	AML	20 40 39.1	
	comp=E,834µm,0.5s						
CHOS				AML	AML	20 40 39.5	
	comp=N,637µm,0.7s						
CHOS	Chios island	1.04	332	P	Pb	20 40 22.6	-0.8
CHOS				S	Sg	20 40 36.9	-0.2
	comp=N,365nm,0.6s						
CHOS	Chios island	1.04	332	PG	Pb	20 40 23.4	0.0
CHOS				SG	Sn	20 40 38.6	+0.2
AYDB	Zeytinkoy-Aydi	1.08	63	PN	Pb	20 40 23.7	-0.4
YER	Yerkesik	1.32	104	PN	Pb	20 40 28.2	-0.1
TURN	Turunc	1.43	118	PN	Pn	20 40 28.7	-0.5
ZEDA	zmir-Bergama	1.53	12	P	Pn	20 40 30.0	-0.6
ZEDA				i AML	AML	20 40 59.0	
	comp=N,28nm,0.5s						
ZEDA				i AML	AML	20 40 59.0	
	comp=N,38nm,1.1s						
DKL	Dikili	1.61	6	PN	Pb	20 40 33.0	-0.1
ARG	Arkhangelos	1.71	137	PN	Pn	20 40 32.8	-0.2
DALY	Dalyan (Mula)	1.71	112	PN	Pn	20 40 33.6	+0.6
KULA	Kula-Manisa	1.89	56	PN	Pn	20 40 36.6	+1.1
KARP	Karpathos	1.96	168	PN	Pn	20 40 36.2	-0.2
BUHA	Balikesir, Bur	2.06	9	P	Pn	20 40 37.4	-0.4
BUHA				i AML	AML	20 41 17.0	
	comp=N,37nm,0.8s						
BUHA				i AML	AML	20 41 20.0	
	comp=N,43nm,0.6s						
STEP	BALIKESIR_Sava	2.08	23	P	Pg	20 40 43.2	-0.1
STEP				i AML	AML	20 41 14.0	
	comp=N,32nm,0.4s						
STEP				i AML	AML	20 41 17.0	
	comp=N,46nm,0.6s						
FETY	Fethiye	2.10	113	PN	Pn	20 40 39.4	+1.0
FETY	Fethiye	2.10	113	P	Pb	20 40 41.0	-0.4
USAK	Uak-Merkez	2.23	55	P	Pg	20 40 46.7	+0.5
USAK				i AML	AML	20 41 16.0	
	comp=N,44nm,1.4s						
USAK				i AML	AML	20 41 18.0	
	comp=N,12nm,1.7s						
EZN	Ezine	2.37	354	PN	Pn	20 40 43.9	+1.8

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*PRU **13** 20:42:38.6±0.0, 51.°22N×18.°97E, h0^{km}, Belchatow*

ISC 13 20:42:40.3±1.9**, 51.°13N**±0.°07×**18.°98E**±0.°05**, h2**^{km}±11^{km}**,**
n17, σ1^{s}22/28**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	1.05	150	Pb	Pg	20 42 59.9	-0.5
OJC				ePg	Pb	20 43 00.5	-0.7
OJC				eSg	Sb	20 43 15.8	+0.4
OKC	Ostrava-Krasne	1.40	203	ePG	Pg	20 43 06.8	-0.2
OKC				eSG	Sn	20 43 26.5	+0.7
	comp=Z,17nm,0.4s						
MORC	Moravsky Berou	1.63	215	ePN	Pn	20 43 09.7	-0.4
MORC				eSG	Sg	20 43 33.2	+0.5
KSP	Ksiaz	1.72	262	ePg	Pg	20 43 13.0	-0.2
KSP				eSg	Sg	20 43 37.5	+2.0
KRLC	Kraliky	1.75	234	ePG	Pn	20 43 11.5	-0.2
KRLC				eSG	Sb	20 43 35.6	0.0
OSTC	Ostas	1.84	253	ePG	Pn	20 43 12.0	-0.9
OSTC				eSG	Sb	20 43 37.1	-1.1
DPC	Dobruska-Polom	1.86	246	ePG	Pn	20 43 12.8	-0.4
DPC				eSG	Sn	20 43 36.8	-0.4
	comp=Z,5.7nm,0.6s						
MAUC	Maruska	1.91	203	ePG	Pn	20 43 13.6	-0.3
MAUC				eSG	Sg	20 43 42.7	+1.0
	comp=Z,21nm,0.7s						
CHVC	Chvalec	1.93	255	ePG	Pn	20 43 13.4	-0.7
LANS	Liptovska Anna	2.00	171	ePG	Pg	20 43 18.3	-0.4
LANS				eSG	Sb	20 43 44.5	+1.6
LANS				eLG	Lg	20 43 52.6	
VRAC	Vranov	2.38	221	eSG	Sg	20 43 57.3	+0.6
VRAC	Vranov	2.38	221	ePN	Pn	20 43 21.1	+0.8
VYHS	Vyhne	2.64	182	eSN	Sn	20 43 57.2	+0.8
KRUC	Moravsky	2.65	220	ePN	Pn	20 43 24.3	+0.2
KRUC				eSG	Sg	20 44 04.6	-0.9
BRG	Berggiesshubel	3.19	267	e(P)	Pg	20 43 41.2	-0.2
BRG				Amp		20 43 43.6	
	comp=Z,1.8nm,0.5s						
BRG	Berggiesshubel	3.19	267	Sg	Sg	20 44 26.6	+3.8
BRG				Amp		20 44 27.3	
	comp=Z,3.2nm,0.5s						
KHC	Kasperske Hory	4.01	242	eSG	Sg	20 44 46.6	-2.3

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*NEIC **13** 20:43:15.4±1.9, 5.°94N±0.°06×127.°4E±0.°1, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=19.0km s-min=4.5km az=62.0*

*IDC **13** 20:43:18.8±2.2, 6.°00N×127.°67E, h41^{km}±17^{km}, mb3.8/12, mbtmp4.0/14, ML3.9/2, MS3.1/7, Error ellipse: s-maj=28.7km s-min=11.5km az=52.0*

*MAN **13** 20:43:20.0, 5.°97N×127.°36E, h31^{km}, mb5.1, ML4.0, MS4.1, Hypocentre not reviewed by the ISC*

ISC 13 20:43:14.5±0.6**, 5.°85N**±0.°05×**127.°39E**±0.°06**, h10**^{km}**, n42,**
σ1^{s}73/41**, mb4.3**/17**, MS3.0**/4**, 1C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.57	314	⇓eP	Pg	20 43 45.6	+0.9
DDMP	Don Marcelino,	1.69	279	⇓eP	Pb	20 43 46.4	+0.7
DDMP				eS	Sg	20 44 11.0	+2.0
DAV	Davao City (W)	2.17	304	P	Pb	20 43 54.4	+0.4
	52nm,0.3s,baz=90,slow=3.6,SNR=6.3						
DAV				S	Sg	20 44 22.8	-1.6
	308nm,0.6s,baz=34,slow=16,SNR=6.2						
DAV				LR	LR	20 45 46.9	
	comp=Z,435nm,18.1s,baz=203,slow=64						
	206nm,0.4s						
DAV	Davao City (W)	2.17	304		Pn	20 43 50.1	-0.7
GSPH	General Santos	2.44	276	⇓iP	Pn	20 43 54.9	+0.3
BIPH	Bislig	2.54	336	⇓eP	Pn	20 43 57.4	+1.6
BIPH				eS	Sg	20 44 39.5	+3.4
KCP	Kidapawan	2.56	297	⇑eP	Pg	20 44 10.2	+6.5
KCP				i S	Sb	20 44 31.5	-0.8
BUTP	Butuan	3.57	331	⇓eP	Pb	20 44 16.4	-1.2
TNTI	Ternate	5.04	180		Pn	20 44 31.3	+1.2
SIJI	Sorong	7.71	150	P	Pn	20 45 08.3	+1.4
	1.0nm,0.3s,baz=321,slow=24,SNR=2.2						
	2.4nm,0.4s						
TOLI2	Tolitoli	8.10	235	Pn	Pn	20 45 13.3	+1.0
MYLDM	Lahad Datu	8.88	266	Pn	Pn	20 45 25.3	+2.4
KAPI	Kappang	13.21	215	LR	LR	20 52 03.8	
	comp=Z,88nm,18.9s,baz=33,slow=39						
GUMO	Guam	18.85	65	LR	LR	20 53 44.0	
	comp=Z,29nm,21.9s,baz=258,slow=34						
LEM	Lembang	23.41	238	LR	LR	20 58 59.9	
	comp=Z,60nm,18.7s,baz=69,slow=40						
JCJ	Chichijima	25.40	32	P	P	20 48 45.7	+3.5
	28nm,0.5s,baz=294,slow=18,SNR=9.7						
WB0	Warramunga Arr	26.37	165	P	P	20 48 52.7	+1.6
WB0				IAmb	IAmb	20 49 09.7	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	26.52	165	P	P	20 48 54.7	+2.2
	comp=Z,0.7nm,0.5s,baz=343,slow=10,SNR=11						
WRA				ScP	ScP	20 55 53.9	-3.7
	comp=Z,0.5nm,1.0s,baz=348,slow=2.7,SNR=1.5						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	26.52	165	P	P	20 48 53.2	+0.7
WB2	Warramunga Arr	26.52	165	P	P	20 48 55.5	+3.0
WB2				IAmb	IAmb	20 49 09.6	
	comp=Z,8.0nm,1.1s						
PSI	Prapat	28.55	265	LR	LR	21 01 19.4	
	comp=Z,38nm,19.8s,baz=88,slow=38						
ASAR	Alice Springs	30.01	168	P	P	20 49 24.6	+0.9
	comp=Z,0.4nm,0.6s,baz=356,slow=8.5,SNR=7.6						
ASAR				ScP	ScP	20 56 04.7	-3.7
	comp=Z,0.3nm,0.6s,baz=346,slow=2.8,SNR=4.7						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	30.01	168	P	P	20 49 22.0	-1.6
GSI	Gunungsitoli	30.09	263	P	P	20 49 21.6	-2.9
CMAR	Chiang Mai Arr	30.45	297	P	P	20 49 27.8	+0.2
	comp=Z,0.3nm,0.7s,baz=110,slow=6.4,SNR=4.4						
CMAR				LR	LR	21 01 33.3	
	comp=Z,21nm,21.5s,baz=115,slow=36						
	comp=Z,0.3nm,0.7s						
MJAR	Matsushiro Arr	32.12	17	P	P	20 49 40.1	-2.0
	comp=Z,0.8nm,0.6s,baz=184,slow=8.8,SNR=2.8						
STKA	Stephens Creek	39.88	161	P	P	20 50 47.9	-0.7
	comp=Z,0.6nm,0.4s,baz=11,slow=5.2,SNR=1.3						
	comp=Z,0.6nm,0.4s						
PALK	Pallekele	46.39	274	LR	LR	21 13 43.7	
	comp=Z,42nm,18.3s,baz=274,slow=39						
MK31	Makanchi Array	56.22	324	P	P	20 52 55.0	+0.1
MK31				IAmb	IAmb	20 53 10.1	
	comp=Z,7.6nm,1.5s						
MKAR	Makanchi Array	56.22	324	P	P	20 52 55.3	+0.4
	comp=Z,2.5nm,0.6s,baz=119,slow=7.6,SNR=19						
	comp=Z,2.5nm,0.6s						
ZALV	Zalesovo Beam	59.03	332	P	P	20 53 14.4	-0.1
	comp=Z,1.1nm,0.5s,baz=123,slow=7.3,SNR=5.3						
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	60.34	327	P	P	20 53 24.1	+0.5
KURBB	Kurchatov Arra	60.34	326	P	P	20 53 24.2	+0.6
	comp=Z,3.8nm,0.6s,baz=125,slow=6.8,SNR=62						
	comp=Z,3.8nm,0.6s						
KKAR	Karatay Array	62.16	316	P	P	20 53 35.3	-0.8
ABKAR	Akbulak array	70.95	320	P	P	20 54 32.3	+0.2
ABKAR	Akbulak array	70.95	320	P	P	20 54 32.3	+0.2
AKTO	Aktyubinsk	72.43	321	P	P	20 54 41.1	0.0
	comp=Z,2.0nm,0.7s,baz=94,slow=7.7,SNR=7.4						
	comp=Z,2.0nm,0.7s						
ARU	Arti	73.52	327	P	P	20 54 47.1	-0.3
	comp=Z,0.6nm,0.5s,baz=20,slow=2.9,SNR=5.5						
	comp=Z,0.6nm,0.5s						
ARU	Arti	73.52	327	IAmb	IAmb	20 55 00.7	
	comp=Z,12nm,1.6s						
ASF	Jabal al Asfar	87.35	302	P	P	20 56 03.0	+0.7
	comp=Z,1.4nm,0.6s,baz=79,slow=5.2,SNR=5.0						
	comp=Z,1.4nm,0.6s						
BRTR	Keskin Array B	89.19	310	P	P	20 56 09.2	-1.8
	comp=Z,0.5nm,0.7s,baz=69,slow=7.9,SNR=3.2						
	comp=Z,0.5nm,0.7s						
FINES	FINESS Array B	90.29	332	P	P	20 56 15.5	+0.1
	comp=Z,1.9nm,1.0s,baz=57,slow=7.0,SNR=3.5						
	comp=Z,1.9nm,1.0s						

TAP 13 20:57:30.2, 22.°84N×120.°92E, h6^{km}, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	0.14	97	i P	Pg	20 57 34.4	+1.2
	baz=97						
LONT	Longtian	0.21	71	P	Pg	20 57 35.4	+1.0
	baz=70						
TTN	Taitung	0.23	112	eP	Pg	20 57 35.9	+1.2
	baz=111						
ECL	Taimali	0.24	172	P	Pg	20 57 36.0	+1.0
	baz=170						
SSD	Sandimen	0.28	251	P	Pb	20 57 37.0	-0.7
	baz=249						
TSMG	Majia	0.28	242	eP	Pb	20 57 37.0	-0.8
	baz=242						
SLGT	Liugui	0.29	302	eP	Pg	20 57 36.9	+0.8
	baz=301						
MASBT	Mashibuluo	0.35	230	i P	Pb	20 57 38.2	-0.5
	baz=229						
STYH	Taoyuan	0.36	338	eP	Pb	20 57 38.4	-0.5
	baz=339						
ELDTW	Lidau	0.36	15	eP	Pb	20 57 38.4	-0.7
	baz=15						
EDH	Donghe	0.38	69	eP	Pb	20 57 39.0	-0.4
	baz=69						
EDH				eS	Sb	20 57 45.0	-0.5
	baz=69						
EAST	Anshuo	0.46	188	eP	Pb	20 57 40.4	-0.4
	baz=187						
EAST				eS	Sb	20 57 47.8	0.0
	baz=187						
FULB	Fuli	0.50	44	eP	Pb	20 57 41.5	+0.1
	baz=43						

GUC 13 21:05:21.7±0.8**, 30.°60S×71.°34W, h52**^{km}±2^{km}**, ML3.8,**
4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.26	253	⇑iP	Pn	21 05 30.3	-0.4
CO06				i S	Sn	21 05 37.1	-0.1
CO06				IAML		21 05 39.7	
	comp=E,8µm,0.1s						
GO04	Tololo Observa	0.63	48	⇓iP	Pn	21 05 35.0	0.0
GO04				i S	Sn	21 05 44.7	+0.2
GO04				IAML		21 05 46.5	
	comp=N,12µm,0.4s						
CO02	Combarbal	0.67	154	⇓iP	Pn	21 05 35.2	-0.1
CO02				i S	Sn	21 05 45.0	-0.2
CO05	La Serena	0.68	8	⇑iP	Pn	21 05 35.5	+0.2
CO05				i S	Sn	21 05 45.4	+0.2
CO05				IAML		21 05 47.0	
	comp=E,3µm,0.2s						
CO01	Juntas del Tor	1.25	61	eP	Pn	21 05 44.0	+1.0
CO01				eS	Sn	21 06 00.7	+1.9
CO01				IAML		21 06 01.6	
	comp=N,1µm,0.4s						
LCO	Las Campanas	1.68	20	eP	Pn	21 05 49.4	+0.4
LCO				eS	Sn	21 06 09.9	+0.5
VA06	Catapilco	1.96	179	⇑iP	Pn	21 05 53.0	+0.6
VA06				i S	Sn	21 06 17.8	+1.9
VA06				IAML		21 06 32.1	
	comp=E,896nm,0.3s						
VA03	San Esteban	2.26	163	⇑iP	Pn	21 05 57.8	+1.0
VA03				i S	Sn	21 06 25.5	+2.0
VA03				IAML		21 06 31.6	
	comp=E,1µm,0.5s						
ROCH	El Roble	2.38	173	eP	Pn	21 05 59.7	+1.2
ROCH				i S	Sn	21 06 28.1	+1.4
ROCH				IAML		21 06 37.4	
	comp=N,596nm,0.6s						
AC04	Llanos de Chal	2.40	6	eP	Pn	21 05 59.3	+0.8
AC04				IAML		21 06 41.5	
	comp=E,310nm,0.2s						
VA01	Torpederas	2.43	186	eP	Pn	21 05 58.7	-0.3
PEL	Peldehue	2.60	168	eP	Pn	21 06 02.1	+0.8
PEL				eS	Sn	21 06 33.8	+2.0
PEL				IAML		21 06 46.3	
	comp=E,289nm,0.4s						
MT02	Curacav	2.66	176	eP	Pn	21 06 02.5	+0.4
MT05	Renca	2.83	170	eP	Pn	21 06 06.2	+1.7
MT05				IAML		21 06 56.4	
	comp=N,712nm,0.5s						
FCH	Farellones	2.87	162	eP	Pn	21 06 06.8	+1.6
FCH				eS	Sn	21 06 43.1	+4.4
FCH				IAML		21 06 49.1	
	comp=E,227nm,0.1s						
MT03	Universidad Ad	2.97	166	eP	Pn	21 06 08.3	+1.8
MT03				IAML		21 06 56.4	
	comp=E,505nm,0.1s						
GO03	Copiap	3.15	18	eP	Pn	21 06 09.6	+0.7
GO03				IAML		21 07 00.5	
	comp=N,282nm,0.3s						
MT09	Talagante	3.18	175	eP	Pn	21 06 10.3	+0.9
MT09				IAML		21 06 58.1	
	comp=N,202nm,0.3s						
MT01	Popeta	3.26	179	eP	Pn	21 06 10.6	+0.3
MT01				IAML		21 07 01.7	
	comp=E,187nm,0.2s						
AC06	Mina Casimiro	3.34	15	eP	Pn	21 06 12.2	+0.6
AC06				IAML		21 07 04.3	
	comp=N,212nm,0.2s						
LMEL	Las Melosas	3.38	164	eP	Pn	21 06 14.4	+2.2
LMEL				IAML		21 07 05.0	
	comp=N,229nm,0.2s						
BO04	La Punta	3.44	170	eP	Pn	21 06 13.7	+0.9
BO04				IAML		21 07 06.8	
	comp=N,154nm,0.2s						
BO01	Tunca	3.79	177	eP	Pn	21 06 17.7	+0.2
BO03	Pichilemu	3.92	187	eP	Pn	21 06 18.1	-1.3
AC02	Maricunga	4.22	28	eP	Pn	21 06 25.6	+1.6
GO05	Huala	4.43	186	eP	Pn	21 06 24.9	-1.4
AC01	Pan de Azucar	4.48	9	eP	Pn	21 06 25.9	-1.2

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*IDC **13** 21:10:38.2±1.9, 4.°47S×133.°94E, h0^{km}, mb3.5/2, mbtmp3.9/6, ML4.0/4, MS3.1/5, Error ellipse: s-maj=83.1km s-min=22.3km az=63.0*

*NEIC **13** 21:10:40.3±2.9, 4.°30S±0.°08×134.°2E±0.°1, h32^{km}±9^{km}, mb4.2/12, Error ellipse: s-maj=14.9km s-min=10.9km az=73.0*

ISC 13 21:10:39.2±0.8**, 4.°39S**±0.°06×**134.°12E**±0.°09**, h21**^{km}**, n39,**
σ2^{s}73/40**, mb4.0**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.51	321	Pn	Pn	21 11 46.3	0.0
	4.8nm,0.3s,baz=239,slow=23,SNR=14						
SIJI				Sn	Sn	21 12 33.1	-5.2
	3.1nm,0.3s,baz=129,slow=23,SNR=1.2						
SIJI				LR	LR	21 13 29.1	
	comp=Z,87nm,20.2s,baz=264,slow=38						
	10nm,0.4s						
SAUI	Saumlaki	4.54	218	Pn	Pn	21 11 46.9	+0.1
KDU	Kakadu	8.40	191	P	Pn	21 12 42.0	+2.1
MTN	Manton Dam	8.90	199		Pn	21 12 48.5	+1.8
MTN					Sn	21 14 27.5	+1.0
MTN	Manton Dam	8.90	199	P	Pn	21 12 48.7	+2.0
SOEI	Soe	11.14	241	Pn	Pn	21 13 18.8	+1.4
LUWI	Luwuk	11.81	286	Pn	Pn	21 13 26.3	-0.3
KNRA	Kununurra	12.39	205		Pn	21 13 34.4	-0.1
KNRA	Kununurra	12.39	205	P	Pn	21 13 34.1	-0.4
COEN	Coen	13.04	137	Pn	Pn	21 13 44.0	+0.5
COEN	Coen	13.04	137	P	Pn	21 13 45.4	+2.0
PMG	Port Moresby	13.87	112	LR	LR	21 21 14.4	
	comp=Z,97nm,18.4s,baz=326,slow=45						
TOLI2	Tolitoli	14.40	292	Pn	Pn	21 14 01.4	-0.7
WB0	Warramunga Arr	15.29	179	Pn	Pn	21 14 12.9	-1.0
WRAB	Tennant Creek	15.45	179		Pn	21 14 15.0	-1.1
WRAB				IAmb	IAmb	21 14 24.1	
	comp=Z,9.6nm,0.6s						
WRAB	Tennant Creek	15.45	179	P	Pn	21 14 14.9	-1.2
WB2	Warramunga Arr	15.46	179		Pn	21 14 15.5	-0.7
WB2				IAmb	IAmb	21 14 24.2	
	comp=Z,9.1nm,0.6s						
WRA	Warramunga Arr	15.46	179	Pn	Pn	21 14 14.8	-1.4
	comp=Z,0.6nm,0.3s,baz=354,slow=13,SNR=18						
WRA				Sn	Sn	21 16 58.1	-8.9
	comp=Z,0.2nm,0.3s,baz=352,slow=24,SNR=4.3						
	comp=Z,1.3nm,0.4s						
WRA	Warramunga Arr	15.46	179		Pn	21 14 15.9	-0.3
WR0	Warramunga Arr	15.48	179		Pn	21 14 16.8	+0.3
WR0				IAmb	IAmb	21 14 24.5	
	comp=Z,8.1nm,0.7s						
QIS	Mount Isa	16.93	162	P	Pn	21 14 35.7	+0.6
AS31	Alice Springs	19.17	181		Pn	21 15 03.2	+0.7
ASAR	Alice Springs	19.17	181	P	Pn	21 15 03.7	+1.2
	comp=Z,0.8nm,0.3s,baz=2.2,slow=9.2,SNR=85						
ASAR				S	Sn	21 18 27.2	-10
	comp=Z,0.6nm,0.6s,baz=358,slow=29,SNR=3.2						
	comp=Z,8.6nm,0.7s						
ASAR	Alice Springs	19.17	181		Pn	21 15 03.5	+1.0
CTA	Charters Tower	19.57	144	P	Pn	21 15 07.9	+0.5
	comp=Z,0.3nm,0.3s,baz=336,slow=10.0,SNR=2.4						
CTA				LR	LR	21 23 14.7	
	comp=Z,94nm,21.7s,baz=296,slow=39						
	comp=Z,4.4nm,0.8s						
CTAO	Charters Tower	19.57	144		P	21 15 07.6	+1.6
CTAO				IAmb	IAmb	21 15 23.5	
	comp=Z,19nm,1.1s						
WRKA	Warakurna	21.28	195	P	P	21 15 26.6	+2.1
MBWA	Marble Bar	21.76	219	P	P	21 15 30.8	+1.2
MBWA	Marble Bar	21.76	219	P	P	21 15 31.5	+1.9
PSA00	Pilbara Seismi	21.99	218	P	P	21 15 33.5	+1.3
PSA00				IAmb	IAmb	21 15 34.9	
	comp=Z,7.4nm,0.8s						
OOD	Oodnadatta	23.32	176	P	P	21 15 48.4	+2.4
MULG	Mulgathing	25.76	180	P	P	21 16 11.1	+2.6
EIDS	Eidsvold	26.46	144	P	P	21 16 12.6	-2.4
EIDS				IAmb	IAmb	21 16 27.5	
	comp=Z,8.9nm,1.2s						
PATS	Pohnpei	26.60	65	P	P	21 16 13.3	-3.0
FORT	Forrest	26.87	192	P	P	21 16 19.3	+0.7
JOW	Kunigami	31.55	350	LR	LR	21 28 08.4	
	comp=Z,33nm,20.9s,baz=21,slow=33						
CMAR	Chiang Mai Arr	41.44	304	P	P	21 18 26.8	+2.1
	comp=Z,0.3nm,0.5s,baz=139,slow=7.0,SNR=2.3						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	68.40	324	P	P	21 21 41.3	+1.9
	comp=Z,0.5nm,0.7s,baz=124,slow=7.7,SNR=2.6						
	comp=Z,0.5nm,0.7s						
PPT	Papeete	75.64	107	LR	LR	21 53 12.6	
	comp=Z,26nm,19.6s,baz=158,slow=34						

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*AZER **13** 21:17:46.7±0.2, 42.°66N×46.°24E, h34^{km}±4^{km}, Error ellipse: s-maj=7.8km s-min=1.9km az=335.0*

*IDC **13** 21:17:46.7±0.9, 42.°91N×46.°37E, h71^{km}±8^{km}, mb4.5/36, mbtmp4.9/45, MS3.6/64, Error ellipse: s-maj=6.7km s-min=6.3km az=52.0*

*TIF **13** 21:17:46.7, 42.°78N×46.°41E, h100^{km}±2^{km}*

*NEIC **13** 21:17:47.5±1.1, 42.°95N±0.°05×46.°41E±0.°04, h76^{km}±4^{km}, mb5.0/419, Mww4.8, Error ellipse: s-maj=7.9km s-min=3.6km az=199.0*

*GII **13** 21:17:47.1±0.4, 42.°94N×46.°41E, h74^{km}*

*NORS **13** 21:17:47.5±0.0, 42.°78N×46.°42E, h59^{km}±2^{km}, MPVA5.2, FELT V MSK at Burtunai, Dylim, Mekheta, Dubki, IV-V MSK at Nozhai-yurt, Vedeno, Kizilyurt, Khasavyurt, Buinaksk, Botlikh, IV MSK at Gudermes, Gunib, Kaka-shura, Makhachkala, III-IV MSK at Babayurt, Karabudakhkent, Sulak, Grozny, Manaskent, Kizlyar III MSK at Tlarata, Bezhta, Kumukh, Sergokala, Urkarah)*

*MOS **13** 21:17:47.2±0.0, 42.°83N×46.°40E, h65^{km}±1^{km}, MPVA5.5*

*DRS **13** 21:17:47.8±0.0, 42.°96N×45.°82E, h28^{km}*

*NEIC **13** 21:17:51, 42.°94N×46.°63E, h60^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.16; $M_{\theta\theta}$1.64; $M_{\phi\phi}$0.52; $M_{r\theta}$0.28; $M_{\theta\phi}$1.09; $M_{\phi r}$-0.30; Fault plane solution: $M_0$2.28000×10^{16} NP1:ϕ_s48.00000°, δ45.00000°, λ-105.00000°. NP2:ϕ_s249.00000°, δ47.00000°, λ-75.00000°. Principal axes: T 2.3103, Plg1.0000°, Azm329.0000°; N -0.0719, Plg11.0000°, Azm59.0000°; P -2.2384, Plg79.0000°, Azm233.0000°;*

*NNC **13** 21:17:55.2±3.8, 43.°05N×47.°72E, h58^{km}±28^{km}, mb4.8 Error ellipse: s-maj=32.6km s-min=14.8km az=92.0*

ISC 13 21:17:46.0±0.3**, 42.°89N**±0.°02×**46.°41E**±0.°02**, h69**^{km}±3^{km}**,**
h69^{km}**:pP-P, n1443, σ1^{s}80**/1563**, mb5.0**/306**, 198C-318D,**
Fault plane solution: NP1:ϕ_s248.53651°, δ22.17891°, λ-68.38739°. **NP2:**ϕ_s45.37341°, δ69.45396°, λ-98.53941°.
Principal axes: T Plg23.9928°, Azm141.9729°; N Plg7.9925°, Azm48.3900°; P Plg64.5491°, Azm301.2311°;
Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	Vedeno	0.22	287		Pn	21 17 58.8	+2.1
DVE	Vedeno	0.22	287	i P	Pn	21 17 58.7	+2.1

DVE	**Vedeno**	0.22	287	*i* Pg	Pn	21 17 58.7	+2.1
DVE				*e*Sg	Sn	21 18 07.3	+2.8
DLMR	**Dylym**	0.24	42	⇓*i*P	Pn	21 17 58.7	+2.0
DLMR				*i* S	Sn	21 18 07.7	+3.1
DLMR	**Dylym**	0.24	42	*i* Pg	Pn	21 17 58.8	+2.0
DLMR				*e*Sg	Sn	21 18 07.7	+3.1
BTLR	**Botlikh**	0.27	211		Pn	21 17 58.5	+1.5
BTLR	**Botlikh**	0.27	211	⇓*i*P	Pn	21 17 58.4	+1.5
BTLR				*e*S	Sn	21 18 06.2	+1.3
BTLR				*i* S	Sn	21 18 06.5	+1.6
BTLR				smax	smax		
	comp=E,68µm,0.7s						
BTLR	**Botlikh**	0.27	211	*i* Pg	Pn	21 17 58.5	+1.5
BTLR				*e*Sg	Sn	21 18 06.8	+1.9
DBC	**Dubki**	0.33	67	⇓*i*P	Pn	21 17 58.9	+1.5
DBC				*e*S	Sn	21 18 08.0	+2.2
DBC				*i* S	Sn	21 18 08.5	+2.7
DBC				pmax	pmax		
	comp=Z,5µm,0.6s						
DBC				smax	smax		
	comp=E,6µm,0.7s						
DBC				smax	smax		
	comp=N,8µm,0.6s						
DBC				smax	smax		
	comp=N,7µm,0.5s						
DBC	**Dubki**	0.33	67	*i* Pg	Pn	21 17 59.0	+1.5
DBC				*i* Pg	Sn	21 18 08.9	+3.1
UNCR	**Uncukul**	0.34	122	⇓*i*P	Pn	21 17 58.5	+1.2
UNCR				*i*		21 18 06.8	
UNCR	**Uncukul**	0.34	122	*i* Pg	Pn	21 17 58.6	+1.2
UNCR				*e*Sg	Sn	21 18 07.4	+1.7
KRNR	**Karanay**	0.37	100	⇓*i*P	Pn	21 17 59.0	+1.3
KRNR				*e*		21 18 08.1	
KRNR				smax	smax		
	comp=N,58µm,0.4s						
KRNR	**Karanay**	0.37	100	*i* Pg	Pn	21 17 59.1	+1.3
KRNR				*e*Sg	Sn	21 18 07.8	+1.5
XNZR	**Khunzakh**	0.41	148	⇓*i*P	Pn	21 17 59.7	+1.5
XNZR				*i*		21 18 08.7	
XNZR				pmax	pmax		
	comp=Z,22µm,0.4s						
XNZR	**Khunzakh**	0.41	148	*i* Pg	Pn	21 17 59.7	+1.5
XNZR				*e*Sg	Sn	21 18 08.8	+1.8
BUJR	**Buynaksk**	0.52	97	*e*P	Pn	21 18 01.4	+2.5
BUJR				*e*S	Sn	21 18 11.9	+3.4
BUJR	**Buynaksk**	0.52	97	*i* Pg	Pn	21 18 01.0	+2.1
BUJR				*e*Sg	Sn	21 18 11.8	+3.4
ARKR	**Arakani**	0.52	124	⇓*i*P	Pn	21 18 00.5	+1.6
ARKR				*i* S	Sn	21 18 10.3	+1.8
ARKR	**Arakani**	0.52	124	*i* Pg	Pn	21 18 00.6	+1.6
ARKR				*e*Sg	Sn	21 18 10.4	+1.9
GROC	**Groznyy**	0.55	305	⇑*i*P	Pn	21 18 02.3	+3.1
GROC				*e*S	Sn	21 18 14.3	+5.5
GROC	**Groznyy**	0.55	305	*i* Pg	Pn	21 18 02.3	+3.1
GROC				*e*Sg	Sn	21 18 14.3	+5.5
GRO	**Groznyy**	0.65	312		Pn	21 18 02.6	+2.4
MAK	**Makhachkala**	0.81	85		Pn	21 18 04.8	+2.7
MAK	**Makhachkala**	0.81	85	⇓*i*P	Pn	21 18 04.8	+2.7
MAK				*e*S	Sn	21 18 18.1	+4.2
MAK				*i* S	Sn	21 18 18.6	+4.7
MAK				smax	smax		
	comp=N,24µm,0.6s						
MAK	**Makhachkala**	0.81	85	*i* Pg	Pn	21 18 04.7	+2.7
MAK				*i* Pg	Sn	21 18 16.9	+3.0
KANR	**Karaman**	0.85	69	⇓*i*P	Pn	21 18 05.8	+3.3
KANR				*i* S	Sn	21 18 21.1	+6.3
KANR	**Karaman**	0.85	69	*i* Pg	Pn	21 18 05.8	+3.3
KANR				*e*Sg	Sn	21 18 20.4	+5.7
KMKR	**Kumukh**	0.92	146	*e*P	Pn	21 18 05.6	+2.0
KMKR				*e*S	Sn	21 18 20.1	+3.5
KMKR				smax	smax		
	comp=E,68µm,0.4s						
KMKR	**Kumukh**	0.92	146	*i* Pg	Pn	21 18 05.4	+1.8
KMKR				*e*Sg	Sn	21 18 19.3	+2.6
SGKR	**Sergokala**	1.02	115	⇓*e*P	Pn	21 18 07.5	+2.8
SGKR				*i*		21 18 22.8	
SGKR				pmax	pmax		
	comp=Z,10µm,0.4s						
SGKR	**Sergokala**	1.02	115	*e*Pg	Pn	21 18 07.5	+2.8
SGKR				*e*Sg	Sn	21 18 22.6	+4.0
LGD	**Lagodekhi**	1.06	187	P	Pn	21 18 06.9	+1.6
LGD				S	Sn	21 18 22.7	+3.1
LGD	**Lagodekhi**	1.06	187		Pn	21 18 06.9	+1.6
LGD	**Lagodekhi**	1.06	187	P	Pn	21 18 06.9	+1.6
LGD				S	Sn	21 18 22.7	+3.1
KMGR	**Komgaron**	1.15	279	⇑*i*P	Pn	21 18 09.9	+3.6
KMGR				*e*S	Sn	21 18 26.6	+5.1
KMGR	**Komgaron**	1.15	279	*i* Pg	Pn	21 18 09.8	+3.5
KMGR				*i* Pg	Sn	21 18 25.5	+4.0
URKR	**Urkarakh**	1.16	128	⇑*i*P	Pn	21 18 08.8	+2.2
URKR				*e*S	Sn	21 18 24.8	+2.8
URKR				*i* S	Sn	21 18 25.3	+3.3
URKR				smax	smax		
	comp=N,46µm,0.3s						
URKR	**Urkarakh**	1.16	128	*i* Pg	Pn	21 18 08.8	+2.2
URKR				*e*Sg	Sn	21 18 25.3	+3.3
ZKT	**Zaqatala**	1.25	171		Pn	21 18 09.2	+1.5
ZKTA	**Zakatala**	1.26	173	P	Pn	21 18 09.1	+1.3
ZKTA	**Zakatala**	1.26	173	P	Pn	21 18 09.1	+1.3
	SNR=1822						
ZKTA				S	Sn	21 18 26.5	+2.3
VLKR	**Vladikavkaz**	1.28	278	⇑*i*P	Pn	21 18 11.5	+3.4
VLKR				*e*S	Sn	21 18 30.2	+5.6
VLKR	**Vladikavkaz**	1.28	278	*i* Pg	Pn	21 18 11.5	+3.4
VLKR				*e*Sg	Sn	21 18 30.2	+5.6
MTEO	**Meteo**	1.40	262	P	Pn	21 18 12.5	+2.5
MTEO				S	Sn	21 18 31.7	+3.8
BTKR	**Batakoyurt**	1.45	290	⇓*i*P	Pn	21 18 13.8	+3.5
BTKR				*e*S	Sn	21 18 33.8	+5.3
BTKR	**Batakoyurt**	1.45	290	*i* Pg	Pn	21 18 13.7	+3.4
BTKR				*e*Sg	Sn	21 18 33.9	+5.3
DDFL	**Dedoflistskaro**	1.46	189	P	Pn	21 18 13.4	+2.9
DDFL				S	Sn	21 18 34.8	+5.9
DDFL	**Dedoflistskaro**	1.46	189	P	Pn	21 18 13.4	+2.9
DDFL				S	Sn	21 18 34.8	+5.9
TRKR	**Terskaya**	1.48	305	⇑*i*P	Pn	21 18 13.9	+3.3
TRKR				*e*S	Sn	21 18 34.5	+5.3
TRKR	**Terskaya**	1.48	305	*i* Pg	Pn	21 18 13.9	+3.3
TRKR				*e*Sg	Sn	21 18 34.5	+5.3
GUDG	**Gudauri**	1.49	254	P	Pn	21 18 13.8	+2.8
GUDG				S	Sn	21 18 33.2	+3.5
GUDG	**Gudauri**	1.49	254	P	Pn	21 18 13.8	+2.8
GUDG				S	Sn	21 18 33.2	+3.5
LACR	**Lac**	1.56	268	*e*P	Pn	21 18 14.1	+2.3
LACR				*e*S	Sn	21 18 34.9	+3.7
LACR	**Lac**	1.56	268	*i* Pg	Pn	21 18 13.9	+2.2
LACR				*e*Sg	Sn	21 18 34.1	+2.9
ARNR	**Ardon**	1.58	281	⇓*i*P	Pn	21 18 15.4	+3.4
ARNR				*e*S	Sn	21 18 36.3	+4.6
ARNR	**Ardon**	1.58	281	*i* Pg	Pn	21 18 15.3	+3.2
ARNR				*e*Sg	Sn	21 18 36.2	+4.5
DGRG	**David-gareji**	1.63	208	P	Pn	21 18 15.0	+2.2
DGRG	**David-gareji**	1.63	208	P	Pn	21 18 14.9	+2.2
SEAG	**Tbilisi Sea**	1.64	227	P	Pn	21 18 14.9	+2.1
SEAG				S	Sn	21 18 35.4	+2.3
SEAG	**Tbilisi Sea**	1.64	227	P	Pn	21 18 14.9	+2.1
SEAG				S	Sn	21 18 35.4	+2.3
DRN	**Derbent**	1.66	121		Pn	21 18 15.0	+2.0
DRN	**Derbent**	1.66	121	⇑*i*P	Pn	21 18 16.0	+3.0
DRN				*e*S	Sn	21 18 38.4	+4.9
DRN	**Derbent**	1.66	121	*i* Pg	Pn	21 18 16.0	+3.0
DRN				*e*Sg	Sn	21 18 38.4	+4.9
BTNK	**Botanikuri**	1.70	225	P	Pn	21 18 09.5	-4.1
BTNK	**Botanikuri**	1.70	225	P	Pn	21 18 09.5	-4.1
AKT	**Akhty**	1.72	145		Pn	21 18 15.8	+1.8
AKT	**Akhty**	1.72	145	⇑*i*P	Pn	21 18 15.8	+1.8
AKT				*e*S	Sn	21 18 37.9	+2.8
AKT				*i* S	Sn	21 18 38.7	+3.6
AKT				pmax	pmax		
	comp=Z,8µm,0.4s						
AKT				smax	smax		
	comp=E,49µm,0.3s						
AKT	**Akhty**	1.72	145	*i* Pg	Pn	21 18 15.7	+1.8
AKT				*e*Sg	Sn	21 18 37.8	+2.6
KORR	**Kora**	1.73	277	⇑*i*P	Pn	21 18 16.6	+2.6
KORR				*e*S	Sn	21 18 38.6	+3.4
KORR	**Kora**	1.73	277	*i* Pg	Pn	21 18 16.6	+2.6
KORR				*e*Sg	Sn	21 18 38.6	+3.4
PRTR	**Priterechnaya**	1.77	300	*e*P	Pn	21 18 17.7	+3.1
PRTR				*e*S	Sn	21 18 41.2	+5.0
PRTR	**Priterechnaya**	1.77	300	*i* Pg	Pn	21 18 17.7	+3.1
PRTR				*e*Sg	Sn	21 18 41.0	+4.8
SEKA	**Sheki**	1.78	160	P	Pn	21 18 15.9	+1.1
	SNR=9121						
SEKA				S	Sn	21 18 37.5	+1.0
STDR	**Stavd-Durt**	1.78	286	⇑*i*P	Pn	21 18 17.9	+3.2
STDR				*e*S	Sn	21 18 40.6	+4.1
STDR	**Stavd-Durt**	1.78	286	*i* Pg	Pn	21 18 17.9	+3.2
STDR				*e*Sg	Sn	21 18 40.6	+4.1
KSMR	**Kasumkent**	1.81	135	⇑*i*P	Pn	21 18 18.0	+2.9
KSMR				*e*S	Sn	21 18 41.9	+4.6
KSMR				*i* S	Sn	21 18 42.3	+5.0
KSMR				smax	smax		
	comp=E,177nm,0.3s						
KSMR				smax	smax		
	comp=N,139nm,0.3s						
KSMR				smax	smax		
	comp=E,146nm,0.3s						
KSMR	**Kasumkent**	1.81	135	*i* Pg	Pn	21 18 18.1	+2.9
KSMR				*e*Sg	Sn	21 18 42.1	+4.8
ZEI	**Tsey**	1.85	268		Pn	21 18 17.2	+1.5
ZEI	**Tsey**	1.85	268	*de*P	Pn	21 18 17.1	+1.4
ZEI	**Tsey**	1.85	268	*e*Pg	Pn	21 18 17.5	+1.7
ZEI				*e*Sg	Sn	21 18 40.5	+2.2
LSNR	**Lesken**	1.93	282	⇑*i*P	Pn	21 18 19.6	+2.9
LSNR				*e*S	Sn	21 18 44.4	+4.3
LSNR	**Lesken**	1.93	282	*i* Pg	Pn	21 18 19.4	+2.7
LSNR				*e*Sg	Sn	21 18 43.0	+3.0
QSAR	**Qusar**	1.95	134	P	Pn	21 18 19.8	+2.9
	SNR=1837						
QSAR				S	Sn	21 18 43.1	+2.7
QZX	**Qazax, Azerbai**	1.99	203		Pn	21 18 18.3	+0.8
QZX	**Qazax, Azerbai**	1.99	203	P	Pn	21 18 18.3	+0.8
	SNR=352						
QZX				S	Sn	21 18 42.0	+0.5
DIGR	**Digorskoe uzhe**	2.08	271	*e*P	Pn	21 18 20.5	+1.6
DIGR				pmax	pmax		
	comp=Z,391nm,0.4s						
DIGR	**Digorskoe uzhe**	2.08	271	*e*Pg	Pn	21 18 20.5	+1.6
DIGR				*e*Sg	Sn	21 18 45.5	+1.6
KZRT	**Kazreti**	2.12	225	P	Pn	21 18 20.3	+1.0
KZRT				S	Sn	21 18 45.2	+0.5
KZRT	**Kazreti**	2.12	225	P	Pn	21 18 20.3	+1.0
KZRT				S	Sn	21 18 45.2	+0.5
NCK	**Nalchik**	2.14	287	⇑*i*P	Pn	21 18 22.4	+2.8
NCK				*e*S	Sn	21 18 48.8	+3.6
NCK	**Nalchik**	2.14	287	*i* Pg	Pn	21 18 22.2	+2.7
NCK				*e*Sg	Sn	21 18 48.6	+3.4
XNQ	**Khinaliq**	2.15	143	P	Pn	21 18 22.0	+2.1
	SNR=2894						
XNQ				S	Sn	21 18 47.9	+2.3
MNGR	**Mingechevir, A**	2.18	166	P	Pn	21 18 21.1	+1.1
MNGR	**Mingechevir, A**	2.18	166	P	Pn	21 18 21.1	+1.1
	SNR=70						
MNGR				S	Sn	21 18 48.6	+2.7
QUBA	**Quba, Azerbaij**	2.18	134	P	Pn	21 18 22.2	+2.1
	SNR=403						
QUBA				S	Sn	21 18 50.3	+4.2
TRLG	**Trialeti**	2.18	233	P	Pn	21 18 21.6	+1.3
TRLG				S	Sn	21 18 48.2	+1.9
TRLG	**Trialeti**	2.18	233	P	Pn	21 18 21.5	+1.3
TRLG				S	Sn	21 18 48.2	+1.9
ONI	**Oni**	2.20	263	P	Pn	21 18 23.4	+3.1
ONI	**Oni**	2.20	263		Pn	21 18 23.0	+2.6
ONI				Sn	Sn	21 18 45.0	-1.6
ONI	**Oni**	2.20	263	⇓*i*P	Pn	21 18 23.5	+3.1
ONI				*e*S	Sn	21 18 49.7	+3.1
ONI	**Oni**	2.20	263	*i* Pg	Pn	21 18 23.5	+3.1
ONI				*e*Sg	Sn	21 18 49.7	+3.1
QBL	**Gabala**	2.22	151	P	Pn	21 18 22.6	+2.0
	SNR=623						
QBL				S	Sn	21 18 51.3	+4.3
GDB	**GEDABAY**	2.22	193	P	Pn	21 18 20.7	-0.1
	SNR=976						
GDB				S	Sn	21 18 46.6	-0.7
GANJ	**Ganja**	2.25	182	P	Pn	21 18 21.2	+0.2
GANJ	**Ganja**	2.25	182	P	Pn	21 18 21.2	+0.2
	SNR=285						
GANJ				S	Sn	21 18 48.2	+0.5
DMNI	**Dmanisi**	2.27	227	P	Pn	21 18 22.3	+0.9
DMNI				S	Sn	21 18 49.0	+0.5
DMNI	**Dmanisi**	2.27	227	P	Pn	21 18 22.3	+0.9
DMNI				S	Sn	21 18 48.9	+0.5
KBTC	**Kuba-Taba**	2.38	294	⇑*i*P	Pn	21 18 24.9	+2.2
KBTC				*e*S	Sn	21 18 53.1	+2.3
KBTC	**Kuba-Taba**	2.38	294	*i* Pn	Pn	21 18 24.9	+2.2
KBTC				*e*Sn	Sn	21 18 53.1	+2.3
BKRG	**Bakuriani**	2.42	243	P	Pn	21 18 25.4	+1.9
BKRG				S	Sn	21 18 53.6	+1.4
BKRG	**Bakuriani**	2.42	243	P	Pn	21 18 25.4	+1.9
BKRG				S	Sn	21 18 53.5	+1.4
IML	**Ismayilli**	2.48	147	P	Pn	21 18 25.4	+1.3
	SNR=111						
IML				S	Sn	21 18 55.4	+2.0
TKB	**Tkibuli**	2.58	259	P	Pn	21 18 27.9	+2.4
TKB				S	Sn	21 18 50.8	-5.0
TKB	**Tkibuli**	2.58	259	P	Pn	21 18 27.9	+2.4
TKB				S	Sn	21 18 50.8	-5.0
SIZA	**Siyzn**	2.60	134	P	Pn	21 18 27.4	+1.7
	SNR=736						
SIZA				S	Sn	21 18 59.5	+3.2
AKH	**Akhalkalaki**	2.63	237	P	Pn	21 18 28.4	+2.1
AKH	**Akhalkalaki**	2.63	237	*i* P	Pn	21 18 28.4	+2.1
AKH	**Akhalkalaki**	2.63	237	P	Pn	21 18 28.4	+2.1
BGD	**Bogdanovka**	2.65	233	P	Pn	21 18 28.6	+2.0
BGD				S	Sn	21 18 59.3	+1.5
BGD	**Bogdanovka**	2.65	233	P	Pn	21 18 28.6	+2.0
BGD				S	Sn	21 18 59.3	+1.5
PQL	**Pirkuli**	2.66	141	P	Pn	21 18 28.3	+1.6
	SNR=1170						
PQL				S	Sn	21 19 03.2	+5.3
PYA1	**Pyatigorsk**	2.68	297	⇑*i*P	Pn	21 18 28.6	+1.8
PYA1				*e*S	Sn	21 18 59.3	+1.1
PYA1	**Pyatigorsk**	2.68	297	*i* Pn	Pn	21 18 28.6	+1.8
PYA1				*e*Sn	Sn	21 18 59.3	+1.1
BRDA	**Brd**	2.69	167	P	Pn	21 18 28.6	+1.7
	SNR=314						
BRDA				S	Sn	21 19 01.0	+2.6
KBZ	**Khabaz**	2.70	289	P	Pn	21 18 28.6	+1.6
	comp=Z,965nm,0.5s,baz=146,slow=3.2,SNR=2997						
KBZ				S	Sn	21 18 58.4	-0.1
	comp=Z,2µm,0.5s,baz=109,slow=6.4,SNR=7.8						
KBZ	**Khabaz**	2.70	289	*i* Pn	Pn	21 18 28.5	+1.6
KBZ				*e*Sn	Sn	21 18 58.8	+0.3
ATGJ	**Altiaghaj**	2.77	136	P	Pn	21 18 30.0	+1.8
	SNR=880						
ATGJ				S	Sn	21 19 04.8	+4.3
ZRD	**Zardab**	2.78	159	P	Pn	21 18 29.5	+1.3
	SNR=416						
ZRD				S	Sn	21 19 01.5	+0.9
AGDM	**Agdam**	2.83	169	P	Pn	21 18 29.7	+0.8
	SNR=715						
AGDM				S	Sn	21 19 02.7	+0.8
KDMR	**Kurdemir**	2.84	152	P	Pn	21 18 30.0	+0.9
	SNR=24						
KDMR				S	Sn	21 19 03.2	+1.1
BEYR	**Belyy Ugol+**	2.84	294	⇑*i*P	Pn	21 18 30.8	+1.7
BEYR				*e*S	Sn	21 19 02.7	+0.5
BEYR	**Belyy Ugol+**	2.84	294	*i* Pn	Pn	21 18 30.8	+1.7
BEYR				*e*Sn	Sn	21 19 02.7	+0.5
SHA1	**Shidzhatmaz**	2.87	288	⇑*i*P	Pn	21 18 31.3	+1.7
SHA1				*e*S	Sn	21 19 04.3	+1.3
SHA1	**Shidzhatmaz**	2.87	288	*i* Pn	Pn	21 18 31.1	+1.6
SHA1				*e*Sn	Sn	21 19 03.6	+0.5
ABS	**Abastumani**	2.90	248	P	Pn	21 18 32.2	+2.2
ABS	**Abastumani**	2.90	248	P	Pn	21 18 32.1	+2.2
KVAR	**Kislovodsk Arr**	2.91	293	P	Pn	21 18 31.8	+1.8
	comp=Z,414nm,0.4s,baz=284,slow=23,SNR=454						
KVAR				S	Sn	21 19 04.2	+0.3
	comp=Z,8µm,0.7s,baz=242,slow=8.2,SNR=39						
KVAR				LR	LR	21 20 02.0	
	comp=Z,656nm,21.8s,baz=344,slow=47						
KIV	**Kislovodsk**	2.91	293	*i* P	Pn	21 18 31.9	+1.8
KIV				S	Sn	21 19 04.5	+0.5
KIV	**Kislovodsk**	2.91	293	Pn	Pn	21 18 31.5	+1.5
KIV				Sn	Sn	21 19 04.7	+0.8
KIV	**Kislovodsk**	2.91	293	⇑*i*P	Pn	21 18 31.8	+1.8
KIV				*i* S	Sn	21 19 04.8	+0.8
KIV	**Kislovodsk**	2.91	293	*i* Pn	Pn	21 18 31.8	+1.8
KIV				*i* Sn	Sn	21 19 04.8	+0.8
KIV	**Kislovodsk**	2.91	293	P	Pn	21 18 31.9	+1.8
KIV				S	Sn	21 19 06.5	+2.5
GNI	**Garni**	3.01	205	P	Pn	21 18 32.7	+1.2
	comp=Z,283nm,0.5s,baz=14,slow=4.3,SNR=173						
GNI				S	Sn	21 19 08.0	+1.5
	comp=Z,687nm,0.5s,baz=33,slow=23,SNR=14						
GNI	**Garni**	3.01	205	*i* P	Pn	21 18 33.8	+2.3
GNI				S	Sn	21 19 07.9	+1.4
GNI	**Garni**	3.01	205		Pn	21 18 32.5	+0.9
GNI				Sn	Sn	21 19 08.9	+2.4
GNI	**Garni**	3.01	205	*i* Pn	Pn	21 18 33.1	+1.6
GNI				*e*Sn	Sn	21 19 09.7	+3.2
GNI	**Garni**	3.01	205	P	Pn	21 18 33.4	+1.9
GNI				S	Sn	21 19 09.7	+3.2
GBS	**Qobustan**	3.02	140	P	Pn	21 18 34.0	+2.4
	SNR=207						
GBS				S	Sn	21 19 11.3	+4.7
ALER	**Alexandrovskoy**	3.15	308	⇑*i*P	Pn	21 18 35.8	+2.6
ALER				*e*S	Sn	21 19 12.0	+2.4
ALER	**Alexandrovskoy**	3.15	308	*i* Pn	Pn	21 18 35.8	+2.6
ALER				*e*Sn	Sn	21 19 12.0	+2.4
CHVG	**Ch'k'valeri**	3.19	268	P	Pn	21 18 37.3	+3.6
CHVG				S	Sn	21 19 11.6	+1.0
CHVG	**Ch'k'valeri**	3.19	268	P	Pn	21 18 37.3	+3.6
CHVG				S	Sn	21 19 11.6	+1.0
GOF	**Gofitskoye**	3.25	313	⇑*i*P	Pn	21 18 37.0	+2.4
GOF				*e*S	Sn	21 19 14.0	+1.8
GOF	**Gofitskoye**	3.25	313	*i* Pn	Pn	21 18 37.0	+2.4
GOF				*e*Sn	Sn	21 19 14.0	+1.8
BLQ	**Beylaqan**	3.29	164	P	Pn	21 18 35.2	+0.1
	SNR=137						
BLQ				S	Sn	21 19 12.6	-0.3
KARS	**Kars**	3.37	229	P	Pn	21 18 39.0	+2.7
KARS	**Kars**	3.37	229		Pn	21 18 38.2	+1.9
KARS	**Kars**	3.37	229	P	Pn	21 18 38.2	+1.9
HYR	**Heyderabad**	3.38	201	P	Pn	21 18 38.5	+2.0
	SNR=82						
HYR				S	Sn	21 19 13.5	-1.9
SAAT	**Saatly**	3.39	153	P	Pn	21 18 36.5	+0.1
	SNR=80						
SAAT				S	Sn	21 19 14.9	-0.5
QRD	**Qoradiz**	3.50	168	P	Pn	21 18 38.2	+0.3
	SNR=123						
QRD				S	Sn	21 19 18.4	+0.3
GOBA	**Gobu**	3.52	134	P	Pn	21 18 41.0	+2.8
	SNR=50						
GOBA				S	Sn	21 19 21.4	+2.7
ALIB	**Äli-Bayra**	3.52	145	P	Pn	21 18 41.0	+2.7
	SNR=186						
ALIB				S	Sn	21 19 22.9	+4.2
NDR	**Nardaran**	3.54	130	P	Pn	21 18 40.2	+1.7
	SNR=92						
SBZ	**Shahbuz**	3.55	191	P	Pn	21 18 40.3	+1.5
	SNR=32						
SBZ				S	Sn	21 19 20.7	+1.0
NVNR	**Nevinnomyssk**	3.65	300	*e*P	Pn	21 18 42.1	+2.1
NVNR				*e*S	Sn	21 19 22.9	+1.0
NVNR	**Nevinnomyssk**	3.65	300	*e*Pn	Pn	21 18 42.1	+2.1
NVNR				*e*Sn	Sn	21 19 22.9	+1.0
GALA	**Gala**	3.75	130	P	Pn	21 18 43.5	+2.2
	SNR=7.4						
NAX	**Nakhchivan**	3.78	191	P	Pn	21 18 43.5	+1.6
NAX	**Nakhchivan**	3.78	191	P	Pn	21 18 43.5	+1.6
	SNR=24						
NAX				S	Sn	21 19 23.0	-2.1
ARXR	**Arkhyz**	3.81	282	*e*P	Pn	21 18 46.0	+3.6
ARXR				*e*S	Sn	21 19 29.5	+3.5
ARXR	**Arkhyz**	3.81	282	*e*Pn	Pn	21 18 46.0	+3.6
SENK	**Senkaya-Erzuru**	3.83	234	P	Pn	21 18 45.3	+2.6
GLBA	**Clilabad**	3.94	157	P	Pn	21 18 45.1	+1.1
	SNR=245						
GLBA				S	Sn	21 19 29.4	+0.4
ORD	**Ordubad**	3.97	185	P	Pn	21 18 45.6	+1.0
	SNR=131						
ORD				S	Sn	21 19 27.7	-2.2
AHMR	**Akhmetovskaya**	4.10	290	*e*P	Pn	21 18 49.4	+3.2
AHMR				*e*S	Sn	21 19 36.7	+3.8
AHMR	**Akhmetovskaya**	4.10	290	*e*Pn	Pn	21 18 49.4	+3.2
AHMR				*e*Sn	Sn	21 19 36.7	+3.8
AGRB	**Hanur-Agry**	4.20	219	P	Pn	21 18 50.3	+2.6
YRD	**Yardimli**	4.21	160	P	Pn	21 18 48.0	+0.2
	SNR=5256						
YRD				S	Sn	21 19 32.8	-3.0
KOPR	**Koprukoy-ERZUR**	4.49	231	P	Pn	21 18 54.9	+3.3
LRK	**Lerik**	4.49	160	P	Pn	21 18 52.2	+0.5
	SNR=447						
LRK				S	Sn	21 19 39.9	-2.9
LKRN	**Lenkeran, Azer**	4.55	156	P	Pn	21 18 52.3	0.0
LKRN	**Lenkeran, Azer**	4.55	156	P	Pn	21 18 52.3	0.0
	SNR=75						
LKRN				S	Sn	21 19 40.7	-3.1
RPOR	**Krasnaya Polya**	4.56	282	⇑*i*P	Pn	21 18 56.9	+4.5
RPOR	**Krasnaya Polya**	4.56	282	*i* Pn	Pn	21 18 56.9	+4.5
RPOR				*e*Sn	Sn	21 19 45.9	+1.8
CHOM	**Cayeli-Rize**	4.58	249	*e*P	Pn	21 18 55.3	+2.6
ASTR	**Astara**	4.69	157	P	Pn	21 18 54.2	0.0
	SNR=588						
ASTR				S	Sn	21 19 45.1	-2.2
GUZR	**Guzeripl'**	4.71	286	*c* *i*P	Pn	21 18 57.5	+2.9
GUZR	**Guzeripl'**	4.71	286	*i* Pn	Pn	21 18 57.7	+3.1
GUZR				*e*Sn	Sn	21 19 48.8	+0.9
MLAZ	**Malazgirt-MUS**	4.75	219	*e*P	Pn	21 18 58.7	+3.5
VANB	**Van**	4.87	209	*e*P	Pn	21 19 00.6	+3.8
SOC	**Sochi**	4.94	280	*c* *i*P	Pn	21 19 00.3	+2.7
SOC				*e*		21 19 58.9	
LZRR	**Lazarevskoye**	5.23	284	⇑*e*P	Pn	21 19 04.9	+3.4
LZRR				*e*S	Sn	21 20 00.8	+0.4
LZRR	**Lazarevskoye**	5.23	284	*e*Pn	Pn	21 19 04.9	+3.4
LZRR				*e*Sn	Sn	21 20 00.8	+0.4
GEVA	**Gevas**	5.24	210	Pn	Pn	21 19 03.9	+2.0
AKDM	**Akdamar-Van**	5.25	211	*e*P	Pn	21 19 05.4	+3.3
VRTB	**Varto-Mus**	5.29	227	*e*P	Pn	21 19 05.7	+3.2
GOYR	**Goytkh**	5.29	287	⇑*e*P	Pn	21 19 05.9	+3.5
GOYR				*e*S	Sn	21 20 01.3	-0.6
GOYR	**Goytkh**	5.29	287	*e*Pn	Pn	21 19 05.9	+3.5
GOYR				*e*Sn	Sn	21 20 01.3	-0.6
KOPT	**Kop Dagi**	5.29	239	Pn	Pn	21 19 05.8	+3.1
BAYT	**Aydıntepe-Bayb**	5.32	244	*e*P	Pn	21 19 04.5	+1.5
GURO	**Guroymak-BITLI**	5.46	219	*e*P	Pn	21 19 07.9	+2.9
GURO	**Guroymak-BITLI**	5.46	219		Pn	21 19 06.8	+1.9
YEDI	**Yedisu-Bingol**	5.61	234	*e*P	Pn	21 19 09.9	+2.9
CUKT	**Cukurca**	6.03	202	*e*P	Pn	21 19 16.1	+3.4
SVAN	**Silvan-Diyarba**	6.18	222	*e*P	Pn	21 19 18.3	+3.7
ANN	**Anapa**	6.76	289	*e*P	Pn	21 19 24.3	+1.8
ANN				*e*S	Sn	21 20 42.0	+3.9
ANN				pmax	pmax		
	comp=Z,28nm,1.0s						
ANN	**Anapa**	6.76	289	*e*Pn	Pn	21 19 27.3	+4.8
ILIC	**ilic-Erzincan**	6.84	242	*e*P	Pn	21 19 25.9	+2.1
DYBB	**Diyarbakir**	6.87	226	*e*P	Pn	21 19 26.2	+2.1
SVRC	**Sivrice-ELAZID**	7.04	233	*e*P	Pn	21 19 28.7	+2.2
MARD	**Mardin**	7.05	220	Pn	Pn	21 19 28.2	+1.6
MAZI	**Mazidag**	7.09	222	*e*P	Pn	21 19 30.7	+3.5
ARPR	**Arapgir-MALATY**	7.19	241	*e*P	Pn	21 19 30.7	+2.1
RSDY	**Resadiye-TOKAT**	7.24	253	*e*P	Pn	21 19 31.6	+2.4
TOKA	**Tokat**	7.87	254		Pn	21 19 37.0	-0.8
FEO	**Feodosiya**	8.23	289	*e*P	Pn	21 19 44.6	+2.0
FEO				*e*S	Sn	21 21 15.7	+1.8
SUDU	**Sudak**	8.48	288	*e*P	Pn	21 19 48.1	+2.1
SUDU				*e*S	Sn	21 21 21.4	+1.4
ALU	**Alushta**	8.87	286	*e*P	Pn	21 19 53.2	+1.9
ALU				*e*S	Sn	21 21 33.0	+3.4
VRH	**Novokhopyorsk**	8.91	341	*e*P	Pn	21 19 51.6	-0.2
VRH				*e*S	Sn	21 21 27.7	-2.7
VRH				pmax	pmax		
	comp=Z,190nm,0.6s						
VRH				pmax	pmax		
	comp=Z,80nm,0.5s						
VRH				smax	smax		
	comp=E,4µm,0.8s						
BNN	**Bunyan**	8.96	247	Pn	Pn	21 19 52.5	-0.3
YAL	**Yalta**	9.02	284	*e*P	Pn	21 19 55.6	+2.2
YAL				*e*S	Sn	21 21 37.2	+3.9
SIM	**Simferopol'**	9.11	287	*e*P	Pn	21 19 57.8	+3.2
SIM				*e*S	Sn	21 21 40.0	+4.5
BZK	**Bozkurt**	9.22	268	Pn	Pn	21 19 55.9	-0.3
SEV	**Sevastopol'**	9.38	284	*e*P	Pn	21 20 00.0	+1.8
SEV				*e*S	Sn	21 21 43.9	+2.0
VORD	**Divnogorie**	9.43	331	*e*P	Pn	21 19 59.0	+0.2
VORD				*e*S	Sn	21 21 43.0	-0.1
VORD				pmax	pmax		
	comp=Z,90nm,0.5s						
VORD				pmax	pmax		
	comp=Z,80nm,0.5s						
VORD				smax	smax		

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             comp=E,1µm,0.6s
BELG  Belogornoye       9.54   4  P      Pn       21 19 59.3 -1.1
             comp=E,590nm,0.5s,baz=214,slow=0.4,SNR=121
BELG                              S      Sn       21 21 39.5 -6.4
             comp=E,936nm,0.6s,baz=159,slow=21,SNR=15
BELG                              LR     LR       21 25 11.7
             comp=E,358nm,18.4s,baz=161,slow=47
ILGA  Ilgaz             9.63 263  Pn     Pn       21 20 03.9 +1.9
VSR   Storozhevoye      9.68 332 eP      Pn       21 20 02.5 +0.2
VSR                              eS      Sn       21 21 44.8 -4.5
VSR                               pmax   pmax
             comp=Z,100nm,0.4s
VSR                               pmax   pmax
             comp=Z,110nm,0.4s
VSR                               smax   smax
             comp=N,840nm,1.2s
VORR  Voronezh         10.05 333 eP      Pn       21 20 06.7 -0.6
VORR                             e                21 21 54.3
VORR                              pmax   pmax
             comp=Z,190nm,1.6s
BR131 Keskin Array S   10.12 256  Pn     Pn       21 20 10.8 +2.3
BR131 Keskin Array S   10.12 256d iP     Pn       21 20 12.3 +3.8
BR131 Keskin Array S   10.12 256  P      Pn       21 20 13.1 +4.6
             SNR=15
BRTR  Keskin Array B   10.12 256  P      Pn       21 20 12.4 +3.9
             comp=Z,9.5nm,0.8s,baz=72,slow=12,SNR=46
BRTR  Keskin Array B   10.12 256         Pn       21 20 10.9 +2.4
BRTR  Keskin Array B   10.12 256 i P     Pn       21 20 13.0 +4.5
BRTR                              pmax   pmax
             comp=Z,10.0nm,0.9s
GEYT  Alibeck          10.21 115  P      Pn       21 20 06.9 -2.8
             comp=Z,126nm,0.3s,baz=305,slow=11,SNR=224
GEYT                              S      Sn       21 21 52.2  -10
             comp=Z,40nm,0.4s,baz=275,slow=21,SNR=2.4
GEYT                              LR     LR       21 24 36.9
             comp=Z,96nm,19.9s,baz=342,slow=40
GEYT  Alibeck          10.21 115  Pn     Pn       21 20 07.4 -2.3
GYA0B ALIBECK ARRAY    10.21 115         Pn       21 20 06.9 -2.8
GYA0B ALIBECK ARRAY    10.21 115 ⇑Pn     Pn       21 20 07.0 -2.7
GYA0B                            ⇓Sn     Sn       21 21 53.5 -9.0
ANTO  Ankara           10.67 258  Pn     Pn       21 20 16.1 +0.1
ANTO  Ankara           10.67 258  P      Pn       21 20 16.1 +0.1
BR231 Keskin MP Arra   10.69 258  Pn     Pn       21 20 19.1 +2.8
LPSR  Galich'ya Gora   10.94 335 eP      Pn       21 20 18.8 -0.6
LPSR                             eS      Sn       21 22 16.2 -3.7
LPSR                              pmax   pmax
             comp=Z,450nm,0.9s
LPSR                              pmax   pmax
             comp=Z,330nm,0.8s
LPSR                              smax   smax
             comp=E,440nm,0.6s
AKTO  Aktyubinsk       10.97  43  P      Pn       21 20 19.3 -0.6
             comp=E,88nm,0.6s,baz=226,slow=12,SNR=172
AKTO                              S      Sn       21 22 12.4 -8.4
             comp=E,183nm,0.5s,baz=72,slow=21,SNR=12
AKTO  Aktyubinsk       10.97  43 ⇓Pn     Pn       21 20 18.6 -1.3
             comp=E,65nm,0.5s
AKTO                             ⇓Sn     Sn       21 22 12.6 -8.2
             comp=E,349nm,0.6s
AB31  Akbulak array    11.34  51 ⇑Pn     Pn       21 20 24.3 -0.8
             comp=E,13nm,0.3s,baz=241,slow=11,SNR=978
AB31                             ⇓Sn     Sn       21 22 24.7 -5.2
             comp=E,141nm,0.5s,baz=242,slow=25,SNR=5.3
ABKAR Akbulak array    11.34  51  Pn     Pn       21 20 22.9 -2.1
ABKAR Akbulak array    11.34  51  Pn     Pn       21 20 23.3 -1.7
MDUB  Mudurnu          11.63 263         Pn       21 20 30.5 +1.4
PURM  Purcari          12.31 293 ⇓P      Pn       21 20 39.2 +1.0
BORA  Eskisehir        12.36 261         Pn       21 20 40.2 +1.2
NATI  Neve Ativ        12.76 225  Pn     Pn       21 20 46.4 +2.0
GEM   Giv'at Ha'Em     12.84 225  Pn     Pn       21 20 47.6 +2.1
CSS   Mathiatis        12.89 236  Pn     Pn       21 20 47.7 +1.5
ASF   Jabal al Asfar   13.08 218  P      Pn       21 20 49.0 +0.1
             comp=E,1.9nm,0.4s,baz=42,slow=4.5,SNR=4.4
ASF                               S      Sn       21 23 15.8 +3.1
             comp=E,2.8nm,0.9s,baz=83,slow=12,SNR=1.6
MILM  Milestii Mici    13.10 294⇓iP      Pn       21 20 49.0  0.0
             comp=E,110nm,1.0s
MILM                             eS      Sn       21 23 10.0 -2.8
             comp=E,130nm,0.9s
MILM  Milestii Mici    13.10 294 ⇑P      Pn       21 20 49.3 +0.4
MILM  Milestii Mici    13.10 294deP      Pn       21 20 47.0 -2.0
MILM                             eS      Sn       21 23 10.0 -2.8
MILM                              pmax   pmax
             comp=Z,110nm,1.0s
MILM                              smax   smax
             comp=N,130nm,0.9s
KIS   Kishinev         13.12 294 eP      Pn       21 20 49.0 -0.2
             comp=N,70nm,0.7s
KIS                              eS      Sn       21 23 09.0 -4.1
             comp=N,6.0nm,0.5s
KIS                               LRM    MLR      21 26 42.0
             comp=N,600nm,14.5s
KIS   Kishinev         13.12 294 ⇓P      Pn       21 20 49.9 +0.7
KIS   Kishinev         13.12 294 eP      Pn       21 20 49.0 -0.2
KIS                              eS      Sn       21 23 09.0 -4.1
KIS                               pmax   pmax
             comp=Z,70nm,0.7s
KIS                               smax   smax
             comp=E,6.0nm,0.5s
TIRR  Tirgusor         13.12 283  Pn     Pn       21 20 49.2 -0.1
TIRR  Tirgusor         13.12 283  P      Pn       21 20 49.2 -0.1
MMA0B Mount Meron ar   13.13 225  Pn     Pn       21 20 50.5 +1.0
MMAI  Mount Meron Ar   13.13 225  P      Pn       21 20 50.1 +0.6
             comp=E,0.2nm,0.5s,baz=5.9,slow=40,SNR=2.2
MMAI                              LR     LR       21 26 30.4
             comp=E,211nm,21.9s,baz=211,slow=40
ISP   Isparta          13.13 253  Pn     Pn       21 20 50.0 +0.5
ISP   Isparta          13.13 253  P      Pn       21 20 50.0 +0.5
TPGR  Topolog          13.13 285 ⇓P      Pn       21 20 51.0 +1.6
CFR   Carcaliu         13.35 286 ⇓P      Pn       21 20 54.0 +1.7
TATR  Tatarca          13.44 288 ⇓P      Pn       21 20 54.4 +1.0
VLDR  Vladesti         13.44 289 ⇑P      Pn       21 20 54.9 +1.4
BLGI  Bet Lehem HaGe   13.46 225  Pn     Pn       21 20 55.5 +1.7
MMLI  Mount Malkishu   13.57 223  Pn     Pn       21 20 55.9 +0.5
SLCR  Slobozia Conac   13.63 288 ⇓P      Pn       21 20 57.5 +1.4
OFRI  `Ofer            13.65 225  Pn     Pn       21 20 57.7 +1.2
HMDT  Nahal Hemdat     13.67 223  Pn     Pn       21 20 58.5 +1.8
SORM  Soroca           13.70 299 ⇑P      Pn       21 20 56.9  0.0
VASR  Vaslui           13.74 292 ⇑P      Pn       21 20 59.0 +1.5
OBN   Obninsk          13.81 336 ⇑P      Pn       21 20 56.7 -1.7
OBN   Obninsk          13.81 336  P      Pn       21 20 56.9 -1.4
             comp=E,29nm,0.5s,baz=115,slow=0.6,SNR=24
OBN                               S      Sn       21 23 23.9 -6.0
             comp=E,28nm,0.5s,baz=29,slow=23,SNR=5.2
OBN                               LR     LR       21 26 53.8
             comp=E,75nm,20.5s,baz=176,slow=40
OBN   Obninsk          13.81 336         Pn       21 20 55.7 -2.6
OBN   Obninsk          13.81 336d iP     Pn       21 20 56.5 -1.8
OBN                              i S     Sn       21 23 23.8 -6.1
OBN                               pmax   pmax
             comp=Z,123nm,0.6s
OBN                               MLR    MLR
             comp=Z,320nm,18.0s
SLTI  Sal'it           13.93 224  Pn     Pn       21 21 01.6 +1.6
GHRR                   13.93 290 ⇑P      Pn       21 21 01.5 +1.5
MOS   Moscow           14.06 339 eP      Pn       21 20 58.3 -3.3
MOS                              eS      Sn       21 23 29.2 -6.7
MOS                               pmax   pmax
             comp=Z,312nm,0.7s
MOS                               pmax   pmax
             comp=Z,300nm,0.7s
ELL   Elmali           14.08 250         Pn       21 21 04.8 +2.7
ELL   Elmali           14.08 250  P      Pn       21 21 04.8 +2.7
PANC  Panciu           14.09 289 ⇓P      Pn       21 21 03.9 +1.8
AKASG Malin Array Be   14.10 310  P      Pn       21 21 00.7 -1.5
             comp=Z,23nm,0.6s,baz=109,slow=13,SNR=51
AKASG                             S      Sn       21 23 29.8 -7.3
             comp=Z,21nm,0.6s,baz=112,slow=25,SNR=6.6
AKASG                             LR     LR       21 27 02.0
             comp=Z,176nm,19.3s,baz=149,slow=40
AKBB  Malin Array Si   14.10 310  Pn     Pn       21 21 00.6 -1.6
AKBB  Malin Array Si   14.10 310d iP     Pn       21 21 00.6 -1.6
ODBI  Odobesti         14.15 288 ⇓P      Pn       21 21 03.5 +0.6
LEHL  Lehliu           14.27 283 ⇑P      Pn       21 21 05.9 +1.5
VRI   Vrincioaia       14.38 289 ⇑P      Pn       21 21 07.3 +1.4
GHAJ  Ghor Haditha     14.43 220  Pn     Pn       21 21 08.4 +1.9
PLOR  Plostina         14.44 289 ⇓P      Pn       21 21 08.6 +1.9
TESR  Tescani          14.51 291 ⇓P      Pn       21 21 08.5 +1.0
RAZG  Razgrad          14.53 279 ⇑P      Pn       21 21 09.2 +1.4
AKAS  Kas              14.56 248  P      P        21 21 13.8 +0.7
AMAZ  Amatzia          14.56 223  Pn     Pn       21 21 09.9 +1.6
JMB   Yambol           14.59 275 eP      P        21 21 12.2 -1.1
YTIR  Yattir           14.60 222  Pn     Pn       21 21 10.5 +1.6
NEHR  Nehoiu           14.66 287 ⇑P      Pn       21 21 11.6 +2.1
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SULR                   14.67 284 ⇑P      Pn       21 21 11.7 +2.1
SGRR  Singureni        14.88 282 ⇑P      Pn       21 21 13.8 +1.5
MLR   Muntele Rosu     14.91 287 ⇓P      Pn       21 21 14.4 +1.5
MLR   Muntele Rosu     14.91 287  P      Pn       21 21 12.7 -0.1
             comp=Z,29nm,0.8s,baz=67,slow=3.5,SNR=43
MLR                               LR     LR       21 28 54.4
             comp=Z,167nm,18.6s,baz=88,slow=45
MLR   Muntele Rosu     14.91 287  Pn     Pn       21 21 13.3 +0.5
MLR   Muntele Rosu     14.91 287  P      Pn       21 21 13.3 +0.5
BIZ   Bicaz            14.94 293 ⇓P      Pn       21 21 13.7 +0.6
SZH   Strazhica        14.97 278 eP      Pn       21 21 15.3 +1.8
HRA   Herat            14.99 119         Pn       21 21 12.4 -1.7
ALN   Alexandroupoli   15.30 269         Pn       21 21 16.3 -1.4
ALN   Alexandroupoli   15.30 269  P      Pn       21 21 16.3 -1.4
ALN                               pmax   pmax
             comp=Z,51nm,1.0s
DOPR  Dopca            15.32 289 ⇑P      Pn       21 21 19.3 +1.2
KZIT  Kziot            15.32 223  Pn     P        21 21 21.5  0.0
PRNI  Paran            15.49 220  Pn     Pn       21 21 21.5 +1.2
MTUR  Matau            15.52 286 ⇑P      P        21 21 23.1 -0.5
VOIR                   15.53 287 ⇑P      P        21 21 22.8 -1.0
HUMR  Humele           15.58 283 ⇑P      P        21 21 23.9 -0.4
STFAR Stefanesti-Arg   15.59 285 ⇑P      P        21 21 23.8 -0.6
KDZ   Kurdzhali        15.59 273 eP      P        21 21 23.6 -0.8
RDO   Rodhopi          15.61 271  P      P        21 21 25.6 +1.0
RDO   Rodhopi          15.61 271  P      P        21 21 23.7 -0.8
ARU   Arti             15.63  26  P      Pn       21 21 19.2 -2.7
             comp=Z,19nm,0.4s,baz=219,slow=8.5,SNR=68
ARU                               S      Sn       21 24 00.0  -14
             comp=Z,27nm,0.5s,baz=286,slow=22,SNR=3.2
ARU   Arti             15.63  26         Pn       21 21 19.1 -2.8
ARU                               IAmb   IAmb     21 21 24.6
             comp=Z,92nm,1.0s
ARU   Arti             15.63  26d iP     Pn       21 21 18.7 -3.2
ARU                               S      Sn       21 24 07.4 -6.6
ARU                               pmax   pmax
             comp=Z,69nm,0.9s
BURAR Bucovina Array   15.64 295 ⇑P      Pn       21 21 23.2 +1.0
BURAR Bucovina Array   15.64 295  Pn     Pn       21 21 22.1 -0.1
BURAR                             IAmb   IAmb     21 21 31.7
             comp=Z,85nm,0.6s
BUR08 Bucovina Ar. S   15.65 295  Pn     Pn       21 21 22.6 +0.2
HRFI  Mount Harif      15.74 219  Pn     Pn       21 21 24.2 +0.8
KRMI  Paran Flat       15.81 220  Pn     Pn       21 21 25.2 +0.8
ARR   Arges            15.82 286 ⇓P      P        21 21 27.0  0.0
KIRV  Kirov            15.82   6  P      Pn       21 21 21.7 -2.6
             comp=Z,114nm,0.5s,baz=198,slow=3.3,SNR=35
KIRV                              S      Sn       21 24 07.3  -11
             comp=Z,163nm,0.6s,baz=266,slow=21,SNR=5.1
KIRV  Kirov            15.82   6d iP     Pn       21 21 20.9 -3.4
EIL   Elat             16.09 219  P      Pn       21 21 28.4 +0.6
             comp=Z,67nm,1.0s,baz=62,slow=5.5,SNR=56
EIL                               LR     LR       21 27 43.5
             comp=Z,112nm,21.6s,baz=36,slow=37
EIL   Elat             16.09 219  Pn     Pn       21 21 28.7 +0.9
RZN   Rozhen           16.10 273 eP      P        21 21 30.7 +0.5
ARCR  ARCALIA          16.14 293 ⇑P      P        21 21 29.8 -0.7
PGB   Panagyurishte    16.35 276 eP      P        21 21 33.7 +0.9
LOT   Lotru            16.43 287 ⇓P      P        21 21 34.0 +0.1
KARP  Karpathos        16.60 250  P      P        21 21 35.0 -0.7
KARP  Karpathos        16.60 250  P      P        21 21 35.4 -0.2
KARP                              IAmb   IAmb     21 21 40.5
             comp=Z,131nm,0.8s
CJR   Cluj-Napoca      16.62 291 ⇑P      P        21 21 36.5 +0.7
SVE   Sverdlovsk       16.64  28deP      Pn       21 21 33.3 -1.3
SVE                              eS      Sn       21 24 26.4  -12
SVE                               pmax   pmax
             comp=Z,183nm,0.8s
BMR   Baia Mare        16.80 294 ⇑P      P        21 21 38.7 +1.0
MNK   Minsk            16.80 320 i P     Pn       21 21 34.1 -2.4
MNK                              i S     Sn       21 24 37.3 -5.1
MNK                               pmax   pmax
             comp=N,85nm,0.9s
MNK                               pmax   pmax
             comp=Z,215nm,0.9s
MNK                               pmax   pmax
             comp=E,24nm,0.9s
MNK                               MLR    MLR
             comp=Z,343nm,8.0s
MNK                               MLR    MLR
             comp=N,179nm,5.0s
MNK                               MLR    MLR
             comp=E,44nm,8.0s
MNK   Minsk            16.80 320 i P     Pn       21 21 34.2 -2.4
             comp=E,24nm,0.9s
MNK                              i P     Pn       21 21 34.2 -2.4
             comp=N,85nm,0.9s
MNK                              i P     Pn       21 21 34.2 -2.4
             comp=Z,215nm,0.9s,baz=125
MNK                              i pP    pP       21 21 49.1 -2.7
MNK                              i S     Sn       21 24 37.3 -5.1
MNK                              i LQ    LQ       21 26 37.7
MNK                              i LR    LR       21 27 54.8
MNK                              i LRM   MLR      21 28 52.4
             comp=Z,343nm,8.4s
MNK                              i LRM   MLR      21 29 09.5
             comp=N,179nm,5.5s
MNK                              i LRM   MLR      21 29 14.0
             comp=E,44nm,7.7s
MMB   Musomiste        16.84 273 eP      P        21 21 40.4 +2.1
LVV   L'vov            16.89 302 i P     Pn       21 21 37.0 -0.7
LVV                              eS      Sn       21 24 33.4  -11
LVV                               MLR    MLR
             comp=Z,400nm,14.0s
VTS   Vitosha          17.02 277 ⇑P      P        21 21 42.1 +1.8
VTS   Vitosha          17.02 277  P      P        21 21 40.3  0.0
VTS   Vitosha          17.02 277  P      P        21 21 40.3  0.0
VTS                               pmax   pmax
             comp=Z,13nm,0.8s
VTS   Vitosha          17.02 277 eP      P        21 21 41.7 +1.4
SRS   Serrai           17.05 272  P      P        21 21 42.1 +1.6
TAS   Tashkent         17.05  87  Pn     Pn       21 21 39.0 -0.7
TAS                               IAmb   IAmb     21 22 05.3
             comp=Z,63nm,0.5s
TAS   Tashkent         17.05  87  P      Pn       21 21 39.0 -0.7
TAS                               pmax   pmax
             comp=Z,63nm,0.5s
PUNG  Punghina         17.06 283 ⇑P      P        21 21 42.5 +1.9
MESR  Meseseni         17.10 292 ⇓P      P        21 21 42.4 +1.3
GZR   Gura Zlata       17.13 287 ⇓P      P        21 21 43.0 +1.5
BRLS  Borolday         17.14  82 eP      Pn       21 21 40.0 -0.9
BRLS  Borolday         17.14  82 eP      Pn       21 21 40.1 -0.9
             baz=83
SAKB  Bahrain          17.21 167  P      P        21 21 43.1 +0.8
DRGR                   17.23 291 ⇑P      P        21 21 43.6 +1.0
KKB   Krupnik          17.26 275 eP      P        21 21 45.6 +2.7
BLKB  Belogradchik     17.30 281 ⇑P      P        21 21 45.3 +2.0
PLG   Polygyros        17.34 269  P      P        21 21 47.1 +3.3
HERR  Herculane        17.40 285 ⇑P      P        21 21 45.4 +1.1
SHMA  Al-Shehemyia     17.40 166  P      P        21 21 45.7 +1.3
IUG   Iuzhnay          17.42  84 eP      Pn       21 21 44.0 -0.4
IUG   Iuzhnay          17.42  84 eP      Pn       21 21 43.1 -1.3
             baz=85
KNT   Kendrikon        17.55 272  P      P        21 21 48.1 +2.1
NACGM Naroch           17.56 320⇓iP      Pn       21 21 43.8 -2.0
KK31  Karatay Array    17.62  81  P      Pn       21 21 46.1 -0.7
KK31                              IAmb   IAmb     21 22 02.9
             comp=Z,45nm,0.6s
KK31  Karatay Array    17.62  81  P      Pn       21 21 46.1 -0.7
KK31                              pmax   pmax
             comp=Z,45nm,0.6s
KK31  Karatay Array    17.62  81 ⇑P      Pn       21 21 46.0 -0.8
             comp=Z,21nm,0.6s,baz=285,slow=12,SNR=261
KKAR  Karatay Array    17.62  81  P      Pn       21 21 46.0 -0.8
KKAR  Karatay Array    17.62  81  P      Pn       21 21 46.0 -0.8
KKAR                              IAmb   IAmb     21 22 02.9
             comp=Z,45nm,0.6s
KKAR  Karatay Array    17.62  81  P      Pn       21 21 46.0 -0.8
KKAR                              pmax   pmax
             comp=Z,45nm,0.6s
KWP   Kalwaria Pacla   17.68 301 eP      P        21 21 50.3 +2.9
KWP   Kalwaria Pacla   17.68 301  P      P        21 21 48.1 +0.7
KWP   Kalwaria Pacla   17.68 301  P      P        21 21 48.1 +0.7
KWP                               pmax   pmax
             comp=Z,784nm,1.0s
CHGR  Chuyangaron      17.73  96  P      P        21 21 47.4 -0.7
CHGR  Chuyangaron      17.73  96  P      P        21 21 47.4 -0.7
CHGR                              pmax   pmax
             comp=Z,112nm,0.6s
KHOR  Al-Khor Airpor   17.73 165  P      Pn       21 21 48.9 +0.8
UZH   Uzhgorod         17.74 297 eP      Pn       21 21 49.0 +0.9
UZH                              eS      Sn       21 25 02.0 -3.1
UZH                               pmax   pmax
             comp=N,4.0nm,0.8s
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UZH                               pmax   pmax
             comp=E,6.0nm,0.8s
UZH                               pmax   pmax
             comp=Z,8.0nm,0.8s
VAY   Valandovo        17.75 273 i P     Pn       21 21 50.5 +2.2
KOLS  Kolonicke sedl   17.81 298 eP      Pn       21 21 50.5 +1.5
KOLS                              pmax   pmax
             comp=Z,32nm,0.8s
KOLS  Kolonicke sedl   17.81 298 eP      Pn       21 21 50.5 +1.5
IDID  Didziasalis      17.82 321 eP      P        21 21 48.7 -0.2
LTVH  Ltavrtes, Hu     17.84 293  P      Pn       21 21 50.8 +1.5
BORR  Bors             17.89 292 ⇓P      Pn       21 21 52.2 +2.3
MDVR  Moldovita        17.90 285 ⇑P      Pn       21 21 51.4 +1.2
BOVS  Bovan            18.00 281 ⇑P      Pn       21 21 53.9 +2.7
IIGN  Ignalina         18.08 321 eP      P        21 21 51.5 -0.3
IIGN                              IAmb   IAmb     21 22 11.4
             comp=Z,72nm,0.6s
LIT   Litokhoron       18.12 269         Pn       21 21 53.4 +0.6
LIT   Litokhoron       18.12 269  P      Pn       21 21 53.4 +0.6
LIT                               pmax   pmax
             comp=Z,14nm,0.9s
ATAL  Atalanti         18.18 265  P      Pn       21 21 57.1 +3.5
DZA   Taraz            18.25  81 eP      Pn       21 21 54.5 +0.1
DZA   Taraz            18.25  81 eP      Pn       21 21 54.5 +0.1
             baz=82
ISAL  Salakas          18.25 321 eP      P        21 21 53.2 -0.5
ISAL                              IAmb   IAmb     21 22 12.1
             comp=Z,84nm,1.1s
IDI   Anoyia           18.32 253 ⇓P      Pn       21 21 56.6 +1.3
IDI   Anoyia           18.32 253  P      P        21 21 54.1 -0.6
             comp=Z,48nm,0.5s,baz=46,slow=14,SNR=40
IDI                               S      S        21 25 20.4 +0.6
             comp=Z,3.4nm,0.6s,baz=300,slow=6.2,SNR=1.3
IDI   Anoyia           18.32 253  P      P        21 21 54.9 +0.3
IDI   Anoyia           18.32 253  IAmb   IAmb     21 21 59.5
             comp=Z,62nm,0.5s
CRVS  Cervenica-Dubn   18.33 298 eP      Pn       21 21 56.3 +1.0
CRVS                              pmax   pmax
             comp=Z,41nm,1.0s
CRVS  Cervenica-Dubn   18.33 298 eP      Pn       21 21 56.3 +1.0
SKO   Skopje           18.44 276 i P     Pn       21 21 58.0 +1.3
GAR   Garm             18.46  94  P      Pn       21 21 57.1  0.0
GAR                               IAmb   IAmb     21 22 18.2
             comp=Z,132nm,1.0s
KLMR  Klimovskoe       18.46 349 eP      P        21 21 55.4 -0.5
KLMR                             e                21 25 13.9
KLMR                              pmax   pmax
             comp=Z,125nm,0.7s
KLMR  Klimovskoe       18.46 349 ePn     P        21 21 55.4 -0.5
KLMR                              AMP             21 21 56.6
             comp=Z,125nm,0.7s
KLMR                             eSn     S        21 25 14.0 -8.3
KLMR                             eSn     S        21 25 14.0 -8.3
BTK   Batken           18.49  91  IAmb   IAmb     21 22 08.9
             comp=Z,52nm,0.7s
TRNA  Turayna          18.54 166  P      Pn       21 21 57.5 -0.4
AGG   Agios Georgios   18.57 266  P      Pn       21 21 58.9 +0.6
AGG   Agios Georgios   18.57 266         Pn       21 21 58.4 +0.1
AGG                               IAmb   IAmb     21 22 00.7
             comp=Z,96nm,1.4s
AGG   Agios Georgios   18.57 266  P      Pn       21 21 58.4 +0.1
AGG                               pmax   pmax
             comp=Z,96nm,1.4s
KRND  KRANIDI          18.59 261  P      Pn       21 21 58.9 +0.4
SHME  Shamm            18.59 152  P      P        21 21 58.1 +0.4
SHME  Shamm            18.59 152  P      P        21 21 57.9 +0.3
JRN   Qarnain Island   18.67 161  P      Pn       21 21 59.4 -0.2
MAKR  Makrakomi, Fth   18.72 266  P      Pn       21 22 00.8 +0.7
FNA   Florina          18.75 272  P      Pn       21 22 03.0 +2.5
FNA   Florina          18.75 272         Pn       21 22 00.1 -0.4
FNA   Florina          18.75 272  P      Pn       21 22 00.1 -0.4
FNA                               pmax   pmax
             comp=Z,42nm,0.9s
BANOM Banah            18.77 151  P      Pn       21 22 00.5 -0.2
BANOM                             P      Pn       21 22 00.5 -0.2
PRGR  Permogore        18.78 359⇓iP      P        21 21 59.4  0.0
PRGR                             e                21 25 18.5
BRVK  Borovoye         18.86  49  P      P        21 21 59.7 -0.5
BRVK                              IAmb   IAmb     21 22 02.4
             comp=Z,73nm,0.6s
BRVK  Borovoye         18.86  49ceP      P        21 21 59.8 -0.5
BRVK                              pmax   pmax
             comp=Z,58nm,0.6s
BRVK                              MLR    MLR
             comp=Z,87nm,12.0s
BRVK  Borovoye         18.86  49  P      P        21 22 00.3  0.0
BRVK  Borovoye         18.86  49 ⇑P      P        21 21 59.8 -0.5
             comp=Z,58nm,0.6s
BRVK                             ⇑S      S        21 25 20.8  -10
             comp=Z,69nm,0.6s
IMMV  Iera Moni Meta   18.87 254  P      Pn       21 22 02.0 +0.1
OTUK  Ortayu           18.88  65 ⇓P      P        21 22 00.9 +0.3
             comp=Z,29nm,0.6s
KECS  Kecovo           18.91 296 eP      Pn       21 22 03.1 +0.8
KECS                              pmax   pmax
             comp=Z,62nm,0.7s
KECS  Kecovo           18.91 296 eP      Pn       21 22 03.0 +0.8
SUW   Suwalki          18.91 314 eP      P        21 22 01.4 +0.5
SUW   Suwalki          18.91 314  P      P        21 22 00.7 -0.1
SUW   Suwalki          18.91 314  P      P        21 22 00.7 -0.1
SUW                               pmax   pmax
             comp=Z,186nm,1.0s
SUW   Suwalki          18.91 314 eP      Pn       21 22 01.7 -0.5
UMQ   Umm Al-Quwin     18.92 153  P      Pn       21 22 02.4  0.0
GUR   Goura            18.96 263  P      Pn       21 22 03.1 +0.1
ANX   Ano Chora        19.02 265  P      Pn       21 22 03.6 -0.2
KLV   Kalavryta, Ach   19.06 263  P      Pn       21 22 04.7 +0.6
OHR   Ohrid            19.10 273 i P     Pn       21 22 06.7 +2.1
NIE   Niedzica         19.17 299 eP      Pn       21 22 06.7 +1.3
DIVS  Divibare         19.18 283  P      P        21 22 04.6 +0.6
DIVS  Divibare         19.18 283 eP      Pn       21 22 05.5 -0.1
MASF  Masafi           19.23 152  P      Pn       21 22 05.8 -0.4
KBN   Korca            19.23 272  P      Pn       21 22 05.9 -0.2
KBN                               IAmb   IAmb     21 22 11.5
             comp=Z,94nm,1.2s
KBN   Korca            19.23 272  P      Pn       21 22 05.9 -0.2
KBN                               pmax   pmax
             comp=Z,94nm,1.2s
PHP   Peshkopia        19.23 275  P      Pn       21 22 07.0 +0.8
FRGS  Fruska Gora      19.23 286 ⇓P      Pn       21 22 06.4 +0.3
FRGS  Fruska Gora      19.23 286⇓iP      Pn       21 22 06.3 +0.2
MSFE  Esma-Masafi      19.24 152  P      P        21 22 05.3 +0.6
PABE  Paberze          19.24 319  P      P        21 22 04.7 +0.3
PABE  Paberze          19.24 319 eP      Pn       21 22 05.3 -0.7
PSZ   Piszkesteto      19.24 294 ⇑P      Pn       21 22 05.8 -0.4
PSZ   Piszkesteto      19.24 294         Pn       21 22 05.7 -0.5
PSZ   Piszkesteto      19.24 294  P      Pn       21 22 05.7 -0.5
PSZ                               pmax   pmax
             comp=Z,28nm,0.7s
SJES  Sjenica          19.29 280 eP      Pn       21 22 06.9  0.0
RAYN  Ar Rayn          19.33 183  P      Pn       21 22 07.3 -0.2
RAYN  Ar Rayn          19.33 183  P      Pn       21 22 07.3 -0.2
RAYN                              pmax   pmax
             comp=Z,23nm,0.9s
RAYN  Ar Rayn          19.33 183  P      Pn       21 22 06.9 -0.5
DRK   Karamyk          19.39  92  P      Pn       21 22 08.2  0.0
DRK                               IAmb   IAmb     21 22 18.1
             comp=Z,53nm,0.7s
DRO   Drossia          19.41 264  P      P        21 22 06.3 -0.2
NAZ   Nazwa, Dubai     19.41 154  P      Pn       21 22 09.2 +0.8
TEKS  Tekeris          19.47 284 eP      Pn       21 22 12.5 +3.6
KBL   Kabul            19.49 108  P      Pn       21 22 09.3 -0.1
KBL   Kabul            19.49 108  P      Pn       21 22 09.3 -0.1
KBL                               pmax   pmax
             comp=Z,22nm,0.8s
KBL   Kabul            19.49 108  P      Pn       21 22 10.9 +1.5
             SNR=10
LSK   Leskovik         19.50 271  P      Pn       21 22 10.4 +1.1
VSVD  Vaisvydziai      19.51 320 eP      Pn       21 22 09.9 +0.7
RLS   Riolos of Patr   19.55 264  P      Pn       21 22 10.8 +0.9
ITM   Ithomi           19.56 261  P      P        21 22 08.6 +0.4
ITM                               IAmb   IAmb     21 22 14.9
             comp=Z,43nm,0.7s
PUL   Pulkovo          19.57 335⇑eP      Pn       21 22 10.1 +0.2
PUL                               MLR    MLR
             comp=Z,227nm,13.0s
AJN   Ajban            19.60 156  P      Pn       21 22 10.4 -0.2
AJN   Ajban            19.60 156  P      P        21 22 08.3 -0.4
FAQ   Al Faqa, Dubai   19.62 154  P      Pn       21 22 11.0 +0.2
GHWR  Ruwais           19.62 162  P      Pn       21 22 10.5 -0.3
BBLS  Lazi&#263;i      19.63 282⇓iP      Pn       21 22 10.2 -0.6
UOSS  Minazif          19.63 153  P      P        21 22 09.5 +0.5
UOSS                              IAmb   IAmb     21 22 30.0
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          comp=Z,46nm,0.8s
UOSS  Minazif            19.63 153   P      P       21 22 09.4 +0.4
BLJ   Bijeljina          19.64 285  eP      Pn      21 22 09.9 -1.0
OJC   Ojcow              19.64 301  eP      P       21 22 09.6 +0.7
OJC   Ojcow              19.64 301   P      P       21 22 09.2 +0.3
OJC                                  IAmb   IAmb    21 22 14.5
          comp=Z,41nm,0.8s
OJC   Ojcow              19.64 301   P      P       21 22 09.2 +0.3
OJC                                  pmax   pmax
          comp=Z,41nm,0.8s
ASUD  Al Ashush, Dub     19.65 155   P      Pn      21 22 10.3 -0.8
ASUD  Al Ashush, Dub     19.65 155   P      Pn      21 22 10.2 -0.9
RUDO  Rudo               19.68 281  eP      P       21 22 09.4  0.0
HATD  Hatta, Dubai       19.72 153   P      Pn      21 22 11.0 -0.9
TIR   Tirane             19.73 275 ⇓P       Pn      21 22 12.0  0.0
TIR   Tirane             19.73 275   IAmb   IAmb    21 22 27.0
          comp=Z,51nm,0.7s
BUD   Budapest           19.79 293   P      Pn      21 22 12.7 +0.1
ASHO  Ashiyiah           19.83 153   P      P       21 22 11.5 +0.3
          SNR=16
VSU   Vasula             19.84 329d iP      P       21 22 11.3 +0.4
VSU                                  pmax   pmax
          comp=Z,312nm,0.6s
VSU                                  MLR    MLR
          comp=Z,672nm,13.0s
VSU   Vasula             19.84 329  eP      P       21 22 11.4 +0.6
IGT   Igoumenitsa        19.88 269   P      P       21 22 05.5 -6.0
LKD2  Lefkada island     19.88 267   P      P       21 22 11.9 +0.3
EVGI  Lefkada island     19.94 266   P      P       21 22 12.7 +0.5
PDG   Podgorica          19.95 278 ⇑P       Pn      21 22 14.5  0.0
PDG   Podgorica          19.95 278   P      Pn      21 22 13.9 -0.6
PDG                                  IAmb   IAmb    21 22 18.6
          comp=Z,59nm,0.7s
PDG   Podgorica          19.95 278  eP      Pn      21 22 14.1 -0.4
BTLS  Baital             19.97  74d iP      P       21 22 13.2 +0.7
BTLS                                 pmax   pmax
          comp=Z,13nm,0.5s
BTLS  Baital             19.97  74⇓iP      P       21 22 13.3 +0.7
          comp=Z,13nm,0.5s,baz=75
VYHS  Vyhne              20.00 296  eP      Pn      21 22 15.0 -0.1
VYHS                                 pmax   pmax
          comp=Z,33nm,0.6s
VYHS  Vyhne              20.00 296  eP      Pn      21 22 15.0 -0.1
SRN   Sarande            20.02 270   P      P       21 22 14.0 +1.0
MORH  Mrgy, Hungar       20.02 289 ⇑P       Pn      21 22 15.4 +0.1
MORH  Mrgy, Hungar       20.02 289⇓iP      Pn      21 22 14.8 -0.5
MORH  Mrgy, Hungar       20.02 289   P      Pn      21 22 15.2 -0.1
DRME  Dracevica, Mon     20.05 277  eP      Pn      21 22 14.9 -0.8
MZWR  Madinat Zayed      20.06 160   P      Pn      21 22 15.0 -0.9
EKS2  Erkin-Say          20.06  81   P      Pn      21 22 15.3 -0.7
          SNR=30
FSK   Fiskardo           20.07 266   P      Pn      21 22 20.6 +4.7
AML   Almayashu          20.10  83   P      Pn      21 22 16.0 -0.7
          SNR=14
AML   Almayashu          20.10  83   P      Pn      21 22 15.7 -1.1
LTHK  Lithakia           20.14 264   P      P       21 22 11.4 -3.0
VLS   Valsamata          20.15 265   P      P       21 22 13.5 -1.0
PSDA  Pessada-Kefalo     20.18 265   P      P       21 22 14.4 -0.4
KEK   Kerkira            20.21 270   P      P       21 22 15.1 -0.1
KEK   Kerkira            20.21 270   P      P       21 22 16.1 +0.9
SRO2  Moca               20.23 294  eP      Pn      21 22 17.6 -0.2
SRO2                                 pmax   pmax
          comp=Z,159nm,0.6s
SRO2  Moca               20.23 294  eP      Pn      21 22 17.6 -0.2
KEF4  Livadi, Kephal     20.24 266   P      P       21 22 15.2 -0.3
DMLN  Damoulianata-K     20.29 266   P      P       21 22 16.5 +0.5
SRO   Srobarova          20.29 294  eP      Pn      21 22 18.6 +0.1
SRO                                  pmax   pmax
          comp=Z,123nm,0.7s
SRO   Srobarova          20.29 294  eP      Pn      21 22 18.6 +0.1
KOLL  Kolacno            20.29 296  eP      Pn      21 22 18.1 -0.4
CSKK  Cskako             20.30 292   P      Pn      21 22 17.9 -0.7
ALNE  Al Ain             20.31 155   P      Pn      21 22 18.7 -0.2
          SNR=16
ALNE  Al Ain             20.31 155   P      P       21 22 17.2 +0.8
KEF3  Kipouria, Keph     20.32 265   P      P       21 22 13.1 -3.2
BRY   Bratogost          20.39 280  eP      Pn      21 22 19.1 -0.7
KOVH  Kovagotottos       20.40 289   P      Pn      21 22 18.7 -1.2
USP   Ospenovka          20.49  79   P      P       21 22 18.6 +0.4
          SNR=14
PBUR  Paburge            20.49 318  eP      P       21 22 19.1 +1.0
HCY   Herceg Novi        20.50 278  eP      P       21 22 19.0 +0.7
TIH   Tihany             20.54 291   P      Pn      21 22 20.8 -0.6
SGDS  Sogindy            20.55  79d iP      P       21 22 18.9  0.0
SGDS  Sogindy            20.55  79⇓iP      P       21 22 19.0  0.0
          baz=79
TREB  Trebinje           20.55 279  eP      Pn      21 22 20.5 -1.2
AAK   Ala-Archa          20.59  81   P      P       21 22 20.7 +1.3
          SNR=33
AAK   Ala-Archa          20.59  81   P      P       21 22 20.4 +1.0
          comp=Z,22nm,0.8s,baz=262,slow=5.6,SNR=65
AAK                                  LR     LR      21 31 14.9
          comp=Z,54nm,20.7s,baz=292,slow=39
          comp=Z,22nm,0.8s
AAK   Ala-Archa          20.59  81   P      P       21 22 19.4 +0.1
AAK   Ala-Archa          20.59  81   P      P       21 22 20.7 +1.3
OKC   Ostrava-Krasne     20.62 299  eP      P       21 22 20.7 +1.2
OKC   Ostrava-Krasne     20.62 299  eP      P       21 22 20.7 +1.2
FRU1  Bishkek            20.66  81   P      P       21 22 20.5 +0.5
FRU1                                 IAmb   IAmb    21 22 44.7
          comp=Z,43nm,0.7s
FRU1  Bishkek            20.66  81   P      P       21 22 20.5 +0.5
FRU1                                 pmax   pmax
          comp=Z,43nm,0.7s
UCH   Uchtor             20.68  82   P      P       21 22 21.6 +0.9
          SNR=15
MZR   Muzera             20.69 161   P      P       21 22 21.0 +0.5
          SNR=13
MZR   Muzera             20.69 161   P      P       21 22 20.6 +0.2
CHMS  Chumysh            20.71  80  iP      P       21 22 20.4 -0.2
CHMS                                 pmax   pmax
          comp=Z,27nm,0.9s
CHMS  Chumysh            20.71  80 ⇓P       P       21 22 20.5 -0.2
          comp=Z,26nm,0.9s
KLNR  Kaliningrad        20.74 313d iP      Pn      21 22 22.4 -1.3
KLNR                                 pmax   pmax
          comp=Z,136nm,0.7s
KLNR                                 MLR    MLR
          comp=Z,225nm,5.0s
MAUC  Maruska            20.76 298  eP      Pn      21 22 22.6 -1.5
MPLH  Magyarpolny        20.79 292   P      Pn      21 22 23.3 -1.0
JAVC  Velka Javorina     20.80 297  eP      Pn      21 22 23.5 -1.1
KBK   Karagaybulak       20.91  81   P      P       21 22 24.2 +1.3
          SNR=47
SMOL  Smolenice          20.93 296  eP      Pn      21 22 24.9 -1.2
SMOL                                 pmax   pmax
          comp=Z,27nm,1.1s
SMOL  Smolenice          20.93 296  eP      Pn      21 22 24.9 -1.2
EGYH  Egyhazaskeszo      20.94 293   P      Pn      21 22 26.8 +0.6
MORC  Moravsky Berou     21.00 299 ⇑P       P       21 22 25.2 +1.6
MORC  Moravsky Berou     21.00 299   P      P       21 22 24.5 +0.9
MORC                                 IAmb   IAmb    21 22 25.8
          comp=Z,48nm,0.8s
MORC  Moravsky Berou     21.00 299   P      P       21 22 24.5 +0.9
MORC                                 pmax   pmax
          comp=Z,47nm,0.8s
MORC  Moravsky Berou     21.00 299  eP      P       21 22 24.4 +0.8
STON  Ston               21.00 280  eP      Pn      21 22 25.8 -1.1
MODS  Modra-Piesok       21.02 295  eP      P       21 22 26.0 +2.1
MODS                                 pmax   pmax
          comp=Z,176nm,1.1s
MODS  Modra-Piesok       21.02 295  eP      P       21 22 26.0 +2.1
SCTE  Santa Cesarea      21.09 272   P      P       21 22 25.3 +0.8
BLY   Banja Luka         21.12 285⇓iP      P       21 22 28.6 +3.7
ZST   Bratislava         21.13 295  eP      P       21 22 27.3 +2.4
ZST                                  pmax   pmax
          comp=Z,168nm,0.9s
ZST   Bratislava         21.13 295  eP      P       21 22 27.3 +2.4
MTSE  Matsula            21.16 326  eP      P       21 22 25.3 +0.1
SLIT  Slitere, Latvi     21.17 323  eP      P       21 22 26.1 +0.8
SRKY  Kupres RS          21.21 283  eP      P       21 22 27.2 +1.2
MGRS  Mrkonjic Grad      21.23 284  eP      P       21 22 27.6 +1.5
ARQ   Araqi              21.23 154   P      P       21 22 27.3 +1.1
          SNR=16
HOQ   Hoqain             21.27 151   P      P       21 22 27.1 +0.4
          SNR=6.3
TKM2  Tokmak 2           21.34  80   P      P       21 22 28.1 +0.6
          SNR=30
TKM2  Tokmak 2           21.34  80  iP      P       21 22 26.9 -0.6
TKM2                                 pmax   pmax
          comp=Z,29nm,0.8s
TKM2  Tokmak 2           21.34  80 ⇓P       P       21 22 26.9 -0.6
          comp=Z,29nm,0.8s
UMZA  Um Al Zommool      21.40 157   P      P       21 22 28.0  0.0
SOP   Sopron             21.47 293   P      P       21 22 30.7 +2.1
KRLC  Kraliky            21.53 300  eP      P       21 22 30.2 +0.9
KRLC  Kraliky            21.53 300  eP      P       21 22 30.2 +0.9
VRAC  Vranov             21.55 298 ⇓P       P       21 22 30.9 +1.4
VRAC  Vranov             21.55 298   P      P       21 22 30.2 +0.7
          comp=Z,19nm,0.7s,baz=96,slow=11,SNR=25
VRAC                                 LR     LR      21 32 03.1
          comp=Z,172nm,21.4s,baz=102,slow=40
          comp=Z,19nm,0.7s
VRAC  Vranov             21.55 298  eP      P       21 22 30.8 +1.3
BIDO  Bidbid             21.62 150   P      P       21 22 31.7 +1.3
RONA  Rosalia, Austr     21.65 293  eP      P       21 22 33.4 +2.8
          comp=Z,34nm,1.2s,SNR=12
KRUC  Moravsky           21.66 297  eP      P       21 22 32.3 +1.7
BOOM  Boomskoye usch     21.66  81   P      P       21 22 31.3 +0.4
BOOM  Boomskoye usch     21.66  81   P      P       21 22 31.3 +0.4
BOOM                                 pmax   pmax
          comp=Z,33nm,0.9s
KOGS  Kog                21.68 290  iP      P       21 22 33.4 +2.6
KOGS                                 IAMb           21 22 34.9
          comp=Z,36nm,0.7s
KUU   Kurty              21.72  77d iP      P       21 22 32.2 +0.8
KUU                                 eS      S       21 26 28.2 +0.3
KUU                                  pmax   pmax
          comp=Z,28nm,0.5s
KUU   Kurty              21.72  77⇓iP      P       21 22 32.2 +0.8
          comp=Z,28nm,0.5s,baz=78
KUU                                 eS      S       21 26 28.2 +0.3
          baz=78
DPC   Dobruska-Polom     21.86 300  eP      P       21 22 34.1 +1.3
DPC   Dobruska-Polom     21.86 300  eP      P       21 22 34.1 +1.3
MEF   Metsahovi          21.91 330  eP      P       21 22 36.2 +3.0
GKP   Gorka Klasztor     21.93 308  eP      P       21 22 34.1 +0.7
GKP   Gorka Klasztor     21.93 308  eP      P       21 22 33.5 +0.1
ULHL  Ulahol             21.93  81   P      P       21 22 35.1 +1.3
          SNR=67
CONA  Conrad Observa     21.95 294  eP      P       21 22 35.7 +1.9
          comp=Z,58nm,1.2s,SNR=22
OSTC  Ostas              21.96 301  eP      P       21 22 34.8 +1.0
BSY   Bisya              22.01 153   P      P       21 22 36.2 +1.6
SMDO  Samad              22.02 150   P      P       21 22 36.2 +1.4
          SNR=6.4
CHVC  Chvalec            22.06 301  eP      P       21 22 36.4 +1.4
WSAR  Wadi Sarin         22.07 149   P      P       21 22 36.5 +1.3
          comp=Z,44nm,0.7s,baz=343,slow=7.7,SNR=19
WSAR                                 PcP    PcP     21 26 30.5 -0.1
          comp=Z,2.9nm,0.5s,baz=252,slow=3.2,SNR=2.0
WSAR                                 LR     LR      21 34 12.3
          comp=Z,82nm,19.2s,baz=352,slow=45
          comp=Z,44nm,0.7s
WSAR  Wadi Sarin         22.07 149   P      P       21 22 37.5 +2.3
UPC   Upice              22.08 301  eP      P       21 22 36.5 +1.4
UPC   Upice              22.08 301  eP      P       21 22 36.5 +1.4
ARSA  Arzberg            22.16 292  eP      P       21 22 38.0 +2.0
          comp=Z,29nm,1.1s,SNR=10
CHKK  Chushkaly          22.19  77  eP      P       21 22 37.2 +0.8
CHKK  Chushkaly          22.19  77  eP      P       21 22 37.2 +0.8
          baz=78
FIA1  FINESS Array S     22.20 334   P      P       21 22 36.2 -0.1
FINES FINESS Array B     22.20 334   P      P       21 22 36.4 +0.2
          comp=Z,25nm,0.4s,baz=138,slow=11,SNR=267
FINES                                S      S       21 26 31.9 -4.4
          comp=Z,25nm,0.8s,baz=126,slow=20,SNR=3.9
FINES                                LR     LR      21 32 05.7
          comp=Z,213nm,18.3s,baz=130,slow=39
          comp=Z,25nm,0.4s
FINES FINESS Array B     22.20 334   P      P       21 22 36.2 -0.1
AAA   Alma-Ata           22.24  79  eP      P       21 22 38.0 +1.0
AAA                                  pmax   pmax
          comp=Z,25nm,1.1s
AAA   Alma-Ata           22.24  79  eP      P       21 22 38.0 +1.0
          comp=Z,25nm,1.1s,baz=79
CRES  Cresnjev           22.25 288  eP      P       21 22 36.9 -0.2
TREC  Trest              22.27 297  eP      P       21 22 39.8 +2.5
TREC  Trest              22.27 297  eP      P       21 22 39.8 +2.5
TNSS  Tian-Shan          22.29  79  iP      P       21 22 39.0 +1.1
TNSS  Tian-Shan          22.29  79  iP      P       21 22 39.0 +1.1
          baz=80
MDOK  Medeo              22.34  79  eP      P       21 22 39.0 +0.8
MDOK  Medeo              22.34  79  eP      P       21 22 39.1 +0.8
          baz=79
MDOK  Medeo              22.34  79 ⇓P       P       21 22 39.1 +0.8
          comp=Z,31nm,1.1s
KSH   Kashi              22.44  89   P      P       21 22 38.3 -1.0
KSH                                  pP     pP      21 22 57.6 +3.7
KSH                                  sP     sP      21 23 03.3 +0.6
KSH                                  S      S       21 26 36.1 -5.0
KSH                                  pmax   pmax
          comp=Z,17nm,0.7s
SOKA  Soboth             22.51 291  eP      P       21 22 40.8 +0.9
          comp=Z,46nm,1.0s,SNR=15
TIP   Timpagrande        22.61 271   P      P       21 22 40.9 -0.1
KDJ   Kajisay            22.64  81   P      P       21 22 42.0 +0.6
KDJ   Kajisay            22.64  81   P      P       21 22 42.0 +0.6
KDJ                                  pmax   pmax
          comp=Z,23nm,0.8s
SGRT  San Giovanni R     22.64 278   P      P       21 22 41.5 +0.1
SGRT                                 IAmb   IAmb    21 22 55.1
          comp=Z,45nm,1.1s
JMDO  Jabal Madar        22.67 151   P      P       21 22 42.7 +1.1
WBK   Wadi Bani Khal     22.77 149   P      P       21 22 44.3 +1.6
OBKA  Obir               22.85 290  eP      P       21 22 44.7 +1.2
          comp=Z,9.2nm,0.6s
LJU   Ljubljana          22.89 289  eP      P       21 22 44.7 +0.9
LJU   Ljubljana          22.89 289  iP      P       21 22 45.0 +1.3
PRU   Pruhonice          22.95 299  eP      P       21 22 45.2 +0.9
PRU   Pruhonice          22.95 299  eP      P       21 22 45.2 +0.9
CEY   Cerknica           22.98 288  eP      P       21 22 45.0 +0.3
PVCC  Panska Ves         22.99 300  eP      P       21 22 46.5 +1.7
PVCC  Panska Ves         22.99 300  eP      P       21 22 46.5 +1.7
CKRC  Cesky Krumlov      23.02 296  eP      P       21 22 46.1 +1.1
MOA   Molln              23.02 294  eP      P       21 22 45.5 +0.5
          comp=Z,14nm,0.6s,SNR=8.4
CUC   Castrocucco        23.05 273   P      P       21 22 45.5  0.0
CUC                                  IAmb   IAmb    21 22 47.7
          comp=Z,88nm,1.0s
TDK   Taldyqorghan       23.06  74  eP      P       21 22 46.2 +0.7
TDK                                  pmax   pmax
          comp=Z,19nm,0.9s
TDK   Taldyqorghan       23.06  74  eP      P       21 22 46.2 +0.7
          comp=Z,20nm,0.9s,baz=74
TARG  Taragay, Kyrgy     23.18  82   P      P       21 22 47.3 +0.2
KURBB Kurchatov Arra     23.18  59   P      P       21 22 47.6 +1.0
          comp=Z,17nm,0.5s,baz=266,slow=8.7,SNR=174
KURBB                                LR     LR      21 33 25.1
          comp=Z,160nm,19.6s,baz=213,slow=40
          comp=Z,17nm,0.5s
KURBB Kurchatov Arra     23.18  59 ⇑P       P       21 22 47.4 +0.8
          comp=Z,38nm,0.8s
KURK  Kurchatov          23.25  59   P      P       21 22 47.6 +0.4
KURK                                 IAmb   IAmb    21 23 06.2
          comp=Z,52nm,0.8s
KURK  Kurchatov          23.25  59d iP      P       21 22 48.1 +0.9
KURK                                 pmax   pmax
          comp=Z,47nm,1.0s
KURK                                 MLR    MLR
          comp=Z,283nm,24.0s
KURK  Kurchatov          23.25  59   P      P       21 22 48.1 +0.9
SKDS  Skadanscina        23.28 288  eP      P       21 22 47.3 -0.3
SATY  Saty               23.34  79  eP      P       21 22 49.7 +1.4
SATY  Saty               23.34  79  eP      P       21 22 49.7 +1.4
          baz=79
ZHN   Zhinishke          23.34  78  eP      P       21 22 49.6 +1.3
ZHN   Zhinishke          23.34  78  eP      P       21 22 49.6 +1.3
          baz=79
GEC2  GERESS Array S     23.42 296   IAmb   IAmb    21 22 51.3
          comp=Z,29nm,0.8s
GERES GERESS Array B     23.42 296   P      P       21 22 49.4 +0.5
          comp=Z,18nm,0.6s,baz=92,slow=9.2,SNR=101
          comp=Z,18nm,0.6s
GERES GERESS Array B     23.42 296   P      P       21 22 49.0 +0.1
RAF   Rauma              23.42 329  eP      P       21 22 49.3 +0.6
CADS  Cadrg              23.43 289  iP      P       21 22 49.4 +0.4
CADS                                 IAMb           21 22 51.8
          comp=Z,38nm,0.6s
BRG   Berggiesshubel     23.43 301  iP      P       21 22 50.4 +1.4
BRG                                  Amp            21 22 52.2
          comp=Z,11nm,0.8s
BRG                                 ex      x       21 23 09.5
BRG                                  Amp            21 23 15.7
          comp=Z,38nm,1.4s
BRG   Berggiesshubel     23.43 301  iP      P       21 22 50.3 +1.4
BRG                                 e               21 23 09.4
BRG                                  pmax   pmax
          comp=Z,11nm,0.8s
BIOA  Bad Ischl, Aus     23.44 293  eP      P       21 22 49.4 +0.4
          comp=Z,8.2nm,0.6s
TRI   Trieste            23.45 288   IAmb   IAmb    21 22 51.2
          comp=Z,54nm,0.6s
PRZ   Przheval'sk        23.45  80   P      P       21 22 49.6 +0.2
PRZ                                  IAmb   IAmb    21 22 52.8
          comp=Z,73nm,1.4s
PRZ   Przheval'sk        23.45  80   P      P       21 22 49.6 +0.2
PRZ                                  pmax   pmax
          comp=Z,73nm,1.4s
KPKS  Kokpek             23.47  77d iP      P       21 22 50.3 +0.9
KPKS  Kokpek             23.47  77⇓iP      P       21 22 50.3 +0.9
          baz=78
MYKA  Terra Mystica      23.47 291  iP      P       21 22 50.2 +0.8
          comp=Z,14nm,0.6s
KHC   Kasperske Hory     23.51 297  eP      P       21 22 49.8 +0.1
KHC                                 e               21 23 13.5
KHC   Kasperske Hory     23.51 297  eP      P       21 22 49.8 +0.1
KHC                                 ex      x       21 23 13.5
AAL   Aland              23.60 326  eP      P       21 22 50.2 -0.1
KBA   Koelnbreinsper     23.65 292  eP      P       21 22 52.1 +0.9
          comp=Z,56nm,0.6s,SNR=27
UZB   Uzynbulak          23.77  78  eP      P       21 22 52.3 +0.1
UZB   Uzynbulak          23.77  78  eP      P       21 22 52.4 +0.1
          baz=79
BSD   Bornholm Skovb     23.78 312  eP      P       21 22 51.9 -0.1
BSD   Bornholm Skovb     23.78 312  iP      P       21 22 50.4 -1.6
BSD                                  IAmb   IAmb    21 22 51.6
          comp=Z,44nm,0.5s
RUE   Ruedersdorf        23.78 305  eP      P       21 22 53.0 +0.9
MHTO  MHTO               23.90 152   P      P       21 22 55.2 +1.9
PDGK  Podgornoye         24.07  78 ⇑P       P       21 22 55.4 +0.5
          comp=Z,32nm,0.5s
CLL   Collm              24.07 302   IAmb   IAmb    21 23 22.5
          comp=Z,73nm,1.2s
CLL   Collm              24.07 302  iP      P       21 22 55.6 +0.9
CLL                                 i *SP   sP      21 23 20.7 +1.4
CLL                                 eS      S       21 27 03.0 -4.1
CLL                                  pmax   pmax
          comp=Z,20nm,0.8s
CLL   Collm              24.07 302  iP      P       21 22 55.6 +0.9
          comp=Z,20nm,0.8s
CLL                                 i sP    sP      21 23 20.7 +1.4
CLL                                 i x     x       21 23 41.0
CLL                                 esPP            21 23 48.0
CLL                                 eS      S       21 27 03.0 -4.1
CLL                                  Lm     MLR     21 33 00.0
          comp=Z,100nm,19.0s
SHLS  Shalkode           24.08  78  iP      P       21 22 58.6 +3.6
SHLS  Shalkode           24.08  78  iP      P       21 22 58.7 +3.6
          baz=78
STAL  STALIGIAL          24.13 290   IAmb   IAmb    21 22 57.4
          comp=Z,58nm,1.2s
VIKU  Vikbolandet        24.18 321  eP      P       21 22 55.9 +0.4
AQU   L'Aquila           24.21 280   P      P       21 22 56.9 +0.8
AQU                                  IAmb   IAmb    21 22 58.7
          comp=Z,53nm,1.2s
AQU   L'Aquila           24.21 280   P      P       21 22 56.9 +0.8
AQU                                  pmax   pmax
          comp=Z,53nm,1.2s
ABTA  Abfaltersbach      24.24 291  eP      P       21 22 56.8 +0.4
          comp=Z,30nm,0.7s,SNR=14
SEM   Semipalatinsk      24.25  60  eP      P       21 22 56.9 +0.4
SEM   Semipalatinsk      24.25  60  eP      P       21 22 57.0 +0.4
          baz=60
NKC   Novy Kostel        24.32 299  eP      P       21 22 58.1 +1.2
NKC   Novy Kostel        24.32 299  eP      P       21 22 58.1 +1.2
NRCA  Norcia             24.32 281   IAmb   IAmb    21 23 01.1
          comp=Z,31nm,0.7s
UPP   Uppsala            24.42 324  eP      P       21 22 58.2 +0.5
RGN   Rugen              24.51 310   IAmb   IAmb    21 23 15.7
          comp=Z,60nm,0.8s
MURB  Monte Urbino       24.66 283   P      P       21 23 01.8 +1.6
LUNU  Lund               24.74 312  iP      P       21 23 01.0 +0.4
DEL   Delary             24.77 315  eP      P       21 23 01.2 +0.2
DEL   Delary             24.77 315  iP      P       21 23 01.0  0.0
WTTA  Wattenberg         24.81 292  iP      P       21 23 01.9 +0.2
          comp=Z,50nm,0.9s,SNR=36
WTTA                                iP      PcP     21 26 36.5 +0.3
          comp=Z,12nm,0.3s
WATA  Walderalm          24.85 292  iP      P       21 23 01.9 -0.1
          comp=Z,78nm,1.2s,SNR=22
WATA                                iP      PcP     21 26 36.3 +0.1
          comp=Z,3.8nm,0.4s
TEOL  Teolo              24.94 288   IAmb   IAmb    21 23 04.1
          comp=Z,57nm,0.7s
VAE   Valguarnera        24.94 268   P      P       21 23 04.7 +1.8
          comp=Z,76nm,0.8s,baz=78,slow=1.2,SNR=31
          comp=Z,76nm,0.8s
DOK   Doka               25.07 163   P      P       21 23 04.8 +0.9
GRFO  Grafenberg         25.08 298   P      P       21 23 04.2 +0.4
GRFO  Grafenberg         25.08 298   P      P       21 23 04.2 +0.4
GRFO                                 pmax   pmax
          comp=Z,18nm,0.7s
SQTA  Sankt Quirin       25.10 292  iP      P       21 23 04.0 -0.2
          comp=Z,40nm,0.6s,SNR=29
SQTA                                iP      PcP     21 26 37.6 +0.8
          comp=Z,1.1nm,0.2s
MOTA  Moosalm            25.17 292  iP      P       21 23 04.5 -0.4
          comp=Z,56nm,1.0s,SNR=16
MOTA                                iP      PcP     21 26 37.0  0.0
          comp=Z,0.6nm,0.2s
COP   Copenhagen         25.30 312  iP      P       21 23 06.7 +1.0
COP                                  IAmb   IAmb    21 23 08.1
          comp=Z,85nm,0.7s
MAKZ  Makanchi           25.38  69   P      P       21 23 07.1 +0.4
MAKZ  Makanchi           25.38  69   P      P       21 23 07.1 +0.4
MAKZ                                 pmax   pmax
          comp=Z,16nm,0.7s
RETA  Reutte             25.39 293  iP      P       21 23 06.5 -0.3
          comp=Z,26nm,0.9s
FETA  Feichten           25.44 292  iP      P       21 23 07.0 -0.3
          comp=Z,40nm,0.9s,SNR=15
OSSC  Osservatorio P     25.53 284   P      P       21 23 09.1 +1.1
ZCCA  Zocca              25.57 286   P      P       21 23 09.8 +1.3
ZCCA                                 IAmb   IAmb    21 23 11.6
          comp=Z,42nm,0.8s
MK31  Makanchi Array     25.60  69   P      P       21 23 09.0 +0.4
MK31  Makanchi Array     25.60  69d iP      P       21 23 09.4 +0.8
MKAR  Makanchi Array     25.60  69   P      P       21 23 09.5 +0.9
          comp=Z,4.3nm,0.4s,baz=269,slow=8.3,SNR=30
MKAR                                 LR     LR      21 34 27.5
          comp=Z,106nm,20.3s,baz=255,slow=39
          comp=Z,4.3nm,0.4s
MKAR  Makanchi Array     25.60  69   P      P       21 23 09.4 +0.8
MKAR  Makanchi Array     25.60  69   P      P       21 23 09.4 +0.8
WHFO  Wadi Hawf          25.67 164   P      P       21 23 09.8 +0.3
APA   Apatity            25.70 349⇓iP      P       21 23 10.0 +0.7
APA                                 i               21 24 05.0
APA                                 i S     S       21 27 33.0 +0.3
APA                                 i SS    SnSn    21 28 42.0 +8.1
APA                                  pmax   pmax
          comp=Z,10.0nm,0.9s
APA                                  MLR    MLR
          comp=Z,1µm,13.0s
SALO  Salr               25.71 289   P      P       21 23 10.6 +0.9
CLTB  Caltabellotta      25.78 269   IAmb   IAmb    21 23 18.8
          comp=Z,20nm,0.5s
LVZ   Lovozero           25.84 350   P      P       21 23 10.6  0.0
LVZ   Lovozero           25.84 350⇑eP      P       21 23 11.2 +0.6
LVZ                                  pmax   pmax
          comp=Z,74nm,0.8s
LVZ                                  MLR    MLR
          comp=Z,369nm,5.0s
DAVA  Damuels            26.00 292  iP      P       21 23 11.9 -0.5
          comp=Z,20nm,0.7s,SNR=6.8
DAVA                                iP      PcP     21 26 39.3 +0.4
          comp=Z,2.1nm,0.4s
DAVOX Davos/Dischmat     26.04 291   P      P       21 23 12.7 -0.2
          comp=Z,15nm,0.6s,baz=98,slow=5.4,SNR=28
DAVOX                                LR     LR      21 35 32.4
          comp=Z,138nm,20.6s,baz=84,slow=41
          comp=Z,15nm,0.6s
ABTO  Aybut              26.12 165   P      P       21 23 13.6  0.0
DMTO  DMTO               26.12 161   P      P       21 23 14.6 +1.1
RBK   Rabkut             26.16 163   P      P       21 23 14.5 +0.6
HFS   Hagfors            26.29 322   P      P       21 23 14.9 +0.3
          comp=Z,7.6nm,0.4s,baz=238,slow=31,SNR=117
          comp=Z,7.6nm,0.4s
STU   Stuttgart          26.40 296   P      P       21 23 16.1 +0.3
STU                                  IAmb   IAmb    21 23 17.7
          comp=Z,48nm,1.0s
STU   Stuttgart          26.40 296   P      P       21 23 16.1 +0.3
STU                                  pmax   pmax
          comp=Z,48nm,1.0s
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TUE	**Stuetta**	**26.43**	**291**	P	**P**	**21 23 16.6**	**+0.2**
BFO	**Black Forest**	**26.99**	**295**	P	**P**	**21 23 21.3**	**+0.1**
BFO	**Black Forest**	**26.99**	**295**	P	**P**	**21 23 21.3**	**+0.1**
BFO				pmax	pmax		
	comp=Z,27nm,1.4s						
MUD	**Monsted U'grnd**	**27.27**	**313**	*i* P	**P**	**21 23 24.5**	**+1.0**
ZSN	**Zaisan**	**27.30**	**67**	*e*P	**P**	**21 23 24.3**	**+0.4**
ZSN	**Zaisan**	**27.30**	**67**	*e*P	**P**	**21 23 24.4**	**+0.5**
	baz=67						
ZAA0	**Zalesovo Array**	**27.45**	**53**	P	**P**	**21 23 24.9**	**-0.2**
ZALV	**Zalesovo Beam**	**27.45**	**53**	P	**P**	**21 23 25.2**	**0.0**
	comp=Z,5.3nm,0.3s,baz=262,slow=11,SNR=29						
ZALV				LR	LR	21 35 23.4	
	comp=Z,72nm,21.8s,baz=276,slow=38						
	comp=Z,5.3nm,0.3s						
NC602	**NORSAR Array S**	**27.51**	**323**	P	**P**	**21 23 25.4**	**-0.2**
NC602				IAmb	IAmb	21 23 49.8	
	comp=Z,47nm,0.7s						
NC602	**NORSAR Array S**	**27.51**	**323**	*e*P	**P**	**21 23 25.9**	**+0.2**
OSL	**Oslo**	**27.57**	**321**	*e*P	**P**	**21 23 26.6**	**+0.5**
NC405	**NORSAR Array S**	**27.59**	**323**	P	**P**	**21 23 26.7**	**+0.3**
NB201	**NORSAR Array S**	**27.75**	**323**	P	**P**	**21 23 27.6**	**-0.2**
NB2	**NORSAR Subarra**	**27.78**	**323**	P	**P**	**21 23 27.8**	**-0.3**
	comp=Z,15nm,0.5s,baz=115,slow=8.6						
NB2	**NORSAR Subarra**	**27.78**	**323**	P	**P**	**21 23 27.8**	**-0.3**
	baz=115,slow=8.6						
NOA	**NORSAR Array B**	**27.78**	**323**	P	**P**	**21 23 28.0**	**-0.1**
	comp=Z,6.4nm,0.7s,baz=115,slow=8.3,SNR=70						
NOA				S	**S**	**21 28 05.9**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=300,slow=15,SNR=6.0						
NOA				LR	LR	21 35 46.5	
	comp=Z,124nm,20.6s,baz=115,slow=39						
	comp=Z,6.4nm,0.7s						
NC303	**NORSAR Array S**	**27.79**	**323**	P	**P**	**21 23 28.2**	**+0.1**
NAO01	**NORSAR Array S**	**27.85**	**322**	P	**P**	**21 23 28.0**	**-0.7**
NAO01				IAmb	IAmb	21 23 29.6	
	comp=Z,47nm,0.9s						
SENIN	**Lac Senin/Sane**	**27.86**	**291**	IAmb	IAmb	21 23 29.3	
	comp=Z,20nm,0.7s						
KONO	**Kongsberg**	**27.99**	**320**	P	**P**	**21 23 29.2**	**-0.7**
KONO				IAmb	IAmb	21 23 55.3	
	comp=Z,30nm,0.9s						
KONO	**Kongsberg**	**27.99**	**320**	P	**P**	**21 23 29.2**	**-0.7**
KONO				pmax	pmax		
	comp=Z,31nm,0.9s						
KONO	**Kongsberg**	**27.99**	**320**	*e*P	**P**	**21 23 30.0**	**+0.1**
HOMB	**Homborsund**	**28.09**	**316**	*i* P	**P**	**21 23 30.0**	**-0.8**
HOMB	**Homborsund**	**28.09**	**316**	*e*P	**P**	**21 23 31.2**	**+0.4**
WLF	**Walferdange**	**28.37**	**298**	P	**P**	**21 23 33.7**	**+0.3**
WLF	**Walferdange**	**28.37**	**298**	P	**P**	**21 23 33.7**	**+0.3**
WLF				pmax	pmax		
	comp=Z,13nm,0.9s						
WLF	**Walferdange**	**28.37**	**298**	*d*P	**P**	**21 23 34.4**	**+1.0**
	comp=Z,9.6nm,0.9s						
BTNL	**Ternell**	**28.37**	**300**	*d*P	**P**	**21 23 35.0**	**+1.6**
MEM	**Membach**	**28.45**	**300**	*d*P	**P**	**21 23 35.7**	**+1.6**
	comp=Z,9.2nm,1.2s						
BNI	**Bardonecchia**	**28.48**	**288**	P	**P**	**21 23 34.3**	**-0.3**
BNI	**Bardonecchia**	**28.48**	**288**	P	**P**	**21 23 34.3**	**-0.3**
BNI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SNART	**Snartemo**	**28.77**	**316**	*i* P	**P**	**21 23 37.0**	**+0.2**
SNART	**Snartemo**	**28.77**	**316**	*e*P	**P**	**21 23 37.6**	**+0.7**
ARA0	**ARCESS Array S**	**28.80**	**345**	*e*P	**P**	**21 23 37.8**	**+0.7**
ARCES	**ARCESS Array B**	**28.80**	**345**	P	**P**	**21 23 38.1**	**+1.1**
	comp=Z,5.5nm,0.4s,baz=159,slow=10,SNR=108						
ARCES				LR	LR	21 36 05.6	
	comp=Z,188nm,18.1s,baz=128,slow=38						
	comp=Z,5.5nm,0.4s						
KTK1	**Kautokeino**	**28.83**	**343**	*e*P	**P**	**21 23 38.0**	**+0.7**
RCHB	**Rochefort**	**28.95**	**299**	*d*P	**P**	**21 23 40.1**	**+1.6**
	comp=Z,7.0nm,1.0s						
RCHB				*d*PnPn	**PnPn**	**21 24 33.9**	**+0.5**
SKAR	**Skarslia**	**28.96**	**321**	*e*P	**P**	**21 23 39.1**	**+0.5**
NSS	**Namsos**	**29.12**	**330**	*e*P	**P**	**21 23 40.5**	**+0.6**
DOMB	**Dombas**	**29.14**	**324**	*e*P	**P**	**21 23 40.6**	**+0.5**
TBLU	**Trondheim**	**29.16**	**327**	*e*P	**P**	**21 23 40.9**	**+0.7**
MOR8	**Moi Rana**	**29.19**	**334**	*e*P	**P**	**21 23 41.1**	**+0.5**
BMRD	**Maredsous**	**29.24**	**299**	*d*P	**P**	**21 23 43.8**	**+2.7**
DOU	**Dourbes**	**29.36**	**299**	*d*P	**P**	**21 23 44.7**	**+2.5**
	comp=Z,6.7nm,0.5s						
KEST	**Kesra**	**29.38**	**268**	P	**P**	**21 23 44.4**	**+1.8**
	comp=Z,90nm,0.9s,baz=20,slow=1.9,SNR=117						
KEST				PcP	**PcP**	**21 26 48.1**	**+0.9**
	comp=Z,8.7nm,0.8s,baz=256,slow=2.6,SNR=3.9						
	comp=Z,90nm,0.9s						
KEST	**Kesra**	**29.38**	**268**	P	**P**	**21 23 43.5**	**+0.9**
KEST	**Kesra**	**29.38**	**268**	P	**P**	**21 23 44.4**	**+1.8**
	SNR=7.1						
BLS5	**Blasjo**	**29.44**	**318**	*e*P	**P**	**21 23 43.9**	**+1.0**
ODD1	**Odda**	**29.50**	**319**	*e*P	**P**	**21 23 45.1**	**+1.7**
FAUS	**Fauske**	**29.69**	**336**	*e*P	**P**	**21 23 45.4**	**+0.5**
STOK	**Stokkvaagen**	**29.75**	**333**	*e*P	**P**	**21 23 46.5**	**+1.0**
WMQ	**Urumqi**	**29.81**	**74**	⇑P	**P**	**21 23 48.1**	**+1.7**
WMQ				pP	pP	21 24 00.5	-2.5
WMQ				sP	sP	21 24 13.8	+2.7
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				LR	LR		
	comp=N,2µm,20.7s						
WMQ				LR	LR		
	comp=E,1µm,19.9s						
WMQ				LR	LR		
	comp=Z,130nm,21.5s						
KONS	**Konsvik**	**29.82**	**334**	*e*P	**P**	**21 23 46.6**	**+0.6**
JETT	**Jettan, Norway**	**29.89**	**342**	*e*P	**P**	**21 23 47.4**	**+0.7**
SSB	**Saint Sauveur**	**29.93**	**289**	IAmb	IAmb	21 23 48.6	
	comp=Z,26nm,1.0s						
KMY	**Karmoy**	**29.98**	**317**	*e*P	**P**	**21 23 48.7**	**+1.1**
MOL	**Molde**	**30.00**	**324**	*e*P	**P**	**21 23 48.9**	**+1.3**
STEI	**Steigen**	**30.06**	**337**	*e*P	**P**	**21 23 48.8**	**+0.7**
HAMF	**Hammerfest**	**30.07**	**345**	*e*P	**P**	**21 23 49.3**	**+1.0**
AKN	**Aaknes**	**30.09**	**324**	*e*P	**P**	**21 23 49.8**	**+1.3**
HYA	**Hoyanger**	**30.10**	**321**	*e*P	**P**	**21 23 50.0**	**+1.4**
BER	**Bergen**	**30.26**	**320**	*e*P	**P**	**21 23 50.8**	**+0.8**
TRO	**Tromso**	**30.29**	**341**	*e*P	**P**	**21 23 50.4**	**+0.3**
ASK	**Askoy**	**30.35**	**320**	*e*P	**P**	**21 23 51.7**	**+0.9**
LOF	**Lofoten**	**30.68**	**337**	*e*P	**P**	**21 23 53.5**	**-0.1**
SUE	**Sulen**	**30.72**	**321**	*e*P	**P**	**21 23 55.3**	**+1.2**
FOO	**Floro**	**30.76**	**322**	*e*P	**P**	**21 23 55.2**	**+0.8**
ATD	**Arta Tunnel**	**31.40**	**187**	LR	LR	21 37 31.8	
	comp=Z,100nm,20.4s,baz=341,slow=38						
PYUN	**Piuthan**	**32.95**	**105**	*e*P	**P**	**21 24 15.5**	**+1.2**
	comp=Z,31nm,0.6s						
DANN	**Dangsing**	**33.36**	**103**	*e*P	**P**	**21 24 19.3**	**+1.4**
	comp=Z,41nm,0.5s						
KOLN	**Koldanda**	**33.58**	**104**	*e*P	**P**	**21 24 20.9**	**+1.1**
	comp=Z,10nm,0.3s						
NRIK	**Noril'sk**	**33.86**	**25**	P	**P**	**21 24 23.2**	**+1.7**
	comp=Z,15nm,0.7s,baz=230,slow=5.4,SNR=17						
NRIK				LR	LR	21 41 36.7	
	comp=Z,151nm,18.6s,baz=231,slow=42						
	comp=Z,15nm,0.7s						
NRIK	**Noril'sk**	**33.86**	**25**	P	**P**	**21 24 22.3**	**+0.9**
NRIK				IAmb	IAmb	21 24 24.0	
	comp=Z,24nm,1.0s						
NRIK	**Noril'sk**	**33.86**	**25**	*d i*P	**P**	**21 24 23.1**	**+1.7**
NRIK				pmax	pmax		
	comp=Z,26nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,158nm,19.0s						
EKA	**Eskdalemuir Ar**	**34.02**	**309**	LR	LR	21 38 38.7	
	comp=Z,125nm,20.3s,baz=34,slow=37						
BJO1	**Bjornoya**	**34.04**	**347**	*e*P	**P**	**21 24 23.3**	**+0.3**
GKN	**Gorkha**	**34.19**	**103**	*e*P	**P**	**21 24 25.9**	**+1.0**
	comp=Z,14nm,0.3s						
DMN	**Daman**	**34.75**	**103**	*e*P	**P**	**21 24 31.0**	**+1.1**
	comp=Z,18nm,0.4s						
KKN	**Kakani**	**34.77**	**103**	*e*P	**P**	**21 24 30.8**	**+0.7**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**34.98**	**103**	*e*P	**P**	**21 24 32.6**	**+0.7**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**34.99**	**103**	*e*P	**P**	**21 24 32.8**	**+0.7**
	comp=Z,20nm,0.7s						
GUN	**Gumba**	**35.13**	**102**	*e*P	**P**	**21 24 34.0**	**+0.7**
	comp=Z,14nm,0.4s						
KNGR	**Kungurtug, Tuv**	**35.25**	**59**	*d i*P	**P**	**21 24 35.4**	**+1.6**
HSPB	**Hornsund (broa**	**36.55**	**349**	*e*P	**P**	**21 24 46.3**	**+1.8**
HYBB	**Hyderabad (bro**	**37.26**	**123**	*e*P	**P**	**21 24 51.4**	**+0.2**
MOY	**Mondy**	**37.27**	**57**	*e*P	**P**	**21 24 52.5**	**+1.5**
MOY				pmax	pmax		
	comp=Z,25nm,1.4s						
SPB2	**Spitsbergen Ar**	**37.36**	**350**	P	**P**	**21 24 51.8**	**+0.4**
SPA0	**Spitsbergen Ar**	**37.37**	**350**	*e*P	**P**	**21 24 53.0**	**+1.6**
SPITS	**Spitsbergen Ar**	**37.37**	**350**	P	**P**	**21 24 53.1**	**+1.7**
	comp=Z,16nm,0.4s,baz=128,slow=11,SNR=102						
SPITS				LR	LR	21 40 21.0	
	comp=Z,98nm,21.8s,baz=150,slow=36						
	comp=Z,16nm,0.4s						
GOMU	**GeErMu**	**37.50**	**84**	P	**P**	**21 24 55.0**	**+1.6**
GOMU				pP	pP	21 24 57.8	-13
GOMU				sP	sP	21 24 59.3	-19
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,58nm,4.9s						
ESBB	**Sonseca Array**	**37.53**	**283**	P	**P**	**21 24 52.2**	**-1.1**
ESDC	**Sonseca Array**	**37.53**	**283**	P	**P**	**21 24 52.9**	**-0.5**
	comp=Z,8.1nm,1.0s,baz=65,slow=8.0,SNR=35						
ESDC				PcP	**PcP**	**21 27 10.3**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=35,slow=2.7,SNR=11						
ESDC				LR	LR	21 42 29.9	
	comp=Z,76nm,18.0s,baz=20,slow=40						
	comp=Z,8.1nm,1.0s						
ESDC	**Sonseca Array**	**37.53**	**283**	P	**P**	**21 24 53.0**	**-0.3**
ESDC					**PcP**	**21 27 10.1**	**0.0**
PAB	**San Pablo**	**37.86**	**283**	P	**P**	**21 24 56.0**	**-0.1**
PAB	**San Pablo**	**37.86**	**283**	P	**P**	**21 24 56.0**	**-0.1**
PAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LSA	**Lhasa**	**37.96**	**95**	P	**P**	**21 24 57.7**	**+0.2**
LSA				IAmb	IAmb	21 24 59.9	
	comp=Z,8.9nm,0.7s						
LSA	**Lhasa**	**37.96**	**95**	P	**P**	**21 24 57.7**	**+0.2**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**37.96**	**95**	P	**P**	**21 24 59.3**	**+1.8**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	**Lhasa**	**37.96**	**95**	P	**P**	**21 24 59.0**	**+1.5**
KBS	**Kingsbay**	**38.51**	**350**	*e*P	**P**	**21 25 02.0**	**+1.1**
JBK	**JBK**	**38.75**	**274**	P	**P**	**21 25 05.0**	**+1.2**
PBRG	**Braganca**	**38.75**	**287**	*e*P	**P**	**21 25 04.2**	**+0.7**
	comp=Z,21nm,1.7s						
FIGM	**Figuig**	**38.85**	**270**	P	**P**	**21 25 04.4**	**-0.1**
ZAK	**Zakamensk**	**38.91**	**59**	*e*P	**P**	**21 25 05.2**	**+0.4**
ZAK				*e*		21 27 11.9	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TDRA	**Tendrara**	**38.96**	**272**	P	**P**	**21 25 06.3**	**+0.7**
MVO	**Moncorvo**	**39.18**	**286**	*e*P	**P**	**21 25 08.0**	**+0.9**
PVRL	**Vila Real**	**39.62**	**287**	*e*P	**P**	**21 25 11.2**	**+0.4**
	comp=Z,47nm,1.6s						
POLO	**Lamas de Olo**	**39.64**	**287**	*e*P	**P**	**21 25 11.5**	**+0.5**
	comp=Z,17nm,1.7s						
PCAB	**Cabril**	**39.69**	**287**	*e*P	**P**	**21 25 11.4**	**+0.1**
PGAV	**Gavieira, Arco**	**39.77**	**288**	*e*P	**P**	**21 25 13.1**	**+1.1**
	comp=Z,63nm,2.1s						
GTA	**Gaotai**	**39.80**	**76**	⇓P	**P**	**21 25 13.6**	**+1.2**
GTA				pP	pP	21 25 29.5	0.0
GTA				sP	sP	21 25 35.5	-2.1
GTA				PcP	**PcP**	**21 27 17.6**	**+0.3**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,42nm,6.8s						
GTA				LR	LR		
	comp=N,85nm,9.6s						
GTA				LR	LR		
	comp=E,74nm,8.8s						
GTA				LR	LR		
	comp=Z,91nm,11.2s						
MTE	**Manteigas**	**39.82**	**285**	*e*P	**P**	**21 25 12.6**	**+0.1**
PVIS	**Viseu**	**39.95**	**286**	*e*P	**P**	**21 25 14.5**	**+1.0**
PVIS	**Viseu**	**39.95**	**286**	*e*PcP	**PcP**	**21 27 18.7**	**+1.1**
PCBR	**Castelo Branco**	**39.98**	**285**	*e*P	**P**	**21 25 14.5**	**+0.8**
PMRV	**Marv??o**	**40.08**	**284**	*e*P	**P**	**21 25 14.8**	**+0.2**
	comp=Z,38nm,1.1s						
SMIR	**Smir Dam**	**40.19**	**278**	P	**P**	**21 25 15.3**	**-0.2**
PBAR	**Barrancos**	**40.33**	**282**	*e*P	**P**	**21 25 16.5**	**-0.1**
PBAR	**Barrancos**	**40.33**	**282**	*e*PcP	**PcP**	**21 27 19.6**	**+0.8**
CHEFC	**Chefchaouen**	**40.42**	**277**	P	**P**	**21 25 17.0**	**-0.5**
PESTR	**Estremoz**	**40.44**	**283**	*e*P	**P**	**21 25 18.0**	**+0.4**
	comp=Z,38nm,1.1s						
PESTR	**Estremoz**	**40.44**	**283**	P	**P**	**21 25 18.0**	**+0.4**
PESTR				IAmb	IAmb	21 25 18.6	
	comp=Z,16nm,0.9s						
COI	**Coimbra**	**40.51**	**285**	*e*P	**P**	**21 25 19.1**	**+1.1**
	comp=Z,94nm,1.1s						
COI	**Coimbra**	**40.51**	**285**	P	**P**	**21 25 17.9**	**-0.1**
COI	**Coimbra**	**40.51**	**285**	P	**P**	**21 25 17.9**	**-0.1**
COI				pmax	pmax		
	comp=Z,54nm,0.7s						
LODK	**Lodwar**	**40.52**	**197**	P	**P**	**21 25 18.0**	**-0.4**
LODK	**Lodwar**	**40.52**	**197**	P	**P**	**21 25 20.0**	**+1.6**
PCAS	**Casmilo, Conde**	**40.63**	**285**	*e*P	**P**	**21 25 20.3**	**+1.2**
	comp=Z,32nm,1.6s						
PMTG	**Montargil**	**40.82**	**284**	*e*P	**P**	**21 25 20.9**	**+0.3**
	comp=Z,29nm,1.2s						
MDT	**Midelt**	**40.97**	**273**	P	**P**	**21 25 22.1**	**0.0**
	comp=Z,6.7nm,0.8s,baz=91,slow=6.5,SNR=13						
MDT				PcP	**PcP**	**21 27 21.2**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=110,slow=4.3,SNR=1.7						
	comp=Z,6.7nm,0.8s						
MDT	**Midelt**	**40.97**	**273**	P	**P**	**21 25 22.5**	**+0.4**
PBEJ	**Beja**	**40.98**	**282**	*e*P	**P**	**21 25 22.4**	**+0.4**
PBEJ	**Beja**	**40.98**	**282**	*e*PcP	**PcP**	**21 27 22.1**	**+1.2**
PSBE	**So Bento**	**41.05**	**285**	*e*P	**P**	**21 25 23.9**	**+1.4**
PVAQ	**Vaqueiros**	**41.14**	**281**	*e*P	**P**	**21 25 23.3**	**0.0**
PVAQ	**Vaqueiros**	**41.14**	**281**	*e*PcP	**PcP**	**21 27 22.2**	**+0.8**
PCVE	**Castro Verde**	**41.27**	**282**	*e*PcP	**PcP**	**21 27 22.9**	**+1.0**
MESJ	**Messejana**	**41.31**	**282**	*e*P	**P**	**21 25 25.2**	**+0.5**
MESJ	**Messejana**	**41.31**	**282**	*e*PcP	**PcP**	**21 27 23.2**	**+1.2**
PNCL	**Nicolau / Gran**	**41.42**	**283**	*e*P	**P**	**21 25 26.3**	**+0.7**
SONM	**Songino Array**	**41.51**	**62**	P	**P**	**21 25 26.9**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=280,slow=10,SNR=12						
SONM				PcP	**PcP**	**21 27 22.9**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=270,slow=3.0,SNR=4.0						
	comp=Z,4.3nm,0.6s						
SONM	**Songino Array**	**41.51**	**62**	P	**P**	**21 25 26.7**	**+0.3**
PTEO	**Sao Teotonio**	**41.80**	**282**	*e*P	**P**	**21 25 29.5**	**+0.8**
ULN	**Ulaanbaatar**	**41.93**	**61**	P	**P**	**21 25 30.6**	**+0.8**
ULN				IAmb	IAmb	21 25 32.1	
	comp=Z,25nm,0.8s						
ULN	**Ulaanbaatar**	**41.93**	**61**	*d i*P	**P**	**21 25 31.0**	**+1.2**
ULN				pmax	pmax		
	comp=Z,31nm,0.9s						
ULN	**Ulaanbaatar**	**41.93**	**61**	P	**P**	**21 25 31.3**	**+1.5**
TZRR	**Tazzarine**	**42.70**	**271**	P	**P**	**21 25 37.0**	**+0.8**
BORG	**Borgarnes**	**42.94**	**324**	LR	LR	21 43 49.7	
	comp=Z,91nm,19.7s,baz=117,slow=36						
BORG	**Borgarnes**	**42.94**	**324**	P	**P**	**21 25 39.0**	**+1.4**
BORG	**Borgarnes**	**42.94**	**324**	P	**P**	**21 25 39.0**	**+1.4**
BORG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SCO	**Scoresbysund**	**43.13**	**333**	P	**P**	**21 25 40.7**	**+1.7**
SCO	**Scoresbysund**	**43.13**	**333**	P	**P**	**21 25 40.7**	**+1.7**
SCO				pmax	pmax		
	comp=Z,13nm,1.0s						
BOD	**Bodaibo**	**43.72**	**46**	*e*P	**P**	**21 25 43.9**	**0.0**
BOD				pmax	pmax		
	comp=Z,27nm,0.8s						
LZH	**Lanzhou**	**44.10**	**79**	⇓P	**P**	**21 25 48.9**	**+1.4**
LZH				pP	pP	21 26 07.1	+2.3
LZH				sP	sP	21 26 14.6	+1.8
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
LZH				LR	LR		
	comp=N,100nm,10.6s						
LZH				LR	LR		
	comp=E,150nm,10.8s						
LZH				LR	LR		
	comp=Z,170nm,11.2s						
OUK	**Oukaimeden**	**44.17**	**273**	P	**P**	**21 25 49.0**	**+0.7**
KMBO	**Kilima Mbogo**	**44.59**	**193**	P	**P**	**21 25 52.3**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=9.0,slow=7.1,SNR=6.5						
KMBO				LR	LR	21 45 03.3	
	comp=Z,96nm,20.1s,baz=164,slow=37						
	comp=Z,3.8nm,0.9s						
KMBO	**Kilima Mbogo**	**44.59**	**193**	P	**P**	**21 25 51.8**	**+0.2**
KMBO	**Kilima Mbogo**	**44.59**	**193**	*i* P	**P**	**21 25 53.5**	**+1.9**
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MBAR	**Mbarara**	**45.53**	**202**	P	**P**	**21 25 59.1**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=5.2,slow=11,SNR=6.1						
MBAR				LR	LR	21 46 09.5	
	comp=Z,83nm,18.1s,baz=4.5,slow=37						
	comp=Z,2.2nm,0.3s						
MBAR	**Mbarara**	**45.53**	**202**	P	**P**	**21 25 59.6**	**+0.6**
BTO	**Baotou**	**46.50**	**70**	*e*P	**P**	**21 26 05.8**	**-0.6**
PALK	**Pallekele**	**46.56**	**130**	P	**P**	**21 26 07.4**	**+0.4**
	comp=Z,4.3nm,0.7s,baz=71,slow=8.7,SNR=4.2						
PALK				PcP	**PcP**	**21 27 40.6**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=338,slow=5.4,SNR=1.8						
PALK				LR	LR	21 47 37.9	
	comp=Z,48nm,19.7s,baz=72,slow=38						
	comp=Z,4.3nm,0.7s						
CD2	**Chengdu**	**46.57**	**85**	P	**P**	**21 26 08.3**	**+1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
HHC	**Hu-ho-hao-te**	**47.46**	**69**	*e*P	**P**	**21 26 15.9**	**+2.1**
HHC				pmax	pmax		
	comp=Z,37nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.9s						
PZH	**PanZhiHua**	**47.50**	**92**	P	**P**	**21 26 15.0**	**+0.7**
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,6.4s						
TIXI	**Tiksi**	**47.64**	**25**	LR	LR	21 50 45.8	
	comp=Z,90nm,18.4s,baz=0.0,slow=42						
TIXI	**Tiksi**	**47.64**	**25**	P	**P**	**21 26 15.0**	**+0.4**
TIXI				IAmb	IAmb	21 26 16.8	
	comp=Z,13nm,1.0s						
TIXI	**Tiksi**	**47.64**	**25**	*c i*P	**P**	**21 26 16.2**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,83nm,19.0s						
SUMG	**Summit**	**48.20**	**336**	P	**P**	**21 26 19.5**	**0.0**
TOA0	**Torodi Ar. Sit**	**48.55**	**246**	P	**P**	**21 26 21.9**	**-0.5**
TOA0	**Torodi Ar. Sit**	**48.55**	**246**	P	**P**	**21 26 22.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**48.55**	**246**	P	**P**	**21 26 21.9**	**-0.4**
	comp=Z,37nm,0.6s,baz=33,slow=8.4,SNR=308						
TORD				PcP	**PcP**	**21 27 46.8**	**-0.4**
	comp=Z,4.7nm,0.7s,baz=19,slow=4.0,SNR=2.6						
	comp=Z,37nm,0.6s						
XAN	**Xi'an**	**48.74**	**79**	⇓P	**P**	**21 26 24.1**	**+0.4**
XAN				pP	pP	21 26 46.3	+5.0
XAN				sP	sP	21 26 58.6	+9.3
XAN				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI	**Kunming**	**49.03**	**92**	⇑P	**P**	**21 26 26.3**	**+0.1**
KMI				sP	sP	21 26 55.3	+3.3
KMI				pmax	pmax		
	comp=Z,24nm,0.9s						
XLT	**XiLinHaoTe**	**49.22**	**64**	*e*P	**P**	**21 26 28.1**	**+0.8**
XLT				pP	pP	21 26 42.9	-2.0
XLT				sP	sP	21 26 52.3	-0.5
XLT				pmax	pmax		
	comp=Z,19nm,0.8s						
XLT				pmax	pmax		
	comp=Z,88nm,4.1s						
HIA	**Hailar**	**49.42**	**56**	P	**P**	**21 26 28.6**	**-0.1**
ANGG	**Ammassalik, Gr**	**49.56**	**327**	P	**P**	**21 26 29.1**	**-0.4**
ANGG				IAmb	IAmb	21 26 33.7	
	comp=Z,16nm,1.1s						
PMOZ	**Porto Moniz, M**	**50.14**	**281**	P	**P**	**21 26 34.8**	**+0.3**
CHTO	**Chiang Mai**	**50.15**	**102**	P	**P**	**21 26 34.1**	**-0.5**
CHTO				IAmb	IAmb	21 26 35.7	
	comp=Z,18nm,0.8s						
CHTO	**Chiang Mai**	**50.15**	**102**	P	**P**	**21 26 35.2**	**+0.7**
YAK	**Yakutsk**	**50.31**	**37**	LR	LR	21 52 12.4	
	comp=Z,44nm,18.1s,baz=268,slow=41						
YAK	**Yakutsk**	**50.31**	**37**	P	**P**	**21 26 35.2**	**0.0**
CM31	**Chiang Mai Arr**	**50.38**	**102**	P	**P**	**21 26 36.6**	**+0.3**
CM31				IAmb	IAmb	21 26 37.6	
	comp=Z,12nm,0.8s						
CM31	**Chiang Mai Arr**	**50.38**	**102**	P	**P**	**21 26 36.8**	**+0.5**
	SNR=9.6						
CMAR	**Chiang Mai Arr**	**50.38**	**102**	P	**P**	**21 26 36.6**	**+0.4**
	comp=Z,8.8nm,0.6s,baz=304,slow=8.4,SNR=111						
CMAR				PcP	**PcP**	**21 27 54.5**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=308,slow=5.3,SNR=4.1						
CMAR				LR	LR	21 51 22.0	
	comp=Z,23nm,21.1s,baz=315,slow=40						
	comp=Z,8.8nm,0.6s						
BJI	**Beijing**	**50.97**	**68**	P	**P**	**21 26 41.8**	**+1.3**
BJI				pP	**pP**	**21 26 55.6**	**-2.5**
BJI				sP	**sP**	**21 27 02.5**	**-3.5**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJT	**Baijiatuau**	**50.98**	**68**	P	**P**	**21 26 41.0**	**+0.4**
BJT				IAmb	IAmb	21 26 42.6	
	comp=Z,11nm,1.0s						
ENH	**Enshi**	**51.10**	**82**	P	**P**	**21 26 41.4**	**-0.2**
ENH				IAmb	IAmb	21 26 43.1	
	comp=Z,9.2nm,0.7s						
GYA	**Guiyang**	**51.14**	**88**	⇓P	**P**	**21 26 42.4**	**+0.3**
GYA				pmax	pmax		
	comp=Z,29nm,0.8s						
HNS	**HongShan**	**51.20**	**72**	⇓P	**P**	**21 26 43.5**	**+1.3**
HNS				pmax	pmax		
	comp=Z,22nm,0.9s						
KOWA	**Kowa**	**51.52**	**252**	P	**P**	**21 26 44.8**	**-0.1**
TIA	**Tai'an**	**53.48**	**72**	⇓P	**P**	**21 27 00.0**	**+0.9**
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
SFJD	**Kangerlussuaq**	**53.97**	**331**	LR	LR	21 50 19.1	
	comp=Z,96nm,18.7s,baz=54,slow=36						
EUNU	**Eureka**	**54.48**	**351**	P	**P**	**21 27 06.2**	**+0.3**
EUNU				IAmb	IAmb	21 27 09.2	
	comp=Z,9.2nm,0.8s						
DL2	**Dalian**	**55.22**	**67**	P	**P**	**21 27 12.5**	**+0.8**
DL2				pmax	pmax		
	comp=Z,47nm,0.5s						
BNX	**BinXian**	**55.62**	**57**	⇓P	**P**	**21 27 14.4**	**-0.1**
BNX				pmax	pmax		
	comp=Z,18nm,0.6s						
BNX				pmax	pmax		
	comp=Z,200nm,4.4s						
KLR	**Kul'dur**	**56.55**	**52**	LR	LR	21 54 46.0	
	comp=Z,75nm,18.3s,baz=334,slow=39						
NJ2	**Nanjing**	**56.88**	**75**	*e*P	**P**	**21 27 22.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
DBIC	**Dimbokro**	**57.66**	**247**	P	**P**	**21 27 28.6**	**-0.7**
	comp=Z,24nm,0.6s,baz=48,slow=7.7,SNR=35						
DBIC				pP	**pP**	**21 27 47.6**	**-0.2**
	comp=Z,5.2nm,0.5s,baz=44,slow=3.6,SNR=2.4						
	comp=Z,24nm,0.6s						
DBIC	**Dimbokro**	**57.66**	**247**	P	**P**	**21 27 28.6**	**-0.7**
TIC	**Toumodi**	**57.78**	**247**	*e*P	**P**	**21 27 28.7**	**-1.5**
KIC	**Kosan Boka**	**57.80**	**246**	*e*P	**P**	**21 27 28.6**	**-1.8**
	comp=Z,42nm,0.7s						
LIC	**Lamto**	**58.10**	**246**	*e*P	**P**	**21 27 30.9**	**-1.5**
	comp=Z,72nm,0.8s						
USRK	**Ussuriysk Ar.**	**59.21**	**57**	P	**P**	**21 27 40.2**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=299,slow=4.7,SNR=6.7						
	comp=Z,4.0nm,0.6s						
SEY	**Seymchan**	**59.30**	**31**	LR	LR	21 57 17.6	
	comp=Z,78nm,20.4s,baz=146,slow=40						
KCSI	**Kotacane, Aceh**	**60.04**	**116**	P	**P**	**21 27 46.3**	**+0.5**
	comp=Z,13nm,0.9s						
KS19	**Wonju Array Si**	**60.14**	**65**	P	**P**	**21 27 45.6**	**-0.7**
KSAR	**Wonju Array Be**	**60.18**	**65**	P	**P**	**21 27 46.2**	**-0.4**
KSRS	**Korea Array**	**60.20**	**65**	P	**P**	**21 27 47.0**	**+0.3**
	comp=Z,9.4nm,0.5s,baz=298,slow=7.1,SNR=38						
KSRS				pP	**pP**	**21 28 05.0**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=296,slow=6.1,SNR=5.5						
	comp=Z,9.4nm,0.5s						
LSZ	**Lusaka**	**60.26**	**200**	P	**P**	**21 27 47.8**	**+0.5**
	comp=Z,3.5nm,0.5s,baz=23,slow=6.9,SNR=14						
LSZ				LR	LR	21 54 39.9	
	comp=Z,62nm,19.2s,baz=352,slow=37						
	comp=Z,3.5nm,0.5s						
LSZ	**Lusaka**	**60.26**	**200**	P	**P**	**21 27 48.0**	**+0.7**
LSZ				IAmb	IAmb	21 27 49.8	
	comp=Z,6.4nm,0.8s						
MA2	**Magadan**	**60.59**	**34**	LR	LR	21 56 12.6	
	comp=Z,53nm,21.8s,baz=295,slow=38						
MA2	**Magadan**	**60.59**	**34**	P	**P**	**21 27 49.0**	**0.0**
BILL	**Bilibino**	**60.61**	**22**	P	**P**	**21 27 49.3**	**+0.3**
BILL				IAmb	IAmb	21 27 51.0	
	comp=Z,9.9nm,0.9s						
KULM	**Kulim**	**60.67**	**112**	P	**P**	**21 27 49.7**	**-0.5**
KULM				IAmb	IAmb	21 27 50.2	
	comp=Z,7.4nm,0.8s						
OPO	**Ambohidratompo**	**61.16**	**179**	LR	LR	21 54 10.9	
	comp=Z,62nm,21.5s,baz=174,slow=36						
PSI	**Prapat**	**61.34**	**115**	LR	LR	21 56 34.7	
	comp=Z,59nm,18.2s,baz=262,slow=38						
IPM	**Ipoh**	**61.52**	**112**	P	**P**	**21 27 55.1**	**-0.8**
GSI	**Gunungsitoli**	**61.57**	**118**	P	**P**	**21 27 56.2**	**0.0**
	comp=Z,24nm,1.1s						

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ABPO  Ambohimpanom   61.60 179  P     P     21 27 57.4 +1.0
FRB   Frobisher Bay  62.00 333  LR    LR    21 53 59.5
      comp=Z,86nm,19.4s,baz=10,slow=35
YHNB  Yeheng         62.94  81  P     P     21 28 06.6 +1.2
TPUB  Ta-pu          63.23  82  P     P     21 28 07.4 +0.2
MNSI  Mandailing Nat 63.27 116  P     P     21 28 06.8 -0.7
VOI   Vohitsoka      64.47 180  P     P     21 28 16.0 +0.6
VOI                             IAmb  IAmb  21 28 17.0
      comp=Z,19nm,1.1s
A21K  Barrow         64.91   8  P     P     21 28 19.3 +1.8
A21K  Barrow         64.91   8  P     P     21 28 16.3 -1.2
      baz=342
JHS   Saijyo         65.05  65  P     P     21 28 18.4 -0.6
JHS                             IAmb  IAmb  21 28 34.6
      comp=Z,40nm,1.5s
A36M  Sachs Harbour  65.27 357  P     P     21 28 19.9 +0.1
A36M                            IAmb  IAmb  21 28 24.1
      comp=Z,19nm,0.8s
A36M  Sachs Harbour  65.27 357  P     P     21 28 20.8 +1.0
      baz=6.7
MYKOM Kota Tinggi    65.39 112  P     P     21 28 20.6 -0.8
MYKOM                           IAmb  IAmb  21 28 21.9
      comp=Z,11nm,0.9s
ASAJ  Asahikawa      65.58  52  LR    LR    21 58 43.4
      comp=Z,35nm,18.7s,baz=209,slow=38
JKA   Kamikawa-asahi 65.58  52  P     P     21 28 21.6 -0.7
JKA                             IAmb  IAmb  21 28 42.7
      comp=Z,14nm,0.9s
RDOG  Red Dog Mine   67.20  12  P     P     21 28 31.1 -1.2
RDOG                            IAmb  IAmb  21 28 31.9
      comp=Z,14nm,0.6s
RDOG  Red Dog Mine   67.20  12  P     P     21 28 30.9 -1.3
      baz=337
TSUM  Tsumeb         67.25 210  LR    LR    21 57 11.7
      comp=Z,41nm,20.1s,baz=334,slow=35
SCHQ  Schefferville  67.33 325  P     P     21 28 33.1 -0.2
      comp=Z,8.5nm,0.6s,baz=39,slow=6.2,SNR=32
SCHQ                            LR    LR    21 57 01.3
      comp=Z,27nm,21.0s,baz=37,slow=35
      comp=Z,8.5nm,0.6s
SCHQ  Schefferville  67.33 325  P     P     21 28 32.9 -0.4
SCHQ                            IAmb  IAmb  21 28 34.2
      comp=Z,9.4nm,0.7s
INU   Inuyama        67.40  62  P     P     21 28 33.0 -1.1
MJB9  Matsu-Tunnel   67.45  61  P     P     21 28 34.0 -0.3
MJAR  Matsushiro Arr 67.45  61  P     P     21 28 34.2 -0.2
      comp=Z,2.1nm,0.6s,baz=301,slow=11,SNR=4.3
MJAR                            LR    LR    22 01 11.6
      comp=Z,30nm,19.4s,baz=339,slow=39
JGF   Kuroka         67.47  62  P     P     21 28 33.7 -0.8
PETK  Petropavlovsk- 67.65  37  P     P     21 28 35.2 -0.1
      comp=Z,2.9nm,0.8s,baz=347,slow=5.9,SNR=2.8
PETK                            LR    LR    22 00 08.1
      comp=Z,24nm,21.2s,baz=319,slow=38
      comp=Z,2.9nm,0.8s
C36M  Paulatuk       67.86 356  P     P     21 28 36.8 +0.5
C36M                            IAmb  IAmb  21 28 40.2
      comp=Z,10nm,0.6s
C36M  Paulatuk       67.86 356  P     P     21 28 36.8 +0.5
      baz=7.5
TOLK  Toolik Lake Re 68.15   6  P     P     21 28 39.6 +1.4
TOLK  Toolik Lake Re 68.15   6  P     P     21 28 39.8 +1.5
      baz=347,SNR=43
JMM   Marumori       68.28  58  P     P     21 28 39.1 -0.4
JMM                             IAmb  IAmb  21 28 58.7
      comp=Z,25nm,0.9s
TNA   Tin City       68.64  15  P     P     21 28 41.5 +0.3
TNA   Tin City       68.64  15  P     P     21 28 41.9 +0.7
      baz=334,SNR=7.0
INK   Inuvik         69.13 360  LR    LR    22 05 48.6
      comp=Z,40nm,19.2s,baz=342,slow=42
INK   Inuvik         69.13 360  P     P     21 28 44.1 -0.1
INK   Inuvik         69.13 360  P     P     21 28 44.4 +0.1
      baz=0.1
MNAI  Manna          69.34 117  P     P     21 28 45.5 -0.9
GAMB  Gambell        69.47  17  P     P     21 28 46.4  0.0
GAMB  Gambell        69.47  17  P     P     21 28 46.5  0.0
      baz=331
COLD  Coldfoot       69.48   7  IAmb  IAmb  21 28 48.6
      comp=Z,18nm,1.0s
COLD  Coldfoot       69.48   7  P     P     21 28 47.4 +0.9
      baz=347
ANM   Nome           70.01  14  P     P     21 28 50.1 +0.3
ANM                             IAmb  IAmb  21 28 51.9
      comp=Z,20nm,1.3s
ANM   Nome           70.01  14  P     P     21 28 50.8 +1.1
      baz=336,SNR=8.2
KSM   Kuching        70.09 107  P     P     21 28 51.4 +0.4
KSM                             IAmb  IAmb  21 29 12.4
      comp=Z,17nm,1.0s
LBTB  Lobatse        70.24 200  LR    LR    22 00 55.4
      comp=Z,63nm,18.3s,baz=24,slow=37
LBTB  Lobatse        70.24 200  P     P     21 28 52.8 +1.1
JHJ   Hachijo jima 2 70.58  63  LR    LR    22 03 08.6
      comp=Z,22nm,18.1s,baz=328,slow=38
H21K  Melozitna Rive 70.76   8  P     P     21 28 55.4 +1.0
H21K                            IAmb  IAmb  21 28 59.0
      comp=Z,11nm,0.8s
H21K  Melozitna Rive 70.76   8  P     P     21 28 55.7 +1.3
      baz=345,SNR=28
H23K  Yukon River    70.91   7  P     P     21 28 56.5 +1.2
H23K                            IAmb  IAmb  21 28 58.1
      comp=Z,19nm,1.2s
H23K  Yukon River    70.91   7  P     P     21 28 57.0 +1.7
      baz=348,SNR=24
H24K  Noodor Dome    71.04   6  P     P     21 28 56.8 +0.7
H24K  Noodor Dome    71.04   6  P     P     21 28 57.5 +1.4
      baz=349,SNR=9.0
GCSA  Galena City Sc 71.15  10  P     P     21 28 57.7 +1.0
      baz=342
GBN   Guysborough    71.22 315  P     P     21 28 57.3 -0.1
GBN                             IAmb  IAmb  21 28 58.6
      comp=Z,16nm,0.9s
KASI  Kota Agung     71.22 117  P     P     21 28 57.7 -0.1
      comp=Z,45nm,0.9s
TPI   Tanjungpandan  71.29 112  P     P     21 28 58.3  0.0
      comp=Z,13nm,0.8s
I21K  Tanana         71.31   8  P     P     21 28 58.0 +0.4
I21K                            IAmb  IAmb  21 29 00.1
      comp=Z,19nm,1.2s
I21K  Tanana         71.31   8  P     P     21 28 59.0 +1.4
      baz=346,SNR=7.4
I23K  Minto, Yukon-K 71.59   7  P     P     21 29 00.4 +1.1
I23K  Minto, Yukon-K 71.59   7  P     P     21 29 00.7 +1.4
      baz=348,SNR=6.7
POKR  Poker Plat Res 71.79   6  P     P     21 29 01.3 +0.8
POKR                            IAmb  IAmb  21 29 03.0
      comp=Z,24nm,1.3s
POKR  Poker Plat Res 71.79   6  P     P     21 29 01.9 +1.3
      baz=349,SNR=6.2
MDM   Murphy Dome    71.88   6  P     P     21 29 01.2 +0.1
STKI  Sintang        71.91 107  P     P     21 29 02.6 +0.6
COLA  College        71.99   6  P     P     21 29 02.2 +0.5
COLA                            IAmb  IAmb  21 29 06.5
      comp=Z,18nm,0.8s
COLA  College        71.99   6  P     P     21 29 03.0 +1.3
      baz=349
TCOL  CIGO, UAF Yank 71.99   6  P     P     21 29 02.0 +0.3
TCOL                            IAmb  IAmb  21 29 06.4
      comp=Z,16nm,0.8s
TCOL  CIGO, UAF Yank 71.99   6  P     P     21 29 02.8 +1.1
      baz=349
I29M  Ogilvie Camp,  72.02   2  P     P     21 29 02.5 +0.5
      baz=356
J20K  Nowinta River  72.04   9  P     P     21 29 02.7 +0.6
J20K                            IAmb  IAmb  21 29 08.0
      comp=Z,9.6nm,0.7s
J20K  Nowinta River  72.04   9  P     P     21 29 03.3 +1.2
      baz=344,SNR=20
NEA2  Nenana         72.17   7  P     P     21 29 03.4 +0.6
      baz=348,SNR=5.9
IL31                 72.17   6  P     P     21 29 03.0 +0.3
ILAR  Eielson Array  72.17   6  P     P     21 29 03.1 +0.3
      comp=Z,1.3nm,0.5s,baz=350,slow=3.7,SNR=21
ILAR                            PP    PP    21 31 40.4 -2.8
      comp=Z,0.8nm,0.8s,baz=341,slow=5.4,SNR=3.6
      comp=Z,1.3nm,0.5s
BATG  Bathurst New B 72.22 319  P     P     21 29 03.6 +0.2
BATG                            IAmb  IAmb  21 29 05.0
      comp=Z,19nm,0.9s
CCB   Clear Creek Bu 72.22   6  IAmb  IAmb  21 29 07.3
      comp=Z,9.4nm,0.6s
J25K  Salcha River,  72.44   5  P     P     21 29 04.7 +0.2
      baz=351
BPAW  Bear Paw Mtn.  72.47   8  IAmb  IAmb  21 29 07.1
      comp=Z,19nm,1.4s
BPAW  Bear Paw Mtn.  72.47   8  P     P     21 29 05.1 +0.4
      baz=347,SNR=9.3
EGAK  Eagle          72.51   3  IAmb  IAmb  21 29 06.7
      comp=Z,10.0nm,0.8s
EGAK  Eagle          72.51   3  P     P     21 29 05.8 +1.0
      baz=354,SNR=14
HDA   Harding Lake   72.52   6  P     P     21 29 05.2 +0.2
HDA                             IAmb  IAmb  21 29 08.7
      comp=Z,14nm,0.6s
HDA   Harding Lake   72.52   6  P     P     21 29 04.9  0.0
      baz=350,SNR=15
CHUM  Lake Minchumin 72.54   9  P     P     21 29 06.1 +1.1
      baz=346,SNR=9.0
LMN   Caledonia Moun 72.59 317  P     P     21 29 05.5 -0.2
LMN                             IAmb  IAmb  21 29 07.3
      comp=Z,17nm,1.2s
J26L  Joseph Creek   72.66   5  P     P     21 29 06.3 +0.5
      baz=352,SNR=18
K20K  Telida         72.85  10  IAmb  IAmb  21 29 09.0
      comp=Z,16nm,1.3s
K20K  Telida         72.85  10  P     P     21 29 08.0 +1.1
      baz=344,SNR=9.7
KTH   Kantishna Hill 73.01   8  IAmb  IAmb  21 29 10.3
      comp=Z,21nm,1.3s
TTA   Tatalina       73.01  11  P     P     21 29 08.5 +0.6
TTA   Tatalina       73.01  11  P     P     21 29 08.8 +0.9
      baz=343,SNR=7.0
CAST  Castle Rocks   73.02   9  IAmb  IAmb  21 29 09.7
      comp=Z,24nm,1.1s
CAST  Castle Rocks   73.02   9  P     P     21 29 08.7 +0.8
      baz=346,SNR=34
MCK   McKinley       73.02   7  IAmb  IAmb  21 29 09.3
      comp=Z,17nm,1.3s
MCK   McKinley       73.02   7  P     P     21 29 08.0  0.0
      baz=348
SCRK  Sand Creek     73.16   5  IAmb  IAmb  21 29 11.1
      comp=Z,24nm,1.5s
SCRK  Sand Creek     73.16   5  P     P     21 29 09.7 +0.8
      baz=352,SNR=12
TRF   Thorofare Moun 73.17   8  P     P     21 29 09.5 +0.5
      baz=347,SNR=6.5
K24K  Donnelly Dome  73.21   6  P     P     21 29 09.8 +0.7
      baz=351,SNR=26
K27K  Chicken        73.21   4  IAmb  IAmb  21 29 11.2
      comp=Z,17nm,1.2s
K27K  Chicken        73.21   4  P     P     21 29 09.3 +0.3
      baz=354
DAWY  Dawson         73.29   3  IAmb  IAmb  21 29 14.0
      comp=Z,11nm,0.8s
DAWY  Dawson         73.29   3  P     P     21 29 10.3 +0.8
      baz=356,SNR=9.5
RIDG  Independent Ri 73.34   5  P     P     21 29 09.3 -0.6
RIDG                            IAmb  IAmb  21 29 11.8
      comp=Z,27nm,1.3s
RIDG  Independent Ri 73.34   5  P     P     21 29 10.5 +0.6
      baz=351,SNR=8.7
RND   Reindeer       73.35   7  IAmb  IAmb  21 29 10.6
      comp=Z,8.5nm,0.7s
MYLDM Lahad Datu     73.39  99  P     P     21 29 11.4 +0.6
MYLDM                           IAmb  IAmb  21 29 33.3
      comp=Z,18nm,1.2s
DOT   Dot Lake       73.48   5  P     P     21 29 11.4 +0.7
DOT                             IAmb  IAmb  21 29 13.6
      comp=Z,31nm,1.4s
PPLA  Purkeypile     73.51   9  P     P     21 29 11.4 +0.4
      baz=346
FCC   Fort Churchill 73.54 340  P     P     21 29 11.6 +0.6
FCC                             IAmb  IAmb  21 29 13.0
      comp=Z,24nm,1.4s
L20K  Farewell, AK   73.72  10  P     P     21 29 12.9 +0.9
      baz=345,SNR=15
BOSA  Boshof         73.77 199  P     P     21 29 13.2 +0.4
      comp=Z,26nm,0.8s,baz=21,slow=5.4,SNR=66
BOSA                            LR    LR    22 02 26.4
      comp=Z,48nm,18.0s,baz=9.5,slow=36
      comp=Z,26nm,0.8s
BOSA  Boshof         73.77 199  P     P     21 29 13.1 +0.4
D62A  Allapoint, All 73.79 320  IAmb  IAmb  21 29 15.2
      comp=Z,12nm,0.7s
DHY   Denali Highway 73.81   6  P     P     21 29 12.9 +0.2
      baz=350,SNR=6.0
YKA   Yellowknife Ar 73.86 351  P     P     21 29 13.3 +0.5
      comp=Z,8.2nm,0.7s,baz=11,slow=6.0,SNR=95
      comp=Z,8.2nm,0.7s
L19K  White Mountain 73.88  10  P     P     21 29 13.8 +0.8
L19K  White Mountain 73.88  10  P     P     21 29 13.9 +0.9
      baz=344,SNR=9.5
WAT1  Susitna Watana 73.95   7  P     P     21 29 13.3 -0.1
      baz=349
PAX   Paxson         74.06   6  P     P     21 29 14.1  0.0
      baz=351
GGN   Saint George   74.13 317  P     P     21 29 15.3 +0.6
GGN                             IAmb  IAmb  21 29 15.9
      comp=Z,14nm,0.8s
L26K  Log Cabin Wild 74.14   5  P     P     21 29 15.5 +1.0
L26K  Log Cabin Wild 74.14   5  P     P     21 29 15.7 +1.2
      baz=353,SNR=10
L27K  Beaver Creek,  74.19   4  P     P     21 29 15.7 +0.8
L27K  Beaver Creek,  74.19   4  P     P     21 29 16.0 +1.2
      baz=354,SNR=14
CUT   Chulitna       74.20   8  IAmb  IAmb  21 29 20.1
      comp=Z,15nm,0.5s
CUT   Chulitna       74.20   8  P     P     21 29 14.6 -0.2
      baz=347
MENT  Mentasta       74.21   5  P     P     21 29 15.6 +0.7
MENT                            IAmb  IAmb  21 29 19.8
      comp=Z,16nm,0.6s
M19K  Big River Lodg 74.21  10  P     P     21 29 15.6 +0.7
M19K  Big River Lodg 74.21  10  P     P     21 29 15.3 +0.4
      baz=344
WAT6  Susitna Watana 74.26   7  P     P     21 29 14.9 -0.5
      baz=349,SNR=7.7
F64A  Sherman        74.33 319  P     P     21 29 15.7 -0.2
F64A                            IAmb  IAmb  21 29 17.7
      comp=Z,16nm,0.7s
SHEM  Shemya Is, Ala 74.63  30  LR    LR    22 06 45.8
      comp=Z,35nm,18.8s,baz=288,slow=39
HARP  HAARP          74.65   6  P     P     21 29 18.2 +0.7
      baz=351
M26K  Nabesna, AK    74.78   5  P     P     21 29 18.7 +0.4
M26K  Nabesna, AK    74.78   5  P     P     21 29 18.9 +0.6
      baz=353,SNR=7.9
SVW2  Sparrevohn     74.83  11  P     P     21 29 19.0 +0.5
M30M  Minto, Yukon   74.85   2  P     P     21 29 19.4 +0.7
      baz=358,SNR=7.2
M22K  Willow         74.85   8  P     P     21 29 19.4 +0.8
M22K                            IAmb  IAmb  21 29 22.2
      comp=Z,25nm,1.1s
M22K  Willow         74.85   8  P     P     21 29 19.6 +1.0
      baz=348
M24K  Tolsona, Glenn 74.86   6  P     P     21 29 18.8  0.0
M24K  Tolsona, Glenn 74.86   6  P     P     21 29 20.0 +1.3
      baz=350
BVCY  Beaver Creek   74.88   3  P     P     21 29 20.0 +1.1
      baz=354
M27K  Edge Creek, AK 74.89   4  P     P     21 29 19.4 +0.4
M27K  Edge Creek, AK 74.89   4  P     P     21 29 20.3 +1.4
      baz=354,SNR=10
GHO   Glory Hole Cre 74.95   7  IAmb  IAmb  21 29 27.5
      comp=Z,12nm,0.9s
SML   Sawmill        74.97   7  IAmb  IAmb  21 29 24.4
      comp=Z,16nm,0.8s
SML   Sawmill        74.97   7  P     P     21 29 19.5 +0.1
      baz=349,SNR=8.7
SCM   Sheep Creek Mo 75.04   7  P     P     21 29 19.9 +0.1
SCM   Sheep Creek Mo 75.04   7  P     P     21 29 20.5 +0.7
      baz=350,SNR=9.5
M23K  Glacier View   75.04   7  P     P     21 29 19.9 +0.2
      baz=349
PMR   Palmer         75.11   8  P     P     21 29 20.3 +0.3
PMR                             IAmb  IAmb  21 29 24.6
      comp=Z,8.7nm,0.6s
PMR   Palmer         75.11   8  P     P     21 29 20.3 +0.3
      baz=348
SPCR  Spurr Chakacha 75.16   9  P     P     21 29 21.1 +0.6
      baz=346
N18K  Kilae Creek    75.19  11  P     P     21 29 21.2 +0.6
N18K                            IAmb  IAmb  21 29 23.1
      comp=Z,15nm,1.2s
N18K  Kilae Creek    75.19  11  P     P     21 29 21.9 +1.3
      baz=343,SNR=7.4
PKME  Peaks-Kenny Pk 75.22 319  P     P     21 29 21.9 +0.9
PKME                            IAmb  IAmb  21 29 22.7
      comp=Z,17nm,0.7s
PKME  Peaks-Kenny Pk 75.22 319  P     P     21 29 22.3 +1.2
      baz=43,SNR=7.1
N19K  Bonanza Creek  75.25  10  P     P     21 29 22.1 +1.1
N19K                            IAmb  IAmb  21 29 23.5
      comp=Z,29nm,1.2s
N19K  Bonanza Creek  75.25  10  P     P     21 29 22.2 +1.1
      baz=344,SNR=16
M31M  Drury Creek, Y 75.25   0  P     P     21 29 21.9 +1.0
      baz=359,SNR=7.2
KNK   Knik Glacier   75.35   7  P     P     21 29 21.9 +0.4
      baz=349
FIS   Fire Island    75.44   8  P     P     21 29 22.7 +0.8
N25K  Chitina, Valde 75.47   5  P     P     21 29 22.6 +0.3
      baz=352
KLU   Klutina        75.49   6  P     P     21 29 22.9 +0.5
KLU                             IAmb  IAmb  21 29 24.1
      comp=Z,16nm,0.6s
KLU   Klutina        75.49   6  P     P     21 29 23.6 +1.2
      baz=351,SNR=8.1
YUK3  Moose Creek    75.54   3  P     P     21 29 24.0 +1.2
      baz=355,SNR=21
RC01  Rabbit Creek A 75.54   8  P     P     21 29 21.6 -1.0
RC01                            IAmb  IAmb  21 29 24.0
      comp=Z,31nm,1.2s
RC01  Rabbit Creek A 75.54   8  P     P     21 29 23.1 +0.5
      baz=348,SNR=10
CAPN  Captain Cook N 75.70   9  P     P     21 29 23.7 +0.2
      baz=347
MCARA McCarthy VSAT  75.80   5  P     P     21 29 24.8 +0.8
MCARA McCarthy VSAT  75.80   5  P     P     21 29 24.8 +0.8
      baz=353
RSO   Redoubt South  75.81  10  P     P     21 29 24.6 +0.2
TGTN  Hyland Airport 75.84 357  P     P     21 29 25.5 +1.1
      baz=4.0
G62A  West of Eustis 75.85 319  P     P     21 29 25.5 +0.8
G62A                            IAmb  IAmb  21 29 26.8
      comp=Z,42nm,1.4s
DIV   Divide         75.86   6  P     P     21 29 25.1 +0.6
DIV                             IAmb  IAmb  21 29 26.4
      comp=Z,22nm,1.0s
O19K  Port Alsworth  75.87  11  P     P     21 29 24.9 +0.5
O19K                            IAmb  IAmb  21 29 26.8
      comp=Z,22nm,0.8s
VRDI  Verde Repeater 75.92   5  P     P     21 29 24.8 -0.2
N31M  Braeburn, Yuko 75.96   1  P     P     21 29 25.1 +0.1
      baz=358
N30M  Aishikik Lake  75.96   2  P     P     21 29 25.8 +0.7
      baz=357,SNR=5.8
GLI   Glacier Island 76.00   7  IAmb  IAmb  21 29 28.5
      comp=Z,10nm,0.5s
GLI   Glacier Island 76.00   7  P     P     21 29 25.9 +0.7
      baz=350
JCJ   Chichijima     76.04  66  LR    LR    22 06 02.9
      comp=Z,37nm,20.2s,baz=62,slow=38
YUK4  Talbot Arm     76.04   3  P     P     21 29 26.4 +0.7
      baz=356,SNR=18
O18K  Koktuh Hills   76.08  11  P     P     21 29 26.2 +0.5
O18K                            IAmb  IAmb  21 29 28.8
      comp=Z,10.0nm,0.8s
O18K  Koktuh Hills   76.08  11  P     P     21 29 26.9 +1.2
      baz=344
BMRM  Bremner River  76.11   6  P     P     21 29 27.4 +1.5
BMRM  Bremner River  76.11   6  P     P     21 29 26.4 +0.5
      baz=352
O22K  Cooper Landing 76.14   8  P     P     21 29 26.4 +0.5
O22K  Cooper Landing 76.14   8  P     P     21 29 26.2 +0.2
      baz=348
FID   Port Fidalgo   76.18   6  P     P     21 29 26.9 +0.7
FID                             IAmb  IAmb  21 29 29.1
      comp=Z,24nm,1.4s
BARN  Barnard Glacie 76.19   4  P     P     21 29 27.9 +1.3
O20K  Slope Mountain 76.20  10  P     P     21 29 26.6 +0.2
      baz=346
CTG   Chitna Glacier 76.31   4  P     P     21 29 27.9 +0.8
      baz=354
CTGM  Chitina Glacie 76.31   4  P     P     21 29 27.7 +0.5
CTGM                            IAmb  IAmb  21 29 29.1
      comp=Z,20nm,1.4s
EYAK  Cordova Ski Ar 76.44   6  P     P     21 29 28.3 +0.6
EYAK                            IAmb  IAmb  21 29 30.2
      comp=Z,22nm,1.3s
EYAK  Cordova Ski Ar 76.44   6  P     P     21 29 28.7 +1.1
      baz=351
YUK6  Outpost Mounta 76.45   2  P     P     21 29 28.6 +0.5
      baz=356
LOGN  Logan Glacier  76.46   4  P     P     21 29 28.3 +0.2
P18K  Big Mountain,  76.52  11  P     P     21 29 28.0 -0.2
P18K  Big Mountain,  76.52  11  P     P     21 29 28.3 +0.1
      baz=344
SEW   Seward         76.54   8  P     P     21 29 28.1 -0.1
SEW                             IAmb  IAmb  21 29 29.9
      comp=Z,18nm,1.1s
SEW   Seward         76.54   8  P     P     21 29 28.8 +0.6
      baz=348
P19K  Oil Pt         76.54  10  P     P     21 29 27.8 -0.5
P19K                            IAmb  IAmb  21 29 29.3
      comp=Z,8.6nm,0.6s
P19K  Oil Pt         76.54  10  P     P     21 29 27.9 -0.5
      baz=345
HYT   Haines Junctio 76.59   2  P     P     21 29 29.3 +0.6
HYT                             IAmb  IAmb  21 29 30.9
      comp=Z,16nm,1.0s
HYT   Haines Junctio 76.59   2  P     P     21 29 29.8 +1.1
      baz=357,SNR=18
ISLE  Juniper Island 76.61   4  P     P     21 29 28.9  0.0
ISLE                            IAmb  IAmb  21 29 31.2
      comp=Z,37nm,1.3s
H62A  Milan          76.63 319  P     P     21 29 29.9 +0.8
H62A                            IAmb  IAmb  21 29 31.0
      comp=Z,10nm,0.8s
BRLK  Bradley Lake   76.72   9  IAmb  IAmb  21 29 30.5
      comp=Z,26nm,0.9s
BRSE  Bradley Lake S 76.75   9  P     P     21 29 29.7 +0.2
      baz=347
HMT   Hamilton       76.76   5  P     P     21 29 29.7 +0.2
VLDQ  Val d'Or       76.77 325  P     P     21 29 30.2 +0.5
WHY   Whitehorse     76.80   1  P     P     21 29 29.6 -0.2
      baz=359
TABL  Table Mountain 76.84   4  P     P     21 29 30.5 +0.3
TRQ   Mont Tremblant 76.96 322  P     P     21 29 31.5 +0.5
TRQ                             IAmb  IAmb  21 29 32.8
      comp=Z,13nm,0.8s
SNH   Sunshine Point 77.00   5  P     P     21 29 31.9 +1.0
SNH                             IAmb  IAmb  21 29 34.7
      comp=Z,14nm,1.0s
Q19K  Cape Douglas,  77.19  11  P     P     21 29 31.3 -0.7
Q19K  Cape Douglas,  77.19  11  P     P     21 29 31.6 -0.4
      baz=345
PCA   Pinnacle       77.22   3  P     P     21 29 32.3 +0.1
PCA                             IAmb  IAmb  21 29 34.4
      comp=Z,15nm,1.0s
PINM  Pinnacle       77.22   3  P     P     21 29 33.2 +1.0
      baz=355
I62A  Tamworth       77.23 319  P     P     21 29 33.0 +0.5
LBNH  Lisbon         77.25 320  P     P     21 29 32.9 +0.4
LBNH                            IAmb  IAmb  21 29 35.0
      comp=Z,17nm,1.0s
LBNH  Lisbon         77.25 320  P     P     21 29 33.7 +1.2
      baz=41,SNR=6.1
DAV   Davao City (W) 77.29  92  LR    LR    22 08 48.3
      comp=Z,45nm,18.2s,baz=148,slow=40
FRNY  Flat Rock      77.58 321  P     P     21 29 35.0 +0.6
FRNY                            IAmb  IAmb  21 29 35.9
      comp=Z,14nm,0.6s
PNL   Peninsula      77.69   3  P     P     21 29 35.7 +0.9
      baz=356
MPSI  Mapaga         77.71 101  P     P     21 29 36.6 +1.1
      comp=Z,356nmcomp=Z,36nm,0.9s
TOLI2 Tolitoli       77.82 100  P     P     21 29 35.9 -0.2
TOLI2                           IAmb  IAmb  21 29 57.2
      comp=Z,13nm,0.8s
SKAG  Skagway        78.00   1  P     P     21 29 37.2 +0.8
SKAG  Skagway        78.00   1  P     P     21 29 37.1 +0.7
      baz=359
LONY  Lake Ozonia    78.20 321  P     P     21 29 39.0 +1.1
      baz=40,SNR=14
J61A  Chester        78.22 319  P     P     21 29 38.8 +0.8
J61A                            IAmb  IAmb  21 29 40.3
      comp=Z,10nm,0.7s
KDAK  Kodiak Island  78.44  10  P     P     21 29 39.0 +0.1
KDAK                            IAmb  IAmb  21 29 40.8
      comp=Z,21nm,0.8s
KDAK  Kodiak Island  78.44  10  P     P     21 29 39.7 +0.9
      baz=346
SUR   Sutherland     78.50 202  LR    LR    22 06 06.4
      comp=Z,73nm,18.8s,baz=32,slow=37
SUR   Sutherland     78.50 202  P     P     21 29 40.5 +0.8
SUR                             IAmb  IAmb  21 29 41.6
      comp=Z,16nm,0.8s
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SUR	Sutherland	78.50	202	P	P	21 29 40.8	+1.2
NCB	Newcomb	78.53	321	P	P	21 29 40.6	+0.9
K62A	Royalston	78.58	319	P	P	21 29 40.5	+0.6
ACCN	Adirondack Com	78.72	320	P	P	21 29 41.5	+0.8
ACCN				IAmb	IAmb	21 29 42.9	
	comp=Z,16nm,0.8s						
OHAK	Old Harbor	78.89	11	P	P	21 29 42.2	+0.8
	baz=345						
L61B	Northampton	78.95	319	P	P	21 29 42.3	+0.2
L61B	Northampton	78.95	319	P	P	21 29 43.0	+1.0
	baz=41						
DLBC	Dease Lake	78.99	358	LR	LR	22 10 53.6	
	comp=Z,21nm,18.4s,baz=214,slow=40						
DLBC	Dease Lake	78.99	358	P	P	21 29 42.8	+0.8
J59A	Piesco	79.05	320	P	P	21 29 43.7	+1.1
MRSI	Marisa	79.09	100	P	P	21 29 43.6	+0.5
	comp=Z,511nmcomp=Z,68nm,1.0s						
UCCT	U. Connecticut	79.23	318	P	P	21 29 43.6	+0.1
UCCT				IAmb	IAmb	21 29 44.5	
	comp=Z,9.7nm,0.8s						
SII	Sitkinak Islan	79.41	11	P	P	21 29 44.7	+0.6
SII				IAmb	IAmb	21 29 47.0	
	comp=Z,26nm,0.9s						
SII	Sitkinak Islan	79.41	11	P	P	21 29 44.8	+0.6
	baz=345						
M63A	Gales Ferry	79.43	318	P	P	21 29 44.8	+0.2
M63A				IAmb	IAmb	21 29 46.5	
	comp=Z,13nm,0.7s						
J58A	Remsen	79.49	321	P	P	21 29 44.7	-0.2
SDPT	Sand Point	79.50	15	P	P	21 29 44.7	0.0
	baz=340						
S34M	Telegraph Cree	79.54	359	P	P	21 29 45.8	+0.9
	baz=1.8						
DELO	Deloro Mine	79.65	323	P	P	21 29 46.7	+0.9
J57A	Williamstown	79.78	321	P	P	21 29 47.0	+0.5
J57A				IAmb	IAmb	21 29 48.5	
	comp=Z,12nm,0.8s						
PECO	Prince Edward	79.83	322	P	P	21 29 47.2	+0.5
KSCT	Kent School, K	79.89	319	P	P	21 29 47.2	+0.1
SADO	Sadowa	80.12	324	LR	LR	22 04 26.6	
	comp=Z,43nm,20.2s,baz=164,slow=35						
SADO	Sadowa	80.12	324	P	P	21 29 48.8	+0.5
SADO				IAmb	IAmb	21 29 50.2	
	comp=Z,14nm,0.8s						
CHNA	Chernabura Isl	80.16	15	P	P	21 29 47.3	-0.9
	baz=341						
L59A	Walton	80.28	320	P	P	21 29 50.0	+0.7
L59A				IAmb	IAmb	21 29 51.2	
	comp=Z,16nm,0.8s						
SIT	Sitka	80.41	1	P	P	21 29 50.5	+0.9
SIT	Sitka	80.41	1	P	P	21 29 49.9	+0.4
	baz=359						
PAL	Palisades	80.65	319	P	P	21 29 52.4	+1.2
	baz=40						
BINY	Binghamton	80.72	321	P	P	21 29 52.4	+0.8
BINY				IAmb	IAmb	21 29 53.5	
	comp=Z,18nm,1.1s						
BINY	Binghamton	80.72	321	P	P	21 29 52.4	+0.8
	baz=39						
ODNJ	Ogdensburg	80.93	319	P	P	21 29 53.4	+0.7
E46A	Sault Ste Mari	80.95	328	P	P	21 29 53.1	+0.4
E46A				IAmb	IAmb	21 29 54.9	
	comp=Z,20nm,0.7s						
KSPA	Keystone Colle	81.11	320	P	P	21 29 54.6	+0.9
MMNY	Mt. Morris Dam	81.19	322	P	P	21 29 53.8	-0.2
BRNJ	Basking Ridge	81.22	319	P	P	21 29 54.1	-0.1
BRNJ				IAmb	IAmb	21 29 57.1	
	comp=Z,20nm,1.3s						
KAPI	Kappang	81.32	105	LR	LR	22 18 02.2	
	comp=Z,16nm,18.1s,baz=322,slow=44						
KAPI	Kappang	81.32	105	P	P	21 29 55.4	+0.4
KAPI	Kappang	81.32	105	P	P	21 29 55.7	+0.6
L56A	Greenwood	81.50	321	P	P	21 29 56.2	+0.4
ULM	Lac du Bonnet	81.56	337	P	P	21 29 56.2	+0.3
	comp=Z,6.9nm,0.8s,baz=5.1,slow=5.8,SNR=4.2						
	comp=Z,6.9nm,0.8s						
ULM	Lac du Bonnet	81.56	337	P	P	21 29 56.0	+0.1
LUPA	Lehigh Univers	81.67	319	P	P	21 29 56.5	-0.1
LUPA				IAmb	IAmb	21 29 57.7	
	comp=Z,8.7nm,0.7s						
WVNY	West Valley, N	81.76	322	P	P	21 29 57.4	+0.3
WVNY				IAmb	IAmb	21 29 59.8	
	comp=Z,19nm,0.8s						
BKSI	Bulukumba	81.79	105	P	P	21 29 57.6	0.0
	comp=Z,24nm,0.8s						
M57A	Sunshine Farm,	81.92	321	P	P	21 29 58.7	+0.7
D41A	Chassel	81.96	331	P	P	21 29 58.0	-0.1
D41A				IAmb	IAmb	21 30 03.1	
	comp=Z,21nm,0.8s						
E43A	Lone Tree Farm	81.97	329	P	P	21 29 58.6	+0.5
E43A				IAmb	IAmb	21 29 59.9	
	comp=Z,17nm,0.7s						
N58A	Sunbury	82.12	320	IAmb	IAmb	21 30 00.5	
	comp=Z,13nm,0.7s						
EYMN	Ely	82.22	333	P	P	21 30 00.0	+0.6
	baz=30						
I49A	Point Hope	82.35	326	P	P	21 30 00.7	+0.6
M55A	Ridgway	82.58	322	P	P	21 30 01.6	+0.3
G45A	Suttons Bay	82.58	328	P	P	21 30 01.6	+0.3
B35A	Bob, Littlefor	82.58	334	P	P	21 30 00.5	-0.8
MVL	Millersville	82.61	319	P	P	21 30 01.7	+0.2
MVL				IAmb	IAmb	21 30 03.0	
	comp=Z,6.6nm,0.5s						
ERPA	Erie	82.61	323	P	P	21 30 01.3	-0.3
ERPA	Erie	82.61	323	P	P	21 30 02.2	+0.7
	baz=36						
EDM	Edmonton	82.69	348	P	P	21 30 02.0	+0.2
SSPA	Standing Stone	82.83	321	P	P	21 30 02.5	-0.2
SSPA				IAmb	IAmb	21 30 04.4	
	comp=Z,21nm,0.8s						
SSPA	Standing Stone	82.83	321	P	P	21 30 03.4	+0.7
	baz=38						
TNTI	Ternate	82.84	96	P	P	21 30 02.6	-0.5
TNTI				IAmb	IAmb	21 30 24.3	
	comp=Z,23nm,1.1s						
COWI	Conover	82.99	331	P	P	21 30 04.0	+0.6
ALLY	Alegheny Colle	83.05	323	P	P	21 30 04.3	+0.4
K50A	Casco	83.22	325	P	P	21 30 05.5	+0.9
AGMN	Agassiz Nation	83.30	336	P	P	21 30 05.5	+0.5
	baz=27						
SDMD	Soldier’s Deli	83.30	319	P	P	21 30 04.4	-0.7
M53A	WI Miller and	83.46	323	P	P	21 30 06.1	+0.2
	baz=36						
GRNB	Grenville Isla	83.59	358	P	P	21 30 07.3	+0.9
GRNB				IAmb	IAmb	21 30 08.9	
	comp=Z,14nm,0.9s						
J47A	Sunmer	83.75	326	P	P	21 30 08.2	+0.9
SANI	Sanana	83.76	99	P	P	21 30 07.2	-0.6
	comp=Z,499nmcomp=Z,17nm,0.9s						
P57A	Homestead Farm	83.80	320	P	P	21 30 07.7	0.0
N53A	Lisbon	84.04	323	P	P	21 30 08.9	0.0
AAM	Ann Arbor	84.04	325	P	P	21 30 09.2	+0.3
AAM	Ann Arbor	84.04	325	P	P	21 30 09.7	+0.8
	baz=34						
G40A	Rib Lake	84.09	331	P	P	21 30 09.8	+0.7
G40A				IAmb	IAmb	21 30 10.8	
	comp=Z,18nm,0.8s						
O54A	Avella	84.34	322	P	P	21 30 11.1	+0.7
CBN	Corbin Frederi	84.50	319	P	P	21 30 11.5	+0.2
	baz=38						
MCWV	Mont Chateau	84.52	321	P	P	21 30 11.9	+0.6
MCWV	Mont Chateau	84.52	321	P	P	21 30 12.0	+0.6
	baz=36						
M50A	Fremont	84.52	324	P	P	21 30 11.2	-0.1
N51A	Ashland	84.63	324	P	P	21 30 11.9	0.0
O53A	New Philadelph	84.66	322	P	P	21 30 11.6	-0.4
O53A	New Philadelph	84.66	322	P	P	21 30 12.5	+0.5
	baz=36						
L48A	N Adams	84.66	325	P	P	21 30 12.2	+0.1
Q56A	Snyder Ridge,	84.70	321	P	P	21 30 12.7	+0.4
F36A	Milaca	84.72	333	P	P	21 30 12.3	0.0
F36A				IAmb	IAmb	21 30 13.1	
	comp=Z,7.7nm,0.7s						
I42A	Draeger Farm,	84.80	329	P	P	21 30 13.1	+0.4
I42A				IAmb	IAmb	21 30 14.5	
	comp=Z,19nm,0.8s						
R58B	Mineral	84.94	319	P	P	21 30 13.6	+0.1
R58B				IAmb	IAmb	21 30 14.6	
	comp=Z,11nm,0.8s						
SPMN	Marine on St.	85.03	332	P	P	21 30 13.5	-0.3
SPMN				IAmb	IAmb	21 30 15.5	
	comp=Z,17nm,1.3s						
SPMN	Marine on St.	85.03	332	P	P	21 30 14.2	+0.4
	baz=29						
O52A	Adamsville	85.05	323	P	P	21 30 14.2	+0.2
BBB	Bella Bella	85.18	357	LR	LR	22 13 58.5	
	comp=Z,19nm,18.3s,baz=306,slow=40						
P53A	Whipple	85.36	322	P	P	21 30 15.8	+0.3
N49A	Columbus Grove	85.40	325	P	P	21 30 15.9	+0.1
DGMT	Dagmar	85.41	341	P	P	21 30 16.1	+0.5
	baz=21						
I40A	Norwalk	85.42	330	P	P	21 30 16.2	+0.4
I40A				IAmb	IAmb	21 30 17.7	
	comp=Z,25nm,1.1s						
ACSO	Alum Creek Sta	85.45	324	P	P	21 30 15.9	-0.1
ACSO	Alum Creek Sta	85.45	324	P	P	21 30 16.4	+0.4
	baz=35						
Q54A	Coxs Mills	85.51	322	P	P	21 30 15.9	-0.4
Q54A				IAmb	IAmb	21 30 17.7	
	comp=Z,12nm,0.8s						
P52A	Corning	85.57	323	P	P	21 30 15.9	-0.7
P52A	Corning	85.57	323	P	P	21 30 16.9	+0.3
	baz=35						
S57A	Dark Hollow, R	85.62	320	IAmb	IAmb	21 30 18.5	
	comp=Z,10nm,0.8s						
F33A	5 Mile Ranch,	85.63	335	P	P	21 30 16.2	-0.6
F33A				IAmb	IAmb	21 30 18.2	
	comp=Z,18nm,0.8s						
R55A	Marlinton	85.75	321	P	P	21 30 17.9	+0.3
R55A				IAmb	IAmb	21 30 19.1	
	comp=Z,9.9nm,0.8s						
N47A	Urbana	86.07	326	P	P	21 30 18.9	-0.1
N47A				IAmb	IAmb	21 30 20.1	
	comp=Z,21nm,0.9s						
O49A	Covington	86.08	324	P	P	21 30 19.4	+0.3
JFWS	Jewell Farm	86.13	330	P	P	21 30 19.6	+0.2
JFWS	Jewell Farm	86.13	330	P	P	21 30 19.8	+0.5
	baz=30,SNR=7.9						
I37A	Lemond, Waseca	86.30	332	P	P	21 30 19.7	-0.4
LLLB	Lillooet	86.32	353	P	P	21 30 20.7	+0.6
LLLB				IAmb	IAmb	21 30 22.1	
	comp=Z,12nm,0.8s						
O48B	Farmland	86.37	325	P	P	21 30 20.4	-0.2
	baz=33						
R53A	Hurricane	86.55	322	IAmb	IAmb	21 30 23.4	
	comp=Z,14nm,0.7s						
M44A	Midewin, Midew	86.59	327	P	P	21 30 21.8	+0.2
Q51A	Peebles	86.61	323	IAmb	IAmb	21 30 23.6	
	comp=Z,19nm,1.0s						
L42A	Oliver, Polo	86.70	329	P	P	21 30 22.4	+0.3
BLA	Blacksburg	86.75	320	P	P	21 30 21.4	-1.2
	baz=36						
P49A	Miami Univ. Ec	86.78	324	P	P	21 30 22.4	-0.2
P49A				IAmb	IAmb	21 30 23.3	
	comp=Z,24nm,1.3s						
P49A	Miami Univ. Ec	86.78	324	P	P	21 30 22.3	-0.3
	baz=34						
EGMT	Eagleton	87.06	344	IAmb	IAmb	21 30 25.7	
	comp=Z,7.4nm,0.8s						
EGMT	Eagleton	87.06	344	P	P	21 30 24.1	+0.3
	baz=17,SNR=7.3						
SFIN	Lafayette	87.07	326	P	P	21 30 24.0	+0.1
	baz=32						
CBB	Campbell River	87.18	355	P	P	21 30 25.3	+1.0
CBB				IAmb	IAmb	21 30 26.3	
	comp=Z,12nm,0.9s						
K38A	Parkersburg	87.28	331	P	P	21 30 24.9	0.0
LAO	LASA Array	87.56	342	P	P	21 30 28.0	+1.7
	baz=20,SNR=5.5						
ECSD	EROS Data Cent	87.62	334	P	P	21 30 26.9	+0.4
ECSD				IAmb	IAmb	21 30 28.1	
	comp=Z,10nm,0.8s						
ECSD	EROS Data Cent	87.62	334	P	P	21 30 27.2	+0.7
	baz=26,SNR=8.8						
SUSD	Miller	87.70	336	P	P	21 30 27.1	+0.1
	baz=25						
HDIL	Hopedale	87.80	328	P	P	21 30 28.1	+0.7
HDIL	Hopedale	87.80	328	P	P	21 30 28.1	+0.7
	baz=31						
R49A	Shelbyville	88.01	324	IAmb	IAmb	21 30 29.4	
	comp=Z,11nm,0.8s						
NEW	Newport	88.07	349	LR	LR	22 11 23.5	
	comp=Z,54nm,19.0s,baz=334,slow=36						
NEW	Newport	88.07	349	P	P	21 30 29.3	+0.7
NEW	Newport	88.07	349	P	P	21 30 29.8	+1.1
	baz=12,SNR=17						
JTMT	Jette	88.15	347	P	P	21 30 29.0	-0.2
JTMT				IAmb	IAmb	21 30 30.7	
	comp=Z,7.8nm,0.6s						
N41A	Harden Midland	88.27	329	P	P	21 30 30.1	+0.4
C09A	Chrisman Ranch	88.68	350	P	P	21 30 31.8	+0.3
C09A				IAmb	IAmb	21 30 33.2	
	comp=Z,6.6nm,0.8s						
TZTN	Tazewell	88.74	322	IAmb	IAmb	21 30 33.7	
	comp=Z,19nm,1.4s						
TZTN	Tazewell	88.74	322	P	P	21 30 31.9	-0.1
	baz=34						
KMSC	Kings Mountain	88.86	320	P	P	21 30 32.9	+0.4
	baz=35						
T50A	Nancy	88.92	323	IAmb	IAmb	21 30 33.8	
	comp=Z,8.9nm,0.7s						
NBCL	Cascavel-CE	88.96	263	*e*P	P	21 30 35.0	+1.7
MSO	Missoula	88.98	347	P	P	21 30 33.4	+0.4
	baz=14						
N38A	Joes South For	89.07	331	P	P	21 30 34.1	+0.7
N38A				IAmb	IAmb	21 30 36.5	
	comp=Z,8.9nm,0.7s						
Q44A	Meyer Farm, Va	89.10	327	P	P	21 30 33.9	+0.2
D03D	Eldon	89.48	353	P	P	21 30 36.0	+0.8
	baz=7.7						
D08A	Wollman Farm,	89.50	350	P	P	21 30 35.5	+0.1
D08A				IAmb	IAmb	21 30 37.2	
	comp=Z,8.5nm,0.9s						
TKL	Tuckaleechee C	89.58	322	LR	LR	22 11 24.7	
	comp=Z,36nm,18.2s,baz=62,slow=36						
TKL	Tuckaleechee C	89.58	322	P	P	21 30 36.0	0.0
TKL				IAmb	IAmb	21 30 37.2	
	comp=Z,7.5nm,1.1s						
RLMT	Red Lodge	89.72	343	P	P	21 30 37.1	+0.4
RLMT				IAmb	IAmb	21 30 38.9	
	comp=Z,8.1nm,0.9s						
RLMT	Red Lodge	89.72	343	P	P	21 30 37.6	+0.9
	baz=18						
P40A	Paris	89.74	329	P	P	21 30 37.2	+0.6
P40A				IAmb	IAmb	21 30 38.1	
	comp=Z,19nm,1.2s						
BOZ	Bozeman (W)	89.75	345	P	P	21 30 37.2	+0.5
BOZ	Bozeman (W)	89.75	345	P	P	21 30 37.6	+0.8
	baz=16,SNR=6.9						
D04E	Lakebay	89.80	353	P	P	21 30 38.1	+1.4
	baz=7.9						
E09A	Wood Farm, Sta	89.93	349	P	P	21 30 38.0	+0.7
E09A				IAmb	IAmb	21 30 39.2	
	comp=Z,7.0nm,0.9s						
T47A	Sharon Grove	89.94	325	IAmb	IAmb	21 30 38.2	
	comp=Z,11nm,0.9s						
NBCA	Caruaru-PE	90.03	259	*e*P	P	21 30 39.9	+1.6
HODGE	Hodges	90.04	320	P	P	21 30 38.0	0.0
HODGE				IAmb	IAmb	21 30 41.4	
	comp=Z,12nm,1.4s						
SIUC	Southern Illin	90.20	326	P	P	21 30 38.9	+0.1
P38A	Dawn	90.21	330	P	P	21 30 39.1	+0.4
P38A				IAmb	IAmb	21 30 40.6	
	comp=Z,7.3nm,1.1s						
HAWA	Hanford	90.23	350	P	P	21 30 39.0	+0.3
HAWA				IAmb	IAmb	21 30 40.8	
	comp=Z,5.7nm,0.8s						
S44A	Carbondale	90.23	326	P	P	21 30 39.4	+0.5
F10A	Beach Ranch, E	90.33	349	P	P	21 30 39.9	+0.5
F10A				IAmb	IAmb	21 30 40.9	
	comp=Z,6.1nm,0.8s						
CLTN	Cedars of Leba	90.36	323	IAmb	IAmb	21 30 40.2	
	comp=Z,8.7nm,0.9s						
YHH	Holmes Hill	90.37	344	P	P	21 30 39.6	-0.3
YHH				IAmb	IAmb	21 30 41.9	
	comp=Z,4.5nm,0.7s						
YHL	Hebgen Lake	90.38	344	P	P	21 30 39.3	-0.5
FVM	French Village	90.45	327	P	P	21 30 40.2	+0.2
CCM	Cathedral Cave	90.72	328	P	P	21 30 41.5	+0.4
CCM				IAmb	IAmb	21 30 42.4	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	90.72	328	P	P	21 30 41.3	+0.1
	baz=30						
NBPB	Pedra_Branca-C	90.80	263	*e*P	P	21 30 43.2	+1.4
V48A	Smith Brothers	90.87	324	IAmb	IAmb	21 30 42.6	
	comp=Z,6.5nm,0.9s						
R40A	Maddies Statio	90.91	329	P	P	21 30 43.0	+0.9
R40A				IAmb	IAmb	21 30 45.1	
	comp=Z,6.9nm,0.8s						
WVT	Waverly	90.97	325	P	P	21 30 41.7	-0.7
	baz=32						
NBAN	Anadia - AL	91.20	258	*e*P	P	21 30 44.7	+1.0
MOOW	Moose Ponds	91.35	344	P	P	21 30 44.9	+0.6
MOOW				IAmb	IAmb	21 30 46.9	
	comp=Z,4.7nm,1.1s						
NBPS	Pedro II - PI	91.39	265	*e*P	P	21 30 45.6	+0.9
NBMA	Muriti-CE	91.43	261	*e*P	P	21 30 46.4	+1.5
REDW	Red Top Meadow	91.74	344	P	P	21 30 46.5	+0.3
REDW				IAmb	IAmb	21 30 48.6	
	comp=Z,5.2nm,0.9s						
MGMO	Mountain Grove	91.90	328	P	P	21 30 46.6	-0.1
PDAR	Pinedale Array	92.03	343	P	P	21 30 46.6	-0.9
	comp=Z,0.4nm,0.4s,baz=23,slow=4.9,SNR=4.0						
PDAR				LR	LR	22 14 07.5	
	comp=Z,34nm,18.5s,baz=40,slow=37						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	92.03	343	P	P	21 30 47.7	+0.2
HLID	Hailey	92.23	346	P	P	21 30 48.2	-0.1
	baz=14						
I07A	Izee	92.50	350	P	P	21 30 50.0	+0.5
I07A				IAmb	IAmb	21 30 51.9	
	comp=Z,3.3nm,0.8s						
MFID	Camas Ranch	92.61	347	P	P	21 30 50.1	+0.1
MFID				IAmb	IAmb	21 30 52.0	
	comp=Z,5.3nm,0.8s						
MBWA	Marble Bar	92.67	116	P	P	21 30 49.8	-0.4
U40A	Yellville	92.82	328	P	P	21 30 50.9	-0.1
U40A				IAmb	IAmb	21 30 52.5	
	comp=Z,12nm,1.2s						
U40A	Yellville	92.82	328	P	P	21 30 51.7	+0.7
	baz=29						
N23A	Red Feather La	92.94	339	IAmb	IAmb	21 30 59.2	
	comp=Z,7.1nm,0.9s						
N23A	Red Feather La	92.94	339	P	P	21 30 52.2	+0.5
	baz=20						
FCAR	Ozark Folk Cen	92.94	327	IAmb	IAmb	21 30 52.3	
	comp=Z,6.9nm,1.2s						
TIGA	Tifton	92.97	319	P	P	21 30 51.7	0.0
	baz=34						
J08A	Circle Bar Ran	93.07	349	P	P	21 30 52.6	+0.5
J08A				IAmb	IAmb	21 30 53.9	
	comp=Z,6.1nm,0.9s						
I04A	Tendick Farm,	93.12	352	P	P	21 30 52.2	0.0
	baz=8.2						
MDP	Montagnes des	93.17	280	LR	LR	22 15 42.6	
	comp=Z,20nm,18.3s,baz=190,slow=37						
LRAL	Lakeview Retre	93.22	322	P	P	21 30 52.2	-0.6
	baz=32						
I03D	Drain, OR	93.31	353	P	P	21 30 53.5	+0.5
	baz=7.5						
SJG	San Juan	93.36	298	LR	LR	22 11 52.0	
	comp=Z,11nm,19.5s,baz=202,slow=35						
J05D	Fort Rock, OR	93.49	351	P	P	21 30 55.3	+1.2
	baz=9.0						
WHAR	Wooly Hollow	93.53	327	IAmb	IAmb	21 30 55.1	
	comp=Z,7.4nm,0.9s						
W41B	Gary Mavity, V	93.62	327	P	P	21 30 53.8	-0.8
	baz=29						
J04D	Umpqua Nationa	93.63	352	P	P	21 30 55.3	+0.4
	baz=8.4						
ISCO	Idaho Springs	93.88	339	P	P	21 30 55.9	-0.3
	baz=20						
J01E	Myrtle Point	93.89	353	P	P	21 30 56.4	+0.7
	baz=7.1						
WVOR	Wild Horse Val	94.00	349	P	P	21 30 57.0	+0.6
WVOR				IAmb	IAmb	21 30 58.4	
	comp=Z,6.9nm,0.8s						
W39A	Magazine	94.20	328	P	P	21 30 57.7	+0.4
	baz=28						
O20A	White River Ci	94.23	341	P	P	21 30 58.1	+0.4
	baz=18						
TUL1	Leonard	94.33	330	P	P	21 30 57.9	0.0
	baz=27						
K02D	Willamette Mer	94.33	353	P	P	21 30 58.1	+0.3
	baz=7.3						
X40A	Basin Creek Fa	94.45	327	IAmb	IAmb	21 30 59.3	
	comp=Z,4.3nm,0.8s						
X40A	Basin Creek Fa	94.45	327	P	P	21 30 58.5	0.0
	baz=29						
Q24A	Divide	94.53	338	P	P	21 30 59.0	-0.2
	baz=20						
L04D	Klamath Falls	94.67	352	P	P	21 30 59.8	+0.3
	baz=8.3						
MIAR	Mount Ida	94.69	328	P	P	21 30 59.5	-0.1
MIAR				IAmb	IAmb	21 31 18.5	
	comp=Z,6.0nm,0.9s						
MIAR	Mount Ida	94.69	328	P	P	21 31 00.2	+0.6
	baz=28						
L02F	Cave Junction	94.89	353	P	P	21 31 00.4	0.0
	baz=7.3						
ELK	Elko	95.11	346	LR	LR	22 16 56.0	
	comp=Z,30nm,18.3s,baz=36,slow=37						
ELK	Elko	95.11	346	P	P	21 31 02.2	+0.6
ELK				IAmb	IAmb	21 31 04.1	
	comp=Z,4.4nm,1.1s						
P18A	Preston Nutter	95.18	342	P	P	21 31 02.6	+0.5
P18A				IAmb	IAmb	21 31 03.7	
	comp=Z,3.2nm,0.9s						
DUG	Dugway, Tooele	95.18	344	P	P	21 31 00.5	-1.4
	baz=15						
YBH	Yreka Blue Hor	95.19	352	LR	LR	22 19 32.5	
	comp=Z,21nm,18.8s,baz=347,slow=39						
KSXB	Camp Six Broad	95.21	353	P	P	21 31 01.9	-0.1
TMUT	Trail Mountain	95.71	343	P	P	21 31 04.5	-0.1
TMUT				IAmb	IAmb	21 31 06.4	
	comp=Z,2.8nm,0.7s						
SRU	San Rafael Swe	95.74	342	P	P	21 31 05.3	+0.8
SRU				IAmb	IAmb	21 31 05.8	
	comp=Z,4.2nm,0.7s						
SDCO	Great Sand Dun	95.77	338	P	P	21 31 04.8	-0.1
	baz=20						
Q16A	Castle Valley	96.07	343	P	P	21 31 06.3	+0.3
PV11	David Mesa, Pa	96.12	341	P	P	21 31 06.8	+0.5
S22A	4UR Ranch, Cre	96.13	339	P	P	21 31 06.1	-0.3
	baz=19						
PV13	Radium Mtn., P	96.25	341	P	P	21 31 07.2	+0.3
WMOK	Wichita Mounta	96.44	332	P	P	21 31 07.7	+0.1
	baz=25						
MSU	Marysvale	96.67	343	P	P	21 31 10.3	+1.5
PSUT	Pine Spring	96.99	345	P	P	21 31 11.4	+1.1
MTPU	Mount Pierson	97.13	343	P	P	21 31 10.3	-0.7
MTPU				IAmb	IAmb	21 31 14.0	
	comp=Z,6.8nm,1.2s						
R11A	Troy Canyon, C	97.50	346	P	P	21 31 12.4	-0.1
	baz=13						
NVAR	Mina Array Bea	97.87	348	P	Pdif	21 31 14.7	+0.4
	comp=Z,0.9nm,0.6s,baz=24,slow=5.4,SNR=7.2						
NVAR				LR	LR	22 17 40.9	
	comp=Z,47nm,18.1s,baz=276,slow=37						
	comp=Z,0.9nm,0.6s						
ANMO	Albuquerque	98.66	338	LR	LR	22 16 54.2	
	comp=Z,55nm,18.7s,baz=32,slow=36						
ANMO	Albuquerque	98.66	338	P	Pdif	21 31 18.1	+0.3
	baz=20						
TPNV	Topopah Spring	98.98	346	IAmb	IAmb	21 31 28.6	
	comp=Z,3.0nm,0.9s						
121A	Cookes Peak, D	101.30	338	P	Pdif	21 31 29.8	+0.2
	baz=19						
MNTX	Cornudas Mount	101.39	336	P	Pdif	21 31 29.9	+0.2
	baz=21						
WRA	Warramunga Arr	101.83	106	P	Pdif	21 31 30.9	-0.8
	comp=Z,2.9nm,0.6s,baz=316,slow=4.4,SNR=31						
WRA				PKiKP	PKiKP	21 35 53.9	-0.7
	comp=Z,0.7nm,1.1s,baz=322,slow=2.0,SNR=2.4						
WRA				PKKPbc	PKKPbc	21 47 37.4	+1.7
	comp=Z,0.5nm,0.9s,baz=134,slow=2.5,SNR=5.1						
TXAR	Lajitas Array	103.04	333	Pdiff	Pdif	21 31 38.1	+0.8
	comp=Z,0.4nm,0.7s,baz=32,slow=5.3,SNR=3.2						
TXAR				PKiKP	PKiKP	21 35 57.7	+0.9
	comp=Z,0.4nm,0.7s,baz=5.7,slow=1.8,SNR=3.0						
ASAR	Alice Springs	103.96	109	Pdiff	Pdif	21 31 40.8	-0.4
	comp=Z,2.2nm,0.8s,baz=318,slow=4.9,SNR=18						
ASAR				PKiKP	PKiKP	21 35 57.9	-0.5
	comp=Z,0.3nm,0.5s,baz=316,slow=1.3,SNR=2.7						
ASAR				PKKPbc	PKKPbc	21 47 31.0	+1.5
	comp=Z,0.3nm,0.5s,baz=116,slow=3.3,SNR=4.7						
MAW	Mawson	110.88	173	PKiKP	PKiKP	21 36 10.4	+0.6
	comp=Z,1.5nm,0.6s,baz=326,slow=3.6,SNR=2.6						
CPUP	Villa Florida	117.12	258	PKP	PKPdf	21 36 22.3	-0.7
	comp=Z,2.2nm,0.6s,baz=102,slow=0.7,SNR=6.6						
QSPA	South Pole Qui	132.71	180		PKiKP	21 36 52.6	-0.3
PLCA	Paso Flores	133.95	250	PKP	PKPdf	21 36 55.5	+0.6
	comp=Z,1.3nm,0.5s,baz=47,slow=2.7,SNR=6.1						

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*TUL **13** 21:58:17.6±0.6, 35°.58N±0°.01×97°.35W±0°.01, h10^{km}±4^{km}, ML2.7, mb_Lg2.1/12(NEIC) Error ellipse: s-maj=1.8km*

s-min=1.6km az=126.0

NEIC 13 21:58:17.7±0.7**, 35°.59N**±0°.01×**97°.35W**±0°.02**, h12**km±4km**, Error ellipse: s-maj=2.0km s-min=1.6km az=58.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.06**	**120**	Pg	Pg	21 58 20.0	-0.2
OK009	**Oakdale Elemen**	**0.06**	**263**	Pg	Pg	21 58 20.0	-0.2
OK009				Sg	Sg	21 58 21.7	-0.3
ADOK	**Arcadia Dam**	**0.07**	**344**	Pg	Pg	21 58 20.2	-0.1
OKCFA	**Oklahoma City**	**0.19**	**206**	Pg	Pg	21 58 21.8	-0.2
OKCFA				Sg	Sg	21 58 24.9	0.0
OKCSW	**OKLAHOMA CITY**	**0.20**	**202**		Pg	21 58 21.9	-0.2
OKCSW				Sg	Sg	21 58 25.1	0.0
FNO	**Franklin**	**0.33**	**187**	Pg	Pg	21 58 24.3	-0.2
FNO				Sg	Sg	21 58 29.2	+0.1
X34A	**Smith Ranch, M**	**1.06**	**202**	Pg	Pb	21 58 37.7	-0.3
TUL1	**Leonard**	**1.31**	**75**	Pn	Pn	21 58 40.9	-0.9
WMOK	**Wichita Mounta**	**1.45**	**235**	Pn	Pn	21 58 43.7	0.0
WMOK	**Wichita Mounta**	**1.45**	**235**	IAmb_Lg		21 59 05.0	
	comp=Z,7.2nm,0.7s						
T35A	**Sooner Cattle**	**1.49**	**27**	Pn	Pn	21 58 44.4	+0.1
U32A	**Winter Ranch,**	**1.56**	**301**	Pn	Pn	21 58 45.7	+0.4
X37A	**Clayton**	**1.90**	**121**	IAmb_Lg		21 59 21.6	
	comp=Z,12nm,0.9s						
U40A	**Yellville**	**3.73**	**77**	IAmb_Lg		22 00 25.6	
	comp=Z,3.2nm,1.0s						
X40A	**Basin Creek Fa**	**3.86**	**105**	IAmb_Lg		22 00 24.8	
	comp=Z,5.0nm,0.8s						
W41B	**Gary Mavity, V**	**4.19**	**94**	IAmb_Lg		22 00 28.1	
	comp=Z,5.1nm,1.2s						
MGMO	**Mountain Grove**	**4.39**	**68**	IAmb_Lg		22 00 38.2	
	comp=Z,3.1nm,0.8s						

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*MAN **13** 22:40:04.7, 3°.24N×126°.53E, h32km, mb5.1, ML4.1, MS4.1, Hypocentre not reviewed by the ISC*

*IDC **13** 22:40:10.8±2.0, 3°.08N×124°.09E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=211.7km s-min=27.8km az=63.0*

*DJA **13** 22:40:14.0±0.5, 4°N±4°×12°7E±°, h24km±3km, M4.1/10, mb4.2/4, mB5.1/3, MLv4.1/10, Mw(mB)4.4/3*

ISC 13 22:40:13.1±1.0**, 4°.05N**±0°.06×**126°.64E**±0°.07**, h10**km**, n15, σ1s.22**/18**, mb3.6**/4**, 2C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.16**	**252**	P	**Pb**	**22 40 35.2**	**-0.1**
SGSI				S	**Sb**	**22 40 50.4**	**-0.1**
KCP	**Kidapawan**	**3.32**	**332**	⇑*e*P	**Pn**	**22 41 06.1**	**+0.8**
TNTI	**Ternate**	**3.33**	**167**	P	**Pn**	**22 41 06.1**	**+0.7**
TNTI				S	**Sn**	**22 41 46.6**	**+1.5**
BIPH	**Bislig**	**4.12**	**356**	⇑*e*P	**Pn**	**22 41 18.5**	**+2.3**
BIPH				*e*S	**Sb**	**22 42 15.0**	**-0.7**
KMSI	**Cibinong**	**4.35**	**218**	P	**Sn**	**22 42 11.6**	**+1.4**
LBMI	**Labuha**	**4.73**	**169**	P	**Pn**	**22 41 24.9**	**+0.2**
GTOI	**Gorontalo**	**4.96**	**227**	P	**Pn**	**22 41 28.4**	**+0.6**
	0.0nm6.4nm,0.6s						
GTOI				S	**Sn**	**22 42 25.0**	**-0.2**
	0.0nm6.4nm,0.6s						
MRSI	**Marisa**	**5.88**	**233**	P	**Pn**	**22 41 40.7**	**+0.3**
	0.2nm616nm34nm,0.5s						
SANI	**Sanana**	**6.09**	**186**	P	**Pn**	**22 41 43.6**	**+0.3**
LUWI	**Luwuk**	**6.36**	**217**	P	**Pn**	**22 41 46.6**	**-0.4**
APSI	**Ampana**	**7.01**	**225**	P	**Pn**	**22 41 56.7**	**+0.8**
WRA	**Warramunga Arr**	**25.01**	**163**	P	**P**	**22 45 35.1**	**-2.3**
	0.8nm,0.5s,baz=334,slow=11,SNR=8.5						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**28.44**	**166**	P	**P**	**22 46 06.5**	**-2.0**
	0.4nm,0.6s,baz=349,slow=7.6,SNR=5.6						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**38.46**	**159**	P	**P**	**22 47 36.1**	**+0.7**
	1.6nm,0.7s,baz=327,slow=8.5,SNR=3.0						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	22 49 55.8	-5.1
	0.4nm,0.6s,baz=114,slow=7.0,SNR=1.8						
	0.4nm,0.6s						

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*TIF **13** 22:44:56.1, 42°.75N×46°.41E, h109km±1km*

*NORS **13** 22:44:57.6±0.0, 42°.81N×46°.43E, h61km±2km, MPVA3.8*

*DRS **13** 22:44:57.2±0.0, 42°.76N×45°.86E, h23km*

*MOS **13** 22:44:57.4±0.0, 42°.83N×46°.42E, h64km±1km, MPVA3.9*

ISC 13 22:44:59.1±1.2**, 42°.88N**±0°.03×**46°.41E**±0°.03**, h64**km±6km**, n46, σ1s.47**/90**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.22**	**291**	*i* Pg	**Pn**	**22 45 08.8**	**-0.4**
DVE				*e*Sg	**Sn**	**22 45 17.4**	**+0.9**
DLMR	**Dylym**	**0.25**	**40**	*i* Pg	**Pn**	**22 45 08.8**	**-0.5**
DLMR				*e*Sg	**Sn**	**22 45 17.5**	**+0.7**
BTLR	**Botlikh**	**0.25**	**213**	*e*Pg	**Pn**	**22 45 08.6**	**-0.8**
BTLR				*e*Sg	**Sn**	**22 45 16.8**	**-0.1**
UNCR	**Uncukul**	**0.33**	**120**	*i* Pg	**Pn**	**22 45 08.7**	**-1.2**
UNCR				*e*Sg	**Sn**	**22 45 17.3**	**-0.4**
DBC	**Dubki**	**0.34**	**65**	*i* Pg	**Pn**	**22 45 09.3**	**-0.8**
DBC				*e*Sg	**Sn**	**22 45 18.2**	**+0.2**
KRNR	**Karanay**	**0.37**	**97**	*i* Pg	**Pn**	**22 45 09.1**	**-1.2**
KRNR				*e*Sg	**Sn**	**22 45 17.7**	**-0.7**
XNZR	**Khunzakh**	**0.40**	**147**	*i* Pg	**Pn**	**22 45 09.9**	**-0.8**
XNZR				*e*Sg	**Sn**	**22 45 19.0**	**0.0**
ARKR	**Arakani**	**0.51**	**122**	*i* Pg	**Pn**	**22 45 10.6**	**-1.0**
ARKR				*e*Sg	**Sn**	**22 45 20.4**	**-0.2**
BUJR	**Buynaksk**	**0.52**	**95**	*i* Pg	**Pn**	**22 45 11.1**	**-0.5**
BUJR				*e*Sg	**Sn**	**22 45 21.7**	**+1.0**
GROC	**Groznyy**	**0.56**	**306**	*e*Pg	**Pn**	**22 45 12.7**	**+0.8**
GROC				*e*Sg	**Sn**	**22 45 24.7**	**+3.3**
MAK	**Makhachkala**	**0.81**	**84**	*e*Pg	**Pn**	**22 45 15.7**	**+0.8**
MAK				*e*Sg	**Sn**	**22 45 28.0**	**+1.5**
KANR	**Karaman**	**0.85**	**68**	*i* Pg	**Pn**	**22 45 15.9**	**+0.5**
KANR				*e*Sg	**Sn**	**22 45 30.2**	**+2.8**
KMKR	**Kumukh**	**0.90**	**145**	*e*Pg	**Pn**	**22 45 15.6**	**-0.7**
KMKR				*e*Sg	**Sn**	**22 45 28.8**	**-0.1**
SGKR	**Sergokala**	**1.01**	**114**	*e*Pg	**Pn**	**22 45 17.4**	**-0.1**
SGKR				*e*Sg	**Sn**	**22 45 31.2**	**+0.1**
LGD	**Lagodekhi**	**1.05**	**187**	P	**Pn**	**22 45 17.0**	**-1.0**
LGD				S	**Sn**	**22 45 32.6**	**+0.7**
KMGR	**Komgaron**	**1.15**	**280**	*e*Pg	**Pn**	**22 45 19.5**	**+0.2**
KMGR				*e*Sg	**Sn**	**22 45 35.7**	**+1.4**
URKR	**Urkarakh**	**1.15**	**128**	*e*Pg	**Pn**	**22 45 19.1**	**-0.3**
URKR				*e*Sg	**Sn**	**22 45 35.1**	**+0.7**
VLKR	**Vladikavkaz**	**1.28**	**278**	*e*Pg	**Pn**	**22 45 21.2**	**+0.1**
VLKR				*e*Sg	**Sn**	**22 45 39.3**	**+1.8**
MTEO	**Meteo**	**1.40**	**263**	P	**Pn**	**22 45 22.6**	**-0.3**
MTEO				S	**Sn**	**22 45 41.8**	**+1.0**
DDFL	**Dedoflistskaro**	**1.45**	**189**	P	**Pn**	**22 45 23.7**	**+0.5**
DDFL				S	**Sn**	**22 45 46.3**	**+4.9**
BTKR	**Batakoyurt**	**1.46**	**291**	*e*Pg	**Pn**	**22 45 23.9**	**+0.6**
BTKR				*e*Sg	**Sn**	**22 45 44.3**	**+2.8**
GUDG	**Gudauri**	**1.48**	**255**	P	**Pn**	**22 45 25.3**	**+1.4**
GUDG				S	**Sn**	**22 45 45.1**	**+2.6**
TRKR	**Terskaya**	**1.49**	**305**	*e*Pg	**Pn**	**22 45 24.1**	**+0.4**
TRKR				*e*Sg	**Sn**	**22 45 43.8**	**+1.5**
LACR	**Lac**	**1.56**	**269**	*e*Pg	**Pn**	**22 45 24.1**	**-0.6**
LACR				*e*Sg	**Sn**	**22 45 45.5**	**+1.4**
ARNR	**Ardon**	**1.59**	**282**	*e*Pg	**Pn**	**22 45 25.5**	**+0.4**
ARNR				*e*Sg	**Sn**	**22 45 46.8**	**+2.1**
DRN	**Derbent**	**1.65**	**120**	*e*Pg	**Pn**	**22 45 26.6**	**+0.7**
DRN				*e*Sg	**Sn**	**22 45 45.7**	**-0.4**
AKT	**Akhty**	**1.71**	**144**	*e*Pg	**Pn**	**22 45 25.9**	**-0.8**
AKT				*e*Sg	**Sn**	**22 45 47.3**	**-0.4**
KORR	**Kora**	**1.73**	**278**	*e*Pg	**Pn**	**22 45 27.0**	**0.0**
KORR				*e*Sg	**Sn**	**22 45 49.4**	**+1.2**
PRTR	**Priterechnaya**	**1.78**	**300**	*e*Pg	**Pn**	**22 45 28.2**	**+0.6**
PRTR				*e*Sg	**Sn**	**22 45 51.3**	**+1.9**
STDR	**Stavd-Durt**	**1.79**	**287**	*e*Pg	**Pn**	**22 45 28.2**	**+0.5**
STDR				*e*Sg	**Sn**	**22 45 51.3**	**+1.8**
KSMR	**Kasumkent**	**1.80**	**134**	*e*Pg	**Pn**	**22 45 28.2**	**+0.2**
KSMR				*e*Sg	**Sn**	**22 45 50.8**	**+0.8**
ZEI	**Tsey**	**1.85**	**268**	*e*Pg	**Pn**	**22 45 28.0**	**-0.7**
ZEI				*e*Sg	**Sn**	**22 45 50.9**	**-0.3**
LSNR	**Lesken**	**1.94**	**283**	*e*Pg	**Pn**	**22 45 29.9**	**+0.1**
LSNR				*e*Sg	**Sn**	**22 45 54.2**	**+1.1**
DIGR	**Digorskoe uzhe**	**2.08**	**272**	*e*Pg	**Pn**	**22 45 31.7**	**-0.2**
DIGR				*e*Sg	**Sn**	**22 45 53.8**	**-3.0**
NCK	**Nalchik**	**2.15**	**288**	*e*Pg	**Pn**	**22 45 32.6**	**-0.1**
NCK				*e*Sg	**Sn**	**22 45 58.4**	**+0.1**
ONI	**Oni**	**2.20**	**264**	P	**Pn**	**22 45 36.8**	**+3.4**
DMNI	**Dmanisi**	**2.26**	**228**	P	**Pn**	**22 45 32.7**	**-1.7**
DMNI				S	**Sn**	**22 45 59.4**	**-1.7**
KBTC	**Kuba-Taba**	**2.38**	**294**	*e*Pn	**Pn**	**22 45 35.2**	**-0.7**
KBTC				*e*Sn	**Sn**	**22 46 03.0**	**-1.0**
PYA1	**Pyatigorsk**	**2.69**	**297**	*e*Pn	**Pn**	**22 45 39.0**	**-1.1**
PYA1				*e*Sn	**Sn**	**22 46 09.4**	**-2.0**
KBZ	**Khabaz**	**2.70**	**290**	*i* Pn	**Pn**	**22 45 38.8**	**-1.4**
KBZ				*e*Sn	**Sn**	**22 46 09.1**	**-2.6**
BEYR	**Belyy Ugol+**	**2.85**	**295**	*e*Pn	**Pn**	**22 45 41.0**	**-1.2**
BEYR				*e*Sn	**Sn**	**22 46 12.9**	**-2.5**
SHA1	**Shidzhatmaz**	**2.87**	**289**	*i* Pn	**Pn**	**22 45 41.5**	**-1.2**
SHA1				*e*Sn	**Sn**	**22 46 14.0**	**-2.2**
KIV0	**Kislovodsk Arr**	**2.91**	**293**	*e*Pn	**Pn**	**22 45 41.6**	**-1.5**
KIV0				*e*Sn	**Sn**	**22 46 13.9**	**-3.1**
KIV	**Kislovodsk**	**2.92**	**293**	*i* Pn	**Pn**	**22 45 42.1**	**-1.1**
KIV				*e*Sn	**Sn**	**22 46 14.7**	**-2.5**
GNI	**Garni**	**3.00**	**205**	*e*Pn	Pn	22 45 49.6	+5.2
GNI				*e*Sn	**Sn**	**22 46 20.9**	**+1.7**
ALER	**Alexandrovskoy**	**3.16**	**308**	*e*Pn	**Pn**	**22 45 46.1**	**-0.3**
ALER				*e*Sn	**Sn**	**22 46 22.2**	**-0.6**

IDC 13 22:51:38.0±13.0**, 64°.36S**×**175°.43E, h0**km**, mb3.7**/2**, mbtmp3.7**/2**, MS3.3**/3**, Error ellipse: s-maj=628.9km s-min=68.8km az=60.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**25.73**	**180**	LR	LR	23 05 10.4	
	comp=Z,47nm,19.8s,baz=30,slow=32						
MAW	**Mawson**	**39.86**	**214**	LR	LR	23 14 03.8	
	comp=Z,44nm,19.2s,baz=128,slow=34						
H01W1	**Cape Leeuwin H**	**46.79**	**279**	T	T	23 51 03.0	
	baz=147,slow=76,SNR=6.9						
H01W2	**Cape Leeuwin H**	**46.80**	**278**	T	T	23 51 03.5	
	baz=147,slow=76,SNR=9.1						
H01W3	**Cape Leeuwin H**	**46.81**	**279**	T	T	23 51 02.9	
	baz=147,slow=76,SNR=6.9						
ASAR	**Alice Springs**	**48.85**	**306**	P	P	23 00 25.1	+0.2
	0.8nm,0.8s,baz=148,slow=6.1,SNR=5.9						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**52.13**	**308**	P	P	23 00 49.4	-0.4
	0.8nm,0.7s,baz=164,slow=6.7,SNR=5.8						
	0.8nm,0.7s						
LBTB	**Lobatse**	**87.86**	**207**	LR	LR	23 41 31.1	
	comp=Z,17nm,18.8s,baz=108,slow=34						
BRTR	**Keskin Array B**	**146.81**	**241**	PKPbc	PKPbc	23 11 20.5	-0.7
	0.6nm,0.8s,baz=123,slow=4.2,SNR=2.7						

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*IDC **13** 23:04:17.6±1.6, 36°.18N×45°.01W, h0km, mb3.6/8, mbtmp3.6/8, Error ellipse: s-maj=44.5km s-min=23.0km az=9.0*

*OTT **13** 23:04:34.9±0.9, 36°.66N×46°.02W, h18km, ML4.6/3, Atlantic Ocean. 1332km southeast from St. John''s, Nl*

ISC 13 23:04:18.9±1.3**, 36°.1N**±0°.2×**45°.0W**±0°.1**, h10**km**, n16, σ0s.67**/15**, mb3.7**/8**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJNN	**Saint John's**	**12.83**	**336**	SN	Sn	23 09 24.5	-19
GBN	**Guysborough**	**15.56**	**312**	PN	**Pn**	**23 07 57.9**	**-0.4**
GBN				SN	Sn	23 10 29.7	-21
GBN				Trac		23 10 44.9	
	comp=Z,2.1nm,0.1s						
DRLN	**Deer Lake**	**16.02**	**329**	PN	**Pn**	**23 08 04.7**	**+0.5**
DRLN				SN	Sn	23 10 42.8	-19
DRLN				Trac		23 10 54.4	
	comp=Z,920nm,3.5s						
HAL	**Halifax**	**16.51**	**307**	PN	**Pn**	**23 08 09.7**	**-0.8**
HAL				SN	Sn	23 10 47.0	-27
HAL				SN	S	23 10 52.0	-34
LMN	**Caledonia Moun**	**17.80**	**309**	PN	**P**	**23 08 27.1**	**-0.3**
LMN				SN	Sn	23 11 22.6	-23
LMN				Trac		23 11 32.5	
	comp=Z,11nm,0.4s						
SVNB	**Stilesville Qu**	**17.98**	**310**	PN	**P**	**23 08 29.8**	**+0.3**
SVNB				Trac		23 11 43.5	
	comp=Z,2.9nm,0.1s						
ELNB	**Elgin, New Bru**	**18.02**	**309**	PN	**P**	**23 08 31.1**	**+1.3**
ELNB				SN	Sn	23 11 27.8	-22
ELNB				Trac		23 11 38.6	
	comp=Z,1.6nm,0.2s						
GAAQ	**Galiote**	**18.73**	**320**	PN	**Pn**	**23 08 39.0**	**+1.0**
GAAQ				SN	Sn	23 11 46.6	-21
GAAQ				Trac		23 11 55.4	
	comp=Z,11nm,0.3s						
GERES	**GERESS Array B**	**44.10**	**54**	P	**P**	**23 12 27.8**	**+0.5**
	0.2nm,0.4s,baz=306,slow=8.4,SNR=2.1						
	0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**47.66**	**106**	P	**P**	**23 12 55.7**	**+0.1**
	1.0nm,0.7s,baz=306,slow=7.8,SNR=6.3						
	1.0nm,0.7s						
TXAR	**Lajitas Array**	**49.17**	**280**	P	**P**	**23 13 07.7**	**+0.4**
	0.2nm,0.8s,baz=94,slow=5.4,SNR=3.0						
	0.2nm,0.8s						
PDAR	**Pinedale Array**	**49.22**	**299**	P	**P**	**23 13 07.7**	**0.0**
	0.4nm,0.6s,baz=75,slow=7.6,SNR=3.5						
	0.4nm,0.6s						
YKA	**Yellowknife Ar**	**49.41**	**325**	P	**P**	**23 13 08.0**	**-0.5**
	0.3nm,0.6s,baz=89,slow=7.9,SNR=6.9						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**49.91**	**26**	P	**P**	**23 13 11.4**	**-0.9**
	3.2nm,1.1s,baz=261,slow=6.0,SNR=5.1						
	3.2nm,1.1s						
FINES	**FINESS Array B**	**50.17**	**36**	P	**P**	**23 13 14.2**	**-0.1**
	1.3nm,0.8s,baz=261,slow=9.3,SNR=4.2						
	1.3nm,0.8s						
ILAR	**Eielson Array**	**62.71**	**332**	P	**P**	**23 14 43.3**	**-0.3**
	0.3nm,0.5s,baz=49,slow=7.3,SNR=5.5						
	0.3nm,0.5s						

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*IDC **13** 23:09:26.8±0.8, 0°.36N×24°.84W, h0km, mb3.8/11, mbtmp3.8/11, MS3.4/20, Error ellipse: s-maj=27.8km s-min=21.8km az=135.0*

*NEIC **13** 23:09:29.3±0.9, 0°.6N±0°.1×25°.0W±0°.1, h10km±1km, mb4.7/18, Error ellipse: s-maj=27.2km s-min=15.0km az=148.0*

ISC 13 23:09:28.0±0.6**, 0°.4N**±0°.1×**24°.94W**±0°.09**, h10**km**, n55, σ0s.84**/31**, mb4.2**/16**, MS3.4**/19**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.59**	**240**	LR	LR	23 16 06.8	
	comp=Z,213nm,19.5s,baz=176,slow=32						
RCBR	**Riachuelo**	**12.59**	**240**	Pn	**Pn**	**23 12 27.8**	**+0.5**
H10N3	**ASCENSION HYDR**	**13.27**	**129**	T	T	23 26 03.7	
	baz=307,slow=75,SNR=173						
H10N2	**ASCENSION HYDR**	**13.27**	**128**	T	T	23 26 03.9	
	baz=307,slow=75,SNR=172						
H10N1	**ASCENSION HYDR**	**13.29**	**128**	T	T	23 26 16.5	
	baz=307,slow=75,SNR=188						
H10S3	**ASCENSION HYDR**	**13.86**	**133**	T	T	23 26 47.8	
	baz=310,slow=74,SNR=67						
H10S2	**ASCENSION HYDR**	**13.87**	**133**	T	T	23 26 51.9	
	baz=270,slow=74,SNR=22						
MBO	**M'Bour**	**15.95**	**29**		**Pn**	**23 13 12.0**	**-0.6**
MBO				IAmb	IAmb	23 13 19.7	
	comp=Z,124nm,1.2s						
DBIC	**Dimbokro**	**20.97**	**72**	P	**P**	**23 14 11.7**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=252,slow=12,SNR=4.1						
DBIC				LR	LR	23 20 31.0	
	comp=Z,90nm,21.1s,baz=266,slow=32						
	comp=Z,4.5nm,0.8s						
DBIC	**Dimbokro**	**20.97**	**72**	IAmb	IAmb	23 14 17.4	
	comp=Z,22nm,1.4s						
KOWA	**Kowa**	**24.96**	**55**	P	**P**	**23 14 52.4**	**+0.4**
MDP	**Montagnes des**	**28.04**	**280**	LR	LR	23 24 40.8	
	comp=Z,14nm,21.3s,baz=270,slow=32						
TORD	**Torodi Ar. Bea**	**29.25**	**63**	P	**P**	**23 15 30.2**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=242,slow=8.6,SNR=3.9						
	comp=Z,0.9nm,0.8s						
TOSP	**Speyside**	**36.96**	**288**	P	**P**	**23 16 37.0**	**-0.7**
MDT	**Midelt**	**37.47**	**29**	LR	LR	23 30 47.0	
	comp=Z,47nm,21.0s,baz=204,slow=34						
CPUP	**Villa Florida**	**41.03**	**227**	LR	LR	23 34 03.8	
	comp=Z,45nm,18.2s,baz=45,slow=36						
STVI	**Saint Thomas**	**43.13**	**297**	P	**P**	**23 17 26.6**	**-2.3**
STVI				IAmb	IAmb	23 17 30.7	
	comp=Z,41nm,1.4s						
ESDC	**Sonseca Array**	**43.49**	**24**	P	**P**	**23 17 33.2**	**+1.6**
	comp=Z,0.9nm,1.0s,baz=212,slow=9.0,SNR=3.5						
ESDC				LR	LR	23 33 26.4	
	comp=Z,17nm,18.2s,baz=274,slow=33						
	comp=Z,0.9nm,1.0s						
ESDC	**Sonseca Array**	**43.49**	**24**	P	**P**	**23 17 31.7**	**+0.1**
LPAZ	**La Paz**	**45.73**	**247**	P	**P**	**23 17 51.4**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=53,slow=8.8,SNR=4.6						
	comp=Z,1.1nm,0.7s						
LPAZ	**La Paz**	**45.73**	**247**	IAmb	IAmb	23 17 53.7	
	comp=Z,1.6nm,0.8s						
KEST	**Kesra**	**47.42**	**38**	LR	LR	23 38 31.5	
	comp=Z,127nm,19.3s,baz=297,slow=37						
PB09	**IPOC Station P**	**48.53**	**240**	P	**P**	**23 18 12.2**	**+0.4**
PB09				IAmb	IAmb	23 18 35.0	
	comp=Z,24nm,1.4s						
LVC	**Limon Verde**	**48.54**	**239**	LR	LR	23 38 31.9	
	comp=Z,21nm,18.9s,baz=90,slow=36						
ROSC	**El Rosal**	**49.50**	**276**	LR	LR	23 37 31.9	
	comp=Z,66nm,19.6s,baz=338,slow=34						
AC01	**Pan de Azucar**	**51.33**	**235**	P	**P**	**23 18 34.3**	**+1.4**
SSB	**Saint Sauveur**	**51.68**	**26**	P	**P**	**23 18 35.7**	**+0.4**
SSB				IAmb	IAmb	23 18 59.3	
	comp=Z,12nm,1.4s						
NNA	**Nana**	**52.98**	**255**	LR	LR	23 39 45.3	
	comp=Z,25nm,21.5s,baz=121,slow=34						
ATAH	**Atahualpa**	**53.84**	**261**	LR	LR	23 40 15.1	
	comp=Z,42nm,21.0s,baz=78,slow=34						
CO06	**Fray Jorge**	**54.05**	**231**	P	**P**	**23 18 52.2**	**-0.8**
NRCA	**Norcia**	**54.24**	**34**	P	**P**	**23 18 54.0**	**-0.2**
LSZ	**Lusaka**	**54.76**	**109**	LR	LR	23 38 13.2	
	comp=Z,24nm,20.1s,baz=180,slow=32						
MBAR	**Mbarara**	**55.69**	**91**	LR	LR	23 39 30.5	
	comp=Z,36nm,19.4s,baz=210,slow=32						
BOSA	**Boshof**	**56.00**	**125**	P	**P**	**23 19 06.5**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=320,slow=9.1,SNR=7.0						
BOSA				LR	LR	23 38 39.8	
	comp=Z,30nm,18.6s,baz=188,slow=31						
	comp=Z,1.7nm,0.8s						
GEC2	**GERESS Array S**	**58.55**	**29**	P	**P**	**23 19 25.1**	**+0.2**
GEC2				IAmb	IAmb	23 19 27.3	
	comp=Z,3.6nm,1.2s						
GERES	**GERESS Array B**	**58.55**	**29**	P	**P**	**23 19 24.9**	**0.0**
	comp=Z,0.5nm,0.8s,baz=224,slow=7.5,SNR=3.5						
	comp=Z,0.5nm,0.8s						
BATG	**Bathurst New B**	**58.76**	**328**	P	**P**	**23 19 26.3**	**0.0**
BATG				IAmb	IAmb	23 19 41.6	
	comp=Z,5.7nm,1.0s						
T59A	**Double "B" Far**	**60.60**	**313**	P	**P**	**23 19 38.9**	**-0.3**
T59A				IAmb	IAmb	23 19 50.5	
	comp=Z,11nm,1.2s						
BOAB	**BOACO BROADBAN**	**61.36**	**284**	P	**P**	**23 19 44.1**	**-0.5**
MMAI	**Mount Meron Ar**	**65.17**	**54**	LR	LR	23 49 43.2	
	comp=Z,28nm,18.2s,baz=83,slow=37						
BRTR	**Keskin Array B**	**65.99**	**46**	P	**P**	**23 20 15.7**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=231,slow=6.0,SNR=6.3						
BRTR				LR	LR	23 51 04.5	
	comp=Z,36nm,18.3s,baz=161,slow=38						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**65.99**	**46**	P	**P**	**23 20 15.1**	**0.0**
SWET	**Sewanee**	**66.33**	**309**	P	**P**	**23 20 16.5**	**-0.6**
SWET				IAmb	IAmb	23 20 19.5	
	comp=Z,3.4nm,1.0s						
AKASG	**Malin Array Be**	**67.78**	**34**	P	**P**	**23 20 25.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=240,slow=5.5,SNR=6.4						
	comp=Z,0.8nm,0.5s						
AKASG	**Malin Array Be**	**67.78**	**34**	IAmb	IAmb	23 20 32.9	
	comp=Z,1.8nm,1.0s						
CMIG	**Matias Romero**	**70.72**	**288**	LR	LR	23 51 57.8	
	comp=Z,30nm,18.8s,baz=306,slow=36						
FINES	**FINESS Array B**	**72.00**	**23**	P	**P**	**23 20 52.5**	**+0.8**
	comp=Z,2.2nm,1.0s,baz=222,slow=2.6,SNR=6.0						
	comp=Z,2.2nm,1.0s						
TXAR	**Lajitas Array**	**79.95**	**300**	LR	LR	23 58 26.4	
	comp=Z,21nm,19.5s,baz=148,slow=37						
ANMO	**Albuquerque**	**82.79**	**305**	LR	LR	23 53 13.1	
	comp=Z,14nm,20.5s,baz=133,slow=32						
PDAR	**Pinedale Array**	**85.74**	**313**	P	**P**	**23 22 09.7**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=114,slow=4.0,SNR=2.7						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**89.45**	**332**	P	**P**	**23 22 25.0**	**0.0**
	comp=Z,0.1nm,0.7s,baz=55,slow=7.6,SNR=2.4						
	comp=Z,0.1nm,0.7s						
AAK	**Ala-Archa**	**96.65**	**47**	LR	LR	00 10 26.6	
	comp=Z,27nm,18.7s,baz=152,slow=38						
STKA	**Stephens Creek**	**146.24**	**159**	PKPbc	**PKPbc**	**23 29 09.4**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=252,slow=3.2,SNR=4.6						
ASAR	**Alice Springs**	**149.11**	**140**	PKPbc	**PKPbc**	**23 29 17.4**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=206,slow=2.0,SNR=19						
WRA	**Warramunga Arr**	**151.95**	**135**	PKPbc	**PKPbc**	**23 29 23.6**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=244,slow=2.6,SNR=5.0						

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*JMA **13** 23:15:23.1±0.2, 25°N±3°×122°.8E±0°.7, h105km±1km, MV1.6/9, NW OFF ISHIGAKIJIMA IS*

*TAP **13** 23:15:23.2, 24°.65N×122°.74E, h106km±1km, ML2.8, D*

ISC 13 23:15:23.3±1.7**, 24°.64N**±0°.07×**122°.76E**±0°.03**, h103**km±11km**, n46, σ0s.63**/76**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.29**	**127**	*i* P	**Pn**	**23 15 38.3**	**+0.1**
	baz=126						
YOJ				*i* S	**Sn**	**23 15 50.0**	**+0.7**
	baz=126						
YOJ	**Yonaguni jima**	**0.29**	**127**	P	**Pn**	**23 15 38.4**	**+0.1**
YOJ				S	**Sn**	**23 15 50.1**	**+0.7**
EGS		**0.78**	**286**	*e*P	**Pn**	**23 15 41.7**	**-0.1**
	baz=285						
TWC	**Suao**	**0.83**	**268**	*e*P	**Pn**	**23 15 41.9**	**-0.3**
	baz=267						
TWC				*e*S	**Sn**	**23 15 55.5**	**-0.9**
	baz=267						
NTC	**Toucheng**	**0.87**	**285**	*e*P	**Pn**	**23 15 42.8**	**+0.2**
	baz=284						
EWUT	**Wuta**	**0.91**	**258**	S	**Sn**	**23 15 58.5**	**+0.6**
	baz=257						
TIPB	**Shuangxi**	**0.91**	**292**	P	**Pn**	**23 15 43.3**	**+0.2**
	baz=291						
TIPB				*e*S	**Sn**	**23 15 56.9**	**-1.1**
	baz=291						
SXI1	**Grass Mountain**	**0.92**	**300**	*e*P	**Pn**	**23 15 43.6**	**+0.3**
	baz=299						
IRIF	**Iriomote-Funau**	**0.94**	**108**	P	**Pn**	**23 15 43.2**	**0.0**
IRIF				*e*S	**Sn**	**23 15 57.6**	**-0.7**
ENA	**Nanau**	**0.95**	**258**	*e*P	**Pn**	**23 15 43.5**	**+0.1**
	baz=256						
ENA				*e*S	**Sn**	**23 15 58.6**	**+0.1**
	baz=256						
NDS	**Dongshan**	**0.95**	**270**	*e*P	**Pn**	**23 15 43.8**	**+0.4**
	baz=269						
NDS				*e*S	**Sn**	**23 15 58.3**	**-0.3**
	baz=269						
NWF	**Wu-fen Shan**	**0.99**	**296**	*e*P	**Pn**	**23 15 44.2**	**+0.3**
	baz=295						
TWE	**Neicheng**	**1.00**	**275**	P	**Pn**	**23 15 44.1**	**+0.2**
	baz=274						
TWE				*e*S	**Sn**	**23 15 58.8**	**-0.6**
	baz=274						
FUSB	**Fushanzhiwuyua**	**1.07**	**277**	P	**Pn**	**23 15 44.8**	**-0.1**
	baz=276						
FUSB				*e*S	**Sn**	**23 15 59.2**	**-1.9**
	baz=276						
ENTT	**Nioudou**	**1.08**	**271**	*e*P	**Pn**	**23 15 45.5**	**+0.6**
	baz=269						
ENTT				*e*S	**Sn**	**23 16 01.4**	**+0.2**
	baz=269						
HATJ	**Hateruma jima**	**1.11**	**121**	*e*S	**Sn**	**23 16 01.9**	**+0.1**
LATG	**Datong**	**1.12**	**265**	*e*P	**Pn**	**23 15 45.8**	**+0.3**
	baz=264						
LATG				*e*S	**Sn**	**23 16 02.4**	**+0.2**
	baz=264						
NDT	**Datong Townshi**	**1.13**	**269**	P	**Pn**	**23 15 46.1**	**+0.6**
	baz=267						
NDT				S	**Sn**	**23 16 02.2**	**0.0**
	baz=267						
NWLT	**Wulai**	**1.15**	**277**	*e*P	**Pn**	**23 15 45.4**	**-0.3**
	baz=276						
NWLT				*e*S	**Sn**	**23 16 01.9**	**-0.7**
	baz=276						
NACB	**Ninganchiao**	**1.16**	**247**	*e*P	**Pn**	**23 15 46.5**	**+0.8**
	baz=245						
NACB				*e*S	**Sn**	**23 16 01.9**	**-0.6**
	baz=245						
YM01	**YM01**	**1.19**	**296**	*e*P	**Pn**	**23 15 46.1**	**-0.1**
	baz=295						
TWD	**Chiawan**	**1.19**	**243**	*e*S	**Sn**	**23 16 03.1**	**-0.2**
	baz=241						
JKRS	**Kuro-shima**	**1.21**	**109**	P	**Pn**	**23 15 46.7**	**+0.4**
JKRS				S	**Sn**	**23 16 03.9**	**+0.3**
ETLH	**Xiulin Townshi**	**1.24**	**250**	*e*P	**Pn**	**23 15 47.4**	**+0.7**
	baz=249						

ETLH				*e*S	Sn	23 16 04.0	-0.4
	baz=249						
HWA	**Hwalien**	1.24	238	*e*S	Sn	23 16 05.2	+1.0
	baz=236						
YHNB	**Yeheng**	1.26	272	P	Pn	23 15 47.4	+0.4
	baz=271						
YHNB				S	Sn	23 16 04.8	0.0
	baz=271						
NNSB	**Datong**	1.27	261	*e*P	Pn	23 15 47.5	+0.3
	baz=259						
NNSB				*e*S	Sn	23 16 04.4	-0.7
	baz=259						
NSK	**Sanguang**	1.27	272	*e*P	Pn	23 15 47.4	+0.3
	baz=271						
NSK				*e*S	Sn	23 16 05.1	0.0
	baz=271						
NNS	**Nan Shan**	1.28	262	*e*P	Pn	23 15 47.4	+0.2
	baz=260						
NNS				*e*S	Sn	23 16 04.9	-0.3
	baz=260						
JIJ	**Ishigaki jima**	1.29	102	P	Pn	23 15 47.2	0.0
JIJ				S	Sn	23 16 04.2	-1.1
FUSS	**Fushou**	1.43	255	*e*P	Pn	23 15 49.8	+0.6
	baz=253						
FUSS				*e*S	Sn	23 16 08.9	+0.1
	baz=253						
WHF	**Hehuan Shan**	1.45	251	*e*S	Sn	23 16 09.2	-0.2
	baz=249						
TWT	**Tachien**	1.49	256	*e*S	Sn	23 16 10.3	+0.4
	baz=254						
NFF	**Wufeng Townshi**	1.49	270	P	Pn	23 15 50.1	+0.4
	baz=269						
NFF				*e*S	Sn	23 16 09.7	-0.1
	baz=269						
TDCB	**Techi**	1.51	256	*e*P	Pn	23 15 50.6	+0.6
	baz=254						
TDCB				*e*S	Sn	23 16 10.1	-0.1
	baz=254						
CHGB	**Renai**	1.55	249	*e*S	Sn	23 16 11.4	+0.1
	baz=247						
LIOB	**Emei**	1.58	271	*e*P	Pn	23 15 51.1	+0.2
	baz=269						
LIOB				*e*S	Sn	23 16 11.3	-0.4
	baz=269						
OWD	**Renai**	1.59	245	*e*S	Sn	23 16 10.8	-1.3
	baz=244						
NSTT	**Nanjuang**	1.60	270	*e*S	Sn	23 16 11.9	0.0
	baz=269						
WUSB	**Renai**	1.63	247	*e*P	Pn	23 15 52.0	+0.6
	baz=246						
WUSB				*e*S	Sn	23 16 12.7	-0.1
	baz=246						
HGSD	**Ruisui**	1.67	227	*e*S	Sn	23 16 12.7	-0.8
	baz=226						
WHP	**Taichung City**	1.69	258	*e*P	Pn	23 15 54.4	+2.2
	baz=257						
WHP				*e*S	Sn	23 16 14.9	+0.8
	baz=257						
VWDT	**VWDT**	1.72	240	*e*P	Pn	23 15 52.6	+0.1
	baz=238						
VWDT				*e*S	Sn	23 16 14.2	-0.4
	baz=238						
JTJ	**Tarama**	1.77	89	*e*P	Pn	23 15 53.4	+0.3
JTJ				*e*S	Sn	23 16 15.8	0.0
YULB	**Yu-li**	1.82	227	*e*P	Pn	23 15 53.2	-0.6
	baz=226						
YULB				*e*S	Sn	23 16 15.1	-1.9
	baz=226						
FULB	**Fuli**	1.96	223	*e*S	Sn	23 16 19.5	-0.6
	baz=222						

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*JMA **13** 23:18:24.0±0.2, 31°.0N±0°.5×12°9E±°, h18^{km}±4^{km}, MD4.1/13, MV4.1/13, SW OFF KYUSHU*
*IDC **13** 23:18:23.2±1.0, 31°.07N×129°.15E, h0^{km}, mb3.6/7, mbtmp3.6/11, ML3.1/4, MS3.2/10, Error ellipse: s-maj=31.1km s-min=14.6km az=104.0*
*NIED **13** 23:18:24.0, 31°.01N×129°.03E, h18^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.63; $M_{\theta\theta}$0.62; $M_{\phi\phi}$0.01; $M_{r\theta}$0.31; $M_{\theta\phi}$0.39; $M_{\phi r}$0.78; Fault plane solution: $M_0$1.11000×10^{15} NP1:ϕ_s89.00000°, δ30.00000°, λ-39.00000°. NP2:ϕ_s215.00000°, δ72.00000°, λ-114.00000°.*
ISC 13 23:18:24.2±0.9**, 31°.08N**±0°.07×**129°.18E**±0°.08**, h6**^{km}**, n25,** σ1^{s}**03**/19**, mb3.7**/7**, MS3.5**/6**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.75	37	*e*P	Pb	23 18 40.6	+0.8
JSJ				*e*S	Sn	23 18 52.3	-0.8
JKC	**Kuchinoerabu**	1.06	125	*e*P	Pg	23 18 44.8	+0.1
JKC				*e*S	Sb	23 18 59.5	+0.3
JKC	**Kuchinoerabu**	1.06	125	A	A	23 18 44.8	
	comp=E,10.0nm,0.4s,comp=E,7.0nm,1.6s						
JSU	**Suzuyama**	1.17	68	*e*P	Pn	23 18 47.6	+0.5
JSU	**Suzuyama**	1.17	68	A	A	23 18 47.6	
	comp=E,4.0nm,0.3s,comp=E,5.0nm,1.6s						
JNN	**Nakanoshima**	1.37	154	A	A	23 18 48.5	
	comp=E,8.0nm,1.5s,comp=E,6.0nm,1.8s						
JYAK	**Yakushimahirau**	1.42	126	*e*P	Pn	23 18 50.1	-0.5
JYAK				*e*S	Sb	23 19 10.1	+0.7
JNU	**Nakatsue**	2.49	35	Pn	Pn	23 19 03.6	-1.7
	5.6nm,0.3s,baz=320,slow=7.0,SNR=6.6						
JNU				Lg	Lg	23 19 44.3	
	23nm,0.3s,baz=252,slow=22,SNR=8.3						
	20nm,0.4s						
JOW	**Kunigami**	4.30	191	LR	LR	23 21 21.4	
	comp=Z,124nm,18.9s,baz=264,slow=42						
KSRS	**Korea Array**	6.45	351	Pn	Pn	23 20 00.5	+0.8
	0.6nm,0.3s,baz=176,slow=14,SNR=10						
KSRS				Sn	Sn	23 21 14.6	+1.1
	0.3nm,0.3s,baz=170,slow=28,SNR=2.7						
KSRS				Lg	Lg	23 21 50.1	
	0.6nm,0.3s,baz=176,slow=29,SNR=5.8						
KSRS				LR	LR	23 22 26.9	
	comp=Z,84nm,22.0s,baz=175,slow=38						
	2.9nm,0.6s						
MJAR	**Matsushiro Arr**	9.28	52	Pn	Pn	23 20 40.4	+1.9
	0.1nm,0.3s,baz=209,slow=9.8,SNR=2.1						
MJAR				LR	LR	23 24 55.8	
	comp=Z,47nm,19.8s,baz=348,slow=42						
	0.6nm,0.4s						
KLR	**Kul'dur**	18.23	5	P	Pn	23 22 35.8	-2.0
	0.1nm,0.3s,baz=191,slow=8.0,SNR=3.7						
KLR				LR	LR	23 28 57.5	
	comp=Z,36nm,18.1s,baz=97,slow=35						
	0.6nm,0.5s						
PMG	**Port Moresby**	43.79	154	LR	LR	23 46 23.8	
	comp=Z,57nm,18.2s,baz=236,slow=38						
WRA	**Warramunga Arr**	50.97	174	P	P	23 27 26.5	-0.3
	0.4nm,0.7s,baz=355,slow=8.3,SNR=2.3						
	0.4nm,0.7s						
ARU	**Arti**	54.18	320	LR	LR	23 54 22.2	
	comp=Z,42nm,18.3s,baz=49,slow=40						
ASAR	**Alice Springs**	54.62	175	P	P	23 27 54.4	+0.6
	0.2nm,0.6s,baz=7.3,slow=14,SNR=4.4						
	0.2nm,0.6s						
AKTO	**Aktyubinsk**	55.11	312	LR	LR	23 54 00.2	
	comp=Z,34nm,18.5s,baz=66,slow=39						
ILAR	**Eielson Array**	59.80	30	P	P	23 28 28.8	-1.1
	0.4nm,0.7s,baz=277,slow=7.0,SNR=5.5						
	0.4nm,0.7s						
STKA	**Stephens Creek**	63.71	168	LR	LR	23 59 37.7	
	comp=Z,22nm,18.4s,baz=54,slow=39						
INK	**Inuvik**	64.13	24	LR	LR	23 58 30.3	
	comp=Z,25nm,18.4s,baz=188,slow=38						
FINES	**FINESS Array B**	69.08	330	P	P	23 29 30.5	-0.2
	1.2nm,0.8s,baz=46,slow=8.2,SNR=1.5						
	1.2nm,0.8s						
YKA	**Yellowknife Ar**	73.80	26	P	P	23 29 59.8	+0.6
	0.4nm,0.8s,baz=304,slow=5.8,SNR=4.0						
	0.4nm,0.8s						
HFS	**Hagfors**	74.94	332	LR	LR	00 09 42.6	
	comp=Z,68nm,18.4s,baz=359,slow=41						
NVAR	**Mina Array Bea**	86.56	47	P	P	23 31 08.8	+0.1
	0.5nm,0.7s,baz=347,slow=4.6,SNR=4.4						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	88.87	39	P	P	23 31 19.8	0.0
	0.5nm,0.8s,baz=96,slow=1.5,SNR=4.5						
	0.5nm,0.8s						

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*IDC **13** 23:20:58.1±1.1, 28°.05N×85°.81E, h0^{km}, mb3.8/8, mbtmp3.8/10, ML4.2/2, Error ellipse: s-maj=39.4km s-min=18.6km az=61.0*
*NEIC **13** 23:20:59.5±1.7, 27°.96N±0°.07×85°.5E±0°.1, h10^{km}±1^{km}, mb4.0/15, Error ellipse: s-maj=20.4km s-min=3.7km az=123.0*
*NDI **13** 23:20:59.9±1.7, 27°.92N×85°.55E, h10^{km}±12^{km}, ML3.4, mb4.0(NEIC)*
ISC 13 23:20:58.6±0.5**, 27°.83N**±0°.05×**85°.56E**±0°.05**, h10**^{km}**, n37,** σ**2**^{s}**12**/40**, mb3.8**/13**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLK	**Valmikinagar**	1.59	252	*e*P	Pb	23 21 28.7	+0.8
VLK				*e*S	Sb	23 21 49.8	+1.7
BOK	**Bokaro**	4.03	176	*e*x	Pg	23 22 15.2	-0.7
BOK				*e*x	Sg	23 23 08.5	+0.5
LGTI	**Lohaghat**	4.94	290	*e*P	Pn	23 22 16.2	+3.4
LGTI				*e*S	Sn	23 23 12.2	+2.1
PTH	**Pithoragarh**	5.00	291	*e*P	Pn	23 22 16.5	+2.7
SHL	**Shillong**	6.09	110	*e*P	Pn	23 22 30.5	+1.7
SHL				*e*S	Sn	23 23 37.6	-1.1
BLSP	**Bilaspur**	6.47	209	*e*S	Sn	23 23 48.4	+0.5
JHNI	**Jhansi**	6.71	251	*e*S	Sn	23 23 46.7	-6.9
SMLA	**Simla**	8.02	296	*e*P	Pn	23 22 55.6	+0.5
SMLA				*e*S	Sn	23 24 21.2	-4.7
SMLA				IAML		23 24 27.3	
	comp=N,20nm,0.2s						
SMLA				IAML		23 24 27.6	
	comp=E,24nm,0.3s						
SMLA				IAML		23 24 29.1	
	comp=N,18nm,0.5s						
SMLA				IAML		23 24 31.1	
	comp=E,24nm,0.5s						
SMLA				IAML		23 24 32.1	
	comp=N,22nm,0.4s						
SMLA				IAML		23 24 32.8	
	comp=E,22nm,0.5s						
BHPL	**Bhopal**	8.65	240	*e*S	Sn	23 24 36.5	-5.1
CMAR	**Chiang Mai Arr**	15.43	124	Pn	Pn	23 24 35.0	-1.5
	comp=E,0.7nm,0.3s,baz=329,slow=6.8,SNR=2.1						
	comp=E,1.0nm,0.4s						
KBL	**Kabul**	15.63	299	P	P	23 24 42.9	-0.4
KBL				IAmb	IAmb	23 24 43.4	
	comp=Z,4.6nm,0.7s						
BOOM	**Boomskoye usch**	16.59	334	P	P	23 24 53.2	-0.7
CHGR	**Chuyangaron**	17.43	312	P	P	23 25 02.3	-0.9
CHGR				IAmb	IAmb	23 25 04.3	
	comp=Z,11nm,0.7s						
MK31	**Makanchi Array**	19.10	353	P	Pn	23 25 21.5	-0.8
MK31				IAmb	IAmb	23 25 22.6	
	comp=Z,5.2nm,1.2s						
MKAR	**Makanchi Array**	19.10	353	P	P	23 25 20.2	-1.2
	comp=Z,0.2nm,0.3s,baz=177,slow=11,SNR=9.3						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	19.10	353	P	P	23 25 20.7	-0.8
KURBB	**Kurchatov Arra**	23.38	349	P	P	23 26 06.7	-0.6
	comp=Z,1.0nm,0.7s,baz=173,slow=10,SNR=10						
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	23.45	349	P	P	23 26 06.7	-1.4
KURK	**Kurchatov**	23.45	349	IAmb	IAmb	23 26 08.8	
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	25.73	34	P	P	23 26 28.0	-1.3
	comp=Z,0.7nm,0.5s,baz=224,slow=12,SNR=2.2						
	comp=Z,0.7nm,0.5s						
ZAA0	**Zalesovo Array**	26.10	359	P	P	23 26 31.4	-0.9
ZAA0				IAmb	IAmb	23 26 33.0	
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	26.10	359	P	P	23 26 32.0	-0.3
	comp=Z,2.0nm,0.6s,baz=179,slow=9.5,SNR=8.6						
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	26.10	359	P	P	23 26 32.4	0.0
FINES	**FINESS Array B**	51.44	328	P	P	23 30 02.6	-1.0
	comp=Z,5.5nm,1.1s,baz=90,slow=10,SNR=4.5						
	comp=Z,5.5nm,1.1s						
IDI	**Anoyia**	51.54	294	P	P	23 30 05.7	+0.8
ARCES	**ARCESS Array B**	53.83	338	P	P	23 30 21.0	-0.2
	comp=Z,2.4nm,0.8s,baz=92,slow=6.0,SNR=5.7						
	comp=Z,2.4nm,0.8s						
KBN	**Korca**	53.95	302	P	P	23 30 23.3	+0.6
WB0	**Warramunga Arr**	66.87	130	P	P	23 31 51.9	+0.8
WB0				IAmb	IAmb	23 31 55.1	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	66.95	130	P	P	23 31 52.6	+0.9
	comp=Z,0.4nm,0.5s,baz=323,slow=6.4,SNR=6.9						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	66.95	130	IAmb	IAmb	23 31 53.0	
	comp=Z,0.2nm,1.4s						
WB2	**Warramunga Arr**	66.96	130	P	P	23 31 52.6	+0.9
ASAR	**Alice Springs**	69.25	133	P	P	23 32 07.0	+1.0
	comp=Z,0.3nm,0.5s,baz=312,slow=6.0,SNR=4.3						
	comp=Z,0.3nm,0.5s						
BMAR	**Burnt Mountain**	77.92	18	P	P	23 32 57.3	+0.9
TORD	**Torodi Ar. Bea**	78.63	279	P	P	23 33 04.5	+3.3
	comp=Z,0.5nm,1.0s,baz=48,slow=6.4,SNR=1.9						
	comp=Z,0.5nm,1.0s						
STKA	**Stephens Creek**	79.81	134	P	P	23 33 07.7	+0.4
STKA				IAmb	IAmb	23 33 22.4	
	comp=Z,1.0nm,1.2s						
SFJD	**Kangerlussuaq**	79.87	344	P	P	23 33 06.2	-0.9
SFJD				IAmb	IAmb	23 33 09.1	
	comp=Z,6.2nm,0.8s						
RSO	**Redoubt South**	80.05	25	P	P	23 33 05.4	-3.0

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*IDC **13** 23:22:13.4±0.8, 35°.49N×31°.56E, h0^{km}, mb3.9/15, mbtmp3.9/21, ML3.8/6, MS2.8/2, Error ellipse: s-maj=17.2km s-min=14.3km az=13.0*
*NEIC **13** 23:22:15.6±2.6, 35°.40N±0°.06×31°.62E±0°.06, h10^{km}±1^{km}, mb4.0/20, ML3.6(ISK), ML3.9(NIC), Error ellipse: s-maj=11.1km s-min=7.2km az=205.0*
*ISK **13** 23:22:15.2, 35°.53N×31°.67E, h5^{km}, ML3.8/31*
*GII **13** 23:22:16.7±0.0, 35°.48N×31°.61E, h10^{km}, MD3.3/4, Mm3.3/10*
*NIC **13** 23:22:17.7±0.0, 35°.66N×31°.83E, h11^{km}±5^{km}, Ml3.8/11*
*DDA **13** 23:22:18.4±0.0, 35°.76N×31°.50E, h20^{km}, MW3.6*
ISC 13 23:22:16.5±1.1**, 35°.52N**±0°.02×**31°.63E**±0°.02**, h15**^{km}±7^{km}**, n170,** σ1^{s}**48**/203**, mb4.1**/28**, 6D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	0.76	130	⇓*i*P	Pg	23 22 31.5	+0.1
AKMS				S	Sb	23 22 43.5	+1.9
AKMS				AML	AML	23 22 51.9	
	15nm,0.5s						
AKMS				AML	AML	23 22 51.9	
	15nm,0.5s						
AKMS				AML	AML	23 22 52.5	
	19nm,0.7s						
AKMS				AML	AML	23 22 52.5	
	19nm,0.7s						
ALFC	**Alefka**	0.87	114	⇓*i*P	Pg	23 22 33.1	-0.3
ALFC				S	Sg	23 22 45.1	+0.2
ALFC				AML	AML	23 22 53.6	
	24nm,0.6s						
ALFC				AML	AML	23 22 53.6	
	24nm,0.6s						
ALFC				AML	AML	23 22 54.3	
	11nm,0.5s						
ALFC				AML	AML	23 22 54.3	
	11nm,0.5s						
GAZI	**Gazipasa**	0.91	38	PG	Pg	23 22 33.3	-0.8
GAZI				SG	Sg	23 22 46.0	-0.1
GAZI	**Gazipasa**	0.91	38	P	Pg	23 22 34.0	-0.1
GAZI				S	Sg	23 22 45.8	-0.3
GAZI				*i* AML	AML	23 22 56.0	
	comp=N,936nm,0.7s						
GAZI				*i* AML	AML	23 22 58.0	
	comp=E,993nm,0.5s						
NATA	**Nata**	1.07	133	⇓*i*P	Pn	23 22 39.0	+2.2
NATA				S	Sn	23 22 53.3	+1.9
NATA				AML	AML	23 23 02.5	
	30nm,0.9s						
NATA				AML	AML	23 23 02.5	
	30nm,0.9s						
NATA				AML	AML	23 23 06.6	
	52nm,0.7s						
NATA				AML	AML	23 23 06.6	
	52nm,0.7s						
LEF	**Lefka**	1.11	111	PG	Pb	23 22 35.9	-1.4
LEF	**Lefka**	1.11	111	P	Pb	23 22 37.3	0.0
AKDN	**Akdeniz- Kıbrı**	1.12	101	PN	Pb	23 22 37.3	-0.2
AKDN				SN	Sn	23 22 53.6	+0.9
SZAC	**Souni**	1.28	126	⇓*i*P	Pg	23 22 42.0	+0.8
SZAC				AML	AML	23 23 16.9	
	8.3nm,0.9s						
SZAC				AML	AML	23 23 17.4	
	7.3nm,0.7s						
TEKE	**Tekeli-Mersin**	1.36	62	PN	Pn	23 22 41.7	+0.8
KEPZ	**Antalya-Kepez**	1.38	359	P	Pn	23 22 40.2	-1.0
KEPZ				S	Sb	23 22 56.4	-3.2
KEPZ				*i* AML	AML	23 22 58.0	
	comp=N,639nm,0.5s						
KEPZ				*i* AML	AML	23 23 07.0	
	comp=E,632nm,0.7s						
KEMT	**Kemer-ANTALYA**	1.39	322	PN	Pb	23 22 42.7	+0.6
ATHAL	**Athalassa**	1.50	104	P	Pn	23 22 42.5	-0.2
ATHAL				AML	AML	23 23 12.9	
	7.9nm,0.6s						
ATHAL				AML	AML	23 23 27.1	
	9.8nm,0.8s						
CSS	**Mathiatis**	1.50	111	PN	Pn	23 22 42.4	-0.4
CSS	**Mathiatis**	1.50	111		Pn	23 22 41.8	-1.0
CSS	**Mathiatis**	1.50	111	P	Pn	23 22 42.5	-0.4
CSS				AML	AML	23 23 13.3	
	1.0nm,0.7s						
CSS				AML	AML	23 23 16.9	
	1.2nm,0.6s						
CSS	**Mathiatis**	1.50	111	Pn	Pn	23 22 42.3	-0.6
ASGA	**Asgata**	1.52	118	⇓P	Pb	23 22 44.8	+0.5
ASGA				AML	AML	23 23 15.6	
	4.6nm,0.8s						
ASGA				AML	AML	23 23 22.9	
	6.3nm,0.9s						
BERE	**Bereket-Mersin**	1.54	57	PN	Pn	23 22 44.2	+0.7
LFK	**Lefkose**	1.58	98	PN	Pn	23 22 44.8	+0.9
YORU	**Yoruktepe-Mers**	1.58	66	PN	Pn	23 22 44.9	+0.9
ANTB	**Antalya**	1.59	331	PN	Pb	23 22 45.6	+0.1
HDMB	**Hadim**	1.60	25	PN	Pn	23 22 45.5	+1.0
OREN	**Orenkoy-Mersin**	1.64	65	PN	Pn	23 22 45.8	+1.0
AKK1	**Akkuyu-Mersin**	1.68	67	PN	Pn	23 22 46.4	+1.2
AKK2	**Akkuyu-Mersin**	1.68	68	PN	Pn	23 22 46.4	+1.1
AKKU	**Akkuyu-Mersin**	1.69	67	PN	Pn	23 22 46.5	+1.1
TEPK	**Tepekoy-MERSIN**	1.71	65	PN	Pn	23 22 46.8	+1.0
MVOU	**Mavrovouni**	1.72	106	⇓P	Pn	23 22 45.0	-0.8
MVOU				AML	AML	23 23 33.0	
	3.2nm,0.7s						
MVOU				AML	AML	23 23 34.7	
	2.5nm,1.0s						
TEVE	**Tevekalti-Mers**	1.74	58	PN	Pn	23 22 47.1	+0.9
KSL	**Kastellorizon**	1.78	291	P	Pb	23 22 49.0	+0.3
KSL				S	Sg	23 23 15.8	+2.2
TISA	**Tisan-Mersin**	1.79	68	PN	Pn	23 22 47.9	+1.1
AKAS	**Kas**	1.79	294	PN	Pb	23 22 48.6	-0.4
AKAS	**Kas**	1.79	294		Pn	23 22 46.8	-0.2
KORT	**Korkueli**	1.81	326	PN	Pn	23 22 48.6	+1.4
IKL	**Isikli**	1.82	66	PN	Pn	23 22 48.3	+1.1
KARG	**Kargicak-Mersi**	1.83	67	PN	Pn	23 22 48.5	+1.2
ELL	**Elmali**	1.86	312	PN	Pn	23 22 49.5	+1.6
ELL	**Elmali**	1.86	312		Pn	23 22 49.0	+1.1
ELL	**Elmali**	1.86	312	P	Pb	23 22 50.5	+0.3
ELL				S	Sb	23 23 14.2	+1.0
SEYD	**Seydisehir-KON**	1.90	5	PN	Pn	23 22 48.9	+0.5
KEBE	**Keben-Mersin**	1.93	61	PN	Pn	23 22 50.4	+1.6
KKBE	**Karaman, Kazim**	2.00	32	P	Pb	23 22 52.0	-0.6
KKBE				S	Sb	23 23 17.6	+0.1
KKBE				*i* AML	AML	23 23 19.0	
	comp=E,211nm,0.5s						
KKBE				*i* AML	AML	23 23 34.0	
	comp=N,202nm,0.7s						
PARAL	**Paralimni**	2.04	104	P	Pg	23 22 55.2	-0.5
PARAL				S	Sg	23 23 32.2	+10
PARAL				AML	AML	23 23 35.5	
	5.5nm,0.9s						
PARAL				AML	AML	23 23 35.5	
	5.5nm,0.9s						
PARAL				AML	AML	23 23 36.8	
	5.0nm,0.8s						
PARAL				AML	AML	23 23 36.8	
	5.0nm,0.8s						
SILI	**Silifke-Mersin**	2.05	65	PN	Pn	23 22 51.7	+1.3
EREN	**Erenkoy**	2.08	89	PN	Pn	23 22 52.7	+2.0
KRMN	**Karaman**	2.12	38	PN	Pn	23 22 53.1	+1.7
KMER	**Konya-Meram**	2.33	15	P	Pb	23 22 57.1	-1.1
KMER				S	Sb	23 23 26.2	-0.6
KMER				*i* AML	AML	23 23 31.0	
	comp=N,205nm,0.6s						
KMER				*i* AML	AML	23 23 35.0	
	comp=E,231nm,0.6s						
ISP	**Isparta**	2.47	339		Pn	23 22 57.9	+1.7
ISP	**Isparta**	2.47	339	Pn	Pn	23 22 58.1	+1.9
ISP				Sn	Sn	23 23 28.7	+2.5
OSC2	**CSNet OBS 4**	2.49	168	P	Pn	23 22 58.3	+1.9
OSC2				S	Sn	23 23 27.1	+0.6
OSC2				AML	AML	23 23 33.7	
	0.3nm,0.8s						
OSC2				AML	AML	23 23 33.7	
	0.3nm,0.8s						
OSC2				AML	AML	23 23 38.8	
	0.3nm,0.6s						
OSC2				AML	AML	23 23 38.8	
	0.3nm,0.6s						
KONT	**Konya--Tatoy**	2.50	13	PN	Pn	23 22 58.8	+2.2
MERS	**Mersin**	2.70	59	PN	Pn	23 23 01.4	+1.9
LADK	**Ladik-KONYA**	2.75	12	PN	Pn	23 23 02.2	+2.1
KERG	**Konya-Eregli**	2.77	46	P	Pn	23 23 03.2	+2.8
KERG				S	Sb	23 23 38.1	-1.3
KERG				*i* AML	AML	23 23 51.0	
	comp=N,163nm,0.6s						
KERG				*i* AML	AML	23 23 53.0	
	comp=E,126nm,0.5s						
YESY	**Yesilyurt**	2.83	36	PN	Pn	23 23 03.5	+2.2
ARG	**Arkhangelos**	2.93	285	Pn	Pn	23 23 02.3	-0.1
GULE	**Gulek**	3.10	54	P	Pb	23 23 08.8	-2.5
GULE				S	Sb	23 23 50.6	+1.7
KARP	**Karpathos**	3.64	272		Pn	23 23 11.6	-0.7
BHL	**Bhannes**	3.69	115	*e*P	Pn	23 23 16.3	+3.3
DQRL	**Deir Qamar**	3.72	118	*e*P	Pn	23 23 16.2	+2.7
HWQ	**Hawqa**	3.76	108	*e*P	Pn	23 23 17.8	+3.8
HNTI	**Hanita**	3.81	129	Pn	Pn	23 23 15.5	+0.9
HNTI				Sn	Sn	23 24 01.5	+2.4
MANT	**Manisa**	3.85	321		Pn	23 23 16.1	+0.7
MMA0B	**Mount Meron ar**	4.00	127	Pn	Pn	23 23 18.3	+1.0
MMA0B				Sn	Sn	23 24 06.2	+2.3
MMAI	**Mount Meron Ar**	4.00	127	Pn	Pn	23 23 15.4	-1.9
	26nm,0.3s,baz=302,slow=45,SNR=36						
MMAI				Sn	Sn	23 24 07.8	+3.8
	13nm,0.3s,baz=134,slow=55,SNR=1.7						
	7.0nm,0.4s						
OFRI	**`Ofer**	4.01	135	Pn	Pn	23 23 18.4	+1.0
OFRI				Sn	Sn	23 24 06.1	+1.9
RCY	**Rachaya**	4.02	119	*e*P	Pn	23 23 19.2	+1.6
SHBL	**Chebaa**	4.03	121	*e*P	Pn	23 23 19.1	+1.3
GEM	**Giv'at Ha'Em**	4.05	123	Pn	Pn	23 23 19.5	+1.5
GEM				Sn	Sn	23 24 06.9	+1.7
BLGI	**Bet Lehem HaGe**	4.05	132	Pn	Pn	23 23 19.4	+1.4
BLGI				Sn	Sn	23 24 07.1	+1.9
NATI	**Neve Ativ**	4.08	122	Pn	Pn	23 23 19.7	+1.5
NATI				Sn	Sn	23 24 07.9	+2.3
SLTI	**Sal'it**	4.33	138	Pn	Pn	23 23 23.0	+1.3
SLTI				Sn	Sn	23 24 14.2	+2.3
MMLI	**Mount Malkishu**	4.40	133	Pn	Pn	23 23 24.3	+1.5
MMLI				Sn	Sn	23 24 16.0	+2.2
ANTO	**Ankara**	4.44	12	Pn	Pn	23 23 25.9	+2.5
BORA	**Eskisehir**	4.46	348	Pn	Pn	23 23 23.2	-0.3
BR131	**Keskin Array S**	4.50	20		Pn	23 23 26.3	+2.2
BRTR	**Keskin Array B**	4.50	20	Pn	Pn	23 23 25.9	+1.7
	0.6nm,0.3s,baz=190,slow=15,SNR=18						
BRTR				Sn	Sn	23 24 19.9	+3.6
	0.5nm,0.3s,baz=206,slow=23,SNR=1.8						
BRTR				LR	LR	23 25 26.3	
	comp=Z,90nm,18.4s,baz=160,slow=42						
	2.4nm,0.6s						
BRTR	**Keskin Array B**	4.50	20		Pn	23 23 26.4	+2.2
HMDT	**Nahal Hemdat**	4.59	134	Pn	Pn	23 23 25.7	+0.3
HMDT				Sn	Sn	23 24 20.8	+2.3
BNN	**Bunyan**	4.74	44		Pn	23 23 30.1	+2.6
UJAP	**Al Uja**	4.78	137	Pn	Pn	23 23 29.4	+1.5
UJAP				Sn	Sn	23 24 24.4	+1.4
AMAZ	**Amatzia**	4.83	144	Pn	Pn	23 23 29.9	+1.3
AMAZ				Sn	Sn	23 24 26.4	+2.1
MDUB	**Mudurnu**	4.96	356	Pn	Pn	23 23 31.4	+0.9
DSI	**Dead Sea**	5.03	140	Pn	Pn	23 23 32.9	+1.5
DSI				Sn	Sn	23 24 31.1	+1.9
YTIR	**Yattir**	5.07	144	Pn	Pn	23 23 33.3	+1.4
YTIR				Sn	Sn	23 24 32.3	+2.1
KZIT	**Kziot**	5.15	152	Pn	Pn	23 23 34.5	+1.5
KZIT				Sn	Sn	23 24 33.7	+1.5
MDBI	**Mazsada**	5.22	142	Pn	Pn	23 23 35.6	+1.6
MDBI				Sn	Sn	23 24 35.5	+1.5
GHAJ	**Ghor Haditha**	5.34	141		Pn	23 23 34.9	-0.7

IDI	Anoyia	5.51	270	Pn	Pn	23 23 36.2	-1.8
	2.3nm,0.3s,baz=66,slow=19,SNR=20						
IDI				Sn	Sn	23 24 37.3	-3.8
	7.9nm,0.3s,baz=302,slow=16,SNR=9.2						
	5.2nm,0.3s						
IDI	Anoyia	5.51	270		Pn	23 23 36.9	-1.1
ASF	Jabal al Asfar	5.51	126	Pn	Pn	23 23 39.9	+1.9
	0.9nm,0.3s,baz=312,slow=5.7,SNR=6.8						
PRNI	Paran	5.88	150	Pn	Pn	23 23 44.4	+1.3
KRMI	Paran Flat	5.98	153	Pn	Pn	23 23 45.7	+1.2
KRMI				Sn	Sn	23 24 54.6	+1.9
HRFI	Mount Harif	6.17	151	Pn	Pn	23 23 48.7	+1.6
MBRI	Mt Berech	6.34	153	Pn	Pn	23 23 50.9	+1.4
EIL	Elat	6.47	153	Pn	Pn	23 23 51.3	+0.2
	2.2nm,0.3s,baz=342,slow=8.6,SNR=36						
EIL				Sn	Sn	23 25 05.5	+0.9
	1.6nm,0.3s,baz=75,slow=13,SNR=1.9						
EIL				LR	LR	23 26 53.7	
	comp=Z,84nm,18.5s,baz=22,slow=43						
	20nm,0.6s						
EIL	Elat	6.47	153	Pn	Pn	23 23 52.2	+1.1
BZK	Bozkurt	6.70	15	Pn	Pn	23 23 55.6	+1.3
ALN	Alexandroupoli	6.94	322	Pn	Pn	23 23 59.5	+1.9
RDO	Rodhopi	7.38	321	Pn	Pn	23 24 04.8	+1.2
ITM	Ithomi	8.00	285	Pn	Pn	23 24 13.1	+0.9
AGG	Agios Georgios	8.20	298	Pn	Pn	23 24 15.3	+0.5
FNA	Florina	9.63	306	Pn	Pn	23 24 34.6	0.0
KEK	Kerkira	10.27	298	Pn	Pn	23 24 43.7	+0.4
SCTE	Santa Cesarea	11.36	298	Pn	Pn	23 24 57.4	-0.7
TIP	Timpagrande	12.38	292	Pn	Pn	23 25 08.4	-3.8
CUC	Castrocucco	13.28	294	Pn	Pn	23 25 22.4	-2.1
SGRT	San Giovanni R	13.88	301	Pn	Pn	23 25 30.2	-2.5
AKASG	Malin Array Be	15.28	354	Pn	P	23 25 55.4	-0.9
	0.8nm,0.3s,baz=176,slow=9.4,SNR=10						
AKBB	Malin Array Si	15.28	354	P	P	23 25 56.8	+0.5
AKBB				IAmb	IAmb	23 25 57.1	
	comp=Z,5.3nm,0.7s						
NRCA	Norcia	16.09	303	P	Pn	23 26 01.8	-0.4
KBA	Koelnbreinsper	17.90	316	ePn	P	23 26 27.2	+1.6
	comp=Z,12nm,1.4s						
KEST	Kesra	18.11	277	P	Pn	23 26 28.5	+1.0
	comp=Z,3.9nm,0.9s,baz=80,slow=6.1,SNR=2.6						
GEC2	GERESS Array S	18.75	321	P	P	23 26 35.3	+0.5
GERES	GERESS Array B	18.75	321	P	P	23 26 34.4	-0.4
	comp=Z,0.2nm,0.3s,baz=141,slow=8.6,SNR=8.9						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	18.75	321	P	P	23 26 35.3	+0.5
WTTA	Wattenberg	18.98	314	ePn	Pn	23 26 38.7	+0.5
	comp=Z,7.6nm,1.1s						
KHC	Kasperske Hory	18.99	321	P	P	23 26 37.8	+0.4
KHC	Kasperske Hory	18.99	321	eP	P	23 26 37.5	+0.1
WATA	Walderalm	19.05	314	ePn	P	23 26 39.0	+0.8
	comp=Z,6.4nm,1.0s						
SQTA	Sankt Quirin	19.21	314	i Pn	P	23 26 40.8	+0.9
	comp=Z,4.3nm,0.5s						
MOTA	Moosalm	19.34	314	ePn	P	23 26 41.8	+0.5
	comp=Z,7.9nm,0.9s						
FETA	Feichten	19.40	313	Pn	Pn	23 26 43.4	+0.3
	comp=Z,8.0nm,0.8s						
RETA	Reutte	19.61	314	ePn	Pn	23 26 46.4	+0.8
	comp=Z,12nm,1.4s						
DAVOX	Davos/Dischmat	19.80	311	P	P	23 26 46.5	0.0
	comp=Z,0.4nm,0.3s,baz=55,slow=5.4,SNR=7.2						
	comp=Z,3.1nm,0.6s						
DAVA	Damuels	20.04	313	ePn	P	23 26 49.1	+0.2
	comp=Z,8.6nm,1.1s						
BELG	Belogornoye	20.35	29	P	P	23 26 53.2	+1.1
	comp=Z,3.6nm,0.4s,baz=194,slow=3.0,SNR=1.8						
	comp=Z,3.6nm,0.4s						
BNI	Bardonecchia	21.21	304	P	P	23 27 02.7	+1.1
BNI				IAmb	IAmb	23 27 13.5	
	comp=Z,5.4nm,1.1s						
SENIN	Lac Senin/Sane	21.25	308	P	P	23 27 02.2	+0.1
SENIN				IAmb	IAmb	23 27 12.3	
	comp=Z,5.0nm,0.8s						
BFO	Black Forest	21.45	314	P	P	23 27 04.5	+0.4
AKTO	Aktyubinsk	24.22	44	P	P	23 27 32.4	-0.1
	comp=Z,2.0nm,0.8s,baz=246,slow=12,SNR=4.2						
	comp=Z,2.0nm,0.8s						
ABKAR	Akbulak array	24.84	48	P	P	23 27 39.5	+1.4
ABKAR	Akbulak array	24.84	48	IAmb	IAmb	23 27 55.5	
	comp=Z,2.4nm,0.9s						
FIA0	FINESS Array S	26.19	354	P	P	23 27 49.4	-0.8
FIA1	FINESS Array S	26.19	354	P	P	23 27 49.2	-0.9
FINES	FINESS Array B	26.19	354	P	P	23 27 48.6	-1.6
	comp=Z,2.1nm,0.7s,baz=153,slow=8.5,SNR=11						
	comp=Z,2.1nm,0.7s						
FINES	FINESS Array B	26.19	354	P	P	23 27 49.0	-1.2
WSAR	Wadi Sarin	26.43	110	P	P	23 27 51.2	-1.5
	comp=Z,5.2nm,0.9s,baz=311,slow=9.3,SNR=1.6						
	comp=Z,5.2nm,0.9s						
KONO	Kongsberg	28.09	336	P	P	23 28 07.6	+0.4
ESDC	Sonseca Array	28.39	289	P	P	23 28 08.8	-1.4
	comp=Z,0.6nm,0.7s,baz=77,slow=9.2,SNR=6.0						
	comp=Z,0.6nm,0.7s						
NAO01	NORSAR Array S	28.62	339	P	P	23 28 12.4	+0.4
AAK	Ala-Archa	33.74	65	P	P	23 28 56.5	-1.1
	comp=Z,0.9nm,0.4s,baz=244,slow=12,SNR=1.9						
	comp=Z,0.9nm,0.4s						
ARCES	ARCESS Array B	34.24	356	P	P	23 29 00.4	-1.0
	comp=Z,3.5nm,1.0s,baz=171,slow=8.4,SNR=5.7						
	comp=Z,3.5nm,1.0s						
BOOM	Boomskoye usch	34.82	65	P	P	23 29 09.7	+2.9
BOOM				IAmb	IAmb	23 29 24.4	
	comp=Z,1.4nm,0.8s						
TOA0	Torodi Ar. Sit	34.97	238	P	P	23 29 07.9	-0.3
TOA0				IAmb	IAmb	23 29 08.3	
	comp=Z,3.0nm,1.1s						
TORD	Torodi Ar. Bea	34.97	238	P	P	23 29 07.5	-0.7
	comp=Z,0.9nm,0.7s,baz=48,slow=7.5,SNR=6.2						
	comp=Z,0.9nm,0.7s						
KDJ	Kajisay	35.76	65	P	P	23 29 16.1	+1.1
KDJ				IAmb	IAmb	23 29 19.0	
	comp=Z,1.8nm,0.7s						
KURBB	Kurchatov Arra	36.79	51	P	P	23 29 23.9	+0.5
	comp=Z,0.6nm,0.5s,baz=267,slow=8.3,SNR=5.6						
	comp=Z,0.6nm,0.5s						
MK31	Makanchi Array	39.15	57	P	P	23 29 45.0	+1.5
MK31				IAmb	IAmb	23 29 52.1	
	comp=Z,4.0nm,1.0s						
MKAR	Makanchi Array	39.15	57	P	P	23 29 44.3	+0.9
	comp=Z,3.0nm,0.6s,baz=275,slow=7.1,SNR=14						
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	39.15	57	P	P	23 29 45.2	+1.8
ZALV	Zalesovo Beam	40.94	46	P	P	23 29 57.1	-1.0
	comp=Z,0.5nm,0.5s,baz=295,slow=11,SNR=2.4						
	comp=Z,0.5nm,0.5s						
PYUN	Piuthan	43.87	85	eP	P	23 30 24.1	+1.5
	comp=Z,6.3nm,0.8s						
DANN	Dangsing	44.39	84	eP	P	23 30 28.8	+1.9
	comp=Z,30nm,0.9s						
KOLN	Koldanda	44.49	85	eP	P	23 30 28.3	+0.7
GKN	Gorkha	45.24	84	eP	P	23 30 34.6	+1.1
	comp=Z,17nm,0.7s						
DMN	Daman	45.78	84	eP	P	23 30 37.9	0.0
	comp=Z,14nm,0.4s						
KKN	Kakani	45.85	84	eP	P	23 30 39.1	+0.7
	comp=Z,9.0nm,0.6s						
PKIN	Phulchoki	46.03	84	eP	P	23 30 40.5	+0.6
PKI	Pulchoki	46.04	84	eP	P	23 30 40.5	+0.5
	comp=Z,5.0nm,0.6s						
GUN	Gumba	46.29	84	eP	P	23 30 42.5	+0.5
SONM	Songino Array	55.13	52	P	P	23 31 47.9	-0.2
	comp=Z,1.2nm,0.5s,baz=291,slow=11,SNR=4.4						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	55.13	52	IAmb	IAmb	23 31 50.0	
	comp=Z,1.0nm,0.6s						
EUNU	Eureka	59.81	350	P	P	23 32 20.3	-0.3
EUNU				IAmb	IAmb	23 32 22.3	
	comp=Z,1.8nm,1.1s						
CMAR	Chiang Mai Arr	61.27	87	P	P	23 32 31.3	-0.1
	comp=Z,0.7nm,0.3s,baz=290,slow=8.5,SNR=4.1						
	comp=Z,0.7nm,0.3s						
SCHQ	Schefferville	66.28	321	P	P	23 33 01.6	-2.3
A36M	Sachs Harbour	71.56	353	P	P	23 33 36.7	+0.3
YKA	Yellowknife Ar	78.62	345	P	P	23 34 16.0	-1.2
	comp=Z,0.4nm,0.7s,baz=25,slow=5.5,SNR=5.7						
	comp=Z,0.4nm,0.7s						
PDAR	Pinedale Array	94.41	332	P	P	23 35 35.2	-0.8
	comp=Z,0.1nm,0.3s,baz=24,slow=9.2,SNR=1.8						
	comp=Z,0.1nm,0.3s						

NEIC 13 23:33:59.5±0.8**, 35°.94N**±0°.01×**96°.795W**±0°.009**, h2**^{km}±2^{km}**,**
mb_Lg1.7/4**, Error ellipse: s-maj=1.7km s-min=0.9km**
az=157.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUL1	Leonard	0.81	92	Pg	Pg	23 34 14.2	-0.9
TUL1				Sg	Sg	23 34 25.1	-0.6
FNO	Franklin	0.84	216	Pg	Pg	23 34 15.5	-0.2
T35A	Sooner Cattle	1.00	13	Pg	Pg	23 34 17.5	-1.2
X34A	Smith Ranch, M	1.58	213		Pn	23 34 28.3	-0.3
X37A	Clayton	1.78	139	IAmb_Lg		23 34 58.1	
	comp=Z,3.3nm,0.7s						
WMOK	Wichita Mounta	2.02	234	Pn	Pn	23 34 34.5	-0.1
MGMO	Mountain Grove	3.84	70	IAmb_Lg		23 36 00.4	
	comp=Z,2.6nm,0.8s						

HEL 13 23:38:08.9±0.1**, 67°.83N**×**20°.20E, h0**^{km}**, ML1.3,**
ML0.9(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.23	270	i P	Pg	23 38 12.9	-0.4
RATU				i S	Sg	23 38 16.2	-0.1
KOVU	Salmi	0.40	358	i P	Pg	23 38 16.0	-0.6
NIKU	Nikkaluokta	0.45	276	i P	Pg	23 38 16.8	-0.6
LANU	Lannavaara	0.71	71	eP	Pg	23 38 21.6	-0.9
LANU				eS	Sg	23 38 29.5	-2.2
MASU	Masugnsbyn	0.78	117	i P	Pg	23 38 23.1	-0.7
SALU	Saltoluokta	0.79	236	i P	Pg	23 38 23.1	-0.8
KIF	Kilpisjarvi	1.21	10	ePB	Pg	23 38 31.5	-0.5
KIF				MSG		23 38 46.4	
	comp=Z,3.1nm,0.2s						
KIF				eS	Sg	23 38 47.4	-0.2
PAJU	Pajala	1.38	124	eP	Pg	23 38 33.6	-1.7
	baz=305						
PAJU				eSB	Sg	23 38 52.2	-1.0
HEF	Hetta	1.42	64	eP	Pn	23 38 34.3	-1.6
HEF				MSG		23 38 50.8	
	comp=Z,1.4nm,0.2s						
HEF				eSN	Sn	23 38 57.8	+2.4
ERTU	Ertsjaerv	1.49	148	ePG	Pn	23 38 36.1	-0.8
ERTU				eSN	Sg	23 38 56.4	-0.3
KLF	Kolari	1.56	111	eP	Pn	23 38 36.8	-1.1
KALU	Kalix	2.33	146	ePB	Pn	23 38 49.0	+0.6
KALU				eSG	Sb	23 39 20.5	-0.6
TOF	Tornio	2.39	135	MSG		23 39 19.3	
	comp=Z,1.3nm,0.2s						
TOF				eSG	Sb	23 39 21.9	-0.7
RNF	Rovaniemi	2.57	116	eSG	Sb	23 39 27.4	-0.5
ARA0	ARCESS Array S	2.59	46	eP	Pn	23 38 52.6	+0.6
	baz=226						
ARA0				eS	Sn	23 39 24.4	+0.3
KEV	Kevo	3.14	49	MSG		23 39 40.2	
	comp=Z,0.8nm,0.2s						
KEV				eSB	Sb	23 39 41.4	-2.9
OUL	Oulu	3.58	138	eSB	Sb	23 39 53.8	-3.0
KU6	Riekki	4.22	111	eS	Sn	23 40 03.0	-1.3

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*DNK **13** 23:38:47.6±0.3, 67°.85N×20°.20E, h0^{km}, ML2.8(UPP),*
Explosion
UPP 13 23:38:47.2±0.1**, 67°.85N**×**20°.20E, h0**^{km}**, ML2.8,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.38	358	P	Pg	23 38 54.5	+0.1
KOVU				S	Sg	23 38 59.4	0.0
KOVU	Salmi	0.38	358	P	Pg	23 38 54.5	+0.1
KOVU				S	Sg	23 38 59.4	0.0
LANU	Lannavaara	0.70	72	P	Pg	23 39 00.6	-0.1
LANU	Lannavaara	0.70	72	P	Pg	23 39 00.6	-0.1
DUNU	Dundret	0.74	169	P	Pg	23 39 01.1	-0.2
DUNU	Dundret	0.74	169	P	Pg	23 39 01.1	-0.2
MASU	Masugnsbyn	0.79	119	P	Pg	23 39 02.1	-0.2
MASU	Masugnsbyn	0.79	119	P	Pg	23 39 02.1	-0.2
SALU	Saltoluokta	0.80	235	P	Pg	23 39 02.3	-0.2
SALU	Saltoluokta	0.80	235	P	Pg	23 39 02.3	-0.2
KIF	Kilpisjarvi	1.19	11	eP	Pg	23 39 10.2	+0.3
PAJU	Pajala	1.39	125	P	Pg	23 39 12.8	-1.1
PAJU	Pajala	1.39	125	P	Pg	23 39 12.8	-1.1
HEF	Hetta	1.41	65	eP	Pn	23 39 12.8	-1.3
ERTU	Ertsjaerv	1.51	148	P	Pn	23 39 15.2	-0.3
ERTU	Ertsjaerv	1.51	148	P	Pn	23 39 15.2	-0.3

UPP 13 23:39:31.7±0.1**, 67°.84N**×**20°.29E, h0**^{km}**, ML3.7,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.39	353	P	Pg	23 39 39.2	+0.1
KOVU				S	Sg	23 39 44.5	+0.3
KOVU	Salmi	0.39	353	P	Pg	23 39 39.2	+0.1
KOVU				S	Sg	23 39 44.5	+0.3
DUNU	Dundret	0.73	171	P	Pg	23 39 45.4	-0.2
DUNU				S	Sg	23 39 55.3	+0.3
DUNU	Dundret	0.73	171	P	Pg	23 39 45.4	-0.2
DUNU				S	Sg	23 39 55.3	+0.3

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*CNRM **13** 23:44:23.5, 35°.36N×4°.22W, h19^{km}, ml3.3*
*IGIL **13** 23:44:24.2, 35°.27N×4°.22W, h1^{km}*
*LDG **13** 23:44:24.6±0.3, 35°.14N×4°.18W, h10^{km}, Ml2.8/4, Error ellipse: s-maj=6.9km s-min=3.2km az=1.0*
*MDD **13** 23:44:24.4±0.4, 35°.27N×4°.24W, h0^{km}, mb_Lg2.8/15, Error ellipse: s-maj=3.7km s-min=2.9km az=177.0*
*SFS **13** 23:44:24.0, 35°.27N×4°.22W, ML2.9, TORRES DE ALCALA (MARRUECOS)*
*INMG **13** 23:44:24.6±1.7, 35°.31N×4°.23W, h0^{km}±8^{km}, MD2.9, ML2.4, Error ellipse: s-maj=4.4km s-min=3.6km az=44.0*
ISC 13 23:44:23.3±0.9**, 35°.29N**±0°.02×**4°.19W**±0°.02**, h16**^{km}±6^{km}**,**
n73, σ1^{s}73/137**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVLZ	Peæn de	0.15	219	P	Pg	23 44 26.8	-0.5
PVLZ				S	Sg	23 44 29.1	-0.7
PALE	Palemas	0.22	109	P	Pg	23 44 28.4	+0.1
PALE				S	Sb	23 44 32.7	+0.1
AKLM	AKL	0.82	161	P	Pb	23 44 38.7	-0.5
AKLM				S	Sb	23 44 49.7	-0.3
CHEFC	Chefchaouen	0.96	260	P	Pn	23 44 43.4	+1.2
CHEFC				S	Sn	23 44 56.2	+0.6
GOG	Mont Gurugu	0.98	93	P	Pb	23 44 42.1	+0.2
GOG				S	Sg	23 44 55.6	+0.5
EMEL	Melilla	1.01	89	Pg	Pb	23 44 42.6	+0.2
EMEL				Sg	Sn	23 44 57.5	+0.9
WMELI	Melilla	1.01	88	P	Pb	23 44 42.4	0.0
WMELI				S	Sb	23 44 55.3	-0.2
SMIR	Smir Dam	1.05	292	P	Pb	23 44 42.6	-0.5
SMIR				S	Sb	23 44 54.5	-2.1
CEU	Ceuta	1.14	303	P	Pn	23 44 42.9	-1.7
CEU				S	Sb	23 44 56.2	-3.0
ECEU	Ceuta	1.14	302	Pg	Pn	23 44 43.6	-1.1
ECEU				Sg	Sb	23 44 59.5	+0.1
ECEU				i Vmb_Lg		23 45 00.4	
EMIJ	Mijas	1.36	340	Pn	Pn	23 44 46.8	-0.8
EMIJ				Pg	Pb	23 44 48.4	0.0
EMIJ				Sg	Sn	23 45 05.3	0.0
EMIJ				i Vmb_Lg		23 45 10.8	
CHAS	Isla Isabel II	1.44	94	P	Pn	23 44 47.2	-1.5
CHAS				S	Sn	23 45 05.5	-1.9
TAF	Taforalt	1.53	107	P	Pn	23 44 50.3	+0.3
TAF				S	Sn	23 45 09.4	-0.2
EJIF	Jimena Fronter	1.56	319	Pn	Pn	23 44 51.1	+0.8
EJIF				Sn	Sn	23 45 09.1	-1.2
JBK	JBK	1.64	125	P	Pn	23 44 51.9	+0.2
JBK				S	Sn	23 45 12.7	+0.2
ELGU	Los Guajares,	1.64	16	Pn	Pn	23 44 51.8	+0.2
ELGU				Sn	Sn	23 45 13.0	+0.6
LCRM	LCR	1.69	199	P	Pg	23 44 56.4	+0.6
LCRM				S	Sg	23 45 19.1	+1.3
EGOR	Sierra Gorda,	1.82	2	Pn	Pb	23 44 56.0	-0.4
EGOR				Sn	Sb	23 45 19.3	+0.4
EGOR				i Vmb_Lg		23 45 27.6	
EBER	Berja	1.92	33	Pn	Pn	23 44 55.3	-0.2
EBER				Sn	Sb	23 45 21.3	-0.6
EBER				i Vmb_Lg		23 45 32.1	
EQUE	Quentar	2.01	17	Pn	Pn	23 44 58.2	+1.5
EQUE				Sn	Sb	23 45 24.4	+0.1
EQUE				i Vmb_Lg		23 45 32.9	
ENIJ	Nijar	2.32	43	Pn	Pn	23 45 02.1	+1.3
ENIJ				Sn	Sn	23 45 28.3	-0.9
ENIJ				i Vmb_Lg		23 45 31.7	
CZD	Col de Zad	2.36	198	P	Pn	23 45 03.6	+2.0
CZD				S	Sn	23 45 32.3	+1.9
MD31	MD31	2.46	191	P	Pn	23 45 05.5	+2.7
MD31				S	Sb	23 45 36.2	-1.1
MDT	Midelt	2.49	188	P	Pn	23 45 05.9	+2.6
MDT				S	Sn	23 45 35.8	+2.4
EQES	Quesada	2.67	19	Pn	Pb	23 45 09.0	-1.7
EQES				Sn	Sb	23 45 42.3	-1.0
EQES				i Vmb_Lg		23 45 53.1	
TDRA	Tendrara	2.87	141	P	Pn	23 45 10.1	+1.5
TDRA				S	Sb	23 45 47.7	-1.5
EADA	Adamuz	2.89	354	Pn	Pn	23 45 11.4	+2.7
EADA				Sn	Sn	23 45 46.0	+2.8
EADA				i Vmb_Lg		23 45 57.3	
ECAB	El Cabril	2.95	341	Pn	Pn	23 45 11.8	+2.2
ECAB				Sn	Sn	23 45 46.0	+1.3
ECAB				i Vmb_Lg		23 45 59.9	
EMIN	Mina Concepcio	3.18	322	Pn	Pn	23 45 14.4	+1.7
EMIN				Sn	Sn	23 45 50.4	+0.1
EMIN				i Vmb_Lg		23 46 01.2	
AVE	Averroes	3.33	234	P	Pn	23 45 16.7	+2.0
EGRO	El Granado	3.48	311	Pn	Pn	23 45 17.6	+0.9
EGRO				Sn	Sn	23 45 57.8	+0.3
EGRO				i Vmb_Lg		23 46 00.6	
EMUR	La Murta	3.48	42	Sn	Sn	23 45 57.0	-0.8
PVAQ	Vaqueiros	3.55	308	ePn	Pn	23 45 18.4	+0.7
PVAQ				eSn	Sn	23 45 59.1	-0.2
PVAQ				A	A	23 46 06.5	
	8.8nm,0.5s						
PVAQ	Vaqueiros	3.55	308	P	Pn	23 45 18.3	+0.7
PVAQ				S	Sn	23 45 58.6	-0.7
PBDV	Barranco-do-Ve	3.60	304	ePn	Pn	23 45 19.2	+0.8
PBDV				eSn	Sn	23 46 00.5	-0.1
PBDV				A	A	23 46 09.0	
	6.9nm,0.4s						
PBAR	Barrancos	3.68	322	ePn	Pn	23 45 21.1	+1.6
PBAR				eSn	Sn	23 46 03.1	+0.5
PBAR				A	A	23 46 13.1	
	7.0nm,0.4s						
PCVE	Castro Verde	3.89	308	ePn	Pn	23 45 24.5	+2.1
PCVE				eSn	Sn	23 46 07.4	-0.3
PCVE				A	A	23 46 15.3	
	4.9nm,0.6s						
ETOB	Tobarra	3.96	31	Pn	Pn	23 45 26.2	+2.7
ETOB				Sn	Sn	23 46 13.6	+4.0
FIGM	Figuig	3.98	141	P	Pn	23 45 25.3	+1.5
FIGM				S	Sn	23 46 12.9	+2.7
PBEJ	Beja	4.03	314	eSn	Sn	23 46 12.5	+1.4
PBEJ				A	A	23 46 17.1	
	4.0nm,0.3s						
MESJ	Messejana	4.12	309	eP	Pn	23 45 26.3	+0.7
MESJ	Messejana	4.12	309	ePn	Pn	23 45 27.5	+1.9
MESJ				eSn	Sn	23 46 13.6	+0.1
MESJ				A	A	23 46 22.2	
	7.6nm,0.5s						
MORF	Marmelete	4.13	301	ePn	Pn	23 45 27.8	+2.1
MORF				eSn	Sn	23 46 14.9	+1.2
MORF				A	A	23 46 19.0	
	3.2nm,0.2s						
EBAD	Badajoz	4.13	328	Pn	Pn	23 45 27.6	+1.9
EBAD				Sn	Sn	23 46 14.4	+0.7
EBAD				i Vmb_Lg		23 46 17.2	
PFVI	Vila Bisbo	4.18	297	ePn	Pn	23 45 27.8	+1.4
PFVI				eSn	Sn	23 46 14.4	-0.5
PFVI				A	A	23 46 25.1	
	10nm,0.8s						
PAB	San Pablo	4.25	358	Pn	Pn	23 45 30.1	+2.6
PAB				Sn	Sn	23 46 18.7	+1.9
PAB				i Vmb_Lg		23 46 29.7	
PTEO	Sao Teotonio	4.30	303	ePn	Pn	23 45 29.0	+1.0
PTEO				eSn	Sn	23 46 18.3	+0.5
PTEO				A	A	23 46 38.0	
	7.2nm,0.6s						
PNCL	Nicolau / Gran	4.48	310	ePn	Pn	23 45 31.8	+1.2
PNCL				eSn	Sn	23 46 21.8	-0.6
PNCL				A	A	23 46 25.3	
	4.5nm,0.7s						
PESTR	Estremoz	4.49	324	ePn	Pn	23 45 32.7	+2.0
PESTR				eSn	Sn	23 46 22.9	+0.3
PESTR				A	A	23 46 31.0	
	3.0nm,0.5s						
TZRR	Tazzarine	4.64	195	P	Pn	23 45 34.0	+1.2
TZRR				S	Sn	23 46 29.4	+3.1
PMRV	Marv??o	4.86	329	ePn	Pn	23 45 37.6	+1.9
PMRV				eSn	Sn	23 46 31.6	0.0
PMRV				A	A	23 47 01.4	
	5.2nm,0.5s						
OUZM	OUZ	4.87	207	P	Pn	23 45 40.0	+4.0
OUZM				S	Sn	23 46 35.2	+3.1
PMTG	Montargil	4.96	321	ePn	Pn	23 45 38.6	+1.5
PMTG				eSn	Sn	23 46 34.3	+0.1
PMTG				A	A	23 46 56.1	
	4.3nm,0.6s						
PACT	Alcochete	5.09	314	ePn	Pn	23 45 40.9	+2.1
OUK	Oukaimeden	5.10	218	P	Pn	23 45 40.3	+0.8
OUK				S	Sn	23 46 38.0	-0.2
PCBR	Castelo Branco	5.24	331	ePn	Pn	23 45 43.5	+2.5
PCBR				eSn	Sn	23 46 39.9	-1.2
PMAFR	Mafra	5.47	313	ePn	Pn	23 45 46.3	+2.1
PSBE	So Bento	5.59	320	ePn	Pn	23 45 48.5	+2.7
PSBE				eSn	Sn	23 46 49.4	-0.3
ETOR	Torete	5.77	16	Pn	Pn	23 45 51.0	+2.6
ETOR				Sn	Sn	23 46 56.1	+1.8
EIBI	Ibiza	5.78	48	Pn	Pn	23 45 49.6	+1.2
EIBI				Sn	Sn	23 46 51.4	-3.0
PCAS	Casmilo, Conde	5.86	326	ePn	Pn	23 45 51.3	+1.9
PCAS				eSn	Sn	23 46 56.4	+0.1
PCAS				A	A	23 47 18.7	
	3.6nm,0.5s						
TTIG	Tnine Tigouga,	5.93	218	P	Pn	23 45 49.8	-0.7
TTIG				S	Sn	23 46 55.6	-2.5
PVIS	Viseu	6.16	333	ePn	Pn	23 45 56.3	+2.7
PVIS				eSn	Sn	23 47 04.1	+0.4
PVIS				A	A	23 47 21.9	
	2.7nm,0.7s						
MVO	Moncorvo	6.28	340	eSn	Sn	23 47 07.1	+0.4
PVRL	Vila Real	6.59	336	ePn	Pn	23 46 01.3	+1.8
PVRL				eSn	Sn	23 47 13.9	-0.5
PVRL				A	A	23 47 17.5	
	4.8nm,0.2s						
POLO	Lamas de Olo	6.70	336	ePn	Pn	23 46 03.5	+2.3
POLO				eSn	Sn	23 47 18.1	+0.9
POLO				A	A	23 47 20.4	
	1.5nm,0.6s						
PBRG	Braganca	6.81	344	ePn	Pn	23 46 05.0	+2.5
PGAV	Gavieira, Arco	7.39	336	ePn	Pn	23 46 13.8	+3.2
PGAV				eSn	Sn	23 47 34.4	+0.2
ETSF	Etsaut	8.11	19	ePn	Pn	23 46 21.9	+1.5
ETSF				eSn	Sn	23 47 48.6	-3.1
	0.3nm,0.2s						
SJPF	Ste Jean	8.15	15	ePn	Pn	23 46 22.4	+1.5
SJPF				eSn	Sn	23 47 49.5	-3.1
	1.0nm,0.4s						
EPF	Esparros	8.49	23	ePn	Pn	23 46 27.5	+1.8
EPF				eSn	Sn	23 47 57.5	-3.7
	0.4nm,0.3s						
MFF	Saint Martin d	11.71	14	eP	Pn	23 47 16.6	+7.0
QUIF	Quistinic	12.64	3	ePn	Pn	23 47 24.7	+2.4
QUIF				eSn	Sn	23 49 36.6	-6.1
	0.3nm,0.2s						

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*IDC **13** 23:44:55.3±2.7, 51°.77N×179°.19W, h66^{km}±24^{km}, mb3.5/14, mbtmp3.8/17, Error ellipse: s-maj=28.6km s-min=12.2km az=176.0*
*NEIC **13** 23:44:56.2±1.7, 51°.6N±0°.1×179°.25W±0°.09, h73^{km}±4^{km}, mb3.9/127, ML3.9(AEIC), Error ellipse: s-maj=16.0km s-min=7.7km az=172.0*
*AEIC **13** 23:44:56±2.4, 51°.43N±0°.10×178°.93W±0°.06, h62^{km}±5^{km}, Error ellipse: s-maj=14.1km s-min=5.3km az=168.0*
ISC 13 23:44:55.8±0.9**, 51°.7N**±0°.1×**179°.23W**±0°.04**, h75**^{km}±7^{km}**,**
n197, σ0^{s}99/195**, mb4.0**/62**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GASW	Gareloi Southw	0.26	64		Pn	23 45 07.4	+0.1
GALAA	Gareloi Lava P	0.30	71		Pn	23 45 07.6	+0.2
GANO	Gareloi North	0.31	59		Pn	23 45 07.7	+0.1
GAEA	Gareloi East	0.32	68		Pn	23 45 07.8	+0.1

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TANO  Tanaga North       0.73  70              Pn      23 45 11.7 +0.3
TASE  Tanaga Southea     0.76  77              Pn      23 45 11.7  0.0
TAFP  Tanaga Falls P     0.81  73              Pn      23 45 12.0 -0.2
TAFP                                           Sn      23 45 24.5  0.0
TAPA  Tanaga Point A     0.89  80              Pn      23 45 13.0 -0.3
KIMD  Kanaga Island      1.24  85              Pn      23 45 16.9 -0.6
KIMD                                           Sn      23 45 33.1 -0.7
KICM  Kanaga Island      1.29  78              Pn      23 45 18.3 +0.2
KICM                                           Sn      23 45 34.6 -0.3
KIKV  Kanaga Island      1.30  80              Pn      23 45 18.0 -0.2
KIWB  Kanaga Island      1.30  81              Pn      23 45 18.1 -0.3
KIWB  Kanaga Island      1.30  81   Sn         Sn      23 45 34.8 -0.5
ADK   Adak               1.60  81              Pn      23 45 21.7 -0.4
ADK                                            Sn      23 45 41.0 -1.0
GSCK  Great Sitkin C     1.93  78              Pn      23 45 26.6  0.0
GSCK                                           Sn      23 45 48.4 -1.7
GSSP  Great Sitkin S     1.94  76              Pn      23 45 26.6  0.0
GSSP                                           Sn      23 45 49.8 -0.4
GSTD  Great Sitkin T     1.95  77              Pn      23 45 26.6 -0.3
GSMY  Great Sitkin M     2.00  78              Pn      23 45 27.4 -0.2
GSTR  Great Sitkin T     2.01  76              Pn      23 45 27.5 -0.1
ATKA  Atka Island        3.16  78              Pn      23 45 43.2 +0.1
ATKA                                           Sn      23 46 18.4 -1.3
KOKL  Mount Kliuchef     3.18  76              Pn      23 45 43.6 +0.2
SHEM  Shemya Is, Ala     4.24 287   P          Pn      23 45 57.0 -0.8
      11nm,0.8s,baz=263,slow=21,SNR=1.4
SHEM                                S          Sn      23 46 46.2 +0.2
      19nm,0.4s,baz=250,slow=19,SNR=2.0
SMY   Shemya             4.24 287              Pn      23 45 57.8  0.0
NIKH  Nikolski High      6.50  74              Pn      23 46 29.8 +1.2
SPIA  Saint Paul Isl     7.61  40              Pn      23 46 45.7 +1.9
MSW   Makushin Switc     7.88  69              Pn      23 46 49.0 +1.5
UNV   Unalaska Valle     8.02  69              Pn      23 46 50.6 +1.1
AKBBA Akutan Broad B     8.40  68              Pn      23 46 56.2 +1.6
SDPT  Sand Point        11.75  64   Pn         Pn      23 47 39.5 -0.7
CNBA  Chernabura Isl    12.18  67   Pn         Pn      23 47 44.6 -1.3
PETK  Petropavlovsk-    14.15 285   P          Pn      23 48 11.6 -0.8
      1.1nm,0.8s,baz=90,slow=23,SNR=0.9
SII   Sitkinak Islan    15.44  62   Pn         Pn      23 48 27.5 -1.4
P18K  Big Mountain,     15.57  51              Pn      23 48 31.7 +1.2
O18K  Koktuh Hills      15.73  49              P       23 48 34.3 -0.9
O18K                                IAmb       IAmb    23 48 38.7
      comp=Z,6.5nm,0.8s
N18K  Kilae Creek       15.74  46              Pn      23 48 33.7 +1.0
N18K                                IAmb       IAmb    23 48 39.4
      comp=Z,5.4nm,1.0s
OHAK  Old Harbor        16.02  60   Pn         Pn      23 48 36.2  0.0
OHAK                                IAmb       IAmb    23 48 37.1
      comp=Z,8.9nm,0.7s
SVW2  Sparrevohn        16.05  45              P       23 48 39.3 +0.6
Q19K  Cape Douglas,     16.21  53   Pn         Pn      23 48 38.9 +0.3
Q19K                                IAmb       IAmb    23 48 47.2
      comp=Z,9.4nm,0.6s
N19K  Bonanza Creek     16.43  47   P          P       23 48 42.7 -0.2
N19K                                IAmb       IAmb    23 48 46.6
      comp=Z,8.3nm,0.8s
KDAK  Kodiak Island     16.50  58   P          Pn      23 48 39.3 -2.8
      comp=Z,2.9nm,0.3s,baz=254,slow=1.9,SNR=30
KDAK  Kodiak Island     16.50  58              Pn      23 48 39.5 -2.6
KDAK                                IAmb       IAmb    23 48 48.0
      comp=Z,8.5nm,1.1s
P19K  Oil Pt            16.61  51   Pn         Pn      23 48 43.4 -0.2
P19K                                IAmb       IAmb    23 48 45.6
      comp=Z,5.6nm,0.8s
L19K  White Mountain    16.85  42              P       23 48 47.8 +0.3
M19K  Big River Lodg    16.92  43   P          P       23 48 50.3 +2.0
CNPM  China Poot        17.56  52              P       23 48 56.0 +0.7
CNPM                                IAmb       IAmb    23 48 57.5
      comp=Z,5.3nm,1.1s
K20K  Telida            17.73  39   P          Pn      23 48 59.4 +2.1
BRLK  Bradley Lake      17.79  52   P          Pn      23 48 58.8 +0.7
BRLK                                IAmb       IAmb    23 49 04.9
      comp=Z,4.2nm,0.9s
J20K  Nowinta River     18.12  37   P          Pn      23 49 03.0 +1.0
PPLA  Purkeypile        18.27  42   P          Pn      23 49 06.3 +2.3
PPLA                                IAmb       IAmb    23 49 17.2
      comp=Z,3.3nm,0.6s
FIS   Fire Island       18.49  48   P          Pn      23 49 07.7 +1.2
O22K  Cooper Landing    18.54  50   P          P       23 49 05.8 -0.2
CAST  Castle Rocks      18.55  40   P          Pn      23 49 07.6 +0.5
SEW   Seward            18.57  51   P          Pn      23 49 07.2 -0.2
SEW                                 IAmb       IAmb    23 49 08.1
      comp=Z,8.6nm,1.1s
IMAR  Indian Mountai    19.27  32   P          Pn      23 49 15.6 -0.1
TRF   Thorofare Moun    19.29  41   P          Pn      23 49 15.6 -0.5
BPAW  Bear Paw Mtn.     19.29  39   P          Pn      23 49 16.0  0.0
KNK   Knik Glacier      19.38  48   P          Pn      23 49 16.8 -0.3
KNK                                 IAmb       IAmb    23 49 20.0
      comp=Z,4.1nm,1.0s
H21K  Melozitna Rive    19.41  34   P          Pn      23 49 16.7 -0.6
SML   Sawmill           19.56  47   P          P       23 49 17.6 +0.4
RND   Reindeer          19.87  42   P          P       23 49 21.1 +0.6
RND                                 IAmb       IAmb    23 49 24.8
      comp=Z,2.4nm,0.5s
GLI   Glacier Island    19.89  50   P          P       23 49 21.8 +1.0
GLI                                 IAmb       IAmb    23 49 27.3
      comp=Z,2.7nm,0.6s
SCM   Sheep Creek Mo    20.02  47   P          P       23 49 21.7 -0.6
SCM                                 IAmb       IAmb    23 49 22.4
      comp=Z,3.3nm,0.6s
FID   Port Fidalgo      20.15  50   P          P       23 49 23.7  0.0
FID                                 IAmb       IAmb    23 49 26.6
      comp=Z,3.9nm,0.4s
NEA2  Nenana            20.26  39   P          P       23 49 25.6 +0.9
DHY   Denali Highway    20.38  44   P          P       23 49 26.1  0.0
DHY                                 IAmb       IAmb    23 49 31.4
      comp=Z,3.2nm,0.5s
I23K  Minto, Yukon-K    20.39  37   P          Pn      23 49 30.1 +1.2
I23K                                IAmb       IAmb    23 49 40.3
      comp=Z,2.8nm,0.4s
DIV   Divide            20.57  50   P          P       23 49 28.7 +0.5
DIV                                 IAmb       IAmb    23 49 32.2
      comp=Z,3.1nm,0.6s
KLU   Klutina           20.58  49   P          P       23 49 29.7 +1.4
KLU                                 IAmb       IAmb    23 49 34.0
      comp=Z,3.1nm,0.7s
WRH   Wood River Hil    20.59  40   P          P       23 49 27.9 -0.4
M24K  Tolsona, Glenn    20.62  47   P          P       23 49 29.0 +0.3
M24K                                IAmb       IAmb    23 49 47.8
      comp=Z,4.2nm,0.7s
H23K  Yukon River       20.65  35   P          Pn      23 49 31.2 -0.7
MDM   Murphy Dome       20.74  38   P          P       23 49 30.2 +0.3
CCB   Clear Creek Bu    20.78  39   P          P       23 49 30.2 -0.1
BMRM  Bremner River     21.10  50   P          P       23 49 35.6 +1.8
BMRM                                IAmb       IAmb    23 49 38.7
      comp=Z,4.8nm,1.0s
POKR  Poker Plat Res    21.11  38   P          P       23 49 33.4 -0.5
POKR                                IAmb       IAmb    23 49 46.0
      comp=Z,2.6nm,0.7s
HMT   Hamilton          21.16  52   P          P       23 49 35.5 +1.1
HMT                                 IAmb       IAmb    23 49 54.8
      comp=Z,2.2nm,0.6s
PAX   Paxson            21.17  45   P          P       23 49 36.0 +1.4
IL31                    21.19  39   P          P       23 49 35.9 +1.2
ILAR  Eielson Array     21.19  39   P          P       23 49 33.4 -1.3
      comp=Z,0.5nm,0.8s,baz=223,slow=7.4,SNR=4.0
      comp=Z,0.5nm,0.8s
ILAR  Eielson Array     21.19  39   P          P       23 49 35.7 +1.0
N25K  Chitina, Valde    21.23  49   P          P       23 49 36.9 +1.6
H24K  Noodor Dome       21.26  36   P          P       23 49 36.8 +1.3
SUCK  Suckling Hills    21.36  53   P          P       23 49 33.5 -3.0
SUCK                                IAmb       IAmb    23 49 52.3
      comp=Z,6.5nm,1.2s
GLB   Gilahina Butte    21.56  49   P          P       23 49 39.5 +0.8
GLB                                 IAmb       IAmb    23 49 42.1
      comp=Z,4.8nm,0.6s
RIDG  Independent Ri    21.67  43   P          P       23 49 40.4 +0.5
VRDI  Verde Repeater    21.69  50   P          P       23 49 41.6 +1.2
VRDI                                IAmb       IAmb    23 49 42.9
      comp=Z,2.4nm,0.6s
J25K  Salcha River,     21.74  40   P          P       23 49 40.2 -0.4
DOT   Dot Lake          21.97  43   P          P       23 49 43.5 +0.3
SCRK  Sand Creek        22.10  43   P          P       23 49 43.9 -0.7
ISLE  Juniper Island    22.14  52   P          P       23 49 44.8 -0.3
TOLK  Toolik Lake Re    22.14  29   P          P       23 49 46.7 +1.8
M27K  Edge Creek, AK    22.64  47   P          P       23 49 49.3 -1.0
L27K  Beaver Creek,     22.80  46   P          P       23 49 51.8 -0.2
BCAR  Beaver Creek A    22.82  46   P          P       23 49 51.9 -0.3
K27K  Chicken           22.93  43   P          P       23 49 53.4 +0.2
M30M  Minto, Yukon      25.00  48   P          P       23 50 13.5 +1.2
HG4B  Hotspring         29.16  70   P          P       23 50 50.3 +0.7
A36M  Sachs Harbour     30.96  29   P          P       23 51 02.9 -2.3
A36M                                IAmb       IAmb    23 51 03.2
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      comp=Z,4.7nm,0.9s
MJAR  Matsushiro Arr    33.57 260   P          P       23 51 29.0 +0.6
      comp=Z,0.6nm,0.3s,baz=25,slow=15,SNR=1.9
      comp=Z,0.6nm,0.3s
H11N2 WAKE ISLAND Hy    33.68 204   T          T       00 27 15.5
      baz=16,slow=76,SNR=50
H11N3 WAKE ISLAND Hy    33.69 204   T          T       00 27 17.6
      baz=16,slow=76,SNR=75
H11N1 WAKE ISLAND Hy    33.70 204   T          T       00 27 16.9
      baz=16,slow=76,SNR=47
H11S1 WAKE ISLAND Hy    34.90 204   T          T       00 28 55.5
      baz=16,slow=76,SNR=59
H11S2 WAKE ISLAND Hy    34.92 204   T          T       00 28 50.7
      baz=16,slow=76,SNR=35
H11S3 WAKE ISLAND Hy    34.92 204   T          T       00 28 55.9
      baz=16,slow=76,SNR=29
YKA   Yellowknife Ar    35.23  47   P          P       23 51 41.8 -0.7
      comp=Z,0.3nm,0.4s,baz=279,slow=9.5,SNR=7.8
      comp=Z,0.3nm,0.4s
NLWA  Neilton Lookou    35.45  75   P          P       23 51 45.8 +1.2
NLWA                                IAmb       IAmb    23 52 02.3
      comp=Z,2.4nm,0.9s
I02E  Swisshome, OR     37.10  79   P          P       23 51 59.2 +0.6
KSXB  Camp Six Broad    38.33  82   P          P       23 52 10.5 +1.4
KSXB                                IAmb       IAmb    23 52 12.0
      comp=Z,3.8nm,1.1s
HUMO  Hull Mountain     38.46  81   P          P       23 52 11.7 +1.6
HUMO                                IAmb       IAmb    23 52 29.3
      comp=Z,0.8nm,0.9s
KRPM  Rodgers           38.62  83   P          P       23 52 12.5 +0.9
KMPM  Mount Pierce      38.99  84   P          P       23 52 13.1 -1.5
NEW   Newport           39.03  70   P          P       23 52 14.9  0.0
NEW                                 IAmb       IAmb    23 52 16.1
      comp=Z,1.4nm,0.7s
YBH   Yreka Blue Hor    39.10  82   P          P       23 52 17.7 +2.1
YBH                                 IAmb       IAmb    23 52 18.3
      comp=Z,2.0nm,0.8s
KSRS  Korea Array       39.37 270   P          P       23 52 19.2 +1.5
      comp=Z,0.5nm,0.3s,baz=56,slow=9.6,SNR=2.2
      comp=Z,0.5nm,0.3s
K05A  Summer Lake       39.66  79   P          P       23 52 22.3 +2.0
K05A                                IAmb       IAmb    23 52 39.7
      comp=Z,2.4nm,0.7s
KSCHJ Chungju           39.70 269   P          P       23 52 17.2 -3.2
I07A  Izee              39.76  77   P          P       23 52 22.2 +1.1
I07A                                IAmb       IAmb    23 52 41.4
      comp=Z,1.9nm,0.9s
BMO   Blue Mountains    40.67  74   P          P       23 52 29.4 +0.8
BMO                                 IAmb       IAmb    23 52 30.0
      comp=Z,1.6nm,0.8s
J08A  Circle Bar Ran    40.78  77   P          P       23 52 31.1 +1.6
J08A                                IAmb       IAmb    23 52 32.0
      comp=Z,1.6nm,0.5s
JTMT  Jette             40.95  69   P          P       23 52 30.8  0.0
WVOR  Wild Horse Val    41.20  78   P          P       23 52 34.2 +1.2
WVOR                                IAmb       IAmb    23 52 35.4
      comp=Z,2.1nm,0.7s
BEKR  Beckworth         41.64  83   P          P       23 52 36.5 -0.2
BEKR                                IAmb       IAmb    23 52 37.8
      comp=Z,1.4nm,0.6s
PAHR  Pah Rah Range     42.34  82   P          P       23 52 42.8 +0.5
PAHR                                IAmb       IAmb    23 52 43.7
      comp=Z,1.8nm,0.7s
PNTR  Pine Nut          42.58  83   P          P       23 52 45.8 +1.4
LRM   Limekiln Ridge    43.03  70   P          P       23 52 53.5 +5.6
HLID  Hailey            43.12  74   P          P       23 52 49.7 +1.1
HLID                                IAmb       IAmb    23 52 50.2
      comp=Z,2.1nm,0.8s
BCYI  Bear Canyon       43.30  73   P          P       23 52 48.9 -1.2
MCMT  McKenzie Canyo    43.34  72   P          P       23 52 50.7 +0.2
RYN   Ryan              43.52  83   P          P       23 52 52.8 +0.9
RYN                                 IAmb       IAmb    23 52 53.6
      comp=Z,2.6nm,1.0s
KVN   Kaiserville       43.53  82   P          P       23 52 52.9 +0.9
KVN                                 IAmb       IAmb    23 52 53.2
      comp=Z,1.5nm,0.6s
BOZ   Bozeman (W)       43.63  70   P          P       23 52 52.9 +0.2
BOZ                                 IAmb       IAmb    23 52 53.4
      comp=Z,1.8nm,0.7s
LHV   Little Huntoon    43.77  83   P          P       23 52 53.7  0.0
LHV                                 IAmb       IAmb    23 53 00.6
      comp=Z,2.8nm,1.1s
NVAR  Mina Array Bea    43.78  83   P          P       23 52 55.1 +1.1
      comp=Z,1.2nm,0.7s,baz=294,slow=7.4,SNR=12
      comp=Z,1.2nm,0.7s
ELK   Elko              44.26  78   P          P       23 52 58.7 +0.8
ELK                                 IAmb       IAmb    23 53 16.3
      comp=Z,1.0nm,0.8s
YHL   Hebgen Lake       44.31  71   P          P       23 52 58.5 +0.2
YHL                                 IAmb       IAmb    23 53 00.0
      comp=Z,4.4nm,1.1s
YHH   Holmes Hill       44.54  71   P          P       23 53 00.6 +0.4
YHH                                 IAmb       IAmb    23 53 00.9
      comp=Z,2.0nm,0.6s
HVU   Hansel Valley     45.14  75   P          P       23 53 05.7 +0.9
HVU                                 IAmb       IAmb    23 53 05.9
      comp=Z,2.3nm,0.7s
RLMT  Red Lodge         45.28  69   P          P       23 53 06.4 +0.5
RLMT                                IAmb       IAmb    23 53 09.0
      comp=Z,2.2nm,1.1s
R11A  Troy Canyon, C    45.51  81   P          P       23 53 08.3 +0.6
R11A                                IAmb       IAmb    23 53 09.0
      comp=Z,2.2nm,0.9s
ULN   Ulaanbaatar       45.89 296   P          P       23 53 11.8 +1.1
ULN                                 IAmb       IAmb    23 53 12.3
      comp=Z,2.1nm,0.8s
FCC   Fort Churchill    45.96  46   P          P       23 53 10.6 -0.1
TPNV  Topopah Spring    45.98  83   P          P       23 53 12.8 +1.4
DUG   Dugway, Tooele    46.07  77   P          P       23 53 12.7 +0.6
QSM   Queen of Sheba    46.22  84   P          P       23 53 13.6 +0.4
QSM                                 IAmb       IAmb    23 53 15.7
      comp=Z,1.6nm,0.6s
SONM  Songino Array     46.28 296   P          P       23 53 14.9 +1.3
      comp=Z,0.8nm,0.4s,baz=61,slow=6.8,SNR=4.8
      comp=Z,0.8nm,0.4s
SONM  Songino Array     46.28 296   IAmb       IAmb    23 53 21.9
      comp=Z,0.8nm,0.8s
PSUT  Pine Spring       46.45  80   P          P       23 53 16.0 +0.8
PSUT                                IAmb       IAmb    23 53 16.9
      comp=Z,2.2nm,1.0s
PD31  Pinedale Array    46.48  72   P          P       23 53 15.1 -0.3
PDAR  Pinedale Array    46.48  72   P          P       23 53 15.4 +0.1
      comp=Z,1.9nm,0.5s,baz=312,slow=3.4,SNR=25
      comp=Z,1.9nm,0.5s
PDAR  Pinedale Array    46.48  72   P          P       23 53 15.9 +0.5
GSC   Goldstone, Bar    46.69  85   P          P       23 53 17.4 +0.4
GSC                                 IAmb       IAmb    23 53 36.5
      comp=Z,2.0nm,0.9s
CCUT  Cedar City        47.38  80   P          P       23 53 23.1 +0.7
CCUT                                IAmb       IAmb    23 53 23.5
      comp=Z,1.2nm,0.8s
MSU   Marysvale         47.49  79   P          P       23 53 23.9 +0.6
TMUT  Trail Mountain    47.59  77   P          P       23 53 25.0 +0.8
TMUT                                IAmb       IAmb    23 53 26.9
      comp=Z,3.7nm,1.1s
RDMU  Red Mountain      47.80  75   P          P       23 53 26.6 +1.0
P18A  Preston Nutter    47.97  76   P          P       23 53 29.4 +2.4
P18A                                IAmb       IAmb    23 53 45.7
      comp=Z,1.5nm,0.9s
PKCU  Pink Cliffs       48.09  80   P          P       23 53 29.2 +1.2
PKCU                                IAmb       IAmb    23 53 31.2
      comp=Z,2.6nm,1.0s
SRU   San Rafael Swe    48.12  77   P          P       23 53 29.4 +1.3
U15A  North Rim         48.75  81   P          P       23 53 33.6 +0.6
O20A  White River Ci    48.86  74   P          P       23 53 34.0 +0.2
PV23  Carpenter Ridg    49.46  76   P          P       23 53 38.6 +0.1
PV14  Lion Creek, Pa    49.50  77   P          P       23 53 38.9 +0.2
PV04  Paradox Valley    49.56  76   P          P       23 53 39.7 +0.6
PV19  Morning Glory     49.56  77   P          P       23 53 39.6 +0.4
PV17  East Wray Mesa    49.60  77   P          P       23 53 40.1 +0.7
PV16  Nyswonger Mesa    49.60  77   P          P       23 53 40.2 +0.7
PV11  David Mesa, Pa    49.64  77   P          P       23 53 40.2 +0.5
PV18  Skein Mesa, Pa    49.65  77   P          P       23 53 40.1 +0.3
PV12  Saucer Basin,     49.67  76   P          P       23 53 40.5 +0.5
PV03  Paradox Valley    49.68  77   P          P       23 53 40.3 +0.2
PV13  Radium Mtn., P    49.76  77   P          P       23 53 41.3 +0.6
WUAZ  Wupatki           49.91  81   P          P       23 53 40.2 -1.5
PV01  Paradox Valley    49.93  76   P          P       23 53 42.0  0.0
PV01                                IAmb       IAmb    23 53 43.6
      comp=Z,2.1nm,0.8s
214A  Organ Pipe Nat    51.40  85   P          P       23 53 53.1 +0.2
214A                                IAmb       IAmb    23 53 53.4
      comp=Z,1.5nm,0.7s
TX32  Lajitas Array     58.87  81   P          P       23 54 47.2 +0.4
TX32                                IAmb       IAmb    23 54 47.5
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      comp=Z,1.0nm,0.7s
TXAR  Lajitas Array     58.87  81   P          P       23 54 46.7 -0.1
      comp=Z,0.8nm,0.6s,baz=301,slow=5.3,SNR=8.9
      comp=Z,0.8nm,0.6s
TXAR  Lajitas Array     58.87  81   P          P       23 54 47.0 +0.3
MK31  Makanchi Array    59.65 308   P          P       23 54 51.2 -0.6
MKAR  Makanchi Array    59.65 308   P          P       23 54 51.1 -0.7
      comp=Z,0.5nm,0.4s,baz=53,slow=6.3,SNR=10
      comp=Z,0.5nm,0.4s
FINES FINESS Array B    65.44 347   P          P       23 55 30.0  0.0
      comp=Z,0.6nm,0.6s,baz=34,slow=7.1,SNR=4.5
      comp=Z,0.6nm,0.6s
KDJ   Kajisay           65.54 307   P          P       23 55 32.2 +0.9
KDJ                                 IAmb       IAmb    23 55 50.6
      comp=Z,1.6nm,0.9s
NOA   NORSAR Array B    67.33 355   P          P       23 55 43.7 +1.5
      comp=Z,0.4nm,0.6s,baz=17,slow=7.5,SNR=1.4
      comp=Z,0.4nm,0.6s
GUN   Gumba             71.50 292   eP         P       23 56 10.0 +1.2
      comp=Z,35nm,0.5s
KKN   Kakani            71.94 292   eP         P       23 56 12.3 +1.0
      comp=Z,8.0nm,0.4s
PKI   Pulchoki          72.03 292   eP         P       23 56 12.5 +0.5
      comp=Z,8.9nm,0.5s
PKIN  Phulchoki         72.03 292   eP         P       23 56 12.7 +0.8
      comp=Z,12nm,0.5s
GKN   Gorkha            72.15 293   eP         P       23 56 13.3 +0.8
      comp=Z,7.9nm,0.5s
DMN   Daman             72.17 292   eP         P       23 56 13.3 +0.6
DANN  Dangsing          72.39 293   eP         P       23 56 14.8 +0.8
      comp=Z,11nm,0.8s
KOLN  Koldanda          72.92 293   eP         P       23 56 17.6 +0.5
PYUN  Piuthan           73.02 294   eP         P       23 56 18.7 +1.0
AKASG Malin Array Be    75.19 342   P          P       23 56 29.3 -0.4
      comp=Z,0.6nm,0.3s,baz=15,slow=5.9,SNR=4.4
      comp=Z,0.6nm,0.3s
BRTR  Keskin Array B    84.57 335   P          P       23 57 20.1 -0.6
      comp=Z,0.8nm,0.7s,baz=72,slow=2.5,SNR=5.2
      comp=Z,0.8nm,0.7s
BRTR  Keskin Array B    84.57 335   P          P       23 57 20.4 -0.3
ASAR  Alice Springs     85.52 222   P          P       23 57 25.5 +0.2
      comp=Z,0.3nm,0.5s,baz=36,slow=4.3,SNR=4.3
      comp=Z,0.3nm,0.5s
BOSA  Boshof           150.59 312   PKPbc      PKPbc   00 04 38.5 -0.3
      comp=Z,2.5nm,1.0s,baz=112,slow=3.3,SNR=5.5
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*CNRM **13** 23:52:38.7, 35.°73N×2.°32W, h18^{km}, ml2.9*
*MDD **13** 23:52:39.4±0.5, 35.°75N×2.°26W, h0^{km}±3^{km}, mb_Lg2.5/15,*
Error ellipse: s-maj=3.2km s-min=2.5km az=135.0
*IGIL **13** 23:52:41.9, 35.°64N×2.°36W, h11^{km}*
*INMG **13** 23:52:41.1±1.2, 35.°64N×2.°36W, h10^{km}±10^{km}, ML2.1,*
Error ellipse: s-maj=7.8km s-min=5.0km az=98.0
ISC 13 23:52:39.1±1.1**, 35.°70N**±0.°02×**2.°26W**±0.°03**, h15**^{km}±9^{km}**,**
n43, σ1.°**14**/76**, Strait of Gibraltar**

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Code  Station Name       Δ°   AZ°    Phase ID              Time        Res
                                    Op         ISC       h  m  s     ISC
CHAS  Isla Isabel II     0.54 195   P          Pg      23 52 50.3 +0.5
CHAS                                S          Sg      23 52 54.7 -2.2
EALB  Alboran            0.67 291   Pg         Pg      23 52 52.2 -0.1
EALB                                Sg         Sg      23 53 00.5 -0.7
WMELI Melilla            0.69 236   P          Pg      23 52 52.0 -0.5
WMELI                               S          Sg      23 53 02.5 +0.9
EMEL  Melilla            0.70 235   Pg         Pg      23 52 52.1 -0.6
EMEL                                Sg         Sg      23 53 02.8 +0.8
GOG   Mont Gurugu        0.77 232   P          Pg      23 52 54.1 -0.1
GOG                                 S          Sn      23 53 07.0 +0.1
TAF   Taforalt           0.90 188   P          Pb      23 52 56.5 +0.1
TAF                                 S          Sb      23 53 08.6 +0.4
ENIJ  Nijar              1.27   2   Pg         Pn      23 53 02.0 -0.3
ENIJ                                Sg         Sb      23 53 18.1 -0.7
ENIJ                              i Vmb_Lg             23 53 20.5
EBER  Berja              1.30 337   Pg         Pn      23 53 02.3 -0.6
EBER                                Sg         Sb      23 53 19.8  0.0
EBER                              i Vmb_Lg             23 53 34.0
JBK   JBK                1.39 191   P          Pn      23 53 02.4 -1.7
JBK                                 S          Sn      23 53 20.7 -1.7
ELGU  Los Guajares,      1.60 317   Pn         Pn      23 53 06.6 -0.4
ELGU                              i Vmb_Lg             23 53 28.5
ELGU                                Sg         Sb      23 53 29.0 +0.5
EQUE  Quentar            1.77 328   Pn         Pn      23 53 09.5 +0.1
EQUE                                Sn         Sn      23 53 31.9 +0.2
EQUE                              i Vmb_Lg             23 53 44.6
EGOR  Sierra Gorda,      2.05 314   Pn         Pn      23 53 13.7 +0.6
EGOR                                Sn         Sn      23 53 38.9 +0.4
EGOR                              i Vmb_Lg             23 53 45.9
CART  Cartagena          2.13  28   P          Pn      23 53 13.8 -0.4
CART                                S          Sn      23 53 38.9 -1.5
EQES  Quesada            2.19 343   Pn         Pn      23 53 15.1  0.0
EQES                                Sn         Sn      23 53 42.5 +0.4
EQES                              i Vmb_Lg             23 53 47.4
EQES                                Sg         Sb      23 53 47.6 +2.0
EMIJ  Mijas              2.21 294   Pn         Pn      23 53 15.3 +0.1
EMIJ                                Sn         Sn      23 53 42.4 +0.1
EMIJ                              i Vmb_Lg             23 53 44.1
EZAR  Zarzadilla de      2.21  12   Sn         Sn      23 53 43.3 +0.8
EMUR  La Murta           2.29  21   Pn         Pn      23 53 16.8 +0.5
EMUR                                Sn         Sn      23 53 43.5 -0.7
EMUR                              i Vmb_Lg             23 53 45.6
SMIR  Smir Dam           2.54 270   P          Pn      23 53 19.3 -0.4
SMIR                                S          Sn      23 53 46.4 -4.0
TDRA  Tendrara           2.67 176   P          Pn      23 53 23.3 +1.6
LCRM  LCR                2.94 228   P          Pn      23 53 26.5 +1.1
LCRM                                S          Sn      23 54 00.5  0.0
ETOB  Tobarra            2.99  11   Pn         Pn      23 53 26.8 +0.8
ETOB                                Sn         Sn      23 54 00.9 -0.8
ETOB                              i Vmb_Lg             23 54 05.5
EADA  Adamuz             3.08 324   Pn         Pn      23 53 27.8 +0.6
EADA                                Sn         Sn      23 54 02.7 -1.1
EADA                              i Vmb_Lg             23 54 10.7
ECAB  El Cabril          3.47 314   Pn         Pn      23 53 33.1 +0.5
ECAB                                Sn         Sn      23 54 13.2 -0.1
ECAB                              i Vmb_Lg             23 54 18.0
MDT   Midelt             3.48 215   P          Pn      23 53 34.3 +1.6
MDT                                 S          Sn      23 54 12.8 -0.9
MD31  MD31               3.51 217   P          Pn      23 53 33.7 +0.5
MD31                                S          Sn      23 54 16.0 +1.6
FIGM  Figuig             3.66 167   P          Pn      23 53 36.0 +0.7
EMIN  Mina Concepcio     4.10 301   Pn         Pn      23 53 41.7 +0.5
PAB   San Pablo          4.18 337   Pn         Pn      23 53 43.4 +1.0
PAB                               i Vmb_Lg             23 56 41.2
EIBI  Ibiza              4.38  40   Pn         Pn      23 53 45.5 +0.3
EIBI                                Sn         Sn      23 54 35.0 -1.0
PBAR  Barrancos          4.55 304   ePn        Pn      23 53 48.8 +1.3
PBAR                                eSn        Sn      23 54 38.6 -1.5
PBAR                                A          A       23 54 50.9
      1.3nm,0.6s
EGRO  El Granado         4.58 295   Pn         Pn      23 53 48.2 +0.3
EGRO                                Sn         Sn      23 54 39.3 -1.5
PVAQ  Vaqueiros          4.71 293   ePn        Pn      23 53 50.4 +0.8
PVAQ                                eSn        Sn      23 54 42.6 -1.4
PVAQ                                A          A       23 54 47.7
      2.3nm,0.6s
PVAQ  Vaqueiros          4.71 293   P          Pn      23 53 51.3 +1.7
PVAQ                                S          Sn      23 54 40.8 -3.2
EBAD  Badajoz            4.87 310   Pn         Pn      23 53 52.3 +0.6
EBAD                                Sn         Sn      23 54 46.5 -1.3
PCVE  Castro Verde       5.03 294   ePn        Pn      23 53 55.5 +1.5
PCVE                                eSn        Sn      23 54 51.2 -0.6
ETOR  Torete             5.11   2   Pn         Pn      23 53 56.1 +0.9
ETOR                              i Vmb_Lg             23 54 16.2
MESJ  Messejana          5.24 296   eP         Pn      23 53 57.5 +0.6
MESJ  Messejana          5.24 296   ePn        Pn      23 53 58.1 +1.2
MESJ                                eSn        Sn      23 54 56.1 -0.9
MESJ                                A          A       23 54 56.7
      2.1nm,0.7s
PTEO  Sao Teotonio       5.51 291   ePn        Pn      23 54 01.7 +1.0
PMRV  Marv??o            5.52 314   ePn        Pn      23 54 02.1 +1.4
PNCL  Nicolau / Gran     5.57 297   ePn        Pn      23 54 02.5 +1.1
PNCL                                eSn        Sn      23 55 03.9 -1.2
PMTG  Montargil          5.82 307   ePn        Pn      23 54 05.8 +1.0
PSBE  So Bento           6.43 308   ePn        Pn      23 54 14.6 +1.3
```

OMAN 13 23:56:26.0±0.2**, 27.°58N**×**53.°84E, h33**^{km}**, mb3.8**/1**, ml2.6**/3**,**
Error ellipse: s-maj=4.1km s-min=1.4km az=3.0,
Southern Iran

```
Code  Station Name       Δ°   AZ°    Phase ID              Time        Res
                                    Op         ISC       h  m  s     ISC
BANOM Banah              2.75 126   P          Pn      23 57 06.9 -0.9
```

MASF	**Masafi**	**3.03**	**136**	P	Pn	23 57 12.3	+0.6
NAZ	**Nazwa, Dubai**	**3.06**	**147**	P	Pn	23 57 13.2	+1.1
SHMA	**Al-Shehemyia**	**3.10**	**237**	P	Pn	23 57 12.6	0.0
FAQ	**Al Faqa, Dubai**	**3.23**	**151**	P	Pn	23 57 15.3	+0.8
ASUD	**Al Ashush, Dub**	**3.23**	**155**	P	Pn	23 57 15.9	+1.4
UOSS	**Minazif**	**3.38**	**141**	P	Pn	23 57 15.9	-0.6
UOSS				S	Sn	23 57 55.9	+0.5
HATD	**Hatta, Dubai**	**3.43**	**143**	P	Pn	23 57 17.6	+0.4
ASHO	**Ashiyiah**	**3.51**	**145**	P	Pn	23 57 18.4	+0.1
	SNR=16						
TRNA	**Turayna**	**3.69**	**220**	P	Pn	23 57 20.9	+0.1
TRNA				S	Sn	23 58 03.9	+0.7
ARQ	**Araqi**	**4.87**	**150**	P	Pn	23 57 36.8	-0.3
	SNR=11						
ARQ				S	Sn	23 58 33.7	+1.4
UMZA	**Um Al Zommool**	**4.99**	**166**	P	Pn	23 57 38.9	+0.2
UMZA				S	Sn	23 58 36.7	+1.4
HOQ	**Hoqain**	**5.07**	**141**	P	Pn	23 57 39.6	-0.1
HOQ				S	Sn	23 58 37.7	+0.6
BSY	**Bisya**	**5.70**	**147**	P	Pn	23 57 48.3	-0.1
SMDO	**Samad**	**5.90**	**139**	P	Pn	23 57 50.9	-0.3
SMDO				P	Pn	23 57 51.0	-0.2
	SNR=6.6						
SMDO				S	Sn	23 58 57.2	-0.5
WSAR	**Wadi Sarin**	**6.12**	**134**	P	Pn	23 57 53.5	-0.7
MHTO	**MHTO**	**7.57**	**149**	P	Pn	23 58 13.1	-0.9

WEL 14 00:06:15.2, 44°S±2°×**17°2E**±°**, h7**^{km}±2^{km}**, M3.0**/21**, ML3.0**/9**, MLv3.0**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=132.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.16**	**128**	P	Pg	00 06 19.7	+1.2
MQZ				S	Sg	00 06 22.0	+1.2
RACZ	**Rakaia**	**0.27**	**244**	P	Pb	00 06 22.6	+0.2
RACZ				S	Sb	00 06 26.7	-0.6
AKCZ	**Akaroa Harbour**	**0.41**	**131**	P	Pb	00 06 24.3	-0.4
OXZ	**Oxford**	**0.43**	**311**	P	Pb	00 06 25.0	-0.1
OXZ				S	Sb	00 06 31.4	-0.3
OKCZ	**Okains Bay**	**0.44**	**106**	P	Pb	00 06 25.1	-0.1
OKCZ				S	Sb	00 06 31.5	-0.5
AMCZ	**Amberley**	**0.45**	**16**	P	Pb	00 06 25.9	+0.6
WACZ	**Wakanui South**	**0.57**	**234**	P	Pb	00 06 28.2	+0.7
MHCZ	**Mount Hutt**	**0.67**	**276**	P	Pb	00 06 30.0	+0.8
GVZ	**Greta Valley S**	**0.76**	**33**	P	Pn	00 06 31.5	-0.7
GVZ				S	Sn	00 06 42.7	-1.2
LTZ	**Lake Taylor**	**0.84**	**349**	P	Pn	00 06 32.9	-0.5
LTZ				S	Sb	00 06 44.7	+1.2
ARCZ	**Arundel**	**1.00**	**250**	P	Pn	00 06 35.4	-0.2
RPZ	**Rata Peaks**	**1.04**	**264**	P	Pn	00 06 36.7	+0.5
INZ	**Inchbonnie**	**1.16**	**319**	P	Pn	00 06 38.9	+1.1
WVZ	**Waitaha Valley**	**1.38**	**292**	P	Pg	00 06 43.0	+1.4
KHZ	**Kahutara**	**1.42**	**34**	P	Pn	00 06 40.7	-0.7
LBZ	**Lake Benmore**	**1.83**	**244**	P	Pg	00 06 49.8	-0.4
THZ	**Tophouse**	**1.87**	**10**	P	Pn	00 06 47.5	-0.1
DSZ	**Denniston Nort**	**1.93**	**345**	P	Pn	00 06 48.6	+0.2
ODZ	**Otahua Downs**	**1.95**	**222**	P	Pn	00 06 48.6	0.0
BSWZ	**Blackbirch Sta**	**2.15**	**29**	P	Pn	00 06 51.3	-0.1
QRZ	**Quartz Range**	**2.78**	**1**	P	Pn	00 07 00.1	0.0
PRWZ	**Pori Road**	**4.01**	**42**	P	Pn	00 07 19.4	+2.5
NNVZ	**North Ngauruho**	**5.05**	**29**	P	Pn	00 07 35.2	+3.7
NTVZ	**North Tongarir**	**5.11**	**29**	P	Pn	00 07 35.4	+3.3

NEIC ***14*** *00:14:40.0±1.0, 17°.9S±0°.1×178°.4W±0°.1, h604*^{km}*±10*^{km}*, mb4.0/33, Error ellipse: s-maj=20.9km s-min=14.7km az=136.0*

IDC ***14*** *00:14:41.6±6.7, 17°.46S×178°.83W, h604*^{km}*±82*^{km}*, mb3.2/7, mbtmp4.2/7, Error ellipse: s-maj=88.4km s-min=25.9km az=150.0*

ISC 14 00:14:39.6±0.6**, 17°.9S**±0°.1×**178°.47W**±0°.09**, h600**^{km}**, n49,** σ**0**^{s}**.90**/50**, mb4.0**/24**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.55**	**59**	P	**P**	**00 16 33.3**	**-1.6**
NIUE	**Niue**	**8.19**	**100**	P	**P**	**00 16 40.8**	**+0.1**
MARNC	**Mare, Loyalty**	**13.21**	**252**	P	**P**	**00 17 29.2**	**-1.3**
LIFNC	**LIFOU**	**13.79**	**256**	P	**P**	**00 17 37.8**	**+1.3**
SANVU	**Saraoutou**	**13.94**	**278**	P	**P**	**00 17 39.2**	**+1.2**
OUENC	**Ouen Island, N**	**14.51**	**249**	P	**P**	**00 17 42.8**	**-0.5**
DZM	**Mont Dzumac**	**14.78**	**251**	P	**P**	**00 17 46.4**	**+0.4**
KNTN	**Kanton**	**16.41**	**25**	P	**P**	**00 17 59.4**	**-1.5**
QRZ	**Quartz Range**	**24.14**	**197**	P	**P**	**00 19 10.2**	**+0.2**
LBZ	**Lake Benmore**	**28.09**	**197**	P	**P**	**00 19 42.5**	**-2.2**
EIDS	**Eidsvold**	**29.22**	**250**	P	**P**	**00 19 54.9**	**+0.2**
EIDS				IAmb	IAmb	00 19 57.7	
	comp=Z,3.3nm,0.9s						
ARMA	**Armidale**	**29.90**	**240**	P	**P**	**00 20 01.4**	**+0.8**
ARMA				IAmb	IAmb	00 20 01.9	
	comp=Z,2.9nm,0.6s						
CTAO	**Charters Tower**	**33.40**	**260**	P	**P**	**00 20 30.3**	**0.0**
CTAO				IAmb	IAmb	00 20 30.9	
	comp=Z,7.5nm,0.8s						
CAN	**Canberra**	**33.67**	**232**	P	**P**	**00 20 32.4**	**-0.1**
CAN				IAmb	IAmb	00 20 44.3	
	comp=Z,3.3nm,1.0s						
COEN	**Coen**	**37.05**	**270**	P	**P**	**00 21 01.5**	**+1.0**
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**00 21 13.3**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=72,slow=10,SNR=6.0						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**00 21 13.4**	**+0.5**
BBOO	**Buckleboo**	**43.37**	**241**	P	**P**	**00 21 50.9**	**+0.3**
BBOO				IAmb	IAmb	00 21 51.5	
	comp=Z,8.6nm,0.9s						
WR0	**Warramunga Arr**	**44.39**	**260**	P	**P**	**00 21 58.5**	**-0.2**
WR0				IAmb	IAmb	00 22 03.3	
	comp=Z,2.5nm,0.9s						
WB0	**Warramunga Arr**	**44.55**	**260**	P	**P**	**00 21 59.7**	**-0.1**
WB0				IAmb	IAmb	00 21 59.8	
	comp=Z,4.1nm,0.8s						
WB2	**Warramunga Arr**	**44.57**	**260**	P	**P**	**00 21 59.8**	**-0.2**
WB2				IAmb	IAmb	00 22 00.3	
	comp=Z,4.7nm,0.6s						
WRA	**Warramunga Arr**	**44.58**	**260**	P	**P**	**00 21 59.7**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=95,slow=7.1,SNR=78						
WRA				PcP	**PcP**	**00 23 30.2**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=95,slow=3.4,SNR=2.1						
	comp=Z,2.9nm,0.5s						
WRA	**Warramunga Arr**	**44.58**	**260**	IAmb	IAmb	00 22 00.3	
	comp=Z,0.3nm,0.7s						
AS31	**Alice Springs**	**44.74**	**254**	P	**P**	**00 22 01.6**	**+0.3**
AS31				IAmb	IAmb	00 22 02.4	
	comp=Z,6.1nm,0.5s						
ASAR	**Alice Springs**	**44.74**	**254**	P	**P**	**00 22 01.4**	**+0.1**
	comp=Z,18nm,0.6s,baz=87,slow=8.6,SNR=213						
ASAR				PcP	**PcP**	**00 23 30.7**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=101,slow=5.0,SNR=3.2						
	comp=Z,18nm,0.6s						
ASAR	**Alice Springs**	**44.74**	**254**	P	**P**	**00 22 01.8**	**+0.4**
MTN	**Manton Dam**	**48.74**	**268**	P	**P**	**00 22 31.1**	**-0.3**
FORT	**Forrest**	**49.97**	**245**	P	**P**	**00 22 39.3**	**-0.8**
KNRA	**Kununurra**	**50.44**	**264**	P	**P**	**00 22 43.8**	**0.0**
KNRA				IAmb	IAmb	00 22 44.4	
	comp=Z,8.2nm,0.8s						
PSA00	**Pilbara Seismi**	**57.86**	**255**	P	**P**	**00 23 35.4**	**-0.3**
PSA00				IAmb	IAmb	00 23 36.1	
	comp=Z,4.9nm,0.8s						
MBWA	**Marble Bar**	**58.02**	**256**	P	**P**	**00 23 36.5**	**-0.3**
MBWA				IAmb	IAmb	00 23 41.7	
	comp=Z,11nm,1.1s						
MORW	**Morawa**	**60.44**	**246**	P	**P**	**00 23 52.3**	**-0.5**
MORW				IAmb	IAmb	00 23 57.7	
	comp=Z,8.6nm,1.1s						
GIRL	**Giralia**	**62.85**	**253**	P	**P**	**00 24 09.0**	**+0.5**
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**00 25 05.1**	**+0.6**
UNV	**Unalaska Valle**	**72.18**	**7**	P	**P**	**00 25 04.7**	**+0.3**
SSLB	**Suanglung**	**72.18**	**303**	P	**P**	**00 25 04.5**	**-0.7**
SSLB				IAmb	IAmb	00 25 09.9	
	comp=Z,7.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**73.65**	**345**	P	**P**	**00 25 11.7**	**-1.2**
BEKR	**Beckworth**	**78.91**	**42**	P	**P**	**00 25 43.5**	**+1.2**
P18K	**Big Mountain,**	**79.31**	**12**	P	**P**	**00 25 43.8**	**0.0**
NVAR	**Mina Array Bea**	**79.45**	**44**	P	**P**	**00 25 46.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=214,slow=7.5,SNR=6.1						
	comp=Z,0.6nm,0.7s						
O18K	**Koktuh Hills**	**79.75**	**12**	P	**P**	**00 25 46.4**	**+0.4**
O18K				IAmb	IAmb	00 25 47.2	
	comp=Z,2.7nm,0.9s						
K05A	**Summer Lake**	**80.22**	**39**	P	**P**	**00 25 48.7**	**-0.4**
K05A				IAmb	IAmb	00 25 51.5	
	comp=Z,3.7nm,1.2s						
N19K	**Bonanza Creek**	**80.77**	**12**	P	**P**	**00 25 48.9**	**-2.5**
N25K	**Chitina, Valde**	**83.70**	**16**	P	**P**	**00 26 06.3**	**+0.2**
GLB	**Gilahina Butte**	**83.76**	**16**	P	**P**	**00 26 06.3**	**-0.1**
TRF	**Thorofare Moun**	**84.00**	**12**	P	**P**	**00 26 07.8**	**+0.1**
TRF				IAmb	IAmb	00 26 08.6	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**85.88**	**13**	P	**P**	**00 26 16.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=222,slow=5.2,SNR=2.5						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**00 26 20.4**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=222,slow=5.6,SNR=11						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**87.38**	**43**	P	**P**	**00 26 25.5**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=207,slow=3.0,SNR=4.9						
	comp=Z,0.4nm,0.5s						

ISU ***14*** *00:42:08, 39°.53N×69°.18E, h5*^{km}

KRNET ***14*** *00:42:10.6±0.1, 39°.94N×69°.14E, h18*^{km}*, mb3.1*

ISC 14 00:42:10.3±1.7**, 39°.95N**±0°.03×**69°.14E**±0°.03**, h2**^{km}±16^{km}**, n14,** σ**1**^{s}**.33**/25**, 12C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.29**	**85**	⇑*i*P	**Pb**	**00 42 34.8**	**-0.6**
	baz=84						
BTK				⇑*i*S	**Sg**	**00 42 52.2**	**+0.4**
	baz=84						
CHGR	**Chuyangaron**	**1.29**	**179**	⇓*i*P	**Pb**	**00 42 34.5**	**-0.9**
	baz=79						
CHGR				⇓*i*S	**Sg**	**00 42 51.4**	**-0.4**
	baz=79						
GAR	**Garm**	**1.31**	**136**	⇑*e*P	**Pb**	**00 42 35.0**	**-0.8**
	baz=35						
GAR				⇑*e*S	**Sg**	**00 42 52.6**	**+0.1**
	baz=35						
TAS	**Tashkent**	**1.38**	**5**	⇑*e*P	**Pb**	**00 42 36.4**	**-0.4**
	baz=5.0						
TAS				⇑*e*S	**Sg**	**00 42 55.2**	**+0.6**
	baz=5.0						
AGL	**Agalyk**	**1.80**	**257**	P	**Pb**	**00 42 43.3**	**-0.7**
AGL				S	**Sg**	**00 43 08.1**	**+0.1**
CHMI	**Chimion**	**1.85**	**79**	P	**Pb**	**00 42 44.4**	**-0.5**
CHMI				S	**Sg**	**00 43 11.4**	**+1.6**
KTAB	**Kitab**	**1.93**	**246**	P	**Sg**	**00 43 12.7**	**+0.5**
SHAK	**Shakhimardan**	**2.00**	**89**	P	**Pb**	**00 42 46.7**	**-0.7**
SHAK				S	**Sg**	**00 43 14.8**	**+0.4**
FRG	**Fergana**	**2.07**	**77**	P	**Sg**	**00 43 17.7**	**+0.9**
DRK	**Karamyk**	**2.10**	**102**	⇓*i*P	**Pb**	**00 42 48.4**	**-0.9**
	baz=2.0						
DRK				⇓*i*S	**Sb**	**00 43 15.8**	**-0.2**
	baz=2.0						
TRKS	**Terek-Say**	**2.19**	**43**	⇑*i*P	**Pb**	**00 42 49.2**	**-1.5**
	baz=45						
TRKS				⇑*i*S	**Sb**	**00 43 17.4**	**-1.0**
	baz=45						
ARK	**Arkit**	**2.83**	**48**	⇑*i*P	**Pb**	**00 42 58.5**	**-3.0**
	baz=48						
ARK				⇑*i*S	**Sb**	**00 43 33.2**	**-3.4**
	baz=48						
KK31	**Karatay Array**	**3.31**	**18**	⇓Pg	**Pb**	**00 43 09.9**	**+0.1**
	0.9nm,0.3s,baz=203,slow=16,SNR=10						
KK31				Lg	Lg	00 43 52.0	
	3.3nm,0.4s,baz=205,slow=25,SNR=13						
ARLS	**Aral**	**4.37**	**62**	⇑*i*P	**Pn**	**00 43 19.9**	**+2.1**
	baz=62						
ARLS				⇑*i*S	**Sn**	**00 44 09.9**	**+0.6**
	baz=62						

SSNC ***14*** *00:51:11.4±1.2, 19°.71N×76°.06W, h5*^{km}*, MD3.4, ML3.4, MW3.5*

OSPL ***14*** *00:51:11.2±2.5, 20°.10N×76°.15W, h0*^{km}*±12*^{km}*, ML3.2*

ISC 14 00:51:06.9±1.9**, 19°.69N**±0°.06×**76°.12W**±0°.03**, h3**^{km}±17^{km}**, n17,** σ**1**^{s}**.80**/25**, 1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCC	**Rio Carpintero**	**0.50**	**53**	*e*P	**Pb**	**00 51 19.6**	**+1.3**
RCC				*e*S	**Sb**	**00 51 25.4**	**-0.6**
LMGC	**Las Mercedes**	**0.92**	**294**	*e*P	**Pn**	**00 51 27.9**	**+1.2**
LMGC				*e*S	**Sn**	**00 51 40.5**	**0.0**
LMGC				IAML		00 51 43.7	
	comp=E,532nm,0.2s						
LMGC				IAML		00 51 43.7	
	comp=N,901nm,0.3s						
GTBY	**Guantanamo Bay**	**0.97**	**76**	*e*P	**Pn**	**00 51 28.0**	**+0.5**
GTBY				*e*S	**Sb**	**00 51 39.9**	**+0.1**
GTBY	**Guantanamo Bay**	**0.97**	**76**	*i* P	**Pn**	**00 51 28.5**	**+0.9**
GTBY				*e*S	**Sn**	**00 51 41.5**	**-0.4**
GTBY				IAML		00 51 42.9	
	comp=Z,637nm,0.4s						
HLGC	**Holguin**	**1.19**	**3**	*e*P	**Pn**	**00 51 32.3**	**+1.7**
HLGC				IAML		00 51 51.1	
	comp=E,2µm,1.1s						
HLGC				IAML		00 51 51.6	
	comp=N,2µm,0.7s						
MOAC	**Moa**	**1.45**	**48**	*e*P	**Pn**	**00 51 34.2**	**+0.1**
GWJ	**Greenwich**	**1.71**	**200**	*i* P	**Pg**	**00 51 40.0**	**+0.3**
STH	**Stony Hill**	**1.74**	**202**	⇓*i*P	**Pg**	**00 51 40.3**	**+0.1**
HOJ	**Hope**	**1.78**	**200**	*i* P	**Pg**	**00 51 41.0**	**-0.1**
MASC	**Masc**	**1.84**	**75**	*e*P	**Pn**	**00 51 39.8**	**+0.4**
MASC				*e*S	**Sb**	**00 52 03.5**	**-1.1**
MTDJ	**Mount Denham**	**1.98**	**223**	*e*P	**Pb**	**00 51 43.5**	**-0.2**
CCCC	**Cccc**	**2.15**	**314**	*e*P	**Pn**	**00 51 43.1**	**-0.7**
LGNH	**Logne**	**3.52**	**109**	*i* P	**Pb**	**00 52 06.9**	**-3.0**
LGNH				*e*S	**Sb**	**00 52 50.8**	**-2.4**
LGNH				IAML		00 52 55.9	
	comp=Z,12nm,0.2s						
JAKH	**Jacmel**	**3.70**	**112**	*i* P	**Pb**	**00 52 12.0**	**-0.9**
JAKH				IAML		00 53 02.7	
	comp=Z,34nm,0.4s						
LONE2	**Loma La Sidra**	**4.53**	**104**	*i* P	**Pn**	**00 52 20.0**	**+3.4**
LONE2				IAML		00 53 31.6	
	comp=Z,22nm,0.4s						
SDDR	**Presa de Saban**	**4.61**	**98**	*i* P	**Pn**	**00 52 20.6**	**+2.9**
SDDR				*e*S	**Sn**	**00 53 14.5**	**+2.7**
SDDR				IAML		00 53 27.6	
	comp=Z,20nm,0.6s						
GRTK	**Grand Turk**	**5.01**	**68**	*i* P	**Pn**	**00 52 25.1**	**+2.1**
GRTK				*e*S	**Sn**	**00 53 18.1**	**-3.3**
GRTK				IAML		00 53 31.8	
	comp=Z,44nm,1.0s						

MOS ***14*** *01:19:10.9±1.0, 27°.98N×52°.44E, h8*^{km}*, mb4.6/35, Error ellipse: s-maj=6.6km s-min=4.2km az=103.6*

IDC ***14*** *01:19:11.1±0.6, 27°.95N×52°.49E, h0*^{km}*, mb4.2/31, mbtmp4.2/38, ML3.8/6, MS3.6/40, Error ellipse: s-maj=14.5km s-min=11.2km az=13.0*

NEIC ***14*** *01:19:13.0±1.6, 28°.02N±0°.06×52°.43E±0°.05, h7*^{km}*±4*^{km}*, mb4.5/58, mb_Lg4.4(TEH), ML4.2(THR), Error ellipse: s-maj=9.3km s-min=5.2km az=155.0*

THR ***14*** *01:19:13±2.2, 28°.10N±0°.06×52°.60E±0°.06, h18*^{km}*±4*^{km}*, Error ellipse: s-maj=9.0km s-min=7.9km az=173.0*

TEH ***14*** *01:19:13.2, 28°.03N×52°.47E, h15*^{km}*, ML4.4*

OMAN ***14*** *01:19:18.3±0.7, 27°.63N×52°.49E, h10*^{km}*, mb5.1/16, ml4.8/15, Error ellipse: s-maj=8.7km s-min=5.1km az=15.0*

DSN ***14*** *01:19:18.5±2.0, 27°.73N×52°.62E, h10*^{km}*, ML4.5/11, Error ellipse: s-maj=23.6km s-min=9.3km az=174.0*

ISC 14 01:19:13.4±0.3**, 28°.01N**±0°.03×**52°.43E**±0°.03**, h15**^{km}**, n436,** σ**1**^{s}**.64**/447**, mb4.5**/90**, MS3.7**/40**, 27C-23D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.93**	**135**	*e*Pg	**Pb**	**01 19 30.6**	**-0.7**
LMD1				*e*		01 19 55.8	
	comp=Z,20µm,0.4s						
JHRM	**Jahrom**	**1.13**	**64**	Pg	**Pn**	**01 19 33.9**	**-0.9**
JHRM	**Jahrom**	**1.13**	**64**	*e*Pg	**Pn**	**01 19 33.9**	**-0.9**
JHRM				*e*		01 19 59.1	
	comp=Z,35µm,0.3s						
AHBU	**AHRAM**	**1.31**	**311**	*e*Pg	**Pb**	**01 19 38.4**	**+0.6**
SHI	**Shiraz**	**1.63**	**3**	*e*Pn	**Pg**	**01 19 43.1**	**-1.7**
SHI				*e*		01 20 19.0	
	comp=Z,46µm,0.7s						
KAZ1	**Kazerun**	**1.75**	**337**	*e*Pn	**Pb**	**01 19 44.5**	**-0.9**
KAZ1				*e*		01 20 27.1	
	comp=Z,62µm,0.7s						
LAR1	**LAR**	**1.75**	**101**	*e*Pn	**Pb**	**01 19 44.7**	**-0.7**
SHMA	**Al-Shehemyia**	**2.51**	**212**	P	**Pn**	**01 19 56.9**	**+3.2**
KHOR	**Al-Khor Airpor**	**2.51**	**199**	P	**Pn**	**01 19 55.3**	**+1.6**
SAKB	**Bahrain**	**2.63**	**220**	P	**Pn**	**01 19 58.7**	**+3.4**
JRN	**Qarnain Island**	**3.08**	**173**	*e*Pn	**Pn**	**01 20 04.2**	**+2.7**
JRN	**Qarnain Island**	**3.08**	**173**	P	**Pn**	**01 20 03.7**	**+2.2**
	SNR=5.9						
KLNJ	**Kolanjah**	**3.08**	**346**	*e*Pn	**Pn**	**01 20 02.2**	**+0.4**
ABEH	**Behbahan**	**3.21**	**324**	*e*Pn	**Pn**	**01 20 04.5**	**+1.2**
GENO	**Geno**	**3.37**	**99**	Pn	**Pn**	**01 20 05.9**	**+0.2**
GENO	**Geno**	**3.37**	**99**	*e*Pn	**Pn**	**01 20 06.0**	**+0.2**
GENO				*e*		01 21 16.3	
	comp=Z,9µm,1.2s						
TRNA	**Turayna**	**3.44**	**199**	P	**Pn**	**01 20 08.9**	**+2.5**
IBND	**Bandar-abas**	**3.69**	**98**	*e*Pn	**Pn**	**01 20 10.5**	**+0.6**
IRAM	**Ramesheh**	**3.79**	**359**	*e*Pn	**Pn**	**01 20 12.1**	**+0.6**
UMQ	**Umm Al-Quwin**	**3.80**	**130**	*e*Pn	**Pn**	**01 20 13.2**	**+1.7**
UMQ	**Umm Al-Quwin**	**3.80**	**130**	P	**Pn**	**01 20 15.9**	**+4.4**
SHME	**Shamm**	**3.84**	**120**	*e*Pn	**Pn**	**01 20 13.3**	**+1.2**
SHME	**Shamm**	**3.84**	**120**	P	**Pn**	**01 20 13.2**	**+1.2**
	SNR=11						
SHME				S	**Sn**	**01 20 57.2**	**+0.3**
SHME	**Shamm**	**3.84**	**120**	P	**Pn**	**01 20 13.1**	**+1.0**
IMEH	**Mehriz**	**3.87**	**29**	*e*Pn	**Pn**	**01 20 14.4**	**+1.8**
IMEH				*e*		01 20 16.9	
	comp=Z,4µm,0.3s						
SLWR	**Sila**	**3.98**	**190**	*e*Pn	**Pn**	**01 20 15.9**	**+2.0**
SLWR	**Sila**	**3.98**	**190**	P	**Pn**	**01 20 16.0**	**+2.1**
IBRJ	**Brojen**	**4.02**	**346**	*e*Pn	**Pn**	**01 20 14.4**	**-0.3**
BANOM	**Banah**	**4.03**	**120**	*e*Pn	**Pn**	**01 20 15.8**	**+1.2**
BANOM	**Banah**	**4.03**	**120**	P	**Pn**	**01 20 16.0**	**+1.3**
	SNR=60						
BANOM				S	**Sn**	**01 21 01.9**	**+0.3**
BANOM	**Banah**	**4.03**	**120**	P	**Pn**	**01 20 15.5**	**+0.8**
BANOM				S	**Sn**	**01 21 01.2**	**-0.4**
ISAD	**Sadrabad**	**4.04**	**15**	*e*Pn	**Pn**	**01 20 16.5**	**+1.5**
GHWR	**Ruwais**	**4.05**	**174**	P	**Pn**	**01 20 16.5**	**+1.7**
AJN	**Ajban**	**4.13**	**146**	*e*Pn	**Pn**	**01 20 18.4**	**+2.5**
AJN	**Ajban**	**4.13**	**146**	P	**Pn**	**01 20 18.7**	**+2.8**
	SNR=7.2						
AJN				S	**Sn**	**01 21 04.8**	**+0.9**
AJN	**Ajban**	**4.13**	**146**	P	**Pn**	**01 20 17.9**	**+1.9**
NAZ	**Nazwa, Dubai**	**4.17**	**135**	P	**Pn**	**01 20 18.6**	**+2.0**
NAZ				S	**Sn**	**01 21 06.0**	**+0.8**
MASF	**Masafi**	**4.25**	**127**	P	**Pn**	**01 20 19.0**	**+1.4**
	SNR=26						
MASF				S	**Sn**	**01 21 06.0**	**-1.0**
MSFE	**Esma-Masafi**	**4.25**	**127**	*e*Pn	**Pn**	**01 20 19.1**	**+1.4**
MSFE	**Esma-Masafi**	**4.25**	**127**	P	**Pn**	**01 20 19.2**	**+1.4**
MSFE				S	**Sn**	**01 21 06.7**	**-0.4**
ASUD	**Al Ashush, Dub**	**4.26**	**142**	P	**Pn**	**01 20 20.1**	**+2.4**
ASUD	**Al Ashush, Dub**	**4.26**	**142**	P	**Pn**	**01 20 19.5**	**+1.7**
KRBR	**Kerman**	**4.27**	**62**	Pn	**Pn**	**01 20 19.0**	**+0.8**
KRBR					**Sb**	**01 21 20.0**	**0.0**
KRBR	**Kerman**	**4.27**	**62**	*e*Pn	**Pn**	**01 20 19.9**	**+1.7**
FAQ	**Al Faqa, Dubai**	**4.31**	**138**	P	**Pn**	**01 20 20.3**	**+1.8**
FAQ				S	**Sn**	**01 21 09.1**	**+0.5**
IGAR	**Gharneh**	**4.39**	**356**	*e*Pn	**Pn**	**01 20 20.8**	**+1.0**
MZWR	**Madinat Zayed**	**4.43**	**163**	*e*Pn	**Pn**	**01 20 22.2**	**+2.2**
MZWR	**Madinat Zayed**	**4.43**	**163**	P	**Pn**	**01 20 22.1**	**+2.0**
IBAF	**Bafgh**	**4.49**	**37**	*e*Pn	**Pn**	**01 20 22.7**	**+1.6**
IBAF				*e*		01 20 26.1	
	comp=Z,3µm,0.5s						
SHK1	**Shahrekord**	**4.51**	**343**	*e*Pn	**Pn**	**01 20 21.4**	**0.0**
AMIS	**Naft Sefid**	**4.55**	**324**	*e*Pn	**Pn**	**01 20 22.8**	**+1.0**
UOSS	**Minazif**	**4.55**	**131**	Pn	**Pn**	**01 20 22.0**	**+0.1**
UOSS	**Minazif**	**4.55**	**131**	*e*Pn	**Pn**	**01 20 22.7**	**+0.9**
UOSS	**Minazif**	**4.55**	**131**	P	**Pn**	**01 20 22.7**	**+0.9**
UOSS				S	**Sn**	**01 21 13.4**	**-1.2**
ICHK	**Chekchek**	**4.56**	**22**	*e*Pn	**Pn**	**01 20 24.0**	**+1.9**
ICHK				*e*		01 20 25.0	
	comp=Z,5µm,0.5s						
HATD	**Hatta, Dubai**	**4.59**	**133**	P	**Pn**	**01 20 23.7**	**+1.4**
HATD				S	**Sn**	**01 21 15.0**	**-0.4**
ASHO	**Ashiyiah**	**4.64**	**135**	*e*Pn	**Pn**	**01 20 24.4**	**+1.3**
ASHO	**Ashiyiah**	**4.64**	**135**	P	**Pn**	**01 20 24.3**	**+1.3**
	SNR=58						
ASHO				S	**Sn**	**01 21 16.3**	**-0.5**
ASHO	**Ashiyiah**	**4.64**	**135**	P	**Pn**	**01 20 23.9**	**+0.8**
KHNJ	**Kahnooj**	**4.67**	**90**	*e*Pn	**Pn**	**01 20 24.0**	**+0.6**
NASN	**Na'in**	**4.79**	**4**	Pn	**Pn**	**01 20 25.0**	**-0.3**
NASN	**Na'in**	**4.79**	**4**	*e*Pn	**Pn**	**01 20 25.5**	**+0.2**
CHMN	**Cheshme madani**	**4.84**	**66**	Pn	**Pn**	**01 20 27.7**	**+1.6**
CHMN	**Cheshme madani**	**4.84**	**66**	*e*Pn	**Pn**	**01 20 27.7**	**+1.6**
CHMN				*e*		01 21 54.7	
	comp=Z,2µm,0.9s						
IPIR	**Pirpir**	**4.85**	**344**	*e*Pn	**Pn**	**01 20 26.1**	**0.0**
IZEF	**Zefreh**	**4.87**	**359**	*e*Pn	**Pn**	**01 20 26.1**	**-0.3**
ALNE	**Al Ain**	**4.94**	**142**	*e*Pn	**Pn**	**01 20 29.2**	**+2.0**
ALNE	**Al Ain**	**4.94**	**142**	P	**Pn**	**01 20 29.1**	**+1.9**
	SNR=13						
ALNE				S	**Sn**	**01 21 24.3**	**+0.2**
ALNE	**Al Ain**	**4.94**	**142**	P	**Pn**	**01 20 28.9**	**+1.8**
MZR	**Muzera**	**5.07**	**169**	*e*Pn	**Pn**	**01 20 30.9**	**+1.9**
MZR	**Muzera**	**5.07**	**169**	P	**Pn**	**01 20 30.8**	**+1.8**
	SNR=25						
MZR	**Muzera**	**5.07**	**169**	P	**Pn**	**01 20 30.6**	**+1.6**
ANAR	**Anarak**	**5.29**	**12**	Pn	**Pn**	**01 20 32.5**	**+0.5**
ANAR	**Anarak**	**5.29**	**12**	*e*Pn	**Pn**	**01 20 32.5**	**+0.5**
JASK	**Jask - Hormozg**	**5.30**	**112**	*e*Pn	**Pn**	**01 20 32.8**	**+0.7**
IKLH	**Kolahrood**	**5.34**	**352**	*e*Pn	**Pn**	**01 20 33.0**	**+0.1**
KBAM	**BAM**	**5.42**	**77**	*e*Pn	**Pn**	**01 20 35.2**	**+1.5**
KBAM				*e*		01 20 38.1	
	comp=Z,3µm,0.6s						
QAMS	**Qamsar**	**5.78**	**351**	Pn	**Pn**	**01 20 39.1**	**+0.2**
QAMS	**Qamsar**	**5.78**	**351**	*e*Pn	**Pn**	**01 20 39.1**	**+0.2**
UMZA	**Um Al Zommool**	**5.82**	**154**	*e*Pn	**Pn**	**01 20 40.9**	**+1.7**
UMZA	**Um Al Zommool**	**5.82**	**154**	P	**Pn**	**01 20 40.5**	**+1.3**
UMZA				S	**Sn**	**01 21 43.9**	**-1.8**
ARQ	**Araqi**	**5.94**	**141**	P	**Pn**	**01 20 41.7**	**+0.9**
	SNR=96						
ARQ				S	**Sn**	**01 21 48.4**	**-0.3**
KRSH	**Karshahi**	**5.95**	**358**	*e*Pn	**Pn**	**01 20 41.4**	**+0.3**
KHMZ	**Khomeyn**	**6.09**	**340**	*e*Pn	**Pn**	**01 20 43.6**	**+0.4**
TPRV	**Parvadeh(Tabas**	**6.21**	**35**	*e*Pn	**Pn**	**01 20 45.0**	**+0.4**
HOQ	**Hoqain**	**6.23**	**134**	P	**Pn**	**01 20 45.7**	**+0.9**
	SNR=24						
HOQ				S	**Sn**	**01 21 54.0**	**-1.7**
ISFB	**Sefidab**	**6.33**	**359**	*e*Pn	**Pn**	**01 20 46.1**	**-0.1**
GHVR	**GHOM**	**6.53**	**352**	Pn	**Pn**	**01 20 49.0**	**0.0**
GHVR	**GHOM**	**6.53**	**352**	*e*Pn	**Pn**	**01 20 49.8**	**+0.8**
IKFM	**Kafar-mosalman**	**6.76**	**325**	*e*Pn	**Pn**	**01 20 52.9**	**+0.7**
BSY	**Bisya**	**6.79**	**139**	P	**Pn**	**01 20 53.5**	**+1.0**
	SNR=83						
BSY				S	**Sn**	**01 22 07.1**	**-2.5**
	SNR=17						
BIDO	**Bidbid**	**6.81**	**130**	*e*Pn	**Pn**	**01 20 54.1**	**+1.4**
BIDO	**Bidbid**	**6.81**	**130**	P	**Pn**	**01 20 54.2**	**+1.4**
	SNR=5.5						
BIDO				S	**Sn**	**01 22 08.4**	**-1.6**
IDOB	**Doab**	**6.82**	**329**	*e*Pn	**Pn**	**01 20 52.4**	**-0.8**
ASAO	**Ashtian**	**6.84**	**343**	Pn	**Pn**	**01 20 53.8**	**+0.4**
ASAO	**Ashtian**	**6.84**	**343**	*e*Pn	**Pn**	**01 20 53.8**	**+0.4**
TKDS	**Koohdasht(Taba**	**6.89**	**35**	*e*Pn	**Pn**	**01 20 54.2**	**+0.2**
IQOM	**Qom**	**6.91**	**351**	*e*Pn	**Pn**	**01 20 54.2**	**-0.2**
TNSJ	**Nastanj**	**6.94**	**30**	*e*Pn	**Pn**	**01 20 55.4**	**+0.8**
IVRN	**Varamin**	**6.99**	**355**	*e*Pn	**Pn**	**01 20 55.3**	**-0.1**
HSAM	**Samen**	**7.00**	**333**	Pn	**Pn**	**01 20 56.4**	**+0.7**
HSAM	**Samen**	**7.00**	**333**	*e*Pn	**Pn**	**01 20 56.4**	**+0.7**
BSRN	**Basiran**	**7.02**	**54**	*e*Pn	**Pn**	**01 20 55.7**	**-0.1**
SMDO	**Samad**	**7.07**	**133**	P	**Pn**	**01 20 57.2**	**+0.6**
	SNR=50						
SMDO				S	**Sn**	**01 22 15.7**	**-1.1**
	SNR=8.5						
WSAR	**Wadi Sarin**	**7.34**	**129**	Pn	**Pn**	**01 21 00.3**	**+0.3**
	comp=Z,30nm,0.4s,baz=312,slow=12,SNR=64						
WSAR				Sn	**Sn**	**01 22 20.1**	**-3.1**
	comp=Z,8.7nm,0.3s,baz=261,slow=23,SNR=11						
WSAR				Lg	Lg	01 23 09.2	
	baz=100,slow=22						
WSAR				LR	LR	01 24 30.3	
	comp=Z,183nm,19.6s,baz=338,slow=44						
WSAR	**Wadi Sarin**	**7.34**	**129**	P	**Pn**	**01 21 00.4**	**+0.3**
	SNR=70						
WSAR				S	**Sn**	**01 22 21.6**	**-1.6**
HAGD	**Aghdareh**	**7.35**	**338**	*e*Pn	**Pn**	**01 21 00.1**	**-0.4**
ILAS	**Lasjerd**	**7.37**	**3**	*e*Pn	**Pn**	**01 21 00.9**	**+0.2**
NHDN	**Nehbandan**	**7.44**	**61**	*e*Pn	**Pn**	**01 21 01.8**	**+0.3**
IHSB	**Hasanabad**	**7.47**	**353**	*e*Pn	**Pn**	**01 21 01.2**	**-0.8**
ZHDN	**Zahedan**	**7.49**	**77**	*e*Pn	**Pn**	**01 21 03.2**	**+0.9**
IBZA	**Bozab**	**7.54**	**330**	*e*Pn	**Pn**	**01 21 02.5**	**-0.5**
IANJ	**Anjilo**	**7.54**	**9**	*e*Pn	**Pn**	**01 21 04.2**	**+1.1**
IDMV	**Damavand**	**7.55**	**358**	*e*Pn	**Pn**	**01 21 03.3**	**0.0**
CHBR	**Chabahar**	**7.59**	**107**	*e*Pn	**Pn**	**01 21 03.2**	**-0.3**
JMDO	**Jabal Madar**	**7.61**	**136**	P	**Pn**	**01 21 04.4**	**+0.6**

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      SNR=26
JMDO                                 S      Sn      01 22 28.0 -1.9
IFIR  Firoozkooh          7.62   2 ePn    Pn      01 21 05.7 +1.6
RAYN  Ar Rayn             7.67 236        Pn      01 21 05.1 +0.3
RAYN  Ar Rayn             7.67 236  P     Pn      01 21 05.1 +0.3
RAYN  Ar Rayn             7.67 236  P     Pn      01 21 05.8 +1.0
IRAZ  Razeghan            7.68 345 ePn    Pn      01 21 04.3 -0.6
KER   Kermanshah          7.81 326 ePn    Pn      01 21 05.7 -0.9
ISHM  Shahmirzad          7.81   5 ePn    Pn      01 21 06.8  0.0
AFRZ  Afriz               7.83  45 ePn    Pn      01 21 07.4 +0.5
CHTH  Charan              7.95 352  Pn    Pn      01 21 08.0 -0.7
CHTH  Charan              7.95 352 ePn    Pn      01 21 08.3 -0.4
WBK   Wadi Bani Khal      7.99 131  P     Pn      01 21 09.3 +0.2
      SNR=62
IGHG  Ghaleghazi          8.06 323 ePn    Pn      01 21 09.8 -0.3
IPRN  Peran               8.21 359 ePn    Pn      01 21 13.1 +1.0
NGCH  Negor - Chabah      8.22 107 ePn    Pn      01 21 13.5 +1.3
ILIN  Lien                8.32 327 ePn    Pn      01 21 13.4 -0.4
IDHR  Dehrash             8.44 324 ePn    Pn      01 21 15.4 +0.1
SHRO  Shahrood            8.52  20 ePn    Pn      01 21 17.1 +0.7
QALM  Alamut, Qazvin      8.53 350 ePn    Pn      01 21 16.4 -0.3
IGLO  Ghaloghah           8.55   8 ePn    Pn      01 21 18.2 +1.3
JLN   Jalan Bani Buh      8.60 131  P     Pn      01 21 18.7 +1.3
      SNR=6.6
MHTO  MHTO                8.62 143  P     Pn      01 21 18.2 +0.6
      SNR=27
SHRT  Shahrakht           8.79  48  Pn    Pn      01 21 16.0 -4.0
SHRT  Shahrakht           8.79  48 ePn    Pn      01 21 16.2 -3.8
SRVN  Saravan             8.86  92 ePn    Pn      01 21 21.5 +0.5
DQM   DQM                 9.30 149  P     Pn      01 21 27.1 +0.1
DOK   Doka                9.48 170  P     Pn      01 21 29.4 -0.1
      SNR=8.3
DOK                                 S     Sn      01 23 12.1 -3.6
TBJM  Torbat-e-JAM        9.88  41 ePn    Pn      01 21 36.0 +0.9
IPAY  Payeh              10.09  32 ePn    Pn      01 21 39.2 +1.3
MRVT  Maraveh tapeh      10.10  17 ePn    Pn      01 21 38.8 +0.8
WHFO  Wadi Hawf          10.12 173  P     Pn      01 21 37.4 -0.9
      SNR=11
WHFO                                S     Sn      01 23 28.3 -3.3
ISFR  Sfrayin            10.17  26 ePn    Pn      01 21 40.8 +1.7
SHAO  Shalim             10.36 163  P     Pn      01 21 42.0 +0.4
      SNR=8.0
DMTO  DMTO               10.50 167  P     Pn      01 21 43.5  0.0
      SNR=51
DMTO                                S     Sn      01 23 38.1 -2.8
BJRD  Bojnurd            10.53  22 ePn    Pn      01 21 44.0 +0.1
HRA   Herat              10.53  50        Pn      01 21 44.7 +0.6
RBK   Rabkut             10.58 171  P     Pn      01 21 44.3 -0.4
      SNR=10
IKRD  Kardeh             10.59  33 ePn    Pn      01 21 46.3 +1.4
ABTO  Aybut              10.63 176  P     Pn      01 21 45.3  0.0
GEYT  Alibeck            10.98  24  Pn    Pn      01 21 52.0 +1.9
      comp=Z,0.7nm,0.3s,baz=231,slow=28,SNR=7.0
      comp=Z,4.7nm,0.8s
GEYT  Alibeck            10.98  24        Pn      01 21 51.7 +1.7
GYA0B ALIBECK ARRAY      10.98  24        Pn      01 21 51.7 +1.6
GRMI  Germi              11.42 342 ePn    Pn      01 21 57.4 +1.3
ISHB  Shabestar          11.72 333 ePn    Pn      01 21 59.7 -0.7
IMRD  Marand             12.06 334 ePn    Pn      01 22 05.5 +0.6
MARD  Mardin             13.50 316        Pn      01 22 23.9 -0.6
GURO  Guroymak-BITLI     13.63 323        Pn      01 22 25.1 -1.3
GNI   Garni              13.68 334  Pn    Pn      01 22 29.6 +2.6
      comp=Z,6.6nm,0.8s,baz=150,slow=4.9,SNR=7.4
GNI                                 LR    LR      01 27 22.3
      comp=Z,61nm,19.0s,baz=144,slow=36
GNI   Garni              13.68 334  Pn    Pn      01 22 26.3 -0.7
GNI   Garni              13.68 334deP     Pn      01 22 30.1 +3.1
GNI                                 pmax  pmax
      comp=Z,7.0nm,0.8s
ASF   Jabal al Asfar     14.07 291  Pn    Pn      01 22 31.9 -0.4
      comp=Z,0.3nm,0.3s,baz=205,slow=12,SNR=3.2
ASF                                 Sn    Sn      01 25 01.4 -6.9
      comp=Z,0.1nm,0.3s,baz=292,slow=14,SNR=1.6
ASF                                 Lg    Lg      01 26 47.5
      baz=71,slow=19,SNR=1.1
      comp=Z,0.8nm,0.3s
ASF   Jabal al Asfar     14.07 291  P     Pn      01 22 32.0 -0.4
KARS  Kars               14.76 331        Pn      01 22 42.1 +0.4
KARS  Kars               14.76 331  P     Pn      01 22 42.1 +0.4
GHAJ  Ghor Haditha       15.03 287  Pn    Pn      01 22 44.4 -0.8
EIL   Elat               15.41 280  Pn    P       01 22 54.0 -0.8
      comp=Z,0.2nm,0.3s,baz=109,slow=9.5,SNR=6.9
EIL                                 Lg    Lg      01 27 28.7
      comp=Z,0.2nm,0.3s,baz=59,slow=15,SNR=1.6
EIL                                 LR    LR      01 30 10.2
      comp=Z,184nm,18.3s,baz=83,slow=43
MMAI  Mount Meron Ar     15.50 293  Pn    Pn      01 22 52.4 +0.9
      comp=Z,0.6nm,0.3s,baz=17,slow=42,SNR=2.3
KOPT  Kop Dagi           15.52 324  Pn    Pn      01 22 51.5 -0.5
KOPT                                IAmb  IAmb    01 23 09.7
      comp=Z,11nm,0.7s
KBL   Kabul              15.62  61  Pn    Pn      01 22 53.4 +0.1
KBL   Kabul              15.62  61  P     Pn      01 22 53.4 +0.1
KBL                                 pmax  pmax
      comp=Z,19nm,1.3s
GROC  Groznyy            16.08 342 eP     P       01 23 02.7 +0.4
GROC                               eS     S       01 26 03.1 -7.3
GROC                                pmax  pmax
      comp=Z,28nm,0.6s
ONI   Oni                16.27 336        Pn      01 23 01.8 +0.3
ONI   Oni                16.27 336  P     Pn      01 23 01.8 +0.3
ONI                                 pmax  pmax
      comp=Z,16nm,1.1s
ZEI   Tsey               16.29 337 eP     Pn      01 23 00.6 -1.2
ZEI                                 pmax  pmax
      comp=Z,23nm,0.9s
NCK   Nalchik            17.02 338⇓eP     P       01 23 12.5 -0.2
NCK                                 pmax  pmax
      comp=Z,8.0nm,0.4s
THW   Thamme Wali        17.33  69  P     Pn      01 23 13.4 -1.4
KBZ   Khabaz             17.46 336  P     P       01 23 17.6 +0.1
      comp=Z,0.2nm,0.3s,baz=147,slow=11,SNR=7.0
      comp=Z,4.3nm,0.8s
KBZ   Khabaz             17.46 336⇓eP     P       01 23 17.7 +0.2
KBZ                                 pmax  pmax
      comp=Z,7.0nm,1.1s
CHGR  Chuyangaron        17.53  48  P     P       01 23 18.0 -0.4
BNN   Bunyan             17.54 312  IAmb  IAmb    01 23 38.9
      comp=Z,30nm,0.8s
CEP   Cherat             17.68  66  P     P       01 23 19.7 -0.5
CSS   Mathiatis          17.69 298  Pn    Pn      01 23 17.9 -1.4
KVAR  Kislovodsk Arr     17.73 336  P     P       01 23 21.0 +0.4
      baz=72,slow=20
      comp=Z,3.2nm,0.6s
KIV   Kislovodsk         17.74 336  Pn    Pn      01 23 17.6 -2.3
KIV   Kislovodsk         17.74 336 eP     P       01 23 22.0 +1.3
KIV                                 pmax  pmax
      comp=Z,19nm,1.1s
KIV                                 MLR   MLR
      comp=Z,38nm,14.0s
GAR   Garm               18.48  49  IAmb  IAmb    01 23 34.0
      comp=Z,34nm,0.6s
SOC   Sochi              18.62 330 eP     P       01 23 29.6 -0.6
SOC                                e              01 26 59.2
SOC                                 MLR   MLR
      comp=Z,173nm,19.0s
ATD   Arta Tunnel        18.69 211  LR    LR      01 31 56.9
      comp=Z,264nm,21.1s,baz=18,slow=41
ATD   Arta Tunnel        18.69 211  P     P       01 23 31.6 +0.3
CHCP  Chirah Chowk       18.75  67  P     Pn      01 23 31.4 -0.9
CHCP                                S     Sn      01 27 00.0 -1.8
TAS   Tashkent           19.16  42  P     Pn      01 23 37.0 -0.2
TAS   Tashkent           19.16  42  P     Pn      01 23 37.0 -0.2
TAS                                 pmax  pmax
      comp=Z,61nm,0.6s
BTK   Batken             19.37  47  IAmb  IAmb    01 23 48.0
      comp=Z,18nm,0.6s
BR131 Keskin Array S     19.45 312ceP     Pn      01 23 41.7 +0.9
BRTR  Keskin Array B     19.45 312  P     Pn      01 23 41.0 +0.1
      comp=Z,0.3nm,0.3s,baz=129,slow=11,SNR=29
      comp=Z,3.9nm,0.7s
BRTR  Keskin Array B     19.45 312  P     P       01 23 40.1 +0.5
BRTR  Keskin Array B     19.45 312  P     Pn      01 23 41.0 +0.1
ANTO  Ankara             20.09 311  P     P       01 23 47.6 +1.1
ANTO                                IAmb  IAmb    01 23 53.7
      comp=Z,12nm,0.6s
ANTO  Ankara             20.09 311  P     P       01 23 47.6 +1.1
ANTO                                pmax  pmax
      comp=Z,13nm,0.6s
KK31  Karatay Array      20.99  39  IAmb  IAmb    01 24 01.0
      comp=Z,19nm,0.8s
KK31  Karatay Array      20.99  39 i P    P       01 23 55.6 -0.6
KKAR  Karatay Array      20.99  39  P     P       01 23 55.7 -0.5
KKAR  Karatay Array      20.99  39  P     P       01 23 55.7 -0.5
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MDUB  Mudurnu            21.45 311  P     P       01 24 01.5 +0.3
AB31  Akbulak array      21.99  13 eP     P       01 24 07.0 +0.2
ABKAR Akbulak array      21.99  13  P     P       01 24 07.1 +0.3
AML   Almayashu          22.31  45  P     P       01 24 11.0 +0.1
      SNR=19
SIM   Simferopol'        22.34 324 eP     P       01 24 10.7 +0.1
SIM                                 SSS   SSS     01 29 07.0
SIM                                 pmax  pmax
      comp=Z,44nm,0.8s
KSH   Kashi              22.62  53  P     P       01 24 08.9 -5.0
KSH                                 pP    pP      01 24 13.0 -5.3
KSH                                 sP    sP      01 24 16.3 -4.0
KSH                                 S     S       01 28 09.1  -12
KSH                                 SS    SnSn    01 28 41.8 -9.0
KSH                                 pmax  pmax
      comp=Z,9.0nm,0.9s
KSH                                 LR    LR
      comp=N,200nm,15.8s
KSH                                 LR    LR
      comp=E,140nm,15.1s
KSH                                 LR    LR
      comp=Z,210nm,12.7s
EKS2  Erkin-Say          22.65  44  P     P       01 24 16.4 +2.3
      SNR=13
AKTO  Aktyubinsk         22.80   9  P     P       01 24 17.0 +1.6
      comp=Z,11nm,0.8s,baz=193,slow=11,SNR=36
AKTO                                LR    LR      01 35 12.6
      comp=Z,180nm,19.8s,baz=176,slow=42
      comp=Z,11nm,0.8s
UCH   Uchtor             22.88  46  P     P       01 24 19.1 +2.2
      SNR=19
AAK   Ala-Archa          23.08  45  P     P       01 24 21.3 +2.6
      SNR=14
AAK   Ala-Archa          23.08  45  P     P       01 24 20.0 +1.3
      comp=Z,7.2nm,0.7s,baz=220,slow=10,SNR=17
AAK                                 LR    LR      01 35 03.5
      comp=Z,371nm,18.0s,baz=240,slow=41
      comp=Z,7.2nm,0.7s
AAK   Ala-Archa          23.08  45  P     P       01 24 19.8 +1.1
AAK                                 IAmb  IAmb    01 24 25.8
      comp=Z,13nm,0.7s
AAK   Ala-Archa          23.08  45⇓eP     P       01 24 20.7 +2.0
AAK                                 pmax  pmax
      comp=Z,11nm,0.6s
KBK   Karagaybulak       23.38  45  P     P       01 24 23.7 +2.0
      SNR=12
USP   Ospenovka          23.43  44  P     P       01 24 23.1 +1.1
      SNR=15
TKM2  Tokmak 2           23.92  45  P     P       01 24 28.1 +1.1
      SNR=14
TKM2  Tokmak 2           23.92  45 i P    P       01 24 27.1 +0.1
TKM2                                pmax  pmax
      comp=Z,7.0nm,0.7s
BOOM  Boomskoye usch     23.93  47  P     P       01 24 27.6 +0.6
BOOM  Boomskoye usch     23.93  47  P     P       01 24 27.6 +0.6
BOOM                                pmax  pmax
      comp=Z,15nm,0.7s
ULHL  Ulahol             24.00  47  P     P       01 24 29.5 +1.7
      SNR=15
IDI   Anoyia             24.49 294 ⇑P     P       01 24 34.1 +2.0
IDI   Anoyia             24.49 294  P     P       01 24 33.9 +1.7
      comp=Z,13nm,0.7s,baz=98,slow=9.3,SNR=11
IDI                                 LR    LR      01 37 38.6
      comp=Z,47nm,20.2s,baz=86,slow=45
      comp=Z,13nm,0.7s
IDI   Anoyia             24.49 294  P     P       01 24 33.3 +1.1
VRH   Novokhopyorsk      24.54 344 eP     P       01 24 32.9 +0.6
VRH                                 pmax  pmax
      comp=Z,150nm,0.6s
KDJ   Kajisay            24.56  49  P     P       01 24 33.7 +0.8
KDJ                                 IAmb  IAmb    01 24 45.0
      comp=Z,7.4nm,0.8s
KDJ   Kajisay            24.56  49  P     P       01 24 33.7 +0.8
KDJ                                 pmax  pmax
      comp=Z,7.0nm,0.8s
BELG  Belogornoye        24.62 353  P     P       01 24 33.5 +0.5
      comp=Z,40nm,0.7s,baz=312,slow=3.1,SNR=14
BELG                                LR    LR      01 37 03.6
      comp=Z,61nm,18.5s,baz=186,slow=43
      comp=Z,40nm,0.7s
BELG  Belogornoye        24.62 353c iP    P       01 24 32.9 -0.1
BELG                                pmax  pmax
      comp=Z,7.0nm,0.7s
TARG  Taragay, Kyrgy     24.80  50  IAmb  IAmb    01 24 41.8
      comp=Z,5.3nm,0.6s
VORD  Divnogorie         24.99 340 eP     P       01 24 36.2 -0.2
VORD                                pmax  pmax
      comp=Z,30nm,0.6s
MFTR  Murfatlar          25.10 316 ⇑P     P       01 24 45.4 +7.9
JURR  Jurilovca          25.15 318 ⇑P     P       01 24 40.6 +2.7
VSR   Storozhevoye       25.25 340 eP     P       01 24 38.2 -0.6
VSR                                 pmax  pmax
      comp=Z,20nm,1.0s
OTUK  Ortayu             25.43  32  P     P       01 24 41.0 +0.6
TPGR  Topolog            25.47 318 ⇑P     P       01 24 43.5 +2.6
RDO   Rodhopi            25.61 308  IAmb  IAmb    01 24 53.7
      comp=Z,11nm,0.9s
VORR  Voronezh           25.64 341 eP     P       01 24 42.3  0.0
VORR                               eS     S       01 29 07.9 -2.0
VORR                                pmax  pmax
      comp=Z,29nm,1.2s
CFR   Carcaliu           25.81 318 ⇓P     P       01 24 46.0 +2.1
CFR   Carcaliu           25.81 318 ⇓P     P       01 24 46.0 +2.1
RAZG  Razgrad            25.99 314 ⇑P     P       01 24 49.3 +3.7
VLDR  Vladesti           26.22 319 ⇑P     P       01 24 49.2 +1.6
MILM  Milestii Mici      26.43 322 ⇓P     P       01 24 50.5 +0.9
MILM  Milestii Mici      26.43 322 ⇓P     P       01 24 50.5 +0.9
LPSR  Galich'ya Gora     26.55 341 eP     P       01 24 50.8 +0.3
LPSR                                pmax  pmax
      comp=Z,20nm,0.6s
GHRR                     26.73 319 ⇑P     P       01 24 54.5 +2.3
PYUN  Piuthan            26.94  83 eP     P       01 24 54.8 +0.2
      comp=Z,25nm,0.6s
PLOR  Plostina           27.05 318 ⇑P     P       01 24 57.5 +2.3
PLOR  Plostina           27.05 318 ⇑P     P       01 24 57.5 +2.3
MLR   Muntele Rosu       27.29 317 ⇑P     P       01 25 00.1 +2.7
MLR   Muntele Rosu       27.29 317  P     P       01 24 59.7 +2.3
      comp=Z,4.2nm,0.6s,baz=151,slow=10,SNR=2.2
      comp=Z,4.2nm,0.6s
MLR   Muntele Rosu       27.29 317 ⇑P     P       01 25 00.1 +2.7
COVR  Voineasa-Covas     27.32 318 ⇓P     P       01 25 00.5 +2.9
TESR  Tescani            27.41 319 ⇑P     P       01 24 59.4 +1.0
SORM  Soroca             27.43 324 ⇓P     P       01 24 58.6 +0.2
SORM  Soroca             27.43 324 ⇓P     P       01 24 58.6 +0.2
KOLN  Koldanda           27.52  83 eP     P       01 25 00.0 +0.2
DANN  Dangsing           27.58  82 eP     P       01 25 00.7 +0.3
      comp=Z,37nm,0.7s
MTUR  Matau              27.70 316 ⇑P     P       01 25 06.7 +5.7
MTUR  Matau              27.70 316 ⇑P     P       01 25 06.7 +5.7
DOPR  Dopca              27.87 317 ⇑P     P       01 25 03.5 +1.0
BIZ   Bicaz              27.96 320 ⇑P     P       01 25 05.1 +1.8
ARR   Arges              28.03 316 ⇑P     P       01 25 06.2 +2.2
ARR                                ⇓              01 25 08.4
BRVK  Borovoye           28.31  23  P     P       01 25 06.0 -0.3
BRVK                                IAmb  IAmb    01 25 09.7
      comp=Z,4.9nm,0.7s
BRVK  Borovoye           28.31  23⇑eP     P       01 25 05.7 -0.6
BRVK                                pmax  pmax
      comp=Z,9.0nm,1.3s
GKN   Gorkha             28.39  82 eP     P       01 25 07.2 -0.3
AKASG Malin Array Be     28.68 329  P     P       01 25 09.7  0.0
      comp=Z,1.9nm,0.5s,baz=129,slow=7.8,SNR=25
      comp=Z,1.9nm,0.5s
AKASG Malin Array Be     28.68 329  P     P       01 25 10.1 +0.5
AKASG Malin Array Be     28.68 329 i P    P       01 25 09.6  0.0
AKASG                               pmax  pmax
      comp=Z,3.0nm,0.6s
AKBB  Malin Array Si     28.68 329⇑iP     P       01 25 09.7 +0.1
ARU   Arti               28.74   7  P     P       01 25 11.3 +1.2
      comp=Z,0.5nm,0.3s,baz=112,slow=23,SNR=2.3
ARU                                 LR    LR      01 38 31.1
      comp=Z,145nm,19.4s,baz=178,slow=40
      comp=Z,0.5nm,0.3s
ARU   Arti               28.74   7d iP    P       01 25 10.3 +0.2
ARU                                               01 25 59.0
ARU                                 S     S       01 30 01.9 +3.2
ARU                                 SS    SnSn    01 31 20.3 +0.5
ARU                                 pmax  pmax
      comp=Z,3.0nm,0.8s
BURAR Bucovina Array     28.84 320 ⇑P     P       01 25 11.3 +0.1
BURAR Bucovina Array     28.84 320  P     P       01 25 11.9 +0.7
BURAR Bucovina Array     28.84 320 ⇑P     P       01 25 11.3 +0.1
BUR08 Bucovina Ar. S     28.86 320  IAmb  IAmb    01 25 27.4
      comp=Z,4.9nm,1.0s
PKIN  Phulchoki          29.12  83 eP     P       01 25 13.2 -0.9
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PKI   Pulchoki           29.13  83 eP     P       01 25 13.3 -1.0
OBN   Obninsk            29.43 341  P     P       01 25 16.9 +0.8
      comp=Z,4.1nm,0.5s,baz=140,slow=7.9,SNR=3.7
      comp=Z,4.1nm,0.5s
OBN   Obninsk            29.43 341  IAmb  IAmb    01 25 25.5
      comp=Z,16nm,0.6s
OBN   Obninsk            29.43 341⇓eP     P       01 25 16.9 +0.8
OBN                                e              01 26 15.2
OBN                                eS     S       01 30 02.1 -7.4
OBN                                 pmax  pmax
      comp=Z,11nm,0.6s
OBN                                 MLR   MLR
      comp=Z,63nm,16.0s
GUN   Gumba              29.50  82 eP     P       01 25 17.2 -0.3
DRGR                     29.89 317  P     P       01 25 22.0 +1.5
MK31  Makanchi Array     29.97  43  IAmb  IAmb    01 25 22.1
      comp=Z,5.3nm,0.9s
MK31  Makanchi Array     29.97  43c iP    P       01 25 21.5 +0.3
MKAR  Makanchi Array     29.97  43  P     P       01 25 21.8 +0.6
      comp=Z,2.5nm,0.6s,baz=233,slow=8.4,SNR=15
MKAR                                LR    LR      01 37 50.1
      comp=Z,53nm,19.7s,baz=240,slow=37
      comp=Z,2.5nm,0.6s
MKAR  Makanchi Array     29.97  43 i P    P       01 25 22.0 +0.8
MKAR                                pmax  pmax
      comp=Z,3.0nm,0.6s
KURBB Kurchatov Arra     30.02  34  P     P       01 25 22.1 +0.6
      comp=Z,2.2nm,0.7s,baz=232,slow=9.1,SNR=23
KURBB                               LR    LR      01 39 14.3
      comp=Z,308nm,18.6s,baz=207,slow=40
      comp=Z,2.2nm,0.7s
KURK  Kurchatov          30.12  34  P     P       01 25 23.2 +0.8
KURK                                IAmb  IAmb    01 25 25.5
      comp=Z,7.8nm,1.4s
KURK  Kurchatov          30.12  34⇑eP     P       01 25 23.0 +0.6
KURK                                pmax  pmax
      comp=Z,6.0nm,1.3s
KIRV  Kirov              30.64 357  P     P       01 25 27.7 +0.9
      comp=Z,31nm,0.6s,baz=204,slow=0.5,SNR=12
KIRV  Kirov              30.64 357⇓eP     P       01 25 27.8 +1.0
KOLS  Kolonicke sedl     31.20 320 eP     P       01 25 34.8 +2.8
KOLS                                pmax  pmax
      comp=Z,8.0nm,0.6s
KOLS  Kolonicke sedl     31.20 320 eP     P       01 25 34.8 +2.8
CRVS  Cervenica-Dubn     31.65 320 eP     P       01 25 37.5 +1.5
CRVS  Cervenica-Dubn     31.65 320 eP     P       01 25 37.5 +1.5
MNK   Minsk              31.95 333 i P    P       01 25 37.9 -0.5
MNK                                i              01 26 44.0
MNK                                i PPP  PPP     01 26 56.6
MNK                                i              01 28 33.1
MNK                                i S    S       01 30 50.9 +1.9
MNK                                i SS   SnSn    01 32 45.2 +7.4
MNK                                 pmax  pmax
      comp=N,10.0nm,1.0s
MNK                                 pmax  pmax
      comp=Z,7.0nm,0.9s
MNK                                 MLR   MLR
      comp=N,92nm,14.0s
MNK                                 MLR   MLR
      comp=E,9.0nm,14.0s
MNK                                 MLR   MLR
      comp=Z,116nm,14.0s
MNK   Minsk              31.95 333 i P    P       01 25 38.0 -0.5
MNK                                i P    P       01 25 38.0 -0.5
      comp=N,10.0nm,1.0s
MNK                                i P    P       01 25 38.0 -0.5
      comp=Z,7.0nm,0.9s,baz=136
MNK                                i PP   PnPn    01 26 44.0 +0.6
MNK                                i PPP  PPP     01 26 56.6
MNK                                i S    S       01 30 51.0 +1.9
MNK                                i SS   SnSn    01 32 45.2 +7.4
MNK                                i LR   LR      01 35 50.2
MNK                                i LRM  MLR     01 39 54.9
      comp=E,9.0nm,13.5s
MNK                                i LRM  MLR     01 39 54.9
      comp=N,92nm,13.5s
MNK                                i LRM  MLR     01 39 57.7
      comp=Z,116nm,13.5s
WMQ   Urumqi             32.34  51 eP     P       01 25 46.1 +3.9
KMBO  Kilima Mbogo       32.43 209  LR    LR      01 39 05.1
      comp=Z,63nm,21.5s,baz=24,slow=37
LANS  Liptovska Anna     32.92 319 eP     P       01 25 48.9 +1.8
LANS                                pmax  pmax
      comp=Z,5.0nm,0.7s
LANS  Liptovska Anna     32.92 319 eP     P       01 25 48.9 +1.8
IDID  Didziasalis        32.99 333 eP     P       01 25 47.5 -0.1
IIGN  Ignalina           33.22 333 eP     P       01 25 49.6  0.0
ISAL  Salakas            33.42 333 eP     P       01 25 50.3 -1.0
MAUC  Maruska            33.98 318 eP     P       01 25 57.6 +1.3
KLMR  Klimovskoe         33.98 349 eP     P       01 25 55.2 -0.9
KLMR                                pmax  pmax
      comp=Z,14nm,0.6s
KLMR  Klimovskoe         33.98 349 eP     P       01 25 55.2 -0.9
KLMR                                AMP           01 25 56.7
      comp=Z,14nm,0.6s
OKC   Ostrava-Krasne     34.00 319 eP     P       01 25 57.8 +1.3
OKC   Ostrava-Krasne     34.00 319 eP     P       01 25 57.8 +1.3
PABE  Paberze            34.27 331  P     P       01 25 58.8 +0.1
MORC  Moravsky Berou     34.32 319  IAmb  IAmb    01 26 09.8
      comp=Z,5.1nm,1.0s
MORC  Moravsky Berou     34.32 319 eP     P       01 26 00.3 +1.0
VRAC  Vranov             34.68 318 eP     P       01 26 03.9 +1.5
KRLC  Kraliky            34.90 319 eP     P       01 26 04.1 -0.2
KRLC  Kraliky            34.90 319 eP     P       01 26 04.1 -0.2
ZAA0  Zalesovo Array     35.10  33  P     P       01 26 06.0  0.0
ZALV  Zalesovo Beam      35.10  33  P     P       01 26 06.0  0.0
      comp=Z,9.9nm,0.6s,baz=241,slow=9.8,SNR=33
ZALV                                LR    LR      01 42 25.0
      comp=Z,189nm,19.6s,baz=234,slow=40
      comp=Z,9.9nm,0.6s
ZALV  Zalesovo Beam      35.10  33  P     P       01 26 05.8 -0.1
ZALV  Zalesovo Beam      35.10  33  P     P       01 26 06.0  0.0
MBAR  Mbarara            35.25 220  LR    LR      01 41 14.8
      comp=Z,134nm,18.3s,baz=28,slow=38
DPC   Dobruska-Polom     35.28 319 eP     P       01 26 07.7 +0.1
DPC   Dobruska-Polom     35.28 319 eP     P       01 26 07.7 +0.1
VSU   Vasula             35.30 337⇓eP     P       01 26 08.0 +0.5
VSU                                 pmax  pmax
      comp=Z,50nm,1.2s
OSTC  Ostas              35.43 319 eP     P       01 26 10.0 +1.1
CHVC  Chvalec            35.54 319 eP     P       01 26 11.2 +1.4
KBA   Koelnbreinsper     35.90 313 eP     P       01 26 14.3 +1.2
      comp=Z,3.4nm,0.7s
BIOA  Bad Ischl, Aus     35.90 314 i P    P       01 26 13.7 +0.7
      comp=Z,2.3nm,0.4s
GERES GERESS Array B     36.26 316  P     P       01 26 16.2 +0.1
      comp=Z,0.1nm,0.3s,baz=101,slow=8.4,SNR=2.0
      comp=Z,0.1nm,0.3s
ABTA  Abfaltersbach      36.34 312 eP     P       01 26 18.1 +1.2
      comp=Z,5.2nm,0.9s
KHC   Kasperske Hory     36.44 316⇓eP     P       01 26 19.8 +2.3
KHC                                 pmax  pmax
      comp=Z,46nm,5.1s
KHC   Kasperske Hory     36.44 316 eP     P       01 26 18.9 +1.4
WTTA  Wattenberg         37.06 312 i P    P       01 26 23.8 +0.7
      comp=Z,8.5nm,0.8s
WATA  Walderalm          37.12 313 eP     P       01 26 24.4 +0.9
      comp=Z,6.8nm,1.0s
KEST  Kesra              37.16 293  LR    LR      01 44 56.4
      comp=Z,56nm,19.8s,baz=258,slow=42
SQTA  Sankt Quirin       37.33 312 eP     P       01 26 25.7 +0.5
      comp=Z,5.6nm,0.8s
MOTA  Moosalm            37.44 312 eP     P       01 26 25.6 -0.6
      comp=Z,2.9nm,0.8s
FETA  Feichten           37.59 312 eP     P       01 26 28.3 +0.8
      comp=Z,7.7nm,1.2s
CLL   Collm              37.59 319 i P    P       01 26 28.8 +1.5
CLL                                 pmax  pmax
      comp=Z,3.0nm,0.7s
CLL   Collm              37.59 319 i P    P       01 26 28.8 +1.5
      comp=Z,3.0nm,0.7s
CLL                                ePP    PnPn    01 27 58.0 +4.1
CLL                                ePPPP          01 28 20.0
RETA  Reutte             37.70 312 i P    P       01 26 28.9 +0.6
      comp=Z,3.4nm,0.8s
FINES FINESS Array B     37.78 340  P     P       01 26 29.0 +0.3
      comp=Z,4.8nm,0.6s,baz=146,slow=9.5,SNR=23
FINES                               LR    LR      01 43 37.0
      comp=Z,89nm,18.6s,baz=182,slow=39
      comp=Z,4.8nm,0.6s
FINES FINESS Array B     37.78 340 i P    P       01 26 29.1 +0.4
FINES                               pmax  pmax
      comp=Z,6.0nm,0.7s
DAVOX Davos/Dischmat     38.09 311  P     P       01 26 32.2 +0.4
      comp=Z,1.2nm,0.4s,baz=102,slow=6.1,SNR=5.7
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DAVOX				LR	LR	01 47 25.8	
	comp=Z,30nm,19.0s,baz=82,slow=44						
	comp=Z,1.2nm,0.4s						
DAVA	**Damuels**	**38.22**	**312**	*e*P	**P**	**01 26 32.4**	**-0.4**
	comp=Z,8.1nm,0.5s						
BSD	**Bornholm Skovb**	**38.25**	**326**	*i* P	**P**	**01 26 32.5**	**-0.3**
BSD				IAmb	IAmb	01 26 35.4	
	comp=Z,9.1nm,0.7s						
BLEU	**Blekinge**	**38.43**	**328**	*i* P	**P**	**01 26 33.5**	**-0.7**
LUNU	**Lund**	**39.24**	**326**	*i* P	**P**	**01 26 42.0**	**+1.0**
DEL	**Delary**	**39.44**	**327**	*i* P	**P**	**01 26 41.7**	**-1.0**
BJUU	**Bjuv**	**39.66**	**326**	*i* P	**P**	**01 26 44.7**	**+0.2**
COP	**Copenhagen**	**39.77**	**325**	*i* P	**P**	**01 26 42.5**	**-3.0**
COP				IAmb	IAmb	01 26 47.4	
	comp=Z,57nm,0.8s						
FABU	**Falkenberg**	**40.25**	**327**	*i* P	**P**	**01 26 50.0**	**+0.5**
BORU	**Boraas**	**40.54**	**328**	*i* P	**P**	**01 26 51.9**	**0.0**
GTA	**Gaotai**	**40.61**	**61**	*e*P	**P**	**01 26 53.8**	**+1.0**
GTA				pP	pP	01 26 57.9	+0.3
GTA				sP	sP	01 27 01.5	+2.0
GTA				pmax	pmax		
	comp=Z,12nm,0.7s						
KNGR	**Kungurtug, Tuv**	**40.73**	**44**	⇓*i*P	**P**	**01 26 55.1**	**+1.4**
HFS	**Hagfors**	**41.44**	**332**	P	**P**	**01 26 59.5**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=228,slow=28,SNR=23						
	comp=Z,0.6nm,0.3s						
MUD	**Monsted U'grnd**	**41.75**	**325**	*i* P	**P**	**01 27 02.3**	**+0.6**
MUD				IAmb	IAmb	01 27 09.1	
	comp=Z,8.7nm,0.8s						
NB2	**NORSAR Subarra**	**42.96**	**332**	P	**P**	**01 27 11.2**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=124,slow=8.6						
NOA	**NORSAR Array B**	**42.96**	**332**	P	**P**	**01 27 10.8**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=120,slow=8.1,SNR=6.8						
NOA				PP	**PP**	**01 28 46.0**	**-5.4**
	comp=Z,1.4nm,0.8s,baz=128,slow=11,SNR=4.1						
NOA				LR	LR	01 45 39.7	
	comp=Z,36nm,19.1s,baz=305,slow=37						
	comp=Z,0.9nm,0.5s						
CHTO	**Chiang Mai**	**43.44**	**92**	P	**P**	**01 27 16.6**	**+0.5**
CHTO				IAmb	IAmb	01 27 17.4	
	comp=Z,7.5nm,1.0s						
CHTO	**Chiang Mai**	**43.44**	**92**	P	**P**	**01 27 16.6**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.57**	**92**	P	**P**	**01 27 16.8**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=280,slow=9.7,SNR=9.9						
CMAR				LR	LR	01 47 26.1	
	comp=Z,15nm,18.2s,baz=210,slow=39						
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.57**	**92**	P	**P**	**01 27 17.1**	**0.0**
CMAR	**Chiang Mai Arr**	**43.57**	**92**	*i* P	**P**	**01 27 17.2**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PZH	**PanZhiHua**	**43.62**	**80**	P	**P**	**01 27 19.9**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,3.9s						
ARCES	**ARCESS Array B**	**44.39**	**347**	P	**P**	**01 27 23.5**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=142,slow=8.0,SNR=17						
ARCES				PP	**PP**	**01 29 03.5**	**-3.0**
	comp=Z,2.8nm,0.8s,baz=137,slow=11,SNR=3.6						
ARCES				LR	LR	01 48 51.0	
	comp=Z,46nm,18.7s,baz=204,slow=40						
	comp=Z,2.6nm,0.6s						
ARCES	**ARCESS Array B**	**44.39**	**347**	IAmb	IAmb	01 27 28.9	
	comp=Z,12nm,1.5s						
SONM	**Songino Array**	**45.92**	**49**	P	**P**	**01 27 36.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=258,slow=7.4,SNR=9.9						
SONM				LR	LR	01 49 48.7	
	comp=Z,106nm,19.0s,baz=321,slow=40						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**45.92**	**49**	P	**P**	**01 27 36.7**	**+1.1**
SONM	**Songino Array**	**45.92**	**49**	P	**P**	**01 27 36.7**	**+1.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NRIK	**Noril'sk**	**46.10**	**16**	P	**P**	**01 27 36.8**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=234,slow=7.6,SNR=4.6						
NRIK				LR	LR	01 50 24.8	
	comp=Z,94nm,18.3s,baz=178,slow=41						
	comp=Z,2.8nm,0.9s						
NRIK	**Noril'sk**	**46.10**	**16**	P	**P**	**01 27 37.7**	**+1.2**
NRIK				IAmb	IAmb	01 27 43.2	
	comp=Z,6.4nm,1.1s						
NRIK	**Noril'sk**	**46.10**	**16**	*ce*P	**P**	**01 27 37.2**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	**Ulaanbaatar**	**46.37**	**49**	P	**P**	**01 27 40.0**	**+0.8**
ULN				IAmb	IAmb	01 27 46.2	
	comp=Z,3.2nm,0.5s						
ULN	**Ulaanbaatar**	**46.37**	**49**	⇑*e*P	**P**	**01 27 40.5**	**+1.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ESDC	**Sonseca Array**	**47.56**	**299**	P	**P**	**01 27 50.4**	**+1.8**
	comp=Z,0.5nm,1.0s,baz=83,slow=6.0,SNR=4.5						
	comp=Z,0.5nm,1.0s						
XAN	**Xi'an**	**48.27**	**68**	P	**P**	**01 27 53.4**	**-0.7**
XAN				pP	pP	01 27 56.6	-2.3
XAN				sP	sP	01 28 00.6	-0.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSZ	**Lusaka**	**49.02**	**212**	LR	LR	01 50 05.8	
	comp=Z,182nm,18.4s,baz=12,slow=38						
TOA0	**Torodi Ar. Sit**	**49.41**	**263**	P	**P**	**01 28 02.2**	**-0.8**
TOA0				IAmb	IAmb	01 28 11.8	
	comp=Z,8.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**49.41**	**263**	P	**P**	**01 28 03.1**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=60,slow=7.4,SNR=21						
	comp=Z,3.1nm,0.6s						
HHC	**Hu-ho-hao-te**	**49.57**	**59**	*e*P	**P**	**01 28 04.1**	**0.0**
HHC				pmax	pmax		
	comp=Z,32nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
BOD	**Bodaibo**	**51.70**	**37**	*e*P	**P**	**01 28 19.4**	**-0.2**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KOWA	**Kowa**	**53.88**	**268**	P	**P**	**01 28 35.6**	**-0.7**
KOWA				IAmb	IAmb	01 28 39.1	
	comp=Z,5.3nm,0.8s						
NJ2	**Nanjing**	**56.84**	**68**	*e*P	**P**	**01 28 57.1**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TSUM	**Tsumeb**	**57.79**	**220**	LR	LR	01 56 03.7	
	comp=Z,109nm,18.4s,baz=50,slow=38						
DBIC	**Dimbokro**	**58.09**	**260**	P	**P**	**01 29 06.7**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=45,slow=5.8,SNR=4.8						
DBIC				LR	LR	01 56 59.7	
	comp=Z,55nm,19.3s,baz=60,slow=39						
	comp=Z,3.7nm,0.7s						
LBTB	**Lobatse**	**58.71**	**209**	LR	LR	01 55 53.4	
	comp=Z,66nm,18.2s,baz=58,slow=38						
TIXI	**Tiksi**	**59.42**	**21**	⇓*e*P	**P**	**01 29 16.3**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,3.4s						
YAK	**Yakutsk**	**59.74**	**32**	LR	LR	01 57 35.4	
	comp=Z,92nm,18.1s,baz=266,slow=39						
BOSA	**Boshof**	**62.03**	**207**	P	**P**	**01 29 35.2**	**+1.8**
	comp=Z,1.6nm,0.9s,baz=25,slow=7.9,SNR=2.3						
BOSA				LR	LR	01 57 35.7	
	comp=Z,101nm,19.4s,baz=9.5,slow=37						
	comp=Z,1.6nm,0.9s						
BOSA	**Boshof**	**62.03**	**207**	IAmb	IAmb	01 29 35.9	
	comp=Z,7.7nm,1.4s						
KLR	**Kul'dur**	**62.60**	**47**	P	**P**	**01 29 36.1**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=255,slow=3.2,SNR=3.7						
KLR				LR	LR	01 59 48.2	
	comp=Z,72nm,19.1s,baz=216,slow=39						
	comp=Z,1.4nm,0.7s						
KLR	**Kul'dur**	**62.60**	**47**	⇓*e*P	**P**	**01 29 37.1**	**+0.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KSRS	**Korea Array**	**62.67**	**60**	P	**P**	**01 29 36.4**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=280,slow=6.7,SNR=7.9						
KSRS				LR	LR	01 59 49.6	
	comp=Z,54nm,19.8s,baz=240,slow=39						
	comp=Z,2.1nm,0.7s						
SUMG	**Summit**	**63.81**	**340**	P	**P**	**01 29 45.9**	**+0.8**
SUMG	**Summit**	**63.81**	**340**	P	**P**	**01 29 45.9**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SUMG	**Summit**	**63.81**	**340**	*i* P	**P**	**01 29 45.0**	**-0.1**
VLA	**Vladivostok**	**64.11**	**53**	⇓*e*P	**P**	**01 29 48.0**	**+1.0**
VLA				pmax	pmax		
	comp=Z,65nm,1.7s						
SUR	**Sutherland**	**67.16**	**209**	LR	LR	02 01 14.2	
	comp=Z,77nm,18.6s,baz=58,slow=38						
DY2G	**Dye2**	**68.03**	**335**	*i* P	**P**	**01 30 10.3**	**-1.8**
SEY	**Seymchan**	**69.79**	**29**	*i* P	**P**	**01 30 22.4**	**-0.4**
SEY				pmax	pmax		
	comp=Z,13nm,1.9s						
MA2	**Magadan**	**70.31**	**32**	LR	LR	02 04 23.4	
	comp=Z,38nm,18.6s,baz=78,slow=39						
MAJO	**Matsushiro**	**70.77**	**58**	⇓*e*P	**P**	**01 30 30.6**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MJAR	**Matsushiro Arr**	**70.77**	**58**	LR	LR	02 03 46.2	
	comp=Z,30nm,19.0s,baz=266,slow=38						
ASAJ	**Asahikawa**	**71.20**	**50**	LR	LR	02 05 03.0	
	comp=Z,52nm,18.4s,baz=20,slow=39						
BILL	**Bilibino**	**72.64**	**21**	⇓*e*P	**P**	**01 30 40.1**	**+0.1**
BILL				*e*		01 30 56.8	
BILL				*e*		01 33 24.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.9s						
BILL				MLR	MLR		
	comp=Z,57nm,17.0s						
JHJ	**Hachijo jima 2**	**73.25**	**61**	LR	LR	02 06 16.8	
	comp=Z,47nm,19.2s,baz=255,slow=39						
RES	**Resolute Bay**	**75.37**	**351**	LR	LR	02 09 14.2	
	comp=Z,37nm,18.9s,baz=76,slow=40						
A36M	**Sachs Harbour**	**80.27**	**359**	P	**P**	**01 31 24.1**	**+1.0**
TOLK	**Toolik Lake Re**	**82.28**	**8**	P	**P**	**01 31 34.6**	**+0.6**
TOLK				IAmb	IAmb	01 31 36.8	
	comp=Z,8.4nm,1.5s						
SCHQ	**Schefferville**	**82.47**	**329**	P	**P**	**01 31 34.7**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=50,slow=11,SNR=10						
	comp=Z,3.2nm,0.6s						
SCHQ	**Schefferville**	**82.47**	**329**	IAmb	IAmb	01 31 41.2	
	comp=Z,3.8nm,0.8s						
C36M	**Paulatuk**	**82.90**	**359**	P	**P**	**01 31 37.5**	**+0.4**
C36M				IAmb	IAmb	01 31 44.1	
	comp=Z,3.5nm,1.0s						
INK	**Inuvik**	**83.88**	**2**	LR	LR	02 17 04.9	
	comp=Z,21nm,18.2s,baz=192,slow=41						
BMAR	**Burnt Mountain**	**84.00**	**7**	P	**P**	**01 31 43.7**	**+0.8**
IMAR	**Indian Mountai**	**84.18**	**10**	P	**P**	**01 31 44.4**	**+0.6**
H21K	**Melozitna Rive**	**84.63**	**10**	P	**P**	**01 31 46.8**	**+0.8**
H21K				IAmb	IAmb	01 31 55.7	
	comp=Z,3.2nm,1.1s						
SHEM	**Shemya Is, Ala**	**84.92**	**31**	LR	LR	02 12 57.8	
	comp=Z,37nm,18.6s,baz=2.5,slow=38						
ILAR	**Eielson Array**	**86.31**	**8**	P	**P**	**01 31 53.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=314,slow=4.0,SNR=7.6						
	comp=Z,0.5nm,0.7s						
BPAW	**Bear Paw Mtn.**	**86.37**	**10**	P	**P**	**01 31 54.8**	**0.0**
BPAW				IAmb	IAmb	01 32 01.1	
	comp=Z,3.5nm,0.8s						
CAST	**Castle Rocks**	**86.83**	**11**	P	**P**	**01 31 57.1**	**0.0**
CAST				IAmb	IAmb	01 32 03.5	
	comp=Z,2.6nm,0.9s						
SCRK	**Sand Creek**	**87.42**	**7**	P	**P**	**01 32 00.7**	**+0.7**
SCRK				IAmb	IAmb	01 32 06.5	
	comp=Z,2.4nm,0.9s						
YKA	**Yellowknife Ar**	**89.22**	**354**	P	**P**	**01 32 08.3**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=7.3,slow=4.9,SNR=19						
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	**89.22**	**354**	*i* P	**P**	**01 32 08.8**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RCBR	**Riachuelo**	**91.23**	**264**	LR	LR	02 14 18.4	
	comp=Z,28nm,18.6s,baz=180,slow=36						
KDAK	**Kodiak Island**	**91.99**	**13**	LR	LR	02 20 39.7	
	comp=Z,34nm,18.8s,baz=34,slow=40						
WRA	**Warramunga Arr**	**92.37**	**111**	P	**P**	**01 32 23.0**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=314,slow=4.2,SNR=11						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**92.37**	**111**	*i* P	**P**	**01 32 24.6**	**+0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**93.80**	**115**	P	**P**	**01 32 29.8**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=306,slow=4.4,SNR=9.9						
	comp=Z,1.1nm,0.6s						

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*NEIC **14** 01:38:24.1±1.6, 18°.50N±0°.05×72°.29W±0°.03, h9^{km}±7^{km}, ML2.8/10, Error ellipse: s-maj=7.1km s-min=3.7km az=193.0*

*OSPL **14** 01:38:24.5±1.2, 18°.51N×72°.34W, h20^{km}±6^{km}, ML1.8*

ISC 14 01:38:23.7±0.9**, 18°.49N**±0°.05×**72°.29W**±0°.03**, h13**^{km}±8^{km}**, n11, **σ**0^{s}.74**/17**, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NQUSE	**US Embassy, Po**	**0.08**	**29**	Pg	**Pg**	**01 38 26.1**	**-0.4**
LGNH	**Logne**	**0.30**	**273**	Pg	**Pg**	**01 38 29.5**	**-0.4**
LGNH				Sg	**Sg**	**01 38 34.6**	**+0.5**
LGNH				IAML		01 38 34.9	
	comp=N,917nm,0.5s						
LGNH				IAML		01 38 36.9	
	comp=E,1µm,0.3s						
LGNH	**Logne**	**0.30**	**273**	*i* P	**Pg**	**01 38 29.5**	**-0.4**
LGNH				*e*S	**Sg**	**01 38 34.6**	**+0.5**
LGNH				IAML		01 38 36.0	
	comp=Z,125nm,0.1s						
JAKH	**Jacmel**	**0.34**	**221**	Pg	**Pg**	**01 38 29.9**	**-0.6**
JAKH				Sg	**Sg**	**01 38 35.9**	**+0.8**
JAKH				IAML		01 38 36.2	
	comp=E,2µm,0.3s						
JAKH	**Jacmel**	**0.34**	**221**	*i* P	**Pg**	**01 38 30.2**	**-0.4**
JAKH				*e*S	**Sg**	**01 38 36.0**	**+0.9**
JAKH				IAML		01 38 37.3	
	comp=Z,116nm,0.3s						
LONE2	**Loma La Sidra**	**0.78**	**85**	*i* P	**Pg**	**01 38 39.0**	**+0.2**
LONE2				*e*S	**Sg**	**01 38 50.1**	**+1.1**
LONE2				IAML		01 38 56.2	
	comp=Z,68nm,0.4s						
SDDR	**Presa de Saban**	**1.07**	**63**	Pg	**Pb**	**01 38 43.5**	**-0.5**
SDDR	**Presa de Saban**	**1.07**	**63**	*i* P	**Pb**	**01 38 43.5**	**-0.5**
SDDR				*e*S	**Sb**	**01 38 57.0**	**-0.9**
SDDR				IAML		01 39 06.2	
	comp=Z,16nm,1.0s						
LOBA2	**Hotel Casa Bon**	**1.21**	**110**	*i* P	**Pn**	**01 38 45.9**	**-0.3**
LOBA2				IAML		01 39 11.6	
	comp=Z,25nm,2.8s						
SDD	**Santo Domingo**	**2.25**	**91**	Pn	**Pn**	**01 39 01.5**	**+0.8**
SDD				IAML		01 39 57.8	
	comp=N,156nm,2.3s						
GTBY	**Guantanamo Bay**	**3.02**	**299**	Pn	**Pn**	**01 39 12.2**	**+0.9**
GTBY				IAML		01 40 17.2	
	comp=N,18nm,2.1s						
GTBY				IAML		01 40 46.6	
	comp=N,22nm,1.8s						

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*IDC **14** 02:35:23.7±0.7, 1°.59N×127°.47E, h0^{km}, mb4.2/11, mbtmp4.2/12, ML3.9/1, MS3.3/8, Error ellipse: s-maj=47.0km s-min=14.4km az=64.0*

*DJA **14** 02:35:25.6±0.4, 2°N±3°×12°8E±°, h10^{km}, M4.2/10, mb4.4/8, mB4.7/4, MLv4.1/10, Mw(mB)4.0/4, MwMwp4.6/1, Mwp5.0/1*

*NEIC **14** 02:35:30.4±1.7, 1°.47N±0°.07×127°.73E±0°.07, h45^{km}±6^{km}, mb4.5/28, Error ellipse: s-maj=10.9km s-min=9.4km az=113.0*

ISC 14 02:35:28.8±0.5**, 1°.55N**±0°.07×**127°.77E**±0°.09**, h35**^{km}**, n66,** σ**1^{s}.27**/59**, mb4.4**/22**, MS3.2**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.87**	**207**	Pn	**Pn**	**02 35 43.2**	**-1.5**
TNTI	**Ternate**	**0.87**	**207**	P	**Pn**	**02 35 43.6**	**-1.0**
LBMI	**Labuha**	**2.19**	**187**	P	**Pn**	**02 36 03.9**	**+1.1**
KMSI	**Cibinong**	**3.91**	**256**	P	**Pn**	**02 36 27.5**	**+1.1**
SANI	**Sanana**	**4.00**	**206**	P	**Pn**	**02 36 29.2**	**+1.6**
SWI	**Sorong**	**4.24**	**124**	P	**Pn**	**02 36 31.4**	**+0.5**
SIJI	**Sorong**	**4.24**	**124**	Pn	**Pn**	**02 36 32.0**	**+0.9**
	5.4nm,0.3s,baz=334,slow=15,SNR=4.5						
SIJI				LR	LR	02 38 23.0	
	comp=Z,1µm,19.1s,baz=330,slow=40						
	18nm,0.2s						
GTOI	**Gorontalo**	**4.84**	**259**	P	**Pn**	**02 36 42.0**	**+2.7**
	0.1nm182nm14nm,0.9s						
LUWI	**Luwuk**	**5.62**	**243**	Pn	**Pn**	**02 36 50.9**	**+0.9**
LUWI	**Luwuk**	**5.62**	**243**	P	**Pn**	**02 36 51.5**	**+1.5**
	0.4nm5µm52nm,0.6s						
MRSI	**Marisa**	**5.92**	**260**	P	**Pn**	**02 36 54.6**	**+0.5**
	0.1nm31nm,0.8s						
TOLI2	**Tolitoli**	**7.00**	**267**		**Pn**	**02 37 09.3**	**+0.4**
TTSI	**Tana Toraja**	**9.16**	**240**	P	**Pn**	**02 37 40.6**	**+1.9**
	2µm1µm24nm,0.8s						
BNSI	**Bone**	**9.67**	**232**	P	**Pn**	**02 37 46.3**	**+0.7**
	25nm,1.0s						
SPSI	**Sidrap Palu**	**9.69**	**236**	P	**Pn**	**02 37 48.8**	**+2.9**
MYLDM	**Lahad Datu**	**9.93**	**292**		**Pn**	**02 37 50.0**	**+0.9**
BKSI	**Bulukumba**	**10.24**	**228**	P	**Pn**	**02 37 55.3**	**+1.8**
	14nm,0.9s						
SBUM	**Sibu**	**15.56**	**274**	Pn	**Pn**	**02 39 06.5**	**+0.6**
JAGI	**Jajag, Banyuwa**	**16.83**	**234**	Pn	**Pn**	**02 39 21.1**	**-0.9**
JAGI				IAmb	IAmb	02 39 29.5	
	comp=Z,51nm,1.2s						
GUMO	**Guam**	**20.72**	**54**	LR	LR	02 46 44.8	
	comp=Z,57nm,21.9s,baz=201,slow=32						
WB0	**Warramunga Arr**	**22.16**	**163**	P	**P**	**02 40 21.1**	**-0.8**
WB0				IAmb	IAmb	02 40 33.4	
	comp=Z,25nm,1.3s						
PMG	**Port Moresby**	**22.17**	**120**	LR	LR	02 49 30.4	
	comp=Z,136nm,19.8s,baz=276,slow=38						
WRA	**Warramunga Arr**	**22.31**	**164**	P	**P**	**02 40 24.1**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=341,slow=11,SNR=11						
	comp=Z,5.0nm,0.9s						
WB2	**Warramunga Arr**	**22.32**	**163**	P	**P**	**02 40 22.5**	**-1.1**
ASAR	**Alice Springs**	**25.77**	**167**	P	**P**	**02 40 59.2**	**+2.7**
	comp=Z,1.3nm,0.8s,baz=342,slow=8.9,SNR=6.8						
ASAR				PcP	**PcP**	**02 44 24.9**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=354,slow=2.8,SNR=4.1						
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**25.77**	**167**	P	**P**	**02 40 56.1**	**-0.5**
CTA	**Charters Tower**	**28.13**	**141**	LR	LR	02 52 39.4	
	comp=Z,134nm,20.1s,baz=281,slow=36						
CMAR	**Chiang Mai Arr**	**32.89**	**303**	P	**P**	**02 41 58.2**	**-1.7**
	comp=Z,1.5nm,0.4s,baz=113,slow=6.7,SNR=8.3						
	comp=Z,1.5nm,0.4s						
CHTO	**Chiang Mai**	**33.05**	**303**	P	**P**	**02 41 59.4**	**-2.0**
HNR	**Honiara**	**33.86**	**109**	LR	LR	02 56 05.7	
	comp=Z,103nm,19.6s,baz=131,slow=36						
KSAR	**Wonju Array Be**	**35.72**	**0**	P	**P**	**02 42 24.8**	**+0.6**
KSRS	**Korea Array**	**35.73**	**0**	P	**P**	**02 42 24.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=170,slow=8.7,SNR=2.5						
KSRS				LR	LR	03 00 08.9	
	comp=Z,13nm,19.0s,baz=190,slow=42						
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**35.74**	**160**	P	**P**	**02 42 25.5**	**+1.1**
	comp=Z,5.9nm,0.9s,baz=326,slow=8.7,SNR=7.1						
	comp=Z,5.9nm,0.9s						
STKA	**Stephens Creek**	**35.74**	**160**	P	**P**	**02 42 26.0**	**+1.5**
KS19	**Wonju Array Si**	**35.78**	**0**	P	**P**	**02 42 26.3**	**+1.7**
USRK	**Ussuriysk Ar.**	**42.63**	**4**	LR	LR	03 03 22.4	
	comp=Z,26nm,18.7s,baz=191,slow=39						
KLR	**Kul'dur**	**47.62**	**4**	LR	LR	03 09 29.9	
	comp=Z,9.5nm,18.1s,baz=226,slow=43						
ULN	**Ulaanbaatar**	**49.50**	**342**	P	**P**	**02 44 16.8**	**+0.7**
ULN				IAmb	IAmb	02 44 20.2	
	comp=Z,5.2nm,1.1s						
SONM	**Songino Array**	**49.68**	**341**	P	**P**	**02 44 17.1**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=155,slow=7.1,SNR=5.1						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**49.68**	**341**	IAmb	IAmb	02 44 18.7	
	comp=Z,3.8nm,1.4s						
MK31	**Makanchi Array**	**59.93**	**326**	P	**P**	**02 45 32.0**	**+0.5**
MKAR	**Makanchi Array**	**59.93**	**326**	P	**P**	**02 45 29.9**	**-1.6**
	comp=Z,4.1nm,0.8s,baz=121,slow=7.3,SNR=12						
	comp=Z,4.1nm,0.8s						
MKAR	**Makanchi Array**	**59.93**	**326**	P	**P**	**02 45 31.6**	**+0.1**
TARG	**Taragay, Kyrgy**	**60.06**	**319**	P	**P**	**02 45 33.4**	**+0.4**
TARG				IAmb	IAmb	02 45 37.3	
	comp=Z,3.6nm,0.9s						
KDJ	**Kajisay**	**60.66**	**319**	P	**P**	**02 45 37.7**	**+0.9**
KDJ				IAmb	IAmb	02 45 38.8	
	comp=Z,3.9nm,0.9s						
BOOM	**Boomskoye usch**	**61.64**	**319**	P	**P**	**02 45 44.5**	**+1.0**
BOOM				IAmb	IAmb	02 45 44.9	
	comp=Z,3.5nm,1.1s						
AAK	**Ala-Archa**	**62.66**	**318**	P	**P**	**02 45 50.7**	**+0.4**
AAK				IAmb	IAmb	02 45 51.9	
	comp=Z,5.4nm,1.4s						
KBL	**Kabul**	**63.67**	**308**	P	**P**	**02 45 56.3**	**-0.9**
KURBB	**Kurchatov Arra**	**64.12**	**328**	P	**P**	**02 45 57.7**	**-1.9**
	comp=Z,5.6nm,1.0s,baz=123,slow=5.9,SNR=24						
	comp=Z,5.6nm,1.0s						
KURK	**Kurchatov**	**64.12**	**328**	P	**P**	**02 45 58.4**	**-1.1**
KK31	**Karatay Array**	**65.53**	**317**	P	**P**	**02 46 09.0**	**+0.1**
KK31				IAmb	IAmb	02 46 10.4	
	comp=Z,3.8nm,1.1s						
KKAR	**Karatay Array**	**65.53**	**317**	P	**P**	**02 46 09.2**	**+0.3**
BRVK	**Borovoye**	**69.77**	**327**		**P**	**02 46 35.6**	**+0.1**
BRVK				IAmb	IAmb	02 46 38.5	
	comp=Z,5.8nm,1.1s						
TIXI	**Tiksi**	**70.00**	**0**	P	**P**	**02 46 35.5**	**-0.9**
NRIK	**Noril'sk**	**72.78**	**346**	P	**P**	**02 46 54.4**	**+1.0**
	comp=Z,1.6nm,0.4s,baz=130,slow=3.1,SNR=4.1						
	comp=Z,1.6nm,0.4s						
NRIK	**Noril'sk**	**72.78**	**346**	P	**P**	**02 46 53.5**	**+0.1**
NRIK				IAmb	IAmb	02 46 55.0	
	comp=Z,5.1nm,1.1s						
GEYT	**Alibeck**	**73.06**	**309**	P	**P**	**02 46 56.9**	**+1.2**
ABKAR	**Akbulak array**	**74.48**	**321**	P	**P**	**02 47 04.0**	**+0.3**
ABKAR				IAmb	IAmb	02 47 06.1	
	comp=Z,5.1nm,1.2s						
AKTO	**Aktyubinsk**	**76.00**	**322**	P	**P**	**02 47 11.3**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=100,slow=10,SNR=2.4						
	comp=Z,0.9nm,0.4s						
ARU	**Arti**	**77.32**	**328**	P	**P**	**02 47 18.2**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=107,slow=14,SNR=3.6						
	comp=Z,0.9nm,0.4s						
ARU	**Arti**	**77.32**	**328**	IAmb	IAmb	02 47 22.2	
	comp=Z,6.3nm,1.1s						
VNDA	**Vanda**	**81.15**	**173**	P	**P**	**02 47 38.9**	**-1.3**
RAYN	**Ar Rayn**	**82.29**	**293**	P	**P**	**02 47 47.2**	**-0.3**
RAYN				IAmb	IAmb	02 47 51.2	
	comp=Z,5.9nm,1.3s						
J20K	**Nowinta River**	**83.42**	**26**	P	**P**	**02 47 53.7**	**+1.3**
J20K				IAmb	IAmb	02 47 55.1	
	comp=Z,7.4nm,1.4s						
IMAR	**Indian Mountai**	**83.90**	**24**	P	**P**	**02 47 53.8**	**-1.1**
GLI	**Glacier Island**	**86.28**	**29**	P	**P**	**02 48 08.8**	**+2.0**

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*ASRS **14** 02:44:10.0±0.3, 50°N±2°×9°1E±°, h10^{km}, MLh3.6/11, Error ellipse: s-maj=4.2km s-min=2.4km az=148.4, confirmed*

*NNC **14** 02:44:17.3±7.3, 50°.37N×90°.47E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=75.9km s-min=43.4km az=19.0*

ISC 14 02:44:10.6±1.6**, 50°.35N**±0°.04×**90°.94E**±0°.03**, h3**^{km}±14^{km}**, n18,** σ**1^{s}.40**/36**, 2C-3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**1.68**	**262**	Pn	**Pn**	**02 44 39.8**	**-1.2**
CUR				Pg	**Pb**	**02 44 42.0**	**-0.3**
CUR				Sg	**Sn**	**02 45 00.6**	**-2.5**
ULGR	**Ulagan, Altay**	**1.92**	**279**	Pg	**Pb**	**02 44 46.2**	**-0.1**
ULGR				Sg	**Sb**	**02 45 11.6**	**+1.0**
AKAR	**Aktash**	**2.12**	**270**	Pn	**Pn**	**02 44 47.4**	**+0.3**
AKAR				Pg	**Pb**	**02 44 49.1**	**-0.7**
AKAR				Sg	**Sb**	**02 45 17.8**	**+1.2**
CHBI	**Chibit, Altay**	**2.20**	**270**	Pn	**Pn**	**02 44 47.9**	**-0.2**
CHBI				Pg	**Pb**	**02 44 50.3**	**-0.8**
CHBI				Sg	**Sg**	**02 45 20.9**	**-0.4**
DGZ	**Jazzator, Alta**	**2.35**	**255**	Pg	**Pb**	**02 44 53.0**	**-0.7**
DGZ				Sg	**Sg**	**02 45 25.3**	**-0.9**
DJO	**Djoy, Khakassi**	**2.44**	**4**	Pg	**Pb**	**02 44 53.9**	**-1.2**
DJO				Sg	**Sb**	**02 45 26.2**	**+0.7**
DJOS	**Djoyskaya Sosn**	**2.46**	**7**	Pg	**Pb**	**02 44 55.3**	**-0.1**
DJOS				Sg	**Sg**	**02 45 28.5**	**-1.1**
CERR	**Cheremushki**	**2.52**	**7**	Pg	**Pb**	**02 44 56.5**	**0.0**
CERR				Sg	**Sb**	**02 45 29.4**	**+1.5**
ERNS	**Erzin**	**2.71**	**90**	Pn	**Pn**	**02 44 55.4**	**+0.3**
ERNS				Pg	**Pb**	**02 44 59.9**	**+0.2**
ERNS				Sg	**Sb**	**02 45 34.4**	**+1.1**
ARDR	**Aradan**	**2.72**	**34**	Pg	**Pb**	**02 45 00.7**	**+0.7**
ARDR				Sg	**Sb**	**02 45 34.5**	**+0.8**
ARTR	**Artybash**	**2.72**	**304**	Pg	**Pb**	**02 45 01.2**	**+1.3**
ARTR				Sg	**Sb**	**02 45 35.5**	**+1.9**
TASR	**Tashtagol**	**3.07**	**323**	Pn	**Pn**	**02 44 58.9**	**-1.1**
TASR				Pg	**Pb**	**02 45 05.3**	**-0.6**
TASR				Sg	**Sb**	**02 45 45.2**	**+1.5**
GALT	**Gorno-Altaysk,**	**3.53**	**299**	Pg	**Pb**	**02 45 14.9**	**+1.2**
GALT				Sg	**Sg**	**02 46 01.6**	**-2.3**
UKR	**Ust'-Kan**	**3.97**	**281**	Pn	**Pb**	**02 45 21.9**	**+0.7**
UKR				Pg	**Pg**	**02 45 28.0**	**+1.4**
UKR				Sg	**Sg**	**02 46 15.5**	**-2.5**
ELT	**Eltsovka**	**4.12**	**317**	Sg	**Sg**	**02 46 20.7**	**-2.2**
MK31	**Makanchi Array**	**6.75**	**241**	⇑Pn	**Pn**	**02 45 54.1**	**+3.5**
	2.3nm,0.8s,baz=93,slow=11,SNR=5.9						
MK31				⇓Pg	Pg	02 46 16.0	-3.9
	4.7nm,0.7s,baz=69,slow=15,SNR=5.6						
MK31				⇑Lg	Lg	02 47 44.3	
	12nm,0.7s,baz=62,slow=30,SNR=4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	7.86	277	⇓Lg	Lg	02 48 17.0	
	14nm,0.7s						
KURBB	Kurchatov Arra	7.92	277	⇓Lg	Lg	02 48 18.4	
	16nm,0.7s						

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*IDC **14** 02:58:23.4±0.9, 1°.70N×127°.82E, h0^{km}, mb4.0/8, mbtmp4.0/9, ML3.7/1, MS3.8/2, Error ellipse: s-maj=45.4km s-min=15.7km az=67.0*

*DJA **14** 02:58:25.5±0.4, 2°N±3°×12°8E±°, h10^{km}, M4.1/9, mb4.4/4, mB5.8/1, MLv3.9/9, Mw(mB)5.4/1*

*NEIC **14** 02:58:28.9±1.9, 1°.56N±0°.07×127°.77E±0°.08, h36^{km}±5^{km}, mb4.3/13, Error ellipse: s-maj=12.7km s-min=8.7km az=53.0*

ISC 14 02:58:24.6±0.5**, 1°.66N**±0°.06×**127°.89E**±0°.07**, h10**^{km}**, n40,** σ**1**^{s}**22**/38**, mb4.2**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.02	211		Pg	02 58 43.0	-1.3
TNTI	Ternate	1.02	211	P	Pg	02 58 43.3	-1.0
LBMI	Labuha	2.31	190	P	Pn	02 59 04.6	+1.8
KMSI	Cibinong	4.06	255	P	Pn	02 59 28.5	+1.7
SANI	Sanana	4.14	207	P	Pn	02 59 28.9	+0.9
SWI	Sorong	4.20	127	P	Pn	02 59 31.3	+2.6
SIJI	Sorong	4.20	127	Pn	Pn	02 59 31.9	+3.1
	4.3nm,0.3s,baz=162,slow=19,SNR=5.8						
SIJI				Sn	Sb	03 00 28.1	-1.5
	0.7nm,0.3s,baz=291,slow=23,SNR=1.5						
SIJI				LR	LR	03 01 23.5	
	comp=Z,464nm,19.7s,baz=244,slow=42						
	20nm,0.5s						
GTOI	Gorontalo	4.99	258	P	Pn	02 59 42.0	+2.4
	0.0nm12nm,0.7s						
LUWI	Luwuk	5.78	242	P	Pn	02 59 52.2	+1.7
	0.8nm8μm56nm,0.7s						
MRSI	Marisa	6.07	259	P	Pn	02 59 55.8	+1.4
	0.1nm26nm,0.5s						
MYLDM	Lahad Datu	10.01	291	Pn	Pn	03 00 49.2	+0.7
ABJI	Asem Bagus	16.55	235	P	Pn	03 02 17.6	+0.7
WB0	Warramunga Arr	22.23	164	P	P	03 03 22.0	+0.4
WB0				IAmb	IAmb	03 03 44.2	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	22.38	164	P	P	03 03 23.2	-0.1
	comp=Z,4.3nm,0.9s,baz=342,slow=11,SNR=14						
	comp=Z,4.3nm,0.9s						
WB2	Warramunga Arr	22.38	164	P	P	03 03 22.3	-0.9
WB2				IAmb	IAmb	03 03 30.7	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	25.84	167	P	P	03 03 57.1	+0.6
ASAR	Alice Springs	25.84	167	P	P	03 03 57.1	+0.6
	comp=Z,0.7nm,0.8s,baz=346,slow=11,SNR=11						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	25.84	167	P	P	03 03 57.4	+0.9
JNU	Nakatsue	31.43	5	LR	LR	03 17 43.6	
	comp=Z,397nm,19.8s,baz=260,slow=37						
CMAR	Chiang Mai Arr	32.94	302	P	P	03 05 00.2	+0.6
	comp=Z,1.0nm,0.4s,baz=106,slow=6.7,SNR=2.0						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	35.79	160	P	P	03 05 25.3	+1.1
	comp=Z,2.2nm,0.7s,baz=333,slow=6.8,SNR=5.0						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	35.79	160	IAmb	IAmb	03 05 27.6	
	comp=Z,3.5nm,1.4s						
MJAR	Matsushiro Arr	36.00	14	P	P	03 05 25.1	-0.8
	comp=Z,0.4nm,0.3s,baz=184,slow=9.4,SNR=2.8						
	comp=Z,0.4nm,0.3s						
ULN	Ulaanbaatar	49.44	342	P	P	03 07 15.8	+0.8
SONM	Songino Array	49.62	341	P	P	03 07 17.0	+0.6
	comp=Z,0.9nm,0.5s,baz=154,slow=7.4,SNR=5.4						
	comp=Z,0.9nm,0.5s						
SONM	Songino Array	49.62	341	IAmb	IAmb	03 07 18.6	
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	59.91	325	P	P	03 08 30.1	-0.7
	comp=Z,4.5nm,0.8s,baz=121,slow=7.8,SNR=14						
	comp=Z,4.5nm,0.8s						
MKAR	Makanchi Array	59.91	325	P	P	03 08 30.4	-0.5
ZALV	Zalesovo Beam	62.95	333	P	P	03 08 50.9	-0.4
KURK	Kurchatov	64.10	328	P	P	03 08 59.1	+0.2
GAR	Garm	64.17	313	P	P	03 08 59.4	-0.5
GAR				IAmb	IAmb	03 09 01.9	
	comp=Z,5.2nm,0.8s						
KKAR	Karatay Array	65.53	317	P	P	03 09 08.6	+0.1
CASY	Casey	68.92	187	P	P	03 09 27.8	-1.6
CASY				IAmb	IAmb	03 09 52.3	
	comp=Z,2.4nm,1.1s						
BRVK	Borovoye	69.75	327	P	P	03 09 34.5	-0.4
BRVK				IAmb	IAmb	03 09 36.6	
	comp=Z,4.8nm,1.2s						
TIXI	Tiksi	69.89	0	P	P	03 09 34.4	-1.0
TIXI				IAmb	IAmb	03 09 36.7	
	comp=Z,3.4nm,0.8s						
NRIK	Noril'sk	72.71	346	P	P	03 09 52.5	0.0
	comp=Z,2.4nm,0.6s,baz=131,slow=5.0,SNR=3.7						
	comp=Z,2.4nm,0.6s						
NRIK	Noril'sk	72.71	346	P	P	03 09 52.9	+0.4
NRIK				IAmb	IAmb	03 09 53.7	
	comp=Z,3.1nm,0.8s						
ABKAR	Akbulak array	74.48	321	P	P	03 10 02.4	-0.9
IMAR	Indian Mountai	83.76	24	P	P	03 10 53.4	-0.3
MCK	McKinley	85.49	26	P	P	03 11 02.9	+0.4

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*DJA **14** 03:02:28.5±1.2, 3°S±6°×14°0E±°, h20^{km}±4^{km}, M4.5/5, MLv4.5/5*

*IDC **14** 03:02:29.7±1.4, 3°.11S×139°.11E, h0^{km}, mb3.7/4, mbtmp3.8/5, ML3.7/1, MS3.6/4, Error ellipse: s-maj=68.9km s-min=17.4km az=99.0*

*NEIC **14** 03:02:32.0±2.8, 3°.3S±0°.1×140°.0E±0°.1, h20^{km}±7^{km}, mb4.3/11, Error ellipse: s-maj=21.1km s-min=14.6km az=150.0*

ISC 14 03:02:27.5±1.0**, 2°.93S**±0°.06×**140°.3E**±0°.1**, h10**^{km}**, n27,** σ**2**^{s}**04**/22**, mb3.9**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.35	343	P	Pb	03 02 35.2	-0.7
GENI				S	Sb	03 02 41.4	-0.2
SMPI	Sarmi	1.82	301	P	Pn	03 02 58.1	-0.8
WAMI	Wamena	1.82	239	P	Pn	03 02 59.8	+0.9
WAMI				S	Sn	03 03 25.3	+3.2
SRPI	Serui, Papua	4.16	285	P	Pn	03 03 30.7	-0.5
SRPI				S	Sn	03 04 20.5	+0.5
BAKI	Biak	4.51	293	P	Pn	03 03 38.6	+2.7
MANU	Manus Island	7.14	83	Pn	Pn	03 04 20.1	+8.0
PMG	Port Moresby	9.39	134	LR	LR	03 09 40.7	
	comp=Z,210nm,18.0s,baz=306,slow=42						
MTN	Manton Dam	13.37	222		Pn	03 05 35.0	-2.5
KNRA	Kununurra	16.99	221		Pn	03 06 24.6	-0.9
KNRA				IAmb	IAmb	03 06 28.8	
	comp=Z,31nm,0.9s						
SOEI	Soe	17.28	246		Pn	03 06 27.8	-1.4
SOEI				IAmb	IAmb	03 06 45.4	
	comp=Z,60nm,1.0s						
WB0	Warramunga Arr	17.69	199		Pn	03 06 32.1	-2.1
WB0				IAmb	IAmb	03 06 47.9	
	comp=Z,15nm,1.1s						
WR0	Warramunga Arr	17.82	198	Pn	Pn	03 06 32.8	-3.0
WR0				IAmb	IAmb	03 07 00.6	
	comp=Z,21nm,1.2s						
WRAB	Tennant Creek	17.86	198	Pn	Pn	03 06 31.4	-4.8
WRAB				IAmb	IAmb	03 07 03.1	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	17.87	198	Pn	Pn	03 06 32.1	-4.3
WB2				IAmb	IAmb	03 07 02.8	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	17.87	198	P	Pn	03 06 33.8	-2.6
	comp=Z,0.3nm,0.3s,baz=18,slow=13,SNR=5.3						
WRA				S	Sn	03 09 40.0	-16
	comp=Z,4.2nm,0.8s,baz=19,slow=22,SNR=4.5						
	comp=Z,1.6nm,0.8s						
CTA	Charters Tower	18.02	162	LR	LR	03 14 41.3	
	comp=Z,226nm,19.8s,baz=328,slow=40						
TOLI2	Tolitoli	19.89	281	P	P	03 06 58.0	-1.3
AS31	Alice Springs	21.51	196	P	P	03 07 15.9	-0.9
ASAR	Alice Springs	21.51	196	P	P	03 07 15.4	-1.4
	comp=Z,2.6nm,0.8s,baz=24,slow=10.0,SNR=14						
ASAR				S	S	03 11 11.7	-3.8
	comp=Z,2.0nm,0.8s,baz=11,slow=29,SNR=5.2						
	comp=Z,2.6nm,0.8s						
MYLDM	Lahad Datu	23.19	290	P	P	03 07 35.2	+0.4
BKB	Balikpapan	23.42	274	P	P	03 07 37.0	0.0
EIDS	Eidsvold	24.61	156	P	P	03 07 50.0	+1.8
EIDS				IAmb	IAmb	03 08 10.9	
	comp=Z,41nm,1.9s						
DZM	Mont Dzumac	31.74	129	LR	LR	03 20 16.8	
	comp=Z,104nm,20.5s,baz=34,slow=33						
PSI	Prapat	41.72	277	LR	LR	03 30 31.5	
	comp=Z,98nm,18.1s,baz=46,slow=41						
MKAR	Makanchi Array	70.92	322	P	P	03 13 45.5	+0.3
	comp=Z,1.1nm,0.9s,baz=115,slow=5.6,SNR=1.6						
	comp=Z,1.1nm,0.9s						
VNDA	Vanda	75.42	175	P	P	03 14 14.8	+3.7
	comp=Z,0.4nm,0.6s,baz=336,slow=7.6,SNR=2.3						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	85.39	24	P	P	03 15 11.8	+6.8
	comp=Z,0.8nm,1.1s,baz=243,slow=4.0,SNR=4.5						
	comp=Z,0.8nm,1.1s						

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*IDC **14** 03:06:49.2±1.9, 15°.77S×72°.65W, h129^{km}±17^{km}, mb3.7/3, mbtmp4.0/6, Error ellipse: s-maj=26.8km s-min=16.7km az=30.0*

*VAO **14** 03:07:05.2±1.6, 15°.35S×71°.32W, h180^{km}±10^{km}, mb3.7*

ISC 14 03:06:47.7±0.8**, 15°.73S**±0°.09×**72°.69W**±0°.08**, h100**^{km}**, n17,** σ**2**^{s}**80**/17**, mb4.0**/3**, Southern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.42	98	P	Pn	03 07 56.0	+2.9
	8.1nm,0.3s,baz=273,slow=12,SNR=59						
LPAZ				S	Sn	03 08 45.4	+1.6
	12nm,0.7s,baz=70,slow=16,SNR=7.2						
LPAZ	La Paz	4.42	98	*e*P	Pn	03 07 56.5	+3.3
NNA	Nana	5.49	312	P	Pn	03 08 08.5	+1.4
	18nm,0.4s,baz=137,slow=14,SNR=14						
NNA				S	Sn	03 09 08.3	-0.7
	36nm,0.3s,baz=45,slow=21,SNR=12						
LVC	Limon Verde	7.72	153	P	Pn	03 08 39.6	+1.9
	1.9nm,0.3s,baz=342,slow=14,SNR=15						
LVC				S	Sn	03 10 03.6	-0.2
	16nm,0.5s,baz=73,slow=16,SNR=14						
CLDB	Colider	17.13	76	*e*P	Pn	03 10 38.2	-2.8
H03N1	Juan Fernandez	18.51	197	T	T	03 29 30.3	
	baz=18,slow=74,SNR=25						
H03N2	Juan Fernandez	18.52	197	T	T	03 29 36.3	
	baz=18,slow=74,SNR=21						
H03N3	Juan Fernandez	18.53	197	T	T	03 29 47.8	
	baz=18,slow=74,SNR=26						
ITTB	Itaituba	20.13	58	*e*P	P	03 11 10.6	-3.4
SNDB	Serra Nova Dou	21.10	83	*e*P	P	03 11 21.0	-3.4
PTGB	Pitanga	21.30	118	*e*P	P	03 11 28.4	+1.9
IPMB	Ipameri, GO	23.53	99	*e*P	P	03 11 47.2	-2.0
SDV	Santo Domingo	24.54	5	*e*P	P	03 12 04.2	+5.8
MCPB	Macapa, AP	25.45	55	*e*P	P	03 12 06.1	-0.4
TORD	Torodi Ar. Bea	78.95	73	P	P	03 18 38.5	-2.5
	2.0nm,0.7s,baz=244,slow=4.7,SNR=18						
	2.0nm,0.7s						
ESDC	Sonseca Array	84.36	46	P	P	03 19 07.6	-1.3
	1.4nm,0.8s,baz=259,slow=5.3,SNR=8.8						
	1.4nm,0.8s						
YKA	Yellowknife Ar	84.60	342	P	P	03 19 08.4	-1.1
	0.4nm,0.6s,baz=133,slow=5.2,SNR=12						
	0.4nm,0.6s						

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*IDC **14** 03:12:00.2±0.7, 24°.05N×121°.75E, h0^{km}, mb4.1/15, mbtmp4.1/17, ML3.4/2, MS3.6/15, Error ellipse: s-maj=21.4km s-min=15.7km az=65.0*

*BJI **14** 03:12:01.4±0.0, 24°.22N×121°.86E, h5^{km}, mb4.4/42, mB4.6/35, ML4.4/8, Ms4.5/55, Ms7 4.4/53*

*JMA **14** 03:12:02.7±0.1, 24°.1N±0°.5×121°.7E±0°.3, h11^{km}, MD4.6/14, MV4.5/14, TAIWAN REGION*

*NEIC **14** 03:12:02.8±1.5, 24°.18N±0°.07×121°.77E±0°.05, h9^{km}±4^{km}, mb4.5/58, ML4.4(TAP), Error ellipse: s-maj=10.8km s-min=5.7km az=162.0*

*TAP **14** 03:12:02.7, 24°.18N×121°.76E, h12^{km}, ML4.7, B*

*NIED **14** 03:12:02.7, 24°.13N×121°.73E, h11^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.96; M$_{\theta\theta}$-3.40; M$_{\phi\phi}$0.44; M$_{r\theta}$6.61; M$_{\theta\phi}$-2.46; M$_{\phi r}$3.28; Fault plane solution: M$_0$8.29000×10^{15} NP1: φ$_s$245.00000°, δ14.00000°, λ91.00000°. NP2: φ$_s$64.00000°, δ76.00000°, λ90.00000°.*

*ASIES **14** 03:12:03.2, 24°.20N×121°.73E, h16^{km}, MW4.4*

ISC 14 03:12:02.8±0.6**, 24°.17N**±0°.01×**121°.77E**±0°.02**, h12**^{km}±4^{km}**, n311,** σ**1**^{s}**16**/366**, mb4.5**/47**, MS3.7**/16**, 18C-34D, Fault plane solution: NP1:**φ$_s$147.08093°, δ23.66928°, λ-23.05859°. **NP2:**φ$_s$258.38040°, δ80.95330°, λ-111.96469°. **Principal axes:** T Plg32.4415°, Azm6.6441°**;** N Plg21.6775°, Azm262.0090°**;** P Plg49.3593°, Azm144.4218°**; Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.14	267	*i* P	Pg	03 12 06.1	-0.2
	baz=264						
ETL				*i* S	Sg	03 12 08.6	-0.1
	baz=264						
EHP	Heping Village	0.14	349	⇓*i*P	Pg	03 12 06.2	-0.2
	baz=354						
EHP				S	Sg	03 12 09.1	+0.2
	baz=354						
NACB	Ninganchiao	0.16	272		Pg	03 12 06.3	-0.3
NACB	Ninganchiao	0.16	272	*i* P	Pg	03 12 06.3	-0.3
	baz=264						
NACB				S	Sg	03 12 09.3	+0.1
	baz=264						
TWD	Chiawan	0.18	242	*i* P	Pg	03 12 06.9	0.0
	baz=245						
TWD				*i* S	Sg	03 12 10.1	+0.3
	baz=245						
HWA	Hwalien	0.24	219	P	Pb	03 12 09.1	0.0
	baz=227						
ENA	Nanau	0.26	354	⇓*i*P	Pg	03 12 08.1	-0.2
	baz=356						
ENA				*i* S	Sg	03 12 12.3	+0.3
	baz=356						
ETLH	Xiulin Townshi	0.27	279	*e*P	Pg	03 12 08.2	-0.2
	baz=278						
ETLH				S	Sg	03 12 12.4	+0.1
	baz=278						
EWUT	Wuta	0.28	1	⇓P	Pg	03 12 08.4	-0.2
	baz=2.0						
EWUT				*i* S	Sg	03 12 13.1	+0.7
	baz=2.0						
ETM	Tongmen	0.33	232	*e*P	Pg	03 12 09.3	-0.1
	baz=232						
ETM				*e*S	Sg	03 12 14.8	+1.0
	baz=232						
TEYL	Yanliau Villag	0.34	208	*e*P	Pb	03 12 10.6	-0.1
	baz=219						
LATG	Datong	0.43	329	⇓P	Pg	03 12 11.1	-0.3
	baz=329						
LATG				S	Sg	03 12 17.1	-0.1
	baz=329						
NNSB	Datong	0.44	306	P	Pg	03 12 11.5	-0.1
	baz=306						
NNSB				S	Sg	03 12 17.2	-0.3
	baz=306						
TWC	Suao	0.45	9	⇓*i*P	Pg	03 12 11.6	0.0
	baz=4.0						
TWC				S	Sg	03 12 18.1	+0.5
	baz=4.0						
NNS	Nan Shan	0.46	307	⇓*i*P	Pg	03 12 11.6	-0.2
	baz=307						
NNS				S	Sg	03 12 18.1	+0.2
	baz=307						
WHF	Hehuan Shan	0.46	267	*e*P	Pg	03 12 11.8	-0.3
	baz=268						
WHF				*i* S	Sg	03 12 18.5	+0.1
	baz=268						
NDS	Dongshan	0.47	354	⇓P	Pg	03 12 12.0	-0.1
	baz=354						
NDS				S	Sg	03 12 18.9	+0.6
	baz=354						
ESL	Shilin	0.47	222	P	Pg	03 12 12.2	+0.2
	baz=230						
FUSS	Fushou	0.49	280	⇓*i*P	Pg	03 12 12.6	+0.1
	baz=280						
FUSS				S	Sg	03 12 19.5	+0.5
	baz=280						
TEGC	Jichi Village	0.50	205	*e*P	Pb	03 12 13.8	+0.2
	baz=194						
ENTT	Nioudou	0.51	338	⇓*i*P	Pg	03 12 12.8	0.0
	baz=339						
ENTT				*i* S	Sb	03 12 20.3	-0.8
	baz=339						
TWT	Tachien	0.55	279	⇓*i*P	Pg	03 12 14.0	+0.4
	baz=279						
TWT				S	Sb	03 12 21.8	-0.7
	baz=279						
CHGB	Renai	0.56	259	⇓*i*P	Pg	03 12 13.7	0.0
	baz=253						
CHGB				*i* S	Sg	03 12 21.4	+0.2
	baz=253						
TWE	Neicheng	0.56	350	⇓*i*P	Pg	03 12 13.8	+0.1
	baz=352						
TWE				*i* S	Sg	03 12 21.6	+0.3
	baz=352						
TDCB	Techi	0.57	279	⇓*i*P	Pg	03 12 14.1	+0.2
	baz=279						
TDCB				*i* S	Sg	03 12 21.2	-0.3
	baz=279						
OWD	Renai	0.58	249	*e*P	Pg	03 12 14.4	+0.2
	baz=249						
OWD				*e*S	Sg	03 12 22.5	+0.5
	baz=249						
EGFH	Guangfu	0.59	213	*e*P	Pb	03 12 14.8	-0.3
	baz=220						
ILA	Ilan	0.60	358	P	Pg	03 12 14.5	0.0
	baz=354						
ILA				*i* S	Sb	03 12 23.7	+0.1
	baz=354						
FUSB	Fushanzhiwuyua	0.61	344	⇓*i*P	Pg	03 12 14.9	0.0
	baz=344						
FUSB				S	Sg	03 12 23.0	0.0
	baz=344						
YHNB	Yeheng	0.62	324		Pg	03 12 14.8	-0.1
YHNB	Yeheng	0.62	324	P	Pg	03 12 15.1	+0.2
YHNB	Yeheng	0.62	324	⇓*i*P	Pg	03 12 15.0	+0.1
	baz=324						
YHNB				S	Sg	03 12 22.9	-0.2
	baz=324						
WUSB	Renai	0.62	254	P	Pg	03 12 14.9	-0.1
	baz=247						
WUSB				S	Sg	03 12 23.3	+0.1
	baz=247						
NSK	Sanguang	0.63	323	⇓*i*P	Pg	03 12 15.1	0.0
	baz=324						
NSK				S	Sg	03 12 23.6	+0.1
	baz=324						
NWLT	Wulai	0.66	338	⇓*i*P	Pg	03 12 15.7	+0.1
	baz=338						
NWLT				S	Sb	03 12 24.8	-0.5
	baz=338						
NTC	Toucheng	0.69	4	⇓*e*P	Pg	03 12 16.2	+0.1
	baz=4.0						
NTC				*e*S	Sb	03 12 26.1	-0.1
	baz=4.0						
EGS		0.69	12	*e*P	Pb	03 12 16.6	-0.2
	baz=20						
VWDT	VWDT	0.71	235	⇑P	Pb	03 12 17.0	-0.1
	baz=235						
VWDT				*e*S	Sb	03 12 26.7	-0.1
	baz=235						
HGSD	Ruisui	0.74	205	⇓*i*P	Pb	03 12 17.9	+0.2
	baz=195						
HGSD				*e*S	Sn	03 12 29.9	-0.5
	baz=195						
NFF	Wufeng Townshi	0.76	308	⇓*e*P	Pg	03 12 17.2	-0.3
	baz=308						
NFF				S	Sg	03 12 27.6	+0.2
	baz=308						
WPL	Puli Township	0.76	258	*e*P	Pb	03 12 17.8	-0.2
	baz=251						
WPL				*e*S	Sb	03 12 28.0	-0.3
	baz=251						
WHP	Taichung City	0.76	278	P	Pb	03 12 18.1	0.0
	baz=279						
WHP				S	Sg	03 12 27.6	0.0
	baz=279						
EHY	Hungye	0.78	212	*e*P	Pg	03 12 17.9	0.0
	baz=224						
DPDB	Guoxing	0.78	260	*e*P	Pg	03 12 18.2	+0.2
	baz=261						
TIPB	Shuangxi	0.80	3	⇓P	Pg	03 12 18.3	-0.1
	baz=3.0						
TIPB				*e*S	Sg	03 12 28.2	-0.8
	baz=3.0						
NHDH	Xindian Distri	0.82	344	*e*P	Pb	03 12 19.1	0.0
	baz=344						
NHDH				*e*S	Sg	03 12 29.3	-0.2
	baz=344						
LIOB	Emei	0.84	305	⇑P	Pb	03 12 19.4	+0.1
	baz=305						
LIOB				*e*S	Sb	03 12 30.3	-0.3
	baz=305						
SSLB	Suanglung	0.84	243	Pg	Pg	03 12 19.0	-0.1
SSLB	Suanglung	0.84	243	P	Pg	03 12 19.2	+0.1
SSLB	Suanglung	0.84	243	⇑*i*P	Pg	03 12 18.9	-0.1
	baz=253						
SSLB				S	Sg	03 12 29.2	-0.8
	baz=253						
NSTT	Nanjuang	0.84	303	⇑P	Pb	03 12 19.3	0.0
	baz=304						
NSTT				S	Sg	03 12 30.3	+0.2
	baz=304						
NJD	Zhudong	0.84	312	*e*P	Pn	03 12 19.9	-0.5
	baz=318						
TATO	Taipei	0.84	342		Pg	03 12 19.1	-0.1
TATO	Taipei	0.84	342	⇑*i*P	Pb	03 12 19.4	-0.1
	baz=342						
TATO				*i* S	Sg	03 12 30.2	0.0
	baz=342						
SMLT	Sun Moon Lake	0.85	251	⇑*i*P	Pb	03 12 19.4	-0.1
	baz=251						
SMLT				*e*S	Sg	03 12 29.9	-0.4
	baz=251						
TWB1	Santiao Chiao	0.86	13	P	Pb	03 12 19.6	-0.1
	baz=13						
TWB1				S	Sg	03 12 30.4	-0.3
	baz=13						
TYC	Yuchr	0.88	253	*e*P	Pg	03 12 19.3	-0.4
	baz=254						
BACT	New Taipei Cit	0.88	340	*e*P	Pb	03 12 20.4	+0.4
	baz=340						
YULB	Yu-li	0.89	210		Pg	03 12 18.8	-1.1
YULB	Yu-li	0.89	210	*e*P	Pg	03 12 18.9	-1.1
	baz=221						
ECBN	Changbin	0.90	199	*e*P	Pg	03 12 20.0	-0.2
	baz=188						
NWF	Wu-fen Shan	0.90	0	⇓*i*P	Pb	03 12 20.5	0.0
	baz=353						
NWF				S	Sb	03 12 32.5	+0.1
	baz=353						
WFSB	Wu-fen Shan	0.90	0	*e*P	Pb	03 12 20.5	+0.1
	baz=353						
WFSB				S	Sb	03 12 32.2	-0.1
	baz=353						
EYUL	Yuli	0.92	207	*e*P	Pb	03 12 20.9	+0.3
	baz=225						
HSN1	Hsinchu	0.92	312	*e*P	Pn	03 12 21.3	-0.2
	baz=312						
TWF1	Yuli	0.92	208	*e*P	Pg	03 12 19.4	-1.2
	baz=223						
SXI1	Grass Mountain	0.93	6	⇓*i*P	Pb	03 12 20.9	0.0
	baz=353						
TWQ1	Liyutan	0.93	281	P	Pn	03 12 21.5	-0.2
	baz=282						
TWQ1				*e*S	Sn	03 12 35.0	+0.1
	baz=282						
NTY	Taoyuan	0.94	333	*e*P	Pn	03 12 22.1	+0.4
	baz=333						
SBCB	Hsinchu	0.95	311	⇑P	Pn	03 12 22.4	+0.4
	baz=311						
SBCB				S	Sb	03 12 34.4	+0.7
	baz=311						
NSY	Sanyi	0.96	285	*e*P	Pn	03 12 22.3	+0.2
	baz=286						
NCUH	Zhongli	0.96	326	⇑P	Pn	03 12 22.2	+0.1
	baz=326						
NCUH				*e*S	Sn	03 12 36.4	+0.7
	baz=326						
NCU	National Centr	0.96	326	P	Pn	03 12 22.2	+0.1
	baz=326						
NCU				S	Sn	03 12 36.1	+0.4
	baz=326						
HSN	Hsinchu	0.97	311	P	Pn	03 12 22.5	+0.3
	baz=314						
HSN				*e*S	Sn	03 12 35.5	-0.4
	baz=314						
NMLH	Miaoli	0.97	293	*e*P	Pn	03 12 22.7	+0.5
	baz=293						
NJN	Zhunan	0.97	302	*e*P	Pn	03 12 22.6	+0.3
	baz=303						
TNOU	National Taiwa	0.98	0	*e*P	Pg	03 12 21.7	0.0

	baz=360						
TNOU				*e*S	Sb	03 12 34.6	0.0
	baz=360						
TWS1	**Kuangyinshan**	0.98	341	P	Pn	03 12 22.5	+0.1
	baz=349						
TWS1				S	Sn	03 12 35.5	-0.7
	baz=349						
WWF	**Wufeng**	0.99	263	*e*P	Pn	03 12 23.4	+0.9
	baz=258						
YM01	**YM01**	0.99	349	⇑*i*P	Pn	03 12 22.5	-0.1
	baz=334						
TCU	**Taichung**	1.00	269	⇑*e*P	Pn	03 12 23.4	+0.7
	baz=270						
TCU				S	Sn	03 12 37.9	+1.2
	baz=270						
YUS	**Yu-Shan**	1.01	228	*e*P	Pg	03 12 22.1	-0.3
	baz=230						
YUS				*e*S	Sb	03 12 36.7	+0.8
	baz=230						
WJS	**Zhushan**	1.01	250	⇑*e*P	Pn	03 12 23.3	+0.4
	baz=247						
WJS				*e*S	Sn	03 12 37.2	+0.2
	baz=247						
YM08	**YM08**	1.03	351	*e*P	Pb	03 12 22.6	0.0
	baz=335						
WNT1	**Nantou City**	1.03	256	*e*P	Pn	03 12 23.4	+0.3
	baz=257						
NTST	**Danshui**	1.04	344	*e*P	Pn	03 12 23.3	+0.1
	baz=343						
NWRT	**Kuosheng**	1.04	354	*e*P	Pg	03 12 22.8	-0.1
	baz=354						
WNT	**Mingjian**	1.04	254	⇓P	Pn	03 12 23.9	+0.7
	baz=252						
WNT				*e*S	Sn	03 12 38.2	+0.7
	baz=252						
ANP	**Anpu**	1.04	347	*e*P	Pg	03 12 23.0	+0.1
	baz=347						
WDJ	**Dajia District**	1.05	280	⇑*e*P	Pn	03 12 24.1	+0.8
	baz=289						
WDJ				*e*S	Sn	03 12 39.5	+1.6
	baz=289						
FULB	**Fuli**	1.06	205	*e*P	Pg	03 12 23.2	0.0
	baz=222						
NHW	**Xinwu Township**	1.06	322	*e*P	Pn	03 12 24.0	+0.4
	baz=321						
NHW				*e*S	Sn	03 12 39.5	+1.2
	baz=321						
ALS	**Alishan**	1.10	234	⇑*i*P	Pb	03 12 24.0	0.0
	baz=224						
JYNG	**Yonagunijimaku**	1.11	75	P	Pg	03 12 24.4	+0.3
JYNG	**Yonagunijimaku**	1.11	75	A	A	03 12 24.4	
	comp=E,13nm,0.9s,comp=E,20nm,4.1s						
WYL	**Yuanlin Townsh**	1.11	260	*e*P	Pg	03 12 25.2	+1.0
	baz=261						
WCHH	**Zhanghua**	1.11	266	*e*P	Pg	03 12 25.0	+0.7
	baz=267						
TWY	**Chenhua**	1.11	352	*e*P	Pg	03 12 25.0	+0.7
	baz=352						
CHKT	**Chengkung**	1.13	199	*e*P	Pb	03 12 23.8	-0.4
	baz=192						
NSM	**Shimen**	1.13	352	*e*P	Pb	03 12 24.3	0.0
	baz=336						
CHN5	**Tsauling**	1.15	241	*e*P	Pg	03 12 25.2	+0.2
	baz=243						
CHN5				*e*S	Sn	03 12 42.9	+2.3
	baz=243						
YOJ	**Yonaguni jima**	1.17	75		Pg	03 12 25.2	-0.1
YOJ	**Yonaguni jima**	1.17	75	P	Pg	03 12 25.4	+0.1
YOJ	**Yonaguni jima**	1.17	75	P	Pg	03 12 25.1	-0.1
	baz=66						
YOJ				S	Sn	03 12 42.1	+1.3
	baz=66						
YOJ	**Yonaguni jima**	1.17	75	P	Pn	03 12 25.0	+0.1
YOJ				*e*S	Sn	03 12 41.5	+0.7
YOJ	**Yonaguni jima**	1.17	75	A	A	03 12 25.0	
	comp=E,13nm,2.4s,comp=E,17nm,2.8s						
ECS	**Chishang**	1.18	206	*e*P	Pn	03 12 24.7	-0.5
	baz=208						
ELDTW	**Lidau**	1.20	216	*e*P	Pn	03 12 23.9	-1.5
	baz=202						
WGK	**Gukeng**	1.21	247	*e*P	Pg	03 12 26.4	+0.3
	baz=249						
WDLH	**Douliu**	1.23	247	⇑*e*P	Pg	03 12 26.4	0.0
	baz=249						
EDH	**Donghe**	1.26	200	*e*P	Pn	03 12 24.7	-1.5
	baz=188						
WRL	**Guolierlin Hig**	1.30	259	*e*P	Pb	03 12 27.4	+0.2
	baz=260						
CHN2	**Minshiung**	1.35	242	*e*P	Pg	03 12 28.9	+0.2
	baz=244						
CHN2				*e*S	Sg	03 12 48.5	+2.3
	baz=244						
STYH	**Taoyuan**	1.35	223	*e*P	Pn	03 12 27.4	0.0
	baz=225						
CHN4	**Tsaushan**	1.35	233	⇓P	Pg	03 12 28.6	-0.2
	baz=235						
CHN4				S	Sg	03 12 47.7	+1.3
	baz=235						
WTK	**Tuku**	1.35	250	*e*P	Pg	03 12 28.8	0.0
	baz=237						
TPUB	**Ta-pu**	1.36	231		Pb	03 12 28.0	-0.2
TPUB	**Ta-pu**	1.36	231	P	Pg	03 12 29.3	+0.4
TPUB	**Ta-pu**	1.36	231	⇓P	Pb	03 12 28.5	+0.3
	baz=222						
TPUB				S	Sg	03 12 46.2	-0.3
	baz=222						
STYT	**Tauyuan**	1.37	223	⇓*e*P	Pn	03 12 27.9	+0.1
	baz=225						
LONT	**Longtian**	1.39	205	*e*P	Pn	03 12 27.2	-0.8
	baz=207						
WTCT	**Ta-ch'eng**	1.40	258	*e*P	Pb	03 12 28.7	-0.2
	baz=260						
CHY	**Chiayi**	1.40	242	*e*P	Pg	03 12 30.1	+0.3
	baz=244						
CHY				*e*S	Sg	03 12 50.0	+1.9
	baz=244						
WTP	**Ta-pu**	1.40	229	*e*P	Pb	03 12 29.0	+0.1
	baz=231						
TWK	**Hsinying**	1.48	233	*e*P	Pb	03 12 30.5	+0.2
	baz=235						
PCYT	**Pengchaiyu**	1.48	10	*e*P	Pb	03 12 30.1	-0.2
	baz=8.0						
TWG	**Pinlang**	1.49	206	*e*P	Pn	03 12 28.2	-1.1
	baz=191						
CHN1	**Nanshi**	1.50	230	*e*P	Pb	03 12 30.8	+0.2
	baz=222						
CHN1				*e*S	Sg	03 12 51.6	+0.4
	baz=222						
SNST	**Tainan City**	1.50	231	*e*P	Pg	03 12 31.6	-0.1
	baz=234						
LDUT	**Ludao**	1.51	191	*e*P	Pn	03 12 27.5	-2.2
	baz=180						
WSF	**Szhu**	1.51	250	*e*P	Pb	03 12 31.1	+0.3
	baz=252						
WSF				*e*S	Sg	03 12 51.9	+0.3
	baz=252						
SGST	**Jiashian**	1.54	226	*e*P	Pn	03 12 30.0	0.0
	baz=228						
WSL	**Shuilin Townsh**	1.55	246	*e*P	Pb	03 12 31.5	0.0
	baz=248						
WSL				S	Sg	03 12 53.5	+0.7
	baz=248						
SLGT	**Liugui**	1.56	222	*e*P	Pn	03 12 30.8	+0.4
	baz=224						
ICHU	**Yijhu**	1.59	240	*e*P	Pb	03 12 32.4	+0.4
	baz=242						
ICHU				*e*S	Sg	03 12 55.3	+1.4
	baz=242						
CHN8	**Yiju**	1.65	241	*e*P	Pb	03 12 33.0	-0.1
	baz=243						
SCST	**Cishan**	1.73	223	*e*P	Pb	03 12 34.7	+0.1
	baz=225						
SHHT	**Tainan City**	1.73	229	*e*P	Pg	03 12 36.0	-0.2
	baz=230						
SSD	**Sandimen**	1.76	217	*e*P	Pb	03 12 34.3	-0.8
	baz=231						
SSD				*e*S	Sb	03 12 58.0	+0.9
	baz=231						
TSMG	**Majia**	1.79	216	*e*P	Pb	03 12 35.7	+0.2
	baz=217						
IRIF	**Iriomote-Funau**	1.79	84	P	Pn	03 12 33.8	+0.2
IRIF	**Iriomote-Funau**	1.79	84	A	A	03 12 33.8	
	comp=E,11nm,2.0s,comp=E,12nm,1.9s						
TWM1	**Shoushan**	1.82	223	*e*P	Pb	03 12 36.1	-0.1
	baz=225						
HATJ	**Hateruma jima**	1.86	93	P	Pn	03 12 35.0	+0.5
HATJ	**Hateruma jima**	1.86	93	A	A	03 12 35.0	
	comp=E,15nm,3.8s,comp=E,17nm,2.9s						
MASBT	**Mashibuluo**	1.87	214	*e*P	Pn	03 12 35.3	+0.7
	baz=215						
MASBT				*e*S	Sb	03 13 01.1	+0.9
	baz=215						
EAST	**Anshuo**	1.97	206	*e*P	Pn	03 12 35.6	-0.4
	baz=195						
TAW	**Tawu**	1.97	204	*e*P	Pb	03 12 37.5	-1.2
	baz=194						
TAWH	**Dawu Township**	1.99	204	*e*P	Pn	03 12 37.6	+1.3
	baz=194						
SSPT	**Xinbi**	2.01	214	*e*P	Pb	03 12 38.6	-0.7
	baz=214						
JKRS	**Kuro-shima**	2.04	88	P	Pn	03 12 37.8	+0.8
JKRS				*e*S	Sn	03 13 03.3	+0.9
JKRS	**Kuro-shima**	2.04	88	A	A	03 12 37.8	
	comp=E,16nm,2.5s,comp=E,23nm,4.1s						
SCZT	**Fangliau**	2.08	211	*e*P	Pb	03 12 39.0	-1.4
	baz=196						
PNG	**Penghu**	2.12	254	*e*P	Pn	03 12 38.7	+0.7
	baz=256						
PHUB	**P'eng-hu**	2.12	253	*e*P	Pn	03 12 38.4	+0.4
	baz=256						
PHUB				*e*S	Sn	03 13 05.4	+1.2
	baz=256						
WDGT	**Dungji**	2.14	245	*e*P	Pn	03 12 39.1	+0.8
	baz=248						
WDGT				*e*S	Sn	03 13 06.0	+1.3
	baz=248						
SLIU	**Shizi**	2.14	205	*e*P	Pb	03 12 41.2	-0.3
	baz=196						
LYUB	**Lan-yu**	2.16	185	*e*P	Pn	03 12 35.9	-2.7
	baz=187						
JIJ	**Ishigaki jima**	2.17	84	P	Pn	03 12 38.9	+0.1
JIJ				*e*S	Sn	03 13 06.0	+0.4
WLCH	**Liuqiu**	2.22	216	*e*P	Pb	03 12 43.1	+0.3
	baz=216						
VWUC	**VWUC**	2.27	292	*e*P	Pn	03 12 39.9	-0.2
	baz=292						
VCHM	**Qimei**	2.35	247	*e*P	Pn	03 12 43.0	+1.8
	baz=233						
TWKBT	**Hengchun**	2.39	202	*e*P	Pn	03 12 42.4	+0.7
	baz=192						
TSEB	**Hengchuen, Pin**	2.40	200	*e*P	Pn	03 12 43.2	+1.4
	baz=203						
PTMZ	**Houxiangcun**	2.57	290	⇑*e*P	Pn	03 12 43.4	-0.8
	baz=291						
MATB	**Ma-tsu**	2.58	320	*e*P	Pn	03 12 43.4	-1.0
	baz=318						
JTJ	**Tarama**	2.71	79	P	Pn	03 12 47.3	+1.1
JTJ	**Tarama**	2.71	79	A	A	03 12 47.3	
	comp=E,7.0nm,2.5s,comp=E,6.0nm,3.4s						
LYJJ	**Jianjiangzhen**	2.99	323	*e*P	Pn	03 12 49.3	-0.7
	baz=321						
QZH	**Quanzhou**	3.00	286	⇓*i*Pn	Pn	03 12 48.8	-1.3
QZH				Sn	Sn	03 13 21.3	-4.7
QZH				LR	LR		
	comp=E,4µm,11.1s						
QZH				LR	LR		
	comp=Z,4µm,11.8s						
KNM	**Kinmen**	3.06	275	*e*P	Pn	03 12 53.1	+2.1
	baz=276						
XPSS	**Dashiqiu**	3.10	333	*e*P	Pn	03 12 51.2	-0.4
	baz=330						
KNMB	**Chin-men Tao**	3.10	276	Pn	Pn	03 12 51.5	-0.1
KNMB	**Chin-men Tao**	3.10	276	*e*P	Pn	03 12 51.1	-0.5
	baz=277						
MHZQ	**Yeshan**	3.14	308	*e*P	Pn	03 12 52.4	+0.3
	baz=307						
JIRB	**Irabujima**	3.17	77	*e*P	Pn	03 12 54.0	+1.5
JIRB				*e*S	Sn	03 13 30.8	+0.7
JIKM	**Ikemajima**	3.25	76	*e*S	Sn	03 13 34.6	+2.4
JMJ	**Miyako jima 2**	3.27	78	P	Pn	03 12 56.0	+2.1
JMJ	**Miyako jima 2**	3.27	78	*e*P	Pn	03 12 55.0	+1.1
	baz=78						
JMJ2	**Miyako jima3**	3.29	79	P	Pn	03 12 56.0	+1.9
JMJ2				*e*S	Sn	03 13 35.5	+2.3
JMJ2	**Miyako jima3**	3.29	79	A	A	03 12 56.0	
	comp=E,6.0nm,2.7s,comp=E,8.0nm,4.2s						
JOGS	**Gusukube**	3.36	79	*e*P	Pn	03 12 57.2	+2.1
JOGS				*e*S	Sn	03 13 37.4	+2.3
JOGS	**Gusukube**	3.36	79	A	A	03 12 57.2	
	comp=E,7.0nm,3.0s,comp=E,7.0nm,3.6s						
AXDP	**Jialang**	3.54	283	*e*P	Pn	03 12 58.1	+0.6
	baz=283						
ZPLA	**Ao Xicun**	3.69	267	*e*P	Pn	03 12 59.0	-0.6
	baz=269						
SXFK	**Yanhouchang**	4.35	302	*e*P	Pn	03 13 08.8	+0.1
	baz=300						
JOW	**Kunigami**	6.45	64	Pn	Pn	03 13 37.2	-0.3
	2.7nm,0.3s,baz=241,slow=9.4,SNR=14						
JOW				Sn	Sn	03 14 51.8	+0.7
	baz=115,slow=26						
	15nm,0.5s						
JOW	**Kunigami**	6.45	64		Pn	03 13 36.8	-0.8
JOW	**Kunigami**	6.45	64	*e*P	Pn	03 13 37.0	-0.5
	baz=64						
SSE	**Sheshan**	6.92	356	Pn	Pn	03 13 43.1	-1.0
SSE				Sn	Sn	03 15 03.0	+0.3
SSE				smax	smax		
	comp=N,81nm,1.3s						
SSE				smax	smax		
	comp=E,73nm,1.3s						
SSE				LR	LR		
	comp=N,760nm,11.0s						
SSE				LR	LR		
	comp=E,570nm,9.1s						
GZH	**Guangzhou**	7.80	264	Pn	Pn	03 13 51.4	-4.8
NJ2	**Nanjing**	8.27	342	*e*P	Pn	03 14 01.8	-0.7
NJ2				S	Sn	03 15 33.8	-2.0
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
NJ2				smax	smax		
	comp=N,220nm,1.3s						
NJ2				smax	smax		
	comp=E,190nm,0.9s						
NJ2				LR	LR		
	comp=N,2µm,13.3s						
NJ2				LR	LR		
	comp=E,1µm,7.6s						
NJ2				LR	LR		
	comp=Z,2µm,12.8s						
WHN	**Wuhan**	9.16	316	⇓P	Pn	03 14 14.1	-0.6
WHN				LR	LR		
	comp=N,5µm,8.5s						
WHN				LR	LR		
	comp=E,3µm,6.0s						
WHN				LR	LR		
	comp=Z,7µm,10.1s						
GULI	**GuiLin**	10.43	279	P	Pn	03 14 31.6	-0.6
GULI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GULI				LR	LR		
	comp=N,1µm,9.2s						
GULI				LR	LR		
	comp=E,2µm,10.6s						
GULI				LR	LR		
	comp=Z,3µm,10.0s						
QIZ	**Qiongzhong**	12.21	248	P	Pn	03 14 56.3	-0.4
QIZ				S	Sn	03 17 14.6	+1.7
QIZ				LR	LR		
	comp=N,510nm,16.5s						
QIZ				LR	LR		
	comp=E,300nm,17.2s						
QIZ				LR	LR		
	comp=Z,410nm,15.1s						
LYN	**LuoYang**	13.14	324	*e*P	Pn	03 15 11.3	+2.0
LYN				S	Sn	03 17 31.4	-4.0
LYN				LR	LR		
	comp=N,3µm,10.0s						
LYN				LR	LR		
	comp=E,1µm,11.3s						
LYN				LR	LR		
	comp=Z,3µm,10.0s						
GYA	**Guiyang**	13.86	283	⇓P	Pn	03 15 21.0	+1.8
GYA				S	Sn	03 17 54.9	+1.8
GYA				PcP	PcP	03 20 46.3	+4.2
GYA				pmax	pmax		
	comp=Z,17nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.7s						
GYA				LR	LR		
	comp=N,610nm,8.1s						
GYA				LR	LR		
	comp=E,2µm,9.0s						
GYA				LR	LR		
	comp=Z,2µm,9.9s						
KSAR	**Wonju Array Be**	14.23	20	Pn	Pn	03 15 24.3	+0.2
KSRS	**Korea Array**	14.25	20	Pn	Pn	03 15 27.5	+3.1
	0.2nm,0.3s,baz=208,slow=13,SNR=6.5						
KSRS				LR	LR	03 21 44.8	
	comp=Z,88nm,21.7s,baz=200,slow=41						
KS19	**Wonju Array Si**	14.28	20	Pn	Pn	03 15 25.1	+0.2
HNS	**HongShan**	14.51	337	⇓P	Pn	03 15 27.5	-0.5
HNS				PP	PnPn	03 15 40.5	+4.4
HNS				*e*S	Sn	03 18 10.3	+1.5
HNS				SS	SnSn	03 18 24.6	+3.0
HNS				LR	LR		
	comp=N,1µm,12.6s						
HNS				LR	LR		
	comp=E,680nm,13.0s						
HNS				LR	LR		
	comp=Z,1µm,14.1s						
XAN	**Xi'an**	14.92	314	⇑P	Pn	03 15 34.6	+1.0
XAN				S	Sn	03 18 26.8	+8.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,72nm,5.2s						
XAN				LR	LR		
	comp=N,590nm,11.7s						
XAN				LR	LR		
	comp=E,2µm,11.4s						
XAN				LR	LR		
	comp=Z,2µm,11.1s						
SEHB	**SEOHWA**	15.10	20	Pn	Pn	03 15 35.0	-1.0
SEHB				IAmb	IAmb	03 15 48.1	
	comp=Z,22nm,0.9s						
BJI	**Beijing**	16.52	345	P	P	03 15 58.6	+1.7
BJI				S	S	03 19 06.4	-2.9
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,100nm,12.0s						
BJI				LR	LR		
	comp=Z,630nm,13.2s						
BJI				LR	LR		
	comp=Z,210nm,12.7s						
BJI				LR	LR		
	comp=Z,690nm,13.2s						
CD2	**Chengdu**	17.32	297	P	Pn	03 16 04.6	+0.1
CD2				S	Sn	03 19 18.4	+1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,4.5s						
CD2				LR	LR		
	comp=Z,940nm,8.0s						
CD2				LR	LR		
	comp=Z,1µm,10.2s						
DAV	**Davao City (W)**	17.39	167	LR	LR	03 22 45.5	
	comp=Z,128nm,19.7s,baz=350,slow=37						
JHJ	**Hachijo jima 2**	18.13	56	LR	LR	03 22 37.6	
	comp=Z,81nm,21.3s,baz=250,slow=35						
PZH	**PanZhiHua**	18.25	282	P	Pn	03 16 15.1	-1.1
PZH				S	Sn	03 19 40.8	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.9s						
PZH				LR	LR		
	comp=Z,440nm,10.1s						
PZH				LR	LR		
	comp=Z,2µm,14.7s						
PZH				LR	LR		
	comp=Z,2µm,14.9s						
HHC	**Hu-ho-hao-te**	18.71	335	*e*P	Pn	03 16 22.5	+0.9
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,5.4s						
HHC				LR	LR		
	comp=Z,1µm,13.9s						
HHC				LR	LR		
	comp=Z,610nm,17.3s						
HHC				LR	LR		
	comp=Z,1µm,13.3s						
MJAR	**Matsushiro Arr**	18.76	45	P	Pn	03 16 22.5	+0.3
	baz=230,slow=8.5,SNR=2.5						
	comp=Z,0.5nm,0.4s						
MYLDM	**Lahad Datu**	19.14	190	P	P	03 16 23.0	-3.0
MYLDM				IAmb	IAmb	03 16 51.5	
	comp=Z,27nm,1.1s						
LZH	**Lanzhou**	19.50	312	*e*P	Pn	03 16 36.8	+5.6
LZH				sP	sP	03 16 42.8	+7.4
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
LZH				LR	LR		
	comp=Z,820nm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
LZH				LR	LR		
	comp=Z,2µm,14.7s						
CN2	**Changchun**	19.82	8	*e*P	Pn	03 16 35.8	+1.0
CN2				*e*S	S	03 20 12.6	-3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
CHTO	**Chiang Mai**	21.89	260	P	P	03 16 56.5	+0.6
CMAR	**Chiang Mai Arr**	22.00	259	P	P	03 16 59.1	+2.0
	comp=Z,4.5nm,0.9s,baz=60,slow=7.5,SNR=12						
CMAR				LR	LR	03 26 02.9	
	comp=Z,169nm,18.5s,baz=105,slow=38						
CMAR	**Chiang Mai Arr**	22.00	259	P	P	03 16 57.4	+0.3
TOLI2	**Tolitoli**	22.94	183	P	P	03 17 05.5	-1.5
TOLI2				IAmb	IAmb	03 17 10.2	
	comp=Z,28nm,1.5s						
GTOI	**Gorontalo**	23.42	177	P	P	03 17 10.6	-1.3
	comp=Z,5.7nm,0.9s						
SBUM	**Sibu**	23.48	205	P	P	03 17 11.1	-1.4
SBUM				IAmb	IAmb	03 17 39.8	
	comp=Z,15nm,1.1s						
MPSI	**Mapaga**	23.76	185	P	P	03 17 15.0	-0.2
	comp=Z,8.5nm,1.3s						
GTA	**Gaotai**	23.98	315	*e*P	P	03 17 18.1	+0.8
GTA				pP	sP	03 17 22.9	+1.2
GTA				sP	pP	03 17 27.5	+6.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,75nm,6.4s						
GTA				LR	LR		
	comp=Z,310nm,12.4s						
GTA				LR	LR		
	comp=Z,980nm,12.7s						
GTA				LR	LR		
	comp=Z,880nm,12.0s						
GUMO	**Guam**	24.22	112	LR	LR	03 26 35.1	
	comp=Z,69nm,19.2s,baz=55,slow=36						
LUWI	**Luwuk**	25.08	178	P	P	03 17 25.9	-1.4
	comp=Z,11µmcomp=Z,83nm,0.7s						
GOMU	**GeErMu**	26.12	304	P	P	03 17 37.8	+0.7
GOMU				pP	sP	03 17 41.6	+0.2
GOMU				sP	pP	03 17 42.6	+1.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,67nm,4.7s						
GOMU				LR	LR		
	comp=Z,170nm,10.8s						
GOMU				LR	LR		
	comp=Z,170nm,12.9s						
GOMU				LR	LR		
	comp=Z,180nm,14.9s						
ASAJ	**Asahikawa**	26.19	35	LR	LR	03 28 42.4	
	comp=Z,188nm,18.3s,baz=162,slow=38						
KLR	**Kul'dur**	26.22	15	P	P	03 17 38.6	+1.2
	comp=Z,4.0nm,0.7s,baz=204,slow=6.6,SNR=9.4						
KLR				LR	LR	03 28 53.1	
	comp=Z,152nm,19.8s,baz=200,slow=38						
	comp=Z,4.0nm,0.7s						
ULN	**Ulaanbaatar**	26.39	337	P	P	03 17 38.6	-0.5
ULN				IAmb	IAmb	03 17 40.9	
	comp=Z,14nm,1.3s						
SIJI	**Sorong**	26.54	158	LR	LR	03 26 46.3	
	comp=Z,57nm,21.9s,baz=90,slow=34						

SONM	**Songino Array**	26.59	336	P	**P**	**03 17 41.0**	**0.0**
	comp=Z,6.7nm,1.1s,baz=154,slow=9.8,SNR=18						
	comp=Z,6.7nm,1.1s						
SONM	**Songino Array**	26.59	336	P	**P**	**03 17 41.1**	**0.0**
LSA	**Lhasa**	27.80	288	P	**P**	**03 17 56.5**	**+4.0**
LSA				LR	LR		
	comp=Z,190nm,15.5s						
LSA				LR	LR		
	comp=Z,460nm,13.1s						
LSA				LR	LR		
	comp=Z,540nm,11.6s						
MSAI	**Masohi**	28.22	165	P	**P**	**03 17 53.7**	**-2.0**
	comp=Z,695nmcomp=Z,9.5nm,0.4s						
MSAI				pP	**pP**	**03 17 58.5**	**-0.5**
	comp=Z,695nmcomp=Z,9.5nm,0.4s						
KAPI	**Kappang**	29.07	184	LR	LR	03 29 29.5	
	comp=Z,78nm,21.9s,baz=340,slow=36						
WMQ	**Urumqi**	34.05	314	*e*P	**P**	**03 18 47.8**	**+0.8**
WMQ				sP	sP	03 18 56.8	+5.4
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,94nm,14.9s						
YAK	**Yakutsk**	38.23	6	LR	LR	03 36 43.6	
	comp=Z,145nm,18.8s,baz=276,slow=39						
MK31	**Makanchi Array**	38.72	316	P	**P**	**03 19 26.8**	**0.0**
MKAR	**Makanchi Array**	38.72	316	P	**P**	**03 19 26.5**	**-0.2**
	comp=Z,3.6nm,0.9s,baz=110,slow=10,SNR=7.5						
MKAR				LR	LR	03 35 51.7	
	comp=Z,59nm,20.6s,baz=74,slow=37						
	comp=Z,3.6nm,0.9s						
MKAR	**Makanchi Array**	38.72	316	P	**P**	**03 19 25.7**	**-1.1**
PETK	**Petropavlovsk-**	39.58	34	LR	LR	03 37 10.6	
	comp=Z,169nm,18.1s,baz=192,slow=38						
ZAA0	**Zalesovo Array**	40.55	327	P	**P**	**03 19 40.9**	**-0.9**
ZALV	**Zalesovo Beam**	40.55	327	P	**P**	**03 19 41.6**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=114,slow=7.2,SNR=13						
ZALV				LR	LR	03 37 29.8	
	comp=Z,173nm,19.4s,baz=122,slow=38						
	comp=Z,5.8nm,0.9s						
ZALV	**Zalesovo Beam**	40.55	327	P	**P**	**03 19 41.0**	**-0.8**
MA2	**Magadan**	40.80	22	LR	LR	03 38 07.7	
	comp=Z,127nm,18.6s,baz=272,slow=38						
KDJ	**Kajisay**	40.89	307	P	**P**	**03 19 45.2**	**+0.1**
BOOM	**Boomskoye usch**	41.87	307	P	**P**	**03 19 53.6**	**+0.5**
H11N1	**WAKE ISLAND Hy**	41.95	87	T	T	04 05 26.5	
	baz=286						
H11N2	**WAKE ISLAND Hy**	41.95	87	T	T	04 05 18.0	
	baz=286,slow=74						
H11N3	**WAKE ISLAND Hy**	41.97	87	T	T	04 05 21.0	
	baz=286,slow=74						
H11S3	**WAKE ISLAND Hy**	42.08	89	T	T	04 05 17.1	
	baz=284,slow=74,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	42.09	89	T	T	04 05 17.1	
	baz=284,slow=74,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	42.10	89	T	T	04 05 23.7	
	baz=284						
KURK	**Kurchatov**	42.45	320	P	**P**	**03 19 57.3**	**-0.2**
AAK	**Ala-Archa**	42.94	307	LR	LR	03 40 15.7	
	comp=Z,135nm,19.0s,baz=63,slow=39						
AAK	**Ala-Archa**	42.94	307	P	**P**	**03 20 01.5**	**-0.3**
DRK	**Karamyk**	44.56	302	P	**P**	**03 20 15.1**	**0.0**
WRA	**Warramunga Arr**	45.52	163	P	**P**	**03 20 20.4**	**-2.0**
	comp=Z,1.5nm,0.7s,baz=345,slow=8.8,SNR=9.5						
	comp=Z,1.5nm,0.7s						
GAR	**Garm**	45.68	302	P	**P**	**03 20 23.4**	**-0.3**
GAR				IAmb	IAmb	03 20 37.9	
	comp=Z,7.3nm,0.9s						
KK31	**Karatay Array**	45.91	307	P	**P**	**03 20 25.0**	**-0.4**
KKAR	**Karatay Array**	45.91	307	P	**P**	**03 20 25.5**	**+0.2**
KBL	**Kabul**	46.66	295	P	**P**	**03 20 31.1**	**-0.5**
TIXI	**Tiksi**	47.68	3	P	**P**	**03 20 36.6**	**-2.1**
TIXI				IAmb	IAmb	03 20 38.2	
	comp=Z,6.3nm,0.9s						
BRVK	**Borovoye**	48.10	321	P	**P**	**03 20 41.8**	**-0.5**
BRVK				IAmb	IAmb	03 20 43.7	
	comp=Z,6.3nm,1.0s						
ASAR	**Alice Springs**	48.98	165	P	**P**	**03 20 47.9**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=344,slow=5.9,SNR=7.7						
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	48.98	165	P	**P**	**03 20 49.7**	**+0.3**
NRIK	**Noril'sk**	49.56	345	P	**P**	**03 20 52.4**	**-0.8**
NRIK				IAmb	IAmb	03 21 21.5	
	comp=Z,6.4nm,1.2s						
ABKAR	**Akbulak array**	53.84	314	P	**P**	**03 21 25.0**	**-0.5**
GYA0B	**ALIBECK ARRAY**	55.27	300	P	**P**	**03 21 36.7**	**+0.5**
ARU	**Arti**	55.44	323	P	**P**	**03 21 36.3**	**-0.7**
STKA	**Stephens Creek**	58.86	160	P	**P**	**03 22 00.5**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=135,slow=1.2,SNR=1.7						
	comp=Z,1.8nm,0.5s						
KLMR	**Klimovskoe**	65.46	328	*e*P	**P**	**03 22 42.9**	**-2.5**
KLMR				AMP		03 22 46.4	
	comp=Z,19nm,1.5s						
ONI	**Oni**	65.73	308	P	**P**	**03 22 47.9**	**+0.3**
KBZ	**Khabaz**	65.91	309	P	**P**	**03 22 48.8**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=131,slow=11,SNR=4.5						
	comp=Z,1.8nm,0.8s						
IMAR	**Indian Mountai**	65.96	26	P	**P**	**03 22 49.6**	**+1.0**
KIV	**Kislovodsk**	66.02	309	P	**P**	**03 22 49.7**	**+0.3**
H21K	**Melozitna Rive**	66.38	27	IAmb	IAmb	03 22 55.0	
	comp=Z,3.4nm,0.8s						
CAST	**Castle Rocks**	66.97	29	IAmb	IAmb	03 23 07.8	
	comp=Z,3.8nm,0.9s						
BPAW	**Bear Paw Mtn.**	67.35	28	IAmb	IAmb	03 23 00.5	
	comp=Z,2.1nm,0.8s						
NEA2	**Nenana**	68.09	28	P	**P**	**03 23 02.0**	**-0.2**
NEA2				IAmb	IAmb	03 23 05.3	
	comp=Z,4.1nm,0.9s						
MARD	**Mardin**	68.92	302	P	**P**	**03 23 07.7**	**-0.3**
IL31		68.98	27	P	**P**	**03 23 08.0**	**+0.4**
ILAR	**Eielson Array**	68.98	27	P	**P**	**03 23 08.2**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=286,slow=8.3,SNR=8.3						
	comp=Z,0.6nm,0.8s						
BMAR	**Burnt Mountain**	69.32	24	P	**P**	**03 23 10.0**	**+0.2**
DOT	**Dot Lake**	70.44	28	IAmb	IAmb	03 23 27.7	
	comp=Z,6.1nm,1.5s						
GLB	**Gilahina Butte**	71.14	30	IAmb	IAmb	03 23 27.6	
	comp=Z,3.0nm,0.9s						
K27K	**Chicken**	71.19	28	IAmb	IAmb	03 23 25.3	
	comp=Z,3.5nm,0.8s						
M26K	**Nabesna, AK**	71.25	29	IAmb	IAmb	03 23 25.4	
	comp=Z,4.8nm,0.8s						
EGAK	**Eagle**	71.36	27	IAmb	IAmb	03 23 25.3	
	comp=Z,2.9nm,0.8s						
L27K	**Beaver Creek,**	71.58	28	P	**P**	**03 23 24.1**	**+0.4**
L27K				IAmb	IAmb	03 23 27.5	
	comp=Z,3.0nm,0.8s						
BCAR	**Beaver Creek A**	71.59	28	P	**P**	**03 23 24.0**	**+0.2**
FINES	**FINESS Array B**	71.73	330	P	**P**	**03 23 25.2**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=86,slow=7.2,SNR=4.3						
	comp=Z,3.1nm,1.0s						
TGL	**Tana Glacier**	71.79	31	IAmb	IAmb	03 23 42.9	
	comp=Z,5.0nm,0.9s						
DAWY	**Dawson**	72.31	27	IAmb	IAmb	03 23 31.5	
	comp=Z,3.4nm,0.8s						
INK	**Inuvik**	73.04	22	IAmb	IAmb	03 23 35.2	
	comp=Z,3.9nm,0.8s						
AKASG	**Malin Array Be**	73.24	318	P	**P**	**03 23 33.0**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=61,slow=6.3,SNR=7.9						
	comp=Z,1.2nm,0.7s						
AKASG	**Malin Array Be**	73.24	318	P	**P**	**03 23 32.9**	**-0.9**
AKASG				IAmb	IAmb	03 23 49.4	
	comp=Z,4.8nm,1.3s						
BR131	**Keskin Array S**	73.61	307	P	**P**	**03 23 35.9**	**-0.5**
BR131				IAmb	IAmb	03 23 50.8	
	comp=Z,7.7nm,1.2s						
BRTR	**Keskin Array B**	73.61	307	P	**P**	**03 23 36.0**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=97,slow=5.1,SNR=9.2						
	comp=Z,1.7nm,1.0s						
BRTR	**Keskin Array B**	73.61	307	P	**P**	**03 23 35.5**	**-0.8**
M30M	**Minto, Yukon**	73.92	28	IAmb	IAmb	03 23 41.9	
	comp=Z,4.7nm,1.0s						
N31M	**Braeburn, Yuko**	74.77	29	IAmb	IAmb	03 23 48.0	
	comp=Z,5.3nm,0.9s						
M31M	**Drury Creek, Y**	75.10	28	P	**P**	**03 23 46.3**	**+1.8**
C36M	**Paulatuk**	75.64	20	IAmb	IAmb	03 23 50.4	
	comp=Z,6.4nm,1.0s						
MANT	**Manisa**	77.75	307	P	**P**	**03 23 58.5**	**-1.7**
NB2	**NORSAR Subarra**	78.49	332	P	**P**	**03 24 02.4**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=60,slow=5.6						
NOA	**NORSAR Array B**	78.49	332	P	**P**	**03 24 04.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=58,slow=5.8,SNR=2.2						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	82.78	23	P	**P**	**03 24 25.7**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=311,slow=4.7,SNR=21						
	comp=Z,2.9nm,0.7s						
GERES	**GERESS Array B**	83.20	321	P	**P**	**03 24 29.1**	**0.0**
	comp=Z,0.2nm,0.5s,baz=92,slow=7.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						
B08A	**Colville Reser**	89.48	36	P	**P**	**03 24 59.9**	**-0.1**
B08A				IAmb	IAmb	03 25 05.8	
	comp=Z,4.7nm,1.0s						
J04D	**Umpqua Nationa**	90.91	41	P	**P**	**03 25 06.3**	**-0.7**
SDV	**Santo Domingo**	144.99	22	PKPdf	**PKPab**	**03 31 39.6**	**-0.7**
BAUV	**El Baul**	145.72	17		**PKPdf**	**03 31 40.8**	**-1.4**

IDC ***14*** *03:18:16.6±1.5,24°.12N×121°.88E,h0^{km},mb3.5/4,*
mbtmp3.5/5,ML3.1/1 Error ellipse: s-maj=41.2km
s-min=33.7km az=74.0
JMA ***14*** *03:18:18.2±0.1,24°.0N±0°.6×121°.6E±0°.8,h18^{km},MV3.2/9,*
TAIWAN REGION
TAP ***14*** *03:18:19.6,24°.18N×121°.74E,h12^{km},ML3.9,B*
ISC 14 03:18:18.5±0.9**,24°.17N**±0°.02×**121°.83E**±0°.02**,h10**^{km}±6^{km}**,**
n123,σ0^{s}.**85**/177**,mb3.5**/4**,2C-20D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	0.16	329	P	**Pb**	**03 18 22.8**	**-0.8**
	baz=2.0						
EHP				*i* S	**Sg**	**03 18 25.4**	**+0.9**
	baz=2.0						
ETL	**Fush Village**	0.19	267	P	**Pg**	**03 18 22.7**	**+0.2**
	baz=258						
ETL				*i* S	**Sg**	**03 18 24.9**	**-0.5**
	baz=258						
NACB	**Ninganchiao**	0.22	271	⇓*i*P	**Pg**	**03 18 23.0**	**0.0**
	baz=267						
NACB				*i* S	**Sg**	**03 18 25.4**	**-0.7**
	baz=267						
TWD	**Chiawan**	0.23	247	⇓*i*P	**Pg**	**03 18 23.4**	**+0.2**
	baz=239						
TWD				*i* S	**Sg**	**03 18 26.3**	**-0.2**
	baz=239						
ENA	**Nanau**	0.27	342	⇓*i*P	**Pb**	**03 18 24.9**	**-0.6**
	baz=1.0						
ENA				S	**Sg**	**03 18 28.5**	**+0.8**
	baz=1.0						
EWUT	**Wuta**	0.28	350	⇓*i*P	**Pb**	**03 18 25.3**	**-0.3**
	baz=6.0						
EWUT				S	**Sb**	**03 18 29.3**	**-1.0**
	baz=6.0						
HWA	**Hwalien**	0.28	227	*e*P	**Pb**	**03 18 25.5**	**-0.1**
	baz=222						
ETLH	**Xiulin Townshi**	0.32	277	⇓*i*P	**Pg**	**03 18 24.9**	**-0.1**
	baz=277						
TWC	**Suao**	0.44	2	⇓*i*P	**Pb**	**03 18 28.4**	**+0.1**
	baz=7.0						
TWC				S	**Sb**	**03 18 34.4**	**-0.5**
	baz=7.0						
LATG	**Datong**	0.46	323	⇓*i*P	**Pb**	**03 18 27.9**	**-0.8**
	baz=330						
LATG				S	**Sg**	**03 18 33.9**	**+0.3**
	baz=330						
NDS	**Dongshan**	0.47	347	⇓P	**Pb**	**03 18 28.8**	**-0.1**
	baz=356						
NDS				S	**Sb**	**03 18 35.4**	**-0.5**
	baz=356						
NNSB	**Datong**	0.48	302	*e*P	**Pg**	**03 18 28.1**	**+0.1**
	baz=307						
NNSB				S	**Sg**	**03 18 33.7**	**-0.7**
	baz=307						
NNS	**Nan Shan**	0.50	303	⇓*i*P	**Pg**	**03 18 28.4**	**+0.2**
	baz=307						
NNS				*i* S	**Sg**	**03 18 34.4**	**-0.4**
	baz=307						
ESL	**Shilin**	0.51	226	P	**Pg**	**03 18 28.6**	**+0.3**
	baz=225						
ESL				*e*S	**Sg**	**03 18 36.3**	**+1.2**
	baz=225						
WHF	**Hehuan Shan**	0.52	267	⇓*i*P	**Pg**	**03 18 28.6**	**-0.1**
	baz=266						
WHF				*i* S	**Sg**	**03 18 34.7**	**-0.9**
	baz=266						
ENTT	**Nioudou**	0.53	333	⇓*i*P	**Pb**	**03 18 29.6**	**-0.3**
	baz=340						
ENTT				S	**Sg**	**03 18 36.0**	**+0.3**
	baz=340						
FUSS	**Fushou**	0.54	278	⇓*i*P	**Pg**	**03 18 29.3**	**+0.2**
	baz=279						
FUSS				S	**Sg**	**03 18 35.8**	**-0.5**
	baz=279						
TWE	**Neicheng**	0.57	345	⇓*i*P	**Pb**	**03 18 30.6**	**+0.1**
	baz=353						
TWE				S	**Sb**	**03 18 37.8**	**-0.9**
	baz=353						
ILA	**Ilan**	0.60	353	*e*P	**Pb**	**03 18 31.3**	**+0.3**
	baz=351						
TWT	**Tachien**	0.60	278	⇓*i*P	**Pg**	**03 18 30.8**	**+0.5**
	baz=278						
TWT				S	**Sg**	**03 18 37.9**	**-0.4**
	baz=278						
CHGB	**Renai**	0.61	260	*e*P	**Pg**	**03 18 30.8**	**+0.4**
	baz=251						
CHGB				*e*S	**Sg**	**03 18 37.2**	**-1.3**
	baz=251						
TDCB	**Techi**	0.62	278	*e*P	**Pg**	**03 18 30.8**	**+0.2**
	baz=278						
TDCB				*i* S	**Sg**	**03 18 37.6**	**-1.1**
	baz=278						
EGFH	**Guangfu**	0.62	217	*e*P	**Pb**	**03 18 31.5**	**0.0**
	baz=218						
EGFH				*e*S	**Sb**	**03 18 40.8**	**+0.6**
	baz=218						
FUSB	**Fushanzhiwuyua**	0.63	339	⇓P	**Pb**	**03 18 31.6**	**0.0**
	baz=346						
FUSB				S	**Sb**	**03 18 39.6**	**-0.9**
	baz=346						
OWD	**Renai**	0.64	250	*e*P	**Pg**	**03 18 30.7**	**-0.2**
	baz=248						
YHNB	**Yeheng**	0.65	320	P	**Pb**	**03 18 31.6**	**-0.3**
	baz=325						
YHNB				*e*S	**Sg**	**03 18 39.5**	**-0.1**
	baz=325						
NSK	**Sanguang**	0.66	320	⇓*i*P	**Pb**	**03 18 31.9**	**-0.3**
	baz=325						
NSK				*e*S	**Sg**	**03 18 39.9**	**-0.2**
	baz=325						
NWLT	**Wulai**	0.67	334	⇓P	**Pb**	**03 18 32.5**	**+0.1**
	baz=339						
NWLT				*e*S	**Sg**	**03 18 40.7**	**+0.2**
	baz=339						
WUSB	**Renai**	0.68	255	S	**Sg**	**03 18 40.0**	**-0.5**
	baz=245						
EGS		0.68	8	*e*P	**Pn**	**03 18 33.9**	**-0.3**
	baz=21						
NTC	**Toucheng**	0.68	360	⇓*e*P	**Pn**	**03 18 32.9**	**-1.3**
	baz=6.0						
VWDT	**VWDT**	0.76	237	P	**Pg**	**03 18 33.4**	**+0.3**
	baz=234						
VWDT				*e*S	**Sb**	**03 18 43.9**	**-0.1**
	baz=234						
HGSD	**Ruisui**	0.77	209	*e*P	**Pn**	**03 18 34.8**	**-0.6**
	baz=219						
HGSD				*e*S	**Sn**	**03 18 47.4**	**+0.3**
	baz=219						
NFF	**Wufeng Townshi**	0.80	305	P	**Pb**	**03 18 34.1**	**-0.4**
	baz=308						
NFF				*e*S	**Sg**	**03 18 43.5**	**-0.8**
	baz=308						
TIPB	**Shuangxi**	0.80	360	⇓*i*P	**Pn**	**03 18 35.0**	**-0.8**
	baz=5.0						
EHY	**Hungye**	0.81	215	*e*P	**Pg**	**03 18 33.8**	**-0.3**
	baz=223						
WHP	**Taichung City**	0.81	278	P	**Pb**	**03 18 34.7**	**-0.1**
	baz=278						
WHP				*e*S	**Sg**	**03 18 44.2**	**-0.7**
	baz=278						
NHDH	**Xindian Distri**	0.84	341	*e*P	**Pn**	**03 18 35.7**	**-0.6**
	baz=345						
TWB1	**Santiao Chiao**	0.85	10	*e*P	**Pn**	**03 18 36.2**	**-0.2**
	baz=8.0						
LIOB	**Emei**	0.88	303	*e*P	**Pn**	**03 18 36.2**	**-0.7**
	baz=305						
LIOB				*e*S	**Sg**	**03 18 47.3**	**+0.3**
	baz=305						
NSTT	**Nanjuang**	0.89	301	*e*P	**Pb**	**03 18 36.0**	**+0.1**
	baz=304						
NSTT				S	**Sg**	**03 18 46.7**	**-0.4**
	baz=304						
SSLB	**Suanglung**	0.89	245	P	**Pg**	**03 18 35.4**	**-0.2**
	baz=252						
SSLB				S	**Sg**	**03 18 45.9**	**-1.3**
	baz=252						
NWF	**Wu-fen Shan**	0.90	357	⇓*i*P	**Pn**	**03 18 37.2**	**0.0**
	baz=348						
SMLT	**Sun Moon Lake**	0.90	252	P	**Pg**	**03 18 35.7**	**-0.1**
	baz=250						
SMLT				S	**Sg**	**03 18 47.1**	**-0.4**
	baz=250						
SXI1	**Grass Mountain**	0.92	2	P	**Pn**	**03 18 37.6**	**+0.1**
	baz=7.0						
SXI1				*e*S	**Sn**	**03 18 49.5**	**-1.4**
	baz=7.0						
TYC	**Yuchr**	0.93	254	*e*P	**Pg**	**03 18 36.5**	**+0.1**
	baz=253						
EYUL	**Yuli**	0.94	210	*e*P	**Pn**	**03 18 37.9**	**+0.1**
	baz=222						
TWQ1	**Liyutan**	0.98	281	*e*P	**Pn**	**03 18 39.1**	**+0.7**
	baz=281						
TWQ1				*e*S	**Sb**	**03 18 51.0**	**+0.4**
	baz=281						
NCUH	**Zhongli**	0.99	324	P	**Pn**	**03 18 39.6**	**+1.2**
	baz=326						
NCUH				*e*S	**Sn**	**03 18 53.6**	**+1.2**
	baz=326						
NCU	**National Centr**	0.99	324	*e*P	**Pn**	**03 18 38.6**	**+0.2**
	baz=327						
NCU				*e*S	**Sn**	**03 18 53.8**	**+1.4**
	baz=327						
SBCB	**Hsinchu**	0.99	309	P	**Pn**	**03 18 38.9**	**+0.5**
	baz=311						
SBCB				*e*S	**Sn**	**03 18 51.8**	**-0.6**
	baz=311						
TWS1	**Kuangyinshan**	1.00	338	*e*P	**Pn**	**03 18 39.7**	**+1.1**
	baz=350						
TWS1				*e*S	**Sn**	**03 18 53.9**	**+1.2**
	baz=350						
YM01	**YM01**	1.00	346	P	**Pn**	**03 18 39.2**	**+0.6**
	baz=350						
YM01				*e*S	**Sn**	**03 18 53.0**	**+0.2**
	baz=350						
HSN	**Hsinchu**	1.01	309	*e*P	**Pn**	**03 18 38.8**	**+0.2**
	baz=304						
HSN				*e*S	**Sn**	**03 18 53.5**	**+0.6**
	baz=304						
NSY	**Sanyi**	1.01	284	*e*P	**Pn**	**03 18 38.8**	**+0.1**
	baz=285						
NMLH	**Miaoli**	1.02	291	*e*P	**Pn**	**03 18 39.5**	**+0.7**
	baz=293						
NTST	**Danshui**	1.05	341	*e*P	**Pn**	**03 18 40.0**	**+0.8**
	baz=344						
ANP	**Anpu**	1.05	344	*e*P	**Pn**	**03 18 40.2**	**+0.9**
	baz=348						
YUS	**Yu-Shan**	1.05	230	P	**Pg**	**03 18 38.5**	**-0.3**
	baz=229						
JYNG	**Yonagunijimaku**	1.05	74	P	**Pn**	**03 18 41.4**	**+2.1**
JYNG				*e*S	**Sn**	**03 18 57.6**	**+3.5**
TCU	**Taichung**	1.06	269	*e*P	**Pn**	**03 18 39.9**	**+0.5**
	baz=269						
WJS	**Zhushan**	1.07	251	*e*P	**Pn**	**03 18 40.0**	**+0.5**
	baz=246						
WJS				*e*S	**Sn**	**03 18 55.3**	**+0.9**
	baz=246						
FULB	**Fuli**	1.08	207	*e*P	**Pn**	**03 18 39.4**	**-0.4**
	baz=221						
WNT	**Mingjian**	1.09	255	*e*P	**Pn**	**03 18 40.3**	**+0.6**
	baz=247						
WDJ	**Dajia District**	1.10	279	*e*P	**Pg**	**03 18 41.3**	**+1.6**
	baz=281						
YOJ	**Yonaguni jima**	1.11	75	⇑P	**Pn**	**03 18 41.9**	**+1.9**
	baz=67						
YOJ				*e*S	**Sn**	**03 18 58.5**	**+3.0**
	baz=67						
YOJ	**Yonaguni jima**	1.11	75	*e*P	**Pn**	**03 18 42.0**	**+1.9**
YOJ				*e*S	**Sn**	**03 18 59.0**	**+3.5**
ALS	**Alishan**	1.15	235	⇑*i*P	**Pg**	**03 18 40.7**	**+0.1**
	baz=234						
ALS				S	**Sg**	**03 18 56.4**	**+0.9**
	baz=234						
CHKT	**Chengkung**	1.15	202	*e*P	**Pg**	**03 18 40.4**	**-0.1**
	baz=185						
WCHH	**Zhanghua**	1.17	266	*e*P	**Pg**	**03 18 41.8**	**+0.9**
	baz=266						
CHN5	**Tsauling**	1.20	242	P	**Pg**	**03 18 42.0**	**+0.5**
	baz=242						
ELDTW	**Lidau**	1.23	218	*e*P	**Pn**	**03 18 41.2**	**-0.6**
	baz=204						
ELDTW				*e*S	**Sn**	**03 18 58.2**	**-0.3**
	baz=204						
WDLH	**Douliu**	1.28	248	*e*P	**Pg**	**03 18 43.3**	**+0.3**
	baz=249						
EDH	**Donghe**	1.29	202	*e*P	**Pg**	**03 18 43.2**	**0.0**
	baz=188						
WRL	**Guolierlin Hig**	1.36	259	*e*P	**Pg**	**03 18 45.2**	**+0.7**
	baz=259						
WRL				*e*S	**Sg**	**03 19 04.2**	**+2.0**
	baz=259						
STYH	**Taoyuan**	1.39	224	*e*P	**Pb**	**03 18 44.5**	**0.0**
	baz=225						
CHN2	**Minshiung**	1.40	243	*e*P	**Pg**	**03 18 46.4**	**+1.2**
	baz=244						
CHN4	**Tsaushan**	1.40	235	P	**Pg**	**03 18 45.5**	**+0.1**
	baz=235						
CHN4				*e*S	**Sg**	**03 19 05.6**	**+2.1**
	baz=235						
TPUB	**Ta-pu**	1.40	232	P	**Pg**	**03 18 45.3**	**0.0**
	baz=221						
TPUB				S	**Sg**	**03 19 03.9**	**+0.3**
	baz=221						
WTK	**Tuku**	1.41	250	*e*P	**Pg**	**03 18 45.8**	**+0.3**
	baz=237						
LONT	**Longtian**	1.41	207	*e*P	**Pn**	**03 18 42.8**	**-1.5**
	baz=207						
WTP	**Ta-pu**	1.45	231	P	**Pg**	**03 18 46.2**	**0.0**
	baz=231						
CHY	**Chiayi**	1.45	243	*e*P	**Pb**	**03 18 45.7**	**+0.1**
	baz=244						
PCYT	**Pengchaiyu**	1.47	8	P	**Pg**	**03 18 46.3**	**-0.4**
	baz=9.0						
TWG	**Pinlang**	1.51	208	*e*P	**Pn**	**03 18 43.6**	**-2.0**
	baz=191						
TWK	**Hsinying**	1.52	234	P	**Pb**	**03 18 47.1**	**+0.2**
	baz=235						
TWK				S	**Sg**	**03 19 07.6**	**0.0**
	baz=235						
LDUT	**Ludao**	1.53	193	*e*P	**Pg**	**03 18 47.3**	**-0.4**
	baz=192						
CHN1	**Nanshi**	1.55	231	P	**Pg**	**03 18 47.7**	**-0.5**
	baz=232						
SGST	**Jiashian**	1.58	227	*e*P	**Pb**	**03 18 47.0**	**-0.7**
	baz=228						
WSL	**Shuilin Townsh**	1.60	247	P	**Pb**	**03 18 48.2**	**0.0**
	baz=248						
WSL				*e*S	**Sg**	**03 19 10.0**	**-0.1**
	baz=248						
ICHU	**Yijhu**	1.63	241	*e*P	**Pb**	**03 18 48.9**	**+0.2**
	baz=243						
CHN8	**Yiju**	1.70	241	*e*P	**Pb**	**03 18 49.6**	**-0.1**
	baz=243						
IRIF	**Iriomote-Funau**	1.74	84	P	**Pg**	**03 18 50.8**	**-1.1**
IRIF				*e*S	**Sg**	**03 19 14.3**	**-0.2**
ECL	**Taimali**	1.76	207	*e*P	**Pb**	**03 18 51.1**	**+0.3**
	baz=194						
SCST	**Cishan**	1.77	224	*e*P	**Pb**	**03 18 50.8**	**-0.3**
	baz=225						
SSD	**Sandimen**	1.79	218	*e*P	**Pb**	**03 18 51.1**	**-0.3**
	baz=232						
TSMG	**Majia**	1.82	217	*e*P	**Pb**	**03 18 51.5**	**-0.4**
	baz=218						
MASBT	**Mashibuluo**	1.90	216	*e*P	**Pb**	**03 18 52.1**	**-1.2**
	baz=216						
JKRS	**Kuro-shima**	1.99	88	*e*P	**Pg**	**03 18 55.2**	**-1.5**
EAST	**Anshuo**	2.00	207	*e*P	**Pb**	**03 18 55.0**	**+0.1**
	baz=196						
TAWH	**Dawu Township**	2.02	206	*e*P	**Pb**	**03 18 55.5**	**+0.3**
	baz=194						
SSPT	**Xinbi**	2.04	215	*e*P	**Pb**	**03 18 56.2**	**+0.6**
	baz=198						
SCZT	**Fangliau**	2.11	212	*e*P	**Pb**	**03 18 55.6**	**-1.2**
	baz=197						
JIJ	**Ishigaki jima**	2.12	84	P	**Pb**	**03 18 56.0**	**-0.9**
JIJ				*e*S	**Sb**	**03 19 22.9**	**-0.4**
SLIU	**Shizi**	2.16	206	*e*P	**Pb**	**03 18 57.9**	**+0.1**
	baz=196						
PNG	**Penghu**	2.17	254	*e*P	**Pb**	**03 18 56.4**	**-1.4**
	baz=257						
LYUB	**Lan-yu**	2.17	186	*e*P	**Pn**	**03 18 54.7**	**+0.1**
	baz=188						
PHUB	**P'eng-hu**	2.17	253	*e*P	**Pn**	**03 18 54.6**	**0.0**
	baz=256						
WDGT	**Dungji**	2.19	246	P	**Pn**	**03 18 55.9**	**+1.0**

	baz=249						
VWUC	**VWUC** baz=292	**2.32**	**291**	eP	**Pn**	**03 18 56.4**	**-0.3**
VCHM	**Qimei** baz=235	**2.40**	**247**	P	**Pn**	**03 18 58.7**	**+0.9**
PTMZ	**Houxiangcun** baz=290	**2.62**	**290**	eP	**Pn**	**03 19 00.6**	**-0.2**
JTJ	**Tarama**	**2.66**	**79**	eP	**Pb**	**03 19 04.8**	**-1.4**
JTJ				eS	**Sb**	**03 19 38.0**	**-0.8**
LYJJ	**Jianjiangzhen** baz=322	**3.02**	**322**	eP	**Pn**	**03 19 06.8**	**+0.5**
KNM	**Kinmen** baz=276	**3.11**	**275**	eP	**Pn**	**03 19 08.8**	**+1.2**
AXDP	**Jialang** baz=282	**3.59**	**282**	eP	**Pn**	**03 19 13.6**	**-0.6**
ZPLA	**Ao Xicun** baz=268	**3.74**	**267**	eP	**Pn**	**03 19 15.6**	**-0.6**
SXFK	**Yanhouchang** baz=300	**4.39**	**301**	eP	**Pn**	**03 19 25.2**	**-0.1**
JOW	**Kunigami** 1.0nm,0.3s,baz=270,slow=17,SNR=1.7 3.2nm,0.5s	**6.40**	**64**	Pn	**Pn**	**03 19 53.2**	**+0.5**
MKAR	**Makanchi Array** 2.0nm,1.1s,baz=103,slow=10,SNR=2.0 2.0nm,1.1s	**38.76**	**316**	P	**P**	**03 25 43.8**	**+0.8**
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=345,slow=8.7,SNR=1.9 0.4nm,1.0s	**45.51**	**163**	P	**P**	**03 26 37.5**	**-0.7**
ILAR	**Eielson Array** 0.2nm,0.8s,baz=289,slow=5.8,SNR=2.0 0.2nm,0.8s	**68.95**	**27**	P	**P**	**03 29 23.4**	**-0.1**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=311,slow=4.8,SNR=8.4 0.3nm,0.6s	**82.75**	**23**	P	**P**	**03 30 41.9**	**-0.5**

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*IDC **14** 03:19:07.8±1.0, 24°.16N×121°.85E, h0^{km}, mb3.8/6, mbtmp3.8/7, ML3.2/1, Error ellipse: s-maj=39.7km s-min=21.0km az=67.0*

*JMA **14** 03:19:10.0±0.2, 24°.1N±0°.9×12°2E±°, h17^{km}±1^{km}, MV3.5/10, TAIWAN REGION*

*TAP **14** 03:19:10.3, 24°.18N×121°.74E, h10^{km}, ML4.2, B*

*NIED **14** 03:19:10.0, 24°.07N×121°.64E, h17^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-6.01; $M_{\theta\theta}$3.10; $M_{\phi\phi}$2.91; $M_{r\theta}$4.53; $M_{\theta\phi}$3.59; $M_{\phi r}$-1.36; Fault plane solution: $M_0$7.79000×10^{14} NP1:ϕ_s23.00000°, δ40.00000°, λ-132.00000°. NP2:ϕ_s253.00000°, δ62.00000°, λ-61.00000°.*

ISC 14 03:19:10.1±0.8**, 24°.17N**±0°.01×**121°.76E**±0°.02**, h11**^{km}±5^{km}**, n159,** $\sigma 0^{s}.67$/226**, mb3.8**/6**, 1C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=259	**0.12**	**265**	iP	**Pg**	**03 19 13.4**	**+0.2**
ETL	baz=259			iS	**Sg**	**03 19 15.5**	**+0.1**
EHP	**Heping Village** baz=2.0	**0.14**	**353**	iP	**Pg**	**03 19 13.6**	**+0.2**
EHP	baz=2.0			iS	**Sg**	**03 19 16.2**	**+0.4**
NACB	**Ninganchiao** baz=260	**0.15**	**271**	⇓iP	**Pg**	**03 19 13.6**	**0.0**
NACB	baz=260			iS	**Sg**	**03 19 15.7**	**-0.3**
TWD	**Chiawan** baz=240	**0.17**	**239**	iP	**Pg**	**03 19 14.2**	**+0.3**
TWD	baz=240			iS	**Sg**	**03 19 16.9**	**+0.3**
HWA	**Hwalien** baz=223	**0.24**	**216**	P	**Pb**	**03 19 16.1**	**-0.3**
ETLH	**Xiulin Townshi** baz=277	**0.26**	**278**	⇓P	**Pg**	**03 19 15.6**	**+0.2**
ETLH	baz=277			S	**Sg**	**03 19 19.5**	**+0.5**
ENA	**Nanau** baz=1.0	**0.26**	**356**	⇓P	**Pg**	**03 19 15.5**	**+0.1**
ENA	baz=1.0			S	**Sg**	**03 19 19.5**	**+0.5**
EWUT	**Wuta** baz=6.0	**0.27**	**4**	P	**Pg**	**03 19 15.9**	**+0.2**
EWUT	baz=6.0			S	**Sg**	**03 19 20.2**	**+0.7**
ETM	**Tongmen** baz=228	**0.32**	**230**	P	**Pg**	**03 19 16.7**	**+0.2**
ETM	baz=228			eS	**Sg**	**03 19 20.9**	**+0.2**
TEYL	**Yanliau Villag** baz=216	**0.34**	**206**	P	**Pb**	**03 19 18.1**	**+0.1**
LATG	**Datong** baz=330	**0.42**	**330**	P	**Pg**	**03 19 18.6**	**+0.2**
LATG	baz=330			S	**Sg**	**03 19 24.9**	**+0.8**
NNSB	**Datong** baz=307	**0.43**	**307**	⇓iP	**Pg**	**03 19 18.8**	**+0.3**
NNSB	baz=307			iS	**Sg**	**03 19 24.7**	**+0.3**
NNS	**Nan Shan** baz=308	**0.44**	**307**	⇓iP	**Pg**	**03 19 19.0**	**+0.2**
NNS	baz=308			S	**Sg**	**03 19 24.4**	**-0.3**
TWC	**Suao** baz=7.0	**0.44**	**11**	⇓iP	**Pg**	**03 19 19.1**	**+0.2**
TWC	baz=7.0			S	**Sg**	**03 19 25.5**	**+0.8**
WHF	**Hehuan Shan** baz=266	**0.45**	**267**	iP	**Pg**	**03 19 19.4**	**+0.3**
WHF	baz=266			S	**Sg**	**03 19 25.5**	**+0.3**
NDS	**Dongshan** baz=356	**0.46**	**355**	P	**Pg**	**03 19 19.7**	**+0.5**
NDS	baz=356			S	**Sg**	**03 19 26.4**	**+1.0**
ESL	**Shilin** baz=228	**0.46**	**220**	P	**Pg**	**03 19 19.5**	**+0.3**
ESL	baz=228			S	**Sb**	**03 19 26.6**	**-0.4**
FUSS	**Fushou** baz=279	**0.48**	**279**	iP	**Pg**	**03 19 19.7**	**+0.3**
FUSS	baz=279			S	**Sg**	**03 19 26.3**	**+0.5**
NDT	**Datong Townshi** baz=333	**0.48**	**332**	⇓iP	**Pg**	**03 19 19.9**	**+0.3**
NDT	baz=333			S	**Sg**	**03 19 26.7**	**+0.7**
ENTT	**Nioudou** baz=341	**0.50**	**339**	⇓iP	**Pg**	**03 19 20.3**	**+0.4**
ENTT	baz=341			iS	**Sg**	**03 19 27.2**	**+0.7**
TEGC	**Jichi Village** baz=192	**0.50**	**204**	eP	**Pb**	**03 19 21.1**	**+0.3**
TEGC	baz=192			eS	**Sb**	**03 19 30.3**	**+2.2**
TWT	**Tachien** baz=278	**0.54**	**279**	⇓P	**Pb**	**03 19 21.3**	**-0.3**
TWT	baz=278			S	**Sg**	**03 19 28.4**	**+0.6**
CHGB	**Renai** baz=251	**0.55**	**258**	P	**Pg**	**03 19 21.1**	**+0.4**
CHGB	baz=251			S	**Sg**	**03 19 28.6**	**+0.5**
TDCB	**Techi** baz=278	**0.55**	**279**	P	**Pg**	**03 19 21.0**	**0.0**
TDCB	baz=278			S	**Sg**	**03 19 27.6**	**-0.7**
TWE	**Neicheng** baz=1.0	**0.55**	**351**	⇓P	**Pg**	**03 19 21.3**	**+0.4**
TWE	baz=1.0			S	**Sg**	**03 19 29.1**	**+0.8**
OWD	**Renai** baz=248	**0.57**	**248**	eP	**Pg**	**03 19 21.6**	**+0.3**
OWD	baz=248			eS	**Sg**	**03 19 29.6**	**+0.6**
EGFH	**Guangfu** baz=219	**0.58**	**211**	eP	**Pb**	**03 19 22.4**	**+0.1**
ILA	**Ilan** baz=1.0	**0.59**	**359**	eP	**Pg**	**03 19 22.1**	**+0.5**
ILA	baz=1.0			S	**Sb**	**03 19 30.8**	**0.0**
FUSB	**Fushanzhiwuyua** baz=346	**0.61**	**345**	⇓P	**Pg**	**03 19 22.4**	**+0.5**
FUSB	baz=346			S	**Sg**	**03 19 30.2**	**+0.3**
YHNB	**Yeheng** baz=325	**0.61**	**325**	⇓iP	**Pg**	**03 19 22.1**	**+0.2**
YHNB	baz=325			S	**Sg**	**03 19 30.1**	**+0.1**
WUSB	**Renai** baz=245	**0.61**	**253**	P	**Pg**	**03 19 22.1**	**+0.1**
WUSB	baz=245			S	**Sg**	**03 19 30.2**	**+0.1**
NSK	**Sanguang** baz=325	**0.62**	**324**	⇓iP	**Pg**	**03 19 22.4**	**+0.2**
NSK	baz=325			S	**Sg**	**03 19 30.9**	**+0.5**
NWLT	**Wulai** baz=347	**0.65**	**339**	P	**Pg**	**03 19 23.1**	**+0.4**
NWLT	baz=347			S	**Sg**	**03 19 31.6**	**+0.4**
NTC	**Toucheng** baz=6.0	**0.68**	**5**	eP	**Pg**	**03 19 23.8**	**+0.5**
EGS	baz=23	**0.69**	**13**	eP	**Pb**	**03 19 24.1**	**+0.1**
VWDT	**VWDT** baz=234	**0.70**	**234**	eP	**Pg**	**03 19 23.9**	**+0.3**
VWDT	baz=234			eS	**Sb**	**03 19 34.3**	**+0.4**
HGSD	**Ruisui** baz=195	**0.74**	**204**	eP	**Pb**	**03 19 25.8**	**+0.8**
NFF	**Wufeng Townshi** baz=315	**0.74**	**308**	eP	**Pg**	**03 19 24.8**	**+0.3**
NFF	baz=315			eS	**Sg**	**03 19 34.6**	**+0.4**
WHP	**Taichung City** baz=278	**0.75**	**278**	eP	**Pb**	**03 19 25.4**	**+0.3**
WHP	baz=278			eS	**Sb**	**03 19 35.3**	**-0.1**
WPL	**Puli Township** baz=250	**0.75**	**258**	eP	**Pb**	**03 19 25.2**	**+0.1**
WPL	baz=250			eS	**Sg**	**03 19 34.7**	**+0.3**
DPDB	**Guoxing** baz=252	**0.77**	**260**	P	**Pb**	**03 19 25.5**	**-0.1**
DPDB	baz=252			S	**Sb**	**03 19 35.7**	**-0.3**
EHY	**Hungye** baz=221	**0.77**	**211**	eP	**Pg**	**03 19 24.9**	**-0.2**
EHY	baz=221			eS	**Sb**	**03 19 37.2**	**+1.2**
TIPB	**Shuangxi** baz=5.0	**0.80**	**4**	P	**Pg**	**03 19 25.9**	**+0.3**
TIPB	baz=5.0			S	**Sg**	**03 19 35.9**	**-0.2**
NHDH	**Xindian Distri** baz=345	**0.82**	**345**	eP	**Pg**	**03 19 26.1**	**+0.2**
TWA	**Mucha** baz=349	**0.82**	**349**	eP	**Pg**	**03 19 25.9**	**-0.1**
TWA	baz=349			eS	**Sb**	**03 19 37.9**	**+0.4**
LIOB	**Emei** baz=305	**0.83**	**305**	eP	**Pb**	**03 19 26.6**	**+0.2**
LIOB	baz=305			eS	**Sb**	**03 19 38.0**	**+0.5**
NSTT	**Nanjuang** baz=304	**0.83**	**304**	eP	**Pb**	**03 19 26.7**	**+0.2**
NSTT	baz=304			eS	**Sg**	**03 19 37.1**	**+0.2**
SSLB	**Suanglung** baz=252	**0.83**	**243**	eP	**Pg**	**03 19 25.9**	**-0.2**
SSLB	baz=252			S	**Sg**	**03 19 37.0**	**+0.1**
SMLT	**Sun Moon Lake** baz=250	**0.84**	**250**	⇑iP	**Pb**	**03 19 26.8**	**+0.1**
SMLT	baz=250			iS	**Sb**	**03 19 37.5**	**-0.4**
TATO	**Taipei** baz=343	**0.84**	**343**	eP	**Pg**	**03 19 26.6**	**+0.3**
TWB1	**Santiao Chiao** baz=8.0	**0.86**	**14**	eP	**Pg**	**03 19 26.7**	**0.0**
TYC	**Yuchr** baz=253	**0.87**	**252**	eP	**Pg**	**03 19 26.6**	**-0.1**
BACT	**New Taipei Cit** baz=341	**0.87**	**341**	eP	**Pb**	**03 19 27.8**	**+0.6**
NHY	**Taipei** baz=349	**0.88**	**349**	eP	**Pn**	**03 19 28.2**	**-0.1**
TAP1	**Taipei** baz=346	**0.89**	**346**	eP	**Pb**	**03 19 27.6**	**+0.1**
TAP	**Taipei** baz=346	**0.90**	**345**	eP	**Pb**	**03 19 27.7**	**+0.1**
ECBN	**Changbin** baz=188	**0.90**	**198**	eP	**Pg**	**03 19 27.2**	**-0.1**
NWF	**Wu-fen Shan** baz=353	**0.90**	**1**	P	**Pb**	**03 19 27.8**	**+0.1**
NWF	baz=353			S	**Sg**	**03 19 39.3**	**+0.1**
WFSB	**Wu-fen Shan** baz=355	**0.90**	**1**	P	**Pb**	**03 19 27.9**	**+0.3**
WFSB	baz=355			S	**Sg**	**03 19 39.0**	**-0.1**
HSN1	**Hsinchu** baz=312	**0.91**	**312**	eP	**Pb**	**03 19 28.3**	**+0.5**
EYUL	**Yuli** baz=223	**0.91**	**206**	eP	**Pn**	**03 19 28.6**	**-0.1**
TWQ1	**Liyutan** baz=282	**0.92**	**281**	eP	**Pn**	**03 19 29.0**	**+0.2**
TWF1	**Yuli** baz=221	**0.92**	**208**	eP	**Pb**	**03 19 28.0**	**0.0**
SXI1	**Grass Mountain** baz=13	**0.93**	**7**	P	**Pg**	**03 19 28.2**	**+0.2**
SXI1	baz=13			eS	**Sg**	**03 19 39.8**	**-0.3**
SBCB	**Hsinchu** baz=311	**0.94**	**311**	eP	**Pn**	**03 19 29.8**	**+0.6**
SBCB	baz=311			eS	**Sn**	**03 19 43.1**	**+0.6**
NSY	**Sanyi** baz=285	**0.94**	**285**	eP	**Pn**	**03 19 29.4**	**+0.1**
NCUH	**Zhongli** baz=327	**0.95**	**327**	eP	**Pn**	**03 19 29.2**	**-0.1**
NCU	**National Centr** baz=327	**0.95**	**327**	eP	**Pb**	**03 19 29.1**	**+0.6**
NCU	baz=327			eS	**Sn**	**03 19 44.1**	**+1.2**
HSN	**Hsinchu** baz=314	**0.95**	**311**	eP	**Pn**	**03 19 29.2**	**-0.2**
HSN	baz=314			eS	**Sn**	**03 19 43.5**	**+0.5**
NMLH	**Miaoli** baz=293	**0.95**	**293**	eP	**Pn**	**03 19 29.2**	**-0.2**
NJN	**Zhunan** baz=303	**0.96**	**302**	eP	**Pb**	**03 19 29.1**	**+0.5**
TNOU	**National Taiwa** baz=1.0	**0.97**	**1**	eP	**Pb**	**03 19 29.3**	**+0.3**
TWS1	**Kuangyinshan** baz=350	**0.98**	**342**	P	**Pn**	**03 19 30.0**	**+0.3**
TWS1	baz=350			eS	**Sn**	**03 19 44.7**	**+1.2**
WWF	**Wufeng** baz=259	**0.98**	**263**	eP	**Pn**	**03 19 30.6**	**+0.9**
YM01	**YM01** baz=350	**0.99**	**350**	eP	**Pb**	**03 19 29.4**	**+0.2**
TCU	**Taichung** baz=270	**0.99**	**269**	eP	**Pn**	**03 19 30.6**	**+0.8**
YUS	**Yu-Shan** baz=230	**1.00**	**228**	P	**Pg**	**03 19 29.3**	**-0.2**
WJS	**Zhushan** baz=244	**1.00**	**250**	eP	**Pn**	**03 19 30.7**	**+0.6**
WNT1	**Nantou City** baz=257	**1.02**	**255**	eP	**Pn**	**03 19 30.7**	**+0.4**
YM08	**YM08** baz=336	**1.02**	**351**	eP	**Pb**	**03 19 30.2**	**+0.4**
WNT	**Mingjian** baz=246	**1.02**	**254**	eP	**Pn**	**03 19 30.9**	**+0.6**
NTST	**Danshui** baz=344	**1.03**	**344**	eP	**Pn**	**03 19 30.7**	**+0.3**
NWRT	**Kuosheng** baz=355	**1.03**	**355**	eP	**Pg**	**03 19 30.0**	**+0.1**
ANP	**Anpu** baz=348	**1.03**	**348**	eP	**Pb**	**03 19 30.5**	**+0.5**
WDJ	**Dajia District** baz=280	**1.04**	**280**	eP	**Pn**	**03 19 31.5**	**+1.0**
WDJ	baz=280			eS	**Sn**	**03 19 46.3**	**+1.3**
NHW	**Xinwu Township** baz=322	**1.05**	**322**	eP	**Pn**	**03 19 30.7**	**0.0**
NHW	baz=322			eS	**Sn**	**03 19 46.5**	**+1.1**
FULB	**Fuli** baz=222	**1.06**	**204**	eP	**Pn**	**03 19 30.7**	**-0.1**
ALS	**Alishan** baz=235	**1.09**	**233**	eP	**Pn**	**03 19 31.4**	**-0.1**
WYL	**Yuanlin Townsh** baz=261	**1.10**	**259**	eP	**Pb**	**03 19 30.6**	**-0.4**
WCHH	**Zhanghua** baz=267	**1.10**	**266**	eP	**Pn**	**03 19 31.7**	**+0.4**
TWY	**Chenhua** baz=338	**1.11**	**353**	eP	**Pb**	**03 19 31.1**	**-0.2**
JYNG	**Yonagunijimaku**	**1.12**	**75**	eP	**Pn**	**03 19 33.2**	**+1.7**
JYNG				eS	**Sn**	**03 19 48.7**	**+1.8**
CHKT	**Chengkung** baz=186	**1.13**	**199**	eP	**Pb**	**03 19 31.2**	**-0.3**
CHN5	**Tsauling** baz=243	**1.14**	**240**	eP	**Pn**	**03 19 32.7**	**+0.7**
YOJ	**Yonaguni jima** baz=67	**1.18**	**76**	eP	**Pb**	**03 19 32.5**	**+0.1**
YOJ	baz=67			eS	**Sn**	**03 19 48.8**	**+0.4**
YOJ	**Yonaguni jima**	**1.18**	**76**	P	**Pg**	**03 19 33.0**	**+0.2**
YOJ				eS	**Sn**	**03 19 49.8**	**+1.3**
ECS	**Chishang** baz=208	**1.18**	**205**	eP	**Pg**	**03 19 33.4**	**+0.6**
ELDTW	**Lidau** baz=204	**1.19**	**215**	eP	**Pb**	**03 19 32.2**	**-0.5**
ELDTW	baz=204			eS	**Sn**	**03 19 49.3**	**+0.4**
WGK	**Gukeng** baz=249	**1.20**	**246**	eP	**Pg**	**03 19 33.1**	**0.0**
WDLH	**Douliu** baz=249	**1.22**	**247**	eP	**Pg**	**03 19 33.7**	**+0.3**
EDH	**Donghe** baz=189	**1.26**	**199**	eP	**Pn**	**03 19 33.4**	**-0.2**
WRL	**Guolierlin Hig** baz=260	**1.29**	**258**	eP	**Pg**	**03 19 34.9**	**0.0**
CHN2	**Minshiung** baz=245	**1.34**	**242**	eP	**Pg**	**03 19 35.6**	**-0.1**
STYH	**Taoyuan** baz=226	**1.34**	**222**	eP	**Pn**	**03 19 34.3**	**-0.4**
WTK	**Tuku** baz=237	**1.34**	**249**	eP	**Pg**	**03 19 36.1**	**+0.2**
CHN4	**Tsaushan** baz=223	**1.34**	**233**	eP	**Pg**	**03 19 35.9**	**0.0**
CHN4	baz=223			eS	**Sg**	**03 19 56.5**	**+3.2**
TPUB	**Ta-pu** baz=221	**1.35**	**230**	P	**Pg**	**03 19 35.9**	**-0.1**
TPUB	baz=221			S	**Sg**	**03 19 53.9**	**+0.4**
STYT	**Tauyuan** baz=226	**1.36**	**223**	P	**Pn**	**03 19 35.3**	**+0.3**
LONT	**Longtian** baz=208	**1.39**	**205**	eP	**Pg**	**03 19 36.4**	**-0.3**
CHY	**Chiayi** baz=243	**1.39**	**242**	eP	**Pg**	**03 19 36.8**	**0.0**
CHY	baz=243			eS	**Sg**	**03 19 57.2**	**+2.2**
WTP	**Ta-pu** baz=232	**1.40**	**229**	P	**Pb**	**03 19 36.5**	**+0.3**
WTP	baz=232			S	**Sg**	**03 19 56.6**	**+1.5**
TWK	**Hsinying** baz=236	**1.47**	**233**	P	**Pb**	**03 19 37.8**	**+0.3**
TWK	baz=236			S	**Sg**	**03 19 57.9**	**+0.4**
PCYT	**Pengchaiyu** baz=10.0	**1.48**	**11**	eP	**Pn**	**03 19 37.2**	**+0.6**
TWG	**Pinlang** baz=209	**1.48**	**205**	eP	**Pb**	**03 19 37.4**	**-0.2**
SNST	**Tainan City** baz=234	**1.49**	**231**	P	**Pb**	**03 19 37.9**	**+0.1**
SNST	baz=234			eS	**Sg**	**03 19 59.9**	**+1.7**
CHN1	**Nanshi** baz=222	**1.50**	**229**	P	**Pb**	**03 19 38.2**	**+0.4**
CHN1	baz=222			eS	**Sg**	**03 20 00.0**	**+1.8**
WSF	**Szhu** baz=252	**1.50**	**250**	eP	**Pb**	**03 19 38.4**	**+0.5**
LDUT	**Ludao** baz=180	**1.51**	**190**	eP	**Pb**	**03 19 38.4**	**+0.3**
TTN	**Taitung** baz=206	**1.52**	**202**	eP	**Pb**	**03 19 37.8**	**-0.4**
SGST	**Jiashian** baz=228	**1.53**	**225**	eP	**Pb**	**03 19 38.0**	**-0.4**
SGST	baz=228			eS	**Sg**	**03 19 59.7**	**+0.4**
WSL	**Shuilin Townsh** baz=248	**1.54**	**246**	eP	**Pn**	**03 19 38.1**	**+0.6**
WSL	baz=248			eS	**Sg**	**03 20 01.4**	**+1.6**
SLGT	**Liugui** baz=225	**1.55**	**221**	eP	**Pb**	**03 19 39.1**	**+0.3**
ICHU	**Yijhu** baz=243	**1.58**	**240**	P	**Pb**	**03 19 39.5**	**+0.3**
ICHU	baz=243			eS	**Sg**	**03 20 01.8**	**+0.9**
CHN8	**Yiju** baz=244	**1.64**	**240**	P	**Pb**	**03 19 40.0**	**-0.3**
SHHT	**Tainan City** baz=233	**1.73**	**229**	eP	**Pb**	**03 19 41.3**	**-0.5**
SCST	**Cishan** baz=227	**1.73**	**222**	eP	**Pb**	**03 19 41.5**	**-0.3**
ECL	**Taimali** baz=195	**1.73**	**205**	eP	**Pn**	**03 19 40.9**	**+0.8**
SSD	**Sandimen** baz=233	**1.75**	**216**	eP	**Pb**	**03 19 41.8**	**-0.4**
TSMG	**Majia** baz=232	**1.78**	**215**	eP	**Pb**	**03 19 42.1**	**-0.6**
IRIF	**Iriomote-Funau**	**1.81**	**84**	eP	**Pn**	**03 19 42.2**	**+1.1**
IRIF				eS	**Sn**	**03 20 04.9**	**+0.9**
TWM1	**Shoushan** baz=225	**1.82**	**223**	eP	**Pb**	**03 19 43.6**	**+0.3**
MASBT	**Mashibuluo** baz=218	**1.86**	**214**	eP	**Pb**	**03 19 43.4**	**-0.8**
HATJ	**Hateruma jima**	**1.87**	**93**	eS	**Sb**	**03 20 07.1**	**-0.6**
EAST	**Anshuo** baz=196	**1.97**	**205**	eP	**Pb**	**03 19 44.8**	**-1.0**
TAWH	**Dawu Township** baz=196	**1.99**	**204**	eP	**Pb**	**03 19 45.0**	**-1.2**
JKRS	**Kuro-shima**	**2.06**	**88**	eP	**Pb**	**03 19 46.6**	**-0.8**
JKRS				eS	**Sb**	**03 20 13.7**	**+0.8**
SCZT	**Fangliau** baz=198	**2.07**	**211**	eP	**Pb**	**03 19 46.4**	**-1.3**
PNG	**Penghu** baz=258	**2.10**	**254**	eP	**Pn**	**03 19 46.4**	**+1.2**
PHUB	**P'eng-hu** baz=256	**2.11**	**252**	eP	**Pn**	**03 19 45.9**	**+0.7**
WDGT	**Dungji** baz=250	**2.13**	**245**	P	**Pn**	**03 19 46.2**	**+0.7**
SLIU	**Shizi** baz=210	**2.14**	**205**	eP	**Pb**	**03 19 48.3**	**-0.5**
LYUB	**Lan-yu** baz=189	**2.17**	**184**	eP	**Pn**	**03 19 45.8**	**-0.2**
JIJ	**Ishigaki jima**	**2.18**	**84**	eS	**Sn**	**03 20 13.7**	**+0.4**
VWUC	**VWUC** baz=292	**2.26**	**292**	eP	**Pn**	**03 19 47.1**	**-0.1**
VCHM	**Qimei** baz=237	**2.34**	**246**	eP	**Pn**	**03 19 49.0**	**+0.6**
TWKBT	**Hengchun** baz=194	**2.38**	**202**	eP	**Pn**	**03 19 50.6**	**+1.5**
PTMZ	**Houxiangcun** baz=291	**2.55**	**290**	eP	**Pn**	**03 19 51.0**	**-0.3**
JTJ	**Tarama**	**2.72**	**80**	eS	**Sn**	**03 20 28.6**	**+2.0**
KNMB	**Chin-men Tao** baz=277	**3.09**	**276**	eP	**Pn**	**03 19 59.4**	**+0.6**
AXDP	**Jialang** baz=283	**3.53**	**283**	eP	**Pn**	**03 20 04.9**	**+0.2**
SXFK	**Yanhouchang** baz=300	**4.33**	**302**	eP	**Pn**	**03 20 16.2**	**+0.3**
JOW	**Kunigami** 1.3nm,0.3s,baz=270,slow=20,SNR=1.9 4.0nm,0.4s	**6.46**	**64**	Pn	**Pn**	**03 20 44.4**	**-0.7**
KSRS	**Korea Array** 0.2nm,0.3s,baz=197,slow=12,SNR=9.5	**14.25**	**20**	Pn	**P**	**03 22 37.2**	**-1.9**
SONM	**Songino Array** 1.1nm,0.9s,baz=157,slow=8.0,SNR=4.3 1.1nm,0.9s	**26.59**	**336**	P	**P**	**03 24 48.6**	**+0.4**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=115,slow=8.8,SNR=2.9 0.4nm,0.5s	**38.71**	**316**	P	**P**	**03 26 34.0**	**-0.1**
ZALV	**Zalesovo Beam** 1.0nm,0.4s,baz=116,slow=6.6,SNR=4.5 1.0nm,0.4s	**40.54**	**327**	P	**P**	**03 26 49.2**	**+0.1**
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=345,slow=8.7,SNR=4.0 1.1nm,0.9s	**45.53**	**163**	P	**P**	**03 27 29.0**	**-0.8**
ASAR	**Alice Springs** 0.8nm,0.8s,baz=345,slow=7.6,SNR=6.3 0.8nm,0.8s	**48.99**	**165**	P	**P**	**03 27 56.0**	**-0.8**
YKA	**Yellowknife Ar** 0.9nm,0.8s,baz=313,slow=4.8,SNR=11 0.9nm,0.8s	**82.78**	**23**	P	**P**	**03 31 32.7**	**-1.1**

TAP 14 03:22:37.7,24°.18N×121°.74E,h10^{km},ML3.7,25D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=260	**0.11**	**259**	*i* P	Pg	03 22 40.8	+0.3
ETL	baz=260			*i* S	Sg	03 22 42.9	+0.5
EHP	**Heping Village** baz=3.0	**0.13**	**0**	P	Pg	03 22 41.0	+0.2
EHP	baz=3.0			S	Sg	03 22 43.7	+0.7
NACB	**Ninganchiao** baz=260	**0.13**	**267**	⇓*i*P	Pg	03 22 41.0	+0.2
NACB	baz=260			*i* S	Sg	03 22 43.4	+0.4
TWD	**Chiawan** baz=240	**0.17**	**233**	*i* P	Pg	03 22 41.5	+0.2
TWD	baz=240			*i* S	Sg	03 22 44.2	+0.4
ETLH	**Xiulin Townshi** baz=277	**0.24**	**277**	⇓P	Pg	03 22 42.8	+0.2
ETLH	baz=277			S	Sg	03 22 46.8	+0.8
HWA	**Hwalien** baz=223	**0.24**	**211**	*e*P	Pb	03 22 43.6	-0.5
ENA	**Nanau** baz=1.0	**0.25**	**0**	⇓*i*P	Pg	03 22 43.0	+0.3
ENA	baz=1.0			*i* S	Sg	03 22 46.7	+0.5
EWUT	**Wuta** baz=7.0	**0.27**	**8**	⇓P	Pg	03 22 43.4	+0.2
EWUT	baz=7.0			*i* S	Sg	03 22 47.4	+0.7
ETM	**Tongmen** baz=229	**0.31**	**227**	*e*P	Pg	03 22 44.0	+0.1
TEYL	**Yanliau Villag** baz=215	**0.34**	**203**	*e*P	Pb	03 22 45.4	-0.3
LATG	**Datong** baz=331	**0.40**	**331**	⇓*i*P	Pg	03 22 46.1	+0.4
LATG	baz=331			S	Sg	03 22 52.0	+1.0
NNSB	**Datong** baz=307	**0.41**	**307**	⇓*i*P	Pg	03 22 46.3	+0.5
NNSB	baz=307			S	Sg	03 22 51.9	+0.7
NNS	**Nan Shan** baz=308	**0.42**	**308**	⇓*i*P	Pg	03 22 46.5	+0.4
NNS	baz=308			S	Sg	03 22 52.3	+0.6
WHF	**Hehuan Shan** baz=266	**0.43**	**266**	⇓*i*P	Pg	03 22 46.6	+0.2
WHF	baz=266			S	Sg	03 22 52.5	+0.3
TWC	**Suao** baz=7.0	**0.44**	**13**	⇓*i*P	Pg	03 22 46.6	+0.3
TWC	baz=7.0			*i* S	Sg	03 22 52.9	+0.8
NDS	**Dongshan** baz=356	**0.45**	**357**	⇓P	Pg	03 22 46.9	+0.3
NDS	baz=356			*i* S	Sb	03 22 53.7	-0.9
FUSS	**Fushou** baz=279	**0.46**	**279**	⇓*i*P	Pg	03 22 47.3	+0.6
FUSS	baz=279			S	Sg	03 22 53.5	+0.6
ESL	**Shilin** baz=229	**0.46**	**218**	*e*P	Pg	03 22 46.7	0.0
NDT	**Datong Townshi** baz=333	**0.47**	**334**	⇓*e*P	Pg	03 22 47.3	+0.4
ENTT	**Nioudou** baz=341	**0.48**	**341**	⇓*i*P	Pg	03 22 47.7	+0.5
ENTT	baz=341			*i* S	Sg	03 22 54.3	+0.7
TEGC	**Jichi Village** baz=193	**0.50**	**201**	*e*P	Pb	03 22 48.6	-0.1
TWT	**Tachien** baz=278	**0.52**	**278**	⇓*i*P	Pb	03 22 48.8	-0.3
TWT	baz=278			S	Sg	03 22 55.3	+0.5
CHGB	**Renai** baz=251	**0.53**	**257**	⇓P	Pg	03 22 48.5	+0.4
CHGB	baz=251			S	Sg	03 22 55.2	+0.1
TDCB	**Techi** baz=279	**0.54**	**278**	*i* P	Pb	03 22 48.9	-0.4
TDCB	baz=279			*i* S	Sg	03 22 56.0	+0.7
TWE	**Neicheng** baz=1.0	**0.54**	**353**	⇓*i*P	Pb	03 22 48.8	-0.5
TWE	baz=1.0			S	Sg	03 22 56.1	+0.6
OWD	**Renai** baz=249	**0.56**	**247**	*e*P	Pb	03 22 49.4	-0.3
ILA	**Ilan** baz=1.0	**0.58**	**1**	P	Pb	03 22 49.6	-0.4
ILA	baz=1.0			S	Sb	03 22 58.2	-0.1
EGFH	**Guangfu** baz=219	**0.58**	**209**	*e*P	Pg	03 22 49.4	+0.4
YHNB	**Yeheng** baz=325	**0.59**	**326**	⇓*i*P	Pb	03 22 49.9	-0.3
YHNB	baz=325			S	Sg	03 22 57.6	+0.6
FUSB	**Fushanzhiwuyua** baz=346	**0.59**	**346**	⇓*i*P	Pb	03 22 49.9	-0.3
FUSB	baz=346			S	Sg	03 22 57.2	+0.1
WUSB	**Renai** baz=245	**0.60**	**252**	P	Pg	03 22 49.6	+0.2
WUSB	baz=245			S	Sg	03 22 57.5	+0.2
NSK	**Sanguang** baz=325	**0.60**	**325**	⇓*i*P	Pb	03 22 50.0	-0.4
NSK	baz=325			S	Sg	03 22 58.2	+0.7
NWLT	**Wulai** baz=347	**0.63**	**340**	⇓P	Pb	03 22 50.5	-0.4
NWLT	baz=347			S	Sb	03 22 59.1	-0.7
NTC	**Toucheng** baz=6.0	**0.68**	**7**	⇓P	Pg	03 22 51.2	+0.4
NTC	baz=6.0			*e*S	Sg	03 23 00.2	+0.5
EGS	baz=23	**0.69**	**15**	*e*P	Pb	03 22 51.4	-0.4
VWDT	**VWDT** baz=241	**0.69**	**232**	P	Pg	03 22 51.1	0.0
NFF	**Wufeng Townshi** baz=309	**0.72**	**309**	*e*P	Pb	03 22 52.3	-0.2
WHP	**Taichung City** baz=278	**0.73**	**278**	*i* P	Pb	03 22 52.7	+0.1
WHP	baz=278			*i* S	Sb	03 23 02.4	-0.3
HGSD	**Ruisui** baz=195	**0.74**	**203**	*e*P	Pb	03 22 53.4	+0.7
DPDB	**Guoxing** baz=261	**0.76**	**259**	*e*P	Pb	03 22 53.0	0.0
EHY	**Hungye** baz=211	**0.77**	**210**	*e*P	Pg	03 22 51.9	-0.8
TIPB	**Shuangxi** baz=5.0	**0.79**	**6**	⇓*i*P	Pb	03 22 53.4	-0.3
TIPB	baz=5.0			S	Sg	03 23 03.2	-0.2
NHDH	**Xindian Distri** baz=345	**0.80**	**346**	*e*P	Pg	03 22 52.8	-0.5
LIOB	**Emei** baz=306	**0.81**	**305**	*e*P	Pb	03 22 54.1	+0.3
TWA	**Mucha** baz=350	**0.81**	**350**	P	Pb	03 22 53.9	0.0
NSTT	**Nanjuang** baz=304	**0.81**	**304**	*e*P	Pb	03 22 54.0	+0.1
NSTT	baz=304			*e*S	Sg	03 23 03.9	0.0
NJD	**Zhudong** baz=319	**0.81**	**313**	*e*P	Pn	03 22 54.9	-0.3
SSLB	**Suanglung** baz=244	**0.82**	**242**	P	Pg	03 22 53.5	0.0
SMLT	**Sun Moon Lake** baz=251	**0.82**	**249**	*e*P	Pg	03 22 53.8	+0.2
TATO	**Taipei** baz=343	**0.82**	**344**	*e*P	Pb	03 22 54.1	0.0
TYC	**Yuchr** baz=253	**0.85**	**251**	*e*P	Pg	03 22 54.1	0.0
TWB1	**Santiao Chiao** baz=8.0	**0.85**	**15**	*e*P	Pg	03 22 53.9	-0.3
TWB1	baz=8.0			*e*S	Sg	03 23 05.0	-0.4
TAP1	**Taipei** baz=346	**0.88**	**347**	*e*P	Pg	03 22 53.3	-1.4
YULB	**Yu-li** baz=221	**0.88**	**207**	*e*P	Pg	03 22 54.0	-0.8
HSN1	**Hsinchu** baz=312	**0.89**	**312**	*e*P	Pn	03 22 55.8	-0.4
NWF	**Wu-fen Shan** baz=353	**0.89**	**2**	P	Pb	03 22 55.2	-0.1
NWF	baz=353			S	Sg	03 23 06.5	0.0
WFSB	**Wu-fen Shan** baz=355	**0.89**	**2**	⇓P	Pb	03 22 55.2	0.0
WFSB	baz=355			S	Sg	03 23 06.3	-0.1
TWQ1	**Liyutan** baz=282	**0.90**	**281**	*e*P	Pb	03 22 55.8	+0.4
EYUL	**Yuli** baz=223	**0.91**	**205**	*e*P	Pn	03 22 56.5	-0.2
SXI1	**Grass Mountain** baz=354	**0.92**	**8**	⇓*i*P	Pb	03 22 55.9	+0.1
SXI1	baz=354			*e*S	Sg	03 23 07.5	+0.1
SBCB	**Hsinchu** baz=312	**0.92**	**312**	*e*P	Pn	03 22 57.0	+0.3
TWF1	**Yuli** baz=220	**0.92**	**206**	*e*P	Pg	03 22 54.9	-0.5
NSY	**Sanyi** baz=286	**0.92**	**285**	*e*P	Pn	03 22 56.7	-0.1
NCUH	**Zhongli** baz=327	**0.93**	**327**	*e*P	Pn	03 22 56.9	0.0
NCU	**National Centr** baz=327	**0.93**	**327**	*e*P	Pn	03 22 57.8	+0.9
NCU	baz=327			*e*S	Sn	03 23 11.8	+1.5
HSN	**Hsinchu** baz=315	**0.94**	**312**	*e*P	Pn	03 22 58.0	+1.0
NMLH	**Miaoli** baz=293	**0.94**	**293**	*e*P	Pn	03 22 56.7	-0.2
TWS1	**Kuangyinshan** baz=350	**0.96**	**342**	*e*P	Pn	03 22 57.3	0.0
TWS1	baz=350			*e*S	Sn	03 23 12.1	+1.1
TNOU	**National Taiwa** baz=1.0	**0.97**	**2**	*e*P	Pb	03 22 56.9	+0.3
TCU	**Taichung** baz=270	**0.97**	**268**	*e*P	Pn	03 22 58.8	+1.4
YM01	**YM01** baz=350	**0.97**	**351**	*e*P	Pn	03 22 57.4	-0.1
WJS	**Zhushan** baz=244	**0.99**	**249**	*e*P	Pn	03 22 58.1	+0.4
YUS	**Yu-Shan** baz=230	**1.00**	**227**	*e*P	Pg	03 22 57.0	+0.1
WNT1	**Nantou City** baz=257	**1.01**	**255**	*e*P	Pb	03 22 57.5	+0.3
WNT	**Mingjian** baz=248	**1.01**	**253**	*e*P	Pn	03 22 58.3	+0.4
YM08	**YM08** baz=351	**1.01**	**352**	*e*P	Pb	03 22 57.6	+0.3
NTST	**Danshui** baz=344	**1.01**	**345**	*e*P	Pn	03 22 58.6	+0.6
WDJ	**Dajia District** baz=281	**1.02**	**280**	*e*P	Pn	03 22 59.2	+1.2
NHW	**Xinwu Township** baz=323	**1.04**	**323**	*e*P	Pn	03 22 59.1	+0.8
FULB	**Fuli** baz=222	**1.06**	**203**	*e*P	Pg	03 22 57.1	-1.0
WCHH	**Zhanghua** baz=267	**1.08**	**265**	*e*P	Pn	03 22 59.0	+0.1
ALS	**Alishan** baz=235	**1.08**	**232**	P	Pb	03 22 58.8	0.0
TWY	**Chenhua** baz=353	**1.10**	**353**	*e*P	Pn	03 22 60.0	+0.8
CHKT	**Chengkung** baz=192	**1.13**	**198**	*e*P	Pb	03 22 58.0	-1.3
CHN5	**Tsauling** baz=243	**1.13**	**239**	P	Pn	03 23 00.4	+0.7
ELDTW	**Lidau** baz=227	**1.19**	**214**	*e*P	Pb	03 22 58.8	-1.6
ELDTW	baz=227			*e*S	Sg	03 23 16.3	+0.3
YOJ	**Yonaguni jima** baz=62	**1.19**	**76**	P	Pb	03 23 00.2	-0.2
WDLH	**Douliu** baz=249	**1.20**	**246**	*e*P	Pg	03 23 01.5	+0.7
EDH	**Donghe** baz=188	**1.27**	**198**	*e*P	Pn	03 23 00.2	-1.2
WRL	**Guolierlin Hig** baz=260	**1.28**	**258**	*e*P	Pg	03 23 02.4	+0.2
WTK	**Tuku** baz=237	**1.33**	**249**	*e*P	Pg	03 23 03.5	+0.3
STYH	**Taoyuan** baz=226	**1.34**	**222**	*e*P	Pn	03 23 02.5	+0.1
TPUB	**Ta-pu** baz=221	**1.34**	**230**	*e*P	Pg	03 23 03.4	-0.1
TPUB	baz=221			S	Sg	03 23 21.9	+1.0
CHY	**Chiayi** baz=245	**1.38**	**241**	*e*P	Pb	03 23 03.9	+0.3
WTP	**Ta-pu** baz=233	**1.39**	**228**	⇓P	Pg	03 23 04.2	-0.2
TWK	**Hsinying** baz=236	**1.46**	**232**	*e*P	Pg	03 23 05.5	-0.3
PCYT	**Pengchaiyu** baz=10.0	**1.47**	**12**	*e*P	Pg	03 23 05.8	-0.2
TWG	**Pinlang** baz=209	**1.49**	**205**	*e*P	Pn	03 23 04.7	+0.2
SNST	**Tainan City** baz=235	**1.49**	**230**	*e*P	Pb	03 23 05.4	0.0
CHN1	**Nanshi** baz=233	**1.49**	**229**	*e*P	Pg	03 23 06.0	-0.3
WSL	**Shuilin Townsh** baz=248	**1.53**	**245**	*e*P	Pb	03 23 06.0	-0.2
ICHU	**Yijhu** baz=244	**1.57**	**239**	*e*P	Pb	03 23 06.8	+0.1
ECL	**Taimali** baz=195	**1.73**	**205**	*e*P	Pn	03 23 06.1	-1.8
SSD	**Sandimen** baz=233	**1.75**	**216**	*e*P	Pb	03 23 09.2	-0.8
TSMG	**Majia** baz=232	**1.78**	**215**	*e*P	Pb	03 23 09.8	-0.6
MASBT	**Mashibuluo** baz=219	**1.86**	**213**	*e*P	Pn	03 23 09.8	+0.1
EAST	**Anshuo** baz=198	**1.97**	**205**	*e*P	Pb	03 23 13.3	-0.3
TAWH	**Dawu Township** baz=196	**1.99**	**203**	*e*P	Pn	03 23 12.4	+1.0
SCZT	**Fangliau** baz=199	**2.07**	**210**	*e*P	Pn	03 23 12.3	-0.3
PNG	**Penghu** baz=258	**2.09**	**253**	*e*P	Pn	03 23 13.7	+0.9
PHUB	**P'eng-hu** baz=256	**2.09**	**252**	*e*P	Pn	03 23 12.4	-0.4
WDGT	**Dungji** baz=250	**2.12**	**245**	*e*P	Pn	03 23 13.9	+0.8
VWUC	**VWUC** baz=292	**2.24**	**292**	*e*P	Pn	03 23 14.6	-0.2
PTMZ	**Houxiangcun** baz=291	**2.53**	**290**	*e*P	Pn	03 23 18.8	-0.1

EAF 14 03:27:43.6±3.8,0°.15N×29°.51E,h33^{km}±20^{km},MD3.4,1C, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIL	**Kilembe**	**0.50**	**85**	*e*P	Pn	03 27 55.1	+0.5
KIL				*e*S	Sb	03 28 00.2	-1.6
MBAR	**Mbarara**	**1.44**	**121**	⇑*e*P	Pn	03 28 03.2	-4.3
MBAR				*e*S	Sn	03 28 14.9	-10
MBAR	**Mbarara**	**1.44**	**121**	*e*P	Pn	03 28 03.3	-4.2
MBAR				*e*S	Sn	03 28 14.9	-10
TEBE	**Entebbe**	**2.96**	**92**	*e*P	Pn	03 28 25.4	-3.1
TEBE				*e*S	Sn	03 29 02.8	-0.1

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*IDC **14** 03:31:46.2±2.5,21°.63N×143°.06E,h309^{km}±23^{km},mb3.2/4, mbtmp4.1/6,Error ellipse: s-maj=62.2km s-min=20.0km az=96.0*

ISC 14 03:31:46.4±1.3,21°.6N±0°.1×143°.1E±0°.5,h311^{km},n6, σ0^{s}.28/7,mb3.5/4,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima** 13nm,0.3s,baz=335,slow=21,SNR=13	**5.50**	**352**	P	**Pn**	**03 33 09.8**	**-0.3**
JCJ	16nm,0.3s,baz=272,slow=23,SNR=7.7			S	**S**	**03 34 17.3**	**-0.1**
JHJ	**Hachijo jima 2** 34nm,0.6s,baz=128,slow=19,SNR=1.3	**11.80**	**346**	P	**Pn**	**03 34 26.6**	**+0.3**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=13,slow=9.4,SNR=6.5 0.3nm,0.6s	**42.19**	**192**	P	**P**	**03 39 09.5**	**-0.1**
YKA	**Yellowknife Ar** 0.2nm,0.4s,baz=292,slow=5.7,SNR=8.1 0.2nm,0.4s	**76.57**	**28**	P	**P**	**03 43 02.7**	**+0.1**
ARCES	**ARCESS Array B** 3.9nm,1.0s,baz=74,slow=9.5,SNR=3.8 3.9nm,1.0s	**78.94**	**341**	P	**P**	**03 43 15.7**	**+0.2**
FINES	**FINESS Array B** 1.8nm,0.9s,baz=64,slow=4.4,SNR=6.1 1.8nm,0.9s	**83.19**	**334**	P	**P**	**03 43 37.6**	**-0.2**

TAP 14 03:32:05.2,24°.14N×121°.61E,h3^{km},ML1.1,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=34	**0.02**	**32**	P	Pg	03 32 06.2	+0.2
ETL	baz=34			*e*S	Sg	03 32 06.8	+0.4
NACB	**Ninganchiao** baz=333	**0.04**	**333**	*i* P	Pg	03 32 06.6	+0.5
NACB	baz=333			*e*S	Sg	03 32 07.3	+0.6
TWD	**Chiawan** baz=185	**0.06**	**193**	*i* P	Pg	03 32 07.3	+0.7
TWD	baz=185			*i* S	Sg	03 32 08.6	+1.1
ETLH	**Xiulin Townshi** baz=298	**0.14**	**298**	*e*P	Pg	03 32 08.8	+0.9
ETLH	baz=298			*e*S	Sg	03 32 11.6	+1.8
HWA	**Hwalien** baz=179	**0.17**	**182**	*e*P	Pg	03 32 09.8	+1.4
HWA	baz=179			*e*S	Sg	03 32 12.9	+2.3
ETM	**Tongmen** baz=211	**0.21**	**212**	*e*P	Pg	03 32 10.3	+1.1
CHGB	**Renai** baz=258	**0.41**	**258**	*e*P	Pb	03 32 14.2	-1.0

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*IDC **14** 03:32:46.1±0.5,24°.21N×121°.86E,h0^{km},mb4.2/28, mbtmp4.2/29,ML4.0/1,MS4.0/24,Error ellipse: s-maj=14.8km s-min=13.1km az=80.0*

*NIED **14** 03:32:47.2,24°.02N×121°.66E,h19^{km},MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.15; M$_{\theta\theta}$-1.74; M$_{\phi\phi}$-0.41; M$_{r\theta}$2.20; M$_{\theta\phi}$-0.95; M$_{\phi r}$1.78; Fault plane solution: M$_0$3.59000×10^{16} NP1: ϕ_s252.00000°,δ20.00000°,λ107.00000°. NP2: ϕ_s53.00000°,δ71.00000°,λ84.00000°.*

*GCMT **14** 03:32:47.3±0.4,24°.02N±0°.03×122°.01E±0°.03,h32^{km}±1^{km}, MW4.9/59,Moment Tensor Solution. s19,c25; s59,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.74±.21; M$_{\theta\theta}$-1.69±.15; M$_{\phi\phi}$-0.05±.16; M$_{r\theta}$1.39±.17; M$_{\theta\phi}$-1.50±.09; M$_{\phi r}$0.98±.16; Best double couple: M$_0$2.75100×10^{16} NP1:ϕ_s246.00000°,δ26.00000°,λ100.00000°. NP2: ϕ_s55.00000°,δ64.00000°,λ85.00000°. Principal axes: T 2.3360, Plg70.0000°, Azm315.0000°; N 0.8300, Plg4.0000°, Azm57.0000°; P -3.1660, Plg19.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JMA **14** 03:32:47.2±0.1,24°.0N±0°.6×121°.7E±0°.8,h19^{km},MD4.8/14, MV4.4/14,TAIWAN REGION*

*BJI **14** 03:32:48.9±0.0,24°.20N×121°.81E,h6^{km},mb4.3/40, mB4.8/39,ML4.5/7,Ms4.9/59,Ms7 4.8/54*

*TAP **14** 03:32:48.3,24°.17N×121°.77E,h12^{km},ML5.0,C*

*NEIC **14** 03:32:48.4±1.5,24°.20N±0°.07×121°.78E±0°.01,h8^{km}±4^{km}, mb4.6/90,ML4.8(TAP),Error ellipse: s-maj=9.6km s-min=1.5km az=180.0*

*ASIES **14** 03:32:48.9,24°.22N×121°.71E,h15^{km},MW4.7*

ISC 14 03:32:48.7±0.7,24°.15N±0°.01×121°.80E±0°.02,h11^{km}±4^{km}, n342,σ1^{s}.43/408,mb4.5/72,MS4.2/29,8C-31D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=265	**0.16**	**273**	⇓*i*P	**Pg**	**03 32 51.8**	**-0.5**
ETL	baz=265			S	**Sg**	**03 32 54.4**	**-0.5**
EHP	**Heping Village** baz=351	**0.17**	**341**	P	**Pg**	**03 32 52.0**	**-0.5**
EHP	baz=351			S	**Sg**	**03 32 54.7**	**-0.3**
NACB	**Ninganchiao**	**0.19**	**277**		**Pg**	**03 32 52.1**	**-0.7**
NACB	**Ninganchiao** baz=265	**0.19**	**277**	⇓*i*P	**Pg**	**03 32 52.1**	**-0.7**
NACB	baz=265			S	**Sg**	**03 32 54.9**	**-0.7**
TWD	**Chiawan** baz=247	**0.20**	**249**	⇓*i*P	**Pg**	**03 32 52.5**	**-0.4**
TWD	baz=247			*i* S	**Sg**	**03 32 55.8**	**-0.1**
HWA	**Hwalien** baz=228	**0.25**	**226**	P	**Pb**	**03 32 54.5**	**-0.7**
HWA	baz=228			S	**Sb**	**03 33 00.3**	**+3.0**
ENA	**Nanau** baz=355	**0.28**	**349**	⇓*i*P	**Pg**	**03 32 53.9**	**-0.6**
ENA	baz=355			*i* S	**Sg**	**03 32 57.7**	**-0.5**
EWUT	**Wuta** baz=1.0	**0.29**	**356**	P	**Pg**	**03 32 54.1**	**-0.5**
EWUT	baz=1.0			S	**Sg**	**03 32 58.4**	**-0.3**
ETLH	**Xiulin Townshi** baz=278	**0.30**	**281**	P	**Pg**	**03 32 53.9**	**-0.8**
ETLH	baz=278			S	**Sg**	**03 32 57.9**	**-0.9**
ETM	**Tongmen** baz=233	**0.34**	**237**	⇓*i*P	**Pg**	**03 32 55.1**	**-0.3**
ETM	baz=233			S	**Sg**	**03 33 00.5**	**+0.6**
TEYL	**Yanliau Villag** baz=220	**0.34**	**213**	P	**Pb**	**03 32 56.2**	**-0.5**
TEYL	baz=220			S	**Sb**	**03 33 03.8**	**+1.7**
LATG	**Datong** baz=328	**0.46**	**327**	⇓*i*P	**Pg**	**03 32 57.0**	**-0.7**
LATG	baz=328			S	**Sg**	**03 33 03.9**	**+0.1**
TWC	**Suao** baz=3.0	**0.46**	**5**	⇓*i*P	**Pg**	**03 32 57.3**	**-0.4**
TWC	baz=3.0			*i* S	**Sg**	**03 33 03.8**	**0.0**
NNSB	**Datong** baz=306	**0.47**	**306**	⇓*i*P	**Pg**	**03 32 57.1**	**-0.8**
NNSB	baz=306			S	**Sg**	**03 33 03.1**	**-1.2**
ESL	**Shilin** baz=228	**0.47**	**225**	P	**Pg**	**03 32 57.7**	**-0.3**
ESL	baz=228			S	**Sb**	**03 33 05.1**	**-1.0**
NNS	**Nan Shan** baz=307	**0.48**	**306**	⇓*i*P	**Pg**	**03 32 57.4**	**-0.8**
NNS	baz=307			*i* S	**Sg**	**03 33 03.8**	**-0.9**
NDS	**Dongshan** baz=353	**0.49**	**351**	⇓*i*P	**Pg**	**03 32 57.7**	**-0.5**
NDS	baz=353			S	**Sg**	**03 33 04.2**	**-0.5**
WHF	**Hehuan Shan** baz=268	**0.49**	**269**	⇓*i*P	**Pg**	**03 32 57.6**	**-0.7**
WHF	baz=268			S	**Sg**	**03 33 04.2**	**-0.7**
TEGC	**Jichi Village** baz=198	**0.50**	**209**	*e*P	**Pb**	**03 32 59.6**	**+0.1**
TEGC	baz=198			*e*S	**Sn**	**03 33 09.5**	**-0.9**
FUSS	**Fushou** baz=280	**0.52**	**281**	⇓*i*P	**Pg**	**03 32 58.3**	**-0.5**
FUSS	baz=280			S	**Sg**	**03 33 05.0**	**-0.7**
ENTT	**Nioudou** baz=339	**0.53**	**336**	⇓*i*P	**Pg**	**03 32 58.6**	**-0.5**
ENTT	baz=339			S	**Sg**	**03 33 06.3**	**+0.2**
CHGB	**Renai** baz=253	**0.58**	**261**	⇓*i*P	**Pg**	**03 32 59.5**	**-0.5**
CHGB				S	**Sg**	**03 33 07.4**	**-0.4**

	baz=253						
TWE	**Neicheng**	**0.58**	**348**	⇓*i*P	**Pg**	**03 32 59.5**	**-0.4**
	baz=351						
TWE				*i* S	**Sg**	**03 33 07.7**	**0.0**
	baz=351						
TWT	**Tachien**	**0.58**	**280**	⇓*i*P	**Pg**	**03 32 59.8**	**-0.2**
	baz=279						
TWT				*i* S	**Sg**	**03 33 07.6**	**-0.1**
	baz=279						
EGFH	**Guangfu**	**0.59**	**216**	P	**Pg**	**03 33 00.3**	**+0.1**
	baz=230						
EGFH				S	**Sb**	**03 33 09.3**	**-0.1**
	baz=230						
TDCB	**Techi**	**0.60**	**280**	⇓*i*P	**Pg**	**03 32 59.9**	**-0.4**
	baz=279						
TDCB				S	**Sg**	**03 33 07.0**	**-1.1**
	baz=279						
OWD	**Renai**	**0.60**	**251**	P	**Pg**	**03 32 59.8**	**-0.7**
	baz=250						
OWD				S	**Sg**	**03 33 08.3**	**-0.1**
	baz=250						
ILA	**Ilan**	**0.61**	**355**	P	**Pg**	**03 33 00.5**	**-0.1**
	baz=353						
ILA				S	**Sb**	**03 33 09.8**	**-0.3**
	baz=353						
FUSB	**Fushanzhiwuyua**	**0.64**	**342**	⇓*i*P	**Pg**	**03 33 00.5**	**-0.5**
	baz=344						
FUSB				S	**Sg**	**03 33 09.4**	**-0.1**
	baz=344						
WUSB	**Renai**	**0.64**	**256**	⇓*i*P	**Pg**	**03 33 00.8**	**-0.4**
	baz=255						
WUSB				S	**Sg**	**03 33 09.5**	**-0.3**
	baz=255						
YHNB	**Yeheng**	**0.65**	**323**		**Pg**	**03 33 00.7**	**-0.5**
YHNB	**Yeheng**	**0.65**	**323**	⇓*i*P	**Pg**	**03 33 00.7**	**-0.5**
	baz=324						
NSK	**Sanguang**	**0.66**	**322**	⇓*i*P	**Pg**	**03 33 00.8**	**-0.7**
	baz=324						
NSK				*i* S	**Sg**	**03 33 10.1**	**-0.2**
	baz=324						
NWLT	**Wulai**	**0.68**	**336**	⇓*i*P	**Pg**	**03 33 01.4**	**-0.4**
	baz=345						
NWLT				S	**Sg**	**03 33 10.2**	**-0.6**
	baz=345						
EGS		**0.70**	**10**	*e*P	**Pb**	**03 33 02.9**	**0.0**
	baz=19						
NTC	**Toucheng**	**0.70**	**2**	P	**Pg**	**03 33 01.9**	**-0.4**
	baz=4.0						
NTC				S	**Sg**	**03 33 11.0**	**-0.4**
	baz=4.0						
VWDT	**VWDT**	**0.72**	**237**	P	**Pg**	**03 33 02.2**	**-0.4**
	baz=236						
VWDT				S	**Sb**	**03 33 13.1**	**-0.1**
	baz=236						
HGSD	**Ruisui**	**0.74**	**208**	P	**Pb**	**03 33 03.5**	**-0.1**
	baz=196						
HGSD				S	**Sn**	**03 33 16.7**	**+0.3**
	baz=196						
EHY	**Hungye**	**0.78**	**214**	P	**Pg**	**03 33 02.7**	**-1.0**
	baz=225						
NFF	**Wufeng Townshi**	**0.79**	**308**	*e*P	**Pg**	**03 33 03.7**	**-0.2**
	baz=308						
NFF				S	**Sg**	**03 33 12.8**	**-1.4**
	baz=308						
WHP	**Taichung City**	**0.79**	**279**	P	**Pg**	**03 33 03.7**	**-0.3**
	baz=279						
WHP				S	**Sg**	**03 33 14.2**	**-0.1**
	baz=279						
TIPB	**Shuangxi**	**0.82**	**2**	P	**Pg**	**03 33 04.0**	**-0.5**
	baz=3.0						
TIPB				S	**Sg**	**03 33 13.8**	**-1.3**
	baz=3.0						
NHDH	**Xindian Distri**	**0.85**	**343**	P	**Pg**	**03 33 04.8**	**-0.2**
	baz=344						
TWA	**Mucha**	**0.85**	**347**	P	**Pg**	**03 33 04.7**	**-0.4**
	baz=348						
TWA				*e*S	**Sg**	**03 33 16.0**	**-0.2**
	baz=348						
SSLB	**Suanglung**	**0.85**	**245**	Pg	**Pg**	**03 33 04.4**	**-0.8**
SSLB	**Suanglung**	**0.85**	**245**	*e*P	**Pg**	**03 33 04.5**	**-0.7**
	baz=254						
SSLB				*e*S	**Sg**	**03 33 15.7**	**-0.7**
	baz=254						
SMLT	**Sun Moon Lake**	**0.87**	**252**	⇑*i*P	**Pg**	**03 33 04.9**	**-0.5**
	baz=252						
SMLT				*i* S	**Sb**	**03 33 17.5**	**0.0**
	baz=252						
LIOB	**Emei**	**0.87**	**305**	P	**Pg**	**03 33 05.2**	**-0.2**
	baz=305						
LIOB				S	**Sg**	**03 33 16.3**	**-0.5**
	baz=305						
TATO	**Taipei**	**0.87**	**341**		**Pg**	**03 33 04.7**	**-0.8**
TWB1	**Santiao Chiao**	**0.87**	**11**	P	**Pg**	**03 33 05.1**	**-0.4**
	baz=13						
TWB1				S	**Sg**	**03 33 16.2**	**-0.6**
	baz=13						
NSTT	**Nanjuang**	**0.87**	**303**	P	**Pg**	**03 33 05.0**	**-0.5**
	baz=304						
NSTT				S	**Sg**	**03 33 16.1**	**-0.8**
	baz=304						
YULB	**Yu-li**	**0.89**	**212**		**Pg**	**03 33 05.2**	**-0.5**
YULB	**Yu-li**	**0.89**	**212**	*e*P	**Pg**	**03 33 04.2**	**-1.5**
	baz=222						
TYC	**Yuchr**	**0.90**	**254**	P	**Pg**	**03 33 05.6**	**-0.3**
	baz=254						
TYC				S	**Sg**	**03 33 17.6**	**-0.1**
	baz=254						
EYUL	**Yuli**	**0.91**	**209**	*e*P	**Pb**	**03 33 06.9**	**+0.4**
	baz=226						
EYUL				*e*S	**Sg**	**03 33 16.9**	**-1.3**
	baz=226						
NWF	**Wu-fen Shan**	**0.92**	**359**	⇓*i*P	**Pb**	**03 33 06.2**	**-0.4**
	baz=353						
NWF				S	**Sg**	**03 33 18.0**	**-0.3**
	baz=353						
SXI1	**Grass Mountain**	**0.94**	**4**	⇓*i*P	**Pb**	**03 33 06.6**	**-0.4**
	baz=5.0						
SXI1				S	**Sg**	**03 33 18.8**	**-0.3**
	baz=5.0						
TWQ1	**Liyutan**	**0.96**	**282**	⇓*i*P	**Pb**	**03 33 07.3**	**0.0**
	baz=292						
TWQ1				S	**Sn**	**03 33 21.1**	**-0.7**
	baz=292						
SBCB	**Hsinchu**	**0.98**	**311**	*e*P	**Pn**	**03 33 08.6**	**+0.2**
	baz=311						
SBCB				*e*S	**Sn**	**03 33 21.7**	**-0.6**
	baz=311						
NSY	**Sanyi**	**0.98**	**286**	P	**Pb**	**03 33 07.8**	**0.0**
	baz=286						
NSY				S	**Sn**	**03 33 22.2**	**-0.3**
	baz=286						
NCUH	**Zhongli**	**0.99**	**326**	*e*P	**Pb**	**03 33 07.9**	**+0.1**
	baz=326						
NCUH				*e*S	**Sn**	**03 33 21.7**	**-0.7**
	baz=326						
NCU	**National Centr**	**0.99**	**326**	⇓*i*P	**Pb**	**03 33 08.0**	**+0.1**
	baz=326						
NCU				S	**Sn**	**03 33 22.7**	**+0.2**
	baz=326						
HSN	**Hsinchu**	**1.00**	**311**	P	**Pb**	**03 33 08.2**	**+0.2**
	baz=304						
HSN				S	**Sn**	**03 33 22.3**	**-0.4**
	baz=304						
NMLH	**Miaoli**	**1.00**	**293**	*e*P	**Pn**	**03 33 08.5**	**-0.2**
	baz=293						
NMLH				S	**Sb**	**03 33 21.2**	**0.0**
	baz=293						
TWS1	**Kuangyinshan**	**1.01**	**340**	P	**Pb**	**03 33 08.2**	**0.0**
	baz=349						
TWS1				S	**Sn**	**03 33 22.6**	**-0.4**
	baz=349						
YUS	**Yu-Shan**	**1.02**	**230**	*e*P	**Pg**	**03 33 07.7**	**-0.6**
	baz=231						
YUS				*e*S	**Sb**	**03 33 22.6**	**+0.4**
	baz=231						
TCU	**Taichung**	**1.03**	**270**	*e*P	**Pn**	**03 33 08.9**	**-0.2**
	baz=270						
TCU				*e*S	**Sn**	**03 33 23.1**	**-0.3**
	baz=270						
WJS	**Zhushan**	**1.03**	**252**	P	**Pb**	**03 33 08.6**	**0.0**
	baz=252						
WJS				S	**Sn**	**03 33 23.9**	**+0.3**
	baz=252						
FULB	**Fuli**	**1.06**	**206**	P	**Pg**	**03 33 08.3**	**-0.7**
	baz=223						
FULB				*e*S	**Sn**	**03 33 24.8**	**+0.6**
	baz=223						
WNT	**Mingjian**	**1.06**	**255**	P	**Pb**	**03 33 09.0**	**0.0**
	baz=251						
WNT				S	**Sn**	**03 33 25.1**	**+0.9**
	baz=251						
NTST	**Danshui**	**1.06**	**342**	*e*P	**Pn**	**03 33 10.1**	**+0.6**
	baz=343						
NTST				*e*S	**Sn**	**03 33 24.4**	**+0.2**
	baz=343						
ANP	**Anpu**	**1.06**	**346**	*e*P	**Pg**	**03 33 08.6**	**-0.5**
	baz=347						
WDJ	**Dajia District**	**1.08**	**281**	P	**Pn**	**03 33 10.2**	**+0.4**
	baz=281						
WDJ				*e*S	**Sn**	**03 33 25.0**	**+0.3**
	baz=281						
JYNG	**Yonagunijimaku**	**1.09**	**74**	P	**Pn**	**03 33 09.8**	**0.0**
JYNG	**Yonagunijimaku**	**1.09**	**74**	A	A	03 33 09.8	
	comp=E,22nm,2.8s,comp=E,36nm,3.8s						
ALS	**Alishan**	**1.11**	**235**	⇑*i*P	**Pg**	**03 33 09.5**	**-0.6**
	baz=227						
ALS				S	**Sb**	**03 33 25.3**	**+0.6**
	baz=227						
CHKT	**Chengkung**	**1.12**	**201**	*e*P	**Pg**	**03 33 08.3**	**-1.9**
	baz=217						
CHKT				*e*S	**Sn**	**03 33 26.1**	**+0.4**
	baz=217						
WCHH	**Zhanghua**	**1.14**	**267**	P	**Pn**	**03 33 10.9**	**+0.4**
	baz=267						
WCHH				S	**Sn**	**03 33 27.5**	**+1.3**
	baz=267						
YOJ	**Yonaguni jima**	**1.15**	**74**		**Pn**	**03 33 10.5**	**-0.1**
YOJ	**Yonaguni jima**	**1.15**	**74**	*e*P	**Pn**	**03 33 10.7**	**0.0**
	baz=65						
YOJ				*e*S	**Sn**	**03 33 27.0**	**+0.6**
	baz=65						
YOJ	**Yonaguni jima**	**1.15**	**74**	P	**Pn**	**03 33 10.6**	**-0.1**
YOJ				S	**Sn**	**03 33 27.7**	**+1.3**
YOJ	**Yonaguni jima**	**1.15**	**74**	A	A	03 33 10.6	
	comp=E,27nm,3.5s,comp=E,26nm,5.4s						
CHN5	**Tsauling**	**1.17**	**242**	P	**Pg**	**03 33 10.6**	**-0.5**
	baz=244						
CHN5				S	**Sn**	**03 33 28.3**	**+1.3**
	baz=244						
ELDTW	**Lidau**	**1.20**	**217**	P	**Pb**	**03 33 09.9**	**-1.5**
	baz=207						
ELDTW				*e*S	**Sb**	**03 33 27.2**	**+0.2**
	baz=207						
WDLH	**Douliu**	**1.24**	**249**	*e*P	**Pg**	**03 33 12.4**	**-0.2**
	baz=250						
EDH	**Donghe**	**1.26**	**201**	*e*P	**Pn**	**03 33 10.5**	**-1.7**
	baz=203						
EDH				*e*S	**Sb**	**03 33 28.8**	**+0.1**
	baz=203						
WRL	**Guolierlin Hig**	**1.32**	**259**	*e*P	**Pb**	**03 33 13.4**	**-0.2**
	baz=261						
WRL				*e*S	**Sg**	**03 33 31.9**	**+0.6**
	baz=261						
STYH	**Taoyuan**	**1.35**	**224**	*e*P	**Pn**	**03 33 13.0**	**-0.5**
	baz=226						
STYH				*e*S	**Sb**	**03 33 31.1**	**-0.3**
	baz=226						
CHN2	**Minshiung**	**1.36**	**243**	P	**Pg**	**03 33 14.6**	**-0.3**
	baz=245						
CHN2				S	**Sg**	**03 33 35.1**	**+2.6**
	baz=245						
CHN4	**Tsaushan**	**1.36**	**235**	P	**Pb**	**03 33 14.3**	**0.0**
	baz=237						
CHN4				S	**Sg**	**03 33 34.4**	**+1.8**
	baz=237						
TPUB	**Ta-pu**	**1.37**	**232**		**Pn**	**03 33 13.8**	**0.0**
TPUB	**Ta-pu**	**1.37**	**232**	P	**Pn**	**03 33 13.8**	**0.0**
	baz=223						
TPUB				S	**Sg**	**03 33 32.4**	**-0.4**
	baz=223						
WTK	**Tuku**	**1.37**	**251**	*e*P	**Pg**	**03 33 14.6**	**-0.4**
	baz=253						
WTK				*e*S	**Sg**	**03 33 33.6**	**+0.8**
	baz=253						
LONT	**Longtian**	**1.38**	**207**	*e*P	**Pn**	**03 33 12.6**	**-1.4**
	baz=209						
LONT				*e*S	**Sg**	**03 33 34.3**	**+1.1**
	baz=209						
WTP	**Ta-pu**	**1.41**	**231**	P	**Pb**	**03 33 14.8**	**-0.3**
	baz=233						
WTP				S	**Sg**	**03 33 34.1**	**-0.1**
	baz=233						
CHY	**Chiayi**	**1.42**	**243**	*e*P	**Pb**	**03 33 15.1**	**-0.1**
	baz=245						
CHY				*e*S	**Sg**	**03 33 34.8**	**+0.5**
	baz=245						
TWG	**Pinlang**	**1.48**	**207**	*e*P	**Pn**	**03 33 12.9**	**-2.4**
	baz=192						
TWK	**Hsinying**	**1.49**	**234**	⇑*i*P	**Pb**	**03 33 15.9**	**-0.5**
	baz=236						
TWK				*i* S	**Sg**	**03 33 36.9**	**+0.2**
	baz=236						
LDUT	**Ludao**	**1.50**	**192**	*e*P	**Pn**	**03 33 13.1**	**-2.4**
	baz=179						
CHN1	**Nanshi**	**1.51**	**231**	P	**Pb**	**03 33 16.4**	**-0.4**
	baz=233						
CHN1				S	**Sg**	**03 33 38.5**	**+1.2**
	baz=233						
SNST	**Tainan City**	**1.51**	**232**	*e*P	**Pn**	**03 33 16.2**	**+0.5**
	baz=235						
SNST				*e*S	**Sg**	**03 33 37.5**	**+0.1**
	baz=235						
TTN	**Taitung**	**1.52**	**203**	*e*P	**Pb**	**03 33 16.7**	**-0.1**
	baz=205						
WSF	**Szhu**	**1.53**	**251**	P	**Pb**	**03 33 16.7**	**-0.4**
	baz=253						
WSF				S	**Sg**	**03 33 38.5**	**+0.5**
	baz=253						
SGST	**Jiashian**	**1.54**	**227**	P	**Pn**	**03 33 16.5**	**+0.3**
	baz=229						
SGST				S	**Sg**	**03 33 38.4**	**+0.1**
	baz=229						
WSL	**Shuilin Townsh**	**1.57**	**247**	*e*P	**Pn**	**03 33 16.4**	**-0.1**
	baz=249						
WSL				*e*S	**Sg**	**03 33 39.6**	**+0.4**
	baz=249						
ICHU	**Yijhu**	**1.60**	**241**	*e*P	**Pb**	**03 33 17.8**	**-0.5**
	baz=243						
ICHU				*e*S	**Sb**	**03 33 39.1**	**+0.6**
	baz=243						
CHN8	**Yiju**	**1.66**	**242**	*e*P	**Pn**	**03 33 18.4**	**+0.7**
	baz=243						
CHN8				*e*S	**Sg**	**03 33 42.4**	**+0.3**
	baz=243						
CHN3	**Shinhua**	**1.70**	**231**	*e*P	**Pg**	**03 33 20.5**	**-0.7**
	baz=232						
CHN3				*e*S	**Sg**	**03 33 43.6**	**+0.3**
	baz=232						
ECL	**Taimali**	**1.73**	**207**	*e*P	**Pn**	**03 33 16.4**	**-2.3**
	baz=195						
SCST	**Cishan**	**1.74**	**224**	*e*P	**Pb**	**03 33 20.2**	**-0.4**
	baz=225						
SCST				*e*S	**Sg**	**03 33 44.8**	**+0.1**
	baz=225						
SHHT	**Tainan City**	**1.74**	**230**	*e*P	**Pg**	**03 33 21.4**	**-0.8**
	baz=231						
SHHT				*e*S	**Sg**	**03 33 45.9**	**+1.1**
	baz=231						
SSD	**Sandimen**	**1.76**	**218**	*e*P	**Pn**	**03 33 19.2**	**+0.1**
	baz=233						
SSD				*e*S	**Sb**	**03 33 43.7**	**+0.5**
	baz=233						
SCLT	**Jiali**	**1.77**	**237**	*e*P	**Pb**	**03 33 20.6**	**-0.5**
	baz=238						
SCLT				*e*S	**Sg**	**03 33 45.1**	**-0.4**
	baz=238						
IRIF	**Iriomote-Funau**	**1.77**	**84**	P	**Pn**	**03 33 19.1**	**-0.2**
IRIF	**Iriomote-Funau**	**1.77**	**84**	A	A	03 33 19.1	
	comp=E,13nm,4.9s,comp=E,17nm,2.7s						
TSMG	**Majia**	**1.79**	**217**	*e*P	**Pb**	**03 33 21.1**	**-0.3**
	baz=218						
TSMG				*e*S	**Sb**	**03 33 43.6**	**-0.3**
	baz=218						
TAI1	**Yung-k'ang**	**1.82**	**233**	*e*P	**Pb**	**03 33 21.4**	**-0.5**
	baz=234						
TAI1				*e*S	**Sg**	**03 33 47.5**	**+0.4**
	baz=234						
TWM1	**Shoushan**	**1.83**	**224**	P	**Pg**	**03 33 22.9**	**-0.9**
	baz=225						
TWM1				*e*S	**Sg**	**03 33 49.3**	**+1.8**
	baz=225						
HATJ	**Hateruma jima**	**1.83**	**93**	P	**Pn**	**03 33 20.4**	**+0.3**
HATJ	**Hateruma jima**	**1.83**	**93**	A	A	03 33 20.4	
	comp=E,24nm,2.9s,comp=E,33nm,3.1s						
SGLT	**Jiouru**	**1.86**	**221**	*e*P	**Pb**	**03 33 23.3**	**+0.6**
	baz=207						
SGLT				*e*S	**Sg**	**03 33 48.5**	**0.0**
	baz=207						
MASBT	**Mashibuluo**	**1.87**	**215**	*e*P	**Pb**	**03 33 21.8**	**-1.1**
	baz=216						
MASBT				*e*S	**Sb**	**03 33 46.0**	**-0.3**
	baz=216						
EAST	**Anshuo**	**1.97**	**207**	*e*P	**Pn**	**03 33 20.3**	**-1.7**
	baz=197						
TAW	**Tawu**	**1.97**	**205**	*e*P	**Pn**	**03 33 23.0**	**+1.0**
	baz=195						
TAWH	**Dawu Township**	**1.99**	**205**	*e*P	**Pn**	**03 33 22.6**	**+0.3**
	baz=195						
SSPT	**Xinbi**	**2.01**	**215**	*e*P	**Pb**	**03 33 24.8**	**-0.4**
	baz=215						
SSPT				*e*S	**Sb**	**03 33 49.6**	**-0.7**
	baz=215						
JKRS	**Kuro-shima**	**2.02**	**87**	P	**Pn**	**03 33 23.2**	**+0.5**
JKRS	**Kuro-shima**	**2.02**	**87**	A	A	03 33 23.2	
	comp=E,29nm,3.0s,comp=E,51nm,5.0s						
SCZT	**Fangliau**	**2.08**	**212**	*e*P	**Pn**	**03 33 24.4**	**+0.9**
	baz=213						
SCZT				*e*S	**Sb**	**03 33 52.1**	**-0.1**
	baz=213						
LAY	**Lan-yu**	**2.12**	**186**	*e*P	**Pn**	**03 33 21.9**	**-2.1**
	baz=188						
SLIU	**Shizi**	**2.13**	**206**	*e*P	**Pn**	**03 33 25.6**	**+1.3**
	baz=200						
PNG	**Penghu**	**2.14**	**255**	*e*P	**Pn**	**03 33 23.8**	**-0.5**
	baz=258						
PNG				*e*S	**Sb**	**03 33 53.9**	**0.0**
	baz=258						
PHUB	**P'eng-hu**	**2.14**	**253**	*e*P	**Pn**	**03 33 24.2**	**-0.1**
	baz=257						
PHUB				*e*S	**Sn**	**03 33 50.9**	**0.0**
	baz=257						
JIJ	**Ishigaki jima**	**2.15**	**84**	P	**Pn**	**03 33 24.4**	**-0.1**
JIJ				*e*S	**Sn**	**03 33 51.3**	**+0.2**
JIJ	**Ishigaki jima**	**2.15**	**84**	A	A	03 33 24.4	
	comp=E,5.0nm,3.6s,comp=E,7.0nm,4.7s						
LYUB	**Lan-yu**	**2.15**	**185**	*e*P	**Pn**	**03 33 21.7**	**-2.7**
	baz=187						
WDGT	**Dungji**	**2.15**	**246**	⇑*i*P	**Pn**	**03 33 24.6**	**+0.1**
	baz=248						
WDGT				S	**Sn**	**03 33 50.9**	**-0.3**
	baz=248						
WLCH	**Liuqiu**	**2.22**	**216**	*e*P	**Pb**	**03 33 27.4**	**-1.4**
	baz=218						
VWUC	**VWUC**	**2.30**	**292**	*e*P	**Pn**	**03 33 25.3**	**-1.2**
	baz=293						
HEN	**Hengchun**	**2.35**	**205**	*e*P	**Pb**	**03 33 30.6**	**-0.4**
	baz=198						
VCHM	**Qimei**	**2.37**	**247**	*e*P	**Pn**	**03 33 27.4**	**-0.1**
	baz=233						
VCHM				*e*S	**Sn**	**03 33 57.1**	**+0.6**
	baz=233						
TWKBT	**Hengchun**	**2.38**	**203**	*e*P	**Pb**	**03 33 29.9**	**-1.7**
	baz=206						
TWKBT				*e*S	**Sb**	**03 33 59.3**	**-1.7**
	baz=206						
TSEB	**Hengchuen, Pin**	**2.39**	**201**	*e*P	**Pb**	**03 33 30.1**	**-1.7**
	baz=203						
TSEB				*e*S	**Sn**	**03 33 57.7**	**+0.7**
	baz=203						
PTMZ	**Houxiangcun**	**2.60**	**290**	*e*P	**Pn**	**03 33 29.7**	**-0.9**
	baz=291						
MATB	**Ma-tsu**	**2.61**	**320**	*e*P	**Pn**	**03 33 29.9**	**-0.9**
	baz=319						
JTJ	**Tarama**	**2.69**	**79**	P	**Pn**	**03 33 32.4**	**+0.5**
JTJ				*e*S	**Sn**	**03 34 06.4**	**+1.9**
JTJ	**Tarama**	**2.69**	**79**	A	A	03 33 32.4	
	comp=E,10.0nm,2.5s,comp=E,13nm,5.9s						
LYJJ	**Jianjiangzhen**	**3.02**	**323**	*e*P	**Pn**	**03 33 35.9**	**-0.5**
	baz=321						
QZH	**Quanzhou**	**3.03**	**286**	⇓*i*Pn	**Pn**	**03 33 35.4**	**-1.1**
QZH				Sn	**Sn**	**03 34 10.0**	**-2.8**
QZH				LR	LR		
	comp=E,10µm,9.9s						
QZH				LR	LR		
	comp=Z,12µm,10.4s						
KNM	**Kinmen**	**3.08**	**276**	*e*P	**Pn**	**03 33 38.6**	**+1.3**
	baz=277						
XPSS	**Dashiqiu**	**3.13**	**333**	*e*P	**Pn**	**03 33 37.2**	**-0.7**
	baz=331						
KNMB	**Chin-men Tao**	**3.13**	**276**	Pn	**Pn**	**03 33 37.5**	**-0.4**
JIRB	**Irabujima**	**3.15**	**77**	P	**Pn**	**03 33 39.1**	**+1.0**
JIRB				*e*S	**Sn**	**03 34 18.3**	**+2.6**
JIKM	**Ikemajima**	**3.23**	**76**	*e*P	**Pn**	**03 33 40.5**	**+1.1**
JIKM				S	**Sn**	**03 34 20.5**	**+2.7**
JIKM	**Ikemajima**	**3.23**	**76**	A	A	03 33 40.5	
	comp=E,8.0nm,3.0s,comp=E,8.0nm,4.2s						
JMJ2	**Miyako jima3**	**3.27**	**79**	P	**Pn**	**03 33 41.4**	**+1.6**
JMJ2				*e*S	**Sn**	**03 34 22.0**	**+3.3**
JMJ2	**Miyako jima3**	**3.27**	**79**	A	A	03 33 41.4	
	comp=E,11nm,3.8s,comp=E,14nm,5.0s						
JOGS	**Gusukube**	**3.34**	**79**	*e*P	**Pn**	**03 33 42.5**	**+1.7**
JOGS				S	**Sn**	**03 34 21.9**	**+1.3**
JOGS	**Gusukube**	**3.34**	**79**	A	A	03 33 42.5	
	comp=E,12nm,3.0s,comp=E,14nm,4.2s						
AXDP	**Jialang**	**3.57**	**283**	*e*P	**Pn**	**03 33 43.4**	**-0.6**
	baz=284						
BBP	**Basco**	**3.69**	**178**	⇓*e*P	**Pn**	**03 33 43.6**	**-2.1**
SXFK	**Yanhouchang**	**4.38**	**302**	*e*P	**Pn**	**03 33 54.4**	**-0.7**
	baz=301						
APYP	**Conner**	**6.28**	**185**	⇓*e*P	**Pn**	**03 34 23.6**	**+2.3**
APYP				*e*S	**Sn**	**03 35 27.8**	**-5.3**
JOW	**Kunigami**	**6.43**	**64**	Pn	**Pn**	**03 34 22.9**	**-0.5**
	7.4nm,0.3s,baz=164,slow=12,SNR=32						
JOW				Sn	**Sn**	**03 35 36.1**	**-0.7**
	1.4nm,0.3s,baz=180,slow=20,SNR=1.0						
	16nm,0.3s						
JOW	**Kunigami**	**6.43**	**64**		**Pn**	**03 34 23.0**	**-0.3**
SSE	**Sheshan**	**6.94**	**356**	Pn	**Pn**	**03 34 34.8**	**+4.5**
SSE				Sn	**Sn**	**03 35 52.4**	**+3.1**
SSE				LR	LR		
	comp=N,2µm,11.1s						
SSE				LR	LR		
	comp=E,1µm,11.4s						
HKPS	**Hong Kong Po S**	**7.29**	**257**	Pn	**Pn**	**03 34 34.8**	**-0.4**
GZH	**Guangzhou**	**7.83**	**264**	Pn	Pn	03 34 37.3	-5.2
SMPP	**San Manuel, Pa**	**8.03**	**188**	⇓*e*P	**Pn**	**03 34 46.7**	**+1.3**
SMPP				*e*S	**Sn**	**03 36 18.1**	**+1.9**
NJ2	**Nanjing**	**8.29**	**342**	*e*P	**Pn**	**03 34 47.6**	**-1.2**
NJ2				S	**Sn**	**03 36 22.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				smax	smax		
	comp=N,140nm,1.3s						
NJ2				smax	smax		
	comp=E,140nm,1.0s						
NJ2				LR	LR		
	comp=N,4µm,12.3s						
NJ2				LR	LR		
	comp=E,2µm,6.2s						
NJ2				LR	LR		
	comp=Z,5µm,11.4s						
CNSH	**ChangSha**	**8.92**	**299**	S	**Sn**	**03 36 33.0**	**-5.1**
CNSH	**ChangSha**	**8.92**	**299**	smax	smax		
	comp=N,580nm,1.6s						
CNSH	**ChangSha**	**8.92**	**299**	smax	smax		
	comp=E,360nm,1.6s						
CNSH	**ChangSha**	**8.92**	**299**	⇓P	**Pn**	**03 34 54.6**	**-2.9**
WHN	**Wuhan**	**9.19**	**316**	P	**Pn**	**03 35 00.1**	**-1.0**
WHN				S	**Sn**	**03 36 39.6**	**-4.9**
WHN				LR	LR		
	comp=E,12µm,8.7s						
WHN				LR	LR		
	comp=E,10µm,8.8s						
WHN				LR	LR		
	comp=E,18µm,10.3s						
GULI	**GuiLin**	**10.46**	**279**	P	**Pn**	**03 35 19.3**	**+0.7**
GULI				S	**Sn**	**03 37 22.4**	**+6.6**
GULI				LR	LR		
	comp=E,3µm,9.8s						
GULI				LR	LR		
	comp=E,7µm,10.6s						
GULI				LR	LR		
	comp=E,8µm,10.3s						
QIZ	**Qiongzhong**	**12.23**	**248**	P	**Pn**	**03 35 43.8**	**+0.8**
QIZ				S	**Sn**	**03 38 02.5**	**+3.1**
QIZ				LR	LR		
	comp=E,2µm,14.9s						
QIZ				LR	LR		
	comp=E,750nm,15.1s						
QIZ				LR	LR		
	comp=E,1µm,16.9s						
TIA	**Tai'an**	**12.68**	**343**	P	**Pn**	**03 35 52.3**	**+3.3**

TIA				pmax	pmax		
	comp=E,12nm,0.5s						
TIA				pmax	pmax		
	comp=E,83nm,3.6s						
TIA				LR	LR		
	comp=E,2µm,14.5s						
TIA				LR	LR		
	comp=E,920nm,8.1s						
TIA				LR	LR		
	comp=E,4µm,11.3s						
LYN	**LuoYang**	**13.17**	**324**	*e*P	**Pn**	**03 35 59.0**	**+3.3**
LYN				S	**Sn**	**03 38 26.3**	**+4.2**
LYN				LR	LR		
	comp=E,8µm,9.8s						
LYN				LR	LR		
	comp=E,3µm,10.2s						
LYN				LR	LR		
	comp=E,7µm,10.8s						
GYA	**Guiyang**	**13.88**	**283**	⇑P	**Pn**	**03 36 07.8**	**+2.2**
GYA				S	**Sn**	**03 38 43.3**	**+3.4**
GYA				PcP	**PcP**	**03 41 35.1**	**+6.9**
GYA				pmax	pmax		
	comp=E,20nm,1.0s						
GYA				pmax	pmax		
	comp=E,190nm,7.8s						
GYA				LR	LR		
	comp=E,2µm,12.7s						
GYA				LR	LR		
	comp=E,5µm,9.7s						
GYA				LR	LR		
	comp=E,6µm,10.6s						
KSAR	**Wonju Array Be**	**14.24**	**20**	Pn	**Pn**	**03 36 09.6**	**-0.6**
KSRS	**Korea Array**	**14.26**	**20**	Pn	**Pn**	**03 36 13.9**	**+3.4**
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=1.3						
KSRS				LR	LR	03 42 27.3	
	comp=E,338nm,21.4s,baz=195,slow=41						
KS19	**Wonju Array Si**	**14.29**	**20**	Pn	**Pn**	**03 36 09.3**	**-1.6**
HNS	**HongShan**	**14.54**	**337**	⇑P	**P**	**03 36 24.3**	**+3.4**
HNS				PP	PnPn	03 36 38.8	+16
HNS				S	**S**	**03 39 18.8**	**+3.8**
HNS				SS	SbSb	03 39 35.3	-21
HNS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HNS				LR	LR		
	comp=N,2µm,13.5s						
HNS				LR	LR		
	comp=E,2µm,11.8s						
HNS				LR	LR		
	comp=Z,3µm,13.3s						
XAN	**Xi'an**	**14.95**	**314**	⇑P	**Pn**	**03 36 23.8**	**+3.8**
XAN				pP	P	03 36 26.8	+1.2
XAN				sP		03 36 30.3	
XAN				SS	**S**	**03 39 28.4**	**+4.8**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,200nm,6.0s						
XAN				LR	LR		
	comp=Z,1µm,9.2s						
XAN				LR	LR		
	comp=Z,4µm,11.4s						
XAN				LR	LR		
	comp=Z,6µm,10.5s						
SEHB	**SEOHWA**	**15.11**	**20**	Pn	**Pn**	**03 36 21.4**	**-0.7**
BJI	**Beijing**	**16.54**	**345**	P	**P**	**03 36 43.3**	**+0.2**
BJI				S	**S**	**03 39 50.3**	**-5.6**
BJI				LR	LR		
	comp=Z,1µm,13.0s						
BJI				LR	LR		
	comp=Z,610nm,11.5s						
BJI				LR	LR		
	comp=Z,2µm,12.2s						
CD2	**Chengdu**	**17.35**	**297**	P	**Pn**	**03 36 51.5**	**+0.6**
CD2				S	**Sn**	**03 40 06.1**	**+2.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=E,3µm,9.0s						
CD2				LR	LR		
	comp=Z,4µm,11.2s						
CD2	**Chengdu**	**17.35**	**297**	P	**Pn**	**03 36 51.6**	**+0.6**
CD2				S	**Sn**	**03 40 04.4**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,3µm,8.2s						
CD2				LR	LR		
	comp=Z,4µm,11.2s						
KMI	**Kunming**	**17.36**	**277**	⇑P	**P**	**03 36 54.6**	**+2.0**
KMI				S	**S**	**03 40 10.6**	**-2.7**
KMI				pmax	pmax		
	comp=Z,11nm,1.7s						
KMI				pmax	pmax		
	comp=Z,220nm,4.7s						
KMI				LR	LR		
	comp=Z,760nm,8.8s						
KMI				LR	LR		
	comp=Z,7µm,10.1s						
KMI				LR	LR		
	comp=Z,7µm,10.1s						
JHJ	**Hachijo jima 2**	**18.12**	**56**	LR	LR	03 43 57.4	
	comp=Z,434nm,19.5s,baz=240,slow=37						
PZH	**PanZhiHua**	**18.28**	**282**	P	**P**	**03 37 04.4**	**+1.7**
PZH				S	**S**	**03 40 30.3**	**-1.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,300nm,11.2s						
PZH				LR	LR		
	comp=Z,1µm,8.4s						
PZH				LR	LR		
	comp=Z,3µm,13.7s						
PZH				LR	LR		
	comp=Z,3µm,14.3s						
HHC	**Hu-ho-hao-te**	**18.73**	**335**	*e*P	**Pn**	**03 37 09.5**	**+1.6**
HHC				sP	pwP	03 37 17.6	+5.3
HHC				S	**S**	**03 40 40.4**	**-0.4**
HHC				sS	sS	03 40 48.3	+3.3
HHC				SS	**SnSn**	**03 40 57.8**	**+6.3**
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,920nm,5.0s						
HHC				LR	LR		
	comp=Z,3µm,11.6s						
HHC				LR	LR		
	comp=Z,2µm,12.5s						
HHC				LR	LR		
	comp=Z,3µm,15.2s						
MJAR	**Matsushiro Arr**	**18.76**	**45**	P	**Pn**	**03 37 08.7**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=226,slow=8.5,SNR=4.9						
MJAR				LR	LR	03 45 14.6	
	comp=Z,753nm,20.0s,baz=224,slow=40						
BTO	**Baotou**	**19.16**	**332**	*e*P	**Pn**	**03 37 17.3**	**+4.3**
BTO				LR	LR		
	comp=Z,11µm,12.5s						
BTO				LR	LR		
	comp=Z,4µm,13.1s						
LZH	**Lanzhou**	**19.53**	**312**	*e*P	**Pn**	**03 37 18.8**	**+1.2**
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,590nm,7.2s						
LZH				LR	LR		
	comp=Z,2µm,13.1s						
LZH				LR	LR		
	comp=Z,3µm,15.3s						
LZH				LR	LR		
	comp=Z,4µm,15.2s						
XLT	**XiLinHaoTe**	**20.25**	**348**	*e*P	Pn	03 37 29.3	+3.3
XLT				S	Sn	03 41 16.3	+2.3
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,300nm,5.2s						
XLT				LR	LR		
	comp=Z,130nm,12.8s						
XLT				LR	LR		
	comp=Z,740nm,14.3s						
XLT				LR	LR		
	comp=Z,2µm,14.3s						
MDJ	**Mudanjiang**	**21.38**	**15**	P	**P**	**03 37 37.9**	**+1.7**
MDJ				S	Sn	03 41 38.0	-3.1
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.7s						
MDJ				LR	LR		
	comp=Z,730nm,15.7s						
MDJ				LR	LR		
	comp=Z,2µm,17.1s						
MDJ				LR	LR		
	comp=Z,2µm,14.7s						
USRK	**Ussuriysk Ar.**	**21.67**	**20**	P	**P**	**03 37 37.6**	**-1.7**
	comp=Z,2.1nm,0.6s,baz=190,slow=7.3,SNR=2.5						
	comp=Z,2.1nm,0.6s						
CHTO	**Chiang Mai**	**21.91**	**260**	P	**P**	**03 37 40.9**	**-1.2**
CMAR	**Chiang Mai Arr**	**22.02**	**259**	P	**P**	**03 37 44.7**	**+1.4**
	comp=Z,1.8nm,0.4s,baz=65,slow=8.1,SNR=8.8						
CMAR				LR	LR	03 46 46.9	
	comp=Z,505nm,19.4s,baz=70,slow=38						
	comp=Z,1.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**22.02**	**259**	P	**P**	**03 37 42.7**	**-0.7**
TOLI2	**Tolitoli**	**22.93**	**183**	P	**P**	**03 37 50.7**	**-2.2**
SBUM	**Sibu**	**23.48**	**205**	P	**P**	**03 37 56.8**	**-1.7**
GTA	**Gaotai**	**24.01**	**315**	*e*P	**P**	**03 38 04.0**	**+0.3**
GTA				pP	pwP	03 38 08.3	-0.7
GTA				sP	sP	03 38 11.5	+3.9
GTA				S	**S**	**03 42 24.5**	**+3.8**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,200nm,4.4s						
GTA				LR	LR		
	comp=Z,820nm,12.3s						
GTA				LR	LR		
	comp=Z,2µm,12.7s						
GTA				LR	LR		
	comp=Z,2µm,12.3s						
LUWI	**Luwuk**	**25.06**	**178**	P	**P**	**03 38 13.0**	**-0.2**
KSM	**Kuching**	**25.14**	**208**	P	**P**	**03 38 13.1**	**-0.8**
KSM				IAmb	IAmb	03 38 32.6	
	comp=Z,24nm,1.2s						
GOMU	**GeErMu**	**26.15**	**304**	P	**P**	**03 38 27.5**	**+4.1**
GOMU				sP	pwP	03 38 31.9	+3.0
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,94nm,5.4s						
GOMU				LR	LR		
	comp=Z,410nm,10.6s						
GOMU				LR	LR		
	comp=Z,350nm,12.8s						
GOMU				LR	LR		
	comp=Z,420nm,12.6s						
KLR	**Kul'dur**	**26.23**	**15**	P	**P**	**03 38 23.8**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=220,slow=6.5,SNR=10						
KLR				LR	LR	03 49 46.3	
	comp=Z,228nm,19.0s,baz=200,slow=39						
	comp=Z,2.7nm,0.7s						
ULN	**Ulaanbaatar**	**26.41**	**337**	P	**P**	**03 38 25.2**	**-0.2**
ULN				IAmb	IAmb	03 38 44.5	
	comp=Z,6.4nm,0.7s						
SONM	**Songino Array**	**26.62**	**336**	P	**P**	**03 38 26.6**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=151,slow=9.2,SNR=14						
SONM				LR	LR	03 50 25.9	
	comp=Z,892nm,18.1s,baz=150,slow=40						
	comp=Z,3.5nm,0.9s						
SONM	**Songino Array**	**26.62**	**336**	P	**P**	**03 38 26.9**	**-0.4**
PSI	**Prapat**	**30.64**	**230**	P	**P**	**03 39 04.0**	**+0.7**
	comp=Z,5.6nm,0.6s,baz=39,slow=4.1,SNR=8.0						
	comp=Z,5.6nm,0.6s						
RPSI	**Rantau Prapat**	**30.71**	**229**	P	**P**	**03 39 04.0**	**+0.2**
WMQ	**Urumqi**	**34.09**	**314**	*e*P	**P**	**03 39 35.5**	**+2.2**
WMQ				LR	LR		
	comp=Z,650nm,11.9s						
MK31	**Makanchi Array**	**38.75**	**316**	P	**P**	**03 40 12.2**	**-0.9**
MKAR	**Makanchi Array**	**38.75**	**316**	P	**P**	**03 40 12.3**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=103,slow=11,SNR=26						
	comp=Z,4.2nm,0.6s						
MKAR	**Makanchi Array**	**38.75**	**316**	P	**P**	**03 40 12.6**	**-0.5**
PETK	**Petropavlovsk-**	**39.58**	**34**	LR	LR	03 58 14.4	
	comp=Z,339nm,18.1s,baz=210,slow=39						
ZAA0	**Zalesovo Array**	**40.58**	**327**	P	**P**	**03 40 27.1**	**-1.0**
ZALV	**Zalesovo Beam**	**40.58**	**327**	P	**P**	**03 40 26.9**	**-1.2**
	comp=Z,2.7nm,0.5s,baz=113,slow=8.2,SNR=11						
ZALV				LR	LR	03 58 15.0	
	comp=Z,393nm,19.7s,baz=118,slow=38						
	comp=Z,2.7nm,0.5s						
MA2	**Magadan**	**40.80**	**22**	LR	LR	03 58 43.1	
	comp=Z,232nm,20.1s,baz=226,slow=38						
KDJ	**Kajisay**	**40.92**	**307**	P	**P**	**03 40 31.4**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**41.93**	**87**	T	T	04 26 01.1	
	baz=276						
H11N2	**WAKE ISLAND Hy**	**41.93**	**87**	T	T	04 25 57.6	
	baz=276						
H11N3	**WAKE ISLAND Hy**	**41.94**	**87**	T	T	04 25 58.2	
	baz=276						
H11S3	**WAKE ISLAND Hy**	**42.06**	**89**	T	T	04 26 03.4	
	baz=275,slow=74,SNR=40						
H11S1	**WAKE ISLAND Hy**	**42.06**	**89**	T	T	04 26 04.0	
	baz=275,slow=74,SNR=23						
H11S2	**WAKE ISLAND Hy**	**42.07**	**89**	T	T	04 26 04.6	
	baz=275,slow=74,SNR=22						
KURK	**Kurchatov**	**42.48**	**320**	P	**P**	**03 40 43.2**	**-0.5**
KURBB	**Kurchatov Arra**	**42.50**	**320**	P	**P**	**03 40 43.2**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=114,slow=8.7,SNR=17						
KURBB				LR	LR	04 00 04.3	
	comp=Z,130nm,21.9s,baz=91,slow=39						
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**42.97**	**307**	P	**P**	**03 40 48.3**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=189,slow=7.8,SNR=4.1						
AAK				LR	LR	04 01 30.0	
	comp=Z,283nm,18.1s,baz=80,slow=40						
	comp=Z,1.3nm,0.4s						
AAK	**Ala-Archa**	**42.97**	**307**	P	**P**	**03 40 47.8**	**-0.4**
WRA	**Warramunga Arr**	**45.50**	**163**	P	**P**	**03 41 06.8**	**-1.5**
	comp=Z,3.5nm,0.6s,baz=345,slow=8.8,SNR=29						
WRA				LR	LR	04 01 14.5	
	comp=Z,161nm,21.0s,baz=28,slow=38						
	comp=Z,3.5nm,0.6s						
WB2	**Warramunga Arr**	**45.50**	**163**	P	**P**	**03 41 08.0**	**-0.3**
GAR	**Garm**	**45.71**	**302**	IAmb	IAmb	03 41 17.4	
	comp=Z,8.9nm,0.8s						
KKAR	**Karatay Array**	**45.94**	**307**	P	**P**	**03 41 11.7**	**0.0**
KBL	**Kabul**	**46.69**	**295**	P	**P**	**03 41 18.7**	**+0.8**
KBL				IAmb	IAmb	03 41 22.8	
	comp=Z,8.2nm,1.1s						
TIXI	**Tiksi**	**47.70**	**3**	P	**P**	**03 41 22.6**	**-2.3**
	comp=Z,5.1nm,0.4s,baz=262,slow=20,SNR=15						
TIXI				LR	LR	04 02 08.3	
	comp=Z,228nm,18.8s,baz=181,slow=37						
	comp=Z,5.1nm,0.4s						
TIXI	**Tiksi**	**47.70**	**3**	P	**P**	**03 41 22.8**	**-2.1**
BRVK	**Borovoye**	**48.13**	**321**	P	**P**	**03 41 27.8**	**-0.8**
BRVK				IAmb	IAmb	03 41 29.3	
	comp=Z,4.6nm,0.7s						
SHEM	**Shemya Is, Ala**	**48.49**	**40**	LR	LR	04 01 01.8	
	comp=Z,89nm,21.3s,baz=265,slow=35						
AS31	**Alice Springs**	**48.96**	**165**	P	**P**	**03 41 34.9**	**-0.4**
ASAR	**Alice Springs**	**48.96**	**165**	P	**P**	**03 41 35.3**	**0.0**
	comp=Z,1.8nm,0.6s,baz=339,slow=7.2,SNR=28						
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**48.96**	**165**	P	**P**	**03 41 34.8**	**-0.4**
NRIK	**Noril'sk**	**49.58**	**345**	P	**P**	**03 41 39.1**	**-0.3**
NRIK				IAmb	IAmb	03 41 40.0	
	comp=Z,3.5nm,0.7s						
CTA	**Charters Tower**	**50.01**	**149**	LR	LR	04 01 47.8	
	comp=Z,268nm,21.5s,baz=288,slow=35						
HNR	**Honiara**	**50.02**	**127**	LR	LR	04 01 40.5	
	comp=Z,77nm,19.3s,baz=310,slow=35						
BILL	**Bilibino**	**51.52**	**20**	P	**P**	**03 41 52.5**	**-1.6**
BILL				IAmb	IAmb	03 41 54.7	
	comp=Z,3.1nm,0.5s						
ABKAR	**Akbulak array**	**53.87**	**314**	P	**P**	**03 42 11.1**	**-0.6**
ARU	**Arti**	**55.47**	**323**	P	**P**	**03 42 22.3**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=90,slow=8.1,SNR=2.7						
	comp=Z,1.8nm,0.5s						
ARU	**Arti**	**55.47**	**323**	P	**P**	**03 42 22.3**	**-1.0**
ARU				IAmb	IAmb	03 42 24.6	
	comp=Z,6.9nm,0.8s						
STKA	**Stephens Creek**	**58.84**	**160**	P	**P**	**03 42 46.8**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=344,slow=7.9,SNR=7.0						
	comp=Z,1.8nm,0.7s						
KIRV	**Kirov**	**60.57**	**325**	P	**P**	**03 42 58.1**	**-0.8**
	comp=Z,8.7nm,0.6s,baz=73,slow=9.4,SNR=4.5						
	comp=Z,8.7nm,0.6s						
DZM	**Mont Dzumac**	**63.20**	**133**	*e*LR	LR	04 02 03.9	
	comp=Z,387nm,25.1s						
TTA	**Tatalina**	**65.25**	**30**	P	**P**	**03 43 29.6**	**-0.7**
TTA				IAmb	IAmb	03 43 36.1	
	comp=Z,5.6nm,1.4s						
GNI	**Garni**	**65.28**	**305**	LR	LR	04 15 33.0	
	comp=Z,80nm,21.2s,baz=88,slow=39						
KLMR	**Klimovskoe**	**65.49**	**328**	*e*P	**P**	**03 43 29.2**	**-2.5**
KLMR				AMP		03 43 32.6	
	comp=Z,21nm,1.5s						
L19K	**White Mountain**	**65.86**	**31**	IAmb	IAmb	03 43 47.1	
	comp=Z,3.6nm,0.9s						
KBZ	**Khabaz**	**65.94**	**309**	P	**P**	**03 43 34.2**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=108,slow=2.6,SNR=5.3						
	comp=Z,1.5nm,0.7s						
J20K	**Nowinta River**	**65.97**	**28**	IAmb	IAmb	03 43 47.4	
	comp=Z,7.8nm,1.4s						
KVAR	**Kislovodsk Arr**	**66.04**	**309**	LR	LR	04 15 46.6	
	comp=Z,152nm,19.1s,baz=274,slow=39						
KIV	**Kislovodsk**	**66.05**	**309**	P	**P**	**03 43 35.5**	**-0.2**
KIV				IAmb	IAmb	03 43 37.0	
	comp=Z,7.0nm,0.9s						
K20K	**Telida**	**66.09**	**29**	IAmb	IAmb	03 43 42.0	
	comp=Z,5.8nm,1.4s						
H21K	**Melozitna Rive**	**66.38**	**27**	IAmb	IAmb	03 43 55.1	
	comp=Z,3.6nm,0.8s						
CAST	**Castle Rocks**	**66.97**	**29**	IAmb	IAmb	03 43 58.6	
	comp=Z,3.8nm,1.0s						
TOLK	**Toolik Lake Re**	**67.26**	**23**	IAmb	IAmb	03 43 46.1	
	comp=Z,2.9nm,0.6s						
BPAW	**Bear Paw Mtn.**	**67.35**	**28**	IAmb	IAmb	03 44 01.0	
	comp=Z,4.9nm,1.1s						
KDAK	**Kodiak Island**	**67.61**	**35**	P	**P**	**03 43 44.5**	**-0.8**
	comp=Z,5.9nm,0.6s,baz=283,slow=3.1,SNR=17						
	comp=Z,5.9nm,0.6s						
KDAK	**Kodiak Island**	**67.61**	**35**	P	**P**	**03 43 45.7**	**+0.5**
GURO	**Guroymak-BITLI**	**67.68**	**303**	P	**P**	**03 43 46.2**	**-0.1**
H23K	**Yukon River**	**67.69**	**26**	IAmb	IAmb	03 44 04.3	
	comp=Z,10nm,1.4s						
TRF	**Thorofare Moun**	**67.76**	**29**	IAmb	IAmb	03 44 16.0	
	comp=Z,6.1nm,0.9s						
I23K	**Minto, Yukon-K**	**67.88**	**27**	IAmb	IAmb	03 44 13.2	
	comp=Z,6.1nm,1.5s						
NEA2	**Nenana**	**68.10**	**28**	IAmb	IAmb	03 44 05.4	
	comp=Z,4.1nm,0.8s						
BRLK	**Bradley Lake**	**68.12**	**33**	IAmb	IAmb	03 43 52.3	
	comp=Z,5.0nm,0.6s						
MCK	**McKinley**	**68.31**	**29**	P	**P**	**03 43 50.6**	**+1.0**
MDM	**Murphy Dome**	**68.38**	**27**	IAmb	IAmb	03 44 07.4	
	comp=Z,5.2nm,0.9s						
WRH	**Wood River Hil**	**68.53**	**28**	P	**P**	**03 43 51.6**	**+0.6**
WRH				IAmb	IAmb	03 44 09.4	
	comp=Z,3.6nm,1.0s						
ILAR	**Eielson Array**	**68.98**	**27**	P	**P**	**03 43 52.3**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=286,slow=6.1,SNR=10						
ILAR				LR	LR	04 16 01.4	
	comp=Z,73nm,19.4s,baz=254,slow=38						
	comp=Z,0.5nm,0.5s						
DHY	**Denali Highway**	**69.13**	**29**	IAmb	IAmb	03 44 15.4	
	comp=Z,5.5nm,0.9s						
ARCES	**ARCESS Array B**	**69.78**	**338**	LR	LR	04 19 53.2	
	comp=Z,128nm,18.7s,baz=86,slow=40						
PAX	**Paxson**	**70.00**	**29**	IAmb	IAmb	03 44 14.4	
	comp=Z,4.5nm,1.1s						
DIV	**Divide**	**70.31**	**31**	P	**P**	**03 44 02.8**	**+0.7**
DIV				IAmb	IAmb	03 44 05.3	
	comp=Z,4.6nm,0.8s						
DOT	**Dot Lake**	**70.45**	**28**	P	**P**	**03 44 02.4**	**-0.5**
N25K	**Chitina, Valde**	**70.73**	**30**	IAmb	IAmb	03 44 09.0	
	comp=Z,4.0nm,0.7s						
GLB	**Gilahina Butte**	**71.14**	**30**	IAmb	IAmb	03 44 22.1	
	comp=Z,4.3nm,0.8s						
K27K	**Chicken**	**71.19**	**28**	IAmb	IAmb	03 44 11.8	
	comp=Z,3.8nm,0.9s						
M26K	**Nabesna, AK**	**71.25**	**29**	IAmb	IAmb	03 44 24.9	
	comp=Z,4.3nm,0.8s						
EGAK	**Eagle**	**71.36**	**27**	IAmb	IAmb	03 44 12.3	
	comp=Z,3.0nm,0.8s						
MCARA	**McCarthy VSAT**	**71.52**	**30**	IAmb	IAmb	03 44 25.2	
	comp=Z,4.3nm,0.6s						
L27K	**Beaver Creek,**	**71.58**	**28**	IAmb	IAmb	03 44 27.5	
	comp=Z,3.2nm,0.9s						
BCAR	**Beaver Creek A**	**71.59**	**28**	P	**P**	**03 44 09.0**	**-0.8**
FINES	**FINESS Array B**	**71.76**	**330**	P	**P**	**03 44 09.3**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=59,slow=7.4,SNR=8.6						
	comp=Z,2.2nm,0.7s						
BARN	**Barnard Glacie**	**72.25**	**30**	IAmb	IAmb	03 44 17.3	
	comp=Z,4.2nm,0.7s						
DAWY	**Dawson**	**72.31**	**27**	IAmb	IAmb	03 44 16.9	
	comp=Z,3.5nm,0.8s						
INK	**Inuvik**	**73.04**	**22**	P	**P**	**03 44 16.6**	**-1.7**
	comp=Z,2.8nm,0.6s,baz=320,slow=7.2,SNR=7.7						
	comp=Z,2.8nm,0.6s						
INK	**Inuvik**	**73.04**	**22**	IAmb	IAmb	03 44 19.5	
	comp=Z,3.4nm,0.8s						
AKASG	**Malin Array Be**	**73.27**	**318**	P	**P**	**03 44 18.2**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=61,slow=4.7,SNR=6.8						
	comp=Z,0.3nm,0.3s						
AKASG	**Malin Array Be**	**73.27**	**318**	IAmb	IAmb	03 44 19.6	
	comp=Z,6.2nm,1.4s						
BR131	**Keskin Array S**	**73.64**	**307**	P	**P**	**03 44 21.6**	**-1.1**
BR131				IAmb	IAmb	03 44 23.9	
	comp=Z,6.9nm,1.2s						
BRTR	**Keskin Array B**	**73.64**	**307**	P	**P**	**03 44 22.1**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=91,slow=4.3,SNR=7.7						
	comp=Z,1.2nm,0.6s						
BRTR	**Keskin Array B**	**73.64**	**307**	P	**P**	**03 44 21.5**	**-1.1**
M30M	**Minto, Yukon**	**73.92**	**28**	IAmb	IAmb	03 44 27.4	
	comp=Z,5.8nm,1.2s						
ATD	**Arta Tunnel**	**75.38**	**276**	LR	LR	04 17 57.2	
	comp=Z,24nm,18.6s,baz=17,slow=36						
HUH	**Hualalai**	**75.49**	**75**	P	**P**	**03 44 33.6**	**-0.1**
WHY	**Whitehorse**	**75.50**	**30**	IAmb	IAmb	03 44 35.9	
	comp=Z,3.3nm,0.7s						
C36M	**Paulatuk**	**75.65**	**20**	P	**P**	**03 44 32.3**	**-1.1**
C36M				IAmb	IAmb	03 44 34.4	
	comp=Z,4.3nm,0.8s						
KWP	**Kalwaria Pacla**	**77.57**	**319**	P	**P**	**03 44 43.5**	**-1.3**
NB2	**NORSAR Subarra**	**78.52**	**332**	P	**P**	**03 44 47.7**	**-2.1**
	comp=Z,1.9nm,0.7s,baz=61,slow=5.6						
NOA	**NORSAR Array B**	**78.52**	**332**	P	**P**	**03 44 47.9**	**-1.9**
	comp=Z,1.4nm,0.6s,baz=58,slow=5.6,SNR=9.9						
	comp=Z,1.4nm,0.6s						
RES	**Resolute Bay**	**78.60**	**9**	LR	LR	04 21 09.6	
	comp=Z,65nm,20.8s,baz=14,slow=37						
DLBC	**Dease Lake**	**78.69**	**31**	P	**P**	**03 44 50.0**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=324,slow=9.6,SNR=7.7						
	comp=Z,2.2nm,0.7s						
BFZ	**Birch Farm**	**81.97**	**141**	P	**P**	**03 45 09.1**	**+0.6**
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**03 45 10.7**	**-1.9**
	comp=Z,3.2nm,0.7s,baz=313,slow=4.8,SNR=55						
	comp=Z,3.2nm,0.7s						
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**03 45 10.8**	**-1.8**
GERES	**GERESS Array B**	**83.22**	**321**	P	**P**	**03 45 14.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=57,slow=8.1,SNR=4.1						
	comp=Z,0.6nm,0.8s						
D05A	**Enumclaw**	**88.72**	**38**	P	**P**	**03 45 42.4**	**+0.1**
SFJD	**Kangerlussuaq**	**88.95**	**357**	LR	LR	04 28 31.4	
	comp=Z,97nm,18.2s,baz=356,slow=38						
EDM	**Edmonton**	**89.36**	**30**	P	**P**	**03 45 45.4**	**+0.1**
EDM				IAmb	IAmb	03 45 48.7	
	comp=Z,4.1nm,0.7s						
B08A	**Colville Reser**	**89.48**	**36**	IAmb	IAmb	03 45 47.2	
	comp=Z,4.3nm,0.8s						
J04D	**Umpqua Nationa**	**90.91**	**41**	P	**P**	**03 45 52.6**	**-0.3**
YBH	**Yreka Blue Hor**	**91.40**	**43**	P	**P**	**03 45 54.7**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=225,slow=7.1,SNR=3.1						
	comp=Z,0.7nm,0.6s						
YBH	**Yreka Blue Hor**	**91.40**	**43**	IAmb	IAmb	03 45 59.2	
	comp=Z,1.4nm,0.8s						
FRB	**Frobisher Bay**	**92.02**	**5**	LR	LR	04 30 45.2	
	comp=Z,96nm,20.0s,baz=352,slow=38						
BEKR	**Beckworth**	**93.93**	**43**	P	**P**	**03 46 05.8**	**-1.2**
BEKR				IAmb	IAmb	03 46 11.1	
	comp=Z,2.0nm,0.9s						
PPT2	**Papeete2**	**95.81**	**107**	*e*LR	LR	04 17 20.5	
	comp=Z,158nm,23.8s						
NVAR	**Mina Array Bea**	**96.07**	**43**	P	**P**	**03 46 16.0**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=283,slow=4.5,SNR=4.0						
	comp=Z,0.5nm,0.7s						
TAOE	**Nuku Hiva Isla**	**100.87**	**95**	*e*LR	LR	04 20 24.3	
	comp=Z,195nm,26.4s						
SDV	**Santo Domingo**	**144.99**	**22**	PKPdf	**PKPab**	**03 52 24.5**	**-1.9**
CBOC	**Ciudad Bolivar**	**145.48**	**32**	*e*P	**PKPbc**	**03 52 26.1**	**-1.9**
PTBC	**PUERTO BERRIO,**	**145.62**	**30**	*e*P	**PKPdf**	**03 52 26.2**	**-1.8**
BAUV	**El Baul**	**145.73**	**17**	PKPbc	**PKPdf**	**03 52 27.1**	**-1.1**
BARC	**Barichara**	**146.13**	**27**	*e*P	**PKPdf**	**03 52 29.0**	**-0.2**
PLMC	**San Jos del P**	**146.17**	**34**	*e*P	**PKPdf**	**03 52 29.2**	**+0.1**
NORC	**Norcasia**	**146.29**	**31**	*e*P	**PKPdf**	**03 52 29.2**	**-0.1**
SPBC	**San Pablo de B**	**146.58**	**30**	*e*P	**PKPdf**	**03 52 29.4**	**-0.4**
RUSC	**La Rusia**	**146.80**	**28**	*e*P	**PKPdf**	**03 52 30.9**	**+0.2**
YOTC	**Yotoco, Valle**	**146.92**	**35**	*e*P	**PKPdf**	**03 52 30.9**	**+0.4**
ORTC	**Ortega, Tolima**	**147.54**	**33**	*e*P	**PKPdf**	**03 52 31.3**	**0.0**

CHIC	**Chingaza**	**147.64**	**30**	*e*P	**PKPdf**	**03 52 33.0**	**+1.0**
PRAC	**Prado**	**147.89**	**33**	*e*P	**PKPdf**	**03 52 32.5**	**+0.6**

IDC ***14*** *03:34:36.9±1.1, 24.°30N×122.°06E, h0^{km}, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=63.3km s-min=21.8km az=65.0*

TAP ***14*** *03:34:39.1, 24.°17N×121.°74E, h13^{km}, ML4.2, B*

ISC 14 03:34:39.0±0.8**, 24.°19N**±0.°02×**121.°80E**±0.°03**, h13**^{km}±5^{km}**, n110,** σ**0.^{s}81**/168**, mb3.7**/7**, 25D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village** baz=1.0	**0.13**	**335**	⇓*i*P	**Pg**	**03 34 42.7**	**+0.2**
EHP	baz=1.0			*i* S	**Sg**	**03 34 45.6**	**+0.7**
ETL	**Fush Village** baz=264	**0.17**	**259**	⇓*i*P	**Pg**	**03 34 42.4**	**-0.6**
ETL	baz=264			*i* S	**Sg**	**03 34 44.9**	**-0.8**
NACB	**Ninganchiao** baz=272	**0.19**	**265**	⇓*i*P	**Pg**	**03 34 42.6**	**-0.7**
NACB	baz=272			*i* S	**Sg**	**03 34 45.0**	**-1.2**
TWD	**Chiawan** baz=243	**0.22**	**240**	⇓*i*P	**Pg**	**03 34 43.1**	**-0.7**
TWD	baz=243			*i* S	**Sg**	**03 34 46.1**	**-0.9**
ENA	**Nanau** baz=360	**0.24**	**347**	⇓*i*P	**Pg**	**03 34 44.6**	**+0.4**
ENA	baz=360			*i* S	**Sg**	**03 34 48.7**	**+0.9**
EWUT	**Wuta** baz=6.0	**0.25**	**355**	⇓*i*P	**Pg**	**03 34 45.0**	**+0.6**
EWUT	baz=6.0			S	**Sg**	**03 34 49.3**	**+1.3**
HWA	**Hwalien** baz=223	**0.28**	**220**	*e*P	**Pg**	**03 34 45.0**	**+0.2**
ETLH	**Xiulin Townshi** baz=279	**0.29**	**273**	⇓*i*P	**Pg**	**03 34 44.6**	**-0.5**
ETLH	baz=279			*i* S	**Sg**	**03 34 48.5**	**-0.8**
ETM	**Tongmen** baz=230	**0.36**	**232**	⇓*i*P	**Pg**	**03 34 45.5**	**-0.8**
ETM	baz=230			S	**Sg**	**03 34 50.5**	**-0.7**
TEYL	**Yanliau Villag** baz=216	**0.37**	**210**	P	**Pg**	**03 34 46.5**	**0.0**
TWC	**Suao** baz=6.0	**0.42**	**6**	⇓P	**Pb**	**03 34 48.1**	**-0.1**
TWC	baz=6.0			S	**Sb**	**03 34 54.6**	**+0.1**
LATG	**Datong** baz=330	**0.42**	**324**	⇓*i*P	**Pb**	**03 34 47.7**	**-0.8**
LATG	baz=330			*i* S	**Sg**	**03 34 53.8**	**+0.5**
NDS	**Dongshan** baz=355	**0.45**	**350**	⇓*i*P	**Pb**	**03 34 48.5**	**-0.3**
NDS	baz=355			*i* S	**Sb**	**03 34 55.2**	**-0.1**
NNSB	**Datong** baz=307	**0.45**	**302**	⇓*i*P	**Pg**	**03 34 47.8**	**-0.1**
NNSB	baz=307			*i* S	**Sg**	**03 34 53.7**	**-0.3**
NNS	**Nan Shan** baz=308	**0.46**	**303**	⇓*i*P	**Pg**	**03 34 48.0**	**-0.2**
NNS	baz=308			*i* S	**Sg**	**03 34 54.0**	**-0.5**
NDT	**Datong Townshi** baz=333	**0.49**	**327**	⇓*i*P	**Pb**	**03 34 48.8**	**-0.6**
NDT	baz=333			S	**Sg**	**03 34 55.7**	**+0.6**
WHF	**Hehuan Shan** baz=267	**0.49**	**265**	⇓*i*P	**Pg**	**03 34 48.1**	**-0.7**
WHF	baz=267			*i* S	**Sg**	**03 34 54.4**	**-1.1**
ENTT	**Nioudou** baz=340	**0.50**	**334**	⇓*i*P	**Pb**	**03 34 49.2**	**-0.4**
ENTT	baz=340			*i* S	**Sb**	**03 34 56.4**	**-0.4**
ESL	**Shilin** baz=226	**0.50**	**222**	P	**Pg**	**03 34 48.3**	**-0.7**
ESL	baz=226			S	**Sg**	**03 34 55.3**	**-0.4**
FUSS	**Fushou** baz=280	**0.51**	**276**	⇓*i*P	**Pg**	**03 34 48.9**	**-0.2**
FUSS	baz=280			S	**Sg**	**03 34 55.3**	**-0.7**
TEGC	**Jichi Village** baz=196	**0.54**	**207**	*e*P	**Pg**	**03 34 49.7**	**+0.2**
TEGC	baz=196			*e*S	**Sg**	**03 34 59.0**	**+2.4**
TWE	**Neicheng** baz=353	**0.54**	**347**	⇓*i*P	**Pb**	**03 34 50.3**	**0.0**
TWE	baz=353			*i* S	**Sb**	**03 34 58.1**	**+0.1**
TWT	**Tachien** baz=279	**0.57**	**276**	⇓*i*P	**Pg**	**03 34 50.3**	**0.0**
TWT	baz=279			*i* S	**Sg**	**03 34 57.5**	**-0.5**
ILA	**Ilan** baz=355	**0.57**	**355**	⇓*i*P	**Pn**	**03 34 51.2**	**-1.7**
ILA	baz=355			S	**Sn**	**03 35 00.0**	**-2.1**
CHGB	**Renai** baz=254	**0.59**	**257**	*i* P	**Pg**	**03 34 50.1**	**-0.4**
CHGB	baz=254			S	**Sg**	**03 34 57.7**	**-0.7**
TDCB	**Techi** baz=279	**0.59**	**276**	⇓*i*P	**Pg**	**03 34 50.4**	**-0.2**
TDCB	baz=279			S	**Sg**	**03 34 57.3**	**-1.2**
FUSB	**Fushanzhiwuyua** baz=345	**0.60**	**341**	⇓*i*P	**Pb**	**03 34 51.3**	**-0.1**
FUSB	baz=345			*i* S	**Sb**	**03 34 59.4**	**-0.4**
YHNB	**Yeheng** baz=325	**0.61**	**321**	⇓*i*P	**Pb**	**03 34 51.2**	**-0.4**
YHNB	baz=325			S	**Sg**	**03 34 59.6**	**+0.4**
OWD	**Renai** baz=248	**0.62**	**248**	*e*P	**Pg**	**03 34 50.4**	**-0.7**
OWD	baz=248			*e*S	**Sg**	**03 34 58.1**	**-1.2**
EGFH	**Guangfu** baz=217	**0.62**	**213**	P	**Pg**	**03 34 50.8**	**-0.3**
EGFH	baz=217			*e*S	**Sg**	**03 35 00.4**	**+1.0**
NSK	**Sanguang** baz=325	**0.63**	**320**	⇓*i*P	**Pb**	**03 34 51.4**	**-0.5**
NSK	baz=325			*i* S	**Sg**	**03 34 59.7**	**0.0**
NWLT	**Wulai** baz=339	**0.64**	**335**	⇓*i*P	**Pb**	**03 34 52.0**	**-0.1**
NWLT	baz=339			*i* S	**Sb**	**03 35 00.7**	**-0.4**
WUSB	**Renai** baz=249	**0.66**	**253**	P	**Pg**	**03 34 51.3**	**-0.5**
WUSB	baz=249			S	**Sg**	**03 34 59.2**	**-1.3**
NTC	**Toucheng** baz=5.0	**0.66**	**2**	*e*P	**Pn**	**03 34 53.0**	**-1.1**
NTC	baz=5.0			*e*S	**Sb**	**03 35 01.8**	**+0.3**
EGS	baz=21	**0.66**	**10**	*e*P	**Pn**	**03 34 52.6**	**-1.5**
VWDT	**VWDT** baz=235	**0.74**	**234**	P	**Pg**	**03 34 52.9**	**-0.6**
VWDT	baz=235			*e*S	**Sg**	**03 35 03.4**	**+0.1**
NFF	**Wufeng Townshi** baz=308	**0.76**	**305**	P	**Pg**	**03 34 54.0**	**+0.1**
NFF	baz=308			*e*S	**Sg**	**03 35 03.6**	**-0.3**
HGSD	**Ruisui** baz=195	**0.78**	**206**	*e*P	**Pb**	**03 34 55.0**	**+0.6**
TIPB	**Shuangxi** baz=4.0	**0.78**	**2**	*i* P	**Pn**	**03 34 54.7**	**-0.9**
TIPB	baz=4.0			*i* S	**Sn**	**03 35 05.2**	**-2.0**
WHP	**Taichung City** baz=279	**0.79**	**277**	P	**Pg**	**03 34 54.3**	**+0.1**
WHP	baz=279			*i* S	**Sg**	**03 35 04.3**	**-0.3**
WPL	**Puli Township** baz=258	**0.79**	**257**	*e*P	**Pg**	**03 34 54.0**	**-0.3**
NHDH	**Xindian Distri** baz=345	**0.81**	**342**	*e*P	**Pb**	**03 34 55.0**	**+0.1**
NHDH	baz=345			*e*S	**Sb**	**03 35 06.0**	**+0.3**
EHY	**Hungye** baz=223	**0.81**	**213**	*e*P	**Pg**	**03 34 53.9**	**-0.9**
TWA	**Mucha** baz=349	**0.81**	**346**	P	**Pn**	**03 34 55.5**	**-0.6**
DPDB	**Guoxing** baz=261	**0.81**	**259**	P	**Pg**	**03 34 54.2**	**-0.6**
TATO	**Taipei** baz=343	**0.83**	**340**	P	**Pn**	**03 34 55.9**	**-0.5**
TATO	baz=343			S	**Sb**	**03 35 06.6**	**+0.2**
TWB1	**Santiao Chiao** baz=9.0	**0.83**	**12**	*e*P	**Pn**	**03 34 56.0**	**-0.4**
TWB1	baz=9.0			S	**Sn**	**03 35 07.0**	**-1.5**
LIOB	**Emei** baz=305	**0.85**	**302**	*e*P	**Pb**	**03 34 55.8**	**+0.3**
LIOB	baz=305			*e*S	**Sg**	**03 35 06.6**	**+0.1**
NSTT	**Nanjuang** baz=304	**0.85**	**301**	P	**Pg**	**03 34 55.6**	**+0.1**
NSTT	baz=304			S	**Sg**	**03 35 06.3**	**-0.4**
SSLB	**Suanglung** baz=253	**0.87**	**243**	P	**Pg**	**03 34 54.9**	**-1.0**
SSLB	baz=253			S	**Sg**	**03 35 05.3**	**-2.1**
NWF	**Wu-fen Shan** baz=352	**0.88**	**359**	P	**Pn**	**03 34 56.8**	**-0.3**
NWF	baz=352			S	**Sn**	**03 35 08.3**	**-1.4**
WFSB	**Wu-fen Shan** baz=354	**0.88**	**359**	P	**Pn**	**03 34 56.6**	**-0.4**
WFSB	baz=354			S	**Sn**	**03 35 08.4**	**-1.2**
SMLT	**Sun Moon Lake** baz=251	**0.88**	**250**	P	**Pg**	**03 34 55.3**	**-0.7**
SMLT	baz=251			S	**Sg**	**03 35 06.4**	**-1.2**
TAP1	**Taipei** baz=345	**0.88**	**343**	*e*P	**Pn**	**03 34 57.1**	**+0.1**
TAP1	baz=345			S	**Sn**	**03 35 09.4**	**-0.3**
TAP	**Taipei** baz=345	**0.89**	**342**	*e*P	**Pn**	**03 34 56.9**	**-0.2**
TAP	baz=345			S	**Sn**	**03 35 09.1**	**-0.7**
SXI1	**Grass Mountain** baz=6.0	**0.90**	**4**	P	**Pn**	**03 34 57.3**	**-0.1**
SXI1	baz=6.0			*e*S	**Sn**	**03 35 09.3**	**-1.0**
TYC	**Yuchr** baz=253	**0.91**	**252**	*e*P	**Pg**	**03 34 55.8**	**-0.8**
YULB	**Yu-li** baz=220	**0.92**	**210**	*e*P	**Pg**	**03 34 55.4**	**-1.3**
HSN1	**Hsinchu** baz=312	**0.92**	**310**	*e*P	**Pb**	**03 34 57.6**	**+0.7**
ECBN	**Changbin** baz=187	**0.93**	**200**	*e*P	**Pg**	**03 34 56.1**	**-0.9**
NTY	**Taoyuan** baz=334	**0.93**	**330**	*e*P	**Pb**	**03 34 57.0**	**+0.1**
TWQ1	**Liyutan** baz=282	**0.95**	**280**	P	**Pb**	**03 34 58.1**	**+0.8**
TWF1	**Yuli** baz=223	**0.95**	**209**	*e*P	**Pg**	**03 34 56.5**	**-0.9**
SBCB	**Hsinchu** baz=312	**0.95**	**309**	P	**Pn**	**03 34 58.8**	**+0.7**
NCU	**National Centr** baz=327	**0.96**	**324**	*e*P	**Pn**	**03 34 58.4**	**+0.3**
NCU	baz=327			*e*S	**Sn**	**03 35 12.8**	**+1.2**
NCUH	**Zhongli** baz=326	**0.96**	**324**	*e*P	**Pn**	**03 34 58.4**	**+0.3**
NCUH	baz=326			*e*S	**Sn**	**03 35 12.6**	**+1.0**
TNOU	**National Taiwa**	**0.96**	**358**	P	**Pn**	**03 34 58.2**	**+0.1**
TWS1	**Kuangyinshan** baz=349	**0.97**	**339**	P	**Pn**	**03 34 58.8**	**+0.5**
TWS1	baz=349			*e*S	**Sn**	**03 35 13.2**	**+1.3**
HSN	**Hsinchu** baz=314	**0.97**	**309**	*e*P	**Pn**	**03 34 58.9**	**+0.6**
HSN	baz=314			*e*S	**Sn**	**03 35 12.8**	**+0.9**
NSY	**Sanyi** baz=286	**0.97**	**284**	P	**Pg**	**03 34 58.4**	**+0.5**
YM01	**YM01** baz=350	**0.97**	**348**	*e*P	**Pn**	**03 34 58.6**	**+0.2**
NMLH	**Miaoli** baz=293	**0.98**	**291**	*e*P	**Pb**	**03 34 58.6**	**+0.8**
YM08	**YM08** baz=351	**1.01**	**349**	*e*P	**Pn**	**03 34 59.0**	**+0.1**
WWF	**Wufeng** baz=259	**1.02**	**262**	*e*P	**Pg**	**03 34 59.3**	**+0.6**
NTST	**Danshui** baz=351	**1.02**	**342**	P	**Pn**	**03 34 59.4**	**+0.4**
NTST	baz=351			*e*S	**Sn**	**03 35 14.6**	**+1.4**
ANP	**Anpu** baz=348	**1.02**	**346**	*e*P	**Pn**	**03 34 58.8**	**-0.3**
TCU	**Taichung** baz=270	**1.03**	**268**	*e*P	**Pg**	**03 34 59.2**	**+0.4**
YUS	**Yu-Shan** baz=229	**1.04**	**228**	P	**Pg**	**03 34 57.7**	**-1.5**
WJS	**Zhushan** baz=245	**1.05**	**250**	*e*P	**Pg**	**03 34 59.0**	**-0.2**
NHW	**Xinwu Township** baz=322	**1.06**	**320**	*e*P	**Pn**	**03 34 59.7**	**+0.1**
NHW	baz=322			*e*S	**Sn**	**03 35 15.0**	**+0.8**
WNT1	**Nantou City** baz=257	**1.06**	**255**	*e*P	**Pg**	**03 34 59.4**	**-0.1**
WNT	**Mingjian** baz=247	**1.07**	**253**	*e*P	**Pg**	**03 34 59.7**	**+0.1**
WDJ	**Dajia District** baz=288	**1.07**	**279**	*e*P	**Pg**	**03 35 00.0**	**+0.3**
WDJ	baz=288			*e*S	**Sg**	**03 35 15.0**	**+1.3**
FULB	**Fuli** baz=219	**1.09**	**205**	*e*P	**Pg**	**03 34 59.0**	**-1.1**
TWY	**Chenhua** baz=352	**1.10**	**350**	*e*P	**Pn**	**03 35 01.3**	**+1.3**
ALS	**Alishan** baz=235	**1.14**	**234**	*e*P	**Pg**	**03 34 59.8**	**-1.2**
YOJ	**Yonaguni jima** baz=67	**1.14**	**76**	*e*P	**Pn**	**03 35 01.0**	**+0.4**
YOJ	baz=67			*e*S	**Sn**	**03 35 17.9**	**+2.0**
WCHH	**Zhanghua** baz=267	**1.14**	**265**	*e*P	**Pb**	**03 35 00.7**	**+0.1**
CHKT	**Chengkung** baz=186	**1.16**	**200**	*e*P	**Pb**	**03 35 01.1**	**+0.3**
CHN5	**Tsauling** baz=242	**1.19**	**240**	P	**Pn**	**03 35 00.8**	**-0.6**
CHN5	baz=242			*e*S	**Sg**	**03 35 17.8**	**+0.5**
ELDTW	**Lidau** baz=216	**1.23**	**216**	*e*P	**Pn**	**03 35 00.9**	**-1.0**
CHN2	**Minshiung** baz=244	**1.38**	**242**	*e*P	**Pn**	**03 35 05.1**	**+1.2**
CHN4	**Tsaushan** baz=234	**1.39**	**233**	*e*P	**Pn**	**03 35 05.0**	**+1.0**
CHN4	baz=234			*e*S	**Sn**	**03 35 23.7**	**+1.5**
TPUB	**Ta-pu** baz=232	**1.39**	**231**	*e*P	**Pn**	**03 35 04.0**	**-0.1**
STYT	**Tauyuan** baz=224	**1.40**	**223**	*e*P	**Pn**	**03 35 03.5**	**-0.8**
CHY	**Chiayi** baz=243	**1.44**	**242**	*e*P	**Pn**	**03 35 05.1**	**+0.4**
WTP	**Ta-pu** baz=230	**1.44**	**229**	*e*P	**Pn**	**03 35 06.0**	**+1.3**
PCYT	**Pengchaiyu** baz=8.0	**1.45**	**10**	*e*P	**Pg**	**03 35 05.7**	**-1.2**
TWK	**Hsinying** baz=234	**1.52**	**233**	*e*P	**Pn**	**03 35 04.9**	**-0.9**
TWG	**Pinlang** baz=207	**1.52**	**206**	*e*P	**Pn**	**03 35 07.1**	**+1.3**
SNST	**Tainan City** baz=233	**1.54**	**231**	*e*P	**Pn**	**03 35 06.8**	**+0.7**
CHN1	**Nanshi** baz=231	**1.54**	**230**	*e*P	**Pn**	**03 35 06.7**	**+0.6**
SGST	**Jiashian** baz=227	**1.57**	**226**	*e*P	**Pn**	**03 35 06.4**	**-0.1**
SONM	**Songino Array** 1.1nm,0.7s,baz=154,slow=9.2,SNR=2.2 1.1nm,0.7s	**26.58**	**336**	P	**P**	**03 40 17.6**	**+0.7**
MKAR	**Makanchi Array** 0.9nm,0.7s,baz=95,slow=10,SNR=2.5 0.9nm,0.7s	**38.73**	**316**	P	**P**	**03 42 03.3**	**+0.5**
ZALV	**Zalesovo Beam** 0.9nm,0.5s,baz=108,slow=7.7,SNR=1.9 0.9nm,0.5s	**40.55**	**327**	P	**P**	**03 42 17.9**	**+0.1**
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=110,slow=8.0,SNR=2.1 0.4nm,0.5s	**42.47**	**320**	P	**P**	**03 42 33.9**	**+0.3**
WRA	**Warramunga Arr** 1.1nm,0.7s,baz=344,slow=8.7,SNR=3.3 1.1nm,0.7s	**45.53**	**163**	P	**P**	**03 42 58.2**	**-0.3**
ASAR	**Alice Springs** 0.4nm,0.5s,baz=339,slow=5.0,SNR=1.9 0.4nm,0.5s	**49.00**	**165**	P	**P**	**03 43 26.4**	**+0.9**
YKA	**Yellowknife Ar** 0.7nm,0.6s,baz=311,slow=5.0,SNR=6.9 0.7nm,0.6s	**82.74**	**23**	P	**P**	**03 47 01.4**	**-1.0**

IDC ***14*** *03:35:02.4±0.9, 24.°28N×121.°96E, h0^{km}, mb4.0/13, mbtmp4.0/13, Error ellipse: s-maj=36.4km s-min=20.7km az=66.0*

NEIC ***14*** *03:35:02.6±1.8, 24.°16N±0.°08×121.°96E±0.°08, h5^{km}±4^{km}, mb4.4/11, ML4.3(TAP), Error ellipse: s-maj=15.2km s-min=5.8km az=221.0*

TAP ***14*** *03:35:05.0, 24.°18N×121.°75E, h13^{km}, ML4.4, B*

ISC 14 03:35:04.3±0.8**, 24.°19N**±0.°02×**121.°82E**±0.°04**, h15**^{km}±5^{km}**, n116,** σ**0.^{s}70**/153**, mb4.2**/18**, 1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village** baz=359	**0.14**	**329**	*i* P	**Pg**	**03 35 08.4**	**+0.3**
EHP	baz=359			*i* S	**Sg**	**03 35 11.0**	**+0.3**
ETL	**Fush Village** baz=259	**0.18**	**262**	*i* P	**Pg**	**03 35 08.4**	**-0.4**
ETL	baz=259			S	**Sg**	**03 35 10.9**	**-0.8**
NACB	**Ninganchiao**	**0.21**	**267**	Pg	**Pg**	**03 35 08.9**	**-0.2**
NACB	**Ninganchiao** baz=267	**0.21**	**267**	*i* P	**Pg**	**03 35 08.6**	**-0.5**
NACB	baz=267			*i* S	**Sg**	**03 35 11.2**	**-1.1**
TWD	**Chiawan** baz=240	**0.23**	**243**	P	**Pg**	**03 35 09.2**	**-0.2**
TWD	baz=240			*i* S	**Sg**	**03 35 12.2**	**-0.7**
ENA	**Nanau** baz=359	**0.25**	**343**	*i* P	**Pb**	**03 35 10.3**	**-0.3**
ENA	baz=359			*i* S	**Sg**	**03 35 14.3**	**+0.7**
EWUT	**Wuta** baz=5.0	**0.26**	**351**	*i* P	**Pb**	**03 35 10.7**	**-0.1**
EWUT	baz=5.0			*i* S	**Sb**	**03 35 15.1**	**-0.1**
HWA	**Hwalien** baz=222	**0.29**	**224**	P	**Pb**	**03 35 11.0**	**-0.2**
ETLH	**Xiulin Townshi** baz=276	**0.31**	**274**	*i* P	**Pg**	**03 35 10.6**	**-0.3**
ETLH	baz=276			*i* S	**Sg**	**03 35 14.8**	**-0.6**
ETM	**Tongmen** baz=229	**0.37**	**234**	P	**Pg**	**03 35 11.6**	**-0.3**
TEYL	**Yanliau Villag** baz=216	**0.38**	**213**	P	**Pb**	**03 35 12.9**	**+0.2**
TWC	**Suao** baz=6.0	**0.42**	**3**	*i* P	**Pb**	**03 35 14.0**	**+0.4**
TWC	baz=6.0			*i* S	**Sb**	**03 35 20.2**	**+0.4**
LATG	**Datong** baz=329	**0.44**	**322**	*i* P	**Pg**	**03 35 13.5**	**+0.3**
LATG	baz=329			*i* S	**Sg**	**03 35 19.4**	**+0.2**
NDS	**Dongshan** baz=355	**0.46**	**348**	*i* P	**Pb**	**03 35 14.3**	**+0.2**
NDS	baz=355			*i* S	**Sb**	**03 35 21.1**	**+0.3**
NNSB	**Datong** baz=306	**0.47**	**301**	P	**Pg**	**03 35 13.5**	**-0.2**
NNSB	baz=306			S	**Sg**	**03 35 19.6**	**-0.4**
NNS	**Nan Shan** baz=307	**0.48**	**302**	P	**Pg**	**03 35 13.8**	**-0.2**
NNS	baz=307			S	**Sg**	**03 35 20.2**	**-0.3**
NDT	**Datong Townshi** baz=332	**0.50**	**326**	*i* P	**Pg**	**03 35 14.5**	**+0.2**
NDT	baz=332			*i* S	**Sg**	**03 35 21.8**	**+0.7**
ENTT	**Nioudou** baz=339	**0.51**	**333**	P	**Pb**	**03 35 15.2**	**+0.1**
ENTT	baz=339			S	**Sg**	**03 35 22.1**	**+0.8**
WHF	**Hehuan Shan** baz=266	**0.51**	**266**	P	**Pg**	**03 35 14.3**	**-0.3**
WHF	baz=266			*i* S	**Sg**	**03 35 20.7**	**-0.9**
ESL	**Shilin** baz=228	**0.51**	**224**	P	**Pg**	**03 35 14.5**	**0.0**
FUSS	**Fushou** baz=279	**0.53**	**277**	⇓*i*P	**Pg**	**03 35 14.8**	**-0.1**
FUSS	baz=279			*i* S	**Sg**	**03 35 21.5**	**-0.6**
TEGC	**Jichi Village** baz=196	**0.54**	**209**	P	**Pb**	**03 35 15.7**	**+0.2**
TEGC	baz=196			*e*S	**Sb**	**03 35 24.8**	**+1.7**
TWE	**Neicheng** baz=352	**0.55**	**345**	*i* P	**Pb**	**03 35 16.1**	**+0.4**
TWE	baz=352			*i* S	**Sb**	**03 35 23.8**	**+0.3**
ILA	**Ilan** baz=354	**0.58**	**353**	*i* P	**Pb**	**03 35 16.5**	**+0.2**
ILA	baz=354			S	**Sb**	**03 35 25.1**	**+0.7**
TWT	**Tachien** baz=278	**0.59**	**277**	*i* P	**Pg**	**03 35 16.2**	**+0.1**
TWT	baz=278			*i* S	**Sg**	**03 35 23.5**	**-0.5**
CHGB	**Renai** baz=251	**0.61**	**258**	P	**Pg**	**03 35 16.3**	**0.0**
CHGB	baz=251			S	**Sg**	**03 35 23.8**	**-0.7**
FUSB	**Fushanzhiwuyua** baz=345	**0.61**	**339**	*i* P	**Pb**	**03 35 16.9**	**+0.1**
FUSB	baz=345			*i* S	**Sb**	**03 35 25.2**	**-0.1**
TDCB	**Techi** baz=278	**0.61**	**276**	*i* P	**Pg**	**03 35 16.3**	**-0.1**
TDCB	baz=278			*i* S	**Sg**	**03 35 23.6**	**-0.9**
EGFH	**Guangfu** baz=218	**0.63**	**215**	*e*P	**Pb**	**03 35 17.2**	**+0.1**
YHNB	**Yeheng**	**0.63**	**320**	Pg	**Pg**	**03 35 16.6**	**-0.2**
YHNB				Sg	**Sg**	**03 35 25.4**	**+0.2**
YHNB	**Yeheng** baz=324	**0.63**	**320**	P	**Pb**	**03 35 17.1**	**0.0**
YHNB	baz=324			*i* S	**Sg**	**03 35 25.4**	**+0.2**
OWD	**Renai** baz=248	**0.64**	**249**	P	**Pg**	**03 35 16.9**	**0.0**
NSK	**Sanguang** baz=324	**0.65**	**319**	*i* P	**Pb**	**03 35 17.6**	**+0.2**
NSK	baz=324			*i* S	**Sg**	**03 35 25.8**	**+0.2**
NWLT	**Wulai** baz=339	**0.66**	**334**	P	**Pb**	**03 35 17.9**	**+0.3**
NWLT	baz=339			*i* S	**Sg**	**03 35 26.5**	**+0.6**
EGS	baz=21	**0.66**	**9**	*e*P	**Pn**	**03 35 19.2**	**0.0**
NTC	**Toucheng** baz=5.0	**0.67**	**0**	P	**Pn**	**03 35 18.1**	**-1.2**
NTC	baz=5.0			S	**Sb**	**03 35 28.1**	**+1.3**
WUSB	**Renai** baz=248	**0.67**	**254**	P	**Pg**	**03 35 17.6**	**+0.1**
WUSB	baz=248			S	**Sg**	**03 35 25.6**	**-0.9**
VWDT	**VWDT** baz=234	**0.76**	**236**	*e*P	**Pb**	**03 35 19.8**	**+0.6**
VWDT	baz=234			*e*S	**Sg**	**03 35 29.9**	**+0.8**
NFF	**Wufeng Townshi** baz=308	**0.78**	**305**	*e*P	**Pg**	**03 35 19.8**	**+0.2**
TIPB	**Shuangxi**	**0.78**	**0**	P	**Pn**	**03 35 20.6**	**-0.3**

```
      baz=4.0
TIPB                       S      Sb      03 35 30.8 +0.6
      baz=4.0
WHP   Taichung City   0.81 277 P      Pg      03 35 20.2 +0.2
      baz=278
WHP                        i S    Sg      03 35 30.4 -0.3
      baz=278
WPL   Puli Township   0.81 258 eP     Pg      03 35 20.0 -0.1
      baz=258
EHY   Hungye          0.82 214 eP     Pb      03 35 20.6 +0.3
      baz=223
NHDH  Xindian Distri  0.82 341 eP     Pn      03 35 21.3 -0.1
      baz=345
TWA   Mucha           0.82 345 eP     Pn      03 35 21.3 -0.1
      baz=349
DPDB  Guoxing         0.83 260 eP     Pg      03 35 20.6 +0.1
      baz=260
TWB1  Santiao Chiao   0.83  10 eP     Pn      03 35 21.9 +0.3
      baz=14
TWB1                       S      Sn      03 35 32.4 -1.2
      baz=14
TATO  Taipei          0.84 339 Pg     Pb      03 35 20.8 +0.1
TATO  Taipei          0.84 339 P      Pn      03 35 21.6 -0.1
      baz=342
TATO                       S      Sg      03 35 32.0 +0.1
      baz=342
NJD   Zhudong         0.87 309 eP     Pb      03 35 21.5 +0.4
      baz=318
LIOB  Emei            0.87 302 eP     Pg      03 35 21.5 +0.3
      baz=305
NSTT  Nanjuang        0.87 301 eP     Pg      03 35 20.3 -1.0
      baz=304
NHY   Taipei          0.88 345 eP     Pn      03 35 22.9 +0.6
      baz=348
NWF   Wu-fen Shan     0.88 358 eP     Pn      03 35 22.8 +0.4
      baz=354
NWF                        S      Sn      03 35 35.0  0.0
      baz=354
WFSB  Wu-fen Shan     0.88 358 eP     Pn      03 35 22.7 +0.4
      baz=354
WFSB                       eS     Sn      03 35 34.1 -0.7
      baz=354
SSLB  Suanglung       0.89 244 eP     Pg      03 35 20.9 -0.7
      baz=252
SSLB                       eS     Sg      03 35 32.5 -0.7
      baz=252
TAP1  Taipei          0.89 342 eP     Pn      03 35 22.8 +0.4
      baz=345
SMLT  Sun Moon Lake   0.90 251 eP     Pg      03 35 20.6 -1.1
      baz=250
TAP   Taipei          0.90 341 eP     Pn      03 35 22.8 +0.3
      baz=345
SXI1  Grass Mountain  0.91   3 eP     Pn      03 35 22.8 +0.1
      baz=6.0
SXI1                       eS     Sn      03 35 34.9 -0.7
      baz=6.0
YULB  Yu-li           0.93 212 eP     Pb      03 35 22.5 +0.4
      baz=220
TYC   Yuchr           0.93 253 eP     Pg      03 35 21.5 -0.8
      baz=253
HSN1  Hsinchu         0.94 309 eP     Pn      03 35 23.9 +0.8
      baz=312
NTY   Taoyuan         0.94 330 eP     Pn      03 35 23.8 +0.7
      baz=333
TWF1  Yuli            0.96 210 eP     Pn      03 35 23.5 +0.2
      baz=222
TNOU  National Taiwa  0.96 357 eP     Pn      03 35 23.6 +0.2
TNOU                       eS     Sn      03 35 36.4 -0.4
NCUH  Zhongli         0.97 323 eP     Pn      03 35 24.5 +1.0
      baz=322
TWQ1  Liyutan         0.97 280 eP     Pg      03 35 23.4 +0.2
      baz=281
NCU   National Centr  0.97 324 eP     Pn      03 35 24.1 +0.6
      baz=322
SBCB  Hsinchu         0.97 309 eP     Pn      03 35 24.2 +0.7
      baz=311
TWS1  Kuangyinshan    0.98 338 eP     Pn      03 35 24.7 +1.1
      baz=349
TWS1                       eS     Sn      03 35 38.7 +1.4
      baz=349
YM01  YM01            0.98 347 eP     Pn      03 35 23.6 -0.1
      baz=349
HSN   Hsinchu         0.99 308 eP     Pn      03 35 24.4 +0.7
      baz=314
NSY   Sanyi           1.00 284 eP     Pg      03 35 23.7 +0.1
      baz=285
YM08  YM08            1.02 348 eP     Pn      03 35 24.8 +0.7
      baz=351
NWRT  Kuosheng        1.02 352 eP     Pn      03 35 25.2 +1.0
      baz=354
ANP   Anpu            1.03 345 eP     Pn      03 35 24.5 +0.1
      baz=348
TCU   Taichung        1.05 268 eP     Pb      03 35 25.4 +1.2
      baz=269
NHW   Xinwu Township  1.08 319 eP     Pb      03 35 25.1 +0.3
      baz=321
WNT1  Nantou City     1.08 255 eP     Pg      03 35 24.4 -0.8
      baz=256
WNT   Mingjian        1.09 254 eP     Pn      03 35 26.1 +1.0
      baz=247
WDJ   Dajia District  1.09 279 eP     Pn      03 35 26.5 +1.3
      baz=280
NSM   Shimen          1.12 349 eP     Pg      03 35 24.6 -1.3
      baz=338
YOJ   Yonaguni jima   1.12  76 eP     Pn      03 35 27.8 +2.3
      baz=64
HKPS  Hong Kong Po S  7.32 256 Pn     Pn      03 36 52.1 +1.4
KSAR  Wonju Array Be 14.20  20 Pn     Pn      03 38 23.7 -1.2
KSRS  Korea Array    14.22  20 Pn     Pn      03 38 26.9 +1.8
      0.1nm,0.3s,baz=262,slow=27,SNR=2.5
KS19  Wonju Array Si 14.25  20 Pn     Pn      03 38 25.3 -0.3
ULN   Ulaanbaatar    26.39 337 P      P       03 40 40.0 -0.3
ULN                        IAmb   IAmb    03 40 42.1
      comp=Z,4.2nm,0.7s
SONM  Songino Array  26.60 336 P      P       03 40 42.6 +0.5
      comp=Z,4.3nm,1.1s,baz=154,slow=8.1,SNR=5.3
      comp=Z,4.3nm,1.1s
SONM  Songino Array  26.60 336 IAmb   IAmb    03 40 44.7
      comp=Z,7.7nm,1.4s
MTN   Manton Dam     37.91 165 P      P       03 42 18.9 -2.3
MKAR  Makanchi Array 38.74 316 P      P       03 42 29.0 +0.9
      comp=Z,1.1nm,0.6s,baz=104,slow=10,SNR=3.5
      comp=Z,1.1nm,0.6s
MKAR  Makanchi Array 38.74 316 P      P       03 42 26.9 -1.2
ZAA0  Zalesovo Array 40.56 327 P      P       03 42 42.5 -0.5
ZALV  Zalesovo Beam  40.56 327 P      P       03 42 43.0 -0.1
      comp=Z,3.6nm,0.8s,baz=111,slow=8.1,SNR=4.8
      comp=Z,3.6nm,0.8s
KURK  Kurchatov      42.47 320 P      P       03 42 59.9 +1.2
KURK  Kurchatov      42.47 320 IAmb   IAmb    03 43 00.8
      comp=Z,4.3nm,1.1s
KURBB Kurchatov Arra 42.48 320 P      P       03 42 59.9 +1.1
      comp=Z,2.7nm,1.0s,baz=115,slow=7.7,SNR=4.8
      comp=Z,2.7nm,1.0s
WRA   Warramunga Arr 45.52 163 P      P       03 43 24.3 +0.8
      comp=Z,0.9nm,0.7s,baz=342,slow=8.5,SNR=0.9
      comp=Z,0.9nm,0.7s
TIXI  Tiksi          47.66   3 P      P       03 43 38.8 -0.9
      comp=Z,5.1nm,0.7s,baz=90,slow=20,SNR=5.8
      comp=Z,5.1nm,0.7s
TIXI  Tiksi          47.66   3 P      P       03 43 38.7 -0.9
BRVK  Borovoye       48.11 321 P      P       03 43 44.3 +0.8
BRVK                       IAmb   IAmb    03 43 45.4
      comp=Z,3.6nm,0.9s
ASAR  Alice Springs  48.99 165 P      P       03 43 51.3 +0.8
      comp=Z,0.5nm,0.7s,baz=339,slow=7.6,SNR=2.8
      comp=Z,0.5nm,0.7s
ABKAR Akbulak array  53.86 314 P      P       03 44 26.7 -0.1
ABKAR                      IAmb   IAmb    03 44 28.4
      comp=Z,3.5nm,0.9s
NEA2  Nenana         68.06  28 P      P       03 46 03.5 +0.4
NEA2                       IAmb   IAmb    03 46 04.0
      comp=Z,4.1nm,1.1s
MDM   Murphy Dome    68.34  27 P      P       03 46 04.5 -0.4
MDM                        IAmb   IAmb    03 46 11.1
      comp=Z,7.8nm,1.4s
ILAR  Eielson Array  68.94  27 P      P       03 46 09.5 +0.9
      comp=Z,0.4nm,0.6s,baz=284,slow=6.3,SNR=1.4
      comp=Z,0.4nm,0.6s
BCAR  Beaver Creek A 71.55  28 P      P       03 46 24.2 -0.5
FINES FINESS Array B 71.74 330 P      P       03 46 25.5 -0.1
      comp=Z,2.0nm,0.8s,baz=56,slow=7.4,SNR=2.3
      comp=Z,2.0nm,0.8s
INK   Inuvik         73.00  22 P      P       03 46 32.4 -0.7
      comp=Z,2.6nm,0.8s,baz=297,slow=4.5,SNR=3.3
      comp=Z,2.6nm,0.8s
INK   Inuvik         73.00  22 IAmb   IAmb    03 46 33.5
      comp=Z,2.3nm,0.8s
BRTR  Keskin Array B 73.64 307 P      P       03 46 38.3 +0.7
      comp=Z,0.9nm,1.0s,baz=73,slow=6.3,SNR=3.5
      comp=Z,0.9nm,1.0s
NOA   NORSAR Array B 78.50 332 P      P       03 47 04.0 -0.7
      comp=Z,0.9nm,0.7s,baz=61,slow=5.3,SNR=2.3
      comp=Z,0.9nm,0.7s
YKA   Yellowknife Ar 82.74  23 P      P       03 47 27.1 -0.3
      comp=Z,2.0nm,0.8s,baz=310,slow=5.0,SNR=10.0
      comp=Z,2.0nm,0.8s
YKA   Yellowknife Ar 82.74  23 P      P       03 47 26.7 -0.7
```

IDC ***14*** *03:37:26.3±1.3, 24.°23N×121.°99E, h0km, mb3.5/4, mbtmp3.5/4, MS4.1/1, Error ellipse: s-maj=71.4km s-min=28.5km az=71.0*

TAP ***14*** *03:37:29.2, 24.°18N×121.°75E, h12km, ML3.9, B*

ISC 14 03:37:28.7±0.8**, 24.°17N**±0.°02×**121.°80E**±0.°02**, h14**km±5km**, n153,** σ**0.s73**/215**, mb3.5**/4**, 1C-30D, Taiwan**

```
Code  Station Name     Δ°  AZ°   Phase ID          Time      Res
                                 Op     ISC     h  m  s    ISC
EHP   Heping Village  0.15 338⇓iP     Pg      03 37 32.8 +0.3
      baz=357
EHP                        i S    Sg      03 37 35.5 +0.4
      baz=357
ETL   Fush Village    0.17 266⇓iP     Pg      03 37 32.6 -0.1
      baz=263
ETL                        i S    Sg      03 37 35.1 -0.4
      baz=263
NACB  Ninganchiao     0.19 271⇓iP     Pg      03 37 32.9 -0.2
      baz=263
NACB                       i S    Sg      03 37 35.5 -0.6
      baz=263
TWD   Chiawan         0.21 245⇓iP     Pg      03 37 33.3 -0.1
      baz=244
TWD                        i S    Sg      03 37 36.4 -0.2
      baz=244
ENA   Nanau           0.26 347⇓iP     Pb      03 37 34.7 -0.6
      baz=358
ENA                        i S    Sb      03 37 38.4 -1.3
      baz=358
HWA   Hwalien         0.27 223 P      Pb      03 37 35.2 -0.2
      baz=225
HWA                        S      Sb      03 37 40.2 +0.4
      baz=225
EWUT  Wuta            0.27 355 ⇓P     Pb      03 37 35.0 -0.5
      baz=4.0
EWUT                       i S    Sb      03 37 39.2 -0.9
      baz=4.0
ETLH  Xiulin Townshi  0.30 277⇓iP     Pg      03 37 34.8 -0.2
      baz=278
ETLH                       i S    Sg      03 37 38.7 -0.5
      baz=278
ETM   Tongmen         0.35 234⇓iP     Pg      03 37 35.8 -0.1
      baz=230
ETM                        S      Sg      03 37 40.5 -0.2
      baz=230
TEYL  Yanliau Villag  0.35 212 P      Pb      03 37 36.9 +0.1
      baz=217
TEYL                       eS     Sb      03 37 43.3 +0.9
      baz=217
TWC   Suao            0.44   5⇓iP     Pb      03 37 38.2 -0.1
      baz=5.0
TWC                        S      Sb      03 37 43.7 -1.1
      baz=5.0
LATG  Datong          0.44 325⇓iP     Pb      03 37 37.8 -0.7
      baz=329
LATG                       S      Sb      03 37 44.1 -0.9
      baz=329
NNSB  Datong          0.46 304⇓iP     Pb      03 37 38.0 -0.8
      baz=307
NNSB                       i S    Sg      03 37 43.9 -0.3
      baz=307
NDS   Dongshan        0.47 350⇓iP     Pb      03 37 38.7 -0.2
      baz=355
NDS                        i S    Sb      03 37 45.2 -0.5
      baz=355
NNS   Nan Shan        0.48 304⇓iP     Pb      03 37 38.2 -0.8
      baz=307
NNS                        i S    Sg      03 37 44.4 -0.3
      baz=307
ESL   Shilin          0.49 224⇓iP     Pb      03 37 38.5 -0.7
      baz=227
ESL                        eS     Sg      03 37 45.2 +0.2
      baz=227
WHF   Hehuan Shan     0.49 267⇓iP     Pg      03 37 38.4 -0.2
      baz=267
WHF                        i S    Sg      03 37 44.7 -0.5
      baz=267
NDT   Datong Townshi  0.51 328 ⇓P     Pb      03 37 39.0 -0.5
      baz=332
NDT                        S      Sb      03 37 46.0 -0.8
      baz=332
ENTT  Nioudou         0.52 335⇓iP     Pb      03 37 39.4 -0.2
      baz=339
ENTT                       i S    Sb      03 37 46.5 -0.5
      baz=339
FUSS  Fushou          0.52 279⇓iP     Pb      03 37 39.2 -0.6
      baz=280
FUSS                       i S    Sg      03 37 46.0  0.0
      baz=280
TEGC  Jichi Village   0.52 208 eP     Pb      03 37 40.5 +0.8
      baz=197
TEGC                       eS     Sn      03 37 49.7 -0.7
      baz=197
TWE   Neicheng        0.56 347⇓iP     Pb      03 37 40.4  0.0
      baz=352
TWE                        i S    Sb      03 37 48.0 -0.4
      baz=352
TWT   Tachien         0.58 278⇓iP     Pb      03 37 40.6 -0.2
      baz=279
TWT                        i S    Sg      03 37 47.9  0.0
      baz=279
CHGB  Renai           0.59 259⇓iP     Pb      03 37 40.3 -0.7
      baz=252
CHGB                       i S    Sg      03 37 47.7 -0.4
      baz=252
ILA   Ilan            0.59 355 P      Pb      03 37 41.2 +0.2
      baz=354
ILA                        S      Sb      03 37 50.1 +0.8
      baz=354
TDCB  Techi           0.59 278⇓iP     Pb      03 37 40.6 -0.4
      baz=279
TDCB                       i S    Sg      03 37 47.7 -0.7
      baz=279
EGFH  Guangfu         0.61 215 eP     Pb      03 37 41.2  0.0
      baz=219
OWD   Renai           0.61 250 eP     Pg      03 37 40.6 -0.2
      baz=249
OWD                        eS     Sg      03 37 48.4 -0.5
      baz=249
FUSB  Fushanzhiwuyua  0.62 341⇓iP     Pb      03 37 41.4 -0.1
      baz=345
FUSB                       i S    Sb      03 37 49.7 -0.4
      baz=345
YHNB  Yeheng          0.63 322⇓iP     Pb      03 37 41.5 -0.2
      baz=325
YHNB                       S      Sg      03 37 49.5 -0.1
      baz=325
NSK   Sanguang        0.65 321⇓iP     Pb      03 37 41.6 -0.3
      baz=324
NSK                        S      Sg      03 37 49.8 -0.2
      baz=324
WUSB  Renai           0.65 254⇓iP     Pb      03 37 41.5 -0.5
      baz=246
WUSB                       S      Sg      03 37 49.5 -0.7
      baz=246
NWLT  Wulai           0.66 336⇓eP     Pb      03 37 42.1 -0.1
      baz=339
NWLT                       S      Sb      03 37 50.6 -0.7
      baz=339
EGS                   0.68  10 eP     Pn      03 37 44.0 -0.1
      baz=20
NTC   Toucheng        0.68   2 eP     Pb      03 37 42.8 +0.3
      baz=5.0
VWDT  VWDT            0.73 236 P      Pb      03 37 43.2 -0.2
      baz=235
VWDT                       S      Sb      03 37 53.1 -0.1
      baz=235
HGSD  Ruisui          0.76 207 eP     Pb      03 37 44.6 +0.8
      baz=195
NFF   Wufeng Townshi  0.78 306 eP     Pb      03 37 44.2 +0.1
      baz=308
NFF                        eS     Sg      03 37 53.6 -0.5
      baz=308
WPL   Puli Township   0.79 259 eP     Pb      03 37 44.1 -0.2
      baz=259
WHP   Taichung City   0.79 278 P      Pb      03 37 44.4 +0.1
      baz=279
WHP                        S      Sb      03 37 54.6 -0.4
      baz=279
EHY   Hungye          0.80 214 eP     Pg      03 37 43.6 -0.6
      baz=224
TIPB  Shuangxi        0.80   1⇓iP     Pb      03 37 44.9 +0.4
      baz=4.0
TIPB                       S      Sb      03 37 54.8 -0.4
      baz=4.0
DPDB  Guoxing         0.81 261 eP     Pb      03 37 44.5 -0.2
      baz=261
NHDH  Xindian Distri  0.83 342 eP     Pb      03 37 45.2 +0.3
      baz=344
NHDH                       eS     Sb      03 37 56.1 +0.1
      baz=344
TWA   Mucha           0.83 346 eP     Pb      03 37 45.6 +0.6
      baz=348
TWA                        eS     Sg      03 37 55.5 -0.3
      baz=348
TATO  Taipei          0.85 340 eP     Pb      03 37 45.8 +0.4
      baz=342
TATO                       S      Sb      03 37 56.6 -0.1
      baz=342
TWB1  Santiao Chiao   0.85  11 P      Pn      03 37 46.1 -0.3
      baz=14
TWB1                       S      Sb      03 37 57.1 +0.5
      baz=14
LIOB  Emei            0.86 304 eP     Pb      03 37 45.8 +0.3
      baz=305
NJD   Zhudong         0.86 311 eP     Pn      03 37 46.4 -0.1
      baz=319
NSTT  Nanjuang        0.86 302 P      Pb      03 37 45.8 +0.2
      baz=304
NSTT                       S      Sg      03 37 56.5 -0.3
      baz=304
SSLB  Suanglung       0.87 244 ⇑P     Pb      03 37 45.2 -0.4
      baz=253
SSLB                       i S    Sg      03 37 55.5 -1.3
      baz=253
SMLT  Sun Moon Lake   0.88 251 P      Pb      03 37 45.5 -0.3
      baz=251
SMLT                       S      Sg      03 37 56.5 -0.7
      baz=251
NHY   Taipei          0.89 346 eP     Pn      03 37 46.8 -0.2
      baz=348
NWF   Wu-fen Shan     0.90 359 P      Pn      03 37 47.0 -0.1
      baz=354
NWF                        S      Sb      03 37 58.6 +0.5
      baz=354
WFSB  Wu-fen Shan     0.90 359⇓iP     Pn      03 37 47.0  0.0
      baz=354
WFSB                       i S    Sb      03 37 58.2 +0.2
      baz=354
TAP1  Taipei          0.90 344 eP     Pn      03 37 47.4 +0.4
      baz=345
TAP1                       S      Sb      03 37 58.9 +0.8
      baz=345
YULB  Yu-li           0.90 211 eP     Pg      03 37 45.0 -1.2
      baz=221
TAP   Taipei          0.91 343 eP     Pn      03 37 47.2  0.0
      baz=345
TAP                        eS     Sb      03 37 59.1 +0.8
      baz=345
TYC   Yuchr           0.91 253 eP     Pb      03 37 46.0 -0.2
      baz=246
TYC                        eS     Sg      03 37 57.1 -1.1
      baz=246
ECBN  Changbin        0.91 201 eP     Pb      03 37 46.7 +0.4
      baz=188
SXI1  Grass Mountain  0.92   4⇓iP     Pn      03 37 47.4 -0.1
      baz=6.0
SXI1                       eS     Sb      03 37 59.3 +0.5
      baz=6.0
EYUL  Yuli            0.93 209 eP     Pn      03 37 47.7 +0.2
      baz=224
HSN1  Hsinchu         0.94 310 eP     Pn      03 37 47.6 +0.1
      baz=312
TWF1  Yuli            0.94 210 eP     Pg      03 37 45.6 -1.3
      baz=223
NTY   Taoyuan         0.94 331 eP     Pn      03 37 48.1 +0.4
      baz=333
TWQ1  Liyutan         0.96 281 eP     Pn      03 37 48.2 +0.3
      baz=282
TWQ1                       eS     Sb      03 38 00.5 +0.8
      baz=282
SBCB  Hsinchu         0.97 310 eP     Pn      03 37 48.8 +0.8
      baz=311
SBCB                       eS     Sn      03 38 03.4 +1.8
      baz=311
NCU   National Centr  0.97 325 eP     Pn      03 37 48.5 +0.4
      baz=326
NCU                        eS     Sn      03 38 02.1 +0.3
      baz=326
NCUH  Zhongli         0.97 325 eP     Pn      03 37 48.5 +0.4
      baz=326
TNOU  National Taiwa  0.98 358 P      Pn      03 37 48.4 +0.3
      baz=360
TNOU                       eS     Sn      03 38 01.9 +0.1
      baz=360
NSY   Sanyi           0.98 285 eP     Pn      03 37 48.4 +0.2
      baz=286
NSY                        eS     Sb      03 38 01.5 +1.0
      baz=286
HSN   Hsinchu         0.99 310 eP     Pb      03 37 48.1 +0.5
      baz=314
TWS1  Kuangyinshan    0.99 339 eP     Pn      03 37 48.5 +0.2
      baz=349
TWS1                       eS     Sn      03 38 03.5 +1.4
      baz=349
NJN   Zhunan          0.99 301 eP     Pn      03 37 49.3 +1.0
      baz=303
NMLH  Miaoli          0.99 292 eP     Pn      03 37 49.2 +0.9
      baz=293
YM01  YM01            0.99 348 eP     Pn      03 37 48.8 +0.4
      baz=335
WWF   Wufeng          1.02 263 eP     Pn      03 37 49.5 +0.9
      baz=258
TCU   Taichung        1.03 269 eP     Pn      03 37 50.0 +1.1
      baz=270
YM08  YM08            1.03 349 eP     Pn      03 37 49.1 +0.3
      baz=335
YUS   Yu-Shan         1.03 229 eP     Pg      03 37 48.4 -0.4
      baz=229
NTST  Danshui         1.04 342 eP     Pn      03 37 49.6 +0.6
      baz=343
ANP   Anpu            1.04 346 eP     Pn      03 37 49.6 +0.5
      baz=347
WJS   Zhushan         1.04 251 eP     Pb      03 37 49.0 +0.4
      baz=246
WNT1  Nantou City     1.06 256 eP     Pn      03 37 50.2 +0.9
      baz=257
WNT   Mingjian        1.06 254 eP     Pn      03 37 49.5 +0.2
      baz=248
FULB  Fuli            1.07 206 eP     Pg      03 37 48.9 -0.6
      baz=221
WDJ   Dajia District  1.08 280 eP     Pn      03 37 50.4 +0.9
      baz=281
NHW   Xinwu Township  1.08 321 eP     Pb      03 37 49.6 +0.3
      baz=321
NHW                        eS     Sn      03 38 05.7 +1.3
      baz=321
TWY   Chenhua         1.12 350 eP     Pn      03 37 51.9 +1.8
      baz=337
ALS   Alishan         1.13 235 eP     Pb      03 37 50.5 +0.3
      baz=235
WYL   Yuanlin Townsh  1.14 260 eP     Pn      03 37 51.2 +0.9
      baz=261
YOJ   Yonaguni jima   1.14  75 eP     Pn      03 37 51.3 +1.0
      baz=89
YOJ                        eS     Sn      03 38 08.1 +2.3
      baz=89
CHKT  Chengkung       1.14 201 eP     Pg      03 37 50.1 -0.7
      baz=187
WCHH  Zhanghua        1.14 266 eP     Pn      03 37 51.5 +1.1
      baz=267
CHN5  Tsauling        1.18 241 eP     Pn      03 37 51.8 +0.8
      baz=243
ECS   Chishang        1.20 207 eP     Pn      03 37 52.5 +1.3
      baz=207
ELDTW Lidau           1.22 217 eP     Pg      03 37 50.2 -1.9
      baz=202
WGK   Gukeng          1.23 247 eP     Pn      03 37 53.0 +1.4
      baz=248
WDLH  Douliu          1.25 248 eP     Pn      03 37 52.7 +0.8
      baz=233
EDH   Donghe          1.28 201 eP     Pg      03 37 51.8 -1.6
      baz=188
WRL   Guolierlin Hig  1.33 259 eP     Pg      03 37 53.8 -0.6
      baz=260
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WRL				eS	Sn	03 38 12.6	+2.1
	baz=260						
STYH	Taoyuan	1.37	224	eP	Pn	03 37 54.2	+0.6
	baz=225						
CHN2	Minshiung	1.37	243	eP	Pg	03 37 55.2	0.0
	baz=244						
CHN4	Tsaushan	1.38	234	eP	Pg	03 37 55.1	-0.1
	baz=235						
CHN4				eS	Sn	03 38 14.0	+2.3
	baz=235						
TPUB	Ta-pu	1.38	231	P	Pb	03 37 54.5	+0.1
	baz=222						
TPUB				eS	Sn	03 38 13.3	+1.4
	baz=222						
WTK	Tuku	1.38	250	eP	Pg	03 37 54.7	-0.6
	baz=237						
STYT	Tauyuan	1.39	224	eP	Pn	03 37 54.3	+0.5
	baz=225						
LONT	Longtian	1.40	206	eP	Pn	03 37 53.0	-1.0
	baz=207						
WTCT	Ta-ch'eng	1.43	258	eP	Pb	03 37 55.3	+0.1
	baz=260						
WTP	Ta-pu	1.43	230	eP	Pg	03 37 55.5	-0.7
	baz=231						
WTP				eS	Sn	03 38 15.2	+2.2
	baz=231						
CHY	Chiayi	1.43	242	eP	Pg	03 37 55.7	-0.6
	baz=244						
PCYT	Pengchaiyu	1.47	9	eP	Pb	03 37 56.0	+0.1
	baz=8.0						
TWG	Pinlang	1.50	207	eP	Pn	03 37 54.6	-0.8
	baz=191						
TWK	Hsinying	1.50	234	eP	Pg	03 37 56.9	-0.8
	baz=235						
CHN1	Nanshi	1.53	230	eP	Pg	03 37 57.3	-0.8
	baz=232						
SNST	Tainan City	1.53	232	eP	Pb	03 37 56.9	0.0
	baz=234						
WSF	Szhu	1.54	250	eP	Pn	03 37 56.4	+0.6
	baz=252						
SGST	Jiashian	1.56	226	eP	Pn	03 37 56.9	+0.8
	baz=228						
WSL	Shuilin Townsh	1.58	246	eP	Pb	03 37 57.9	+0.1
	baz=248						
ICHU	Yijhu	1.61	240	eP	Pb	03 37 58.1	-0.3
	baz=242						
ECL	Taimali	1.75	207	eP	Pb	03 38 00.2	-0.5
	baz=194						
SCST	Cishan	1.76	223	eP	Pb	03 38 00.6	-0.2
	baz=225						
SHHT	Tainan City	1.76	230	eP	Pb	03 38 01.3	+0.4
	baz=231						
SSD	Sandimen	1.78	217	P	Pb	03 38 01.1	-0.1
	baz=231						
TSMG	Majia	1.81	216	eP	Pb	03 38 01.8	+0.1
	baz=201						
TWM1	Shoushan	1.85	224	eP	Pb	03 38 02.8	+0.5
	baz=225						
MASBT	Mashibuluo	1.89	215	eP	Pn	03 38 01.8	+1.2
	baz=214						
MASBT				eS	Sn	03 38 25.9	+1.6
	baz=214						
EAST	Anshuo	1.98	206	eP	Pb	03 38 04.5	-0.2
	baz=195						
TAW	Tawu	1.99	205	eP	Pb	03 38 04.3	-0.4
	baz=194						
TAWH	Dawu Township	2.01	205	eP	Pb	03 38 04.6	-0.5
	baz=194						
SSPT	Xinbi	2.03	214	eP	Pb	03 38 05.3	-0.1
	baz=215						
SCZT	Fangliau	2.10	212	eP	Pn	03 38 05.0	+1.5
	baz=196						
PNG	Penghu	2.15	254	eP	Pn	03 38 04.6	+0.5
	baz=257						
PHUB	P'eng-hu	2.15	253	eP	Pn	03 38 04.6	+0.4
	baz=257						
PHUB				eS	Sn	03 38 31.3	+0.7
	baz=257						
WDGT	Dungji	2.16	246	eP	Pn	03 38 05.2	+0.8
	baz=249						
VWUC	VWUC	2.29	291	eP	Pn	03 38 06.2	0.0
	baz=292						
VCHM	Qimei	2.38	247	eP	Pn	03 38 08.3	+0.9
	baz=234						
TWKBT	Hengchun	2.40	203	eP	Pb	03 38 10.2	-1.6
	baz=192						
PTMZ	Houxiangcun	2.59	290	eP	Pn	03 38 09.8	-0.5
	baz=291						
MATB	Ma-tsu	2.59	320	eP	Pn	03 38 10.3	-0.1
	baz=319						
MSUT	Lienchiang	2.62	320	eP	Pn	03 38 10.1	-0.6
	baz=319						
LYJJ	Jianjiangzhen	3.00	322	eP	Pn	03 38 16.8	+0.8
	baz=321						
KNM	Kinmen	3.08	275	eP	Pn	03 38 19.1	+2.0
	baz=276						
XPSS	Dashiqiu	3.11	332	eP	Pn	03 38 18.0	+0.5
	baz=330						
KNMB	Chin-men Tao	3.13	276	eP	Pn	03 38 17.3	-0.4
	baz=277						
AXDP	Jialang	3.57	283	eP	Pn	03 38 23.3	-0.4
	baz=283						
ZPLA	Ao Xicun	3.71	267	eP	Pn	03 38 25.0	-0.8
	baz=269						
SXFK	Yanhouchang	4.37	301	eP	Pn	03 38 34.8	0.0
	baz=300						
MKAR	Makanchi Array	38.74	316	P	P	03 44 52.8	+0.2
	0.5nm,0.7s,baz=107,slow=8.9,SNR=2.0						
	0.5nm,0.7s						
PALK	Pallekele	42.78	254	LR	LR	04 03 46.8	
	comp=Z,238nm,21.3s,baz=63,slow=37						
WRA	Warramunga Arr	45.52	163	P	P	03 45 47.4	-0.7
	0.4nm,0.7s,baz=345,slow=8.7,SNR=2.8						
	0.4nm,0.7s						
ASAR	Alice Springs	48.98	165	P	P	03 46 15.3	+0.2
	0.3nm,0.7s,baz=346,slow=7.1,SNR=1.7						
	0.3nm,0.7s						
YKA	Yellowknife Ar	82.76	23	P	P	03 49 51.3	-0.8
	0.3nm,0.6s,baz=312,slow=5.1,SNR=5.2						
	0.3nm,0.6s						

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*TUL **14** 03:39:27.5±1.2, 35°.05N±0°.02×97°.56W±0°.03, h5^{km}±7^{km}, ML3.1, mb_Lg3.0/88(NEIC), Error ellipse: s-maj=3.9km s-min=2.9km az=105.0*

*ANF **14** 03:39:28.1±0.2, 35°.06N×97°.57W, h5^{km}, ML3.6/17, Error ellipse: s-maj=2.3km s-min=2.0km az=95.0*

*NEIC **14** 03:39:28.0±1.1, 35°.07N±0°.02×97°.54W±0°.03, h5^{km}±7^{km}, Error ellipse: s-maj=3.9km s-min=3.0km az=108.0*

ISC 14 03:39:27.6±1.3**, 35°.07N**±0°.03×**97°.58W**±0°.03**, h2**^{km}±11^{km}**, n89,** σ**0^{s}74**/90**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	Franklin	0.23	38		Pg	03 39 32.7	+0.6
OKCSW	OKLAHOMA CITY	0.35	19		Pg	03 39 34.8	+0.4
OKCSW				Sg	Sg	03 39 39.1	+0.2
OKCFA	Oklahoma City	0.36	17		Pg	03 39 35.0	+0.5
OKCFA				Sg	Sg	03 39 38.8	-0.4
OKCFA	Oklahoma City	0.36	17	P	Pg	03 39 35.0	+0.5
	baz=194,SNR=15						
OKCFA				S	Sg	03 39 39.5	+0.3
	baz=194						
X34A	Smith Ranch, M	0.52	204	Pg	Pg	03 39 38.2	+0.7
X34A				Sg	Sb	03 39 46.0	-1.4
WMOK	Wichita Mounta	1.04	252		Pg	03 39 47.0	-0.7
WMOK	Wichita Mounta	1.04	252	P	Pg	03 39 46.9	-0.7
	baz=72,SNR=67						
WMOK	Wichita Mounta	1.04	252	P	Pg	03 39 46.9	-0.7
	baz=72						
TUL1	Leonard	1.68	60		Pn	03 39 57.5	-0.6
TUL1	Leonard	1.68	60	P	Pn	03 39 57.7	-0.4
	baz=240,SNR=62						
TUL1				S	Sb	03 40 20.5	-0.4
	baz=240						
TUL1	Leonard	1.68	60	P	Pn	03 39 57.7	-0.4
	baz=240						
TUL1				S	Sb	03 40 20.5	-0.4
	baz=240						
U32A	Winter Ranch,	1.75	319		Pn	03 39 59.2	+0.2
U32A	Winter Ranch,	1.75	319	P	Pn	03 39 59.6	+0.6
	baz=138,SNR=15						
U32A				S	Sb	03 40 23.6	+0.8
	baz=138						
Z35A	Perchaven, San	1.76	171		Pn	03 39 58.5	-0.7
Z35A	Perchaven, San	1.76	171	P	Pn	03 39 58.4	-0.7
	baz=352,SNR=74						
Z35A				S	Sn	03 40 22.1	0.0
	baz=352						
X37A	Clayton	1.88	104		Pn	03 40 00.1	-0.7
X37A				IAmb_Lg		03 40 31.2	
	comp=Z,99nm,0.9s						
X37A	Clayton	1.88	104	P	Pn	03 40 00.8	0.0
	baz=285,SNR=78						
X37A				S	Sb	03 40 26.4	-0.2
	baz=285						
T35A	Sooner Cattle	2.03	25		Pn	03 40 03.1	+0.1
T35A				IAmb_Lg		03 40 36.2	
	comp=Z,106nm,1.2s						
T35B	Sooner Cattle	2.03	25	P	Pn	03 40 03.3	+0.3
	baz=205,SNR=20						
T35B				S	Sb	03 40 30.0	-1.1
	baz=205						
Z38A	Mt. Pleasant	2.81	129	Pn	Pn	03 40 12.8	-0.8
Z38A				IAmb_Lg		03 40 58.6	
	comp=Z,40nm,0.8s						
Z38A	Mt. Pleasant	2.81	129	S	Sn	03 40 49.4	+1.3
	baz=311						
ABTX	Abilene, Hawle	2.99	216	Pn	Pn	03 40 16.4	+0.3
ABTX	Abilene, Hawle	2.99	216	S	Sn	03 40 53.9	+1.4
	baz=35						
WHTX	Lake Whitney,	3.08	178		Pn	03 40 17.5	+0.3
WHTX	Lake Whitney,	3.08	178	P	Pn	03 40 17.6	+0.3
	baz=358,SNR=20						
WHTX				Sb	Sb	03 41 02.5	+1.4
	baz=358						
WHTX	Lake Whitney,	3.08	178	P	Pn	03 40 17.6	+0.3
	baz=358						
WHTX				Sb	Sb	03 41 02.5	+1.4
	baz=358						
W39A	Magazine	3.11	87		Pn	03 40 17.2	-0.5
W39A	Magazine	3.11	87	P	Pn	03 40 17.4	-0.3
	baz=268,SNR=20						
W39A	Magazine	3.11	87	P	Pn	03 40 17.4	-0.3
	baz=268						
HHAR	Hobbs	3.20	67		Pn	03 40 18.4	-0.6
HHAR	Hobbs	3.20	67	P	Pn	03 40 18.9	-0.1
	baz=248						
MIAR	Mount Ida	3.33	98		Pn	03 40 20.9	0.0
MIAR	Mount Ida	3.33	98	P	Pn	03 40 21.5	+0.7
	baz=280,SNR=149						
MIAR	Mount Ida	3.33	98	P	Pn	03 40 21.5	+0.7
	baz=280						
AMTX	Amarillo	3.38	268		Pn	03 40 22.0	+0.5
237A	Washetta, Mont	3.40	154		Pn	03 40 21.5	-0.3
237A				IAmb_Lg		03 41 22.7	
	comp=Z,60nm,0.9s						
R32A	Long Quarter,	3.46	345	Pn	Pn	03 40 22.9	+0.2
R32A				IAmb_Lg		03 41 22.2	
	comp=Z,28nm,0.7s						
WLAR	White Oak Lake	3.94	109		Pn	03 40 28.8	-0.4
X40A	Basin Creek Fa	3.95	97		Pn	03 40 28.9	-0.3
X40A				IAmb_Lg		03 41 36.0	
	comp=Z,41nm,1.1s						
X40A	Basin Creek Fa	3.95	97	P	Pn	03 40 29.3	+0.1
	baz=280,SNR=20						
X40A				P	Pn	03 40 29.3	+0.1
	baz=280,SNR=20						
X40A	Basin Creek Fa	3.95	97	P	Pn	03 40 29.3	+0.1
	baz=280						
U40A	Yellville	4.05	70	Pn	Pn	03 40 30.2	-0.5
U40A				IAmb_Lg		03 41 38.7	
	comp=Z,49nm,0.8s						
U40A	Yellville	4.05	70	P	Pn	03 40 30.1	-0.6
	baz=252,SNR=18						
U40A				P	Pn	03 40 30.1	-0.6
	baz=252,SNR=18						
U40A	Yellville	4.05	70	P	Pn	03 40 30.1	-0.6
	baz=252						
KSU1	Kansas State U	4.09	11	Pn	Pn	03 40 30.9	-0.4
CBKS	Cedar Bluff	4.12	336	Pn	Pn	03 40 31.8	+0.1
CBKS				IAmb_Lg		03 41 44.0	
	comp=Z,39nm,1.0s						
CBKS	Cedar Bluff	4.12	336	P	Pn	03 40 32.3	+0.6
	baz=154,SNR=5.9						
CBKS	Cedar Bluff	4.12	336	P	Pn	03 40 32.3	+0.6
	baz=154						
435B	Jarrell	4.28	180	Pn	Pn	03 40 34.0	+0.1
435B				IAmb_Lg		03 41 49.4	
	comp=Z,36nm,0.9s						
UALR	University of	4.31	92	Pn	Pn	03 40 34.2	-0.1
UALR				IAmb_Lg		03 41 49.5	
	comp=Z,33nm,1.0s						
S39A	Bolivar	4.31	51		Pn	03 40 33.0	-1.3
S39A	Bolivar	4.31	51	P	Pn	03 40 34.0	-0.3
	baz=234,SNR=12						
WHAR	Wooly Hollow	4.34	86		Pn	03 40 34.3	-0.4
WHAR				IAmb_Lg		03 41 54.3	
	comp=Z,32nm,1.1s						
Z41A	Richland Creek	4.35	113	Pn	Pn	03 40 34.8	-0.1
Z41A				IAmb_Lg		03 41 54.8	
	comp=Z,51nm,0.9s						
W41B	Gary Mavity, V	4.37	87		Pn	03 40 34.2	-0.9
W41B	Gary Mavity, V	4.37	87	P	Pn	03 40 35.3	+0.2
	baz=270						
W41B				S	Sn	03 41 26.3	-0.2
	baz=270						
MSTX	Muleshoe	4.43	257	Pn	Pn	03 40 36.6	+0.6
MSTX	Muleshoe	4.43	257	P	Pn	03 40 36.8	+0.8
	baz=74,SNR=9.5						
MSTX	Muleshoe	4.43	257	P	Pn	03 40 36.8	+0.8
	baz=74						
FCAR	Ozark Folk Cen	4.52	78		Pn	03 40 36.3	-0.9
MGMO	Mountain Grove	4.77	63	Pn	Pn	03 40 39.8	-0.8
MGMO				IAmb_Lg		03 42 05.5	
	comp=Z,38nm,0.8s						
CCAR	Cane Creek	4.93	102	Pn	Pn	03 40 41.4	-1.4
CCAR				IAmb_Lg		03 42 13.3	
	comp=Z,24nm,0.8s						
JCT	Junction City	4.95	203	Pn	Pn	03 40 42.6	-0.5
R40A	Maddies Statio	5.34	51	Pn	Pn	03 40 46.9	-1.5
R40A				IAmb_Lg		03 42 17.1	
	comp=Z,18nm,0.9s						
P38A	Dawn	5.57	34	Pn	Pn	03 40 49.9	-1.7
P38A				IAmb_Lg		03 42 26.8	
	comp=Z,23nm,0.7s						
KSCO	Kaye Shedlock'	5.64	316		Lg	03 42 29.3	
KSCO				IAmb_Lg		03 42 37.7	
	comp=Z,18nm,0.9s						
CCM	Cathedral Cave	5.90	58	Pn	Pn	03 40 55.6	-0.5
CCM				IAmb_Lg		03 42 47.9	
	comp=Z,26nm,0.8s						
T25A	Trinidad	5.90	292	Pn	Pn	03 40 56.6	+0.2
T25A				IAmb_Lg		03 42 43.2	
	comp=Z,21nm,0.8s						
BGNE	Belgrade	6.34	356	IAmb_Lg		03 42 55.6	
	comp=Z,22nm,0.7s						
FVM	French Village	6.45	61	Pn	Pn	03 41 02.5	-1.1
FVM				IAmb_Lg		03 43 05.0	
	comp=Z,23nm,0.9s						
LNXT	Lenox	6.67	79	IAmb_Lg		03 43 16.1	
	comp=Z,29nm,0.8s						
SLM	Saint Louis	6.88	57	IAmb_Lg		03 43 08.9	
	comp=Z,28nm,0.8s						
W45A	Hickory Valley	6.88	87	IAmb_Lg		03 43 18.3	
	comp=Z,13nm,0.7s						
Q24A	Divide	7.20	305	IAmb_Lg		03 43 17.6	
	comp=Z,18nm,0.9s						
S44A	Carbondale	7.20	66	IAmb_Lg		03 43 23.1	
	comp=Z,22nm,0.8s						
SIUC	Southern Illin	7.24	66	IAmb_Lg		03 43 30.6	
	comp=Z,26nm,1.0s						
ANMO	Albuquerque	7.29	272	Pn	Pn	03 41 15.3	0.0
MNTX	Cornudas Mount	7.34	245	Pn	Pn	03 41 15.8	-0.2
BNM	Barren Site	7.52	266	Pn	Pn	03 41 20.1	+1.5
PLAL	Pickwick Lake	7.79	88	Pn	Pn	03 41 19.9	-2.2
Q44A	Meyer Farm, Va	7.84	58	Pn	Pn	03 41 23.1	+0.3
Q44A				IAmb_Lg		03 43 52.5	
	comp=Z,24nm,0.8s						
ISCO	Idaho Springs	7.94	309	Pn	Pn	03 41 25.1	+0.6
ISCO				IAmb_Lg		03 43 49.9	
	comp=Z,11nm,1.1s						
K38A	Parkersburg	8.44	25	IAmb_Lg		03 44 00.7	
	comp=Z,20nm,0.8s						
L40A	Anamosa	8.57	34	IAmb_Lg		03 44 11.2	
	comp=Z,21nm,1.1s						
ECSD	EROS Data Cent	8.68	5	Pn	Pn	03 41 33.7	-0.6
PHWY	Pilot Hill	8.78	317	IAmb_Lg		03 44 22.8	
	comp=Z,11nm,1.1s						
N23A	Red Feather La	8.80	314	IAmb_Lg		03 44 13.0	
	comp=Z,13nm,1.0s						
L42A	Oliver, Polo	9.29	39	IAmb_Lg		03 44 24.6	
	comp=Z,15nm,0.8s						
I37A	Lemond, Waseca	9.49	19	IAmb_Lg		03 44 50.0	
	comp=Z,17nm,0.9s						

TAP 14 03:40:58.6, 24°.18N×121°.72E, h13^{km}, ML3.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.09	259	iP	Pg	03 41 02.0	+0.5
	baz=258						
ETL				iS	Sg	03 41 04.7	+1.1
	baz=258						
NACB	Ninganchiao	0.11	269	iP	Pb	03 41 02.3	-0.3
	baz=268						
NACB				iS	Sb	03 41 05.0	-0.3
	baz=268						
EHP	Heping Village	0.14	9	eS	Sb	03 41 05.7	-0.2
	baz=11						
TWD	Chiawan	0.15	230	iP	Pg	03 41 02.7	+0.4
	baz=227						
TWD				iS	Sb	03 41 05.8	-0.4
	baz=227						
ETLH	Xiulin Townshi	0.22	278	P	Pb	03 41 04.1	-0.4
	baz=277						
ETLH				S	Sb	03 41 08.0	-0.4
	baz=277						
HWA	Hwalien	0.22	208	eP	Pb	03 41 05.1	+0.6
	baz=205						
ENA	Nanau	0.25	5	eP	Pg	03 41 04.4	+0.5
	baz=6.0						
ENA				eS	Sb	03 41 08.7	-0.6
	baz=6.0						
EWUT	Wuta	0.27	11	eP	Pg	03 41 04.7	+0.4
	baz=11						
EWUT				eS	Sb	03 41 09.3	-0.6
	baz=11						
NNSB	Datong	0.40	309	eP	Pb	03 41 07.4	-0.1
	baz=309						
LATG	Datong	0.40	334	eP	Pb	03 41 07.3	-0.2
	baz=333						
NNS	Nan Shan	0.41	310	eP	Pb	03 41 07.5	-0.3
	baz=310						
WHF	Hehuan Shan	0.42	266	eP	Pb	03 41 07.6	-0.4
	baz=265						
FUSS	Fushou	0.44	279	eP	Pb	03 41 08.1	-0.2
	baz=279						
ESL	Shilin	0.45	216	eP	Pb	03 41 08.1	-0.2
	baz=214						
TWC	Suao	0.45	15	eP	Pb	03 41 08.2	-0.1
	baz=16						
NDS	Dongshan	0.46	360	eP	Pb	03 41 08.4	-0.1
	baz=359						
NDT	Datong Townshi	0.46	336	eP	Pb	03 41 08.6	-0.1
	baz=336						
ENTT	Nioudou	0.48	343	eP	Pb	03 41 09.1	+0.2
	baz=343						
CHGB	Renai	0.51	257	eP	Pb	03 41 09.7	+0.2
	baz=256						
TDCB	Techi	0.52	279	eP	Pb	03 41 09.5	-0.1
	baz=278						
OWD	Renai	0.54	246	eP	Pb	03 41 10.3	+0.3
	baz=246						
TWE	Neicheng	0.55	355	eP	Pb	03 41 10.0	+0.1
	baz=356						
EGFH	Guangfu	0.57	208	eP	Pb	03 41 10.8	+0.4
	baz=207						
WUSB	Renai	0.58	252	eP	Pb	03 41 10.8	+0.2
	baz=251						
WUSB				eS	Sb	03 41 19.3	+0.5
	baz=251						
YHNB	Yeheng	0.58	328	eP	Pb	03 41 11.0	+0.3
	baz=327						
NSK	Sanguang	0.60	327	eP	Pb	03 41 11.3	+0.4
	baz=327						
NWLT	Wulai	0.63	342	eS	Sb	03 41 20.6	+0.4
	baz=341						
VWDT	VWDT	0.68	232	eP	Pg	03 41 11.5	-0.3
	baz=231						

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*IDC **14** 03:44:44.6±0.6, 1°.70N×127°.83E, h0^{km}, mb4.3/15, mbtmp4.2/17, ML3.8/2, MS3.8/8, Error ellipse: s-maj=27.8km s-min=13.3km az=72.0*

*DJA **14** 03:44:46.6±0.4, 2°N±3°×12°8E±°, h14^{km}±3^{km}, M4.2/16, mB4.7/4, mb4.5/16, MLv4.1/12, Mw(mB)4.0/4*

*NEIC **14** 03:44:50.4±1.8, 1°.54N±0°.06×127°.70E±0°.07, h34^{km}±4^{km}, mb4.6/37, Error ellipse: s-maj=10.8km s-min=8.5km az=103.0*

ISC 14 03:44:49.7±0.5**, 1°.59N**±0°.05×**127°.79E**±0°.08**, h35**^{km}**, n101,** σ**1^{s}14**/86**, mb4.6**/41**, MS3.8**/8**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.91	208	Pn	Pn	03 45 03.7	-2.3
TNTI					Sn	03 45 16.4	-1.6
TNTI	Ternate	0.91	208	P	Pn	03 45 03.7	-2.3
LBMI	Labuha	2.23	187	P	Pn	03 45 25.6	+1.4
KMSI	Cibinong	3.94	255	P	Pn	03 45 47.7	0.0
SANI	Sanana	4.04	207	P	Pn	03 45 48.7	-0.3
SWI	Sorong	4.24	125	P	Pn	03 45 50.5	-1.3
SIJI	Sorong	4.25	125	Pn	Pn	03 45 53.0	+1.0
	5.2nm,0.3s,baz=315,slow=11,SNR=8.7						
	16nm,0.3s						
GTOI	Gorontalo	4.87	259	P	Pn	03 46 01.8	+1.3
	0.1nm250nm19nm,1.1s						
MSAI	Masohi	5.03	167	P	Pn	03 46 03.7	+1.0
LUWI	Luwuk	5.66	243	Pn	Pn	03 46 11.1	-0.3
LUWI	Luwuk	5.66	243	P	Pn	03 46 12.1	+0.8
	0.8nm88nm,0.9s						
MRSI	Marisa	5.95	259	P	Pn	03 46 17.0	+1.6
	0.1nm767nm44nm,0.8s						
KCP	Kidapawan	6.02	334	⇑eP	Pn	03 46 15.4	-1.0
TOLI2	Tolitoli	7.02	266	Pn	Pn	03 46 29.2	-0.9
TTSI	Tana Toraja	9.20	240	P	Pn	03 47 00.0	0.0
	23nm,0.6s						
SPSI	Sidrap Palu	9.73	235	P	Pn	03 47 08.6	+1.4
	26nm,1.0s						
MYLDM	Lahad Datu	9.94	291		Pn	03 47 08.0	-2.1
KAPI	Kappang	10.37	231	Pn	Pn	03 47 17.1	+1.1
	0.9nm,0.3s,baz=35,slow=12,SNR=5.0						
	4.6nm,0.5s						
KAPI	Kappang	10.37	231	Pn	Pn	03 47 14.4	-1.6
SBUM	Sibu	15.58	273	Pn	Pn	03 48 27.5	+0.6
PWJI	Pagerwojo	18.58	239	P	Pn	03 49 05.7	+1.3
	36nm,1.1s						
SMRI	Semarang	19.32	243	P	P	03 49 11.3	-0.8
	64nm,2.0s						
PMG	Port Moresby	22.17	120	LR	LR	03 59 02.9	
	comp=Z,350nm,19.7s,baz=286,slow=39						
WB0	Warramunga Arr	22.19	163	P	P	03 49 43.0	0.0
WRAB	Tennant Creek	22.33	164	P	P	03 49 42.4	-2.2
WRAB				IAmb	IAmb	03 50 06.7	
	comp=Z,27nm,1.2s						
WRA	Warramunga Arr	22.34	164	P	P	03 49 45.0	+0.3
	comp=Z,8.2nm,1.0s,baz=346,slow=11,SNR=21						
	comp=Z,8.2nm,1.0s						
WB2	Warramunga Arr	22.34	164	P	P	03 49 44.6	-0.1
WB2				IAmb	IAmb	03 49 47.2	
	comp=Z,26nm,1.2s						
PSA00	Pilbara Seismi	24.29	198	P	P	03 50 02.6	-1.4
KRVT	Keravat (AS076	24.92	104	LR	LR	03 58 05.2	
	comp=Z,584nm,19.6s,baz=61,slow=32						
AS31	Alice Springs	25.79	167	P	P	03 50 18.7	+1.1
ASAR	Alice Springs	25.80	167	P	P	03 50 18.4	+0.7
	comp=Z,4.5nm,1.0s,baz=350,slow=13,SNR=19						
ASAR				PcP	PcP	03 53 46.0	-0.9
	comp=Z,0.4nm,0.6s,baz=347,slow=1.7,SNR=6.6						
	comp=Z,4.5nm,1.0s						
ASAR	Alice Springs	25.80	167	P	P	03 50 18.2	+0.5
PSI	Prapat	28.87	273	LR	LR	04 03 39.3	
	comp=Z,149nm,18.7s,baz=105,slow=39						
NJ2	Nanjing	31.45	345	eP	P	03 51 10.3	+2.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	Chiang Mai Arr	32.89	302	P	P	03 51 20.6	-0.2
	comp=Z,3.2nm,0.3s,baz=120,slow=6.3,SNR=7.6						
CMAR				LR	LR	04 05 49.0	
	comp=Z,59nm,18.5s,baz=100,slow=38						
	comp=Z,3.2nm,0.3s						
CMAR	Chiang Mai Arr	32.89	302	P	P	03 51 20.2	-0.6
CHTO	Chiang Mai	33.05	303	P	P	03 51 21.3	-0.8
PZH	PanZhiHua	35.22	317	P	P	03 51 43.5	+2.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.4s						

KSRS	Korea Array	35.69	0	P	P	03 51 43.9	-0.8
	comp=Z,1.1nm,0.6s,baz=181,slow=9.8,SNR=6.5						
	comp=Z,1.1nm,0.6s						
STKA	Stephens Creek	35.76	160	P	P	03 51 46.1	+0.6
	comp=Z,4.8nm,0.8s,baz=345,slow=9.6,SNR=6.7						
	comp=Z,4.8nm,0.8s						
STKA	Stephens Creek	35.76	160	IAmb	IAmb	03 51 49.0	
	comp=Z,2.0nm,1.1s						
MJAR	Matsushiro Arr	36.09	14	P	P	03 51 45.9	-2.4
	comp=Z,1.0nm,0.7s,baz=175,slow=9.8,SNR=4.6						
	comp=Z,1.0nm,0.7s						
MJAR	Matsushiro Arr	36.09	14	IAmb	IAmb	03 51 48.7	
	comp=Z,3.5nm,1.4s						
XAN	Xi'an	36.80	333	P	P	03 51 54.0	-0.3
XAN				pP	pP	03 51 59.8	-4.8
XAN				sP	sP	03 52 02.3	-6.6
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
BJT	Baijiatuau	39.69	346	P	P	03 52 19.2	+0.7
BJT				IAmb	IAmb	03 52 25.6	
	comp=Z,6.9nm,0.8s						
BJI	Beijing	39.71	346	P	P	03 52 18.0	-0.7
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LZH	Lanzhou	40.88	330	*e*P	P	03 52 29.3	+0.6
LZH				pP	pP	03 52 35.8	-3.3
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
H11S3	WAKE ISLAND Hy	41.67	64	T	T	04 36 06.5	
	baz=247,slow=75,SNR=6.5						
H11S2	WAKE ISLAND Hy	41.69	64	T	T	04 35 59.8	
	baz=247,slow=75,SNR=5.9						
H11S1	WAKE ISLAND Hy	41.69	64	T	T	04 36 01.2	
	baz=247,slow=75,SNR=4.9						
HHC	Hu-ho-hao-te	41.75	341	*e*P	P	03 52 38.5	+2.8
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
H11N1	WAKE ISLAND Hy	42.26	62	T	T	04 36 49.9	
	baz=244,slow=74						
H11N2	WAKE ISLAND Hy	42.27	62	T	T	04 36 57.6	
	baz=244						
H11N3	WAKE ISLAND Hy	42.28	62	T	T	04 36 51.3	
	baz=244,slow=74						
GTA	Gaotai	45.47	329	*e*P	P	03 53 06.4	+0.7
GTA				pP	pP	03 53 12.9	-3.3
GTA				PcP	PcP	03 54 47.3	+3.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.8s						
KLR	Kul'dur	47.59	4	P	P	03 53 21.4	-0.5
	comp=Z,1.0nm,0.6s,baz=194,slow=4.2,SNR=3.6						
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	49.47	342	P	P	03 53 36.6	-0.1
ULN				IAmb	IAmb	03 53 40.0	
	comp=Z,9.7nm,1.0s						
SONM	Songino Array	49.66	341	P	P	03 53 37.7	-0.4
	comp=Z,2.4nm,0.6s,baz=157,slow=8.2,SNR=14						
	comp=Z,2.4nm,0.6s						
SONM	Songino Array	49.66	341	P	P	03 53 38.4	+0.3
SONM				IAmb	IAmb	03 53 41.4	
	comp=Z,6.2nm,1.2s						
WMQ	Urumqi	55.08	325	*e*P	P	03 54 18.8	+0.5
WMQ				pP	pP	03 54 23.1	-5.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	Makanchi Array	59.91	326	P	P	03 54 51.6	-0.7
	comp=Z,8.0nm,0.7s,baz=123,slow=8.1,SNR=25						
	comp=Z,8.0nm,0.7s						
MKAR	Makanchi Array	59.91	326	P	P	03 54 51.2	-1.1
TARG	Taragay, Kyrgy	60.04	319	P	P	03 54 54.1	+0.4
TARG				IAmb	IAmb	03 54 58.3	
	comp=Z,4.7nm,1.0s						
RAO	Raoul Island	60.23	125	LR	LR	04 19 02.0	
	comp=Z,76nm,19.3s,baz=16,slow=34						
KSH	Kashi	60.30	316	P	P	03 54 58.3	+3.1
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KDJ	Kajisay	60.64	319	P	P	03 54 57.4	-0.1
KDJ				IAmb	IAmb	03 55 00.8	
	comp=Z,5.8nm,0.8s						
BOOM	Boomskoye usch	61.63	319	P	P	03 55 04.7	+0.5
AAK	Ala-Archa	62.65	318	P	P	03 55 12.1	+1.0
AAK				IAmb	IAmb	03 55 19.5	
	comp=Z,3.5nm,0.9s						
ZAA0	Zalesovo Array	62.97	333	IAmb	IAmb	03 55 14.7	
	comp=Z,7.3nm,1.2s						
ZALV	Zalesovo Beam	62.97	333	P	P	03 55 12.9	+0.2
	comp=Z,4.5nm,0.9s,baz=122,slow=5.6,SNR=6.6						
	comp=Z,4.5nm,0.9s						
ZALV	Zalesovo Beam	62.97	333	P	P	03 55 12.8	+0.1
KBL	Kabul	63.66	308	P	P	03 55 18.3	+0.2
KBL				IAmb	IAmb	03 55 20.0	
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	64.11	328	P	P	03 55 19.0	-1.3
BTK	Batken	64.16	314	P	P	03 55 21.6	+0.5
BTK				IAmb	IAmb	03 55 25.2	
	comp=Z,9.0nm,1.3s						
KK31	Karatay Array	65.51	317	P	P	03 55 30.0	+0.3
KKAR	Karatay Array	65.51	317	P	P	03 55 29.5	-0.2
BRVK	Borovoye	69.75	327	P	P	03 55 56.4	+0.2
TIXI	Tiksi	69.96	0	P	P	03 55 56.4	-0.7
TIXI				IAmb	IAmb	03 55 58.8	
	comp=Z,12nm,1.3s						
NRIK	Noril'sk	72.75	346	P	P	03 56 13.3	-0.7
	comp=Z,6.5nm,0.8s,baz=119,slow=7.8,SNR=8.8						
	comp=Z,6.5nm,0.8s						
NRIK	Noril'sk	72.75	346	IAmb	IAmb	03 56 15.8	
	comp=Z,7.9nm,0.8s						
GEYT	Alibeck	73.06	309	P	P	03 56 16.7	+0.2
	comp=Z,2.7nm,0.6s,baz=162,slow=20,SNR=4.1						
	comp=Z,2.7nm,0.6s						
GEYT	Alibeck	73.06	309	P	P	03 56 17.4	+0.9
ABKAR	Akbulak array	74.47	321	P	P	03 56 24.1	-0.4
ARU	Arti	77.30	328	P	P	03 56 40.0	-0.6
VNDA	Vanda	81.18	173	LR	LR	04 34 35.9	
	comp=Z,59nm,18.1s,baz=328,slow=37						
RAYN	Ar Rayn	82.30	293	P	P	03 57 08.5	+0.2
RAYN				IAmb	IAmb	03 57 11.5	
	comp=Z,4.9nm,0.9s						
KDAK	Kodiak Island	83.13	32	LR	LR	04 33 42.1	
	comp=Z,40nm,18.7s,baz=250,slow=35						
J20K	Nowinta River	83.38	26	P	P	03 57 12.9	-0.1
J20K				IAmb	IAmb	03 57 14.1	
	comp=Z,6.8nm,1.3s						
IMAR	Indian Mountai	83.86	24	P	P	03 57 15.4	-0.1
H21K	Melozitna Rive	84.19	24	P	P	03 57 17.1	-0.2
H21K				IAmb	IAmb	03 57 21.1	
	comp=Z,4.8nm,1.4s						
ONI	Oni	84.76	312	P	P	03 57 19.9	-0.7
ONI				IAmb	IAmb	03 57 28.5	
	comp=Z,6.1nm,1.2s						
GURO	Guroymak-BITLI	85.70	308	P	P	03 57 25.7	+0.1
GURO				IAmb	IAmb	03 57 29.1	
	comp=Z,5.9nm,0.9s						
SML	Sawmill	85.71	28	IAmb	IAmb	03 57 27.1	
	comp=Z,5.8nm,1.0s						
ILAR	Eielson Array	86.57	25	P	P	03 57 29.5	+0.4
	comp=Z,0.2nm,0.8s,baz=254,slow=5.5,SNR=1.9						
	comp=Z,0.2nm,0.8s						
QSPA	South Pole Qui	91.51	180	LR	LR	04 42 25.6	
	comp=Z,46nm,18.0s,baz=360,slow=38						
BRTR	Keskin Array B	92.20	310	P	P	03 57 56.5	+0.2
	comp=Z,0.6nm,0.9s,baz=110,slow=5.4,SNR=3.9						
	comp=Z,0.6nm,0.9s						
ARCES	ARCESS Array B	92.81	340	P	P	03 57 57.9	-0.5
	comp=Z,4.1nm,0.9s,baz=66,slow=6.0,SNR=4.9						
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	122.04	54	PKP	PKPdf	04 03 42.3	+0.8
	comp=Z,0.1nm,0.4s,baz=159,slow=1.1,SNR=3.6						
TORD	Torodi Ar. Bea	124.57	287	PKP	PKPdf	04 03 47.2	+0.7
	comp=Z,0.3nm,0.7s,baz=69,slow=1.5,SNR=1.9						
VA03	San Esteban	144.51	153	PKPdf	PKPab	04 04 21.8	+0.2
CO01	Juntas del Tor	147.04	151	PKPbc	PKPdf	04 04 29.3	+1.4

TAP 14 03:48:53.5, 24°.17N×121°.75E, h12km, ML3.7, 2C-24D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.11	266	⇓*i*P	Pg	03 48 56.7	+0.2
	baz=267						
ETL				*i* S	Sg	03 48 59.2	+0.5
	baz=267						
NACB	Ninganchiao	0.14	273	⇓*i*P	Pg	03 48 57.0	+0.2
	baz=274						
NACB				*i* S	Sg	03 48 59.4	+0.2
	baz=274						
EHP	Heping Village	0.14	359	P	Pg	03 48 57.1	+0.1
	baz=1.0						
EHP				S	Sg	03 48 60.0	+0.6
	baz=1.0						
TWD	Chiawan	0.16	238	⇓*i*P	Pg	03 48 57.4	+0.2
	baz=245						
TWD				*i* S	Sg	03 49 00.2	+0.4
	baz=245						
HWA	Hwalien	0.23	214	P	Pb	03 48 59.3	-0.2
	baz=225						
HWA				S	Sg	03 49 05.0	+3.4
	baz=225						
ETLH	Xiulin Townshi	0.24	280	⇓*i*P	Pg	03 48 58.8	+0.2
	baz=280						
ETLH				S	Sg	03 49 02.5	+0.4
	baz=280						
ENA	Nanau	0.26	359	⇓*i*P	Pg	03 48 59.1	+0.2
	baz=359						
ENA				*i* S	Sg	03 49 03.1	+0.5
	baz=359						
EWUT	Wuta	0.28	6	⇓*i*P	Pg	03 48 59.4	+0.2
	baz=5.0						
EWUT				S	Sg	03 49 03.5	+0.4
	baz=5.0						
ETM	Tongmen	0.30	229	⇓*i*P	Pg	03 48 59.9	+0.2
	baz=231						
ETM				S	Sg	03 49 04.3	+0.4
	baz=231						
TEYL	Yanliau Villag	0.33	204	P	Pb	03 49 01.4	+0.1
	baz=217						
TEYL				*e*S	Sb	03 49 07.7	+1.3
	baz=217						
LATG	Datong	0.42	332	⇓*i*P	Pg	03 49 02.2	+0.4
	baz=331						
LATG				S	Sg	03 49 08.1	+0.7
	baz=331						
NNSB	Datong	0.42	308	P	Pg	03 49 02.2	+0.4
	baz=308						
NNSB				*e*S	Sg	03 49 08.1	+0.6
	baz=308						
NNS	Nan Shan	0.43	309	⇓*i*P	Pg	03 49 02.5	+0.4
	baz=309						
NNS				*i* S	Sg	03 49 08.7	+0.7
	baz=309						
WHF	Hehuan Shan	0.44	267	⇓*i*P	Pg	03 49 02.5	+0.2
	baz=268						
WHF				*i* S	Sg	03 49 08.9	+0.7
	baz=268						
TWC	Suao	0.45	12	⇓*i*P	Pg	03 49 02.7	+0.3
	baz=6.0						
TWC				*i* S	Sb	03 49 09.4	-0.7
	baz=6.0						
FUSS	Fushou	0.47	280	⇓*i*P	Pg	03 49 03.2	+0.5
	baz=281						
FUSS				*i* S	Sg	03 49 09.7	+0.7
	baz=281						
NDS	Dongshan	0.47	357	P	Pg	03 49 03.1	+0.4
	baz=355						
NDS				S	Sg	03 49 09.6	+0.7
	baz=355						
TEGC	Jichi Village	0.49	202	*e*P	Pb	03 49 04.8	+0.8
	baz=196						
TEGC				*e*S	Sb	03 49 14.4	+3.2
	baz=196						
ENTT	Nioudou	0.50	341	⇓*i*P	Pb	03 49 03.8	-0.4
	baz=340						
ENTT				*i* S	Sb	03 49 10.8	-0.7
	baz=340						
TWT	Tachien	0.53	280	⇓*i*P	Pb	03 49 04.8	0.0
	baz=280						
TWT				S	Sb	03 49 11.9	-0.5
	baz=280						
CHGB	Renai	0.53	259	⇓*i*P	Pg	03 49 04.4	+0.5
	baz=253						
CHGB				*i* S	Sg	03 49 11.5	+0.5
	baz=253						
TDCB	Techi	0.54	279	⇓*i*P	Pb	03 49 04.8	-0.2
	baz=280						
TDCB				*i* S	Sg	03 49 11.8	+0.5
	baz=280						
TWE	Neicheng	0.56	353	⇓*i*P	Pg	03 49 04.8	+0.4
	baz=353						
TWE				*i* S	Sb	03 49 12.5	-0.6
	baz=353						
OWD	Renai	0.56	248	P	Pg	03 49 04.6	+0.1
	baz=250						
OWD				S	Sg	03 49 11.6	-0.3
	baz=250						
EGFH	Guangfu	0.57	210	*e*P	Pg	03 49 04.9	+0.2
	baz=220						
EGFH				*e*S	Sb	03 49 14.6	+1.0
	baz=220						
ILA	Ilan	0.60	0	*e*P	Pg	03 49 05.4	+0.2
	baz=355						
ILA				*e*S	Sb	03 49 14.2	-0.1
	baz=355						
WUSB	Renai	0.60	253	P	Pb	03 49 05.6	-0.3
	baz=247						
WUSB				S	Sg	03 49 13.5	+0.4
	baz=247						
YHNB	Yeheng	0.60	326	⇓*i*P	Pb	03 49 05.8	-0.2
	baz=326						
YHNB				*i* S	Sb	03 49 14.0	-0.6
	baz=326						
FUSB	Fushanzhiwuyua	0.61	346	⇓*i*P	Pb	03 49 05.8	-0.3
	baz=345						
FUSB				S	Sg	03 49 13.9	+0.5
	baz=345						
NSK	Sanguang	0.62	325	⇓*i*P	Pb	03 49 06.0	-0.3
	baz=325						
NSK				*i* S	Sg	03 49 14.3	+0.6
	baz=325						
NWLT	Wulai	0.65	340	⇓*i*P	Pb	03 49 06.6	-0.2
	baz=339						
NWLT				S	Sg	03 49 14.9	+0.3
	baz=339						
VWDT	VWDT	0.69	234	⇓*i*P	Pb	03 49 07.1	-0.3
	baz=235						
VWDT				S	Sb	03 49 17.9	+1.0
	baz=235						
NTC	Toucheng	0.69	6	P	Pb	03 49 07.2	-0.3
	baz=5.0						
NTC				S	Sg	03 49 15.7	-0.2
	baz=5.0						
EGS		0.70	14	*e*P	Pg	03 49 07.3	+0.3
	baz=20						
HGSD	Ruisui	0.73	204	P	Pb	03 49 08.4	+0.3
	baz=194						
HGSD				S	Sn	03 49 20.9	+0.2
	baz=194						
NFF	Wufeng Townshi	0.74	309	P	Pb	03 49 08.4	+0.1
	baz=309						
NFF				S	Sb	03 49 18.4	0.0
	baz=309						
WHP	Taichung City	0.74	279	P	Pb	03 49 08.5	+0.2
	baz=279						
WHP				S	Sb	03 49 18.9	+0.4
	baz=279						
EHY	Hungye	0.76	211	*e*P	Pg	03 49 07.8	-0.4
	baz=224						
TIPB	Shuangxi	0.81	5	P	Pb	03 49 09.3	-0.2
	baz=4.0						
TIPB				S	Sg	03 49 19.5	-0.1
	baz=4.0						
SSLB	Suanglung	0.82	243	⇓*i*P	Pg	03 49 09.4	+0.2
	baz=254						
SSLB				S	Sg	03 49 19.4	-0.5
	baz=254						
NHDH	Xindian Distri	0.82	346	*e*P	Pb	03 49 10.1	+0.4
	baz=345						
NHDH				*e*S	Sg	03 49 19.8	-0.3
	baz=345						
LIOB	Emei	0.82	306	*e*P	Pb	03 49 10.2	+0.5
	baz=306						
LIOB				*e*S	Sb	03 49 21.1	+0.4
	baz=306						
NSTT	Nanjuang	0.82	304	P	Pb	03 49 10.2	+0.5
	baz=304						
NSTT				S	Sb	03 49 20.9	+0.2
	baz=304						
SMLT	Sun Moon Lake	0.82	250	⇑*i*P	Pb	03 49 09.9	+0.1
	baz=252						
SMLT				*i* S	Sb	03 49 20.6	-0.3
	baz=252						
TWA	Mucha	0.82	350	P	Pb	03 49 10.0	+0.3
	baz=349						
TWA				S	Sb	03 49 21.2	+0.3
	baz=349						
TYC	Yuchr	0.85	252	*e*P	Pb	03 49 10.2	0.0
	baz=254						
TYC				*e*S	Sg	03 49 21.0	-0.1
	baz=254						
TWB1	Santiao Chiao	0.87	15	P	Pg	03 49 10.1	-0.1
	baz=7.0						
TWB1				*e*S	Sg	03 49 21.5	-0.1
	baz=7.0						
YULB	Yu-li	0.87	208	*e*P	Pg	03 49 09.6	-0.7
	baz=221						
YULB				*e*S	Sb	03 49 23.0	+0.8
	baz=221						
TAP	Taipei	0.90	346	*e*S	Sn	03 49 23.9	-0.9
	baz=345						
NWF	Wu-fen Shan	0.90	2	P	Pb	03 49 11.5	+0.4
	baz=352						
NWF				S	Sg	03 49 22.6	-0.1
	baz=352						
EYUL	Yuli	0.90	206	*e*P	Pb	03 49 11.4	+0.3
	baz=225						
EYUL				*e*S	Sn	03 49 25.4	+0.5
	baz=225						
TWQ1	Liyutan	0.91	282	P	Pn	03 49 12.8	+0.7
	baz=292						
TWQ1				S	Sn	03 49 25.4	+0.4
	baz=292						
NSY	Sanyi	0.93	286	P	Pn	03 49 12.9	+0.5
	baz=286						
NSY				*e*S	Sn	03 49 26.1	+0.4
	baz=286						
SBCB	Hsinchu	0.93	312	*e*P	Pn	03 49 13.4	+1.0
	baz=312						
SBCB				*e*S	Sn	03 49 27.4	+1.7
	baz=312						
SXI1	Grass Mountain	0.93	7	*e*P	Pb	03 49 11.6	0.0
	baz=6.0						
SXI1				*e*S	Sg	03 49 23.4	-0.3
	baz=6.0						
NMLH	Miaoli	0.94	293	*e*P	Pn	03 49 13.0	+0.4
	baz=294						
NCUH	Zhongli	0.95	328	*e*P	Pn	03 49 12.8	+0.2
	baz=326						
NCUH				*e*S	Sn	03 49 27.1	+1.0
	baz=326						
NCU	National Centr	0.95	328	*e*P	Pn	03 49 13.5	+0.8
	baz=327						
NCU				S	Sn	03 49 27.4	+1.3
	baz=327						
HSN	Hsinchu	0.95	312	P	Pn	03 49 12.8	+0.2
	baz=314						
HSN				S	Sn	03 49 28.1	+2.0
	baz=314						
TCU	Taichung	0.98	269	*e*P	Pn	03 49 14.6	+1.6
	baz=270						
TCU				*e*S	Sn	03 49 29.9	+3.2
	baz=270						
TWS1	Kuangyinshan	0.98	342	*e*P	Pn	03 49 13.3	+0.3
	baz=349						
TWS1				*e*S	Sn	03 49 27.9	+1.1
	baz=349						
YM01	YM01	0.99	351	*e*P	Pg	03 49 12.5	-0.1
	baz=335						
WJS	Zhushan	0.99	250	*e*P	Pn	03 49 14.1	+0.9
	baz=247						
WJS				*e*S	Sn	03 49 27.7	+0.5
	baz=247						
YUS	Yu-Shan	0.99	227	P	Pg	03 49 12.7	+0.1
	baz=230						
YUS				*e*S	Sb	03 49 26.2	+0.2
	baz=230						
WNT	Mingjian	1.01	254	P	Pn	03 49 14.3	+0.8
	baz=251						
WNT				S	Sn	03 49 29.5	+1.8
	baz=251						
WDJ	Dajia District	1.02	280	*e*P	Pn	03 49 14.9	+1.2
	baz=281						
WDJ				*e*S	Sn	03 49 29.1	+1.1
	baz=281						
FULB	Fuli	1.05	203	*e*P	Pb	03 49 13.3	-0.3
	baz=221						
ALS	Alishan	1.08	233	⇑*i*P	Pg	03 49 14.5	+0.2
	baz=226						
ALS				S	Sb	03 49 28.7	+0.2
	baz=226						
WCHH	Zhanghua	1.09	266	*e*P	Pn	03 49 16.0	+1.5
	baz=267						
WCHH				*e*S	Sn	03 49 31.3	+1.8
	baz=267						
CHKT	Chengkung	1.12	198	*e*P	Pb	03 49 13.3	-1.4
	baz=216						
CHKT				*e*S	Sn	03 49 30.6	+0.3
	baz=216						
CHN5	Tsauling	1.13	240	P	Pg	03 49 15.6	+0.4
	baz=243						
CHN5				S	Sn	03 49 32.5	+1.9
	baz=243						
ELDTW	Lidau	1.18	215	*e*P	Pb	03 49 13.5	-2.4
	baz=217						
WDLH	Douliu	1.20	247	*e*P	Pg	03 49 17.0	+0.4
	baz=250						
WDLH				*e*S	Sn	03 49 35.6	+3.2
	baz=250						
EDH	Donghe	1.25	199	*e*P	Pn	03 49 15.8	-1.0
	baz=184						
EDH				*e*S	Sg	03 49 34.2	+0.3
	baz=184						
WRL	Guolierlin Hig	1.28	258	*e*P	Pg	03 49 18.2	+0.1
	baz=261						
WRL				*e*S	Sg	03 49 36.3	+1.7
	baz=261						
CHN2	Minshiung	1.32	242	*e*P	Pg	03 49 19.6	+0.7
	baz=245						
CHN2				*e*S	Sg	03 49 39.6	+3.5
	baz=245						
WTK	Tuku	1.33	249	*e*P	Pg	03 49 19.4	+0.4
	baz=252						
WTK				*e*S	Sg	03 49 38.1	+1.8
	baz=252						
CHN4	Tsaushan	1.33	233	P	Pg	03 49 19.2	+0.1
	baz=236						
CHN4				S	Sg	03 49 39.6	+3.2
	baz=236						
STYH	Taoyuan	1.33	222	P	Pn	03 49 18.0	+0.1
	baz=226						
STYH				*e*S	Sg	03 49 36.9	+0.5
	baz=226						
TPUB	Ta-pu	1.34	230	*e*P	Pb	03 49 18.8	+0.3
	baz=222						
TPUB				*e*S	Sg	03 49 37.8	+1.2
	baz=222						
LONT	Longtian	1.38	204	*e*P	Pn	03 49 16.9	-1.6
	baz=208						
LONT				*e*S	Sg	03 49 38.9	+1.1
	baz=208						
CHY	Chiayi	1.38	241	*e*P	Pg	03 49 20.2	+0.2
	baz=244						
CHY				*e*S	Sg	03 49 39.9	+1.9
	baz=244						
WTP	Ta-pu	1.38	229	P	Pb	03 49 19.5	+0.2
	baz=232						
TWK	Hsinying	1.46	232	P	Pb	03 49 21.0	+0.4
	baz=235						
TWK				*e*S	Sg	03 49 41.9	+1.4
	baz=235						
TWG	Pinlang	1.48	205	*e*P	Pn	03 49 18.0	-1.9
	baz=208						
SNST	Tainan City	1.48	231	P	Pb	03 49 21.3	+0.3
	baz=234						
SNST				*e*S	Sg	03 49 41.6	+0.4
	baz=234						
CHN1	Nanshi	1.48	229	⇓*i*P	Pb	03 49 21.4	+0.5
	baz=232						
CHN1				S	Sg	03 49 42.8	+1.6
	baz=232						
LDUT	Ludao	1.51	190	*e*P	Pn	03 49 18.0	-2.3
	baz=179						
SGST	Jiashian	1.52	225	*e*P	Pg	03 49 22.1	-0.5
	baz=228						
SGST				*e*S	Sg	03 49 42.3	0.0
	baz=228						
WSL	Shuilin Townsh	1.53	246	*e*P	Pb	03 49 22.1	+0.3
	baz=249						
WSL				*e*S	Sg	03 49 45.0	+2.2
	baz=249						
ICHU	Yijhu	1.56	239	*e*P	Pb	03 49 22.3	0.0
	baz=243						

ECL	Taimali	1.72	205	*e*P	Pn	03 49 23.1	-0.2
	baz=194						
SSD	Sandimen	1.74	216	*e*P	Pb	03 49 24.8	-0.7
	baz=232						
TSMG	Majia	1.77	215	*e*P	Pb	03 49 25.4	-0.5
	baz=218						
MASBT	Mashibuluo	1.85	214	*e*P	Pb	03 49 26.3	-1.0
	baz=216						
EAST	Anshuo	1.96	205	*e*P	Pb	03 49 28.3	-0.8
	baz=196						
SCZT	Fangliau	2.06	210	*e*P	Pb	03 49 29.5	-1.4
	baz=196						
WDGT	Dungji	2.11	245	*e*P	Pn	03 49 29.6	+1.0
	baz=249						
VWUC	VWUC	2.25	292	*e*P	Pn	03 49 30.1	-0.4
	baz=292						
VCHM	Qimei	2.33	246	*e*P	Pn	03 49 32.0	+0.4
	baz=234						
PTMZ	Houxiangcun	2.54	291	*e*P	Pn	03 49 34.6	+0.1
	baz=291						
KNMB	Chin-men Tao	3.08	276	*e*P	Pn	03 49 42.1	+0.2
	baz=277						
XPSS	Dashiqiu	3.09	333	*e*P	Pn	03 49 41.6	-0.4
	baz=331						
AXDP	Jialang	3.52	283	*e*P	Pn	03 49 48.1	+0.2
	baz=283						

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*IDC **14** 03:49:38.2±1.1, 24°.12N×122°.76E, h0^{km}, mb3.9/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=39.6km s-min=19.5km az=96.0*
*NEIC **14** 03:49:39.1±1.6, 23°.95N±0°.03×122°.86E±0°.08, h6^{km}±6^{km}, mb4.0/2, Error ellipse: s-maj=10.2km s-min=3.5km az=99.0*
*TAP **14** 03:49:40.9, 24°.13N×122°.84E, h15^{km}, ML4.1, D*
*JMA **14** 03:49:41.0±0.1, 24°.1N±0°.7×122°.9E±0°.4, h21^{km}±2^{km}, MD4.1/14, MV4.2/14, NW OFF ISHIGAKIJIMA IS*
JMA Felt I J1 at NW OFF ISHIGAKIJIMA IS .
*NIED **14** 03:49:41.0, 24°.11N×122°.87E, h21^{km}, MW4.1, Moment Tensor Solution. s1 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.05; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$0.09; $M_{r\theta}$1.54; $M_{\theta\phi}$-0.25; $M_{\phi r}$0.51; Fault plane solution: $M_0$1.63000×10^{15} NP1: ϕ_s173.00000°, δ6.00000°, λ10.00000°. NP2: ϕ_s73.00000°, δ89.00000°, λ96.00000°.*
ISC 14 03:49:39.9±1.1, **24°.07N**±0°.03×**122°.86E**±0°.02, **h13**^{km}±7^{km}, **n129, σ1^{s}.01**/191, **mb4.0**/9, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.39	12	*i* P	Pb	03 49 48.3	-0.4
JYNG				*e*S	Sb	03 49 53.4	-1.3
JYNG	Yonagunijimaku	0.39	12	A	A	03 49 48.3	
	comp=E,27nm,1.2s,comp=E,37nm,0.5s						
YOJ	Yonaguni jima	0.42	20	Pg	Pb	03 49 48.9	-0.3
YOJ	Yonaguni jima	0.42	20	⇑ *i*P	Pb	03 49 48.9	-0.3
	baz=23						
YOJ				S	Sg	03 49 54.1	+0.2
	baz=23						
YOJ	Yonaguni jima	0.42	20	*i* P	Pb	03 49 48.9	-0.3
YOJ				*e*S	Sb	03 49 54.3	-1.1
YOJ	Yonaguni jima	0.42	20	A	A	03 49 48.9	
	comp=E,13nm,0.7s,comp=E,13nm,3.3s						
IRIF	Iriomote-Funau	0.84	71	P	Pg	03 49 56.2	0.0
IRIF				S	Sg	03 50 07.9	+0.6
IRIF	Iriomote-Funau	0.84	71	A	A	03 49 56.2	
	comp=E,22nm,0.8s,comp=E,21nm,1.3s						
HATJ	Hateruma jima	0.87	90	P	Pb	03 49 56.7	-0.2
HATJ				S	Sb	03 50 08.1	-0.3
HATJ	Hateruma jima	0.87	90	A	A	03 49 56.7	
	comp=E,10.0nm,1.0s,comp=E,10.0nm,1.2s						
EWUT	Wuta	1.05	291	P	Pb	03 49 59.8	-0.2
	baz=288						
EWUT				S	Sg	03 50 14.0	0.0
	baz=288						
TWC	Suao	1.06	301	*i* P	Pb	03 49 59.9	-0.3
	baz=299						
TWC				S	Sg	03 50 14.1	-0.3
	baz=299						
JKRS	Kuro-shima	1.07	81	P	Pb	03 50 00.3	0.0
JKRS				*e*S	Sb	03 50 14.2	+0.1
JKRS	Kuro-shima	1.07	81	A	A	03 50 00.3	
	comp=E,12nm,1.2s,comp=E,16nm,1.1s						
ENA	Nanau	1.08	290	*i* P	Pb	03 50 00.1	-0.4
	baz=287						
ENA				*e*S	Sb	03 50 14.3	-0.1
	baz=287						
EGS		1.14	313	*e*P	Pg	03 50 02.3	+0.4
	baz=311						
TWD	Chiawan	1.15	271	P	Pb	03 50 01.6	-0.1
	baz=268						
TWD				*e*S	Sb	03 50 17.0	+0.5
	baz=268						
NACB	Ninganchiao	1.16	276	Pn	Pb	03 50 02.2	+0.4
NACB	Ninganchiao	1.16	276	*e*P	Pb	03 50 01.8	0.0
	baz=284						
NACB				*e*S	Sn	03 50 18.0	+0.6
	baz=284						
TEYL	Yanliau Villag	1.17	261	*e*P	Pn	03 50 02.2	+0.3
	baz=243						
TEYL				*e*S	Sb	03 50 17.9	+1.0
	baz=243						
NDS	Dongshan	1.18	299	*e*P	Pb	03 50 02.1	-0.1
	baz=297						
NDS				*e*S	Sg	03 50 18.6	+0.4
	baz=297						
JIJ	Ishigaki jima	1.21	76	P	Pn	03 50 02.1	-0.4
JIJ				S	Sb	03 50 17.9	-0.4
JIJ	Ishigaki jima	1.21	76	A	A	03 50 02.1	
	comp=E,6.0nm,0.5s,comp=E,8.0nm,1.3s						
NTC	Toucheng	1.22	310	*e*P	Pb	03 50 03.1	+0.3
	baz=309						
NTC				*e*S	Sg	03 50 18.9	-0.4
	baz=309						
ILA	Ilan	1.23	305	*e*P	Pg	03 50 03.8	+0.3
	baz=314						
ILA				*e*S	Sg	03 50 19.9	+0.4
	baz=314						
TWB1	Santiao Chiao	1.23	320	*e*P	Pn	03 50 02.7	-0.1
	baz=334						
TWB1				*e*S	Sb	03 50 18.0	-0.7
	baz=334						
ETM	Tongmen	1.25	266	*e*P	Pn	03 50 02.3	-0.8
	baz=249						
ETM				*e*S	Sb	03 50 18.7	-0.7
	baz=249						
ETLH	Xiulin Townshi	1.26	277	P	Pn	03 50 03.7	+0.4
	baz=274						
ETLH				*e*S	Sn	03 50 20.3	0.0
	baz=274						
TWE	Neicheng	1.27	301	P	Pb	03 50 03.9	+0.3
	baz=300						
TWE				*e*S	Sg	03 50 20.8	0.0
	baz=300						
LATG	Datong	1.30	291	P	Pb	03 50 04.5	+0.2
	baz=289						
LATG				*e*S	Sb	03 50 20.5	-0.4
	baz=289						
TIPB	Shuangxi	1.30	314	*e*P	Pb	03 50 04.2	-0.1
	baz=313						
TIPB				*e*S	Sg	03 50 21.0	-0.9
	baz=313						
ENTT	Nioudou	1.31	296	P	Pb	03 50 04.6	+0.2
	baz=294						
ENTT				*e*S	Sn	03 50 21.0	-0.2
	baz=294						
FUSB	Fushanzhiwuyua	1.35	301	*e*P	Pb	03 50 05.3	+0.3
	baz=315						
SXI1	Grass Mountain	1.36	319	*e*P	Pn	03 50 04.8	+0.1
	baz=318						
EGFH	Guangfu	1.37	253	*e*P	Pn	03 50 04.8	+0.2
	baz=251						
EGFH				*e*S	Sn	03 50 21.1	-1.6
	baz=251						
NNSB	Datong	1.39	285	*e*P	Pb	03 50 06.0	+0.1
	baz=283						
NNSB				*e*S	Sg	03 50 24.5	-0.3
	baz=283						
NWF	Wu-fen Shan	1.40	316	P	Pn	03 50 05.3	+0.1
	baz=315						
NWF				S	Sb	03 50 23.3	-0.5
	baz=315						
WFSB	Wu-fen Shan	1.40	316	*e*P	Pn	03 50 05.1	0.0
	baz=315						
WFSB				*e*S	Sb	03 50 23.5	-0.2
	baz=315						
NNS	Nan Shan	1.40	286	*i* P	Pb	03 50 06.5	+0.5
	baz=284						
NNS				S	Sb	03 50 24.0	+0.1
	baz=284						
NWLT	Wulai	1.42	300	*e*P	Pb	03 50 06.7	+0.4
	baz=311						
NWLT				*e*S	Sg	03 50 25.2	-0.6
	baz=311						
HGSD	Ruisui	1.43	247	*e*P	Pn	03 50 05.2	-0.4
	baz=244						
HGSD				*e*S	Sn	03 50 22.8	-1.5
	baz=244						
WHF	Hehuan Shan	1.46	273	*i* P	Pn	03 50 06.4	+0.1
	baz=271						
WHF				S	Sn	03 50 25.4	0.0
	baz=271						
TNOU	National Taiwa	1.46	318	*e*P	Pn	03 50 05.7	-0.3
	baz=317						
TWA	Mucha	1.47	308	P	Pb	03 50 07.2	0.0
	baz=307						
TWA				*e*S	Sb	03 50 25.5	-0.3
	baz=307						
YHNB	Yeheng	1.48	294	Pn	Pb	03 50 07.7	+0.4
YHNB	Yeheng	1.48	294	*e*P	Pb	03 50 07.8	+0.6
	baz=293						
FUSS	Fushou	1.48	277	*e*P	Pb	03 50 08.1	+0.6
	baz=275						
FUSS				*e*S	Sb	03 50 27.1	+0.8
	baz=275						
ECBN	Changbin	1.49	240	*e*P	Pn	03 50 06.0	-0.3
	baz=237						
ECBN				*e*S	Sn	03 50 24.0	-1.6
	baz=237						
NSK	Sanguang	1.49	294	P	Pb	03 50 08.0	+0.4
	baz=292						
NSK				*e*S	Sn	03 50 25.5	-0.5
	baz=292						
NHDH	Xindian Distri	1.50	307	*e*P	Pg	03 50 09.3	+0.4
	baz=305						
EHY	Hungye	1.51	249	P	Pn	03 50 06.4	-0.3
	baz=246						
EHY				*e*S	Sn	03 50 25.2	-1.0
	baz=246						
CHGB	Renai	1.54	270	P	Pn	03 50 07.5	+0.3
	baz=268						
CHGB				*e*S	Sn	03 50 27.0	-0.2
	baz=268						
OWD	Renai	1.54	266	*e*P	Pn	03 50 07.1	-0.1
	baz=264						
OWD				*e*S	Sn	03 50 26.7	-0.5
	baz=264						
TATO	Taipei	1.54	306	Pn	Pb	03 50 08.8	+0.5
TATO	Taipei	1.54	306	*e*P	Pb	03 50 08.8	+0.5
	baz=305						
TWT	Tachien	1.54	277	*e*P	Pb	03 50 08.9	+0.4
	baz=275						
TDCB	Techi	1.56	277	*e*P	Pb	03 50 09.0	+0.2
	baz=275						
TDCB				*e*S	Sb	03 50 28.8	+0.3
	baz=275						
YULB	Yu-li	1.58	245	Pn	Pn	03 50 06.5	-1.1
YULB	Yu-li	1.58	245	*e*P	Pn	03 50 07.1	-0.5
	baz=242						
YULB				*e*S	Sn	03 50 26.9	-1.0
	baz=242						
EYUL	Yuli	1.58	243	*e*P	Pn	03 50 07.6	0.0
	baz=241						
EYUL				*e*S	Sn	03 50 27.7	-0.2
	baz=241						
WUSB	Renai	1.59	268	*e*P	Pn	03 50 08.2	+0.3
	baz=266						
WUSB				*e*S	Sn	03 50 28.8	+0.4
	baz=266						
VWDT	VWDT	1.60	259	*e*P	Pn	03 50 08.2	+0.3
	baz=258						
YM08	YM08	1.60	314	*e*P	Pn	03 50 08.3	+0.4
	baz=313						
CHKT	Chengkung	1.67	235	*e*P	Pn	03 50 07.7	-1.2
	baz=217						
CHKT				*e*S	Sn	03 50 27.4	-2.8
	baz=217						
FULB	Fuli	1.67	239	*e*P	Pn	03 50 08.3	-0.6
	baz=221						
FULB				*e*S	Sn	03 50 29.6	-0.6
	baz=221						
NFF	Wufeng Townshi	1.68	290	*e*P	Pb	03 50 11.4	+0.6
	baz=288						
NFF				*e*S	Sg	03 50 35.1	+1.0
	baz=288						
WHP	Taichung City	1.76	277	*e*P	Pb	03 50 13.2	+1.2
	baz=263						
SSLB	Suanglung	1.76	261	Pn	Pn	03 50 10.3	+0.1
SSLB	Suanglung	1.76	261	*e*P	Pn	03 50 11.2	+1.1
	baz=259						
SSLB				*e*S	Sn	03 50 32.1	-0.4
	baz=259						
NCUH	Zhongli	1.77	301	*e*P	Pg	03 50 13.4	-0.5
	baz=316						
LIOB	Emei	1.77	289	*e*P	Pb	03 50 12.7	+0.4
	baz=288						
JTJ	Tarama	1.78	71	P	Pn	03 50 10.7	+0.4
JTJ				*e*S	Sn	03 50 33.6	+0.8
JTJ	Tarama	1.78	71	A	A	03 50 10.7	
	comp=E,6.0nm,2.2s,comp=E,5.0nm,1.6s						
NSTT	Nanjuang	1.78	289	*e*P	Pb	03 50 12.8	+0.4
	baz=287						
NSTT				*e*S	Sb	03 50 34.5	-0.2
	baz=287						
EDH	Donghe	1.79	233	*e*P	Pn	03 50 09.2	-1.4
	baz=218						
EDH				*e*S	Sn	03 50 30.3	-2.9
	baz=218						
SMLT	Sun Moon Lake	1.80	265	*e*P	Pn	03 50 12.1	+1.4
	baz=263						
SMLT				*e*S	Sn	03 50 34.8	+1.3
	baz=263						
TYC	Yuchr	1.83	265	*e*P	Pb	03 50 13.0	-0.3
	baz=264						
YUS	Yu-Shan	1.84	252	*e*P	Pn	03 50 12.0	+0.4
	baz=250						
YUS				*e*S	Sn	03 50 33.7	-1.2
	baz=250						
SBCB	Hsinchu	1.85	293	*e*P	Pg	03 50 15.2	-0.2
	baz=292						
LDUT	Ludao	1.88	223	*e*P	Pn	03 50 10.8	-1.0
	baz=222						
ELDTW	Lidau	1.90	243	*e*P	Pn	03 50 11.6	-0.5
	baz=242						
TWQ1	Liyutan	1.92	279	*e*P	Pb	03 50 14.1	-0.7
	baz=278						
NMLH	Miaoli	1.94	284	*e*P	Pb	03 50 15.7	+0.5
	baz=283						
NSY	Sanyi	1.94	281	*e*P	Pb	03 50 15.3	+0.1
	baz=279						
NSY				*e*S	Sg	03 50 41.7	-0.7
	baz=279						
ALS	Alishan	1.96	254	*e*P	Pn	03 50 14.1	+1.0
	baz=252						
ALS				*e*S	Sn	03 50 37.9	+0.2
	baz=252						
LONT	Longtian	1.96	234	*e*P	Pn	03 50 12.6	-0.2
	baz=223						
WJS	Zhushan	1.96	263	*e*P	Pb	03 50 16.0	+0.5
	baz=262						
WJS				*e*S	Sg	03 50 42.6	-0.4
	baz=262						
TCU	Taichung	1.99	273	*e*P	Pb	03 50 16.7	+0.6
	baz=272						
TCU				*e*S	Sb	03 50 42.4	+1.6
	baz=272						
WNT	Mingjian	2.00	265	*e*P	Pn	03 50 15.2	+1.9
	baz=264						
WNT				*e*S	Sb	03 50 41.4	+0.5
	baz=264						
CHN5	Tsauling	2.05	257	*e*P	Pn	03 50 16.3	+2.2
	baz=243						
CHN5				*e*S	Sb	03 50 43.2	+0.8
	baz=243						
TWG	Pinlang	2.05	233	*e*P	Pn	03 50 13.4	-0.7
	baz=222						
TWG				*e*S	Sn	03 50 38.0	-1.6
	baz=222						
WCHH	Zhanghua	2.10	271	*e*P	Pb	03 50 17.4	-0.5
	baz=270						
STYH	Taoyuan	2.10	245	*e*P	Pn	03 50 14.4	-0.5
	baz=244						
WDLH	Douliu	2.15	260	*e*P	Pn	03 50 17.5	+2.0
	baz=260						
TPUB	Ta-pu	2.18	250	Pn	Pn	03 50 16.2	+0.3
TPUB	Ta-pu	2.18	250	*e*P	Pn	03 50 18.4	+2.5
	baz=248						
TPUB				*e*S	Sn	03 50 44.3	+1.6
	baz=248						
CHN4	Tsaushan	2.19	252	P	Pn	03 50 18.6	+2.6
	baz=250						
CHN4				*e*S	Sb	03 50 46.6	+0.1
	baz=250						
WTP	Ta-pu	2.21	249	*e*P	Pn	03 50 18.6	+2.3
	baz=247						
WTP				*e*S	Sn	03 50 46.0	+2.4
	baz=247						
JIRB	Irabujima	2.24	70	P	Pn	03 50 17.2	+0.4
JIRB				*e*S	Sn	03 50 44.4	+0.1
WRL	Guolierlin Hig	2.27	266	*e*P	Pb	03 50 19.7	-1.1
	baz=265						
WRL				*e*S	Sb	03 50 48.2	-0.6
	baz=265						
WTK	Tuku	2.29	261	*e*P	Pb	03 50 20.5	-0.6
	baz=260						
WTK				*e*S	Sb	03 50 49.8	+0.5
	baz=260						
CHY	Chiayi	2.30	256	*e*P	Pn	03 50 19.6	+2.1
	baz=256						
SGST	Jiashian	2.30	245	*e*P	Pn	03 50 20.0	+2.4
	baz=243						
SGST				*e*S	Sn	03 50 47.8	+1.9
	baz=243						
CHN1	Nanshi	2.31	248	*e*P	Pb	03 50 20.7	-0.7
	baz=247						
CHN1				*e*S	Sb	03 50 49.4	-0.4
	baz=247						
TWK	Hsinying	2.31	250	*e*P	Pn	03 50 17.6	-0.1
	baz=249						
TWK				*e*S	Sb	03 50 49.1	-0.9
	baz=249						
JIKM	Ikemajima	2.34	68	P	Pn	03 50 18.6	+0.6
JIKM				*e*S	Sn	03 50 47.0	+0.3
JMJ2	Miyako jima3	2.35	73	*e*P	Pn	03 50 19.3	+1.1
JOGS	Gusukube	2.43	73	*e*P	Pn	03 50 20.4	+1.2
SSD	Sandimen	2.43	238	*e*P	Pn	03 50 21.9	+2.6
	baz=227						
SCST	Cishan	2.47	242	*e*P	Pn	03 50 22.6	+2.8
	baz=242						
EAST	Anshuo	2.49	228	*e*P	Pn	03 50 19.8	-0.4
	baz=228						
MASBT	Mashibuluo	2.50	235	*e*P	Pn	03 50 23.4	+3.1
	baz=225						
SSPT	Xinbi	2.63	234	*e*P	Pn	03 50 24.9	+2.8
	baz=226						
SCZT	Fangliau	2.66	231	*e*P	Pn	03 50 24.9	+2.4
	baz=222						
TSEB	Hengchuen, Pin	2.81	220	*e*P	Pn	03 50 26.3	+1.8
	baz=221						
TWKBT	Hengchun	2.83	222	*e*P	Pn	03 50 26.3	+1.5
	baz=222						
JOW	Kunigami	5.62	60	Pn	Pn	03 51 03.5	+0.4
	5.4nm,0.3s,baz=138,slow=23,SNR=5.2						
JOW				Sn	Sn	03 52 09.9	+2.3
	0.6nm,0.3s,baz=127,slow=27,SNR=1.2						
	7.2nm,0.3s						
KSRS	Korea Array	14.03	17	Pn	P	03 53 03.6	-2.6
	0.6nm,0.3s,baz=198,slow=12,SNR=22						
KS19	Wonju Array Si	14.06	17	Pn	Pn	03 52 58.5	-0.4
MDJ	Mudanjiang	21.23	13	P	P	03 54 23.7	-1.7
MDJ				IAmb	IAmb	03 54 29.7	
	comp=Z,7.1nm,1.1s						
USRK	Ussuriysk Ar.	21.43	18	P	P	03 54 27.9	+0.3
	comp=Z,2.6nm,0.7s,baz=199,slow=11,SNR=4.4						
	comp=Z,2.6nm,0.7s						
KLR	Kul'dur	26.07	13	P	P	03 55 13.3	+0.2
	comp=Z,1.1nm,0.4s,baz=208,slow=6.6,SNR=3.0						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	45.15	165	P	P	03 57 57.0	+0.6
	comp=Z,1.5nm,0.8s,baz=345,slow=8.6,SNR=7.0						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	48.65	166	P	P	03 58 24.9	+1.2
	comp=Z,1.5nm,0.8s,baz=353,slow=15,SNR=10.0						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	48.65	166	P	P	03 58 23.0	-0.8
ABKAR	Akbulak array	54.62	314	P	P	03 59 09.0	+0.9
ABKAR				IAmb	IAmb	03 59 31.9	
	comp=Z,3.0nm,1.4s						
ILAR	Eielson Array	68.62	27	P	P	04 00 43.0	+0.6
	comp=Z,0.2nm,0.4s,baz=269,slow=5.2,SNR=6.2						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	72.31	330	P	P	04 01 04.7	-0.3
	comp=Z,1.6nm,0.9s,baz=57,slow=5.1,SNR=2.0						
	comp=Z,1.6nm,0.9s						
YKA	Yellowknife Ar	82.48	23	P	P	04 02 01.9	0.0
	comp=Z,1.5nm,0.8s,baz=312,slow=4.9,SNR=22						
	comp=Z,1.5nm,0.8s						

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*DDA **14** 03:54:35.4±0.0, 39°.58N×27°.99E, h7^{km}±2^{km}, ML2.0*
*ISK **14** 03:54:35.7, 39°.62N×28°.03E, h5^{km}, ML2.5/17*
ISC 14 03:54:35.8±1.1, **39°.60N**±0°.02×**28°.01E**±0°.02, **h7**^{km}±13^{km}, **n27, σ0^{s}.48**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	Dursunbey	0.36	89	P	Pg	03 54 42.1	-0.8
DURS				S	Sg	03 54 48.4	+0.7
DURS				*i* AML	AML	03 54 49.0	
	comp=N,261nm,0.2s						
DURS				*i* AML	AML	03 54 49.0	
	comp=E,338nm,0.3s						
DST	Dursunbey	0.47	89	PG	Pg	03 54 44.9	-0.1
DST				SG	Sg	03 54 51.5	+0.4
GONE	Gonen-Balikesi	0.52	331	PG	Pg	03 54 45.9	+0.1
GONE				SG	Sg	03 54 53.2	+0.7
KCTX	Karacabey (Bur	0.72	22	PG	Pg	03 54 49.4	-0.3
KCTX				SG	Sg	03 54 59.3	+0.2
AKHS	Akhisar	0.73	192	P	Pg	03 54 49.6	-0.2
AKHS				S	Sg	03 55 00.1	+0.7
AKHS				*i* AML	AML	03 55 03.0	
	comp=E,25nm,0.4s						
AKS	Akhisar	0.73	192	PG	Pb	03 54 50.8	-0.1
EDC	Edincik	0.76	352	PG	Pg	03 54 50.3	-0.1
EDC				SG	Sg	03 55 00.4	+0.1
ORLT	Orhaneli	0.82	56	PG	Pg	03 54 51.5	-0.1
SIMA	Simav-Kutahya	0.91	124	PG	Pb	03 54 53.9	-0.1
ZEDA	zmir-Bergama	0.96	229	P	Pg	03 54 54.2	0.0
ZEDA				S	Sg	03 55 07.0	+0.4
ZEDA				*i* AML	AML	03 55 09.0	
	comp=E,24nm,0.4s						
ZEDA				*i* AML	AML	03 55 09.0	
	comp=N,30nm,0.4s						
MDNY	Mudanya-Bursa	1.03	41	PG	Pb	03 54 55.5	-0.4
AYVA	Ayvalik	1.06	255	P	Pb	03 54 56.3	-0.2
AYVA				S	Sb	03 55 10.3	-0.2
AYVA				*i* AML	AML	03 55 11.0	
	comp=N,105nm,0.3s						
AYVA				*i* AML	AML	03 55 12.0	
	comp=E,56nm,0.7s						
SHAP	Saphane-Kutahy	1.10	121	PN	Pb	03 54 57.3	0.0
TVSB	Tavsanli	1.13	97	PN	Pb	03 54 57.7	-0.1
BAYC	CANAKKALE_Bayr	1.14	278	P	Pg	03 54 57.1	-0.5
BAYC				S	Sg	03 55 11.8	-0.6
BAYC				*i* AML	AML	03 55 14.0	
	comp=E,60nm,0.2s						
BAYC				*i* AML	AML	03 55 14.0	
	comp=N,52nm,0.2s						
ARMT	Armutlu	1.17	34	PN	Pb	03 54 58.1	-0.3
USAK	Uak-Merkez	1.18	138	P	Pg	03 54 57.8	-0.6
USAK				*i* AML	AML	03 55 13.0	
	comp=E,27nm,1.0s						
USAK				S	Sg	03 55 13.5	-0.2
KULA	Kula-Manisa	1.19	155	PN	Pn	03 54 58.9	-0.1
GEDZ	Gediz	1.22	116	PN	Pn	03 54 59.5	+0.1
TRML	Termal-Yalova	1.35	41	PN	Pb	03 55 01.2	-0.3
YLV	Yalova	1.43	47	PN	Pb	03 55 02.4	-0.4
ADVT	Abdulvahap	1.57	57	PN	Pb	03 55 04.5	-0.7
KAVV	Kandilli-Istan	1.67	28	PN	Pb	03 55 06.3	-0.7
ISK	Istanbul-Kandi	1.68	28	PN	Pb	03 55 06.1	-0.9
BORA	Eskisehir	1.91	81	PN	Pn	03 55 09.6	+0.8
SILT	Sile	2.00	38	PN	Pn	03 55 10.5	+0.5
GULT	Gulveren	2.10	66	PN	Pn	03 55 12.4	+0.9

IDC 14 03:59:52.0±3.7, **57°.90S**×**149°.47E, h0**^{km}**, mb3.6**/3, **mbtmp3.7**/3, **MS3.0**/1, **Error ellipse: s-maj=351.2km s-min=27.5km az=75.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	20.16	172	P	P	04 04 27.5	+0.2
	1.8nm,0.9s,baz=346,slow=10,SNR=10						
VNDA				LR	LR	04 10 42.9	
	comp=Z,43nm,19.5s,baz=302,slow=32						
	1.8nm,0.9s						
H01W1	Cape Leeuwin H	32.90	299	T	T	04 41 05.6	
	baz=144,slow=74,SNR=24						
H01W2	Cape Leeuwin H	32.91	299	T	T	04 41 01.1	
	baz=144,slow=74,SNR=25						
H01W3	Cape Leeuwin H	32.92	299	T	T	04 41 06.7	
	baz=144,slow=74,SNR=22						
ASAR	Alice Springs	35.99	335	P	P	04 06 54.5	+0.1
	0.8nm,0.7s,baz=163,slow=9.3,SNR=9.4						
	0.8nm,0.7s						
WRA	Warramunga Arr	39.51	337	P	P	04 07 24.1	-0.1
	1.0nm,0.7s,baz=163,slow=7.3,SNR=7.3						
	1.0nm,0.7s						
H08S2	Diego Garcia H	76.64	277	T	T	05 35 42.6	
	baz=147,slow=76,SNR=8.8						
H08S1	Diego Carcia H	76.66	277	T	T	05 35 43.7	
	baz=147,slow=76,SNR=4.5						
H08S3	Diego Garcia H	76.67	277	T	T	05 35 48.5	
	baz=147,slow=76,SNR=12						
FINES	FINESS Array B	151.97	301	PKPbc	PKPbc	04 19 46.9	-0.5
	2.4nm,1.1s,baz=116,slow=6.3,SNR=1.5						

ASRS 14 04:04:07.4±0.2,52°N±2°×10°0E±°,h5^{km},MLh3.7/8,Error ellipse: s-maj=5.0km s-min=2.3km az=6.7,confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOY	Mondy	0.85	80	Pg	Pn	04 04 26.9	+0.7
MOY				Sg	Sn	04 04 38.3	-0.8
KNGR	Kungurtug, Tuv	1.63	236	Pg	Pg	04 04 42.2	+3.7
KNGR				Sg	Sg	04 05 03.8	+4.2
ZAK	Zakamensk	2.57	115	Pg	Pg	04 04 56.3	-0.2
ZAK				Sg	Sg	04 05 30.3	+0.5
ERNS	Erzin	3.11	248	Pg	Pg	04 05 08.4	+1.5
ERNS				Sg	Sg	04 05 47.2	0.0
ARDR	Aradan	3.98	288	Pg	Pb	04 05 20.5	+2.5
ARDR				Sg	Sg	04 06 17.4	+2.2
TRG	Tyrgan	4.31	71	Sg	Sg	04 06 26.3	+0.6
MINR	Mina	4.71	318	Pg	Pg	04 05 43.6	+6.1
MINR				Sg	Sg	04 06 46.6	+8.1
DJOS	Djoyskaya Sosn	5.24	287	Pg	Pg	04 05 47.6	0.0
DJOS				Sg	Sg	04 06 59.7	+4.4
CERR	Cheremushki	5.24	288	Pg	Pg	04 05 49.5	+1.9
CERR				Sg	Sg	04 06 58.0	+2.6
DJO	Djoy, Khakassi	5.34	287	Sg	Sg	04 07 02.0	+3.3
ULN	Ulaanbaatar	6.04	124	Pg	Pg	04 05 59.9	-3.1

IDC ***14*** *04:09:22.8±1.8,21°.24S×67°.13W,h186^{km}±25^{km},mb3.2/2, mbtmp3.7/4,Error ellipse: s-maj=51.2km s-min=13.8km az=100.0*

NEIC ***14*** *04:09:22.9±1.3,21°.26S±0°.07×67°.3W±0°.1,h212^{km}±10^{km}, mb4.2/3,ML4.1(GUC),Error ellipse: s-maj=18.5km s-min=10.4km az=97.0*

VAO ***14*** *04:09:23.1±0.4,21°.24S×67°.44W,h218^{km}±10^{km},mb3.9*

GUC ***14*** *04:09:24.4±0.6,21°.28S×67°.35W,h204^{km}±6^{km},ML4.1*

SCB ***14*** *04:09:25.3±1.9,21°.27S×67°.28W,h164^{km}±28^{km},ML3.6/11, MW3.6,Error ellipse: s-maj=8.3km s-min=7.5km az=0.0*

ISC 14 04:09:22.9±0.7,**21°.25S**±0°.04×**67°.29W**±0°.05,**h198**^{km}±7^{km}, **n79,**σ**1^{s}.23**/96,**mb3.7**/4,**7C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.54	90	P	Pn	04 09 58.4	+1.1
MOCB				S	S	04 10 20.2	-3.7
MOCB				IAML		04 10 24.7	
	920nm,0.4s						
MOCB				IAML		04 10 25.3	
	738nm,0.4s						
AF01	San Pedro de A	1.88	206		Pn	04 10 01.8	+1.4
PB09	IPOC Station P	1.89	253		Pn	04 10 01.7	+1.4
PB09	IPOC Station P	1.89	253	⇑iP	Pn	04 10 01.8	+1.4
PB09				eS	S	04 10 30.1	+0.6
PB09				IAML		04 10 33.6	
	comp=N,228nm,0.2s						
PB09	IPOC Station P	1.89	253	P	Pn	04 10 02.1	+1.8
PB09				IAML		04 10 33.6	
	comp=N,170nm,0.5s						
YJA	Yavi	1.89	119	P	Pn	04 10 01.9	+1.3
YJA				IAML		04 10 30.8	
	comp=N,76nm,0.4s						
LVC	Limon Verde	2.02	228	P	Pn	04 10 03.0	+1.2
	comp=N,88nm,0.4s,baz=43,slow=9.0,SNR=350						
LVC				S	S	04 10 32.9	+0.7
	comp=N,44nm,0.3s,baz=263,slow=21,SNR=19						
LVC	Limon Verde	2.02	228	Pn	Pn	04 10 02.7	+0.9
LVC	Limon Verde	2.02	228	⇑iP	Pn	04 10 02.9	+1.1
LVC				i S	S	04 10 32.0	-0.1
LVC	Limon Verde	2.02	228	P	Pn	04 10 03.2	+1.4
LVC	Limon Verde	2.02	228	eP	Pn	04 10 03.0	+1.2
LVC				eS	S	04 10 32.9	+0.7
PB01	IPOC Station P	2.06	275		Pn	04 10 02.4	+0.4
PB01	IPOC Station P	2.06	275	i P	Pn	04 10 02.6	+0.6
PB01				eS	S	04 10 31.9	-0.4
PB01				IAML		04 10 34.8	
	comp=E,523nm,0.3s						
PB01	IPOC Station P	2.06	275	P	Pn	04 10 03.0	+1.0
PB01				IAML		04 10 34.8	
	comp=E,286nm,0.2s						
PB08	IPOC Station P	2.06	302		Pn	04 10 03.0	+0.6
PB08	IPOC Station P	2.06	302	⇓iP	Pn	04 10 03.8	+1.5
PB08				i S	S	04 10 33.5	+0.6
PB08	IPOC Station P	2.06	302	P	Pn	04 10 04.1	+1.8
PB08				IAML		04 10 34.4	
	comp=E,61nm,0.7s						
PB02	IPOC Station P	2.43	268		Pn	04 10 06.3	+0.4
PB02	IPOC Station P	2.43	268	⇑iP	Pn	04 10 06.6	+0.6
PB02				eS	S	04 10 38.4	-1.1
PB02				IAML		04 10 41.5	
	comp=E,906nm,0.1s						
PB02	IPOC Station P	2.43	268	P	Pn	04 10 06.9	+0.9
PB02				IAML		04 10 41.7	
	comp=E,685nm,0.4s						
PB07	IPOC Station P	2.46	258		Pn	04 10 07.1	+0.6
PB07	IPOC Station P	2.46	258	⇑iP	Pn	04 10 07.0	+0.6
PB07				eS	S	04 10 39.2	-1.1
PB07				IAML		04 10 40.6	
	comp=E,509nm,0.1s						
PB07	IPOC Station P	2.46	258	P	Pn	04 10 07.3	+0.9
PB07				IAML		04 10 41.2	
	comp=E,323nm,0.4s						
PB06	IPOC Station P	2.56	235		Pn	04 10 07.9	+0.4
PB06	IPOC Station P	2.56	235	⇑iP	Pn	04 10 08.1	+0.6
PB06				eS	S	04 10 42.1	-0.3
PB06				IAML		04 10 43.9	
	comp=E,438nm,0.4s						
PB06	IPOC Station P	2.56	235	P	Pn	04 10 08.5	+1.0
PB06				IAML		04 10 45.2	
	comp=E,162nm,0.4s						
PB11	IPOC Station P	2.67	303	Pn	Pn	04 10 09.0	+0.2
PATCX	Punta Patache	2.71	279	Pn	Pn	04 10 09.4	+0.3
PATCX	Punta Patache	2.71	279	i P	Pn	04 10 09.6	+0.5
PATCX				i S	S	04 10 44.0	-1.1
PATCX				IAML		04 10 45.4	
	comp=N,584nm,0.2s						
TA01	Diego Aracena	2.78	284		Pn	04 10 10.1	+0.2
TA01	Diego Aracena	2.78	284	eP	Pn	04 10 09.7	-0.2
TA01				i S	S	04 10 44.3	-2.2
PB15	IPOC Station P	2.80	226		Pn	04 10 11.4	+1.1
PB15	IPOC Station P	2.80	226	⇑iP	Pn	04 10 11.2	+0.8
PB15				i S	S	04 10 47.5	0.0
PB15	IPOC Station P	2.80	226	P	Pn	04 10 11.6	+1.3
PB15				IAML		04 10 55.7	
	comp=N,640nm,0.2s						
PB04	IPOC Station P	2.86	247		Pn	04 10 11.2	+0.3
PB04	IPOC Station P	2.86	247	i P	Pn	04 10 11.5	+0.5
PB04				i S	S	04 10 47.3	-1.2
PB04				IAML		04 10 49.3	
	comp=N,388nm,0.2s						
PB04	IPOC Station P	2.86	247	P	Pn	04 10 11.6	+0.6
PB04				IAML		04 10 48.9	
	comp=N,186nm,0.1s						
PB16	IPOC Station P	3.57	324		Pn	04 10 21.0	+1.1
PB16	IPOC Station P	3.57	324	⇑iP	Pn	04 10 21.5	+1.6
PB16				eS	S	04 11 04.8	+0.2
PB16	IPOC Station P	3.57	324	P	Pn	04 10 21.8	+1.9
PB10	IPOC Station P	3.76	233	Pn	Pn	04 10 21.4	-0.2
PB10	IPOC Station P	3.76	233	eP	Pn	04 10 21.9	+0.2
PB10	IPOC Station P	3.76	233	P	Pn	04 10 22.3	+0.6
PB12	IPOC Station P	3.88	312	Pn	Pn	04 10 22.9	-0.3
PB12	IPOC Station P	3.88	312	i P	Pn	04 10 22.2	-1.0
PB14	IPOC Station P	4.42	220	Pn	Pn	04 10 29.7	-0.4
GO02	Mina Guanaco	4.43	208		Pn	04 10 30.7	+0.4
GO02	Mina Guanaco	4.43	208	i P	Pn	04 10 30.7	+0.4
GO02				eS	S	04 11 21.9	-1.4
BBOE	La Paz, Chanca	4.46	351	P	Pn	04 10 33.4	+2.4
BBOD	La Paz, Gloria	4.75	345	P	Pn	04 10 37.0	+2.3
LPAZ	La Paz	5.00	351	P	Pn	04 10 39.2	+1.3
	comp=N,6.4nm,0.3s,baz=170,slow=6.1,SNR=127						
LPAZ				S	S	04 11 36.0	-0.9
	comp=N,5.3nm,0.7s,baz=2.2,slow=18,SNR=1.7						
LPAZ	La Paz	5.00	351	Pn	Pn	04 10 38.4	+0.5
LPAZ	La Paz	5.00	351	P	Pn	04 10 39.3	+1.3
LPAZ	La Paz	5.00	351	eP	Pn	04 10 39.0	+1.1
AC01	Pan de Azucar	5.74	211		Pn	04 10 45.9	-0.8
AC02	Maricunga	5.81	196	Pn	Pn	04 10 48.1	+0.1
AC06	Mina Casimiro	6.69	204	Pn	Pn	04 10 57.2	-1.8
GO03	Copiap	6.86	202		Pn	04 10 59.5	-1.8
AC04	Llanos de Chal	7.73	206	Pn	Pn	04 11 09.6	-2.9
CO01	Juntas del Tor	9.05	196		Pn	04 11 29.8	-0.2
GO04	Tololo Observa	9.43	199	Pn	Pn	04 11 32.5	-2.4
CO02	Combarbal	10.45	198	Pn	Pn	04 11 45.9	-2.2
VILB	Vilhena	10.68	41	eP	Pn	04 11 51.6	+0.5
ETMB	Extrema	11.42	5	eP	Pn	04 11 58.9	-1.6
VA03	San Esteban	11.83	194	Pn	Pn	04 12 03.1	-2.6
MT02	Curacav	12.44	195	Pn	Pn	04 12 11.4	-1.9
CLDB	Colider	15.11	49	eP	P	04 12 47.2	0.0
SNDB	Serra Nova Dou	17.88	61	eP	P	04 13 17.9	+0.2
MACA	Manacapuru-AM	19.10	21	eP	P	04 13 29.7	-1.1
ITTB	Itaituba	20.19	35	eP	P	04 13 41.4	-1.3
PRPB	Parauapebas	22.61	51	eP	P	04 14 05.8	-1.3
SMTB	Santa Maria do	22.63	60	eP	P	04 14 07.2	-0.1
JANB	Januaria	22.68	78	eP	P	04 14 07.3	-0.4
MALB	Monte Alegre	23.09	35	eP	P	04 14 11.4	+0.1
QSPA	South Pole Qui	68.94	180	P	P	04 20 07.7	+1.4
QSPA				IAmb	IAmb	04 20 10.4	
	comp=Z,2.3nm,1.2s						
TOA0	Torodi Ar. Sit	75.86	70	P	P	04 20 47.9	+0.1
TOA0				IAmb	IAmb	04 21 04.9	
	comp=Z,6.3nm,1.4s						
TORD	Torodi Ar. Bea	75.86	70	P	P	04 20 48.1	+0.2
	comp=Z,0.7nm,0.5s,baz=247,slow=5.3,SNR=11						
	comp=Z,0.7nm,0.5s						
YKA	Yellowknife Ar	91.46	340	P	P	04 22 07.8	+1.7
	comp=Z,0.1nm,0.4s,baz=132,slow=4.4,SNR=2.6						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	144.54	37	PKP	PKPdf	04 28 36.7	+1.0
	comp=Z,0.5nm,0.7s,baz=303,slow=2.9,SNR=1.8						

JMA ***14*** *04:13:50.8±0.2,24°.1N±0°.9×12°2E±°,h20^{km}±1^{km}, MV3.3/11,TAIWAN REGION*

TAP ***14*** *04:13:50.8,24°.19N×121°.76E,h13^{km},ML3.8,B*

ISC 14 04:13:50.2±0.8,**24°.18N**±0°.02×**121°.80E**±0°.02,**h16**^{km}±6^{km}, **n110,**σ**0^{s}.87**/156,**14D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.14	340	⇓iP	Pg	04 13 54.3	+0.1
	baz=353						
EHP				i S	Sg	04 13 56.9	+0.2
	baz=353						
ETL	Fush Village	0.16	264	⇓iP	Pb	04 13 54.3	-0.5
	baz=260						
ETL				i S	Sb	04 13 57.0	-0.9
	baz=260						
NACB	Ninganchiao	0.18	269	⇓iP	Pb	04 13 54.6	-0.7
	baz=260						
NACB				i S	Sb	04 13 57.3	-1.4
	baz=260						
TWD	Chiawan	0.21	242	i P	Pb	04 13 55.2	-0.4
	baz=242						
TWD				i S	Sb	04 13 58.4	-0.9
	baz=242						
ENA	Nanau	0.26	349	⇓iP	Pg	04 13 56.1	+0.2
	baz=356						
ENA				i S	Sg	04 14 00.1	+0.4
	baz=356						
HWA	Hwalien	0.26	221	eP	Pb	04 13 57.2	+0.5
	baz=225						
EWUT	Wuta	0.27	357	⇓iP	Pb	04 13 56.5	-0.3
	baz=2.0						
EWUT				i S	Sg	04 14 00.6	+0.5
	baz=2.0						
ETLH	Xiulin Townshi	0.29	276	P	Pg	04 13 56.5	0.0
	baz=276						
ETLH				S	Sg	04 14 00.4	-0.3
	baz=276						
ETM	Tongmen	0.35	233	P	Pg	04 13 57.8	+0.4
	baz=230						
TEYL	Yanliau Villag	0.36	211	eP	Pb	04 13 58.7	+0.4
	baz=217						
LATG	Datong	0.43	326	⇓P	Pg	04 13 59.3	+0.3
	baz=328						
LATG				i S	Sg	04 14 05.1	+0.1
	baz=328						
TWC	Suao	0.43	6	⇓iP	Pb	04 13 59.6	0.0
	baz=4.0						
TWC				i S	Sb	04 14 05.7	-0.2
	baz=4.0						
NNSB	Datong	0.45	304	⇓P	Pg	04 13 59.6	+0.2
	baz=305						
NNSB				S	Sg	04 14 05.6	0.0
	baz=305						
NDS	Dongshan	0.46	351	⇓iP	Pb	04 14 00.1	+0.1
	baz=354						
NDS				i S	Sb	04 14 06.4	-0.3
	baz=354						
NNS	Nan Shan	0.47	304	P	Pg	04 13 59.8	+0.1
	baz=306						
NNS				S	Sg	04 14 06.0	0.0
	baz=306						
WHF	Hehuan Shan	0.49	266	i P	Pg	04 14 00.1	0.0
	baz=266						
WHF				i S	Sg	04 14 06.5	-0.2
	baz=266						
ESL	Shilin	0.49	223	eP	Pb	04 14 00.5	-0.1
	baz=229						
NDT	Datong Townshi	0.50	329	⇓iP	Pb	04 14 00.5	-0.1
	baz=331						
NDT				i S	Sb	04 14 07.5	-0.2
	baz=331						
ENTT	Nioudou	0.51	336	⇓iP	Pb	04 14 00.8	0.0
	baz=338						
ENTT				i S	Sb	04 14 07.9	-0.1
	baz=338						
FUSS	Fushou	0.51	278	P	Pg	04 14 00.9	+0.4
	baz=279						
FUSS				S	Sg	04 14 07.7	+0.3
	baz=279						
TEGC	Jichi Village	0.52	207	eP	Pn	04 14 02.4	-0.6
	baz=194						
TWE	Neicheng	0.56	348	⇓iP	Pg	04 14 01.9	+0.7
	baz=351						
TWE				i S	Sg	04 14 09.5	+0.8
	baz=351						
TWT	Tachien	0.57	278	i P	Pg	04 14 02.2	+0.6
	baz=278						
TWT				i S	Sb	04 14 09.8	-0.2
	baz=278						
CHGB	Renai	0.58	259	P	Pg	04 14 02.3	+0.5
	baz=252						
CHGB				S	Sb	04 14 09.8	-0.4
	baz=252						
TDCB	Techi	0.59	278	i P	Pg	04 14 02.4	+0.5
	baz=278						
TDCB				i S	Sb	04 14 09.4	-1.0
	baz=278						
ILA	Ilan	0.59	356	P	Pn	04 14 02.7	-1.3
	baz=353						
ILA				eS	Sg	04 14 10.8	+1.0
	baz=353						
EGFH	Guangfu	0.61	214	eP	Pn	04 14 03.4	-0.9
	baz=219						
OWD	Renai	0.61	249	P	Pg	04 14 03.0	+0.7
	baz=248						
FUSB	Fushanzhiwuyua	0.61	342	⇓iP	Pg	04 14 02.9	+0.5
	baz=344						
FUSB				i S	Sg	04 14 10.9	+0.4
	baz=344						
YHNB	Yeheng	0.62	322	P	Pg	04 14 03.0	+0.5
	baz=324						
YHNB				i S	Sg	04 14 11.2	+0.3
	baz=324						
NSK	Sanguang	0.64	321	⇓iP	Pg	04 14 03.2	+0.3
	baz=323						
NSK				i S	Sb	04 14 11.5	-0.3
	baz=323						
WUSB	Renai	0.65	254	eP	Pg	04 14 03.4	+0.4
	baz=246						
WUSB				S	Sb	04 14 11.7	-0.4
	baz=246						
NWLT	Wulai	0.66	336	i P	Pg	04 14 03.8	+0.6
	baz=338						
NWLT				i S	Sg	04 14 12.0	+0.1
	baz=338						
NTC	Toucheng	0.68	3	P	Pn	04 14 04.3	-0.8
	baz=4.0						
NTC				eS	Sn	04 14 13.8	-1.7
	baz=4.0						
VWDT	VWDT	0.73	235	eP	Pn	04 14 05.2	-0.7
	baz=241						
HGSD	Ruisui	0.76	207	eP	Pn	04 14 05.7	-0.7
	baz=196						
NFF	Wufeng Townshi	0.77	306	eP	Pn	04 14 05.9	-0.6
	baz=308						
WHP	Taichung City	0.78	278	eP	Pg	04 14 05.8	+0.3
	baz=278						
WHP				eS	Sg	04 14 16.4	+0.5
	baz=278						
WPL	Puli Township	0.78	258	eP	Pg	04 14 06.0	+0.5
	baz=250						
WPL				S	Sb	04 14 16.2	+0.3
	baz=250						
TIPB	Shuangxi	0.79	2	eP	Pn	04 14 06.1	-0.8
	baz=3.0						
TIPB				S	Sg	04 14 16.4	+0.1
	baz=3.0						
EHY	Hungye	0.80	213	eP	Pn	04 14 06.5	-0.3
	baz=224						
DPDB	Guoxing	0.81	260	eP	Pn	04 14 06.7	-0.4
	baz=260						
TWA	Mucha	0.82	347	eP	Pn	04 14 07.0	-0.2
	baz=339						
TATO	Taipei	0.84	341	P	Pn	04 14 07.4	-0.1
	baz=342						
TATO				S	Sn	04 14 18.6	-1.0
	baz=342						
TWB1	Santiao Chiao	0.85	12	P	Pn	04 14 07.7	+0.1
	baz=13						
TWB1				eS	Sg	04 14 18.1	+0.1
	baz=13						
LIOB	Emei	0.85	303	eP	Pn	04 14 07.8	+0.2
	baz=305						
NSTT	Nanjuang	0.85	302	eP	Pn	04 14 07.5	-0.2
	baz=303						
NSTT				S	Sg	04 14 18.3	+0.1
	baz=303						
SSLB	Suanglung	0.86	243	eP	Pb	04 14 06.9	0.0
	baz=253						
SSLB				S	Sb	04 14 18.0	-0.2
	baz=253						
SMLT	Sun Moon Lake	0.87	251	eP	Pb	04 14 06.9	-0.1
	baz=251						
SMLT				eS	Sg	04 14 19.1	+0.5
	baz=251						
NWF	Wu-fen Shan	0.89	359	P	Pn	04 14 08.4	+0.2
	baz=353						
NWF				S	Sn	04 14 19.7	-1.2
	baz=353						
WFSB	Wu-fen Shan	0.89	359	P	Pn	04 14 08.2	+0.1
	baz=353						
WFSB				S	Sn	04 14 19.6	-1.2
	baz=353						
TAP1	Taipei	0.89	344	eP	Pn	04 14 09.2	+1.1
	baz=336						
TAP	Taipei	0.90	343	eP	Pn	04 14 08.6	+0.4
	baz=344						
TAP				eS	Sn	04 14 20.7	-0.3
	baz=344						
YULB	Yu-li	0.90	210	eP	Pg	04 14 07.9	+0.1
	baz=221						
ECBN	Changbin	0.91	200	eP	Pg	04 14 08.5	+0.5
	baz=188						
SXI1	Grass Mountain	0.92	5	P	Pn	04 14 08.9	+0.3
	baz=6.0						
SXI1				eS	Sn	04 14 20.7	-0.9
	baz=6.0						
HSN1	Hsinchu	0.93	310	eP	Pg	04 14 09.3	+1.0
	baz=312						
EYUL	Yuli	0.93	208	eP	Pg	04 14 09.4	+1.0
	baz=224						
TWQ1	Liyutan	0.95	281	P	Pg	04 14 09.9	+1.3
	baz=281						
SBCB	Hsinchu	0.96	310	eP	Pg	04 14 10.3	+1.4
	baz=311						
NCU	National Centr	0.96	325	eP	Pg	04 14 09.7	+0.7
	baz=326						
NCU				eS	Sn	04 14 24.2	+1.6
	baz=326						
NCUH	Zhongli	0.96	325	eP	Pg	04 14 09.8	+0.8
	baz=321						
TNOU	National Taiwa	0.97	359	eP	Pg	04 14 09.4	+0.4
	baz=360						
NSY	Sanyi	0.97	284	eP	Pg	04 14 10.2	+1.1
	baz=285						
HSN	Hsinchu	0.98	310	eP	Pg	04 14 10.7	+1.5
	baz=314						
TWS1	Kuangyinshan	0.98	340	eP	Pg	04 14 09.6	+0.3
	baz=348						
TWS1				eS	Sn	04 14 23.9	+0.9
	baz=348						
NMLH	Miaoli	0.98	292	eP	Pg	04 14 10.8	+1.5
	baz=292						
YM01	YM01	0.99	348	eP	Pg	04 14 10.6	+1.2
	baz=349						
WWF	Wufeng	1.01	263	eP	Pg	04 14 11.6	+1.7
	baz=257						
TCU	Taichung	1.02	269	eP	Pg	04 14 11.4	+1.3
	baz=269						
YM08	YM08	1.02	350	P	Pg	04 14 10.6	+0.5
	baz=350						
YUS	Yu-Shan	1.03	229	eP	Pg	04 14 11.6	+1.3
	baz=229						
NTST	Danshui	1.03	342	eP	Pg	04 14 10.1	-0.1
	baz=343						
ANP	Anpu	1.04	346	eP	Pg	04 14 10.5	+0.1
	baz=347						
WJS	Zhushan	1.04	250	eP	Pg	04 14 12.2	+1.9
	baz=245						
WNT1	Nantou City	1.05	256	eP	Pg	04 14 12.1	+1.4
	baz=256						
WDJ	Dajia District	1.07	279	eP	Pg	04 14 11.9	+1.0
	baz=280						
NHW	Xinwu Township	1.07	321	eP	Pg	04 14 11.0	0.0
	baz=321						
JYNG	Yonagunijimaku	1.08	75	P	Pg	04 14 13.0	+1.8
JYNG				S	Sg	04 14 28.2	+2.8
TWY	Chenhua	1.11	351	eP	Pg	04 14 13.3	+1.6
	baz=337						
ALS	Alishan	1.12	234	eP	Pn	04 14 11.1	-0.5
	baz=235						
WCHH	Zhanghua	1.13	265	eP	Pg	04 14 12.0	-0.2
	baz=266						
YOJ	Yonaguni jima	1.15	75	eP	Pg	04 14 13.6	+1.2
	baz=66						
YOJ				eS	Sg	04 14 29.3	+1.9
	baz=66						
YOJ	Yonaguni jima	1.15	75	eP	Pg	04 14 14.1	+1.7
YOJ				eS	Sg	04 14 29.7	+2.3
CHN5	Tsauling	1.17	241	eP	Pg	04 14 12.9	-0.1
	baz=242						
TPUB	Ta-pu	1.38	231	eP	Pb	04 14 15.6	-0.1
	baz=232						
WTP	Ta-pu	1.43	230	eP	Pb	04 14 16.6	+0.1
	baz=231						
CHY	Chiayi	1.43	242	eP	Pg	04 14 17.2	-0.5
	baz=243						
PCYT	Pengchaiyu	1.47	10	eP	Pb	04 14 17.2	0.0
	baz=8.0						
TWK	Hsinying	1.50	233	eP	Pb	04 14 17.7	-0.1
	baz=234						
CHN1	Nanshi	1.52	230	eP	Pb	04 14 18.7	+0.5
	baz=231						
SNST	Tainan City	1.52	232	eP	Pb	04 14 18.2	+0.1
	baz=233						
SGST	Jiashian	1.56	226	eP	Pb	04 14 19.1	+0.3
	baz=227						

WSL	**Shuilin Townsh**	1.58	246	*e*P	Pb	04 14 19.7	+0.6
	baz=248						
ICHU	**Yijhu**	1.61	240	*e*P	Pb	04 14 20.3	+0.7
	baz=242						
ECL	**Taimali**	1.75	206	*e*P	Pb	04 14 22.1	0.0
	baz=193						
IRIF	**Iriomote-Funau**	1.77	84	*e*P	Pg	04 14 23.3	-1.1
IRIF				*e*S	Sg	04 14 45.0	-2.3
SSD	**Sandimen**	1.78	217	*e*P	Pb	04 14 22.6	0.0
	baz=231						
HATJ	**Hateruma jima**	1.84	93	*e*S	Sb	04 14 46.7	+0.3
MASBT	**Mashibuluo**	1.89	215	*e*P	Pb	04 14 24.5	+0.1
	baz=216						
JKRS	**Kuro-shima**	2.02	88	P	Pb	04 14 26.4	-0.2
SCZT	**Fangliau**	2.10	211	*e*P	Pb	04 14 26.7	-1.3
	baz=196						
PNG	**Penghu**	2.14	254	*e*P	Pb	04 14 27.3	-1.4
	baz=257						
JIJ	**Ishigaki jima**	2.15	85	*e*P	Pb	04 14 28.5	-0.3
JIJ				*e*S	Sb	04 14 53.6	-1.7
WDGT	**Dungji**	2.16	245	*e*P	Pn	04 14 27.1	+1.5
	baz=248						
LYUB	**Lan-yu**	2.17	185	*e*P	Pn	04 14 26.6	+0.8
	baz=187						
JISG	**Ishigakijimahi**	2.33	79	*e*S	Sb	04 14 57.8	-2.6
JTJ	**Tarama**	2.69	79	*e*S	Sb	04 15 09.3	-1.6
AXDP	**Jialang**	3.56	282	*e*P	Pn	04 14 46.1	+1.3
	baz=283						
ZPLA	**Ao Xicun**	3.71	267	*e*P	Pn	04 14 47.2	+0.3
	baz=269						

TAP 14 04:15:12.4, 24°.19N×121°.73E, h8^{km}, ML3.5, 12D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	0.10	255	P	Pg	04 15 14.3	-0.5
	baz=255						
ETL				S	Sg	04 15 17.2	+0.7
	baz=255						
NACB	**Ninganchiao**	0.12	265	P	Pg	04 15 14.5	-0.6
	baz=259						
NACB				S	Sg	04 15 17.4	+0.4
	baz=259						
EHP	**Heping Village**	0.12	5	P	Pg	04 15 15.7	+0.4
	baz=8.0						
EHP				S	Sg	04 15 18.3	+1.2
	baz=8.0						
TWD	**Chiawan**	0.16	229	*i* P	Pg	04 15 16.1	+0.3
	baz=236						
TWD				*i* S	Sg	04 15 18.6	+0.6
	baz=236						
ETLH	**Xiulin Townshi**	0.23	276	P	Pg	04 15 17.2	+0.2
	baz=276						
ETLH				S	Sg	04 15 20.7	+0.6
	baz=276						
HWA	**Hwalien**	0.24	209	*e*P	Pg	04 15 18.0	+0.9
	baz=219						
HWA				*e*S	Sg	04 15 23.9	+3.5
	baz=219						
ENA	**Nanau**	0.24	3	⇓*i*P	Pg	04 15 17.7	+0.4
	baz=4.0						
ENA				*i* S	Sg	04 15 21.4	+0.8
	baz=4.0						
EWUT	**Wuta**	0.26	10	P	Pg	04 15 18.1	+0.4
	baz=9.0						
EWUT				S	Sg	04 15 21.9	+0.6
	baz=9.0						
ETM	**Tongmen**	0.31	225	*e*P	Pg	04 15 18.5	0.0
	baz=217						
ETM				*e*S	Sg	04 15 22.8	+0.2
	baz=217						
TEYL	**Yanliau Villag**	0.34	201	P	Pb	04 15 20.1	-0.6
	baz=213						
TEYL				S	Sb	04 15 26.7	+0.4
	baz=213						
LATG	**Datong**	0.39	332	⇓*i*P	Pg	04 15 20.7	+0.5
	baz=332						
LATG				S	Sg	04 15 26.4	+1.0
	baz=332						
NNSB	**Datong**	0.40	308	⇓*i*P	Pg	04 15 20.8	+0.5
	baz=308						
NNSB				S	Sg	04 15 26.5	+0.9
	baz=308						
NNS	**Nan Shan**	0.41	308	⇓*i*P	Pg	04 15 21.0	+0.4
	baz=309						
NNS				*i* S	Sg	04 15 27.0	+1.0
	baz=309						
WHF	**Hehuan Shan**	0.42	265	⇓*i*P	Pg	04 15 21.0	+0.2
	baz=265						
WHF				S	Sg	04 15 27.2	+0.7
	baz=265						
TWC	**Suao**	0.44	15	P	Pg	04 15 21.3	+0.3
	baz=15						
TWC				S	Sg	04 15 27.4	+0.7
	baz=15						
FUSS	**Fushou**	0.45	278	*i* P	Pg	04 15 21.8	+0.6
	baz=279						
FUSS				S	Sg	04 15 27.7	+0.6
	baz=279						
NDS	**Dongshan**	0.45	359	P	Pg	04 15 21.7	+0.5
	baz=358						
NDS				S	Sg	04 15 27.8	+0.8
	baz=358						
ESL	**Shilin**	0.46	216	P	Pg	04 15 21.6	+0.2
	baz=227						
ESL				S	Sg	04 15 28.5	+1.2
	baz=227						
ENTT	**Nioudou**	0.48	342	⇓*i*P	Pg	04 15 22.4	+0.6
	baz=342						
ENTT				*i* S	Sg	04 15 28.9	+0.9
	baz=342						
CHGB	**Renai**	0.52	256	P	Pg	04 15 22.9	+0.3
	baz=249						
CHGB				S	Sg	04 15 29.8	+0.3
	baz=249						
TDCB	**Techi**	0.53	278	⇓*i*P	Pg	04 15 23.2	+0.6
	baz=278						
TDCB				S	Sg	04 15 30.0	+0.5
	baz=278						
TWE	**Neicheng**	0.54	354	⇓*i*P	Pg	04 15 23.4	+0.6
	baz=3.0						
TWE				*e*S	Sg	04 15 30.5	+0.6
	baz=3.0						
OWD	**Renai**	0.55	246	*e*P	Pg	04 15 23.2	+0.1
	baz=247						
OWD				*e*S	Sg	04 15 30.2	-0.3
	baz=247						
YHNB	**Yeheng**	0.58	326	⇓*i*P	Pb	04 15 24.4	-0.5
	baz=326						
YHNB				S	Sg	04 15 32.1	+0.8
	baz=326						
EGFH	**Guangfu**	0.58	208	*e*P	Pg	04 15 23.7	0.0
	baz=217						
EGFH				*e*S	Sg	04 15 32.2	+0.9
	baz=217						
FUSB	**Fushanzhiwuyua**	0.59	347	⇓*i*P	Pb	04 15 24.5	-0.5
	baz=347						
FUSB				S	Sg	04 15 32.0	+0.5
	baz=347						
WUSB	**Renai**	0.59	251	P	Pg	04 15 24.1	+0.3
	baz=244						
WUSB				S	Sg	04 15 31.5	-0.1
	baz=244						
NSK	**Sanguang**	0.59	325	⇓*i*P	Pb	04 15 24.6	-0.6
	baz=326						
NSK				S	Sb	04 15 33.3	-0.5
	baz=326						
NWLT	**Wulai**	0.62	341	⇓*i*P	Pg	04 15 25.1	+0.6
	baz=340						
NWLT				S	Sg	04 15 33.2	+0.5
	baz=340						
NTC	**Toucheng**	0.67	8	*e*P	Pg	04 15 25.3	-0.2
	baz=7.0						
NTC				*e*S	Sg	04 15 34.9	+0.7
	baz=7.0						
EGS		0.68	16	*e*P	Pb	04 15 27.1	+0.5
	baz=24						
VWDT	**VWDT**	0.69	231	P	Pb	04 15 26.2	-0.5
	baz=233						
VWDT				S	Sg	04 15 35.4	+0.8
	baz=233						
NFF	**Wufeng Townshi**	0.71	309	*e*P	Pb	04 15 27.1	-0.1
	baz=317						
NFF				*e*S	Sg	04 15 36.3	+0.8
	baz=317						
WHP	**Taichung City**	0.72	278	P	Pb	04 15 27.2	-0.1
	baz=278						
WHP				S	Sb	04 15 37.0	-0.4
	baz=278						
WPL	**Puli Township**	0.72	256	P	Pg	04 15 26.9	+0.4
	baz=247						
WPL				S	Sb	04 15 37.1	-0.4
	baz=247						
HGSD	**Ruisui**	0.74	202	*e*P	Pb	04 15 28.1	+0.4
	baz=218						
HGSD				*e*S	Sn	04 15 39.4	-1.4
	baz=218						
DPDB	**Guoxing**	0.75	259	*e*P	Pg	04 15 27.2	+0.3
	baz=249						
DPDB				*e*S	Sg	04 15 36.8	+0.2
	baz=249						
EHY	**Hungye**	0.77	209	P	Pg	04 15 26.9	-0.3
	baz=218						
EHY				*e*S	Sg	04 15 37.4	0.0
	baz=218						
TIPB	**Shuangxi**	0.79	6	P	Pb	04 15 28.1	-0.3
	baz=356						
TIPB				*e*S	Sg	04 15 38.0	+0.1
	baz=356						
LIOB	**Emei**	0.80	305	*e*P	Pb	04 15 28.6	0.0
	baz=305						
LIOB				*e*S	Sb	04 15 40.1	+0.6
	baz=305						
NSTT	**Nanjuang**	0.80	304	*e*P	Pb	04 15 28.6	0.0
	baz=304						
NSTT				*e*S	Sb	04 15 39.4	-0.2
	baz=304						
SSLB	**Suanglung**	0.81	241	P	Pg	04 15 27.9	-0.2
	baz=242						
SSLB				S	Sg	04 15 37.2	-1.4
	baz=242						
SMLT	**Sun Moon Lake**	0.81	249	*e*P	Pg	04 15 28.4	+0.2
	baz=249						
SMLT				*e*S	Sg	04 15 39.1	+0.4
	baz=249						
TATO	**Taipei**	0.82	345	*e*P	Pb	04 15 28.7	-0.2
	baz=344						
TYC	**Yuchr**	0.84	251	*e*P	Pb	04 15 29.1	-0.2
	baz=243						
TYC				*e*S	Sg	04 15 39.3	-0.3
	baz=243						
TWB1	**Santiao Chiao**	0.85	16	*e*P	Pb	04 15 29.5	-0.1
	baz=7.0						
TWB1				*e*S	Sg	04 15 40.5	+0.5
	baz=7.0						
YULB	**Yu-li**	0.88	207	*e*P	Pg	04 15 28.4	-1.1
	baz=222						
NWF	**Wu-fen Shan**	0.88	3	*e*P	Pb	04 15 30.0	-0.1
	baz=354						
NWF				*e*S	Sg	04 15 40.9	-0.1
	baz=354						
TWQ1	**Liyutan**	0.89	281	P	Pn	04 15 31.7	+0.5
	baz=281						
NSY	**Sanyi**	0.91	285	*e*P	Pn	04 15 31.4	-0.3
	baz=285						
EYUL	**Yuli**	0.91	204	*e*P	Pn	04 15 31.4	-0.2
	baz=218						
SXI1	**Grass Mountain**	0.92	8	*e*P	Pg	04 15 30.1	+0.1
	baz=353						
SXI1				*e*S	Sg	04 15 41.7	-0.3
	baz=353						
TWF1	**Yuli**	0.92	206	P	Pg	04 15 30.0	-0.1
	baz=219						
TWF1				*e*S	Sb	04 15 43.3	+0.3
	baz=219						
NCUH	**Zhongli**	0.92	328	*e*P	Pn	04 15 31.6	-0.2
	baz=327						
NCU	**National Centr**	0.92	328	*e*S	Sn	04 15 47.0	+1.8
	baz=328						
NMLH	**Miaoli**	0.92	293	*e*P	Pb	04 15 31.2	+0.5
	baz=301						
TWS1	**Kuangyinshan**	0.95	343	*e*P	Pn	04 15 32.5	+0.3
	baz=352						
TWS1				*e*S	Sn	04 15 47.8	+1.8
	baz=352						
TCU	**Taichung**	0.96	268	*e*P	Pn	04 15 31.9	-0.3
	baz=269						
TCU				*e*S	Sn	04 15 47.0	+0.9
	baz=269						
YM01	**YM01**	0.97	351	*e*P	Pn	04 15 32.4	-0.1
	baz=350						
WJS	**Zhushan**	0.98	249	*e*P	Pg	04 15 30.3	-1.1
	baz=243						
YUS	**Yu-Shan**	0.99	226	*e*P	Pg	04 15 31.5	-0.1
	baz=228						
YUS				*e*S	Sg	04 15 44.8	+0.3
	baz=228						
FULB	**Fuli**	1.06	202	*e*P	Pg	04 15 32.3	-0.5
	baz=221						
WCHH	**Zhanghua**	1.07	265	*e*P	Pn	04 15 34.6	+0.8
	baz=265						
WCHH				*e*S	Sn	04 15 51.1	+2.2
	baz=265						
ALS	**Alishan**	1.08	232	*e*P	Pg	04 15 33.2	0.0
	baz=233						
ALS				*e*S	Sn	04 15 49.4	-0.1
	baz=233						
CHN5	**Tsauling**	1.12	239	*e*P	Pn	04 15 34.9	+0.3
	baz=240						
CHN5				*e*S	Sn	04 15 51.6	+1.2
	baz=240						
CHKT	**Chengkung**	1.13	197	*e*P	Pg	04 15 33.0	-1.2
	baz=186						
ELDTW	**Lidau**	1.19	213	*e*P	Pg	04 15 34.1	-1.1
	baz=218						
WDLH	**Douliu**	1.20	246	*e*P	Pn	04 15 35.7	+0.3
	baz=248						
WDLH				*e*S	Sn	04 15 52.9	+0.9
	baz=248						
WRL	**Guolierlin Hig**	1.27	257	*e*P	Pg	04 15 36.9	+0.1
	baz=258						
WRL				*e*S	Sn	04 15 54.9	+1.3
	baz=258						
EDH	**Donghe**	1.27	198	P	Pn	04 15 35.6	-0.8
	baz=187						
EDH				*e*S	Sg	04 15 53.4	+0.1
	baz=187						
WTK	**Tuku**	1.32	248	*e*P	Pg	04 15 37.8	-0.1
	baz=250						
WTK				*e*S	Sn	04 15 56.6	+1.5
	baz=250						
STYH	**Taoyuan**	1.33	221	*e*P	Pn	04 15 36.7	-0.7
	baz=224						
STYH				*e*S	Sb	04 15 54.4	-0.6
	baz=224						
TPUB	**Ta-pu**	1.34	229	*e*P	Pb	04 15 37.8	0.0
	baz=220						
TPUB				*e*S	Sg	04 15 57.2	+1.7
	baz=220						
CHY	**Chiayi**	1.38	240	*e*P	Pg	04 15 39.3	+0.5
	baz=242						
CHY				*e*S	Sg	04 15 58.1	+1.4
	baz=242						
WTP	**Ta-pu**	1.38	228	*e*P	Pb	04 15 38.5	-0.1
	baz=219						
WTP				*e*S	Sg	04 15 58.6	+1.6
	baz=219						
LONT	**Longtian**	1.39	203	*e*P	Pn	04 15 35.7	-2.4
	baz=221						
TWK	**Hsinying**	1.46	231	*e*P	Pb	04 15 39.8	-0.1
	baz=234						
TWK				*e*S	Sg	04 16 00.9	+1.6
	baz=234						
CHN1	**Nanshi**	1.48	228	*e*P	Pg	04 15 40.7	-0.2
	baz=220						
CHN1				*e*S	Sg	04 16 02.8	+2.6
	baz=220						
TWG	**Pinlang**	1.49	204	*e*P	Pn	04 15 39.8	+0.3
	baz=211						
SGST	**Jiashian**	1.52	224	*e*P	Pn	04 15 40.0	0.0
	baz=229						
WSL	**Shuilin Townsh**	1.52	245	*e*P	Pb	04 15 41.1	+0.1
	baz=246						
WSL				*e*S	Sg	04 16 03.4	+1.9
	baz=246						
SSD	**Sandimen**	1.75	215	*e*P	Pb	04 15 44.2	-0.6
	baz=223						
MASBT	**Mashibuluo**	1.86	213	*e*P	Pn	04 15 44.8	+0.1
	baz=229						
MASBT				S	Sb	04 16 10.6	+0.5
	baz=229						
PNG	**Penghu**	2.08	253	*e*P	Pb	04 15 49.5	-0.9
	baz=255						
PNG				*e*S	Sb	04 16 15.5	-1.0
	baz=255						
WDGT	**Dungji**	2.11	245	*e*P	Pn	04 15 48.5	+0.5
	baz=233						
WDGT				*e*S	Sb	04 16 15.8	-1.4
	baz=233						

IDC 14 04:24:40.4±8.2, 22°.35S×147°.19E, h0^{km}, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=105.4km s-min=63.1km az=178.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	12.22	279	Pn	Pn	04 27 34.5	-1.4
	baz=95,slow=12,SNR=4.5						
WRA				Lg	Lg	04 31 09.4	
	baz=104,slow=29,SNR=4.6 0.4nm,1.0s						
ASAR	**Alice Springs**	12.30	261	Pn	Pn	04 27 38.6	+1.6
	baz=89,slow=14,SNR=1.6						
ASAR				Lg	Lg	04 31 10.2	
	baz=75,slow=28 0.3nm,0.7s						
I22FR	**PORTLAGUERRE I**	18.20	93	*i*		06 13 30.0	
	baz=268,slow=308,SNR=2.0						

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*IPEC **14** 04:34:58.3±0.4, 51°.51N×16°.20E, h2^{km}±2^{km}, ML2.0/3, Error ellipse: s-maj=2.7km s-min=1.2km az=31.0*

*VIE **14** 04:34:59.8±0.9, 51°.40N×16°.09E, h0^{km}, mb2.4/3, ml2.5/3, Error ellipse: s-maj=10.7km s-min=4.9km az=53.0   72 km WNW of Wroclaw Suspected Mining induced.*

*PRU **14** 04:34:59.7±0.0, 51°.45N×16°.08E, h0^{km}*

ISC 14 04:34:58.5±1.2, 51°.49N±0°.05×16°.12E±0°.03, h0^{km}, n28, σ0^{s}.78/59, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.66	171	*e*Pg	**Pg**	**04 35 11.6**	**+0.4**
KSP				*e*Sg	**Sg**	**04 35 20.0**	**+0.4**
CHVC	**Chvalec**	0.91	183	*e*PG	**Pg**	**04 35 16.3**	**+0.4**
CHVC				*e*SG	**Sg**	**04 35 27.8**	**+0.2**
OSTC	**Ostas**	0.94	176	*e*PG	**Pg**	**04 35 16.7**	**+0.2**
OSTC				*e*SG	**Sg**	**04 35 29.0**	**+0.3**
	comp=Z,25nm,0.4s						
UPC	**Upice**	0.99	184	*e*PG	**Pg**	**04 35 17.5**	**+0.1**
UPC				*e*SG	**Sg**	**04 35 30.4**	**+0.1**
	comp=Z,96nm,0.5s						
DPC	**Dobruska-Polom**	1.15	174	*e*PG	**Pg**	**04 35 20.1**	**-0.4**
DPC				*e*SG	**Sg**	**04 35 34.9**	**-0.6**
	comp=Z,22nm,0.3s						
PVCC	**Panska Ves**	1.38	226	*e*PG	**Pb**	**04 35 25.1**	**0.0**
PVCC				*e*SG	**Sg**	**04 35 43.2**	**+0.5**
	comp=Z,106nm,0.2s						
KRLC	**Kraliky**	1.48	163	*e*PG	**Pg**	**04 35 26.5**	**-0.3**
KRLC				*e*SG	**Sg**	**04 35 45.2**	**-0.8**
	comp=Z,30nm,0.6s						
BRG	**Berggiesshubel**	1.51	246	Pg	**Pb**	**04 35 27.3**	**0.0**
BRG				Sg	**Sn**	**04 35 47.4**	**+0.4**
BRG				Amp		04 35 48.1	
	comp=Z,39nm,0.4s						
PRU	**Pruhonice**	1.81	214	*e*PN	**Pn**	**04 35 30.5**	**-0.4**
PRU				*e*PG	**Pb**	**04 35 32.2**	**-0.3**
PRU				*e*SG	**Sb**	**04 35 55.7**	**0.0**
	comp=Z,17nm,0.4s						
MORC	**Moravsky Berou**	1.94	152	*e*Pn	**Pn**	**04 35 32.3**	**-0.5**
	baz=334						
MORC				*e*Sg	**Sb**	**04 35 58.8**	**-0.7**
	comp=Z,13nm,0.4s,baz=334						
MORC	**Moravsky Berou**	1.94	152	*e*PN	**Pn**	**04 35 32.4**	**-0.4**
MORC				*e*SG	**Sb**	**04 35 58.9**	**-0.6**
CLL	**Collm**	1.96	266	*e*Pn	**Pn**	**04 35 33.0**	**0.0**
CLL				*e*Pg	**Pb**	**04 35 35.0**	**-0.1**
CLL				*i* Sg	**Sg**	**04 36 01.6**	**+0.1**
	comp=Z,20nm,0.3s						
OKC	**Ostrava-Krasne**	2.10	141	*e*PG	**Pb**	**04 35 37.3**	**-0.1**
VRAC	**Vranov**	2.21	172	*e*Pn	**Pn**	**04 35 35.9**	**-0.5**
	baz=354						
VRAC				*e*Sg	**Sb**	**04 36 07.9**	**+0.8**
	comp=Z,8.7nm,0.3s,baz=354						
VRAC	**Vranov**	2.21	172	*e*PN	**Pn**	**04 35 35.9**	**-0.5**
VRAC				*e*SG	**Sb**	**04 36 08.0**	**+0.8**
MAUC	**Maruska**	2.39	152	*e*PG	**Pg**	**04 35 43.3**	**-1.0**
KRUC	**Moravsky**	2.44	176	*e*Pn	**Pn**	**04 35 39.0**	**-0.5**
	baz=357						
KRUC				*e*Sg	**Sb**	**04 36 15.2**	**+1.4**
	comp=Z,6.9nm,0.3s,baz=357						
KRUC	**Moravsky**	2.44	176	*e*PN	**Pn**	**04 35 39.1**	**-0.5**
KRUC				*e*SG	**Sb**	**04 36 15.2**	**+1.4**
NKC	**Novy Kostel**	2.65	243	*e*PN	**Pn**	**04 35 42.4**	**-0.1**
NKC				*e*PG	**Pg**	**04 35 48.4**	**-0.8**
NKC				*e*SG	**Sg**	**04 36 23.0**	**-0.6**
	comp=Z,24nm,0.3s						
OJC	**Ojcow**	2.66	117	Pn	**Pn**	**04 35 42.2**	**-0.4**
OJC				*e*Pg	**Pg**	**04 35 50.3**	**+0.9**
OJC				*e*Sg	**Sg**	**04 36 25.0**	**+1.3**
JAVC	**Velka Javorina**	2.82	159	*e*PN	**Pn**	**04 35 44.6**	**-0.2**
KHC	**Kasperske Hory**	2.87	216	*e*PN	**Pn**	**04 35 45.7**	**+0.1**
KHC				*e*PG	**Pb**	**04 35 51.4**	**+0.8**
KHC				*e*SN	**Sn**	**04 36 18.2**	**-2.7**
KHC				*e*SG	**Sb**	**04 36 28.8**	**+2.5**
	comp=Z,7.5nm,0.4s						
CKRC	**Cesky Krumlov**	2.92	204	*e*PN	**Pn**	**04 35 46.3**	**+0.1**
CKRC				*e*PG	**Pb**	**04 35 52.3**	**+0.9**
CKRC				*e*SG	**Sb**	**04 36 29.3**	**+1.6**
	comp=Z,8.5nm,0.4s						
LANS	**Liptovska Anna**	3.18	136	*e*PG	**Pg**	**04 35 58.9**	**-0.4**
LANS				*e*SG	**Sg**	**04 36 40.6**	**+0.1**
MODS	**Modra-Piesok**	3.21	166	*e*PG	**Pg**	**04 35 59.8**	**-0.2**
MODS				*e*SG	**Sg**	**04 36 41.1**	**-0.5**
CONA	**Conrad Observa**	3.57	183	*i* Pn	**Pn**	**04 35 55.9**	**+0.7**
	comp=Z,0.6nm,0.2s						
CONA				*e*Sg	**Sg**	**04 36 52.9**	**-0.3**
	comp=Z,5.9nm,0.4s						
MOA	**Molln**	3.84	199	*i* Pn	**Pn**	**04 35 59.6**	**+0.7**
	comp=Z,0.5nm,0.1s						
MOA				*e*Sg	**Sg**	**04 37 01.1**	**-0.8**
	comp=Z,3.1nm,0.3s						
ARSA	**Arzberg**	4.27	186	*e*Sg	**Sg**	**04 37 15.9**	**+0.4**
	comp=Z,1.9nm,0.3s						

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*IDC **14** 04:46:00.5±1.0, 26°.93N×143°.37E, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.2/6, Error ellipse: s-maj=21.7km s-min=20.4km az=33.0*

*NEIC **14** 04:46:03.8±2.0, 27°.0N±0°.1×143°.21E±0°.08, h25^{km}±6^{km}, mb4.2/8, Error ellipse: s-maj=19.4km s-min=9.8km az=179.0*

ISC 14 04:46:05.0±0.8, 27°.0N±0°.1×143°.30E±0°.09, h35^{km}, n23, σ1^{s}.65/18, mb4.1/7, MS3.3/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	1.00	277	Pn	**Pn**	**04 46 22.6**	**+0.2**
	48nm,0.3s,baz=114,slow=23,SNR=60						
JCJ				Sn	**Sn**	**04 46 39.6**	**+4.2**
	347nm,0.3s,baz=253,slow=19,SNR=14						
JCJ	**Chichijima**	1.00	277		**Pn**	**04 46 22.4**	**-0.1**
JCJ				Sn	**Sn**	**04 46 33.9**	**-1.5**
NACB	**Ninganchiao**	19.77	267	P	**P**	**04 50 30.3**	**-1.9**
NACB				IAmb	IAmb	04 50 33.4	
	comp=Z,26nm,0.6s						
DAV	**Davao City (W)**	25.98	224	LR	LR	05 02 51.1	
	comp=Z,17nm,18.9s,baz=158,slow=39						
ULN	**Ulaanbaatar**	35.09	316	P	**P**	**04 52 53.1**	**-1.9**
ULN				IAmb	IAmb	04 52 55.9	
	comp=Z,3.4nm,1.1s						
CMAR	**Chiang Mai Arr**	41.61	268	LR	LR	05 08 46.9	
	comp=Z,31nm,21.9s,baz=85,slow=33						
BILL	**Bilibino**	43.36	12	P	**P**	**04 54 01.9**	**-1.6**
WRAB	**Tennant Creek**	47.42	191	P	**P**	**04 54 35.2**	**-1.0**
WB2	**Warramunga Arr**	47.43	191	P	**P**	**04 54 36.1**	**-0.2**
WRA	**Warramunga Arr**	47.44	191	P	**P**	**04 54 36.6**	**+0.4**
	comp=Z,15nm,0.7s,baz=8.7,slow=8.3,SNR=100						
WRA	**Warramunga Arr**	47.44	191	P	**P**	**04 54 36.0**	**-0.3**
WRA				IAmb	IAmb	04 54 38.1	
	comp=Z,1.6nm,1.1s						
AS31	**Alice Springs**	51.15	191	P	**P**	**04 55 02.6**	**-2.0**
ASAR	**Alice Springs**	51.15	191	P	**P**	**04 55 05.0**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=12,slow=15,SNR=17 comp=Z,2.1nm,0.9s						
ILAR	**Eielson Array**	57.35	29	P	**P**	**04 55 50.2**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=259,slow=6.0,SNR=2.5 comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	57.35	29	P	**P**	**04 55 50.6**	**+1.3**

STKA	Stephens Creek	58.54	182	P	P	04 55 58.8	+0.8
	comp=Z,1.0nm,0.5s,baz=359,slow=2.6,SNR=3.4 comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	58.54	182	IAmb	IAmb	04 56 22.1	
	comp=Z,2.1nm,1.4s						
AKTO	Aktyubinsk	66.81	316	LR	LR	05 27 14.2	
	comp=Z,16nm,19.8s,baz=85,slow=37						
GEYT	Alibeck	70.40	303	LR	LR	05 28 21.0	
	comp=Z,25nm,21.5s,baz=1.5,slow=36						
YKA	Yellowknife Ar	71.78	29	P	P	04 57 24.4	+0.9
	comp=Z,0.2nm,0.7s,baz=294,slow=6.2,SNR=3.6 comp=Z,0.2nm,0.7s						
YBH	Yreka Blue Hor	75.37	51	LR	LR	05 25 04.6	
	comp=Z,22nm,20.0s,baz=262,slow=31						
FINES	FINESS Array B	78.49	334	P	P	04 58 03.6	+1.4
	comp=Z,1.5nm,0.9s,baz=60,slow=8.2,SNR=2.1 comp=Z,1.5nm,0.9s						
TXAR	Lajitas Array	94.88	54	LR	LR	05 35 03.9	
	comp=Z,23nm,20.8s,baz=312,slow=31						

IDC 14 04:46:17.2±1.6**, 14°.08S×166°.51E, h0km, mb3.7**/3**, mbtmp3.7**/4**, ML3.6**/1**, Error ellipse: s-maj=54.9km s-min=31.0km az=130.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.95	180	Pn	Pn	04 48 14.2	0.0
	0.7nm,0.3s,baz=335,slow=19,SNR=1.4						
DZM				Sn	Sn	04 49 41.0	-3.9
	0.3nm,0.3s,baz=143,slow=20,SNR=1.1 3.1nm,0.5s						
WRA	Warramunga Arr	31.28	255	P	P	04 52 39.2	0.0
	0.8nm,1.0s,baz=86,slow=9.2,SNR=2.5 0.8nm,1.0s						
ASAR	Alice Springs	32.22	248	P	P	04 52 47.5	-0.1
	0.4nm,0.6s,baz=75,slow=9.9,SNR=5.5 0.4nm,0.6s						
ILAR	Eielson Array	86.14	18	P	P	04 58 59.9	0.0
	0.6nm,0.7s,baz=238,slow=5.2,SNR=9.2 0.6nm,0.7s						
ARCES	ARCESS Array B	119.44	345	PKP	PKPdf	05 05 08.0	-0.3
	2.9nm,1.0s,baz=20,slow=4.0,SNR=4.0						

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*VAO **14** 05:00:12.9±0.8, 16°.04S×69°.67W, h230km±5km, mb4.0*
*NEIC **14** 05:00:13.3±1.6, 16°.19S±0°.06×69°.56W±0°.08, h222km±7km, mb4.1/8, Error ellipse: s-maj=12.4km s-min=8.2km az=66.0*
*IDC **14** 05:00:14.1±1.0, 16°.14S×69°.40W, h228km±5km, mb3.5/7, mbtmp4.0/10, Error ellipse: s-maj=20.3km s-min=18.4km az=168.0*
ISC 14 05:00:11.5±0.8**, 16°.15S**±0°.07×**69°.68W**±0°.10**, h213km, n73, σ1ˢ.31**/68**, mb4.0**/7**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.49	95	P	Pn	05 00 49.5	+2.5
	165nm,0.4s,baz=298,slow=6.6,SNR=2019						
LPAZ				S	S	05 01 16.3	+2.0
	88nm,0.6s,baz=150,slow=5.7,SNR=21						
LPAZ	La Paz	1.49	95	Pn	Pn	05 00 49.3	+2.3
LPAZ	La Paz	1.49	95	*e*P	Pn	05 00 49.6	+2.5
PB16	IPOC Station P	2.18	176		Pn	05 00 56.5	+3.1
AP01	Chacalluta	2.30	196	Pn	Pn	05 00 55.8	+1.8
PB12	IPOC Station P	2.53	194	Pn	Pn	05 00 57.9	+1.3
PB11	IPOC Station P	3.59	180	Pn	Pn	05 01 10.5	+1.6
PB08	IPOC Station P	4.00	173		Pn	05 01 16.2	+2.1
TA01	Diego Aracena	4.42	186		Pn	05 01 19.4	+0.6
PATCX	Punta Patache	4.67	185	Pn	Pn	05 01 22.8	+0.7
PB01	IPOC Station P	4.87	178		Pn	05 01 25.4	+0.8
PB02	IPOC Station P	5.14	182		Pn	05 01 29.7	+1.5
PB07	IPOC Station P	5.55	182		Pn	05 01 34.6	+1.2
PB09	IPOC Station P	5.63	176		Pn	05 01 35.6	+1.2
LVC	Limon Verde	6.47	174	P	Pn	05 01 47.7	+2.4
	5.3nm,0.3s,baz=51,slow=11,SNR=26						
LVC				S	S	05 02 57.4	-2.2
	20nm,0.3s,baz=174,slow=22,SNR=16						
LVC	Limon Verde	6.47	174	Pn	Pn	05 01 47.0	+1.8
PB15	IPOC Station P	7.02	178		Pn	05 01 53.3	+1.0
ETMB	Extrema	7.14	29	*e*P	Pn	05 01 54.0	+0.3
PB10	IPOC Station P	7.37	186	Pn	Pn	05 01 58.0	+1.5
NNA	Nana	8.09	300	P	Pn	05 02 11.9	+5.9
	7.0nm,0.4s,baz=121,slow=11,SNR=4.2						
GO02	Mina Guanaco	8.97	179		Pn	05 02 18.8	+1.3
VILB	Vilhena	9.71	72	*e*P	Pn	05 02 26.4	-0.6
AC01	Pan de Azucar	9.98	185	Pn	Pn	05 02 31.2	+0.9
PTLB	Pontes e Lacer	10.17	88	*e*P	Pn	05 02 33.9	+1.1
AC04	Llanos de Chal	12.06	186	Pn	Pn	05 02 58.2	+1.4
PDRB	Porto dos Gac	13.36	72	*e*P	P	05 03 15.9	+0.5
SALV	Santo Antonio	13.45	91	*e*P	Pn	05 03 13.7	-0.6
AQDB	Aquidauana	13.95	110	*e*P	P	05 03 21.1	-0.9
CLDB	Colider	14.48	70	*e*P	P	05 03 26.7	-1.3
CO02	Combarbal	15.03	184		P	05 03 34.2	+0.2
CO02				IAmb	IAmb	05 03 38.1	
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	15.32	133	P	P	05 03 37.0	-0.1
	comp=Z,1.0nm,0.5s,baz=326,slow=11,SNR=3.8						
CPUP	Villa Florida	15.32	133	IAmb	IAmb	05 03 41.7	
	comp=Z,4.8nm,1.2s						
CPUP	Villa Florida	15.32	133	*e*P	P	05 03 38.2	+1.1
DVLD	Doverlandia	16.81	94	*e*P	Pn	05 03 54.6	-0.5
MCR1	Marechal Candi	16.83	122	*e*P	Pn	05 03 55.4	+0.2
ARAG	Araguaiana, MT	17.19	91	*e*P	Pn	05 03 58.1	-1.4
ITTB	Itaituba	18.02	51	*e*P	P	05 04 06.7	-0.1
ITQB	Itaqui	18.02	141	P	P	05 04 07.5	+0.8
ITQB	Itaqui	18.02	141	*e*P	Pn	05 04 08.3	-0.8
PCMB	Pacaembu	18.25	110	*e*P	Pn	05 04 10.9	-1.0
SNDB	Serra Nova Dou	18.31	79	*e*P	P	05 04 10.0	0.0
PTGB	Pitanga	18.56	120	*e*P	Pn	05 04 14.1	-1.5
ITRB	Iturama	18.72	104	*e*P	Pn	05 04 15.4	-2.0
H03N1	Juan Fernandez	19.13	204	T	T	05 22 41.3	
	baz=27,slow=73,SNR=3.6						
H03N2	Juan Fernandez	19.14	204	T	T	05 22 41.0	
	baz=27,slow=73,SNR=4.1						
H03N3	Juan Fernandez	19.15	204	T	T	05 22 40.1	
	baz=27,slow=73,SNR=4.3						
ITAB	Concordia	19.66	127	*e*P	P	05 04 25.7	+1.4
FRTB	Fartura	20.23	114	*e*P	P	05 04 30.8	+0.2
CPSB	Cacapava Do Su	20.55	137	*e*P	P	05 04 34.5	+0.6
IPMB	Ipameri, GO	20.60	98	*e*P	P	05 04 32.7	-1.9
BDFB	Brasilia	20.84	92	P	P	05 04 36.4	-0.8
	comp=Z,2.7nm,0.5s,baz=247,slow=12,SNR=4.8 comp=Z,2.7nm,0.5s						
BDFB	Brasilia	20.84	92	IAmb	IAmb	05 04 37.4	
	comp=Z,10nm,1.4s						
PEXB	Peixe	21.11	82	*e*P	P	05 04 39.4	-0.6
PLTB	Pedras Altas	21.34	140	*e*P	P	05 04 43.3	+1.1
CNLB	Canela	21.71	130	*e*P	P	05 04 46.4	+0.4
VAO	Valinhos	22.44	111	*e*P	P	05 04 53.5	+0.6
SMTB	Santa Maria do	22.73	74	*e*P	P	05 04 54.8	-0.7
MCPB	Macapa, AP	23.42	50	*e*P	P	05 05 01.9	+0.3
JANB	Januaria	24.45	91	*e*P	P	05 05 10.0	-1.1
PLCA	Paso Flores	24.51	182	P	P	05 05 12.9	+1.5
	comp=Z,1.4nm,0.8s,baz=355,slow=11,SNR=3.5 comp=Z,1.4nm,0.8s						
PLCA	Paso Flores	24.51	182	IAmb	IAmb	05 05 34.0	
	comp=Z,3.4nm,1.1s						
PLCA	Paso Flores	24.51	182	*e*P	P	05 05 11.5	+0.1
DIAM	Diamantina, MG	24.93	99	*e*P	P	05 05 16.6	+1.0
BAUV	El Baul	24.99	4	P	P	05 05 16.4	+0.5
NBPN	Ponto Novo - B	29.13	83	*e*P	P	05 05 51.7	-1.2
NBAN	Anadia - AL	33.16	83	*e*P	P	05 06 26.9	-1.3
RCBR	Riachuelo	34.65	77	P	P	05 06 41.0	-0.1
	comp=Z,6.4nm,0.7s,baz=46,slow=5.3,SNR=5.0 comp=Z,6.4nm,0.7s						
DBIC	Dimbokro	68.02	76	P	P	05 10 47.6	-0.8
	comp=Z,1.3nm,0.4s,baz=248,slow=5.7,SNR=4.9 comp=Z,1.3nm,0.4s						
TOA0	Torodi Ar. Sit	76.32	72	P	P	05 11 36.2	-1.3
TOA0				IAmb	IAmb	05 11 37.8	
	comp=Z,3.5nm,0.8s						
TORD	Torodi Ar. Bea	76.32	72	P	P	05 11 36.2	-1.3
	comp=Z,3.2nm,0.8s,baz=270,slow=6.1,SNR=20 comp=Z,3.2nm,0.8s						
ESDC	Sonseca Array	82.57	45	P	P	05 12 11.1	+0.2
	comp=Z,0.4nm,0.6s,baz=272,slow=6.0,SNR=5.3 comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	85.92	341	P	P	05 12 27.8	+0.8
	comp=Z,0.4nm,0.8s,baz=129,slow=5.2,SNR=6.0 comp=Z,0.4nm,0.8s						
SONM	Songino Array	148.24	5	PKPbc	PKiKP	05 19 33.4	-0.7
	comp=Z,0.7nm,0.6s,baz=23,slow=4.8,SNR=3.5						

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*IDC **14** 05:03:25.1±0.9, 54°.11N×35°.25W, h0km, mb3.7/6, mbtmp3.7/7, ML2.6/1, MS3.2/11, Error ellipse: s-maj=47.1km s-min=18.0km az=17.0*
ISC 14 05:03:27.5±0.8**, 54°.1N**±0°.3×**35°.3W**±0°.1**, h16km, n17, σ0ˢ.75**/9**, mb3.7**/6**, MS3.1**/10**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.29	285	P	Pn	05 07 40.0	-0.3
	0.2nm,0.3s,baz=90,slow=6.4,SNR=7.4 1.8nm,0.6s						
FRB	Frobisher Bay	19.47	313	LR	LR	05 13 54.5	
	comp=Z,43nm,18.6s,baz=356,slow=32						
NOA	NORSAR Array B	25.38	55	LR	LR	05 16 26.7	
	comp=Z,22nm,18.3s,baz=350,slow=31						
ESDC	Sonseca Array	25.54	112	P	P	05 08 55.7	+0.4
	0.8nm,0.8s,baz=313,slow=8.5,SNR=8.1						
ESDC				LR	LR	05 16 46.5	
	comp=Z,39nm,18.7s,baz=318,slow=31 0.8nm,0.8s						
DAVOX	Davos/Dischmat	29.23	86	LR	LR	05 19 22.4	
	comp=Z,41nm,20.1s,baz=266,slow=33						
SADO	Sadowa	29.59	270	P	P	05 09 32.0	+0.5
	3.1nm,0.7s,baz=2.7,slow=7.9,SNR=4.0						
SADO				LR	LR	05 20 23.4	
	comp=Z,47nm,20.5s,baz=48,slow=34 3.1nm,0.7s						
VRAC	Vranov	31.88	77	LR	LR	05 20 24.8	
	comp=Z,21nm,21.6s,baz=4.5,slow=32						
TKL	Tuckaleechee C	38.12	261	LR	LR	05 25 10.5	
	comp=Z,43nm,18.1s,baz=64,slow=34						
YKA	Yellowknife Ar	39.97	315	P	P	05 11 00.6	-0.1
	0.5nm,0.8s,baz=60,slow=9.4,SNR=6.0						
YKA				PcP	PcP	05 13 04.8	-0.8
	0.3nm,0.8s,baz=58,slow=3.7,SNR=4.1 0.5nm,0.8s						
BRTR	Keskin Array B	47.31	78	P	P	05 12 01.1	+0.8
	1.4nm,0.9s,baz=302,slow=7.1,SNR=5.9 1.4nm,0.9s						
PDAR	Pinedale Array	48.38	289	LR	LR	05 31 31.5	
	comp=Z,31nm,18.1s,baz=78,slow=35						
TORD	Torodi Ar. Bea	50.13	130	P	P	05 12 21.3	-0.7
	1.5nm,0.8s,baz=333,slow=7.8,SNR=6.6 1.5nm,0.8s						
ILAR	Eielson Array	50.41	329	LR	LR	05 32 57.8	
	comp=Z,22nm,19.0s,baz=301,slow=35						
ANMO	Albuquerque	51.92	279	LR	LR	05 33 53.8	
	comp=Z,27nm,18.9s,baz=14,slow=35						
TXAR	Lajitas Array	54.33	272	P	P	05 12 53.8	+0.6
	0.2nm,0.7s,baz=45,slow=6.9,SNR=3.5 0.2nm,0.7s						
CMIG	Matias Romero	58.62	255	LR	LR	05 39 42.2	
	comp=Z,33nm,18.3s,baz=104,slow=37						
ASAR	Alice Springs	148.52	19	PKPbc	PKPbc	05 23 12.3	-1.0
	1.2nm,0.8s,baz=359,slow=2.0,SNR=12						

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*IDC **14** 05:16:35.8±1.3, 24°.36N×121°.99E, h0km, mb3.5/4, mbtmp3.5/4, MS2.7/1, Error ellipse: s-maj=82.8km s-min=27.6km az=75.0*
*JMA **14** 05:16:37.0±0.1, 24°.0N±0°.7×121°.7E±0°.9, h20km, MV3.1/10, TAIWAN REGION*
*TAP **14** 05:16:38.2, 24°.19N×121°.76E, h12km, ML3.9, C*
ISC 14 05:16:37.7±0.8**, 24°.18N**±0°.01×**121°.80E**±0°.02**, h12km**±5km**, n123, σ0ˢ.73**/207**, mb3.5**/4**, 2C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.14	336	⇓*i*P	Pg	05 16 41.6	+0.4
	baz=353						
EHP				S	Sg	05 16 44.2	+0.6
	baz=353						
ETL	Fush Village	0.17	262	⇑*i*P	Pg	05 16 41.6	0.0
	baz=258						
ETL				*i* S	Sg	05 16 44.3	0.0
	baz=258						
NACB	Ninganchiao	0.19	268	⇓*i*P	Pg	05 16 41.9	0.0
	baz=259						
NACB				*i* S	Sg	05 16 44.6	-0.3
	baz=259						
TWD	Chiawan	0.22	242	⇓*i*P	Pg	05 16 42.4	+0.1
	baz=241						
TWD				*i* S	Sg	05 16 45.8	+0.3
	baz=241						
ENA	Nanau	0.25	347	⇓*i*P	Pg	05 16 43.4	+0.4
	baz=356						
ENA				S	Sg	05 16 46.9	+0.3
	baz=356						
EWUT	Wuta	0.26	355	P	Pb	05 16 43.8	-0.7
	baz=2.0						
EWUT				S	Sg	05 16 47.6	+0.7
	baz=2.0						
HWA	Hwalien	0.27	222	*e*P	Pb	05 16 44.6	0.0
	baz=224						
HWA				*e*S	Sb	05 16 49.7	+0.5
	baz=224						
ETLH	Xiulin Townshi	0.30	275	⇓*i*P	Pg	05 16 43.7	-0.1
	baz=275						
ETLH				S	Sg	05 16 47.5	-0.5
	baz=275						
ETM	Tongmen	0.36	233	P	Pg	05 16 45.1	+0.1
	baz=230						
ETM				*e*S	Sg	05 16 50.1	+0.4
	baz=230						
TEYL	Yanliau Villag	0.36	211	*e*P	Pb	05 16 46.2	0.0
	baz=217						
TEYL				*e*S	Sb	05 16 53.1	+1.3
	baz=217						
TWC	Suao	0.43	5	⇓*i*P	Pb	05 16 46.9	-0.3
	baz=5.0						
TWC				S	Sb	05 16 53.4	-0.2
	baz=5.0						
LATG	Datong	0.43	324	⇓*i*P	Pg	05 16 46.6	+0.3
	baz=328						
LATG				S	Sg	05 16 52.5	+0.3
	baz=328						
NNSB	Datong	0.46	303	⇓*i*P	Pg	05 16 47.0	+0.2
	baz=305						
NNSB				S	Sg	05 16 52.4	-0.5
	baz=305						
NDS	Dongshan	0.46	350	P	Pb	05 16 47.4	-0.4
	baz=354						
NDS				S	Sg	05 16 53.4	+0.5
	baz=354						
NNS	Nan Shan	0.47	303	⇓*i*P	Pg	05 16 47.1	+0.1
	baz=306						
NNS				S	Sg	05 16 53.3	0.0
	baz=306						
WHF	Hehuan Shan	0.49	266	⇓*i*P	Pg	05 16 47.5	0.0
	baz=266						
WHF				*i* S	Sg	05 16 53.8	-0.4
	baz=266						
ESL	Shilin	0.50	223	⇓*i*P	Pg	05 16 47.7	+0.1
	baz=226						
ESL				S	Sb	05 16 55.8	0.0
	baz=226						
ENTT	Nioudou	0.51	335	⇓*i*P	Pb	05 16 48.2	-0.4
	baz=338						
ENTT				*i* S	Sg	05 16 55.1	+0.7
	baz=338						
FUSS	Fushou	0.52	277	P	Pg	05 16 48.1	+0.2
	baz=278						
FUSS				S	Sg	05 16 54.7	-0.1
	baz=278						
TWE	Neicheng	0.55	347	⇓*i*P	Pb	05 16 49.1	-0.2
	baz=352						
TWE				*i* S	Sb	05 16 56.7	-0.5
	baz=352						
TWT	Tachien	0.58	277	⇓*i*P	Pg	05 16 49.6	+0.5
	baz=277						
TWT				S	Sg	05 16 57.2	+0.4
	baz=277						
ILA	Ilan	0.58	355	*e*P	Pb	05 16 50.2	+0.3
	baz=354						
ILA				S	Sb	05 16 58.3	+0.1
	baz=354						
CHGB	Renai	0.59	258	⇓*i*P	Pg	05 16 49.4	+0.1
	baz=251						
CHGB				S	Sg	05 16 56.9	-0.2
	baz=251						
TDCB	Techi	0.59	277	⇓*i*P	Pg	05 16 49.7	+0.3
	baz=278						
TDCB				S	Sg	05 16 56.8	-0.5
	baz=278						
FUSB	Fushanzhiwuyua	0.61	341	P	Pb	05 16 50.2	-0.2
	baz=344						
FUSB				S	Sg	05 16 58.2	+0.5
	baz=344						
EGFH	Guangfu	0.62	214	P	Pb	05 16 50.4	-0.1
	baz=228						
EGFH				*e*S	Sb	05 16 59.9	+0.8
	baz=228						
OWD	Renai	0.62	249	*e*P	Pg	05 16 49.9	+0.1
	baz=248						
OWD				*e*S	Sg	05 16 57.4	-0.6
	baz=248						
YHNB	Yeheng	0.62	321	⇓*i*P	Pb	05 16 50.4	-0.2
	baz=323						
YHNB				S	Sg	05 16 58.4	+0.2
	baz=323						
NSK	Sanguang	0.64	320	⇓*i*P	Pg	05 16 50.5	+0.3
	baz=323						
NSK				*i* S	Sg	05 16 59.0	+0.4
	baz=323						
NWLT	Wulai	0.65	335	*e*P	Pb	05 16 50.9	-0.2
	baz=338						
NWLT				*e*S	Sg	05 16 58.9	-0.3
	baz=338						
WUSB	Renai	0.66	253	⇓*i*P	Pg	05 16 50.7	+0.2
	baz=246						
WUSB				S	Sg	05 16 58.8	-0.4
	baz=246						
EGS		0.67	10	*e*P	Pn	05 16 52.4	-0.7
	baz=20						
NTC	Toucheng	0.67	2	*e*P	Pb	05 16 51.5	+0.2
	baz=4.0						
NTC				*e*S	Sb	05 17 00.5	-0.1
	baz=4.0						
VWDT	VWDT	0.74	235	⇓*i*P	Pg	05 16 52.2	+0.1
	baz=234						
VWDT				S	Sg	05 17 02.6	+0.7
	baz=234						
HGSD	Ruisui	0.77	207	P	Pb	05 16 53.5	+0.4
	baz=194						
HGSD				S	Sn	05 17 06.8	+0.9
	baz=194						
NFF	Wufeng Townshi	0.77	306	*e*P	Pg	05 16 52.9	+0.2
	baz=307						
NFF				*e*S	Sg	05 17 02.5	-0.3
	baz=307						
TIPB	Shuangxi	0.79	1	P	Pb	05 16 53.6	+0.2
	baz=3.0						
TIPB				S	Sb	05 17 03.6	-0.4
	baz=3.0						
WHP	Taichung City	0.79	277	*e*P	Pg	05 16 53.4	+0.3
	baz=278						
WHP				*e*S	Sg	05 17 03.8	+0.4
	baz=278						
EHY	Hungye	0.81	213	*e*P	Pg	05 16 52.7	-0.6
	baz=224						
EHY				*e*S	Sn	05 17 06.0	-0.8
	baz=224						
NHDH	Xindian Distri	0.82	342	*e*P	Pb	05 16 54.2	+0.3
	baz=344						
NHDH				*e*S	Sb	05 17 05.5	+0.6
	baz=344						
TWA	Mucha	0.82	346	*e*P	Pn	05 16 54.5	-0.6
	baz=348						
TWA				*e*S	Sb	05 17 05.5	+0.5
	baz=348						
TWB1	Santiao Chiao	0.84	11	*e*P	Pn	05 16 54.8	-0.6
	baz=14						
TWB1				*e*S	Sb	05 17 06.1	+0.6
	baz=14						
LIOB	Emei	0.85	303	*e*P	Pb	05 16 55.0	+0.5
	baz=305						
NSTT	Nanjuang	0.86	302	*e*P	Pb	05 16 54.7	+0.1
	baz=303						
NSTT				*e*S	Sg	05 17 05.8	+0.2
	baz=303						
SSLB	Suanglung	0.87	243	P	Pg	05 16 54.6	0.0
	baz=252						
SSLB				S	Sg	05 17 04.9	-1.1
	baz=252						
SMLT	Sun Moon Lake	0.88	250	P	Pg	05 16 54.8	+0.1
	baz=250						
SMLT				*e*S	Sg	05 17 06.4	+0.1
	baz=250						
NWF	Wu-fen Shan	0.89	359	*e*P	Pb	05 16 55.4	+0.3
	baz=347						
TYC	Yuchr	0.91	252	*e*P	Pg	05 16 55.4	+0.1
	baz=246						
TYC				*e*S	Sg	05 17 06.7	-0.5
	baz=246						
SXI1	Grass Mountain	0.91	4	*e*P	Pn	05 16 56.0	-0.4
	baz=6.0						
SXI1				*e*S	Sb	05 17 07.6	-0.1
	baz=6.0						
YULB	Yu-li	0.91	211	*e*P	Pg	05 16 54.5	-0.9
	baz=220						
EYUL	Yuli	0.94	208	*e*P	Pn	05 16 56.8	-0.1
	baz=224						
EYUL				*e*S	Sn	05 17 11.0	+0.8
	baz=224						
TWF1	Yuli	0.95	209	P	Pg	05 16 56.1	+0.1
	baz=220						
TWF1				*e*S	Sn	05 17 10.7	+0.4
	baz=220						
TWQ1	Liyutan	0.96	280	*e*P	Pb	05 16 56.6	+0.4
	baz=281						
TWQ1				*e*S	Sn	05 17 10.2	-0.4
	baz=281						
SBCB	Hsinchu	0.96	309	*e*P	Pn	05 16 57.7	+0.6
	baz=310						
SBCB				*e*S	Sn	05 17 12.7	+2.0
	baz=310						
NCU	National Centr	0.96	325	*e*P	Pn	05 16 58.1	+0.9
	baz=326						
NCU				*e*S	Sn	05 17 10.4	-0.4
	baz=326						
NCUH	Zhongli	0.96	324	*e*P	Pg	05 16 56.4	+0.1
	baz=325						
HSN	Hsinchu	0.98	309	*e*P	Pn	05 16 59.2	+1.9
	baz=303						
HSN				*e*S	Sn	05 17 11.8	+0.7
	baz=303						
NSY	Sanyi	0.98	284	*e*P	Pn	05 16 57.7	+0.3
	baz=285						
NSY				*e*S	Sn	05 17 10.8	-0.3
	baz=285						
TWS1	Kuangyinshan	0.98	339	*e*P	Pg	05 16 56.8	+0.1
	baz=349						
TWS1				*e*S	Sn	05 17 10.8	-0.4
	baz=349						
YM01	YM01	0.98	348	*e*P	Pn	05 16 57.7	+0.3
	baz=349						
NMLH	Miaoli	0.99	291	*e*P	Pn	05 16 58.2	+0.7
	baz=292						
TCU	Taichung	1.03	268	*e*P	Pn	05 16 58.7	+0.7
	baz=269						
TCU				*e*S	Sn	05 17 13.8	+1.5
	baz=269						
YUS	Yu-Shan	1.04	229	*e*P	Pg	05 16 57.7	-0.2
	baz=229						
YUS				*e*S	Sg	05 17 11.5	0.0
	baz=229						
WJS	Zhushan	1.05	250	*e*P	Pn	05 16 59.0	+0.7
	baz=246						
WJS				*e*S	Sn	05 17 12.7	-0.1
	baz=246						
WNT	Mingjian	1.07	254	*e*P	Pn	05 16 59.0	+0.5
	baz=251						
WNT				*e*S	Sn	05 17 14.8	+1.5
	baz=251						
JYNG	Yonagunijimaku	1.07	75	P	Pn	05 16 59.2	+0.6
JYNG				*e*S	Sn	05 17 15.5	+2.0
WDJ	Dajia District	1.07	279	*e*P	Pn	05 17 00.0	+1.4
	baz=280						
WDJ				*e*S	Sn	05 17 14.3	+0.9
	baz=280						
FULB	Fuli	1.08	206	P	Pn	05 16 59.1	+0.3
	baz=221						
TWY	Chenhua	1.10	350	*e*P	Pg	05 17 00.4	+1.4
	baz=337						
ALS	Alishan	1.13	234	⇑P	Pb	05 16 59.6	+0.1
	baz=235						
ALS				*e*S	Sn	05 17 15.7	+0.3
	baz=235						
YOJ	Yonaguni jima	1.14	76	*e*P	Pg	05 17 00.8	+1.2
	baz=66						
YOJ				*e*S	Sn	05 17 17.0	+2.0
	baz=66						
YOJ	Yonaguni jima	1.14	76	P	Pg	05 17 00.6	+1.0
YOJ				S	Sn	05 17 17.0	+2.0
WCHH	Zhanghua	1.14	265	*e*P	Pb	05 16 59.6	+0.1
	baz=266						

WCHH				eS	Sn	05 17 16.5	+1.4
	baz=266						
CHKT	Chengkung	1.15	201	eP	Pg	05 17 00.5	+0.6
	baz=201						
CHKT				S	Sn	05 17 16.7	+1.4
	baz=201						
CHN5	Tsauling	1.18	241	P	Pg	05 17 00.9	+0.4
	baz=242						
CHN5				eS	Sn	05 17 17.2	+0.9
	baz=242						
ELDTW	Lidau	1.22	216	eP	Pn	05 16 59.2	-1.5
	baz=206						
ELDTW				eS	Sg	05 17 18.9	+1.6
	baz=206						
WDLH	Douliu	1.26	247	eP	Pg	05 17 02.4	+0.5
	baz=249						
WDLH				eS	Sg	05 17 20.4	+2.1
	baz=249						
EDH	Donghe	1.29	201	eP	Pn	05 17 01.7	+0.2
	baz=188						
WRL	Guolierlin Hig	1.33	258	eP	Pb	05 17 02.8	+0.1
	baz=260						
STYH	Taoyuan	1.38	223	eP	Pn	05 17 03.0	+0.2
	baz=225						
CHN4	Tsaushan	1.38	234	P	Pb	05 17 04.1	+0.5
	baz=235						
CHN4				eS	Sg	05 17 22.6	+0.2
	baz=235						
WTK	Tuku	1.39	249	eP	Pb	05 17 03.7	+0.1
	baz=251						
WTK				eS	Sg	05 17 24.2	+1.8
	baz=251						
TPUB	Ta-pu	1.39	231	eP	Pb	05 17 03.9	+0.3
	baz=222						
TPUB				eS	Sg	05 17 22.8	+0.3
	baz=222						
STYT	Tauyuan	1.40	224	eP	Pb	05 17 03.9	+0.1
	baz=225						
STYT				eS	Sg	05 17 23.0	+0.3
	baz=225						
LONT	Longtian	1.41	206	eP	Pn	05 17 01.9	-1.4
	baz=207						
WTP	Ta-pu	1.44	230	P	Pb	05 17 04.8	+0.3
	baz=231						
WTP				eS	Sg	05 17 24.1	+0.2
	baz=231						
CHY	Chiayi	1.44	242	eP	Pg	05 17 05.9	+0.6
	baz=243						
CHY				eS	Sg	05 17 25.5	+1.5
	baz=243						
TWK	Hsinying	1.51	233	eP	Pb	05 17 06.1	+0.4
	baz=234						
TWK				eS	Sb	05 17 25.6	+0.7
	baz=234						
TWG	Pinlang	1.51	207	eP	Pb	05 17 05.5	-0.3
	baz=207						
TWG				eS	Sg	05 17 26.3	-0.2
	baz=207						
LDUT	Ludao	1.53	192	eP	Pn	05 17 03.9	-1.0
	baz=179						
CHN1	Nanshi	1.53	230	eP	Pb	05 17 06.6	+0.5
	baz=231						
CHN1				eS	Sb	05 17 26.4	+0.9
	baz=231						
SNST	Tainan City	1.53	232	eP	Pb	05 17 06.5	+0.4
	baz=233						
SNST				eS	Sg	05 17 28.0	+0.8
	baz=233						
WSF	Szhu	1.55	250	eS	Sg	05 17 28.3	+0.7
	baz=252						
SGST	Jiashian	1.57	226	eP	Pb	05 17 07.0	+0.4
	baz=228						
SGST				eS	Sg	05 17 28.1	-0.1
	baz=228						
WSL	Shuilin Townsh	1.59	246	eP	Pn	05 17 06.3	+0.6
	baz=248						
WSL				eS	Sg	05 17 29.5	+0.7
	baz=248						
ICHU	Yijhu	1.62	240	eP	Pb	05 17 07.6	0.0
	baz=242						
ECL	Taimali	1.76	207	eP	Pb	05 17 09.8	-0.2
	baz=194						
IRIF	Iriomote-Funau	1.76	85	eP	Pb	05 17 09.6	-0.4
IRIF				eS	Sb	05 17 32.5	+0.4
SCST	Cishan	1.76	223	eP	Pb	05 17 09.7	-0.3
	baz=224						
SSD	Sandimen	1.79	217	P	Pb	05 17 09.7	-0.8
	baz=231						
SSD				eS	Sb	05 17 32.9	0.0
	baz=231						
TSMG	Majia	1.81	216	eP	Pn	05 17 09.8	+1.0
	baz=208						
HATJ	Hateruma jima	1.83	93	eS	Sb	05 17 34.1	0.0
MASBT	Mashibuluo	1.90	215	eP	Pn	05 17 11.1	+1.2
	baz=215						
MASBT				eS	Sb	05 17 36.4	+0.4
	baz=215						
EAST	Anshuo	2.00	206	eP	Pb	05 17 13.6	-0.4
	baz=195						
JKRS	Kuro-shima	2.01	88	eP	Pb	05 17 13.6	-0.7
JKRS				eS	Sb	05 17 39.3	0.0
SSPT	Xinbi	2.04	214	eP	Pg	05 17 16.1	-0.7
	baz=199						
SCZT	Fangliau	2.10	211	eP	Pn	05 17 14.1	+1.3
	baz=211						
SCZT				eS	Sb	05 17 41.7	-0.3
	baz=211						
JIJ	Ishigaki jima	2.14	85	eS	Sb	05 17 41.1	-1.9
PNG	Penghu	2.15	254	eP	Pn	05 17 14.3	+0.9
	baz=257						
PHUB	P'eng-hu	2.15	252	eP	Pn	05 17 13.7	+0.3
	baz=255						
SLIU	Shizi	2.16	206	eP	Pb	05 17 15.3	-1.5
	baz=208						
WDGT	Dungji	2.17	245	eP	Pn	05 17 14.5	+0.8
	baz=248						
JISG	Ishigakijimahi	2.32	79	P	Pn	05 17 16.8	+1.0
VCHM	Qimei	2.38	246	eP	Pn	05 17 17.8	+1.1
	baz=233						
MATB	Ma-tsu	2.58	320	eP	Pn	05 17 19.4	0.0
	baz=319						
PTMZ	Houxiangcun	2.59	290	eP	Pn	05 17 19.1	-0.4
	baz=290						
AXDP	Jialang	3.56	282	eP	Pn	05 17 32.1	-0.8
	baz=283						
KSRS	Korea Array	14.23	20	Pn	P	05 20 04.2	-2.2
	0.3nm,0.3s,baz=196,slow=12,SNR=6.1						
MJAR	Matsushiro Arr	18.73	45	LR	LR	05 29 02.8	
	comp=Z,22nm,18.9s,baz=178,slow=40						
ZALV	Zalesovo Beam	40.55	327	P	P	05 24 16.3	-0.5
	0.6nm,0.4s,baz=89,slow=9.2,SNR=1.6						
	0.6nm,0.4s						
WRA	Warramunga Arr	45.53	163	P	P	05 24 57.6	+0.2
	0.7nm,0.9s,baz=345,slow=8.7,SNR=2.6						
	0.7nm,0.9s						
ASAR	Alice Springs	48.99	165	P	P	05 25 26.0	+1.6
	0.2nm,0.5s,baz=335,slow=6.4,SNR=1.9						
	0.2nm,0.5s						
YKA	Yellowknife Ar	82.75	23	P	P	05 29 00.1	-1.2
	0.2nm,0.6s,baz=314,slow=4.4,SNR=8.1						
	0.2nm,0.6s						

NEIC 14 05:21:56.9±1.1, 18°.2N±0°.1×145°.5E±0°.2, h278^{km}±5^{km}, mb3.9/19, ML3.9/6, Error ellipse: s-maj=27.1km s-min=15.2km az=104.0

IDC 14 05:21:57.8±8.8, 18°.27N×145°.55E, h295^{km}±92^{km}, mb3.2/11, mbtmp3.9/11, Error ellipse: s-maj=34.2km s-min=13.8km az=87.0

ISC 14 05:21:58.1±0.7, 18°.14N±0°.09×145°.4E±0°.2, h300^{km}, n33, σ0^{s}.94/32, mb3.8/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.56	187	Pn	Pn	05 23 09.1	-1.6
GUMO				IAML		05 25 24.6	
	110nm,3.0s						
JMM	Marumori	20.07	349	P	P	05 26 09.4	-0.1
JTM	Tenmabayashi	22.88	351	P	P	05 26 35.1	-0.8
KSRS	Korea Array	24.62	325	P	P	05 26 51.6	-0.1
	0.6nm,0.5s,baz=140,slow=8.7,SNR=2.1						
	0.6nm,0.5s						
KLR	Kul'dur	32.93	343	P	P	05 28 04.0	-0.8
	3.7nm,0.9s,baz=160,slow=8.7,SNR=6.6						
	3.7nm,0.9s						
PET	Petropavlovsk	36.31	13	P	P	05 28 34.5	+1.0
KNRA	Kununurra	37.41	207	P	P	05 28 45.9	+2.8
WB0	Warramunga Arr	39.20	197	P	P	05 28 58.8	+0.8
WB0				IAmb	IAmb	05 29 22.8	
	comp=Z,17nm,1.4s						
WB2	Warramunga Arr	39.38	197	P	P	05 29 00.4	+1.0
WB2				IAmb	IAmb	05 29 01.2	
	comp=Z,3.5nm,0.6s						
WRA	Warramunga Arr	39.39	197	P	P	05 29 00.8	+1.3
	comp=Z,1.8nm,0.6s,baz=24,slow=8.6,SNR=31						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	39.39	197	P	P	05 29 00.3	+0.8
ASAR	Alice Springs	43.05	196	P	P	05 29 30.2	+1.0
	comp=Z,0.4nm,0.5s,baz=13,slow=7.6,SNR=7.5						
	comp=Z,0.4nm,0.5s						
SONM	Songino Array	43.43	322	P	P	05 29 32.4	+0.4
	comp=Z,0.7nm,0.6s,baz=142,slow=7.3,SNR=3.4						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	43.43	322	IAmb	IAmb	05 29 37.6	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	58.67	314	P	P	05 31 24.9	+0.3
	comp=Z,0.6nm,0.4s,baz=81,slow=10.0,SNR=5.2						
	comp=Z,0.6nm,0.4s						
O18K	Koktuh Hills	59.21	30	P	P	05 31 28.6	+0.6
O18K				IAmb	IAmb	05 31 48.1	
	comp=Z,4.4nm,1.2s						
KDAK	Kodiak Island	59.95	33	P	P	05 31 32.5	-0.5
KDAK				IAmb	IAmb	05 31 59.3	
	comp=Z,8.5nm,1.4s						
CNPM	China Poot	61.06	31	P	P	05 31 40.1	-0.4
CNPM				IAmb	IAmb	05 31 54.3	
	comp=Z,3.2nm,0.9s						
J20K	Nowinta River	61.06	26	P	P	05 31 41.3	+0.9
KURK	Kurchatov	61.52	318	P	P	05 31 44.0	+0.3
KURK				IAmb	IAmb	05 31 44.6	
	comp=Z,1.9nm,0.8s						
IMAR	Indian Mountai	61.82	24	P	P	05 31 46.3	+0.8
NRIK	Noril'sk	62.05	340	P	P	05 31 46.8	-0.1
	comp=Z,2.4nm,0.4s,baz=123,slow=7.5,SNR=4.6						
	comp=Z,2.4nm,0.4s						
H21K	Melozitna Rive	62.08	24	P	P	05 31 47.6	+0.4
H21K				IAmb	IAmb	05 32 02.0	
	comp=Z,3.8nm,1.5s						
FID	Port Fidalgo	63.64	31	P	P	05 31 57.1	-0.4
FID				IAmb	IAmb	05 31 58.0	
	comp=Z,2.4nm,0.8s						
MDM	Murphy Dome	63.73	26	P	P	05 31 58.2	+0.2
MDM				IAmb	IAmb	05 31 59.3	
	comp=Z,1.3nm,0.6s						
H24K	Noodor Dome	64.09	25	P	P	05 32 00.6	+0.2
TOLK	Toolik Lake Re	64.20	22	P	P	05 32 01.6	+0.6
TOLK				IAmb	IAmb	05 32 23.1	
	comp=Z,3.0nm,1.3s						
ILAR	Eielson Array	64.25	26	P	P	05 31 60.0	-1.4
	comp=Z,0.7nm,0.6s,baz=249,slow=5.6,SNR=8.8						
	comp=Z,0.7nm,0.6s						
BMAR	Burnt Mountain	65.72	23	P	P	05 32 11.5	+0.7
BCAR	Beaver Creek A	66.19	28	P	P	05 32 13.7	-0.1
YKA	Yellowknife Ar	78.59	28	P	P	05 33 26.3	-0.3
	comp=Z,0.2nm,0.3s,baz=289,slow=5.6,SNR=7.5						
	comp=Z,0.2nm,0.3s						
NVAR	Mina Array Bea	83.67	52	P	P	05 33 54.4	+0.5
	comp=Z,0.4nm,0.6s,baz=264,slow=7.4,SNR=4.4						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	87.28	335	P	P	05 34 09.5	-1.4
	comp=Z,0.6nm,0.6s,baz=66,slow=4.8,SNR=4.3						
	comp=Z,0.6nm,0.6s						

NIED 14 05:39:25.3, 30°.99N×129°.00E, h12^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.30; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-0.49; $M_{r\theta}$-0.20; $M_{\theta\phi}$1.01; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.27000×10^{14} NP1: ϕ_s198.00000°, δ73.00000°, λ-164.00000°. NP2: ϕ_s104.00000°, δ75.00000°, λ-17.00000°.

JMA 14 05:39:25.3±0.3, 31°.0N±0°.5×12°9E±°, h12^{km}±2^{km}, MV3.5/27, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	42	eP	Pg	05 39 42.3	-0.7
JKC	Kuchinoerabu	1.16	117	eP	Pb	05 39 47.1	0.0
JSU	Suzuyama	1.34	67	eP	Pn	05 39 49.9	0.0
JNN	Nakanoshima	1.37	146	eP	Pn	05 39 49.9	-0.4
JYAK	Yakushimahirau	1.50	120	eP	Pn	05 39 51.5	-0.5
JFU	Fukue jima 2	1.67	353	eS	Sb	05 40 16.5	-0.5
JTN	Tanegashima 3	1.73	101	eP	Pn	05 39 55.2	0.0
JTZ	Takazaki	2.00	63	eP	Pn	05 39 59.5	+0.6

NOU 14 05:47:12.4, 17°.96S×168°.13E, h26^{km}, MLv3.8/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.24	13	P	Pn	05 47 20.1	-0.2
DVP	Devils Point	0.24	13	P	Pn	05 47 20.1	-0.2
RTV	Rentapao	0.33	59	P	Pn	05 47 21.8	+0.3
RTV	Rentapao	0.33	59	P	Pn	05 47 21.8	+0.3
LIFNC	LIFOU	2.93	197	P	Pn	05 47 57.1	-0.2
MARNC	Mare, Loyalty	3.50	182	P	Pn	05 48 04.2	-1.0
YATNC	Mamie plateau,	4.24	196	P	Pn	05 48 15.4	0.0
DZM	Mont Dzumac	4.39	201	P	Pn	05 48 17.6	+0.1
OUENC	Ouen Island, N	4.60	195	P	Pn	05 48 20.9	+0.6

IDC 14 05:51:23.4±1.6, 54°.19N×35°.39W, h0^{km}, mb3.4/5, mbtmp3.5/6, ML3.8/1, MS3.1/18, Error ellipse: s-maj=53.3km s-min=25.1km az=35.0

ISC 14 05:51:25.7±1.5, 54°.2N±0°.2×35°.4W±0°.2, h16^{km}, n22, σ0^{s}.47/7, mb3.4/5, MS3.2/13, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	12.75	28	LR	LR	05 57 58.5	
	comp=Z,39nm,20.7s,baz=238,slow=31						
SFJD	Kangerlussuaq	14.80	336	Pn	Pn	05 54 54.1	+0.1
	0.4nm,0.3s,baz=113,slow=16,SNR=1.9						
SFJD				LR	LR	05 59 20.2	
	comp=Z,53nm,20.1s,baz=142,slow=32						
	4.0nm,0.7s						
SCHQ	Schefferville	18.18	285	LR	LR	06 00 20.7	
	comp=Z,28nm,21.2s,baz=90,slow=30						
EKA	Eskdalemuir Ar	18.56	73	LR	LR	06 01 28.2	
	comp=Z,79nm,19.0s,baz=273,slow=33						
FRB	Frobisher Bay	19.35	313	LR	LR	06 00 47.8	
	comp=Z,31nm,20.1s,baz=238,slow=29						
NOA	NORSAR Array B	25.42	56	P	P	05 56 51.6	-0.6
	0.8nm,0.9s,baz=270,slow=7.1,SNR=3.4						
NOA				LR	LR	06 04 37.7	
	comp=Z,16nm,19.9s,baz=320,slow=31						
	0.8nm,0.9s						
ESDC	Sonseca Array	25.65	112	P	P	05 56 54.8	+0.3
	0.4nm,0.9s,baz=320,slow=8.2,SNR=1.5						
ESDC				LR	LR	06 04 56.2	
	comp=Z,37nm,18.0s,baz=338,slow=32						
	0.4nm,0.9s						
HFS	Hagfors	26.75	57	LR	LR	06 05 05.3	
	comp=Z,40nm,19.5s,baz=331,slow=31						
DAVOX	Davos/Dischmat	29.32	86	LR	LR	06 08 17.5	
	comp=Z,57nm,18.1s,baz=301,slow=35						
SADO	Sadowa	29.50	270	LR	LR	06 08 30.1	
	comp=Z,76nm,18.1s,baz=110,slow=35						
RES	Resolute Bay	30.77	333	LR	LR	06 07 39.7	
	comp=Z,20nm,20.9s,baz=70,slow=32						
TKL	Tuckaleechee C	38.04	261	LR	LR	06 13 28.7	
	comp=Z,27nm,19.5s,baz=55,slow=35						
YKA	Yellowknife Ar	39.85	315	P	P	05 58 58.0	+0.1
	0.2nm,0.6s,baz=60,slow=9.8,SNR=4.3						
	0.2nm,0.6s						
INK	Inuvik	43.93	328	LR	LR	06 16 09.8	
	comp=Z,38nm,20.4s,baz=62,slow=34						
BRTR	Keskin Array B	47.38	78	P	P	05 59 59.5	+0.5
	0.8nm,0.8s,baz=299,slow=6.5,SNR=2.0						
	0.8nm,0.8s						
PDAR	Pinedale Array	48.27	288	LR	LR	06 18 58.1	
	comp=Z,38nm,18.2s,baz=78,slow=34						
TORD	Torodi Ar. Bea	50.24	130	P	P	06 00 20.8	-0.2
	1.2nm,0.9s,baz=335,slow=6.4,SNR=2.4						
	1.2nm,0.9s						
ILAR	Eielson Array	50.30	329	LR	LR	06 23 04.4	
	comp=Z,27nm,19.0s,baz=48,slow=38						
ANMO	Albuquerque	51.82	279	LR	LR	06 22 10.2	
	comp=Z,34nm,18.2s,baz=70,slow=36						
ELK	Elko	52.78	290	LR	LR	06 24 14.2	
	comp=Z,19nm,19.1s,baz=119,slow=37						
DBIC	Dimbokro	53.41	141	LR	LR	06 20 26.4	
	comp=Z,33nm,20.0s,baz=330,slow=33						
ASAR	Alice Springs	148.49	19	PKPbc	PKPbc	06 11 11.0	-0.4
	1.1nm,0.7s,baz=358,slow=2.5,SNR=13						

TEH 14 05:57:05.2, 27°.76N×53°.87E, h17^{km}, ML3.2

OMAN 14 05:57:07.6±0.9, 27°.77N×53°.91E, h146^{km}±16^{km}, mb3.4/4, ml3.0/12, Error ellipse: s-maj=13.8km s-min=6.2km az=34.0

DSN 14 05:57:07.9±0.9, 27°.82N×54°.28E, h10^{km}, ML2.8/8, Error ellipse: s-maj=13.4km s-min=6.0km az=22.0

ISC 14 05:57:05.2±0.9, 27°.79N±0°.04×53°.87E±0°.04, h10^{km}, n43, σ1^{s}.30/60, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.47	105	ePg	Pg	05 57 14.9	+0.5
LAR1				e		05 57 32.5	
	comp=Z,69μm,0.5s						
JHRM	Jahrom	0.76	340	ePg	Pg	05 57 19.8	-0.1
LMD1	Lamerd	0.77	234	ePg	Pg	05 57 19.9	-0.1
LMD1				eSg	Sg	05 57 31.2	+1.2
QIR1	Qir	1.00	314	ePg	Pg	05 57 24.4	0.0
QIR1				e		05 57 46.5	
	comp=Z,17μm,0.4s						
GENO	Geno	2.08	100	ePn	Pn	05 57 40.6	+0.2
GENO				e		05 58 18.5	
	comp=Z,1μm,0.3s						
SHME	Shamm	2.67	130	P	Pn	05 57 49.6	+1.3
SHME	Shamm	2.67	130	P	Pn	05 57 47.4	-0.9
BANOM	Banah	2.86	130	P	Pn	05 57 51.3	+0.4
BANOM	Banah	2.86	130	P	Pn	05 57 50.2	-0.8
BANOM				S	Sn	05 58 22.9	-2.6
MASF	Masafi	3.17	139	P	Pn	05 57 56.3	+1.1
MASF				S	Sn	05 58 33.8	+0.8
MSFE	Esma-Masafi	3.17	139	P	Pn	05 57 55.7	+0.4
NAZ	Nazwa, Dubai	3.22	150	P	Pn	05 57 57.6	+1.8
FAQ	Al Faqa, Dubai	3.41	153	P	Pn	05 57 59.8	+1.4
	SNR=5.0						
FAQ	Al Faqa, Dubai	3.41	153	P	Pn	05 57 59.6	+1.2
ASUD	Al Ashush, Dub	3.41	157	P	Pn	05 58 00.5	+2.0
ASUD				S	Sn	05 58 42.8	+3.7
ASUD	Al Ashush, Dub	3.41	157	P	Pn	05 57 59.8	+1.3
UOSS	Minazif	3.52	143	P	Pn	05 58 00.5	+0.5
UOSS				S	Sn	05 58 42.9	+1.1
UOSS	Minazif	3.52	143	P	Pn	05 58 00.1	+0.1
HATD	Hatta, Dubai	3.58	145	P	Pn	05 58 02.1	+1.2
HATD				S	Sn	05 58 44.9	+1.6
HATD	Hatta, Dubai	3.58	145	P	Pn	05 58 01.5	+0.7
IMEH	Mehriz	3.65	10	e		05 58 06.4	
	comp=Z,198nm,0.1s						
IMEH				ePn	Pn	05 58 03.5	+1.6
ASHO	Ashiyiah	3.67	147	P	Pn	05 58 03.0	+0.9
ASHO				S	Sn	05 58 45.8	+0.4
ASHO	Ashiyiah	3.67	147	P	Pn	05 58 02.5	+0.5
KLNJ	Kolanjah	3.77	329	ePn	Pn	05 58 04.6	+0.8
TRNA	Turayna	3.86	219	P	Pn	05 58 05.7	+1.0
TRNA				S	Sn	05 58 48.8	-1.3
JASK	Jask - Hormozg	4.05	117	ePn	Pn	05 58 07.3	0.0
ALNE	Al Ain	4.09	155	P	Pn	05 58 07.9	+0.1
ALNE				S	Sn	05 58 58.5	+2.8
ISAD	Sadrabad	4.11	358	ePn	Pn	05 58 10.3	+1.9
IRAM	Ramesheh	4.21	343	ePn	Pn	05 58 10.2	+0.6
KBAM	BAM	4.25	71	ePn	Pn	05 58 12.0	+1.8
SOHO	SOHO	4.36	146	P	Pn	05 58 11.7	+0.2
SOHO				S	Sn	05 59 03.4	+1.0
SOHO	SOHO	4.36	146	P	Pn	05 58 11.5	0.0
ARQ	Araqi	5.04	151	P	Pn	05 58 21.0	+0.1
	SNR=13						
ARQ				S	Sn	05 59 20.5	+1.2
HOQ	Hoqain	5.22	143	P	Pn	05 58 25.1	+1.8
HOQ				S	Sn	05 59 23.3	-0.3
IZEF	Zefreh	5.26	346	ePn	Pn	05 58 23.6	-0.5
BSY	Bisya	5.86	148	P	Pn	05 58 32.6	+0.4
BSY				S	Sn	05 59 37.9	-1.5
SMDO	Samad	6.04	140	P	Pn	05 58 35.0	+0.2
SMDO				S	Sn	05 59 43.4	-0.7
WSAR	Wadi Sarin	6.25	135	P	Pn	05 58 37.3	-0.2
WSAR				S	Sn	05 59 47.6	-1.5
JMDO	Jabal Madar	6.62	144	P	Pn	05 58 41.6	-1.1
JMDO				S	Sn	05 59 56.3	-1.9
WBK	Wadi Bani Khal	6.92	137	P	Pn	05 58 46.4	-0.4
WBK				S	Sn	06 00 03.5	-2.3
SRVN	Saravan	7.58	91	ePn	Pn	05 58 57.1	+1.2
MHTO	MHTO	7.74	150	P	Pn	05 58 57.2	-0.8
RAYN	Ar Rayn	8.66	242	P	Pn	05 59 08.4	-2.2

IDC 14 06:13:54.2±1.9, 55°.05N×164°.36E, h0^{km}, mb3.3/3, mbtmp3.2/4, ML2.3/1, MS1.9/1, Error ellipse: s-maj=110.1km s-min=30.4km az=150.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	4.38	246	Pn	Pn	06 15 01.7	-0.2
	0.8nm,0.3s,baz=66,slow=16,SNR=20						
PETK				Sn	Sn	06 15 49.7	-3.9
	0.5nm,0.3s,baz=193,slow=13,SNR=2.3						
	1.6nm,0.4s						
SHEM	Shemya Is, Ala	6.21	108	LR	LR	06 16 42.8	
	comp=Z,11nm,21.0s,baz=341,slow=27						
ILAR	Eielson Array	25.64	48	P	P	06 19 24.4	-0.6
	0.3nm,0.8s,baz=254,slow=8.6,SNR=5.2						
	0.3nm,0.8s						
H11N2	WAKE ISLAND Hy	35.31	176	T	T	06 58 56.3	
	baz=2.0						
H11N3	WAKE ISLAND Hy	35.32	176	T	T	06 58 29.6	
	baz=2.0,slow=74,SNR=3.4						
H11N1	WAKE ISLAND Hy	35.33	176	T	T	06 58 55.2	
	baz=2.0,slow=74						
YKA	Yellowknife Ar	40.01	46	P	P	06 21 30.1	-0.1
	0.2nm,0.5s,baz=297,slow=7.8,SNR=5.1						
	0.2nm,0.5s						
TXAR	Lajitas Array	67.58	71	P	P	06 24 53.1	+0.5
	0.5nm,0.7s,baz=301,slow=5.4,SNR=4.7						
	0.5nm,0.7s						

ANF 14 06:38:34.1±0.4, 37°.59N×97°.82W, h1^{km}, ML3.0/8, Error ellipse: s-maj=5.5km s-min=3.0km az=47.0

NEIC 14 06:38:34.6±0.2, 37°.59N±0°.02×97°.81W±0°.02, h1^{km}±6^{km}, mb_Lg2.5/38, Error ellipse: s-maj=2.8km s-min=2.3km az=208.0

ISC 14 06:38:34.5±0.9, 37°.62N±0°.05×97°.82W±0°.04, h10^{km}, n33, σ0^{s}.89/18, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R32A	Long Quarter,	1.06	319		Pg	06 38 54.8	-0.2
R32A	Long Quarter,	1.06	319	P	Pg	06 38 54.7	-0.2
	baz=139						
R32A				S	Sg	06 39 09.4	+0.7
	baz=139						
T35A	Sooner Cattle	1.26	124		Pn	06 38 57.2	-0.9
T35B	Sooner Cattle	1.26	124	P	Pn	06 38 57.2	-0.9
	baz=303						
T35B				S	Sb	06 39 13.5	-1.1
	baz=303						
U32A	Winter Ranch,	1.56	218	P	Pn	06 39 02.6	+0.3
	baz=38						
U32A				S	Sg	06 39 23.4	-1.2
	baz=38						
KSU1	Kansas State U	1.76	32	IAmb_Lg		06 39 32.3	
	comp=Z,16nm,0.7s						
KSU1	Kansas State U	1.76	32	P	Pb	06 39 06.5	-0.3
	baz=212						
CBKS	Cedar Bluff	1.92	309	P	Pb	06 39 09.6	-0.1
	baz=128						
OKCFA	Oklahoma City	2.22	172	IAmb_Lg		06 39 47.0	
	comp=Z,15nm,0.8s						
OKCFA	Oklahoma City	2.22	172	S	Sb	06 39 42.4	0.0
	baz=352						
TUL1	Leonard	2.36	136	IAmb_Lg		06 39 53.1	
	comp=Z,28nm,0.7s						
TUL1	Leonard	2.36	136	P	Pn	06 39 14.0	+0.7
	baz=317						
TUL1				S	Sb	06 39 44.7	-1.6
	baz=317						
FNO	Franklin	2.38	172	Pn	Pn	06 39 13.9	+0.3
WMOK	Wichita Mounta	2.98	195	Pn	Pn	06 39 22.1	+0.3
S39A	Bolivar	3.57	88	IAmb_Lg		06 40 32.1	
	comp=Z,7.9nm,1.0s						
S39A	Bolivar	3.57	88	Pb	Pb	06 39 39.1	+1.4

	baz=270						
X37A	Clayton	3.62	146	P	Pn	06 39 31.1	+0.5
	baz=327						
X37A				S	Sn	06 40 14.5	+1.1
	baz=327						
W39A	Magazine	4.06	125	IAmb_Lg		06 40 49.3	
	comp=Z,16nm,0.9s						
AMTX	Amarillo	4.15	230	IAmb_Lg		06 40 57.3	
	comp=Z,7.3nm,0.7s						
R40A	Maddies Statio	4.44	80	IAmb_Lg		06 40 51.9	
	comp=Z,7.5nm,1.0s						
MGMO	Mountain Grove	4.45	94	IAmb_Lg		06 40 58.6	
	comp=Z,11nm,1.1s						
MIAR	Mount Ida	4.61	131	IAmb_Lg		06 41 11.9	
	comp=Z,7.5nm,0.8s						
N38A	Joes South For	4.77	47	IAmb_Lg		06 41 17.4	
	comp=Z,13nm,0.9s						
FCAR	Ozark Folk Cen	4.89	109	IAmb_Lg		06 41 07.0	
	comp=Z,6.0nm,0.8s						
WHAR	Wooly Hollow	5.03	116	IAmb_Lg		06 41 14.1	
	comp=Z,11nm,0.7s						
X40A	Basin Creek Fa	5.11	126	IAmb_Lg		06 41 25.0	
	comp=Z,7.1nm,0.8s						
W41B	Gary Mavity, V	5.12	117	IAmb_Lg		06 41 16.4	
	comp=Z,5.5nm,0.7s						
CCM	Cathedral Cave	5.22	83	IAmb_Lg		06 41 32.1	
	comp=Z,7.6nm,1.1s						
T25A	Trinidad	5.27	267	IAmb_Lg		06 41 22.4	
	comp=Z,7.2nm,1.1s						
WLAR	White Oak Lake	5.49	134	IAmb_Lg		06 41 35.0	
	comp=Z,9.7nm,0.9s						
PBMO	Poplar Bluff	5.96	96	IAmb_Lg		06 41 46.8	
	comp=Z,9.5nm,0.8s						
S44A	Carbondale	6.80	87	IAmb_Lg		06 42 12.3	
	comp=Z,7.2nm,0.8s						
N23A	Red Feather La	7.10	300	IAmb_Lg		06 42 24.1	
	comp=Z,5.8nm,0.8s						

*ISK **14** 06:49:52.8, 37°.48N×26°.72E, h7^{km}, ML2.8/18*
*DDA **14** 06:49:52.7±0.0, 37°.47N×26°.70E, h10^{km}±1^{km}, ML2.5*
*ATH **14** 06:49:53.2, 37°.51N×26°.69E, h20^{km}±7^{km}, ML2.8/4, Error ellipse: s-maj=8.1km s-min=1.4km az=63.0*
ISC 14 06:49:52.7±1.0**, 37°.48N**±0°.02×**26°.68E**±0°.02**, h11**^{km}±9^{km}**, n45, σ0^{s}.76**/72**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.26	28	P	Pg	06 49 58.3	+0.2
SMG				S	Sb	06 50 02.7	-1.3
SMG				AML	AML	06 50 03.1	
	comp=E,11007µm,0.5s						
SMG				AML	AML	06 50 03.1	
	comp=N,10456µm,0.2s						
DDIM	Aydin, Didim	0.45	93	P	Pg	06 50 01.4	-0.1
DDIM				S	Sg	06 50 07.8	+0.4
GCAM	G?zelcaml?	0.49	63	PG	Pg	06 50 02.4	+0.1
GCAM				SG	Sb	06 50 09.8	-0.9
GCAM	G?zelcaml?	0.49	63	P	Pg	06 50 02.3	-0.1
GCAM				S	Sb	06 50 09.7	-0.9
GCAM				iAML	AML	06 50 11.0	
	comp=N,467nm,0.2s						
GCAM				iAML	AML	06 50 11.0	
	comp=N,401nm,0.2s						
DGB	zmir	0.59	16	P	Pg	06 50 04.2	0.0
DGB				S	Sb	06 50 13.2	-0.3
DGB				iAML	AML	06 50 16.0	
	comp=N,379nm,0.4s						
YKAV	Yalikavak-Bodr	0.59	126	PG	Pg	06 50 04.5	+0.2
BODT	Bodrum	0.65	129	PG	Pg	06 50 05.6	+0.2
BODT				SG	Sg	06 50 14.4	+0.5
BDRM	Kayabasi	0.74	124	P	Pb	06 50 08.1	+0.5
BDRM				S	Sg	06 50 16.0	-0.5
KOSK	Kos Island	0.76	162	P	Pb	06 50 07.9	-0.2
KOSK				S	Sb	06 50 18.3	-0.1
KOSK				AML	AML	06 50 22.4	
	comp=N,5347µm,0.4s						
KOSK				AML	AML	06 50 23.8	
	comp=E,5005µm,0.4s						
KOSK	Kos Island	0.76	162	PG	Pb	06 50 08.0	0.0
ZEYE	Izmir, Urla-Ze	0.77	350	P	Pg	06 50 07.9	+0.2
ZEYE				S	Sb	06 50 19.0	+0.3
ZEYE				iAML	AML	06 50 21.0	
	comp=E,209nm,0.2s						
ZEYE				iAML	AML	06 50 21.0	
	comp=E,328nm,0.2s						
URLA	Izmir	0.88	356	PG	Pg	06 50 09.7	-0.1
URLA				SG	Sn	06 50 23.1	-0.9
URLA	Izmir	0.88	356	P	Pg	06 50 09.8	+0.1
URLA				S	Sb	06 50 22.5	+0.6
URLA				iAML	AML	06 50 25.0	
	comp=E,150nm,0.3s						
URLA				iAML	AML	06 50 26.0	
	comp=E,260nm,0.4s						
MLSB	Milas	0.89	102	PG	Pb	06 50 10.0	-0.2
NISR	Nisiros	0.94	157	P	Pb	06 50 11.1	+0.1
BLCB	Balcova	0.95	17	PG	Pb	06 50 11.1	-0.1
BLCB				SG	Sb	06 50 24.5	+0.7
NIS1	Nisyros Isl.	0.96	155	PG	Pb	06 50 11.6	+0.2
AYDN	Tasoluk	0.97	79	P	Pg	06 50 10.9	-0.5
AYDN				S	Sb	06 50 24.2	-0.3
APE	Apeiranthos	1.00	246	P	Pg	06 50 11.4	-0.6
APE				S	Sg	06 50 25.0	-0.1
APE				AML	AML	06 50 27.9	
	comp=N,251µm,0.2s						
APE				AML	AML	06 50 28.4	
	comp=E,223µm,0.3s						
APE	Apeiranthos	1.00	246	PG	Pn	06 50 13.1	+0.3
CHOS	Chios island	1.03	332	P	Pg	06 50 12.2	-0.4
CHOS				S	Sg	06 50 24.6	-1.5
CHOS				AML	AML	06 50 30.8	
	comp=N,439µm,0.4s						
CHOS				AML	AML	06 50 32.0	
	comp=E,441µm,0.3s						
CHOS	Chios island	1.03	332	PG	Pb	06 50 12.9	+0.2
AYDB	Zeytinkoy-Aydi	1.07	64	PG	Pg	06 50 13.1	-0.2
TNSA	Tinos	1.21	273	P	Pb	06 50 16.1	+0.5
FOCM	Foa	1.23	2	PN	Pg	06 50 16.9	+0.5
YER	Yerkesik	1.32	105	PN	Pb	06 50 17.4	-0.2
MULA	Mugla, Merkez-	1.33	99	P	Pn	06 50 17.3	0.0
MULA				S	Sb	06 50 34.1	-0.6
TURN	Turunc	1.43	119	PN	Pg	06 50 19.8	-0.4
TURN	Turunc	1.43	119	P	Pg	06 50 19.8	-0.4
TURN				S	Sn	06 50 37.2	-0.3
SNT5	Nea Kammeni, S	1.49	224	P	Pb	06 50 20.9	+0.6
ZEDA	zmir-Bergama	1.52	12	P	Pg	06 50 22.3	+0.5
ZEDA				S	Sg	06 50 42.7	+1.1
AKHS	Akhisar	1.66	32	P	Pb	06 50 23.7	+0.4
AKHS				S	Sb	06 50 43.9	-0.4
DALY	Dalyan (Mula)	1.71	112	PN	Pb	06 50 23.9	-0.2
ARG	Arkhangelos	1.71	137	PN	Pb	06 50 23.4	-0.8
TAVA	DENIZLI_Tavas	1.78	90	P	Pg	06 50 26.0	-0.8
TAVA				S	Sg	06 50 52.9	+3.0
MANT	Manisa	1.79	55	P	Pg	06 50 27.6	+0.4
MANT				S	Sg	06 50 49.9	-0.6
SIGR	SIGRI	1.85	340	P	Pn	06 50 24.1	-0.3
KULA	Kula-Manisa	1.88	56	PN	Pb	06 50 25.9	-1.2
BUHA	Balikesir, Bur	2.04	9	P	Pb	06 50 29.9	0.0
BUHA				S	Sg	06 50 58.3	-0.1
STEP	BALIKESIR_Sava	2.06	23	P	Pg	06 50 33.3	+1.0
STEP				S	Sg	06 50 57.9	-1.2
STEP				iAML	AML	06 51 08.0	
	comp=E,43nm,0.8s						
FETY	Fethiye	2.10	113	PN	Pn	06 50 28.9	+1.1
USAK	Uak-Merkez	2.22	56	P	Pg	06 50 36.8	+1.5
USAK				S	Sn	06 50 57.5	+0.5
USAK				iAML	AML	06 51 09.0	
	comp=E,62nm,2.5s						
BAYC	CANAKKALE_Bayr	2.26	357	P	Pn	06 50 31.3	+1.2
BAYC				S	Sg	06 51 04.0	-1.4
BALY	Balya	2.38	18	P	Pg	06 50 39.8	+1.6
BALY				S	Sg	06 51 08.4	-0.6
BALY				iAML	AML	06 51 16.0	
	comp=E,31nm,0.6s						
DURS	Dursunbey	2.54	33	P	Pg	06 50 40.6	-0.9
DURS				S	Sg	06 51 13.6	-0.9

*IDC **14** 06:58:31.1±1.9, 38°.14N×9°.57W, h0^{km}, mb3.7/2, mbtmp4.1/4, ML4.6/2, Error ellipse: s-maj=33.0km s-min=25.5km az=108.0*
*MDD **14** 06:58:34.6±0.4, 38°.12N×9°.54W, h15^{km}±3^{km}, mb_Lg3.9/31, Error ellipse: s-maj=4.2km s-min=2.0km az=74.0*
*SFS **14** 06:58:34.0, 38°.12N×9°.54W, h15^{km}, ML3.9, ATLANTICO PORTUGAL*
*LDG **14** 06:58:35.6±0.1, 38°.11N×9°.61W, h24^{km}, Ml3.6/22, Error ellipse: s-maj=2.6km s-min=1.4km az=71.0*
*INMG **14** 06:58:36.3±2.0, 38°.12N×9°.52W, h28^{km}±3^{km}, MD3.3, ML3.5, Error ellipse: s-maj=5.2km s-min=1.8km az=85.0*
*IGIL **14** 06:58:36.1, 38°.12N×9°.52W, h25^{km}, ML3.8*
*CNRM **14** 06:58:45.4, 37°.32N×9°.14W, h53^{km}, ml3.9*
ISC 14 06:58:34.3±0.8**, 38°.15N**±0°.02×**9°.51W**±0°.05**, h35**^{km}**, n129, σ2^{s}.04**/229**, 5C-17D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSINE	Sines	0.54	110	⇓iPg	Pn	06 58 46.5	+1.0
PSINE				eSg	Sn	06 58 54.3	+0.9
PSINE				A	A	06 58 54.6	
	4µm,0.1s						
PCASC	Cascais	0.62	1	ePg	Pn	06 58 47.4	+0.7
PCASC				eSg	Sn	06 58 55.9	+0.5
PCASC				A	A	06 58 56.6	
	1µm,0.4s						
LIS	Lisbon	0.63	26	eP	Pn	06 58 48.1	+1.3
LIS				eS	Sn	06 58 56.9	+1.2
LIS				IAML		06 58 59.0	
	comp=E,2µm,0.2s						
LIS	Lisbon	0.63	26	⇓iPg	Pn	06 58 48.5	+1.7
LIS				eSg	Sn	06 58 57.4	+1.7
LIS				A	A	06 58 58.6	
	comp=E,1µm,0.3s						
PSETU	Setºbal	0.64	52	ePg	Pn	06 58 48.8	+2.0
PSETU				eSg	Sn	06 58 57.9	+2.2
PSETU				A	A	06 58 59.6	
	comp=E,4µm,0.2s						
PVERD	Verdizela	0.64	10	⇓iPg	Pn	06 58 46.8	0.0
PVERD				eSg	Sn	06 58 54.7	-1.0
PVERD				A	A	06 59 01.2	
	comp=E,4µm,0.3s						
PMST	Lisbon--Monsan	0.64	23	⇑iPg	Pn	06 58 48.3	+1.4
PMST				eSg	Sn	06 58 57.7	+1.9
PMST				A	A	06 58 59.1	
	comp=E,1µm,0.5s						
INMG	Instituto de M	0.69	25	⇓eP	Pn	06 58 49.6	+2.0
INMG				eS	Sn	06 58 59.5	+2.4
INMG				A	A	06 59 01.9	
	comp=E,2µm,0.5s						
PNCL	Nicolau / Gran	0.77	92	⇓iP	Pn	06 58 49.8	+1.1
PNCL				eS	Sn	06 58 59.9	+0.9
PNCL				A	A	06 59 00.9	
	comp=E,2µm,0.3s						
PACT	Alcochete	0.81	40	eP	Pn	06 58 51.4	+2.1
PACT				eS	Sn	06 59 02.1	+2.0
PACT				A	A	06 59 08.7	
	comp=E,933nm,0.3s						
PMAFR	Mafra	0.82	12	⇑iP	Pn	06 58 50.8	+1.4
PMAFR				eS	Sn	06 59 01.9	+1.5
PMAFR				A	A	06 59 03.1	
	comp=E,963nm,0.2s						
PTEO	Sao Teotonio	0.86	134	⇓iP	Pn	06 58 50.8	+0.9
PTEO				eS	Sn	06 59 01.7	+0.4
PTEO				A	A	06 59 03.3	
	comp=E,2µm,0.5s						
PBEN	Benavente	0.96	34	eS	Sn	06 59 05.7	+2.0
PALJ	Aljezur	1.00	146	eP	Pn	06 58 52.6	+0.8
PALJ				eS	Sn	06 59 05.2	+0.5
PALJ				A	A	06 59 06.7	
	comp=E,1µm,0.6s						
MESJ	Messejana	1.06	106	eP	Pn	06 58 54.0	+1.4
MESJ				eS	Sn	06 59 07.3	+1.1
MESJ				IAML		06 59 08.7	
	comp=N,2µm,0.1s						
MESJ	Messejana	1.06	106	⇓iP	Pn	06 58 54.1	+1.4
MESJ				eS	Sn	06 59 07.4	+1.2
MESJ				A	A	06 59 10.1	
	comp=N,1µm,0.3s						
MORF	Marmelete	1.08	141	eP	Pn	06 58 53.8	+0.8
MORF				eS	Sn	06 59 06.9	+0.2
MORF				IAML		06 59 07.6	
	comp=E,2µm,0.1s						
MORF	Marmelete	1.08	141	⇓eP	Pn	06 58 53.8	+0.8
MORF				eS	Sn	06 59 07.3	+0.6
MORF				A	A	06 59 07.8	
	comp=E,960nm,0.1s						
PFVI	Vila Bisbo	1.15	152	⇓iP	Pn	06 58 54.6	+0.7
PFVI				eS	Sn	06 59 07.7	-0.6
PFVI				A	A	06 59 09.3	
	comp=E,623nm,0.1s						
PFVI	Vila Bisbo	1.15	152	P	Pn	06 58 54.6	+0.7
PSVI	Cabo S. Vicent	1.19	160	eP	Pn	06 58 55.4	+0.9
PSVI				eS	Sn	06 59 09.9	+0.5
PSVI				A	A	06 59 11.5	
	comp=E,653nm,0.5s						
PLAGO	Lagos	1.23	148	⇑iP	Pn	06 58 56.1	+1.1
PLAGO				eS	Sn	06 59 10.5	0.0
PLAGO				A	A	06 59 11.4	
	comp=E,922nm,0.6s						
PSANT	Santarm	1.26	30	eP	Pn	06 58 57.2	+1.7
PSANT				eS	Sn	06 59 12.8	+1.6
PSANT				A	A	06 59 15.2	
	comp=E,808nm,0.3s						
PPOR	Portimao	1.27	142	eP	Pn	06 58 56.8	+1.2
PPOR				eS	Sn	06 59 11.8	+0.4
PPOR				A	A	06 59 16.3	
	comp=E,897nm,0.4s						
PBEJ	Beja	1.30	95	⇓eP	Pn	06 58 57.1	+1.2
PBEJ				eS	Sn	06 59 13.1	+1.0
PBEJ				A	A	06 59 14.7	
	comp=E,289nm,0.1s						
PMTG	Montargil	1.36	47	⇓eP	Pn	06 58 58.1	+1.3
PMTG				eS	Sn	06 59 15.1	+1.5
PMTG				A	A	06 59 25.6	
	comp=E,391nm,0.6s						
PALBU	Albufeira	1.45	136	⇓iP	Pn	06 58 59.6	+1.6
PALBU				eS	Sn	06 59 16.5	+0.8
PALBU				A	A	06 59 17.6	
	comp=E,741nm,0.3s						
PSBE	So Bento	1.47	22	⇑eP	Pn	06 59 00.1	+1.7
PSBE				eS	Sn	06 59 17.8	+1.4
PSBE				A	A	06 59 32.4	
	comp=E,237nm,0.3s						
PBDV	Barranco-do-Ve	1.54	125	⇓eP	Pn	06 59 00.7	+1.4
PBDV				eS	Sn	06 59 19.1	+1.0
PBDV				A	A	06 59 29.1	
	comp=E,348nm,0.3s						
PVAQ	Vaqueiros	1.60	117	⇓eP	Pn	06 59 01.4	+1.3
PVAQ				eS	Sn	06 59 20.0	+0.5
PVAQ				A	A	06 59 26.1	
	comp=E,455nm,0.2s						
PVAQ	Vaqueiros	1.60	117	P	Pn	06 59 01.4	+1.3
PVAQ				S	Sn	06 59 20.4	+0.9
PESTR	Estremoz	1.67	64	⇓ePn	Pn	06 59 02.0	+1.0
PESTR				eSn	Sn	06 59 22.0	+0.8
PESTR				A	A	06 59 33.3	
	comp=E,191nm,0.5s						
PFARO	Faro	1.68	131	ePn	Pn	06 59 03.2	+2.0
PFARO				eSn	Sn	06 59 24.1	+2.5
PFARO				A	A	06 59 26.4	
	comp=E,573nm,0.2s						
EGRO	El Granado	1.71	110	Pn	Pn	06 59 02.9	+1.2
EGRO				Sn	Sn	06 59 24.6	+2.3
EGRO				iVmb_Lg		06 59 26.1	
PTAV	Tavira	1.79	124	ePn	Pn	06 59 04.6	+1.9
PTAV				eSn	Sn	06 59 26.6	+2.4
PTAV				A	A	06 59 35.8	
	comp=E,447nm,0.4s						
PBAR	Barrancos	1.94	88	⇓ePn	Pn	06 59 06.0	+1.2
PBAR				eSn	Sn	06 59 28.4	+0.4
PBAR				A	A	06 59 40.2	
	comp=E,211nm,0.1s						
EBAD	Badajoz	2.05	72	Pn	Pn	06 59 06.7	+0.4
EBAD				Sn	Sn	06 59 30.4	-0.2
EBAD				iVmb_Lg		06 59 32.7	
PCAS	Casmilo, Conde	2.06	22	ePn	Pn	06 59 08.3	+1.9
PCAS				eSn	Sn	06 59 31.6	+0.8
PCAS				A	A	06 59 52.8	
	comp=E,131nm,0.7s						
PMRV	Marv??o	2.09	52	⇓iPn	Pn	06 59 08.1	+1.3
PMRV				eSn	Sn	06 59 31.8	+0.2
PMRV				A	A	06 59 46.7	
	comp=E,164nm,0.4s						
EMIN	Mina Concepcio	2.27	99	Pn	Pn	06 59 10.5	+1.1
EMIN				Sn	Sn	06 59 37.0	+0.9
EMIN				iVmb_Lg		06 59 39.2	
PCBR	Castelo Branco	2.31	42	ePn	Pn	06 59 11.4	+1.5
PCBR				eSn	Sn	06 59 37.4	+0.3
PCBR				A	A	06 59 53.4	
	comp=E,83nm,0.8s						
MTE	Manteigas	2.71	33	⇑ePn	Pn	06 59 17.0	+1.5
MTE				eSn	Sn	06 59 47.2	+0.1
MTE				A	A	07 00 14.8	
	comp=E,105nm,0.7s						
PVIS	Viseu	2.85	25	ePn	Pn	06 59 19.1	+1.8
PVIS				eSn	Sn	06 59 50.4	-0.1
PVIS				A	A	06 59 52.3	
	comp=E,110nm,0.1s						
PTO	Porto	3.07	13	ePn	Pn	06 59 21.8	+1.6
PTO				eSn	Sn	06 59 55.2	-0.5
PTO				A	A	06 59 55.9	
	comp=E,163nm,0.1s						
ECAB	El Cabril	3.23	90	Pn	Pn	06 59 24.6	+2.1
ECAB				Sn	Sn	06 59 59.2	-0.5
ECAB				iVmb_Lg		07 00 01.9	
EPLA	Plasencia	3.28	53	Pn	Pn	06 59 24.6	+1.4
EPLA				Sn	Sn	07 00 01.2	+0.1
EPLA				iVmb_Lg		07 00 02.4	
PVRL	Vila Real	3.42	23	ePn	Pn	06 59 26.6	+1.5
PVRL				eSn	Sn	07 00 03.3	-1.1
PVRL				A	A	07 00 05.3	
	comp=E,91nm,0.1s						
POLO	Lamas de Olo	3.48	22	ePn	Pn	06 59 27.6	+1.6
POLO				eSn	Sn	07 00 04.9	-1.2
POLO				A	A	07 00 08.6	
	comp=E,16nm,0.2s						
MVO	Moncorvo	3.57	32	ePn	Pn	06 59 28.3	+1.1
MVO				eSn	Sn	07 00 07.0	-1.2
MVO				A	A	07 00 10.2	
	comp=E,79nm,0.3s						
EJIF	Jimena Fronter	3.64	117	Pn	Pn	06 59 29.6	+1.5
EJIF				Sn	Sn	07 00 08.5	-1.3
PCAB	Cabril	3.73	17	ePn	Pn	06 59 30.9	+1.4
PCAB				eSn	Sn	07 00 10.8	-1.4
PCAB				A	A	07 00 15.2	
	comp=E,49nm,0.4s						
ELOB	Lobios	3.88	16	Pn	Pn	06 59 32.4	+0.9
ELOB				Sn	Sn	07 00 15.1	-0.7
ELOB				iVmb_Lg		07 00 17.4	
EADA	Adamuz	3.88	88	Pn	Pn	06 59 32.2	+0.6
EADA				Sn	Sn	07 00 15.1	-0.9
EADA				iVmb_Lg		07 00 19.0	
PGAV	Gavieira, Arco	3.93	14	ePn	Pn	06 59 33.7	+1.5
PGAV				eSn	Sn	07 00 15.3	-1.8
PGAV				A	A	07 00 18.7	
	comp=E,52nm,0.5s						
ECEU	Ceuta	4.00	123	Pn	Pn	06 59 35.4	+2.4
ECEU				Sn	Sn	07 00 18.8	+0.2
ECEU				iVmb_Lg		07 00 23.9	
CEU	Ceuta	4.00	123	P	Pn	06 59 36.1	+3.1
CEU				S	Sn	07 00 19.6	+1.0
EZAM	Zamans	4.04	9	Pn	Pn	06 59 34.4	+0.7
EZAM				Sn	Sn	07 00 18.3	-1.5
EZAM				iVmb_Lg		07 00 19.6	
EMIJ	Mijas	4.09	111	Pn	Pn	06 59 35.7	+1.4
EMIJ				Sn	Sn	07 00 22.4	+1.4
EMIJ				iVmb_Lg		07 00 25.0	
SMIR	Smir Dam	4.12	125	P	Pn	06 59 37.3	+2.6
PBRG	Braganca	4.22	29	ePn	Pn	06 59 37.7	+1.5
PBRG				eSn	Sn	07 00 22.8	-1.5
PBRG				A	A	07 00 24.6	
	comp=E,45nm,0.2s						
PAB	San Pablo	4.26	69	Pn	Pn	06 59 38.5	+1.7
PAB				Sn	Sn	07 00 23.6	-1.7
PAB				iVmb_Lg		07 00 25.9	
EMAL	Malaga-Limoner	4.27	107	P	Pn	06 59 39.5	+2.7
EMAL				S	Sn	07 00 24.9	-0.5
EGOR	Sierra Gorda,	4.41	102	Pn	Pn	06 59 41.2	+2.4
EGOR				Sn	Sn	07 00 28.9	0.0
EGOR				iVmb_Lg		07 00 34.1	
CHEFC	Chefchaouen	4.52	131	P	Pn	06 59 42.8	+2.5
ESDC	Sonseca Array	4.58	69	Pn	Pn	06 59 42.7	+1.5
	comp=E,13nm,0.3s,baz=254,slow=13,SNR=531						
ESDC				Sn	Sn	07 00 31.2	-2.0
	comp=E,12nm,0.3s,baz=262,slow=16,SNR=13						
ESDC				Lg	Lg	07 00 58.0	
	comp=E,4.4nm,0.3s,baz=254,slow=29,SNR=4.8						
	comp=E,49nm,0.3s						
ESDC	Sonseca Array	4.58	69	Pn	Pn	06 59 42.5	+1.3
ESDC				Sn	Sn	07 00 31.5	-1.7
ESDC				iVmb_Lg		07 00 32.9	
EMAZ	Mazaricos	4.81	5	Pn	Pn	06 59 44.8	+0.5
EMAZ				Sn	Sn	07 00 35.0	-3.8
EMAZ				iVmb_Lg		07 00 36.0	
GUD	Guadarrama	4.84	57	Pn	Pn	06 59 46.3	+1.6
GUD				Sn	Sn	07 00 38.0	-1.5
GUD				iVmb_Lg		07 00 41.4	
ELGU	Los Guajares,	4.85	103	Pn	Pn	06 59 47.3	+2.5
ELGU				Sn	Sn	07 00 39.8	+0.1
ELGU				iVmb_Lg		07 00 46.1	
EQUE	Quentar	4.90	99	Pn	Pn	06 59 47.0	+1.5
EQUE				Sn	Sn	07 00 41.1	-0.1
EQUE				iVmb_Lg		07 00 44.6	
EQES	Quesada	5.10	92	Pn	Pn	06 59 49.6	+1.3
EQES				Sn	Sn	07 00 45.1	-0.8
EQES				iVmb_Lg		07 00 47.8	
AVE	Averroes	5.13	160	P	Pn	06 59 50.0	+1.4
AVE				S	Sn	07 00 43.5	-3.1
AVE	Averroes	5.13	160	P	Pn	06 59 50.2	+1.5
UCM	Universidad Co	5.32	64	P	Pn	06 59 53.3	+2.1
UCM				S	Sn	07 00 49.6	-1.6
EBER	Berja	5.41	101	Pn	Pn	06 59 55.1	+2.6
EBER				Sn	Sn	07 00 53.7	0.0
EBER				iVmb_Lg		07 00 58.5	
SRHM	Skhour des Reh	5.81	166	P	Pn	06 59 60.0	+1.9
AKLM	AKL	5.82	127	P	Pn	07 00 00.4	+2.2
LCRM	LCR	5.83	138	P	Pn	06 59 59.0	+0.5
ENIJ	Nijar	5.92	99	Pn	Pn	07 00 01.7	+2.2
ENIJ				Sn	Sn	07 01 04.3	-1.7
ENIJ				iVmb_Lg		07 01 06.7	
GOG	Mont Gurugu	5.99	117	P	Pn	07 00 02.0	+1.5
EZAR	Zarzadilla de	6.17	90	Pn	Pn	07 00 04.8	+1.8
EZAR				Sn	Sn	07 01 11.7	-0.8
CZD	Col de Zad	6.27	143	P	Pn	07 00 05.7	+1.2
ETOB	Tobarra	6.27	83	Pn	Pn	07 00 05.2	+0.9
ETOB				Sn	Sn	07 01 12.4	-2.4
ETOB				iVmb_Lg		07 01 16.0	
ETOR	Torete	6.35	63	Pn	Pn	07 00 06.5	+1.0
ETOR				Sn	Sn	07 01 13.6	-3.2
ETOR				iVmb_Lg		07 01 17.7	
EMUR	La Murta	6.54	90	Pn	Pn	07 00 09.8	+1.8
EMUR				Sn	Sn	07 01 20.7	-0.6
EMUR				iVmb_Lg		07 01 21.8	
MD31	MD31	6.54	142	P	Pn	07 00 08.1	+0.1
TAF	Taforalt	6.61	118	P	Pn	07 00 10.1	+1.1
MDT	Midelt	6.65	142	Pn	Pn	07 00 10.3	+0.7
	comp=E,9.4nm,0.3s,baz=330,slow=11,SNR=389						
MDT				Sn	Sn	07 01 20.2	-4.1
	comp=E,18nm,0.3s,baz=156,slow=18,SNR=21						
	comp=E,25nm,0.3s						
MDT	Midelt	6.65	142	P	Pn	07 00 10.3	+0.7
CART	Cartagena	6.75	92	P	Pn	07 00 11.1	+0.3
JBK	JBK	6.78	122	P	Pn	07 00 10.8	-0.6
ECHE	Chera	6.82	75	Pn	Pn	07 00 13.8	+2.0
ECHE				Sn	Sn	07 01 25.0	-3.2
ECHE				iVmb_Lg		07 01 30.2	
ELAN	Lanestosa	6.86	40	Pn	Pn	07 00 14.6	+2.2
ELAN				Sn	Sn	07 01 28.0	-1.2
ELAN				iVmb_Lg		07 01 30.4	
OUK	Oukaimeden	7.05	168	P	Pn	07 00 15.9	+0.5
EMOS	Mosqueruela	7.35	70	Pn	Pn	07 00 20.6	+1.4
EMOS				Sn	Sn	07 01 38.1	-3.4
EMOS				iVmb_Lg		07 01 43.9	
OUZM	OUZ	7.57	162	P	Pn	07 00 22.5	+0.2
TTIG	Tnine Tigouga,	7.63	173	P	Pn	07 00 20.7	-2.5
TTIG				S	Sn	07 01 34.6	-14
ESAC	San Caprasio	7.81	60	Pn	Pn	07 00 27.9	+2.5
ESAC				Sn	Sn	07 01 51.1	-1.5
ESAC				iVmb_Lg		07 01 53.8	
EORO	Oroz-Betelu	7.84	50	Pn	Pn	07 00 27.9	+2.1
EORO				Sn	Sn	07 01 52.1	-1.2
EORO				iVmb_Lg		07 01 53.9	
EALK	Alkurruntz	7.91	48	Pn	Pn	07 00 28.8	+2.0
EALK				Sn	Sn	07 01 53.2	-1.9
TDRA	Tendrara	7.94	128	P	Pn	07 00 29.0	+1.6
SJPF	Ste Jean	8.01	49	ePn	Pn	07 00 29.3	+1.1
SJPF				eSn	Sn	07 01 54.4	-3.2
	comp=E,7.6nm,0.4s						

TZRR	Tazzarine	8.03	155	P	Pn	07 00 30.8	+2.2
ERTA	Horta de San J	8.10	67	Pn	Pn	07 00 30.8	+1.4
ERTA				Sn	Sn	07 01 57.9	-1.9
ERTA				*i* Vmb_Lg		07 01 59.0	
ETSF	Etsaut	8.30	52	*e*Pn	Pn	07 00 33.6	+1.4
ETSF				*e*Sn	Sn	07 02 01.7	-3.0
	comp=E,4.0nm,0.3s						
ZGR	Zagora	8.63	157	P	Pn	07 00 37.6	+0.8
EPF	Esparros	8.94	54	*e*Pn	Pn	07 00 42.5	+1.6
EPF				*e*Sn	Sn	07 02 16.5	-3.8
	comp=E,18nm,0.5s						
LFF	La Frestale	10.24	45	*e*Pn	Pn	07 00 59.5	+0.8
LFF				*e*Sn	Sn	07 02 47.3	-4.9
	comp=E,3.3nm,0.2s						
MTLF	Montolieu	10.29	56	*e*Pn	Pn	07 01 00.0	+0.6
MTLF				*e*Sn	Sn	07 02 49.2	-4.3
	comp=E,4.7nm,0.5s						
QUIF	Quistinic	10.80	23	*e*Pn	Pn	07 01 06.9	+0.5
QUIF				*e*Sn	Sn	07 03 00.6	-5.4
	comp=E,1.8nm,0.3s						
RJF	Les Rejaudoux	10.90	46	*e*Pn	Pn	07 01 07.5	-0.2
RJF				*e*Sn	Sn	07 03 03.4	-5.0
	comp=E,3.3nm,0.2s						
MFF	Saint Martin d	10.91	36	*e*Pn	Pn	07 01 08.6	+0.7
MFF				*e*Sn	Sn	07 03 03.7	-5.0
	comp=E,0.5nm,0.2s						
CAF	Calviac	11.00	48	*e*Pn	Pn	07 01 09.5	+0.4
CAF				*e*Sn	Sn	07 03 05.7	-5.1
	comp=E,4.4nm,0.4s						
ROSF	Rostrenen	11.15	22	*e*Pn	Pn	07 01 11.6	+0.6
ROSF				*e*Sn	Sn	07 03 08.8	-5.5
	comp=E,0.6nm,0.3s						
SGMF	Saint Gilles	11.30	24	*e*Pn	Pn	07 01 13.9	+0.8
SGMF				*e*Sn	Sn	07 03 12.2	-5.8
	comp=E,0.7nm,0.2s						
TCF	Toulx Ste Croi	11.89	43	*e*Pn	Pn	07 01 20.6	-0.7
TCF				*e*Sn	Sn	07 03 26.7	-5.9
	comp=E,1.6nm,0.3s						
BGF	Bois d'Agland	12.40	43	*e*Pn	Pn	07 01 28.8	+0.6
BGF				*e*Sn	Sn	07 03 39.0	-6.1
	comp=E,11nm,0.4s						
FLN	La Foliniere	12.46	29	*e*Pn	Pn	07 01 29.5	+0.5
FLN				*e*Sn	Sn	07 03 40.2	-6.3
	comp=E,1.6nm,0.4s						
LDF	La Druitiere	12.46	30	*e*Pn	Pn	07 01 29.4	+0.4
LDF				*e*Sn	Sn	07 03 40.3	-6.2
	comp=E,0.4nm,0.2s						
SMRF	Simiane la Rot	12.78	58	*e*Pn	Pn	07 01 34.3	+0.9
AVF	Avril sur Loir	12.82	44	*e*Pn	Pn	07 01 34.1	+0.2
AVF				*e*Sn	Sn	07 03 49.2	-6.1
	comp=E,0.5nm,0.3s						
SMF	Signal de Mont	13.00	45	*e*Pn	Pn	07 01 37.3	+0.9
SSF	Saint Saulge	13.07	43	*e*Pn	Pn	07 01 37.5	+0.2
SSF				*e*Sn	Sn	07 03 55.1	-6.3
	comp=E,1.0nm,0.3s						
LMR	La Mourre	13.20	62	*e*Pn	Pn	07 01 40.1	+1.0
LOR	Lormes	13.39	43	*e*Pn	Pn	07 01 42.3	+0.6
LOR				*e*Sn	Sn	07 04 02.6	-6.5
	comp=E,0.5nm,0.3s						
SBF	Sospel	14.00	61	*e*Pn	Pn	07 01 51.7	+1.6
TORD	Torodi Ar. Bea	26.82	155	P	P	07 04 12.8	+1.5
	comp=E,0.6nm,0.8s,baz=331,slow=10,SNR=2.8						
	comp=E,0.6nm,0.8s						
ARCES	ARCESS Array B	36.59	20	P	P	07 05 38.6	+2.1
	comp=E,1.8nm,0.9s,baz=226,slow=11,SNR=1.4						
	comp=E,1.8nm,0.9s						
ASAR	Alice Springs	145.69	76	PKPbc	PKPbc	07 18 11.8	+2.1
	comp=E,0.6nm,0.7s,baz=309,slow=2.6,SNR=7.7						

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*ISK **14** 07:25:06.5, 38°.87N×43°.55E, h2^{km}, ML2.7/10*
*DDA **14** 07:25:07.8±0.0, 38°.90N×43°.48E, h8^{km}±2^{km}, ML2.7*
ISC 14 07:25:07.6±1.1**, 38°.88N**±0°.02×**43°.53E**±0°.03**, h5**^{km}±11^{km}**,**
n21, σ1s.08/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERCV	ERCIS-VAN	0.21	314	PG	Pg	07 25 12.2	+0.4
ERCV				SG	Sg	07 25 17.1	+2.5
VANB	Van	0.30	202	PG	Pb	07 25 15.1	-0.5
TVAN	Van	0.36	196	P	Pb	07 25 15.5	-1.1
TVAN				S	Sb	07 25 21.7	-0.9
TVAN				*i* AML	AML	07 25 23.0	
	comp=N,736nm,0.6s						
TVAN				*i* AML	AML	07 25 24.0	
	comp=E,924nm,0.4s						
CLDR	Caldiran	0.40	48	PG	Pg	07 25 15.1	-0.4
CLDR				SG	Sg	07 25 21.4	+0.6
OZAP	Van, Ozalp-Mer	0.42	121	P	Pb	07 25 16.9	-0.7
OZAP				S	Sb	07 25 24.5	+0.2
ADCV	BITLIS_Adilcev	0.64	264	P	Pb	07 25 20.3	-1.0
ADCV				*i* AML	AML	07 25 30.0	
	comp=E,453nm,0.4s						
ADCV				S	Sb	07 25 30.3	-0.2
ADCV				*i* AML	AML	07 25 31.0	
	comp=N,345nm,0.3s						
GEVA	Gevas	0.67	214	P	Pg	07 25 20.3	-0.2
GEVA				S	Sb	07 25 31.5	-0.2
AKDM	Akdamar-Van	0.70	219	PG	Pg	07 25 20.8	-0.2
MLAZ	Malazgirt-MUS	0.81	289	PG	Pb	07 25 23.3	-1.0
AGRB	Hanur-Agry	0.81	329	PG	Pg	07 25 22.9	-0.4
AGRB				SG	Sb	07 25 35.0	-0.8
KOTA	Agri, Merkez-K	0.96	345	P	Pg	07 25 25.4	-0.6
KOTA				S	Sb	07 25 38.9	-1.0
IGDI	IGDIR	1.08	23	P	Pb	07 25 28.1	-0.7
IGDI				S	Sb	07 25 43.1	-0.1
BLIS	Bitlis-Merkez	1.20	248	P	Pg	07 25 29.2	-1.5
BLIS				S	Sb	07 25 46.5	-0.3
PERV	Siirt/Pervari-	1.21	220	P	Pn	07 25 32.0	+0.7
PERV				S	Sn	07 25 51.8	+3.7
GURO	Guroymak-BITLI	1.22	255	PN	Pg	07 25 30.3	-0.7
EATA	Eleskirt	1.27	321	P	Pg	07 25 31.4	-0.7
EATA				S	Sb	07 25 48.2	-0.9
HAKT	HAKKARI	1.32	174	P	Pn	07 25 31.9	-1.0
HAKT				S	Sn	07 25 51.9	+0.8
GNI	Garni	1.58	36	PN	Pb	07 25 36.7	-0.7
CUKT	Cukurca	1.63	178	PN	Pn	07 25 37.3	+0.3
SVAN	Silvan-Diyarba	1.97	249	PN	Pn	07 25 41.4	-0.2
BTMN	Batman	2.03	242	P	Pb	07 25 44.0	-1.1
BTMN				S	Sg	07 26 13.3	+0.4
BTMN				*i* AML	AML	07 26 17.0	
	comp=E,53nm,0.7s						

IDC 14 07:31:56.2±9.1**, 5°.96S**×**150°.08E, h70**^{km}±66^{km}**, mb3.0**/2**,**
mbtmp3.4/3**, ML1.8**/1**, Error ellipse: s-maj=124.1km**
s-min=59.8km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.48	220	P	Pn	07 33 01.7	0.0
	3.5nm,0.3s,baz=35,slow=16,SNR=2.7						
PMG				S	Sn	07 33 53.4	+0.7
	13nm,0.4s,baz=141,slow=17,SNR=3.8						
	12nm,0.5s						
WRA	Warramunga Arr	20.67	226	P	P	07 36 30.5	-0.1
	0.7nm,0.5s,baz=52,slow=11,SNR=14						
	0.7nm,0.5s						
ASAR	Alice Springs	23.50	220	P	P	07 37 00.2	+0.1
	0.3nm,0.4s,baz=53,slow=8.7,SNR=8.0						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	148.04	285	PKPbc	PKPbc	07 51 34.1	-0.8
	0.2nm,0.3s,baz=109,slow=4.0,SNR=2.2						

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*DJA **14** 07:34:24.8±0.5, 2°N±4°×12°8E±°, h10^{km}, M3.6/7, MLv3.6/7*
*IDC **14** 07:34:27.1±2.1, 1°.53N×127°.39E, h0^{km}, mb3.5/3,*
mbtmp3.6/3, Error ellipse: s-maj=150.7km s-min=26.5km
az=66.0
ISC 14 07:34:26.7±1.5**, 1°.6N**±0°.1×**128°.05E**±0°.10**, h10**^{km}**, n7,**
σ1s.98/8**, mb3.5**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.10	219	P	Pb	07 34 45.7	-2.1
TNTI				S	Pn	07 34 47.9	-0.2
LBMI	Labuha	2.32	194	P	Pn	07 35 05.4	+0.4
SWI	Sorong	4.05	128	P	Pn	07 35 27.4	-1.4
SANI	Sanana	4.20	209	P	Pn	07 35 30.6	-0.2
WRA	Warramunga Arr	22.31	164	P	P	07 39 27.3	+2.7
	1.9nm,1.0s,baz=342,slow=11,SNR=4.6						
	1.9nm,1.0s						
ASAR	Alice Springs	25.79	168	P	P	07 40 00.4	+2.4
	0.3nm,0.8s,baz=346,slow=11,SNR=2.7						
	0.3nm,0.8s						
MKAR	Makanchi Array	60.02	325	P	P	07 44 33.7	0.0
	1.1nm,0.7s,baz=130,slow=8.2,SNR=7.2						
	1.1nm,0.7s						

DJA 14 07:49:04.0±0.7**, 11°S**±3°×**12°4E**±°**, h10**^{km}±4^{km}**, M3.9**/6**,**
mb4.1/3**, MLv3.8**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.69	344	P	Pg	07 49 17.5	+0.2
BATI				S	Sb	07 49 27.5	-0.2
SOEI	Soe	1.18	20	P	Pb	07 49 26.0	-0.5
SOEI				S	Sn	07 49 42.8	-0.1
EDFI	Ende, Flores	3.00	314	P	Pn	07 49 50.9	-0.9
EDFI				S	Sn	07 50 28.7	+0.8
PLAI	Plampang	6.33	288	P	Pn	07 50 37.8	+0.4
	0.1nm22nm,1.4s						

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*IDC **14** 07:49:55.4±2.9, 11°.85S×166°.58E, h145^{km}±24^{km},*
mb3.9/15, mbtmp4.4/16, MS2.9/1, Error ellipse:
s-maj=19.3km s-min=14.3km az=72.0
*NEIC **14** 07:49:56.3±1.6, 11°.84S±0°.07×166°.7E±0°.1, h154^{km}±6^{km},*
mb4.5/21, Error ellipse: s-maj=20.0km s-min=9.2km
az=105.0
ISC 14 07:49:55.6±0.6**, 11°.88S**±0°.07×**166°.7E**±0°.1**, h150**^{km}**, n95,**
σ1s.19/87**, mb4.3**/23**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.59	172		Pn	07 50 51.3	+0.7
SANVU	Saraoutou	3.59	172	P	Pn	07 50 51.6	+1.0
DVP	Devils Point	6.00	166	P	Pn	07 51 23.8	+1.4
LIFNC	LIFOU	8.87	176	Pn	Pn	07 52 00.1	-0.6
LIFNC	LIFOU	8.87	176	P	Pn	07 52 00.5	-0.2
MARNC	Mare, Loyalty	9.64	172	Pn	Pn	07 52 10.0	-0.9
MARNC	Mare, Loyalty	9.64	172	P	Pn	07 52 10.9	0.0
YATNC	Mamie plateau,	10.13	179	P	Pn	07 52 18.4	+1.0
DZM	Mont Dzumac	10.14	181	P	Pn	07 52 19.5	+1.8
	21nm,0.4s,baz=354,slow=11,SNR=54						
DZM				S	Sn	07 54 06.6	-3.4
	7.7nm,0.4s,baz=315,slow=19,SNR=3.2						
DZM	Mont Dzumac	10.14	181		Pn	07 52 19.8	+2.1
DZM	Mont Dzumac	10.14	181	P	Pn	07 52 20.5	+2.9
NOUC	Port Laguerre	10.18	182	P	Pn	07 52 21.3	+3.3
ONTNC	Ouen Toro	10.38	181	P	Pn	07 52 23.6	+2.9
OUENC	Ouen Island, N	10.49	179		Pn	07 52 24.8	+2.7
OUENC	Ouen Island, N	10.49	179	P	Pn	07 52 25.2	+3.1
PINNC	Pines Island,	10.71	176	Pn	Pn	07 52 26.6	+1.6
PINNC	Pines Island,	10.71	176	P	Pn	07 52 27.1	+2.1
RABL	Rabaul	16.25	297	P	Pn	07 53 26.9	-8.7
	61nm,0.6s						
EIDS	Eidsvold	19.92	225	P	P	07 54 16.8	+0.9
EIDS				IAmb	IAmb	07 54 17.6	
	comp=Z,9.7nm,0.6s						
EIDS	Eidsvold	19.92	225	P	P	07 54 17.5	+1.7
CTA	Charters Tower	21.23	245	P	P	07 54 29.2	-0.7
	comp=Z,5.7nm,0.8s,baz=78,slow=9.9,SNR=8.2						
	comp=Z,5.7nm,0.8s						
CTAO	Charters Tower	21.23	245	P	P	07 54 29.8	-0.1
CTAO				IAmb	IAmb	07 54 38.9	
	comp=Z,27nm,1.5s						
RMQ	Roma	22.25	227	P	P	07 54 41.0	+0.5
ARMA	Armidale	23.12	215	P	P	07 54 49.4	+0.7
ARMA				IAmb	IAmb	07 54 50.3	
	comp=Z,13nm,0.6s						
ARMA	Armidale	23.12	215	P	P	07 54 49.8	+1.1
MKAZ	Moumakai	26.26	164	P	P	07 55 18.9	+2.0
CMSA	Cobar Meteorol	27.51	221	P	P	07 55 28.0	-0.2
PKGZ	Pakihiroa	27.85	160	P	P	07 55 31.9	+0.7
URZ	Urewera	27.89	162	P	P	07 55 32.2	+0.9
	comp=Z,6.3nm,0.6s,baz=144,slow=3.7,SNR=9.5						
	comp=Z,6.3nm,0.6s						
URZ	Urewera	27.89	162	IAmb	IAmb	07 55 33.4	
	comp=Z,17nm,1.0s						
URZ	Urewera	27.89	162	P	P	07 55 32.3	+0.9
URZ	Urewera	27.89	162	P	P	07 55 31.8	+0.4
MUGZ	Murupara	27.99	163	P	P	07 55 33.4	+1.1
TWGZ	Tauwhareparae	28.08	161	P	P	07 55 34.4	+1.2
MWZ	Matawai	28.08	162	P	P	07 55 33.9	+0.7
MRHZ	Matea Rd	28.22	164	P	P	07 55 35.8	+1.3
MTHZ	Maungataniwha	28.36	163	P	P	07 55 37.1	+1.4
SNGZ	Shannon Statio	28.43	162	P	P	07 55 36.7	+0.3
RAHZ	Arahi	28.48	163	P	P	07 55 37.1	+0.3
RIGZ	Rimuhau	28.49	162	P	P	07 55 36.1	-0.8
BKZ	Black Stump Fm	28.55	164	P	P	07 55 36.8	-0.6
BKZ	Black Stump Fm	28.55	164	P	P	07 55 38.2	+0.8
QRZ	Quartz Range	29.30	171	P	P	07 55 46.1	+2.2
H11S2	WAKE ISLAND Hy	30.17	0	T	T	08 26 38.1	
	baz=181,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	30.18	0	T	T	08 26 38.6	
	baz=181,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	30.19	0	T	T	08 26 39.3	
	baz=181,slow=76,SNR=3.6						
STKA	Stephens Creek	30.48	225	P	P	07 55 54.5	0.0
	comp=Z,3.6nm,0.6s,baz=56,slow=8.0,SNR=7.1						
	comp=Z,3.6nm,0.6s						
STKA	Stephens Creek	30.48	225	IAmb	IAmb	07 55 55.2	
	comp=Z,1.0nm,0.7s						
KHZ	Kahutara	31.01	170	P	P	07 55 58.6	-0.4
LTZ	Lake Taylor	31.18	172	P	P	07 56 00.9	+0.4
H11N1	WAKE ISLAND Hy	31.39	0	T	T	08 28 10.2	
	baz=182,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	31.39	0	T	T	08 28 10.8	
	baz=182,slow=76,SNR=2.8						
H11N2	WAKE ISLAND Hy	31.41	0	T	T	08 28 08.9	
	baz=182,slow=76,SNR=3.4						
TOO	Toolangi	31.85	213	P	P	07 56 06.9	+0.4
RPZ	Rata Peaks	31.95	174	P	P	07 56 08.1	+0.9
	comp=Z,13nm,0.5s,baz=332,slow=2.6,SNR=9.1						
	comp=Z,13nm,0.5s						
RPZ	Rata Peaks	31.95	174	P	P	07 56 08.4	+1.1
WRA	Warramunga Arr	32.05	251	P	P	07 56 07.3	-1.2
	comp=Z,1.5nm,0.7s,baz=83,slow=8.4,SNR=4.4						
WRA				PcP	PcP	07 58 54.5	-0.1
	comp=Z,1.3nm,0.8s,baz=76,slow=2.9,SNR=5.8						
	comp=Z,1.5nm,0.7s						
MQZ	McQueen's Vall	32.14	172	P	P	07 56 08.6	-0.2
LCRK	Leigh Creek	32.18	231	P	P	07 56 08.8	-0.6
OOD	Oodnadatta	33.03	237	P	P	07 56 16.5	-0.3
HTT	Hallett	33.21	225	P	P	07 56 18.5	+0.1
ASAR	Alice Springs	33.23	245	P	P	07 56 17.6	-1.2
	comp=Z,2.2nm,0.7s,baz=71,slow=9.5,SNR=15						
ASAR				PcP	PcP	07 58 57.5	-0.4
	comp=Z,2.1nm,0.8s,baz=75,slow=2.4,SNR=10						
ASAR				ScP	ScP	08 02 29.6	+1.2
	comp=Z,1.4nm,0.9s,baz=92,slow=2.8,SNR=7.3						
	comp=Z,2.2nm,0.7s						
GUMO	Guam	33.27	319	LR	LR	08 06 54.6	
	comp=Z,24nm,21.6s,baz=100,slow=31						
BBOO	Buckleboo	34.93	228	P	P	07 56 32.8	-0.5
BBOO	Buckleboo	34.93	228	P	P	07 56 32.8	-0.5
MULG	Mulgathing	35.32	234	P	P	07 56 35.5	-1.1
SIJI	Sorong	36.77	285	P	P	07 56 49.0	-0.2
	comp=Z,5.4nm,0.4s,baz=108,slow=7.5,SNR=5.9						
	comp=Z,5.4nm,0.4s						
KNRA	Kununurra	36.96	260	P	P	07 56 50.3	-0.4
KNRA				IAmb	IAmb	07 56 51.0	
	comp=Z,16nm,0.9s						
WRKA	Warakurna	38.53	245	P	P	07 57 02.6	-1.2
FORT	Forrest	40.31	236	P	P	07 57 17.9	-0.5
FORT				IAmb	IAmb	07 57 27.2	
	comp=Z,22nm,1.1s						
FORT	Forrest	40.31	236	P	P	07 57 18.0	-0.5
MBWA	Marble Bar	45.78	252	P	P	07 58 02.1	-0.5
MBWA				IAmb	IAmb	07 58 03.8	
	comp=Z,12nm,1.4s						
TOLI2	Tolitoli	47.35	283	P	P	07 58 14.6	-0.3
TOLI2				IAmb	IAmb	07 58 14.6	
	comp=Z,5.0nm,0.9s						
MEEK	Meekatharra	47.39	245	P	P	07 58 14.9	-0.2
KLBR	Kellerberrin	49.03	238	P	P	07 58 26.7	-0.9
BKB	Balikpapan	50.46	278	P	P	07 58 32.8	-5.8
	comp=Z,109nm,0.7s						
MJAR	Matsushiro Arr	55.12	332	P	P	07 59 12.1	-0.3
	comp=Z,0.6nm,0.4s,baz=168,slow=9.8,SNR=4.2						
	comp=Z,0.6nm,0.4s						
ERM	Erimo	57.82	339	P	P	07 59 31.5	+0.2
VNDA	Vanda	65.69	181	P	P	08 00 23.9	+0.4
	comp=Z,2.0nm,0.5s,baz=348,slow=7.9,SNR=31						
	comp=Z,2.0nm,0.5s						
VNDA	Vanda	65.69	181	P	P	08 00 23.7	+0.2
VNDA				IAmb	IAmb	08 00 25.4	
	comp=Z,12nm,1.5s						
CASY	Casey	65.94	202	P	P	08 00 24.6	-0.7
CASY				IAmb	IAmb	08 00 25.1	
	comp=Z,2.3nm,0.8s						
SBA	Scott Base	65.97	180	P	P	08 00 26.0	+0.6
SBA				IAmb	IAmb	08 00 27.6	
	comp=Z,5.6nm,0.8s						
CMAR	Chiang Mai Arr	73.26	293	P	P	08 01 12.1	+1.0
	comp=Z,3.2nm,0.3s,baz=134,slow=3.9,SNR=4.0						
	comp=Z,3.2nm,0.3s						
P18K	Big Mountain,	77.38	19	P	P	08 01 33.2	-0.6
QSPA	South Pole Qui	78.14	180	P	P	08 01 37.9	-0.1
SONM	Songino Array	79.86	324	P	P	08 01 48.4	+0.7
	comp=Z,0.7nm,0.3s,baz=135,slow=5.4,SNR=6.0						
	comp=Z,0.7nm,0.3s						
SONM	Songino Array	79.86	324	IAmb	IAmb	08 01 55.8	
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	84.01	18	P	P	08 02 08.9	0.0
	comp=Z,0.5nm,0.7s,baz=245,slow=4.9,SNR=8.2						
	comp=Z,0.5nm,0.7s						
MAW	Mawson	84.29	202	P	P	08 02 10.1	-0.2
	comp=Z,2.8nm,0.9s,baz=62,slow=8.0,SNR=3.9						
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	94.73	317	P	P	08 03 00.3	+0.2
	comp=Z,1.2nm,0.5s,baz=84,slow=6.6,SNR=12						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	95.30	27	P	P	08 03 01.2	-1.0
	comp=Z,0.1nm,0.4s,baz=258,slow=4.9,SNR=8.6						
	comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	117.36	346	PKP	PKPdf	08 08 22.6	-0.2
	comp=Z,0.5nm,0.3s,baz=92,slow=2.3,SNR=17						
FINES	FINESS Array B	122.86	339	PKP	PKPdf	08 08 33.2	-0.4
	comp=Z,1.3nm,0.8s,baz=9.5,slow=2.3,SNR=6.9						
ESDC	Sonseca Array	151.09	345	PKPbc	PKPbc	08 09 31.9	+0.5
	comp=Z,0.6nm,0.7s,baz=1.6,slow=4.1,SNR=4.5						
TORD	Torodi Ar. Bea	165.26	277	PKP	PKPdf	08 09 43.1	0.0
	comp=Z,1.3nm,1.1s,baz=339,slow=3.3,SNR=3.8						

IDC 14 07:58:52.8±1.7**, 16°.42S**×**178°.36W, h0**^{km}**, mb3.9**/5**,**
mbtmp3.9/5**, Error ellipse: s-maj=156.7km**
s-min=25.9km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.40	240	P	P	08 06 24.4	-0.1
	1.1nm,0.5s,baz=75,slow=6.5,SNR=3.1						
	1.1nm,0.5s						
WRA	Warramunga Arr	44.97	258	P	P	08 07 10.2	0.0
	0.5nm,0.3s,baz=92,slow=7.2,SNR=39						
	0.5nm,0.3s						
ASAR	Alice Springs	45.26	253	P	P	08 07 12.2	-0.3
	6.9nm,0.6s,baz=88,slow=8.5,SNR=90						
	6.9nm,0.6s						
TXAR	Lajitas Array	85.16	58	P	P	08 11 31.7	+0.2
	0.2nm,0.6s,baz=224,slow=3.8,SNR=3.8						
	0.2nm,0.6s						
PDAR	Pinedale Array	86.25	43	P	P	08 11 36.5	-0.2
	0.2nm,0.5s,baz=224,slow=2.5,SNR=1.9						
	0.2nm,0.5s						

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*OSPL **14** 08:10:53.5±1.8, 18°.50N×72°.61W, h49^{km}±12^{km}, ML2.2*
*NEIC **14** 08:10:54.6±1.9, 18°.51N±0°.05×72°.28W±0°.01, h10^{km}±2^{km},*
ML2.7/12, Error ellipse: s-maj=8.2km s-min=3.0km
az=351.0
ISC 14 08:10:54.3±1.0**, 18°.52N**±0°.06×**72°.38W**±0°.03**, h26**^{km}±8^{km}**,**
n14, σ1s.38/22**, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NQUSE	US Embassy, Po	0.14	70		Pb	08 10 57.4	-2.0
LGNH	Logne	0.21	268	Pg	Pn	08 11 00.8	-1.0
LGNH				Sg	Sb	08 11 05.9	+1.7
LGNH				IAML		08 11 06.2	
	comp=N,905nm,0.5s						
LGNH				IAML		08 11 08.3	
	comp=E,1μm,0.3s						
LGNH	Logne	0.21	268	*i* P	Pn	08 11 00.8	-1.0
LGNH				*e*S	Sb	08 11 05.9	+1.7
LGNH				IAML		08 11 07.2	
	comp=Z,126nm,0.1s						
JAKH	Jacmel	0.31	205	Pg	Pb	08 11 01.5	0.0
JAKH				Sg	Sn	08 11 07.4	-1.4
JAKH				IAML		08 11 07.5	
	comp=E,3μm,0.3s						
JAKH	Jacmel	0.31	205	*i* P	Pb	08 11 01.5	0.0
JAKH				*e*S	Sn	08 11 07.3	-1.4
JAKH				IAML		08 11 08.0	
	comp=Z,165nm,0.2s						
LOPE2	Hotel El Peder	0.78	129	*i* P	Pn	08 11 08.6	-1.0
LOPE2				*e*S	Sn	08 11 22.3	+1.9
LOPE2				IAML		08 11 29.1	
	comp=Z,68nm,1.0s						
LONE2	Loma La Sidra	0.86	87	*i* P	Pn	08 11 10.3	-0.5
LONE2				*e*S	Sb	08 11 24.3	+2.3
LONE2				IAML		08 11 29.4	
	comp=Z,56nm,0.3s						
SDDR	Presa de Saban	1.14	66	Pg	Pn	08 11 14.8	+0.2
SDDR				Sg	Sn	08 11 28.2	-1.2
SDDR	Presa de Saban	1.14	66	*i* P	Pn	08 11 15.3	+0.7
SDDR				*e*S	Sb	08 11 30.7	+1.0
SDDR				IAML		08 11 33.6	
	comp=Z,10nm,0.2s						
LOBA2	Hotel Casa Bon	1.30	109	*i* P	Pb	08 11 18.2	+0.1
SC01	Santiago de lo	1.81	60	Pn	Pn	08 11 22.6	-1.2
SC01				IAML		08 11 38.2	
	comp=E,40nm,2.7s						
BANI	BANI	1.93	93	Pn	Pn	08 11 25.6	+0.1
GTBY	Guantanamo Bay	2.93	299	Pn	Pn	08 11 40.7	+1.4
GTBY				IAML		08 12 17.2	
	comp=E,16nm,2.4s						
GTBY				IAML		08 13 13.1	
	comp=E,18nm,2.4s						
CRPR	Cabo Rojo, PR	5.04	95		Pn	08 12 07.0	-1.2

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*IDC **14** 08:11:41.2±1.6, 12°.73S×168°.94E, h626^{km}±18^{km},*
mb3.5/14, mbtmp4.5/16, Error ellipse: s-maj=16.7km
s-min=13.2km az=86.0
*NEIC **14** 08:11:42.6±1.3, 12°.8S±0°.1×168°.9E±0°.1, h638^{km}±8^{km},*
mb4.2/32, Error ellipse: s-maj=20.8km s-min=17.3km
az=89.0
ISC 14 08:11:41.5±0.5**, 12°.75S**±0°.07×**168°.81E**±0°.09**, h626**^{km}**, n53,**
σ0s.94/59**, mb4.1**/29**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.10	210	P	P	08 13 04.2	+0.9
LIFNC	LIFOU	8.12	190	P	P	08 13 43.0	+0.1
MARNC	Mare, Loyalty	8.72	185	P	P	08 13 48.4	0.0
DZM	Mont Dzumac	9.54	193	P	P	08 13 58.1	+1.7
	6.2nm,0.6s,baz=28,slow=18,SNR=11						
OUENC	Ouen Island, N	9.80	191	P	P	08 14 00.6	+1.9
PINNC	Pines Island,	9.90	187	P	P	08 14 00.3	+0.6
KRVT	Keravat (AS076	18.58	295	P	P	08 15 22.5	+1.1
	21nm,0.5s,baz=201,slow=8.6,SNR=3.9						
OUZ	Omahuta	22.79	170	P	P	08 16 00.0	+1.3
CTA	Charters Tower	22.82	248	P	P	08 16 00.0	+0.7
	1.7nm,0.6s,baz=63,slow=6.8,SNR=1.4						
	1.7nm,0.6s						
URZ	Urewera	26.46	165	P	P	08 16 30.5	-0.5
	5.4nm,0.5s,baz=315,slow=4.3,SNR=6.3						
	5.4nm,0.5s						
BKZ	Black Stump Fm	27.18	167	P	P	08 16 36.0	-1.4
QRZ	Quartz Range	28.16	174	P	P	08 16 46.4	+0.6
TUWZ	Tuamarina	28.92	172		S	08 20 59.4	-1.4
STKA	Stephens Creek	31.42	228	P	P	08 17 15.0	+1.1
	5.8nm,0.3s,baz=57,slow=8.9,SNR=69						
	5.8nm,0.3s						
STKA	Stephens Creek	31.42	228	P	P	08 17 14.5	+0.6
STKA				IAmb	IAmb	08 17 16.6	
	comp=Z,1.4nm,0.3s						
TOO	Toolangi	32.33	216	P	P	08 17 21.9	+0.4
WB0	Warramunga Arr	33.72	254	P	P	08 17 33.7	+0.2
WB2	Warramunga Arr	33.78	253	P	P	08 17 34.0	+0.1
WB2				IAmb	IAmb	08 17 35.0	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	33.78	253	P	P	08 17 33.8	-0.1
WRAB				IAmb	IAmb	08 17 34.9	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	33.79	253	P	P	08 17 34.2	+0.2
	comp=Z,8.4nm,0.3s,baz=84,slow=8.6,SNR=493						
WRA				PcP	PcP	08 19 53.3	-1.0
	comp=Z,0.2nm,0.4s,baz=86,slow=5.0,SNR=1.3						
WRA				S	S	08 22 12.2	-3.4

	comp=Z,1.0nm,0.8s,baz=86,slow=14,SNR=4.8						
WRA				ScP	ScP	08 22 40.6	-0.2
	comp=Z,1.6nm,1.0s,baz=83,slow=4.6,SNR=5.1						
	comp=Z,8.4nm,0.3s						
WRA	Warramunga Arr	33.79	253	P	P	08 17 32.7	-1.3
AS31	Alice Springs	34.80	247	P	P	08 17 42.8	+0.4
ASAR	Alice Springs	34.80	247	P	P	08 17 42.6	+0.3
	comp=Z,7.1nm,0.4s,baz=76,slow=9.7,SNR=202						
ASAR				PcP	PcP	08 19 57.1	-0.1
	comp=Z,0.1nm,1.4s,baz=97,slow=3.8,SNR=4.7						
ASAR				S	S	08 22 28.6	-2.0
	comp=Z,1.7nm,0.8s,baz=72,slow=16,SNR=12						
ASAR				ScP	ScP	08 22 44.5	+0.1
	comp=Z,0.7nm,0.8s,baz=57,slow=3.4,SNR=6.2						
	comp=Z,7.1nm,0.4s						
BBOO	Buckleboo	35.98	231	P	P	08 17 52.4	+0.5
BBOO				IAmb	IAmb	08 17 53.5	
	comp=Z,14nm,1.0s						
KNRA	Kununurra	38.89	261	P	P	08 18 16.2	+0.5
FORT	Forrest	41.60	238	P	P	08 18 36.9	-0.1
FORT				IAmb	IAmb	08 19 01.2	
	comp=Z,24nm,1.2s						
JCJ	Chichijima	47.30	327	P	P	08 19 21.0	+0.5
	comp=Z,16nm,0.5s,baz=287,slow=19,SNR=6.6						
	comp=Z,16nm,0.5s						
PSA00	Pilbara Seismi	47.44	252	P	P	08 19 22.0	+0.3
MBWA	Marble Bar	47.53	253	P	P	08 19 22.8	+0.4
MBWA				IAmb	IAmb	08 19 23.8	
	comp=Z,5.9nm,0.8s						
MJAR	Matsushiro Arr	56.88	331	P	P	08 20 27.3	-1.4
	comp=Z,1.8nm,0.7s,baz=154,slow=8.1,SNR=5.7						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	64.87	182	P	P	08 21 19.9	-0.3
	comp=Z,0.7nm,0.7s,baz=359,slow=6.1,SNR=13						
	comp=Z,0.7nm,0.7s						
SBA	Scott Base	65.11	180	P	P	08 21 22.9	+1.2
CASY	Casey	65.92	202	P	P	08 21 26.0	-0.8
CMAR	Chiang Mai Arr	75.54	293	P	P	08 22 25.8	+1.8
	comp=Z,1.7nm,0.3s,baz=116,slow=4.1,SNR=14						
	comp=Z,1.7nm,0.3s						
QSPA	South Pole Qui	77.27	180	P	P	08 22 32.3	-0.4
QSPA				IAmb	IAmb	08 22 33.2	
	comp=Z,6.3nm,0.8s						
Q19K	Cape Douglas,	77.66	19	P	P	08 22 35.1	+0.5
Q19K				IAmb	IAmb	08 22 37.6	
	comp=Z,7.7nm,0.9s						
K20K	Telida	81.08	16	P	P	08 22 52.6	+0.1
K20K				IAmb	IAmb	08 22 54.5	
	comp=Z,6.6nm,1.2s						
PMR	Palmer	81.15	19	P	P	08 22 52.7	-0.1
PMR				IAmb	IAmb	08 22 54.0	
	comp=Z,10nm,1.4s						
SONM	Songino Array	81.81	323	P	P	08 22 56.8	0.0
	comp=Z,1.3nm,0.9s,baz=139,slow=9.2,SNR=3.7						
	comp=Z,1.3nm,0.9s						
VRDI	Verde Repeater	82.79	21	P	P	08 23 01.3	-0.1
YBH	Yreka Blue Hor	82.96	45	P	P	08 23 03.3	+0.7
YBH				IAmb	IAmb	08 23 05.0	
	comp=Z,5.7nm,1.3s						
HUMO	Hull Mountain	83.15	44	P	P	08 23 03.9	+0.5
HUMO				IAmb	IAmb	08 23 05.4	
	comp=Z,5.4nm,1.1s						
ILAR	Eielson Array	84.19	18	P	P	08 23 06.5	-1.5
	comp=Z,1.2nm,0.5s,baz=234,slow=5.2,SNR=17						
	comp=Z,1.2nm,0.5s						
MAW	Mawson	84.27	202	P	P	08 23 08.6	+0.2
	comp=Z,1.9nm,0.7s,baz=104,slow=4.8,SNR=3.6						
	comp=Z,1.9nm,0.7s						
MAW	Mawson	84.27	202	P	P	08 23 08.4	0.0
NVAR	Mina Array Bea	84.85	49	P	P	08 23 12.6	+0.5
	comp=Z,1.3nm,0.9s,baz=230,slow=8.7,SNR=8.0						
	comp=Z,1.3nm,0.9s						
HAWA	Hanford	86.89	41	P	P	08 23 21.0	-0.3
HAWA				IAmb	IAmb	08 23 23.1	
	comp=Z,5.3nm,1.0s						
PRN	Pahroc Range	86.93	51	P	P	08 23 22.1	+0.2
PRN				IAmb	IAmb	08 23 23.8	
	comp=Z,3.7nm,0.9s						
BMO	Blue Mountains	87.79	43	P	P	08 23 25.5	-0.2
BMO				IAmb	IAmb	08 23 26.9	
	comp=Z,4.6nm,1.2s						
ELK	Elko	87.86	48	P	P	08 23 26.2	-0.1
LCMT	Little Creek M	88.19	52	P	P	08 23 27.8	+0.1
LCMT				IAmb	IAmb	08 23 29.5	
	comp=Z,3.6nm,1.0s						
YKA	Yellowknife Ar	95.11	27	P	P	08 23 58.0	-0.7
	comp=Z,1.6nm,0.9s,baz=254,slow=4.6,SNR=17						
	comp=Z,1.6nm,0.9s						
ARCES	ARCESS Array B	118.71	346	PKP	PKPdf	08 29 18.2	-1.0
	comp=Z,5.3nm,1.1s,baz=20,slow=1.3,SNR=11						

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*NEIC **14** 08:21:56.2±1.2, 12°.9S±0°.1×169°.2E±0°.2, h627km±9km, mb4.1/29, Error ellipse: s-maj=21.8km s-min=18.3km az=94.0*

*IDC **14** 08:21:58.0±1.8, 12°.94S×169°.01E, h648km±22km, mb3.3/15, mbtmp4.3/16, Error ellipse: s-maj=15.8km s-min=13.4km az=156.0*

*NOU **14** 08:22:16.9, 14°.54S×169°.33E, h462km, mb4.4/16, Vanuatu Islands*

ISC 14 08:21:55.9±0.5**, 12°.86S**±0°.08×**169°.04E**±0°.10**, h625**km**, n76, σ1s.43**/80**, mb4.1**/30**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.13	214	P	P	08 23 18.4	+0.5
SANVU	Saraoutou	3.13	214	P	P	08 23 18.7	+0.8
DVP	Devils Point	4.91	190	P	P	08 23 27.5	-2.2
RTV	Rentapao	4.94	187	P	P	08 23 25.7	-4.2
LIFNC	LIFOU	8.06	192	P	P	08 23 57.1	+0.4
LIFNC	LIFOU	8.06	192	P	P	08 23 58.0	+1.3
MARNC	Mare, Loyalty	8.63	186	P	P	08 24 02.5	+0.5
MARNC	Mare, Loyalty	8.63	186	P	P	08 24 02.6	+0.6
MARNC	Mare, Loyalty	8.63	186	P	P	08 24 03.1	+1.1
YATNC	Mamie plateau,	9.38	192	P	P	08 24 10.1	+0.9
YATNC	Mamie plateau,	9.38	192	P	P	08 24 10.3	+1.1
DZM	Mont Dzumac	9.49	195	P	P	08 24 12.3	+1.9
	23nm,0.6s,baz=158,slow=18,SNR=21						
DZM	Mont Dzumac	9.49	195	P	P	08 24 11.7	+1.3
DZM	Mont Dzumac	9.49	195	P	P	08 24 12.5	+2.1
DZM	Mont Dzumac	9.49	195	P	P	08 24 12.7	+2.3
NOUC	Port Laguerre	9.56	195	P	P	08 24 13.1	+2.2
NOUC	Port Laguerre	9.56	195	P	P	08 24 12.9	+2.0
ONTNC	Ouen Toro	9.72	194	P	P	08 24 14.4	+2.0
ONTNC	Ouen Toro	9.72	194	P	P	08 24 14.6	+2.2
OUENC	Ouen Island, N	9.74	192	P	P	08 24 14.5	+1.9
OUENC	Ouen Island, N	9.74	192	P	P	08 24 14.9	+2.3
OUENC	Ouen Island, N	9.74	192	P	P	08 24 15.0	+2.3
PINNC	Pines Island,	9.82	189	P	P	08 24 14.8	+1.4
PINNC	Pines Island,	9.82	189	P	P	08 24 15.3	+1.9
PINNC	Pines Island,	9.82	189	P	P	08 24 17.5	+4.1
CTA	Charters Tower	22.99	249	P	P	08 26 14.9	-0.4
	2.4nm,0.7s,baz=89,slow=12,SNR=1.7						
	2.4nm,0.7s						
ARMA	Armidale	23.76	220	P	P	08 26 22.8	+0.7
ARMA				IAmb	IAmb	08 26 47.1	
	comp=Z,7.5nm,1.2s						
URZ	Urewera	26.30	166	P	P	08 26 44.1	0.0
	comp=Z,10nm,1.0s,baz=211,slow=3.3,SNR=7.7						
	comp=Z,10nm,1.0s						
URZ	Urewera	26.30	166	IAmb	IAmb	08 26 44.2	
	comp=Z,38nm,1.5s						
BKZ	Black Stump Fm	27.02	167	P	P	08 26 50.3	-0.3
KHZ	Kahutara	29.71	173	P	P	08 27 12.7	-0.9
STKA	Stephens Creek	31.51	229	P	P	08 27 30.6	+1.4
	comp=Z,3.6nm,0.7s,baz=53,slow=9.0,SNR=12						
STKA				PcP	PcP	08 30 01.7	-0.4
	comp=Z,2.2nm,1.0s,baz=26,slow=3.8,SNR=4.0						
	comp=Z,3.6nm,0.7s						
STKA	Stephens Creek	31.51	229	IAmb	IAmb	08 27 33.0	
	comp=Z,0.9nm,0.9s						
WB0	Warramunga Arr	33.91	254	P	P	08 27 49.7	+0.1
WB2	Warramunga Arr	33.97	253	P	P	08 27 50.0	0.0
WRA	Warramunga Arr	33.98	253	P	P	08 27 50.3	+0.2
	comp=Z,7.5nm,0.4s,baz=84,slow=8.5,SNR=270						
WRA				PcP	PcP	08 30 09.4	0.0
	comp=Z,1.1nm,1.0s,baz=79,slow=3.7,SNR=4.7						
WRA				S	S	08 32 29.1	-3.9
	comp=Z,4.6nm,1.0s,baz=89,slow=13,SNR=12						
	comp=Z,7.5nm,0.4s						
WRA	Warramunga Arr	33.98	253	P	P	08 27 49.0	-1.1
AS31	Alice Springs	34.97	247	P	P	08 27 58.6	+0.3
AS31				IAmb	IAmb	08 27 59.5	
	comp=Z,5.7nm,0.5s						
ASAR	Alice Springs	34.97	247	P	P	08 27 58.8	+0.5
	comp=Z,11nm,0.5s,baz=74,slow=9.5,SNR=219						
ASAR				PcP	PcP	08 30 12.1	-0.2
	comp=Z,1.7nm,0.8s,baz=83,slow=2.7,SNR=10						
ASAR				S	S	08 32 45.4	-2.4
	comp=Z,5.8nm,0.9s,baz=78,slow=15,SNR=18						
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	34.97	247	P	P	08 27 58.0	-0.3
BBOO	Buckleboo	36.09	231	P	P	08 28 07.9	+0.6
BBOO				IAmb	IAmb	08 28 18.7	
	comp=Z,22nm,1.4s						
KNRA	Kununurra	39.10	261	P	P	08 28 32.2	+0.3
FORT	Forrest	41.74	238	P	P	08 28 52.8	+0.2
PSA00	Pilbara Seismi	47.62	253	P	P	08 29 37.6	-0.1
PSA00				IAmb	IAmb	08 29 39.1	
	comp=Z,10nm,1.2s						
TOLI2	Tolitoli	49.84	283	P	P	08 29 54.3	+0.3
TOLI2				IAmb	IAmb	08 29 55.1	
	comp=Z,5.8nm,0.8s						
MORW	Morawa	51.64	243	P	P	08 30 06.8	0.0
MORW				IAmb	IAmb	08 30 32.1	
	comp=Z,10nm,1.1s						
MJAR	Matsushiro Arr	57.09	331	P	P	08 30 44.0	-0.7
	comp=Z,0.8nm,0.7s,baz=166,slow=8.2,SNR=4.1						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	64.77	182	P	P	08 31 34.1	+0.1
	comp=Z,1.0nm,0.7s,baz=356,slow=6.1,SNR=11						
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	64.77	182	IAmb	IAmb	08 31 35.9	
	comp=Z,3.0nm,1.1s						
SBA	Scott Base	65.01	181	P	P	08 31 36.9	+1.4
SBA				IAmb	IAmb	08 31 38.0	
	comp=Z,5.8nm,1.0s						
CASY	Casey	65.90	202	P	P	08 31 41.2	0.0
CASY				IAmb	IAmb	08 31 41.8	
	comp=Z,3.6nm,0.8s						
CMAR	Chiang Mai Arr	75.79	293	P	P	08 32 42.1	+2.2
	comp=Z,5.1nm,0.9s,baz=114,slow=3.9,SNR=23						
	comp=Z,5.1nm,0.9s						
OHAK	Old Harbor	76.44	20	P	P	08 32 42.7	+0.1
OHAK				IAmb	IAmb	08 33 03.7	
	comp=Z,7.9nm,1.4s						
QSPA	South Pole Qui	77.16	180	P	P	08 32 46.5	-0.1
QSPA				IAmb	IAmb	08 32 47.9	
	comp=Z,10nm,0.9s						
CNPM	China Poot	78.92	19	P	P	08 32 57.1	+1.2
CNPM				IAmb	IAmb	08 33 00.0	
	comp=Z,2.2nm,0.6s						
RC01	Rabbit Creek A	80.61	19	P	P	08 33 05.4	+0.8
RC01				IAmb	IAmb	08 33 06.0	
	comp=Z,5.5nm,0.8s						
PMR	Palmer	81.18	19	P	P	08 33 08.5	+1.0
PPLA	Purkeypile	81.27	17	P	P	08 33 08.4	+0.3
PPLA				IAmb	IAmb	08 33 16.6	
	comp=Z,3.0nm,0.9s						
CAST	Castle Rocks	81.71	17	P	P	08 33 10.3	0.0
CAST				IAmb	IAmb	08 33 11.3	
	comp=Z,4.9nm,0.6s						
J20K	Nowinta River	81.77	15	P	P	08 33 11.7	+1.2
SONM	Songino Array	82.04	323	P	P	08 33 12.6	+0.2
	comp=Z,0.9nm,0.6s,baz=104,slow=3.0,SNR=3.8						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	82.04	323	IAmb	IAmb	08 33 14.1	
	comp=Z,1.5nm,1.0s						
RND	Reindeer	82.63	18	P	P	08 33 15.0	0.0
RND				IAmb	IAmb	08 33 16.8	
	comp=Z,7.5nm,1.4s						
IL31		84.23	17	P	P	08 33 22.2	-0.5
ILAR	Eielson Array	84.23	17	P	P	08 33 22.2	-0.5
	comp=Z,1.4nm,0.7s,baz=234,slow=5.3,SNR=24						
	comp=Z,1.4nm,0.7s						
MAW	Mawson	84.25	202	P	P	08 33 22.5	-0.4
	comp=Z,4.5nm,0.7s,baz=112,slow=4.7,SNR=9.0						
	comp=Z,4.5nm,0.7s						
NVAR	Mina Array Bea	84.75	49	P	P	08 33 27.6	+1.4
	comp=Z,0.3nm,0.7s,baz=226,slow=8.6,SNR=2.8						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	92.42	47	P	P	08 34 01.5	-0.3
	comp=Z,0.1nm,0.4s,baz=267,slow=5.4,SNR=1.8						
	comp=Z,0.1nm,0.4s						
YKA	Yellowknife Ar	95.11	27	P	P	08 34 13.2	0.0
	comp=Z,0.3nm,0.6s,baz=253,slow=4.3,SNR=8.1						
YKA				PKiKP	PKiKP	08 38 49.4	-0.6
	comp=Z,0.1nm,0.4s,baz=245,slow=1.6,SNR=1.8						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	97.05	316	P	P	08 34 23.0	+0.6
	comp=Z,0.9nm,0.6s,baz=86,slow=6.8,SNR=5.3						
	comp=Z,0.9nm,0.6s						
LPAZ	La Paz	116.49	116	PKP	PKPdf	08 39 31.2	-0.6
	comp=Z,0.8nm,0.8s,baz=207,slow=4.5,SNR=4.0						
ARCES	ARCESS Array B	118.87	346	PKP	PKPdf	08 39 33.6	-0.5
	comp=Z,3.0nm,0.7s,baz=62,slow=2.3,SNR=18						
ARCES				PKKPbc	PKKPbc	08 49 50.0	-3.8
	comp=Z,2.9nm,1.0s,baz=224,slow=2.5,SNR=5.6						
FINES	FINESS Array B	124.61	339	PKP	PKPdf	08 39 45.3	0.0
	comp=Z,1.5nm,0.8s,baz=130,slow=5.7,SNR=5.6						
KEST	Kesra	150.78	325	PKPbc	PKPbc	08 40 39.5	-0.1
	comp=Z,4.8nm,0.7s,baz=45,slow=5.7,SNR=4.6						
ESDC	Sonseca Array	152.58	348	PKPbc	PKiKP	08 40 43.7	+0.3
	comp=Z,0.5nm,0.8s,baz=10,slow=4.1,SNR=2.2						
TORD	Torodi Ar. Bea	167.67	273	PKP	PKPdf	08 40 52.1	-0.6
	comp=Z,0.5nm,0.7s,baz=104,slow=6.1,SNR=3.9						
TORD				PKPab	PKPab	08 42 04.1	+0.3
	comp=Z,1.6nm,1.0s,baz=90,slow=6.6,SNR=4.9						

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*IDC **14** 08:35:50.0±3.2, 18°.81S×169°.45E, h242km±35km, mb3.4/6, mbtmp4.0/7, Error ellipse: s-maj=70.2km s-min=23.7km az=147.0*

*NOU **14** 08:35:53.1, 18°.84S×169°.21E, h212km, MLv4.0/14, Vanuatu Islands*

ISC 14 08:35:51.0±1.1**, 18°.80S**±0°.09×**169°.3E**±0°.2**, h246**km**, n20, σ1s.40**/21**, mb3.7**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.27	322	P	Pn	08 36 26.5	-0.8
DVP	Devils Point	1.47	316	P	Pn	08 36 28.5	-0.2
LIFNC	LIFOU	2.73	224	P	Pn	08 36 39.1	-1.2
MARNC	Mare, Loyalty	2.91	203	P	Pn	08 36 40.9	-1.3
YATNC	Mamie plateau,	3.93	214	P	Pn	08 36 52.7	-1.1
PINNC	Pines Island,	4.16	204	P	Pn	08 36 57.8	+1.4
DZM	Mont Dzumac	4.19	219	P	Pn	08 36 57.2	+0.2
	10.0nm,0.4s,baz=95,slow=16,SNR=14						
DZM				S	S	08 37 46.5	-2.8
	10nm,0.4s,baz=92,slow=22,SNR=1.9						
DZM	Mont Dzumac	4.19	219	P	Pn	08 36 57.2	+0.2
OUENC	Ouen Island, N	4.25	212	P	Pn	08 36 58.1	+0.5
NOUC	Port Laguerre	4.30	220	P	Pn	08 36 58.2	+0.1
ONTNC	Ouen Toro	4.37	216	P	Pn	08 36 59.3	+0.3
STKA	Stephens Creek	28.09	237	P	P	08 41 21.6	+1.4
	1.8nm,0.9s,baz=70,slow=12,SNR=3.0						
	1.8nm,0.9s						
WRA	Warramunga Arr	32.93	262	P	P	08 42 03.0	+0.3
	0.2nm,0.4s,baz=81,slow=6.5,SNR=10						
	0.2nm,0.4s						
ASAR	Alice Springs	33.25	255	P	P	08 42 06.2	+0.7
	2.6nm,0.5s,baz=83,slow=8.9,SNR=54						
	2.6nm,0.5s						
PETK	Petropavlovsk-	72.30	353	P	P	08 46 49.9	+0.4
	2.5nm,0.7s,baz=150,slow=6.7,SNR=3.0						
	2.5nm,0.7s						
SONM	Songino Array	86.88	323	P	P	08 48 08.5	+0.5
	1.0nm,0.9s,baz=141,slow=4.8,SNR=3.9						
	1.0nm,0.9s						
ILAR	Eielson Array	89.81	17	P	P	08 48 19.9	-1.4
	0.2nm,0.4s,baz=239,slow=5.1,SNR=8.0						
	0.2nm,0.4s						
YKA	Yellowknife Ar	100.27	27	P	Pdif	08 49 05.7	-3.1
	0.2nm,0.7s,baz=275,slow=4.1,SNR=1.7						
ARCES	ARCESS Array B	124.65	345	PKP	PKPdf	08 54 19.9	-0.6
	8.8nm,1.3s,baz=29,slow=2.0,SNR=5.8						
DAVOX	Davos/Dischmat	147.35	333	PKPbc	PKPdf	08 55 05.3	+2.2
	1.8nm,0.4s,baz=173,slow=10,SNR=4.0						

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*IDC **14** 08:52:35.9±1.3, 42°.28N×141°.01E, h121km±11km, mb3.3/13, mbtmp3.6/17, MS2.4/1, Error ellipse: s-maj=16.9km s-min=12.2km az=134.0*

*JMA **14** 08:52:37.0±0.1, 42°.3N±0°.4×141°.0E±0°.7, h120km±1km, MV3.0/38, IBURI REGION*

ISC 14 08:52:36.4±0.7**, 42°.28N**±0°.06×**140°.99E**±0°.06**, h125**km±6km**, n40, σ0s.62**/41**, mb3.5**/12**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNB	Noboribetsu	0.19	10	P	Pn	08 52 53.3	-0.3
JNB				S	Sn	08 53 05.6	-1.1
JKB	Kayabe	0.39	176	P	Pn	08 52 54.5	+0.2
JYM2	Yakumo 2	0.49	251	P	Pn	08 52 55.1	+0.3
JYM2				*e*S	Sn	08 53 08.5	-0.2
JEW	Eniwo	0.65	31	P	Pn	08 52 56.1	+0.3
JSH	Shimam	0.79	298	P	Pn	08 52 57.0	+0.1
JHST	Hiyamasetana	0.84	280	P	Pn	08 52 57.3	-0.1
JSR	Shiriuchi	0.86	210	P	Pn	08 52 58.1	+0.6
JOT	Ohata	0.90	177	P	Pn	08 52 58.4	+0.6
JISS	Ishikarishitsu	1.04	17	P	Pn	08 52 59.7	+0.5
JISS				*e*S	Sn	08 53 17.4	+0.8
JOMM	Oshimamatsumae	1.05	225	P	Pn	08 53 00.0	+0.7
JOMM				*e*S	Sn	08 53 17.4	+0.7
JBT2	Biratori 2	1.13	63	*e*P	Pn	08 53 00.2	+0.1
JOSM	Okushiri--Mats	1.15	261	P	Pn	08 53 00.4	+0.2
JNBK	Urakawa-nobuka	1.30	89	P	Pn	08 53 02.1	+0.2
JFR	Furan	1.47	53	*e*P	Pn	08 53 04.0	+0.2
JAB	Ashibetsu	1.52	36	P	Pn	08 53 05.1	+0.8
JAB				*e*S	Sn	08 53 26.2	+0.5
JCH	Churui	1.79	78	*e*P	Pn	08 53 07.7	+0.3
JCH				*e*S	Sn	08 53 30.8	-0.4
ASAJ	Asahikawa	2.18	32	P	Pn	08 53 12.7	+0.5
	13nm,0.3s,baz=215,slow=12,SNR=27						
ASAJ				S	Sn	08 53 38.8	-1.0
	14nm,0.6s,baz=258,slow=23,SNR=7.1						
MJAR	Matsushiro Arr	6.12	202	P	Pn	08 54 05.4	+1.0
	1.0nm,0.5s,baz=329,slow=22,SNR=6.0						
USRK	Ussuriysk Ar.	6.85	289	P	Pn	08 54 15.4	+1.2
	2.5nm,0.6s,baz=97,slow=14,SNR=2.2						
KLR	Kul'dur	9.48	320	P	Pn	08 54 49.4	-0.3
	1.2nm,0.8s,baz=120,slow=13,SNR=2.8						
KLR				LR	LR	08 58 34.9	
	comp=Z,19nm,18.6s,baz=338,slow=38						
SONM	Songino Array	24.92	295	P	P	08 57 48.0	+0.3
	0.7nm,0.5s,baz=74,slow=9.1,SNR=4.6						
	0.7nm,0.5s						
H11N2	WAKE ISLAND Hy	31.37	128	T	T	09 31 17.4	
	baz=321,slow=75,SNR=7.7						
H11N1	WAKE ISLAND Hy	31.38	128	T	T	09 31 17.2	
	baz=321,slow=75,SNR=6.6						
H11N3	WAKE ISLAND Hy	31.39	128	T	T	09 31 18.1	
	baz=321,slow=75,SNR=5.2						
H11S1	WAKE ISLAND Hy	32.22	129	T	T	09 32 26.1	
	baz=321						
H11S3	WAKE ISLAND Hy	32.22	130	T	T	09 32 21.0	
	baz=321						
H11S2	WAKE ISLAND Hy	32.24	129	T	T	09 32 23.4	
	baz=321						
ZALV	Zalesovo Beam	38.30	308	P	P	08 59 44.3	0.0
	1.9nm,0.4s,baz=90,slow=8.9,SNR=6.8						
	1.9nm,0.4s						
MKAR	Makanchi Array	41.25	297	P	P	09 00 09.0	+0.1
	0.5nm,0.6s,baz=132,slow=5.1,SNR=4.4						
	0.5nm,0.6s						
ILAR	Eielson Array	45.31	35	P	P	09 00 42.3	+1.1
	0.7nm,0.9s,baz=280,slow=8.0,SNR=10						
	0.7nm,0.9s						
INK	Inuvik	49.91	29	P	P	09 01 17.0	+0.4
	0.7nm,0.4s,baz=278,slow=5.9,SNR=7.8						
	0.7nm,0.4s						
YKA	Yellowknife Ar	59.47	31	P	P	09 02 25.9	+0.4
	0.1nm,0.4s,baz=302,slow=6.5,SNR=7.9						
	0.1nm,0.4s						
WRA	Warramunga Arr	62.21	187	P	P	09 02 44.2	-0.4
	0.3nm,0.5s,baz=6.0,slow=7.2,SNR=7.5						
	0.3nm,0.5s						
FINES	FINESS Array B	64.05	331	P	P	09 02 56.0	-0.2
	2.2nm,0.5s,baz=49,slow=7.9,SNR=18						
	2.2nm,0.5s						
ASAR	Alice Springs	65.94	187	P	P	09 03 07.7	-1.2
	0.6nm,1.0s,baz=10,slow=5.7,SNR=2.4						
	0.6nm,1.0s						
NB2	NORSAR Subarra	69.24	336	P	P	09 03 29.0	-0.3
	comp=Z,0.7nm,0.6s,baz=36,slow=6.5						
NOA	NORSAR Array B	69.24	336	P	P	09 03 28.9	-0.3
	comp=Z,0.8nm,0.6s,baz=38,slow=6.3,SNR=4.4						
	comp=Z,0.8nm,0.6s						
AKASG	Malin Array Be	69.99	321	P	P	09 03 33.3	-0.7
	comp=Z,0.3nm,0.3s,baz=45,slow=5.3,SNR=1.7						
	comp=Z,0.3nm,0.3s						
NVAR	Mina Array Bea	72.14	54	P	P	09 03 48.4	+0.9
	comp=Z,0.2nm,0.5s,baz=278,slow=6.3,SNR=2.2						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	87.17	52	P	P	09 05 07.7	-0.9
	baz=305,slow=5.2,SNR=1.6						

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*IDC **14** 09:26:53.2±0.9, 24°.11N×121°.82E, h0km, mb3.8/9, mbtmp3.8/11, ML3.2/2, MS2.9/3, Error ellipse: s-maj=30.3km s-min=19.0km az=75.0*

*JMA **14** 09:26:55.1±0.2, 24°.1N±0°.7×121°.6E±1°.0, h20km, MV3.6/8, TAIWAN REGION*

*NIED **14** 09:26:55.1, 24°.05N×121°.61E, h20km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.42; $M_{\theta\theta}$0.84; $M_{\phi\phi}$4.59; $M_{r\theta}$2.03; $M_{\theta\phi}$2.98; $M_{\phi r}$-1.79; Fault plane solution: $M_0$6.46000×10^{14} NP1: ϕ_s231.00000°, δ47.00000°, λ-56.00000°. NP2: ϕ_s6.00000°, δ53.00000°, λ-121.00000°.*

*ASIES **14** 09:26:56.7, 24°.18N×121°.74E, h23km, MW3.7*

*TAP **14** 09:26:56.8, 24°.18N×121°.74E, h11km, ML4.2, B*

*NEIC **14** 09:26:56.4±1.0, 24°.15N±0°.01×121°.77E±0°.04, h14km±3km, mb4.3/7, ML4.0(TAP), Error ellipse: s-maj=5.9km s-min=1.1km az=106.0*

ISC 14 09:26:56.1±0.7**, 24°.16N**±0°.01×**121°.77E**±0°.02**, h14**km±4km**, n165, σ1s.00**/254**, mb4.1**/13**, 3C-35D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.13	272	⇓*i*P	Pg	09 26 60.0	+0.3
	baz=262						
ETL				S	Sg	09 27 02.3	+0.2
	baz=262						
EHP	Heping Village	0.16	351	⇓*i*P	Pg	09 27 00.2	+0.2
	baz=3.0						
EHP				*i* S	Sg	09 27 03.1	+0.5
	baz=3.0						
NACB	Ninganchiao	0.16	277		Pg	09 27 00.2	+0.2
NACB				Sg	Sg	09 27 03.0	+0.4
NACB	Ninganchiao	0.16	277	⇓*i*P	Pg	09 27 00.2	+0.2
	baz=270						
NACB				*i* S	Sg	09 27 02.0	-0.6
	baz=270						
TWD	Chiawan	0.17	244	⇓*i*P	Pg	09 27 00.6	+0.4
	baz=241						
TWD				*i* S	Sg	09 27 03.6	+0.6
	baz=241						
HWA	Hwalien	0.23	220	*i* P	Pb	09 27 02.6	+0.5
	baz=222						
HWA				S	Sb	09 27 06.0	-0.1
	baz=222						
ETLH	Xiulin Townshi	0.27	281	⇓*i*P	Pg	09 27 02.1	+0.3
	baz=278						
ETLH				*i* S	Sg	09 27 05.8	+0.2
	baz=278						
ENA	Nanau	0.27	355	⇓*i*P	Pg	09 27 02.2	+0.3
	baz=1.0						
ENA				*i* S	Sg	09 27 06.0	+0.2
	baz=1.0						
EWUT	Wuta	0.29	2	⇓*i*P	Pg	09 27 02.6	+0.4
	baz=6.0						
EWUT				*i* S	Sg	09 27 06.5	+0.2
	baz=6.0						
LATG	Datong	0.44	330	⇓*i*P	Pg	09 27 05.3	+0.4
	baz=331						
LATG				*e*S	Sg	09 27 11.3	+0.4
	baz=331						
NNSB	Datong	0.44	308	⇓*i*P	Pg	09 27 05.5	+0.5
	baz=307						
NNSB				*i* S	Sg	09 27 11.1	0.0
	baz=307						
ESL	Shilin	0.46	222	⇓*i*P	Pg	09 27 05.8	+0.6
	baz=225						
ESL				*e*S	Sb	09 27 12.4	-0.2
	baz=225						
NNS	Nan Shan	0.46	308	⇓*i*P	Pg	09 27 05.7	+0.4
	baz=308						
NNS				*i* S	Sg	09 27 11.9	+0.4
	baz=308						
TWC	Suao	0.46	9	⇓*i*P	Pg	09 27 05.7	+0.5
	baz=7.0						
TWC				*i* S	Sg	09 27 12.2	+0.8
	baz=7.0						
WHF	Hehuan Shan	0.46	269	⇓*i*P	Pg	09 27 05.7	+0.4
	baz=267						
WHF				*i* S	Sg	09 27 12.0	+0.4

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     baz=267
NDS  Dongshan          0.48 354⇓iP   Pg     09 27 06.2 +0.6
     baz=356
NDS                             i S  Sg     09 27 12.4 +0.4
     baz=356
FUSS Fushou            0.49 281⇓iP   Pg     09 27 06.5 +0.7
     baz=280
FUSS                            i S  Sg     09 27 13.1 +0.7
     baz=280
ENTT Nioudou           0.52 339⇓iP   Pg     09 27 06.9 +0.6
     baz=341
ENTT                            i S  Sg     09 27 13.8 +0.6
     baz=341
CHGB Renai             0.55 260⇓iP   Pg     09 27 07.6 +0.6
     baz=251
CHGB                              S  Sg     09 27 14.8 +0.5
     baz=251
TDCB Techi             0.56 280⇓iP   Pb     09 27 08.1 +0.2
     baz=279
TDCB                              S  Sg     09 27 15.3 +0.5
     baz=279
TWE  Neicheng          0.57 351⇓iP   Pg     09 27 07.9 +0.6
     baz=353
TWE                               S  Sg     09 27 15.6 +0.6
     baz=353
EGFH Guangfu           0.57 213  eP  Pb     09 27 08.3 +0.3
     baz=219
EGFH                             eS  Sb     09 27 16.7 +0.7
     baz=219
OWD  Renai             0.58 250⇓iP   Pg     09 27 08.0 +0.5
     baz=249
OWD                              eS  Sg     09 27 15.3 +0.2
     baz=249
ILA  Ilan              0.61 358⇓iP   Pg     09 27 08.9 +0.8
     baz=1.0
ILA                               S  Sb     09 27 17.3 +0.4
     baz=1.0
WUSB Renai             0.62 255⇓iP   Pg     09 27 08.9 +0.7
     baz=246
WUSB                             eS  Sg     09 27 16.4 +0.1
     baz=246
FUSB Fushanzhiwuyua    0.62 345⇓iP   Pg     09 27 08.9 +0.5
     baz=346
FUSB                              S  Sg     09 27 17.2 +0.6
     baz=346
YHNB Yeheng            0.62 325      Pg     09 27 08.9 +0.6
YHNB                              Sg Sg     09 27 17.5 +0.9
YHNB Yeheng            0.62 325   P  Pg     09 27 09.0 +0.6
YHNB Yeheng            0.62 325⇓iP   Pg     09 27 09.0 +0.6
     baz=325
YHNB                            i S  Sg     09 27 17.2 +0.5
     baz=325
NSK  Sanguang          0.64 324⇓iP   Pg     09 27 09.1 +0.5
     baz=325
NSK                               S  Sg     09 27 17.5 +0.4
     baz=325
NWLT Wulai             0.67 339⇓iP   Pg     09 27 09.8 +0.7
     baz=340
NWLT                              S  Sg     09 27 18.2 +0.3
     baz=340
NTC  Toucheng          0.70    5⇓iP  Pg     09 27 10.3 +0.6
     baz=6.0
NTC                              eS  Sb     09 27 20.3 +0.7
     baz=6.0
VWDT VWDT              0.70 235⇓iP   Pb     09 27 10.4 +0.3
     baz=234
VWDT                             eS  Sb     09 27 20.3 +0.7
     baz=234
EGS                    0.70   12 eP  Pg     09 27 10.5 +0.7
     baz=21
EGS                              eS  Sg     09 27 19.5 +0.4
     baz=21
HGSD Ruisui            0.73 206   P  Pb     09 27 11.8 +1.1
     baz=193
HGSD                             eS  Sn     09 27 23.4 +0.5
     baz=193
NFF  Wufeng Townshi    0.76 309   P  Pb     09 27 11.5 +0.4
     baz=309
NFF                               S  Sg     09 27 21.4 +0.6
     baz=309
WHP  Taichung City     0.76 279⇓iP   Pb     09 27 11.8 +0.6
     baz=279
WHP                               S  Sb     09 27 22.4 +1.0
     baz=279
EHY  Hungye            0.76 212  eP  Pg     09 27 10.8 -0.2
     baz=212
TIPB Shuangxi          0.81    4⇓iP  Pg     09 27 12.4 +0.5
     baz=5.0
TIPB                              S  Sg     09 27 22.5 -0.2
     baz=5.0
SSLB Suanglung         0.83 244      Pg     09 27 12.8 +0.5
SSLB                              Sg Sg     09 27 23.6 +0.5
SSLB Suanglung         0.83 244   P  Pg     09 27 12.7 +0.5
SSLB Suanglung         0.83 244⇓iP   Pg     09 27 12.6 +0.5
     baz=253
SSLB                             eS  Sg     09 27 21.4 -1.7
     baz=253
NHDH Xindian Distri    0.83 345  eP  Pb     09 27 13.2 +0.8
     baz=345
NHDH                             eS  Sb     09 27 24.1 +0.6
     baz=345
SMLT Sun Moon Lake     0.84 251⇓iP   Pb     09 27 13.0 +0.5
     baz=250
SMLT                              S  Sg     09 27 23.8 +0.4
     baz=250
TWA  Mucha             0.84 349  eP  Pg     09 27 12.8 +0.4
     baz=349
TWA                              eS  Sg     09 27 24.1 +0.7
     baz=349
LIOB Emei              0.84 306  eP  Pb     09 27 13.3 +0.8
     baz=305
LIOB                             eS  Sg     09 27 23.8 +0.3
     baz=305
NSTT Nanjuang          0.84 304⇓iP   Pb     09 27 13.1 +0.5
     baz=304
NSTT                              S  Sb     09 27 24.2 +0.4
     baz=304
TATO Taipei            0.85 343      Pb     09 27 13.4 +0.7
TATO                              Sg Sg     09 27 24.4 +0.5
TYC  Yuchr             0.87 253   P  Pb     09 27 13.5 +0.6
     baz=246
TYC                               S  Sg     09 27 24.3 -0.1
     baz=246
TWB1 Santiao Chiao     0.87   13 eP  Pb     09 27 13.6 +0.6
     baz=7.0
TWB1                             eS  Sg     09 27 24.9 +0.4
     baz=7.0
YULB Yu-li             0.87 210      Pb     09 27 13.9 +0.9
YULB Yu-li             0.87 210  eP  Pg     09 27 13.1 +0.1
     baz=220
YULB                             eS  Sb     09 27 25.9 +1.3
     baz=220
EYUL Yuli              0.90 207  eP  Pn     09 27 15.1 +0.7
     baz=223
NWF  Wu-fen Shan       0.91    1  P  Pg     09 27 14.7 +0.9
     baz=353
NWF                              eS  Sg     09 27 26.4 +0.7
     baz=353
TAP  Taipei            0.91 345  eP  Pn     09 27 14.8 +0.2
     baz=346
TAP                              eS  Sg     09 27 27.1 +1.3
     baz=346
TWQ1 Liyutan           0.93 282⇓iP   Pn     09 27 15.3 +0.5
     baz=282
TWQ1                             eS  Sn     09 27 28.0 +0.1
     baz=282
SXI1 Grass Mountain    0.94    6⇓iP  Pb     09 27 14.9 +0.7
     baz=353
SXI1                             eS  Sb     09 27 27.0 +0.4
     baz=353
NSY  Sanyi             0.95 286  eP  Pn     09 27 16.2 +1.1
     baz=285
NSY                              eS  Sn     09 27 30.0 +1.4
     baz=285
SBCB Hsinchu           0.95 312  eP  Pn     09 27 16.2 +1.1
     baz=311
SBCB                             eS  Sb     09 27 27.1 +0.1
     baz=311
NCUH Zhongli           0.97 327  eP  Pn     09 27 15.8 +0.5
     baz=326
NCUH                             eS  Sn     09 27 30.2 +1.3
     baz=326
NCU  National Centr    0.97 327   P  Pn     09 27 16.1 +0.8
     baz=327
NCU                              eS  Sn     09 27 29.7 +0.8
     baz=327
NMLH Miaoli            0.97 293  eP  Pn     09 27 16.4 +1.1
     baz=293
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NMLH                             eS  Sn     09 27 28.8 -0.1
     baz=293
HSN  Hsinchu           0.97 312   P  Pn     09 27 16.0 +0.7
     baz=314
HSN                              eS  Sn     09 27 29.5 +0.6
     baz=314
TWS1 Kuangyinshan      0.99 341   P  Pn     09 27 16.6 +1.0
     baz=350
TWS1                             eS  Sn     09 27 30.5 +1.0
     baz=350
TCU  Taichung          1.00 270  eP  Pn     09 27 17.4 +1.8
     baz=269
TCU                              eS  Sn     09 27 32.0 +2.4
     baz=269
YUS  Yu-Shan           1.00 229⇑iP   Pb     09 27 15.9 +0.4
     baz=229
YUS                              eS  Sn     09 27 30.0 -0.3
     baz=229
YM01 YM01              1.00 350  i P Pn     09 27 16.3 +0.5
     baz=350
YM01                             eS  Sg     09 27 29.2 +0.6
     baz=350
WJS  Zhushan           1.01 251   P  Pn     09 27 17.2 +1.4
     baz=246
WJS                              eS  Sn     09 27 31.1 +1.3
     baz=246
WNT  Mingjian          1.03 255  eP  Pn     09 27 17.4 +1.3
     baz=250
WNT                              eS  Sn     09 27 32.8 +2.5
     baz=250
FULB Fuli              1.05 205  eP  Pb     09 27 16.8 +0.7
     baz=222
FULB                             eS  Sn     09 27 33.4 +2.5
     baz=222
NTST Danshui           1.05 344  eP  Pn     09 27 17.2 +0.8
     baz=352
NTST                             eS  Sn     09 27 32.4 +1.6
     baz=352
WDJ  Dajia District    1.05 281  eP  Pn     09 27 18.1 +1.7
     baz=281
WDJ                              eS  Sn     09 27 32.3 +1.5
     baz=281
ANP  Anpu              1.05 348  eP  Pg     09 27 17.0 +0.5
     baz=348
ALS  Alishan           1.09 234⇑iP   Pg     09 27 17.6 +0.4
     baz=235
ALS                              eS  Sn     09 27 33.2 +1.0
     baz=235
WCHH Zhanghua          1.11 266   P  Pg     09 27 19.0 +1.5
     baz=266
WCHH                             eS  Sn     09 27 35.8 +3.6
     baz=266
CHKT Chengkung         1.11 199  eP  Pb     09 27 17.0 -0.1
     baz=192
CHKT                             eS  Sn     09 27 34.5 +2.0
     baz=192
JYNG Yonagunijimaku    1.11   74  P  Pn     09 27 18.1 +0.9
JYNG                             eS  Sn     09 27 34.6 +2.2
TWY  Chenhua           1.13 352   P  Pg     09 27 18.5 +0.7
     baz=353
TWY                              eS  Sg     09 27 33.2 +0.7
     baz=353
CHN5 Tsauling          1.14 241   P  Pg     09 27 19.0 +0.9
     baz=242
CHN5                             eS  Sn     09 27 35.9 +2.6
     baz=242
YOJ  Yonaguni jima     1.18   75     Pn     09 27 18.9 +0.7
YOJ  Yonaguni jima     1.18   75  P  Pb     09 27 19.2 +1.0
YOJ  Yonaguni jima     1.18   75  P  Pn     09 27 18.7 +0.6
     baz=66
YOJ                              eS  Sg     09 27 38.2 +4.1
     baz=66
YOJ  Yonaguni jima     1.18   75  P  Pb     09 27 19.0 +0.8
YOJ                              eS  Sg     09 27 35.8 +1.7
ELDTW Lidau            1.18 216  eP  Pn     09 27 17.4 -0.9
     baz=205
ELDTW                            eS  Sg     09 27 36.0 +1.7
     baz=205
WDLH Douliu            1.22 248  eP  Pg     09 27 19.9 +0.3
     baz=249
EDH  Donghe            1.25 200  eP  Pn     09 27 18.3 -0.9
     baz=188
EDH                              eS  Sg     09 27 37.5 +1.0
     baz=188
WRL  Guolierlin Hig    1.30 259   P  Pb     09 27 21.1 +0.9
     baz=260
WRL                              eS  Sg     09 27 40.7 +2.7
     baz=260
CHN2 Minshiung         1.34 243  eP  Pg     09 27 22.9 +1.1
     baz=244
CHN2                             eS  Sg     09 27 42.4 +3.2
     baz=244
STYH Taoyuan           1.34 223   P  Pb     09 27 21.5 +0.6
     baz=225
STYH                             eS  Sg     09 27 39.3 +0.1
     baz=225
CHN4 Tsaushan          1.34 234   P  Pg     09 27 22.4 +0.5
     baz=236
CHN4                             eS  Sg     09 27 42.1 +2.8
     baz=236
WTK  Tuku              1.34 250  eP  Pb     09 27 21.9 +0.8
     baz=251
WTK                              eS  Sg     09 27 40.5 +1.1
     baz=251
TPUB Ta-pu             1.35 231      Pb     09 27 21.9 +0.7
TPUB Ta-pu             1.35 231   P  Pg     09 27 22.5 +0.5
TPUB Ta-pu             1.35 231   P  Pb     09 27 22.1 +0.9
     baz=222
TPUB                             eS  Sg     09 27 40.5 +1.0
     baz=222
LONT Longtian          1.37 205  eP  Pn     09 27 20.0 -0.9
     baz=208
WTP  Ta-pu             1.39 230   P  Pb     09 27 22.9 +1.0
     baz=232
WTP                              eS  Sg     09 27 41.6 +0.6
     baz=232
CHY  Chiayi            1.39 242   P  Pg     09 27 23.6 +0.7
     baz=244
TWK  Hsinying          1.47 233   P  Pb     09 27 23.9 +0.7
     baz=236
TWG  Pinlang           1.47 206  eP  Pn     09 27 21.1 -1.2
     baz=192
CHN1 Nanshi            1.49 230   P  Pb     09 27 24.5 +0.9
     baz=233
SNST Tainan City       1.49 232  eP  Pb     09 27 24.2 +0.6
     baz=235
PCYT Pengchaiyu        1.49   11 eP  Pn     09 27 23.6 +1.0
     baz=9.0
LDUT Ludao             1.50 191  eP  Pn     09 27 21.3 -1.3
     baz=180
WSF  Szhu              1.50 250  eP  Pb     09 27 24.6 +0.8
     baz=252
SGST Jiashian          1.52 226  eP  Pb     09 27 24.4 +0.3
     baz=229
WSL  Shuilin Townsh    1.54 246   P  Pb     09 27 24.5  0.0
     baz=248
WSL                              eS  Sg     09 27 47.5 +1.7
     baz=248
ICHU Yijhu             1.58 240   P  Pb     09 27 25.4 +0.4
     baz=243
ICHU                             eS  Sg     09 27 49.2 +2.3
     baz=243
CHN8 Yiju              1.64 241  eP  Pb     09 27 26.5 +0.4
     baz=228
CHN8                             eS  Sg     09 27 50.3 +1.4
     baz=228
SCST Cishan            1.72 223  eP  Pb     09 27 28.1 +0.6
     baz=225
SCST                             eS  Sg     09 27 53.0 +1.4
     baz=225
ECL  Taimali           1.72 206  eP  Pn     09 27 25.4 -0.3
     baz=195
SHHT Tainan City       1.72 229  eP  Pb     09 27 27.8 +0.2
     baz=233
SSD  Sandimen          1.75 217  eP  Pb     09 27 27.6 -0.3
     baz=233
SSD                              eS  Sg     09 27 52.6 +0.3
     baz=233
TSMG Majia             1.77 216  eP  Pb     09 27 28.4  0.0
     baz=208
IRIF Iriomote-Funau    1.80   84  P  Pb     09 27 29.5 +0.6
TWM1 Shoushan          1.81 223  eP  Pb     09 27 30.2 +1.1
     baz=226
MASBT Mashibuluo       1.86 214  eP  Pn     09 27 28.2 +0.7
     baz=216
MASBT                            eS  Sg     09 27 55.5 -0.4
     baz=216
EAST Anshuo            1.96 206  eP  Pn     09 27 29.0 +0.1
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     baz=196
TAW  Tawu              1.96 204  eP  Pn     09 27 30.7 +1.8
     baz=195
TAWH Dawu Township     1.98 204  eP  Pb     09 27 31.8 -0.1
     baz=195
SSPT Xinbi             2.00 214  eP  Pb     09 27 32.2 +0.1
     baz=216
JKRS Kuro-shima        2.05   87  P  Pn     09 27 31.6 +1.4
SCZT Fangliau          2.06 211  eP  Pb     09 27 32.8 -0.5
     baz=198
PNG  Penghu            2.11 254  eP  Pn     09 27 31.6 +0.7
     baz=258
PHUB P'eng-hu          2.11 253  eP  Pn     09 27 31.1 +0.1
     baz=256
WDGT Dungji            2.13 246  eP  Pn     09 27 32.7 +1.5
     baz=250
JIJ  Ishigaki jima     2.18   84  P  Pn     09 27 32.8 +0.9
JIJ                              eS  Sn     09 27 59.6 +0.8
WLCH Liuqiu            2.20 216  eP  Pb     09 27 34.8 -0.9
     baz=239
VWUC VWUC              2.27 292  eP  Pn     09 27 32.5 -0.6
     baz=292
VCHM Qimei             2.34 247  eP  Pn     09 27 35.5 +1.3
     baz=236
TWKBT Hengchun         2.37 202  eP  Pn     09 27 36.1 +1.5
     baz=194
PTMZ Houxiangcun       2.57 291  eP  Pn     09 27 37.0 -0.2
     baz=291
MATB Ma-tsu            2.58 321  eP  Pn     09 27 37.5 -0.1
     baz=319
LYJJ Jianjiangzhen     3.00 323  eP  Pn     09 27 43.6 +0.4
     baz=322
KNMB Chin-men Tao      3.10 276  Pn  Pn     09 27 44.3 -0.3
KNMB Chin-men Tao      3.10 276  eP  Pn     09 27 44.3 -0.3
     baz=277
XPSS Dashiqiu          3.11 333  eP  Pn     09 27 44.5 -0.3
     baz=332
JMJ  Miyako jima 2     3.28   78  P  Pn     09 27 49.8 +2.7
AXDP Jialang           3.54 283  eP  Pn     09 27 50.9 +0.2
     baz=283
ZPLA Ao Xicun          3.68 267  eP  Pn     09 27 52.6 +0.1
     baz=268
JOW  Kunigami          6.46   64  Pn  Pn    09 28 31.1 +0.3
     1.5nm,0.3s,baz=141,slow=24,SNR=7.5
JOW                               Sn  Sn    09 29 41.3 -3.0
     baz=139,slow=19
     3.1nm,0.3s
JOW  Kunigami          6.46   64      Pn    09 28 30.9 +0.2
CNSH ChangSha          8.89 299 ⇑P    Pn    09 28 57.8 -6.4
CNSH                              S   Sn    09 30 34.1  -10
CNSH                              smax smax
     comp=N,92nm,0.8s
CNSH                              smax smax
     comp=E,78nm,0.9s
KSRS Korea Array      14.27   20  Pn  Pn    09 30 17.4 -0.3
     comp=E,0.1nm,0.3s,baz=201,slow=12,SNR=1.3
KSRS                              LR  LR    09 36 24.4
     comp=E,29nm,19.0s,baz=215,slow=40
     comp=E,0.4nm,0.7s
CMAR Chiang Mai Arr   22.00 259   LR  LR    09 40 50.8
     comp=E,22nm,19.8s,baz=190,slow=38
SONM Songino Array    26.60 336   P   P     09 32 34.3 +0.2
     comp=E,1.3nm,0.8s,baz=163,slow=10,SNR=6.2
     comp=E,1.3nm,0.8s
SONM Songino Array    26.60 336   P   P     09 32 34.0 -0.1
MKAR Makanchi Array   38.73 316   P   P     09 34 19.9  0.0
     comp=E,0.7nm,0.6s,baz=101,slow=11,SNR=5.4
     comp=E,0.7nm,0.6s
MKAR Makanchi Array   38.73 316   P   P     09 34 19.5 -0.3
PETK Petropavlovsk-   39.59   34  P   P     09 34 26.1 -0.8
ZALV Zalesovo Beam    40.56 327   P   P     09 34 34.8 -0.1
     comp=E,1.2nm,0.5s,baz=98,slow=9.6,SNR=4.6
     comp=E,1.2nm,0.5s
ZALV Zalesovo Beam    40.56 327   P   P     09 34 35.4 +0.5
WRA  Warramunga Arr   45.51 163   P   P     09 35 13.2 -2.1
     comp=E,0.9nm,0.8s,baz=344,slow=8.7,SNR=8.2
     comp=E,0.9nm,0.8s
TIXI Tiksi            47.69    3  P   P     09 35 30.7 -1.1
TIXI                              IAmb IAmb 09 35 31.4
     comp=Z,2.7nm,0.8s
BRVK Borovoye         48.10 321   P   P     09 35 34.8 -0.6
BRVK                              IAmb IAmb 09 35 36.8
     comp=Z,2.6nm,1.0s
ASAR Alice Springs    48.98 165   P   P     09 35 42.2 -0.1
     comp=Z,0.6nm,0.7s,baz=341,slow=6.9,SNR=6.9
     comp=Z,0.6nm,0.7s
KDAK Kodiak Island    67.62   35  P   P     09 37 51.2 -1.1
     comp=Z,1.5nm,0.7s,baz=266,slow=6.7,SNR=5.5
     comp=Z,1.5nm,0.7s
KDAK Kodiak Island    67.62   35  P   P     09 37 52.2 -0.1
H23K Yukon River      67.70   26  P   P     09 37 53.1 +0.4
H23K                              IAmb IAmb 09 37 56.5
     comp=Z,2.0nm,1.0s
ILAR Eielson Array    68.99   27  P   P     09 38 01.0 +0.2
     comp=Z,0.3nm,0.9s,baz=284,slow=7.3,SNR=3.0
     comp=Z,0.3nm,0.9s
GLB  Gilahina Butte   71.16   30  P   P     09 38 12.1 -2.1
GLB                               IAmb IAmb 09 38 17.8
     comp=Z,3.8nm,1.1s
INK  Inuvik           73.05   22  P   P     09 38 24.5 -0.8
     comp=Z,1.1nm,0.6s,baz=259,slow=4.4,SNR=4.1
     comp=Z,1.1nm,0.6s
INK  Inuvik           73.05   22  P   P     09 38 24.7 -0.6
INK                               IAmb IAmb 09 38 39.1
     comp=Z,2.5nm,1.1s
NOA  NORSAR Array B   78.50 332   LR  LR    10 17 51.2
     comp=Z,14nm,18.0s,baz=330,slow=39
YKA  Yellowknife Ar   82.79   23  P   P     09 39 18.2 -1.4
     comp=Z,1.2nm,0.8s,baz=312,slow=4.9,SNR=28
     comp=Z,1.2nm,0.8s
YKA  Yellowknife Ar   82.79   23  P   P     09 39 18.9 -0.6
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*IDC **14** 09:45:07.2±0.9, 32°.72N×130°.49E, h0km, mb3.6/9, mbtmp3.7/12, ML3.4/3, MS3.0/7, Error ellipse: s-maj=16.2km s-min=8.5km az=133.0*

*NIED **14** 09:45:09.3, 32°.74N×130°.60E, h11km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-7.86; $M_{\theta\theta}$9.32; $M_{\phi\phi}$-1.46; $M_{r\theta}$-1.89; $M_{\theta\phi}$-1.03; $M_{\phi r}$-0.69; Fault plane solution: $M_0$8.89000×10^{14} NP1: ϕ_s283.00000°, δ40.00000°, λ-78.00000°. NP2: ϕ_s88.00000°, δ51.00000°, λ-99.00000°.*

*JMA **14** 09:45:09.3±0.0, 32°.74N±0°.08×130°.6E±0°.1, h11km, MD4.0/20, MW3.9/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

*NEIC **14** 09:45:10.0±1.1, 32°.76N±0°.04×130°.58E±0°.06, h10km±1km, mb4.3/6, Error ellipse: s-maj=9.8km s-min=4.9km az=116.0*

ISC 14 09:45:09.7±1.0**, 32°.75N**±0°.04×**130°.63E**±0°.06**, h11**km±7km**, n63, σ1ˢ.36**/51**, mb3.9**/12**, MS3.2**/4**, Kyushu**

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Code Station Name       Δ°  AZ°   Phase ID       Time      Res
                                 Op    ISC      h  m  s    ISC
JTA  Tamana            0.23 340  i P   Pb     09 45 14.3  -1.6
JTA                              eS    Sg     09 45 17.7  -0.2
JTA  Tamana            0.23 340  A     A      09 45 14.3
     comp=E,22nm,0.9s,comp=E,38nm,0.3s
JIU3 Izumi3            0.25 142  i P   Pg     09 45 14.6  -0.3
JIU3                             eS    Sg     09 45 18.6  +0.2
JNU  Nakatsue          0.43   29 Pg    Pb     09 45 17.4  -1.9
     889nm,0.3s,baz=211,slow=7.7,SNR=4024
JNU                              Lg    Lg     09 45 24.1
     3µm,0.3s,baz=90,slow=8.1,SNR=60
JNU                              LR    LR     09 45 38.9
     comp=Z,568nm,20.9s,baz=96,slow=61
JNU  Nakatsue          0.43   29       Pb     09 45 18.4  -0.9
JNU                              Sg    Sb     09 45 24.3  -1.5
JNU  Nakatsue          0.43   29 A     A      09 45 18.1
     comp=E,17nm,1.0s,comp=E,13nm,0.6s
JHD  Hondo             0.50 236  A     A      09 45 18.7
     comp=E,16nm,0.9s,comp=E,25nm,1.3s
JZO  Okuchi            0.60 182  A     A      09 45 20.8
     comp=E,6.0nm,0.3s,comp=E,9.0nm,0.3s
JKIT Kitakata          0.71 100  A     A      09 45 23.2
     comp=E,6.0nm,0.3s,comp=E,10.0nm,0.3s
JFI  Itaya             0.71 344  A     A      09 45 22.9
     comp=E,13nm,0.3s,comp=E,12nm,0.3s
JHHC Hyugahichiya      0.90 109  A     A      09 45 26.7
     comp=E,4.0nm,0.5s,comp=E,6.0nm,1.7s
JTZ  Takazaki          0.93 155  i P   Pg     09 45 27.4  -0.1
JTZ                              S     Sg     09 45 39.7   0.0
JTZ  Takazaki          0.93 155  A     A      09 45 27.4
     comp=E,6.0nm,1.6s,comp=E,7.0nm,0.5s
JUS  Usuki             1.00   71 A     A      09 45 28.4
     comp=E,5.0nm,0.9s,comp=E,7.0nm,0.4s
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JKI	Kunimi	1.18	42	A	A	09 45 31.6	
	comp=E,7.0nm,2.0s,comp=E,7.0nm,0.9s						
JSU	Suzuyama	1.25	187		Pn	09 45 32.2	-0.8
JNKG	Nichinankitago	1.25	149	A	A	09 45 32.5	
	comp=E,6.0nm,3.8s,comp=E,7.0nm,2.1s						
JII	Iki	1.29	325	A	A	09 45 32.9	
	comp=E,12nm,2.3s,comp=E,8.0nm,0.3s						
JNAR	Kushima--Naru	1.33	156	A	A	09 45 33.6	
	comp=E,9.0nm,3.7s,comp=E,4.0nm,1.8s						
JTY	Toyota	1.56	13	A	A	09 45 37.3	
	comp=E,3.0nm,0.5s,comp=E,7.0nm,0.8s						
JTU	Tsushima	2.05	330		Pn	09 45 43.6	-0.4
JHS	Saijyo	3.05	42	Pn	Pn	09 45 59.2	+1.3
NAWB	Namwon	3.78	316	Pn	Pn	09 46 07.7	-0.1
TJN	Taejon	4.51	324		Pn	09 46 18.6	+0.7
KSCHJ	Chungju	4.66	333		Pn	09 46 20.6	+0.7
KSRS	Korea Array	5.19	335	Pn	Pn	09 46 27.0	-0.2
	0.6nm,0.3s,baz=151,slow=14,SNR=10						
KSRS				Pg	Pb	09 46 42.2	+1.7
	2.2nm,0.3s,baz=152,slow=17,SNR=18						
KSRS				Sn	Sn	09 47 28.6	+1.5
	1.2nm,0.3s,baz=149,slow=27,SNR=5.1						
KSRS				Lg	Lg	09 47 51.5	
	3.6nm,0.3s,baz=158,slow=31,SNR=8.8						
	1.5nm,0.4s						
KSAR	Wonju Array Be	5.20	335		Pn	09 46 27.2	-0.1
KS19	Wonju Array Si	5.26	335	Pn	Pn	09 46 27.8	-0.3
INCN	Inchon	5.75	326	Pn	Pn	09 46 35.6	+0.7
SEHB	SEOHWA	5.84	341		Pn	09 46 37.6	+1.4
INU	Inuyama	5.90	62	Pn	Pn	09 46 39.6	+2.6
JOW	Kunigami	6.24	200	Pn	Pn	09 46 43.8	+2.1
	1.9nm,0.3s,baz=89,slow=23,SNR=6.6						
JOW	Kunigami	6.24	200	Pn	Pn	09 46 45.0	+3.4
JGF	Kuroka	6.26	61	Pn	Pn	09 46 43.7	+1.8
JMZ	Minamidaito 2	6.92	176	Pn	Pn	09 46 52.0	+0.9
MJAR	Matsushiro Arr	7.30	57	Pn	Pn	09 46 58.1	+1.8
	0.1nm,0.3s,baz=240,slow=13,SNR=8.7						
MJAR				Lg	Lg	09 48 59.9	
	baz=260,slow=26,SNR=2.0						
MJAR				LR	LR	09 49 35.2	
	comp=Z,54nm,19.3s,baz=272,slow=36						
	3.1nm,0.5s						
JHJ	Hachijo jima 2	7.71	85	Pn	Pn	09 47 02.8	+1.1
	18nm,0.3s,baz=75,slow=22,SNR=6.1						
JHJ				LR	LR	09 49 38.8	
	comp=Z,28nm,19.0s,baz=248,slow=35						
	248nm,0.9s						
JHJ2	Mitsune	7.73	85	Pn	Pn	09 47 03.2	+1.0
TPUB	Ta-pu	12.90	226	Pn	Pn	09 48 12.4	-0.6
KLR	Kul'dur	16.49	3	Pn	P	09 49 07.4	+3.9
	0.2nm,0.3s,baz=162,slow=10,SNR=8.3						
KLR				LR	LR	09 54 21.8	
	comp=Z,40nm,20.1s,baz=233,slow=34						
ULN	Ulaanbaatar	23.35	317	P	P	09 50 17.9	-0.2
ULN				IAmb	IAmb	09 50 33.4	
	comp=Z,6.7nm,1.4s						
SONM	Songino Array	23.71	317	P	P	09 50 18.8	-2.9
	comp=Z,0.4nm,0.5s,baz=115,slow=10,SNR=1.7						
	comp=Z,0.4nm,0.5s						
SIJI	Sorong	33.44	179	LR	LR	10 04 35.7	
	comp=Z,23nm,21.4s,baz=26,slow=35						
TIXI	Tiksi	38.97	359	LR	LR	10 07 58.8	
	comp=Z,33nm,18.9s,baz=182,slow=35						
KURBB	Kurchatov Arra	41.86	311	P	P	09 52 59.2	-0.4
	comp=Z,1.8nm,1.0s,baz=96,slow=9.5,SNR=4.5						
	comp=Z,1.8nm,1.0s						
KIWB	Kanaga Island	42.05	47	P	P	09 53 01.7	+0.6
PMG	Port Moresby	44.78	157	LR	LR	10 10 07.6	
	comp=Z,71nm,21.1s,baz=168,slow=34						
KK31	Karatay Array	47.62	301	P	P	09 53 45.7	0.0
KK31				IAmb	IAmb	09 53 51.0	
	comp=Z,3.3nm,0.9s						
KKAR	Karatay Array	47.62	301	P	P	09 53 45.9	+0.3
WRA	Warramunga Arr	52.51	176	P	P	09 54 21.9	-1.0
	comp=Z,0.5nm,0.8s,baz=356,slow=8.2,SNR=2.7						
	comp=Z,0.5nm,0.8s						
ABKAR	Akbulak array	53.89	310	P	P	09 54 32.8	0.0
ASAR	Alice Springs	56.18	176	P	P	09 54 48.6	-1.0
	comp=Z,0.6nm,0.9s,baz=7.4,slow=7.9,SNR=4.7						
	comp=Z,0.6nm,0.9s						
TCOL	CIGO, UAF Yank	57.32	30	P	P	09 54 58.4	+1.2
FINES	FINESS Array B	68.26	330	P	P	09 56 09.0	-1.1
	comp=Z,1.0nm,0.4s,baz=68,slow=4.4,SNR=12						
	comp=Z,1.0nm,0.4s						
RES	Resolute Bay	68.77	12	LR	LR	10 29 16.4	
	comp=Z,13nm,18.1s,baz=48,slow=38						
YKA	Yellowknife Ar	71.77	26	P	P	09 56 30.9	-0.7
	comp=Z,0.1nm,0.7s,baz=306,slow=5.8,SNR=2.3						
	comp=Z,0.1nm,0.7s						
AKASG	Malin Array Be	71.97	319	P	P	09 56 32.1	-1.0
	comp=Z,1.2nm,0.5s,baz=55,slow=6.7,SNR=6.5						
	comp=Z,1.2nm,0.5s						
BR131	Keskin Array S	74.72	307	P	P	09 56 48.9	-0.8
BR131				IAmb	IAmb	09 57 06.2	
	comp=Z,5.7nm,1.2s						
BRTR	Keskin Array B	74.72	307	P	P	09 56 48.4	-1.3
	comp=Z,0.7nm,0.8s,baz=193,slow=3.8,SNR=4.0						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	74.72	307	P	P	09 56 49.1	-0.6
BURAR	Bucovina Array	75.82	318	P	P	09 56 55.6	-0.3
PSZ	Piszkesteto	78.60	320	P	P	09 57 11.3	-0.1
PSZ				IAmb	IAmb	09 57 11.4	
	comp=Z,3.7nm,1.1s						
NVAR	Mina Array Bea	84.53	47	P	P	09 57 43.6	+0.5
	comp=Z,0.2nm,0.6s,baz=297,slow=6.0,SNR=2.8						
	comp=Z,0.2nm,0.6s						

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*SOME **14** 09:45:47.9, 42°.17N×84°.20E, h5^{km}*

*IDC **14** 09:45:48.2±2.0, 42°.18N×84°.25E, h0^{km}, mb3.7/2, mbtmp3.4/6, ML2.9/4, MS2.4/1, Error ellipse: s-maj=24.6km s-min=21.1km az=84.0*

*NNC **14** 09:45:57.7±1.8, 42°.43N×83°.86E, h0^{km}, mb3.5, mpv3.6, Error ellipse: s-maj=15.8km s-min=8.2km az=150.0*

ISC 14 09:45:54.8±1.8**, 42°.34N**±0°.08×**83°.98E**±0°.07**, h10^{km}, n25, σ2ˢ.12**/39**, 11C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.42	285	eP	Pn	09 46 49.6	+1.3
	12nm,0.1s						
SHLS				eS	Sb	09 47 34.8	-2.5
	67nm,0.0s						
PDGK	Podgornoye	3.44	288	⇑Pn	Pn	09 46 51.8	+3.2
	1.1nm,0.3s						
PDGK				⇓Pg	Pb	09 46 59.2	+3.2
	6.3nm,0.4s						
PDGK				⇑Sn	Sn	09 47 32.5	+2.9
	8.3nm,0.5s						
PDGK				⇑Lg	Lg	09 47 43.5	
	62nm,0.7s						
DJR	Jarkent	3.65	305	eP	Pb	09 46 59.5	+0.1
	3.0nm,0.1s						
DJR				eS	Sg	09 47 51.6	-0.2
	34nm,0.4s						
UZB	Uzynbulak	3.74	284	eP	Pb	09 46 59.8	-1.1
	3.5nm,0.1s						
UZB				eS	Sg	09 47 51.9	-2.8
	29nm,0.3s						
KPKS	Kokpek	4.05	288	eP	Pb	09 47 06.9	+0.7
	4.8nm,0.1s						
KPKS				eS	Sg	09 48 04.1	-0.6
	41nm,0.1s						
SATY	Saty	4.17	282	eP	Pb	09 47 08.4	+0.1
	3.7nm,0.0s						
SATY				eS	Sg	09 48 07.1	-1.5
	26nm,0.1s						
KURS	Kuram	4.42	287	eP	Pb	09 47 13.5	+1.1
	3.0nm,0.2s						
KURS				eS	Sg	09 48 14.8	-1.7
	7.8nm,0.3s						
KAPS	Kapalarasan	4.46	313	eP	Pb	09 47 14.7	+1.6
	3.0nm,0.1s						
KAPS				eS	Sg	09 48 17.4	-0.4
	27nm,0.0s						
MK31	Makanchi Array	4.62	345	⇓Pn	Pn	09 47 07.5	+2.9
	0.3nm,0.3s,baz=173,slow=16,SNR=19						
MK31				⇑Pg	Pb	09 47 18.4	+2.6
	1.5nm,0.3s,baz=155,slow=17,SNR=16						
MK31				⇑Lg	Lg	09 48 21.3	
	5.2nm,0.2s,baz=155,slow=28,SNR=11						
MKAR	Makanchi Array	4.62	345	Pn	Pn	09 47 04.4	-0.2
	0.3nm,0.3s,baz=170,slow=16,SNR=16						
MKAR				Pg	Pb	09 47 16.2	+0.4
	1.3nm,0.3s,baz=149,slow=15,SNR=9.6						
MKAR				Sn	Sn	09 47 60.0	+1.7
	2.6nm,0.3s,baz=166,slow=16,SNR=5.3						
MKAR				Lg	Lg	09 48 20.9	
	10nm,0.3s,baz=151,slow=28,SNR=13						
MKAR				LR	LR	09 48 47.2	
	comp=Z,39nm,18.2s,baz=184,slow=37						
	0.5nm,0.3s						
MAKZ	Makanchi	4.69	343	⇑Pn	Pn	09 47 09.0	+3.4
	2.7nm,0.8s						
MAKZ				⇓Pg	Pb	09 47 20.7	+3.6
	6.8nm,0.6s						
MAKZ				⇓Lg	Lg	09 48 24.0	
	17nm,0.6s						
ZSN	Zaisan	5.15	7	eP	Pb	09 47 26.6	+1.6
	5.2nm,0.1s						
ZSN				eS	Sg	09 48 37.1	-3.0
	38nm,0.1s						
MDOK	Medeo	5.17	282	eP	Pb	09 47 27.5	+2.2
	1.8nm,0.2s						
MDOK				eS	Sg	09 48 38.8	-1.9
	8.4nm,0.1s						
MDOK	Medeo	5.17	282	⇑Lg	Lg	09 48 39.1	
	0.2nm,0.2s						
TNSS	Tian-Shan	5.23	280	eP	Pb	09 47 28.6	+2.2
	1.8nm,0.1s						
TNSS				eS	Sg	09 48 41.3	-1.3
	5.7nm,0.1s						
KUU	Kurty	5.80	288	eP	Pb	09 47 40.0	+4.0
KUU				eS	Sg	09 49 00.1	-0.8
TKM2	Tokmak 2	6.21	278	⇑Pn	Pn	09 47 27.6	+1.0
	316nm,0.1s						
TKM2				⇓Lg	Lg	09 49 12.1	
	8.9nm,0.8s						
AAK	Ala-Archa	7.02	276	Pn	Pn	09 47 37.2	-0.4
	0.4nm,0.3s,baz=100,slow=18,SNR=1.7						
AAK				Pg	Pb	09 47 59.3	+2.5
	0.5nm,0.3s,baz=156,slow=20,SNR=1.9						
AAK				Lg	Lg	09 49 37.7	
	0.6nm,0.3s,baz=314,slow=18,SNR=2.0						
	1.0nm,0.4s						
KURBB	Kurchatov Arra	9.10	338	Pn	Pn	09 48 03.7	-2.2
	baz=153,slow=12,SNR=2.1						
KURBB				Sn	Sn	09 49 48.5	+0.2
	0.1nm,0.3s,baz=126,slow=13,SNR=1.5						
KURBB				Lg	Lg	09 50 42.3	
	0.1nm,0.3s,baz=153,slow=31,SNR=3.5						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	9.10	338	⇑Lg	Lg	09 50 44.1	
	23nm,0.7s						
KURK	Kurchatov	9.15	338	⇑Lg	Lg	09 50 44.3	
	12nm,0.9s						
OTUK	Ortayu	10.10	310	⇑Lg	Lg	09 51 15.4	
	4.1nm,0.8s						
AKTO	Aktyubinsk	19.58	303	P	P	09 50 22.3	-0.4
	0.1nm,0.3s,baz=128,slow=7.8,SNR=3.7						
	1.1nm,0.6s						
ARCES	ARCESS Array B	40.14	332	P	P	09 53 27.6	-2.7
	1.3nm,0.6s,baz=92,slow=7.6,SNR=11						
	1.3nm,0.6s						
YKA	Yellowknife Ar	74.45	9	P	P	09 57 28.0	-4.7
	0.2nm,0.4s,baz=341,slow=6.1,SNR=8.1						
	0.2nm,0.4s						

EAF 14 09:55:42.0±4.6**, 11°.63N×42°.97E, h0^{km}**±40^{km}**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	0.16	229	*i* P	Pg	09 55 42.7	-2.4
ATD				*i* Sg	Sg	09 55 46.0	-1.1
ATD	Arta Tunnel	0.16	229	*i* P	Pg	09 55 42.7	-2.4
ATD				*i* Sg	Sg	09 55 46.0	-1.1
ATD	Arta Tunnel	0.16	229	*i* P	Pg	09 55 42.6	-2.5
ATD				*i* Sg	Sg	09 55 46.2	-0.9
DESE	Dese	3.31	261	eP	Pn	09 56 33.0	-2.4
DESE				eS	Sn	09 57 13.3	-2.3
DESE	Dese	3.31	261	eP	Pn	09 56 32.6	-2.8
DESE				eS	Sn	09 57 17.6	+2.0
DESE	Dese	3.31	261	eP	Pn	09 56 31.5	-3.9
DESE				eS	Sb	09 57 21.9	-0.9
DESE	Dese	3.31	261	eP	Pn	09 56 32.6	-2.8
DESE				eS	Sn	09 57 17.6	+2.0
AAE	Adis Abeba	4.88	238	eP	Pn	09 57 01.3	+4.3
AAE				eS	Sb	09 58 03.9	-4.1
FURI	Furi	5.02	238	eP	Pn	09 57 01.2	+2.3
FURI				eS	Sn	09 57 56.6	-1.3
FURI	Furi	5.02	238	eP	Pn	09 57 04.6	+5.7
FURI				eS	Sb	09 58 09.3	-2.8
FURI	Furi	5.02	238	eP	Pb	09 57 11.0	0.0
FURI				eS	Sb	09 58 09.4	-2.7
FURI	Furi	5.02	238	eP	Pn	09 57 04.6	+5.7
FURI				eS	Sb	09 58 09.3	-2.8

IDC 14 10:37:43.1±1.1**, 11°.82N×144°.84E, h0^{km}, mb3.6**/4**, mbtmp3.6**/4**, MS2.7**/5**, Error ellipse: s-maj=89.1km s-min=18.2km az=101.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.76	1	Pn	Pb	10 38 15.8	-0.5
	61nm,0.3s,baz=150,slow=11,SNR=33						
GUMO				Sn	Sn	10 38 37.0	-1.0
	86nm,0.3s,baz=51,slow=19,SNR=6.8						
GUMO				LR	LR	10 38 41.9	
	comp=Z,54nm,18.8s,baz=198,slow=33						
JCJ	Chichijima	15.40	351	LR	LR	10 45 19.2	
	comp=Z,16nm,20.9s,baz=123,slow=30						
JOW	Kunigami	21.58	316	LR	LR	10 49 18.5	
	comp=Z,46nm,20.2s,baz=238,slow=32						
MJAR	Matsushiro Arr	25.33	347	LR	LR	10 53 01.8	
	comp=Z,23nm,18.1s,baz=180,slow=36						
ASAJ	Asahikawa	32.24	357	LR	LR	11 00 03.9	
	comp=Z,7.4nm,18.6s,baz=184,slow=42						
WRA	Warramunga Arr	33.21	198	P	P	10 44 21.3	-0.6
	0.9nm,0.8s,baz=22,slow=9.7,SNR=5.5						
	0.9nm,0.8s						
ASAR	Alice Springs	36.85	197	P	P	10 44 53.7	+0.3
	0.3nm,0.7s,baz=23,slow=9.3,SNR=4.5						
	0.3nm,0.7s						
KLR	Kul'dur	38.85	346	LR	LR	10 59 50.8	
	comp=Z,14nm,19.9s,baz=353,slow=34						
ILAR	Eielson Array	70.17	25	P	P	10 48 56.9	-0.5
	0.8nm,0.6s,baz=253,slow=5.7,SNR=13						
	0.8nm,0.6s						
YKA	Yellowknife Ar	84.44	27	P	P	10 50 18.0	+0.7
	0.3nm,0.7s,baz=292,slow=5.2,SNR=3.9						
	0.3nm,0.7s						

IDC 14 10:40:15.8±2.5**, 7°.87S×112°.69E, h0^{km}, mb3.4**/4**, mbtmp3.4**/4**, Error ellipse: s-maj=148.1km s-min=28.1km az=51.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.16	122	P	P	10 45 34.7	+0.6
	0.3nm,0.7s,baz=297,slow=12,SNR=5.2						
	0.3nm,0.7s						
ASAR	Alice Springs	25.70	130	P	P	10 45 47.8	-0.2
	0.2nm,0.5s,baz=303,slow=8.5,SNR=5.2						
	0.2nm,0.5s						
STKA	Stephens Creek	35.97	136	P	P	10 47 18.2	-0.3
	0.6nm,0.4s,baz=319,slow=8.8,SNR=5.0						
	0.6nm,0.4s						
MKAR	Makanchi Array	60.77	337	P	P	10 50 29.4	-0.2
	0.2nm,0.5s,baz=137,slow=8.2,SNR=1.8						
	0.2nm,0.5s						

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*IDC **14** 11:36:49.1±8.7, 21°.85S×177°.41W, h328^{km}±96^{km}, mb3.2/4, mbtmp3.9/4, Error ellipse: s-maj=95.4km s-min=27.5km az=175.0*

*NEIC **14** 11:37:26.4±1.5, 23°.9S±0°.2×179°.9E±0°.3, h537^{km}±16^{km}, mb4.1/12, Error ellipse: s-maj=38.1km s-min=23.4km az=68.0*

ISC 14 11:36:46.7±1.3**, 21°.6S**±0°.1×**177°.5W**±0°.2**, h300^{km}, n20, σ1ˢ.29**/19**, mb3.9**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	7.60	183	P	Pn	11 38 34.8	-0.5
	170nm,0.4s,baz=25,slow=22,SNR=2.6						
RAO				S	S	11 40 03.3	0.0
	123nm,0.3s,baz=69,slow=22,SNR=1.3						
RAO	Raoul Island	7.60	183	P	Pn	11 39 01.2	+26
URZ	Urewera	17.21	194	P	Pn	11 40 30.5	-0.3
CTA	Charters Tower	33.84	266	P	P	11 43 03.5	+1.8
	2.1nm,0.5s,baz=98,slow=11,SNR=6.0						
	2.1nm,0.5s						
CTAO	Charters Tower	33.84	266	P	P	11 43 02.9	+1.1
AS31	Alice Springs	44.71	258	P	P	11 44 31.4	+0.4
ASAR	Alice Springs	44.71	258	P	P	11 44 30.6	-0.4
	0.7nm,0.6s,baz=100,slow=6.9,SNR=12						
	0.7nm,0.6s						
ASAR	Alice Springs	44.71	258	P	P	11 44 30.1	-0.9
WR0	Warramunga Arr	44.71	263	P	P	11 44 30.3	-0.7
WR0				IAmb	IAmb	11 44 43.9	
	comp=Z,9.0nm,1.4s						
WB0	Warramunga Arr	44.88	263	P	P	11 44 33.4	+1.0
WB0				IAmb	IAmb	11 44 35.7	
	comp=Z,10.0nm,1.4s						
WB2	Warramunga Arr	44.89	263	P	P	11 44 33.0	+0.6
WB2				IAmb	IAmb	11 44 39.2	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	44.89	263	P	P	11 44 32.5	+0.1
WRAB				IAmb	IAmb	11 44 41.8	
	comp=Z,6.5nm,1.2s						
WRA	Warramunga Arr	44.90	263	P	P	11 44 32.5	0.0
	comp=Z,1.0nm,0.6s,baz=96,slow=8.3,SNR=52						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	44.90	263	P	P	11 44 33.3	+0.8
KNRA	Kununurra	51.04	267	P	P	11 45 21.1	+1.8
VNDA	Vanda	56.83	185	P	P	11 46 02.0	+2.1
PSA00	Pilbara Seismi	57.86	257	P	P	11 46 05.8	-2.2
MORW	Morawa	59.82	248	P	P	11 46 18.9	-2.4
MORW				IAmb	IAmb	11 46 25.5	
	comp=Z,18nm,1.4s						
QSPA	South Pole Qui	68.44	180	P	P	11 47 21.7	+5.1
QSPA				IAmb	IAmb	11 47 37.1	
	comp=Z,3.8nm,1.4s						
TXAR	Lajitas Array	87.29	57	P	P	11 48 59.8	-0.4
	comp=Z,0.3nm,0.8s,baz=231,slow=5.7,SNR=4.1						
	comp=Z,0.3nm,0.8s						

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*NNC **14** 11:40:19.3±6.3, 37°.99N×72°.05E, h226^{km}±54^{km}, mb2.8, mpv3.8, Error ellipse: s-maj=58.3km s-min=34.0km az=9.0*

ISC 14 11:40:19.3±3.1**, 38°.0N**±0°.2×**71°.9E**±0°.1**, h200^{km}, n11, σ1ˢ.64**/15**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.37	17	P	Pn	11 41 26.4	+0.4
	SNR=177						
UCH	Uchtor	4.69	24	P	Pn	11 41 29.9	-0.2
	SNR=49						
EKS2	Erkin-Say	4.89	16	P	Pn	11 41 33.2	+0.8
	SNR=19						
AAK	Ala-Archa	5.05	22	P	Pn	11 41 35.3	+0.8
	SNR=11						
KBK	Karagaybulak	5.21	25	P	Pn	11 41 37.7	+1.1
	SNR=6.2						
KK31	Karatay Array	5.24	349	P	Pn	11 41 37.3	+0.6
	3.6nm,0.3s,baz=171,slow=12,SNR=65						
KK31				S	Sn	11 42 41.0	+3.1
	22nm,0.6s,baz=170,slow=22,SNR=9.3						
CHMS	Chumysh	5.46	22	P	Pn	11 41 39.9	+0.4
	SNR=5.5						
TKM2	Tokmak 2	5.68	28	P	Pn	11 41 42.8	+0.2
	SNR=13						
TKM2	Tokmak 2	5.68	28	⇑P	Pn	11 41 42.5	0.0
	13nm,1.1s						
TKM2				⇑S	Sn	11 42 47.3	-1.1
	3.5nm,0.6s						
AB31	Akbulak array	14.21	326	P	Pn	11 43 32.3	+0.6
	0.7nm,0.6s,baz=150,slow=11,SNR=34						
AB31				⇓S	S	11 46 05.5	-4.2
	1.4nm,0.4s						
AKTO	Aktyubinsk	15.93	326	⇑P	P	11 43 51.6	-0.7
	3.2nm,0.5s						
AKTO				⇑S	S	11 46 49.2	+0.3
	2.5nm,0.9s						

WEL 14 11:49:22.7±1.1**, 33°S**±21'×**17°9E**±4°0**, h382^{km}**±31^{km}**, M4.0**/4**, mB4.4**/1**, ML4.5**/8**, MLv4.0**/4**, Mw(mB)3.5**/1**, Error ellipse: s-maj=0.1km s-min=0.0km az=114.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.90	187	P	Pn	11 50 40.6	-1.9
MXZ				S	S	11 51 48.4	+0.9
WMGZ	Waiomatatini S	5.14	186	P	Pn	11 50 45.9	+0.7
WMGZ				S	S	11 51 52.8	+0.6
HAZ	Te Kaha	5.16	192	P	Pn	11 50 45.8	+0.4
HAZ				S	S	11 51 52.6	0.0
PKGZ	Pakihiroa	5.25	189	P	Pn	11 50 45.3	-1.1
PUZ	Puketiti	5.41	187	P	Pn	11 50 49.4	+1.4
PUZ				S	S	11 51 56.8	-0.6
MWZ	Matawai	5.77	192	P	Pn	11 50 52.0	0.0
MWZ				S	S	11 52 05.8	+1.2
URZ	Urewera	5.78	196	P	Pn	11 50 51.4	-0.6
URZ				S	S	11 52 05.1	+0.2
RTZ	Ruatahuna	6.15	196	P	Pn	11 50 56.6	+0.3
RTZ				S	S	11 52 14.8	+2.3
KNZ	Kokohu	6.42	190	P	Pn	11 50 59.7	+0.6
KNZ				S	S	11 52 17.6	-0.1
MRHZ	Matea Rd	6.50	199	P	Pn	11 51 00.7	+0.6
BKZ	Black Stump Fm	6.79	197	P	Pn	11 51 02.9	-0.5
BKZ				S	S	11 52 25.4	-0.2
BHHZ	Black Hill Sta	7.21	199	P	Pn	11 51 07.2	-1.0
BHHZ				S	S	11 52 34.1	-0.3
KAHZ	Kahuranaki	7.31	194	P	P	11 51 09.9	-0.2
PXZ	Pawanui	7.54	193	P	P	11 51 12.3	-0.4
PXZ				S	S	11 52 41.2	+0.1

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*TUL **14** 12:12:08.4±1.7, 35°.05N±0°.02×97°.57W±0°.03, h7^{km}±5^{km}, ML2.8, mb_Lg2.6/51(NEIC), Error ellipse: s-maj=2.9km s-min=2.0km az=104.0*

*NEIC **14** 12:12:09.2±1.1, 35°.073N±0°.005×97°.53W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=0.7km az=81.0*

*ANF **14** 12:12:09.3±0.3, 35°.07N×97°.57W, h7^{km}, ML3.1/9, Error ellipse: s-maj=3.2km s-min=2.1km az=96.0*

ISC 14 12:12:09.4±1.1**, 35°.08N**±0°.03×**97°.55W**±0°.03**, h7^{km}**±9^{km}**, n47, σ0ˢ.71**/51**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.22	35	Pg	Pg	12 12 13.8	+0.1
FNO				Sg	Sg	12 12 17.1	+0.5
OKCSW	OKLAHOMA CITY	0.34	16	Pg	Pg	12 12 16.4	+0.4
OKCSW				Sg	Sg	12 12 20.0	-0.5
OKCFA	Oklahoma City	0.34	14	Pg	Pg	12 12 16.3	+0.2
OKCFA				Sg	Sg	12 12 21.2	+0.5
OKCFA	Oklahoma City	0.34	14	S	Sg	12 12 20.4	-0.3
	baz=194						
X34A	Smith Ranch, M	0.53	206		Pg	12 12 19.1	-0.6
X34A				Sg	Sg	12 12 26.5	-0.1
WMOK	Wichita Mounta	1.06	252	Pg	Pg	12 12 29.0	-0.8
WMOK					Sg	12 12 44.0	+0.4
TUL1	Leonard	1.66	60	Pn	Pn	12 12 38.6	-0.2
TUL1	Leonard	1.66	60	P	Pn	12 12 38.5	-0.3
	baz=240						
TUL1				S	Sb	12 13 01.4	0.0
	baz=240						
U32A	Winter Ranch,	1.75	318	Pn	Pn	12 12 40.6	+0.4
U32A	Winter Ranch,	1.75	318	P	Pn	12 12 40.4	+0.2
	baz=138						
U32A				S	Sb	12 13 04.4	+0.4
	baz=138						
Z35A	Perchaven, San	1.76	172		Pn	12 12 39.6	-0.7
Z35A	Perchaven, San	1.76	172	P	Pn	12 12 39.5	-0.8
	baz=352						
Z35A				S	Sn	12 13 02.9	-0.1
	baz=352						
X37A	Clayton	1.86	105		Pn	12 12 41.8	+0.2
X37A				IAmb_Lg		12 13 11.6	
	comp=Z,39nm,0.8s						
X37A	Clayton	1.86	105	P	Pn	12 12 41.6	0.0
	baz=285						
X37A				S	Sb	12 13 07.3	+0.2
	baz=285						
T35A	Sooner Cattle	2.02	24	Pn	Pn	12 12 44.2	+0.4
T35A				IAmb_Lg		12 13 17.0	
	comp=Z,23nm,1.0s						
T35B	Sooner Cattle	2.02	24	P	Pn	12 12 44.0	+0.2
	baz=205						
T35B				S	Sb	12 13 10.8	-0.8
	baz=205						
Z38A	Mt. Pleasant	2.80	130	Pn	Pn	12 12 54.5	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z38A				IAmb_Lg		12 13 38.3	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	3.00	216		Pn	12 12 57.6	+0.2
ABTX	Abilene, Hawle	3.00	216	S	Sn	12 13 34.7	+1.0
	baz=35						
WHTX	Lake Whitney,	3.08	178		Pn	12 12 58.3	-0.1
WHTX	Lake Whitney,	3.08	178	P	Pn	12 12 58.4	-0.1
	baz=358						
WHTX				Sb	Sb	12 13 44.3	+2.0
	baz=358						
W39A	Magazine	3.09	87		Pn	12 12 58.1	-0.5
W39A	Magazine	3.09	87	P	Pn	12 12 58.5	0.0
	baz=268						
HHAR	Hobbs	3.18	67		Pn	12 12 58.2	-1.5
MIAR	Mount Ida	3.31	98		Pn	12 13 02.5	+0.9
MIAR				IAmb_Lg		12 14 01.7	
	comp=Z,8.8nm,0.8s						
MIAR	Mount Ida	3.31	98	P	Pn	12 13 02.5	+0.9
	baz=280						
237A	Washetta, Mont	3.40	154	IAmb_Lg		12 14 04.3	
	comp=Z,17nm,0.9s						
R32A	Long Quarter,	3.46	345		Pn	12 13 03.7	0.0
R32A				IAmb_Lg		12 14 07.4	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	3.93	97		Pn	12 13 09.8	-0.3
X40A				IAmb_Lg		12 14 17.2	
	comp=Z,9.6nm,0.8s						
U40A	Yellville	4.03	70		Pn	12 13 11.2	-0.2
KSU1	Kansas State U	4.08	10		Pn	12 13 11.5	-0.7
CBKS	Cedar Bluff	4.12	335	IAmb_Lg		12 14 29.8	
	comp=Z,14nm,0.7s						
435B	Jarrell	4.29	180		Pn	12 13 13.4	-1.6
435B				IAmb_Lg		12 14 30.2	
	comp=Z,14nm,0.9s						
UALR	University of	4.29	93		Pn	12 13 14.8	-0.2
UALR				IAmb_Lg		12 14 31.3	
	comp=Z,9.7nm,0.8s						
S39A	Bolivar	4.29	51	Pn	Pn	12 13 13.2	-1.9
S39A				IAmb_Lg		12 14 32.9	
	comp=Z,7.9nm,0.9s						
WHAR	Wooly Hollow	4.32	86		Pn	12 13 14.9	-0.5
WHAR				IAmb_Lg		12 14 36.1	
	comp=Z,8.5nm,0.9s						
W41B	Gary Mavity, V	4.35	87		Pn	12 13 16.5	+0.6
W41B				IAmb_Lg		12 14 26.0	
	comp=Z,9.7nm,1.1s						
FCAR	Ozark Folk Cen	4.50	78	Pn	Pn	12 13 17.5	-0.5
FCAR				IAmb_Lg		12 14 32.9	
	comp=Z,6.9nm,0.7s						
MGMO	Mountain Grove	4.75	63	Pn	Pn	12 13 22.0	+0.6
MGMO				IAmb_Lg		12 14 48.1	
	comp=Z,10nm,0.7s						
JCT	Junction City	4.96	203		Pn	12 13 23.4	-1.0
JCT				IAmb_Lg		12 14 54.6	
	comp=Z,14nm,0.8s						
R40A	Maddies Statio	5.32	51	Pn	Pn	12 13 28.4	-0.8
P38A	Dawn	5.55	34	Pn	Pn	12 13 31.8	-0.6
P38A				IAmb_Lg		12 15 06.4	
	comp=Z,10nm,0.8s						
CCM	Cathedral Cave	5.88	58	IAmb_Lg		12 15 16.4	
	comp=Z,9.7nm,0.8s						
FVM	French Village	6.43	61	IAmb_Lg		12 15 45.9	
	comp=Z,11nm,0.9s						
S44A	Carbondale	7.18	66	IAmb_Lg		12 16 03.6	
	comp=Z,8.7nm,0.7s						
Q24A	Divide	7.21	305	IAmb_Lg		12 16 00.9	
	comp=Z,6.7nm,0.9s						
SIUC	Southern Illin	7.22	66	IAmb_Lg		12 16 15.7	
	comp=Z,7.3nm,0.8s						

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*NEIC **14** 12:20:21.6±1.0, 12°.9S±0°.1×169°.2E±0°.2, h636^{km}±10^{km}, mb4.4/18, Error ellipse: s-maj=26.0km s-min=16.4km az=119.0*

*IDC **14** 12:20:23.3±3.2, 13°.00S×169°.00E, h655^{km}±45^{km}, mb3.1/9, mbtmp4.1/9, Error ellipse: s-maj=59.8km s-min=18.4km az=149.0*

ISC 14 12:20:21.3±0.7, 12°.9S±0°.1×169°.0E±0°.1, h625^{km}, n32, σ0ˢ.75/33, mb4.2/18, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.10	214	P	P	12 21 44.1	+1.0
MARNC	Mare, Loyalty	8.61	186	P	P	12 22 27.1	0.0
CTA	Charters Tower	22.96	249	P	P	12 24 40.1	-0.4
	2.0nm,0.5s,baz=65,slow=13,SNR=1.6						
	2.0nm,0.5s						
CTAO	Charters Tower	22.96	249	P	P	12 24 40.3	-0.1
CTAO				IAmb	IAmb	12 24 57.9	
	comp=Z,21nm,1.4s						
ARMA	Armidale	23.73	220	P	P	12 24 47.6	+0.3
ARMA				IAmb	IAmb	12 25 15.8	
	comp=Z,13nm,1.5s						
COEN	Coen	25.16	265	P	P	12 25 00.0	+0.1
BHW	Baring Head	28.88	171	P	P	12 25 31.2	-0.7
STKA	Stephens Creek	31.48	229	P	P	12 25 54.7	+0.3
	comp=Z,2.0nm,0.4s,baz=44,slow=7.4,SNR=3.6						
	comp=Z,2.0nm,0.4s						
STKA	Stephens Creek	31.48	229	P	P	12 25 55.1	+0.7
TOO	Toolangi	32.34	216	P	P	12 26 02.1	+0.6
TOO				IAmb	IAmb	12 26 18.2	
	comp=Z,17nm,1.2s						
WR0	Warramunga Arr	33.76	253	P	P	12 26 13.7	-0.1
WR0				IAmb	IAmb	12 26 26.8	
	comp=Z,5.6nm,1.1s						
WB0	Warramunga Arr	33.88	254	P	P	12 26 14.8	+0.1
WB2	Warramunga Arr	33.94	253	P	P	12 26 15.3	+0.1
WB2				IAmb	IAmb	12 26 15.4	
	comp=Z,5.4nm,0.5s						
WRAB	Tennant Creek	33.94	253	P	P	12 26 15.0	-0.1
WRAB				IAmb	IAmb	12 26 15.3	
	comp=Z,6.3nm,0.5s						
WRA	Warramunga Arr	33.95	253	P	P	12 26 15.2	-0.1
	comp=Z,5.7nm,0.5s,baz=84,slow=8.6,SNR=80						
	comp=Z,5.7nm,0.5s						
WRA	Warramunga Arr	33.95	253	P	P	12 26 14.1	-1.2
AS31	Alice Springs	34.94	247	P	P	12 26 23.4	0.0
AS31				IAmb	IAmb	12 26 24.1	
	comp=Z,5.8nm,0.3s						
ASAR	Alice Springs	34.94	247	P	P	12 26 23.4	0.0
	comp=Z,5.5nm,0.4s,baz=78,slow=9.6,SNR=132						
ASAR				S	S	12 31 10.7	-2.0
	comp=Z,0.8nm,0.9s,baz=75,slow=16,SNR=4.6						
	comp=Z,5.5nm,0.4s						
ASAR	Alice Springs	34.94	247	P	P	12 26 23.2	-0.2
BBOO	Buckleboo	36.05	231	P	P	12 26 32.9	+0.4
KNRA	Kununurra	39.07	261	P	P	12 26 57.3	+0.2
FORT	Forrest	41.71	238	P	P	12 27 18.7	+1.0
FORT				IAmb	IAmb	12 27 19.6	
	comp=Z,10nm,0.8s						
PSA00	Pilbara Seismi	47.59	253	P	P	12 28 02.2	-0.6
PSA00	Pilbara Seismi	47.59	253	P	P	12 28 02.6	-0.2
PSA00				IAmb	IAmb	12 28 26.6	
	comp=Z,10.0nm,1.2s						
CMAR	Chiang Mai Arr	75.77	293	P	P	12 31 06.7	+1.5
	comp=Z,0.8nm,0.3s,baz=114,slow=4.4,SNR=4.7						
	comp=Z,0.8nm,0.3s						
QSPA	South Pole Qui	77.14	180	P	P	12 31 12.4	+0.5
QSPA				IAmb	IAmb	12 31 34.7	
	comp=Z,5.6nm,1.4s						
CAST	Castle Rocks	81.74	17	P	P	12 31 35.2	-0.6
SONM	Songino Array	82.04	323	P	P	12 31 37.7	-0.1
	comp=Z,0.3nm,0.4s,baz=112,slow=3.8,SNR=2.0						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	84.26	17	P	P	12 31 47.2	-1.1
	comp=Z,0.7nm,0.6s,baz=236,slow=5.2,SNR=14						
	comp=Z,0.7nm,0.6s						
NVAR	Mina Array Bea	84.78	49	P	P	12 31 52.9	+1.2
	comp=Z,0.2nm,0.6s,baz=239,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	95.13	27	P	P	12 32 37.7	-1.1
	comp=Z,0.3nm,0.7s,baz=254,slow=4.4,SNR=5.0						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	118.88	346	PKP	PKPdf	12 37 58.8	-0.8
	comp=Z,1.6nm,0.9s,baz=57,slow=3.3,SNR=1.4						

JMA 14 12:24:29.1±0.1, 38°.3N±0°.3×141°.8E±0°.5, h55^{km}, MV0.8/25, E OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.26	283	P	Pn	12 24 38.3	0.0
JIKH				S	Sn	12 24 44.9	0.0
JIO	Ouri	0.40	300	P	Pn	12 24 39.6	+0.1
JIO				*e*S	Sn	12 24 47.1	+0.1
JKMT	Kesennumamotoy	0.61	336	S	Sn	12 24 51.2	0.0
JMK	Ichinoseki	0.83	328	P	Pn	12 24 44.9	+0.3
JMK				*e*S	Sn	12 24 56.3	+0.3
OFUJ	Ofunato	0.83	354	*e*P	Pn	12 24 44.5	-0.1
OFUJ				*e*S	Sn	12 24 55.3	-0.8
JMM	Marumori	0.87	244	*e*S	Sn	12 24 56.6	-0.5
JOU	Okura	0.89	278	*e*P	Pn	12 24 45.8	+0.4

JMA 14 12:24:42.4±0.0, 36°.80N±0°.08×140°.6E±0°.2, h9^{km}, MV1.0/30, NORTHERN IBARAKI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.19	185	*i* P	Pg	12 24 46.4	+0.1
JHO				*e*S	Sg	12 24 49.1	+0.1
JFFD	Fukushimafurud	0.29	355	*i* P	Pg	12 24 48.4	+0.1
JFFD				*e*S	Sg	12 24 52.7	+0.4
ONAJ	Iwakimizuishiy	0.35	29	P	Pg	12 24 49.5	+0.1
ONAJ				*e*S	Sg	12 24 54.6	+0.7
JFK	Kawauchi	0.61	22	*e*S	Sg	12 25 02.3	0.0
JFK	Kawauchi	0.61	22	*e*P	Pg	12 24 54.1	-0.2
JFK				*e*S	Sg	12 25 02.3	0.0
JYT	Yasato	0.65	209	P	Pg	12 24 54.8	-0.2
JFT	Otama	0.75	344	*e*S	Sg	12 25 06.7	0.0

JMA 14 12:25:47.6±0.4, 25°N±1°×123°.5E±0°.6, h23^{km}, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.73	163	P	Pb	12 26 01.4	-0.3
IRIF				*e*S	Sb	12 26 11.2	-0.1
JIJ	Ishigaki jima	0.89	139	*e*P	Pb	12 26 03.9	-0.6
JIJ				*e*S	Sb	12 26 15.0	-0.9
JKRS	Kuro-shima	0.93	150	P	Pb	12 26 04.9	-0.1
JKRS				*e*S	Sb	12 26 17.2	+0.4

TAP 14 12:26:27.0, 24°.47N×121°.85E, h10^{km}±1^{km}, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.07	252	*i* P	Pg	12 26 29.7	+0.6
	baz=251						
EWUT				*i* S	Sg	12 26 31.8	+1.1
	baz=251						
ENA	Nanau	0.11	249	*e*P	Pg	12 26 29.1	-0.6
	baz=246						
ENA				S	Sg	12 26 32.5	+1.0
	baz=246						
TWC	Suao	0.14	359	P	Pg	12 26 31.0	+0.9
	baz=2.0						
TWC				S	Sg	12 26 33.6	+1.3
	baz=2.0						
NDS	Dongshan	0.21	323	*e*P	Pg	12 26 32.4	+1.1
	baz=323						
NDS				S	Sg	12 26 36.0	+1.8
	baz=323						
LATG	Datong	0.30	283	*i* P	Pb	12 26 34.0	-0.6
	baz=282						
LATG				S	Sb	12 26 39.2	-0.6
	baz=282						
ENTT	Nioudou	0.31	304	P	Pb	12 26 34.2	-0.5
	baz=303						
ENTT				S	Sb	12 26 39.3	-0.7
	baz=303						

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*RSNC **14** 13:02:32.6±1.1, 10°.68N×72°.55W, h0^{km}±5^{km}, ML3.3, Mw3.5*

*FUNV **14** 13:02:32.6, 10°.73N×72°.49W, h1^{km}, MW3.7*

ISC 14 13:02:32.1±1.3, 10°.70N±0°.04×72°.50W±0°.03, h9^{km}±11^{km}, n32, σ1ˢ.85/58, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	0.49	310	*i* P	Pg	13 02 42.3	+0.7
CRJC				*e*S	Sg	13 02 49.7	+1.6
CRJC				*i*		13 02 50.0	
	comp=Z,3μm,0.2s						
URIC	Uribia, Colomb	1.11	27	*e*P	Pg	13 02 53.4	-0.1
URIC				*e*S	Sg	13 03 08.8	+0.9
URIC				*i*		13 03 11.0	
	comp=Z,2μm,0.4s						
LL6C	La Loma 6 Bece	1.23	218⇑	*e*P	Pg	13 02 53.1	-2.5
LL6C				*e*S	Sg	13 03 10.2	-1.4
LL6C				*i*		13 03 13.6	
	comp=Z,456nm,0.3s						
LL1C	La Loma 1 Cana	1.55	222	*e*P	Pn	13 02 58.6	-1.4
LL1C				*e*S	Sn	13 03 19.4	-0.9
SMRC	Santa Marta, M	1.75	285	*e*P	Pn	13 03 01.2	-1.5
SMRC				*e*S	Sn	13 03 21.4	-3.8
DABV	Dabajuro	1.84	83	*e*P	Pn	13 03 04.2	+0.2
DABV				*e*S	Sn	13 03 28.5	+1.0
ARGC	Ariguani, Magd	1.91	244	*e*P	Pn	13 03 04.2	-0.8
ARGC				*e*S	Sn	13 03 29.3	+0.1
ARGC				*i*		13 03 34.3	
	comp=Z,117nm,0.2s						
OCAC	Ocana	2.58	198	*e*P	Pn	13 03 16.1	+1.8
OCAC				*e*S	Sn	13 03 49.8	+3.9
SDV	Santo Domingo	2.58	134	*e*P	Pn	13 03 16.8	+2.5
SDV				*e*S	Sn	13 03 48.6	+2.7
SDV				*i*		13 04 03.2	
	comp=Z,106nm,0.5s						
CURV	Curarigua	2.59	105	*e*P	Pn	13 03 15.4	+1.1
CURV				*e*S	Sn	13 03 46.3	+0.3
SIQV	Siquisique	2.65	91	*e*P	Pn	13 03 14.4	-0.7
SIQV				*e*S	Sn	13 03 47.6	+0.2
SJCC	San Jacinto, C	2.76	253	*e*P	Pn	13 03 17.5	+0.9
SJCC				*e*S	Sn	13 03 52.4	+2.3
SJCC				*i*		13 04 11.2	
	comp=Z,74nm,0.6s						
CAPV	Capacho	2.83	176	*e*P	Pn	13 03 17.8	+0.1
CAPV				*e*S	Sn	13 03 52.1	0.0
SANV	Sanarito	3.15	112	*e*P	Pn	13 03 22.0	-0.1
SANV				*e*S	Sn	13 03 59.1	-0.9
PAMC	Pamplona, Colo	3.35	183	*e*P	Pn	13 03 22.2	-2.9
PAMC				*e*S	Sn	13 04 10.7	+5.4
PAMC				*i*		13 04 16.2	
	comp=Z,121nm,0.4s						
BRRC	Barranca, Sant	3.77	199	*e*P	Pn	13 03 31.0	+0.5
BRRC				*e*S	Sn	13 04 13.7	-1.4
BRRC				*i*		13 04 32.8	
	comp=Z,79nm,0.5s						
ZARC	Zaragoza, Cauc	3.95	216	*e*P	Pn	13 03 32.7	-0.3
ZARC				*e*S	Sn	13 04 17.5	-2.0
ZARC				*i*		13 04 38.2	
	comp=Z,82nm,0.5s						
MAPV	Macapo	4.07	102	*e*P	Pn	13 03 34.1	-0.6
MAPV				*e*S	Sn	13 04 20.8	-1.8
BARC	Barichara	4.14	189	*e*P	Pn	13 03 35.8	0.0
UREC	San Jos de Ur	4.19	226	*e*P	Pn	13 03 37.9	+1.6
UREC				*e*S	Sn	13 04 25.6	+0.2
UREC				*i*		13 04 27.4	
	comp=Z,29nm,0.2s						
PTBC	PUERTO BERRIO,	4.57	205	*e*P	Pn	13 03 41.6	+0.1
PTBC				*e*S	Sn	13 04 33.3	-1.5
PTBC				*i*		13 04 53.8	
	comp=Z,42nm,0.4s						
BAUV	El Baul	4.73	111	*e*P	Pn	13 03 42.8	-1.0
BAUV				*e*S	Sn	13 04 36.0	-2.7
ELOV	Elorza	4.74	141	*e*P	Pn	13 03 44.5	+0.7
ELOV				*e*S	Sn	13 04 36.0	-2.9
RUSC	La Rusia	4.81	187	*e*P	Pn	13 03 45.8	+0.5
RUSC				*i*		13 05 02.8	
	comp=Z,30nm,0.4s						
BENV	Beln	4.88	98	*e*P	Pn	13 03 45.5	-0.4
BENV				*e*S	Sn	13 04 39.8	-2.7
SPBC	San Pablo de B	5.25	197	*e*P	Pn	13 03 52.1	+1.1
SPBC				*e*S	Sn	13 04 53.0	+1.2
HELC	Santa Helena	5.39	214	*e*P	Pn	13 03 55.5	+2.3
HELC				*e*S	Sn	13 04 55.5	-0.1
HELC				*i*		13 05 09.2	
	comp=Z,22nm,0.7s						
NORC	Norcasia	5.62	205	*e*S	Sn	13 05 02.1	+1.3
CBOC	Ciudad Bolivar	5.93	216	*e*P	Pn	13 04 02.6	+2.2
CBOC				*i*		13 05 22.0	
	comp=Z,6.9nm,0.6s						
CHIC	Chingaza	6.16	192	*e*P	Pn	13 04 04.1	+0.4
CHIC				*i*		13 05 55.5	
	comp=Z,8.8nm,0.5s						
PLMC	San Jos del P	6.87	213	*e*P	Pn	13 04 14.2	+1.0
ORTC	Ortega, Tolima	7.28	202	*e*P	Pn	13 04 20.6	+1.8
ORTC				*e*S	Sn	13 05 45.4	+3.7

IDC 14 13:10:03.6±2.6, 3°.10N×128°.76E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=184.4km s-min=27.3km az=69.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.55	167	P	P	13 15 15.8	0.0
	0.3nm,0.3s,baz=346,slow=9.9,SNR=9.3						
	0.3nm,0.3s						
ASAR	Alice Springs	27.07	170	P	P	13 15 47.3	-0.8
	0.4nm,0.4s,baz=352,slow=7.4,SNR=7.4						
	0.4nm,0.4s						
MKAR	Makanchi Array	59.23	325	P	P	13 20 07.6	+0.8
	0.2nm,0.4s,baz=125,slow=8.0,SNR=1.9						
	0.2nm,0.4s						

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*IASPEI **14** 13:11:28.8±0.9, 40°.18N±0°.02×20°.67E±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=3.9km s-min=2.7km az=125.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TIR **14** 13:11:28.2, 40°.21N×20°.68E, h4^{km}, Md2.5, Ml2.5*

*SKO **14** 13:11:29.6, 40°.15N×20°.71E, h19^{km}*

*ATH **14** 13:11:29.2, 40°.19N×20°.69E, h11^{km}±4^{km}, ML2.3/9, Error ellipse: s-maj=4.3km s-min=0.9km az=341.0*

*THE **14** 13:11:29.0, 40°.17N×20°.67E, h5^{km}±1^{km}, ML2.3/7, Error ellipse: s-maj=1.9km s-min=0.5km az=291.0*

ISC 14 13:11:28.8±0.8, 40°.19N±0°.02×20°.66E±0°.02, h7^{km}±5^{km}, n43, σ1ˢ.18/73, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSK	Leskovik	0.06	228	P	Pg	13 11 30.5	0.0
LSK				S	Sg	13 11 31.9	0.0
	5μm,0.1s						
LSK	Leskovik	0.06	228	P	Pg	13 11 30.5	0.0
	baz=227						
LSK				S	Sg	13 11 31.9	0.0
	baz=227						
LSK				AMP			
	comp=E,28nm,0.1s,baz=227						
PENT	Pentalofos	0.37	89	P	Pg	13 11 35.8	-0.2
PENT				S	Sg	13 11 41.3	+0.4
PENT				AML	AML	13 11 43.3	
	comp=N,421μm,0.2s						
PENT				AML	AML	13 11 43.8	
	comp=E,771μm,0.2s						
PENT	Pentalofos	0.37	89	P	Pg	13 11 36.0	0.0
PENT				S	Sg	13 11 41.3	+0.4
	comp=E,310nm,0.3s						
NEST	Nestorio	0.38	53	P	Pg	13 11 36.1	0.0
NEST				S	Sg	13 11 40.8	-0.3
NEST				AML	AML	13 11 44.6	
	comp=E,1923μm,0.2s						
NEST				AML	AML	13 11 45.3	
	comp=N,1309μm,0.2s						
NEST	Nestorio	0.38	53	P	Pg	13 11 36.1	0.0
KBN	Korca	0.45	13	P	Pg	13 11 37.1	-0.4
KBN				S	Sg	13 11 44.5	+1.2
	comp=N,310nm,0.4s						
KBN	Korca	0.45	13	P	Pg	13 11 36.8	-0.6
	baz=11						
KBN				S	Sg	13 11 43.9	+0.6
	baz=11						
KBN				AMP			
	comp=N,1.7nm,0.5s,baz=11						
JAN	Janina	0.55	164	P	Pg	13 11 38.6	-0.8
JAN				S	Sg	13 11 47.5	+0.8
JAN				AML	AML	13 11 49.1	
	comp=N,1692μm,0.4s						
JAN				AML	AML	13 11 49.9	
	comp=E,1947μm,0.5s						
JAN	Janina	0.55	164	P	Pg	13 11 37.8	-1.6
JAN				S	Sg	13 11 46.8	+0.2
	comp=E,832nm,0.4s						
SRN	Sarande	0.59	239	P	Pg	13 11 40.3	+0.2
SRN				S	Sg	13 11 48.9	+1.1
	comp=E,248nm,0.6s						
SRN	Sarande	0.59	239	P	Pg	13 11 40.4	+0.2
	baz=239						
SRN				S	Sb	13 11 50.0	+0.1
	baz=239						
SRN				AMP			
	comp=N,1.2nm,0.5s,baz=239						
KPRO	Kipourio	0.59	113	P	Pg	13 11 39.5	-0.7
KPRO	Kipourio	0.59	113	P	Pg	13 11 39.7	-0.5
IGT	Igoumenitsa	0.70	201	P	Pg	13 11 42.0	-0.2
IGT				S	Sb	13 11 53.1	+0.1
IGT				AML	AML	13 11 55.8	
	comp=N,1295μm,0.5s						
IGT				AML	AML	13 11 57.9	
	comp=E,604μm,0.5s						
IGT	Igoumenitsa	0.70	201	P	Pg	13 11 42.0	-0.2
IGT				S	Sg	13 11 52.4	+1.0
	comp=E,478nm,0.5s						
IGT	Igoumenitsa	0.70	201	*i* Pg	Pg	13 11 41.9	-0.2
IGT				*i* Sg	Sb	13 11 53.2	+0.1
IGT	Igoumenitsa	0.70	201	P	Pg	13 11 42.7	+0.5
	baz=202						
IGT				S	Sb	13 11 53.9	+0.8
	baz=202						
KASA	Kassiopi	0.71	232	P	Pg	13 11 42.4	+0.1
KASA				S	Sb	13 11 54.0	+0.8
KASA				AML	AML	13 11 55.3	
	comp=E,460μm,0.5s						
KASA				AML	AML	13 11 55.5	
	comp=N,613μm,0.5s						
FNA	Florina	0.81	43	P	Pg	13 11 43.9	-0.5
FNA				S	Sb	13 11 55.6	-0.8
FNA				AML	AML	13 11 58.0	
	comp=N,693μm,0.3s						
FNA				AML	AML	13 11 59.8	
	comp=E,689μm,0.3s						
FNA	Florina	0.81	43	*i* Pg	Pg	13 11 43.9	-0.5
FNA				*i* Sg	Sb	13 11 56.6	+0.2
FNA	Florina	0.81	43	P	Pg	13 11 43.9	-0.5
	baz=42						
FNA				S	Sb	13 11 55.5	-0.8
	baz=42						
KEK	Kerkira	0.81	234	P	Pg	13 11 43.8	-0.6
KEK				S	Sb	13 11 57.2	+0.9
KEK				AML	AML	13 12 00.7	
	comp=N,200μm,0.5s						
KEK				AML	AML	13 12 02.8	
	comp=E,252μm,0.2s						
KEK	Kerkira	0.81	234	P	Pg	13 11 44.0	-0.4
KZN	Kozani	0.86	82	P	Pg	13 11 45.2	-0.2
KZN				S	Sg	13 11 56.2	-0.3
KZN				AML	AML	13 12 02.3	
	comp=N,404μm,0.4s						
KZN				AML	AML	13 12 03.4	
	comp=E,288μm,0.3s						
KZN	Kozani	0.86	82	P	Pg	13 11 45.1	-0.2
OHR	Ohrid	0.93	7	*i* Pg	Pb	13 11 47.5	+0.3
OHR				*i* Sg	Sn	13 12 02.0	+0.2
OHR				*e*Lg	Lg	13 12 03.4	
	comp=E,91nm,0.6s						
THL	Klokotos Trika	1.22	120	P	Pg	13 11 51.6	-0.5
THL				AML	AML	13 12 14.4	
	comp=N,279μm,0.6s						
THL				AML	AML	13 12 16.8	
	comp=E,196μm,0.5s						
THL	Klokotos Trika	1.22	120	P	Pg	13 11 51.2	-0.9
THL				S	Sn	13 12 09.1	+0.3
	comp=E,120nm,0.6s						
LKD2	Lefkada island	1.40	180	P	Pb	13 11 55.1	0.0
LKD2	Lefkada island	1.40	180	P	Pn	13 11 54.4	-0.3
LKD2	Lefkada island	1.40	180	P	Pg	13 11 56.0	+0.5
	baz=181						
LKD2				S	Sg	13 12 16.9	+3.2
	baz=181						
LIT	Litokhoron	1.41	93	P	Pb	13 11 54.9	-0.5
LIT	Litokhoron	1.41	93	P	Pn	13 11 54.6	-0.2
LIT	Litokhoron	1.41	93	*i* Pg	Pn	13 11 54.6	-0.2

LIT				*i* Sg	Sg	13 12 15.8	+1.8
SCTE	Santa Cesarea	1.68	267	P	Pg	13 12 01.4	+0.4
	baz=267						
VAY	Valandovo	1.84	52	*i* Pn	Pb	13 12 03.1	+0.4
VAY				*i* Sn	Sn	13 12 24.5	+0.2
VAY				*e*Lg	Lg	13 12 34.8	
	comp=E,17nm,0.6s						
STIP	Stip	1.90	37	*i* Pn	Pg	13 12 05.6	+0.4
STIP				*i* Sn	Sg	13 12 36.5	+6.7
STIP				*e*Lg	Lg	13 12 41.7	
	comp=N,5.1nm,0.6s						
KNT	Kendrikon	1.96	60	*i* Pn	Pn	13 12 02.5	0.0
BCI	Bajram Curri	2.22	349	P	Pb	13 12 09.4	+0.2
	baz=349						
RICI	Ricice	4.22	323	*e*Pn	Pn	13 12 32.5	-1.0
RICI				Sn	Sn	13 13 22.4	-0.7
KIJV	Kijevo	4.95	322	*e*Pn	Pn	13 12 43.1	-0.4
KIJV				Sn	Sn	13 13 39.6	-1.5
MORI	Morici	5.20	317	*e*Pn	Pn	13 12 45.1	-1.8
MORI				Sn	Sn	13 13 43.6	-3.5

DDA ***14*** *13:39:44.8±0.0, 40.°81N×41.°53E, h7^{km}±1^{km}, ML2.0*
ISK ***14*** *13:39:44.4, 40.°85N×41.°52E, h17^{km}, ML2.7/7*
ISC 14 13:39:43.7±1.2**, 40.°75N**±0.°04×**41.°50E**±0.°04**, h8**^{km}±14^{km}**,**
n12, σ1.^{s}08/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDEM	Demirkent	0.24	52	P	Pg	13 39 48.6	+0.1
DDEM				S	Sg	13 39 51.9	+0.1
DDEM				*i* AML	AML	13 39 52.0	
	comp=E,546nm,0.2s						
DDEM				*i* AML	AML	13 39 56.0	
	comp=N,699nm,0.3s						
DBAD	Bademkaya	0.31	28	P	Pg	13 39 50.0	+0.1
DBAD				S	Sg	13 39 53.7	-0.3
DBAD				*i* AML	AML	13 39 54.0	
	comp=N,204nm,0.2s						
DBAD				*i* AML	AML	13 39 54.0	
	comp=E,372nm,0.2s						
DBAD				*i* AML	AML	13 39 55.0	
	comp=Z,206nm,0.3s						
DAGI	Agillar	0.46	43	P	Pg	13 39 52.6	+0.1
DAGI				S	Sg	13 39 58.3	-0.2
KRIK	Erzurum-spir	0.60	227	P	Pg	13 39 53.3	-2.0
DBOC	Borcka	0.61	12	P	Pg	13 39 55.2	-0.3
DBOC				S	Sg	13 40 02.6	-0.9
DBOC				*i* AML	AML	13 40 04.0	
	comp=E,197nm,0.2s						
HOPA	Hopa-Artvin	0.64	356	PG	Pg	13 39 55.7	-0.4
CHOM	Cayeli-Rize	0.66	302	PG	Pg	13 39 57.2	+0.7
SENK	Senkaya-Erzuru	0.67	106	PG	Pb	13 39 58.3	+0.5
CHAY	Cayeli-Rize	0.68	300	PG	Pg	13 39 57.6	+0.8
CHAY				SG	Sb	13 40 07.1	-0.3
KOPR	Koprukoy-ERZUR	0.80	160	PG	Pb	13 40 02.0	+2.0
BATM	Batumi	0.87	9	PG	Pg	13 39 59.9	-0.5
BATM				SG	Sb	13 40 10.9	-2.0
BAYT	Aydıntepe-Bayb	1.10	252	PN	Pb	13 40 06.1	+1.1

IDC ***14*** *13:43:58.1±2.2, 52.°90N×163.°51W, h0^{km}, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=88.9km s-min=28.3km az=5.0*
NEIC ***14*** *13:44:00.7±0.7, 52.°66N±0.°09×163.°6W±0.°1, h36^{km}±27^{km}, ML3.0/6, ML3.2(AEIC), Error ellipse: s-maj=13.1km s-min=8.2km az=159.0*
AEIC ***14*** *13:44:01±0.8, 52.°7N±0.°1×163.°7W±0.°1, h40^{km}±10^{km}, Error ellipse: s-maj=15.1km s-min=9.0km az=160.0*
ISC 14 13:44:02.0±1.2**, 52.°7N**±0.°1×**163.°63W**±0.°06**, h35**^{km}**, n32,**
σ0.^{s}97/30**, mb3.5**/3**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.85	342		Pn	13 44 30.9	-0.3
AKSA	Akutan Strait	1.88	320		Pn	13 44 30.7	-0.9
AKSA					Sn	13 44 54.1	-0.1
AKUT	Akutan	1.91	319	Pn	Pn	13 44 31.7	-0.3
AKUT				IAML		13 45 00.1	
	comp=N,86nm,0.5s						
WECS	Westdahl Cape	1.94	340		Pn	13 44 32.4	0.0
AKBBA	Akutan Broad B	1.95	316		Pn	13 44 32.2	-0.4
AKBBA					Sn	13 44 55.8	-0.1
ZRO	Akutan Zero	1.97	315		Pn	13 44 32.3	-0.5
UNV	Unalaska Valle	2.06	304		Pn	13 44 33.1	-1.0
UNV					Sn	13 44 57.7	-0.9
SSLN	Shishaldin Nor	2.11	354		Pn	13 44 34.8	0.0
ISNN	Isanotski Nort	2.12	358		Pn	13 44 34.7	-0.2
FALS	False Pass	2.14	3		Pn	13 44 34.7	-0.5
FALS					Sn	13 45 01.1	+0.6
MTBL	Makushin Table	2.22	306		Pn	13 44 35.9	-0.4
MSW	Makushin Switc	2.24	304		Pn	13 44 36.0	-0.6
MSW					Sn	13 45 02.5	-0.5
OKFG	Magazine Ridge	2.68	287		Pn	13 44 41.2	-1.4
NIKH	Nikolski High	3.18	277		Pn	13 44 47.7	-1.8
CNBA	Chernabura Isl	3.19	47	Pn	Pn	13 44 47.1	-2.5
CNBA				IAML		13 46 20.4	
	comp=E,29nm,2.1s						
SDPT	Sand Point	3.22	34		Pn	13 44 49.3	-0.7
SDPT	Sand Point	3.22	34	IAML		13 45 24.3	
	comp=N,40nm,2.3s						
SDPT				IAML		13 46 18.2	
	comp=E,39nm,2.3s						
ADK	Adak	8.05	269	Pn	Pn	13 45 55.9	-0.4
KDAK	Kodiak Island	8.09	47	Pn	Pn	13 45 55.5	-1.2
Q19K	Cape Douglas,	8.38	38	Pn	Pn	13 45 58.5	-2.3
O18K	Koktuh Hills	8.54	30	Pn	Pn	13 46 02.7	-0.3
SVW2	Sparrevohn	9.47	24	Pn	Pn	13 46 15.3	-0.4
PETK	Petropavlovsk-	23.14	287	P	P	13 49 05.8	+1.0
	comp=E,2.4nm,0.8s,baz=82,slow=10,SNR=3.6						
	comp=E,2.4nm,0.8s						
YKA	Yellowknife Ar	27.35	50	P	P	13 49 42.9	-0.4
	baz=265,slow=8.7,SNR=1.6						
PDAR	Pinedale Array	36.88	83	P	P	13 51 07.3	+0.1
	comp=E,0.4nm,0.6s,baz=301,slow=3.8,SNR=5.5						
	comp=E,0.4nm,0.6s						
H11N2	WAKE ISLAND Hy	40.08	226	T	T	14 35 49.3	
	baz=23						
H11N3	WAKE ISLAND Hy	40.08	226	T	T	14 35 48.7	
	baz=23						
H11N1	WAKE ISLAND Hy	40.09	226	T	T	14 35 48.2	
	baz=23						
H11S1	WAKE ISLAND Hy	41.24	225	T	T	14 37 21.1	
	baz=25						
H11S2	WAKE ISLAND Hy	41.25	225	T	T	14 37 15.4	
	baz=25						
H11S3	WAKE ISLAND Hy	41.26	225	T	T	14 37 13.2	
	baz=25						
TXAR	Lajitas Array	49.25	94	P	P	13 52 48.0	+0.9
	comp=E,0.1nm,0.3s,baz=306,slow=7.7,SNR=1.8						
	comp=E,0.1nm,0.3s						

NIED ***14*** *13:46:19.1, 32.°68N×130.°73E, h14^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.42; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-0.89; $M_{r\theta}$-0.82; $M_{\theta\phi}$1.72; $M_{\phi r}$-0.20; Fault plane solution: $M_0$2.07000×10^{14} NP1: ϕ_s188.00000°, δ66.00000°, λ166.00000°. NP2: ϕ_s284.00000°, δ77.00000°, λ25.00000°.*
JMA 14 13:46:19.1±0.0**, 32.°7N**±0.°1×**130.°7E**±0.°1**, h14**^{km}**, MV3.6**/20**,**
NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.15	153	*i* P	Pg	13 46 23.0	0.0
JIU3				*e*S	Sg	13 46 25.7	+0.2
JTA	Tamana	0.33	329	*i* P	Pg	13 46 25.9	+0.1
JTA				S	Sg	13 46 30.6	+0.2
JTZ	Takazaki	0.84	159	*i* P	Pb	13 46 35.5	0.0
JTZ				S	Sb	13 46 46.9	+0.3

JMA ***14*** *13:57:37.1±0.2, 24.°0N±0.°7×121.°6E±1.°0, h16^{km}±1^{km}, MV2.7/10, TAIWAN REGION*
TAP ***14*** *13:57:39.9, 24.°17N×121.°73E, h12^{km}, ML3.6, B*
ISC 14 13:57:38.9±0.8**, 24.°13N**±0.°02×**121.°81E**±0.°02**, h11**^{km}±5^{km}**,**
n111, σ0.^{s}78/175**, 4C-23D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.17	281	⇓*i*P	Pg	13 57 42.9	+0.1
	baz=266						
ETL				*e*S	Sg	13 57 45.4	-0.1
	baz=266						
EHP	Heping Village	0.19	341	P	Pg	13 57 43.5	+0.4
	baz=5.0						
EHP				*i* S	Sg	13 57 46.4	+0.4
	baz=5.0						
TWD	Chiawan	0.20	257	⇓*i*P	Pg	13 57 43.5	+0.3
	baz=243						
TWD				S	Sg	13 57 46.2	0.0
	baz=243						
NACB	Ninganchiao	0.20	284	⇓*i*P	Pg	13 57 43.2	-0.1
	baz=274						
NACB				*e*S	Sg	13 57 45.6	-0.7
	baz=274						
HWA	Hwalien	0.24	232	⇑*i*P	Pb	13 57 45.4	+0.1
	baz=222						
HWA				*e*S	Sb	13 57 49.9	+2.6
	baz=222						
ENA	Nanau	0.31	348	⇓*i*P	Pg	13 57 45.4	+0.2
	baz=2.0						
ENA				*e*S	Sg	13 57 49.3	0.0
	baz=2.0						
ETLH	Xiulin Townshi	0.31	285	⇓*i*P	Pg	13 57 45.1	-0.2
	baz=280						
ETLH				S	Sg	13 57 48.9	-0.6
	baz=280						
EWUT	Wuta	0.32	355	⇓*i*P	Pg	13 57 45.8	+0.4
	baz=7.0						
EWUT				S	Sg	13 57 50.3	+0.6
	baz=7.0						
ESL	Shilin	0.47	228	⇓*i*P	Pg	13 57 48.6	+0.5
	baz=226						
ESL				*e*S	Sg	13 57 54.8	+0.6
	baz=226						
TWC	Suao	0.48	4	*e*P	Pb	13 57 48.9	-0.6
	baz=7.0						
TWC				*e*S	Sb	13 57 55.5	-1.2
	baz=7.0						
LATG	Datong	0.48	328	⇓*i*P	Pg	13 57 48.4	0.0
	baz=332						
LATG				S	Sg	13 57 54.1	-0.7
	baz=332						
NNSB	Datong	0.49	308	⇓*i*P	Pg	13 57 48.5	-0.2
	baz=309						
NNSB				*e*S	Sg	13 57 53.9	-1.3
	baz=309						
WHF	Hehuan Shan	0.50	272	⇓*i*P	Pg	13 57 48.6	-0.2
	baz=268						
WHF				*e*S	Sg	13 57 54.9	-0.6
	baz=268						
NNS	Nan Shan	0.51	308	⇓*i*P	Pg	13 57 48.7	-0.2
	baz=310						
NNS				*e*S	Sg	13 57 54.9	-0.7
	baz=310						
NDS	Dongshan	0.51	350	⇓*i*P	Pb	13 57 49.4	-0.6
	baz=357						
NDS				*e*S	Sg	13 57 55.8	0.0
	baz=357						
FUSS	Fushou	0.53	283	⇓*i*P	Pg	13 57 49.4	0.0
	baz=281						
FUSS				S	Sg	13 57 56.3	-0.2
	baz=281						
ENTT	Nioudou	0.56	336	⇓*i*P	Pg	13 57 50.0	+0.2
	baz=341						
ENTT				S	Sg	13 57 57.1	-0.1
	baz=341						
EGFH	Guangfu	0.57	218	*e*P	Pb	13 57 51.1	0.0
	baz=219						
EGFH				*e*S	Sb	13 57 59.8	+0.5
	baz=219						
CHGB	Renai	0.59	264	⇓*i*P	Pg	13 57 50.5	+0.1
	baz=252						
CHGB				*e*S	Sg	13 57 57.9	-0.3
	baz=252						
OWD	Renai	0.60	254	P	Pg	13 57 50.8	+0.1
	baz=250						
OWD				*e*S	Sg	13 57 58.6	-0.2
	baz=250						
TWE	Neicheng	0.61	348	⇓*i*P	Pb	13 57 51.1	-0.5
	baz=354						
TWE				S	Sg	13 57 59.0	+0.2
	baz=354						
TDCB	Techi	0.61	282	⇓*i*P	Pg	13 57 50.9	+0.1
	baz=280						
TDCB				S	Sg	13 57 58.0	-0.9
	baz=280						
ILA	Ilan	0.64	355	*e*P	Pb	13 57 51.8	-0.4
	baz=1.0						
ILA				*e*S	Sg	13 58 00.3	+0.5
	baz=1.0						
WUSB	Renai	0.65	258	⇓*i*P	Pg	13 57 51.7	+0.2
	baz=246						
WUSB				*e*S	Sg	13 57 59.5	-0.6
	baz=246						
FUSB	Fushanzhiwuyua	0.66	342	⇓*i*P	Pg	13 57 51.9	+0.1
	baz=346						
FUSB				*e*S	Sg	13 57 59.8	-0.8
	baz=346						
YHNB	Yeheng	0.67	324	⇓*i*P	Pg	13 57 51.9	-0.1
	baz=326						
YHNB				S	Sg	13 58 00.3	-0.6
	baz=326						
NSK	Sanguang	0.69	323	⇓*i*P	Pg	13 57 52.1	-0.1
	baz=326						
NSK				S	Sg	13 58 00.7	-0.6
	baz=326						
NWLT	Wulai	0.71	337	⇓P	Pb	13 57 53.0	-0.4
	baz=340						
NWLT				*e*S	Sg	13 58 01.4	-0.5
	baz=340						
VWDT	VWDT	0.72	239	⇓*i*P	Pb	13 57 53.2	-0.3
	baz=235						
VWDT				*e*S	Sg	13 58 02.6	+0.4
	baz=235						
HGSD	Ruisui	0.72	209	*e*P	Pb	13 57 54.0	+0.4
	baz=193						
HGSD				*e*S	Sn	13 58 05.5	-0.8
	baz=193						
NTC	Toucheng	0.72	1	*e*P	Pb	13 57 53.4	-0.3
	baz=6.0						
NTC				*e*S	Sg	13 58 02.5	-0.1
	baz=6.0						
EHY	Hungye	0.76	216	*e*P	Pg	13 57 53.6	-0.1
	baz=224						
WHP	Taichung City	0.80	281	*e*P	Pg	13 57 54.7	+0.2
	baz=279						
WHP				*e*S	Sg	13 58 05.0	0.0
	baz=279						
NFF	Wufeng Townshi	0.81	309	*e*P	Pg	13 57 54.5	-0.1
	baz=309						
NFF				*e*S	Sg	13 58 04.4	-0.8
	baz=309						
TIPB	Shuangxi	0.84	1	*i* P	Pb	13 57 55.7	+0.1
	baz=5.0						
TIPB				*e*S	Sg	13 58 05.6	-0.6
	baz=5.0						
SSLB	Suanglung	0.85	247	⇑P	Pg	13 57 55.5	0.0
	baz=253						
SSLB				*e*S	Sg	13 58 05.6	-0.9
	baz=253						
SMLT	Sun Moon Lake	0.87	254	⇑*i*P	Pg	13 57 55.9	+0.1
	baz=251						
SMLT				*e*S	Sg	13 58 06.7	-0.3
	baz=251						
YULB	Yu-li	0.87	213	*e*P	Pg	13 57 55.1	-0.7
	baz=221						
YULB				*e*S	Sg	13 58 06.6	-0.4
	baz=221						
NHDH	Xindian Distri	0.87	343	*e*P	Pb	13 57 56.1	0.0
	baz=346						
TWA	Mucha	0.88	346	*e*P	Pb	13 57 56.3	+0.1
	baz=350						
LIOB	Emei	0.89	306	*e*P	Pg	13 57 56.3	+0.1
	baz=306						
LIOB				*e*S	Sg	13 58 08.0	+0.2
	baz=306						
NSTT	Nanjuang	0.89	304	P	Pg	13 57 56.2	0.0
	baz=305						
NSTT				*e*S	Sg	13 58 07.2	-0.6
	baz=305						
TWB1	Santiao Chiao	0.89	10	*e*P	Pb	13 57 56.5	+0.1
	baz=7.0						
TWB1				*e*S	Sb	13 58 08.6	+0.1
	baz=7.0						
EYUL	Yuli	0.90	210	*e*P	Pb	13 57 56.5	0.0
	baz=223						
NWF	Wu-fen Shan	0.94	358	*e*P	Pn	13 57 57.9	-0.4
	baz=353						
NWF				*e*S	Sg	13 58 09.1	-0.4
	baz=353						
TWQ1	Liyutan	0.97	283	*e*P	Pn	13 57 58.9	+0.2
	baz=292						
TWQ1				*e*S	Sn	13 58 11.7	-0.8
	baz=292						
NSY	Sanyi	1.00	287	*e*P	Pn	13 57 59.4	+0.4
	baz=286						
SBCB	Hsinchu	1.00	312	*e*P	Pg	13 57 58.6	+0.3
	baz=312						
YUS	Yu-Shan	1.01	231	⇑*i*P	Pg	13 57 58.6	+0.1
	baz=219						
YUS				*e*S	Sb	13 58 12.9	+0.7
	baz=219						
NCU	National Centr	1.01	326	*e*P	Pn	13 57 59.4	+0.2
	baz=327						
NCU				*e*S	Sn	13 58 13.8	+0.4
	baz=327						
NCUH	Zhongli	1.01	326	P	Pn	13 57 59.0	-0.1
	baz=327						
NCUH				*e*S	Sn	13 58 13.3	-0.1
	baz=327						
NMLH	Miaoli	1.02	294	*e*P	Pn	13 57 59.1	-0.1
	baz=294						
HSN	Hsinchu	1.02	311	*e*P	Pg	13 57 58.7	+0.1
	baz=315						
TWS1	Kuangyinshan	1.03	340	*e*P	Pn	13 57 59.7	+0.3
	baz=350						
TWS1				*e*S	Sn	13 58 13.8	-0.1
	baz=350						
WJS	Zhushan	1.04	253	P	Pn	13 57 60.0	+0.5
	baz=247						
WJS				*e*S	Sn	13 58 13.7	-0.3
	baz=247						
TCU	Taichung	1.04	271	*e*P	Pn	13 58 00.5	+1.1
	baz=270						
TCU				*e*S	Sn	13 58 14.4	+0.4
	baz=270						
FULB	Fuli	1.04	207	*e*P	Pn	13 57 59.3	-0.2
	baz=220						
YM01	YM01	1.04	348	*e*P	Pn	13 57 59.4	-0.2
	baz=336						
WNT	Mingjian	1.06	257	*e*P	Pn	13 58 00.3	+0.5
	baz=250						
WNT				*e*S	Sn	13 58 14.7	+0.2
	baz=250						
JYNG	Yonagunijimaku	1.08	72	P	Pn	13 58 01.0	+0.8
JYNG				*e*S	Sn	13 58 18.4	+3.3
ANP	Anpu	1.09	346	*e*P	Pg	13 57 59.9	-0.1
	baz=348						
WDJ	Dajia District	1.09	282	P	Pg	13 58 01.1	+1.1
	baz=281						
WDJ				*e*S	Sn	13 58 15.4	+0.1
	baz=281						
CHKT	Chengkung	1.10	202	*e*P	Pb	13 57 59.4	-0.6
	baz=185						
ALS	Alishan	1.11	237	P	Pn	13 58 00.4	-0.3
	baz=225						
ALS				*e*S	Sn	13 58 16.3	+0.1
	baz=225						
YOJ	Yonaguni jima	1.15	73	*e*P	Pg	13 58 01.5	+0.5
	baz=72						
YOJ	Yonaguni jima	1.15	73	*e*P	Pg	13 58 01.8	+0.8
YOJ				S	Sn	13 58 19.9	+3.2
WCHH	Zhanghua	1.15	268	P	Pg	13 58 01.0	0.0
	baz=267						
WCHH				*e*S	Sn	13 58 17.0	+0.4
	baz=267						
TWY	Chenhua	1.16	351	*e*P	Pg	13 58 02.0	+0.8
	baz=338						
CHN5	Tsauling	1.16	243	*e*P	Pg	13 58 01.7	+0.3
	baz=242						
CHN5				*e*S	Sn	13 58 18.8	+1.6
	baz=242						
ELDTW	Lidau	1.18	218	*e*P	Pn	13 58 00.2	-1.3
	baz=202						
EDH	Donghe	1.24	202	*e*P	Pn	13 58 01.2	-1.0
	baz=188						
WDLH	Douliu	1.24	250	*e*P	Pb	13 58 02.6	+0.1
	baz=233						
WRL	Guolierlin Hig	1.33	261	*e*P	Pn	13 58 03.4	-0.1
	baz=261						
STYH	Taoyuan	1.34	225	*e*P	Pn	13 58 03.3	-0.4
	baz=225						
CHN2	Minshiung	1.36	244	*e*P	Pg	13 58 04.9	-0.1
	baz=245						
TPUB	Ta-pu	1.36	233	*e*P	Pb	13 58 04.5	0.0
	baz=233						
LONT	Longtian	1.37	207	*e*P	Pn	13 58 02.9	-1.1
	baz=208						
WTK	Tuku	1.37	252	*e*P	Pg	13 58 05.0	-0.3
	baz=252						
WTK				*e*S	Sg	13 58 25.3	+2.2
	baz=252						
WTP	Ta-pu	1.40	232	*e*P	Pb	13 58 05.1	-0.1
	baz=232						
WTP				*e*S	Sg	13 58 26.9	+2.7
	baz=232						
CHY	Chiayi	1.42	244	*e*P	Pb	13 58 05.7	+0.3
	baz=244						
CHY				*e*S	Sg	13 58 25.3	+0.8
	baz=244						
TWG	Pinlang	1.47	208	*e*P	Pn	13 58 03.5	-1.9
	baz=193						
LDUT	Ludao	1.48	192	*e*P	Pn	13 58 03.6	-1.9
	baz=179						
TWK	Hsinying	1.48	235	*e*P	Pb	13 58 06.7	+0.1
	baz=236						
CHN1	Nanshi	1.50	232	*e*P	Pb	13 58 07.3	+0.3
	baz=233						
CHN1				*e*S	Sg	13 58 28.2	+0.8
	baz=233						
SNST	Tainan City	1.50	233	*e*P	Pb	13 58 07.1	+0.2
	baz=234						
SNST				*e*S	Sg	13 58 29.2	+1.8
	baz=234						
SGST	Jiashian	1.53	228	*e*P	Pn	13 58 06.6	+0.3
	baz=228						
WSF	Szhu	1.53	252	*e*P	Pb	13 58 07.1	-0.3
	baz=252						
WSF				*e*S	Sg	13 58 28.9	+0.6
	baz=252						
WSL	Shuilin Townsh	1.57	248	*e*P	Pb	13 58 07.8	-0.2
	baz=249						
WSL				*e*S	Sg	13 58 29.9	+0.5
	baz=249						
ICHU	Yijhu	1.60	242	*e*P	Pb	13 58 07.8	-0.6
	baz=243						
CHN8	Yiju	1.66	242	*e*P	Pb	13 58 09.3	-0.2
	baz=244						
ECL	Taimali	1.71	208	*e*P	Pn	13 58 08.2	-0.6
	baz=194						
SCST	Cishan	1.73	225	*e*P	Pb	13 58 10.7	0.0
	baz=226						
SHHT	Tainan City	1.73	231	*e*P	Pb	13 58 11.1	+0.2
	baz=232						
SSD	Sandimen	1.75	218	*e*P	Pb	13 58 10.7	-0.4
	baz=203						
IRIF	Iriomote-Funau	1.76	83	P	Pb	13 58 10.4	-0.9
IRIF				*e*S	Sg	13 58 34.9	-0.8
TSMG	Majia	1.77	217	*e*P	Pb	13 58 10.6	-0.9
	baz=218						
TWM1	Shoushan	1.82	225	*e*P	Pb	13 58 12.8	+0.5
	baz=225						
HATJ	Hateruma jima	1.82	92	S	Sb	13 58 35.3	+0.1
EAST	Anshuo	1.95	207	*e*P	Pn	13 58 10.8	-1.2
	baz=196						
TAWH	Dawu Township	1.97	206	*e*P	Pb	13 58 13.8	-1.0
	baz=195						
SSPT	Xinbi	2.00	215	*e*P	Pb	13 58 14.7	-0.6
	baz=215						
JKRS	Kuro-shima	2.01	86	*e*P	Pb	13 58 14.9	-0.6
SCZT	Fangliau	2.06	212	*e*P	Pb	13 58 15.2	-1.2
	baz=197						
LYUB	Lan-yu	2.12	186	*e*P	Pn	13 58 13.3	-1.1
	baz=188						
PHUB	P'eng-hu	2.14	254	*e*P	Pn	13 58 14.2	-0.5
	baz=256						
PNG	Penghu	2.14	255	*e*P	Pn	13 58 14.3	-0.3
	baz=258						
JIJ	Ishigaki jima	2.14	83	P	Pb	13 58 15.6	-2.2
JIJ				*e*S	Sb	13 58 43.0	-1.4
WDGT	Dungji	2.15	247	*e*P	Pn	13 58 15.2	+0.4
	baz=250						
JISG	Ishigakijimahi	2.33	78	P	Pn	13 58 17.8	+0.6
TWKBT	Hengchun	2.36	203	*e*P	Pb	13 58 19.8	-1.8
	baz=192						
VCHM	Qimei	2.37	248	*e*P	Pn	13 58 18.0	+0.2

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      baz=235
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*IDC **14** 14:19:27.5±2.1, 0°.74N×126°.17E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=177.8km s-min=28.0km az=65.0*
*DJA **14** 14:19:35.4±0.9, 1°N±3°×12°7E±°, h32km±16km, M3.6/9, mb3.7/3, mB4.6/2, MLv3.5/9, Mw(mB)3.9/2*
ISC 14 14:19:34.3±1.2, **0°.94N**±0°.08×**126°.64E**±0°.06, **h35**km, **n12**, σ**2^{s}36**/13, **mb3.7**/3, **Northern Molucca Sea**

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Code  Station Name         Δ°  AZ°   Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
TNTI  Ternate             0.75 103  P     Pn      14 19 50.5 +2.1
LBMI  Labuha              1.79 151  P     Pn      14 20 04.6 +1.9
LBMI                                S     Sn      14 20 26.9 +2.7
KMSI  Cibinong            2.68 262  P     Pn      14 20 16.1 +1.2
SGSI  Sangihe             2.94 338  P     Pn      14 20 20.2 +1.6
SANI  Sanana              3.04 192  P     Pn      14 20 19.7 -0.2
GTOI  Gorontalo           3.64 265  P     Pn      14 20 31.2 +3.1
APSI  Ampana              5.32 250  P     Pn      14 20 53.2 +2.0
MPSI  Mapaga              6.76 265  P     Pn      14 21 12.8 +1.7
      0.0nm477nm1.7nm,0.7s
SPSI  Sidrap Palu         8.42 235  P     Pn      14 21 35.8 +2.0
WRA   Warramunga Arr     22.09 160  P     P       14 24 23.9 -2.7
      1.6nm,0.3s,baz=338,slow=11,SNR=31
      1.6nm,0.3s
ASAR  Alice Springs      25.46 164  P     P       14 24 57.1 -2.1
      0.4nm,0.4s,baz=340,slow=11,SNR=7.9
      0.4nm,0.4s
MKAR  Makanchi Array     59.79 326  P     P       14 29 33.9 -2.1
      0.2nm,0.3s,baz=127,slow=5.8,SNR=1.8
      0.2nm,0.3s
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*NEIC **14** 14:20:30.4±0.8, 40°.67N±0°.03×119°.47W±0°.05, h7km±5km, Error ellipse: s-maj=5.3km s-min=4.3km az=98.0*
*IDC **14** 14:20:30.3±0.7, 40°.67N×119°.51W, h0km, mb3.0/1, mbtmp3.2/4, ML4.2/2, MS2.9/12, Error ellipse: s-maj=8.7km s-min=5.3km az=32.0*
*REN **14** 14:20:30.8±0.7, 40°.65N±0°.03×119°.45W±0°.04, h9km±7km, Mwr3.8, ML3.7/68(NEIC), Mwr3.8/102(NEIC), Error ellipse: s-maj=4.9km s-min=2.5km az=135.0*
*NEIC **14** 14:20:31, 40°.65N×119°.45W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.31; $M_{\theta\theta}$-2.17; $M_{\phi\phi}$4.48; $M_{r\theta}$-3.42; $M_{\theta\phi}$4.88; $M_{\phi r}$1.24; Fault plane solution: $M_0$7.22000×10^{14} NP1:ϕ_s168.82000°, δ62.89000°, λ-155.48000°. NP2:ϕ_s67.08000°, δ68.32000°, λ-29.36000°. Principal axes: T 7.0925, Plg3.0000°, Azm119.0000°; N 0.2488, Plg54.0000°, Azm214.0000°; P -7.3412, Plg36.0000°, Azm26.0000°;*
*NEIC **14** 14:20:33, 40°.65N×119°.45W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.27; $M_{\theta\theta}$-2.44; $M_{\phi\phi}$2.70; $M_{r\theta}$-2.32; $M_{\theta\phi}$5.29; $M_{\phi r}$-0.40; Fault plane solution: $M_0$6.34000×10^{14} NP1:ϕ_s77.00000°, δ88.00000°, λ-22.00000°. NP2:ϕ_s167.00000°, δ68.00000°, λ-178.00000°. Principal axes: T 6.3990, Plg14.0000°, Azm124.0000°; N -0.1214, Plg68.0000°, Azm251.0000°; P -6.2776, Plg17.0000°, Azm30.0000°;*
*ANF **14** 14:20:35.5±2.0, 40°.66N×119°.48W, h15km±17km, ML4.0/21 Error ellipse: s-maj=9.4km s-min=3.3km az=54.0*
ISC 14 14:20:30.8±0.7, **40°.64N**±0°.02×**119°.47W**±0°.03, **h9**km, **n82**, σ**1^{s}92**/88, **MS2.9**/4, **Nevada**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
PAHR  Pah Rah Range       0.93 176        Pg      14 20 48.7 -0.1
PAHR                                IAML          14 21 04.4
      comp=E,3μm,0.8s
PAHR                                IAML          14 21 05.2
      comp=N,2μm,0.5s
BEKR  Beckworth           1.03 222  Pg    Pb      14 20 50.6 -0.3
BEKR                                IAML          14 21 08.1
      comp=N,1μm,0.3s
BEKR                                IAML          14 21 08.6
      comp=E,2μm,0.5s
VCNR  Virginia City       1.35 186        Pn      14 20 56.0  0.0
MPK   Martis Peak         1.41 198        Pn      14 20 56.9  0.0
MPK                                 IAML          14 21 19.6
      comp=N,2μm,0.8s
MOD   Modoc Plateau       1.41 334  Pn    Pn      14 20 56.5 -0.3
MOD                                 IAML          14 21 20.1
      comp=E,2μm,0.9s
PNTR  Pine Nut            1.55 184  Pn    Pn      14 20 58.8  0.0
LCMM  Colby Mountain      1.64 253        Pn      14 21 00.1  0.0
YERR  Yerington           1.66 174  Pn    Pn      14 20 59.6 -0.7
BMN   Battle Mountai      1.72  96  Pn    Pn      14 21 00.6 -0.6
BMN                                 IAML          14 21 26.4
      comp=N,913nm,1.1s
BMN                                 IAML          14 21 33.2
      comp=E,655nm,0.7s
EMB   Emerald Bay         1.73 197  Pn    Pn      14 21 01.2 -0.1
EMB                                 IAML          14 21 29.1
      comp=N,950nm,0.5s
EMB                                 IAML          14 21 29.4
      comp=E,872nm,0.8s
ORV   Oroville            1.90 236        Pn      14 21 04.0 +0.6
ORV   Oroville            1.90 236  Pn    Pn      14 21 03.8 +0.4
WVOR  Wild Horse Val      1.90  19  Pn    Pn      14 21 03.2 -0.3
KVN   Kaiserville         1.90 146        Pn      14 21 03.9 +0.3
KVN                                 IAML          14 21 32.6
      comp=E,556nm,1.0s
KVN                                 IAML          14 21 40.4
      comp=N,551nm,0.8s
RYN   Ryan                2.13 160  Pn    Pn      14 21 07.2 +0.4
NVAR  Mina Array Bea      2.38 157  Pn    Pn      14 21 11.2 +1.0
      comp=N,14nm,0.3s,baz=337,slow=14,SNR=67
NVAR                                Pg    Pb      14 21 14.5 +0.5
      comp=N,53nm,0.3s,baz=31,slow=23,SNR=63
NVAR                                Lg    Lg      14 21 47.2
      comp=N,174nm,0.3s,baz=303,slow=33,SNR=26
NVAR                                LR    LR      14 21 48.7
      comp=N,39nm,20.4s,baz=30,slow=32
      comp=N,86nm,0.6s
NVAR  Mina Array Bea      2.38 157        Pn      14 21 10.2  0.0
NV11  Mina Array Sit      2.42 155  Pn    Pn      14 21 10.8 +0.1
NV11                                IAML          14 21 49.9
      comp=E,319nm,0.5s
NV11                                IAML          14 21 50.6
      comp=N,300nm,0.6s
LHV   Little Huntoon      2.50 162  Pn    Pn      14 21 12.0 +0.4
K04D  Chiloquin, OR       2.62 320  P     Pb      14 21 17.6 -0.5
      baz=138,SNR=7.4
K04D                                Sb    Sg      14 21 54.7 -0.4
      baz=138
L04D  Klamath Falls       2.66 307  P     Pb      14 21 17.7 -0.9
      baz=125,SNR=95
L04D                                Sb    Sg      14 21 54.7 -1.4
      baz=125
YBH   Yreka Blue Hor      2.68 295  Pg    Pb      14 21 17.8 -1.2
      comp=N,8.8nm,0.3s,baz=124,slow=5.7,SNR=124
YBH                                 Lg    Lg      14 21 53.7
      comp=N,18nm,0.3s,baz=160,slow=20,SNR=18
YBH   Yreka Blue Hor      2.68 295        Pb      14 21 16.6 -2.5
YBH   Yreka Blue Hor      2.68 295  Pn    Pn      14 21 14.2 -0.1
J08A  Circle Bar Ran      2.82  15        Pn      14 21 16.7 +0.6
J08A                                IAML          14 22 02.1
      comp=E,180nm,0.9s
J08A                                IAML          14 22 15.5
      comp=N,262nm,1.2s
J05D  Fort Rock, OR       2.96 334  P     Pb      14 21 24.1 +0.4
      baz=153,SNR=93
J05D                                Sb    Sg      14 22 04.2 -1.6
      baz=153
MLAC  Mammoth, Mammo      3.04 171  Pb    Pg      14 21 29.5 +0.4
      baz=351
ELK   Elko                3.21  87  Pn    Pn      14 21 22.4 +0.7
      comp=N,1.9nm,0.3s,baz=277,slow=16,SNR=12
ELK                                 Pg    Pb      14 21 29.4 +1.2
      comp=N,8.0nm,0.3s,baz=293,slow=15,SNR=37
ELK                                 Sn    Sn      14 21 59.9 -0.4
      comp=N,7.7nm,0.3s,baz=340,slow=2.4,SNR=11
ELK                                 Lg    Lg      14 22 12.3
      comp=N,17nm,0.3s,baz=179,slow=23,SNR=16
ELK                                 LR    LR      14 22 47.7
      comp=N,107nm,19.1s,baz=248,slow=42
ELK   Elko                3.21  87        Pn      14 21 22.3 +0.7
J04D  Umpqua Nationa      3.26 324  P     Pb      14 21 29.9 +0.8
      baz=142,SNR=85
J04D                                Sb    Sg      14 22 14.3 -1.3
      baz=142
HUMO  Hull Mountain       3.27 308  Pn    Pn      14 21 22.5 +0.2
PINE  Pine Mountain       3.34 341        Pn      14 21 24.1 +0.8
PINE                                IAML          14 22 28.0
      comp=E,141nm,1.1s
PINE                                IAML          14 22 33.6
      comp=N,164nm,1.3s
L02F  Cave Junction       3.43 297  P     Pb      14 21 30.8 -0.9
      baz=114
L02F                                Sb    Sg      14 22 17.5 -3.3
      baz=114
MCCM  Marconi Confer      3.63 228        Pn      14 21 28.6 +1.4
LCH   Last Change Ra      3.68 157        Pn      14 21 30.4 +2.3
LCH                                 IAML          14 22 31.1
      comp=E,106nm,1.0s
K02D  Willamette Mer      3.76 305  P     Pb      14 21 33.4 -4.0
      baz=122,SNR=9.7
R11A  Troy Canyon, C      3.77 126        Pn      14 21 31.5 +2.2
R11A  Troy Canyon, C      3.77 126  Pn    Pn      14 21 31.5 +2.2
      baz=309
R11A                                Pb    Pg      14 21 41.2 -1.9
      baz=309
R11A                                Sb    Sg      14 22 31.1 -0.9
      baz=309
I04A  Tendick Farm,       3.84 326  Sb    Sg      14 22 30.9 -3.2
      baz=144
MFID  Camas Ranch         3.88  43        Pn      14 21 31.1 +0.4
MFID                                IAML          14 22 38.0
      comp=E,117nm,0.8s
MFID                                IAML          14 22 38.8
      comp=E,139nm,0.9s
I05D  Terrebonne, OR      3.95 340  Pb    Pg      14 21 44.1 -2.3
      baz=159,SNR=18
I05D                                Sb    Sg      14 22 36.2 -1.5
      baz=159
S11A  Rachel              4.16 135        Pn      14 21 37.0 +2.4
J01E  Myrtle Point        4.18 309  Pb    Pb      14 21 47.4 +2.9
      baz=126
J01E                                Pg    Pg      14 21 53.8 +2.9
      baz=126
I03D  Drain, OR           4.20 318  Pb    Pg      14 21 51.0 -0.3
      baz=135
I03D                                Sb    Sg      14 22 43.8 -1.9
      baz=135
TPNV  Topopah Spring      4.46 145        Pn      14 21 40.0 +1.2
TPNV                                IAML          14 22 58.7
      comp=E,111nm,1.1s
TPNV                                IAML          14 23 01.8
      comp=E,120nm,0.9s
TPNV  Topopah Spring      4.46 145  Pn    Pn      14 21 41.6 +2.8
      baz=327
TPNV                                Pb    Pg      14 21 54.5 -1.8
      baz=327
TPNV                                Sb    Sg      14 22 52.2 -1.8
      baz=327
BMO   Blue Mountains      4.50  20        Pn      14 21 39.4 +0.2
H04D  Lebanon             4.57 329  Pb    Pb      14 21 54.1 +2.9
      baz=147
FURC  Furnace Creek,      4.64 153  Sb    Sg      14 22 59.0 -0.7
      baz=335
PRN   Pahroc Range        4.71 132        Pn      14 21 42.3 +0.1
PRN                                 IAML          14 23 15.8
      comp=N,90nm,0.6s
HLID  Hailey              4.76  50  P     Pb      14 21 49.1 -5.4
      baz=234
VES   Vestal, Richgr      4.80 176  Sb    Sg      14 23 02.5 -2.4
      baz=357
PSUT  Pine Spring         4.82 114        Pn      14 21 44.3 +0.6
PSUT                                IAML          14 23 15.8
      comp=E,90nm,1.0s
PSUT                                IAML          14 23 19.7
      comp=N,60nm,0.8s
BGU   Big Grassy Mou      4.89  85  Pn    Pn      14 21 45.1 +0.4
GWY   Greenwater Val      4.96 153        Pn      14 21 48.0 +2.4
ISA   Isabella, Lake      5.03 171  Pb    Pg      14 22 05.1 -2.1
      baz=352
ISA                                 Sb    Sg      14 23 09.2 -3.1
      baz=352
DUG   Dugway, Tooele      5.10  93  Pn    Pn      14 21 48.9 +1.4
DUG                                 IAML          14 23 18.2
      comp=N,63nm,0.8s
DUG                                 IAML          14 23 22.3
      comp=N,70nm,1.0s
DUG   Dugway, Tooele      5.10  93  P     Pn      14 21 49.9 +2.4
      baz=277
DUG                                 Sb    Sg      14 23 09.8 -4.7
      baz=277
SMMC  Simmler             5.33 185  Sb    Sb      14 23 14.9 +6.6
      baz=4.4
SHOC  Shoshone, Teco      5.36 151  Sb    Sg      14 23 20.2 -2.6
      baz=333
CCUT  Cedar City          5.66 121        Pn      14 21 58.0 +2.7
SZCU  Shurtz Canyon       5.82 119        Pn      14 21 56.0 -1.5
EDW2  Edwards Air Fo      5.86 168  Sb    Sg      14 23 35.8 -3.2
      baz=349
TUQ   Turquoise Moun      5.90 151  Sb    Sg      14 23 35.0 -5.2
      baz=333
MSU   Marysvale           6.02 108        Pn      14 21 58.0 -2.2
MTPU  Mount Pierson       6.21 112        Pn      14 22 03.5 +0.5
BELC  Belle Mtn. Jos      7.18 156  Sb    Sg      14 24 19.0 -2.2
      baz=339
MSO   Missoula            7.37  31  P     Pn      14 22 21.9 +3.3
      baz=215
PFO   Pinyon Flats O      7.41 160  Lg    Lg      14 24 30.8
      comp=N,0.3nm,0.3s,baz=250,slow=15,SNR=2.0
BOZ   Bozeman (W)         7.58  47        Pb      14 22 41.6 -0.9
PDAR  Pinedale Array      7.71  71  Pg    Pb      14 22 45.5 +0.6
      comp=N,0.1nm,0.3s,baz=246,slow=13,SNR=6.3
NEW   Newport             7.81  12  LR    LR      14 25 07.7
      comp=N,44nm,18.1s,baz=242,slow=36
ANMO  Albuquerque        11.75 115  LR    LR      14 28 07.2
      comp=N,51nm,21.9s,baz=298,slow=39
BBB   Bella Bella        12.99 336  LR    LR      14 28 57.5
      comp=N,60nm,21.0s,baz=208,slow=39
TXAR  Lajitas Array      17.14 126  P     P       14 24 33.3 +0.9
      comp=N,0.5nm,0.3s,baz=324,slow=9.0,SNR=2.1
TXAR                                LR    LR      14 32 05.9
      comp=N,34nm,21.4s,baz=312,slow=40
      comp=N,0.3nm,0.5s
LPIG  La Paz             18.19 152  LR    LR      14 32 00.9
      comp=N,53nm,20.2s,baz=12,slow=38
DLBC  Dease Lake         19.05 343  LR    LR      14 32 34.5
      comp=N,89nm,18.2s,baz=87,slow=38
YKA   Yellowknife Ar     22.08   6  P     P       14 25 25.6 -0.3
      comp=N,0.6nm,0.8s,baz=187,slow=10,SNR=13
      comp=N,0.6nm,0.8s
KDAK  Kodiak Island      27.22 320  LR    LR      14 35 00.2
      comp=N,55nm,18.1s,baz=246,slow=32
TKL   Tuckaleechee C     28.38  88  LR    LR      14 37 24.5
      comp=N,22nm,20.2s,baz=292,slow=36
ILAR  Eielson Array      28.88 336  LR    LR      14 38 26.1
      comp=N,29nm,18.7s,baz=172,slow=37
SADO  Sadowa             29.70  68  LR    LR      14 37 56.5
      comp=N,31nm,19.0s,baz=334,slow=35
```

*IDC **14** 14:28:47.4±1.5, 6°.51S×127°.33E, h414km±21km, mb3.2/6, mbtmp4.1/10, Error ellipse: s-maj=22.9km s-min=14.7km az=69.0*
ISC 14 14:28:46.8±0.6, **6°.53S**±0°.06×**127°.39E**±0°.08, **h408**km, **n25**, σ**1^{s}51**/29, **mb3.6**/6, **Banda Sea**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
BATI  Baumata             5.19 225  P     P       14 30 11.6 +0.7
      60nm,0.3s,baz=62,slow=2.2,SNR=25
BATI                                S     S       14 31 16.7 -3.1
      76nm,0.5s,baz=333,slow=21,SNR=7.6
SIJI  Sorong              6.83  35  P     P       14 30 30.4 +1.2
      15nm,0.3s,baz=215,slow=8.4,SNR=24
SIJI                                S     S       14 31 48.1 -4.0
      3.7nm,0.4s,baz=215,slow=22,SNR=2.1
MTN   Manton Dam          7.28 150  P     P       14 30 35.3 +1.1
KDU   Kakadu              7.91 141  P     P       14 30 41.9 +0.7
KNRA  Kununurra           9.19 172  P     P       14 30 56.2 +0.9
TOLI2 Tolitoli           10.05 319  P     P       14 31 06.6 +1.7
WRAB  Tennant Creek      14.94 154  P     P       14 31 59.3 +0.8
WRA   Warramunga Arr     14.95 154  P     P       14 31 58.6 +0.1
      1.9nm,0.6s,baz=330,slow=11,SNR=25
WRA                                 S     S       14 34 34.3 -2.9
      1.5nm,0.5s,baz=331,slow=21,SNR=6.8
MBWA  Marble Bar         16.32 206  P     P       14 32 13.1 -0.2
PSA00 Pilbara Seismi     16.64 205  P     P       14 32 16.5 -0.1
COEN  Coen               17.19 117  P     P       14 32 23.9 +1.3
ASAR  Alice Springs      18.16 160  P     P       14 32 33.2 +0.5
      0.8nm,0.4s,baz=332,slow=7.3,SNR=24
ASAR                                S     S       14 35 37.1 -2.1
      0.8nm,0.5s,baz=333,slow=22,SNR=6.7
QIS   Mount Isa          18.30 141  P     P       14 32 35.1 +0.8
WRKA  Warakurna          18.43 177  P     P       14 32 36.5 +0.9
OOD   Oodnadatta         22.57 161  P     P       14 33 14.8 +0.7
FORT  Forrest            24.13 179  P     P       14 33 28.5 +0.4
MULG  Mulgathing         24.45 166  P     P       14 33 32.1 +1.1
STKA  Stephens Creek     28.50 154  P     P       14 34 07.7 +0.9
      2.2nm,0.6s,baz=341,slow=6.8,SNR=7.0
      2.2nm,0.6s
STKA  Stephens Creek     28.50 154  P     P       14 34 08.0 +1.1
PSI   Prapat             29.89 287  P     P       14 34 18.5 -0.9
      3.3nm,0.5s,baz=132,slow=4.0,SNR=5.3
      3.3nm,0.5s
ARPS  Mount Arapiles     32.87 158  P     P       14 34 46.4 +1.7
CMAR  Chiang Mai Arr     37.46 312  P     P       14 35 23.6 -0.1
      0.4nm,0.3s,baz=142,slow=7.7,SNR=1.4
      0.4nm,0.3s
MJAR  Matsushiro Arr     44.03  13  P     P       14 36 15.4 -0.9
      0.8nm,0.5s,baz=175,slow=9.0,SNR=4.7
      0.8nm,0.5s
MKAR  Makanchi Array     66.43 328  P     P       14 38 54.6 +0.7
      0.7nm,0.5s,baz=122,slow=7.2,SNR=6.2
      0.7nm,0.5s
ZALV  Zalesovo Beam      70.03 335  P     P       14 39 15.2 -0.6
      0.7nm,0.4s,baz=144,slow=6.9,SNR=3.6
      0.7nm,0.4s
```

IDC 14 14:38:49.4±1.5, **27°.30N**×**141°.03E**, **h0**km, **mb3.9**/3, **mbtmp3.9**/3, **MS2.8**/3, **Error ellipse: s-maj=34.0km s-min=20.1km az=6.0**, **Bonin Islands region**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
JCJ   Chichijima          1.05 101  Pn    Pn      14 39 11.6 +0.2
      16nm,0.3s,baz=356,slow=15,SNR=36
JCJ                                 Sn    Sn      14 39 27.3 +0.5
      77nm,0.3s,baz=127,slow=24,SNR=8.9
JOW   Kunigami           11.37 271  LR    LR      14 45 28.8
      comp=Z,49nm,18.3s,baz=200,slow=35
KSRS  Korea Array        14.98 316  LR    LR      14 47 24.2
      comp=Z,33nm,19.1s,baz=130,slow=34
SONM  Songino Array      33.85 317  P     P       14 45 33.6 -0.1
      0.2nm,0.3s,baz=123,slow=10,SNR=2.2
      0.2nm,0.3s
YAK   Yakutsk            35.54 351  LR    LR      15 00 01.0
      comp=Z,12nm,19.2s,baz=180,slow=36
WRA   Warramunga Arr     47.41 189  P     P       14 47 25.6 -0.1
      7.6nm,1.0s,baz=8.8,slow=8.3,SNR=45
      7.6nm,1.0s
ASAR  Alice Springs      51.14 188  P     P       14 47 54.0 -0.2
      0.8nm,0.8s,baz=3.3,slow=5.1,SNR=9.3
      0.8nm,0.8s
```

WEL 14 15:22:42.1±0.9, **40°S**±4°×**17°3E**±°, **h165**km±7km, **M3.5**/33, **MLv3.5**/33, **Error ellipse: s-maj=0.0km s-min=0.0km az=107.8**, **Cook Strait**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time     Res
                                    Op    ISC      h  m  s    ISC
DUWZ  D'Urville Isla      0.64 145  P     Pn      15 23 06.7 +0.8
DUWZ                                S     Sn      15 23 24.7 +0.5
TKNZ  Takaka Hill         0.84 206  P     Pn      15 23 07.5 +0.4
QRZ   Quartz Range        0.88 232  P     Pn      15 23 07.8 +0.4
QRZ                                 S     Sn      15 23 27.0 +0.1
NMEZ  Namu Road           0.93  21  P     Pn      15 23 08.1 +0.3
NMEZ                                S     Sn      15 23 28.8 +1.5
NNZ   Nelson              0.94 183  P     Pn      15 23 08.2 +0.5
NNZ                                 S     Sn      15 23 27.7  0.0
NBEZ  Newall Road No      1.06  18  P     Pn      15 23 09.0 +0.2
KHEZ  Kahui Hut           1.08  24  P     Pn      15 23 09.3 +0.2
PREZ  Palmer Road         1.09  31  P     Pn      15 23 09.2 +0.2
PREZ                                S     Sn      15 23 30.8 +1.0
LREZ  Lake Rotokare       1.10  42  P     Pn      15 23 09.6 +0.4
LREZ                                S     Sn      15 23 30.9 +1.0
NEZ   North Egmont        1.13  27  P     Pn      15 23 09.4 -0.1
TCW   Tory Channel        1.13 146  P     Pn      15 23 10.3 +1.0
PKE   Pukeiti             1.16  21  P     Pn      15 23 09.8 +0.1
TUWZ  Tuamarina           1.21 162  P     Pn      15 23 10.6 +0.5
MRNZ  Matariki Terra      1.23 205  P     Pn      15 23 10.5 +0.2
DREZ  Durham Road         1.24  29  P     Pn      15 23 10.5 +0.1
DREZ                                S     Sn      15 23 32.7 +0.7
KIW   Kapiti Island       1.26 118  P     Pn      15 23 10.8 +0.3
WAZ   Wanganui            1.30  67  P     Pn      15 23 11.5 +0.7
MHEZ  Mangahewa           1.38  30  P     Pn      15 23 11.9 +0.2
WEL   Wellington          1.42 135  P     Pn      15 23 12.5 +0.5
OGWZ  Otaki Gorge         1.42 113  P     Pn      15 23 12.4 +0.4
OHWZ  Ohakea              1.44  88  P     Pn      15 23 12.8 +0.6
BSWZ  Blackbirch Sta      1.47 167  P     Pn      15 23 13.1 +0.6
CAW   Cannon Point        1.49 124  P     Pn      15 23 13.0 +0.3
THZ   Tophouse            1.54 195  P     Pn      15 23 13.3 +0.1
VRZ   Vera Road           1.54  42  P     Pn      15 23 12.6 -0.6
BHW   Baring Head         1.57 137  P     Pn      15 23 13.5 +0.1
CMWZ  Cape Campbell       1.58 159  P     Pn      15 23 14.7 +1.1
MRZ   Mangatainoka R      1.68 104  P     Pn      15 23 14.7 +0.1
HOWZ  Holdsworth Sta      1.70 112  P     Pn      15 23 14.9  0.0
PKVZ  Pokaka              1.77  57  P     Pn      15 23 15.1 -0.6
MSWZ  Moikau Station      1.78 130  P     Pn      15 23 15.7  0.0
MTW   Mount Morrison      1.80 120  P     Pn      15 23 15.9  0.0
MTVZ  Mangateitei         1.80  61  P     Pn      15 23 15.5 -0.5
PLWZ  Palliser            1.89 134  P     Pn      15 23 16.7 -0.2
TRVZ  Turoa               1.90  60  P     Pn      15 23 16.4 -0.8
WNVZ  Wahianoa            1.92  61  P     Pn      15 23 16.7 -0.7
DSZ   Denniston Nort      1.92 220  P     Pn      15 23 17.1 -0.2
DRZ   Dome Shelter        1.92  59  P     Pn      15 23 17.3 -0.3
FWVZ  Far West T-bar      1.92  59  P     Pn      15 23 16.7 -0.9
TIWZ  Tintock             1.93 106  P     Pn      15 23 17.4  0.0
WHVZ  Whangaehu Hut       1.93  60  P     Pn      15 23 17.0 -0.7
TSZ   Takapari Road       1.94  84  P     Pn      15 23 17.1 -0.4
PRWZ  Pori Road           1.95  99  P     Pn      15 23 17.7 +0.2
TWVZ  Taurewa             1.96  53  P     Pn      15 23 16.7 -1.1
MOVZ  Moawhango           1.98  65  P     Pn      15 23 16.9 -1.1
TUVZ  Tukino              1.98  60  P     Pn      15 23 17.5 -0.7
NGZ   Ngauruhoe           2.00  57  P     Pn      15 23 17.4 -0.9
SNVZ  South Ngauruho      2.02  58  P     Pn      15 23 17.9 -0.7
WTVZ  West Tongariro      2.02  56  P     Pn      15 23 17.7 -0.9
NNVZ  North Ngauruho      2.03  56  P     Pn      15 23 17.8 -0.9
TMWZ  Te Maipa            2.04 115  P     Pn      15 23 18.4 -0.2
TRWZ  Traveller           2.04 124  P     Pn      15 23 18.4 -0.2
OTVZ  Oturere             2.05  58  P     Pn      15 23 18.2 -0.7
HIZ   Hauiti              2.08  32  P     Pn      15 23 18.0 -1.1
NTVZ  North Tongarir      2.09  56  P     Pn      15 23 18.4 -0.9
ETVZ  East Tongariro      2.09  58  P     Pn      15 23 18.6 -0.7
TMVZ  Te Maari            2.10  57  P     Pn      15 23 18.7 -0.7
KHZ   Kahutara            2.14 178  P     Pn      15 23 19.5 -0.2
PNHZ  Pukenui             2.15  81  P     Pn      15 23 19.3 -0.6
BHHZ  Black Hill Sta      2.17  70  P     Pn      15 23 18.7 -1.4
KATZ  Kakaramea           2.17  54  P     Pn      15 23 19.3 -1.0
BFZ   Birch Farm          2.18 102  P     Pn      15 23 19.9 -0.2
CPWZ  Castlepoint         2.19 108  P     Pn      15 23 20.8 +0.5
RITZ  Rihia Road          2.27  56  P     Pn      15 23 20.7 -0.6
RATZ  Rangitukua          2.29  53  P     Pn      15 23 20.9 -0.6
WPHZ  Waipukurau          2.31  86  P     Pn      15 23 21.2 -0.5
ANWZ  Angora Road         2.33  95  P     Pn      15 23 21.6 -0.3
KRHZ  Kereru              2.34  75  P     Pn      15 23 21.1 -1.0
WATZ  Wairara             2.37  49  P     Pn      15 23 21.6 -0.9
PRHZ  Porangahau          2.44  91  P     Pn      15 23 22.8 -0.5
TLZ   Tolley Road         2.54  41  P     Pn      15 23 22.8 -1.7
KUTZ  Kaahu Road          2.57  47  P     Pn      15 23 23.9 -1.0
BKZ   Black Stump Fm      2.60  66  P     Pn      15 23 23.6 -1.6
PXZ   Pawanui             2.63  86  P     Pn      15 23 24.8 -0.8
MCHZ  McNeill Hill        2.64  73  P     Pn      15 23 25.0 -0.7
LTZ   Lake Taylor         2.65 199  P     Pn      15 23 24.9 -0.9
KAHZ  Kahuranaki          2.68  81  P     Pn      15 23 25.3 -0.9
GVZ   Greta Valley S      2.70 186  P     Pn      15 23 25.5 -0.9
MRHZ  Matea Rd            2.72  59  P     Pn      15 23 24.5 -2.1
WPRZ  Whakapapatarin      2.75  51  P     Pn      15 23 25.4 -1.6
ALRZ  Allen Road          2.83  54  P     Pn      15 23 26.0 -2.0
GRRZ  Galatos Road        2.83  48  P     Pn      15 23 26.7 -1.3
NMHZ  Naumai              2.85  67  P     Pn      15 23 27.9 -0.4
CKHZ  Cape Kidnapper      2.86  79  P     Pn      15 23 27.3 -1.0
INZ   Inchbonnie          2.87 211  P     Pn      15 23 27.4 -1.0
HSRZ  Hossack Road        2.93  49  P     Pn      15 23 27.8 -1.4
AMCZ  Amberley            2.96 191  P     Pn      15 23 28.4 -1.0
UTU   Utuhina             3.00  46  P     Pn      15 23 29.1 -1.0
TOZ   Tahuroa Road        3.01  33  P     Pn      15 23 28.4 -1.8
NGRZ  Ngongotaha          3.05  45  P     Pn      15 23 29.5 -1.2
RRRZ  Republican Roa      3.07  52  P     Pn      15 23 29.0 -2.0
RAHZ  Arahi               3.13  65  P     Pn      15 23 30.3 -1.4
KARZ  Kaharoa             3.14  45  P     Pn      15 23 30.7 -1.2
MUGZ  Murupara            3.15  56  P     Pn      15 23 29.4 -2.5
RTZ   Ruatahuna           3.21  60  P     Pn      15 23 30.0 -2.7
OXZ   Oxford              3.22 199  P     Pn      15 23 30.8 -2.0
AWAZ  Awhitu Peninsu      3.34  17  P     Pn      15 23 33.9 -0.5
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TGRZ	Tauranga	3.36	42	P	Pn	15 23 33.0	-1.6
SNGZ	Shannon Statio	3.37	65	P	Pn	15 23 32.7	-1.9
MKAZ	Moumakai	3.44	24	P	Pn	15 23 34.7	-0.9
WVZ	Waitaha Valley	3.45	215	P	Pn	15 23 34.0	-1.7
OKCZ	Okains Bay	3.45	185	P	Pn	15 23 33.7	-2.0
MQZ	McQueen's Vall	3.48	189	P	Pn	15 23 33.3	-2.6
URZ	Urewera	3.49	56	P	Pn	15 23 33.2	-3.0
KNZ	Kokohu	3.50	70	P	Pn	15 23 34.2	-2.2
ETAZ	East Tamaki Re	3.52	20	P	Pn	15 23 35.9	-0.8
RACZ	Rakaia	3.58	195	P	Pn	15 23 35.4	-1.9
AKCZ	Akaroa Harbour	3.61	186	P	Pn	15 23 35.4	-2.4
RVAZ	Riverhead Bore	3.62	15	P	Pn	15 23 37.2	-0.7
MBAZ	Motutapu North	3.69	19	P	Pn	15 23 38.1	-0.7
PRGZ	Paritu Road	3.69	70	P	Pn	15 23 36.6	-2.2
RIGZ	Rimuhau	3.69	66	P	Pn	15 23 36.4	-2.4
MWZ	Matawai	3.72	60	P	Pn	15 23 36.2	-3.0
WIAZ	Waiheke Island	3.73	21	P	Pn	15 23 38.7	-0.6
WACZ	Wakanui South	3.85	197	P	Pn	15 23 38.9	-1.8
RPZ	Rata Peaks	3.87	207	P	Pn	15 23 38.9	-2.1
TKGZ	Te Karaka	3.88	63	P	Pn	15 23 38.7	-2.5
KUZ	Kuaotunu	3.96	28	P	Pn	15 23 40.8	-1.4
RUGZ	Raukumara Rang	4.02	56	P	Pn	15 23 39.5	-3.7
ARCZ	Arundel	4.03	204	P	Pn	15 23 40.5	-2.7
HAZ	Te Kaha	4.22	55	P	Pn	15 23 41.5	-4.0
FOZ	Fox Glacier	4.23	219	P	Pn	15 23 43.2	-2.4
PUZ	Puketiti	4.34	61	P	Pn	15 23 43.8	-3.5
TMZ	Timaru	4.48	203	P	Pn	15 23 46.7	-2.2
MXZ	Matakaoa Point	4.66	56	P	Pn	15 23 48.1	-3.3
LBZ	Lake Benmore	4.76	209	P	Pn	15 23 49.9	-2.7
OUZ	Omahuta	5.05	1	P	Pn	15 23 55.8	-0.7
ODZ	Otahua Downs	5.19	202	P	Pn	15 23 55.8	-2.4
WKZ	Wanaka	5.60	214	P	Pn	15 23 59.8	-3.8
WHZ	Wether Hill Ro	6.90	214	P	Pn	15 24 17.1	-3.7

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*NEIC **14** 15:51:07.9±1.7, 51°.7N±0°.1×179°.76W±0°.09, h74km±7km, mb4.5/150, ML4.4(AEIC), Error ellipse: s-maj=20.9km s-min=8.0km az=177.0*

*AEIC **14** 15:51:07±1.7, 51°.7N±0°.2×179°.75W±0°.09, h73km±5km, Error ellipse: s-maj=21.9km s-min=7.9km az=179.0*

*IDC **14** 15:51:08.3±1.5, 51°.80N×179°.98W, h87km±12km, mb3.7/25, mbtmp4.1/27, MS2.7/7, Error ellipse: s-maj=19.5km s-min=8.9km az=176.0*

ISC 14 15:51:06.4±0.6**, 51°.6N**±0°.1×**179°.84W**±0°.03**, h74**km**, n397,** σ**1s.25**/397**, mb4.5**/79**, 2C, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GASW	Gareloi Southw	0.64	73		Pn	15 51 21.1	+0.2
GALAA	Gareloi Lava P	0.69	76		Pn	15 51 21.8	+0.4
GAEA	Gareloi East	0.70	74		Pn	15 51 22.0	+0.4
TASE	Tanaga Southea	1.15	77		Pn	15 51 27.4	+0.5
TAFP	Tanaga Falls P	1.19	75		Pn	15 51 27.8	+0.3
TAFP					Sn	15 51 43.1	-0.2
TAPA	Tanaga Point A	1.28	79		Pn	15 51 29.0	+0.4
KIMD	Kanaga Island	1.63	83		Pn	15 51 33.4	+0.3
KIMD					Sn	15 51 53.9	+0.5
KICM	Kanaga Island	1.68	78		Pn	15 51 34.4	+0.7
KIKV	Kanaga Island	1.68	79		Pn	15 51 34.4	+0.5
KIWB	Kanaga Island	1.69	80		Sn	15 51 55.9	+1.1
KIWB	Kanaga Island	1.69	80		Pn	15 51 34.8	+0.8
ADK	Adak	1.98	81	Pn	Pn	15 51 38.1	+0.3
ADK	Adak	1.98	81		Sn	15 52 02.0	+0.3
GSCK	Great Sitkin C	2.32	78		Pn	15 51 42.9	+0.5
GSTD	Great Sitkin T	2.34	77		Pn	15 51 43.1	+0.4
GSTD					Sn	15 52 10.8	+0.3
GSMY	Great Sitkin M	2.39	78		Pn	15 51 43.9	+0.6
GSTR	Great Sitkin T	2.40	77		Pn	15 51 44.2	+0.7
ATKA	Atka Island	3.55	78		Pn	15 51 59.7	+0.7
ATKA					Sn	15 52 40.3	+0.5
KOKL	Mount Kliuchef	3.56	76		Pn	15 52 00.0	+0.7
KOFP	Korovin Flat P	3.62	77		Pn	15 52 01.2	+1.2
SHEM	Shemya Is, Ala	3.90	289	P	Pn	15 52 05.5	+1.8
	38nm,0.4s,baz=64,slow=2.7,SNR=15						
SHEM				LR	LR	15 52 41.8	
	comp=Z,13nm,21.1s,baz=112,slow=25						
SHEM				S	Sn	15 52 47.3	-1.0
	46nm,0.3s,baz=95,slow=19,SNR=1.7						
SMY	Shemya	3.90	289	Pn	Pn	15 52 06.2	+2.5
SMY	Shemya	3.90	289		Sn	15 52 51.3	+3.1
NIKH	Nikolski High	6.88	74	Pn	Pn	15 52 46.6	+2.2
NIKH	Nikolski High	6.88	74	P	Pn	15 52 46.7	+2.3
	baz=264						
OKFG	Magazine Ridge	7.50	71		Pn	15 52 55.8	+2.8
SPIA	Saint Paul Isl	7.91	41	Pn	Pn	15 53 01.9	+3.5
SPIA	Saint Paul Isl	7.91	41	P	Pn	15 53 01.9	+3.5
	baz=229						
MSW	Makushin Switc	8.26	69		Pn	15 53 04.7	+1.5
UNV	Unalaska Valle	8.40	69	Pn	Pn	15 53 07.1	+1.9
UNV	Unalaska Valle	8.40	69	P	Pn	15 53 07.3	+2.1
	baz=260,SNR=6.3						
FALS	False Pass	10.37	65	Pn	Pn	15 53 31.1	-1.0
FALS	False Pass	10.37	65	P	Pn	15 53 34.9	+2.8
	baz=259						
SDPT	Sand Point	12.12	64	P	Pn	15 53 55.4	-0.5
	baz=260						
CHNA	Chernabura Isl	12.55	67	P	Pn	15 54 00.6	-1.1
	baz=264						
GAMB	Gambell	12.95	16	P	Pn	15 54 10.4	+3.5
	baz=203						
PETK	Petropavlovsk-	13.80	285	P	Pn	15 54 19.6	+1.2
	1.1nm,0.8s,baz=101,slow=17,SNR=1.3						
PETK				S	Sn	15 56 47.0	-2.9
	1.3nm,0.8s,baz=96,slow=39,SNR=1.5						
CHIR	Chirikof Islan	14.92	64	P	Pn	15 54 31.1	-1.8
	baz=264						
TNA	Tin City	15.27	19		Pn	15 54 38.2	+0.9
SII	Sitkinak Islan	15.80	62		Pn	15 54 42.1	-2.1
SII				IAmb	IAmb	15 54 47.4	
	comp=Z,33nm,0.6s						
SII	Sitkinak Islan	15.80	62	P	Pn	15 54 42.9	-1.4
	baz=263,SNR=6.1						
P18K	Big Mountain,	15.90	51	P	P	15 54 47.5	-0.3
	baz=252						
N18K	Kilae Creek	16.06	46	P	P	15 54 50.2	+0.7
	baz=246,SNR=7.1						
O18K	Koktuh Hills	16.07	49		Pn	15 54 46.4	-1.1
O18K				IAmb	IAmb	15 54 53.1	
	comp=Z,24nm,0.9s						
O18K	Koktuh Hills	16.07	49	P	P	15 54 49.7	+0.2
	baz=250,SNR=20						
SVW2	Sparrevohn	16.37	45	P	P	15 54 54.0	+1.2
OHAK	Old Harbor	16.39	60	Pn	Pn	15 54 49.2	-2.3
OHAK	Old Harbor	16.39	60	P	Pn	15 54 51.2	-0.2
	baz=261,SNR=21						
Q19K	Cape Douglas,	16.55	53	P	P	15 54 55.3	+0.4
Q19K				IAmb	IAmb	15 55 02.9	
	comp=Z,22nm,0.5s						
Q19K	Cape Douglas,	16.55	53	P	P	15 54 55.3	+0.4
	baz=255,SNR=8.3						
O19K	Port Alsworth	16.60	49	P	P	15 54 58.3	+2.9
	baz=250						
N19K	Bonanza Creek	16.75	47	P	P	15 54 59.2	+2.0
	baz=248,SNR=12						
KDAK	Kodiak Island	16.85	58	P	Pn	15 54 54.9	-2.3
	comp=Z,17nm,0.4s,baz=245,slow=3.2,SNR=64						
KDAK				S	Sn	15 57 57.9	-5.7
	comp=Z,1.3nm,0.3s,baz=239,slow=23,SNR=6.3						
KDAK	Kodiak Island	16.85	58		Pn	15 54 55.1	-2.1
KDAK				IAmb	IAmb	15 54 58.4	
	comp=Z,16nm,0.5s						
KDAK	Kodiak Island	16.85	58	P	Pn	15 54 55.1	-2.1
	baz=260						
P19K	Oil Pt	16.95	51	P	P	15 55 00.8	+1.5
P19K	Oil Pt	16.95	51	P	P	15 55 00.4	+1.1
	baz=254						
TTA	Tatalina	17.04	39	P	P	15 55 01.8	+1.4
TTA	Tatalina	17.04	39	P	P	15 55 02.4	+2.1
	baz=239,SNR=17						
L19K	White Mountain	17.15	42	P	P	15 55 03.5	+2.0
L19K	White Mountain	17.15	42	P	P	15 55 03.8	+2.3
	baz=243,SNR=13						
M19K	Big River Lodg	17.23	43	P	P	15 55 04.7	+2.4
	baz=245,SNR=6.8						
O20K	Slope Mountain	17.37	50	P	P	15 55 06.5	+2.6
	baz=253,SNR=9.0						
RSO	Redoubt South	17.43	49	P	P	15 55 06.5	+1.8
L20K	Farewell, AK	17.69	42	P	P	15 55 09.9	+2.4
	baz=244,SNR=9.6						
CNPM	China Poot	17.90	53	P	P	15 55 08.5	-1.2
SPCR	Spurr Chakacha	17.92	47	P	Pn	15 55 13.0	+2.7
	baz=250,SNR=5.9						
K20K	Telida	18.02	39	P	Pn	15 55 12.2	+0.7
K20K	Telida	18.02	39	P	Pn	15 55 13.1	+1.6
	baz=241,SNR=7.1						
BRLK	Bradley Lake	18.13	52	P	P	15 55 12.4	+0.1
BRSE	Bradley Lake S	18.19	52	P	Pn	15 55 14.5	+0.9
	baz=256,SNR=8.1						
MA2	Magadan	18.30	307	LR	LR	16 03 04.7	
	comp=Z,17nm,18.8s,baz=98,slow=40						
J20K	Nowinta River	18.40	37	P	Pn	15 55 17.0	+0.9
J20K				IAmb	IAmb	15 55 20.5	
	comp=Z,14nm,0.7s						
J20K	Nowinta River	18.40	37	P	Pn	15 55 17.3	+1.2
	baz=239,SNR=21						
PPLA	Purkeypile	18.58	42		Pn	15 55 19.5	+1.2
PPLA				IAmb	IAmb	15 55 26.2	
	comp=Z,12nm,0.5s						
PPLA	Purkeypile	18.58	42	P	Pn	15 55 19.8	+1.5
	baz=245						
CAST	Castle Rocks	18.84	40	P	Pn	15 55 22.2	+0.9
CAST				IAmb	IAmb	15 55 24.4	
	comp=Z,12nm,0.6s						
CAST	Castle Rocks	18.84	40	P	Pn	15 55 22.3	+0.9
	baz=244,SNR=29						
O22K	Cooper Landing	18.87	50	P	P	15 55 21.1	+0.8
O22K	Cooper Landing	18.87	50	P	Pn	15 55 23.2	+1.6
	baz=256,SNR=13						
SEW	Seward	18.91	51	P	P	15 55 21.4	+0.7
SEW	Seward	18.91	51	P	P	15 55 21.8	+1.0
	baz=257,SNR=8.8						
CHUM	Lake Minchumin	18.96	39	P	Pn	15 55 23.8	+1.1
	baz=242						
CUT	Chulitna	19.21	44	P	P	15 55 24.3	+0.4
CUT				IAmb	IAmb	15 55 29.4	
	comp=Z,21nm,0.5s						
CUT	Chulitna	19.21	44	P	P	15 55 24.9	+1.0
	baz=249						
IMAR	Indian Mountai	19.53	33	P	Pn	15 55 28.9	-0.6
BPAW	Bear Paw Mtn.	19.58	39	P	Pn	15 55 30.2	+0.1
	baz=244,SNR=26						
TRF	Thorofare Moun	19.59	41	P	P	15 55 28.2	-0.1
TRF	Thorofare Moun	19.59	41	P	Pn	15 55 30.0	-0.4
	baz=247,SNR=11						
H21K	Melozitna Rive	19.67	34	P	Pn	15 55 31.4	+0.2
H21K	Melozitna Rive	19.67	34	P	Pn	15 55 31.6	+0.4
	baz=237,SNR=14						
KNK	Knik Glacier	19.71	48	P	P	15 55 29.7	+0.2
	baz=254						
I21K	Tanana	19.72	36	P	P	15 55 30.9	+1.4
I21K				IAmb	IAmb	15 55 32.7	
	comp=Z,9.3nm,0.7s						
I21K	Tanana	19.72	36	P	Pn	15 55 32.2	+0.6
	baz=240,SNR=10.0						
SML	Sawmill	19.88	47	P	P	15 55 31.5	+0.1
SML				IAmb	IAmb	15 55 38.5	
	comp=Z,9.7nm,0.6s						
SML	Sawmill	19.88	47	P	P	15 55 31.3	-0.1
	baz=254						
WAT1	Susitna Watana	20.10	44	P	Pn	15 55 35.6	-0.6
	baz=251						
M23K	Glacier View	20.15	47	P	P	15 55 34.1	-0.1
	baz=254,SNR=12						
RND	Reindeer	20.17	42	P	P	15 55 35.8	+1.3
BWN	Browne	20.22	40	P	P	15 55 35.0	+0.1
BWN				IAmb	IAmb	15 55 49.0	
	comp=Z,17nm,1.0s						
GLI	Glacier Island	20.22	50	P	P	15 55 34.0	-1.0
GLI				IAmb	IAmb	15 55 37.6	
	comp=Z,13nm,0.6s						
GLI	Glacier Island	20.22	50	P	Pn	15 55 37.1	-0.4
	baz=258,SNR=5.2						
MCK	McKinley	20.26	41	P	Pn	15 55 37.3	-0.8
	baz=248						
SCM	Sheep Creek Mo	20.34	47	P	P	15 55 36.2	-0.1
SCM				IAmb	IAmb	15 55 38.2	
	comp=Z,18nm,0.6s						
SCM	Sheep Creek Mo	20.34	47	P	P	15 55 36.3	-0.1
	baz=255,SNR=19						
WAT6	Susitna Watana	20.37	45	P	P	15 55 36.7	-0.1
	baz=252,SNR=25						
FID	Port Fidalgo	20.49	50	P	P	15 55 36.9	-1.0
FID				IAmb	IAmb	15 55 42.9	
	comp=Z,13nm,0.6s						
NEA2	Nenana	20.55	39	P	P	15 55 39.3	+0.8
NEA2				IAmb	IAmb	15 55 41.6	
	comp=Z,17nm,0.6s						
NEA2	Nenana	20.55	39	P	P	15 55 39.6	+1.1
	baz=245,SNR=25						
I23K	Minto, Yukon-K	20.68	37	P	P	15 55 41.1	+1.2
I23K	Minto, Yukon-K	20.68	37	P	P	15 55 41.1	+1.2
	baz=244						
DHY	Denali Highway	20.69	44	P	P	15 55 40.8	+0.6
DHY				IAmb	IAmb	15 55 44.6	
	comp=Z,25nm,0.6s						
DHY	Denali Highway	20.69	44	P	P	15 55 40.8	+0.6
	baz=252,SNR=39						
EYAK	Cordova Ski Ar	20.80	51	P	P	15 55 41.7	+0.4
	baz=260						
WRH	Wood River Hil	20.89	40	P	P	15 55 41.7	-0.5
KLU	Klutina	20.91	49	P	P	15 55 42.5	0.0
KLU	Klutina	20.91	49	P	P	15 55 42.9	+0.4
	baz=257,SNR=8.1						
H23K	Yukon River	20.92	36	P	P	15 55 42.6	+0.1
H23K	Yukon River	20.92	36	P	P	15 55 44.2	+1.6
	baz=242						
M24K	Tolsona, Glenn	20.94	47	P	P	15 55 42.5	-0.3
M24K				IAmb	IAmb	15 55 46.5	
	comp=Z,15nm,0.5s						
M24K	Tolsona, Glenn	20.94	47	P	P	15 55 43.5	+0.7
	baz=255,SNR=11						
MDM	Murphy Dome	21.03	38	P	P	15 55 44.0	+0.3
MDM				IAmb	IAmb	15 55 45.9	
	comp=Z,8.2nm,0.6s						
CCB	Clear Creek Bu	21.07	39	P	P	15 55 43.5	-0.6
HDA	Harding Lake	21.32	40	P	P	15 55 47.6	+0.8
HDA				IAmb	IAmb	15 55 50.4	
	comp=Z,7.4nm,0.6s						
HDA	Harding Lake	21.32	40	P	P	15 55 47.3	+0.5
	baz=249,SNR=12						
POKR	Poker Plat Res	21.40	38	P	P	15 55 47.8	+0.1
POKR				IAmb	IAmb	15 55 51.1	
	comp=Z,7.6nm,0.6s						
POKR	Poker Plat Res	21.40	38	P	P	15 55 49.1	+1.4
	baz=246,SNR=5.6						
COLD	Coldfoot	21.40	32	P	P	15 55 48.9	+1.2
COLD	Coldfoot	21.40	32	P	P	15 55 49.3	+1.7
	baz=238						
BMRM	Bremner River	21.43	50	P	P	15 55 48.6	+0.6
BMRM	Bremner River	21.43	50	P	P	15 55 48.7	+0.6
	baz=260						
HARP	HAARP	21.48	46	P	P	15 55 49.2	+0.7
	baz=256,SNR=7.5						
IL31		21.48	40	P	P	15 55 48.5	0.0
ILAR	Eielson Array	21.48	40	P	P	15 55 46.6	-1.9
	comp=Z,1.7nm,0.4s,baz=244,slow=9.5,SNR=35						
ILAR				ScP	ScP	16 03 16.4	-2.1
	comp=Z,0.7nm,0.7s,baz=283,slow=3.6,SNR=5.8						
	comp=Z,1.7nm,0.4s						
ILAR	Eielson Array	21.48	40	P	P	15 55 49.0	+0.5
PAX	Paxson	21.48	45	P	P	15 55 48.5	-0.2
PAX	Paxson	21.48	45	P	P	15 55 49.4	+0.7
	baz=254,SNR=7.3						
H24K	Noodor Dome	21.54	36	P	P	15 55 50.3	+1.1
H24K				IAmb	IAmb	15 55 54.3	
	comp=Z,9.5nm,0.8s						
H24K	Noodor Dome	21.54	36	P	P	15 55 50.5	+1.3
	baz=244,SNR=18						
N25K	Chitina, Valde	21.55	49	P	P	15 55 48.9	-0.5
N25K	Chitina, Valde	21.55	49	P	P	15 55 49.7	+0.3
	baz=258,SNR=12						
K24K	Donnelly Dome	21.60	42	P	P	15 55 49.5	-0.3
	baz=252						
GLB	Gilahina Butte	21.89	49	P	P	15 55 53.9	+0.9
J25K	Salcha River,	22.04	41	P	P	15 55 54.0	-0.5
	baz=250						
MENT	Mentasta	22.25	45	P	P	15 55 56.7	-0.1
DOT	Dot Lake	22.28	43	P	P	15 55 57.4	+0.2
TOLK	Toolik Lake Re	22.38	29	P	P	15 55 59.2	+1.0
	baz=236,SNR=12						
A21K	Barrow	22.39	19	P	P	15 55 59.0	+0.9
	baz=220						
L26K	Log Cabin Wild	22.44	45	P	P	15 55 58.7	-0.1
L26K				IAmb	IAmb	15 56 02.4	
	comp=Z,7.1nm,0.7s						
L26K	Log Cabin Wild	22.44	45	P	P	15 56 00.0	+1.3
	baz=256,SNR=7.4						
M26K	Nabesna, AK	22.46	47	P	P	15 55 57.8	-1.2
M26K	Nabesna, AK	22.46	47	P	P	15 55 58.8	-0.2
	baz=258,SNR=5.9						
J26L	Joseph Creek	22.74	41	P	P	15 56 00.8	-1.2
	baz=253,SNR=27						
BARN	Barnard Glacie	22.86	51	P	P	15 56 03.2	-0.3
M27K	Edge Creek, AK	22.96	47	P	P	15 56 04.4	+0.1
	baz=260						
CTG	Chitna Glacier	23.01	51	P	P	15 56 04.7	-0.1
	baz=264						
TABL	Table Mountain	23.05	52	P	P	15 56 05.1	-0.3
TABL				IAmb	IAmb	15 56 07.4	
	comp=Z,5.7nm,0.5s						
L27K	Beaver Creek,	23.12	46	P	P	15 56 06.0	+0.2
L27K	Beaver Creek,	23.12	46	P	P	15 56 06.2	+0.4
	baz=258,SNR=10						
BCAR	Beaver Creek A	23.14	46	P	P	15 56 06.2	+0.2
LOGN	Logan Glacier	23.16	51	P	P	15 56 05.6	-0.7
LOGN				IAmb	IAmb	15 56 07.5	
	comp=Z,5.2nm,0.5s						
K27K	Chicken	23.23	43	P	P	15 56 07.2	+0.4
	baz=256						
BMAR	Burnt Mountain	23.41	34	P	P	15 56 09.3	+0.8
BVCY	Beaver Creek	23.44	47	P	P	15 56 09.2	+0.4
	baz=261,SNR=11						
PCA	Pinnacle	23.46	53	P	P	15 56 07.3	-1.8
PINM	Pinnacle	23.47	53	P	P	15 56 07.8	-1.3
	baz=267						
YUK3	Moose Creek	23.53	49	P	P	15 56 09.3	-0.5
	baz=262,SNR=33						
EGAK	Eagle	23.81	42	P	P	15 56 12.5	+0.5
EGAK				IAmb	IAmb	15 56 14.6	
	comp=Z,13nm,0.6s						
EGAK	Eagle	23.81	42	P	P	15 56 12.5	+0.5
	baz=255,SNR=25						
PNL	Peninsula	23.88	54	P	P	15 56 12.2	-0.5
	baz=268						
YUK4	Talbot Arm	24.34	50	P	P	15 56 17.3	+0.2
	baz=265,SNR=13						
DAWY	Dawson	24.39	44	P	P	15 56 17.6	+0.3
	baz=258						
YUK6	Outpost Mounta	24.45	51	P	P	15 56 17.3	-0.9
	baz=266						
HYT	Haines Junctio	24.86	52	P	P	15 56 21.6	-0.2
	baz=268,SNR=5.6						
N30M	Aishikik Lake	25.10	50	P	P	15 56 24.9	+1.0
	baz=266,SNR=9.0						
I29M	Ogilvie Camp,	25.13	41	P	P	15 56 23.9	-0.1
	baz=257,SNR=8.7						
M30M	Minto, Yukon	25.33	48	P	P	15 56 27.9	+2.1
	baz=264,SNR=12						
EPYK	Eagle Plains	25.99	39	P	P	15 56 31.7	-0.1
	baz=257						
ASAJ	Asahikawa	26.06	268	P	P	15 56 32.1	-0.5
	comp=Z,1.6nm,0.8s,baz=8.5,slow=10,SNR=2.0						
	comp=Z,1.6nm,0.8s						
M31M	Drury Creek, Y	26.42	49	P	P	15 56 38.8	+3.0
	baz=268,SNR=6.0						
INK	Inuvik	27.65	35	P	P	15 56 46.4	-0.2
	comp=Z,1.2nm,0.3s,baz=236,slow=9.1,SNR=26						
INK				ScP	ScP	16 03 34.1	-1.4
	comp=Z,2.1nm,1.2s,baz=226,slow=3.9,SNR=3.8						
INK				LR	LR	16 07 45.4	
	comp=Z,24nm,21.9s,baz=220,slow=36						
	comp=Z,1.2nm,0.3s						
INK	Inuvik	27.65	35	P	P	15 56 46.7	+0.1
INK	Inuvik	27.65	35	P	P	15 56 47.3	+0.7
	baz=256						
DLBC	Dease Lake	28.78	57	LR	LR	16 08 15.0	
	comp=Z,51nm,18.6s,baz=270,slow=36						
KLR	Kul'dur	30.49	285	LR	LR	16 08 14.4	
	comp=Z,13nm,20.1s,baz=116,slow=34						
A36M	Sachs Harbour	31.21	29	P	P	15 57 19.9	+1.9
A36M				IAmb	IAmb	15 57 20.6	
	comp=Z,12nm,0.9s						
A36M	Sachs Harbour	31.21	29	P	P	15 57 19.7	+1.7
	baz=259,SNR=5.5						
C36M	Paulatuk	31.21	34	P	P	15 57 18.5	+0.5
H11N2	WAKE ISLAND Hy	33.47	203	T	T	16 33 20.4	
	baz=18,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	33.48	203	T	T	16 33 18.9	
	baz=18,slow=76,SNR=42						
H11N1	WAKE ISLAND Hy	33.49	203	T	T	16 33 20.2	
	baz=18,slow=76,SNR=32						
OZB	Mount Ozzard	34.16	73	P	P	15 57 45.4	+1.3
H11S1	WAKE ISLAND Hy	34.69	203	T	T	16 34 48.9	
	baz=17,slow=74						
H11S2	WAKE ISLAND Hy	34.71	203	T	T	16 34 54.6	
	baz=17						
H11S3	WAKE ISLAND Hy	34.71	203	T	T	16 34 53.4	
	baz=17,slow=74						
YKA	Yellowknife Ar	35.55	46	P	P	15 57 55.8	-0.1
	comp=Z,2.0nm,0.4s,baz=281,slow=7.7,SNR=53						
YKA				PcP	PcP	16 00 22.1	-1.0
	comp=Z,0.2nm,0.3s,baz=295,slow=3.2,SNR=3.8						
YKA				ScP	ScP	16 04 01.2	-1.1
	comp=Z,0.8nm,0.8s,baz=291,slow=2.9,SNR=10						
	comp=Z,2.0nm,0.4s						
YKA	Yellowknife Ar	35.55	46	P	P	15 57 55.7	-0.2
B04A	Port Angeles	35.75	73	P	P	15 57 57.7	-0.1
D03D	Eldon	36.24	73	P	P	15 58 04.4	+2.5
	baz=298,SNR=6.8						
E03A	Lebam	36.43	75	P	P	15 58 04.7	+1.2
B05A	Bryant	36.49	72	P	P	15 58 05.8	+1.8
	baz=298						
HEBO	Mount Hebo	36.98	77	P	P	15 58 09.4	+1.1
E04D	Cinebar	37.02	75	P	P	15 58 11.1	+2.5
	baz=300,SNR=6.6						
F04A	Amboy	37.42	75	P	P	15 58 13.3	+1.3
I02E	Swisshome, OR	37.49	79	P	P	15 58 14.5	+1.9
I02E				IAmb	IAmb	15 58 16.6	
	comp=Z,7.5nm,0.8s						
I02E	Swisshome, OR	37.49	79	P	P	15 58 14.9	+2.3
	baz=302						
LTY	Liberty	37.81	73	P	P	15 58 14.8	-0.6
LTY				IAmb	IAmb	15 58 17.1	
	comp=Z,3.7nm,0.6s						
KEBM	Edson Butte	37.86	81	P	P	15 58 17.5	+1.7
H04D	Lebanon	37.95	78	P	P	15 58 17.4	+0.9
H04D	Lebanon	37.95	78	P	P	15 58 18.7	+2.2
	baz=302,SNR=6.0						
I03D	Drain, OR	38.02	79	P	P	15 58 20.2	+3.2
	baz=303						
B08A	Colville Reser	38.08	70	P	P	15 58 17.3	-0.3
B08A				IAmb	IAmb	15 58 19.3	
	comp=Z,3.1nm,0.8s						
HOOD	Mount Hood Mea	38.20	76	P	P	15 58 18.8	+0.1
H04A	Detroit Lake	38.20	77	P	P	15 58 18.3	-0.3
K02D	Willamette Mer	38.37	81	P	P	15 58 22.3	+2.2
	baz=304						
DBO	Dodson Butte	38.39	80	P	P	15 58 20.0	-0.3
DBO				IAmb	IAmb	15 58 24.4	
	comp=Z,3.9nm,0.8s						
G05D	Wamic, OR	38.44	76	P	P	15 58 22.7	+2.1
	baz=301,SNR=6.9						
I04A	Tendick Farm,	38.54	78	P	P	15 58 23.6	+2.1
	baz=303,SNR=11						
KSXB	Camp Six Broad	38.72	82	P	P	15 58 24.8	+1.7
KSXB				IAmb	IAmb	15 58 26.7	
	comp=Z,9.5nm,1.2s						
L02F	Cave Junction	38.74	81	P	P	15 58 25.6	+2.5
	baz=304						
HUMO	Hull Mountain	38.85	80	P	P	15 58 25.0	+0.9
HAWA	Hanford	38.92	73	P	P	15 58 24.6	0.0
KSRS	Korea Array	38.99	270	P	P	15 58 24.6	-0.5
	comp=Z,0.6nm,0.7s,baz=61,slow=9.9,SNR=4.2						
	comp=Z,0.6nm,0.7s						
KRPM	Rodgers	39.01	83	P	P	15 58 27.5	+2.1
KRPM				IAmb	IAmb	15 58 28.8	
	comp=Z,5.9nm,0.8s						
J04D	Umpqua Nationa	39.02	79	P	P	15 58 26.8	+1.0
J04D	Umpqua Nationa	39.02	79	P	P	15 58 28.0	+2.3
	baz=303,SNR=7.2						
KHMM	Horse Mountain	39.35	83	P	P	15 58 30.6	+2.2
KHMM				IAmb	IAmb	15 58 31.9	
	comp=Z,7.5nm,0.7s						
NEW	Newport	39.41	69	P	P	15 58 29.1	+0.3
	comp=Z,3.0nm,0.5s,baz=298,slow=7.3,SNR=4.9						
	comp=Z,3.0nm,0.5s						
NEW	Newport	39.41	69	P	P	15 58 28.8	+0.1
NEW				IAmb	IAmb	15 58 31.3	
	comp=Z,5.5nm,0.8s						
NEW	Newport	39.41	69	P	P	15 58 29.4	+0.6
	baz=299						
PINE	Pine Mountain	39.44	77	P	P	15 58 29.5	+0.4
PINE				IAmb	IAmb	15 58 34.9	
	comp=Z,4.3nm,0.7s						
L04D	Klamath Falls	39.47	80	P	P	15 58 30.9	+1.5
L04D				IAmb	IAmb	15 58 32.4	

	comp=Z,6.6nm,0.7s						
L04D	**Klamath Falls**	**39.47**	**80**	P	**P**	**15 58 31.6**	**+2.3**
	baz=304,SNR=5.2						
YBH	**Yreka Blue Hor**	**39.49**	**81**	P	**P**	**15 58 31.6**	**+2.1**
	comp=Z,4.3nm,0.7s,baz=325,slow=4.7,SNR=21						
YBH				LR	LR	16 12 49.5	
	comp=Z,16nm,18.8s,baz=264,slow=33						
	comp=Z,4.3nm,0.7s						
YBH	**Yreka Blue Hor**	**39.49**	**81**	P	**P**	**15 58 30.8**	**+1.3**
YBH				IAmb	IAmb	15 58 33.4	
	comp=Z,4.8nm,0.8s						
J05D	**Fort Rock, OR**	**39.53**	**78**	P	**P**	**15 58 32.2**	**+2.3**
	baz=304,SNR=6.3						
RES	**Resolute Bay**	**39.81**	**24**	P	**P**	**15 58 32.5**	**+0.9**
RES				IAmb	IAmb	15 58 35.2	
	comp=Z,3.2nm,0.9s						
K05A	**Summer Lake**	**40.05**	**79**	P	**P**	**15 58 36.5**	**+2.3**
I07A	**Izee**	**40.15**	**76**	P	**P**	**15 58 36.1**	**+1.1**
WALA	**Waterton Lakes**	**40.88**	**67**	P	**P**	**15 58 41.8**	**+0.9**
WALA				IAmb	IAmb	15 58 46.6	
	comp=Z,3.3nm,0.6s						
BMO	**Blue Mountains**	**41.06**	**74**	P	**P**	**15 58 42.7**	**+0.2**
BMO				IAmb	IAmb	15 58 44.3	
	comp=Z,5.9nm,0.8s						
JTMT	**Jette**	**41.33**	**69**	P	**P**	**15 58 44.6**	**0.0**
JTMT				IAmb	IAmb	15 59 01.1	
	comp=Z,10nm,1.1s						
ORV	**Oroville**	**41.51**	**83**	P	**P**	**15 58 46.0**	**-0.1**
ORV				IAmb	IAmb	15 58 47.9	
	comp=Z,4.0nm,0.6s						
PLID	**Pearl Lake**	**41.71**	**73**	P	**P**	**15 58 48.0**	**+0.1**
MSO	**Missoula**	**42.00**	**70**	P	**P**	**15 58 49.6**	**-0.5**
MSO				IAmb	IAmb	15 58 51.2	
	comp=Z,3.1nm,0.6s						
MSO	**Missoula**	**42.00**	**70**	P	**P**	**15 58 50.1**	**0.0**
	baz=302						
PAHR	**Pah Rah Range**	**42.73**	**82**	P	**P**	**15 58 56.9**	**+0.7**
PAHR				IAmb	IAmb	15 58 58.5	
	comp=Z,9.2nm,1.2s						
PNTR	**Pine Nut**	**42.96**	**82**	P	**P**	**15 58 59.9**	**+1.8**
CMB	**Columbia Colle**	**43.12**	**84**	P	**P**	**15 58 59.7**	**+0.4**
HRY	**Holter Researc**	**43.29**	**69**	P	**P**	**15 59 01.1**	**+0.5**
HLID	**Hailey**	**43.51**	**74**	P	**P**	**15 59 03.0**	**+0.6**
HLID				IAmb	IAmb	15 59 04.4	
	comp=Z,6.6nm,0.8s						
HLID	**Hailey**	**43.51**	**74**	P	**P**	**15 59 03.6**	**+1.2**
	baz=305,SNR=14						
BMN	**Battle Mountai**	**43.62**	**79**	P	**P**	**15 59 04.5**	**+1.2**
BMN				IAmb	IAmb	15 59 06.1	
	comp=Z,7.9nm,0.6s						
BCYI	**Bear Canyon**	**43.69**	**72**	P	**P**	**15 59 04.6**	**+0.6**
MCMT	**McKenzie Canyo**	**43.73**	**71**	P	**P**	**15 59 04.6**	**+0.3**
RYN	**Ryan**	**43.91**	**82**	P	**P**	**15 59 07.1**	**+1.4**
RYN				IAmb	IAmb	15 59 09.1	
	comp=Z,6.3nm,0.6s						
KVN	**Kaiserville**	**43.91**	**81**	P	**P**	**15 59 07.3**	**+1.5**
KVN				IAmb	IAmb	15 59 07.7	
	comp=Z,3.7nm,0.5s						
BOZ	**Bozeman (W)**	**44.02**	**70**	P	**P**	**15 59 06.7**	**+0.3**
BOZ				IAmb	IAmb	15 59 07.9	
	comp=Z,5.6nm,0.6s						
BOZ	**Bozeman (W)**	**44.02**	**70**	P	**P**	**15 59 06.7**	**+0.3**
	baz=304,SNR=6.5						
NVAR	**Mina Array Bea**	**44.17**	**82**	P	**P**	**15 59 09.3**	**+1.4**
	comp=Z,5.6nm,0.7s,baz=299,slow=7.5,SNR=38						
	comp=Z,5.6nm,0.7s						
NVAR	**Mina Array Bea**	**44.17**	**82**	P	**P**	**15 59 08.7**	**+0.9**
NV11	**Mina Array Sit**	**44.26**	**82**	P	**P**	**15 59 09.6**	**+1.2**
ELK	**Elko**	**44.65**	**78**	P	**P**	**15 59 12.8**	**+1.2**
	comp=Z,5.6nm,0.4s,baz=305,slow=7.2,SNR=9.3						
	comp=Z,5.6nm,0.4s						
ELK	**Elko**	**44.65**	**78**	P	**P**	**15 59 13.1**	**+1.4**
ELK				IAmb	IAmb	15 59 14.1	
	comp=Z,7.6nm,0.5s						
PAGB	**Antelope Grade**	**44.66**	**87**	P	**P**	**15 59 12.1**	**+0.6**
YHL	**Hebgen Lake**	**44.69**	**70**	P	**P**	**15 59 12.3**	**+0.3**
YHL				IAmb	IAmb	15 59 13.3	
	comp=Z,5.3nm,0.7s						
YHH	**Holmes Hill**	**44.92**	**70**	P	**P**	**15 59 14.3**	**+0.4**
YHH				IAmb	IAmb	15 59 15.1	
	comp=Z,6.1nm,0.6s						
TPH	**Tonopah**	**45.06**	**82**	P	**P**	**15 59 16.2**	**+1.3**
H17A	**Grant Village**	**45.31**	**71**	P	**P**	**15 59 19.2**	**+2.3**
	baz=305						
VES	**Vestal, Richgr**	**45.31**	**86**	P	**P**	**15 59 17.9**	**+1.2**
	baz=310						
LCH	**Last Change Ra**	**45.32**	**83**	P	**P**	**15 59 17.4**	**+0.5**
LCH				IAmb	IAmb	15 59 19.4	
	comp=Z,3.6nm,0.7s						
HVU	**Hansel Valley**	**45.52**	**75**	P	**P**	**15 59 19.8**	**+1.3**
CWC	**Cottonwood Cre**	**45.55**	**84**	P	**P**	**15 59 20.0**	**+1.2**
	baz=310						
TPAW	**Teton Pass**	**45.61**	**72**	P	**P**	**15 59 20.0**	**+0.7**
TPAW				IAmb	IAmb	15 59 21.9	
	comp=Z,3.5nm,0.6s						
RLMT	**Red Lodge**	**45.66**	**69**	P	**P**	**15 59 20.4**	**+0.8**
RLMT				IAmb	IAmb	15 59 22.8	
	comp=Z,5.3nm,0.8s						
RLMT	**Red Lodge**	**45.66**	**69**	P	**P**	**15 59 20.5**	**+0.8**
	baz=305,SNR=8.1						
REDW	**Red Top Meadow**	**45.74**	**72**	P	**P**	**15 59 20.7**	**+0.5**
BGU	**Big Grassy Mou**	**45.88**	**76**	P	**P**	**15 59 21.9**	**+0.6**
BGU				IAmb	IAmb	15 59 26.7	
	comp=Z,5.1nm,0.7s						
R11A	**Troy Canyon, C**	**45.89**	**81**	P	**P**	**15 59 22.6**	**+1.2**
R11A				IAmb	IAmb	15 59 24.2	
	comp=Z,6.0nm,0.6s						
R11A	**Troy Canyon, C**	**45.89**	**81**	P	**P**	**15 59 22.7**	**+1.2**
	baz=309,SNR=16						
SONM	**Songino Array**	**45.96**	**296**	P	**P**	**15 59 22.3**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=53,slow=9.3,SNR=4.4						
	comp=Z,0.4nm,0.5s						
FCC	**Fort Churchill**	**46.28**	**46**	P	**P**	**15 59 23.3**	**-0.6**
FCC				IAmb	IAmb	15 59 32.1	
	comp=Z,3.3nm,1.0s						
FURC	**Furnace Creek,**	**46.29**	**83**	P	**P**	**15 59 26.3**	**+1.9**
	baz=310						
TPNV	**Topopah Spring**	**46.36**	**82**	P	**P**	**15 59 26.0**	**+0.9**
TPNV	**Topopah Spring**	**46.36**	**82**	P	**P**	**15 59 26.6**	**+1.5**
	baz=310,SNR=11						
LRMC	**Laurel Mtn Rad**	**46.42**	**85**	P	**P**	**15 59 26.7**	**+1.1**
	baz=311						
DUG	**Dugway, Tooele**	**46.45**	**77**	P	**P**	**15 59 27.2**	**+1.5**
DUG	**Dugway, Tooele**	**46.45**	**77**	P	**P**	**15 59 27.3**	**+1.5**
	baz=308,SNR=28						
EDW2	**Edwards Air Fo**	**46.61**	**86**	P	**P**	**15 59 27.8**	**+0.8**
	baz=311						
PRN	**Pahroc Range**	**46.81**	**81**	P	**P**	**15 59 29.8**	**+1.2**
PRN				IAmb	IAmb	15 59 34.8	
	comp=Z,8.3nm,0.7s						
PSUT	**Pine Spring**	**46.84**	**79**	P	**P**	**15 59 29.9**	**+1.0**
BW06	**Boulder Array**	**46.86**	**72**	P	**P**	**15 59 29.7**	**+0.7**
BW06	**Boulder Array**	**46.86**	**72**	P	**P**	**15 59 29.9**	**+0.9**
	baz=307,SNR=19						
PD31	**Pinedale Array**	**46.86**	**72**	P	**P**	**15 59 29.4**	**+0.4**
PDAR	**Pinedale Array**	**46.86**	**72**	P	**P**	**15 59 29.8**	**+0.7**
	comp=Z,7.2nm,0.6s,baz=308,slow=3.4,SNR=100						
PDAR				ScP	**ScP**	**16 04 46.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=327,slow=2.5,SNR=4.0						
	comp=Z,7.2nm,0.6s						
PDAR	**Pinedale Array**	**46.86**	**72**	P	**P**	**15 59 29.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**47.00**	**285**	*e*P	**P**	**15 59 28.4**	**-1.6**
HHC				pmax	pmax		
	comp=Z,56nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.7s						
SHOC	**Shoshone, Teco**	**47.02**	**84**	P	**P**	**15 59 31.7**	**+1.6**
	baz=310						
NLU	**North Lily Min**	**47.05**	**76**	P	**P**	**15 59 31.7**	**+1.2**
GSC	**Goldstone, Bar**	**47.08**	**85**	P	**P**	**15 59 31.9**	**+1.2**
GSC				IAmb	IAmb	15 59 32.8	
	comp=Z,8.7nm,0.9s						
GSC	**Goldstone, Bar**	**47.08**	**85**	P	**P**	**15 59 32.1**	**+1.5**
	baz=311,SNR=10						
BFSC	**Mount Baldy Ra**	**47.24**	**86**	P	**P**	**15 59 33.3**	**+1.3**
	baz=312						
TUQ	**Turquoise Moun**	**47.54**	**84**	P	**P**	**15 59 35.5**	**+1.2**
	baz=311,SNR=9.4						
HEC	**Hector,Ludlow**	**47.68**	**85**	P	**P**	**15 59 36.4**	**+1.1**
	baz=311						
MSU	**Marysvale**	**47.88**	**78**	P	**P**	**15 59 38.5**	**+1.5**
GMRC	**Granite Mounta**	**48.13**	**84**	P	**P**	**15 59 40.1**	**+1.3**
	baz=311,SNR=7.5						
LCMT	**Little Creek M**	**48.18**	**80**	P	**P**	**15 59 38.7**	**-0.5**
LCMT				IAmb	IAmb	15 59 42.7	
	comp=Z,5.2nm,0.7s						
PFO	**Pinyon Flats O**	**48.40**	**86**	P	**P**	**15 59 42.0**	**+1.0**
	comp=Z,1.8nm,0.5s,baz=280,slow=6.5						
	comp=Z,1.8nm,0.5s						
BELC	**Belle Mtn. Jos**	**48.43**	**85**	P	**P**	**15 59 41.9**	**+0.7**
	baz=312						
NEE2	**Needles Airpor**	**48.78**	**84**	P	**P**	**15 59 44.8**	**+1.1**
	baz=311						
IRM	**Iron Mountain**	**48.86**	**85**	P	**P**	**15 59 45.4**	**+1.1**
	baz=312,SNR=5.4						
MONP2	**Monument Peak**	**48.91**	**87**	P	**P**	**15 59 45.9**	**+1.0**
	baz=312						
BC3	**Big Chuckawall**	**49.00**	**85**	P	**P**	**15 59 46.1**	**+0.6**
	baz=312						
W13A	**Hualapai Mount**	**49.02**	**83**	P	**P**	**15 59 45.9**	**+0.2**
W13A				IAmb	IAmb	15 59 47.6	
	comp=Z,3.2nm,0.7s						
O20A	**White River Ci**	**49.25**	**74**	P	**P**	**15 59 48.0**	**+0.5**
O20A	**White River Ci**	**49.25**	**74**	P	**P**	**15 59 48.2**	**+0.7**
	baz=309,SNR=33						
IKP	**In-Ko-Pah, Jac**	**49.26**	**87**	P	**P**	**15 59 48.9**	**+1.3**
	baz=313						
RSSD	**Black Hills**	**49.27**	**67**	P	**P**	**15 59 47.3**	**-0.3**
	baz=307						
PDMCI	**Parker Dam,Lak**	**49.38**	**84**	P	**P**	**15 59 49.4**	**+1.1**
	baz=312						
GLA	**Glamis**	**49.79**	**85**	P	**P**	**15 59 52.8**	**+1.3**
	baz=312						
PV23	**Carpenter Ridg**	**49.84**	**76**	P	**P**	**15 59 52.6**	**+0.5**
ULM	**Lac du Bonnet**	**50.10**	**56**	P	**P**	**15 59 52.6**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=316,slow=6.2,SNR=6.5						
	comp=Z,1.8nm,0.3s						
N23A	**Red Feather La**	**50.14**	**72**	P	**P**	**15 59 55.7**	**+1.4**
	baz=309						
WUAZ	**Wupatki**	**50.30**	**81**	P	**P**	**15 59 55.1**	**-0.3**
WUAZ				IAmb	IAmb	15 59 57.7	
	comp=Z,7.1nm,0.8s						
WUAZ	**Wupatki**	**50.30**	**81**	P	**P**	**15 59 57.1**	**+1.7**
	baz=311,SNR=7.5						
SMCO	**Snowmass**	**50.61**	**74**	P	**P**	**15 59 58.0**	**0.0**
MVCO	**Mesa Verde**	**50.95**	**77**	P	**P**	**16 00 01.1**	**+0.7**
MVCO				IAmb	IAmb	16 00 02.8	
	comp=Z,5.9nm,0.6s						
MVCO	**Mesa Verde**	**50.95**	**77**	P	**P**	**16 00 01.6**	**+1.2**
	baz=311,SNR=6.9						
ISCO	**Idaho Springs**	**51.03**	**72**	P	**P**	**16 00 01.0**	**0.0**
ISCO				IAmb	IAmb	16 00 03.4	
	comp=Z,4.2nm,0.9s						
ISCO	**Idaho Springs**	**51.03**	**72**	P	**P**	**16 00 02.8**	**+1.7**
	baz=310,SNR=5.8						
S22A	**4UR Ranch, Cre**	**51.61**	**75**	P	**P**	**16 00 06.9**	**+1.4**
	baz=311						
214A	**Organ Pipe Nat**	**51.78**	**85**	P	**P**	**16 00 05.8**	**-0.6**
214A				IAmb	IAmb	16 00 08.7	
	comp=Z,2.7nm,0.8s						
214A	**Organ Pipe Nat**	**51.78**	**85**	P	**P**	**16 00 06.2**	**-0.2**
	baz=313						
SDCO	**Great Sand Dun**	**52.41**	**74**	P	**P**	**16 00 11.4**	**0.0**
SDCO				IAmb	IAmb	16 00 13.4	
	comp=Z,6.3nm,0.8s						
SDCO	**Great Sand Dun**	**52.41**	**74**	P	**P**	**16 00 12.7**	**+1.3**
	baz=311,SNR=11						
TUC	**Tucson**	**52.80**	**83**	P	**P**	**16 00 14.6**	**+0.5**
TUC				IAmb	IAmb	16 00 16.0	
	comp=Z,3.6nm,0.8s						
TUC	**Tucson**	**52.80**	**83**	P	**P**	**16 00 15.1**	**+1.1**
	baz=313						
FRB	**Frobisher Bay**	**53.18**	**31**	LR	LR	16 23 26.5	
	comp=Z,24nm,19.9s,baz=266,slow=36						
T25A	**Trinidad**	**53.47**	**74**	P	**P**	**16 00 19.7**	**+0.6**
T25A	**Trinidad**	**53.47**	**74**	P	**P**	**16 00 20.6**	**+1.6**
	baz=312,SNR=13						
ANMO	**Albuquerque**	**53.68**	**78**	P	**P**	**16 00 21.7**	**+1.0**
	baz=312						
ECSD	**EROS Data Cent**	**53.72**	**63**	P	**P**	**16 00 19.5**	**-1.0**
	baz=310						
EYMN	**Ely**	**53.79**	**56**	P	**P**	**16 00 20.5**	**-0.5**
EYMN				IAmb	IAmb	16 00 21.5	
	comp=Z,9.0nm,1.1s						
121A	**Cookes Peak, D**	**54.50**	**81**	P	**P**	**16 00 28.0**	**+1.4**
	baz=314						
MNTX	**Cornudas Mount**	**56.55**	**80**	P	**P**	**16 00 42.2**	**+1.2**
MNTX				IAmb	IAmb	16 00 44.3	
	comp=Z,3.3nm,0.8s						
MNTX	**Cornudas Mount**	**56.55**	**80**	P	**P**	**16 00 42.3**	**+1.2**
	baz=314,SNR=6.0						
MSTX	**Muleshoe**	**56.58**	**76**	P	**P**	**16 00 41.5**	**+0.1**
MSTX	**Muleshoe**	**56.58**	**76**	P	**P**	**16 00 42.2**	**+0.8**
	baz=314						
AMTX	**Amarillo**	**56.62**	**74**	P	**P**	**16 00 41.6**	**0.0**
AMTX	**Amarillo**	**56.62**	**74**	P	**P**	**16 00 42.6**	**+1.0**
	baz=313						
ARCES	**ARCESS Array B**	**57.76**	**350**	P	**P**	**16 00 48.1**	**-0.9**
	comp=Z,3.5nm,1.1s,baz=24,slow=8.9,SNR=1.7						
	comp=Z,3.5nm,1.1s						
ARCES	**ARCESS Array B**	**57.76**	**350**	P	**P**	**16 00 48.6**	**-0.4**
P38A	**Dawn**	**58.16**	**65**	P	**P**	**16 00 51.2**	**-1.1**
WMQ	**Urumqi**	**58.67**	**302**	⇑*i*P	**P**	**16 00 58.3**	**+2.4**
TXAR	**Lajitas Array**	**59.26**	**81**	P	**P**	**16 01 00.8**	**+0.7**
	comp=Z,2.3nm,0.5s,baz=301,slow=5.2,SNR=22						
	comp=Z,2.3nm,0.5s						
TXAR	**Lajitas Array**	**59.26**	**81**	P	**P**	**16 01 00.6**	**+0.5**
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**16 00 60.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=51,slow=5.7,SNR=4.4						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**16 01 00.1**	**-0.7**
ABTX	**Abilene, Hawle**	**59.40**	**75**	P	**P**	**16 01 02.3**	**+1.3**
	baz=315						
HDIL	**Hopedale**	**59.89**	**62**	P	**P**	**16 01 03.4**	**-0.8**
	baz=314						
SCHQ	**Schefferville**	**60.23**	**38**	P	**P**	**16 01 06.1**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=317,slow=6.5,SNR=14						
	comp=Z,2.8nm,0.4s						
SCHQ	**Schefferville**	**60.23**	**38**	P	**P**	**16 01 05.6**	**-0.7**
SCHQ				IAmb	IAmb	16 01 07.6	
	comp=Z,3.7nm,0.5s						
CCM	**Cathedral Cave**	**60.53**	**65**	P	**P**	**16 01 07.5**	**-1.1**
CCM				IAmb	IAmb	16 01 09.6	
	comp=Z,3.9nm,0.7s						
CCM	**Cathedral Cave**	**60.53**	**65**	P	**P**	**16 01 07.5**	**-1.1**
	baz=314						
U40A	**Yellville**	**60.80**	**67**	P	**P**	**16 01 09.6**	**-1.0**
U40A	**Yellville**	**60.80**	**67**	P	**P**	**16 01 09.8**	**-0.8**
	baz=315,SNR=7.1						
W39A	**Magazine**	**61.08**	**69**	P	**P**	**16 01 12.2**	**-0.1**
	baz=315						
SFIN	**Lafayette**	**61.21**	**61**	P	**P**	**16 01 13.1**	**0.0**
	baz=315,SNR=6.5						
MIAR	**Mount Ida**	**61.66**	**69**	P	**P**	**16 01 17.0**	**+0.7**
MIAR	**Mount Ida**	**61.66**	**69**	P	**P**	**16 01 16.8**	**+0.5**
	baz=315,SNR=5.4						
W41B	**Gary Mavity, V**	**61.98**	**68**	P	**P**	**16 01 18.0**	**-0.4**
	baz=315,SNR=7.4						
X40A	**Basin Creek Fa**	**62.13**	**69**	P	**P**	**16 01 20.0**	**+0.5**
	baz=315						
O48B	**Farmland**	**62.34**	**59**	P	**P**	**16 01 20.0**	**-0.9**
	baz=316						
PZH	**PanZhiHua**	**62.67**	**279**	P	**P**	**16 01 21.3**	**-2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.6s						
KMI	**Kunming**	**63.05**	**277**	⇑P	**P**	**16 01 30.1**	**+4.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
P49A	**Miami Univ. Ec**	**63.10**	**60**	P	**P**	**16 01 25.0**	**-0.8**
	baz=316						
WVT	**Waverly**	**63.82**	**64**	P	**P**	**16 01 30.2**	**-0.5**
	baz=316						
OXF	**Oxford**	**64.09**	**67**	P	**P**	**16 01 32.4**	**0.0**
	baz=316						
P52A	**Corning**	**64.41**	**58**	P	**P**	**16 01 33.8**	**-0.7**
	baz=317						
O53A	**New Philadelph**	**64.44**	**57**	P	**P**	**16 01 34.1**	**-0.6**
	baz=317						
FINES	**FINESS Array B**	**65.42**	**347**	P	**P**	**16 01 39.5**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=17,slow=8.4,SNR=4.7						
	comp=Z,1.7nm,0.9s						
BINY	**Binghamton**	**65.66**	**52**	P	**P**	**16 01 42.2**	**-0.3**
	baz=318						
SSPA	**Standing Stone**	**65.87**	**55**	P	**P**	**16 01 43.5**	**-0.4**
SSPA	**Standing Stone**	**65.87**	**55**	P	**P**	**16 01 43.7**	**-0.2**
	baz=318						
LRAL	**Lakeview Retre**	**66.54**	**66**	P	**P**	**16 01 46.9**	**-1.3**
	baz=317						
BLA	**Blacksburg**	**67.10**	**59**	P	**P**	**16 01 51.8**	**-0.1**
	baz=318						
NOA	**NORSAR Array B**	**67.36**	**354**	P	**P**	**16 01 52.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=8.5,slow=6.3,SNR=1.9						
	comp=Z,0.8nm,0.7s						
PAL	**Palisades**	**67.58**	**52**	P	**P**	**16 01 54.6**	**-0.1**
	baz=320						
KMSC	**Kings Mountain**	**68.14**	**61**	P	**P**	**16 01 58.4**	**+0.1**
	baz=318						
GOGA	**Godfrey**	**68.25**	**64**	P	**P**	**16 01 58.4**	**-0.7**
	baz=318						
CMAR	**Chiang Mai Arr**	**70.34**	**275**	P	**P**	**16 02 12.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=21,slow=6.7,SNR=4.9						
	comp=Z,0.5nm,0.8s						
AKASG	**Malin Array Be**	**75.13**	**341**	P	**P**	**16 02 39.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=20,slow=6.3,SNR=4.7						
	comp=Z,0.5nm,0.4s						
GERES	**GERESS Array B**	**79.27**	**351**	P	**P**	**16 03 02.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=27,slow=7.7,SNR=2.5						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**81.73**	**223**	P	**P**	**16 03 16.7**	**0.0**
	comp=Z,0.4nm,0.7s,baz=31,slow=6.1,SNR=6.5						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**85.22**	**222**	P	**P**	**16 03 35.5**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=26,slow=5.6,SNR=6.9						
	comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**89.03**	**3**	P	**P**	**16 03 52.4**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=343,slow=4.0,SNR=5.1						
	comp=Z,0.4nm,0.7s						
BOSA	**Boshof**	**150.34**	**311**	PKPbc	**PKPbc**	**16 10 48.0**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=35,slow=3.7,SNR=6.5						

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*MAN **14** 16:06:40.9, 5°.82N×127°.08E, h117^{km}, mb5.1, ML4.0, MS4.1, Hypocentre not reviewed by the ISC*

*IDC **14** 16:06:45.6±3.1, 4°.80N×125°.11E, h78^{km}±29^{km}, mb3.4/4, mbtmp3.8/5, MS2.5/1, Error ellipse: s-maj=81.7km s-min=20.1km az=70.0*

ISC 14 16:06:47.6±1.0, **5°.1N**±0°.1×**126°.0E**±0°.2, **h100^{km}, n9, σ2^{s}.15**/13, **mb3.5**/4, **1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.03**	**343**	⇓*e*P	**Pn**	**16 07 05.4**	**-3.0**
DDMP				*e*S	**Sn**	**16 07 27.8**	**+3.8**
GSPH	**General Santos**	**1.44**	**312**	⇓*i*P	**Pn**	**16 07 14.2**	**+0.9**
MATI	**Mati**	**1.83**	**7**	⇓*e*P	Pn	16 07 05.8	-12
MATI				*e*S	Sn	16 07 28.3	-13
DAV	**Davao City (W)**	**1.99**	**347**	P	**Pn**	**16 07 22.2**	**+2.1**
	115nm,0.3s,baz=253,slow=19,SNR=2.2						
DAV				S	**Sn**	**16 07 44.8**	**-0.1**
	155nm,0.3s,baz=114,slow=23,SNR=12						
DAV				LR	LR	16 07 57.8	
	comp=Z,95nm,18.2s,baz=187,slow=31						
KCP	**Kidapawan**	**2.10**	**334**	⇑*e*P	**Pn**	**16 07 19.4**	**-2.1**
KCP				*i* S	**Sn**	**16 07 47.1**	**-0.3**
WRA	**Warramunga Arr**	**26.21**	**162**	P	**P**	**16 12 12.9**	**-0.4**
	0.2nm,0.5s,baz=342,slow=10,SNR=3.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**29.62**	**165**	P	**P**	**16 12 43.3**	**-0.4**
	0.3nm,0.8s,baz=345,slow=6.9,SNR=5.1						
ASAR				PcP	**PcP**	**16 15 47.0**	**+0.9**
	0.1nm,0.5s,baz=359,slow=2.2,SNR=1.1						
ASAR				ScP	**ScP**	**16 19 21.9**	**+2.7**
	0.4nm,1.0s,baz=334,slow=3.0,SNR=2.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**56.02**	**325**	P	**P**	**16 16 13.9**	**-2.1**
	0.6nm,0.4s,baz=117,slow=7.1,SNR=15						
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**88.91**	**340**	P	**P**	**16 19 31.0**	**+0.5**
	2.0nm,0.9s,baz=88,slow=5.5,SNR=3.8						
	2.0nm,0.9s						

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*TAP **14** 16:11:47.2, 24°.70N×121°.97E, h10^{km}, ML2.6, C*

*JMA **14** 16:11:48.0±0.1, 24°.7N±0°.4×121°.9E±0°.5, h30^{km}, MV2.4/8, TAIWAN REGION*

ISC 14 16:11:47.0±0.9, **24°.69N**±0°.02×**122°.02E**±0°.02, **h8^{km}**±7^{km}, **n72, σ0^{s}.65**/120, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.17**	**333**	*i* P	**Pg**	**16 11 51.1**	**+0.5**
	baz=352						
EGS				*i* S	**Sg**	**16 11 53.4**	**+0.4**
	baz=352						
TWC	**Suao**	**0.17**	**241**	*i* P	**Pg**	**16 11 50.6**	**0.0**
	baz=235						
TWC				*i* S	**Sg**	**16 11 52.8**	**-0.4**
	baz=235						
NTC	**Toucheng**	**0.23**	**313**	*i* P	**Pg**	**16 11 51.8**	**+0.1**
	baz=321						
NTC				*i* S	**Sg**	**16 11 55.5**	**+0.5**
	baz=321						
ILA	**Ilan**	**0.26**	**286**	*i* P	**Pg**	**16 11 52.3**	**+0.1**
	baz=279						
ILA				*i* S	**Sg**	**16 11 55.8**	**+0.2**
	baz=279						
NDS	**Dongshan**	**0.28**	**258**	*i* P	**Pg**	**16 11 52.6**	**-0.1**
	baz=250						
NDS				*i* S	**Sg**	**16 11 55.6**	**-0.8**
	baz=250						
TWB1	**Santiao Chiao**	**0.31**	**355**	*i* P	**Pg**	**16 11 53.5**	**+0.3**
	baz=356						
TWB1				*i* S	**Sg**	**16 11 58.4**	**+0.9**
	baz=356						
TWE	**Neicheng**	**0.32**	**275**	*i* P	**Pg**	**16 11 53.1**	**-0.2**
	baz=270						
TWE				*i* S	**Sg**	**16 11 56.8**	**-0.9**
	baz=270						
TIPB	**Shuangxi**	**0.33**	**328**	*i* P	**Pg**	**16 11 53.8**	**+0.3**
	baz=334						
TIPB				*i* S	**Sg**	**16 11 58.6**	**+0.8**
	baz=334						
EWUT	**Wuta**	**0.33**	**221**	*i* P	**Pg**	**16 11 53.8**	**+0.2**
	baz=209						
EWUT				*i* S	**Sg**	**16 11 57.8**	**-0.1**
	baz=209						
ENA	**Nanau**	**0.37**	**224**	*i* P	**Pg**	**16 11 54.1**	**-0.1**
	baz=216						
ENA				*i* S	**Sg**	**16 11 58.7**	**-0.4**
	baz=216						
FUSB	**Fushanzhiwuyua**	**0.40**	**280**	*i* P	**Pg**	**16 11 54.6**	**-0.2**
	baz=280						
FUSB				*i* S	**Sg**	**16 11 59.5**	**-0.6**
	baz=280						
ENTT	**Nioudou**	**0.41**	**263**	*i* P	**Pg**	**16 11 54.9**	**-0.2**
	baz=261						
ENTT				*i* S	**Sg**	**16 12 00.5**	**-0.1**
	baz=261						
NWF	**Wu-fen Shan**	**0.43**	**330**	*i* P	**Pb**	**16 11 56.4**	**-0.6**
	baz=328						
NWF				*i* S	**Sb**	**16 12 02.4**	**-1.3**
	baz=328						
LATG	**Datong**	**0.47**	**251**	*i* P	**Pg**	**16 11 56.3**	**0.0**
	baz=248						
LATG				*i* S	**Sg**	**16 12 01.8**	**-0.7**
	baz=248						
NWLT	**Wulai**	**0.47**	**280**	*i* P	**Pg**	**16 11 56.0**	**-0.3**
	baz=281						
NWLT				*i* S	**Sg**	**16 12 02.3**	**-0.2**
	baz=281						
TWA	**Mucha**	**0.49**	**306**	*i* P	**Pg**	**16 11 56.7**	**+0.2**
	baz=309						
TWA				*i* S	**Sg**	**16 12 03.3**	**+0.4**
	baz=309						
NHDH	**Xindian Distri**	**0.52**	**301**	P	**Pb**	**16 11 57.7**	**-0.7**
	baz=303						
NHDH				S	**Sg**	**16 12 03.7**	**-0.3**
	baz=303						
YHNB	**Yeheng**	**0.58**	**268**	P	**Pg**	**16 11 57.9**	**-0.4**
	baz=267						
YHNB				S	**Sg**	**16 12 05.4**	**-0.7**
	baz=267						
NSK	**Sanguang**	**0.60**	**268**	*i* P	**Pg**	**16 11 58.1**	**-0.5**
	baz=268						
NSK				*i* S	**Sg**	**16 12 05.3**	**-1.2**
	baz=268						
YM01	**YM01**	**0.61**	**318**	P	**Pb**	**16 11 59.5**	**-0.4**
	baz=320						
NNSB	**Datong**	**0.64**	**246**	*i* P	**Pg**	**16 11 58.9**	**-0.5**
	baz=243						
NNSB				*i* S	**Sg**	**16 12 07.0**	**-0.7**
	baz=243						
NNS	**Nan Shan**	**0.64**	**247**	*i* P	**Pg**	**16 11 58.9**	**-0.5**
	baz=244						
NNS				*i* S	**Sg**	**16 12 07.8**	**0.0**
	baz=244						
ETL	**Fush Village**	**0.64**	**214**	P	**Pg**	**16 11 59.3**	**-0.2**
	baz=201						
ETL				S	**Sg**	**16 12 08.1**	**+0.3**

	baz=201						
NACB	Ninganchiao	0.65	217	P	Pg	16 11 59.5	0.0
	baz=204						
NACB				S	Sg	16 12 07.7	-0.2
	baz=204						
ANP	Anpu	0.67	317	eP	Pb	16 12 00.4	-0.6
	baz=320						
TWS1	Kuangyinshan	0.68	307	iP	Pb	16 12 01.1	+0.1
	baz=309						
ETLH	Xiulin Townshi	0.69	225	iP	Pg	16 11 59.9	-0.4
	baz=222						
ETLH				iS	Sg	16 12 08.5	-0.8
	baz=222						
TWY	Chenhua	0.69	327	P	Pb	16 12 01.2	-0.1
	baz=330						
NTST	Danshui	0.70	312	eP	Pb	16 12 01.4	0.0
	baz=314						
TWD	Chiawan	0.72	212	iP	Pg	16 12 00.9	0.0
	baz=208						
TWD				iS	Sg	16 12 09.8	-0.6
	baz=208						
NFF	Wufeng Townshi	0.82	266	P	Pn	16 12 04.4	-0.5
	baz=265						
FUSS	Fushou	0.83	238	iP	Pg	16 12 02.4	-0.7
	baz=236						
FUSS				iS	Sg	16 12 13.1	-0.9
	baz=236						
WHF	Hehuan Shan	0.88	232	iP	Pg	16 12 03.9	-0.1
	baz=228						
JYNG	Yonagunijimaku	0.88	106	P	Pn	16 12 05.5	-0.1
JYNG				S	Sb	16 12 17.4	+1.1
TWT	Tachien	0.88	240	eP	Pb	16 12 04.7	0.0
	baz=232						
TWT				eS	Sg	16 12 15.5	-0.1
	baz=232						
TDCB	Techi	0.90	241	eP	Pg	16 12 04.4	+0.1
	baz=232						
TDCB				eS	Sg	16 12 15.8	-0.2
	baz=232						
LIOB	Emei	0.91	267	P	Pn	16 12 06.2	+0.1
	baz=266						
NSTT	Nanjuang	0.93	266	iP	Pn	16 12 05.6	-0.7
	baz=265						
PCYT	Pengchaiyu	0.93	3	eP	Pn	16 12 06.4	0.0
	baz=5.0						
YOJ	Yonaguni jima	0.93	104	iP	Pn	16 12 06.3	-0.1
	baz=104						
YOJ				iS	Sn	16 12 19.2	-0.7
	baz=104						
YOJ	Yonaguni jima	0.93	104	P	Pn	16 12 06.6	+0.3
YOJ				S	Sb	16 12 19.0	+1.1
SBCB	Hsinchu	0.94	276	P	Pn	16 12 06.6	+0.1
	baz=296						
SBCB				S	Sn	16 12 20.0	-0.2
	baz=296						
CHGB	Renai	0.99	231	P	Pg	16 12 05.8	-0.4
	baz=229						
CHGB				S	Sb	16 12 19.7	-0.2
	baz=229						
ESL	Shilin	1.03	211	iP	Pg	16 12 06.2	-0.5
	baz=209						
ESL				iS	Sg	16 12 20.1	0.0
	baz=209						
WHP	Taichung City	1.06	247	iP	Pg	16 12 07.3	-0.1
	baz=245						
OWD	Renai	1.06	226	iP	Pg	16 12 07.0	-0.5
	baz=224						
WUSB	Renai	1.08	230	P	Pb	16 12 07.3	-0.7
	baz=234						
WUSB				S	Sg	16 12 22.0	+0.2
	baz=234						
NMLH	Miaoli	1.13	262	iP	Pn	16 12 09.9	+0.8
	baz=253						
NMLH				iS	Sn	16 12 25.5	+0.8
	baz=253						
EGFH	Guangfu	1.16	208	P	Pb	16 12 08.8	-0.4
	baz=219						
TWQ1	Liyutan	1.19	253	iP	Pg	16 12 10.9	+1.1
	baz=253						
TWQ1				iS	Sn	16 12 27.6	+1.4
	baz=253						
VWDT	VWDT	1.23	221	P	Pn	16 12 10.4	-0.1
	baz=228						
VWDT				S	Sb	16 12 26.6	+0.1
	baz=228						
SMLT	Sun Moon Lake	1.30	232	iP	Pg	16 12 12.7	+0.6
	baz=229						
WDJ	Dajia District	1.30	255	S	Sg	16 12 30.3	+1.4
	baz=255						
HGSD	Ruisui	1.31	204	P	Pg	16 12 12.3	+0.1
	baz=189						
TYC	Yuchr	1.32	234	iP	Pg	16 12 13.8	+1.4
	baz=231						
SSLB	Suanglung	1.33	227	iP	Pn	16 12 11.8	0.0
	baz=225						
EHY	Hungye	1.34	208	iP	Pb	16 12 12.4	0.0
	baz=205						
YULB	Yu-li	1.45	207	P	Pn	16 12 13.4	-0.1
	baz=214						
YULB				S	Sb	16 12 33.3	+0.3
	baz=214						
WJS	Zhushan	1.46	234	eP	Pg	16 12 15.1	0.0
	baz=222						
WJS				eS	Sg	16 12 36.3	+2.2
	baz=222						
WNT	Mingjian	1.46	237	eP	Pg	16 12 15.3	+0.2
	baz=223						
WNT				eS	Sg	16 12 36.1	+2.0
	baz=223						
EYUL	Yuli	1.48	206	P	Pn	16 12 14.0	+0.1
	baz=214						
YUS	Yu-Shan	1.54	219	P	Pb	16 12 15.8	-0.3
	baz=226						
IRIF	Iriomote-Funau	1.60	103	P	Pn	16 12 14.8	-0.7
IRIF				S	Sn	16 12 35.8	-0.6
ALS	Alishan	1.62	223	P	Pb	16 12 17.7	+0.4
	baz=205						
FULB	Fuli	1.63	204	P	Pb	16 12 17.5	+0.2
	baz=216						
FULB				S	Sb	16 12 37.9	-0.2
	baz=216						
CHN4	Tsaushan	1.87	225	iP	Pb	16 12 22.0	+0.7
	baz=207						
CHN4				eS	Sg	16 12 49.0	+2.0
	baz=207						
JKRS	Kuro-shima	1.87	104	P	Pn	16 12 19.4	+0.1
JKRS				S	Sn	16 12 42.1	-1.0
TPUB	Ta-pu	1.88	223	P	Pb	16 12 22.0	+0.4
	baz=206						
TPUB				S	Sg	16 12 47.7	+0.2
	baz=206						
STYH	Taoyuan	1.90	217	P	Pb	16 12 22.1	+0.3
	baz=214						
JIJ	Ishigaki jima	1.96	99	eS	Sn	16 12 43.5	-1.9
TWK	Hsinying	1.99	225	eP	Pg	16 12 25.1	-0.2
	baz=234						
TWK				eS	Sg	16 12 51.3	+0.2
	baz=234						
CHN1	Nanshi	2.03	223	eP	Pb	16 12 24.6	+0.5
	baz=205						
CHN1				eS	Sg	16 12 53.5	+1.3
	baz=205						

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*IDC **14** 16:15:30.6±2.1, 4°.85N×125°.50E, h0^{km}, mb3.4/3, mbtmp3.4/3, MS3.2/1, Error ellipse: s-maj=190.6km s-min=24.6km az=65.0*

*MAN **14** 16:15:45.9, 5°.60N×126°.76E, h11^{km}, mb4.4, ML3.2, MS2.9, Hypocentre not reviewed by the ISC*

ISC 14 16:15:40.9±1.6, **5°.3N**±0°.2×**126°.9E**±0°.3, **h100**^{km}, **n7**, σ**1s.32**/8, **mb3.1**/3, **2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.41	305	eS	Sn	16 16 23.6	-1.4
DDMP	Don Marcelino,	1.41	305	⇓eP	Pn	16 16 06.9	+0.8
GSPH	General Santos	2.06	293	⇑iP	Pn	16 16 14.9	+0.5
KCP	Kidapawan	2.46	314	⇑eP	Pn	16 16 20.3	+0.8
KCP				iS	Sn	16 16 50.4	+1.2
WRA	Warramunga Arr	26.12	164	P	P	16 21 07.2	+1.4
	0.2nm,0.3s,baz=339,slow=11,SNR=9.5						
WRA				LR	LR	16 30 48.0	
	comp=Z,53nm,21.4s,baz=45,slow=35						
	0.2nm,0.3s						
ASAR	Alice Springs	29.58	167	P	P	16 21 36.4	-0.3
	0.1nm,0.5s,baz=347,slow=7.7,SNR=6.3						
	0.1nm,0.5s						
MKAR	Makanchi Array	56.37	325	P	P	16 25 10.5	-1.3
	0.7nm,0.4s,baz=114,slow=7.7,SNR=12						
	0.7nm,0.4s						

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*IDC **14** 16:20:58.1±9.7, 24°.42S×179°.78E, h468^{km}±100^{km}, mb3.4/3, mbtmp4.2/4, Error ellipse: s-maj=83.2km s-min=37.3km az=32.0*

ISC 14 16:20:58.1±2.3, **24°.5S**±0°.1×**179°.9W**±0°.3, **h500**^{km}, **n6**, σ**1s.13**/7, **mb4.0**/3, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	13.96	190	P	P	16 23 58.5	+1.3
	5.0nm,0.8s,baz=352,slow=19,SNR=6.4						
URZ				S	S	16 26 23.5	-1.4
	3.4nm,0.7s,baz=22,slow=19,SNR=1.2						
CTA	Charters Tower	31.54	271	P	P	16 26 39.6	+0.7
	5.7nm,0.5s,baz=92,slow=11,SNR=18						
	5.7nm,0.5s						
ASAR	Alice Springs	42.00	261	P	P	16 28 05.0	-0.1
	0.6nm,0.5s,baz=93,slow=6.9,SNR=35						
	0.6nm,0.5s						
WRA	Warramunga Arr	42.42	267	P	P	16 28 07.9	-0.6
	2.5nm,0.5s,baz=101,slow=8.0,SNR=27						
	2.5nm,0.5s						
AKASG	Malin Array Be	145.49	327	PKPbc	PKPbc	16 39 39.2	-0.6
	0.2nm,0.3s,baz=48,slow=3.4,SNR=2.2						
BRTR	Keskin Array B	147.97	306	PKPbc	PKPab	16 39 51.2	-0.4
	0.5nm,0.6s,baz=91,slow=5.8,SNR=4.6						

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*NEIC **14** 16:26:25.3±1.4, 7°.8S±0°.1×122°.5E±0°.2, h243^{km}±10^{km}, mb4.2/10, Error ellipse: s-maj=30.2km s-min=9.6km az=50.0*

*IDC **14** 16:26:25.2±0.9, 7°.84S×122°.51E, h231^{km}±8^{km}, mb3.4/6, mbtmp4.0/11, Error ellipse: s-maj=30.4km s-min=9.5km az=62.0*

*DJA **14** 16:26:27.6±0.4, 8°S±4°×12°2E±°, h227^{km}±5^{km}, M3.8/11, mb4.3/6, mB4.1/1, MLv3.5/11, Mw(mB)3.1/1*

ISC 14 16:26:26.5±0.6, **7°.92S**±0°.06×**122°.53E**±0°.07, **h250**^{km}, **n62**, σ**1s.33**/65, **mb3.8**/9, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	0.77	202		Pn	16 26 58.5	-1.9
MMRI	Maumere	0.77	202	P	Pn	16 26 59.0	-1.4
MMRI	Maumere	0.77	202	P	Pn	16 26 59.1	-1.4
EDFI	Ende, Flores	1.17	225	P	Pn	16 27 01.2	-1.5
BBSI	Bau Bau	2.41	1	P	Pn	16 27 12.9	-0.1
SOEI	Soe	2.51	137		Pn	16 27 12.8	-1.2
BATI	Baumata	2.54	154	P	Pn	16 27 13.3	-1.0
	173nm,0.4s,baz=351,slow=3.1,SNR=66						
BATI				S	S	16 27 49.4	-2.6
	175nm,0.3s,baz=115,slow=23,SNR=11						
BATI	Baumata	2.54	154	P	Pn	16 27 13.2	-1.0
BKSI	Bulukumba	3.52	317	P	Pn	16 27 23.6	-1.2
KAPI	Kappang	3.99	316	P	Pn	16 27 28.7	-1.6
	10.0nm,0.4s,baz=156,slow=7.2,SNR=4.4						
KAPI	Kappang	3.99	316	Pn	Pn	16 27 27.2	-3.1
BNSI	Bone	4.24	325	P	Pn	16 27 34.5	+1.2
PLAI	Plampang	4.79	259	P	Pn	16 27 38.8	-1.0
PLAI	Plampang	4.79	259	P	Pn	16 27 38.8	-1.0
IGBI	Denpasar	7.36	262	P	Pn	16 28 11.2	-0.6
	0.3nm50nm,1.0s						
JAGI	Jajag, Banyuwa	8.31	266	P	Pn	16 28 21.8	-2.1
	32nm,1.5s						
MTN	Manton Dam	9.78	121		Pn	16 28 40.9	-1.5
MTN	Manton Dam	9.78	121	P	Pn	16 28 41.2	-1.2
KNRA	Kununurra	9.83	142		Pn	16 28 41.3	-1.7
KNRA	Kununurra	9.83	142	P	Pn	16 28 41.5	-1.6
PWJI	Pagerwojo	10.62	269	P	Pn	16 28 53.0	-0.1
	11nm,0.8s						
KDU	Kakadu	10.87	117	P	Pn	16 28 54.7	-1.4
SIJI	Sorong	11.17	52	P	Pn	16 28 58.2	-1.7
	2.1nm,0.4s,baz=267,slow=9.4,SNR=4.6						
PCJI	Pacitan	11.25	268	P	Pn	16 28 59.8	-1.0
	33nm,0.7s						
UGM	Wanagama	11.89	269	P	Pn	16 29 08.6	-0.4
	88nm,1.6s						
PSA00	Pilbara Seismi	13.82	191		Pn	16 29 32.2	-0.4
CNJI	Cibinong	15.28	271	P	Pn	16 29 49.1	-1.1
	48nm,1.2s						
WB0	Warramunga Arr	16.46	137	P	P	16 30 02.4	-0.2
WB0				IAmb	IAmb	16 30 04.2	
	comp=Z,5.4nm,1.0s						
WRA	Warramunga Arr	16.55	137	P	P	16 30 03.5	0.0
	comp=Z,2.5nm,0.5s,baz=314,slow=12,SNR=37						
WRA				S	S	16 33 03.8	+0.1
	comp=Z,0.8nm,0.8s,baz=321,slow=25,SNR=3.6						
WRA	Warramunga Arr	16.55	137	P	P	16 30 03.3	-0.2
WRAB	Tennant Creek	16.55	137	P	P	16 30 03.6	+0.2
WRAB	Tennant Creek	16.55	137	P	P	16 30 03.9	+0.4
WB2	Warramunga Arr	16.56	137	P	P	16 30 03.8	+0.2
WB2				IAmb	IAmb	16 30 04.9	
	comp=Z,5.9nm,0.9s						
WR0	Warramunga Arr	16.70	137	P	P	16 30 05.3	+0.2
WR0				IAmb	IAmb	16 30 06.5	
	comp=Z,5.7nm,0.6s						
WRKA	Warakurna	17.89	163	P	P	16 30 19.5	+1.4
MEEK	Meekatharra	18.99	191	P	P	16 30 30.8	+0.9
AS31	Alice Springs	19.09	146	P	P	16 30 32.0	+1.1
AS31				IAmb	IAmb	16 30 33.0	
	comp=Z,5.5nm,0.5s						
ASAR	Alice Springs	19.09	146	P	P	16 30 31.9	+1.0
	comp=Z,8.0nm,0.4s,baz=330,slow=13,SNR=226						
ASAR				S	S	16 33 58.1	+4.1
	comp=Z,0.5nm,0.9s,baz=328,slow=21,SNR=4.2						
ASAR	Alice Springs	19.09	146	P	P	16 30 31.6	+0.7
QIS	Mount Isa	20.75	129	P	P	16 30 49.1	+0.4
MORW	Morawa	21.91	195	P	P	16 31 00.0	+0.2
MORW	Morawa	21.91	195	P	P	16 31 00.6	+0.8
BLDU	Ballidu	23.23	193	P	P	16 31 12.6	+0.8
FORT	Forrest	23.33	168	P	P	16 31 13.4	+0.8
FORT				IAmb	IAmb	16 31 19.8	
	comp=Z,10nm,0.8s						
FORT	Forrest	23.33	168	P	P	16 31 14.7	+2.1
OOD	Oodnadatta	23.36	149	P	P	16 31 13.8	+0.8
MTSU	Mount Surprise	23.50	118	P	P	16 31 15.6	+1.2
KLBR	Kellerberrin	23.98	190	P	P	16 31 20.4	+1.9
	comp=Z,24nm,1.9s						
MULG	Mulgathing	24.74	156	P	P	16 31 26.3	+0.9
BBOO	Buckleboo	27.77	155	P	P	16 31 51.9	-0.6
BBOO				IAmb	IAmb	16 31 54.3	
	comp=Z,6.5nm,1.1s						
BBOO	Buckleboo	27.77	155	P	P	16 31 53.3	+0.8
HTT	Hallett	29.57	151	P	P	16 32 10.1	+1.6
STKA	Stephens Creek	29.72	146	P	P	16 32 10.3	+0.5
	comp=Z,2.8nm,0.3s,baz=334,slow=13,SNR=4.3						
	comp=Z,2.8nm,0.3s						
STKA	Stephens Creek	29.72	146	P	P	16 32 10.7	+1.0
CMSA	Cobar Meteorol	31.91	141	P	P	16 32 30.7	+1.7
ARPS	Mount Arapiles	33.67	151	P	P	16 32 46.3	+2.2
SONM	Songino Array	57.31	347	P	P	16 35 47.9	-0.7
	comp=Z,0.2nm,0.3s,baz=166,slow=6.8,SNR=2.7						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	65.16	331	P	P	16 36 40.9	-0.1
	comp=Z,0.9nm,0.5s,baz=137,slow=8.0,SNR=16						
	comp=Z,0.9nm,0.5s						
PETK	Petropavlovsk-	67.72	22	P	P	16 36 58.1	+1.1
	comp=Z,0.6nm,0.5s,baz=236,slow=2.1,SNR=5.4						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	69.34	337	P	P	16 37 06.5	-0.5
	comp=Z,0.5nm,0.4s,baz=118,slow=6.4,SNR=2.2						
	comp=Z,0.5nm,0.4s						
VNDA	Vanda	72.53	172	P	P	16 37 27.2	+1.5
	comp=Z,0.3nm,0.4s,baz=334,slow=7.5,SNR=2.9						
	comp=Z,0.3nm,0.4s						
TORD	Torodi Ar. Bea	121.70	281	PKP	PKiKP	16 44 51.7	-0.1
	comp=Z,0.3nm,0.6s,baz=111,slow=3.2,SNR=2.0						

IDC 14 16:30:55.4±6.9, **18°.81S**×**177°.22W**, **h0**^{km}, **mb3.9**/2, **mbtmp3.9**/2, **Error ellipse: s-maj=288.0km s-min=68.8km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.59	260	P	P	16 39 17.7	0.0
	0.5nm,0.3s,baz=96,slow=7.6,SNR=18						
	0.5nm,0.3s						
ASAR	Alice Springs	45.64	255	P	P	16 39 17.9	-0.3
	1.1nm,0.5s,baz=90,slow=8.2,SNR=28						
	1.1nm,0.5s						
BRTR	Keskin Array B	146.22	315	PKPbc	PKPdf	16 50 37.4	+0.2
	0.4nm,0.7s,baz=90,slow=4.3,SNR=2.3						

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*IDC **14** 16:34:10.6±1.6, 29°.54N×130°.18E, h0^{km}, mb3.3/3, mbtmp3.3/4, ML3.0/1, MS2.5/1, Error ellipse: s-maj=53.5km s-min=28.2km az=95.0*

*JMA **14** 16:34:14.3±0.1, 29°.6N±0°.9×13°0E±°, h12^{km}, MV2.9/18, NEAR TOKARA ISLANDS*

JMA Felt II J1 at NEAR TOKARA ISLANDS .

ISC 14 16:34:12.7±1.2, **29°.46N**±0°.05×**129°.80E**±0°.07, **h8**^{km}±9^{km}, **n18**, σ**1s.41**/25, **mb3.4**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.38	10	P	Pg	16 34 21.1	+0.9
JNN				S	Sg	16 34 25.9	+0.6
JTAJ	Takarajima	0.61	240	P	Pb	16 34 25.4	-0.2
JTAJ				eS	Sb	16 34 33.5	-0.9
JYAK	Yakushimahirau	0.99	38	eP	Pn	16 34 33.1	+0.2
JYAK				eS	Sn	16 34 47.0	-0.1
JKC	Kuchinoerabu	1.05	19	P	Pg	16 34 33.0	+0.1
JKC				eS	Sg	16 34 46.2	-0.4
JAM	Amami Oshima	1.06	189	eP	Pn	16 34 35.6	+1.6
JAM				eS	Sn	16 34 51.7	+2.8
JMTN	Minamitane	1.33	45	eP	Pg	16 34 38.7	+0.4
JAMN	Amaminishikomi	1.33	204	eP	Pg	16 34 38.6	+0.2
JTN	Tanegashima 3	1.57	40	eP	Pb	16 34 41.9	-0.1
JTN				eS	Sb	16 35 02.5	+0.5
JTK	Tokunoshima	1.83	204	eP	Pb	16 34 46.2	-0.3
JTK				eS	Sg	16 35 09.9	-1.7
JOKE	Okinoerabujima	2.36	208	eP	Pb	16 34 54.0	-1.5
JYRO	Yoronjima	2.71	206	eP	Pb	16 34 58.8	-2.6
JIH	Iheya	2.91	214	eP	Pn	16 35 01.6	+2.3
JOW	Kunigami	2.95	208	Pn	Pn	16 35 01.5	+1.6
	3.0nm,0.3s,baz=95,slow=25,SNR=14						
JOW				Sn	Sn	16 35 36.8	+1.2
	1.5nm,0.3s,baz=104,slow=7.2,SNR=1.4						
	6.7nm,0.3s						
JOW	Kunigami	2.95	208	eP	Pn	16 35 02.2	+2.3
KSRS	Korea Array	8.12	349	LR	LR	16 39 13.8	
	comp=Z,35nm,20.6s,baz=135,slow=37						
SONM	Songino Array	25.73	322	P	P	16 39 43.3	-0.5
	0.6nm,0.9s,baz=138,slow=8.8,SNR=3.0						
	0.6nm,0.9s						
WRA	Warramunga Arr	49.31	174	P	P	16 43 02.2	-0.3
	0.4nm,1.0s,baz=358,slow=7.9,SNR=1.2						
	0.4nm,1.0s						
YKA	Yellowknife Ar	75.02	26	P	P	16 45 53.0	-1.5
	0.2nm,0.5s,baz=298,slow=5.8,SNR=3.0						
	0.2nm,0.5s						

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*IDC **14** 16:56:09.8±0.5, 59°.57S×26°.05W, h0^{km}, mb4.2/12, mbtmp4.2/13, ML4.6/1, MS3.3/11, Error ellipse: s-maj=21.7km s-min=16.6km az=57.0*

*NEIC **14** 16:56:18.4±1.5, 59°.63S±0°.09×26°.2W±0°.2, h65^{km}±7^{km}, mb4.6/37, Error ellipse: s-maj=14.1km s-min=9.7km az=137.0*

ISC 14 16:56:15.4±0.5, **59°.64S**±0°.08×**26°.02W**±0°.09, **h40**^{km}, **n73**, σ**1s.08**/64, **mb4.5**/26, **MS3.3**/9, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.84	309	Pn	Pn	16 58 08.7	+2.0
ORCD	Orcadas	9.38	255	Pn	Pn	16 58 33.0	+5.3
VNA1	Neumayer--Stat	13.25	154	P	Pn	16 59 19.7	-0.9
VNA1				S	Sn	17 01 32.3	-14
VNA3	Neumayer Olymp	13.41	157	P	Pn	16 59 21.1	-1.6
VNA3				S	Sn	17 01 35.4	-15
ESPZ	Base Esperanza	15.15	242	Pn	Pn	16 59 45.7	-0.5
SNAA	Sanae	15.23	152	P	Pn	16 59 45.9	-1.3
SNAA				S	Sn	17 02 19.0	-16
SNAA	Sanae	15.23	152	Pn	Pn	16 59 46.1	-1.2
	2.5nm,0.3s,baz=312,slow=12,SNR=56						
SNAA				Sn	Sn	17 02 19.1	-15
	0.3nm,0.3s,baz=14,slow=20,SNR=2.1						
SNAA				LR	LR	17 04 19.7	
	comp=Z,92nm,21.7s,baz=330,slow=32						
	8.1nm,0.5s						
SNAA	Sanae	15.23	152		Pn	16 59 46.0	-1.2
TROLL	Troll, Antarti	16.79	149	P	Pn	17 00 05.6	-1.5
TROLL				S	Sn	17 02 59.0	-13
PMSA	Palmer Station	18.24	238	LR	LR	17 06 35.8	
	comp=Z,95nm,20.8s,baz=56,slow=34						
BELA	Belgrano 2	18.54	186	P	P	17 00 28.1	0.0
USHA	Ushuaia	23.14	263	P	P	17 01 17.5	-0.2
	5.8nm,0.8s,baz=249,slow=10,SNR=2.8						
	5.8nm,0.8s						
DSPA	Despedida	23.50	265	P	P	17 01 21.3	+0.1
MG02	Cerro Sombrero	24.61	267	P	P	17 01 30.3	-1.1
MG03	Isla Dawson	24.66	264	P	P	17 01 31.4	-0.5
GO09	Cerro Castillo	27.05	267	P	P	17 01 51.5	-2.1
GO09				IAmb	IAmb	17 02 02.1	
	comp=Z,27nm,1.3s						
QSPA	South Pole Qui	30.60	180	P	P	17 02 26.7	+1.5
	comp=Z,1.6nm,0.5s,baz=214,slow=1.5,SNR=38						
QSPA				PcP	PcP	17 05 23.0	+0.5
	comp=Z,1.9nm,0.8s,baz=268,slow=21,SNR=3.3						
QSPA				LR	LR	17 14 26.7	
	comp=Z,85nm,19.2s,baz=203,slow=36						
	comp=Z,1.6nm,0.5s						
QSPA	South Pole Qui	30.60	180	P	P	17 02 26.3	+1.1
TRQA	Tornquist	31.42	297	P	P	17 02 32.6	+0.1
TRQA				IAmb	IAmb	17 02 40.7	
	comp=Z,9.1nm,1.3s						
AY01	Puyuhuapi	31.70	278	P	P	17 02 35.7	+0.9
AY01				IAmb	IAmb	17 02 47.7	
	comp=Z,7.3nm,1.1s						
PLCA	Paso Flores	33.37	284	P	P	17 02 49.5	-0.1
	comp=Z,1.0nm,0.6s,baz=124,slow=7.8,SNR=6.7						
PLCA				LR	LR	17 15 23.1	
	comp=Z,46nm,19.9s,baz=156,slow=35						
	comp=Z,1.0nm,0.6s						
PLCA	Paso Flores	33.37	284	P	P	17 02 47.0	-2.6
GO05	Huala	38.55	289	P	P	17 03 32.1	-1.7
BO04	La Punta	38.75	291	P	P	17 03 35.1	-0.5
BO04				IAmb	IAmb	17 03 45.6	
	comp=Z,16nm,1.2s						
MT09	Talagante	39.10	291	P	P	17 03 38.3	-0.4
MT02	Curacav	39.60	291	P	P	17 03 42.5	-0.1
MT02				IAmb	IAmb	17 03 55.1	
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	39.69	313	P	P	17 03 42.8	-0.6
	comp=Z,0.9nm,0.5s,baz=222,slow=13,SNR=3.5						
CPUP				LR	LR	17 20 06.8	
	comp=Z,25nm,19.1s,baz=194,slow=36						
	comp=Z,0.9nm,0.5s						
VA06	Catapilco	40.25	292	P	P	17 03 47.0	-0.9
SUR	Sutherland	41.14	70	LR	LR	17 17 14.1	
	comp=Z,58nm,19.9s,baz=178,slow=31						
CO02	Combarbal	41.24	293	P	P	17 03 55.9	-0.5
CO02				IAmb	IAmb	17 04 02.1	
	comp=Z,16nm,1.0s						
CO01	Juntas del Tor	41.85	295	P	P	17 04 01.1	-0.4
CO01				IAmb	IAmb	17 04 10.2	
	comp=Z,5.8nm,0.8s						
CO06	Fray Jorge	41.98	293	P	P	17 04 01.3	-0.9
CO06				IAmb	IAmb	17 04 10.0	
	comp=Z,18nm,1.1s						
SBA	Scott Base	42.53	184	P	P	17 04 08.7	+2.5
VNDA	Vanda	43.00	183	P	P	17 04 11.5	+1.5
	comp=Z,1.1nm,0.7s,baz=167,slow=4.0,SNR=9.7						
VNDA				LR	LR	17 20 59.6	
	comp=Z,38nm,19.0s,baz=230,slow=35						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	43.00	183	P	P	17 04 11.9	+1.9
AC04	Llanos de Chal	43.80	296	P	P	17 04 16.8	-0.2
AC04				IAmb	IAmb	17 04 18.3	
	comp=Z,23nm,1.3s						
GO02	Mina Guanaco	45.75	299	P	P	17 04 30.5	-2.5
GO02				IAmb	IAmb	17 04 39.2	
	comp=Z,14nm,1.4s						
BOSA	Boshof	46.39	71	LR	LR	17 21 38.8	
	comp=Z,29nm,19.0s,baz=181,slow=33						
BDFB	Brasilia	46.80	330	P	P	17 04 40.0	-0.9
	comp=Z,1.9nm,0.7s,baz=138,slow=8.1,SNR=3.1						
	comp=Z,1.9nm,0.7s						
LVC	Limon Verde	47.69	302	P	P	17 04 48.6	+0.4
	comp=Z,2.0nm,0.3s,baz=179,slow=4.9,SNR=3.1						
	comp=Z,2.0nm,0.3s						
LVC	Limon Verde	47.69	302	P	P	17 04 48.2	0.0
LVC				IAmb	IAmb	17 04 50.4	
	comp=Z,3.3nm,0.8s						

PB04	IPOC Station P	48.47	301	P	P	17 04 53.5	-0.5
PB09	IPOC Station P	48.55	302	P	P	17 04 54.4	-0.2
PB09				IAmb	IAmb	17 05 02.8	
	comp=Z,9.1nm,1.2s						
PB07	IPOC Station P	48.89	301	P	P	17 04 56.7	-0.5
PB02	IPOC Station P	49.25	301	P	P	17 04 59.5	-0.4
PB02				IAmb	IAmb	17 05 01.1	
	comp=Z,6.9nm,0.7s						
PB01	IPOC Station P	49.32	302	P	P	17 05 00.5	+0.1
PB01				IAmb	IAmb	17 05 01.4	
	comp=Z,6.2nm,0.6s						
PB11	IPOC Station P	50.52	303	P	P	17 05 09.4	-0.2
PB11				IAmb	IAmb	17 05 35.5	
	comp=Z,8.5nm,1.2s						
TSUM	Tsumeb	51.01	57	P	P	17 05 13.8	+0.6
	comp=Z,3.7nm,0.9s,baz=240,slow=5.9,SNR=3.8						
TSUM				LR	LR	17 23 40.6	
	comp=Z,40nm,18.5s,baz=180,slow=32						
	comp=Z,3.7nm,0.9s						
TSUM	Tsumeb	51.01	57	P	P	17 05 13.6	+0.4
TSUM				IAmb	IAmb	17 05 16.4	
	comp=Z,12nm,1.4s						
H10N1	ASCENSION HYDR	52.42	14	T	T	18 00 50.9	
	baz=194,slow=75						
H10N3	ASCENSION HYDR	52.42	14	T	T	18 00 53.4	
	baz=194,slow=75						
H10N2	ASCENSION HYDR	52.44	14	T	T	18 00 51.9	
	baz=194,slow=75						
LPAZ	La Paz	52.99	306	P	P	17 05 28.7	+0.1
	comp=Z,1.5nm,0.4s,baz=100,slow=6.5,SNR=11						
	comp=Z,1.5nm,0.4s						
LPAZ	La Paz	52.99	306	P	P	17 05 28.4	-0.1
RCBR	Riachuelo	54.22	348	LR	LR	17 23 49.0	
	comp=Z,52nm,20.3s,baz=5.0,slow=31						
NNA	Nana	60.54	299	LR	LR	17 32 49.7	
	comp=Z,16nm,19.7s,baz=174,slow=36						
TOA0	Torodi Ar. Sit	75.92	28	P	P	17 07 58.8	+1.2
TOA0				IAmb	IAmb	17 07 59.9	
	comp=Z,5.1nm,0.8s						
TORD	Torodi Ar. Bea	75.92	28	P	P	17 07 58.7	+1.2
	comp=Z,3.3nm,0.6s,baz=198,slow=6.2,SNR=23						
	comp=Z,3.3nm,0.6s						
ESPN	Las Esperanzas	85.39	303	P	P	17 08 47.5	-0.8
ACON	Acoyapa	85.56	303	P	P	17 08 51.4	+2.3
ASAR	Alice Springs	95.37	162	P	P	17 09 35.0	-0.3
	comp=Z,0.7nm,0.6s,baz=186,slow=3.7,SNR=18						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	99.09	161	P	Pdif	17 09 51.6	-0.6
	comp=Z,0.6nm,0.9s,baz=192,slow=4.4,SNR=2.1						
	comp=Z,0.6nm,0.9s						
CMAR	Chiang Mai Arr	123.19	112	PKP	PKiKP	17 15 08.2	+0.5
	comp=Z,1.1nm,0.6s,baz=234,slow=3.8,SNR=11						
FINES	FINESS Array B	127.27	28	PKP	PKiKP	17 15 13.5	-0.8
	comp=Z,1.0nm,0.6s,baz=153,slow=2.1,SNR=7.7						
AAK	Ala-Archa	130.52	73	PKP	PKiKP	17 15 21.2	-0.5
	comp=Z,0.4nm,0.3s,baz=220,slow=2.6,SNR=3.7						
ARCES	ARCESS Array B	134.04	23	PKP	PKiKP	17 15 26.9	-0.9
	comp=Z,1.5nm,0.6s,baz=199,slow=1.8,SNR=11						
MKAR	Makanchi Array	137.35	74	PKP	PKPdf	17 15 32.3	-1.0
	comp=Z,0.7nm,0.8s,baz=247,slow=3.1,SNR=4.1						
YKA	Yellowknife Ar	139.21	315	PKP	PKPdf	17 15 36.1	-0.1
	comp=Z,0.5nm,0.6s,baz=123,slow=2.3,SNR=8.5						
ZALV	Zalesovo Beam	143.28	68	PKhKP	PKPpre	17 15 40.5	
	comp=Z,0.7nm,0.4s,baz=252,slow=3.9,SNR=5.0						
INK	Inuvik	148.92	317	PKPbc	PKPbc	17 15 56.5	-0.5
	comp=Z,1.6nm,0.8s,baz=137,slow=3.6,SNR=4.2						
SONM	Songino Array	150.16	92	PKPbc	PKiKP	17 16 01.4	-0.3
	comp=Z,4.4nm,0.7s,baz=216,slow=3.0,SNR=34						
KDAK	Kodiak Island	152.80	290	PKPbc	PKiKP	17 16 06.1	-0.5
	comp=Z,1.1nm,0.4s,baz=198,slow=16,SNR=10						
ILAR	Eielson Array	152.87	306	PKPbc	PKPbc	17 16 05.5	-0.8
	comp=Z,0.5nm,0.7s,baz=159,slow=3.9,SNR=8.1						

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*DDA **14** 17:03:00.8±0.0, 40°.29N×38°.68E, h7^{km}, ML2.3*
*ISK **14** 17:03:00.0, 40°.31N×38°.68E, h12^{km}, ML2.6/8*
ISC 14 17:03:00.6±0.9**, 40°.31N**±0°.03×**38°.69E**±0°.02**, h12**^{km}±6^{km}**,**
n23, σ0^{s}.96/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALUC	Giresun/Alucra	0.07	61	P	Pg	17 03 02.8	-0.4
ALUC				S	Sg	17 03 05.0	-0.2
SUSE	Susehri	0.39	255	P	Pg	17 03 08.5	+0.2
SUSE				*i* AML	AML	17 03 19.0	
	comp=E,505nm,0.4s						
SUSE				*i* AML	AML	17 03 20.0	
	comp=N,338nm,0.2s						
KELT	Kelkit	0.46	110	P	Pg	17 03 10.2	+0.5
KELT				S	Sb	17 03 17.0	-0.7
KELT				*i* AML	AML	17 03 18.0	
	comp=E,235nm,0.4s						
KELT				*i* AML	AML	17 03 19.0	
	comp=N,190nm,0.5s						
ESPY	Espiye-Giresun	0.61	3	PG	Pg	17 03 12.5	+0.1
ESPY				SG	Sg	17 03 21.2	+0.8
GUMT	Gumushane	0.62	76	PG	Pg	17 03 12.8	+0.1
CUZAR	Zara_SIVAS	0.82	239	P	Pb	17 03 16.4	-0.5
ILIC	ilic-Erzincan	0.86	186	PG	Pb	17 03 17.5	-0.1
MACK	Trabzon	1.04	52	P	Pb	17 03 20.9	+0.5
MACK				S	Sn	17 03 36.2	+0.8
RSDY	Resadiye-TOKAT	1.04	275	PG	Pg	17 03 20.1	-0.6
RSDY				SG	Sn	17 03 35.2	-0.5
KEMA	Kemaliye	1.05	188	P	Pn	17 03 20.9	-0.4
KEMA				S	Sn	17 03 38.1	+2.2
KTUT	Trabzon	1.06	50	PG	Pb	17 03 21.2	+0.3
ERZN	Erzincan	1.07	132	PG	Pg	17 03 20.9	-0.3
BAYT	Aydıntepe-Bayb	1.11	85	PN	Pg	17 03 21.8	-0.2
BAYT				SN	Sn	17 03 37.6	+0.1
BAYB	BAYBURT	1.20	92	P	Pb	17 03 23.2	-0.2
BAYB				*i* AML	AML	17 03 43.0	
	comp=E,69nm,0.3s						
ARPR	Arapgir-MALATY	1.25	193	PN	Pn	17 03 23.1	-0.9
SVSK	Karacayir	1.36	254	PN	Pn	17 03 25.3	0.0
CUKAN	kangal_SIVAS	1.37	224	P	Pg	17 03 26.3	-0.5
CUKAN				S	Sg	17 03 47.0	+2.4
CUKAN				*i* AML	AML	17 03 50.0	
	comp=N,47nm,0.5s						
CUKAN				*i* AML	AML	17 03 52.0	
	comp=E,41nm,0.7s						
KOPT	Kop Dagi	1.42	101	P	Pg	17 03 27.5	-0.2
KOPT				S	Sg	17 03 48.6	+2.5
KOPT				*i* AML	AML	17 03 55.0	
	comp=N,38nm,0.5s						
KOPT				*i* AML	AML	17 03 55.0	
	comp=E,35nm,0.5s						
HEKM	Malatya_Hekimh	1.54	202	P	Pg	17 03 30.0	0.0
HEKM				*i* AML	AML	17 03 56.0	
	comp=E,48nm,0.6s						
KRIK	Erzurum-spir	1.71	88	P	Pn	17 03 28.6	-1.8
KRIK				S	Sn	17 03 52.2	-0.1
KOVA	Elazig, Kovanc	1.82	151	P	Pg	17 03 34.8	-0.7
CUAYA	Sivas-Altinyay	1.82	236	P	Pg	17 03 35.0	-0.6
ELZG	Elazig	1.82	173	P	Pg	17 03 34.6	-1.0
ELZG				*i* AML	AML	17 04 05.0	
	comp=E,40nm,0.5s						
ELZG				*i* AML	AML	17 04 05.0	
	comp=N,26nm,0.5s						

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*TUL **14** 17:11:49.9±1.6, 36°.87N±0°.01×98°.14W±0°.02, h6^{km}±3^{km}, ML2.7, mb_Lg2.2/16(NEIC), Error ellipse: s-maj=2.1km s-min=1.3km az=120.0*
NEIC 14 17:11:50.0±1.6**, 36°.86N**±0°.01×**98°.14W**±0°.01**, h5**^{km}±1^{km}**, Error ellipse: s-maj=2.9km s-min=2.1km az=48.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.84	236	Pg	Pg	17 12 06.0	-0.2
U32A				Sg	Sg	17 12 17.2	+0.1
T35A	Sooner Cattle	1.30	87	Pn	Pn	17 12 14.2	-0.7
T35A				Sg	Sg	17 12 31.4	-0.5
OKCSW	OKLAHOMA CITY	1.55	158	Pn	Pb	17 12 19.3	+0.1
R32A	Long Quarter,	1.63	344	Pn	Pb	17 12 20.0	-0.6
R32A				IAmb_Lg		17 12 43.3	
	comp=Z,18nm,0.8s						
FNO	Franklin	1.70	159	Pn	Pn	17 12 20.4	0.0
TUL1	Leonard	2.11	116	Pn	Pn	17 12 26.7	+0.6
WMOK	Wichita Mounta	2.18	194		Pn	17 12 26.4	-0.5
WMOK				IAmb_Lg		17 13 02.3	
	comp=Z,11nm,0.8s						
X34A	Smith Ranch, M	2.26	174	Pn	Pb	17 12 29.9	-1.5
CBKS	Cedar Bluff	2.33	328	Pn	Pn	17 12 30.3	+1.2
CBKS				IAmb_Lg		17 13 04.0	
	comp=Z,9.9nm,0.8s						
KSU1	Kansas State U	2.55	28	Pn	Pn	17 12 33.2	+1.2
X37A	Clayton	3.19	134	Pn	Pn	17 12 40.9	+0.1
HHAR	Hobbs	3.42	98	Pn	Pn	17 12 42.0	-2.1
AMTX	Amarillo	3.49	237	Pn	Pn	17 12 44.0	-1.0
AMTX				IAmb_Lg		17 13 47.7	
	comp=Z,8.1nm,0.7s						
W39A	Magazine	3.90	114	Pn	Pn	17 12 49.2	-1.4
S39A	Bolivar	3.93	76	Pn	Pn	17 12 48.2	-2.8
U40A	Yellville	4.28	95	Pn	Pn	17 12 54.5	-1.3
MIAR	Mount Ida	4.37	120	Pn	Pn	17 12 55.8	-1.2
P38A	Dawn	4.56	51	IAmb_Lg		17 14 27.7	
	comp=Z,5.9nm,0.8s						
MGMO	Mountain Grove	4.71	85	Pn	Pn	17 12 59.2	-2.5
MSTX	Muleshoe	4.76	234	Pn	Pn	17 13 01.3	-1.2
R40A	Maddies Statio	4.88	71		Pn	17 13 02.4	-1.6
WHTX	Lake Whitney,	4.88	173	Pn	Pn	17 13 04.2	+0.1
X40A	Basin Creek Fa	4.92	117	Pn	Pn	17 13 04.1	-0.5
FCAR	Ozark Folk Cen	4.95	99	Pn	Pn	17 13 03.6	-1.4
FCAR				IAmb_Lg		17 14 24.4	
	comp=Z,4.0nm,1.0s						
WHAR	Wooly Hollow	4.99	107	Pn	Pn	17 13 03.6	-1.9
T25A	Trinidad	5.03	275	Pn	Pn	17 13 04.4	-1.9
W41B	Gary Mavity, V	5.06	108	Pn	Pn	17 13 05.2	-1.3
P40A	Paris	5.49	59	Pn	Pn	17 13 10.0	-2.4
CCM	Cathedral Cave	5.61	76	Pn	Pn	17 13 11.5	-2.6
CCM				IAmb_Lg		17 14 58.2	
	comp=Z,3.8nm,0.8s						
PBMO	Poplar Bluff	6.18	88	Pn	Pn	17 13 19.0	-3.0
N23A	Red Feather La	7.30	306	IAmb_Lg		17 15 43.0	
	comp=Z,2.7nm,0.8s						

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*IDC **14** 17:17:09.1±2.3, 56°.11N×157°.70W, h0^{km}, mb3.5/7, mbtmp3.5/9, ML3.4/2, Error ellipse: s-maj=59.2km s-min=18.7km az=157.0*
*NEIC **14** 17:17:14.8±1.8, 57°.05N±0°.04×157°.77W±0°.07, h15^{km}±1^{km}, Error ellipse: s-maj=6.7km s-min=3.7km az=135.0*
*AEIC **14** 17:17:14±1.8, 57°.07N±0°.02×157°.84W±0°.07, h24^{km}±5^{km}, ML3.5, mb4.1/5(NEIC), ML3.7/42(NEIC), Mwr3.8/19(NEIC), Error ellipse: s-maj=5.2km s-min=2.5km az=104.0*
*NEIC **14** 17:17:15, 57°.08N×157°.84W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.01; $M_{\theta\theta}$-3.00; $M_{\phi\phi}$3.00; $M_{r\theta}$-4.39; $M_{\theta\phi}$-0.88; $M_{\phi r}$-3.38; Fault plane solution: $M_0 6.36000\times10^{14}$ NP1:ϕ_s224.62000°, δ88.93000°, λ61.44000°. NP2:ϕ_s132.65000°, δ28.58000°, λ177.76000°. Principal axes: T 5.6280, Plg39.0000°, Azm109.0000°; N 1.2739, Plg29.0000°, Azm225.0000°; P -6.9020, Plg37.0000°, Azm340.0000°;*
ISC 14 17:17:13.7±1.4**, 57°.00N**±0°.04×**157°.74W**±0°.03**, h9**^{km}±10^{km}**,**
n139, σ1^{s}.13/145**, mb3.5**/7**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANNW	Aniakchak Nort	0.26	264		Pb	17 17 21.1	+0.5
AZAC	Aniakchak	0.29	250		Pb	17 17 21.3	+0.2
AZAC					Sb	17 17 25.5	-0.5
ANPB	Aniakchak Plen	0.35	237		Pb	17 17 22.3	+0.1
PLBL	Peulik Blue Cr	0.86	35		Pn	17 17 31.7	-0.4
PLK1	Peulik 1	1.01	37		Pn	17 17 34.4	+0.3
PLK3	Peulik 3	1.06	48		Pg	17 17 34.7	+0.7
PLK3					Sn	17 17 50.0	+0.4
VNHG	Veniaminof 1	1.11	226		Pn	17 17 35.4	-0.1
PLK5	Peulik 5	1.11	24		Pg	17 17 36.2	+1.2
VNFG	Fog Glacier, M	1.23	235		Pg	17 17 38.2	+0.9
VNFG	Fog Glacier, M	1.23	235	P	Pg	17 17 38.2	+0.9
	baz=49						
KJL	Kejulik	1.58	47		Pg	17 17 43.2	-0.8
CHIR	Chirikof Islan	1.66	134		Pb	17 17 44.5	0.0
CHIR				Sn	Sn	17 18 02.8	-1.6
CHIR				IAML		17 18 15.8	
	comp=N,722nm,0.8s						
CHIR				IAML		17 18 18.1	
	comp=E,595nm,0.7s						
CHIR	Chirikof Islan	1.66	134	P	Pb	17 17 44.5	0.0
	baz=316						
CHIR				S	Sb	17 18 07.6	+2.1
	baz=316						
CAHL	Cahill	1.69	50		Pb	17 17 44.8	-0.2
ANCK	Angle Creek	1.71	44		Pb	17 17 45.0	-0.3
KELA	Mount Kelaz	1.80	36		Pb	17 17 46.4	-0.6
SII	Sitkinak Islan	2.00	101		Pn	17 17 49.0	+1.3
SII				Sn	Sn	17 18 11.0	-1.9
SII				IAML		17 18 25.9	
	comp=N,599nm,0.7s						
SII				IAML		17 18 36.1	
	comp=E,682nm,0.8s						
SII	Sitkinak Islan	2.00	101	P	Pb	17 17 49.1	-1.2
	baz=286						
SDPT	Sand Point	2.25	224		Pb	17 17 53.1	-1.4
SDPT					Sb	17 18 23.0	+0.7
SDPT				IAML		17 18 30.1	
	comp=N,338nm,1.7s						
SDPT				IAML		17 18 32.9	
	comp=E,406nm,1.2s						
SDPT	Sand Point	2.25	224	P	Pn	17 17 52.5	+1.4
	baz=39						
CHNA	Chernabura Isl	2.41	206	P	Pn	17 17 54.5	+1.3
	baz=23						
CNBA	Chernabura Isl	2.42	206		Pn	17 17 54.5	+1.1
CNBA					Sb	17 18 27.5	+0.3
CNBA				IAML		17 18 31.1	
	comp=E,464nm,0.9s						
CNBA				IAML		17 18 39.2	
	comp=N,298nm,1.0s						
OHAK	Old Harbor	2.44	83		Pn	17 17 54.5	+0.8
OHAK				Sn	Sn	17 18 24.7	+1.1
OHAK	Old Harbor	2.44	83	P	Pn	17 17 54.7	+1.1
	baz=268						
P18K	Big Mountain,	2.75	28		Pn	17 17 57.3	-0.7
P18K				IAML		17 18 42.4	
	comp=E,237nm,0.8s						
P18K	Big Mountain,	2.75	28	P	Pn	17 17 57.4	-0.5
	baz=212						
KDAK	Kodiak Island	2.90	72	Pn	Pn	17 18 01.3	+1.3
	comp=E,7.2nm,0.3s,baz=267,slow=7.2,SNR=155						
KDAK				Sn	Sn	17 18 37.2	+2.2
	comp=E,3.6nm,0.3s,baz=58,slow=10,SNR=6.3						
	comp=E,14nm,0.3s						
KDAK	Kodiak Island	2.90	72		Pn	17 18 01.0	+1.0
KDAK				Sn	Sn	17 18 36.6	+1.7
Q19K	Cape Douglas,	2.92	47		Pn	17 17 59.4	-0.9
Q19K	Cape Douglas,	2.92	47	P	Pn	17 18 00.2	-0.1
	baz=232						
O18K	Koktuh Hills	3.16	24		Pn	17 18 02.9	-0.7
O18K				IAML		17 18 56.9	
	comp=N,239nm,1.1s						
O18K				IAML		17 19 01.2	
	comp=E,158nm,0.9s						
O18K	Koktuh Hills	3.16	24	P	Pn	17 18 03.2	-0.4
	baz=208						
AUL	Augustine Lava	3.31	42		Pn	17 18 05.5	0.0
P19K	Oil Pt	3.57	40		Pn	17 18 09.4	+0.1
P19K				IAML		17 19 19.9	
	comp=N,187nm,0.8s						
P19K	Oil Pt	3.57	40	P	Pn	17 18 09.4	+0.1
	baz=225						
O19K	Port Alsworth	3.67	28		Pn	17 18 10.6	-0.1
N18K	Kilae Creek	3.82	14		Pn	17 18 11.7	-0.9
N18K				IAML		17 19 18.1	
	comp=E,93nm,1.1s						
N18K				IAML		17 19 19.4	
	comp=N,80nm,0.6s						
N18K	Kilae Creek	3.82	14	P	Pn	17 18 12.1	-0.6
	baz=196						
FALS	False Pass	3.85	239	Pn	Pn	17 18 14.1	+1.1
O20K	Slope Mountain	4.09	39		Pn	17 18 17.0	+0.5
O20K	Slope Mountain	4.09	39	P	Pn	17 18 17.0	+0.5
	baz=224						
HOM	Homer	4.18	48	Pn	Pn	17 18 17.6	0.0
HOM				IAML		17 19 42.5	
	comp=E,116nm,1.1s						
N19K	Bonanza Creek	4.18	22		Pn	17 18 17.8	+0.1
N19K				IAML		17 19 24.8	
	comp=N,110nm,0.7s						
N19K				IAML		17 19 28.0	
	comp=E,112nm,0.9s						
N19K	Bonanza Creek	4.18	22	P	Pn	17 18 17.9	+0.1
	baz=206						
SVW2	Sparrevohn	4.26	14		Pn	17 18 18.0	-0.8
SVW2				IAML		17 19 29.6	
	comp=E,73nm,0.9s						
SVW2				IAML		17 19 46.1	
	comp=N,56nm,0.8s						
CNPM	China Poot	4.27	51		Pn	17 18 19.8	+1.0
RED	Redoubt Volcan	4.30	35		Pn	17 18 19.5	+0.1
RDWB	Redoubt West	4.33	34		Pn	17 18 19.6	-0.2
RSO	Redoubt South	4.34	35		Pn	17 18 19.1	-0.9
NCT	North Crescent	4.37	33		Pn	17 18 20.7	+0.5
DFR	Drift River	4.46	34		Pn	17 18 21.6	+0.1
BRLK	Bradley Lake	4.55	50		Pn	17 18 22.9	+0.2
CAPN	Captain Cook N	5.10	39	Pn	Pn	17 18 29.3	-0.8
SPU	Mount Spurr	5.12	33		Pn	17 18 30.0	-0.5
M19K	Big River Lodg	5.21	18		Pn	17 18 31.8	0.0
M19K				IAML		17 20 17.2	
	comp=N,45nm,0.9s						
M19K	Big River Lodg	5.21	18	P	Pn	17 18 31.6	-0.1
	baz=201						
SEW	Seward	5.34	51		Pn	17 18 34.4	+0.9
L19K	White Mountain	5.41	15		Pn	17 18 33.5	-1.0
L19K				IAML		17 20 09.4	
	comp=N,52nm,1.0s						
L19K	White Mountain	5.41	15	P	Pn	17 18 34.0	-0.5
	baz=198						
RC01	Rabbit Creek A	5.82	42	Pn	Pn	17 18 39.1	-1.1
L20K	Farewell, AK	5.84	18		Pn	17 18 40.1	-0.2
L20K	Farewell, AK	5.84	18	P	Pn	17 18 40.1	-0.2
	baz=202						
UNV	Unalaska Valle	5.91	241	Pn	Pn	17 18 40.9	-0.4
TT01	Tatalina	5.99	8		Pn	17 18 41.8	-0.7
TTA	Tatalina	6.02	8	Pn	Pn	17 18 41.8	-1.1
Q23K	Middleton Isla	6.49	63	Pn	Pn	17 18 49.1	-0.2
MID	Middleton Isla	6.50	63	Pn	Pn	17 18 49.0	-0.4
KNK	Knik Glacier	6.50	43	Pn	Pn	17 18 49.5	-0.1
PPLA	Purkeypile	6.54	23	Pn	Pn	17 18 51.1	+0.9
GHO	Glory Hole Cre	6.57	40		Pn	17 18 47.5	-2.9
CUT	Chulitna	6.61	32	Pn	Pn	17 18 50.6	-0.3
K20K	Telida	6.64	14		Pn	17 18 50.2	-1.1
GLI	Glacier Island	6.74	50	Pn	Pn	17 18 52.9	+0.1
SML	Sawmill	6.80	41	Pn	Pn	17 18 53.2	-0.4
SPIA	Saint Paul Isl	6.82	277	Pn	Pn	17 18 54.0	+0.2
FID	Port Fidalgo	6.94	52	Pn	Pn	17 18 54.8	-0.7
CAST	Castle Rocks	7.03	21		Pn	17 18 55.6	-1.1
SCM	Sheep Creek Mo	7.19	43	Pn	Pn	17 18 57.5	-1.4
KTH	Kantishna Hill	7.40	24		Pn	17 19 00.7	-1.0
J20K	Nowinta River	7.42	12		Pn	17 19 01.0	-1.0
TRF	Thorofare Moun	7.46	27		Pn	17 19 02.0	-0.7
KLU	Klutina	7.55	48		Pn	17 19 03.9	0.0
HMT	Hamilton	7.78	59	Pn	Pn	17 19 07.6	+0.6
M24K	Tolsona, Glenn	7.79	44	Pn	Pn	17 19 06.4	-0.7
RND	Reindeer	7.80	31	Pn	Pn	17 19 05.3	-2.0
BPAW	Bear Paw Mtn.	7.86	22		Pn	17 19 06.7	-1.4
BMRM	Bremner River	7.86	54	Pn	Pn	17 19 07.3	-0.9
SUCK	Suckling Hills	7.93	61	Pn	Pn	17 19 08.6	-0.4
DHY	Denali Highway	8.00	36	Pn	Pn	17 19 11.2	+1.0
N25K	Chitina, Valde	8.15	50	Pn	Pn	17 19 11.5	-0.7
SNH	Sunshine Point	8.41	61	Pn	Pn	17 19 14.5	-1.1
GLB	Gilahina Butte	8.41	52	Pn	Pn	17 19 15.0	-0.7
ANM	Nome	8.46	337	Pn	Pn	17 19 16.2	0.0
VRDI	Verde Repeater	8.48	54	Pn	Pn	17 19 16.8	0.0
PAX	Paxson	8.57	41		Pn	17 19 17.1	-0.8
I21K	Tanana	8.67	16		Pn	17 19 19.3	+0.2
NEA2	Nenana	8.71	25	Pn	Pn	17 19 21.5	+1.8
ISLE	Juniper Island	8.77	59	Pn	Pn	17 19 20.8	+0.1
WRH	Wood River Hil	8.85	28		Pn	17 19 20.8	-0.9
H21K	Melozitna Rive	9.01	13		Pn	17 19 22.7	-1.1
CCB	Clear Creek Bu	9.07	28		Pn	17 19 24.8	+0.2
GRNC	Granite Creek	9.08	59		Pn	17 19 25.8	+0.7
HDA	Harding Lake	9.11	31		Pn	17 19 24.2	-1.0
I23K	Minto, Yukon-K	9.12	23		Pn	17 19 22.9	-2.4
IMAR	Indian Mountai	9.22	10		Pn	17 19 25.8	-0.9
MDM	Murphy Dome	9.22	26		Pn	17 19 26.1	-0.6
BARN	Barnard Glacie	9.23	57	Pn	Pn	17 19 26.4	-0.6
TABL	Table Mountain	9.29	61		Pn	17 19 28.0	+0.1
CTGM	Chitina Glacie	9.35	58	Pn	Pn	17 19 27.3	-1.3
IL31		9.41	30		Pn	17 19 25.9	-3.3
ILAR	Eielson Array	9.41	30	Pn	Pn	17 19 31.3	+2.0
	comp=N,0.1nm,0.3s,baz=219,slow=14,SNR=10						
	comp=N,0.8nm,0.6s						
ILAR	Eielson Array	9.41	30	Pn	Pn	17 19 26.2	-3.1
H23K	Yukon River	9.68	20		Pn	17 19 32.7	-0.4
J25K	Salcha River,	9.72	33		Pn	17 19 34.7	+1.1
TNA	Tin City	9.88	335	Pn	Pn	17 19 35.1	-0.5
L27K	Beaver Creek,	10.00	46	Pn	Pn	17 19 36.6	-0.8
BCAR	Beaver Creek A	10.02	46	Pn	Pn	17 19 36.6	-1.0
H24K	Noodor Dome	10.04	24	Pn	Pn	17 19 36.3	-1.6
K27K	Chicken	10.43	41	Pn	Pn	17 19 43.1	-0.1
RDOG	Red Dog Mine	11.35	350	Pn	Pn	17 19 56.7	+0.9
N31M	Braeburn, Yuko	12.08	59	Pn	Pn	17 20 02.7	-3.1
BMAR	Burnt Mountain	12.10	25	Pn	Pn	17 20 05.2	-0.9
INK	Inuvik	15.73	34	Pn	Pn	17 20 54.5	-0.6
	comp=N,0.1nm,0.3s,baz=243,slow=7.4,SNR=3.9						
INK	Inuvik	15.73	34	Pn	Pn	17 20 53.4	-1.8
C36M	Paulatuk	19.25	37		P	17 21 34.1	-3.9
C36M				IAmb	IAmb	17 21 53.3	
	comp=Z,18nm,1.6s						
A36M	Sachs Harbour	20.11	29	P	P	17 21 46.1	-1.2
A36M				IAmb	IAmb	17 22 04.8	
	comp=Z,12nm,1.2s						
YKA	Yellowknife Ar	22.07	58	P	P	17 22 10.1	+1.6
	comp=Z,0.7nm,0.6s,baz=273,slow=10,SNR=9.6						
	comp=Z,0.7nm,0.6s						
YKA	Yellowknife Ar	22.07	58	P	P	17 22 06.8	-1.8
PETK	Petropavlovsk-	25.47	280	P	P	17 22 40.0	-1.8
	comp=Z,1.0nm,0.9s,baz=46,slow=8.3,SNR=1.0						
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	53.75	359	P	P	17 26 36.9	+1.3
	comp=Z,1.4nm,1.0s,baz=14,slow=4.6,SNR=1.1						
	comp=Z,1.4nm,1.0s						
SONM	Songino Array	54.49	305	P	P	17 26 42.3	+0.9
	comp=Z,0.6nm,0.7s,baz=34,slow=7.9,SNR=4.4						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	54.49	305	IAmb	IAmb	17 27 03.5	
	comp=Z,2.2nm,1.5s						
MKAR	Makanchi Array	65.15	319	P	P	17 27 56.2	+1.6
	comp=Z,0.2nm,0.6s,baz=46,slow=8.3,SNR=1.7						
	comp=Z,0.2nm,0.6s						
AKASG	Malin Array Be	72.52	355	P	P	17 28 41.5	+1.2
	comp=Z,0.2nm,0.4s,baz=7.6,slow=6.2,SNR=3.3						
	comp=Z,0.2nm,0.4s						
CMAR	Chiang Mai Arr	81.74	291	P	P	17 29 32.7	0.0
	comp=Z,0.4nm,0.7s,baz=12,slow=5.5,SNR=4.4						
	comp=Z,0.4nm,0.7s						
H03N2	Juan Fernandez	111.73	118	T	T	19 36 16.3	
	baz=329,slow=77,SNR=12						
H03N1	Juan Fernandez	111.74	118	T	T	19 36 17.6	
	baz=329,slow=77,SNR=15						
H03N3	Juan Fernandez	111.75	118	T	T	19 36 16.7	
	baz=329,slow=77,SNR=15						
BOSA	Boshof	151.55	354	PKPbc	PKPbc	17 37 06.2	-1.7
	comp=Z,0.7nm,0.5s,baz=344,slow=7.4,SNR=1.7						

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*IDC **14** 17:20:39.2±1.1, 11°.33N×42°.80E, h0^{km}, mb3.8/8, mbtmp3.8/8, MS3.6/2, Error ellipse: s-maj=38.1km s-min=6.8km az=101.0*
*NEIC **14** 17:20:41.4±0.8, 11°.5N±0°.2×42°.9E±0°.7, h4^{km}±26^{km}, mb4.2/3, Error ellipse: s-maj=105.6km s-min=6.1km az=74.0*
ISC 14 17:20:40.4±0.9**, 11°.36N**±0°.08×**42°.80E**±0°.08**, h10**^{km}**, n19,**
σ1^{s}.05/17**, mb4.0**/11**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	Arta Tunnel	0.17	15	Pg	Pg	17 20 42.9	-1.2
	7μm,0.3s,baz=139,slow=19						
ATD				Lg	Lg	17 20 46.0	
	10μm,0.3s,baz=135,slow=23,SNR=51						
ATD	Arta Tunnel	0.17	15		Pg	17 20 42.4	-1.8
ATD				Sg	Sg	17 20 46.3	-0.5
I19DJ	I19DJ	0.38	73	Pg	Pg	17 20 46.5	-1.5
	baz=308,slow=38						
I19DJ				*i*		17 22 50.0	
	baz=308,slow=317,SNR=0.9						
FURI	Furi	4.74	239		Pb	17 22 02.8	-1.1
ASF	Jabal al Asfar	21.41	346	P	P	17 25 28.8	+0.1
	0.7nm,0.3s,baz=179,slow=7.7,SNR=1.7						
	0.7nm,0.3s						
BRTR	Keskin Array B	29.39	346	P	P	17 26 44.8	+0.7
	0.5nm,0.8s,baz=144,slow=10,SNR=3.9						
	0.5nm,0.8s						
TORD	Torodi Ar. Bea	40.18	277	LR	LR	17 44 54.7	
	comp=Z,112nm,19.6s,baz=243,slow=36						
MK31	Makanchi Array	48.53	36	P	P	17 29 24.1	+0.4
MK31				IAmb	IAmb	17 29 26.6	

	comp=Z,1.5nm,1.0s						
MKAR	Makanchi Array	48.53	36	P	P	17 29 24.3	+0.6
	comp=Z,1.6nm,0.9s,baz=234,slow=4.1,SNR=8.7						
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	48.53	36	P	P	17 29 23.3	-0.4
KURBB	Kurchatov Arra	48.85	30	P	P	17 29 27.0	+0.9
	comp=Z,0.8nm,0.8s,baz=231,slow=8.1,SNR=6.5						
	comp=Z,0.8nm,0.8s						
KURK	Kurchatov	48.96	30	P	P	17 29 27.0	+0.1
KURK	Kurchatov	48.96	30	IAmb	IAmb	17 29 30.4	
	comp=Z,2.8nm,1.1s						
FINES	FINESS Array B	51.47	350	P	P	17 29 46.4	+0.7
	comp=Z,1.5nm,0.8s,baz=158,slow=7.7,SNR=1.9						
	comp=Z,1.5nm,0.8s						
ZAA0	Zalesovo Array	53.95	29	P	P	17 30 05.0	+0.8
ZAA0				IAmb	IAmb	17 30 06.1	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	53.95	29	P	P	17 30 04.5	+0.3
	comp=Z,1.5nm,0.6s,baz=232,slow=7.3,SNR=7.9						
	comp=Z,1.5nm,0.6s						
CMAR	Chiang Mai Arr	54.53	75	P	P	17 30 08.4	-0.7
	comp=Z,0.4nm,0.4s,baz=273,slow=8.9,SNR=2.2						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	63.99	42	P	P	17 31 16.2	+1.9
	comp=Z,0.7nm,0.7s,baz=247,slow=7.9,SNR=4.7						
	comp=Z,0.7nm,0.7s						
USRK	Ussuriysk Ar.	81.60	47	LR	LR	18 17 03.7	
	comp=Z,27nm,19.5s,baz=243,slow=42						

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*AAE **14** 17:25:03.5±5.6, 12°.46N×43°.49E, h15^{km}±879^{km}*

*IDC **14** 17:25:11.1±0.7, 11°.63N×42°.95E, h0^{km}, mb3.9/14, mbtmp3.9/15, ML3.5/1, MS3.5/26, Error ellipse: s-maj=22.9km s-min=5.4km az=129.0*

*NEIC **14** 17:25:12.6±2.6, 11°.6N±0°.1×42°.88E±0°.06, h9^{km}±6^{km}, mb4.3/16, Error ellipse: s-maj=15.4km s-min=8.1km az=188.0*

*EAF **14** 17:25:14.6±11.0, 11°.66N×43°.04E, h0^{km}±56^{km}*

ISC 14 17:25:12.1±0.7, **11°.54N**±0°.04×**42°.89E**±0°.04, **h12**^{km}±4^{km}, **n78**, σ**1^s.72**/76, **mb4.1**/19, **MS3.5**/24, **Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	Arta Tunnel	0.05	254	Pg	Pg	17 25 13.8	-0.6
	11µm,0.3s,baz=282,slow=12,SNR=2326						
ATD				LR	LR	17 25 35.7	
	comp=Z,97µm,21.1s,baz=10,slow=179						
ATD	Arta Tunnel	0.05	254		Pg	17 25 13.0	-1.4
ATD				Sg	Sg	17 25 16.8	+0.8
ATD	Arta Tunnel	0.05	254	*i* P	Pg	17 25 14.1	-0.4
ATD	Arta Tunnel	0.05	254	*i* P	Pg	17 25 14.0	-0.4
ATD				*i* Sg	Sg	17 25 17.0	+0.9
ATD	Arta Tunnel	0.05	254	*e*P	Pg	17 25 14.0	-0.4
ATD				*e*S	Sg	17 25 17.0	+0.9
I19DJ	I19DJ	0.28	104	Pg	Pg	17 25 16.6	-1.3
	baz=311,slow=36						
I19DJ				Lg	Lg	17 25 22.5	
	baz=310,slow=51						
I19DJ				*i*		17 27 20.0	
	baz=310,slow=316,SNR=0.6						
HARA	HARA	2.27	170	*e*P	Pg	17 25 55.9	+0.1
HARA				*e*S	Sg	17 26 27.7	+2.4
HARA	HARA	2.27	170	*e*P	Pn	17 25 50.5	+0.7
HARA				*e*S	Sb	17 26 20.8	-0.8
HARA	HARA	2.27	170	*e*P	Pn	17 25 50.0	+0.2
HARA				*e*S	Sg	17 26 26.1	+0.7
HARA	HARA	2.27	170	*e*P	Pn	17 25 50.8	+1.0
HARA				*e*S	Sg	17 26 25.5	+0.2
DESE	Dese	3.22	263	*e*P	Pn	17 26 04.2	+1.3
DESE				*e*S	Sb	17 26 48.4	-0.5
DESE	Dese	3.22	263	*e*P	Pn	17 26 04.8	+1.8
DESE				*e*S	Sb	17 26 48.7	-0.3
DESE	Dese	3.22	263	*e*P	Pn	17 26 03.9	+1.0
DESE				*e*S	Sb	17 26 48.1	-0.8
DESE	Dese	3.22	263	*e*P	Pn	17 26 04.8	+1.8
DESE				*e*S	Sb	17 26 47.8	-1.1
AAE	Adis Abeba	4.77	239	*e*P	Pn	17 26 23.9	-0.2
AAE				*e*S	Sb	17 27 35.5	+2.1
AAE	Adis Abeba	4.77	239	*e*P	Pn	17 26 29.6	+5.4
AAE				*e*S	Sb	17 27 34.1	+0.7
AAE	Adis Abeba	4.77	239	*e*P	Pb	17 26 33.5	-2.4
AAE				*e*S	Sb	17 27 33.0	-0.4
AAE	Adis Abeba	4.77	239	*e*P	Pn	17 26 28.5	+4.3
AAE				*e*S	Sb	17 27 30.9	-2.6
FURI	Furi	4.91	238		Pn	17 26 26.8	+0.7
FURI				LR	LR	17 27 40.3	
FURI	Furi	4.91	238	*e*P	Pn	17 26 27.3	+1.1
FURI				*e*S	Sb	17 27 41.3	+3.7
FURI	Furi	4.91	238	*e*P	Pb	17 26 36.5	-1.9
FURI				*e*S	Sb	17 27 38.8	+1.2
FURI	Furi	4.91	238	*e*P	Pb	17 26 38.9	+0.5
FURI				*e*S	Sb	17 27 30.3	-7.2
DILA	Dilla	6.82	222	*e*P	Pb	17 27 12.2	+1.5
DILA				*e*S	Sg	17 28 46.0	-5.1
SOCY	Socotra	10.88	85	Pn	Pn	17 27 46.9	-1.0
KMBO	Kilima Mbogo	13.78	204	LR	LR	17 33 27.0	
	comp=Z,164nm,21.0s,baz=81,slow=36						
UOSS	Minazif	18.35	42	Pn	Pn	17 29 24.0	-2.6
UOSS				IAmb	IAmb	17 29 37.8	
	comp=Z,12nm,0.9s						
WSAR	Wadi Sarin	18.97	50	P	P	17 29 33.5	-0.1
	comp=Z,0.1nm,0.3s,baz=263,slow=3.4,SNR=3.8						
WSAR				LR	LR	17 36 59.0	
	comp=Z,139nm,19.4s,baz=253,slow=38						
	comp=Z,5.3nm,0.8s						
GHAJ	Ghor Haditha	20.80	342		P	17 29 51.8	-1.6
ASF	Jabal al Asfar	21.26	346	P	P	17 29 59.0	+0.5
	comp=Z,1.6nm,0.8s,baz=270,slow=2.0,SNR=1.8						
	comp=Z,1.6nm,0.8s						
MMAI	Mount Meron Ar	22.45	343	LR	LR	17 37 29.2	
	comp=Z,112nm,19.9s,baz=317,slow=33						
GNI	Garni	28.54	3	LR	LR	17 42 59.4	
	comp=Z,66nm,19.2s,baz=172,slow=38						
BRTR	Keskin Array B	29.24	345	P	P	17 31 14.8	+0.6
	comp=Z,0.8nm,0.8s,baz=154,slow=12,SNR=6.1						
BRTR				LR	LR	17 42 06.8	
	comp=Z,109nm,19.3s,baz=158,slow=35						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	29.24	345	P	P	17 31 16.3	+2.1
GEYT	Alibeck	29.60	25	LR	LR	17 44 10.6	
	comp=Z,105nm,18.6s,baz=210,slow=39						
LSZ	Lusaka	30.37	209	LR	LR	17 42 53.3	
	comp=Z,109nm,20.9s,baz=34,slow=35						
KBZ	Khabaz	32.07	0	LR	LR	17 45 30.0	
	comp=Z,51nm,18.5s,baz=156,slow=38						
RDO	Rodhopi	33.20	336	P	P	17 31 47.1	-1.8
GAR	Garm	36.64	37	P	P	17 32 19.7	+1.0
MLR	Muntele Rosu	36.80	340	LR	LR	17 46 32.5	
	comp=Z,31nm,18.5s,baz=99,slow=35						
BTK	Batken	37.62	36	P	P	17 32 28.7	+1.6
BTK				IAmb	IAmb	17 32 31.6	
	comp=Z,7.1nm,1.4s						
KEST	Kesra	38.73	314	P	P	17 32 35.7	-0.7
	comp=Z,4.8nm,0.9s,baz=186,slow=10,SNR=2.6						
	comp=Z,4.8nm,0.9s						
BURAR	Bucovina Array	38.91	341	P	P	17 32 37.4	-0.4
TSUM	Tsumeb	39.44	219	LR	LR	17 49 45.5	
	comp=Z,92nm,18.8s,baz=77,slow=37						
KKAR	Karatay Array	39.52	32	P	P	17 32 43.5	+0.6
LBTB	Lobatse	40.06	205	LR	LR	17 49 29.9	
	comp=Z,63nm,19.0s,baz=28,slow=36						
ABKAR	Akbulak array	40.17	17	P	P	17 32 46.7	-1.5
ABKAR	Akbulak array	40.17	17	P	P	17 32 47.0	-1.2
TORD	Torodi Ar. Bea	40.25	277	P	P	17 32 51.4	+2.0
	comp=Z,1.3nm,1.0s,baz=87,slow=10.0,SNR=4.0						
	comp=Z,1.3nm,1.0s						
AKASG	Malin Array Be	40.62	347	P	P	17 32 52.7	+0.8
	comp=Z,0.2nm,0.4s,baz=154,slow=6.9,SNR=2.6						
AKASG				LR	LR	17 50 31.6	
	comp=Z,37nm,18.5s,baz=162,slow=38						
	comp=Z,0.2nm,0.4s						
AKTO	Aktyubinsk	40.72	15	LR	LR	17 53 45.8	
	comp=Z,25nm,19.3s,baz=180,slow=42						
AAK	Ala-Archa	41.40	36	LR	LR	17 51 10.4	
	comp=Z,79nm,18.9s,baz=246,slow=38						
BOOM	Boomskoye usch	42.15	37	P	P	17 33 05.8	+1.0
KDJ	Kajisay	42.68	38	P	P	17 33 11.1	+2.0
KDJ				IAmb	IAmb	17 33 14.5	
	comp=Z,4.4nm,0.9s						
BOSA	Boshof	43.41	203	LR	LR	17 51 23.9	
	comp=Z,70nm,18.4s,baz=8.5,slow=36						
GERES	GERESS Array B	44.40	333	P	P	17 33 21.6	-1.2
	comp=Z,0.2nm,0.4s,baz=139,slow=6.1,SNR=2.7						
	comp=Z,0.2nm,0.4s						
GERES	GERESS Array B	44.40	333	P	P	17 33 23.4	+0.6
ARU	Arti	46.41	12	LR	LR	17 56 46.7	
	comp=Z,53nm,18.4s,baz=144,slow=41						
DBIC	Dimbokro	47.35	268	LR	LR	17 55 41.0	
	comp=Z,36nm,18.4s,baz=96,slow=39						
MK31	Makanchi Array	48.33	36	P	P	17 33 53.2	-0.5
MK31				IAmb	IAmb	17 33 57.2	
	comp=Z,3.8nm,1.0s						
MKAR	Makanchi Array	48.33	36	P	P	17 33 53.7	0.0
	comp=Z,3.6nm,0.9s,baz=228,slow=6.4,SNR=19						
	comp=Z,3.6nm,0.9s						
MKAR	Makanchi Array	48.33	36	P	P	17 33 54.0	+0.3
SUR	Sutherland	48.51	205	LR	LR	17 52 39.2	
	comp=Z,70nm,19.4s,baz=36,slow=34						
KURBB	Kurchatov Arra	48.65	30	P	P	17 33 56.8	+0.7
	comp=Z,1.5nm,0.8s,baz=229,slow=7.9,SNR=8.9						
KURBB				LR	LR	17 55 48.5	
	comp=Z,118nm,19.2s,baz=212,slow=38						
	comp=Z,1.5nm,0.8s						
KURK	Kurchatov	48.76	30	P	P	17 33 58.9	+2.0
KURK				IAmb	IAmb	17 34 01.0	
	comp=Z,3.8nm,1.1s						
ESDC	Sonseca Array	49.94	313	P	P	17 34 06.0	-0.2
	comp=Z,1.1nm,0.9s,baz=113,slow=7.7,SNR=6.3						
	comp=Z,1.1nm,0.9s						
FINES	FINESS Array B	51.31	350	LR	LR	17 57 44.9	
	comp=Z,27nm,20.6s,baz=182,slow=38						
HFS	Hagfors	53.11	342	LR	LR	17 56 15.7	
	comp=Z,15nm,20.1s,baz=120,slow=35						
ZAA0	Zalesovo Array	53.75	29	P	P	17 34 34.7	+0.5
ZAA0				IAmb	IAmb	17 34 37.2	
	comp=Z,4.6nm,1.1s						
ZALV	Zalesovo Beam	53.75	29	P	P	17 34 34.9	+0.7
	comp=Z,4.6nm,0.9s,baz=233,slow=8.2,SNR=13						
ZALV				LR	LR	17 59 06.9	
	comp=Z,73nm,18.1s,baz=216,slow=38						
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	53.75	29	P	P	17 34 34.4	+0.2
CMAR	Chiang Mai Arr	54.40	76	P	P	17 34 38.5	-1.1
	comp=Z,0.7nm,0.7s,baz=271,slow=8.3,SNR=8.4						
	comp=Z,0.7nm,0.7s						
NOA	NORSAR Array B	54.58	342	LR	LR	17 59 18.9	
	comp=Z,17nm,18.4s,baz=120,slow=38						
ARCES	ARCESS Array B	59.00	353	LR	LR	18 00 48.1	
	comp=Z,34nm,20.8s,baz=231,slow=36						
SONM	Songino Array	63.80	42	P	P	17 35 45.5	+1.0
	comp=Z,2.8nm,1.1s,baz=251,slow=7.0,SNR=11						
SONM				LR	LR	18 04 40.1	
	comp=Z,51nm,20.0s,baz=259,slow=37						
	comp=Z,2.8nm,1.1s						
SONM	Songino Array	63.80	42	P	P	17 35 46.1	+1.6
TIXI	Tiksi	77.86	19	P	P	17 37 09.1	-0.2
	comp=Z,0.2nm,0.2s,baz=268,slow=23,SNR=4.5						
	comp=Z,0.2nm,0.2s						
YAK	Yakutsk	78.39	29	LR	LR	18 14 19.7	
	comp=Z,36nm,18.7s,baz=266,slow=38						
KLR	Kul'dur	80.62	42	P	P	17 37 25.1	+0.2
	comp=Z,1.2nm,0.7s,baz=279,slow=7.0,SNR=4.1						
	comp=Z,1.2nm,0.7s						

NOU 14 17:32:28.6, 14°.96S×166°.35E, h0^{km}, **MLv4.5**/9, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.96	121	P	Pg	17 32 47.0	+0.1
DVP	Devils Point	3.27	148	P	Pn	17 33 20.8	-0.3
DZM	Mont Dzumac	7.07	179	P	Pn	17 34 12.7	-0.8
	22nm,1.6s						
YATNC	Mamie plateau,	7.08	176	P	Pn	17 34 13.2	-0.3
	26nm,1.3s						
NOUC	Port Laguerre	7.10	180	P	Pn	17 34 14.4	+0.5
	17nm,1.1s						

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*IDC **14** 17:32:33.8±0.9, 4°.13N×128°.03E, h0^{km}, mb4.0/6, mbtmp4.0/6, MS2.8/1, Error ellipse: s-maj=67.6km s-min=19.5km az=74.0*

*DJA **14** 17:32:44.7±1.1, 3°N±6°×12°6E±°, h26^{km}±16^{km}, M4.5/10, mb4.8/4, mB5.0/4, MLv4.3/10, Mw(mB)4.3/4*

*NEIC **14** 17:32:45.8±2.4, 3°.29N±0°.05×126°.28E±0°.09, h72^{km}±5^{km}, mb4.3/13, Error ellipse: s-maj=12.8km s-min=7.8km az=81.0*

*MAN **14** 17:32:49.3, 3°.51N×125°.87E, h70^{km}, mb5.2, ML4.1, MS4.2, Hypocentre not reviewed by the ISC*

ISC 14 17:32:46.8±0.6, **3°.26N**±0°.04×**126°.10E**±0°.06, **h100**^{km}, **n40**, σ**2^s.39**/46, **mb4.1**/11, **3C-3D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.70	307	P	Pn	17 33 00.3	-4.0
SGSI				S	Sn	17 33 10.5	-6.9
TNTI	Ternate	2.78	153		Pn	17 33 27.4	-2.3
TNTI				Sn	Sn	17 33 59.9	-2.7
TNTI	Ternate	2.78	153	P	Pn	17 33 27.7	-2.0
DDMP	Don Marcelino,	2.85	352	⇓*e*P	Pn	17 33 28.3	-2.2
DDMP				*e*S	Sn	17 34 00.7	-3.6
GSPH	General Santos	3.03	338	⇑*i*P	Pn	17 33 31.6	-1.5
KMSI	Cibinong	3.41	218	P	Pn	17 33 37.8	-0.2
MATI	Mati	3.66	3	⇓*e*P	Pn	17 33 39.5	-1.9
MATI				*e*S	Sn	17 34 21.7	-2.0
DAV	Davao City (W)	3.82	352	Sn	Sn	17 34 25.1	-2.4
	53nm,0.3s,baz=242,slow=20,SNR=3.8						
DAV	Davao City (W)	3.82	352	Pn	Pn	17 33 40.1	-3.4
DAV				Sn	Sn	17 34 29.7	+2.2
KCP	Kidapawan	3.85	345	⇑*i*P	Pn	17 33 44.2	+0.1
KCP				*i* S	Sn	17 34 30.1	+1.6
GTOI	Gorontalo	4.04	230	P	Pn	17 33 46.1	-0.4
LBMI	Labuha	4.12	160	P	Pn	17 33 46.4	-1.3
CTBH	Cotabato--PC H	4.34	335	⇑*i*P	Pn	17 33 50.9	+0.3
MRSI	Marisa	4.99	236	P	Pn	17 34 00.1	+0.7
	1.3nm4µm239nm,0.5s						
SANI	Sanana	5.28	181	P	Pn	17 33 59.9	-3.5
	0.2nm892nm21nm,0.7s						
LUWI	Luwuk	5.42	218		Pn	17 34 06.3	+1.1
ZCP	Zamboanga City	5.42	312	⇓*e*P	Pn	17 34 04.5	-0.7
ZCP				*e*S	Sn	17 35 02.8	-3.5
TOLI2	Tolitoli	5.72	248		Pn	17 34 08.3	-1.1
TOLI2				Sn	Sn	17 35 08.2	-5.6
MYLDM	Lahad Datu	7.81	284		Pn	17 34 40.3	+2.5
MTN	Manton Dam	16.77	163	Pn	Pn	17 36 33.0	-2.7
MTN				IAmb	IAmb	17 36 39.4	
	comp=Z,45nm,1.6s						
KNRA	Kununurra	19.00	172	P	Pn	17 37 01.3	-1.3
KNRA				IAmb	IAmb	17 37 01.9	
	comp=Z,15nm,0.8s						
WB0	Warramunga Arr	24.30	161	P	P	17 37 55.5	+0.4
WB0				IAmb	IAmb	17 37 56.7	
	comp=Z,8.9nm,0.7s						
WRA	Warramunga Arr	24.44	161	P	P	17 37 56.7	+0.3
	comp=Z,4.7nm,0.6s,baz=338,slow=9.7,SNR=54						
	comp=Z,4.7nm,0.6s						
WRA	Warramunga Arr	24.44	161	P	P	17 37 55.5	-0.9
WB2	Warramunga Arr	24.45	161	P	P	17 37 56.9	+0.4
WB2				IAmb	IAmb	17 37 58.2	
	comp=Z,9.8nm,0.8s						
MBWA	Marble Bar	25.06	194	P	P	17 38 04.2	+2.2
PSA00	Pilbara Seismi	25.43	194	P	P	17 38 07.8	+2.5
PSA00				IAmb	IAmb	17 38 16.7	
	comp=Z,8.9nm,1.2s						
AS31	Alice Springs	27.83	165	P	P	17 38 27.6	+0.6
ASAR	Alice Springs	27.83	165	P	P	17 38 27.7	+0.8
	comp=Z,1.5nm,0.5s,baz=345,slow=7.7,SNR=88						
ASAR				PcP	PcP	17 41 43.6	+2.8
	comp=Z,0.2nm,0.5s,baz=345,slow=2.4,SNR=1.9						
	comp=Z,1.5nm,0.5s						
FORT	Forrest	33.90	177	P	P	17 39 19.2	-1.1
MJAR	Matsushiro Arr	34.95	17	LR	LR	17 52 14.7	
	comp=Z,15nm,20.5s,baz=178,slow=35						
BBOO	Buckleboo	37.10	166	P	P	17 39 48.4	+0.8
STKA	Stephens Creek	37.93	158	P	P	17 39 54.8	+0.2
	comp=Z,3.8nm,0.6s,baz=332,slow=9.3,SNR=8.4						
	comp=Z,3.8nm,0.6s						
STKA	Stephens Creek	37.93	158	IAmb	IAmb	17 39 57.3	
	comp=Z,1.0nm,0.8s						
ARMA	Armidale	41.43	146	P	P	17 40 23.6	-0.2
ARMA				IAmb	IAmb	17 40 53.3	
	comp=Z,6.6nm,1.2s						
MKAR	Makanchi Array	57.58	326	P	P	17 42 27.8	+1.6
	comp=Z,0.2nm,0.5s,baz=134,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.5s						
KURBB	Kurchatov Arra	61.79	328	P	P	17 42 57.8	+2.8
	comp=Z,0.2nm,0.6s,baz=125,slow=5.8,SNR=2.6						
	comp=Z,0.2nm,0.6s						
IMAR	Indian Mountai	83.02	24	P	P	17 45 03.0	+2.2
H21K	Melozitna Rive	83.37	24	P	P	17 45 03.0	+0.4
H21K				IAmb	IAmb	17 45 04.4	
	comp=Z,2.7nm,1.1s						
ILAR	Eielson Array	85.79	25	P	P	17 45 05.9	-8.9
	comp=Z,1.4nm,0.8s,baz=270,slow=4.5,SNR=14						
	comp=Z,1.4nm,0.8s						

IDC 14 17:43:38.7±2.2, **13°.70N**×**146°.60E, h0**^{km}, **mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=36.9km s-min=35.0km az=120.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.69	266	Pn	Pn	17 44 09.8	+0.3
	37nm,0.3s,baz=104,slow=4.8,SNR=25						
GUMO				Sn	Sb	17 44 32.7	+0.2
	23nm,0.3s,baz=318,slow=18,SNR=4.7						
WRA	Warramunga Arr	35.55	200	P	P	17 50 37.7	-0.2
	0.4nm,0.7s,baz=20,slow=9.9,SNR=2.2						
	0.4nm,0.7s						
SONM	Songino Array	47.62	324	P	P	17 52 16.8	+0.1
	0.4nm,0.5s,baz=140,slow=4.7,SNR=1.7						
	0.4nm,0.5s						
MKAR	Makanchi Array	62.58	316	P	P	17 54 04.5	-0.3
	0.2nm,0.5s,baz=99,slow=7.5,SNR=2.5						
	0.2nm,0.5s						

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*NEIC **14** 17:59:28.5±2.0, 5°.70S±0°.08×152°.1E±0°.1, h27^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=22.4km s-min=7.8km az=113.0*

*IDC **14** 17:59:31.9±1.7, 5°.50S×151°.80E, h58^{km}±12^{km}, mb3.7/10, mbtmp4.0/11, MS2.7/1, Error ellipse: s-maj=37.2km s-min=9.6km az=118.0*

ISC 14 17:59:29.9±0.8, **5°.64S**±0°.07×**152°.1E**±0°.1, **h45**^{km}, **n27**, σ**1^s.35**/29, **mb4.0**/16, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.33	357	P	Pn	17 59 51.5	-0.5
	4µm,0.3s,baz=258,slow=1.5,SNR=2550						
KRVT				S	Sn	18 00 08.1	-0.4
	5µm,0.4s,baz=89,slow=21,SNR=43						
KRVT				LR	LR	18 00 29.8	
	comp=Z,19µm,19.3s,baz=197,slow=48						
RABL	Rabaul	1.44	3		Pn	17 59 53.2	-0.4
RABL				Sn	Sn	18 00 11.5	+0.1
MANU	Manus Island	5.92	307		Pn	18 00 57.7	+2.7
PMG	Port Moresby	6.16	232	P	Pn	18 00 59.0	+0.6
	23nm,0.8s,baz=48,slow=11,SNR=11						
PMG				S	Sn	18 02 05.5	-2.1
	9.9nm,0.5s,baz=72,slow=14,SNR=1.5						
PMG	Port Moresby	6.16	232		Pn	18 00 58.3	0.0
PMG				Sn	Sn	18 02 05.2	-2.4
GUMO	Guam	20.41	339	LR	LR	18 12 24.3	
	comp=Z,22nm,18.6s,baz=170,slow=38						
MTN	Manton Dam	21.88	249	P	P	18 04 18.8	-0.3
MTN				IAmb	IAmb	18 04 29.9	
	comp=Z,37nm,1.6s						
WB0	Warramunga Arr	22.22	229	P	P	18 04 22.3	-0.5
WB0				IAmb	IAmb	18 04 25.4	
	comp=Z,5.4nm,0.8s						
WR0	Warramunga Arr	22.23	229	P	P	18 04 23.0	+0.1
WR0				IAmb	IAmb	18 04 25.9	
	comp=Z,5.1nm,0.8s						
WB2	Warramunga Arr	22.36	229	P	P	18 04 23.4	-0.8
WB2				IAmb	IAmb	18 04 26.6	
	comp=Z,6.2nm,0.7s						
WRA	Warramunga Arr	22.37	229	P	P	18 04 24.0	-0.4
	comp=Z,4.0nm,0.6s,baz=54,slow=10,SNR=35						
	comp=Z,4.0nm,0.6s						
KNRA	Kununurra	24.98	245	P	P	18 04 48.9	-0.6
AS31	Alice Springs	25.06	223	P	P	18 04 50.8	+0.5
ASAR	Alice Springs	25.06	223	P	P	18 04 50.6	+0.4
	comp=Z,4.4nm,0.7s,baz=58,slow=8.5,SNR=72						
	comp=Z,4.4nm,0.7s						
STKA	Stephens Creek	27.89	199	P	P	18 05 17.3	+1.7
	comp=Z,2.1nm,0.8s,baz=11,slow=19,SNR=2.5						
	comp=Z,2.1nm,0.8s						
MORW	Morawa	41.27	231	P	P	18 07 14.2	+3.1
CMAR	Chiang Mai Arr	57.60	296	P	P	18 09 14.9	-0.9
	comp=Z,0.4nm,0.4s,baz=127,slow=5.7,SNR=2.0						
	comp=Z,0.4nm,0.4s						
PETK	Petropavlovsk-	58.72	4	P	P	18 09 20.9	-2.0
	comp=Z,1.8nm,0.9s,baz=163,slow=5.3,SNR=2.2						
	comp=Z,1.8nm,0.9s						
SONM	Songino Array	66.66	328	P	P	18 10 15.6	-0.6
	comp=Z,0.8nm,0.5s,baz=146,slow=4.6,SNR=6.3						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	66.66	328	IAmb	IAmb	18 10 17.2	
	comp=Z,0.7nm,0.7s						
P19K	Oil Pt	77.99	25	P	P	18 11 23.7	+0.4
P19K				IAmb	IAmb	18 11 25.1	
	comp=Z,3.5nm,0.6s						
CNPM	China Poot	78.77	26	P	P	18 11 28.8	+1.1
CNPM				IAmb	IAmb	18 11 30.4	
	comp=Z,4.1nm,0.6s						
MKAR	Makanchi Array	80.50	319	P	P	18 11 36.0	-1.3
	comp=Z,0.5nm,0.8s,baz=111,slow=3.6,SNR=3.1						
	comp=Z,0.5nm,0.8s						
ZALV	Zalesovo Beam	81.46	327	P	P	18 11 40.1	-2.1
	comp=Z,0.6nm,0.4s,baz=128,slow=7.3,SNR=2.7						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	83.20	22	P	P	18 11 51.0	-0.1
	comp=Z,0.4nm,0.6s,baz=251,slow=5.3,SNR=5.7						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	93.15	52	P	P	18 12 41.4	+1.6
	comp=Z,0.6nm,0.8s,baz=271,slow=6.5,SNR=4.5						
	comp=Z,0.6nm,0.8s						
TORD	Torodi Ar. Bea	149.88	286	PKPbc	PKPbc	18 19 15.8	-0.5
	comp=Z,2.4nm,0.5s,baz=85,slow=2.7,SNR=34						

TAP 14 18:14:45.6, 24°.39N×121°.69E, h10^{km}±1^{km}, **ML1.5, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.06	55	*i* P	Pg	18 14 48.7	+0.9
	baz=59						
ENA				*i* S	Sg	18 14 50.2	+0.9
	baz=59						
EWUT	Wuta	0.10	58	*i* P	Pb	18 14 49.0	-0.6
	baz=58						
EWUT				*i* S	Sg	18 14 50.5	+0.4
	baz=58						
LATG	Datong	0.20	315	*e*P	Pb	18 14 51.4	-0.1
	baz=314						
LATG				*e*S	Sg	18 14 54.3	+1.3
	baz=314						
ETL	Fush Village	0.24	194	*e*P	Pb	18 14 51.5	-0.5
	baz=193						
ETL				S	Sg	18 14 55.1	+1.2
	baz=193						
NDS	Dongshan	0.24	7	S	Sg	18 14 55.1	+1.2
	baz=6.0						
ETLH	Xiulin Townshi	0.26	225	S	Sg	18 14 55.8	+1.2
	baz=225						
NDT	Datong Townshi	0.26	323	*e*P	Pb	18 14 52.1	-0.3
	baz=323						
TWC	Suao	0.26	35	*e*S	Sg	18 14 55.4	+0.8
	baz=36						
ENTT	Nioudou	0.27	336	*i* P	Pb	18 14 52.4	-0.2
	baz=337						
ENTT				*i* S	Sb	18 14 56.4	-0.8
	baz=337						
NNSB	Datong	0.28	278	P	Pb	18 14 52.7	0.0
	baz=277						
NNSB				S	Sb	18 14 56.8	-0.8
	baz=277						
NNS	Nan Shan	0.29	280	*i* P	Pb	18 14 52.9	-0.1
	baz=279						
NNS				S	Sb	18 14 57.0	-0.9
	baz=279						
TWD	Chiawan	0.32	195	P	Pb	18 14 53.2	-0.2
	baz=193						
TWD				S	Sb	18 14 57.6	-1.0
	baz=193						
TWE	Neicheng	0.33	357	P	Pb	18 14 53.4	-0.1
	baz=359						
TWE				S	Sb	18 14 58.4	-0.5
	baz=359						
FUSB	Fushanzhiwuyua	0.38	346	P	Pb	18 14 54.5	0.0
	baz=346						
FUSB				S	Sb	18 14 59.7	-0.6
	baz=346						
YHNB	Yeheng	0.40	315	*e*P	Pb	18 14 55.5	+0.8

	baz=314						
YHNB				S	Sb	18 15 00.5	-0.4
	baz=314						
NSK	**Sanguang**	**0.41**	**314**	*e*P	Pn	18 14 56.6	-1.0
	baz=314						
NSK				*i* S	Sb	18 15 00.6	-0.7
	baz=314						
FUSS	**Fushou**	**0.43**	**250**	*i* P	Pb	18 14 55.5	+0.2
	baz=250						
FUSS				*i* S	Sb	18 15 01.6	-0.4
	baz=250						
WHF	**Hehuan Shan**	**0.46**	**237**	*i* P	Pb	18 14 55.9	-0.1
	baz=236						
WHF				*i* S	Sb	18 15 02.0	-1.0
	baz=236						
CHGB	**Renai**	**0.57**	**235**	P	Pb	18 14 58.3	+0.5
	baz=234						
CHGB				S	Sb	18 15 06.6	+0.6
	baz=234						
TIPB	**Shuangxi**	**0.59**	**12**	P	Pb	18 14 58.0	-0.1
	baz=12						
TIPB				*e*S	Sb	18 15 05.9	-0.6
	baz=12						
ESL	**Shilin**	**0.62**	**202**	*e*P	Pb	18 14 58.3	-0.2
	baz=201						
OWD	**Renai**	**0.64**	**227**	*e*P	Pb	18 14 59.0	+0.2
	baz=226						
OWD				*e*S	Sb	18 15 08.0	+0.1
	baz=226						
SSLB	**Suanglung**	**0.90**	**228**	*e*P	Pb	18 15 03.6	+0.3
	baz=227						
SSLB				*e*S	Sb	18 15 15.3	0.0
	baz=227						

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*IDC **14** 18:21:02.9±0.6,8°.46N×102°.83W,h0^{km},mb4.7/20,mbtmp4.7/22,ML3.8/1,MS5.3/54,Error ellipse: s-maj=24.0km s-min=11.1km az=58.0*

*MOS **14** 18:21:04.1±1.3,8°.66N×102°.84W,h10^{km},mb5.3/14,MS5.3/29,Error ellipse: s-maj=9.6km s-min=5.8km az=90.4*

*NEIC **14** 18:21:05.9±1.7,8°.56N±0°.08×102°.8W±0°.1,h10^{km}±1^{km},mb5.3/556,Ms_20 5.4/398,Mwb5.6/50,Mww5.8,Error ellipse: s-maj=17.1km s-min=13.2km az=248.0*

*GCMT **14** 18:21:07.9±0.1,8°.56N±0°.01×103°.04W±0°.01,h12^{km},MW5.7/154,Moment Tensor Solution. s141,c275; s154,c451; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.35±.04; $M_{\theta\theta}$2.34±.04; $M_{\phi\phi}$-1.99±.04; $M_{r\theta}$0.25±.09; $M_{\theta\phi}$-4.34±.03; $M_{\phi r}$0.20±.10; Best double couple: $M_0$4.86200×10^{17} NP1:ϕ_s167.00000°,δ86.00000°,λ-2.00000°. NP2:ϕ_s257.00000°,δ88.00000°,λ-176.00000°. Principal axes: T 5.0270, Plg1.0000°, Azm32.0000°; N -0.3320, Plg86.0000°, Azm285.0000°; P -4.6960, Plg4.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 18:21:07,8°.68N×102°.75W,h6^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09; $M_{\theta\theta}$1.76; $M_{\phi\phi}$-1.67; $M_{r\theta}$0.27; $M_{\theta\phi}$-2.69; $M_{\phi r}$0.94; Fault plane solution: $M_0$3.34000×10^{17} NP1:ϕ_s254.88000°,δ75.94000°,λ-171.23000°. NP2:ϕ_s162.73000°,δ81.49000°,λ-14.22000°. Principal axes: T 3.2520, Plg4.0000°, Azm209.0000°; N 0.1747, Plg73.0000°, Azm312.0000°; P -3.4267, Plg16.0000°, Azm118.0000°;*

*NEIC **14** 18:21:14,8°.60N×103°.06W,h22^{km},Moment Tensor Solution. Duration: 14^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.43; $M_{\theta\theta}$2.73; $M_{\phi\phi}$-2.29; $M_{r\theta}$3.31; $M_{\theta\phi}$-3.66; $M_{\phi r}$-0.32; Fault plane solution: $M_0$5.55000×10^{17} NP1: ϕ_s166.00000°,δ56.00000°,λ4.00000°. NP2:ϕ_s74.00000°,δ87.00000°,λ146.00000°. Principal axes: T 6.1264, Plg26.0000°, Azm24.0000°; N -1.4233, Plg56.0000°, Azm249.0000°; P -4.7030, Plg21.0000°, Azm125.0000°;*

ISC 14 18:21:05.0±0.3**,8°.31N**±0°.04×**102°.82W**±0°.04**,h10**^{km}**, n1232,σ2^{s}43**/1141**,mb5.2**/284**,MS5.4**/279**,3C-2D,**
Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**10.09**	**24**	Pn	**Pn**	**18 23 25.8**	**-4.4**
UNM	**Universidad Na**	**11.51**	**17**	Pn	**Pn**	**18 23 47.8**	**-2.0**
UNM	**Universidad Na**	**11.51**	**17**	P	**Pn**	**18 23 47.8**	**-2.0**
CMIG	**Matias Romero**	**11.66**	**41**	Pn	**Pn**	**18 23 47.6**	**-4.1**
	0.6nm,0.3s,baz=220,slow=10,SNR=7.5						
CMIG				LR	LR	18 27 18.9	
	comp=Z,48µm,21.6s,baz=184,slow=32						
	3.8nm,0.7s						
RTAL	**Retalhuleu**	**12.53**	**59**		**Pn**	**18 24 01.4**	**-2.1**
H06E1	**SOCORRO T-PHAS**	**13.05**	**324**	T	T	18 37 12.3	
	SNR=228						
HUEH	**Huehuetenango**	**13.08**	**57**		**Pn**	**18 24 08.2**	**-3.0**
CCIG	**Comitan**	**13.10**	**52**		**Pn**	**18 24 09.7**	**-1.7**
SNET	**Serv Nac Est T**	**14.36**	**67**	Pn	**Pn**	**18 24 29.4**	**+0.7**
ZAIG	**Zacatecas**	**14.38**	**1**	Pn	**Pn**	**18 24 29.0**	**0.0**
MTO3	**Montecristo**	**14.51**	**64**		**Pn**	**18 24 28.2**	**-2.6**
ESQI	**Esquipulas**	**14.59**	**64**		**Pn**	**18 24 33.6**	**+1.8**
PETF	**Flores**	**15.25**	**55**	Pn	**Pn**	**18 24 38.2**	**-2.4**
PETF				IAmb	IAmb	18 24 41.8	
	comp=Z,90nm,0.8s						
PAYG	**Puerto Ayora**	**15.35**	**125**		**P**	**18 24 47.4**	**+0.8**
CRIN	**San Cristobal**	**16.10**	**73**	P	**P**	**18 24 54.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**16.28**	**68**	P	**P**	**18 24 55.5**	**-1.6**
TGUH	**Tegucigalpa,Un**	**16.28**	**68**	*e*P	**P**	**18 24 56.6**	**-0.5**
CNGN	**Cerro Negro**	**16.39**	**74**	P	**P**	**18 24 57.5**	**-0.7**
SLBS	**Sierra La Lagu**	**16.75**	**337**	P	**Pn**	**18 24 56.6**	**-3.3**
HZTE	**Horizontes, Gu**	**17.15**	**81**	P	**Pn**	**18 25 05.1**	**0.0**
HZTE				IAmb	IAmb	18 25 26.6	
	comp=Z,443nm,1.7s						
DUNO	**Dulce Nombre,**	**17.19**	**83**	P	**P**	**18 25 07.2**	**0.0**
DUNO				IAmb	IAmb	18 25 18.6	
	comp=Z,547nm,1.9s						
MATN	**Matagalpa**	**17.22**	**73**	P	**P**	**18 25 06.7**	**-0.8**
ORTG	**Ortega, Santa**	**17.25**	**82**	P	**P**	**18 25 07.5**	**-0.4**
LPIG	**La Paz**	**17.26**	**336**	P	**P**	**18 25 05.4**	**-2.4**
	comp=Z,11nm,0.3s,baz=180,slow=2.3,SNR=1.1						
LPIG				LR	LR	18 30 05.8	
	comp=Z,19µm,18.9s,baz=160,slow=32						
BOAB	**BOACO BROADBAN**	**17.36**	**75**	P	**P**	**18 25 08.2**	**-0.8**
BOAB				IAmb	IAmb	18 25 19.6	
	comp=Z,382nm,1.5s						
CAO2	**Cobano, Puntar**	**17.55**	**84**	P	**P**	**18 25 12.4**	**+1.4**
CAO2				IAmb	IAmb	18 25 22.5	
	comp=Z,315nm,1.8s						
JTS	**Las Juntas de**	**17.74**	**82**	P	**P**	**18 25 14.1**	**+0.9**
JTS	**Las Juntas de**	**17.74**	**82**	P	**P**	**18 25 14.1**	**+0.9**
JTS				pmax	pmax		
	comp=Z,205nm,1.8s						
ACON	**Acoyapa**	**17.74**	**77**	P	**P**	**18 25 12.9**	**-0.3**
JACO	**JACO, Garabito**	**17.98**	**84**	P	**P**	**18 25 16.8**	**+1.0**
HDC	**Heredia**	**18.54**	**83**	P	**Pn**	**18 25 23.9**	**+1.5**
HDC				IAmb	IAmb	18 25 36.0	
	comp=Z,290nm,1.4s						
ESPN	**Las Esperanzas**	**18.62**	**76**	P	**P**	**18 25 22.6**	**-0.3**
HPIG		**18.72**	**352**	P	**Pn**	**18 25 22.6**	**-1.9**
RIMA	**Rio Macho**	**18.77**	**84**	P	**Pn**	**18 25 26.1**	**+0.9**
CVTR	**Volcan Turrial**	**18.89**	**83**	P	**P**	**18 25 26.3**	**0.0**
PEZE	**Perez Zeledon,**	**18.94**	**85**	P	**Pn**	**18 25 27.4**	**+0.3**
PEZE				IAmb	IAmb	18 25 37.0	
	comp=Z,322nm,1.8s						
SRBA	**San Rafael, Bu**	**19.25**	**86**	P	**Pn**	**18 25 32.4**	**+1.4**
SRBA				IAmb	IAmb	18 25 56.1	
	comp=Z,217nm,1.7s						
BATAN	**Batan**	**19.27**	**83**	P	**P**	**18 25 29.3**	**-0.7**
DRK0	**Durika**	**19.37**	**86**	P	**P**	**18 25 31.0**	**-0.2**
KVTX	**Kingsville**	**19.69**	**13**	P	**Pn**	**18 25 33.4**	**-2.6**
KVTX	**Kingsville**	**19.69**	**13**	S	S	18 29 26.9	+10
	baz=195						
CDITO	**Canoas**	**19.73**	**88**	P	**P**	**18 25 35.0**	**-0.1**
BRU2	**Volcan**	**19.91**	**87**	P	**P**	**18 25 35.8**	**-1.4**
833A	**Chaparral WMA,**	**20.17**	**9**	P	**P**	**18 25 38.3**	**-1.5**
833A				IAmb	IAmb	18 25 44.4	
	comp=Z,189nm,1.2s						
833A	**Chaparral WMA,**	**20.17**	**9**	P	**Pn**	**18 25 40.1**	**-1.5**
	baz=190,SNR=36						
833A				S	**Sn**	**18 29 33.4**	**+4.6**
	baz=190						
833A	**Chaparral WMA,**	**20.17**	**9**	P	**Pn**	**18 25 40.2**	**-1.4**
	baz=190,SNR=36						
833A				S	**Sn**	**18 29 33.3**	**+4.6**
	baz=190						
SRIG	**Santa Rosalia**	**20.91**	**336**	P	**P**	**18 25 45.1**	**-2.7**
SRIG				IAmb	IAmb	18 25 52.5	
	comp=Z,128nm,1.3s						
TX31	**Lajitas Ar. Si**	**20.93**	**358**	P	**P**	**18 25 46.4**	**-1.7**
TX31	**Lajitas Ar. Si**	**20.93**	**358**	P	Pn	18 25 47.8	-2.8
	baz=178,SNR=78						
TX31				S	Sn	18 29 51.2	+3.9
	baz=178						
TX32	**Lajitas Array**	**20.93**	**358**	P	**P**	**18 25 46.8**	**-1.3**
TXAR	**Lajitas Array**	**20.93**	**358**	P	Pn	18 25 47.5	-3.2
	comp=Z,20nm,0.9s,baz=182,slow=12,SNR=79						
TXAR				S	Sn	18 29 49.3	+2.1
	comp=Z,0.1nm,0.3s,baz=156,slow=26,SNR=0.9						
TXAR				LR	LR	18 33 19.6	
	comp=Z,22µm,19.1s,baz=174,slow=35						
	comp=Z,20nm,0.9s						
TXAR	**Lajitas Array**	**20.93**	**358**	P	**P**	**18 25 46.5**	**-1.6**
735A	**Kenedy**	**20.98**	**12**	P	Pn	18 25 49.0	-2.1
735A				IAmb	IAmb	18 25 52.7	
	comp=Z,174nm,1.1s						
735A	**Kenedy**	**20.98**	**12**	P	Pn	18 25 48.9	-2.1
	baz=194,SNR=6.4						
735A				S	Sn	18 29 54.9	+6.8
	baz=194						
CACAO	**El Cacao, Vera**	**21.77**	**91**	*e*P	**P**	**18 25 59.2**	**+2.0**
HSIG		**21.98**	**341**	P	**P**	**18 25 57.9**	**-1.4**
JCT	**Junction City**	**22.24**	**7**	P	**P**	**18 26 00.8**	**-1.3**
JCT				IAmb	IAmb	18 26 05.8	
	comp=Z,151nm,1.1s						
JCT	**Junction City**	**22.24**	**7**	P	**P**	**18 26 00.8**	**-1.3**
JCT				pmax	pmax		
	comp=Z,151nm,1.1s						
JCT				MLR	MLR		
	comp=Z,24µm,19.0s						
JCT	**Junction City**	**22.24**	**7**	P	**P**	**18 26 02.2**	**+0.1**
	baz=188,SNR=65						
JCT				S	Sn	18 30 12.4	-6.1
	baz=188						
JCT	**Junction City**	**22.24**	**7**	P	**P**	**18 26 02.1**	**+0.1**
	baz=188,SNR=65						
JCT				S	Sn	18 30 12.7	-5.8
	baz=188						
PNME	**Penonome**	**22.25**	**88**	*e*P	**P**	**18 26 05.0**	**+2.7**
HKT	**Hockley**	**22.50**	**16**	P	**P**	**18 26 04.1**	**-0.7**
HKT	**Hockley**	**22.50**	**16**	IAMs_20	IAMs_20	18 35 50.6	
	comp=Z,14µm,19.0s						
HKT	**Hockley**	**22.50**	**16***c*	*i*P	**P**	**18 26 03.9**	**-0.9**
HKT				pmax	pmax		
	comp=Z,328nm,1.7s						
HKT	**Hockley**	**22.50**	**16**	P	**P**	**18 26 05.8**	**+1.0**
	baz=198						
HKT				S	**S**	**18 30 16.1**	**+4.4**
	baz=198						
BCIP	**Isla Barro Col**	**22.73**	**86**	P	**P**	**18 26 09.0**	**+1.6**
BCIP	**Isla Barro Col**	**22.73**	**86**	P	**P**	**18 26 09.0**	**+1.6**
BCIP				pmax	pmax		
	comp=Z,410nm,1.9s						
BCIP				MLR	MLR		
	comp=Z,6µm,19.0s						
BCIP	**Isla Barro Col**	**22.73**	**86**	*e*P	**P**	**18 26 12.7**	**+5.3**
435B	**Jarrell**	**22.89**	**12**	P	**P**	**18 26 08.4**	**-0.5**
435B	**Jarrell**	**22.89**	**12**	P	**P**	**18 26 08.6**	**-0.4**
	baz=193,SNR=5.5						
435B	**Jarrell**	**22.89**	**12**	P	**P**	**18 26 09.2**	**+0.2**
	baz=193						
435B				S	Sn	18 30 26.5	-7.5
	baz=193						
UPA	**Univ. de Panam**	**23.03**	**87**	*e*P	**P**	**18 26 12.7**	**+2.1**
MNTX	**Cornudas Mount**	**23.39**	**354**	P	**P**	**18 26 11.8**	**-2.4**
MNTX				IAmb	IAmb	18 26 16.3	
	comp=Z,94nm,1.4s						
MNTX	**Cornudas Mount**	**23.39**	**354**	P	**P**	**18 26 13.0**	**-1.1**
	baz=174,SNR=54						
MNTX				S	**S**	**18 30 31.7**	**+4.4**
	baz=174						
MNTX	**Cornudas Mount**	**23.39**	**354**	P	**P**	**18 26 13.2**	**-0.9**
	baz=174,SNR=54						
MNTX				S	Sn	18 30 37.4	-8.7
	baz=174						
EPT	**El Paso**	**23.60**	**352**	IAMs_20	IAMs_20	18 36 17.8	
	comp=Z,11µm,18.0s						
FSCY	**Frank Sound, G**	**23.65**	**60**	P	**P**	**18 26 13.0**	**-3.8**
319A	**Douglas**	**23.73**	**346**	P	**P**	**18 26 16.6**	**-0.9**
SOR	**Soroa**	**23.86**	**51**	P	**P**	**18 26 17.9**	**-0.9**
SOR	**Soroa**	**23.86**	**51**	P	**P**	**18 26 17.9**	**-0.9**
SOR				pmax	pmax		
	comp=Z,225nm,1.7s						
441A	**DeRidder**	**24.07**	**21**	P	**P**	**18 26 19.3**	**-1.3**
441A	**DeRidder**	**24.07**	**21**	S	**S**	**18 30 42.4**	**+4.3**
	baz=204						
WHTX	**Lake Whitney,**	**24.09**	**11**	P	**P**	**18 26 18.8**	**-2.0**
WHTX	**Lake Whitney,**	**24.09**	**11**	S	**S**	**18 30 43.7**	**+5.4**
	baz=193						
WHTX	**Lake Whitney,**	**24.09**	**11**	P	**P**	**18 26 21.0**	**+0.2**
	baz=193						
WHTX				S	**S**	**18 30 44.1**	**+5.8**
	baz=193						
ABTX	**Abilene, Hawle**	**24.37**	**6**	P	**P**	**18 26 21.1**	**-2.4**
ABTX				IAmb	IAmb	18 26 25.7	
	comp=Z,104nm,0.9s						
ABTX	**Abilene, Hawle**	**24.37**	**6**	P	**P**	**18 26 22.1**	**-1.4**
	baz=188,SNR=38						
ABTX				S	**S**	**18 30 47.9**	**+4.9**
	baz=188						
ABTX	**Abilene, Hawle**	**24.37**	**6**	P	**P**	**18 26 21.9**	**-1.5**
	baz=188,SNR=38						
ABTX				S	**S**	**18 30 47.7**	**+4.7**
	baz=188						
237A	**Washetta, Mont**	**24.46**	**14**	P	**P**	**18 26 23.0**	**-1.3**
237A				IAmb	IAmb	18 26 31.1	
	comp=Z,97nm,1.1s						
NATX	**Nacogdoches**	**24.54**	**17**	P	**P**	**18 26 23.2**	**-1.7**
NATX				IAMs_20	IAMs_20	18 36 54.2	
	comp=Z,9µm,19.0s						
NATX	**Nacogdoches**	**24.54**	**17**	P	**P**	**18 26 24.3**	**-0.6**
	baz=200,SNR=11						
NATX	**Nacogdoches**	**24.54**	**17**	P	**P**	**18 26 24.6**	**-0.3**
	baz=200,SNR=11						
NATX				S	**S**	**18 30 51.1**	**+5.4**
	baz=200						
121A	**Cookes Peak, D**	**24.54**	**350**	P	**P**	**18 26 23.4**	**-1.8**
121A				IAmb	IAmb	18 26 28.9	
	comp=Z,99nm,1.1s						
121A	**Cookes Peak, D**	**24.54**	**350**	P	**P**	**18 26 24.5**	**-0.7**
	baz=168,SNR=32						
121A				S	S	18 30 58.2	+12
	baz=168						
121A	**Cookes Peak, D**	**24.54**	**350**	P	**P**	**18 26 24.7**	**-0.5**
	baz=168,SNR=32						
121A				S	S	18 31 00.7	+15
	baz=168						
LCCY	**Blossom Villag**	**24.74**	**60**	P	**P**	**18 26 25.8**	**-1.1**
TUMC	**Tumaco**	**24.83**	**104**	*e*P	**P**	**18 26 31.0**	**+3.2**
342A	**Flagon Creek P**	**24.95**	**22**	P	**P**	**18 26 26.3**	**-2.3**
342B	**Flagon Creek P**	**24.95**	**22**	P	**P**	**18 26 29.1**	**+0.4**
	baz=205,SNR=10.0						
342B				S	**S**	**18 30 58.9**	**+6.7**
	baz=205						
TUC	**Tucson**	**25.00**	**344**	P	**P**	**18 26 25.6**	**-3.7**
TUC				IAmb	IAmb	18 26 33.9	
	comp=Z,118nm,1.4s						
TUC	**Tucson**	**25.00**	**344**	P	**P**	**18 26 25.6**	**-3.7**
TUC				pmax	pmax		
	comp=Z,118nm,1.5s						
TUC				MLR	MLR		
	comp=Z,5µm,21.0s						
TUC	**Tucson**	**25.00**	**344**	P	**P**	**18 26 28.6**	**-0.6**
	baz=161						
TUC				S	**S**	**18 30 57.2**	**+3.9**
	baz=161						
SFX	**San Felipe**	**25.25**	**335**	P	**P**	**18 26 29.7**	**-1.7**
SFX				IAmb	IAmb	18 26 39.2	
	comp=Z,81nm,1.6s						
214A	**Organ Pipe Nat**	**25.30**	**340**	P	**P**	**18 26 30.9**	**-1.0**
214A				IAmb	IAmb	18 26 46.2	
	comp=Z,132nm,1.6s						
214A	**Organ Pipe Nat**	**25.30**	**340**	P	**P**	**18 26 32.0**	**+0.1**
	baz=156,SNR=12						
Z35A	**Perchaven, San**	**25.43**	**11**	P	**P**	**18 26 30.7**	**-2.2**
Z35A	**Perchaven, San**	**25.43**	**11**	P	**P**	**18 26 31.2**	**-1.8**
	baz=193						
Z35A				S	**S**	**18 31 03.3**	**+3.4**
	baz=193						
MSTX	**Muleshoe**	**25.54**	**0**	P	**P**	**18 26 32.2**	**-1.9**
MSTX				IAmb	IAmb	18 26 38.1	
	comp=Z,56nm,1.1s						
MSTX	**Muleshoe**	**25.54**	**0**	P	**P**	**18 26 32.9**	**-1.2**
	baz=180,SNR=24						
MSTX				S	**S**	**18 31 00.2**	**-1.6**
	baz=180						
MSTX	**Muleshoe**	**25.54**	**0**	P	**P**	**18 26 33.5**	**-0.6**
	baz=180,SNR=24						
MSTX				S	**S**	**18 31 06.9**	**+5.0**
	baz=180						
OTAV	**Otavalo**	**25.57**	**107**	P	**P**	**18 26 36.3**	**+1.3**
OTAV	**Otavalo**	**25.57**	**107**	IAMs_20	IAMs_20	18 33 58.2	
	comp=Z,12µm,22.0s						
OTAV	**Otavalo**	**25.57**	**107**	P	**P**	**18 26 36.3**	**+1.3**
OTAV				pmax	pmax		
	comp=Z,263nm,1.9s						
OTAV				MLR	MLR		
	comp=Z,12µm,22.0s						
OTAV	**Otavalo**	**25.57**	**107**	*e*P	**P**	**18 26 37.7**	**+2.8**
OTAV	**Otavalo**	**25.57**	**107**	*e*P	**P**	**18 26 29.9**	**-5.1**
344A	**Westbrook Farm**	**25.63**	**24**	P	**P**	**18 26 33.5**	**-1.4**
344A	**Westbrook Farm**	**25.63**	**24**	P	**P**	**18 26 33.5**	**-1.4**
	baz=209,SNR=8.7						
344A				S	**S**	**18 31 02.9**	**-0.3**
	baz=209						
Y22A	**Socorro**	**25.79**	**352**	P	**P**	**18 26 35.4**	**-1.1**
	baz=170,SNR=23						
Y22A				S	**S**	**18 31 11.1**	**+5.1**
	baz=170						
Z38A	**Mt. Pleasant**	**25.86**	**15**	P	**P**	**18 26 35.9**	**-1.0**
Z38A				IAmb	IAmb	18 26 39.5	
	comp=Z,91nm,1.0s						
Y22D	**IRIS PASSCAL I**	**25.92**	**352**	P	**P**	**18 26 36.4**	**-1.2**
Y22D				IAMs_20	IAMs_20	18 37 34.3	
	comp=Z,10µm,19.0s						
Y22D	**IRIS PASSCAL I**	**25.92**	**352**	P	**P**	**18 26 38.0**	**+0.4**
	baz=171						
BNM	**Barren Site**	**25.96**	**353**	P	**P**	**18 26 36.5**	**-1.6**
LENM	**Lemitar**	**26.02**	**352**	P	**P**	**18 26 36.6**	**-1.9**
346A	**Big Creek Wild**	**26.12**	**27**	S	**S**	**18 31 17.1**	**+6.3**
	baz=211						
GCUF	**Volcan Galeras**	**26.32**	**104**	*e*P	**P**	**18 26 48.3**	**+6.4**
113A	**Mohawk Valley,**	**26.37**	**339**	P	**P**	**18 26 39.7**	**-1.8**
113A				IAmb	IAmb	18 26 45.1	
	comp=Z,85nm,1.3s						
VBMS	**Vicksburg**	**26.39**	**24**	P	**P**	**18 26 40.8**	**-1.0**
VBMS				IAmb	IAmb	18 26 44.2	
	comp=Z,57nm,0.9s						
VBMS	**Vicksburg**	**26.39**	**24**	P	**P**	**18 26 42.0**	**+0.2**
	baz=208						
AMTX	**Amarillo**	**26.47**	**2**	P	**P**	**18 26 41.1**	**-1.5**
AMTX				IAmb	IAmb	18 27 19.2	
	comp=Z,75nm,1.3s						
AMTX	**Amarillo**	**26.47**	**2**	P	**P**	**18 26 41.7**	**-0.8**
	baz=182,SNR=7.6						
AMTX				S	**S**	**18 31 23.9**	**+7.4**
	baz=182						
AMTX	**Amarillo**	**26.47**	**2**	P	**P**	**18 26 42.1**	**-0.5**
	baz=182						
AMTX				S	**S**	**18 31 24.1**	**+7.6**
	baz=182						
MTDJ	**Mount Denham**	**26.47**	**66**	*e*P	P	18 26 51.2	+8.5
Z41A	**Richland Creek**	**26.50**	**19**	P	**P**	**18 26 40.8**	**-1.9**
Z41A				IAmb	IAmb	18 26 47.8	
	comp=Z,72nm,0.9s						
Z41A	**Richland Creek**	**26.50**	**19**	P	**P**	**18 26 41.6**	**-1.1**
	baz=203						
Z41A				P	**P**	**18 26 41.6**	**-1.1**
	baz=203						
Z41A				S	**S**	**18 31 21.9**	**+5.1**
	baz=203						
Z41A				S	**S**	**18 31 21.9**	**+5.1**
	baz=203						
Z41A	**Richland Creek**	**26.50**	**19**	P	**P**	**18 26 44.8**	**+2.1**
	baz=203						
Z41A				S	**S**	**18 31 21.8**	**+5.0**
	baz=203						
WMOK	**Wichita Mounta**	**26.56**	**7**	P	**P**	**18 26 41.5**	**-1.8**
WMOK	**Wichita Mounta**	**26.56**	**7**	P	**P**	**18 26 41.5**	**-1.8**
WMOK				pmax	pmax		
	comp=Z,20nm,1.2s						
WMOK				MLR	MLR		
	comp=Z,15µm,18.0s						
WMOK	**Wichita Mounta**	**26.56**	**7**	P	**P**	**18 26 42.6**	**-0.7**
	baz=189,SNR=8.8						
WMOK	**Wichita Mounta**	**26.56**	**7**	P	**P**	**18 26 43.2**	**-0.1**
	baz=189,SNR=8.8						
WMOK				S	**S**	**18 31 22.4**	**+4.5**
	baz=189						
X34A	**Smith Ranch, M**	**26.57**	**9**		**P**	**18 26 41.1**	**-2.2**
X34A				IAmb	IAmb	18 26 45.6	
	comp=Z,55nm,1.1s						
PLMC	**San Jos del P**	**26.57**	**96**	*e*P	**P**	**18 26 43.5**	**-0.1**
YOTC	**Yotoco, Valle**	**26.66**	**98**	*e*P	**P**	**18 26 43.5**	**-1.0**
CBOC	**Ciudad Bolivar**	**26.71**	**93**	*e*P	**P**	**18 26 48.4**	**+3.3**
ANMO	**Albuquerque**	**26.72**	**353**	P	**P**	**18 26 43.0**	**-1.9**
	comp=Z,7.8nm,1.1s,baz=161,slow=11,SNR=21						
ANMO				S	**S**	**18 31 17.2**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=150,slow=17,SNR=1.3						
ANMO				LR	LR	18 36 51.5	
	comp=Z,7µm,18.8s,baz=177,slow=36						
	comp=Z,7.8nm,1.1s						
ANMO	**Albuquerque**	**26.72**	**353**	P	**P**	**18 26 42.9**	**-2.1**
ANMO	**Albuquerque**	**26.72**	**353**	P	**P**	**18 26 42.9**	**-2.1**
ANMO				pmax	pmax		
	comp=Z,59nm,1.9s						
ANMO				MLR	MLR		
	comp=Z,7µm,19.0s						
ANMO	**Albuquerque**	**26.72**	**353**	P	**P**	**18 26 43.6**	**-1.3**
	baz=172,SNR=14						
ANMO				S	**S**	**18 31 21.5**	**+0.7**
	baz=172						
ANMO	**Albuquerque**	**26.72**	**353**	P	**P**	**18 26 44.0**	**-1.0**
	baz=172						
ANMO				S	**S**	**18 31 24.3**	**+3.6**
	baz=172						
SOTA	**Rioblanco**	**26.80**	**102**	*e*P	**P**	**18 26 48.3**	**+2.1**
WLAR	**White Oak Lake**	**26.80**	**18**	P	**P**	**18 26 44.7**	**-0.7**
X18A	**Snowflake**	**26.91**	**347**	P	**P**	**18 26 44.8**	**-1.8**
X18A				IAmb	IAmb	18 27 00.8	
	comp=Z,105nm,1.9s						
PCON	**Cinco Dias**	**26.96**	**101**	*e*P	**P**	**18 26 52.2**	**+4.5**
GLA	**Glamis**	**27.02**	**337**	P	**P**	**18 26 45.0**	**-2.4**
GLA				IAmb	IAmb	18 26 52.5	
	comp=Z,93nm,1.2s						
GLA	**Glamis**	**27.02**	**337**	P	**P**	**18 26 45.0**	**-2.4**
GLA				pmax	pmax		
	comp=Z,93nm,1.2s						
GLA	**Glamis**	**27.02**	**337**	P	**P**	**18 26 48.2**	**+0.7**
	baz=153,SNR=9.5						
UREC	**San Jos de Ur**	**27.02**	**89**	*e*P	**P**	**18 26 48.3**	**+0.7**
X37A	**Clayton**	**27.04**	**14**		**P**	**18 26 45.8**	**-1.8**
X37A				IAmb	IAmb	18 26 54.2	
	comp=Z,85nm,1.4s						
X37A	**Clayton**	**27.04**	**14**	P	**P**	**18 26 46.8**	**-0.7**
	baz=196,SNR=9.0						
X37A				S	S	18 31 34.1	+8.7
	baz=196						
BRAL	**Brewton**	**27.09**	**31**	P	**P**	**18 26 44.8**	**-3.2**
BRAL	**Brewton**	**27.09**	**31**	P	**P**	**18 26 48.9**	**+0.9**
	baz=216						
BRAL				S	**S**	**18 31 32.7**	**+6.6**
	baz=216						
YUH	**Yuha Desert**	**27.10**	**335**	P	**P**	**18 26 45.9**	**-2.2**
YUH				IAmb	IAmb	18 26 58.5	
	comp=Z,104nm,1.9s						
CBX	**Cerro Bola**	**27.13**	**334**	P	**P**	**18 26 47.3**	**-1.2**
HELC	**Santa Helena**	**27.15**	**93**	*e*P	**P**	**18 26 49.3**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**27.18**	**335**	P	**P**	**18 26 49.5**	**+0.5**
	baz=150,SNR=6.1						
Y14A	**Wickenburg**	**27.18**	**341**	P	**P**	**18 26 48.4**	**-0.5**
Y14A				IAmb	IAmb	18 26 54.0	
	comp=Z,84nm,1.6s						
MARP	**Paez Belalcaza**	**27.27**	**100**	*e*P	**P**	**18 26 54.1**	**+3.9**
FNO	**Franklin**	**27.28**	**10**		**P**	**18 26 47.3**	**-2.4**
FNO				IAmb	IAmb	18 26 51.7	
	comp=Z,61nm,1.2s						
SWSC	**Sam W. Stewart**	**27.30**	**336**	P	**P**	**18 26 50.5**	**+0.5**
	baz=151						
SJCC	**San Jacinto, C**	**27.33**	**85**	*e*P	**P**	**18 26 53.2**	**+2.7**
OKCFA	**Oklahoma City**	**27.42**	**10**		**P**	**18 26 47.3**	**-3.7**
OKCFA				IAmb	IAmb	18 26 53.0	
	comp=Z,86nm,1.2s						
W18A	**Petrified Fore**	**27.43**	**348**	P	**P**	**18 26 49.3**	**-2.0**
W18A	**Petrified Fore**	**27.43**	**348**	P	**P**	**18 26 51.7**	**+0.4**
	baz=165						
W18A				S	**S**	**18 31 37.6**	**+5.8**
	baz=165						
BAR	**Barrett**	**27.44**	**334**	P	**P**	**18 26 49.5**	**-1.7**

BAR				IAmb	IAmb	18 26 53.6	
	comp=Z,58nm,1.4s						
MIAR	Mount Ida	27.46	17	P	P	18 26 49.3	-2.0
MIAR				IAmb	IAmb	18 26 53.7	
	comp=Z,97nm,1.1s						
MIAR				IAMs_20	IAMs_20	18 38 21.6	
	comp=Z,8µm,19.0s						
MIAR	Mount Ida	27.46	17	P	P	18 26 49.3	-2.0
MIAR				pmax	pmax		
	comp=Z,97nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,8µm,19.0s						
MIAR	Mount Ida	27.46	17	P	P	18 26 50.5	-0.9
	baz=200,SNR=54						
MIAR	Mount Ida	27.46	17	P	P	18 26 50.7	-0.6
	baz=200,SNR=54						
MIAR				S	S	18 31 35.8	+3.8
	baz=200						
ANIL	Santa Ana	27.50	96	*e*P	P	18 26 55.1	+2.8
MONP2	Monument Peak	27.52	335	P	P	18 26 53.0	+0.9
	baz=150,SNR=9.9						
BLYC	Blythe	27.53	339	P	P	18 26 50.7	-1.2
BLYC				IAmb	IAmb	18 27 08.4	
	comp=Z,91nm,1.9s						
X40A	Basin Creek Fa	27.62	18	P	P	18 26 51.9	-0.9
X40A				IAmb	IAmb	18 26 59.7	
	comp=Z,103nm,2.0s						
X40A				IAMs_20	IAMs_20	18 38 51.0	
	comp=Z,10µm,19.0s						
X40A	Basin Creek Fa	27.62	18	P	P	18 26 54.2	+1.4
	baz=202						
ZARC	Zaragoza, Cauc	27.70	90	*e*P	P	18 26 54.1	+0.3
ORTC	Ortega, Tolima	27.75	97	*e*P	P	18 26 56.0	+1.8
BC3	Big Chuckawall	27.79	337	P	P	18 26 54.4	-0.1
	baz=152,SNR=15						
109C	Camp Elliot, M	27.81	334	P	P	18 26 54.8	+0.4
	baz=148						
GARC	Garzon, Huila	27.87	101	*e*P	P	18 26 58.0	+2.5
NORC	Norcasia	27.87	94	*e*P	P	18 26 57.0	+1.7
PDMCI	Parker Dam,Lak	27.89	340	P	P	18 26 55.3	+0.1
	baz=155,SNR=11						
PDMCI				S	S	18 31 42.6	+3.8
	baz=155						
W39A	Magazine	28.01	16	P	P	18 26 54.5	-1.8
W39A				IAMs_20	IAMs_20	18 38 29.2	
	comp=Z,7µm,20.0s						
W39A	Magazine	28.01	16	P	P	18 26 56.3	0.0
	baz=199,SNR=26						
W39A	Magazine	28.01	16	P	P	18 26 56.5	+0.2
	baz=199,SNR=26						
W39A				S	S	18 31 44.2	+3.5
	baz=199						
UALR	University of	28.04	19	P	P	18 26 54.8	-1.8
IRM	Iron Mountain	28.12	338	P	P	18 26 57.4	+0.1
	baz=153,SNR=25						
IRM				S	S	18 31 45.6	+3.1
	baz=153						
250A	Grady	28.13	31	P	P	18 26 55.6	-1.7
250A	Grady	28.13	31	P	P	18 26 57.4	0.0
	baz=217,SNR=9.4						
PRAC	Prado	28.14	98	*e*P	P	18 26 58.9	+1.2
TPFO	Pinon Flats	28.15	335	P	P	18 26 57.8	+0.1
	baz=150,SNR=11						
PFO	Pinyon Flats O	28.16	335	P	P	18 26 56.6	-1.2
	comp=Z,8.9nm,1.0s,baz=143,slow=7.3,SNR=15						
PFO				S	S	18 31 46.6	+3.4
	comp=Z,0.7nm,0.5s,baz=169,slow=11,SNR=1.3						
PFO				LR	LR	18 35 58.0	
	comp=Z,12µm,20.8s,baz=143,slow=32						
	comp=Z,8.9nm,1.0s						
PFO	Pinyon Flats O	28.16	335	P	P	18 26 56.4	-1.3
PFO	Pinyon Flats O	28.16	335	IAMs_20	IAMs_20	18 35 44.8	
	comp=Z,10µm,20.0s						
PFO	Pinyon Flats O	28.16	335	P	P	18 26 57.4	-0.4
	baz=150,SNR=11						
PFO				S	S	18 31 48.4	+5.2
	baz=150						
U32A	Winter Ranch,	28.16	7	P	P	18 26 57.6	0.0
	baz=188						
PTBC	PUERTO BERRIO,	28.17	92	*e*P	P	18 27 00.9	+2.9
WUAZ	Wupatki	28.19	345	P	P	18 26 56.8	-1.3
WUAZ				IAmb	IAmb	18 27 01.3	
	comp=Z,81nm,1.4s						
WUAZ	Wupatki	28.19	345	P	P	18 26 57.9	-0.2
	baz=162,SNR=22						
WUAZ				S	S	18 31 49.9	+6.0
	baz=162						
TUL1	Leonard	28.21	12		P	18 26 56.0	-2.1
TUL1				IAmb	IAmb	18 26 60.0	
	comp=Z,50nm,1.2s						
TUL1	Leonard	28.21	12	P	P	18 26 57.1	-1.0
	baz=195,SNR=5.7						
TUL1				S	S	18 31 44.6	+0.8
	baz=195						
TUL1	Leonard	28.21	12	P	P	18 26 57.5	-0.6
	baz=195,SNR=5.7						
TUL1				S	S	18 31 46.3	+2.5
	baz=195						
Z47A	Carrollton	28.28	27	P	P	18 26 56.7	-1.9
Z47A				IAmb	IAmb	18 27 00.9	
	comp=Z,36nm,0.9s						
Z47A	Carrollton	28.28	27	P	P	18 26 58.4	-0.2
	baz=212						
BELC	Belle Mtn. Jos	28.31	336	P	P	18 26 59.1	0.0
	baz=151,SNR=12						
BELC				S	S	18 31 49.5	+3.8
	baz=151						
SMRC	Santa Marta, M	28.32	82	*e*P	P	18 27 00.9	+1.6
656A	Willston	28.32	40	P	P	18 26 58.7	-0.4
656A				IAmb	IAmb	18 27 17.9	
	comp=Z,36nm,0.6s						
W41B	Gary Mavity, V	28.44	18	P	P	18 26 57.7	-2.4
W41B				IAmb	IAmb	18 27 02.2	
	comp=Z,48nm,1.2s						
W41B	Gary Mavity, V	28.44	18	P	P	18 26 59.7	-0.3
	baz=202,SNR=15						
W41B	Gary Mavity, V	28.44	18	P	P	18 26 59.8	-0.3
	baz=202,SNR=15						
W41B				S	S	18 31 51.2	+3.8
	baz=202						
MURC	Murrieta	28.46	334	P	P	18 27 00.8	+0.5
	baz=149						
NEE2	Needles Airpor	28.48	339	P	P	18 27 01.4	+0.9
	baz=155						
NEE2				S	S	18 31 54.1	+6.0
	baz=155						
ROSC	El Rosal	28.51	95	P	P	18 27 02.2	+0.7
	comp=Z,5.0nm,0.3s,baz=319,slow=20,SNR=1.5						
ROSC				S	S	18 31 56.5	+6.8
	comp=Z,9.3nm,0.4s,baz=213,slow=15,SNR=1.8						
ROSC				LR	LR	18 34 55.3	
	comp=Z,2µm,18.1s,baz=288,slow=29						
	comp=Z,5.0nm,0.3s						
ROSC	El Rosal	28.51	95	IAmb	IAmb	18 27 13.3	
	comp=Z,78nm,1.4s						
ROSC	El Rosal	28.51	95	P	P	18 27 02.2	+0.7
ROSC				pmax	pmax		
	comp=Z,78nm,1.4s						
ROSC	El Rosal	28.51	95	*e*P	P	18 27 03.8	+2.3
W13A	Hualapai Mount	28.53	341	P	P	18 26 58.8	-2.4
WHAR	Wooly Hollow	28.54	18	P	P	18 26 58.9	-2.0
WHAR				IAmb	IAmb	18 27 06.8	
	comp=Z,53nm,1.1s						
ELS	Elsinore Mount	28.60	334	P	P	18 27 00.1	-1.5
LRAL	Lakeview Retre	28.63	29	P	P	18 26 59.6	-2.2
LRAL	Lakeview Retre	28.63	29	P	P	18 27 01.6	-0.2
	baz=214,SNR=6.0						
LRAL	Lakeview Retre	28.63	29	P	P	18 27 01.8	0.0
	baz=214,SNR=6.0						
SPBC	San Pablo de B	28.65	93	*e*P	P	18 27 05.7	+3.4
T25A	Trinidad	28.74	357	P	P	18 27 00.2	-2.7
T25A				IAmb	IAmb	18 27 17.0	
	comp=Z,94nm,1.7s						
T25A	Trinidad	28.74	357	P	P	18 27 03.4	+0.4
	baz=177,SNR=13						
T25A				S	S	18 31 58.0	+5.5
	baz=177						
ATAH	Atahualpa	28.78	122	P	P	18 27 05.7	+1.9
	comp=Z,13nm,0.9s,baz=334,slow=6.7,SNR=12						
ATAH				S	S	18 31 56.5	+2.5
	comp=Z,2.7nm,0.7s,baz=282,slow=22,SNR=1.4						
ATAH				LR	LR	18 36 20.2	
	comp=Z,23µm,20.0s,baz=295,slow=32						
	comp=Z,13nm,0.9s						
CIS	Catalina Islan	28.83	332	S	S	18 31 58.6	+4.9
	baz=146						
OXF	Oxford	28.85	23	P	P	18 27 04.5	+0.8
	baz=208						
BRRC	Barranca, Sant	28.86	90	*e*P	P	18 27 07.6	+3.5
GMRC	Granite Mounta	28.87	338	P	P	18 27 05.1	+1.0
	baz=153,SNR=13						
GMRC				S	S	18 32 00.1	+5.6
	baz=153						
LL1C	La Loma 1 Cana	28.93	85	*e*P	P	18 27 08.6	+3.9
HHAR	Hobbs	29.00	15	P	P	18 27 02.4	-2.7
HHAR	Hobbs	29.00	15	P	P	18 27 03.5	-1.6
	baz=198						
T35A	Sooner Cattle	29.05	10		P	18 27 02.8	-2.7
T35A				IAmb	IAmb	18 27 07.3	
	comp=Z,57nm,1.1s						
T35B	Sooner Cattle	29.05	10	P	P	18 27 03.6	-2.0
	baz=193,SNR=13						
CHIC	Chingaza	29.12	95	*e*P	P	18 27 07.6	+0.7
FCAR	Ozark Folk Cen	29.14	18	P	P	18 27 03.9	-2.5
TIGA	Tifton	29.16	35	P	P	18 27 04.8	-1.8
TIGA				IAmb	IAmb	18 27 09.0	
	comp=Z,41nm,1.0s						
TIGA	Tifton	29.16	35	P	P	18 27 08.1	+1.6
	baz=222						
HEC	Hector,Ludlow	29.17	337	P	P	18 27 07.4	+0.7
	baz=152						
HEC				S	S	18 32 02.8	+3.7
	baz=152						
OCAC	Ocana	29.19	88	*e*P	P	18 27 10.5	+3.3
GTBY	Guantanamo Bay	29.19	64	*e*P	P	18 27 06.7	-0.3
BFSC	Mount Baldy Ra	29.20	334	P	P	18 27 07.7	+0.7
	baz=148						
BFSC				S	S	18 32 03.7	+4.0
	baz=148						
LL6C	La Loma 6 Bece	29.21	85	*e*P	P	18 27 10.5	+3.3
MVCO	Mesa Verde	29.23	351	P	P	18 27 04.6	-2.8
MVCO				IAmb	IAmb	18 27 09.2	
	comp=Z,49nm,1.3s						
MVCO	Mesa Verde	29.23	351	P	P	18 27 07.3	-0.1
	baz=168,SNR=13						
MVCO				S	S	18 32 04.9	+4.6
	baz=168						
U15A	North Rim	29.29	344	P	P	18 27 06.1	-1.9
U15A				IAmb	IAmb	18 27 21.2	
	comp=Z,118nm,1.9s						
U40A	Yellville	29.36	17	P	P	18 27 05.8	-2.5
U40A				IAmb	IAmb	18 27 10.5	
	comp=Z,43nm,1.1s						
U40A				IAMs_20	IAMs_20	18 39 20.9	
	comp=Z,9µm,20.0s						
U40A	Yellville	29.36	17	P	P	18 27 07.4	-0.8
	baz=200,SNR=21						
U40A				P	P	18 27 07.4	-0.8
	baz=200,SNR=21						
U40A	Yellville	29.36	17	P	P	18 27 07.7	-0.6
	baz=200,SNR=21						
SDCO	Great Sand Dun	29.41	356	P	P	18 27 06.9	-2.1
SDCO	Great Sand Dun	29.41	356	P	P	18 27 09.9	+0.9
	baz=174,SNR=17						
SDCO	Great Sand Dun	29.41	356	P	P	18 27 09.6	+0.6
	baz=174,SNR=17						
SDCO				S	S	18 32 09.0	+5.9
	baz=174						
BARC	Barichara	29.43	91	*e*P	P	18 27 11.5	+2.0
RRX	Edison Barstow	29.47	336	P	P	18 27 11.2	+1.9
	baz=150						
MACC	Macarena, Meta	29.48	100	*e*P	P	18 27 10.5	+0.9
152A	Waverly Hall	29.48	32	P	P	18 27 07.5	-1.9
152A	Waverly Hall	29.48	32	P	P	18 27 08.9	-0.5
	baz=219						
DECC	Green Verdugo	29.51	333	S	S	18 32 09.9	+5.6
	baz=147						
S22A	4UR Ranch, Cre	29.53	354	P	P	18 27 07.8	-2.4
S22A	4UR Ranch, Cre	29.53	354	P	P	18 27 09.8	-0.4
	baz=172,SNR=28						
S22A				S	S	18 32 11.1	+6.0
	baz=172						
TUQ	Turquoise Moun	29.55	338	P	P	18 27 11.6	+1.4
	baz=153,SNR=8.4						
TUQ				S	S	18 32 10.5	+5.4
	baz=153						
Y49A	Blount Mountai	29.59	28	P	P	18 27 08.1	-2.2
Y49A	Blount Mountai	29.59	28	P	P	18 27 09.7	-0.6
	baz=215						
RUSC	La Rusia	29.60	93	*e*P	P	18 27 13.4	+2.2
LCAR	Lake Charles	29.61	19	P	P	18 27 08.9	-1.6
LCAR	Lake Charles	29.61	19	P	P	18 27 09.4	-1.1
	baz=204,SNR=10.0						
Z51A	Franklin	29.75	31	P	P	18 27 10.9	-0.9
GSC	Goldstone, Bar	29.77	337	P	P	18 27 10.7	-1.3
GSC	Goldstone, Bar	29.77	337	P	P	18 27 10.7	-1.3
GSC				pmax	pmax		
	comp=Z,38nm,1.4s						
GSC	Goldstone, Bar	29.77	337	P	P	18 27 13.6	+1.6
	baz=151,SNR=6.5						
GSC				S	S	18 32 13.4	+4.9
	baz=151						
X48A	Hartselle	29.79	27	P	P	18 27 09.7	-2.3
PLAL	Pickwick Lake	29.79	25	P	P	18 27 09.6	-2.5
PLAL				IAmb	IAmb	18 27 13.6	
	comp=Z,30nm,0.9s						
EDW2	Edwards Air Fo	29.89	334	P	P	18 27 13.5	+0.4
	baz=148,SNR=9.2						
EDW2				S	S	18 32 13.0	+2.6
	baz=148						
OSI	Osito Audit: C	29.99	333	P	P	18 27 15.4	+1.4
	baz=147						
SHOC	Shoshone, Teco	30.09	338	P	P	18 27 15.7	+0.9
	baz=152						
SHOC				S	S	18 32 20.3	+6.9
	baz=152						
LCMT	Little Creek M	30.10	343	P	P	18 27 13.4	-1.6
LCMT				IAmb	IAmb	18 27 26.9	
	comp=Z,107nm,1.8s						
CCAC	Calif City Air	30.13	335	P	P	18 27 13.2	-2.0
255A	Hazlehurst	30.16	36	P	P	18 27 14.6	-0.9
PV13	Radium Mtn., P	30.21	351	P	P	18 27 13.7	-2.4
R32A	Long Quarter,	30.21	6	P	P	18 27 13.5	-2.3
R32A				IAmb	IAmb	18 27 17.7	
	comp=Z,46nm,1.1s						
R32A	Long Quarter,	30.21	6	P	P	18 27 15.1	-0.7
	baz=188,SNR=6.2						
SHPR	Sheep Range	30.24	340	P	P	18 27 14.8	-1.4
PKCU	Pink Cliffs	30.25	345	P	P	18 27 15.0	-1.6
MGMO	Mountain Grove	30.27	17	P	P	18 27 14.6	-1.8
LRMC	Laurel Mtn Rad	30.27	335	P	P	18 27 17.6	+1.0
	baz=150						
LRMC				S	S	18 32 19.5	+3.0
	baz=150						
154A	Montrose	30.31	34	P	P	18 27 13.8	-2.9
154A				IAmb	IAmb	18 27 19.5	
	comp=Z,73nm,1.1s						
PV15	Paradox Valley	30.34	351	P	P	18 27 15.2	-2.0
PV11	David Mesa, Pa	30.35	351	P	P	18 27 14.2	-3.0
PV11				IAmb	IAmb	18 27 19.2	
	comp=Z,49nm,1.3s						
QSM	Queen of Sheba	30.37	337	P	P	18 27 15.4	-1.9
QSM				IAmb	IAmb	18 27 29.0	
	comp=Z,71nm,1.7s						
PV07	Paradox Valley	30.45	351	P	P	18 27 15.2	-3.0
PV10	Paradox Valley	30.46	350	P	P	18 27 13.8	-4.4
PV10				IAmb	IAmb	18 27 20.1	
	comp=Z,60nm,1.3s						
ARVC	Arvin	30.46	334	P	P	18 27 19.0	+0.9
	baz=147						
S39A	Bolivar	30.49	15	P	P	18 27 15.1	-3.2
S39A	Bolivar	30.49	15	P	P	18 27 16.7	-1.5
	baz=199,SNR=8.8						
GWY	Greenwater Val	30.49	338	P	P	18 27 16.0	-2.5
CBKS	Cedar Bluff	30.50	5	P	P	18 27 15.0	-3.4
CBKS				IAmb	IAmb	18 27 21.2	
	comp=Z,53nm,1.4s						
CBKS	Cedar Bluff	30.50	5	P	P	18 27 15.0	-3.4
CBKS				pmax	pmax		
	comp=Z,53nm,1.4s						
CBKS				MLR	MLR		
	comp=Z,17µm,18.0s						
CBKS	Cedar Bluff	30.50	5	P	P	18 27 18.3	0.0
	baz=186						
CBKS				S	S	18 32 23.6	+3.8
	baz=186						
PBMO	Poplar Bluff	30.50	20	P	P	18 27 15.5	-2.8
PBMO				IAmb	IAmb	18 27 20.6	
	comp=Z,49nm,1.3s						
PBMO	Poplar Bluff	30.50	20	P	P	18 27 17.6	-0.7
	baz=205,SNR=8.8						
FPAL	Fort Paine	30.52	29	P	P	18 27 17.0	-1.7
PV23	Carpenter Ridg	30.53	350	P	P	18 27 16.9	-2.0
PV23				IAmb	IAmb	18 27 20.8	
	comp=Z,38nm,1.2s						
BCW	Bitter Crk WRg	30.57	333	P	P	18 27 17.4	-1.7
BCW				IAmb	IAmb	18 27 37.4	
	comp=Z,36nm,1.2s						
KSCO	Kaye Shedlock'	30.57	0	P	P	18 27 15.4	-3.7
KSCO				IAmb	IAmb	18 28 07.8	
	comp=Z,47nm,1.1s						
KSCO	Kaye Shedlock'	30.57	0	P	P	18 27 18.7	-0.4
	baz=180						
KSCO				S	S	18 32 24.6	+3.5
	baz=180						
Q24A	Divide	30.59	356	P	P	18 27 17.8	-1.7
Q24A	Divide	30.59	356	P	P	18 27 20.3	+0.8
	baz=175,SNR=6.5						
Q24A				S	S	18 32 25.8	+4.0
	baz=175						
CCUT	Cedar City	30.64	343	P	P	18 27 18.3	-1.6
PKM	Mcpherson Peak	30.71	332	P	P	18 27 21.2	+0.8
	baz=145						
GOGA	Godfrey	30.72	33	P	P	18 27 18.0	-2.3
GOGA				IAmb	IAmb	18 27 26.3	
	comp=Z,50nm,1.6s						
GOGA	Godfrey	30.72	33	P	P	18 27 18.0	-2.3
GOGA				pmax	pmax		
	comp=Z,50nm,1.6s						
GOGA				MLR	MLR		
	comp=Z,3µm,20.0s						
GOGA	Godfrey	30.72	33	P	P	18 27 18.3	-2.1
	baz=220,SNR=6.3						
GOGA	Godfrey	30.72	33	P	P	18 27 20.9	+0.6
	baz=220,SNR=6.3						
GOGA				S	S	18 32 25.5	+2.2
	baz=220						
Y52A	Lilburn	30.75	32	IAmb	IAmb	18 27 27.4	
	comp=Z,78nm,1.9s						
ISA	Isabella, Lake	30.76	335	IAmb	IAmb	18 27 34.6	
	comp=Z,77nm,2.0s						
ISA	Isabella, Lake	30.76	335	P	P	18 27 21.8	+1.0
	baz=148						
ISA				S	S	18 32 29.2	+5.1
	baz=148						
MTPU	Mount Pierson	30.79	345	IAmb	IAmb	18 27 24.1	
	comp=Z,44nm,1.3s						
FURC	Furnace Creek,	30.81	338	P	P	18 27 22.6	+1.5
	baz=152,SNR=8.5						
TAMC	Tame, Arauca	30.82	91	*e*P	P	18 27 24.0	+2.5
WVT	Waverly	30.89	24	P	P	18 27 19.9	-1.8
WVT	Waverly	30.89	24	P	P	18 27 19.9	-1.8
WVT				pmax	pmax		
	comp=Z,25nm,1.1s						
WVT				MLR	MLR		
	comp=Z,4µm,18.0s						
WVT	Waverly	30.89	24	P	P	18 27 20.4	-1.4
	baz=210,SNR=12						
WVT	Waverly	30.89	24	P	P	18 27 20.7	-1.1
	baz=210						
SWET	Sewanee	30.93	28	P	P	18 27 20.5	-1.7
SMCO	Snowmass	30.96	354	P	P	18 27 19.7	-3.1
SMCO				IAmb	IAmb	18 27 28.6	
	comp=Z,55nm,1.6s						
SMCO				IAMs_20	IAMs_20	18 39 16.8	
	comp=Z,7µm,20.0s						
TPNV	Topopah Spring	31.01	339	P	P	18 27 21.6	-1.5
TPNV				IAmb	IAmb	18 27 29.2	
	comp=Z,96nm,1.7s						
TPNV	Topopah Spring	31.01	339	P	P	18 27 21.6	-1.5
TPNV				pmax	pmax		
	comp=Z,96nm,1.7s						
TPNV				MLR	MLR		
	comp=Z,4µm,22.0s						
TPNV	Topopah Spring	31.01	339	P	P	18 27 24.4	+1.3
	baz=153,SNR=11						
TPNV				S	S	18 32 34.5	+6.3
	baz=153						
PRN	Pahroc Range	31.02	341	IAmb	IAmb	18 27 26.4	
	comp=Z,71nm,1.8s						
SMMC	Simmler	31.15	332	P	P	18 27 25.0	+0.9
	baz=145						
SMMC				S	S	18 32 35.1	+5.1
	baz=145						
KSU1	Kansas State U	31.16	9	IAmb	IAmb	18 27 26.2	
	comp=Z,39nm,1.1s						
KSU1	Kansas State U	31.16	9	IAMs_20	IAMs_20	18 39 27.3	
	comp=Z,8µm,20.0s						
KSU1	Kansas State U	31.16	9	P	P	18 27 23.7	-0.5
	baz=192						
KSU1				S	S	18 32 33.2	+3.1
	baz=192						
VES	Vestal, Richgr	31.18	334	P	P	18 27 25.8	+1.5
	baz=148						
VES				S	S	18 32 35.6	+5.3
	baz=148						
MSU	Marysvale	31.23	346	P	P	18 27 23.2	-1.9
MSU	Marysvale	31.23	346	P	P	18 27 23.2	-1.9
CWC	Cottonwood Cre	31.27	336	P	P	18 27 26.8	+1.4
	baz=150						
CWC				S	S	18 32 38.6	+6.5
	baz=150						
R40A	Maddies Statio	31.33	16	IAmb	IAmb	18 27 27.7	
	comp=Z,64nm,1.2s						
R40A	Maddies Statio	31.33	16	P	P	18 27 24.7	-1.0
	baz=200,SNR=20						
CCM	Cathedral Cave	31.41	18	P	P	18 27 23.6	-2.7
CCM	Cathedral Cave	31.41	18	IAMs_20	IAMs_20	18 40 44.1	
	comp=Z,9µm,20.0s						
CCM	Cathedral Cave	31.41	18	P	P	18 27 23.6	-2.7
CCM				pmax	pmax		
	comp=Z,19nm,1.0s						
CCM				MLR	MLR		
	comp=Z,9µm,20.0s						
CCM	Cathedral Cave	31.41	18	P	P	18 27 25.2	-1.1
	baz=202,SNR=9.4						
CCM	Cathedral Cave	31.41	18	P	P	18 27 25.6	-0.8
	baz=202						
CCM				S	S	18 32 37.2	+3.3
	baz=202						
SRU	San Rafael Swe	31.44	348	P	P	18 27 25.1	-1.8
SRU				IAmb	IAmb	18 27 39.8	
	comp=Z,82nm,1.8s						
SRU	San Rafael Swe	31.44	348	P	P	18 27 25.1	-1.8
SRU				pmax	pmax		
	comp=Z,82nm,1.8s						
ISCO	Idaho Springs	31.46	356	P	P	18 27 27.8	+0.7
	baz=175,SNR=10						
ISCO	Idaho Springs	31.46	356	P	P	18 27 27.9	+0.8
	baz=175,SNR=10						
ISCO				S	S	18 32 38.8	+3.5
	baz=175						
CLTN	Cedars of Leba	31.48	26	P	P	18 27 25.4	-1.6
FVM	French Village	31.60	19	P	P	18 27 25.3	-2.7
FVM				IAmb	IAmb	18 27 30.8	
	comp=Z,34nm,1.1s						
FVM	French Village	31.60	19	P	P	18 27 25.3	-2.7
FVM				pmax	pmax		
	comp=Z,34nm,1.2s						
FVM	French Village	31.60	19	P	P	18 27 27.0	-1.0
	baz=204,SNR=7.4						
PAGB	Antelope Grade	31.61	332	IAmb	IAmb	18 27 41.9	
	comp=Z,109nm,2.0s						
VOG	Valley Oaks Go	31.71	334	P	P	18 27 30.2	+1.2
	baz=147						
S44A	Carbondale	31.73	21	IAmb	IAmb	18 27 31.4	
	comp=Z,38nm,0.9s						
S44A	Carbondale	31.73	21	P	P	18 27 28.0	-1.1
	baz=206,SNR=5.8						
SIUC	Southern Illin	31.76	21	P	P	18 27 28.0	-1.4
SIUC				IAmb	IAmb	18 27 31.6	
	comp=Z,41nm,1.0s						
TMUT	Trail Mountain	31.76	348	IAmb	IAmb	18 27 32.4	
	comp=Z,37nm,1.2s						
CPCT	Cooper Cave	31.78	29	P	P	18 27 28.5	-1.2
LCH	Last Change Ra	31.78	337	IAmb	IAmb	18 27 43.9	
	comp=Z,77nm,2.0s						
SDV	Santo Domingo	31.82	87	LR	LR	18 38 54.2	
	comp=Z,5µm,20.9s,baz=270,slow=34						
SDV	Santo Domingo	31.82	87	P	P	18 27 31.2	+0.7
SDV				IAmb	IAmb	18 27 40.3	
	comp=Z,70nm,1.3s						
P17A	Butcher Ranch,	31.83	348	IAmb	IAmb	18 27 32.6	
	comp=Z,51nm,1.3s						
TIN	Tinemaha, Big	31.86	336	P	P	18 27 32.2	+1.8
	baz=150						
TIN				S	S	18 32 47.6	+6.3
	baz=150						
P18A	Preston Nutter	31.89	349	IAmb	IAmb	18 27 43.9	
	comp=Z,83nm,2.0s						

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HODGE  Hodges             31.99  33  P         P         18 27 30.7 -0.8
HODGE                                IAmb      IAmb      18 27 37.7
       comp=Z,39nm,1.4s
R11A   Troy Canyon, C     32.05 341  IAmb      IAmb      18 27 35.8
       comp=Z,82nm,1.9s
R11A   Troy Canyon, C     32.05 341  P         P         18 27 33.8 +1.6
       baz=156,SNR=18
R11A                                 S         S         18 32 50.1 +5.8
       baz=156
O20A   White River Ci     32.06 352  P         P         18 27 32.2 -0.1
       baz=170,SNR=15
O20A                                 S         S         18 32 50.7 +6.2
       baz=170
U49A   Red Boiling Sp     32.08  26  P         P         18 27 30.2 -2.1
U49A   Red Boiling Sp     32.08  26  P         P         18 27 30.9 -1.4
       baz=213,SNR=9.1
P38A   Dawn               32.27  13  IAmb      IAmb      18 27 35.6
       comp=Z,33nm,1.2s
TKL    Tuckaleechee C     32.31  30  LR        LR        18 41 35.5
       comp=Z,5μm,21.6s,baz=217,slow=38
TKL    Tuckaleechee C     32.31  30  P         P         18 27 31.2 -3.2
TKL    Tuckaleechee C     32.31  30  P         P         18 27 31.2 -3.2
TKL                                  pmax      pmax
       comp=Z,29nm,1.3s
TKL    Tuckaleechee C     32.31  30  P         P         18 27 33.7 -0.7
       baz=217,SNR=6.1
NHSC   New Hope           32.36  37  P         P         18 27 35.8 +1.0
       baz=226
SDDR   Presa de Saban     32.37  68 eP         P         18 27 38.5 +3.4
OGNE   Ogallala           32.51   1  P         P         18 27 36.1  0.0
       baz=181,SNR=5.8
OGNE   Ogallala           32.51   1  P         P         18 27 35.9 -0.2
       baz=181,SNR=5.8
OGNE                                 S         S         18 32 55.8 +4.5
       baz=181
MPU    Maple Canyon       32.54 347  IAmb      IAmb      18 27 39.9
       comp=Z,52nm,1.1s
V52A   Sevierville        32.55  30  P         P         18 27 35.8 -0.6
       baz=217,SNR=5.1
P40A   Paris              32.55  16  P         P         18 27 34.6 -1.7
P40A   Paris              32.55  16  P         P         18 27 35.4 -0.9
       baz=200,SNR=28
N23A   Red Feather La     32.57 356  P         P         18 27 36.7 -0.2
       baz=174,SNR=9.5
N23A                                 S         S         18 32 57.0 +4.4
       baz=174
JSC    Jenkinsville       32.58  34  P         P         18 27 35.0 -1.7
JSC                                  IAmb      IAmb      18 28 29.7
       comp=Z,46nm,1.2s
JSC    Jenkinsville       32.58  34  P         P         18 27 35.0 -1.7
JSC                                  pmax      pmax
       comp=Z,46nm,1.2s
JSC    Jenkinsville       32.58  34  P         P         18 27 37.3 +0.6
       baz=223,SNR=5.4
NLU    North Lily Min     32.58 347  P         P         18 27 36.0 -0.9
NLU                                  IAmb      IAmb      18 27 51.4
       comp=Z,66nm,1.7s
MLAC   Mammoth, Mammo32.60 336  P         P         18 27 38.7 +1.6
       baz=149
OMMB   Old Mammoth Mi     32.65 336  IAmb      IAmb      18 27 40.6
       comp=Z,96nm,1.8s
RDMU   Red Mountain       32.69 350  IAmb      IAmb      18 27 40.0
       comp=Z,49nm,1.3s
NNA    Nana               32.77 128  LR        LR        18 38 18.0
       comp=Z,5μm,20.6s,baz=317,slow=32
V53A   Saluda             32.80  31  P         P         18 27 36.8 -1.9
V53A                                 IAmb      IAmb      18 27 45.2
       comp=Z,43nm,1.4s
Y57A   Sumter             32.88  36  IAmb      IAmb      18 27 42.5
       comp=Z,49nm,1.2s
Q44A   Meyer Farm, Va     32.89  20  P         P         18 27 38.6 -0.8
       baz=206,SNR=12
T50A   Nancy              32.92  27  P         P         18 27 37.2 -2.5
T50A                                 IAmb      IAmb      18 27 42.8
       comp=Z,47nm,1.5s
T50A   Nancy              32.92  27  P         P         18 27 39.2 -0.4
       baz=214
T50A                                 P         P         18 27 39.2 -0.4
       baz=214
PHWY   Pilot Hill         32.94 356  IAmb      IAmb      18 27 42.2
       comp=Z,34nm,1.3s
DUG    Dugway, Tooele     32.98 346  IAMs_20   IAMs_20   18 42 15.4
       comp=Z,5μm,18.0s
DUG    Dugway, Tooele     32.98 346  P         P         18 27 40.8 +0.5
       baz=162,SNR=28
DUG                                  S         S         18 33 07.0 +8.2
       baz=162
LHV    Little Huntoon     33.00 337  P         P         18 27 40.2 -0.1
LHV                                  IAmb      IAmb      18 27 54.9
       comp=Z,84nm,1.6s
SAO    San Andreas Ge     33.01 332  P         P         18 27 40.7 +0.3
SAO                                  IAMs_20   IAMs_20   18 38 09.4
       comp=Z,6μm,18.0s
SAO    San Andreas Ge     33.01 332  P         P         18 27 40.7 +0.3
SAO                                  pmax      pmax
       comp=Z,38nm,1.7s
SAO                                  MLR       MLR
       comp=Z,6μm,18.0s
NV11   Mina Array Sit     33.03 338  IAmb      IAmb      18 27 55.0
       comp=Z,75nm,1.7s
OLIL   Olney              33.06  21  IAmb      IAmb      18 27 43.0
       comp=Z,58nm,1.4s
OLIL   Olney              33.06  21  P         P         18 27 40.5 -0.4
       baz=208
JLU    Jordanelle         33.07 348  P         P         18 27 39.3 -1.9
NVAR   Mina Array Bea     33.08 337  P         P         18 27 39.7 -1.6
       comp=Z,4.2nm,1.0s,baz=159,slow=7.3,SNR=35
NVAR                                 PcP       PcP       18 30 24.7 -0.1
       comp=Z,0.3nm,0.5s,baz=98,slow=3.7,SNR=2.3
NVAR                                 S         S         18 32 59.3 -1.2
       comp=Z,0.1nm,0.4s,baz=311,slow=39,SNR=1.4
NVAR                                 LR        LR        18 39 06.5
       comp=Z,4μm,21.9s,baz=148,slow=33
       comp=Z,4.2nm,1.0s
TZTN   Tazewell           33.13  29  P         P         18 27 39.9 -1.6
TZTN   Tazewell           33.13  29  P         P         18 27 41.8 +0.3
       baz=217
TZTN                                 S         S         18 33 05.2 +4.3
       baz=217
KMSC   Kings Mountain     33.18  33  P         P         18 27 42.5 +0.5
       baz=222
KMSC                                 S         S         18 33 04.3 +2.7
       baz=222
BGNE   Belgrade           33.22   6  P         P         18 27 41.8 -0.5
       baz=188
BIRD   Birdtown, Kers     33.30  35  IAmb      IAmb      18 27 46.2
       comp=Z,43nm,1.3s
BIRD   Birdtown, Kers     33.30  35  P         P         18 27 41.1 -1.8
       baz=223,SNR=5.9
RYN    Ryan               33.34 337  P         P         18 27 42.3 -1.2
N38A   Joes South For     33.45  13  IAmb      IAmb      18 27 47.0
       comp=Z,52nm,1.1s
RWWY   Rawlins            33.47 354  IAmb      IAmb      18 27 56.8
       comp=Z,40nm,1.4s
KVN    Kaiserville        33.55 338  IAmb      IAmb      18 27 47.8
       comp=Z,38nm,1.3s
CMB    Columbia Colle     33.58 334  P         P         18 27 43.2 -2.2
CMB    Columbia Colle     33.58 334  P         P         18 27 43.3 -2.2
CMB                                  pmax      pmax
       comp=Z,48nm,2.0s
CMB                                  MLR       MLR
       comp=Z,4μm,20.0s
BGU    Big Grassy Mou     33.73 346  IAmb      IAmb      18 27 59.1
       comp=Z,57nm,1.4s
V55A   Taylorsville       33.77  33  IAmb      IAmb      18 27 53.7
       comp=Z,64nm,1.3s
V55A   Taylorsville       33.77  33  P         P         18 27 47.0 -0.2
       baz=221,SNR=14
V55A                                 P         P         18 27 47.0 -0.2
       baz=221,SNR=14
R49A   Shelbyville        33.83  25  P         P         18 27 46.3 -1.3
       baz=213
R49A                                 P         P         18 27 46.3 -1.3
       baz=213
X58A   Rowland            33.88  36  P         P         18 27 45.8 -2.2
YERR   Yerington          33.92 337  IAmb      IAmb      18 28 01.9
       comp=Z,54nm,1.5s
W57A   Gilead             33.93  35  IAmb      IAmb      18 27 51.3
       comp=Z,38nm,1.4s
N41A   Harden Midland     33.98  16  P         P         18 27 47.4 -1.4
       baz=202,SNR=11
S51A   Beattyville        33.99  28  P         P         18 27 46.3 -2.7
S51A                                 IAmb      IAmb      18 27 50.8
       comp=Z,32nm,0.8s
S51A   Beattyville        33.99  28  P         P         18 27 47.7 -1.3
       baz=216,SNR=13
S51A                                 P         P         18 27 47.7 -1.3
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       baz=216,SNR=13
BLO    Bloomington        34.04  23  IAmb      IAmb      18 27 51.0
       comp=Z,27nm,1.0s
HWUT   Hardware Ranch     34.06 348  IAmb      IAmb      18 27 52.1
       comp=Z,47nm,1.2s
HWUT                                 IAMs_20   IAMs_20   18 42 53.7
       comp=Z,6μm,18.0s
ELK    Elko               34.14 343  IAMs_20   IAMs_20   18 43 20.1
       comp=Z,5μm,19.0s
PNTR   Pine Nut           34.16 336  IAmb      IAmb      18 27 53.3
       comp=Z,30nm,1.1s
P46A   Rosedale           34.17  22  IAmb      IAmb      18 27 52.4
       comp=Z,63nm,1.4s
R50A   Paris              34.19  26  P         P         18 27 48.8 -1.9
R50A   Paris              34.19  26  P         P         18 27 49.8 -0.9
       baz=214
R50A                                 P         P         18 27 49.8 -0.9
       baz=214
HDIL   Hopedale           34.30  18  IAMs_20   IAMs_20   18 42 23.7
       comp=Z,5μm,18.0s
HDIL   Hopedale           34.30  18  P         P         18 27 50.9 -0.7
       baz=204,SNR=10
HDIL   Hopedale           34.30  18  P         P         18 27 50.9 -0.7
       baz=204,SNR=10
VCNR   Virginia City      34.35 337  IAmb      IAmb      18 28 06.6
       comp=Z,46nm,1.3s
K22A   Casper             34.36 355  P         P         18 27 50.7 -1.6
K22A                                 IAmb      IAmb      18 27 55.3
       comp=Z,100nm,1.9s
K22A   Casper             34.36 355  P         P         18 27 53.8 +1.5
       baz=173,SNR=6.5
K22A   Casper             34.36 355  P         P         18 27 52.6 +0.3
       baz=173,SNR=6.5
K22A                                 S         S         18 33 23.9 +3.8
       baz=173
BMN    Battle Mountai     34.47 340  IAmb      IAmb      18 27 56.3
       comp=Z,72nm,1.3s
HVU    Hansel Valley      34.48 347  P         P         18 27 52.2 -1.2
HVU                                  IAmb      IAmb      18 28 07.7
       comp=Z,82nm,1.7s
HVU    Hansel Valley      34.48 347  P         P         18 27 52.2 -1.2
HVU                                  pmax      pmax
       comp=Z,82nm,1.7s
SCIA   State Center       34.52  13  P         P         18 27 51.8 -1.7
SCIA   State Center       34.52  13  P         P         18 27 53.8 +0.3
       baz=197
U56A   King               34.59  33  IAmb      IAmb      18 28 00.7
       comp=Z,76nm,1.5s
P48A   Milroy             34.72  24  P         P         18 27 52.9 -2.3
P48A                                 IAmb      IAmb      18 27 56.8
       comp=Z,38nm,1.2s
MCCM   Marconi Confer     34.79 332  IAMs_20   IAMs_20   18 38 41.7
       comp=Z,6μm,19.0s
BW06   Boulder Array      34.83 351  IAmb      IAmb      18 27 58.4
       comp=Z,46nm,1.2s
BW06   Boulder Array      34.83 351  P         P         18 27 55.2 -1.2
       baz=168,SNR=46
BW06                                 S         S         18 33 29.9 +2.4
       baz=168
PD31   Pinedale Array     34.83 351  IAmb      IAmb      18 27 58.4
       comp=Z,42nm,1.2s
PDAR   Pinedale Array     34.83 351  P         P         18 27 55.2 -1.2
       comp=Z,19nm,1.0s,baz=162,slow=9.4,SNR=55
PDAR                                 PcP       PcP       18 30 29.0 -0.7
       comp=Z,0.1nm,0.3s,baz=163,slow=6.5,SNR=2.1
PDAR                                 S         S         18 33 23.9 -3.6
       comp=Z,0.1nm,0.5s,baz=151,slow=46,SNR=1.4
       comp=Z,19nm,1.0s
SFIN   Lafayette          34.88  21  P         P         18 27 56.1 -0.6
       baz=208,SNR=8.0
SFIN   Lafayette          34.88  21  P         P         18 27 56.3 -0.3
       baz=208,SNR=8.0
SFIN                                 S         S         18 33 32.3 +4.5
       baz=208
V58A   Windy Hill, Pi     34.89  35  P         P         18 27 54.6 -2.1
V58A                                 IAmb      IAmb      18 27 59.8
       comp=Z,61nm,1.2s
V58A   Windy Hill, Pi     34.89  35  P         P         18 27 56.4 -0.4
       baz=224,SNR=10
V58A                                 P         P         18 27 56.4 -0.4
       baz=224,SNR=10
P49A   Miami Univ. Ec     35.07  25  P         P         18 27 56.0 -2.3
P49A   Miami Univ. Ec     35.07  25  P         P         18 27 56.6 -1.7
       baz=212,SNR=13
P49A   Miami Univ. Ec     35.07  25  P         P         18 27 57.4 -0.9
       baz=212,SNR=13
P49A                                 S         S         18 33 33.0 +2.2
       baz=212
AHID   Auburn Hatcher     35.09 349  IAmb      IAmb      18 28 17.8
       comp=Z,40nm,1.2s
AHID                                 IAMs_20   IAMs_20   18 40 20.0
       comp=Z,5μm,18.0s
TBTG   Tabatinga, AM      35.09 110 eP         P         18 27 59.6 +0.8
BEKR   Beckworth          35.12 336  IAmb      IAmb      18 28 02.2
       comp=Z,101nm,1.9s
L40A   Anamosa            35.14  15  IAmb      IAmb      18 28 00.3
       comp=Z,34nm,1.1s
CNNC   Cliffs of the      35.20  37  IAMs_20   IAMs_20   18 42 41.5
       comp=Z,6μm,20.0s
CNNC   Cliffs of the      35.20  37  P         P         18 27 57.0 -2.5
       baz=226
S54A   Dingess, Beckl     35.22  30  IAmb      IAmb      18 28 01.9
       comp=Z,35nm,1.1s
BLA    Blacksburg         35.22  32  IAmb      IAmb      18 28 06.0
       comp=Z,72nm,1.4s
BLA                                  IAMs_20   IAMs_20   18 43 24.6
       comp=Z,5μm,19.0s
BLA    Blacksburg         35.22  32  P         P         18 27 59.5 -0.2
       baz=221,SNR=9.1
BLA    Blacksburg         35.22  32  P         P         18 27 59.8 +0.1
       baz=221,SNR=9.1
BLA                                  S         S         18 33 37.4 +4.1
       baz=221
Q51A   Peebles            35.23  27  P         P         18 27 57.0 -2.7
Q51A                                 IAmb      IAmb      18 28 01.9
       comp=Z,56nm,1.1s
Q51A   Peebles            35.23  27  P         P         18 27 58.6 -1.1
       baz=215,SNR=13
Q51A                                 P         P         18 27 58.6 -1.1
       baz=215,SNR=13
R53A   Hurricane          35.32  29  IAmb      IAmb      18 28 02.8
       comp=Z,38nm,1.1s
R53A   Hurricane          35.32  29  P         P         18 28 00.1 -0.3
       baz=218,SNR=10
R53A                                 P         P         18 28 00.1 -0.3
       baz=218,SNR=10
ORV    Oroville           35.33 335  IAmb      IAmb      18 28 14.6
       comp=Z,81nm,1.6s
ECR    Eagle Creek        35.41 349  P         P         18 28 00.2 -1.3
O48B   Farmland           35.50  24  P         P         18 28 01.6 -0.4
       baz=211
O48B                                 S         S         18 33 39.2 +1.8
       baz=211
L42A   Oliver, Polo       35.51  17  P         P         18 28 01.3 -0.8
       baz=203,SNR=5.9
HOPS   Hopland Field      35.56 332  IAmb      IAmb      18 28 21.5
       comp=Z,41nm,1.2s
HOPS                                 IAMs_20   IAMs_20   18 39 36.1
       comp=Z,8μm,19.0s
REDW   Red Top Meadow     35.62 350  P         P         18 28 00.4 -2.8
REDW                                 IAmb      IAmb      18 28 05.9
       comp=Z,76nm,1.6s
Q52A   Bidwell            35.67  28  IAmb      IAmb      18 28 05.7
       comp=Z,57nm,1.3s
Q52A   Bidwell            35.67  28  P         P         18 28 02.0 -1.5
       baz=217,SNR=6.5
Q52A                                 P         P         18 28 02.0 -1.5
       baz=217,SNR=6.5
T57A   Hurt               35.68  33  P         P         18 28 03.5 -0.1
       baz=223,SNR=7.5
T57A                                 P         P         18 28 03.5 -0.1
       baz=223,SNR=7.5
RSSD   Black Hills        35.69 358  P         P         18 28 01.6 -2.2
RSSD                                 IAmb      IAmb      18 28 06.8
       comp=Z,48nm,1.4s
RSSD   Black Hills        35.69 358  P         P         18 28 01.7 -2.2
RSSD                                 pmax      pmax
       comp=Z,48nm,1.5s
RSSD                                 MLR       MLR
       comp=Z,21μm,18.0s
RSSD   Black Hills        35.69 358  P         P         18 28 02.7 -1.1
       baz=178,SNR=14
RSSD   Black Hills        35.69 358  P         P         18 28 04.1 +0.2
       baz=178
RSSD                                 S         S         18 33 45.4 +4.7
       baz=178
SNOW   Snow King Moun     35.70 350  IAmb      IAmb      18 28 17.9
       comp=Z,57nm,1.3s
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ECSD   EROS Data Cent     35.70   8  IAMs_20   IAMs_20   18 42 20.4
       comp=Z,9μm,21.0s
ECSD   EROS Data Cent     35.70   8  P         P         18 28 02.5 -1.2
       baz=190,SNR=11
ECSD   EROS Data Cent     35.70   8  P         P         18 28 03.4 -0.3
       baz=190,SNR=11
ECSD                                 S         S         18 33 41.6 +1.2
       baz=190
P51A   Williamsport       35.73  27  P         P         18 28 02.0 -2.0
RPN    Rapa Nui           35.79 190  LR        LR        18 39 11.5
       comp=Z,10μm,21.3s,baz=15,slow=30
LOHW   Long Hollow        35.82 350  P         P         18 28 03.4 -1.6
LOHW                                 IAmb      IAmb      18 28 06.8
       comp=Z,42nm,1.3s
LOHW                                 IAMs_20   IAMs_20   18 43 00.4
       comp=Z,6μm,18.0s
N47A   Urbana             35.83  22  IAmb      IAmb      18 28 06.3
       comp=Z,50nm,1.1s
MOOW   Moose Ponds        35.98 350  IAMs_20   IAMs_20   18 42 57.6
       comp=Z,6μm,19.0s
SUSD   Miller             36.15   5  P         P         18 28 08.1 +0.5
       baz=186
SUSD                                 S         S         18 33 50.2 +2.9
       baz=186
R55A   Marlinton          36.19  31  IAmb      IAmb      18 28 11.1
       comp=Z,38nm,1.1s
R55A   Marlinton          36.19  31  P         P         18 28 07.9 -0.1
       baz=220,SNR=6.9
R55A                                 P         P         18 28 07.9 -0.1
       baz=220,SNR=6.9
JFWS   Jewell Farm        36.20  16  IAMs_20   IAMs_20   18 42 55.7
       comp=Z,8μm,22.0s
JFWS   Jewell Farm        36.20  16  P         P         18 28 09.1 +1.2
       baz=201
JFWS                                 S         S         18 33 49.9 +1.9
       baz=201
L44A   Lake County Fo     36.21  19  IAMs_20   IAMs_20   18 43 42.2
       comp=Z,5μm,19.0s
L44A   Lake County Fo     36.21  19  P         P         18 28 10.0 +2.0
       baz=206
L44A                                 S         S         18 33 51.9 +3.7
       baz=206
P52A   Corning            36.27  27  IAmb      IAmb      18 28 10.5
       comp=Z,48nm,1.1s
P52A   Corning            36.27  27  P         P         18 28 08.7  0.0
       baz=216,SNR=9.7
FLWY   Flagg Ranch        36.29 350  P         P         18 28 07.5 -1.5
FLWY                                 IAmb      IAmb      18 28 27.2
       comp=Z,85nm,1.6s
FLWY                                 IAMs_20   IAMs_20   18 43 24.0
       comp=Z,6μm,19.0s
Q54A   Coxs Mills         36.37  29  IAmb      IAmb      18 28 11.9
       comp=Z,48nm,1.0s
Q54A   Coxs Mills         36.37  29  P         P         18 28 09.0 -0.5
       baz=219,SNR=12
Q54A                                 P         P         18 28 09.0 -0.5
       baz=219,SNR=12
ACSO   Alum Creek Sta     36.38  26  IAmb      IAmb      18 28 11.5
       comp=Z,56nm,1.1s
ACSO   Alum Creek Sta     36.38  26  P         P         18 28 08.6 -1.0
       baz=214,SNR=6.7
ACSO   Alum Creek Sta     36.38  26  P         P         18 28 08.9 -0.7
       baz=214,SNR=6.7
S57A   Dark Hollow, R     36.41  33  P         P         18 28 07.7 -2.1
S57A   Dark Hollow, R     36.41  33  P         P         18 28 09.3 -0.5
       baz=222,SNR=7.6
S57A                                 P         P         18 28 09.3 -0.5
       baz=222,SNR=7.6
YPP    Pitchstone Pla     36.49 350  IAmb      IAmb      18 28 24.9
       comp=Z,72nm,1.8s
I37B   Waseca             36.51  11  P         P         18 28 09.0 -1.6
       baz=196,SNR=6.1
HLID   Hailey             36.55 346  P         P         18 28 11.5 +0.3
       baz=160,SNR=14
HLID                                 S         S         18 34 00.1 +6.3
       baz=160
H17A   Grant Village      36.58 351  P         P         18 28 12.3 +0.8
       baz=167,SNR=5.7
H17A                                 S         S         18 33 58.4 +4.1
       baz=167
T59A   Double "B" Far     36.61  35  P         P         18 28 10.1 -1.4
T59A   Double "B" Far     36.61  35  P         P         18 28 11.1 -0.4
       baz=225,SNR=11
T59A                                 P         P         18 28 11.1 -0.4
       baz=225,SNR=11
YFT    Old Faithful       36.67 350  IAmb      IAmb      18 28 31.6
       comp=Z,79nm,1.8s
WVOR   Wild Horse Val     36.74 340  IAmb      IAmb      18 28 24.4
       comp=Z,103nm,1.6s
WVOR                                 IAMs_20   IAMs_20   18 45 24.9
       comp=Z,6μm,19.0s
MFID   Camas Ranch        36.78 344  P         P         18 28 10.9 -2.2
O52A   Adamsville         36.80  27  IAmb      IAmb      18 28 15.0
       comp=Z,47nm,1.1s
O52A   Adamsville         36.80  27  P         P         18 28 12.4 -0.7
       baz=216,SNR=5.9
O52A                                 P         P         18 28 12.4 -0.7
       baz=216,SNR=5.9
KMRM   Mail Ridge         36.84 333  IAmb      IAmb      18 28 21.5
       comp=Z,60nm,1.3s
MOD    Modoc Plateau      36.85 338  IAmb      IAmb      18 28 19.4
       comp=Z,52nm,1.2s
YMR    Madison River      36.91 350  P         P         18 28 12.4 -1.8
SJG    San Juan           36.93  71  P         P         18 28 14.0 -0.5
       comp=Z,16nm,0.8s,baz=280,slow=6.1,SNR=3.7
SJG                                  LR        LR        18 43 09.9
       comp=Z,2μm,19.1s,baz=267,slow=36
       comp=Z,16nm,0.8s
I40A   Norwalk            37.01  15  IAmb      IAmb      18 28 16.6
       comp=Z,55nm,1.1s
I40A   Norwalk            37.01  15  P         P         18 28 13.4 -1.5
       baz=200,SNR=6.5
RLMT   Red Lodge          37.10 352  P         P         18 28 16.7 +0.9
       baz=169,SNR=8.9
RLMT                                 S         S         18 34 04.4 +2.2
       baz=169
YHL    Hebgen Lake        37.12 350  P         P         18 28 12.7 -3.4
YHL                                  IAmb      IAmb      18 28 30.7
       comp=Z,100nm,1.9s
O53A   New Philadelph     37.19  28  P         P         18 28 17.5 +1.0
       baz=217
O53A                                 S         S         18 34 06.5 +3.2
       baz=217
N51A   Ashland            37.21  26  P         P         18 28 15.2 -1.4
       baz=215
N51A                                 P         P         18 28 15.2 -1.4
       baz=215
L48A   N Adams            37.23  23  P         P         18 28 14.8 -2.0
MCWV   Mont Chateau       37.38  30  IAmb      IAmb      18 28 20.9
       comp=Z,58nm,1.4s
MCWV   Mont Chateau       37.38  30  P         P         18 28 17.9 -0.1
       baz=220
MCWV                                 S         S         18 34 10.3 +4.1
       baz=220
KHMM   Horse Mountain     37.38 334  P         P         18 28 17.4 -0.8
JCC    Jacoby Creek,      37.47 333  P         P         18 28 18.0 -0.7
JCC                                  IAmb      IAmb      18 28 24.3
       comp=Z,50nm,1.1s
J08A   Circle Bar Ran     37.51 341  IAmb      IAmb      18 28 22.2
       comp=Z,72nm,2.0s
O54A   Avella             37.53  29  P         P         18 28 18.3 -1.0
       baz=218,SNR=5.8
O54A                                 P         P         18 28 18.3 -1.0
       baz=218,SNR=5.8
CBN    Corbin Frederi     37.58  34  P         P         18 28 17.5 -2.3
       baz=224
CBN                                  S         S         18 34 14.2 +5.0
       baz=224
YBH    Yreka Blue Hor     37.65 335  P         P         18 28 19.2 -1.2
       comp=Z,7.2nm,0.8s,baz=106,slow=6.6,SNR=21
YBH                                  LR        LR        18 41 34.1
       comp=Z,3μm,21.2s,baz=152,slow=33
       comp=Z,7.2nm,0.8s
KRPM   Rodgers            37.74 333  P         P         18 28 20.3 -0.9
K05A   Summer Lake        37.79 338  IAmb      IAmb      18 28 27.6
       comp=Z,98nm,1.3s
SPMN   Marine on St.      37.79  12  IAmb      IAmb      18 28 22.7
       comp=Z,52nm,1.2s
SPMN   Marine on St.      37.79  12  P         P         18 28 20.5 -0.9
       baz=196
SPMN                                 S         S         18 34 14.7 +2.6
       baz=196
AAM    Ann Arbor          37.84  23  IAmb      IAmb      18 28 23.8
       comp=Z,45nm,0.9s
AAM    Ann Arbor          37.84  23  P         P         18 28 22.4 +0.5
       baz=212
AAM                                  S         S         18 34 16.0 +3.1
       baz=212
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L04D	**Klamath Falls**	**37.90**	**336**	P	**P**	**18 28 20.1**	**-2.4**
L04D				IAmb	IAmb	18 28 27.3	
	comp=Z,54nm,1.0s						
L04D	**Klamath Falls**	**37.90**	**336**	P	**P**	**18 28 22.9**	**+0.3**
	baz=147,SNR=17						
L04D				S	**S**	**18 34 17.6**	**+3.4**
	baz=147						
BOZ	**Bozeman (W)**	**37.92**	**350**	IAmb	IAmb	18 28 36.8	
	comp=Z,115nm,1.9s						
BOZ				IAMs_20	IAMs_20	18 44 21.0	
	comp=Z,5µm,19.0s						
BOZ	**Bozeman (W)**	**37.92**	**350**	P	**P**	**18 28 23.0**	**+0.2**
	baz=166,SNR=20						
BOZ				S	**S**	**18 34 18.0**	**+3.4**
	baz=166						
K04D	**Chiloquin, OR**	**38.02**	**337**	P	**P**	**18 28 24.9**	**+1.3**
	baz=148						
K04D				S	**S**	**18 34 19.6**	**+3.5**
	baz=148						
STVI	**Saint Thomas**	**38.09**	**71**	P	**P**	**18 28 22.3**	**-2.1**
STVI				IAmb	IAmb	18 28 30.8	
	comp=Z,60nm,1.1s						
J47A	**Sunmer**	**38.20**	**21**	IAmb	IAmb	18 28 26.8	
	comp=Z,64nm,1.1s						
F36A	**Milaca**	**38.26**	**10**	P	**P**	**18 28 23.9**	**-1.6**
	baz=195,SNR=13						
L02F	**Cave Junction**	**38.33**	**335**	P	**P**	**18 28 26.4**	**+0.3**
	baz=146,SNR=12						
L02F				S	**S**	**18 34 25.7**	**+5.1**
	baz=146						
LAO	**LASA Array**	**38.35**	**356**	IAmb	IAmb	18 28 39.4	
	comp=Z,66nm,1.5s						
LAO	**LASA Array**	**38.35**	**356**	P	**P**	**18 28 25.5**	**-0.8**
	baz=174						
LAO				S	**S**	**18 34 23.1**	**+2.2**
	baz=174						
PLID	**Pearl Lake**	**38.38**	**345**	IAmb	IAmb	18 28 28.9	
	comp=Z,89nm,1.8s						
M53A	**WI Miller and**	**38.38**	**27**	IAMs_20	IAMs_20	18 46 10.1	
	comp=Z,5µm,20.0s						
M53A	**WI Miller and**	**38.38**	**27**	S	**S**	**18 34 24.4**	**+3.1**
	baz=217						
J05D	**Fort Rock, OR**	**38.40**	**338**	P	**P**	**18 28 27.8**	**+1.0**
	baz=150,SNR=32						
J05D				S	**S**	**18 34 26.8**	**+5.0**
	baz=150						
I07A	**Izee**	**38.49**	**341**	P	**P**	**18 28 25.6**	**-1.9**
BMO	**Blue Mountains**	**38.52**	**343**	IAMs_20	IAMs_20	18 43 07.9	
	comp=Z,4µm,19.0s						
J04D	**Umpqua Nationa**	**38.69**	**337**	P	**P**	**18 28 27.9**	**-1.4**
J04D				IAmb	IAmb	18 28 34.6	
	comp=Z,60nm,0.9s						
J04D				IAMs_20	IAMs_20	18 42 08.5	
	comp=Z,7µm,22.0s						
J04D	**Umpqua Nationa**	**38.69**	**337**	P	**P**	**18 28 30.1**	**+0.8**
	baz=148,SNR=10						
J04D				S	**S**	**18 34 30.2**	**+3.9**
	baz=148						
PINE	**Pine Mountain**	**38.73**	**339**	P	**P**	**18 28 28.2**	**-1.4**
PINE				IAmb	IAmb	18 28 32.0	
	comp=Z,65nm,1.1s						
K02D	**Willamette Mer**	**38.85**	**335**	P	**P**	**18 28 31.0**	**+0.5**
	baz=146,SNR=31						
K02D				S	**S**	**18 34 31.3**	**+2.8**
	baz=146						
DBO	**Dodson Butte**	**39.03**	**336**	IAmb	IAmb	18 28 39.0	
	comp=Z,64nm,1.3s						
SSPA	**Standing Stone**	**39.09**	**31**	P	**P**	**18 28 31.4**	**-1.1**
SSPA	**Standing Stone**	**39.09**	**31**	P	**P**	**18 28 31.7**	**-0.8**
	baz=222,SNR=6.4						
SSPA	**Standing Stone**	**39.09**	**31**	P	**P**	**18 28 33.1**	**+0.6**
	baz=222						
ERPA	**Erie**	**39.23**	**27**	IAMs_20	IAMs_20	18 46 35.6	
	comp=Z,4µm,19.0s						
ERPA	**Erie**	**39.23**	**27**	S	S	18 34 41.0	+6.8
	baz=217						
I04A	**Tendick Farm,**	**39.27**	**337**	P	**P**	**18 28 33.7**	**-0.3**
	baz=148,SNR=13						
I04A				S	**S**	**18 34 37.0**	**+2.2**
	baz=148						
KEBM	**Edson Butte**	**39.27**	**335**	IAmb	IAmb	18 28 41.6	
	comp=Z,86nm,1.2s						
M55A	**Ridgway**	**39.30**	**29**	P	**P**	**18 28 33.3**	**-0.8**
M55A	**Ridgway**	**39.30**	**29**	P	**P**	**18 28 33.4**	**-0.8**
	baz=220,SNR=6.5						
M55A				P	**P**	**18 28 33.4**	**-0.8**
	baz=220,SNR=6.5						
J01E	**Myrtle Point**	**39.34**	**335**	IAmb	IAmb	18 28 40.2	
	comp=Z,74nm,1.0s						
J01E				IAMs_20	IAMs_20	18 42 42.0	
	comp=Z,5µm,19.0s						
J01E	**Myrtle Point**	**39.34**	**335**	P	**P**	**18 28 35.5**	**+1.0**
	baz=146,SNR=14						
J01E				S	**S**	**18 34 39.5**	**+3.8**
	baz=146						
I05D	**Terrebonne, OR**	**39.35**	**339**	P	**P**	**18 28 35.6**	**+1.0**
	baz=150,SNR=7.6						
I05D				S	**S**	**18 34 41.7**	**+5.8**
	baz=150						
COWI	**Conover**	**39.45**	**15**	IAMs_20	IAMs_20	18 45 21.9	
	comp=Z,6µm,21.0s						
MDND	**Maddock**	**39.50**	**3**	P	**P**	**18 28 35.3**	**-0.5**
	baz=185						
MDND				S	**S**	**18 34 43.6**	**+5.6**
	baz=185						
F10A	**Beach Ranch, E**	**39.52**	**344**	P	**P**	**18 28 35.1**	**-1.1**
MSO	**Missoula**	**39.55**	**348**	IAMs_20	IAMs_20	18 47 20.0	
	comp=Z,5µm,22.0s						
MSO	**Missoula**	**39.55**	**348**	P	**P**	**18 28 36.1**	**-0.2**
	baz=162						
I03D	**Drain, OR**	**39.55**	**336**	P	**P**	**18 28 36.8**	**+0.5**
	baz=147,SNR=14						
I03D				S	**S**	**18 34 42.2**	**+3.3**
	baz=147						
GLMI	**Grayling**	**39.66**	**20**	IAMs_20	IAMs_20	18 45 26.6	
	comp=Z,5µm,20.0s						
GLMI	**Grayling**	**39.66**	**20**	P	**P**	**18 28 37.7**	**+0.5**
	baz=209						
BUCK	**Buck Mountain**	**39.83**	**337**	IAmb	IAmb	18 28 43.7	
	comp=Z,68nm,1.1s						
N58A	**Sunbury**	**39.84**	**31**	P	**P**	**18 28 36.7**	**-2.1**
H04A	**Detroit Lake**	**39.95**	**338**	IAmb	IAmb	18 28 41.0	
	comp=Z,50nm,1.1s						
M57A	**Sunshine Farm,**	**40.00**	**31**	P	**P**	**18 28 39.8**	**-0.2**
	baz=222,SNR=5.1						
M57A				P	**P**	**18 28 39.8**	**-0.2**
	baz=222,SNR=5.1						
EGMT	**Eagleton**	**40.01**	**353**	P	**P**	**18 28 38.2**	**-2.0**
EGMT				IAMs_20	IAMs_20	18 44 51.4	
	comp=Z,7µm,20.0s						
EGMT	**Eagleton**	**40.01**	**353**	P	**P**	**18 28 39.0**	**-1.1**
	baz=169,SNR=14						
EGMT				S	**S**	**18 34 47.7**	**+1.8**
	baz=169						
H04D	**Lebanon**	**40.02**	**338**	P	**P**	**18 28 40.9**	**+0.8**
	baz=148,SNR=5.9						
H04D				S	**S**	**18 34 47.0**	**+1.1**
	baz=148						
DGMT	**Dagmar**	**40.04**	**359**	P	**P**	**18 28 40.7**	**+0.3**
	baz=178						
I02E	**Swisshome, OR**	**40.09**	**336**	IAmb	IAmb	18 28 47.6	
	comp=Z,52nm,0.9s						
I02E				IAMs_20	IAMs_20	18 44 03.9	
	comp=Z,4µm,18.0s						
I02E	**Swisshome, OR**	**40.09**	**336**	P	**P**	**18 28 41.9**	**+1.2**
	baz=146,SNR=7.9						
I02E				S	**S**	**18 34 51.1**	**+4.1**
	baz=146						
G05D	**Wamic, OR**	**40.12**	**340**	P	**P**	**18 28 42.5**	**+1.5**
	baz=151						
G05D				S	**S**	**18 34 51.6**	**+4.1**
	baz=151						
F07A	**Phinny Hill Vi**	**40.24**	**341**	P	**P**	**18 28 40.8**	**-1.2**
F07A				IAmb	IAmb	18 28 45.1	
	comp=Z,61nm,1.2s						
COR	**Corvallis**	**40.28**	**337**	P	**P**	**18 28 40.4**	**-1.9**
COR	**Corvallis**	**40.28**	**337**	IAMs_20	IAMs_20	18 43 10.8	
	comp=Z,5µm,20.0s						
COR	**Corvallis**	**40.28**	**337**	P	**P**	**18 28 40.4**	**-1.9**
COR				pmax	pmax		
	comp=Z,202nm,1.7s						
COR				MLR	MLR		
	comp=Z,5µm,20.0s						
AGMN	**Agassiz Nation**	**40.28**	**7**	IAmb	IAmb	18 28 43.9	
	comp=Z,62nm,1.1s						
AGMN				IAMs_20	IAMs_20	18 44 35.7	
	comp=Z,5µm,22.0s						
AGMN	**Agassiz Nation**	**40.28**	**7**	P	**P**	**18 28 41.0**	**-1.2**
	baz=191,SNR=14						
AGMN	**Agassiz Nation**	**40.28**	**7**	P	**P**	**18 28 40.8**	**-1.5**
	baz=191,SNR=14						
AGMN				S	**S**	**18 34 52.3**	**+2.6**
	baz=191						
L56A	**Greenwood**	**40.39**	**29**	P	**P**	**18 28 42.0**	**-1.3**
D41A	**Chassel**	**40.49**	**15**	IAmb	IAmb	18 28 49.2	
	comp=Z,106nm,1.2s						
HAWA	**Hanford**	**40.57**	**342**	P	**P**	**18 28 42.6**	**-2.0**
HAWA				IAmb	IAmb	18 28 56.2	
	comp=Z,87nm,1.8s						
B35A	**Bob, Littlefor**	**40.65**	**9**	IAmb	IAmb	18 28 47.1	
	comp=Z,92nm,1.7s						
B35A	**Bob, Littlefor**	**40.65**	**9**	P	**P**	**18 28 43.7**	**-1.6**
	baz=194,SNR=5.7						
ETMB	**Extrema**	**40.65**	**116**	*e*P	**P**	**18 28 45.0**	**-0.8**
EYMN	**Ely**	**40.65**	**12**	P	**P**	**18 28 42.1**	**-3.2**
EYMN	**Ely**	**40.65**	**12**	P	**P**	**18 28 43.6**	**-1.8**
	baz=197,SNR=9.6						
EYMN	**Ely**	**40.65**	**12**	P	**P**	**18 28 43.6**	**-1.8**
	baz=197,SNR=9.6						
EYMN				S	**S**	**18 34 57.2**	**+2.0**
	baz=197						
MMNY	**Mt. Morris Dam**	**40.68**	**28**	P	**P**	**18 28 43.8**	**-1.8**
MMNY				IAmb	IAmb	18 28 47.7	
	comp=Z,72nm,1.5s						
F05D	**White Salmon**	**40.73**	**340**	IAMs_20	IAMs_20	18 43 34.7	
	comp=Z,4µm,20.0s						
F05D	**White Salmon**	**40.73**	**340**	P	**P**	**18 28 47.6**	**+1.5**
	baz=151						
F05D				S	**S**	**18 35 02.9**	**+6.3**
	baz=151						
G03D	**McMinnville, O**	**40.80**	**338**	IAmb	IAmb	18 28 49.7	
	comp=Z,62nm,1.2s						
G03D				IAMs_20	IAMs_20	18 43 40.4	
	comp=Z,5µm,20.0s						
G03D	**McMinnville, O**	**40.80**	**338**	P	**P**	**18 28 47.2**	**+0.6**
	baz=148						
G03D				S	**S**	**18 35 01.3**	**+3.8**
	baz=148						
E07A	**Sunnyside**	**40.81**	**342**	P	**P**	**18 28 45.5**	**-1.2**
E07A				IAmb	IAmb	18 28 49.0	
	comp=Z,83nm,1.3s						
TAOE	**Nuku Hiva Isla**	**40.91**	**246**	*e*P	**P**	**18 28 51.0**	**+2.9**
	comp=Z,287nm,27.0s						
TAOE				*e*S	S	18 34 48.2	-12
	comp=Z,435nm,26.3s						
TAOE				*e*LQ	LQ	18 37 58.3	
TAOE				*e*LR	LR	18 39 27.7	
	comp=Z,6µm,25.5s,baz=52						
TAOE	**Nuku Hiva Isla**	**40.91**	**246**	*e*T	T	19 11 45.7	
	comp=Z,128nm,0.2s						
HEBO	**Mount Hebo**	**40.98**	**337**	IAmb	IAmb	18 28 55.0	
	comp=Z,51nm,1.0s						
D08A	**Wollman Farm,**	**40.99**	**343**	P	**P**	**18 28 46.8**	**-1.3**
ODNJ	**Ogdensburg**	**41.13**	**33**	P	**P**	**18 28 46.0**	**-3.4**
BINY	**Binghamton**	**41.21**	**31**	P	**P**	**18 28 49.0**	**-1.1**
BINY				IAMs_20	IAMs_20	18 47 55.1	
	comp=Z,3µm,18.0s						
BINY	**Binghamton**	**41.21**	**31**	P	**P**	**18 28 49.4**	**-0.7**
	baz=223,SNR=6.2						
BINY	**Binghamton**	**41.21**	**31**	S	**S**	**18 35 07.4**	**+3.6**
	baz=223						
K57A	**Scipio Center**	**41.34**	**30**	IAmb	IAmb	18 29 01.6	
	comp=Z,74nm,1.5s						
F04D	**Rainier, OR**	**41.45**	**339**	P	**P**	**18 28 53.5**	**+1.6**
	baz=149						
F04D				S	**S**	**18 35 10.4**	**+3.3**
	baz=149						
PAL	**Palisades**	**41.45**	**34**	IAMs_20	IAMs_20	18 47 03.7	
	comp=Z,4µm,19.0s						
PAL	**Palisades**	**41.45**	**34**	S	**S**	**18 35 11.6**	**+4.3**
	baz=226						
NEW	**Newport**	**41.62**	**346**	P	**P**	**18 28 51.5**	**-1.8**
NEW	**Newport**	**41.62**	**346**	IAMs_20	IAMs_20	18 47 42.0	
	comp=Z,5µm,19.0s						
NEW	**Newport**	**41.62**	**346**	P	**P**	**18 28 51.6**	**-1.8**
NEW				pmax	pmax		
	comp=Z,43nm,1.3s						
NEW				MLR	MLR		
	comp=Z,5µm,19.0s						
NEW	**Newport**	**41.62**	**346**	P	**P**	**18 28 52.8**	**-0.6**
	baz=158,SNR=11						
NEW				S	**S**	**18 35 12.6**	**+2.9**
	baz=158						
E04D	**Cinebar**	**41.70**	**339**	IAmb	IAmb	18 28 56.6	
	comp=Z,88nm,1.1s						
E04D	**Cinebar**	**41.70**	**339**	P	**P**	**18 28 54.3**	**+0.3**
	baz=150,SNR=14						
E04D				S	**S**	**18 35 15.9**	**+5.1**
	baz=150						
SADO	**Sadowa**	**41.72**	**25**	LR	LR	18 47 09.8	
	comp=Z,2µm,21.6s,baz=214,slow=38						
SADO	**Sadowa**	**41.72**	**25**	IAmb	IAmb	18 29 30.4	
	comp=Z,29nm,0.6s						
E03A	**Lebam**	**42.04**	**339**	IAmb	IAmb	18 29 04.2	
	comp=Z,92nm,1.2s						
LPAZ	**La Paz**	**42.14**	**125**	P	**P**	**18 28 59.4**	**+0.7**
	comp=Z,11nm,0.8s,baz=325,slow=9.2,SNR=39						
LPAZ				S	**S**	**18 35 22.0**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=169,slow=22,SNR=1.8						
	comp=Z,11nm,0.8s						
LPAZ	**La Paz**	**42.14**	**125**	IAmb	IAmb	18 29 07.5	
	comp=Z,72nm,1.1s						
DELO	**Deloro Mine**	**42.19**	**27**	IAmb	IAmb	18 29 03.1	
	comp=Z,62nm,1.5s						
YLE	**Yale**	**42.20**	**34**	IAMs_20	IAMs_20	18 49 34.1	
	comp=Z,4µm,18.0s						
ULM	**Lac du Bonnet**	**42.20**	**7**	P	**P**	**18 28 56.3**	**-1.7**
	comp=Z,16nm,1.1s,baz=195,slow=7.5,SNR=11						
ULM				S	**S**	**18 35 12.8**	**-5.4**
	comp=Z,2.1nm,0.7s,baz=229,slow=22,SNR=1.3						
ULM				LR	LR	18 46 19.3	
	comp=Z,4µm,19.4s,baz=196,slow=36						
	comp=Z,16nm,1.1s						
ULM	**Lac du Bonnet**	**42.20**	**7**	P	**P**	**18 28 56.6**	**-1.5**
ULM	**Lac du Bonnet**	**42.20**	**7**	P	**P**	**18 28 56.6**	**-1.5**
ULM				pmax	pmax		
	comp=Z,31nm,1.2s						
PB16	**IPOC Station P**	**42.21**	**129**	P	**P**	**18 29 00.3**	**+1.1**
PB16				IAmb	IAmb	18 29 08.4	
	comp=Z,85nm,1.5s						
B08A	**Colville Reser**	**42.29**	**344**	P	**P**	**18 28 57.5**	**-1.3**
D04E	**Lakebay**	**42.31**	**340**	P	**P**	**18 28 59.5**	**+0.6**
	baz=150						
C06D	**Leavenworth**	**42.35**	**342**	P	**P**	**18 28 59.7**	**+0.4**
	baz=153						
C06D				S	**S**	**18 35 25.2**	**+4.7**
	baz=153						
WISH	**Wishkah**	**42.60**	**339**	IAmb	IAmb	18 29 20.9	
	comp=Z,50nm,1.1s						
BBSR	**BB Station**	**42.66**	**50**	IAMs_20	IAMs_20	18 44 01.2	
	comp=Z,4µm,22.0s						
D03D	**Eldon**	**42.72**	**340**	P	**P**	**18 29 03.3**	**+1.0**
	baz=150,SNR=7.8						
D03D				S	**S**	**18 35 28.9**	**+3.0**
	baz=150						
BBGH	**Gun Hill**	**42.73**	**80**	IAMs_20	IAMs_20	18 45 46.5	
	comp=Z,5µm,20.0s						
NLWA	**Neilton Lookou**	**42.87**	**339**	P	**P**	**18 29 02.1**	**-1.5**
NLWA				IAmb	IAmb	18 29 06.3	
	comp=Z,48nm,1.1s						
NLWA				IAMs_20	IAMs_20	18 45 28.3	
	comp=Z,5µm,19.0s						
PB11	**IPOC Station P**	**42.94**	**131**	P	**P**	**18 29 05.0**	**+0.4**
PB11				IAmb	IAmb	18 29 13.1	
	comp=Z,64nm,1.1s						
B05A	**Bryant**	**43.03**	**341**	P	**P**	**18 29 04.5**	**-0.3**
	baz=151						
B05A				S	**S**	**18 35 32.6**	**+2.3**
	baz=151						
SAML	**Samuel**	**43.05**	**113**	P	**P**	**18 29 04.8**	**-0.6**
SAML	**Samuel**	**43.05**	**113**	P	**P**	**18 29 04.8**	**-0.6**
L61B	**Northampton**	**43.11**	**33**	IAMs_20	IAMs_20	18 48 57.6	
	comp=Z,4µm,18.0s						
L61B	**Northampton**	**43.11**	**33**	S	**S**	**18 35 35.2**	**+3.3**
	baz=227						
BRYW	**Bryant College**	**43.38**	**34**	IAMs_20	IAMs_20	18 48 39.0	
	comp=Z,4µm,18.0s						
PB08	**IPOC Station P**	**43.55**	**131**	IAmb	IAmb	18 29 18.6	
	comp=Z,67nm,1.5s						
A04D	**Lummi Island**	**43.63**	**341**	P	**P**	**18 29 09.6**	**0.0**
	baz=151						
A04D				S	**S**	**18 35 40.9**	**+1.8**
	baz=151						
LONY	**Lake Ozonia**	**43.69**	**29**	IAMs_20	IAMs_20	18 50 29.5	
	comp=Z,3µm,18.0s						
LONY	**Lake Ozonia**	**43.69**	**29**	P	**P**	**18 29 10.6**	**+0.4**
	baz=223,SNR=5.3						
LONY				S	**S**	**18 35 44.8**	**+4.6**
	baz=223						
PB02	**IPOC Station P**	**43.72**	**133**	IAmb	IAmb	18 29 19.8	
	comp=Z,85nm,1.5s						
HRV	**Adam Dziewonsk**	**43.76**	**34**	IAMs_20	IAMs_20	18 49 31.8	
	comp=Z,4µm,18.0s						
HRV	**Adam Dziewonsk**	**43.76**	**34**	S	**S**	**18 35 46.0**	**+4.7**
	baz=228						
L64A	**Middleborough**	**43.79**	**35**	IAmb	IAmb	18 29 17.2	
	comp=Z,49nm,1.1s						
WES	**Weston**	**43.81**	**34**	IAMs_20	IAMs_20	18 49 39.4	
	comp=Z,4µm,18.0s						
PB01	**IPOC Station P**	**43.85**	**132**	P	**P**	**18 29 12.5**	**+0.7**
PB01				IAmb	IAmb	18 29 20.8	
	comp=Z,64nm,1.4s						
BCX	**Boston College**	**43.86**	**34**	IAMs_20	IAMs_20	18 49 57.8	
	comp=Z,4µm,18.0s						
PB04	**IPOC Station P**	**44.18**	**134**	P	**P**	**18 29 17.9**	**+3.3**
PB04				IAmb	IAmb	18 29 23.3	
	comp=Z,53nm,1.4s						
CLRS	**Cowichan Lake**	**44.19**	**340**	IAmb	IAmb	18 29 15.8	
	comp=Z,35nm,1.1s						
HNH	**Hanover**	**44.19**	**32**	IAMs_20	IAMs_20	18 49 01.2	
	comp=Z,4µm,20.0s						
FRNY	**Flat Rock**	**44.33**	**30**	IAmb	IAmb	18 29 25.7	
	comp=Z,51nm,1.6s						
FFD	**Franklin Falls**	**44.36**	**33**	IAMs_20	IAMs_20	18 49 34.9	
	comp=Z,4µm,18.0s						
VT1	**Waterbury**	**44.38**	**31**	IAMs_20	IAMs_20	18 50 37.2	
	comp=Z,4µm,18.0s						
PB10	**IPOC Station P**	**44.66**	**136**	P	**P**	**18 29 20.6**	**+2.3**
LBNH	**Lisbon**	**44.75**	**32**	P	**P**	**18 29 17.7**	**-1.0**
LBNH				IAMs_20	IAMs_20	18 49 27.7	
	comp=Z,5µm,20.0s						
LBNH	**Lisbon**	**44.75**	**32**	P	**P**	**18 29 17.7**	**-1.0**
LBNH				pmax	pmax		
	comp=Z,47nm,1.8s						
LBNH				MLR	MLR		
	comp=Z,4µm,20.0s						
OZB	**Mount Ozzard**	**44.78**	**339**	IAmb	IAmb	18 29 21.2	
	comp=Z,50nm,1.1s						
MNTQ	**Montreal, Queb**	**44.79**	**29**	P	**P**	**18 29 14.9**	**-4.0**
MNTQ				IAmb	IAmb	18 29 25.5	
	comp=Z,66nm,1.6s						
TRQ	**Mont Tremblant**	**44.89**	**28**	IAmb	IAmb	18 29 30.9	
	comp=Z,84nm,1.8s						
VLDQ	**Val d'Or**	**45.10**	**24**	P	**P**	**18 29 18.4**	**-3.0**
VLDQ				IAmb	IAmb	18 29 23.5	
	comp=Z,49nm,1.7s						
LVC	**Limon Verde**	**45.24**	**133**	LR	LR	18 43 50.1	
	comp=Z,6µm,21.2s,baz=299,slow=30						
LVC	**Limon Verde**	**45.24**	**133**	P	**P**	**18 29 24.9**	**+1.6**
LVC				IAmb	IAmb	18 29 32.6	
	comp=Z,47nm,1.4s						
LVC	**Limon Verde**	**45.24**	**133**	IAMs_20	IAMs_20	18 43 47.9	
	comp=Z,6µm,21.0s						
LVC	**Limon Verde**	**45.24**	**133**	P	**P**	**18 29 24.9**	**+1.6**
LVC				pmax	pmax		
	comp=Z,47nm,1.4s						
LVC				MLR	MLR		
	comp=Z,6µm,21.0s						
LVC	**Limon Verde**	**45.24**	**133**	*e*P	**P**	**18 29 25.2**	**+1.8**
H62A	**Milan**	**45.38**	**32**	P	**P**	**18 29 21.6**	**-2.1**
EDM	**Edmonton**	**45.59**	**351**	P	**P**	**18 29 23.2**	**-2.1**
EDM	**Edmonton**	**45.59**	**351**	P	**P**	**18 29 23.2**	**-2.1**
EDM				pmax	pmax		
	comp=Z,90nm,1.2s						
G62A	**West of Eustis**	**46.14**	**32**	P	**P**	**18 29 30.0**	**+0.3**
G62A				IAmb	IAmb	18 29 32.6	
	comp=Z,37nm,1.4s						
G62A	**West of Eustis**	**46.14**	**32**	P	**P**	**18 29 29.8**	**+0.1**
	baz=227,SNR=5.6						
G62A				P	**P**	**18 29 29.8**	**+0.1**
	baz=227,SNR=5.6						
WVL	**Waterville**	**46.16**	**33**	IAMs_20	IAMs_20	18 51 27.5	
	comp=Z,5µm,18.0s						
PKME	**Peaks-Kenny Pk**	**46.82**	**32**	S	**S**	**18 36 30.7**	**+5.3**
	baz=229						
F63A	**Nahmakanta, Br**	**47.21**	**32**	IAmb	IAmb	18 29 40.4	
	comp=Z,21nm,1.2s						
VILB	**Vilhena**	**47.31**	**116**	*e*P	**P**	**18 29 38.5**	**-0.8**
H03N2	**Juan Fernandez**	**47.32**	**153**	T	T	19 20 31.7	
	baz=329,slow=77,SNR=424						
H03N1	**Juan Fernandez**	**47.33**	**153**	T	T	19 20 32.9	
	baz=329,slow=77,SNR=574						
H03N3	**Juan Fernandez**	**47.34**	**153**	T	T	19 20 32.1	
	baz=329,slow=77,SNR=499						
F64A	**Sherman**	**47.71**	**32**	P	**P**	**18 29 39.8**	**-2.2**
F64A				IAmb	IAmb	18 29 52.6	
	comp=Z,51nm,1.6s						
LMQ	**La Malbaie**	**47.85**	**29**	IAmb	IAmb	18 29 45.1	
	comp=Z,20nm,1.1s						
D62A	**Allapoint, All**	**48.16**	**31**	P	**P**	**18 29 44.4**	**-1.0**
D62A				IAmb	IAmb	18 29 47.9	
	comp=Z,66nm,1.9s						
BBB	**Bella Bella**	**48.39**	**339**	LR	LR	18 48 19.6	
	comp=Z,2µm,20.8s,baz=158,slow=34						
PQI	**Presque Isle**	**48.42**	**32**	IAMs_20	IAMs_20	18 52 16.1	
	comp=Z,3µm,19.0s						
ITTB	**Itaituba**	**48.62**	**103**	*e*P	**P**	**18 29 47.4**	**-2.0**
PTLB	**Pontes e Lacer**	**49.29**	**119**	*e*P	**P**	**18 29 53.7**	**-0.9**
MALB	**Monte Alegre**	**49.45**	**100**	*e*P	**P**	**18 29 54.5**	**-1.3**
AROD	**Rodeo**	**49.90**	**142**	*e*P	**P**	**18 30 00.9**	**+1.5**
MDP	**Montagnes des**	**49.91**	**90**	LR	LR	18 51 37.8	
	comp=Z,2µm,18.3s,baz=276,slow=37						
PDRB	**Porto dos Gac**	**49.92**	**113**	*e*P	**P**	**18 29 58.9**	**-0.6**
PMOR	**Pomariorio Ree**	**50.33**	**243**	*e*T	T	19 23 52.7	
	comp=Z,12nm,0.2s						
GRNB	**Grenville Isla**	**50.40**	**339**	IAmb	IAmb	18 30 15.3	
	comp=Z,43nm,1.6s						
ACCO	**Cerro Coronel**	**50.44**	**142**	*e*P	**P**	**18 30 04.5**	**+1.0**
CLDB	**Colider**	**50.52**	**111**	*e*P	**P**	**18 30 02.6**	**-1.4**
FCC	**Fort Churchill**	**50.78**	**6**	IAmb	IAmb	18 30 11.5	
	comp=Z,92nm,1.9s						
ACLC	**CERRO LA CRUZ**	**50.99**	**139**	*e*P	**P**	**18 30 10.6**	**+3.1**
MT02	**Curacav**	**51.15**	**146**	P	**P**	**18 30 10.6**	**+2.2**
MT02				IAmb	IAmb	18 30 16.4	
	comp=Z,70nm,1.6s						
MCPB	**Macapa, AP**	**51.31**	**97**	*e*P	**P**	**18 30 08.2**	**-1.8**
PEL	**Peldehue**	**51.32**	**145**	IAMs_20	IAMs_20	18 46 21.5	
	comp=Z,4µm,20.0s						
AUSP	**Uspallata**	**51.40**	**143**	*e*P	**P**	**18 30 11.8**	**+1.1**
AVFE	**Valle Fertil**	**51.49**	**140**	*e*P	**P**	**18 30 14.8**	**+3.6**
NBRS	**Nobres**	**51.80**	**115**	*e*P	**P**	**18 30 12.4**	**-1.2**
GO05	**Huala**	**52.04**	**148**	IAmb	IAmb	18 30 22.6	
	comp=Z,58nm,1.2s						
LMEL	**Las Melosas**	**52.11**	**145**	IAmb	IAmb	18 30 24.0	
	comp=Z,73nm,1.5s						
HMH	**Humu‘ula Sheep**	**52.14**	**288**	P	**P**	**18 30 16.6**	**+0.1**
SALV	**Santo Antonio**	**52.49**	**117**	*e*P	**P**	**18 30 17.9**	**-0.8**
CRAG	**Craig**	**52.80**	**339**	IAmb	IAmb	18 30 27.3	
	comp=Z,42nm,1.5s						
CRAG	**Craig**	**52.80**	**339**	P	**P**	**18 30 21.2**	**+0.9**
	baz=141						
CRAG				S	**S**	**18 37 54.2**	**+5.5**
	baz=141						
PPT	**Papeete**	**52.87**	**241**	LR	LR	18 46 52.5	
	comp=Z,3µm,18.4s,baz=60,slow=29						
PPT2	**Papeete2**	**52.88**	**241**	*e*P	**P**	**18 30 23.0**	**+1.4**
	comp=Z,141nm,27.5s						
PPT2				*e*S	**S**	**18 37 53.2**	**+2.3**
PPT2				*e*LQ	LQ	18 43 02.3	
PPT2				*e*LR	LR	18 44 55.2	
	comp=Z,8µm,25.0s,baz=56						
WRAK	**Wrangell Islan**	**53.28**	**340**	P	**P**	**18 30 21.8**	**-2.1**
WRAK	**Wrangell Islan**	**53.28**	**340**	P	**P**	**18 30 24.2**	**+0.3**
	baz=142						
WRAK				S	S	18 38 02.5	+7.2
	baz=142						
RFA	**San Rafael**	**53.76**	**145**	*e*P	**P**	**18 30 31.8**	**+3.9**
MRA	**San Martin**	**53.77**	**141**	*e*P	**P**	**18 30 28.0**	**0.0**
TCA	**Tanti**	**53.77**	**139**	*e*P	**P**	**18 30 27.8**	**-0.2**
PP1B	**Ponte de Pedra**	**53.90**	**119**	*e*P	**P**	**18 30 28.7**	**-0.4**
S34M	**Telegraph Cree**	**54.09**	**342**	P	**P**	**18 30 31.1**	**+1.2**
	baz=144						
S34M				S	S	18 38 14.0	+7.8
	baz=144						
SCHQ	**Schefferville**	**54.52**	**25**	P	**P**	**18 30 30.6**	**-2.4**
	comp=Z,12nm,1.1s,baz=228,slow=5.9,SNR=6.6						
SCHQ				S	**S**	**18 38 06.4**	**-5.7**
	comp=Z,1.4nm,0.8s,baz=267,slow=18,SNR=1.5						
SCHQ				LR	LR	18 55 46.7	
	comp=Z,4µm,18.7s,baz=226,slow=38						
	comp=Z,12nm,1.1s						

SCHQ	**Schefferville**	**54.52**	**25**	IAmb	IAmb	18 30 37.7	
	comp=Z,28nm,1.3s						
KIP	**Kipapa**	**54.66**	**290**	*i* P	**P**	**18 30 35.4**	**+0.8**
KIP				pmax	pmax		
	comp=Z,48nm,1.4s						
XMAS	**Kiritimati**	**54.72**	**267**	IAMs_20	IAMs_20	18 46 22.3	
	comp=Z,3µm,19.0s						
YKA	**Yellowknife Ar**	**54.76**	**353**	P	**P**	**18 30 32.1**	**-2.5**
	comp=Z,17nm,1.1s,baz=164,slow=7.3,SNR=57						
YKA				PcP	**PcP**	**18 31 34.6**	**-2.4**
	comp=Z,3.8nm,0.9s,baz=161,slow=3.7,SNR=9.3						
YKA				LR	LR	18 54 12.2	
	comp=Z,8µm,19.7s,baz=162,slow=36						
	comp=Z,17nm,1.1s						
PRPB	**Parauapebas**	**54.77**	**104**	*e*P	**P**	**18 30 35.6**	**+0.1**
SIT	**Sitka**	**54.81**	**339**	P	**P**	**18 30 36.4**	**+1.4**
	baz=139						
SIT				S	S	18 38 25.2	+9.4
	baz=139						
SNDB	**Serra Nova Dou**	**55.04**	**111**	*e*P	**P**	**18 30 36.7**	**-0.7**
TBI	**Tubuai**	**55.40**	**234**	*e*P	**P**	**18 30 41.6**	**+1.8**
	comp=Z,109nm,30.2s						
TBI				*e*S	**S**	**18 38 26.9**	**+2.2**
	comp=Z,1µm,27.8s						
TBI				*e*LR	LR	18 46 11.0	
	comp=Z,7µm,27.0s						
TBI	**Tubuai**	**55.40**	**234**	*e*T	T	19 30 06.9	
	comp=Z,17nm,0.3s						
BESE	**Bessie Mountai**	**55.82**	**340**	P	**P**	**18 30 39.9**	**-2.5**
BESE				IAmb	IAmb	18 30 44.8	
	comp=Z,26nm,1.2s						
DVLD	**Doverlandia**	**55.90**	**116**	*e*P	**P**	**18 30 42.9**	**-0.7**
CPUP	**Villa Florida**	**55.99**	**129**	P	**P**	**18 30 43.8**	**-0.3**
	comp=Z,5.5nm,1.0s,baz=315,slow=10,SNR=10						
CPUP				S	**S**	**18 38 30.8**	**-1.8**
	comp=Z,1.2nm,1.0s,baz=40,slow=4.1,SNR=1.8						
	comp=Z,5.5nm,1.0s						
CPUP	**Villa Florida**	**55.99**	**129**	*e*P	**P**	**18 30 46.9**	**+2.8**
C2SB	**Chapadao do Su**	**56.15**	**119**	*e*P	**P**	**18 30 47.5**	**+2.2**
TGTN	**Hyland Airport**	**56.34**	**346**	P	**P**	**18 30 46.0**	**-0.1**
	baz=149						
TGTN				S	**S**	**18 38 42.7**	**+6.4**
	baz=149						
LL04	**Puerto Octay**	**56.41**	**153**	P	**P**	**18 30 47.9**	**+1.1**
LL04				IAmb	IAmb	18 30 55.1	
	comp=Z,51nm,1.7s						
P33M	**Teslin, Yukon**	**56.47**	**343**	IAmb	IAmb	18 31 05.8	
	comp=Z,42nm,1.8s						
P33M				IAMs_20	IAMs_20	18 56 09.9	
	comp=Z,3µm,18.0s						
P33M	**Teslin, Yukon**	**56.47**	**343**	P	**P**	**18 30 46.8**	**-0.3**
	baz=144,SNR=12						
P33M				S	**S**	**18 38 43.7**	**+5.5**
	baz=144						
SKAG	**Skagway**	**56.66**	**341**	IAmb	IAmb	18 31 00.6	
	comp=Z,66nm,1.7s						
SKAG	**Skagway**	**56.66**	**341**	P	**P**	**18 30 49.0**	**+0.7**
	baz=140,SNR=6.1						
SKAG				S	**S**	**18 38 46.9**	**+6.5**
	baz=140						
PLCA	**Paso Flores**	**57.14**	**151**	P	**P**	**18 30 51.9**	**-0.2**
	comp=Z,6.1nm,0.9s,baz=321,slow=7.8,SNR=8.5						
PLCA				S	S	18 38 37.7	-10
	comp=Z,0.3nm,0.6s,baz=18,slow=20,SNR=1.2						
PLCA				LR	LR	18 50 10.7	
	comp=Z,3µm,19.3s,baz=320,slow=30						
	comp=Z,6.1nm,0.9s						
PLCA	**Paso Flores**	**57.14**	**151**	IAmb	IAmb	18 30 59.7	
	comp=Z,28nm,1.2s						
WHY	**Whitehorse**	**57.45**	**342**	P	**P**	**18 30 53.9**	**-0.2**
	baz=141,SNR=6.4						
WHY				S	**S**	**18 38 56.6**	**+5.4**
	baz=141						
SMTB	**Santa Maria do**	**57.60**	**106**	*e*P	**P**	**18 30 55.1**	**-0.7**
MCR1	**Marechal Candi**	**57.64**	**126**	*e*P	**P**	**18 30 57.2**	**+1.3**
TRCB	**Terra Rica**	**58.03**	**123**	*e*P	**P**	**18 31 01.7**	**+3.1**
PNL	**Peninsula**	**58.20**	**339**	P	**P**	**18 31 00.2**	**+1.0**
	baz=136,SNR=5.6						
ITQB	**Itaqui**	**58.30**	**132**	*e*P	**P**	**18 31 03.8**	**+3.5**
N31M	**Braeburn, Yuko**	**58.37**	**342**	IAmb	IAmb	18 31 05.5	
	comp=Z,34nm,1.1s						
N31M				IAMs_20	IAMs_20	18 56 58.1	
	comp=Z,2µm,18.0s						
N31M	**Braeburn, Yuko**	**58.37**	**342**	P	**P**	**18 31 00.4**	**-0.1**
	baz=141,SNR=28						
N31M				S	**S**	**18 39 08.7**	**+5.6**
	baz=141						
HYT	**Haines Junctio**	**58.41**	**341**	IAmb	IAmb	18 31 03.7	
	comp=Z,35nm,1.4s						
HYT	**Haines Junctio**	**58.41**	**341**	P	**P**	**18 31 01.1**	**+0.3**
	baz=138,SNR=17						
HYT				S	**S**	**18 39 09.6**	**+5.9**
	baz=138						
BCPM	**Bancas Point**	**58.48**	**339**	IAMs_20	IAMs_20	18 57 36.2	
	comp=Z,2µm,19.0s						
LL02	**Futaleuf**	**58.49**	**154**	P	**P**	**18 31 02.1**	**+0.7**
M31M	**Drury Creek, Y**	**58.53**	**343**	P	**P**	**18 30 59.0**	**-2.5**
M31M				IAmb	IAmb	18 31 08.3	
	comp=Z,42nm,1.4s						
M31M				IAMs_20	IAMs_20	18 55 23.2	
	comp=Z,3µm,20.0s						
M31M	**Drury Creek, Y**	**58.53**	**343**	P	**P**	**18 31 01.4**	**-0.1**
	baz=142,SNR=15						
M31M				S	**S**	**18 39 09.1**	**+4.1**
	baz=142						
ITRB	**Iturama**	**58.66**	**119**	*e*P	**P**	**18 31 06.4**	**+3.3**
PCMB	**Pacaembu**	**58.66**	**121**	*e*P	**P**	**18 31 05.4**	**+2.4**
N30M	**Aishikik Lake**	**58.76**	**342**	P	**P**	**18 31 02.7**	**-0.4**
	baz=139,SNR=28						
N30M				S	S	18 39 15.1	+7.0
	baz=139						
YUK6	**Outpost Mounta**	**58.78**	**341**	P	**P**	**18 31 04.8**	**+1.3**
	baz=138,SNR=26						
YUK6				S	S	18 39 15.9	+7.2
	baz=138						
PINM	**Pinnacle**	**58.80**	**339**	P	**P**	**18 31 03.6**	**+0.1**
	baz=135						
PINM				S	**S**	**18 39 13.6**	**+4.9**
	baz=135						
AY01	**Puyuhuapi**	**59.14**	**155**	P	**P**	**18 31 07.9**	**+2.0**
AY01				IAmb	IAmb	18 31 13.5	
	comp=Z,21nm,1.2s						
YUK4	**Talbot Arm**	**59.17**	**341**	P	**P**	**18 31 06.0**	**-0.2**
	baz=138,SNR=22						
YUK4				S	**S**	**18 39 19.8**	**+6.1**
	baz=138						
BDFB	**Brasilia**	**59.26**	**114**	P	**P**	**18 31 06.1**	**-1.3**
	comp=Z,9.1nm,0.8s,baz=292,slow=4.4,SNR=13						
BDFB				S	**S**	**18 39 12.2**	**-3.9**
	comp=Z,0.7nm,0.3s,baz=32,slow=15,SNR=1.3						
BDFB				LR	LR	18 55 26.1	
	comp=Z,2µm,19.1s,baz=292,slow=35						
	comp=Z,9.1nm,0.8s						
BDFB	**Brasilia**	**59.26**	**114**	P	**P**	**18 31 06.1**	**-1.3**
BDFB	**Brasilia**	**59.26**	**114**	P	**P**	**18 31 06.1**	**-1.3**
BDFB				pmax	pmax		
	comp=Z,71nm,1.4s						
TABL	**Table Mountain**	**59.36**	**339**	IAMs_20	IAMs_20	18 58 28.3	
	comp=Z,3µm,20.0s						
M30M	**Minto, Yukon**	**59.52**	**343**	IAmb	IAmb	18 31 15.2	
	comp=Z,60nm,1.9s						
M30M				IAMs_20	IAMs_20	18 59 31.4	
	comp=Z,2µm,18.0s						
M30M	**Minto, Yukon**	**59.52**	**343**	P	**P**	**18 31 09.1**	**+0.7**
	baz=140,SNR=10						
M30M				S	**S**	**18 39 22.6**	**+4.7**
	baz=140						
YAH	**Yahtse**	**59.52**	**339**	IAMs_20	IAMs_20	18 58 23.6	
	comp=Z,3µm,20.0s						
LOGN	**Logan Glacier**	**59.58**	**339**	IAmb	IAmb	18 31 28.2	
	comp=Z,53nm,1.6s						
CTGM	**Chitina Glacie**	**59.80**	**339**	IAmb	IAmb	18 31 15.6	
	comp=Z,34nm,1.4s						
CTG	**Chitna Glacier**	**59.80**	**339**	P	**P**	**18 31 11.5**	**+1.1**
	baz=134,SNR=11						
ISLE	**Juniper Island**	**59.90**	**339**	IAmb	IAmb	18 31 13.3	
	comp=Z,38nm,1.5s						
ISLE				IAMs_20	IAMs_20	18 58 56.6	
	comp=Z,3µm,20.0s						
BARN	**Barnard Glacie**	**59.98**	**339**	P	**P**	**18 31 09.1**	**-2.7**
YUK3	**Moose Creek**	**60.08**	**340**	P	**P**	**18 31 13.2**	**+0.8**
	baz=136,SNR=19						
YUK3				S	**S**	**18 39 30.9**	**+5.4**
	baz=136						
COYC	**Coyhaique**	**60.31**	**156**	P	**P**	**18 31 15.2**	**+1.3**
COYC	**Coyhaique**	**60.31**	**156**	IAMs_20	IAMs_20	18 51 03.7	
	comp=Z,2µm,19.0s						
HMT	**Hamilton**	**60.43**	**338**	P	**P**	**18 31 12.6**	**-2.0**
ITAB	**Concordia**	**60.47**	**128**	P	**P**	**18 31 15.1**	**-0.3**
FRB	**Frobisher Bay**	**60.51**	**17**	LR	LR	18 58 40.5	
	comp=Z,2µm,18.2s,baz=213,slow=37						
Q23K	**Middleton Isla**	**60.65**	**336**	P	**P**	**18 31 17.1**	**+1.0**
	baz=128						
Q23K				S	**S**	**18 39 37.6**	**+5.3**
	baz=128						
BVCY	**Beaver Creek**	**60.67**	**341**	P	**P**	**18 31 17.5**	**+1.3**
	baz=136						
MCARA	**McCarthy VSAT**	**60.68**	**339**	P	**P**	**18 31 17.6**	**+1.3**
	baz=133,SNR=8.9						
MCARA				S	**S**	**18 39 38.1**	**+5.4**
	baz=133						
VRDI	**Verde Repeater**	**60.73**	**339**	IAmb	IAmb	18 31 23.5	
	comp=Z,54nm,1.6s						
VRDI				IAMs_20	IAMs_20	18 58 41.4	
	comp=Z,3µm,19.0s						
FRTB	**Fartura**	**60.81**	**122**	*e*P	**P**	**18 31 21.1**	**+3.2**
M27K	**Edge Creek, AK**	**60.96**	**340**	IAmb	IAmb	18 31 25.1	
	comp=Z,26nm,1.1s						
M27K				IAMs_20	IAMs_20	18 59 25.6	
	comp=Z,2µm,18.0s						
M27K	**Edge Creek, AK**	**60.96**	**340**	P	**P**	**18 31 17.8**	**-0.6**
	baz=134						
M27K				S	**S**	**18 39 41.3**	**+4.6**
	baz=134						
BMRM	**Bremner River**	**60.97**	**338**	P	**P**	**18 31 19.5**	**+1.1**
	baz=131,SNR=17						
BMRM				S	**S**	**18 39 40.4**	**+3.8**
	baz=131						
GLB	**Gilahina Butte**	**61.00**	**339**	IAmb	IAmb	18 31 23.5	
	comp=Z,28nm,1.2s						
GLB				IAMs_20	IAMs_20	18 58 58.6	
	comp=Z,4µm,20.0s						
CPSB	**Cacapava Do Su**	**61.03**	**131**	*e*P	**P**	**18 31 23.3**	**+4.2**
SDBA	**SAO DESIDERIO**	**61.12**	**109**	*e*P	**P**	**18 31 20.8**	**+0.6**
EYAK	**Cordova Ski Ar**	**61.13**	**337**	P	**P**	**18 31 16.8**	**-2.5**
EYAK	**Cordova Ski Ar**	**61.13**	**337**	P	**P**	**18 31 20.4**	**+1.1**
	baz=130,SNR=9.5						
EYAK				S	**S**	**18 39 42.1**	**+3.7**
	baz=130						
M26K	**Nabesna, AK**	**61.37**	**340**	P	**P**	**18 31 18.1**	**-2.9**
M26K				IAmb	IAmb	18 31 25.7	
	comp=Z,22nm,1.1s						
M26K				IAMs_20	IAMs_20	18 59 47.4	
	comp=Z,3µm,19.0s						
M26K	**Nabesna, AK**	**61.37**	**340**	P	**P**	**18 31 20.6**	**-0.4**
	baz=133,SNR=19						
M26K				S	**S**	**18 39 45.0**	**+3.4**
	baz=133						
J29M	**Klondike Camp**	**61.37**	**343**	P	**P**	**18 31 21.3**	**+0.3**
	baz=139						
J29M				S	**S**	**18 39 43.7**	**+2.1**
	baz=139						
N25K	**Chitina, Valde**	**61.39**	**339**	IAMs_20	IAMs_20	18 59 11.0	
	comp=Z,4µm,21.0s						
N25K	**Chitina, Valde**	**61.39**	**339**	P	**P**	**18 31 20.7**	**-0.5**
	baz=131,SNR=31						
N25K				S	**S**	**18 39 44.5**	**+2.5**
	baz=131						
DAWY	**Dawson**	**61.42**	**343**	IAmb	IAmb	18 31 25.7	
	comp=Z,33nm,1.1s						
DAWY	**Dawson**	**61.42**	**343**	P	**P**	**18 31 20.6**	**-0.7**
	baz=138,SNR=9.2						
DAWY				S	**S**	**18 39 44.4**	**+2.1**
	baz=138						
L27K	**Beaver Creek,**	**61.44**	**341**	IAmb	IAmb	18 31 28.1	
	comp=Z,31nm,1.4s						
L27K				IAMs_20	IAMs_20	18 58 48.3	
	comp=Z,2µm,21.0s						
L27K	**Beaver Creek,**	**61.44**	**341**	P	**P**	**18 31 22.4**	**+0.9**
	baz=135,SNR=18						
L27K				S	**S**	**18 39 48.0**	**+5.5**
	baz=135						
DIV	**Divide**	**61.51**	**338**	P	**P**	**18 31 19.0**	**-3.0**
FID	**Port Fidalgo**	**61.53**	**337**	P	**P**	**18 31 19.5**	**-2.6**
PLTB	**Pedras Altas**	**61.61**	**133**	*e*P	**P**	**18 31 26.9**	**+3.8**
KLU	**Klutina**	**61.80**	**338**	IAmb	IAmb	18 31 30.3	
	comp=Z,24nm,1.1s						
KLU	**Klutina**	**61.80**	**338**	P	**P**	**18 31 23.5**	**-0.5**
	baz=130,SNR=15						
KLU				S	**S**	**18 39 49.2**	**+2.0**
	baz=130						
GLI	**Glacier Island**	**61.85**	**337**	IAmb	IAmb	18 31 29.9	
	comp=Z,48nm,1.6s						
GLI	**Glacier Island**	**61.85**	**337**	P	**P**	**18 31 23.8**	**-0.4**
	baz=128						
GLI				S	**S**	**18 39 50.5**	**+2.8**
	baz=128						
L26K	**Log Cabin Wild**	**61.92**	**340**	P	**P**	**18 31 22.5**	**-2.1**
L26K				IAMs_20	IAMs_20	19 00 03.8	
	comp=Z,3µm,18.0s						
L26K	**Log Cabin Wild**	**61.92**	**340**	P	**P**	**18 31 24.8**	**+0.1**
	baz=133,SNR=9.7						
L26K				S	**S**	**18 39 52.8**	**+4.3**
	baz=133						
MENT	**Mentasta**	**61.98**	**340**	P	**P**	**18 31 22.5**	**-2.6**
MENT				IAmb	IAmb	18 31 31.3	
	comp=Z,20nm,1.1s						
I29M	**Ogilvie Camp,**	**62.09**	**344**	IAMs_20	IAMs_20	18 59 49.2	
	comp=Z,3µm,19.0s						
I29M	**Ogilvie Camp,**	**62.09**	**344**	P	**P**	**18 31 25.3**	**-0.4**
	baz=139,SNR=29						
I29M				S	**S**	**18 39 51.7**	**+1.1**
	baz=139						
HARP	**HAARP**	**62.11**	**339**	P	**P**	**18 31 26.6**	**+0.6**
	baz=131						
TIJ01	**Guaruva-PR**	**62.11**	**124**	*e*P	**P**	**18 31 30.4**	**+3.7**
K27K	**Chicken**	**62.21**	**342**	IAMs_20	IAMs_20	19 00 58.5	
	comp=Z,2µm,18.0s						
K27K	**Chicken**	**62.21**	**342**	P	**P**	**18 31 26.2**	**-0.4**
	baz=135						
K27K				S	**S**	**18 39 57.8**	**+5.7**
	baz=135						
M24K	**Tolsona, Glenn**	**62.28**	**339**	IAMs_20	IAMs_20	19 00 24.6	
	comp=Z,3µm,21.0s						
M24K	**Tolsona, Glenn**	**62.28**	**339**	P	**P**	**18 31 28.0**	**+0.8**
	baz=130,SNR=8.5						
SEW	**Seward**	**62.31**	**336**	IAmb	IAmb	18 31 44.7	
	comp=Z,34nm,1.4s						
SEW	**Seward**	**62.31**	**336**	P	**P**	**18 31 27.8**	**+0.5**
	baz=126						
SEW				S	**S**	**18 39 54.5**	**+1.1**
	baz=126						
KDAK	**Kodiak Island**	**62.38**	**333**	P	**P**	**18 31 25.3**	**-2.5**
KDAK				IAmb	IAmb	18 31 34.7	
	comp=Z,25nm,1.4s						
KDAK	**Kodiak Island**	**62.38**	**333**	P	**P**	**18 31 25.3**	**-2.5**
KDAK				pmax	pmax		
	comp=Z,25nm,1.4s						
KDAK				MLR	MLR		
	comp=Z,2µm,18.0s						
KDAK	**Kodiak Island**	**62.38**	**333**	P	**P**	**18 31 28.2**	**+0.4**
	baz=121						
KDAK				S	**S**	**18 39 56.3**	**+1.9**
	baz=121						
OHAK	**Old Harbor**	**62.41**	**332**	P	**P**	**18 31 28.7**	**+0.7**
	baz=120						
OHAK				S	**S**	**18 39 58.1**	**+3.3**
	baz=120						
EPYK	**Eagle Plains**	**62.45**	**345**	IAMs_20	IAMs_20	18 59 16.8	
	comp=Z,3µm,20.0s						
EPYK	**Eagle Plains**	**62.45**	**345**	P	**P**	**18 31 26.6**	**-1.6**
	baz=141,SNR=22						
EPYK				S	**S**	**18 39 56.3**	**+1.1**
	baz=141						
EGAK	**Eagle**	**62.46**	**343**	IAmb	IAmb	18 31 32.6	
	comp=Z,31nm,1.2s						
EGAK				IAMs_20	IAMs_20	18 56 51.2	
	comp=Z,2µm,21.0s						
EGAK	**Eagle**	**62.46**	**343**	P	**P**	**18 31 26.9**	**-1.4**
	baz=136,SNR=29						
EGAK				S	**S**	**18 39 58.6**	**+3.3**
	baz=136						
NBPS	**Pedro II - PI**	**62.49**	**99**	*e*P	**P**	**18 31 31.6**	**+2.1**
SII	**Sitkinak Islan**	**62.51**	**331**	IAMs_20	IAMs_20	18 53 09.0	
	comp=Z,2µm,19.0s						
C36M	**Paulatuk**	**62.52**	**352**	IAmb	IAmb	18 31 46.1	
	comp=Z,36nm,1.6s						
C36M	**Paulatuk**	**62.52**	**352**	P	**P**	**18 31 28.6**	**+0.1**
	baz=156						
C36M				S	**S**	**18 39 57.3**	**+1.5**
	baz=156						
SCM	**Sheep Creek Mo**	**62.53**	**338**	P	**P**	**18 31 29.6**	**+0.7**
	baz=128						
SCM				S	**S**	**18 39 57.6**	**+1.1**
	baz=128						
DOT	**Dot Lake**	**62.58**	**341**	P	**P**	**18 31 26.6**	**-2.5**
PAX	**Paxson**	**62.60**	**340**	P	**P**	**18 31 28.8**	**-0.5**
	baz=131,SNR=20						
PAX				S	**S**	**18 39 58.6**	**+1.4**
	baz=131						
BRSE	**Bradley Lake S**	**62.64**	**335**	P	**P**	**18 31 29.7**	**+0.1**
	baz=124,SNR=12						
O22K	**Cooper Landing**	**62.64**	**336**	P	**P**	**18 31 29.7**	**+0.2**
	baz=126						
O22K				S	**S**	**18 39 59.3**	**+1.6**
	baz=126						
M23K	**Glacier View**	**62.66**	**338**	P	**P**	**18 31 29.6**	**-0.1**
	baz=128						
M23K				S	**S**	**18 39 58.4**	**+0.5**
	baz=128						
KNK	**Knik Glacier**	**62.70**	**337**	P	**P**	**18 31 30.2**	**+0.3**
	baz=127,SNR=8.8						
KNK				S	**S**	**18 40 00.6**	**+2.1**
	baz=127						
BRLK	**Bradley Lake**	**62.71**	**335**	IAmb	IAmb	18 31 35.8	
	comp=Z,37nm,1.2s						
BRLK				IAMs_20	IAMs_20	18 53 20.1	
	comp=Z,2µm,18.0s						
CNPM	**China Poot**	**62.72**	**335**	IAMs_20	IAMs_20	18 53 19.5	
	comp=Z,2µm,19.0s						
CHIR	**Chirikof Islan**	**62.86**	**330**	IAMs_20	IAMs_20	18 52 50.5	
	comp=Z,3µm,18.0s						
SML	**Sawmill**	**62.89**	**338**	P	**P**	**18 31 30.2**	**-1.0**
	baz=127,SNR=24						
SML				S	**S**	**18 40 03.1**	**+2.2**
	baz=127						
HOM	**Homer**	**62.97**	**335**	P	**P**	**18 31 32.2**	**+0.4**
	baz=123						
HOM				S	**S**	**18 40 03.7**	**+1.9**
	baz=123						
J26L	**Joseph Creek**	**63.00**	**342**	P	**P**	**18 31 32.2**	**+0.2**
	baz=134,SNR=31						
J26L				S	**S**	**18 40 06.3**	**+4.0**
	baz=134						
RC01	**Rabbit Creek A**	**63.00**	**337**	P	**P**	**18 31 32.2**	**+0.3**
	baz=126						
RC01				S	**S**	**18 40 01.3**	**-0.8**
	baz=126						
PMR	**Palmer**	**63.07**	**337**	P	**P**	**18 31 31.4**	**-0.9**
	baz=126,SNR=7.8						
PMR				S	**S**	**18 40 04.9**	**+2.0**
	baz=126						
RAR	**Rarotonga**	**63.14**	**241**	LR	LR	18 51 45.0	
	comp=Z,2µm,19.1s,baz=64,slow=29						
WAT6	**Susitna Watana**	**63.15**	**339**	P	**P**	**18 31 31.0**	**-2.1**
	baz=128,SNR=42						
WAT6				S	**S**	**18 40 06.0**	**+1.7**
	baz=128						
FIS	**Fire Island**	**63.23**	**336**	P	**P**	**18 31 30.3**	**-3.1**
K24K	**Donnelly Dome**	**63.25**	**340**	P	**P**	**18 31 33.9**	**+0.3**
	baz=131,SNR=9.9						
K24K				S	**S**	**18 40 07.0**	**+1.7**
	baz=131						
INK	**Inuvik**	**63.28**	**348**	LR	LR	18 59 18.3	
	comp=Z,4µm,18.2s,baz=151,slow=36						
INK	**Inuvik**	**63.28**	**348**	P	**P**	**18 31 31.9**	**-1.8**
	baz=146,SNR=34						
INK				S	**S**	**18 40 06.5**	**+1.1**
	baz=146						
DHY	**Denali Highway**	**63.33**	**339**	P	**P**	**18 31 31.5**	**-2.8**
DHY				IAmb	IAmb	18 31 39.7	
	comp=Z,38nm,1.3s						
DHY	**Denali Highway**	**63.33**	**339**	P	**P**	**18 31 34.1**	**-0.2**
	baz=129,SNR=19						
DHY				S	**S**	**18 40 08.8**	**+2.3**
	baz=129						
CAPN	**Captain Cook N**	**63.39**	**336**	P	**P**	**18 31 34.9**	**+0.5**
	baz=124						
Q19K	**Cape Douglas,**	**63.45**	**333**	IAmb	IAmb	18 31 51.4	
	comp=Z,30nm,1.2s						
Q19K	**Cape Douglas,**	**63.45**	**333**	P	**P**	**18 31 35.0**	**0.0**
	baz=121						
Q19K				S	**S**	**18 40 08.8**	**+0.8**
	baz=121						
M22K	**Willow**	**63.54**	**337**	P	**P**	**18 31 35.5**	**+0.1**
	baz=126						
M22K				S	**S**	**18 40 11.5**	**+2.7**
	baz=126						
WAT1	**Susitna Watana**	**63.60**	**338**	P	**P**	**18 31 35.7**	**-0.2**
	baz=128						
WAT1				S	**S**	**18 40 11.8**	**+2.2**
	baz=128						
O20K	**Slope Mountain**	**63.62**	**335**	P	**P**	**18 31 36.4**	**+0.3**
	baz=122,SNR=6.7						
O20K				S	**S**	**18 40 10.8**	**+0.7**
	baz=122						
P19K	**Oil Pt**	**63.65**	**334**	P	**P**	**18 31 32.5**	**-3.8**
P19K	**Oil Pt**	**63.65**	**334**	P	**P**	**18 31 35.6**	**-0.6**
	baz=122,SNR=9.8						
P19K				S	**S**	**18 40 11.9**	**+1.6**
	baz=122						
J25K	**Salcha River,**	**63.65**	**341**	IAmb	IAmb	18 31 43.2	
	comp=Z,26nm,1.3s						
J25K				IAMs_20	IAMs_20	18 59 38.7	
	comp=Z,2µm,18.0s						
J25K	**Salcha River,**	**63.65**	**341**	P	**P**	**18 31 36.5**	**+0.2**
	baz=132						
J25K				S	**S**	**18 40 12.8**	**+2.4**
	baz=132						
NBMO	**Morrinhos-CE**	**63.66**	**98**	*e*P	**P**	**18 31 39.4**	**+2.3**
RSO	**Redoubt South**	**63.88**	**335**	P	**P**	**18 31 35.2**	**-2.8**
CUT	**Chulitna**	**63.98**	**338**	IAMs_20	IAMs_20	19 01 34.5	
	comp=Z,3µm,20.0s						
CUT	**Chulitna**	**63.98**	**338**	P	**P**	**18 31 38.5**	**+0.1**
	baz=126						
CUT				S	**S**	**18 40 15.0**	**+0.7**
	baz=126						
BSCB	**Bom Sucesso**	**64.00**	**118**	*e*P	**P**	**18 31 43.3**	**+4.0**
HDA	**Harding Lake**	**64.04**	**340**	P	**P**	**18 31 35.5**	**-3.2**
HDA	**Harding Lake**	**64.04**	**340**	P	**P**	**18 31 37.8**	**-0.9**
	baz=130,SNR=15						
HDA				S	**S**	**18 40 14.7**	**-0.3**
	baz=130						
HDA				S	**S**	**18 40 14.7**	**-0.3**
	baz=130						
SPCR	**Spurr Chakacha**	**64.05**	**336**	P	**P**	**18 31 38.6**	**-0.4**
	baz=123						
IL31		**64.25**	**341**	P	**P**	**18 31 37.0**	**-3.1**
ILAR	**Eielson Array**	**64.25**	**341**	P	**P**	**18 31 37.4**	**-2.7**
	comp=Z,12nm,1.0s,baz=155,slow=5.1,SNR=40						
ILAR				S	**S**	**18 40 12.0**	**-5.6**
	comp=Z,0.2nm,0.5s,baz=316,slow=35,SNR=1.7						
ILAR				LR	LR	19 01 15.3	
	comp=Z,1µm,18.3s,baz=124,slow=38						
	comp=Z,12nm,1.0s						
MCK	**McKinley**	**64.29**	**339**	P	**P**	**18 31 40.7**	**+0.3**
	baz=128						
MCK				S	**S**	**18 40 20.5**	**+2.3**
	baz=128						
P18K	**Big Mountain,**	**64.39**	**333**	IAmb	IAmb	18 31 46.2	
	comp=Z,42nm,1.4s						
P18K	**Big Mountain,**	**64.39**	**333**	P	**P**	**18 31 40.4**	**-0.8**
	baz=120						
P18K				S	**S**	**18 40 18.7**	**-0.9**
	baz=120						
O19K	**Port Alsworth**	**64.40**	**334**	P	**P**	**18 31 38.5**	**-2.6**
O19K	**Port Alsworth**	**64.40**	**334**	P	**P**	**18 31 40.3**	**-0.8**
	baz=121						
O19K				S	**S**	**18 40 20.0**	**+0.5**
	baz=121						
WRH	**Wood River Hil**	**64.46**	**340**	IAmb	IAmb	18 31 47.9	
	comp=Z,32nm,1.5s						
WRH				IAMs_20	IAMs_20	19 02 38.1	
	comp=Z,2µm,19.0s						
CCB	**Clear Creek Bu**	**64.47**	**340**	P	**P**	**18 31 38.7**	**-2.8**
CCB				IAmb	IAmb	18 31 53.7	
	comp=Z,27nm,1.4s						
CCB				IAMs_20	IAMs_20	19 02 20.4	
	comp=Z,2µm,18.0s						
CNBA	**Chernabura Isl**	**64.47**	**328**	IAMs_20	IAMs_20	18 52 20.4	
	comp=Z,3µm,21.0s						
TRF	**Thorofare Moun**	**64.61**	**338**	P	**P**	**18 31 42.6**	**0.0**
	baz=126,SNR=15						
O18K	**Koktuh Hills**	**64.61**	**334**	P	**P**	**18 31 39.1**	**-3.5**
O18K	**Koktuh Hills**	**64.61**	**334**	P	**P**	**18 31 42.2**	**-0.4**
	baz=120,SNR=14						
O18K				S	**S**	**18 40 22.6**	**+0.4**
	baz=120						
COLA	**College**	**64.63**	**340**	IAMs_20	IAMs_20	19 00 47.7	
	comp=Z,2µm,19.0s						
COLA	**College**	**64.63**	**340**	*i* P	**P**	**18 31 42.5**	**-0.1**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						

TCOL	**CIGO, UAF Yank**	**64.64**	**340**	IAMs_20	IAMs_20	19 00 47.7	
	comp=Z,2µm,19.0s						
TCOL	**CIGO, UAF Yank**	**64.64**	**340**	P	**P**	**18 31 42.2**	**-0.4**
	baz=129						
TCOL				S	**S**	**18 40 23.0**	**+0.7**
	baz=129						
POKR	**Poker Plat Res**	**64.65**	**341**	IAMs_20	IAMs_20	19 00 19.1	
	comp=Z,2µm,18.0s						
POKR	**Poker Plat Res**	**64.65**	**341**	P	**P**	**18 31 41.8**	**-0.9**
	baz=130						
POKR				S	**S**	**18 40 23.1**	**+0.5**
	baz=130						
N19K	**Bonanza Creek**	**64.79**	**335**	P	**P**	**18 31 40.5**	**-3.3**
N19K				IAMs_20	IAMs_20	18 54 27.0	
	comp=Z,2µm,18.0s						
N19K	**Bonanza Creek**	**64.79**	**335**	P	**P**	**18 31 42.3**	**-1.5**
	baz=121,SNR=14						
N19K				S	**S**	**18 40 24.1**	**-0.5**
	baz=121						
MDM	**Murphy Dome**	**64.81**	**340**	IAmb	IAmb	18 31 48.4	
	comp=Z,19nm,1.1s						
MDM				IAMs_20	IAMs_20	19 01 03.4	
	comp=Z,2µm,20.0s						
NEA2	**Nenana**	**64.87**	**340**	IAMs_20	IAMs_20	19 03 33.8	
	comp=Z,2µm,18.0s						
NEA2	**Nenana**	**64.87**	**340**	P	**P**	**18 31 42.3**	**-1.9**
	baz=128,SNR=27						
NEA2				S	**S**	**18 40 25.1**	**-0.1**
	baz=128						
KTH	**Kantishna Hill**	**64.89**	**338**	P	**P**	**18 31 40.4**	**-4.0**
KTH				IAmb	IAmb	18 31 55.4	
	comp=Z,33nm,1.2s						
KTH				IAMs_20	IAMs_20	19 01 54.7	
	comp=Z,3µm,20.0s						
PPLA	**Purkeypile**	**64.99**	**337**	P	**P**	**18 31 44.1**	**-1.1**
	baz=124,SNR=25						
PPLA				S	**S**	**18 40 27.9**	**+0.8**
	baz=124						
A36M	**Sachs Harbour**	**65.10**	**352**	P	**P**	**18 31 45.8**	**+0.3**
	baz=155						
A36M				S	**S**	**18 40 29.3**	**+1.5**
	baz=155						
BPAW	**Bear Paw Mtn.**	**65.24**	**339**	P	**P**	**18 31 42.8**	**-3.8**
BPAW				IAmb	IAmb	18 31 58.1	
	comp=Z,17nm,1.0s						
BPAW	**Bear Paw Mtn.**	**65.24**	**339**	P	**P**	**18 31 46.2**	**-0.4**
	baz=126,SNR=13						
CAST	**Castle Rocks**	**65.25**	**338**	P	**P**	**18 31 42.9**	**-3.8**
CAST	**Castle Rocks**	**65.25**	**338**	P	**P**	**18 31 45.6**	**-1.0**
	baz=124,SNR=26						
H24K	**Noodor Dome**	**65.25**	**341**	IAMs_20	IAMs_20	18 59 06.0	
	comp=Z,2µm,20.0s						
H24K	**Noodor Dome**	**65.25**	**341**	P	**P**	**18 31 45.7**	**-1.0**
	baz=129,SNR=53						
H24K				S	**S**	**18 40 31.1**	**+1.0**
	baz=129						
I23K	**Minto, Yukon-K**	**65.31**	**340**	IAMs_20	IAMs_20	19 03 03.4	
	comp=Z,2µm,19.0s						
I23K	**Minto, Yukon-K**	**65.31**	**340**	P	**P**	**18 31 46.0**	**-1.0**
	baz=128,SNR=17						
I23K				S	**S**	**18 40 29.9**	**-0.7**
	baz=128						
M19K	**Big River Lodg**	**65.31**	**336**	IAmb	IAmb	18 31 52.9	
	comp=Z,28nm,1.1s						
M19K				IAMs_20	IAMs_20	19 01 51.9	
	comp=Z,2µm,20.0s						
M19K	**Big River Lodg**	**65.31**	**336**	P	**P**	**18 31 46.5**	**-0.6**
	baz=121						
M19K				S	**S**	**18 40 31.9**	**+1.0**
	baz=121						
N18K	**Kilae Creek**	**65.32**	**334**	P	**P**	**18 31 43.5**	**-3.6**
N18K	**Kilae Creek**	**65.32**	**334**	P	**P**	**18 31 46.5**	**-0.6**
	baz=119,SNR=15						
N18K				S	**S**	**18 40 30.0**	**-0.9**
	baz=119						
BMAR	**Burnt Mountain**	**65.33**	**344**	P	**P**	**18 31 43.7**	**-3.5**
MAN01	**Angra dos Reis**	**65.38**	**120**	*e*P	**P**	**18 31 51.1**	**+2.9**
L20K	**Farewell, AK**	**65.42**	**337**	P	**P**	**18 31 47.0**	**-0.7**
	baz=122,SNR=17						
L20K				S	**S**	**18 40 32.2**	**+0.1**
	baz=122						
NBCL	**Cascavel-CE**	**65.54**	**98**	*e*P	**P**	**18 31 52.0**	**+2.5**
CHUM	**Lake Minchumin**	**65.59**	**338**	P	**P**	**18 31 47.8**	**-1.0**
	baz=124						
CHUM				S	**S**	**18 40 33.6**	**-0.5**
	baz=124						
L19K	**White Mountain**	**65.65**	**336**	IAMs_20	IAMs_20	19 02 20.6	
	comp=Z,2µm,20.0s						
L19K	**White Mountain**	**65.65**	**336**	P	**P**	**18 31 49.0**	**-0.3**
	baz=121,SNR=9.6						
L19K				S	**S**	**18 40 34.6**	**-0.3**
	baz=121						
NBMA	**Muriti-CE**	**65.72**	**102**	*e*P	**P**	**18 31 53.7**	**+3.1**
H23K	**Yukon River**	**65.78**	**341**	P	**P**	**18 31 45.8**	**-4.3**
H23K				IAMs_20	IAMs_20	19 02 32.0	
	comp=Z,2µm,19.0s						
H23K	**Yukon River**	**65.78**	**341**	P	**P**	**18 31 49.1**	**-1.0**
	baz=128,SNR=16						
H23K				S	**S**	**18 40 35.5**	**-1.0**
	baz=128						
K20K	**Telida**	**65.96**	**337**	P	**P**	**18 31 50.9**	**-0.4**
	baz=122,SNR=21						
K20K				S	**S**	**18 40 37.3**	**-1.4**
	baz=122						
I21K	**Tanana**	**66.22**	**340**	IAMs_20	IAMs_20	19 02 22.5	
	comp=Z,2µm,19.0s						
I21K	**Tanana**	**66.22**	**340**	P	**P**	**18 31 52.5**	**-0.3**
	baz=125,SNR=16						
I21K				S	**S**	**18 40 40.8**	**-0.9**
	baz=125						
SJMB	**Sao Joao De Ma**	**66.43**	**114**	*e*P	**P**	**18 31 57.6**	**+2.6**
J20K	**Nowinta River**	**66.43**	**338**	IAMs_20	IAMs_20	19 02 55.2	
	comp=Z,3µm,21.0s						
J20K	**Nowinta River**	**66.43**	**338**	P	**P**	**18 31 53.6**	**-0.7**
	baz=122,SNR=25						
J20K				S	**S**	**18 40 42.8**	**-1.5**
	baz=122						
GDU01	**Guandu, BA**	**66.47**	**109**	*e*P	**P**	**18 31 58.5**	**+3.1**
TTA	**Tatalina**	**66.49**	**336**	P	**P**	**18 31 50.5**	**-4.2**
TTA				IAmb	IAmb	18 31 59.5	
	comp=Z,27nm,1.4s						
TTA	**Tatalina**	**66.49**	**336**	P	**P**	**18 31 50.5**	**-4.2**
TTA				pmax	pmax		
	comp=Z,27nm,1.4s						
TTA	**Tatalina**	**66.49**	**336**	P	**P**	**18 31 53.5**	**-1.3**
	baz=120,SNR=13						
TTA				S	**S**	**18 40 45.4**	**+0.1**
	baz=120						
RES	**Resolute Bay**	**66.49**	**2**	LR	LR	19 01 32.0	
	comp=Z,5µm,18.3s,baz=200,slow=37						
RES	**Resolute Bay**	**66.49**	**2**	P	**P**	**18 31 50.3**	**-4.1**
RES				IAmb	IAmb	18 31 54.9	
	comp=Z,19nm,1.2s						
RES	**Resolute Bay**	**66.49**	**2**	P	**P**	**18 31 50.3**	**-4.1**
RES				pmax	pmax		
	comp=Z,19nm,1.3s						
BSFB	**Barra de Sao F**	**66.77**	**115**	*e*P	**P**	**18 32 00.6**	**+3.4**
H21K	**Melozitna Rive**	**66.77**	**340**	IAmb	IAmb	18 31 60.0	
	comp=Z,25nm,1.0s						
H21K				IAMs_20	IAMs_20	19 02 39.2	
	comp=Z,2µm,19.0s						
H21K	**Melozitna Rive**	**66.77**	**340**	P	**P**	**18 31 54.3**	**-2.2**
	baz=124,SNR=34						
H21K				S	**S**	**18 40 46.5**	**-2.0**
	baz=124						
COLD	**Coldfoot**	**66.85**	**342**	IAmb	IAmb	18 32 01.6	
	comp=Z,32nm,1.2s						
COLD	**Coldfoot**	**66.85**	**342**	P	**P**	**18 31 57.1**	**+0.2**
	baz=128,SNR=20						
COLD				S	**S**	**18 40 52.3**	**+3.0**
	baz=128						
IMAR	**Indian Mountai**	**67.28**	**340**	P	**P**	**18 31 56.4**	**-3.2**
RIB01	**Linhares ES**	**67.33**	**115**	*e*P	**P**	**18 32 03.9**	**+3.2**
NRS	**Narsarsuaq**	**67.41**	**26**	IAMs_20	IAMs_20	19 03 00.8	
	comp=Z,2µm,19.0s						
ALF01	**Guarapari-ES**	**67.44**	**116**	*e*P	**P**	**18 32 05.3**	**+3.9**
TOLK	**Toolik Lake Re**	**67.55**	**343**	P	**P**	**18 31 58.2**	**-3.1**
TOLK	**Toolik Lake Re**	**67.55**	**343**	P	**P**	**18 32 00.4**	**-0.9**
	baz=129,SNR=34						
TOLK				S	**S**	**18 40 59.2**	**+1.4**
	baz=129						
MG03	**Isla Dawson**	**67.69**	**160**	P	**P**	**18 32 03.8**	**+1.6**
GCSA	**Galena City Sc**	**67.74**	**338**	P	**P**	**18 32 02.9**	**+0.4**
	baz=120						
GCSA				S	**S**	**18 41 00.5**	**+0.5**
	baz=120						
RCBR	**Riachuelo**	**68.19**	**100**	LR	LR	19 01 20.4	
	comp=Z,4µm,19.2s,baz=74,slow=35						
RCBR	**Riachuelo**	**68.19**	**100**	*e*P	**P**	**18 32 10.0**	**+3.7**
SFJD	**Kangerlussuaq**	**68.26**	**20**	LR	LR	19 03 38.1	
	comp=Z,2µm,18.5s,baz=232,slow=38						
SFJD	**Kangerlussuaq**	**68.26**	**20**	P	**P**	**18 32 04.5**	**-1.2**
SFJD				IAmb	IAmb	18 32 24.2	
	comp=Z,22nm,1.3s						
SFJD	**Kangerlussuaq**	**68.26**	**20**	IAMs_20	IAMs_20	19 03 26.9	
	comp=Z,2µm,19.0s						
SFJD	**Kangerlussuaq**	**68.26**	**20**	P	**P**	**18 32 04.5**	**-1.2**
SFJD				pmax	pmax		
	comp=Z,22nm,1.3s						
SFJD				MLR	MLR		
	comp=Z,2µm,19.0s						
NBCA	**Caruaru-PE**	**68.56**	**102**	*e*P	**P**	**18 32 11.1**	**+2.4**
NBAN	**Anadia - AL**	**68.62**	**104**	*e*P	**P**	**18 32 12.1**	**+3.1**
NBPV	**Pedro Velho**	**68.90**	**100**	*e*P	**P**	**18 32 14.6**	**+3.9**
ILULI	**Ilulissat**	**69.33**	**17**	P	**P**	**18 32 10.8**	**-1.6**
ILULI				IAmb	IAmb	18 32 13.6	
	comp=Z,22nm,1.1s						
ILULI				IAMs_20	IAMs_20	19 04 50.0	
	comp=Z,2µm,18.0s						
ILULI	**Ilulissat**	**69.33**	**17**	P	**P**	**18 32 10.8**	**-1.6**
ILULI				pmax	pmax		
	comp=Z,22nm,1.1s						
ILULI				MLR	MLR		
	comp=Z,2µm,18.0s						
TULEG	**Thule**	**70.62**	**8**	IAMs_20	IAMs_20	19 06 28.7	
	comp=Z,2µm,19.0s						
ANM	**Nome**	**70.95**	**336**	IAMs_20	IAMs_20	19 05 57.8	
	comp=Z,2µm,20.0s						
ANM	**Nome**	**70.95**	**336**	S	**S**	**18 41 40.1**	**+2.2**
	baz=112						
EFI	**East Falkland**	**71.02**	**152**	IAMs_20	IAMs_20	18 58 53.9	
	comp=Z,2µm,19.0s						
EFI	**East Falkland**	**71.02**	**152**	*i* P	**P**	**18 32 26.9**	**+3.9**
EFI				pmax	pmax		
	comp=Z,37nm,1.1s						
A21K	**Barrow**	**71.08**	**344**	IAMs_20	IAMs_20	19 04 43.9	
	comp=Z,1µm,18.0s						
A21K	**Barrow**	**71.08**	**344**	S	**S**	**18 41 38.6**	**-0.6**
	baz=122						
RDOG	**Red Dog Mine**	**71.43**	**340**	IAMs_20	IAMs_20	19 04 28.2	
	comp=Z,3µm,22.0s						
RDOG	**Red Dog Mine**	**71.43**	**340**	P	**P**	**18 32 22.2**	**-3.1**
	baz=115						
AFI	**Afiamalu**	**71.90**	**252**	LR	LR	18 54 44.6	
	comp=Z,726nm,20.7s,baz=70,slow=28						
TNA	**Tin City**	**72.31**	**337**	IAmb	IAmb	18 32 36.7	
	comp=Z,35nm,1.4s						
TNA	**Tin City**	**72.31**	**337**	P	**P**	**18 32 30.2**	**-0.3**
	baz=110						
TNA				S	**S**	**18 41 56.5**	**+2.9**
	baz=110						
MIDW	**Midway**	**72.53**	**297**	IAMs_20	IAMs_20	18 55 29.6	
	comp=Z,2µm,20.0s						
ICESG	**Greenland Ices**	**72.88**	**20**	*e*P	**P**	**18 32 31.5**	**-2.8**
ICESG				IAmb	IAmb	18 32 38.6	
	comp=Z,8.8nm,0.9s						
GAMB	**Gambell**	**73.32**	**334**	IAMs_20	IAMs_20	19 00 21.7	
	comp=Z,1µm,20.0s						
GAMB	**Gambell**	**73.32**	**334**	S	**S**	**18 42 08.5**	**+3.3**
	baz=105						
ADK	**Adak**	**73.56**	**322**	IAMs_20	IAMs_20	18 58 38.5	
	comp=Z,2µm,20.0s						
SUMG	**Summit**	**74.58**	**16**	P	**P**	**18 32 41.6**	**-2.8**
SUMG				IAmb	IAmb	18 32 49.4	
	comp=Z,28nm,1.0s						
SUMG	**Summit**	**74.58**	**16**	P	**P**	**18 32 41.6**	**-2.8**
SUMG				pmax	pmax		
	comp=Z,28nm,1.0s						
SUMG	**Summit**	**74.58**	**16**	*i* P	**P**	**18 32 44.0**	**-0.4**
SUMG				IAmb	IAmb	18 32 48.9	
	comp=Z,12nm,0.9s						
PMSA	**Palmer Station**	**78.41**	**164**	LR	LR	19 00 51.1	
	comp=Z,917nm,19.1s,baz=324,slow=30						
BORG	**Borgarnes**	**78.90**	**26**	LR	LR	19 07 25.7	
	comp=Z,902nm,20.2s,baz=274,slow=35						
BORG	**Borgarnes**	**78.90**	**26**	IAMs_20	IAMs_20	19 07 03.4	
	comp=Z,1µm,18.0s						
SCO	**Scoresbysund**	**79.16**	**20**	IAMs_20	IAMs_20	19 09 54.1	
	comp=Z,2µm,20.0s						
SHEM	**Shemya Is, Ala**	**79.25**	**322**	LR	LR	19 00 01.3	
	comp=Z,2µm,21.5s,baz=94,slow=30						
DAG	**Danmarks Havn**	**80.63**	**13**	*i* P	**P**	**18 33 16.0**	**-1.5**
DAG				IAmb	IAmb	18 33 21.2	
	comp=Z,2.7nm,1.0s						
RAO	**Raoul Island**	**81.22**	**239**	LR	LR	19 00 07.9	
	comp=Z,1µm,21.9s,baz=82,slow=29						
NOR	**Nord**	**81.27**	**9**	*i* P	**P**	**18 33 19.9**	**-1.0**
NOR				IAmb	IAmb	18 33 28.4	
	comp=Z,1.6nm,0.8s						
PMOZ	**Porto Moniz, M**	**81.89**	**58**	*e*P	**P**	**18 33 27.6**	**+2.3**
PMOZ	**Porto Moniz, M**	**81.89**	**58**	*e*LR	LR	18 59 36.2	
	comp=Z,657nm,18.0s						
BILL	**Bilibino**	**82.70**	**338**	P	**P**	**18 33 26.8**	**-1.8**
BILL				IAmb	IAmb	18 33 34.7	
	comp=Z,33nm,1.7s						
BILL				IAMs_20	IAMs_20	19 06 32.4	
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**82.70**	**338**⇓	*e*P	**P**	**18 33 28.7**	**0.0**
BILL				*e*		18 33 36.4	
BILL				*e*		18 36 41.1	
BILL				*i* S	**S**	**18 43 48.5**	**+2.3**
BILL				*i* SS	**SS**	**18 49 08.5**	**+0.7**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,813nm,15.0s						
HOPE	**Hope Point**	**83.30**	**147**	IAMs_20	IAMs_20	19 12 05.7	
	comp=Z,2µm,19.0s						
JMIC	**Jan Mayen**	**83.61**	**19**	LR	LR	19 12 16.8	
	comp=Z,1µm,18.6s,baz=278,slow=37						
TARA	**Tarawa**	**84.13**	**271**	IAMs_20	IAMs_20	19 00 15.3	
	comp=Z,2µm,20.0s						
MXZ	**Matakaoa Point**	**86.30**	**231**	IAMs_20	IAMs_20	19 03 12.1	
	comp=Z,2µm,21.0s						
URZ	**Urewera**	**87.38**	**231**	LR	LR	19 03 48.0	
	comp=Z,1µm,21.4s,baz=31,slow=29						
URZ	**Urewera**	**87.38**	**231**	IAMs_20	IAMs_20	19 03 47.7	
	comp=Z,2µm,19.0s						
SPITS	**Spitsbergen Ar**	**87.65**	**10**	LR	LR	19 13 41.9	
	comp=Z,1µm,20.4s,baz=358,slow=36						
PGAV	**Gavieira, Arco**	**87.87**	**48**	*e*P	**P**	**18 33 59.5**	**+4.3**
PGAV	**Gavieira, Arco**	**87.87**	**48**	*e*LR	LR	19 02 13.7	
	comp=Z,1µm,20.0s						
COI	**Coimbra**	**88.05**	**50**	IAMs_20	IAMs_20	19 11 45.3	
	comp=Z,2µm,19.0s						
MORF	**Marmelete**	**88.32**	**53**	*e*P	**P**	**18 33 58.0**	**+0.6**
MORF				IAMs_20	IAMs_20	19 04 14.6	
	comp=Z,2µm,23.5s						
MORF	**Marmelete**	**88.32**	**53**	*e*P	**P**	**18 33 57.9**	**+0.6**
KWAJ	**Kwajalein Atol**	**88.33**	**279**	IAMs_20	IAMs_20	19 08 16.5	
	comp=Z,2µm,20.0s						
PET	**Petropavlovsk**	**88.53**	**323**	*e*P	**P**	**18 34 00.3**	**+2.4**
PET				*e*		18 44 27.0	
PET				*e*S	**S**	**18 44 41.1**	**-2.9**
PET				*e*PS	**PnS**	**18 45 44.1**	**-2.9**
PET				*e*SS	**SS**	**18 50 30.9**	**-3.1**
PET				*e*SSS	SSS	18 54 11.0	
PET				pmax	pmax		
	comp=Z,31nm,1.3s						
PET				pmax	pmax		
	comp=Z,100nm,12.4s						
PET				MLR	MLR		
	comp=Z,900nm,20.0s						
PET				MLR	MLR		
	comp=Z,700nm,21.0s						
MESJ	**Messejana**	**88.57**	**52**	*e*P	**P**	**18 33 59.1**	**+0.6**
MESJ				*e*SKSac	**SKSac**	**18 44 27.2**	**-0.9**
MESJ				IAMs_20	IAMs_20	19 04 06.6	
	comp=Z,1µm,18.2s						
MESJ	**Messejana**	**88.57**	**52**	*e*P	**P**	**18 33 59.1**	**+0.6**
MESJ				*e*		18 44 27.2	
ESK	**Eskdalemuir**	**88.66**	**34**	IAMs_20	IAMs_20	19 08 46.4	
	comp=Z,2µm,22.0s						
MTE	**Manteigas**	**88.67**	**50**	*e*P	**P**	**18 34 01.9**	**+2.9**
MTE	**Manteigas**	**88.67**	**50**	*e*PP	PP	18 37 28.3	+0.9
MTE				*e*S	**S**	**18 44 46.6**	**+0.5**
MTE	**Manteigas**	**88.67**	**50**	*e*LR	LR	19 02 36.9	
	comp=Z,2µm,20.0s						
MTE	**Manteigas**	**88.67**	**50**	IAMs_20	IAMs_20	19 10 59.8	
	comp=Z,2µm,19.0s						
EKA	**Eskdalemuir Ar**	**88.69**	**34**	LR	LR	19 14 03.3	
	comp=Z,1µm,18.8s,baz=286,slow=36						
MVO	**Moncorvo**	**88.92**	**49**	*e*P	**P**	**18 34 01.6**	**+1.4**
MVO	**Moncorvo**	**88.92**	**49**	*e*PP	PP	18 37 27.3	-2.2
MVO	**Moncorvo**	**88.92**	**49**	*e*LR	LR	19 02 13.7	
	comp=Z,1µm,20.0s						
PMRV	**Marv??o**	**88.95**	**50**	*e*LR	LR	19 02 22.1	
	comp=Z,2µm,18.0s						
PVAQ	**Vaqueiros**	**89.04**	**52**	*e*P	**P**	**18 34 00.6**	**-0.1**
PVAQ	**Vaqueiros**	**89.04**	**52**	*e*PP	PP	18 37 31.1	+0.7
PVAQ	**Vaqueiros**	**89.04**	**52**	*e*LR	LR	18 59 58.8	
	comp=Z,862nm,18.0s						
PETK	**Petropavlovsk-**	**89.07**	**324**	P	**P**	**18 34 00.3**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=45,slow=2.2,SNR=3.2						
PETK				LR	LR	19 07 28.8	
	comp=Z,608nm,20.5s,baz=81,slow=31						
	comp=Z,2.5nm,0.9s						
PETK	**Petropavlovsk-**	**89.07**	**324**	P	**P**	**18 34 00.3**	**-0.2**
OUZ	**Omahuta**	**89.54**	**234**	P	**P**	**18 34 03.7**	**+0.7**
SKR	**Severo-Kuril's**	**90.58**	**321**	*e*P	**P**	**18 34 04.1**	**-3.5**
SKR				*e*S	**SKSac**	**18 44 33.3**	**-6.0**
SKR				pmax	pmax		
	comp=Z,100nm,5.8s						
MA2	**Magadan**	**91.08**	**331**	IAMs_20	IAMs_20	19 13 34.2	
	comp=Z,1µm,21.0s						
MA2	**Magadan**	**91.08**	**331**	*i* P	**P**	**18 34 11.3**	**+1.6**
MA2				pmax	pmax		
	comp=Z,24nm,1.1s						
MA2				MLR	MLR		
	comp=Z,711nm,17.0s						
PAB	**San Pablo**	**91.24**	**50**	IAMs_20	IAMs_20	19 13 39.9	
	comp=Z,2µm,19.0s						
ESDC	**Sonseca Array**	**91.50**	**50**	P	**P**	**18 34 11.5**	**-0.7**
	comp=Z,0.6nm,1.0s,baz=294,slow=4.7,SNR=4.1						
ESDC				S	SKSac	18 44 33.9	-11
	comp=Z,0.2nm,0.4s,baz=17,slow=36,SNR=1.3						
ESDC				LR	LR	19 12 20.3	
	comp=Z,1µm,18.9s,baz=293,slow=34						
	comp=Z,0.6nm,1.0s						
MDT	**Midelt**	**92.38**	**57**	LR	LR	19 09 46.9	
	comp=Z,761nm,21.8s,baz=306,slow=32						
RPZ	**Rata Peaks**	**92.89**	**226**	LR	LR	19 06 05.3	
	comp=Z,2µm,21.9s,baz=83,slow=29						
TIXI	**Tiksi**	**93.34**	**346**	S	SKSac	18 45 04.8	+11
	comp=Z,0.2nm,0.3s,baz=272,slow=23,SNR=1.0						
TIXI				LR	LR	19 21 08.6	
	comp=Z,929nm,18.0s,baz=359,slow=39						
TIXI	**Tiksi**	**93.34**	**346**	P	**P**	**18 34 16.2**	**-3.7**
TIXI				IAMs_20	IAMs_20	19 21 15.1	
	comp=Z,1µm,18.0s						
TIXI	**Tiksi**	**93.34**	**346**	*i* P	**P**	**18 34 19.0**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,23nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,1µm,21.0s						
BELA	**Belgrano 2**	**93.59**	**169**	IAmb	IAmb	18 34 27.6	
	comp=Z,19nm,1.6s						
DZM	**Mont Dzumac**	**93.75**	**248**	LR	LR	19 07 20.6	
	comp=Z,713nm,20.9s,baz=102,slow=30						
DZM	**Mont Dzumac**	**93.75**	**248**	*e*LR	LR	19 03 58.4	
	comp=Z,1µm,22.4s						
NOA	**NORSAR Array B**	**94.06**	**26**	P	**P**	**18 34 19.8**	**-3.7**
	comp=Z,0.7nm,0.8s,baz=304,slow=4.6,SNR=1.7						
NOA				LR	LR	19 14 38.2	
	comp=Z,2µm,21.8s,baz=290,slow=34						
NOA	**NORSAR Array B**	**94.06**	**26**	P	**P**	**18 34 19.8**	**-3.7**
CART	**Cartagena**	**94.23**	**51**	IAMs_20	IAMs_20	19 15 17.3	
	comp=Z,2µm,19.0s						
ARCES	**ARCESS Array B**	**94.67**	**16**	LR	LR	19 17 02.2	
	comp=Z,3µm,22.0s,baz=306,slow=36						
KEV	**Kevo**	**94.94**	**16**	IAMs_20	IAMs_20	19 17 22.4	
	comp=Z,2µm,22.0s						
HFS	**Hagfors**	**95.56**	**27**	LR	LR	19 15 09.4	
	comp=Z,2µm,22.0s,baz=282,slow=34						
WLF	**Walferdange**	**95.73**	**38**	IAMs_20	IAMs_20	19 16 25.0	
	comp=Z,2µm,20.0s						
SSB	**Saint Sauveur**	**96.13**	**43**	IAMs_20	IAMs_20	19 13 31.2	
	comp=Z,1µm,21.0s						
KOWA	**Kowa**	**96.37**	**74**	IAMs_20	IAMs_20	19 19 13.0	
	comp=Z,1µm,19.0s						
ECH	**Echery**	**96.86**	**39**	IAMs_20	IAMs_20	19 12 10.8	
	comp=Z,1µm,21.0s						
DBIC	**Dimbokro**	**96.87**	**82**	LR	LR	19 15 19.1	
	comp=Z,594nm,20.1s,baz=290,slow=34						
BFO	**Black Forest**	**97.55**	**39**	IAMs_20	IAMs_20	19 15 37.0	
	comp=Z,1µm,21.0s						
SENIN	**Lac Senin/Sane**	**97.59**	**41**	IAMs_20	IAMs_20	19 19 52.6	
	comp=Z,1µm,20.0s						
BNI	**Bardonecchia**	**97.63**	**42**	IAMs_20	IAMs_20	19 11 13.9	
	comp=Z,2µm,22.0s						
APA	**Apatity**	**98.14**	**16**⇓	*i*P	**P**	**18 34 41.0**	**-0.9**
APA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,3µm,19.0s						
QSPA	**South Pole Qui**	**98.28**	**180**	LR	LR	19 12 29.0	
	comp=Z,3µm,19.3s,baz=114,slow=31						
QSPA	**South Pole Qui**	**98.28**	**180**	P	**P**	**18 34 43.3**	**+0.7**
HNR	**Honiara**	**98.42**	**262**	LR	LR	19 13 40.7	
	comp=Z,441nm,18.1s,baz=68,slow=32						
HNR	**Honiara**	**98.42**	**262**	IAMs_20	IAMs_20	19 21 30.1	
	comp=Z,772nm,18.0s						
GRA1	**Grafenberg Arr**	**98.78**	**37**	IAMs_20	IAMs_20	19 16 14.4	
	comp=Z,2µm,20.0s						
GRFO	**Grafenberg**	**98.78**	**37**	IAMs_20	IAMs_20	19 15 54.4	
	comp=Z,2µm,20.0s						
YAK	**Yakutsk**	**99.06**	**338**	*e*P	Pdif	18 34 48.6	+2.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DAVOX	**Davos/Dischmat**	**99.10**	**40**	LR	LR	19 17 01.2	
	comp=Z,1µm,20.1s,baz=291,slow=34						
CLL	**Collm**	**99.14**	**35**	IAMs_20	IAMs_20	19 17 10.5	
	comp=Z,2µm,22.0s						
CLL	**Collm**	**99.14**	**35**	*e*PS	PS	18 47 40.0	-5.2
CLL				*e*PPS	PPS	18 48 30.0	
CLL				*e*SS	SS	18 53 11.0	+5.5
CLL				*e*SSSS		19 00 00.0	
CLL				LmV		19 17 00.0	
	comp=Z,2µm,21.8s						
VNDA	**Vanda**	**99.21**	**193**	LR	LR	19 10 55.7	
	comp=Z,932nm,20.5s,baz=96,slow=30						
NKC	**Novy Kostel**	**99.28**	**36**	AMS	AMS	19 13 00.0	
	comp=Z,1µm,21.6s						
FINES	**FINESS Array B**	**99.94**	**22**	P	**Pdif**	**18 34 48.4**	**-1.6**
	comp=Z,3.0nm,0.9s,baz=258,slow=6.7,SNR=5.2						
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**99.94**	**22**	*i* P	**Pdif**	**18 34 50.5**	**+0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**100.12**	**321**	IAMs_20	IAMs_20	19 11 14.3	
	comp=Z,980nm,20.0s						
YSS	**Yuzh-Sakhalins**	**100.12**	**321**	*i* P	**Pdif**	**18 34 50.4**	**-0.8**
YSS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,557nm,19.0s						
PVCC	**Panska Ves**	**100.37**	**35**	AMS	AMS	19 17 20.0	
	comp=Z,2µm,22.3s						
KHC	**Kasperske Hory**	**100.41**	**37**	*e*PP	**PP**	**18 38 55.3**	**-3.2**
KHC				AMS	AMS	19 16 20.0	
	comp=Z,2µm,19.6s						
PRU	**Pruhonice**	**100.60**	**36**	*e*SP	SP	18 47 53.9	-5.2
PRU				AMS	AMS	19 13 50.0	
CKRC	**Cesky Krumlov**	**100.98**	**37**	AMS	AMS	19 19 20.0	
	comp=Z,2µm,21.0s						
CHVC	**Chvalec**	**101.19**	**35**	AMS	AMS	19 17 50.0	
	comp=Z,2µm,20.3s						
UPC	**Upice**	**101.20**	**35**	AMS	AMS	19 17 50.0	
	comp=Z,2µm,19.8s						
OSTC	**Ostas**	**101.29**	**35**	AMS	AMS	19 18 00.0	
	comp=Z,2µm,21.4s						
VSL	**Villasalto**	**101.44**	**47**	IAMs_20	IAMs_20	19 13 16.4	
	comp=Z,2µm,22.0s						
DPC	**Dobruska-Polom**	**101.45**	**35**	*e*SP	SP	18 48 03.4	-4.8
DPC				AMS	AMS	19 17 50.0	
	comp=Z,2µm,19.7s						
TREC	**Trest**	**101.46**	**36**	AMS	AMS	19 17 40.0	
	comp=Z,2µm,22.5s						
ERM	**Erimo**	**101.80**	**316**	IAMs_20	IAMs_20	19 15 27.1	
	comp=Z,1µm,20.0s						
KRLC	**Kraliky**	**101.84**	**35**	AMS	AMS	19 24 20.0	
	comp=Z,2µm,17.7s						
TORD	**Torodi Ar. Bea**	**102.07**	**75**	PP	**PP**	**18 39 08.6**	**-3.6**
	comp=Z,0.2nm,0.5s,baz=251,slow=4.4,SNR=2.8						
OKC	**Ostrava-Krasne**	**102.72**	**35**	AMS	AMS	19 23 50.0	
	comp=Z,800nm,21.8s						
MAUC	**Maruska**	**102.78**	**35**	AMS	AMS	19 19 00.0	
	comp=Z,3µm,19.4s						
AQU	**L'Aquila**	**103.16**	**43**	IAMs_20	IAMs_20	19 14 57.4	
	comp=Z,2µm,22.0s						

OJC	**Ojcow**	**103.45**	**34**	IAMs_20	IAMs_20	19 21 05.8	
	comp=Z,2µm,21.0s						
PSZ	**Piszkesteto**	**104.69**	**36**	IAMs_20	IAMs_20	19 23 22.4	
	comp=Z,1µm,20.0s						
MNK	**Minsk**	**105.06**	**27**	*i* P	**Pdif**	**18 35 06.1**	**-6.8**
MNK				*i* PPP	PPP	18 41 41.9	
MNK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,0.8s						
MNK				MLR	MLR		
	comp=Z,1µm,20.0s						
MNK				MLR	MLR		
	comp=E,147nm,20.0s						
MNK				MLR	MLR		
	comp=N,376nm,22.0s						
MNK	**Minsk**	**105.06**	**27**	*i* P	**Pdif**	**18 35 06.2**	**-6.8**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**Pdif**	**18 35 06.2**	**-6.8**
	comp=N,15nm,0.8s						
MNK				*i* P	**Pdif**	**18 35 06.2**	**-6.8**
	comp=Z,4.0nm,0.7s,baz=310						
MNK				*i* PP	PKiKP	18 39 19.6	-7.9
MNK				*i* PPP	PPP	18 41 42.0	
MNK				*i* SKS		18 45 39.9	
MNK				*i* S	SKKSac	18 46 49.6	+11
MNK				*i* PS	**PS**	**18 48 33.9**	**-14**
MNK				*i* SS	SS	18 54 12.3	-15
MNK				*i* SSS	SSS	18 58 10.9	
MNK				*i* LR	LR	19 13 57.4	
MNK				*i* LRM	MLR	19 21 45.7	
	comp=Z,1µm,20.4s						
MNK				*i* LRM	MLR	19 21 51.4	
	comp=E,147nm,19.8s						
MNK				*i* LRM	MLR	19 22 05.5	
	comp=N,376nm,21.7s						
CEL	**Celeste**	**106.60**	**46**	IAMs_20	IAMs_20	19 16 01.9	
	comp=Z,854nm,21.0s						
DIVS	**Divibare**	**106.67**	**39**	IAMs_20	IAMs_20	19 20 43.4	
	comp=Z,1µm,20.0s						
TIP	**Timpagrande**	**106.82**	**45**	IAMs_20	IAMs_20	19 20 32.4	
	comp=Z,760nm,20.0s						
PDG	**Podgorica**	**107.01**	**41**	IAMs_20	IAMs_20	19 26 07.9	
	comp=Z,985nm,20.0s						
TIR	**Tirane**	**107.93**	**42**	IAMs_20	IAMs_20	19 27 38.2	
	comp=Z,1µm,21.0s						
AKASG	**Malin Array Be**	**108.10**	**30**	PP	**PP**	**18 39 52.7**	**-2.7**
	comp=Z,0.1nm,0.2s,baz=332,slow=7.6,SNR=4.2						
MDJ	**Mudanjiang**	**109.31**	**323**	IAMs_20	IAMs_20	19 35 09.0	
	comp=Z,1µm,19.0s						
MLR	**Muntele Rosu**	**109.50**	**36**	IAMs_20	IAMs_20	19 30 03.8	
	comp=Z,1µm,19.0s						
HIA	**Hailar**	**111.66**	**332**	IAMs_20	IAMs_20	19 27 35.4	
	comp=Z,1µm,22.0s						
ARU	**Arti**	**113.68**	**11**	IAMs_20	IAMs_20	19 31 03.7	
	comp=Z,1µm,20.0s						
INCN	**Inchon**	**115.14**	**318**	IAMs_20	IAMs_20	19 23 23.7	
	comp=Z,1µm,21.0s						
ANN	**Anapa**	**116.16**	**30**	*i* P	**Pdif**	**18 36 02.1**	**-0.4**
ANN				pmax	pmax		
	comp=Z,87nm,1.1s						
ISP	**Isparta**	**116.76**	**40**	IAMs_20	IAMs_20	19 29 17.0	
	comp=Z,979nm,22.0s						
ANTO	**Ankara**	**116.91**	**37**	IAMs_20	IAMs_20	19 27 43.2	
	comp=Z,1µm,22.0s						
XLT	**XiLinHaoTe**	**117.23**	**329**	*e*PKP	**PKiKP**	**18 39 52.9**	**+1.8**
XLT				PKS	**PKSdf**	**18 43 21.4**	**-6.4**
XLT				SKKS		18 48 02.0	
XLT				AMB	AMB		
	comp=Z,130nm,4.5s						
XLT				LR	LR		
	comp=Z,55nm,19.4s						
XLT				LR	LR		
	comp=Z,530nm,17.3s						
XLT				LR	LR		
	comp=Z,1µm,19.4s						
BRTR	**Keskin Array B**	**117.51**	**37**	PKP	**PKPdf**	**18 39 50.3**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=221,slow=1.3,SNR=6.1						
ZALV	**Zalesovo Beam**	**117.64**	**355**	PKP	**PKiKP**	**18 39 51.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=356,slow=6.2,SNR=1.5						
ZALV				PP	**PP**	**18 41 02.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=26,slow=10,SNR=4.0						
ZALV	**Zalesovo Beam**	**117.64**	**355**	PKIKP	**PKiKP**	**18 39 51.8**	**+0.4**
ULN	**Ulaanbaatar**	**118.15**	**338**	IAMs_20	IAMs_20	19 31 06.4	
	comp=Z,1µm,22.0s						
SOC	**Sochi**	**118.17**	**30**	*i* PKIKP	**PKPdf**	**18 39 52.7**	**-0.1**
SOC				*e*		18 41 06.7	
SOC				*e*PPP	PPP	18 43 34.7	
SOC				*e*PS	**PS**	**18 50 52.8**	**-0.8**
SOC				*e*SS	SS	18 57 18.3	-3.6
SOC				*e*SSS	SSS	19 01 36.3	
SONM	**Songino Array**	**118.42**	**338**	PP	PP	18 41 10.1	+1.4
	comp=Z,0.1nm,0.3s,baz=2.2,slow=4.6,SNR=1.6						
BRVK	**Borovoye**	**118.59**	**5**	*i* PKIKP	**PKiKP**	**18 39 54.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**119.32**	**28**	IAMs_20	IAMs_20	19 36 20.6	
	comp=Z,652nm,20.0s						
KIV	**Kislovodsk**	**119.32**	**28**	*i* PKIKP	**PKPdf**	**18 39 54.7**	**-0.4**
KIV				*e*		18 41 14.0	
KIV				*e*PS	**PS**	**18 51 01.9**	**-2.3**
KIV				*e*SS	SS	18 57 35.8	-1.0
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KBZ	**Khabaz**	**119.60**	**28**	PKP	**PKiKP**	**18 39 56.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=285,slow=6.3,SNR=1.7						
KBZ	**Khabaz**	**119.60**	**28**	*i* PKIKP	**PKiKP**	**18 39 56.7**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BJI	**Beijing**	**119.90**	**326**	Pdif	**Pdif**	**18 36 20.4**	**+1.1**
BJI				PP	**PP**	**18 41 21.0**	**+1.8**
BJI				SS	SS	18 57 40.3	-4.1
BJI				AMB	AMB		
	comp=Z,97nm,4.6s						
BJI				LR	LR		
	comp=Z,790nm,19.3s						
BJI				LR	LR		
	comp=Z,720nm,17.5s						
BJI				LR	LR		
	comp=Z,1µm,20.1s						
BJT	**Baijiatuau**	**119.92**	**326**	IAMs_20	IAMs_20	19 39 59.3	
	comp=Z,1µm,20.0s						
MAW	**Mawson**	**120.00**	**174**	PKP	**PKiKP**	**18 39 57.0**	**+1.4**
	comp=Z,3.0nm,0.8s,baz=286,slow=4.8,SNR=5.0						
ABKAR	**Akbulak array**	**120.72**	**13**		**PKPdf**	**18 39 55.3**	**-2.2**
KURK	**Kurchatov**	**121.21**	**359**	*i* PKIKP	**PKPdf**	**18 39 58.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KURBB	**Kurchatov Arra**	**121.30**	**359**	PKP	**PKPdf**	**18 39 56.1**	**-2.4**
	comp=Z,0.6nm,0.8s,baz=5.0,slow=1.5,SNR=5.0						
KURBB				PP	**PP**	**18 41 23.6**	**-4.4**
	comp=Z,1.1nm,1.0s,baz=351,slow=6.6,SNR=6.6						
HHC	**Hu-ho-hao-te**	**121.74**	**330**	*e*PKP	**PKPdf**	**18 39 56.6**	**-3.3**
HHC				PP	**PP**	**18 41 31.1**	**-0.7**
HHC				AMB	AMB		
	comp=Z,220nm,8.1s						
HHC				LR	LR		
	comp=Z,1µm,20.4s						
HHC				LR	LR		
	comp=Z,1µm,20.6s						
HHC				LR	LR		
	comp=Z,3µm,21.3s						
MAK	**Makhachkala**	**122.26**	**25**	*e*P	**Pdif**	**18 36 22.3**	**-7.4**
MAK				pmax	pmax		
	comp=Z,152nm,1.2s						
SSE	**Sheshan**	**122.47**	**315**	PKP	**PKPdf**	**18 40 01.8**	**+0.4**
SSE				PP	**PP**	**18 41 41.8**	**+4.6**
SSE				SS	SS	18 58 18.6	+0.5
SSE				AMB	AMB		
	comp=Z,32nm,8.4s						
SSE				LR	LR		
	comp=Z,310nm,22.7s						
SSE				LR	LR		
	comp=Z,280nm,22.7s						
HNS	**HongShan**	**122.56**	**325**	⇑PKP	**PKiKP**	**18 40 07.3**	**+5.7**
HNS				PP	**PP**	**18 41 40.4**	**+3.0**
HNS				SKS	**SKSdf**	**18 47 09.3**	**-4.4**
HNS				SS	**SS**	**18 58 21.9**	**+3.3**
HNS				AMB	AMB		
	comp=Z,100nm,6.9s						
HNS				LR	LR		
	comp=Z,1µm,20.0s						
HNS				LR	LR		
	comp=Z,500nm,18.7s						
HNS				LR	LR		
	comp=Z,1µm,20.3s						
GNI	**Garni**	**123.23**	**29**	IAMs_20	IAMs_20	19 31 34.1	
	comp=Z,1µm,22.0s						
NJ2	**Nanjing**	**123.50**	**317**	*e*PKP	**PKPdf**	**18 40 02.8**	**-0.5**
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
NJ2				LR	LR		
	comp=Z,970nm,18.5s						
NJ2				LR	LR		
	comp=Z,1µm,19.0s						
WRA	**Warramunga Arr**	**123.62**	**252**	PKP	**PKPdf**	**18 40 03.1**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=86,slow=1.6,SNR=12						
ASAR	**Alice Springs**	**123.72**	**247**	PKP	**PKPdf**	**18 40 03.1**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=92,slow=1.7,SNR=12						
ASAR	**Alice Springs**	**123.72**	**247**	PKPdf	**PKPdf**	**18 40 02.8**	**-1.2**
ASAR	**Alice Springs**	**123.72**	**247**	PKIKP	**PKPdf**	**18 40 02.8**	**-1.2**
MKAR	**Makanchi Array**	**124.95**	**356**	PKP	**PKPdf**	**18 40 03.9**	**-1.8**
	comp=Z,1.6nm,0.9s,baz=5.7,slow=2.4,SNR=8.9						
MKAR				PP	**PP**	**18 41 49.3**	**-3.5**
	comp=Z,1.1nm,0.9s,baz=352,slow=4.9,SNR=4.9						
MKAR	**Makanchi Array**	**124.95**	**356**		**PKPdf**	**18 40 04.1**	**-1.7**
MKAR	**Makanchi Array**	**124.95**	**356**	PKIKP	**PKPdf**	**18 40 04.1**	**-1.7**
LYN	**LuoYang**	**125.86**	**324**	PKP	**PKiKP**	**18 40 12.3**	**+4.1**
LYN				SS	SS	18 58 57.8	-2.5
LYN				AMB	AMB		
	comp=Z,130nm,7.8s						
LYN				LR	LR		
	comp=Z,760nm,20.1s						
LYN				LR	LR		
	comp=Z,360nm,19.1s						
LYN				LR	LR		
	comp=Z,1µm,19.6s						
NACB	**Ninganchiao**	**125.96**	**308**	IAMs_20	IAMs_20	19 25 07.7	
	comp=Z,1µm,22.0s						
YULB	**Yu-li**	**126.59**	**307**	IAMs_20	IAMs_20	19 35 20.7	
	comp=Z,738nm,20.0s						
BOSA	**Boshof**	**127.23**	**120**	PKP	**PKPdf**	**18 40 10.9**	**+0.2**
	comp=Z,4.7nm,1.1s,baz=253,slow=4.4,SNR=4.4						
WMQ	**Urumqi**	**127.25**	**350**	*e*PKP	**PKiKP**	**18 40 11.4**	**+0.6**
WMQ				LR	LR		
	comp=Z,3µm,21.9s						
WMQ				LR	LR		
	comp=Z,3µm,14.7s						
WMQ				LR	LR		
	comp=Z,2µm,23.7s						
XAN	**Xi'an**	**128.24**	**326**	PKP	**PKPdf**	**18 40 10.3**	**-2.1**
XAN				PP	**PP**	**18 42 17.8**	**+2.5**
XAN				SS	SS	18 59 30.8	+0.9
XAN				AMB	AMB		
	comp=Z,150nm,8.9s						
XAN				LR	LR		
	comp=Z,860nm,20.0s						
XAN				LR	LR		
	comp=Z,1µm,19.0s						
XAN				LR	LR		
	comp=Z,1µm,19.7s						
TNTI	**Ternate**	**129.18**	**278**	IAMs_20	IAMs_20	19 26 16.2	
	comp=Z,688nm,20.0s						
AAK	**Ala-Archa**	**129.24**	**3**	*i* PKIKP	**PKPdf**	**18 40 13.2**	**-1.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
DAV	**Davao City (W)**	**129.39**	**286**	IAMs_20	IAMs_20	19 24 41.0	
	comp=Z,1µm,22.0s						
ENH	**Enshi**	**130.66**	**322**	IAMs_20	IAMs_20	19 31 47.2	
	comp=Z,1µm,21.0s						
GEYT	**Alibeck**	**130.68**	**20**	PKP	**PKiKP**	**18 40 17.8**	**0.0**
	comp=Z,4.6nm,0.9s,baz=288,slow=1.4,SNR=5.9						
KSH	**Kashi**	**132.41**	**1**	PKP	**PKiKP**	**18 40 26.3**	**+4.9**
KSH				PP	PP	18 42 51.1	+9.4
KSH				PKS	**PKSdf**	**18 43 54.3**	**-2.6**
KSH				AMB	AMB		
	comp=Z,140nm,8.6s						
KSH				LR	LR		
	comp=Z,1µm,23.6s						
KSH				LR	LR		
	comp=Z,660nm,24.0s						
KSH				LR	LR		
	comp=Z,2µm,26.1s						
HKPS	**Hong Kong Po S**	**132.72**	**311**	IAMs_20	IAMs_20	19 26 27.9	
	comp=Z,1µm,22.0s						
GOMU	**GeErMu**	**132.72**	**341**	PKP	**PKPdf**	**18 40 21.6**	**+0.3**
GOMU				sPKP		18 40 28.8	
GOMU				PP	**PP**	**18 42 43.6**	**-0.7**
GOMU				SKS	**SKSdf**	**18 47 32.8**	**-0.6**
GOMU				SKKS	**SKKSac**	**18 49 38.9**	**-3.5**
GOMU				SS	**SS**	**19 00 25.3**	**+0.5**
GOMU				AMB	AMB		
	comp=Z,52nm,4.0s						
GOMU				LR	LR		
	comp=Z,810nm,22.0s						
GOMU				LR	LR		
	comp=Z,640nm,21.0s						
GOMU				LR	LR		
	comp=Z,760nm,20.6s						
CD2	**Chengdu**	**133.42**	**328**	PKP	**PKPdf**	**18 40 22.1**	**-0.2**
CD2				AMB	AMB		
	comp=Z,80nm,6.0s						
CD2				LR	LR		
	comp=Z,1µm,22.0s						
CD2				LR	LR		
	comp=Z,980nm,19.6s						
SOEI	**Soe**	**133.51**	**264**	IAMs_20	IAMs_20	19 37 33.7	
	comp=Z,966nm,21.0s						
LUWI	**Luwuk**	**134.03**	**277**	IAMs_20	IAMs_20	19 33 54.0	
	comp=Z,668nm,20.0s						
TOLI2	**Tolitoli**	**135.54**	**280**	IAMs_20	IAMs_20	19 28 21.6	
	comp=Z,993nm,22.0s						
RAYN	**Ar Rayn**	**135.73**	**44**	IAMs_20	IAMs_20	19 48 03.7	
	comp=Z,609nm,22.0s						
QIZ	**Qiongzhong**	**137.87**	**310**	IAMs_20	IAMs_20	19 32 36.6	
	comp=Z,960nm,21.0s						
QIZ	**Qiongzhong**	**137.87**	**310**	PKP	**PKPdf**	**18 40 31.3**	**+0.4**
QIZ				PP	**PP**	**18 43 17.9**	**+0.3**
QIZ				LR	LR		
	comp=Z,480nm,25.5s						
QIZ				LR	LR		
	comp=Z,640nm,20.6s						
QIZ				LR	LR		
	comp=Z,910nm,23.5s						
PZH	**PanZhiHua**	**137.98**	**326**	PKP	**PKiKP**	**18 40 33.5**	**+0.5**
PZH				PP	**PP**	**18 43 18.4**	**+0.7**
PZH				SS	SS	19 01 30.6	+2.4
PZH				AMB	AMB		
	comp=Z,60nm,7.7s						
PZH				LR	LR		
	comp=Z,520nm,21.4s						
PZH				LR	LR		
	comp=Z,590nm,20.8s						
PZH				LR	LR		
	comp=Z,850nm,21.2s						
FURI	**Furi**	**138.00**	**67**	IAMs_20	IAMs_20	19 39 48.9	
	comp=Z,675nm,22.0s						
KMI	**Kunming**	**138.48**	**324**	⇑PKP	**PKiKP**	**18 40 36.4**	**+2.2**
KMI				PP	**PP**	**18 43 21.1**	**+0.1**
KMI				SS	SS	19 01 35.3	+0.8
KMI				AMB	AMB		
	comp=Z,110nm,14.5s						
KMI				LR	LR		
	comp=Z,520nm,22.2s						
KMI				LR	LR		
	comp=Z,1µm,21.4s						
KMI				LR	LR		
	comp=Z,1µm,20.7s						
ATD	**Arta Tunnel**	**140.57**	**61**	IAMs_20	IAMs_20	19 43 59.5	
	comp=Z,575nm,20.0s						
UOSS	**Minazif**	**141.13**	**31**	IAMs_20	IAMs_20	19 56 50.5	
	comp=Z,523nm,21.0s						
UMZA	**Um Al Zommool**	**142.37**	**35**	P	PKPpre	18 40 31.0	
JIRN	**Jiri**	**143.20**	**347**	*e*P	**PKPdf**	**18 40 37.8**	**-3.0**
KKN	**Kakani**	**143.27**	**348**	*e*P	PKPab	18 40 36.8	+0.4
BIDO	**Bidbid**	**143.29**	**30**	P	PKPab	18 40 35.9	-0.4
	SNR=5.2						
PKIN	**Phulchoki**	**143.45**	**348**	*e*P	PKPbc	18 40 38.4	+0.2
PKI	**Pulchoki**	**143.45**	**348**	*e*P	PKPab	18 40 37.7	+0.4
BSY	**Bisya**	**143.46**	**32**	P	PKPab	18 40 36.4	-0.6
	SNR=5.2						
SBUM	**Sibu**	**143.46**	**286**	IAMs_20	IAMs_20	19 32 44.2	
	comp=Z,882nm,22.0s						
DMN	**Daman**	**143.48**	**348**	*e*P	PKPbc	18 40 38.0	-0.2
SMDO	**Samad**	**143.63**	**31**	P	PKPbc	18 40 39.7	+1.1
	SNR=6.6						
WSAR	**Wadi Sarin**	**143.77**	**30**	P	PKPbc	18 40 38.9	+0.1
RAMN	**Ramite**	**143.78**	**346**	*e*P	PKPab	18 40 37.7	-0.8
JMDO	**Jabal Madar**	**144.23**	**31**	P	**PKPab**	**18 40 37.7**	**-2.3**
WBK	**Wadi Bani Khal**	**144.47**	**30**	P	PKPbc	18 40 41.8	+0.8
DOK	**Doka**	**144.88**	**40**	P	**PKPab**	**18 40 42.3**	**-0.1**
JLN	**Jalan Bani Buh**	**145.07**	**30**	P	**PKPab**	**18 40 42.1**	**-0.9**
WHFO	**Wadi Hawf**	**145.16**	**41**	P	**PKPab**	**18 40 41.4**	**-2.1**
ABTO	**Aybut**	**145.25**	**43**	P	**PKPbc**	**18 40 42.3**	**-1.4**
	SNR=5.4						
MHTO	**MHTO**	**145.30**	**33**	P	**PKPbc**	**18 40 42.6**	**-1.1**
	SNR=16						
CHTO	**Chiang Mai**	**145.55**	**322**		**PKPbc**	**18 40 41.1**	**-3.5**
CHTO	**Chiang Mai**	**145.55**	**322**	IAMs_20	IAMs_20	19 54 53.8	
	comp=Z,719nm,18.0s						
CHTO	**Chiang Mai**	**145.55**	**322**	PKP2	**PKPbc**	**18 40 41.1**	**-3.5**
CHTO				MLR	MLR		
	comp=Z,700nm,18.0s						
CHTO	**Chiang Mai**	**145.55**	**322**	P	**PKPab**	**18 40 45.0**	**+0.2**
KSM	**Kuching**	**145.57**	**285**		**PKPdf**	**18 40 41.7**	**-3.1**
KSM				IAMs_20	IAMs_20	19 45 20.1	
	comp=Z,643nm,20.0s						
CM31	**Chiang Mai Arr**	**145.82**	**321**		**PKPdf**	**18 40 42.4**	**-2.7**
CM31	**Chiang Mai Arr**	**145.82**	**321**	P	**PKPdf**	**18 40 45.4**	**+0.3**
	SNR=23						
CMAR	**Chiang Mai Arr**	**145.82**	**321**	PKPbc	**PKPdf**	**18 40 42.9**	**-2.1**
	comp=Z,3.4nm,0.9s,baz=18,slow=2.4,SNR=20						
CMAR	**Chiang Mai Arr**	**145.82**	**321**		**PKPdf**	**18 40 42.0**	**-3.1**
CMAR	**Chiang Mai Arr**	**145.82**	**321**	PKP2	**PKPdf**	**18 40 42.0**	**-3.1**
HYBB	**Hyderabad (bro**	**154.40**	**357**	*e*PKPab	**PKPab**	**18 41 19.6**	**-1.2**
PCHI	**Peechi**	**161.26**	**3**	*e*P	**PKPdf**	**18 41 08.4**	**+1.3**

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*NOU **14** 18:22:58.8, 42°.86S×172°.84E, h25^{km}, mb4.3/7, South Island, New Zealand*

*WEL **14** 18:23:03.6±0.3, 42°S±2°×17°3E±°, h12^{km}±3^{km}, M3.4/29, ML3.6/30, MLv3.4/29, Error ellipse: s-maj=0.0km s-min=0.0km az=117.4*

ISC 14 18:23:02.4±1.3**, 42°.32S**±0°.02×**173°.05E**±0°.03**, h1**^{km}±11^{km}**, n97,** σ1^{s}**49**/105**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.37**	**104**	P	**Pb**	**18 23 12.6**	**+0.9**
KHZ				S	**Sb**	**18 23 18.8**	**+0.8**
KHZ	**Kahutara**	**0.37**	**104**	P	**Pb**	**18 23 12.6**	**+0.9**
THZ	**Tophouse**	**0.57**	**349**	P	**Pg**	**18 23 14.2**	**+0.9**
THZ				S	**Sg**	**18 23 20.7**	**0.0**
GVZ	**Greta Valley S**	**0.64**	**181**	P	**Pn**	**18 23 18.2**	**-0.4**
LTZ	**Lake Taylor**	**0.74**	**231**	P	**Pb**	**18 23 18.1**	**+0.1**
BSWZ	**Blackbirch Sta**	**0.86**	**46**	P	**Pb**	**18 23 20.3**	**+0.2**
AMCZ	**Amberley**	**0.90**	**199**	P	**Pn**	**18 23 22.6**	**+0.5**
MRNZ	**Matariki Terra**	**0.95**	**347**	P	**Pg**	**18 23 21.1**	**+0.5**
CMWZ	**Cape Campbell**	**1.04**	**57**	P	**Pn**	**18 23 24.9**	**+0.9**
CMWZ				S	**Sn**	**18 23 41.5**	**+2.4**
DSZ	**Denniston Nort**	**1.09**	**302**	P	**Pb**	**18 23 24.2**	**+0.1**
DSZ				S	**Sn**	**18 23 39.7**	**-0.9**
TUWZ	**Tuamarina**	**1.11**	**37**	P	**Pg**	**18 23 23.9**	**+0.2**
NNZ	**Nelson**	**1.13**	**13**	P	**Pg**	**18 23 23.6**	**-0.4**
OXZ	**Oxford**	**1.25**	**216**	P	**Pg**	**18 23 26.3**	**+0.1**
INZ	**Inchbonnie**	**1.25**	**251**	P	**Pg**	**18 23 26.7**	**+0.3**
INZ				S	**Sn**	**18 23 44.6**	**+0.2**
TKNZ	**Takaka Hill**	**1.29**	**357**	P	**Pn**	**18 23 26.9**	**-0.6**
OKCZ	**Okains Bay**	**1.40**	**180**	P	**Pn**	**18 23 28.9**	**-0.1**
OKCZ				S	**Sg**	**18 23 48.3**	**+1.0**
MQZ	**McQueen's Vall**	**1.41**	**192**	P	**Pn**	**18 23 28.3**	**-0.8**
MQZ				S	**Sb**	**18 23 47.1**	**-0.8**
TCW	**Tory Channel**	**1.44**	**40**	P	**Pn**	**18 23 29.0**	**-0.5**
QRZ	**Quartz Range**	**1.55**	**345**	P	**Pn**	**18 23 31.2**	**+0.2**
QRZ				S	**Sn**	**18 23 50.3**	**-1.4**
QRZ	**Quartz Range**	**1.55**	**345**	P	**Pb**	**18 23 31.5**	**-0.3**
AKCZ	**Akaroa Harbour**	**1.55**	**184**	P	**Pn**	**18 23 30.7**	**-0.4**
RACZ	**Rakaia**	**1.55**	**205**	P	**Pn**	**18 23 30.6**	**-0.5**
SNZO	**South Karori**	**1.60**	**51**	P	**Pb**	**18 23 32.3**	**-0.3**
BHW	**Baring Head**	**1.64**	**57**	P	**Pn**	**18 23 32.4**	**+0.1**
WEL	**Wellington**	**1.65**	**52**	P	**Pn**	**18 23 32.8**	**+0.3**
DUWZ	**D'Urville Isla**	**1.66**	**24**	P	**Pn**	**18 23 32.3**	**-0.2**
PLWZ	**Palliser**	**1.81**	**66**	P	**Pn**	**18 23 34.0**	**-0.6**
WACZ	**Wakanui South**	**1.84**	**208**	P	**Pn**	**18 23 34.6**	**-0.4**
WVZ	**Waitaha Valley**	**1.86**	**246**	P	**Pn**	**18 23 36.1**	**+0.8**
MSWZ	**Moikau Station**	**1.88**	**62**	P	**Pn**	**18 23 35.2**	**-0.4**
CAW	**Cannon Point**	**1.94**	**52**	P	**Pn**	**18 23 36.4**	**0.0**
RPZ	**Rata Peaks**	**2.02**	**226**	P	**Pn**	**18 23 36.8**	**-0.7**
KIW	**Kapiti Island**	**2.02**	**44**	P	**Pn**	**18 23 38.0**	**+0.5**
ARCZ	**Arundel**	**2.12**	**220**	P	**Pn**	**18 23 38.3**	**-0.7**
MTW	**Mount Morrison**	**2.17**	**58**	P	**Pn**	**18 23 39.0**	**-0.6**
TRWZ	**Traveller**	**2.18**	**66**	P	**Pn**	**18 23 39.8**	**+0.1**
OGWZ	**Otaki Gorge**	**2.19**	**47**	P	**Pn**	**18 23 39.8**	**0.0**
HOWZ	**Holdsworth Sta**	**2.33**	**53**	P	**Pn**	**18 23 41.0**	**-0.8**
TMWZ	**Te Maipa**	**2.45**	**61**	P	**Pn**	**18 23 42.9**	**-0.6**
MRZ	**Mangatainoka R**	**2.52**	**50**	P	**Pn**	**18 23 43.9**	**-0.5**
TMZ	**Timaru**	**2.54**	**215**	P	**Pn**	**18 23 43.8**	**-0.9**
FOZ	**Fox Glacier**	**2.67**	**242**	P	**Pn**	**18 23 47.9**	**+1.5**
POWZ	**Post Office Ro**	**2.81**	**48**	P	**Pg**	**18 23 55.6**	**-0.7**
PRWZ	**Pori Road**	**2.82**	**52**	P	**Pn**	**18 23 48.0**	**-0.5**
LBZ	**Lake Benmore**	**2.94**	**224**	P	**Pn**	**18 23 49.6**	**-0.5**
LBZ				P	**Pn**	**18 23 49.8**	**-0.4**
WAZ	**Wanganui**	**2.95**	**30**	P	**Pn**	**18 23 52.4**	**+2.1**
NMEZ	**Namu Road**	**2.98**	**12**	P	**Pb**	**18 23 54.2**	**-1.9**
LREZ	**Lake Rotokare**	**3.04**	**20**	P	**Pb**	**18 23 54.9**	**-2.3**
PREZ	**Palmer Road**	**3.10**	**16**	P	**Pb**	**18 23 55.4**	**-2.8**
DVHZ	**Dannevirke**	**3.10**	**50**	P	**Pb**	**18 23 59.4**	**+1.2**
KHEZ	**Kahui Hut**	**3.11**	**14**	P	**Pn**	**18 23 55.4**	**+2.7**
NBEZ	**Newall Road No**	**3.12**	**12**	P	**Pb**	**18 23 55.6**	**-2.8**
NEZ	**North Egmont**	**3.15**	**15**	P	**Pn**	**18 23 55.8**	**+2.7**
TSZ	**Takapari Road**	**3.15**	**45**	P	**Pn**	**18 23 52.3**	**-0.8**
PKE	**Pukeiti**	**3.21**	**13**	P	**Pn**	**18 23 56.0**	**+2.1**
ODZ	**Otahua Downs**	**3.23**	**212**	P	**Pn**	**18 23 53.1**	**-1.1**
DREZ	**Durham Road**	**3.25**	**16**	P	**Pn**	**18 23 57.6**	**+3.2**
PNHZ	**Pukenui**	**3.38**	**46**	P	**Pb**	**18 24 00.8**	**-2.3**
MHEZ	**Mangahewa**	**3.39**	**17**	P	**Pn**	**18 23 59.4**	**+3.1**
VRZ	**Vera Road**	**3.45**	**23**	P	**Pn**	**18 23 59.2**	**+2.1**
PKVZ	**Pokaka**	**3.50**	**31**	P	**Pn**	**18 24 00.4**	**+2.6**
MOVZ	**Moawhango**	**3.56**	**36**	P	**Pb**	**18 24 02.7**	**-3.4**
WNVZ	**Wahianoa**	**3.56**	**34**	P	**Pn**	**18 24 01.6**	**+2.8**
TRVZ	**Turoa**	**3.57**	**33**	P	**Pb**	**18 24 05.4**	**-0.9**
WHVZ	**Whangaehu Hut**	**3.60**	**33**	P	**Pb**	**18 24 06.4**	**-0.5**
FWVZ	**Far West T-bar**	**3.61**	**33**	P	**Pb**	**18 24 04.7**	**-2.3**
TUVZ	**Tukino**	**3.64**	**34**	P	**Pn**	**18 24 01.7**	**+1.8**
BHHZ	**Black Hill Sta**	**3.64**	**40**	P	**Pn**	**18 24 00.8**	**+1.0**
NGZ	**Ngauruhoe**	**3.69**	**32**	P	**Pn**	**18 24 03.4**	**+2.7**
TWVZ	**Taurewa**	**3.72**	**30**	P	**Pb**	**18 24 06.6**	**-2.3**
NNVZ	**North Ngauruho**	**3.74**	**32**	P	**Pb**	**18 24 05.8**	**-3.4**
ETVZ	**East Tongariro**	**3.77**	**33**	P	**Pb**	**18 24 08.5**	**-1.2**
TMVZ	**Te Maari**	**3.79**	**33**	P	**Pn**	**18 24 03.3**	**+1.4**
NTVZ	**North Tongarir**	**3.79**	**33**	P	**Pb**	**18 24 07.6**	**-2.5**
HIZ	**Hauiti**	**4.05**	**20**	P	**Pn**	**18 24 06.5**	**+1.2**
HIZ	**Hauiti**	**4.05**	**20**	P	**Pn**	**18 24 06.6**	**+1.2**
BKZ	**Black Stump Fm**	**4.10**	**41**	P	**Pn**	**18 24 06.6**	**+0.5**
BKZ	**Black Stump Fm**	**4.10**	**41**	P	**Pn**	**18 24 05.8**	**-0.3**
WATZ	**Wairara**	**4.15**	**30**	P	**Pb**	**18 24 12.7**	**-3.5**
TUZ	**Tuapeka**	**4.38**	**213**	P	**Pn**	**18 24 09.6**	**-0.4**
TLZ	**Tolley Road**	**4.42**	**26**	P	**Pn**	**18 24 12.5**	**+1.9**
MUGZ	**Murupara**	**4.78**	**38**	P	Pb	18 24 21.4	-5.4
TOZ	**Tahuroa Road**	**4.96**	**23**	P	**Pn**	**18 24 19.2**	**+1.3**
SYZ	**Scrubby Hill**	**5.06**	**212**	P	**Pn**	**18 24 18.7**	**-0.5**
URZ	**Urewera**	**5.11**	**39**	P	**Pn**	**18 24 21.1**	**+1.1**
URZ	**Urewera**	**5.11**	**39**	P	**Pn**	**18 24 21.8**	**+1.8**
MWZ	**Matawai**	**5.25**	**42**	P	**Pn**	**18 24 21.2**	**-0.8**
AWAZ	**Awhitu Peninsu**	**5.39**	**14**	P	**Pn**	**18 24 26.0**	**+2.1**
MKAZ	**Moumakai**	**5.46**	**18**	P	**Pn**	**18 24 26.0**	**+1.2**
ETAZ	**East Tamaki Re**	**5.56**	**16**	P	**Pn**	**18 24 27.7**	**+1.6**
RVAZ	**Riverhead Bore**	**5.67**	**13**	P	**Pn**	**18 24 28.7**	**+1.0**
MBAZ	**Motutapu North**	**5.73**	**15**	P	**Pn**	**18 24 29.8**	**+1.3**
WIAZ	**Waiheke Island**	**5.75**	**17**	P	**Pn**	**18 24 30.2**	**+1.4**
ABAZ	**Army Bay**	**5.88**	**14**	P	**Pn**	**18 24 32.3**	**+1.8**
KUZ	**Kuaotunu**	**5.94**	**21**	P	**Pn**	**18 24 32.0**	**+0.6**
OUZ	**Omahuta**	**7.11**	**4**	P	**Pn**	**18 24 48.9**	**+1.6**
OUZ	**Omahuta**	**7.11**	**4**	P	**Pn**	**18 24 48.8**	**+1.4**

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*FUNV **14** 18:23:47.4, 9°.07N×70°.96W, h2^{km}, MW3.6*

ISC 14 18:23:47.3±1.2**, 9°.08N**±0°.03×**70°.91W**±0°.02**, h14**^{km}±9^{km}**, n31,** σ1^{s}**50**/59**, 2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**0.33**	**125**	⇓*i*P	**Pg**	**18 23 54.4**	**+0.2**
SDV				*e*S	**Sb**	**18 23 59.8**	**-0.7**
SDV				*i*		18 24 01.0	
	comp=Z,999nm,0.4s						
SOCV	**Socops**	**0.79**	**176**	*e*P	**Pg**	**18 24 02.6**	**-0.1**
SOCV				*e*S	**Sb**	**18 24 13.7**	**+0.2**
CURV	**Curarigua**	**1.32**	**45**	*e*P	**Pg**	**18 24 13.3**	**+0.6**
CURV				*e*S	**Sg**	**18 24 31.2**	**+1.3**

CAPV	Capacho	1.84	229	*e*P	Pn	18 24 19.7	+1.0
CAPV				*e*S	Sn	18 24 42.6	+0.6
DABV	Dabajuro	1.85	8	*e*P	Pn	18 24 18.6	-0.1
DABV				*e*S	Sn	18 24 43.7	+1.8
MCQV	Machiques	1.87	301	*e*P	Pn	18 24 19.9	+0.9
MCQV				*e*S	Sn	18 24 42.9	+0.4
SIQV	Siquisique	1.90	35	*e*P	Pn	18 24 20.7	+1.3
SIQV				*e*S	Sb	18 24 45.7	+0.2
LL6C	La Loma 6 Bece	2.42	286	*e*P	Pn	18 24 26.5	-0.1
LL6C				*e*S	Sn	18 24 55.5	-0.5
LL6C				*i*		18 25 02.5	
	comp=Z,39nm,0.2s						
PAMC	Pamplona, Colo	2.48	226	*e*P	Pb	18 24 31.6	-0.3
PAMC				*e*S	Sb	18 25 01.6	-0.8
ELOV	Elorza	2.50	146	*e*P	Pn	18 24 28.9	+1.3
ELOV				*e*S	Sn	18 24 59.1	+1.2
OCAC	Ocana	2.53	251	*e*P	Pb	18 24 31.8	-0.8
OCAC				*e*S	Sn	18 25 00.6	+1.8
OCAC				*i*		18 25 07.9	
	comp=Z,194nm,0.4s						
MAPV	Macapo	2.53	73	*e*P	Pn	18 24 30.2	+2.2
MAPV				*e*S	Sn	18 25 00.5	+1.7
CRJC	Cerrejon, Guaj	2.74	315	*e*P	Pn	18 24 29.6	-1.4
CRJC				*e*S	Sn	18 25 02.2	-1.8
CRJC				*i*		18 25 05.8	
	comp=Z,72nm,0.2s						
TAMC	Tame, Arauca	2.77	198	*e*P	Pb	18 24 34.7	-2.0
URIC	Uribia, Colomb	2.82	338	*e*P	Pn	18 24 32.4	+0.5
URIC				*e*S	Sn	18 25 08.8	+3.0
BAUV	El Baul	2.83	92	*e*P	Pn	18 24 33.2	+1.0
BAUV				*e*S	Sn	18 25 07.4	+1.2
JACV	Jacura	2.86	46	*e*P	Pn	18 24 34.3	+1.7
JACV				*e*S	Sn	18 25 07.9	+1.0
BARC	Barichara	3.34	223	*e*P	Pb	18 24 45.1	-1.4
BENV	Beln	3.38	75	*e*P	Pn	18 24 41.2	+1.4
BENV				*e*S	Sn	18 25 20.4	+0.5
ARGC	Ariguani, Magd	3.38	284	*e*P	Pn	18 24 40.1	+0.3
ARGC				*e*S	Sn	18 25 18.0	-1.8
RUSC	La Rusia	3.83	214	*e*P	Pn	18 24 48.5	+2.2
RUSC				*e*S	Sn	18 25 34.2	+2.8
ZARC	Zaragoza, Cauc	4.21	248	*e*P	Pn	18 24 50.3	-0.9
ZARC				*e*S	Sn	18 25 39.7	-0.6
SJCC	San Jacinto, C	4.29	281	*e*P	Pn	18 24 53.2	+0.8
SJCC				*e*S	Sn	18 25 43.4	+1.1
PTBC	PUERTO BERRIO,	4.33	235	*e*P	Pn	18 24 55.5	+2.7
PTBC				*e*S	Sn	18 25 42.3	-0.8
PTBC				*i*		18 25 53.5	
	comp=Z,15nm,0.4s						
MERV	Las Mercedes	4.56	87	*e*P	Pn	18 24 56.9	+1.0
MERV				*e*S	Sn	18 25 47.5	-1.3
CACV	CAICARA DEL OR	4.58	109	*e*P	Pb	18 25 04.1	-3.4
CACV				*e*S	Sb	18 26 01.4	-1.2
BIRV	Birongo	4.78	73	*e*P	Pn	18 24 59.6	+0.6
BIRV				*e*S	Sn	18 25 52.6	-1.6
PAYV	Puerto Ayacuch	4.86	138	*e*P	Pn	18 25 00.4	+0.4
PAYV				*e*S	Sn	18 25 54.2	-2.0
CHIC	Chingaza	5.23	213⇓	*e*P	Pn	18 25 08.5	+2.9
NORC	Norcasia	5.26	229	*e*P	Pn	18 25 07.1	+1.5
NORC				*e*S	Sn	18 26 07.8	+1.7
NORC				*i*		18 26 18.2	
	comp=Z,7.2nm,0.5s						
PCRV	Puerto La Cruz	6.28	79	*e*P	Pn	18 25 20.5	+0.8
PCRV				*e*S	Sn	18 26 29.0	-2.4

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*JMA **14** 18:34:23.1±0.2, 43°.3N±0°.5×145°.8E±0°.8, h73^{km}±1^{km}, MV2.3/40, OFF NEMURO PENINSULA*

*SKHL **14** 18:34:23.6±0.2, 43°.20N×145°.90E, h70^{km}±1^{km}, mb3.8/7*

ISC 14 18:34:22.9±2.0, **43°.26N**±0°.07×**145°.86E**±0°.06, **h72**^{km}±13^{km}, **n14**, σ**0^{s}39**/25, **1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.14	322	P	Pn	18 34 33.8	+0.3
NEM2				*e*S	Sn	18 34 41.5	+0.3
JKHN	Kushirohamanak	0.54	251	*i*P	Pn	18 34 36.5	+0.3
JKHN				*e*S	Sn	18 34 46.3	+0.2
YUK	Yuzh-Kuril'sk	0.78	0	*e*P	Pn	18 34 38.7	-0.1
YUK				AMB	AMB	18 34 40.1	
	60nm,0.2s						
YUK				*i*S	Sn	18 34 50.2	-0.4
YUK				A	A	18 34 52.3	
	240nm,0.2s						
YUK				A	A	18 34 52.3	
	200nm,0.2s						
AKK	Akkeshi	0.78	253	*e*P	Pn	18 34 38.7	-0.1
AKK				AMB	AMB	18 34 38.9	
	30nm,0.2s						
AKK				*e*S	Sn	18 34 50.1	-0.6
AKK				A	A	18 34 50.7	
	60nm,0.3s						
AKK				A	A	18 34 50.7	
	80nm,0.3s						
JNSB	Nemuroshibetsu	0.81	310	*e*P	Pn	18 34 39.2	0.0
JNSB				*e*S	Sn	18 34 51.3	0.0
JRA	Rausu	0.87	322	*e*P	Pn	18 34 40.0	+0.1
JRA				*e*S	Sn	18 34 52.5	+0.1
JAK	Akkeshi	0.89	253	*i*P	Pn	18 34 40.0	-0.1
JAK				*e*S	Sn	18 34 52.5	-0.4
JNK	Nakash	0.89	292	P	Pn	18 34 39.8	-0.3
JNK				*e*S	Sn	18 34 51.9	-1.1
SHO	Shikotan	0.94	49*d*	*i*P	Pn	18 34 40.8	+0.1
SHO	Shikotan	0.94	49	*e*P	Pn	18 34 40.8	+0.1
SHO				*e*S	Sn	18 34 53.6	-0.3
SHO				A	A	18 34 54.0	
	160nm,0.3s						
SHO				A	A	18 34 54.0	
	80nm,0.3s						
SHO	Shikotan	0.94	49	pmax	pmax		
	comp=Z,3.0nm,0.1s						
JOB	Onbets	1.52	257	*e*P	Pn	18 34 48.4	+0.2
JOB				*e*S	Sn	18 35 07.1	-0.2
JAR	Ashorobuto	1.53	272	*e*P	Pn	18 34 48.5	+0.3
JAR				*e*S	Sn	18 35 07.5	+0.1
JTKR	Abashiri--Toko	1.59	297	P	Pn	18 34 49.5	+0.4
JTKR				*e*S	Sn	18 35 09.3	+0.6

IDC 14 18:48:38.2±47.0, **16°.67S**×**174°.74W**, **h0**^{km}, **mb3.8**/3, **mbtmp3.8**/3, **Error ellipse: s-maj=889.1km s-min=190.3km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	42.29	241	P	P	18 56 34.6	+0.8
	0.6nm,0.5s,baz=67,slow=7.7,SNR=2.9						
	0.6nm,0.5s						
WRA	Warramunga Arr	48.31	258	P	P	18 57 21.3	-0.5
	0.4nm,0.8s,baz=97,slow=7.5,SNR=2.0						
	0.4nm,0.8s						
ASAR	Alice Springs	48.50	253	P	P	18 57 22.8	-0.5
	2.1nm,0.6s,baz=89,slow=8.1,SNR=36						
	2.1nm,0.6s						

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*IDC **14** 18:59:26.2±1.9, 8°.46N×102°.88W, h0^{km}, mb3.3/6, mbtmp3.4/6, Error ellipse: s-maj=90.9km s-min=24.6km az=58.0*

ISC 14 18:59:27.7±2.1, **8°.5N**±0°.4×**102°.9W**±0°.6, **h10**^{km}, **n11**, σ**0^{s}72**/6, **mb3.3**/5, **Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E1	SOCORRO T-PHAS	12.90	323	T	T	19 15 40.9	
TXAR	Lajitas Array	20.77	358	P	Pn	19 04 09.7	-1.7
	0.6nm,0.8s,baz=156,slow=16,SNR=5.1						
	0.6nm,0.8s						
NVAR	Mina Array Bea	32.92	337	P	P	19 06 03.3	+0.8
	0.1nm,0.4s,baz=174,slow=9.0,SNR=1.8						
	0.1nm,0.4s						
PDAR	Pinedale Array	34.66	351	P	P	19 06 17.9	+0.2
	0.1nm,0.4s,baz=183,slow=9.5,SNR=1.6						
	0.1nm,0.4s						
LPAZ	La Paz	42.26	126	P	P	19 07 22.4	+0.1
	3.4nm,1.1s,baz=288,slow=6.8,SNR=8.5						
	3.4nm,1.1s						
H03N2	Juan Fernandez	47.48	153	T	T	19 58 55.9	
	baz=329,slow=77,SNR=9.0						
H03N1	Juan Fernandez	47.49	153	T	T	19 58 58.5	
	baz=329,slow=77,SNR=10						
H03N3	Juan Fernandez	47.50	153	T	T	19 58 57.5	
	baz=329,slow=77,SNR=9.1						
YKA	Yellowknife Ar	54.60	353	P	P	19 08 56.2	+0.1
	0.2nm,0.6s,baz=163,slow=7.6,SNR=2.6						
	0.2nm,0.6s						
ILAR	Eielson Array	64.09	341	P	P	19 10 00.8	-0.9
	0.7nm,0.8s,baz=157,slow=3.6,SNR=12						
	0.7nm,0.8s						
CMAR	Chiang Mai Arr	145.67	321	PKPbc	PKPab	19 19 08.0	0.0
	0.6nm,0.8s,baz=2.6,slow=3.1,SNR=4.7						

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*ANF **14** 19:04:36.5±0.4, 37°.08N×97°.75W, h6^{km}, ML3.4/7, Error ellipse: s-maj=4.2km s-min=3.3km az=2.0*

*NEIC **14** 19:04:36.6±1.1, 37°.053N±0°.010×97°.73W±0°.01, h11^{km}±4^{km}, Error ellipse: s-maj=1.7km s-min=0.9km az=137.0*

ISC 14 19:04:36.6±0.8, **37°.05N**±0°.03×**97°.74W**±0°.03, **h10**^{km}, **n56**, σ**0^{s}96**/38, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.99	97		Pg	19 04 55.1	-0.7
T35B	Sooner Cattle	0.99	97	P	Pg	19 04 55.1	-0.6
	baz=279						
T35B				S	Sg	19 05 08.1	-0.5
	baz=279						
U32A	Winter Ranch,	1.21	237	Pn	Pn	19 04 59.3	-0.3
U32A	Winter Ranch,	1.21	237	P	Pn	19 04 59.3	-0.3
	baz=56						
U32A				S	Sn	19 05 16.3	+0.1
	baz=56						
R32A	Long Quarter,	1.57	331		Pb	19 05 05.3	-0.5
R32A	Long Quarter,	1.57	331	P	Pb	19 05 05.3	-0.5
	baz=150						
R32A				S	Sb	19 05 25.8	0.0
	baz=150						
OKCFA	Oklahoma City	1.65	172		Pb	19 05 06.6	-0.4
OKCFA	Oklahoma City	1.65	172	P	Pb	19 05 07.2	+0.1
	baz=352						
OKCFA				S	Sg	19 05 29.5	0.0
	baz=352						
OKCSW	OKLAHOMA CITY	1.66	171		Pb	19 05 06.9	-0.3
FNO	Franklin	1.81	171		Pb	19 05 09.4	-0.5
TUL1	Leonard	1.94	125		Pn	19 05 10.4	+0.8
TUL1	Leonard	1.94	125	P	Pb	19 05 11.2	-0.9
	baz=307						
TUL1				S	Sb	19 05 37.4	+1.1
	baz=307						
KSU1	Kansas State U	2.24	23		Pn	19 05 15.1	+1.4
CBKS	Cedar Bluff	2.37	319		Pn	19 05 16.3	+0.8
X34A	Smith Ranch, M	2.44	182		Pn	19 05 17.8	+1.3
X34A				IAmb_Lg		19 05 55.3	
	comp=Z,30nm,0.8s						
WMOK	Wichita Mounta	2.45	200	Pn	Pn	19 05 17.9	+1.1
X37A	Clayton	3.12	141		Pn	19 05 26.6	+0.7
X37A				IAmb_Lg		19 06 20.1	
	comp=Z,42nm,0.8s						
HHAR	Hobbs	3.15	103		Pn	19 05 26.8	+0.5
S39A	Bolivar	3.58	78		Pn	19 05 33.5	+1.3
S39A	Bolivar	3.58	78	P	Pg	19 05 43.0	-2.2
	baz=261						
N33B	J Bar K, Exete	3.69	3	S	Sn	19 06 18.7	+1.4
	baz=184						
W39A	Magazine	3.70	119	IAmb_Lg		19 06 36.9	
	comp=Z,29nm,0.8s						
AMTX	Amarillo	3.86	237		Pn	19 05 37.7	+1.6
U40A	Yellville	3.99	98		Pn	19 05 38.6	+0.8
U40A				IAmb_Lg		19 06 41.9	
	comp=Z,26nm,0.8s						
U40A	Yellville	3.99	98	P	Pn	19 05 39.3	+1.5
	baz=282						
U40A				P	Pn	19 05 39.3	+1.5
	baz=282						
P38A	Dawn	4.19	51		Pn	19 05 41.6	+1.0
MIAR	Mount Ida	4.21	125		Pn	19 05 41.5	+0.7
KSCO	Kaye Shedlock'	4.33	298	IAmb_Lg		19 06 55.5	
	comp=Z,25nm,0.7s						
BGNE	Belgrade	4.37	356	IAmb_Lg		19 06 51.9	
	comp=Z,26nm,0.8s						
MGMO	Mountain Grove	4.38	87	Pn	Pn	19 05 44.0	+0.9
R40A	Maddies Statio	4.52	72	Pn	Pn	19 05 46.4	+1.3
FCAR	Ozark Folk Cen	4.67	103	Pn	Pn	19 05 47.8	+0.6
X40A	Basin Creek Fa	4.74	121	IAmb_Lg		19 07 16.9	
	comp=Z,26nm,1.2s						
WHAR	Wooly Hollow	4.75	110	Pn	Pn	19 05 48.8	+0.5
W41B	Gary Mavity, V	4.83	111	IAmb_Lg		19 07 07.8	
	comp=Z,20nm,0.8s						
UALR	University of	4.93	116	IAmb_Lg		19 07 20.3	
	comp=Z,15nm,0.9s						
WHTX	Lake Whitney,	5.05	177	IAmb_Lg		19 07 17.3	
	comp=Z,20nm,0.9s						
WLAR	White Oak Lake	5.05	130	IAmb_Lg		19 07 25.8	
	comp=Z,16nm,0.8s						
P40A	Paris	5.12	59	IAmb_Lg		19 07 26.0	
	comp=Z,14nm,0.9s						
N38A	Joes South For	5.13	42	IAmb_Lg		19 07 24.8	
	comp=Z,21nm,0.9s						
CCM	Cathedral Cave	5.26	77		Pn	19 05 54.6	-0.7
T25A	Trinidad	5.33	273		Pn	19 05 56.9	+0.5
T25A				IAmb_Lg		19 07 32.0	
	comp=Z,12nm,0.8s						
LCAR	Lake Charles	5.39	98	IAmb_Lg		19 07 32.5	
	comp=Z,12nm,0.8s						
Z41A	Richland Creek	5.54	132	IAmb_Lg		19 07 45.6	
	comp=Z,16nm,0.9s						
PBMO	Poplar Bluff	5.87	90	IAmb_Lg		19 07 51.3	
	comp=Z,11nm,0.7s						
FVM	French Village	5.89	79	IAmb_Lg		19 07 44.1	
	comp=Z,16nm,1.1s						
Q24A	Divide	6.15	290	IAmb_Lg		19 07 54.4	
	comp=Z,14nm,0.7s						
435B	Jarrell	6.25	179	IAmb_Lg		19 08 07.0	
	comp=Z,17nm,1.1s						
N41A	Harden Midland	6.50	54	IAmb_Lg		19 08 07.8	
	comp=Z,20nm,0.8s						
JCT	Junction City	6.77	195	IAmb_Lg		19 08 20.1	
	comp=Z,11nm,0.7s						
K38A	Parkersburg	6.77	33	IAmb_Lg		19 08 17.1	
	comp=Z,19nm,0.8s						
S44A	Carbondale	6.79	82	IAmb_Lg		19 08 13.6	
	comp=Z,10nm,0.8s						
L40A	Anamosa	7.10	43	IAmb_Lg		19 08 20.9	
	comp=Z,14nm,1.1s						
N23A	Red Feather La	7.45	304	IAmb_Lg		19 08 42.1	
	comp=Z,15nm,0.8s						
O44A	Mansfield	7.90	64	IAmb_Lg		19 08 59.0	
	comp=Z,14nm,0.7s						
L42A	Oliver, Polo	7.96	49	IAmb_Lg		19 08 48.3	
	comp=Z,14nm,0.8s						

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*IDC **14** 19:07:26.1±0.7, 8°.44N×102°.83W, h0^{km}, mb4.2/17, mbtmp4.2/19, ML4.2/2, MS4.6/51, Error ellipse: s-maj=29.5km s-min=12.1km az=61.0*

*NEIC **14** 19:07:29.1±1.5, 8°.51N±0°.04×102°.8W±0°.1, h10^{km}±1^{km}, mb4.9/182, Error ellipse: s-maj=17.2km s-min=7.0km az=277.0*

*GCMT **14** 19:07:32.0±0.2, 8°.56N±0°.01×102°.89W±0°.01, h15^{km}, MW5.4/134, Moment Tensor Solution. s78,c103; s134,c227; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.06±.02; $M_{\theta\theta}$0.17±.02; $M_{\phi\phi}$-0.11±.02; $M_{r\theta}$-0.69±.08; $M_{\theta\phi}$-1.17±.02; $M_{\phi r}$0.01±.06; Best double couple: $M_0$1.36700×10^{17} NP1:ϕ_s357.00000°, δ60.00000°, λ0.00000°. NP2:ϕ_s87.00000°, δ90.00000°, λ-150.00000°. Principal axes: T 1.4080, Plg21.0000°, Azm218.0000°; N -0.0810, Plg60.0000°, Azm88.0000°; P -1.3260, Plg21.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 19:07:27.9±0.4, **8°.43N**±0°.07×**102°.88W**±0°.07, **h10**^{km}, **n444**, σ**1^{s}06**/401, **mb4.9**/84, **MS4.7**/52, **Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	Tlapa	10.01	24	Pn	Pn	19 09 50.4	-1.6
CMIG	Matias Romero	11.62	41	Pn	Pn	19 10 10.8	-3.0
	0.7nm,0.3s,baz=181,slow=10,SNR=2.8						
CMIG				LR	LR	19 13 47.6	
	comp=Z,8µm,18.3s,baz=214,slow=33						
	1.6nm,0.3s						
RTAL	Retalhuleu	12.52	60	Pn	Pn	19 10 24.3	-2.0
H06E1	SOCORRO T-PHAS	12.92	324	T	T	19 23 46.1	
	SNR=36						
HUEH	Huehuetenango	13.07	57		Pn	19 10 32.0	-2.0
CCIG	Comitan	13.08	52		Pn	19 10 31.9	-2.2
ZAIG	Zacatecas	14.26	1		Pn	19 10 52.2	+1.9
MTO3	Montecristo	14.52	65		Pn	19 10 52.4	-1.4
ESQI	Esquipulas	14.60	64		Pn	19 10 54.0	-0.8
PETF	Flores	15.24	55	Pn	Pn	19 11 00.6	-2.7
PAYG	Puerto Ayora	15.47	125		Pn	19 11 07.3	+0.9
CRIN	San Cristobal	16.13	73		Pn	19 11 13.5	-1.5
TGUH	Tegucigalpa,Un	16.30	69	Pn	Pn	19 11 17.1	-0.1
TGUH				IAmb	IAmb	19 11 27.4	
	comp=Z,84nm,1.2s						
CNGN	Cerro Negro	16.42	74		Pn	19 11 19.0	+0.3
SLBS	Sierra La Lagu	16.61	337		Pn	19 11 22.6	+1.5
LPIG	La Paz	17.13	336	P	Pn	19 11 26.3	-1.2
	comp=Z,2.5nm,0.3s,baz=208,slow=18,SNR=1.1						
LPIG				LR	LR	19 16 28.4	
	comp=Z,6µm,18.9s,baz=159,slow=32						
	comp=Z,12nm,0.3s						
HZTE	Horizontes, Gu	17.20	81	P	Pn	19 11 29.4	+0.9
DUNO	Dulce Nombre,	17.24	83	P	Pn	19 11 28.3	-0.8
DUNO				IAmb	IAmb	19 11 35.4	
	comp=Z,109nm,1.2s						
MATN	Matagalpa	17.25	74	P	Pn	19 11 29.4	+0.2
ORTG	Ortega, Santa	17.30	82	P	P	19 11 31.0	-0.3
BOAB	BOACO BROADBAN	17.39	75	P	P	19 11 32.7	+0.5
JTS	Las Juntas de	17.79	83	P	Pn	19 11 35.2	-0.7
HDC	Heredia	18.59	84	P	P	19 11 44.6	-1.0
HDC				IAmb	IAmb	19 11 52.5	
	comp=Z,140nm,1.3s						
HPIG		18.60	352	P	Pn	19 11 47.5	+1.6
RIMA	Rio Macho	18.83	84	P	P	19 11 48.4	+0.1
RIMA				IAmb	IAmb	19 11 54.5	
	comp=Z,101nm,1.6s						
PEZE	Perez Zeledon,	19.00	86	P	P	19 11 50.6	+0.5
PEZE				IAmb	IAmb	19 11 58.1	
	comp=Z,67nm,1.2s						
SRBA	San Rafael, Bu	19.31	86	P	P	19 11 53.0	-0.5
DRK0	Durika	19.42	86	P	P	19 11 55.2	+0.4
CDITO	Canoas	19.79	88	P	P	19 11 58.7	+0.1
833A	Chaparral WMA,	20.06	9	P	P	19 12 00.5	-0.9
833A				IAmb	IAmb	19 12 19.0	
	comp=Z,129nm,1.8s						
833A	Chaparral WMA,	20.06	9	P	Pn	19 12 03.8	+0.6
	baz=190						
SRIG	Santa Rosalia	20.77	336	P	P	19 12 09.0	-0.2
SRIG				IAmb	IAmb	19 12 13.5	
	comp=Z,64nm,1.2s						
TX32	Lajitas Array	20.81	358	P	P	19 12 09.7	0.0
TXAR	Lajitas Array	20.81	358	P	P	19 12 09.6	-0.1
	comp=Z,2.4nm,0.7s,baz=182,slow=12,SNR=13						
TXAR				LR	LR	19 19 41.8	
	comp=Z,2µm,18.2s,baz=174,slow=35						
	comp=Z,2.4nm,0.7s						
HSIG		21.85	341	P	P	19 12 20.4	-0.3
JCT	Junction City	22.13	7	P	P	19 12 23.9	+0.1
JCT				IAmb	IAmb	19 12 33.1	
	comp=Z,51nm,1.1s						
JCT	Junction City	22.13	7	P	P	19 12 25.7	+1.9
	baz=188,SNR=13						
HKT	Hockley	22.41	16	P	P	19 12 26.8	+0.1
435B	Jarrell	22.79	12	P	P	19 12 31.3	+0.6
435B	Jarrell	22.79	12	P	P	19 12 33.4	+2.7
	baz=194						
MNTX	Cornudas Mount	23.27	355	P	P	19 12 35.8	0.0
MNTX				IAmb	IAmb	19 12 42.4	
	comp=Z,54nm,1.8s						
MNTX	Cornudas Mount	23.27	355	P	P	19 12 37.3	+1.5
	baz=174,SNR=6.3						
319A	Douglas	23.60	346	P	P	19 12 39.0	-0.2
319A				IAmb	IAmb	19 12 53.0	
	comp=Z,33nm,1.3s						
SOR	Soroa	23.84	51	P	P	19 12 41.8	+0.4
SOR				IAmb	IAmb	19 12 56.8	
	comp=Z,63nm,1.7s						
WHTX	Lake Whitney,	23.98	11	P	P	19 12 45.7	+3.0
	baz=193						
ABTX	Abilene, Hawle	24.26	7	P	P	19 12 45.5	+0.2
ABTX				IAmb	IAmb	19 12 53.7	
	comp=Z,43nm,1.1s						
ABTX	Abilene, Hawle	24.26	7	P	P	19 12 47.7	+2.4
	baz=188,SNR=9.8						
121A	Cookes Peak, D	24.41	350	P	P	19 12 46.6	-0.3
121A				IAmb	IAmb	19 12 52.6	
	comp=Z,49nm,1.8s						
121A	Cookes Peak, D	24.41	350	P	P	19 12 49.0	+2.0
	baz=168						
NATX	Nacogdoches	24.45	17	P	P	19 12 46.8	-0.2
NATX				IAmb	IAmb	19 12 54.9	
	comp=Z,59nm,1.4s						
NATX	Nacogdoches	24.45	17	P	P	19 12 48.4	+1.4
	baz=200						
LCCY	Blossom Villag	24.74	61	P	P	19 12 49.3	-0.5
TUC	Tucson	24.87	344	P	P	19 12 51.0	+0.1
TUC	Tucson	24.87	344	P	P	19 12 51.7	+0.7
	baz=161						
214A	Organ Pipe Nat	25.17	340	P	P	19 12 52.8	-0.7
214A				IAmb	IAmb	19 13 08.3	
	comp=Z,27nm,1.4s						
214A	Organ Pipe Nat	25.17	340	P	P	19 12 54.6	+1.1
	baz=156						
Z35A	Perchaven, San	25.32	11	P	P	19 12 54.8	-0.1
Z35A				IAmb	IAmb	19 12 58.0	
	comp=Z,36nm,1.1s						
MSTX	Muleshoe	25.42	0	P	P	19 12 55.8	-0.2
MSTX	Muleshoe	25.42	0	P	P	19 12 57.8	+1.9
	baz=180						
344A	Westbrook Farm	25.55	25	P	P	19 12 57.7	+0.6
OTAV	Otavalo	25.66	107	P	P	19 12 58.0	-0.8
OTAV				IAmb	IAmb	19 13 17.7	
	comp=Z,33nm,1.4s						
OTAV	Otavalo	25.66	107	*e*P	P	19 13 00.6	+1.8
BNM	Barren Site	25.83	353	P	P	19 13 00.0	+0.2
LENM	Lemitar	25.89	352	P	P	19 12 60.0	-0.3
113A	Mohawk Valley,	26.24	339	P	P	19 13 03.1	-0.1
113A				IAmb	IAmb	19 13 07.0	
	comp=Z,27nm,1.2s						
VBMS	Vicksburg	26.31	24	P	P	19 13 04.1	+0.2
VBMS	Vicksburg	26.31	24	P	P	19 13 06.5	+2.6
	baz=208						
AMTX	Amarillo	26.36	2	P	P	19 13 04.6	+0.3
AMTX				IAmb	IAmb	19 13 24.4	
	comp=Z,41nm,1.6s						
AMTX	Amarillo	26.36	2	P	P	19 13 06.9	+2.5
	baz=183						
Z41A	Richland Creek	26.41	19	P	P	19 13 06.5	+1.8
	baz=203						
WMOK	Wichita Mounta	26.46	8	P	P	19 13 05.9	+0.7
	baz=189						
ANMO	Albuquerque	26.60	353	P	P	19 13 08.0	+1.4
	comp=Z,0.4nm,0.4s,baz=147,slow=13,SNR=1.9						
ANMO				LR	LR	19 23 03.5	
	comp=Z,1µm,18.2s,baz=172,slow=35						
	comp=Z,0.4nm,0.4s						
ANMO	Albuquerque	26.60	353	P	P	19 13 06.1	-0.6
ANMO	Albuquerque	26.60	353	P	P	19 13 08.6	+2.0
	baz=172						
GLA	Glamis	26.88	337	P	P	19 13 09.0	-0.1
GLA				IAmb	IAmb	19 13 16.5	
	comp=Z,59nm,1.6s						
GLA	Glamis	26.88	337	P	P	19 13 09.8	+0.7
	baz=153						
X37A	Clayton	26.94	14	P	P	19 13 09.1	-0.4
X37A				IAmb	IAmb	19 13 51.1	
	comp=Z,65nm,1.6s						
YUH	Yuha Desert	26.96	335	P	P	19 13 09.0	-0.7
BRAL	Brewton	27.02	31	P	P	19 13 09.2	-1.0
BRAL	Brewton	27.02	31	P	P	19 13 10.8	+0.6
	baz=216						
Y14A	Wickenburg	27.05	341	P	P	19 13 10.9	+0.3
SWSC	Sam W. Stewart	27.17	336	P	P	19 13 13.3	+1.7
	baz=151						
MIAR	Mount Ida	27.37	17	P	P	19 13 13.0	-0.4
MIAR				IAmb	IAmb	19 13 25.0	
	comp=Z,40nm,1.3s						
MIAR	Mount Ida	27.37	17	P	P	19 13 14.2	+0.8
	baz=200,SNR=16						
MONP2	Monument Peak	27.38	335	P	P	19 13 13.8	0.0
	baz=150						
SJCC	San Jacinto, C	27.39	85	P	P	19 13 13.0	-0.9
X40A	Basin Creek Fa	27.53	18	P	P	19 13 16.9	+2.0
	baz=202						
BC3	Big Chuckawall	27.66	337	P	P	19 13 17.0	+0.9
	baz=152,SNR=7.4						
PDMCI	Parker Dam,Lak	27.76	340	P	P	19 13 18.2	+1.3
	baz=155						
ZARC	Zaragoza, Cauc	27.77	90	P	P	19 13 16.4	-0.8
W39A	Magazine	27.92	16	P	P	19 13 17.9	-0.4

W39A	Magazine	27.92	16	P	P	19 13 19.2	+0.9
	baz=199						
IRM	Iron Mountain	27.99	338	P	P	19 13 20.0	+1.1
	baz=153,SNR=8.8						
PFO	Pinyon Flats O	28.02	335	P	P	19 13 19.7	+0.3
	comp=Z,1.7nm,0.6s,baz=154,slow=9.4,SNR=6.6						
PFO				LR	LR	19 22 21.4	
	comp=Z,3µm,21.1s,baz=142,slow=32						
	comp=Z,1.7nm,0.6s						
PFO	Pinyon Flats O	28.02	335	P	P	19 13 19.1	-0.3
PFO				IAmb	IAmb	19 13 21.5	
	comp=Z,37nm,1.9s						
PFO	Pinyon Flats O	28.02	335	P	P	19 13 20.5	+1.1
	baz=150						
WUAZ	Wupatki	28.06	345	P	P	19 13 20.0	+0.2
WUAZ	Wupatki	28.06	345	P	P	19 13 21.3	+1.5
	baz=162						
250A	Grady	28.07	31	P	P	19 13 18.4	-1.3
TUL1	Leonard	28.11	12	P	P	19 13 20.1	0.0
	baz=195						
BELC	Belle Mtn. Jos	28.17	336	P	P	19 13 21.4	+0.6
	baz=152						
Z47A	Carrollton	28.20	27	P	P	19 13 19.5	-1.3
MURC	Murrieta	28.32	334	P	P	19 13 24.1	+2.1
	baz=149						
W41B	Gary Mavity, V	28.35	19	P	P	19 13 21.4	-0.7
W41B	Gary Mavity, V	28.35	19	P	P	19 13 22.9	+0.8
	baz=202						
WHAR	Wooly Hollow	28.44	18	P	P	19 13 23.2	+0.2
WHAR				IAmb	IAmb	19 13 36.2	
	comp=Z,45nm,1.4s						
LRAL	Lakeview Retre	28.56	29	P	P	19 13 25.3	+1.2
	baz=214						
ROSC	El Rosal	28.59	95	P	P	19 13 24.1	-0.9
ROSC				IAmb	IAmb	19 13 52.0	
	comp=Z,14nm,0.9s						
T25A	Trinidad	28.62	357	P	P	19 13 28.5	+3.7
	baz=177						
GMRC	Granite Mounta	28.74	338	P	P	19 13 27.0	+1.2
	baz=153						
ATAH	Atahualpa	28.89	122	P	P	19 13 26.9	-0.9
	comp=Z,2.9nm,0.6s,baz=303,slow=12,SNR=5.1						
ATAH				LR	LR	19 22 39.6	
	comp=Z,3µm,20.3s,baz=291,slow=32						
	comp=Z,2.9nm,0.6s						
HHAR	Hobbs	28.90	15	P	P	19 13 26.6	-0.4
HHAR				IAmb	IAmb	19 13 37.4	
	comp=Z,28nm,1.8s						
T35A	Sooner Cattle	28.95	11	P	P	19 13 27.2	-0.3
T35A				IAmb	IAmb	19 13 34.7	
	comp=Z,42nm,1.5s						
HEC	Hector,Ludlow	29.03	337	P	P	19 13 28.7	+0.4
	baz=152						
BFSC	Mount Baldy Ra	29.07	334	P	P	19 13 29.7	+1.0
	baz=149						
MVCO	Mesa Verde	29.10	351	P	P	19 13 29.1	0.0
MVCO	Mesa Verde	29.10	351	P	P	19 13 30.0	+0.8
	baz=168						
TIGA	Tifton	29.11	35	P	P	19 13 27.8	-1.1
TIGA	Tifton	29.11	35	P	P	19 13 28.4	-0.6
	baz=222						
U15A	North Rim	29.16	344	P	P	19 13 29.5	-0.2
U15A				IAmb	IAmb	19 13 41.7	
	comp=Z,27nm,1.8s						
U40A	Yellville	29.27	17	P	P	19 13 29.6	-0.7
U40A	Yellville	29.27	17	P	P	19 13 30.4	+0.1
	baz=200						
SDCO	Great Sand Dun	29.28	356	P	P	19 13 31.0	+0.2
SDCO	Great Sand Dun	29.28	356	P	P	19 13 31.7	+0.9
	baz=175						
DECC	Green Verdugo	29.37	333	P	P	19 13 33.0	+1.6
	baz=147						
S22A	4UR Ranch, Cre	29.41	354	P	P	19 13 31.7	-0.2
S22A	4UR Ranch, Cre	29.41	354	P	P	19 13 34.1	+2.2
	baz=172						
TUQ	Turquoise Moun	29.41	338	P	P	19 13 33.1	+1.3
	baz=153						
LCAR	Lake Charles	29.52	20	P	P	19 13 32.0	-0.5
GSC	Goldstone, Bar	29.63	337	P	P	19 13 34.4	+0.7
	baz=151						
PLAL	Pickwick Lake	29.71	25	P	P	19 13 33.9	-0.4
PLAL				IAmb	IAmb	19 13 36.4	
	comp=Z,20nm,1.3s						
EDW2	Edwards Air Fo	29.76	334	P	P	19 13 35.6	+0.8
	baz=149						
SHOC	Shoshone, Teco	29.96	338	P	P	19 13 37.6	+1.1
	baz=153						
LCMT	Little Creek M	29.97	343	P	P	19 13 37.2	+0.5
SHPR	Sheep Range	30.10	340	P	P	19 13 38.4	+0.5
LRMC	Laurel Mtn Rad	30.14	335	P	P	19 13 39.4	+1.1
	baz=150						
ARVC	Arvin	30.33	334	P	P	19 13 41.5	+1.7
	baz=147						
FPAL	Fort Paine	30.45	29	P	P	19 13 40.9	0.0
FPAL				IAmb	IAmb	19 13 43.3	
	comp=Z,30nm,1.3s						
ISA	Isabella, Lake	30.63	335	P	P	19 13 43.9	+1.4
	baz=148						
GOGA	Godfrey	30.66	33	P	P	19 13 42.5	-0.2
GOGA	Godfrey	30.66	33	P	P	19 13 42.7	0.0
	baz=220						
FURC	Furnace Creek,	30.68	338	P	P	19 13 44.8	+2.1
	baz=152						
WVT	Waverly	30.80	24	P	P	19 13 43.3	-0.6
TPNV	Topopah Spring	30.88	339	P	P	19 13 45.7	+0.9
TPNV	Topopah Spring	30.88	339	P	P	19 13 46.4	+1.6
	baz=154						
VES	Vestal, Richgr	31.04	334	P	P	19 13 48.0	+2.0
	baz=148						
CWC	Cottonwood Cre	31.13	336	P	P	19 13 48.3	+1.3
	baz=150						
CCM	Cathedral Cave	31.32	18	P	P	19 13 47.9	-0.5
FVM	French Village	31.51	19	P	P	19 13 49.6	-0.4
FVM				IAmb	IAmb	19 13 52.2	
	comp=Z,36nm,1.7s						
CPCT	Cooper Cave	31.71	29	P	P	19 13 51.0	-0.9
CPCT				IAmb	IAmb	19 13 54.3	
	comp=Z,19nm,1.2s						
TIN	Tinemaha, Big	31.72	336	P	P	19 13 54.6	+2.5
	baz=150						
SDV	Santo Domingo	31.88	87	LR	LR	19 24 00.7	
	comp=Z,483nm,22.0s,baz=256,slow=31						
SDV	Santo Domingo	31.88	87	P	P	19 13 52.7	-1.2
SDV	Santo Domingo	31.88	87	*e*P	P	19 13 55.8	+1.9
R11A	Troy Canyon, C	31.92	341	P	P	19 13 54.5	+0.6
R11A				IAmb	IAmb	19 14 07.1	
	comp=Z,24nm,1.9s						
R11A	Troy Canyon, C	31.92	341	P	P	19 13 55.6	+1.7
	baz=156						
O20A	White River Ci	31.93	352	P	P	19 13 55.3	+1.2
	baz=170						
BG3	Lake Jocassee	32.15	32	P	P	19 13 55.2	-0.6
BG3				IAmb	IAmb	19 13 58.8	
	comp=Z,26nm,1.4s						
TKL	Tuckaleechee C	32.24	30	P	P	19 13 55.0	-1.7
	comp=Z,5.3nm,1.0s,baz=212,slow=5.1,SNR=5.9						
TKL				LR	LR	19 28 33.8	
	comp=Z,891nm,19.2s,baz=216,slow=39						
	comp=Z,5.3nm,1.0s						
TKL	Tuckaleechee C	32.24	30	P	P	19 13 56.3	-0.3
TKL				IAmb	IAmb	19 13 59.1	
	comp=Z,32nm,1.5s						
NHSC	New Hope	32.31	37	P	P	19 13 58.7	+1.5
	baz=226						
MLAC	Mammoth, Mammo	32.46	336	P	P	19 14 00.7	+1.9
	baz=150						
T50A	Nancy	32.84	27	P	P	19 14 01.4	-0.4
T50A				IAmb	IAmb	19 14 04.0	
	comp=Z,28nm,1.5s						
DUG	Dugway, Tooele	32.85	346	P	P	19 14 03.0	+1.0
DUG				IAmb	IAmb	19 14 11.1	
	comp=Z,15nm,1.4s						
DUG	Dugway, Tooele	32.85	346	P	P	19 14 03.9	+1.8
	baz=162						
NNA	Nana	32.89	128	LR	LR	19 24 38.1	
	comp=Z,816nm,21.0s,baz=318,slow=31						
NV11	Mina Array Sit	32.89	338	P	P	19 14 02.6	+0.2
NVAR	Mina Array Bea	32.95	337	P	P	19 14 02.4	-0.6
	comp=Z,0.9nm,0.7s,baz=156,slow=7.4,SNR=12						
NVAR				LR	LR	19 25 29.0	
	comp=Z,1µm,20.9s,baz=146,slow=33						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	32.95	337	P	P	19 14 03.7	+0.7
TZTN	Tazewell	33.06	29	P	P	19 14 03.2	-0.6
TZTN	Tazewell	33.06	29	P	P	19 14 04.1	+0.4
	baz=217						
KMSC	Kings Mountain	33.12	33	P	P	19 14 04.6	+0.4
	baz=222						
W57A	Gilead	33.87	35	P	P	19 14 10.5	-0.3
HWUT	Hardware Ranch	33.93	348	P	P	19 14 12.6	+1.1
HWUT				IAmb	IAmb	19 14 25.6	
	comp=Z,16nm,1.4s						
ELK	Elko	34.01	343	P	P	19 14 11.8	-0.4
HDIL	Hopedale	34.21	19	P	P	19 14 12.6	-1.1
HDIL	Hopedale	34.21	19	P	P	19 14 16.0	+2.3
	baz=204						
BMN	Battle Mountai	34.34	340	P	P	19 14 14.8	-0.3
BMN				IAmb	IAmb	19 14 19.3	
	comp=Z,18nm,1.4s						
SCIA	State Center	34.42	13	P	P	19 14 15.1	-0.5
SCIA	State Center	34.42	13	P	P	19 14 17.2	+1.7
	baz=197						
BW06	Boulder Array	34.70	351	P	P	19 14 18.9	+0.7
	baz=168						
PD31	Pinedale Array	34.70	351	P	P	19 14 18.5	+0.3
PDAR	Pinedale Array	34.70	351	P	P	19 14 18.9	+0.7
	comp=Z,1.6nm,0.8s,baz=168,slow=7.6,SNR=7.3						
PDAR				PcP	PcP	19 16 51.1	-1.1
	comp=Z,0.1nm,0.3s,baz=166,slow=4.2,SNR=1.7						
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	34.70	351	P	P	19 14 18.4	+0.1
SFIN	Lafayette	34.79	21	P	P	19 14 19.0	+0.2
	baz=208						
V58A	Windy Hill, Pi	34.83	35	P	P	19 14 19.1	0.0
P49A	Miami Univ. Ec	34.99	25	P	P	19 14 20.3	-0.2
P49A	Miami Univ. Ec	34.99	25	P	P	19 14 20.7	+0.3
	baz=212						
BLA	Blacksburg	35.16	32	P	P	19 14 21.8	-0.2
BLA	Blacksburg	35.16	32	P	P	19 14 23.2	+1.2
	baz=221,SNR=6.1						
ORV	Oroville	35.20	335	P	P	19 14 23.4	+1.1
ORV				IAmb	IAmb	19 14 31.2	
	comp=Z,25nm,1.3s						
R53A	Hurricane	35.25	29	P	P	19 14 21.9	-0.8
O48B	Farmland	35.42	24	P	P	19 14 24.4	+0.2
	baz=211						
ECSD	EROS Data Cent	35.59	8	P	P	19 14 26.9	+1.3
	baz=191						
Q52A	Bidwell	35.60	28	P	P	19 14 25.6	-0.1
MOOW	Moose Ponds	35.85	350	P	P	19 14 27.8	-0.3
RPN	Rapa Nui	35.89	190	LR	LR	19 25 24.7	
	comp=Z,1µm,20.0s,baz=19,slow=30						
ACSO	Alum Creek Sta	36.31	26	P	P	19 14 31.9	+0.1
	baz=214						
S57A	Dark Hollow, R	36.34	33	P	P	19 14 31.6	-0.5
HLID	Hailey	36.42	346	P	P	19 14 33.4	+0.5
HLID	Hailey	36.42	346	P	P	19 14 35.5	+2.5
	baz=160						
WVOR	Wild Horse Val	36.60	340	P	P	19 14 35.0	+0.5
WVOR				IAmb	IAmb	19 14 38.4	
	comp=Z,53nm,1.8s						
MOD	Modoc Plateau	36.72	338	P	P	19 14 36.5	+1.0
SJG	San Juan	36.96	71	LR	LR	19 29 29.2	
	comp=Z,649nm,18.5s,baz=266,slow=36						
MCWV	Mont Chateau	37.31	30	P	P	19 14 40.9	+0.5
	baz=220						
YBH	Yreka Blue Hor	37.52	335	LR	LR	19 28 08.9	
	comp=Z,956nm,19.7s,baz=155,slow=33						
YBH	Yreka Blue Hor	37.52	335	P	P	19 14 41.5	-0.8
CBN	Corbin Frederi	37.52	34	P	P	19 14 43.5	+1.3
	baz=224						
K05A	Summer Lake	37.65	338	P	P	19 14 44.7	+1.2
K05A				IAmb	IAmb	19 14 51.6	
	comp=Z,34nm,1.3s						
AAM	Ann Arbor	37.75	24	P	P	19 14 45.8	+1.8
	baz=212						
L04D	Klamath Falls	37.76	336	P	P	19 14 44.5	+0.2
	baz=148						
BOZ	Bozeman (W)	37.80	350	P	P	19 14 46.4	+1.9
	baz=166						
L02F	Cave Junction	38.20	335	P	P	19 14 49.0	+1.2
	baz=146,SNR=8.6						
J05D	Fort Rock, OR	38.26	338	P	P	19 14 50.0	+1.4
	baz=150,SNR=8.6						
BMO	Blue Mountains	38.38	343	P	P	19 14 49.0	-0.5
J04D	Umpqua Nationa	38.55	337	P	P	19 14 51.9	+0.8
	baz=148						
PINE	Pine Mountain	38.59	339	P	P	19 14 51.8	+0.4
K02D	Willamette Mer	38.71	335	P	P	19 14 53.6	+1.3
	baz=146,SNR=9.7						
DBO	Dodson Butte	38.89	336	P	P	19 14 54.0	+0.2
SSPA	Standing Stone	39.03	31	P	P	19 14 54.7	-0.2
SSPA				IAmb	IAmb	19 14 57.2	
	comp=Z,68nm,1.6s						
SSPA	Standing Stone	39.03	31	P	P	19 14 55.8	+1.0
	baz=222						
I04A	Tendick Farm,	39.14	337	P	P	19 14 56.1	+0.3
	baz=148						
I05D	Terrebonne, OR	39.21	339	P	P	19 14 57.4	+1.0
	baz=150						
M55A	Ridgway	39.23	29	P	P	19 14 56.3	-0.2
I03D	Drain, OR	39.42	336	P	P	19 14 59.2	+1.2
	baz=147						
H04A	Detroit Lake	39.82	338	P	P	19 15 01.4	+0.1
AGMN	Agassiz Nation	40.18	7	P	P	19 15 04.3	+0.1
AGMN				IAmb	IAmb	19 15 11.3	
	comp=Z,24nm,1.2s						
AGMN	Agassiz Nation	40.18	7	P	P	19 15 05.5	+1.2
	baz=191						
LUPA	Lehigh Univers	40.31	33	P	P	19 15 05.3	-0.2
LUPA				IAmb	IAmb	19 15 15.8	
	comp=Z,53nm,1.6s						
F05D	White Salmon	40.60	340	P	P	19 15 08.8	+1.0
	baz=151						
ETMB	Extrema	40.76	116	*e*P	P	19 15 08.7	-0.8
TAOE	Nuku Hiva Isla	40.90	246	*e*LR	LR	19 25 49.7	
	comp=Z,2µm,25.6s,baz=63						
TAOE	Nuku Hiva Isla	40.90	246	*e*T	T	19 58 21.2	
	comp=Z,105nm,0.2s						
BINY	Binghamton	41.15	31	P	P	19 15 12.0	-0.4
BINY				IAmb	IAmb	19 15 15.0	
	comp=Z,32nm,1.4s						
NEW	Newport	41.49	346	LR	LR	19 31 44.3	
	comp=Z,530nm,18.6s,baz=161,slow=35						
NEW	Newport	41.49	346	P	P	19 15 15.3	+0.1
	baz=158						
E04D	Cinebar	41.57	339	P	P	19 15 16.5	+0.7
E04D				IAmb	IAmb	19 15 27.3	
	comp=Z,49nm,1.5s						
E04D	Cinebar	41.57	339	P	P	19 15 17.2	+1.4
	baz=150						
L59A	Walton	41.62	32	P	P	19 15 16.6	+0.2
SADO	Sadowa	41.65	26	LR	LR	19 35 17.9	
	comp=Z,350nm,18.5s,baz=226,slow=40						
E03A	Lebam	41.91	339	P	P	19 15 19.4	+0.9
E03A				IAmb	IAmb	19 15 22.7	
	comp=Z,43nm,1.4s						
ULM	Lac du Bonnet	42.10	7	P	P	19 15 19.8	-0.2
	comp=Z,2.3nm,0.6s,baz=231,slow=2.9,SNR=1.6						
ULM				LR	LR	19 31 24.0	
	comp=Z,692nm,21.6s,baz=198,slow=34						
	comp=Z,2.3nm,0.6s						
ULM	Lac du Bonnet	42.10	7	P	P	19 15 20.1	0.0
ULM				IAmb	IAmb	19 15 27.1	
	comp=Z,29nm,1.6s						
LPAZ	La Paz	42.26	126	P	P	19 15 21.7	-0.9
	comp=Z,11nm,0.9s,baz=317,slow=8.0,SNR=24						
	comp=Z,11nm,0.9s						
LPAZ	La Paz	42.26	126	P	P	19 15 22.7	+0.1
LPAZ				IAmb	IAmb	19 15 26.9	
	comp=Z,43nm,1.5s						
LPAZ	La Paz	42.26	126	*e*P	P	19 15 23.0	+0.4
PB16	IPOC Station P	42.33	129	P	P	19 15 23.2	+0.1
PB11	IPOC Station P	43.07	131	P	P	19 15 29.1	+0.6
PB08	IPOC Station P	43.67	131	P	P	19 15 34.3	+0.6
PB01	IPOC Station P	43.98	132	P	P	19 15 37.0	+1.2
LVC	Limon Verde	45.37	133	P	P	19 15 47.3	+0.1
	comp=Z,5.6nm,1.0s,baz=33,slow=3.8,SNR=4.0						
LVC				LR	LR	19 30 20.6	
	comp=Z,1µm,19.5s,baz=299,slow=30						
	comp=Z,5.6nm,1.0s						
LVC	Limon Verde	45.37	133	P	P	19 15 47.6	+0.4
GO02	Mina Guanaco	46.54	137	P	P	19 15 58.2	+1.8
GO02				IAmb	IAmb	19 17 02.3	
	comp=Z,12nm,0.9s						
VILB	Vilhena	47.42	116	*e*P	P	19 16 03.3	+0.2
H03N2	Juan Fernandez	47.45	153	T	T	20 06 56.8	
	baz=329,slow=77,SNR=70						
H03N1	Juan Fernandez	47.47	153	T	T	20 07 00.4	
	baz=329,slow=77,SNR=78						
H03N3	Juan Fernandez	47.47	153	T	T	20 07 06.6	
	baz=329,slow=77,SNR=71						
BBB	Bella Bella	48.26	339	LR	LR	19 34 41.4	
	comp=Z,806nm,19.3s,baz=156,slow=34						
ITTB	Itaituba	48.71	103	*e*P	P	19 16 12.3	-0.7
MDP	Montagnes des	49.98	90	LR	LR	19 34 52.6	
	comp=Z,316nm,21.0s,baz=280,slow=33						
PDRB	Porto dos Gac	50.03	113	*e*P	P	19 16 23.2	0.0
PMOR	Pomariorio Ree	50.32	243	*e*T	T	20 10 24.0	
	comp=Z,6.3nm,0.2s						
CLDB	Colider	50.62	111	*e*P	P	19 16 27.9	+0.3
LMEL	Las Melosas	52.24	145	P	P	19 16 41.5	+1.9
LMEL				IAmb	IAmb	19 16 43.1	
	comp=Z,18nm,1.2s						
SALV	Santo Antonio	52.61	117	*e*P	P	19 16 42.6	+0.2
PPT	Papeete	52.87	241	LR	LR	19 32 38.2	
	comp=Z,901nm,19.9s,baz=41,slow=29						
PPT2	Papeete2	52.88	241	*e*S	S	19 24 11.4	-2.4
PPT2				*e*LR	LR	19 31 20.8	
	comp=Z,2µm,25.5s,baz=57						
PP1B	Ponte de Pedra	54.01	119	*e*P	P	19 16 54.2	+1.4
DLBC	Dease Lake	54.06	343	LR	LR	19 38 54.9	
	comp=Z,1µm,18.5s,baz=146,slow=35						
DLBC	Dease Lake	54.06	343	P	P	19 16 53.3	+0.7
SCHQ	Schefferville	54.44	25	P	P	19 16 56.1	+0.7
	comp=Z,7.3nm,1.1s,baz=266,slow=5.2,SNR=4.4						
SCHQ				LR	LR	19 42 05.8	
	comp=Z,1µm,18.7s,baz=234,slow=38						
	comp=Z,7.3nm,1.1s						
AQDB	Aquidauana	54.56	122	P	P	19 16 57.1	+0.4
AQDB				IAmb	IAmb	19 16 58.7	
	comp=Z,16nm,1.2s						
AQDB	Aquidauana	54.56	122	*e*P	P	19 16 57.6	+0.9
YKA	Yellowknife Ar	54.64	353	P	P	19 16 55.3	-1.3
	comp=Z,0.7nm,0.7s,baz=163,slow=7.3,SNR=9.4						
YKA				PcP	PcP	19 17 59.4	0.0
	comp=Z,0.8nm,0.9s,baz=155,slow=4.0,SNR=1.6						
YKA				LR	LR	19 40 11.1	
	comp=Z,634nm,19.2s,baz=162,slow=36						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	54.64	353	P	P	19 16 57.2	+0.6
SNDB	Serra Nova Dou	55.15	111	*e*P	P	19 17 01.8	+0.7
TBI	Tubuai	55.41	234	*e*S	S	19 24 49.2	+1.4
TBI				*e*LR	LR	19 32 44.2	
	comp=Z,2µm,27.0s,baz=62						
TBI	Tubuai	55.41	234	*e*T	T	20 16 38.6	
	comp=Z,9.8nm,0.3s						
CPUP	Villa Florida	56.12	129	P	P	19 17 07.2	-0.6
	comp=Z,11nm,1.1s,baz=304,slow=7.8,SNR=10						
CPUP				LR	LR	19 37 38.8	
	comp=Z,368nm,21.2s,baz=314,slow=32						
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	56.12	129	P	P	19 17 07.9	+0.1
CPUP				IAmb	IAmb	19 17 10.6	
	comp=Z,16nm,1.1s						
TGTN	Hyland Airport	56.21	346	P	P	19 17 08.3	+0.3
	baz=149						
P33M	Teslin, Yukon	56.34	343	P	P	19 17 09.3	+0.3
P33M	Teslin, Yukon	56.34	343	P	P	19 17 09.8	+0.7
	baz=144						
SKAG	Skagway	56.53	341	P	P	19 17 10.6	+0.4
	baz=140						
PLCA	Paso Flores	57.27	151	P	P	19 17 15.5	-0.4
	comp=Z,6.1nm,1.2s,baz=294,slow=7.5,SNR=4.6						
PLCA				LR	LR	19 36 30.5	
	comp=Z,762nm,19.5s,baz=326,slow=30						
	comp=Z,6.1nm,1.2s						
PLCA	Paso Flores	57.27	151	*e*P	P	19 17 16.7	+0.8
PEXB	Peixe	57.97	110	*e*P	P	19 17 21.6	+0.5
PNL	Peninsula	58.06	339	P	P	19 17 16.3	-4.8
	baz=136						
TRCB	Terra Rica	58.15	123	P	P	19 17 23.3	+0.9
N31M	Braeburn, Yuko	58.24	342	P	P	19 17 23.1	+0.7
N31M				IAmb	IAmb	19 17 30.1	
	comp=Z,16nm,1.2s						
N31M	Braeburn, Yuko	58.24	342	P	P	19 17 23.4	+1.0
	baz=141						
HYT	Haines Junctio	58.27	341	P	P	19 17 23.7	+1.0
HYT				IAmb	IAmb	19 17 34.2	
	comp=Z,11nm,1.3s						
HYT	Haines Junctio	58.27	341	P	P	19 17 23.7	+1.0
	baz=139						
M31M	Drury Creek, Y	58.40	343	P	P	19 17 24.0	+0.6
	baz=143						
ITQB	Itaqui	58.42	132	P	P	19 17 23.6	-0.5
ITQB				IAmb	IAmb	19 18 03.9	
	comp=Z,19nm,1.2s						
ITQB	Itaqui	58.42	132	*e*P	P	19 17 24.9	+0.8
N30M	Aishikik Lake	58.62	342	P	P	19 17 25.9	+0.8
	baz=139						
YUK6	Outpost Mounta	58.64	341	P	P	19 17 26.3	+0.9
	baz=138,SNR=7.3						
YUK4	Talbot Arm	59.03	341	P	P	19 17 29.3	+1.2
	baz=138						
BDFB	Brasilia	59.37	114	P	P	19 17 31.0	-0.1
	comp=Z,3.2nm,0.7s,baz=311,slow=11,SNR=4.0						
BDFB				LR	LR	19 41 54.2	
	comp=Z,463nm,18.7s,baz=309,slow=35						
	comp=Z,3.2nm,0.7s						
BDFB	Brasilia	59.37	114	P	P	19 17 30.9	-0.1
BDFB				IAmb	IAmb	19 17 32.8	
	comp=Z,7.5nm,1.1s						
M30M	Minto, Yukon	59.39	343	P	P	19 17 29.7	-0.7
M30M				IAmb	IAmb	19 17 52.1	
	comp=Z,18nm,2.0s						
M30M	Minto, Yukon	59.39	343	P	P	19 17 29.1	-1.2
	baz=140						
CTG	Chitna Glacier	59.67	339	P	P	19 17 32.1	-0.3
	baz=134						
ISLE	Juniper Island	59.77	339	P	P	19 17 32.8	-0.3
ISLE				IAmb	IAmb	19 17 40.6	
	comp=Z,11nm,1.3s						
TRQA	Tornquist	59.94	143	P	P	19 17 34.7	+0.2
YUK3	Moose Creek	59.94	340	P	P	19 17 32.8	-1.6
	baz=136						
FRB	Frobisher Bay	60.41	17	LR	LR	19 44 59.3	
	comp=Z,307nm,19.9s,baz=204,slow=37						
BVCY	Beaver Creek	60.53	341	P	P	19 17 39.2	+1.0
	baz=136						
MCARA	McCarthy VSAT	60.55	339	P	P	19 17 38.6	+0.3
MCARA				IAmb	IAmb	19 17 46.1	
	comp=Z,18nm,1.3s						
MCARA	McCarthy VSAT	60.55	339	P	P	19 17 38.9	+0.6
	baz=133						
VRDI	Verde Repeater	60.59	339	P	P	19 17 39.0	+0.2
VRDI				IAmb	IAmb	19 17 45.6	
	comp=Z,8.3nm,1.1s						
M27K	Edge Creek, AK	60.83	340	P	P	19 17 40.2	-0.2
M27K				IAmb	IAmb	19 17 51.2	
	comp=Z,11nm,1.3s						
M27K	Edge Creek, AK	60.83	340	P	P	19 17 40.3	-0.1
	baz=134						
BMRM	Bremner River	60.84	338	P	P	19 17 41.2	+0.9
BMRM	Bremner River	60.84	338	P	P	19 17 41.5	+1.1
	baz=131						
GLB	Gilahina Butte	60.87	339	P	P	19 17 40.9	+0.4
GLB				IAmb	IAmb	19 17 48.1	
	comp=Z,10.0nm,1.0s						
EYAK	Cordova Ski Ar	60.99	337	P	P	19 17 42.0	+0.7
	baz=130						
M26K	Nabesna, AK	61.23	340	P	P	19 17 43.2	+0.2
M26K				IAmb	IAmb	19 17 49.8	
	comp=Z,6.6nm,0.9s						
M26K	Nabesna, AK	61.23	340	P	P	19 17 43.2	+0.2
	baz=133						
N25K	Chitina, Valde	61.26	339	P	P	19 17 44.0	+0.8
	baz=131,SNR=8.6						
DAWY	Dawson	61.29	343	P	P	19 17 43.2	0.0
DAWY				IAmb	IAmb	19 17 54.4	
	comp=Z,21nm,1.5s						
DAWY	Dawson	61.29	343	P	P	19 17 43.3	0.0
	baz=138						
BCAR	Beaver Creek A	61.30	341	P	P	19 17 42.3	-1.2
L27K	Beaver Creek,	61.31	341	P	P	19 17 43.7	+0.2
	baz=135						
DIV	Divide	61.37	338	P	P	19 17 43.6	-0.4
DIV				IAmb	IAmb	19 17 50.7	
	comp=Z,6.9nm,0.8s						
KLU	Klutina	61.66	338	P	P	19 17 46.0	0.0
KLU				IAmb	IAmb	19 17 52.6	
	comp=Z,9.6nm,1.0s						
KLU	Klutina	61.66	338	P	P	19 17 46.3	+0.3
	baz=130						
GLI	Glacier Island	61.72	337	P	P	19 17 46.0	-0.2
GLI				IAmb	IAmb	19 17 52.8	
	comp=Z,9.0nm,1.0s						
GLI	Glacier Island	61.72	337	P	P	19 17 47.6	+1.4
	baz=128						
L26K	Log Cabin Wild	61.78	340	P	P	19 17 46.6	0.0
	baz=133						

I29M	Ogilvie Camp,	61.95	344	P	P	19 17 47.2	-0.6
I29M				IAmb	IAmb	19 17 54.3	
	comp=Z,13nm,1.2s						
I29M	Ogilvie Camp,	61.95	344	P	P	19 17 47.3	-0.5
	baz=139						
HARP	HAARP	61.98	339	P	P	19 17 48.7	+0.7
	baz=131						
K27K	Chicken	62.08	342	P	P	19 17 49.0	+0.5
	baz=135						
KDAK	Kodiak Island	62.24	333	P	P	19 17 49.3	-0.5
	comp=Z,1.3nm,0.7s,baz=83,slow=7.5,SNR=3.6						
	comp=Z,1.3nm,0.7s						
OHAK	Old Harbor	62.28	332	P	P	19 17 49.2	-0.8
OHAK	Old Harbor	62.28	332	P	P	19 17 50.1	+0.1
	baz=120						
EPYK	Eagle Plains	62.32	345	P	P	19 17 49.9	-0.3
	baz=142						
EGAK	Eagle	62.33	343	P	P	19 17 50.1	-0.1
EGAK				IAmb	IAmb	19 17 57.4	
	comp=Z,19nm,1.6s						
EGAK	Eagle	62.33	343	P	P	19 17 50.6	+0.4
	baz=136						
PAX	Paxson	62.46	340	P	P	19 17 51.0	-0.3
	baz=131						
BRSE	Bradley Lake S	62.50	335	P	P	19 17 51.1	-0.4
	baz=124						
M23K	Glacier View	62.52	338	P	P	19 17 55.7	+4.0
	baz=128						
KNK	Knik Glacier	62.57	337	P	P	19 17 51.9	-0.1
	baz=127						
CNPM	China Poot	62.59	335	P	P	19 17 51.6	-0.5
CNPM				IAmb	IAmb	19 17 59.0	
	comp=Z,14nm,1.1s						
SML	Sawmill	62.76	338	P	P	19 17 52.8	-0.5
	baz=128,SNR=20						
RC01	Rabbit Creek A	62.87	337	P	P	19 17 52.7	-1.2
RC01				IAmb	IAmb	19 20 09.5	
	comp=Z,6.5nm,0.7s						
RC01	Rabbit Creek A	62.87	337	P	P	19 17 53.4	-0.5
	baz=126						
J26L	Joseph Creek	62.87	342	P	P	19 17 53.8	-0.2
	baz=134						
PMR	Palmer	62.93	337	P	P	19 17 54.1	-0.2
	baz=127						
WAT6	Susitna Watana	63.02	339	P	P	19 17 54.6	-0.5
	baz=128,SNR=11						
K24K	Donnelly Dome	63.12	340	P	P	19 17 58.8	+3.3
	baz=131						
RAR	Rarotonga	63.14	241	LR	LR	19 37 50.7	
	comp=Z,517nm,18.1s,baz=43,slow=29						
INK	Inuvik	63.15	348	LR	LR	19 43 33.9	
	comp=Z,556nm,21.9s,baz=150,slow=34						
INK	Inuvik	63.15	348	P	P	19 17 54.9	-0.8
INK				IAmb	IAmb	19 18 08.5	
	comp=Z,11nm,1.2s						
INK	Inuvik	63.15	348	P	P	19 17 55.4	-0.3
	baz=146						
DHY	Denali Highway	63.20	339	P	P	19 17 55.5	-0.9
DHY				IAmb	IAmb	19 18 02.5	
	comp=Z,6.7nm,0.9s						
DHY	Denali Highway	63.20	339	P	P	19 17 55.4	-0.9
	baz=129						
M22K	Willow	63.41	337	P	P	19 17 57.3	-0.2
M22K	Willow	63.41	337	P	P	19 17 57.5	+0.1
	baz=126						
WAT1	Susitna Watana	63.47	338	P	P	19 17 57.1	-0.8
	baz=128						
O20K	Slope Mountain	63.48	335	P	P	19 17 59.4	+1.3
	baz=122						
P19K	Oil Pt	63.51	334	P	P	19 17 56.9	-1.4
	baz=122						
J25K	Salcha River,	63.52	341	P	P	19 17 58.0	-0.3
	baz=132						
RSO	Redoubt South	63.74	335	P	P	19 17 59.4	-0.6
HDA	Harding Lake	63.90	340	P	P	19 17 59.7	-1.0
	baz=130						
SPCR	Spurr Chakacha	63.92	336	P	P	19 18 00.1	-0.9
	baz=123						
RND	Reindeer	63.93	339	P	P	19 18 00.3	-0.7
IL31		64.12	341	P	P	19 18 00.9	-1.2
IL31				IAmb	IAmb	19 18 11.7	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	64.12	341	P	P	19 18 01.3	-0.8
	comp=Z,3.4nm,0.7s,baz=151,slow=4.2,SNR=46						
ILAR				LR	LR	19 44 59.2	
	comp=Z,274nm,18.9s,baz=120,slow=35						
	comp=Z,3.4nm,0.7s						
ILAR	Eielson Array	64.12	341	P	P	19 18 00.8	-1.3
MCK	McKinley	64.16	339	P	P	19 18 00.7	-1.7
	baz=128						
TRF	Thorofare Moun	64.47	338	P	P	19 18 04.5	-0.2
	baz=126						
O18K	Koktuh Hills	64.48	334	P	P	19 18 03.5	-1.0
	baz=120						
N19K	Bonanza Creek	64.65	335	P	P	19 18 04.8	-1.0
	baz=121						
NEA2	Nenana	64.73	340	P	P	19 18 05.5	-0.6
NEA2	Nenana	64.73	340	P	P	19 18 05.3	-0.8
	baz=128,SNR=9.3						
PPLA	Purkeypile	64.86	337	P	P	19 18 07.0	-0.2
	baz=124,SNR=12						
BPAW	Bear Paw Mtn.	65.11	339	P	P	19 18 07.2	-1.4
	baz=126						
CAST	Castle Rocks	65.11	338	P	P	19 18 06.8	-1.9
CAST	Castle Rocks	65.11	338	P	P	19 18 07.6	-1.1
	baz=124,SNR=10.0						
H24K	Noodor Dome	65.12	341	P	P	19 18 08.3	-0.4
	baz=130,SNR=10						
I23K	Minto, Yukon-K	65.17	340	P	P	19 18 07.4	-1.5
	baz=128						
M19K	Big River Lodg	65.18	336	P	P	19 18 08.4	-0.7
M19K				IAmb	IAmb	19 18 15.0	
	comp=Z,11nm,1.0s						
M19K	Big River Lodg	65.18	336	P	P	19 18 08.4	-0.7
	baz=121						
N18K	Kilae Creek	65.18	334	P	P	19 18 08.2	-1.0
	baz=119,SNR=9.5						
BMAR	Burnt Mountain	65.20	344	P	P	19 18 08.8	-0.4
SVW2	Sparrevohn	65.26	335	P	P	19 18 08.3	-1.4
SVW2				IAmb	IAmb	19 18 15.4	
	comp=Z,8.1nm,1.0s						
L20K	Farewell, AK	65.28	337	P	P	19 18 08.7	-1.1
	baz=122,SNR=8.6						
L19K	White Mountain	65.51	336	P	P	19 18 10.2	-1.1
	baz=121						
H23K	Yukon River	65.65	341	P	P	19 18 11.3	-0.8
	baz=128						
K20K	Telida	65.83	337	P	P	19 18 12.0	-1.3
	baz=122,SNR=9.6						
I21K	Tanana	66.08	340	P	P	19 18 14.7	-0.1
	baz=125						
J20K	Nowinta River	66.30	338	P	P	19 18 14.8	-1.4
J20K				IAmb	IAmb	19 18 22.3	
	comp=Z,9.8nm,0.9s						
J20K	Nowinta River	66.30	338	P	P	19 18 15.6	-0.6
	baz=122,SNR=8.5						
TTA	Tatalina	66.36	336	P	P	19 18 16.0	-0.8
TTA				IAmb	IAmb	19 18 21.8	
	comp=Z,6.2nm,1.0s						
TTA	Tatalina	66.36	336	P	P	19 18 15.7	-1.0
	baz=120						
RES	Resolute Bay	66.38	2	LR	LR	19 46 05.8	
	comp=Z,391nm,18.4s,baz=212,slow=35						
H21K	Melozitna Rive	66.64	340	P	P	19 18 17.8	-0.6
	baz=124,SNR=12						
COLD	Coldfoot	66.72	342	P	P	19 18 19.2	+0.2
	baz=128						
IMAR	Indian Mountai	67.14	340	P	P	19 18 20.2	-1.5
TOLK	Toolik Lake Re	67.41	343	P	P	19 18 23.2	-0.2
	baz=129						
SFJD	Kangerlussuaq	68.17	20	LR	LR	19 49 16.3	
	comp=Z,466nm,19.6s,baz=232,slow=37						
RCBR	Riachuelo	68.27	100	LR	LR	19 47 40.6	
	comp=Z,530nm,21.0s,baz=74,slow=35						
USHA	Ushuaia	69.31	160	LR	LR	19 42 47.9	
	comp=Z,816nm,18.6s,baz=295,slow=31						
AFI	Afiamalu	71.87	252	LR	LR	19 41 54.7	
	comp=Z,356nm,19.4s,baz=60,slow=29						
BORG	Borgarnes	78.82	26	LR	LR	19 55 20.7	
	comp=Z,236nm,18.1s,baz=280,slow=36						
SHEM	Shemya Is, Ala	79.12	322	LR	LR	19 46 35.4	
	comp=Z,496nm,21.6s,baz=109,slow=30						
RAO	Raoul Island	81.23	239	LR	LR	19 46 42.1	
	comp=Z,323nm,19.5s,baz=78,slow=29						
JMIC	Jan Mayen	83.52	19	LR	LR	19 58 54.3	
	comp=Z,325nm,18.4s,baz=270,slow=37						
URZ	Urewera	87.40	231	LR	LR	19 50 55.8	
	comp=Z,268nm,20.2s,baz=31,slow=30						
SPITS	Spitsbergen Ar	87.55	10	LR	LR	20 00 11.6	
	comp=Z,240nm,18.6s,baz=12,slow=36						
PETK	Petropavlovsk-	88.94	323	LR	LR	19 51 14.8	
	comp=Z,220nm,21.0s,baz=80,slow=30						
MA2	Magadan	90.94	331	LR	LR	19 57 40.6	
	comp=Z,203nm,18.6s,baz=50,slow=33						
ESDC	Sonseca Array	91.48	50	LR	LR	19 58 58.2	
	comp=Z,321nm,18.0s,baz=288,slow=34						
MDT	Midelt	92.37	57	LR	LR	19 56 30.5	
	comp=Z,137nm,21.1s,baz=340,slow=32						
RPZ	Rata Peaks	92.92	226	LR	LR	19 52 40.4	
	comp=Z,445nm,21.3s,baz=52,slow=29						
TIXI	Tiksi	93.20	346	LR	LR	20 05 05.8	
	comp=Z,260nm,18.3s,baz=358,slow=37						
TIXI	Tiksi	93.20	346	P	P	19 20 42.5	+0.3
TIXI				IAmb	IAmb	19 20 54.0	
	comp=Z,7.3nm,1.1s						
DZM	Mont Dzumac	93.74	248	LR	LR	19 57 08.8	
	comp=Z,305nm,18.2s,baz=76,slow=32						
DZM	Mont Dzumac	93.74	248	*e*LR	LR	19 50 38.6	
	comp=Z,493nm,24.3s						
ARCES	ARCESS Array B	94.58	16	LR	LR	20 03 22.1	
	comp=Z,640nm,21.0s,baz=306,slow=36						
DBIC	Dimbokro	96.92	82	LR	LR	20 01 58.5	
	comp=Z,137nm,20.1s,baz=309,slow=34						
FINES	FINESS Array B	99.86	22	LR	LR	20 08 41.4	
	comp=Z,318nm,18.1s,baz=323,slow=37						
ZALV	Zalesovo Beam	117.52	355	PKP	PKPdf	19 26 14.0	0.0
	comp=Z,0.2nm,0.3s,baz=319,slow=4.2,SNR=1.7						
HHC	Hu-ho-hao-te	121.61	330	*e*P	PKPdf	19 26 18.8	-3.7
NJ2	Nanjing	123.37	317	*e*P	PKPdf	19 26 24.0	-1.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	123.59	252	PKP	PKPdf	19 26 26.5	-0.2
	comp=Z,1.0nm,1.0s,baz=91,slow=2.5,SNR=4.7						
ASAR	Alice Springs	123.71	247	PKP	PKPdf	19 26 26.6	-0.2
	comp=Z,0.4nm,0.9s,baz=72,slow=3.0,SNR=3.1						
MKAR	Makanchi Array	124.83	356	PKP	PKPdf	19 26 27.6	-0.8
	comp=Z,0.9nm,0.8s,baz=337,slow=1.8,SNR=7.8						
MKAR	Makanchi Array	124.83	356		PKPdf	19 26 27.3	-1.1
WMQ	Urumqi	127.12	350	*e*P	PKiKP	19 26 34.4	+1.0
TARG	Taragay, Kyrgy	130.09	359	PKPdf	PKPdf	19 26 40.3	+1.2
GEYT	Alibeck	130.59	20	PKP	PKPdf	19 26 39.4	-0.3
	comp=Z,1.0nm,0.5s,baz=280,slow=3.4,SNR=1.7						
BTK	Batken	131.41	6	PKPdf	PKPdf	19 26 41.5	+0.3
KSH	Kashi	132.29	1	PKP	PKiKP	19 26 46.9	+2.9
CHGR	Chuyangaron	132.58	8	PKPdf	PKiKP	19 26 45.1	+0.5
CD2	Chengdu	133.29	328	PKP	PKPdf	19 26 45.3	+0.3
PZH	PanZhiHua	137.84	326	PKP	PKPdf	19 26 52.5	-1.2
CHTO	Chiang Mai	145.41	322	PKPbc	PKPbc	19 27 06.4	-0.7
CM31	Chiang Mai Arr	145.69	321	PKPdf	PKPdf	19 27 07.4	-0.3
CMAR	Chiang Mai Arr	145.69	321	PKPbc	PKPdf	19 27 07.2	-0.5
	comp=Z,2.0nm,0.9s,baz=358,slow=2.4,SNR=15						
CMAR	Chiang Mai Arr	145.69	321		PKPdf	19 27 07.0	-0.7

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*GII **14** 19:08:30.8±0.0, 36°.12N×29°.67E, h10^{km}, Mm2.9/6*
*NIC **14** 19:08:32.9±0.0, 36°.15N×29°.72E, h0^{km}±1^{km}, Ml3.3/5*
*ISK **14** 19:08:32.9, 36°.11N×29°.68E, h5^{km}, ML3.5/21*
*DDA **14** 19:08:32.1±0.0, 35°.89N×29°.67E, h24^{km}±1^{km}, ML3.5*
*ATH **14** 19:08:32.3, 36°.17N×29°.66E, h16^{km}±1^{km}, ML3.1/2, Error ellipse: s-maj=3.2km s-min=1.1km az=129.0*
*IDC **14** 19:08:32.7±0.9, 36°.00N×29°.76E, h0^{km}, mb3.6/6, mbtmp3.5/14, ML3.6/8, MS2.7/1, Error ellipse: s-maj=17.1km s-min=14.5km az=2.0*
*THE **14** 19:08:34.1, 36°.04N×29°.81E, h0^{km}±3^{km}, ML3.2/3, Error ellipse: s-maj=9.9km s-min=1.0km az=108.0*
ISC 14 19:08:33.4±0.6**, 36°.10N**±0°.02×**29°.69E**±0°.01**, h12**^{km}±4^{km}**,**
n114, σ2^{s}.25/163**, mb3.5**/6**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.10	297	P	Pg	19 08 35.4	-1.0
KSL				S	Sg	19 08 37.1	-1.4
KSL	Kastellorizon	0.10	297	⇑ *i*P	Pg	19 08 35.6	-0.7
KSL				S	Sg	19 08 37.0	-1.4
KSL				AML	AML	19 08 37.3	
	216nm,0.4s						
KSL				AML	AML	19 08 37.3	
	216nm,0.4s						
KSL				AML	AML	19 08 37.4	
	298nm,0.3s						
KSL				AML	AML	19 08 37.4	
	298nm,0.3s						
AKAS	Kas	0.15	331	PG	Pg	19 08 36.7	-0.4
AKAS				SG	Sg	19 08 38.9	-0.8
AKAS	Kas	0.15	331	P	Pg	19 08 36.6	-0.4
AKAS				S	Sg	19 08 38.8	-0.9
DEMR	Demre-Antalya	0.22	52	PG	Pb	19 08 38.5	-0.8
DEMR				SG	Sb	19 08 42.4	+1.1
AKUM	Antalya-Kumluc	0.57	67	P	Pn	19 08 45.5	-1.7
ELL	Elmali	0.67	15	PG	Pn	19 08 45.8	-3.0
ELL	Elmali	0.67	15	P	Pn	19 08 45.8	-3.0
ELL				S	Sn	19 08 56.2	-3.0
FETY	Fethiye	0.72	317	PG	Pn	19 08 48.1	-1.4
FETY				SG	Sn	19 08 58.9	-1.6
KEMT	Kemer-ANTALYA	0.86	54	PG	Pn	19 08 50.9	-0.3
CAME	Cameli-Denizli	0.90	340	PG	Pn	19 08 50.9	-1.0
KORT	Korkueli	1.04	30	PG	Pn	19 08 53.9	0.0
KORT	Korkueli	1.04	30	P	Pn	19 08 52.3	-1.6
KORT				S	Sn	19 09 12.7	+4.2
CAEL	Denizli, Camel	1.06	344	P	Pn	19 08 54.1	-0.1
CAEL				S	Sn	19 09 14.2	+5.3
CAEL				*i* AML	AML	19 09 20.0	
	comp=N,1µm,1.1s						
CAEL				*i* AML	AML	19 09 34.0	
	comp=E,1µm,0.7s						
DALY	Dalyan (Mula)	1.10	311	PN	Pg	19 08 54.8	+0.2
DALY				SN	Sn	19 09 11.2	+1.5
ANTB	Antalya	1.11	44	PN	Pg	19 08 55.7	+0.9
GOLH	Golhisar	1.14	355	P	Pg	19 08 57.0	+1.7
GOLH				S	Sn	19 09 16.2	+5.5
GOLH				*i* AML	AML	19 09 25.0	
	comp=N,671nm,0.6s						
GOLH				*i* AML	AML	19 09 28.0	
	comp=E,1µm,0.6s						
ARG	Arkhangelos	1.27	276	P	Pn	19 08 54.7	-2.3
ARG				S	Sb	19 09 11.3	-2.3
ARG				AML	AML	19 09 26.0	
	comp=N,1636µm,1.0s						
ARG				AML	AML	19 09 29.0	
	comp=E,1812µm,1.4s						
ARG	Arkhangelos	1.27	276	P	Pg	19 08 58.4	+0.5
ARG				S	Sg	19 09 18.2	+3.7
	comp=E,865nm,1.2s						
ARG	Arkhangelos	1.27	276	PN	Pg	19 08 58.2	+0.2
ARG	Arkhangelos	1.27	276	P	Pg	19 08 58.1	+0.2
ARG				S	Sg	19 09 17.4	+3.0
TURN	Turunc	1.35	300	PN	Pg	19 08 59.6	+0.3
TURN	Turunc	1.35	300	P	Pg	19 08 59.6	+0.3
TURN				S	Sg	19 09 19.4	+2.6
BUCA	Burdur, Bucak-	1.41	29	P	Pg	19 09 01.4	+0.9
BUCA				S	Sg	19 09 26.6	+7.9
BUCA				*i* AML	AML	19 09 34.0	
	comp=E,350nm,1.2s						
TAVA	DENIZLI_Tavas	1.50	335	P	Pg	19 09 02.7	+0.5
TAVA				S	Sg	19 09 26.0	+4.4
YER	Yerkesik	1.53	313	P	Pg	19 09 03.3	+0.4
YER				S	Sg	19 09 25.3	+2.5
YER	Yerkesik	1.53	313	PN	Pg	19 09 02.8	-0.1
YER				SN	Sg	19 09 24.3	+1.5
MULA	Mugla, Merkez-	1.59	317	P	Pg	19 09 03.9	-0.1
MULA				S	Sg	19 09 26.9	+2.1
MULA				*i* AML	AML	19 09 31.0	
	comp=E,920nm,0.7s						
MULA				*i* AML	AML	19 09 32.0	
	comp=E,500nm,0.6s						
BRDR	BURDUR-Merkez	1.62	10	P	Pg	19 09 05.4	+0.9
BRDR				S	Sg	19 09 29.1	+3.6
BRDR				*i* AML	AML	19 09 37.0	
	comp=E,327nm,0.6s						
KEPZ	Antalya-Kepez	1.73	62	P	Pg	19 09 06.2	-0.5
KEPZ				S	Sg	19 09 27.7	-1.5
DAT	Datca	1.82	291	P	Pg	19 09 06.4	-1.9
DAT	Datca	1.82	291	PN	Pg	19 09 06.3	-2.0
BASM	Basmaki-Afyon	1.83	9	PN	Pg	19 09 07.3	-1.3
ISP	Isparta	1.84	21	Pn	Pg	19 09 06.9	-1.8
MLSB	Milas	1.95	308	PN	Pg	19 09 08.9	-1.9
BDRM	Kayabasi	2.05	299	P	Pg	19 09 09.6	-3.2
BDRM				S	Sg	19 09 37.1	-2.2
BAGO	Egridir - ISPA	2.08	25	P	Pg	19 09 12.1	-1.1
BAGO				S	Sg	19 09 41.8	+1.6
NIS1	Nisyros Isl.	2.09	285	P	Pb	19 09 09.8	-1.5
GAZI	Gazipasa	2.13	86	PN	Pb	19 09 10.1	-1.8
GAZI	Gazipasa	2.13	86	P	Pb	19 09 10.0	-1.8
GAZI				S	Sb	19 09 37.1	-1.1
AYDN	Tasoluk	2.13	317	P	Pg	19 09 12.9	-1.4
AYDN				S	Sg	19 09 40.7	-1.2
AYDN				*i* AML	AML	19 09 46.0	
	comp=E,284nm,0.4s						
AYDN				*i* AML	AML	19 09 49.0	
	comp=E,454nm,0.6s						
KARP	Karpathos	2.13	256	P	Pb	19 09 10.2	-1.8
KARP				S	Sb	19 09 36.9	-1.5
KARP				AML	AML	19 09 45.0	
	comp=E,370µm,0.4s						
KARP				AML	AML	19 09 45.9	
	comp=N,636µm,0.5s						
KARP	Karpathos	2.13	256	P	Pb	19 09 10.7	-1.3
KARP				S	Sg	19 09 39.3	-2.6
	comp=N,285nm,0.6s						
KARP	Karpathos	2.13	256	P	Pb	19 09 10.6	-1.4
KARP				S	Sg	19 09 39.7	-2.2
KARP				AML	AML	19 09 45.3	
	comp=N,0.6nm,0.4s						
KARP				AML	AML	19 09 45.3	
	comp=N,0.6nm,0.4s						
KARP				AML	AML	19 10 00.6	
	comp=N,0.5nm,0.6s						
KARP				AML	AML	19 10 00.6	
	comp=N,0.5nm,0.6s						
SEDI	Konya, Seydise	2.13	50	P	Pg	19 09 13.9	-0.4
SEDI				S	Sg	19 09 44.6	+2.6
BODT	Bodrum	2.14	297	P	Pb	19 09 10.6	-1.6
BODT				S	Sg	19 09 39.5	-2.8
BODT	Bodrum	2.14	297	PN	Pb	19 09 10.5	-1.6
SEYD	Seydisehir-KON	2.16	52	PN	Pb	19 09 12.0	-0.5
KZIL	AFYON_Kizioren	2.18	9	P	Pg	19 09 12.4	-2.8
KZIL				S	Sg	19 09 41.8	-1.7
PASA	Karahalli, USA	2.25	356	P	Pg	19 09 12.8	-3.7
PASA				S	Sg	19 09 43.7	-1.9
AYDB	Zeytinkoy-Aydi	2.34	322	PN	Pg	19 09 14.6	-3.7
DDIM	Aydin, Didim	2.39	305	P	Pb	19 09 14.9	-1.4
DDIM				*i* AML	AML	19 10 04.0	
	comp=N,462nm,1.0s						
DDIM				*i* AML	AML	19 10 09.0	
	comp=N,488nm,0.8s						
HDMB	Hadim	2.41	68	PN	Pb	19 09 16.1	-0.7
AKMS	Akamas	2.41	116	P	Pn	19 09 13.7	+1.1
AKMS				AML	AML	19 09 44.8	
	comp=N,0.4nm,0.7s						
AKMS				AML	AML	19 09 45.0	
	comp=N,0.4nm,0.9s						
YVAC	Isparta, Yalva	2.49	29	P	Pg	19 09 18.2	-3.0
YVAC				S	Sg	19 09 49.0	-4.5
GCAM	G?zelcaml?	2.54	310	PN	Pb	19 09 17.0	-1.8
GCAM	G?zelcaml?	2.54	310	P	Pb	19 09 17.5	-1.3
GCAM				S	Sg	19 09 50.6	-4.3
GCAM				*i* AML	AML	19 10 11.0	
	comp=N,162nm,1.2s						
SHUT	Suhut-Afyon	2.54	15	PN	Pb	19 09 17.1	-1.9
KULA	Kula-Manisa	2.54	341	P	Pb	19 09 16.6	-2.4
KULA	Kula-Manisa	2.54	341	PN	Pb	19 09 16.2	-2.8
DOGA	KONYA_Doganhis	2.55	38	P	Pg	19 09 20.4	-1.9
DOGA				S	Sg	19 09 52.0	-3.3
ALFC	Alefka	2.55	111	P	Pn	19 09 15.3	+0.8
ALFC				AML	AML	19 09 50.5	
	comp=N,0.3nm,0.6s						
ALFC				AML	AML	19 09 50.9	
	comp=N,0.3nm,0.6s						
MANT	Manisa	2.55	340	P	Pb	19 09 16.6	-2.6
MANT				S	Sb	19 09 47.9	-2.7
ERMK	Ermenek	2.65	77	P	Pb	19 09 20.0	-1.0
ERMK				S	Sb	19 09 52.0	-1.5
USAK	Uak-Merkez	2.66	349	P	Pb	19 09 18.7	-2.4
NATA	Nata	2.69	119	P	Pn	19 09 17.9	+1.3
KMER	Konya-Meram	2.71	51	P	Pb	19 09 21.4	-0.6
KMER				S	Sg	19 09 58.1	-2.5
SMG	Samos	2.79	306	P	Pb	19 09 19.8	-3.4
SMG				S	Sb	19 09 54.6	-2.9
SMG	Samos	2.79	306	P	Pb	19 09 19.5	-3.8
SMG				S	Sb	19 09 56.9	-0.5
	comp=N,232nm,0.5s						
KKBE	Karaman, Kazim	2.84	66	P	Pb	19 09 22.2	-1.9
KKBE				S	Sb	19 09 58.6	-0.1
SZAC	Souni	2.93	116	P	Pn	19 09 20.5	+0.7
SZAC				AML	AML	19 09 43.1	
	comp=N,0.3nm,1.3s						
SZAC				AML	AML	19 10 05.5	
	comp=N,0.2nm,0.4s						
DGB	zmir	2.97	312	P	Pb	19 09 24.0	-2.2
DGB				*i* AML	AML	19 10 15.0	
	comp=N,171nm,1.1s						
DGB				*i* AML	AML	19 10 15.0	
	comp=N,136nm,0.9s						
ZKR	Zakros	3.00	252	P	Pb	19 09 22.9	-3.9
ZKR	Zakros	3.00	252	P	Pb	19 09 23.0	-3.7
KDHN	Kadinhani	3.09	38	P	Pb	19 09 25.8	-2.6
BLCB	Balcova	3.11	318	P	Pb	19 09 25.0	-3.6
GULN	MERSIN_Gulnar	3.12	87	P	Pb	19 09 25.0	-3.7
AKHS	Akhisar	3.15	332	P	Pb	19 09 24.1	-5.2
CSS	Mathiatis	3.18	110	P	Pb	19 09 27.7	-2.1
CSS	Mathiatis	3.18	110	P	Pn	19 09 24.9	+1.7
CSS	Mathiatis	3.18	110	Pn	Pn	19 09 20.6	-2.6
ASGA	Asgata	3.19	113	P	Pn	19 09 24.9	+1.6
MVOU	Mavrovouni	3.39	108	P	Pn	19 09 27.0	+0.9
ANDZ	Kutahya, Merke	3.40	3	P	Pb	19 09 29.1	-4.6
APE	Apeiranthos	3.49	287	Pn	Pn	19 09 24.4	-3.1
ZEDA	zmir-Bergama	3.53	325	P	Pb	19 09 30.5	-5.4
IDI	Anoyia	3.99	260	Pn	Pn	19 09 35.8	+1.3
	comp=N,2.5nm,0.3s,baz=60,slow=12,SNR=19						
IDI				Sn	Sn	19 10 23.8	+2.6
	comp=N,2.9nm,0.3s,baz=0.0,slow=10,SNR=2.8						
	comp=N,7.9nm,0.4s						
IMMV	Iera Moni Meta	4.69	264	P	Pn	19 09 46.5	+2.6
BRTR	Keskin Array B	4.78	40	Pn	Pn	19 09 49.0	+3.8
	comp=N,1.0nm,0.3s,baz=208,slow=15,SNR=40						
BRTR				Sn	Sb	19 10 45.8	-8.7
	comp=N,1.7nm,0.3s,baz=211,slow=24,SNR=30						
	comp=N,4.7nm,0.6s						
HNTI	Hanita	5.43	122	Pn	Pn	19 09 52.4	-1.8
HNTI				Sn	Sn	19 10 55.6	-1.0
OFRI	\`Ofer	5.59	127	Pn	Pn	19 09 54.3	-2.0
OFRI				Sn	Sn	19 10 59.8	-0.7
MMA0B	Mount Meron ar	5.63	122	Sn	Sn	19 11 00.9	-0.6
MMAI	Mount Meron Ar	5.63	122	Pn	Pn	19 09 55.4	-1.5
	comp=N,4.5nm,0.3s,baz=274,slow=20,SNR=14						
MMAI				Sn	Sn	19 11 00.8	-0.7
	comp=N,2.6nm,0.3s,baz=304,slow=21,SNR=1.7						
	comp=N,0.8nm,0.3s						
GEM	Giv'at Ha'Em	5.70	119	Pn	Pn	19 09 57.1	-0.8
GEM				Sn	Sn	19 11 02.9	-0.4
NATI	Neve Ativ	5.73	118	Pn	Pn	19 09 57.5	-0.7
NATI				Sn	Sn	19 11 02.6	-1.3
MMLI	Mount Malkishu	5.99	126	Pn	Pn	19 09 59.9	-1.9
MMLI				Sn	Sn	19 11 08.7	-1.6
HMDT	Nahal Hemdat	6.17	127	Pn	Pn	19 10 03.2	-1.1
HMDT				Sn	Sn	19 11 12.7	-2.1
KZIT	Kziot	6.50	142	Pn	Pn	19 10 07.4	-1.5
KZIT				Sn	Sn	19 11 21.8	-1.2
DSI	Dead Sea	6.54	132	Pn	Pn	19 10 06.9	-2.5
GHAJ	Ghor Haditha	6.84	133	Pn	Pn	19 10 11.2	-2.4
ASF	Jabal al Asfar	7.14	121	Pn	Pn	19 10 18.6	+0.8
	comp=N,0.6nm,0.3s,baz=318,slow=4.2,SNR=2.9						
ASF				Sn	Sn	19 11 41.3	+2.4
	comp=N,0.2nm,0.3s,baz=333,slow=2.3,SNR=1.2						
	comp=N,1.7nm,0.4s						
PRNI	Paran	7.26	141	Pn	Pn	19 10 17.4	-1.9
HRFI	Mount Harif	7.53	142	Pn	Pn	19 10 21.2	-1.8
EIL	Elat	7.79	144	Pn	Pn	19 10 26.9	+0.4
	comp=N,0.3nm,0.3s,baz=346,slow=11,SNR=4.1						
EIL				Sn	Sn	19 11 52.8	-1.9
	comp=N,0.2nm,0.3s,baz=60,slow=16,SNR=2.1						
EIL				LR	LR	19 14 53.3	
	comp=N,56nm,18.8s,baz=298,slow=50						
	comp=N,2.1nm,0.6s						
EIL	Elat	7.79	144	Pn	Pn	19 10 24.1	-2.5
MLR	Muntele Rosu	9.80	344	Pn	Pn	19 10 57.7	+3.6
	comp=N,0.2nm,0.3s,baz=223,slow=19,SNR=1.7						
	comp=N,0.6nm,0.4s						
KEST	Kesra	16.49	275	Pn	P	19 12 27.9	+0.7
	comp=N,0.1nm,0.3s,baz=99,slow=18,SNR=1.4						
	comp=N,2.6nm,1.0s						
GERES	GERESS Array B	17.31	322	P	P	19 12 38.6	+2.4
	comp=N,0.1nm,0.3s,baz=134,slow=11,SNR=3.5						

	comp=N,0.3nm,0.6s						
AKTO	**Aktyubinsk**	**24.92**	**46**	P	**P**	**19 13 58.2**	**+2.0**
	comp=N,0.7nm,0.5s,baz=266,slow=5.6,SNR=2.1						
	comp=N,0.7nm,0.5s						
FINES	**FINESS Array B**	**25.46**	**356**	P	**P**	**19 14 03.8**	**+2.8**
	comp=N,0.7nm,0.6s,baz=165,slow=16,SNR=3.8						
	comp=N,0.7nm,0.6s						
ESDC	**Sonseca Array**	**26.71**	**288**	P	**P**	**19 14 13.7**	**+1.1**
	comp=N,0.4nm,0.8s,baz=78,slow=9.5,SNR=2.5						
	comp=N,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**33.99**	**235**	P	**P**	**19 15 18.2**	**+1.2**
	comp=N,1.0nm,0.6s,baz=29,slow=7.8,SNR=8.0						
	comp=N,1.0nm,0.6s						
MKAR	**Makanchi Array**	**40.16**	**58**	P	**P**	**19 16 09.6**	**+0.4**
	comp=N,0.2nm,0.6s,baz=255,slow=8.7,SNR=2.4						
	comp=N,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**41.68**	**47**	P	**P**	**19 16 21.8**	**+0.2**
	comp=N,0.4nm,0.4s,baz=239,slow=9.9,SNR=2.1						
	comp=N,0.4nm,0.4s						

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*IDC **14** 19:14:17.3±1.1, 8°.37N×103°.03W, h0^{km}, mb3.7/10, mbtmp3.8/11, ML3.4/1, Error ellipse: s-maj=47.6km s-min=16.0km az=59.0*

*NEIC **14** 19:14:19.7±2.7, 8°.5N±0°.1×102°.9W±0°.1, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=25.6km s-min=17.8km az=239.0*

ISC 14 19:14:19.0±0.8**, 8°.5N**±0°.1×**102°.9W**±0°.1**, h10**^{km}**, n47, σ1^{s}.01**/41**, mb4.3**/15**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**9.99**	**25**	Pn	**Pn**	**19 16 40.8**	**-2.1**
CMIG	**Matias Romero**	**11.61**	**42**	Pn	**Pn**	**19 17 05.5**	**+0.5**
	0.2nm,0.3s,baz=243,slow=14,SNR=1.8						
	1.9nm,0.3s						
H06E1	**SOCORRO T-PHAS**	**12.88**	**324**	T	T	19 30 37.4	
HUEH	**Huehuetenango**	**13.08**	**58**	Pn	**Pn**	**19 17 23.2**	**-2.0**
MTO3	**Montecristo**	**14.53**	**65**	Pn	**Pn**	**19 17 43.7**	**-1.4**
ORTG	**Ortega, Santa**	**17.32**	**82**		**P**	**19 18 23.6**	**+1.0**
HPIG		**18.56**	**352**	P	**Pn**	**19 18 37.4**	**+0.8**
SRIG	**Santa Rosalia**	**20.74**	**336**	P	**P**	**19 19 00.2**	**+0.3**
SRIG				IAmb	IAmb	19 19 06.5	
	comp=Z,15nm,1.1s						
TXAR	**Lajitas Array**	**20.78**	**358**	P	Pn	19 19 02.5	-0.4
	comp=Z,0.9nm,0.6s,baz=207,slow=9.8,SNR=6.1						
	comp=Z,0.9nm,0.6s						
TXAR	**Lajitas Array**	**20.78**	**358**	P	**P**	**19 19 01.2**	**+0.8**
JCT	**Junction City**	**22.10**	**7**	P	**P**	**19 19 15.4**	**+0.8**
JCT				IAmb	IAmb	19 19 22.2	
	comp=Z,17nm,1.3s						
HKT	**Hockley**	**22.39**	**16**	P	**P**	**19 19 17.8**	**+0.3**
435B	**Jarrell**	**22.76**	**12**	P	**P**	**19 19 22.4**	**+0.8**
319A	**Douglas**	**23.56**	**346**	P	**P**	**19 19 30.6**	**+0.6**
ABTX	**Abilene, Hawle**	**24.24**	**7**	P	**P**	**19 19 36.3**	**+0.1**
ABTX				IAmb	IAmb	19 19 41.6	
	comp=Z,11nm,1.1s						
342A	**Flagon Creek P**	**24.85**	**22**	P	**P**	**19 19 43.3**	**+1.6**
OTAV	**Otavalo**	**25.70**	**107**	P	**P**	**19 19 51.0**	**+0.8**
OTAV				IAmb	IAmb	19 20 09.3	
	comp=Z,9.9nm,1.4s						
Z41A	**Richland Creek**	**26.39**	**19**	P	**P**	**19 19 57.3**	**+1.7**
NVAR	**Mina Array Bea**	**32.91**	**337**	P	**P**	**19 20 54.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=166,slow=7.6,SNR=4.2						
	comp=Z,0.2nm,0.3s						
NVAR	**Mina Array Bea**	**32.91**	**337**	P	**P**	**19 20 53.2**	**-0.6**
PDAR	**Pinedale Array**	**34.67**	**351**	P	**P**	**19 21 10.3**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=167,slow=7.4,SNR=4.4						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**34.67**	**351**	P	**P**	**19 21 09.6**	**+0.5**
YBH	**Yreka Blue Hor**	**37.48**	**335**	P	**P**	**19 21 32.9**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=154,slow=3.1,SNR=2.4						
	comp=Z,0.5nm,0.5s						
LPAZ	**La Paz**	**42.30**	**126**	P	**P**	**19 22 13.8**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=318,slow=6.5,SNR=8.3						
	comp=Z,2.6nm,0.9s						
LPAZ	**La Paz**	**42.30**	**126**	P	**P**	**19 22 13.7**	**-0.2**
LPAZ				IAmb	IAmb	19 22 23.7	
	comp=Z,6.5nm,1.1s						
H03N2	**Juan Fernandez**	**47.49**	**153**	T	T	20 13 45.7	
	baz=329,slow=77,SNR=15						
H03N1	**Juan Fernandez**	**47.51**	**153**	T	T	20 13 43.3	
	baz=329,slow=77,SNR=19						
H03N3	**Juan Fernandez**	**47.51**	**153**	T	T	20 13 46.7	
	baz=329,slow=77,SNR=16						
YKA	**Yellowknife Ar**	**54.61**	**353**	P	**P**	**19 23 46.8**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=163,slow=7.6,SNR=3.7						
	comp=Z,0.3nm,0.6s						
CPUP	**Villa Florida**	**56.16**	**129**	P	**P**	**19 23 58.8**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=310,slow=8.8,SNR=4.5						
	comp=Z,1.3nm,0.6s						
CPUP	**Villa Florida**	**56.16**	**129**	IAmb	IAmb	19 24 05.5	
	comp=Z,3.0nm,0.9s						
PLCA	**Paso Flores**	**57.31**	**151**	P	**P**	**19 24 07.9**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=344,slow=11,SNR=1.9						
	comp=Z,1.3nm,0.8s						
BDFB	**Brasilia**	**59.41**	**114**	P	**P**	**19 24 23.3**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=259,slow=4.2,SNR=4.0						
	comp=Z,1.7nm,0.5s						
BDFB	**Brasilia**	**59.41**	**114**	P	**P**	**19 24 22.8**	**+0.3**
BDFB				IAmb	IAmb	19 24 35.7	
	comp=Z,6.5nm,1.3s						
KNK	**Knik Glacier**	**62.53**	**337**	P	**P**	**19 24 40.2**	**-2.5**
BRLK	**Bradley Lake**	**62.54**	**335**	P	**P**	**19 24 42.2**	**-0.7**
SML	**Sawmill**	**62.72**	**338**	P	**P**	**19 24 44.1**	**0.0**
RND	**Reindeer**	**63.89**	**339**	P	**P**	**19 24 51.5**	**-0.3**
IL31		**64.08**	**341**	P	**P**	**19 24 52.5**	**-0.4**
IL31				IAmb	IAmb	19 24 53.6	
	comp=Z,2.5nm,0.8s						
ILAR	**Eielson Array**	**64.08**	**341**	P	**P**	**19 24 52.2**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=151,slow=4.8,SNR=15						
	comp=Z,1.8nm,0.9s						
ILAR	**Eielson Array**	**64.08**	**341**	P	**P**	**19 24 52.4**	**-0.6**
O18K	**Koktuh Hills**	**64.44**	**334**	P	**P**	**19 24 54.5**	**-0.9**
O18K				IAmb	IAmb	19 24 56.0	
	comp=Z,4.0nm,1.0s						
H21K	**Melozitna Rive**	**66.60**	**340**	P	**P**	**19 25 08.9**	**-0.4**
H21K				IAmb	IAmb	19 25 09.8	
	comp=Z,2.4nm,0.9s						
IMAR	**Indian Mountai**	**67.11**	**340**	P	**P**	**19 25 11.8**	**-0.7**
MKAR	**Makanchi Array**	**124.80**	**356**	PKP	**PKPdf**	**19 33 19.3**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=2.9,slow=2.9,SNR=3.0						
CMAR	**Chiang Mai Arr**	**145.64**	**321**	PKPbc	**PKPdf**	**19 33 57.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=42,slow=1.7,SNR=6.6						
CMAR	**Chiang Mai Arr**	**145.64**	**321**		**PKPdf**	**19 33 57.1**	**-1.6**

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*IDC **14** 19:20:33.2±1.4, 43°.40N×105°.19W, h0^{km}, mb4.1/1, mbtmp3.5/7, ML3.0/5, Error ellipse: s-maj=24.2km s-min=9.3km az=151.0*

*NEIC **14** 19:20:35.3±1.3, 43°.61N±0°.06×105°.26W±0°.08, h0^{km}±2^{km}, ML3.4/65, Error ellipse: s-maj=10.4km s-min=9.4km az=91.0*

ISC 14 19:20:34.4±0.9**, 43°.61N**±0°.06×**105°.25W**±0°.06**, h0**^{km}**, n60, σ0^{s}.99**/58**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**60**		**Pg**	**19 20 53.2**	**-0.6**
RSSD				IAML		19 21 13.0	
	754nm,0.6s						
K22A	**Casper**	**1.34**	**224**		**Pg**	**19 20 59.3**	**-0.8**
K22A				IAML		19 21 27.4	
	comp=N,782nm,0.3s						
K22A				IAML		19 21 32.3	
	comp=E,551nm,0.8s						
PHWY	**Pilot Hill**	**2.32**	**184**		**Pn**	**19 21 14.1**	**0.0**
PHWY				IAML		19 21 48.8	
	comp=E,177nm,0.8s						
RWWY	**Rawlins**	**2.41**	**218**		**Pn**	**19 21 15.6**	**+0.3**
N23A	**Red Feather La**	**2.77**	**191**		**Pn**	**19 21 21.4**	**+1.1**
N23A				IAML		19 22 02.5	
	comp=E,191nm,0.8s						
LAO	**LASA Array**	**3.15**	**348**	Pn	**Pn**	**19 21 25.7**	**+0.3**
RLMT	**Red Lodge**	**3.25**	**299**		**Pn**	**19 21 28.1**	**+1.2**
RLMT				IAML		19 22 27.8	
	comp=E,94nm,0.6s						
RLMT				IAML		19 22 43.5	
	comp=E,80nm,0.7s						
BW06	**Boulder Array**	**3.26**	**256**		**Pn**	**19 21 27.4**	**+0.4**
PD31	**Pinedale Array**	**3.26**	**256**		**Pn**	**19 21 27.6**	**+0.5**
PDAR	**Pinedale Array**	**3.26**	**256**	Pn	**Pn**	**19 21 27.7**	**+0.6**
	comp=E,9.0nm,0.5s,baz=80,slow=16,SNR=85						
PDAR				Lg	Lg	19 22 15.6	
	comp=E,16nm,0.3s,baz=77,slow=32,SNR=15						
PDAR	**Pinedale Array**	**3.26**	**256**		**Pn**	**19 21 27.4**	**+0.3**
OGNE	**Ogallala**	**3.58**	**137**	Pn	**Pn**	**19 21 32.5**	**+1.2**
ISCO	**Idaho Springs**	**3.82**	**184**	Pn	**Pn**	**19 21 35.7**	**+0.9**
ISCO				IAML		19 22 53.3	
	comp=E,45nm,0.8s						
GCMT	**Greycliff**	**3.83**	**306**		**Pn**	**19 21 36.0**	**+1.2**
LOHW	**Long Hollow**	**3.89**	**272**		**Pn**	**19 21 37.4**	**+1.8**
LOHW				IAML		19 22 46.3	
	comp=E,43nm,0.7s						
H17A	**Grant Village**	**3.92**	**283**		**Pn**	**19 21 34.8**	**-1.4**
H17A				IAML		19 22 45.1	
	comp=E,56nm,0.8s						
H17A				IAML		19 22 47.5	
	comp=N,64nm,0.7s						
FLWY	**Flagg Ranch**	**3.97**	**279**		**Pn**	**19 21 37.6**	**+0.9**
FLWY				IAML		19 22 53.8	
	comp=N,78nm,1.6s						
FLWY				IAML		19 22 55.5	
	comp=N,61nm,0.9s						
MOOW	**Moose Ponds**	**3.99**	**274**		**Pn**	**19 21 37.3**	**+0.3**
SNOW	**Snow King Moun**	**4.00**	**270**		**Pn**	**19 21 37.8**	**+0.5**
SNOW				IAML		19 22 54.9	
	comp=N,65nm,1.5s						
YPP	**Pitchstone Pla**	**4.06**	**281**		**Pn**	**19 21 39.5**	**+1.4**
REDW	**Red Top Meadow**	**4.08**	**268**		**Pn**	**19 21 38.5**	**+0.2**
YFT	**Old Faithful**	**4.11**	**284**		**Pn**	**19 21 38.8**	**0.0**
YFT				IAML		19 22 08.5	
	comp=E,40nm,2.0s						
O20A	**White River Ci**	**4.13**	**214**	Pn	**Pn**	**19 21 39.5**	**+0.5**
O20A				IAML		19 23 00.2	
	comp=N,66nm,0.8s						
TPAW	**Teton Pass**	**4.14**	**270**		**Pn**	**19 21 40.9**	**+1.7**
TPAW				IAML		19 23 05.9	
	comp=N,37nm,1.1s						
YHH	**Holmes Hill**	**4.19**	**288**		**Pn**	**19 21 40.9**	**+1.0**
YMR	**Madison River**	**4.25**	**286**	Pn	**Pn**	**19 21 40.3**	**-0.3**
YMR				IAML		19 23 06.0	
	comp=E,65nm,1.0s						
AHID	**Auburn Hatcher**	**4.36**	**261**		**Pn**	**19 21 42.3**	**+0.2**
AHID				IAML		19 23 09.8	
	comp=E,42nm,1.5s						
E28A	**Huff**	**4.38**	**46**		**Pn**	**19 21 43.8**	**+1.6**
RDMU	**Red Mountain**	**4.42**	**228**		**Pn**	**19 21 42.5**	**-0.5**
RDMU				IAML		19 23 04.2	
	comp=E,52nm,1.0s						
RDMU				IAML		19 23 15.3	
	comp=N,41nm,1.1s						
YHL	**Hebgen Lake**	**4.44**	**288**		**Pn**	**19 21 43.8**	**+0.6**
YHL				IAML		19 23 11.3	
	comp=N,52nm,1.1s						
YHL				IAML		19 23 23.4	
	comp=E,58nm,1.1s						
QLMT	**Earthquake Lak**	**4.60**	**287**		**Pn**	**19 21 45.7**	**+0.2**
SMCO	**Snowmass**	**4.62**	**197**		**Pn**	**19 21 46.9**	**+1.1**
SMCO				IAML		19 23 04.8	
	comp=E,35nm,0.9s						
Q24A	**Divide**	**4.65**	**179**		**Pn**	**19 21 46.9**	**+0.8**
K31A	**O'Neill**	**4.86**	**100**		**Pn**	**19 21 50.9**	**+2.1**
DGMT	**Dagmar**	**4.91**	**8**		**Pn**	**19 21 51.6**	**+2.1**
BOZ	**Bozeman (W)**	**4.97**	**296**		**Pn**	**19 21 51.6**	**+1.2**
BOZ				IAML		19 23 26.8	
	comp=E,21nm,0.8s						
BOZ				IAML		19 23 30.5	
	comp=E,22nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.00**	**156**		**Pn**	**19 21 51.6**	**+0.7**
HWUT	**Hardware Ranch**	**5.07**	**249**	Pn	**Pn**	**19 21 52.3**	**+0.4**
HWUT				IAML		19 23 51.1	
	comp=E,37nm,0.9s						
EGMT	**Eagleton**	**5.42**	**326**		**Pn**	**19 21 57.5**	**+0.9**
P18A	**Preston Nutter**	**5.46**	**225**		**Pn**	**19 21 58.0**	**+0.6**
PV07	**Paradox Valley**	**5.77**	**208**		**Pn**	**19 22 03.1**	**+1.6**
MDND	**Maddock**	**5.79**	**41**	Pn	**Pn**	**19 22 02.5**	**+0.9**
P17A	**Butcher Ranch,**	**5.84**	**227**		**Pn**	**19 22 02.9**	**+0.5**
SDCO	**Great Sand Dun**	**5.87**	**182**	Pn	**Pn**	**19 22 03.0**	**+0.1**
S22A	**4UR Ranch, Cre**	**5.98**	**192**		**Pn**	**19 22 05.8**	**+1.3**
ECSD	**EROS Data Cent**	**6.27**	**86**	Pn	**Pn**	**19 22 07.8**	**-0.3**
CBKS	**Cedar Bluff**	**6.34**	**137**		**Pn**	**19 22 08.7**	**-0.6**
T25A	**Trinidad**	**6.50**	**174**	Pn	**Pn**	**19 22 11.8**	**+0.3**
DUG	**Dugway, Tooele**	**6.59**	**241**		**Pn**	**19 22 13.1**	**+0.3**
F33A	**5 Mile Ranch,**	**6.76**	**68**		**Pn**	**19 22 14.0**	**-0.8**
R32A	**Long Quarter,**	**7.16**	**134**	Pn	**Pn**	**19 22 22.2**	**+1.8**
ELK	**Elko**	**7.95**	**252**	Pn	**Pn**	**19 22 32.4**	**+1.0**
	comp=E,0.3nm,0.3s,baz=68,slow=7.4,SNR=3.7						
	comp=E,1.0nm,0.5s						
ELK	**Elko**	**7.95**	**252**		**Pn**	**19 22 31.9**	**+0.5**
ULM	**Lac du Bonnet**	**9.23**	**41**	Pn	**Pn**	**19 22 47.5**	**-1.1**
	comp=E,0.6nm,0.3s,baz=222,slow=12,SNR=1.9						
ULM				Lg	Lg	19 25 21.4	
	comp=E,0.6nm,0.3s,baz=173,slow=17,SNR=4.3						
	comp=E,2.1nm,0.3s						
NEW	**Newport**	**9.49**	**303**	Pn	**Pn**	**19 22 53.0**	**+0.7**
	comp=E,0.2nm,0.3s,baz=109,slow=18,SNR=1.6						
NEW				Lg	Lg	19 25 31.9	
	comp=E,0.3nm,0.3s,baz=168,slow=13,SNR=2.2						
	comp=E,0.9nm,0.5s						
I56US	**NEWPORT INFRAS**	**9.49**	**303**	*i*		20 19 00.0	
	baz=116,slow=321,SNR=2.2						
NVAR	**Mina Array Bea**	**11.13**	**247**	Pn	**Pn**	**19 23 16.8**	**+1.8**
	comp=E,0.1nm,0.3s,baz=66,slow=11,SNR=3.8						
	comp=E,0.4nm,0.6s						
TXAR	**Lajitas Array**	**14.31**	**174**	Lg	Lg	19 27 55.8	
	baz=2.3,slow=12,SNR=3.1						
YKA	**Yellowknife Ar**	**19.69**	**347**	P	**P**	**19 25 04.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=4.3						
YKA				Lg	Lg	19 30 57.8	
	baz=155,slow=29,SNR=1.9						
	comp=E,0.3nm,0.5s						
ARCES	**ARCESS Array B**	**61.53**	**18**	P	**P**	**19 30 52.8**	**+0.1**
	comp=E,2.4nm,1.0s,baz=331,slow=5.4,SNR=1.7						
	comp=E,2.4nm,1.0s						

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*NCEDC **14** 19:39:18.5±1.2, 37°.03N±0°.03×121°.49W±0°.04, h8^{km}±6^{km}, Md3.0/122, ML2.7/52(NEIC), Error ellipse: s-maj=5.8km s-min=1.9km az=54.0*

NEIC 14 19:39:18.3±1.5**, 37°.01N**±0°.03×**121°.52W**±0°.05**, h12**^{km}±6^{km}**, Error ellipse: s-maj=7.2km s-min=1.7km az=59.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HFEM	**San Felipe**	**0.10**	**107**		Pg	19 39 20.3	-0.9
PACP	**Pacheco Peak**	**0.19**	**91**		Pg	19 39 21.6	-0.9
PACP					Sg	19 39 24.5	-1.0
HCOM	**Corn Cob Canyo**	**0.20**	**230**		Pb	19 39 23.3	-0.5
HSFM	**Saint Francis**	**0.20**	**175**		Pb	19 39 23.4	-0.5
SAO	**San Andreas Ge**	**0.26**	**167**		Pg	19 39 24.1	+0.4
SAO					Sb	19 39 28.9	-0.3
MHC	**Mount Hamilton**	**0.34**	**343**		Pg	19 39 24.9	-0.4
CMPM	**Mikes Peak**	**0.38**	**25**		Pg	19 39 25.2	-0.7
SCCB	**Santa Clara Co**	**0.39**	**315**		Pg	19 39 26.1	0.0
BLRM	**Lewis Ranch**	**0.40**	**150**		Pb	19 39 26.8	-0.5
SCZ	**Santa Cruz**	**0.42**	**167**		Pg	19 39 26.6	-0.1
BJCM	**Johnson Can.**	**0.48**	**168**		Pg	19 39 27.6	-0.1
COSM	**Mount Oso**	**0.51**	**13**		Pg	19 39 27.8	-0.5
BBGB	**Big Mountain B**	**0.58**	**138**		Pg	19 39 29.4	-0.2
HAST	**Hastings Reser**	**0.62**	**182**		Pg	19 39 30.4	-0.1
BSMM	**Soledad Missio**	**0.63**	**173**		Pg	19 39 30.9	+0.2
WENL	**Wente Vineyard**	**0.64**	**343**		Pg	19 39 30.8	0.0
JRSC	**Jasper Ridge**	**0.69**	**304**		Pg	19 39 31.2	-0.6
BDM	**Black Diamond**	**0.98**	**344**		Pb	19 39 36.3	-0.9
PMPB	**Monarch Peak**	**0.98**	**144**		Pg	19 39 36.9	-0.4
BKS	**Berkeley--Byer**	**1.03**	**327**		Pb	19 39 36.9	-1.2
BL67	**Building 67, L**	**1.04**	**326**		Pb	19 39 37.0	-1.3
VAK	**Adit at Lawren**	**1.04**	**326**		Pb	19 39 37.7	-0.6
PAPM	**Alder Peak**	**1.10**	**173**		Pb	19 39 38.6	-0.8
PDRM	**Domengine Ranc**	**1.15**	**126**		Pb	19 39 38.7	-1.3
PKD	**Bear Valley Ra**	**1.33**	**143**		Pn	19 39 41.4	-1.3
CMB	**Columbia Colle**	**1.36**	**41**		Pn	19 39 41.7	-1.4
RAMR	**Ramage Ranch**	**1.47**	**159**		Pn	19 39 43.6	-1.0
MCCM	**Marconi Confer**	**1.56**	**317**		Pn	19 39 43.8	-2.1
MCCM	**Marconi Confer**	**1.56**	**317**	IAML		19 40 13.0	
	comp=E,107nm,0.7s						
MCCM				IAML		19 40 14.1	
	comp=N,114nm,0.8s						
PAGB	**Antelope Grade**	**1.64**	**141**		Pn	19 39 46.6	-0.3
PAGB				IAML		19 40 15.9	
	comp=N,58nm,0.9s						
PAGB				IAML		19 40 22.5	
	comp=E,71nm,0.7s						
TRAM	**Private Proper**	**1.67**	**143**		Pn	19 39 46.7	-0.7
TSCN	**Private Proper**	**1.75**	**147**		Pn	19 39 47.5	-0.9
MDPB	**Devils Postpil**	**2.04**	**72**		Pn	19 39 53.0	+0.3
GDXM	**Geysers**	**2.06**	**331**		Pn	19 39 52.8	+0.1
OMMB	**Old Mammoth Mi**	**2.10**	**73**	Pn	Pn	19 39 53.8	+0.3
OMMB				IAML		19 40 21.5	
	comp=E,91nm,0.6s						
EMB	**Emerald Bay**	**2.26**	**29**		Pn	19 39 56.2	+0.6
EMB				IAML		19 40 29.4	
	comp=N,58nm,0.5s						
EMB				IAML		19 40 30.0	
	comp=E,57nm,0.6s						
HOPS	**Hopland Field**	**2.33**	**329**	Pn	Pn	19 39 55.0	-1.3
ORV	**Oroville**	**2.54**	**0**	Pn	Pn	19 39 59.5	+0.2
PNTR	**Pine Nut**	**2.57**	**36**		Pn	19 40 00.3	+0.4
PNTR				IAML		19 40 47.1	
	comp=N,48nm,1.0s						
PNTR				IAML		19 40 58.6	
	comp=E,33nm,0.6s						
BCW	**Bitter Crk WRg**	**2.68**	**140**		Pn	19 40 02.5	+1.1
BCW				IAML		19 41 06.7	
	comp=N,33nm,1.1s						
BCW				IAML		19 41 06.7	
	comp=E,37nm,0.9s						
LHV	**Little Huntoon**	**2.69**	**62**		Pn	19 40 01.9	+0.5
LHV				IAML		19 40 51.5	
	comp=N,33nm,0.8s						
LHV				IAML		19 40 59.7	
	comp=E,35nm,0.8s						
ISA	**Isabella, Lake**	**2.80**	**118**	Pn	Pn	19 40 02.1	-1.0
ISA				IAML		19 40 49.6	
	comp=E,30nm,0.5s						
ISA				IAML		19 40 51.6	
	comp=N,32nm,0.5s						
RYN	**Ryan**	**2.87**	**55**		Pn	19 40 04.0	0.0
RYN				IAML		19 40 51.2	
	comp=N,15nm,0.3s						
RYN				IAML		19 40 53.1	
	comp=E,19nm,0.5s						
NVAR	**Mina Array Bea**	**2.92**	**60**		Pn	19 40 05.0	+0.3
BEKR	**Beckworth**	**2.99**	**17**		Pn	19 40 06.1	+0.4
BEKR				IAML		19 40 53.2	
	comp=E,28nm,0.7s						
NV11	**Mina Array Sit**	**3.02**	**61**		Pn	19 40 06.2	+0.1
PAHR	**Pah Rah Range**	**3.17**	**31**		Pn	19 40 09.1	+1.0
PAHR				IAML		19 41 03.0	
	comp=E,15nm,1.7s						
PAHR				IAML		19 41 04.7	
	comp=N,14nm,1.4s						
KVN	**Kaiserville**	**3.38**	**52**	Pn	Pn	19 40 10.7	-0.4
KVN				IAML		19 41 06.0	
	comp=N,9.8nm,1.2s						
CCAC	**Calif City Air**	**3.39**	**122**		Pn	19 40 12.5	+1.5
CCAC				IAML		19 41 27.6	
	comp=N,26nm,1.4s						
TPH	**Tonopah**	**3.58**	**71**		Pn	19 40 14.1	+0.3
KSXB	**Camp Six Broad**	**5.14**	**340**	Pn	Pn	19 40 37.1	+1.8
KSXB				IAML		19 41 35.3	
	comp=N,6.7nm,4.2s						

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*NEIC **14** 19:57:21.4±0.7, 17°.40S±0°.07×172°.37W±0°.08, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=14.2km s-min=10.0km az=53.0*

*IDC **14** 19:57:24.3±1.1, 17°.27S×173°.11W, h0^{km}, mb4.0/8, mbtmp4.0/9, ML3.4/1, MS3.5/1, Error ellipse: s-maj=48.2km s-min=18.9km az=133.0*

ISC 14 19:57:23.3±0.6**, 17°.47S**±0°.06×**172°.35W**±0°.09**, h21**^{km}**, n28, σ1^{s}.76**/26**, mb4.1**/13**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.80**	**125**	Pn	**Pn**	**19 58 07.2**	**+0.2**
NIUE				Sn	**Sn**	**19 58 37.3**	**-2.9**
AFI	**Afiamalu**	**3.58**	**9**	Pn	**Pn**	**19 58 18.9**	**+1.2**
	3.6nm,0.3s,baz=176,slow=23,SNR=1.6						
AFI				Sn	**Sn**	**19 58 58.0**	**-1.5**
	11nm,0.3s,baz=273,slow=17,SNR=6.8						
	15nm,0.3s						
AFI	**Afiamalu**	**3.58**	**9**	Pn	**Pn**	**19 58 15.8**	**-1.9**
AFI				Sn	**Sn**	**19 58 57.5**	**-2.0**
RAR	**Rarotonga**	**12.44**	**109**	LR	LR	20 04 56.9	
	comp=Z,210nm,19.0s,baz=332,slow=34						
DZM	**Mont Dzumac**	**20.47**	**254**	P	Pn	20 02 00.1	-1.9
DZM				IAmb	IAmb	20 02 13.7	
	comp=Z,33nm,1.4s						
URZ	**Urewera**	**22.68**	**202**	P	**P**	**20 02 26.3**	**+2.9**
	comp=Z,11nm,0.7s,baz=45,slow=2.9,SNR=12						
URZ				S	**S**	**20 06 30.0**	**-0.5**
	comp=Z,8.7nm,0.9s,baz=43,slow=9.8,SNR=2.7						
	comp=Z,11nm,0.7s						
URZ	**Urewera**	**22.68**	**202**	P	**P**	**20 02 21.6**	**-1.7**
URZ				IAmb	IAmb	20 02 31.1	
	comp=Z,30nm,1.2s						
RPZ	**Rata Peaks**	**29.69**	**205**	P	P	20 03 35.6	+7.8
	comp=Z,12nm,0.6s,baz=335,slow=5.2,SNR=5.8						
STKA	**Stephens Creek**	**43.92**	**242**	P	**P**	**20 05 27.7**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=95,slow=12,SNR=3.0						
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	**43.92**	**242**	P	**P**	**20 05 27.9**	**-0.9**
BBOO	**Buckleboo**	**48.68**	**241**	P	**P**	**20 06 05.2**	**-1.0**
WB0	**Warramunga Arr**	**50.35**	**259**	P	**P**	**20 06 17.8**	**-1.4**
WB0				IAmb	IAmb	20 06 18.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**50.38**	**258**	P	**P**	**20 06 18.1**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=97,slow=7.4,SNR=27						
	comp=Z,1.2nm,0.5s						
WRA	**Warramunga Arr**	**50.38**	**258**	P	**P**	**20 06 17.8**	**-1.6**
AS31	**Alice Springs**	**50.46**	**253**	P	**P**	**20 06 19.0**	**-1.0**
AS31				IAmb	IAmb	20 06 30.7	
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**50.46**	**253**	P	**P**	**20 06 19.4**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=89,slow=8.5,SNR=141						
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**50.46**	**253**	P	**P**	**20 06 18.9**	**-1.1**
SOEI	**Soe**	**61.85**	**268**	P	**P**	**20 07 40.6**	**-1.0**
QSPA	**South Pole Qui**	**72.59**	**180**	P	**P**	**20 08 50.0**	**+1.1**
QSPA				IAmb	IAmb	20 09 08.0	
	comp=Z,6.9nm,1.4s						
NVAR	**Mina Array Bea**	**75.20**	**41**	P	P	20 09 11.0	+6.3
	comp=Z,0.5nm,0.7s,baz=220,slow=9.4,SNR=4.8						
	comp=Z,0.5nm,0.7s						
KSRS	**Korea Array**	**78.33**	**315**	P	P	20 09 26.9	+4.8
	comp=Z,0.3nm,0.4s,baz=116,slow=5.5,SNR=3.5						
PDAR	**Pinedale Array**	**83.14**	**41**	P	P	20 09 54.0	+6.0
	comp=Z,0.3nm,0.7s,baz=229,slow=6.8,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**84.28**	**11**	P	**P**	**20 09 56.8**	**+3.8**
	comp=Z,0.4nm,0.6s,baz=229,slow=5.9,SNR=7.2						
	comp=Z,0.4nm,0.6s						
BMAR	**Burnt Mountain**	**87.09**	**10**	P	**P**	**20 10 07.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**94.21**	**288**	P	**P**	**20 10 43.7**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=145,slow=3.1,SNR=1.8						
	comp=Z,0.4nm,0.7s						
CLL	**Collm**	**145.97**	**354**	*e*(PKPbc)	**PKiKP**	**20 17 04.0**	**-0.7**
CLL				*e*x	x	20 17 09.0	
GERES	**GERESS Array B**	**148.32**	**352**	PKPbc	**PKPab**	**20 17 13.0**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=56,slow=0.4,SNR=4.0						
BRTR	**Keskin Array B**	**148.38**	**320**	PKPbc	**PKPab**	**20 17 10.9**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=54,slow=2.5,SNR=2.8						

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*TAP **14** 20:05:59.7, 24°.80N×122°.29E, h9^{km}, ML2.7, C*

*JMA **14** 20:06:00.9±0.1, 24°.7N±0°.8×122°.3E±0°.3, h46^{km}±2^{km}, MV1.9/8, TAIWAN REGION*

ISC 14 20:05:60.0±0.9**, 24°.78N**±0°.02×**122°.30E**±0°.02**, h16**^{km}±7^{km}**, n68, σ0^{s}.66**/121**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.34**	**281**	P	**Pg**	**20 06 07.1**	**-0.1**
	baz=278						
EGS				S	**Sb**	**20 06 12.3**	**-0.6**
	baz=278						
TWB1	**Santiao Chiao**	**0.37**	**309**	P	**Pg**	**20 06 07.5**	**-0.1**
	baz=308						
TWB1				*i* S	**Sg**	**20 06 12.2**	**-0.5**
	baz=308						
NTC	**Toucheng**	**0.44**	**280**	*e*P	**Pg**	**20 06 08.8**	**-0.1**
	baz=277						
NTC				*e*S	**Sb**	**20 06 16.1**	**+0.5**
	baz=277						
TWC	**Suao**	**0.45**	**248**	*i* P	**Pg**	**20 06 08.4**	**-0.5**
	baz=253						
TWC				*e*S	**Sb**	**20 06 15.0**	**-0.8**
	baz=253						
TIPB	**Shuangxi**	**0.47**	**294**	*e*P	**Pg**	**20 06 09.2**	**-0.3**
	baz=292						
TIPB				*e*S	**Sb**	**20 06 16.2**	**-0.5**
	baz=292						

ILA	Ilan	0.51	269	eS	Sb	20 06 18.3	+0.8
	baz=254						
NDS	Dongshan	0.55	255	eP	Pg	20 06 10.5	-0.5
	baz=252						
NDS				S	Sb	20 06 18.6	-0.4
	baz=252						
NWF	Wu-fen Shan	0.56	302	eP	Pb	20 06 11.7	+0.3
	baz=300						
NWF				eS	Sb	20 06 19.1	0.0
	baz=300						
WFSB	Wu-fen Shan	0.56	302	eS	Sb	20 06 19.4	+0.3
	baz=300						
EWUT	Wuta	0.58	235	eP	Pg	20 06 11.3	-0.2
	baz=232						
EWUT				eS	Sb	20 06 19.8	0.0
	baz=232						
TWE	Neicheng	0.58	265	P	Pg	20 06 11.0	-0.5
	baz=254						
TWE				eS	Sb	20 06 19.2	-0.5
	baz=254						
ENA	Nanau	0.62	236	eP	Pg	20 06 11.8	-0.4
	baz=232						
ENA				eS	Sb	20 06 21.2	+0.4
	baz=232						
FUSB	Fushanzhiwuyua	0.65	269	eP	Pg	20 06 12.5	-0.3
	baz=266						
FUSB				eS	Sb	20 06 22.4	+0.5
	baz=266						
JYNG	Yonagunijimaku	0.67	119	P	Pg	20 06 13.1	0.0
JYNG				S	Sg	20 06 22.1	+0.1
ENTT	Nioudou	0.68	259	eP	Pg	20 06 12.9	-0.5
	baz=256						
ENTT				eS	Sb	20 06 22.4	-0.3
	baz=256						
TWA	Mucha	0.68	287	eP	Pb	20 06 13.9	+0.4
	baz=272						
TWA				S	Sn	20 06 24.5	-0.8
	baz=272						
EHP	Heping Village	0.69	228	eS	Sb	20 06 23.7	+0.8
	baz=235						
YOJ	Yonaguni jima	0.72	116	eP	Pg	20 06 14.2	+0.1
	baz=117						
YOJ				eS	Sb	20 06 24.9	+1.2
	baz=117						
YOJ	Yonaguni jima	0.72	116	P	Pg	20 06 14.0	0.0
YOJ				eS	Sg	20 06 23.6	+0.1
NWLT	Wulai	0.73	270	eP	Pg	20 06 13.8	-0.5
	baz=268						
NWLT				eS	Sb	20 06 24.4	+0.4
	baz=268						
NHDH	Xindian Distri	0.73	285	eP	Pn	20 06 15.3	-0.3
	baz=274						
NHDH				eS	Sn	20 06 25.3	-1.1
	baz=274						
NDT	Datong Townshi	0.74	256	eP	Pb	20 06 14.2	-0.2
	baz=263						
NDT				eS	Sb	20 06 24.2	-0.1
	baz=263						
LATG	Datong	0.75	251	P	Pg	20 06 14.2	-0.4
	baz=249						
LATG				S	Sb	20 06 24.6	-0.1
	baz=249						
YM01	YM01	0.76	299	P	Pn	20 06 15.6	-0.5
	baz=298						
YM01				S	Sn	20 06 26.2	-1.0
	baz=298						
TWY	Chenhua	0.81	308	eP	Pn	20 06 17.0	+0.3
	baz=307						
TWY				eS	Sn	20 06 28.1	-0.2
	baz=307						
YHNB	Yeheng	0.85	263	eP	Pg	20 06 15.9	-0.7
	baz=261						
YHNB				eS	Sb	20 06 27.4	-0.2
	baz=261						
NSK	Sanguang	0.86	263	eP	Pg	20 06 16.1	-0.8
	baz=261						
NSK				eS	Sb	20 06 27.7	-0.3
	baz=261						
TWS1	Kuangyinshan	0.87	292	eP	Pn	20 06 17.4	-0.1
	baz=291						
TWS1				eS	Sn	20 06 29.9	+0.1
	baz=291						
PCYT	Pengchaiyu	0.87	346	eP	Pg	20 06 17.3	+0.3
	baz=348						
PCYT				eS	Sn	20 06 30.6	+0.7
	baz=348						
ETL	Fush Village	0.87	225	eS	Sn	20 06 29.6	-0.4
	baz=233						
NACB	Ninganchiao	0.88	227	P	Pb	20 06 16.2	-0.7
	baz=233						
NACB				S	Sb	20 06 29.0	+0.5
	baz=233						
NNSB	Datong	0.91	248	eP	Pg	20 06 16.4	-1.2
	baz=235						
NNSB				S	Sb	20 06 29.6	+0.3
	baz=235						
NNS	Nan Shan	0.91	249	P	Pb	20 06 17.6	+0.1
	baz=236						
NNS				S	Sn	20 06 30.0	-1.0
	baz=236						
ETLH	Xiulin Townshi	0.94	233	eP	Pb	20 06 17.6	-0.4
	baz=239						
ETLH				eS	Sg	20 06 30.6	0.0
	baz=239						
TWD	Chiawan	0.95	223	eP	Pg	20 06 18.3	-0.1
	baz=230						
TWD				eS	Sn	20 06 31.9	+0.1
	baz=230						
NFF	Wufeng Townshi	1.09	263	eP	Pg	20 06 20.9	-0.1
	baz=268						
NFF				eS	Sn	20 06 35.9	+0.5
	baz=268						
FUSS	Fushou	1.10	242	eP	Pn	20 06 21.4	+0.5
	baz=240						
FUSS				eS	Sn	20 06 35.7	-0.2
	baz=240						
WHF	Hehuan Shan	1.14	237	P	Pg	20 06 21.8	-0.3
	baz=234						
WHF				eS	Sn	20 06 37.1	+0.1
	baz=234						
TWT	Tachien	1.15	243	eS	Sn	20 06 38.0	+0.9
	baz=233						
TDCB	Techi	1.17	244	eS	Sn	20 06 37.7	+0.3
	baz=233						
LIOB	Emei	1.18	264	eP	Pg	20 06 22.9	+0.1
	baz=263						
LIOB				eS	Sg	20 06 39.8	+1.7
	baz=263						
NSTT	Nanjuang	1.19	263	eP	Pg	20 06 23.4	+0.3
	baz=262						
NSTT				eS	Sg	20 06 39.9	+1.2
	baz=262						
HSN	Hsinchu	1.21	271	eS	Sn	20 06 38.1	-0.2
	baz=291						
ESL	Shilin	1.25	220	eP	Pb	20 06 23.5	+0.4
	baz=225						
ESL				eS	Sg	20 06 41.1	+0.8
	baz=225						
CHGB	Renai	1.25	235	P	Pg	20 06 23.9	-0.3
	baz=234						
CHGB				eS	Sg	20 06 40.1	-0.5
	baz=234						
OWD	Renai	1.31	232	eP	Pb	20 06 24.7	+0.3
	baz=229						
OWD				eS	Sg	20 06 42.8	+0.2
	baz=229						
WUSB	Renai	1.33	234	eP	Pg	20 06 25.2	-0.6
	baz=233						
WUSB				eS	Sg	20 06 43.0	-0.2
	baz=233						
EGFH	Guangfu	1.36	216	eP	Pb	20 06 25.0	-0.1
	baz=194						
EGFH				eS	Sg	20 06 44.8	+0.7
	baz=194						
IRIF	Iriomote-Funau	1.37	108	P	Pn	20 06 23.2	-1.3
NMLH	Miaoli	1.40	260	eS	Sg	20 06 46.5	+1.3
	baz=259						
NSY	Sanyi	1.45	256	eS	Sg	20 06 48.2	+1.4
	baz=255						
TWQ1	Liyutan	1.46	253	eS	Sg	20 06 47.4	+0.3
	baz=252						
VWDT	VWDT	1.47	226	eP	Pb	20 06 27.1	+0.2
	baz=232						
VWDT				eS	Sg	20 06 47.7	+0.2
	baz=232						
HGSD	Ruisui	1.51	212	eP	Pn	20 06 27.1	+0.7
	baz=193						
HGSD				eS	Sg	20 06 48.1	-0.7
	baz=193						
SMLT	Sun Moon Lake	1.56	235	eP	Pg	20 06 29.3	-0.8
	baz=234						
SMLT				eS	Sg	20 06 50.1	-0.2
	baz=234						
SSLB	Suanglung	1.58	232	eS	Sg	20 06 50.0	-0.9
	baz=230						
TYC	Yuchr	1.58	237	eP	Pg	20 06 29.6	-0.8
	baz=236						
TYC				eS	Sg	20 06 50.9	0.0
	baz=236						
JKRS	Kuro-shima	1.65	109	P	Pn	20 06 27.6	-0.5
JKRS				S	Sn	20 06 48.4	-0.6
YULB	Yu-li	1.66	214	eP	Pn	20 06 28.6	+0.2
	baz=210						
YULB				eS	Sb	20 06 51.5	+0.7
	baz=210						
TWF1	Yuli	1.69	213	eP	Pn	20 06 29.8	+1.0
	baz=209						
TWF1				eS	Sb	20 06 52.7	+0.9
	baz=209						
JIJ	Ishigaki jima	1.73	103	P	Pn	20 06 28.3	-1.0
YUS	Yu-Shan	1.78	224	eP	Pb	20 06 32.6	+0.1
	baz=202						
YUS				eS	Sg	20 06 56.0	-1.5
	baz=202						
FULB	Fuli	1.82	211	eS	Sb	20 06 56.5	+0.9
	baz=189						
ALS	Alishan	1.86	228	eP	Pb	20 06 34.0	+0.2
	baz=205						
ALS				eS	Sg	20 06 59.5	-0.6
	baz=205						
CHN5	Tsauling	1.89	232	eP	Pb	20 06 34.9	+0.7
	baz=233						
CHN5				eS	Sg	20 07 01.6	+0.6
	baz=233						
ELDTW	Lidau	1.97	217	eP	Pn	20 06 33.6	+0.8
	baz=198						
ELDTW				eS	Sn	20 06 58.5	+1.3
	baz=198						
CHN4	Tsaushan	2.11	228	eP	Pb	20 06 38.2	+0.3
	baz=206						
CHN4				eS	Sg	20 07 07.5	-0.5
	baz=206						
CHN1	Nanshi	2.27	226	eS	Sg	20 07 10.4	-2.6
	baz=227						

IDC ***14*** *20:09:03.1±2.0, 23°.87S×66°.78W, h187^{km}±15^{km}, mb3.1/4, mbtmp3.6/7, Error ellipse: s-maj=31.3km s-min=21.2km az=1.0*

ISC 14 20:09:04.0±1.1**, 23°.9S**±0°.1×**66°.9W**±0°.1**, h200**^{km}**, n9, σ1^s.32**/11**, mb3.1**/4**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.25	303	P	Pn	20 09 45.2	-0.3
	61nm,0.3s,baz=130,slow=5.0,SNR=34						
LVC				S	Sn	20 10 16.7	-1.1
	29nm,0.4s,baz=285,slow=20,SNR=12						
LPAZ	La Paz	7.62	351	P	Pn	20 10 54.2	+1.2
	0.7nm,0.4s,baz=139,slow=8.1,SNR=4.6						
LPAZ				S	Sn	20 12 17.4	-2.1
	0.7nm,0.5s,baz=212,slow=24,SNR=1.8						
BDFB	Brasilia	19.53	69	P	P	20 13 16.6	0.0
	6.8nm,0.7s,baz=247,slow=12,SNR=12						
TXAR	Lajitas Array	63.63	324	P	P	20 19 15.0	+1.0
	0.1nm,0.5s,baz=156,slow=4.9,SNR=1.9						
	0.1nm,0.5s						
TORD	Torodi Ar. Bea	76.41	69	P	P	20 20 30.8	-1.1
	0.3nm,0.5s,baz=271,slow=6.9,SNR=7.1						
	0.3nm,0.5s						
PDAR	Pinedale Array	77.08	329	P	P	20 20 36.8	+1.4
	0.2nm,0.6s,baz=134,slow=3.9,SNR=2.1						
	0.2nm,0.6s						
YKA	Yellowknife Ar	94.03	340	P	P	20 21 59.5	+0.7
	0.2nm,0.5s,baz=133,slow=4.4,SNR=5.8						
	0.2nm,0.5s						
WRA	Warramunga Arr	131.81	207	PKP	PKiKP	20 27 53.9	-1.2
	0.4nm,0.9s,baz=154,slow=2.0,SNR=6.4						
MKAR	Makanchi Array	146.34	39	PKPbc	PKPab	20 28 21.7	-0.7
	0.5nm,0.6s,baz=329,slow=2.5,SNR=5.4						

NNC ***14*** *20:31:18.4±13.0, 36°.55N×70°.62E, h176^{km}±206^{km}, mb2.6, mpv3.4, Error ellipse: s-maj=118.4km s-min=69.1km az=20.0*

ISC 14 20:31:09.4±1.7**, 36°.0N**±0°.1×**70°.7E**±0°.2**, h150**^{km}**, n9, σ3^s.29**/12**, 2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.05	359	⇓P	Pn	20 32 52.3	+2.2
	0.8nm,0.3s,baz=174,slow=12,SNR=41						
KK31				S	Sn	20 34 08.2	-0.9
	7.9nm,0.5s,baz=184,slow=22,SNR=15						
TKM2	Tokmak 2	7.83	27	⇑P	Pn	20 33 03.1	+2.4
	1.4nm,0.5s						
TKM2				⇑S	Sn	20 34 27.3	-0.9
	1.2nm,0.7s						
DMN	Daman	14.83	121	eP	Pn	20 34 30.1	-1.9
KKN	Kakani	14.84	120	eP	Pn	20 34 30.6	-1.5
PKIN	Phulchoki	15.05	120	eP	Pn	20 34 33.1	-1.7
PKI	Pulchoki	15.06	120	eP	Pn	20 34 33.6	-1.4
AB31	Akbulak array	15.38	332	⇓P	P	20 34 43.9	+4.2
	0.3nm,0.3s						
AB31				⇓S	Sn	20 37 21.9	-7.3
	0.4nm,0.6s,baz=159,slow=23,SNR=4.6						
JIRN	Jiri	15.56	118	eP	Pn	20 34 39.4	-1.8
RAMN	Ramite	16.28	119	eP	Pn	20 34 49.0	-0.8

KLM ***14*** *20:52:05, 7°.22S×101°.45E, h0^{km}, mb5.3*

IDC ***14*** *20:52:09.6±0.3, 6°.87S×101°.82E, h0^{km}, mb5.2/33, mbtmp5.2/36, ML4.9/3, MS4.3/55, Error ellipse: s-maj=10.9km s-min=9.4km az=77.0*

BJI ***14*** *20:52:10.0±0.0, 6°.90S×101°.80E, h10^{km}, mb5.2/85, mB5.2/71, Ms5.1/92, Ms7 4.8/84*

DJA ***14*** *20:52:11.2±0.2, 7°S±2°×10°2E±°, h10^{km}, M5.1/89, mb5.3/89, mB5.6/61, MLv5.7/20, Mw(mB)5.1/61, MwMwp5.0/20, Mwp5.3/20*

NEIC ***14*** *20:52:12.1±1.9, 6°.86S±0°.06×101°.80E±0°.06, h10^{km}±1^{km}, mb5.6/169, Mww5.3, Error ellipse: s-maj=10.8km s-min=9.6km az=111.0*

GCMT ***14*** *20:52:14.1±0.1, 7°.01S±0°.01×101°.84E±0°.01, h12^{km}, MW5.3/121, Moment Tensor Solution. s82,c125; s121,c216; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.80±.01; $M_{\theta\theta}$0.21±.01; $M_{\phi\phi}$0.58±.01; $M_{r\theta}$-0.04±.04; $M_{\theta\phi}$-0.59±.01; $M_{\phi r}$-0.34±.04; Best double couple: $M_0$0.97900×10^{17} NP1:ϕ_s125.00000°, δ40.00000°, λ-119.00000°. NP2:ϕ_s341.00000°, δ55.00000°, λ-67.00000°. Principal axes: T 1.0490, Plg8.0000°, Azm55.0000°; N -0.1400, Plg18.0000°, Azm148.0000°; P -0.9090, Plg70.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *20:52:14, 6°.97S×101°.79E, h12^{km}, Moment Tensor Solution. Duration: 6^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.86; $M_{\theta\theta}$0.28; $M_{\phi\phi}$0.59; $M_{r\theta}$-0.21; $M_{\theta\phi}$-0.60; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.09000×10^{17} NP1: ϕ_s314.00000°, δ32.00000°, λ-103.00000°. NP2: ϕ_s149.00000°, δ59.00000°, λ-82.00000°. Principal axes: T 1.1695, Plg14.0000°, Azm233.0000°; N -0.1734, Plg7.0000°, Azm325.0000°; P -0.9961, Plg75.0000°, Azm81.0000°;*

MOS ***14*** *20:52:15.2±1.0, 6°.75S×101°.90E, h47^{km}, mb5.6/64, MS4.4/15 Error ellipse: s-maj=6.9km s-min=4.0km az=113.3*

ISC 14 20:52:13.2±0.4**, 6°.92S**±0°.03×**101°.83E**±0°.03**, h23**^{km}±2^{km}**, h23**^{km}**:pP-P, n1461, σ1^s.20**/1647**, mb5.5**/248**, MS4.5**/97**, 75C-102D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	2.78	24	Pn	Pn	20 52 55.7	-0.7
MNAI				Sn	Sn	20 53 29.0	-0.2
MNAI	Manna	2.78	24	P	Pn	20 52 56.0	-0.4
MNAI	Manna	2.78	24	P	Pn	20 52 56.4	0.0
KASI	Kota Agung	3.00	63	P	Pn	20 52 58.9	-0.4
KLI	Kotabumi	3.64	56	P	Pn	20 53 08.9	+0.7
BLSI	Bandar Lampung	3.73	66	P	Pn	20 53 09.6	+0.2
MASI	Maura Aman, Be	3.78	6	P	Pn	20 53 09.3	-0.8
PPSI	Pulau Pagai	4.51	336	P	Pn	20 53 18.4	-1.7
SKJI	Sukabumi	4.70	91	P	Pn	20 53 22.6	-0.1
KRJI	Kerinci	4.81	356	P	Pn	20 53 23.2	-1.2
TNG	Tangerang	4.84	81	P	Pn	20 53 24.6	-0.1
TNG				P	Pn	20 53 26.3	+1.6
DBJI	Dramaga	4.90	86	P	Pn	20 53 26.1	+0.6
PMBI	Palembang	4.94	37		Pn	20 53 26.1	+0.1
PMBI	Palembang	4.94	37	P	Pn	20 53 26.0	+0.1
PMBI	Palembang	4.94	37	P	Pn	20 53 26.6	+0.6
CBJI	Citeko	5.01	85	P	Pn	20 53 28.9	+1.9
CNJI	Cibinong	5.28	94	P	Pn	20 53 29.3	-1.3
	14nm9µm37µm2µm,0.8s						
JMBI	JAMBI	5.56	19	P	Pn	20 53 34.2	-0.3
	1.5nm4µm316nm,0.7s						
LEM	Lembang	5.75	89	Pn	Pn	20 53 38.0	+0.7
	205nm,0.3s,baz=331,slow=6.4,SNR=98						
LEM				Sn	Sn	20 54 39.1	-3.6
	72nm,0.3s,baz=88,slow=23,SNR=7.9						
	720nm,0.5s						
LEM	Lembang	5.75	89	P	Pn	20 53 38.0	+0.7
LEM	Lembang	5.75	89	P	Pn	20 53 38.6	+1.3
	3.9nm8µm14µm1µm,0.9s						
SISI	Saibi	6.19	334	P	Pn	20 53 40.9	-2.4
	1.2nm4µm357nm,0.6s						
PPBI	Pangkal Pinang	6.39	42	P	Pn	20 53 46.3	+0.3
	1.0nm9µm6µm158nm,1.2s						
CMJI	Cimerak	6.62	98	P	Pn	20 53 47.8	-1.4
DSRI	Dabo	6.96	23	P	Pn	20 53 53.9	0.0
	0.3nm5µm1µm74nm,1.1s						
TPI	Tanjungpandan	7.13	55	P	Pn	20 53 56.0	-0.1
	0.3nm1µm56nm,0.6s						
COCO	West Island	7.18	223		Pn	20 53 55.8	-1.1
COCO	West Island	7.18	223	P	Pn	20 53 55.8	-1.1
BKNI	Bangkinang	7.24	354	Pn	Pn	20 53 55.5	-2.3
BKNI	Bangkinang	7.24	354	P	Pn	20 53 55.4	-2.3
	4.1nm2µm215nm,0.9s						
TPRI	Tanjung Pinang	8.24	19	P	Pn	20 54 12.6	+1.2
	45nm,0.5s						
YOGI	Yogyakarta	8.45	97	P	Pn	20 54 14.2	0.0
	4µm343nm,0.7s						
SMRI	Semarang	8.55	91	Pn	Pn	20 54 16.7	+1.0
SMRI	Semarang	8.55	91	P	Pn	20 54 16.7	+1.0
	7µm12µm400nm,1.8s						
SMRI	Semarang	8.55	91	P	Pn	20 54 17.5	+1.8
UGM	Wanagama	8.68	97		Pn	20 54 16.6	-0.8
UGM	Wanagama	8.68	97	P	Pn	20 54 16.8	-0.7
	8µm528nm,0.6s						
UGM	Wanagama	8.68	97	P	Pn	20 54 17.2	-0.3
MYKOM	Kota Tinggi	8.89	13	Pn	Pn	20 54 18.4	-1.9
MYKOM	Kota Tinggi	8.89	13	P	Pn	20 54 19.0	-1.3
WOJI	Wonogiri, Jawa	9.07	96	P	Pn	20 54 21.7	-1.0
	3µm147nm,0.8s						
UWJI	Ujung Watu	9.07	87	P	Pn	20 54 23.7	+0.9
	398nm,0.6s						
GSI	Gunungsitoli	9.21	332	Pn	Pn	20 54 23.2	-1.5
GSI	Gunungsitoli	9.21	332	P	Pn	20 54 24.2	-0.5
	138nm,1.0s						
PCJI	Pacitan	9.36	98	P	Pn	20 54 25.2	-1.5
	5µm415nm,0.5s						
PWJI	Pagerwojo	9.95	97	P	Pn	20 54 35.4	+0.5
	4µm286nm,0.8s						
RPSI	Rantau Prapat	9.98	343		Pn	20 54 33.1	-2.2
PSI	Prapat	10.08	343	Pn	Pn	20 54 33.1	-3.7
	3.3nm,0.3s,baz=142,slow=10,SNR=5.7						
PSI				Sn	Sn	20 56 21.2	-8.2
	2.9nm,0.3s,baz=12,slow=20,SNR=2.5						
PSI				LR	LR	20 58 02.4	
	comp=Z,738nm,18.1s,baz=176,slow=36						
	8.9nm,0.4s						
GRJI	Gresik	10.57	91	P	Pn	20 54 43.4	0.0
	3µm393nm,0.7s						
PBKI	Pangkalan Bun	10.66	67	P	Pn	20 54 45.3	+0.7
	3µm133nm,1.0s						
JRMM	Jerantut	10.76	3	P	Pn	20 54 45.0	-0.9
TSI	Tuntungan	10.85	342	P	Pn	20 54 46.2	-1.1
	104nm,0.7s						
KCSI	Kotacane, Aceh	11.14	339	P	Pn	20 54 50.4	-0.8
	45nm,0.7s						
GMJI	Gumukmas	11.59	97	P	Pn	20 54 57.2	-0.2
	78nm,1.2s						
BLJI	Banyuglugur	11.70	95	P	Pn	20 54 59.5	+0.7
	1µm58nm,0.7s						
STKI	Sintang	11.87	55	P	Pn	20 55 02.2	+1.0
	3µm92nm,0.8s						
KSM	Kuching	11.88	46	Pn	Pn	20 55 00.7	-0.7
KSM	Kuching	11.88	46	P	Pn	20 55 02.0	+0.7
KMMI	Kalianget	12.05	91	P	Pn	20 55 02.4	-1.2
	4µm2µm76nm,1.2s						
KULM	Kulim	12.19	354	Pn	Pn	20 55 02.7	-2.8
KULM	Kulim	12.19	354	P	Pn	20 55 05.0	-0.5
JAGI	Jajag, Banyuwa	12.31	98	Pn	Pn	20 55 04.5	-2.7
JAGI	Jajag, Banyuwa	12.31	98	P	Pn	20 55 05.3	-1.9
	2µm116nm,0.5s						
JAGI	Jajag, Banyuwa	12.31	98	P	Pn	20 55 06.9	-0.3
ABJI	Asem Bagus	12.34	95	P	Pn	20 55 07.1	-0.4
	3µm286nm,0.8s						
LHMI	Lhok Sumawe	13.02	338	Pn	Pn	20 55 14.4	-2.5
SRBI	Singaraja	13.32	96	P	Pn	20 55 19.7	-1.3
	3µm2µm206nm,0.7s						
IGBI	Denpasar	13.33	99	P	Pn	20 55 20.8	-0.3
	2µm128nm,0.8s						
DNP	Denpasar	13.37	98	P	Pn	20 55 21.2	-0.5
	489nm,0.5s						
BBKI	Banjar Baru	13.41	76	P	Pn	20 55 24.3	+2.1
	2µm42nm,1.5s						
MTKI	Muara Teweh, K	14.32	66	P	Pn	20 55 34.8	+0.1
	2µm3µm44nm,1.2s						
SRIT	Nakonsritamara	15.57	352	P	Pn	20 55 51.5	+0.1
PLAI	Plampang	15.91	98	P	Pn	20 55 57.1	+1.3
	4µm380nm,1.2s						
PLAI	Plampang	15.91	98	P	Pn	20 55 55.4	-0.4
BKB	Balikpapan	16.04	70		Pn	20 55 58.6	+1.1
BKB				IAmb	IAmb	20 56 11.4	
	comp=Z,222nm,0.6s						
WBSI	Waikabubak, Su	17.59	100	P	Pn	20 56 16.7	-0.3
	comp=Z,105nm,0.6s						
KAPI	Kappang	17.93	85	P	Pn	20 56 19.6	-1.5
	comp=Z,1.5nm,0.3s,baz=261,slow=13,SNR=6.3						
	comp=Z,8.4nm,0.5s						
KAPI	Kappang	17.93	85	P	Pn	20 56 20.7	-0.5
KAPI	Kappang	17.93	85	P	Pn	20 56 20.7	-0.5
KAPI				pmax	pmax		
	comp=Z,87nm,1.6s						
SPSI	Sidrap Palu	18.10	82	P	Pn	20 56 23.3	0.0
	comp=Z,3µmcomp=Z,1µmcomp=Z,30nm,0.7s						
BKSI	Bulukumba	18.26	86	P	Pn	20 56 24.1	-1.2
	comp=Z,2µmcomp=Z,1µmcomp=Z,95nm,1.4s						
TTSI	Tana Toraja	18.33	79	P	Pn	20 56 26.5	+0.4
	comp=Z,4µmcomp=Z,2µmcomp=Z,50nm,1.5s						
BNSI	Bone	18.36	83	P	P	20 56 26.1	-0.3
	comp=Z,2µmcomp=Z,92nm,1.9s						
SPMM	Sapulut	18.63	52	P	Pn	20 56 31.0	+1.2
MPSI	Mapaga	19.42	69	P	Pn	20 56 38.8	-0.5
	comp=Z,4µmcomp=Z,2µmcomp=Z,96nm,0.9s						
GIRL	Giralia	19.68	144	P	P	20 56 40.1	-0.7
	baz=20,SNR=6.2						
GIRL	Giralia	19.68	144	P	P	20 56 39.2	-1.5
GIRL				IAmb	IAmb	20 56 49.6	
	comp=Z,359nm,1.4s						
GIRL	Giralia	19.68	144	P	P	20 56 41.2	+0.4
EDFI	Ende, Flores	19.76	97	P	P	20 56 41.2	-0.7
	comp=Z,1µmcomp=Z,80nm,0.8s						
MMRI	Maumere	20.29	96	P	P	20 56 46.4	-1.2
MMRI	Maumere	20.29	96	P	P	20 56 47.1	-0.5
	comp=Z,2µmcomp=Z,7µmcomp=Z,470nm,1.4s						
MMRI	Maumere	20.29	96	P	P	20 56 47.7	+0.1
MYLDM	Lahad Datu	20.53	55		P	20 56 50.9	+0.8
MYLDM				IAmb	IAmb	20 57 23.4	
	comp=Z,253nm,1.1s						
TOLI2	Tolitoli	20.53	68	P	P	20 56 49.6	-0.6
TOLI2				IAmb	IAmb	20 56 54.6	
	comp=Z,242nm,1.2s						
TOLI2	Tolitoli	20.53	68	P	P	20 56 51.0	+0.8
APSI	Ampana	20.65	74	P	P	20 56 52.6	+1.2
	comp=Z,3µmcomp=Z,136nm,1.1s						
BBSI	Bau Bau	20.67	87	P	P	20 56 52.3	+0.6
	comp=Z,506nmcomp=Z,163nmcomp=Z,16nm,1.0s						
MRSI	Marisa	21.37	71	P	P	20 56 58.7	-0.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,103nm,1.7s						
LUWI	Luwuk	21.69	75	P	P	20 57 01.7	-0.9
LUWI				IAmb	IAmb	20 57 48.0	
	comp=Z,208nm,1.2s						
LUWI	Luwuk	21.69	75	P	P	20 57 03.4	+0.8
	comp=Z,2µmcomp=Z,77nm,0.6s						
BATI	Baumata	21.83	100	P	P	20 57 04.2	-0.1

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      comp=Z,171nm,0.7s,baz=306,slow=1.1,SNR=24
BATI                                S      S        21 01 03.0  -1.9
      comp=Z,61nm,0.8s,baz=37,slow=16,SNR=3.9
      comp=Z,171nm,0.7s
BATI  Baumata            21.83 100  P      P        20 57 04.9  +0.6
      comp=Z,3µmcomp=Z,214nm,1.2s
DGPR  DIGLIPUR           21.84 336 eP      P        20 57 02.1  -2.1
DGPR                               ex      S        21 01 08.2  +3.5
BATP  Bataraza           22.30  46⇓eP      P        20 57 09.6  +0.3
MBWA  Marble Bar         22.37 131  P      P        20 57 09.5  -0.4
MBWA  Marble Bar         22.37 131  P      P        20 57 10.6  +0.7
MBWA  Marble Bar         22.37 131  P      P        20 57 11.6  +1.7
SOEI  Soe                22.38  99  P      P        20 57 09.3  -0.9
SOEI  Soe                22.38  99  P      P        20 57 09.8  -0.4
      comp=Z,9µmcomp=Z,667nm,1.3s
SOEI  Soe                22.38  99  P      P        20 57 09.9  -0.3
GTOI  Gorontalo          22.43  71  P      P        20 57 09.3  -1.3
      comp=Z,632nmcomp=Z,28nm,1.5s
PSA00 Pilbara Seismi     22.70 132  P      P        20 57 13.2  -0.2
PSA00                               IAmb   IAmb     20 57 16.1
      comp=Z,328nm,1.4s
PSA00 Pilbara Seismi     22.70 132  P      P        20 57 13.7  +0.2
PSA00                               IAmb   IAmb     20 57 16.1
      comp=Z,147nm,1.4s
PSA00 Pilbara Seismi     22.70 132  P      P        20 57 14.1  +0.7
SANI  Sanana             24.56  80  P      P        20 57 30.3  -1.3
      comp=Z,2µmcomp=Z,2µmcomp=Z,74nm,1.7s
ENPP  El Nido            25.12  44⇓eP      P        20 57 36.5  -0.1
MEEK  Meekatharra        25.29 143  P      P        20 57 38.1   0.0
      baz=25,SNR=14
MEEK  Meekatharra        25.29 143  P      P        20 57 40.0  +1.9
      comp=Z,65nm,2.0s
PALK  Pallekele          25.36 303  LR     LR       21 06 27.2
      comp=Z,891nm,18.0s,baz=230,slow=34
PALK  Pallekele          25.36 303  P      P        20 57 40.4  +1.5
CM31  Chiang Mai Arr     25.38 354  P      P        20 57 38.8  -0.1
CM31                                IAmb   IAmb     20 57 41.9
      comp=Z,128nm,1.1s
CM31  Chiang Mai Arr     25.38 354  P      P        20 57 39.8  +0.9
      SNR=67
CMAR  Chiang Mai Arr     25.38 354  P      P        20 57 39.5  +0.6
      comp=Z,86nm,1.1s,baz=184,slow=8.3,SNR=210
CMAR                                PcP    PcP      21 01 11.7  +0.4
      comp=Z,11nm,1.0s,baz=207,slow=3.8,SNR=12
CMAR                                S      S        21 02 06.8  +2.4
      comp=Z,0.3nm,0.3s,baz=152,slow=29,SNR=1.3
CMAR                                ScS    ScS      21 08 38.4   0.0
      comp=Z,0.3nm,0.3s,baz=194,slow=3.5,SNR=1.8
CMAR                                LR     LR       21 09 12.8
      comp=Z,960nm,18.0s,baz=195,slow=40
CMAR                                P3KPbc          21 30 34.4
      comp=Z,0.2nm,0.3s,baz=335,slow=4.0,SNR=1.4
      comp=Z,86nm,1.1s
CMAR  Chiang Mai Arr     25.38 354  P      P        20 57 39.1  +0.2
CMAR                                       PcP      21 01 10.9  -0.4
CHTO  Chiang Mai         25.73 354  P      P        20 57 41.8  -0.3
CHTO  Chiang Mai         25.73 354  P      P        20 57 41.8  -0.3
CHTO                                pmax   pmax
      comp=Z,59nm,1.1s
CHTO  Chiang Mai         25.73 354  P      P        20 57 42.8  +0.7
CHTO  Chiang Mai         25.73 354  P      P        20 57 42.7  +0.6
MORW  Morawa             25.79 150  P      P        20 57 42.4  -0.1
      baz=26,SNR=3.9
MORW  Morawa             25.79 150  P      P        20 57 41.9  -0.7
PAGZ  Pagadian           26.02  56⇓eP      P        20 57 44.8  -0.1
LBMI  Labuha             26.35  77  P      P        20 57 48.6  +0.7
      comp=Z,1µmcomp=Z,2µmcomp=Z,78nm,1.1s
CNOP  Candoni, Negro     26.58  51⇓eP      P        20 57 49.3  -0.5
TNTI  Ternate            26.60  74  P      P        20 57 48.4  -1.7
TNTI                                IAmb   IAmb     20 57 53.5
      comp=Z,190nm,1.6s
TNTI  Ternate            26.60  74  P      P        20 57 49.3  -0.8
      comp=Z,1µmcomp=Z,1µmcomp=Z,50nm,1.1s
QIZ   Qiongzhong         26.97  17  P      P        20 57 51.1  -2.2
QIZ   Qiongzhong         26.97  17  P      P        20 57 54.3  +1.0
QIZ                                 S      S        21 02 33.5  +4.0
QIZ                                 pmax   pmax
      comp=Z,22nm,1.1s
QIZ                                 pmax   pmax
      comp=Z,260nm,4.5s
QIZ                                 LR     LR
      comp=Z,1µm,19.5s
QIZ                                 LR     LR
      comp=Z,2µm,20.6s
QIZ                                 LR     LR
      comp=Z,830nm,25.1s
KCP   Kidapawan          27.02  60⇑eP      P        20 57 54.6  +0.7
DDMP  Don Marcelino,     27.12  62⇓eP      P        20 57 53.7  -1.0
TBP   Tagbilaran         27.46  53 eP      P        20 57 56.4  -1.5
DAV   Davao City (W)     27.47  60  P      P        20 57 58.0  +0.1
      comp=Z,105nm,0.3s,baz=246,slow=3.3,SNR=3.7
DAV                                 S      S        21 02 40.7  +3.2
      comp=Z,81nm,0.3s,baz=64,slow=12,SNR=2.2
DAV                                 LR     LR       21 10 34.4
      comp=Z,658nm,19.2s,baz=224,slow=40
      comp=Z,105nm,0.3s
DAV   Davao City (W)     27.47  60  P      P        20 57 57.5  -0.4
LUBP  Lubang             27.49  42⇓eP      P        20 57 58.2  +0.2
KNRA  Kununurra          27.78 111  P      P        20 58 00.4  -0.2
      baz=28,SNR=43
KNRA  Kununurra          27.78 111  P      P        20 58 00.1  -0.5
KNRA                                IAmb   IAmb     20 58 01.8
      comp=Z,124nm,0.9s
KNRA  Kununurra          27.78 111  P      P        20 58 00.7  +0.1
MACP  Maragondon, Ca     28.18  42⇓eP      P        20 58 07.4  +3.2
MUN   Mundaring          28.31 154  P      P        20 58 05.4  +0.2
      baz=28,SNR=5.5
KLBR  Kellerberrin       28.70 151  P      P        20 58 09.2  +0.5
DGAR  Diego Garcia       29.15 267 i P     P        20 58 11.7  -1.2
DGAR                                pmax   pmax
      comp=Z,87nm,1.0s
MTN   Manton Dam         29.45 104  P      P        20 58 15.0  -0.5
      baz=30,SNR=6.5
MTN   Manton Dam         29.45 104  P      P        20 58 14.9  -0.6
MTN                                 IAmb   IAmb     20 59 01.3
      comp=Z,104nm,1.4s
MTN   Manton Dam         29.45 104  P      P        20 58 15.5   0.0
JCNP  Jose Panganiba     29.54  44⇓eP      P        20 58 15.8  -0.5
NWAO  Narrogin (SRO)     29.57 153  P      P        20 58 15.4  -0.9
NWAO                                IAmb   IAmb     20 58 16.8
      comp=Z,78nm,1.1s
NWAO  Narrogin (SRO)     29.57 153  P      P        20 58 15.5  -0.9
NWAO                                pmax   pmax
      comp=Z,78nm,1.1s
NWAO  Narrogin (SRO)     29.57 153  P      P        20 58 16.3  -0.1
NWAO  Narrogin (SRO)     29.57 153  P      P        20 58 17.8  +1.4
SWI   Sorong             29.96  80  P      P        20 58 18.6  -1.5
      comp=Z,34nm,0.8s
SIJI  Sorong             29.96  80  P      P        20 58 18.4  -1.8
      comp=Z,16nm,0.8s,baz=261,slow=5.9,SNR=16
SIJI                                S      S        21 03 12.8  -4.2
      comp=Z,4.8nm,0.4s,baz=119,slow=24,SNR=3.2
SIJI                                LR     LR       21 11 01.9
      comp=Z,303nm,21.7s,baz=287,slow=38
      comp=Z,16nm,0.8s
H01W3 Cape Leeuwin H     30.05 160  T      T        21 31 21.5
      baz=339,slow=76,SNR=12
H01W2 Cape Leeuwin H     30.06 160  T      T        21 31 21.6
      baz=339,slow=76,SNR=6.8
H01W1 Cape Leeuwin H     30.06 159  T      T        21 31 17.2
      baz=339,slow=76,SNR=9.2
KDU   Kakadu             30.72 103  P      P        20 58 26.2  -0.5
      baz=31,SNR=8.2
KDU   Kakadu             30.72 103  P      P        20 58 26.8   0.0
PCHI  Peechi             30.73 304 eP      P        20 58 29.0  +2.2
WRKA  Warakurna          31.07 128  P      P        20 58 29.5  -0.2
      baz=31,SNR=60
WRKA  Warakurna          31.07 128  P      P        20 58 30.5  +0.7
BWNR  Bhubaneshwar       31.30 330⇓iP      P        20 58 32.3  +0.5
AZL   Aizawl             31.75 344 eP      P        20 58 35.6  -0.2
KMI   Kunming            31.86   2 ⇓P      P        20 58 39.0  +2.0
KMI                                 sP     sP       20 58 44.3  -0.2
KMI                                 PP     PP       20 59 45.8  -3.4
KMI                                 PcP    PcP      21 01 29.0  +1.4
KMI                                 S      S        21 03 50.4  +3.7
KMI                                 pmax   pmax
      comp=Z,36nm,1.3s
KMI                                 pmax   pmax
      comp=Z,360nm,4.0s
KMI                                 LR     LR
      comp=Z,1µm,14.3s
KMI                                 LR     LR
      comp=Z,2µm,13.4s
KMI                                 LR     LR
      comp=Z,2µm,12.6s
IMP   Imphal             32.48 347 i P     P        20 58 41.4  -0.8
GULI  GuiLin             33.08  14  P      P        20 58 47.9  +0.5
GULI                                S      S        21 04 05.3  +0.1
GULI                                pmax   pmax
      comp=Z,20nm,1.1s
GULI                                LR     LR
      comp=Z,1µm,20.6s
GULI                                LR     LR
      comp=Z,4µm,20.6s
GULI                                LR     LR
      comp=Z,2µm,15.9s
PZH   PanZhiHua          33.23 360 ⇓P      P        20 58 49.3  +0.5
PZH                                 pP     pP       20 58 52.8  -1.2
PZH                                 sP     sP       20 58 55.5  -0.8
PZH                                 PcP    PcP      21 01 31.0  -0.2
PZH                                 S      S        21 04 08.3  +0.6
PZH                                 sS     sS       21 04 19.3  +2.9
PZH                                 PcS    PcS      21 05 15.9  -1.1
PZH                                 pmax   pmax
      comp=Z,10.0nm,1.2s
PZH                                 pmax   pmax
      comp=Z,230nm,4.9s
PZH                                 LR     LR
      comp=Z,1µm,13.4s
PZH                                 LR     LR
      comp=Z,1µm,15.7s
PZH                                 LR     LR
      comp=Z,1µm,14.5s
KOHI  KOHIMA             33.30 347 i P     P        20 58 48.5  -1.0
HYB   Hyderabad          33.37 317 i x     P        20 58 49.9  -0.2
HYBB  Hyderabad (bro     33.38 317 eP      P        20 58 50.4  +0.3
HYBB                                IVmB_BB         20 58 51.3
      comp=Z,294nm,1.3s
HYBB                               ePcP    PcP      21 01 31.8  +0.1
HYBB                               eS      S        21 04 12.0  +1.9
HYBB                                IVMs_BB IVMs_BB 21 17 23.5
      comp=Z,253nm,11.1s
GYA   Guiyang            33.51   8 ⇑P      P        20 58 52.8  +1.5
GYA                                 PcP    PcP      21 01 32.5  +0.5
GYA                                 S      S        21 04 15.3  +3.2
GYA                                 pmax   pmax
      comp=Z,59nm,1.1s
GYA                                 pmax   pmax
      comp=Z,320nm,7.8s
GYA                                 LR     LR
      comp=Z,530nm,15.6s
GYA                                 LR     LR
      comp=Z,2µm,15.6s
GYA                                 LR     LR
      comp=Z,620nm,21.2s
JHSG  JHARSUGUGA         33.56 329⇓iP      P        20 58 52.7  +1.1
SHL   Shillong           33.71 344⇓iP      P        20 58 52.7  -0.4
SHL                                 IAmb   IAmb     20 58 57.7
      comp=Z,25nm,0.8s
MOKO  MOKOCHONG          33.80 348⇓iP      P        20 58 53.7  -0.1
WB0   Warramunga Arr     34.08 115  P      P        20 58 55.9  -0.4
WB0                                 IAmb   IAmb     20 58 57.7
      comp=Z,127nm,1.1s
WRA   Warramunga Arr     34.08 116  P      P        20 58 56.1  -0.1
      comp=Z,60nm,1.0s,baz=284,slow=12,SNR=104
WRA                                 PcP    PcP      21 01 33.7   0.0
      comp=Z,6.4nm,0.8s,baz=292,slow=3.2,SNR=6.3
WRA                                 S      S        21 04 21.4  +0.3
      comp=Z,0.6nm,0.8s,baz=42,slow=54,SNR=1.8
WRA                                 LR     LR       21 11 49.8
      comp=Z,406nm,21.3s,baz=4.5,slow=35
WRA                                 P3KPbc          21 29 58.2
      comp=Z,0.8nm,0.9s,baz=107,slow=5.7,SNR=5.5
      comp=Z,60nm,1.0s
WRA   Warramunga Arr     34.08 116  P      P        20 58 56.1  -0.1
WRAB  Tennant Creek      34.09 116ceP      P        20 58 56.5  +0.2
WRAB                                pmax   pmax
      comp=Z,16nm,0.6s
WRAB  Tennant Creek      34.09 116  P      P        20 58 57.2  +0.9
FORT  Forrest            34.16 137  P      P        20 58 56.8   0.0
      baz=34,SNR=55
FORT  Forrest            34.16 137  P      P        20 58 56.8   0.0
FORT  Forrest            34.16 137  P      P        20 58 58.1  +1.3
BOK   Bokaro             34.27 333⇓iP      P        20 58 59.8  +2.0
BOK                                 IAmb   IAmb     20 59 04.4
      comp=Z,102nm,1.1s
GUWA  GUWAHATI           34.36 344 i P     P        20 58 58.1  -0.3
TEZP  TEZPUR             34.47 346 i P     P        20 58 59.4  -0.1
LKP   Lekhapani          34.54 351 eP      P        20 58 59.7  -0.3
BLSP  Bilaspur           34.73 327⇓iP      P        20 59 00.9  -0.9
ITAN  ITANAGAR           34.76 347 i P     P        20 59 02.0   0.0
AS31  Alice Springs      35.00 122  P      P        20 59 04.2  -0.1
ASAR  Alice Springs      35.00 122  P      P        20 59 04.1  -0.1
      comp=Z,62nm,1.0s,baz=303,slow=7.8,SNR=261
ASAR                                PcP    PcP      21 01 36.5  +0.1
      comp=Z,7.8nm,0.6s,baz=302,slow=2.1,SNR=9.5
ASAR                                S      S        21 04 34.5  -0.8
      comp=Z,0.3nm,0.6s,baz=40,slow=41,SNR=3.1
ASAR                                ScP    ScP      21 05 22.6  +1.9
      comp=Z,0.9nm,0.8s,baz=270,slow=2.8,SNR=3.5
ASAR                                LR     LR       21 16 43.9
      comp=Z,410nm,18.1s,baz=308,slow=42
ASAR                                P3KPbc          21 29 54.1
      comp=Z,0.8nm,0.8s,baz=119,slow=4.8,SNR=6.8
      comp=Z,62nm,1.0s
TPUB  Ta-pu              35.22  31  P      P        20 59 05.9  -0.1
TPUB                                IAmb   IAmb     20 59 25.0
      comp=Z,151nm,1.5s
GOA   Goa                35.58 309 eP      P        20 59 10.4  +1.3
QZH   Quanzhou           35.63  27⇓iP      P        20 59 09.6  +0.1
QZH                                 S      S        21 04 47.6  +3.0
QZH                                 pmax   pmax
      comp=Z,260nm,2.7s
QZH                                 LR     LR
      comp=Z,790nm,15.2s
QZH                                 LR     LR
      comp=Z,780nm,15.2s
QZH                                 LR     LR
      comp=Z,800nm,13.3s
YULB  Yu-li              35.64  32  P      P        20 59 09.7  +0.2
SSLB  Suanglung          35.78  31  P      P        20 59 10.9   0.0
SSLB  Suanglung          35.78  31  P      P        20 59 11.7  +0.9
SLGI  Shiliguri          35.86 339 eP      P        20 59 13.1  +1.6
GTK   Tadong             36.37 340 eP      P        20 59 17.3  +1.4
NACB  Ninganchiao        36.43  31  P      P        20 59 15.2  -1.2
CNSH  ChangSha           36.51  17 ⇑P      P        20 59 17.3  +0.4
CNSH                                S      S        21 05 01.3  +3.3
CNSH                                pmax   pmax
      comp=Z,38nm,1.2s
CNSH                                LR     LR
      comp=Z,1µm,17.9s
CNSH                                LR     LR
      comp=Z,2µm,18.4s
CNSH                                LR     LR
      comp=Z,1µm,15.8s
AKL   Akola              36.72 319 eP      P        20 59 20.0  +1.1
AKL                                i x     S        21 05 06.9  +5.5
YHNB  Yeheng             36.73  31  P      P        20 59 18.7  -0.2
RAMN  Ramite             36.76 337 ePg     P        20 59 20.6  +1.2
      comp=Z,298nm,1.2s
SMPI  Sarmi              37.08  84  P      P        20 59 22.2  +0.1
      comp=Z,925nmcomp=Z,39nm,1.4s
YOJ   Yonaguni jima      37.41  33  P      P        20 59 27.3  +2.6
JIRN  Jiri               37.56 337 ePg     P        20 59 27.5  +1.2
      comp=Z,331nm,1.1s
CD2   Chengdu            37.66   3  P      P        20 59 27.3  +0.5
CD2                                 sP     sP       20 59 34.5  +0.2
CD2                                 PP     PP       21 00 53.0  -0.1
CD2                                 S      S        21 05 12.9  -2.7
CD2                                 sS     sS       21 05 24.0  -0.3
CD2                                 pmax   pmax
      comp=Z,30nm,0.7s
CD2                                 pmax   pmax
      comp=Z,240nm,6.0s
CD2                                 LR     LR
      comp=Z,3µm,20.6s
CD2                                 LR     LR
      comp=Z,1µm,17.2s
ENH   Enshi              37.70  11  P      P        20 59 26.9  -0.2
PKI   Pulchoki           37.79 336 ePg     P        20 59 28.9  +0.7
      comp=Z,236nm,1.4s
PKIN  Phulchoki          37.80 336 ePg     P        20 59 29.0  +0.7
      comp=Z,235nm,1.5s
LSA   Lhasa              37.83 345  P      P        20 59 28.9  +0.2
LSA                                 IAmb   IAmb     20 59 31.2
      comp=Z,96nm,1.1s
LSA   Lhasa              37.83 345  P      P        20 59 28.9  +0.2
LSA                                 pmax   pmax
      comp=Z,97nm,1.1s
LSA   Lhasa              37.83 345  P      P        20 59 30.1  +1.4
LSA                                 S      S        21 05 17.9  -1.1
LSA                                 pmax   pmax
      comp=Z,100nm,1.0s
LSA                                 LR     LR
      comp=Z,200nm,10.1s
LSA                                 LR     LR
      comp=Z,300nm,13.3s
LSA                                 LR     LR
      comp=Z,150nm,11.8s
LSA   Lhasa              37.83 345 i P     P        20 59 29.8  +1.1
      SNR=35
DMN   Daman              37.95 335 ePg     P        20 59 30.3  +0.8
      comp=Z,177nm,1.2s
KKN   Kakani             38.04 336 ePg     P        20 59 31.1  +0.9
      comp=Z,348nm,1.2s
KKN   Kakani             38.04 336 ePg     P        20 59 31.2  +1.0
      comp=Z,272nm,1.2s
MULG  Mulgathing         38.14 132  P      P        20 59 30.9  +0.1
OOD   Oodnadatta         38.20 127  P      P        20 59 31.8  +0.5
VLK   Valmikinagar       38.22 334⇓iP      P        20 59 33.7  +2.3
BHPL  Bhopal             38.31 322 eP      P        20 59 31.1  -1.2
BHPL                               i x     x        21 01 02.6
JMJ   Miyako jima 2      38.96  35  P      P        20 59 38.5  +0.8
QIS   Mount Isa          39.00 114  P      P        20 59 38.6  +0.4
      baz=39,SNR=47
QIS   Mount Isa          39.00 114  P      P        20 59 38.9  +0.7
WHN   Wuhan              39.14  17 ⇓P      P        20 59 40.0  +0.9
WHN                                 S      S        21 05 42.3  +4.5
WHN                                 LR     LR
      comp=Z,1µm,14.1s
WHN                                 LR     LR
      comp=Z,6µm,17.7s
WHN                                 LR     LR
      comp=Z,2µm,19.3s
JHNI  Jhansi             39.36 326⇓iP      P        20 59 39.9  -1.3
BRCI  Bahraich           39.48 331 i P     P        20 59 43.0  +0.9
BBOO  Buckleboo          40.90 134  P      P        20 59 53.6  -0.3
      baz=41,SNR=17
BBOO  Buckleboo          40.90 134  P      P        20 59 53.3  -0.6
BBOO                                IAmb   IAmb     20 59 54.9
      comp=Z,161nm,1.4s
BBOO  Buckleboo          40.90 134  P      P        20 59 53.8  -0.1
COEN  Coen               41.21 103  P      P        20 59 57.1  +0.5
      baz=41,SNR=6.9
COEN  Coen               41.21 103  P      P        20 59 56.3  -0.3
COEN  Coen               41.21 103  P      P        20 59 57.6  +1.0
XAN   Xi'an              41.29   9 ⇓P      P        20 59 57.1  +0.1
XAN                                 S      S        21 06 08.9  -1.1
XAN                                 pmax   pmax
      comp=Z,100nm,1.2s
XAN                                 pmax   pmax
      comp=Z,480nm,6.5s
XAN                                 LR     LR
      comp=Z,1µm,14.0s
XAN                                 LR     LR
      comp=Z,2µm,15.2s
XAN                                 LR     LR
      comp=Z,2µm,13.6s
LCRK  Leigh Creek        41.36 129  P      P        20 59 58.8  +1.1
LGTI  Lohaghat           41.70 331 i P     P        21 00 01.0  +0.7
PTH   Pithoragarh        41.80 331⇓iP      P        21 00 01.9  +0.5
NJ2   Nanjing            42.02  22 eP      P        21 00 03.5  +0.6
NJ2                                 S      S        21 06 24.9  +4.1
NJ2                                 sS     sS       21 06 31.3  +1.7
NJ2                                 pmax   pmax
      comp=Z,25nm,1.1s
NJ2                                 pmax   pmax
      comp=Z,370nm,5.1s
NJ2                                 LR     LR
      comp=Z,1µm,14.2s
NJ2                                 LR     LR
      comp=Z,710nm,14.2s
NJ2                                 LR     LR
      comp=Z,2µm,14.2s
SSE   Sheshan            42.10  25  P      P        21 00 04.4  +0.8
SSE                                 S      S        21 06 23.1  +1.2
SSE                                 pmax   pmax
      comp=Z,22nm,1.3s
SSE                                 pmax   pmax
      comp=Z,140nm,5.0s
SSE                                 LR     LR
      comp=Z,180nm,16.5s
JOW   Kunigami           42.22  36  P      P        21 00 04.2  -0.5
JOW   Kunigami           42.22  36  P      P        21 00 05.3  +0.6
      comp=Z,28nm,0.7s
INKA  Innaminka          42.26 124  P      P        21 00 05.9  +0.9
AJM   Ajmer              42.40 323 eP      P        21 00 06.0  -0.2
AJM                                i PCP   PcP      21 01 59.9  +0.6
LYN   LuoYang            42.46  13⇓iP      P        21 00 07.5  +1.0
LYN                                 S      S        21 06 26.6  -0.5
LYN                                 pmax   pmax
      comp=Z,90nm,1.2s
LYN                                 pmax   pmax
      comp=Z,630nm,4.1s
LYN                                 LR     LR
      comp=Z,730nm,20.6s
LYN                                 LR     LR
      comp=Z,3µm,19.6s
LYN                                 LR     LR
      comp=Z,1µm,21.6s
PTPS  Port Pirie         42.49 133  P      P        21 00 08.0  +1.2
      comp=Z,203nm,0.8s
AYAN  Aya Nagar          42.51 327 eP      P        21 00 06.2  -0.7
KUDL  Kundal             42.59 326 eP      P        21 00 07.0  -0.6
KUDL                               i PCP   PcP      21 01 59.5  -0.3
NAPP  Napperby           42.60 133  P      P        21 00 08.2  +0.4
      comp=Z,94nm,1.0s
LZH   Lanzhou            42.82   2 ⇓P      P        21 00 10.9  +1.3
LZH                                 sP     sP       21 00 19.6  +2.4
LZH                                 PP     PP       21 01 51.9  +2.6
LZH                                 PcP    PcP      21 02 02.0  +1.4
LZH                                 S      S        21 06 33.4  +0.6
LZH                                 sS     sS       21 06 44.1  +2.5
LZH                                 SS     SS       21 09 34.9   -10
LZH                                 pmax   pmax
      comp=Z,69nm,1.1s
LZH                                 pmax   pmax
      comp=Z,420nm,4.7s
LZH                                 LR     LR
      comp=Z,920nm,13.6s
LZH                                 LR     LR
      comp=Z,1µm,14.3s
LZH                                 LR     LR
      comp=Z,1µm,15.0s
MTSU  Mount Surprise     42.84 109  P      P        21 00 10.8  +0.9
      baz=43,SNR=20
MTSU  Mount Surprise     42.84 109  P      P        21 00 10.0   0.0
HTT   Hallett            43.29 133  P      P        21 00 13.7  +0.3
      baz=43,SNR=28
HTT   Hallett            43.29 133  P      P        21 00 13.7  +0.3
GOMU  GeErMu             43.40 352  P      P        21 00 14.8  +0.3
GOMU                                pP     pP       21 00 18.3  -1.6
GOMU                                sP     sP       21 00 19.0  -3.1
GOMU                                PP     PP       21 01 56.5  +0.8
GOMU                                PcP    PcP      21 02 02.3  -0.5
GOMU                                S      S        21 06 40.6  -1.0
GOMU                                pmax   pmax
      comp=Z,19nm,1.4s
GOMU                                pmax   pmax
      comp=Z,59nm,3.6s
GOMU                                LR     LR
      comp=Z,220nm,15.9s
GOMU                                LR     LR
      comp=Z,280nm,16.1s
GOMU                                LR     LR
      comp=Z,300nm,17.9s
DDI   Dehra Dun          43.49 330⇓iP      P        21 00 15.2  +0.2
DDI                                 IAmb   IAmb     21 00 16.9
      comp=Z,60nm,0.4s
TWOA  Tennyson Woods     43.84 135  P      P        21 00 19.8  +2.0
      comp=Z,42nm,1.0s
STKA  Stephens Creek     44.59 129  P      P        21 00 24.1  +0.3
      comp=Z,79nm,1.0s,baz=300,slow=8.9,SNR=81
STKA                                PcP    PcP      21 02 07.1  +0.5
      comp=Z,21nm,1.1s,baz=324,slow=5.9,SNR=3.6
STKA                                LR     LR       21 18 28.9
      comp=Z,598nm,21.3s,baz=297,slow=35
      comp=Z,79nm,1.0s
STKA  Stephens Creek     44.59 129  P      P        21 00 24.2  +0.3
      baz=45,SNR=57
STKA  Stephens Creek     44.59 129  P      P        21 00 24.0  +0.2
STKA  Stephens Creek     44.59 129  P      P        21 00 24.0  +0.3
STKA                                pmax   pmax
      comp=Z,17nm,0.9s
STKA  Stephens Creek     44.59 129  P      P        21 00 24.6  +0.8
SMLA  Simla              44.59 329⇓iP      P        21 00 23.3  -0.4
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SMLA				IAmb	IAmb	21 00 26.7	
	comp=Z,161nm,1.3s						
SMLA				*i* x	x	21 02 06.8	
QLP	**Quilpie**	**44.79**	**121**	P	**P**	**21 00 26.9**	**+1.4**
	baz=45,SNR=9.3						
QLP	**Quilpie**	**44.79**	**121**	P	**P**	**21 00 27.8**	**+2.4**
PMG	**Port Moresby**	**44.92**	**96**	P	**P**	**21 00 26.7**	**+0.1**
PMG	**Port Moresby**	**44.92**	**96**	*ce*P	**P**	**21 00 27.3**	**+0.7**
PMG				pmax	pmax		
	comp=Z,155nm,1.2s						
CTA	**Charters Tower**	**44.98**	**111**	LR	LR	21 20 29.3	
	comp=Z,450nm,21.7s,baz=286,slow=38						
CTA	**Charters Tower**	**44.98**	**111**	P	**P**	**21 00 29.5**	**+2.4**
	comp=Z,74nm,1.3s						
CTAO	**Charters Tower**	**44.98**	**111**	P	**P**	**21 00 27.7**	**+0.6**
CTAO				IAmb	IAmb	21 00 29.4	
	comp=Z,77nm,1.1s						
CTAO	**Charters Tower**	**44.98**	**111**	P	**P**	**21 00 27.7**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,77nm,1.2s						
CTAO	**Charters Tower**	**44.98**	**111**	P	**P**	**21 00 29.0**	**+1.9**
	comp=Z,62nm,1.3s						
JASL	**Jaisalmer**	**45.05**	**320**	*e*P	**P**	**21 00 28.9**	**+1.4**
BHK	**Bhakra**	**45.20**	**329**	⇓*i*P	**P**	**21 00 28.3**	**-0.4**
BHK				*i* x	x	21 02 10.8	
TIA	**Tai'an**	**45.25**	**17**	⇓P	**P**	**21 00 28.6**	**-0.3**
TIA				S	**S**	**21 07 13.4**	**+5.5**
TIA				pmax	pmax		
	comp=Z,29nm,1.1s						
TIA				pmax	pmax		
	comp=Z,230nm,5.0s						
TIA				LR	LR		
	comp=Z,840nm,20.0s						
TIA				LR	LR		
	comp=Z,2µm,18.2s						
TIA				LR	LR		
	comp=Z,550nm,25.1s						
TIY	**Taiyuan**	**45.49**	**12**	P	**P**	**21 00 31.8**	**+0.9**
TIY				S	**S**	**21 07 13.6**	**+2.1**
TIY				pmax	pmax		
	comp=Z,50nm,0.5s						
TIY				pmax	pmax		
	comp=Z,280nm,4.7s						
TIY				LR	LR		
	comp=Z,520nm,24.0s						
TIY				LR	LR		
	comp=Z,2µm,19.9s						
TIY				LR	LR		
	comp=Z,480nm,23.4s						
HNS	**HongShan**	**45.70**	**14**	⇓P	**P**	**21 00 33.0**	**+0.6**
HNS				PP	**PP**	**21 02 23.9**	**+4.1**
HNS				S	**S**	**21 07 16.1**	**+1.7**
HNS				pmax	pmax		
	comp=Z,42nm,1.5s						
HNS				pmax	pmax		
	comp=Z,340nm,7.8s						
HNS				LR	LR		
	comp=Z,580nm,20.8s						
HNS				LR	LR		
	comp=Z,1µm,18.5s						
HNS				LR	LR		
	comp=Z,620nm,21.7s						
GTA	**Gaotai**	**46.14**	**358**	⇓P	**P**	**21 00 37.0**	**+1.0**
GTA				pP	pP	21 00 42.4	+1.0
GTA				sP	pwP	21 00 46.3	-2.5
GTA				PcP	**PcP**	**21 02 12.8**	**+0.9**
GTA				S	**S**	**21 07 20.8**	**0.0**
GTA				pmax	pmax		
	comp=Z,43nm,1.1s						
GTA				pmax	pmax		
	comp=Z,370nm,8.0s						
GTA				LR	LR		
	comp=Z,700nm,19.1s						
GTA				LR	LR		
	comp=Z,950nm,19.1s						
GTA				LR	LR		
	comp=Z,770nm,21.1s						
THN	**Thein Dam**	**46.37**	**329**	⇓*i*P	**P**	**21 00 37.2**	**-0.6**
RER	**Riviere de l'E**	**46.71**	**247**	P	**P**	**21 00 42.5**	**+1.7**
JSU	**Suzuyama**	**46.99**	**34**	P	**P**	**21 00 42.1**	**-0.6**
ARPS	**Mount Arapiles**	**47.00**	**135**	P	**P**	**21 00 44.3**	**+1.5**
	baz=47,SNR=7.4						
ARPS	**Mount Arapiles**	**47.00**	**135**	P	**P**	**21 00 44.1**	**+1.3**
	comp=Z,59nm,1.3s						
JMU	**Jammu**	**47.02**	**329**	⇓*i*P	**P**	**21 00 43.0**	**+0.1**
GUMO	**Guam**	**47.34**	**64**	LR	LR	21 20 01.6	
	comp=Z,186nm,21.7s,baz=252,slow=35						
CMSA	**Cobar Meteorol**	**47.66**	**127**	P	**P**	**21 00 48.8**	**+0.8**
	baz=48,SNR=83						
CMSA	**Cobar Meteorol**	**47.66**	**127**	P	**P**	**21 00 49.0**	**+1.0**
BTO	**Baotou**	**47.89**	**8**	*e*P	**P**	**21 00 50.6**	**+0.9**
BTO				S	**S**	**21 07 50.9**	**+5.1**
HHC	**Hu-ho-hao-te**	**48.37**	**10**	*e*P	**P**	**21 00 54.6**	**+1.2**
HHC				PP	**PP**	**21 02 47.9**	**+1.7**
HHC				S	**S**	**21 07 56.9**	**+4.3**
HHC				pmax	pmax		
	comp=Z,120nm,0.9s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
HHC				LR	LR		
	comp=Z,940nm,13.1s						
HHC				LR	LR		
	comp=Z,2µm,13.8s						
JNU	**Nakatsue**	**48.45**	**33**	P	**P**	**21 00 53.5**	**-0.5**
JNU				IAmb	IAmb	21 02 24.1	
	comp=Z,38nm,0.6s						
NAWB	**Namwon**	**48.52**	**28**	P	**P**	**21 00 54.7**	**+0.2**
NAWB				IAmb	IAmb	21 00 59.6	
	comp=Z,95nm,1.7s						
BJT	**Baijiatuau**	**48.55**	**15**	P	**P**	**21 00 53.9**	**-0.7**
BJT				IAmb	IAmb	21 00 56.6	
	comp=Z,60nm,1.1s						
BJT	**Baijiatuau**	**48.55**	**15**	P	**P**	**21 00 53.9**	**-0.7**
BJT				pmax	pmax		
	comp=Z,60nm,1.1s						
BJI	**Beijing**	**48.57**	**15**	P	**P**	**21 00 55.5**	**+0.7**
BJI				sP	**sP**	**21 01 01.3**	**-0.9**
BJI				PcP	**PcP**	**21 02 21.3**	**+1.0**
BJI				PP	**PP**	**21 02 52.1**	**+4.2**
BJI				S	**S**	**21 08 02.6**	**+7.5**
BJI				pmax	pmax		
	comp=Z,51nm,1.1s						
BJI				pmax	pmax		
	comp=Z,310nm,4.8s						
BJI				LR	LR		
	comp=Z,540nm,18.0s						
BJI				LR	LR		
	comp=Z,1µm,16.0s						
BJI				LR	LR		
	comp=Z,800nm,17.5s						
RMQ	**Roma**	**48.64**	**119**	P	**P**	**21 00 53.2**	**-2.5**
	baz=49,SNR=6.7						
RMQ	**Roma**	**48.64**	**119**	P	**P**	**21 00 58.4**	**+2.7**
JTU	**Tsushima**	**48.77**	**31**	P	**P**	**21 00 56.5**	**+0.1**
JTU				IAmb	IAmb	21 01 25.4	
	comp=Z,94nm,1.5s						
DL2	**Dalian**	**49.16**	**20**	P	**P**	**21 00 59.6**	**+0.3**
DL2				PcP	**PcP**	**21 02 22.9**	**+0.4**
DL2				S	**S**	**21 08 03.5**	**0.0**
DL2				pmax	pmax		
	comp=Z,29nm,1.3s						
DL2				pmax	pmax		
	comp=Z,200nm,6.9s						
DL2				LR	LR		
	comp=Z,800nm,14.0s						
DL2				LR	LR		
	comp=Z,330nm,14.6s						
DL2				LR	LR		
	comp=Z,970nm,14.7s						
TJN	**Taejon**	**49.29**	**27**	P	**P**	**21 01 00.7**	**+0.4**
TJN	**Taejon**	**49.29**	**27**	*ce*P	**P**	**21 00 59.5**	**-0.9**
RK1H	**Rockhampton Ha**	**49.48**	**115**	P	**P**	**21 01 03.0**	**+0.9**
INCN	**Inchon**	**49.88**	**26**	P	**P**	**21 01 04.1**	**-0.8**
INCN	**Inchon**	**49.88**	**26**	P	**P**	**21 01 04.1**	**-0.8**
INCN				pmax	pmax		
	comp=Z,31nm,1.1s						
TOO	**Toolangi**	**49.96**	**134**	P	**P**	**21 01 06.8**	**+1.2**
	baz=50,SNR=3.6						
TOO	**Toolangi**	**49.96**	**134**	P	**P**	**21 01 06.2**	**+0.7**
TOO				IAmb	IAmb	21 01 08.7	
	comp=Z,84nm,1.4s						
TOO	**Toolangi**	**49.96**	**134**	P	**P**	**21 01 06.3**	**+0.7**
TOO				pmax	pmax		
	comp=Z,84nm,1.4s						
TOO	**Toolangi**	**49.96**	**134**	P	**P**	**21 01 07.7**	**+2.1**
	comp=Z,43nm,1.7s						
HJU	**Haeju**	**49.97**	**25**	P	**P**	**21 01 05.0**	**-0.5**
HJU				pP	**sP**	**21 01 13.5**	**+0.5**
HJU				S	**S**	**21 08 12.6**	**-2.3**
HJU				AmB			
	comp=Z,333nm,1.5s						
HJU				AMS	AMS		
	comp=N,116nm,1.9s						
HJU				AMS	AMS		
	comp=E,114nm,1.9s						
HJU				AMS	AMS		
	comp=Z,156nm,2.5s						
KSCHJ	**Chungju**	**49.98**	**27**	P	**P**	**21 01 05.7**	**+0.1**
KSCHJ				IAmb	IAmb	21 01 06.9	
	comp=Z,96nm,1.9s						
KRVT	**Keravat (AS076**	**50.01**	**90**	LR	LR	21 24 45.4	
	comp=Z,136nm,21.8s,baz=47,slow=39						
RABL	**Rabaul**	**50.16**	**90**	P	**P**	**21 01 06.3**	**-1.1**
RABL				IAmb	IAmb	21 01 08.3	
	comp=Z,40nm,0.8s						
KSAR	**Wonju Array Be**	**50.40**	**27**	P	**P**	**21 01 08.5**	**-0.3**
KSAR				PcP	**PcP**	**21 02 27.1**	**+0.1**
KSAR	**Wonju Array Be**	**50.40**	**27**	P	**P**	**21 01 08.5**	**-0.3**
KSAR						21 02 27.1	
EIDS	**Eidsvold**	**50.41**	**117**	P	**P**	**21 01 08.4**	**-0.8**
	baz=50,SNR=3.6						
EIDS	**Eidsvold**	**50.41**	**117**	P	**P**	**21 01 09.3**	**+0.1**
EIDS	**Eidsvold**	**50.41**	**117**	P	**P**	**21 01 10.2**	**+1.0**
KSRS	**Korea Array**	**50.43**	**27**	P	**P**	**21 01 09.2**	**+0.2**
	comp=Z,7.6nm,0.5s,baz=229,slow=7.3,SNR=44						
KSRS				PcP	**PcP**	**21 02 27.3**	**+0.1**
	comp=Z,10.0nm,1.0s,baz=213,slow=3.6,SNR=10.0						
KSRS				LR	LR	21 24 32.6	
	comp=Z,254nm,18.1s,baz=220,slow=39						
	comp=Z,7.6nm,0.5s						
KS19	**Wonju Array Si**	**50.44**	**27**	P	**P**	**21 01 09.4**	**+0.2**
KS19				IAmb	IAmb	21 01 10.8	
	comp=Z,89nm,1.6s						
JLN	**Jalan Bani Buh**	**50.61**	**306**	P	**P**	**21 01 13.1**	**+2.5**
	SNR=5.0						
JLN				P	**P**	**21 01 13.1**	**+2.5**
	SNR=5.0						
PYAG	**Pyongyang**	**50.84**	**24**	P	**P**	**21 01 11.9**	**-0.1**
PYAG				pP	**sP**	**21 01 20.3**	**+0.7**
PYAG				S	**S**	**21 08 25.4**	**-1.6**
PYAG				AmB			
	comp=Z,249nm,1.3s						
PYAG				AMS	AMS		
	comp=N,336nm,5.2s						
PYAG				AMS	AMS		
	comp=E,228nm,3.6s						
PYAG				AMS	AMS		
	comp=Z,144nm,2.2s						
JHS	**Saijyo**	**51.09**	**33**	P	**P**	**21 01 13.9**	**-0.1**
JHS				IAmb	IAmb	21 01 15.2	
	comp=Z,210nm,2.0s						
DQM	**DQM**	**51.09**	**302**	P	**P**	**21 01 15.7**	**+1.3**
WBK	**Wadi Bani Khal**	**51.19**	**306**	P	**P**	**21 01 16.7**	**+1.6**
	SNR=9.5						
WBK				P	**P**	**21 01 16.7**	**+1.6**
	SNR=9.5						
SOCY	**Socotra**	**51.21**	**292**	P	**P**	**21 01 15.6**	**+0.1**
SOCY				IAmb	IAmb	21 01 18.6	
	comp=Z,100nm,1.2s						
SOCY	**Socotra**	**51.21**	**292**	P	**P**	**21 01 16.8**	**+1.3**
	SNR=5.5						
MHTO	**MHTO**	**51.22**	**304**	P	**P**	**21 01 16.1**	**+0.8**
	SNR=7.3						
SEHB	**SEOHWA**	**51.25**	**27**	P	**P**	**21 01 15.2**	**0.0**
SUJ	**Sinuiju**	**51.25**	**22**	P	**P**	**21 01 14.3**	**-0.8**
SUJ				pP	**sP**	**21 01 23.5**	**+0.8**
SUJ				S	**S**	**21 08 30.5**	**-2.1**
SUJ				AmB			
	comp=Z,179nm,1.7s						
SUJ				AMS	AMS		
	comp=N,226nm,6.4s						
SUJ				AMS	AMS		
	comp=E,190nm,5.4s						
SUJ				AMS	AMS		
	comp=Z,124nm,3.5s						
SBV	**Sambava**	**51.42**	**258**	P	**P**	**21 01 19.1**	**+2.1**
KBL	**Kabul**	**51.58**	**325**	P	**P**	**21 01 17.1**	**-0.9**
KBL	**Kabul**	**51.58**	**325**	P	**P**	**21 01 17.1**	**-0.9**
KBL				pmax	pmax		
	comp=Z,56nm,1.5s						
KBL	**Kabul**	**51.58**	**325**	P	**P**	**21 01 17.6**	**-0.4**
	SNR=15						
KBL				P	**P**	**21 01 17.6**	**-0.4**
	SNR=15						
CAN	**Canberra**	**51.62**	**130**	P	**P**	**21 01 19.2**	**+1.1**
CAN				IAmb	IAmb	21 01 20.6	
	comp=Z,49nm,0.9s						
CAN	**Canberra**	**51.62**	**130**	P	**P**	**21 01 19.3**	**+1.1**
CAN				pmax	pmax		
	comp=Z,49nm,0.9s						
CAN	**Canberra**	**51.62**	**130**	P	**P**	**21 01 18.8**	**+0.6**
JCJ	**Chichijima**	**51.67**	**47**	LR	LR	21 24 04.8	
	comp=Z,176nm,19.7s,baz=280,slow=37						
JMDO	**Jabal Madar**	**51.77**	**305**	P	**P**	**21 01 21.2**	**+1.8**
WSAR	**Wadi Sarin**	**51.77**	**307**	LR	LR	21 20 15.2	
	comp=Z,724nm,20.1s,baz=139,slow=33						
WSAR	**Wadi Sarin**	**51.77**	**307**	P	**P**	**21 01 21.4**	**+1.9**
	SNR=10						
CNB	**Canberra Magne**	**51.90**	**130**	P	**P**	**21 01 21.0**	**+0.7**
	baz=52,SNR=5.0						
KSH	**Kashi**	**52.03**	**335**	P	**P**	**21 01 20.3**	**-0.9**
KSH				pP	pP	21 01 27.3	+0.6
KSH				sP	sP	21 01 30.0	+1.1
KSH				PcP	**PcP**	**21 02 33.4**	**+0.1**
KSH				PP	**PP**	**21 03 24.3**	**+4.7**
KSH				S	**S**	**21 08 41.4**	**-2.3**
KSH				pmax	pmax		
	comp=Z,49nm,1.2s						
KSH				pmax	pmax		
	comp=Z,340nm,4.4s						
KSH				LR	LR		
	comp=Z,380nm,16.8s						
KSH				LR	LR		
	comp=Z,320nm,15.8s						
KSH				LR	LR		
	comp=Z,360nm,20.3s						
WMQ	**Urumqi**	**52.10**	**347**	⇓*i*P	**P**	**21 01 22.8**	**+1.2**
WMQ				pP	pwP	21 01 32.3	-1.9
WMQ				sP	sP	21 01 36.8	+7.6
WMQ				PcP	**PcP**	**21 02 34.9**	**+1.5**
WMQ				S	**S**	**21 08 47.5**	**+3.1**
WMQ				pmax	pmax		
	comp=Z,220nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,630nm,4.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.7s						
WMQ				LR	LR		
	comp=Z,330nm,21.7s						
ARMA	**Armidale**	**52.13**	**123**	P	**P**	**21 01 22.2**	**0.0**
	baz=52,SNR=6.4						
ARMA	**Armidale**	**52.13**	**123**	P	**P**	**21 01 23.6**	**+1.4**
ARMA	**Armidale**	**52.13**	**123**	P	**P**	**21 01 24.1**	**+1.9**
	comp=Z,50nm,2.0s						
SMDO	**Samad**	**52.15**	**306**	P	**P**	**21 01 23.8**	**+1.5**
	SNR=15						
SMDO				P	**P**	**21 01 23.8**	**+1.5**
	SNR=15						
XLT	**XiLinHaoTe**	**52.20**	**13**	⇑*i*P	**P**	**21 01 23.3**	**+1.0**
XLT				sP	sP	21 01 31.8	+1.9
XLT				S	**S**	**21 08 52.3**	**+6.5**
XLT				pmax	pmax		
	comp=Z,45nm,1.3s						
XLT				pmax	pmax		
	comp=Z,170nm,3.6s						
XLT				LR	LR		
	comp=Z,930nm,20.3s						
XLT				LR	LR		
	comp=Z,400nm,19.0s						
HHU	**Hamhung**	**52.31**	**25**	P	**P**	**21 01 23.0**	**-0.1**
HHU				pP	**sP**	**21 01 31.4**	**+0.8**
HHU				S	**S**	**21 08 47.3**	**+0.1**
HHU				AmB			
	comp=Z,163nm,1.4s						
HHU				AMS	AMS		
	comp=N,99nm,2.7s						
HHU				AMS	AMS		
	comp=E,100nm,2.7s						
HHU				AMS	AMS		
	comp=Z,94nm,2.5s						
BIDO	**Bidbid**	**52.32**	**307**	P	**P**	**21 01 25.1**	**+1.6**
	SNR=24						
BIDO				P	**P**	**21 01 25.1**	**+1.6**
	SNR=24						
DMTO	**DMTO**	**52.37**	**299**	P	**P**	**21 01 24.8**	**+0.9**
SNY	**Shenyang**	**52.44**	**20**	⇑P	**P**	**21 01 23.8**	**-0.2**
SNY				S	**S**	**21 08 47.8**	**-1.1**
SNY				pmax	pmax		
	comp=Z,44nm,1.2s						
SNY				pmax	pmax		
	comp=Z,300nm,4.7s						
SNY				LR	LR		
	comp=Z,520nm,14.9s						
SNY				LR	LR		
	comp=Z,720nm,14.9s						
SNY				LR	LR		
	comp=Z,1µm,14.8s						
MGCD	**Mangrove Creek**	**52.54**	**127**	P	**P**	**21 01 26.5**	**+1.5**
	baz=53,SNR=5.7						
MGCD	**Mangrove Creek**	**52.54**	**127**	P	**P**	**21 01 26.3**	**+1.3**
	comp=Z,44nm,0.9s						
BSY	**Bisya**	**52.68**	**305**	P	**P**	**21 01 27.6**	**+1.4**
	SNR=11						
BSY				P	**P**	**21 01 27.6**	**+1.4**
	SNR=11						
RBK	**Rabkut**	**52.93**	**298**	P	**P**	**21 01 29.5**	**+1.4**
RBK				P	**P**	**21 01 29.5**	**+1.4**
HOQ	**Hoqain**	**53.00**	**306**	P	**P**	**21 01 30.4**	**+1.9**
	SNR=22						
HOQ				P	**P**	**21 01 30.4**	**+1.9**
	SNR=22						
TARG	**Taragay, Kyrgy**	**53.17**	**338**	P	**P**	**21 01 29.9**	**-0.1**
MOO	**Moorlands**	**53.35**	**139**	P	**P**	**21 01 32.4**	**+1.6**
	baz=54,SNR=3.5						
DOK	**Doka**	**53.44**	**299**	P	**P**	**21 01 32.5**	**+0.7**
WHFO	**Wadi Hawf**	**53.48**	**298**	P	**P**	**21 01 32.6**	**+0.5**
	SNR=5.1						
WHFO				P	**P**	**21 01 32.6**	**+0.5**
	SNR=5.1						
ARQ	**Araqi**	**53.51**	**306**	P	**P**	**21 01 33.7**	**+1.3**
	SNR=8.4						
ARQ				P	**P**	**21 01 33.7**	**+1.3**
	SNR=8.4						
PRZ	**Przheval'sk**	**53.61**	**339**	P	**P**	**21 01 33.4**	**+0.5**
PRZ				IAmb	IAmb	21 01 35.5	
	comp=Z,146nm,1.4s						
PRZ	**Przheval'sk**	**53.61**	**339**	P	**P**	**21 01 33.4**	**+0.5**
PRZ				pmax	pmax		
	comp=Z,146nm,1.4s						
TAU	**Tasmania Unive**	**53.66**	**139**	P	**P**	**21 01 33.9**	**+0.8**
TAU				IAmb	IAmb	21 01 35.5	
	comp=Z,54nm,0.8s						
TAU	**Tasmania Unive**	**53.66**	**139**	P	**P**	**21 01 33.9**	**+0.8**
TAU				pmax	pmax		
	comp=Z,55nm,0.8s						
TAU	**Tasmania Unive**	**53.66**	**139**	P	**P**	**21 01 34.1**	**+1.0**
	comp=Z,80nm,1.0s						
ABTO	**Aybut**	**53.67**	**297**	P	**P**	**21 01 34.5**	**+0.9**
	SNR=6.0						
ABTO				P	**P**	**21 01 34.5**	**+0.9**
	SNR=6.0						
JHJ	**Hachijo jima 2**	**53.71**	**40**	LR	LR	21 25 36.7	
	comp=Z,108nm,19.3s,baz=256,slow=37						
KDJ	**Kajisay**	**53.76**	**337**	P	**P**	**21 01 34.4**	**+0.4**
KDJ	**Kajisay**	**53.76**	**337**	P	**P**	**21 01 34.4**	**+0.4**
KDJ				pmax	pmax		
	comp=Z,166nm,1.1s						
SHLS	**Shalkode**	**53.83**	**340**	*d i*P	**P**	**21 01 34.0**	**-0.3**
SHLS				pmax	pmax		
	comp=Z,40nm,1.2s						
SHLS	**Shalkode**	**53.83**	**340**	⇓*i*P	**P**	**21 01 34.1**	**-0.3**
	comp=Z,40nm,1.2s,baz=340						
DRK	**Karamyk**	**53.88**	**331**	P	**P**	**21 01 34.9**	**-0.2**
DRK				IAmb	IAmb	21 01 37.5	
	comp=Z,66nm,0.9s						
UZB	**Uzynbulak**	**53.97**	**339**	*d i*P	**P**	**21 01 35.9**	**+0.5**
UZB				pmax	pmax		
	comp=Z,37nm,1.1s						
UZB	**Uzynbulak**	**53.97**	**339**	⇓*i*P	**P**	**21 01 36.0**	**+0.5**
	comp=Z,37nm,1.1s,baz=340						
SATY	**Saty**	**54.11**	**339**	*d i*P	**P**	**21 01 36.8**	**+0.4**
SATY				pmax	pmax		
	comp=Z,48nm,1.2s						
SATY	**Saty**	**54.11**	**339**	⇓*i*P	**P**	**21 01 36.9**	**+0.4**
	comp=Z,48nm,1.2s,baz=339						
ZHN	**Zhinishke**	**54.19**	**339**	*i* P	**P**	**21 01 37.2**	**+0.2**
ZHN	**Zhinishke**	**54.19**	**339**	*i* P	**P**	**21 01 37.2**	**+0.2**
	baz=339						
ULHL	**Ulahol**	**54.22**	**337**	P	**P**	**21 01 37.5**	**+0.1**
	SNR=48						
GAR	**Garm**	**54.23**	**330**	P	**P**	**21 01 35.8**	**-1.6**
GAR				IAmb	IAmb	21 01 37.3	
	comp=Z,94nm,1.2s						
UMZA	**Um Al Zommool**	**54.33**	**304**	P	**P**	**21 01 39.1**	**+0.8**
KPKS	**Kokpek**	**54.37**	**339**	*d i*P	**P**	**21 01 38.5**	**+0.2**
KPKS				pmax	pmax		
	comp=Z,30nm,1.1s						
KPKS	**Kokpek**	**54.37**	**339**	⇓*i*P	**P**	**21 01 38.5**	**+0.2**
	comp=Z,30nm,1.1s,baz=339						
ALNE	**Al Ain**	**54.48**	**306**	P	**P**	**21 01 40.8**	**+1.4**
	SNR=21						
ALNE				P	**P**	**21 01 40.8**	**+1.4**
	SNR=21						
ALNE	**Al Ain**	**54.48**	**306**	*i* P	**P**	**21 01 40.4**	**+1.1**
	SNR=12						
ASHO	**Ashiyiah**	**54.53**	**307**	P	**P**	**21 01 40.9**	**+1.2**
ASHO				P	**P**	**21 01 40.9**	**+1.2**
ASHO	**Ashiyiah**	**54.53**	**307**	*i* P	**P**	**21 01 40.8**	**+1.0**
	SNR=8.9						
HATD	**Hatta, Dubai**	**54.54**	**307**	P	**P**	**21 01 41.3**	**+1.4**
HATD				P	**P**	**21 01 41.3**	**+1.4**
HATD	**Hatta, Dubai**	**54.54**	**307**	*i* P	**P**	**21 01 40.8**	**+1.0**
	SNR=5.2						
UOSS	**Minazif**	**54.54**	**307**	P	**P**	**21 01 39.5**	**-0.3**
UOSS				IAmb	IAmb	21 01 41.6	
	comp=Z,73nm,1.4s						
UOSS	**Minazif**	**54.54**	**307**	P	**P**	**21 01 40.8**	**+1.0**
UOSS				P	**P**	**21 01 40.8**	**+1.0**
UOSS	**Minazif**	**54.54**	**307**	P	**P**	**21 01 40.1**	**+0.3**
BOOM	**Boomskoye usch**	**54.55**	**337**	P	**P**	**21 01 39.5**	**-0.2**
BOOM				IAmb	IAmb	21 01 41.0	
	comp=Z,101nm,1.1s						
BOOM	**Boomskoye usch**	**54.55**	**337**	P	**P**	**21 01 39.5**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,101nm,1.2s						
CHGR	**Chuyangaron**	**54.56**	**329**	P	**P**	**21 01 37.9**	**-1.9**
CHGR				IAmb	IAmb	21 01 39.3	
	comp=Z,101nm,1.1s						
CHGR	**Chuyangaron**	**54.56**	**329**	P	**P**	**21 01 37.9**	**-1.9**
CHGR				pmax	pmax		
	comp=Z,101nm,1.1s						
TNSS	**Tian-Shan**	**54.62**	**338**	*i* P	**P**	**21 01 40.3**	**-0.2**
TNSS	**Tian-Shan**	**54.62**	**338**	*i* P	**P**	**21 01 40.3**	**-0.2**
	baz=338						
SONM	**Songino Array**	**54.67**	**4**	P	**P**	**21 01 41.7**	**+1.2**
	comp=Z,55nm,1.0s,baz=185,slow=8.7,SNR=234						
SONM				S	**S**	**21 09 22.1**	**+2.9**
	comp=Z,0.1nm,0.4s,baz=0.1,slow=32,SNR=1.2						
SONM				LR	LR	21 28 24.6	
	comp=Z,448nm,19.3s,baz=176,slow=40						
SONM				PKP2bc	**P'P'bc**	**21 32 05.8**	**+2.6**
	comp=Z,1.4nm,1.0s,baz=300,slow=1.2,SNR=7.8						
	comp=Z,55nm,1.0s						
SONM	**Songino Array**	**54.67**	**4**	P	**P**	**21 01 41.5**	**+1.0**
SONM				IAmb	IAmb	21 01 43.0	
	comp=Z,86nm,1.0s						
MDOK	**Medeo**	**54.69**	**338**	*i* P	**P**	**21 01 40.9**	**+0.2**
MDOK	**Medeo**	**54.69**	**338**	*i* P	**P**	**21 01 40.9**	**+0.2**
	baz=338						
ULN	**Ulaanbaatar**	**54.74**	**4**	P	**P**	**21 01 41.6**	**+0.6**
ULN				IAmb	IAmb	21 01 43.5	
	comp=Z,47nm,1.0s						
ULN	**Ulaanbaatar**	**54.74**	**4**	*ce*P	**P**	**21 01 42.0**	**+1.0**
ULN				pmax	pmax		
	comp=Z,67nm,1.3s						
ULN	**Ulaanbaatar**	**54.74**	**4**	P	**P**	**21 01 42.4**	**+1.4**
ULN				P	**P**	**21 01 42.4**	**+1.4**
MSFE	**Esma-Masafi**	**54.78**	**308**	P	**P**	**21 01 42.8**	**+1.2**
AAA	**Alma-Ata**	**54.78**	**338**	*e*P	**P**	**21 01 41.4**	**+0.2**
AAA				pmax	pmax		
	comp=Z,25nm,1.1s						
AAA	**Alma-Ata**	**54.78**	**338**	*e*P	**P**	**21 01 41.5**	**+0.2**
	comp=Z,25nm,1.1s,baz=338						
MASF	**Masafi**	**54.79**	**308**	P	**P**	**21 01 43.4**	**+1.8**
BTK	**Batken**	**54.81**	**331**	P	**P**	**21 01 40.9**	**-0.6**

BTK				IAmb	IAmb	21 01 43.0	
	comp=Z,94nm,1.3s						
BTK	Batken	54.81	331	P	P	21 01 40.9	-0.6
BTK				pmax	pmax		
	comp=Z,94nm,1.3s						
CN2	Changchun	54.83	21	eP	P	21 01 40.8	-0.7
CN2				eS	S	21 09 19.8	-1.4
CN2				SS	SS	21 13 03.5	-1.5
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				LR	LR		
	comp=Z,800nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
UCH	Uchtor	54.90	335	P	P	21 01 42.8	+0.2
	SNR=48						
FAQ	Al Faqa, Dubai	54.93	307	P	P	21 01 44.0	+1.4
	SNR=9.4						
FAQ				P	P	21 01 44.0	+1.4
	SNR=9.4						
FAQ	Al Faqa, Dubai	54.93	307	i P	P	21 01 43.3	+0.7
	SNR=24						
BANOM	Banah	54.95	308	P	P	21 01 44.0	+1.2
NAZ	Nazwa, Dubai	54.99	307	P	P	21 01 44.4	+1.3
	SNR=6.5						
NAZ	Nazwa, Dubai	54.99	307	i P	P	21 01 43.9	+0.9
	SNR=11						
TKM2	Tokmak 2	55.04	337	P	P	21 01 43.4	+0.1
	SNR=108						
VOI	Vohitsoka	55.06	248	P	P	21 01 44.0	+0.2
VOI	Vohitsoka	55.06	248	P	P	21 01 44.3	+0.5
VOI	Vohitsoka	55.06	248	P	P	21 01 46.2	+2.4
MJAR	Matsushiro Arr	55.06	36	P	P	21 01 41.7	-1.7
	comp=Z,9.2nm,1.2s,baz=199,slow=7.6,SNR=11						
MJAR				PcP	PcP	21 02 45.1	+0.3
	comp=Z,9.6nm,0.9s,baz=186,slow=3.9,SNR=9.7						
	comp=Z,9.2nm,1.2s						
MJAR	Matsushiro Arr	55.06	36	P	P	21 01 41.4	-1.9
MJB9	Matsu-Tunnel	55.06	36	P	P	21 01 41.2	-2.2
KBK	Karagaybulak	55.08	336	P	P	21 01 44.2	+0.6
	SNR=25						
ASUD	Al Ashush, Dub	55.08	306	P	P	21 01 45.5	+1.8
ASUD				P	P	21 01 45.5	+1.8
ASUD	Al Ashush, Dub	55.08	306	i P	P	21 01 44.8	+1.1
	SNR=11						
AML	Almayashu	55.16	335	P	P	21 01 44.3	-0.2
	SNR=29						
AML	Almayashu	55.16	335	P	P	21 01 44.7	+0.2
AML	Almayashu	55.16	335	i P	P	21 01 44.4	-0.2
	SNR=29						
AAK	Ala-Archa	55.25	336	P	P	21 01 45.2	+0.4
	SNR=23						
AAK	Ala-Archa	55.25	336	P	P	21 01 44.6	-0.2
AAK	Ala-Archa	55.25	336	deP	P	21 01 44.9	+0.1
AAK				pmax	pmax		
	comp=Z,46nm,1.3s						
AAK	Ala-Archa	55.25	336	P	P	21 01 45.4	+0.7
AAK				P	P	21 01 45.4	+0.7
AAK	Ala-Archa	55.25	336	i P	P	21 01 45.2	+0.4
	SNR=29						
CHKK	Chushkaly	55.31	338	⇓iP	P	21 01 44.3	-0.7
CHKK	Chushkaly	55.31	338	⇓iP	P	21 01 44.3	-0.7
	baz=338						
FRU1	Bishkek	55.34	336	P	P	21 01 45.3	0.0
FRU1				IAmb	IAmb	21 01 46.9	
	comp=Z,98nm,1.1s						
FRU1	Bishkek	55.34	336	P	P	21 01 45.3	0.0
FRU1				pmax	pmax		
	comp=Z,98nm,1.1s						
CHMS	Chumysh	55.45	336	P	P	21 01 45.9	-0.1
	SNR=25						
HRA	Herat	55.56	320	P	P	21 01 46.6	-0.7
HRA				IAmb	IAmb	21 01 48.3	
	comp=Z,61nm,1.1s						
EKS2	Erkin-Say	55.57	335	P	P	21 01 47.5	+0.5
	SNR=91						
KUU	Kurty	55.59	338	d iP	P	21 01 46.5	-0.5
KUU	Kurty	55.59	338	⇓iP	P	21 01 46.5	-0.5
	baz=338						
USP	Ospenovka	55.77	336	P	P	21 01 47.9	-0.5
	SNR=71						
TDK	Taldyqorghan	55.81	340	d iP	P	21 01 48.3	-0.3
TDK				pmax	pmax		
	comp=Z,76nm,1.1s						
TDK	Taldyqorghan	55.81	340	⇓iP	P	21 01 48.3	-0.3
	comp=Z,76nm,1.1s,baz=340						
MZR	Muzera	55.84	304	P	P	21 01 50.3	+1.1
	SNR=12						
MZR				P	P	21 01 50.3	+1.1
	SNR=12						
MZR	Muzera	55.84	304	i P	P	21 01 50.3	+1.1
	SNR=28						
MZWR	Madinat Zayed	55.85	305	P	P	21 01 50.5	+1.3
SGDS	Sogindy	55.87	336	d iP	P	21 01 48.7	-0.4
SGDS				pmax	pmax		
	comp=Z,43nm,1.8s						
SGDS	Sogindy	55.87	336	⇓iP	P	21 01 48.7	-0.4
	comp=Z,43nm,1.8s,baz=336						
MSHR	Mys Shultsa	56.04	26	ceP	P	21 01 51.0	+0.8
MSHR				pmax	pmax		
	comp=Z,31nm,1.7s						
MSHR				MLR	MLR		
	comp=Z,180nm,22.0s						
JSD	Sado	56.13	34	P	P	21 01 49.8	-1.2
JSD				IAmb	IAmb	21 01 51.4	
	comp=Z,54nm,1.2s						
ZSN	Zaisan	56.18	346	d iP	P	21 01 52.2	+1.0
ZSN				pmax	pmax		
	comp=Z,58nm,1.1s						
ZSN	Zaisan	56.18	346	⇓iP	P	21 01 52.2	+1.0
	comp=Z,58nm,1.1s,baz=346						
MK31	Makanchi Array	56.23	344	P	P	21 01 51.4	-0.2
MK31				IAmb	IAmb	21 01 52.7	
	comp=Z,54nm,1.1s						
MK31	Makanchi Array	56.23	344	d iP	P	21 01 51.1	-0.5
MKAR	Makanchi Array	56.23	344	P	P	21 01 51.5	-0.1
	comp=Z,37nm,0.8s,baz=148,slow=8.6,SNR=214						
MKAR				PP	PP	21 03 55.5	-1.7
	comp=Z,4.4nm,1.0s,baz=154,slow=11,SNR=1.5						
MKAR				S	S	21 09 40.4	+0.5
	comp=Z,0.2nm,0.8s,baz=265,slow=6.1,SNR=1.2						
MKAR				LR	LR	21 29 23.6	
	comp=Z,186nm,21.2s,baz=140,slow=40						
MKAR				PKPPKP	P'P'df	21 31 48.2	+1.2
	comp=Z,0.4nm,0.8s,baz=8.5,slow=2.5,SNR=3.5						
MKAR				PKP2bc	P'P'bc	21 32 00.9	+1.0
	comp=Z,2.5nm,1.1s,baz=339,slow=3.1,SNR=8.3						
	comp=Z,37nm,0.8s						
MAKZ	Makanchi	56.33	344	P	P	21 01 51.9	-0.4
MAKZ				IAmb	IAmb	21 01 53.4	
	comp=Z,118nm,1.9s						
MAKZ	Makanchi	56.33	344	P	P	21 01 51.9	-0.4
MAKZ				pmax	pmax		
	comp=Z,118nm,1.9s						
TAS	Tashkent	56.52	331	P	P	21 01 53.2	-0.5
TAS				IAmb	IAmb	21 01 54.6	
	comp=Z,115nm,1.3s						
TAS	Tashkent	56.52	331	P	P	21 01 53.2	-0.5
TAS				pmax	pmax		
	comp=Z,115nm,1.3s						
GHWR	Ruwais	56.77	304	P	P	21 01 57.0	+1.3
GHWR				P	P	21 01 57.0	+1.3
VLA	Vladivostok	56.79	26	i P	P	21 01 55.8	+0.2
VLA				pmax	pmax		
	comp=Z,87nm,1.1s						
VLA				MLR	MLR		
	comp=Z,275nm,17.0s						
DZA	Taraz	56.80	334	eP	P	21 01 54.6	-1.1
DZA	Taraz	56.80	334	eP	P	21 01 54.6	-1.1
	baz=334						
IUG	Iuzhnay	56.81	332	d iP	P	21 01 55.6	-0.3
IUG	Iuzhnay	56.81	332	⇓iP	P	21 01 55.6	-0.3
	baz=332						
MDJ	Mudanjiang	57.07	23	P	P	21 01 57.3	-0.2
MDJ	Mudanjiang	57.07	23	P	P	21 01 57.8	+0.3
MDJ				S	S	21 09 54.6	+3.5
MDJ				pmax	pmax		
	comp=Z,37nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,320nm,7.7s						
MDJ				LR	LR		
	comp=Z,540nm,15.0s						
MDJ				LR	LR		
	comp=Z,340nm,13.5s						
MDJ				LR	LR		
	comp=Z,590nm,15.0s						
ZAK	Zakamensk	57.08	1	eP	P	21 01 58.0	+0.3
ZAK				pmax	pmax		
	comp=Z,35nm,1.2s						
BNX	BinXian	57.20	21	⇓P	P	21 01 58.6	+0.2
BNX				pP	pP	21 02 03.6	-0.3
BNX				sP	sP	21 02 05.8	-0.2
BNX				PP	PP	21 04 06.4	+0.7
BNX				S	S	21 09 51.3	-1.5
BNX				sS	pS	21 09 59.3	0.0
BNX				pmax	pmax		
	comp=Z,500nm,3.9s						
BNX				LR	LR		
	comp=Z,670nm,15.8s						
BNX				LR	LR		
	comp=Z,690nm,13.6s						
BNX				LR	LR		
	comp=Z,980nm,23.5s						
JRN	Qarnain Island	57.23	305	P	P	21 01 60.0	+1.0
JRN				P	P	21 01 60.0	+1.0
KK31	Karatay Array	57.34	333	P	P	21 01 58.6	-0.9
KK31	Karatay Array	57.34	333	P	P	21 01 58.6	-0.9
KK31				pmax	pmax		
	comp=Z,20nm,1.1s						
KKAR	Karatay Array	57.34	333	P	P	21 01 58.5	-1.0
KKAR	Karatay Array	57.34	333	P	P	21 01 58.5	-1.0
BTLS	Baital	57.43	337	d iP	P	21 01 59.3	-0.8
BTLS				pmax	pmax		
	comp=Z,21nm,1.1s						
BTLS	Baital	57.43	337	⇓iP	P	21 01 59.3	-0.8
	comp=Z,21nm,1.1s,baz=337						
HNR	Honiara	57.53	97	LR	LR	21 29 12.5	
	comp=Z,180nm,19.7s,baz=284,slow=39						
HNR	Honiara	57.53	97	P	P	21 02 00.2	-1.2
HNR	Honiara	57.53	97	P	P	21 02 00.2	-1.2
HNR				pmax	pmax		
	comp=Z,124nm,0.9s						
USRK	Ussuriysk Ar.	57.71	25	P	P	21 02 02.2	+0.2
	comp=Z,73nm,0.9s,baz=219,slow=6.4,SNR=83						
USRK				LR	LR	21 28 06.3	
	comp=Z,275nm,19.6s,baz=217,slow=37						
	comp=Z,73nm,0.9s						
SLWR	Sila	57.78	304	P	P	21 02 04.0	+1.0
SLWR				P	P	21 02 04.0	+1.0
HIA	Hailar	58.11	14	P	P	21 02 04.3	-0.5
HIA				IAmb	IAmb	21 02 05.9	
	comp=Z,55nm,1.4s						
HIA	Hailar	58.11	14	P	P	21 02 04.3	-0.5
HIA				pmax	pmax		
	comp=Z,55nm,1.4s						
MOY	Mondy	58.36	359	eP	P	21 02 07.0	+0.4
MOY				pmax	pmax		
	comp=Z,45nm,2.1s						
TRNA	Turayna	58.47	304	P	P	21 02 07.4	-0.3
KHOR	Al-Khor Airpor	58.61	306	P	P	21 02 10.4	+1.7
SHMA	Al-Shehemyia	59.16	306	P	P	21 02 14.0	+1.5
SAKB	Bahrain	59.56	305	P	P	21 02 16.4	+1.1
CIT	Chita	59.56	8	eP	P	21 02 15.8	+0.9
CIT				e		21 02 24.4	
CIT				e		21 02 32.4	
SEM	Semipalatinsk	60.08	344	d iP	P	21 02 18.3	-0.4
SEM				eS	S	21 10 32.4	+1.8
SEM				pmax	pmax		
	comp=Z,43nm,1.2s						
SEM	Semipalatinsk	60.08	344	⇓iP	P	21 02 18.3	-0.4
	comp=Z,43nm,1.2s,baz=344						
SEM				eS	S	21 10 32.4	+1.8
	baz=344						
GEYT	Alibeck	60.38	321	P	P	21 02 21.0	+0.2
	comp=Z,20nm,0.8s,baz=220,slow=19,SNR=28						
GEYT				PcP	PcP	21 03 05.5	-0.2
	comp=Z,15nm,0.9s,baz=65,slow=8.2,SNR=4.3						
	comp=Z,20nm,0.8s						
GEYT	Alibeck	60.38	321	P	P	21 02 20.6	-0.2
GEYT				IAmb	IAmb	21 02 21.7	
	comp=Z,37nm,1.1s						
GYA0B	ALIBECK ARRAY	60.38	321	P	P	21 02 20.5	-0.3
GYA0B				IAmb	IAmb	21 02 22.2	
	comp=Z,56nm,1.1s						
TEY	Ternei	60.41	28	⇓eP	P	21 02 20.2	-0.5
TEY				pmax	pmax		
	comp=Z,100nm,1.4s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
KURBB	Kurchatov Arra	60.76	343	LR	LR	21 32 30.7	
	comp=E,217nm,18.3s,baz=111,slow=40						
KURK	Kurchatov	60.81	343	P	P	21 02 23.2	-0.1
KURK	Kurchatov	60.81	343	deP	P	21 02 23.1	-0.3
KURK				pmax	pmax		
	comp=Z,82nm,1.0s						
KURK	Kurchatov	60.81	343	P	P	21 02 23.5	+0.1
JEW	Eniwo	61.23	32	P	P	21 02 26.4	0.0
ATD	Arta Tunnel	61.47	287	LR	LR	21 26 38.6	
	comp=Z,115nm,18.1s,baz=138,slow=34						
ATD	Arta Tunnel	61.47	287	P	P	21 02 29.0	+0.3
ATD				IAmb	IAmb	21 02 31.4	
	comp=Z,74nm,1.6s						
ERM	Erimo	61.59	34	P	P	21 02 28.9	0.0
ERM	Erimo	61.59	34	ceP	P	21 02 29.1	+0.3
ERM				pmax	pmax		
	comp=Z,45nm,1.7s						
ERM	Erimo	61.59	34	P	P	21 02 30.1	+1.3
KLR	Kul'dur	61.73	22	P	P	21 02 29.8	+0.1
	comp=Z,26nm,0.5s,baz=222,slow=6.2,SNR=140						
KLR				S	S	21 10 50.9	-0.3
	comp=Z,0.4nm,0.6s,baz=25,slow=20,SNR=1.3						
KLR				LR	LR	21 31 34.7	
	comp=Z,304nm,18.5s,baz=218,slow=38						
	comp=Z,26nm,0.5s						
KLR	Kul'dur	61.73	22	deP	P	21 02 29.6	0.0
KLR				pmax	pmax		
	comp=Z,60nm,1.0s						
KLR				MLR	MLR		
	comp=Z,491nm,20.0s						
ZAA0	Zalesovo Array	62.31	349	P	P	21 02 33.2	-0.2
ZALV	Zalesovo Beam	62.31	349	P	P	21 02 33.4	-0.1
	comp=Z,63nm,0.9s,baz=170,slow=4.4,SNR=207						
ZALV				S	S	21 10 57.2	-1.1
	comp=Z,0.3nm,0.2s,baz=183,slow=16,SNR=3.9						
ZALV				PKPPKP	P'P'df	21 31 37.0	-0.4
	comp=Z,0.8nm,0.8s,baz=291,slow=4.5,SNR=4.4						
ZALV				LR	LR	21 33 42.7	
	comp=Z,327nm,18.2s,baz=143,slow=40						
	comp=Z,63nm,0.9s						
ASAJ	Asahikawa	62.71	32	P	P	21 02 36.0	-0.4
	comp=Z,9.6nm,0.5s,baz=250,slow=15,SNR=13						
	comp=Z,9.6nm,0.5s						
ASAJ	Asahikawa	62.71	32	P	P	21 02 36.2	-0.1
ASAJ				pmax	pmax		
	comp=Z,39nm,1.1s						
JKA	Kamikawa-asahi	62.71	32	P	P	21 02 36.2	-0.1
JKA				IAmb	IAmb	21 02 37.6	
	comp=Z,39nm,1.1s						
RAYN	Ar Rayn	62.76	301	P	P	21 02 37.1	0.0
RAYN	Ar Rayn	62.76	301	P	P	21 02 37.1	0.0
RAYN				pmax	pmax		
	comp=Z,218nm,2.0s						
RAYN	Ar Rayn	62.76	301	P	P	21 02 37.4	+0.3
KIBK	Kibwezi	63.70	271	P	P	21 02 43.7	+0.1
KIBK	Kibwezi	63.70	271	P	P	21 02 44.6	+1.0
DZM	Mont Dzumac	63.93	111	LR	LR	21 33 15.9	
	comp=Z,196nm,18.1s,baz=288,slow=39						
ZEA	Zeya	64.13	16	eP	P	21 02 46.3	+0.8
ZEA				pmax	pmax		
	comp=E,20nm,1.5s						
ZEA				pmax	pmax		
	comp=N,30nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.5s						
ZEA				MLR	MLR		
	comp=N,600nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,19.0s						
OUENC	Ouen Island, N	64.31	111	P	P	21 02 47.5	+0.1
OUENC				IAmb	IAmb	21 02 49.7	
	comp=Z,51nm,1.2s						
KMBO	Kilima Mbogo	64.63	272	P	P	21 02 49.7	-0.2
	comp=Z,10nm,1.0s,baz=79,slow=7.1,SNR=12						
KMBO				LR	LR	21 25 13.6	
	comp=Z,274nm,21.5s,baz=95,slow=31						
	comp=Z,10nm,1.0s						
KMBO	Kilima Mbogo	64.63	272	P	P	21 02 50.1	+0.2
KMBO	Kilima Mbogo	64.63	272	deP	P	21 02 50.7	+0.8
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMBO	Kilima Mbogo	64.63	272	P	P	21 02 51.1	+1.2
KMBO	Kilima Mbogo	64.63	272	i P	P	21 02 50.7	+0.8
	SNR=9.0						
YSS	Yuzh-Sakhalins	64.75	30	P	P	21 02 49.6	0.0
YSS	Yuzh-Sakhalins	64.75	30	eP	P	21 02 49.8	+0.1
YSS				eS	S	21 11 28.9	0.0
YSS				pmax	pmax		
	comp=Z,500nm,4.0s						
YSS				pmax	pmax		
	comp=Z,180nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
GRNR	Gornyy	64.76	23	⇓iP	P	21 02 50.5	+0.8
GRNR				eS	S	21 11 36.5	+7.5
GRNR				pmax	pmax		
	comp=E,20nm,1.2s						
GRNR				pmax	pmax		
	comp=N,30nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,70nm,1.0s						
GRNR				smax	smax		
	comp=N,1.0nm,0.7s						
FURI	Furi	64.87	283	P	P	21 02 52.2	+0.7
FURI				IAmb	IAmb	21 02 56.0	
	comp=Z,54nm,1.2s						
BOD	Bodaibo	65.28	7	eP	P	21 02 52.9	0.0
BOD				pmax	pmax		
	comp=Z,60nm,1.7s						
BRVK	Borovoye	65.47	340	P	P	21 02 53.9	-0.4
BRVK	Borovoye	65.47	340	ceP	P	21 02 53.7	-0.5
BRVK				pmax	pmax		
	comp=Z,78nm,1.3s						
BRVK	Borovoye	65.47	340	P	P	21 02 53.8	-0.4
BRVK				P	P	21 02 53.8	-0.4
UGL	Uglegorsk	65.91	28	eP	P	21 02 57.2	0.0
UGL				eS	S	21 11 46.0	+2.9
UGL				pmax	pmax		
	comp=Z,170nm,1.1s						
UGL				pmax	pmax		
	comp=Z,900nm,3.6s						
MAW	Mawson	66.02	195	P	P	21 02 58.0	+0.4
	comp=Z,42nm,1.2s,baz=42,slow=8.5,SNR=28						
MAW				LR	LR	21 25 39.3	
	comp=Z,619nm,21.0s,baz=31,slow=30						
MAW				PKPPKP		21 31 32.9	
	comp=Z,5.1nm,1.0s,baz=180,slow=6.7,SNR=5.2						
	comp=Z,42nm,1.2s						
MAW	Mawson	66.02	195	P	P	21 02 58.3	+0.7
	baz=66,SNR=9.8						
MAW	Mawson	66.02	195	P	P	21 02 58.3	+0.7
MAW	Mawson	66.02	195	P	P	21 02 58.3	+0.7
MAW				pmax	pmax		
	comp=Z,24nm,1.5s						
ABKAR	Akbulak array	66.81	332	P	P	21 03 02.5	-0.4
ABKAR	Akbulak array	66.81	332	P	P	21 03 02.6	-0.3
ABKAR				IAmb	IAmb	21 03 03.9	
	comp=Z,69nm,1.0s						
LODK	Lodwar	67.13	277	P	P	21 03 07.0	+1.1
LODK				IAmb	IAmb	21 03 08.7	
	comp=Z,33nm,1.2s						
LODK	Lodwar	67.13	277	P	P	21 03 07.3	+1.4
	SNR=6.6						
TYV	Tymovskoe	67.45	27	eP	P	21 03 08.8	+1.8
TYV				pmax	pmax		
	comp=Z,500nm,3.2s						
TYV				pmax	pmax		
	comp=Z,50nm,1.5s						
NKL	Nikolayevsk	68.28	24	eP	P	21 03 13.6	+1.5
NKL				eS	S	21 12 12.2	+0.8
NKL				pmax	pmax		
	comp=E,4.0nm,0.5s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,109nm,1.4s						
MLZ	Mavora Lakes	68.51	136	P	P	21 03 13.9	0.0
MAK	Makhachkala	69.89	321	eP	P	21 03 15.0	-7.4
MAK				eS	S	21 12 20.8	-10
MAK				eSS	SS	21 16 52.1	-8.4
MAK				pmax	pmax		
	comp=Z,52nm,0.8s						
RPZ	Rata Peaks	70.26	134	LR	LR	21 31 38.9	
	comp=Z,312nm,21.7s,baz=278,slow=34						
RPZ	Rata Peaks	70.26	134	P	P	21 03 25.6	+0.9
GNI	Garni	70.33	317	LR	LR	21 36 34.8	
	comp=Z,86nm,18.4s,baz=127,slow=38						
GNI	Garni	70.33	317	P	P	21 03 25.0	-0.4
GNI				IAmb	IAmb	21 03 27.1	
	comp=Z,45nm,1.3s						
GNI	Garni	70.33	317	ceP	P	21 03 26.0	+0.6
GNI				pmax	pmax		
	comp=Z,52nm,1.7s						
GNI	Garni	70.33	317	P	P	21 03 25.7	+0.3
GNI	Garni	70.33	317	P	P	21 03 25.6	+0.3
GEVA	Gevas	70.67	315	P	P	21 03 27.1	-0.4
GEVA				IAmb	IAmb	21 03 51.4	
	comp=Z,77nm,1.8s						
OXZ	Oxford	70.90	133	P	P	21 03 29.2	+0.5
QRZ	Quartz Range	70.92	131	P	P	21 03 30.0	+1.2
GROC	Groznyy	71.10	320	eP	P	21 03 29.9	+0.1
GROC				e		21 03 49.8	
GROC				e		21 06 05.9	
GROC				pmax	pmax		
	comp=Z,75nm,1.0s						
MBAR	Mbarara	71.16	272	LR	LR	21 29 00.7	
	comp=Z,326nm,21.1s,baz=82,slow=31						
MBAR	Mbarara	71.16	272	P	P	21 03 30.9	-0.1
MBAR	Mbarara	71.16	272	ceP	P	21 03 32.0	+1.1
MBAR				pmax	pmax		
	comp=Z,31nm,1.0s						
MBAR	Mbarara	71.16	272	P	P	21 03 32.1	+1.1
MBAR				P	P	21 03 32.1	+1.1
GURO	Guroymak-BITLI	71.50	314	P	P	21 03 32.9	+0.4
KARS	Kars	71.68	317	P	P	21 03 33.6	+0.1
KARS	Kars	71.68	317	P	P	21 03 33.6	+0.1
KARS				pmax	pmax		
	comp=Z,572nm,1.7s						
AKH	Akhalkalaki	71.75	318	⇓P	P	21 03 35.1	+1.1
KHZ	Kahutara	71.87	132	P	P	21 03 34.7	+0.2
MARD	Mardin	71.89	313	P	P	21 03 35.2	+0.4
SVE	Sverdlovsk	71.90	338	c iP	P	21 03 34.6	+0.3
SVE				pmax	pmax		
	comp=Z,143nm,1.3s						
YAK	Yakutsk	72.05	13	P	P	21 03 34.2	-0.9
	comp=Z,5.7nm,0.5s,baz=213,slow=2.6,SNR=38						
YAK				LR	LR	21 37 52.0	
	comp=Z,206nm,18.4s,baz=229,slow=38						
	comp=Z,5.7nm,0.5s						
YAK	Yakutsk	72.05	13	P	P	21 03 34.0	-1.1
YAK	Yakutsk	72.05	13	d iP	P	21 03 34.2	-0.9
YAK				e		21 03 52.1	
YAK				e		21 06 11.0	
YAK				ePPP	PPP	21 07 56.4	
YAK				eS	S	21 12 53.5	-1.7
YAK				e		21 13 36.5	
YAK				eSS	SS	21 17 31.6	-1.1
YAK				pmax	pmax		
	comp=Z,90nm,1.2s						
YAK				pmax	pmax		
	comp=N,51nm,1.4s						
YAK				pmax	pmax		
	comp=E,36nm,1.3s						
YAK				pmax	pmax		
	comp=Z,51nm,2.7s						
YAK				pmax	pmax		
	comp=N,39nm,2.8s						
YAK				pmax	pmax		
	comp=E,70nm,2.8s						
YAK				smax	smax		
	comp=N,30nm,2.0s						
YAK				smax	smax		
	comp=E,47nm,2.1s						
ZEI	Tsey	72.12	319	eP	P	21 03 35.7	-0.5
ZEI				pmax	pmax		
	comp=Z,38nm,1.4s						
ONI	Oni	72.32	319	P	P	21 03 37.5	+0.3
ONI				IAmb	IAmb	21 03 46.7	
	comp=Z,58nm,1.5s						
ONI	Oni	72.32	319	P	P	21 03 37.5	+0.3

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ONI                                   pmax    pmax
       comp=Z,58nm,1.5s
ARU    Arti              72.42 336    LR      LR      21 37 49.9
       comp=Z,283nm,20.4s,baz=114,slow=38
ARU    Arti              72.42 336    P       P       21 03 37.2  -0.2
ARU                                   IAmb    IAmb    21 03 38.6
       comp=Z,88nm,1.1s
ARU    Arti              72.42 336d iP        P       21 03 37.2  -0.2
ARU                                                   21 06 13.3
ARU                                   S       S       21 13 02.7  +2.9
ARU                                   SS      SS      21 17 39.6  +0.9
ARU                                   pmax    pmax
       comp=Z,92nm,1.1s
ARU                                   MLR     MLR
       comp=Z,253nm,16.0s
LSZ    Lusaka            72.47 256    LR      LR      21 29 57.9
       comp=Z,468nm,21.8s,baz=108,slow=31
SNZO   South Karori      72.61 131    P       P       21 03 39.3  +0.4
KOPT   Kop Dagi          73.20 315    P       P       21 03 43.1  +0.4
KOPT                                  IAmb    IAmb    21 03 45.1
       comp=Z,126nm,1.7s
KBZ    Khabaz            73.20 320    P       P       21 03 42.2  -0.1
       comp=Z,36nm,0.9s,baz=121,slow=5.0,SNR=70
       comp=Z,36nm,0.9s
KBZ    Khabaz            73.20 320deP         P       21 03 42.5  +0.2
KBZ                                   pmax    pmax
       comp=Z,47nm,0.9s
CHVG   Ch'k'valeri       73.28 318 ⇓P         P       21 03 43.2  +0.4
SHA1   Shidzhatmaz       73.36 319d iP        P       21 03 43.6   0.0
KIV    Kislovodsk        73.44 320 ⇑P         P       21 03 44.3  +0.4
KIV    Kislovodsk        73.44 320    P       P       21 03 43.6  -0.2
KIV                                   IAmb    IAmb    21 03 45.2
       comp=Z,42nm,1.0s
KIV    Kislovodsk        73.44 320  eP        P       21 03 43.7  -0.2
KIV                                   pmax    pmax
       comp=Z,45nm,1.1s
KIV                                   MLR     MLR
       comp=Z,58nm,18.0s
KIV    Kislovodsk        73.44 320    P       P       21 03 44.1  +0.2
KIV    Kislovodsk        73.44 320  i P       P       21 03 44.0  +0.1
       SNR=20
EIL    Elat              73.72 304    LR      LR      21 35 16.1
       comp=Z,259nm,18.6s,baz=92,slow=35
GOF    Gofitskoye        73.73 321⇓iP         P       21 03 45.3  -0.1
GOF                                   pmax    pmax
       comp=Z,84nm,1.1s
GHAJ   Ghor Haditha      73.73 305    P       P       21 03 45.8  +0.1
GHAJ                                  IAmb    IAmb    21 03 48.0
       comp=Z,80nm,1.0s
BKZ    Black Stump Fm    73.77 129    P       P       21 03 46.0   0.0
BKZ    Black Stump Fm    73.77 129    P       P       21 03 47.0  +1.0
SKR    Severo-Kuril's    73.96  33ceP         P       21 03 47.6  +1.0
URZ    Urewera           74.19 128    LR      LR      21 36 27.7
       comp=Z,288nm,19.5s,baz=211,slow=36
URZ    Urewera           74.19 128    P       P       21 03 50.0  +1.6
SHBL   Chebaa            74.25 307  eP        P       21 03 50.2  +1.2
HWQ    Hawqa             74.41 308  eP        P       21 03 50.3  +0.5
MMAI   Mount Meron Ar    74.41 307    LR      LR      21 38 24.9
       comp=Z,213nm,18.1s,baz=265,slow=37
BHL    Bhannes           74.51 308  eP        P       21 03 51.2  +0.9
LBTB   Lobatse           74.65 246    LR      LR      21 30 30.8
       comp=Z,369nm,21.8s,baz=94,slow=31
LBTB   Lobatse           74.65 246    P       P       21 03 51.2  -0.1
LBTB   Lobatse           74.65 246    P       P       21 03 51.3  -0.1
LBTB                                  pmax    pmax
       comp=Z,16nm,1.0s
BELG   Belogornoye       74.86 329    LR      LR      21 40 35.5
       comp=Z,144nm,18.1s,baz=133,slow=39
BELG   Belogornoye       74.86 329  i P       P       21 03 51.4  -0.4
BELG                                  pmax    pmax
       comp=Z,17nm,1.1s
BELG                                  MLR     MLR
       comp=Z,14nm,6.0s
BOSA   Boshof            74.94 242    P       P       21 03 53.2  +0.1
       comp=Z,22nm,0.8s,baz=90,slow=5.6,SNR=38
BOSA                                  LR      LR      21 30 07.9
       comp=Z,313nm,21.4s,baz=104,slow=30
       comp=Z,22nm,0.8s
BOSA   Boshof            74.94 242    P       P       21 03 52.9  -0.2
BOSA   Boshof            74.94 242    P       P       21 03 52.9  -0.2
BOSA                                  pmax    pmax
       comp=Z,34nm,1.0s
SOC    Sochi             75.21 318  eP        P       21 03 51.8  -2.3
SOC                                 ePPP      PPP     21 08 37.4
SOC                                 eS        S       21 13 31.9  +0.1
SOC                                 eSS       SS      21 18 14.1  -7.8
SOC                                 eSSS      SSS     21 21 37.9
SOC                                   pmax    pmax
       comp=Z,29nm,0.9s
SOC                                   MLR     MLR
       comp=Z,101nm,22.0s
BNN    Bunyan            76.07 313    P       P       21 03 58.9  -0.4
PEA0B  Petropavlovsk-    76.10  31    P       P       21 03 58.9  -0.1
PEA0B                                 IAmb    IAmb    21 04 22.9
       comp=Z,54nm,1.4s
PEA0B  Petropavlovsk-    76.10  31    P       P       21 03 58.9  -0.1
PEA0B                                 pmax    pmax
       comp=Z,54nm,1.5s
PETK   Petropavlovsk-    76.10  31    P       P       21 03 58.5  -0.5
       comp=Z,8.7nm,1.0s,baz=218,slow=7.0,SNR=9.3
PETK                                  LR      LR      21 40 06.5
       comp=Z,159nm,19.0s,baz=227,slow=38
       comp=Z,8.7nm,1.0s
TOKA   Tokat             76.15 314    P       P       21 03 59.3  -0.3
PET    Petropavlovsk     76.54  31    P       P       21 04 01.2  -0.2
PET                                   IAmb    IAmb    21 04 02.6
       comp=Z,65nm,1.1s
PET    Petropavlovsk     76.54  31  eP        P       21 04 01.6  +0.2
PET                                 eS        S       21 13 46.0   0.0
PET                                 ePS               21 14 25.7
PET                                 eSS       SS      21 18 43.1  +1.6
PET                                   pmax    pmax
       comp=Z,80nm,1.1s
PET                                   pmax    pmax
       comp=Z,400nm,11.3s
PET                                   MLR     MLR
       comp=Z,400nm,17.0s
PET                                   MLR     MLR
       comp=Z,300nm,17.0s
CSS    Mathiatis         76.67 308    P       P       21 04 02.7  +0.1
NRIK   Noril'sk          76.73 355    P       P       21 04 01.4  -0.7
       comp=Z,28nm,1.1s,baz=161,slow=4.5,SNR=49
NRIK                                  LR      LR      21 42 45.7
       comp=Z,196nm,18.7s,baz=160,slow=40
       comp=Z,28nm,1.1s
NRIK   Noril'sk          76.73 355    P       P       21 04 01.8  -0.4
NRIK                                  IAmb    IAmb    21 04 03.1
       comp=Z,84nm,1.4s
NRIK   Noril'sk          76.73 355deP         P       21 04 01.5  -0.7
NRIK                                  pmax    pmax
       comp=Z,72nm,1.4s
NRIK                                  MLR     MLR
       comp=Z,177nm,17.0s
MA2    Magadan           76.77  23    P       P       21 04 03.1  +0.5
       comp=Z,59nm,1.0s,baz=172,slow=4.5,SNR=9.5
MA2                                   LR      LR      21 37 39.2
       comp=Z,156nm,21.1s,baz=240,slow=36
       comp=Z,59nm,1.0s
MA2    Magadan           76.77  23    P       P       21 04 02.8  +0.2
MA2    Magadan           76.77  23d iP        P       21 04 03.3  +0.7
MA2                                   pmax    pmax
       comp=Z,78nm,1.1s
MA2                                   MLR     MLR
       comp=Z,284nm,21.0s
VNDA   Vanda             77.01 169    P       P       21 04 04.0  +0.2
       comp=Z,39nm,1.0s,baz=300,slow=5.7,SNR=106
VNDA                                  LR      LR      21 31 33.6
       comp=Z,152nm,22.0s,baz=308,slow=31
       comp=Z,39nm,1.0s
VNDA   Vanda             77.01 169    P       P       21 04 04.0  +0.2
VNDA                                  IAmb    IAmb    21 04 05.4
       comp=Z,74nm,1.1s
VNDA   Vanda             77.01 169    P       P       21 04 04.0  +0.2
VRH    Novokhopyorsk     77.39 326  eP        P       21 04 04.9  -1.4
VRH                                   pmax    pmax
       comp=Z,90nm,1.2s
KIRV   Kirov             77.57 335ceP         P       21 04 07.7  +0.6
BR131  Keskin Array S    77.98 313    P       P       21 04 09.3  -0.7
BR131                                 IAmb    IAmb    21 04 10.7
       comp=Z,52nm,1.1s
BR131  Keskin Array S    77.98 313    P       P       21 04 09.3  -0.7
BR131                                 pmax    pmax
       comp=Z,52nm,1.1s
BR131  Keskin Array S    77.98 313    P       P       21 04 09.3  -0.7
       SNR=18
BR131                                 P       P       21 04 09.3  -0.7
       SNR=18
BRTR   Keskin Array B    77.98 313    P       P       21 04 09.1  -1.0
       comp=Z,16nm,1.0s,baz=126,slow=6.3,SNR=93
BRTR                                  PP      PP      21 07 01.5  -4.9
       comp=Z,1.4nm,0.9s,baz=116,slow=9.8,SNR=3.3
BRTR                                  LR      LR      21 38 36.5
       comp=Z,204nm,20.4s,baz=122,slow=36
       comp=Z,16nm,1.0s
BRTR   Keskin Array B    77.98 313    P       P       21 04 09.3  -0.8
BRTR   Keskin Array B    77.98 313    P       P       21 04 09.3  -0.8
SBA    Scott Base        78.10 169    P       P       21 04 10.4  +0.6
SBA                                   IAmb    IAmb    21 04 12.4
       comp=Z,42nm,1.0s
SBA    Scott Base        78.10 169    P       P       21 04 10.4  +0.6
SBA                                   pmax    pmax
       comp=Z,42nm,1.0s
RAO    Raoul Island      78.17 118    LR      LR      21 39 30.7
       comp=Z,124nm,18.3s,baz=66,slow=36
ILGA   Ilgaz             78.37 314    P       P       21 04 11.8  -0.4
BZK    Bozkurt           78.48 315 ⇑P         P       21 04 12.7  +0.2
BZK    Bozkurt           78.48 315    P       P       21 04 12.1  -0.4
ANTO   Ankara            78.64 313    P       P       21 04 13.1  -0.5
ANTO                                  IAmb    IAmb    21 04 14.7
       comp=Z,81nm,1.2s
ANTO   Ankara            78.64 313    P       P       21 04 13.1  -0.5
ANTO                                  pmax    pmax
       comp=Z,81nm,1.3s
BR231  Keskin MP Arra    78.64 313    P       P       21 04 13.2  -0.5
BR231                                 IAmb    IAmb    21 04 14.8
       comp=Z,63nm,1.1s
VORD   Divnogorie        78.65 325  eP        P       21 04 12.1  -1.2
VORD                                  pmax    pmax
       comp=Z,20nm,1.0s
SUR    Sutherland        78.76 238    LR      LR      21 31 57.7
       comp=Z,250nm,21.3s,baz=108,slow=30
SUR    Sutherland        78.76 238    P       P       21 04 15.1  +0.5
SUR                                   IAmb    IAmb    21 04 17.1
       comp=Z,57nm,0.9s
SUR    Sutherland        78.76 238    P       P       21 04 16.1  +1.5
SUR                                   P       P       21 04 16.1  +1.5
VSR    Storozhevoye      78.83 325  eP        P       21 04 13.2  -1.1
VSR                                   pmax    pmax
       comp=Z,40nm,0.9s
VORR   Voronezh          79.01 326  eP        P       21 04 15.2   0.0
VORR                                  pmax    pmax
       comp=Z,71nm,1.6s
SIM    Simferopol'       79.45 318  eP        P       21 04 16.8  -1.0
SIM                                   S       S       21 14 20.0  +2.2
SIM                                   pmax    pmax
       comp=Z,44nm,1.0s
LPSR   Galich'ya Gora    79.57 326  eP        P       21 04 17.2  -1.1
LPSR                                  pmax    pmax
       comp=Z,60nm,1.3s
ELL    Elmali            79.85 309    P       P       21 04 20.1  -0.3
ELL    Elmali            79.85 309    P       P       21 04 20.1  -0.3
ELL                                   pmax    pmax
       comp=Z,284nm,1.2s
MDUB   Mudurnu           79.99 313    P       P       21 04 20.6  -0.4
BORA   Eskisehir         80.36 312    P       P       21 04 22.1  -0.8
TIXI   Tiksi             80.41   8    P       P       21 04 21.4  -1.1
       comp=Z,8.4nm,0.8s,baz=90,slow=23,SNR=30
       comp=Z,8.4nm,0.8s
TIXI   Tiksi             80.41   8    P       P       21 04 21.2  -1.2
TIXI   Tiksi             80.41   8ceP         P       21 04 21.2  -1.2
TIXI                                  pmax    pmax
       comp=Z,41nm,1.7s
TIXI                                  MLR     MLR
       comp=Z,390nm,17.0s
PRGR   Permogore         80.88 336⇓iP         P       21 04 25.2  +0.1
PRGR                                e                 21 07 34.5
YER    Yerkesik          81.21 309    P       P       21 04 24.2  -3.4
KULA   Kula-Manisa       81.30 311    P       P       21 04 28.4  +0.4
MOS    Moscow            81.63 329  eP        P       21 04 26.2  -3.0
MOS                                   pmax    pmax
       comp=Z,147nm,1.4s
MOS                                   pmax    pmax
       comp=Z,200nm,1.6s
DAT    Datca             81.65 309    P       P       21 04 28.1  -1.9
KARP   Karpathos         81.67 307    P       P       21 04 30.8  +0.8
OBN    Obninsk           81.91 328 ⇑P         P       21 04 30.8   0.0
OBN    Obninsk           81.91 328    P       P       21 04 30.3  -0.4
OBN    Obninsk           81.91 328d iP        P       21 04 30.7   0.0
OBN                                 e                 21 07 36.9
OBN                                   pmax    pmax
       comp=Z,154nm,1.7s
BODT   Bodrum            81.94 309    P       P       21 04 31.1  -0.3
TSUM   Tsumeb            82.34 252    LR      LR      21 36 19.2
       comp=Z,377nm,20.5s,baz=88,slow=32
TSUM   Tsumeb            82.34 252    P       P       21 04 33.9  -0.1
TSUM                                  IAmb    IAmb    21 04 35.6
       comp=Z,40nm,1.0s
SMG    Samos             82.47 309    P       P       21 04 34.4  +0.3
PURM   Purcari           82.78 319 ⇑P         P       21 04 35.9  +0.4
KLMR   Klimovskoe        83.02 334  eP        P       21 04 33.6  -2.8
KLMR                                e                 21 07 43.4
KLMR                                  pmax    pmax
       comp=Z,113nm,1.4s
KLMR   Klimovskoe        83.02 334  eP        P       21 04 33.7  -2.7
KLMR                                  AMP             21 04 38.7
       comp=Z,113nm,1.4s
KLMR                                ePP       PP      21 07 43.4  -4.1
QSPA   South Pole Qui    83.07 180    LR      LR      21 36 44.5
       comp=Z,122nm,20.8s,baz=314,slow=32
QSPA   South Pole Qui    83.07 180    P       P       21 04 36.7  -0.2
QSPA                                  IAmb    IAmb    21 04 38.3
       comp=Z,67nm,1.1s
PSN    Preselentsi       83.08 315    P       P       21 04 37.1   0.0
TIRR   Tirgusor          83.14 316 ⇑P         P       21 04 38.0  +0.6
TIRR   Tirgusor          83.14 316    P       P       21 04 37.3  -0.1
TIRR   Tirgusor          83.14 316    P       P       21 04 37.3  -0.1
TIRR                                  pmax    pmax
       comp=Z,188nm,1.2s
CHOS   Chios island      83.24 310    P       P       21 04 38.7  +0.5
TPGR   Topolog           83.25 317 ⇑P         P       21 04 38.3  +0.2
PRK    Paraskevi         83.29 311    P       P       21 04 39.4  +1.1
APE    Apeiranthos       83.32 309 ⇑P         P       21 04 38.7  +0.1
APE    Apeiranthos       83.32 309    P       P       21 04 38.5  -0.1
IDI    Anoyia            83.41 307 ⇑P         P       21 04 40.2  +1.1
IDI    Anoyia            83.41 307    LR      LR      21 43 47.0
       comp=Z,56nm,19.4s,baz=87,slow=37
TLBR   Topalu            83.42 316 ⇑P         P       21 04 39.5  +0.6
ICOR   Ion Corvin        83.47 316 ⇑P         P       21 04 39.9  +0.8
PRD    Provadia          83.50 315    P       P       21 04 38.9  -0.4
NVL    N'lazarevskaya    83.51 199  eP        P       21 04 39.9  +1.1
NVL                                   pmax    pmax
       comp=Z,58nm,1.4s
CFR    Carcaliu          83.54 317 ⇑P         P       21 04 39.9  +0.5
HARR   Harsova           83.54 316 ⇑P         P       21 04 40.2  +0.7
MILM   Milestii Mici     83.59 319⇓iP         P       21 04 35.0  -4.7
       comp=Z,150nm,1.2s
MILM   Milestii Mici     83.59 319 ⇑P         P       21 04 40.1  +0.4
MILM   Milestii Mici     83.59 319d iP        P       21 04 35.0  -4.7
MILM                                  pmax    pmax
       comp=Z,150nm,1.2s
EDRB   Edirne            83.61 313    P       P       21 04 40.3  +0.4
KIS    Kishinev          83.61 319⇓eP         P       21 04 39.0  -0.8
       comp=Z,220nm,5.1s
KIS    Kishinev          83.61 319deP         P       21 04 39.0  -0.8
KIS                                   pmax    pmax
       comp=Z,220nm,5.1s
VLDR   Vladesti          83.77 318 ⇑P         P       21 04 41.3  +0.7
JMB    Yambol            83.88 314    P       P       21 04 41.7  +0.4
IMMV   Iera Moni Meta    84.18 307    P       P       21 04 43.8  +0.9
VASR   Vaslui            84.18 318 ⇑P         P       21 04 43.5  +0.8
RAZG   Razgrad           84.22 315 ⇑P         P       21 04 43.6  +0.6
SORM   Soroca            84.25 320 ⇓P         P       21 04 43.0   0.0
GHRR                     84.28 318 ⇑P         P       21 04 44.6  +1.4
KARY   Karystos          84.39 309    P       P       21 04 44.1  +0.1
PANC   Panciu            84.40 317 ⇑P         P       21 04 45.3  +1.5
ODBI   Odobesti          84.43 317 ⇑P         P       21 04 45.7  +1.8
AKASG  Malin Array Be    84.47 322    P       P       21 04 43.3  -0.8
       comp=Z,4.5nm,0.8s,baz=86,slow=4.9,SNR=57
AKASG                                 PP      PP      21 07 58.0  -1.6
       comp=Z,0.7nm,0.6s,baz=90,slow=6.8,SNR=8.5
AKASG                                 LR      LR      21 43 41.4
       comp=Z,66nm,20.8s,baz=66,slow=37
       comp=Z,4.5nm,0.8s
AKASG  Malin Array Be    84.47 322    P       P       21 04 43.3  -0.8
AKASG  Malin Array Be    84.47 322ceP         P       21 04 43.2  -0.8
AKASG                                 pmax    pmax
       comp=Z,7.0nm,0.8s
AKBB   Malin Array Si    84.47 322    P       P       21 04 43.0  -1.0
AKBB                                  IAmb    IAmb    21 04 44.7
       comp=Z,54nm,1.5s
AKBB   Malin Array Si    84.47 322ceP         P       21 04 43.6  -0.5
DIM    Dimitrovgrad      84.53 313    P       P       21 04 44.3  -0.3
SZH    Strazhica         84.55 315    P       P       21 04 44.3  -0.4
VRI    Vrincioaia        84.68 317 ⇓P         P       21 04 46.2  +1.0
SULR                     84.69 316 ⇑P         P       21 04 46.2  +0.9
PLOR   Plostina          84.73 317 ⇑P         P       21 04 46.7  +1.1
DION   Dionisos Attik    84.79 309    P       P       21 04 45.6  -0.4
PTL    Penteli           84.84 309    P       P       21 04 45.9  -0.4
NEHR   Nehoiu            84.86 317 ⇓P         P       21 04 46.8  +0.6
AFI    Afiamalu          84.88 103    LR      LR      21 39 56.5
       comp=Z,62nm,20.2s,baz=307,slow=34
AFI    Afiamalu          84.88 103    P       P       21 04 47.8  +0.8
AFI    Afiamalu          84.88 103    P       P       21 04 47.8  +0.8
AFI                                   pmax    pmax
       comp=Z,91nm,1.1s
ATHU   Athens Univers    84.88 309    P       P       21 04 45.5  -1.0
SHEM   Shemya Is, Ala    84.91  36    LR      LR      21 43 22.2
       comp=Z,44nm,20.1s,baz=286,slow=36
TESR   Tescani           84.91 318 ⇑P         P       21 04 47.2  +0.8
ATH    Athens Observa    84.94 309    P       P       21 04 45.9  -0.8
KAVA   Kavala            85.02 312    P       P       21 04 46.5  -0.6
COVR   Voineasa-Covas    85.03 317 ⇑P         P       21 04 47.4  +0.3
RZN    Rozhen            85.04 313    P       P       21 04 47.7  +0.3
KTHA   Kythira Island    85.08 307    P       P       21 04 47.3  -0.2
MLR    Muntele Rosu      85.11 317 ⇑P         P       21 04 48.7  +1.0
MLR    Muntele Rosu      85.11 317    P       P       21 04 47.6   0.0
MLR    Muntele Rosu      85.11 317    P       P       21 04 47.6   0.0
MLR                                   pmax    pmax
       comp=Z,134nm,1.2s
KTHR   Kythira           85.12 307    P       P       21 04 47.1  -0.6
PLD    Plovdiv           85.14 313    P       P       21 04 47.1  -0.6
KRND   KRANIDI           85.25 308    P       P       21 04 47.3  -1.0
OUR    Ouranopolis       85.26 311    P       P       21 04 48.3   0.0
EPID   Epidavros         85.32 309    P       P       21 04 47.9  -0.8
KOKK   Kokkinochori,     85.36 312    P       P       21 04 48.4  -0.4
OZUR                     85.37 317 ⇑P         P       21 04 49.1  +0.3
BIZ    Bicaz             85.38 318 ⇑P         P       21 04 49.6  +0.9
PAIG   Paliouri          85.40 311    P       P       21 04 49.4  +0.4
LTK    Loutraki          85.52 309    P       P       21 04 56.6  +6.9
HUMR   Humele            85.53 316 ⇑P         P       21 04 49.8  +0.2
NVR    Nevrokopi         85.58 312    P       P       21 04 49.2  -0.7
DOPR   Dopca             85.61 317 ⇑P         P       21 04 50.4  +0.4
ATAL   Atalanti          85.62 310    P       P       21 04 49.1  -1.1
LKR    Lokris            85.63 310    P       P       21 04 48.1  -2.1
PGB    Panagyurishte     85.64 314    P       P       21 04 50.0  -0.2
PLG    Polygyros         85.67 311    P       P       21 04 49.1  -1.3
SRS    Serrai            85.73 312    P       P       21 04 49.9  -0.7
MMB    Musomiste         85.73 313    P       P       21 04 50.0  -0.7
THAL   Thalero           85.76 309    P       P       21 04 48.2  -2.6
SOH    Sokhos            85.84 312    P       P       21 04 50.4  -0.8
HORT   Hortiatis         85.98 312    P       P       21 04 51.5  -0.5
MPEP   Malo Peshtene     86.13 314    P       P       21 04 52.7  +0.2
BURAR  Bucovina Array    86.14 319 ⇑P         P       21 04 53.8  +1.2
BURAR  Bucovina Array    86.14 319    P       P       21 04 53.3  +0.6
BURAR                                 IAmb    IAmb    21 04 54.9
       comp=Z,29nm,1.0s
BUR08  Bucovina Ar. S    86.16 319    P       P       21 04 53.3  +0.6
BUR08                                 IAmb    IAmb    21 04 55.2
       comp=Z,56nm,1.2s
ITM    Ithomi            86.16 308    P       P       21 04 52.5  -0.3
ITM    Ithomi            86.16 308    P       P       21 04 52.6  -0.3
ITM                                   IAmb    IAmb    21 04 53.9
       comp=Z,86nm,1.3s
KLV    Kalavryta, Ach    86.16 309    P       P       21 04 52.5  -0.4
AGG    Agios Georgios    86.22 310    P       P       21 04 51.9  -1.3
AGG    Agios Georgios    86.22 310    P       P       21 04 52.3  -0.9
AGG                                   IAmb    IAmb    21 04 53.5
       comp=Z,63nm,1.2s
AGG    Agios Georgios    86.22 310    P       P       21 04 52.3  -0.9
AGG                                   pmax    pmax
       comp=Z,63nm,1.2s
PYL    PYLOS             86.25 308    P       P       21 04 53.0  -0.3
KNT    Kendrikon         86.25 312    P       P       21 04 52.9  -0.3
KKB    Krupnik           86.27 313    P       P       21 04 53.1  -0.2
VTS    Vitosha           86.32 314 ⇑P         P       21 04 54.1  +0.4
VTS    Vitosha           86.32 314    P       P       21 04 53.6  -0.1
LIT    Litokhoron        86.33 311    P       P       21 04 52.9  -0.7
TROLL  Troll, Antarti    86.33 198    P       P       21 04 54.8  +1.6
TROLL  Troll, Antarti    86.33 198    PP      PP      21 08 13.7  -0.3
MNK    Minsk             86.39 326  i P       P       21 04 53.5  -0.1
MNK                                 i                 21 08 14.4
MNK                                 i PPP     PPP     21 10 08.3
MNK                                 i S       SKSac   21 15 19.3  +0.8
MNK                                 i SS      SS      21 21 10.3  +2.0
MNK                                   pmax    pmax
       comp=Z,56nm,1.2s
MNK                                   pmax    pmax
       comp=E,10.0nm,1.3s
MNK                                   pmax    pmax
       comp=N,25nm,1.3s
MNK                                   MLR     MLR
       comp=Z,105nm,19.0s
MNK                                   MLR     MLR
       comp=E,12nm,20.0s
MNK                                   MLR     MLR
       comp=N,199nm,24.0s
MNK    Minsk             86.39 326  i P       P       21 04 53.5  -0.1
       comp=E,10.0nm,1.3s
MNK                                 i P       P       21 04 53.5  -0.1
       comp=N,25nm,1.3s
MNK                                 i P       P       21 04 53.5  -0.1
       comp=Z,56nm,1.2s,baz=287
MNK                                 i PP      PP      21 08 14.5  -0.6
MNK                                 i PPP     PPP     21 10 08.4
MNK                                 i S       SKSac   21 15 19.4  +0.8
MNK                                 i SS      SS      21 21 10.3  +2.0
MNK                                 i SSS     SSS     21 24 47.6
MNK                                 i LQ      LQ      21 37 13.8
MNK                                 i LR      LR      21 43 54.7
MNK                                 i LRM     MLR     21 45 32.5
       comp=Z,105nm,19.2s
MNK                                 i LRM     MLR     21 45 44.6
       comp=E,12nm,19.8s
MNK                                 i LRM     MLR     21 45 50.4
       comp=N,199nm,23.6s
EFP    Efpalio           86.43 309    P       P       21 04 55.7  +1.6
ANX    Ano Chora         86.45 309    P       P       21 04 54.4   0.0
DRO    Drossia           86.48 309    P       P       21 04 55.1  +0.7
VAY    Valandovo         86.52 312  i P       P       21 04 54.4  -0.1
THL    Klokotos Trika    86.57 310    P       P       21 04 53.7  -1.1
ARCR   ARCALIA           86.58 318 ⇑P         P       21 04 54.9  +0.2
LOT    Lotru             86.58 316 ⇑P         P       21 04 55.1  +0.2
EVR    Evrytania         86.60 310    P       P       21 04 54.9  -0.2
RLS    Riolos of Patr    86.69 309    P       P       21 04 56.1  +0.7
PUL    Pulkovo           86.79 331ceP         P       21 04 55.1  -0.3
PUL                                   pmax    pmax
       comp=Z,74nm,1.0s
PUL                                   MLR     MLR
       comp=Z,110nm,17.0s
STIP   Stip              86.88 312  i P       P       21 04 55.0  -1.3
KZN    Kozani            86.91 311    P       P       21 04 55.3  -1.3
BLKB   Belogradchik      86.94 314 ⇑P         P       21 04 57.1  +0.5
CJR    Cluj-Napoca       86.99 318 ⇑P         P       21 04 58.5  +1.7
NACGM  Naroch            87.12 326⇓eP         P       21 04 55.6  -1.5
       baz=106
BILL   Bilibino          87.12  20    P       P       21 04 56.2  -0.7
BILL                                  IAmb    IAmb    21 04 57.9
       comp=Z,29nm,1.0s
BILL   Bilibino          87.12  20c iP        P       21 04 56.4  -0.5
BILL                                e                 21 08 23.8
BILL                                i S       S       21 15 29.2  -5.4
BILL                                i SS      SS      21 21 13.7  -4.7
BILL                                  pmax    pmax
       comp=Z,33nm,1.0s
BILL                                  MLR     MLR
       comp=Z,146nm,18.0s
KPRO   Kipourio          87.14 311    P       P       21 04 56.7  -1.0
GZR    Gura Zlata        87.25 316 ⇑P         P       21 04 58.7  +0.6
IDID   Didziasalis       87.26 326  eP        P       21 04 58.0  +0.2
DEV    Deva              87.28 317 ⇑P         P       21 04 59.7  +1.6
BMR    Baia Mare         87.28 319 ⇑P         P       21 04 59.6  +1.5
PSDA   Pessada-Kefalo    87.39 309    P       P       21 04 57.9  -0.9
HERR   Herculane         87.39 316 ⇓P         P       21 04 59.2  +0.5
NYDR   Nydri-Lefkada     87.41 309    P       P       21 04 59.3  +0.4
EVGI   Lefkada island    87.42 309    P       P       21 04 59.1  +0.1
LVV    L'vov             87.44 321  eP        P       21 04 59.7  +0.9
FSK    Fiskardo          87.47 309    P       P       21 04 59.5  +0.3
JAN    Janina            87.47 310    P       P       21 04 59.0  -0.2
SKO    Skopje            87.49 313  i P       P       21 04 59.1  -0.2
MESR   Meseseni          87.52 318 ⇓P         P       21 05 00.6  +1.3
IIGN   Ignalina          87.55 326  eP        P       21 04 59.5  +0.3
DRGR                     87.60 318 ⇑P         P       21 05 00.7  +0.9
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ISAL	Salakas	87.67	327	*e*P	P	21 05 00.2	+0.5
LSK	Leskovik	87.76	311	P	P	21 05 00.9	+0.2
OHR	Ohrid	87.79	312	*i* P	P	21 05 00.9	+0.1
IGT	Igoumenitsa	87.84	310	P	P	21 05 01.0	0.0
MDVR	Moldovita	87.86	315	⇑P	P	21 05 01.9	+0.8
LVZ	Lovozero	88.00	340	P	P	21 05 00.6	-0.6
LVZ	Lovozero	88.00	340	*ce*P	P	21 05 01.8	+0.7
LVZ				pmax	pmax		
	comp=Z,53nm,1.7s						
SNAA	Sanae	88.05	198	P	P	21 05 02.0	+0.5
SNAA	Sanae	88.05	198	PP	PP	21 08 27.2	-0.5
SNAA	Sanae	88.05	198	LR	LR	21 38 10.5	
	comp=Z,162nm,20.8s,baz=96,slow=31						
SNAA	Sanae	88.05	198	P	P	21 05 02.4	+1.0
SNAA	Sanae	88.05	198	*de*P	P	21 05 02.6	+1.2
SNAA				pmax	pmax		
	comp=Z,31nm,1.3s						
BZS	Buzias	88.10	316	⇑P	P	21 05 02.8	+0.7
VSU	Vasula	88.14	329	*e*P	P	21 05 02.1	+0.2
SRN	Sarande	88.16	310	P	P	21 05 02.6	+0.2
SIRR	Siria	88.20	317	⇑P	P	21 05 03.7	+1.1
KWP	Kalwaria Pacla	88.23	320	*e*P	P	21 05 03.1	+0.5
KWP	Kalwaria Pacla	88.23	320	P	P	21 05 02.5	-0.1
KWP	Kalwaria Pacla	88.23	320	P	P	21 05 02.5	-0.1
KWP				pmax	pmax		
	comp=Z,476nm,1.1s						
LTVH	Ltavrtes, Hu	88.27	318	⇑P	P	21 05 04.4	+1.6
LTVH	Ltavrtes, Hu	88.27	318	P	P	21 05 03.4	+0.6
LTVH	Ltavrtes, Hu	88.27	318	P	P	21 05 04.0	+1.2
UZH	Uzhgorod	88.28	319	⇓*i*P	P	21 05 03.0	+0.2
UZH				*e*		21 05 21.8	
KEK	Kerkira	88.28	310	P	P	21 05 03.8	+0.7
APA	Apatity	88.31	339	⇓*i*P	P	21 04 58.5	-4.0
APA				pmax	pmax		
	comp=Z,17nm,1.2s						
APA				MLR	MLR		
	comp=Z,400nm,23.0s						
KOLS	Kolonicke sedl	88.36	320	*e*P	P	21 05 04.6	+1.4
KOLS				pmax	pmax		
	comp=Z,125nm,1.1s						
KOLS	Kolonicke sedl	88.36	320	*e*P	P	21 05 04.6	+1.4
SJES	Sjenica	88.80	314	⇓*i*P	P	21 05 06.1	+0.5
PABE	Paberze	88.84	326	P	P	21 05 05.2	-0.1
PABE	Paberze	88.84	326	*e*P	P	21 05 05.5	+0.2
CRVS	Cervenica-Dubn	88.87	319	*e*P	P	21 05 06.3	+0.6
CRVS				pmax	pmax		
	comp=Z,38nm,1.3s						
CRVS	Cervenica-Dubn	88.87	319	*e*P	P	21 05 06.3	+0.6
SUW	Suwalki	88.93	325	*e*P	P	21 05 05.6	-0.1
SUW	Suwalki	88.93	325	P	P	21 05 05.7	-0.1
SUW	Suwalki	88.93	325	P	P	21 05 05.7	0.0
SUW				pmax	pmax		
	comp=Z,299nm,1.1s						
SUW	Suwalki	88.93	325	*e*P	P	21 05 05.4	-0.4
DIVS	Divibare	88.94	314	⇓*i*P	P	21 05 06.4	+0.2
VSVD	Vaisvydziai	88.97	327	*e*P	P	21 05 05.1	-0.8
PDG	Podgorica	89.17	313	⇑P	P	21 05 07.6	+0.5
PDG	Podgorica	89.17	313	*e*P	P	21 05 07.0	-0.1
DRME	Dracevica, Mon	89.18	313	*e*P	P	21 05 07.8	+0.6
FRGS	Fruska Gora	89.26	316	⇑P	P	21 05 08.2	+0.6
FRGS	Fruska Gora	89.26	316	⇓*i*P	P	21 05 07.6	0.0
FIA1	FINESS Array S	89.29	332	P	P	21 05 07.5	+0.3
FIA1				IAmb	IAmb	21 05 08.8	
	comp=Z,53nm,1.4s						
FINES	FINESS Array B	89.29	332	P	P	21 05 07.3	+0.1
	comp=Z,9.0nm,0.9s,baz=116,slow=4.1,SNR=30						
FINES				PKiKP	PKiKP	21 10 05.0	-0.5
	comp=Z,1.9nm,1.0s,baz=227,slow=5.5,SNR=1.7						
	comp=Z,9.0nm,0.9s						
FINES	FINESS Array B	89.29	332	P	P	21 05 07.2	-0.1
RUDO	Rudo	89.29	314	*e*P	P	21 05 07.1	-0.7
BBLS	Lazići	89.31	314	⇓*i*P	P	21 05 08.3	+0.4
BSZH	Besenyszg	89.34	318	P	P	21 05 08.6	+0.8
TEKS	Tekeris	89.35	315	*e*P	P	21 05 07.3	-0.7
KECS	Kecovo	89.42	319	*e*P	P	21 05 09.4	+1.2
KECS	Kecovo	89.42	319	*e*P	P	21 05 09.4	+1.2
UPM	Unac-Piva	89.56	313	*e*P	P	21 05 09.2	0.0
MTSE	Matsula	89.69	329	*e*P	P	21 05 09.4	+0.3
PSZ	Piszkesteto	89.71	318	⇑P	P	21 05 09.8	+0.2
PSZ	Piszkesteto	89.71	318	P	P	21 05 09.6	0.0
PSZ				IAmb	IAmb	21 05 11.4	
	comp=Z,54nm,1.2s						
PSZ	Piszkesteto	89.71	318	P	P	21 05 09.6	0.0
PSZ				pmax	pmax		
	comp=Z,54nm,1.2s						
PSZ	Piszkesteto	89.71	318	P	P	21 05 09.9	+0.2
PSZ	Piszkesteto	89.71	318	P	P	21 05 10.5	+0.8
NIE	Niedzica	89.72	320	*e*P	P	21 05 11.1	+1.4
HCY	Herceg Novi	89.73	313	*e*P	P	21 05 09.4	-0.4
MEF	Metsahovi	89.77	331	*e*P	P	21 05 09.6	+0.1
BRY	Bratogost	89.77	313	*e*P	P	21 05 09.2	-1.0
BEL	Belsk	89.88	322	*e*P	P	21 05 10.8	+0.6
VNA1	Neumayer--Stat	90.05	198	P	P	21 05 12.6	+1.9
PBUR	Paburge	90.08	326	*e*P	P	21 05 11.3	+0.3
OJC	Ojcow	90.19	320	*e*P	P	21 05 11.9	+0.2
OJC	Ojcow	90.19	320	P	P	21 05 11.6	-0.2
OJC				IAmb	IAmb	21 05 13.5	
	comp=Z,73nm,1.5s						
OJC	Ojcow	90.19	320	P	P	21 05 11.6	-0.2
OJC				pmax	pmax		
	comp=Z,73nm,1.5s						
LANS	Liptovska Anna	90.21	319	*e*P	P	21 05 12.8	+0.9
LANS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LANS	Liptovska Anna	90.21	319	*e*P	P	21 05 12.8	+0.9
MORH	Mrgy, Hungar	90.25	316	⇑P	P	21 05 12.8	+0.7
MORH	Mrgy, Hungar	90.25	316	⇓*i*P	P	21 05 12.1	0.0
MORH	Mrgy, Hungar	90.25	316	P	P	21 05 12.1	0.0
MORH	Mrgy, Hungar	90.25	316	P	P	21 05 12.3	+0.2
VNA3	Neumayer Olymp	90.25	198	P	P	21 05 13.4	+1.7
VNA3	Neumayer Olymp	90.25	198	PP	PP	21 08 42.7	-2.6
STON	Ston	90.37	313	⇓*i*P	P	21 05 11.6	-1.1
VYHS	Vyhne	90.50	319	*e*P	P	21 05 13.9	+0.6
VYHS				pmax	pmax		
	comp=Z,17nm,1.2s						
VYHS	Vyhne	90.50	319	*e*P	P	21 05 13.9	+0.6
TIP	Timpagrande	90.52	309	⇑P	P	21 05 15.0	+1.3
KOVH	Kovagotottos	90.60	316	P	P	21 05 13.8	+0.1
KOVH	Kovagotottos	90.60	316	P	P	21 05 13.6	-0.2
CSKK	Cskako	90.70	318	P	P	21 05 11.8	-2.4
SRO	Srobarova	90.74	318	*e*P	P	21 05 15.3	+1.0
SRO				pmax	pmax		
	comp=Z,67nm,1.3s						
SRO	Srobarova	90.74	318	*e*P	P	21 05 15.3	+1.0
MATE	Matera	90.77	311	⇑P	P	21 05 15.6	+1.0
KOLL	Kolacno	90.80	319	*e*P	P	21 05 15.4	+0.7
SRKY	Kupres RS	90.94	314	*e*P	P	21 05 14.8	-0.8
BLY	Banja Luka	91.03	315	⇓*i*P	P	21 05 16.3	+0.5
MPLH	Magyarpolny	91.15	317	P	P	21 05 16.8	+0.5
MPLH	Magyarpolny	91.15	317	P	P	21 05 16.9	+0.5
OKC	Ostrava-Krasne	91.17	320	*e*P	P	21 05 16.9	+0.6
OKC	Ostrava-Krasne	91.17	320	*e*P	P	21 05 16.9	+0.6
MAUC	Maruska	91.30	319	*e*P	P	21 05 17.7	+0.7
JAVC	Velka Javorina	91.33	319	*e*P	P	21 05 18.6	+1.4
SMOL	Smolenice	91.43	319	*e*P	P	21 05 18.4	+0.8
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SMOL	Smolenice	91.43	319	*e*P	P	21 05 18.4	+0.8
MODS	Modra-Piesok	91.51	318	*e*P	P	21 05 18.7	+0.7
MODS				pmax	pmax		
	comp=Z,104nm,1.3s						
MODS	Modra-Piesok	91.51	318	*e*P	P	21 05 18.7	+0.7
MORC	Moravsky Berou	91.55	320	P	P	21 05 17.5	-0.7
MORC				IAmb	IAmb	21 05 20.0	
	comp=Z,27nm,1.1s						
MORC	Moravsky Berou	91.55	320	P	P	21 05 17.5	-0.7
MORC				pmax	pmax		
	comp=Z,27nm,1.1s						
MORC	Moravsky Berou	91.55	320	*e*P	P	21 05 18.9	+0.7
ZST	Bratislava	91.60	318	*e*P	P	21 05 19.0	+0.6
ZST				pmax	pmax		
	comp=Z,141nm,1.6s						
ZST	Bratislava	91.60	318	*e*P	P	21 05 19.0	+0.6
ARCES	ARCESS Array B	91.69	340	P	P	21 05 18.2	-0.2
	comp=Z,14nm,1.0s,baz=130,slow=4.9,SNR=14						
ARCES				LR	LR	21 49 45.8	
	comp=Z,189nm,20.9s,baz=86,slow=38						
	comp=Z,14nm,1.0s						
ARCES	ARCESS Array B	91.69	340	P	P	21 05 18.4	+0.1
ARCES				IAmb	IAmb	21 05 19.5	
	comp=Z,37nm,1.2s						
ARCES	ARCESS Array B	91.69	340	P	P	21 05 18.4	+0.1
ARCES				pmax	pmax		
	comp=Z,37nm,1.3s						
SOP	Sopron	91.89	318	P	P	21 05 19.7	0.0
BELA	Belgrano 2	92.01	188	P	P	21 05 20.2	+0.4
BELA				IAmb	IAmb	21 05 21.8	
	comp=Z,68nm,1.7s						
RONA	Rosalia, Austr	92.06	318	*i* P	P	21 05 21.0	+0.4
	comp=Z,11nm,1.2s						
KRLC	Kraliky	92.08	320	*e*P	P	21 05 21.3	+0.7
KRLC	Kraliky	92.08	320	*e*P	P	21 05 21.3	+0.7
VRAC	Vranov	92.09	319	*e*P	P	21 05 21.0	+0.3
KRUC	Moravsky	92.19	319	*e*P	P	21 05 21.4	+0.3
GKP	Gorka Klasztor	92.27	323	*e*P	P	21 05 21.2	-0.1
GKP	Gorka Klasztor	92.27	323	*e*P	P	21 05 21.4	+0.1
GCIS	Gornji Cirnik	92.27	316	*e*P	P	21 05 22.0	+0.5
CONA	Conrad Observa	92.39	318	*e*P	P	21 05 22.4	+0.3
	comp=Z,11nm,1.4s,SNR=5.7						
CRES	Cresnjev	92.39	316	*e*P	P	21 05 22.1	0.0
DPC	Dobruska-Polom	92.41	320	*e*P	P	21 05 22.9	+0.7
DPC	Dobruska-Polom	92.41	320	*e*P	P	21 05 22.9	+0.7
GROS	Grobnik	92.44	316	*e*P	P	21 05 22.5	+0.1
OSTC	Ostas	92.51	320	*e*P	P	21 05 23.2	+0.6
ARSA	Arzberg	92.53	317	*e*P	P	21 05 23.6	+0.9
	comp=Z,18nm,1.1s,SNR=8.1						
CHVC	Chvalec	92.61	320	*e*P	P	21 05 23.7	+0.6
UPC	Upice	92.63	320	*e*P	P	21 05 23.8	+0.7
UPC	Upice	92.63	320	*e*P	P	21 05 23.8	+0.7
PERS	Pernice	92.72	316	*e*P	P	21 05 24.0	+0.3
SOKA	Soboth	92.79	317	*e*P	P	21 05 24.9	+0.9
	comp=Z,28nm,1.2s,SNR=13						
TREC	Trest	92.81	319	*e*P	P	21 05 24.6	+0.6
TREC	Trest	92.81	319	*e*P	P	21 05 24.6	+0.6
LJU	Ljubljana	93.06	316	*e*P	P	21 05 25.4	+0.2
LJU	Ljubljana	93.06	316	*e*P	P	21 05 25.5	+0.3
OBKA	Obir	93.10	316	*i* P	P	21 05 26.1	+0.6
	comp=Z,18nm,1.4s						
MOA	Molln	93.44	318	*i* P	P	21 05 27.0	+0.1
	comp=Z,7.0nm,1.1s						
PRU	Pruhonice	93.50	320	*e*P	P	21 05 27.1	0.0
PRU	Pruhonice	93.50	320	*e*P	P	21 05 27.1	0.0
CKRC	Cesky Krumlov	93.52	319	*e*P	P	21 05 27.4	+0.1
CKRC				*e*x	x	21 05 39.8	
MYKA	Terra Mystica	93.73	316	*i* P	P	21 05 28.7	+0.4
	comp=Z,8.2nm,1.0s						
BIOA	Bad Ischl, Aus	93.85	317	*i* P	P	21 05 28.7	-0.2
	comp=Z,12nm,1.6s						
GEC2	GERESS Array S	93.92	319	P	P	21 05 28.6	-0.7
GEC2				IAmb	IAmb	21 05 30.7	
	comp=Z,23nm,1.1s						
GERES	GERESS Array B	93.92	319	P	P	21 05 29.3	+0.1
	comp=Z,6.9nm,0.9s,baz=147,slow=3.2,SNR=52						
	comp=Z,6.9nm,0.9s						
GERES	GERESS Array B	93.92	319	P	P	21 05 28.5	-0.7
BRG	Berggiesshubel	93.98	321	⇑*i*P	P	21 05 30.1	+0.8
BRG				Amp		21 05 31.0	
	comp=Z,18nm,1.1s						
BRG				PP	PP	21 09 18.1	+2.6
BRG				Amp		21 09 20.7	
	comp=Z,4.7nm,1.1s						
BRG	Berggiesshubel	93.98	321	⇑*i*P	P	21 05 30.1	+0.8
BRG						21 09 18.0	
BRG				pmax	pmax		
	comp=Z,18nm,1.1s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBA	Koelnbreinsper	93.98	317	*i* P	P	21 05 29.2	-0.4
	comp=Z,9.8nm,1.3s						
KHC	Kasperske Hory	94.03	319	P	P	21 05 29.2	-0.4
KHC	Kasperske Hory	94.03	319	P	P	21 05 29.3	-0.4
KHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KHC	Kasperske Hory	94.03	319	*e*P	P	21 05 29.5	-0.2
KHC				AMS	AMS	21 55 10.0	
	comp=Z,200nm,17.0s						
ABTA	Abfaltersbach	94.52	316	*i* P	P	21 05 31.7	-0.3
	comp=Z,6.2nm,1.2s						
CLL	Collm	94.61	321	P	P	21 05 31.1	-1.1
CLL	Collm	94.61	321	P	P	21 05 31.1	-1.1
CLL				pmax	pmax		
	comp=Z,14nm,1.1s						
CLL	Collm	94.61	321	*i* P	P	21 05 31.7	-0.5
	comp=Z,15nm,1.1s						
CLL				*e*PP	PP	21 09 21.0	+0.6
CLL				*e*(PS)		21 17 54.0	
CLL				LmH		21 57 00.0	
	comp=N,200nm,18.4s						
CLL				LmH		21 57 00.0	
	comp=E,100nm,20.4s						
CLL				LmH		21 57 00.0	
	comp=Z,200nm,19.3s						
NKC	Novy Kostel	94.87	320	*e*P	P	21 05 33.7	+0.3
NKC	Novy Kostel	94.87	320	*e*P	P	21 05 33.7	+0.3
WTTA	Wattenberg	95.16	317	*i* P	P	21 05 34.7	-0.4
	comp=Z,14nm,1.3s						
WATA	Walderalm	95.21	317	*e*P	P	21 05 34.7	-0.5
	comp=Z,13nm,1.5s,SNR=5.3						
RAR	Rarotonga	95.29	112	LR	LR	21 49 21.0	
	comp=Z,64nm,19.9s,baz=300,slow=36						
MOTA	Moosalm	95.53	317	*e*P	P	21 05 36.4	-0.3
	comp=Z,7.8nm,1.0s						
FETA	Feichten	95.76	317	*i* P	P	21 05 37.9	+0.1
	comp=Z,8.4nm,1.3s						
RETA	Reutte	95.77	317	*e*P	P	21 05 37.7	0.0
	comp=Z,10nm,1.5s						
KEST	Kesra	96.00	305	P	P	21 05 38.5	-0.5
	comp=Z,14nm,1.0s,baz=256,slow=2.3,SNR=8.1						
	comp=Z,14nm,1.0s						
KEST	Kesra	96.00	305	P	P	21 05 38.2	-0.8
KEST				IAmb	IAmb	21 05 41.4	
	comp=Z,25nm,1.1s						
KEST	Kesra	96.00	305	P	P	21 05 40.7	+1.7
KEST				P	P	21 05 40.7	+1.7
NOA	NORSAR Array B	96.30	331	P	P	21 05 38.7	-1.0
	comp=Z,1.1nm,0.8s,baz=94,slow=5.0,SNR=3.3						
NOA				LR	LR	21 51 27.4	
	comp=Z,99nm,20.4s,baz=100,slow=37						
	comp=Z,1.1nm,0.8s						
DAVA	Damuels	96.35	317	*e*P	P	21 05 40.2	-0.3
	comp=Z,13nm,1.1s						
TOA0	Torodi Ar. Sit	101.37	282	P	Pdif	21 06 03.8	+0.4
TORD	Torodi Ar. Bea	101.37	282	P	Pdif	21 06 01.9	-1.6
	comp=Z,2.4nm,1.1s,baz=354,slow=4.5,SNR=6.7						
TORD				PKiKP	PKiKP	21 10 27.5	-0.4
	comp=Z,1.0nm,0.9s,baz=92,slow=3.6,SNR=3.2						
TTA	Tatalina	101.66	27	Pdiff	Pdif	21 06 04.0	+0.2
	baz=278						
J20K	Nowinta River	102.30	26	Pdiff	Pdif	21 06 06.7	+0.3
	baz=280						
L19K	White Mountain	102.30	28	Pdiff	Pdif	21 06 06.9	+0.4
	baz=279						
K20K	Telida	102.47	27	Pdiff	Pdif	21 06 08.2	+1.0
	baz=280						
H21K	Melozitna Rive	102.59	24	Pdiff	Pdif	21 06 08.8	+1.1
	baz=281						
N19K	Bonanza Creek	102.68	29	Pdiff	Pdif	21 06 08.7	+0.3
	baz=279						
TOLK	Toolik Lake Re	103.14	21	Pdiff	Pdif	21 06 10.5	+0.3
	baz=285						
BPAW	Bear Paw Mtn.	103.67	26	Pdiff	Pdif	21 06 12.5	-0.1
	baz=283						
ILAR	Eielson Array	105.23	24	Pdiff	Pdif	21 06 19.7	+0.2
	comp=Z,0.3nm,0.8s,baz=232,slow=4.4,SNR=2.2						
ILAR				PP	PP	21 10 37.1	-3.4
	comp=Z,2.4nm,1.2s,baz=280,slow=7.0,SNR=6.4						
ILAR				PKKPbc	PKKPbc	21 21 59.9	-2.5
	comp=Z,2.0nm,1.0s,baz=141,slow=1.7,SNR=11						
ILAR				PKKP	PKKPdf	21 22 12.3	-0.4
	comp=Z,1.0nm,1.1s,baz=139,slow=1.7,SNR=4.6						
WAT6	Susitna Watana	105.46	27	PKiKP	PKiKP	21 10 34.4	+0.2
	baz=285						
SCM	Sheep Creek Mo	105.84	27	PKiKP	PKiKP	21 10 35.5	+0.7
	baz=285						
PAX	Paxson	106.35	26	PKiKP	PKiKP	21 10 36.4	+0.6
	baz=287						
ESDC	Sonseca Array	106.54	309	Pdiff	Pdif	21 06 25.4	-0.5
	comp=Z,0.3nm,0.6s,baz=66,slow=3.1,SNR=2.4						
ESDC				PKiKP	PKiKP	21 10 36.7	-0.1
	comp=Z,1.4nm,1.1s,baz=45,slow=3.1,SNR=5.6						
ESDC				PP	PP	21 10 51.6	+0.5
	comp=Z,4.3nm,1.1s,baz=71,slow=5.9,SNR=9.9						
ESDC				PKKPab	PKKPab	21 22 12.6	+0.5
	comp=Z,2.8nm,1.0s,baz=274,slow=4.9,SNR=12						
KLU	Klutina	106.58	28	PKiKP	PKiKP	21 10 37.2	+0.9
	baz=287						
N25K	Chitina, Valde	107.16	27	PKiKP	PKiKP	21 10 38.1	+0.8
	baz=288						
L26K	Log Cabin Wild	107.25	26	PKiKP	PKiKP	21 10 37.8	+0.4
	baz=289						
BMRM	Bremner River	107.35	28	PKiKP	PKiKP	21 10 38.0	+0.3
	baz=288						
M26K	Nabesna, AK	107.62	26	PKiKP	PKiKP	21 10 38.9	+0.8
	baz=290						
I29M	Ogilvie Camp,	108.42	23	PKiKP	PKiKP	21 10 38.7	-0.8
	baz=295						
EPYK	Eagle Plains	108.57	21	PKiKP	PKiKP	21 10 39.5	-0.2
	baz=297						
YUK4	Talbot Arm	109.92	26	PKiKP	PKiKP	21 10 43.4	+0.7
	baz=294						
M30M	Minto, Yukon	110.21	25	PKiKP	PKiKP	21 10 43.1	+0.1
	baz=296						
HYT	Haines Junctio	110.64	27	PKiKP	PKiKP	21 10 44.8	+0.8
	baz=294						
P33M	Teslin, Yukon	112.99	26	PKiKP	PKiKP	21 10 48.2	-0.2
	baz=298						
S34M	Telegraph Cree	114.86	28	P	PKPdf	21 10 52.7	+0.8
	baz=299,SNR=6.3						
USHA	Ushuaia	117.94	186	PKP	PKiKP	21 10 58.1	+0.1
	comp=Z,4.2nm,0.7s,baz=268,slow=1.9,SNR=5.1						
YKA	Yellowknife Ar	118.48	18	PKP	PKPdf	21 10 57.6	-1.1
	comp=Z,4.7nm,0.9s,baz=318,slow=2.0,SNR=42						
YKA				PP	PP	21 12 16.8	+1.6
	comp=Z,2.5nm,1.1s,baz=315,slow=6.6,SNR=6.2						
YKA				PKKPbc	PKKPbc	21 21 15.5	-2.7
	comp=Z,1.4nm,0.9s,baz=133,slow=4.4,SNR=13						
YKA				PKKP	PKKPdf	21 21 45.3	-2.3
	comp=Z,0.5nm,0.8s,baz=132,slow=2.7,SNR=7.0						
YKA	Yellowknife Ar	118.48	18	PKPdf	PKPdf	21 10 57.3	-1.4
YKA	Yellowknife Ar	118.48	18	*c i*PKIKP	PKPdf	21 10 57.5	-1.2
YKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CBB	Campbell River	121.77	34	PKPdf	PKiKP	21 11 05.6	0.0
GO09	Cerro Castillo	121.82	184		PKiKP	21 11 06.7	+1.0
D03D	Eldon	124.36	35	P	PKiKP	21 11 11.7	+1.0
	baz=302,SNR=9.5						
B05A	Bryant	124.53	34	P	PKiKP	21 11 11.5	+0.5
	baz=303,SNR=8.0						
E04D	Cinebar	125.18	36	PKPdf	PKiKP	21 11 12.3	-0.1
E04D	Cinebar	125.18	36	P	PKiKP	21 11 13.0	+0.5
	baz=302						
G03D	McMinnville, O	125.46	38	P	PKiKP	21 11 13.7	+0.7
	baz=300						
F04A	Amboy	125.60	37	PKPdf	PKiKP	21 11 13.2	0.0
I02E	Swisshome, OR	125.64	39	P	PKiKP	21 11 13.8	+0.5
	baz=299						
EDM	Edmonton	125.70	25	PKPdf	PKPdf	21 11 12.6	-0.4
EDM	Edmonton	125.70	25	PKIKP	PKPdf	21 11 12.6	-0.4
J01E	Myrtle Point	126.05	40	P	PKiKP	21 11 14.2	0.0
	baz=299						
H04D	Lebanon	126.13	38	P	PKiKP	21 11 14.9	+0.6
	baz=301,SNR=14						
I03D	Drain, OR	126.16	40	P	PKiKP	21 11 15.0	+0.5
	baz=300,SNR=13						
K02D	Willamette Mer	126.44	41	P	PKiKP	21 11 15.4	+0.2
	baz=298,SNR=9.3						
I04A	Tendick Farm,	126.70	39	P	PKPdf	21 11 15.4	+0.3
	baz=300,SNR=15						
L02F	Cave Junction	126.77	41	P	PKiKP	21 11 16.5	+0.7
	baz=298						
HAWA	Hanford	127.03	35		PKiKP	21 11 16.1	-0.1
I05D	Terrebonne, OR	127.08	38	P	PKiKP	21 11 16.7	+0.3
	baz=302						
J04D	Umpqua Nationa	127.17	40	P	PKiKP	21 11 17.3	+0.5
	baz=300,SNR=9.4						
NEW	Newport	127.23	32	P	PKiKP	21 11 16.4	-0.1
	baz=309,SNR=5.7						
COYC	Coyhaique	127.46	185	PKPdf	PKPdf	21 11 16.3	-0.2
YBH	Yreka Blue Hor	127.52	41	PKPdf	PKPdf	21 11 17.0	+0.2
YBH	Yreka Blue Hor	127.52	41	PKIKP	PKPdf	21 11 17.0	+0.2
L04D	Klamath Falls	127.55	41	P	PKiKP	21 11 17.6	+0.2
	baz=300,SNR=11						
J05D	Fort Rock, OR	127.70	39	P	PKiKP	21 11 18.4	+0.6
	baz=301						
AY01	Puyuhuapi	128.65	185	PKPdf	PKPdf	21 11 18.4	-0.4
ORV	Oroville	129.37	43	PKPdf	PKPdf	21 11 20.1	-0.2
ORV	Oroville	129.37	43	PKIKP	PKPdf	21 11 20.1	-0.2
WVOR	Wild Horse Val	129.77	39	PKPdf	PKiKP	21 11 22.4	+0.5
WVOR	Wild Horse Val	129.77	39	PKIKP	PKiKP	21 11 22.4	+0.5
PLID	Pearl Lake	129.79	34	PKPdf	PKPdf	21 11 21.5	+0.2
LL02	Futaleuf	129.79	186	PKPdf	PKPdf	21 11 20.6	-0.4
MSO	Missoula	129.80	31	PKPdf	PKPdf	21 11 20.6	-0.5
MSO	Missoula	129.80	31	P	PKPdf	21 11 20.8	-0.3
	baz=311,SNR=16						
BEKR	Beckworth	129.99	42		PKPdf	21 11 21.5	-0.2
CMB	Columbia Colle	130.85	45	PKPdf	PKPdf	21 11 22.9	-0.3
CMB	Columbia Colle	130.85	45	PKIKP	PKPdf	21 11 22.9	-0.3
EGMT	Eagleton	131.03	28	PKPdf	PKPdf	21 11 23.2	-0.1
EGMT	Eagleton	131.03	28	P	PKPdf	21 11 23.8	+0.4
	baz=317						
LRM	Limekiln Ridge	131.24	32		PKPdf	21 11 24.1	+0.1
SCHQ	Schefferville	131.36	351	PKP	PKPdf	21 11 23.2	-0.4
	comp=Z,9.5nm,0.9s,baz=28,slow=5.1,SNR=8.9						
HLID	Hailey	131.63	35	PKPdf	PKiKP	21 11 25.4	-0.3
HLID	Hailey	131.63	35	P	PKiKP	21 11 25.4	-0.3
	baz=308						
BOZ	Bozeman (W)	131.82	31		PKPdf	21 11 25.4	+0.4
BOZ	Bozeman (W)	131.82	31	PKIKP	PKPdf	21 11 25.4	+0.4
BOZ	Bozeman (W)	131.82	31	P	PKiKP	21 11 25.5	-0.4
	baz=313,SNR=7.7						
PLCA	Paso Flores	132.06	188	PKP	PKiKP	21 11 26.1	-0.4
	comp=Z,12nm,1.2s,baz=163,slow=3.9,SNR=9.8						
PLCA				PP	PP	21 13 46.4	+0.8
	comp=Z,2.4nm,1.0s,baz=173,slow=7.3,SNR=4.2						
PLCA	Paso Flores	132.06	188	PKPdf	PKiKP	21 11 26.4	-0.2
PLCA	Paso Flores	132.06	188	PKIKP	PKiKP	21 11 26.4	-0.2
PLCA	Paso Flores	132.06	188	*e*P	PKiKP	21 11 26.2	-0.4
NVAR	Mina Array Bea	132.09	43	PKhKP	PKPpre	21 11 21.8	
	comp=Z,2.6nm,0.8s,baz=248,slow=5.6,SNR=4.3						
NVAR				PKP	PKiKP	21 11 26.5	-0.4
	comp=Z,4.1nm,0.8s,baz=249,slow=2.2,SNR=19						
NVAR				PP	PP	21 13 50.6	+3.4
	comp=Z,0.1nm,0.3s,baz=278,slow=4.3,SNR=4.1						
NVAR				SKPbc	SKPab	21 14 51.7	-0.1
	comp=Z,1.3nm,0.9s,baz=253,slow=4.8,SNR=4.3						
NVAR	Mina Array Bea	132.09	43		PKPdf	21 11 25.7	-0.1
TRQA	Tornquist	132.78	197		PKPdf	21 11 26.8	-0.1
TRQA	Tornquist	132.78	197	PKIKP	PKPdf	21 11 26.8	-0.1
ELK	Elko	132.82	39	PKPdf	PKPdf	21 11 27.7	+0.6
ELK	Elko	132.82	39	PKIKP	PKPdf	21 11 27.7	+0.6
RLMT	Red Lodge	133.35	30	P	PKiKP	21 11 28.6	-0.5
	baz=315						
LAO	LASA Array	133.63	27	P	PKiKP	21 11 29.4	-0.2
	baz=320						
LAO	LASA Array	133.63	27	P	PKiKP	21 11 29.3	-0.2
	baz=320						
R11A	Troy Canyon, C	133.95	42	P	PKiKP	21 11 30.5	-0.1
	baz=303						
EDW2	Edwards Air Fo	134.03	47	P	PKiKP	21 11 30.3	-0.3
	baz=298						
ULM	Lac du Bonnet	134.34	16	PKP	PKPdf	21 11 28.6	-0.7
	comp=Z,13nm,0.9s,baz=352,slow=5.4,SNR=7.3						
ULM	Lac du Bonnet	134.34	16	PKPdf	PKPdf	21 11 28.7	-0.6
HWUT	Hardware Ranch	134.49	35		PKPdf	21 11 30.1	0.0
BFSC	Mount Baldy Ra	134.57	48	P	PKPdf	21 11 31.0	+0.5
	baz=298						
DUG	Dugway, Tooele	134.64	38	P	PKiKP	21 11 31.4	-0.4
	baz=308						
GSC	Goldstone, Bar	134.69	46	P	PKiKP	21 11 31.8	-0.2
	baz=300,SNR=11						
BW06	Boulder Array	134.84	33	P	PKPdf	21 11 30.5	-0.4
	baz=313						
PD31	Pinedale Array	134.84	33		PKPdf	21 11 30.5	-0.4
PDAR	Pinedale Array	134.84	33	PKhKP	PKPpre	21 11 22.3	
	comp=Z,0.1nm,0.3s,baz=68,slow=26,SNR=2.3						
PDAR				PKP	PKPdf	21 11 30.7	-0.2
	comp=Z,5.1nm,1.0s,baz=354,slow=1.5,SNR=13						
PDAR				PP	PP	21 14 03.5	-0.8
	comp=Z,0.2nm,0.4s,baz=204,slow=2.0,SNR=3.3						
PDAR	Pinedale Array	134.84	33		PKPdf	21 11 28.5	-2.3
PLTB	Pedras Altas	134.94	210	*e*P	PKPdf	21 11 30.2	-0.9
NBAN	Anadia - AL	135.12	249	*e*P	PKPdf	21 11 31.7	-0.2
HEC	Hector,Ludlow	135.25	46	P	PKiKP	21 11 33.2	+0.1
	baz=300						
PFO	Pinyon Flats O	135.75	48	PKP	PKPdf	21 11 32.8	+0.1
	comp=Z,5.2nm,0.9s,baz=133,slow=1.4,SNR=5.1						
PFO	Pinyon Flats O	135.75	48	PKPdf	PKPdf	21 11 32.2	-0.5
PFO	Pinyon Flats O	135.75	48	P	PKiKP	21 11 34.4	+0.1
	baz=298						
TPFO	Pinon Flats	135.75	48	P	PKiKP	21 11 33.8	-0.5
	baz=298						
GMRC	Granite Mounta	135.76	46	P	PKiKP	21 11 34.4	+0.1
	baz=300,SNR=13						
BELC	Belle Mtn. Jos	135.90	47	P	PKiKP	21 11 34.4	-0.1

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               baz=299,SNR=5.9
CPSB   Cacapava Do Su 135.95 211  eP          PKPdf    21 11 33.4 +0.4
NBLA   Lagarto - SE   136.04 246  eP          PKPdf    21 11 33.1 -0.5
MONP2  Monument Peak  136.11  49  P           PKiKP    21 11 34.7 -0.4
               baz=298
IRM    Iron Mountain  136.44  46  P           PKiKP    21 11 35.2 -0.3
               baz=300
IKP    In-Ko-Pah, Jac 136.46  49  P           PKiKP    21 11 35.2 -0.5
               baz=298
BC3    Big Chuckawall 136.46  47  P           PKiKP    21 11 35.4 -0.3
               baz=299,SNR=7.4
K22A   Casper         136.50  31  P           PKPdf    21 11 31.2 -2.7
               baz=317,SNR=7.2
K22A   Casper         136.50  31  P           PKPdf    21 11 32.9 -1.0
               baz=317,SNR=7.2
GDU01  Guandu, BA     136.54 242  eP          PKPdf    21 11 34.4 -0.1
SWSC   Sam W. Stewart 136.55  48  P           PKiKP    21 11 35.1 -0.7
               baz=298
RSSD   Black Hills    136.59  27  P           PKPdf    21 11 32.1 -1.9
               baz=321
PDMCI  Parker Dam,Lak 137.08  46  P           PKiKP    21 11 36.7 -0.1
               baz=301
O20A   White River Ci 137.36  35  P           PKPdf    21 11 36.1 +0.5
               baz=313
VAO    Valinhos       137.38 225  eP          PKPdf    21 11 35.8 -0.1
EYMN   Ely            137.57  13  P           PKPdf    21 11 36.0 +0.6
               baz=340
ITAB   Concordia      137.71 216  PKPdf       PKPdf    21 11 35.6 -0.8
ITAB   Concordia      137.71 216  eP          PKPdf    21 11 35.3 -1.1
N23A   Red Feather La 138.07  32  P           PKPdf    21 11 37.1 +0.1
               baz=316
ITQB   Itaqui         138.13 209  eP          PKPdf    21 11 37.6 +0.5
RCLB   Rio Claro- Sao 138.16 225  eP          PKPdf    21 11 37.9 +0.5
NBMA   Muriti-CE      138.21 251  eP          PKPdf    21 11 37.9 +0.2
NBPN   Ponto Novo - B 138.28 245  eP          PKPdf    21 11 38.0 +0.3
WUAZ   Wupatki        138.33  42  P           PKiKP    21 11 39.0 -0.6
               baz=305
NBCL   Cascavel-CE    138.68 256  eP          PKPdf    21 11 38.7 +0.3
FRTB   Fartura        138.93 222  eP          PKPdf    21 11 39.3 +0.5
ISCO   Idaho Springs  139.04  33  PKPdf       PKPdf    21 11 38.1 -0.7
ISCO   Idaho Springs  139.04  33  PKIKP       PKPdf    21 11 38.1 -0.7
ISCO   Idaho Springs  139.04  33  P           PKPdf    21 11 38.4 -0.5
               baz=316
MVCO   Mesa Verde     139.14  38  P           PKPdf    21 11 39.2 +0.2
               baz=310
214A   Organ Pipe Nat 139.24  48  P           PKiKP    21 11 42.0 +0.6
               baz=300
MT02   Curacav        139.49 189              PKPdf    21 11 39.3 -0.2
W18A   Petrified Fore 139.65  42  P           PKiKP    21 11 41.2 -1.0
               baz=307
BB19B  Bebedouro      139.74 226  eP          PKPdf    21 11 40.3  0.0
ROC1   El Roble       139.74 189              PKPdf    21 11 38.5 -1.8
S22A   4UR Ranch, Cre 139.78  36  P           PKiKP    21 11 41.7 -0.9
               baz=313
TCA    Tanti          139.80 198  eP          PKPdf    21 11 41.0 +0.7
VA03   San Esteban    139.87 190              PKPdf    21 11 40.1 -0.2
ECSD   EROS Data Cent 139.92  21  PKPdf       PKPdf    21 11 39.6 -0.2
ECSD   EROS Data Cent 139.92  21  P           PKPdf    21 11 39.7 -0.2
               baz=331
SDCO   Great Sand Dun 140.55  35              PKPdf    21 11 40.7 -0.9
SDCO   Great Sand Dun 140.55  35  P           PKPdf    21 11 38.6 -3.0
               baz=314,SNR=6.0
ACHE   Chepes         140.56 196  eP          PKPdf    21 11 41.3 -0.4
TRQ    Mont Tremblant 140.72 356  PKPdf       PKPdf    21 11 40.3 -1.0
CPUP   Villa Florida  141.25 211  PKhKP       PKPpre   21 11 36.7
               comp=Z,9.1nm,1.0s,baz=125,slow=3.5,SNR=16
APLL   PUNTA DE LOS L141.25 196   eP          PKPpre   21 11 29.7
TRCB   Terra Rica     141.31 220  eP          PKPdf    21 11 43.2 +0.1
IPMB   Ipameri, GO    141.44 230  eP          PKPdf    21 11 43.9 +0.5
T25A   Trinidad       141.59  35  PKPdf       PKPdf    21 11 43.1 -0.3
T25A   Trinidad       141.59  35  P           PKPdf    21 11 39.6 -3.8
               baz=315
NBPS   Pedro II - PI  141.66 254  eP          PKPdf    21 11 43.3 -0.7
SDBA   SAO DESIDERIO  141.76 240  eP          PKPdf    21 11 44.5 +0.4
ANMO   Albuquerque    141.86  39  PKhKP       PKPpre   21 11 40.9
               comp=Z,11nm,1.1s,baz=238,slow=1.4,SNR=9.1
ANMO   Albuquerque    141.86  39  PKPdf       PKPdf    21 11 44.2 +0.3
ANMO   Albuquerque    141.86  39  PKIKP       PKPdf    21 11 44.2 +0.3
ANMO   Albuquerque    141.86  39  P           PKPdf    21 11 40.9 -3.0
               baz=311,SNR=19
ANMO   Albuquerque    141.86  39  P           PKPdf    21 11 40.9 -3.0
               baz=311
ITRB   Iturama        141.92 225  eP          PKPdf    21 11 44.2  0.0
BMNY   Brushton-Moira 142.09 356  P           PKPdf    21 11 42.7 -1.0
               baz=6.0,SNR=6.0
Y22A   Socorro        142.18  41  P           PKPdf    21 11 43.0 -1.5
               baz=309,SNR=14
ACLC   CERRO LA CRUZ142.28 196    eP          PKPdf    21 11 40.5 -4.4
121A   Cookes Peak, D 142.48  43  PKPdf       PKPdf    21 11 43.1 -2.0
121A   Cookes Peak, D 142.48  43  P           PKPdf    21 11 44.7 -0.4
               baz=307,SNR=7.1
121A   Cookes Peak, D 142.48  43  P           PKPdf    21 11 43.0 -2.0
               baz=307
CO01   Juntas del Tor 142.50 192              PKPdf    21 11 43.1 -2.2
BDFB   Brasilia       142.65 233  PKP         PKPdf    21 11 45.2 -0.5
               comp=Z,23nm,1.0s,baz=126,slow=2.6,SNR=21
BDFB   Brasilia       142.65 233  PKPdf       PKPdf    21 11 45.0 -0.7
CBKS   Cedar Bluff    142.76  28  P           PKPdf    21 11 41.5 -3.7
               baz=323
ACCN   Adirondack Com 143.47 354  P           PKPbc    21 11 43.1 -0.3
               baz=7.5,SNR=5.2
R32A   Long Quarter,  143.55  28  P           PKPab    21 11 43.4 +0.5
               baz=324,SNR=9.8
LCO    Las Campanas   143.56 191  PKPdf       PKPdf    21 11 46.6 -0.6
LCO    Las Campanas   143.56 191  PKIKP       PKPdf    21 11 46.6 -0.6
N38A   Joes South For 143.69  19  P           PKPbc    21 11 43.8 -0.3
               baz=334
KSU1   Kansas State U 143.91  25  PKPdf       PKPbc    21 11 44.9  0.0
KSU1   Kansas State U 143.91  25  P           PKPab    21 11 44.2 -0.1
               baz=328
K62A   Royalston      144.02 353  P           PKPab    21 11 44.7 +0.1
               baz=10,SNR=11
K62A                              P           PKPab    21 11 44.7 +0.1
               baz=10,SNR=11
HRV    Adam Dziewonsk144.08 352   PKPdf       PKPab    21 11 45.0 +0.2
HRV    Adam Dziewonsk144.08 352   PKIKP       PKPab    21 11 45.0 +0.2
HRV    Adam Dziewonsk144.08 352   P           PKPab    21 11 44.7 -0.1
               baz=11,SNR=5.6
HRV    Adam Dziewonsk144.08 352   P           PKPab    21 11 44.7 -0.1
               baz=11
TRY    Troy           144.12 354  P           PKPab    21 11 45.0 +0.1
               baz=7.7,SNR=8.1
L61B   Northampton    144.29 353  P           PKPab    21 11 45.2 -0.4
               baz=9.4,SNR=6.2
L61B   Northampton    144.29 353  P           PKPab    21 11 45.5 -0.1
               baz=9.4,SNR=6.2
K57A   Scipio Center  144.31 358  P           PKPab    21 11 45.4 -0.3
               baz=2.9,SNR=6.8
QUA2   Belchertown    144.41 353  P           PKPab    21 11 46.0  0.0
               baz=10.0,SNR=12
AAM    Ann Arbor      144.43   7              PKPab    21 11 46.0 -0.1
AAM    Ann Arbor      144.43   7  PKIKP       PKPab    21 11 46.0 -0.1
N41A   Harden Midland 144.50  17  P           PKPab    21 11 45.7 -0.7
               baz=338,SNR=18
M44A   Midewin, Midew 144.57  13  P           PKPab    21 11 46.1 -0.6
               baz=343,SNR=6.0
MNTX   Cornudas Mount 144.61  42  PKPdf       PKPdf    21 11 48.1 -0.6
MNTX   Cornudas Mount 144.61  42  P           PKPdf    21 11 48.5 -0.1
               baz=309,SNR=43
MNTX   Cornudas Mount 144.61  42  P           PKPdf    21 11 48.5 -0.1
               baz=309,SNR=43
P38A   Dawn           144.63  21  P           PKPab    21 11 47.0  0.0
               baz=333,SNR=41
WVNY   West Valley, N 144.66   1  P           PKPab    21 11 45.7 -1.3
               baz=359,SNR=7.3
L48A   N Adams        144.68   8  P           PKPab    21 11 46.8 -0.2
               baz=349,SNR=12
L48A                              P           PKPab    21 11 46.8 -0.2
               baz=349,SNR=12
AMTX   Amarillo       144.75  35  PKPdf       PKPbc    21 11 48.0 +0.2
AMTX   Amarillo       144.75  35  P           PKPdf    21 11 48.5 -0.4
               baz=317,SNR=14
AMTX   Amarillo       144.75  35  P           PKPdf    21 11 48.5 -0.4
               baz=317
MSTX   Muleshoe       144.76  37  P           PKPbc    21 11 48.0 +0.2
               baz=314,SNR=17
MSTX   Muleshoe       144.76  37  P           PKPbc    21 11 48.2 +0.4
               baz=314
L59A   Walton         144.77 356  P           PKPab    21 11 46.9 -0.5
               baz=5.4,SNR=22
L59A                              P           PKPab    21 11 46.9 -0.5
               baz=5.4,SNR=22
LPIG   La Paz         144.77  57  PKP         PKPdf    21 11 49.6 +0.5
               comp=Z,24nm,0.3s,baz=345,slow=1.2,SNR=10
BINY   Binghamton     144.81 357              PKPab    21 11 46.9 -0.7
BINY   Binghamton     144.81 357  P           PKPab    21 11 47.3 -0.3
               baz=3.8,SNR=20
BINY   Binghamton     144.81 357  P           PKPab    21 11 47.3 -0.3
               baz=3.8,SNR=20
GO03   Copiap         144.84 192              PKPbc    21 11 48.2  0.0
L56A   Greenwood      144.93 359  P           PKPab    21 11 47.3 -0.7
               baz=1.1,SNR=14
L56A                              P           PKPab    21 11 47.3 -0.7
               baz=1.1,SNR=14
AQDB   Aquidauana     144.94 219              PKPab    21 11 48.0 -0.6
U32A   Winter Ranch,  145.04  30  P           PKPdf    21 11 49.0 -0.2
               baz=322,SNR=8.2
HDIL   Hopedale       145.06  15              PKPbc    21 11 47.6 -0.8
HDIL   Hopedale       145.06  15  P           PKPbc    21 11 48.1 -0.3
               baz=341,SNR=14
HDIL   Hopedale       145.06  15  P           PKPbc    21 11 48.1 -0.3
               baz=341,SNR=14
FSA    Cafayete       145.09 199⇑eP           PKPbc    21 11 38.1  -11
NPNY   Mohonk Preserv 145.13 355  P           PKPbc    21 11 47.9 -0.7
               baz=7.0,SNR=15
P40A   Paris          145.22  19  P           PKPbc    21 11 48.3 -0.7
               baz=336,SNR=54
ALLY   Alegheny Colle 145.37   3              PKPbc    21 11 48.1 -1.3
M50A   Fremont        145.39   6  P           PKPbc    21 11 48.7 -0.8
               baz=352,SNR=8.3
M50A                              P           PKPbc    21 11 48.7 -0.8
               baz=352,SNR=8.3
M52A   Chesterland    145.41   4  P           PKPbc    21 11 49.6 +0.1
               baz=354,SNR=5.5
M52A                              P           PKPbc    21 11 49.6 +0.1
               baz=354,SNR=5.5
KSPA   Keystone Colle 145.44 357  P           PKPbc    21 11 49.4 -0.2
               baz=4.2,SNR=28
BRNY   Black Rk. Fore 145.45 354  P           PKPbc    21 11 49.2 -0.5
               baz=7.3,SNR=8.8
N47A   Urbana         145.53  10  P           PKPdf    21 11 49.4 -0.5
               baz=347,SNR=16
N47A                              P           PKPdf    21 11 49.4 -0.5
               baz=347,SNR=16
M53A   WI Miller and  145.56   3  P           PKPdf    21 11 49.5 -0.5
               baz=356,SNR=7.9
M55A   Ridgway        145.59   1  P           PKPdf    21 11 49.2 -0.8
               baz=359,SNR=18
M55A                              P           PKPdf    21 11 49.2 -0.8
               baz=359,SNR=18
M57A   Sunshine Farm, 145.72 359  P           PKPdf    21 11 50.1 -0.1
               baz=1.9,SNR=55
M57A                              P           PKPdf    21 11 50.1 -0.1
               baz=1.9,SNR=55
SMTB   Santa Maria do 145.72 243  eP          PKPdf    21 11 51.0 -0.1
N49A   Columbus Grove 145.72   8  P           PKPdf    21 11 50.1 -0.1
               baz=350,SNR=15
N49A                              P           PKPdf    21 11 50.1 -0.1
               baz=350,SNR=15
SFIN   Lafayette      145.74  12  P           PKPdf    21 11 50.3  0.0
               baz=344,SNR=20
SFIN   Lafayette      145.74  12  P           PKPdf    21 11 50.4 +0.2
               baz=344,SNR=20
T35B   Sooner Cattle  145.78  27  P           PKPbc    21 11 50.8 -0.1
               baz=326,SNR=22
ODNJ   Ogdensburg     145.84 355              PKPdf    21 11 50.0 -0.4
ODNJ   Ogdensburg     145.84 355  P           PKPdf    21 11 50.0 -0.4
               baz=6.3,SNR=17
PAL    Palisades      145.85 354  P           PKPdf    21 11 50.4  0.0
               baz=7.6,SNR=13
PAL    Palisades      145.85 354  P           PKPbc    21 11 50.8 -0.1
               baz=7.6,SNR=13
P43A   Skaggs, Pawnee 145.86  16  P           PKPdf    21 11 50.5  0.0
               baz=340,SNR=18
N51A   Ashland        145.94   6  P           PKPdf    21 11 50.2 -0.4
               baz=353
N51A                              P           PKPdf    21 11 50.2 -0.4
               baz=353
FOR    Fordham        145.99 354  P           PKPbc    21 11 51.1 -0.3
               baz=7.6,SNR=7.1
N53A   Lisbon         146.18   4  P           PKPdf    21 11 50.9 -0.2
               baz=355,SNR=7.3
N53A                              P           PKPdf    21 11 50.9 -0.2
               baz=355,SNR=7.3
N58A   Sunbury        146.20 358  P           PKPdf    21 11 51.1 +0.1
               baz=2.6,SNR=25
N58A                              P           PKPdf    21 11 51.1 +0.1
               baz=2.6,SNR=25
SLA    San Lorenzo    146.21 201  eP          PKPab    21 11 53.2 -0.2
O48B   Farmland       146.22  10  P           PKPdf    21 11 50.6 -0.5
               baz=348,SNR=18
O48B   Farmland       146.22  10  P           PKPdf    21 11 51.2 +0.1
               baz=348,SNR=18
R40A   Maddies Statio 146.26  20  P           PKPdf    21 11 51.0 -0.2
               baz=334,SNR=56
AC01   Pan de Azucar  146.31 192              PKPdf    21 11 51.5 -0.3
O49A   Covington      146.42   9  P           PKPdf    21 11 50.9 -0.5
               baz=349,SNR=16
O49A                              P           PKPdf    21 11 50.9 -0.5
               baz=349,SNR=16
S39A   Bolivar        146.42  22  P           PKPdf    21 11 51.2 -0.3
               baz=332,SNR=58
SSPA   Standing Stone 146.43 360              PKPdf    21 11 51.3 -0.2
SSPA   Standing Stone 146.43 360  P           PKPdf    21 11 51.1 -0.3
               baz=0.6,SNR=22
SSPA   Standing Stone 146.43 360  P           PKPdf    21 11 51.8 +0.3
               baz=0.6
WMOK   Wichita Mounta 146.43  32              PKPdf    21 11 51.7  0.0
WMOK   Wichita Mounta 146.43  32  PKP2        PKPdf    21 11 51.7  0.0
WMOK   Wichita Mounta 146.43  32  P           PKPdf    21 11 51.2 -0.5
               baz=321,SNR=28
WMOK   Wichita Mounta 146.43  32  P           PKPdf    21 11 51.6 -0.1
               baz=321
P46A   Rosedale       146.45  13  P           PKPdf    21 11 51.2 -0.3
               baz=344,SNR=16
PP1B   Ponte de Pedra 146.49 223  eP          PKPdf    21 11 52.5 +0.3
PANJ   Princeton      146.54 355  P           PKPdf    21 11 51.7  0.0
               baz=6.3,SNR=9.2
ACSO   Alum Creek Sta 146.56   7              PKPdf    21 11 51.5 -0.2
ACSO   Alum Creek Sta 146.56   7  P           PKPdf    21 11 51.6 -0.1
               baz=351,SNR=14
ACSO   Alum Creek Sta 146.56   7  P           PKPdf    21 11 52.3 +0.6
               baz=351,SNR=14
SLM    Saint Louis    146.60  17  P           PKPbc    21 11 52.8 -0.4
               baz=338,SNR=5.3
Q44A   Meyer Farm, Va 146.69  16  P           PKPbc    21 11 52.9 -0.6
               baz=340,SNR=14
O53A   New Philadelph 146.71   4  P           PKPdf    21 11 51.7 -0.3
               baz=355,SNR=20
O52A   Adamsville     146.79   5  P           PKPdf    21 11 52.1  0.0
               baz=353,SNR=12
O52A                              P           PKPdf    21 11 52.1  0.0
               baz=353,SNR=12
TUPA   Temple Univers 146.79 356  P           PKPdf    21 11 52.5 +0.4
               baz=5.5,SNR=15
PAGS   Pennsylvania G 146.81 358  PKPdf       PKPdf    21 11 52.1 +0.1
CCM    Cathedral Cave 146.82  19  PKPdf       PKPdf    21 11 51.9 -0.3
CCM    Cathedral Cave 146.82  19  PKP2        PKPdf    21 11 51.9 -0.3
CCM    Cathedral Cave 146.82  19  P           PKPdf    21 11 51.7 -0.5
               baz=336,SNR=40
CCM    Cathedral Cave 146.82  19  P           PKPdf    21 11 52.1 -0.1
               baz=336
O54A   Avella         146.82   3  P           PKPdf    21 11 51.7 -0.4
               baz=356,SNR=20
O54A                              P           PKPdf    21 11 51.7 -0.4
               baz=356,SNR=20
TUL1   Leonard        146.94  27              PKPdf    21 11 52.3 -0.2
TUL1   Leonard        146.94  27  P           PKPdf    21 11 52.8 +0.4
               baz=327,SNR=10
TUL1   Leonard        146.94  27  P           PKPdf    21 11 53.0 +0.6
               baz=327
P48A   Milroy         146.95  10  P           PKPdf    21 11 52.1 -0.3
               baz=347,SNR=32
P48A                              P           PKPdf    21 11 52.1 -0.3
               baz=347,SNR=32
P49A   Miami Univ. Ec 147.00   9  P           PKPdf    21 11 53.3 +0.9
               baz=348,SNR=5.7
P49A   Miami Univ. Ec 147.00   9  P           PKPbc    21 11 53.9 -0.5
               baz=348,SNR=5.7
GO02   Mina Guanaco   147.03 194  PKPdf       PKPdf    21 11 53.3  0.0
OLIL   Olney          147.08  14  P           PKPdf    21 11 52.7 +0.1
               baz=342,SNR=24
FVM    French Village 147.14  18  P           PKPdf    21 11 52.5 -0.3
               baz=337,SNR=20
GEDE   Greenville     147.18 356  P           PKPdf    21 11 52.3 -0.4
               baz=4.7,SNR=12
TX31   Lajitas Ar. Si 147.23  44  P           PKPdf    21 11 53.8 +0.5
               baz=308
TX32   Lajitas Array  147.23  44              PKPdf    21 11 53.4 +0.2
TXAR   Lajitas Array  147.23  44  PKP         PKPdf    21 11 53.0 -0.3
               comp=Z,28nm,0.8s,baz=260,slow=0.6,SNR=92
TXAR                              PKPbc       PKPab    21 11 56.6 -0.6
               comp=Z,28nm,0.8s,baz=234,slow=1.9,SNR=123
TXAR   Lajitas Array  147.23  44  PKPdf       PKPdf    21 11 53.2 -0.1
P52A   Corning        147.24   6  P           PKPdf    21 11 52.2 -0.6
               baz=353,SNR=18
P51A   Williamsport   147.29   7  P           PKPdf    21 11 53.3 +0.4
               baz=351,SNR=18
P51A                              P           PKPdf    21 11 53.3 +0.4
               baz=351,SNR=18
SNDB   Serra Nova Dou 147.34 235  eP          PKPdf    21 11 53.5 -0.1
MCWV   Mont Chateau   147.37   2  P           PKPdf    21 11 54.1 +1.0
               baz=357,SNR=12
MCWV   Mont Chateau   147.37   2  P           PKPbc    21 11 55.4 -0.1
               baz=357,SNR=12
P53A   Whipple        147.45   5  P           PKPdf    21 11 52.9 -0.3
               baz=354,SNR=19
P53A                              P           PKPdf    21 11 52.9 -0.3
               baz=354,SNR=19
ABTX   Abilene, Hawle 147.55  35  PKPdf       PKPdf    21 11 53.7 +0.1
ABTX   Abilene, Hawle 147.55  35  P           PKPdf    21 11 54.0 +0.4
               baz=318,SNR=56
ABTX   Abilene, Hawle 147.55  35  P           PKPdf    21 11 54.1 +0.4
               baz=318,SNR=56
HJA    Humahuaca      147.56 202  eP          PKPab    21 11 58.5 -0.4
P57A   Homestead Farm 147.58 360  P           PKPdf    21 11 53.4  0.0
               baz=0.4,SNR=16
P57A                              P           PKPdf    21 11 53.4  0.0
               baz=0.4,SNR=16
Q51A   Peebles        147.70   8  P           PKPdf    21 11 53.3 -0.3
               baz=350,SNR=22
Q51A                              P           PKPdf    21 11 53.3 -0.3
               baz=350,SNR=22
S44A   Carbondale     147.75  17  P           PKPdf    21 11 53.5 -0.2
               baz=339,SNR=21
U40A   Yellville      147.77  23  P           PKPdf    21 11 53.2 -0.7
               baz=332,SNR=72
U40A                              P           PKPdf    21 11 53.2 -0.7
               baz=332,SNR=72
U40A   Yellville      147.77  23  P           PKPdf    21 11 53.4 -0.4
               baz=332,SNR=72
Q52A   Bidwell        147.89   6  P           PKPdf    21 11 53.9 -0.1
               baz=352,SNR=21
Q52A                              P           PKPdf    21 11 53.9 -0.1
               baz=352,SNR=21
Q54A   Coxs Mills     147.99   4  P           PKPdf    21 11 53.8 -0.3
               baz=355,SNR=10
Q54A                              P           PKPdf    21 11 53.8 -0.3
               baz=355,SNR=10
R49A   Shelbyville    148.13  10  P           PKPdf    21 11 53.9 -0.5
               baz=347,SNR=16
R49A                              P           PKPdf    21 11 53.9 -0.5
               baz=347,SNR=16
SALV   Santo Antonio  148.22 224  eP          PKPdf    21 11 55.0 -0.1
X37A   Clayton        148.22  28  P           PKPdf    21 11 54.2 -0.4
               baz=326,SNR=10
PBMO   Poplar Bluff   148.25  19  P           PKPdf    21 11 53.9 -0.7
               baz=337,SNR=14
R50A   Paris          148.29   9  P           PKPdf    21 11 54.6 -0.1
               baz=348,SNR=11
R50A                              P           PKPdf    21 11 54.6 -0.1
               baz=348,SNR=11
W39A   Magazine       148.41  25  P           PKPbc    21 11 57.5 -0.8
               baz=330
FCAR   Ozark Folk Cen 148.46  22              PKPdf    21 11 54.3 -0.6
FCAR                              PKPbc       PKPbc    21 11 58.1 -0.4
R53A   Hurricane      148.55   6  P           PKPdf    21 11 54.8 -0.3
               baz=353,SNR=19
R53A                              P           PKPdf    21 11 54.8 -0.3
               baz=353,SNR=19
PARMO  Parma          148.56  18              PKPbc    21 11 58.6 -0.1
TMAB   Tom-Au,PA,Br   148.59 254  eP          PKPdf    21 11 56.3 +0.5
LCAR   Lake Charles   148.65  20  PKPdf       PKPdf    21 11 54.4 -0.8
LCAR   Lake Charles   148.65  20  P           PKPdf    21 11 55.0 -0.3
               baz=335,SNR=38
R55A   Marlinton      148.73   3  P           PKPdf    21 11 54.7 -0.7
               baz=356,SNR=6.1
R55A                              P           PKPdf    21 11 54.7 -0.7
               baz=356,SNR=6.1
AF01   San Pedro de A 148.74 198              PKPdf    21 11 58.0 +1.8
PRPB   Parauapebas    148.86 246  eP          PKPdf    21 11 55.7 -0.5
PB15   IPOC Station P 148.87 196              PKPdf    21 11 57.5 +1.2
PB15   IPOC Station P 148.87 196  eP          PKiKP    21 12 01.1 -0.5
T47A   Sharon Grove   148.98  14  P           PKPdf    21 11 55.3 -0.5
               baz=343,SNR=8.5
JCT    Junction City  149.00  38  P           PKPdf    21 11 56.4 +0.3
               baz=315,SNR=53
JCT    Junction City  149.00  38  P           PKPdf    21 11 56.5 +0.5
               baz=315
S51A   Beattyville    149.03   8              PKPdf    21 11 54.9 -1.0
S51A   Beattyville    149.03   8  P           PKPdf    21 11 54.8 -1.0
               baz=350,SNR=18
S51A                              P           PKPdf    21 11 54.8 -1.0
               baz=350,SNR=18
W41B   Gary Mavity, V 149.04  23  P           PKPbc    21 11 59.5 -0.5
               baz=332,SNR=9.7
W41B   Gary Mavity, V 149.04  23  P           PKPdf    21 11 55.4 -0.6
               baz=332,SNR=9.7
MIAR   Mount Ida      149.05  25  P           PKPdf    21 11 56.2 +0.3
               baz=329,SNR=51
MIAR   Mount Ida      149.05  25  P           PKPdf    21 11 56.2 +0.3
               baz=329,SNR=51
R58B   Mineral        149.10 360  P           PKPdf    21 11 56.1 +0.2
               baz=0.6,SNR=8.1
R58B                              P           PKPdf    21 11 56.1 +0.2
               baz=0.6,SNR=8.1
S54A   Dingess, Beckl 149.13   5  P           PKPdf    21 11 54.8 -1.2
               baz=354,SNR=5.6
S54A                              P           PKPdf    21 11 54.8 -1.2
               baz=354,SNR=5.6
WHTX   Lake Whitney,  149.25  33              PKPdf    21 11 56.5 +0.2
WHTX   Lake Whitney,  149.25  33  P           PKPdf    21 11 57.1 +0.7
               baz=320,SNR=7.1
WHTX   Lake Whitney,  149.25  33  P           PKiKP    21 12 01.4 -0.5
               baz=320,SNR=7.1
LVC    Limon Verde    149.28 197  PKP         PKPdf    21 11 57.1  0.0
               comp=Z,1.0nm,0.6s,baz=199,slow=7.6,SNR=1.7
LVC                               PKPbc       PKiKP    21 12 02.1 -0.5
               comp=Z,95nm,0.9s,baz=192,slow=1.3,SNR=7.8
LVC                               PP          PP       21 15 31.8 +0.3
               comp=Z,5.6nm,1.1s,baz=131,slow=8.5,SNR=2.8
LVC    Limon Verde    149.28 197              PKPdf    21 11 58.7 +1.5
S57A   Dark Hollow, R 149.29   1  P           PKPdf    21 11 56.1 -0.2
               baz=359,SNR=9.8
S57A                              P           PKPdf    21 11 56.1 -0.2
               baz=359,SNR=9.8
PB06   IPOC Station P 149.37 196  eP          PKiKP    21 12 02.3 -0.3
X40A   Basin Creek Fa 149.41  24  P           PKPbc    21 11 59.3 -1.6
               baz=331,SNR=16
X40A                              P           PKPbc    21 11 59.3 -1.6
               baz=331,SNR=16
X40A   Basin Creek Fa 149.41  24  P           PKPbc    21 12 00.3 -0.6
               baz=331,SNR=16
T50A   Nancy          149.43  11              PKPdf    21 11 55.3 -1.2
T50A   Nancy          149.43  11  P           PKPdf    21 11 55.8 -0.7
               baz=347
T50A                              P           PKPdf    21 11 55.8 -0.7
               baz=347
Z38A   Mt. Pleasant   149.50  29  P           PKPbc    21 12 01.6 +0.4
               baz=326,SNR=6.8
WVT    Waverly        149.61  16  PKPdf       PKPdf    21 11 55.8 -1.0
WVT    Waverly        149.61  16  PKHKP       PKPpre   21 11 55.8
WVT    Waverly        149.61  16  P           PKPbc    21 12 01.2 -0.2
               baz=341,SNR=105
WVT    Waverly        149.61  16  P           PKPdf    21 11 56.5 -0.3
               baz=341
U49A   Red Boiling Sp 149.74  12  P           PKPdf    21 11 56.3 -0.7
               baz=345,SNR=40
BLA    Blacksburg     149.78   4  P           PKPdf    21 11 56.9 -0.2
               baz=356,SNR=6.7
BLA    Blacksburg     149.78   4  P           PKPbc    21 12 00.8 -1.0
               baz=356
PB04   IPOC Station P 149.88 195              PKPdf    21 11 56.8 -1.0
PB04   IPOC Station P 149.88 195⇓eP           PKiKP    21 12 03.7 +0.1
WLAR   White Oak Lake 149.99  25  PKPdf       PKPdf    21 11 57.1 -0.4
T57A   Hurt           150.05   2  P           PKPbc    21 12 01.9 -0.5
               baz=358,SNR=16
T57A                              P           PKPbc    21 12 01.9 -0.5
               baz=358,SNR=16
T59A   Double "B" Far 150.08 359  P           PKPbc    21 12 02.5  0.0
               baz=1.3,SNR=23
T59A                              P           PKPbc    21 12 02.5  0.0
               baz=1.3,SNR=23
435B   Jarrell        150.09  35  P           PKPbc    21 12 02.3 -0.5
               baz=319,SNR=7.9
435B   Jarrell        150.09  35  P           PKPdf    21 11 58.6 +0.9
               baz=319
TZTN   Tazewell       150.11   9  P           PKPbc    21 12 02.1 -0.5
               baz=349,SNR=26
TZTN   Tazewell       150.11   9  P           PKPdf    21 11 57.4 -0.2
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	baz=349						
237A	Washetta, Mont	150.11	31	P	PKiKP	21 12 03.5	-0.1
	baz=323,SNR=5.7						
PB09	IPOC Station P	150.15	197		PKPdf	21 12 00.3	+2.0
PB09	IPOC Station P	150.15	197	⇓eP	PKiKP	21 12 05.3	+1.1
V48A	Smith Brothers	150.24	14	P	PKPdf	21 11 57.1	-0.7
	baz=343,SNR=36						
U54A	Nelsons Funny	150.35	6		PKPdf	21 11 57.2	-0.9
U54A	Nelsons Funny	150.35	6	P	PKPbc	21 12 02.6	-0.7
	baz=353,SNR=7.9						
U54A				P	PKPbc	21 12 02.6	-0.7
	baz=353,SNR=7.9						
PB07	IPOC Station P	150.39	196	⇓eP	PKiKP	21 12 04.7	0.0
Z41A	Richland Creek	150.49	25	P	PKiKP	21 12 04.2	-0.1
	baz=330,SNR=5.3						
Z41A				P	PKiKP	21 12 04.2	-0.1
	baz=330,SNR=5.3						
Z41A	Richland Creek	150.49	25	P	PKiKP	21 12 04.1	-0.1
	baz=330						
U56A	King	150.64	4	P	PKPbc	21 12 03.5	-0.3
	baz=356,SNR=6.9						
U56A				P	PKPbc	21 12 03.5	-0.3
	baz=356,SNR=6.9						
OXF	Oxford	150.65	19	P	PKPbc	21 12 03.9	0.0
	baz=337,SNR=20						
OXF	Oxford	150.65	19	P	PKPbc	21 12 03.5	-0.5
	baz=337						
V51A	Loudon	150.70	10	P	PKPbc	21 12 03.7	-0.3
	baz=348,SNR=25						
U59A	Littleton	150.71	359	P	PKPbc	21 12 03.9	-0.1
	baz=0.8,SNR=7.2						
U59A				P	PKPbc	21 12 03.9	-0.1
	baz=0.8,SNR=7.2						
833A	Chaparral WMA,	150.74	41	P	PKiKP	21 12 05.1	+0.1
	baz=313						
833A	Chaparral WMA,	150.74	41	P	PKPdf	21 12 00.1	+1.3
	baz=313						
PB02	IPOC Station P	150.78	196	⇓eP	PKPbc	21 12 03.6	-1.2
V52A	Sevierville	150.79	9	P	PKPbc	21 12 03.8	-0.5
	baz=349,SNR=59						
NATX	Nacogdoches	150.88	30	P	PKiKP	21 12 05.3	+0.1
	baz=325,SNR=5.1						
NATX	Nacogdoches	150.88	30	P	PKiKP	21 12 05.3	+0.1
	baz=325						
PB01	IPOC Station P	150.93	197	⇓eP	PKPbc	21 12 03.4	-1.7
TKL	Tuckaleechee C	150.94	9	PKP	PKPdf	21 11 58.4	-0.5
	comp=Z,6.7nm,1.1s,baz=206,slow=3.9,SNR=4.2						
TKL				PKPbc	PKPbc	21 12 04.3	-0.3
	comp=Z,63nm,0.9s,baz=127,slow=2.0,SNR=62						
TKL	Tuckaleechee C	150.94	9	P	PKPbc	21 12 04.4	-0.3
	baz=349,SNR=29						
SWET	Sewanee	150.95	13	PKPdf	PKPdf	21 11 57.9	-1.1
V55A	Taylorsville	151.07	5	P	PKPbc	21 12 04.5	-0.4
	baz=354,SNR=20						
V55A				P	PKPbc	21 12 04.5	-0.4
	baz=354,SNR=20						
V53A	Saluda	151.07	8	P	PKPbc	21 12 04.5	-0.4
	baz=351,SNR=52						
V53A				P	PKPbc	21 12 04.5	-0.4
	baz=351,SNR=52						
W50A	Signal Mountai	151.10	12	P	PKPbc	21 12 04.3	-0.7
	baz=345,SNR=12						
Y45A	Yeager Farm, C	151.20	20	P	PKPbc	21 12 04.7	-0.6
	baz=336,SNR=5.3						
V61A	Roper	151.23	357	P	PKiKP	21 12 05.6	-0.1
	baz=3.3,SNR=5.3						
V61A				P	PKiKP	21 12 05.6	-0.1
	baz=3.3,SNR=5.3						
V58A	Windy Hill, Pi	151.25	2	P	PKPbc	21 12 05.1	-0.2
	baz=358,SNR=9.9						
V58A				P	PKPbc	21 12 05.1	-0.2
	baz=358,SNR=9.9						
X48A	Hartselle	151.41	15	P	PKPbc	21 12 04.8	-0.9
	baz=342,SNR=22						
W52A	Murphy	151.47	10	P	PKPbc	21 12 05.6	-0.3
	baz=348,SNR=11						
CLDB	Colider	151.56	232	eP	PKPdf	21 12 00.3	-0.2
HKT	Hockley	151.71	34	P	PKiKP	21 12 07.5	+0.6
	baz=321						
CASEE	Lake Jocassee	151.72	8	P	PKPbc	21 12 06.2	-0.2
	baz=350,SNR=15						
BBSR	BB Station	151.74	335	P	PKPbc	21 12 06.0	-0.5
	baz=29						
KMSC	Kings Mountain	151.76	5	P	PKPbc	21 12 06.1	-0.4
	baz=354,SNR=16						
KMSC	Kings Mountain	151.76	5	P	PKPdf	21 12 00.3	+0.1
	baz=354						
X51A	Calhoun	151.81	12	P	PKPbc	21 12 06.2	-0.5
	baz=346						
X51A				P	PKPbc	21 12 06.2	-0.5
	baz=346						
CNNC	Cliffs of the	151.82	360	P	PKiKP	21 12 06.9	-0.1
	baz=0.7						
PDRB	Porto dos Gac	151.82	229	eP	PKPdf	21 12 00.5	-0.4
W57A	Gilead	151.85	3	P	PKPbc	21 12 06.1	-0.6
	baz=356,SNR=12						
W57A				P	PKPbc	21 12 06.1	-0.6
	baz=356,SNR=12						
Y49A	Blount Mountai	152.13	15	P	PKPdf	21 12 00.2	-0.6
	baz=342,SNR=15						
PB11	IPOC Station P	152.19	197	⇓eP	PKPdf	21 12 01.5	0.0
Z47A	Carrollton	152.29	18	P	PKPbc	21 12 07.4	-0.3
	baz=339,SNR=6.3						
VBMS	Vicksburg	152.33	23	P	PKiKP	21 12 08.3	+0.2
	baz=333						
BIRD	Birdtown, Kers	152.33	4	PKPdf	PKPdf	21 12 00.5	-0.6
BIRD					pPKPdf	21 12 06.5	-0.5
BIRD	Birdtown, Kers	152.33	4	P	PKPbc	21 12 07.5	-0.3
	baz=355,SNR=9.0						
X58A	Rowland	152.48	2	P	PKPbc	21 12 08.0	-0.1
	baz=358						
X58A				P	PKPbc	21 12 08.0	-0.1
	baz=358						
146A	Union	152.48	20	P	PKiKP	21 12 08.6	+0.2
	baz=336,SNR=5.4						
Y52A	Lilburn	152.64	11	P	PKiKP	21 12 08.7	-0.1
	baz=347,SNR=8.1						
Y52A				P	PKiKP	21 12 08.7	-0.1
	baz=347,SNR=8.1						
LRAL	Lakeview Retre	152.75	16	P	PKPdf	21 12 01.2	-0.5
	baz=341,SNR=6.4						
LRAL	Lakeview Retre	152.75	16	P	PKPdf	21 12 01.7	0.0
	baz=341						
Z51A	Franklin	152.94	13	P	PKPdf	21 12 02.1	+0.1
	baz=345,SNR=5.6						
MCPB	Macapa, AP	152.96	256	eP	PKPdf	21 12 03.0	+0.5
GOGA	Godfrey	153.19	10	PKPdf	PKPdf	21 12 01.8	-0.5
GOGA				PKPbc	PKPbc	21 12 09.8	0.0
GOGA	Godfrey	153.19	10	PKIKP	PKPdf	21 12 01.8	-0.5
GOGA	Godfrey	153.19	10	P	PKiKP	21 12 10.0	+0.1
	baz=348,SNR=5.2						
GOGA	Godfrey	153.19	10	P	PKPdf	21 12 02.3	0.0
	baz=348						
VILB	Vilhena	153.38	222	eP	PKPdf	21 12 03.5	+0.3
PB12	IPOC Station P	153.47	197	eP	PKPdf	21 12 03.2	-0.1
PB16	IPOC Station P	153.49	199	PKPdf	PKPdf	21 12 03.3	-0.6
HAW	Hawthorne Fire	153.50	6	P	PKPbc	21 12 10.2	-0.3
	baz=352,SNR=6.0						
152A	Waverly Hall	153.67	13	P	PKPdf	21 12 03.0	-0.1
	baz=345,SNR=7.2						
250A	Grady	153.95	16	PKPdf	PKPdf	21 12 03.3	-0.1
250A					PKPbc	21 12 11.2	-0.3
LPAZ	La Paz	154.89	203	PKP	PKPdf	21 12 06.3	+0.3
	comp=Z,16nm,1.1s,baz=59,slow=1.9,SNR=24						
LPAZ				PKPbc	PKiKP	21 12 15.1	+0.5
	comp=Z,15nm,1.1s,baz=113,slow=7.5,SNR=9.6						
LPAZ				PKPab	PKPab	21 12 30.7	+1.1
	comp=Z,14nm,1.1s,baz=148,slow=5.6,SNR=6.3						
LPAZ				PP	PP	21 16 05.8	+1.8
	comp=Z,1.8nm,1.0s,baz=116,slow=6.4,SNR=4.1						
LPAZ	La Paz	154.89	203	PKPdf	PKPdf	21 12 05.3	-0.7
LPAZ	La Paz	154.89	203	eP	PKPdf	21 12 05.1	-0.8
ITTB	Itaituba	154.95	244	eP	PKPdf	21 12 05.0	-0.3
ETMB	Extrema	159.54	216	eP	PKPdf	21 12 10.5	-0.6
CMIG	Matias Romero	160.80	57	PKP	PKPdf	21 12 12.2	-0.2
	comp=Z,6.3nm,1.0s,baz=116,slow=7.9,SNR=4.4						
NNA	Nana	161.17	184	PKP	PKPdf	21 12 12.8	-0.2
	comp=Z,3.4nm,0.3s,baz=214,slow=4.0,SNR=2.0						
NNA				PKPab	PKPab	21 12 57.4	+1.4
	comp=Z,2.4nm,0.3s,baz=151,slow=5.4,SNR=3.7						
BOAV	Boa Vista	161.85	256	eP	PKPdf	21 12 13.1	-0.6
SJG	San Juan	163.84	315	eP	PKPdf	21 12 13.8	-1.6
ATAH	Atahualpa	166.03	179	PKP	PKPdf	21 12 18.9	+0.9
	comp=Z,9.5nm,1.1s,baz=161,slow=10,SNR=8.6						
ATAH				PP	PP	21 17 03.9	+0.5
	comp=Z,4.2nm,0.8s,baz=191,slow=5.3,SNR=2.1						
BAUV	El Baul	169.77	282		PKPdf	21 12 18.4	-1.7
SDV	Santo Domingo	172.28	285	PKP	PKPdf	21 12 19.7	-1.9
	comp=Z,4.1nm,0.3s,baz=164,slow=6.1,SNR=4.2						
OTAV	Otavalo	173.35	178	eP	PKPdf	21 12 20.5	-1.9
CRJC	Cerrejon, Guaj	173.38	308	eP	PKPdf	21 12 19.9	-2.0
MACC	Macarena, Meta	173.59	222	eP	PKPdf	21 12 19.3	-2.6
TAMC	Tame, Arauca	173.64	266	eP	PKPdf	21 12 22.0	0.0
SMRC	Santa Marta, M	174.26	318	eP	PKPdf	21 12 37.8	+16
GCUF	Volcan Galeras	174.28	188	eP	PKPdf	21 12 35.5	+13
SRBA	San Rafael, Bu	174.37	66		PKPdf	21 12 20.2	-2.1
SRBA				PKPab	PKPab	21 13 55.9	+1.1
LL6C	La Loma 6 Bece	174.40	300	eP	PKPdf	21 12 21.0	-1.2
RUSC	La Rusia	174.84	259	eP	PKPdf	21 12 20.9	-2.1
SOTA	Rioblanco	175.00	198	eP	PKPdf	21 12 19.3	-3.7
OCAC	Ocana	175.01	286	eP	PKPdf	21 12 20.6	-1.9
MARP	Paez Belalcaza	175.38	209	eP	PKPdf	21 12 20.8	-2.0
PRAC	Prado	175.43	226	eP	PKPdf	21 12 20.8	-1.8
BRRC	Barranca, Sant	175.57	273	eP	PKPdf	21 12 20.0	-2.5
ROSC	El Rosal	175.65	242	PKP	PKPdf	21 12 21.6	-1.5
	comp=Z,6.5nm,0.4s,baz=109,slow=14,SNR=5.6						
SPBC	San Pablo de B	175.73	253	eP	PKPdf	21 12 20.3	-2.4
SJCC	San Jacinto, C	175.82	315	eP	PKPdf	21 12 21.3	-1.4
ORTC	Ortega, Tolima	175.82	224	eP	PKPdf	21 12 18.0	-4.7
PTBC	PUERTO BERRIO,	176.29	264	eP	PKPdf	21 12 21.0	-1.7
ANIL	Santa Ana	176.34	229	eP	PKPdf	21 12 20.9	-2.2
NORC	Norcasia	176.45	248	eP	PKPdf	21 12 19.3	-3.5
YOTC	Yotoco, Valle	176.56	212	eP	PKPdf	21 12 20.7	-2.2
ZARC	Zaragoza, Cauc	176.66	280		PKPdf	21 12 21.2	-1.6
ZARC				PKPab	PKPab	21 14 04.5	-0.5
ZARC	Zaragoza, Cauc	176.66	280	eP	PKPdf	21 12 21.5	-1.3
PLMC	San Jos del P	177.25	223	eP	PKPdf	21 12 19.9	-3.0
CBOC	Ciudad Bolivar	177.61	244	eP	PKPdf	21 12 20.9	-2.3

NEIC 14 21:10:22.1±0.6, 35°.79N±0°.02×97°.03W±0°.02, h7^{km}±4^{km}, mb_Lg2.5/9, Error ellipse: s-maj=3.2km s-min=0.7km az=137.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.31	244	Pg	Pg	21 10 27.9	-0.3
ADOK				Sg	Sg	21 10 32.9	+0.6
OKCSW	OKLAHOMA CITY	0.51	221	Pg	Pg	21 10 31.5	-0.4
OKCFA	Oklahoma City	0.51	223	Pg	Pg	21 10 31.4	-0.5
FNO	Franklin	0.61	210	Pg	Pg	21 10 33.2	-0.7
TUL1	Leonard	1.01	83	Pg	Pg	21 10 40.4	-1.2
T35A	Sooner Cattle	1.20	20	Pg	Pg	21 10 43.8	-1.3
X34A	Smith Ranch, M	1.35	209		Pn	21 10 46.7	-0.8
U32A	Winter Ranch,	1.71	291	Pn	Pn	21 10 52.3	-0.1
WMOK	Wichita Mounta	1.78	234	Pn	Pn	21 10 53.1	-0.2
X37A	Clayton	1.81	131	Pn	Pn	21 10 53.3	-0.4
R32A	Long Quarter,	2.95	333	IAmb_Lg		21 12 00.4	
	comp=Z,9.1nm,0.7s						
Z38A	Mt. Pleasant	3.03	146	IAmb_Lg		21 12 00.6	
	comp=Z,13nm,1.1s						
MIAR	Mount Ida	3.09	113	Pn	Pn	21 11 12.2	+0.8
KSU1	Kansas State U	3.32	6	IAmb_Lg		21 12 13.4	
	comp=Z,19nm,1.0s						
S39A	Bolivar	3.53	56	Pn	Pn	21 11 17.3	-0.2
S39A				IAmb_Lg		21 12 13.7	
	comp=Z,14nm,1.1s						
ABTX	Abilene, Hawle	3.83	215	IAmb_Lg		21 12 20.8	
	comp=Z,12nm,0.8s						
W41B	Gary Mavity, V	3.95	98	Pn	Pn	21 11 23.0	-0.2

IDC 14 21:20:48.4±3.2, 8°.09N×103°.60W, h0^{km}, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=136.8km s-min=28.1km az=59.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TXAR	Lajitas Array	21.14	360	P	P	21 25 35.9	+0.7
	0.3nm,0.8s,baz=188,slow=12,SNR=2.8						
	0.3nm,0.8s						
PDAR	Pinedale Array	34.94	352	P	P	21 27 43.1	+0.8
	0.1nm,0.4s,baz=126,slow=9.1,SNR=2.5						
	0.1nm,0.4s						
LPAZ	La Paz	42.65	125	P	P	21 28 47.8	0.0
	0.7nm,0.5s,baz=298,slow=5.9,SNR=4.8						
	0.7nm,0.5s						
H03N2	Juan Fernandez	47.49	152	T	T	22 20 33.6	
	baz=322						
H03N1	Juan Fernandez	47.50	152	T	T	22 20 31.0	
	baz=322						
H03N3	Juan Fernandez	47.50	152	T	T	22 20 25.5	
	baz=322						
YKA	Yellowknife Ar	54.90	354	P	P	21 30 18.6	-1.9
	0.2nm,0.6s,baz=161,slow=7.9,SNR=2.7						
	0.2nm,0.6s						
ILAR	Eielson Array	64.20	341	P	P	21 31 25.2	+0.3
	0.7nm,0.9s,baz=157,slow=4.2,SNR=5.1						
	0.7nm,0.9s						

OTT 14 21:29:55.3±0.1, 45°.95N×77°.36W, h18^{km}, MN3.5/19

OTT 6km northeast from Petawawa, Ontario Felt Western Quebec Seismic Zone. Felt at Petawawa, Pembroke, Ontario.

NEIC 14 21:29:56.3±1.0, 45°.93N±0°.02×77°.35W±0°.03, h15^{km}±6^{km}, Error ellipse: s-maj=3.5km s-min=2.4km az=134.0

ISC 14 21:29:55.5±1.0, 45°.95N±0°.02×77°.36W±0°.02, h18^{km}±3^{km}, n112, σ0^{s}.77/132, 1C, Southern Ontario

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CRLO	Chalk River	0.09	350		Pg	21 30 00.7	+1.6
CRLO	Chalk River	0.09	350	⇑PG	Pg	21 29 58.9	-0.3
CRLO				SG	Pg	21 30 00.7	+1.6
CRLO				Trac		21 30 00.8	
	comp=Z,3μm,0.1s						
PEMO	Pembroke	0.28	164	Pg	Pg	21 30 01.3	-0.4
PEMO				Sg	Sg	21 30 04.8	-1.1
PEMO	Pembroke	0.28	164	PG	Pg	21 30 01.3	-0.4
PEMO				SG	Sg	21 30 04.8	-1.1
PEMO				Trac		21 30 05.2	
	comp=Z,2μm,0.0s						
ALGO	Algonquin Park	0.48	271	Pg	Pg	21 30 05.2	0.0
ALGO				Sg	Sg	21 30 11.7	-0.2
ALGO	Algonquin Park	0.48	271	PG	Pg	21 30 05.2	0.0
ALGO				SG	Sg	21 30 11.7	-0.2
ALGO				Trac		21 30 12.3	
	comp=Z,837nm,0.1s						
PLVO	Plevna	0.93	168	Pg	Pb	21 30 12.3	-0.7
PLVO				Sg	Sb	21 30 24.5	-0.4
PLVO	Plevna	0.93	168	PG	Pb	21 30 12.3	-0.7
PLVO				SG	Sb	21 30 24.5	-0.4
PLVO				Trac		21 30 24.7	
	comp=Z,522nm,0.2s						
KB1O	Rock site, Kin	0.99	123	Pg	Pb	21 30 13.5	-0.6
KB1O	Rock site, Kin	0.99	123	PG	Pb	21 30 13.5	-0.6
KB1O				Trac		21 30 27.1	
	comp=Z,177nm,0.1s						
BANO	Bancroft	1.01	204	Pg	Pb	21 30 13.8	-0.6
BANO				Sg	Sb	21 30 27.1	-0.2
BANO	Bancroft	1.01	204	PG	Pb	21 30 13.8	-0.6
BANO				SG	Sb	21 30 27.1	-0.2
BANO				Trac		21 30 27.9	
	comp=Z,337nm,0.0s						
VABQ	Val Des Bois	1.22	91	Pg	Pn	21 30 17.5	-0.1
VABQ				Sg	Sn	21 30 33.7	+0.1
VABQ	Val Des Bois	1.22	91	PG	Pn	21 30 17.5	-0.1
VABQ				SG	Sn	21 30 33.7	+0.1
VABQ				Trac		21 30 37.9	
	comp=Z,48nm,0.1s						
GRQ	Grand Remous	1.23	57	Pg	Pn	21 30 17.8	+0.1
GRQ				Sg	Sb	21 30 33.8	+0.2
GRQ	Grand Remous	1.23	57	PG	Pn	21 30 17.8	+0.1
GRQ				SG	Sb	21 30 33.8	+0.2
GRQ				Trac		21 30 37.6	
	comp=Z,126nm,0.1s						
OTT	Ottawa	1.28	115	Pg	Pn	21 30 18.4	+0.1
OTT				Sg	Sn	21 30 35.6	+0.7
OTT	Ottawa	1.28	115	PG	Pn	21 30 18.4	+0.1
OTT				SG	Sn	21 30 35.6	+0.7
OTT				Trac		21 30 36.6	
	comp=Z,98nm,0.1s						
GAC	Glen Almond	1.34	100	Pg	Pn	21 30 19.4	+0.3
GAC				Sg	Sb	21 30 36.8	+0.1
GAC	Glen Almond	1.34	100	PG	Pn	21 30 19.4	+0.3
GAC				PG	Pn	21 30 19.4	+0.3
GAC				SG	Sb	21 30 36.8	+0.1
GAC				SG	Sn	21 30 36.9	+0.5
GAC				Trac		21 30 39.5	
	comp=Z,61nm,0.1s						
GAC				Trac		21 30 39.6	
	comp=Z,218nm,0.2s						
ORIO	Orleans, Innes	1.39	110		Pn	21 30 20.3	+0.5
ORIO				Sg	Sb	21 30 38.8	+0.7
ORIO	Orleans, Innes	1.39	110	PG	Pn	21 30 20.3	+0.5
ORIO				SG	Sb	21 30 38.8	+0.7
ORIO				Trac		21 30 40.0	
	comp=Z,99nm,0.1s						
DELO	Deloro Mine	1.44	187	Pn	Pn	21 30 21.0	+0.4
DELO					Sb	21 30 39.8	+0.2
DELO	Deloro Mine	1.44	187	PG	Pn	21 30 21.0	+0.4
DELO				SG	Sb	21 30 39.9	+0.2
DELO				Trac		21 30 43.1	
	comp=Z,124nm,0.1s						
BUKO	Buck Lake	1.52	251		Pb	21 30 22.5	-0.5
BUKO				Sg	Sb	21 30 42.6	+0.7
BUKO	Buck Lake	1.52	251	PG	Pb	21 30 22.5	-0.5
BUKO				SG	Sb	21 30 42.6	+0.7
BUKO				Trac		21 30 48.2	
	comp=Z,58nm,0.1s						
SADO	Sadowa	1.72	228	Pn	Pn	21 30 25.4	+0.9
SADO					Sb	21 30 47.3	-0.5
SADO	Sadowa	1.72	228	PN	Pn	21 30 24.6	+0.1
SADO				SN	Sn	21 30 45.8	-0.2
SADO				Trac		21 30 50.4	
	comp=Z,119nm,0.2s						
WBO	Williamsburg	1.74	122	Pn	Pn	21 30 25.5	+0.8
WBO					Sn	21 30 46.9	+0.4
WBO	Williamsburg	1.74	122	PN	Pn	21 30 25.5	+0.8
WBO				SN	Sn	21 30 46.9	+0.4
WBO				Trac		21 30 50.9	
	comp=Z,64nm,0.1s						
ALFO	Alfred	1.76	100	PN	Pn	21 30 25.7	+0.7
ALFO				SN	Sn	21 30 47.2	+0.4
ALFO				Trac		21 30 53.9	
	comp=Z,50nm,0.2s						
KGNO	Kingston	1.82	160	Pn	Pn	21 30 26.1	+0.2
KGNO					Sn	21 30 48.5	0.0
KGNO	Kingston	1.82	160	PN	Pn	21 30 26.1	+0.2
KGNO				SN	Sn	21 30 48.5	0.0
KGNO				Trac		21 30 52.5	
	comp=Z,103nm,0.1s						
KGNO				LG	Lg	21 30 52.7	
TRQ	Mont Tremblant	1.97	81	Pn	Pn	21 30 28.9	+1.0
TRQ					Sb	21 30 54.0	-1.0
TRQ	Mont Tremblant	1.97	81	PN	Pn	21 30 28.2	+0.3
TRQ				SN	Sn	21 30 51.8	-0.4
TRQ				LG	Lg	21 30 57.1	
TRQ				Trac		21 30 59.5	
	comp=Z,30nm,0.1s						
PECO	Prince Edward	2.03	173	Pn	Pn	21 30 29.7	+1.0
PECO					Sb	21 30 57.1	+0.5
PECO	Prince Edward	2.03	173	PN	Pn	21 30 29.4	+0.7
PECO				SN	Sn	21 30 53.1	-0.4
PECO				Trac		21 30 58.4	
	comp=Z,60nm,0.1s						
PECO				LG	Lg	21 30 58.5	
KLBO	Killbear Provi	2.09	255	Pn	Pn	21 30 29.8	+0.3
KLBO					Sn	21 30 54.6	-0.4
KLBO	Killbear Provi	2.09	255	PN	Pn	21 30 29.8	+0.3
KLBO				SN	Sn	21 30 54.6	-0.4
KLBO				LG	Lg	21 31 00.9	
KLBO				Trac		21 31 03.4	
	comp=Z,52nm,0.1s						
WLVO	Wesleyville	2.15	200	Pn	Pn	21 30 31.3	+0.9
WLVO					Sn	21 30 56.6	0.0
WLVO	Wesleyville	2.15	200	PN	Pn	21 30 31.3	+0.9
WLVO				SN	Sn	21 30 56.6	0.0
WLVO				LG	Lg	21 31 02.4	
WLVO				Trac		21 31 02.7	
	comp=Z,64nm,0.1s						
VLDQ	Val d'Or	2.17	358	Pn	Pb	21 30 33.0	-1.0
VLDQ				IAmb_Lg		21 31 08.8	
	comp=Z,62nm,0.7s						
VLDQ	Val d'Or	2.17	358	PN	Pn	21 30 31.6	+1.1
VLDQ				SN	Sb	21 30 59.6	-1.0
VLDQ				LG	Lg	21 31 06.4	
VLDQ				Trac		21 31 08.7	
	comp=Z,40nm,0.1s						
BMNY	Brushton-Moira	2.29	118	P	Pn	21 30 32.4	+0.1
	baz=300,SNR=39						
BMNY				Sb	Sb	21 31 04.5	+0.3
	baz=300						
WCNY	West Carthage	2.31	148	Pb	Pb	21 30 35.5	-0.9
	baz=329						
WCNY				Sb	Sb	21 31 04.8	+0.1
	baz=329						
LONY	Lake Ozonia	2.37	123	Pn	Pn	21 30 32.6	-0.7
LONY	Lake Ozonia	2.37	123	PN	Pn	21 30 33.4	0.0
LONY				SN	Sn	21 31 00.9	-1.0
LONY				Trac		21 31 07.8	
	comp=Z,126nm,0.2s						
LONY				LG	Lg	21 31 09.1	
J56A	Wolcott	2.69	172	Pn	Pn	21 30 39.2	+1.4
J55A	Hilton	2.70	187	Pn	Pn	21 30 39.4	+1.5
J57A	Williamstown	2.72	159		Pn	21 30 39.4	+1.3
J57A				IAmb_Lg		21 31 21.7	
	comp=Z,45nm,0.8s						
J57A	Williamstown	2.72	159	Pb	Pb	21 30 42.4	-1.0
	baz=340,SNR=17						
J57A				Pb	Pb	21 30 42.4	-1.0
	baz=340,SNR=17						
J57A				Sb	Sb	21 31 17.4	+1.0
	baz=340						
J57A				Sb	Sb	21 31 17.4	+1.0
	baz=340						
FRNY	Flat Rock	2.88	111		Pn	21 30 40.9	+0.5
FRNY	Flat Rock	2.88	111	P	Pn	21 30 41.0	+0.7
	baz=294,SNR=31						
FRNY				Sb	Sb	21 31 22.2	+1.2
	baz=294						
MEDO	Medina	2.89	196	Pn	Pn	21 30 40.2	-0.3
NCB	Newcomb	2.98	131		Pn	21 30 42.3	+0.5
NCB				IAmb_Lg		21 31 27.4	
	comp=Z,49nm,0.8s						
NCB	Newcomb	2.98	131	Sb	Sb	21 31 25.9	+2.0
	baz=313						
J58A	Remsen	2.98	150		Pn	21 30 42.4	+0.6
J58A	Remsen	2.98	150	P	Pn	21 30 42.7	+0.9
	baz=331,SNR=20						
J58A				P	Pn	21 30 42.7	+0.9
	baz=331,SNR=20						
J59A	Piesco	3.21	140		Pn	21 30 45.5	+0.6
MMNY	Mt. Morris Dam	3.24	187		Pn	21 30 45.9	+0.6
K57A	Scipio Center	3.27	169	Pn	Pn	21 30 47.2	+1.4
K57A	Scipio Center	3.27	169	P	Pn	21 30 47.2	+1.4
	baz=350,SNR=9.9						
WVNY	West Valley, N	3.65	195	Pn	Pn	21 30 52.8	+1.8
WVNY				IAmb_Lg		21 31 51.4	
	comp=Z,31nm,0.8s						
ACCN	Adirondack Com	3.67	133		Pn	21 30 52.4	+1.1
MCVT	Middlebury Col	3.68	121	P	Pn	21 30 52.8	+1.4
	baz=304,SNR=8.6						
L56A	Greenwood	3.81	182		Pn	21 30 54.5	+1.3
L56A	Greenwood	3.81	182	P	Pn	21 30 54.7	+1.4
	baz=2.1,SNR=14						
L56A				P	Pn	21 30 54.7	+1.4
	baz=2.1,SNR=14						
BINY	Binghamton	3.88	165		Pn	21 30 53.8	-0.3
BINY	Binghamton	3.88	165	P	Pn	21 30 55.0	+1.0
	baz=346,SNR=6.1						
L59A	Walton	4.11	155		Pn	21 30 57.9	+0.6
L59A	Walton	4.11	155	P	Pn	21 30 58.1	+0.8
	baz=337,SNR=11						
L59A				P	Pn	21 30 58.1	+0.8
	baz=337,SNR=11						
TRY	Troy	4.16	139	IAmb_Lg		21 32 08.4	
	comp=Z,33nm,0.8s						
LBNH	Lisbon	4.21	112	Pn	Pn	21 30 59.3	+0.6
LBNH				IAmb_Lg		21 32 07.7	
	comp=Z,27nm,0.9s						
HNH	Hanover	4.25	120	IAmb_Lg		21 32 08.8	
	comp=Z,36nm,0.8s						
J61A	Chester	4.30	125	Pn	Pn	21 31 00.8	+0.8
H62A	Milan	4.59	105	IAmb_Lg		21 32 20.7	
	comp=Z,27nm,0.8s						
M55A	Ridgway	4.59	193	Pn	Pn	21 31 05.5	+1.6
M55A				IAmb_Lg		21 32 17.7	
	comp=Z,25nm,0.8s						
M57A	Sunshine Farm,	4.61	178	Pn	Pn	21 31 04.8	+0.6
M57A				IAmb_Lg		21 32 17.9	
	comp=Z,28nm,0.7s						
ALLY	Alegheny Colle	4.75	206	IAmb_Lg		21 32 30.0	

	comp=Z,30nm,0.8s						
I62A	Tamworth	4.75	114	IAmb_Lg		21 32 25.1	
	comp=Z,29nm,1.0s						
G62A	West of Eustis	4.85	96	Pn	Pn	21 31 08.4	+1.0
L61B	Northampton	4.85	134	Pn	Pn	21 31 08.1	+0.7
K62A	Royalston	4.93	130	IAmb_Lg		21 32 30.6	
	comp=Z,19nm,0.9s						
KSCT	Kent School, K	5.06	145	Pn	Pn	21 31 10.4	0.0
KSCT				IAmb_Lg		21 32 43.8	
	comp=Z,24nm,0.9s						
LMQ	La Malbaie	5.09	69	Pn	Pn	21 31 10.9	+0.1
N58A	Sunbury	5.13	175	Pn	Pn	21 31 12.4	+1.2
N58A				IAmb_Lg		21 32 39.0	
	comp=Z,19nm,0.9s						
QUA2	Belchertown	5.14	134	IAmb_Lg		21 32 35.3	
	comp=Z,21nm,0.7s						
I63A	Otisfield	5.17	109	IAmb_Lg		21 32 37.9	
	comp=Z,19nm,1.0s						
ODNJ	Ogdensburg	5.26	157	IAmb_Lg		21 32 40.0	
	comp=Z,27nm,0.7s						
ODNJ	Ogdensburg	5.26	157	P	Pn	21 31 13.1	0.0
	baz=339,SNR=7.8						
TRNY	Table Rock, Ra	5.31	154	IAmb_Lg		21 32 42.4	
	comp=Z,29nm,0.9s						
SSPA	Standing Stone	5.32	184	IAmb_Lg		21 32 44.4	
	comp=Z,26nm,1.1s						
UCCT	U. Connecticut	5.57	136	IAmb_Lg		21 32 51.8	
	comp=Z,26nm,0.9s						
WES	Weston	5.61	127	IAmb_Lg		21 32 52.9	
	comp=Z,16nm,0.8s						
BRYW	Bryant College	5.82	132	IAmb_Lg		21 32 59.3	
	comp=Z,15nm,1.0s						
MVL	Millersville	5.99	173	IAmb_Lg		21 33 03.9	
	comp=Z,14nm,1.0s						
O54A	Avella	6.17	202	IAmb_Lg		21 33 14.4	
	comp=Z,21nm,0.9s						
O53A	New Philadelph	6.36	208	IAmb_Lg		21 33 22.8	
	comp=Z,20nm,0.9s						
MCWV	Mont Chateau	6.55	197	IAmb_Lg		21 33 21.9	
	comp=Z,18nm,0.9s						
O52A	Adamsville	6.69	211	IAmb_Lg		21 33 34.3	
	comp=Z,15nm,0.9s						
N49A	Columbus Grove	7.06	227	IAmb_Lg		21 33 39.7	
	comp=Z,14nm,1.1s						
P53A	Whipple	7.11	206	IAmb_Lg		21 33 39.9	
	comp=Z,21nm,0.9s						
Q54A	Coxs Mills	7.42	201	IAmb_Lg		21 33 50.7	
	comp=Z,13nm,0.9s						
O49A	Covington	7.69	224	IAmb_Lg		21 34 10.1	
	comp=Z,12nm,0.8s						
CBN	Corbin Frederi	7.74	180	IAmb_Lg		21 34 00.3	
	comp=Z,14nm,0.8s						
R55A	Marlinton	7.93	196	IAmb_Lg		21 34 22.9	
	comp=Z,13nm,1.0s						
Q51A	Peebles	8.21	215	IAmb_Lg		21 34 11.1	
	comp=Z,16nm,0.8s						
R53A	Hurricane	8.34	206	IAmb_Lg		21 34 16.4	
	comp=Z,16nm,0.9s						
P48A	Milroy	8.79	225	IAmb_Lg		21 34 30.4	
	comp=Z,10.0nm,0.9s						
BLA	Blacksburg	9.02	196	IAmb_Lg		21 34 46.1	
	comp=Z,8.8nm,0.7s						
S51A	Beattyville	9.51	211	IAmb_Lg		21 34 50.6	
	comp=Z,11nm,0.8s						
U54A	Nelsons Funny	10.00	201	IAmb_Lg		21 35 09.3	
	comp=Z,7.7nm,0.8s						

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*KRSC **14** 21:32:56.8±2.0, 48°.64N×156°.12E, h16^{km}±36^{km}, ML4.0*
*IDC **14** 21:32:59.3±3.4, 48°.66N×154°.90E, h85^{km}±31^{km}, mb3.2/4, mbtmp3.6/6, Error ellipse: s-maj=47.9km s-min=23.1km az=137.0*
ISC 14 21:32:54.5±1.1, **48°.4N**±0°.1×**155°.2E**±0°.2, **h35**^{km}, **n24**, σ**2**^{s}.**55**/27, **mb3.5**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.33	14	eP	Pn	21 33 31.1	+0.8
PAU	Pauzhetka	3.21	18	eS	Sn	21 34 18.8	-0.6
KDTR	Khodutka, Kamc	3.85	27	eP	Pn	21 33 52.6	+1.4
KDTR				eS	Sn	21 34 34.0	-1.2
MIPR	Malaya Ipel'ka	3.98	14	eP	Pn	21 33 55.1	+2.1
ASAK	Asacha	4.32	22	eP	Pn	21 34 00.2	+2.5
MTVR	Mutnovka	4.48	24	eP	Pn	21 34 02.2	+2.2
MTVR				eS	Sn	21 34 51.1	+0.2
GRL	Gorelyy	4.51	23	eP	Pn	21 34 02.8	+2.4
RUS	Russkaya	4.53	26	eP	Pn	21 34 01.5	+1.0
RUS				eS	Sn	21 34 50.2	-1.7
KRMR	Karymshinskiy	4.78	22	eP	Pn	21 34 07.9	+3.9
PETK	Petropavlovsk-	4.94	18	P	Pn	21 34 09.2	+3.0
	1.6nm,0.5s,baz=176,slow=12,SNR=7.3						
UGLR	Uglovaya	5.30	24	eP	Pn	21 34 14.5	+3.2
KOK	Koryaka	5.33	23	eP	Pn	21 34 14.9	+3.3
AVH	Avacha	5.33	23	eP	Pn	21 34 15.0	+3.4
SMAR	Somma	5.35	24	eP	Pn	21 34 15.3	+3.3
SDLR	Sedlovina	5.38	24	eP	Pn	21 34 14.4	+2.0
KRX	Arik	5.39	22	eP	Pn	21 34 16.3	+3.8
GNL	Ganaly	5.55	17	eP	Pn	21 34 17.2	+2.6
SPN	Mys Shipunski	5.58	31	eP	Pn	21 34 18.3	+3.3
MKZ	Mys Kozlova	7.36	31	eP	Pn	21 34 40.0	+0.7
ASAJ	Asahikawa	9.74	248	P	Pn	21 35 14.8	+2.7
	6.4nm,0.6s,baz=75,slow=14,SNR=4.6						
MKAR	Makanchi Array	47.44	297	P	P	21 41 21.8	-3.7
	0.3nm,0.7s,baz=78,slow=9.8,SNR=2.8						
	0.3nm,0.7s						
YKA	Yellowknife Ar	48.73	38	P	P	21 41 34.3	-0.8
	0.4nm,0.8s,baz=301,slow=8.4,SNR=3.1						
	0.4nm,0.8s						
CMAR	Chiang Mai Arr	54.14	257	P	P	21 42 15.4	-0.8
	0.9nm,0.7s,baz=39,slow=6.5,SNR=5.2						
	0.9nm,0.7s						
WRA	Warramunga Arr	70.58	201	P	P	21 44 05.7	-0.2
	0.4nm,0.7s,baz=16,slow=6.4,SNR=2.0						
	0.4nm,0.7s						

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*IDC **14** 21:36:26.1±1.7, 32°.95N×130°.43E, h0^{km}, mb3.8/1, mbtmp3.4/4, ML2.8/3, Error ellipse: s-maj=24.5km s-min=9.9km az=167.0*
*JMA **14** 21:36:27.3±0.0, 32°.77N±0°.09×130°.8E±0°.1, h14^{km}, MV3.6/20, NW KUMAMOTO PREF*
JMA Felt III J1 at NW KUMAMOTO PREF .
ISC 14 21:36:27.7±0.8, **32°.76N**±0°.04×**130°.72E**±0°.08, **h12**^{km}, **n8**, σ**1**^{s}.**91**/12, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.22	159	P	Pg	21 36 32.2	-0.3
JIU3				eS	Sg	21 36 35.8	0.0
JTA	Tamana	0.26	323	i P	Pg	21 36 33.2	+0.1
JTA				eS	Sg	21 36 37.4	+0.7
JNU	Nakatsue	0.39	21	Pg	Pg	21 36 34.0	-1.5
	272nm,0.3s,baz=199,slow=9.0,SNR=1561						
JNU				Lg	Lg	21 36 39.9	
	2μm,0.3s,baz=325,slow=23,SNR=165						
JTZ	Takazaki	0.91	160	i P	Pb	21 36 44.8	-0.7
JTZ				S	Sb	21 36 56.5	-1.1
KSRS	Korea Array	5.21	335	Pn	Pn	21 37 43.4	-2.1
	0.1nm,0.3s,baz=147,slow=14,SNR=2.2						
KSRS				Pg	Pb	21 38 00.4	+1.6
	0.5nm,0.3s,baz=155,slow=16,SNR=6.3						
KSRS				Lg	Lg	21 39 04.1	
	0.5nm,0.3s,baz=157,slow=29,SNR=4.3						
	0.3nm,0.4s						
JOW	Kunigami	6.28	200	Pn	Pn	21 38 02.9	+2.7
	1.3nm,0.3s,baz=116,slow=20,SNR=7.2						
	5.0nm,0.4s						
MJAR	Matsushiro Arr	7.24	56	Pn	Pn	21 38 16.0	+2.7
	0.1nm,0.3s,baz=251,slow=14,SNR=5.3						
	1.0nm,0.5s						
FINES	FINESS Array B	68.29	330	P	P	21 47 25.6	-2.6
	0.6nm,0.6s,baz=64,slow=8.7,SNR=5.5						
	0.6nm,0.6s						

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*SOME **14** 21:50:19.0, 46°.15N×78°.88E, h10^{km}*
*NNC **14** 21:50:23.0±3.1, 46°.19N×79°.43E, h0^{km}, mb2.6, mpv2.3, Error ellipse: s-maj=34.4km s-min=9.9km az=125.0*
ISC 14 21:50:18.0±1.3, **46°.20N**±0°.06×**78°.88E**±0°.05, **h10**^{km}, **n13**, σ**1**^{s}.**45**/26, **4C-1D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPS	Kapalarasan	0.97	160	eP	Pg	21 50 36.2	-0.5
	1.5nm,0.0s						
KAPS				eS	Sg	21 50 48.8	-0.6
	4.8nm,0.1s						
TDK	Taldyqorghan	1.24	196	eP	Pg	21 50 42.3	+0.4
	13nm,0.0s						
TDK				eS	Sn	21 50 59.5	+1.2
	17nm,0.0s						
DJR	Jarkent	1.97	161	eP	Pb	21 50 54.8	+0.7
	2.7nm,0.0s						
DJR				eS	Sg	21 51 20.6	-0.9
	3.8nm,0.1s						
MAKZ	Makanchi	2.22	73	⇑Pn	Pn	21 50 54.8	-0.2
	1.4nm,0.4s						
MAKZ				⇑Sn	Sn	21 51 21.6	-0.9
	1.1nm,0.3s						
MK31	Makanchi Array	2.43	75	Pn	Pn	21 50 58.7	+0.9
	0.4nm,0.4s,baz=249,slow=16,SNR=16						
MK31				⇑Sn	Sn	21 51 27.2	-0.3
	0.8nm,0.4s,baz=251,slow=20,SNR=12						
KPKS	Kokpek	2.74	183	eP	Pg	21 51 09.0	-1.5
	2.4nm,0.2s						
KPKS				eS	Sg	21 51 44.6	-1.3
	2.9nm,0.3s						
PDGK	Podgornoye	2.90	171	⇑Pn	Pb	21 51 10.7	+0.7
	0.6nm,0.3s						
PDGK				⇓Sn	Sb	21 51 46.4	+0.9
	1.1nm,0.6s						
KUU	Kurty	2.93	219	eP	Pb	21 51 12.2	+1.9
	2.1nm,0.0s						
KUU				eS	Sg	21 51 50.1	-1.9
	3.0nm,0.2s						
KTBS	Karatobe	2.94	213	eP	Pb	21 51 12.5	+2.1
	1.4nm,2.4s						
KTBS				eS	Sg	21 51 51.1	-1.2
	3.2nm,0.0s						
UZB	Uzynbulak	3.05	178	eP	Pb	21 51 14.3	+1.8
	1.7nm,0.1s						
UZB				eS	Sg	21 51 53.9	-2.2
	1.5nm,0.2s						
SHLS	Shalkode	3.07	172	eP	Pg	21 51 15.8	-1.1
	0.9nm,0.2s						
SHLS				eS	Sg	21 51 56.8	+0.2
	0.8nm,0.1s						
MDOK	Medeo	3.31	204	eP	Pb	21 51 19.1	+2.3
	0.7nm,0.1s						
MDOK				eS	Sg	21 52 02.7	-1.5
	2.1nm,0.1s						
KST	Kastek	3.78	214	eP	Pg	21 51 28.2	-2.3
	1.2nm,0.1s						
KST				eS	Sg	21 52 17.6	-1.8
	1.7nm,0.0s						

IDC 14 21:56:25.0±45.0, **16°.19S**×**172°.51W**, **h0**^{km}, **mb4.1**/3, **mbtmp4.1**/3, **MS3.5**/1, **Error ellipse: s-maj=879.2km s-min=183.3km az=79.0**, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	27.67	281	LR	LR	22 11 56.2	
	comp=Z,95nm,18.2s,baz=171,slow=34						
STKA	Stephens Creek	44.40	241	P	P	22 04 38.4	+0.7
	0.9nm,0.4s,baz=79,slow=10,SNR=4.2						
	0.9nm,0.4s						
WRA	Warramunga Arr	50.51	257	P	P	22 05 24.9	-0.5
	0.5nm,0.4s,baz=97,slow=7.2,SNR=18						
	0.5nm,0.4s						
ASAR	Alice Springs	50.69	252	P	P	22 05 26.5	-0.3
	4.7nm,0.4s,baz=88,slow=8.1,SNR=117						
	4.7nm,0.4s						

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*TAP **14** 22:02:56.8, 24°.92N×122°.05E, h109^{km}, ML2.9, C*
*JMA **14** 22:02:57.5±0.1, 25°N±2°×122°.2E±0°.5, h90^{km}, MV2.1/9, TAIWAN REGION*
ISC 14 22:02:55.8±1.6, **24°.95N**±0°.05×**122°.05E**±0°.03, **h116**^{km}±7^{km}, **n80**, σ**0**^{s}.**75**/151, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.09	316	eP	Pn	22 03 12.0	+0.3
	baz=330						
TWB1				eS	Sn	22 03 22.5	-1.1
	baz=330						
EGS		0.15	228	eP	Pn	22 03 12.0	+0.2
	baz=233						
EGS				eS	Sn	22 03 22.9	-0.9
	baz=233						
TIPB	Shuangxi	0.21	277	P	Pn	22 03 12.4	+0.4
	baz=284						
TIPB				eS	Sn	22 03 23.1	-1.0
	baz=284						
NTC	Toucheng	0.22	246	eP	Pn	22 03 12.2	+0.2
	baz=252						
NTC				eS	Sn	22 03 23.4	-0.7
	baz=252						
NWF	Wu-fen Shan	0.28	297	eP	Pn	22 03 12.6	+0.3
	baz=301						
NWF				eS	Sn	22 03 24.3	-0.4
	baz=301						
WFSB	Wu-fen Shan	0.28	297	eP	Pn	22 03 12.7	+0.5
	baz=301						
WFSB				eS	Sn	22 03 24.6	+0.1
	baz=301						
TWC	Suao	0.39	209	eP	Pn	22 03 12.9	+0.3
	baz=209						
TWC				eS	Sn	22 03 24.4	-0.9
	baz=209						
TWE	Neicheng	0.42	237	eP	Pn	22 03 13.3	+0.5
	baz=239						
TWE				eS	Sn	22 03 24.8	-0.8
	baz=239						
TWA	Mucha	0.43	275	eP	Pn	22 03 13.2	+0.3
	baz=278						
TWA				eS	Sn	22 03 25.1	-0.7
	baz=278						
NDS	Dongshan	0.44	225	eP	Pn	22 03 13.7	+0.7
	baz=227						
NDS				eS	Sn	22 03 26.1	+0.3
	baz=227						
FUSB	Fushanzhiwuyua	0.46	246	eP	Pn	22 03 13.6	+0.4
	baz=249						
FUSB				eS	Sn	22 03 25.5	-0.7
	baz=249						
NHDH	Xindian Distri	0.48	272	eP	Pn	22 03 13.5	+0.4
	baz=275						
NHDH				eS	Sn	22 03 25.8	-0.5
	baz=275						
YM01	YM01	0.48	294	eP	Pn	22 03 13.5	+0.3
	baz=297						
YM01				eS	Sn	22 03 25.7	-0.7
	baz=297						
TWY	Chenhua	0.53	309	eP	Pn	22 03 13.9	+0.5
	baz=311						
TWY				eS	Sn	22 03 26.8	+0.1
	baz=311						
NWLT	Wulai	0.53	251	eP	Pn	22 03 13.8	+0.2
	baz=254						
NWLT				eS	Sn	22 03 25.8	-1.1
	baz=254						
ENTT	Nioudou	0.54	236	eP	Pn	22 03 14.2	+0.6
	baz=237						
ENTT				eS	Sn	22 03 26.6	-0.4
	baz=237						
EWUT	Wuta	0.56	207	eP	Pn	22 03 14.4	+0.7
	baz=207						
EWUT				eS	Sn	22 03 27.1	-0.1
	baz=207						
ENA	Nanau	0.59	209	eP	Pn	22 03 14.6	+0.7
	baz=209						
ENA				eS	Sn	22 03 27.7	+0.2
	baz=209						
NTST	Danshui	0.59	292	eP	Pn	22 03 14.0	+0.1
	baz=294						
NTST				eS	Sn	22 03 27.4	-0.1
	baz=294						
TWS1	Kuangyinshan	0.60	285	eP	Pn	22 03 14.6	+0.6
	baz=287						
TWS1				eS	Sn	22 03 27.9	+0.3
	baz=287						
LATG	Datong	0.63	230	eP	Pn	22 03 15.0	+0.7
	baz=231						
LATG				eS	Sn	22 03 27.3	-1.0
	baz=231						
YHNB	Yeheng	0.68	246	i P	Pn	22 03 15.1	+0.4
	baz=248						
YHNB				S	Sn	22 03 28.4	-0.4
	baz=248						
NSK	Sanguang	0.69	247	P	Pn	22 03 15.0	+0.3
	baz=248						
NSK				S	Sn	22 03 28.5	-0.5
	baz=248						
NCU	National Centr	0.79	272	eP	Pn	22 03 16.3	+0.8
	baz=273						
NCU				eS	Sn	22 03 30.7	+0.4
	baz=273						
NCUH	Zhongli	0.79	272	eP	Pn	22 03 16.2	+0.7
	baz=273						
NCUH				eS	Sn	22 03 31.2	+0.8
	baz=273						
NNS	Nan Shan	0.80	231	eP	Pn	22 03 16.5	+0.7
	baz=231						
NNS				eS	Sn	22 03 30.6	-0.2
	baz=231						
NNSB	Datong	0.80	230	eP	Pn	22 03 16.4	+0.7
	baz=231						
NNSB				eS	Sn	22 03 30.7	-0.1
	baz=231						
NACB	Ninganchiao	0.88	209	eP	Pn	22 03 16.4	+0.1
	baz=209						
NACB				eS	Sn	22 03 31.3	-0.5
	baz=209						
ETL	Fush Village	0.88	207	eP	Pn	22 03 17.1	+0.7
	baz=207						
ETL				eS	Sn	22 03 31.6	-0.2
	baz=207						
ETLH	Xiulin Townshi	0.90	215	eP	Pn	22 03 16.8	+0.2
	baz=216						
ETLH				eS	Sn	22 03 31.8	-0.6
	baz=216						
NFF	Wufeng Townshi	0.91	250	eP	Pn	22 03 17.0	+0.4
	baz=251						
NFF				eS	Sn	22 03 32.1	-0.3
	baz=251						
JYNG	Yonagunijimaku	0.95	121	P	Pn	22 03 17.3	+0.4
TWD	Chiawan	0.96	206	eP	Pn	22 03 17.2	+0.1
	baz=206						
TWD				eS	Sn	22 03 32.0	-1.1
	baz=206						
SBCB	Hsinchu	0.98	261	eP	Pn	22 03 18.0	+0.7
	baz=262						
SBCB				eS	Sn	22 03 33.3	-0.3
	baz=262						
LIOB	Emei	0.99	253	eP	Pn	22 03 18.0	+0.6
	baz=254						
LIOB				eS	Sn	22 03 33.9	+0.2
	baz=254						
YOJ	Yonaguni jima	0.99	119	eP	Pn	22 03 17.5	+0.1
	baz=117						
YOJ				eS	Sn	22 03 33.3	-0.5
	baz=117						
YOJ	Yonaguni jima	0.99	119	eP	Pn	22 03 17.8	+0.4
NSTT	Nanjuang	1.01	252	eP	Pn	22 03 18.1	+0.5
	baz=253						
NSTT				eS	Sn	22 03 33.7	-0.3
	baz=253						
FUSS	Fushou	1.01	227	eP	Pn	22 03 18.7	+0.7
	baz=227						
FUSS				eS	Sn	22 03 34.4	-0.2
	baz=227						
TDCB	Techi	1.07	230	eP	Pn	22 03 19.4	+1.1
	baz=230						
TDCB				eS	Sn	22 03 34.8	-0.6
	baz=230						
WHF	Hehuan Shan	1.07	222	eP	Pn	22 03 19.4	+0.7
	baz=222						
WHF				eS	Sn	22 03 34.5	-1.5
	baz=222						
CHGB	Renai	1.19	222	eP	Pn	22 03 20.8	+1.1
	baz=223						
CHGB				eS	Sn	22 03 37.7	-0.1
	baz=223						
WHP	Taichung City	1.21	237	eP	Pn	22 03 20.7	+0.9
	baz=237						
WHP				eS	Sn	22 03 38.1	+0.2
	baz=237						
NMLH	Miaoli	1.22	251	eP	Pn	22 03 20.5	+0.7
	baz=251						
NMLH				eS	Sn	22 03 37.5	-0.5
	baz=251						
ESL	Shilin	1.26	207	eP	Pn	22 03 21.0	+0.7
	baz=206						
ESL				eS	Sn	22 03 36.9	-1.9
	baz=206						
OWD	Renai	1.27	219	eP	Pn	22 03 21.5	+0.9
	baz=219						
OWD				eS	Sn	22 03 38.6	-0.7
	baz=219						
WUSB	Renai	1.28	222	eP	Pn	22 03 21.6	+1.1
	baz=222						
WUSB				eS	Sn	22 03 39.3	-0.1
	baz=222						
NSY	Sanyi	1.29	246	eP	Pn	22 03 21.4	+0.8
	baz=246						
NSY				eS	Sn	22 03 39.4	+0.1
	baz=246						
TWQ1	Liyutan	1.31	243	eP	Pn	22 03 21.4	+0.6
	baz=243						
TWQ1				eS	Sn	22 03 39.2	-0.6
	baz=243						
EGFH	Guangfu	1.40	204	eP	Pn	22 03 22.5	+0.7
	baz=204						
EGFH				eS	Sn	22 03 39.9	-1.6
	baz=204						
WDJ	Dajia District	1.42	245	eP	Pn	22 03 22.5	+0.5
	baz=246						
WDJ				eS	Sn	22 03 41.3	-0.7
	baz=246						
VWDT	VWDT	1.45	215	eP	Pn	22 03 23.4	+1.0
	baz=215						
VWDT				eS	Sn	22 03 43.0	+0.4
	baz=215						
SMLT	Sun Moon Lake	1.49	225	eP	Pn	22 03 24.1	+1.1
	baz=225						
SMLT				eS	Sn	22 03 43.9	+0.2
	baz=225						
TYC	Yuchr	1.51	227	eP	Pn	22 03 24.0	+1.0
	baz=226						
TYC				eS	Sn	22 03 43.9	+0.2
	baz=226						
SSLB	Suanglung	1.53	221	P	Pn	22 03 24.3	+0.9
	baz=221						
SSLB				eS	Sn	22 03 44.4	+0.1
	baz=221						
HGSD	Ruisui	1.56	202	eP	Pn	22 03 24.4	+0.7
	baz=202						
HGSD				eS	Sn	22 03 44.7	-0.2
	baz=202						
EHY	Hungye	1.58	205	eP	Pn	22 03 23.9	0.0
	baz=205						
EHY				eS	Sn	22 03 44.1	-1.3
	baz=205						
IRIF	Iriomote-Funau	1.64	111	eS	Sn	22 03 46.2	-0.4
WJS	Zhushan	1.65	227	eP	Pn	22 03 25.4	+0.7
	baz=227						
WJS				eS	Sn	22 03 47.0	+0.2
	baz=227						
YULB	Yu-li	1.69	204	eP	Pn	22 03 25.6	+0.3
	baz=204						
YULB				eS	Sn	22 03 46.1	-1.7
	baz=204						
EYUL	Yuli	1.73	203	eP	Pn	22 03 26.6	+0.8
	baz=203						
ALS	Alishan	1.83	219	eP	Pn	22 03 28.1	+0.9
	baz=218						
ALS				eS	Sn	22 03 51.7	+0.5
	baz=218						
CHN5	Tsauling	1.84	223	eP	Pn	22 03 27.7	+0.6
	baz=223						
CHN5				eS	Sn	22 03 51.5	+0.5
	baz=223						
WRL	Guolierlin Hig	1.85	236	eP	Pn	22 03 27.6	+0.5
	baz=236						
WRL				eS	Sn	22 03 49.5	-1.6
	baz=236						
WDLH	Douliu	1.87	228	eS	Sn	22 03 50.8	-0.7
	baz=228						
FULB	Fuli	1.87	202	eP	Pn	22 03 28.2	+0.6
	baz=202						
FULB				eS	Sn	22 03 51.4	-0.4
	baz=202						
JKRS	Kuro-shima	1.92	111	P	Pn	22 03 29.3	+1.3
JKRS				eS	Sn	22 03 52.6	0.0
WTK	Tuku	1.97	231	eP	Pn	22 03 29.1	+0.4
	baz=231						
WTK				eS	Sn	22 03 53.6	-0.2
	baz=231						

JIJ	Ishigaki jima	1.99	107	eS	Sn	22 03 53.6	-0.6
EDH	Donghe	2.08	199	eS	Sn	22 03 54.9	-1.4
	baz=199						
JISG	Ishigakijimahi	2.08	99	eS	Sn	22 03 55.0	-1.3
TPUB	Ta-pu	2.09	219	eP	Pn	22 03 31.0	+0.7
	baz=218						
TPUB				eS	Sn	22 03 55.9	-0.7
	baz=218						
STYH	Taoyuan	2.12	214	eP	Pn	22 03 30.8	+0.2
	baz=213						
STYH				eS	Sn	22 03 56.8	-0.3
	baz=213						
WTP	Ta-pu	2.15	218	eP	Pn	22 03 32.1	+1.2
	baz=218						
WTP				eS	Sn	22 03 56.6	-1.2
	baz=218						
WSL	Shuilin Townsh	2.19	230	eP	Pn	22 03 31.8	+0.4
	baz=230						
WSL				eS	Sn	22 03 56.8	-2.0
	baz=230						
CHN1	Nanshi	2.24	219	eP	Pn	22 03 32.6	+0.4
	baz=218						
CHN1				eS	Sn	22 03 59.5	-0.5
	baz=218						
VWUC	VWUC	2.37	272	eP	Pn	22 03 33.8	+0.2
	baz=271						
VWUC				eS	Sn	22 04 01.3	-1.4
	baz=271						
MASBT	Mashibuluo	2.66	210	eP	Pn	22 03 39.9	+2.3
	baz=209						
MASBT				eS	Sn	22 04 09.1	-0.6
	baz=209						
PTMZ	Houxiangcun	2.66	273	eP	Pn	22 03 37.6	+0.1
	baz=272						
PHUB	P'eng-hu	2.68	238	eP	Pn	22 03 37.3	-0.4
	baz=238						
PHUB				eS	Sn	22 04 08.2	-1.8
	baz=238						

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*SOME **14** 22:07:02.5, 42°.18N×81°.17E, h15km*

*NNC **14** 22:07:04.0±2.0, 42°.22N×81°.11E, h0km, mb2.6, mpv2.3, Error ellipse: s-maj=20.6km s-min=9.5km az=16.0*

ISC 14 22:07:06.1±2.6**, 42°.3N**±0°.1×**80°.93E**±0°.08**, h10km, n10, σ1s.96**/18**, 3C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.37	309	eP	Pn	22 07 28.0	-3.4
	2.0nm,0.1s						
SHLS				eS	Sn	22 07 46.6	-3.1
	16nm,0.1s						
PDGK	Podgornoye	1.47	314	⇓P	Pb	22 07 33.3	-0.3
	0.7nm,0.4s						
PDGK				⇑S	Sg	22 07 56.0	+2.7
	2.9nm,0.2s						
UZB	Uzynbulak	1.64	301	eP	Pb	22 07 36.8	+0.4
	2.0nm,0.1s						
UZB				eS	Sg	22 08 01.5	+2.8
	11nm,0.1s						
SATY	Saty	2.00	293	eP	Pb	22 07 43.5	+0.8
	2.6nm,0.5s						
SATY				eS	Sg	22 08 13.3	+2.7
	7.2nm,0.4s						
KPKS	Kokpek	2.01	306	eP	Pb	22 07 43.3	+0.4
	2.4nm,0.0s						
KPKS				eS	Sg	22 08 12.8	+2.0
	38nm,0.1s						
ZHN	Zhinishke	2.03	296	eP	Pb	22 07 43.7	+0.6
	4.6nm,0.1s						
ZHN				eS	Sg	22 08 13.3	+2.1
	14nm,0.1s						
DJR	Jarkent	2.19	338	eP	Pb	22 07 46.0	+0.2
	0.7nm,0.1s						
DJR				eS	Sg	22 08 17.1	+0.8
	18nm,0.1s						
KAPS	Kapalarasan	3.18	340	eP	Pb	22 08 03.5	+0.8
	0.3nm,0.0s						
KAPS				eS	Sg	22 08 47.1	-1.2
	3.9nm,0.1s						
MAKZ	Makanchi	4.56	9	⇓Pn	Pn	22 08 16.3	+1.2
	0.5nm,0.5s						
MAKZ				⇑Lg	Lg	22 09 29.9	
	1.2nm,1.1s						
MK31	Makanchi Array	4.59	12	⇑Pn	Pn	22 08 15.7	+0.2
	0.1nm,0.3s,baz=187,slow=14,SNR=3.0						
MK31				⇓Lg	Lg	22 09 29.2	
	0.4nm,0.5s,baz=192,slow=28,SNR=4.9						

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*IDC **14** 22:15:23.1±8.6, 32°.13S×179°.97W, h331km±96km, mb2.9/2, mbtmp3.7/3, Error ellipse: s-maj=107.5km s-min=42.0km az=2.0*

*WEL **14** 22:15:26.5±0.9, 32°S±6°×17°8E±1°2, h33km, M4.2/11, mB4.6/8, ML4.7/15, MLv4.5/11, Mw(mB)3.9/8, Error ellipse: s-maj=0.0km s-min=0.0km az=113.6*

ISC 14 22:15:23.3±1.0**, 32°.22S**±0°.10×**179°.8W**±0°.2**, h350km, n23, σ1s.89**/39**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.35	29	P	Pn	22 16 26.0	0.0
GLKZ				S	S	22 17 14.7	-1.7
RIZ	Raoul Island	3.37	29	P	Pn	22 16 26.9	+0.7
MXZ	Matakaoa Point	5.55	196	P	Pn	22 16 51.1	+2.2
MXZ				S	S	22 17 56.7	-1.6
WMGZ	Waiomatatini S	5.78	194	P	Pn	22 16 52.6	+1.1
WMGZ				S	S	22 18 01.8	-1.1
HAZ	Te Kaha	5.87	199	P	Pn	22 16 54.5	+2.0
HAZ				S	S	22 18 04.0	-0.9
PKGZ	Pakihiroa	5.92	197	P	Pn	22 16 55.1	+2.0
PKGZ				S	S	22 18 02.0	-4.0
PUZ	Puketiti	6.05	195	P	Pn	22 16 58.2	+3.6
PUZ				S	S	22 18 08.1	-0.6
RUGZ	Raukumara Rang	6.10	199	P	Pn	22 16 57.5	+2.3
RUGZ				S	S	22 18 08.0	-1.8
MWZ	Matawai	6.48	199	P	Pn	22 16 54.5	-5.1
MWZ				S	S	22 18 17.8	0.0
URZ	Urewera	6.54	202	P	Pn	22 16 59.9	-0.2
	3.5nm,0.3s,baz=271,slow=3.9,SNR=51						
URZ				S	S	22 18 18.4	-0.4
	7.8nm,0.3s,baz=242,slow=21,SNR=10						
URZ	Urewera	6.54	202	P	Pn	22 16 60.0	-0.2
URZ				S	S	22 18 18.3	-0.6
RIGZ	Rimuhau	6.77	197	P	Pn	22 17 03.0	+0.1
RIGZ				S	S	22 18 23.1	-0.8
MUGZ	Murupara	6.85	203	P	Pn	22 17 06.7	+3.0
MUGZ				S	S	22 18 24.0	-1.5
RTZ	Ruatahuna	6.91	202	P	Pn	22 17 05.1	+0.6
RTZ				S	S	22 18 25.3	-1.5
SNGZ	Shannon Statio	6.95	199	P	Pn	22 17 07.4	+2.4
SNGZ				S	S	22 18 26.3	-1.4
KNZ	Kokohu	7.09	196	P	Pn	22 17 08.2	+1.6
KNZ				S	S	22 18 27.5	-3.2
RAHZ	Arahi	7.15	200	P	Pn	22 17 11.1	+3.8
RAHZ				S	S	22 18 31.5	-0.5
MRHZ	Matea Rd	7.29	204	P	Pn	22 17 11.3	+2.3
NMHZ	Naumai	7.40	201	P	Pn	22 17 13.0	+2.6
KWHZ	Kaweka Forest	7.82	202	P	Pn	22 17 16.8	+1.5
KWHZ				S	S	22 18 44.6	-1.9
ASAR	Alice Springs	41.54	270	P	P	22 22 38.1	+0.1
	0.5nm,0.6s,baz=105,slow=7.7,SNR=9.4						
	0.5nm,0.6s						
WRA	Warramunga Arr	42.70	275	P	P	22 22 47.0	-0.3
	0.4nm,0.3s,baz=116,slow=7.4,SNR=15						
	0.4nm,0.3s						
FINES	FINESS Array B	146.30	338	PKPbc	PKPab	22 34 23.1	-1.0
	1.6nm,0.9s,baz=58,slow=4.7,SNR=6.9						

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*IDC **14** 22:36:28.8±1.4, 16°.74N×145°.81E, h367km±19km, mb2.8/7, mbtmp3.5/8, Error ellipse: s-maj=33.2km s-min=25.1km az=99.0*

*NEIC **14** 22:36:28.7±0.9, 16°.74N±0°.08×145°.6E±0°.3, h341km±9km, mb3.8/7, Error ellipse: s-maj=36.1km s-min=10.6km az=98.0*

ISC 14 22:36:28.6±0.8**, 16°.79N**±0°.09×**145°.5E**±0°.2**, h350km, n19, σ1s.55**/21**, mb3.4**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.24	192	P	Pn	22 37 32.6	+2.2
	43nm,0.8s,baz=20,slow=16,SNR=2.1						
GUMO				S	S	22 38 23.0	+3.1
	25nm,0.3s,baz=354,slow=22,SNR=1.9						
GUMO	Guam	3.24	192		Pn	22 37 29.6	-0.8
GUMO				Sn	S	22 38 17.7	-2.2
KNRA	Kununurra	36.25	208	P	P	22 42 59.9	0.0
ASAR	Alice Springs	41.78	196	P	P	22 43 43.7	-1.6
	0.2nm,0.5s,baz=42,slow=6.6,SNR=4.1						
	0.2nm,0.5s						
SONM	Songino Array	44.55	323	P	P	22 44 05.7	-1.4
	0.3nm,0.6s,baz=134,slow=6.2,SNR=1.9						
	0.3nm,0.6s						
MK31	Makanchi Array	59.68	315	P	P	22 45 58.4	+1.1
MKAR	Makanchi Array	59.68	315	P	P	22 45 57.9	+0.6
	0.1nm,0.4s,baz=85,slow=8.3,SNR=1.8						
	0.1nm,0.4s						
MKAR	Makanchi Array	59.68	315	P	P	22 45 58.1	+0.8
N19K	Bonanza Creek	60.98	29	P	P	22 46 07.7	+1.9
N19K				IAmb	IAmb	22 46 23.6	
	comp=Z,5.5nm,1.5s						
CNPM	China Poot	62.17	31	P	P	22 46 13.9	+0.2
CNPM				IAmb	IAmb	22 46 28.7	
	comp=Z,4.7nm,1.2s						
KURBB	Kurchatov Arra	62.64	319	P	P	22 46 16.9	+0.1
	comp=Z,0.5nm,0.6s,baz=92,slow=7.6,SNR=4.8						
	comp=Z,0.5nm,0.6s						
IMAR	Indian Mountai	63.02	24	P	P	22 46 20.3	+1.2
MDM	Murphy Dome	64.91	25	P	P	22 46 32.2	+0.9
MDM				IAmb	IAmb	22 46 57.6	
	comp=Z,3.0nm,1.4s						
ILAR	Eielson Array	65.42	26	P	P	22 46 32.1	-2.5
	comp=Z,0.4nm,0.4s,baz=254,slow=5.9,SNR=9.5						
	comp=Z,0.4nm,0.4s						
BMAR	Burnt Mountain	66.92	23	P	P	22 46 45.6	+1.6
ABKAR	Akbulak array	74.63	317	P	P	22 47 31.0	+0.7
ABKAR	Akbulak array	74.63	317	P	P	22 47 30.9	+0.7
ABKAR				IAmb	IAmb	22 47 45.5	
	comp=Z,0.9nm,1.1s						
YKA	Yellowknife Ar	79.74	28	P	P	22 47 57.2	-1.0
	comp=Z,0.1nm,0.4s,baz=293,slow=5.2,SNR=2.3						
	comp=Z,0.1nm,0.4s						
FINES	FINESS Array B	88.55	335	P	P	22 48 42.1	0.0
	comp=Z,0.9nm,0.8s,baz=72,slow=4.5,SNR=1.6						
	comp=Z,0.9nm,0.8s						

IDC 14 22:37:03.5±2.9**, 2°.18S**×**136°.12E, h0km, mb3.1**/2**, mbtmp3.2**/3**, ML3.1**/1**, Error ellipse: s-maj=110.4km s-min=31.4km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.74	185	P	Pn	22 41 11.0	-1.2
	0.1nm,0.3s,baz=7.0,slow=12,SNR=2.6						
	0.4nm,0.6s						
ASAR	Alice Springs	21.47	186	P	P	22 41 54.0	+0.1
	0.4nm,0.6s,baz=4.5,slow=11,SNR=7.2						
	0.4nm,0.6s						
MKAR	Makanchi Array	67.80	323	P	P	22 48 03.7	+0.3
	0.1nm,0.4s,baz=123,slow=5.3,SNR=1.9						
	0.1nm,0.4s						

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*TUL **14** 22:39:30.9±0.7, 36°.52N±0°.03×98°.70W±0°.03, h6km±6km, ML3.0, mb_Lg2.5/38(NEIC), Error ellipse: s-maj=5.0km s-min=2.3km az=146.0*

NEIC 14 22:39:31.6±0.7**, 36°.51N**±0°.03×**98°.70W**±0°.04**, h8km**±6km**, Error ellipse: s-maj=5.5km s-min=3.1km az=133.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.28	241	Pg	Pg	22 39 36.9	-0.3
U32A				Sg	Sg	22 39 41.2	+0.3
OKCFA	Oklahoma City	1.49	137		Pn	22 39 58.1	-0.7
OKCSW	OKLAHOMA CITY	1.51	137		Pn	22 39 58.2	-0.8
FNO	Franklin	1.64	140	Pn	Pn	22 40 00.8	0.0
WMOK	Wichita Mounta	1.77	182		Pn	22 40 01.9	-0.7
T35A	Sooner Cattle	1.80	76		Pn	22 40 02.1	-0.9
T35A				IAmb_Lg		22 40 30.9	
	comp=Z,17nm,0.7s						
R32A	Long Quarter,	1.91	360		Pn	22 40 04.9	+0.4
X34A	Smith Ranch, M	2.04	159		Pn	22 40 07.1	+0.9
X34A				IAmb_Lg		22 40 36.4	
	comp=Z,19nm,0.9s						
TUL1	Leonard	2.43	104		Pn	22 40 11.4	-0.2
TUL1				IAmb_Lg		22 40 46.7	
	comp=Z,16nm,0.7s						
AMTX	Amarillo	2.92	237		Pn	22 40 18.5	0.0
KSU1	Kansas State U	3.07	32	Pn	Pn	22 40 21.1	+0.6
X37A	Clayton	3.32	124	Pn	Pn	22 40 23.7	-0.3
X37A				IAmb_Lg		22 41 20.6	
	comp=Z,16nm,0.8s						
Z35A	Perchaven, San	3.39	159	Pn	Pn	22 40 25.1	+0.2
HHAR	Hobbs	3.85	92		Pn	22 40 31.5	+0.3
HHAR				IAmb_Lg		22 41 37.7	
	comp=Z,9.1nm,0.7s						
ABTX	Abilene, Hawle	3.96	192		Pn	22 40 31.2	-1.6
KSCO	Kaye Shedlock'	3.99	310	IAmb_Lg		22 41 39.3	
	comp=Z,13nm,0.7s						
MSTX	Muleshoe	4.19	234	IAmb_Lg		22 41 55.1	
	comp=Z,12nm,1.2s						
W39A	Magazine	4.20	107	Pn	Pn	22 40 35.6	-0.4
S39A	Bolivar	4.46	73		Pn	22 40 38.2	-1.3
S39A				IAmb_Lg		22 41 54.8	
	comp=Z,7.7nm,0.9s						
MIAR	Mount Ida	4.62	114	Pn	Pn	22 40 41.4	-0.3
T25A	Trinidad	4.62	279		Pn	22 40 42.0	-0.1
T25A				IAmb_Lg		22 41 56.7	
	comp=Z,10nm,0.9s						
U40A	Yellville	4.72	90		Pn	22 40 42.6	-0.6
P38A	Dawn	5.12	51	Pn	Pn	22 40 48.3	-0.4
P38A				IAmb_Lg		22 42 23.3	
	comp=Z,7.6nm,0.7s						
X40A	Basin Creek Fa	5.19	111	Pn	Pn	22 40 49.7	0.0
WHAR	Wooly Hollow	5.34	101	IAmb_Lg		22 42 31.4	
	comp=Z,6.1nm,0.7s						
W41B	Gary Mavity, V	5.41	102	IAmb_Lg		22 42 21.0	
	comp=Z,7.5nm,1.1s						
R40A	Maddies Statio	5.42	69	IAmb_Lg		22 42 24.8	
	comp=Z,8.0nm,0.8s						
JCT	Junction City	6.09	189	IAmb_Lg		22 42 53.7	
	comp=Z,6.4nm,0.8s						
LCAR	Lake Charles	6.11	92	IAmb_Lg		22 42 45.5	
	comp=Z,4.8nm,0.9s						
ISCO	Idaho Springs	6.36	303	IAmb_Lg		22 42 59.3	
	comp=Z,4.2nm,0.8s						
PHWY	Pilot Hill	7.11	314	IAmb_Lg		22 43 34.9	
	comp=Z,5.6nm,0.8s						
K22A	Casper	8.60	318	IAmb_Lg		22 44 23.3	
	comp=Z,4.8nm,0.9s						
RSSD	Black Hills	8.62	333	IAmb_Lg		22 44 08.8	
	comp=Z,2.8nm,0.7s						

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*IDC **14** 22:45:51.2±0.6, 27°.76N×85°.34E, h0km, mb4.1/21, mbtmp4.1/24, ML4.0/3, MS3.0/4, Error ellipse: s-maj=17.7km s-min=14.1km az=42.0*

*NDI **14** 22:45:53.5±3.4, 27°.89N×85°.53E, h10km±12km, ML4.0, mb4.4(NEIC)*

*NEIC **14** 22:45:55.4±1.2, 27°.86N±0°.07×85°.36E±0°.09, h22km±3km, mb4.4/61, Error ellipse: s-maj=11.8km s-min=9.4km az=53.0*

ISC 14 22:45:54.1±0.3**, 27°.81N**±0°.04×**85°.47E**±0°.03**, h18km, n147, σ1s.99**/172**, mb4.3**/46**, MS3.1**/4**, 1D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLK	Valmikinagar	1.50	251	eP	Pb	22 46 22.1	+0.6
VLK				eP	Pg	22 46 22.3	-0.8
VLK				eS	Sg	22 46 42.3	-0.4
VLK				eS	Sb	22 46 43.0	+2.8
VAR	Varanasi	3.33	222	ex	Pg	22 46 57.5	-0.3
VAR				eS	Sb	22 47 33.5	+0.7
BRCI	Bahraich	3.45	267	eP	Pn	22 46 50.0	+3.0
BOK	Bokaro	4.02	175	eP	Pn	22 46 57.5	+2.7
BOK				eP	Pn	22 46 57.6	+2.9
BOK				eS	Sn	22 47 43.4	+2.0
BOK				IAML		22 48 03.3	
	comp=E,548nm,0.6s						
BOK				IAML		22 48 04.5	
	comp=N,289nm,1.0s						
ALBI	Allahabad	4.12	234	eP	Pn	22 46 58.6	+2.5
LGTI	Lohaghat	4.87	291	eP	Pn	22 47 10.7	+4.2
LGTI				eP	Pn	22 47 10.7	+4.2
LGTI				ex	Sn	22 48 09.0	+6.6
PTH	Pithoragarh	4.93	292	eP	Pn	22 47 09.8	+2.3
PTH				eP	Pn	22 47 11.0	+3.6
PTH				eS	Sn	22 48 04.4	+0.3
LSA	Lhasa	5.33	68	Pn	Pn	22 47 16.1	+2.9
LSA	Lhasa	5.33	68	P	Pn	22 47 14.9	+1.7
LSA				S	Sg	22 48 45.3	0.0
LSA				LR	LR		
	comp=N,140nm,9.4s						
LSA				LR	LR		
	comp=E,220nm,7.9s						
LSA				LR	LR		
	comp=Z,360nm,7.3s						
SHL	Shillong	6.16	110	eP	Pn	22 47 24.6	+0.3
SHL				eS	Sn	22 48 31.9	-2.5
SHL				IAML		22 48 35.8	
	comp=N,76nm,0.8s						
BLSP	Bilaspur	6.42	209	eP	Pn	22 47 29.8	+2.0
JHNI	Jhansi	6.63	251	eP	Pn	22 47 29.2	-1.4
JHNI				ex	Sn	22 48 40.0	-5.7
JHNI				eS	Sn	22 48 40.5	-5.2
JBP	Jabalpur	6.78	228	eP	Pn	22 47 34.9	+2.2
JBP				ex	Pn	22 47 34.9	+2.2
JBP				eS	Sn	22 48 51.9	+2.5
DDI	Dehra Dun	6.95	293	eP	Pn	22 47 37.5	+2.4
DDI				eS	Sn	22 48 53.4	-0.4
NDI	New Delhi	7.33	279	eP	Pn	22 47 44.0	+3.7
KUDL	Kundal	7.95	274	eP	Pn	22 47 49.4	+0.7
KUDL				eS	Sn	22 49 16.5	-1.7
SMLA	Simla	7.96	297	eP	Pn	22 47 49.7	+0.9
SMLA				eP	Pn	22 47 49.8	+1.0
SMLA				eS	Sn	22 49 14.6	-3.7
SMLA				eS	Sn	22 49 14.8	-3.5
SMLA				IAML		22 49 19.4	
	comp=N,77nm,0.5s						
SMLA				IAML		22 49 19.4	
	comp=N,79nm,0.4s						
SMLA				IAML		22 49 19.9	
	comp=E,173nm,0.2s						
SMLA				IAML		22 49 20.0	
	comp=E,169nm,0.9s						
BHPL	Bhopal	8.57	240	eP	Pn	22 47 57.0	-0.3
BHPL				eP	Pn	22 47 57.2	-0.2
BHPL				eS	Sn	22 49 29.2	-4.4
BHPL				eS	Sn	22 49 30.6	-3.1
BHPL				IAML		22 49 32.7	
	comp=E,120nm,0.4s						
BHPL				IAML		22 49 36.5	
	comp=N,130nm,0.2s						
RAGD	RAYAGADA	8.72	193	eP	Pn	22 48 01.7	+2.4
RAGD				eS	Sn	22 49 36.0	-1.3
AJM	Ajmer	9.73	265	i S	Sn	22 49 57.0	-5.2
GOMU	GeErMu	11.52	41	P	Pn	22 48 35.8	-2.2
GOMU				pP		22 48 39.1	
GOMU				sP		22 48 40.8	
GOMU				S	Sn	22 50 40.3	-6.1
GOMU				sS		22 50 48.1	
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,31nm,5.9s						
GOMU				LR	LR		
	comp=N,73nm,8.3s						
GOMU				LR	LR		
	comp=E,68nm,10.4s						
GOMU				LR	LR		
	comp=Z,110nm,13.1s						
HYBB	Hyderabad (bro	12.15	213	eP	Pn	22 48 44.9	-1.5
HYBB				e		22 50 53.7	
KSH	Kashi	14.09	328	P	Pn	22 49 14.6	+1.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	PanZhiHua	14.55	91	P	P	22 49 22.8	-2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,50nm,3.9s						
TARG	Taragay, Kyrgy	15.24	338		Pn	22 49 27.3	-1.4
TARG				IAmb	IAmb	22 49 47.3	
	comp=Z,6.8nm,0.9s						
CHTO	Chiang Mai	15.27	123		P	22 49 33.9	+0.3
CHTO				IAmb	IAmb	22 49 35.0	
	comp=Z,7.6nm,0.8s						
CM31	Chiang Mai Arr	15.49	124	Pn	Pn	22 49 33.7	+2.0
CMAR	Chiang Mai Arr	15.49	124	Pn	Pn	22 49 30.5	-1.2
	comp=Z,0.1nm,0.3s,baz=306,slow=13,SNR=7.5						
	comp=Z,0.7nm,0.6s						
CMAR	Chiang Mai Arr	15.49	124	Pn	P	22 49 34.6	-1.4
KBL	Kabul	15.57	300	Pn	Pn	22 49 31.4	-1.5
KBL				IAmb	IAmb	22 49 38.5	
	comp=Z,16nm,1.1s						
KMI	Kunming	15.70	96	⇓P	P	22 49 40.1	+1.5
KMI				sP	sP	22 49 46.3	-0.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KDJ	Kajisay	15.81	337	Pn	Pn	22 49 35.3	-0.5
WMQ	Urumqi	16.08	6	eP	Pn	22 49 40.5	+1.3
WMQ				pP	pP	22 49 47.1	-1.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
DRK	Karamyk	16.26	319		Pn	22 49 41.2	-0.6
DRK				IAmb	IAmb	22 49 45.6	
	comp=Z,14nm,0.6s						
BOOM	Boomskoye usch	16.57	335	Pn	Pn	22 49 43.9	-1.7
GTA	Gaotai	16.61	42	eP	P	22 49 48.4	-0.1
GTA				pP	pP	22 49 52.4	-1.6
GTA				sP	sP	22 49 55.4	-1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BTK	Batken	17.21	319	Pn	Pn	22 49 50.7	-2.9
AAK	Ala-Archa	17.27	332	P	Pn	22 49 54.6	+0.2
	comp=Z,0.4nm,0.3s,baz=131,slow=7.7,SNR=6.2						
AAK				LR	LR	22 56 37.5	
	comp=Z,36nm,18.2s,baz=160,slow=37						
	comp=Z,1.2nm,0.4s						
AAK	Ala-Archa	17.27	332		Pn	22 49 54.1	-0.3
CHGR	Chuyangaron	17.39	313		Pn	22 49 55.8	0.0
CHGR				IAmb	IAmb	22 49 58.7	
	comp=Z,18nm,0.7s						
MK31	Makanchi Array	19.11	353		P	22 50 16.2	+0.2
MKAR	Makanchi Array	19.11	353	P	Pn	22 50 16.7	-0.2
	comp=Z,1.1nm,0.3s,baz=173,slow=12,SNR=48						
	comp=Z,2.8nm,0.4s						
MKAR	Makanchi Array	19.11	353	P	P	22 50 15.9	0.0
MAKZ	Makanchi	19.16	353	P	P	22 50 16.8	+0.3
KK31	Karatay Array	19.48	325	P	P	22 50 19.0	-1.0
KKAR	Karatay Array	19.48	325	P	P	22 50 18.8	-1.2
HRA	Herat	20.92	294	P	P	22 50 34.7	-1.2
PALK	Pallekele	20.92	193	P	Pn	22 50 43.0	+4.6
	comp=Z,10nm,0.9s,baz=110,slow=12,SNR=7.2						
ENH	Enshi	21.14	78	P	P	22 50 38.9	+0.8
ENH				IAmb	IAmb	22 50 46.3	
	comp=Z,10nm,0.7s						
KURBB	Kurchatov Arra	23.39	349	P	P	22 51 02.2	+0.5
	comp=Z,1.9nm,0.6s,baz=170,slow=10,SNR=16						
	comp=Z,1.9nm,0.6s						
KURK	Kurchatov	23.46	349	P	P	22 51 02.0	-0.4
KURK				IAmb	IAmb	22 51 08.6	
	comp=Z,4.3nm,0.8s						
HHC	Hu-ho-hao-te	25.06	52	eP	P	22 51 19.8	+2.3
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
WHN	Wuhan	25.34	77	P	P	22 51 26.8	+6.9
SONM	Songino Array	25.79	34	P	P	22 51 25.5	+1.4
	comp=Z,2.6nm,0.6s,baz=216,slow=10,SNR=27						
SONM				LR	LR	23 03 35.7	
	comp=Z,53nm,18.1s,baz=197,slow=41						
	comp=Z,2.6nm,0.6s						
SONM	Songino Array	25.79	34	P	P	22 51 25.2	+1.1
SONM				IAmb	IAmb	22 51 33.4	
	comp=Z,4.8nm,1.0s						
ZAA0	Zalesovo Array	26.12	359	P	P	22 51 26.7	-0.1
ZAA0				IAmb	IAmb	22 51 32.6	
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	26.12	359	P	P	22 51 27.6	+0.8
	comp=Z,4.2nm,0.6s,baz=187,slow=9.1,SNR=13						
	comp=Z,4.2nm,0.6s						
ZALV	Zalesovo Beam	26.12	359	P	P	22 51 26.6	-0.2
ULN	Ulaanbaatar	26.14	34	P	P	22 51 27.5	+0.2
ULN				IAmb	IAmb	22 51 39.4	
	comp=Z,5.7nm,0.7s						
ABKAR	Akbulak array	29.04	324	P	P	22 51 53.0	0.0
ABKAR	Akbulak array	29.04	324	P	P	22 51 52.7	-0.3

NJ2	Nanjing	29.17	73	*e*P	P	22 51 53.1	-1.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKTO	Aktyubinsk	30.74	325	LR	LR	23 06 49.4	
	comp=Z,16nm,18.2s,baz=135,slow=41						
SOCY	Socotra	33.29	248	P	P	22 52 29.9	-1.0
ARU	Arti	34.44	334	P	P	22 52 40.6	+0.2
ARU				IAmb	IAmb	22 52 45.6	
	comp=Z,4.3nm,1.3s						
RAYN	Ar Rayn	36.16	272	P	P	22 52 54.6	-1.1
KSRS	Korea Array	36.76	64	P	P	22 52 59.5	-1.1
	comp=Z,0.5nm,0.5s,baz=268,slow=8.5,SNR=2.1						
	comp=Z,0.5nm,0.5s						
MARD	Mardin	38.54	296	P	P	22 53 15.7	-0.1
MARD				IAmb	IAmb	22 53 18.5	
	comp=Z,6.7nm,0.4s						
KLR	Kul'dur	41.26	46	P	P	22 53 38.0	-0.1
	comp=Z,0.6nm,0.4s,baz=262,slow=11,SNR=2.2						
	comp=Z,0.6nm,0.4s						
NRIK	Noril'sk	41.58	1	P	P	22 53 40.4	0.0
	comp=Z,2.5nm,0.7s,baz=175,slow=5.6,SNR=4.6						
	comp=Z,2.5nm,0.7s						
TOLI2	Tolitoli	42.98	122	P	P	22 53 53.6	+1.2
TOLI2				IAmb	IAmb	22 54 10.2	
	comp=Z,7.3nm,0.7s						
BRTR	Keskin Array B	44.14	299	P	P	22 54 01.6	-0.2
	comp=Z,0.5nm,0.8s,baz=118,slow=8.3,SNR=3.1						
	comp=Z,0.5nm,0.8s						
MJAR	Matsushiro Arr	45.01	65	P	P	22 54 10.8	+2.2
	comp=Z,0.5nm,0.5s,baz=275,slow=8.3,SNR=1.7						
	comp=Z,0.5nm,0.5s						
ELL	Elmali	47.25	296	P	P	22 54 25.9	-0.5
ERM	Erimo	48.52	57	P	P	22 54 36.1	+0.2
ERM				IAmb	IAmb	22 54 46.9	
	comp=Z,9.4nm,0.9s						
MNK	Minsk	49.16	319	*i* P	P	22 54 46.9	+6.2
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	22 54 46.9	+6.2
	comp=N,9.0nm,0.8s						
MNK				*i* P	P	22 54 46.9	+6.2
	comp=Z,6.0nm,0.8s,baz=100						
MNK				*i* PP	PP	22 56 43.6	+9.3
MNK				*i* PPP	PPP	22 57 34.5	
MNK				*i* S	S	23 01 51.5	+6.3
MNK				*i* SS	SS	23 05 25.3	+9.1
MNK				*i* SSS	SSS	23 06 40.9	
MNK				*i* LQ	LQ	23 12 37.7	
MNK				*i* LR	LR	23 15 10.3	
MNK				*i* LRM	MLR	23 17 34.5	
	comp=Z,224nm,20.4s						
MNK				*i* LRM	MLR	23 17 51.1	
	comp=N,67nm,16.9s						
MNK				*i* LRM	MLR	23 18 35.6	
	comp=E,20nm,22.9s						
MLR	Muntele Rosu	49.77	307	P	P	22 54 46.3	+0.7
MLR				IAmb	IAmb	22 55 03.9	
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	49.91	17	P	P	22 54 46.2	+0.1
TIXI				IAmb	IAmb	22 54 51.8	
	comp=Z,8.7nm,1.5s						
BURAR	Bucovina Array	50.27	310	P	P	22 54 49.2	-0.2
BUR08	Bucovina Ar. S	50.29	310	P	P	22 54 49.8	+0.3
BUR08				IAmb	IAmb	22 55 04.4	
	comp=Z,6.6nm,1.5s						
FIA1	FINESS Array S	51.41	328	P	P	22 54 57.1	-0.5
FIA1				IAmb	IAmb	22 55 01.1	
	comp=Z,16nm,1.5s						
FINES	FINESS Array B	51.41	328	P	P	22 54 57.6	0.0
	comp=Z,1.8nm,0.5s,baz=105,slow=8.9,SNR=26						
	comp=Z,1.8nm,0.5s						
FINES	FINESS Array B	51.41	328	P	P	22 54 57.4	-0.3
KEV	Kevo	53.39	338	P	P	22 55 12.2	0.0
KEV				IAmb	IAmb	22 55 17.9	
	comp=Z,14nm,1.4s						
ITM	Ithomi	53.53	297	P	P	22 55 12.2	-1.6
ITM				IAmb	IAmb	22 55 39.8	
	comp=Z,11nm,1.1s						
ARA0	ARCESS Array S	53.82	338	*e*P	P	22 55 15.5	+0.2
ARCES	ARCESS Array B	53.82	338	P	P	22 55 15.7	+0.4
	comp=Z,2.8nm,0.5s,baz=103,slow=8.4,SNR=57						
	comp=Z,2.8nm,0.5s						
ARCES	ARCESS Array B	53.82	338	P	P	22 55 15.6	+0.2
ARCES				IAmb	IAmb	22 55 43.8	
	comp=Z,13nm,1.4s						
KTK1	Kautokeino	54.44	337	*e*P	P	22 55 19.9	0.0
HAMF	Hammerfest	54.75	339	*e*P	P	22 55 22.3	+0.2
JETT	Jettan, Norway	55.55	337	*e*P	P	22 55 28.1	+0.2
TRO	Tromso	56.07	337	*e*P	P	22 55 30.9	-0.6
STEI	Steigen	57.12	335	*e*P	P	22 55 39.2	+0.1
MOR8	Moi Rana	57.24	333	*e*P	P	22 55 39.0	-1.1
LOF	Lofoten	57.77	335	*e*P	P	22 55 42.8	-0.9
GERES	GERESS Array B	57.89	312	P	P	22 55 44.3	-0.8
	comp=Z,0.2nm,0.4s,baz=92,slow=6.0,SNR=2.7						
	comp=Z,0.2nm,0.4s						
GERES	GERESS Array B	57.89	312	P	P	22 55 44.5	-0.5
NSS	Namsos	58.18	331	*e*P	P	22 55 46.3	-0.3
NC602	NORSAR Array S	58.35	326	*e*P	P	22 55 47.6	-0.2
NC303	NORSAR Array S	58.43	327	P	P	22 55 47.8	-0.6
NB2	NORSAR Subarra	58.51	327	P	P	22 55 48.1	-0.9
	comp=Z,0.4nm,0.5s,baz=86,slow=7.4						
NB2	NORSAR Subarra	58.51	327	P	P	22 55 48.1	-0.9
	baz=86,slow=7.4						
NOA	NORSAR Array B	58.51	327	P	P	22 55 48.1	-0.9
	comp=Z,0.9nm,0.7s,baz=88,slow=7.1,SNR=4.8						
NOA				LR	LR	23 22 01.7	
	comp=Z,14nm,18.4s,baz=70,slow=37						
	comp=Z,0.9nm,0.7s						
SPA0	Spitsbergen Ar	58.72	347	*e*P	P	22 55 51.1	+0.9
NC204	NORSAR Array S	58.72	327	P	P	22 55 49.4	-1.1
KONO	Kongsberg	59.36	325	*e*P	P	22 55 54.5	-0.4
DOMB	Dombas	59.51	328	*e*P	P	22 55 55.4	-0.6
MOL	Molde	60.19	329	*e*P	P	22 55 59.9	-0.7
KNRA	Kununurra	60.24	130	P	P	22 56 02.1	+0.6
BLS5	Blasjo	60.98	325	*e*P	P	22 56 06.2	+0.2
MSSA	Maissana	61.48	308	P	P	22 56 09.1	-0.7
SENIN	Lac Senin/Sane	62.58	310	P	P	22 56 16.6	-0.7
BNI	Bardonecchia	63.29	309	P	P	22 56 21.5	-0.5
MORW	Morawa	63.68	150	P	P	22 56 24.7	+0.3
KEST	Kesra	63.73	298	P	P	22 56 24.5	-0.4
	comp=Z,6.8nm,1.0s,baz=295,slow=7.3,SNR=4.9						
	comp=Z,6.8nm,1.0s						
KEST	Kesra	63.73	298	P	P	22 56 23.9	-1.0
WB0	Warramunga Arr	66.91	129	P	P	22 56 46.1	+0.6
WRA	Warramunga Arr	67.00	130	P	P	22 56 47.1	+1.0
	comp=Z,3.4nm,0.6s,baz=323,slow=6.3,SNR=54						
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	67.00	130	P	P	22 56 46.9	+0.8
NWAO	Narrogin (SRO)	67.52	151	P	P	22 56 48.9	-0.2
AS31	Alice Springs	69.29	133	P	P	22 57 01.3	+0.8
AS31				IAmb	IAmb	22 57 02.1	
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	69.29	133	P	P	22 57 01.5	+1.0
	comp=Z,3.3nm,0.6s,baz=315,slow=6.4,SNR=65						
	comp=Z,3.3nm,0.6s						
ASAR	Alice Springs	69.29	133	P	P	22 57 01.0	+0.5
LSZ	Lusaka	70.09	240	P	P	22 57 05.6	-0.1
LSZ				IAmb	IAmb	22 57 16.7	
	comp=Z,3.2nm,1.3s						
EUNU	Eureka	72.27	359	P	P	22 57 18.8	+1.0
EUNU				IAmb	IAmb	22 57 26.1	
	comp=Z,1.7nm,0.8s						
ESDC	Sonseca Array	72.43	306	P	P	22 57 19.1	-0.5
	comp=Z,1.1nm,0.9s,baz=49,slow=7.6,SNR=6.5						
	comp=Z,1.1nm,0.9s						
ESDC	Sonseca Array	72.43	306	P	P	22 57 18.4	-1.1
TULEG	Thule	74.68	354	P	P	22 57 31.1	-0.8
CTAO	Charters Tower	75.65	122	P	P	22 57 39.6	+1.2
TOLK	Toolik Lake Re	75.77	18	P	P	22 57 38.2	-0.2
TOLK				IAmb	IAmb	22 57 40.0	
	comp=Z,2.5nm,0.8s						
IMAR	Indian Mountai	76.24	21	P	P	22 57 41.9	+0.8
BMAR	Burnt Mountain	77.96	18	P	P	22 57 52.1	+1.2
LBTB	Lobatse	77.98	233	P	P	22 57 51.7	+0.1
LBTB				IAmb	IAmb	22 57 52.5	
	comp=Z,2.4nm,0.8s						
TOA0	Torodi Ar. Sit	78.55	279	P	P	22 57 54.3	-0.7
TOA0				IAmb	IAmb	22 57 55.4	
	comp=Z,2.7nm,0.8s						
TORD	Torodi Ar. Bea	78.55	279	P	P	22 57 54.5	-0.5
	comp=Z,1.7nm,0.5s,baz=58,slow=4.8,SNR=34						
	comp=Z,1.7nm,0.5s						
ILAR	Eielson Array	79.20	20	P	P	22 57 57.5	-0.1
	comp=Z,0.4nm,0.7s,baz=311,slow=4.7,SNR=5.8						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	79.20	20	P	P	22 57 57.7	+0.1
STKA	Stephens Creek	79.86	134	P	P	22 58 02.4	+0.8
BOSA	Boshof	80.46	231	P	P	22 58 04.3	-0.8
	comp=Z,3.4nm,0.9s,baz=30,slow=7.4,SNR=4.9						
	comp=Z,3.4nm,0.9s						
BOSA	Boshof	80.46	231	P	P	22 58 04.6	-0.6
BOSA				IAmb	IAmb	22 58 17.2	
	comp=Z,10nm,1.4s						
KDAK	Kodiak Island	81.91	27	P	P	22 58 12.2	0.0
KDAK				IAmb	IAmb	22 58 37.9	
	comp=Z,4.6nm,1.1s						
BCAR	Beaver Creek A	81.99	20	P	P	22 58 13.4	+0.7
KOWA	Kowa	82.93	283	P	P	22 58 18.4	+0.1
KOWA				IAmb	IAmb	22 58 25.3	
	comp=Z,4.4nm,1.2s						
DBIC	Dimbokro	87.22	276	P	P	22 58 39.3	-0.6
	comp=Z,6.9nm,1.1s,baz=69,slow=8.6,SNR=1.9						
	comp=Z,6.9nm,1.1s						
DBIC	Dimbokro	87.22	276	P	P	22 58 39.3	-0.6
YKA	Yellowknife Ar	88.58	9	P	P	22 58 45.3	-0.2
	comp=Z,0.5nm,0.7s,baz=336,slow=5.2,SNR=7.5						
	comp=Z,0.5nm,0.7s						
TXAR	Lajitas Array	122.51	9	PKP	PKPdf	23 04 47.5	-1.5
	comp=Z,0.1nm,0.7s,baz=337,slow=1.2,SNR=2.2						

IDC ***14*** *22:49:23.5±0.7, 1°.02N×98°.72E, h95^{km}±4^{km}, mb3.7/13, mbtmp4.1/15, MS3.8/7, Error ellipse: s-maj=19.5km s-min=9.9km az=102.0*

DJA ***14*** *22:49:23.9±0.3, 1°N±2°×9°9E±°, h91^{km}±4^{km}, M4.5/18, mb4.6/7, mB5.5/1, MLv4.5/18, Mw(mB)5.0/1*

NEIC ***14*** *22:49:24.2±1.9, 0°.92N±0°.07×98°.83E±0°.06, h100^{km}±6^{km}, mb4.5/34, Error ellipse: s-maj=10.2km s-min=7.7km az=208.0*

ISC 14 22:49:23.3±0.6**, 0°.94N**±0°.05×**98°.84E**±0°.04**, h98**^{km}±4^{km}**, n89, σ1^{s}08**/94**, mb4.3**/26**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBSI	Sibolga	0.61	5	P	Pn	22 49 41.6	+1.8
SBSI				S	Sn	22 49 55.0	+2.9
MNSI	Mandailing Nat	0.76	101	P	Pn	22 49 42.4	+1.4
MNSI				S	Sn	22 49 55.8	+1.4
GSI	Gunungsitoli	1.31	286		Pn	22 49 48.3	+1.1
GSI				Sn	Sn	22 50 05.9	+0.7
GSI	Gunungsitoli	1.31	286	P	Pn	22 49 48.5	+1.3
GSI				S	Sn	22 50 06.1	+0.9
RPSI	Rantau Prapat	1.75	3		Pn	22 49 53.7	+1.1
PSI	Prapat	1.85	3	P	Pn	22 49 53.7	-0.4
	64nm,0.4s,baz=277,slow=2.2,SNR=60						
PSI				S	Sn	22 50 13.2	-4.3
	102nm,0.3s,baz=180,slow=11,SNR=7.1						
PPI	Padang Panjang	2.09	132	P	Pn	22 49 58.7	+1.8
SISI	Saibi	2.26	174	P	Pn	22 49 59.7	+0.4
BKNI	Bangkinang	2.29	105	Pn	Pn	22 50 00.7	+1.2
BKNI	Bangkinang	2.29	105	P	Pn	22 50 00.6	+1.1
TSI	Tuntungan	2.56	354	P	Pn	22 50 03.9	+0.7
KCSI	Kotacane, Aceh	2.78	338	P	Pn	22 50 06.4	+0.3
RGRI	Rengat	3.72	110	P	Pn	22 50 19.4	+0.7
PPSI	Pulau Pagai	3.86	162	P	Pn	22 50 19.1	-1.5
KRJI	Kerinci	3.99	139	P	Pn	22 50 22.7	+0.2
IPM	Ipoh	4.14	32		Pn	22 50 26.2	+1.8
LHMI	Lhok Sumawe	4.66	336	Pn	Pn	22 50 32.8	+1.3
LHMI	Lhok Sumawe	4.66	336	P	Pn	22 50 32.6	+1.2
KULM	Kulim	4.69	23		Pn	22 50 32.7	+0.9
MASI	Maura Aman, Be	5.29	140	P	Pn	22 50 40.6	+0.6
	1.0nm221nm,1.2s						
BSI	Banda Aceh	5.75	322	P	Pn	22 50 47.3	+1.1
MNAI	Manna	6.68	142	Pn	Pn	22 50 58.5	-0.4
MNAI	Manna	6.68	142	P	Pn	22 50 58.7	-0.2
	1.2nm143nm,0.6s						
KASI	Kota Agung	8.55	139	P	Pn	22 51 23.2	-1.2
	18nm,0.4s						
TPI	Tanjungpandan	9.55	113	P	Pn	22 51 38.3	+0.4
CMAR	Chiang Mai Arr	17.41	0	P	Pn	22 53 20.8	+0.6
	2.2nm,0.3s,baz=188,slow=12,SNR=12						
PALK	Pallekele	19.14	290	P	P	22 53 39.4	+0.3
	5.7nm,0.6s,baz=141,slow=16,SNR=1.9						
PALK	Pallekele	19.14	290	P	Pn	22 53 41.2	+0.2
PALK				IAmb	IAmb	22 54 09.1	
	comp=Z,45nm,1.4s						
MYLDM	Lahad Datu	20.08	77	P	Pn	22 53 51.5	-0.3
TOLI2	Tolitoli	21.94	89	P	P	22 54 09.6	+0.4
H08S2	Diego Garcia H	27.62	252	T	T	23 22 47.0	
	baz=73,slow=75,SNR=137						
H08S3	Diego Garcia H	27.62	252	T	T	23 22 44.2	
	baz=73,slow=75,SNR=202						
H08S1	Diego Carcia H	27.64	252	T	T	23 22 47.0	
	baz=73,slow=75,SNR=30						
ENH	Enshi	30.88	18	P	P	22 55 29.5	-1.1
ENH				IAmb	IAmb	22 55 31.3	
	comp=Z,5.8nm,0.8s						
WRA	Warramunga Arr	40.51	123	PcP	PcP	22 58 53.6	-0.4
	comp=Z,0.4nm,0.3s,baz=319,slow=2.3,SNR=7.8						
WRA				LR	LR	23 13 32.6	
	comp=Z,517nm,21.1s,baz=62,slow=36						
WR0	Warramunga Arr	40.69	123	P	P	22 56 52.5	-2.0
WR0				IAmb	IAmb	22 56 53.1	
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	41.94	128	PcP	PcP	22 58 58.2	-0.3
	comp=Z,0.6nm,0.7s,baz=298,slow=2.7,SNR=5.0						
ASAR				LR	LR	23 13 31.0	
	comp=Z,347nm,21.8s,baz=108,slow=34						
BJT	Baijiatuau	41.98	20	P	P	22 57 04.2	-0.5
BJT				IAmb	IAmb	22 57 06.8	
	comp=Z,12nm,0.7s						
JNU	Nakatsue	43.94	40	P	P	22 57 22.2	+1.5
KDJ	Kajisay	45.40	337	P	P	22 57 33.2	+0.8
KDJ				IAmb	IAmb	22 57 57.4	
	comp=Z,3.2nm,0.8s						
DRK	Karamyk	45.61	331	P	P	22 57 35.4	+1.1
BOOM	Boomskoye usch	46.19	336	P	P	22 57 39.9	+1.3
BOOM				IAmb	IAmb	22 58 03.0	
	comp=Z,2.6nm,0.6s						
SONM	Songino Array	47.17	7	P	P	22 57 47.2	+1.1
	comp=Z,1.3nm,0.4s,baz=189,slow=9.7,SNR=18						
SONM				PcP	PcP	22 59 16.4	+0.2
	comp=Z,1.4nm,0.4s,baz=194,slow=4.0,SNR=9.4						
	comp=Z,1.3nm,0.4s						
SONM	Songino Array	47.17	7	P	P	22 57 46.8	+0.8
SONM				PcP	PcP	22 59 16.5	+0.3
GUMO	Guam	47.25	72	LR	LR	23 17 30.3	
	comp=Z,113nm,21.9s,baz=134,slow=36						
MK31	Makanchi Array	47.91	345	P	P	22 57 52.0	+0.3
MKAR	Makanchi Array	47.91	345	P	P	22 57 52.3	+0.6
	comp=Z,2.3nm,0.5s,baz=153,slow=9.0,SNR=40						
MKAR				pP	pP	22 58 14.4	-0.6
	comp=Z,1.3nm,0.6s,baz=155,slow=7.5,SNR=4.5						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	47.91	345	P	P	22 57 52.1	+0.5
MAKZ	Makanchi	48.00	344	P	P	22 57 53.0	+0.6
BBOO	Buckleboo	48.57	137	P	P	22 57 56.0	-1.0
PMG	Port Moresby	49.20	103	P	P	22 58 03.2	+1.1
	comp=Z,23nm,0.4s,baz=284,slow=4.2,SNR=7.8						
PMG	Port Moresby	49.20	103	P	P	22 58 02.2	+0.1
JSD	Sado	51.70	40	P	P	22 58 21.5	+1.0
STKA	Stephens Creek	51.97	133	P	P	22 58 21.8	-0.8
STKA				IAmb	IAmb	22 58 35.5	
	comp=Z,4.5nm,1.4s						
USRK	Ussuriysk Ar.	52.17	30	P	P	22 58 24.0	+0.1
	comp=Z,4.7nm,0.8s,baz=232,slow=7.1,SNR=5.5						
	comp=Z,4.7nm,0.8s						
KURBB	Kurchatov Arra	52.42	344	P	P	22 58 25.6	0.0
	comp=Z,1.2nm,0.7s,baz=162,slow=7.2,SNR=9.0						
KURBB				pP	pP	22 58 48.5	-0.8
	comp=Z,0.9nm,0.5s,baz=163,slow=7.1,SNR=4.6						
	comp=Z,1.2nm,0.7s						
KURK	Kurchatov	52.48	344	P	P	22 58 26.6	+0.5
KURK				IAmb	IAmb	22 58 27.4	
	comp=Z,2.3nm,0.8s						
ZAA0	Zalesovo Array	54.09	350	P	P	22 58 37.6	-0.2
ZAA0				IAmb	IAmb	22 58 38.3	
	comp=Z,2.5nm,0.6s						
ZALV	Zalesovo Beam	54.09	350	P	P	22 58 37.6	-0.2
	comp=Z,2.4nm,0.4s,baz=165,slow=6.6,SNR=13						
ZALV				pP	pP	22 58 59.9	-1.7
	comp=Z,1.5nm,0.4s,baz=164,slow=6.2,SNR=4.4						
	comp=Z,2.4nm,0.4s						
ABKAR	Akbulak array	58.52	331	P	P	22 59 09.2	-0.2
ABKAR				IAmb	IAmb	22 59 10.0	
	comp=Z,2.5nm,0.7s						
ABKAR	Akbulak array	58.52	331	P	P	22 59 09.0	-0.4
CAN	Canberra	59.04	133	P	P	22 59 13.1	-0.3
AKTO	Aktyubinsk	60.24	331	LR	LR	23 27 36.5	
	comp=Z,14nm,18.8s,baz=319,slow=38						
KBZ	Khabaz	65.34	319	P	P	22 59 55.1	-0.1
	comp=Z,1.8nm,0.9s,baz=100,slow=6.1,SNR=4.1						
KBZ				LR	LR	23 30 48.3	
	comp=Z,11nm,19.1s,baz=74,slow=38						
	comp=Z,1.8nm,0.9s						
CSS	Mathiatis	69.53	307	P	P	23 00 22.1	+0.3
CSS				IAmb	IAmb	23 00 51.1	
	comp=Z,9.6nm,1.5s						
BR131	Keskin Array S	70.50	312	P	P	23 00 27.2	-0.6
BR131				IAmb	IAmb	23 00 27.7	
	comp=Z,2.4nm,0.6s						
BRTR	Keskin Array B	70.50	312	P	P	23 00 25.9	-2.0
	comp=Z,1.0nm,0.6s,baz=130,slow=8.7,SNR=10						
BRTR				pP	PcP	23 00 50.5	+1.9
	comp=Z,0.7nm,0.6s,baz=136,slow=6.3,SNR=4.3						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	70.50	312	P	P	23 00 27.1	-0.6
BZK	Bozkurt	70.86	314	P	P	23 00 28.8	-1.0
PEA0B	Petropavlovsk-	71.06	33	P	P	23 00 30.3	-0.5
PEA0B				IAmb	IAmb	23 00 51.3	
	comp=Z,20nm,1.3s						
PETK	Petropavlovsk-	71.06	33	P	P	23 00 30.1	-0.6
	comp=Z,1.5nm,0.8s,baz=170,slow=2.7,SNR=5.5						
PETK				LR	LR	23 31 14.0	
	comp=Z,78nm,21.9s,baz=158,slow=35						
	comp=Z,1.5nm,0.8s						
TIXI	Tiksi	73.17	10	P	P	23 00 42.6	-0.3
BOSA	Boshof	76.07	240	P	P	23 01 01.9	+1.1
	comp=Z,1.5nm,0.9s,baz=166,slow=19,SNR=1.8						
	comp=Z,1.5nm,0.9s						
BOSA	Boshof	76.07	240	P	P	23 01 01.5	+0.7
BOSA				IAmb	IAmb	23 01 07.7	
	comp=Z,7.3nm,1.2s						
AKASG	Malin Array Be	76.47	322	P	P	23 01 01.5	-0.9
	comp=Z,0.1nm,0.2s,baz=69,slow=3.2,SNR=1.5						
AKASG				pP	pP	23 01 25.8	-1.8
	comp=Z,0.1nm,0.3s,baz=90,slow=4.6,SNR=2.9						
	comp=Z,0.1nm,0.2s						
BURAR	Bucovina Array	78.30	318	P	P	23 01 13.6	+0.8
BUR08	Bucovina Ar. S	78.32	319	P	P	23 01 13.8	+0.9
THZ	Tophouse	78.78	133	P	P	23 01 15.4	-0.2
FINES	FINESS Array B	80.99	332	P	P	23 01 26.4	-0.5
	comp=Z,0.6nm,0.5s,baz=99,slow=7.2,SNR=12						
FINES				pP	pP	23 01 51.3	-1.1
	comp=Z,1.3nm,0.8s,baz=100,slow=7.9,SNR=1.8						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	80.99	332	P	P	23 01 26.6	-0.3
BKZ	Black Stump Fm	81.03	130	P	P	23 01 26.9	-0.8
BKZ				IAmb	IAmb	23 01 27.7	
	comp=Z,13nm,1.2s						
ARCES	ARCESS Array B	83.33	340	P	P	23 01 39.1	+0.1
	comp=Z,0.8nm,0.4s,baz=106,slow=4.2,SNR=16						
ARCES				pP	pP	23 02 04.5	-0.2
	comp=Z,1.7nm,0.7s,baz=104,slow=3.0,SNR=2.8						
	comp=Z,0.8nm,0.4s						
ARCES	ARCESS Array B	83.33	340	P	P	23 01 39.2	+0.1
ARCES				IAmb	IAmb	23 02 05.4	
	comp=Z,9.4nm,1.4s						
VNDA	Vanda	85.25	169	P	P	23 01 49.5	+1.0
	comp=Z,0.3nm,0.6s,baz=304,slow=6.6,SNR=5.1						
	comp=Z,0.3nm,0.6s						
VNDA	Vanda	85.25	169	P	P	23 01 49.4	+0.8
SNAA	Sanae	94.56	198	LR	LR	23 42 50.0	
	comp=Z,91nm,18.5s,baz=172,slow=34						
TXAR	Lajitas Array	143.00	34	PKhKP	PKPpre	23 08 42.4	
	comp=Z,0.2nm,0.3s,baz=12,slow=0.3,SNR=9.9						
BDFB	Brasilia	144.18	244	PKP	PKPbc	23 08 47.6	+0.3
	comp=Z,1.4nm,0.5s,baz=79,slow=7.7,SNR=3.5						
CPUP	Villa Florida	145.89	220	PKPbc	PKPab	23 08 52.5	-0.2
	comp=Z,3.5nm,0.9s,baz=149,slow=3.1,SNR=8.3						
CPUP				pPKPbc	pPKPbc	23 09 18.9	0.0
	comp=Z,0.8nm,0.6s,baz=70,slow=8.9,SNR=2.3						

IDC ***14*** *22:52:19.9±0.8, 22°.54S×173°.04E, h0^{km}, mb4.2/14, mbtmp4.3/17, ML4.2/3, MS4.0/37, Error ellipse: s-maj=22.5km s-min=16.8km az=92.0*

NEIC ***14*** *22:52:22.1±1.1, 22°.47S±0°.09×173°.0E±0°.1, h10^{km}±1^{km}, mb4.9/35, Error ellipse: s-maj=16.1km s-min=14.8km az=67.0*

GCMT ***14*** *22:52:26.1±0.3, 22°.55S±0°.02×172°.99E±0°.02, h24^{km}±1^{km}, MW5.0/97, Moment Tensor Solution. s19,c22; s97,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.73±.26; $M_{\theta\theta}$-1.69±.15; $M_{\phi\phi}$4.42±.18; $M_{r\theta}$0.21±.23; $M_{\theta\phi}$0.36±.11; $M_{\phi r}$0.19±.19; Best double couple: $M_0$3.61000×10^{16} NP1:ϕ_s353.00000°, δ44.00000°, λ-105.00000°. NP2: ϕ_s194.00000°, δ48.00000°, λ-75.00000°. Principal axes: T 4.4470, Plg2.0000°, Azm273.0000°; N -1.6730, Plg11.0000°, Azm4.0000°; P -2.7740, Plg79.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 22:52:21.7±0.5**, 22°.53S**±0°.07×**172°.98E**±0°.07**, h10**^{km}**, n121, σ1^{s}00**/83**, mb4.7**/29**, MS4.1**/36**, 1C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.71	282	Pn	Pn	22 53 31.9	-0.9
PINNC	Pines Island,	5.12	268	Pn	Pn	22 53 38.8	+0.4
LIFNC	LIFOU	5.62	287	Pn	Pn	22 53 44.6	-0.6
OUENC	Ouen Island, N	5.68	270		Pn	22 53 46.3	+0.2
ONTNC	Ouen Toro	6.04	271	Pn	Pn	22 53 51.3	+0.1
DZM	Mont Dzumac	6.07	273	Pn	Pn	22 53 51.5	-0.1
	5.6nm,0.3s,baz=131,slow=14,SNR=64						
DZM				Sn	Sn	22 54 59.7	-1.5
	3.8nm,0.3s,baz=120,slow=23,SNR=6.7						
	14nm,0.3s						
DZM	Mont Dzumac	6.07	273	*e*Pn	Pn	22 53 50.6	-1.0
	113nm,1.0s						
DZM				*e*Sn	Sn	22 55 00.6	-0.6
DZM				*e*LR	LR	22 55 22.2	
	comp=Z,4µm,24.4s						
DZM	Mont Dzumac	6.07	273	Pn	Pn	22 53 51.8	+0.2
RAO	Raoul Island	10.58	131	LR	LR	22 57 44.7	
	comp=Z,976nm,20.7s,baz=331,slow=31						
OUZ	Omahuta	12.66	178		Pn	22 55 22.8	+1.0
HIZ	Hauiti	16.01	175	P	P	22 56 11.5	+1.0
HIZ				IAmb	IAmb	22 56 16.0	
	comp=Z,192nm,1.2s						
URZ	Urewera	16.07	168	Pn	Pn	22 56 05.7	-2.1
	comp=Z,0.2nm,0.3s,baz=313,slow=20,SNR=1.6						
URZ				LR	LR	23 00 53.8	
	comp=Z,840nm,19.3s,baz=31,slow=32						
	comp=Z,4.4nm,0.9s						
URZ	Urewera	16.07	168		P	22 56 11.4	+0.2
URZ				IAmb	IAmb	22 56 16.1	
	comp=Z,104nm,1.1s						
AFI	Afiamalu	16.82	62	LR	LR	23 02 03.5	
	comp=Z,165nm,21.2s,baz=236,slow=35						
BKZ	Black Stump Fm	16.85	171		P	22 56 20.7	+0.8
BKZ				IAmb	IAmb	22 56 25.4	
	comp=Z,132nm,1.3s						
HNR	Honiara	18.05	314	P	P	22 56 34.4	+1.2
	comp=Z,5.2nm,0.3s,baz=217,slow=6.2,SNR=1.6						
HNR				LR	LR	23 02 18.6	
	comp=Z,248nm,18.5s,baz=150,slow=33						
	comp=Z,47nm,0.5s						
HNR	Honiara	18.05	314		P	22 56 32.9	-0.3
HNR				IAmb	IAmb	22 56 40.5	
	comp=Z,200nm,1.2s						
BFZ	Birch Farm	18.31	172	P	P	22 56 36.5	+0.6
BFZ				IAmb	IAmb	22 56 39.9	
	comp=Z,54nm,0.9s						
TUWZ	Tuamarina	18.86	178	P	Pn	22 56 43.7	+1.2
EIDS	Eidsvold	20.21	258	P	Pn	22 56 58.9	+0.2
EIDS				IAmb	IAmb	22 57 06.6	
	comp=Z,123nm,1.4s						
ARMA	Armidale	20.64	243	P	Pn	22 57 03.4	-0.5
RPZ	Rata Peaks	21.19	184	P	P	22 57 06.7	-0.6
	comp=Z,35nm,0.9s,baz=11,slow=1.2,SNR=7.9						
RPZ				LR	LR	23 04 57.3	
	comp=Z,869nm,18.0s,baz=343,slow=36						
	comp=Z,35nm,0.9s						
RPZ	Rata Peaks	21.19	184	P	P	22 57 09.1	+1.8
RPZ				IAmb	IAmb	22 57 10.4	
	comp=Z,58nm,1.0s						
CAN	Canberra	24.48	233	P	P	22 57 41.1	0.0
CAN				IAmb	IAmb	22 57 45.5	
	comp=Z,43nm,1.3s						
CTA	Charters Tower	25.01	271	P	P	22 57 47.2	+1.2
	comp=Z,6.6nm,0.7s,baz=56,slow=2.0,SNR=2.7						
CTA				LR	LR	23 07 37.1	
	comp=Z,547nm,18.4s,baz=90,slow=37						
	comp=Z,6.6nm,0.7s						
CTAO	Charters Tower	25.01	271	P	P	22 57 47.3	+1.4

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CTAO                                    IAmb     IAmb     22 57 50.0
      comp=Z,14nm,1.1s
RAR   Rarotonga          25.31  92      LR       LR       23 07 32.4
      comp=Z,172nm,18.2s,baz=260,slow=36
PMG   Port Moresby       27.98 294      LR       LR       23 07 47.8
      comp=Z,401nm,19.3s,baz=146,slow=33
STKA  Stephens Creek     29.34 245      P        P        22 58 25.7 +0.9
      comp=Z,1.6nm,0.5s,baz=76,slow=6.8,SNR=5.3
STKA                                    LR       LR       23 10 45.9
      comp=Z,157nm,18.0s,baz=68,slow=38
      comp=Z,1.6nm,0.5s
BBOO  Buckleboo          34.11 244      P        P        22 59 07.0 +0.3
TBI   Tubuai             34.54  99      eLR      LR       23 07 51.8
      comp=Z,686nm,30.8s,baz=266
PPT2  Papeete2           35.45  89      eLR      LR       23 08 25.2
      comp=Z,819nm,27.0s,baz=252
PPT   Papeete            35.46  89      LR       LR       23 09 35.0
      comp=Z,472nm,20.1s,baz=256,slow=29
WR0   Warramunga Arr     35.85 267      P        P        22 59 20.8 -1.1
AS31  Alice Springs      35.89 260      P        P        22 59 22.1 -0.1
ASAR  Alice Springs      35.89 260      P        P        22 59 21.4 -0.9
      comp=Z,3.7nm,1.0s,baz=90,slow=8.7,SNR=17
      comp=Z,3.7nm,1.0s
ASAR  Alice Springs      35.89 260      P        P        22 59 22.2  0.0
WB0   Warramunga Arr     36.03 267      P        P        22 59 22.7 -0.7
WRA   Warramunga Arr     36.04 267      P        P        22 59 22.2 -1.4
      comp=Z,1.1nm,0.6s,baz=97,slow=8.6,SNR=7.9
      comp=Z,1.1nm,0.6s
WRA   Warramunga Arr     36.04 267      P        P        22 59 22.2 -1.4
FORT  Forrest            40.76 249      P        P        23 00 03.0 -0.1
FORT                                    IAmb     IAmb     23 00 16.9
      comp=Z,24nm,0.8s
MTN   Manton Dam         40.90 276      P        P        23 00 03.6 -0.8
MTN                                     IAmb     IAmb     23 00 40.3
      comp=Z,22nm,1.2s
H11S2 WAKE ISLAND Hy     41.23 351      T        T        23 43 52.7
      baz=171,slow=76,SNR=30
H11S3 WAKE ISLAND Hy     41.23 351      T        T        23 43 48.9
      baz=171,slow=76,SNR=22
H11S1 WAKE ISLAND Hy     41.25 351      T        T        23 43 49.8
      baz=171,slow=76,SNR=49
KNRA  Kununurra          42.22 271      P        P        23 00 15.0 -0.2
H11N1 WAKE ISLAND Hy     42.41 351      T        T        23 45 24.0
      baz=172,slow=76,SNR=11
H11N3 WAKE ISLAND Hy     42.41 352      T        T        23 45 20.9
      baz=172,slow=76,SNR=7.2
H11N2 WAKE ISLAND Hy     42.42 351      T        T        23 45 20.9
      baz=172,slow=76,SNR=7.7
SIJI  Sorong             45.91 292      LR       LR       23 19 43.1
      comp=Z,222nm,21.7s,baz=118,slow=36
TAOE  Nuku Hiva Isla     46.93  81      eLR      LR       23 13 45.2
      comp=Z,691nm,26.8s
BATI  Baumata            48.67 276      LR       LR       23 21 45.3
      comp=Z,682nm,20.8s,baz=131,slow=36
MBWA  Marble Bar         49.23 261      P        P        23 01 09.6 -1.0
MBWA                                    IAmb     IAmb     23 01 25.2
      comp=Z,22nm,1.5s
NWAO  Narrogin (SRO)     49.92 245      P        P        23 01 15.3 -0.6
EDFI  Ende, Flores       51.01 277      P        P        23 01 25.2 +0.8
      comp=Z,6.9nm,1.8s
MORW  Morawa             51.27 250      P        P        23 01 25.4 -0.6
MORW                                    IAmb     IAmb     23 02 01.4
      comp=Z,28nm,1.4s
KAPI  Kappang            54.23 280      LR       LR       23 25 04.7
      comp=Z,70nm,19.5s,baz=122,slow=36
DAV   Davao City (W)     54.93 297      LR       LR       23 24 28.1
      comp=Z,63nm,20.9s,baz=140,slow=35
VNDA  Vanda              55.31 183      P        P        23 01 55.1 +0.1
      comp=Z,3.9nm,0.8s,baz=13,slow=6.5,SNR=25
VNDA                                    LR       LR       23 21 37.9
      comp=Z,270nm,21.8s,baz=11,slow=32
      comp=Z,3.9nm,0.8s
VNDA  Vanda              55.31 183      P        P        23 01 55.6 +0.7
VNDA                                    IAmb     IAmb     23 01 56.7
      comp=Z,6.4nm,0.9s
SBA   Scott Base         55.46 182      P        P        23 01 56.5 +0.5
TOLI2 Tolitoli           55.99 288      P        P        23 02 00.5 -0.3
TOLI2                                   IAmb     IAmb     23 02 01.7
      comp=Z,13nm,1.0s
CASY  Casey              58.57 205      P        P        23 02 18.2 -0.1
LEM   Lembang            64.68 273      LR       LR       23 31 58.6
      comp=Z,140nm,18.1s,baz=152,slow=37
MJAR  Matsushiro Arr     67.31 330      P        P        23 03 16.7 -0.1
      comp=Z,2.0nm,0.8s,baz=152,slow=9.0,SNR=6.1
      comp=Z,2.0nm,0.8s
QSPA  South Pole Qui     67.54 180      LR       LR       23 30 20.9
      comp=Z,127nm,19.1s,baz=51,slow=34
QSPA  South Pole Qui     67.54 180      P        P        23 03 18.4 +0.3
RPN   Rapa Nui           69.60 112      LR       LR       23 25 39.2
      comp=Z,91nm,20.8s,baz=254,slow=29
KSRS  Korea Array        73.20 324      P        P        23 03 53.6 +0.8
      comp=Z,0.6nm,0.5s,baz=161,slow=5.3,SNR=4.5
      comp=Z,0.6nm,0.5s
YSS   Yuzh-Sakhalins     74.35 339      P        P        23 04 00.2 +0.9
NJ2   Nanjing            75.00 315      eP       P        23 04 03.5 +0.1
NJ2                                     pmax     pmax
      comp=Z,9.0nm,0.5s
USRK  Ussuriysk Ar.      76.27 331      P        P        23 04 10.8 +0.4
      comp=Z,2.5nm,0.8s,baz=95,slow=6.5,SNR=3.6
      comp=Z,2.5nm,0.8s
PSI   Prapat             76.40 279      LR       LR       23 39 52.3
      comp=Z,118nm,18.3s,baz=128,slow=37
PEA0B Petropavlovsk-     76.48 351      P        P        23 04 12.6 +1.1
PETK  Petropavlovsk-     76.48 351      P        P        23 04 12.7 +1.3
      comp=Z,1.8nm,0.5s,baz=151,slow=5.9,SNR=9.1
      comp=Z,1.8nm,0.5s
PETK  Petropavlovsk-     76.48 351      P        P        23 04 11.4  0.0
MAW   Mawson             76.70 202      P        P        23 04 13.4 +0.8
      comp=Z,4.3nm,0.7s,baz=118,slow=7.6,SNR=12
MAW                                     LR       LR       23 34 50.4
      comp=Z,107nm,18.2s,baz=86,slow=33
      comp=Z,4.3nm,0.7s
MAW   Mawson             76.70 202      P        P        23 04 13.3 +0.6
NIKH  Nikolski High      76.83  11      P        P        23 04 13.6 +0.2
BELA  Belgrano 2         78.51 174      P        P        23 04 21.8 -0.8
BELA                                    IAmb     IAmb     23 04 33.4
      comp=Z,9.6nm,1.2s
SMAI  San Martin Ant     79.60 161      P        P        23 04 28.7  0.0
SMAI                                    IAmb     IAmb     23 04 37.0
      comp=Z,18nm,1.1s
KLR   Kul'dur            80.32 334      LR       LR       23 38 29.7
      comp=Z,33nm,19.3s,baz=56,slow=34
MA2   Magadan            83.82 349      LR       LR       23 39 44.8
      comp=Z,58nm,18.5s,baz=122,slow=34
PZH   PanZhiHua          84.41 302      P        P        23 04 57.1 +2.2
PZH                                     pmax     pmax
      comp=Z,10.0nm,0.5s
PZH                                     pmax     pmax
      comp=Z,40nm,5.8s
HHC   Hu-ho-hao-te       84.99 318      eP       P        23 04 59.4 +2.0
HHC                                     pmax     pmax
      comp=Z,23nm,0.9s
HHC                                     pmax     pmax
      comp=Z,100nm,5.0s
CD2   Chengdu            85.00 306      eP       P        23 04 58.0 +0.4
TROLL Troll, Antarti     85.48 183      P        P        23 04 58.3 -1.2
SNAA  Sanae              86.01 181      P        P        23 04 58.5 -3.6
SNAA  Sanae              86.01 181      P        P        23 05 00.8 -1.3
SNAA                                    IAmb     IAmb     23 05 08.0
      comp=Z,13nm,1.3s
VNA3  Neumayer Olymp     86.46 179      P        P        23 05 03.2 -1.1
SEY   Seymchan           86.72 351      LR       LR       23 36 39.5
      comp=Z,100nm,21.4s,slow=31
YBH   Yreka Blue Hor     87.28  42      LR       LR       23 39 32.2
      comp=Z,61nm,18.1s,baz=238,slow=32
PFO   Pinyon Flats O     87.31  52      LR       LR       23 38 21.7
      comp=Z,60nm,18.2s,baz=220,slow=32
LPIG  La Paz             87.74  63      LR       LR       23 35 34.9
      comp=Z,62nm,20.6s,baz=227,slow=30
NVAR  Mina Array Bea     88.41  47      P        P        23 05 12.8 -1.6
      comp=Z,0.1nm,0.3s,baz=211,slow=6.9,SNR=2.2
      comp=Z,0.1nm,0.3s
NVAR  Mina Array Bea     88.41  47      P        P        23 05 13.8 -0.6
BBB   Bella Bella        90.36  32      LR       LR       23 37 28.0
      comp=Z,80nm,21.2s,baz=212,slow=30
YAK   Yakutsk            91.07 341      LR       LR       23 45 31.8
      comp=Z,43nm,18.1s,baz=89,slow=35
M27K  Edge Creek, AK     91.88  19      P        P        23 05 30.7 +0.8
M27K                                    IAmb     IAmb     23 05 44.1
      comp=Z,6.8nm,1.2s
SONM  Songino Array      91.95 322      P        P        23 05 29.6 -0.9
      comp=Z,0.3nm,0.5s,baz=76,slow=6.1,SNR=3.5
      comp=Z,0.3nm,0.5s
ILAR  Eielson Array      92.36  16      P        P        23 05 30.6 -1.3
      comp=Z,0.3nm,0.7s,baz=233,slow=4.9,SNR=4.1
ILAR                                    LR       LR       23 41 26.9
      comp=Z,113nm,20.0s,baz=237,slow=32
      comp=Z,0.3nm,0.7s
J25K  Salcha River,      92.63  17      P        P        23 05 33.7 +0.5
J25K                                    IAmb     IAmb     23 05 42.4
      comp=Z,6.7nm,1.4s
DLBC  Dease Lake         93.39  26      LR       LR       23 42 50.2
      comp=Z,86nm,19.0s,baz=164,slow=32
PLCA  Paso Flores        93.76 137      LR       LR       23 36 54.1
      comp=Z,34nm,21.0s,baz=232,slow=28
NEW   Newport            94.08  39      LR       LR       23 44 26.4
      comp=Z,28nm,18.4s,baz=258,slow=33
TXAR  Lajitas Array      95.29  61      LR       LR       23 42 15.5
      comp=Z,98nm,18.5s,baz=210,slow=32
PDAR  Pinedale Array     96.31  46      LR       LR       23 42 37.2
      comp=Z,29nm,19.8s,baz=250,slow=31
CMIG  Matias Romero      98.29  75      LR       LR       23 40 40.1
      comp=Z,78nm,19.6s,baz=212,slow=30
INK   Inuvik             98.58  18      LR       LR       23 44 42.7
      comp=Z,66nm,21.0s,baz=232,slow=32
TIXI  Tiksi              98.69 347      LR       LR       23 45 00.4
      comp=Z,54nm,21.8s,baz=184,slow=32
WMQ   Urumqi            102.00 312 ⇑iP       Pdif     23 06 17.0 +0.9
WMQ                                     pP       pwP      23 06 27.8 +3.3
ARCES ARCESS Array B    129.11 346      PKP      PKPdf    23 11 28.1 -1.2
      comp=Z,3.2nm,1.0s,baz=45,slow=5.3,SNR=4.7
ARCES ARCESS Array B    129.11 346               PKPdf    23 11 27.8 -1.5
CRVS  Cervenica-Dubn    145.34 326      ePKP     PKPdf    23 12 00.3 +0.6
CHVC  Chvalec           146.69 333      ePKP     PKPdf    23 12 01.4 -0.6
MAUC  Maruska           146.80 330      ePKP     PKPbc    23 12 03.6 -0.4
CKRC  Cesky Krumlov     148.77 332      ePKP     PKPbc    23 12 09.3  0.0
KHC   Kasperske Hory    148.84 333      ePKP     PKPbc    23 12 09.4 -0.1
KHC                                     ex       x        23 12 20.7
GERES GERESS Array B    149.01 333      PKPbc    PKPbc    23 12 09.8 -0.2
      comp=Z,0.9nm,0.8s,baz=248,slow=1.4,SNR=6.5
GERES GERESS Array B    149.01 333               PKPbc    23 12 09.4 -0.6
TORD  Torodi Ar. Bea    167.52 223      PKPab    PKPab    23 13 33.4 -1.0
      comp=Z,0.6nm,0.8s,baz=96,slow=5.1,SNR=2.9
```

IDC 14 22:55:38.2±2.2**, 5°.06S**×**149°.81E, h0**^{km}**, mb3.4**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=145.4km s-min=31.8km az=125.0, New Britain region**

```
Code  Station Name         Δ°  AZ°      Phase ID              Time     Res
                                        Op       ISC        h  m  s    ISC
WRA   Warramunga Arr     21.11 224      P        P        23 00 25.0 +0.3
      0.7nm,0.5s,baz=49,slow=11,SNR=4.6
      0.7nm,0.5s
ASAR  Alice Springs      24.03 218      P        P        23 00 54.8 -0.4
      0.8nm,0.6s,baz=54,slow=8.7,SNR=7.6
      0.8nm,0.6s
ILAR  Eielson Array      83.53  23      P        P        23 08 08.0 +0.2
      0.2nm,0.7s,baz=243,slow=5.8,SNR=1.7
      0.2nm,0.7s
```

NEIC ***14*** *23:33:21.7±1.9, 16°.52N±0°.03×98°.44W±0°.02, h25*^{km}*±8*^{km}*, mb4.1/13, Md4.3/103(MEX), Error ellipse: s-maj=4.7km s-min=3.1km az=200.0*

IDC ***14*** *23:33:21.4±4.2, 16°.87N×98°.27W, h0*^{km}*, mb3.6/6, mbtmp3.6/8, ML3.5/2, MS3.6/3, Error ellipse: s-maj=84.0km s-min=19.0km az=11.0*

MEX ***14*** *23:33:23.9±2.1, 16°.55N×98°.41W, h12*^{km}*±15*^{km}*, MD4.3*

ISC 14 23:33:22.1±0.9**, 16°.50N**±0°.03×**98°.43W**±0°.02**, h26**^{km}±7^{km}**, n97, σ1**^{s}**52**/154**, mb4.0**/11**, MS3.2**/3**, Near coast of Guerrero**

```
Code  Station Name         Δ°  AZ°      Phase ID              Time     Res
                                        Op       ISC        h  m  s    ISC
PNIG  Pinotepa            0.31 109               Pb       23 33 29.4 +0.1
PNIG                                             Sb       23 33 34.4 +0.1
PNIG  Pinotepa            0.31 109      i P      Pb       23 33 29.4 +0.1
PNIG                                    eS       Sb       23 33 34.4 +0.1
CRIG  Cruz Grande         0.71 290               Pb       23 33 35.7 -0.3
CRIG                                             Sb       23 33 45.5 +0.1
CRIG  Cruz Grande         0.71 290      i P      Pb       23 33 35.7 -0.3
CRIG                                    eS       Sb       23 33 45.5 +0.1
MGIG  Malinaltepec        0.76 345      eP       Pb       23 33 36.9 +0.1
MGIG                                    i S      Sb       23 33 45.1 -1.8
YOIG  Yosondua            0.92  67      i P      Pb       23 33 38.4 -1.2
YOIG                                    eS       Sb       23 33 49.6 -2.0
TXIG  Tlaxiaco            0.98  40      i P      Pb       23 33 39.1 -1.6
TXIG                                    eS       Sb       23 33 50.9 -2.5
TLIG  Tlapa               1.07 353               Pb       23 33 40.6 -1.5
TLIG  Tlapa               1.07 353       Sn      Sb       23 33 53.7 -2.0
TLIG  Tlapa               1.07 353      eP       Pb       23 33 40.6 -1.5
TLIG                                    eS       Sb       23 33 53.7 -2.0
DAIG  Los Arroyos         1.28 294               Pn       23 33 44.0 -0.4
DAIG                                             Sn       23 33 59.3 -1.5
DAIG  Los Arroyos         1.28 294      eP       Pn       23 33 44.0 -0.4
DAIG                                    i S      Sn       23 33 59.3 -1.5
PEIG  Puerto Escondi      1.33 112      eP       Pn       23 33 44.9 -0.1
PEIG                                    eS       Sb       23 34 02.6 -0.4
VNTA  La Mica             1.40 288      eP       Pn       23 33 44.8 -1.1
VNTA                                    i S      Sn       23 34 01.4 -2.1
FTIG  Fresnillo de T      1.43  11      eP       Pn       23 33 46.5 -0.1
FTIG                                    eS       Sn       23 34 03.9 -0.7
ACP2  Acapulco            1.45 285               Pn       23 33 46.1 -0.6
ACP2                                             Sn       23 34 03.4 -1.4
ACP2  Acapulco            1.45 285      eP       Pn       23 33 46.1 -0.6
ACP2                                    i S      Sn       23 34 03.4 -1.4
HLIG  Huajuapan de L      1.46  24      eP       Pn       23 33 46.7 -0.3
HLIG                                    eS       Sn       23 34 04.6 -0.8
VHO   Vista Hermosa       1.72  70      eP       Pn       23 33 50.5 -0.1
VHO                                     i S      Sn       23 34 11.8 -0.1
OXBJ  Oaxaca              1.73  71               Pn       23 33 51.2 +0.5
OXBJ                                             Sn       23 34 11.3 -0.8
OXBJ  Oaxaca              1.73  71      eP       Pn       23 33 51.2 +0.5
OXBJ                                    i S      Sn       23 34 11.3 -0.8
OXLC  Oaxaca              1.75  71      eP       Pn       23 33 51.4 +0.5
OXLC                                    i S      Sn       23 34 12.8 +0.3
MEIG  Mezcala             1.82 322               Pb       23 33 53.9 -0.9
MEIG                                             Sn       23 34 14.5 +0.3
MEIG  Mezcala             1.82 322      eP       Pb       23 33 53.9 -0.9
MEIG                                    i S      Sn       23 34 14.5 +0.3
CAIG  El Cayaco           1.84 288               Pn       23 33 52.0 -0.1
CAIG                                             Sn       23 34 12.0 -2.6
CAIG  El Cayaco           1.84 288      eP       Pn       23 33 52.0 -0.1
CAIG                                    eS       Sn       23 34 12.0 -2.6
TOIG  Toxpalan            2.06  39      eP       Pn       23 33 55.4 +0.2
TOIG                                    eS       Sn       23 34 21.4 +1.4
PLIG  Platanillo          2.15 332               Pb       23 33 58.6 -1.8
PLIG                                             Sb       23 34 25.5 -1.2
PLIG  Platanillo          2.15 332      eP       Pb       23 33 58.6 -1.8
PLIG                                    i S      Sb       23 34 25.5 -1.2
TPIG  Tehuac#an           2.17  28               Pn       23 33 57.1 +0.3
TPIG                                             Sn       23 34 21.9 -1.0
TPIG  Tehuac#an           2.17  28      eP       Pn       23 33 57.1 +0.3
TPIG                                    eS       Sn       23 34 21.9 -1.0
HUIG  Huatulco            2.34 108               Pn       23 33 58.9 -0.1
HUIG                                             Sb       23 34 30.6 -1.7
HUIG  Huatulco            2.34 108      eP       Pn       23 33 58.9 -0.1
HUIG                                    i S      Sb       23 34 30.6 -1.7
YAIG  Yautepec            2.43 346               Pn       23 34 02.4 +2.1
YAIG                                             Sb       23 34 32.6 -2.3
YAIG  Yautepec            2.43 346      eP       Pn       23 34 02.4 +2.1
YAIG                                    eS       Sb       23 34 32.6 -2.3
ARIG  Puente Sto Nin      2.55 314               Pn       23 34 04.5 +2.7
ARIG                                             Sb       23 34 36.5 -1.7
ARIG  Puente Sto Nin      2.55 314      eP       Pn       23 34 04.5 +2.7
ARIG                                    eS       Sb       23 34 36.5 -1.7
PPM   Popocatepetl        2.56 356      eP       Pn       23 34 03.5 +1.1
PPM                                     i S      Sb       23 34 37.9 -1.2
AMVM  AMECAMECA           2.65 353               Pn       23 34 02.5 -0.9
AMVM                                             Sb       23 34 41.2  0.0
AMVM  AMECAMECA           2.65 353      eP       Pn       23 34 02.5 -0.9
AMVM                                    i S      Sb       23 34 41.2  0.0
MAVM  Malinalco, Edo      2.65 338               Pn       23 34 05.1 +1.7
MAVM                                             Sb       23 34 42.0 +0.8
MAVM  Malinalco, Edo      2.65 338      eP       Pn       23 34 05.1 +1.7
MAVM                                    i S      Sb       23 34 42.0 +0.8
NEUV  Arroyo Zacate       2.79  64      eP       Pn       23 34 05.2 +0.1
NEUV                                    i S      Sn       23 34 39.5 +1.6
XCVM  Xochimilco          2.82 347      eP       Pn       23 34 08.7 +2.9
XCVM                                    i S      Sn       23 34 39.8 +0.7
THVM  De Xico             2.85 350      eP       Pn       23 34 09.0 +2.9
THVM                                    eS       Sn       23 34 41.2 +1.4
AOVM  Tlapan              2.89 343      eP       Pb       23 34 10.4 -2.8
AOVM                                    eS       Sn       23 34 42.1 +1.1
UNM   Universidad Na      2.91 346       Pn      Pn       23 34 05.7 -1.3
MCRU  Las Cruces          2.92 344      eP       Pb       23 34 10.7 -3.0
MCRU                                    i S      Sn       23 34 42.6 +1.0
BJVM  Benito Juarez       2.95 346      eP       Pb       23 34 11.3 -2.9
BJVM                                    i S      Sb       23 34 48.3 -1.6
CJVM  Cuajimalpa          2.96 344      eP       Pb       23 34 15.5 +1.1
ZIIG  Zihuatanejo         3.11 291               Pn       23 34 10.8 +1.3
ZIIG                                             Sn       23 34 47.4 +1.6
ZIIG  Zihuatanejo         3.11 291      eP       Pn       23 34 10.8 +1.3
ZIIG                                    eS       Sn       23 34 47.4 +1.6
PTVM  Pico Tres Padr      3.15 348               Pn       23 34 13.6 +3.3
PTVM                                             Sb       23 34 53.2 -2.5
PTVM  Pico Tres Padr      3.15 348      eP       Pn       23 34 13.6 +3.3
PTVM                                    eS       Sb       23 34 53.2 -2.5
VTVM  Tizayuca            3.27 354               Pb       23 34 20.5 +0.7
VTVM                                             Sb       23 34 57.1 -2.2
VTVM  Tizayuca            3.27 354      eP       Pb       23 34 20.5 +0.7
VTVM                                    i S      Sb       23 34 57.1 -2.2
ZUVM  ZUMPANGO            3.37 350               Pb       23 34 21.9 +0.5
ZUVM                                             Sb       23 35 01.3 -0.7
ZUVM  ZUMPANGO            3.37 350      eP       Pb       23 34 21.9 +0.5
ZUVM                                    i S      Sb       23 35 01.3 -0.7
CMIG  Matias Romero       3.45  80       Pn      Pn       23 34 13.8 -0.3
      4.8nm,0.3s,baz=268,slow=11,SNR=27
CMIG                                     Pg      Pb       23 34 24.1 +1.6
      21nm,0.3s,baz=271,slow=15,SNR=28
CMIG                                     Lg      Lg       23 35 04.7
      13nm,0.3s,baz=255,slow=19,SNR=1.9
      10nm,0.3s
CMIG  Matias Romero       3.45  80               Pn       23 34 13.7 -0.5
CMIG                                             Sn       23 34 53.1 -1.1
CMIG  Matias Romero       3.45  80      eP       Pn       23 34 13.7 -0.5
CMIG                                    i S      Sn       23 34 53.1 -1.1
CXUV  Coxquihui           3.75  12      eP       Pb       23 34 27.3 -0.3
CXUV                                    i S      Sn       23 35 04.0 +2.4
DEIG  Demacu              3.83 351      eP       Pn       23 34 22.9 +3.2
DEIG                                    i S      Sn       23 35 04.0 +0.1
UXUV  UXUV                4.18  78      eP       Pn       23 34 23.6 -0.6
UXUV                                    i S      Sn       23 35 10.0 -2.3
PCIG                      5.07  98               Pn       23 34 37.2 +0.7
PCIG                                             Sn       23 35 33.2 -1.0
PCIG                      5.07  98      eP       Pn       23 34 37.2 +0.7
PCIG                                    eS       Sn       23 35 33.2 -1.0
COIG  Colima              5.68 299      e        Pn       23 34 48.6 +3.6
COIG                                    e                 23 35 55.3
MNGA  Volcan de Coli      5.76 302      e        Pn       23 34 41.1 -5.1
MNGA                                    e                 23 36 10.2
INCO  Volcan de Coli      5.77 302      e        Pn       23 34 41.2 -5.3
INCO                                    e                 23 36 01.8
CDAR  Ciudad de Arme      5.85 295      e        Pn       23 34 48.9 +1.7
CDAR                                    e                 23 36 06.0
PATR  El Naranjo          6.12 102      e        Pn       23 34 53.0 +1.8
PATR                                    i                 23 35 57.3
PAVE  Pavencul            6.16 101      e        Pn       23 34 55.6 +4.0
PAVE                                    i                 23 36 00.7
CHUJ  Union Juarez        6.24 102      e        Pn       23 34 55.0 +2.2
CHUJ                                    i                 23 36 04.5
TXAR  Lajitas Array      13.66 340       Pn      P        23 36 44.2 +1.4
      0.1nm,0.3s,baz=159,slow=13,SNR=9.2
TXAR                                     Lg      Lg       23 40 27.6
      baz=150,slow=24,SNR=1.6
WHTX  Lake Whitney,      15.45   3               P        23 37 01.0 -1.7
WHTX                                    IAmb     IAmb     23 37 04.2
      comp=Z,10nm,0.9s
ABTX  Abilene, Hawle     16.10 356      P        Pn       23 37 08.2 +1.5
ANMO  Albuquerque        19.73 340      P        P        23 37 49.5 -0.5
      comp=Z,0.1nm,0.3s,baz=135,slow=14,SNR=2.0
      comp=Z,0.5nm,0.5s
U40A  Yellville          20.39  13      P        P        23 37 56.2 -0.9
U40A                                    IAmb     IAmb     23 38 00.4
      comp=Z,6.7nm,1.0s
Y52A  Lilburn            21.59  34      P        P        23 38 08.4 -1.6
Y52A                                    IAmb     IAmb     23 38 10.2
      comp=Z,8.8nm,0.9s
WVT   Waverly            21.71  24      P        P        23 38 09.1 -2.1
WVT                                     IAmb     IAmb     23 38 13.8
      comp=Z,6.8nm,0.9s
W50A  Signal Mountai     22.01  30      P        P        23 38 13.1 -1.5
W50A                                    IAmb     IAmb     23 38 14.8
      comp=Z,9.2nm,1.0s
SDCO  Great Sand Dun     22.07 345      P        P        23 38 14.1 -1.3
R40A  Maddies Statio     22.38  13      P        P        23 38 19.6 +1.2
R40A                                    IAmb     IAmb     23 38 21.8
      comp=Z,5.0nm,0.8s
CPCT  Cooper Cave        22.59  31      P        P        23 38 19.4 -1.4
CPCT                                    IAmb     IAmb     23 38 21.5
      comp=Z,7.2nm,1.1s
TKL   Tuckaleechee C     23.13  32      P        P        23 38 25.1 -1.2
      comp=Z,4.5nm,0.9s,baz=193,slow=6.5,SNR=4.2
      comp=Z,4.5nm,0.9s
ISCO  Idaho Springs      24.05 346      P        P        23 38 35.6 +0.1
V58A  Windy Hill, Pi     25.80  38      P        P        23 38 50.2 -0.9
P49A  Miami Univ. Ec     25.89  25      P        P        23 38 51.2 -0.7
P51A  Williamsport       26.54  27      P        P        23 38 57.0 -0.8
PDAR  Pinedale Array     27.86 342      P        P        23 39 11.1 +1.2
      comp=Z,0.4nm,0.7s,baz=134,slow=14,SNR=2.7
      comp=Z,0.4nm,0.7s
NVAR  Mina Array Bea     27.96 325      P        P        23 39 12.9 +2.0
      comp=Z,0.8nm,0.8s,baz=139,slow=7.0,SNR=5.3
      comp=Z,0.8nm,0.8s
SDV   Santo Domingo      28.13 102      LR       LR       23 49 59.9
      comp=Z,67nm,19.7s,baz=252,slow=36
SADO  Sadowa             32.54  26      LR       LR       23 57 01.2
      comp=Z,38nm,18.2s,baz=255,slow=44
YKA   Yellowknife Ar     47.34 350      P        P        23 41 53.9 +0.4
      comp=Z,0.6nm,0.8s,baz=158,slow=7.5,SNR=9.1
      comp=Z,0.6nm,0.8s
INK   Inuvik             56.37 345      P        P        23 43 01.5 +0.8
      comp=Z,1.0nm,0.8s,baz=122,slow=6.8,SNR=4.3
      comp=Z,1.0nm,0.8s
ILAR  Eielson Array      58.16 338      P        P        23 43 13.8 +0.4
      comp=Z,0.4nm,1.0s,baz=170,slow=5.5,SNR=4.5
      comp=Z,0.4nm,1.0s
TORD  Torodi Ar. Bea     95.77  75      LR       LR       00 24 22.0
      comp=Z,173nm,21.8s,baz=220,slow=32
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IDC ***14*** *23:37:25.6±0.4, 28°.99N×142°.92E, h0*^{km}*, mb4.5/40, mbtmp4.4/43, ML3.4/3, MS3.6/24, Error ellipse: s-maj=12.7km s-min=9.4km az=94.0*

NEIC ***14*** *23:37:27.7±1.3, 29°.01N±0°.06×143°.0E±0°.1, h10*^{km}*±1*^{km}*, mb4.7/139, Error ellipse: s-maj=15.0km s-min=9.4km az=90.0*

ISC 14 23:37:27.0±0.3**, 29°.02N**±0°.04×**142°.92E**±0°.06**, h10**^{km}**, n354, σ1**^{s}**15**/361**, mb4.7**/118**, MS3.7**/27**, 1C-3D, Southeast of Honshu**

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Code  Station Name         Δ°  AZ°      Phase ID              Time     Res
                                        Op       ISC        h  m  s    ISC
JCJ   Chichijima          2.02 199      Pn       Pn       23 38 00.9 -0.3
      42nm,0.3s,baz=4.5,slow=19,SNR=44
JCJ                                     Sn       Sn       23 38 22.9 -3.6
      65nm,0.3s,baz=340,slow=21,SNR=9.5
JCJ   Chichijima          2.02 199      Pn       Pn       23 38 00.5 -0.6
JHJ2  Mitsune             4.88 328      Pn       Pn       23 38 39.4 -1.0
JHJ   Hachijo jima 2      4.90 327      Pn       Pn       23 38 39.5 -1.2
      13nm,0.3s,baz=133,slow=22,SNR=9.3
JHJ                                     Sn       Sn       23 39 31.8 -5.7
      59nm,0.3s,baz=243,slow=22,SNR=5.9
      103nm,0.3s
JYT   Yasato              7.55 343      Pn       Pn       23 39 15.8 -1.3
INU   Inuyama             8.06 323      Pn       Pn       23 39 25.1 +1.0
JGF   Kuroka              8.08 326               Pn       23 39 25.9 +1.4
MJAR  Matsushiro Arr      8.49 333      Pn       Pn       23 39 29.1 -0.9
      0.5nm,0.3s,baz=138,slow=12,SNR=19
MJAR                                    Sn       Sn       23 41 01.3 -4.6
      0.3nm,0.3s,baz=160,slow=19,SNR=8.0
      7.3nm,0.4s
MJAR  Matsushiro Arr      8.49 333               Pn       23 39 30.0 -0.1
MAJO  Matsushiro          8.49 333               Pn       23 39 30.5 +0.4
MJB9  Matsu-Tunnel        8.49 333               Pn       23 39 30.5 +0.3
JMM   Marumori            9.01 349               Pn       23 39 35.1 -2.0
JSD   Sado                9.80 338      Pn       Pn       23 39 46.9 -1.1
JHS   Saijyo             10.24 308               Pn       23 39 56.0 +1.9
JTM   Tenmabayashi       11.84 353      Pn       Pn       23 40 14.8 -1.2
ERM   Erimo              12.97   1      Pn       Pn       23 40 27.6 -3.8
JOW   Kunigami           13.13 264      LR       LR       23 45 19.0
      comp=Z,235nm,19.4s,baz=122,slow=36
NAWB  Namwon             14.61 300      P        P        23 41 00.7 +0.5
KSCHJ Chungju            14.78 306      P        P        23 41 01.4 -0.8
TJN   Taejon             15.01 303      P        P        23 41 05.2 +0.5
ASAJ  Asahikawa          15.07 359      Pn       P        23 41 03.5 -1.9
      0.4nm,0.3s,baz=246,slow=20,SNR=1.3
ASAJ                                    LR       LR       23 49 33.5
      comp=Z,121nm,20.0s,baz=153,slow=48
KSRS  Korea Array        15.10 308      Pn       Pn       23 41 04.2 +3.8
      0.5nm,0.3s,baz=114,slow=12,SNR=28
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KSRS				LR	LR	23 47 29.7	
	comp=Z,164nm,18.6s,baz=115,slow=40						
KSAR	**Wonju Array Be**	**15.12**	**308**		**Pn**	**23 41 02.7**	**+2.0**
KS19	**Wonju Array Si**	**15.16**	**308**	Pn	**Pn**	**23 41 03.8**	**+2.5**
KS19				IAmb	IAmb	23 41 07.5	
	comp=Z,26nm,1.0s						
SEHB	**SEOHWA**	**15.30**	**311**		**Pn**	**23 41 05.1**	**+2.0**
SEHB				IAmb	IAmb	23 41 12.0	
	comp=Z,18nm,0.6s						
INCN	**Inchon**	**16.02**	**306**		**Pn**	**23 41 13.9**	**+1.5**
USRK	**Ussuriysk Ar.**	**17.49**	**333**	P	**Pn**	**23 41 31.3**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=2.5						
	comp=Z,2.1nm,0.6s						
MDJ	**Mudanjiang**	**18.84**	**329**		**P**	**23 41 47.2**	**+0.2**
MDJ	**Mudanjiang**	**18.84**	**329**	P	**P**	**23 41 48.0**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.1s						
MDJ				LR	LR		
	comp=N,150nm,14.9s						
MDJ				LR	LR		
	comp=E,170nm,16.4s						
YHNB	**Yeheng**	**19.70**	**262**	P	**P**	**23 41 56.8**	**+0.1**
YULB	**Yu-li**	**20.18**	**259**	P	**P**	**23 42 02.6**	**+0.7**
YULB				IAmb	IAmb	23 42 07.6	
	comp=Z,60nm,1.4s						
SSLB	**Suanglung**	**20.34**	**260**	P	**P**	**23 42 03.3**	**-0.4**
SSLB				IAmb	IAmb	23 42 17.4	
	comp=Z,31nm,0.8s						
BNX	**BinXian**	**20.69**	**328**	⇓P	**P**	**23 42 08.9**	**+1.7**
BNX				pP	Pn	23 42 12.9	+3.3
BNX				sP	**pwP**	**23 42 15.8**	**-3.9**
BNX				PP	**PnPn**	**23 42 29.5**	**+4.4**
BNX				S	**S**	**23 45 53.1**	**-5.2**
BNX				sS	**sS**	**23 45 59.0**	**+0.1**
BNX				pmax	pmax		
	comp=Z,120nm,0.9s						
BNX				pmax	pmax		
	comp=Z,240nm,3.5s						
BNX				LR	LR		
	comp=Z,260nm,15.4s						
NJ2	**Nanjing**	**20.94**	**284**	*e*P	**P**	**23 42 09.6**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	**Kul'dur**	**21.92**	**340**	P	**P**	**23 42 19.9**	**-0.6**
	comp=Z,4.8nm,0.9s,baz=144,slow=9.6,SNR=10						
	comp=Z,4.8nm,0.9s						
WAKE	**Wake Island**	**23.68**	**109**	P	**P**	**23 42 37.2**	**-1.7**
XLT	**XiLinHaoTe**	**26.06**	**312**	*e*P	**P**	**23 43 02.3**	**+1.6**
XLT				S	**S**	**23 47 30.4**	**-1.4**
XLT				pmax	pmax		
	comp=Z,12nm,0.7s						
XLT				pmax	pmax		
	comp=Z,78nm,3.5s						
XLT				LR	LR		
	comp=N,10.0nm,12.5s						
XLT				LR	LR		
	comp=E,150nm,13.4s						
XLT				LR	LR		
	comp=Z,110nm,14.6s						
HIA	**Hailar**	**26.87**	**325**	P	**P**	**23 43 08.3**	**+0.4**
HIA				IAmb	IAmb	23 43 35.3	
	comp=Z,12nm,1.0s						
DAV	**Davao City (W)**	**27.28**	**220**	LR	LR	23 52 52.7	
	comp=Z,111nm,21.1s,baz=64,slow=34						
HHC	**Hu-ho-hao-te**	**28.14**	**303**	*e*P	**P**	**23 43 21.6**	**+2.1**
HHC				S	**S**	**23 48 09.1**	**+4.3**
HHC				pmax	pmax		
	comp=Z,37nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
HHC				LR	LR		
	comp=N,250nm,13.8s						
HHC				LR	LR		
	comp=E,270nm,18.4s						
HHC				LR	LR		
	comp=Z,540nm,15.6s						
ENH	**Enshi**	**29.03**	**281**	P	**P**	**23 43 26.6**	**-0.8**
ENH				IAmb	IAmb	23 43 29.8	
	comp=Z,6.7nm,0.5s						
XAN	**Xi'an**	**29.33**	**289**	P	**P**	**23 43 28.8**	**-1.2**
XAN				pP	sP	23 43 34.1	+3.7
XAN				sP	pP	23 43 36.9	+6.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=N,160nm,15.6s						
XAN				LR	LR		
	comp=E,150nm,17.1s						
XAN				LR	LR		
	comp=Z,190nm,16.5s						
SIJI	**Sorong**	**31.74**	**203**	P	**P**	**23 43 51.0**	**-0.4**
	comp=Z,3.1nm,0.3s,baz=332,slow=9.1,SNR=5.2						
	comp=Z,3.1nm,0.3s						
GYA	**Guiyang**	**32.12**	**274**	⇓P	**P**	**23 43 56.8**	**+2.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MYLDM	**Lahad Datu**	**33.12**	**229**	P	**P**	**23 44 03.0**	**-0.4**
MYLDM				IAmb	IAmb	23 44 32.5	
	comp=Z,8.4nm,0.8s						
ULN	**Ulaanbaatar**	**33.42**	**314**	P	**P**	**23 44 06.0**	**0.0**
ULN				IAmb	IAmb	23 44 11.9	
	comp=Z,11nm,1.1s						
LZH	**Lanzhou**	**33.52**	**292**	*e*P	**P**	**23 44 08.9**	**+1.9**
LZH				pP	pwP	23 44 19.6	0.0
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,37nm,4.2s						
LZH				LR	LR		
	comp=N,140nm,13.7s						
LZH				LR	LR		
	comp=E,200nm,14.1s						
LZH				LR	LR		
	comp=Z,190nm,14.5s						
SONM	**Songino Array**	**33.82**	**314**	P	**P**	**23 44 10.9**	**+1.4**
	comp=Z,4.3nm,0.8s,baz=118,slow=8.5,SNR=29						
SONM				PcP	**PcP**	**23 46 48.7**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=119,slow=1.8,SNR=4.4						
SONM				LR	LR	23 58 50.8	
	comp=Z,49nm,18.7s,baz=109,slow=38						
	comp=Z,4.3nm,0.8s						
SONM	**Songino Array**	**33.82**	**314**	P	**P**	**23 44 10.1**	**+0.6**
CD2	**Chengdu**	**33.87**	**283**	*e*P	**P**	**23 44 10.0**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	**Seymchan**	**34.48**	**8**	P	**P**	**23 44 15.1**	**+0.2**
	comp=Z,4.3nm,0.6s,baz=192,slow=8.0,SNR=11						
	comp=Z,4.3nm,0.6s						
SANI	**Sanana**	**34.89**	**211**	P	**P**	**23 44 18.2**	**-0.7**
	comp=Z,20nm,0.7s						
KMI	**Kunming**	**35.87**	**273**	⇑P	**P**	**23 44 27.3**	**-0.3**
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
PZH	**PanZhiHua**	**36.40**	**276**	P	**P**	**23 44 32.5**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,5.0s						
GTA	**Gaotai**	**36.82**	**298**	*e*P	**P**	**23 44 36.0**	**+0.6**
GTA				pP	sP	23 44 40.1	+4.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PMG	**Port Moresby**	**38.41**	**173**	P	**P**	**23 44 48.6**	**-0.2**
PMG				IAmb	IAmb	23 44 49.4	
	comp=Z,30nm,1.2s						
KAPI	**Kappang**	**40.51**	**217**	LR	LR	00 01 13.1	
	comp=Z,49nm,21.3s,baz=54,slow=35						
GOMU	**GeErMu**	**40.82**	**293**	P	**P**	**23 45 06.9**	**-2.4**
GOMU				pP	sP	23 45 11.5	+1.9
GOMU				sP	pP	23 45 12.3	+2.8
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,61nm,5.4s						
CHTO	**Chiang Mai**	**41.26**	**266**	P	**P**	**23 45 12.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**41.40**	**265**	P	**P**	**23 45 13.5**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=48,slow=8.6,SNR=12						
CMAR				LR	LR	00 03 24.0	
	comp=Z,66nm,19.6s,baz=75,slow=38						
	comp=Z,1.2nm,0.4s						
BILL	**Bilibino**	**41.45**	**13**	P	**P**	**23 45 13.0**	**-0.6**
SOEI	**Soe**	**42.54**	**208**	P	**P**	**23 45 22.2**	**-1.0**
SOEI				IAmb	IAmb	23 45 26.2	
	comp=Z,35nm,1.1s						
COEN	**Coen**	**42.72**	**180**	P	**P**	**23 45 24.5**	**0.0**
EDFI	**Ende, Flores**	**42.77**	**212**	P	**P**	**23 45 24.9**	**-0.1**
	comp=Z,18nm,0.8s						
MTN	**Manton Dam**	**43.15**	**197**	P	**P**	**23 45 27.3**	**-0.6**
BATI	**Baumata**	**43.20**	**208**	P	**P**	**23 45 28.1**	**-0.3**
	comp=Z,18nm,0.5s,baz=98,slow=7.1,SNR=3.6						
	comp=Z,18nm,0.5s						
TIXI	**Tiksi**	**43.38**	**354**	P	**P**	**23 45 28.7**	**-0.5**
	comp=Z,4.6nm,0.6s,baz=87,slow=23,SNR=23						
	comp=Z,4.6nm,0.6s						
TIXI	**Tiksi**	**43.38**	**354**	P	**P**	**23 45 28.9**	**-0.4**
WMQ	**Urumqi**	**46.01**	**304**	*e*P	**P**	**23 45 54.1**	**+3.4**
KULM	**Kulim**	**46.40**	**248**	P	**P**	**23 45 54.7**	**+0.6**
KULM				IAmb	IAmb	23 46 01.4	
	comp=Z,11nm,1.1s						
KNRA	**Kununurra**	**46.49**	**199**	P	**P**	**23 45 54.1**	**-0.5**
ZAA0	**Zalesovo Array**	**48.49**	**318**	P	**P**	**23 46 10.0**	**+0.3**
ZALV	**Zalesovo Beam**	**48.49**	**318**	P	**P**	**23 46 09.2**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=105,slow=6.9,SNR=8.4						
ZALV				PcP	**PcP**	**23 47 35.5**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=108,slow=4.7,SNR=5.3						
ZALV				LR	LR	00 08 12.0	
	comp=Z,54nm,18.4s,baz=189,slow=38						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**48.49**	**318**	P	**P**	**23 46 09.9**	**+0.2**
CTA	**Charters Tower**	**48.92**	**176**	P	**P**	**23 46 13.1**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=31,slow=5.9,SNR=3.4						
	comp=Z,5.3nm,0.7s						
CTAO	**Charters Tower**	**48.92**	**176**	P	**P**	**23 46 13.5**	**+0.1**
WB0	**Warramunga Arr**	**49.19**	**191**	P	**P**	**23 46 15.0**	**-0.5**
LEM	**Lembang**	**49.25**	**229**	P	**P**	**23 46 15.9**	**-0.3**
	comp=Z,41nm,0.7s,baz=125,slow=18,SNR=7.2						
LEM				LR	LR	00 09 37.3	
	comp=Z,55nm,18.1s,baz=194,slow=39						
	comp=Z,41nm,0.7s						
LEM	**Lembang**	**49.25**	**229**	P	**P**	**23 46 16.1**	**-0.1**
	comp=Z,29nm,0.7s						
PSI	**Prapat**	**49.25**	**246**	P	**P**	**23 46 16.2**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=64,slow=11,SNR=3.7						
	comp=Z,2.8nm,0.5s						
WB2	**Warramunga Arr**	**49.37**	**191**	P	**P**	**23 46 16.7**	**-0.2**
WRA	**Warramunga Arr**	**49.37**	**191**	P	**P**	**23 46 16.4**	**-0.5**
	comp=Z,18nm,0.8s,baz=12,slow=8.4,SNR=71						
WRA				PcP	**PcP**	**23 47 39.6**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=6.1,slow=4.2,SNR=1.3						
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**49.37**	**191**	P	**P**	**23 46 15.3**	**-1.6**
MK31	**Makanchi Array**	**49.78**	**308**	P	**P**	**23 46 20.1**	**+0.3**
MK31				IAmb	IAmb	23 46 21.7	
	comp=Z,6.1nm,0.9s						
MKAR	**Makanchi Array**	**49.78**	**308**	P	**P**	**23 46 20.8**	**+0.9**
	comp=Z,4.8nm,0.8s,baz=92,slow=9.5,SNR=45						
MKAR				PcP	**PcP**	**23 47 40.3**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=76,slow=6.3,SNR=5.1						
	comp=Z,4.8nm,0.8s						
MKAR	**Makanchi Array**	**49.78**	**308**	P	**P**	**23 46 20.5**	**+0.6**
MAKZ	**Makanchi**	**49.99**	**308**	P	**P**	**23 46 22.2**	**+0.7**
N18K	**Kilae Creek**	**51.11**	**34**	P	**P**	**23 46 29.0**	**-0.7**
N18K	**Kilae Creek**	**51.11**	**34**	P	**P**	**23 46 31.2**	**+1.5**
	baz=260						
NRIK	**Noril'sk**	**51.11**	**338**	P	**P**	**23 46 29.8**	**+0.3**
	comp=Z,6.8nm,0.9s,baz=114,slow=8.4,SNR=10						
NRIK				PcP	**PcP**	**23 47 44.8**	**-0.2**
	comp=Z,4.0nm,0.8s,baz=128,slow=4.9,SNR=3.8						
	comp=Z,6.8nm,0.9s						
NRIK	**Noril'sk**	**51.11**	**338**	P	**P**	**23 46 29.5**	**0.0**
NRIK				IAmb	IAmb	23 46 31.7	
	comp=Z,9.4nm,1.0s						
GSI	**Gunungsitoli**	**51.22**	**246**	P	**P**	**23 46 31.1**	**0.0**
O18K	**Koktuh Hills**	**51.32**	**35**	P	**P**	**23 46 32.6**	**+1.3**
	baz=262						
TTA	**Tatalina**	**51.47**	**31**	P	**P**	**23 46 33.3**	**+0.9**
	baz=258						
N19K	**Bonanza Creek**	**51.81**	**34**	P	**P**	**23 46 35.3**	**+0.3**
N19K	**Bonanza Creek**	**51.81**	**34**	P	**P**	**23 46 35.7**	**+0.7**
	baz=262						
KURK	**Kurchatov**	**52.13**	**313**	P	**P**	**23 46 37.6**	**+0.3**
KURK				IAmb	IAmb	23 46 38.7	
	comp=Z,14nm,1.0s						
KURBB	**Kurchatov Arra**	**52.19**	**313**	P	**P**	**23 46 37.9**	**0.0**
	comp=Z,8.8nm,0.8s,baz=91,slow=7.3,SNR=65						
	comp=Z,8.8nm,0.8s						
P19K	**Oil Pt**	**52.28**	**35**	P	**P**	**23 46 38.3**	**-0.2**
P19K				IAmb	IAmb	23 46 39.6	
	comp=Z,6.4nm,0.8s						
P19K	**Oil Pt**	**52.28**	**35**	P	**P**	**23 46 38.9**	**+0.4**
	baz=264						
L20K	**Farewell, AK**	**52.35**	**32**	P	**P**	**23 46 40.4**	**+1.4**
	baz=261						
K20K	**Telida**	**52.41**	**30**	P	**P**	**23 46 40.6**	**+1.3**
K20K				IAmb	IAmb	23 46 41.7	
	comp=Z,9.5nm,0.8s						
K20K	**Telida**	**52.41**	**30**	P	**P**	**23 46 40.9**	**+1.6**
	baz=260,SNR=13						
KDAK	**Kodiak Island**	**52.45**	**38**	P	**P**	**23 46 39.3**	**-0.3**
	comp=Z,5.2nm,0.8s,baz=305,slow=4.0,SNR=6.6						
	comp=Z,5.2nm,0.8s						
KDAK	**Kodiak Island**	**52.45**	**38**	P	**P**	**23 46 39.6**	**0.0**
KDAK				IAmb	IAmb	23 46 41.2	
	comp=Z,7.1nm,0.9s						
KDAK	**Kodiak Island**	**52.45**	**38**	P	**P**	**23 46 39.8**	**+0.2**
	baz=266						
J20K	**Nowinta River**	**52.53**	**29**	P	**P**	**23 46 41.4**	**+1.2**
J20K				IAmb	IAmb	23 46 42.5	
	comp=Z,7.5nm,0.8s						
J20K	**Nowinta River**	**52.53**	**29**	P	**P**	**23 46 41.7**	**+1.5**
	baz=259,SNR=9.5						
PRZ	**Przheval'sk**	**52.89**	**303**	P	**P**	**23 46 44.3**	**+0.9**
PRZ				IAmb	IAmb	23 47 01.9	
	comp=Z,10nm,0.8s						
IMAR	**Indian Mountai**	**53.04**	**27**	P	**P**	**23 46 44.2**	**+0.3**
AS31	**Alice Springs**	**53.09**	**190**	P	**P**	**23 46 44.0**	**-0.8**
ASAR	**Alice Springs**	**53.09**	**190**	P	**P**	**23 46 44.2**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=12,slow=5.6,SNR=15						
ASAR				PcP	**PcP**	**23 47 53.5**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=6.7,slow=4.6,SNR=2.2						
	comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**53.09**	**190**	P	**P**	**23 46 43.6**	**-1.2**
PPLA	**Purkeypile**	**53.19**	**31**	P	**P**	**23 46 46.3**	**+1.0**
PPLA	**Purkeypile**	**53.19**	**31**	P	**P**	**23 46 46.6**	**+1.4**
	baz=262						
CNPM	**China Poot**	**53.28**	**35**	P	**P**	**23 46 45.6**	**-0.2**
CAST	**Castle Rocks**	**53.31**	**31**	P	**P**	**23 46 46.8**	**+0.8**
CAST				IAmb	IAmb	23 46 48.0	
	comp=Z,7.9nm,0.9s						
CAST	**Castle Rocks**	**53.31**	**31**	P	**P**	**23 46 47.3**	**+1.3**
	baz=262,SNR=12						
H21K	**Melozitna Rive**	**53.36**	**28**	P	**P**	**23 46 47.1**	**+0.8**
H21K				IAmb	IAmb	23 46 50.6	
	comp=Z,9.9nm,1.4s						
H21K	**Melozitna Rive**	**53.36**	**28**	P	**P**	**23 46 47.7**	**+1.3**
	baz=259,SNR=9.3						
TARG	**Taragay, Kyrgy**	**53.43**	**302**	P	**P**	**23 46 48.6**	**+0.9**
BRSE	**Bradley Lake S**	**53.55**	**35**	P	**P**	**23 46 47.0**	**-0.8**
	baz=266						
I21K	**Tanana**	**53.62**	**28**	P	**P**	**23 46 49.3**	**+1.1**
I21K	**Tanana**	**53.62**	**28**	P	**P**	**23 46 49.6**	**+1.4**
	baz=261,SNR=5.2						
KDJ	**Kajisay**	**53.83**	**303**	P	**P**	**23 46 50.9**	**+0.6**
BPAW	**Bear Paw Mtn.**	**53.88**	**30**	P	**P**	**23 46 51.3**	**+1.1**
	baz=262						
TRF	**Thorofare Moun**	**54.11**	**31**	P	**P**	**23 46 52.4**	**+0.4**
TRF				IAmb	IAmb	23 46 53.3	
	comp=Z,7.2nm,1.0s						
TRF	**Thorofare Moun**	**54.11**	**31**	P	**P**	**23 46 52.5**	**+0.4**
	baz=263,SNR=6.6						
PMR	**Palmer**	**54.47**	**33**	P	**P**	**23 46 54.1**	**-0.3**
PMR				IAmb	IAmb	23 46 55.1	
	comp=Z,6.3nm,0.6s						
PMR	**Palmer**	**54.47**	**33**	P	**P**	**23 46 54.7**	**+0.2**
	baz=266						
COLD	**Coldfoot**	**54.66**	**26**	P	**P**	**23 46 57.1**	**+1.3**
	baz=261						
MBWA	**Marble Bar**	**54.67**	**207**	P	**P**	**23 46 56.1**	**-0.2**
BOOM	**Boomskoye usch**	**54.69**	**303**	P	**P**	**23 46 57.2**	**+0.6**
BOOM				IAmb	IAmb	23 46 58.9	
	comp=Z,5.5nm,0.9s						
I23K	**Minto, Yukon-K**	**54.71**	**29**	P	**P**	**23 46 57.2**	**+1.1**
	baz=263						
H23K	**Yukon River**	**54.72**	**28**	P	**P**	**23 46 56.9**	**+0.6**
H23K	**Yukon River**	**54.72**	**28**	P	**P**	**23 46 57.7**	**+1.4**
	baz=262						
MCK	**McKinley**	**54.74**	**30**	P	**P**	**23 46 56.7**	**+0.3**
	baz=264						
NEA2	**Nenana**	**54.77**	**29**	P	**P**	**23 46 57.1**	**+0.5**
NEA2				IAmb	IAmb	23 46 58.3	
	comp=Z,8.3nm,0.8s						
NEA2	**Nenana**	**54.77**	**29**	P	**P**	**23 46 57.5**	**+0.9**
	baz=264,SNR=8.9						
TKM2	**Tokmak 2**	**54.87**	**304**	P	**P**	**23 46 59.4**	**+1.5**
	SNR=11						
PSA00	**Pilbara Seismi**	**55.00**	**206**	P	**P**	**23 46 58.4**	**-0.3**
PSA00				IAmb	IAmb	23 46 59.3	
	comp=Z,8.7nm,0.8s						
PSA00	**Pilbara Seismi**	**55.00**	**206**	P	**P**	**23 46 58.7**	**0.0**
PSA00				IAmb	IAmb	23 46 59.4	
	comp=Z,11nm,0.8s						
TOLK	**Toolik Lake Re**	**55.13**	**24**	P	**P**	**23 47 00.2**	**+1.1**
TOLK				IAmb	IAmb	23 47 01.4	
	comp=Z,6.0nm,1.1s						
TOLK	**Toolik Lake Re**	**55.13**	**24**	P	**P**	**23 47 00.5**	**+1.3**
	baz=260,SNR=5.2						
KSH	**Kashi**	**55.17**	**300**	P	P	23 47 05.0	+4.9
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WAT6	**Susitna Watana**	**55.19**	**32**	P	**P**	**23 46 60.0**	**+0.1**
	baz=266,SNR=6.6						
CCB	**Clear Creek Bu**	**55.32**	**29**	P	**P**	**23 47 00.9**	**+0.4**
SCM	**Sheep Creek Mo**	**55.35**	**33**	P	**P**	**23 47 01.2**	**+0.3**
	baz=267						
KBK	**Karagaybulak**	**55.38**	**304**	P	**P**	**23 47 03.2**	**+1.5**
	SNR=17						
DHY	**Denali Highway**	**55.39**	**31**	P	**P**	**23 47 00.8**	**-0.5**
	baz=266						
H24K	**Noodor Dome**	**55.40**	**28**	P	**P**	**23 47 02.0**	**+0.8**
H24K	**Noodor Dome**	**55.40**	**28**	P	**P**	**23 47 02.5**	**+1.3**
	baz=264						
GLI	**Glacier Island**	**55.42**	**34**	P	**P**	**23 47 01.6**	**+0.3**
	baz=268						
FRU1	**Bishkek**	**55.59**	**304**	P	**P**	**23 47 04.2**	**+1.2**
USP	**Ospenovka**	**55.61**	**305**	P	**P**	**23 47 04.0**	**+0.9**
	SNR=9.3						
HDA	**Harding Lake**	**55.67**	**30**	P	**P**	**23 47 02.8**	**-0.3**
	baz=266,SNR=6.0						
AAK	**Ala-Archa**	**55.72**	**304**	P	**P**	**23 47 05.3**	**+1.3**
	SNR=6.1						
AAK	**Ala-Archa**	**55.72**	**304**	P	**P**	**23 47 04.8**	**+0.8**
	comp=Z,5.9nm,0.7s,baz=125,slow=6.2,SNR=20						
	comp=Z,5.9nm,0.7s						
AAK	**Ala-Archa**	**55.72**	**304**	P	**P**	**23 47 04.7**	**+0.7**
AAK				IAmb	IAmb	23 47 05.9	
	comp=Z,7.0nm,0.8s						
IL31		**55.72**	**29**	P	**P**	**23 47 03.2**	**-0.3**
IL31				IAmb	IAmb	23 47 04.0	
	comp=Z,3.8nm,0.7s						
ILAR	**Eielson Array**	**55.72**	**29**	P	**P**	**23 47 03.3**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=258,slow=6.2,SNR=41						
	comp=Z,3.3nm,0.7s						
ILAR	**Eielson Array**	**55.72**	**29**	P	**P**	**23 47 03.0**	**-0.5**
UCH	**Uchtor**	**55.77**	**303**	P	**P**	**23 47 07.0**	**+2.2**
	SNR=13						
KLU	**Klutina**	**56.01**	**33**	P	**P**	**23 47 05.9**	**+0.2**
	baz=269						
K24K	**Donnelly Dome**	**56.15**	**30**	P	**P**	**23 47 07.2**	**+0.6**
	baz=267						
EKS2	**Erkin-Say**	**56.23**	**304**	P	**P**	**23 47 08.9**	**+1.3**
	SNR=8.5						
PAX	**Paxson**	**56.25**	**31**	P	**P**	**23 47 07.7**	**+0.3**
PAX	**Paxson**	**56.25**	**31**	P	**P**	**23 47 08.2**	**+0.8**
	baz=268,SNR=6.1						
J25K	**Salcha River,**	**56.36**	**29**	P	**P**	**23 47 08.0**	**-0.2**
	baz=267						
AML	**Almayashu**	**56.39**	**303**	P	**P**	**23 47 11.1**	**+2.0**
	SNR=25						
BMRM	**Bremner River**	**56.64**	**34**	P	**P**	**23 47 10.6**	**+0.5**
	baz=270						
BMAR	**Burnt Mountain**	**56.85**	**26**	P	**P**	**23 47 12.5**	**+1.0**
DOT	**Dot Lake**	**56.91**	**31**	P	**P**	**23 47 12.1**	**+0.2**
J26L	**Joseph Creek**	**57.14**	**30**	P	**P**	**23 47 13.7**	**0.0**
	baz=269,SNR=6.9						
BRVK	**Borovoye**	**57.15**	**317**	P	**P**	**23 47 14.0**	**+0.2**
BRVK				IAmb	IAmb	23 47 15.3	
	comp=Z,5.8nm,0.8s						
K27K	**Chicken**	**57.79**	**30**	P	**P**	**23 47 18.7**	**+0.6**
K27K	**Chicken**	**57.79**	**30**	P	**P**	**23 47 19.1**	**+0.9**
	baz=270						
L27K	**Beaver Creek,**	**57.92**	**31**	P	**P**	**23 47 20.3**	**+1.2**
	baz=271						
BCAR	**Beaver Creek A**	**57.94**	**31**	P	**P**	**23 47 19.8**	**+0.5**
EGAK	**Eagle**	**58.18**	**29**	P	**P**	**23 47 21.0**	**+0.1**
	baz=271						
DRK	**Karamyk**	**58.34**	**301**	P	**P**	**23 47 24.2**	**+1.4**
KK31	**Karatay Array**	**58.51**	**305**	P	**P**	**23 47 24.1**	**+0.5**
KKAR	**Karatay Array**	**58.51**	**305**	P	**P**	**23 47 24.4**	**+0.8**
BTK	**Batken**	**58.94**	**302**	P	**P**	**23 47 27.4**	**+0.6**
BTK				IAmb	IAmb	23 47 28.4	
	comp=Z,11nm,1.1s						
I29M	**Ogilvie Camp,**	**59.36**	**29**	P	**P**	**23 47 30.1**	**+1.0**
	baz=273,SNR=6.0						
YUK4	**Talbot Arm**	**59.51**	**33**	P	**P**	**23 47 32.0**	**+1.5**
	baz=275						
GAR	**Garm**	**59.57**	**300**	P	**P**	**23 47 31.8**	**+0.7**
YUK6	**Outpost Mounta**	**59.68**	**34**	P	**P**	**23 47 33.2**	**+1.6**
	baz=276						
EPYK	**Eagle Plains**	**59.95**	**27**	P	**P**	**23 47 34.4**	**+1.2**
	baz=274,SNR=5.8						
HYT	**Haines Junctio**	**60.11**	**34**	P	**P**	**23 47 35.8**	**+1.3**
	baz=276						
CHGR	**Chuyangaron**	**60.53**	**300**	P	**P**	**23 47 38.2**	**+0.5**
STKA	**Stephens Creek**	**60.57**	**181**	P	**P**	**23 47 37.6**	**0.0**
	comp=Z,4.7nm,0.6s,baz=342,slow=9.1,SNR=10						
	comp=Z,4.7nm,0.6s						
STKA	**Stephens Creek**	**60.57**	**181**	P	**P**	**23 47 37.7**	**0.0**
INK	**Inuvik**	**61.02**	**25**	P	**P**	**23 47 40.5**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=286,slow=5.4,SNR=11						
	comp=Z,1.8nm,0.5s						
INK	**Inuvik**	**61.02**	**25**	P	**P**	**23 47 40.7**	**+0.3**
INK				IAmb	IAmb	23 47 55.4	
	comp=Z,3.3nm,0.7s						
INK	**Inuvik**	**61.02**	**25**	P	**P**	**23 47 41.1**	**+0.7**
	baz=276,SNR=6.0						
AFI	**Afiamalu**	**61.12**	**128**	LR	LR	00 12 14.5	
	comp=Z,36nm,18.1s,baz=63,slow=34						
M31M	**Drury Creek, Y**	**61.41**	**32**	P	**P**	**23 47 43.7**	**+0.5**
M31M				IAmb	IAmb	23 47 59.9	
	comp=Z,3.8nm,0.8s						
M31M	**Drury Creek, Y**	**61.41**	**32**	P	**P**	**23 47 44.5**	**+1.2**
	baz=278						
KBL	**Kabul**	**61.76**	**296**	P	**P**	**23 47 46.0**	**-0.2**
KBL				IAmb	IAmb	23 47 48.8	
	comp=Z,2.9nm,0.6s						
JIS	**Juneau Island**	**62.06**	**36**	P	**P**	**23 47 47.7**	**+0.2**
JIS				IAmb	IAmb	23 47 49.9	
	comp=Z,7.8nm,1.0s						
PALK	**Pallekele**	**62.25**	**263**	LR	LR	00 15 36.3	
	comp=Z,53nm,18.8s,baz=235,slow=37						
P33M	**Teslin, Yukon**	**62.49**	**34**	P	**P**	**23 47 49.7**	**-0.9**
	baz=281						
ARU	**Arti**	**63.32**	**322**	P	**P**	**23 47 56.2**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=229,slow=0.8,SNR=12						
	comp=Z,2.7nm,0.8s						
ARU	**Arti**	**63.32**	**322**	P	**P**	**23 47 55.9**	**-0.1**
ARU				IAmb	IAmb	23 47 57.2	
	comp=Z,9.3nm,0.9s						
S34M	**Telegraph Cree**	**63.83**	**36**	P	**P**	**23 48 00.8**	**+1.4**
	baz=283						
C36M	**Paulatuk**	**64.22**	**23**	P	**P**	**23 48 02.1**	**+0.4**
C36M	**Paulatuk**	**64.22**	**23**	P	**P**	**23 48 02.3**	**+0.5**
	baz=284						
ABKAR	**Akbulak array**	**64.23**	**314**	P	**P**	**23 48 02.5**	**+0.4**
ABKAR	**Akbulak array**	**64.23**	**314**	P	**P**	**23 48 02.6**	**+0.4**
ABKAR				IAmb	IAmb	23 48 03.3	
	comp=Z,12nm,1.2s						
CAN	**Canberra**	**64.25**	**174**	P	**P**	**23 48 02.8**	**+0.5**
DLBC	**Dease Lake**	**64.27**	**36**	LR	LR	00 15 37.5	
	comp=Z,42nm,19.5s,baz=140,slow=36						
AKTO	**Aktyubinsk**	**65.12**	**315**	P	**P**	**23 48 07.9**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=74,slow=15,SNR=14						
	comp=Z,4.4nm,0.7s						
NWAO	**Narrogin (SRO)**	**66.25**	**203**	P	**P**	**23 48 15.0**	**-0.3**
HRA	**Herat**	**67.13**	**298**	P	**P**	**23 48 21.9**	**+0.5**
HRA				IAmb	IAmb	23 48 23.5	
	comp=Z,7.5nm,0.8s						
EUNU	**Eureka**	**67.92**	**8**	P	**P**	**23 48 25.9**	**+0.4**
EUNU				IAmb	IAmb	23 48 27.0	
	comp=Z,6.3nm,0.8s						
GEYT	**Alibeck**	**69.02**	**302**	P	**P**	**23 48 34.2**	**+1.2**
	comp=Z,4.9nm,0.9s,baz=79,slow=8.0,SNR=5.7						
	comp=Z,4.9nm,0.9s						
GEYT	**Alibeck**	**69.02**	**302**	P	**P**	**23 48 33.9**	**+0.9**
GEYT				IAmb	IAmb	23 48 37.6	
	comp=Z,5.2nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**69.02**	**302**	P	**P**	**23 48 33.8**	**+0.8**
GYA0B				IAmb	IAmb	23 48 37.6	

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          comp=Z,7.8nm,1.1s
YKA   Yellowknife Ar    70.15  29  P      P       23 48 39.6 +0.2
          comp=Z,2.1nm,0.6s,baz=297,slow=6.3,SNR=19
          comp=Z,2.1nm,0.6s
KLMR  Klimovskoe        71.25 330 eP      P       23 48 45.7 -0.5
KLMR                               AMP            23 48 46.8
          comp=Z,11nm,1.2s
D03D  Eldon             71.72  45  P      P       23 48 51.4 +2.0
          baz=293,SNR=6.1
ARCES ARCESS Array B    71.95 341  P      P       23 48 50.8 +0.5
          comp=Z,2.2nm,0.6s,baz=75,slow=10,SNR=18
          comp=Z,2.2nm,0.6s
ARCES ARCESS Array B    71.95 341  P      P       23 48 50.9 +0.5
ARCES                              IAmb   IAmb    23 49 09.2
          comp=Z,8.8nm,1.2s
E04D  Cinebar           72.44  46  P      P       23 48 55.4 +1.7
          baz=294
J01E  Myrtle Point      72.92  50  P      P       23 48 58.0 +1.5
          baz=294
I03D  Drain, OR         73.09  49  P      P       23 48 59.4 +1.9
          baz=294
K02D  Willamette Mer    73.28  50  P      P       23 49 00.2 +1.4
          baz=294
L02F  Cave Junction     73.58  51  P      P       23 49 02.3 +1.8
          baz=294
I04A  Tendick Farm,     73.67  49  P      P       23 49 02.3 +1.2
          baz=295,SNR=5.1
B08A  Colville Reser    73.69  44  P      P       23 49 00.8 -0.2
B08A                               IAmb   IAmb    23 49 02.8
          comp=Z,6.3nm,0.8s
J04D  Umpqua Nationa    74.10  49  P      P       23 49 05.2 +1.4
          baz=295
YBH   Yreka Blue Hor    74.33  51  LR     LR      00 17 01.7
          comp=Z,57nm,20.5s,baz=299,slow=32
L04D  Klamath Falls     74.40  50  P      P       23 49 05.2 -0.2
L04D                               IAmb   IAmb    23 49 14.0
          comp=Z,11nm,1.2s
L04D  Klamath Falls     74.40  50  P      P       23 49 06.7 +1.2
          baz=295
HAWA  Hanford           74.41  45  P      P       23 49 06.0 +0.7
HAWA                               IAmb   IAmb    23 49 09.2
          comp=Z,6.0nm,1.1s
RAR   Rarotonga         74.46 125  LR     LR      00 17 39.4
          comp=Z,81nm,20.3s,baz=315,slow=32
PINE  Pine Mountain     74.64  48  P      P       23 49 07.7 +0.8
PINE                               IAmb   IAmb    23 49 11.4
          comp=Z,11nm,0.9s
J05D  Fort Rock, OR     74.66  49  P      P       23 49 08.2 +1.3
          baz=295
QRZ   Quartz Range      74.71 157  P      P       23 49 07.0 +0.2
EDM   Edmonton          74.89  37  P      P       23 49 08.2 +0.2
EDM                                IAmb   IAmb    23 49 09.6
          comp=Z,8.9nm,1.0s
NEW   Newport           75.06  43  LR     LR      00 18 24.0
          comp=Z,22nm,20.9s,baz=300,slow=33
NEW   Newport           75.06  43  P      P       23 49 09.0  0.0
NEW                                IAmb   IAmb    23 49 10.8
          comp=Z,6.9nm,0.9s
NEW   Newport           75.06  43  P      P       23 49 09.8 +0.8
          baz=297,SNR=6.8
ORV   Oroville          76.10  52  P      P       23 49 15.2 +0.1
ORV                                IAmb   IAmb    23 49 16.5
          comp=Z,8.3nm,1.1s
KHZ   Kahutara          76.47 157  P      P       23 49 16.4 -0.5
BMO   Blue Mountains    76.50  46  P      P       23 49 17.8 +0.4
BMO                                IAmb   IAmb    23 49 19.4
          comp=Z,5.8nm,1.0s
FIA1  FINESS Array S    76.52 334  P      P       23 49 17.7 +0.7
FINES FINESS Array B    76.52 334  P      P       23 49 17.5 +0.5
          comp=Z,2.5nm,0.6s,baz=68,slow=4.4,SNR=24
          comp=Z,2.5nm,0.6s
FINES FINESS Array B    76.52 334  P      P       23 49 17.2 +0.2
WALA  Waterton Lakes    76.57  41  P      P       23 49 18.6 +0.8
WALA                               IAmb   IAmb    23 49 19.8
          comp=Z,9.0nm,0.7s
BEKR  Beckworth         76.75  52  P      P       23 49 19.4 +0.4
BEKR                               IAmb   IAmb    23 49 20.6
          comp=Z,8.3nm,0.9s
JTMT  Jette             76.99  42  P      P       23 49 20.9 +0.7
JTMT                               IAmb   IAmb    23 49 22.2
          comp=Z,9.3nm,0.8s
KBZ   Khabaz            77.18 313  P      P       23 49 21.8 +0.7
          comp=Z,6.3nm,0.8s,baz=70,slow=2.9,SNR=20
          comp=Z,6.3nm,0.8s
KVAR  Kislovodsk Arr    77.21 313  P      P       23 49 23.3 +1.8
          comp=Z,2.5nm,0.8s,baz=272,slow=20,SNR=2.9
          comp=Z,2.5nm,0.8s
KIV   Kislovodsk        77.21 313  P      P       23 49 22.3 +0.9
KIV                                IAmb   IAmb    23 49 40.2
          comp=Z,7.4nm,0.8s
CMB   Columbia Colle    77.56  53  P      P       23 49 23.6 +0.2
CMB                                IAmb   IAmb    23 49 25.1
          comp=Z,6.4nm,0.8s
GNI   Garni             77.62 309  P      P       23 49 24.9 +1.0
          comp=Z,1.7nm,0.6s,baz=128,slow=20,SNR=2.7
          comp=Z,1.7nm,0.6s
MEF   Metsahovi         77.92 333 eP      P       23 49 25.1 +0.2
MFID  Camas Ranch       78.11  47  P      P       23 49 27.1 +0.5
MFID                               IAmb   IAmb    23 49 28.6
          comp=Z,10nm,0.9s
SUMG  Summit            78.68   0  P      P       23 49 30.8 +1.4
SUMG                               IAmb   IAmb    23 49 45.3
          comp=Z,5.5nm,0.8s
NVAR  Mina Array Bea    78.83  52  P      P       23 49 31.6 +0.9
          comp=Z,5.1nm,0.9s,baz=286,slow=5.6,SNR=24
NVAR                               LR     LR      00 21 02.7
          comp=Z,54nm,19.2s,baz=272,slow=33
          comp=Z,5.1nm,0.9s
NVAR  Mina Array Bea    78.83  52  P      P       23 49 30.5 -0.2
NV11  Mina Array Sit    78.93  52  P      P       23 49 31.5 +0.3
HLID  Hailey            78.94  46  P      P       23 49 31.7 +0.5
HLID  Hailey            78.94  46  P      P       23 49 32.5 +1.3
          baz=300,SNR=8.5
LRM   Limekiln Ridge    79.03  44  P      P       23 49 32.4 +0.7
PKM   Mcpherson Peak    79.41  56  P      P       23 49 34.9 +1.0
          baz=298
EGMT  Eagleton          79.48  41  P      P       23 49 35.0 +1.1
          baz=302
VES   Vestal, Richgr    79.49  55  P      P       23 49 34.6 +0.5
          baz=298
BOZ   Bozeman (W)       79.64  43  P      P       23 49 35.7 +0.8
BOZ                                IAmb   IAmb    23 49 36.6
          comp=Z,3.8nm,0.6s
BOZ   Bozeman (W)       79.64  43  P      P       23 49 35.9 +1.0
          baz=301,SNR=9.3
TPH   Tonopah           79.74  52  P      P       23 49 36.4 +0.7
ELK   Elko              79.79  49  P      P       23 49 35.5 -0.4
          comp=Z,2.6nm,0.9s,baz=317,slow=6.3,SNR=7.9
ELK                                LR     LR      00 20 54.8
          comp=Z,56nm,19.0s,baz=280,slow=33
          comp=Z,2.6nm,0.9s
MNK   Minsk             79.88 328 i P     P       23 49 34.4 -1.4
          comp=E,2.0nm,1.2s
MNK                               i P     P       23 49 34.4 -1.4
          comp=N,13nm,1.1s
MNK                               i P     P       23 49 34.4 -1.4
          comp=Z,16nm,0.9s,baz=234
MNK                               i PP    PP      23 52 35.8 -0.8
MNK                               i PPP   PPP     23 54 24.9
MNK                               i S     S       23 59 38.0 -1.0
MNK                               i SS    SS      00 04 49.7 +2.3
MNK                               i SSS   SSS     00 08 15.7
MNK                               i LQ    LQ      00 20 06.3
MNK                               i LR    LR      00 23 13.0
MNK                               i LRM   MLR     00 26 16.8
          comp=Z,154nm,26.8s
MNK                               i LRM   MLR     00 26 18.3
          comp=N,148nm,24.6s
MNK                               i LRM   MLR     00 26 28.4
          comp=E,15nm,21.0s
IDID  Didziasalis       79.92 329 eP      P       23 49 37.1 +1.1
ISAL  Salakas           80.04 329 eP      P       23 49 37.5 +0.8
IIGN  Ignalina          80.14 329 eP      P       23 49 38.0 +0.8
NACGM Naroch            80.15 328⇓eP      P       23 49 35.0 -2.3
          baz=53
GURO  Guroymak-BITLI    80.23 309  P      P       23 49 38.8 +0.6
UPP   Uppsala           80.72 335 eP      P       23 49 40.3 +0.1
EDW2  Edwards Air Fo    80.73  55  P      P       23 49 42.2 +1.3
          baz=299
R11A  Troy Canyon, C    80.74  51  P      P       23 49 41.1 +0.1
R11A  Troy Canyon, C    80.74  51  P      P       23 49 42.1 +1.1
          baz=300,SNR=6.2
VSVD  Vaisvydziai       80.76 330 eP      P       23 49 41.4 +0.9
HVU   Hansel Valley     80.88  47  P      P       23 49 42.8 +1.1
HVU                                IAmb   IAmb    23 49 43.9
          comp=Z,4.4nm,0.7s
PABE  Paberze           81.05 330  P      P       23 49 42.6 +0.6
PABE  Paberze           81.05 330 eP      P       23 49 42.9 +0.9
RLMT  Red Lodge         81.31  43  P      P       23 49 44.7 +0.7
RLMT                               IAmb   IAmb    23 49 45.9
          comp=Z,4.9nm,0.6s
RLMT  Red Lodge         81.31  43  P      P       23 49 45.4 +1.5
          baz=302,SNR=9.1
GSC   Goldstone, Bar    81.38  54  P      P       23 49 45.2 +0.8
          baz=299
AHID  Auburn Hatcher    81.44  46  P      P       23 49 44.4 -0.2
AHID                               IAmb   IAmb    23 49 46.1
          comp=Z,6.3nm,1.1s
AKASG Malin Array Be    81.46 324  P      P       23 49 43.9 -0.4
          comp=Z,1.1nm,0.5s,baz=49,slow=6.0,SNR=9.2
          comp=Z,1.1nm,0.5s
PRN   Pahroc Range      81.57  52  P      P       23 49 45.3 -0.1
PRN                                IAmb   IAmb    23 49 47.8
          comp=Z,6.9nm,0.8s
DUG   Dugway, Tooele    81.67  49  P      P       23 49 45.8  0.0
DUG                                IAmb   IAmb    23 49 47.8
          comp=Z,10nm,1.2s
DUG   Dugway, Tooele    81.67  49  P      P       23 49 46.9 +1.0
          baz=301,SNR=8.5
HWUT  Hardware Ranch    81.75  47  P      P       23 49 46.9 +0.6
HWUT                               IAmb   IAmb    23 49 48.5
          comp=Z,7.4nm,0.9s
NC405 NORSAR Array S    81.86 338  P      P       23 49 46.7 +0.4
TUQ   Turquoise Moun    81.94  54  P      P       23 49 48.7 +1.3
          baz=300
HEC   Hector,Ludlow     81.95  55  P      P       23 49 48.5 +1.1
          baz=300
NB2   NORSAR Subarra    82.07 338  P      P       23 49 47.2 -0.3
          comp=Z,5.3nm,0.6s,baz=41,slow=5.3
NOA   NORSAR Array B    82.07 338  P      P       23 49 47.5  0.0
          comp=Z,3.3nm,0.6s,baz=41,slow=5.1,SNR=15
NOA                                LR     LR      00 29 25.9
          comp=Z,16nm,21.4s,baz=65,slow=38
          comp=Z,3.3nm,0.6s
LAO   LASA Array        82.22  40  P      P       23 49 48.6  0.0
LAO                                IAmb   IAmb    23 49 50.7
          comp=Z,10nm,0.9s
LAO   LASA Array        82.22  40  P      P       23 49 49.7 +1.2
          baz=304,SNR=5.0
SUW   Suwalki           82.35 329  P      P       23 49 49.0  0.0
SUW   Suwalki           82.35 329 eP      P       23 49 49.5 +0.5
PD31  Pinedale Array    82.40  45  P      P       23 49 49.6 -0.2
PDAR  Pinedale Array    82.40  45  P      P       23 49 50.1 +0.4
          comp=Z,1.2nm,0.5s,baz=286,slow=1.6,SNR=17
PDAR                               LR     LR      00 23 00.6
          comp=Z,27nm,20.2s,baz=298,slow=33
          comp=Z,1.2nm,0.5s
PDAR  Pinedale Array    82.40  45  P      P       23 49 49.6 -0.2
GMRC  Granite Mounta    82.45  54  P      P       23 49 50.6 +0.5
          baz=300,SNR=6.9
PFO   Pinyon Flats O    82.46  56  P      P       23 49 50.5 +0.4
          comp=Z,2.7nm,0.6s,baz=311,slow=6.7,SNR=5.4
PFO                                LR     LR      00 22 34.6
          comp=Z,38nm,20.1s,baz=212,slow=33
          comp=Z,2.7nm,0.6s
PFO   Pinyon Flats O    82.46  56  P      P       23 49 50.4 +0.2
PFO                                IAmb   IAmb    23 49 51.1
          comp=Z,4.0nm,0.8s
TPFO  Pinon Flats       82.47  56  P      P       23 49 50.6 +0.4
          baz=300
SOCY  Socotra           83.27 280  P      P       23 49 53.3 -1.2
BNN   Bunyan            84.22 311  P      P       23 49 59.4 +0.2
K22A  Casper            84.32  44  P      P       23 50 00.5 +0.9
          baz=304
O20A  White River Ci    84.66  47  P      P       23 50 02.3 +0.9
          baz=304
RAYN  Ar Rayn           84.97 294  P      P       23 50 03.7 +0.6
PV23  Carpenter Ridg    85.09  49  P      P       23 50 03.9 +0.2
BR131 Keskin Array S    85.18 313  P      P       23 50 04.0  0.0
BR131                              IAmb   IAmb    23 50 23.1
          comp=Z,5.0nm,0.9s
BRTR  Keskin Array B    85.18 313  P      P       23 50 04.6 +0.7
          comp=Z,1.7nm,0.7s,baz=104,slow=4.1,SNR=14
          comp=Z,1.7nm,0.7s
BRTR  Keskin Array B    85.18 313  P      P       23 50 04.2 +0.2
BURAR Bucovina Array    85.42 323  P      P       23 50 04.8 -0.2
ULM   Lac du Bonnet     85.49  33  LR     LR      00 27 53.1
          comp=Z,32nm,19.9s,baz=312,slow=35
N23A  Red Feather La    85.68  45  P      P       23 50 07.2 +0.6
N23A  Red Feather La    85.68  45  P      P       23 50 08.4 +1.8
          baz=305,SNR=8.9
MVCO  Mesa Verde        86.11  49  P      P       23 50 09.7 +0.9
          baz=304
ISCO  Idaho Springs     86.52  46  P      P       23 50 11.0 +0.2
ISCO                               IAmb   IAmb    23 50 16.2
          comp=Z,5.3nm,1.3s
ISCO  Idaho Springs     86.52  46  P      P       23 50 11.6 +0.8
          baz=305
MMAI  Mount Meron Ar    87.70 307  P      P       23 50 15.5 -0.9
          comp=Z,0.3nm,0.5s,baz=58,slow=21,SNR=7.3
          comp=Z,0.3nm,0.5s
SDCO  Great Sand Dun    87.77  48  P      P       23 50 18.2 +1.3
          baz=306
ANMO  Albuquerque       88.75  50  LR     LR      00 26 54.3
          comp=Z,32nm,18.6s,baz=294,slow=33
GERES GERESS Array B    90.21 329  P      P       23 50 27.2 -0.7
          comp=Z,0.5nm,0.6s,baz=57,slow=4.9,SNR=6.8
          comp=Z,0.5nm,0.6s
MOA   Molln             90.68 328 eP      P       23 50 30.9 +0.9
          comp=Z,4.9nm,1.5s
SOKA  Soboth            91.17 327 i P     P       23 50 32.0 -0.5
          comp=Z,5.6nm,1.0s
MNTX  Cornudas Mount    91.36  52  P      P       23 50 34.7 +1.2
          baz=306
OBKA  Obir              91.52 327 eP      P       23 50 32.7 -1.4
          comp=Z,12nm,1.9s
MYKA  Terra Mystica     91.86 328 i P     P       23 50 34.4 -1.2
          comp=Z,1.6nm,0.4s
LPIG  La Paz            92.00  61  LR     LR      00 27 51.4
          comp=Z,41nm,18.1s,baz=175,slow=33
ABTA  Abfaltersbach     92.30 328 i P     P       23 50 37.2 -0.4
          comp=Z,5.0nm,1.1s
MOTA  Moosalm           92.48 330 eP      P       23 50 37.9 -0.7
          comp=Z,3.7nm,1.2s
RETA  Reutte            92.53 330 i P     P       23 50 38.4 -0.3
          comp=Z,5.1nm,1.2s
DAVA  Damuels           93.07 330 i P     P       23 50 41.1 -0.2
          comp=Z,4.1nm,0.9s
WMOK  Wichita Mounta    93.91  47  P      P       23 50 44.5 -0.7
WMOK                               IAmb   IAmb    23 50 46.6
          comp=Z,4.7nm,0.9s
WMOK  Wichita Mounta    93.91  47  P      P       23 50 45.7 +0.5
          baz=309,SNR=5.4
TX31  Lajitas Ar. Si    93.94  53  P      P       23 50 46.2 +0.7
TXAR  Lajitas Array     93.94  53  P      P       23 50 46.8 +1.3
          comp=Z,1.3nm,0.6s,baz=307,slow=2.8,SNR=19
TXAR                               LR     LR      00 35 44.1
          comp=Z,23nm,18.9s,baz=273,slow=37
          comp=Z,1.3nm,0.6s
TXAR  Lajitas Array     93.94  53  P      P       23 50 46.3 +0.8
TORD  Torodi Ar. Bea   123.79 313  PKP    PKPdf   23 56 25.6 -0.4
          comp=Z,0.5nm,0.6s,baz=324,slow=1.3,SNR=6.7
LPAZ  La Paz           148.77  73  PKPbc  PKPbc   23 57 16.6 +0.4
          comp=Z,8.9nm,0.8s,baz=309,slow=3.8,SNR=21
LPAZ  La Paz           148.77  73         PKPdf   23 57 13.6 +1.2
PLCA  Paso Flores      150.33 122  PKPbc  PKPbc   23 57 19.4 +0.6
          comp=Z,5.8nm,0.8s,baz=239,slow=3.6,SNR=15
PLCA  Paso Flores      150.33 122         PKPbc   23 57 19.0 +0.3
BDFB  Brasilia         163.30  39  PKPab  PKPab   23 58 21.3 +0.1
          comp=Z,3.3nm,1.0s,baz=23,slow=9.4,SNR=3.2
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*TAP **14** 23:43:36.7, 24°.62N×122°.97E, h91^{km}, ML3.1, C*

*JMA **14** 23:43:36.5±0.2, 25°N±3°×123°.0E±0°.8, h93^{km}±2^{km}, MV2.0/10, NW OFF ISHIGAKIJIMA IS*

ISC 14 23:43:37.3±1.5**, 24°.52N**±0°.06×**122°.97E**±0°.03**, h89**^{km}±9^{km}**, n52, σ0^{s}.77**/81**, Taiwan region**

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Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                     Op     ISC         h  m  s   ISC
JYNG  Yonagunijimaku     0.07 195   P      Pn      23 43 49.8  0.0
JYNG                                S      Sn      23 43 59.6 +0.5
YOJ   Yonaguni jima      0.07 146 i P      Pn      23 43 50.0 +0.1
          baz=169
YOJ                               i S      Sn      23 43 59.6 +0.5
          baz=169
YOJ   Yonaguni jima      0.07 146   P      Pn      23 43 50.0 +0.1
YOJ                                 S      Sn      23 43 59.5 +0.4
IRIF  Iriomote-Funau     0.72 105   P      Pn      23 43 53.9  0.0
IRIF                                S      Sn      23 44 06.2 -0.1
HATJ  Hateruma jima      0.90 121  eS      Sn      23 44 10.6 +1.1
JKRS  Kuro-shima         0.99 106   P      Pn      23 43 57.4 +0.5
JKRS                                S      Sn      23 44 12.2 +0.8
TWC   Suao               1.02 275  eP      Pn      23 43 57.0 -0.1
          baz=269
TWC                                eS      Sn      23 44 11.3 -0.8
          baz=269
JIJ   Ishigaki jima      1.08  98   P      Pn      23 43 57.7 -0.2
JIJ                                 S      Sn      23 44 12.7 -0.7
NTC   Toucheng           1.08 288  eS      Sn      23 44 12.6 -0.8
          baz=282
TIPB  Shuangxi           1.13 294  eP      Pn      23 43 58.3 -0.1
          baz=282
TIPB                               eS      Sn      23 44 13.4 -1.0
          baz=282
NDS   Dongshan           1.14 276  eP      Pn      23 43 58.9 +0.3
          baz=270
NDS                                eS      Sn      23 44 14.0 -0.6
          baz=270
TWE   Neicheng           1.20 280  eP      Pn      23 43 59.2 -0.1
          baz=275
NWF   Wu-fen Shan        1.21 297  eS      Sn      23 44 15.3 -0.9
          baz=283
FUSB  Fushanzhiwuyua     1.28 281  eP      Pn      23 44 00.6 +0.3
          baz=268
FUSB                               eS      Sn      23 44 17.5 -0.2
          baz=268
ENTT  Nioudou            1.28 276   P      Pn      23 44 00.9 +0.7
          baz=265
ENTT                               eS      Sn      23 44 18.2 +0.6
          baz=265
NACB  Ninganchiao        1.30 255   P      Pn      23 44 00.1 -0.4
          baz=241
NACB                                S      Sn      23 44 17.2 -0.7
          baz=241
LATG  Datong             1.31 271   P      Pn      23 44 01.1 +0.3
          baz=266
LATG                                S      Sn      23 44 18.3 -0.2
          baz=266
TWD   Chiawan            1.32 251  eS      Sn      23 44 17.7 -0.8
          baz=246
NWLT  Wulai              1.36 281  eS      Sn      23 44 18.5 -0.8
          baz=276
ETLH  Xiulin Townshi     1.39 257  eS      Sn      23 44 19.2 -0.9
          baz=246
NNS   Nan Shan           1.45 267  eS      Sn      23 44 21.2 -0.4
          baz=254
YHNB  Yeheng             1.46 276  eP      Pn      23 44 02.9 +0.4
          baz=264
YHNB                               eS      Sn      23 44 21.3 -0.3
          baz=264
NSK   Sanguang           1.47 276  eS      Sn      23 44 21.9 -0.1
          baz=263
JTJ   Tarama             1.58  85   P      Pn      23 44 03.6 -0.5
JTJ                                 S      Sn      23 44 23.6 -0.8
FUSS  Fushou             1.59 260  eP      Pn      23 44 04.7 +0.2
          baz=256
FUSS                               eS      Sn      23 44 24.4 -0.5
          baz=256
WHF   Hehuan Shan        1.60 257  eP      Pn      23 44 04.7  0.0
          baz=252
WHF                                eS      Sn      23 44 24.5 -0.8
          baz=252
EGFH  Guangfu            1.64 239   P      Pn      23 44 04.5 -0.4
          baz=230
EGFH                               eS      Sn      23 44 25.0 -0.7
          baz=230
NFF   Wufeng Townshi     1.69 274  eS      Sn      23 44 26.4 -0.4
          baz=269
CHGB  Renai              1.70 255  eP      Pn      23 44 06.1 +0.3
          baz=243
CHGB                               eS      Sn      23 44 26.2 -1.1
          baz=243
OWD   Renai              1.73 251   P      Pn      23 44 06.1  0.0
          baz=241
OWD                                 S      Sn      23 44 27.1 -0.8
          baz=241
HGSD  Ruisui             1.74 234  eP      Pn      23 44 05.8 -0.3
          baz=226
HGSD                               eS      Sn      23 44 27.4 -0.6
          baz=226
WUSB  Renai              1.77 253   P      Pn      23 44 06.9 +0.3
          baz=243
WUSB                                S      Sn      23 44 28.4 -0.4
          baz=243
NSTT  Nanjuang           1.79 274  eS      Sn      23 44 29.0 -0.1
          baz=270
EHY   Hungye             1.81 236  eP      Pn      23 44 06.7 -0.3
          baz=243
VWDT  VWDT               1.83 246   P      Pn      23 44 07.7 +0.4
          baz=242
VWDT                               eS      Sn      23 44 29.9 -0.2
          baz=242
WHP   Taichung City      1.86 263  eP      Pn      23 44 09.0 +1.3
          baz=255
WHP                                eS      Sn      23 44 31.3 +0.5
          baz=255
YULB  Yu-li              1.90 234  eP      Pn      23 44 07.8 -0.3
          baz=242
EYUL  Yuli               1.91 233  eP      Pn      23 44 08.5 +0.2
          baz=225
EYUL                               eS      Sn      23 44 32.2 +0.3
          baz=225
SSLB  Suanglung          1.98 249  eP      Pn      23 44 09.5 +0.2
          baz=245
SSLB                               eS      Sn      23 44 33.8 +0.2
          baz=245
FULB  Fuli               2.02 230  eS      Sn      23 44 34.0 -0.6
          baz=220
TYC   Yuchr              2.02 253  eS      Sn      23 44 35.3 +0.8
          baz=245
CHKT  Chengkung          2.04 226  eS      Sn      23 44 33.1 -1.8
          baz=223
YUS   Yu-Shan            2.11 241   P      Pn      23 44 11.9 +0.5
          baz=233
WJS   Zhushan            2.16 252  eS      Sn      23 44 39.3 +1.5
          baz=248
EDH   Donghe             2.17 225   P      Pn      23 44 11.0 -0.7
          baz=218
EDH                                 S      Sn      23 44 36.2 -1.8
          baz=218
ALS   Alishan            2.22 243  eP      Pn      23 44 13.6 +1.0
          baz=235
ELDTW Lidau              2.22 234  eP      Pn      23 44 12.4 -0.2
          baz=226
ELDTW                              eS      Sn      23 44 39.1 -0.4
          baz=226
CHN5  Tsauling           2.29 247  eS      Sn      23 44 42.8 +1.9
          baz=236
LDUT  Ludao              2.30 217  eS      Sn      23 44 39.6 -1.4
          baz=210
STYH  Taoyuan            2.42 237   P      Pn      23 44 16.0 +1.1
          baz=229
STYH                               eS      Sn      23 44 44.3 +0.5
          baz=229
CHN4  Tsaushan           2.46 242  eS      Sn      23 44 47.4 +2.3
          baz=232
WTP   Ta-pu              2.50 240  eP      Pn      23 44 17.8 +1.7
          baz=239
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*IDC **14** 23:45:37.4±2.0, 24°.25N×141°.50E, h139^{km}±23^{km}, mb3.0/5, mbtmp3.5/6, Error ellipse: s-maj=53.7km s-min=19.6km az=92.0*

ISC 14 23:45:38.5±1.1**, 24°.3N**±0°.1×**141°.6E**±0°.3**, h150**^{km}**, n6, σ0^{s}.99**/7**, mb3.0**/5**, Volcano Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                     Op     ISC         h  m  s   ISC
JCJ   Chichijima         2.86  11   P      Pn      23 46 24.2 +0.2
          35nm,0.2s,baz=18,slow=7.1,SNR=137
JCJ                                 S      Sn      23 46 58.6 -0.7
          84nm,0.3s,baz=292,slow=23,SNR=16
WRA   Warramunga Arr    44.52 190   P      P       23 53 33.9 -1.4
          0.4nm,0.3s,baz=8.4,slow=8.5,SNR=12
          0.4nm,0.3s
ASAR  Alice Springs     48.24 189   P      P       23 54 05.2 +0.8
          0.2nm,0.7s,baz=11,slow=12,SNR=1.9
          0.2nm,0.7s
MKAR  Makanchi Array    51.87 311   P      P       23 54 31.9 +0.4
          0.1nm,0.5s,baz=91,slow=7.2,SNR=2.0
          0.1nm,0.5s
YKA   Yellowknife Ar    74.87  28   P      P       23 57 03.0 +0.6
          0.1nm,0.3s,baz=298,slow=5.9,SNR=2.6
          0.1nm,0.3s
FINES FINESS Array B    80.22 334   P      P       23 57 31.7 -0.4
          0.6nm,0.7s,baz=64,slow=6.3,SNR=1.2
          0.6nm,0.7s
```

IDC 14 23:49:22.9±3.2**,28°.92N**×**142°.88E,h0^{km},mb3.5**/2**,** **mbtmp3.5**/3**,ML2.7**/1**,Error ellipse: s-maj=94.6km s-min=23.4km az=85.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.92	199	Pn	Pb	23 49 57.9	-0.9
	4.3nm,0.3s,baz=18,slow=20,SNR=1.8						
JCJ				Sn	Sn	23 50 21.1	-0.6
	18nm,0.3s,baz=300,slow=22,SNR=11						
MJAR	Matsushiro Arr	8.56	334	Pn	Pn	23 51 27.0	-1.0
	0.1nm,0.3s,baz=149,slow=11,SNR=4.2						
	0.9nm,0.4s						
WRA	Warramunga Arr	49.27	191	P	P	23 58 13.2	-0.3
	0.5nm,0.5s,baz=12,slow=8.7,SNR=6.6						
	0.5nm,0.5s						
MKAR	Makanchi Array	49.81	308	P	P	23 58 17.6	0.0
	0.2nm,0.6s,baz=80,slow=9.4,SNR=2.6						
	0.2nm,0.6s						

*IDC **14** 23:54:32.2±0.9,53°.73N×166°.26W,h0^{km},mb3.8/14, mbtmp3.8/16,ML3.5/2,Error ellipse: s-maj=24.7km s-min=14.8km az=176.0*

*AEIC **14** 23:54:39±3.1,53°.53N±0°.04×165°.82W±0°.06,h43^{km}±6^{km}, Error ellipse: s-maj=7.5km s-min=2.8km az=145.0*

*NEIC **14** 23:54:40±2.5,53°.59N±0°.06×165°.89W±0°.08,h58^{km}±6^{km}, mb3.9/29,ML4.2/8,ML4.0(AEIC),Error ellipse: s-maj=9.0km s-min=5.9km az=153.0*

ISC 14 23:54:39.8±1.0**,53°.62N**±0°.09×**165°.87W**±0°.05**,h59^{km}**±7^{km}**,** **n148,**σ**1^s.57**/147**,mb3.9**/19**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	Unalaska Valle	0.44	301		Pn	23 54 50.9	-0.1
UNV				Sn	Sn	23 54 59.5	+0.3
UNV	Unalaska Valle	0.44	301	P	Pn	23 54 50.9	-0.1
	baz=128						
UNV				S	Sn	23 54 59.7	+0.6
	baz=128						
AKBBA	Akutan Broad B	0.48	356		Pn	23 54 51.7	+0.2
AKBBA					Sn	23 55 01.0	+1.1
AKUT	Akutan	0.52	7		Pn	23 54 52.0	+0.2
AKUT					Sn	23 55 01.4	+0.7
AKUT				IAML		23 55 03.2	
	comp=E,24μm,0.3s						
AKSA	Akutan Strait	0.53	11		Pn	23 54 51.7	-0.3
AKSA					Sn	23 55 01.4	+0.6
MTBL	Makushin Table	0.59	307		Pn	23 54 53.4	+0.6
MSW	Makushin Switc	0.61	299		Pn	23 54 53.4	+0.4
MSW					Sn	23 55 03.7	+1.1
MGOD	Makushin Gods	0.62	287		Pn	23 54 53.0	0.0
OKFG	Magazine Ridge	1.23	261		Pn	23 55 01.0	+0.1
WTUG	Tugumak	1.51	35		Pn	23 55 05.2	+0.6
SSLW	Shishaldin Wes	1.55	41		Pn	23 55 05.9	+0.8
BRPK	Brown Peak	1.62	50		Pn	23 55 06.6	+0.5
SSLN	Shishaldin Nor	1.62	42		Pn	23 55 07.5	+1.3
FALS	False Pass	1.90	48	Pn	Pn	23 55 10.7	+0.9
FALS	False Pass	1.90	48		Sn	23 55 34.6	+1.9
FALS	False Pass	1.90	48	P	Pn	23 55 10.8	+0.9
	baz=228						
FALS				S	Sn	23 55 34.6	+1.9
	baz=228						
NIKH	Nikolski High	1.90	251	Pn	Pn	23 55 09.6	-0.4
NIKH	Nikolski High	1.90	251		Sn	23 55 32.4	-0.4
NIKH	Nikolski High	1.90	251	P	Pn	23 55 09.5	-0.4
	baz=72						
NIKH				S	Sn	23 55 32.4	-0.4
	baz=72						
HAG	Hague Volcano	2.87	52		Pn	23 55 24.1	+0.9
PS4A	Pavlof South-4	2.91	52		Pn	23 55 25.2	+1.6
SDPT	Sand Point	3.59	59	Pn	Pn	23 55 32.9	-0.1
SDPT				IAML		23 56 28.2	
	comp=N,473nm,0.7s						
SDPT				IAML		23 56 32.9	
	comp=E,578nm,0.7s						
SDPT	Sand Point	3.59	59	P	Pn	23 55 33.2	+0.2
	baz=242						
CNBA	Chernabura Isl	3.88	69	Pn	Pn	23 55 35.6	-1.3
CNBA				IAML		23 56 42.8	
	comp=N,164nm,0.7s						
CHNA	Chernabura Isl	3.88	69	P	Pn	23 55 35.8	-1.1
	baz=253						
SPIA	Saint Paul Isl	4.35	327	Pn	Pn	23 55 44.3	+1.0
ATKA	Atka Island	5.23	258		Pn	23 55 56.3	+0.9
ANPB	Aniakchak Plen	5.39	51		Pn	23 55 58.3	+0.7
CHIR	Chirikof Islan	6.34	66	Pn	Pn	23 56 09.2	-1.2
CHIR	Chirikof Islan	6.34	66	P	Pn	23 56 09.3	-1.2
	baz=253						
GSTD	Great Sitkin T	6.42	260		Pn	23 56 12.9	+1.2
ADK	Adak	6.79	260	Pn	Pn	23 56 17.3	+0.6
SII	Sitkinak Islan	7.33	62	Pn	Pn	23 56 23.4	-0.7
OHAK	Old Harbor	8.02	58	Pn	Pn	23 56 32.2	-1.2
P18K	Big Mountain,	8.25	41		Pn	23 56 38.7	+2.0
O18K	Koktuh Hills	8.56	39		Pn	23 56 43.3	+2.4
KDAK	Kodiak Island	8.58	56	Pn	Pn	23 56 39.8	-1.4
	comp=N,2.5nm,0.3s,baz=234,slow=6.0,SNR=29						
KDAK				Sn	Sn	23 58 08.2	-8.1
	baz=253,slow=12						
	comp=N,5.5nm,0.4s						
KDAK	Kodiak Island	8.58	56		Pn	23 56 39.9	-1.3
Q19K	Cape Douglas,	8.63	47	Pn	Pn	23 56 42.4	+0.5
N18K	Kilae Creek	8.91	33	Pn	Pn	23 56 46.6	+0.9
O19K	Port Alsworth	9.12	39		Pn	23 56 50.5	+2.0
P19K	Oil Pt	9.21	44	Pn	Pn	23 56 50.8	+1.0
SVW2	Sparrevohn	9.32	32		Pn	23 56 52.6	+1.3
N19K	Bonanza Creek	9.48	36	Pn	Pn	23 56 55.1	+1.6
RSO	Redoubt South	9.89	41		Pn	23 57 00.7	+1.4
CNPM	China Poot	10.00	48		Pn	23 56 59.8	-0.7
BRLK	Bradley Lake	10.27	47	Pn	Pn	23 57 02.4	-1.9
M19K	Big River Lodg	10.31	32		Pn	23 57 06.4	+1.7
L19K	White Mountain	10.38	30	Pn	Pn	23 57 06.7	+1.0
GAMB	Gambell	10.62	346	Pn	Pn	23 57 12.3	+3.3
TTA	Tatalina	10.67	25	Pn	Pn	23 57 10.8	+1.2
SEW	Seward	11.07	48		Pn	23 57 13.9	-1.2
RC01	Rabbit Creek A	11.46	43		Pn	23 57 19.8	-0.7
K20K	Telida	11.53	27	Pn	Pn	23 57 22.3	+0.9
TNA	Tin City	12.02	356	Pn	Pn	23 57 30.9	+2.9
CAST	Castle Rocks	12.15	31	Pn	Pn	23 57 31.0	+1.1
KNK	Knik Glacier	12.16	43		Pn	23 57 28.0	-2.0
J20K	Nowinta River	12.17	25		Pn	23 57 31.1	+1.0
Q23K	Middleton Isla	12.22	54	Pn	Pn	23 57 28.0	-2.8
MID	Middleton Isla	12.23	54	Pn	Pn	23 57 27.9	-3.0
SML	Sawmill	12.42	42		Pn	23 57 31.6	-2.0
GLI	Glacier Island	12.46	47		Pn	23 57 31.2	-3.0
FID	Port Fidalgo	12.68	48		Pn	23 57 33.4	-3.7
TRF	Thorofare Moun	12.74	33	Pn	Pn	23 57 38.0	0.0
SCM	Sheep Creek Mo	12.84	43		Pn	23 57 37.3	-2.0
EYAK	Cordova Ski Ar	12.92	50		Pn	23 57 37.4	-2.9
BPAW	Bear Paw Mtn.	12.98	30		Pn	23 57 42.2	+1.0
DIV	Divide	13.15	47	Pn	Pn	23 57 41.0	-2.6
M24K	Tolsona, Glenn	13.45	43		Pn	23 57 45.6	-2.0
DHY	Denali Highway	13.51	38		Pn	23 57 45.6	-2.9
HMT	Hamilton	13.53	52		Pn	23 57 45.7	-2.9
I21K	Tanana	13.53	26		Pn	23 57 49.3	+0.6
BMRM	Bremner River	13.60	49		Pn	23 57 47.4	-2.3
H21K	Melozitna Rive	13.72	23		Pn	23 57 51.9	+0.7
IMAR	Indian Mountai	13.78	21	Pn	Pn	23 57 52.0	0.0
N25K	Chitina, Valde	13.87	46	Pn	Pn	23 57 51.0	-2.3
WRH	Wood River Hil	14.15	33		Pn	23 57 57.1	+0.2
PAX	Paxson	14.17	41		Pn	23 57 55.9	-1.5
I23K	Minto, Yukon-K	14.23	29		Pn	23 57 58.7	+0.7
CCB	Clear Creek Bu	14.36	33		Pn	23 57 58.2	-1.4
MCARA	McCarthy VSAT	14.47	48		Pn	23 57 59.3	-1.9
ISLE	Juniper Island	14.51	52		Pn	23 57 59.6	-2.2
H23K	Yukon River	14.68	27		Pn	23 58 05.6	+1.7
IL31		14.73	33		Pn	23 58 04.2	-0.3
ILAR	Eielson Array	14.73	33	Pn	Pn	23 58 01.1	-3.5
	comp=N,0.1nm,0.3s,baz=231,slow=14,SNR=2.2						
	comp=N,0.2nm,0.6s						
ILAR	Eielson Array	14.73	33	Pn	Pn	23 58 04.8	+0.2
MENT	Mentasta	14.85	42		Pn	23 58 07.8	+1.8
TABL	Table Mountain	15.03	53		Pn	23 58 07.4	-1.2
DOT	Dot Lake	15.07	40		Pn	23 58 10.4	+1.5
CTGM	Chitina Glacie	15.09	51		Pn	23 58 08.2	-1.1
J25K	Salcha River,	15.14	35		Pn	23 58 08.5	-1.5
J25K				IAmb	IAmb	23 58 15.6	
	comp=Z,3.4nm,0.7s						
H24K	Noodor Dome	15.16	29	Pn	Pn	23 58 09.4	-0.7
M27K	Edge Creek, AK	15.35	46		Pn	23 58 11.3	-1.4
M27K				IAmb	IAmb	23 58 20.9	
	comp=Z,5.7nm,0.8s						
L27K	Beaver Creek,	15.67	43		Pn	23 58 14.7	-2.0
BCAR	Beaver Creek A	15.69	43		Pn	23 58 14.3	-2.6
EGAK	Eagle	16.74	38		Pn	23 58 30.6	+0.5
BMAR	Burnt Mountain	17.21	28		Pn	23 58 36.4	+0.5
M30M	Minto, Yukon	17.64	48	P	P	23 58 41.9	+0.4
M30M				IAmb	IAmb	23 58 45.4	
	comp=Z,8.5nm,1.5s						
N31M	Braeburn, Yuko	17.82	52		P	23 58 44.2	+0.8
N31M				IAmb	IAmb	23 58 57.7	
	comp=Z,7.1nm,0.7s						
BESE	Bessie Mountai	17.90	61		Pn	23 58 44.2	-0.2
WHY	Whitehorse	18.10	55		Pn	23 58 48.0	+1.1
WHY				IAmb	IAmb	23 58 51.4	
	comp=Z,6.5nm,1.1s						
JIS	Juneau Island	18.14	62	P	P	23 58 46.5	-0.3
JIS				IAmb	IAmb	23 58 50.6	
	comp=Z,5.2nm,0.8s						
A21K	Barrow	18.23	10	P	Pn	23 58 50.0	+1.8
A21K				IAmb	IAmb	23 58 53.4	
	comp=Z,18nm,1.2s						
M31M	Drury Creek, Y	18.62	50	P	Pn	23 58 53.5	+0.4
CRAG	Craig	18.99	71		Pn	23 58 57.3	-0.2
CRAG				IAmb	IAmb	23 59 18.3	
	comp=Z,9.3nm,1.2s						
P33M	Teslin, Yukon	19.05	57	P	Pn	23 58 58.7	+0.3
EPYK	Eagle Plains	19.13	37	P	P	23 58 57.2	-0.6
EPYK				IAmb	IAmb	23 58 58.6	
	comp=Z,4.4nm,0.6s						
DLBC	Dease Lake	20.43	62	P	P	23 59 13.3	+1.3
	comp=Z,2.0nm,0.7s,baz=282,slow=12,SNR=6.4						
	comp=Z,2.0nm,0.7s						
DLBC	Dease Lake	20.43	62	P	Pn	23 59 14.3	-0.3
DLBC				IAmb	IAmb	23 59 37.8	
	comp=Z,5.0nm,1.1s						
INK	Inuvik	21.14	33	P	P	23 59 18.1	-1.3
	comp=Z,1.5nm,0.4s,baz=260,slow=11,SNR=11						
	comp=Z,1.5nm,0.4s						
INK	Inuvik	21.14	33	P	P	23 59 18.0	-1.3
PETK	Petropavlovsk-	21.60	283	P	P	23 59 22.5	-2.0
	comp=Z,0.6nm,0.7s,baz=226,slow=56,SNR=1.3						
	comp=Z,0.6nm,0.7s						
A36M	Sachs Harbour	25.31	28	P	P	00 00 00.9	+0.6
YKA	Yellowknife Ar	27.82	51	P	P	00 00 24.4	+1.4
	comp=Z,0.6nm,0.4s,baz=275,slow=8.4,SNR=18						
	comp=Z,0.6nm,0.4s						
YKA	Yellowknife Ar	27.82	51	P	P	00 00 23.3	+0.3
YBH	Yreka Blue Hor	30.92	95	P	P	00 00 53.3	+2.4
	comp=Z,1.0nm,0.7s,baz=304,slow=5.6,SNR=4.1						
	comp=Z,1.0nm,0.7s						
JTMT	Jette	32.60	79	P	P	00 01 07.0	+1.4
RES	Resolute Bay	34.32	26	P	P	00 01 19.9	-0.1
RES				IAmb	IAmb	00 01 20.3	
	comp=Z,3.5nm,1.2s						
MCMT	McKenzie Canyo	34.99	83	P	P	00 01 27.3	+0.8
BOZ	Bozeman (W)	35.28	81	P	P	00 01 28.9	+0.1
BOZ				IAmb	IAmb	00 01 35.1	
	comp=Z,0.9nm,0.6s						
NVAR	Mina Array Bea	35.63	96	P	P	00 01 34.0	+2.0
	comp=Z,0.6nm,0.6s,baz=309,slow=9.4,SNR=4.8						
	comp=Z,0.6nm,0.6s						
YHH	Holmes Hill	36.19	81	P	P	00 01 38.0	+1.2
YHH				IAmb	IAmb	00 01 41.4	
	comp=Z,3.3nm,1.1s						
PDAR	Pinedale Array	38.12	83	P	P	00 01 54.4	+1.2
	comp=Z,0.4nm,0.6s,baz=328,slow=5.3,SNR=4.6						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	38.12	83	P	P	00 01 54.1	+0.9
H11N2	WAKE ISLAND Hy	39.78	222	T	T	00 44 19.3	
	baz=25,slow=76,SNR=515						
H11N3	WAKE ISLAND Hy	39.78	222	T	T	00 44 19.8	
	baz=25,slow=76,SNR=1210						
H11N1	WAKE ISLAND Hy	39.80	222	T	T	00 44 20.7	
	baz=25,slow=76,SNR=419						
H11S1	WAKE ISLAND Hy	40.96	222	T	T	00 45 48.9	
	baz=25,slow=76,SNR=352						
H11S2	WAKE ISLAND Hy	40.97	222	T	T	00 45 45.0	
	baz=25,slow=76,SNR=394						
H11S3	WAKE ISLAND Hy	40.98	222	T	T	00 45 50.9	
	baz=25,slow=76,SNR=262						
TX31	Lajitas Ar. Si	50.65	93	P	P	00 03 33.3	+0.3
TXAR	Lajitas Array	50.65	93	P	P	00 03 34.0	+0.9
	comp=Z,0.9nm,0.7s,baz=307,slow=6.1,SNR=12						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	50.65	93	P	P	00 03 33.4	+0.3
ARCES	ARCESS Array B	56.87	355	P	P	00 04 16.8	-1.0
	comp=Z,1.7nm,0.9s,baz=8.6,slow=7.1,SNR=1.4						
	comp=Z,1.7nm,0.9s						
MK31	Makanchi Array	64.44	315	P	P	00 05 09.7	0.0
MK31				IAmb	IAmb	00 05 16.0	
	comp=Z,2.3nm,1.3s						
MKAR	Makanchi Array	64.44	315	P	P	00 05 08.4	-1.3
	comp=Z,0.3nm,0.6s,baz=37,slow=5.8,SNR=5.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	64.44	315	P	P	00 05 09.5	-0.2
FINES	FINESS Array B	64.89	354	P	P	00 05 11.4	-0.8
	comp=Z,2.7nm,1.0s,baz=15,slow=7.9,SNR=8.3						
	comp=Z,2.7nm,1.0s						
FINES	FINESS Array B	64.89	354	P	P	00 05 11.1	-1.1
ABKAR	Akbulak array	70.44	330	P	P	00 05 47.5	+0.1
BOOM	Boomskoye usch	70.58	316	P	P	00 05 48.7	0.0
BOOM				IAmb	IAmb	00 05 49.6	
	comp=Z,1.1nm,0.6s						
SIJI	Sorong	74.95	247	P	P	00 06 14.8	+0.1
	comp=Z,6.8nm,0.6s,baz=337,slow=20,SNR=5.9						
AKASG	Malin Array Be	75.28	350	P	P	00 06 15.4	-0.6
	comp=Z,0.4nm,0.4s,baz=9.1,slow=5.8,SNR=2.7						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	78.36	285	P	P	00 06 32.4	-1.5
	comp=Z,1.3nm,0.2s,baz=54,slow=4.6,SNR=2.4						
	comp=Z,1.3nm,0.2s						
BRTR	Keskin Array B	85.51	345	P	P	00 07 10.2	-1.1
	comp=Z,0.4nm,0.6s,baz=72,slow=6.4,SNR=2.9						
	comp=Z,0.4nm,0.6s						
H03N2	Juan Fernandez	114.45	113	T	T	02 17 53.5	
	baz=321,slow=77,SNR=60						
H03N1	Juan Fernandez	114.47	113	T	T	02 17 58.4	
	baz=321,slow=77,SNR=58						
H03N3	Juan Fernandez	114.47	113	T	T	02 17 57.7	
	baz=321,slow=77,SNR=51						

*TUL **15** 00:05:59.8±0.6,36°.57N±0°.02×98°.98W±0°.05,h7^{km}±3^{km}, ML2.9,mb_Lg2.2/24(NEIC),Error ellipse: s-maj=5.4km s-min=1.3km az=107.0*

NEIC 15 00:06:00.5±0.6**,36°.56N**±0°.02×**98°.97W**±0°.02**,h6^{km}**±3^{km}**,** **Error ellipse: s-maj=2.5km s-min=2.4km az=69.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.18	187	Pg	Pg	00 06 03.8	-0.4
U32A				Sg	Sg	00 06 06.9	+0.3
OKCFA	Oklahoma City	1.68	132	Pn	Pn	00 06 29.5	-0.9
FNO	Franklin	1.82	135		Pn	00 06 31.9	-0.5
WMOK	Wichita Mounta	1.83	175		Pn	00 06 31.8	-0.6
R32A	Long Quarter,	1.87	6	Pn	Pn	00 06 32.9	-0.1
T35A	Sooner Cattle	2.01	79	Pn	Pn	00 06 35.0	+0.1
X34A	Smith Ranch, M	2.17	154		Pn	00 06 38.0	+0.9
CBKS	Cedar Bluff	2.33	345	Pn	Pn	00 06 39.8	+0.5
CBKS				IAmb_Lg		00 07 12.9	
	comp=Z,8.3nm,0.8s						
TUL1	Leonard	2.65	103	IAmb_Lg		00 07 25.6	
	comp=Z,8.7nm,0.8s						
AMTX	Amarillo	2.77	234	IAmb_Lg		00 07 32.1	
	comp=Z,9.7nm,0.9s						
KSU1	Kansas State U	3.15	36	IAmb_Lg		00 07 40.0	
	comp=Z,6.9nm,0.8s						
X37A	Clayton	3.54	123		Pn	00 06 55.3	-0.6
ABTX	Abilene, Hawle	3.97	188	IAmb_Lg		00 08 06.6	
	comp=Z,6.0nm,0.9s						
HHAR	Hobbs	4.07	92	IAmb_Lg		00 08 20.4	
	comp=Z,3.8nm,0.8s						
T25A	Trinidad	4.40	279	Pn	Pn	00 07 07.7	-0.3
W39A	Magazine	4.43	106	IAmb_Lg		00 08 31.1	
	comp=Z,7.3nm,0.8s						
S39A	Bolivar	4.65	74	Pn	Pn	00 07 10.0	-1.2
MIAR	Mount Ida	4.84	113	Pn	Pn	00 07 11.5	-2.3
U40A	Yellville	4.94	91	Pn	Pn	00 07 14.8	-0.4
SDCO	Great Sand Dun	5.35	285	IAmb_Lg		00 08 53.9	
	comp=Z,3.1nm,0.9s						
R40A	Maddies Statio	5.61	70	Pn	Pn	00 07 23.7	-0.7
R40A				IAmb_Lg		00 08 56.3	
	comp=Z,4.7nm,1.1s						
W41B	Gary Mavity, V	5.63	102	IAmb_Lg		00 09 00.6	
	comp=Z,6.6nm,0.9s						
LCAR	Lake Charles	6.33	92	IAmb_Lg		00 09 21.8	
	comp=Z,3.7nm,0.9s						
FVM	French Village	6.96	76	IAmb_Lg		00 09 39.1	
	comp=Z,5.1nm,0.9s						

*NEIC **15** 00:19:03.1±2.7,16°.62S±0°.07×70°.9W±0°.1,h132^{km}±10^{km}, mb4.0/8,Error ellipse: s-maj=15.0km s-min=9.8km az=89.0*

*IDC **15** 00:19:04.7±1.8,16°.56S×70°.76W,h143^{km}±16^{km},mb3.5/3, mbtmp4.0/6,Error ellipse: s-maj=25.5km s-min=23.4km az=139.0*

*VAO **15** 00:19:06.5±3.7,16°.39S×70°.73W,h149^{km}±9^{km},mb4.2*

ISC 15 00:19:04.0±0.6**,16°.61S**±0°.06×**70°.91W**±0°.06**,h150^{km},n42,** σ**1^s.66**/43**,mb3.8**/4**,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	2.07	165		Pn	00 19 38.0	-2.1
PB16	IPOC Station P	2.17	142	Pn	Pn	00 19 41.4	-0.4
LPAZ	La Paz	2.68	84	P	Pn	00 19 48.0	-0.1
	51nm,0.3s,baz=309,slow=5.0,SNR=730						
LPAZ				S	Sn	00 20 20.0	-1.9
	21nm,0.5s,baz=351,slow=22,SNR=6.9						
LPAZ	La Paz	2.68	84		Pn	00 19 48.0	-0.1
LPAZ				Sn	Sn	00 20 19.4	-2.5
LPAZ	La Paz	2.68	84	*e*P	Pn	00 19 47.9	-0.1
PB11	IPOC Station P	3.35	159		Pn	00 19 54.2	-1.9
PB08	IPOC Station P	3.89	155		Pn	00 20 02.8	-0.4
TA01	Diego Aracena	4.00	170		Pn	00 20 02.6	-1.6
PATCX	Punta Patache	4.25	170	Pn	Pn	00 20 05.3	-2.4
PB01	IPOC Station P	4.61	163		Pn	00 20 10.5	-1.9
PB02	IPOC Station P	4.78	169		Pn	00 20 13.2	-1.5
PB07	IPOC Station P	5.18	169		Pn	00 20 18.5	-1.6
PB09	IPOC Station P	5.39	163		Pn	00 20 21.9	-1.0
PB04	IPOC Station P	5.74	173	Pn	Pn	00 20 25.5	-2.0
LVC	Limon Verde	6.26	163	P	Pn	00 20 33.7	-0.8
	14nm,0.3s,baz=360,slow=8.8,SNR=37						
LVC				S	Sn	00 21 42.2	-3.2
	13nm,0.3s,baz=184,slow=19,SNR=15						
PB15	IPOC Station P	6.70	169		Pn	00 20 37.9	-2.5
NNA	Nana	7.36	308	P	Pn	00 20 50.0	+1.0
	3.4nm,0.3s,baz=119,slow=19,SNR=1.7						
NNA				S	Sn	00 22 08.0	-3.4
	4.0nm,0.4s,baz=216,slow=18,SNR=2.0						
NNA	Nana	7.36	308		Pn	00 20 48.9	-0.2
ETMB	Extrema	8.15	35	*e*P	Pn	00 20 57.8	-1.8
GO02	Mina Guanaco	8.60	172	Pn	Pn	00 21 03.4	-2.3
AC01	Pan de Azucar	9.50	178	Pn	Pn	00 21 16.3	-1.1
VILB	Vilhena	10.97	72	*e*P	Pn	00 21 35.6	-1.5
SALV	Santo Antonio	14.63	89	*e*P	P	00 22 24.6	-1.6
CLDB	Colider	15.74	71	*e*P	P	00 22 38.4	-0.2
H03N1	Juan Fernandez	18.25	202	T	T	00 41 33.5	
	baz=25,slow=74,SNR=13						
H03N2	Juan Fernandez	18.25	202	T	T	00 41 32.9	
	baz=25						
H03N3	Juan Fernandez	18.27	202	T	T	00 41 34.1	
	baz=25,slow=74,SNR=19						
ITTB	Itaituba	19.23	52	*e*P	P	00 23 16.8	0.0
SNDB	Serra Nova Dou	19.55	79	*e*P	P	00 23 19.9	-0.5
BDFB	Brasilia	22.01	91	P	P	00 23 45.5	-1.2
	1.9nm,0.6s,baz=281,slow=19,SNR=3.9						
	1.9nm,0.6s						
BDFB	Brasilia	22.01	91	P	P	00 23 45.4	-1.2
BDFB				IAmb	IAmb	00 23 47.5	
	comp=Z,7.6nm,1.3s						
PEXB	Peixe	22.35	81	*e*P	P	00 23 49.1	-0.8
TRQA	Tornquist	22.77	162	P	P	00 23 55.0	+1.4
SMTB	Santa Maria do	24.00	74	*e*P	P	00 24 05.7	+0.6
PLCA	Paso Flores	24.04	179	P	P	00 24 07.6	+2.3
	comp=Z,2.4nm,0.9s,baz=4.3,slow=13,SNR=5.5						
	comp=Z,2.4nm,0.9s						
MCPB	Macapa, AP	24.61	51	*e*P	P	00 24 11.4	+0.7
SNAA	Sanae	67.49	161	P	P	00 29 46.0	+2.5
DBIC	Dimbokro	69.28	76	P	P	00 29 56.2	+0.7
QSPA	South Pole Qui	73.56	180	P	P	00 30 23.1	+2.6
QSPA				IAmb	IAmb	00 30 25.8	
	comp=Z,3.6nm,1.4s						
TORD	Torodi Ar. Bea	77.58	72	P	P	00 30 44.4	+0.3
	comp=Z,0.7nm,0.3s,baz=260,slow=6.8,SNR=28						
	comp=Z,0.7nm,0.3s						
ASAR	Alice Springs	133.20	212	PKP	PKiKP	00 38 05.3	+1.2
	comp=Z,0.3nm,0.8s,baz=106,slow=3.0,SNR=2.1						
WRA	Warramunga Arr	136.01	215	PKP	PKiKP	00 38 10.3	+0.5
	comp=Z,0.8nm,0.9s,baz=137,slow=1.5,SNR=5.5						

*TUL **15** 00:27:14.7±0.6,36°.342N±0°.010×97°.60W±0°.02,h7^{km}±7^{km}, ML2.7,mb_Lg2.2/15(NEIC),Error ellipse: s-maj=2.1km s-min=1.4km az=78.0*

NEIC 15 00:27:14.7±0.6**,36°.340N**±0°.005×**97°.60W**±0°.02**,h5^{km}**±7^{km}**,** **Error ellipse: s-maj=2.1km s-min=0.3km az=68.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.93	173	Pg	Pg	00 27 32.2	-0.4
OKCSW	OKLAHOMA CITY	0.94	172		Pg	00 27 32.5	-0.2
T35A	Sooner Cattle	1.05	56	Pg	Pg	00 27 34.5	-0.3
FNO	Franklin	1.09	172	Pg	Pg	00 27 35.1	-0.6
U32A	Winter Ranch,	1.13	272	Pg	Pg	00 27 35.5	-0.9
TUL1	Leonard	1.52	106		Pn	00 27 42.1	-0.4
X34A	Smith Ranch, M	1.75	186		Pn	00 27 45.7	+0.1
WMOK	Wichita Mounta	1.87	211		Pn	00 27 47.6	+0.3
X37A	Clayton	2.52	133	Pn	Pn	00 27 56.9	+0.7
X37A				IAmb_Lg		00 28 38.0	
	comp=Z,7.6nm,0.8s						
AMTX	Amarillo	3.63	248	IAmb_Lg		00 29 14.6	
	comp=Z,5.5nm,0.7s						
S39A	Bolivar	3.68	67	IAmb_Lg		00 29 20.6	
	comp=Z,3.0nm,0.8s						
MIAR	Mount Ida	3.74	117	Pn	Pn	00 28 14.0	+1.0
MIAR				IAmb_Lg		00 29 15.9	
	comp=Z,4.3nm,0.7s						
U40A	Yellville	3.83	88	Pn	Pn	00 28 15.8	+1.6
U40A				IAmb_Lg		00 29 16.8	
	comp=Z,7.2nm,0.8s						
MGMO	Mountain Grove	4.36	78	IAmb_Lg		00 29 34.0	
	comp=Z,4.1nm,0.9s						
P38A	Dawn	4.59	43	IAmb_Lg		00 29 37.7	
	comp=Z,6.3nm,1.2s						
R40A	Maddies Statio	4.67	64	Pn	Pn	00 28 26.9	+1.1
CCM	Cathedral Cave	5.35	69	IAmb_Lg		00 30 11.9	
	comp=Z,5.6nm,0.8s						

*NOU **15** 00:36:44.3,42°.53S×171°.60E,h231^{km},mb3.9/6,South Island, New Zealand*

*WEL **15** 00:37:04.1±0.3,42°S±3°×17°4E±°,h31^{km},M2.9/18, ML3.1/20,MLv2.9/18,Error ellipse: s-maj=0.0km s-min=0.0km az=156.1*

ISC 15 00:37:03.9±1.1**,41°.62S**±0°.03×**173°.57E**±0°.02**,h27^{km}**±12^{km}**,** **n64,**σ**1^s.48**/83**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	Blackbirch Sta	0.25	112	P	Pn	00 37 13.0	+1.1
BSWZ				S	Sn	00 37 19.3	+2.4
TUWZ	Tuamarina	0.34	56	P	Pn	00 37 13.3	+0.2
TUWZ				S	Sn	00 37 19.7	+0.7
NNZ	Nelson	0.42	341	P	Pn	00 37 14.1	-0.2
NNZ				S	Sn	00 37 21.7	+0.6
CMWZ	Cape Campbell	0.50	105	P	Pb	00 37 14.6	+0.3
CMWZ				S	Sn	00 37 26.3	+3.2
THZ	Tophouse	0.51	254	P	Pn	00 37 16.2	+0.7
THZ				S	Sn	00 37 24.4	+0.9
MRNZ	Matariki Terra	0.65	290	P	Pn	00 37 17.8	+0.5
TCW	Tory Channel	0.67	53	P	Pb	00 37 17.1	0.0
TCW				S	Sb	00 37 26.0	-0.1
TKNZ	Takaka Hill	0.74	322	P	Pn	00 37 18.6	0.0
KHZ	Kahutara	0.80	181	P	Pn	00 37 20.0	+0.7
KHZ				S	Sn	00 37 31.8	+1.4
KHZ	Kahutara	0.80	181	P	Pn	00 37 20.1	+0.7
DUWZ	D’Urville Isla	0.86	18	P	Pb	00 37 20.0	-0.3
DUWZ				S	Sn	00 37 32.7	+0.7
WEL	Wellington	0.96	70	P	Pb	00 37 21.2	-0.8
BHW	Baring Head	1.00	78	P	Pn	00 37 22.2	+0.1
BHW				S	Sn	00 37 36.1	+0.7
QRZ	Quartz Range	1.11	315	P	Pb	00 37 24.3	-0.2
QRZ				S	Sb	00 37 37.8	-0.8
QRZ	Quartz Range	1.11	315	P	Pb	00 37 24.4	-0.2
CAW	Cannon Point	1.24	66	P	Pn	00 37 24.4	-1.1
CAW				S	Sb	00 37 41.9	-0.4
KIW	Kapiti Island	1.27	54	P	Pn	00 37 25.4	-0.5

KIW				S	Sn	00 37 41.9	0.0
PLWZ	Palliser	1.27	88	P	Pn	00 37 24.1	-1.8
PLWZ				S	Sb	00 37 46.1	+2.9
MSWZ	Moikau Station	1.28	81	P	Pn	00 37 24.3	-1.7
DSZ	Denniston Nort	1.32	264	P	Pn	00 37 27.5	+0.9
DSZ				S	Sn	00 37 43.6	+0.2
GVZ	Greta Valley S	1.40	196	P	Pn	00 37 27.9	+0.1
OGWZ	Otaki Gorge	1.45	57	P	Pn	00 37 27.4	-0.9
OGWZ				S	Sn	00 37 46.9	+0.4
LTZ	Lake Taylor	1.51	219	P	Pn	00 37 29.9	+0.7
LTZ				S	Sn	00 37 48.7	+0.7
MTW	Mount Morrison	1.53	73	P	Pn	00 37 27.3	-2.1
MTW				S	Sb	00 37 50.3	-0.2
HOWZ	Holdsworth Sta	1.64	65	P	Pn	00 37 29.2	-1.8
MRZ	Mangatainoka R	1.80	58	P	Pn	00 37 31.5	-1.6
TMWZ	Te Maipa	1.82	74	P	Pn	00 37 31.0	-2.5
INZ	Inchbonnie	1.93	234	P	Pb	00 37 36.9	-1.4
WAZ	Wanganui	2.15	31	P	Pn	00 37 38.3	+0.3
MQZ	McQueen's Vall	2.19	198	P	Pn	00 37 35.8	-2.8
MQZ				S	Sn	00 38 01.9	-2.8
NMEZ	Namu Road	2.22	6	P	Pn	00 37 39.9	+1.0
BFZ	Birch Farm	2.23	66	P	Pb	00 37 46.7	+3.1
KHEZ	Kahui Hut	2.35	9	P	Pn	00 37 41.6	+0.9
NBEZ	Newall Road No	2.36	6	P	Pn	00 37 41.0	+0.2
DVHZ	Dannevirke	2.37	57	P	Pb	00 37 45.8	-0.2
DVHZ				S	Sb	00 38 15.9	+1.1
NEZ	North Egmont	2.38	10	P	Pn	00 37 39.1	-2.1
TSZ	Takapari Road	2.40	50	P	Pn	00 37 38.9	-2.4
PKE	Pukeiti	2.44	8	P	Pn	00 37 43.0	+1.0
PKE				S	Sn	00 38 10.2	-0.8
PNHZ	Pukenui	2.63	50	P	Pn	00 37 43.8	-0.8
VRZ	Vera Road	2.65	20	P	Pn	00 37 46.5	+1.6
VRZ				S	Sn	00 38 18.3	+2.2
PKVZ	Pokaka	2.69	31	P	Pn	00 37 45.2	-0.3
WNVZ	Wahianoa	2.77	35	P	Pn	00 37 48.4	+1.8
MOVZ	Moawhango	2.77	38	P	Pn	00 37 47.6	+1.0
TUVZ	Tukino	2.84	35	P	Pn	00 37 49.3	+1.7
BHHZ	Black Hill Sta	2.85	43	P	Pn	00 37 48.0	+0.3
NGZ	Ngauruhoe	2.89	33	P	Pn	00 37 50.6	+2.2
KRHZ	Kereru	2.91	48	P	Pn	00 37 48.6	+0.2
TWVZ	Taurewa	2.92	30	P	Pn	00 37 50.2	+1.5
NNVZ	North Ngauruho	2.94	33	P	Pn	00 37 51.7	+2.8
WTVZ	West Tongariro	2.94	32	P	Pn	00 37 51.0	+2.1
PXZ	Pawanui	2.96	59	S	Sn	00 38 20.8	-2.9
KWHZ	Kaweka Forest	3.09	46	P	Pb	00 37 56.3	-2.0
HIZ	Hauiti	3.26	18	P	Pn	00 37 53.8	+0.6
HIZ	Hauiti	3.26	18	P	Pn	00 37 54.8	+1.6
BKZ	Black Stump Fm	3.32	43	P	Pb	00 37 59.0	-3.0
BKZ	Black Stump Fm	3.32	43	P	Pb	00 37 59.3	-2.8
NMHZ	Naumai	3.53	46	P	Pn	00 37 56.8	-0.2
TOZ	Tahuroa Road	4.16	22	P	Pn	00 38 06.5	+0.9
URZ	Urewera	4.32	40	P	Pn	00 38 13.1	+5.3
URZ	Urewera	4.32	40	P	Pn	00 38 13.0	+5.2
AWAZ	Awhitu Peninsu	4.62	11	P	Pn	00 38 12.6	+0.6
MKAZ	Moumakai	4.67	16	P	Pn	00 38 13.4	+0.7
MBAZ	Motutapu North	4.95	12	P	Pn	00 38 17.3	+0.8
WIAZ	Waiheke Island	4.97	15	P	Pn	00 38 17.4	+0.6

NIED ***15*** *01:10:44.3, 39°.27N×142°.16E, h54^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.36; $M_{\theta\theta}$-4.73; $M_{\phi\phi}$-0.63; $M_{r\theta}$0.42; $M_{\theta\phi}$-2.98; $M_{\phi r}$-1.83; Fault plane solution: $M_0$6.17000×10^{15} NP1:ϕ_s81.00000°, δ46.00000°, λ118.00000°. NP2:ϕ_s224.00000°, δ51.00000°, λ64.00000°.*

JMA ***15*** *01:10:44.3±0.1, 39°.3N±0°.2×142°.2E±0°.5, h54^{km}, MD4.6/39, MW4.5/39, E OFF IWATE PREF*

JMA Felt III J1 at E OFF IWATE PREF .

IDC ***15*** *01:10:45.6±1.7, 39°.24N×142°.06E, h67^{km}±15^{km}, mb4.1/35, mbtmp4.4/42, MS3.4/38, Error ellipse: s-maj=12.7km s-min=10.5km az=124.0*

NEIC ***15*** *01:10:45.1±1.5, 39°.33N±0°.05×142°.09E±0°.10, h55^{km}±5^{km}, mb4.7/245, Error ellipse: s-maj=11.3km s-min=7.4km az=109.0*

ISC 15 01:10:44.0±0.7, **39°.25N**±0°.03×**142°.19E**±0°.05, **h53**^{km}±6^{km}, **n507**, σ1^s**41**/382, **mb4.7**/173, **MS3.5**/35, **52C-34D, Fault plane solution: NP1:**ϕ_s87.43407°, δ71.56130°, λ98.66617°. **NP2:**ϕ_s241.70508°, δ20.30944°, λ65.68024°. **Principal axes:** T Plg62.4736°, Azm10.7628°; N Plg8.2181°, Azm264.6741°; P Plg26.0718°, Azm170.6219°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.43	318	⇓iP	Pn	01 10 54.8	+0.1
MIYJ				⇓S	Sn	01 11 02.2	-0.2
MIYJ	Miyakonagasawa	0.43	318	A	A	01 10 54.8	
	comp=E,74nm,0.5s,comp=E,91nm,0.6s						
OFUJ	Ofunato	0.44	247	i P	Pn	01 10 55.1	+0.4
OFUJ				S	Sn	01 11 02.7	+0.2
OFUJ	Ofunato	0.44	247	A	A	01 10 55.1	
	comp=E,22nm,0.4s,comp=E,41nm,0.7s						
JKMT	Kesennumamotoy	0.71	232	i P	Pn	01 10 58.3	+0.3
JKMT				S	Sn	01 11 08.2	0.0
JKMT	Kesennumamotoy	0.71	232	A	A	01 10 58.3	
	comp=E,42nm,0.5s,comp=E,76nm,1.6s						
JTH	Tanohata	0.73	340	⇓iP	Pn	01 10 58.3	+0.1
JTH				⇓S	Sn	01 11 08.8	+0.2
JTH	Tanohata	0.73	340	A	A	01 10 58.3	
	comp=E,25nm,1.1s,comp=E,38nm,1.5s						
JOM	Ohasama	0.73	288	⇓iP	Pn	01 10 58.3	+0.1
JOM				⇓S	Sn	01 11 08.6	-0.1
JOM	Ohasama	0.73	288	A	A	01 10 58.3	
	comp=E,74nm,0.6s,comp=E,69nm,0.3s						
JMK	Ichinoseki	0.82	249	i P	Pn	01 10 59.5	+0.2
JMK				S	Sn	01 11 10.4	-0.1
JMK	Ichinoseki	0.82	249	A	A	01 10 59.5	
	comp=E,19nm,1.1s,comp=E,22nm,0.5s						
JKZ	Kuzumaki	0.99	318	A	A	01 11 01.8	
	comp=E,64nm,0.4s,comp=E,61nm,1.2s						
JKEN	Kujiedanarisaw	1.02	339	A	A	01 11 02.3	
	comp=E,52nm,0.3s,comp=E,54nm,1.2s						
JIO	Ouri	1.03	220	⇓iP	Pn	01 11 02.4	+0.2
JIO				⇓S	Sn	01 11 15.4	-0.3
JIO	Ouri	1.03	220	A	A	01 11 02.4	
	comp=E,22nm,1.1s,comp=E,15nm,1.2s						
JSZI	Iwateshizukuis	1.08	297	A	A	01 11 03.0	
	comp=E,75nm,1.2s,comp=E,65nm,1.8s						
JOFO	Osakifurukawao	1.19	237	A	A	01 11 04.9	
	comp=E,89nm,1.1s,comp=E,99nm,0.4s						
JRG	Rokugo	1.22	277	⇓iP	Pn	01 11 04.9	+0.2
JRG				⇓S	Sn	01 11 21.1	+1.0
JRG	Rokugo	1.22	277	A	A	01 11 04.9	
	comp=E,55nm,0.5s,comp=E,40nm,0.7s						
JANG	Nango	1.23	335	⇓iP	Pn	01 11 04.8	-0.1
JANG				⇓S	Sn	01 11 20.6	0.0
JANG	Nango	1.23	335	A	A	01 11 04.8	
	comp=E,13nm,0.6s,comp=E,11nm,0.8s						
JYK	Kaneyama	1.47	257	i P	Pn	01 11 08.5	+0.5
JYK	Kaneyama	1.47	257	A	A	01 11 08.5	
	comp=E,13nm,2.2s,comp=E,9.0nm,1.9s						
JOU	Okura	1.49	234	P	Pn	01 11 08.8	+0.4
JOU	Okura	1.49	234	A	A	01 11 08.8	
	comp=E,14nm,0.8s,comp=E,16nm,0.9s						
JAH	Hinai	1.52	308	⇓iP	Pn	01 11 09.1	+0.3
JAH	Hinai	1.52	308	A	A	01 11 09.1	
	comp=E,12nm,0.7s,comp=E,18nm,1.1s						
JYW	Yuwa	1.56	281	A	A	01 11 10.0	
	comp=E,39nm,0.7s,comp=E,36nm,1.5s						
JTM	Tenmabayashi	1.76	331	Pn	Pn	01 11 12.2	+0.2
JMM	Marumori	1.77	219		Pn	01 11 12.1	-0.1
JYYZ	Yamagatayuza	1.78	263	A	A	01 11 13.0	
	comp=E,12nm,3.7s,comp=E,22nm,3.3s						
JARK	Aomorirokkasho	1.86	340	A	A	01 11 14.2	
	comp=E,7.0nm,0.7s,comp=E,7.0nm,0.7s						
JNTW	Noshirotokiwa	1.87	304	A	A	01 11 14.2	
	comp=E,28nm,2.7s,comp=E,25nm,2.2s						
JYS	Shirataka	1.96	239	A	A	01 11 15.7	
	comp=E,12nm,0.6s,comp=E,10.0nm,1.7s						
JHHS	Hirosakihyakuz	1.98	315	A	A	01 11 15.8	
	comp=E,18nm,0.9s,comp=E,19nm,2.6s						
JYA	Atsumi	2.04	252	A	A	01 11 16.9	
	comp=E,12nm,0.9s,comp=E,11nm,0.7s						
JYAR	Yonezawaarcadi	2.09	231	A	A	01 11 17.7	
	comp=E,20nm,1.2s,comp=E,28nm,1.1s						
JAHD	Aomorihigashid	2.11	342	A	A	01 11 17.8	
	comp=E,13nm,0.6s,comp=E,16nm,0.5s						
JIW	Iwasaki	2.15	309	A	A	01 11 18.2	
	comp=E,11nm,0.9s,comp=E,8.0nm,0.5s						
JFK	Kawauchi	2.15	209	A	A	01 11 18.6	
	comp=E,4.0nm,3.1s,comp=E,4.0nm,1.5s						
JSI2	Shiura 2	2.26	323	A	A	01 11 19.8	
	comp=E,6.0nm,0.8s,comp=E,7.0nm,1.0s						
JFT	Otama	2.27	221	A	A	01 11 20.2	
	comp=E,13nm,1.5s,comp=E,16nm,1.3s						
ONAJ	Iwakimizuishiy	2.41	208	A	A	01 11 22.3	
	comp=E,9.0nm,0.3s,comp=E,9.0nm,0.4s						
JOG3	Oga3	2.50	286	A	A	01 11 15.5	
	comp=E,9.0nm,2.4s,comp=E,9.0nm,2.1s						
ERM	Erimo	2.85	15	Pn	Pn	01 11 26.9	-0.1
JSB	Shiboa	2.90	219	A	A	01 11 29.2	
	comp=E,6.0nm,1.4s,comp=E,6.0nm,2.7s						
JIZZ	Izumozaki	3.23	239	A	A	01 11 33.7	
	comp=E,7.0nm,1.9s,comp=E,7.0nm,2.1s						
JSD	Sado	3.31	250	Pn	Pn	01 11 33.3	+0.1
JIAM	Iburiatsuma	3.37	357	A	A	01 11 35.6	
	comp=E,7.0nm,0.9s,comp=E,7.0nm,0.8s						
JYT	Yasato	3.41	208	Pn	Pn	01 11 33.9	-0.7
JEW	Eniwo	3.63	351	Pn	Pn	01 11 38.8	+1.2
MJAR	Matsushiro Arr	4.15	231	P	Pn	01 11 46.9	+2.0
	132nm,0.7s,baz=36,slow=11,SNR=246						
MJAR				S	Sn	01 12 37.0	+4.9
	11nm,0.3s,baz=150,slow=13,SNR=4.0						
MJAR				LR	LR	01 13 35.5	
	comp=Z,421nm,21.6s,baz=54,slow=42						
MJAR	Matsushiro Arr	4.15	231	Pn	Pn	01 11 46.6	+1.7
MAJO	Matsushiro	4.16	231	Pn	Pn	01 11 47.1	+2.2
MJB9	Matsu-Tunnel	4.16	231		Pn	01 11 47.1	+2.2
ASAJ	Asahikawa	4.87	3	P	Pn	01 11 55.2	+0.6
	35nm,0.3s,baz=214,slow=10,SNR=59						
ASAJ				S	Sn	01 12 47.7	-2.0
	109nm,0.7s,baz=62,slow=31,SNR=1.7						
JKA	Kamikawa-asahi	4.87	3	Pn	Pn	01 11 54.3	-0.3
JGF	Kuroka	5.30	228	Pn	Pn	01 12 01.9	+1.3
INU	Inuyama	5.67	228	Pn	Pn	01 12 06.9	+1.2
JHJ	Hachijo jima 2	6.42	198	P	Pn	01 12 15.4	-0.5
	188nm,0.3s,baz=275,slow=4.1,SNR=12						
JHJ				S	Sn	01 13 22.8	-5.1
	128nm,0.3s,baz=242,slow=24,SNR=1.3						
JHJ				LR	LR	01 15 05.6	
	comp=Z,130nm,19.7s,baz=72,slow=41						
YSS	Yuzh-Sakhalins	7.71	3		Pn	01 12 33.1	-0.4
JHS	Saijyo	8.40	242		Pn	01 12 45.4	+2.3
USRK	Ussuriysk Ar.	9.09	306	P	Pn	01 12 53.3	+0.9
	76nm,0.8s,baz=117,slow=14,SNR=53						
USRK				LR	LR	01 16 10.7	
	comp=Z,304nm,20.8s,baz=114,slow=36						
MDJ	Mudanjiang	10.81	304		Pn	01 13 17.1	+1.2
MDJ	Mudanjiang	10.81	304	P	Pn	01 13 18.5	+2.6
MDJ				sP		01 13 35.3	
MDJ				S	Sn	01 15 14.1	-1.1
MDJ				pmax	pmax		
	comp=Z,50nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.9s						
MDJ				LR	LR		
	comp=N,170nm,22.1s						
MDJ				LR	LR		
	comp=E,230nm,17.1s						
MDJ				LR	LR		
	comp=Z,350nm,19.8s						
SEHB	SEOHWA	10.93	269		Pn	01 13 18.6	+0.9
JNU	Nakatsue	11.00	240	P	Pn	01 13 20.8	+2.2
	comp=Z,7.7nm,0.8s,baz=3.6,slow=17,SNR=2.0						
JNU	Nakatsue	11.00	240	Pn	Pn	01 13 18.3	-0.3
KSRS	Korea Array	11.35	265	P	Pn	01 13 27.9	+4.5
	comp=Z,5.6nm,0.7s,baz=72,slow=14,SNR=18						
KSRS				S	Sn	01 15 28.5	-0.1
	comp=Z,0.5nm,0.3s,baz=73,slow=24,SNR=2.2						
KSRS				LR	LR	01 17 25.7	
	comp=Z,108nm,18.1s,baz=65,slow=36						
KS19	Wonju Array Si	11.38	266		Pn	01 13 25.2	+1.4
KSCHJ	Chungju	11.46	262		Pn	01 13 25.0	+0.2
JCJ	Chichijima	12.12	180	LR	LR	01 19 10.3	
	comp=Z,31nm,21.0s,baz=23,slow=42						
NAWB	Namwon	12.38	257	Pn	Pn	01 13 38.4	+1.0
KLR	Kul'dur	12.46	327	P	Pn	01 13 38.3	-0.1
	comp=Z,2.6nm,0.8s,baz=141,slow=13,SNR=6.4						
KLR				LR	LR	01 18 31.6	
	comp=Z,211nm,18.1s,baz=106,slow=38						
BNX	BinXian	12.69	306	⇓P	Pn	01 13 43.9	+2.4
BNX				pmax	pmax		
	comp=Z,33nm,1.0s						
BNX				pmax	pmax		
	comp=Z,150nm,4.0s						
CN2	Changchun	13.34	295	*e*P	Pn	01 13 50.3	-0.2
CN2				*e*S	Sn	01 16 15.8	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,15.0s						
CN2				LR	LR		
	comp=E,100nm,15.0s						
CN2				LR	LR		
	comp=Z,100nm,21.0s						
JOW	Kunigami	16.99	227	P	Pn	01 14 37.3	-0.7
	comp=Z,7.4nm,0.7s,baz=113,slow=4.2,SNR=4.4						
JOW				LR	LR	01 21 16.5	
	comp=Z,83nm,19.5s,baz=99,slow=37						
PEA0B	Petropavlovsk-	17.47	32	Pn	Pn	01 14 42.8	-1.0
PETK	Petropavlovsk-	17.47	32	P	Pn	01 14 41.6	-2.1
	comp=Z,3.0nm,0.9s,baz=213,slow=12,SNR=6.1						
PETK				LR	LR	01 21 56.6	
	comp=Z,80nm,18.6s,baz=248,slow=38						
PETK	Petropavlovsk-	17.47	32	Pn	Pn	01 14 41.4	-2.4
HIA	Hailar	18.88	309	P	P	01 14 58.6	-1.2
BJI	Beijing	20.03	281	P	P	01 15 12.8	+0.4
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI				LR	LR		
	comp=N,100nm,12.3s						
BJI				LR	LR		
	comp=E,56nm,16.8s						
BJT	Baijiatuau	20.04	280	P	P	01 15 11.7	-0.8
XLT	XiLinHaoTe	20.05	292	*e*P	Pn	01 15 14.8	0.0
XLT				pP	pP	01 15 27.8	+3.0
XLT				sP	sP	01 15 34.4	+2.9
XLT				S	S	01 18 48.8	-6.3
XLT				sS	Sn	01 19 04.3	+4.8
XLT				SS	SnSn	01 19 19.9	+5.5
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,42nm,3.5s						
NJ2	Nanjing	20.25	256	*e*P	Pn	01 15 16.3	-0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MA2	Magadan	21.06	12	P	P	01 15 23.9	+0.5
	comp=Z,16nm,0.6s,baz=202,slow=11,SNR=12						
MA2				LR	LR	01 23 39.3	
	comp=Z,62nm,18.7s,baz=176,slow=37						
	comp=Z,16nm,0.6s						
MA2	Magadan	21.06	12	P	P	01 15 23.4	+0.1
MA2				IAmb	IAmb	01 15 27.1	
	comp=Z,22nm,0.7s						
HNS	HongShan	21.61	274	⇓P	P	01 15 34.3	+4.8
HNS				S	Sn	01 19 34.0	-3.1
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HNS				LR	LR		
	comp=E,160nm,17.3s						
HNS				LR	LR		
	comp=Z,140nm,16.0s						
HHC	Hu-ho-hao-te	23.45	284	*e*P	P	01 15 47.3	-1.4
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
HHC				LR	LR		
	comp=E,260nm,14.5s						
HHC				LR	LR		
	comp=Z,310nm,15.9s						
YULB	Yu-li	23.76	234	P	P	01 15 50.0	-1.6
YULB				IAmb	IAmb	01 16 13.1	
	comp=Z,22nm,1.2s						
YAK	Yakutsk	24.06	345	P	P	01 15 52.9	-1.0
	comp=Z,24nm,0.6s,baz=354,slow=1.7,SNR=9.6						
	comp=Z,24nm,0.6s						
YAK	Yakutsk	24.06	345	P	P	01 15 52.2	-1.7
WHN	Wuhan	24.36	258	⇑P	P	01 15 54.0	-3.0
WHN				pP	pP	01 16 09.8	-0.6
SEY	Seymchan	24.50	11	P	P	01 15 59.2	+1.3
	comp=Z,6.8nm,0.7s,baz=214,slow=6.5,SNR=16						
SEY				LR	LR	01 26 20.5	
	comp=Z,56nm,18.5s,baz=291,slow=38						
	comp=Z,6.8nm,0.7s						
XAN	Xi'an	27.10	269	⇑P	P	01 16 22.8	+0.9
XAN				pP	pP	01 16 33.8	-1.5
XAN				sP	sP	01 16 38.1	-3.5
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	Songino Array	27.13	300	P	P	01 16 21.8	-0.3
	comp=Z,1.2nm,0.5s,baz=97,slow=9.0,SNR=8.4						
SONM				LR	LR	01 27 21.0	
	comp=Z,77nm,19.1s,baz=90,slow=37						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	27.13	300	P	P	01 16 21.1	-1.0
ENH	Enshi	28.20	262	P	P	01 16 32.4	+0.7
ENH				IAmb	IAmb	01 16 45.4	
	comp=Z,16nm,0.7s						
H11N2	WAKE ISLAND Hy	28.84	125	T	T	01 47 02.7	
	baz=318,slow=75,SNR=7843						
H11N1	WAKE ISLAND Hy	28.85	125	T	T	01 47 03.4	
	baz=318,slow=75,SNR=7483						
H11N3	WAKE ISLAND Hy	28.86	125	T	T	01 47 04.0	
	baz=318,slow=75,SNR=8528						
H11S1	WAKE ISLAND Hy	29.63	127	T	T	01 48 01.9	
	baz=319,slow=76,SNR=1761						
H11S3	WAKE ISLAND Hy	29.63	127	T	T	01 48 01.7	
	baz=319,slow=76,SNR=2563						
H11S2	WAKE ISLAND Hy	29.64	127	T	T	01 48 02.9	
	baz=319,slow=76,SNR=1362						
BILL	Bilibino	31.73	17	P	P	01 17 02.4	0.0
BILL				IAmb	IAmb	01 17 04.2	
	comp=Z,13nm,1.5s						
GYA	Guiyang	32.25	257	⇓P	P	01 17 10.8	+3.2
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
CD2	Chengdu	32.34	267	*e*P	P	01 17 08.0	-0.3
TIXI	Tiksi	33.17	352	P	P	01 17 14.6	-0.3
PZH	PanZhiHua	35.99	262	P	P	01 17 41.6	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,6.0s						
GOMU	GeErMu	37.27	281	P	P	01 17 48.6	-2.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,36nm,6.0s						
WMQ	Urumqi	40.43	295	*e*P	P	01 18 19.6	+2.5
WMQ				sP	sP	01 18 38.3	+1.2
WMQ				PcP	PcP	01 20 23.6	+4.5
WMQ				S	S	01 24 19.4	-2.4
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
ZAA0	Zalesovo Array	40.91	311	P	P	01 18 20.3	-0.5
ZAA0				IAmb	IAmb	01 18 34.6	
	comp=Z,11nm,0.7s						
ZALV	Zalesovo Beam	40.91	311	P	P	01 18 20.5	-0.3
	comp=Z,7.3nm,0.5s,baz=85,slow=11,SNR=20						
ZALV				PcP	PcP	01 20 19.9	-0.5
	comp=Z,1.0nm,0.4s,baz=90,slow=2.0,SNR=2.7						
ZALV				LR	LR	01 36 00.8	
	comp=Z,55nm,18.8s,baz=90,slow=37						
	comp=Z,7.3nm,0.5s						
ZALV	Zalesovo Beam	40.91	311	P	P	01 18 20.3	-0.5
NRIK	Noril'sk	41.53	334	P	P	01 18 25.9	+0.1
	comp=Z,2.3nm,0.4s,baz=175,slow=5.0,SNR=6.9						
	comp=Z,2.3nm,0.4s						
NRIK	Noril'sk	41.53	334	P	P	01 18 25.8	+0.1
CMAR	Chiang Mai Arr	42.68	254	P	P	01 18 35.8	0.0
	comp=Z,1.7nm,0.3s,baz=52,slow=7.0,SNR=4.9						
CMAR				LR	LR	01 36 21.2	
	comp=Z,27nm,18.4s,baz=355,slow=36						
	comp=Z,1.7nm,0.3s						
N18K	Kilae Creek	43.24	39	P	P	01 18 41.6	+1.8
N18K				IAmb	IAmb	01 18 43.1	
	comp=Z,18nm,0.8s						
N18K	Kilae Creek	43.24	39	P	P	01 18 42.1	+2.3
	baz=270,SNR=20						
TTA	Tatalina	43.26	36	P	P	01 18 40.5	+0.6
TTA	Tatalina	43.26	36	P	P	01 18 41.5	+1.5
	baz=267,SNR=6.9						
SVW2	Sparrevohn	43.40	39	IAmb	IAmb	01 18 44.2	
	comp=Z,17nm,1.0s						
MK31	Makanchi Array	43.50	300	P	P	01 18 42.0	-0.1
MKAR	Makanchi Array	43.50	300	P	P	01 18 41.7	-0.3
	comp=Z,1.6nm,0.4s,baz=85,slow=10,SNR=30						
MKAR				LR	LR	01 37 19.9	
	comp=Z,71nm,20.2s,baz=78,slow=37						
	comp=Z,1.6nm,0.4s						
MKAR	Makanchi Array	43.50	300	P	P	01 18 42.4	+0.3
P18K	Big Mountain,	43.58	41	IAmb	IAmb	01 18 44.7	
	comp=Z,13nm,0.7s						
P18K	Big Mountain,	43.58	41	P	P	01 18 44.1	+1.6
	baz=271						
O18K	Koktuh Hills	43.58	41	IAmb	IAmb	01 18 47.3	
	comp=Z,12nm,0.6s						
O18K	Koktuh Hills	43.58	41	P	P	01 18 44.6	+2.1
	baz=271						
L19K	White Mountain	43.77	37	IAmb	IAmb	01 18 46.8	
	comp=Z,12nm,1.1s						
L19K	White Mountain	43.77	37	P	P	01 18 45.8	+1.8
	baz=269,SNR=10						
N19K	Bonanza Creek	43.93	39	P	P	01 18 45.9	+0.5
N19K				IAmb	IAmb	01 18 48.9	
	comp=Z,12nm,1.1s						
N19K	Bonanza Creek	43.93	39	P	P	01 18 47.5	+2.1
	baz=271,SNR=11						
M19K	Big River Lodg	43.98	38	P	P	01 18 47.8	+2.1
	baz=270						
O19K	Port Alsworth	44.02	40	IAmb	IAmb	01 18 50.1	
	comp=Z,12nm,0.7s						
O19K	Port Alsworth	44.02	40	P	P	01 18 48.5	+2.6
	baz=271						
J20K	Nowinta River	44.16	34	IAmb	IAmb	01 18 50.0	
	comp=Z,13nm,1.1s						
J20K	Nowinta River	44.16	34	P	P	01 18 49.0	+2.0
	baz=267,SNR=12						
K20K	Telida	44.16	35	IAmb	IAmb	01 18 50.1	
	comp=Z,11nm,0.9s						
K20K	Telida	44.16	35	P	P	01 18 49.2	+2.1
	baz=268,SNR=13						
A21K	Barrow	44.18	24	IAmb	IAmb	01 18 48.9	
	comp=Z,18nm,1.1s						
A21K	Barrow	44.18	24	P	P	01 18 48.1	+1.0
	baz=258,SNR=6.1						
L20K	Farewell, AK	44.23	37	P	P	01 18 49.7	+2.1
	baz=269,SNR=7.9						
Q19K	Cape Douglas,	44.41	42	P	P	01 18 49.5	+0.3
Q19K	Cape Douglas,	44.41	42	P	P	01 18 49.8	+0.6
	baz=273,SNR=17						
IMAR	Indian Mountai	44.44	32	P	P	01 18 50.2	+1.0
P19K	Oil Pt	44.59	41	IAmb	IAmb	01 18 53.1	
	comp=Z,16nm,0.8s						
P19K	Oil Pt	44.59	41	P	P	01 18 52.4	+1.8
	baz=273,SNR=16						
OHAK	Old Harbor	44.72	44	P	P	01 18 52.1	+0.5
	baz=275						
RSO	Redoubt South	44.79	40	P	P	01 18 53.6	+1.2
H21K	Melozitna Rive	44.80	32	IAmb	IAmb	01 18 55.0	
	comp=Z,10nm,1.2s						
H21K	Melozitna Rive	44.80	32	P	P	01 18 53.9	+1.7
	baz=267,SNR=8.1						
O20K	Slope Mountain	44.87	40	P	P	01 18 54.0	+1.1
	baz=273,SNR=10						
CHUM	Lake Minchumin	44.95	35	P	P	01 18 55.5	+2.2
	baz=269,SNR=7.9						
PPLA	Purkeypile	45.01	36	IAmb	IAmb	01 18 57.4	
	comp=Z,22nm,1.4s						
PPLA	Purkeypile	45.01	36	P	P	01 18 56.2	+2.2
	baz=270,SNR=8.4						
SPCR	Spurr Chakacha	45.03	39	P	P	01 18 56.2	+2.0
	baz=272,SNR=6.6						
KDAK	Kodiak Island	45.05	43	P	P	01 18 55.0	+0.7
	comp=Z,19nm,0.4s,baz=303,slow=3.9,SNR=60						
KDAK				LR	LR	01 37 08.5	
	comp=Z,43nm,20.6s,baz=228,slow=35						
	comp=Z,19nm,0.4s						
KDAK	Kodiak Island	45.05	43	P	P	01 18 54.1	-0.1
KDAK	Kodiak Island	45.05	43	P	P	01 18 54.9	+0.7
	baz=275						
CAST	Castle Rocks	45.05	35	IAmb	IAmb	01 18 57.3	
	comp=Z,9.6nm,0.9s						
CAST	Castle Rocks	45.05	35	P	P	01 18 56.2	+2.0
	baz=270,SNR=12						
KURK	Kurchatov	45.08	306		PcP	01 20 34.0	-0.5
KURK	Kurchatov	45.08	306	P	P	01 18 53.6	-0.9
KURK				IAmb	IAmb	01 19 02.1	
	comp=Z,12nm,0.6s						

I21K	Tanana	45.13	33	IAmb	IAmb	01 18 57.8	
	comp=Z,8.6nm,1.1s						
I21K	Tanana	45.13	33	P	P	01 18 56.7	+1.9
	baz=268						
KURBB	Kurchatov Arra	45.15	306	P	P	01 18 54.7	-0.4
	comp=Z,7.5nm,0.6s,baz=81,slow=8.6,SNR=56						
KURBB				PcP	PcP	01 20 34.0	-0.7
	comp=Z,1.0nm,0.7s,baz=75,slow=4.2,SNR=2.0						
KURBB				LR	LR	01 37 53.8	
	comp=Z,47nm,20.9s,baz=106,slow=36						
	comp=Z,7.5nm,0.6s						
BPAW	Bear Paw Mtn.	45.54	34	P	P	01 18 59.6	+1.6
	baz=270,SNR=6.3						
CNPM	China Poot	45.61	41	IAmb	IAmb	01 19 01.0	
	comp=Z,12nm,0.8s						
BRLK	Bradley Lake	45.77	41	P	P	01 19 00.2	+0.2
BRSE	Bradley Lake S	45.84	41	P	P	01 19 01.4	+0.9
	baz=275,SNR=11						
TRF	Thorofare Moun	45.86	35	IAmb	IAmb	01 19 04.3	
	comp=Z,9.2nm,1.0s						
TRF	Thorofare Moun	45.86	35	P	P	01 19 02.0	+1.2
	baz=272,SNR=10						
COLD	Coldfoot	45.92	30	P	P	01 19 02.3	+1.3
	baz=268						
H23K	Yukon River	46.16	32	IAmb	IAmb	01 19 06.1	
	comp=Z,12nm,1.0s						
H23K	Yukon River	46.16	32	P	P	01 19 05.1	+2.2
	baz=270,SNR=11						
TOLK	Toolik Lake Re	46.22	28	IAmb	IAmb	01 19 06.1	
	comp=Z,7.6nm,0.9s						
TOLK	Toolik Lake Re	46.22	28	P	P	01 19 04.9	+1.5
	baz=267,SNR=6.5						
I23K	Minto, Yukon-K	46.23	33	P	P	01 19 05.1	+1.7
	baz=271						
RC01	Rabbit Creek A	46.23	39	P	P	01 19 04.4	+0.9
	baz=274,SNR=11						
NEA2	Nenana	46.37	34	P	P	01 19 06.0	+1.4
NEA2				IAmb	IAmb	01 19 06.6	
	comp=Z,7.1nm,0.6s						
NEA2	Nenana	46.37	34	P	P	01 19 06.1	+1.5
	baz=272,SNR=16						
MCK	McKinley	46.46	35	IAmb	IAmb	01 19 07.3	
	comp=Z,7.9nm,0.8s						
MCK	McKinley	46.46	35	P	P	01 19 06.3	+1.1
	baz=272						
SEW	Seward	46.46	40	IAmb	IAmb	01 19 06.8	
	comp=Z,16nm,1.0s						
SEW	Seward	46.46	40	P	P	01 19 06.0	+0.7
	baz=276						
PMR	Palmer	46.49	38	IAmb	IAmb	01 19 07.7	
	comp=Z,20nm,1.2s						
PMR	Palmer	46.49	38	P	P	01 19 06.2	+0.8
	baz=274,SNR=9.4						
RND	Reindeer	46.51	35	IAmb	IAmb	01 19 07.5	
	comp=Z,14nm,1.0s						
MDM	Murphy Dome	46.72	33	IAmb	IAmb	01 19 10.0	
	comp=Z,19nm,1.2s						
KNK	Knik Glacier	46.83	38	IAmb	IAmb	01 19 10.2	
	comp=Z,11nm,0.8s						
KNK	Knik Glacier	46.83	38	P	P	01 19 09.3	+1.1
	baz=275,SNR=7.4						
H24K	Noodor Dome	46.84	32	P	P	01 19 10.3	+2.1
	baz=271,SNR=10.0						
SML	Sawmill	46.85	38	P	P	01 19 09.6	+1.1
	baz=275,SNR=15						
POKR	Poker Plat Res	47.05	33	P	P	01 19 11.7	+1.9
	baz=272,SNR=6.9						
WAT6	Susitna Watana	47.07	36	P	P	01 19 11.0	+0.8
	baz=275,SNR=8.7						
M23K	Glacier View	47.14	38	P	P	01 19 11.8	+1.1
	baz=275,SNR=8.3						
DHY	Denali Highway	47.20	36	IAmb	IAmb	01 19 13.1	
	comp=Z,6.7nm,0.8s						
DHY	Denali Highway	47.20	36	P	P	01 19 12.2	+1.0
	baz=274,SNR=9.2						
HDA	Harding Lake	47.29	34	IAmb	IAmb	01 19 13.3	
	comp=Z,10nm,0.7s						
HDA	Harding Lake	47.29	34	P	P	01 19 12.8	+1.0
	baz=274,SNR=8.4						
ILAR	Eielson Array	47.30	33	P	P	01 19 12.6	+0.8
	comp=Z,8.9nm,0.7s,baz=267,slow=6.4,SNR=114						
	comp=Z,8.9nm,0.7s						
ILAR	Eielson Array	47.30	33	P	P	01 19 12.5	+0.6
SCM	Sheep Creek Mo	47.32	37	P	P	01 19 13.5	+1.3
	baz=276,SNR=14						
JIRN	Jiri	47.46	274	*e*P	P	01 19 14.9	+0.9
	comp=Z,7.2nm,0.3s						
RAMN	Ramite	47.49	272	*e*P	P	01 19 13.7	-0.4
	comp=Z,35nm,0.8s						
GLI	Glacier Island	47.54	39	P	P	01 19 14.2	+0.5
	baz=277,SNR=18						
M24K	Tolsona, Glenn	47.84	37	P	P	01 19 18.0	+1.9
	baz=276,SNR=5.2						
K24K	Donnelly Dome	47.85	35	P	P	01 19 16.9	+0.8
	baz=275,SNR=9.3						
FID	Port Fidalgo	47.85	39	IAmb	IAmb	01 19 18.1	
	comp=Z,12nm,1.1s						
J25K	Salcha River,	47.96	34	P	P	01 19 17.6	+0.6
	baz=275						
TARG	Taragay, Kyrgy	48.00	295	IAmb	IAmb	01 19 32.8	
	comp=Z,10nm,0.9s						
KLU	Klutina	48.03	38	P	P	01 19 19.1	+1.5
	baz=277,SNR=21						
PAX	Paxson	48.07	36	P	P	01 19 19.9	+2.0
	baz=276						
KKN	Kakani	48.10	274	*e*P	P	01 19 18.7	-0.1
	comp=Z,36nm,0.7s						
PKI	Pulchoki	48.11	274	*e*P	P	01 19 18.1	-0.9
	comp=Z,12nm,0.5s						
PKIN	Phulchoki	48.12	274	*e*P	P	01 19 18.0	-1.0
	comp=Z,12nm,0.6s						
EYAK	Cordova Ski Ar	48.23	39	P	P	01 19 20.8	+1.7
	baz=278,SNR=15						
HARP	HAARP	48.28	37	P	P	01 19 21.2	+1.8
	baz=277						
KDJ	Kajisay	48.31	295	P	P	01 19 20.1	-0.1
KDJ				IAmb	IAmb	01 19 34.6	
	comp=Z,4.1nm,0.8s						
PMG	Port Moresby	48.63	173	LR	LR	01 44 22.2	
	comp=Z,25nm,18.5s,baz=229,slow=42						
N25K	Chitina, Valde	48.64	38	IAmb	IAmb	01 19 24.5	
	comp=Z,4.2nm,0.6s						
N25K	Chitina, Valde	48.64	38	P	P	01 19 23.9	+1.6
	baz=278,SNR=6.4						
BMRM	Bremner River	48.73	38	P	P	01 19 24.6	+1.6
	baz=279,SNR=16						
J26L	Joseph Creek	48.75	34	P	P	01 19 23.8	+0.6
	baz=276,SNR=6.3						
MENT	Mentasta	48.87	36	IAmb	IAmb	01 19 26.9	
	comp=Z,8.8nm,0.8s						
L26K	Log Cabin Wild	49.02	36	P	P	01 19 27.4	+2.2
	baz=278						
GLB	Gilahina Butte	49.04	38	IAmb	IAmb	01 19 28.1	
	comp=Z,8.5nm,1.2s						
BOOM	Boomskoye usch	49.05	296	P	P	01 19 26.2	+0.3
BOOM				IAmb	IAmb	01 19 40.5	
	comp=Z,9.4nm,1.1s						
VRDI	Verde Repeater	49.24	38	IAmb	IAmb	01 19 29.6	
	comp=Z,12nm,1.0s						
M26K	Nabesna, AK	49.27	36	P	P	01 19 29.0	+1.9
	baz=279,SNR=6.2						
SUCK	Suckling Hills	49.28	39	IAmb	IAmb	01 19 29.7	
	comp=Z,7.8nm,0.6s						
MCARA	McCarthy VSAT	49.42	38	P	P	01 19 30.0	+1.8
	baz=280,SNR=6.3						
L27K	Beaver Creek,	49.70	35	IAmb	IAmb	01 19 33.3	
	comp=Z,9.8nm,0.9s						
L27K	Beaver Creek,	49.70	35	P	P	01 19 32.3	+2.0
	baz=279,SNR=20						
EGAK	Eagle	49.74	33	IAmb	IAmb	01 19 48.3	
	comp=Z,4.6nm,0.8s						
EGAK	Eagle	49.74	33	P	P	01 19 31.4	+0.8
	baz=278,SNR=7.8						
M27K	Edge Creek, AK	49.80	36	IAmb	IAmb	01 19 34.0	
	comp=Z,9.2nm,0.8s						
M27K	Edge Creek, AK	49.80	36	P	P	01 19 32.9	+1.7
	baz=280						
AAK	Ala-Archa	50.01	297	P	P	01 19 32.3	-0.8
	comp=Z,1.5nm,0.4s,baz=75,slow=2.2,SNR=6.8						
AAK				LR	LR	01 40 15.8	
	comp=Z,34nm,18.2s,baz=102,slow=36						
	comp=Z,1.5nm,0.4s						
AAK	Ala-Archa	50.01	297	P	P	01 19 32.4	-0.7
KSH	Kashi	50.09	293	P	P	01 19 40.6	+6.8
KSH				pP	sP	01 19 55.1	+1.1
KSH				S	S	01 26 48.9	+7.5
KSH				sS	sS	01 27 17.5	+13
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BARN	Barnard Glacie	50.13	38	IAmb	IAmb	01 19 35.9	
	comp=Z,6.5nm,0.6s						
YAH	Yahtse	50.22	39	IAmb	IAmb	01 19 37.1	
	comp=Z,10.0nm,0.9s						
BVCY	Beaver Creek	50.25	36	P	P	01 19 36.3	+1.8
	baz=280						
CTG	Chitna Glacier	50.30	38	P	P	01 19 36.8	+1.7
	baz=281,SNR=8.2						
CTGM	Chitina Glacie	50.30	38	IAmb	IAmb	01 19 37.4	
	comp=Z,16nm,1.2s						
TABL	Table Mountain	50.50	39	IAmb	IAmb	01 19 53.0	
	comp=Z,8.4nm,0.7s						
YUK3	Moose Creek	50.56	37	P	P	01 19 38.5	+1.4
	baz=281,SNR=9.1						
DAWY	Dawson	50.61	34	P	P	01 19 38.3	+1.0
	baz=280						
I29M	Ogilvie Camp,	50.84	32	P	P	01 19 40.6	+1.7
	baz=280,SNR=8.7						
PINM	Pinnacle	51.01	39	P	P	01 19 41.5	+1.2
	baz=283						
EPYK	Eagle Plains	51.30	31	P	P	01 19 44.0	+1.6
	baz=281,SNR=14						
YUK4	Talbot Arm	51.50	37	P	P	01 19 46.3	+2.2
	baz=283,SNR=7.1						
PNL	Peninsula	51.52	39	P	P	01 19 44.7	+0.6
	baz=284						
YUK6	Outpost Mounta	51.72	38	P	P	01 19 47.1	+1.2
	baz=284						
M30M	Minto, Yukon	52.07	35	IAmb	IAmb	01 19 50.9	
	comp=Z,4.3nm,0.8s						
M30M	Minto, Yukon	52.07	35	P	P	01 19 50.3	+2.2
	baz=284,SNR=9.7						
INK	Inuvik	52.14	28	P	P	01 19 49.8	+1.3
	comp=Z,5.3nm,0.5s,baz=283,slow=6.3,SNR=38						
INK				LR	LR	01 43 17.4	
	comp=Z,27nm,18.5s,baz=147,slow=37						
	comp=Z,5.3nm,0.5s						
INK	Inuvik	52.14	28	IAmb	IAmb	01 19 50.7	
	comp=Z,10nm,0.9s						
INK	Inuvik	52.14	28	P	P	01 19 49.8	+1.3
	baz=282,SNR=10						
HYT	Haines Junctio	52.16	38	P	P	01 19 51.6	+2.6
	baz=284,SNR=32						
N30M	Aishikik Lake	52.20	37	P	P	01 19 51.7	+2.5
	baz=284						
KK31	Karatay Array	52.57	299	P	P	01 19 52.0	-0.1
KKAR	Karatay Array	52.57	299	P	P	01 19 52.0	-0.1
N31M	Braeburn, Yuko	52.80	37	P	P	01 19 55.9	+2.4
	baz=285,SNR=12						
M31M	Drury Creek, Y	53.24	36	IAmb	IAmb	01 19 59.1	
	comp=Z,4.3nm,0.7s						
M31M	Drury Creek, Y	53.24	36	P	P	01 19 58.7	+1.9
	baz=286,SNR=8.6						
WHY	Whitehorse	53.45	37	P	P	01 20 00.5	+2.1
	baz=287,SNR=8.7						
BTK	Batken	53.54	295	P	P	01 19 60.0	+0.6
BTK				IAmb	IAmb	01 20 12.9	
	comp=Z,6.8nm,1.1s						
A36M	Sachs Harbour	53.98	23	P	P	01 20 04.0	+2.0
	baz=287						
BESE	Bessie Mountai	54.08	40	IAmb	IAmb	01 20 06.0	
	comp=Z,7.0nm,1.2s						
GAR	Garm	54.33	294	IAmb	IAmb	01 20 20.3	
	comp=Z,5.6nm,0.7s						
JIS	Juneau Island	54.41	40	IAmb	IAmb	01 20 08.5	
	comp=Z,10nm,1.2s						
P33M	Teslin, Yukon	54.56	38	IAmb	IAmb	01 20 09.6	
	comp=Z,11nm,1.2s						
P33M	Teslin, Yukon	54.56	38	P	P	01 20 08.0	+1.6
	baz=288,SNR=11						
ARU	Arti	55.12	318	LR	LR	01 46 07.3	
	comp=Z,85nm,18.3s,baz=82,slow=38						
ARU	Arti	55.12	318	P	P	01 20 10.1	-0.4
C36M	Paulatuk	55.16	26	P	P	01 20 11.4	+0.8
	baz=289,SNR=9.4						
S34M	Telegraph Cree	56.16	40	P	P	01 20 20.4	+2.5
	baz=291						
DLBC	Dease Lake	56.51	39	IAmb	IAmb	01 20 24.1	
	comp=Z,5.5nm,1.0s						
ABKAR	Akbulak array	57.00	309	P	P	01 20 23.4	-0.6
KBL	Kabul	57.22	290	P	P	01 20 25.4	-0.6
KBL				IAmb	IAmb	01 20 43.0	
	comp=Z,6.9nm,0.7s						
AKTO	Aktyubinsk	57.67	311	LR	LR	01 46 43.5	
	comp=Z,31nm,19.5s,baz=83,slow=38						
EUNU	Eureka	57.90	9	IAmb	IAmb	01 20 30.7	
	comp=Z,4.3nm,0.7s						
CTA	Charters Tower	59.15	176	LR	LR	01 54 55.2	
	comp=Z,35nm,18.0s,baz=257,slow=45						
WB2	Warramunga Arr	59.34	189	P	P	01 20 42.0	+1.4
WB2				IAmb	IAmb	01 21 03.8	
	comp=Z,6.9nm,0.9s						
WRA	Warramunga Arr	59.34	189	P	P	01 20 40.0	-0.6
	comp=Z,2.6nm,0.5s,baz=5.9,slow=7.1,SNR=66						
	comp=Z,2.6nm,0.5s						
RES	Resolute Bay	60.30	15	P	P	01 20 46.4	-0.1
RES				IAmb	IAmb	01 20 47.4	
	comp=Z,8.5nm,0.9s						
YKA	Yellowknife Ar	61.59	31	P	P	01 20 55.7	+0.3
	comp=Z,2.6nm,0.9s,baz=301,slow=6.6,SNR=25						
	comp=Z,2.6nm,0.9s						
ARCES	ARCESS Array B	62.14	339	P	P	01 20 58.8	-0.3
	comp=Z,1.7nm,0.6s,baz=59,slow=7.2,SNR=12						
ARCES				LR	LR	01 50 51.7	
	comp=Z,33nm,20.0s,baz=357,slow=39						
	comp=Z,1.7nm,0.6s						
ARCES	ARCESS Array B	62.14	339	IAmb	IAmb	01 21 01.9	
	comp=Z,6.4nm,1.1s						
HRA	Herat	62.20	293	P	P	01 20 60.0	-0.4
HRA				IAmb	IAmb	01 21 16.3	
	comp=Z,3.3nm,0.8s						
KLMR	Klimovskoe	62.22	327	*e*P	P	01 20 58.1	-1.6
KLMR				AMP		01 21 00.0	
	comp=Z,9.0nm,1.1s						
BELG	Belogornoye	62.61	317	LR	LR	01 49 44.4	
	comp=Z,53nm,19.4s,baz=19,slow=37						
ASAR	Alice Springs	63.07	189	P	P	01 21 05.4	-0.4
	comp=Z,0.9nm,0.5s,baz=357,slow=5.9,SNR=16						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	63.07	189	P	P	01 21 06.1	+0.3
GEYT	Alibeck	63.31	298	P	P	01 21 06.4	-1.1
	comp=Z,2.9nm,0.7s,baz=43,slow=55,SNR=3.3						
GEYT				LR	LR	01 50 05.7	
	comp=Z,28nm,18.7s,baz=119,slow=37						
	comp=Z,2.9nm,0.7s						
GEYT	Alibeck	63.31	298	P	P	01 21 07.1	-0.4
NLWA	Neilton Lookou	64.78	49	P	P	01 21 18.1	+1.2
D03D	Eldon	65.15	48	P	P	01 21 21.5	+2.2
	baz=302						
B05A	Bryant	65.34	47	P	P	01 21 21.8	+1.3
	baz=302						
E04D	Cinebar	65.97	49	P	P	01 21 26.7	+2.1
	baz=302						
LTY	Liberty	66.69	47	IAmb	IAmb	01 21 30.9	
	comp=Z,5.0nm,0.6s						
B08A	Colville Reser	66.84	46	P	P	01 21 30.8	+0.7
B08A				IAmb	IAmb	01 21 32.4	
	comp=Z,16nm,1.5s						
H04D	Lebanon	66.96	51	P	P	01 21 33.2	+2.3
	baz=303						
I03D	Drain, OR	67.04	52	P	P	01 21 33.5	+2.1
	baz=303						
FINES	FINESS Array B	67.14	332	P	P	01 21 31.3	-0.5
	comp=Z,4.3nm,0.6s,baz=23,slow=12,SNR=23						
FINES				LR	LR	01 52 18.1	
	comp=Z,42nm,21.4s,baz=32,slow=37						
	comp=Z,4.3nm,0.6s						
FINES	FINESS Array B	67.14	332	P	P	01 21 32.1	+0.4
H04A	Detroit Lake	67.21	50	P	P	01 21 33.4	+0.8
EDM	Edmonton	67.23	39	P	P	01 21 32.7	+0.1
EDM				IAmb	IAmb	01 21 34.2	
	comp=Z,9.7nm,0.8s						
K02D	Willamette Mer	67.39	53	P	P	01 21 34.1	+0.3
	baz=303						
G05D	Wamic, OR	67.42	49	P	P	01 21 35.9	+2.0
	baz=304						
I04A	Tendick Farm,	67.56	51	P	P	01 21 36.3	+1.5
	baz=304						
I05D	Terrebonne, OR	67.90	50	P	P	01 21 38.3	+1.3
	baz=304						
J04D	Umpqua Nationa	68.05	52	P	P	01 21 40.5	+2.4
	baz=304						
NEW	Newport	68.12	45	LR	LR	01 52 54.8	
	comp=Z,19nm,19.0s,baz=44,slow=37						
NEW	Newport	68.12	45	IAmb	IAmb	01 21 40.3	
	comp=Z,7.5nm,1.0s						
NEW	Newport	68.12	45	P	P	01 21 39.4	+1.1
	baz=305						
L04D	Klamath Falls	68.49	53	P	P	01 21 42.4	+1.6
	baz=304						
J05D	Fort Rock, OR	68.55	51	P	P	01 21 43.3	+2.1
	baz=304						
K05A	Summer Lake	69.07	52	IAmb	IAmb	01 21 48.1	
	comp=Z,18nm,1.1s						
MTSE	Matsula	69.82	331	*e*P	P	01 21 48.4	-0.1
KIV	Kislovodsk	69.92	311	⇑P	P	01 21 50.7	+1.1
KIV	Kislovodsk	69.92	311	P	P	01 21 49.5	-0.1
KIV				IAmb	IAmb	01 22 08.6	
	comp=Z,12nm,0.9s						
KBZ	Khabaz	69.93	310	P	P	01 21 49.5	0.0
	comp=Z,3.2nm,0.8s,baz=67,slow=6.7,SNR=9.8						
	comp=Z,3.2nm,0.8s						
MSO	Missoula	70.71	45	P	P	01 21 54.9	+0.5
	baz=307						
IDID	Didziasalis	70.95	327	*e*P	P	01 21 55.8	+0.3
BEKR	Beckworth	71.04	54	IAmb	IAmb	01 21 58.6	
	comp=Z,8.2nm,0.8s						
ISAL	Salakas	71.04	327	*e*P	P	01 21 56.3	+0.3
IIGN	Ignalina	71.15	327	*e*P	P	01 21 56.9	+0.2
NACGM	Naroch	71.21	327	⇓*e*P	P	01 21 55.5	-1.6
	baz=48						
PABE	Paberze	71.98	328	*e*P	P	01 22 01.6	0.0
CMB	Columbia Colle	72.09	55	IAmb	IAmb	01 22 04.9	
	comp=Z,5.6nm,0.9s						
EGMT	Eagleton	72.21	42	P	P	01 22 03.9	+0.6
EGMT				IAmb	IAmb	01 22 05.2	
	comp=Z,11nm,1.0s						
EGMT	Eagleton	72.21	42	P	P	01 22 04.2	+0.8
	baz=309						
HFS	Hagfors	72.32	336	P	P	01 22 03.5	-0.1
	comp=Z,0.4nm,0.4s,baz=102,slow=28,SNR=13						
HFS				LR	LR	01 57 05.3	
	comp=Z,55nm,18.5s,baz=28,slow=38						
	comp=Z,0.4nm,0.4s						
NB2	NORSAR Subarra	72.38	337	P	P	01 22 03.5	-0.6
	comp=Z,1.9nm,0.8s,baz=37,slow=5.9						
NOA	NORSAR Array B	72.38	337	P	P	01 22 03.6	-0.4
	comp=Z,2.0nm,0.7s,baz=38,slow=6.0,SNR=8.2						
NOA				LR	LR	01 56 38.1	
	comp=Z,38nm,21.8s,baz=50,slow=38						
	comp=Z,2.0nm,0.7s						
HLID	Hailey	72.42	48	P	P	01 22 06.4	+1.6
	baz=308						
BMN	Battle Mountai	72.65	52	IAmb	IAmb	01 22 08.3	
	comp=Z,4.7nm,0.6s						
BOZ	Bozeman (W)	72.73	45	IAmb	IAmb	01 22 08.6	
	comp=Z,6.8nm,0.7s						
BOZ	Bozeman (W)	72.73	45	P	P	01 22 07.7	+1.1
	baz=309						
AKASG	Malin Array Be	72.92	322	P	P	01 22 06.7	-0.7
	comp=Z,2.2nm,0.4s,baz=44,slow=6.4,SNR=22						
AKASG				LR	LR	01 57 12.6	
	comp=Z,29nm,18.7s,baz=5.0,slow=38						
	comp=Z,2.2nm,0.4s						
AKBB	Malin Array Si	72.92	322	P	P	01 22 06.6	-0.7
AKBB				IAmb	IAmb	01 22 07.5	
	comp=Z,6.8nm,0.8s						
KVN	Kaiserville	72.93	53	IAmb	IAmb	01 22 10.3	
	comp=Z,10nm,1.0s						
NVAR	Mina Array Bea	73.18	54	P	P	01 22 10.6	+1.2
	comp=Z,4.6nm,0.8s,baz=286,slow=6.0,SNR=31						
	comp=Z,4.6nm,0.8s						
YHL	Hebgen Lake	73.44	45	IAmb	IAmb	01 22 13.3	
	comp=Z,5.5nm,0.8s						
GURO	Guroymak-BITLI	73.52	306	P	P	01 22 11.1	-0.2
SFJD	Kangerlussuaq	73.62	5	LR	LR	01 55 30.4	
	comp=Z,20nm,18.3s,baz=344,slow=36						
H17A	Grant Village	74.07	45	IAmb	IAmb	01 22 18.6	
	comp=Z,7.8nm,0.8s						
H17A	Grant Village	74.07	45	P	P	01 22 17.5	+2.9
	baz=310						
VES	Vestal, Richgr	74.23	57	P	P	01 22 16.2	+0.8
	baz=307						
RLMT	Red Lodge	74.32	44	P	P	01 22 17.2	+1.3
	baz=310						
FRB	Frobisher Bay	74.47	14	LR	LR	01 58 24.7	
	comp=Z,20nm,18.5s,baz=358,slow=38						
LAO	LASA Array	74.90	42	IAmb	IAmb	01 22 21.4	
	comp=Z,14nm,1.1s						
R11A	Troy Canyon, C	74.92	53	P	P	01 22 20.7	+1.1
	baz=308						
MARD	Mardin	75.06	306	P	P	01 22 19.3	-1.0
MARD				IAmb	IAmb	01 22 42.1	
	comp=Z,7.2nm,0.5s						
SORM	Soroca	75.07	321	⇑P	P	01 22 19.3	-0.6
HWUT	Hardware Ranch	75.28	48	IAmb	IAmb	01 22 24.2	
	comp=Z,9.0nm,1.1s						
TPNV	Topopah Spring	75.37	54	P	P	01 22 23.1	+1.0
	baz=308						
DUG	Dugway, Tooele	75.45	50	IAmb	IAmb	01 22 25.0	
	comp=Z,6.3nm,0.9s						
DUG	Dugway, Tooele	75.45	50	P	P	01 22 23.9	+1.4
	baz=309						
QSM	Queen of Sheba	75.58	55	IAmb	IAmb	01 22 25.4	
	comp=Z,11nm,1.0s						
BW06	Boulder Array	75.68	46	P	P	01 22 24.8	+0.9
	baz=311						
PDAR	Pinedale Array	75.68	46	P	P	01 22 24.7	+0.8
	comp=Z,3.4nm,0.7s,baz=272,slow=2.5,SNR=23						
	comp=Z,3.4nm,0.7s						
PDAR	Pinedale Array	75.68	46	P	P	01 22 24.0	+0.1
PRN	Pahroc Range	75.84	53	IAmb	IAmb	01 22 27.3	
	comp=Z,7.7nm,1.0s						
GSC	Goldstone, Bar	76.03	56	P	P	01 22 27.2	+1.3
	baz=308						
BFSC	Mount Baldy Ra	76.14	57	P	P	01 22 27.5	+1.0
	baz=308						
MPU	Maple Canyon	76.26	49	IAmb	IAmb	01 22 29.5	
	comp=Z,7.1nm,0.9s						
CCUT	Cedar City	76.79	52	IAmb	IAmb	01 22 32.8	
	comp=Z,5.0nm,0.9s						
GIRR	Girov	76.79	321	⇑P	P	01 22 29.8	0.0
BUR08	Bucovina Ar. S	76.94	322	IAmb	IAmb	01 22 31.6	
	comp=Z,4.3nm,0.8s						
BURAR	Bucovina Array	76.95	322	⇑P	P	01 22 31.0	+0.1
BURAR	Bucovina Array	76.95	322	P	P	01 22 30.7	-0.1
BURAR				IAmb	IAmb	01 22 32.0	
	comp=Z,4.8nm,0.8s						
BIZ	Bicaz	77.00	321	⇑P	P	01 22 31.3	+0.3
TESR	Tescani	77.03	320	⇑P	P	01 22 30.8	-0.3
GMRC	Granite Mounta	77.09	56	P	P	01 22 33.0	+1.1
	baz=309						
P17A	Butcher Ranch,	77.14	49	IAmb	IAmb	01 22 34.5	
	comp=Z,10.0nm,0.9s						
MTPU	Mount Pierson	77.19	51	IAmb	IAmb	01 22 35.2	
	comp=Z,4.7nm,0.8s						
Q16A	Castle Valley	77.24	50	IAmb	IAmb	01 22 35.3	
	comp=Z,6.1nm,1.2s						
ULM	Lac du Bonnet	77.32	34	P	P	01 22 32.4	-0.3
	comp=Z,4.4nm,0.7s,baz=15,slow=4.5,SNR=4.1						
	comp=Z,4.4nm,0.7s						
ULM	Lac du Bonnet	77.32	34	IAmb	IAmb	01 22 33.2	
	comp=Z,5.2nm,0.8s						
P18A	Preston Nutter	77.33	49	IAmb	IAmb	01 22 35.9	
	comp=Z,16nm,1.5s						
BELC	Belle Mtn. Jos	77.36	56	P	P	01 22 33.8	+0.4
	baz=309						
VRI	Vrincioaia	77.44	320	⇓P	P	01 22 34.1	+0.6
K22A	Casper	77.44	45	IAmb	IAmb	01 22 35.6	
	comp=Z,15nm,1.2s						
K22A	Casper	77.44	45	P	P	01 22 34.5	+0.8
	baz=312						
SRU	San Rafael Swe	77.50	50	IAmb	IAmb	01 22 36.2	
	comp=Z,11nm,0.8s						
OJC	Ojcow	77.54	326	*e*P	P	01 22 34.0	+0.1
OJC	Ojcow	77.54	326	IAmb	IAmb	01 22 35.0	
	comp=Z,11nm,1.1s						
OZUR		77.74	320	⇓P	P	01 22 36.1	+0.9
RSSD	Black Hills	77.77	42	P	P	01 22 36.5	+0.8
RSSD				IAmb	IAmb	01 22 37.1	
	comp=Z,7.6nm,1.1s						
RSSD	Black Hills	77.77	42	P	P	01 22 36.3	+0.7
	baz=314						
IRM	Iron Mountain	77.81	56	P	P	01 22 37.1	+1.3
	baz=309						
BRTR	Keskin Array B	77.84	312	P	P	01 22 35.6	-0.4
	comp=Z,0.7nm,0.5s,baz=104,slow=3.6,SNR=7.0						
	comp=Z,0.7nm,0.5s						
BRTR	Keskin Array B	77.84	312	P	P	01 22 35.1	-1.0
MLR	Muntele Rosu	78.09	320	P	P	01 22 37.5	+0.2
	comp=Z,1.0nm,0.5s,baz=85,slow=9.2,SNR=1.9						
MLR				LR	LR	02 00 04.5	
	comp=Z,46nm,18.7s,baz=200,slow=38						
	comp=Z,1.0nm,0.5s						
O20A	White River Ci	78.15	48	P	P	01 22 38.5	+0.6

	baz=312						
U15A	North Rim	78.17	53	IAmb	IAmb	01 22 40.7	
	comp=Z,6.2nm,0.9s						
LANS	Liptovska Anna	78.48	326	eP	P	01 22 40.5	+1.3
OKC	Ostrava-Krasne	78.53	327	eP	P	01 22 39.7	+0.2
KSP	Ksiaz	78.54	328	eP	P	01 22 39.7	+0.2
OSTC	Ostas	78.79	328	eP	P	01 22 41.7	+0.8
PV23	Carpenter Ridg	78.82	49	IAmb	IAmb	01 22 43.8	
	comp=Z,9.2nm,0.8s						
CHVC	Chvalec	78.83	328	eP	P	01 22 40.9	-0.2
MORC	Moravsky Berou	78.84	327	⇓P	P	01 22 41.7	+0.6
MORC	Moravsky Berou	78.84	327	eP	P	01 22 41.3	+0.1
DPC	Dobruska-Polom	78.91	328	eP	P	01 22 42.0	+0.4
KRLC	Kraliky	78.93	328	eP	P	01 22 41.7	0.0
N23A	Red Feather La	78.94	46	IAmb	IAmb	01 22 44.7	
	comp=Z,7.9nm,1.1s						
N23A	Red Feather La	78.94	46	P	P	01 22 43.7	+1.5
	baz=313						
PV11	David Mesa, Pa	79.00	49	IAmb	IAmb	01 22 44.8	
	comp=Z,10nm,0.6s						
PV13	Radium Mtn., P	79.13	49	IAmb	IAmb	01 22 45.5	
	comp=Z,11nm,0.8s						
VYHS	Vyhne	79.25	326	eP	P	01 22 43.5	+0.1
WUAZ	Wupatki	79.32	53	P	P	01 22 46.0	+1.8
	baz=311						
BRG	Berggiesshubel	79.46	330	eP	P	01 22 44.3	-0.2
BRG				Amp		01 22 45.4	
	comp=Z,3.6nm,1.1s						
CLL	Collm	79.48	330	P	P	01 22 43.8	-0.8
CLL				IAmb	IAmb	01 22 45.1	
	comp=Z,4.7nm,0.7s						
CLL	Collm	79.48	330	i P	P	01 22 44.2	-0.4
	comp=Z,6.0nm,0.8s						
PVCC	Panska Ves	79.48	329	eP	P	01 22 44.9	+0.3
VRAC	Vranov	79.59	327	⇑P	P	01 22 45.1	-0.2
VRAC	Vranov	79.59	327	P	P	01 22 44.9	-0.3
	comp=Z,2.8nm,0.7s,baz=54,slow=8.3,SNR=5.2						
VRAC				LR	LR	02 01 07.1	
	comp=Z,45nm,19.2s,baz=32,slow=38						
	comp=Z,2.8nm,0.7s						
VRAC	Vranov	79.59	327	eP	P	01 22 45.4	+0.1
SIRR	Siria	79.62	323	⇑P	P	01 22 45.3	-0.2
GZR	Gura Zlata	79.72	321	⇑P	P	01 22 46.0	-0.1
KRUC	Moravsky	79.87	327	eP	P	01 22 47.1	+0.3
ISCO	Idaho Springs	79.87	46	P	P	01 22 48.9	+1.5
	baz=313						
PRU	Pruhonice	79.91	329	eP	P	01 22 44.7	-2.3
MVCO	Mesa Verde	79.95	50	IAmb	IAmb	01 22 49.9	
	comp=Z,5.3nm,0.8s						
MVCO	Mesa Verde	79.95	50	P	P	01 22 49.2	+1.4
	baz=312						
MODS	Modra-Piesok	80.02	326	eP	P	01 22 48.5	+0.9
BZS	Buzias	80.11	322	⇑P	P	01 22 47.8	-0.3
HERR	Herculane	80.27	321	⇑P	P	01 22 48.5	-0.5
RAYN	Ar Rayn	80.38	292	P	P	01 22 48.4	-1.7
NKC	Novy Kostel	80.55	330	eP	P	01 22 50.9	+0.5
S22A	4UR Ranch, Cre	80.57	49	P	P	01 22 52.6	+1.4
	baz=313						
CKRC	Cesky Krumlov	80.92	328	eP	P	01 22 52.5	0.0
RONA	Rosalia, Austr	80.96	326	eP	P	01 22 53.4	+0.7
	comp=Z,2.8nm,0.6s						
CONA	Conrad Observa	80.97	327	i P	P	01 22 53.0	+0.2
	comp=Z,0.6nm,0.3s,SNR=4.5						
KHC	Kasperske Hory	80.97	329	eP	P	01 22 52.8	0.0
GERES	GERESS Array B	81.15	328	P	P	01 22 53.6	-0.1
	comp=Z,1.0nm,0.6s,baz=38,slow=6.8,SNR=13						
GERES				LR	LR	02 01 43.6	
	comp=Z,62nm,18.2s,baz=4.0,slow=38						
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	81.15	328	P	P	01 22 53.9	+0.1
EKA	Eskdalemuir Ar	81.25	341	P	P	01 22 53.4	-0.7
	comp=Z,0.9nm,0.6s,baz=32,slow=5.7,SNR=4.3						
	comp=Z,0.9nm,0.6s						
SDCO	Great Sand Dun	81.34	48	P	P	01 22 56.4	+1.2
	baz=314						
VTS	Vitosha	81.51	319	⇑P	P	01 22 56.2	+0.4
VTS	Vitosha	81.51	319	P	P	01 22 55.8	-0.1
VTS				IAmb	IAmb	01 22 57.2	
	comp=Z,5.1nm,0.8s						
TUC	Tucson	81.79	55	P	P	01 22 57.9	+0.4
TUC	Tucson	81.79	55	P	P	01 22 58.6	+1.1
	baz=312						
ECSD	EROS Data Cent	81.80	39	IAmb	IAmb	01 22 57.8	
	comp=Z,4.5nm,0.8s						
ECSD	EROS Data Cent	81.80	39	P	P	01 22 57.4	+0.2
	baz=318						
SOKA	Soboth	82.29	326	i P	P	01 22 59.7	-0.1
	comp=Z,2.1nm,0.4s,SNR=6.8						
T25A	Trinidad	82.39	48	IAmb	IAmb	01 23 02.6	
	comp=Z,6.5nm,0.8s						
T25A	Trinidad	82.39	48	P	P	01 23 01.7	+1.1
	baz=314						
OBKA	Obir	82.63	327	eP	P	01 23 01.6	0.0
	comp=Z,2.9nm,0.8s						
ANMO	Albuquerque	82.69	50	P	P	01 23 03.3	+1.1
ANMO	Albuquerque	82.69	50	P	P	01 23 03.7	+1.4
	baz=313						
STU	Stuttgart	82.98	331	P	P	01 23 02.9	-0.3
STU				IAmb	IAmb	01 23 04.4	
	comp=Z,8.0nm,0.7s						
SCHQ	Schefferville	83.04	16	P	P	01 23 03.4	0.0
	comp=Z,3.5nm,0.7s,baz=333,slow=4.8,SNR=6.0						
	comp=Z,3.5nm,0.7s						
WATA	Walderalm	83.21	329	eP	P	01 23 04.4	-0.2
	comp=Z,1.7nm,0.6s						
WTTA	Wattenberg	83.25	329	eP	P	01 23 04.6	-0.3
	comp=Z,1.5nm,0.5s						
MOTA	Moosalm	83.40	329	eP	P	01 23 05.4	-0.2
	comp=Z,5.1nm,0.9s						
RETA	Reutte	83.42	329	eP	P	01 23 05.6	-0.1
	comp=Z,0.7nm,0.3s,SNR=4.8						
SQTA	Sankt Quirin	83.45	329	eP	P	01 23 05.5	-0.4
	comp=Z,0.6nm,0.3s						
121A	Cookes Peak, D	83.53	53	IAmb	IAmb	01 23 09.1	
	comp=Z,6.3nm,0.9s						
121A	Cookes Peak, D	83.53	53	P	P	01 23 08.4	+1.8
	baz=313						
FETA	Feichten	83.81	329	i P	P	01 23 07.6	-0.1
	comp=Z,1.8nm,0.7s,SNR=4.9						
DAVA	Damuels	83.93	330	eP	P	01 23 08.6	+0.2
	comp=Z,5.1nm,0.6s,SNR=4.6						
KBN	Korca	84.22	319	P	P	01 23 10.0	+0.1
KBN				IAmb	IAmb	01 23 10.1	
	comp=Z,9.0nm,0.8s						
DAVOX	Davos/Dischmat	84.34	329	P	P	01 23 10.2	-0.3
	comp=Z,4.0nm,0.8s,baz=344,slow=3.7,SNR=11						
DAVOX				LR	LR	02 03 30.3	
	comp=Z,24nm,21.1s,baz=84,slow=38						
	comp=Z,4.0nm,0.8s						
PMOR	Pomariorio Ree	84.51	114	eT	T	02 56 35.7	
	comp=Z,33nm,0.2s						
PPT2	Papeete2	85.10	117	eLR	LR	01 50 03.0	
	comp=Z,43nm,22.2s						
PPT2	Papeete2	85.10	117	eT	T	02 57 20.0	
	comp=Z,12nm,0.3s						
AMTX	Amarillo	85.54	48	P	P	01 23 17.7	+1.1
	baz=316						
MSTX	Muleshoe	85.56	49	P	P	01 23 17.7	+1.0
	baz=315						
MNTX	Cornudas Mount	85.58	52	P	P	01 23 17.5	+0.7
	baz=314						
SENIN	Lac Senin/Sane	85.69	331	IAmb	IAmb	01 23 21.3	
	comp=Z,3.8nm,0.9s						
TAOE	Nuku Hiva Isla	86.12	105	eLR	LR	01 50 43.8	
	comp=Z,126nm,26.3s						
P38A	Dawn	86.41	40	P	P	01 23 20.7	0.0
WMOK	Wichita Mounta	87.29	46	IAmb	IAmb	01 23 26.0	
	comp=Z,4.2nm,1.1s						
WMOK	Wichita Mounta	87.29	46	P	P	01 23 25.5	+0.3
	baz=317						
S39A	Bolivar	88.00	41	IAmb	IAmb	01 23 28.9	
	comp=Z,6.7nm,0.8s						
TX31	Lajitas Ar. Si	88.29	53	IAmb	IAmb	01 23 31.2	
	comp=Z,4.7nm,0.8s						
TXAR	Lajitas Array	88.29	53	P	P	01 23 30.4	+0.3
	comp=Z,1.3nm,0.7s,baz=312,slow=4.3,SNR=5.9						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	88.29	53	P	P	01 23 30.6	+0.6
CCM	Cathedral Cave	88.75	39	P	P	01 23 31.9	-0.1
CCM	Cathedral Cave	88.75	39	P	P	01 23 31.9	-0.1
	baz=322						
TBI	Tubuai	89.14	121	eT	T	03 02 25.2	
	comp=Z,57nm,0.3s						
U40A	Yellville	89.26	41	P	P	01 23 34.5	+0.1
	baz=321						
W39A	Magazine	89.67	43	P	P	01 23 36.3	+0.1
	baz=320						
JCT	Junction City	89.81	50	IAmb	IAmb	01 23 38.3	
	comp=Z,3.9nm,0.7s						
JCT	Junction City	89.81	50	P	P	01 23 37.3	+0.2
	baz=317						
O48B	Farmland	89.82	34	P	P	01 23 37.3	+0.3
	baz=325						
MIAR	Mount Ida	90.27	43	IAmb	IAmb	01 23 40.6	
	comp=Z,5.8nm,0.9s						
MIAR	Mount Ida	90.27	43	P	P	01 23 39.5	+0.4
	baz=320						
W41B	Gary Mavity, V	90.49	42	P	P	01 23 40.2	+0.1
	baz=321						
ACSO	Alum Creek Sta	90.78	33	P	P	01 23 41.9	+0.5
	baz=327						
TKL	Tuckaleechee C	94.23	36	LR	LR	02 09 59.9	
	comp=Z,16nm,18.2s,baz=240,slow=38						
ESDC	Sonseca Array	95.57	334	P	P	01 24 02.6	-0.9
	comp=Z,0.4nm,0.8s,baz=10,slow=6.0,SNR=3.1						
ESDC				LR	LR	02 12 34.9	
	comp=Z,48nm,18.4s,baz=26,slow=39						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	116.18	316	PKP	PKPdf	01 29 20.5	-1.3
	comp=Z,0.3nm,0.5s,baz=34,slow=2.0,SNR=7.1						
SNAA	Sanae	143.05	198	PKPdf	PKPdf	01 30 09.5	-1.2
VNA3	Neumayer Olymp	144.87	195	PKPdf	PKPab	01 30 12.1	-1.0
LPAZ	La Paz	145.01	58	PKPbc	PKPbc	01 30 15.8	-0.1
	comp=Z,1.6nm,0.4s,baz=346,slow=5.8,SNR=16						
LPAZ	La Paz	145.01	58	PKPbc	PKPbc	01 30 15.5	-0.4
PB16	IPOC Station P	145.54	62	PKPbc	PKPab	01 30 18.2	+0.4
PB11	IPOC Station P	146.41	64	PKPbc	PKPab	01 30 20.4	-0.1

BEO **15** *01:12:37.7±0.4, 43°.36N×17°.73E, h5km±3km, ML2.1/11*
RHSSO **15** *01:12:38.2±0.2, 43°.34N×17°.78E, h5km±2km, ML2.3/13*
VIE **15** *01:12:41.5±2.0, 43°.64N×18°.08E, h8km, mb2.9/2, ml2.0/2, Error ellipse: s-maj=47.9km s-min=12.5km az=54.0 35 km SW of Sarajevo*
ISC 15 01:12:37.1±1.1, **43°.36N**±0°.02×**17°.77E**±0°.02, **h2**km±10km, **n56**, σ**1s.39**/107, **5C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.48	286	ePg	Pg	01 12 46.2	-0.2
RICI				Sg	Sb	01 12 54.7	-1.2
STON	Ston	0.49	186	ePg	Pg	01 12 46.2	-0.4
STON				eSg	Sg	01 12 54.0	+1.0
STON	Ston	0.49	186	⇑iPg	Pg	01 12 46.6	0.0
STON				eSg	Sg	01 12 53.9	+1.0
STON	Ston	0.49	186	ePg	Pg	01 12 46.4	-0.2
STON				Sg	Sg	01 12 53.2	+0.3
MAKA	Makarska	0.55	263	i Pg	Pg	01 12 47.4	-0.3
MAKA				Sg	Sb	01 12 56.1	-1.7
BRY	Bratogost	0.73	129	⇑iPg	Pg	01 12 50.0	-1.1
BRY				eSg	Sg	01 13 01.5	+0.9
DBRK	Dubrovnik	0.75	158	ePg	Pg	01 12 51.0	-0.5
DBRK				Sg	Sg	01 13 02.1	+1.0
TREB	Trebinje	0.77	146	ePg	Pg	01 12 51.2	-0.8
TREB				eSg	Sg	01 13 02.9	+1.0
TREB	Trebinje	0.77	146	⇑iPg	Pg	01 12 51.2	-0.8
TREB				eSg	Sg	01 13 03.0	+1.0
SRKY	Kupres RS	0.83	329	⇓iPg	Pg	01 12 53.4	+0.3
SRKY				eSg	Sb	01 13 05.2	-0.8
UPM	Unac-Piva	0.85	100	⇓iPg	Pg	01 12 52.9	-0.5
UPM				eSg	Sg	01 13 05.1	+0.7
LSTV	Lastovo	0.87	227	ePg	Pg	01 12 53.0	-0.9
LSTV				Sg	Sb	01 13 06.1	-1.0
HVAR	Hvar	0.98	260	ePg	Pg	01 12 55.3	-0.6
HVAR				Sg	Sb	01 13 09.8	-0.4
HCY	Herceg Novi	1.06	149	ePg	Pg	01 12 56.7	-0.7
HCY				eSg	Sg	01 13 11.4	+0.3
MGRS	Mrkonjic Grad	1.16	335	⇑iPg	Pb	01 12 59.4	-0.6
MGRS				eSg	Sn	01 13 15.9	-1.1
KIJV	Kijevo	1.18	304	ePg	Pb	01 12 59.8	-0.4
KIJV				Sg	Sn	01 13 17.9	+0.6
RUDO	Rudo	1.20	77	ePg	Pn	01 12 59.0	-1.9
RUDO				eSg	Sb	01 13 16.0	-0.4
BBLS	Lazići	1.29	66	ePg	Pn	01 13 00.6	-1.7
BBLS				eSg	Sb	01 13 19.7	+0.4
BBLS	Lazići	1.29	66	⇑iPg	Pn	01 13 01.2	-1.1
BBLS				eSg	Sb	01 13 19.5	+0.2
A050A	Klekovaca	1.43	322	ePg	Pb	01 13 04.4	-0.2
A050A				eSg	Sg	01 13 24.9	+1.8
PDG	Podgorica	1.44	130	ePg	Pn	01 13 04.4	+0.2
PDG				eSg	Sg	01 13 24.7	+1.4
PDG	Podgorica	1.44	130	ePg	Pn	01 13 03.8	-0.4
PDG				eSg	Sb	01 13 23.7	+0.4
BLY	Banja Luka	1.45	343	ePg	Pb	01 13 04.5	-0.3
BLY				eSg	Sg	01 13 25.5	+1.8
BLY	Banja Luka	1.45	343	ePg	Pg	01 13 05.2	+0.3
BLY				eSg	Sg	01 13 25.8	+2.1
ZIRJ	Zirje	1.57	281	ePn	Pb	01 13 06.6	-0.3
ZIRJ				Sg	Sg	01 13 29.4	+1.8
DRME	Dracevica, Mon	1.57	138	ePn	Pb	01 13 06.5	-0.4
DRME				eSn	Sb	01 13 27.7	+0.5
MORI	Morici	1.58	289	ePn	Pb	01 13 06.7	-0.3
MORI				Sg	Sg	01 13 29.9	+2.1
SJES	Sjenica	1.61	93	ePn	Pb	01 13 07.4	-0.3
SJES				eSn	Sb	01 13 29.4	+0.8
SJES	Sjenica	1.61	93	ePn	Pn	01 13 07.2	+0.4
SJES				eSn	Sn	01 13 28.2	0.0
IVAS	Ivanjica	1.75	82	ePn	Pn	01 13 08.6	0.0
IVAS				eSn	Sn	01 13 31.5	0.0
A051A	Mrakovica	1.76	340	ePn	Pb	01 13 09.3	-0.9
A051A				eSn	Sb	01 13 32.1	-0.7
DIVS	Divibare	1.77	65	ePn	Pn	01 13 08.9	0.0
DIVS				eSn	Sb	01 13 32.6	-0.6
DIVS	Divibare	1.77	65	ePn	Pn	01 13 08.8	-0.1
DIVS				eSn	Sb	01 13 33.0	-0.2
BLJ	Bijeljina	1.79	37	ePn	Pn	01 13 08.4	-0.6
BLJ				eSn	Sn	01 13 32.4	+0.2
UDBI	Udbina	1.86	310	ePn	Pg	01 13 12.4	-0.3
UDBI				Sn	Sg	01 13 38.7	+1.9
DUGI	Dugi Otok	2.06	289	ePn	Pb	01 13 14.7	-0.6
DUGI				Sn	Sg	01 13 42.2	-1.2
A252A	Venje	2.08	2	ePn	Pn	01 13 13.8	+0.8
A252A				Sn	Sg	01 13 43.3	-0.5
TRUS	Trudelj	2.10	65	ePn	Pn	01 13 13.0	-0.3
TRUS				eSn	Sn	01 13 40.5	+0.5
PLIT	Plitvice	2.16	315	ePn	Pb	01 13 15.8	-1.2
PLIT				Sn	Sg	01 13 45.2	-1.5
VIRC	Vir	2.17	296	ePn	Pb	01 13 16.4	-0.7
VIRC				Sn	Sb	01 13 44.9	+0.4
FRGS	Fruska Gora	2.32	39	ePn	Pn	01 13 16.4	0.0
FRGS				eSn	Sn	01 13 46.1	+0.6
FRGS	Fruska Gora	2.32	39	ePn	Pn	01 13 16.8	+0.4
FRGS				eSn	Sn	01 13 45.6	+0.1
MOSL	Moslavina	2.37	343	ePn	Pb	01 13 18.9	-1.6
MOSL				Sn	Sb	01 13 49.3	-0.8
SELS	Selova	2.45	92	ePn	Pn	01 13 19.2	+1.0
RABC	Rab	2.56	304	ePn	Pb	01 13 22.1	-1.7
RABC				Sn	Sb	01 13 54.8	-0.8
A250A	Rusevo Krmpots	2.68	311	ePn	Pb	01 13 23.4	-2.4
A250A				Sn	Sb	01 13 58.1	-1.1
MORH	Mrgy, Hungar	2.92	12	ePn	Pn	01 13 24.8	+0.2
MORH				eSn	Sn	01 14 01.8	+1.6
CRES	Cresnjev	2.96	327	ePn	Pn	01 13 26.7	+1.5
CRES				eSn	Sn	01 14 03.0	+1.6
BARS	Barje	3.02	99	ePn	Pn	01 13 27.2	+1.3
BARS				eSn	Sn	01 14 03.0	+0.4
RIY	Rijeka	3.06	311	ePn	Pn	01 13 28.7	+2.1
RIY				Sn	Sb	01 14 06.1	-4.1
SMRN	Sveta Marina	3.09	304	ePn	Pb	01 13 29.5	-3.3
SMRN				Sn	Sb	01 14 06.5	-4.4
BRJN	Brijuni	3.28	299	ePn	Pn	01 13 31.7	+2.2
BRJN				Sn	Sb	01 14 11.7	-4.6
SOKA	Soboth	3.84	331	ePn	Pn	01 13 38.0	+0.7
	0.6nm,0.3s						
OBKA	Obir	3.89	325	ePn	Pn	01 13 40.2	+2.2
	0.2nm,0.2s						
WTTA	Wattenberg	5.82	314	ePn	Pn	01 14 08.3	+3.7
	0.2nm,0.2s						
WATA	Walderalm	5.90	314	ePn	Pn	01 14 09.5	+3.8
	0.3nm,0.2s						

WEL 15 01:15:37.6±1.3, **32°S**±24°×**17°9W**±4°6, **h410**km±32km, **M3.9**/4, **mB4.1**/4, **MLv4.1**/4, **Mw(mB)3.2**/4, **Error ellipse: s-maj=0.1km s-min=0.0km az=114.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.79	204	P	P	01 17 07.8	-0.2
MXZ				S	S	01 18 21.3	-0.8
WMGZ	Waiomatatini S	5.99	202	S	S	01 18 26.0	+0.1
HAZ	Te Kaha	6.15	207	P	P	01 17 14.1	+2.3
HAZ				S	S	01 18 31.8	+2.6
PKGZ	Pakihiroa	6.16	204	P	P	01 17 11.6	-0.4
PKGZ				S	S	01 18 27.6	-1.9
PUZ	Puketiti	6.27	202	P	P	01 17 13.9	+0.8
PUZ				S	S	01 18 33.3	+1.7
RUGZ	Raukumara Rang	6.38	207	P	P	01 17 15.7	+1.3
RUGZ				S	S	01 18 31.4	-2.5
TKGZ	Te Karaka	6.74	204	P	P	01 17 19.0	+0.1
TKGZ				S	S	01 18 41.4	+0.5
MWZ	Matawai	6.76	206	P	P	01 17 17.9	-1.2
MWZ				S	S	01 18 42.8	+1.4
RIGZ	Rimuhau	7.01	203	P	P	01 17 20.6	-1.3
RIGZ				S	S	01 18 47.9	+1.5
KNZ	Kokohu	7.32	203	P	P	01 17 23.9	-1.4
KNZ				S	S	01 18 52.9	+0.1
FWVZ	Far West T-bar	8.35	212	P	P	01 17 36.5	-0.4
WNVZ	Wahianoa	8.39	212	P	P	01 17 36.5	-0.7

IDC 15 01:18:49.2±5.9, **5°.53S**×**147°.51E**, **h200**km±64km, **mb3.3**/2, **mbtmp4.1**/4, **Error ellipse: s-maj=123.0km s-min=28.7km az=130.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.87	185	P	Pn	01 19 51.1	+1.7
	21nm,0.2s,baz=284,slow=22,SNR=31						
PMG				S	Sn	01 20 36.0	-0.7
	54nm,0.7s,baz=359,slow=8.3,SNR=3.6						
WRA	Warramunga Arr	19.22	221	P	P	01 22 57.9	-0.5
	6.6nm,0.5s,baz=39,slow=11,SNR=46						
ASAR	Alice Springs	22.29	215	P	P	01 23 30.9	+0.6
	5.4nm,0.5s,baz=48,slow=8.7,SNR=29						
	5.4nm,0.5s						
ILAR	Eielson Array	84.85	23	P	P	01 31 00.5	-0.6
	0.1nm,0.5s,baz=243,slow=6.0,SNR=4.1						
	0.1nm,0.5s						

IDC 15 01:38:41.9±8.9, **5°.18S**×**146°.05E**, **h170**km±93km, **mb2.8**/2, **mbtmp3.3**/4, **Error ellipse: s-maj=103.2km s-min=29.9km az=137.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.34	165	P	Pn	01 39 47.3	+0.2
	3.3nm,0.3s,baz=52,slow=14,SNR=1.7						
PMG				S	Sn	01 40 38.5	+0.3
	8.1nm,0.3s,baz=156,slow=21,SNR=6.6						
WRA	Warramunga Arr	18.58	217	P	P	01 42 45.8	-0.5
	0.4nm,0.4s,baz=38,slow=10,SNR=15						
ASAR	Alice Springs	21.79	211	P	P	01 43 20.9	+0.3
	0.1nm,0.4s,baz=39,slow=8.0,SNR=1.6						
	0.1nm,0.4s						
ILAR	Eielson Array	85.10	23	P	P	01 50 58.5	+0.1
	0.5nm,0.6s,baz=256,slow=5.0,SNR=7.3						
	0.5nm,0.6s						

NIED **15** *01:38:47.4, 31°.04N×129°.03E, h12km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.60; $M_{\theta\theta}$4.49; $M_{\phi\phi}$-3.89; $M_{r\theta}$-0.15; $M_{\theta\phi}$4.41; $M_{\phi r}$-1.29; Fault plane solution: $M_0$6.23000×10^{14} NP1: ϕ_s291.00000°, δ78.00000°, λ-5.00000°. NP2: ϕ_s22.00000°, δ85.00000°, λ-168.00000°.*
JMA **15** *01:38:47.4±0.2, 31°.0N±0°.3×129°.0E±0°.6, h12km±1km, MV3.9/31, SW OFF KYUSHU*
IDC **15** *01:38:52.6±1.8, 31°.30N×128°.86E, h0km, mb3.3/2, mbtmp3.3/4, ML3.0/2, MS3.1/8, Error ellipse: s-maj=34.0km s-min=20.8km az=92.0*
ISC 15 01:38:48.0±1.2, **31°.01N**±0°.04×**129°.12E**±0°.07, **h6**km, **n19**, σ**0s.89**/15, **MS3.2**/5, **1D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.84	37	eP	Pg	01 39 03.6	-0.6
JSJ				eS	Sg	01 39 15.5	+0.3
JKC	Kuchinoerabu	1.08	120	S	Sn	01 39 24.2	-0.6
JSU	Suzuyama	1.25	66	⇓eP	Pg	01 39 11.4	-0.6
JNN	Nakanoshima	1.33	150	eP	Pg	01 39 13.2	-0.4
JYAK	Yakushimahirau	1.43	122	P	Pn	01 39 13.9	-0.5
JTN	Tanegashima 3	1.64	102	P	Pn	01 39 17.6	+0.1
JFU	Fukue jima 2	1.67	349	P	Pn	01 39 16.2	-1.6
JTZ	Takazaki	1.91	62	P	Pn	01 39 21.0	0.0
JIU3	Izumi3	2.11	43	eP	Pn	01 39 24.1	+0.3
JNU	Nakatsue	2.58	35	Pn	Pb	01 39 34.7	-0.1
	6.3nm,0.3s,baz=215,slow=16,SNR=21						
JNU				Sn	Sb	01 40 07.2	+0.4
	17nm,0.3s,baz=253,slow=19,SNR=7.5						
	27nm,0.5s						
JOW	Kunigami	4.22	190	LR	LR	01 41 47.4	
	comp=Z,96nm,19.2s,baz=96,slow=39						
KSRS	Korea Array	6.51	352	Pn	Pn	01 40 24.9	+0.7
	0.2nm,0.3s,baz=176,slow=14,SNR=5.7						
KSRS				Sn	Sn	01 41 37.9	-0.9
	0.7nm,0.3s,baz=170,slow=24,SNR=3.3						
KSRS				Lg	Lg	01 42 08.7	
	0.7nm,0.3s,baz=172,slow=29,SNR=6.0						
KSRS				LR	LR	01 43 01.4	
	comp=Z,94nm,18.1s,baz=170,slow=40						
	1.3nm,0.4s						
MJAR	Matsushiro Arr	9.37	51	LR	LR	01 45 18.9	
	comp=Z,78nm,18.1s,baz=250,slow=41						
SONM	Songino Array	24.16	321	P	P	01 44 07.0	+2.0
	0.2nm,0.3s,baz=127,slow=9.2,SNR=1.9						
SONM				LR	LR	01 53 49.7	
	comp=Z,45nm,18.9s,baz=146,slow=38						
	0.2nm,0.3s						
CMAR	Chiang Mai Arr	30.02	252	LR	LR	01 58 30.1	
	comp=Z,36nm,18.7s,baz=330,slow=39						
KURBB	Kurchatov Arra	42.06	313	LR	LR	02 05 42.3	
	comp=Z,75nm,18.1s,baz=131,slow=39						
PMG	Port Moresby	43.75	154	LR	LR	02 06 23.7	
	comp=Z,49nm,19.1s,baz=46,slow=37						
WRA	Warramunga Arr	50.91	174	P	P	01 47 57.9	+7.9
	0.7nm,1.1s,baz=356,slow=8.4,SNR=1.9						
	0.7nm,1.1s						
ARU	Arti	54.20	320	LR	LR	02 15 47.0	
	comp=Z,21nm,20.4s,baz=124,slow=41						

IDC **15** *01:48:31.8±1.3, 28°.81N×139°.39E, h393km±17km, mb3.1/10, mbtmp3.9/14, Error ellipse: s-maj=46.9km s-min=15.8km az=74.0*
JMA **15** *01:48:32.8±0.1, 29°N±1°×14°0E±°, h414km, MV3.5/18, NEAR TORISHIMA IS*
ISC 15 01:48:32.4±0.6, **29°.01N**±0°.09×**140°.2E**±0°.2, **h424**km, **n22**, σ**1s.48**/29, **mb3.6**/10, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.58	137	P	P	01 49 34.3	-0.1
CBIJ				S	S	01 50 22.9	-1.7
JCJ	Chichijima	2.58	137	P	P	01 49 34.2	-0.2
	128nm,0.3s,baz=292,slow=23,SNR=431						
JCJ				S	S	01 50 22.6	-1.9
	115nm,0.3s,baz=312,slow=22,SNR=12						
JHH2	Haha-jima-NKT2	2.94	143	P	P	01 49 36.8	-0.2
JHH2				S	S	01 50 27.7	-1.6
JHJ	Hachijo jima 2	4.11	355	P	P	01 49 47.4	+0.7
	220nm,0.9s,baz=279,slow=11,SNR=2.0						
JHJ				S	S	01 50 46.7	-0.7
	94nm,0.7s,baz=46,slow=20,SNR=1.1						
JHU	Hanno	6.87	354	P	P	01 50 14.9	-0.3
JRY	Ryogami san	7.07	351	P	P	01 50 17.8	+0.4
JAG	Ashikaga	7.42	355	P	P	01 50 20.7	-0.5
JAG				eS	S	01 51 46.6	-3.4
JHO	Hitachi	7.58	2	P	P	01 50 24.1	+1.2
MJAR	Matsushiro Arr	7.70	348	P	P	01 50 22.5	-1.8
	1.2nm,0.6s,baz=172,slow=12,SNR=4.9						
USRK	Ussuriysk Ar.	16.52	339	P	P	01 52 00.4	+0.3
	4.5nm,0.6s,baz=143,slow=10.0,SNR=4.3						
KLR	Kul'dur	21.20	345	P	P	01 52 48.5	+2.5
	0.7nm,0.3s,baz=163,slow=11,SNR=3.8						
	0.7nm,0.3s						
SONM	Songino Array	32.13	315	P	P	01 54 20.2	-2.6
	0.2nm,0.3s,baz=95,slow=7.7,SNR=2.5						
	0.2nm,0.3s						

ZALV	**Zalesovo Beam**	**46.90**	**318**	PcP	**PcP**	**01 57 47.9**	**+0.8**
	0.7nm,0.4s,baz=72,slow=4.7,SNR=2.6						
MKAR	**Makanchi Array**	**47.92**	**308**	P	**P**	**01 56 29.0**	**-1.3**
	0.8nm,0.5s,baz=88,slow=9.7,SNR=7.7						
MKAR				PcP	**PcP**	**01 57 51.5**	**+0.5**
	0.3nm,0.7s,baz=73,slow=5.4,SNR=6.2 0.8nm,0.5s						
WRA	**Warramunga Arr**	**49.00**	**187**	P	**P**	**01 56 38.3**	**-0.4**
	0.5nm,0.7s,baz=2.8,slow=7.7,SNR=4.6						
WRA				PcP	**PcP**	**01 57 57.2**	**+2.0**
	0.3nm,0.8s,baz=0.4,slow=4.1,SNR=2.0 0.5nm,0.7s						
ARCES	**ARCESS Array B**	**71.16**	**340**	P	**P**	**01 59 08.5**	**+2.2**
	0.7nm,0.4s,baz=70,slow=8.6,SNR=16 0.7nm,0.4s						
KBZ	**Khabaz**	**75.43**	**312**	P	**P**	**01 59 32.1**	**+0.8**
	2.9nm,0.7s,baz=87,slow=6.1,SNR=8.8 2.9nm,0.7s						
FINES	**FINESS Array B**	**75.46**	**333**	P	**P**	**01 59 32.4**	**+1.3**
	1.4nm,0.4s,baz=72,slow=5.0,SNR=32 1.4nm,0.4s						
AKASG	**Malin Array Be**	**80.05**	**323**	P	**P**	**01 59 56.9**	**+0.5**
	0.5nm,0.4s,baz=53,slow=5.7,SNR=4.3 0.5nm,0.4s						
NOA	**NORSAR Array B**	**81.19**	**337**	P	**P**	**02 00 03.6**	**+1.4**
	0.3nm,0.5s,baz=55,slow=6.4,SNR=3.8 0.3nm,0.5s						
BRTR	**Keskin Array B**	**83.43**	**312**	P	**P**	**02 00 14.6**	**+0.4**
	0.6nm,0.5s,baz=106,slow=4.2,SNR=7.7 0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**122.02**	**310**	PKP	**PKiKP**	**02 06 38.9**	**+0.5**
	0.2nm,0.5s,baz=68,slow=1.6,SNR=6.0						

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*SOME **15** 02:09:19.9, 41°.78N×80°.00E, h15^{km}*
*NNC **15** 02:09:20.5±1.0, 41°.82N×80°.00E, h0^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=6.7km s-min=5.1km az=145.0*
*KRNET **15** 02:09:20.4±0.1, 41°.76N×79°.97E, mb2.9*
ISC 15 02:09:22.4±1.8, **41°.88N**±0°.07×**79°.99E**±0°.06, **h10^{km}, n39, σ1^{s}16**/69, **19C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.33**	**298**	⇑*i*P	**Pn**	**02 09 46.1**	**-1.1**
	baz=3.0						
PRZ				⇑*i*S	**Sg**	**02 10 05.1**	**-0.1**
	baz=3.0						
SHLS	**Shalkode**	**1.34**	**343**	*e*P	**Pn**	**02 09 45.8**	**-1.5**
	27nm,0.2s						
SHLS				*e*S	**Sb**	**02 10 04.7**	**-0.3**
	155nm,0.3s						
SHLS	**Shalkode**	**1.34**	**343**	P	**Pn**	**02 09 45.8**	**-1.5**
	27nm,0.2s						
SHLS				S	**Sb**	**02 10 04.7**	**-0.3**
	155nm,0.3s						
UZB	**Uzynbulak**	**1.46**	**331**	*e*P	**Pn**	**02 09 48.4**	**-0.6**
	21nm,0.2s						
UZB				*e*S	**Sg**	**02 10 09.0**	**-0.3**
	114nm,0.2s						
UZB	**Uzynbulak**	**1.46**	**331**	P	**Pn**	**02 09 48.4**	**-0.6**
	21nm,0.2s						
UZB				S	**Sb**	**02 10 08.8**	**+0.4**
	114nm,0.2s						
PDGK	**Podgornoye**	**1.50**	**346**	P	**Pn**	**02 09 49.3**	**-0.2**
	3.9nm,0.3s						
PDGK				S	**Sg**	**02 10 10.4**	**-0.3**
	26nm,0.4s						
PDGK	**Podgornoye**	**1.50**	**346**	⇑P	**Pn**	**02 09 48.6**	**-0.9**
	12nm,0.5s						
PDGK				⇑S	**Sg**	**02 10 10.3**	**-0.3**
	27nm,0.3s						
KTMS	**Ketmen**	**1.59**	**10**	*e*P	**Pb**	**02 09 51.5**	**-0.5**
	0.4nm,0.2s						
KTMS				*e*S	**Sg**	**02 10 14.1**	**+0.5**
	1.1nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.64**	**266**	⇑*i*P	**Pn**	**02 09 49.9**	**-1.8**
	baz=70						
TARG				⇑*i*S	**Sn**	**02 10 12.7**	**-0.3**
	baz=70						
SATY	**Saty**	**1.66**	**316**	*e*P	**Pb**	**02 09 52.1**	**-1.2**
	7.6nm,0.2s						
SATY				*e*S	**Sg**	**02 10 15.2**	**-0.7**
	55nm,0.1s						
SATY	**Saty**	**1.66**	**316**	P	**Pb**	**02 09 52.1**	**-1.2**
	7.3nm,0.2s						
SATY				S	**Sb**	**02 10 14.8**	**+0.5**
	55nm,0.1s						
ZHN	**Zhinishke**	**1.73**	**319**	*e*P	**Pb**	**02 09 53.4**	**-0.8**
	25nm,0.1s						
ZHN				*e*S	**Sg**	**02 10 17.6**	**-0.4**
	76nm,0.2s						
ZHN	**Zhinishke**	**1.73**	**319**	P	**Pb**	**02 09 53.5**	**-0.8**
	25nm,0.1s						
ZHN				S	**Sg**	**02 10 17.3**	**-0.6**
	76nm,0.2s						
KPKS	**Kokpek**	**1.86**	**329**	*e*P	**Pb**	**02 09 55.6**	**-0.9**
	15nm,0.2s						
KPKS				*e*S	**Sg**	**02 10 21.2**	**-0.9**
	85nm,0.3s						
ANVS	**Anan'yevo**	**1.94**	**299**	⇓*i*P	**Pb**	**02 09 56.7**	**-1.4**
	baz=2.0						
ANVS				⇓*i*S	**Sb**	**02 10 23.0**	**+0.5**
	baz=2.0						
KURS	**Kuram**	**2.10**	**321**	*e*P	**Pb**	**02 09 60.0**	**-0.6**
	20nm,0.2s						
KURS				*e*S	**Sg**	**02 10 28.8**	**-1.0**
	41nm,0.3s						
KURS	**Kuram**	**2.10**	**321**	Pg	**Pb**	**02 09 60.0**	**-0.6**
	20nm,0.2s						
KURS				Lg	Lg	02 10 28.8	
	41nm,0.3s						
KDJ	**Kajisay**	**2.11**	**278**	⇑*i*P	**Pn**	**02 09 58.5**	**+0.6**
	baz=81						
KDJ				⇑*i*S	**Sb**	**02 10 25.5**	**-1.7**
	baz=81						
DJR	**Jarkent**	**2.46**	**357**	*e*P	**Pb**	**02 10 06.0**	**-0.7**
	3.7nm,0.2s						
DJR				*e*S	**Sb**	**02 10 39.0**	**+1.8**
	70nm,0.5s						
MDOK	**Medeo**	**2.53**	**302**	*e*P	**Pb**	**02 10 06.8**	**-1.2**
	12nm,0.3s						
MDOK				*e*S	**Sb**	**02 10 40.5**	**+1.4**
	21nm,0.6s						
MDOK	**Medeo**	**2.53**	**302**	⇓Pg	**Pb**	**02 10 06.4**	**-1.6**
	7.7nm,0.4s						
MDOK				⇑Lg	Lg	02 10 40.4	
	21nm,0.7s						
MDOK	**Medeo**	**2.53**	**302**	Pg	**Pb**	**02 10 07.4**	**-0.5**
	12nm,0.3s						
MDOK				Lg	Lg	02 10 40.5	
	21nm,0.6s						
TNSS	**Tian-Shan**	**2.53**	**298**	*e*P	**Pb**	**02 10 07.1**	**-1.1**
	9.1nm,0.3s						
TNSS				*e*S	**Sb**	**02 10 41.2**	**+1.7**
	13nm,0.3s						
TNSS	**Tian-Shan**	**2.53**	**298**	Pg	**Pb**	**02 10 07.5**	**-0.7**
	9.1nm,0.3s						
TNSS				Lg	Lg	02 10 41.2	
	13nm,0.3s						
ULHL	**Ulahol**	**2.81**	**279**	⇑*i*P	**Pn**	**02 10 08.7**	**+1.0**
	baz=81						
ULHL				⇑*i*S	**Sn**	**02 10 43.0**	**+1.2**
	baz=81						
MTBS	**Maitube**	**2.92**	**297**	*e*P	**Pb**	**02 10 13.8**	**-0.7**
	4.4nm,0.2s						
MTBS				*e*S	**Sb**	**02 10 52.6**	**+2.4**
	14nm,0.3s						
MTBS	**Maitube**	**2.92**	**297**	Pg	**Pb**	**02 10 14.2**	**-0.3**
	4.4nm,0.2s						
MTBS				Lg	Lg	02 10 52.1	
	14nm,0.3s						
CHKK	**Chushkaly**	**2.96**	**313**	*e*P	**Pb**	**02 10 15.2**	**0.0**
	12nm,0.2s						
CHKK				*e*S	**Sg**	**02 10 54.9**	**-2.7**
	29nm,0.3s						
CHKK	**Chushkaly**	**2.96**	**313**	Pg	**Pb**	**02 10 15.1**	**-0.2**
	12nm,0.2s						
CHKK				Lg	Lg	02 10 54.1	
	29nm,0.3s						
BOOM	**Boomskoye usch**	**3.07**	**283**	⇑*e*P	**Pn**	**02 10 11.6**	**+0.4**
	baz=85						
BOOM				⇑*i*S	**Sn**	**02 10 49.3**	**+1.3**
	baz=85						
KST	**Kastek**	**3.20**	**293**	*e*P	**Pb**	**02 10 18.3**	**-1.1**
	4.9nm,0.3s						
KST				*e*S	**Sb**	**02 11 00.4**	**+2.0**
	25nm,0.5s						
KST	**Kastek**	**3.20**	**293**	Pg	**Pb**	**02 10 18.2**	**-1.1**
	2.6nm,0.2s						
KST				Lg	Lg	02 11 00.2	
	25nm,0.5s						
KUU	**Kurty**	**3.35**	**308**	*e*P	**Pb**	**02 10 21.6**	**-0.4**
	2.7nm,0.3s						
KUU				*e*S	**Sb**	**02 11 06.1**	**+3.3**
	8.9nm,0.4s						
KUU	**Kurty**	**3.35**	**308**	Pg	**Pb**	**02 10 21.3**	**-0.7**
	2.7nm,0.3s						
KUU				Lg	Lg	02 11 04.9	
	8.9nm,0.4s						
TKM2	**Tokmak 2**	**3.42**	**289**	⇓Pn	**Pn**	**02 10 16.4**	**+0.4**
	1.3nm,0.8s						
TKM2				⇑Pg	**Pb**	**02 10 24.2**	**+1.0**
	2.1nm,0.7s						
TKM2				⇑Lg	Lg	02 11 10.8	
	7.3nm,0.7s						
TKM2	**Tokmak 2**	**3.42**	**289**	⇑*e*P	**Pn**	**02 10 16.6**	**+0.7**
	baz=91						
TKM2				⇑*i*S	**Sn**	**02 10 57.5**	**+0.9**
	baz=91						
KAPS	**Kapalarasan**	**3.44**	**353**	*e*P	**Pb**	**02 10 23.9**	**+0.4**
	1.4nm,0.1s						
KAPS				*e*S	**Sg**	**02 11 10.1**	**-2.7**
	14nm,0.3s						
KAPS	**Kapalarasan**	**3.44**	**353**	Pg	**Pb**	**02 10 24.3**	**+0.9**
	1.8nm,0.3s						
KAPS				Lg	Lg	02 11 09.2	
	14nm,0.3s						
MK31	**Makanchi Array**	**5.19**	**18**	⇑Pn	**Pn**	**02 10 39.5**	**-0.5**
	0.9nm,0.5s,baz=194,slow=13						
MK31				⇓Sn	**Sn**	**02 11 41.5**	**+1.6**
	1.4nm,0.5s,baz=196,slow=28						
MK31				⇑Lg	Lg	02 12 07.2	
	1.1nm,0.4s,baz=196,slow=26						

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*IDC **15** 02:23:22.1±0.5, 36°.79N×137°.91E, h199^{km}±6^{km}, mb3.6/22, mbtmp4.1/24, Error ellipse: s-maj=14.7km s-min=9.4km az=66.0*
*NEIC **15** 02:23:22.4±1.8, 36°.80N±0°.05×138°.10E±0°.09, h205^{km}±5^{km}, mb4.2/28, Error ellipse: s-maj=10.0km s-min=7.8km az=100.0*
*NIED **15** 02:23:23.1, 36°.82N×138°.15E, h208^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.78; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-0.26; $M_{r\theta}$-0.21; $M_{\theta\phi}$-0.36; $M_{\phi r}$-0.26; Fault plane solution: $M_0$1.04000×10^{15} NP1: ϕ_s310.00000°, δ47.00000°, λ-52.00000°. NP2: ϕ_s81.00000°, δ55.00000°, λ-124.00000°.*
*JMA **15** 02:23:23.1±0.2, 36°.8N±0°.7×13°8E±°, h208^{km}±1^{km}, MV3.8/39, NORTHERN NAGANO PREF*
ISC 15 02:23:22.5±0.6, **36°.83N**±0°.05×**138°.10E**±0°.05, **h208^{km}**±5^{km}, **n94, σ1^{s}01**/97, **mb4.0**/32, **10D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJB9	**Matsu-Tunnel**	**0.30**	**163**		**Pn**	**02 23 50.3**	**+0.3**
MAJO	**Matsushiro**	**0.30**	**163**	Pn	**Pn**	**02 23 50.3**	**+0.3**
MAT	**Matsushiro**	**0.30**	**163**	P	**Pn**	**02 23 50.3**	**+0.3**
MAT				S	**S**	**02 24 11.0**	**-0.4**
MJAR	**Matsushiro Arr**	**0.30**	**162**	P	**Pn**	**02 23 49.6**	**-0.4**
	481nm,0.4s,baz=340,slow=1.9,SNR=1172						
JSZ	**Suzu**	**0.85**	**317**	P	**Pn**	**02 23 52.6**	**+0.6**
JSZ				S	**S**	**02 24 14.9**	**-0.2**
JRY	**Ryogami san**	**1.04**	**141**	⇓P	**Pn**	**02 23 53.3**	**-0.1**
JAG	**Ashikaga**	**1.17**	**110**	⇓P	**Pn**	**02 23 54.4**	**+0.2**
JSD	**Sado**	**1.21**	**6**	Pn	**Pn**	**02 23 55.0**	**+0.6**
JSD	**Sado**	**1.21**	**6**	P	**Pn**	**02 23 55.0**	**+0.6**
JSD				S	**S**	**02 24 18.9**	**-0.4**
JGF	**Kuroka**	**1.37**	**206**	Pn	**Pn**	**02 23 56.7**	**+0.9**
JYN	**Shimob**	**1.38**	**165**	⇓P	**Pn**	**02 23 56.2**	**+0.2**
JHG	**Hegura jima**	**1.38**	**318**	P	**Pn**	**02 23 56.5**	**+0.7**
JNS	**Sasagawa**	**1.39**	**44**	P	**Pn**	**02 23 56.6**	**+0.8**
JNS				S	**S**	**02 24 21.6**	**-0.1**
JKG	**Kaga**	**1.52**	**249**	⇓P	**Pn**	**02 23 58.1**	**+1.1**
JKG				⇓*e*S	**S**	**02 24 24.9**	**+1.3**
JYTA	**Yamagatataniai**	**1.65**	**222**	⇓P	**Pn**	**02 23 59.3**	**+1.0**
JYTA				⇓*e*S	**S**	**02 24 27.0**	**+1.3**
JFNN	**Fujinakano**	**1.70**	**164**	P	**Pn**	**02 23 59.8**	**+1.0**
INU	**Inuyama**	**1.72**	**211**	Pn	**Pn**	**02 23 59.5**	**+0.6**
JOD2	**Odawara 2**	**1.76**	**153**	⇓P	**Pn**	**02 23 59.5**	**+0.2**
JOD2				⇓*e*S	**S**	**02 24 27.3**	**-0.2**
JYT	**Yasato**	**1.79**	**109**	Pn	**Pn**	**02 23 59.3**	**-0.3**
JAW	**Awa shima**	**1.86**	**29**	P	**Pn**	**02 24 00.9**	**+0.8**
JAW				S	**S**	**02 24 29.5**	**+0.3**
JFT	**Otama**	**1.92**	**68**	⇓P	**Pn**	**02 24 02.0**	**+1.3**
JMM	**Marumori**	**2.38**	**64**		**Pn**	**02 24 06.5**	**+1.0**
JWT	**Wachi**	**2.67**	**235**	P	**Pn**	**02 24 09.5**	**+0.7**
JIE	**Ise**	**2.69**	**205**	P	**Pn**	**02 24 09.4**	**+0.5**
JHJ	**Hachijo jima 2**	**3.96**	**159**	P	**Pn**	**02 24 23.7**	**-0.3**
	208nm,0.9s,baz=284,slow=4.2,SNR=2.3						
JHJ				S	**S**	**02 25 11.0**	**-0.9**
	188nm,0.3s,baz=139,slow=23,SNR=11						
JHJ2	**Mitsune**	**3.97**	**159**	Pn	**Pn**	**02 24 23.3**	**-0.9**
JHS	**Saijyo**	**4.44**	**247**	Pn	**Pn**	**02 24 29.4**	**-0.5**
JTM	**Tenmabayashi**	**4.58**	**30**	Pn	**Pn**	**02 24 30.6**	**-1.1**
ERM	**Erimo**	**6.49**	**36**	Pn	**Pn**	**02 24 54.0**	**-2.1**
JEW	**Eniwo**	**6.53**	**22**		**Pn**	**02 24 55.6**	**-0.9**
ASAJ	**Asahikawa**	**8.04**	**24**	P	**Pn**	**02 25 13.8**	**-2.3**
	12nm,0.3s,baz=223,slow=12,SNR=21						
JKA	**Kamikawa-asahi**	**8.04**	**24**	Pn	**Pn**	**02 25 13.8**	**-2.3**
KSRS	**Korea Array**	**8.15**	**277**	P	**Pn**	**02 25 19.7**	**+2.1**
	1.9nm,0.7s,baz=96,slow=13,SNR=7.6						
KS19	**Wonju Array Si**	**8.19**	**278**	Pn	**Pn**	**02 25 15.5**	**-2.7**
JCJ	**Chichijima**	**10.31**	**159**	P	Pn	02 25 39.9	-5.7
	30nm,0.3s,baz=1.2,slow=21,SNR=31						
JCJ				S	S	02 27 26.4	-15
	52nm,0.3s,baz=281,slow=21,SNR=9.8						
JCJ	**Chichijima**	**10.31**	**159**		Pn	02 25 40.0	-5.6
YSS	**Yuzh-Sakhalins**	**10.69**	**17**	Pn	**Pn**	**02 25 47.4**	**-2.8**
KLR	**Kul'dur**	**13.22**	**342**	P	**Pn**	**02 26 21.9**	**-0.4**
	2.7nm,0.5s,baz=146,slow=12,SNR=12						
NJ2	**Nanjing**	**16.57**	**259**	*e*P	**P**	**02 27 00.5**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	**17.47**	**287**	P	**P**	**02 27 10.5**	**-1.4**
BJT				IAmb	IAmb	02 27 52.9	
	comp=Z,4.3nm,0.8s						
ENH	**Enshi**	**24.67**	**263**	P	**P**	**02 28 22.6**	**-1.7**
SONM	**Songino Array**	**25.71**	**305**	P	**P**	**02 28 32.2**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=120,slow=8.1,SNR=5.0 comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**25.71**	**305**	P	**P**	**02 28 32.6**	**-1.0**
TIXI	**Tiksi**	**35.22**	**355**	P	**P**	**02 29 56.4**	**0.0**
TIXI				IAmb	IAmb	02 30 23.8	
	comp=Z,5.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.09**	**313**	P	**P**	**02 30 36.5**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=103,slow=7.5,SNR=7.8						
ZALV				PcP	**PcP**	**02 32 38.0**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=112,slow=1.6,SNR=4.4 comp=Z,2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**40.09**	**313**	P	**P**	**02 30 37.8**	**+0.3**
MKAR	**Makanchi Array**	**41.97**	**302**	P	**P**	**02 30 52.9**	**0.0**
	comp=Z,1.8nm,0.5s,baz=88,slow=10,SNR=20 comp=Z,1.8nm,0.5s						
NRIK	**Noril'sk**	**42.35**	**336**	P	**P**	**02 30 54.9**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=121,slow=11,SNR=3.0 comp=Z,2.5nm,0.6s						
NRIK	**Noril'sk**	**42.35**	**336**	P	**P**	**02 30 55.6**	**-0.1**
NRIK				IAmb	IAmb	02 30 57.3	
	comp=Z,3.1nm,0.8s						
KURK	**Kurchatov**	**43.96**	**308**	P	**P**	**02 31 08.3**	**-0.4**
PRZ	**Przheval'sk**	**45.48**	**296**	IAmb	IAmb	02 31 23.4	
	comp=Z,13nm,0.8s						
TARG	**Taragay, Kyrgy**	**46.10**	**296**	P	**P**	**02 31 26.7**	**+0.5**
TARG				IAmb	IAmb	02 31 28.3	
	comp=Z,11nm,0.7s						
BOOM	**Boomskoye usch**	**47.24**	**297**	P	**P**	**02 31 34.5**	**-0.3**
AAK	**Ala-Archa**	**48.24**	**298**	P	**P**	**02 31 41.6**	**-0.8**
BRVK	**Borovoye**	**48.79**	**312**	P	**P**	**02 31 46.3**	**0.0**
KDAK	**Kodiak Island**	**49.02**	**42**	P	**P**	**02 31 49.0**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=220,slow=6.9,SNR=5.5 comp=Z,3.3nm,0.9s						
KDAK	**Kodiak Island**	**49.02**	**42**	IAmb	IAmb	02 33 04.8	
	comp=Z,6.8nm,1.1s						
KK31	**Karatay Array**	**50.91**	**299**	P	**P**	**02 32 02.5**	**0.0**
KK31				IAmb	IAmb	02 32 04.0	
	comp=Z,6.2nm,1.2s						
KKAR	**Karatay Array**	**50.91**	**299**	P	**P**	**02 32 02.8**	**+0.3**
ILAR	**Eielson Array**	**51.08**	**32**	P	**P**	**02 32 04.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=264,slow=5.2,SNR=6.2 comp=Z,0.3nm,0.6s						
GAR	**Garm**	**52.37**	**294**	IAmb	IAmb	02 32 16.0	
	comp=Z,5.4nm,0.5s						
ARU	**Arti**	**54.74**	**318**	P	**P**	**02 32 30.5**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=33,slow=3.7,SNR=19 comp=Z,3.0nm,0.6s						
ARU	**Arti**	**54.74**	**318**	P	**P**	**02 32 30.6**	**+0.4**
EPYK	**Eagle Plains**	**55.01**	**29**	P	**P**	**02 32 31.8**	**-0.2**
ABKAR	**Akbulak array**	**56.02**	**309**	P	**P**	**02 32 39.4**	**0.0**
WRA	**Warramunga Arr**	**56.58**	**184**	P	**P**	**02 32 43.9**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=359,slow=7.6,SNR=60 comp=Z,1.3nm,0.3s						
WR0	**Warramunga Arr**	**56.58**	**184**	P	**P**	**02 32 43.8**	**+0.1**
AKTO	**Aktyubinsk**	**56.82**	**311**	P	**P**	**02 32 45.1**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=78,slow=13,SNR=4.9 comp=Z,1.5nm,0.5s						
KIRV	**Kirov**	**58.79**	**322**	P	**P**	**02 32 57.2**	**-1.3**
	comp=Z,11nm,0.5s,baz=156,slow=1.4,SNR=4.9 comp=Z,11nm,0.5s						
AS31	**Alice Springs**	**60.30**	**184**	P	**P**	**02 33 07.8**	**-1.4**
ASAR	**Alice Springs**	**60.30**	**184**	P	**P**	**02 33 09.6**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=359,slow=4.9,SNR=8.8 comp=Z,0.7nm,0.6s						
ARCES	**ARCESS Array B**	**63.23**	**339**	P	**P**	**02 33 28.8**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=48,slow=7.7,SNR=7.6 comp=Z,1.1nm,0.8s						
ARCES	**ARCESS Array B**	**63.23**	**339**	IAmb	IAmb	02 33 31.2	
	comp=Z,48nm,2.0s						
YKA	**Yellowknife Ar**	**65.30**	**29**	P	**P**	**02 33 42.8**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=305,slow=6.5,SNR=10 comp=Z,0.7nm,0.7s						
FINES	**FINESS Array B**	**67.73**	**331**	P	**P**	**02 33 57.3**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=68,slow=6.4,SNR=26 comp=Z,1.5nm,0.4s						
KBZ	**Khabaz**	**69.00**	**309**	P	**P**	**02 34 05.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=134,slow=6.5,SNR=4.5 comp=Z,1.6nm,0.7s						
KIV	**Kislovodsk**	**69.01**	**310**	P	**P**	**02 34 06.2**	**+0.6**
KIV				IAmb	IAmb	02 34 08.0	
	comp=Z,9.7nm,1.3s						
AKASG	**Malin Array Be**	**72.81**	**321**	P	**P**	**02 34 28.1**	**0.0**
	comp=Z,3.1nm,0.5s,baz=46,slow=6.7,SNR=16 comp=Z,3.1nm,0.5s						
AKASG	**Malin Array Be**	**72.81**	**321**	IAmb	IAmb	02 34 28.7	
	comp=Z,1.5nm,0.8s						
AKBB	**Malin Array Si**	**72.81**	**321**	P	**P**	**02 34 27.7**	**-0.4**
AKBB				IAmb	IAmb	02 34 28.5	
	comp=Z,4.7nm,0.6s						
NB2	**NORSAR Subarra**	**73.32**	**336**	P	**P**	**02 34 31.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=42,slow=5.9						
NB2	**NORSAR Subarra**	**73.32**	**336**	P	**P**	**02 34 31.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=42,slow=5.9						
NB2	**NORSAR Subarra**	**73.32**	**336**	P	**P**	**02 34 31.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**73.32**	**336**	P	**P**	**02 34 31.4**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=41,slow=5.9,SNR=6.6 comp=Z,1.9nm,0.7s						
BUR08	**Bucovina Ar. S**	**76.78**	**320**	P	**P**	**02 34 51.2**	**+0.2**
BUR08				IAmb	IAmb	02 34 53.1	
	comp=Z,2.9nm,0.9s						
BR131	**Keskin Array S**	**76.97**	**310**	P	**P**	**02 34 52.8**	**+0.5**
BR131				IAmb	IAmb	02 34 54.0	
	comp=Z,4.7nm,1.1s						
BRTR	**Keskin Array B**	**76.97**	**310**	P	**P**	**02 34 53.2**	**+0.9**
	comp=Z,2.1nm,1.0s,baz=122,slow=3.7,SNR=10 comp=Z,2.1nm,1.0s						
NVAR	**Mina Array Bea**	**77.22**	**52**	P	**P**	**02 34 56.0**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=289,slow=5.5,SNR=3.6 comp=Z,0.4nm,0.6s						
NV11	**Mina Array Sit**	**77.31**	**51**	P	**P**	**02 34 53.9**	**-0.3**
NV11				IAmb	IAmb	02 35 02.3	
	comp=Z,8.8nm,1.6s						
R11A	**Troy Canyon, C**	**78.96**	**50**	P	**P**	**02 35 01.6**	**-1.7**
R11A				IAmb	IAmb	02 37 56.4	
	comp=Z,2.6nm,0.7s						
PDAR	**Pinedale Array**	**79.68**	**44**	P	**P**	**02 35 08.4**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=292,slow=4.0,SNR=4.1 comp=Z,0.2nm,0.4s						
GERES	**GERESS Array B**	**81.45**	**327**	P	**P**	**02 35 16.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=45,slow=5.9,SNR=9.2 comp=Z,0.5nm,0.4s						
TXAR	**Lajitas Array**	**92.32**	**50**	P	**P**	**02 36 11.8**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=290,slow=3.6,SNR=3.8 comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**115.54**	**312**	PKP	**PKPdf**	**02 41 39.3**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=45,slow=1.5,SNR=2.2						

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*DDA **15** 02:37:31.2±0.0, 36°.32N×45°.18E, h4^{km}±5^{km}, MW3.7*
*ISK **15** 02:37:32.1, 36°.48N×45°.13E, h17^{km}, ML3.7/10*
*TEH **15** 02:37:33.5, 36°.76N×45°.00E, h7^{km}, ML3.6*
*AZER **15** 02:37:34.7±2.4, 36°.39N×44°.86E, h10^{km}, Error ellipse: s-maj=25.2km s-min=15.4km az=48.0*
*ISN **15** 02:37:34.0±2.4, 36°.74N×45°.03E, h8^{km}±21^{km}, ML3.6*
ISC 15 02:37:33.8±1.2, **36°.75N**±0°.02×**45°.05E**±0°.02, **h1^{km}**±11^{km}, **n79, σ1^{s}69**/99, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.53**	**87**	*e*Pg	**Pg**	**02 37 43.8**	**-0.1**
MAHB				*e*Sg	**Sg**	**02 37 52.0**	**+1.3**
MAHB				*e*		02 37 53.5	
	comp=Z,89µm,0.4s						
IAZR	**Azarshahr**	**1.19**	**38**	*e*Pg	**Pb**	**02 37 56.1**	**-1.2**
IAZR				*e*Sg	**Sn**	**02 38 15.4**	**+0.6**
IAZR				*e*		02 38 21.3	
	comp=Z,42µm,0.6s						
CUKT	**Cukurca**	**1.26**	**294**	PN	**Pg**	**02 37 58.1**	**+0.2**
CUKT				SN	**Sn**	**02 38 17.2**	**+0.9**
CUKT	**Cukurca**	**1.26**	**294**	*e*Pn	**Pn**	**02 37 56.8**	**-1.8**
HAKT	**HAKKARI**	**1.34**	**307**	*e*Pn	**Pn**	**02 37 58.5**	**-1.4**
HAKT	**HAKKARI**	**1.34**	**307**	P	**Pn**	**02 37 58.5**	**-1.4**
HAKT				S	**Sb**	**02 38 16.5**	**-1.2**
IKRK	**Kirkuk**	**1.46**	**203**	*e*Pg	**Pb**	**02 38 01.0**	**-0.7**
IKRK				*e*Sg	**Sg**	**02 38 21.0**	**+0.3**
IKRK				AML	AML	02 38 26.1	
	comp=E,3µm,0.4s						
IKRK				AML	AML	02 38 26.3	
	comp=N,4µm,0.6s						
ISHB	**Shabestar**	**1.60**	**16**	*e*Pn	**Pn**	**02 38 01.8**	**-1.6**
ISHB				*e*		02 38 31.3	
	comp=Z,12µm,0.6s						
TAB1	**Tabriz**	**1.65**	**38**	*e*	Sg	02 38 37.4	+11
	comp=Z,23µm,0.4s						
ITBZ	**Tabriz**	**1.72**	**30**	*e*		02 38 30.8	
	comp=Z,4µm,0.6s						
ITBZ				*e*Pn	**Pn**	**02 38 05.1**	**+0.1**
IBST	**Bostanabad**	**1.75**	**56**	*e*		02 38 07.0	
	comp=Z,7µm,0.4s						
IBST				*e*Pn	**Pn**	**02 38 05.4**	**-0.1**
IHSH	**Hashtrud**	**1.86**	**72**	*e*		02 38 47.0	
	comp=Z,7µm,0.5s						
IHSH				*e*Pn	**Pn**	**02 38 07.1**	**+0.1**
IMRD	**Marand**	**2.03**	**15**	*e*Pn	**Pb**	**02 38 10.4**	**-1.2**
IMRD				*e*		02 38 46.5	
	comp=Z,4µm,0.4s						
OZAP	**Van, Ozalp-Mer**	**2.09**	**337**	P	**Pb**	**02 38 12.4**	**-0.2**
OZAP				S	**Sg**	**02 38 43.9**	**+3.0**
TVAN	**Van**	**2.21**	**324**	P	**Pb**	**02 38 15.1**	**+0.5**
TVAN				S	**Sg**	**02 38 46.9**	**+2.2**
GEVA	**Gevas**	**2.23**	**315**	*e*Pn	**Pb**	**02 38 14.0**	**-0.9**
GEVA	**Gevas**	**2.23**	**315**	P	**Pb**	**02 38 14.0**	**-0.9**
GEVA				S	**Sb**	**02 38 41.4**	**-1.6**
IHRS	**Heris**	**2.23**	**45**	*e*Pn	**Pn**	**02 38 12.2**	**+0.1**
IHRS				*e*		02 38 48.8	
	comp=Z,4µm,0.5s						
VANB	**Van**	**2.27**	**325**	PN	**Pn**	**02 38 12.5**	**0.0**
VANB	**Van**	**2.27**	**325**	*e*Pn	**Pn**	**02 38 11.9**	**-0.6**
AKDM	**Akdamar-Van**	**2.28**	**314**	PN	**Pb**	**02 38 13.6**	**-2.2**
AKDM	**Akdamar-Van**	**2.28**	**314**	*e*Pn	**Pn**	**02 38 12.9**	**+0.2**
ORD	**Ordubad**	**2.30**	**19**	P	**Pb**	**02 38 17.0**	**+0.9**
	SNR=54						
ORD				S	**Sg**	**02 38 49.0**	**+1.2**
IDHR	**Dehrash**	**2.31**	**152**	*e*Pn	**Pb**	**02 38 15.1**	**-1.3**
IDHR				*e*		02 38 52.5	
	comp=Z,7µm,0.3s						
PERV	**Siirt/Pervari-**	**2.33**	**302**	P	**Pb**	**02 38 15.1**	**-1.5**
PERV				S	**Sb**	**02 38 46.1**	**+0.1**
ISRB	**Sarab**	**2.35**	**62**	*e*Pn	**Pb**	**02 38 15.4**	**-1.6**
ISRB				*e*		02 38 18.4	
	comp=Z,4µm,0.5s						
ILIN	**Lien**	**2.40**	**139**	*e*Pn	**Pb**	**02 38 16.0**	**-1.8**
ILIN				*e*		02 38 55.8	
	comp=Z,3µm,0.7s						
NAX	**Nakhchivan**	**2.45**	**8**	P	**Pb**	**02 38 19.5**	**+0.9**
	SNR=42						
NAX				S	**Sg**	**02 38 55.5**	**+3.0**
SNGE	**Sanandaj**	**2.49**	**131**	*e*Pn	**Pb**	**02 38 18.5**	**-0.9**

CLDR	Caldiran	2.56	340	PN	Pb	02 38 18.0	-2.5
CLDR	Caldiran	2.56	340	ePn	Pn	02 38 17.5	+1.0
SBZ	Shahbuz	2.68	8	P	Pb	02 38 22.7	+0.1
	SNR=27						
SBZ				S	Sg	02 39 02.2	+2.5
IGHG	Ghaleghazi	2.71	152	ePn	Pb	02 38 20.8	-2.4
IGHG				e		02 39 16.8	
	comp=Z,3μm,0.8s						
ADCV	BITLIS_Adilcev	2.76	319	ePn	Pn	02 38 20.3	+1.0
ADCV	BITLIS_Adilcev	2.76	319	P	Pn	02 38 20.4	+1.0
ADCV				S	Sb	02 38 59.6	+1.1
BLIS	Bitlis-Merkez	2.87	306	ePn	Pn	02 38 21.0	+0.3
BLIS	Bitlis-Merkez	2.87	306	P	Pn	02 38 21.1	+0.3
BLIS				S	Sb	02 38 58.2	-3.2
ZNJK	Zanjan	2.92	90	ePn	Pb	02 38 24.0	-2.8
KCHF	Cheshme Sefid,	2.95	146	ePn	Pb	02 38 24.1	-3.2
KCHF				e		02 39 19.6	
	comp=Z,3μm,0.6s						
HYR	Heyderabad	2.97	357	P	Pb	02 38 26.5	-1.0
	SNR=9.6						
GURO	Guroymak-BITLI	3.00	308	PN	Pn	02 38 23.4	+0.9
GRMI	Germi	3.05	47	ePn	Pn	02 38 25.7	+2.4
MLAZ	Malazgirt-MUS	3.10	321	PN	Pn	02 38 25.4	+1.4
MLAZ	Malazgirt-MUS	3.10	321	ePn	Pn	02 38 24.8	+0.8
BTMN	Batman	3.22	292	P	Pb	02 38 30.9	-1.0
BTMN				S	Sb	02 39 10.7	-1.0
IBZA	Bozab	3.23	134	ePn	Pn	02 38 27.9	+2.1
LRK	Lerik	3.23	53	P	Pb	02 38 29.8	-2.1
	SNR=17						
LRK				S	Sg	02 39 18.1	+0.7
AGRB	Hanur-Agry	3.26	331	PN	Pn	02 38 27.9	+1.7
AGRB	Hanur-Agry	3.26	331	ePn	Pn	02 38 27.2	+1.0
YRD	Yardimli	3.33	48	P	Pb	02 38 32.1	-1.6
	SNR=27						
YRD				S	Sg	02 39 18.5	-2.2
SVAN	Silvan-Diyarba	3.37	296	PN	Pn	02 38 28.3	+0.7
SVAN	Silvan-Diyarba	3.37	296	ePn	Pn	02 38 28.2	+0.7
KOTA	Agri, Merkez-K	3.38	335	P	Pb	02 38 30.9	-3.7
GNI	Garni	3.41	356	PN	Pn	02 38 30.0	+1.8
MUSM	Mu-Merkez	3.43	306	P	Pb	02 38 31.4	-4.0
MUSM				S	Sb	02 39 15.6	-2.0
MARD	Mardin	3.46	281	P	Pn	02 38 29.5	+0.6
ASTR	Astara	3.48	57	P	Pb	02 38 33.3	-2.8
	SNR=8.3						
ASTR				S	Sg	02 39 23.4	-2.0
BHD	Baghdad	3.51	189	ePn	Pn	02 38 31.0	+1.6
BHD				eSn	Sn	02 39 14.0	+2.4
BHD				AML	AML	02 39 33.0	
	comp=E,273nm,0.5s						
LKRN	Lenkeran, Azer	3.55	55	P	Pb	02 38 34.7	-2.6
	SNR=4.0						
GLBA	Clilabad	3.63	46	P	Pb	02 38 37.6	-1.1
	SNR=4.8						
IBDR	Badra	3.70	168	ePn	Pn	02 38 33.0	+1.0
IBDR				eSn	Sn	02 39 16.0	-0.2
IBDR				AML	AML	02 39 45.0	
	comp=N,68nm,0.4s						
IBDR				AML	AML	02 39 45.2	
	comp=E,62nm,0.4s						
MAZI	Mazidag	3.75	282	PN	Pn	02 38 32.9	+0.1
MAZI	Mazidag	3.75	282	ePn	Pn	02 38 33.5	+0.7
QABG	Abgarm-Qazvin	3.81	104	ePn	Pn	02 38 34.7	+0.9
HAGD	Aghdareh	3.84	119	ePn	Pn	02 38 36.0	+1.8
HAGD				e		02 39 46.6	
	comp=Z,737nm,0.6s						
HSAM	Samen	3.85	130	ePn	Pn	02 38 37.0	+2.7
IDOB	Doab	3.91	138	ePn	Pn	02 38 37.0	+1.9
IKFM	Kafar-mosalman	3.95	144	ePn	Pn	02 38 37.4	+2.0
GDB	GEDABAY	4.01	8	P	Pb	02 38 41.7	-3.6
GANJ	Ganja	4.02	14	P	Pb	02 38 45.1	-0.3
	SNR=4.5						
DYBB	Diyarbakir	4.09	289	PN	Pn	02 38 38.3	+0.8
KOPR	Koprukoy-ERZUR	4.10	323	PN	Pn	02 38 39.7	+2.0
BNGB	Bingl	4.12	304	PN	Pn	02 38 39.4	+1.4
IGZV	Ghazvin	4.18	93	ePn	Pn	02 38 39.9	+1.1
BINT	Bingol	4.19	302	ePn	Pn	02 38 38.8	-0.1
QALM	Alamut, Qazvin	4.51	92	ePn	Pn	02 38 46.4	+2.9
ASAO	Ashtian	4.61	117	ePn	Pn	02 38 47.4	+2.6
AMIS	Naft Sefid	6.16	144	ePn	Pn	02 39 06.3	+0.4
KLNJ	Kolanjah	7.89	135	ePn	Pn	02 39 31.2	+1.2

IDC 15 03:03:09.1±9.4**, 22°.27S**×**172°.89E, $h45^{km}$**$\pm59^{km}$**, mb3.2**/3**, mbtmp3.6**/4**, ML3.8**/1**, MS3.4**/9**, Error ellipse: s-maj=115.6km s-min=38.9km az=32.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.98	271	P	Pn	03 04 35.6	+0.4
	2.5nm,0.3s,baz=136,slow=13,SNR=35						
DZM				S	Sn	03 05 42.5	+0.1
	11nm,0.4s,baz=304,slow=23,SNR=7.0						
	6.8nm,0.3s						
CTA	Charters Tower	24.92	270	LR	LR	03 17 09.6	
	comp=Z,190nm,18.2s,baz=84,slow=34						
RAR	Rarotonga	25.41	93	LR	LR	03 16 36.6	
	comp=Z,33nm,21.9s,baz=274,slow=32						
PMG	Port Moresby	27.80	293	LR	LR	03 18 02.9	
	comp=Z,82nm,18.2s,baz=192,slow=32						
STKA	Stephens Creek	29.37	244	LR	LR	03 19 25.0	
	comp=Z,67nm,19.0s,baz=191,slow=33						
PPT	Papeete	35.54	89	LR	LR	03 22 22.1	
	comp=Z,43nm,20.9s,baz=160,slow=32						
ASAR	Alice Springs	35.85	260	P	P	03 10 05.1	+0.3
	0.5nm,0.8s,baz=99,slow=7.7,SNR=4.2						
ASAR				LR	LR	03 23 38.0	
	comp=Z,68nm,20.1s,baz=128,slow=34						
	0.5nm,0.8s						
WRA	Warramunga Arr	35.97	266	P	P	03 10 05.7	-0.2
	0.2nm,0.4s,baz=97,slow=8.4,SNR=8.0						
WRA				LR	LR	03 24 26.8	
	comp=Z,82nm,19.0s,baz=49,slow=36						
	0.2nm,0.4s						
H11S2	WAKE ISLAND Hy	40.96	351	T	T	03 54 39.1	
	baz=171,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	40.96	351	T	T	03 54 40.9	
	baz=171,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	40.98	351	T	T	03 54 41.6	
	baz=171,slow=76,SNR=20						
DAV	Davao City (W)	54.74	297	LR	LR	03 34 42.1	
	comp=Z,23nm,19.6s,baz=182,slow=35						
VNDA	Vanda	55.56	183	P	P	03 12 39.1	-0.3
	0.5nm,0.7s,baz=357,slow=7.9,SNR=5.9						
VNDA				LR	LR	03 34 42.1	
	comp=Z,61nm,18.3s,baz=320,slow=34						
	0.5nm,0.7s						

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*JMA **15** 03:16:33.7±0.3, 24°N±1°×12°2E±°, $h19^{km}\pm1^{km}$, MV2.5/8, TAIWAN REGION*

*TAP **15** 03:16:34.4, 24°.18N×121°.76E, $h13^{km}$, ML3.4, B*

ISC 15 03:16:34.4±0.8**, 24°.17N**±0°.01×**121°.77E**±0°.02**, $h14^{km}$**$\pm5^{km}$**, n99, $\sigma 0^{s}.58$**/156**, 1C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.14	264	⇓iP	Pg	03 16 38.0	0.0
	baz=262						
ETL				i S	Sg	03 16 40.5	+0.1
	baz=262						
EHP	Heping Village	0.14	349	⇓iP	Pg	03 16 38.0	0.0
	baz=354						
EHP				i S	Sg	03 16 40.9	+0.4
	baz=354						
NACB	Ninganchiao	0.16	270	⇓iP	Pg	03 16 38.3	-0.1
	baz=270						
NACB				i S	Sg	03 16 41.1	+0.1
	baz=270						
TWD	Chiawan	0.18	240	⇓iP	Pg	03 16 38.7	0.0
	baz=244						
TWD				i S	Sg	03 16 42.0	+0.4
	baz=244						
HWA	Hwalien	0.25	218	eP	Pb	03 16 40.8	+0.1
	baz=226						
HWA				eS	Sb	03 16 45.4	+0.5
	baz=226						
ENA	Nanau	0.25	354	⇓iP	Pg	03 16 39.9	0.0
	baz=356						
ENA				S	Sg	03 16 43.8	+0.2
	baz=356						
ETLH	Xiulin Townshi	0.27	277	⇓iP	Pg	03 16 40.1	0.0
	baz=277						
ETLH				S	Sg	03 16 44.1	+0.2
	baz=277						
EWUT	Wuta	0.27	2	⇓iP	Pg	03 16 40.3	+0.1
	baz=3.0						
EWUT				i S	Sg	03 16 44.4	+0.4
	baz=3.0						
LATG	Datong	0.42	328	⇓iP	Pg	03 16 43.0	+0.1
	baz=328						
LATG				eS	Sg	03 16 48.3	-0.4
	baz=328						
NNSB	Datong	0.43	306	⇓iP	Pg	03 16 43.3	+0.1
	baz=306						
NNSB				S	Sg	03 16 49.4	+0.4
	baz=306						
TWC	Suao	0.44	9	⇓iP	Pg	03 16 43.3	+0.1
	baz=4.0						
TWC				eS	Sg	03 16 49.6	+0.5
	baz=4.0						
NNS	Nan Shan	0.45	306	⇓iP	Pg	03 16 43.5	+0.1
	baz=307						
NNS				S	Sg	03 16 49.7	+0.2
	baz=307						
NDS	Dongshan	0.46	354	⇓iP	Pg	03 16 43.8	+0.2
	baz=354						
NDS				eS	Sg	03 16 50.0	+0.2
	baz=354						
WHF	Hehuan Shan	0.46	267	⇓iP	Pg	03 16 43.8	0.0
	baz=267						
WHF				S	Sg	03 16 50.1	+0.1
	baz=267						
ESL	Shilin	0.47	221	eP	Pg	03 16 44.0	+0.2
	baz=227						
ESL				eS	Sb	03 16 51.0	-0.5
	baz=227						
FUSS	Fushou	0.49	279	⇓iP	Pb	03 16 44.5	-0.5
	baz=279						
FUSS				i S	Sb	03 16 51.3	-0.8
	baz=279						
ENTT	Nioudou	0.50	338	⇓iP	Pb	03 16 44.5	-0.6
	baz=338						
ENTT				eS	Sb	03 16 51.6	-0.6
	baz=338						
TWT	Tachien	0.55	278	⇓iP	Pb	03 16 45.9	-0.1
	baz=278						
TWT				eS	Sb	03 16 53.5	-0.3
	baz=278						
TWE	Neicheng	0.55	350	⇓iP	Pb	03 16 45.6	-0.4
	baz=351						
TWE				eS	Sb	03 16 53.2	-0.6
	baz=351						
CHGB	Renai	0.56	258	eP	Pb	03 16 45.6	-0.5
	baz=255						
CHGB				eS	Sg	03 16 52.0	-0.9
	baz=255						
TDCB	Techi	0.56	278	⇓iP	Pb	03 16 46.0	-0.3
	baz=279						
TDCB				S	Sg	03 16 53.2	+0.1
	baz=279						
OWD	Renai	0.59	248	P	Pb	03 16 46.2	-0.4
	baz=249						
OWD				eS	Sg	03 16 54.0	+0.2
	baz=249						
ILA	Ilan	0.59	358	eP	Pb	03 16 46.3	-0.3
	baz=353						
ILA				eS	Sb	03 16 55.3	+0.4
	baz=353						
EGFH	Guangfu	0.59	212	eP	Pg	03 16 46.1	0.0
	baz=220						
EGFH				eS	Sb	03 16 55.3	+0.4
	baz=220						
FUSB	Fushanzhiwuyua	0.61	344	eS	Sg	03 16 54.3	-0.2
	baz=344						
YHNB	Yeheng	0.61	324	⇓iP	Pb	03 16 46.6	-0.4
	baz=324						
YHNB				eS	Sb	03 16 54.9	-0.7
	baz=324						
WUSB	Renai	0.62	253	⇓P	Pb	03 16 47.0	-0.2
	baz=249						
WUSB				S	Sg	03 16 54.8	-0.1
	baz=249						
NSK	Sanguang	0.62	323	⇓iP	Pb	03 16 46.8	-0.5
	baz=323						
NSK				S	Sg	03 16 54.9	-0.1
	baz=323						
NWLT	Wulai	0.65	338	eP	Pb	03 16 47.3	-0.3
	baz=338						
NWLT				eS	Sb	03 16 55.9	-0.7
	baz=338						
NTC	Toucheng	0.68	5	P	Pb	03 16 47.8	-0.3
	baz=4.0						
NTC				eS	Sb	03 16 57.7	+0.3
	baz=4.0						
VWDT	VWDT	0.71	234	⇑iP	Pb	03 16 48.5	-0.1
	baz=241						
VWDT				eS	Sb	03 16 58.5	+0.2
	baz=241						
HGSD	Ruisui	0.75	205	eP	Pb	03 16 49.4	+0.1
	baz=194						
HGSD				S	Sb	03 17 00.3	+0.9
	baz=194						
NFF	Wufeng Townshi	0.75	308	eP	Pb	03 16 49.1	-0.2
	baz=307						
NFF				eS	Sb	03 16 59.5	0.0
	baz=307						
WHP	Taichung City	0.76	278	P	Pb	03 16 50.0	+0.4
	baz=278						
WHP				eS	Sb	03 17 00.0	+0.2
	baz=278						
EHY	Hungye	0.78	212	eP	Pg	03 16 49.7	0.0
	baz=224						
EHY				eS	Sb	03 17 01.0	+0.7
	baz=224						
TIPB	Shuangxi	0.80	4	i P	Pb	03 16 50.2	0.0
	baz=3.0						
TIPB				S	Sg	03 17 00.4	0.0
	baz=3.0						
NHDH	Xindian Distri	0.82	344	eP	Pn	03 16 51.0	-0.5
	baz=343						
NHDH				eS	Sb	03 17 01.2	-0.2
	baz=343						
TWA	Mucha	0.82	348	eP	Pb	03 16 50.9	+0.3
	baz=348						
TWA				eS	Sb	03 17 01.9	+0.4
	baz=348						
LIOB	Emei	0.83	304	eP	Pn	03 16 51.2	-0.6
	baz=304						
LIOB				eS	Sb	03 17 01.7	-0.2
	baz=304						
NSTT	Nanjuang	0.84	303	eP	Pb	03 16 51.1	+0.3
	baz=303						
NSTT				eS	Sb	03 17 02.1	+0.2
	baz=303						
SSLB	Suanglung	0.84	243	eP	Pg	03 16 50.2	-0.5
	baz=254						
SMLT	Sun Moon Lake	0.85	250	eP	Pb	03 16 50.9	-0.2
	baz=251						
SMLT				eS	Sb	03 17 02.0	-0.4
	baz=251						
TWB1	Santiao Chiao	0.85	13	eP	Pb	03 16 51.2	+0.1
	baz=13						
TWB1				eS	Sg	03 17 02.0	-0.2
	baz=13						
TYC	Yuchr	0.88	252	eP	Pn	03 16 52.5	+0.1
	baz=253						
YULB	Yu-li	0.89	209	eP	Pg	03 16 50.5	-1.2
	baz=221						
YULB				eS	Sg	03 17 02.9	-0.4
	baz=221						
NWF	Wu-fen Shan	0.89	1	eP	Pn	03 16 52.2	-0.6
	baz=353						
NWF				eS	Sb	03 17 03.5	-0.2
	baz=353						
EYUL	Yuli	0.92	207	eP	Pn	03 16 52.9	-0.1
	baz=224						
TWQ1	Liyutan	0.93	281	eP	Pn	03 16 53.5	+0.4
	baz=281						
TWQ1				eS	Sn	03 17 05.8	-0.5
	baz=281						
SBCB	Hsinchu	0.94	311	eP	Pn	03 16 53.7	+0.3
	baz=311						
NCUH	Zhongli	0.95	326	eP	Pn	03 16 53.5	0.0
	baz=326						
NCUH				eS	Sn	03 17 07.7	+0.7
	baz=326						
NMLH	Miaoli	0.96	292	eP	Pn	03 16 54.4	+0.8
	baz=292						
NMLH				eS	Sn	03 17 06.6	-0.6
	baz=292						
TWS1	Kuangyinshan	0.98	341	eP	Pn	03 16 54.1	+0.3
	baz=341						
YM01	YM01	0.98	349	eP	Pg	03 16 53.5	0.0
	baz=348						
YM01				eS	Sn	03 17 07.2	-0.6
	baz=348						
TCU	Taichung	1.00	269	eP	Pn	03 16 55.6	+1.5
	baz=269						
YUS	Yu-Shan	1.01	228	eP	Pb	03 16 54.1	0.0
	baz=217						
YUS				eS	Sb	03 17 08.1	+0.6
	baz=217						
WJS	Zhushan	1.02	250	eP	Pn	03 16 54.4	0.0
	baz=247						
WJS				eS	Sn	03 17 09.9	+1.5
	baz=247						
WNT	Mingjian	1.04	254	eP	Pn	03 16 54.9	+0.3
	baz=252						
WNT				eS	Sn	03 17 10.2	+1.3
	baz=252						
WDJ	Dajia District	1.05	280	eP	Pn	03 16 55.2	+0.4
	baz=280						
FULB	Fuli	1.06	204	eP	Pn	03 16 55.0	0.0
	baz=220						
ALS	Alishan	1.10	233	eP	Pb	03 16 55.4	-0.1
	baz=225						
ALS				eS	Sn	03 17 10.8	-0.2
	baz=225						
JYNG	Yonagunijimaku	1.11	75	eP	Pg	03 16 56.1	+0.3
JYNG				S	Sn	03 17 11.7	+1.1
TWY	Chenhua	1.11	352	eP	Pg	03 16 57.2	+1.4
	baz=336						
WCHH	Zhanghua	1.11	265	eP	Pg	03 16 57.0	+1.1
	baz=266						
CHN5	Tsauling	1.15	240	eP	Pg	03 16 56.8	+0.1
	baz=242						
YOJ	Yonaguni jima	1.17	76	eP	Pn	03 16 55.3	-1.1
	baz=74						
YOJ				eS	Sg	03 17 13.0	+0.9
	baz=74						
YOJ	Yonaguni jima	1.17	76	P	Pb	03 16 56.6	+0.2
YOJ				S	Sg	03 17 12.8	+0.6
ELDTW	Lidau	1.20	215	eP	Pn	03 16 56.4	-0.6
	baz=202						
WDLH	Douliu	1.23	247	eP	Pg	03 16 58.1	+0.1
	baz=248						
EDH	Donghe	1.27	200	eP	Pg	03 16 58.6	-0.3
	baz=188						
WRL	Guolierlin Hig	1.30	258	eP	Pb	03 16 58.6	-0.2
	baz=260						
WRL				eS	Sg	03 17 18.0	+1.5
	baz=260						
STYH	Taoyuan	1.35	223	eP	Pn	03 16 58.4	-0.5
	baz=224						
WTK	Tuku	1.35	249	eP	Pb	03 16 59.9	+0.2
	baz=236						
TPUB	Ta-pu	1.36	230	eP	Pg	03 17 00.1	-0.5
	baz=232						
LONT	Longtian	1.39	205	eP	Pn	03 16 57.6	-1.9
	baz=207						
CHY	Chiayi	1.41	242	eP	Pb	03 17 00.1	-0.3
	baz=243						
WTP	Ta-pu	1.41	229	eP	Pn	03 17 00.0	+0.2
	baz=230						
PCYT	Pengchaiyu	1.48	11	eP	Pn	03 17 00.6	-0.1
	baz=7.0						
TWK	Hsinying	1.48	233	eP	Pb	03 17 02.0	+0.1
	baz=234						
CHN1	Nanshi	1.50	229	eP	Pb	03 17 02.5	+0.3
	baz=231						
WSL	Shuilin Townsh	1.55	246	eP	Pb	03 17 03.1	+0.1
	baz=247						
WSL				eS	Sg	03 17 25.4	+0.9
	baz=247						
ICHU	Yijhu	1.59	240	eP	Pb	03 17 02.8	-0.8
	baz=241						
ECL	Taimali	1.74	206	eP	Pn	03 17 04.0	-0.3
	baz=194						
SSD	Sandimen	1.76	217	eP	Pb	03 17 06.1	-0.5
	baz=208						
TSMG	Majia	1.79	215	eP	Pn	03 17 05.5	+0.5
	baz=207						
IRIF	Iriomote-Funau	1.80	84	S	Sn	03 17 26.8	-0.9
MASBT	Mashibuluo	1.87	214	eP	Pb	03 17 07.5	-1.0
	baz=205						
EAST	Anshuo	1.97	206	eP	Pn	03 17 08.5	+1.0
	baz=195						
JKRS	Kuro-shima	2.04	88	eP	Pn	03 17 09.7	+1.2
JKRS				eS	Sb	03 17 35.9	-0.9
SCZT	Fangliau	2.08	211	eP	Pb	03 17 11.5	-0.6
	baz=195						
PNG	Penghu	2.12	254	eP	Pb	03 17 10.9	-1.7
	baz=256						
PHUB	P'eng-hu	2.12	252	eP	Pn	03 17 08.4	-1.1
	baz=254						
WDGT	Dungji	2.14	245	eP	Pn	03 17 10.3	+0.6
	baz=247						
SLIU	Shizi	2.14	205	eP	Pb	03 17 12.3	-0.8
	baz=207						
JIJ	Ishigaki jima	2.17	85	eS	Sn	03 17 36.5	-0.6
VWUC	VWUC	2.26	292	eP	Pn	03 17 10.5	-1.0
	baz=291						
VCHM	Qimei	2.35	246	eP	Pn	03 17 13.3	+0.6
	baz=231						
PTMZ	Houxiangcun	2.56	290	eP	Pn	03 17 15.4	-0.1
	baz=290						
MATB	Ma-tsu	2.57	320	eP	Pn	03 17 15.0	-0.7
	baz=317						
AXDP	Jialang	3.54	283	eP	Pn	03 17 28.9	-0.1
	baz=282						

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*KRNET **15** 03:45:51.7±0.1, 40°.54N×74°.63E, $h16^{km}$, mb2.4*

*NNC **15** 03:45:55.1±2.6, 40°.57N×75°.04E, $h0^{km}$, mb3.4, mpv3.0, Error ellipse: s-maj=19.1km s-min=14.5km az=158.0*

*SOME **15** 03:45:59.0, 40°.80N×74°.95E, $h5^{km}$*

ISC 15 03:45:54.8±1.9**, 40°.63N**±0°.08×**74°.92E**±0°.03**, $h14^{km}$**$\pm12^{km}$**, n29, $\sigma 1^{s}.29$**/52**, 21C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	Aral	1.31	340	⇑iP	Pn	03 46 17.0	-1.9
	baz=50						
ARLS				⇑iS	Sb	03 46 35.6	-0.5
	baz=50						
UCH	Uchtor	1.63	349	⇑eP	Pn	03 46 23.6	+0.1
	baz=57						
UCH				⇑iS	Sb	03 46 46.6	+1.1
	baz=57						
ULHL	Ulahol	1.90	31	⇑iP	Pb	03 46 30.2	+0.8
	baz=35						
ULHL				⇑iS	Sg	03 46 58.1	+2.1
	baz=35						
BOOM	Boomskoye usch	2.02	22	⇑iP	Pb	03 46 31.5	+0.2
	baz=26						
BOOM				⇑iS	Sg	03 47 00.4	+0.8
	baz=26						
KBK	Karagaybulak	2.03	1	⇑iP	Pb	03 46 30.7	-0.9
	baz=6.0						
KBK				⇑iS	Sg	03 46 59.3	-0.8
	baz=6.0						
AAK	Ala-Archa	2.04	351	⇑iP	Pn	03 46 30.3	+1.5
	baz=57						
AAK				⇑iS	Sb	03 46 58.4	+1.5
	baz=57						
EKS2	Erkin-Say	2.21	338	⇑iP	Pn	03 46 31.7	+0.6
	baz=44						
EKS2				⇑iS	Sb	03 47 00.9	-0.9
	baz=44						
KDJ	Kajisay	2.27	48	⇑iP	Pb	03 46 35.4	-0.3
	baz=50						
KDJ				⇑iS	Sg	03 47 08.0	+0.2
	baz=50						
TKM2	Tokmak 2	2.35	12	⇑Pn	Pb	03 46 36.5	-0.5
	2.2nm,0.5s						
TKM2				⇓Sn	Sb	03 47 08.0	+1.9
	7.1nm,0.5s						
MRKS	Merke	2.47	330	eP	Pg	03 46 43.1	+1.1
	1.5nm,0.1s						
MRKS				eS	Sg	03 47 14.7	+0.6
	16nm,0.4s						
MRKS	Merke	2.47	330	Pg	Pg	03 46 41.4	-0.7
	1.4nm,0.1s						
MRKS				Lg	Lg	03 47 16.5	
	16nm,0.4s						
ARK	Arkit	2.52	299	⇑iP	Pn	03 46 34.0	-1.4
	baz=3.0						
ARK				⇑iS	Sn	03 47 04.8	-1.2

	baz=3.0						
KST	Kastek	2.54	18	*e*P	Pg	03 46 43.0	-0.5
	2.6nm,0.4s						
KST				*e*S	Sb	03 47 14.4	+3.0
	15nm,0.4s						
KST	Kastek	2.54	18	Pg	Pb	03 46 40.4	+0.2
	2.5nm,0.4s						
KST				Lg	Lg	03 47 14.6	
	15nm,0.4s						
USP	Ospenovka	2.66	353	⇑*i*P	Pn	03 46 38.9	+1.6
	baz=58						
USP				⇑*i*S	Sb	03 47 13.1	-1.6
	baz=58						
MTBS	Maitube	2.75	24	*e*P	Pg	03 46 48.4	+0.9
	2.8nm,0.1s						
MTBS				*e*S	Sg	03 47 23.4	+0.4
	10nm,0.2s						
TNSS	Tian-Shan	2.85	32	*e*P	Pg	03 46 49.6	+0.2
	2.4nm,0.5s						
TNSS				*e*S	Sg	03 47 26.0	-0.4
	4.7nm,0.3s						
TNSS	Tian-Shan	2.85	32	Pg	Pb	03 46 47.4	+1.8
	2.8nm,0.3s						
TNSS				Lg	Lg	03 47 26.3	
	4.7nm,0.3s						
AAA	Alma-Ata	2.98	29	*e*P	Pg	03 46 51.8	-0.2
	19nm,0.1s						
AAA				*e*S	Sg	03 47 29.1	-1.4
	30nm,0.1s						
MDOK	Medeo	2.99	31	*e*P	Pg	03 46 52.4	+0.3
	2.1nm,0.0s						
MDOK				*e*S	Sg	03 47 30.6	-0.3
	4.7nm,0.5s						
MDOK	Medeo	2.99	31	Pg	Pb	03 46 49.6	+1.6
	2.4nm,0.4s						
MDOK				Lg	Lg	03 47 30.8	
	5.2nm,0.6s						
MDOK	Medeo	2.99	31	Pg	Pb	03 46 49.8	+1.8
	4.5nm,0.2s						
MDOK				Lg	Lg	03 47 30.6	
	4.7nm,0.5s						
KUU	Kurty	3.43	17	*e*P	Pg	03 46 59.5	-1.0
	1.0nm,0.2s						
KUU				*e*S	Sg	03 47 42.8	-2.2
	6.3nm,0.3s						
KUU	Kurty	3.43	17	Pg	Pb	03 46 56.6	+1.2
	1.0nm,0.2s						
KUU				Lg	Lg	03 47 42.8	
	6.3nm,0.3s						
CHKK	Chushkaly	3.58	25	*e*P	Pg	03 47 03.0	-0.2
	0.9nm,0.2s						
CHKK				*e*S	Sg	03 47 48.8	-0.7
	5.4nm,0.4s						
UZB	Uzynbulak	3.97	49	*e*P	Pg	03 47 09.6	-1.1
	1.8nm,0.2s						
UZB				*e*S	Sg	03 48 00.1	-2.1
	3.3nm,0.0s						
IUG	Iuzhnay	3.98	294	*e*P	Pg	03 47 11.7	+0.8
	8.7nm,0.1s						
IUG				*e*S	Sg	03 48 03.7	+1.3
	4.0nm,0.4s						
KPKS	Kokpek	3.99	43	*e*P	Pg	03 47 09.9	-1.3
	1.4nm,0.2s						
KPKS				*e*S	Sg	03 48 00.7	-2.2
	8.1nm,0.3s						
BTLS	Baital	4.46	352	*e*P	Pg	03 47 19.0	-1.2
	0.4nm,0.5s						
BTLS				*e*S	Sg	03 48 16.4	-1.5
	1.2nm,0.4s						

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*NIED **15** 03:56:50.7, 31°09N×129°04E, h9^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.33; M$_{\theta\theta}$0.48; M$_{\phi\phi}$0.85; M$_{r\theta}$2.52; M$_{\theta\phi}$3.11; M$_{\phi r}$-0.23; Fault plane solution: M$_0$4.17000×10^{15} NP1:φ$_s$4.00000°, δ49.00000°, λ-162.00000°. NP2:φ$_s$262.00000°, δ77.00000°, λ-42.00000°.*

*JMA **15** 03:56:50.7±0.2, 31°1N±0°4×129°0E±0°8, h9^{km}±2^{km}, MD4.5/36, MV4.9/36, SW OFF KYUSHU*

JMA Felt II J1 at SW OFF KYUSHU .

*BJI **15** 03:56:52.1±0.0, 30°92N×129°17E, h20^{km}, mb4.3/43, mB4.4/25, ML4.0/1, Ms4.2/33, Ms7 4.0/31*

*NEIC **15** 03:56:53.5±2.0, 31°09N±0°06×129°13E±0°07, h10^{km}±1^{km}, mb4.4/30, Error ellipse: s-maj=11.5km s-min=9.2km az=131.0*

*IDC **15** 03:56:57.6±1.8, 31°05N×129°03E, h43^{km}±17^{km}, mb3.8/18, mbtmp4.1/25, ML3.7/6, MS3.5/27, Error ellipse: s-maj=17.0km s-min=12.5km az=84.0*

ISC 15 03:56:51.8±1.5**, 31°05N**±0°03×**129°09E**±0°04**, h4**^{km}±9^{km}**, n128,** σ2^{s}**16**/108**, mb4.3**/36**, MS3.6**/24**, 1C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.82	40	P	Pg	03 57 06.0	-1.6
JSJ				S	Sg	03 57 17.3	-1.1
JSJ	Shimokoshiki	0.82	40	A	A	03 57 06.0	
	comp=E,56nm,1.2s,comp=E,45nm,0.3s						
JKC	Kuchinoerabu	1.11	121	*e*P	Pb	03 57 12.9	-0.7
JKC				S	Sg	03 57 28.3	+0.7
JKC	Kuchinoerabu	1.11	121	A	A	03 57 12.9	
	comp=E,17nm,0.6s,comp=E,20nm,0.6s						
JSU	Suzuyama	1.25	68	Pn	Pn	03 57 15.2	-1.0
JSU	Suzuyama	1.25	68	P	Pn	03 57 14.9	-1.2
JSU				S	Sb	03 57 31.5	-1.0
JSU	Suzuyama	1.25	68	A	A	03 57 14.9	
	comp=E,21nm,0.2s,comp=E,29nm,1.3s						
JNN	Nakanoshima	1.38	150	⇓P	Pn	03 57 16.6	-1.3
JNN	Nakanoshima	1.38	150	A	A	03 57 16.6	
	comp=E,42nm,0.9s,comp=E,40nm,0.6s						
JYAK	Yakushimahirau	1.46	123	P	Pn	03 57 17.5	-1.5
JYAK	Yakushimahirau	1.46	123	A	A	03 57 17.5	
	comp=E,6.0nm,0.8s,comp=E,6.0nm,0.6s						
JFU	Fukue jima 2	1.63	350	P	Pn	03 57 19.3	-2.1
JFU	Fukue jima 2	1.63	350	A	A	03 57 19.3	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,0.9s						
JTN	Tanegashima 3	1.67	103	P	Pn	03 57 20.8	-1.1
JTN				*e*S	Sn	03 57 42.3	-1.5
JHD	Hondo	1.67	32	A	A	03 57 20.3	
	comp=E,8.0nm,0.8s,comp=E,7.0nm,0.7s						
JZO	Okuchi	1.69	49	A	A	03 57 20.8	
	comp=E,14nm,1.3s,comp=E,15nm,0.8s						
JMTN	Minamitane	1.69	112	P	Pn	03 57 21.0	-1.1
JTAJ	Takarajima	1.89	177	P	Pb	03 57 24.6	-2.3
JTZ	Takazaki	1.91	63	P	Pn	03 57 24.2	-0.9
JNAR	Kushima--Naru	1.93	75	A	A	03 57 24.7	
	comp=E,6.0nm,1.0s,comp=E,8.0nm,1.5s						
JIU3	Izumi3	2.10	44	P	Pn	03 57 26.7	-1.0
JNU	Nakatsue	2.56	36	P	Pb	03 57 37.5	-0.9
	43nm,0.3s,baz=255,slow=4.9,SNR=64						
JNU				S	Sb	03 58 10.6	+0.3
	905nm,0.6s,baz=5.7,slow=9.5,SNR=12						
	301nm,0.7s						
JNU	Nakatsue	2.56	36		Pb	03 57 37.8	-0.6
JUS	Usuki	3.02	48	A	A	03 57 40.1	
	comp=E,2.0nm,2.7s,comp=E,3.0nm,3.0s						
JTU	Tsushima	3.48	4	Pn	Pn	03 57 45.9	-0.8
JOW	Kunigami	4.26	190	P	Pn	03 57 59.5	+2.0
	13nm,0.3s,baz=49,slow=16,SNR=32						
JOW				LR	LR	03 59 49.4	
	comp=Z,754nm,18.7s,baz=118,slow=40						
	46nm,0.4s						
NAWB	Namwon	4.59	342		Pn	03 58 00.5	-1.5
JHS	Saijyo	5.19	40	Pn	Pn	03 58 13.2	+2.9
TJN	Taejon	5.51	345	Pn	Pn	03 58 14.4	-0.2
KSCHJ	Chungju	5.88	351		Pn	03 58 19.2	-0.6
KSAR	Wonju Array Be	6.46	351	Pn	Pn	03 58 26.9	-0.8
KSRS	Korea Array	6.46	352	P	Pn	03 58 28.0	+0.3
	4.7nm,0.3s,baz=174,slow=14,SNR=81						
KSRS				LR	LR	04 01 01.8	
	comp=Z,383nm,21.9s,baz=165,slow=38						
	23nm,0.5s						
KS19	Wonju Array Si	6.52	351		Pn	03 58 27.4	-1.2
INCN	Inchon	6.74	343	Pn	Pn	03 58 31.3	-0.2
SSE	Sheshan	6.78	272	Pn	Pn	03 58 33.3	+1.2
SSE				Sn	Sn	03 59 53.0	+3.2
SSE				smax	smax		
	comp=N,83nm,1.3s						
SSE				smax	smax		
	comp=E,73nm,1.1s						
SSE				LR	LR		
	comp=N,770nm,14.4s						
SSE				LR	LR		
	comp=E,310nm,13.4s						
SEHB	SEOHWA	7.24	355	Pn	Pn	03 58 38.2	-0.2
INU	Inuyama	7.91	55	Pn	Pn	03 58 50.1	+2.5
JGF	Kuroka	8.27	55	Pn	Pn	03 58 55.6	+3.0
NJ2	Nanjing	8.79	279	⇓P	Pn	03 59 00.5	+0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=N,490nm,9.8s						
NJ2				LR	LR		
	comp=E,370nm,9.8s						
NJ2				LR	LR		
	comp=Z,630nm,13.2s						
MJAR	Matsushiro Arr	9.36	52	P	Pn	03 59 11.7	+4.2
	0.1nm,0.3s,baz=243,slow=13,SNR=9.1						
MJAR				LR	LR	04 02 53.4	
	comp=Z,159nm,21.9s,baz=226,slow=38						
	1.8nm,0.5s						
NACB	Ninganchiao	9.54	226	Pn	Pn	03 59 10.5	+0.5
SSLB	Suanglung	10.22	227	Pn	Pn	03 59 19.0	-0.4
YULB	Yu-li	10.30	224	Pn	Pn	03 59 22.1	+1.6
JCJ	Chichijima	12.11	106	LR	LR	04 03 44.8	
	comp=Z,97nm,20.7s,baz=115,slow=34						
USRK	Ussuriysk Ar.	13.33	9	P	P	04 00 05.0	-6.6
	4.4nm,0.9s,baz=188,slow=14,SNR=6.8						
USRK				LR	LR	04 04 35.5	
	comp=Z,150nm,20.3s,baz=171,slow=34						
HNS	HongShan	13.48	302	⇓P	P	04 00 09.3	-4.0
HNS				S	S	04 02 43.8	-14
HNS				SS	SnSn	04 02 55.4	+9.1
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				LR	LR		
	comp=E,460nm,10.4s						
HNS				LR	LR		
	comp=Z,410nm,12.0s						
MDJ	Mudanjiang	13.55	2	P	P	04 00 17.6	+3.5
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,66nm,4.6s						
BJI	Beijing	13.81	314	P	Pn	04 00 10.3	+1.9
BJI				S	Sn	04 02 41.0	-1.2
BJI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BJI				LR	LR		
	comp=Z,540nm,11.9s						
BJI				LR	LR		
	comp=Z,550nm,10.3s						
BJI				LR	LR		
	comp=Z,650nm,11.4s						
LYN	LuoYang	14.41	288	*e*P	P	04 00 25.9	+2.2
LYN				PP	PnPn	04 00 39.8	+15
LYN				S	S	04 03 09.6	-7.6
LYN				pmax	pmax		
	comp=Z,140nm,3.3s						
LYN				LR	LR		
	comp=N,1μm,14.9s						
LYN				LR	LR		
	comp=E,450nm,13.7s						
LYN				LR	LR		
	comp=Z,340nm,15.9s						
BNX	BinXian	14.73	355	⇓P	P	04 00 25.5	-1.7
BNX				pmax	pmax		
	comp=Z,11nm,0.5s						
BNX				pmax	pmax		
	comp=Z,180nm,3.5s						
XLT	XiLinHaoTe	16.44	325	*e*P	P	04 00 47.4	+1.1
XLT				pP	sP	04 00 51.0	+3.4
XLT				sP	pP	04 00 55.1	+7.9
XLT				S	S	04 03 52.3	-6.5
XLT				SS	SnSn	04 04 09.9	+10
XLT				pmax	pmax		
	comp=Z,60nm,3.6s						
XLT				LR	LR		
	comp=Z,27nm,10.1s						
XLT				LR	LR		
	comp=Z,160nm,11.0s						
XLT				LR	LR		
	comp=Z,350nm,12.8s						
ASAJ	Asahikawa	16.84	35	P	P	04 00 50.4	-0.3
	comp=Z,0.4nm,0.3s,baz=245,slow=24,SNR=7.0						
ASAJ				LR	LR	04 06 51.0	
	comp=Z,152nm,18.6s,baz=173,slow=35						
	comp=Z,12nm,0.9s						
JKA	Kamikawa-asahi	16.85	35	Pn	P	04 00 48.4	-2.2
HHC	Hu-ho-hao-te	17.21	309	*e*P	P	04 00 55.3	+0.5
HHC				pmax	pmax		
	comp=Z,40nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				LR	LR		
	comp=Z,790nm,10.6s						
HHC				LR	LR		
	comp=Z,660nm,10.4s						
HHC				LR	LR		
	comp=Z,820nm,10.3s						
XAN	Xi'an	17.27	285	⇑P	P	04 00 54.4	-1.0
XAN				pP	sP	04 00 59.5	+2.7
XAN				sP	pP	04 01 03.3	+6.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,90nm,6.5s						
XAN				LR	LR		
	comp=Z,840nm,14.9s						
XAN				LR	LR		
	comp=Z,500nm,13.3s						
XAN				LR	LR		
	comp=Z,560nm,11.4s						
BTO	Baotou	18.14	307	*e*P	P	04 01 08.0	+2.9
KLR	Kul'dur	18.27	6	P	P	04 01 08.2	+1.8
	comp=Z,0.2nm,0.3s,baz=201,slow=7.9,SNR=28						
KLR				LR	LR	04 07 51.8	
	comp=Z,104nm,18.1s,baz=186,slow=36						
	comp=Z,9.9nm,0.8s						
YSS	Yuzh-Sakhalins	19.06	30	P	Pn	04 01 14.7	-1.1
LZH	Lanzhou	21.61	290	*e*P	P	04 01 49.3	+6.3
LZH				pP	sP	04 01 54.3	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				LR	LR		
	comp=Z,330nm,15.3s						
LZH				LR	LR		
	comp=Z,370nm,13.7s						
LZH				LR	LR		
	comp=Z,420nm,15.5s						
GUMO	Guam	22.64	137	LR	LR	04 08 43.9	
	comp=Z,58nm,20.3s,baz=90,slow=31						
ULN	Ulaanbaatar	23.78	321	P	P	04 02 06.7	+1.1
ULN				IAmb	IAmb	04 02 07.8	
	comp=Z,8.6nm,0.9s						
DAV	Davao City (W)	24.08	189	LR	LR	04 13 29.9	
	comp=Z,58nm,18.9s,baz=20,slow=41						
SONM	Songino Array	24.12	320	P	P	04 02 08.9	+0.1
	comp=Z,5.2nm,0.9s,baz=130,slow=9.1,SNR=15						
	comp=Z,5.2nm,0.9s						
SONM	Songino Array	24.12	320	P	P	04 02 08.7	0.0
PZH	PanZhiHua	24.37	266	P	P	04 02 14.5	+3.2
PZH				S	S	04 06 30.5	-1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,3.9s						
PZH				LR	LR		
	comp=Z,830nm,20.5s						
PZH				LR	LR		
	comp=Z,340nm,21.1s						
PZH				LR	LR		
	comp=Z,570nm,16.9s						
GTA	Gaotai	25.25	297	*e*P	P	04 02 19.6	+0.5
GTA				pP	sP	04 02 24.0	+3.5
GTA				sP	pP	04 02 26.5	+6.4
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,92nm,7.2s						
GTA				LR	LR		
	comp=Z,250nm,14.3s						
GTA				LR	LR		
	comp=Z,210nm,19.5s						
GTA				LR	LR		
	comp=Z,340nm,13.1s						
GOMU	GeErMu	28.91	290	P	P	04 02 50.6	-1.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,83nm,4.1s						
GOMU				LR	LR		
	comp=Z,120nm,13.3s						
GOMU				LR	LR		
	comp=Z,59nm,11.6s						
GOMU				LR	LR		
	comp=Z,77nm,16.5s						
CHTO	Chiang Mai	29.83	253	P	P	04 03 00.9	+0.7
CHTO				IAmb	IAmb	04 03 03.6	
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	30.01	252	P	P	04 03 02.6	+0.8
	comp=Z,1.1nm,0.4s,baz=68,slow=4.9,SNR=6.0						
CMAR				LR	LR	04 17 02.5	
	comp=Z,104nm,18.1s,baz=220,slow=40						
	comp=Z,1.1nm,0.4s						
WMQ	Urumqi	34.90	303	*e*P	P	04 03 44.0	-0.6
WMQ				pP	sP	04 03 52.0	+6.1
WMQ				sP	pP	04 03 56.5	+11
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
KAPI	Kappang	36.95	196	LR	LR	04 20 52.6	
	comp=Z,41nm,18.1s,baz=8.5,slow=39						
ZALV	Zalesovo Beam	39.00	319	P	P	04 04 18.5	-0.6
	comp=Z,0.9nm,0.5s,baz=115,slow=7.0,SNR=3.7						
ZALV				LR	LR	04 21 21.3	
	comp=Z,54nm,18.1s,baz=118,slow=38						
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	39.00	319	P	P	04 04 19.9	+0.8
MKAR	Makanchi Array	39.05	307	P	P	04 04 20.0	+0.2
	comp=Z,0.8nm,0.8s,baz=92,slow=12,SNR=8.6						
MKAR				LR	LR	04 21 07.4	
	comp=Z,58nm,20.5s,baz=96,slow=37						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	39.05	307	P	P	04 04 20.9	+1.1
PSI	Prapat	40.00	231	LR	LR	04 20 28.5	
	comp=Z,48nm,20.2s,baz=94,slow=35						
TIXI	Tiksi	40.66	360	P	P	04 04 32.4	-0.3
TIXI				IAmb	IAmb	04 04 40.0	
	comp=Z,10nm,1.4s						
KURK	Kurchatov	41.98	313	P	P	04 04 43.9	+0.1
KURK	Kurchatov	41.98	313	IAmb	IAmb	04 04 51.3	
	comp=Z,6.0nm,1.1s						
KURBB	Kurchatov Arra	42.02	313	P	P	04 04 43.9	-0.3
	baz=99,slow=6.1						
KURBB				LR	LR	04 23 07.7	
	comp=Z,112nm,20.5s,baz=90,slow=37						
KDJ	Kajisay	42.54	300	P	P	04 04 49.0	+0.2
BILL	Bilibino	42.88	20	P	P	04 04 53.7	+2.7
BILL				IAmb	IAmb	04 04 56.6	
	comp=Z,9.9nm,1.5s						
AAK	Ala-Archa	44.50	301	LR	LR	04 26 16.4	
	comp=Z,86nm,18.3s,baz=100,slow=40						
AAK	Ala-Archa	44.50	301	P	P	04 05 04.9	+0.4
NRIK	Noril'sk	44.95	341	P	P	04 05 06.0	-1.5
	comp=Z,1.0nm,0.4s,baz=107,slow=11,SNR=2.0						
	comp=Z,1.0nm,0.4s						
NRIK	Noril'sk	44.95	341	P	P	04 05 08.3	+0.8
NRIK				IAmb	IAmb	04 05 14.6	
	comp=Z,4.8nm,1.1s						
BRVK	Borovoye	47.35	315	P	P	04 05 27.0	+0.2
KK31	Karatay Array	47.38	302	P	P	04 05 26.7	-0.5
KK31				IAmb	IAmb	04 05 39.8	
	comp=Z,5.2nm,1.1s						
KKAR	Karatay Array	47.38	302	P	P	04 05 27.3	+0.2
WRA	Warramunga Arr	50.95	174	P	P	04 05 54.2	-0.4
	comp=Z,1.8nm,0.9s,baz=353,slow=8.0,SNR=12						
	comp=Z,1.8nm,0.9s						
PSA00	Pilbara Seismi	53.07	191	P	P	04 06 10.4	+0.1
PSA00				IAmb	IAmb	04 06 11.0	
	comp=Z,4.9nm,0.8s						
ABKAR	Akbulak array	53.99	311	P	P	04 06 16.8	-0.1
ARU	Arti	54.15	320	LR	LR	04 30 04.4	
	comp=Z,45nm,19.7s,baz=128,slow=37						
ARU	Arti	54.15	320	P	P	04 06 18.4	+0.5
ASAR	Alice Springs	54.60	175	P	P	04 06 21.5	0.0
	comp=Z,1.7nm,0.8s,baz=5.1,slow=14,SNR=21						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	54.60	175	P	P	04 06 21.9	+0.4
AKTO	Aktyubinsk	55.07	312	P	P	04 06 24.8	0.0
	comp=Z,1.6nm,0.7s,baz=86,slow=8.9,SNR=6.2						
AKTO				LR	LR	04 30 58.6	
	comp=Z,75nm,20.5s,baz=95,slow=37						
	comp=Z,1.6nm,0.7s						
GEYT	Alibeck	57.63	298	LR	LR	04 32 59.8	
	comp=Z,48nm,21.1s,baz=118,slow=38						
CAST	Castle Rocks	57.78	31	P	P	04 06 45.1	+1.3
CAST				IAmb	IAmb	04 07 02.2	
	comp=Z,4.5nm,1.4s						
H23K	Yukon River	58.62	28	P	P	04 06 51.4	+1.7
NEA2	Nenana	58.97	30	IAmb	IAmb	04 07 12.7	
	comp=Z,3.8nm,1.1s						
RND	Reindeer	59.23	31	IAmb	IAmb	04 06 59.1	
	comp=Z,3.7nm,0.9s						
MDM	Murphy Dome	59.27	29	P	P	04 06 56.0	+1.8
ILAR	Eielson Array	59.87	30	P	P	04 07 00.0	+1.7
	comp=Z,0.9nm,0.7s,baz=277,slow=6.6,SNR=8.9						
	comp=Z,0.9nm,0.7s						
BMAR	Burnt Mountain	60.35	26	P	P	04 07 04.5	+2.8
M26K	Nabesna, AK	62.05	32	P	P	04 07 15.3	+2.0
VRDI	Verde Repeater	62.12	33	IAmb	IAmb	04 07 19.6	
	comp=Z,2.4nm,0.8s						
L27K	Beaver Creek,	62.41	31	P	P	04 07 17.4	+1.8
L27K				IAmb	IAmb	04 07 30.5	
	comp=Z,1.9nm,0.9s						
M27K	Edge Creek, AK	62.56	32	IAmb	IAmb	04 07 41.6	
	comp=Z,3.0nm,1.1s						
STKA	Stephens Creek	63.69	168	P	P	04 07 24.8	+0.4
	comp=Z,1.7nm,0.7s,baz=357,slow=7.5,SNR=3.5						
	comp=Z,1.7nm,0.7s						
KBZ	Khabaz	66.75	308	P	P	04 07 45.2	+1.0
	comp=Z,2.7nm,0.9s,baz=177,slow=2.3,SNR=6.5						
	comp=Z,2.7nm,0.9s						
C36M	Paulatuk	66.94	22	P	P	04 07 46.6	+1.5
FINES	FINESS Array B	69.07	330	P	P	04 07 58.0	-0.5
	comp=Z,1.8nm,0.7s,baz=64,slow=6.6,SNR=6.7						
	comp=Z,1.8nm,0.7s						
AKASG	Malin Array Be	72.39	319	LR	LR	04 41 34.3	
	comp=Z,52nm,18.1s,baz=358,slow=37						
YKA	Yellowknife Ar	73.86	26	P	P	04 08 27.2	-0.3
	comp=Z,0.4nm,0.6s,baz=308,slow=5.6,SNR=13						
YKA				LR	LR	04 41 55.2	
	comp=Z,18nm,21.8s,baz=312,slow=36						
	comp=Z,0.4nm,0.6s						
BR131	Keskin Array S	74.71	307	P	P	04 08 33.2	+0.2
BR131				IAmb	IAmb	04 08 48.4	
	comp=Z,5.9nm,1.1s						
BRTR	Keskin Array B	74.71	307	P	P	04 08 33.7	+0.7
	comp=Z,1.3nm,0.8s,baz=101,slow=5.9,SNR=9.6						
	comp=Z,1.3nm,0.8s						
NB2	NORSAR Subarra	75.34	334	P	P	04 08 33.8	-2.4
	comp=Z,6.3nm,1.4s,baz=50,slow=5.9						
NOA	NORSAR Array B	75.34	334	P	P	04 08 35.3	-0.9
	comp=Z,1.2nm,0.8s,baz=50,slow=5.8,SNR=4.1						
	comp=Z,1.2nm,0.8s						
VRAC	Vranov	80.03	322	LR	LR	04 48 21.1	
	comp=Z,59nm,19.1s,baz=54,slow=38						
CLL	Collm	80.64	325	*e*P	P	04 09 07.0	+1.3
CLL				*e*PcP	PcP	04 09 12.0	-0.6
GERES	GERESS Array B	81.83	323	LR	LR	04 49 17.7	
	comp=Z,49nm,20.4s,baz=7.5,slow=38						
EKA	Eskdalemuir Ar	84.75	335	LR	LR	04 52 47.7	
	comp=Z,29nm,20.7s,baz=3.5,slow=40						
NVAR	Mina Array Bea	86.64	47	P	P	04 09 36.5	-0.6
	comp=Z,0.3nm,0.5s,baz=297,slow=8.0,SNR=2.4						
	comp=Z,0.3nm,0.5s						
PDAR	Pinedale Array	88.95	39	P	P	04 09 47.9	-0.1
	comp=Z,0.2nm,0.3s,baz=255,slow=5.5,SNR=2.1						
	comp=Z,0.2nm,0.3s						
ULM	Lac du Bonnet	89.79	27	P	P	04 09 51.3	-0.2
	comp=Z,1.8nm,0.5s,baz=268,slow=4.4,SNR=2.1						
ULM				LR	LR	04 55 01.6	
	comp=Z,29nm,18.0s,baz=28,slow=39						
	comp=Z,1.8nm,0.5s						
SCHQ	Schefferville	93.38	9	LR	LR	04 57 35.2	
	comp=Z,22nm,18.1s,baz=145,slow=39						
ESDC	Sonseca Array	97.23	325	LR	LR	04 57 18.4	
	comp=Z,42nm,20.0s,baz=15,slow=37						

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*IDC **15** 04:11:01.7±1.3, 24°06N×121°83E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.2/1, MS2.9/1, Error ellipse: s-maj=41.7km s-min=26.7km az=71.0*

*JMA **15** 04:11:03.3±0.2, 24°1N±0°8×12°2E±°, h18^{km}, MV3.3/11, TAIWAN REGION*

*TAP **15** 04:11:04.8, 24°20N×121°69E, h12^{km}, ML4.0, B*

ISC 15 04:11:04.4±0.7**, 24°15N**±0°01×**121°73E**±0°02**, h16**^{km}±4^{km}**, n128,** σ1^{s}**26**/218**, mb3.5**/4**, 2C-29D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=238	0.09	274	iP	Pg	04 11 07.4	-0.4
ETL	baz=238			S	Sg	04 11 09.4	-0.6
NACB	**Ninganchiao** baz=256	0.12	280	⇓iP	Pg	04 11 07.6	-0.5
NACB	baz=256			S	Sg	04 11 09.8	-0.6
TWD	**Chiawan** baz=214	0.14	239	⇑iP	Pg	04 11 08.1	-0.2
TWD	baz=214			iS	Sg	04 11 10.9	+0.1
EHP	**Heping Village** baz=27	0.16	5	⇓iP	Pg	04 11 08.0	-0.6
EHP	baz=27			iS	Sg	04 11 10.6	-0.7
HWA	**Hwalien** baz=197	0.21	212	iP	Pg	04 11 10.1	+0.8
HWA	baz=197			eS	Sg	04 11 14.5	+2.0
ETLH	**Xiulin Townshi** baz=273	0.23	284	⇓iP	Pg	04 11 09.3	-0.4
ETLH	baz=273			S	Sg	04 11 12.7	-0.6
ENA	**Nanau** baz=14	0.28	3	⇓iP	Pg	04 11 09.9	-0.5
ENA	baz=14			S	Sg	04 11 13.7	-0.7
ETM	**Tongmen** baz=218	0.28	229	eP	Pg	04 11 11.0	+0.5
ETM	baz=218			eS	Sg	04 11 15.4	+0.7
EWUT	**Wuta** baz=18	0.30	9	⇓iP	Pg	04 11 10.2	-0.5
EWUT	baz=18			S	Sg	04 11 14.1	-1.0
TEYL	**Yanliau Villag** baz=195	0.31	202	eP	Pg	04 11 11.6	+0.7
TEYL	baz=195			eS	Sg	04 11 18.6	+3.4
NNSB	**Datong** baz=310	0.42	311	⇓iP	Pg	04 11 12.7	-0.3
NNSB	baz=310			S	Sg	04 11 18.2	-0.5
WHF	**Hehuan Shan** baz=262	0.42	269	⇓iP	Pb	04 11 12.9	-0.9
WHF	baz=262			eS	Sb	04 11 19.3	-0.8
LATG	**Datong** baz=336	0.42	335	⇓iP	Pg	04 11 12.7	-0.4
LATG	baz=336			eS	Sg	04 11 18.6	-0.3
ESL	**Shilin** baz=211	0.43	219	⇓iP	Pb	04 11 13.2	-0.5
ESL	baz=211			eS	Sb	04 11 20.9	+0.9
NNS	**Nan Shan** baz=311	0.43	312	⇓iP	Pg	04 11 12.8	-0.4
NNS	baz=311			eS	Sg	04 11 18.7	-0.4
FUSS	**Fushou** baz=277	0.45	282	⇓iP	Pb	04 11 13.6	-0.6
FUSS	baz=277			eS	Sb	04 11 20.1	-0.7
TWC	**Suao** baz=21	0.47	14	⇓iP	Pg	04 11 13.5	-0.4
TWC	baz=21			eS	Sg	04 11 19.8	-0.4
TEGC	**Jichi Village** baz=195	0.47	201	eP	Pn	04 11 15.8	-0.8
TEGC	baz=195			eS	Sb	04 11 24.2	+3.1
NDS	**Dongshan** baz=3.0	0.48	359	⇓iP	Pg	04 11 13.7	-0.3
NDS	baz=3.0			eS	Sg	04 11 19.8	-0.7
NDT	**Datong Townshi** baz=338	0.49	337	⇓eP	Pg	04 11 14.1	-0.1
NDT	baz=338			eS	Sg	04 11 20.4	-0.5
ENTT	**Nioudou** baz=347	0.51	343	⇓iP	Pg	04 11 14.3	-0.2
ENTT	baz=347			eS	Sg	04 11 21.1	-0.3
CHGB	**Renai** baz=254	0.51	260	⇓iP	Pb	04 11 14.9	-0.4
CHGB	baz=254			eS	Sb	04 11 22.2	-0.4
TWT	**Tachien** baz=276	0.51	281	eP	Pb	04 11 15.1	-0.1
TWT	baz=276			eS	Sb	04 11 22.1	-0.4
TDCB	**Techi** baz=277	0.53	281	⇓P	Pb	04 11 15.2	-0.3
TDCB	baz=277			eS	Sb	04 11 22.1	-0.8
OWD	**Renai** baz=243	0.54	249	⇓P	Pb	04 11 15.2	-0.5
OWD	baz=243			eS	Sb	04 11 22.9	-0.3
EGFH	**Guangfu** baz=204	0.55	210	⇓P	Pb	04 11 15.8	0.0
EGFH	baz=204			eS	Sb	04 11 24.5	+1.1
TWE	**Neicheng** baz=359	0.57	355	⇓eP	Pg	04 11 15.5	-0.2
TWE	baz=359			eS	Sg	04 11 23.0	-0.3
WUSB	**Renai** baz=249	0.58	254	⇓iP	Pb	04 11 16.1	-0.2
WUSB	baz=249			eS	Sb	04 11 24.2	-0.1
YHNB	**Yeheng** baz=329	0.61	328	⇓P	Pg	04 11 16.2	-0.2
YHNB	baz=329			eS	Sg	04 11 24.1	-0.4
ILA	**Ilan** baz=6.0	0.61	2	eP	Pg	04 11 16.5	0.0
FUSB	**Fushanzhiwuyua** baz=351	0.62	348	⇓P	Pg	04 11 16.4	-0.3
FUSB	baz=351			eS	Sg	04 11 24.4	-0.5
NSK	**Sanguang** baz=328	0.62	327	⇓P	Pg	04 11 16.3	-0.4
NSK	baz=328			eS	Sg	04 11 24.4	-0.5
NWLT	**Wulai** baz=344	0.66	342	⇓P	Pg	04 11 17.0	-0.3
NWLT	baz=344			eS	Sg	04 11 25.0	-1.0
VWDT	**VWDT** baz=229	0.67	234	⇓P	Pn	04 11 17.7	-1.5
VWDT	baz=229			eS	Sn	04 11 27.8	-1.6
NTC	**Toucheng** baz=11	0.71	8	⇓eP	Pg	04 11 17.9	-0.3
NTC	baz=11			eS	Sg	04 11 26.8	-0.8
HGSD	**Ruisui** baz=199	0.71	203	eP	Pn	04 11 19.6	-0.3
HGSD	baz=199			eS	Sn	04 11 33.1	+2.6
EGS	baz=20	0.71	15	eP	Pg	04 11 18.7	+0.3
EGS	baz=20			eS	Sg	04 11 28.0	+0.1
WPL	**Puli Township** baz=255	0.72	259	eP	Pn	04 11 18.9	-1.1
WPL	baz=255			eS	Sb	04 11 28.3	+0.1
WHP	**Taichung City** baz=277	0.72	280	eP	Pb	04 11 18.8	0.0
WHP	baz=277			eS	Sb	04 11 29.0	+0.5
NFF	**Wufeng Townshi** baz=310	0.73	311	eP	Pg	04 11 18.6	-0.2
NFF	baz=310			eS	Sg	04 11 27.8	-0.7
DPDB	**Guoxing** baz=257	0.74	261	eP	Pn	04 11 19.3	-1.0
DPDB	baz=257			eS	Sb	04 11 29.1	+0.2
EHY	**Hungye** baz=205	0.74	210	eP	Pb	04 11 18.5	-0.5
EHY	baz=205			eS	Sn	04 11 30.7	-0.6
SSLB	**Suanglung** baz=239	0.79	243	⇓P	Pn	04 11 19.9	-1.1
SSLB	baz=239			eS	Sb	04 11 30.4	-0.1
SMLT	**Sun Moon Lake** baz=246	0.80	251	eP	Pn	04 11 20.5	-0.8
SMLT	baz=246			eS	Sb	04 11 31.0	+0.3
LIOB	**Emei** baz=306	0.81	307	eP	Pb	04 11 20.5	+0.3
LIOB	baz=306			eS	Sg	04 11 31.2	+0.2
NSTT	**Nanjuang** baz=305	0.81	306	eP	Pb	04 11 20.2	0.0
NSTT	baz=305			eS	Sg	04 11 30.9	-0.2
TIPB	**Shuangxi** baz=9.0	0.82	6	eP	Pg	04 11 20.1	-0.4
TIPB	baz=9.0			eS	Sg	04 11 30.1	-1.2
NHDH	**Xindian Distri** baz=349	0.83	347	eP	Pg	04 11 20.6	0.0
NHDH	baz=349			eS	Sg	04 11 31.0	-0.5
TYC	**Yuchr** baz=249	0.83	253	eP	Pn	04 11 20.7	-0.8
TYC	baz=249			eS	Sb	04 11 31.7	+0.2
TWA	**Mucha** baz=354	0.83	351	eP	Pg	04 11 20.8	+0.1
TWA	baz=354			eS	Sg	04 11 31.0	-0.8
TATO	**Taipei** baz=347	0.85	345	eP	Pg	04 11 20.5	-0.5
YULB	**Yu-li** baz=204	0.85	208	eP	Pb	04 11 20.1	-0.8
YULB	baz=204			eS	Sn	04 11 34.1	+0.1
EYUL	**Yuli** baz=202	0.88	205	eP	Pn	04 11 22.5	+0.3
TWB1	**Santiao Chiao** baz=19	0.89	16	eP	Pg	04 11 21.2	-0.5
TWB1	baz=19			eS	Sg	04 11 32.3	-1.0
TWF1	**Yuli** baz=203	0.89	206	eP	Pb	04 11 20.8	-0.7
TWF1	baz=203			eS	Sn	04 11 35.3	+0.4
TWQ1	**Liyutan** baz=280	0.89	283	eP	Pn	04 11 23.1	+0.7
TWQ1	baz=280			eS	Sn	04 11 36.5	+1.5
HSN1	**Hsinchu** baz=314	0.90	314	eP	Pb	04 11 22.9	+1.2
TAP1	**Taipei** baz=349	0.90	348	eP	Pg	04 11 21.0	-0.9
TAP1	baz=349			eS	Sg	04 11 33.9	+0.1
TAP	**Taipei** baz=349	0.91	347	eP	Pg	04 11 20.3	-1.7
TAP	baz=349			eS	Sg	04 11 33.7	-0.2
NWF	**Wu-fen Shan** baz=6.0	0.92	3	eP	Pg	04 11 22.4	+0.1
NWF	baz=6.0			eS	Sg	04 11 34.1	-0.2
WFSB	**Wu-fen Shan** baz=6.0	0.92	3	⇑eP	Pg	04 11 22.4	+0.2
WFSB	baz=6.0			eS	Sg	04 11 34.1	-0.2
NSY	**Sanyi** baz=285	0.92	287	eP	Pn	04 11 23.4	+0.7
SBCB	**Hsinchu** baz=313	0.93	314	eP	Pn	04 11 23.6	+0.8
SBCB	baz=313			eS	Sn	04 11 37.0	+1.1
NMLH	**Miaoli** baz=293	0.94	294	eP	Pn	04 11 23.9	+0.9
HSN	**Hsinchu** baz=316	0.94	313	eP	Pb	04 11 22.9	+0.4
WWF	**Wufeng** baz=260	0.94	264	eP	Pn	04 11 24.6	+1.4
NCUH	**Zhongli** baz=329	0.95	329	eP	Pb	04 11 23.6	+1.0
NCU	**National Centr** baz=330	0.95	329	eP	Pb	04 11 23.8	+1.2
NCU	baz=330			eS	Sb	04 11 37.0	+2.0
TCU	**Taichung** baz=267	0.96	270	eP	Pn	04 11 24.8	+1.5
YUS	**Yu-Shan** baz=223	0.97	227	eP	Pn	04 11 23.5	-0.4
YUS	baz=223			eS	Sn	04 11 37.2	-0.3
WJS	**Zhushan** baz=247	0.97	250	eP	Pn	04 11 24.2	+0.7
WJS	baz=247			eS	Sn	04 11 38.2	+1.3
TWS1	**Kuangyinshan** baz=345	0.98	344	eP	Pb	04 11 24.3	+1.1
WNT	**Mingjian** baz=251	0.99	254	eP	Pn	04 11 25.1	+1.4
YM01	**YM01** baz=354	1.00	352	eP	Pg	04 11 24.2	+0.3
WDJ	**Dajia District** baz=279	1.01	281	eP	Pn	04 11 25.4	+1.5
WDJ	baz=279			eS	Sn	04 11 39.5	+1.6
FULB	**Fuli** baz=200	1.03	203	eP	Pn	04 11 24.3	0.0
YM08	**YM08** baz=355	1.04	353	eP	Pg	04 11 24.4	-0.2
NHW	**Xinwu Township** baz=324	1.05	324	eP	Pb	04 11 25.1	+0.8
NHW	baz=324			eS	Sn	04 11 40.5	+1.6
ALS	**Alishan** baz=229	1.06	233	eP	Pn	04 11 25.2	+0.3
ALS	baz=229			eS	Sn	04 11 40.6	+1.1
WCHH	**Zhanghua** baz=264	1.07	266	eP	Pn	04 11 26.0	+1.2
CHKT	**Chengkung** baz=195	1.10	198	eP	Pn	04 11 25.0	-0.2
CHN5	**Tsauling** baz=237	1.11	240	eP	Pn	04 11 25.6	+0.2
CHN5	baz=237			eS	Sn	04 11 43.2	+2.8
TWY	**Chenhua** baz=356	1.12	354	eP	Pg	04 11 26.8	+0.6
JYNG	**Yonagunijimaku**	1.15	75	P	Pg	04 11 26.4	-0.3
JYNG				S	Sg	04 11 43.2	+1.4
ELDTW	**Lidau** baz=211	1.16	214	eP	Pn	04 11 25.6	-0.5
WDLH	**Douliu** baz=244	1.18	247	eP	Pn	04 11 27.9	+1.6
YOJ	**Yonaguni jima** baz=77	1.21	75	iP	Pg	04 11 27.2	-0.6
YOJ	baz=77			eS	Sg	04 11 44.2	+0.6
YOJ	**Yonaguni jima**	1.21	75	P	Pg	04 11 27.2	-0.6
YOJ				S	Sg	04 11 44.5	+0.8
EDH	**Donghe** baz=196	1.24	198	eP	Pn	04 11 27.5	+0.4
EDH	baz=196			eS	Sn	04 11 45.3	+1.8
WRL	**Guolierlin Hig** baz=256	1.26	259	eP	Pn	04 11 29.1	+1.7
WRL	baz=256			eS	Sn	04 11 46.6	+2.6
CHN2	**Minshiung** baz=239	1.30	242	eP	Pn	04 11 30.5	+2.5
CHN2	baz=239			eS	Sn	04 11 49.0	+4.0
CHN4	**Tsaushan** baz=230	1.31	233	eP	Pn	04 11 29.1	+1.0
CHN4	baz=230			eS	Sn	04 11 49.9	+4.6
WTK	**Tuku** baz=247	1.31	250	eP	Pn	04 11 30.3	+2.2
STYH	**Taoyuan** baz=219	1.31	222	eP	Pn	04 11 29.0	+0.9
STYH	baz=219			eS	Sn	04 11 46.8	+1.5
TPUB	**Ta-pu** baz=227	1.31	230	eP	Pn	04 11 29.4	+1.2
TPUB	baz=227			eS	Sn	04 11 48.5	+3.1
STYT	**Tauyuan** baz=219	1.33	222	eP	Pn	04 11 29.0	+0.6
LONT	**Longtian** baz=202	1.35	204	eP	Pn	04 11 28.6	-0.1
CHY	**Chiayi** baz=239	1.36	242	eP	Pn	04 11 31.2	+2.4
CHY	baz=239			eS	Sn	04 11 50.8	+4.3
WTP	**Ta-pu** baz=226	1.36	229	eP	Pn	04 11 30.6	+1.7
WTP	baz=226			eS	Sn	04 11 50.7	+4.1
TWG	**Pinlang** baz=202	1.46	204	eP	Pn	04 11 29.0	-1.1
SNST	**Tainan City** baz=228	1.46	231	eP	Pg	04 11 31.7	-0.8
SNST	baz=228			eS	Sn	04 11 53.0	+4.0
CHN1	**Nanshi** baz=227	1.46	229	⇓eP	Pg	04 11 32.4	-0.2
CHN1	baz=227			eS	Sn	04 11 52.8	+3.8
LDUT	**Ludao** baz=188	1.49	189	eP	Pn	04 11 29.6	-1.1
LDUT	baz=188			eS	Sb	04 11 48.9	-1.6
PCYT	**Pengchaiyu** baz=14	1.50	12	eP	Pn	04 11 31.5	+0.7
WSL	**Shuilin Townsh** baz=243	1.51	246	eP	Pg	04 11 32.7	-0.7
WSL	baz=243			eS	Sn	04 11 54.3	+4.1
ICHU	**Yijhu** baz=237	1.54	240	eP	Pg	04 11 33.9	-0.2
ICHU	baz=237			eS	Sg	04 11 55.4	+1.2
ECL	**Taimali** baz=203	1.70	205	eP	Pb	04 11 34.2	-1.2
SSD	**Sandimen** baz=214	1.72	216	eP	Pg	04 11 35.8	-1.7
SSD	baz=214			eS	Sg	04 11 59.9	-0.1
MASBT	**Mashibuluo** baz=212	1.83	213	eP	Pg	04 11 37.0	-2.6
MASBT	baz=212			eS	Sg	04 12 01.8	-1.7
IRIF	**Iriomote-Funau**	1.84	84	eP	Pn	04 11 35.9	+0.5
HATJ	**Hateruma jima**	1.90	92	eS	Sn	04 12 00.7	+0.8
PHUB	**P'eng-hu** baz=251	2.07	253	eP	Pb	04 11 39.8	-1.9
PHUB	baz=251			eS	Sb	04 12 06.8	-0.4
JKRS	**Kuro-shima**	2.09	87	P	Pn	04 11 39.8	+1.0
JKRS				eS	Sn	04 12 07.4	+2.9
SLIU	**Shizi** baz=203	2.11	204	eP	Pg	04 11 42.8	-2.1
JIJ	**Ishigaki jima**	2.22	84	iP	Pn	04 11 41.0	+0.4
JIJ				eS	Sn	04 12 08.1	+0.4
VWUC	**VWUC** baz=291	2.23	292	eP	Pn	04 11 41.2	+0.3
VWUC	baz=291			eS	Sn	04 12 07.9	-0.3
JISG	**Ishigakijimahi**	2.40	79	P	Pn	04 11 43.7	+0.6
JISG				S	Sn	04 12 12.8	+0.7
MATB	**Ma-tsu** baz=321	2.56	321	eP	Pn	04 11 45.6	+0.2
MATB	baz=321			eS	Sn	04 12 16.0	-0.3
JTJ	**Tarama**	2.76	79	eS	Sn	04 12 22.8	+1.8
KNMB	**Chin-men Tao** baz=275	3.06	277	eP	Pn	04 11 53.0	+0.8
KNMB	baz=275			eS	Sn	04 12 28.1	-0.5
MHZQ	**Yeshan** baz=308	3.12	309	eP	Pn	04 11 53.5	+0.4
MHZQ	baz=308			eS	Sn	04 12 29.9	-0.1
JOW	**Kunigami** 1.1nm,0.3s,baz=270,slow=20,SNR=1.3 5.0nm,0.5s	6.49	64	Pn	Pn	04 12 38.8	-0.6
KSRS	**Korea Array** 0.1nm,0.3s,baz=199,slow=12,SNR=6.9	14.28	20	Pn	P	04 14 32.6	-0.6
JCJ	**Chichijima** comp=Z,32nm,18.4s,baz=75,slow=35	18.68	77	LR	LR	04 21 52.7	
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=108,slow=12,SNR=5.1 0.5nm,0.6s	38.70	316	P	P	04 18 28.8	+1.1
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=344,slow=8.9,SNR=5.9 0.6nm,0.6s	45.52	163	P	P	04 19 22.1	-1.4
ASAR	**Alice Springs** 0.3nm,0.8s,baz=340,slow=7.9,SNR=2.4 0.3nm,0.8s	48.98	165	P	P	04 19 49.5	-0.9
YKA	**Yellowknife Ar** 0.9nm,0.9s,baz=312,slow=4.6,SNR=2.3 0.9nm,0.9s	82.81	23	P	P	04 23 26.8	-0.9

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*KRSC **15** 04:13:42.3±1.1, 51°.54N×158°.18E, h80^{km}±12^{km}, ML5.2*

*MOS **15** 04:13:42.8±1.0, 51°.55N×158°.08E, h85^{km}, mb4.4/21, MS3.2/9, Error ellipse: s-maj=8.9km s-min=3.6km az=78.9*

*NEIC **15** 04:13:44.6±1.5, 51°.67N±0°.08×157°.9E±0°.1, h85^{km}±5^{km}, mb4.7/274, Error ellipse: s-maj=12.8km s-min=9.9km az=126.0*

*IDC **15** 04:13:46.6±1.0, 51°.75N×157°.78E, h104^{km}±8^{km}, mb4.0/26, mbtmp4.3/30, MS3.3/25, Error ellipse: s-maj=13.1km s-min=8.5km az=136.0*

ISC 15 04:13:43.4±0.6**, 51°.56N**±0°.04×**158°.11E**±0°.04**, h79**^{km}±4^{km}**, n547, σ1^{s}.24**/458**, mb4.6**/177**, 4C-9D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	0.26	356	PN	Pn	04 13 55.5	+0.1
KDTR				S	Sn	04 14 03.6	-0.6
KDTR	**Khodutka, Kamc**	0.26	356	eP	Pn	04 13 55.5	+0.1
KDTR				eS	Sn	04 14 03.6	-0.6
PAU	**Pauzhetka**	0.81	264	PN	Pn	04 14 01.0	+0.8
PAU				S	Sn	04 14 13.3	+0.5
PAU	**Pauzhetka**	0.81	264	eP	Pn	04 14 01.0	+0.8
PAU				eS	Sn	04 14 13.3	+0.5
ASAK	**Asacha**	0.84	351	PN	Pn	04 14 01.0	+0.3
ASAK	**Asacha**	0.84	351	eP	Pn	04 14 01.0	+0.3
RUS	**Russkaya**	0.92	16	PN	Pn	04 14 01.3	-0.1
RUS	**Russkaya**	0.92	16	eP	Pn	04 14 01.3	-0.1
MTVR	**Mutnovka**	0.93	3	PN	Pn	04 14 02.1	+0.3
MTVR	**Mutnovka**	0.93	3	eP	Pn	04 14 02.1	+0.3
GRL	**Gorelyy**	1.00	359	PN	Pn	04 14 03.2	+0.6
GRL				S	Sn	04 14 17.0	+0.2
GRL	**Gorelyy**	1.00	359	eP	Pn	04 14 03.2	+0.6
GRL				eS	Sn	04 14 17.0	+0.2
MIPR	**Malaya Ipel'ka**	1.10	311	PN	Pn	04 14 04.1	+0.4
MIPR				S	Sn	04 14 18.7	-0.2
MIPR	**Malaya Ipel'ka**	1.10	311	eP	Pn	04 14 04.1	+0.4
MIPR				eS	Sn	04 14 18.7	-0.2
KRMR	**Karymshinskiy**	1.28	1	PN	Pn	04 14 06.6	+0.8
KRMR				S	Sn	04 14 23.9	+1.2
KRMR	**Karymshinskiy**	1.28	1	eP	Pn	04 14 06.6	+0.8
KRMR				eS	Sn	04 14 23.9	+1.2
APC	**Apacha**	1.49	337	PN	Pn	04 14 09.3	+0.7
APC				S	Sn	04 14 28.7	+1.2
APC	**Apacha**	1.49	337	eP	Pn	04 14 09.3	+0.7
APC				eS	Sn	04 14 28.7	+1.2
PET	**Petropavlovsk**	1.51	13		Pn	04 14 09.4	+0.5
PET	**Petropavlovsk**	1.51	13	PN	Pn	04 14 09.3	+0.5
PET				S	Sn	04 14 28.5	+0.5
PET	**Petropavlovsk**	1.51	13	eP	Pn	04 14 09.3	+0.5
PET				eS	Sn	04 14 28.5	+0.5
SKR	**Severo-Kuril’s**	1.53	236	d iPN	Pn	04 14 09.7	+0.7
SKR	**Severo-Kuril’s**	1.53	236	eP	Pn	04 14 09.8	+0.7
SKR				eS	Sn	04 14 28.2	-0.2
DALK	**Dalny**	1.53	15	PN	Pn	04 14 09.7	+0.6
DALK				S	Sn	04 14 28.9	+0.4
DALK	**Dalny**	1.53	15	eP	Pn	04 14 09.7	+0.6
DALK				eS	Sn	04 14 28.9	+0.4
PEA0B	**Petropavlovsk-**	1.58	351		Pn	04 14 10.4	+0.6
PEA0B	**Petropavlovsk-**	1.58	351	d iPN	Pn	04 14 10.3	+0.6
PETK	**Petropavlovsk-** 128nm,0.4s,baz=148,slow=13,SNR=640	1.58	351	P	Pn	04 14 09.4	-0.3
PETK	252nm,0.5s,baz=122,slow=16,SNR=7.5			S	Sn	04 14 30.9	+1.4
PETK	comp=Z,120nm,20.2s,baz=159,slow=34			LR	LR	04 14 32.6	
UGLR	**Uglovaya**	1.71	15	PN	Pn	04 14 12.7	+1.1

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UGLR  Uglovaya          1.71  15 eP    Pn    04 14 12.7 +1.1
AVH   Avacha            1.76  12  PN   Pn    04 14 13.6 +1.5
AVH   Avacha            1.76  12 eP    Pn    04 14 13.6 +1.5
SMAR  Somma             1.76  14  PN   Pn    04 14 13.2 +0.8
SMAR  Somma             1.76  14 eP    Pn    04 14 13.2 +0.8
KOK   Koryaka           1.77  10  PN   Pn    04 14 14.0 +1.7
KOK   Koryaka           1.77  10 eP    Pn    04 14 14.0 +1.7
NLC   Nalytchevo        1.79  25  PN   Pn    04 14 12.0 -0.4
NLC                                S   Sn    04 14 33.3 -1.2
NLC   Nalytchevo        1.79  25 eP    Pn    04 14 12.0 -0.4
NLC                              eS    Sn    04 14 33.3 -1.2
SDLR  Sedlovina         1.79  15  PN   Pn    04 14 13.3 +0.7
SDLR  Sedlovina         1.79  15 eP    Pn    04 14 13.3 +0.7
KRER  Koryakskii        1.80  12  PN   Pn    04 14 14.1 +1.3
KRER  Koryakskii        1.80  12 eP    Pn    04 14 14.1 +1.3
KRX   Arik              1.84  10  PN   Pn    04 14 14.7 +1.4
KRX   Arik              1.84  10 eP    Pn    04 14 14.7 +1.4
SPN   Mys Shipunski     1.94  37  PN   Pn    04 14 15.2 +0.7
SPN                                S   Sn    04 14 38.9 +0.8
SPN   Mys Shipunski     1.94  37 eP    Pn    04 14 15.2 +0.7
SPN                              eS    Sn    04 14 38.9 +0.8
GNL   Ganaly            2.15 357  PN   Pn    04 14 18.8 +1.5
GNL   Ganaly            2.15 357 eP    Pn    04 14 18.8 +1.5
KII   Karymskiy         2.62  18  PN   Pn    04 14 25.9 +2.3
KII   Karymskiy         2.62  18 eP    Pn    04 14 25.9 +2.3
MKZ   Mys Kozlova       3.72  35  PN   Pn    04 14 38.5 +0.1
MKZ   Mys Kozlova       3.72  35 eP    Pn    04 14 38.5 +0.1
TUMD  Tumrok D          3.90  20 eP    Pn    04 14 42.5 +1.5
TUMR  Tumrok            3.93  17  PN   Pn    04 14 42.5 +1.1
TUMR  Tumrok            3.93  17 eP    Pn    04 14 43.8 +2.4
ESO   Esso              4.39   4  PN   Pn    04 14 49.5 +1.9
ESO   Esso              4.39   4 eP    Pn    04 14 49.5 +1.9
KMNR  Kamenistaya       4.40  16  PN   Pn    04 14 50.4 +2.6
KMNR  Kamenistaya       4.40  16 eP    Pn    04 14 50.4 +2.6
KIRR  Kirishev          4.60  16  PN   Pn    04 14 54.2 +3.6
KIRR  Kirishev          4.60  16 eP    Pn    04 14 54.2 +3.6
SMKR  Semkarok          5.41  20  PN   Pn    04 15 03.0 +1.4
SMKR  Semkarok          5.41  20 eP    Pn    04 15 03.0 +1.4
SRKR  Sorokina          5.42  18  PN   Pn    04 15 03.4 +1.8
SRKR  Sorokina          5.42  18 eP    Pn    04 15 03.4 +1.8
KBTR  Krutoberegovo     5.43  29  PN   Pn    04 15 02.8 +1.1
KBTR  Krutoberegovo     5.43  29 eP    Pn    04 15 02.8 +1.1
KBG   Krutoberegovo     5.44  28  PN   Pn    04 15 03.1 +1.3
KBG   Krutoberegovo     5.44  28 eP    Pn    04 15 03.1 +1.3
BKI   Bering            5.96  49  PN   Pn    04 15 08.7 -0.2
BKI   Bering            5.96  49 eP    Pn    04 15 08.7 -0.2
MA2   Magadan           9.04 336  P    Pn    04 15 50.6 -0.4
      9.1nm,0.6s,baz=135,slow=7.9,SNR=5.0
MA2                               LR   LR    04 19 15.2
      comp=Z,180nm,19.5s,baz=174,slow=37
MA2   Magadan           9.04 336 i PN  Pn    04 15 51.9 +0.9
MA2                               pmax pmax
      comp=Z,4.0nm,0.4s
MA2                               MLR  MLR
      comp=Z,174nm,13.0s
KUR   Kuril'sk          9.29 231  PN   Pn    04 15 55.2 +0.8
KUR                               S    Sn    04 17 39.0 +1.9
KUR                               pmax pmax
      comp=Z,76nm,0.6s
SMY   Shemya            9.90  77  Pn   Pn    04 16 03.6 +0.8
SMY   Shemya            9.90  77  PN   Pn    04 16 03.6 +0.8
UGL   Uglegorsk        10.55 263 ePN   Pn    04 16 16.0 +4.4
UGL                               pmax pmax
      comp=Z,220nm,0.8s
SHO   Shikotan         10.80 229 ePN   Pn    04 16 10.9 -4.1
YSS   Yuzh-Sakhalins   11.04 251       Pn    04 16 19.2 +1.0
YSS   Yuzh-Sakhalins   11.04 251dePN   Pn    04 16 20.8 +2.6
YSS                               pmax pmax
      comp=Z,70nm,0.7s
YSS                               pmax pmax
      comp=Z,200nm,3.0s
YSS                               MLR  MLR
      comp=Z,200nm,14.0s
YUK   Yuzh-Kuril'sk    11.14 232 i PN  Pn    04 16 19.8 +0.1
SEY   Seymchan         11.81 347  P    Pn    04 16 28.2 -0.4
      comp=Z,3.7nm,0.9s,baz=326,slow=1.3,SNR=9.6
SEY   Seymchan         11.81 347 i PN  Pn    04 16 29.7 +1.0
SEY                               pmax pmax
      comp=Z,6.0nm,1.0s
SEY                               MLR  MLR
      comp=Z,186nm,13.0s
JKA   Kamikawa-asahi   12.79 240  Pn   Pn    04 16 42.0 +0.1
ASAJ  Asahikawa        12.79 240  P    Pn    04 16 43.0 +1.0
      comp=Z,33nm,0.6s,baz=70,slow=12,SNR=20
ASAJ                              LR   LR    04 21 00.8
      comp=Z,90nm,20.7s,baz=44,slow=34
ASAJ  Asahikawa        12.79 240  PN   Pn    04 16 43.0 +1.0
GRNR  Gornyy           13.63 275⇓iP    Pn    04 16 53.7 +0.6
GRNR                              pmax pmax
      comp=Z,3.0nm,1.1s
GRNR                              MLR  MLR
      comp=E,100nm,13.0s
GRNR                              MLR  MLR
      comp=N,100nm,16.0s
GRNR                              MLR  MLR
      comp=Z,100nm,14.0s
ERM   Erimo            13.97 233  Pn   Pn    04 16 55.9 -1.7
ERM   Erimo            13.97 233 i P   Pn    04 16 57.1 -0.5
TEY   Ternei           15.70 254⇑eP    P     04 17 23.4 +1.2
TEY                               pmax pmax
      comp=E,20nm,0.7s
TEY                               pmax pmax
      comp=Z,20nm,0.7s
KLR   Kul'dur          16.94 272  P    P     04 17 37.2 +1.3
      comp=Z,5.9nm,0.9s,baz=64,slow=13,SNR=12
KLR                               PcP  PcP   04 22 17.8 +0.8
      comp=Z,0.3nm,0.3s,baz=176,slow=4.8,SNR=4.0
KLR                               LR   LR    04 23 50.3
      comp=Z,101nm,19.4s,baz=52,slow=36
KLR   Kul'dur          16.94 272 i P   P     04 17 36.2 +0.3
KLR                               pmax pmax
      comp=Z,10.0nm,1.0s
KLR                               MLR  MLR
      comp=Z,96nm,13.0s
BILL  Bilibino         17.01  11       Pn    04 17 35.7 -0.2
BILL  Bilibino         17.01  11 i P   Pn    04 17 34.2 -1.7
BILL                              pmax pmax
      comp=Z,7.0nm,1.7s
BILL                              MLR  MLR
      comp=Z,212nm,13.0s
YAK   Yakutsk          18.60 315  LR   LR    04 25 00.4
      comp=Z,47nm,19.0s,baz=89,slow=37
YAK   Yakutsk          18.60 315 eP    Pn    04 17 56.3 +1.1
YAK                              eS    S     04 21 19.8 -1.4
YAK                               pmax pmax
      comp=Z,12nm,0.8s
YAK                               smax smax
      comp=N,21nm,1.6s
YAK                               smax smax
      comp=E,10.0nm,1.6s
USRK  Ussuriysk Ar.    18.93 257  P    P     04 17 57.5 -0.4
      comp=E,3.9nm,0.7s,baz=61,slow=12,SNR=5.6
USRK                              LR   LR    04 25 12.3
      comp=E,76nm,18.8s,baz=68,slow=36
JSD   Sado             19.43 234       P     04 18 02.2 -1.1
JSD                               IAmb IAmb  04 18 06.5
      comp=Z,40nm,1.1s
VLA   Vladivostok      19.59 255 i P   P     04 18 05.7 +0.7
VLA                               pmax pmax
      comp=Z,33nm,0.8s
VLA                               MLR  MLR
      comp=Z,216nm,12.0s
JYT   Yasato           19.95 227       P     04 18 08.6 -0.3
MDJ   Mudanjiang       20.19 261  P    P     04 18 10.7 -0.7
MDJ   Mudanjiang       20.19 261  P    P     04 18 11.0 -0.4
MDJ                               pP   pP    04 18 25.6 -1.8
MDJ                               sP   sP    04 18 37.6 +0.2
MDJ                               pmax pmax
      comp=Z,10.0nm,0.8s
MDJ                               pmax pmax
      comp=Z,82nm,4.9s
MJB9  Matsu-Tunnel     20.63 231  P    P     04 18 16.5 +0.2
MAJO  Matsushiro       20.63 231  P    P     04 18 16.3 -0.1
MAJO  Matsushiro       20.63 231  P    P     04 18 16.3 -0.1
MAJO                              pmax pmax
      comp=Z,43nm,0.6s
MJAR  Matsushiro Arr   20.63 231  P    P     04 18 16.5 +0.2
      comp=Z,23nm,0.7s,baz=24,slow=11,SNR=81
MJAR                              LR   LR    04 26 03.6
      comp=Z,63nm,21.5s,baz=40,slow=36
      comp=Z,23nm,0.7s
MJAR  Matsushiro Arr   20.63 231  P    P     04 18 16.3 -0.1
MJAR                              IAmb IAmb  04 18 20.0
      comp=Z,24nm,0.9s
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MJAR  Matsushiro Arr   20.63 231  P    P     04 18 16.3 -0.1
MJAR                              pmax pmax
      comp=Z,24nm,0.9s
BNX   BinXian          21.00 266 ⇓P    P     04 18 21.5 +1.3
BNX                               pmax pmax
      comp=Z,13nm,0.5s
BNX                               pmax pmax
      comp=Z,180nm,4.4s
JGF   Kuroka           21.80 231  P    P     04 18 28.1 -0.7
INU   Inuyama          22.16 231  P    P     04 18 32.9 +0.2
CN2   Changchun        23.16 263 eP    P     04 18 42.1 -0.9
CN2                               pmax pmax
      comp=Z,10.0nm,0.6s
TIXI  Tiksi            24.01 338  P    P     04 18 50.3  0.0
      comp=Z,2.4nm,0.5s,baz=268,slow=23,SNR=8.2
TIXI                              LR   LR    04 28 32.4
      comp=Z,92nm,18.4s,baz=181,slow=37
      comp=Z,2.4nm,0.5s
TIXI  Tiksi            24.01 338  P    P     04 18 49.7 -0.6
TIXI  Tiksi            24.01 338ceP    P     04 18 50.6 +0.3
HIA   Hailar           24.37 280  P    P     04 18 52.3 -1.6
HIA                               IAmb IAmb  04 19 12.1
      comp=Z,28nm,1.4s
HIA   Hailar           24.37 280  P    P     04 18 52.3 -1.6
HIA                               pmax pmax
      comp=Z,28nm,1.4s
JHS   Saijyo           24.41 237  IAmb IAmb  04 18 58.1
      comp=Z,27nm,1.0s
KSRS  Korea Array      25.51 248  P    P     04 19 04.7 +0.5
      comp=Z,2.0nm,0.7s,baz=47,slow=9.1,SNR=6.0
KSRS                              LR   LR    04 29 45.8
      comp=Z,21nm,18.3s,baz=40,slow=38
      comp=Z,2.0nm,0.7s
TTA   Tatalina         26.69  47  P    P     04 19 14.6 -0.2
TTA   Tatalina         26.69  47  P    P     04 19 14.6 -0.2
TTA                               pmax pmax
      comp=Z,6.0nm,0.8s
TTA   Tatalina         26.69  47  P    P     04 19 15.3 +0.6
      baz=267,SNR=12
N18K  Kilae Creek      26.69  52  P    P     04 19 16.3 +1.5
      baz=271,SNR=11
JNU   Nakatsue         27.04 238  P    P     04 19 18.6 +0.5
      comp=Z,13nm,0.7s,baz=199,slow=22,SNR=14
      comp=Z,13nm,0.7s
JNU   Nakatsue         27.04 238  IAmb IAmb  04 19 24.1
      comp=Z,15nm,0.7s
O18K  Koktuh Hills     27.06  54  P    P     04 19 19.2 +1.2
      baz=273
P18K  Big Mountain,    27.08  55  P    P     04 19 19.3 +1.0
      baz=274
L19K  White Mountain   27.19  49  P    P     04 19 20.2 +1.0
L19K                                   PcP   04 22 36.7 -0.6
L19K  White Mountain   27.19  49  P    P     04 19 20.0 +0.7
      baz=269
CHIR  Chirikof Islan   27.32  63  P    P     04 19 15.8 -4.6
      baz=281
N19K  Bonanza Creek    27.38  52  P    P     04 19 22.3 +1.3
      baz=272,SNR=7.8
M19K  Big River Lodg   27.41  49  P    P     04 19 22.1 +1.0
      baz=270,SNR=6.2
K20K  Telida           27.59  46  P    P     04 19 23.5 +0.7
      baz=268,SNR=8.2
J20K  Nowinta River    27.61  44  P    P     04 19 23.7 +0.8
J20K                                   PcP   04 22 38.5 +0.3
J20K  Nowinta River    27.61  44  P    P     04 19 23.5 +0.6
      baz=266,SNR=6.8
L20K  Farewell, AK     27.65  48  P    P     04 19 23.9 +0.5
      baz=270
IMAR  Indian Mountai   27.96  41  P    P     04 19 25.8 -0.2
IMAR                              PcP  PcP   04 22 39.2 +0.1
P19K  Oil Pt           28.07  54  P    P     04 19 27.6 +0.5
      baz=275
A21K  Barrow           28.23  29  P    P     04 19 27.9 -0.4
A21K  Barrow           28.23  29  P    P     04 19 28.1 -0.2
      baz=250
H21K  Melozitna Rive   28.31  41  P    P     04 19 29.6 +0.4
      baz=264
O20K  Slope Mountain   28.34  53  P    P     04 19 30.1 +0.6
      baz=275
OHAK  Old Harbor       28.35  59  P    P     04 19 29.4 -0.1
      baz=280
CHUM  Lake Minchumin   28.40  45  P    P     04 19 30.8 +0.9
      baz=268
PPLA  Purkeypile       28.44  47  P    P     04 19 29.3 -1.1
      baz=270
CAST  Castle Rocks     28.49  46  P    P     04 19 31.7 +0.9
      baz=269,SNR=8.0
KDAK  Kodiak Island    28.64  58  P    P     04 19 31.9 -0.2
      comp=Z,4.6nm,0.8s,baz=317,slow=11,SNR=7.5
KDAK                              PcP  PcP   04 22 41.5 +0.7
      comp=Z,2.4nm,0.4s,baz=247,slow=0.4,SNR=9.7
KDAK                              LR   LR    04 31 48.6
      comp=Z,47nm,20.6s,baz=271,slow=38
      comp=Z,4.6nm,0.8s
KDAK  Kodiak Island    28.64  58  IAmb IAmb  04 19 33.1
      comp=Z,4.8nm,0.8s
KDAK  Kodiak Island    28.64  58  P    P     04 19 32.3 +0.2
      baz=279
BPAW  Bear Paw Mtn.    28.99  45  P    P     04 19 35.8 +0.6
BPAW  Bear Paw Mtn.    28.99  45  P    P     04 19 35.7 +0.6
      baz=269,SNR=7.6
CNPM  China Poot       29.09  54  IAmb IAmb  04 19 37.8
      comp=Z,12nm,0.8s
TRF   Thorofare Moun   29.30  46  P    P     04 19 38.7 +0.6
      baz=271,SNR=8.1
BRSE  Bradley Lake S   29.32  54  P    P     04 19 38.3 +0.2
      baz=277,SNR=9.1
CUT   Chulitna         29.33  48  P    P     04 19 38.1 -0.1
      baz=273
COLD  Coldfoot         29.52  38  P    P     04 19 40.3 +0.4
COLD  Coldfoot         29.52  38  P    P     04 19 40.2 +0.4
      baz=264
H23K  Yukon River      29.67  41  P    P     04 19 41.9 +0.7
      baz=267,SNR=8.5
RC01  Rabbit Creek A   29.67  51  P    P     04 19 42.1 +0.8
      baz=276
NEA2  Nenana           29.83  44  P    P     04 19 42.9 +0.3
      baz=270,SNR=7.8
MCK   McKinley         29.90  45  P    P     04 19 43.8 +0.5
MCK   McKinley         29.90  45  P    P     04 19 43.8 +0.5
MCK                               pmax pmax
      comp=Z,7.0nm,0.8s
MCK   McKinley         29.90  45  P    P     04 19 43.7 +0.5
      baz=272,SNR=5.1
SEW   Seward           29.92  53  IAmb IAmb  04 19 44.0
      comp=Z,13nm,0.9s
SEW   Seward           29.92  53  P    P     04 19 43.2 -0.2
      baz=278,SNR=8.4
PMR   Palmer           29.92  50  P    P     04 19 43.5 +0.1
      baz=275
TOLK  Toolik Lake Re   29.93  36  P    P     04 19 43.8 +0.3
      baz=262,SNR=6.1
RND   Reindeer         29.94  46  IAmb IAmb  04 19 44.4
      comp=Z,10nm,0.9s
WRH   Wood River Hil   30.26  44  P    P     04 19 47.0 +0.7
WRH                               IAmb IAmb  04 19 47.8
      comp=Z,11nm,1.0s
WRH                                    PcP   04 22 44.8  0.0
KNK   Knik Glacier     30.26  50  P    P     04 19 46.8 +0.4
      baz=276,SNR=17
SML   Sawmill          30.28  49  P    P     04 19 47.4 +0.7
      baz=275,SNR=24
H24K  Noodor Dome      30.36  41  P    P     04 19 48.1 +0.9
H24K                                   PcP   04 22 45.5 +0.3
H24K  Noodor Dome      30.36  41  P    P     04 19 47.8 +0.5
      baz=269
COLA  College          30.36  43ceP    P     04 19 48.3 +1.1
COLA                              pmax pmax
      comp=Z,5.0nm,0.7s
WAT6  Susitna Watana   30.50  48  P    P     04 19 48.5 -0.2
      baz=275
M23K  Glacier View     30.57  49  P    P     04 19 49.4 +0.2
      baz=276
DHY   Denali Highway   30.63  47  P    P     04 19 50.0 +0.1
      baz=274,SNR=7.6
HDA   Harding Lake     30.75  44  IAmb IAmb  04 19 51.4
      comp=Z,5.6nm,0.6s
HDA   Harding Lake     30.75  44  P    P     04 19 50.5 -0.2
      baz=272,SNR=11
SCM   Sheep Creek Mo   30.75  49  IAmb IAmb  04 19 52.6
      comp=Z,18nm,0.8s
SCM   Sheep Creek Mo   30.75  49  P    P     04 19 51.2 +0.4
      baz=276,SNR=16
IL31                   30.77  43  P    P     04 19 51.0 +0.1
ILAR  Eielson Array    30.77  43  P    P     04 19 50.4 -0.5
      comp=Z,4.3nm,0.8s,baz=260,slow=7.9,SNR=62
ILAR                              PcP  PcP   04 22 44.8 -1.5
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      comp=Z,1.7nm,0.7s,baz=280,slow=3.5,SNR=10
      comp=Z,4.3nm,0.8s
GLI   Glacier Island   30.98  51  P    P     04 19 52.9 +0.2
      baz=278
M24K  Tolsona, Glenn   31.27  48  IAmb IAmb  04 19 57.2
      comp=Z,8.1nm,0.7s
M24K  Tolsona, Glenn   31.27  48  P    P     04 19 56.6 +1.2
      baz=277
K24K  Donnelly Dome    31.30  45  P    P     04 19 55.4 -0.1
      baz=274,SNR=7.4
J25K  Salcha River,    31.43  44  P    P     04 19 55.9 -0.9
J25K                                   PcP   04 22 48.3 +0.3
J25K  Salcha River,    31.43  44  P    P     04 19 55.8 -0.9
      baz=273,SNR=7.3
KLU   Klutina          31.46  50  P    P     04 19 57.8 +0.7
      baz=278,SNR=6.6
PAX   Paxson           31.50  47  P    P     04 19 57.6 +0.2
PAX                                    PcP   04 22 48.6 +0.3
PAX   Paxson           31.50  47  P    P     04 19 57.4  0.0
      baz=276
Q23K  Middleton Isla   31.57  54  P    P     04 19 59.1 +1.1
      baz=281
DIV   Divide           31.58  50  IAmb IAmb  04 19 59.4
      comp=Z,7.6nm,0.8s
EYAK  Cordova Ski Ar   31.68  51  P    P     04 19 59.4 +0.5
      baz=280
BMAR  Burnt Mountain   31.70  38  P    P     04 19 59.7 +0.5
BMAR                                   PcP   04 22 49.6 +0.8
HARP  HAARP            31.71  48  P    P     04 19 60.0 +0.8
      baz=277
N25K  Chitina, Valde   32.07  49  P    P     04 20 03.3 +0.8
      baz=279,SNR=6.7
BMRM  Bremner River    32.17  50  IAmb IAmb  04 20 04.9
      comp=Z,10nm,0.9s
BMRM  Bremner River    32.17  50  P    P     04 20 03.9 +0.6
      baz=280,SNR=9.0
L26K  Log Cabin Wild   32.46  46  P    P     04 20 06.2 +0.5
      baz=277
H11N2 WAKE ISLAND Hy   32.50 164  T    T     04 54 15.2
      baz=349,slow=74,SNR=996
H11N3 WAKE ISLAND Hy   32.52 164  T    T     04 54 15.0
      baz=349,slow=74,SNR=873
H11N1 WAKE ISLAND Hy   32.52 164  T    T     04 54 17.7
      baz=349,SNR=162
M26K  Nabesna, AK      32.70  48  P    P     04 20 08.1 +0.2
M26K                              IAmb IAmb  04 20 10.8
      comp=Z,9.4nm,1.1s
M26K                              PcP  PcP   04 22 51.4 -0.2
M26K  Nabesna, AK      32.70  48  P    P     04 20 09.7 +1.7
      baz=279,SNR=7.4
SONM  Songino Array    33.08 284  PcP  PcP   04 22 52.6 -0.4
      comp=Z,1.8nm,0.9s,baz=78,slow=2.8,SNR=6.8
SONM                              ScP  ScP   04 26 28.8 -1.1
      comp=Z,0.8nm,0.7s,baz=90,slow=4.3,SNR=5.3
SONM                              LR   LR    04 33 42.0
      comp=Z,53nm,21.4s,baz=129,slow=36
SONM  Songino Array    33.08 284  P    P     04 20 11.6 +0.1
WAX   Waxell Ridge     33.11  51  IAmb IAmb  04 20 13.6
      comp=Z,12nm,0.9s
L27K  Beaver Creek,    33.14  46  IAmb IAmb  04 20 13.9
      comp=Z,15nm,0.9s
L27K  Beaver Creek,    33.14  46  P    P     04 20 13.1 +1.4
      baz=279,SNR=26
BCAR  Beaver Creek A   33.16  46  P    P     04 20 13.1 +1.2
BCAR                              PcP  PcP   04 22 53.7 +0.9
EGAK  Eagle            33.22  43  IAmb IAmb  04 20 12.8
      comp=Z,6.9nm,0.8s
EGAK  Eagle            33.22  43  P    P     04 20 12.1 -0.2
      baz=276,SNR=16
M27K  Edge Creek, AK   33.23  47  IAmb IAmb  04 20 15.0
      comp=Z,10nm,1.1s
M27K  Edge Creek, AK   33.23  47  P    P     04 20 14.1 +1.5
      baz=280
ISLE  Juniper Island   33.33  51  IAmb IAmb  04 20 15.3
      comp=Z,8.3nm,1.0s
HHC   Hu-ho-hao-te     33.41 270 eP    P     04 20 13.6 -0.8
HHC                               pmax pmax
      comp=Z,17nm,1.0s
HHC                               pmax pmax
      comp=Z,98nm,5.6s
BARN  Barnard Glacie   33.56  50  IAmb IAmb  04 20 17.7
      comp=Z,7.3nm,0.7s
GRNC  Granite Creek    33.58  50  IAmb IAmb  04 20 17.7
      comp=Z,7.2nm,0.8s
YAH   Yahtse           33.66  51  IAmb IAmb  04 20 18.8
      comp=Z,13nm,0.8s
H11S1 WAKE ISLAND Hy   33.67 165  T    T     04 55 42.9
      baz=350,slow=76,SNR=942
H11S3 WAKE ISLAND Hy   33.68 165  T    T     04 55 42.6
      baz=350,slow=76,SNR=1147
BVCY  Beaver Creek     33.68  47  P    P     04 20 17.9 +1.5
      baz=280
H11S2 WAKE ISLAND Hy   33.69 165  T    T     04 55 44.2
      baz=350,slow=76,SNR=647
CTG   Chitna Glacier   33.73  50  P    P     04 20 18.2 +1.2
      baz=282,SNR=8.3
ZAK   Zakamensk        33.87 290 eP    P     04 20 26.5 +8.3
ZAK                               pmax pmax
      comp=Z,4.0nm,1.5s
TABL  Table Mountain   33.94  51  IAmb IAmb  04 20 20.7
      comp=Z,9.1nm,0.8s
YUK3  Moose Creek      33.99  48  P    P     04 20 20.1 +0.8
      baz=282,SNR=8.6
DAWY  Dawson           34.07  44  P    P     04 20 20.2 +0.4
DAWY                                   PcP   04 22 55.2 -0.2
DAWY  Dawson           34.07  44  P    P     04 20 19.8  0.0
      baz=279
I29M  Ogilvie Camp,    34.35  42  P    P     04 20 22.4 +0.3
      baz=278
PINM  Pinnacle         34.45  51  P    P     04 20 24.2 +1.1
      baz=284
NJ2   Nanjing          34.60 251 eP    P     04 20 24.9 +0.3
NJ2                               pmax pmax
      comp=Z,9.0nm,0.5s
EPYK  Eagle Plains     34.86  40  P    P     04 20 27.3 +0.8
      baz=278
YUK4  Talbot Arm       34.93  49  P    P     04 20 25.3 -2.1
      baz=283
YUK6  Outpost Mounta   35.15  49  P    P     04 20 30.6 +1.2
      baz=284
M30M  Minto, Yukon     35.50  46  P    P     04 20 33.4 +1.3
      baz=283
HYT   Haines Junctio   35.59  49  IAmb IAmb  04 20 35.4
      comp=Z,6.8nm,1.1s
HYT   Haines Junctio   35.59  49  P    P     04 20 34.6 +1.6
      baz=285,SNR=7.0
N30M  Aishikik Lake    35.63  48  P    P     04 20 34.5 +1.3
      baz=284
INK   Inuvik           35.83  36  P    P     04 20 34.5 -0.3
INK   Inuvik           35.83  36  P    P     04 20 34.5 -0.3
INK                               pmax pmax
      comp=Z,5.0nm,0.9s
INK   Inuvik           35.83  36  P    P     04 20 35.5 +0.8
      baz=278
N31M  Braeburn, Yuko   36.23  48  IAmb IAmb  04 20 41.2
      comp=Z,7.0nm,0.8s
N31M  Braeburn, Yuko   36.23  48  P    P     04 20 40.6 +2.3
      baz=285,SNR=7.5
NRIK  Noril'sk         36.48 326  LR   LR    04 37 40.0
      comp=Z,48nm,18.2s,baz=85,slow=40
NRIK  Noril'sk         36.48 326 i P   P     04 20 40.1 -0.2
NRIK                              pmax pmax
      comp=Z,3.0nm,1.5s
NRIK                              MLR  MLR
      comp=Z,49nm,19.0s
M31M  Drury Creek, Y   36.68  46  IAmb IAmb  04 20 44.7
      comp=Z,7.0nm,0.9s
M31M  Drury Creek, Y   36.68  46  P    P     04 20 43.9 +1.8
      baz=285,SNR=12
WHY   Whitehorse       36.88  49  IAmb IAmb  04 20 46.7
      comp=Z,7.9nm,0.8s
WHY   Whitehorse       36.88  49  P    P     04 20 45.8 +1.9
      baz=287,SNR=13
SKAG  Skagway          37.02  51  IAmb IAmb  04 20 48.1
      comp=Z,10nm,0.9s
SKAG  Skagway          37.02  51  P    P     04 20 47.4 +2.4
      baz=288,SNR=5.7
SIT   Sitka            37.82  55  P    P     04 20 54.2 +2.4
      baz=291
JIS   Juneau Island    37.87  53  IAmb IAmb  04 20 55.2
      comp=Z,8.0nm,0.9s
P33M  Teslin, Yukon    37.99  49  IAmb IAmb  04 20 55.9
      comp=Z,7.4nm,1.0s
P33M  Teslin, Yukon    37.99  49  P    P     04 20 55.1 +1.8
      baz=289,SNR=13
C36M  Paulatuk         39.01  33  P    P     04 21 02.0 +0.4
      baz=284
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GUMO  Guam              39.35 201 LR     LR     04 35 07.2
      comp=Z,21nm,21.8s,baz=100,slow=32
CRAG  Craig             39.57  56 P      P      04 21 09.0 +2.7
      baz=294
WRAK  Wrangell Islan    39.59  55 IAmb   IAmb   04 21 10.1
      comp=Z,10.0nm,0.8s
WRAK  Wrangell Islan    39.59  55 P      P      04 21 09.4 +2.9
      baz=294
S34M  Telegraph Cree    39.61  52 P      P      04 21 09.3 +2.6
      baz=293,SNR=5.7
DLBC  Dease Lake        39.95  51 IAmb   IAmb   04 21 13.1
      comp=Z,7.0nm,0.9s
GRNB  Grenville Isla    41.93  57 P      P      04 21 27.4 +1.5
GRNB                              IAmb   IAmb   04 21 29.4
      comp=Z,14nm,0.8s
ZALV  Zalesovo Beam     42.59 303 LR     LR     04 39 22.1
      comp=Z,27nm,19.7s,baz=128,slow=36
BBB   Bella Bella       43.70  59 LR     LR     04 36 48.9
      comp=Z,52nm,21.0s,baz=314,slow=32
EUNU  Eureka            43.73  13 P      P      04 21 39.6 -0.6
EUNU                              IAmb   IAmb   04 22 08.2
      comp=Z,9.1nm,0.8s
CD2   Chengdu           44.60 264 eP     P      04 21 46.0 -1.7
YKA   Yellowknife Ar    45.12  41 P      P      04 21 51.8 +0.4
      comp=Z,3.6nm,0.7s,baz=299,slow=7.9,SNR=41
YKA                               PcP    PcP    04 23 31.3 +0.9
      comp=Z,1.0nm,0.9s,baz=306,slow=2.8,SNR=6.5
YKA                               ScP    ScP    04 27 14.8 -0.9
      comp=Z,0.2nm,0.5s,baz=302,slow=5.5,SNR=2.5
      comp=Z,3.6nm,0.7s
WMQ   Urumqi            46.33 289 eP     P      04 22 02.3 +1.1
KURK  Kurchatov         47.51 302 P      P      04 22 08.1 -2.1
KURK  Kurchatov         47.51 302ceP     P      04 22 10.0 -0.2
KURK                              pmax   pmax
      comp=Z,7.0nm,2.5s
KURBB Kurchatov Arra    47.61 302 P      P      04 22 08.5 -2.5
      comp=Z,1.1nm,0.5s,baz=62,slow=7.4,SNR=10
      comp=Z,1.1nm,0.5s
MK31  Makanchi Array    47.73 296 P      P      04 22 09.7 -2.3
MK31  Makanchi Array    47.73 296 P      P      04 22 09.7 -2.3
MK31                              pmax   pmax
      comp=Z,1.0nm,0.8s
MKAR  Makanchi Array    47.73 296 P      P      04 22 09.4 -2.6
      comp=Z,0.7nm,0.5s,baz=60,slow=7.2,SNR=13
MKAR                              ScP    ScP    04 27 25.3 -1.6
      comp=Z,0.7nm,0.6s,baz=43,slow=4.4,SNR=4.9
MKAR                              LR     LR     04 41 23.3
      comp=Z,46nm,21.7s,baz=61,slow=35
      comp=Z,0.7nm,0.5s
MKAR  Makanchi Array    47.73 296 P      P      04 22 10.3 -1.7
MKAR  Makanchi Array    47.73 296 P      P      04 22 10.3 -1.7
D03D  Eldon             48.96  62 P      P      04 22 23.1 +1.7
      baz=306,SNR=5.3
PZH   PanZhiHua         48.96 262 P      P      04 22 22.4 +0.6
PZH                               pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                               pmax   pmax
      comp=Z,120nm,5.5s
B05A  Bryant            49.08  61 P      P      04 22 23.9 +1.6
      baz=306
E03A  Lebam             49.27  63 IAmb   IAmb   04 22 27.3
      comp=Z,12nm,1.0s
D05A  Enumclaw          49.77  62 IAmb   IAmb   04 22 30.6
      comp=Z,12nm,1.0s
E04D  Cinebar           49.82  63 P      P      04 22 30.3 +2.4
      baz=307
BRVK  Borovoye          50.42 309 i P    P      04 22 33.4 +1.0
BRVK                              pmax   pmax
      comp=Z,3.0nm,0.7s
H04D  Lebanon           50.96  65 IAmb   IAmb   04 22 39.6
      comp=Z,7.5nm,0.9s
H04D  Lebanon           50.96  65 P      P      04 22 38.5 +1.9
      baz=308
J01E  Myrtle Point      51.12  67 P      P      04 22 40.4 +2.6
      baz=309
I03D  Drain, OR         51.12  66 P      P      04 22 40.2 +2.4
      baz=308
H04A  Detroit Lake      51.17  64 P      P      04 22 39.7 +1.5
H04A                              IAmb   IAmb   04 22 40.8
      comp=Z,8.8nm,1.0s
C09A  Chrisman Ranch    51.41  59 IAmb   IAmb   04 22 41.9
      comp=Z,8.7nm,0.9s
K02D  Willamette Mer    51.56  67 P      P      04 22 43.5 +2.2
      baz=309
HAWA  Hanford           51.59  61 IAmb   IAmb   04 22 43.6
      comp=Z,9.3nm,1.1s
I04A  Tendick Farm,     51.59  65 P      P      04 22 43.4 +2.0
      baz=309,SNR=6.6
NEW   Newport           51.74  58 IAmb   IAmb   04 22 44.3
      comp=Z,7.1nm,1.1s
NEW   Newport           51.74  58 P      P      04 22 43.7 +1.2
      baz=308,SNR=6.9
I05D  Terrebonne, OR    51.86  64 P      P      04 22 45.1 +1.7
      baz=309
L02F  Cave Junction     51.98  68 P      P      04 22 46.7 +2.4
      baz=309
J04D  Umpqua Nationa    52.11  66 P      P      04 22 47.9 +2.4
      baz=309
PINE  Pine Mountain     52.42  64 P      P      04 22 49.3 +1.5
PINE                              IAmb   IAmb   04 22 51.0
      comp=Z,6.3nm,0.9s
PINE                              PcP    PcP    04 23 58.3 +0.8
J05D  Fort Rock, OR     52.58  65 P      P      04 22 51.5 +2.6
      baz=309,SNR=5.9
L04D  Klamath Falls     52.64  67 P      P      04 22 51.6 +2.2
      baz=310,SNR=6.9
YBH   Yreka Blue Hor    52.72  68 IAmb   IAmb   04 22 53.5
      comp=Z,11nm,1.3s
F10A  Beach Ranch, E    53.11  60 IAmb   IAmb   04 22 54.7
      comp=Z,5.7nm,1.1s
K05A  Summer Lake       53.13  65 P      P      04 22 54.8 +1.8
K05A                              IAmb   IAmb   04 22 56.6
      comp=Z,9.9nm,1.1s
K05A                              PcP    PcP    04 23 59.4 -0.7
ARU   Arti              53.70 317 LR     LR     04 47 45.8
      comp=Z,39nm,19.2s,baz=125,slow=38
ARU   Arti              53.70 317 i P    P      04 22 57.1 +0.4
ARU                               pmax   pmax
      comp=Z,9.0nm,2.5s
ARU                               MLR    MLR
      comp=Z,37nm,19.0s
BMO   Blue Mountains    53.77  61 IAmb   IAmb   04 23 00.0
      comp=Z,4.6nm,0.8s
MSO   Missoula          54.32  58 IAmb   IAmb   04 23 04.3
      comp=Z,12nm,1.1s
MSO   Missoula          54.32  58 P      P      04 23 02.7 +1.2
      baz=310,SNR=9.3
ARCES ARCESS Array B    54.37 341 P      P      04 22 59.3 -2.1
      comp=Z,2.2nm,0.9s,baz=54,slow=9.1,SNR=2.3
      comp=Z,2.2nm,0.9s
ARCES ARCESS Array B    54.37 341 P      P      04 23 01.2 -0.1
ARCES ARCESS Array B    54.37 341 P      P      04 23 01.2 -0.1
GDXM  Geysers           54.56  70 IAmb   IAmb   04 23 07.0
      comp=Z,10.0nm,1.0s
ORV   Oroville          54.83  69 IAmb   IAmb   04 23 07.5
      comp=Z,8.4nm,1.1s
BEKR  Beckworth         55.28  68 IAmb   IAmb   04 23 11.5
      comp=Z,8.7nm,1.1s
MFID  Camas Ranch       55.52  62 IAmb   IAmb   04 23 12.8
      comp=Z,5.6nm,0.9s
SUMG  Summit            55.63   6 P      P      04 23 09.6 -1.3
SUMG                              pP     pP     04 23 29.5 -1.3
SUMG                              IAmb   IAmb   04 23 30.1
      comp=Z,8.3nm,0.8s
SUMG  Summit            55.63   6 P      P      04 23 09.6 -1.3
SUMG                              *PP    pP     04 23 29.5 -1.3
SUMG                              pmax   pmax
      comp=Z,8.0nm,0.8s
SUMG  Summit            55.63   6 i P    P      04 23 10.0 -0.9
EGMT  Eagleton          55.71  54 IAmb   IAmb   04 23 13.9
      comp=Z,15nm,1.4s
EGMT  Eagleton          55.71  54 P      P      04 23 12.5 +1.0
      baz=311,SNR=5.5
PAHR  Pah Rah Range     55.95  67 IAmb   IAmb   04 23 16.3
      comp=Z,13nm,1.4s
HLID  Hailey            56.19  61 IAmb   IAmb   04 23 17.9
      comp=Z,6.4nm,1.1s
HLID  Hailey            56.19  61 P      P      04 23 17.1 +2.0
      baz=312,SNR=9.7
BOZ   Bozeman (W)       56.34  58 P      P      04 23 17.7 +1.6
      baz=312,SNR=20
CMB   Columbia Colle    56.49  70 IAmb   IAmb   04 23 20.2
      comp=Z,7.8nm,1.2s
CMAR  Chiang Mai Arr    56.66 257 P      P      04 23 19.4 +0.9
      comp=Z,2.4nm,0.4s,baz=27,slow=6.9,SNR=12
      comp=Z,2.4nm,0.4s
CMAR  Chiang Mai Arr    56.66 257 P      P      04 23 18.7 +0.2
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BMN   Battle Mountai    56.71  65 IAmb   IAmb   04 23 21.4
      comp=Z,4.5nm,0.7s
SIJI  Sorong            56.96 213 P      P      04 23 20.8 +0.2
      comp=Z,7.8nm,0.8s,baz=303,slow=23,SNR=5.2
SIJI                              LR     LR     04 45 38.3
      comp=Z,31nm,21.4s,baz=124,slow=34
      comp=Z,7.8nm,0.8s
YHL   Hebgen Lake       57.07  58 IAmb   IAmb   04 23 24.2
      comp=Z,8.1nm,0.9s
NVAR  Mina Array Bea    57.43  68 P      P      04 23 25.9 +1.9
      comp=Z,3.7nm,0.6s,baz=301,slow=7.4,SNR=25
      comp=Z,3.7nm,0.6s
NVAR  Mina Array Bea    57.43  68 P      P      04 23 25.2 +1.2
NV11  Mina Array Sit    57.52  68 IAmb   IAmb   04 23 27.6
      comp=Z,14nm,1.5s
ELK   Elko              57.62  64 LR     LR     04 46 36.4
      comp=Z,20nm,18.9s,baz=250,slow=34
YPP   Pitchstone Pla    57.66  58 IAmb   IAmb   04 23 29.3
      comp=Z,8.9nm,1.2s
H17A  Grant Village     57.70  58 P      P      04 23 29.2 +3.4
      baz=313,SNR=7.4
RLMT  Red Lodge         57.90  57 P      P      04 23 29.3 +2.2
      baz=313,SNR=25
AKTO  Aktyubinsk        57.95 312 LR     LR     04 50 39.5
      comp=Z,16nm,18.1s,baz=68,slow=38
MOOW  Moose Ponds       58.05  59 IAmb   IAmb   04 23 31.4
      comp=Z,8.1nm,1.1s
TPAW  Teton Pass        58.11  59 P      P      04 23 30.5 +1.8
DGMT  Dagmar            58.17  51 P      P      04 23 30.2 +1.4
      baz=314
HVU   Hansel Valley     58.28  62 IAmb   IAmb   04 23 32.8
      comp=Z,4.9nm,1.1s
LAO   LASA Array        58.39  54 P      P      04 23 32.4 +2.1
      baz=313,SNR=9.0
LCH   Last Change Ra    58.63  68 IAmb   IAmb   04 23 34.7
      comp=Z,3.8nm,0.7s
VES   Vestal, Richgr    58.74  71 P      P      04 23 34.2 +1.3
      baz=314
CWC   Cottonwood Cre    58.92  69 P      P      04 23 36.2 +1.9
      baz=314
ICESG Greenland Ices    58.96   7 i P    P      04 23 31.3 -3.0
R11A  Troy Canyon, C    59.05  66 IAmb   IAmb   04 23 37.8
      comp=Z,4.1nm,0.9s
R11A  Troy Canyon, C    59.05  66 P      P      04 23 37.1 +1.9
      baz=314,SNR=6.1
ISA   Isabella, Lake    59.23  70 P      P      04 23 37.1 +0.8
ISA                               IAmb   IAmb   04 23 38.2
      comp=Z,6.7nm,1.1s
ISA   Isabella, Lake    59.23  70 P      P      04 23 37.1 +0.8
ISA                               pmax   pmax
      comp=Z,7.0nm,1.2s
ISA   Isabella, Lake    59.23  70 P      P      04 23 37.2 +0.9
      baz=314
DUG   Dugway, Tooele    59.35  63 P      P      04 23 39.1 +2.0
      baz=314,SNR=10
BW06  Boulder Array     59.35  59 P      P      04 23 39.0 +1.7
      baz=314,SNR=25
PDAR  Pinedale Array    59.35  59 P      P      04 23 38.9 +1.6
      comp=Z,13nm,0.8s,baz=319,slow=2.9,SNR=91
      comp=Z,13nm,0.8s
FURC  Furnace Creek,    59.61  69 P      P      04 23 41.2 +2.3
      baz=314,SNR=7.7
TPNV  Topopah Spring    59.63  68 P      P      04 23 40.4 +1.2
TPNV  Topopah Spring    59.63  68 P      P      04 23 40.4 +1.2
TPNV                              pmax   pmax
      comp=Z,10.0nm,1.1s
TPNV  Topopah Spring    59.63  68 P      P      04 23 41.1 +1.9
      baz=314,SNR=7.7
JLU   Jordanelle        59.82  62 IAmb   IAmb   04 23 43.4
      comp=Z,3.8nm,0.9s
NLU   North Lily Min    59.92  63 IAmb   IAmb   04 23 44.0
      comp=Z,7.7nm,0.9s
PRN   Pahroc Range      60.01  67 IAmb   IAmb   04 23 44.7
      comp=Z,5.6nm,1.0s
EDW2  Edwards Air Fo    60.05  71 P      P      04 23 43.8 +1.8
      baz=314
GSC   Goldstone, Bar    60.45  70 IAmb   IAmb   04 23 47.3
      comp=Z,9.0nm,1.1s
GSC   Goldstone, Bar    60.45  70 P      P      04 23 46.6 +1.8
      baz=315
SHPR  Sheep Range       60.57  67 P      P      04 23 46.2 +0.6
SHPR                              IAmb   IAmb   04 23 48.6
      comp=Z,5.2nm,1.2s
ULM   Lac du Bonnet     60.77  45 P      P      04 23 47.0 +0.5
      comp=Z,2.4nm,0.4s,baz=313,slow=7.2,SNR=4.8
      comp=Z,2.4nm,0.4s
ULM   Lac du Bonnet     60.77  45 IAmb   IAmb   04 23 47.5
      comp=Z,4.3nm,0.8s
MDND  Maddock           60.80  49 P      P      04 23 48.5 +1.7
      baz=316,SNR=5.1
CCUT  Cedar City        60.87  65 IAmb   IAmb   04 23 50.6
      comp=Z,4.6nm,0.9s
TUQ   Turquoise Moun    60.87  69 P      P      04 23 49.5 +1.9
      baz=315
P17A  Butcher Ranch,    60.99  62 IAmb   IAmb   04 23 51.4
      comp=Z,9.4nm,1.2s
FINES FINESS Array B    61.04 336 P      P      04 23 46.7 -1.5
      comp=Z,1.2nm,0.4s,baz=40,slow=6.9,SNR=18
      comp=Z,1.2nm,0.4s
K22A  Casper            61.04  57 IAmb   IAmb   04 23 51.0
      comp=Z,4.9nm,0.7s
K22A  Casper            61.04  57 P      P      04 23 50.8 +2.1
      baz=315
Q16A  Castle Valley     61.15  63 IAmb   IAmb   04 23 52.4
      comp=Z,6.2nm,0.8s
P18A  Preston Nutter    61.16  62 IAmb   IAmb   04 23 52.7
      comp=Z,6.9nm,1.0s
MTPU  Mount Pierson     61.19  64 IAmb   IAmb   04 23 53.3
      comp=Z,4.6nm,0.9s
RSSD  Black Hills       61.28  54 P      P      04 23 50.9 +0.5
RSSD  Black Hills       61.28  54 P      P      04 23 50.9 +0.5
RSSD                              pmax   pmax
      comp=Z,19nm,0.7s
RSSD  Black Hills       61.28  54 P      P      04 23 51.8 +1.4
      baz=315
LCMT  Little Creek M    61.31  66 IAmb   IAmb   04 23 53.7
      comp=Z,7.3nm,0.9s
RWWY  Rawlins           61.35  58 IAmb   IAmb   04 23 52.1
      comp=Z,7.3nm,0.8s
MURC  Murrieta          61.42  71 P      P      04 23 52.6 +1.3
      baz=315
PKCU  Pink Cliffs       61.54  65 IAmb   IAmb   04 23 55.6
      comp=Z,6.3nm,0.9s
BELC  Belle Mtn. Jos    61.84  70 P      P      04 23 55.3 +1.1
      baz=315
O20A  White River Ci    61.90  60 P      P      04 23 56.0 +1.4
      baz=315,SNR=8.5
AGMN  Agassiz Nation    62.20  47 IAmb   IAmb   04 23 57.4
      comp=Z,7.8nm,0.9s
AGMN  Agassiz Nation    62.20  47 P      P      04 23 56.5 +0.3
      baz=318,SNR=5.2
N23A  Red Feather La    62.59  58 P      P      04 24 01.0 +1.7
      baz=316,SNR=12
PV23  Carpenter Ridg    62.67  62 P      P      04 24 00.5 +0.6
PDMCI Parker Dam,Lak    62.71  69 P      P      04 24 01.5 +1.7
      baz=316
B35A  Bob, Littlefor    63.11  45 IAmb   IAmb   04 24 03.3
      comp=Z,8.2nm,0.8s
SMCO  Snowmass          63.26  60 P      P      04 24 04.8 +0.9
SMCO                              IAmb   IAmb   04 24 06.3
      comp=Z,8.8nm,0.8s
WUAZ  Wupatki           63.44  66 IAmb   IAmb   04 24 08.0
      comp=Z,9.7nm,1.2s
WUAZ  Wupatki           63.44  66 P      P      04 24 07.2 +2.3
      baz=316
ISCO  Idaho Springs     63.55  59 IAmb   IAmb   04 24 08.6
      comp=Z,9.0nm,0.9s
ISCO  Idaho Springs     63.55  59 P      P      04 24 07.7 +2.0
      baz=316,SNR=17
MVCO  Mesa Verde        63.84  63 IAmb   IAmb   04 24 10.0
      comp=Z,7.9nm,0.8s
MVCO  Mesa Verde        63.84  63 P      P      04 24 09.3 +1.7
      baz=316,SNR=8.0
KSM   Kuching           63.95 236 P      P      04 24 06.9 -1.3
KSM                               IAmb   IAmb   04 24 10.9
      comp=Z,7.4nm,1.0s
S22A  4UR Ranch, Cre    64.37  61 IAmb   IAmb   04 24 14.1
      comp=Z,7.3nm,1.0s
S22A  4UR Ranch, Cre    64.37  61 P      P      04 24 13.1 +2.0
      baz=317,SNR=12
EYMN  Ely               64.41  44 P      P      04 24 11.2 +0.4
EYMN                              IAmb   IAmb   04 24 11.8
      comp=Z,11nm,0.8s
EYMN  Ely               64.41  44 P      P      04 24 11.0 +0.2
      baz=320
OGNE  Ogallala          64.60  56 P      P      04 24 14.1 +1.8
      baz=317,SNR=8.2
W18A  Petrified Fore    64.65  65 P      P      04 24 14.7 +1.8
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      baz=317
NB2   NORSAR Subarra    64.67 343 P      P      04 24 11.5 -0.8
      comp=Z,0.8nm,0.6s,baz=23,slow=6.9
NOA   NORSAR Array B    64.67 343 P      P      04 24 10.6 -1.8
      comp=Z,1.0nm,0.6s,baz=22,slow=6.4,SNR=5.8
      comp=Z,1.0nm,0.6s
X18A  Snowflake         64.96  66 IAmb   IAmb   04 24 17.8
      comp=Z,8.0nm,1.0s
SDCO  Great Sand Dun    65.10  60 P      P      04 24 17.3 +1.5
      baz=317,SNR=5.9
ECSD  EROS Data Cent    65.24  50 P      P      04 24 16.6 +0.3
      baz=319,SNR=18
SPMN  Marine on St.     65.90  47 IAmb   IAmb   04 24 21.6
      comp=Z,9.3nm,0.8s
SPMN  Marine on St.     65.90  47 P      P      04 24 20.4 -0.1
      baz=320
TUC   Tucson            66.09  68 P      P      04 24 22.4 +0.3
TUC   Tucson            66.09  68 P      P      04 24 22.4 +0.3
TUC                               pmax   pmax
      comp=Z,5.0nm,1.1s
TUC   Tucson            66.09  68 P      P      04 24 23.8 +1.7
      baz=317
T25A  Trinidad          66.13  60 IAmb   IAmb   04 24 24.7
      comp=Z,11nm,1.1s
T25A  Trinidad          66.13  60 P      P      04 24 23.8 +1.4
      baz=318,SNR=5.7
ANMO  Albuquerque       66.62  63 P      P      04 24 26.1 +0.6
ANMO  Albuquerque       66.62  63 i P    P      04 24 26.8 +1.3
ANMO                              pmax   pmax
      comp=Z,3.0nm,0.9s
ANMO  Albuquerque       66.62  63 P      P      04 24 27.1 +1.6
      baz=318
CBKS  Cedar Bluff       67.36  56 IAmb   IAmb   04 24 30.9
      comp=Z,13nm,1.0s
CBKS  Cedar Bluff       67.36  56 P      P      04 24 30.2 +0.2
      baz=319
SCHQ  Schefferville     67.58  26 P      P      04 24 30.8 -0.3
      comp=Z,5.2nm,0.5s,baz=332,slow=5.3,SNR=25
      comp=Z,5.2nm,0.5s
SCHQ  Schefferville     67.58  26 P      P      04 24 30.6 -0.4
SCHQ                              IAmb   IAmb   04 24 31.6
      comp=Z,9.9nm,1.1s
319A  Douglas           67.64  68 IAmb   IAmb   04 24 34.7
      comp=Z,11nm,0.9s
121A  Cookes Peak, D    67.65  66 IAmb   IAmb   04 24 35.2
      comp=Z,7.8nm,1.2s
121A  Cookes Peak, D    67.65  66 P      P      04 24 34.0 +2.0
      baz=318
SCIA  State Center      68.25  50 P      P      04 24 36.3 +0.9
      baz=321
JFWS  Jewell Farm       68.85  47 P      P      04 24 40.2 +1.1
      baz=322
AKASG Malin Array Be    69.29 328 P      P      04 24 39.9 -1.8
      comp=Z,0.4nm,0.3s,baz=29,slow=6.8,SNR=4.8
      comp=Z,0.4nm,0.3s
MSTX  Muleshoe          69.38  61 IAmb   IAmb   04 24 45.6
      comp=Z,6.6nm,0.8s
MSTX  Muleshoe          69.38  61 P      P      04 24 43.4 +0.7
      baz=319
MNTX  Cornudas Mount    69.63  65 P      P      04 24 45.7 +1.6
      baz=319,SNR=9.8
P38A  Dawn              69.86  51 IAmb   IAmb   04 24 46.3
      comp=Z,10nm,0.8s
P40A  Paris             70.65  50 P      P      04 24 50.0 -0.2
WMOK  Wichita Mounta    70.95  58 IAmb   IAmb   04 24 53.7
      comp=Z,6.5nm,0.9s
WMOK  Wichita Mounta    70.95  58 P      P      04 24 53.1 +0.9
      baz=320,SNR=7.4
HDIL  Hopedale          71.15  48 P      P      04 24 53.5 +0.3
      baz=323
S39A  Bolivar           71.47  52 IAmb   IAmb   04 24 55.3
      comp=Z,8.4nm,1.1s
R40A  Maddies Statio    71.52  51 IAmb   IAmb   04 24 56.2
      comp=Z,10nm,0.8s
TUL1  Leonard           71.60  55 IAmb   IAmb   04 24 56.9
      comp=Z,8.5nm,0.7s
TUL1  Leonard           71.60  55 P      P      04 24 56.4 +0.3
      baz=321
SADO  Sadowa            72.08  39 LR     LR     04 58 04.6
      comp=Z,48nm,18.1s,baz=332,slow=37
ABTX  Abilene, Hawle    72.10  60 P      P      04 25 00.0 +0.9
ABTX                              IAmb   IAmb   04 25 00.4
      comp=Z,7.8nm,0.8s
ABTX  Abilene, Hawle    72.10  60 P      P      04 24 59.9 +0.7
      baz=320
CCM   Cathedral Cave    72.20  51 P      P      04 24 59.9 +0.3
CCM                               IAmb   IAmb   04 25 00.5
      comp=Z,7.0nm,1.0s
CCM   Cathedral Cave    72.20  51 P      P      04 24 59.9 +0.3
CCM                               pmax   pmax
      comp=Z,7.0nm,1.0s
CCM   Cathedral Cave    72.20  51 P      P      04 24 59.6  0.0
      baz=322
HHAR  Hobbs             72.26  54 IAmb   IAmb   04 25 00.6
      comp=Z,9.1nm,0.8s
TXAR  Lajitas Array     72.38  65 P      P      04 25 02.3 +1.3
      comp=Z,13nm,0.7s,baz=298,slow=4.6,SNR=125
TXAR  Lajitas Array     72.38  65 P      P      04 25 01.9 +0.9
MGMO  Mountain Grove    72.41  52 IAmb   IAmb   04 25 01.3
      comp=Z,5.6nm,0.8s
LPIG  La Paz            72.46  73 LR     LR     04 56 58.7
      comp=Z,35nm,18.8s,baz=174,slow=36
FVM   French Village    72.65  50 IAmb   IAmb   04 25 03.3
      comp=Z,8.7nm,0.9s
U40A  Yellville         72.74  53 P      P      04 25 02.8 -0.1
      baz=322,SNR=15
O48B  Farmland          73.27  46 P      P      04 25 05.6 -0.3
      baz=325
CLL   Collm             73.34 338 i P    P      04 25 04.7 -1.4
CLL                               pmax   pmax
      comp=Z,5.0nm,1.0s
CLL   Collm             73.34 338 i P    P      04 25 04.7 -1.4
      comp=Z,5.0nm,1.0s
FCAR  Ozark Folk Cen    73.47  53 IAmb   IAmb   04 25 07.6
      comp=Z,8.4nm,0.8s
PBMO  Poplar Bluff      73.60  51 IAmb   IAmb   04 25 09.0
      comp=Z,12nm,1.1s
JCT   Junction City     73.66  62 IAmb   IAmb   04 25 10.0
      comp=Z,12nm,0.8s
JCT   Junction City     73.66  62 P      P      04 25 09.6 +1.1
      baz=321,SNR=5.8
DZM   Mont Dzumac       73.67 172 P      P      04 25 10.4 +2.0
P48A  Milroy            73.80  46 IAmb   IAmb   04 25 09.4
      comp=Z,7.4nm,0.7s
MIAR  Mount Ida         73.80  55 IAmb   IAmb   04 25 10.3
      comp=Z,8.1nm,1.1s
MIAR  Mount Ida         73.80  55 P      P      04 25 09.5 +0.3
      baz=322,SNR=5.6
WHAR  Wooly Hollow      73.86  53 IAmb   IAmb   04 25 11.1
      comp=Z,22nm,1.5s
W41B  Gary Mavity, V    73.98  53 IAmb   IAmb   04 25 11.1
      comp=Z,7.6nm,0.8s
W41B  Gary Mavity, V    73.98  53 P      P      04 25 10.6 +0.4
      baz=323,SNR=6.3
P49A  Miami Univ. Ec    74.05  46 P      P      04 25 10.1 -0.4
      baz=325
WRA   Warramunga Arr    74.18 203 P      P      04 25 12.0 +0.7
      comp=Z,3.7nm,0.7s,baz=18,slow=6.1,SNR=31
      comp=Z,3.7nm,0.7s
WRA   Warramunga Arr    74.18 203 P      P      04 25 11.9 +0.6
PINNC Pines Island,     74.30 171 P      P      04 25 12.7 +0.8
WLAR  White Oak Lake    74.71  55 IAmb   IAmb   04 25 15.8
      comp=Z,13nm,1.1s
O53A  New Philadelph    74.99  43 P      P      04 25 15.8 -0.2
      baz=326
T47A  Sharon Grove      75.03  49 IAmb   IAmb   04 25 17.6
      comp=Z,12nm,1.0s
WVT   Waverly           75.38  50 P      P      04 25 18.4 +0.2
WVT   Waverly           75.38  50 P      P      04 25 18.4 +0.2
WVT                               pmax   pmax
      comp=Z,4.0nm,0.9s
WVT   Waverly           75.38  50 P      P      04 25 18.5 +0.3
      baz=324
GERES GERESS Array B    75.46 337 P      P      04 25 17.4 -1.2
      comp=Z,0.6nm,0.4s,baz=44,slow=5.6,SNR=11
      comp=Z,0.6nm,0.4s
MEM   Membach           75.49 342 dP     P      04 25 18.1 -0.5
833A  Chaparral WMA,    75.55  63 IAmb   IAmb   04 25 21.7
      comp=Z,7.8nm,0.8s
833A  Chaparral WMA,    75.55  63 P      P      04 25 20.7 +1.4
      baz=321
BCLA  Clavier           75.81 342 dP     P      04 25 19.0 -1.4
BCLA                              dPcP   PcP    04 25 31.3 -1.4
BMRD  Maredsous         76.02 343 dP     P      04 25 19.6 -2.0
U49A  Red Boiling Sp    76.03  48 IAmb   IAmb   04 25 23.0
      comp=Z,6.8nm,0.8s
T50A  Nancy             76.05  47 IAmb   IAmb   04 25 23.1
      comp=Z,6.8nm,0.8s
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CLTN	Cedars of Leba	76.12	49	IAmb	IAmb	04 25 23.6	
	comp=Z,10nm,0.9s						
V48A	Smith Brothers	76.17	49	IAmb	IAmb	04 25 23.7	
	comp=Z,8.5nm,1.1s						
PLAL	Pickwick Lake	76.18	51	IAmb	IAmb	04 25 23.6	
	comp=Z,9.8nm,1.2s						
WLF	Walferdange	76.36	342	P	P	04 25 22.6	-1.0
WLF				IAmb	IAmb	04 25 44.9	
	comp=Z,19nm,1.4s						
WLF	Walferdange	76.36	342	P	P	04 25 22.6	-1.0
WLF				pmax	pmax		
	comp=Z,19nm,1.4s						
PALK	Pallekele	76.51	265	LR	LR	05 02 19.1	
	comp=Z,40nm,18.3s,baz=250,slow=38						
BRTR	Keskin Array B	77.01	319	P	P	04 25 27.2	-0.4
	comp=Z,0.5nm,0.8s,baz=343,slow=2.6,SNR=4.0						
	comp=Z,0.5nm,0.8s						
BRTR	Keskin Array B	77.01	319	i P	P	04 25 30.0	+2.4
SWET	Sewanee	77.02	49	IAmb	IAmb	04 25 27.8	
	comp=Z,7.0nm,0.7s						
KBA	Koelnbreinsper	77.19	336	i P	P	04 25 28.7	+0.1
	comp=Z,6.2nm,0.8s						
V51A	Loudon	77.27	48	IAmb	IAmb	04 25 30.4	
	comp=Z,15nm,1.2s						
WATA	Walderalm	77.38	337	eP	P	04 25 29.3	-0.2
	comp=Z,1.4nm,0.5s						
RETA	Reutte	77.44	338	eP	P	04 25 29.0	-0.7
	comp=Z,0.6nm,0.3s						
WTTA	Wattenberg	77.44	337	i P	P	04 25 30.3	+0.4
	comp=Z,0.7nm,0.3s						
MOTA	Moosalm	77.49	338	eP	P	04 25 29.7	-0.4
	comp=Z,3.5nm,0.9s						
SQTA	Sankt Quirin	77.58	338	eP	P	04 25 30.2	-0.4
	comp=Z,1.6nm,0.5s						
Z47A	Carrollton	77.63	52	IAmb	IAmb	04 25 31.9	
	comp=Z,10nm,0.8s						
TKL	Tuckaleechee C	77.66	47	LR	LR	05 01 36.9	
	comp=Z,15nm,18.4s,baz=344,slow=37						
WSAR	Wadi Sarin	77.76	292	LR	LR	05 05 04.5	
	comp=Z,36nm,18.7s,baz=187,slow=40						
ASAR	Alice Springs	77.86	203	P	P	04 25 33.8	+1.6
	comp=Z,3.5nm,0.7s,baz=15,slow=5.3,SNR=42						
	comp=Z,3.5nm,0.7s						
ASAR	Alice Springs	77.86	203	P	P	04 25 33.0	+0.9
FETA	Feichten	77.88	338	i P	P	04 25 32.1	-0.3
	comp=Z,1.6nm,0.6s						
ZAIG	Zacatecas	78.04	69	IAmb	IAmb	04 25 36.5	
	comp=Z,8.5nm,1.0s						
LRAL	Lakeview Retre	78.28	51	P	P	04 25 34.2	-0.4
	baz=325						
DAVOX	Davos/Dischmat	78.31	338	LR	LR	05 04 21.2	
	comp=Z,9.7nm,18.5s,baz=84,slow=39						
T57A	Hurt	78.55	43	IAmb	IAmb	04 25 36.2	
	comp=Z,13nm,1.2s						
TUE	Stuetta	78.72	339	P	P	04 25 35.7	-1.3
TUE				IAmb	IAmb	04 25 37.4	
	comp=Z,6.9nm,0.7s						
TIGA	Tifton	81.23	50	P	P	04 25 51.4	+0.8
	baz=326						
STKA	Stephens Creek	84.33	194	P	P	04 26 07.6	+1.3
	comp=Z,4.1nm,1.0s,baz=344,slow=7.9,SNR=5.8						
	comp=Z,4.1nm,1.0s						
ESDC	Sonseca Array	87.81	346	P	P	04 26 22.1	-1.5
	comp=Z,2.1nm,0.8s,baz=2.8,slow=4.1,SNR=16						
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	87.81	346	P	P	04 26 22.5	-1.1
KEST	Kesra	88.86	335	P	P	04 26 27.5	-1.3
	comp=Z,2.4nm,0.5s,baz=99,slow=2.1,SNR=7.6						
	comp=Z,2.4nm,0.5s						
TORD	Torodi Ar. Bea	112.38	335	PKiKP	PKiKP	04 32 09.5	-0.8
	comp=Z,0.9nm,1.1s,baz=336,slow=2.2,SNR=4.6						
TORD				PKKPab	PKKPab	04 43 09.4	-2.0
	comp=Z,0.8nm,0.9s,baz=225,slow=3.6,SNR=3.6						
DBIC	Dimbokro	120.19	340	PKP	PKPdf	04 32 25.2	-0.1
	comp=Z,2.8nm,0.7s,baz=243,slow=2.3,SNR=2.5						
VNDA	Vanda	128.82	179	PKP	PKiKP	04 32 40.3	-0.3
	comp=Z,0.6nm,0.7s,baz=353,slow=4.1,SNR=5.6						
LPAZ	La Paz	129.23	64	PKP	PKiKP	04 32 43.7	-0.3
	comp=Z,1.5nm,0.9s,baz=28,slow=3.0,SNR=4.2						
H03N2	Juan Fernandez	135.44	89	T	T	07 03 25.9	
	baz=314,slow=77,SNR=775						
H03N1	Juan Fernandez	135.45	89	T	T	07 03 25.8	
	baz=314,slow=77,SNR=933						
H03N3	Juan Fernandez	135.45	89	T	T	07 03 31.3	
	baz=314,slow=77,SNR=988						
BOSA	Boshof	138.20	285	PKP	PKPdf	04 32 59.5	+0.4
	comp=Z,0.8nm,0.4s,baz=79,slow=3.0,SNR=6.7						
QSPA	South Pole Qui	141.30	180	PKPdf	PKPpre	04 32 58.4	
CPUP	Villa Florida	143.24	60	PKhKP	PKPpre	04 33 04.9	
	comp=Z,1.0nm,0.6s,baz=288,slow=3.2,SNR=5.5						
CPUP	Villa Florida	143.24	60		PKPdf	04 33 07.6	-0.5
CPUP	Villa Florida	143.24	60	PKIKP	PKPdf	04 33 07.6	-0.5
LL04	Puerto Octay	144.14	93	PKPdf	PKPbc	04 33 07.7	+0.1
GO07	Milladeo Hill,	144.58	97	PKPdf	PKPdf	04 33 09.8	-0.1
PLCA	Paso Flores	145.20	91	PKPbc	PKPab	04 33 11.7	+0.5
	comp=Z,13nm,0.9s,baz=299,slow=4.1,SNR=47						
PLCA	Paso Flores	145.20	91	PKPbc	PKPab	04 33 11.4	+0.2
AY01	Puyuhuapi	145.88	98	PKPbc	PKPab	04 33 13.4	-0.1
COYC	Coyhaique	146.80	100	PKPbc	PKPab	04 33 16.5	-0.5
PLTB	Pedras Altas	149.50	62	PKPbc	PKiKP	04 33 24.2	0.0
TROLL	Troll, Antarti	156.80	199	PKPab	PKPab	04 33 58.8	+0.6
SNAA	Sanae	158.09	196	PKPab	PKPab	04 34 03.7	0.0
VNA3	Neumayer Olymp	159.48	191	PKPab	PKPab	04 34 09.8	+0.1

*IDC **15** 04:30:12.2±1.8, 17.°24N×93.°83W, h174km±36km, mb3.0/5, mbtmp3.5/5, Error ellipse: s-maj=113.8km s-min=33.1km az=43.0*

*MEX **15** 04:30:16.5±1.4, 17.°53N×94.°47W, h172km±9km, MD4.1*

ISC 15 04:30:14.6±0.8**, 17.°38N**±0.°07×**94.°49W**±0.°04**, h178**km±6km**, n25, σ1s72**/44**, mb3.3**/4**, 1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UXUV	UXUV	0.34	100	eP	Pn	04 30 38.6	0.0
UXUV				i S	Sn	04 30 55.4	-1.5
CMIG	Matias Romero	0.47	233	P	Pn	04 30 39.5	+0.4
	340nm,0.3s,baz=91,slow=3.4,SNR=1370						
CMIG				S	Sn	04 30 57.1	-0.7
	110nm,0.5s,baz=47,slow=8.4,SNR=11						
CMIG	Matias Romero	0.47	233	eP	Pn	04 30 39.5	+0.4
CMIG				eS	Sn	04 30 57.0	-0.7
CARR	Arriaga	1.25	154	eP	Pn	04 30 45.5	+1.3
CARR				i S	Sn	04 31 08.0	+0.9
NEUV	Arroyo Zacate	1.29	285	eP	Pn	04 30 44.2	-0.2
NEUV				eS	Sn	04 31 06.0	-1.5
TGIG		1.44	114	eP	Pn	04 30 46.2	+0.2
TGIG				eS	Sn	04 31 08.8	-1.3
PCIG		2.06	143	i P	Pn	04 30 53.6	+1.4
PCIG				i S	Sn	04 31 22.0	+0.5
VHO	Vista Hermosa	2.16	262	eP	Pn	04 30 54.9	+1.3
VHO				eS	Sn	04 31 25.2	+1.5
HUIG	Huatulco	2.23	224	eP	Pn	04 30 53.6	-0.5
HUIG				i S	Sn	04 31 26.1	+1.4
CCIG	Comitan	2.50	115	eP	Pn	04 30 58.1	+0.6
CCIG				eS	Sn	04 31 30.4	-0.3
TOIG	Toxpalan	2.55	287	eP	Pn	04 30 58.7	+0.7
TOIG				eS	Sn	04 31 30.2	-1.4
PEIG	Puerto Escondi	2.89	242	eP	Pn	04 31 01.2	-0.7
PEIG				eS	Sn	04 31 40.0	+1.4
YOIG	Yosondua	2.96	260	⇓eP	Pn	04 31 03.8	+0.8
YOIG				eS	Sn	04 31 41.0	+0.4
TXIG	Tlaxiaco	3.13	268	eP	Pn	04 31 05.7	+0.7
TXIG				eS	Sn	04 31 41.5	-2.8
HLIG	Huajuapan de L	3.19	279	eP	Pn	04 31 06.6	+0.9
HLIG				eS	Sn	04 31 45.0	-0.5
FTIG	Fresnillo de T	3.51	279	eP	Pn	04 31 10.6	+1.0
FTIG				eS	Sn	04 31 48.4	-4.1
PNIG	Pinotepa	3.61	255	eP	Pn	04 31 10.1	-0.7
PNIG				eS	Sn	04 31 52.7	-2.0
TLIG	Tlapa	3.89	273	eP	Pn	04 31 15.6	+1.2
TLIG				eS	Sn	04 31 56.6	-4.6
MGIG	Malinaltepec	3.96	269	eP	Pn	04 31 15.8	+0.5
MGIG				i S	Sn	04 32 03.0	+0.2
PPM	Popocatepetl	4.27	294	eP	Pn	04 31 22.1	+2.4
PPM				eS	Sn	04 32 10.6	+0.1
ANMO	Albuquerque	20.50	331	P	P	04 34 41.8	+2.8
	0.6nm,0.6s,baz=155,slow=13,SNR=4.0						
	0.6nm,0.6s						
NVAR	Mina Array Bea	29.55	320	P	P	04 36 05.4	+2.4
	0.6nm,0.7s,baz=138,slow=9.6,SNR=2.9						
	0.6nm,0.7s						
YKA	Yellowknife Ar	47.22	347	P	P	04 38 29.0	-0.3
	0.5nm,0.6s,baz=151,slow=7.3,SNR=10						
	0.5nm,0.6s						
ILAR	Eielson Array	58.81	337	P	P	04 39 54.7	+0.7
	0.2nm,0.5s,baz=143,slow=6.7,SNR=5.6						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	91.90	76	P	P	04 42 58.9	-4.6
	0.6nm,1.0s,baz=273,slow=1.8,SNR=5.0						
	0.6nm,1.0s						

WEL 15 04:33:05.9±0.5**, 40°S**±3°×**17°7E**±°**, h26**km±5km**, M3.2**/13**, ML3.6**/13**, MLv3.2**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=104.8, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHZ	Kahuranaki	0.10	156	P	Pb	04 33 11.7	+0.9
KAHZ				S	Sb	04 33 16.2	+2.1
CKHZ	Cape Kidnapper	0.20	77	P	Pn	04 33 12.7	-0.6
CKHZ				S	Sb	04 33 18.3	+2.6
MCHZ	McNeill Hill	0.28	339	P	Pn	04 33 13.9	-0.4
PXZ	Pawanui	0.33	175	P	Pn	04 33 14.5	-0.6
PXZ				S	Sn	04 33 21.6	+0.7
KRHZ	Kereru	0.36	280	P	Pn	04 33 14.8	-0.7
KWHZ	Kaweka Forest	0.42	312	P	Pn	04 33 15.8	-0.5
WPHZ	Waipukurau	0.47	219	P	Pn	04 33 16.9	-0.1
PNHZ	Pukenui	0.52	246	P	Pn	04 33 17.4	-0.4
PNHZ				S	Sn	04 33 26.4	+0.5
PRHZ	Porangahau	0.58	195	P	Pn	04 33 18.1	-0.4
PRHZ				S	Sn	04 33 28.1	+0.9
BKZ	Black Stump Fm	0.60	334	P	Pn	04 33 18.7	-0.1
BKZ				S	Sn	04 33 28.4	+0.7
NMHZ	Naumai	0.61	359	P	Pn	04 33 19.4	+0.5
BHHZ	Black Hill Sta	0.63	290	P	Pn	04 33 18.9	-0.3
TSZ	Takapari Road	0.75	242	P	Pb	04 33 20.6	+0.2
DVHZ	Dannevirke	0.78	220	P	Pb	04 33 21.0	+0.1
ANWZ	Angora Road	0.80	199	P	Pn	04 33 21.4	-0.1
RAHZ	Arahi	0.81	14	P	Pn	04 33 22.2	+0.5
MTHZ	Maungataniwha	0.85	1	P	Pn	04 33 22.6	+0.3
MOVZ	Moawhango	0.88	289	P	Pn	04 33 23.3	+0.6
MRHZ	Matea Rd	0.93	340	P	Pb	04 33 24.0	+0.6
KNZ	Kokohu	0.95	44	P	Pn	04 33 23.1	-0.4
HATZ	Hinemaiaia	0.99	325	P	Pb	04 33 25.5	+1.0
SNGZ	Shannon Statio	1.01	24	P	Pn	04 33 24.5	+0.1
TUVZ	Tukino	1.01	295	P	Pb	04 33 25.8	+1.0
WNVZ	Wahianoa	1.02	291	P	Pb	04 33 26.0	+0.9
ETVZ	East Tongariro	1.03	303	P	Pb	04 33 26.3	+1.1
RITZ	Rihia Road	1.04	314	P	Pb	04 33 26.6	+1.2
WHVZ	Whangaehu Hut	1.05	293	P	Pb	04 33 26.4	+0.9
OTVZ	Oturere	1.05	301	P	Pb	04 33 26.5	+0.9
TMVZ	Te Maari	1.05	304	P	Pb	04 33 26.3	+0.8
SNVZ	South Ngauruho	1.05	299	P	Pb	04 33 26.6	+1.0
POWZ	Post Office Ro	1.06	229	P	Pb	04 33 25.5	-0.2
TRVZ	Turoa	1.07	292	P	Pb	04 33 26.9	+1.0
BFZ	Birch Farm	1.07	204	P	Pn	04 33 24.5	-0.8
PRWZ	Pori Road	1.07	217	P	Pn	04 33 25.3	0.0
NTVZ	North Tongarir	1.08	304	P	Pb	04 33 26.9	+1.0
FWVZ	Far West T-bar	1.08	294	P	Pb	04 33 26.9	+0.7
NGZ	Ngauruhoe	1.08	299	P	Pb	04 33 27.0	+0.9
MTVZ	Mangateitei	1.09	287	P	Pb	04 33 27.5	+1.3
RTZ	Ruatahuna	1.09	6	P	Pn	04 33 25.9	+0.2
NNVZ	North Ngauruho	1.10	301	P	Pb	04 33 27.3	+0.9
KRVZ	Karewarewa	1.10	303	P	Pb	04 33 27.2	+0.9
WTVZ	West Tongariro	1.12	301	P	Pb	04 33 27.7	+1.0
PRGZ	Paritu Road	1.13	47	P	Pn	04 33 25.6	-0.5
KATZ	Kakaramea	1.14	309	P	Pb	04 33 27.9	+0.9
RATZ	Rangitukua	1.17	315	P	Pb	04 33 29.3	+1.7
ALRZ	Allen Road	1.20	342	P	Pb	04 33 29.8	+1.8
PKVZ	Pokaka	1.22	289	P	Pb	04 33 28.9	+0.6
MUGZ	Murupara	1.23	358	P	Pn	04 33 27.8	+0.4
RIGZ	Rimuhau	1.24	36	P	Pn	04 33 27.6	+0.1
WHTZ	Whakaora	1.24	327	P	Pb	04 33 30.2	+1.6
TWVZ	Taurewa	1.25	300	P	Pb	04 33 29.8	+0.9
PRRZ	Plateau Road	1.25	344	P	Pb	04 33 30.4	+1.6
WATZ	Wairara	1.31	319	P	Pb	04 33 31.3	+1.4
MRZ	Mangatainoka R	1.35	225	P	Pn	04 33 28.4	-0.7
WAZ	Wanganui	1.42	267	P	Pb	04 33 31.9	+0.2
URZ	Urewera	1.46	9	P	Pn	04 33 30.4	-0.2
MWZ	Matawai	1.48	22	P	Pn	04 33 30.3	-0.5
TARZ	Mount Tarawera	1.49	350	P	Pn	04 33 32.0	+0.9
HOWZ	Holdsworth Sta	1.56	220	P	Pn	04 33 31.0	-1.0
TMWZ	Te Maipa	1.57	207	P	Pn	04 33 30.9	-1.3
OMRZ	Omania	1.64	347	P	Pb	04 33 38.3	+2.9
OGWZ	Otaki Gorge	1.68	228	P	Pn	04 33 32.7	-1.0
VRZ	Vera Road	1.70	289	P	Pb	04 33 38.3	+1.8
MTW	Mount Morrison	1.77	214	P	Pn	04 33 33.1	-1.7
WHRZ	Whale Island	1.85	4	P	Pn	04 33 36.2	+0.2
RUGZ	Raukumara Rang	1.86	21	P	Pn	04 33 35.9	-0.4
KIW	Kapiti Island	1.86	231	P	Pn	04 33 35.5	-0.7
LREZ	Lake Rotokare	1.89	277	P	Pb	04 33 42.6	+2.9
CAW	Cannon Point	1.94	223	P	Pn	04 33 35.7	-1.5
HIZ	Hauiti	1.94	307	P	Pb	04 33 41.4	+0.8
HAZ	Te Kaha	2.08	21	P	Pn	04 33 39.2	0.0
MSWZ	Moikau Station	2.09	215	P	Pn	04 33 37.1	-2.1
PREZ	Palmer Road	2.09	279	P	Pb	04 33 45.3	+2.0
DREZ	Durham Road	2.10	283	P	Pb	04 33 45.6	+2.4
NEZ	North Egmont	2.16	281	P	Pb	04 33 47.2	+2.9
PLWZ	Palliser	2.21	212	P	Pn	04 33 38.8	-2.2
KHEZ	Kahui Hut	2.21	280	P	Pb	04 33 48.4	+3.1
PKE	Pukeiti	2.26	282	P	Pb	04 33 46.8	+0.8
TCW	Tory Channel	2.46	231	P	Pn	04 33 42.9	-1.4
TUWZ	Tuamarina	2.79	231	P	Pn	04 33 46.9	-2.0
QRZ	Quartz Range	3.47	250	P	Pn	04 33 56.7	-1.5
ABAZ	Army Bay	3.48	333	P	Pb	04 34 03.7	-3.0
AKCZ	Akaroa Harbour	5.09	214	P	Pn	04 34 18.2	-2.3
CTZ	Chatham Island	6.35	132	P	Pn	04 34 36.9	-0.8

*IDC **15** 04:38:42.6±2.4, 38.°19N×142.°03E, h53km±22km, mb3.5/14, mbtmp3.8/18, ML3.3/4, MS2.8/6, Error ellipse: s-maj=20.0km s-min=14.5km az=101.0*

*NIED **15** 04:38:42.4, 38.°27N×141.°93E, h50km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.16; $M_{\theta\theta}$-2.61; $M_{\phi\phi}$-2.55; $M_{r\theta}$-0.07; $M_{\theta\phi}$-2.94; $M_{\phi r}$-4.93; Fault plane solution: $M_0$7.22000×10^{14} NP1: ϕ_s65.00000°, δ32.00000°, λ131.00000°. NP2: ϕ_s199.00000°, δ67.00000°, λ68.00000°.*

*JMA **15** 04:38:42.4±0.1, 38.°3N±0.°3×141.°9E±0.°5, h50km, MD4.0/40, MV4.1/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

ISC 15 04:38:41.5±1.7**, 38.°21N**±0.°05×**142.°1E**±0.°1**, h41**km±14km**, n50, σ0s77**/44**, mb3.8**/14**, MS3.0**/3**, 15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.47	282	i P	Pn	04 38 52.2	+0.4
JIKH				S	Sn	04 38 59.1	0.0
JIKH	Ishinomakikobu	0.47	282	A	A	04 38 52.2	
	comp=E,27nm,0.3s,comp=E,18nm,0.3s						
JIO	Ouri	0.60	294	⇓iP	Pn	04 38 53.6	+0.1
JIO				⇓S	Sn	04 39 01.5	-0.7
JKMT	Kesennumamotoy	0.75	323	⇓iP	Pn	04 38 55.6	0.0
JKMT				⇓S	Sn	04 39 04.9	-0.8
JKMT	Kesennumamotoy	0.75	323	A	A	04 38 55.6	
	comp=E,8.0nm,0.9s,comp=E,15nm,0.9s						
OFUJ	Ofunato	0.92	341	⇓iP	Pn	04 38 57.9	+0.1
OFUJ				⇓S	Sn	04 39 08.8	-1.0
OFUJ	Ofunato	0.92	341	A	A	04 38 57.9	
	comp=E,8.0nm,0.5s,comp=E,4.0nm,0.6s						
JOFO	Osakifurukawao	0.97	294	A	A	04 38 58.5	
	comp=E,18nm,3.4s,comp=E,17nm,2.1s						
JMK	Ichinoseki	0.98	319	⇓iP	Pn	04 38 58.9	+0.1
JMK				⇓S	Sn	04 39 10.7	-0.8
JMK	Ichinoseki	0.98	319	A	A	04 38 58.9	
	comp=E,7.0nm,0.9s,comp=E,7.0nm,0.6s						
JMST	Minamisoumatoc	1.04	242	A	A	04 39 00.2	
	comp=E,10.0nm,0.5s,comp=E,3.0nm,0.8s						
JMM	Marumori	1.05	251	i P	Pn	04 38 59.6	-0.1
JMM				S	Sn	04 39 12.1	-1.0
JOU	Okura	1.10	278	⇓iP	Pn	04 39 00.5	+0.1
JOU				⇓S	Sn	04 39 13.8	-0.5
JOU	Okura	1.10	278	A	A	04 39 00.5	
	comp=E,11nm,0.4s,comp=E,12nm,0.3s						
JFK	Kawauchi	1.25	228	i P	Pn	04 39 02.9	+0.3
JFK				S	Sn	04 39 18.2	0.0
JOM	Ohasama	1.39	335	⇓iP	Pn	04 39 04.6	+0.3
JOM				⇓S	Sn	04 39 21.9	+0.3
JYK	Kaneyama	1.50	299	⇓iP	Pn	04 39 05.9	0.0
JFT	Otama	1.52	243	i P	Pn	04 39 07.0	+0.8
JFT				S	Sn	04 39 25.0	+0.3
JYS	Shirataka	1.56	271	i P	Pn	04 39 07.0	+0.3
JYS				S	Sn	04 39 25.6	-0.1
JRG	Rokugo	1.62	317	⇓iP	Pn	04 39 07.8	+0.3
JRG				⇓S	Sn	04 39 27.9	+0.8
JYW	Yuwa	1.95	313	A	A	04 39 12.5	
	comp=E,4.0nm,1.7s,comp=E,4.0nm,1.2s						
MJAR	Matsushiro Arr	3.48	243	P	Pn	04 39 34.3	+1.2
	0.4nm,0.3s,baz=220,slow=13,SNR=24						
MJAR				LR	LR	04 41 11.0	
	comp=Z,160nm,19.8s,baz=33,slow=43						
	2.3nm,0.4s						
JHJ	Hachijo jima 2	5.41	201	P	Pn	04 39 59.2	-0.3
	8.5nm,0.3s,baz=65,slow=15,SNR=1.5						
	125nm,0.9s						
ASAJ	Asahikawa	5.91	4	P	Pn	04 40 06.0	-0.4
	1.9nm,0.3s,baz=213,slow=7.0,SNR=7.3						
	2.7nm,0.3s						
USRK	Ussuriysk Ar.	9.65	311	P	Pn	04 41 00.6	+2.9
	1.4nm,0.3s,baz=125,slow=13,SNR=7.9						
	9.0nm,0.6s						
KSRS	Korea Array	11.20	270	LR	LR	04 45 18.8	
	comp=Z,21nm,18.9s,baz=240,slow=35						
KLR	Kul'dur	13.28	329	LR	LR	04 46 16.5	
	comp=Z,33nm,19.2s,baz=56,slow=34						
SEY	Seymchan	25.54	11	P	P	04 44 07.3	+1.4
	1.2nm,0.5s,baz=204,slow=8.9,SNR=4.4						
	1.2nm,0.5s						
SONM	Songino Array	27.57	302	P	P	04 44 26.1	+1.5
	0.6nm,0.5s,baz=110,slow=9.4,SNR=3.8						
	0.6nm,0.5s						
H11N2	WAKE ISLAND Hy	28.35	124	T	T	05 14 55.0	
	baz=316,slow=76,SNR=358						
H11N1	WAKE ISLAND Hy	28.36	124	T	T	05 14 51.0	
	baz=316,slow=76,SNR=431						
H11N3	WAKE ISLAND Hy	28.37	124	T	T	05 14 56.7	
	baz=316,slow=76,SNR=333						
H11S1	WAKE ISLAND Hy	29.11	126	T	T	05 15 45.4	
	baz=318,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	29.11	126	T	T	05 15 47.8	
	baz=318,slow=76,SNR=72						
H11S2	WAKE ISLAND Hy	29.12	126	T	T	05 15 46.7	
	baz=318,slow=76,SNR=42						
DAV	Davao City (W)	34.40	210	LR	LR	04 58 40.6	
	comp=Z,20nm,20.6s,baz=176,slow=35						
ZALV	Zalesovo Beam	41.50	311	P	P	04 46 23.5	-0.8
	1.3nm,0.6s,baz=73,slow=5.2,SNR=3.7						
	1.3nm,0.6s						
MKAR	Makanchi Array	43.93	301	P	P	04 46 43.8	-0.3
	0.9nm,0.6s,baz=84,slow=10,SNR=8.2						
MKAR				LR	LR	05 07 04.2	
	comp=Z,17nm,18.0s,baz=184,slow=39						
	0.9nm,0.6s						
KDAK	Kodiak Island	45.89	43	LR	LR	05 04 19.6	
	comp=Z,19nm,21.4s,baz=225,slow=34						
ILAR	Eielson Array	48.23	33	P	P	04 47 17.4	-0.3
	0.9nm,0.7s,baz=268,slow=6.5,SNR=13						
	0.9nm,0.7s						
WRA	Warramunga Arr	58.30	189	P	P	04 48 31.8	-0.3
	0.9nm,0.6s,baz=4.7,slow=7.0,SNR=12						
	0.9nm,0.6s						
ASAR	Alice Springs	62.02	188	P	P	04 48 57.2	-0.4
	0.6nm,0.6s,baz=10.0,slow=5.1,SNR=7.6						
	0.6nm,0.6s						
YKA	Yellowknife Ar	62.54	31	P	P	04 49 00.7	+0.1
	0.4nm,0.7s,baz=302,slow=6.5,SNR=6.8						
	0.4nm,0.7s						
ARCES	ARCESS Array B	63.07	339	P	P	04 49 03.5	-0.5
	1.7nm,0.8s,baz=50,slow=8.4,SNR=5.6						
	1.7nm,0.8s						
FINES	FINESS Array B	68.01	332	P	P	04 49 35.2	-0.8
	1.5nm,0.9s,baz=39,slow=12,SNR=6.1						
	1.5nm,0.9s						
AKASG	Malin Array Be	73.67	322	P	P	04 50 10.3	-0.3
	0.1nm,0.3s,baz=38,slow=5.2,SNR=2.6						
	0.1nm,0.3s						
NVAR	Mina Array Bea	73.88	54	P	P	04 50 12.4	+0.1
	0.4nm,0.6s,baz=283,slow=8.2,SNR=2.2						
	0.4nm,0.6s						
PDAR	Pinedale Array	76.48	46	P	P	04 50 27.9	+0.7
	0.6nm,0.5s,baz=263,slow=1.4,SNR=9.0						
	0.6nm,0.5s						
TXAR	Lajitas Array	89.01	53	P	P	04 51 32.0	-0.2
	0.5nm,0.6s,baz=315,slow=3.1,SNR=7.4						
	0.5nm,0.6s						
LPAZ	La Paz	145.66	59	PKPbc	PKPdf	04 58 16.0	-0.5
	1.8nm,0.8s,baz=284,slow=2.5,SNR=6.4						

IDC 15 04:57:43.2±3.0**, 29.°34S**×**176.°96W, h0**km**, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=114.4km s-min=45.2km az=4.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.84	276	Pn	Pn	04 58 02.4	+0.1
	404nm,0.3s,baz=331,slow=18,SNR=16						
STKA	Stephens Creek	35.61	255	P	P	05 04 44.2	+1.5
	3.1nm,0.8s,baz=84,slow=10,SNR=4.0						
	3.1nm,0.8s						
ASAR	Alice Springs	44.08	265	P	P	05 05 52.4	-1.0
	1.0nm,0.8s,baz=112,slow=7.1,SNR=7.8						
	1.0nm,0.8s						
WRA	Warramunga Arr	44.98	271	P	P	05 05 59.7	-0.8
	2.1nm,0.7s,baz=113,slow=6.9,SNR=13						
	2.1nm,0.7s						
FINES	FINESS Array B	144.45	341	PKP	PKPdf	05 17 20.9	+0.1
	1.2nm,0.6s,baz=46,slow=4.0,SNR=7.9						

*IDC **15** 04:58:46.3±1.3, 26.°10N×128.°50E, h0km, mb3.7/7, mbtmp3.7/7, MS2.9/1, Error ellipse: s-maj=52.4km s-min=18.6km az=76.0*

*JMA **15** 04:58:48.4±0.3, 26.°1N±0.°9×128.°7E±0.°9, h31km, MV3.5/13, NEAR OKINAWAJIMA ISLAND*

*NIED **15** 04:58:48.4, 26.°07N×128.°74E, h31km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}7.72; $M_{\theta\theta}$-1.50; $M_{\phi\phi}$-6.23; $M_{r\theta}$-0.39; $M_{\theta\phi}$-6.08; $M_{\phi r}$-0.46; Fault plane solution: $M_0$9.07000×10^{14} NP1: ϕ_s34.00000°, δ43.00000°, λ89.00000°. NP2: ϕ_s215.00000°, δ47.00000°, λ91.00000°.*

ISC 15 04:58:47.8±1.7**, 26.°15N**±0.°05×**128.°74E**±0.°04**, h14**km±11km**, n20, σ0s73**/27**, mb3.6**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.74	300	P	Pb	04 59 02.8	+0.2
JNTH				eS	Sb	04 59 13.8	+1.1
JOW	Kunigami	0.80	328	Pn	Pn	04 59 04.6	-0.1
	302nm,0.3s,baz=136,slow=22,SNR=150						
JOW				Sn	Sn	04 59 16.2	-0.3
	442nm,0.3s,baz=108,slow=19,SNR=9.8						
JOW	Kunigami	0.80	328	P	Pn	04 59 04.5	-0.3
JJT3	Tamagusuku3	0.86	270	P	Pb	04 59 04.6	-0.1
JJT3				eS	Sb	04 59 16.2	+0.1
JYRO	Yoronjima	0.91	343	P	Pn	04 59 06.3	0.0
JYRO				eS	Sn	04 59 19.2	0.0
JIH	Iheya	1.12	322	P	Pg	04 59 09.5	+0.1
JOKE	Okinoerabujima	1.22	353	P	Pg	04 59 11.4	+0.1
JAGN	Aguni-jima	1.42	288	P	Pn	04 59 13.0	-0.2
JAGN				S	Sn	04 59 30.6	-1.1
JTK	Tokunoshima	1.64	6	P	Pb	04 59 17.4	-0.5
JTK				eS	Sb	04 59 37.4	-1.0
JKE	Kume jima 2	1.77	276	P	Pn	04 59 16.8	-1.2
JMZ	Minamidaito 2	2.25	98	P	Pn	04 59 24.6	-0.1
JMZ				eS	Sn	04 59 51.4	-0.9
JKDJ	Kitadaitoujima	2.31	94	P	Pn	04 59 25.7	+0.3
JKDJ				S	Sn	04 59 52.8	-0.8
SONM	Songino Array	27.87	327	P	P	05 04 37.8	+0.6
	0.7nm,0.7s,baz=133,slow=11,SNR=4.5						
	0.7nm,0.7s						
PMG	Port Moresby	39.62	151	LR	LR	05 21 04.0	
	comp=Z,19nm,21.8s,baz=128,slow=34						
MKAR	Makanchi Array	41.93	312	P	P	05 06 37.1	-1.0
	0.3nm,0.6s,baz=107,slow=9.7,SNR=2.7						
	0.3nm,0.6s						
WRA	Warramunga Arr	46.14	173	P	P	05 07 12.0	0.0
	0.5nm,0.9s,baz=351,slow=8.4,SNR=1.6						
	0.5nm,0.9s						
FINES	FINESS Array B	73.16	331	P	P	05 10 17.6	-0.2
	2.0nm,0.9s,baz=79,slow=9.9,SNR=4.8						
	2.0nm,0.9s						
AKASG	Malin Array Be	75.89	320	P	P	05 10 33.6	-0.3
	0.3nm,0.4s,baz=64,slow=6.6,SNR=3.3						
	0.3nm,0.4s						
BRTR	Keskin Array B	77.45	308	P	P	05 10 43.9	+0.8
	0.7nm,0.8s,baz=96,slow=3.7,SNR=3.6						
	0.7nm,0.8s						
YKA	Yellowknife Ar	78.40	25	P	P	05 10 49.5	+1.7

0.5nm,0.9s,baz=304,slow=5.4,SNR=4.7
0.5nm,0.9s

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*IDC **15** 05:02:01.2±1.3, 26°.12N×128°.63E, h0^{km}, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=52.4km s-min=18.8km az=67.0*
*JMA **15** 05:02:03.5±0.3, 26°.1N±0°.9×12°9E±°, h37^{km}, MV3.4/14, NEAR OKINAWAJIMA ISLAND*
ISC 15 05:02:02.1±1.8**, 26°.06N**±0°.07×**128°.69E**±0°.04**, h10**^{km}±11^{km}**, n19, σ1^{s}05**/24**, mb3.6**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.75	307	P	Pn	05 02 17.6	-1.1
JNTH				eS	Sn	05 02 28.7	-1.4
JJT3	Tamagusuku3	0.82	276	P	Pn	05 02 19.3	-0.3
JOW	Kunigami	0.85	334	Pn	Pn	05 02 19.5	-0.6
	280nm,0.3s,baz=154,slow=22,SNR=30						
JOW				Sn	Sn	05 02 31.4	-1.2
	547nm,0.3s,baz=133,slow=29,SNR=15						
JOW	Kunigami	0.85	334	P	Pn	05 02 19.5	-0.6
JYRO	Yoronjima	0.98	347	P	Pg	05 02 21.3	+0.3
JIH	Iheya	1.16	326	P	Pg	05 02 24.2	-0.3
JOKE	Okinoerabujima	1.30	355	P	Pn	05 02 26.2	0.0
JAGN	Aguni-jima	1.40	292	P	Pb	05 02 27.8	-0.5
JKE	Kume jima 2	1.73	279	P	Pn	05 02 31.6	-0.5
JTK	Tokunoshima	1.73	8	P	Pn	05 02 32.2	+0.1
JTK				S	Sn	05 02 53.1	-1.2
JMZ	Minamidaito 2	2.29	96	P	Pn	05 02 39.4	-0.4
JMZ				eS	Sn	05 03 05.9	-2.2
JKDJ	Kitadaitoujima	2.35	92	P	Pn	05 02 40.6	-0.1
JKDJ				eS	Sn	05 03 07.6	-2.0
SONM	Songino Array	27.92	327	P	P	05 07 54.2	+1.8
	0.6nm,0.5s,baz=132,slow=8.9,SNR=4.2						
	0.6nm,0.5s						
MKAR	Makanchi Array	41.95	312	P	P	05 09 52.6	-0.4
	0.3nm,0.5s,baz=103,slow=10,SNR=4.3						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	45.26	316	P	P	05 10 19.1	-0.4
	0.3nm,0.4s,baz=105,slow=9.4,SNR=4.3						
	0.3nm,0.4s						
WRA	Warramunga Arr	46.06	173	P	P	05 10 26.8	+0.6
	0.2nm,0.6s,baz=354,slow=8.6,SNR=1.5						
	0.2nm,0.6s						
FINES	FINESS Array B	73.21	331	P	P	05 13 33.0	+0.2
	1.1nm,0.8s,baz=72,slow=6.2,SNR=4.4						
	1.1nm,0.8s						
BRTR	Keskin Array B	77.46	308	P	P	05 13 58.8	+0.8
	0.6nm,0.7s,baz=104,slow=4.0,SNR=3.6						
	0.6nm,0.7s						
YKA	Yellowknife Ar	78.50	25	P	P	05 14 03.8	+0.7
	0.3nm,0.7s,baz=304,slow=5.3,SNR=5.4						
	0.3nm,0.7s						

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*JMA **15** 05:05:41.2±0.1, 24°.4N±0°.7×122°.2E±0°.3, h67^{km}±2^{km}, MV2.6/11, TAIWAN REGION*
*TAP **15** 05:05:41.5, 24°.46N×122°.25E, h63^{km}±1^{km}, ML3.5, B*
ISC 15 05:05:41.6±1.3**, 24°.49N**±0°.03×**122°.25E**±0°.02**, h66**^{km}±7^{km}**, n64, σ0^{s}68**/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.38	288	P	Pn	05 05 53.0	0.0
	baz=292						
TWC				S	Sn	05 06 01.4	0.0
	baz=292						
EWUT	Wuta	0.43	264	i P	Pn	05 05 53.4	-0.1
	baz=267						
EWUT				i S	Sn	05 06 02.2	+0.1
	baz=267						
EGS		0.46	321	P	Pn	05 05 53.8	+0.1
	baz=323						
EGS				S	Sn	05 06 03.2	+0.6
	baz=323						
ENA	Nanau	0.47	263	P	Pn	05 05 53.6	-0.2
	baz=265						
ENA				S	Sn	05 06 03.1	+0.4
	baz=265						
EHP	Heping Village	0.50	249	P	Pn	05 05 54.2	+0.1
	baz=251						
EHP				S	Sn	05 06 03.9	+0.6
	baz=251						
NDS	Dongshan	0.51	287	i P	Pn	05 05 54.4	+0.2
	baz=289						
NDS				i S	Sn	05 06 03.6	+0.2
	baz=289						
NTC	Toucheng	0.53	314	P	Pn	05 05 54.4	0.0
	baz=315						
NTC				S	Sn	05 06 03.7	0.0
	baz=315						
ILA	Ilan	0.53	301	P	Pn	05 05 55.0	+0.5
	baz=303						
ILA				S	Sn	05 06 04.9	+1.1
	baz=303						
TWB1	Santiao Chiao	0.57	335	P	Pn	05 05 54.6	-0.2
	baz=336						
TWB1				eS	Sn	05 06 04.2	-0.3
	baz=336						
TWE	Neicheng	0.58	294	i P	Pn	05 05 55.2	+0.3
	baz=296						
TIPB	Shuangxi	0.62	321	P	Pn	05 05 55.4	0.0
	baz=322						
TIPB				eS	Sn	05 06 05.2	-0.3
	baz=322						
JYNG	Yonagunijimaku	0.64	93	P	Pn	05 05 55.5	0.0
JYNG				eS	Sn	05 06 05.8	0.0
ENTT	Nioudou	0.64	284	i P	Pn	05 05 56.2	+0.5
	baz=285						
ETL	Fush Village	0.66	240	P	Pn	05 05 55.6	-0.2
	baz=242						
ETL				S	Sn	05 06 05.7	-0.6
	baz=242						
FUSB	Fushanzhiwuyua	0.66	294	P	Pn	05 05 56.5	+0.6
	baz=296						
FUSB				S	Sn	05 06 07.5	+1.1
	baz=296						
LATG	Datong	0.66	274	i P	Pn	05 05 56.2	+0.2
	baz=276						
LATG				S	Sn	05 06 06.9	+0.4
	baz=276						
NACB	Ninganchiao	0.68	242	P	Pn	05 05 55.3	-0.7
	baz=244						
NACB				S	Sn	05 06 06.0	-0.6
	baz=244						
YOJ	Yonaguni jima	0.69	92	P	Pn	05 05 56.2	0.0
	baz=89						
YOJ				S	Sn	05 06 07.2	+0.3
	baz=89						
YOJ	Yonaguni jima	0.69	92	P	Pn	05 05 56.2	0.0
YOJ				S	Sn	05 06 06.7	-0.2
WFSB	Wu-fen Shan	0.72	324	P	Pn	05 05 56.8	+0.3
	baz=324						
WFSB				S	Sn	05 06 07.8	+0.3
	baz=324						
TWD	Chiawan	0.72	236	eP	Pn	05 05 55.9	-0.7
	baz=237						
TWD				eS	Sn	05 06 06.5	-1.0
	baz=237						
NWLT	Wulai	0.74	293	P	Pn	05 05 57.4	+0.6
	baz=294						
NWLT				eS	Sn	05 06 07.5	-0.4
	baz=294						
ETLH	Xiulin Townshi	0.76	248	P	Pn	05 05 56.6	-0.5
	baz=250						
ETLH				S	Sn	05 06 07.7	-0.6
	baz=250						
TWA	Mucha	0.78	309	P	Pn	05 05 57.5	+0.2
	baz=310						
TWA				eS	Sn	05 06 08.7	0.0
	baz=310						
NNS	Nan Shan	0.80	267	i P	Pn	05 05 57.7	+0.1
	baz=268						
NNS				eS	Sn	05 06 08.7	-0.7
	baz=268						
NHDH	Xindian Distri	0.81	306	P	Pn	05 05 57.9	+0.3
	baz=307						
NHDH				eS	Sn	05 06 09.6	+0.3
	baz=307						
NSK	Sanguang	0.83	283	P	Pn	05 05 58.4	+0.4
	baz=284						
NSK				eS	Sn	05 06 09.6	-0.4
	baz=284						
FUSS	Fushou	0.95	256	P	Pn	05 05 59.8	+0.3
	baz=256						
FUSS				eS	Sn	05 06 12.3	-0.5
	baz=256						
WHF	Hehuan Shan	0.96	249	P	Pn	05 05 59.7	-0.2
	baz=250						
WHF				S	Sn	05 06 12.8	-0.6
	baz=250						
TWS1	Kuangyinshan	0.97	309	P	Pn	05 05 59.9	+0.3
	baz=310						
TWS1				eS	Sn	05 06 13.5	+0.6
	baz=310						
ESL	Shilin	1.00	228	P	Pn	05 06 00.4	+0.4
	baz=228						
ESL				eS	Sn	05 06 13.5	-0.2
	baz=228						
TWT	Tachien	1.01	257	P	Pn	05 06 01.0	+0.8
	baz=257						
TWT				eS	Sn	05 06 14.1	+0.1
	baz=257						
EGFH	Guangfu	1.11	223	eP	Pn	05 06 02.2	+0.9
	baz=223						
EGFH				eS	Sn	05 06 15.1	-0.9
	baz=223						
OWD	Renai	1.12	242	eP	Pn	05 06 01.3	-0.2
	baz=242						
OWD				eS	Sn	05 06 16.3	-0.1
	baz=242						
LIOB	Emei	1.14	278	P	Pn	05 06 02.5	+0.8
	baz=279						
NSTT	Nanjuang	1.15	277	P	Pn	05 06 02.6	+0.8
	baz=278						
NSTT				eS	Sn	05 06 17.2	+0.3
	baz=278						
WHP	Taichung City	1.21	260	eP	Pn	05 06 04.0	+1.3
	baz=261						
WHP				eS	Sn	05 06 18.8	+0.4
	baz=261						
IRIF	Iriomote-Funau	1.36	96	P	Pn	05 06 04.3	-0.2
IRIF				eS	Sn	05 06 21.4	-0.5
SMLT	Sun Moon Lake	1.37	244	P	Pn	05 06 05.6	+0.7
	baz=244						
SMLT				eS	Sn	05 06 22.3	-0.1
	baz=244						
SSLB	Suanglung	1.38	240	eP	Pn	05 06 06.2	+1.3
	baz=240						
SSLB				eS	Sn	05 06 22.5	+0.2
	baz=240						
EYUL	Yuli	1.42	217	P	Pn	05 06 06.4	+0.9
	baz=217						
EYUL				S	Sn	05 06 23.0	-0.3
	baz=217						
TWF1	Yuli	1.43	218	eP	Pn	05 06 06.3	+0.7
	baz=218						
TWF1				S	Sn	05 06 22.9	-0.7
	baz=218						
HATJ	Hateruma jima	1.48	107	P	Pn	05 06 06.5	+0.3
HATJ				S	Sn	05 06 25.3	+0.5
WJS	Zhushan	1.54	245	eP	Pn	05 06 08.3	+1.3
	baz=245						
WJS				eS	Sn	05 06 27.9	+1.7
	baz=245						
YUS	Yu-Shan	1.55	230	P	Pn	05 06 07.6	0.0
	baz=230						
YUS				eS	Sn	05 06 26.6	-0.6
	baz=230						
WNT	Mingjian	1.55	247	eP	Pn	05 06 08.8	+1.6
	baz=247						
WNT				eS	Sn	05 06 28.5	+2.0
	baz=247						
FULB	Fuli	1.56	214	P	Pn	05 06 07.6	+0.4
	baz=214						
FULB				eS	Sn	05 06 26.8	+0.2
	baz=214						
CHKT	Chengkung	1.60	211	eP	Pn	05 06 08.7	+0.8
	baz=210						
CHKT				eS	Sn	05 06 27.9	+0.2
	baz=210						
JKRS	Kuro-shima	1.62	99	P	Pn	05 06 08.5	+0.4
JKRS				S	Sn	05 06 28.5	+0.3
ALS	Alishan	1.64	234	eP	Pn	05 06 09.5	+0.8
	baz=234						
ALS				eS	Sn	05 06 28.8	-0.3
	baz=234						
ELDTW	Lidau	1.72	221	eP	Pn	05 06 10.3	+0.7
	baz=221						
ELDTW				eS	Sn	05 06 30.6	0.0
	baz=221						
JIJ	Ishigaki jima	1.73	94	P	Pn	05 06 09.3	-0.3
JIJ				S	Sn	05 06 29.9	-0.8
EDH	Donghe	1.74	210	eP	Pn	05 06 09.7	0.0
	baz=210						
EDH				eS	Sn	05 06 31.3	+0.3
	baz=210						
JISG	Ishigakijimahi	1.88	87	eP	Pn	05 06 11.4	-0.1
CHN4	Tsaushan	1.89	234	eP	Pn	05 06 13.1	+1.4
	baz=233						
CHN4				eS	Sn	05 06 34.9	+0.2
	baz=233						
CHN8	Yiju	2.19	239	eP	Pn	05 06 16.7	+1.0
	baz=239						
JTJ	Tarama	2.24	86	P	Pn	05 06 17.0	+0.6
JTJ				eS	Sn	05 06 43.5	+0.5
PNG	Penghu	2.63	250	eP	Pn	05 06 20.1	-1.6
	baz=250						
PHUB	P'eng-hu	2.63	249	eP	Pn	05 06 21.0	-0.8
	baz=248						
PHUB				eS	Sn	05 06 51.2	-1.5
	baz=248						
WDGT	Dungji	2.67	243	eP	Pn	05 06 22.1	-0.2
	baz=243						
VCHM	Qimei	2.88	244	eP	Pn	05 06 25.1	-0.1
	baz=244						
PTMZ	Houxiangcun	2.90	282	eP	Pn	05 06 25.3	-0.1
	baz=281						
PTMZ				eS	Sn	05 06 56.5	-2.5
	baz=281						
KNMB	Chin-men Tao	3.52	270	eP	Pn	05 06 32.9	-0.9
	baz=270						
AXDP	Jialang	3.91	277	eP	Pn	05 06 39.2	-0.1
	baz=276						

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*NOU **15** 05:08:41.9, 37°.20S×177°.47E, h244^{km}, MLv4.1/8, Off E. Coast of N. Island, N.Z.*
*WEL **15** 05:08:48.6±1.0, 37°S±5°×17°7E±°, h172^{km}±9^{km}, M3.0/24, ML3.3/7, MLv3.0/24, Error ellipse: s-maj=0.0km s-min=0.0km az=53.4*
ISC 15 05:08:42.4±2.2**, 37°.14S**±0°.07×**177°.15E**±0°.07**, h225**^{km}±11^{km}**, n106, σ1^{s}62**/120**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.79	141	P	Pn	05 09 14.4	+0.9
HAZ				S	S	05 09 35.8	-2.1
OPRZ	Ohinepanea	0.85	214	P	Pn	05 09 14.5	+0.7
RUGZ	Raukumara Rang	0.92	153	P	Pn	05 09 14.9	+0.5
MARZ	Manawahe	0.93	204	P	Pn	05 09 15.4	+1.1
MXZ	Matakaoa Point	1.01	115	P	Pn	05 09 16.3	+1.6
MXZ				S	S	05 09 39.0	-1.0
URZ	Urewera	1.12	182	P	Pn	05 09 16.4	+1.0
URZ	Urewera	1.12	182	P	Pn	05 09 16.4	+1.0
OMRZ	Omania	1.15	212	P	Pn	05 09 17.3	+1.7
KUZ	Kuaotunu	1.21	288	P	Pn	05 09 16.0	-0.1
MWZ	Matawai	1.23	166	P	Pn	05 09 17.6	+1.4
MWZ				S	S	05 09 41.0	-1.8
PUZ	Puketiti	1.28	137	P	Pn	05 09 18.6	+2.0
PUZ				S	S	05 09 41.3	-2.1
MUGZ	Murupara	1.37	193	P	Pn	05 09 18.6	+1.4
TKGZ	Te Karaka	1.41	157	P	Pn	05 09 19.8	+2.3
TKGZ				S	S	05 09 43.6	-1.4
TOZ	Tahuroa Road	1.44	245	P	Pn	05 09 19.1	+1.4
RTZ	Ruatahuna	1.48	185	P	Pn	05 09 19.7	+1.5
MKAZ	Moumakai	1.59	271	P	Pn	05 09 20.0	+1.0
GRZ	Great Barrier	1.63	303	P	Pn	05 09 19.7	+0.3
RIGZ	Rimuhau	1.64	163	P	Pn	05 09 21.9	+2.5
SNGZ	Shannon Statio	1.65	175	P	Pn	05 09 21.7	+2.2
SNGZ				S	S	05 09 46.6	-2.0
WIAZ	Waiheke Island	1.65	281	P	Pn	05 09 20.5	+0.9
MTHZ	Maungataniwha	1.73	188	P	Pn	05 09 22.0	+1.8
MTHZ				S	S	05 09 47.9	-2.0
RAHZ	Arahi	1.77	182	P	Pn	05 09 22.9	+2.3
RAHZ				S	S	05 09 48.6	-2.0
MRHZ	Matea Rd	1.79	199	P	Pn	05 09 22.4	+1.6
MRHZ				S	S	05 09 50.3	-0.6
ETAZ	East Tamaki Re	1.79	275	P	Pn	05 09 22.1	+1.3
MBAZ	Motutapu North	1.84	281	P	Pn	05 09 22.5	+1.2
PRGZ	Paritu Road	1.87	162	P	Pn	05 09 24.0	+2.4
KNZ	Kokohu	1.92	168	P	Pn	05 09 24.3	+2.4
KNZ				S	S	05 09 51.6	-1.4
ABAZ	Army Bay	1.94	285	P	Pn	05 09 23.5	+1.3
EPAZ	Eden Park BICE	1.95	277	P	Pn	05 09 23.6	+1.4
HBAZ	Herne Bay Bore	1.96	278	P	Pn	05 09 23.8	+1.4
NMHZ	Naumai	1.97	188	P	Pn	05 09 25.1	+2.5
AWAZ	Awhitu Peninsu	2.01	271	P	Pn	05 09 24.2	+1.4
RATZ	Rangitukua	2.04	212	P	Pn	05 09 25.8	+2.6
WTAZ	Waiatarua	2.07	275	P	Pn	05 09 25.0	+1.5
BKZ	Black Stump Fm	2.09	194	P	Pn	05 09 25.0	+1.4
BKZ				S	S	05 09 54.1	-1.9
BKZ	Black Stump Fm	2.09	194	P	Pn	05 09 25.0	+1.4
RVAZ	Riverhead Bore	2.09	279	P	Pn	05 09 24.4	+0.7
HIZ	Hauiti	2.28	232	P	Pn	05 09 28.1	+2.7
HIZ				S	S	05 09 58.8	-0.4
HIZ	Hauiti	2.28	232	P	Pn	05 09 28.4	+2.9
TMVZ	Te Maari	2.28	210	P	Pn	05 09 27.6	+2.0
ETVZ	East Tongariro	2.29	209	P	Pn	05 09 27.7	+1.9
WTVZ	West Tongariro	2.33	212	P	Pn	05 09 28.1	+2.0
MCHZ	McNeill Hill	2.33	189	P	Pn	05 09 28.6	+2.6
MCHZ				S	S	05 10 00.2	0.0
NNVZ	North Ngauruho	2.33	211	P	Pn	05 09 28.2	+2.1
OTVZ	Oturere	2.34	210	P	Pn	05 09 28.3	+2.1
KWHZ	Kaweka Forest	2.35	194	P	Pn	05 09 28.3	+2.0
KWHZ				S	S	05 10 00.3	-0.4
TWVZ	Taurewa	2.36	215	P	Pn	05 09 27.5	+1.1
SNVZ	South Ngauruho	2.37	210	P	Pn	05 09 28.7	+2.1
NGZ	Ngauruhoe	2.37	211	P	Pn	05 09 28.8	+2.1
FWVZ	Far West T-bar	2.46	210	P	Pn	05 09 29.6	+2.0
WHVZ	Whangaehu Hut	2.47	209	P	Pn	05 09 29.6	+1.9
BHHZ	Black Hill Sta	2.50	200	P	Pn	05 09 29.2	+1.4
WNVZ	Wahianoa	2.50	209	P	Pn	05 09 29.7	+1.7
CKHZ	Cape Kidnapper	2.52	181	P	Pn	05 09 30.3	+2.4
MOVZ	Moawhango	2.52	206	P	Pn	05 09 29.5	+1.5
KRHZ	Kereru	2.58	194	P	Pn	05 09 30.4	+1.8
PKVZ	Pokaka	2.58	213	P	Pn	05 09 30.8	+2.1
MTVZ	Mangateitei	2.60	210	P	Pn	05 09 31.4	+2.5
KAHZ	Kahuranaki	2.66	185	P	Pn	05 09 32.0	+2.4
PNHZ	Pukenui	2.87	195	P	Pn	05 09 33.3	+1.5
PXZ	Pawanui	2.90	184	P	Pn	05 09 34.1	+2.0
WPHZ	Waipukurau	2.97	191	P	Pn	05 09 34.8	+1.9
TSZ	Takapari Road	3.06	197	P	Pn	05 09 35.3	+1.4
WAZ	Wanganui	3.12	212	P	Pn	05 09 36.8	+2.2
PRHZ	Porangahau	3.15	187	P	Pn	05 09 36.9	+1.9
DVHZ	Dannevirke	3.25	193	P	Pn	05 09 37.4	+1.3
ANWZ	Angora Road	3.36	189	P	Pn	05 09 39.3	+1.9
POWZ	Post Office Ro	3.42	198	P	Pn	05 09 39.4	+1.2
OUZ	Omahuta	3.46	303	P	Pn	05 09 41.9	+3.4
OUZ	Omahuta	3.46	303	P	Pn	05 09 42.0	+3.4
PRWZ	Pori Road	3.53	195	P	Pn	05 09 41.5	+2.0
BFZ	Birch Farm	3.61	191	P	Pn	05 09 41.5	+1.2
BFZ	Birch Farm	3.61	191	P	Pn	05 09 41.5	+1.2
MRZ	Mangatainoka R	3.73	199	P	Pn	05 09 42.6	+0.9
CPWZ	Castlepoint	3.84	191	P	Pn	05 09 45.0	+2.0
HOWZ	Holdsworth Sta	3.96	198	P	Pn	05 09 45.2	+0.7
OGWZ	Otaki Gorge	3.98	202	P	Pn	05 09 45.8	+1.0
TMWZ	Te Maipa	4.08	194	P	Pn	05 09 47.7	+1.6
KIW	Kapiti Island	4.11	204	P	Pn	05 09 47.0	+0.7
MTW	Mount Morrison	4.21	197	P	Pn	05 09 48.0	+0.4
CAW	Cannon Point	4.28	202	P	Pn	05 09 48.9	+0.5
TRWZ	Traveller	4.40	195	P	Pn	05 09 50.7	+0.8
DUWZ	D'Urville Isla	4.44	214	P	Pn	05 09 51.2	+0.8
MSWZ	Moikau Station	4.52	198	P	Pn	05 09 51.7	+0.4
WEL	Wellington	4.53	203	P	Pn	05 09 52.4	+0.9
SNZO	South Karori	4.58	204	P	Pn	05 09 52.3	+0.3
BHW	Baring Head	4.62	202	P	Pn	05 09 52.9	+0.4
TCW	Tory Channel	4.64	208	P	Pn	05 09 53.2	+0.4
PLWZ	Palliser	4.66	198	P	Pn	05 09 53.4	+0.3
TUWZ	Tuamarina	4.96	209	P	Pn	05 09 57.1	+0.4
NNZ	Nelson	5.02	215	P	Pn	05 09 57.9	+0.4
QRZ	Quartz Range	5.15	223	P	Pn	05 09 59.3	+0.1
QRZ	Quartz Range	5.15	223	P	Pn	05 10 00.8	+1.6
BSWZ	Blackbirch Sta	5.23	208	P	Pn	05 10 00.7	+0.5
THZ	Tophouse	5.67	214	P	Pn	05 10 06.1	+0.4
KHZ	Kahutara	5.96	207	P	Pn	05 10 09.7	+0.3
KHZ	Kahutara	5.96	207	P	Pn	05 10 09.8	+0.5
DSZ	Denniston Nort	6.19	220	P	Pn	05 10 13.8	+1.4
GVZ	Greta Valley S	6.62	207	P	Pn	05 10 17.9	+0.1
LTZ	Lake Taylor	6.77	212	P	Pn	05 10 20.3	+0.5
INZ	Inchbonnie	7.09	216	P	Pn	05 10 24.7	+0.8
OKCZ	Okains Bay	7.28	204	P	Pn	05 10 26.9	+0.7
OXZ	Oxford	7.31	211	P	Pn	05 10 25.8	-0.9
MQZ	McQueen's Vall	7.40	206	P	Pn	05 10 26.7	-1.0
ARCZ	Arundel	8.18	212	P	Pn	05 10 38.0	+0.2
TMZ	Timaru	8.61	211	P	Pn	05 10 43.5	+0.3

IDC 15 05:29:15.9±2.1**, 0°.29N**×**126°.11E, h0**^{km}**, mb3.1**/3**, mbtmp3.1**/3**, Error ellipse: s-maj=168.1km s-min=29.6km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.67	159	P	P	05 34 08.2	-0.1
	0.3nm,0.6s,baz=337,slow=11,SNR=1.4						
	0.3nm,0.6s						
ASAR	Alice Springs	24.99	163	P	P	05 34 41.6	0.0
	0.3nm,0.4s,baz=350,slow=16,SNR=4.1						
	0.3nm,0.4s						
MKAR	Makanchi Array	60.04	327	P	P	05 39 24.6	0.0
	0.2nm,0.6s,baz=119,slow=8.5,SNR=2.3						
	0.2nm,0.6s						

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*BJI **15** 05:50:57.0±0.0, 63°.06N×151°.30W, h125^{km}, mb5.8/81, mB5.4/41*
*MOS **15** 05:50:58.4±0.8, 63°.18N×151°.12W, h129^{km}, mb5.5/120, Error ellipse: s-maj=7.7km s-min=3.4km az=98.4*
*NEIC **15** 05:51:00, 63°.07N×150°.96W, h130^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.82; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.08; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.31; $M_{\phi r}$0.54; Fault plane solution: $M_0$1.05000×10^{17} NP1:ϕ_s266.07000°, δ31.90000°, λ123.22000°. NP2:ϕ_s48.42000°, δ63.77000°, λ71.17000°. Principal axes: T 1.0872, Plg66.0000°, Azm284.0000°; N -0.0719, Plg17.0000°, Azm57.0000°; P -1.0154, Plg17.0000°, Azm152.0000°;*
*NEIC **15** 05:51:00.5±2.4, 63°.09N±0°.02×150°.97W±0°.08, h134^{km}±1^{km} Error ellipse: s-maj=5.9km s-min=3.3km az=258.0*
*AEIC **15** 05:51:00±2.1, 63°.08N±0°.04×150°.95W±0°.08, h132^{km}±3^{km}, ML5.4, mb5.4/682(NEIC), ML5.6/162(NEIC), Mwb5.3/28(NEIC), Mww5.3(NEIC), Error ellipse: s-maj=5.2km s-min=5.0km az=196.0*
*NEIC **15** 05:51:01, 63°.02N×151°.01W, h130^{km}, Moment Tensor Solution. Duration: 2^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$-0.04; $M_{r\theta}$0.25; $M_{\theta\phi}$-0.39; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.19000×10^{17} NP1: ϕ_s268.00000°, δ37.00000°, λ122.00000°. NP2: ϕ_s50.00000°, δ59.00000°, λ68.00000°. Principal axes: T 1.2114, Plg68.0000°, Azm275.0000°; N -0.0336, Plg19.0000°, Azm62.0000°; P -1.1777, Plg12.0000°, Azm156.0000°;*
*IDC **15** 05:51:01.1±0.5, 63°.22N×151°.09W, h138^{km}±3^{km}, mb5.0/33, mbtmp5.4/38, MS4.0/36 Error ellipse: s-maj=8.8km s-min=6.4km az=26.0*
*GCMT **15** 05:51:02.0±0.1, 63°.18N±0°.01×150°.93W±0°.02, h138^{km}, MW5.3/150, Moment Tensor Solution. s125,c184; s150,c265; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.95±.01; $M_{\theta\theta}$-0.94±.02; $M_{\phi\phi}$0.00±.02; $M_{r\theta}$0.33±.01; $M_{\theta\phi}$-0.33±.02; $M_{\phi r}$0.61±.01; Best double couple: $M_0$1.21700×10^{17} NP1:ϕ_s273.00000°, δ35.00000°, λ127.00000°. NP2:ϕ_s50.00000°, δ62.00000°, λ67.00000°. Principal axes: T 1.2580, Plg65.0000°, Azm280.0000°; N -0.0830, Plg20.0000°, Azm61.0000°; P -1.1760, Plg15.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 05:50:59.7±0.2**, 63°.07N**±0°.02×**151°.04W**±0°.02**, h132**^{km}±1^{km}**, h132**^{km}**:pP-P, n2154, σ1^{s}41**/2510**, mb5.4**/562**, 410C-243D, Fault plane solution: NP1:**ϕ_s68.84672°**,** δ78.37248°**,** λ53.64374°. **NP2:**ϕ_s323.53381°**,** δ37.92465°**,** λ160.85735°. **Principal axes:** T Plg44.4508°**,** Azm302.8880°**;** N Plg35.4955°, Azm77.2854°**;** P

Plg24.5359°, Azm186.2844°; **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.49	6		Pn	05 51 19.2	+0.2
KTH				Sn	Sn	05 51 33.7	0.0
TRF	Thorofare Moun	0.51	41		Pn	05 51 19.8	+0.6
TRF				Sn	Sn	05 51 34.2	+0.2
TRF	Thorofare Moun	0.51	41	P	Pn	05 51 19.3	+0.1
	baz=218,SNR=1000						
TRF				S	Sn	05 51 34.6	+0.5
	baz=218						
PPLA	Purkeypile	0.55	252		Pn	05 51 20.2	+0.7
PPLA	Purkeypile	0.55	252		Sn	05 51 35.6	+1.2
PPLA	Purkeypile	0.55	252	P	Pn	05 51 20.3	+0.8
	baz=73,SNR=1000						
PPLA				S	Sn	05 51 35.1	+0.7
	baz=73						
CAST	Castle Rocks	0.59	307		Pn	05 51 20.0	+0.4
CAST				Sn	Sn	05 51 34.2	-0.4
CAST	Castle Rocks	0.59	307	P	Pn	05 51 19.9	+0.4
	baz=124,SNR=1000						
CAST				S	Sn	05 51 34.8	+0.2
	baz=124						
CUT	Chulitna	0.76	152		Pn	05 51 21.0	+0.4
CUT					Sn	05 51 37.2	+0.6
CUT	Chulitna	0.76	152	P	Pn	05 51 21.1	+0.4
	baz=335,SNR=1000						
CUT				S	Sn	05 51 37.0	+0.5
	baz=335						
CHUM	Lake Minchumin	1.00	326		Pn	05 51 23.4	+0.7
CHUM					Sn	05 51 40.5	+0.4
CHUM	Lake Minchumin	1.00	326	P	Pn	05 51 23.4	+0.7
	baz=143,SNR=1000						
CHUM				S	Sn	05 51 40.2	0.0
	baz=143						
BPAW	Bear Paw Mtn.	1.03	1		Pn	05 51 23.3	+0.2
BPAW					Sn	05 51 40.3	-0.7
BPAW				IAML		05 51 41.3	
	comp=N,81µm,1.0s						
BPAW	Bear Paw Mtn.	1.03	1	P	Pn	05 51 23.2	+0.2
	baz=179,SNR=1000						
BPAW				S	Sn	05 51 40.2	-0.7
	baz=179						
RND	Reindeer	1.05	70		Pn	05 51 23.1	-0.2
RND					Sn	05 51 40.2	-1.0
MCK	McKinley	1.16	54	Pn	Pn	05 51 24.5	+0.2
MCK					Sn	05 51 42.5	-0.5
MCK				IAML		05 51 43.8	
	comp=N,91µm,0.7s						
MCK	McKinley	1.16	54	P	Pn	05 51 24.5	+0.2
MCK						05 51 42.5	
MCK	McKinley	1.16	54	P	Pn	05 51 24.5	+0.2
	baz=234,SNR=1000						
MCK				S	Sn	05 51 42.6	-0.4
	baz=234						
BWN	Browne	1.31	32		Pn	05 51 26.4	+0.6
BWN					Sn	05 51 45.9	+0.1
BWN				IAML		05 51 47.3	
	comp=N,122µm,1.4s						
BWN				IAML		05 51 56.7	
	comp=E,63µm,1.3s						
M22K	Willow	1.39	162		Pn	05 51 27.1	+0.4
M22K	Willow	1.39	162	P	Pn	05 51 26.9	+0.2
	baz=344,SNR=1000						
M22K				S	Sn	05 51 48.0	+0.9
	baz=344						
K20K	Telida	1.40	283		Pn	05 51 27.6	+0.7
K20K					Sn	05 51 47.4	-0.1
K20K	Telida	1.40	283	P	Pn	05 51 27.5	+0.7
	baz=100,SNR=1000						
K20K				S	Sn	05 51 47.5	-0.1
	baz=100						
L20K	Farewell, AK	1.43	247		Pn	05 51 27.6	+0.4
L20K					Sn	05 51 48.6	+0.5
L20K	Farewell, AK	1.43	247	P	Pn	05 51 27.6	+0.4
	baz=65,SNR=1000						
L20K				S	Sn	05 51 49.0	+0.8
	baz=65						
WAT6	Susitna Watana	1.59	106		Pn	05 51 28.4	-0.7
WAT6	Susitna Watana	1.59	106	P	Pn	05 51 28.7	-0.4
	baz=290,SNR=1000						
WAT6				S	Sn	05 51 50.4	-1.1
	baz=290						
STLK	Strandline Lak	1.62	194		Pn	05 51 29.7	+0.4
GHO	Glory Hole Cre	1.63	142		Pn	05 51 29.8	+0.3
DHY	Denali Highway	1.67	88		Pn	05 51 30.1	+0.1
DHY				IAML		05 51 54.5	
	comp=N,77µm,0.6s						
DHY	Denali Highway	1.67	88	P	Pn	05 51 30.0	+0.1
	baz=271,SNR=1000						
DHY				S	Sn	05 51 52.4	-0.7
	baz=271						
PMR	Palmer	1.73	148		Pn	05 51 30.4	-0.1
PMR	Palmer	1.73	148	P	Pn	05 51 30.4	-0.1
PMR	Palmer	1.73	148	P	Pn	05 51 30.3	-0.2
	baz=331,SNR=1000						
PMR				S	Sn	05 51 53.5	-0.6
	baz=331						
NEA2	Nenana	1.76	29		Pn	05 51 30.5	-0.3
NEA2					Sn	05 51 53.6	-1.1
NEA2				IAML		05 51 54.2	
	comp=E,46µm,0.8s						
NEA2	Nenana	1.76	29	P	Pn	05 51 30.6	-0.3
	baz=209,SNR=1000						
NEA2				S	Sn	05 51 53.1	-1.7
	baz=209						
J20K	Nowinta River	1.78	310		Pn	05 51 31.8	+0.7
J20K				IAML		05 51 56.4	
	comp=E,21µm,1.3s						
J20K	Nowinta River	1.78	310	P	Pn	05 51 31.6	+0.6
	baz=127,SNR=1000						
J20K				S	Sn	05 51 55.4	+0.4
	baz=127						
SML	Sawmill	1.79	134		Pn	05 51 31.1	-0.2
SML				IAML		05 51 56.9	
	comp=N,99µm,1.0s						
SML	Sawmill	1.79	134	P	Pn	05 51 31.0	-0.2
	baz=317,SNR=1000						
SML				S	Sn	05 51 55.9	+0.5
	baz=317						
SPCG	Spurr Capps Gl	1.84	195		Pn	05 51 32.3	+0.3
SPBG	Spurr Blockage	1.92	200		Pn	05 51 33.6	+0.7
WRH	Wood River Hil	1.92	42		Pn	05 51 32.8	0.0
WRH				IAML		05 51 57.8	
	comp=N,22µm,1.1s						
CKN	Chakachatna No	1.93	197		Pn	05 51 33.7	+0.7
SPWE	Spurr West	1.94	202		Pn	05 51 33.8	+0.7
M19K	Big River Lodg	1.95	235		Pn	05 51 33.6	+0.5
M19K	Big River Lodg	1.95	235	P	Pn	05 51 33.3	+0.2
	baz=52						
M19K				S	Sn	05 51 58.5	-0.1
	baz=52						
SPU	Mount Spurr	1.96	195	Pn	Pn	05 51 33.6	+0.4
SPCR	Spurr Chakacha	1.96	197		Pn	05 51 33.6	+0.3
SPCR	Spurr Chakacha	1.96	197	P	Pn	05 51 33.6	+0.3
	baz=17,SNR=1000						
SPCR				S	Sn	05 51 58.8	-0.2
	baz=17						
FIS	Fire Island	1.97	168		Pn	05 51 34.8	+1.4
L19K	White Mountain	1.98	245		Pn	05 51 34.0	+0.5
L19K	White Mountain	1.98	245	P	Pn	05 51 33.8	+0.4
	baz=62,SNR=1000						
L19K				S	Sn	05 51 59.6	+0.3
	baz=62						
M23K	Glacier View	2.00	128	P	Pn	05 51 33.1	-0.7
	baz=312,SNR=1000						
M23K				S	Sn	05 51 59.6	-0.4
	baz=312						
KNK	Knik Glacier	2.06	143	Pn	Pn	05 51 34.3	-0.1
KNK				IAML		05 52 09.5	
	comp=N,49µm,0.7s						
KNK	Knik Glacier	2.06	143	P	Pn	05 51 34.2	-0.2
	baz=326,SNR=1000						
KNK				S	Sn	05 52 01.0	0.0
	baz=326						
RC01	Rabbit Creek A	2.08	162		Pn	05 51 34.5	-0.2
RC01				IAML		05 52 03.6	
	comp=N,39µm,0.3s						
RC01				IAML		05 52 06.2	
	comp=E,29µm,0.4s						
RC01	Rabbit Creek A	2.08	162	P	Pn	05 51 34.4	-0.4
	baz=344,SNR=1000						
RC01				S	Sn	05 52 01.5	-0.1
	baz=344						
SCM	Sheep Creek Mo	2.13	124		Pn	05 51 34.9	-0.5
SCM	Sheep Creek Mo	2.13	124	P	Pn	05 51 34.9	-0.5
SCM	Sheep Creek Mo	2.13	124	P	Pn	05 51 34.7	-0.6
	baz=308,SNR=1000						
SCM				S	Sn	05 52 02.6	-0.1
	baz=308						
CCB	Clear Creek Bu	2.13	41		Pn	05 51 35.1	-0.3
CCB				IAML		05 52 03.0	
	comp=E,21µm,1.1s						
I21K	Tanana	2.16	349		Pn	05 51 36.0	+0.4
I21K				IAML		05 52 05.2	
	comp=N,23µm,1.4s						
I21K	Tanana	2.16	349	P	Pn	05 51 36.0	+0.4
	baz=168,SNR=1000						
I21K				S	Sn	05 52 02.6	-0.7
	baz=168						
I23K	Minto, Yukon-K	2.21	19		Pn	05 51 36.4	+0.1
I23K				IAML		05 52 05.0	
	comp=E,28µm,1.5s						
I23K				IAML		05 52 05.1	
	comp=N,41µm,1.0s						
I23K	Minto, Yukon-K	2.21	19	P	Pn	05 51 36.5	+0.1
	baz=199,SNR=1000						
I23K				S	Sn	05 52 03.1	-1.3
	baz=199						
HDA	Harding Lake	2.26	52		Pn	05 51 36.6	-0.4
HDA				IAML		05 52 06.0	
	comp=E,30µm,0.8s						
HDA				IAML		05 52 10.2	
	comp=N,25µm,0.5s						
HDA	Harding Lake	2.26	52	P	Pn	05 51 36.6	-0.4
	baz=235,SNR=1000						
HDA				S	Sn	05 52 03.8	-1.7
	baz=235						
HDA				S	Sn	05 52 03.8	-1.7
	baz=235						
MDM	Murphy Dome	2.26	32	Pn	Pn	05 51 37.0	0.0
MDM				IAML		05 52 05.2	
	comp=E,19µm,1.2s						
MDM				IAML		05 52 08.2	
	comp=N,14µm,1.6s						
TTA	Tatalina	2.27	269		Pn	05 51 37.7	+0.6
TTA	Tatalina	2.27	269	P	Pn	05 51 37.7	+0.6
TTA	Tatalina	2.27	269	P	Pn	05 51 37.8	+0.6
	baz=84,SNR=1000						
TTA				S	Sn	05 52 05.6	-0.3
	baz=84						
TT01	Tatalina	2.28	268		Pn	05 51 37.2	+0.1
TCOL	CIGO, UAF Yank	2.29	36		Pn	05 51 37.0	-0.2
TCOL				IAML		05 52 09.3	
	comp=E,38µm,0.7s						
TCOL				IAML		05 52 10.8	
	comp=N,61µm,0.7s						
TCOL	CIGO, UAF Yank	2.29	36	P	Pn	05 51 37.2	0.0
	baz=218,SNR=1000						
TCOL				S	Sn	05 52 05.1	-1.1
	baz=218						
I53US	FAIRBANKS INFR	2.29	36	P	Pn	05 51 37.0	-0.3
	baz=221,slow=19,SNR=0.6						
I53US				*i*		06 04 00.0	
	baz=220,slow=330,SNR=1.8						
COLA	College	2.29	36	IAML		05 52 06.7	
	comp=N,25µm,1.1s						
COLA				IAML		05 52 07.1	
	comp=N,25µm,1.1s						
COLA	College	2.29	36		Pn	05 51 37.3	0.0
COLA	College	2.29	36	*d i*P	Pn	05 51 37.1	-0.2
CAPN	Captain Cook N	2.31	181		Pn	05 51 40.0	+2.4
CAPN	Captain Cook N	2.31	181	P	Pn	05 51 40.0	+2.4
	baz=2.2,SNR=439						
CAPN				S	Sn	05 52 10.5	+4.0
	baz=2.2						
PS08	TAPS Pump Stn8	2.39	50		Pn	05 51 38.0	-0.5
PS10	TAPS Pump St10	2.41	79		Pn	05 51 39.8	+1.0
M24K	Tolsona, Glenn	2.45	111		Pn	05 51 39.7	+0.4
M24K	Tolsona, Glenn	2.45	111	P	Pn	05 51 39.5	+0.1
	baz=296,SNR=1000						
M24K				S	Sn	05 52 11.3	+1.4
	baz=296						
K24K	Donnelly Dome	2.48	70	P	Pn	05 51 39.8	+0.1
	baz=255,SNR=1000						
K24K				S	Sn	05 52 10.6	+0.2
	baz=255						
IL31		2.51	45		Pn	05 51 39.7	-0.3
ILAR	Eielson Array	2.51	45	P	Pn	05 51 39.5	-0.5
	comp=N,2µm,0.3s,baz=226,slow=13,SNR=8921						
ILAR				S	Sn	05 52 07.0	-4.0
	comp=N,3µm,0.8s,baz=227,slow=16,SNR=7.4						
ILAR	Eielson Array	2.51	45		Pn	05 51 39.8	-0.2
ILAR	Eielson Array	2.51	45	P	Pn	05 51 39.8	-0.2
PS09	TAPS Pump Stn9	2.52	68		Pn	05 51 40.7	+0.6
PAX	Paxson	2.54	90		Pn	05 51 41.0	+0.4
PAX	Paxson	2.54	90	P	Pn	05 51 41.0	+0.4
PAX	Paxson	2.54	90	P	Pn	05 51 40.5	0.0
	baz=275,SNR=1000						
PAX				S	Sn	05 52 11.0	-1.0
	baz=275						
PS07	TAPS Pump Stn7	2.55	27		Pn	05 51 40.5	0.0
POKR	Poker Plat Res	2.59	36		Pn	05 51 41.2	+0.1
POKR	Poker Plat Res	2.59	36	P	Pn	05 51 41.3	+0.1
	baz=218,SNR=1000						
POKR				S	Sn	05 52 09.6	-3.4
	baz=218						
SLKM	Skilak Lake	2.60	171		Pn	05 51 41.6	+0.4
DFR	Drift River	2.61	198		Pn	05 51 42.1	+0.7
RDJH	Redoubt Jeurge	2.62	199		Pn	05 51 42.2	+0.5
O22K	Cooper Landing	2.67	166		Pn	05 51 42.1	0.0
O22K	Cooper Landing	2.67	166	P	Pn	05 51 42.1	0.0
	baz=348,SNR=1000						
O22K				S	Sn	05 52 13.3	-1.4
	baz=348						
H21K	Melozitna Rive	2.71	344		Pn	05 51 43.1	+0.5
H21K	Melozitna Rive	2.71	344	P	Pn	05 51 42.9	+0.3
	baz=162,SNR=1000						
H21K				S	Sn	05 52 12.9	-2.7
	baz=162						
RDWB	Redoubt West	2.73	199		Pn	05 51 43.5	+0.5
RSO	Redoubt South	2.74	198		Pn	05 51 43.8	+0.5
PS11	TAPS Pump St11	2.76	109		Pn	05 51 43.6	+0.4
RED	Redoubt Volcan	2.79	198		Pn	05 51 44.1	+0.4
N19K	Bonanza Creek	2.79	217		Pn	05 51 44.2	+0.5
N19K	Bonanza Creek	2.79	217	P	Pn	05 51 44.3	+0.5
	baz=35,SNR=1000						
N19K				S	Sn	05 52 12.7	-4.9
	baz=35						
HARP	HAARP	2.79	101		Pn	05 51 43.7	0.0
HARP	HAARP	2.79	101	P	Pn	05 51 43.7	0.0
	baz=287,SNR=1000						
HARP				S	Sn	05 52 18.5	+0.9
	baz=287						
H23K	Yukon River	2.84	13		Pn	05 51 44.9	+0.6
H23K				IAML		05 52 18.8	
	comp=N,20µm,1.0s						
H23K				IAML		05 52 19.1	
	comp=E,24µm,1.2s						
H23K	Yukon River	2.84	13	P	Pn	05 51 44.5	+0.3
	baz=193,SNR=1000						
H23K				S	Sn	05 52 17.6	-1.1
	baz=193						
PS06	TAPS Pump Stn6	2.85	11		Pn	05 51 44.8	+0.4
KLU	Klutina	2.87	121		Pn	05 51 43.9	-0.8
KLU				IAML		05 52 31.2	
	comp=N,29µm,0.8s						
KLU				IAML		05 52 33.7	
	comp=E,30µm,0.7s						
KLU	Klutina	2.87	121	P	Pn	05 51 43.7	-1.0
	baz=306,SNR=1000						
KLU				S	Sn	05 52 17.8	-1.6
	baz=306						
GLI	Glacier Island	2.88	138		Pn	05 51 44.4	-0.4
GLI	Glacier Island	2.88	138	P	Pn	05 51 44.1	-0.7
	baz=322,SNR=1000						
GLI				S	Sn	05 52 19.4	-0.2
	baz=322						
JPK	Jack Peak	2.91	132		Pn	05 51 44.2	-1.0
SVW2	Sparrevohn	2.91	229		Pn	05 51 45.6	+0.4
J25K	Salcha River,	2.95	56		Pn	05 51 45.5	-0.2
J25K				IAML		05 52 20.7	
	comp=E,14µm,0.8s						
J25K				IAML		05 52 24.4	
	comp=N,15µm,1.1s						
J25K	Salcha River,	2.95	56	P	Pn	05 51 45.3	-0.4
	baz=240						
J25K				S	Sn	05 52 18.3	-3.0
	baz=240						
VMT	TAPS Tl Valdez	2.97	130		Pn	05 51 44.7	-1.2
SEW	Seward	3.07	165		Pn	05 51 47.1	-0.1
SEW	Seward	3.07	165	P	Pn	05 51 46.8	-0.4
	baz=347,SNR=1000						
SEW				S	Sn	05 52 21.8	-2.1
	baz=347						
GCSA	Galena City Sc	3.08	306		Pn	05 51 48.1	+0.8
GCSA	Galena City Sc	3.08	306	P	Pn	05 51 48.1	+0.8
	baz=120,SNR=351						
GCSA				S	Sn	05 52 24.0	0.0
	baz=120						
O20K	Slope Mountain	3.09	195		Pn	05 51 47.9	+0.3
O20K	Slope Mountain	3.09	195	P	Pn	05 51 47.9	+0.3
	baz=14,SNR=787						
O20K				S	Sn	05 52 25.5	+0.9
	baz=14						
H24K	Noodor Dome	3.10	25		Pn	05 51 47.7	+0.1
H24K				IAML		05 52 24.4	
	comp=N,8µm,1.1s						
H24K	Noodor Dome	3.10	25	P	Pn	05 51 47.5	-0.1
	baz=207,SNR=1000						
H24K				S	Sn	05 52 22.6	-2.1
	baz=207						
IM03		3.15	339		Pn	05 51 48.0	-0.1
IMAR	Indian Mountai	3.15	339	Pn	Pn	05 51 48.7	+0.5
DIV	Divide	3.15	126		Pn	05 51 47.1	-1.2
FID	Port Fidalgo	3.17	135		Pn	05 51 47.9	-0.8
PS12	TAPS Pump St12	3.19	118		Pn	05 51 47.8	-1.0
DOT	Dot Lake	3.20	76		Pn	05 51 48.4	-0.5
O19K	Port Alsworth	3.28	210		Pn	05 51 50.5	+0.5
O19K				IAML		05 52 27.2	
	comp=E,8µm,0.5s						
O19K				IAML		05 52 54.6	
	comp=N,6µm,0.5s						
O19K	Port Alsworth	3.28	210	P	Pn	05 51 50.3	+0.4
	baz=28						
BRLK	Bradley Lake	3.32	179		Pn	05 51 50.9	+0.4
BRLK				IAML		05 52 31.1	
	comp=N,17µm,0.7s						
BRLK				IAML		05 52 31.9	
	comp=E,8µm,0.5s						
N18K	Kilae Creek	3.32	226		Pn	05 51 50.8	+0.3
N18K	Kilae Creek	3.32	226	P	Pn	05 51 50.7	+0.2
	baz=42,SNR=1000						
N18K				S	Sn	05 52 23.3	-6.5
	baz=42						
MENT	Mentasta	3.34	89		Pn	05 51 50.8	0.0
MENT				IAML		05 52 40.8	
	comp=N,21µm,0.8s						
MENT				IAML		05 52 45.3	
	comp=E,20µm,0.7s						
BRSE	Bradley Lake S	3.34	177		Pn	05 51 50.8	0.0
BRSE	Bradley Lake S	3.34	177	P	Pn	05 51 50.9	0.0
	baz=358,SNR=1000						
BRSE				S	Sn	05 52 28.9	-1.5
	baz=358						
N25K	Chitina, Valde	3.34	113		Pn	05 51 50.6	-0.3
N25K				IAML		05 52 31.7	
	comp=E,15µm,0.5s						
N25K				IAML		05 52 32.8	
	comp=N,19µm,0.6s						
N25K	Chitina, Valde	3.34	113	P	Pn	05 51 50.4	-0.5
	baz=299,SNR=1000						
N25K				S	Sn	05 52 29.0	-1.4
	baz=299						
HOM	Homer	3.44	185		Pn	05 51 52.5	+0.4
HOM				IAML		05 52 57.4	
	comp=E,21µm,0.9s						
HOM	Homer	3.44	185	P	Pn	05 51 52.4	+0.4
	baz=5.3,SNR=1000						
HOM				S	Sn	05 52 31.8	-0.7
	baz=5.3						
L26K	Log Cabin Wild	3.50	87		Pn	05 51 52.7	-0.2
L26K				IAML		05 52 43.4	
	comp=N,21µm,0.8s						
L26K				IAML		05 52 46.9	
	comp=E,14µm,0.5s						
L26K	Log Cabin Wild	3.50	87	P	Pn	05 51 52.7	-0.2
	baz=274,SNR=1000						
L26K				S	Sn	05 52 33.6	-0.5
	baz=274						
CNPM	China Poot	3.56	182		Pn	05 51 53.7	0.0
CNPM				IAML		05 52 36.8	
	comp=E,15µm,0.8s						
CNPM				IAML		05 52 37.0	
	comp=N,16µm,0.8s						
EYAK	Cordova Ski Ar	3.56	133		Pn	05 51 53.0	-0.6
EYAK	Cordova Ski Ar	3.56	133	P	Pn	05 51 52.7	-0.9
	baz=318,SNR=1000						
EYAK				S	Sn	05 52 34.7	-0.7
	baz=318						
OPT	Oil Point	3.59	198		Pn	05 51 54.6	+0.5
P19K	Oil Pt	3.59	198		Pn	05 51 54.6	+0.6
P19K				IAML		05 52 40.0	
	comp=E,8µm,0.7s						
P19K				IAML		05 53 08.0	
	comp=N,6µm,0.8s						
P19K	Oil Pt	3.59	198	P	Pn	05 51 54.3	+0.2
	baz=17,SNR=1000						
P19K				S	Sn	05 52 37.6	+1.5
	baz=17						
J26L	Joseph Creek	3.62	63	P	Pn	05 51 54.1	-0.3
	baz=250,SNR=1000						
J26L				S	Sn	05 52 35.6	-1.1
	baz=250						
BMRM	Bremner River	3.69	122		Pn	05 51 54.3	-1.1
BMRM				IAML		05 52 58.4	
	comp=E,17µm,0.9s						
BMRM	Bremner River	3.69	122	P	Pn	05 51 53.8	-1.7
	baz=308,SNR=687						
BMRM				S	Sn	05 52 37.2	-1.4
	baz=308						
GLB	Gilahina Butte	3.75	113		Pn	05 51 55.8	-0.5
GLB				IAML		05 52 41.1	
	comp=N,16µm,0.8s						
GLB				IAML		05 52 43.3	
	comp=E,14µm,0.7s						
PS05	TAPS Pump Stn5	3.76	2		Pn	05 51 56.9	+0.7
M26K	Nabesna, AK	3.76	97		Pn	05 51 56.0	-0.4
M26K				IAML		05 53 00.3	
	comp=N,9µm,1.1s						
M26K				IAML		05 53 06.1	
	comp=E,7µm,0.7s						
M26K	Nabesna, AK	3.76	97	P	Pn	05 51 55.8	-0.5
	baz=284,SNR=820						
M26K				S	Sn	05 52 28.5	-12
	baz=284						
O18K	Koktuh Hills	3.80	214		Pn	05 51 57.3	+0.5
O18K	Koktuh Hills	3.80	214	P	Pn	05 51 57.2	+0.4
	baz=30						
O18K				S	Sn	05 52 40.9	-0.1
	baz=30						
AU22	Augustine Moun	3.88	198		Pn	05 51 58.1	+0.3
AUL	Augustine Lava	3.88	198		Pn	05 51 58.4	+0.5
AU2	Augustine Isla	3.88	198		Pn	05 51 58.2	+0.4
AUW	Augustine West	3.90	199		Pn	05 51 58.6	+0.6
AUH	Augustine H	3.90	198		Pn	05 51 58.6	+0.5
AUQ	Augustine Qik’	3.90	198		Pn	05 51 58.6	+0.4
VRDI	Verde Repeater	4.01	114		Pn	05 51 59.0	-0.8
VRDI				IAML		05 52 48.3	
	comp=E,6µm,0.8s						
VRDI				IAML		05 52 48.9	
	comp=N,10µm,0.9s						
MCARA	McCarthy VSAT	4.12	111		Pn	05 52 00.9	-0.1
MCARA	McCarthy VSAT	4.12	111	P	Pn	05 52 00.8	-0.1
	baz=298,SNR=1000						
MCARA				S	Sn	05 52 48.0	-0.5
	baz=298						
K27K	Chicken	4.12	73		Pn	05 52 00.6	-0.5
K27K				IAML		05 52 53.3	
	comp=N,11µm,1.3s						
K27K				IAML		05 52 53.8	
	comp=E,9µm,0.8s						
K27K	Chicken	4.12	73	P	Pn	05 52 00.6	-0.5
	baz=260						
K27K				S	Sn	05 52 46.2	-2.5
	baz=260						
COLD	Coldfoot	4.19	4		Pn	05 52 02.3	+0.5
COLD	Coldfoot	4.19	4	P	Pn	05 52 02.4	+0.5
	baz=185,SNR=1000						
COLD				S	Sn	05 52 47.9	-2.3
	baz=185						
L27K	Beaver Creek,	4.19	86		Pn	05 52 01.1	-0.9
L27K				IAML		05 53 09.0	
	comp=N,3µm,1.6s						
L27K				IAML		05 53 18.2	
	comp=E,3µm,1.1s						
L27K	Beaver Creek,	4.19	86	P	Pn	05 52 01.1	-0.9

	baz=274,SNR=1000						
L27K				S	Sn	05 52 47.1	-3.3
	baz=274						
P18K	Big Mountain,	4.21	211		Pn	05 52 02.6	+0.4
P18K	Big Mountain,	4.21	211	P	Pn	05 52 02.6	+0.4
	baz=27						
P18K				S	Sn	05 52 48.5	-2.3
	baz=27						
BC03		4.21	86		Pn	05 52 01.1	-1.1
BCAR	Beaver Creek A	4.21	86	Pn	Pn	05 52 01.4	-0.9
HMT	Hamilton	4.24	127		Pn	05 52 01.5	-1.1
M27K	Edge Creek, AK	4.28	96		Pn	05 52 03.6	+0.4
M27K				IAML		05 53 15.3	
	comp=E,5µm,0.7s						
M27K				IAML		05 53 19.2	
	comp=N,7µm,1.1s						
M27K	Edge Creek, AK	4.28	96	P	Pn	05 52 03.9	+0.7
	baz=284						
Q23K	Middleton Isla	4.30	146		Pn	05 52 02.6	-0.7
Q23K				IAML		05 53 25.7	
	comp=N,8µm,0.8s						
Q23K				IAML		05 53 34.3	
	comp=E,9µm,1.5s						
Q23K	Middleton Isla	4.30	146	P	Pn	05 52 02.5	-0.9
	baz=331,SNR=401						
Q23K				S	Sn	05 52 52.9	+0.1
	baz=331						
MID	Middleton Isla	4.30	146		Pn	05 52 02.6	-0.8
MID				IAML		05 53 13.1	
	comp=E,8µm,1.5s						
MID				IAML		05 53 22.6	
	comp=N,8µm,1.0s						
MID	Middleton Isla	4.30	146	P	Pn	05 52 02.6	-0.8
Q19K	Cape Douglas,	4.34	198		Pn	05 52 03.8	-0.3
Q19K				IAML		05 53 04.6	
	comp=N,8µm,0.9s						
Q19K	Cape Douglas,	4.34	198	P	Pn	05 52 03.8	-0.3
	baz=16,SNR=800						
Q19K				S	Sn	05 52 45.5	-8.5
	baz=16						
NICHA	Nichawak Mount	4.41	127		Pn	05 52 04.4	-0.5
PTPK	Patty Peak	4.45	111		Pn	05 52 05.0	-0.5
KHIT	Khitrov Hills	4.54	122		Pn	05 52 05.5	-1.2
BALM	Baldy	4.57	113		Pn	05 52 06.2	-0.9
SUCK	Suckling Hills	4.59	128		Pn	05 52 06.4	-0.9
GRIN	Grindle Hills	4.62	124		Pn	05 52 07.0	-0.8
KIAG	Kiagna River	4.62	114		Pn	05 52 06.7	-1.2
EGAK	Eagle	4.69	64		Pn	05 52 07.7	-0.9
EGAK				IAML		05 53 17.2	
	comp=N,7µm,1.1s						
EGAK	Eagle	4.69	64	P	Pn	05 52 07.6	-0.9
	baz=253,SNR=1000						
EGAK				S	Sn	05 52 59.0	-3.0
	baz=253						
WAX	Waxell Ridge	4.70	120		Pn	05 52 07.6	-1.1
BVCY	Beaver Creek	4.73	93		Pn	05 52 08.8	-0.4
BVCY	Beaver Creek	4.73	93	P	Pn	05 52 08.7	-0.4
	baz=282,SNR=162						
BGLC	Bering Glacier	4.74	125		Pn	05 52 09.2	+0.1
BGLC	Bering Glacier	4.74	125	P	Pn	05 52 09.3	+0.1
	baz=312,SNR=114						
BGLC				S	Sn	05 53 03.9	+0.6
	baz=312						
ISLE	Juniper Island	4.81	117		Pn	05 52 08.8	-1.5
BARN	Barnard Glacie	4.85	110		Pn	05 52 10.6	-0.3
BARN				IAML		05 53 16.1	
	comp=E,4µm,1.0s						
BARN				IAML		05 53 43.3	
	comp=N,6µm,1.0s						
SNH	Sunshine Point	4.87	123		Pn	05 52 10.8	-0.2
SNH				IAML		05 53 35.3	
	comp=N,7µm,0.7s						
YUK2	White River	4.91	101		Pn	05 52 11.7	0.0
BAGL	Bagley Icefiel	4.97	117		Pn	05 52 11.1	-1.2
GRNC	Granite Creek	4.98	114		Pn	05 52 11.5	-1.2
GRNC				IAML		05 53 23.8	
	comp=N,6µm,1.0s						
GRNC				IAML		05 53 34.7	
	comp=E,3µm,1.0s						
CTG	Chitna Glacier	5.03	110	P	Pn	05 52 13.0	-0.3
	baz=299,SNR=1000						
CTG				S	Sn	05 53 10.2	-0.3
	baz=299						
CTGM	Chitina Glacie	5.04	110		Pn	05 52 13.0	-0.4
CTGM				IAML		05 53 14.2	
	comp=E,2µm,1.4s						
CTGM				IAML		05 53 40.3	
	comp=N,5µm,1.2s						
CYK	Cape Yakataga	5.07	122		Pn	05 52 13.5	-0.1
YUK3	Moose Creek	5.09	100		Pn	05 52 14.1	0.0
YUK3	Moose Creek	5.09	100	P	Pn	05 52 14.1	0.0
	baz=290,SNR=1000						
BM03	Burnt Mountain	5.13	29		Pn	05 52 13.9	-0.6
BMAR	Burnt Mountain	5.15	29	Pn	Pn	05 52 14.1	-0.6
YAH	Yahtse	5.19	117		Pn	05 52 14.3	-1.1
YAH				IAML		05 53 15.9	
	comp=E,5µm,0.8s						
LOGN	Logan Glacier	5.25	111		Pn	05 52 15.6	-0.6
LOGN				IAML		05 53 49.4	
	comp=N,3µm,1.1s						
LOGN				IAML		05 53 49.8	
	comp=E,4µm,1.2s						
DAWY	Dawson	5.30	74		Pn	05 52 16.2	-0.6
DAWY				IAML		05 53 32.8	
	comp=E,3µm,0.7s						
DAWY				IAML		05 53 45.9	
	comp=N,3µm,1.2s						
DAWY	Dawson	5.30	74	P	Pn	05 52 16.1	-0.6
	baz=264,SNR=1000						
DAWY				S	Sn	05 53 14.9	-1.9
	baz=264						
KDAK	Kodiak Island	5.36	189	P	Pn	05 52 15.2	-2.3
	comp=N,648nm,0.7s,baz=41,slow=9.0,SNR=594						
KDAK				S	Sn	05 53 14.2	-4.0
	comp=N,698nm,0.3s,baz=171,slow=23,SNR=17						
KDAK	Kodiak Island	5.36	189		Pn	05 52 15.7	-1.8
KDAK				IAML		05 53 17.4	
	comp=N,4µm,0.5s						
KDAK				IAML		05 53 18.0	
	comp=N,3µm,0.7s						
KDAK	Kodiak Island	5.36	189	P	Pn	05 52 15.7	-1.8
KDAK	Kodiak Island	5.36	189	P	Pn	05 52 15.2	-2.3
	baz=7.9						
KDAK				S	Sn	05 53 14.0	-4.2
	baz=7.9						
TABL	Table Mountain	5.39	115		Pn	05 52 17.0	-1.2
TABL				IAML		05 53 46.8	
	comp=E,3µm,0.9s						
TABL				IAML		05 53 59.6	
	comp=N,4µm,1.0s						
CAHL	Cahill	5.46	205		Pn	05 52 19.7	+0.8
KJL	Kejulik	5.51	206		Pn	05 52 20.6	+1.1
CHX	Chaix Hills	5.62	118		Pn	05 52 21.1	0.0
TOLK	Toolik Lake Re	5.63	5		Pn	05 52 22.6	+1.5
TOLK	Toolik Lake Re	5.63	5	P	Pn	05 52 22.6	+1.5
	baz=186,SNR=1000						
TOLK				S	Sn	05 53 25.4	+0.8
	baz=186						
SAMH	Samovar Hills	5.71	116		Pn	05 52 22.1	-0.3
PLK5	Peulik 5	5.85	212		Pn	05 52 25.2	+1.2
J29M	Klondike Camp	5.86	71	P	Pn	05 52 24.4	+0.1
	baz=262,SNR=64						
PCA	Pinnacle	5.95	115		Pn	05 52 25.8	+0.3
PINM	Pinnacle	5.95	115	P	Pn	05 52 24.6	-0.9
	baz=305,SNR=1000						
PINM				S	Sn	05 53 32.0	-0.5
	baz=305						
PLK1	Peulik 1	5.96	210		Pn	05 52 26.7	+1.1
OHAK	Old Harbor	5.97	192		Pn	05 52 23.0	-2.8
OHAK	Old Harbor	5.97	192	P	Pn	05 52 22.9	-2.8
	baz=10,SNR=108						
OHAK				S	Sn	05 53 28.6	-4.3
	baz=10						
I29M	Ogilvie Camp,	6.01	62		Pn	05 52 25.9	-0.3
I29M	Ogilvie Camp,	6.01	62	P	Pn	05 52 25.1	-1.1
	baz=253,SNR=1000						
I29M				S	Sn	05 53 32.8	-1.1
	baz=253						
YUK4	Talbot Arm	6.05	101	P	Pn	05 52 26.9	-0.1
	baz=291,SNR=44						
PLBL	Peulik Blue Cr	6.10	211		Pn	05 52 29.1	+1.6
BCPM	Bancas Point	6.29	115		Pn	05 52 29.1	-0.9
YUK6	Outpost Mounta	6.34	104		Pn	05 52 30.0	-0.9
YUK6	Outpost Mounta	6.34	104	P	Pn	05 52 30.2	-0.7
	baz=295,SNR=226						
YUK5	Granite Creek	6.49	102		Pn	05 52 32.1	-0.7
ANM	Nome	6.52	290		Pn	05 52 34.3	+1.3
ANM	Nome	6.52	290	P	Pn	05 52 34.3	+1.3
ANM	Nome	6.52	290	P	Pn	05 52 34.7	+1.6
	baz=97,SNR=70						
ANM				S	Sn	05 53 45.1	-0.9
	baz=97						
YKU2	Yakutat	6.54	118		Pn	05 52 32.9	-0.4
M30M	Minto, Yukon	6.55	88		Pn	05 52 32.0	-1.5
M30M	Minto, Yukon	6.55	88	P	Pn	05 52 32.6	-0.9
	baz=281,SNR=590						
M30M				S	Sn	05 53 48.1	+1.3
	baz=281						
PNL	Peninsula	6.55	116		Pn	05 52 32.6	-0.9
PNL	Peninsula	6.55	116	P	Pn	05 52 32.8	-0.7
	baz=306,SNR=573						
PNL				S	Sn	05 53 46.0	-0.8
	baz=306						
YUK7	Dusty Glacier	6.62	107		Pn	05 52 34.3	-0.4
N30M	Aishikik Lake	6.71	98	P	Pn	05 52 35.0	-0.7
	baz=290,SNR=369						
N30M				S	Sn	05 53 49.2	-1.5
	baz=290						
SII	Sitkinak Islan	6.72	195	Pn	Pn	05 52 33.8	-2.1
SII	Sitkinak Islan	6.72	195	P	Pn	05 52 34.2	-1.7
	baz=13,SNR=44						
SII				S	Sn	05 53 45.3	-5.7
	baz=13						
SII	Sitkinak Islan	6.72	195	P	Pn	05 52 35.6	-0.2
HYT	Haines Junctio	6.77	103		Pn	05 52 35.6	-1.0
HYT	Haines Junctio	6.77	103	P	Pn	05 52 35.5	-1.1
	baz=295,SNR=508						
EPYK	Eagle Plains	6.96	55		Pn	05 52 37.1	-2.0
EPYK	Eagle Plains	6.96	55	P	Pn	05 52 37.2	-1.8
	baz=248,SNR=497						
EPYK				S	Sn	05 53 54.8	-2.0
	baz=248						
RDOG	Red Dog Mine	7.01	321		Pn	05 52 39.1	-0.5
RDOG	Red Dog Mine	7.01	321	P	Pn	05 52 38.9	-0.7
	baz=130,SNR=226						
RDOG				S	Sn	05 54 00.4	+2.7
	baz=130						
ANNW	Aniakchak Nort	7.10	214		Pn	05 52 42.1	+1.2
AZAC	Aniakchak	7.16	213		Pn	05 52 42.6	+0.8
PS01	TAPS Pump Stn	7.28	7		Pn	05 52 43.9	+0.7
N31M	Braeburn, Yuko	7.29	96		Pn	05 52 43.3	-0.2
N31M	Braeburn, Yuko	7.29	96	P	Pn	05 52 43.6	+0.1
	baz=289,SNR=462						
N31M				S	Sn	05 54 08.9	+4.2
	baz=289						
CHIR	Chirikof Islan	7.63	200	Pn	Pn	05 52 45.6	-2.5
CHIR	Chirikof Islan	7.63	200	P	Pn	05 52 45.5	-2.6
	baz=16,SNR=13						
CHIR				S	Sn	05 54 06.7	-6.3
	baz=16						
M31M	Drury Creek, Y	7.72	89		Pn	05 52 48.9	-0.3
M31M	Drury Creek, Y	7.72	89	P	Pn	05 52 49.5	+0.3
	baz=284,SNR=614						
M31M				S	Sn	05 54 17.7	+2.6
	baz=284						
TNA	Tin City	7.74	296		Pn	05 52 50.7	+1.3
TNA	Tin City	7.74	296	P	Pn	05 52 50.8	+1.3
	baz=101,SNR=66						
VNHG	Veniaminof 1	8.00	215		Pn	05 52 53.1	0.0
WHY	Whitehorse	8.01	100		Pn	05 52 52.2	-1.0
WHY	Whitehorse	8.01	100	P	Pn	05 52 52.5	-0.7
	baz=295,SNR=212						
SKAG	Skagway	8.38	108		Pn	05 52 57.6	-0.4
SKAG	Skagway	8.38	108	P	Pn	05 52 57.7	-0.4
	baz=302,SNR=207						
SKAG				S	Sn	05 54 31.1	0.0
	baz=302						
A21K	Barrow	8.56	348		Pn	05 52 59.0	-1.4
A21K	Barrow	8.56	348	P	Pn	05 52 59.1	-1.2
	baz=162,SNR=795						
INK	Inuvik	8.91	46	P	Pn	05 53 04.2	-0.8
	comp=N,120nm,0.7s,baz=242,slow=15,SNR=110						
INK				S	Sn	05 54 43.9	+0.4
	comp=N,178nm,0.9s,baz=300,slow=19,SNR=3.8						
INK				LR	LR	05 56 47.3	
	comp=N,891nm,18.6s,baz=231,slow=39						
INK	Inuvik	8.91	46		Pn	05 53 03.0	-2.0
INK	Inuvik	8.91	46	P	Pn	05 53 04.4	-0.6
	baz=242,SNR=188						
BESE	Bessie Mountai	9.09	112		Pn	05 53 06.3	-1.3
SDPT	Sand Point	9.12	216		Pn	05 53 06.6	-1.4
SDPT	Sand Point	9.12	216	P	Pn	05 53 10.1	+2.1
	baz=28,SNR=13						
SDPT				S	Sn	05 54 44.7	-4.2
	baz=28						
P33M	Teslin, Yukon	9.13	100		Pn	05 53 07.4	-0.8
P33M	Teslin, Yukon	9.13	100	P	Pn	05 53 07.6	-0.6
	baz=296,SNR=132						
GAMB	Gambell	9.28	284		Pn	05 53 11.1	+1.1
GAMB	Gambell	9.28	284	P	Pn	05 53 12.1	+2.0
	baz=85,SNR=68						
GAMB				S	Sn	05 54 56.3	+3.8
	baz=85						
CHNA	Chernabura Isl	9.36	212	P	Pn	05 53 08.5	-2.8
	baz=25						
CHNA				S	Sn	05 54 47.4	-7.2
	baz=25						
CNBA	Chernabura Isl	9.37	212	Pn	Pn	05 53 09.0	-2.3
JIS	Juneau Island	9.47	113		Pn	05 53 11.5	-1.1
SIT	Sitka	9.88	120	Pn	Pn	05 53 17.2	-1.0
SIT	Sitka	9.88	120	P	Pn	05 53 17.2	-1.0
SIT	Sitka	9.88	120	P	Pn	05 53 17.3	-1.0
	baz=314,SNR=176						
SIT				S	Sn	05 55 03.5	-3.7
	baz=314						
FALS	False Pass	10.40	223	Pn	Pn	05 53 26.3	+1.1
FALS	False Pass	10.40	223	P	Pn	05 53 28.0	+2.8
TGTN	Hyland Airport	10.69	88	P	Pn	05 53 29.6	+0.5
	baz=288,SNR=30						
S34M	Telegraph Cree	11.07	109	P	Pn	05 53 34.4	+0.3
	baz=306,SNR=293						
DLBC	Dease Lake	11.25	105	P	Pn	05 53 36.6	+0.1
	comp=N,82nm,0.8s,baz=297,slow=13,SNR=75						
DLBC				LR	LR	05 58 22.9	
	comp=N,500nm,18.1s,baz=310,slow=39						
DLBC	Dease Lake	11.25	105		Pn	05 53 36.3	-0.2
WRAK	Wrangell Islan	11.51	117		Pn	05 53 39.5	-0.4
WRAK	Wrangell Islan	11.51	117	P	Pn	05 53 39.5	-0.4
	baz=313,SNR=73						
AKUT	Akutan	11.77	227	Pn	Pn	05 53 44.0	+0.7
CRAG	Craig	11.88	122	Pn	Pn	05 53 43.7	-1.0
CRAG	Craig	11.88	122	P	Pn	05 53 45.8	+1.1
	baz=317,SNR=28						
CRAG				S	Sn	05 55 54.0	-1.5
	baz=317						
UNV	Unalaska Valle	12.25	228	Pn	Pn	05 53 50.2	+0.6
UNV	Unalaska Valle	12.25	228	P	Pn	05 53 50.8	+1.2
	baz=35,SNR=11						
UNV	Unalaska Valle	12.25	228	P	Pn	05 53 50.1	+0.6
C36M	Paulatuk	12.48	48	Pn	Pn	05 53 47.9	-4.4
C36M	Paulatuk	12.48	48	P	Pn	05 53 48.4	-3.9
	baz=253,SNR=62						
C36M				S	Sn	05 56 08.1	-1.5
	baz=253						
A36M	Sachs Harbour	13.17	36	Pn	Pn	05 53 58.2	-3.1
A36M	Sachs Harbour	13.17	36	P	Pn	05 53 59.2	-2.1
	baz=240,SNR=157						
A36M				S	Sn	05 56 22.1	-4.3
	baz=240						
NIKH	Nikolski High	13.78	231		Pn	05 54 09.9	+0.7
RUBB	Prince Rupert	13.85	120	P	Pn	05 54 10.4	+0.3
DIB	Dawson Inlet,	13.86	127		Pn	05 54 10.7	+0.3
MOBC	Moresby Island	14.10	126	P	Pn	05 54 13.4	0.0
GRNB	Grenville Isla	14.32	120	Pn	Pn	05 54 17.1	+0.9
HG4B	Hotspring	15.06	127	P	P	05 54 26.8	-0.7
HG4B				IAmb	IAmb	05 54 31.8	
	comp=Z,168nm,0.8s						
BBB	Bella Bella	16.31	121	P	P	05 54 42.5	+1.2
	comp=Z,187nm,0.8s,baz=314,slow=10,SNR=40						
BBB				S	Sn	05 57 40.5	-1.5
	comp=Z,9.2nm,0.7s,baz=106,slow=19,SNR=1.9						
BBB				LR	LR	06 00 19.8	
	comp=Z,578nm,21.0s,baz=329,slow=34						
BBB	Bella Bella	16.31	121	P	P	05 54 42.6	+1.2
BBB				IAmb	IAmb	05 54 46.0	
	comp=Z,206nm,0.8s						
ATKA	Atka Island	16.38	239	P	P	05 54 43.8	+1.6
YKA	Yellowknife Ar	16.54	76	P	Pn	05 54 42.8	-0.8
	comp=Z,56nm,0.7s,baz=284,slow=11,SNR=221						
YKA				PcP	PcP	05 59 24.6	-1.1
	comp=Z,8.3nm,0.6s,baz=282,slow=1.1,SNR=5.0						
YKA				LR	LR	06 01 30.4	
	comp=Z,592nm,21.6s,baz=302,slow=38						
YKA				ScP	ScP	06 02 48.3	+0.7
	comp=Z,10nm,0.6s,baz=289,slow=2.1,SNR=19						
YKA				PKiKP	PKiKP	06 07 17.1	-1.2
	comp=Z,1.4nm,0.9s,baz=325,slow=1.6,SNR=10						
YKA				P3KPbc		06 29 48.3	
	comp=Z,0.6nm,1.0s,baz=96,slow=4.9,SNR=6.3						
YKA	Yellowknife Ar	16.54	76		Pn	05 54 43.0	-0.5
GSTR	Great Sitkin T	17.21	242	P	Pn	05 54 51.6	-0.2
HOLB	Holberg	17.53	125	P	Pn	05 54 55.9	+0.2
ADK	Adak	17.62	242	P	Pn	05 54 56.3	-0.4
ADK				IAmb	IAmb	05 54 59.3	
	comp=Z,281nm,1.0s						
ADK	Adak	17.62	242	P	Pn	05 54 56.3	-0.4
ADK				pmax	pmax		
	comp=Z,281nm,1.0s						
ADK	Adak	17.62	242	P	Pn	05 54 59.2	+2.5
KIWB	Kanaga Island	17.83	243	P	P	05 54 57.1	-1.0
BILL	Bilibino	18.04	305		P	05 54 59.8	-0.4
BILL				IAmb	IAmb	05 55 24.2	
	comp=Z,257nm,1.4s						
BILL	Bilibino	18.04	305	*d i*P	P	05 55 00.5	+0.2
BILL				*i* S	S	05 58 18.5	-1.6
BILL				pmax	pmax		
	comp=Z,114nm,1.1s						
CBB	Campbell River	19.07	121	P	Pn	05 55 14.1	+0.2
CBB				IAmb	IAmb	05 55 19.1	
	comp=Z,144nm,0.9s						
OZB	Mount Ozzard	19.89	123	P	Pn	05 55 22.5	-1.0
LLLB	Lillooet	20.02	115	P	Pn	05 55 24.2	-0.8
LLLB				IAmb	IAmb	05 55 30.9	
	comp=Z,194nm,0.9s						
CLRS	Cowichan Lake	20.53	121	P	Pn	05 55 29.8	-1.0
CLRS				IAmb	IAmb	05 55 32.8	
	comp=Z,148nm,0.7s						
SMY	Shemya	20.94	257	P	P	05 55 31.6	0.0
SMY				IAmb	IAmb	05 55 35.0	
	comp=Z,226nm,1.5s						
SMY	Shemya	20.94	257	P	P	05 55 31.6	0.0
SMY				pmax	pmax		
	comp=Z,226nm,1.5s						
C03A	Quillayute Air	21.08	124	P	P	05 55 35.7	+2.5
A04D	Lummi Island	21.17	119	P	P	05 55 36.9	+2.7
	baz=323,SNR=14						
B04A	Port Angeles	21.39	122	P	P	05 55 38.5	+1.9
B04A				IAmb	IAmb	05 55 41.8	
	comp=Z,253nm,1.0s						
B05A	Bryant	21.78	119	P	P	05 55 42.9	+2.3
	baz=324,SNR=58						
B05A				S	S	05 59 36.8	+4.0
	baz=324,SNR=7.3						
NLWA	Neilton Lookou	21.80	123	P	P	05 55 41.3	+0.3
NLWA				IAmb	IAmb	05 56 29.9	
	comp=Z,117nm,1.0s						
B06A	Marblemount	21.82	118	P	P	05 55 41.4	+0.3
B06A				IAmb	IAmb	05 55 45.0	
	comp=Z,266nm,1.5s						
EDM	Edmonton	21.87	99	P	P	05 55 43.0	+1.4
EDM	Edmonton	21.87	99	P	P	05 55 43.0	+1.4
EDM				pmax	pmax		
	comp=Z,679nm,0.7s						
D03D	Eldon	21.98	122	P	P	05 55 45.0	+2.2
	baz=325,SNR=48						
WISH	Wishkah	22.07	124	P	P	05 55 43.2	-0.4
WISH				IAmb	IAmb	05 56 29.5	
	comp=Z,165nm,1.3s						
RES	Resolute Bay	22.22	36	P	P	05 55 43.8	-1.2
	comp=Z,20nm,0.4s,baz=262,slow=10,SNR=109						
RES				S	S	05 59 38.5	-1.3
	comp=Z,42nm,0.8s,baz=341,slow=22,SNR=9.7						
	comp=Z,20nm,0.4s						
RES	Resolute Bay	22.22	36	P	P	05 55 44.1	-0.9
RES	Resolute Bay	22.22	36	P	P	05 55 44.1	-0.9
RES				S	S	05 59 38.6	-1.3
RES				pmax	pmax		
	comp=Z,66nm,1.0s						
D04E	Lakebay	22.40	122	P	P	05 55 49.8	+2.9
	baz=326,SNR=6.8						
C06D	Leavenworth	22.53	118	P	P	05 55 50.6	+2.3
	baz=324						
E03A	Lebam	22.62	124	P	P	05 55 48.9	-0.2
E03A				IAmb	IAmb	05 56 21.4	
	comp=Z,189nm,1.2s						
D05A	Enumclaw	22.69	121	P	P	05 55 51.8	+1.9
D05A				IAmb	IAmb	05 55 53.6	
	comp=Z,199nm,0.8s						
B08A	Colville Reser	22.82	115	P	P	05 55 52.6	+1.5
E04D	Cinebar	22.99	123	P	P	05 55 54.9	+2.2
E04D				IAmb	IAmb	05 56 25.2	
	comp=Z,233nm,1.3s						
E04D	Cinebar	22.99	123	P	P	05 55 55.2	+2.6
	baz=326,SNR=22						
LTY	Liberty	23.16	119	P	P	05 55 55.5	+1.2
LTY				IAmb	IAmb	05 55 56.8	
	comp=Z,109nm,0.7s						
F04A	Amboy	23.57	123	P	P	05 55 59.8	+1.8
F04A				IAmb	IAmb	05 56 02.1	
	comp=Z,160nm,0.9s						
HEBO	Mount Hebo	23.68	126	P	P	05 56 01.3	+2.3
HEBO				IAmb	IAmb	05 56 02.5	
	comp=Z,104nm,0.8s						
C09A	Chrisman Ranch	23.70	115	P	P	05 56 00.6	+1.5
NEW	Newport	23.81	113	P	P	05 56 01.7	+1.5
	comp=Z,79nm,1.0s,baz=324,slow=8.4,SNR=107						
NEW				LR	LR	06 05 10.2	
	comp=Z,564nm,18.7s,baz=318,slow=36						
	comp=Z,79nm,1.0s						
NEW	Newport	23.81	113	P	P	05 56 01.7	+1.5
NEW				IAmb	IAmb	05 56 04.5	
	comp=Z,100nm,1.0s						
NEW	Newport	23.81	113	P	P	05 56 01.7	+1.5
NEW				pmax	pmax		
	comp=Z,101nm,1.0s						
NEW	Newport	23.81	113	P	P	05 56 02.1	+1.8
	baz=321,SNR=106						
G03D	McMinnville, O	23.86	125	P	P	05 56 02.3	+1.7
G03D				IAmb	IAmb	05 56 03.9	
	comp=Z,110nm,0.8s						
G03D	McMinnville, O	23.86	125	P	P	05 56 03.0	+2.4
	baz=328,SNR=28						
F05D	White Salmon	23.98	122	P	P	05 56 03.7	+2.1
F05D				IAmb	IAmb	05 56 04.9	
	comp=Z,84nm,0.7s						
F05D	White Salmon	23.98	122	P	P	05 56 04.2	+2.5
	baz=326,SNR=37						
D08A	Wollman Farm,	24.02	117	P	P	05 56 03.5	+1.4
E07A	Sunnyside	24.05	119	P	P	05 56 03.7	+1.4
HAWA	Hanford	24.32	119	P	P	05 56 05.6	+0.9
HOOD	Mount Hood Mea	24.38	123	P	P	05 56 07.4	+1.9
HOOD				IAmb	IAmb	05 56 10.1	
	comp=Z,176nm,0.9s						
COR	Corvallis	24.38	126	P	P	05 56 07.4	+2.1
COR				IAmb	IAmb	05 56 11.3	
	comp=Z,111nm,1.1s						
COR	Corvallis	24.38	126	P	P	05 56 07.4	+2.1
COR				pmax	pmax		
	comp=Z,111nm,1.2s						
EUNU	Eureka	24.40	22	P	P	05 56 06.6	+1.4
EUNU				IAmb	IAmb	05 56 58.3	
	comp=Z,166nm,1.4s						
E08A	Dider Farm, El	24.43	118	P	P	05 56 07.1	+1.4
E08A				IAmb	IAmb	05 56 08.0	
	comp=Z,66nm,0.7s						
F07A	Phinny Hill Vi	24.57	120	P	P	05 56 08.6	+1.6
G05D	Wamic, OR	24.57	123	P	P	05 56 09.2	+2.1
	baz=327,SNR=28						
WALA	Waterton Lakes	24.58	107	P	P	05 56 08.9	+1.7
I02E	Swisshome, OR	24.60	128	P	P	05 56 09.3	+2.1
I02E				IAmb	IAmb	05 56 10.8	
	comp=Z,82nm,0.8s						
I02E	Swisshome, OR	24.60	128	P	P	05 56 09.9	+2.7
	baz=330,SNR=16						
H04D	Lebanon	24.64	126	P	P	05 56 09.6	+1.9
H04D				IAmb	IAmb	05 56 11.0	
	comp=Z,77nm,0.8s						
H04D	Lebanon	24.64	126	P	P	05 56 10.0	+2.3
	baz=329,SNR=47						
H04A	Detroit Lake	24.71	125	P	P	05 56 09.9	+1.6
H04A				IAmb	IAmb	05 56 11.2	
	comp=Z,178nm,1.5s						
E09A	Wood Farm, Sta	24.78	116	P	P	05 56 10.1	+1.2
BUCK	Buck Mountain	24.83	126	P	P	05 56 11.9	+2.4
BUCK				IAmb	IAmb	05 56 42.3	
	comp=Z,107nm,0.9s						
SEY	Seymchan	24.98	295	P	P	05 56 10.5	-0.1
	comp=Z,151nm,0.9s,baz=97,slow=7.6,SNR=90						

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SEY                                 LR    LR    06 07 02.4
      comp=Z,418nm,19.0s,baz=28,slow=39
      comp=Z,151nm,0.9s
I03D  Drain, OR         25.13 127   P     P     05 56 14.7 +2.6
      baz=330,SNR=29
I05D  Terrebonne, OR    25.32 124   P     P     05 56 16.0 +2.0
      baz=328,SNR=42
J01E  Myrtle Point      25.39 129   P     P     05 56 16.6 +2.1
J01E                                IAmb  IAmb  05 56 47.3
      comp=Z,149nm,0.9s
J01E  Myrtle Point      25.39 129   P     P     05 56 17.5 +3.0
      baz=331,SNR=31
I04A  Tendick Farm,     25.39 126   P     P     05 56 16.6 +2.1
      baz=330,SNR=42
JTMT  Jette             25.42 110   P     P     05 56 16.5 +1.6
JTMT                                IAmb  IAmb  05 56 20.4
      comp=Z,140nm,0.8s
G08A  Pilot Rock        25.45 119   P     P     05 56 16.3 +1.1
G08A                                IAmb  IAmb  05 56 17.6
      comp=Z,54nm,0.6s
KEBM  Edson Butte       25.50 130   P     P     05 56 18.1 +2.6
F10A  Beach Ranch, E    25.59 116   P     P     05 56 17.0 +0.6
DBO   Dodson Butte      25.67 128   P     P     05 56 19.7 +2.6
DBO                                 IAmb  IAmb  05 56 50.1
      comp=Z,122nm,1.0s
K02D  Willamette Mer    25.89 129   P     P     05 56 21.8 +2.7
      baz=332,SNR=93
PINE  Pine Mountain     25.94 124   P     P     05 56 21.7 +2.0
PINE                                IAmb  IAmb  05 56 54.2
      comp=Z,74nm,1.0s
J04D  Umpqua Nationa    25.98 126   P     P     05 56 22.1 +2.1
J04D  Umpqua Nationa    25.98 126   P     P     05 56 22.6 +2.6
      baz=330,SNR=35
KBO   Bosley Butte      26.12 130   P     P     05 56 22.8 +1.6
KBO                                 IAmb  IAmb  05 57 12.1
      comp=Z,169nm,1.5s
HUMO  Hull Mountain     26.22 128   P     P     05 56 24.1 +2.1
HUMO                                IAmb  IAmb  05 56 54.9
      comp=Z,84nm,0.9s
I07A  Izee              26.25 122   P     P     05 56 24.1 +1.8
I07A                                IAmb  IAmb  05 57 18.2
      comp=Z,179nm,1.7s
J05D  Fort Rock, OR     26.26 125   P     P     05 56 25.1 +2.5
      baz=329,SNR=41
MSO   Missoula          26.28 111   P     P     05 56 22.2  -0.4
MSO                                 IAmb  IAmb  05 56 24.9
      comp=Z,53nm,0.8s
MSO   Missoula          26.28 111   P     P     05 56 24.0 +1.4
      baz=322,SNR=40
L02F  Cave Junction     26.43 130   P     P     05 56 26.5 +2.7
      baz=332,SNR=14
BMO   Blue Mountains    26.47 118   P     P     05 56 24.9 +0.6
BMO   Blue Mountains    26.47 118   P     P     05 56 24.9 +0.6
BMO                                 pmax  pmax
      comp=Z,55nm,1.0s
KSXB  Camp Six Broad    26.58 130   P     P     05 56 27.2 +1.8
KSXB                                IAmb  IAmb  05 56 58.4
      comp=Z,137nm,1.3s
K04D  Chiloquin, OR     26.64 126   P     P     05 56 28.5 +2.7
      baz=330
L04D  Klamath Falls     26.80 128   P     P     05 56 29.4 +2.1
L04D                                IAmb  IAmb  05 56 59.9
      comp=Z,162nm,1.1s
L04D  Klamath Falls     26.80 128   P     P     05 56 29.7 +2.4
      baz=331,SNR=42
PLID  Pearl Lake        26.81 116   P     P     05 56 28.1 +0.6
PLID                                IAmb  IAmb  05 56 29.7
      comp=Z,54nm,0.7s
K05A  Summer Lake       26.87 125   P     P     05 56 30.4 +2.4
K05A                                IAmb  IAmb  05 56 31.9
      comp=Z,93nm,1.3s
YBH   Yreka Blue Hor    27.08 129   P     P     05 56 32.3 +2.5
      comp=Z,37nm,0.8s,baz=17,slow=5.1,SNR=154
YBH                                 pP    pP    05 57 01.7 +3.7
      comp=Z,64nm,0.9s,baz=355,slow=3.5,SNR=12
      comp=Z,37nm,0.8s
YBH   Yreka Blue Hor    27.08 129   P     P     05 56 31.7 +2.0
YBH                                 IAmb  IAmb  05 57 02.8
      comp=Z,79nm,0.9s
KRPM  Rodgers           27.13 131   P     P     05 56 32.5 +2.3
KRPM                                IAmb  IAmb  05 57 02.9
      comp=Z,84nm,1.0s
EGMT  Eagleton          27.18 104   P     P     05 56 31.6 +1.0
EGMT                                IAmb  IAmb  05 56 33.0
      comp=Z,85nm,0.8s
EGMT  Eagleton          27.18 104   P     P     05 56 31.8 +1.2
      baz=319,SNR=79
FCC   Fort Churchill    27.22  73   P     P     05 56 31.2 +0.6
FCC   Fort Churchill    27.22  73   P     P     05 56 31.3 +0.6
FCC                                 pmax  pmax
      comp=Z,30nm,0.9s
J08A  Circle Bar Ran    27.26 121   P     P     05 56 33.2 +1.8
J08A                                IAmb  IAmb  05 56 34.5
      comp=Z,63nm,0.7s
HRY   Holter Researc    27.28 108   P     P     05 56 32.9 +1.4
MA2   Magadan           27.31 289   P     P     05 56 32.0 +0.5
      comp=Z,99nm,1.0s,baz=51,slow=11,SNR=17
      comp=Z,99nm,1.0s
MA2   Magadan           27.31 289   P     P     05 56 32.0 +0.5
MA2                                 IAmb  IAmb  05 56 34.2
      comp=Z,118nm,1.0s
MA2   Magadan           27.31 289ceP      P     05 56 32.1 +0.5
MA2                                 pmax  pmax
      comp=Z,137nm,1.0s
MA2   Magadan           27.31 289   P     P     05 56 32.8 +1.3
      comp=Z,138nm,1.0s
JCC   Jacoby Creek,     27.43 132   P     P     05 56 35.6 +2.8
JCC                                 IAmb  IAmb  05 57 24.9
      comp=Z,81nm,1.3s
KHMM  Horse Mountain    27.48 131   P     P     05 56 36.1 +2.7
KHMM                                IAmb  IAmb  05 57 25.9
      comp=Z,114nm,1.4s
LRM   Limekiln Ridge    27.71 110   P     P     05 56 37.0 +1.5
PET   Petropavlovsk     27.72 272   P     P     05 56 35.3  0.0
PET                                 IAmb  IAmb  05 56 37.9
      comp=Z,52nm,0.8s
PET   Petropavlovsk     27.72 272  eP     P     05 56 35.2  0.0
PET                                e*SP   sP    05 57 15.3 -3.4
PET                                eS     S     06 01 07.3 -0.3
PET                                e*SS   sS    06 01 54.3 -4.4
PET                                 pmax  pmax
      comp=Z,400nm,10.2s
PET                                 pmax  pmax
      comp=Z,300nm,13.7s
PET                                 pmax  pmax
      comp=Z,98nm,0.8s
PET                                 MLR   MLR
      comp=Z,200nm,15.0s
PET                                 MLR   MLR
      comp=Z,200nm,15.0s
PET   Petropavlovsk     27.72 272   P     P     05 56 38.1 +2.9
      comp=Z,278nm,1.1s
KMPM  Mount Pierce      27.75 132   P     P     05 56 37.7 +1.9
MOD   Modoc Plateau     27.80 125   P     P     05 56 38.3 +2.0
WVOR  Wild Horse Val    27.98 122   P     P     05 56 39.9 +2.1
WVOR                                IAmb  IAmb  05 56 41.2
      comp=Z,51nm,0.8s
WVOR  Wild Horse Val    27.98 122   P     P     05 56 39.9 +2.1
WVOR                                pmax  pmax
      comp=Z,51nm,0.8s
KMRM  Mail Ridge        28.07 132   P     P     05 56 41.4 +2.9
KMRM                                IAmb  IAmb  05 57 11.4
      comp=Z,82nm,0.9s
PEA0B Petropavlovsk-    28.10 273   P     P     05 56 39.2 +0.5
PEA0B Petropavlovsk-    28.10 273ceP      P     05 56 39.6 +1.0
PETK  Petropavlovsk-    28.10 273   P     P     05 56 38.5  -0.1
      comp=Z,21nm,0.7s,baz=78,slow=9.2,SNR=67
PETK                                PcP   PcP   05 59 49.1  -0.2
      comp=Z,9.0nm,0.9s,baz=90,slow=7.4,SNR=5.0
PETK                                PKiKP PKiKP 06 07 22.6  -1.7
      comp=Z,3.5nm,0.9s,baz=68,slow=3.3,SNR=5.7
      comp=Z,21nm,0.7s
PETK  Petropavlovsk-    28.10 273   P     P     05 56 38.4  -0.3
BOZ   Bozeman (W)       28.24 110   P     P     05 56 40.8 +0.7
BOZ   Bozeman (W)       28.24 110   P     P     05 56 40.8 +0.7
BOZ                                 pmax  pmax
      comp=Z,77nm,1.6s
BOZ   Bozeman (W)       28.24 110   P     P     05 56 41.9 +1.8
      baz=322,SNR=47
MFID  Camas Ranch       28.26 117   P     P     05 56 41.3 +1.0
MFID                                IAmb  IAmb  05 56 42.9
      comp=Z,75nm,0.8s
MCMT  McKenzie Canyo    28.34 112   P     P     05 56 42.9 +1.8
TULEG Thule             28.36  29   P     P     05 56 40.4  -0.2
BCYI  Bear Canyon       28.52 113   P     P     05 56 43.1 +0.4
KCPM  Cahto Peak        28.59 132   P     P     05 56 43.0  -0.2
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KCPM                                IAmb  IAmb  05 57 15.6
      comp=Z,57nm,0.9s
HLID  Hailey            28.71 115   P     P     05 56 44.5 +0.1
HLID  Hailey            28.71 115   P     P     05 56 46.1 +1.7
      baz=326,SNR=64
GCMT  Greycliff         28.93 107   P     P     05 56 48.5 +2.2
QLMT  Earthquake Lak    28.94 110   P     P     05 56 49.0 +2.6
YHL   Hebgen Lake       29.02 110   P     P     05 56 49.7 +2.4
YHL                                 IAmb  IAmb  05 57 20.0
      comp=Z,135nm,1.3s
YHH   Holmes Hill       29.22 110   P     P     05 56 51.1 +2.1
YHH                                 IAmb  IAmb  05 56 52.5
      comp=Z,82nm,0.9s
YMR   Madison River     29.26 110   P     P     05 56 51.9 +2.6
DGMT  Dagmar            29.33  98   P     P     05 56 50.4 +0.8
DGMT                                IAmb  IAmb  05 57 21.4
      comp=Z,97nm,1.2s
DGMT  Dagmar            29.33  98   P     P     05 56 51.3 +1.7
      baz=317,SNR=8.4
DGMT  Dagmar            29.33  98   P     P     05 56 51.1 +1.5
      baz=317,SNR=8.4
YNR   Norris Junctio    29.35 110   P     P     05 56 53.2 +3.1
YNR                                 IAmb  IAmb  05 56 54.2
      comp=Z,59nm,0.9s
HOPS  Hopland Field     29.39 132   P     P     05 56 50.5 +0.3
HOPS                                IAmb  IAmb  05 57 22.8
      comp=Z,63nm,1.1s
YUF   Upper Falls       29.42 109   P     P     05 56 53.3 +2.6
ORV   Oroville          29.43 129   P     P     05 56 51.7 +1.2
ORV   Oroville          29.43 129   P     P     05 56 51.7 +1.2
ORV                                 pmax  pmax
      comp=Z,41nm,0.9s
BEKR  Beckworth         29.56 127   P     P     05 56 53.4 +1.5
BEKR                                IAmb  IAmb  05 57 23.7
      comp=Z,49nm,0.8s
LKWY  Lake              29.59 109   P     P     05 56 55.9 +3.7
LKWY                                IAmb  IAmb  05 56 57.0
      comp=Z,59nm,0.8s
LKWY  Lake              29.59 109   P     P     05 56 55.9 +3.7
LKWY                                pmax  pmax
      comp=Z,59nm,0.9s
TIXI  Tiksi             29.62 321   P     P     05 56 51.6  -0.3
      comp=Z,13nm,0.6s,baz=271,slow=22,SNR=39
TIXI                                pP    pP    05 57 21.3 +1.0
      comp=Z,21nm,0.8s,baz=90,slow=23,SNR=7.2
TIXI                                PcP   PcP   05 59 52.1  -0.7
      comp=Z,19nm,0.8s,baz=90,slow=22,SNR=5.7
TIXI                                LR    LR    06 11 33.0
      comp=Z,248nm,18.4s,baz=359,slow=42
      comp=Z,13nm,0.6s
TIXI  Tiksi             29.62 321   P     P     05 56 51.6  -0.3
TIXI  Tiksi             29.62 321ceP      P     05 56 51.9   0.0
TIXI                                pmax  pmax
      comp=Z,17nm,0.8s
RLMT  Red Lodge         29.64 107   P     P     05 56 54.5 +1.9
RLMT                                IAmb  IAmb  05 57 25.1
      comp=Z,149nm,1.2s
RLMT  Red Lodge         29.64 107   P     P     05 56 54.9 +2.3
      baz=322,SNR=94
GDXM  Geysers           29.65 132   P     P     05 56 55.1 +2.6
H17A  Grant Village     29.65 110   P     P     05 56 56.1 +3.4
H17A                                IAmb  IAmb  05 57 31.9
      comp=Z,68nm,1.2s
H17A  Grant Village     29.65 110   P     P     05 56 56.4 +3.7
      baz=323,SNR=11
YPP   Pitchstone Pla    29.65 110   P     P     05 56 55.6 +2.8
LAO   LASA Array        29.76 102   P     P     05 56 54.5 +1.0
LAO                                 IAmb  IAmb  05 57 25.6
      comp=Z,66nm,1.0s
LAO   LASA Array        29.76 102   P     P     05 56 55.7 +2.2
      baz=320,SNR=51
LAO   LASA Array        29.76 102   P     P     05 56 55.5 +2.1
      baz=320,SNR=51
FLWY  Flagg Ranch       29.85 110   P     P     05 56 56.2 +1.8
FLWY                                IAmb  IAmb  05 56 58.7
      comp=Z,74nm,0.8s
PAHR  Pah Rah Range     30.06 126   P     P     05 56 58.0 +1.7
PAHR                                IAmb  IAmb  05 57 28.7
      comp=Z,54nm,1.1s
MOOW  Moose Ponds       30.10 111   P     P     05 56 57.6 +1.0
MPK   Martis Peak       30.18 127   P     P     05 56 57.4  -0.2
MCCM  Marconi Confer    30.22 132   P     P     05 56 56.7  -0.7
MCCM                                IAmb  IAmb  05 57 29.3
      comp=Z,52nm,0.9s
TPAW  Teton Pass        30.22 111   P     P     05 56 59.8 +2.0
BMN   Battle Mountai    30.24 122   P     P     05 56 59.6 +1.7
BMN   Battle Mountai    30.24 122   P     P     05 56 59.6 +1.7
BMN                                 pmax  pmax
      comp=Z,22nm,0.7s
LOHW  Long Hollow       30.27 111   P     P     05 56 59.7 +1.5
LOHW                                IAmb  IAmb  05 57 01.9
      comp=Z,41nm,0.7s
VCNR  Virginia City     30.32 127   P     P     05 57 00.6 +2.0
VCNR                                IAmb  IAmb  05 57 31.2
      comp=Z,65nm,0.8s
SNOW  Snow King Moun    30.33 111   P     P     05 57 01.1 +2.4
SNOW                                IAmb  IAmb  05 57 02.7
      comp=Z,39nm,0.8s
REDW  Red Top Meadow    30.37 111   P     P     05 57 01.4 +2.3
REDW                                IAmb  IAmb  05 57 33.1
      comp=Z,123nm,1.4s
ECR   Eagle Creek       30.40 112   P     P     05 57 02.1 +2.7
EMB   Emerald Bay       30.44 128   P     P     05 57 01.3 +1.5
EMB                                 IAmb  IAmb  05 57 32.1
      comp=Z,137nm,1.3s
SKR   Severo-Kuril's    30.47 271  eP     P     05 56 58.5  -1.0
SKR                                e                05 57 41.2
SKR                                eS     S     06 01 48.7  -1.9
SKR                                 pmax  pmax
      comp=Z,100nm,1.6s
SKR                                 pmax  pmax
      comp=Z,71nm,1.2s
SKR                                 MLR   MLR
      comp=Z,100nm,15.0s
SKR                                 MLR   MLR
      comp=Z,100nm,14.0s
PNTR  Pine Nut          30.52 127   P     P     05 57 02.4 +2.0
PNTR                                IAmb  IAmb  05 57 38.4
      comp=Z,68nm,0.8s
ELK   Elko              30.75 120   LR    LR    06 09 06.5
      comp=Z,270nm,20.1s,baz=318,slow=35
ELK   Elko              30.75 120   P     P     05 57 04.7 +2.3
ELK                                 IAmb  IAmb  05 57 06.1
      comp=Z,54nm,0.8s
ELK   Elko              30.75 120   P     P     05 57 04.7 +2.3
ELK                                 pmax  pmax
      comp=Z,54nm,0.8s
YERR  Yerington         30.75 127   P     P     05 57 04.4 +2.0
YERR                                IAmb  IAmb  05 57 34.8
      comp=Z,68nm,1.0s
AHID  Auburn Hatcher    30.75 112   P     P     05 57 03.9 +1.5
AHID                                IAmb  IAmb  05 57 06.0
      comp=Z,55nm,0.9s
HVU   Hansel Valley     30.87 115   P     P     05 57 05.7 +2.3
HVU                                 IAmb  IAmb  05 57 06.9
      comp=Z,48nm,0.7s
HVU   Hansel Valley     30.87 115   P     P     05 57 05.7 +2.3
HVU                                 pmax  pmax
      comp=Z,48nm,0.7s
KVN   Kaiserville       31.11 125   P     P     05 57 07.7 +2.1
KVN   Kaiserville       31.11 125   P     P     05 57 07.7 +2.1
KVN                                 pmax  pmax
      comp=Z,38nm,0.9s
CMB   Columbia Colle    31.18 129   P     P     05 57 07.9 +1.9
CMB   Columbia Colle    31.18 129   P     P     05 57 07.9 +1.9
CMB                                 pmax  pmax
      comp=Z,21nm,0.9s
RYN   Ryan              31.32 126   P     P     05 57 09.4 +2.0
BW06  Boulder Array     31.40 111   P     P     05 57 10.1 +1.9
BW06                                IAmb  IAmb  05 57 11.4
      comp=Z,71nm,0.9s
BW06  Boulder Array     31.40 111   P     P     05 57 10.3 +2.2
      baz=325,SNR=92
PD31  Pinedale Array    31.40 111   P     P     05 57 09.8 +1.6
PD31                                IAmb  IAmb  05 57 11.4
      comp=Z,63nm,0.9s
PDAR  Pinedale Array    31.40 111   P     P     05 57 10.3 +2.2
      comp=Z,45nm,0.8s,baz=317,slow=6.3,SNR=328
PDAR                                pP    pP    05 57 39.0 +2.1
      comp=Z,20nm,0.7s,baz=319,slow=6.5,SNR=5.7
PDAR                                PcP   PcP   05 59 58.6 +0.3
      comp=Z,9.3nm,0.7s,baz=115,slow=1.1,SNR=7.2
PDAR                                ScP   ScP   06 03 29.4 +0.7
      comp=Z,6.1nm,0.9s,baz=304,slow=0.5,SNR=10
      comp=Z,45nm,0.8s
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PDAR  Pinedale Array    31.40 111   P     P     05 57 09.6 +1.5
BGU   Big Grassy Mou    31.48 117   P     P     05 57 10.7 +1.9
HWUT  Hardware Ranch    31.51 114   P     P     05 57 10.9 +1.8
NVAR  Mina Array Bea    31.58 126   P     P     05 57 12.2 +2.4
      comp=Z,47nm,0.7s,baz=317,slow=8.3,SNR=343
NVAR                                pP    pP    05 57 41.5 +3.1
      comp=Z,46nm,0.7s,baz=315,slow=8.6,SNR=9.0
NVAR                                PcP   PcP   06 00 00.4 +1.6
      comp=Z,14nm,0.7s,baz=284,slow=2.1,SNR=8.5
NVAR                                ScP   ScP   06 03 30.4 +1.0
      comp=Z,12nm,1.1s,baz=296,slow=2.5,SNR=15
NVAR                                LR    LR    06 10 01.3
      comp=Z,199nm,19.1s,baz=282,slow=36
      comp=Z,47nm,0.7s
NV11  Mina Array Sit    31.63 126   P     P     05 57 12.1 +2.0
NV11                                IAmb  IAmb  05 57 42.5
      comp=Z,60nm,0.8s
Q09A  Carvers           31.64 124   P     P     05 57 12.8 +2.6
Q09A                                IAmb  IAmb  05 57 14.0
      comp=Z,85nm,0.8s
LHV   Little Huntoon    31.66 126   P     P     05 57 12.8 +2.7
LHV                                 IAmb  IAmb  05 57 43.4
      comp=Z,119nm,1.1s
ULM   Lac du Bonnet     31.83  88   P     P     05 57 13.3 +1.8
      comp=Z,15nm,0.7s,baz=314,slow=7.5,SNR=18
ULM                                 pP    pP    05 57 41.6 +1.3
      comp=Z,47nm,0.8s,baz=312,slow=8.4,SNR=9.3
ULM                                 PcP   PcP   05 59 59.9 +0.9
      comp=Z,29nm,0.7s,baz=341,slow=1.8,SNR=6.3
ULM                                 ScP   ScP   06 03 30.8 +1.1
      comp=Z,8.8nm,1.0s,baz=330,slow=2.3,SNR=4.1
      comp=Z,15nm,0.7s
ULM   Lac du Bonnet     31.83  88   P     P     05 57 12.8 +1.3
ULM                                 IAmb  IAmb  05 57 42.7
      comp=Z,48nm,0.8s
MDND  Maddock           31.87  94   P     P     05 57 13.7 +1.8
MDND  Maddock           31.87  94   P     P     05 57 13.8 +1.8
      baz=318
SAO   San Andreas Ge    31.95 131   P     P     05 57 14.4 +1.7
SAO   San Andreas Ge    31.95 131   P     P     05 57 14.4 +1.7
SAO                                 pmax  pmax
      comp=Z,27nm,0.9s
MDPB  Devils Postpil    32.00 128   P     P     05 57 15.9 +2.5
MDPB                                IAmb  IAmb  05 57 46.0
      comp=Z,44nm,0.8s
OMMB  Old Mammoth Mi    32.05 127   P     P     05 57 16.5 +2.5
OMMB                                IAmb  IAmb  05 57 47.1
      comp=Z,74nm,1.0s
MLAC  Mammoth, Mammo32.09 127       P     P     05 57 17.6 +3.4
      baz=333,SNR=11
DUG   Dugway, Tooele    32.19 117   P     P     05 57 16.5 +1.6
DUG                                 IAmb  IAmb  05 57 18.1
      comp=Z,60nm,0.8s
DUG   Dugway, Tooele    32.19 117   P     P     05 57 16.5 +1.6
DUG                                 pmax  pmax
      comp=Z,60nm,0.8s
DUG   Dugway, Tooele    32.19 117   P     P     05 57 17.1 +2.1
      baz=328,SNR=77
BBGB  Big Mountain B    32.26 131   P     P     05 57 18.2 +2.7
TPH   Tonopah           32.29 125   P     P     05 57 17.9 +2.0
TPH   Tonopah           32.29 125   P     P     05 57 17.9 +2.0
TPH                                 pmax  pmax
      comp=Z,283nm,0.8s
E28A  Huff              32.33  97   P     P     05 57 17.7 +1.8
E28A  Huff              32.33  97   P     P     05 57 18.5 +2.6
      baz=319,SNR=20
JLU   Jordanelle        32.40 115   P     P     05 57 18.7 +1.8
PMPB  Monarch Peak      32.67 131   P     P     05 57 21.3 +2.3
PMPB                                IAmb  IAmb  05 57 52.6
      comp=Z,65nm,0.9s
R11A  Troy Canyon, C    32.68 122   P     P     05 57 21.1 +1.9
R11A                                IAmb  IAmb  05 57 22.4
      comp=Z,53nm,0.8s
R11A  Troy Canyon, C    32.68 122   P     P     05 57 21.2 +2.0
      baz=331,SNR=141
NLU   North Lily Min    32.69 116   P     P     05 57 20.9 +1.5
NLU                                 IAmb  IAmb  05 57 22.4
      comp=Z,56nm,0.8s
RSSD  Black Hills       32.72 103   P     P     05 57 21.3 +1.7
RSSD  Black Hills       32.72 103   P     P     05 57 21.3 +1.7
RSSD                                pmax  pmax
      comp=Z,87nm,0.6s
RSSD  Black Hills       32.72 103   P     P     05 57 21.7 +2.1
      baz=322,SNR=104
RSSD                                S     S     06 02 27.4 +1.1
      baz=322
RSSD  Black Hills       32.72 103   P     P     05 57 21.6 +1.9
      baz=322
K22A  Casper            32.80 107   P     P     05 57 21.9 +1.6
K22A                                IAmb  IAmb  05 57 52.3
      comp=Z,112nm,1.1s
K22A  Casper            32.80 107   P     P     05 57 22.0 +1.7
      baz=324,SNR=30
K22A  Casper            32.80 107   P     P     05 57 22.0 +1.7
      baz=324,SNR=30
MPU   Maple Canyon      32.82 116   P     P     05 57 22.2 +1.7
TIN   Tinemaha, Big     32.83 127   P     P     05 57 23.6 +3.2
      baz=333
LCH   Last Change Ra    32.88 126   P     P     05 57 23.2 +2.2
LCH                                 IAmb  IAmb  05 57 24.6
      comp=Z,39nm,0.8s
VOG   Valley Oaks Go    33.07 129   P     P     05 57 24.5 +2.1
      baz=334
PSUT  Pine Spring       33.19 120   P     P     05 57 25.7 +2.0
PSUT                                IAmb  IAmb  05 57 27.1
      comp=Z,61nm,0.8s
RDMU  Red Mountain      33.21 113   P     P     05 57 25.7 +1.8
S11A  Rachel            33.23 123   P     P     05 57 25.8 +1.8
S11A                                IAmb  IAmb  05 57 27.9
      comp=Z,60nm,0.7s
AGMN  Agassiz Nation    33.24  90   P     P     05 57 24.7 +0.9
AGMN  Agassiz Nation    33.24  90   P     P     05 57 25.4 +1.5
      baz=317,SNR=18
AGMN  Agassiz Nation    33.24  90   P     P     05 57 25.0 +1.2
      baz=317,SNR=18
RWWY  Rawlins           33.29 109   P     P     05 57 25.2 +0.5
RWWY                                IAmb  IAmb  05 57 55.1
      comp=Z,57nm,0.9s
PAGB  Antelope Grade    33.29 131   P     P     05 57 26.8 +2.4
CWC   Cottonwood Cre    33.43 127   P     P     05 57 28.4 +2.7
      baz=333
NOR   Nord              33.51  11 i P     P     05 57 25.2  -0.5
NOR                                 IAmb  IAmb  05 57 27.1
      comp=Z,16nm,0.7s
D32A  Dogwood Acres,    33.58  93   P     P     05 57 27.8 +1.0
D32A                                IAmb  IAmb  05 57 57.5
      comp=Z,67nm,0.9s
TMUT  Trail Mountain    33.60 116   P     P     05 57 29.4 +2.0
VES   Vestal, Richgr    33.60 129   P     P     05 57 29.0 +1.9
      baz=334,SNR=19
P17A  Butcher Ranch,    33.64 115   P     P     05 57 29.4 +1.7
TPNV  Topopah Spring    33.65 124   P     P     05 57 28.8 +1.1
TPNV                                IAmb  IAmb  05 57 30.4
      comp=Z,35nm,0.7s
TPNV  Topopah Spring    33.65 124   P     P     05 57 28.8 +1.1
TPNV                                pmax  pmax
      comp=Z,35nm,0.7s
TPNV  Topopah Spring    33.65 124   P     P     05 57 29.8 +2.1
      baz=332,SNR=54
TCRU  Three Creeks R    33.69 118   P     P     05 57 30.6 +2.5
PRN   Pahroc Range      33.70 123   P     P     05 57 30.1 +1.9
P18A  Preston Nutter    33.72 115   P     P     05 57 30.5 +2.1
P18A                                IAmb  IAmb  05 57 32.4
      comp=Z,82nm,0.8s
SMMC  Simmler           33.76 131   P     P     05 57 31.2 +2.7
      baz=335,SNR=17
FURC  Furnace Creek,    33.85 126   P     P     05 57 31.8 +2.6
      baz=333,SNR=18
MSU   Marysvale         33.88 118   P     P     05 57 32.2 +2.5
MSU   Marysvale         33.88 118   P     P     05 57 32.2 +2.5
Q16A  Castle Valley     33.94 116   P     P     05 57 32.3 +2.1
ISA   Isabella, Lake    33.98 128   P     P     05 57 32.0 +1.6
ISA                                 IAmb  IAmb  05 58 02.5
      comp=Z,46nm,0.8s
ISA   Isabella, Lake    33.98 128   P     P     05 57 32.1 +1.6
ISA                                 pmax  pmax
      comp=Z,46nm,0.9s
ISA   Isabella, Lake    33.98 128   P     P     05 57 32.4 +2.0
      baz=334,SNR=30
SRU   San Rafael Swe    34.04 115   P     P     05 57 33.3 +2.2
SRU   San Rafael Swe    34.04 115   P     P     05 57 33.3 +2.2
SRU                                 pmax  pmax
      comp=Z,141nm,0.9s
O20A  White River Ci    34.13 112   P     P     05 57 33.6 +1.7
O20A                                IAmb  IAmb  05 58 07.7
      comp=Z,45nm,0.9s
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O20A	White River Ci	34.13	112	P	P	05 57 33.6	+1.7
	baz=327,SNR=22						
B35A	Bob, Littlefor	34.17	88	P	P	05 57 33.2	+1.3
B35A				IAmb	IAmb	05 58 02.5	
	comp=Z,46nm,0.9s						
B35A	Bob, Littlefor	34.17	88	P	P	05 57 33.0	+1.2
	baz=317,SNR=7.8						
GWY	Greenwater Val	34.17	126	P	P	05 57 34.2	+2.0
GWY				IAmb	IAmb	05 57 36.9	
	comp=Z,35nm,0.7s						
PKM	Mcpherson Peak	34.21	131	P	P	05 57 35.3	+2.8
	baz=335,SNR=32						
CCUT	Cedar City	34.23	120	P	P	05 57 35.2	+2.4
MTPU	Mount Pierson	34.28	118	P	P	05 57 35.4	+2.1
MTPU				IAmb	IAmb	05 57 37.4	
	comp=Z,82nm,1.1s						
QSM	Queen of Sheba	34.29	126	P	P	05 57 35.6	+2.5
BCW	Bitter Crk WRg	34.30	130	P	P	05 57 35.1	+1.8
BCW				IAmb	IAmb	05 58 34.9	
	comp=Z,84nm,1.1s						
SZCU	Shurtz Canyon	34.30	120	P	P	05 57 35.6	+2.2
ARVC	Arvin	34.33	129	P	P	05 57 34.9	+1.4
	baz=335,SNR=5.8						
PHWY	Pilot Hill	34.36	108	P	P	05 57 35.1	+1.2
YAK	Yakutsk	34.40	305	LR	LR	06 13 08.1	
	comp=Z,306nm,18.6s,baz=87,slow=39						
YAK	Yakutsk	34.40	305	P	P	05 57 33.4	-0.3
YAK	Yakutsk	34.40	305	*e*P	P	05 57 33.8	+0.1
YAK				*e**PP	pP	05 58 03.6	+1.2
YAK				*e*		05 58 53.9	
YAK				*e*		06 00 05.7	
YAK				*e*S	S	06 02 50.8	-0.5
YAK				*e*SS	SnSn	06 05 13.4	-3.0
YAK				*e*		06 07 36.9	
YAK				pmax	pmax		
	comp=Z,146nm,0.9s						
YAK				pmax	pmax		
	comp=E,61nm,1.3s						
YAK				pmax	pmax		
	comp=N,37nm,1.2s						
YAK				pmax	pmax		
	comp=Z,68nm,1.8s						
YAK				pmax	pmax		
	comp=N,51nm,1.4s						
YAK				pmax	pmax		
	comp=E,55nm,1.5s						
YAK				smax	smax		
	comp=E,151nm,1.7s						
YAK				smax	smax		
	comp=N,64nm,1.5s						
LRMC	Laurel Mtn Rad	34.43	127	P	P	05 57 36.8	+2.5
	baz=334,SNR=7.1						
SHPR	Sheep Range	34.45	123	P	P	05 57 36.0	+1.4
N23A	Red Feather La	34.48	108	P	P	05 57 36.6	+1.6
N23A				IAmb	IAmb	05 58 07.5	
	comp=Z,78nm,1.2s						
N23A	Red Feather La	34.48	108	P	P	05 57 36.8	+1.8
	baz=325,SNR=19						
NUUG	Nuugaatsiaq	34.50	34	*i* P	P	05 57 33.5	-0.9
FRB	Frobisher Bay	34.52	51	LR	LR	06 11 54.1	
	comp=Z,180nm,19.6s,baz=313,slow=36						
SHOC	Shoshone, Teco	34.57	125	P	P	05 57 38.0	+2.5
	baz=333,SNR=11						
PKCU	Pink Cliffs	34.74	119	P	P	05 57 40.2	+2.9
PKCU				IAmb	IAmb	05 57 41.2	
	comp=Z,55nm,0.8s						
SUSD	Miller	34.75	97	P	P	05 57 38.0	+1.1
SUSD	Miller	34.75	97	P	P	05 57 38.5	+1.6
	baz=321,SNR=7.3						
SUSD				S	S	06 02 58.3	+1.1
	baz=321						
SUSD	Miller	34.75	97	P	P	05 57 38.3	+1.4
	baz=321,SNR=7.3						
LCMT	Little Creek M	34.75	121	P	P	05 57 39.6	+2.5
OSI	Osito Audit: C	34.83	129	P	P	05 57 40.1	+2.3
	baz=335						
EDW2	Edwards Air Fo	34.85	128	P	P	05 57 39.7	+1.8
	baz=334,SNR=7.5						
F33A	5 Mile Ranch,	34.88	93	P	P	05 57 39.2	+1.1
F33A				IAmb	IAmb	05 58 09.1	
	comp=Z,48nm,1.0s						
F33A	5 Mile Ranch,	34.88	93	P	P	05 57 39.4	+1.3
	baz=320,SNR=12						
GSC	Goldstone, Bar	34.91	126	P	P	05 57 41.0	+2.6
GSC				IAmb	IAmb	05 57 42.0	
	comp=Z,70nm,0.8s						
GSC	Goldstone, Bar	34.91	126	P	P	05 57 41.0	+2.6
GSC				pmax	pmax		
	comp=Z,70nm,0.8s						
GSC	Goldstone, Bar	34.91	126	P	P	05 57 41.1	+2.6
	baz=334,SNR=62						
TUQ	Turquoise Moun	35.11	125	P	P	05 57 42.9	+2.7
	baz=333,SNR=50						
RRX	Edison Barstow	35.22	127	P	P	05 57 43.7	+2.7
	baz=334,SNR=14						
PV23	Carpenter Ridg	35.22	114	P	P	05 57 43.1	+1.8
PV23				IAmb	IAmb	05 57 48.5	
	comp=Z,64nm,0.7s						
PV10	Paradox Valley	35.27	114	P	P	05 57 44.3	+2.5
PV10				IAmb	IAmb	05 57 46.3	
	comp=Z,54nm,0.8s						
DECC	Green Verdugo	35.30	129	P	P	05 57 44.2	+2.4
	baz=335,SNR=6.0						
PV07	Paradox Valley	35.38	114	P	P	05 57 44.3	+1.7
PV07				IAmb	IAmb	05 57 45.4	
	comp=Z,61nm,0.8s						
PV11	David Mesa, Pa	35.41	114	P	P	05 57 44.7	+1.8
PV11				IAmb	IAmb	05 57 46.4	
	comp=Z,61nm,0.6s						
PASC	Pasadena Art C	35.42	129	P	P	05 57 44.9	+2.1
PASC				IAmb	IAmb	05 58 15.1	
	comp=Z,42nm,1.0s						
SMCO	Snowmass	35.47	111	P	P	05 57 43.0	-0.6
EYMN	Ely	35.49	87	P	P	05 57 44.4	+1.2
EYMN	Ely	35.49	87	P	P	05 57 44.6	+1.4
	baz=318,SNR=16						
EYMN				S	S	06 03 08.0	-0.4
	baz=318						
EYMN	Ely	35.49	87	P	P	05 57 44.8	+1.6
	baz=318,SNR=16						
HEC	Hector,Ludlow	35.50	126	P	P	05 57 46.1	+2.6
	baz=334,SNR=7.7						
ISCO	Idaho Springs	35.53	109	P	P	05 57 46.1	+2.1
ISCO	Idaho Springs	35.53	109	P	P	05 57 46.1	+2.1
ISCO				pmax	pmax		
	comp=Z,34nm,1.2s						
ISCO	Idaho Springs	35.53	109	P	P	05 57 46.4	+2.4
	baz=326,SNR=18						
ISCO	Idaho Springs	35.53	109	P	P	05 57 46.4	+2.4
	baz=326,SNR=18						
PV15	Paradox Valley	35.54	114	P	P	05 57 45.6	+1.6
BFSC	Mount Baldy Ra	35.55	128	P	P	05 57 46.6	+2.6
	baz=335,SNR=24						
PV13	Radium Mtn., P	35.55	114	P	P	05 57 45.9	+1.8
PV13				IAmb	IAmb	05 57 47.0	
	comp=Z,119nm,1.2s						
U15A	North Rim	35.63	120	P	P	05 57 47.2	+2.3
U15A				IAmb	IAmb	05 57 48.3	
	comp=Z,57nm,0.8s						
NKL	Nikolayevsk	35.69	286	*e*P	P	05 57 42.6	-2.2
NKL				*e*S	S	06 03 11.9	+0.7
NKL				pmax	pmax		
	comp=E,20nm,0.9s						
NKL				pmax	pmax		
	comp=N,10.0nm,0.8s						
NKL				pmax	pmax		
	comp=Z,277nm,1.0s						
NKL				smax	smax		
	comp=N,1.0nm,1.1s						
NKL				smax	smax		
	comp=E,2.0nm,1.1s						
GMRC	Granite Mounta	35.79	125	P	P	05 57 48.6	+2.6
	baz=333,SNR=44						
BBRC	Big Bear Solar	35.79	127	P	P	05 57 48.7	+2.5
	baz=334,SNR=14						
CIS	Catalina Islan	36.04	130	P	P	05 57 50.1	+2.1
	baz=336,SNR=6.6						
F36A	Milaca	36.12	91	P	P	05 57 49.9	+1.3
F36A				IAmb	IAmb	05 58 20.4	
	comp=Z,91nm,0.9s						
F36A	Milaca	36.12	91	P	P	05 57 50.0	+1.3
	baz=319,SNR=22						
OGNE	Ogallala	36.15	104	P	P	05 57 50.6	+1.6
OGNE	Ogallala	36.15	104	P	P	05 57 50.8	+1.8
	baz=324,SNR=21						
OGNE	Ogallala	36.15	104	P	P	05 57 50.9	+1.8
	baz=324,SNR=21						
ELS	Elsinore Mount	36.16	129	P	P	05 57 50.9	+1.7
ELS				IAmb	IAmb	05 58 21.0	
	comp=Z,124nm,1.9s						
W13A	Hualapai Mount	36.18	123	P	P	05 57 51.3	+1.8
W13A				IAmb	IAmb	05 57 53.0	
	comp=Z,49nm,0.7s						
NEE2	Needles Airpor	36.19	124	P	P	05 57 51.9	+2.6
	baz=333						
K31A	O'Neill	36.27	99	P	P	05 57 50.5	+0.5
K31A				IAmb	IAmb	05 58 24.3	
	comp=Z,56nm,1.0s						
MURC	Murrieta	36.29	128	P	P	05 57 52.1	+1.9
	baz=335,SNR=8.5						
ECSD	EROS Data Cent	36.36	96	P	P	05 57 50.5	-0.1
ECSD				IAmb	IAmb	05 58 21.6	
	comp=Z,80nm,1.1s						
ECSD	EROS Data Cent	36.36	96	P	P	05 57 51.9	+1.3
	baz=322,SNR=47						
ECSD				S	S	06 03 20.5	-1.3
	baz=322						
ECSD	EROS Data Cent	36.36	96	P	P	05 57 51.7	+1.0
	baz=321,SNR=47						
BELC	Belle Mtn. Jos	36.36	126	P	P	05 57 53.1	+2.1
	baz=334,SNR=52						
SCI2	San Clemente I	36.38	130	P	P	05 57 53.3	+2.5
	baz=336						
TYV	Tymovskoe	36.42	282	*e*P	P	05 57 52.2	+1.1
TYV				*e*S	S	06 03 26.1	+3.6
TYV				pmax	pmax		
	comp=Z,190nm,1.3s						
TYV				pmax	pmax		
	comp=Z,400nm,4.3s						
TYV				smax	smax		
	comp=N,10.0nm,1.6s						
TYV				smax	smax		
	comp=E,23nm,1.6s						
TYV				smax	smax		
	comp=N,400nm,10.0s						
TYV				smax	smax		
	comp=E,500nm,10.0s						
Q24A	Divide	36.42	109	P	P	05 57 53.2	+1.6
Q24A	Divide	36.42	109	P	P	05 57 53.8	+2.2
	baz=327,SNR=21						
E38A	The Farm, Brul	36.46	88	P	P	05 57 51.8	+0.3
E38A				IAmb	IAmb	05 58 22.3	
	comp=Z,58nm,1.0s						
E38A	The Farm, Brul	36.46	88	P	P	05 57 53.3	+1.8
	baz=319,SNR=6.9						
MVCO	Mesa Verde	36.49	115	P	P	05 57 53.7	+1.6
MVCO				IAmb	IAmb	05 57 54.8	
	comp=Z,42nm,0.8s						
MVCO	Mesa Verde	36.49	115	P	P	05 57 53.9	+1.8
	baz=329,SNR=46						
IRM	Iron Mountain	36.54	125	P	P	05 57 54.9	+2.6
	baz=334,SNR=47						
PFO	Pinyon Flats O	36.55	127	P	P	05 57 53.6	+1.1
PFO	Pinyon Flats O	36.55	127	P	P	05 57 53.6	+1.1
PFO				pmax	pmax		
	comp=Z,39nm,1.0s						
PFO	Pinyon Flats O	36.55	127	P	P	05 57 54.3	+1.8
	baz=334,SNR=15						
TPFO	Pinon Flats	36.55	127	P	P	05 57 54.5	+1.9
	baz=334,SNR=14						
S22A	4UR Ranch, Cre	36.73	112	P	P	05 57 56.8	+2.6
S22A				IAmb	IAmb	05 57 57.9	
	comp=Z,40nm,0.8s						
S22A	4UR Ranch, Cre	36.73	112	P	P	05 57 56.9	+2.6
	baz=328,SNR=66						
PDMCI	Parker Dam,Lak	36.78	124	P	P	05 57 56.7	+2.4
	baz=333,SNR=16						
WUAZ	Wupatki	36.79	120	P	P	05 57 56.9	+2.3
WUAZ	Wupatki	36.79	120	P	P	05 57 57.2	+2.6
	baz=331,SNR=154						
BC3	Big Chuckawall	36.87	126	P	P	05 57 57.3	+2.0
	baz=334,SNR=24						
SPMN	Marine on St.	36.94	91	P	P	05 57 56.7	+1.2
SPMN	Marine on St.	36.94	91	P	P	05 57 57.1	+1.6
	baz=320,SNR=18						
SPMN	Marine on St.	36.94	91	P	P	05 57 57.0	+1.5
	baz=320,SNR=18						
109C	Camp Elliot, M	36.96	129	P	P	05 57 58.4	+2.5
109C				IAmb	IAmb	05 57 59.4	
	comp=Z,60nm,0.9s						
109C	Camp Elliot, M	36.96	129	P	P	05 57 58.4	+2.5
	baz=335,SNR=14						
BLYC	Blythe	37.13	125	P	P	05 57 59.7	+2.4
MONP2	Monument Peak	37.21	128	P	P	05 58 00.7	+2.6
	baz=335,SNR=58						
SUMG	Summit	37.22	27	P	P	05 57 58.6	+0.5
SUMG				IAmb	IAmb	05 57 59.2	
	comp=Z,49nm,0.9s						
SUMG	Summit	37.22	27	P	P	05 57 58.6	+0.5
SUMG				pmax	pmax		
	comp=Z,49nm,0.9s						
SUMG	Summit	37.22	27	*i* P	P	05 57 57.0	-1.1
SUMG				IAmb	IAmb	05 57 59.2	
	comp=Z,29nm,0.6s						
DAG	Danmarks Havn	37.28	16	*i* P	P	05 57 57.0	-1.0
DAG				IAmb	IAmb	05 57 58.8	
	comp=Z,119nm,0.7s						
SDCO	Great Sand Dun	37.29	111	P	P	05 58 01.1	+2.2
SDCO	Great Sand Dun	37.29	111	P	P	05 58 01.1	+2.2
	baz=328,SNR=57						
SDCO	Great Sand Dun	37.29	111	P	P	05 58 01.4	+2.4
	baz=328,SNR=57						
BAR	Barrett	37.31	128	P	P	05 58 01.1	+2.3
BAR				IAmb	IAmb	05 58 02.1	
	comp=Z,36nm,0.8s						
SWSC	Sam W. Stewart	37.38	127	P	P	05 58 01.3	+1.9
	baz=334,SNR=8.7						
TKX	Tecate	37.43	128	P	P	05 58 01.9	+2.1
TKX				IAmb	IAmb	05 58 03.0	
	comp=Z,47nm,1.1s						
KSCO	Kaye Shedlock'	37.48	107	P	P	05 58 01.7	+1.4
KSCO	Kaye Shedlock'	37.48	107	P	P	05 58 02.6	+2.3
	baz=326,SNR=22						
KSCO	Kaye Shedlock'	37.48	107	P	P	05 58 02.6	+2.3
	baz=326,SNR=22						
BGNE	Belgrade	37.51	100	P	P	05 58 01.2	+0.8
BGNE	Belgrade	37.51	100	P	P	05 58 01.9	+1.5
	baz=324,SNR=16						
BGNE				S	S	06 03 39.9	+0.7
	baz=324						
BGNE	Belgrade	37.51	100	P	P	05 58 01.8	+1.5
	baz=324,SNR=16						
IKP	In-Ko-Pah, Jac	37.54	128	P	P	05 58 03.4	+2.6
	baz=335,SNR=18						
Y14A	Wickenburg	37.54	123	P	P	05 58 03.4	+2.6
I37A	Lemond, Waseca	37.60	93	P	P	05 58 02.0	+0.9
I37B	Waseca	37.60	93	P	P	05 58 03.0	+1.9
	baz=321,SNR=33						
YUH	Yuha Desert	37.61	127	P	P	05 58 02.9	+1.6
YUH				IAmb	IAmb	05 58 04.6	
	comp=Z,41nm,0.8s						
CBX	Cerro Bola	37.64	128	P	P	05 58 04.5	+2.8
CBX				IAmb	IAmb	05 58 05.5	
	comp=Z,46nm,0.7s						
GLA	Glamis	37.65	126	P	P	05 58 04.0	+2.3
GLA	Glamis	37.65	126	P	P	05 58 04.0	+2.3
GLA				pmax	pmax		
	comp=Z,86nm,0.8s						
GLA	Glamis	37.65	126	P	P	05 58 04.2	+2.5
	baz=334,SNR=38						
W18A	Petrified Fore	37.79	118	P	P	05 58 05.3	+2.3
W18A				IAmb	IAmb	05 58 06.7	
	comp=Z,115nm,1.1s						
W18A	Petrified Fore	37.79	118	P	P	05 58 05.7	+2.6
	baz=331,SNR=20						
L34A	Svendsen Farm,	37.86	98	P	P	05 58 03.9	+0.6
L34A	Svendsen Farm,	37.86	98	P	P	05 58 04.3	+1.0
	baz=323,SNR=47						
L34A				S	S	06 03 43.4	-1.1
	baz=323						
KBS	Kingsbay	37.87	5	P	P	05 58 04.5	+1.5
KBS				IAmb	IAmb	05 58 05.7	
	comp=Z,61nm,0.8s						
KBS	Kingsbay	37.87	5	P	P	05 58 04.5	+1.5
KBS				pmax	pmax		
	comp=Z,61nm,0.9s						
KBS	Kingsbay	37.87	5	⇑*i*P	P	05 58 04.5	+1.5
COWI	Conover	37.94	87	P	P	05 58 04.6	+0.6
COWI				IAmb	IAmb	05 58 52.3	
	comp=Z,64nm,1.1s						
CCX	Cicese	38.05	129	P	P	05 58 07.0	+2.0
CCX				IAmb	IAmb	05 58 08.3	
	comp=Z,53nm,0.7s						
G40A	Rib Lake	38.09	89	P	P	05 58 05.8	+0.6
G40A				IAmb	IAmb	05 58 36.5	
	comp=Z,60nm,0.9s						
G40A	Rib Lake	38.09	89	P	P	05 58 06.5	+1.3
	baz=320,SNR=14						
SFJD	Kangerlussuaq	38.16	39	P	P	05 58 05.7	+0.2
SFJD				IAmb	IAmb	05 58 37.1	
	comp=Z,58nm,1.0s						
SFJD	Kangerlussuaq	38.16	39	P	P	05 58 05.7	+0.2
SFJD				pmax	pmax		
	comp=Z,58nm,1.0s						
SFJD	Kangerlussuaq	38.16	39	*i* P	P	05 58 04.2	-1.3
SFJD				IAmb	IAmb	05 58 06.1	
	comp=Z,14nm,0.8s						
X18A	Snowflake	38.22	119	P	P	05 58 08.9	+2.3
T25A	Trinidad	38.27	110	P	P	05 58 08.6	+1.5
T25A	Trinidad	38.27	110	P	P	05 58 09.1	+2.0
	baz=328,SNR=18						
113A	Mohawk Valley,	38.29	125	P	P	05 58 09.0	+2.0
113A				IAmb	IAmb	05 58 10.3	
	comp=Z,40nm,0.8s						
N33A	J Bar K, Exete	38.36	100	P	P	05 58 08.5	+1.0
N33B	J Bar K, Exete	38.36	100	P	P	05 58 08.8	+1.2
	baz=324,SNR=7.9						
F42A	Maple Grove Fa	38.65	86	P	P	05 58 11.8	+1.9
F42A				IAmb	IAmb	05 58 42.6	
	comp=Z,40nm,0.7s						
F42A	Maple Grove Fa	38.65	86	P	P	05 58 11.8	+1.9
	baz=320,SNR=5.4						
SPA0	Spitsbergen Ar	38.78	4	*e*P	P	05 58 10.8	+0.2
SPITS	Spitsbergen Ar	38.78	4	LR	LR	06 12 54.7	
	comp=Z,73nm,19.5s,baz=315,slow=34						
SPITS	Spitsbergen Ar	38.78	4	P	P	05 58 10.9	+0.2
SPITS				pmax	pmax		
	comp=Z,127nm,0.8s						
SPB2	Spitsbergen Ar	38.78	4	P	P	05 58 11.1	+0.5
CBKS	Cedar Bluff	38.91	104	P	P	05 58 14.1	+1.9
CBKS	Cedar Bluff	38.91	104	P	P	05 58 14.1	+1.9
CBKS				pmax	pmax		
	comp=Z,88nm,0.6s						
CBKS	Cedar Bluff	38.91	104	P	P	05 58 14.2	+2.0
	baz=326,SNR=25						
CBKS				S	S	06 04 02.2	+1.8
	baz=326						
CBKS	Cedar Bluff	38.91	104	P	P	05 58 14.2	+2.0
	baz=326,SNR=25						
K38A	Parkersburg	38.95	93	P	P	05 58 14.0	+1.6
K38A	Parkersburg	38.95	93	P	P	05 58 14.2	+1.7
	baz=322,SNR=16						
I40A	Norwalk	38.96	90	P	P	05 58 13.8	+1.3
I40A				IAmb	IAmb	05 58 44.1	
	comp=Z,111nm,1.4s						
I40A	Norwalk	38.96	90	P	P	05 58 14.2	+1.7
	baz=321,SNR=7.4						
N35A	Tabor	39.07	98	P	P	05 58 14.9	+1.4
N35A	Tabor	39.07	98	P	P	05 58 15.1	+1.6
	baz=324,SNR=34						
DBG	Daneborg	39.13	19	*i* P	P	05 58 12.0	-1.6
DBG				IAmb	IAmb	05 58 14.2	
	comp=Z,66nm,0.8s						
GRNR	Gornyy	39.23	287	⇑*i*P	P	05 58 15.6	+0.9
GRNR				pmax	pmax		
	comp=E,100nm,0.7s						
GRNR				pmax	pmax		
	comp=N,100nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,400nm,0.9s						
YSS	Yuzh-Sakhalins	39.24	278	P	P	05 58 15.7	+1.0
YSS	Yuzh-Sakhalins	39.24	278	α *i*P	P	05 58 15.8	+1.0
YSS				*e**SP	sP	05 58 58.8	-0.3
YSS				*e*		06 00 28.0	
YSS				*e*S	S	06 04 05.8	+0.7
YSS				*e**SS	sS	06 04 59.4	+1.9
YSS				pmax	pmax		
	comp=Z,900nm,3.4s						
YSS				pmax	pmax		
	comp=Z,210nm,1.3s						
YSS				smax	smax		
	comp=N,400nm,4.0s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	Yuzh-Sakhalins	39.24	278	P	P	05 58 15.6	+0.8
	comp=Z,249nm,1.1s						
ANMO	Albuquerque	39.28	114	P	P	05 58 17.2	+1.7
ANMO	Albuquerque	39.28	114	*d i*P	P	05 58 17.7	+2.2
ANMO				pmax	pmax		
	comp=Z,32nm,1.0s						
ANMO	Albuquerque	39.28	114	P	P	05 58 17.9	+2.4
	baz=330,SNR=56						
ANMO	Albuquerque	39.28	114	P	P	05 58 17.9	+2.4
	baz=330						
SCIA	State Center	39.34	95	P	P	05 58 16.0	+0.3
SCIA	State Center	39.34	95	S	S	06 04 07.1	+0.4
	baz=323						
SCIA	State Center	39.34	95	P	P	05 58 17.0	+1.4
	baz=323						
214A	Organ Pipe Nat	39.38	124	P	P	05 58 18.6	+2.5
214A				IAmb	IAmb	05 58 19.7	
	comp=Z,59nm,0.8s						
214A	Organ Pipe Nat	39.38	124	P	P	05 58 18.9	+2.7
	baz=334,SNR=23						
ICESG	Greenland Ices	39.52	32	*i* P	P	05 58 15.9	-1.4
ICESG				IAmb	IAmb	05 58 19.4	
	comp=Z,59nm,0.7s						
R32A	Long Quarter,	39.68	103	P	P	05 58 19.7	+1.1
R32A	Long Quarter,	39.68	103	P	P	05 58 20.2	+1.6
	baz=326,SNR=73						
I42A	Draeger Farm,	39.74	89	P	P	05 58 20.2	+1.3
I42A	Draeger Farm,	39.74	89	S	S	06 04 13.7	+1.2
	baz=321						
DY2G	Dye2	39.75	37	*i* P	P	05 58 19.4	+0.3
DY2G				IAmb	IAmb	05 58 21.6	
	comp=Z,7.7nm,0.8s						
SHO	Shikotan	39.75	271	*e*P	P	05 58 18.0	-1.0
SHO				pmax	pmax		
	comp=Z,74nm,0.6s						
SHO				pmax	pmax		
	comp=E,17nm,0.8s						
SHO				pmax	pmax		
	comp=N,34nm,0.5s						
H43A	Windswept, Lux	39.81	87	P	P	05 58 20.6	+1.0
H43A				IAmb	IAmb	05 58 51.2	
	comp=Z,64nm,0.8s						
H43A	Windswept, Lux	39.81	87	S	S	06 04 14.3	+0.7
	baz=321						
TUC	Tucson	39.84	121	P	P	05 58 22.5	+2.5
TUC	Tucson	39.84	121	P	P	05 58 22.5	+2.5
TUC				pmax	pmax		
	comp=Z,29nm,0.8s						
TUC	Tucson	39.84	121	P	P	05 58 22.7	+2.7
	baz=333						
Y22D	IRIS PASSCAL I	39.84	116	P	P	05 58 22.9	+2.8
Y22D				IAmb	IAmb	05 58 24.0	
	comp=Z,66nm,0.8s						
Y22D	IRIS PASSCAL I	39.84	116	P	P	05 58 23.6	+3.5
	baz=330,SNR=8.4						
Y22D	IRIS PASSCAL I	39.84	116	P	P	05 58 23.2	+3.2
	baz=330,SNR=8.4						
JFWS	Jewell Farm	39.89	91	P	P	05 58 21.0	+0.8
JFWS				IAmb	IAmb	05 58 52.0	
	comp=Z,56nm,0.7s						
JFWS	Jewell Farm	39.89	91	P	P	05 58 21.0	+0.8
JFWS				pmax	pmax		
	comp=Z,56nm,0.7s						
JFWS	Jewell Farm	39.89	91	P	P	05 58 21.0	+0.8
	baz=322,SNR=15						
JFWS	Jewell Farm	39.89	91	P	P	05 58 20.7	+0.5
	baz=322,SNR=15						
BNM	Barren Site	39.90	115	P	P	05 58 23.0	+2.3
HSPB	Hornsund (broa	39.92	5	*e*P	P	05 58 19.7	-0.3
E46A	Sault Ste Mari	39.93	82	P	P	05 58 20.7	+0.2
E46A				IAmb	IAmb	05 58 52.0	
	comp=Z,65nm,0.8s						
E46A	Sault Ste Mari	39.93	82	P	P	05 58 21.6	+1.1
	baz=319,SNR=8.9						
Y22A	Socorro	39.94	116	P	P	05 58 23.7	+2.8
	baz=331,SNR=73						
KSU1	Kansas State U	40.06	100	P	P	05 58 22.6	+0.8
KSU1	Kansas State U	40.06	100	P	P	05 58 22.9	+1.2
	baz=325,SNR=58						
KSU1				S	S	06 04 17.4	-0.1
	baz=325						
KSU1	Kansas State U	40.06	100	P	P	05 58 22.8	+1.2
	baz=325,SNR=58						
L40A	Anamosa	40.12	93	P	P	05 58 22.6	+0.5

L40A					IAmb	IAmb	05 58 56.0	
	comp=Z,68nm,0.8s							
L40A	Anamosa	40.12	93		P	P	05 58 22.9	+0.8
	baz=322,SNR=29							
N38A	Joes South For	40.22	96		P	P	05 58 23.4	+0.5
N38A					IAmb	IAmb	05 58 54.7	
	comp=Z,44nm,0.7s							
N38A	Joes South For	40.22	96		P	P	05 58 23.8	+0.9
	baz=324,SNR=7.7							
N38A					S	S	06 04 20.1	+0.3
	baz=324							
HOPEN	Hopen	40.64	1	e	P	P	05 58 26.9	+0.9
121A	Cookes Peak, D	40.83	118		P	P	05 58 31.0	+2.7
121A					IAmb	IAmb	05 58 32.1	
	comp=Z,182nm,1.8s							
121A	Cookes Peak, D	40.83	118		P	P	05 58 31.2	+3.0
	baz=332,SNR=36							
121A	Cookes Peak, D	40.83	118		P	P	05 58 31.2	+3.0
	baz=332,SNR=36							
I45A	Fountain	40.84	86		P	P	05 58 29.1	+1.1
L42A	Oliver, Polo	40.87	91		P	P	05 58 29.2	+0.9
L42A	Oliver, Polo	40.87	91		P	P	05 58 29.6	+1.3
	baz=322,SNR=6.6							
L42A					S	S	06 04 29.7	+0.2
	baz=322							
K43A	Burlington	40.93	89		P	P	05 58 28.7	-0.1
K43A					IAmb	IAmb	05 59 01.8	
	comp=Z,88nm,1.0s							
K43A	Burlington	40.93	89		P	P	05 58 30.6	+1.9
	baz=322,SNR=7.2							
ZEA	Zeya	40.96	296	c i	P	P	05 58 29.0	+0.2
ZEA					pmax	pmax		
	comp=N,40nm,0.7s							
ZEA					pmax	pmax		
	comp=Z,190nm,0.9s							
ZEA					pmax	pmax		
	comp=E,40nm,1.1s							
ZEA					MLR	MLR		
	comp=Z,200nm,16.0s							
GLMI	Grayling	40.97	84		P	P	05 58 30.4	+1.3
GLMI	Grayling	40.97	84		P	P	05 58 30.4	+1.3
	baz=321,SNR=5.4							
GLMI	Grayling	40.97	84		P	P	05 58 30.5	+1.4
	baz=321,SNR=5.4							
P38A	Dawn	41.02	97		P	P	05 58 30.4	+0.9
P38A					IAmb	IAmb	05 59 01.6	
	comp=Z,108nm,1.3s							
P38A	Dawn	41.02	97		P	P	05 58 30.6	+1.0
	baz=324,SNR=22							
SCHQ	Schefferville	41.17	61		P	P	05 58 30.9	+0.4
	comp=Z,35nm,0.9s,baz=323,slow=8.9,SNR=31							
SCHQ					PcP	PcP	06 00 27.6	+0.5
	comp=Z,16nm,0.6s,baz=293,slow=4.2,SNR=6.9							
SCHQ					LR	LR	06 16 09.8	
	comp=Z,199nm,18.5s,baz=24,slow=37							
	comp=Z,35nm,0.9s							
SCHQ	Schefferville	41.17	61		P	P	05 58 30.9	+0.4
SCHQ					IAmb	IAmb	05 58 32.2	
	comp=Z,59nm,1.1s							
U32A	Winter Ranch,	41.25	105		P	P	05 58 33.2	+1.7
	baz=327,SNR=15							
319A	Douglas	41.26	120		P	P	05 58 33.5	+1.8
319A					IAmb	IAmb	05 58 35.4	
	comp=Z,62nm,0.9s							
AMTX	Amarillo	41.35	109		P	P	05 58 32.7	+0.3
AMTX	Amarillo	41.35	109		P	P	05 58 34.6	+2.2
	baz=329,SNR=11							
AMTX	Amarillo	41.35	109		P	P	05 58 34.2	+1.8
	baz=329							
N41A	Harden Midland	41.36	94		P	P	05 58 32.7	+0.3
N41A	Harden Midland	41.36	94		P	P	05 58 33.6	+1.3
	baz=323,SNR=8.4							
JKA	Kamikawa-asahi	41.48	275		P	P	05 58 32.6	-0.7
ASAJ	Asahikawa	41.49	275		P	P	05 58 32.6	-0.7
ASAJ					pmax	pmax		
	comp=Z,20nm,0.7s							
L44A	Lake County Fo	41.53	90		P	P	05 58 33.5	-0.2
L44A					IAmb	IAmb	05 59 23.2	
	comp=Z,85nm,1.0s							
L44A	Lake County Fo	41.53	90		P	P	05 58 35.3	+1.6
	baz=322							
NRIK	Noril'sk	41.57	333		P	P	05 58 34.5	+0.8
	comp=Z,98nm,0.8s,baz=46,slow=7.0,SNR=135							
NRIK					ScP	ScP	06 04 03.9	-1.6
	comp=Z,14nm,0.9s,baz=48,slow=2.2,SNR=6.2							
NRIK					LR	LR	06 18 35.5	
	comp=Z,278nm,20.8s,baz=12,slow=40							
	comp=Z,98nm,0.8s							
NRIK	Noril'sk	41.57	333		P	P	05 58 34.4	+0.8
NRIK	Noril'sk	41.57	333	ce	P	P	05 58 34.1	+0.5
NRIK					pmax	pmax		
	comp=Z,285nm,1.4s							
MSTX	Muleshoe	41.66	111		P	P	05 58 36.8	+1.8
MSTX					IAmb	IAmb	05 58 37.9	
	comp=Z,84nm,0.8s							
MSTX	Muleshoe	41.66	111		P	P	05 58 37.0	+2.0
	baz=329,SNR=38							
MSTX	Muleshoe	41.66	111		P	P	05 58 37.0	+2.0
	baz=329,SNR=38							
VLDQ	Val d'Or	41.67	75		P	P	05 58 33.0	-1.7
VLDQ					IAmb	IAmb	05 58 34.8	
	comp=Z,50nm,0.9s							
P40A	Paris	41.77	96		P	P	05 58 36.0	+0.3
P40A					IAmb	IAmb	05 58 37.5	
	comp=Z,46nm,0.7s							
P40A	Paris	41.77	96		P	P	05 58 36.4	+0.8
	baz=324,SNR=39							
P40A					S	S	06 04 41.9	-0.9
	baz=324							
KIP	Kipapa	41.89	190		P	P	05 58 37.3	+0.5
KIP					IAmb	IAmb	05 58 39.2	
	comp=Z,101nm,0.8s							
KIP	Kipapa	41.89	190	ce	P	P	05 58 38.3	+1.5
KIP					pmax	pmax		
	comp=Z,211nm,1.7s							
KIP	Kipapa	41.89	190		P	P	05 58 38.6	+1.8
	comp=Z,139nm,0.9s							
T35A	Sooner Cattle	41.91	102		P	P	05 58 36.7	-0.1
T35A					IAmb	IAmb	05 58 38.6	
	comp=Z,53nm,0.6s							
T35B	Sooner Cattle	41.91	102		P	P	05 58 37.7	+0.9
	baz=326,SNR=38							
KIDD	KIDD Seismic O	42.02	117		P	P	05 58 40.2	+2.3
	baz=332,SNR=9.1							
SCO	Scoresbysund	42.09	23		P	P	05 58 37.5	-0.3
SCO					IAmb	IAmb	05 58 39.3	
	comp=Z,85nm,1.6s							
SCO	Scoresbysund	42.09	23		P	P	05 58 37.5	-0.3
SCO					pmax	pmax		
	comp=Z,85nm,1.6s							
M44A	Midewin, Midew	42.10	90		P	P	05 58 38.5	+0.2
M44A					IAmb	IAmb	05 59 09.7	
	comp=Z,56nm,0.7s							
M44A	Midewin, Midew	42.10	90		P	P	05 58 39.5	+1.2
	baz=323,SNR=8.7							
M44A					S	S	06 04 47.2	-0.4
	baz=323							
SOEG	Soedalen	42.12	29	i	P	P	05 58 37.4	-0.7
SOEG					IAmb	IAmb	05 58 38.7	
	comp=Z,36nm,0.7s							
HDIL	Hopedale	42.20	92		P	P	05 58 39.0	-0.1
HDIL					IAmb	IAmb	05 59 10.3	
	comp=Z,87nm,0.7s							
HDIL	Hopedale	42.20	92		P	P	05 58 39.7	+0.6
	baz=323,SNR=21							
HDIL	Hopedale	42.20	92		P	P	05 58 40.0	+0.9
	baz=323,SNR=21							
KLR	Kul'dur	42.40	289	ce	P	P	05 58 40.6	-0.1
KLR					pmax	pmax		
	comp=Z,175nm,1.3s							
BJO1	Bjornoya	42.53	4	e	P	P	05 58 42.2	+0.9
MNTX	Cornudas Mount	42.54	116		P	P	05 58 44.2	+2.2
MNTX	Cornudas Mount	42.54	116		P	P	05 58 44.5	+2.5
	baz=331,SNR=40							
MNTX	Cornudas Mount	42.54	116		P	P	05 58 44.5	+2.5
	baz=331,SNR=40							
R40A	Maddies Statio	42.68	97		P	P	05 58 42.9	-0.1
R40A	Maddies Statio	42.68	97		P	P	05 58 43.3	+0.3
	baz=325,SNR=36							
R40A					S	S	06 04 54.6	-1.5
	baz=325							
S39A	Bolivar	42.70	98		P	P	05 58 42.6	-0.5
S39A	Bolivar	42.70	98		P	P	05 58 42.9	-0.3
	baz=326,SNR=43							
S39A					S	S	06 04 53.9	-2.5
	baz=326							
ANGG	Ammassalik, Gr	42.70	34		P	P	05 58 41.9	-1.0
ANGG					IAmb	IAmb	05 58 43.1	
	comp=Z,75nm,1.0s							
ANGG	Ammassalik, Gr	42.70	34	i	P	P	05 58 41.1	-1.7
ANGG					IAmb	IAmb	05 58 44.3	
	comp=Z,33nm,0.6s							
HSIG		42.71	124		P	P	05 58 45.7	+2.4
HSIG					IAmb	IAmb	05 58 46.7	
	comp=Z,48nm,0.9s							
WMOK	Wichita Mounta	42.73	106		P	P	05 58 44.7	+1.2
WMOK	Wichita Mounta	42.73	106		P	P	05 58 44.7	+1.2
WMOK					pmax	pmax		
	comp=Z,52nm,1.1s							
WMOK	Wichita Mounta	42.73	106		P	P	05 58 44.9	+1.4
	baz=328,SNR=31							
WMOK	Wichita Mounta	42.73	106		P	P	05 58 44.9	+1.4
	baz=328,SNR=31							
P43A	Skaggs, Pawnee	42.83	93		P	P	05 58 44.0	-0.2
P43A	Skaggs, Pawnee	42.83	93		P	P	05 58 44.5	+0.3
	baz=324,SNR=9.2							
ERM	Erimo	42.88	273		P	P	05 58 46.0	+1.5
ERM	Erimo	42.88	273	ce	P	P	05 58 45.3	+0.7
ERM					pmax	pmax		
	comp=Z,127nm,0.8s							
ERM	Erimo	42.88	273		P	P	05 58 45.8	+1.2
O44A	Mansfield	42.90	92		P	P	05 58 45.1	+0.3
O44A	Mansfield	42.90	92		P	P	05 58 45.1	+0.3
	baz=324,SNR=7.3							
JEW	Eniwo	43.00	275		P	P	05 58 46.0	+0.4
BOD	Bodaibo	43.02	309	e	P	P	05 58 44.9	-0.7
BOD					pmax	pmax		
	comp=Z,173nm,1.5s							
TUL1	Leonard	43.06	102		P	P	05 58 47.1	+1.0
TUL1	Leonard	43.06	102		P	P	05 58 46.8	+0.7
	baz=327,SNR=9.7							
TUL1	Leonard	43.06	102		P	P	05 58 47.1	+1.0
	baz=327,SNR=9.7							
IVI	Ivigtut	43.12	44	i	P	P	05 58 47.0	+0.7
X34A	Smith Ranch, M	43.26	105		P	P	05 58 49.0	+1.2
L48A	N Adams	43.30	87		P	P	05 58 48.9	+0.9
L48A	N Adams	43.30	87		P	P	05 58 49.2	+1.2
	baz=323,SNR=14							
L48A					P	P	05 58 49.2	+1.2
	baz=323,SNR=14							
L48A					S	S	06 05 06.1	+0.9
	baz=323							
L48A					S	S	06 05 06.1	+0.9
	baz=323							
SLM	Saint Louis	43.32	95		P	P	05 58 48.6	+0.5
SLM					IAmb	IAmb	05 58 50.5	
	comp=Z,61nm,0.8s							
SLM	Saint Louis	43.32	95		P	P	05 58 48.6	+0.5
SLM					pmax	pmax		
	comp=Z,61nm,0.9s							
SLM	Saint Louis	43.32	95		P	P	05 58 49.2	+1.1
	baz=325,SNR=8.1							
CCM	Cathedral Cave	43.34	96		P	P	05 58 48.5	+0.2
CCM	Cathedral Cave	43.34	96		P	P	05 58 48.5	+0.2
CCM					pmax	pmax		
	comp=Z,22nm,0.8s							
CCM	Cathedral Cave	43.34	96		P	P	05 58 48.3	0.0
	baz=325,SNR=18							
CCM					S	S	06 05 04.5	-1.2
	baz=325							
CCM	Cathedral Cave	43.34	96		P	P	05 58 49.3	+1.0
	baz=325							
SFIN	Lafayette	43.34	90		P	P	05 58 49.2	+0.9
SFIN	Lafayette	43.34	90		P	P	05 58 48.9	+0.6
	baz=324,SNR=11							
SFIN	Lafayette	43.34	90		P	P	05 58 49.5	+1.2
	baz=324,SNR=11							
AAM	Ann Arbor	43.37	86		P	P	05 58 49.6	+1.1
AAM					IAmb	IAmb	05 59 22.6	
	comp=Z,69nm,1.3s							
AAM	Ann Arbor	43.37	86		P	P	05 58 49.6	+1.1
AAM					pmax	pmax		
	comp=Z,69nm,1.3s							
K50A	Casco	43.47	84		P	P	05 58 50.5	+1.2
K50A					IAmb	IAmb	05 58 52.0	
	comp=Z,63nm,0.9s							
TEY	Ternei	43.47	281	e	P	P	05 58 48.9	-0.4
SADO	Sadowa	43.48	80		LR	LR	06 17 07.3	
	comp=Z,232nm,19.7s,baz=338,slow=36							
SADO	Sadowa	43.48	80		P	P	05 58 49.6	+0.3
N47A	Urbana	43.58	89		P	P	05 58 50.4	+0.2
N47A					IAmb	IAmb	05 59 21.3	
	comp=Z,75nm,0.8s							
N47A	Urbana	43.58	89		P	P	05 58 50.6	+0.5
	baz=323,SNR=15							
N47A					P	P	05 58 50.6	+0.5
	baz=323,SNR=15							
HHAR	Hobbs	43.58	100		P	P	05 58 50.2	-0.1
MGMO	Mountain Grove	43.61	98		P	P	05 58 50.7	+0.1
MGMO					IAmb	IAmb	05 58 52.7	
	comp=Z,74nm,0.8s							
Q44A	Meyer Farm, Va	43.66	93		P	P	05 58 51.0	+0.2
Q44A					IAmb	IAmb	05 58 53.0	
	comp=Z,84nm,1.1s							
Q44A	Meyer Farm, Va	43.66	93		P	P	05 58 51.1	+0.3
	baz=324,SNR=10							
JMIC	Jan Mayen	43.72	17	e	P	P	05 58 51.9	+1.0
FVM	French Village	43.76	95		P	P	05 58 51.5	-0.2
FVM					IAmb	IAmb	05 58 53.5	
	comp=Z,41nm,0.6s							
FVM	French Village	43.76	95		P	P	05 58 51.5	-0.2
FVM					pmax	pmax		
	comp=Z,41nm,0.6s							
FVM	French Village	43.76	95		P	P	05 58 52.2	+0.4
	baz=325,SNR=34							
FVM					S	S	06 05 11.4	-0.6
	baz=325							
SRIG	Santa Rosalia	43.77	126		P	P	05 58 53.0	+1.2
SRIG					IAmb	IAmb	05 58 55.2	
	comp=Z,77nm,0.7s							
P46A	Rosedale	43.90	91		P	P	05 58 52.2	-0.6
P46A					IAmb	IAmb	05 58 58.9	
	comp=Z,64nm,0.7s							
P46A	Rosedale	43.90	91		P	P	05 58 53.8	+1.0
	baz=324,SNR=23							
P46A					S	S	06 05 13.5	-0.4
	baz=324							
KHU	Kahuku	43.90	186		P	P	05 58 52.8	-0.5
KHU	Kahuku	43.90	186		P	P	05 58 52.8	-0.5
U40A	Yellville	44.01	99		P	P	05 58 53.5	-0.3
U40A					IAmb	IAmb	06 00 38.1	
	comp=Z,44nm,0.8s							
U40A	Yellville	44.01	99		P	P	05 58 53.6	-0.1
	baz=326,SNR=21							
U40A					P	P	05 58 53.6	-0.1
	baz=326,SNR=21							
U40A	Yellville	44.01	99		P	P	05 58 53.8	+0.1
	baz=326,SNR=21							
NRS	Narsarsuaq	44.01	42		P	P	05 58 53.4	0.0
NRS	Narsarsuaq	44.01	42		P	P	05 58 53.4	0.0
NRS					pmax	pmax		
	comp=Z,35nm,0.9s							
NRS	Narsarsuaq	44.01	42	i	P	P	05 58 51.1	-2.3
NRS					IAmb	IAmb	05 58 56.2	
	comp=Z,24nm,0.9s							
ABTX	Abilene, Hawle	44.16	109		P	P	05 58 55.0	0.0
ABTX	Abilene, Hawle	44.16	109		P	P	05 58 55.7	+0.8
	baz=329,SNR=8.7							
ABTX	Abilene, Hawle	44.16	109		P	P	05 58 56.0	+1.1
	baz=329,SNR=8.7							
OLIL	Olney	44.21	93		P	P	05 58 54.9	-0.3
OLIL					IAmb	IAmb	05 58 57.5	
	comp=Z,86nm,1.0s							
OLIL	Olney	44.21	93		P	P	05 58 56.0	+0.7
	baz=325,SNR=24							
N49A	Columbus Grove	44.23	87		P	P	05 58 55.5	+0.1
N49A					IAmb	IAmb	05 59 26.9	
	comp=Z,58nm,0.8s							
N49A	Columbus Grove	44.23	87		P	P	05 58 56.5	+1.1
	baz=323,SNR=9.1							
N49A					P	P	05 58 56.5	+1.1
	baz=323,SNR=9.1							
LATQ	La Tuque	44.26	72		P	P	05 58 56.2	+0.6
O48B	Farmland	44.32	89		P	P	05 58 56.1	0.0
	baz=324,SNR=28							
O48B	Farmland	44.32	89		P	P	05 58 56.1	0.0
	baz=324,SNR=28							
X37A	Clayton	44.36	103		P	P	05 58 57.2	+0.7
X37A	Clayton	44.36	103		P	P	05 58 57.5	+1.0
	baz=328,SNR=14							
TRQ	Mont Tremblant	44.39	75		P	P	05 58 56.5	-0.2
TRQ					IAmb	IAmb	05 58 58.0	
	comp=Z,89nm,1.3s							
SIUC	Southern Illin	44.53	95		P	P	05 58 58.0	+0.2
SIUC					IAmb	IAmb	05 59 00.1	
	comp=Z,91nm,0.8s							
S44A	Carbondale	44.53	95		P	P	05 58 58.0	+0.2
S44A					IAmb	IAmb	05 59 00.1	
	comp=Z,81nm,0.8s							
S44A	Carbondale	44.53	95		P	P	05 58 58.6	+0.8
	baz=325,SNR=17							
S44A					S	S	06 05 22.9	-0.2
	baz=325							
W39A	Magazine	44.56	101		P	P	05 58 58.0	-0.1
W39A	Magazine	44.56	101		P	P	05 58 58.3	+0.2
	baz=327,SNR=13							
W39A	Magazine	44.56	101		P	P	05 58 58.3	+0.2
	baz=327,SNR=13							
BLO	Bloomington	44.57	91		P	P	05 58 58.2	+0.1
BLO	Bloomington	44.57	91		P	P	05 58 58.2	+0.1
BLO					pmax	pmax		
	comp=Z,41nm,0.9s							
Z35A	Perchaven, San	44.59	106		P	P	05 58 58.8	+0.4
Z35A					IAmb	IAmb	06 00 40.6	
	comp=Z,80nm,0.9s							
Z35A	Perchaven, San	44.59	106		P	P	05 58 59.6	+1.2
	baz=329,SNR=8.9							
Z35A					S	S	06 05 24.8	+0.7
	baz=329							
FCAR	Ozark Folk Cen	44.72	99		P	P	05 58 59.1	-0.2
O49A	Covington	44.75	88		P	P	05 59 00.0	+0.5
O49A					IAmb	IAmb	05 59 30.7	
	comp=Z,60nm,0.8s							
O49A	Covington	44.75	88		P	P	05 59 00.0	+0.5
	baz=324,SNR=9.9							
O49A					P	P	05 59 00.0	+0.5
	baz=324,SNR=9.9							
PBMO	Poplar Bluff	44.75	96		P	P	05 58 59.9	+0.3
PBMO					IAmb	IAmb	05 59 01.6	
	comp=Z,90nm,0.7s							
PBMO	Poplar Bluff	44.75	96		P	P	05 59 00.0	+0.5
	baz=326,SNR=87							
PBMO					S	S	06 05 25.1	-1.2
	baz=326							
JTM	Tenmabayashi	44.81	273		P	P	05 59 00.6	+0.7
P48A	Milroy	44.84	90		P	P	05 59 00.2	-0.1
P48A	Milroy	44.84	90		P	P	05 59 00.1	-0.1
	baz=324,SNR=7.9							
P48A					P	P	05 59 00.1	-0.1
	baz=324,SNR=7.9							
LCAR	Lake Charles	45.01	98		P	P	05 59 01.3	-0.3
LCAR					IAmb	IAmb	06 00 41.8	
	comp=Z,64nm,0.8s							
LCAR	Lake Charles	45.01	98		P	P	05 59 01.4	-0.3
	baz=326,SNR=18							
LCAR					S	S	06 05 28.0	-2.0
	baz=326							
M52A	Chesterland	45.02	84		S	S	06 05 29.6	-0.4
	baz=323							
M52A					S	S	06 05 29.6	-0.4
	baz=323							
N51A	Ashland	45.05	86		P	P	05 59 01.6	-0.3
N51A					IAmb	IAmb	05 59 33.7	
	comp=Z,90nm,0.9s							
N51A	Ashland	45.05	86		P	P	05 59 03.1	+1.1
	baz=323,SNR=8.8							
N51A					P	P	05 59 03.1	+1.1
	baz=323,SNR=8.8							
N51A					S	S	06 05 30.7	+0.1
	baz=323							
N51A					S	S	06 05 30.7	+0.1
	baz=323							
P49A	Miami Univ. Ec	45.10	89		P	P	05 59 01.7	-0.6
WHAR	Wooly Hollow	45.15	99		P	P	05 59 02.5	-0.2
PARMO	Parma	45.15	96		P	P	05 59 03.6	+0.9
PARMO					IAmb	IAmb	06 00 42.6	
	comp=Z,97nm,0.8s							
ERPA	Erie	45.18	83		S	S	06 05 33.1	+0.7
	baz=323							
MIAR	Mount Ida	45.19	101		P	P	05 59 04.0	+0.9
MIAR	Mount Ida	45.19	101		P	P	05 59 04.0	+0.9
MIAR					pmax	pmax		
	comp=Z,28nm,0.8s							
MIAR	Mount Ida	45.19	101		P	P	05 59 04.0	+0.9
	baz=327,SNR=25							
MIAR	Mount Ida	45.19	101		P	P	05 59 04.0	+0.9
	baz=327,SNR=25							
LMQ	La Malbaie	45.20	70		P	P	05 59 03.4	+0.4
LMQ					IAmb	IAmb	05 59 04.4	
	comp=Z,58nm,1.0s							
W41B	Gary Mavity, V	45.26	99		P	P	05 59 03.0	-0.6
W41B	Gary Mavity, V	45.26	99		P	P	05 59 03.6	0.0
	baz=327,SNR=8.8							
W41B	Gary Mavity, V	45.26	99		P	P	05 59 03.2	-0.5
	baz=327,SNR=8.8							
TX31	Lajitas Ar. Si	45.32	115		P	P	05 59 06.3	+2.1
TX31					IAmb	IAmb	05 59 07.5	
	comp=Z,78nm,0.7s							
TX31	Lajitas Ar. Si	45.32	115		P	P	05 59 06.6	+2.4
	baz=332,SNR=77							
TX32	Lajitas Array	45.32	115		P	P	05 59 06.3	+2.1
TXAR	Lajitas Array	45.32	115		P	P	05 59 06.5	+2.2
	comp=Z,19nm,0.6s,baz=328,slow=6.2,SNR=237							
TXAR					pP	pP	05 59 36.3	+1.9
	comp=Z,13nm,0.6s,baz=329,slow=7.6,SNR=4.0							
TXAR					PcP	PcP	06 00 42.7	+1.1
	comp=Z,15nm,0.9s,baz=332,slow=0.8,SNR=6.8							
TXAR					ScP	ScP	06 04 22.8	+1.3
	comp=Z,2.0nm,0.8s,baz=227,slow=2.1,SNR=4.6							
	comp=Z,19nm,0.6s							
TXAR	Lajitas Array	45.32	115		P	P	05 59 06.2	+1.9
ACSO	Alum Creek Sta	45.33	87		P	P	05 59 04.7	+0.6
ACSO					IAmb	IAmb	05 59 06.3	
	comp=Z,68nm,0.8s							
ACSO	Alum Creek Sta	45.33	87		P	P	05 59 05.0	+0.9
	baz=324,SNR=17							
ACSO					S	S	06 05 34.8	+0.3
	baz=324							
ACSO	Alum Creek Sta	45.33	87		P	P	05 59 05.0	+0.9
	baz=324,SNR=17							
T45A	Paducah	45.36	95		P	P	05 59 04.8	+0.4
T45B	Paducah	45.37	95		P	P	05 59 04.8	+0.3
	baz=326,SNR=17							
T45B					S	S	06 05 34.4	-0.6
	baz=326							
M53A	WI Miller and	45.41	84		P	P	05 59 05.8	+1.0
M53A					IAmb	IAmb	05 59 37.0	
	comp=Z,112nm,0.9s							
M53A	WI Miller and	45.41	84		P	P	05 59 06.0	+1.3
	baz=323,SNR=9.5							
ALLY	Alegheny Colle	45.48	83		P	P	05 59 06.1	+0.8
ALLY	Alegheny Colle	45.48	83		P	P	05 59 06.8	+1.5
	baz=323,SNR=11							
BMNY	Brushton-Moira	45.48	76		P	P	05 59 05.2	-0.1
	baz=322,SNR=7.1							
HICK	Hickman	45.49	96		P	P	05 59 06.2	+0.7
HICK					IAmb	IAmb	05 59 56.2	
	comp=Z,104nm,1.1s							
UALR	University of	45.55	100		P	P	05 59 06.4	+0.5
WVNY	West Valley, N	45.58	81		P	P	05 59 06.3	+0.2
X40A	Basin Creek Fa	45.58	101		P	P	05 59 06.3	+0.2
X40A	Basin Creek Fa	45.58	101		P	P	05 59 06.6	+0.5
	baz=327,SNR=14							
X40A					P	P	05 59 06.6	+0.5
	baz=327,SNR=14							
X40A	Basin Creek Fa	45.58	101		P	P	05 59 06.5	+0.4
	baz=327,SNR=14							
GNAR	Gosnell	45.61	97		P	P	05 59 06.8	+0.5
GNAR					IAmb	IAmb	05 59 12.8	
	comp=Z,86nm,1.2s							
LONY	Lake Ozonia	45.62	76		P	P	05 59 06.1	-0.3
LONY	Lake Ozonia	45.62	76		P	P	05 59 06.2	-0.3
	baz=322,SNR=7.3							
WHTX	Lake Whitney,	45.65	107		P	P	05 59 08.0	+1.3
	baz=329							
Z38A	Mt. Pleasant	45.65	104		P	P	05 59 07.3	+0.6
Z38A					IAmb	IAmb	06 00 44.1	
	comp=Z,81nm,1.4s							
LNXT	Lenox	45.74	96		P	P	05 59 08.2	+0.9
LNXT					IAmb	IAmb	05 59 09.3	
	comp=Z,33nm,0.6s							
N53A	Lisbon	45.84	85		P	P	05 59 08.8	+0.6
N53A	Lisbon	45.84	85		P	P	05 59 09.0	+0.8
	baz=323,SNR=24							
N53A					P	P	05 59 09.0	+0.8
	baz=323,SNR=24							
N53A					S	S	06 05 42.4	+0.5
	baz=323							
N53A					S	S	06 05 42.4	+0.5

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      baz=323
FRNY  Flat Rock        45.89  75  P     P     05 59 07.4 -1.1
FRNY  Flat Rock        45.89  75  P     P     05 59 07.7 -0.8
      baz=322,SNR=8.9
P51A  Williamsport     45.90  88  P     P     05 59 08.4 -0.2
P51A  Williamsport     45.90  88  P     P     05 59 08.8 +0.2
      baz=324,SNR=11
P51A                              P     P     05 59 08.8 +0.2
      baz=324,SNR=11
R49A  Shelbyville      45.90  90  P     P     05 59 08.3 -0.4
R49A  Shelbyville      45.90  90  P     P     05 59 08.7  0.0
      baz=325,SNR=5.5
R49A                              P     P     05 59 08.7  0.0
      baz=325,SNR=5.5
R49A                              S     S     06 05 40.7 -2.1
      baz=325
R49A                              S     S     06 05 40.7 -2.1
      baz=325
JCT   Junction City    45.94 110  P     P     05 59 10.1 +1.0
JCT                               IAmb  IAmb  05 59 43.0
      comp=Z,53nm,0.7s
JCT   Junction City    45.94 110  P     P     05 59 10.1 +1.0
JCT                               pmax  pmax
      comp=Z,53nm,0.7s
JCT   Junction City    45.94 110  P     P     05 59 10.4 +1.4
      baz=330,SNR=41
JCT                               S     S     06 05 44.2 +0.6
      baz=330
JCT   Junction City    45.94 110  P     P     05 59 10.6 +1.6
      baz=330,SNR=41
O52A  Adamsville       45.94  86  P     P     05 59 09.2 +0.2
O52A                              IAmb  IAmb  05 59 11.0
      comp=Z,94nm,1.2s
O52A  Adamsville       45.94  86  P     P     05 59 09.4 +0.4
      baz=324,SNR=12
O52A                              P     P     05 59 09.4 +0.4
      baz=324,SNR=12
T47A  Sharon Grove     46.09  93  P     P     05 59 10.3 +0.2
T47A                              IAmb  IAmb  05 59 12.5
      comp=Z,80nm,1.2s
T47A  Sharon Grove     46.09  93  P     P     05 59 10.8 +0.7
      baz=326,SNR=21
T47A                              S     S     06 05 45.3 -0.2
      baz=326
D62A  Allapoint, All   46.11  70  P     P     05 59 10.4 +0.3
D62A                              IAmb  IAmb  05 59 11.8
      comp=Z,46nm,0.8s
D62A  Allapoint, All   46.11  70  P     P     05 59 10.7 +0.6
      baz=321,SNR=16
D62A                              P     P     05 59 10.7 +0.6
      baz=321,SNR=16
O53A  New Philadelph   46.12  85  P     P     05 59 10.5 +0.2
O53A  New Philadelph   46.12  85  P     P     05 59 11.2 +0.8
      baz=324,SNR=7.6
WLAR  White Oak Lake   46.12 101  P     P     05 59 10.0 -0.4
WLAR                              IAmb  IAmb  05 59 14.9
      comp=Z,81nm,1.4s
Q51A  Peebles          46.14  88  P     P     05 59 10.1 -0.4
Q51A                              IAmb  IAmb  05 59 42.0
      comp=Z,58nm,0.8s
Q51A  Peebles          46.14  88  P     P     05 59 11.0 +0.5
      baz=324,SNR=21
Q51A                              P     P     05 59 11.0 +0.5
      baz=324,SNR=21
Q51A                              S     S     06 05 46.0 -0.1
      baz=324
Q51A                              S     S     06 05 46.0 -0.1
      baz=324
USRK  Ussuriysk Ar.    46.18 284  P     P     05 59 10.1 -0.7
      comp=Z,21nm,0.8s,baz=51,slow=7.6,SNR=34
USRK                              PcP   PcP   06 00 44.7 +0.5
      comp=Z,5.2nm,0.5s,baz=25,slow=2.3,SNR=5.0
USRK                              LR    LR    06 18 46.8
      comp=Z,139nm,20.4s,baz=29,slow=36
      comp=Z,21nm,0.8s
P52A  Corning          46.20  87  P     P     05 59 10.9 -0.1
P52A  Corning          46.20  87  P     P     05 59 11.6 +0.6
      baz=324,SNR=11
M55A  Ridgway          46.25  82  P     P     05 59 11.8 +0.5
M55A                              IAmb  IAmb  05 59 43.5
      comp=Z,76nm,0.9s
M55A  Ridgway          46.25  82  P     P     05 59 12.2 +0.9
      baz=323,SNR=18
M55A                              P     P     05 59 12.2 +0.9
      baz=323,SNR=18
L56A  Greenwood        46.26  81  P     P     05 59 11.5  0.0
L56A  Greenwood        46.26  81  P     P     05 59 11.9 +0.4
      baz=323,SNR=7.1
L56A                              P     P     05 59 11.9 +0.4
      baz=323,SNR=7.1
R50A  Paris            46.29  90  P     P     05 59 11.6 -0.1
R50A  Paris            46.29  90  P     P     05 59 12.0 +0.3
      baz=325,SNR=8.4
R50A                              P     P     05 59 12.0 +0.3
      baz=325,SNR=8.4
J58A  Remsen           46.30  78  P     P     05 59 11.6 -0.2
WVT   Waverly          46.47  95  P     P     05 59 13.8 +0.7
WVT   Waverly          46.47  95  P     P     05 59 13.8 +0.7
WVT                               pmax  pmax
      comp=Z,26nm,0.9s
WVT   Waverly          46.47  95  P     P     05 59 14.0 +0.9
      baz=326,SNR=24
WVT   Waverly          46.47  95  P     P     05 59 14.0 +0.9
      baz=326
HAMF  Hammerfest       46.51   2 eP     P     05 59 12.8 -0.1
CCAR  Cane Creek       46.53 100  P     P     05 59 14.7 +1.1
CCAR                              IAmb  IAmb  05 59 21.8
      comp=Z,59nm,0.9s
O54A  Avella           46.55  85  P     P     05 59 13.9 +0.2
O54A  Avella           46.55  85  P     P     05 59 14.6 +0.9
      baz=324,SNR=34
O54A                              P     P     05 59 14.6 +0.9
      baz=324,SNR=34
Z41A  Richland Creek   46.62 101  P     P     05 59 14.4 +0.1
Z41A  Richland Creek   46.62 101  P     P     05 59 15.4 +1.1
      baz=328
435B  Jarrell          46.63 108  P     P     05 59 15.5 +1.1
435B  Jarrell          46.63 108  P     P     05 59 15.7 +1.3
      baz=330
HPIG                   46.63 119  P     P     05 59 16.9 +2.2
P53A  Whipple          46.65  86  P     P     05 59 14.7 +0.2
P53A                              IAmb  IAmb  05 59 15.9
      comp=Z,49nm,0.9s
P53A  Whipple          46.65  86  P     P     05 59 14.9 +0.4
      baz=324,SNR=14
P53A                              P     P     05 59 14.9 +0.4
      baz=324,SNR=14
VT1   Waterbury        46.66  75  P     P     05 59 14.9 +0.4
      baz=322,SNR=5.5
W45A  Hickory Valley   46.66  97  P     P     05 59 16.1 +1.6
W45A                              IAmb  IAmb  05 59 30.6
      comp=Z,103nm,1.1s
W45A  Hickory Valley   46.66  97  P     P     05 59 15.8 +1.2
      baz=327,SNR=17
Q52A  Bidwell          46.68  87  P     P     05 59 14.9 +0.2
Q52A                              IAmb  IAmb  05 59 16.2
      comp=Z,78nm,0.8s
Q52A  Bidwell          46.68  87  P     P     05 59 14.8 +0.2
      baz=324,SNR=30
Q52A                              P     P     05 59 14.8 +0.2
      baz=324,SNR=30
MDJ   Mudanjiang       46.91 286  P     P     05 59 16.5 +0.1
MDJ                               IAmb  IAmb  05 59 18.0
      comp=Z,132nm,1.1s
MDJ   Mudanjiang       46.91 286  P     P     05 59 16.4 +0.1
MDJ                               pP    pP    05 59 46.6 +0.1
MDJ                               sP    sP    06 00 02.4 +1.1
MDJ                               S     S     06 06 03.0 +6.1
MDJ                               sS    sS    06 06 51.4 +0.8
MDJ                               pmax  pmax
      comp=Z,130nm,1.0s
MDJ                               pmax  pmax
      comp=Z,480nm,3.6s
MDJ   Mudanjiang       46.91 286  P     P     05 59 16.8 +0.4
      comp=Z,114nm,1.1s
BINY  Binghamton       46.91  79  P     P     05 59 16.7 +0.2
BINY  Binghamton       46.91  79  P     P     05 59 16.6 +0.1
      baz=323,SNR=7.9
BINY  Binghamton       46.91  79  P     P     05 59 16.7 +0.2
      baz=323,SNR=7.9
G62A  West of Eustis   46.93  73  P     P     05 59 16.9 +0.3
G62A  West of Eustis   46.93  73  P     P     05 59 17.1 +0.5
      baz=322,SNR=14
G62A                              P     P     05 59 17.1 +0.5
      baz=322,SNR=14
BNX   BinXian          46.97 289 ⇑P     P     05 59 16.6 -0.3
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BNX                               pmax  pmax
      comp=Z,140nm,0.9s
BNX                               pmax  pmax
      comp=Z,410nm,5.8s
ACCN  Adirondack Com   47.00  77  P     P     05 59 17.0 -0.2
NATX  Nacogdoches      47.07 104  P     P     05 59 19.3 +1.5
      baz=329
VLA   Vladivostok      47.08 283d iP    P     05 59 18.5 +0.8
VLA                               pmax  pmax
      comp=Z,77nm,1.2s
U49A  Red Boiling Sp   47.08  92  P     P     05 59 18.7 +0.9
U49A                              IAmb  IAmb  05 59 49.7
      comp=Z,78nm,0.7s
U49A  Red Boiling Sp   47.08  92  P     P     05 59 18.8 +0.9
      baz=326,SNR=42
U49A                              S     S     06 06 00.2 +0.6
      baz=326
M57A  Sunshine Farm,   47.09  81  P     P     05 59 18.5 +0.6
M57A  Sunshine Farm,   47.09  81  P     P     05 59 18.3 +0.4
      baz=323,SNR=8.6
M57A                              P     P     05 59 18.3 +0.4
      baz=323,SNR=8.6
LBNH  Lisbon           47.09  75  P     P     05 59 17.6 -0.3
LBNH  Lisbon           47.09  75  P     P     05 59 17.6 -0.3
LBNH                              pmax  pmax
      comp=Z,23nm,1.0s
LBNH  Lisbon           47.09  75  P     P     05 59 18.1 +0.3
      baz=322,SNR=5.4
LBNH  Lisbon           47.09  75  P     P     05 59 18.2 +0.3
      baz=322,SNR=5.4
T50A  Nancy            47.09  91  P     P     05 59 18.5 +0.6
T50A                              IAmb  IAmb  05 59 49.8
      comp=Z,94nm,1.1s
T50A  Nancy            47.09  91  S     S     06 05 60.0 +0.2
      baz=326
T50A                              S     S     06 05 60.0 +0.2
      baz=326
OXF   Oxford           47.09  97  P     P     05 59 18.7 +0.7
OXF   Oxford           47.09  97  P     P     05 59 18.7 +0.7
OXF                               pmax  pmax
      comp=Z,145nm,0.9s
OXF   Oxford           47.09  97  P     P     05 59 19.3 +1.3
      baz=327,SNR=44
OXF                               S     S     06 06 03.1 +3.3
      baz=327
OXF   Oxford           47.09  97  P     P     05 59 19.3 +1.3
      baz=327,SNR=44
S51A  Beattyville      47.15  90  P     P     05 59 18.6 +0.2
S51A  Beattyville      47.15  90  P     P     05 59 18.2 -0.2
      baz=325,SNR=14
S51A                              P     P     05 59 18.2 -0.2
      baz=325,SNR=14
F63A  Nahmakanta, Br   47.16  71  P     P     05 59 18.4  0.0
F63A  Nahmakanta, Br   47.16  71  P     P     05 59 18.9 +0.5
      baz=322,SNR=16
F63A                              P     P     05 59 18.9 +0.5
      baz=322,SNR=16
H62A  Milan            47.17  74  P     P     05 59 18.7 +0.3
H62A  Milan            47.17  74  P     P     05 59 18.8 +0.4
      baz=322,SNR=5.7
H62A                              P     P     05 59 18.8 +0.4
      baz=322,SNR=5.7
CLTN  Cedars of Leba   47.18  93  P     P     05 59 19.4 +0.7
CLTN                              IAmb  IAmb  05 59 21.3
      comp=Z,81nm,1.1s
MCWV  Mont Chateau     47.22  85  P     P     05 59 19.4 +0.5
MCWV                              IAmb  IAmb  05 59 20.7
      comp=Z,63nm,0.8s
MCWV  Mont Chateau     47.22  85  P     P     05 59 19.7 +0.9
      baz=324,SNR=20
MCWV  Mont Chateau     47.22  85  P     P     05 59 19.9 +1.0
      baz=324,SNR=20
BATG  Bathurst New B   47.22  68  P     P     05 59 19.0 +0.2
BATG                              IAmb  IAmb  06 00 49.4
      comp=Z,56nm,0.8s
HCNY  Howe Caverns     47.23  78  P     P     05 59 19.0 +0.1
      baz=323,SNR=8.5
V48A  Smith Brothers   47.25  94  P     P     05 59 19.9 +0.7
V48A  Smith Brothers   47.25  94  P     P     05 59 19.8 +0.7
      baz=326,SNR=20
V48A                              S     S     06 06 02.9 +0.9
      baz=326
JMM   Marumori         47.29 271  P     P     05 59 19.8 +0.3
PLAL  Pickwick Lake    47.31  96  P     P     05 59 20.1 +0.5
SSPA  Standing Stone   47.31  82  P     P     05 59 19.7 +0.1
SSPA                              IAmb  IAmb  05 59 51.6
      comp=Z,133nm,1.7s
SSPA  Standing Stone   47.31  82  P     P     05 59 20.2 +0.6
      baz=324,SNR=9.4
SSPA  Standing Stone   47.31  82  P     P     05 59 20.2 +0.6
      baz=324
Q54A  Coxs Mills       47.31  86  P     P     05 59 19.8 +0.2
Q54A  Coxs Mills       47.31  86  P     P     05 59 20.2 +0.6
      baz=324,SNR=12
Q54A                              P     P     05 59 20.2 +0.6
      baz=324,SNR=12
R53A  Hurricane        47.34  88  P     P     05 59 20.1 +0.3
R53A                              IAmb  IAmb  05 59 21.3
      comp=Z,67nm,0.9s
R53A  Hurricane        47.34  88  P     P     05 59 20.5 +0.7
      baz=325,SNR=18
R53A                              P     P     05 59 20.5 +0.7
      baz=325,SNR=18
L59A  Walton           47.34  79  P     P     05 59 19.5 -0.4
L59A  Walton           47.34  79  P     P     05 59 20.2 +0.3
      baz=323,SNR=6.2
L59A                              P     P     05 59 20.2 +0.3
      baz=323,SNR=6.2
F64A  Sherman          47.36  70  P     P     05 59 19.9 +0.1
F64A                              IAmb  IAmb  05 59 21.3
      comp=Z,85nm,0.8s
F64A  Sherman          47.36  70  P     P     05 59 20.4 +0.5
      baz=322,SNR=26
F64A                              P     P     05 59 20.4 +0.5
      baz=322,SNR=26
TRO   Tromso           47.39   5⇑iP     P     05 59 20.2 +0.4
HIA   Hailar           47.41 297  P     P     05 59 20.9 +0.6
HIA   Hailar           47.41 297  P     P     05 59 20.9 +0.6
HIA                               pmax  pmax
      comp=Z,208nm,0.8s
PKME  Peaks-Kenny Pk   47.43  72  P     P     05 59 20.7 +0.3
PKME                              IAmb  IAmb  05 59 22.0
      comp=Z,79nm,0.8s
PKME  Peaks-Kenny Pk   47.43  72  P     P     05 59 21.1 +0.7
      baz=322,SNR=20
PKME  Peaks-Kenny Pk   47.43  72  P     P     05 59 21.1 +0.7
      baz=322,SNR=20
KEV   Kevo             47.45   1  P     P     05 59 19.6 -0.6
KEV                               IAmb  IAmb  05 59 21.0
      comp=Z,78nm,0.8s
KEV   Kevo             47.45   1  P     P     05 59 19.7 -0.6
KEV                               pmax  pmax
      comp=Z,78nm,0.8s
JETT  Jettan, Norway   47.52   4 eP     P     05 59 21.7 +0.8
KSPA  Keystone Colle   47.53  80  P     P     05 59 20.9 -0.3
KSPA  Keystone Colle   47.53  80  P     P     05 59 21.3 +0.1
      baz=323,SNR=7.4
J61A  Chester          47.53  76  P     P     05 59 21.2  0.0
Y45A  Yeager Farm, C   47.58  98  P     P     05 59 23.2 +1.6
Y45A  Yeager Farm, C   47.58  98  P     P     05 59 23.3 +1.6
      baz=327,SNR=7.7
ARA0  ARCESS Array S   47.65   2⇑iP     P     05 59 21.6 -0.3
ARCES ARCESS Array B   47.65   2  P     P     05 59 21.4 -0.5
      comp=Z,55nm,0.8s,baz=360,slow=7.0,SNR=147
ARCES                             PcP   PcP   06 00 49.6 +0.5
      comp=Z,23nm,0.9s,baz=339,slow=2.0,SNR=5.9
      comp=Z,55nm,0.8s
ARCES ARCESS Array B   47.65   2  P     P     05 59 21.1 -0.8
ARCES                             IAmb  IAmb  05 59 22.6
      comp=Z,66nm,0.9s
N58A  Sunbury          47.68  81  P     P     05 59 22.2 -0.2
N58A                              IAmb  IAmb  05 59 23.8
      comp=Z,47nm,0.9s
N58A  Sunbury          47.68  81  P     P     05 59 22.8 +0.4
      baz=324,SNR=15
N58A                              P     P     05 59 22.8 +0.4
      baz=324,SNR=15
143A  Socs Landing,    47.72 100  P     P     05 59 24.6 +1.8
143A                              IAmb  IAmb  06 00 18.9
      comp=Z,91nm,1.0s
143A  Socs Landing,    47.72 100  P     P     05 59 24.3 +1.5
      baz=328,SNR=7.6
WVL   Waterville       47.83  72  P     P     05 59 23.9 +0.4
      baz=323,SNR=5.6
I63A  Otisfield        47.83  74  P     P     05 59 24.1 +0.6
MSHR  Mys Shultsa      47.84 283ceP     P     05 59 24.7 +1.1
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MSHR                              pmax  pmax
      comp=Z,87nm,1.3s
SLBS  Sierra La Lagu   47.92 126  P     P     05 59 25.7 +1.2
833A  Chaparral WMA,   47.99 111  P     P     05 59 26.3 +1.4
833A  Chaparral WMA,   47.99 111  P     P     05 59 26.7 +1.7
      baz=331
S54A  Dingess, Beckl   48.06  87  P     P     05 59 25.3 -0.1
S54A                              IAmb  IAmb  05 59 57.1
      comp=Z,49nm,0.8s
S54A  Dingess, Beckl   48.06  87  P     P     05 59 25.9 +0.4
      baz=325,SNR=14
S54A                              P     P     05 59 25.9 +0.4
      baz=325,SNR=14
TZTN  Tazewell         48.07  90  P     P     05 59 25.6  0.0
TZTN                              IAmb  IAmb  05 59 27.4
      comp=Z,44nm,0.9s
TZTN  Tazewell         48.07  90  P     P     05 59 26.2 +0.7
      baz=326,SNR=12
TZTN  Tazewell         48.07  90  P     P     05 59 26.2 +0.7
      baz=326,SNR=12
SWET  Sewanee          48.09  94  P     P     05 59 26.1 +0.4
SWET                              IAmb  IAmb  05 59 27.0
      comp=Z,65nm,1.3s
HKT   Hockley          48.11 107  P     P     05 59 26.6 +0.8
HKT                               IAmb  IAmb  05 59 32.8
      comp=Z,77nm,1.7s
HKT   Hockley          48.11 107  P     P     05 59 26.6 +0.8
HKT                               pmax  pmax
      comp=Z,77nm,1.7s
KTK1  Kautokeino       48.14   3⇑iP     P     05 59 25.0 -0.6
PAGS  Pennsylvania G   48.17  82  P     P     05 59 25.9 -0.3
PAGS                              IAmb  IAmb  05 59 27.6
      comp=Z,58nm,0.9s
P57A  Homestead Farm   48.19  83  P     P     05 59 26.8 +0.5
P57A                              IAmb  IAmb  05 59 28.2
      comp=Z,54nm,0.9s
P57A  Homestead Farm   48.19  83  P     P     05 59 27.1 +0.7
      baz=324,SNR=18
P57A                              P     P     05 59 27.1 +0.7
      baz=324,SNR=18
R55A  Marlinton        48.21  86  P     P     05 59 26.9 +0.3
R55A  Marlinton        48.21  86  P     P     05 59 27.3 +0.7
      baz=325,SNR=8.3
R55A                              P     P     05 59 27.3 +0.7
      baz=325,SNR=8.3
K62A  Royalston        48.21  76  P     P     05 59 25.0 -1.5
K62A  Royalston        48.21  76  P     P     05 59 26.7 +0.2
      baz=323,SNR=6.1
K62A                              P     P     05 59 26.7 +0.2
      baz=323,SNR=6.1
X48A  Hartselle        48.22  95  P     P     05 59 26.2 -0.4
X48A  Hartselle        48.22  95  P     P     05 59 27.2 +0.6
      baz=327,SNR=12
X48A                              S     S     06 06 16.2 +0.5
      baz=327
G65A  Princeton        48.23  70  P     P     05 59 26.3 -0.2
G65A                              IAmb  IAmb  05 59 28.0
      comp=Z,44nm,0.9s
G65A  Princeton        48.23  70  P     P     05 59 27.1 +0.5
      baz=323,SNR=11
G65A                              P     P     05 59 27.1 +0.5
      baz=323,SNR=11
JSD   Sado             48.31 274  P     P     05 59 27.9 +0.6
V51A  Loudon           48.32  92  P     P     05 59 27.7 +0.3
V51A                              IAmb  IAmb  05 59 59.3
      comp=Z,88nm,1.5s
V51A  Loudon           48.32  92  P     P     05 59 28.2 +0.8
      baz=326,SNR=10
W50A  Signal Mountai   48.38  93  P     P     05 59 28.2 +0.3
W50A  Signal Mountai   48.38  93  P     P     05 59 28.3 +0.3
      baz=326,SNR=7.3
W50A                              S     S     06 06 18.4 +0.3
      baz=326
KSCT  Kent School, K   48.41  78  P     P     05 59 27.5 -0.5
ODNJ  Ogdensburg       48.43  79  P     P     05 59 27.6 -0.6
ODNJ  Ogdensburg       48.43  79  P     P     05 59 28.1 -0.1
      baz=324,SNR=9.3
342A  Flagon Creek P   48.43 102  P     P     05 59 29.9 +1.6
342A                              IAmb  IAmb  05 59 45.3
      comp=Z,61nm,0.8s
342B  Flagon Creek P   48.43 102  P     P     05 59 30.4 +2.2
      baz=329,SNR=8.2
LUPA  Lehigh Univers   48.47  80  P     P     05 59 28.5  0.0
LUPA                              IAmb  IAmb  05 59 29.9
      comp=Z,72nm,0.9s
MVL   Millersville     48.52  81  P     P     05 59 29.7 +0.8
VBMS  Vicksburg        48.52 100  P     P     05 59 30.7 +1.7
VBMS                              IAmb  IAmb  06 00 01.8
      comp=Z,68nm,0.8s
VBMS  Vicksburg        48.52 100  P     P     05 59 30.6 +1.7
      baz=328
CPCT  Cooper Cave      48.53  92  P     P     05 59 29.1  0.0
GGN   Saint George     48.60  70  P     P     05 59 29.2 -0.2
GGN                               IAmb  IAmb  05 59 30.8
      comp=Z,79nm,0.8s
LOF   Lofoten          48.62   8⇑iP     P     05 59 29.9 +0.7
V52A  Sevierville      48.63  91  P     P     05 59 30.2 +0.4
V52A                              IAmb  IAmb  06 00 01.8
      comp=Z,79nm,1.6s
V52A  Sevierville      48.63  91  P     P     05 59 30.6 +0.8
      baz=326,SNR=9.8
EMMW  East Machias     48.66  71  P     P     05 59 30.2 +0.3
      baz=323,SNR=12
TKL   Tuckaleechee C   48.70  91  LR    LR    06 20 59.2
      comp=Z,203nm,20.8s,baz=334,slow=37
TKL   Tuckaleechee C   48.70  91  P     P     05 59 30.2 -0.1
TKL   Tuckaleechee C   48.70  91  P     P     05 59 30.2 -0.1
TKL                               pmax  pmax
      comp=Z,31nm,0.8s
TKL   Tuckaleechee C   48.70  91  P     P     05 59 31.0 +0.7
      baz=326,SNR=14
SDMD  Soldier’s Deli   48.77  82  P     P     05 59 30.8  0.0
SDMD  Soldier’s Deli   48.77  82  P     P     05 59 30.9 +0.1
      baz=324,SNR=6.0
FPAL  Fort Paine       48.79  94  P     P     05 59 31.6 +0.5
FPAL                              IAmb  IAmb  06 00 03.0
      comp=Z,57nm,0.6s
Z47A  Carrollton       48.80  97  P     P     05 59 30.9 -0.2
Z47A                              IAmb  IAmb  05 59 46.3
      comp=Z,72nm,0.7s
Z47A  Carrollton       48.80  97  P     P     05 59 31.9 +0.8
      baz=328,SNR=27
146A  Union            48.83  98  P     P     05 59 32.5 +1.1
146A  Union            48.83  98  P     P     05 59 32.8 +1.5
      baz=328,SNR=20
WES   Weston           48.84  76  P     P     05 59 30.5 -0.8
      baz=324,SNR=9.1
U54A  Nelsons Funny    48.88  89  P     P     05 59 32.4 +0.7
U54A                              IAmb  IAmb  05 59 33.7
      comp=Z,58nm,0.8s
U54A  Nelsons Funny    48.88  89  P     P     05 59 32.6 +0.8
      baz=326,SNR=17
U54A                              P     P     05 59 32.6 +0.8
      baz=326,SNR=17
LMN   Caledonia Moun   48.88  68  P     P     05 59 31.6  0.0
LMN                               IAmb  IAmb  05 59 33.0
      comp=Z,74nm,0.8s
TUPA  Temple Univers   48.91  80  P     P     05 59 31.7 -0.2
      baz=324,SNR=10
WUPA  West Chester U   48.91  81  P     P     05 59 31.8  0.0
JYT   Yasato           48.91 271  P     P     05 59 32.4 +0.5
STEI  Steigen          48.92   7⇑iP     P     05 59 31.6 +0.1
BLA   Blacksburg       48.95  87  P     P     05 59 32.4 +0.1
BLA                               IAmb  IAmb  05 59 33.9
      comp=Z,40nm,0.8s
BLA   Blacksburg       48.95  87  P     P     05 59 32.4 +0.1
BLA                               pmax  pmax
      comp=Z,40nm,0.9s
BLA   Blacksburg       48.95  87  P     P     05 59 32.9 +0.6
      baz=325,SNR=9.4
BLA   Blacksburg       48.95  87  P     P     05 59 33.3 +1.0
      baz=325,SNR=9.4
Y49A  Blount Mountai   49.00  95  P     P     05 59 33.1 +0.4
Y49A                              IAmb  IAmb  06 00 06.2
      comp=Z,44nm,1.0s
Y49A  Blount Mountai   49.00  95  P     P     05 59 33.4 +0.8
      baz=327,SNR=7.2
344A  Westbrook Farm   49.08 101  P     P     05 59 35.3 +2.1
344A                              IAmb  IAmb  06 00 06.7
      comp=Z,72nm,0.9s
344A  Westbrook Farm   49.08 101  P     P     05 59 34.7 +1.5
      baz=329,SNR=8.4
344A                              S     S     06 06 30.5 +2.7
      baz=329
W52A  Murphy           49.10  92  P     P     05 59 34.2 +0.8
W52A                              IAmb  IAmb  05 59 35.2
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	comp=Z,39nm,0.9s						
W52A	Murphy	49.10	92	P	P	05 59 34.3	+0.8
	baz=326,SNR=13						
X51A	Calhoun	49.11	93	P	P	05 59 33.9	+0.5
X51A				IAmb	IAmb	06 00 05.5	
	comp=Z,42nm,0.6s						
X51A	Calhoun	49.11	93	P	P	05 59 34.4	+0.9
	baz=327,SNR=9.4						
X51A				P	P	05 59 34.4	+0.9
	baz=327,SNR=9.4						
BRYW	Bryant College	49.12	76	P	P	05 59 33.3	-0.1
V53A	Saluda	49.13	90	P	P	05 59 34.5	+0.8
V53A				IAmb	IAmb	05 59 35.5	
	comp=Z,36nm,0.8s						
V53A	Saluda	49.13	90	P	P	05 59 34.6	+1.0
	baz=326,SNR=20						
V53A				P	P	05 59 34.6	+1.0
	baz=326,SNR=20						
DRLN	Deer Lake	49.14	60	P	P	05 59 33.5	0.0
DRLN				IAmb	IAmb	05 59 34.9	
	comp=Z,64nm,1.0s						
S57A	Dark Hollow, R	49.16	85	P	P	05 59 34.6	+0.8
S57A	Dark Hollow, R	49.16	85	P	P	05 59 34.9	+1.0
	baz=325,SNR=9.7						
S57A				P	P	05 59 34.9	+1.0
	baz=325,SNR=9.7						
LVZ	Lovozero	49.26	357	P	P	05 59 34.4	+0.2
LVZ	Lovozero	49.26	357	ceP	P	05 59 34.7	+0.5
LVZ				pmax	pmax		
	comp=Z,114nm,1.0s						
CN2	Changchun	49.36	289	eP	P	05 59 35.3	+0.1
CN2				eS	S	06 06 29.4	-2.0
CN2				pmax	pmax		
	comp=Z,100nm,1.2s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,16.5s						
LRAL	Lakeview Retre	49.42	96	P	P	05 59 35.6	-0.3
LRAL	Lakeview Retre	49.42	96	P	P	05 59 36.0	+0.2
	baz=328,SNR=7.5						
LRAL	Lakeview Retre	49.42	96	P	P	05 59 36.0	+0.2
	baz=328,SNR=7.5						
FAUS	Fauske	49.47	7	⇑iP	P	05 59 35.5	-0.2
R58B	Mineral	49.48	84	P	P	05 59 36.8	+0.5
R58B				IAmb	IAmb	06 00 09.0	
	comp=Z,94nm,1.2s						
R58B	Mineral	49.48	84	P	P	05 59 37.2	+1.0
	baz=325,SNR=11						
R58B				P	P	05 59 37.2	+1.0
	baz=325,SNR=11						
CBN	Corbin Frederi	49.52	84	P	P	05 59 37.3	+0.8
CBN	Corbin Frederi	49.52	84	P	P	05 59 37.8	+1.3
	baz=325,SNR=13						
CBN	Corbin Frederi	49.52	84	P	P	05 59 37.8	+1.3
	baz=325,SNR=13						
MJB9	Matsu-Tunnel	49.55	273	P	P	05 59 37.4	+0.5
MAJO	Matsushiro	49.56	273	P	P	05 59 37.1	+0.3
MAJO	Matsushiro	49.56	273	c iP	P	05 59 37.4	+0.6
MAJO				pmax	pmax		
	comp=Z,26nm,0.6s						
MAJO	Matsushiro	49.56	273	P	P	05 59 38.9	+2.1
MJAR	Matsushiro Arr	49.56	273	P	P	05 59 37.6	+0.7
	comp=Z,61nm,1.0s,baz=22,slow=7.5,SNR=126						
	comp=Z,61nm,1.0s						
MJAR	Matsushiro Arr	49.56	273	P	P	05 59 37.5	+0.7
MJAR				IAmb	IAmb	05 59 38.9	
	comp=Z,95nm,1.1s						
BG3	Lake Jocassee	49.63	91	P	P	05 59 37.6	+0.2
BG3				IAmb	IAmb	06 00 58.4	
	comp=Z,30nm,0.7s						
T57A	Hurt	49.65	86	P	P	05 59 37.9	+0.4
T57A				IAmb	IAmb	06 00 10.9	
	comp=Z,32nm,0.8s						
T57A	Hurt	49.65	86	P	P	05 59 37.9	+0.4
	baz=326,SNR=12						
T57A				P	P	05 59 37.9	+0.4
	baz=326,SNR=12						
U56A	King	49.67	88	P	P	05 59 38.1	+0.3
U56A				IAmb	IAmb	05 59 39.5	
	comp=Z,40nm,0.9s						
U56A	King	49.67	88	P	P	05 59 38.9	+1.2
	baz=326,SNR=5.9						
U56A				P	P	05 59 38.9	+1.2
	baz=326,SNR=5.9						
346A	Big Creek Wild	49.70	100	P	P	05 59 39.0	+1.0
V55A	Taylorsville	49.70	89	P	P	05 59 38.4	+0.5
V55A	Taylorsville	49.70	89	P	P	05 59 38.6	+0.7
	baz=326,SNR=12						
V55A				P	P	05 59 38.6	+0.7
	baz=326,SNR=12						
JSRW	J. Sargeant Re	49.71	85	P	P	05 59 38.6	+0.7
Z51A	Franklin	50.01	94	P	P	05 59 41.0	+0.7
Z51A				IAmb	IAmb	06 00 15.2	
	comp=Z,39nm,0.8s						
Z51A	Franklin	50.01	94	P	P	05 59 41.0	+0.7
	baz=327,SNR=15						
Y52A	Lilburn	50.06	93	P	P	05 59 41.8	+1.1
Y52A	Lilburn	50.06	93	P	P	05 59 41.6	+0.9
	baz=327,SNR=50						
Y52A				P	P	05 59 41.6	+0.9
	baz=327,SNR=50						
KONS	Konsvik	50.21	8	eP	P	05 59 41.3	0.0
KMSC	Kings Mountain	50.24	89	P	P	05 59 42.0	+0.1
KMSC	Kings Mountain	50.24	89	P	P	05 59 42.4	+0.4
	baz=326,SNR=10						
KMSC	Kings Mountain	50.24	89	P	P	05 59 42.7	+0.7
	baz=326,SNR=10						
HAL	Halifax	50.37	68	P	P	05 59 43.4	+0.6
HAL				IAmb	IAmb	05 59 44.2	
	comp=Z,62nm,0.9s						
HAL	Halifax	50.37	68	P	P	05 59 43.4	+0.6
HAL				pmax	pmax		
	comp=Z,62nm,0.9s						
STOK	Stokkvaagen	50.37	8	eP	P	05 59 43.2	+0.7
T59A	Double "B" Far	50.45	85	P	P	05 59 43.9	+0.4
T59A				IAmb	IAmb	05 59 45.4	
	comp=Z,48nm,0.8s						
T59A	Double "B" Far	50.45	85	P	P	05 59 44.4	+0.9
	baz=326,SNR=13						
T59A				P	P	05 59 44.4	+0.9
	baz=326,SNR=13						
HODGE	Hodges	50.58	91	P	P	05 59 45.0	+0.5
HODGE				IAmb	IAmb	05 59 46.1	
	comp=Z,42nm,0.7s						
HODGE	Hodges	50.58	91	P	P	05 59 45.2	+0.7
	baz=327,SNR=22						
GBN	Guysborough	50.61	66	P	P	05 59 45.3	+0.6
GBN				IAmb	IAmb	05 59 46.4	
	comp=Z,69nm,0.8s						
MOR8	Moi Rana	50.62	8	eP	P	05 59 43.2	-1.2
250A	Grady	50.64	96	P	P	05 59 45.0	-0.1
250A	Grady	50.64	96	P	P	05 59 45.3	+0.3
	baz=328,SNR=7.9						
T60A	Surry	50.68	84	P	P	05 59 46.0	+0.8
V58A	Windy Hill, Pi	50.71	87	P	P	05 59 46.0	+0.5
V58A	Windy Hill, Pi	50.71	87	P	P	05 59 46.5	+1.0
	baz=326,SNR=7.4						
V58A				P	P	05 59 46.5	+1.0
	baz=326,SNR=7.4						
GOGA	Godfrey	50.71	93	P	P	05 59 45.3	-0.2
GOGA	Godfrey	50.71	93	P	P	05 59 45.3	-0.2
GOGA				pmax	pmax		
	comp=Z,27nm,0.8s						
GOGA	Godfrey	50.71	93	P	P	05 59 46.0	+0.5
	baz=327						
JGF	Kuroka	50.72	273	P	P	05 59 46.0	+0.4
152A	Waverly Hall	50.76	94	P	P	05 59 46.3	+0.3
152A				IAmb	IAmb	06 00 17.8	
	comp=Z,40nm,0.8s						
152A	Waverly Hall	50.76	94	P	P	05 59 46.2	+0.3
	baz=328,SNR=15						
W57A	Gilead	50.84	88	P	P	05 59 46.7	+0.2
W57A	Gilead	50.84	88	P	P	05 59 46.9	+0.4
	baz=326,SNR=6.8						
W57A				P	P	05 59 46.9	+0.4
	baz=326,SNR=6.8						
U59A	Littleton	50.85	85	P	P	05 59 47.0	+0.5
U59A				IAmb	IAmb	05 59 48.6	
	comp=Z,42nm,0.9s						
U59A	Littleton	50.85	85	P	P	05 59 47.5	+1.0
	baz=326,SNR=11						
U59A				P	P	05 59 47.5	+1.0
	baz=326,SNR=11						
IRK	Irkutsk	50.87	310	eP	P	05 59 45.8	-0.7
IRK				e		06 00 19.5	
IRK				pmax	pmax		
	comp=Z,248nm,2.4s						
BRAL	Brewton	50.97	97	P	P	05 59 48.8	+1.3
BRAL				IAmb	IAmb	06 00 20.3	
	comp=Z,79nm,1.0s						
BRAL	Brewton	50.97	97	P	P	05 59 48.6	+1.1
	baz=328,SNR=6.1						
BRAL	Brewton	50.97	97	P	P	05 59 48.9	+1.4
	baz=328,SNR=6.1						
JSC	Jenkinsville	50.99	90	P	P	05 59 46.4	-1.2
JSC				IAmb	IAmb	06 00 19.8	
	comp=Z,41nm,0.7s						
JSC	Jenkinsville	50.99	90	P	P	05 59 46.4	-1.2
JSC				pmax	pmax		
	comp=Z,41nm,0.7s						
JSC	Jenkinsville	50.99	90	P	P	05 59 46.6	-0.9
	baz=327,SNR=7.7						
BIRD	Birdtown, Kers	51.05	89	P	P	05 59 48.2	+0.2
BIRD				IAmb	IAmb	05 59 49.7	
	comp=Z,34nm,0.8s						
BIRD	Birdtown, Kers	51.05	89	P	P	05 59 48.8	+0.8
	baz=327,SNR=10						
INU	Inuyama	51.08	273	P	P	05 59 47.6	-0.7
INU				IAmb	IAmb	05 59 49.9	
	comp=Z,48nm,0.7s						
INU	Inuyama	51.08	273	P	P	05 59 49.8	+1.5
154A	Montrose	51.54	93	P	P	05 59 52.4	+0.6
154A				IAmb	IAmb	06 00 24.9	
	comp=Z,72nm,1.1s						
154A	Montrose	51.54	93	P	P	05 59 52.0	+0.3
	baz=328,SNR=9.9						
ZAIG	Zacatecas	51.59	118	P	P	05 59 52.9	+0.3
HAW	Hawthorne Fire	51.60	91	P	P	05 59 52.9	+0.7
	baz=327,SNR=10						
Y57A	Sumter	51.60	89	P	P	05 59 51.6	-0.6
Y57A				IAmb	IAmb	06 00 26.5	
	comp=Z,45nm,0.8s						
X58A	Rowland	51.63	88	P	P	05 59 53.2	+0.8
X58A				IAmb	IAmb	05 59 54.4	
	comp=Z,43nm,0.9s						
X58A	Rowland	51.63	88	P	P	05 59 53.5	+1.1
	baz=327,SNR=7.0						
X58A				P	P	05 59 53.5	+1.1
	baz=327,SNR=7.0						
352A	Blakely	51.67	95	P	P	05 59 52.8	0.0
352A				IAmb	IAmb	06 00 24.4	
	comp=Z,35nm,0.8s						
CNNC	Cliffs of the	51.73	86	P	P	05 59 52.6	-0.5
CNNC				IAmb	IAmb	06 00 30.2	
	comp=Z,42nm,0.9s						
CNNC	Cliffs of the	51.73	86	P	P	05 59 53.7	+0.7
	baz=326						
Y58A	Scranton	52.03	89	P	P	05 59 56.1	+0.8
Y58A				IAmb	IAmb	06 01 51.1	
	comp=Z,50nm,0.8s						
NSS	Namsos	52.08	9	⇑iP	P	05 59 54.8	-0.6
TIGA	Tifton	52.31	94	P	P	05 59 57.2	-0.2
TIGA				IAmb	IAmb	06 00 29.3	
	comp=Z,36nm,0.7s						
TIGA	Tifton	52.31	94	P	P	05 59 57.7	+0.2
	baz=328						
Y59A	Loris	52.32	88	P	P	05 59 58.2	+0.8
Y59A	Loris	52.32	88	P	P	05 59 58.3	+0.8
	baz=327,SNR=6.4						
Y59A				P	P	05 59 58.3	+0.8
	baz=327,SNR=6.4						
255A	Hazlehurst	52.41	93	P	P	05 59 58.4	+0.2
255A				IAmb	IAmb	06 00 31.7	
	comp=Z,66nm,1.0s						
255A	Hazlehurst	52.41	93	P	P	05 59 58.8	+0.6
	baz=328,SNR=5.1						
NHSC	New Hope	52.46	90	P	P	05 59 59.3	+0.8
NHSC	New Hope	52.46	90	P	P	05 59 60.0	+1.4
	baz=327						
MOY	Mondy	52.48	312	eP	P	06 00 00.4	+1.8
MOY				pmax	pmax		
	comp=Z,188nm,1.8s						
SEHB	SEOHWA	52.63	282	P	P	06 00 00.0	+0.3
ZAK	Zakamensk	52.76	309	eP	P	06 00 01.2	+0.6
ZAK				e		06 00 26.9	
ZAK				pmax	pmax		
	comp=Z,47nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,33nm,1.4s						
JHS	Saijyo	53.15	276	P	P	06 00 04.4	+0.8
TBLU	Trondheim	53.21	10	eP	P	06 00 03.4	-0.3
XLT	XiLinHaoTe	53.23	296	⇑iP	P	06 00 05.0	+0.9
XLT				pP	pP	06 00 35.3	+0.3
XLT				sP	sP	06 00 49.0	-0.6
XLT				S	S	06 07 25.9	+1.2
XLT				sS	sS	06 08 15.6	-2.4
XLT				pmax	pmax		
	comp=Z,99nm,0.9s						
XLT				pmax	pmax		
	comp=Z,490nm,4.0s						
XLT				LR	LR		
	comp=Z,30nm,16.5s						
XLT				LR	LR		
	comp=Z,270nm,17.5s						
XLT				LR	LR		
	comp=Z,270nm,20.6s						
KS19	Wonju Array Si	53.43	282	P	P	06 00 07.0	+1.4
KSRS	Korea Array	53.45	282	P	P	06 00 07.0	+1.4
	comp=Z,125nm,1.0s,baz=30,slow=7.0,SNR=197						
KSRS				LR	LR	06 25 12.0	
	comp=Z,55nm,18.1s,baz=40,slow=38						
	comp=Z,125nm,1.0s						
KSAR	Wonju Array Be	53.47	282	P	P	06 00 07.0	+1.1
KSAR	Wonju Array Be	53.47	282	P	P	06 00 07.0	+1.1
ULN	Ulaanbaatar	53.49	305	P	P	06 00 07.4	+1.3
ULN	Ulaanbaatar	53.49	305	ceP	P	06 00 07.1	+1.0
ULN				pmax	pmax		
	comp=Z,68nm,0.9s						
456A	Hilliard	53.63	93	P	P	06 00 07.2	+0.1
MOL	Molde	53.64	12	eP	P	06 00 07.5	+0.8
SONM	Songino Array	53.76	305	P	P	06 00 09.6	+1.5
	comp=Z,100nm,0.9s,baz=30,slow=6.8,SNR=308						
SONM				LR	LR	06 23 05.5	
	comp=Z,280nm,19.1s,baz=358,slow=36						
	comp=Z,100nm,0.9s						
SONM	Songino Array	53.76	305	P	P	06 00 09.5	+1.4
KSCHJ	Chungju	53.90	281	P	P	06 00 09.8	+0.7
AKN	Aaknes	53.98	13	eP	P	06 00 09.6	+0.4
INCN	Inchon	53.99	283	P	P	06 00 10.5	+0.8
INCN	Inchon	53.99	283	P	P	06 00 10.5	+0.8
INCN				pmax	pmax		
	comp=Z,104nm,0.8s						
INCN	Inchon	53.99	283	P	P	06 00 10.9	+1.2
	comp=Z,155nm,1.1s						
DOMB	Dombas	54.30	11	⇑iP	P	06 00 11.0	-0.6
TJN	Taejon	54.59	282	P	P	06 00 14.7	+0.7
TJN	Taejon	54.59	282	ceP	P	06 00 15.1	+1.1
TJN	Taejon	54.59	282	P	P	06 00 15.3	+1.3
	comp=Z,1µm,1.1s						
SUE	Sulen	54.84	14	⇑eP	P	06 00 15.5	+0.1
PRGR	Permogore	54.97	350	⇑iP	P	06 00 17.2	+0.8
PRGR				e*PP	pP	06 00 50.4	+3.0
PRGR				e*SP	sP	06 01 00.8	-1.1
PRGR				e		06 01 15.5	
PRGR				eS	S	06 07 44.0	-3.5
DL2	Dalian	55.01	288	P	P	06 00 17.8	+0.8
DL2				pmax	pmax		
	comp=Z,290nm,1.0s						
NC204	NORSAR Array S	55.21	11	P	P	06 00 17.8	-0.4
JTU	Tsushima	55.22	279	P	P	06 00 19.4	+0.8
NC303	NORSAR Array S	55.31	10	P	P	06 00 17.9	-1.0
NC303				IAmb	IAmb	06 00 19.5	
	comp=Z,45nm,1.0s						
NAWB	Namwon	55.37	281	P	P	06 00 20.2	+0.6
NC405	NORSAR Array S	55.45	10	P	P	06 00 19.1	-0.7
ASK	Askoy	55.45	14	eP	P	06 00 20.2	+0.4
NBO00	NORSAR Array S	55.45	11	P	P	06 00 19.3	-0.6
ZAA0	Zalesovo Array	55.45	324	P	P	06 00 19.8	-0.1
ZALV	Zalesovo Beam	55.45	324	P	P	06 00 19.7	-0.3
	comp=Z,133nm,0.7s,baz=28,slow=6.8,SNR=339						
ZALV				S	S	06 07 48.1	-6.0
	comp=Z,0.5nm,0.3s,baz=45,slow=4.3,SNR=1.6						
ZALV				LR	LR	06 25 13.9	
	comp=Z,138nm,19.1s,baz=349,slow=37						
ZALV				PKP2ab	P'P'ab	06 30 49.5	-8.9
	comp=Z,0.8nm,0.5s,baz=208,slow=7.9,SNR=3.6						
	comp=Z,133nm,0.7s						
ZALV	Zalesovo Beam	55.45	324	P	P	06 00 19.6	-0.4
NB201	NORSAR Array S	55.48	10	P	P	06 00 18.9	-1.1
NB2	NORSAR Subarra	55.48	10	P	P	06 00 19.3	-0.8
	comp=Z,51nm,0.9s,baz=350,slow=7.4						
NB2	NORSAR Subarra	55.48	10	P	P	06 00 19.3	-0.8
	baz=350,slow=7.4						
NOA	NORSAR Array B	55.48	10	P	P	06 00 19.3	-0.8
	comp=Z,20nm,0.8s,baz=350,slow=7.2,SNR=70						
NOA				pP	pP	06 00 52.9	+1.7
	comp=Z,9.2nm,0.8s,baz=351,slow=7.1,SNR=4.4						
	comp=Z,20nm,0.8s						
BER	Bergen	55.56	14	eP	P	06 00 20.7	+0.1
SKAR	Skarslia	55.57	12	eP	P	06 00 20.8	0.0
NAO01	NORSAR Array S	55.65	11	P	P	06 00 20.1	-1.1
NAO01				IAmb	IAmb	06 00 21.3	
	comp=Z,81nm,1.1s						
JCJ	Chichijima	55.71	263	P	P	06 00 21.8	-0.3
JNU	Nakatsue	55.73	276	P	P	06 00 22.8	+0.5
JNU	Nakatsue	55.73	276	P	P	06 00 24.4	+2.1
FIA0	FINESS Array S	55.78	2	P	P	06 00 21.6	-0.6
FIA0	FINESS Array S	55.78	2	P	P	06 00 21.6	-0.6
FIA1	FINESS Array S	55.78	2	P	P	06 00 21.6	-0.6
FINES	FINESS Array B	55.78	2	P	P	06 00 21.6	-0.6
	comp=Z,54nm,0.8s,baz=12,slow=9.8,SNR=129						
FINES				pP	pP	06 00 54.9	+1.7
	comp=Z,20nm,0.9s,baz=12,slow=10,SNR=3.1						
	comp=Z,54nm,0.8s						
NC602	NORSAR Array S	55.81	10	P	P	06 00 21.0	-1.4
NC602	NORSAR Array S	55.81	10	eP	P	06 00 21.6	-0.7
RAF	Rauma	56.10	4	eP	P	06 00 23.7	-0.8
KLMR	Klimovskoe	56.13	354	eP	P	06 00 21.3	-3.4
KLMR				e*SP	sP	06 01 10.9	+0.5
KLMR				eS	S	06 07 58.7	-4.2
KLMR				pmax	pmax		
	comp=Z,300nm,0.9s						
KLMR	Klimovskoe	56.13	354	eP	P	06 00 21.3	-3.4
KLMR				AMP		06 00 26.2	
	comp=Z,300nm,0.9s						
KLMR				esP	sP	06 01 10.9	+0.5
KLMR				eS	S	06 07 58.8	-4.2
KLMR				eS	S	06 07 58.8	-4.2
BJI	Beijing	56.39	293	P	P	06 00 27.6	+0.8
BJI				pP	pP	06 00 57.4	-0.6
BJI				sP	sP	06 01 13.1	+0.6
BJI				PcP	PcP	06 01 22.4	+0.1
BJI				S	S	06 08 09.1	+2.3
BJI				sS	sS	06 08 59.3	-1.2
BJI				pmax	pmax		
	comp=Z,60nm,1.2s						
BJI				pmax	pmax		
	comp=Z,480nm,3.8s						
BJI				LR	LR		
	comp=Z,190nm,11.0s						
BJI				LR	LR		
	comp=Z,120nm,9.9s						
BJI				LR	LR		
	comp=Z,140nm,10.1s						
BJT	Baijiatuau	56.41	293	P	P	06 00 27.3	+0.3
BJT	Baijiatuau	56.41	293	P	P	06 00 27.3	+0.3
BJT				pmax	pmax		
	comp=Z,122nm,1.1s						
OSL	Oslo	56.53	11	eP	P	06 00 28.0	+0.5
BLS5	Blasjo	56.62	14	eP	P	06 00 28.5	+0.3
KONO	Kongsberg	56.71	12	P	P	06 00 28.3	-0.6
KONO				IAmb	IAmb	06 00 29.1	
	comp=Z,34nm,1.1s						
KONO	Kongsberg	56.71	12	ceP	P	06 00 28.4	-0.4
KONO				pmax	pmax		
	comp=Z,32nm,1.0s						
KONO	Kongsberg	56.71	12	⇑iP	P	06 00 28.4	-0.4
AAL	Aland	56.88	5	⇓eP	P	06 00 29.9	-0.1
KAC	Achnashellach	56.89	21	eP	P	06 00 29.5	-0.6
MEF	Metsahovi	56.98	3	eP	P	06 00 30.6	-0.1
UPP	Uppsala	57.09	7	⇓eP	P	06 00 32.0	+0.6
MCD	Coleburn Disti	57.14	20	eP	P	06 00 31.9	+0.1
JSU	Suzuyama	57.28	276	P	P	06 00 32.9	-0.3
STRU	Stroemstad	57.46	11	i P	P	06 00 32.5	-1.6
PUL	Pulkovo	57.48	359	ceP	P	06 00 34.9	+0.7
PUL				pmax	pmax		
	comp=Z,280nm,1.2s						
HHC	Hu-ho-hao-te	57.61	297	eP	P	06 00 36.5	+0.9
HHC				sP	sP	06 01 21.8	+0.4
HHC				S	S	06 08 22.8	-0.3
HHC				sS	sS	06 09 17.8	+0.9
HHC				pmax	pmax		
	comp=Z,190nm,1.4s						
HHC				pmax	pmax		
	comp=Z,320nm,4.4s						
KIRV	Kirov	57.66	347	S	S	06 08 22.5	-0.4
	comp=Z,9.9nm,0.5s,baz=245,slow=21,SNR=14						
KIRV	Kirov	57.66	347	ceP	P	06 00 36.1	+0.7
SNART	Snartemo	57.77	13	i P	P	06 00 34.9	-1.4
TLIG	Tlapa	57.89	117	P	P	06 00 38.1	+0.4
TLIG				IAmb	IAmb	06 01 34.5	
	comp=Z,54nm,1.5s						
DRUM	Mains of Drumt	57.90	20	eP	P	06 00 36.5	-0.7
DRUM				IAmb	IAmb	06 00 37.5	
	comp=Z,78nm,0.8s						
SVE	Sverdlovsk	57.95	340	d iP	P	06 00 38.0	+0.5
SVE				pmax	pmax		
	comp=Z,324nm,1.1s						
HOMB	Homborsund	57.97	13	i P	P	06 00 37.0	-0.6
HOMB	Homborsund	57.97	13	⇑eP	P	06 00 38.1	+0.5
INVG	Invergeldie, C	58.12	21	eP	P	06 00 38.2	-0.6
INVG				IAmb	IAmb	06 00 39.5	
	comp=Z,28nm,0.9s						
EAB	Aberfoyle	58.30	21	eP	P	06 00 39.1	-0.9
VIKU	Vikbolandet	58.39	8	eP	P	06 00 40.3	-0.2
BTO	Baotou	58.44	298	eP	P	06 00 39.9	-1.4
BTO				S	S	06 08 31.0	-2.9
BTO				LR	LR		
	comp=Z,690nm,6.7s						
BTO				LR	LR		
	comp=Z,1µm,9.0s						
MTSE	Matsula	58.48	3	eP	P	06 00 41.0	-0.1
TJOU	Tjoern	58.49	11	i P	P	06 00 39.9	-1.4
PGBU	Glenifferbraes	58.64	21	eP	P	06 00 41.7	-0.6
PGBU				IAmb	IAmb	06 00 43.0	
	comp=Z,23nm,0.8s						
ARU	Arti	58.64	341	LR	LR	06 29 12.9	
	comp=Z,86nm,18.6s,baz=344,slow=39						
ARU	Arti	58.64	341	P	P	06 00 42.2	-0.2
ARU	Arti	58.64	341	c iP	P	06 00 42.1	-0.2
ARU				*PP	pP	06 01 13.3	-0.4
ARU						06 01 27.6	
ARU						06 02 51.2	
ARU				S	S	06 08 36.2	+0.4
ARU				pmax	pmax		
	comp=Z,240nm,0.8s						
VSU	Vasula	58.78	1	c iP	P	06 00 42.6	-0.7
VSU				pmax	pmax		
	comp=Z,414nm,1.0s						
VSU	Vasula	58.78	1	eP	P	06 00 43.0	-0.3
EBL	Broad Law	58.91	20	eP	P	06 00 44.4	+0.1
BORU	Boraas	58.98	10	i P	P	06 00 42.9	-1.7
ONAU	Onsala	59.14	11	i P	P	06 00 44.3	-1.5
TIA	Tai'an	59.21	290	⇑P	P	06 00 47.1	+0.5
TIA				pmax	pmax		
	comp=Z,46nm,1.4s						
HNS	HongShan	59.23	292	⇑P	P	06 00 47.8	+1.1
HNS				sP	PcP	06 01 33.9	+0.3
HNS				PP	PP	06 02 57.8	-0.7
HNS				S	S	06 08 46.5	+2.6
HNS				pmax	pmax		
	comp=Z,290nm,1.1s						
HNS				LR	LR		
	comp=Z,150nm,12.7s						
HNS				LR	LR		
	comp=Z,240nm,15.5s						
HNS				LR	LR		
	comp=Z,230nm,15.9s						
ESK	Eskdalemuir	59.32	21	eP	P	06 00 46.5	-0.6
ESK				IAmb	IAmb	06 00 47.6	
	comp=Z,35nm,0.8s						
ESK	Eskdalemuir	59.32	21	P	P	06 00 46.4	-0.6
ESK				IAmb	IAmb	06 00 47.8	
	comp=Z,34nm,0.8s						
ESK	Eskdalemuir	59.32	21	P	P	06 00 46.4	-0.6
ESK				pmax	pmax		
	comp=Z,34nm,0.8s						
NEWG	New Galloway	59.35	21	eP	P	06 00 45.8	-1.4
NEWG				IAmb	IAmb	06 00 47.5	
	comp=Z,32nm,1.0s						
GAL1	Galloway	59.51	22	eP	P	06 00 47.8	-0.5
GAL1				IAmb	IAmb	06 00 48.6	

	comp=Z,37nm,0.7s						
SLIT	Slitere, Latvi	59.52	4	eP	P	06 00 47.8	-0.5
BRVK	Borovoye	59.77	333	P	P	06 00 49.9	-0.3
BRVK	Borovoye	59.77	333	ceP	P	06 00 49.8	-0.3
BRVK				pmax	pmax		
	comp=Z,215nm,1.1s						
SEM	Semipalatinsk	59.87	325	ceP	P	06 00 50.2	-0.9
SEM				pmax	pmax		
	comp=Z,37nm,0.7s						
SEM	Semipalatinsk	59.87	325	⇑eP	P	06 00 50.2	-0.9
	comp=Z,37nm,0.7s,baz=325						
TIY	Taiyuan	59.91	294	⇓P	P	06 00 52.8	+1.3
TIY				sP	sP	06 01 37.4	-0.1
TIY				pmax	pmax		
	comp=Z,69nm,1.1s						
TIY				LR	LR		
	comp=Z,200nm,8.0s						
TIY				LR	LR		
	comp=Z,160nm,5.7s						
TIY				LR	LR		
	comp=Z,140nm,10.3s						
EDMD	Edmundbyers	59.99	20	eP	P	06 00 50.8	-0.9
KURK	Kurchatov	60.01	326	P	P	06 00 51.4	-0.4
KURK	Kurchatov	60.01	326	P	P	06 00 51.4	-0.4
KURK				pmax	pmax		
	comp=Z,156nm,0.9s						
IGLA	Glengowla, Co	60.03	25	eP	P	06 00 51.4	-0.5
KESW	Keswick, Cumbr	60.04	21	eP	P	06 00 51.0	-1.0
KURBB	Kurchatov Arra	60.12	326	S	S	06 08 48.1	-6.8
	comp=Z,3.9nm,0.9s,baz=28,slow=13,SNR=6.1						
KURBB	Kurchatov Arra	60.12	326	P	P	06 00 51.8	-0.7
DEL	Delary	60.22	10	eP	P	06 00 53.1	-0.1
DEL	Delary	60.22	10	i P	P	06 00 51.3	-1.8
BLEU	Blekinge	60.52	8	i P	P	06 00 53.5	-1.7
BJUU	Bjuv	60.55	10	i P	P	06 00 53.7	-1.7
HPK	Haverah Park	60.88	20	eP	P	06 00 57.7	0.0
WPS	Cemaes, Angles	60.95	22	eP	P	06 00 56.9	-1.2
WPS				IAmb	IAmb	06 00 57.7	
	comp=Z,20nm,0.9s						
WME	Myndd Eilian	60.98	22	eP	P	06 00 57.7	-0.7
LUNU	Lund	61.02	10	i P	P	06 00 57.1	-1.5
WLF1	Llynfaes	61.07	22	eP	P	06 00 58.0	-0.9
WLF1				IAmb	IAmb	06 01 00.7	
	comp=Z,46nm,1.1s						
PBUR	Paburge	61.12	5	eP	P	06 00 58.9	-0.3
VSVD	Vaisvydziai	61.22	3	eP	P	06 01 00.0	+0.1
ZSN	Zaisan	61.27	320	c iP	P	06 01 01.0	+0.6
ZSN				eS	S	06 09 10.8	+1.1
ZSN				pmax	pmax		
	comp=Z,58nm,0.7s						
ZSN	Zaisan	61.27	320	⇑iP	P	06 01 01.1	+0.6
	comp=Z,58nm,0.7s,baz=320						
ZSN				eS	S	06 09 10.9	+1.1
	baz=320						
MOS	Moscow	61.33	354	eP	P	06 00 59.6	-1.1
MOS				e		06 01 46.6	
MOS				eS	S	06 09 10.6	+0.4
MOS				e		06 10 31.2	
MOS				pmax	pmax		
	comp=Z,422nm,1.2s						
MOS				pmax	pmax		
	comp=Z,700nm,1.5s						
LBWR	Ladybower, Pea	61.41	20	eP	P	06 01 00.4	-0.9
LBWR				IAmb	IAmb	06 01 01.6	
	comp=Z,31nm,0.8s						
LLW	Llanuwychllyn	61.62	22	eP	P	06 01 01.7	-1.0
BSD	Bornholm Skovb	61.64	9	i P	P	06 01 01.5	-1.3
ISAL	Salakas	61.67	2	eP	P	06 01 03.6	+0.6
PABE	Paberze	61.70	3	P	P	06 01 02.9	-0.2
PABE	Paberze	61.70	3	eP	P	06 01 03.1	0.0
IIGN	Ignalina	61.90	2	eP	P	06 01 04.8	+0.4
IDID	Didziasalis	61.94	1	eP	P	06 01 05.0	+0.2
NJ2	Nanjing	62.00	286	⇑iP	P	06 01 05.8	+0.3
NJ2				pmax	pmax		
	comp=Z,510nm,1.0s						
OBN	Obninsk	62.00	355	⇓P	P	06 01 05.4	+0.2
OBN	Obninsk	62.00	355	P	P	06 01 05.4	+0.2
OBN	Obninsk	62.00	355	ceP	P	06 01 05.3	+0.2
OBN				e		06 03 23.2	
OBN				i S	S	06 09 14.9	-3.7
OBN				eSS	SS	06 13 18.7	-3.5
OBN				pmax	pmax		
	comp=Z,401nm,1.0s						
JOW	Kunigami	62.25	275	P	P	06 01 07.3	0.0
JOW	Kunigami	62.25	275	P	P	06 01 08.4	+1.1
	comp=Z,364nm,1.0s						
RSBS	Rosebush, Pemb	62.30	23	eP	P	06 01 06.3	-0.9
RSBS				IAmb	IAmb	06 01 07.5	
	comp=Z,22nm,0.8s						
NACGM	Naroch	62.35	1	i P	P	06 01 07.5	0.0
	baz=359						
KLNR	Kaliningrad	62.46	6	i P	P	06 01 08.5	+0.3
KLNR				pmax	pmax		
	comp=Z,327nm,0.8s						
MCH1	Michaelchurch	62.55	22	eP	P	06 01 08.1	-0.8
MCH1				IAmb	IAmb	06 01 09.2	
	comp=Z,28nm,0.8s						
LYN	LuoYang	62.60	293	⇑iP	P	06 01 10.6	+1.1
LYN				pP	PcP	06 01 45.0	-2.2
LYN				S	S	06 09 29.5	+2.7
LYN				sS	sS	06 10 22.1	+0.8
LYN				pmax	pmax		
	comp=Z,630nm,1.1s						
MK31	Makanchi Array	62.61	322	P	P	06 01 08.6	-0.8
MK31	Makanchi Array	62.61	322	i P	P	06 01 08.8	-0.6
MK31				pmax	pmax		
	comp=Z,46nm,0.5s						
MKAR	Makanchi Array	62.61	322	P	P	06 01 08.8	-0.6
	comp=Z,57nm,0.4s,baz=44,slow=6.8,SNR=551						
MKAR				S	S	06 09 26.2	-0.4
	comp=Z,1.8nm,1.1s,baz=356,slow=9.7,SNR=3.5						
MKAR				PKPPKP	P'P'df	06 30 04.8	-8.8
	comp=Z,0.6nm,0.9s,baz=284,slow=4.9,SNR=4.5						
MKAR				LR	LR	06 31 57.9	
	comp=Z,161nm,18.7s,baz=0.5,slow=39						
	comp=Z,57nm,0.4s						
MKAR	Makanchi Array	62.61	322	P	P	06 01 08.9	-0.5
MAKZ	Makanchi	62.68	322	P	P	06 01 09.4	-0.5
MAKZ	Makanchi	62.68	322	P	P	06 01 09.4	-0.5
MAKZ				pmax	pmax		
	comp=Z,151nm,0.9s						
MONM	Monmouth	62.74	22	eP	P	06 01 09.4	-0.8
MONM				IAmb	IAmb	06 01 10.6	
	comp=Z,24nm,1.1s						
MNK	Minsk	62.76	1	i P	P	06 01 10.8	+0.6
MNK				i *PP	pP	06 01 42.0	+0.1
MNK				i *SP	sP	06 01 56.5	+0.1
MNK				i		06 03 30.2	
MNK				i PPP	PPP	06 04 59.8	
MNK				i S	S	06 09 26.5	-1.6
MNK				i SS	SS	06 13 41.7	+7.7
MNK				i SSS	SSS	06 16 25.3	
MNK				pmax	pmax		
	comp=Z,142nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,91nm,1.1s						
MNK				MLR	MLR		
	comp=Z,72nm,15.0s						
MNK				MLR	MLR		
	comp=E,87nm,15.0s						
MNK				MLR	MLR		
	comp=N,290nm,13.0s						
MNK	Minsk	62.76	1	i P	P	06 01 10.8	+0.6
	comp=E,2.0nm,0.8s						
MNK				i P	P	06 01 10.8	+0.6
	comp=N,91nm,1.1s						
MNK				i P	P	06 01 10.8	+0.6
	comp=Z,142nm,0.9s,baz=359						
MNK				i pP	pP	06 01 42.1	+0.1
MNK				i sP	sP	06 01 56.5	+0.1
MNK				i PP	PP	06 03 30.2	+1.1
MNK				i PPP	PPP	06 04 59.9	
MNK				i S	S	06 09 26.6	-1.6
MNK				i sS	sS	06 10 18.6	-4.4
MNK				i SS	SS	06 13 41.8	+7.7
MNK				i SSS	SSS	06 16 25.3	
MNK				i LR	LR	06 25 55.9	
MNK				i LRM	MLR	06 30 42.1	
	comp=Z,72nm,15.3s						
MNK				i LRM	MLR	06 30 52.3	
	comp=E,87nm,15.3s						
MNK				i LRM	MLR	06 30 54.8	
	comp=N,290nm,12.8s						
SUW	Suwalki	63.17	4	eP	P	06 01 12.3	-0.6
SUW	Suwalki	63.17	4	P	P	06 01 12.2	-0.6
SUW	Suwalki	63.17	4	P	P	06 01 12.2	-0.7
SUW				pmax	pmax		
	comp=Z,134nm,0.7s						
SUW	Suwalki	63.17	4	eP	P	06 01 11.9	-1.1
HTL	Hartland	63.26	23	eP	P	06 01 12.9	-0.7
HTL				IAmb	IAmb	06 01 14.1	
	comp=Z,28nm,1.0s						
GTA	Gaotai	63.43	305	⇑P	P	06 01 16.0	+0.9
GTA				pP	pP	06 01 46.1	-0.8
GTA				sP	sP	06 02 03.3	+2.0
GTA				S	S	06 09 38.8	+1.6
GTA				SS	SS	06 13 50.4	+4.9
GTA				pmax	pmax		
	comp=Z,220nm,1.0s						
GTA				pmax	pmax		
	comp=Z,480nm,7.6s						
GTA				LR	LR		
	comp=Z,180nm,20.3s						
GTA				LR	LR		
	comp=Z,130nm,14.7s						
GTA				LR	LR		
	comp=Z,220nm,17.9s						
GKP	Gorka Klasztor	63.64	8	eP	P	06 01 16.2	+0.2
GKP	Gorka Klasztor	63.64	8	eP	P	06 01 16.1	+0.1
WMQ	Urumqi	63.69	316	⇑iP	P	06 01 18.3	+1.7
WMQ				sP	sP	06 02 00.9	-1.9
WMQ				S	S	06 09 41.6	+1.4
WMQ				pmax	pmax		
	comp=Z,90nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,470nm,4.3s						
WMQ				LR	LR		
	comp=Z,510nm,18.5s						
WMQ				LR	LR		
	comp=Z,230nm,20.7s						
WMQ				LR	LR		
	comp=Z,130nm,20.7s						
OTUK	Ortayu	63.83	329	P	P	06 01 16.9	-0.6
DYA	Yadsworthy	63.90	23	eP	P	06 01 16.3	-1.5
DYA				IAmb	IAmb	06 01 18.0	
	comp=Z,25nm,0.9s						
CCA1	Carnmenellis	63.90	24	eP	P	06 01 17.2	-0.7
CCA1				IAmb	IAmb	06 01 17.7	
	comp=Z,42nm,1.1s						
BELG	Belogornoye	63.95	347	c iP	P	06 01 17.5	-0.5
BELG				pmax	pmax		
	comp=Z,142nm,0.9s						
RUE	Ruedersdorf	64.17	10	eP	P	06 01 19.0	-0.5
LPSR	Galich'ya Gora	64.40	353	eP	P	06 01 21.0	0.0
LPSR				eS	S	06 09 46.3	-2.2
LPSR				pmax	pmax		
	comp=Z,350nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,390nm,0.9s						
LPSR				smax	smax		
	comp=E,80nm,1.2s						
ESQI	Esquipulas	64.44	109	P	P	06 01 22.6	+0.7
ESQI				IAmb	IAmb	06 01 58.1	
	comp=Z,89nm,1.2s						
XAN	Xi'an	64.52	295	⇑P	P	06 01 21.8	-0.4
XAN				S	S	06 09 51.6	+0.9
XAN				pmax	pmax		
	comp=Z,77nm,1.3s						
XAN				pmax	pmax		
	comp=Z,390nm,5.6s						
XAN				LR	LR		
	comp=Z,220nm,16.8s						
XAN				LR	LR		
	comp=Z,220nm,18.4s						
XAN				LR	LR		
	comp=Z,260nm,17.5s						
AKTO	Aktyubinsk	64.53	340	S	S	06 09 48.6	-1.7
	comp=Z,2.6nm,1.0s,baz=101,slow=19,SNR=10						
AKTO				LR	LR	06 31 28.1	
	comp=Z,38nm,19.1s,baz=21,slow=38						
AKTO	Aktyubinsk	64.53	340	P	P	06 01 21.7	-0.3
MTO3	Montecristo	64.58	109	P	P	06 01 22.6	-0.3
LZH	Lanzhou	64.79	300	⇑P	P	06 01 24.8	+0.8
LZH				pP	pP	06 01 52.8	-3.2
LZH				sP	sP	06 02 08.6	-1.7
LZH				S	S	06 09 55.1	+1.0
LZH				pmax	pmax		
	comp=Z,190nm,1.3s						
LZH				pmax	pmax		
	comp=Z,770nm,4.3s						
LZH				LR	LR		
	comp=Z,290nm,15.7s						
LZH				LR	LR		
	comp=Z,220nm,17.0s						
LZH				LR	LR		
	comp=Z,400nm,17.4s						
SNF	Seneffe	65.10	17	dP	P	06 01 25.4	-0.2
	comp=Z,9.9nm,0.8s						
BSTI	Sart Tilman	65.19	16	dP	P	06 01 26.0	-0.2
	comp=Z,5.2nm,0.8s						
MEM	Membach	65.22	16	dP	P	06 01 26.3	-0.1
WHN	Wuhan	65.25	289	⇑P	P	06 01 27.4	+0.5
WHN				pP	PcP	06 01 53.3	-4.8
WHN				S	S	06 10 01.3	+1.8
WHN				pmax	pmax		
	comp=Z,400nm,0.8s						
BEL	Belsk	65.26	6	eP	P	06 01 26.8	+0.2
BTNL	Ternell	65.26	16	dP	P	06 01 25.8	-0.8
	comp=Z,14nm,1.3s						
CLL	Collm	65.27	11	P	P	06 01 26.2	-0.5
CLL				IAmb	IAmb	06 01 27.6	
	comp=Z,46nm,1.3s						
CLL	Collm	65.27	11	⇑iP	P	06 01 26.2	-0.5
CLL				i *PP	pP	06 01 59.2	+0.4
CLL				eS	S	06 10 02.0	+2.8
CLL				pmax	pmax		
	comp=Z,47nm,1.4s						
CLL				pmax	pmax		
	comp=Z,21nm,1.7s						
CLL	Collm	65.27	11	⇑iP	P	06 01 26.2	-0.5
	comp=Z,47nm,1.4s						
CLL				i (PcP)	PcP	06 01 56.9	-1.0
CLL				i pP	pP	06 01 59.2	+0.4
CLL				esP	sP	06 02 14.0	+0.7
CLL				esPP		06 04 37.0	
CLL				eS	S	06 10 02.0	+2.8
CLL				ePS	PnS	06 10 42.0	+3.8
CLL				esS	sS	06 10 54.0	-0.4
CLL				esPS		06 11 13.0	
CLL				esSS		06 15 06.0	
CLL				eSSS	SSS	06 17 30.0	
CLL				ePKPPKPd	P'P'df	06 30 07.0	-2.2
	comp=Z,21nm,1.7s						
VORR	Voronezh	65.32	353	eP	P	06 01 27.1	+0.1
VORR				eS	S	06 10 01.6	+1.9
VORR				pmax	pmax		
	comp=Z,310nm,0.9s						
VORR				pmax	pmax		
	comp=Z,330nm,1.0s						
VORR				smax	smax		
	comp=N,590nm,1.3s						
BCLA	Clavier	65.32	16	dP	P	06 01 27.1	0.0
TDK	Taldyqorghan	65.33	324	eP	P	06 01 27.6	+0.4
TDK	Taldyqorghan	65.33	324	eP	P	06 01 27.7	+0.4
	baz=324						
BGES	Gesves	65.33	17	dP	P	06 01 26.8	-0.3
	comp=Z,7.6nm,0.8s						
AB31	Akbulak array	65.36	338	i P	P	06 01 27.2	-0.1
ABKAR	Akbulak array	65.36	338	P	P	06 01 27.4	0.0
ABKAR	Akbulak array	65.36	338	P	P	06 01 27.2	-0.1
BMRD	Maredsous	65.37	17	dP	P	06 01 26.8	-0.5
	comp=Z,10nm,1.3s						
JSA	Saint Aubin	65.41	22	eP	P	06 01 26.7	-0.9
JSA				IAmb	IAmb	06 01 27.3	
	comp=Z,16nm,0.9s						
BHOU	Houvegnez	65.47	16	dP	P	06 01 27.4	-0.7
	comp=Z,5.9nm,1.3s						
DOU	Dourbes	65.55	17	dP	P	06 01 27.9	-0.5
	comp=Z,9.8nm,1.1s						
VRH	Novokhopyorsk	65.63	351	eP	P	06 01 28.1	-0.8
VRH				eS	S	06 10 00.1	-3.4
VRH				pmax	pmax		
	comp=Z,180nm,0.8s						
VRH				pmax	pmax		
	comp=Z,250nm,0.9s						
VRH				smax	smax		
	comp=E,230nm,1.2s						
VSR	Storozhevoye	65.77	353	eP	P	06 01 29.3	-0.6
VSR				eS	S	06 10 03.6	-1.7
VSR				pmax	pmax		
	comp=Z,240nm,0.7s						
VSR				pmax	pmax		
	comp=Z,200nm,0.6s						
VSR				smax	smax		
	comp=N,90nm,1.1s						
BRG	Berggiesshubel	65.78	10	eP	P	06 01 29.9	-0.1
BRG				Amp		06 01 31.2	
	comp=Z,34nm,1.0s						
BRG				pP	pP	06 02 03.8	+1.6
BRG				Amp		06 02 07.1	
	comp=Z,15nm,0.9s						
BRG	Berggiesshubel	65.78	10	eP	P	06 01 29.9	-0.1
BRG						06 02 03.7	
BRG				pmax	pmax		
	comp=Z,34nm,1.0s						
BRG				pmax	pmax		
	comp=Z,15nm,0.9s						
KSP	Ksiaz	65.99	9	eP	P	06 01 31.5	+0.1
VORD	Divnogorie	66.02	353	eP	P	06 01 31.4	0.0
VORD				pmax	pmax		
	comp=Z,650nm,1.4s						
WLF	Walferdange	66.17	16	P	P	06 01 32.5	0.0
WLF	Walferdange	66.17	16	P	P	06 01 32.5	0.0
WLF				pmax	pmax		
	comp=Z,22nm,0.9s						
WLF	Walferdange	66.17	16	dP	P	06 01 32.1	-0.4
	comp=Z,16nm,0.9s						
PVCC	Panska Ves	66.18	10	eP	P	06 01 32.5	0.0
PVCC	Panska Ves	66.18	10	eP	P	06 01 32.5	0.0
CHVC	Chvalec	66.23	9	eP	P	06 01 32.9	0.0
OSTC	Ostas	66.27	9	eP	P	06 01 33.3	+0.1
NKC	Novy Kostel	66.29	11	eP	P	06 01 33.3	0.0
NKC	Novy Kostel	66.29	11	eP	P	06 01 33.3	0.0
UPC	Upice	66.31	9	eP	P	06 01 33.5	+0.1
UPC	Upice	66.31	9	eP	P	06 01 33.5	+0.1
BTLS	Baital	66.42	327	c iP	P	06 01 34.1	0.0
BTLS				pmax	pmax		
	comp=Z,38nm,0.6s						
BTLS	Baital	66.42	327	⇑iP	P	06 01 34.2	0.0
	comp=Z,38nm,0.6s,baz=327						
DPC	Dobruska-Polom	66.48	9	eP	P	06 01 34.8	+0.3
DPC	Dobruska-Polom	66.48	9	eP	P	06 01 34.8	+0.3
AKASG	Malin Array Be	66.57	360	P	P	06 01 34.5	-0.6
	comp=Z,69nm,0.5s,baz=2.3,slow=6.4,SNR=574						
AKASG				PKPPKP	P'P'df	06 29 54.9	-12
	comp=Z,0.7nm,0.3s,baz=164,slow=3.3,SNR=7.9						
	comp=Z,69nm,0.5s						
AKASG	Malin Array Be	66.57	360	P	P	06 01 34.4	-0.6
AKBB	Malin Array Si	66.57	360	P	P	06 01 34.7	-0.3
AKBB	Malin Array Si	66.57	360	ceP	P	06 01 34.5	-0.5
KPKS	Kokpek	66.67	323	c iP	P	06 01 36.2	+0.3
KPKS				eS	S	06 10 17.7	+1.1
KPKS				pmax	pmax		
	comp=Z,68nm,0.7s						
KPKS	Kokpek	66.67	323	⇑iP	P	06 01 36.2	+0.3
	comp=Z,68nm,0.7s,baz=323						
KPKS				eS	S	06 10 17.8	+1.1
	baz=323						
GRA1	Grafenberg Arr	66.71	12	P	P	06 01 36.1	+0.1
GRA1				IAmb	IAmb	06 01 37.6	
	comp=Z,83nm,1.7s						
GRF	Grafenberg Arr	66.71	12	P	P	06 01 36.1	+0.1
GRF				pmax	pmax		
	comp=Z,83nm,1.7s						
GRFO	Grafenberg	66.71	12	P	P	06 01 36.1	+0.2
GRFO				IAmb	IAmb	06 01 37.6	
	comp=Z,82nm,1.7s						
GRFO	Grafenberg	66.71	12	P	P	06 01 36.1	+0.2
GRFO				pmax	pmax		
	comp=Z,82nm,1.7s						
PRU	Pruhonice	66.71	10	eP	P	06 01 35.9	0.0
PRU	Pruhonice	66.71	10	eP	P	06 01 35.9	0.0
SHLS	Shalkode	66.74	322	c iP	P	06 01 36.5	+0.1
SHLS				pmax	pmax		
	comp=Z,91nm,0.7s						
SHLS	Shalkode	66.74	322	⇑iP	P	06 01 36.5	+0.1
	comp=Z,91nm,0.7s,baz=322						
CHKK	Chushkaly	66.77	324	eP	P	06 01 35.7	-0.7
CHKK	Chushkaly	66.77	324	eP	P	06 01 35.7	-0.7
	baz=324						
KRLC	Kraliky	66.79	9	eP	P	06 01 36.8	+0.3
KRLC	Kraliky	66.79	9	eP	P	06 01 36.8	+0.3
OJC	Ojcow	66.82	6	eP	P	06 01 36.5	-0.2
OJC	Ojcow	66.82	6	P	P	06 01 36.4	-0.2
OJC	Ojcow	66.82	6	P	P	06 01 36.4	-0.2
OJC				pmax	pmax		
	comp=Z,18nm,0.8s						
UZB	Uzynbulak	66.87	322	c iP	P	06 01 37.4	+0.2
UZB				pmax	pmax		
	comp=Z,46nm,0.9s						
UZB	Uzynbulak	66.87	322	⇑iP	P	06 01 37.5	+0.2
	comp=Z,46nm,0.9s,baz=322						
KUU	Kurty	66.91	325	c iP	P	06 01 36.8	-0.5
KUU				pmax	pmax		
	comp=Z,46nm,0.8s						
KUU	Kurty	66.91	325	⇑iP	P	06 01 36.8	-0.5
	comp=Z,46nm,0.8s,baz=325						
ZHN	Zhinishke	67.02	323	ceP	P	06 01 37.5	-0.6
ZHN	Zhinishke	67.02	323	⇑eP	P	06 01 37.5	-0.6
	baz=323						
TARA	Tarawa	67.11	220	P	P	06 01 39.2	+0.3
TARA	Tarawa	67.11	220	P	P	06 01 39.4	+0.6
	comp=Z,192nm,1.1s						
OKC	Ostrava-Krasne	67.11	8	eP	P	06 01 38.7	+0.2
OKC	Ostrava-Krasne	67.11	8	eP	P	06 01 38.7	+0.2
SATY	Saty	67.12	323	c iP	P	06 01 39.1	+0.3
SATY				pmax	pmax		
	comp=Z,20nm,0.6s						
SATY	Saty	67.12	323	⇑iP	P	06 01 39.2	+0.3
	comp=Z,20nm,0.6s,baz=323						
MORC	Moravsky Berou	67.14	8	⇑P	P	06 01 38.5	-0.2
MORC	Moravsky Berou	67.14	8	P	P	06 01 38.4	-0.2
MORC				IAmb	IAmb	06 01 39.9	
	comp=Z,31nm,0.8s						
MORC	Moravsky Berou	67.14	8	P	P	06 01 38.4	-0.2
MORC				pmax	pmax		
	comp=Z,31nm,0.8s						
MORC	Moravsky Berou	67.14	8	eP	P	06 01 38.5	-0.2
YHNB	Yeheng	67.23	280	P	P	06 01 39.3	-0.4
YHNB				IAmb	IAmb	06 01 41.5	
	comp=Z,46nm,0.8s						
YHNB	Yeheng	67.23	280	P	P	06 01 39.7	0.0
CLF	Chambon-Foret	67.24	19	P	P	06 01 39.1	-0.2
CLF				IAmb	IAmb	06 01 40.5	
	comp=Z,48nm,0.8s						
MATN	Matagalpa	67.37	107	P	P	06 01 40.1	-0.5
LVV	L'vov	67.39	3	eP	P	06 01 40.0	-0.2
LVV				eS	S	06 10 25.1	+0.3
AAA	Alma-Ata	67.39	324	eP	P	06 01 40.8	+0.4
AAA	Alma-Ata	67.39	324	eP	P	06 01 40.9	+0.4
	baz=324						
MDOK	Medeo	67.40	324	i P	P	06 01 40.5	0.0
MDOK	Medeo	67.40	324	i P	P	06 01 40.6	0.0
	baz=324						
TREC	Trest	67.47	10	eP	P	06 01 40.9	+0.1
TREC	Trest	67.47	10	eP	P	06 01 40.9	+0.1
KHC	Kasperske Hory	67.48	11	P	P	06 01 41.1	+0.2
KHC	Kasperske Hory	67.48	11	eP	P	06 01 41.2	+0.3
KHC				e		06 02 16.0	
KHC	Kasperske Hory	67.48	11	eP	P	06 01 41.2	+0.3
KHC				epP	pP	06 02 16.0	+2.8
KNTN	Kanton	67.50	202	P	P	06 01 41.4	+0.2
KNTN				IAmb	IAmb	06 01 42.9	
	comp=Z,50nm,0.9s						
KNTN	Kanton	67.50	202	P	P	06 01 42.7	+1.4
	comp=Z,77nm,1.1s						
KWP	Kalwaria Pacla	67.53	4	eP	P	06 01 41.6	+0.4
KWP	Kalwaria Pacla	67.53	4	P	P	06 01 41.2	0.0
KWP	Kalwaria Pacla	67.53	4	P	P	06 01 41.2	0.0
KWP				pmax	pmax		
	comp=Z,496nm,0.5s						
VRAC	Vranov	67.54	9	⇑P	P	06 01 41.4	+0.3
VRAC	Vranov	67.54	9	eP	P	06 01 41.3	+0.1
TNSS	Tian-Shan	67.54	324	i P	P	06 01 41.7	-0.1
TNSS	Tian-Shan	67.54	324	i P	P	06 01 41.7	-0.1
	baz=324						
ENH	Enshi	67.56	293	P	P	06 01 41.7	+0.1
NACB	Ninganchiao	67.56	279	P	P	06 01 41.4	-0.3
MAUC	Maruska	67.56	8	eP	P	06 01 41.7	+0.3
NIE	Niedzica	67.65	6	eP	P	06 01 43.0	+1.1
PRZ	Przheval'sk	67.66	323	P	P	06 01 43.4	+1.1

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PRZ   Przheval'sk      67.66 323   P       P       06 01 43.4 +1.1
PRZ                                pmax    pmax
      comp=Z,166nm,0.9s
ECH   Echery           67.72  16   P       P       06 01 42.0 -0.3
ECH   Echery           67.72  16   P       P       06 01 42.0 -0.3
ECH                                pmax    pmax
      comp=Z,17nm,0.9s
BFO   Black Forest     67.75  15   P       P       06 01 41.9 -0.6
BFO   Black Forest     67.75  15   P       P       06 01 41.9 -0.6
BFO                                pmax    pmax
      comp=Z,25nm,1.4s
SGDS  Sogindy          67.76 326 i P       P       06 01 43.0 +0.3
SGDS                               pmax    pmax
      comp=Z,63nm,1.1s
SGDS  Sogindy          67.76 326 i P       P       06 01 43.1 +0.3
      comp=Z,64nm,1.1s,baz=326
KRUC  Moravsky         67.77   9 eP        P       06 01 42.5 -0.1
GEC2  GERESS Array S   67.78  11   P       P       06 01 42.9 +0.1
GERES GERESS Array B   67.78  11   P       P       06 01 42.5 -0.3
      comp=Z,9.5nm,0.8s,baz=320,slow=3.5,SNR=64
GERES                              pP      pP      06 02 16.4 +1.2
      comp=Z,7.2nm,0.8s,baz=343,slow=4.2,SNR=6.0
GERES                              PKPPKP  P'P'df  06 29 57.9 -7.2
      comp=Z,1.9nm,0.9s,baz=191,slow=4.0,SNR=4.9
      comp=Z,9.5nm,0.8s
GERES GERESS Array B   67.78  11   P       P       06 01 42.9 +0.1
CKRC  Cesky Krumlov    67.85  10 eP        P       06 01 42.9 -0.3
LANS  Liptovska Anna   67.87   7 eP        P       06 01 44.5 +1.2
LANS                               pmax    pmax
      comp=Z,25nm,0.8s
LANS  Liptovska Anna   67.87   7 eP        P       06 01 44.5 +1.2
USP   Ospenovka        67.97 326   P       P       06 01 44.6 +0.6
      SNR=24
TKM2  Tokmak 2         68.01 325   P       P       06 01 45.0 +0.5
      SNR=173
JAVC  Velka Javorina   68.06   8 eP        P       06 01 45.3 +0.8
GOMU  GeErMu           68.11 307   P       P       06 01 46.5 +1.1
GOMU                               PcP     PcP     06 02 06.0 -4.5
GOMU                               S       S       06 10 29.5 -5.1
GOMU                               pmax    pmax
      comp=Z,190nm,0.9s
GOMU                               LR      LR
      comp=Z,110nm,12.4s
GOMU                               LR      LR
      comp=Z,60nm,9.7s
GOMU                               LR      LR
      comp=Z,68nm,13.8s
CHMS  Chumysh          68.16 325   P       P       06 01 45.9 +0.7
      SNR=94
SSLB  Suanglung        68.19 280   P       P       06 01 45.6  0.0
SSLB  Suanglung        68.19 280   P       P       06 01 46.8 +1.2
CRVS  Cervenica-Dubn   68.22   5 eP        P       06 01 45.7 +0.3
CRVS                               pmax    pmax
      comp=Z,243nm,2.1s
CRVS  Cervenica-Dubn   68.22   5 eP        P       06 01 45.7 +0.3
KOLS  Kolonicke sedl   68.22   5 eP        P       06 01 46.2 +0.8
KOLS                               pmax    pmax
      comp=Z,41nm,0.8s
KOLS  Kolonicke sedl   68.22   5 eP        P       06 01 46.2 +0.8
QZH   Quanzhou         68.24 282⇑iP        P       06 01 46.0 +0.2
QZH                                pmax    pmax
      comp=Z,59nm,1.1s
BOOM  Boomskoye usch   68.32 324   P       P       06 01 46.7 +0.3
BOOM  Boomskoye usch   68.32 324   P       P       06 01 46.7 +0.3
BOOM                               pmax    pmax
      comp=Z,91nm,0.8s
KDJ   Kajisay          68.32 323   P       P       06 01 47.0 +0.6
KDJ   Kajisay          68.32 323   P       P       06 01 47.0 +0.6
KDJ                                pmax    pmax
      comp=Z,148nm,0.9s
FRU1  Bishkek          68.36 326   P       P       06 01 47.4 +0.9
FRU1  Bishkek          68.36 326   P       P       06 01 47.4 +0.9
FRU1                               pmax    pmax
      comp=Z,258nm,0.9s
YULB  Yu-li            68.37 279   P       P       06 01 45.8 -1.0
YULB                               IAmb    IAmb    06 01 50.6
      comp=Z,35nm,0.6s
KOLL  Kolacno          68.38   8 eP        P       06 01 47.3 +0.9
SMOL  Smolenice        68.39   8 eP        P       06 01 47.3 +0.8
SMOL                               pmax    pmax
      comp=Z,35nm,1.5s
SMOL  Smolenice        68.39   8 eP        P       06 01 47.3 +0.8
KBK   Karagaybulak     68.42 325   P       P       06 01 47.8 +0.7
      SNR=126
ULHL  Ulahol           68.47 324   P       P       06 01 48.5 +1.1
      SNR=6.1
VYHS  Vyhne            68.49   7 eP        P       06 01 47.5 +0.4
VYHS                               pmax    pmax
      comp=Z,24nm,0.9s
VYHS  Vyhne            68.49   7 eP        P       06 01 47.5 +0.4
MODS  Modra-Piesok     68.52   8 eP        P       06 01 47.9 +0.6
MODS                               pmax    pmax
      comp=Z,92nm,1.0s
MODS  Modra-Piesok     68.52   8 eP        P       06 01 47.9 +0.6
UZH   Uzhgorod         68.52   5 eP        P       06 01 45.8 -1.5
UZH                              e                 06 02 08.4
UZH                              i                 06 02 20.5
TARG  Taragay, Kyrgy   68.52 323   P       P       06 01 49.2 +1.2
TARG                               IAmb    IAmb    06 02 03.2
      comp=Z,87nm,1.1s
AAK   Ala-Archa        68.56 326   P       P       06 01 48.4 +0.6
      SNR=113
AAK   Ala-Archa        68.56 326   LR      LR      06 35 44.6
      comp=Z,130nm,19.9s,baz=16,slow=39
AAK   Ala-Archa        68.56 326   P       P       06 01 48.4 +0.6
AAK   Ala-Archa        68.56 326ceP        P       06 01 48.2 +0.3
AAK                                pmax    pmax
      comp=Z,163nm,1.0s
KECS  Kecovo           68.59   6 eP        P       06 01 48.3 +0.6
KECS                               pmax    pmax
      comp=Z,53nm,0.9s
KECS  Kecovo           68.59   6 eP        P       06 01 48.3 +0.6
ZST   Bratislava       68.68   8 eP        P       06 01 49.2 +0.9
ZST                                pmax    pmax
      comp=Z,80nm,0.8s
ZST   Bratislava       68.68   8 eP        P       06 01 49.2 +0.9
EKS2  Erkin-Say        68.72 326   P       P       06 01 49.6 +0.8
      SNR=223
TPUB  Ta-pu            68.75 280   P       P       06 01 49.2 +0.1
MOA   Molln            68.81  11 eP        P       06 01 48.8 -0.4
      comp=Z,26nm,1.4s,SNR=7.9
MOA                              eP        P'P'df  06 29 56.0 -7.3
      comp=Z,5.8nm,1.1s
RETA  Reutte           68.84  13 eP        P       06 01 49.1 -0.3
      comp=Z,16nm,1.2s,SNR=7.0
RETA                             eP        P'P'df  06 29 56.7 -6.6
      comp=Z,15nm,1.5s
CONA  Conrad Observa   68.86   9 i P       P       06 01 49.7 +0.2
      comp=Z,37nm,0.8s,SNR=26
CONA                             eP        P'P'df  06 29 55.5 -7.8
      comp=Z,4.2nm,1.0s
BIOA  Bad Ischl, Aus   68.92  11 eP        P       06 01 49.4 -0.4
      comp=Z,18nm,0.9s,SNR=7.4
UCH   Uchtor           68.94 325   P       P       06 01 50.8 +0.2
      SNR=35
DAVA  Damuels          68.95  14 i P       P       06 01 49.9 -0.3
      comp=Z,11nm,0.9s
MOTA  Moosalm          69.02  13 eP        P       06 01 50.2 -0.4
      comp=Z,21nm,0.9s,SNR=9.8
MOTA                             eP        P'P'df  06 29 55.4 -7.7
      comp=Z,18nm,1.0s
WATA  Walderalm        69.08  13 eP        P       06 01 50.8 -0.2
      comp=Z,33nm,0.9s,SNR=15
WATA                             eP        P'P'df  06 29 55.2 -7.8
      comp=Z,9.3nm,1.4s
KK31  Karatay Array    69.11 329   P       P       06 01 51.0 -0.1
KK31  Karatay Array    69.11 329   P       P       06 01 51.0 -0.1
KK31                               pmax    pmax
      comp=Z,129nm,1.0s
KKAR  Karatay Array    69.11 329   P       P       06 01 50.7 -0.3
KKAR  Karatay Array    69.11 329   P       P       06 01 50.7 -0.3
DZA   Taraz            69.11 328 eP        P       06 01 50.9 -0.2
DZA                                pmax    pmax
      comp=Z,58nm,1.0s
DZA   Taraz            69.11 328 eP        P       06 01 51.0 -0.2
      comp=Z,58nm,1.0s,baz=328
RONA  Rosalia, Austr   69.12   9 eP        P       06 01 51.5 +0.5
      comp=Z,19nm,0.8s,SNR=9.8
RONA                             eP        P'P'df  06 29 53.5 -9.2
      comp=Z,8.0nm,1.0s
PSZ   Piszkesteto      69.12   7 ⇑P        P       06 01 51.7 +0.6
PSZ   Piszkesteto      69.12   7   P       P       06 01 51.6 +0.5
PSZ                                IAmb    IAmb    06 01 53.0
      comp=Z,75nm,1.1s
PSZ   Piszkesteto      69.12   7   P       P       06 01 51.6 +0.5
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PSZ                                pmax    pmax
      comp=Z,75nm,1.1s
PSZ   Piszkesteto      69.12   7   P       P       06 01 51.8 +0.6
SRO   Srobarova        69.14   8 eP        P       06 01 52.0 +0.9
SRO                                pmax    pmax
      comp=Z,30nm,1.2s
SRO   Srobarova        69.14   8 eP        P       06 01 52.0 +0.9
SORM  Soroca           69.14   0 ⇑P        P       06 01 50.6 -0.5
WTTA  Wattenberg       69.15  13 eP        P       06 01 51.5  0.0
      comp=Z,46nm,0.8s,SNR=14
WTTA                             eP        P'P'df  06 29 55.0 -7.9
      comp=Z,8.1nm,0.9s
SOP   Sopron           69.15   9   P       P       06 01 51.8 +0.6
SQTA  Sankt Quirin     69.15  13 i P       P       06 01 51.4  0.0
      comp=Z,44nm,0.9s,SNR=20
SQTA                             eP        P'P'df  06 29 55.3 -7.5
      comp=Z,12nm,1.0s
AML   Almayashu        69.24 326   P       P       06 01 52.8 +0.4
      SNR=148
FETA  Feichten         69.30  13 eP        P       06 01 52.5 +0.2
      comp=Z,21nm,0.9s,SNR=11
FETA                             eP        P'P'df  06 29 54.1 -8.5
      comp=Z,6.6nm,1.0s
CD2   Chengdu          69.36 298 ⇑P        P       06 01 53.3 +0.5
CD2                                pmax    pmax
      comp=Z,280nm,0.7s
EGYH  Egyhazaskeszo    69.47   8   P       P       06 01 53.9 +0.8
KBA   Koelnbreinsper   69.50  11 i P       P       06 01 54.0 +0.4
      comp=Z,62nm,0.8s,SNR=25
ARSA  Arzberg          69.51  10 eP        P       06 01 53.6 +0.1
      comp=Z,19nm,0.9s,SNR=8.8
ARSA                             eP        P'P'df  06 29 54.1 -8.0
      comp=Z,7.2nm,0.9s
BMR   Baia Mare        69.52   4 ⇑P        P       06 01 53.7 +0.2
SENIN Lac Senin/Sane   69.56  16   P       P       06 01 54.1 +0.1
CSKK  Cskako           69.58   8   P       P       06 01 54.5 +0.6
BUR08 Bucovina Ar. S   69.59   3   P       P       06 01 54.1  0.0
BUR08                              IAmb    IAmb    06 01 55.4
      comp=Z,28nm,0.7s
BURAR Bucovina Array   69.62   3 ⇑P        P       06 01 54.1 -0.1
BURAR Bucovina Array   69.62   3   P       P       06 01 54.3  0.0
BURAR                              IAmb    IAmb    06 01 55.5
      comp=Z,40nm,0.8s
TUE   Stuetta          69.69  14   P       P       06 01 54.8  0.0
TUE                                IAmb    IAmb    06 01 56.4
      comp=Z,37nm,0.7s
MPLH  Magyarpolny      69.73   8   P       P       06 01 55.1 +0.3
LTVH  Ltavrtes, Hu     69.75   5   P       P       06 01 55.5 +0.6
ABTA  Abfaltersbach    69.75  12 eP        P       06 01 54.6 -0.4
      comp=Z,20nm,1.0s
ABTA                             eP        P'P'df  06 29 54.1 -7.7
      comp=Z,5.6nm,1.2s
MYKA  Terra Mystica    69.97  11 eP        P       06 01 56.1 -0.3
      comp=Z,18nm,1.0s,SNR=5.5
MESR  Meseseni         70.02   4 ⇓P        P       06 01 56.9 +0.3
TIH   Tihany           70.02   8   P       P       06 01 57.0 +0.4
SOKA  Soboth           70.04  10 eP        P       06 01 56.7 -0.1
      comp=Z,19nm,0.9s,SNR=9.6
IAS   Iasi             70.08   1 ⇓P        P       06 01 56.6 -0.3
IUG   Iuzhnay          70.12 329c iP       P       06 01 58.0 +0.6
IUG   Iuzhnay          70.12 329⇑iP        P       06 01 58.0 +0.6
      baz=329
ARCR  ARCALIA          70.13   3 ⇑P        P       06 01 58.0 +0.8
OBKA  Obir             70.17  11 i P       P       06 01 57.6  0.0
      comp=Z,70nm,0.8s,SNR=16
SSB   Saint Sauveur    70.26  18   P       P       06 01 57.4 -0.7
SSB   Saint Sauveur    70.26  18   P       P       06 01 57.4 -0.7
SSB                                pmax    pmax
      comp=Z,35nm,1.6s
KIS   Kishinev         70.28   0⇑iP        P       06 01 57.6 -0.5
      comp=Z,120nm,1.3s
KIS   Kishinev         70.28   0c iP       P       06 01 57.6 -0.5
KIS                              e                 06 02 44.0
KIS                                pmax    pmax
      comp=Z,120nm,1.3s
GROS  Grobnik          70.29  10 i P       P       06 01 58.0 -0.3
GROS                               IAMb            06 01 59.1
      comp=Z,27nm,1.0s
BIZ   Bicaz            70.31   2 ⇓P        P       06 01 58.6 +0.3
CTI   Castel Tesino    70.36  13   P       P       06 01 58.5 -0.3
CTI   Castel Tesino    70.36  13   P       P       06 01 58.5 -0.3
CTI                                pmax    pmax
      comp=Z,10.0nm,0.8s
MILM  Milestii Mici    70.36   0⇑iP        P       06 01 57.6 -1.0
      comp=Z,340nm,1.2s
MILM  Milestii Mici    70.36   0 ⇑P        P       06 01 57.9 -0.7
MILM  Milestii Mici    70.36   0c iP       P       06 01 57.6 -1.0
MILM                             e                 06 02 31.0
MILM                               pmax    pmax
      comp=Z,340nm,1.2s
KOGS  Kog              70.36   9 i P       P       06 01 58.5 -0.1
DRGR                   70.37   5 ⇓P        P       06 01 58.4 -0.4
CADS  Cadrg            70.38  11 i P       P       06 01 58.3 -0.5
CADS                               IAMb            06 02 00.2
      comp=Z,14nm,0.6s
CJR   Cluj-Napoca      70.48   4 ⇑P        P       06 01 59.6 +0.2
LJU   Ljubljana        70.63  11 eP        P       06 01 59.4 -0.9
LJU   Ljubljana        70.63  11 i P       P       06 01 59.8 -0.5
VASR  Vaslui           70.63   1 ⇑P        P       06 01 59.8 -0.5
SALO  Salr             70.67  14   P       P       06 01 59.8 -0.8
SALO                               IAmb    IAmb    06 02 01.0
      comp=Z,38nm,0.8s
PURM  Purcari          70.75 359 ⇑P        P       06 02 00.1 -0.9
TESR  Tescani          70.75   2 ⇑P        P       06 02 00.6 -0.4
MORH  Mrgy, Hungar     70.75   8⇑iP        P       06 02 00.7 -0.3
MORH  Mrgy, Hungar     70.75   8   P       P       06 02 00.5 -0.5
BNI   Bardonecchia     70.77  17   P       P       06 02 01.8 +0.5
BNI   Bardonecchia     70.77  17   P       P       06 02 01.8 +0.5
BNI                                pmax    pmax
      comp=Z,33nm,1.1s
LEOM  Leova            70.80   1 ⇑P        P       06 02 01.5 +0.3
KOVH  Kovagotottos     70.85   8   P       P       06 02 01.8 +0.2
SIRR  Siria            70.86   5 ⇑P        P       06 02 01.8 +0.2
CRES  Cresnjev         70.92  10 eP        P       06 02 00.9 -1.1
CEY   Cerknica         70.92  11⇑iP        P       06 02 01.1 -1.0
TEOL  Teolo            71.04  13   P       P       06 02 02.2 -0.6
TEOL                               IAmb    IAmb    06 02 03.5
      comp=Z,54nm,0.9s
SKDS  Skadanscina      71.08  11 eP        P       06 02 15.9  +13
TAS   Tashkent         71.08 329   P       P       06 02 03.5 +0.4
TAS   Tashkent         71.08 329   P       P       06 02 03.5 +0.4
TAS                                pmax    pmax
      comp=Z,254nm,1.0s
KSH   Kashi            71.09 323   P       P       06 02 07.0 +3.7
KSH                                PcP     PcP     06 02 22.6 -0.1
KSH                                PP      PP      06 04 49.8 +7.9
KSH                                S       S       06 11 13.5 +4.6
KSH                                pmax    pmax
      comp=Z,220nm,1.2s
KSH                                LR      LR
      comp=Z,250nm,18.5s
OZUR                   71.15   2 ⇓P        P       06 02 03.9 +0.4
PGAV  Gavieira, Arco   71.17  28 eP        P       06 02 03.8 +0.1
      comp=Z,49nm,1.3s
PGAV                             i LQ      LQ      06 02 51.2
GHRR                   71.21   1 ⇑P        P       06 02 04.1 +0.3
DOPR  Dopca            71.27   3 ⇑P        P       06 02 04.6 +0.4
DEV   Deva             71.29   4 ⇑P        P       06 02 04.5 +0.3
VRI   Vrincioaia       71.40   2 ⇑P        P       06 02 04.7 -0.3
COVR  Voineasa-Covas   71.41   2 ⇑P        P       06 02 05.6 +0.5
PLOR  Plostina         71.41   2 ⇑P        P       06 02 04.9 -0.2
VLDR  Vladesti         71.43   1 ⇑P        P       06 02 05.2 +0.1
PCAB  Cabril           71.47  28 eP        P       06 02 05.4  0.0
      comp=Z,43nm,2.0s
BZS   Buzias           71.50   5 ⇑P        P       06 02 04.8 -0.7
ODBI  Odobesti         71.50   1 ⇑P        P       06 02 06.2 +0.7
GULI  GuiLin           71.54 289 ⇑P        P       06 02 04.9 -1.1
GCPR  Guaynabo City    71.58  86   P       P       06 02 05.4 -1.0
GCPR                               IAmb    IAmb    06 02 43.4
      comp=Z,50nm,1.1s
SCTR  Scanteiesti      71.60   1 ⇑P        P       06 02 06.3 +0.2
GOF   Gofitskoye       71.64 350⇑iP        P       06 02 06.5 +0.2
GOF                              eS        S       06 11 12.0 -2.7
GOF                                pmax    pmax
      comp=Z,503nm,0.7s
GOF                                smax    smax
      comp=N,91nm,1.5s
PBRG  Braganca         71.65  27 eP        P       06 02 06.9 +0.4
      comp=N,27nm,1.3s
PBRG                             epP       pP      06 02 39.7 +0.4
TATR  Tatarca          71.68   1 ⇑P        P       06 02 07.4 +0.8
SLCR  Slobozia Conac   71.68   1 ⇓P        P       06 02 07.1 +0.5
SJG   San Juan         71.72  86   LR      LR      06 35 05.6
      comp=N,79nm,19.0s,baz=272,slow=37
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IZVR  Izvoarele        71.73   1 ⇑P        P       06 02 07.0 +0.1
MLR   Muntele Rosu     71.76   2 ⇓P        P       06 02 07.4 +0.2
MLR   Muntele Rosu     71.76   2   P       P       06 02 07.2  0.0
MLR                                IAmb    IAmb    06 02 10.1
      comp=Z,78nm,1.3s
MLR   Muntele Rosu     71.76   2   P       P       06 02 07.2  0.0
MLR                                pmax    pmax
      comp=Z,79nm,1.3s
GZR   Gura Zlata       71.77   5 ⇑P        P       06 02 07.0 -0.3
SCHL  Schela           71.77   1 ⇑P        P       06 02 07.2  0.0
SRBA  San Rafael, Bu   71.78 106   P       P       06 02 06.6 -1.1
POLO  Lamas de Olo     71.84  28 eP        P       06 02 07.5 -0.2
      comp=Z,22nm,1.3s
POLO                             epP       pP      06 02 41.3 +0.8
MSSA  Maissana         71.84  15   P       P       06 02 06.7 -1.0
FRGS  Fruska Gora      71.87   7 ⇑P        P       06 02 07.4 -0.4
FRGS  Fruska Gora      71.87   7⇑iP        P       06 02 07.3 -0.5
BTK   Batken           71.91 327   P       P       06 02 08.4 +0.2
BTK   Batken           71.91 327   P       P       06 02 08.4 +0.2
BTK                                pmax    pmax
      comp=Z,170nm,0.9s
PVRL  Vila Real        71.95  28 eP        P       06 02 09.1 +0.8
      comp=Z,36nm,1.2s
PVRL                             epP       pP      06 02 42.3 +1.2
GYA   Guiyang          72.08 293 ⇑P        P       06 02 10.0 +0.6
GYA                                pP      pP      06 02 41.5 -0.5
GYA                                S       S       06 11 20.8 +0.2
GYA                                SS      SS      06 16 02.3 +2.8
GYA                                pmax    pmax
      comp=Z,310nm,1.0s
GYA                                pmax    pmax
      comp=Z,770nm,3.5s
GYA                                LR      LR
      comp=Z,74nm,4.8s
GYA                                LR      LR
      comp=Z,150nm,6.1s
GYA                                LR      LR
      comp=Z,260nm,18.4s
TLCR                   72.09   0 ⇓P        P       06 02 09.0  0.0
CFR   Carcaliu         72.10   1 ⇑P        P       06 02 08.8 -0.2
BLY   Banja Luka       72.12   9⇑iP        P       06 02 08.7 -0.5
TAOE  Nuku Hiva Isla   72.20 169 eLR       LR      06 24 08.9
      comp=Z,198nm,22.9s
MVO   Moncorvo         72.20  28 eP        P       06 02 10.0 +0.1
      comp=Z,34nm,1.1s
MVO                              epP       pP      06 02 43.7 +1.0
MVO                              i LQ      LQ      06 02 58.0
DRK   Karamyk          72.22 326   P       P       06 02 11.0 +0.7
SIM   Simferopol'      72.25 356 eP        P       06 02 09.3 -0.7
SIM                              e*PP      pP      06 02 37.0 -5.6
SIM                                S       SPn     06 11 55.0 +4.3
SIM                                pmax    pmax
      comp=Z,67nm,1.1s
ANN   Anapa            72.27 354c iP       P       06 02 09.5 -0.6
ANN                              ePPP      PPP     06 06 34.5
ANN                              eS        S       06 11 20.2 -1.6
ANN                                pmax    pmax
      comp=Z,139nm,0.8s
HERR  Herculane        72.27   5 ⇑P        P       06 02 09.5 -0.6
MDVR  Moldovita        72.34   5 ⇑P        P       06 02 09.8 -0.8
STFAR Stefanesti-Arg   72.37   3 ⇑P        P       06 02 10.9 +0.2
TPGR  Topolog          72.42   0 ⇓P        P       06 02 11.1 +0.1
MGRS  Mrkonjic Grad    72.44   9 eP        P       06 02 11.3 +0.1
PVIS  Viseu            72.45  29 eP        P       06 02 11.9 +0.6
PVIS                             epP       pP      06 02 44.8 +0.7
PVIS                             i LQ      LQ      06 02 58.4
TEKS  Tekeris          72.46   7 eP        P       06 02 11.1 -0.2
HKPS  Hong Kong Po S   72.53 285   P       P       06 02 12.8 +0.8
HARR  Harsova          72.58   1 ⇓P        P       06 02 12.1 +0.1
TLBR  Topalu           72.73   1 ⇑P        P       06 02 13.1 +0.3
KVAR  Kislovodsk Arr   72.76 350   LR      LR      06 37 17.2
      comp=Z,47nm,21.1s,baz=280,slow=38
KIV   Kislovodsk       72.76 350 ⇑P        P       06 02 13.5 +0.3
KIV   Kislovodsk       72.76 350   P       P       06 02 13.4 +0.2
KIV   Kislovodsk       72.76 350 eP        P       06 02 13.3 +0.2
KIV                              eS        S       06 11 26.8 -0.9
KIV                                pmax    pmax
      comp=Z,249nm,1.0s
KIV                                pmax    pmax
      comp=Z,36nm,3.2s
LEHL  Lehliu           72.79   2 ⇓P        P       06 02 13.3 +0.2
OSSC  Osservatorio P   72.81  13   P       P       06 02 12.6 -0.8
COI   Coimbra          72.82  29 eP        P       06 02 13.8 +0.4
      comp=Z,55nm,1.3s
COI                              epP       pP      06 02 47.1 +0.9
TIRR  Tirgusor         72.82   0 ⇑P        P       06 02 13.2 -0.1
TIRR  Tirgusor         72.82   0   P       P       06 02 13.2 -0.1
TIRR  Tirgusor         72.82   0   P       P       06 02 13.3 -0.1
TIRR                               pmax    pmax
      comp=Z,172nm,1.1s
MTE   Manteigas        72.83  28 eP        P       06 02 13.5 -0.1
      comp=Z,54nm,1.3s
MTE                              epP       pP      06 02 47.1 +0.7
MTE   Manteigas        72.83  28   P       P       06 02 13.4 -0.1
DIVS  Divibare         72.94   7   P       P       06 02 13.4 -0.8
DIVS  Divibare         72.94   7⇑iP        P       06 02 13.7 -0.5
PCAS  Casmilo, Conde   72.95  29 eP        P       06 02 14.6 +0.4
      comp=Z,68nm,1.4s
PCAS                             epP       pP      06 02 47.4 +0.3
KBZ   Khabaz           72.97 349   P       P       06 02 14.8 +0.5
      comp=Z,121nm,1.0s,baz=355,slow=3.2,SNR=185
KBZ                                LR      LR      06 37 28.4
      comp=Z,66nm,19.5s,baz=347,slow=38
      comp=Z,121nm,1.0s
KBZ   Khabaz           72.97 349ceP        P       06 02 14.7 +0.5
KBZ                                pmax    pmax
      comp=Z,137nm,0.9s
SHA1  Shidzhatmaz      72.98 350c iP       P       06 02 14.9 +0.3
GAR   Garm             73.04 327   P       P       06 02 15.1 +0.2
MFTR  Murfatlar        73.10   0 ⇑P        P       06 02 15.2 +0.2
BBLS  Lazi&#263;i      73.14   7⇑iP        P       06 02 15.5 +0.1
NCK   Nalchik          73.14 349c iP       P       06 02 15.9 +0.6
NCK                                pmax    pmax
      comp=Z,313nm,0.9s
ICOR  Ion Corvin       73.16   1 ⇓P        P       06 02 15.4 +0.1
MURB  Monte Urbino     73.20  12   P       P       06 02 15.5 -0.3
MURB                               IAmb    IAmb    06 02 18.5
      comp=Z,45nm,0.9s
VLAD  Vladila          73.22   3 ⇑P        P       06 02 14.9 -0.8
GROC  Groznyy          73.22 347 eP        P       06 02 15.3 -0.5
GROC                             e                 06 02 31.4
GROC                             e*PP      pP      06 02 47.9 -0.5
GROC                             eS        S       06 11 33.0 +0.2
GROC                               pmax    pmax
      comp=Z,48nm,0.7s
MAK   Makhachkala      73.28 346 eP        P       06 02 12.5 -3.6
MAK                              e*PP      pP      06 02 45.9 -2.8
MAK                              e*SP      sP      06 02 59.9 -3.0
MAK                              e                 06 05 02.0
MAK                              ePPP      PPP     06 06 43.0
MAK                              eS        SKiKP   06 11 28.2 -5.2
MAK                              e*SS      sS      06 12 29.1 -0.5
MAK                              eSS       SS      06 16 19.0 +2.5
MAK                                pmax    pmax
      comp=Z,305nm,1.2s
SOC   Sochi            73.35 352 eP        P       06 02 15.1 -1.4
SOC                              e*PP      pP      06 02 50.6 +1.5
SOC                              e*SP      sP      06 03 01.1 -2.2
SOC                              e                 06 05 08.0
SOC                              ePPP      PPP     06 06 50.4
SOC                              eS        SKiKP   06 11 33.1 -0.4
SOC                              eSS       SS      06 16 21.2 +3.7
SOC                                pmax    pmax
      comp=Z,102nm,0.7s
PCBR  Castelo Branco   73.38  29 eP        P       06 02 16.5 -0.2
      comp=Z,56nm,1.3s
PCBR                             i LQ      LQ      06 03 03.6
RUDO  Rudo             73.38   7⇑iP        P       06 02 16.2 -0.5
PSBE  So Bento         73.40  30 eP        P       06 02 17.2 +0.3
PSBE                             epP       pP      06 02 50.8 +1.0
BOVS  Bovan            73.48   5 ⇑P        P       06 02 16.4 -0.9
BLKB  Belogradchik     73.54   5 ⇓P        P       06 02 17.0 -0.7
PSN   Preselentsi      73.59   1   P       P       06 02 18.3 +0.4
CHGR  Chuyangaron      73.64 328   P       P       06 02 18.8 +0.3
CHGR  Chuyangaron      73.64 328   P       P       06 02 18.8 +0.3
CHGR                               pmax    pmax
      comp=Z,1µm,0.8s
RAZG  Razgrad          73.69   2 ⇓P        P       06 02 18.2 -0.3
UPM   Unac-Piva        73.77   8 eP        P       06 02 18.8 -0.4
LATE  Laterza          73.77  13   P       P       06 02 18.4 -0.7
LATE                               IAmb    IAmb    06 02 19.8
      comp=Z,72nm,1.1s
SJES  Sjenica          73.77   7⇑iP        P       06 02 19.2 +0.1
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PMRV	Marv??o	73.79	29	eP	P	06 02 19.1	-0.1
	comp=Z,32nm,1.5s						
ZEI	Tsey	73.81	349	eP	P	06 02 17.1	-2.4
ZEI				pmax	pmax		
	comp=Z,76nm,1.0s						
PMAFR	Mafra	73.82	30	eP	P	06 02 19.8	+0.5
	comp=Z,120nm,1.7s						
PMAFR				epP	pP	06 02 53.3	+1.1
PMAFR				i LQ	LQ	06 03 07.7	
MPEP	Malo Peshtene	73.84	4	P	P	06 02 18.9	-0.5
PMTG	Montargil	73.95	29	eP	P	06 02 19.9	-0.2
	comp=Z,33nm,1.3s						
PMTG				epP	pP	06 02 52.7	-0.3
SZH	Strazhica	73.98	2	P	P	06 02 19.3	-0.9
STON	Ston	74.02	9	⇑iP	P	06 02 17.7	-2.7
CHVG	Ch'k'valeri	74.04	350	⇑P	P	06 02 21.1	+0.5
BRY	Bratogost	74.05	8	eP	P	06 02 20.4	-0.4
PMST	Lisbon--Monsan	74.05	30	eP	P	06 02 20.9	+0.2
PRD	Provadia	74.07	1	P	P	06 02 21.4	+0.7
PZH	PanZhiHua	74.07	297	⇑P	P	06 02 21.3	+0.1
PZH				pP	pP	06 02 54.8	+0.9
PZH				sP	sP	06 03 09.0	+0.9
PZH				S	S	06 11 41.3	-1.8
PZH				sS	sS	06 12 38.8	-0.7
PZH				pmax	pmax		
	comp=Z,350nm,1.0s						
PZH				pmax	pmax		
	comp=Z,200nm,3.5s						
PZH				LR	LR		
	comp=Z,240nm,18.3s						
PZH				LR	LR		
	comp=Z,270nm,19.2s						
PZH				LR	LR		
	comp=Z,350nm,18.1s						
AQU	L'Aquila	74.19	12	P	P	06 02 22.2	+0.7
AQU	L'Aquila	74.19	12	P	P	06 02 22.2	+0.7
TREB	Trebinje	74.22	8	⇑iP	P	06 02 21.0	-0.6
ESBB	Sonseca Array	74.27	26	P	P	06 02 21.9	-0.1
ESDC	Sonseca Array	74.27	26	P	P	06 02 21.9	0.0
	comp=Z,31nm,1.0s,baz=343,slow=5.6,SNR=124						
ESDC				pP	pP	06 02 55.6	+0.7
	comp=Z,18nm,0.9s,baz=343,slow=5.7,SNR=7.2						
	comp=Z,31nm,1.0s						
ESDC	Sonseca Array	74.27	26	P	P	06 02 22.0	0.0
PESTR	Estremoz	74.28	29	eP	P	06 02 21.8	-0.3
	comp=Z,46nm,1.3s						
PESTR				epP	pP	06 02 54.8	-0.2
PESTR				i LQ	LQ	06 03 09.4	
PESTR	Estremoz	74.28	29	P	P	06 02 21.6	-0.5
PESTR					pP	06 02 54.7	-0.3
PESTR	Estremoz	74.28	29	P	P	06 02 22.2	+0.1
PAB	San Pablo	74.31	26	P	P	06 02 21.8	-0.5
PAB	San Pablo	74.31	26	P	P	06 02 21.8	-0.5
PAB				pmax	pmax		
	comp=Z,35nm,1.2s						
PAB	San Pablo	74.31	26	P	P	06 02 22.5	+0.2
HCY	Herceg Novi	74.50	8	eP	P	06 02 22.2	-1.0
VTS	Vitosha	74.56	4	⇑P	P	06 02 23.2	-0.5
VTS	Vitosha	74.56	4	P	P	06 02 23.1	-0.7
VTS	Vitosha	74.56	4	P	P	06 02 23.1	-0.7
VTS				pmax	pmax		
	comp=Z,18nm,0.8s						
VTS	Vitosha	74.56	4	i P	P	06 02 22.8	-1.0
PDG	Podgorica	74.56	7	⇓P	P	06 02 22.9	-0.7
PDG	Podgorica	74.56	7	P	P	06 02 23.0	-0.6
PDG				IAmb	IAmb	06 02 24.1	
	comp=Z,42nm,0.7s						
PDG	Podgorica	74.56	7	⇑iP	P	06 02 23.0	-0.6
JMB	Yambol	74.79	2	P	P	06 02 24.7	-0.2
PNCL	Nicolau / Gran	74.80	30	eP	P	06 02 25.2	+0.2
	comp=Z,66nm,1.6s						
KMI	Kunming	74.89	296	⇑P	P	06 02 26.3	+0.3
KMI				pmax	pmax		
	comp=Z,89nm,1.2s						
KMI				pmax	pmax		
	comp=Z,320nm,3.5s						
PBEJ	Beja	75.03	29	eP	P	06 02 26.7	+0.4
	comp=Z,27nm,1.4s						
PBAR	Barrancos	75.07	29	eP	P	06 02 26.6	0.0
	comp=Z,84nm,1.3s						
PBAR				epP	pP	06 03 00.1	+0.5
PBAR				i LQ	LQ	06 03 14.5	
PLD	Plovdiv	75.12	3	P	P	06 02 26.1	-0.7
MESJ	Messejana	75.13	30	eP	P	06 02 26.9	0.0
MESJ				IAmb	IAmb	06 02 28.2	
	comp=Z,18nm,1.0s						
MESJ	Messejana	75.13	30	eP	P	06 02 27.0	0.0
	comp=Z,34nm,1.7s						
MESJ				epP	pP	06 02 59.9	0.0
MESJ	Messejana	75.13	30	eP	P	06 02 26.9	0.0
SKO	Skopje	75.13	6	i P	P	06 02 27.1	+0.2
BATM	Batumi	75.17	350	⇓P	P	06 02 26.8	-0.4
DIM	Dimitrovgrad	75.19	3	P	P	06 02 27.8	+0.6
AKH	Akhalkalaki	75.22	349	⇓P	P	06 02 28.1	+0.5
BZK	Bozkurt	75.24	356	⇑P	P	06 02 27.1	-0.4
BZK	Bozkurt	75.24	356	P	P	06 02 26.6	-0.8
LSA	Lhasa	75.28	307	P	P	06 02 30.1	+1.6
LSA	Lhasa	75.28	307	P	P	06 02 30.1	+1.6
LSA				pmax	pmax		
	comp=Z,130nm,0.9s						
ARGC	Ariguani, Magd	75.29	97	eP	P	06 02 29.1	+0.9
PTEO	Sao Teotonio	75.29	30	eP	P	06 02 28.7	+0.9
	comp=Z,79nm,1.5s						
KKB	Krupnik	75.30	5	P	P	06 02 27.9	0.0
DIKM	Dikmen	75.50	355	⇑P	P	06 02 29.8	+0.8
RZN	Rozhen	75.53	3	P	P	06 02 29.5	+0.1
MORF	Marmelete	75.54	30	eP	P	06 02 29.4	0.0
MORF				IAmb	IAmb	06 02 30.2	
	comp=Z,80nm,1.3s						
MORF	Marmelete	75.54	30	eP	P	06 02 29.1	-0.2
	comp=Z,75nm,1.5s						
MORF				epP	pP	06 03 02.7	+0.3
MORF	Marmelete	75.54	30	eP	P	06 02 29.3	0.0
KDZ	Kurdzhali	75.59	3	P	P	06 02 29.7	+0.2
MMB	Musomiste	75.60	4	P	P	06 02 29.7	+0.1
PVAQ	Vaqueiros	75.66	29	eP	P	06 02 30.0	+0.1
	comp=Z,60nm,1.9s						
PVAQ				epP	pP	06 03 03.7	+0.7
PVAQ				i LQ	LQ	06 03 16.4	
LKP	Lekhapani	75.66	302	eP	P	06 02 31.2	+1.1
PFVI	Vila Bisbo	75.67	30	epP	pP	06 03 03.1	+0.1
PBDV	Barranco-do-Ve	75.76	30	eP	P	06 02 31.4	+0.8
	comp=Z,76nm,1.4s						
PBDV				epP	pP	06 03 04.5	+0.9
VAY	Valandovo	75.83	5	i P	P	06 02 31.0	+0.2
KTUT	Trabzon	75.93	352	⇓P	P	06 02 31.4	0.0
OHR	Ohrid	75.96	6	i P	P	06 02 31.7	+0.1
KARS	Kars	76.03	349	P	P	06 02 33.6	+1.4
KARS	Kars	76.03	349	P	P	06 02 33.6	+1.4
KARS				pmax	pmax		
	comp=Z,254nm,0.8s						
KVT	Kavak	76.04	354	P	P	06 02 33.1	+1.0
RDO	Rodhopi	76.09	3	P	P	06 02 32.4	+0.1
RDO				IAmb	IAmb	06 02 34.0	
	comp=Z,82nm,1.3s						
ILGA	Ilgaz	76.15	356	P	P	06 02 33.8	+0.8
MATE	Matera	76.16	10	⇑P	P	06 02 32.6	-0.1
FNA	Florina	76.31	6	P	P	06 02 33.0	-0.7
FNA				IAmb	IAmb	06 02 34.2	
	comp=Z,50nm,0.7s						
FNA	Florina	76.31	6	P	P	06 02 33.0	-0.7
FNA				pmax	pmax		
	comp=Z,50nm,0.7s						
GNI	Garni	76.35	348	P	P	06 02 35.1	+1.0
GNI	Garni	76.35	348	ceP	P	06 02 35.4	+1.4
GNI				pmax	pmax		
	comp=Z,209nm,1.7s						
ALN	Alexandroupoli	76.35	2	P	P	06 02 33.9	+0.1
ALN				IAmb	IAmb	06 02 35.1	
	comp=Z,48nm,0.9s						
ALN	Alexandroupoli	76.35	2	P	P	06 02 33.9	+0.1
ALN				pmax	pmax		
	comp=Z,47nm,0.9s						
KBN	Korca	76.44	6	P	P	06 02 34.7	+0.2
KBN	Korca	76.44	6	P	P	06 02 34.7	+0.2
KBN				pmax	pmax		
	comp=Z,18nm,0.7s						
BAYT	Aydıntepe-Bayb	76.49	351	P	P	06 02 34.0	-0.8
UREC	San Jos de Ur	76.57	99	eP	P	06 02 33.9	-1.5
ITAN	ITANAGAR	76.64	304	⇑iP	P	06 02 36.3	+0.7
RSDY	Resadiye-TOKAT	76.66	353	P	P	06 02 37.2	+1.6
GEYT	Alibeck	76.67	337	P	P	06 02 36.5	+0.8
	comp=Z,75nm,1.1s,baz=268,slow=4.5,SNR=62						
GEYT				LR	LR	06 42 13.0	
	comp=Z,145nm,20.1s,baz=0.5,slow=40						
	comp=Z,75nm,1.1s						
GEYT	Alibeck	76.67	337	P	P	06 02 36.3	+0.6
GEYT				IAmb	IAmb	06 02 37.9	
	comp=Z,115nm,1.1s						
GYA0	ALIBECK ARRAY	76.67	337	P	P	06 02 35.9	+0.2
GYA0B	ALIBECK ARRAY	76.67	337	P	P	06 02 36.6	+0.9
KOPR	Koprukoy-ERZUR	76.76	350	P	P	06 02 37.7	+1.3
TOKT	Tokat	76.78	354	P	P	06 02 37.5	+1.2
TOKA	Tokat	76.78	354	P	P	06 02 37.1	+0.9
TOKA				IAmb	IAmb	06 02 38.5	
	comp=Z,47nm,0.9s						
MDUB	Mudurnu	76.79	358	P	P	06 02 37.1	+0.7
MDUB	Mudurnu	76.79	358	P	P	06 02 36.9	+0.5
GULT	Gulveren	76.83	359	P	P	06 02 37.1	+0.5
KOPT	Kop Dagi	76.84	351	P	P	06 02 38.1	+1.1
KOPT				IAmb	IAmb	06 02 40.7	
	comp=Z,114nm,1.2s						
SCTE	Santa Cesarea	76.86	8	P	P	06 02 36.9	+0.2
SCTE				IAmb	IAmb	06 02 37.5	
	comp=Z,63nm,0.8s						
YUVA	Yuva-Kibriscik	76.86	358	P	P	06 02 37.8	+1.0
CORM	Corum	77.00	356	P	P	06 02 38.9	+1.3
LIT	Litokhoron	77.04	5	P	P	06 02 37.5	-0.2
LIT				IAmb	IAmb	06 02 38.5	
	comp=Z,45nm,0.8s						
LIT	Litokhoron	77.04	5	P	P	06 02 37.5	-0.2
LIT				pmax	pmax		
	comp=Z,45nm,0.8s						
MOKO	MOKOCHONG	77.08	303	⇑iP	P	06 02 39.5	+1.2
MOKO				i pP	sP	06 03 27.2	+1.8
ZARC	Zaragoza, Cauc	77.11	99	P	P	06 02 37.7	-0.7
ZARC	Zaragoza, Cauc	77.11	99	eP	P	06 02 36.8	-1.6
OCAC	Ocana	77.14	97	P	P	06 02 38.7	-0.1
OCAC	Ocana	77.14	97	eP	P	06 02 34.9	-3.9
SVSK	Karacayir	77.16	354	P	P	06 02 39.7	+1.4
QIZ	Qiongzhong	77.27	287	P	P	06 02 39.9	+0.6
QIZ				IAmb	IAmb	06 02 41.4	
	comp=Z,76nm,1.0s						
QIZ	Qiongzhong	77.27	287	P	P	06 02 40.6	+1.3
	comp=Z,77nm,1.2s						
KEK	Kerkira	77.30	7	P	P	06 02 38.6	-0.5
KEK				IAmb	IAmb	06 02 39.9	
	comp=Z,39nm,0.8s						
LOD	Lodumlu	77.34	357	P	P	06 02 38.9	-0.6
ANTO	Ankara	77.36	357	P	P	06 02 40.6	+1.0
ANTO	Ankara	77.36	357	P	P	06 02 40.3	+0.7
ANTO	Ankara	77.36	357	P	P	06 02 40.3	+0.7
ANTO				pmax	pmax		
	comp=Z,140nm,1.1s						
AUBOZ	BOZOYUK	77.36	359	P	P	06 02 39.1	-0.5
AUMIH	MIHALICIK	77.39	358	P	P	06 02 40.2	+0.4
BORA	Eskisehir	77.39	359	P	P	06 02 40.1	+0.4
BORA	Eskisehir	77.39	359	P	P	06 02 39.9	+0.1
BR131	Keskin Array S	77.48	356	P	P	06 02 40.4	0.0
BR131				IAmb	IAmb	06 02 41.8	
	comp=Z,100nm,1.1s						
BR131	Keskin Array S	77.48	356	c iP	P	06 02 39.0	-1.3
BRTR	Keskin Array B	77.48	356	P	P	06 02 40.4	0.0
	comp=Z,20nm,0.8s,baz=28,slow=2.9,SNR=116						
	comp=Z,20nm,0.8s						
BRTR	Keskin Array B	77.48	356	P	P	06 02 39.7	-0.6
YOZ	Yozgat	77.51	355	P	P	06 02 40.7	+0.2
KBL	Kabul	77.59	327	P	P	06 02 40.0	-1.1
KBL				IAmb	IAmb	06 02 41.3	
	comp=Z,89nm,0.8s						
KBL	Kabul	77.59	327	P	P	06 02 40.0	-1.1
KBL				pmax	pmax		
	comp=Z,89nm,0.9s						
TIP	Timpagrande	77.63	10	⇑P	P	06 02 40.6	-0.5
TIP	Timpagrande	77.63	10	P	P	06 02 39.9	-1.2
PAYG	Puerto Ayora	77.76	117	eP	P	06 02 41.6	-0.3
JMU	Jammu	77.76	322	eP	P	06 02 42.3	+0.5
AFSR	Afar-Bala (An	77.77	357	P	P	06 02 42.6	+0.7
KOHI	KOHIMA	77.78	303	⇑iP	P	06 02 42.3	+0.1
SDV	Santo Domingo	77.78	95	LR	LR	06 39 57.9	
	comp=Z,65nm,18.7s,baz=350,slow=38						
SDV	Santo Domingo	77.78	95	P	P	06 02 42.8	+0.4
SDV	Santo Domingo	77.78	95	eP	P	06 02 36.8	-5.6
SDV	Santo Domingo	77.78	95	eP	P	06 02 43.1	+0.7
SVRH	Sivrihisar-ESK	77.81	358	P	P	06 02 42.3	+0.2
AUSIV	SIVRIHISAR	77.81	358	P	P	06 02 42.5	+0.4
KAMT	Kaman	77.83	356	P	P	06 02 41.6	-0.7
BNGB	Bingl	77.85	351	P	P	06 02 43.5	+1.1
ARPR	Arapgir-MALATY	77.90	353	P	P	06 02 35.8	-6.9
HELC	Santa Helena	77.96	100	eP	P	06 02 40.7	-2.9
BRRC	Barranca, Sant	77.96	98	eP	P	06 02 43.6	+0.4
CBOC	Ciudad Bolivar	78.03	101	eP	P	06 02 41.6	-2.1
AGG	Agios Georgios	78.11	5	P	P	06 02 43.0	-0.7
AGG	Agios Georgios	78.11	5	P	P	06 02 43.0	-0.7
AGG				pmax	pmax		
	comp=Z,26nm,1.0s						
PTBC	PUERTO BERRIO,	78.13	99	eP	P	06 02 41.6	-2.4
KULU	Kulu	78.18	357	P	P	06 02 42.9	-1.3
GURO	Guroymak-BITLI	78.18	350	P	P	06 02 45.0	+0.7
SERE	Sereflikochisa	78.26	356	P	P	06 02 43.9	-0.7
YAYX	Yaylak	78.26	356	P	P	06 02 45.3	+0.7
GUWA	GUWAHATI	78.26	305	⇑iP	P	06 02 44.7	0.0
BNN	Bunyan	78.27	355	P	P	06 02 40.3	-4.4
BNN	Bunyan	78.27	355	P	P	06 02 45.5	+0.7
GEVA	Gevas	78.33	349	P	P	06 02 45.8	+0.7
GTK	Tadong	78.36	308	⇑iP	P	06 02 46.6	+1.2
KIZT	Kizilcal	78.37	358	P	P	06 02 43.7	-1.5
CHEFC	Chefchaouen	78.39	28	P	P	06 02 47.0	+1.6
DARE	Darende-Malaty	78.47	353	P	P	06 02 47.2	+1.4
BHK	Bhakra	78.54	320	⇑iP	P	06 02 46.5	+0.4
SVRC	Sivrice-ELAZID	78.55	352	P	P	06 02 48.1	+1.8
SMLA	Simla	78.59	319	⇑iP	P	06 02 46.3	-0.1
SMLA				IAmb	IAmb	06 02 48.1	
	comp=Z,108nm,0.8s						
CHBY	Cihanbeyli	78.64	357	P	P	06 02 45.7	-1.0
IMP	Imphal	78.64	303	⇑iP	P	06 02 47.4	+0.5
SVAN	Silvan-Diyarba	78.64	350	P	P	06 02 47.9	+1.2
BARC	Barichara	78.66	98	eP	P	06 02 47.4	+0.2
MALT	Malatya	78.67	352	P	P	06 02 47.6	+0.7
SARI	SarD1z-Kayseri	78.69	354	P	P	06 02 48.1	+1.0
SHUT	Suhut-Afyon	78.71	359	P	P	06 02 47.4	+0.3
SHL	Shillong	78.76	305	⇑iP	P	06 02 47.5	-0.2
SHL				IAmb	IAmb	06 02 48.8	
	comp=Z,45nm,0.6s						
PLMC	San Jos del P	78.76	101	eP	P	06 02 44.5	-3.1
NORC	Norcasia	78.81	100	eP	P	06 02 47.4	-0.4
GULA	Gulagac	78.84	356	P	P	06 02 48.4	+0.6
JIRN	Jiri	78.90	311	eP	P	06 02 49.5	+0.9
	comp=Z,1µm,1.1s						
CLTB	Caltabellotta	78.90	13	P	P	06 02 47.9	-0.3
BAUV	El Baul	78.91	92	P	P	06 02 48.2	-0.2
DYBB	Diyarbakir	78.92	351	P	P	06 02 49.6	+1.4
SULT	Sultanhani-AKS	79.01	356	P	P	06 02 49.3	+0.6
LADK	Ladik-KONYA	79.03	357	P	P	06 02 49.1	+0.2
DDI	Dehra Dun	79.08	318	eP	P	06 02 49.4	+0.2
DDI				IAmb	IAmb	06 02 50.9	
	comp=Z,312nm,1.1s						
SPBC	San Pablo de B	79.09	99	eP	P	06 02 48.4	-1.0
KKN	Kakani	79.09	311	eP	P	06 02 50.0	+0.5
	comp=Z,183nm,0.8s						
PTH	Pithoragarh	79.13	316	⇑iP	P	06 02 49.2	-0.5
LGTI	Lohaghat	79.21	316	eP	P	06 02 50.0	+0.2
PKIN	Phulchoki	79.25	311	eP	P	06 02 50.8	+0.4
	comp=Z,215nm,0.9s						
PKI	Pulchoki	79.25	311	eP	P	06 02 50.8	+0.3
	comp=Z,493nm,1.1s						
KONT	Konya--Tatoy	79.29	357	P	P	06 02 50.6	+0.4
HRA	Herat	79.30	332	P	P	06 02 51.0	+0.5
HRA				IAmb	IAmb	06 02 52.5	
	comp=Z,115nm,1.1s						
DMN	Daman	79.32	311	eP	P	06 02 51.5	+0.7
	comp=Z,380nm,0.9s						
RUSC	La Rusia	79.32	98	eP	P	06 02 50.3	-0.8
MANU	Manus Island	79.34	243	P	P	06 02 50.9	+0.2
MAZI	Mazidag	79.39	351	P	P	06 02 51.7	+0.9
RAMN	Ramite	79.41	310	eP	P	06 02 51.6	+0.4
	comp=Z,660nm,1.1s						
YESY	Yesilyurt	79.42	356	P	P	06 02 51.8	+0.8
ISP	Isparta	79.44	359	P	P	06 02 50.7	-0.4
ISP	Isparta	79.44	359	P	P	06 02 51.2	+0.1
ISP	Isparta	79.44	359	P	P	06 02 51.2	+0.1
ISP				pmax	pmax		
	comp=Z,250nm,1.5s						
CMRD	Camardi-Nigde	79.49	355	P	P	06 02 52.4	+1.0
MARD	Mardin	79.51	350	P	P	06 02 52.6	+1.1
YOTC	Yotoco, Valle	79.55	102	eP	P	06 02 50.3	-1.6
KOZT	Kozan	79.64	354	P	P	06 02 52.7	+0.7
ROSC	El Rosal	79.70	100	P	P	06 02 54.3	+1.2
	comp=Z,28nm,1.0s,baz=89,slow=2.4,SNR=14						
ROSC				LR	LR	06 42 08.2	
	comp=Z,88nm,18.2s,baz=272,slow=38						
	comp=Z,28nm,1.0s						
ROSC	El Rosal	79.70	100	P	P	06 02 52.7	-0.4
ROSC	El Rosal	79.70	100	P	P	06 02 52.7	-0.4
ROSC				pmax	pmax		
	comp=Z,33nm,1.0s						
ROSC	El Rosal	79.70	100	eP	P	06 02 51.3	-1.8
JBK	JBK	79.71	26	P	P	06 02 54.0	+1.3
ITM	Ithomi	79.93	6	P	P	06 02 53.4	-0.3
ITM				IAmb	IAmb	06 02 54.0	
	comp=Z,42nm,0.8s						
VLK	Valmikinagar	80.01	312	eP	P	06 02 54.7	+0.6
ORTC	Ortega, Tolima	80.11	101	eP	P	06 02 51.3	-3.6
AZL	Aizawl	80.11	303	⇑iP	P	06 02 55.8	+0.9
CEYT	Ceyhan	80.11	354	P	P	06 02 53.6	-0.9
CHIC	Chingaza	80.15	99	eP	P	06 02 56.1	+0.6
KORT	Korkueli	80.26	359	P	P	06 02 52.8	-2.8
KEST	Kesra	80.29	16	P	P	06 02 55.4	-0.3
	comp=Z,37nm,1.0s,baz=231,slow=0.5,SNR=22						
	comp=Z,37nm,1.0s						
KEST	Kesra	80.29	16	P	P	06 02 55.6	0.0
SRHM	Skhour des Reh	80.34	31	P	P	06 02 57.0	+1.0
PPT	Papeete	80.38	179	LR	LR	06 31 18.6	
	comp=Z,148nm,21.4s,baz=318,slow=30						
PPT2	Papeete2	80.40	179	eS	S	06 12 53.9	+2.8
	comp=Z,127nm,25.5s						
PPT2	Papeete2	80.40	179	eLR	LR	06 28 10.3	
	comp=Z,364nm,31.8s,baz=6.2						
CZD	Col de Zad	80.45	28	P	P	06 02 58.3	+1.5
ELL	Elmali	80.52	359	P	P	06 02 56.8	-0.1
ELL	Elmali	80.52	359	P	P	06 02 56.8	-0.1
ELL				pmax	pmax		
	comp=Z,258nm,1.8s						
MDT	Midelt	80.75	28	P	P	06 02 58.6	+0.4
	comp=Z,27nm,1.1s,baz=163,slow=5.0,SNR=17						
	comp=Z,27nm,1.1s						
MDT	Midelt	80.75	28	P	P	06 02 58.9	+0.7
BELO	BELONIA	81.03	304	eP	P	06 03 00.9	+1.3
AKAS	Kas	81.03	359	P	P	06 02 58.9	-0.8
AKAS				IAmb	IAmb	06 03 00.1	
	comp=Z,78nm,1.1s						
AYAN	Aya Nagar	81.08	318	eP	P	06 02 59.9	0.0
SOTA	Rioblanco	81.08	103	eP	P	06 02 59.0	-1.5
PTGC	Puerto Gaitan,	81.25	98	eP	P	06 02 58.1	-2.8
SONA	Sohna	81.31	318	eP	P	06 03 00.8	-0.3
GARC	Garzon, Huila	81.53	102	eP	P	06 02 57.1	-5.6
KUDL	Kundal	81.59	319	eP	P	06 03 02.4	-0.1
GOLM	Goulmima	81.75	29	P	P	06 03 05.0	+1.5
IDI	Anoyia	81.92	3	⇓P	P	06 03 03.4	-0.9
IDI	Anoyia	81.92	3	P	P	06 03 02.8	-1.5
OTAV	Otavalo	81.96	105	P	P	06 03 05.8	+0.7
OTAV	Otavalo	81.96	105	P	P	06 03 05.9	+0.7
OTAV				pmax	pmax		
	comp=Z,60nm,1.9s						
OTAV	Otavalo	81.96	105	eP	P	06 03 04.8	-0.3
OTAV	Otavalo	81.96	105	eP	P	06 03 04.1	-1.0
CHTO	Chiang Mai	82.08	296	P	P	06 03 04.8	-0.4
CHTO				IAmb	IAmb	06 03 06.2	
	comp=Z,79nm,1.1s						
CHTO	Chiang Mai	82.08	296	P	P	06 03 04.8	-0.4
CHTO				pmax	pmax		
	comp=Z,79nm,1.2s						
CHTO	Chiang Mai	82.08	296	P	P	06 03 04.8	-0.4
	comp=Z,42nm,1.2s						
FIGM	Figuig	82.10	26	P	P	06 03 07.0	+1.6
CSS	Mathiatis	82.24	356	P	P	06 03 05.3	-0.6
CSS				IAmb	IAmb	06 03 08.4	
	comp=Z,52nm,1.1s						
DGTI	Dogotuki	82.34	208	P	P	06 03 07.8	+1.4
CM31	Chiang Mai Arr	82.40	296	P	P	06 03 07.2	+0.3
CMAR	Chiang Mai Arr	82.40	296	P	P	06 03 07.1	+0.2
	comp=Z,90nm,1.0s,baz=5.0,slow=6.0,SNR=291						
CMAR				PKKPbc	PKKPbc	06 21 32.1	+3.4
	comp=Z,1.4nm,0.5s,baz=229,slow=4.6,SNR=6.6						
CMAR				LR	LR	06 44 04.0	
	comp=Z,82nm,18.3s,baz=20,slow=39						
	comp=Z,90nm,1.0s						
UBPT	Khong Chiam	82.49	289	P	P	06 03 07.4	0.0
UBPT				IAmb	IAmb	06 03 08.9	
	comp=Z,102nm,1.1s						
BOK	Bokaro	82.55	309	⇑iP	P	06 03 07.9	+0.2
BOK				IAmb	IAmb	06 03 08.8	
	comp=Z,89nm,0.8s						
GENI	Genyem	82.84	250	P	P	06 03 11.3	+2.1
	comp=Z,2µmcomp=Z,35nm,0.5s						
GENI	Genyem	82.84	250	P	P	06 03 11.3	+2.1
	comp=Z,70nm,1.4s						
ZGR	Zagora	83.12	30	P	P	06 03 12.0	+1.3
JHNI	Jhansi	83.46	316	⇑iP	P	06 03 11.1	-1.2
AJM	Ajmer	83.70	320	eP	P	06 03 12.7	-0.8
JASL	Jaisalmer	84.34	323	eP	P	06 03 16.2	-0.5
SANVU	Saraoutou	84.73	220	P	P	06 03 19.6	+1.0
SWI	Sorong	85.20	259	P	P	06 03 21.4	+0.3
	comp=Z,53nm,1.4s						
BLSP	Bilaspur	85.39	312	eP	P	06 03 20.9	-1.2
MYLDM	Lahad Datu	85.63	273	P	P	06 03 24.0	+0.7
MYLDM				IAmb	IAmb	06 03 26.2	
	comp=Z,89nm,1.5s						
BHPL	Bhopal	85.89	316	⇑iP	P	06 03 23.7	-0.9
BHPL				IAmb	IAmb	06 03 26.2	
	comp=Z,73nm,1.1s						
PMG	Port Moresby	86.11	241	P	P	06 03 25.3	-0.3
PMG	Port Moresby	86.11	241	ceP	P	06 03 25.2	-0.3
PMG				pmax	pmax		
	comp=Z,27nm,1.0s						
PMG	Port Moresby	86.11	241	P	P	06 03 26.7	+1.2
	comp=Z,58nm,1.4s						
TBI	Tubuai	86.13	179	eS	S	06 13 47.5	-1.0
	comp=Z,116nm,28.5s						
TBI	Tubuai	86.13	179	eLR	LR	06 30 55.5	
	comp=Z,226nm,34.0s,baz=350						
EIL	Elat	87.46	355	P	P	06 03 31.9	-0.1
	comp=Z,23nm,0.9s,baz=79,slow=7.7						
EIL				LR	LR	06 47 33.2	
	comp=Z,52nm,19.4s,baz=282,slow=39						
	comp=Z,23nm,0.9s						
BOAV	Boa Vista	88.12	88	eP	P	06 03 35.0	-0.3
BOAV				epP	pP	06 04 10.8	+1.6
TOLI2	Tolitoli	88.19	269	P	P	06 03 34.8	-0.8
MRSI	Marisa	88.22	268	P	P	06 03 38.3	+2.5
	comp=Z,20nm,0.8s						
ATAH	Atahualpa	88.57	109	LR	LR	06 45 48.3	
	comp=Z,74nm,19.1s,baz=4.1,slow=37						
MDP	Montagnes des	89.29	80	LR	LR	06 41 42.9	
	comp=Z,64nm,21.5s,baz=18,slow=34						
DGPR	DIGLIPUR	89.59	299	⇑iP	P	06 03 42.5	+0.2
TBTG	Tabatinga, AM	89.69	100	eP	P	06 03 42.4	-0.2
TBTG				epP	pP	06 04 17.8	+1.2
SBUM	Sibu	90.89	277	P	P	06 03 47.6	-0.7
SBUM				IAmb	IAmb	06 03 52.1	
	comp=Z,18nm,1.0s						
HYBB	Hyderabad (bro	90.97	313	eP	P	06 03 47.7	-0.9
HYBB				epP	pP	06 04 23.3	+0.8
HYBB				esP	sP	06 04 37.5	+1.1
SRIT	Nakonsritamara	90.98	291	P	P	06 03 48.5	-0.2
CZSB	Cruzeiro do Su	91.59	104	eP	P	06 03 51.2	-0.2
KSM	Kuching	92.62	278	P	P	06 03 56.5	+0.3
KSM				IAmb	IAmb	06 03 57.9	
	comp=Z,66nm,1.8s						
RAYN	Ar Rayn	92.71	345	P	P	06 03 56.8	+0.1
RAYN				IAmb	IAmb	06 03 58.0	
	comp=Z,35nm,1.1s						
RAYN	Ar Rayn	92.71	345	P	P	06 03 56.8	+0.1
RAYN				pmax	pmax		
	comp=Z,35nm,1.2s						
MACA	Manacapuru-AM	92.96	91	eP	P	06 03 57.1	-0.7
STKI	Sintang	93.34	277	P	P	06 04 00.0	+0.4
	comp=Z,23nm,0.5s						
NNA	Nana	93.58	109	P	P	06 04 00.3	-0.3
NNA				IAmb	IAmb	06 04 01.1	
	comp=Z,18nm,0.8s						
NNA	Nana	93.58	109	ceP	P	06 04 01.2	+0.6
NNA				pmax	pmax		
	comp=Z,23nm,1.3s						
IPM	Ipoh	94.05	288	P	P	06 04 02.6	-0.3
IPM				IAmb	IAmb	06 04 04.1	
	comp=Z,22nm,1.1s						
MCPB	Macapa, AP	94.40	82	eP	P	06 04 04.0	-0.5
RPN	Rapa Nui	95.79	143	LR	LR	06 37 50.8	
	comp=Z,90nm,22.0s,baz=332,slow=29						

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ITTB  Itaituba            96.28  87 eP      P       06 04 12.2 -0.8
ETMB  Extrema             96.34  99 eP      P       06 04 11.5 -1.7
SALM  Salem               96.47 312 eP      P       06 04 13.8  0.0
WRA   Warramunga Arr     100.85 247 P       Pdif    06 04 32.5 -0.8
      comp=Z,2.5nm,0.9s,baz=39,slow=5.6,SNR=10
WRA                                 PP      PP      06 08 37.1 -5.8
      comp=Z,2.4nm,1.1s,baz=32,slow=7.7,SNR=4.0
WRA                                 PKiKP   PKiKP   06 08 57.2 -0.9
      comp=Z,1.4nm,0.8s,baz=8.5,slow=1.9,SNR=16
WRA                                 PKKPbc  PKKPbc  06 20 42.1 -0.6
      comp=Z,0.6nm,0.7s,baz=216,slow=2.7,SNR=5.2
WRA   Warramunga Arr     100.85 247         Pdif    06 04 32.4 -0.9
TORD  Torodi Ar. Bea     101.13  27 P       Pdif    06 04 32.7 -2.0
      comp=Z,0.5nm,0.6s,baz=318,slow=5.5,SNR=2.6
TORD                                PKKPbc  PKKPbc  06 20 42.9 +1.5
      comp=Z,4.7nm,0.7s,baz=155,slow=1.5,SNR=18
LPAZ  La Paz             101.20 104 P       Pdif    06 04 34.6 -0.9
      comp=Z,0.9nm,0.8s,baz=323,slow=7.9,SNR=4.6
LPAZ                                PP      PP      06 08 38.4 -7.8
      comp=Z,0.9nm,0.8s,baz=291,slow=8.6,SNR=2.4
LPAZ                                PKKP    PKKPdf  06 20 45.7 -2.6
      comp=Z,0.5nm,0.6s,baz=290,slow=1.4,SNR=3.9
ASAR  Alice Springs      104.34 246 Pdiff   Pdif    06 04 48.3 -0.4
      comp=Z,1.1nm,0.9s,baz=34,slow=4.5,SNR=7.8
ASAR                                PKiKP   PKiKP   06 09 04.2 -0.2
      comp=Z,2.5nm,0.8s,baz=33,slow=2.8,SNR=12
ASAR                                PKKPbc  PKKPbc  06 20 34.6 +2.0
      comp=Z,1.6nm,0.7s,baz=191,slow=2.3,SNR=9.6
STKA  Stephens Creek     108.59 236 PKiKP   PKiKP   06 09 11.7 -0.3
      comp=Z,5.2nm,0.9s,baz=34,slow=3.5,SNR=7.6
CPUP  Villa Florida      114.79  99 PKP     PKPdf   06 09 23.7 -0.2
      comp=Z,1.0nm,0.7s,baz=260,slow=2.9,SNR=5.6
KMBO  Kilima Mbogo       117.90 351 PKP     PKiKP   06 09 31.2 +0.5
      comp=Z,5.4nm,0.7s,baz=9.8,slow=5.0,SNR=9.8
LL04  Puerto Octay       120.85 120 PKPdf   PKPdf   06 09 34.8 -0.4
PLTB  Pedras Altas       121.11  99 PKPdf   PKPdf   06 09 35.8 -0.2
PLCA  Paso Flores        121.44 119 PKP     PKiKP   06 09 37.0 +0.5
      comp=Z,10nm,0.8s,baz=306,slow=3.1,SNR=46
PLCA                                SKP     SKPdf   06 13 00.5 +1.4
      comp=Z,3.3nm,0.7s,baz=352,slow=3.0,SNR=6.3
PLCA                                PKKPab  PKKPab  06 19 38.5 +2.1
      comp=Z,1.4nm,0.8s,baz=193,slow=5.5,SNR=5.0
PLCA  Paso Flores        121.44 119 PKPdf   PKiKP   06 09 36.7 +0.2
TRQA  Tornquist          122.73 110         PKPdf   06 09 38.6 -0.2
TRQA  Tornquist          122.73 110 PKIKP   PKPdf   06 09 38.7 -0.2
LL02  Futaleuf           123.01 121 PKPdf   PKPdf   06 09 39.3 +0.1
AY01  Puyuhuapi          123.74 122         PKiKP   06 09 40.7 -0.1
COYC  Coyhaique          124.92 123 PKPdf   PKPdf   06 09 42.7 -0.1
GO08  Villa O'Higgin     127.16 125 PKPdf   PKiKP   06 09 48.0 +0.4
MG05  Puerto Natales     129.82 127 PKPdf   PKPdf   06 09 52.2 +0.3
LSZ   Lusaka             132.26   1         PKPdf   06 09 58.1 +0.2
LSZ   Lusaka             132.26   1 PKIKP   PKPdf   06 09 58.1 +0.2
EFI   East Falkland      135.35 118 PKPdf   PKiKP   06 10 03.4 -0.5
EFI   East Falkland      135.35 118 PKIKP   PKiKP   06 10 03.4 -0.5
TSUM  Tsumeb             135.47  15 PKP     PKPdf   06 10 04.5 +0.6
      baz=26,slow=5.6
TSUM                                SKPbc   SKPbc   06 13 21.6 -0.9
      comp=Z,3.8nm,0.8s,baz=13,slow=5.6,SNR=5.7
TSUM  Tsumeb             135.47  15 PKPdf   PKPdf   06 10 03.2 -0.7
MATP  Matopo             137.38   1 PKP     PKPdf   06 10 07.8 +0.4
      comp=Z,13nm,1.1s,baz=0.8,slow=2.9,SNR=13
MATP                                PP      PP      06 12 52.5 -1.1
      comp=Z,12nm,1.2s,baz=1.4,slow=7.0,SNR=6.5
MATP                                SKPbc   SKPbc   06 13 27.7 -0.5
      comp=Z,2.7nm,0.5s,baz=357,slow=2.4,SNR=4.4
LBTB  Lobatse            141.89   5 PKhKP   PKPpre  06 10 10.9
      comp=Z,5.3nm,0.9s,baz=347,slow=3.2,SNR=7.6
LBTB                                SKPbc   SKPbc   06 13 40.4 +0.1
      comp=Z,3.2nm,0.7s,baz=318,slow=5.2,SNR=3.9
PMSA  Palmer Station     142.58 135 SKPbc   SKiKP   06 13 41.3 -0.4
      comp=Z,33nm,1.0s,baz=80,slow=1.8,SNR=4.2
VNDA  Vanda              143.28 195 PKP     PKPbc   06 10 14.1 +0.4
      comp=Z,19nm,1.0s,baz=335,slow=4.2,SNR=60
BOSA  Boshof             145.45   6 PKPbc   PKPdf   06 10 21.1 -0.5
      comp=Z,86nm,1.2s,baz=344,slow=3.4,SNR=42
HOPE  Hope Point         146.32 106         PKPbc   06 10 23.1 -0.3
HOPE  Hope Point         146.32 106 PKP2    PKPbc   06 10 23.1 -0.3
ORCD  Orcadas            146.96 120 PKPdf   PKPbc   06 10 24.9 -0.1
CASY  Casey              147.27 228 PKPdf   PKPdf   06 10 23.1 -0.1
CASY                                PKPbc   PKPbc   06 10 25.8  0.0
SUR   Sutherland         148.86  13 PKPbc   PKPbc   06 10 31.1 -0.1
      comp=Z,21nm,0.8s,baz=85,slow=0.1,SNR=26
SUR   Sutherland         148.86  13         PKPbc   06 10 31.9 +0.6
QSPA  South Pole Qui     152.88 180 PKP     PKPdf   06 10 30.0 -2.0
      comp=Z,13nm,1.0s,baz=272,slow=0.5,SNR=13
QSPA                                PKPbc   PKiKP   06 10 39.6  0.0
      comp=Z,21nm,0.7s,baz=260,slow=0.9,SNR=57
VNA3  Neumayer Olymp     163.24 136 PKPab   PKPab   06 11 36.1 +0.1
VNA3  Neumayer Olymp     163.24 136 PKPdf   PKPdf   06 10 41.5 -3.0
VNA3  Neumayer Olymp     163.24 136 pPKPab  pPKPab  06 12 11.0 +0.8
VNA1  Neumayer--Stat     163.79 134 PKPdf   PKPdf   06 10 41.9 -3.0
SNAA  Sanae              165.25 139 PKPab   PKPab   06 11 44.8 -0.1
SNAA  Sanae              165.25 139 PKPdf   PKPdf   06 10 41.3 -5.1
SNAA  Sanae              165.25 139 PKP     PKPdf   06 10 40.9 -5.4
      comp=Z,4.6nm,1.1s,baz=323,slow=6.1,SNR=5.1
SNAA                                PKPab   PKPab   06 11 45.2 +0.4
      comp=Z,3.6nm,1.0s,baz=225,slow=5.8,SNR=3.6
MAW   Mawson             165.28 237 PKP     PKPdf   06 10 44.8 -1.5
      comp=Z,7.4nm,1.0s,baz=32,slow=1.7,SNR=9.3
MAW                                 PKPab   PKPab   06 11 44.6 -0.3
      comp=Z,4.8nm,0.8s,baz=150,slow=3.1,SNR=5.0
MAW   Mawson             165.28 237         PKPdf   06 10 45.4 -0.9
MAW   Mawson             165.28 237 PKIKP   PKPdf   06 10 45.4 -0.9
TROLL Troll, Antarti     166.64 143 PKPab   PKPab   06 11 51.4 +0.3
TROLL Troll, Antarti     166.64 143 PKPdf   PKPdf   06 10 43.1 -4.5
TROLL Troll, Antarti     166.64 143 sPKPab  sPKPab  06 12 40.8 +1.5
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IDC ***15*** *06:24:12.2±0.8, 14°.40S×166°.78E, h0^{km}, mb4.4/17, mbtmp4.4/18, ML4.9/1, MS3.9/37 Error ellipse: s-maj=26.6km s-min=14.7km az=104.0*

NEIC ***15*** *06:24:15.6±1.9, 14°.36S±0°.09×167°.0E±0°.1, h21^{km}±5^{km}, mb4.8/48, Error ellipse: s-maj=19.9km s-min=12.3km az=82.0*

GCMT ***15*** *06:24:17.6±0.3, 14°.25S±0°.02×166°.52E±0°.02, h12^{km}, MW4.8/70, Moment Tensor Solution. s9,c9; s70,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.06±.08; M$_{\theta\theta}$-1.49±.07; M$_{\phi\phi}$1.55±.08; M$_{r\theta}$-0.08±.22; M$_{\theta\phi}$0.74±.07; M$_{\phi r}$0.09±.23; Best double couple: M$_0$1.69700×10^{16} NP1:ϕ_s58.00000°, δ86.00000°, λ-1.00000°. NP2: ϕ_s148.00000°, δ89.00000°, λ-176.00000°. Principal axes: T 1.7250, Plg2.0000°, Azm283.0000°; N -0.0580, Plg86.0000°, Azm159.0000°; P -1.6680, Plg3.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 06:24:14.4±0.4**, 14°.39S**±0°.05×**166°.81E**±0°.09**, h10**^{km}**, n127, σ1s.71**/93**, mb4.7**/49**, MS4.0**/38**, 1C-1D, Vanuatu Islands**

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Code  Station Name        Δ°   AZ°  Phase ID           Time      Res
                                    Op      ISC     h  m  s     ISC
SANVU Saraoutou           1.12 160          Pb      06 24 34.6 -1.2
LIFNC LIFOU               6.37 176 Pn       Pn      06 25 47.2 -1.1
MARNC Mare, Loyalty       7.15 171 Pn       Pn      06 26 00.7 +1.6
DZM   Mont Dzumac         7.65 183 Pn       Pn      06 26 06.3 +0.3
      17nm,0.3s,baz=8.2,slow=18,SNR=60
DZM                                Sn       Sn      06 27 31.4 -1.4
      7.1nm,0.3s,baz=138,slow=19,SNR=2.0
      36nm,0.4s
DZM   Mont Dzumac         7.65 183 ePn      Pn      06 26 06.7 +0.7
      172nm,1.1s
DZM                                eSn      Sn      06 27 37.2 +4.4
      126nm,1.1s
DZM                                eLR      LR      06 27 59.7
DZM   Mont Dzumac         7.65 183 Pn       Pn      06 26 06.6 +0.5
ONTNC Ouen Toro           7.88 182 Pn       Pn      06 26 10.1 +0.9
OUENC Ouen Island, N      7.99 180          Pn      06 26 11.6 +1.0
PINNC Pines Island,       8.20 176 Pn       Pn      06 26 14.9 +1.4
HNR   Honiara             8.33 306 LR       LR      06 29 12.8
      comp=Z,851nm,19.9s,baz=118,slow=36
KRVT  Keravat (AS076     17.68 303 LR       LR      06 35 20.2
      comp=Z,399nm,19.5s,baz=258,slow=38
EIDS  Eidsvold           18.37 231 P        Pn      06 28 30.5 +1.1
CTA   Charters Tower     20.43 251 P        P       06 28 51.8 -0.2
      14nm,1.0s,baz=87,slow=12,SNR=8.0
      14nm,1.0s
CTAO  Charters Tower     20.43 251 P        P       06 28 52.0  0.0
CTAO                               IAmb     IAmb    06 28 59.3
      comp=Z,28nm,0.9s
RAO   Raoul Island       20.45 139 LR       LR      06 35 14.3
      comp=Z,473nm,22.0s,baz=316,slow=32
AFI   Afiamalu           20.77  91 LR       LR      06 35 11.4
      comp=Z,177nm,19.0s,baz=250,slow=32
ARMA  Armidale           21.21 219 P        P       06 29 01.4 +0.9
OUZ   Omahuta            21.62 165 P        P       06 29 06.8 +2.1
OUZ                                IAmb     IAmb    06 29 21.2
      comp=Z,33nm,1.0s
PATS  Pohnpei            22.71 338 P        P       06 29 21.9 +5.4
COEN  Coen               22.92 268 P        P       06 29 20.2 +1.3
COEN                               IAmb     IAmb    06 29 30.5
      comp=Z,22nm,1.1s
URZ   Urewera            25.46 161 P        P       06 29 46.7 +4.0
      comp=Z,5.8nm,0.6s,baz=342,slow=6.4,SNR=2.2
URZ   Urewera            25.46 161 IAmb     IAmb    06 30 01.0
      comp=Z,23nm,0.9s
BKZ   Black Stump Fm     26.11 163 P        P       06 29 50.4 +1.8
BKZ                                IAmb     IAmb    06 30 13.8
      comp=Z,31nm,1.5s
CAN   Canberra           26.29 214 P        P       06 29 50.2 -0.1
CAN                                IAmb     IAmb    06 29 57.5
      comp=Z,40nm,1.5s
STKA  Stephens Creek     28.88 229 P        P       06 30 13.0 -0.5
      comp=Z,4.9nm,0.5s,baz=50,slow=10,SNR=9.9
STKA                               LR       LR      06 41 42.9
      comp=Z,448nm,18.5s,baz=54,slow=36
      comp=Z,4.9nm,0.5s
STKA  Stephens Creek     28.88 229 P        P       06 30 13.4  0.0
RPZ   Rata Peaks         29.45 174 LR       LR      06 40 32.5
      comp=Z,279nm,20.3s,baz=318,slow=33
WB0   Warramunga Arr     31.42 256 P        P       06 30 33.7 -2.4
WB0                                IAmb     IAmb    06 30 34.2
      comp=Z,6.9nm,0.6s
WB2   Warramunga Arr     31.47 255 P        P       06 30 34.1 -2.4
WRAB  Tennant Creek      31.47 255 P        P       06 30 34.3 -2.2
WRA   Warramunga Arr     31.48 255 P        P       06 30 33.9 -2.8
      comp=Z,2.5nm,0.6s,baz=86,slow=9.4,SNR=35
WRA                                LR       LR      06 42 30.9
      comp=Z,415nm,18.9s,baz=52,slow=35
      comp=Z,2.5nm,0.6s
WRA   Warramunga Arr     31.48 255 P        P       06 30 33.5 -3.1
AS31  Alice Springs      32.38 248 P        P       06 30 42.4 -2.2
ASAR  Alice Springs      32.38 248 P        P       06 30 42.0 -2.5
      comp=Z,2.8nm,0.7s,baz=74,slow=9.3,SNR=46
ASAR                               PcP      PcP     06 33 30.9 -1.4
      comp=Z,0.4nm,0.6s,baz=72,slow=3.0,SNR=1.7
ASAR                               LR       LR      06 42 24.0
      comp=Z,262nm,18.4s,baz=96,slow=34
      comp=Z,2.8nm,0.7s
ASAR  Alice Springs      32.38 248 P        P       06 30 42.8 -1.8
RAR   Rarotonga          32.48 107 LR       LR      06 41 09.3
      comp=Z,211nm,21.4s,baz=252,slow=31
BBOO  Buckleboo          33.44 231 P        P       06 30 53.8 +0.1
MTN   Manton Dam         34.69 268 P        P       06 31 04.3 -0.4
GUMO  Guam               35.28 321 LR       LR      06 46 36.9
      comp=Z,234nm,18.1s,baz=138,slow=38
KNRA  Kununurra          36.74 263 P        P       06 31 20.4 -1.8
KNRA                               IAmb     IAmb    06 31 20.8
      comp=Z,19nm,0.9s
SIJI  Sorong             37.62 288 LR       LR      06 46 54.8
      comp=Z,226nm,20.0s,baz=307,slow=36
FORT  Forrest            39.09 239 P        P       06 31 40.9 -1.1
PPT2  Papeete2           41.98 100 eLR      LR      06 43 51.1
      comp=Z,341nm,27.0s,baz=271
SANI  Sanana             42.13 283 P        P       06 32 05.8 -1.5
      comp=Z,17nm,0.9s
TBI   Tubuai             42.19 109 eLR      LR      06 43 59.0
      comp=Z,430nm,27.2s,baz=284
BATI  Baumata            42.32 271 LR       LR      06 49 14.9
      comp=Z,364nm,19.0s,baz=126,slow=36
MBWA  Marble Bar         45.21 254 P        P       06 32 31.1 -0.9
MBWA                               IAmb     IAmb    06 32 42.3
      comp=Z,11nm,0.9s
DAV   Davao City (W)     46.13 295 LR       LR      06 50 27.1
      comp=Z,42nm,20.3s,baz=226,slow=34
KAPI  Kappang            47.23 277 LR       LR      06 52 31.7
      comp=Z,79nm,18.8s,baz=100,slow=36
MORW  Morawa             49.02 244 P        P       06 33 00.9 -0.8
GIRL  Giralia            50.32 252 P        P       06 33 11.1 -0.6
MYLDM Lahad Datu         51.70 289 P        P       06 33 21.7 -0.5
MYLDM                              IAmb     IAmb    06 33 34.1
      comp=Z,29nm,1.5s
TAOE  Nuku Hiva Isla     52.15  90 eLR      LR      06 48 17.7
      comp=Z,226nm,24.6s
JOW   Kunigami           55.50 318 LR       LR      06 55 21.5
      comp=Z,80nm,20.4s,baz=72,slow=34
SBUM  Sibu               56.60 283 P        P       06 33 56.1 -1.9
MJAR  Matsushiro Arr     57.40 333 P        P       06 34 01.4 -1.8
      comp=Z,8.8nm,1.1s,baz=163,slow=8.3,SNR=8.9
      comp=Z,8.8nm,1.1s
MJAR  Matsushiro Arr     57.40 333 P        P       06 34 03.5 +0.2
MJAR                               IAmb     IAmb    06 34 09.2
      comp=Z,5.3nm,0.9s
MAJO  Matsushiro         57.40 333 P        P       06 34 02.2 -1.0
MAJO                               IAmb     IAmb    06 34 09.5
      comp=Z,16nm,1.1s
MJB9  Matsu-Tunnel       57.41 333 P        P       06 34 02.2 -1.0
MJB9                               IAmb     IAmb    06 34 09.4
      comp=Z,15nm,1.0s
JNU   Nakatsue           58.39 325 P        P       06 34 10.4 +0.1
      comp=Z,15nm,0.9s,baz=180,slow=20,SNR=4.6
      comp=Z,15nm,0.9s
ASAJ  Asahikawa          62.28 341 P        P       06 34 36.6  0.0
      comp=Z,4.5nm,0.6s,baz=210,slow=8.9,SNR=5.3
ASAJ                               LR       LR      06 58 40.3
      comp=Z,68nm,21.0s,baz=158,slow=33
      comp=Z,4.5nm,0.6s
VNDA  Vanda              63.19 181 P        P       06 34 42.5 +0.3
      comp=Z,2.0nm,0.8s,baz=19,slow=6.5,SNR=12
VNDA                               LR       LR      06 58 38.2
      comp=Z,95nm,20.4s,baz=4.5,slow=33
      comp=Z,2.0nm,0.8s
VNDA  Vanda              63.19 181 P        P       06 34 43.2 +0.9
VNDA                               IAmb     IAmb    06 34 53.5
      comp=Z,6.0nm,0.9s
KSRS  Korea Array        63.21 326 P        P       06 34 43.0  0.0
      comp=Z,2.0nm,0.8s,baz=144,slow=7.7,SNR=7.1
      comp=Z,2.0nm,0.8s
SBA   Scott Base         63.47 180 P        P       06 34 43.5 -0.6
CASY  Casey              63.67 202 P        P       06 34 45.1 -0.6
CASY                               IAmb     IAmb    06 34 53.4
      comp=Z,6.1nm,0.9s
NJ2   Nanjing            65.13 316 eP       P       06 34 58.4 +2.7
NJ2                                pmax     pmax
      comp=Z,5.0nm,0.5s
USRK  Ussuriysk Ar.      66.39 333 P        P       06 35 04.5 +1.0
      comp=Z,9.7nm,1.0s,baz=177,slow=7.9,SNR=9.5
      comp=Z,9.7nm,1.0s
SHEM  Shemya Is, Ala     67.14   5 LR       LR      06 58 03.0
      comp=Z,103nm,21.9s,baz=144,slow=30
PETK  Petropavlovsk-     67.68 354 P        P       06 35 10.5 -1.1
      comp=Z,3.7nm,0.8s,baz=177,slow=12,SNR=3.7
PETK                               LR       LR      06 59 01.1
      comp=Z,97nm,21.1s,baz=155,slow=31
      comp=Z,3.7nm,0.8s
MDJ   Mudanjiang         67.78 332 P        P       06 35 15.4 +3.0
MDJ                                pmax     pmax
      comp=Z,13nm,1.2s
MDJ                                pmax     pmax
      comp=Z,100nm,3.9s
BNX   BinXian            69.63 332 ⇓P       P       06 35 25.9 +2.0
BNX                                pmax     pmax
      comp=Z,20nm,1.2s
BNX                                pmax     pmax
      comp=Z,120nm,7.9s
KLR   Kul'dur            70.52 336 P        P       06 35 29.1 -0.3
      comp=Z,1.6nm,0.7s,baz=156,slow=12,SNR=3.9
      comp=Z,1.6nm,0.7s
BJI   Beijing            71.73 321 P        P       06 35 40.1 +3.3
BJI                                pmax     pmax
      comp=Z,5.0nm,1.0s
XAN   Xi'an              73.14 313 P        P       06 35 48.3 +2.8
XAN                                pP       PcP     06 36 00.3 -1.8
XAN                                pmax     pmax
      comp=Z,4.0nm,1.0s
CMAR  Chiang Mai Arr     74.41 294 P        P       06 35 55.4 +2.2
      comp=Z,3.3nm,0.8s,baz=108,slow=3.5,SNR=7.2
MA2   Magadan            74.85 352 LR       LR      07 02 39.6
      comp=Z,56nm,21.9s,baz=198,slow=31
HHC   Hu-ho-hao-te       75.04 320 eP       P       06 35 58.8 +2.3
HHC                                pmax     pmax
      comp=Z,23nm,1.0s
HHC                                pmax     pmax
      comp=Z,150nm,4.6s
PZH   PanZhiHua          75.14 303 P        P       06 35 59.0 +1.6
PZH                                pmax     pmax
      comp=Z,10.0nm,0.7s
PZH                                pmax     pmax
      comp=Z,100nm,7.3s
QSPA  South Pole Qui     75.64 180 LR       LR      07 07 20.2
      comp=Z,76nm,18.1s,baz=31,slow=34
QSPA  South Pole Qui     75.64 180 P        P       06 35 59.3 -0.3
LZH   Lanzhou            77.77 312 eP       P       06 36 17.4 +5.2
LZH                                pP       PcP     06 36 22.3 +0.1
LZH                                sP       pwP     06 36 24.8 +7.4
LZH                                pmax     pmax
      comp=Z,19nm,1.3s
SEY   Seymchan           77.89 353 P        P       06 36 11.1 -0.9
      comp=Z,2.1nm,0.6s,baz=153,slow=9.0,SNR=5.3
SEY                                LR       LR      07 06 19.8
      comp=Z,89nm,20.1s,baz=147,slow=32
      comp=Z,2.1nm,0.6s
KDAK  Kodiak Island      79.31  21 LR       LR      07 06 10.9
      comp=Z,108nm,19.2s,baz=237,slow=32
ULN   Ulaanbaatar        81.60 324 P        P       06 36 33.7 +1.0
SONM  Songino Array      81.96 324 P        P       06 36 35.1 +0.5
      comp=Z,1.2nm,0.7s,baz=132,slow=4.4,SNR=6.6
      comp=Z,1.2nm,0.7s
SONM  Songino Array      81.96 324 P        P       06 36 33.4 -1.2
MAW   Mawson             82.03 202 LR       LR      07 07 54.0
      comp=Z,102nm,21.4s,baz=90,slow=32
GTA   Gaotai             82.11 314 ⇑P       P       06 36 43.3 +7.7
GTA                                sP       PcP     06 36 55.5  +14
GTA                                pmax     pmax
      comp=Z,9.0nm,0.8s
BILL  Bilibino           82.20 360 P        P       06 36 34.1 -1.1
BILL                               IAmb     IAmb    06 36 34.7
      comp=Z,7.3nm,0.7s
O22K  Cooper Landing     82.31  20 P        P       06 36 35.4 -0.5
IMAR  Indian Mountai     85.36  15 P        P       06 36 51.0 -0.5
YBH   Yreka Blue Hor     85.49  45 LR       LR      07 06 14.8
      comp=Z,34nm,21.5s,baz=246,slow=30
WRH   Wood River Hil     85.77  18 IAmb     IAmb    06 37 17.3
      comp=Z,3.9nm,0.9s
HDA   Harding Lake       86.06  18 IAmb     IAmb    06 37 19.1
      comp=Z,7.9nm,0.9s
MDM   Murphy Dome        86.08  18 P        P       06 36 53.5 -1.6
MDM                                IAmb     IAmb    06 37 18.8
      comp=Z,6.1nm,1.1s
IL31                     86.34  18 P        P       06 36 54.2 -2.0
ILAR  Eielson Array      86.34  18 P        P       06 36 54.0 -2.3
      comp=Z,1.8nm,0.7s,baz=246,slow=5.0,SNR=18
ILAR                               LR       LR      07 11 10.5
      comp=Z,77nm,19.6s,baz=248,slow=33
      comp=Z,1.8nm,0.7s
ILAR  Eielson Array      86.34  18 P        P       06 36 54.9 -1.4
J25K  Salcha River,      86.69  19 IAmb     IAmb    06 37 20.4
      comp=Z,2.9nm,0.7s
BBB   Bella Bella        86.74  34 LR       LR      07 07 54.6
      comp=Z,83nm,20.9s,baz=272,slow=30
BELA  Belgrano 2         87.09 176 P        P       06 36 59.0 -1.0
BELA                               IAmb     IAmb    06 37 05.6
      comp=Z,7.5nm,0.9s
PFO   Pinyon Flats O     87.16  54 LR       LR      07 07 29.1
      comp=Z,72nm,21.6s,baz=205,slow=30
TOLK  Toolik Lake Re     88.44  15 IAmb     IAmb    06 37 35.1
      comp=Z,3.0nm,0.9s
WVOR  Wild Horse Val     88.56  46 P        P       06 37 06.6 -1.1
WVOR                               IAmb     IAmb    06 37 07.9
      comp=Z,3.5nm,0.9s
DLBC  Dease Lake         88.85  28 LR       LR      07 12 51.9
      comp=Z,46nm,18.4s,baz=268,slow=33
LPIG  La Paz             89.46  65 LR       LR      07 11 55.9
      comp=Z,41nm,18.2s,baz=212,slow=32
ELK   Elko               90.39  48 LR       LR      07 12 48.7
      comp=Z,42nm,18.9s,baz=240,slow=32
NEW   Newport            91.59  40 LR       LR      07 15 10.2
      comp=Z,33nm,18.0s,baz=139,slow=33
WMQ   Urumqi             92.18 315 eP       P       06 37 25.3 +0.8
PMSA  Palmer Station     92.23 161 LR       LR      07 12 47.2
      comp=Z,70nm,19.7s,baz=182,slow=32
INK   Inuvik             92.71  19 LR       LR      07 12 43.3
      comp=Z,78nm,21.4s,baz=220,slow=31
TROLL Troll, Antarti     93.16 185 P        P       06 37 29.0 +0.3
SNAA  Sanae              93.86 183 P        P       06 37 30.7 -1.2
SNAA  Sanae              93.86 183 LR       LR      07 18 26.1
      comp=Z,94nm,18.1s,baz=151,slow=35
SNAA  Sanae              93.86 183 P        P       06 37 31.0 -0.8
VNA3  Neumayer Olymp     94.54 181 P        P       06 37 34.7 -0.2
PDAR  Pinedale Array     95.04  47 LR       LR      07 11 24.0
      comp=Z,27nm,21.7s,baz=266,slow=30
MK31  Makanchi Array     96.66 316 P        P       06 37 43.1 -1.8
MK31                               IAmb     IAmb    06 37 52.0
      comp=Z,2.9nm,1.2s
MKAR  Makanchi Array     96.66 316 P        P       06 37 44.4 -0.5
      comp=Z,0.6nm,0.7s,baz=88,slow=8.9,SNR=4.3
      comp=Z,0.6nm,0.7s
ZALV  Zalesovo Beam      96.86 324 P        P       06 37 47.4 +1.8
      comp=Z,1.2nm,0.5s,baz=116,slow=6.6,SNR=4.2
YKA   Yellowknife Ar     97.45  27 P        P       06 37 46.1 -1.9
      comp=Z,0.3nm,0.8s,baz=258,slow=4.6,SNR=5.5
YKA                                LR       LR      07 15 06.0
      comp=Z,41nm,21.7s,baz=318,slow=31
      comp=Z,0.3nm,0.8s
ARCES ARCESS Array B    119.81 345 PKP      PKPdf   06 43 03.0 -1.4
      comp=Z,1.4nm,0.5s,baz=45,slow=1.5,SNR=8.5
FINES FINESS Array B    125.25 338 PKP      PKPdf   06 43 14.2 -0.8
      comp=Z,1.3nm,0.7s,baz=70,slow=4.6,SNR=1.6
KEST  Kesra             150.67 320 PKPbc    PKiKP   06 44 10.6 +2.5
      comp=Z,7.7nm,0.9s,baz=301,slow=5.1,SNR=6.6
ESDC  Sonseca Array     153.54 344 PKPbc    PKiKP   06 44 16.5 +2.6
      comp=Z,0.5nm,0.6s,baz=5.1,slow=4.5,SNR=5.9
TORD  Torodi Ar. Bea    165.49 267 PKP      PKPdf   06 44 20.8 +0.5
      comp=Z,0.8nm,0.9s,baz=74,slow=3.7,SNR=3.6
TORD                               PKPab    PKPab   06 45 17.9 -0.8
      comp=Z,0.3nm,0.5s,baz=81,slow=5.0,SNR=4.0
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NEIC ***15*** *06:36:17.3±2.7, 20°.6S±0°.1×177°.4W±0°.1, h305^{km}±9^{km}, mb4.1/28, Error ellipse: s-maj=22.7km s-min=16.6km az=136.0*

NOU ***15*** *06:36:18.5, 20°.85S×177°.09W, h324^{km}, mb4.4/10, Fiji Islands Region*

IDC ***15*** *06:36:30.1±7.9, 20°.64S×177°.77W, h438^{km}±90^{km}, mb3.1/9, mbtmp4.0/10, Error ellipse: s-maj=38.3km s-min=26.9km az=136.0*

ISC 15 06:36:16.6±0.6**, 20°.7S**±0°.1×**177°.34W**±0°.08**, h300**^{km}**, n55, σ1s.26**/54**, mb4.0**/22**, Fiji Islands region**

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Code  Station Name        Δ°   AZ°  Phase ID           Time      Res
                                    Op      ISC     h  m  s     ISC
DGTI  Dogotuki            5.15 327 P        Pn      06 37 41.3 +5.3
NIUE  Niue                7.15  79          Pn      06 38 00.8 +0.9
NIUE  Niue                7.15  79 P        Pn      06 38 00.5 +0.6
AFI   Afiamalu            8.56  39          Pn      06 38 16.2 -1.0
MARNC Mare, Loyalty      13.69 264 P        Pn      06 39 23.3 +3.8
PINNC Pines Island,      14.28 259 P        P       06 39 25.3 -0.5
OUENC Ouen Island, N     14.83 260 P        P       06 39 32.9 +1.1
DZM   Mont Dzumac        15.18 262 P        Pn      06 39 38.6 +1.3
      6.6nm,0.7s,baz=104,slow=18,SNR=7.3
DZM   Mont Dzumac        15.18 262 P        P       06 39 35.3 -0.5
DZM                                IAmb     IAmb    06 39 41.8
      comp=Z,12nm,1.0s
DZM   Mont Dzumac        15.18 262 P        Pn      06 39 39.6 +2.3
ONTNC Ouen Toro          15.18 261 P        Pn      06 39 37.0 -0.3
OUZ   Omahuta            16.56 207 P        P       06 39 51.2 +0.6
OUZ   Omahuta            16.56 207 P        P       06 39 50.9 +0.3
URZ   Urewera            18.19 194 P        P       06 40 07.2 -1.0
HIZ   Hauiti             19.03 199 P        P       06 40 16.7 -0.5
BKZ   Black Stump Fm     19.19 195 P        P       06 40 18.2 -0.8
QRZ   Quartz Range       21.88 201 P        P       06 40 44.7 -0.7
KHZ   Kahutara           23.01 197 P        P       06 40 53.5 -2.2
ARMA  Armidale           29.56 245 P        P       06 41 55.7 +1.3
ARMA                               IAmb     IAmb    06 41 56.5
      comp=Z,6.0nm,1.1s
CAN   Canberra           32.94 236 P        P       06 42 24.4 +0.6
CTAO  Charters Tower     34.09 264 P        P       06 42 34.0 +0.2
TOO   Toolangi           36.31 234 P        P       06 42 52.0 -0.3
STKA  Stephens Creek     38.28 244 P        P       06 43 08.9  0.0
      comp=Z,3.6nm,0.8s,baz=92,slow=6.1,SNR=5.0
      comp=Z,3.6nm,0.8s
STKA  Stephens Creek     38.28 244 P        P       06 43 08.0 -1.0
BBOO  Buckleboo          43.03 244 P        P       06 43 46.1 -1.4
BBOO                               IAmb     IAmb    06 43 54.5
      comp=Z,25nm,1.4s
WR0   Warramunga Arr     45.00 262 P        P       06 44 01.6 -1.7
WR0                                IAmb     IAmb    06 44 23.2
      comp=Z,7.2nm,1.3s
AS31  Alice Springs      45.09 257 P        P       06 44 03.0 -0.9
ASAR  Alice Springs      45.09 257 P        P       06 44 02.8 -1.1
      comp=Z,1.7nm,0.5s,baz=94,slow=8.3,SNR=27
      comp=Z,1.7nm,0.5s
ASAR  Alice Springs      45.09 257 P        P       06 44 02.5 -1.4
WB0   Warramunga Arr     45.17 262 P        P       06 44 03.0 -1.6
WB2   Warramunga Arr     45.18 262 P        P       06 44 02.9 -1.7
WB2                                IAmb     IAmb    06 44 08.9
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	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	45.19	262	P	P	06 44 03.1	-1.6
	comp=Z,0.9nm,0.3s,baz=96,slow=7.7,SNR=42						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	45.19	262	P	P	06 44 02.9	-1.9
FORT	Forrest	49.80	247	P	P	06 44 38.6	-1.2
KNRA	Kununurra	51.27	266	P	P	06 44 50.0	-0.9
SBA	Scott Base	57.76	184	P	P	06 45 37.8	+1.6
VNDA	Vanda	57.81	185	P	P	06 45 36.9	+0.3
	comp=Z,0.4nm,0.6s,baz=0.1,slow=6.3,SNR=2.1						
	comp=Z,0.4nm,0.6s						
VNDA	Vanda	57.81	185	P	P	06 45 37.2	+0.5
QSPA	South Pole Qui	69.41	180	P	P	06 46 51.9	-0.4
QSPA				IAmb	IAmb	06 47 10.5	
	comp=Z,6.1nm,1.4s						
BELA	Belgrano 2	79.32	173	P	P	06 47 47.6	-1.2
BELA				IAmb	IAmb	06 48 11.5	
	comp=Z,4.1nm,1.3s						
YBH	Yreka Blue Hor	80.03	38	P	P	06 47 54.6	+1.4
	comp=Z,1.6nm,0.8s,baz=170,slow=6.1,SNR=7.8						
	comp=Z,1.6nm,0.8s						
YBH	Yreka Blue Hor	80.03	38	P	P	06 47 54.5	+1.4
YBH				IAmb	IAmb	06 47 55.3	
	comp=Z,1.8nm,0.8s						
NVAR	Mina Array Bea	80.72	43	P	P	06 47 58.0	+0.9
	comp=Z,0.7nm,0.8s,baz=205,slow=6.0,SNR=3.7						
	comp=Z,0.7nm,0.8s						
PINE	Pine Mountain	82.33	37	P	P	06 48 06.2	+0.9
PINE				IAmb	IAmb	06 48 08.0	
	comp=Z,5.6nm,1.1s						
I07A	Izee	83.33	38	P	P	06 48 11.6	+1.2
I07A				IAmb	IAmb	06 48 12.2	
	comp=Z,3.7nm,0.9s						
U15A	North Rim	83.61	47	P	P	06 48 13.6	+1.5
U15A				IAmb	IAmb	06 48 14.4	
	comp=Z,2.6nm,0.8s						
G08A	Pilot Rock	84.37	37	P	P	06 48 15.9	+0.3
G08A				IAmb	IAmb	06 48 17.2	
	comp=Z,1.9nm,0.9s						
F10A	Beach Ranch, E	85.75	37	P	P	06 48 22.5	+0.2
F10A				IAmb	IAmb	06 48 23.7	
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	86.62	57	P	P	06 48 28.0	+1.1
	comp=Z,0.4nm,0.8s,baz=203,slow=4.8,SNR=3.6						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	86.62	57	P	P	06 48 27.4	+0.4
CCB	Clear Creek Bu	88.04	12	P	P	06 48 31.4	-1.2
CCB				IAmb	IAmb	06 48 31.9	
	comp=Z,1.4nm,0.6s						
IMAR	Indian Mountai	88.21	9	P	P	06 48 32.0	-1.5
ILAR	Eielson Array	88.33	13	P	P	06 48 32.7	-1.4
	comp=Z,0.2nm,0.4s,baz=229,slow=5.6,SNR=7.0						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	88.65	43	P	P	06 48 36.6	+0.2
	comp=Z,0.5nm,0.6s,baz=186,slow=4.5,SNR=3.7						
	comp=Z,0.5nm,0.6s						
BOZ	Bozeman (W)	88.81	40	P	P	06 48 38.3	+1.3
BOZ				IAmb	IAmb	06 48 38.6	
	comp=Z,1.5nm,0.8s						

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*IDC **15** 06:38:07.7±2.6, 8.°39S×74.°70W, h128^{km}±35^{km}, mb3.5/2, mbtmp4.0/6, Error ellipse: s-maj=58.1km s-min=14.0km az=39.0*

*VAO **15** 06:38:15.4±1.3, 8.°58S×74.°11W, h132^{km}±6^{km}, mbR3.7*

ISC 15 06:38:08.7±0.7**, 8.°50S**±0.°08×**74.°75W**±0.°07**, h136^{km}, n20, σ1.^{s}40**/22**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.17	69	*e*P	Pn	06 38 45.6	+0.6
ATAH	Atahualpa	3.86	290	P	Pn	06 39 07.7	+0.5
	45nm,0.3s,baz=351,slow=3.5,SNR=108						
ATAH				S	Sn	06 39 51.4	-0.9
	51nm,0.5s,baz=19,slow=13,SNR=12						
NNA	Nana	4.03	211	P	Pn	06 39 09.5	+0.4
	24nm,0.4s,baz=37,slow=7.0,SNR=27						
NNA				S	Sn	06 39 53.5	-2.5
	32nm,0.3s,baz=333,slow=23,SNR=12						
TBTG	Tabatinga, AM	6.44	49	*e*P	Pn	06 39 41.7	+0.4
ETMB	Extrema	8.53	99	*e*P	Pn	06 40 06.7	-2.6
LPAZ	La Paz	10.08	141	P	Pn	06 40 29.8	-0.9
	0.7nm,0.5s,baz=330,slow=7.2,SNR=7.7						
LPAZ	La Paz	10.08	141	*e*P	Pn	06 40 30.3	-0.4
MACA	Manacapuru-AM	14.96	70	*e*P	P	06 41 35.0	-0.6
LVC	Limon Verde	15.11	159	*e*P	P	06 41 38.7	+1.2
SIV	San Ignacio	15.29	120	P	Pn	06 41 35.2	-2.3
	2.3nm,0.4s,baz=293,slow=12,SNR=15						
PTLB	Pontes e Lacer	16.75	116	*e*P	Pn	06 41 55.3	-0.2
BOAV	Boa Vista	17.84	53	*e*P	Pn	06 42 09.0	+0.4
PDRB	Porto dos Gac	18.01	101	*e*P	P	06 42 09.2	-0.1
CLDB	Colider	18.83	99	*e*P	P	06 42 17.8	-0.5
ITTB	Itaituba	19.33	79	*e*P	P	06 42 23.9	+0.2
BDFB	Brasilia	27.07	108	P	P	06 43 39.4	+0.5
	1.7nm,0.6s,baz=268,slow=8.2,SNR=5.4						
	1.7nm,0.6s						
PLTB	Pedras Altas	30.37	143	*e*P	P	06 44 11.2	+3.2
JANB	Januaria	30.48	105	*e*P	P	06 44 09.7	+0.6
YKA	Yellowknife Ar	77.14	342	P	P	06 49 46.1	-0.9
	0.5nm,0.6s,baz=140,slow=5.6,SNR=18						
	0.5nm,0.6s						
WRA	Warramunga Arr	139.76	225	PKP	PKiKP	06 57 22.6	-1.4
	0.5nm,0.5s,baz=123,slow=2.1,SNR=7.4						

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*NSSP **15** 06:40:53.6, 38.°40N×46.°48E, h6^{km}, Ms3.2*

*AZER **15** 06:40:54.6±0.1, 38.°46N×46.°53E, h11^{km}, Error ellipse: s-maj=1.2km s-min=0.4km az=13.0*

*TEH **15** 06:40:55.7, 38.°48N×46.°53E, h8^{km}, ML3.0*

ISC 15 06:40:55.3±0.9**, 38.°47N**±0.°02×**46.°51E**±0.°02**, h9^{km}**±7^{km}**, n42, σ1.^{s}16**/67**, 2C-4D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVRZ	Varzaqan	0.13	73	*e*Pg	Pg	06 40 58.3	0.0
TVRZ				*e*Sg	Sg	06 41 01.0	+0.5
ITBZ	Tabriz	0.37	231	*e*Pg	Pg	06 41 02.3	-0.3
ITBZ				*e*Sg	Sg	06 41 08.2	+0.7
TAB1	Tabriz	0.44	199	*e*Sg	Sb	06 41 12.4	+0.2
TAB1				*e*Pg	Pb	06 41 04.9	-0.5
IHRS	Heris	0.44	109	*e*Sg	Sb	06 41 10.5	-1.8
IHRS				*e*Pg	Pg	06 41 03.7	-0.3
ORD	Ordubad	0.61	319	P	Pb	06 41 07.6	-0.7
	SNR=91						
ORD				S	Sb	06 41 16.6	-0.5
IMRD	Marand	0.68	291	*e*Pg	Pb	06 41 08.8	-0.7
ISHB	Shabestar	0.73	256	*e*Sg	Sb	06 41 20.7	+0.2
ISHB				*e*Pg	Pb	06 41 09.4	-0.9
IBST	Bostanabad	0.82	158	*e*Pg	Pb	06 41 11.0	-1.0
IAZR	Azarshahr	0.89	208	*e*Pg	Pb	06 41 12.5	-0.6
NAX	Nakhchivan	1.06	312	P	Pn	06 41 16.2	-0.3
	SNR=31						
NAX				S	Sn	06 41 31.7	+0.2
ISRB	Sarab	1.11	125	*e*Pg	Pb	06 41 16.1	-0.8
ISRB				*e*Sg	Sn	06 41 32.2	-0.8
ISRB				*e*		06 41 35.0	
	comp=Z,5μm,0.3s						
GRMI	Germi	1.14	72	*e*Pg	Pg	06 41 16.2	-0.9
QRD	Qoradiz	1.18	32	P	Pn	06 41 18.6	+0.6
	SNR=7.4						
SBZ	Shahbuz	1.19	321	P	Pn	06 41 19.0	+0.6
	SNR=8.6						
SBZ				S	Sn	06 41 35.6	+0.9
IHSH	Hashtrud	1.30	153	*e*Pg	Pg	06 41 19.8	-0.6
IHSH				*e*Sg	Sn	06 41 39.3	+1.5
IHSH				*e*		06 41 40.5	
	comp=Z,5μm,0.3s						
YRD	Yardimli	1.43	71	P	Pg	06 41 21.7	-1.0
	SNR=22						
YRD				S	Sg	06 41 41.4	+0.2
LRK	Lerik	1.45	82	P	Pg	06 41 22.0	-1.1
	SNR=19						
LRK				S	Sg	06 41 42.5	+0.7
BLQ	Beylaqan	1.49	33	P	Pg	06 41 24.0	0.0
	SNR=6.8						
BLQ				S	Sg	06 41 45.1	+1.7
GLBA	Clilabad	1.66	62	P	Pg	06 41 27.0	-0.2
	SNR=14						
GLBA				S	Sg	06 41 50.9	+2.2
MAKU	Maku	1.68	302	*e*Pg	Pg	06 41 26.7	-0.8
AGDM	Agdam	1.70	16	P	Pg	06 41 26.9	-1.1
	SNR=4.0						
AGDM				S	Sg	06 41 50.8	+0.7
ASTR	Astara	1.79	86	P	Pg	06 41 28.7	-1.0
	SNR=7.3						
ASTR				S	Sg	06 41 54.3	+1.4
LKRN	Lenkeran, Azer	1.79	82	S	Sg	06 41 55.2	+2.2
HYR	Heyderabad	1.80	315	P	Pg	06 41 29.0	-0.8
	SNR=12						
HYR				S	Sg	06 41 53.8	+0.7
MAHB	Mahabad	1.81	201	*e*Pn	Pb	06 41 27.8	-1.0
MAHB				*e*		06 42 00.0	
	comp=Z,3μm,0.5s						
ZRD	Zardab	2.02	26	S	Sg	06 42 01.8	+1.4
SAAT	Saatly	2.04	46	P	Pg	06 41 33.3	-1.0
	SNR=3.1						
SAAT				S	Sg	06 41 59.0	-1.8
NRKZ	NAREK	2.10	317	⇓*i*P	Pg	06 41 34.4	-1.2
NRKZ				⇓*i*S	Sg	06 42 02.5	-0.3
GNI	Garni	2.17	321	⇓*i*P	Pg	06 41 35.8	-1.1
GNI				⇑*i*S	Sg	06 42 06.7	+1.6
GANJ	Ganja	2.18	356	P	Pb	06 41 35.1	+0.1
	SNR=14						
GANJ				S	Sg	06 42 03.7	-1.7
KDMR	Kurdemir	2.31	34	S	Sg	06 42 10.0	+0.6
KAPZ	Kaputan	2.32	323	⇑*i*P	Pg	06 41 38.5	-1.3
KAPZ				⇓*i*S	Sg	06 42 11.4	+1.4
GDB	GEDABAY	2.33	346	P	Pb	06 41 38.1	+0.6
	SNR=12						
GDB				S	Sg	06 42 10.1	0.0
ZNJK	Zanjan	2.49	135	*e*Pn	Pb	06 41 38.4	-2.0
QZX	Qazax, Azerbai	2.73	342	P	Pb	06 41 44.1	-0.3
	SNR=6.2						
QZX				S	Sb	06 42 18.0	0.0
SEKA	Sheki	2.79	11	P	Pb	06 41 44.1	-1.3
	SNR=3.1						
PQL	Pirkuli	2.82	34	P	Pn	06 41 42.7	+1.9
	SNR=6.0						
PQL				S	Sb	06 42 21.4	+0.7
XNQ	Khinaliq	2.98	24	P	Pb	06 41 46.1	-2.6
	SNR=4.2						
ZKTA	Zakatala	3.17	2	P	Pb	06 41 49.8	-2.0
	SNR=3.0						
ZKTA				S	Sb	06 42 31.2	+0.6
SIZA	Siyzn	3.19	34	P	Pn	06 41 48.3	+2.5
	SNR=3.7						
QABG	Abgarm-Qazvin	3.69	137	*e*Pn	Pn	06 41 53.5	+0.7
QALM	Alamut, Qazvin	3.87	120	*e*		06 43 11.3	
	comp=Z,221nm,0.7s						

NOU 15 06:44:44.4, 16.°35S×167.°42E, h9^{km}, MLv4.6/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.73	146	P	Pn	06 45 15.3	+0.7
YATNC	Mamie plateau,	5.70	185	P	Pn	06 46 09.2	-0.1
DZM	Mont Dzumac	5.76	189	P	Pn	06 46 09.6	-0.7
NOUC	Port Laguerre	5.82	190	P	Pn	06 46 11.5	+0.6
ONTNC	Ouen Toro	6.00	189	P	Pn	06 46 12.9	-0.5
OUENC	Ouen Island, N	6.06	185	P	Pn	06 46 14.5	+0.2

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*ANF **15** 06:53:39.6±0.3, 36.°08N×97.°60W, h5^{km}, ML3.0/10, Error ellipse: s-maj=3.5km s-min=2.4km az=1.0*

*TUL **15** 06:53:39.7±1.1, 36.°04N±0.°01×97.°60W±0.°01, h5^{km}±1^{km}, ML2.6, mb_Lg2.3/39(NEIC), Error ellipse: s-maj=3.0km s-min=2.1km az=4.0*

*NEIC **15** 06:53:39.8±0.8, 36.°06N±0.°01×97.°61W±0.°02, h8^{km}±5^{km}, Error ellipse: s-maj=2.4km s-min=0.8km az=54.0*

ISC 15 06:53:39.7±0.9**, 36.°08N**±0.°03×**97.°63W**±0.°04**, h10^{km}, n39, σ0.^{s}85**/33**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.67	168	Pg	Pg	06 53 52.1	-0.6
OKCFA	Oklahoma City	0.67	168	P	Pg	06 53 52.1	-0.6
	baz=349						
OKCSW	OKLAHOMA CITY	0.69	167		Pg	06 53 52.4	-0.6
FNO	Franklin	0.84	167	Pg	Pg	06 53 55.1	-0.7
FNO				IAmb_Lg		06 54 06.7	
	comp=Z,21nm,0.8s						
U32A	Winter Ranch,	1.15	286		Pb	06 54 01.8	+0.1
U32A	Winter Ranch,	1.15	286	P	Pb	06 54 01.8	+0.1
	baz=106						
U32A				S	Sn	06 54 18.7	+1.0
	baz=106						
T35A	Sooner Cattle	1.23	47		Pn	06 54 03.0	0.0
T35B	Sooner Cattle	1.23	47	P	Pn	06 54 03.0	0.0
	baz=225						
T35B				S	Sb	06 54 19.1	+0.2
	baz=225						
X34A	Smith Ranch, M	1.48	187		Pb	06 54 07.2	-0.1
X34A				IAmb_Lg		06 54 27.6	
	comp=Z,13nm,0.7s						
TUL1	Leonard	1.50	96	Pn	Pn	06 54 06.3	-0.3
TUL1	Leonard	1.50	96	P	Pn	06 54 06.3	-0.3
	baz=276						
TUL1				S	Sb	06 54 26.5	-0.1
	baz=276						
WMOK	Wichita Mounta	1.64	216		Pn	06 54 09.2	+0.7
WMOK	Wichita Mounta	1.64	216	P	Pn	06 54 09.2	+0.7
	baz=36						
X37A	Clayton	2.37	128	Pn	Pn	06 54 19.6	+1.0
X37A				IAmb_Lg		06 54 56.9	
	comp=Z,18nm,0.9s						
X37A	Clayton	2.37	128	S	Sb	06 54 49.8	-1.9
	baz=309						
Z35A	Perchaven, San	2.76	173	Pb	Pb	06 54 28.6	-0.5
	baz=354						
CBKS	Cedar Bluff	3.21	329	IAmb_Lg		06 55 31.1	
	comp=Z,8.6nm,0.9s						
CBKS	Cedar Bluff	3.21	329	P	Pg	06 54 39.9	-1.3
	baz=148						
W39A	Magazine	3.25	105	Pn	Pn	06 54 31.4	+0.8
W39A	Magazine	3.25	105	P	Pn	06 54 31.5	+0.8
	baz=286						
W39A				S	Sn	06 55 10.7	+1.3
	baz=286						
AMTX	Amarillo	3.52	251	IAmb_Lg		06 55 39.1	
	comp=Z,13nm,1.0s						
Z38A	Mt. Pleasant	3.55	141	IAmb_Lg		06 55 35.7	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	3.65	114	Pn	Pn	06 54 37.2	+1.0
MIAR				IAmb_Lg		06 55 41.1	
	comp=Z,9.1nm,0.7s						
MIAR	Mount Ida	3.65	114	P	Pn	06 54 37.8	+1.6
	baz=296						
S39A	Bolivar	3.81	64	Pn	Pn	06 54 39.5	+1.1
S39A				IAmb_Lg		06 55 42.7	
	comp=Z,12nm,0.7s						
S39A	Bolivar	3.81	64	P	Pn	06 54 39.5	+1.1
	baz=246						
ABTX	Abilene, Hawle	3.83	206	IAmb_Lg		06 55 38.1	
	comp=Z,8.2nm,0.7s						
U40A	Yellville	3.87	84	Pn	Pn	06 54 40.1	+0.8
U40A				IAmb_Lg		06 55 42.0	
	comp=Z,6.7nm,0.7s						
WHTX	Lake Whitney,	4.08	178	Pn	Pn	06 54 42.4	+0.3
X40A	Basin Creek Fa	4.23	111	Pn	Pn	06 54 45.2	+1.0
WLAR	White Oak Lake	4.41	121	IAmb_Lg		06 56 10.0	
	comp=Z,11nm,0.8s						
WHAR	Wooly Hollow	4.42	99	IAmb_Lg		06 56 08.6	
	comp=Z,8.1nm,0.8s						
MGMO	Mountain Grove	4.44	74	IAmb_Lg		06 56 02.4	
	comp=Z,6.7nm,0.7s						
FCAR	Ozark Folk Cen	4.47	91	Pn	Pn	06 54 47.4	0.0
FCAR				IAmb_Lg		06 56 09.8	
	comp=Z,5.6nm,1.1s						
W41B	Gary Mavity, V	4.47	100	IAmb_Lg		06 56 02.8	
	comp=Z,9.6nm,0.8s						
UALR	University of	4.50	105	IAmb_Lg		06 56 07.9	
	comp=Z,9.6nm,1.0s						
P38A	Dawn	4.80	41	Pn	Pn	06 54 52.6	+0.6
P38A				IAmb_Lg		06 56 19.3	
	comp=Z,5.8nm,0.7s						
R40A	Maddies Statio	4.81	61	Pn	Pn	06 54 53.1	+0.9
435B	Jarrell	5.28	180	IAmb_Lg		06 56 39.2	
	comp=Z,7.8nm,0.9s						

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*IDC **15** 06:55:43.3±1.9, 23.°78S×176.°63W, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.2/3, Error ellipse: s-maj=140.7km s-min=25.3km az=156.0*

ISC 15 06:55:53.6±0.9**, 24.°0S**±0.°3×**176.°7W**±0.°2**, h82^{km}, n12, σ0.^{s}82**/12**, mb3.7**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	11.04	26	LR	LR	07 01 55.3	
	comp=Z,77nm,20.4s,baz=164,slow=34						
PPT	Papeete	26.08	81	LR	LR	07 10 36.7	
	comp=Z,29nm,19.4s,baz=296,slow=34						
STKA	Stephens Creek	37.53	248	P	P	07 02 59.4	-0.6
	1.0nm,0.6s,baz=72,slow=6.4,SNR=1.7						
STKA				LR	LR	07 15 45.1	
	comp=Z,88nm,19.3s,baz=203,slow=32						
	1.0nm,0.6s						
ASAR	Alice Springs	45.04	260	P	P	07 04 01.2	-0.3
	0.8nm,0.6s,baz=106,slow=7.5,SNR=8.8						
ASAR				PcP	PcP	07 05 42.9	+1.6
	0.7nm,0.6s,baz=106,slow=3.8,SNR=6.4						
	0.8nm,0.6s						
WRA	Warramunga Arr	45.45	265	P	P	07 04 04.8	-0.1
	2.3nm,0.9s,baz=97,slow=8.2,SNR=15						
WRA				PcP	PcP	07 05 44.1	+1.4
	1.1nm,1.0s,baz=104,slow=3.4,SNR=4.6						
	2.3nm,0.9s						
NVAR	Mina Array Bea	82.72	42	P	P	07 08 08.8	+0.1
	0.5nm,0.7s,baz=244,slow=9.6,SNR=3.7						
	0.5nm,0.7s						
TROLL	Troll, Antarti	84.25	180	P	P	07 08 16.4	+0.4
SNAA	Sanae	84.50	178	P	P	07 08 16.5	-0.7
VNA3	Neumayer Olymp	84.59	176	P	P	07 08 17.7	+0.2
TXAR	Lajitas Array	87.90	57	P	P	07 08 34.1	-0.4
	0.3nm,0.8s,baz=193,slow=5.0,SNR=4.3						
	0.3nm,0.8s						
AKASG	Malin Array Be	146.65	330	PKPbc	PKPbc	07 15 25.1	-0.6
	1.7nm,0.6s,baz=47,slow=4.3,SNR=6.2						
BRTR	Keskin Array B	150.05	309	PKPbc	PKPbc	07 15 35.5	+0.3
	1.2nm,0.7s,baz=158,slow=4.0,SNR=6.6						

IDC 15 07:01:54.2±2.9**, 19.°39S**×**176.°01W, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=298.0km s-min=35.9km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.60	255	P	P	07 10 24.4	0.0
	0.9nm,0.8s,baz=94,slow=8.2,SNR=7.2						
	0.9nm,0.8s						
WRA	Warramunga Arr	46.62	261	P	P	07 10 24.3	-0.2
	0.3nm,0.5s,baz=98,slow=8.0,SNR=8.9						
	0.3nm,0.5s						
TXAR	Lajitas Array	84.89	57	P	P	07 14 31.5	0.0
	0.1nm,0.3s,baz=216,slow=4.5,SNR=1.7						
	0.1nm,0.3s						

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*IDC **15** 07:23:00.9±2.2, 36.°34N×97.°86W, h0^{km}, mbtmp3.1/5, ML3.0/5, Error ellipse: s-maj=26.4km s-min=15.0km az=104.0*

*TUL **15** 07:23:06.8±0.7, 36.°38N±0.°01×97.°72W±0.°02, h6^{km}±7^{km}, ML3.6, mb_Lg3.2/113(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=101.0*

*NEIC **15** 07:23:06.9±0.9, 36.°37N±0.°01×97.°72W±0.°02, h6^{km}±5^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=101.0*

*ANF **15** 07:23:07.2±0.3, 36.°37N×97.°74W, h6^{km}, ML3.7/13, Error ellipse: s-maj=4.0km s-min=3.0km az=28.0*

ISC 15 07:23:07.1±0.8**, 36.°39N**±0.°03×**97.°69W**±0.°03**, h10^{km}, n99, σ1.^{s}08**/56**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.99	168	Pg	Pg	07 23 25.3	-0.8
OKCFA				IAmb_Lg		07 23 37.8	
	comp=Z,164nm,0.9s						
OKCSW	OKLAHOMA CITY	1.00	168		Pg	07 23 25.6	-0.7
U32A	Winter Ranch,	1.05	270	Pg	Pg	07 23 26.3	-1.1
U32A	Winter Ranch,	1.05	270	P	Pg	07 23 26.3	-1.1
	baz=90,SNR=127						
U32A				S	Sg	07 23 40.7	-0.4
	baz=90						
T35A	Sooner Cattle	1.09	61		Pb	07 23 27.8	-0.2
T35B	Sooner Cattle	1.09	61	P	Pb	07 23 27.8	-0.2
	baz=241,SNR=239						
FNO	Franklin	1.15	168	Pg	Pb	07 23 28.2	-0.9
TUL1	Leonard	1.61	107		Pn	07 23 36.1	+0.6
TUL1				IAmb_Lg		07 24 02.4	
	comp=Z,200nm,1.0s						
TUL1	Leonard	1.61	107	P	Pn	07 23 36.1	+0.6
	baz=287,SNR=98						
TUL1				S	Sb	07 23 58.3	+0.9
	baz=287						
TUL1	Leonard	1.61	107	P	Pn	07 23 36.1	+0.6
	baz=287						
TUL1				S	Sb	07 23 58.2	+0.9
	baz=287						
WMOK	Wichita Mounta	1.87	209		Pn	07 23 39.4	+0.3
WMOK	Wichita Mounta	1.87	209	P	Pn	07 23 39.5	+0.3
	baz=28,SNR=289						
WMOK	Wichita Mounta	1.87	209	P	Pn	07 23 39.4	+0.3
	baz=28						
WMOK				S	Sb	07 24 04.5	-0.3
	baz=28						
R32A	Long Quarter,	2.19	339		Pn	07 23 43.1	-0.4
R32A	Long Quarter,	2.19	339	P	Pb	07 23 45.7	-1.1
	baz=159						
R32A				Sb	Sb	07 24 15.5	+1.6
	baz=159						
X37A	Clayton	2.61	133		Pn	07 23 50.5	+1.2
X37A				IAmb_Lg		07 24 36.5	
	comp=Z,82nm,0.7s						
X37A	Clayton	2.61	133	P	Pn	07 23 50.6	+1.3
	baz=314,SNR=35						
KSU1	Kansas State U	2.84	17		Pn	07 23 52.9	+0.4
KSU1				IAmb_Lg		07 24 45.7	
	comp=Z,63nm,0.7s						
CBKS	Cedar Bluff	2.92	327		Pn	07 23 55.2	+1.7
CBKS	Cedar Bluff	2.92	327	P	Pn	07 23 55.1	+1.5
	baz=146,SNR=84						
CBKS	Cedar Bluff	2.92	327	P	Pn	07 23 55.1	+1.5
	baz=146						
HHAR	Hobbs	3.03	91		Pn	07 23 56.7	+1.6
Z35A	Perchaven, San	3.07	173		Pn	07 23 56.8	+1.2
Z35A	Perchaven, San	3.07	173	P	Pn	07 23 56.8	+1.2
	baz=353,SNR=6.5						
Z35A				S	Sn	07 24 35.0	+2.5
	baz=353						
W39A	Magazine	3.39	109	IAmb_Lg		07 24 60.0	
	comp=Z,89nm,0.7s						
W39A	Magazine	3.39	109	Sb	Sg	07 24 54.9	-1.2
	baz=291						
W39A	Magazine	3.39	109	S	Sg	07 24 54.9	-1.2
	baz=291						
AMTX	Amarillo	3.58	246	IAmb_Lg		07 25 07.9	
	comp=Z,66nm,0.8s						
AMTX	Amarillo	3.58	246	Pb	Pb	07 24 11.2	+0.7
	baz=64						
S39A	Bolivar	3.73	68		Pn	07 24 06.2	+1.5
S39A	Bolivar	3.73	68	P	Pn	07 24 06.2	+1.5
	baz=251,SNR=19						
MIAR	Mount Ida	3.83	117		Pn	07 24 07.3	+1.2
MIAR				IAmb_Lg		07 25 17.4	
	comp=Z,61nm,0.8s						
MIAR	Mount Ida	3.83	117	Sb	Sg	07 25 08.1	-2.0
	baz=300						
Z38A	Mt. Pleasant	3.83	144		Pn	07 24 07.2	+1.0
U40A	Yellville	3.91	89		Pn	07 24 08.0	+0.8
ABTX	Abilene, Hawle	4.08	204	IAmb_Lg		07 25 19.0	
	comp=Z,45nm,0.8s						
N33A	J Bar K, Exete	4.35	2		Pn	07 24 13.4	+0.2
N33A				IAmb_Lg		07 25 31.6	
	comp=Z,51nm,0.8s						
WHTX	Lake Whitney,	4.39	177		Pn	07 24 14.8	+1.0
X40A	Basin Creek Fa	4.40	114		Pn	07 24 14.9	+1.0
MGMO	Mountain Grove	4.42	78		Pn	07 24 15.6	+1.4
MGMO				IAmb_Lg		07 25 26.7	
	comp=Z,51nm,0.9s						
WHAR	Wooly Hollow	4.53	102	IAmb_Lg		07 25 36.7	
	comp=Z,59nm,0.8s						
W41B	Gary Mavity, V	4.59	104	IAmb_Lg		07 25 39.8	
	comp=Z,61nm,0.9s						
P38A	Dawn	4.61	44	IAmb_Lg		07 25 40.3	
	comp=Z,58nm,0.7s						
WLAR	White Oak Lake	4.62	124	Pn	Pn	07 24 17.8	+0.8
WLAR				IAmb_Lg		07 25 38.5	
	comp=Z,44nm,0.7s						
237A	Washetta, Mont	4.65	160	Pn	Pn	07 24 17.6	+0.3
237A	Washetta, Mont	4.65	160	P	Pn	07 24 17.5	+0.2
	baz=341,SNR=5.7						
237A				S	Sn	07 25 10.8	-0.5

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           baz=341
UALR  University of     4.65 109  IAmb_Lg          07 25 37.7
           comp=Z,57nm,0.9s
KSCO  Kaye Shedlock'    4.71 305  IAmb_Lg          07 25 38.5
           comp=Z,50nm,0.7s
R40A  Maddies Statio    4.72  65            Pn     07 24 19.4 +1.1
R40A  Maddies Statio    4.72  65  P         Pn     07 24 19.4 +1.1
           baz=248,SNR=17
BGNE  Belgrade          5.03 356  Pn        Pn     07 24 22.9 +0.3
BGNE  Belgrade          5.03 356  P         Pn     07 24 23.1 +0.5
           baz=176,SNR=12
BGNE  Belgrade          5.03 356  P         Pn     07 24 23.1 +0.5
           baz=176
Z41A  Richland Creek    5.09 126  IAmb_Lg          07 26 00.1
           comp=Z,51nm,0.8s
LCAR  Lake Charles      5.30  92  IAmb_Lg          07 25 57.3
           comp=Z,33nm,0.8s
T25A  Trinidad          5.44 280  IAmb_Lg          07 26 00.7
           comp=Z,49nm,0.8s
P40A  Paris             5.45  53  IAmb_Lg          07 26 03.9
           comp=Z,60nm,0.7s
435B  Jarrell           5.59 179  IAmb_Lg          07 26 13.7
           comp=Z,31nm,0.8s
OGNE  Ogallala          5.68 325  IAmb_Lg          07 26 17.1
           comp=Z,46nm,0.9s
OGNE  Ogallala          5.68 325  P         Pn     07 24 33.0 +1.4
           baz=142,SNR=12
OGNE  Ogallala          5.68 325  P         Pn     07 24 32.9 +1.4
           baz=142
PBMO  Poplar Bluff      5.86  84  IAmb_Lg          07 26 16.0
           comp=Z,41nm,0.7s
SLM   Saint Louis       6.34  67  IAmb_Lg          07 26 29.7
           comp=Z,33nm,0.8s
SDCO  Great Sand Dun    6.39 285  IAmb_Lg          07 26 36.7
           comp=Z,38nm,1.3s
Q24A  Divide            6.45 296  IAmb_Lg          07 26 39.1
           comp=Z,41nm,0.8s
S44A  Carbondale        6.88  77  IAmb_Lg          07 26 57.1
           comp=Z,32nm,0.8s
SIUC  Southern Illin    6.91  76  IAmb_Lg          07 27 01.6
           comp=Z,35nm,0.9s
OXF   Oxford            7.02 103  IAmb_Lg          07 26 57.7
           comp=Z,33nm,0.8s
W45A  Hickory Valley    7.03  98  IAmb_Lg          07 26 55.1
           comp=Z,28nm,0.8s
ISCO  Idaho Springs     7.11 301  IAmb_Lg          07 27 01.2
           comp=Z,29nm,0.9s
Y45A  Yeager Farm, C    7.14 108  IAmb_Lg          07 27 04.1
           comp=Z,29nm,0.7s
P43A  Skaggs, Pawnee    7.22  61  IAmb_Lg          07 27 07.3
           comp=Z,42nm,0.8s
VBMS  Vicksburg         7.25 123  IAmb_Lg          07 27 14.2
           comp=Z,28nm,1.0s
ANMO  Albuquerque       7.28 261  Pn        Pn     07 24 47.4 -6.2
           comp=Z,0.1nm,0.3s,baz=86,slow=14,SNR=1.4
ANMO                              Pg        Pb     07 25 19.0 +5.4
           comp=Z,0.9nm,0.3s,baz=81,slow=18,SNR=18
ANMO                              Lg        Lg     07 26 52.1
           comp=Z,1.8nm,0.3s,baz=201,slow=12,SNR=6.8
           comp=Z,0.2nm,0.3s
ECSD  EROS Data Cent    7.38   6  Pn        Pn     07 24 54.1 -0.7
ECSD  EROS Data Cent    7.38   6  P         Pn     07 24 54.0 -0.9
           baz=187
L40A  Anamosa           7.57  40  IAmb_Lg          07 27 18.9
           comp=Z,41nm,0.9s
PHWY  Pilot Hill        7.79 311  IAmb_Lg          07 27 23.7
           comp=Z,38nm,0.9s
N23A  Red Feather La    7.87 307  IAmb_Lg          07 27 18.1
           comp=Z,34nm,1.1s
Y22D  IRIS PASSCAL I    7.89 256  IAmb_Lg          07 27 29.2
           comp=Z,30nm,0.7s
OLIL  Olney             7.97  70  IAmb_Lg          07 27 24.1
           comp=Z,36nm,1.2s
146A  Union             8.05 115  IAmb_Lg          07 27 39.3
           comp=Z,17nm,1.1s
SUSD  Miller            8.10 354  IAmb_Lg          07 27 36.0
           comp=Z,22nm,0.7s
833A  Chaparral WMA,    8.17 191  IAmb_Lg          07 27 31.8
           comp=Z,21nm,1.0s
O44A  Mansfield         8.17  60  IAmb_Lg          07 27 34.6
           comp=Z,26nm,0.8s
I37A  Lemond, Waseca    8.29  22  IAmb_Lg          07 27 52.2
           comp=Z,29nm,0.8s
L42A  Oliver, Polo      8.38  46  IAmb_Lg          07 27 37.2
           comp=Z,34nm,0.8s
TXAR  Lajitas Array     8.64 217  Pn        Pn     07 25 04.7 -7.6
           baz=232,slow=51,SNR=1.4
TXAR                              Pg        Pg     07 25 41.5  -11
           comp=Z,0.5nm,0.3s,baz=34,slow=14,SNR=8.1
TXAR                              Lg        Lg     07 27 23.5
           comp=Z,0.5nm,0.3s,baz=86,slow=18,SNR=4.3
           comp=Z,0.1nm,0.3s
JFWS  Jewell Farm       8.68  39  IAmb_Lg          07 27 42.7
           comp=Z,36nm,0.7s
M44A  Midewin, Midew    9.03  54  IAmb_Lg          07 28 08.4
           comp=Z,29nm,1.0s
RWWY  Rawlins           9.10 308  IAmb_Lg          07 28 07.3
           comp=Z,18nm,1.1s
I40A  Norwalk           9.24  34  IAmb_Lg          07 28 03.2
           comp=Z,21nm,1.0s
K22A  Casper            9.25 315  IAmb_Lg          07 28 10.9
           comp=Z,28nm,1.1s
F33A  5 Mile Ranch,     9.50   6  IAmb_Lg          07 28 14.8
           comp=Z,15nm,0.9s
SPMN  Marine on St.     9.57  21  IAmb_Lg          07 28 19.7
           comp=Z,18nm,0.9s
PDAR  Pinedale Array   11.15 308  Pn        Pn     07 25 40.9 -5.8
           comp=Z,0.1nm,0.3s,baz=118,slow=18,SNR=2.4
PDAR                              Pg               07 26 24.4
           comp=Z,0.2nm,0.3s,baz=126,slow=15,SNR=3.8
PDAR                              Lg        Lg     07 28 47.0
           comp=Z,0.2nm,0.3s,baz=106,slow=20,SNR=2.0
           comp=Z,0.1nm,0.3s
TKL   Tuckaleechee C   11.30  90  Lg        Lg     07 28 57.9
           comp=Z,0.4nm,0.3s,baz=9.4,slow=17,SNR=7.3
ULM   Lac du Bonnet    13.92   5  Pn        Pn     07 26 15.3 -9.0
           comp=Z,0.3nm,0.3s,baz=180,slow=20,SNR=1.6
ULM                               Lg        Lg     07 30 16.4
           comp=Z,0.3nm,0.3s,baz=87,slow=7.7,SNR=1.4
           comp=Z,1.4nm,0.4s
ELK   Elko             14.40 293  Pn        Pn     07 26 23.9 -7.2
           comp=Z,0.2nm,0.3s,baz=110,slow=15,SNR=1.9
           comp=Z,0.5nm,0.4s
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IDC ***15*** *07:23:25.8±0.5, 14°.32S×166°.77E, h0^{km}, mb4.6/23, mbtmp4.6/27, ML4.0/3, MS4.3/54, Error ellipse: s-maj=17.4km s-min=13.1km az=104.0*

MOS ***15*** *07:23:26.1±0.9, 14°.30S×166°.64E, h10^{km}, mb5.2/31, Error ellipse: s-maj=10.3km s-min=8.8km az=118.9*

NEIC ***15*** *07:23:28.1±1.7, 14°.35S±0°.05×166°.82E±0°.10, h12^{km}±3^{km}, mb5.0/100, Error ellipse: s-maj=14.4km s-min=6.1km az=68.0*

NOU ***15*** *07:23:30.4, 14°.57S×166°.56E, h0^{km}, mb5.1/64, Vanuatu Islands*

GCMT ***15*** *07:23:31.1±0.2, 14°.23S±0°.01×166°.59E±0°.01, h13^{km}±1^{km}, MW5.1/110, Moment Tensor Solution. s55,c68; s110,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.70±.14; $M_{\theta\theta}$-5.75±.14; $M_{\phi\phi}$4.05±.12; $M_{r\theta}$-1.42±.29; $M_{\theta\phi}$2.01±.10; $M_{\phi r}$0.06±.29; Best double couple: $M_0$5.42700×10^{16} NP1:ϕ_s147.00000°,δ80.00000°, λ-176.00000°. NP2:ϕ_s56.00000°,δ86.00000°, λ-10.00000°. Principal axes: T 4.4640, Plg5.0000°, Azm102.0000°; N 1.9260, Plg79.0000°, Azm217.0000°; P -6.3900, Plg10.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 07:23:27.7±0.3**, 14°.33S**±0°.04×**166°.83E**±0°.05**, h10^{km}, n411, σ1^{s}54**/380**, mb5.0**/102**, MS4.4**/68**, 14C-7D, Vanuatu Islands**

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Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op        ISC     h  m  s    ISC
SANVU Saraoutou         1.17 162  Pn        Pb     07 23 48.4 -1.6
SANVU                             Sg        Sb     07 24 04.1 -1.1
SANVU Saraoutou         1.17 162  P         Pb     07 23 48.6 -1.4
DVP   Devils Point      3.62 159  P         Pn     07 24 27.1 +3.3
RTV   Rentapao          3.77 156  P         Pn     07 24 28.9 +3.0
LIFNC LIFOU             6.42 177            Pn     07 25 00.9 -1.4
MARNC Mare, Loyalty     7.20 171  Pn        Pn     07 25 13.4 +0.3
MARNC Mare, Loyalty     7.20 171  P         Pn     07 25 14.6 +1.5
YATNC Mamie plateau,    7.68 180  P         Pn     07 25 19.2 -0.6
DZM   Mont Dzumac       7.71 183  Pn        Pn     07 25 19.5 -0.6
           14nm,0.3s,baz=312,slow=20,SNR=95
DZM                               Sn        Sn     07 26 47.5  0.0
           6.2nm,0.3s,baz=334,slow=22,SNR=1.4
DZM                               LR        LR     07 28 00.2
           comp=Z,4µm,20.6s,baz=44,slow=36
           27nm,0.3s
DZM   Mont Dzumac       7.71 183  ePn       Pn     07 25 20.6 +0.5
           232nm,1.3s
DZM                               eSn       Sn     07 26 50.3 +2.7
           183nm,0.9s
DZM   Mont Dzumac       7.71 183  Pn        Pn     07 25 19.9 -0.3
NOUC  Port Laguerre     7.74 184  P         Pn     07 25 21.0 +0.5
ONTNC Ouen Toro         7.94 182  Pn        Pn     07 25 22.8 -0.5
OUENC Ouen Island, N    8.04 180            Pn     07 25 24.5 -0.2
OUENC Ouen Island, N    8.04 180  P         Pn     07 25 25.2 +0.5
PINNC Pines Island,     8.26 176  Pn        Pn     07 25 27.8 +0.2
PINNC Pines Island,     8.26 176  P         Pn     07 25 29.5 +1.9
HNR   Honiara           8.31 305  Pn        Pn     07 25 27.0 -1.3
           419nm,0.6s,baz=102,slow=1.6,SNR=7.0
HNR                               Sn        Sn     07 26 56.3 -6.0
           5.0nm,0.3s,baz=49,slow=7.1,SNR=1.4
HNR                               LR        LR     07 28 25.8
           comp=Z,3µm,20.5s,baz=125,slow=36
HNR   Honiara           8.31 305  Pn        Pn     07 25 27.6 -0.7
HNR   Honiara           8.31 305  P         Pn     07 25 27.6 -0.7
HNR   Honiara           8.31 305  P         Pn     07 25 29.2 +0.9
DGTI  Dogotuki         12.61 101  P         Pn     07 26 36.0 +8.7
TARA  Tarawa           16.72  22  P         P      07 27 24.9 +0.4
TARA                              IAmb      IAmb   07 27 54.4
           comp=Z,124nm,0.9s
TARA  Tarawa           16.72  22  P         P      07 27 30.1 +5.6
           comp=Z,150nm,1.0s
KRVT  Keravat (AS076   17.66 303  P         Pn     07 27 32.7 -1.4
           comp=Z,1.4nm,0.3s,baz=152,slow=16,SNR=2.5
           comp=Z,33nm,0.7s
RK1H  Rockhampton Ha   17.87 237  P         P      07 27 37.6 +0.3
EIDS  Eidsvold         18.41 231  P         Pn     07 27 44.7 +1.5
           baz=19,SNR=4.7
EIDS  Eidsvold         18.41 231            P      07 27 41.0 -2.2
EIDS  Eidsvold         18.41 231  P         Pn     07 27 44.8 +1.5
PMG   Port Moresby     19.85 282  P         P      07 27 58.0 -1.1
           comp=Z,2.0nm,0.3s,baz=165,slow=15,SNR=2.3
PMG                               LR        LR     07 34 37.8
           comp=Z,2µm,19.3s,baz=136,slow=34
           comp=Z,7.1nm,0.3s
PMG   Port Moresby     19.85 282            P      07 27 58.2 -0.9
PMG                               IAmb      IAmb   07 28 05.0
           comp=Z,79nm,1.3s
PMG   Port Moresby     19.85 282⇑ eP        P      07 27 58.4 -0.7
PMG                               pmax      pmax
           comp=Z,22nm,0.9s
PMG   Port Moresby     19.85 282  P         Pn     07 28 00.7  0.0
PMG   Port Moresby     19.85 282  P         Pn     07 28 01.5 +0.8
CTA   Charters Tower   20.46 251  P         P      07 28 05.2 -0.5
           comp=Z,18nm,1.1s,baz=97,slow=11,SNR=6.5
CTA                               LR        LR     07 34 32.5
           comp=Z,748nm,18.3s,baz=77,slow=33
           comp=Z,18nm,1.1s
CTAO  Charters Tower   20.46 251  P         P      07 28 04.7 -1.0
CTAO  Charters Tower   20.46 251  P         P      07 28 04.7 -1.0
CTAO                              pmax      pmax
           comp=Z,36nm,1.0s
CTAO  Charters Tower   20.46 251  P         P      07 28 06.0 +0.3
RAO   Raoul Island     20.48 139  LR        LR     07 34 17.3
           comp=Z,2µm,21.9s,baz=317,slow=32
AFI   Afiamalu         20.76  91  P         Pn     07 28 12.7 +1.3
           comp=Z,57nm,0.8s,baz=185,slow=16,SNR=3.5
AFI                               LR        LR     07 34 26.6
           comp=Z,625nm,19.7s,baz=270,slow=32
AFI   Afiamalu         20.76  91  P         P      07 28 08.5 -0.5
AFI                               IAmb      IAmb   07 28 21.2
           comp=Z,95nm,0.9s
AFI   Afiamalu         20.76  91  P         P      07 28 08.5 -0.5
AFI                               pmax      pmax
           comp=Z,95nm,0.9s
AFI   Afiamalu         20.76  91  P         Pn     07 28 17.4 +6.0
RMQ   Roma             20.77 232  P         Pn     07 28 10.3 -1.2
           baz=21,SNR=28
RMQ   Roma             20.77 232  P         Pn     07 28 11.8 +0.3
ARMA  Armidale         21.26 219  P         P      07 28 15.3 +0.9
           baz=22,SNR=9.8
ARMA  Armidale         21.26 219  P         P      07 28 14.6 +0.3
ARMA  Armidale         21.26 219  P         P      07 28 17.1 +2.7
MTSU  Mount Surprise   21.93 257  P         P      07 28 21.6 -0.1
           baz=22,SNR=7.9
MTSU  Mount Surprise   21.93 257  P         P      07 28 23.4 +1.8
PATS  Pohnpei          22.66 338  P         P      07 28 28.0 -1.4
           baz=23,SNR=4.2
PATS  Pohnpei          22.66 338  P         P      07 28 29.2 -0.2
PATS  Pohnpei          22.66 338  P         P      07 28 33.8 +4.4
COEN  Coen             22.94 268  P         P      07 28 32.0 -0.4
           baz=23
COEN  Coen             22.94 268  P         P      07 28 31.9 -0.4
COEN  Coen             22.94 268  P         P      07 28 31.4 -0.9
MGCD  Mangrove Creek   23.61 215  P         P      07 28 39.4 +0.5
           baz=24,SNR=5.7
MGCD  Mangrove Creek   23.61 215  P         P      07 28 40.2 +1.3
MKAZ  Moumakai         23.86 163  P         P      07 28 41.5 +0.2
RIV   Riverview        24.05 213  P         P      07 28 44.0 +0.8
           baz=24,SNR=4.2
SYDH  Sydney Hard Ro   24.22 214  P         P      07 28 46.3 +1.6
           comp=Z,34nm,0.8s
QLP   Quilpie          24.38 236  P         P      07 28 46.1 -0.2
           baz=25
QLP   Quilpie          24.38 236  P         P      07 28 47.7 +1.5
TOZ   Tahuroa Road     24.55 163  P         P      07 28 49.8 +2.1
NGRZ  Ngongotaha       25.09 162  P         P      07 28 51.9 -0.7
HIZ   Hauiti           25.11 165  P         P      07 28 54.4 +1.7
HAZ   Te Kaha          25.28 159  P         P      07 28 53.8 -0.4
URZ   Urewera          25.51 161  P         P      07 28 59.4 +3.0
           comp=Z,22nm,0.7s,baz=329,slow=2.1,SNR=8.3
URZ                               LR        LR     07 37 45.0
           comp=Z,1µm,18.9s,baz=30,slow=34
URZ   Urewera          25.51 161  P         P      07 28 56.5 +0.1
URZ                               IAmb      IAmb   07 29 14.9
           comp=Z,28nm,0.9s
URZ   Urewera          25.51 161  P         P      07 28 59.4 +3.0
PUZ   Puketiti         25.73 159  P         P      07 29 00.8 +2.5
CMSA  Cobar Meteorol   25.84 225  P         P      07 28 59.4 -0.1
           baz=26,SNR=12
CMSA  Cobar Meteorol   25.84 225  P         P      07 29 01.4 +1.9
           comp=Z,30nm,1.0s
SNGZ  Shannon Statio   26.06 161  P         P      07 29 00.8 -0.7
RIGZ  Rimuhau          26.13 160  P         P      07 29 01.9 -0.2
CNB   Canberra Magne   26.14 214  P         P      07 29 02.6 +0.4
           baz=26,SNR=7.4
CNB   Canberra Magne   26.14 214  P         P      07 29 04.3 +2.1
BKZ   Black Stump Fm   26.16 163  P         P      07 29 02.9 +0.5
BKZ                               IAmb      IAmb   07 29 16.2
           comp=Z,38nm,1.0s
BKZ   Black Stump Fm   26.16 163  P         P      07 29 02.7 +0.3
BKZ   Black Stump Fm   26.16 163  P         P      07 29 04.0 +1.6
NMHZ  Naumai           26.19 162  P         P      07 29 04.0 +1.4
BHHZ  Black Hill Sta   26.34 164  P         P      07 29 03.8 -0.3
QIS   Mount Isa        26.67 253  P         P      07 29 05.9 -1.2
           baz=27,SNR=4.5
QIS   Mount Isa        26.67 253  P         P      07 29 05.8 -1.4
KAHZ  Kahuranaki       26.86 163  P         P      07 29 08.9 +0.3
INKA  Innaminka        27.68 237  P         P      07 29 17.9 +1.8
STKA  Stephens Creek   28.93 229  P         P      07 29 27.5 +0.3
           comp=Z,22nm,0.7s,baz=40,slow=8.3,SNR=40
STKA                              PcP       PcP    07 32 35.9 -0.4
           comp=Z,1.7nm,0.4s,baz=22,slow=1.5,SNR=3.6
STKA                              LR        LR     07 41 05.6
           comp=Z,1µm,18.1s,baz=53,slow=37
           comp=Z,22nm,0.7s
STKA  Stephens Creek   28.93 229  P         P      07 29 27.3 +0.2
           baz=29,SNR=12
STKA  Stephens Creek   28.93 229  P         P      07 29 26.9 -0.3
STKA  Stephens Creek   28.93 229  P         P      07 29 26.9 -0.3
STKA                              pmax      pmax
           comp=Z,5.0nm,0.9s
STKA  Stephens Creek   28.93 229  P         P      07 29 28.1 +0.9
RPZ   Rata Peaks       29.50 174  LR        LR     07 39 24.1
           comp=Z,1µm,21.8s,baz=342,slow=32
TOO   Toolangi         29.92 215  P         P      07 29 36.2 +0.3
TOO                               IAmb      IAmb   07 29 46.6
           comp=Z,17nm,1.0s
TOO   Toolangi         29.92 215  P         P      07 29 36.2 +0.3
TOO                               pmax      pmax
           comp=Z,17nm,1.0s
BRAT  Ballarat         30.80 217  P         P      07 29 45.8 +2.2
LCRK  Leigh Creek      30.81 234  P         P      07 29 44.6 +0.7
WR0   Warramunga Arr   31.32 255  P         P      07 29 46.6 -1.9
WB0   Warramunga Arr   31.44 256  P         P      07 29 47.4 -2.2
WB0                               IAmb      IAmb   07 29 56.0
           comp=Z,26nm,1.4s
WB2   Warramunga Arr   31.50 255  P         P      07 29 48.0 -2.1
           baz=32
WB2   Warramunga Arr   31.50 255  P         P      07 29 48.2 -1.9
WRAB  Tennant Creek    31.50 255  P         P      07 29 48.1 -2.0
WRAB  Tennant Creek    31.50 255⇑ eP        P      07 29 50.4 +0.3
WRAB                              pmax      pmax
           comp=Z,5.0nm,0.8s
WRA   Warramunga Arr   31.51 255  P         P      07 29 47.8 -2.4
           comp=Z,4.3nm,0.7s,baz=85,slow=9.6,SNR=64
WRA                               ScP       ScP    07 36 27.6 +0.9
           comp=Z,0.9nm,1.0s,baz=79,slow=4.7,SNR=2.8
WRA                               LR        LR     07 41 44.5
           comp=Z,1µm,18.8s,baz=66,slow=35
           comp=Z,4.3nm,0.7s
WRA   Warramunga Arr   31.51 255  P         P      07 29 47.6 -2.5
WRA   Warramunga Arr   31.51 255 iP         P      07 29 47.7 -2.5
WRA                               pmax      pmax
           comp=Z,4.0nm,0.7s
HTT   Hallett          31.66 228  P         P      07 29 51.4  0.0
           baz=32,SNR=12
HTT   Hallett          31.66 228  P         P      07 29 51.8 +0.4
OOD   Oodnadatta       31.89 240  P         P      07 29 55.5 +2.1
NAPP  Napperby         32.10 229  P         P      07 29 56.2 +1.0
AS31  Alice Springs    32.41 248  P         P      07 29 56.4 -1.8
ASAR  Alice Springs    32.41 248  P         P      07 29 55.9 -2.3
           comp=Z,4.4nm,0.7s,baz=72,slow=9.3,SNR=54
ASAR                              PcP       PcP    07 32 44.6 -1.0
           comp=Z,2.1nm,0.8s,baz=74,slow=3.3,SNR=5.0
ASAR                              LR        LR     07 41 38.8
           comp=Z,1µm,18.0s,baz=92,slow=34
           comp=Z,4.4nm,0.7s
ASAR  Alice Springs    32.41 248  P         P      07 29 57.1 -1.1
ASAR  Alice Springs    32.41 248  P         P      07 29 57.1 -1.1
WHYH  Whyalla          32.45 230  P         P      07 29 58.5 +0.2
           comp=Z,31nm,0.7s
RAR   Rarotonga        32.49 107  LR        LR     07 40 35.6
           comp=Z,496nm,21.9s,baz=282,slow=32
TWOA  Tennyson Woods   32.73 226  P         P      07 30 01.7 +1.0
MOO   Moorlands        32.74 207  P         P      07 30 00.6 -0.1
           baz=33,SNR=3.2
KDU   Kakadu           33.42 269  P         P      07 30 05.9 -1.1
           baz=34,SNR=8.0
BBOO  Buckleboo        33.48 231  P         P      07 30 07.3 -0.1
           baz=34,SNR=52
BBOO  Buckleboo        33.48 231  P         P      07 30 05.6 -1.8
BBOO  Buckleboo        33.48 231  P         P      07 30 07.7 +0.3
MULG  Mulgathing       34.06 237  P         P      07 30 11.8 -0.6
MTN   Manton Dam       34.70 268  P         P      07 30 17.2 -1.0
           baz=35,SNR=3.5
MTN   Manton Dam       34.70 268  P         P      07 30 15.2 -2.9
MTN                               IAmb      IAmb   07 30 25.6
           comp=Z,21nm,0.8s
GUMO  Guam             35.25 321  LR        LR     07 43 54.8
           comp=Z,739nm,19.2s,baz=142,slow=35
KNRA  Kununurra        36.76 263  P         P      07 30 34.2 -1.5
           baz=37,SNR=7.1
KNRA  Kununurra        36.76 263  P         P      07 30 34.5 -1.2
KNRA                              IAmb      IAmb   07 30 57.3
           comp=Z,36nm,1.0s
SIJI  Sorong           37.62 288  LR        LR     07 47 37.7
           comp=Z,675nm,18.8s,baz=142,slow=39
WRKA  Warakurna        37.69 248  P         P      07 30 41.8 -1.8
           baz=38
WRKA  Warakurna        37.69 248  P         P      07 30 42.7 -0.9
FORT  Forrest          39.13 239  P         P      07 30 55.2 -0.4
           baz=39,SNR=50
FORT  Forrest          39.13 239  P         P      07 30 55.2 -0.4
FORT  Forrest          39.13 239  P         P      07 30 57.1 +1.4
PPT2  Papeete2         41.98 100  eS        S      07 37 27.9  -11
           comp=Z,244nm,24.8s
PPT2                              eLQ       LQ     07 41 43.7
           comp=Z,285nm,23.2s
PPT2                              eLR       LR     07 43 10.0
           comp=Z,1µm,29.5s,baz=254
SANI  Sanana           42.13 283  P         P      07 31 23.1 +2.4
TBI   Tubuai           42.20 109  eS        S      07 37 46.8 +5.3
           comp=Z,222nm,25.2s
TBI                               eLQ       LQ     07 41 21.9
TBI                               eLR       LR     07 43 18.6
           baz=278
BATI  Baumata          42.33 271  LR        LR     07 48 19.9
           comp=Z,770nm,18.7s,baz=112,slow=35
EDFI  Ende, Flores     44.51 272  P         P      07 31 39.1 -0.9
PSA00 Pilbara Seismi   45.13 254  P         P      07 31 42.9 -1.9
PSA00                             IAmb      IAmb   07 31 53.8
           comp=Z,15nm,1.2s
MBWA  Marble Bar       45.23 254  P         P      07 31 45.1 -0.5
MBWA                              IAmb      IAmb   07 31 54.6
           comp=Z,23nm,0.9s
MBWA  Marble Bar       45.23 254  P         P      07 31 44.8 -0.8
GTOI  Gorontalo        45.84 285  P         P      07 31 51.4 +0.9
           comp=Z,17nm,0.7s
DAV   Davao City (W)   46.11 295  LR        LR     07 51 32.1
           comp=Z,96nm,18.4s,baz=137,slow=37
MEEK  Meekatharra      46.54 247  P         P      07 31 54.7 -1.2
           baz=47,SNR=37
MEEK  Meekatharra      46.54 247  P         P      07 31 55.5 -0.4
KAPI  Kappang          47.23 276  LR        LR     07 51 47.5
           comp=Z,254nm,21.0s,baz=99,slow=36
KAPI  Kappang          47.23 276  P         P      07 32 04.8 +3.4
JCJ   Chichijima       47.63 330  LR        LR     07 52 39.2
           comp=Z,152nm,19.0s,baz=14,slow=37
KLBR  Kellerberrin     47.92 240  P         P      07 32 05.4 -1.1
           baz=48,SNR=10
KLBR  Kellerberrin     47.92 240  P         P      07 32 06.4 -0.2
           comp=Z,85nm,0.7s
TOLI2 Tolitoli         48.09 285  P         P      07 32 11.6 +3.5
PLAI  Plampang         48.29 271  P         P      07 32 13.5 +3.9
PLAI  Plampang         48.29 271  P         P      07 32 12.7 +3.1
NWAO  Narrogin (SRO)   48.59 239  P         P      07 32 10.7 -1.0
NWAO  Narrogin (SRO)   48.59 239  P         P      07 32 10.7 -1.0
NWAO                              pmax      pmax
           comp=Z,45nm,0.8s
MORW  Morawa           49.05 244  P         P      07 32 14.6 -0.7
           baz=49,SNR=8.9
MORW  Morawa           49.05 244  P         P      07 32 14.5 -0.9
MORW  Morawa           49.05 244  P         P      07 32 14.7 -0.7
MUN   Mundaring        49.28 240  P         P      07 32 16.2 -0.8
           baz=50,SNR=3.3
JAGI  Jajag, Banyuwa   51.87 270  P         P      07 32 35.6 -1.3
TAOE  Nuku Hiva Isla   52.14  90  eS        S      07 39 59.5 -4.2
TAOE                              eLR       LR     07 47 35.1
           comp=Z,738nm,25.1s
BBKI  Banjar Baru      52.37 277  P         P      07 32 48.1 +7.6
JHJ   Hachijo jima 2   53.79 332  LR        LR     07 54 59.5
           comp=Z,143nm,19.4s,baz=198,slow=35
JOW   Kunigami         55.47 317  LR        LR     07 56 33.8
           comp=Z,239nm,18.6s,baz=132,slow=36
INU   Inuyama          56.92 331  P         P      07 33 17.9 +4.8
JGF   Kuroka           56.97 331  P         P      07 33 12.6 -0.9
JGF                               IAmb      IAmb   07 33 21.4
           comp=Z,22nm,0.8s
MJAR  Matsushiro Arr   57.36 333  P         P      07 33 14.8 -1.4
           comp=Z,4.7nm,0.8s,baz=164,slow=8.5,SNR=12
           comp=Z,4.7nm,0.8s
MJAR  Matsushiro Arr   57.36 333  P         P      07 33 15.3 -0.9
MJAR                              IAmb      IAmb   07 33 22.8
           comp=Z,18nm,0.9s
MJAR  Matsushiro Arr   57.36 333  P         P      07 33 15.3 -0.9
MJAR                              pmax      pmax
           comp=Z,18nm,0.9s
MAJO  Matsushiro       57.36 333  P         P      07 33 15.5 -0.8
MAJO  Matsushiro       57.36 333⇑ eP        P      07 33 15.4 -0.8
MAJO                              pmax      pmax
           comp=Z,10.0nm,1.0s
MAJO  Matsushiro       57.36 333  P         P      07 33 21.5 +5.3
MJB9  Matsu-Tunnel     57.36 333  P         P      07 33 15.5 -0.8
KSM   Kuching          58.11 281  P         P      07 33 19.5 -2.5
KSM                               IAmb      IAmb   07 33 30.6
           comp=Z,13nm,0.9s
KSM   Kuching          58.11 281  P         P      07 33 24.7 +2.7
JNU   Nakatsue         58.35 325  P         P      07 33 22.7 -0.6
JNU   Nakatsue         58.35 325  P         P      07 33 29.1 +5.8
LEM   Lembang          58.55 271  LR        LR     07 59 32.7
           comp=Z,224nm,18.4s,baz=142,slow=37
JHS   Saijyo           58.57 328  P         P      07 33 24.4 -0.4
JSD   Sado             58.59 334  P         P      07 33 24.4 -0.4
TPUB  Ta-pu            58.66 309  P         P      07 33 29.9 +4.2
JKA   Kamikawa-asahi   62.23 340  P         P      07 33 49.8 +0.3
JKA                               IAmb      IAmb   07 33 51.0
           comp=Z,11nm,0.6s
ASAJ  Asahikawa        62.23 340  P         P      07 33 50.0 +0.5
           comp=Z,7.7nm,0.5s,baz=172,slow=1.9,SNR=3.0
           comp=Z,7.7nm,0.5s
ASAJ  Asahikawa        62.23 340  P         P      07 33 49.8 +0.2
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ASAJ				pmax	pmax		
	comp=Z,11nm,0.6s						
MDSI	**Maura Dua**	**62.41**	**272**	P	**P**	**07 33 53.8**	**+2.3**
TJN	**Taejon**	**62.70**	**325**	⇑eP	**P**	**07 33 52.0**	**-0.9**
KSRS	**Korea Array**	**63.17**	**326**	P	**P**	**07 33 56.2**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=140,slow=7.2,SNR=8.8						
	comp=Z,4.7nm,0.8s						
VNDA	**Vanda**	**63.25**	**181**	P	**P**	**07 33 57.1**	**+1.2**
	comp=Z,8.4nm,1.0s,baz=351,slow=5.1,SNR=30						
VNDA				LR	LR	07 57 40.8	
	comp=Z,342nm,20.6s,baz=29,slow=32						
	comp=Z,8.4nm,1.0s						
VNDA	**Vanda**	**63.25**	**181**	P	**P**	**07 33 55.8**	**-0.2**
VNDA				IAmb	IAmb	07 34 01.6	
	comp=Z,16nm,1.1s						
VNDA	**Vanda**	**63.25**	**181**	P	**P**	**07 33 55.8**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,16nm,1.2s						
SBA	**Scott Base**	**63.53**	**180**	P	**P**	**07 33 58.1**	**+0.3**
SBA	**Scott Base**	**63.53**	**180**	P	**P**	**07 33 58.1**	**+0.3**
SBA				pmax	pmax		
	comp=Z,29nm,1.0s						
CASY	**Casey**	**63.73**	**202**	P	**P**	**07 33 58.6**	**-0.7**
CASY				IAmb	IAmb	07 34 06.8	
	comp=Z,13nm,0.9s						
YSS	**Yuzh-Sakhalins**	**64.72**	**342**	P	**P**	**07 34 05.6**	**-0.4**
YSS	**Yuzh-Sakhalins**	**64.72**	**342**	eP	**P**	**07 34 06.8**	**+0.8**
YSS				eS	**S**	**07 42 45.7**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2	**Nanjing**	**65.09**	**316**	eP	**P**	**07 34 11.1**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TEY	**Ternei**	**65.14**	**337**	eP	**P**	**07 34 09.2**	**+0.4**
QIZ	**Qiongzhong**	**65.17**	**299**	P	**P**	**07 34 10.0**	**+0.5**
QIZ				S	**S**	**07 42 54.0**	**+1.0**
QIZ				LR	LR		
	comp=Z,170nm,17.7s						
QIZ				LR	LR		
	comp=Z,170nm,16.2s						
QIZ				LR	LR		
	comp=Z,310nm,25.5s						
MSHR	**Mys Shultsa**	**65.43**	**332**	⇑eP	**P**	**07 34 09.8**	**-0.9**
MSHR				pmax	pmax		
	comp=Z,24nm,1.3s						
USRK	**Ussuriysk Ar.**	**66.34**	**333**	P	**P**	**07 34 17.2**	**+0.6**
	comp=Z,9.7nm,0.8s,baz=131,slow=5.5,SNR=9.9						
USRK				LR	LR	07 59 37.6	
	comp=Z,107nm,22.0s,baz=140,slow=33						
	comp=Z,9.7nm,0.8s						
SHEM	**Shemya Is, Ala**	**67.08**	**5**	LR	LR	07 57 17.2	
	comp=Z,301nm,22.0s,baz=146,slow=30						
PEA0B	**Petropavlovsk-**	**67.62**	**354**	P	**P**	**07 34 24.4**	**-0.1**
PEA0B				IAmb	IAmb	07 34 33.7	
	comp=Z,18nm,0.9s						
PEA0B	**Petropavlovsk-**	**67.62**	**354**	P	**P**	**07 34 24.4**	**-0.1**
PEA0B				pmax	pmax		
	comp=Z,18nm,0.9s						
PETK	**Petropavlovsk-**	**67.62**	**354**	P	**P**	**07 34 24.4**	**-0.1**
	comp=Z,8.1nm,0.8s,baz=184,slow=13,SNR=22						
PETK				LR	LR	07 58 37.6	
	comp=Z,230nm,21.6s,baz=160,slow=31						
	comp=Z,8.1nm,0.8s						
PETK	**Petropavlovsk-**	**67.62**	**354**	P	**P**	**07 34 23.3**	**-1.2**
PETK	**Petropavlovsk-**	**67.62**	**354**	P	**P**	**07 34 23.3**	**-1.2**
GULI	**GuiLin**	**67.65**	**305**	P	**P**	**07 34 25.4**	**+0.1**
MDJ	**Mudanjiang**	**67.73**	**332**	P	**P**	**07 34 25.5**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,11nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.7s						
MDJ				LR	LR		
	comp=Z,320nm,21.4s						
MDJ				LR	LR		
	comp=Z,260nm,21.4s						
MDJ				LR	LR		
	comp=Z,370nm,17.5s						
CN2	**Changchun**	**69.09**	**329**	eP	**P**	**07 34 33.8**	**-0.1**
CN2				eS	**S**	**07 43 41.8**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,18.0s						
CN2				LR	LR		
	comp=Z,100nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,19.2s						
BNX	**BinXian**	**69.59**	**332**	⇑P	**P**	**07 34 36.5**	**-0.5**
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
BNX				pmax	pmax		
	comp=Z,160nm,7.1s						
GRNR	**Gornyy**	**70.07**	**340**	⇓iP	**P**	**07 34 40.6**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,70nm,1.1s						
KLR	**Kul'dur**	**70.47**	**336**	P	**P**	**07 34 42.1**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=122,slow=3.2,SNR=16						
KLR				LR	LR	08 01 36.1	
	comp=Z,82nm,21.8s,baz=162,slow=32						
	comp=Z,3.5nm,0.8s						
KLR	**Kul'dur**	**70.47**	**336**	⇓eP	**P**	**07 34 42.3**	**0.0**
KLR				pmax	pmax		
	comp=Z,21nm,2.5s						
LYN	**LuoYang**	**70.89**	**315**	eP	P	07 34 52.3	+7.1
LYN				S	**S**	**07 44 09.0**	**+8.1**
LYN				pmax	pmax		
	comp=Z,20nm,0.8s						
LYN				pmax	pmax		
	comp=Z,140nm,5.3s						
LYN				LR	LR		
	comp=N,260nm,17.1s						
LYN				LR	LR		
	comp=E,240nm,17.3s						
LYN				LR	LR		
	comp=Z,350nm,18.4s						
BJI	**Beijing**	**71.69**	**321**	P	**P**	**07 34 50.1**	**+0.2**
BJI				sP	**pwP**	**07 34 57.1**	**+2.1**
BJI				PcP	**PcP**	**07 35 10.0**	**+1.0**
BJI				S	**S**	**07 44 11.4**	**+1.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI				LR	LR		
	comp=Z,210nm,20.8s						
BJI				LR	LR		
	comp=Z,130nm,19.5s						
BJI				LR	LR		
	comp=Z,180nm,24.9s						
XAN	**Xi'an**	**73.11**	**313**	P	**P**	**07 34 58.6**	**0.0**
XAN				pP	pwP	07 35 05.6	+1.9
XAN				sP	PcP	07 35 09.8	-5.5
XAN				S	**SKiKP**	**07 44 29.3**	**-2.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,94nm,6.5s						
XAN				LR	LR		
	comp=Z,180nm,18.4s						
XAN				LR	LR		
	comp=Z,250nm,18.4s						
XAN				LR	LR		
	comp=Z,420nm,17.8s						
KMI	**Kunming**	**73.73**	**302**	⇑P	**P**	**07 35 04.4**	**+1.7**
KMI				pP	pwP	07 35 07.1	-0.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				LR	LR		
	comp=Z,100nm,14.9s						
KMI				LR	LR		
	comp=Z,230nm,20.5s						
KMI				LR	LR		
	comp=Z,330nm,27.0s						
XLT	**XiLinHaoTe**	**74.14**	**324**	eP	**P**	**07 35 04.9**	**+0.4**
XLT				pP	pwP	07 35 09.3	-0.3
XLT				sP	sP	07 35 12.4	+4.3
XLT				pmax	pmax		
	comp=Z,15nm,0.9s						
XLT				pmax	pmax		
	comp=Z,78nm,4.8s						
CMAR	**Chiang Mai Arr**	**74.40**	**294**	P	**P**	**07 35 07.2**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=123,slow=4.2,SNR=11						
CMAR				LR	LR	08 05 26.8	
	comp=Z,54nm,21.5s,baz=160,slow=34						
	comp=Z,3.5nm,0.9s						
CHTO	**Chiang Mai**	**74.52**	**294**	P	**P**	**07 35 06.4**	**-0.8**
CHTO				IAmb	IAmb	07 35 24.2	
	comp=Z,13nm,1.1s						
CHTO	**Chiang Mai**	**74.52**	**294**	P	**P**	**07 35 06.4**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
MA2	**Magadan**	**74.79**	**352**	LR	LR	08 05 02.8	
	comp=Z,125nm,20.0s,baz=166,slow=33						
HHC	**Hu-ho-hao-te**	**75.01**	**320**	eP	**P**	**07 35 11.1**	**+1.5**
HHC				S	**S**	**07 44 50.5**	**+2.8**
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=Z,460nm,21.0s						
HHC				LR	LR		
	comp=Z,450nm,20.6s						
PZH	**PanZhiHua**	**75.12**	**303**	P	**P**	**07 35 10.5**	**-0.1**
PZH				S	**S**	**07 44 48.8**	**-0.8**
PZH				ScS	**ScS**	**07 45 23.8**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,9.4s						
PZH				LR	LR		
	comp=Z,500nm,19.6s						
PZH				LR	LR		
	comp=Z,460nm,21.1s						
PZH				LR	LR		
	comp=Z,640nm,25.0s						
CD2	**Chengdu**	**75.43**	**308**	P	**P**	**07 35 12.3**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
QSPA	**South Pole Qui**	**75.69**	**180**	LR	LR	08 04 02.6	
	comp=Z,240nm,21.5s,baz=39,slow=32						
QSPA	**South Pole Qui**	**75.69**	**180**	P	**P**	**07 35 12.7**	**-0.6**
ZEA	**Zeya**	**75.76**	**337**	eP	**P**	**07 35 14.1**	**+0.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	**Lanzhou**	**77.74**	**312**	eP	P	07 35 32.8	+7.5
LZH				pP	PcP	07 35 38.3	+2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=N,160nm,12.5s						
LZH				LR	LR		
	comp=E,230nm,14.3s						
LZH				LR	LR		
	comp=Z,230nm,14.6s						
SEY	**Seymchan**	**77.84**	**353**	P	**P**	**07 35 24.8**	**-0.3**
	comp=Z,6.4nm,0.7s,baz=142,slow=5.1,SNR=12						
SEY				LR	LR	08 03 30.7	
	comp=Z,191nm,21.5s,baz=154,slow=31						
	comp=Z,6.4nm,0.7s						
SEY	**Seymchan**	**77.84**	**353**	⇑eP	**P**	**07 35 24.6**	**-0.4**
SEY				pmax	pmax		
	comp=Z,30nm,2.5s						
KDAK	**Kodiak Island**	**79.25**	**21**	LR	LR	08 04 44.0	
	comp=Z,244nm,20.6s,baz=239,slow=31						
YAK	**Yakutsk**	**81.53**	**343**	P	**P**	**07 35 44.7**	**-0.4**
	comp=Z,16nm,0.6s,baz=88,slow=1.7,SNR=6.0						
	comp=Z,16nm,0.6s						
YAK	**Yakutsk**	**81.53**	**343**	P	**P**	**07 35 44.3**	**-0.8**
YAK	**Yakutsk**	**81.53**	**343**	c iP	**P**	**07 35 44.4**	**-0.7**
YAK				pmax	pmax		
	comp=Z,30nm,0.7s						
ULN	**Ulaanbaatar**	**81.56**	**324**	P	**P**	**07 35 45.7**	**-0.1**
ULN				IAmb	IAmb	07 35 53.7	
	comp=Z,22nm,0.8s						
ULN	**Ulaanbaatar**	**81.56**	**324**	c iP	**P**	**07 35 45.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
M19K	**Big River Lodg**	**81.89**	**17**	P	**P**	**07 35 48.6**	**+1.6**
	baz=218						
SONM	**Songino Array**	**81.92**	**324**	P	**P**	**07 35 47.0**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=145,slow=7.5,SNR=9.1						
SONM				LR	LR	08 13 30.9	
	comp=Z,133nm,18.5s,baz=121,slow=37						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**81.92**	**324**	P	**P**	**07 35 47.2**	**-0.5**
SONM				IAmb	IAmb	07 35 55.5	
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	**81.92**	**324**	P	**P**	**07 35 47.2**	**-0.5**
SONM				pmax	pmax		
	comp=Z,14nm,1.0s						
L19K	**White Mountain**	**81.98**	**17**	P	**P**	**07 35 48.5**	**+0.9**
	baz=217						
GTA	**Gaotai**	**82.08**	**314**	⇑P	**P**	**07 35 49.4**	**+0.6**
GTA				pP	pwP	07 35 53.4	-0.5
GTA				sP	PcP	07 35 56.8	+2.6
GTA				sS	sS	07 46 12.6	+4.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,71nm,5.6s						
GTA				LR	LR		
	comp=Z,190nm,16.3s						
GTA				LR	LR		
	comp=Z,110nm,17.9s						
GTA				LR	LR		
	comp=Z,140nm,17.5s						
MAW	**Mawson**	**82.09**	**202**	P	**P**	**07 35 47.9**	**-0.1**
	comp=Z,8.6nm,1.2s,baz=134,slow=17,SNR=3.4						
MAW				LR	LR	08 07 49.8	
	comp=Z,316nm,19.9s,baz=104,slow=32						
	comp=Z,8.6nm,1.2s						
MAW	**Mawson**	**82.09**	**202**	P	**P**	**07 35 48.0**	**-0.1**
	baz=82,SNR=5.1						
BILL	**Bilibino**	**82.15**	**360**	P	**P**	**07 35 47.4**	**-0.8**
BILL				IAmb	IAmb	07 35 48.8	
	comp=Z,16nm,0.7s						
BILL	**Bilibino**	**82.15**	**360**	⇑iP	**P**	**07 35 47.2**	**-1.1**
BILL				i		07 35 55.1	
BILL				i		07 38 56.1	
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
O22K	**Cooper Landing**	**82.26**	**20**	IAmb	IAmb	07 36 19.3	
	comp=Z,17nm,0.8s						
TTA	**Tatalina**	**82.26**	**16**	P	**P**	**07 35 49.1**	**0.0**
TTA	**Tatalina**	**82.26**	**16**	P	**P**	**07 35 49.1**	**0.0**
TTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TTA	**Tatalina**	**82.26**	**16**	P	**P**	**07 35 50.6**	**+1.5**
	baz=216						
L20K	**Farewell, AK**	**82.50**	**17**	P	**P**	**07 35 51.4**	**+1.1**
	baz=218						
PMR	**Palmer**	**83.27**	**20**	P	**P**	**07 35 53.5**	**-0.7**
PMR				IAmb	IAmb	07 36 17.1	
	comp=Z,12nm,1.2s						
PMR	**Palmer**	**83.27**	**20**	P	**P**	**07 35 53.5**	**-0.7**
PMR				pmax	pmax		
	comp=Z,12nm,1.2s						
PMR	**Palmer**	**83.27**	**20**	P	**P**	**07 35 53.9**	**-0.3**
	baz=223						
KNK	**Knik Glacier**	**83.36**	**20**	P	**P**	**07 35 54.7**	**0.0**
KNK				IAmb	IAmb	07 36 20.3	
	comp=Z,18nm,1.2s						
GHO	**Glory Hole Cre**	**83.47**	**20**	IAmb	IAmb	07 36 20.9	
	comp=Z,13nm,1.1s						
SML	**Sawmill**	**83.69**	**20**	IAmb	IAmb	07 36 22.0	
	comp=Z,22nm,1.2s						
CAST	**Castle Rocks**	**83.75**	**17**	IAmb	IAmb	07 36 18.8	
	comp=Z,10nm,1.0s						
CAST	**Castle Rocks**	**83.75**	**17**	P	**P**	**07 35 55.8**	**-0.8**
	baz=220						
J20K	**Nowinta River**	**83.76**	**16**	P	**P**	**07 35 57.5**	**+0.8**
	baz=218						
SCM	**Sheep Creek Mo**	**84.04**	**20**	IAmb	IAmb	07 36 23.7	
	comp=Z,22nm,1.2s						
SCM	**Sheep Creek Mo**	**84.04**	**20**	P	**P**	**07 35 58.0**	**-0.3**
	baz=224						
KTH	**Kantishna Hill**	**84.19**	**18**	IAmb	IAmb	07 36 23.3	
	comp=Z,14nm,1.1s						
TRF	**Thorofare Moun**	**84.30**	**18**	IAmb	IAmb	07 36 12.4	
	comp=Z,7.2nm,0.9s						
TRF	**Thorofare Moun**	**84.30**	**18**	P	**P**	**07 35 58.4**	**-1.3**
	baz=222						
GOMU	**GeErMu**	**84.41**	**309**	P	**P**	**07 36 03.9**	**+2.8**
GOMU				pP	pwP	07 36 07.1	+0.8
GOMU				sP	PcP	07 36 08.3	+3.5
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,66nm,6.2s						
GOMU				LR	LR		
	comp=Z,59nm,13.2s						
GOMU				LR	LR		
	comp=Z,53nm,13.2s						
GOMU				LR	LR		
	comp=Z,43nm,16.0s						
WAT6	**Susitna Watana**	**84.44**	**19**	P	**P**	**07 36 01.0**	**+0.6**
	baz=224						
BPAW	**Bear Paw Mtn.**	**84.58**	**17**	P	**P**	**07 35 59.7**	**-1.2**
	baz=221						
WAX	**Waxell Ridge**	**84.66**	**23**	IAmb	IAmb	07 36 27.0	
	comp=Z,8.0nm,0.8s						
N25K	**Chitina, Valde**	**84.81**	**21**	IAmb	IAmb	07 36 28.3	
	comp=Z,10nm,1.2s						
N25K	**Chitina, Valde**	**84.81**	**21**	P	**P**	**07 36 02.0**	**-0.2**
	baz=227						
MCK	**McKinley**	**84.91**	**18**	P	**P**	**07 36 02.7**	**+0.1**
	baz=223						
DHY	**Denali Highway**	**84.92**	**19**	IAmb	IAmb	07 36 28.1	
	comp=Z,21nm,1.4s						
DHY	**Denali Highway**	**84.92**	**19**	P	**P**	**07 36 03.0**	**+0.2**
	baz=224						
ZAK	**Zakamensk**	**84.98**	**325**	eP	**P**	**07 36 02.1**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,28nm,1.2s						
I21K	**Tanana**	**85.13**	**16**	P	**P**	**07 36 04.2**	**+0.5**
	baz=220						
H21K	**Melozitna Rive**	**85.28**	**16**	IAmb	IAmb	07 36 29.9	
	comp=Z,7.3nm,1.0s						
H21K	**Melozitna Rive**	**85.28**	**16**	P	**P**	**07 36 05.0**	**+0.6**
	baz=219						
YBH	**Yreka Blue Hor**	**85.44**	**45**	P	**P**	**07 36 07.4**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=169,slow=8.8,SNR=5.4						
YBH				LR	LR	08 05 38.4	
	comp=Z,81nm,21.4s,baz=246,slow=30						
	comp=Z,1.0nm,0.9s						
YBH	**Yreka Blue Hor**	**85.44**	**45**	P	**P**	**07 36 07.4**	**+1.5**
YBH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEA2	**Nenana**	**85.51**	**18**	IAmb	IAmb	07 36 30.2	
	comp=Z,14nm,1.3s						
WRH	**Wood River Hil**	**85.71**	**18**	IAmb	IAmb	07 36 30.6	
	comp=Z,16nm,1.0s						
M26K	**Nabesna, AK**	**85.91**	**21**	P	**P**	**07 36 07.2**	**-0.5**
	baz=228						
K24K	**Donnelly Dome**	**85.94**	**19**	P	**P**	**07 36 07.3**	**-0.5**
	baz=226						
HDA	**Harding Lake**	**86.01**	**18**	P	**P**	**07 36 07.5**	**-0.6**
	baz=224						
MDM	**Murphy Dome**	**86.02**	**18**	IAmb	IAmb	07 36 32.7	
	comp=Z,17nm,1.1s						
TCOL	**CIGO, UAF Yank**	**86.07**	**18**	IAmb	IAmb	07 36 32.8	
	comp=Z,18nm,0.9s						
TCOL	**CIGO, UAF Yank**	**86.07**	**18**	P	**P**	**07 36 08.0**	**-0.2**
	baz=224						
COLA	**College**	**86.07**	**18**	P	**P**	**07 36 07.7**	**-0.6**
COLA				IAmb	IAmb	07 36 32.8	
	comp=Z,17nm,0.9s						
COLA	**College**	**86.07**	**18**	deP	**P**	**07 36 07.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IL31		**86.28**	**18**	IAmb	IAmb	07 36 34.0	
	comp=Z,9.2nm,1.1s						
ILAR	**Eielson Array**	**86.28**	**18**	P	**P**	**07 36 07.6**	**-1.8**
	comp=Z,3.2nm,0.6s,baz=240,slow=5.2,SNR=60						
ILAR				LR	LR	08 07 58.5	
	comp=Z,229nm,21.7s,baz=236,slow=31						
	comp=Z,3.2nm,0.6s						
H23K	**Yukon River**	**86.29**	**17**	IAmb	IAmb	07 36 34.8	
	comp=Z,8.7nm,1.0s						
H23K	**Yukon River**	**86.29**	**17**	P	**P**	**07 36 09.6**	**+0.2**
	baz=222						
YUK3	**Moose Creek**	**86.41**	**22**	P	**P**	**07 36 10.5**	**+0.1**
	baz=231						
J25K	**Salcha River,**	**86.64**	**19**	IAmb	IAmb	07 36 36.5	
	comp=Z,7.5nm,0.8s						
J25K	**Salcha River,**	**86.64**	**19**	P	**P**	**07 36 10.0**	**-1.2**
	baz=226						
BBB	**Bella Bella**	**86.69**	**34**	LR	LR	08 07 08.5	
	comp=Z,254nm,20.9s,baz=249,slow=30						
L27K	**Beaver Creek,**	**86.75**	**21**	P	**P**	**07 36 11.8**	**0.0**
	baz=229						
PFO	**Pinyon Flats O**	**87.11**	**54**	LR	LR	08 09 54.3	
	comp=Z,196nm,18.3s,baz=262,slow=32						
COLD	**Coldfoot**	**87.16**	**15**	IAmb	IAmb	07 36 40.0	
	comp=Z,6.3nm,0.9s						
COLD	**Coldfoot**	**87.16**	**15**	P	**P**	**07 36 14.0**	**+0.4**
	baz=221						
NVAR	**Mina Array Bea**	**87.34**	**49**	P	**P**	**07 36 16.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=235,slow=8.7,SNR=4.8						
NVAR				LR	LR	08 06 39.9	
	comp=Z,141nm,21.9s,baz=270,slow=30						
	comp=Z,0.6nm,0.6s						
RAMN	**Ramite**	**87.94**	**298**	eP	**P**	**07 36 18.3**	**-0.3**
	comp=Z,35nm,1.2s						
PALK	**Pallekele**	**88.05**	**278**	LR	LR	08 16 04.2	
	comp=Z,129nm,20.3s,baz=216,slow=36						
EGAK	**Eagle**	**88.09**	**20**	IAmb	IAmb	07 36 43.4	
	comp=Z,8.2nm,1.3s						
TOLK	**Toolik Lake Re**	**88.38**	**15**	IAmb	IAmb	07 36 45.5	
	comp=Z,5.1nm,0.9s						
TOLK	**Toolik Lake Re**	**88.38**	**15**	P	**P**	**07 36 19.8**	**+0.3**
	baz=222						
JIRN	**Jiri**	**88.49**	**299**	eP	**P**	**07 36 22.2**	**+0.8**
I07A	**Izee**	**88.52**	**44**	P	**P**	**07 36 19.9**	**-0.9**
DLBC	**Dease Lake**	**88.79**	**28**	LR	LR	08 11 18.6	
	comp=Z,130nm,18.3s,baz=262,slow=32						
J08A	**Circle Bar Ran**	**88.95**	**45**	P	**P**	**07 36 22.7**	**-0.2**
A21K	**Barrow**	**88.97**	**11**	P	**P**	**07 36 22.2**	**+0.1**
A21K	**Barrow**	**88.97**	**11**	P	**P**	**07 36 22.6**	**+0.5**
	baz=215						
PKI	**Pulchoki**	**89.13**	**299**	eP	**P**	**07 36 23.6**	**-0.7**
	comp=Z,44nm,0.9s						
PKIN	**Phulchoki**	**89.14**	**299**	eP	**P**	**07 36 23.7**	**-0.6**
	comp=Z,32nm,0.8s						
KKN	**Kakani**	**89.30**	**299**	eP	**P**	**07 36 24.5**	**-0.5**
G08A	**Pilot Rock**	**89.32**	**43**	P	**P**	**07 36 22.6**	**-1.9**
I29M	**Ogilvie Camp,**	**89.40**	**20**	P	**P**	**07 36 23.9**	**-0.4**
I29M				IAmb	IAmb	07 36 53.6	
	comp=Z,3.2nm,0.5s						
DMN	**Daman**	**89.40**	**299**	eP	**P**	**07 36 24.9**	**-0.6**
	comp=Z,62nm,0.8s						
LPIG	**La Paz**	**89.42**	**65**	LR	LR	08 11 01.3	
	comp=Z,74nm,18.1s,baz=210,slow=32						
TIXI	**Tiksi**	**89.50**	**349**	LR	LR	08 13 00.8	
	comp=Z,46nm,20.4s,baz=181,slow=33						
TIXI	**Tiksi**	**89.50**	**349**	⇓eP	**P**	**07 36 23.5**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ELK	**Elko**	**90.34**	**48**	LR	LR	08 12 01.9	
	comp=Z,100nm,18.5s,baz=244,slow=32						
F10A	**Beach Ranch, E**	**90.70**	**43**	IAmb	IAmb	07 36 50.9	
	comp=Z,7.8nm,1.4s						
NEW	**Newport**	**91.54**	**40**	LR	LR	08 14 51.0	
	comp=Z,78nm,18.0s,baz=278,slow=34						
WMQ	**Urumqi**	**92.15**	**315**	eP	**P**	**07 36 38.8**	**+1.1**
WMQ				LR	LR		
	comp=Z,520nm,19.3s						
WMQ				LR	LR		
	comp=Z,690nm,21.1s						
WMQ				LR	LR		
	comp=Z,140nm,21.1s						
PMSA	**Palmer Station**	**92.28**	**161**	LR	LR	08 15 08.8	
	comp=Z,188nm,18.9s,baz=214,slow=34						
INK	**Inuvik**	**92.65**	**19**	LR	LR	08 12 30.0	
	comp=Z,196nm,21.7s,baz=213,slow=32						
TROLL	**Troll, Antarti**	**93.22**	**185**	P	**P**	**07 36 42.2**	**-0.1**
NVL	**N'lazarevskaya**	**93.38**	**188**	eP	**P**	**07 36 47.0**	**+4.2**
NVL				pmax	pmax		
	comp=Z,13nm,0.9s						
SNAA	**Sanae**	**93.92**	**183**	P	**P**	**07 36 45.0**	**-0.4**
SNAA	**Sanae**	**93.92**	**183**	LR	LR	08 18 07.1	
	comp=Z,312nm,18.2s,baz=158,slow=35						
SNAA	**Sanae**	**93.92**	**183**	P	**P**	**07 36 45.1**	**-0.3**
SNAA	**Sanae**	**93.92**	**183**	⇓eP	**P**	**07 36 44.4**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,14nm,1.3s						
VNA3	**Neumayer Olymp**	**94.60**	**181**	P	**P**	**07 36 47.0**	**-1.5**
PDAR	**Pinedale Array**	**95.00**	**47**	LR	LR	08 20 21.2	
	comp=Z,51nm,18.0s,baz=276,slow=36						
VNA1	**Neumayer--Stat**	**95.16**	**182**	P	**P**	**07 36 50.6**	**-0.3**
ANMO	**Albuquerque**	**95.43**	**55**	LR	LR	08 13 21.1	
	comp=Z,108nm,19.1s,baz=256,slow=31						
SMCO	**Snowmass**	**96.02**	**51**	P	**P**	**07 36 52.6**	**-3.4**
TXAR	**Lajitas Array**	**96.47**	**61**	P	**P**	**07 36 57.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=234,slow=4.1,SNR=3.0						
	comp=Z,0.2nm,0.5s						

MK31	**Makanchi Array**	96.62	316	P	P	07 36 55.4	-2.6
MK31				IAmb	IAmb	07 37 05.3	
	comp=Z,8.3nm,0.9s						
MK31	**Makanchi Array**	96.62	316	⇑*e*P	P	07 36 57.1	-1.0
MKAR	**Makanchi Array**	96.62	316	P	P	07 36 57.5	-0.6
	comp=Z,2.5nm,0.9s,baz=98,slow=6.1,SNR=17						
MKAR				PP	PP	07 40 54.4	+1.7
	comp=Z,1.4nm,1.0s,baz=110,slow=5.7,SNR=5.0						
MKAR				LR	LR	08 23 19.3	
	comp=Z,86nm,18.5s,baz=94,slow=37						
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	96.62	316	P	P	07 36 56.9	-1.1
ZAA0	**Zalesovo Array**	96.82	324	P	P	07 36 56.6	-2.1
ZALV	**Zalesovo Beam**	96.82	324	P	P	07 36 57.0	-1.7
	comp=Z,2.1nm,0.7s,baz=104,slow=6.3,SNR=6.2						
ZALV				LR	LR	08 20 10.6	
	comp=Z,76nm,20.2s,baz=183,slow=35						
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	96.82	324	P	P	07 36 56.9	-1.8
MAKZ	**Makanchi**	96.83	316	P	P	07 36 57.5	-1.5
MAKZ	**Makanchi**	96.83	316	P	P	07 36 57.5	-1.5
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
YKA	**Yellowknife Ar**	97.39	27	P	P	07 36 59.6	-1.5
	comp=Z,0.8nm,0.9s,baz=259,slow=4.7,SNR=7.8						
YKA				LR	LR	08 14 18.3	
	comp=Z,62nm,20.6s,baz=293,slow=31						
	comp=Z,0.8nm,0.9s						
NRIK	**Noril'sk**	99.55	339	P	Pdif	07 37 07.8	-2.8
	comp=Z,1.6nm,0.7s,baz=122,slow=2.0,SNR=3.6						
NRIK				LR	LR	08 20 05.4	
	comp=Z,104nm,21.5s,baz=147,slow=34						
NRIK	**Noril'sk**	99.55	339	P	Pdif	07 37 08.9	-1.7
NRIK				IAmb	IAmb	07 37 19.2	
	comp=Z,5.7nm,1.1s						
NRIK	**Noril'sk**	99.55	339	⇓*e*P	Pdif	07 37 09.6	-1.1
NRIK				pmax	pmax		
	comp=Z,8.0nm,2.0s						
KURBB	**Kurchatov Arra**	99.86	320	PP	PP	07 41 18.9	+1.5
	comp=Z,1.0nm,0.9s,baz=102,slow=7.8,SNR=5.5						
KURBB				LR	LR	08 21 18.0	
	comp=Z,144nm,21.5s,baz=73,slow=35						
LPAZ	**La Paz**	117.77	117	PKP	PKPdf	07 42 15.1	-1.0
	comp=Z,0.5nm,0.5s,baz=222,slow=9.8,SNR=2.3						
ARCES	**ARCESS Array B**	119.76	345	PKP	PKPdf	07 42 15.7	-2.0
	comp=Z,3.4nm,0.6s,baz=67,slow=2.1,SNR=26						
ARCES	**ARCESS Array B**	119.76	345		PKPdf	07 42 16.9	-0.7
ARCES	**ARCESS Array B**	119.76	345	PKIKP	PKPdf	07 42 16.9	-0.7
CPUP	**Villa Florida**	121.03	133	PKP	PKPdf	07 42 19.5	-1.9
	comp=Z,1.8nm,0.8s,baz=89,slow=7.0,SNR=3.4						
BOSA	**Boshof**	123.39	221	PKP	PKPdf	07 42 24.8	-1.3
	comp=Z,1.7nm,0.8s,baz=217,slow=2.0,SNR=4.1						
GNI	**Garni**	123.55	309	⇑*i*PKIKP	PKiKP	07 42 26.6	+0.4
ZEI	**Tsey**	123.66	312	*i* PKIKP	PKPdf	07 42 22.5	-3.7
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VORR	**Voronezh**	124.12	323	*e*PKIKP	PKPdf	07 42 25.0	-1.4
VORR				pmax	pmax		
	comp=Z,20nm,0.3s						
OBN	**Obninsk**	124.14	328	⇓*i*PKIKP	PKPdf	07 42 25.8	-0.6
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KIV	**Kislovodsk**	124.26	314	*i* PKIKP	PKPdf	07 42 25.2	-1.9
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,78nm,23.0s						
FINES	**FINESS Array B**	125.20	338	PKP	PKPdf	07 42 26.8	-1.4
	comp=Z,1.5nm,0.5s,baz=69,slow=2.3,SNR=11						
NB2	**NORSAR Subarra**	130.13	345	PKPdf	PKPdf	07 42 36.5	-1.2
	comp=Z,2.5nm,1.1s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	130.13	345	PKP	PKPdf	07 42 37.1	-0.7
	comp=Z,0.4nm,0.6s,baz=207,slow=14,SNR=3.2						
NOA				SKPbc	SKPab	07 46 00.1	-0.4
	comp=Z,2.3nm,0.9s,baz=30,slow=3.2,SNR=5.8						
AKASG	**Malin Array Be**	130.17	326	PKP	PKPdf	07 42 37.4	-0.7
	comp=Z,0.4nm,0.4s,baz=38,slow=19,SNR=3.9						
AKASG				SKPbc	SKPbc	07 46 01.3	+0.1
	comp=Z,0.8nm,0.6s,baz=43,slow=4.6,SNR=6.5						
BRTR	**Keskin Array B**	131.93	311	PKP	PKPdf	07 42 40.8	-1.1
	comp=Z,0.8nm,0.8s,baz=175,slow=3.7,SNR=2.9						
BRTR				SKPbc	SKPbc	07 46 08.2	0.0
	comp=Z,0.7nm,0.6s,baz=90,slow=2.6,SNR=4.6						
BDFB	**Brasilia**	134.47	130	PKP	PKPdf	07 42 46.0	-1.3
	comp=Z,2.2nm,0.7s,baz=330,slow=0.9,SNR=5.2						
KOLS	**Kolonicke sedl**	134.88	327	*e*PKIKP	PKiKP	07 42 47.7	-0.8
KOLS	**Kolonicke sedl**	134.88	327	*e*PKP	PKiKP	07 42 47.7	-0.8
DPC	**Dobruska-Polom**	136.83	333	*e*PKIKP	PKiKP	07 42 53.2	+0.7
DPC	**Dobruska-Polom**	136.83	333	*e*PKP	PKiKP	07 42 53.2	+0.7
BRG	**Berggiesshubel**	137.47	335	*e*PKP	PKiKP	07 43 03.9	+10
BRG				Amp		07 43 05.7	
	comp=Z,9.3nm,1.4s						
BRG				*e*x	x	07 46 26.7	
BRG				Amp		07 46 28.2	
	comp=Z,14nm,1.3s						
CLL	**Collm**	137.52	336	*e*SKPbc	SKPbc	07 46 26.0	+0.4
	comp=Z,12nm,1.3s						
CLL				*e*PKSbc	PKSbc	07 46 28.0	+1.6
CLL				*e*PKSab	PKSab	07 46 34.0	+0.3
CLL				*e*pPKSab		07 46 38.0	
CLL				Lm	MLR	08 46 00.0	
	comp=Z,100nm,21.0s						
MODS	**Modra-Piesok**	137.77	330	*e*PKIKP	PKiKP	07 42 53.8	-0.6
MODS	**Modra-Piesok**	137.77	330	*e*PKP	PKiKP	07 42 53.8	-0.6
MODS				*e*		07 46 28.6	
RONA	**Rosalia, Austr**	138.71	330	*e*S	SKPbc	07 46 30.3	+1.1
	comp=Z,9.2nm,1.2s						
CONA	**Conrad Observa**	138.76	330	*e*P	PKPdf	07 42 54.5	+0.1
	comp=Z,7.1nm,1.7s						
CONA				*e*S	SKPbc	07 46 30.6	+1.2
	comp=Z,11nm,1.4s						
CKRC	**Cesky Krumlov**	138.84	332	*e*PKP	PKiKP	07 42 57.2	+0.6
KHC	**Kasperske Hory**	138.94	333	*e*PKIKP	PKPdf	07 42 51.9	-2.7
KHC				*e*		07 42 59.0	
KHC	**Kasperske Hory**	138.94	333	*e*PKP	PKPdf	07 42 51.9	-2.7
KHC				*e*pPKP	sPKPdf	07 42 59.0	+0.7
DIVS	**Divibare**	139.04	323		PKPdf	07 42 54.4	-0.6
GERES	**GERESS Array B**	139.10	333	PKP	PKPdf	07 42 54.2	-0.8
	comp=Z,0.9nm,0.7s,baz=352,slow=4.0,SNR=5.1						
GERES				SKPbc	SKPbc	07 46 31.1	+0.8
	comp=Z,2.9nm,0.9s,baz=132,slow=2.0,SNR=12						
MOA	**Molln**	139.57	331	*e*P	PKiKP	07 43 01.2	+3.1
	comp=Z,6.3nm,1.3s						
SOKA	**Soboth**	140.04	330	S	SKPbc	07 46 33.6	+0.7
	comp=Z,5.5nm,1.2s						
ABTA	**Abfaltersbach**	141.19	332	P	PKiKP	07 43 02.7	+1.1
	comp=Z,2.5nm,0.6s						
WTTA	**Wattenberg**	141.20	333	*e*P	PKPdf	07 42 57.4	-1.5
	comp=Z,3.5nm,0.8s						
WTTA				*e*S	SKiKP	07 46 37.0	-1.1
	comp=Z,12nm,1.4s						
MOTA	**Moosalm**	141.37	333	*e*P	PKPdf	07 42 57.1	-2.1
	comp=Z,4.2nm,0.8s						
MOTA				*e*S	SKPbc	07 46 37.0	+0.5
	comp=Z,9.8nm,1.1s						
SQTA	**Sankt Quirin**	141.42	333	*e*P	PKPdf	07 42 56.4	-2.9
	comp=Z,2.0nm,0.7s						
SQTA				*e*S	SKiKP	07 46 37.5	-1.0
	comp=Z,8.2nm,1.0s						
FETA	**Feichten**	141.78	333	*e*P	PKiKP	07 43 05.9	+3.0
	comp=Z,3.4nm,0.8s						
FETA				*e*S	SKPbc	07 46 37.8	+0.2
	comp=Z,4.2nm,1.2s						
DAVA	**Damuels**	141.94	334	*e*P	PKPdf	07 42 58.7	-1.5
	comp=Z,5.0nm,1.0s						
DAVA				*e*S	SKiKP	07 46 38.9	-0.7
	comp=Z,12nm,1.7s						
TUE	**Stuetta**	142.81	334	PKPdf	PKPdf	07 42 58.5	-3.3
ZCCA	**Zocca**	143.69	330		PKPdf	07 43 02.6	-0.7
SENIN	**Lac Senin/Sane**	143.74	336		PKPbc	07 43 01.4	+0.4
SSB	**Saint Sauveur**	145.70	338	PKPdf	PKPdf	07 43 05.8	-0.9
SSB	**Saint Sauveur**	145.70	338	PKIKP	PKPdf	07 43 05.8	-0.9
KEST	**Kesra**	150.63	321	PKPbc	PKPbc	07 43 20.5	-0.1
	comp=Z,34nm,1.0s,baz=11,slow=1.1,SNR=11						
PBRG	**Braganca**	152.06	350	*e*PKPbc	PKPbc	07 43 23.1	-0.6
POLO	**Lamas de Olo**	152.66	351	*e*PKPbc	PKiKP	07 43 24.9	-0.4
MVO	**Moncorvo**	152.74	350	*e*PKPbc	PKPdf	07 43 21.1	+2.9
ESDC	**Sonseca Array**	153.49	344	PKP	PKPdf	07 43 19.6	+0.3
	comp=Z,0.3nm,0.6s,baz=97,slow=3.0,SNR=3.0						
ESDC				PKPbc	PKPbc	07 43 25.5	-1.4
	comp=Z,1.0nm,0.8s,baz=9.5,slow=3.3,SNR=9.7						
ESDC	**Sonseca Array**	153.49	344		PKPbc	07 43 26.6	-0.3
ESDC				PKPab	PKPab	07 43 36.6	-2.5
MTE	**Manteigas**	153.57	350	*e*PKPbc	PKPbc	07 43 26.6	-0.5
PCBR	**Castelo Branco**	154.10	350	*e*PKPbc	PKiKP	07 43 28.1	-0.1
PMRV	**Marv??o**	154.49	350	*e*PKPbc	PKiKP	07 43 30.8	+1.7
TORD	**Torodi Ar. Bea**	165.50	267	PKP	PKPdf	07 43 33.7	+0.1
	comp=Z,0.6nm,0.7s,baz=283,slow=1.4,SNR=3.8						
TORD				PKPab	PKPab	07 44 31.1	-1.0
	comp=Z,2.3nm,0.9s,baz=144,slow=1.2,SNR=4.9						
TORD				PP	PP	07 48 25.1	+5.8
	comp=Z,1.0nm,1.1s,baz=335,slow=6.6,SNR=3.5						

DNK 15 07:33:36.2±1.9**, 65.°57N**×**37.°37W, h8**^{km}±6^{km}**, ML1.4, Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANGG	**Ammassalik, Gr**	0.12	294	*i* P	Pg	07 33 37.6	-1.3
ANGG				*i* S	Sg	07 33 41.2	+0.5
ANGG				IAML		07 33 41.4	
	comp=Z,65nm,0.1s						
ANGG	**Ammassalik, Gr**	0.12	294	*i* P	Pg	07 33 37.6	-1.3
ANGG				*i* S	Sg	07 33 41.2	+0.5
ANGG				IAML		07 33 41.4	
	comp=Z,65nm,0.1s						
SOEG	**Soedalen**	3.55	39	*i* S	Sn	07 35 11.4	-2.1
SOEG				IAML		07 35 14.1	
	comp=Z,3.2nm,0.2s						
ICESG	**Greenland Ices**	3.65	347	*i* P	Pn	07 34 32.4	-0.8
ICESG				*i* S	Sn	07 35 14.7	-1.9
ICESG				IAML		07 35 27.0	
	comp=Z,1.0nm,0.3s						
DY2G	**Dye2**	3.74	288	*i* P	Pn	07 34 36.4	+2.0
DY2G				*i* S	Sn	07 35 15.5	-3.2
DY2G				IAML		07 35 30.7	
	comp=Z,1.6nm,0.1s						
DY2G	**Dye2**	3.74	288	*e*P	Pn	07 34 35.5	+1.1
DY2G				*i* S	Sn	07 35 16.9	-1.9
SFJD	**Kangerlussuaq**	5.54	291	*i* S	Sn	07 35 57.3	-5.2
SFJD	**Kangerlussuaq**	5.54	291	*i* S	Sn	07 35 57.6	-4.9

NOU ***15*** *07:41:40.7, 31.°78S×138.°58E, h0*^{km}*, MLv3.4/11, South Australia*

AUST ***15*** *07:41:40.4±3.1, 31.°80S×138.°66E, h14*^{km}*±23*^{km}*, Error ellipse: s-maj=10.7km s-min=7.2km az=71.0*

IDC ***15*** *07:41:41.5±3.7, 31.°17S×139.°05E, h0*^{km}*, mbtmp3.1/3, ML3.1/3, Error ellipse: s-maj=72.8km s-min=16.0km az=35.0*

ISC 15 07:41:39.0±0.8**, 31.°76S**±0.°03×**138.°67E**±0.°04**, h10**^{km}**, n27, σ2.**^{s}**20**/35**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	1.36	343	P	Pb	07 42 05.3	+0.7
	baz=1.4,SNR=84						
LCRK				S	Sg	07 42 24.8	+2.0
	baz=1.4						
LCRK	**Leigh Creek**	1.36	343	P	Pg	07 42 06.4	+1.2
AUJCS	**Jamestown Cent**	1.44	182	P	Pn	07 42 05.7	+0.5
	baz=1.4						
AUJCS				S	Sb	07 42 24.9	+0.6
	baz=1.4						
NAPP	**Napperby**	1.49	197	P	Pg	07 42 07.7	+0.2
WHYH	**Whyalla**	1.57	216	P	Pn	07 42 08.0	+1.0
HTT	**Hallett**	1.68	173	P	Pn	07 42 08.5	0.0
	baz=1.6,SNR=26						
HTT	**Hallett**	1.68	173	P	Pb	07 42 09.8	-0.3
BBOO	**Buckleboo**	2.45	244	P	Pn	07 42 19.5	+0.5
	baz=2.4,SNR=55						
BBOO				S	Sb	07 42 53.7	+0.3
	baz=2.4						
BBOO	**Buckleboo**	2.45	244	P	Pn	07 42 21.4	+2.4
STKA	**Stephens Creek**	2.49	93	Pn	Pn	07 42 20.7	+1.1
	2.2nm,0.3s,baz=286,slow=15,SNR=8.8						
STKA				Pg	Pb	07 42 23.3	-0.5
	2.2nm,0.3s,baz=278,slow=16,SNR=7.3						
STKA				Lg	Lg	07 42 53.8	
	15nm,0.3s,baz=360,slow=19,SNR=18						
	3.8nm,0.3s						
STKA	**Stephens Creek**	2.49	93	P	Pn	07 42 20.7	+1.1
	baz=2.5,SNR=7.6						
STKA				S	Sb	07 42 55.2	+0.6
	baz=2.5						
STKA	**Stephens Creek**	2.49	93	P	Pb	07 42 23.4	-0.4
MULG	**Mulgathing**	4.22	289	P	Pn	07 42 44.7	+1.3
	baz=4.2,SNR=5.9						
MULG				S	Sn	07 43 33.7	+0.9
	baz=4.2						
MULG	**Mulgathing**	4.22	289	P	Pn	07 42 44.7	+1.3
INKA	**Innaminka**	4.39	25	P	Pn	07 42 48.6	+2.9
	baz=4.4,SNR=4.5						
INKA	**Innaminka**	4.39	25	P	Pn	07 42 49.2	+3.5
OOD	**Oodnadatta**	4.73	326	P	Pn	07 42 52.3	+2.0
	baz=4.8,SNR=8.2						
OOD	**Oodnadatta**	4.73	326	P	Pn	07 42 53.0	+2.7
ARPS	**Mount Arapiles**	5.64	153	P	Pn	07 43 03.1	+0.1
	baz=5.6						
ARPS	**Mount Arapiles**	5.64	153	P	Pn	07 43 06.3	+3.4
CMSA	**Cobar Meteorol**	5.99	90	P	Pn	07 43 07.7	0.0
	baz=6.0						
TOO	**Toolangi**	8.07	138	P	Pn	07 43 36.7	+0.4
	baz=8.1						
ASAR	**Alice Springs**	9.10	331	Pn	Pn	07 43 49.9	-0.5
	0.2nm,0.3s,baz=153,slow=12,SNR=11						
ASAR				Sn	Sn	07 45 25.8	-7.2
	0.1nm,0.3s,baz=151,slow=21,SNR=2.4						
	0.5nm,0.5s						
ASPA	**Alice Springs**	9.10	331	P	Pn	07 43 51.0	+0.5
	baz=9.2						
FORT	**Forrest**	9.14	273	P	Pn	07 43 50.5	-0.4
	baz=9.1						
FORT	**Forrest**	9.14	273	P	Pn	07 43 52.0	+1.1
WRA	**Warramunga Arr**	12.39	341	Pn	Pn	07 44 32.7	-2.9
	0.2nm,0.3s,baz=154,slow=13,SNR=12						
WRA				Sn	Sn	07 46 48.4	-5.4
	0.1nm,0.3s,baz=162,slow=23,SNR=2.6						
	0.2nm,0.3s						

IDC ***15*** *07:42:00.0±4.6, 20.°97S×170.°98E, h0*^{km}*, mb4.0/5, mbtmp4.1/6, ML4.0/1, MS3.7/5, Error ellipse: s-maj=167.1km s-min=28.0km az=146.0*

NOU ***15*** *07:42:09.2, 19.°95S×170.°00E, h15*^{km}*, MLv4.3/14, Vanuatu Islands*

NEIC ***15*** *07:42:11.8±1.4, 20.°02S±0.°04×170.°0E±0.°1, h32*^{km}*±6*^{km}*, mb4.3/7, Error ellipse: s-maj=19.1km s-min=5.8km az=99.0*

ISC 15 07:42:10.4±0.7**, 19.°99S**±0.°06×**170.°1E**±0.°1**, h30**^{km}**, n41, σ0.**^{s}**95**/41**, mb4.3**/8**, MS3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	2.40	232		Pn	07 42 47.0	-0.7
MARNC				Sn	Sn	07 43 15.9	-0.2
MARNC	**Mare, Loyalty**	2.40	232	P	Pn	07 42 47.2	-0.5
RTV	**Rentapao**	2.67	325	P	Pn	07 42 50.8	-0.6
LIFNC	**LIFOU**	2.75	253		Pn	07 42 51.4	-1.0
LIFNC	**LIFOU**	2.75	253	P	Pn	07 42 51.6	-0.8
DVP	**Devils Point**	2.86	322	P	Pn	07 42 53.7	-0.3
PINNC	**Pines Island,**	3.56	222		Pn	07 43 03.1	-0.5
PINNC	**Pines Island,**	3.56	222	P	Pn	07 43 03.5	-0.1
YATNC	**Mamie plateau,**	3.60	235	P	Pn	07 43 03.4	-0.7
OUENC	**Ouen Island, N**	3.85	231		Pn	07 43 08.0	+0.4
OUENC	**Ouen Island, N**	3.85	231	P	Pn	07 43 08.2	+0.7
DZM	**Mont Dzumac**	3.95	238	Pn	Pn	07 43 09.2	+0.1
	7.6nm,0.3s,baz=94,slow=8.9,SNR=120						
DZM				Sn	Sn	07 43 55.9	+1.3
	3.9nm,0.3s,baz=134,slow=23,SNR=12						
DZM				LR	LR	07 44 34.9	
	comp=Z,638nm,20.5s,baz=92,slow=36						
	28nm,0.4s						
DZM	**Mont Dzumac**	3.95	238	P	Pn	07 43 09.2	+0.1
ONTNC	**Ouen Toro**	4.07	235		Pn	07 43 10.9	+0.3
ONTNC	**Ouen Toro**	4.07	235	P	Pn	07 43 11.5	+0.9
NOUC	**Port Laguerre**	4.08	238	P	Pn	07 43 11.5	+0.7
SANVU	**Saraoutou**	5.27	329	Pn	Pn	07 43 28.2	+1.0
AFI	**Afiamalu**	18.40	74	LR	LR	07 51 46.4	
	comp=Z,139nm,20.6s,baz=275,slow=33						
BKZ	**Black Stump Fm**	19.90	165	P	Pn	07 46 41.2	-0.1
BKZ				IAmb	IAmb	07 46 45.3	
	comp=Z,20nm,1.2s						
CTA	**Charters Tower**	22.36	266	LR	LR	07 54 32.6	
	comp=Z,151nm,19.3s,baz=202,slow=32						
WRA	**Warramunga Arr**	33.53	264	P	P	07 48 47.2	-0.4
	comp=Z,0.5nm,0.7s,baz=98,slow=8.2,SNR=2.6						
WRA				LR	LR	08 01 46.8	
	comp=Z,173nm,19.7s,baz=272,slow=35						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	33.53	264	P	P	07 48 46.7	-1.0
AS31	**Alice Springs**	33.70	257	P	P	07 48 49.1	0.0
AS31				IAmb	IAmb	07 48 56.1	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	33.70	257	P	P	07 48 49.2	+0.1
	comp=Z,3.3nm,0.7s,baz=84,slow=9.1,SNR=20						
ASAR				LR	LR	08 01 07.9	
	comp=Z,190nm,19.6s,baz=326,slow=33						
	comp=Z,3.3nm,0.7s						
ASAR	**Alice Springs**	33.70	257	P	P	07 48 49.1	0.0
SBA	**Scott Base**	57.93	181	P	P	07 52 00.1	+0.8
SBA				IAmb	IAmb	07 52 25.1	
	comp=Z,3.6nm,1.3s						
CASY	**Casey**	59.75	204	P	P	07 52 12.4	+0.3
CASY				IAmb	IAmb	07 52 20.3	
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	70.07	180	P	P	07 53 19.5	+0.1
PETK	**Petropavlovsk-**	73.58	352	P	P	07 53 41.2	+0.9
	comp=Z,1.6nm,0.4s,baz=138,slow=11,SNR=2.1						
	comp=Z,1.6nm,0.4s						
SONM	**Songino Array**	88.28	323	P	P	07 54 59.3	+0.3
	comp=Z,0.8nm,0.7s,baz=129,slow=4.6,SNR=4.0						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	88.28	323	P	P	07 54 59.3	+0.3
SONM				IAmb	IAmb	07 54 59.8	
	comp=Z,1.4nm,1.0s						
ILAR	**Eielson Array**	90.72	17	P	P	07 55 09.2	-0.6
	comp=Z,0.4nm,0.7s,baz=244,slow=5.1,SNR=5.3						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	90.72	17	P	P	07 55 09.4	-0.4
RONA	**Rosalia, Austr**	145.12	329	*e*P	PKPdf	08 01 45.1	+0.2
	comp=Z,3.2nm,0.6s						
GERES	**GERESS Array B**	145.51	332	PKPbc	PKPdf	08 01 41.0	-4.6
	comp=Z,0.6nm,0.6s,baz=252,slow=2.7,SNR=5.3						
GERES	**GERESS Array B**	145.51	332		PKPdf	08 01 45.5	-0.2
MOA	**Molln**	145.99	330	*e*P	PKPbc	08 01 47.5	+0.4
	comp=Z,1.8nm,0.8s						
ABTA	**Abfaltersbach**	147.61	331	*e*P	PKPbc	08 01 51.2	-0.7
	comp=Z,4.4nm,0.8s						
MOTA	**Moosalm**	147.78	333	*e*P	PKPbc	08 01 52.3	-0.2
	comp=Z,1.1nm,0.4s						
SQTA	**Sankt Quirin**	147.84	332	*e*P	PKPbc	08 01 52.6	0.0
	comp=Z,2.6nm,0.7s						
FETA	**Feichten**	148.20	333	*e*P	PKPbc	08 01 53.6	0.0
	comp=Z,5.4nm,1.0s						

THE ***15*** *07:53:17.5, 40.°64N×20.°70E, h8*^{km}*±1*^{km}*, ML2.5/4, Error ellipse: s-maj=1.1km s-min=0.6km az=18.0*

ATH ***15*** *07:53:18.5, 40.°64N×20.°75E, h8*^{km}*±5*^{km}*, ML2.4/4, Error ellipse: s-maj=6.2km s-min=2.0km az=121.0*

ISC 15 07:53:18.4±1.0**, 40.°62N**±0.°03×**20.°75E**±0.°04**, h5**^{km}±6^{km}**, n18, σ0.**^{s}**64**/29**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	0.03	83	P	Pg	07 53 19.2	-0.3
KBN				S	Sg	07 53 20.7	+0.3
	7μm,0.2s						
NEST	**Nestorio**	0.31	132	P	Pg	07 53 24.3	0.0
NEST				S	Sg	07 53 29.5	+1.1
NEST				AML	AML	07 53 30.3	
	comp=E,1576μm,0.5s						
NEST				AML	AML	07 53 30.3	
	comp=N,2012μm,0.5s						
NEST	**Nestorio**	0.31	132	P	Pg	07 53 24.1	-0.2
NEST				S	Sg	07 53 29.6	+1.2
	comp=N,608nm,0.4s						
LSK	**Leskovik**	0.48	194	P	Pg	07 53 27.1	-0.6
FNA	**Florina**	0.50	71	P	Pg	07 53 27.8	-0.3
FNA				S	Sb	07 53 36.0	-1.4
FNA				AML	AML	07 53 37.2	
	comp=E,1691μm,0.2s						
FNA				AML	AML	07 53 38.2	
	comp=N,1822μm,0.3s						
FNA	**Florina**	0.50	71	P	Pg	07 53 27.7	-0.3
FNA				S	Sg	07 53 35.7	+1.1
	comp=N,885nm,0.2s						
PENT	**Pentalofos**	0.52	145	P	Pg	07 53 28.3	0.0
PENT				S	Sg	07 53 35.5	+0.5
PENT	**Pentalofos**	0.52	145	P	Pg	07 53 27.9	-0.4
KPRO	**Kipourio**	0.81	145	P	Pg	07 53 33.3	-0.7
KPRO				S	Sb	07 53 46.5	+0.3
KPRO				AML	AML	07 53 48.8	
	comp=N,377μm,0.3s						
KPRO				AML	AML	07 53 51.5	
	comp=E,178μm,0.2s						
KPRO	**Kipourio**	0.81	145	P	Pg	07 53 33.2	-0.7
KZN	**Kozani**	0.84	112	P	Pg	07 53 34.0	-0.5
KZN				S	Sb	07 53 47.2	+0.2
KZN				AML	AML	07 53 49.3	
	comp=N,549μm,0.3s						
KZN				AML	AML	07 53 51.6	
	comp=E,405μm,0.3s						
KZN	**Kozani**	0.84	112	P	Pg	07 53 34.1	-0.3
KZN				S	Sb	07 53 46.9	-0.1
	comp=E,240nm,0.3s						
IGT	**Igoumenitsa**	1.13	197	P	Pn	07 53 40.4	-0.4
KEK	**Kerkira**	1.16	219	P	Pn	07 53 41.2	-0.1
LIT	**Litokhoron**	1.43	111	P	Pb	07 53 45.2	-0.2
THL	**Klokotos Trika**	1.43	137	P	Pn	07 53 44.5	-0.4
RICI	**Ricice**	3.94	318	*e*Pn	Pn	07 54 19.2	-0.2
RICI				Sn	Sn	07 55 07.0	+1.0
KIJV	**Kijevo**	4.67	318	*e*Pn	Pn	07 54 29.2	-0.3
KIJV				Sn	Sn	07 55 24.6	+0.5

IDC ***15*** *08:02:09.2±0.7, 4.°78S×153.°45E, h65*^{km}*±5*^{km}*, mb3.8/12, mbtmp4.2/14, MS3.2/3, Error ellipse: s-maj=13.9km s-min=8.8km az=26.0*

NEIC ***15*** *08:02:09.3±0.9, 4.°73S±0.°09×153.°43E±0.°10, h60*^{km}*±7*^{km}*, mb4.4/20, Error ellipse: s-maj=15.8km s-min=10.7km az=49.0*

ISC 15 08:02:08.5±0.5**, 4.°78S**±0.°06×**153.°43E**±0.°07**, h56**^{km}**, n43, σ1.**^{s}**01**/50**, mb4.2**/20**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	1.39	295		Pn	08 02 32.1	+0.4
KRVT	**Keravat (AS076**	1.48	289	P	Pn	08 02 33.0	+0.2
	2μm,0.4s,baz=212,slow=1.5,SNR=106						
KRVT				S	Sn	08 02 52.9	+1.8
	5μm,0.5s,baz=109,slow=24,SNR=7.9						
PMG	**Port Moresby**	7.73	233	P	Pn	08 03 59.7	+1.1
	15nm,0.4s,baz=40,slow=12,SNR=11						
PMG				S	Sn	08 05 22.4	-2.4
	33nm,0.5s,baz=104,slow=13,SNR=7.1						
PMG				LR	LR	08 07 20.2	
	comp=Z,128nm,20.6s,baz=100,slow=40						
HNR	**Honiara**	7.95	126	P	Pn	08 04 02.8	+1.3
	68nm,0.4s,baz=270,slow=11,SNR=1.5						
PATS	**Pohnpei**	12.53	23	Pn	Pn	08 05 03.7	-0.5
DZM	**Mont Dzumac**	21.31	145	P	P	08 06 51.5	+0.5
	6.7nm,0.5s,baz=258,slow=5.4,SNR=16						
	6.7nm,0.5s						
DZM	**Mont Dzumac**	21.31	145	P	P	08 06 51.7	+0.7
DZM				IAmb	IAmb	08 07 06.9	
	comp=Z,14nm,1.0s						
SIJI	**Sorong**	22.47	279	P	P	08 07 03.3	-0.1
	comp=Z,4.8nm,0.4s,baz=274,slow=23,SNR=2.5						
SIJI				LR	LR	08 14 42.3	
	comp=Z,95nm,20.8s,baz=59,slow=34						
	comp=Z,4.8nm,0.4s						
MTN	**Manton Dam**	23.43	249	P	P	08 07 12.8	-0.2
MTN				IAmb	IAmb	08 07 38.0	
	comp=Z,33nm,1.3s						
WB0	**Warramunga Arr**	23.78	230	P	P	08 07 15.5	-0.7
WB0				IAmb	IAmb	08 07 23.2	
	comp=Z,7.2nm,0.8s						
WR0	**Warramunga Arr**	23.79	229	P	P	08 07 16.2	-0.1
WR0				IAmb	IAmb	08 07 31.3	
	comp=Z,13nm,1.3s						
WRAB	**Tennant Creek**	23.91	229	P	P	08 07 17.1	-0.4
WRAB				IAmb	IAmb	08 07 32.9	
	comp=Z,7.9nm,0.8s						
WB2	**Warramunga Arr**	23.92	229	P	P	08 07 17.4	-0.1
WB2				IAmb	IAmb	08 07 24.3	
	comp=Z,9.7nm,0.5s						
WRA	**Warramunga Arr**	23.93	229	P	P	08 07 17.6	0.0
	comp=Z,3.2nm,0.5s,baz=53,slow=9.9,SNR=76						
WRA				PcP	PcP	08 10 58.8	-0.3
	comp=Z,0.2nm,0.5s,baz=51,slow=2.1,SNR=6.5						
	comp=Z,3.2nm,0.5s						
WRA	**Warramunga Arr**	23.93	229	P	P	08 07 16.6	-1.0

ARMA	**Armidale**	25.55	184	P	P	08 07 31.1	-1.3
ARMA				IAmb	IAmb	08 07 57.5	
	comp=Z,7.7nm,1.1s						
KNRA	**Kununurra**	26.54	244	P	P	08 07 43.0	+1.6
AS31	**Alice Springs**	26.59	223	P	P	08 07 41.9	+0.2
ASAR	**Alice Springs**	26.59	223	P	P	08 07 41.0	-0.7
	comp=Z,0.8nm,0.7s,baz=55,slow=8.9,SNR=11						
ASAR				pP	pwP	08 07 59.2	+1.3
	comp=Z,1.5nm,0.7s,baz=52,slow=9.0,SNR=4.1						
ASAR				PcP	PcP	08 11 04.8	-0.3
	comp=Z,0.7nm,0.7s,baz=67,slow=2.7,SNR=4.9						
	comp=Z,0.8nm,0.7s						
STKA	**Stephens Creek**	29.15	201	P	P	08 08 03.3	-1.1
	comp=Z,1.5nm,0.6s,baz=29,slow=12,SNR=5.0						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	29.15	201	P	P	08 08 04.5	0.0
BBOO	**Buckleboo**	32.26	208	P	P	08 08 31.3	-0.6
BBOO				IAmb	IAmb	08 08 32.8	
	comp=Z,13nm,1.3s						
FORT	**Forrest**	35.20	220	P	P	08 08 57.1	-0.3
MBWA	**Marble Bar**	36.52	240	P	P	08 09 09.5	+0.5
MBWA				IAmb	IAmb	08 09 24.3	
	comp=Z,16nm,1.4s						
URZ	**Urewera**	39.69	150	P	P	08 09 35.3	0.0
BKZ	**Black Stump Fm**	40.10	152	P	P	08 09 38.8	-0.1
MJAR	**Matsushiro Arr**	43.51	342	LR	LR	08 28 02.0	
	comp=Z,19nm,19.6s,baz=183,slow=36						
KSRS	**Korea Array**	48.27	333	P	P	08 10 42.7	-1.4
	comp=Z,1.4nm,0.8s,baz=146,slow=6.5,SNR=3.6						
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	66.65	328	P	P	08 12 53.7	+0.2
	comp=Z,0.5nm,0.4s,baz=134,slow=4.3,SNR=4.1						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	66.65	328	P	P	08 12 53.4	-0.1
VNDA	**Vanda**	72.82	178	P	P	08 13 31.3	+0.5
	comp=Z,3.8nm,0.8s,baz=328,slow=6.9,SNR=24						
	comp=Z,3.8nm,0.8s						
VNDA	**Vanda**	72.82	178	P	P	08 13 31.6	+0.7
VNDA				IAmb	IAmb	08 13 32.4	
	comp=Z,5.1nm,1.0s						
MKAR	**Makanchi Array**	80.72	319	P	P	08 14 16.1	+0.2
	comp=Z,2.2nm,0.7s,baz=98,slow=7.1,SNR=20						
MKAR				pP	pP	08 14 32.9	+2.5
	comp=Z,0.5nm,0.5s,baz=114,slow=5.7,SNR=3.0						
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	81.49	326	P	P	08 14 19.0	-0.7
	comp=Z,2.1nm,0.6s,baz=104,slow=6.3,SNR=6.0						
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	81.49	326	P	P	08 14 18.5	-1.2
ILAR	**Eielson Array**	81.91	22	P	P	08 14 21.7	0.0
	comp=Z,0.2nm,0.6s,baz=258,slow=4.5,SNR=2.8						
ILAR				pP	pP	08 14 37.5	+1.3
	comp=Z,0.4nm,0.7s,baz=245,slow=5.5,SNR=3.1						
	comp=Z,0.2nm,0.6s						
QSPA	**South Pole Qui**	85.18	180	P	P	08 14 39.0	+0.3
MAW	**Mawson**	85.83	203	P	P	08 14 41.7	0.0
	comp=Z,2.2nm,0.7s,baz=14,slow=3.7,SNR=4.4						
	comp=Z,2.2nm,0.7s						
MAW	**Mawson**	85.83	203	P	P	08 14 41.8	0.0
GERES	**GERESS Array B**	124.37	329	PKP	PKPdf	08 21 00.8	-0.8
	comp=Z,0.2nm,0.5s,baz=43,slow=4.4,SNR=1.5						
BDFB	**Brasilia**	150.63	134	PKPbc	PKPbc	08 21 53.3	-2.2
	comp=Z,0.9nm,0.4s,baz=220,slow=2.9,SNR=5.7						
BDFB	**Brasilia**	150.63	134		PKPbc	08 21 54.2	-1.3
TORD	**Torodi Ar. Bea**	150.90	288	PKPbc	PKPbc	08 21 55.4	-0.6
	comp=Z,5.8nm,0.7s,baz=70,slow=2.3,SNR=28						
TORD				pPKPbc	sPKPbc	08 22 14.5	-2.0
	comp=Z,4.5nm,0.7s,baz=81,slow=2.8,SNR=8.3						

IDC 15 08:38:18.0±3.4, 6°.54S×154°.04E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=69.7km s-min=28.4km az=88.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	2.99	318	Pn	Pn	08 39 08.3	+1.6
	10nm,0.3s,baz=2.9,slow=2.5,SNR=7.0						
KRVT				Sn	Sn	08 39 43.4	+0.1
	13nm,0.3s,baz=310,slow=22,SNR=6.3						
	31nm,0.3s						
WRA	**Warramunga Arr**	23.32	233	P	P	08 43 27.2	-0.7
	1.0nm,0.6s,baz=62,slow=10,SNR=13						
	1.0nm,0.6s						
ASAR	**Alice Springs**	25.78	227	P	P	08 43 51.6	+0.7
	0.4nm,0.5s,baz=56,slow=9.3,SNR=7.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	82.44	319	P	P	08 50 41.9	-0.5
	0.6nm,0.7s,baz=98,slow=5.3,SNR=5.2						
	0.6nm,0.7s						

TUL 15 08:50:32.9±1.4, 36°.685N±0°.009×97°.66W±0°.01, h6^{km}±7^{km}, ML2.7, mb_Lg2.6/61(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=115.0

NEIC 15 08:50:33.1±0.8, 36°.67N±0°.01×97°.66W±0°.01, h4^{km}±6^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=133.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	0.95	75		Pg	08 50 51.1	-0.2
U32A	**Winter Ranch,**	1.12	255		Pg	08 50 53.9	-0.7
OKCFA	**Oklahoma City**	1.26	172	Pn	Pg	08 50 56.8	-0.5
OKCSW	**OKLAHOMA CITY**	1.27	172		Pg	08 50 57.1	-0.4
FNO	**Franklin**	1.43	172		Pn	08 50 59.7	0.0
TUL1	**Leonard**	1.69	116		Pn	08 51 03.8	+0.4
TUL1				IAmb_Lg		08 51 30.5	
	comp=Z,41nm,1.1s						
R32A	**Long Quarter,**	1.94	335		Pn	08 51 07.4	+0.5
WMOK	**Wichita Mounta**	2.13	206		Pn	08 51 09.5	0.0
WMOK				IAmb_Lg		08 51 40.6	
	comp=Z,24nm,0.8s						
Z35A	**Perchaven, San**	3.35	174	Pn	Pn	08 51 25.7	-0.5
W39A	**Magazine**	3.47	114	IAmb_Lg		08 52 32.1	
	comp=Z,18nm,0.8s						
S39A	**Bolivar**	3.61	72	IAmb_Lg		08 52 37.2	
	comp=Z,9.2nm,0.8s						
AMTX	**Amarillo**	3.73	243	IAmb_Lg		08 52 39.2	
	comp=Z,13nm,0.8s						
MIAR	**Mount Ida**	3.94	121		Pn	08 51 34.0	-0.4
MIAR				IAmb_Lg		08 52 40.4	
	comp=Z,13nm,1.0s						
Z38A	**Mt. Pleasant**	4.05	146	IAmb_Lg		08 52 48.3	
	comp=Z,25nm,0.8s						
MGMO	**Mountain Grove**	4.34	82	IAmb_Lg		08 52 48.5	
	comp=Z,15nm,0.8s						
P38A	**Dawn**	4.39	47	IAmb_Lg		08 52 51.9	
	comp=Z,16nm,0.9s						
N35A	**Tabor**	4.47	20	IAmb_Lg		08 52 57.1	
	comp=Z,21nm,0.8s						
FCAR	**Ozark Folk Cen**	4.54	98	IAmb_Lg		08 52 59.2	
	comp=Z,12nm,0.8s						
WHAR	**Wooly Hollow**	4.57	106	IAmb_Lg		08 53 02.3	
	comp=Z,8.6nm,0.8s						
KSCO	**Kaye Shedlock'**	4.58	302	IAmb_Lg		08 53 02.7	
	comp=Z,7.5nm,0.8s						
R40A	**Maddies Statio**	4.58	68	IAmb_Lg		08 53 01.1	
	comp=Z,8.6nm,0.8s						
W41B	**Gary Mavity, V**	4.64	107	IAmb_Lg		08 53 06.4	
	comp=Z,13nm,1.0s						
UALR	**University of**	4.72	112	IAmb_Lg		08 53 03.9	
	comp=Z,9.9nm,0.9s						
P40A	**Paris**	5.26	55	IAmb_Lg		08 53 27.3	
	comp=Z,14nm,0.7s						
LCAR	**Lake Charles**	5.28	95	IAmb_Lg		08 53 26.4	
	comp=Z,10nm,0.8s						
CCM	**Cathedral Cave**	5.29	73	IAmb_Lg		08 53 25.2	
	comp=Z,15nm,0.8s						
N38A	**Joes South For**	5.38	39	IAmb_Lg		08 53 34.0	
	comp=Z,12nm,0.9s						
L34A	**Svendsen Farm,**	5.38	10	IAmb_Lg		08 53 22.8	
	comp=Z,6.0nm,0.7s						
T25A	**Trinidad**	5.43	277	IAmb_Lg		08 53 29.3	
	comp=Z,9.3nm,0.8s						
OGNE	**Ogallala**	5.47	323	IAmb_Lg		08 53 36.1	
	comp=Z,9.9nm,0.7s						
PBMO	**Poplar Bluff**	5.81	87	IAmb_Lg		08 53 40.7	
	comp=Z,15nm,0.8s						
435B	**Jarrell**	5.87	179	IAmb_Lg		08 53 48.2	
	comp=Z,6.9nm,0.8s						
FVM	**French Village**	5.91	75	IAmb_Lg		08 53 44.7	
	comp=Z,13nm,0.7s						
JCT	**Junction City**	6.43	197	IAmb_Lg		08 54 09.7	
	comp=Z,8.3nm,1.1s						
N23A	**Red Feather La**	7.72	306	IAmb_Lg		08 54 40.7	
	comp=Z,4.9nm,0.8s						
Y22D	**IRIS PASSCAL I**	8.00	254	IAmb_Lg		08 55 07.8	
	comp=Z,10nm,0.8s						
K22A	**Casper**	9.07	314	IAmb_Lg		08 55 35.6	
	comp=Z,3.6nm,0.9s						

IDC 15 09:09:13.3±1.4, 32°.62N×130°.59E, h0^{km}, mb3.3/2, mbtmp3.3/4, ML2.6/2, Error ellipse: s-maj=24.8km s-min=10.0km az=111.0

NIED 15 09:09:15.7, 32°.67N×130°.72E, h14^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.11; M$_{\theta\theta}$2.32; M$_{\phi\phi}$-2.43; M$_{r\theta}$-1.14; M$_{\theta\phi}$4.55; M$_{\phi r}$-0.30; Fault plane solution: M$_0$5.26000×10^{14} NP1: φ$_s$193.00000°, δ79.00000°, λ174.00000°. NP2: φ$_s$284.00000°, δ84.00000°, λ11.00000°.

JMA 15 09:09:15.7±0.0, 32°.7N±0°.1×130°.7E±0°.1, h14^{km}, MV3.9/20, NW KUMAMOTO PREF

JMA Felt III J1 at NW KUMAMOTO PREF .

ISC 15 09:09:15.5±1.1, 32°.57N±0°.06×130°.59E±0°.08, h11^{km}, n9, σ1^{s}.62/11, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	0.19	97	*i* P	Pg	09 09 19.4	-0.1
JIU3				S	Sg	09 09 22.1	-0.2
JTA	**Tamana**	0.39	353	*e*P	Pg	09 09 22.6	-0.7
JTA				S	Sg	09 09 27.3	-1.3
JNU	**Nakatsue**	0.60	24	Pg	Pg	09 09 24.6	-2.5
	263nm,0.3s,baz=359,slow=23,SNR=1672						
JNU				Lg	Lg	09 09 30.9	
	2μm,0.3s,baz=274,slow=23,SNR=103						
JTZ	**Takazaki**	0.79	148	*i* P	Pn	09 09 31.9	-0.7
KSRS	**Korea Array**	5.34	337	Pn	Pn	09 10 35.0	-0.1
	0.3nm,0.3s,baz=156,slow=14,SNR=1.8						
KSRS				Pg	Pb	09 10 51.8	+3.0
	1.5nm,0.3s,baz=152,slow=17,SNR=15						
KSRS				Lg	Lg	09 11 59.4	
	1.7nm,0.3s,baz=153,slow=30,SNR=5.1						
	0.7nm,0.3s						
JOW	**Kunigami**	6.06	200	Pn	Pn	09 10 49.4	+4.3
	1.5nm,0.3s,baz=96,slow=22,SNR=10						
MJAR	**Matsushiro Arr**	7.43	56	Pn	Pn	09 11 05.1	+1.3
	0.1nm,0.3s,baz=228,slow=14,SNR=5.8						
MJAR				Lg	Lg	09 13 10.6	
	baz=104,slow=22						
	2.2nm,0.5s						
WRA	**Warramunga Arr**	52.34	176	P	P	09 18 26.7	-0.7
	0.4nm,0.8s,baz=353,slow=7.7,SNR=2.2						
	0.4nm,0.8s						
ASAR	**Alice Springs**	56.01	176	P	P	09 18 53.3	-0.9
	0.3nm,0.9s,baz=12,slow=6.3,SNR=1.6						
	0.3nm,0.9s						

IDC 15 09:19:07.0±2.9, 6°.49S×104°.03E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=81.6km s-min=49.0km az=47.0

DJA 15 09:19:12.3±0.6, 6°S±4°×10°5E±°, h10^{km}, M3.4/6, MLv3.4/6

ISC 15 09:19:11.7±1.0, 6°.01S±0°.07×104°.87E±0°.07, h10^{km}, n17, σ0^{s}.51/13, mb3.4/3, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	0.61	322	P	Pg	09 19 23.0	-0.5
BLSI	**Bandar Lampung**	0.74	30	P	Pb	09 19 26.8	+0.1
BLSI				S	Sb	09 19 37.0	+0.1
KLI	**Kotabumi**	1.14	359	P	Pn	09 19 34.2	+0.5
KLI				S	Sn	09 19 49.5	+0.1
MDSI	**Maura Dua**	1.66	336	P	Pn	09 19 41.3	+0.4
MNAI	**Manna**	2.51	311	P	Pn	09 19 53.3	+0.7
CNJI	**Cibinong**	2.59	120	P	Pn	09 19 54.5	+0.8
LEM	**Lembang**	2.85	107	Pn	Pg	09 20 05.8	-0.6
	8.1nm,0.3s,baz=232,slow=19,SNR=5.2						
	17nm,0.4s						
H01W3	**Cape Leeuwin H**	29.98	165	T	T	09 56 49.1	
	baz=342,slow=76,SNR=6.5						
H01W1	**Cape Leeuwin H**	30.00	165	T	T	09 56 46.9	
	baz=342,slow=76,SNR=7.3						
H01W2	**Cape Leeuwin H**	30.00	165	T	T	09 56 50.1	
	baz=342,slow=76,SNR=8.4						
WRA	**Warramunga Arr**	31.80	119	P	P	09 25 36.6	-0.2
	0.3nm,0.8s,baz=292,slow=10,SNR=1.8						
	0.3nm,0.8s						
H08S2	**Diego Garcia H**	32.18	265	T	T	09 59 05.6	
	baz=89,slow=76,SNR=15						
H08S3	**Diego Garcia H**	32.19	265	T	T	09 59 06.1	
	baz=89,slow=76,SNR=12						
H08S1	**Diego Carcia H**	32.20	265	T	T	09 59 07.5	
	baz=89,slow=76,SNR=9.3						
ASAR	**Alice Springs**	32.98	125	P	P	09 25 46.7	-0.4
	0.4nm,0.7s,baz=291,slow=8.4,SNR=5.4						
	0.4nm,0.7s						
STKA	**Stephens Creek**	42.87	132	P	P	09 27 10.8	+0.3
	1.3nm,0.5s,baz=308,slow=8.7,SNR=11						
	1.3nm,0.5s						
TXAR	**Lajitas Array**	144.45	46	PKPbc	PKPab	09 38 47.0	-0.4
	0.2nm,0.5s,baz=299,slow=2.0,SNR=5.8						

KRSC 15 09:31:37.1±2.1, 48°.94N×156°.85E, h30^{km}±28^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	1.81	345	*e*P	Pn	09 32 06.1	-0.1
SKR				*e*S	Sn	09 32 27.9	-0.2
PAU	**Pauzhetka**	2.53	359	*e*S	Sn	09 32 49.2	+3.3
KDTR	**Khodutka, Kamc**	2.98	15	*e*P	Pn	09 32 24.7	+2.4
KDTR				*e*S	Sb	09 33 01.7	-3.7
MIPR	**Malaya Ipel'ka**	3.34	359	*e*P	Pn	09 32 29.6	+2.3
ASAK	**Asacha**	3.52	11	*e*P	Pn	09 32 34.0	+4.3
MTVR	**Mutnovka**	3.65	13	*e*P	Pn	09 32 36.2	+4.6
MTVR				*e*S	Sb	09 33 19.4	-5.4
RUS	**Russkaya**	3.66	16	*e*P	Pn	09 32 35.0	+3.5
RUS				*e*S	Sn	09 33 19.1	+5.5
GRL	**Gorelyy**	3.70	12	*e*P	Pb	09 32 37.3	-4.5
DALK	**Dalny**	4.27	16	P	Pn	09 32 45.1	+5.1
UGLR	**Uglovaya**	4.46	15	*e*P	Pn	09 32 47.1	+4.5
AVH	**Avacha**	4.50	15	P	Pn	09 32 48.7	+5.6
KOK	**Koryaka**	4.50	14	P	Pn	09 32 48.7	+5.4
SDLR	**Sedlovina**	4.53	16	*e*P	Pn	09 32 48.3	+4.6
KRX	**Arik**	4.57	14	*e*P	Pn	09 32 49.5	+5.3
SPN	**Mys Shipunski**	4.62	24	*e*P	Pn	09 32 49.5	+4.7
SPN				*e*S	Sn	09 33 44.2	+6.8
MKZ	**Mys Kozlova**	6.39	26	*e*P	Pn	09 33 12.8	+3.8

ISK 15 09:38:01.5, 35°.57N×27°.58E, h37^{km}, ML2.3/8

DDA 15 09:38:25.1±0.0, 37°.14N×27°.95E, h7^{km}±6^{km}, ML1.5

ISC 15 09:38:01.8±1.7, 35°.67N±0°.08×27°.54E±0°.07, h31^{km}±16^{km}, n13, σ1^{s}.10/18, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	0.33	249	PG	Pn	09 38 10.5	-0.1
KARP				SG	Sn	09 38 17.0	+0.6
ARG	**Arkhangelos**	0.72	41	PG	Pn	09 38 16.5	+0.5
DAT	**Datca**	1.06	2	PN	Pb	09 38 21.9	+0.2
TURN	**Turunc**	1.24	27	PN	Pb	09 38 24.2	-0.5
TURN				SN	Sb	09 38 40.7	+0.3
TURN	**Turunc**	1.24	27	P	Pn	09 38 23.3	+0.2
TURN				S	Sb	09 38 40.3	-0.1
BDRM	**Kayabasi**	1.40	357	P	Pn	09 38 26.1	+0.8
BDRM				S	Sn	09 38 40.2	-2.6
BODT	**Bodrum**	1.41	352	PN	Pb	09 38 26.8	-0.7
DALY	**Dalyan (Mula)**	1.46	38	PN	Pn	09 38 26.9	+0.8
FETY	**Fethiye**	1.58	52	PN	Pn	09 38 28.4	+0.6
YER	**Yerkesik**	1.58	22	PN	Pn	09 38 29.0	+1.1
AYDN	**Tasoluk**	2.01	8	P	Pn	09 38 35.2	+1.5
GOLH	**Golhisar**	2.26	45	P	Pb	09 38 41.3	-0.7
GOLH				*i* AML	AML	09 38 58.0	
	comp=E,9.0nm,1.4s						
GOLH				S	Sb	09 39 10.1	+0.4
AYDB	**Zeytinkoy-Aydi**	2.29	7	PN	Pn	09 38 39.4	+1.7

IDC 15 09:40:34.9±2.5, 27°.57N×140°.95E, h40^{km}±23^{km}, mb3.7/12, mbtmp3.9/14, ML2.8/2, MS3.2/10, Error ellipse: s-maj=21.9km s-min=13.9km az=76.0

NEIC 15 09:40:34.6±1.3, 27°.62N±0°.09×141°.1E±0°.1, h31^{km}±5^{km}, mb4.7/26, Error ellipse: s-maj=17.9km s-min=9.2km az=50.0

ISC 15 09:40:34.8±0.5, 27°.59N±0°.08×141°.02E±0°.08, h35^{km}, n61, σ0^{s}.93/50, mb4.3/24, MS3.2/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	1.15	115	Pn	Pn	09 40 54.2	-0.2
	59nm,0.3s,baz=273,slow=23,SNR=61						
JCJ				Sn	Sn	09 41 09.9	+1.0
	321nm,0.3s,baz=285,slow=17,SNR=14						
JCJ	**Chichijima**	1.15	115		Pn	09 40 53.7	-0.7
JGF	**Kuroka**	8.57	340	Pn	Pn	09 42 37.1	+0.6
MJAR	**Matsushiro Arr**	9.24	346	Pn	Pn	09 42 46.7	+1.2
	baz=298,slow=13,SNR=3.1						
MJAR				LR	LR	09 45 54.9	
	comp=Z,86nm,20.8s,baz=131,slow=35						
	1.3nm,0.7s						
JMM	**Marumori**	10.25	359	Pn	Pn	09 42 58.2	-1.2
JOW	**Kunigami**	11.37	269	LR	LR	09 46 53.4	
	comp=Z,296nm,19.8s,baz=118,slow=34						
GUMO	**Guam**	14.39	165	LR	LR	09 49 14.0	
	comp=Z,56nm,18.7s,baz=94,slow=36						
KSRS	**Korea Array**	14.78	315	Pn	Pn	09 44 03.0	+1.8
	0.1nm,0.3s,baz=119,slow=13,SNR=2.7						
KSRS				LR	LR	09 49 17.8	
	comp=Z,62nm,18.4s,baz=110,slow=35						
	1.4nm,0.9s						
KLR	**Kul'dur**	22.76	344	P	P	09 45 34.4	+0.5
	2.7nm,0.7s,baz=144,slow=9.4,SNR=10						
	2.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	24.93	103	T	T	10 12 56.3	
	baz=296,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	24.93	103	T	T	10 12 56.3	
	baz=296,slow=74,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	24.94	103	T	T	10 12 57.6	
	baz=296,slow=74,SNR=10						
DAV	**Davao City (W)**	25.12	218	LR	LR	09 56 18.4	
	comp=Z,45nm,19.2s,baz=336,slow=38						
PETK	**Petropavlovsk-**	28.34	21	LR	LR	09 58 05.2	
	comp=Z,28nm,21.2s,baz=131,slow=37						
SHEM	**Shemya Is, Ala**	35.12	35	LR	LR	10 00 09.3	
	comp=Z,16nm,21.3s,baz=344,slow=33						
CHTO	**Chiang Mai**	39.49	266	P	P	09 48 03.5	+1.2
CMAR	**Chiang Mai Arr**	39.62	266	LR	LR	10 04 21.0	
	comp=Z,55nm,19.1s,baz=80,slow=36						
MTN	**Manton Dam**	41.32	195	P	P	09 48 17.8	+0.6
MTN				IAmb	IAmb	09 48 20.3	
	comp=Z,17nm,1.2s						
COEN	**Coen**	41.35	177	P	P	09 48 18.2	+0.7
COEN				IAmb	IAmb	09 48 39.8	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	47.51	188	P	P	09 49 07.0	+0.2
WRAB	**Tennant Creek**	47.68	188	P	P	09 49 08.3	+0.3
WR0	**Warramunga Arr**	47.68	188	P	P	09 49 07.9	-0.1
WB2	**Warramunga Arr**	47.69	188	P	P	09 49 08.3	+0.2
WRA	**Warramunga Arr**	47.69	189	P	P	09 49 08.3	+0.2
	comp=Z,30nm,0.8s,baz=7.8,slow=8.5,SNR=109						
WRA	**Warramunga Arr**	47.69	189	P	P	09 49 07.3	-0.8
MK31	**Makanchi Array**	49.36	309	P	P	09 49 20.4	-0.5
MKAR	**Makanchi Array**	49.36	309	P	P	09 49 19.3	-1.5
	comp=Z,0.9nm,0.8s,baz=96,slow=9.3,SNR=6.6						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	49.36	309	P	P	09 49 19.5	-1.3
AS31	**Alice Springs**	51.42	188	P	P	09 49 36.6	+0.1
ASAR	**Alice Springs**	51.42	188	P	P	09 49 35.9	-0.6
	comp=Z,3.3nm,0.9s,baz=12,slow=14,SNR=40						
	comp=Z,3.3nm,0.9s						
ASAR	**Alice Springs**	51.42	188	P	P	09 49 36.1	-0.4
KURK	**Kurchatov**	51.90	314	P	P	09 49 39.4	-0.4
PRZ	**Przheval'sk**	52.27	304	P	P	09 49 42.9	0.0
PRZ				IAmb	IAmb	09 49 44.4	
	comp=Z,13nm,0.9s						
TARG	**Taragay, Kyrgy**	52.78	303	P	P	09 49 47.1	+0.1
TARG				IAmb	IAmb	09 49 48.8	
	comp=Z,7.4nm,1.1s						
KDAK	**Kodiak Island**	54.59	37	LR	LR	10 10 17.7	
	comp=Z,30nm,21.9s,baz=270,slow=33						
AAK	**Ala-Archa**	55.12	304	LR	LR	10 16 04.0	
	comp=Z,43nm,18.7s,baz=131,slow=39						
ILAR	**Eielson Array**	57.78	29	P	P	09 50 22.0	-0.2
	comp=Z,0.8nm,0.9s,baz=259,slow=4.9,SNR=8.5						
	comp=Z,0.8nm,0.9s						
KK31	**Karatay Array**	57.95	305	P	P	09 50 23.7	-0.1
KK31				IAmb	IAmb	09 50 24.3	
	comp=Z,5.2nm,0.9s						
KKAR	**Karatay Array**	57.95	305	P	P	09 50 23.1	-0.7
KKAR	**Karatay Array**	57.95	305	P	P	09 50 23.3	-0.5
KKAR				IAmb	IAmb	09 50 24.3	
	comp=Z,5.2nm,0.9s						
GAR	**Garm**	58.85	301		P	09 50 30.2	0.0
GAR				IAmb	IAmb	09 50 30.8	
	comp=Z,12nm,0.9s						
BMAR	**Burnt Mountain**	58.86	26	P	P	09 50 31.8	+2.0
STKA	**Stephens Creek**	59.14	179	P	P	09 50 31.0	-1.0
	comp=Z,2.7nm,0.9s,baz=4.0,slow=9.1,SNR=7.0						
	comp=Z,2.7nm,0.9s						
STKA	**Stephens Creek**	59.14	179	P	P	09 50 31.6	-0.4
FORT	**Forrest**	59.35	193	P	P	09 50 34.0	+0.6
CHGR	**Chuyangaron**	59.80	301		P	09 50 36.2	-0.6
BCAR	**Beaver Creek A**	60.02	31	P	P	09 50 39.3	+1.5
KBL	**Kabul**	60.87	296	P	P	09 50 44.2	-0.2
KBL				IAmb	IAmb	09 50 45.4	
	comp=Z,5.2nm,0.9s						
ABKAR	**Akbulak array**	64.01	314	P	P	09 51 05.1	+0.4
ABKAR	**Akbulak array**	64.01	314	P	P	09 51 06.0	+1.3
ABKAR				IAmb	IAmb	09 51 06.5	
	comp=Z,2.1nm,0.8s						
OUZ	**Omahuta**	69.64	152	P	P	09 51 40.0	-0.6
OUZ				IAmb	IAmb	09 51 43.1	
	comp=Z,23nm,1.5s						
YKA	**Yellowknife Ar**	72.20	28	P	P	09 51 55.7	-0.2
	comp=Z,1.0nm,0.9s,baz=294,slow=5.5,SNR=9.2						
	comp=Z,1.0nm,0.9s						
ARCES	**ARCESS Array B**	72.73	341	P	P	09 51 59.6	+0.6
	comp=Z,1.8nm,1.0s,baz=67,slow=3.2,SNR=3.6						
	comp=Z,1.8nm,1.0s						
FINES	**FINESS Array B**	77.05	333	P	P	09 52 23.2	-0.8
	comp=Z,1.5nm,0.9s,baz=221,slow=14,SNR=1.6						
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	77.05	333	P	P	09 52 23.8	-0.2
NVAR	**Mina Array Bea**	81.03	51	P	P	09 52 48.0	+1.4
	comp=Z,0.4nm,0.7s,baz=268,slow=5.4,SNR=2.9						
	comp=Z,0.4nm,0.7s						
NOA	**NORSAR Array B**	82.77	338	P	P	09 52 53.0	-2.0
	comp=Z,1.6nm,0.9s,baz=24,slow=8.7,SNR=2.4						
	comp=Z,1.6nm,0.9s						
RAYN	**Ar Rayn**	84.00	293	P	P	09 53 01.4	-0.7
RAYN				IAmb	IAmb	09 53 02.9	
	comp=Z,6.1nm,0.9s						
PDAR	**Pinedale Array**	84.59	44	P	P	09 53 04.8	-0.1
	comp=Z,0.7nm,0.9s,baz=262,slow=4.5,SNR=4.0						
	comp=Z,0.7nm,0.9s						
BRTR	**Keskin Array B**	84.90	312	P	P	09 53 04.2	-2.3
	comp=Z,0.5nm,0.6s,baz=98,slow=2.6,SNR=3.6						
	comp=Z,0.5nm,0.6s						
H06S1	**SOCORRO T**	96.50	65	T	T	11 42 06.0	
	SNR=9.2						

VAO 15 09:42:08.3±1.0, 29°.46S×69°.55W, h67^{km}±5^{km}, mb4.4

SJA 15 09:42:11.7±0.5, 29°.22S×69°.47W, h125^{km}±3^{km}, ML4.3, MW4.3

NEIC 15 09:42:12.3±1.7, 29°.24S±0°.04×69°.30W±0°.09, h96^{km}±5^{km}, mb4.6/93, Md4.4(SJA), ML4.5(GUC), Error ellipse: s-maj=10.9km s-min=6.3km az=91.0

GUC 15 09:42:13.4±0.8, 29°.19S×69°.67W, h124^{km}±7^{km}, ML4.5

IDC 15 09:42:15.1±0.5, 29°.21S×69°.36W, h118^{km}±4^{km}, mb4.1/15, mbtmp4.4/18, MS2.8/4, Error ellipse: s-maj=17.4km s-min=11.3km az=81.0

ISC 15 09:42:13.3±0.5, 29°.21S±0°.03×69°.47W±0°.03, h108^{km}±4^{km}, n227, σ1^{s}.31/257, mb4.6/58, 1C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO01	**Juntas del Tor**	0.94	215	Pn	Pn	09 42 34.9	+0.8
CO01	**Juntas del Tor**	0.94	215	*e*P	Pn	09 42 34.8	+0.8
CO01				*e*S	Sn	09 42 50.8	+1.2
CO01	**Juntas del Tor**	0.94	215	*e*P	Pn	09 42 34.4	+0.4
CO01				*e*S	Sn	09 42 51.5	+1.9
CO01				IAML		09 42 52.0	
	comp=Z,3μm,1.1s						
AROD	**Rodeo**	0.95	180	*e*P	Pn	09 42 35.2	+1.0
ACDV	**Cuesta del Vie**	1.00	162	*e*P	Pn	09 42 35.4	+0.8
ACDV				IAML		09 42 54.9	
	comp=Z,2μm,0.4s						

LCO	Las Campanas	1.10	280	Pn	Pn	09 42 36.0	+0.3
LCO	Las Campanas	1.10	280	eP	Pn	09 42 35.3	-0.4
LCO				eS	Sn	09 42 51.9	-0.7
ACCO	Cerro Coronel	1.41	166	eP	Pn	09 42 40.3	+0.9
CO05	La Serena	1.69	245	eP	Pn	09 42 41.7	-0.7
CO05				eS	Sn	09 43 03.2	-1.3
CO05				IAML		09 43 05.0	
	comp=N,13µm,0.5s						
AC04	Llanos de Chal	1.73	305		Pn	09 42 43.0	+0.1
AC04	Llanos de Chal	1.73	305	eP	Pn	09 42 42.9	+0.1
AC04				eS	Sn	09 43 04.4	-1.0
AC04				IAML		09 43 06.3	
	comp=N,5µm,0.4s						
AC04				IAML		09 43 06.9	
	comp=E,5µm,0.3s						
AC04	Llanos de Chal	1.73	305	eP	Pn	09 42 43.0	+0.1
AC04				eS	Sn	09 43 05.9	+0.5
AC04				IAML		09 43 07.8	
	comp=Z,2µm,0.6s						
GO03	Copiap	1.75	337		Pn	09 42 43.6	+0.4
GO03	Copiap	1.75	337	eP	Pn	09 42 43.5	+0.4
GO03				eS	Sn	09 43 05.9	0.0
GO03				IAML		09 43 07.9	
	comp=N,6µm,0.4s						
GO03	Copiap	1.75	337	eP	Pn	09 42 43.4	+0.2
GO03				eS	Sn	09 43 07.0	+1.1
AC06	Mina Casimiro	2.01	337	eP	Pn	09 42 46.3	-0.1
AC06				eS	Sn	09 43 11.3	-0.3
ACLC	CERRO LA CRUZ	2.21	96	eP	Pn	09 42 49.4	+0.4
ACLC				eS	Sn	09 43 16.7	+0.3
ACLC				IAML		09 43 18.9	
	comp=Z,2µm,0.2s						
AVFE	Valle Fertil	2.26	130	eP	Pn	09 42 50.0	+0.3
AVFE				eS	Sn	09 43 17.8	+0.3
AVFE				IAML		09 43 18.8	
	comp=Z,5µm,0.6s						
CO06	Fray Jorge	2.38	232		Pn	09 42 49.9	-1.2
CO06	Fray Jorge	2.38	232	eP	Pn	09 42 49.9	-1.2
CO06				eS	Sn	09 43 17.9	-2.2
CO06				IAML		09 43 30.6	
	comp=N,3µm,0.2s						
CO02	Combarbal	2.38	213	eP	Pn	09 42 51.1	-0.3
CO02				eS	Sn	09 43 19.8	-0.6
CO02	Combarbal	2.38	213	eP	Pn	09 42 51.3	0.0
CO02				eS	Sn	09 43 20.4	0.0
CO02				IAML		09 43 31.4	
	comp=Z,2µm,0.4s						
AC02	Maricunga	2.39	7	eP	Pn	09 42 53.2	+1.4
AC02				i S	Sn	09 43 23.1	+2.0
AC02				IAML		09 43 25.0	
	comp=N,2µm,0.6s						
AC02	Maricunga	2.39	7	eP	Pn	09 42 52.0	+0.3
AC02				eS	Sn	09 43 23.8	+2.7
AC02				IAML		09 43 24.0	
	comp=Z,557nm,0.5s						
RTLS	Leoncito	2.58	177	eP	Pn	09 42 54.3	+0.2
RTLS				eS	Sn	09 43 20.7	-4.5
RTLS				IAML		09 43 28.2	
	comp=Z,1µm,0.5s						
RTCV	Cerro Valdivia	2.76	163	eP	Pn	09 42 55.9	-0.2
RTCV				eS	Sn	09 43 29.9	+0.8
APLL	PUNTA DE LOS L	2.81	115	eP	Pn	09 42 57.0	+0.1
AUSP	Uspallata	3.00	179	eP	Pn	09 42 59.8	+0.2
AUSP				eS	Sn	09 43 24.7	-10
ACHE	Chepes	3.11	129	eP	Pn	09 43 01.0	+0.1
AC01	Pan de Azucar	3.21	342	eP	Pn	09 43 02.1	-0.2
AC01				eS	Sn	09 43 36.4	-3.5
AC01				IAML		09 43 38.9	
	comp=E,1µm,0.6s						
AC01	Pan de Azucar	3.21	342	eP	Pn	09 43 02.0	-0.2
AC01				eS	Sn	09 43 28.2	-12
AC01				IAML		09 43 48.4	
	comp=Z,520nm,0.6s						
VA03	San Esteban	3.66	194	eP	Pn	09 43 08.2	0.0
VA03	San Esteban	3.66	194	eP	Pn	09 43 08.0	-0.1
VA03				eS	Sn	09 43 55.4	+4.9
VA03				IAML		09 44 22.1	
	comp=Z,667nm,0.8s						
VA06	Catapilco	3.69	205	Pn	Pn	09 43 07.1	-1.3
VA06	Catapilco	3.69	205	eP	Pn	09 43 07.1	-1.3
ROC1	El Roble	3.98	199	Pn	Pn	09 43 10.2	-2.4
GO02	Mina Guanaco	4.04	358	Pn	Pn	09 43 13.3	-0.2
GO02	Mina Guanaco	4.04	358	⇑iP	Pn	09 43 13.3	-0.2
MT02	Curacav	4.28	199		Pn	09 43 14.7	-1.7
MT05	Renca	4.30	194	eP	Pn	09 43 16.6	-0.2
MT05				IAML		09 44 47.0	
	comp=Z,324nm,1.4s						
MT09	Talagante	4.73	196	Pn	Pn	09 43 20.5	-2.1
BO04	La Punta	4.86	191	Pn	Pn	09 43 23.1	-1.2
PB10	IPOC Station P	5.76	350	Pn	Pn	09 43 34.2	-2.3
LVC	Limon Verde	6.60	4	P	Pn	09 43 46.4	-1.7
	comp=Z,7.2nm,0.3s,baz=188,slow=9.8,SNR=34						
LVC				S	Sn	09 44 58.2	-3.9
	comp=Z,39nm,0.5s,baz=17,slow=23,SNR=6.3						
LVC				LR	LR	09 46 27.9	
	comp=Z,46nm,18.6s,baz=173,slow=38						
LVC	Limon Verde	6.60	4	eP	Pn	09 43 46.4	-1.7
TRQA	Tornquist	10.80	147	Pn	Pn	09 44 42.2	-2.6
CPUP	Villa Florida	11.13	78	P	Pn	09 44 45.8	-3.4
	comp=Z,4.6nm,0.7s,baz=251,slow=12,SNR=16						
CPUP				LR	LR	09 48 52.7	
	comp=Z,52nm,19.0s,baz=224,slow=36						
CPUP	Villa Florida	11.13	78		Pn	09 44 44.5	-4.7
CPUP	Villa Florida	11.13	78	eP	Pn	09 44 44.4	-4.7
ITQB	Itaqui	11.21	95	Pn	Pn	09 44 47.0	-3.3
ITQB	Itaqui	11.21	95	eP	Pn	09 44 46.3	-4.0
PLCA	Paso Flores	11.53	184	P	Pn	09 44 56.4	+1.8
	comp=Z,1.1nm,0.6s,baz=4.5,slow=6.1,SNR=7.9						
PLCA				LR	LR	09 50 02.0	
	comp=Z,45nm,21.4s,baz=358,slow=40						
PLCA	Paso Flores	11.53	184		Pn	09 44 54.9	+0.4
LPAZ	La Paz	12.93	6	P	Pn	09 45 14.7	+1.1
	comp=Z,4.1nm,0.7s,baz=194,slow=7.4,SNR=11						
LPAZ				LR	LR	09 51 15.4	
	comp=Z,58nm,21.2s,baz=81,slow=42						
LPAZ	La Paz	12.93	6	eP	Pn	09 45 13.9	+0.2
PLTB	Pedras Altas	13.91	104	P	Pn	09 45 22.3	-3.5
PLTB	Pedras Altas	13.91	104	eP	Pn	09 45 21.1	-4.7
CPSB	Cacapava Do Su	13.97	99	eP	Pn	09 45 22.6	-4.0
MCR1	Marechal Candi	14.56	75	eP	Pn	09 45 34.2	0.0
AQDB	Aquidauana	15.22	58	eP	Pn	09 45 39.6	-2.9
SIV	San Ignacio	15.26	32	P	P	09 45 45.1	-0.4
	comp=Z,4.7nm,0.9s,baz=220,slow=11,SNR=22						
ITAB	Concordia	15.41	87	P	Pn	09 45 44.1	-0.8
ITAB	Concordia	15.41	87	eP	Pn	09 45 43.4	-1.5
PTGB	Pitanga	16.15	78	eP	Pn	09 45 51.8	-2.3
CNLB	Canela	16.25	95	eP	Pn	09 45 53.6	-1.8
TRCB	Terra Rica	16.42	71	eP	Pn	09 45 57.4	-0.1
PTLB	Pontes e Lacer	16.69	37	eP	P	09 46 02.2	+1.0
PP1B	Ponte de Pedra	17.67	52	eP	Pn	09 46 13.1	+0.4
PCMB	Pacaembu	18.09	69	eP	Pn	09 46 17.1	-0.6
VILB	Vilhena	18.33	30	eP	P	09 46 19.5	+0.2
SALV	Santo Antonio	18.34	47	eP	Pn	09 46 20.4	-0.4
FRTB	Fartura	18.77	76	eP	P	09 46 24.3	+0.2
NBRS	Nobres	19.50	43	eP	P	09 46 32.8	+0.7
ETMB	Extrema	19.54	10	eP	P	09 46 33.6	+1.2
ITRB	Iturama	19.78	66	eP	P	09 46 35.7	+0.6
DVLD	Doverlandia	20.23	56	eP	P	09 46 40.4	+0.4
PET01	Itanhaem-SP	20.41	81	eP	P	09 46 42.2	+0.4
SPB	Sao Paulo	20.50	79	eP	P	09 46 42.2	-0.7
BB19B	Bebedouro	20.60	72	eP	P	09 46 42.9	-1.0
RCLB	Rio Claro- Sao	20.86	76	eP	P	09 46 46.6	-0.2
ARAG	Araguaiana, MT	21.10	54	eP	P	09 46 48.8	-0.5
VAO	Valinhos	21.12	78	eP	P	09 46 49.1	-0.4
PDRB	Porto dos Gac	21.16	37	eP	P	09 46 49.0	-1.0
CZSB	Cruzeiro do Su	21.59	351	eP	P	09 46 55.5	+0.9
PARB	Paraibuna	22.15	80	eP	P	09 46 58.5	-1.9
IPMB	Ipameri, GO	22.42	65	eP	P	09 47 02.4	-0.9
BDFB	Brasilia	23.94	60	P	P	09 47 17.6	-0.2
	comp=Z,5.5nm,0.5s,baz=223,slow=7.1,SNR=9.3						
	comp=Z,5.5nm,0.5s						
BDFB	Brasilia	23.94	60	P	P	09 47 16.4	-1.3
BDFB				IAmb	IAmb	09 47 18.3	
	comp=Z,24nm,1.3s						
SNDB	Serra Nova Dou	24.10	48	eP	P	09 47 18.1	-0.9
TBTG	Tabatinga, AM	24.89	359	eP	P	09 47 26.6	+0.4
USHA	Ushuaia	25.61	179	P	P	09 47 34.0	+1.7
	comp=Z,11nm,0.9s,baz=22,slow=6.2,SNR=5.9						
USHA				pP	pP	09 47 58.5	+1.5
	comp=Z,11nm,0.9s,baz=359,slow=4.6,SNR=5.8						
	comp=Z,11nm,0.9s						
PEXB	Peixe	26.04	54	eP	P	09 47 37.5	+0.8
JANB	Januaria	27.15	64	eP	P	09 47 46.4	-0.3
MACA	Manacapuru-AM	27.22	19	eP	P	09 47 49.1	+1.9
ITTB	Itaituba	27.93	30	eP	P	09 47 53.0	-0.6
SMTB	Santa Maria do	28.84	50	eP	P	09 48 02.0	+0.3
BOAV	Boa Vista	32.58	17	eP	P	09 48 34.3	-0.2
NBPN	Ponto Novo - B	32.87	62	eP	P	09 48 36.5	-0.6
NBPS	Pedro II - PI	36.25	52	eP	P	09 49 06.9	+0.6
ZARC	Zaragoza, Cauc	36.86	351	P	P	09 49 10.5	-0.9
ZARC				IAmb	IAmb	09 49 12.6	
	comp=Z,8.9nm,0.7s						
SJCC	San Jacinto, C	39.27	351	P	P	09 49 32.1	+0.4
VNA3	Neumayer Olymp	53.01	160	P	P	09 51 18.3	-0.2
VNA3	Neumayer Olymp	53.01	160	pP	pP	09 51 42.5	-2.6
SOR	Soroa	53.32	344	P	P	09 51 21.4	+0.1
SNAA	Sanae	55.23	159	P	P	09 51 34.6	-0.1
SNAA	Sanae	55.23	159	P	P	09 51 34.9	+0.2
	comp=Z,3.3nm,0.6s,baz=275,slow=8.2,SNR=27						
	comp=Z,3.3nm,0.6s						
SNAA	Sanae	55.23	159	P	P	09 51 34.5	-0.2
SNAA				IAmb	IAmb	09 51 35.9	
	comp=Z,6.8nm,1.1s						
TROLL	Troll, Antarti	56.94	159	P	P	09 51 46.7	-0.3
QSPA	South Pole Qui	61.01	180	P	P	09 52 15.6	+0.4
QSPA				IAmb	IAmb	09 52 17.6	
	comp=Z,8.2nm,1.2s						
344A	Westbrook Farm	63.63	340	P	P	09 52 33.1	+0.3
833A	Chaparral WMA,	63.98	331	P	P	09 52 36.4	+1.2
342A	Flagon Creek P	64.06	338	P	P	09 52 37.3	+1.7
143A	Socs Landing,	65.00	340	P	P	09 52 42.8	+1.1
X51A	Calhoun	65.08	346	P	P	09 52 40.6	-1.6
PLAL	Pickwick Lake	66.22	343	P	P	09 52 49.2	-0.3
PLAL				IAmb	IAmb	09 52 50.7	
	comp=Z,8.5nm,1.1s						
WLAR	White Oak Lake	66.44	339	P	P	09 52 51.2	+0.2
V48A	Smith Brothers	66.64	345	P	P	09 52 52.1	-0.1
V48A				IAmb	IAmb	09 52 53.3	
	comp=Z,15nm,1.1s						
TXAR	Lajitas Array	66.75	328	P	P	09 52 54.5	+1.3
	comp=Z,1.1nm,0.7s,baz=146,slow=8.0,SNR=16						
TXAR				pP	PcP	09 53 21.6	+0.3
	comp=Z,0.6nm,0.6s,baz=147,slow=7.2,SNR=5.4						
	comp=Z,1.1nm,0.7s						
TXAR	Lajitas Array	66.75	328	P	P	09 52 54.1	+0.9
TX31	Lajitas Ar. Si	66.75	328	P	P	09 52 54.4	+1.2
TX31				IAmb	IAmb	09 53 11.0	
	comp=Z,10nm,1.5s						
TX32	Lajitas Array	66.75	328	P	P	09 52 53.7	+0.5
CLTN	Cedars of Leba	66.87	345	P	P	09 52 53.9	+0.2
CLTN				IAmb	IAmb	09 52 54.2	
	comp=Z,6.9nm,0.9s						
U49A	Red Boiling Sp	67.15	346	P	P	09 52 55.2	-0.2
U49A				IAmb	IAmb	09 52 55.6	
	comp=Z,3.6nm,0.6s						
WVT	Waverly	67.25	344	P	P	09 52 55.4	-0.6
WVT				IAmb	IAmb	09 52 56.9	
	comp=Z,16nm,0.9s						
MIAR	Mount Ida	67.38	339	P	P	09 52 56.9	0.0
MIAR				IAmb	IAmb	09 52 58.7	
	comp=Z,7.0nm,0.9s						
T47A	Sharon Grove	67.90	345	P	P	09 52 59.7	-0.4
T47A				IAmb	IAmb	09 53 01.0	
	comp=Z,11nm,1.1s						
W39A	Magazine	68.05	339	P	P	09 53 02.1	+1.0
W39A				IAmb	IAmb	09 53 02.9	
	comp=Z,6.7nm,0.8s						
LCAR	Lake Charles	68.07	341	P	P	09 53 01.6	+0.4
FCAR	Ozark Folk Cen	68.18	340	P	P	09 53 01.7	-0.2
FCAR				IAmb	IAmb	09 53 03.2	
	comp=Z,12nm,1.3s						
PARMO	Parma	68.25	343	P	P	09 53 02.7	+0.4
U40A	Yellville	68.83	340	P	P	09 53 05.5	-0.4
U40A				IAmb	IAmb	09 53 07.4	
	comp=Z,8.3nm,0.9s						
S44A	Carbondale	69.09	343	P	P	09 53 07.3	-0.2
HHAR	Hobbs	69.10	339	P	P	09 53 07.6	0.0
HHAR				IAmb	IAmb	09 53 09.1	
	comp=Z,5.2nm,0.7s						
SIUC	Southern Illin	69.10	343	P	P	09 53 07.3	-0.2
SIUC				IAmb	IAmb	09 53 08.1	
	comp=Z,11nm,0.6s						
VNDA	Vanda	69.20	190	P	P	09 53 09.3	+1.5
	comp=Z,1.3nm,0.8s,baz=126,slow=6.4,SNR=8.5						
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	69.20	190	P	P	09 53 08.1	+0.3
MGMO	Mountain Grove	69.40	341	P	P	09 53 09.4	0.0
MNTX	Cornudas Mount	69.54	328	P	P	09 53 10.3	-0.2
FVM	French Village	69.67	342	P	P	09 53 11.2	+0.1
CCM	Cathedral Cave	69.95	342	P	P	09 53 13.3	+0.5
CCM				IAmb	IAmb	09 53 14.2	
	comp=Z,16nm,0.9s						
S39A	Bolivar	70.21	340	P	P	09 53 14.7	+0.3
S39A				IAmb	IAmb	09 53 16.0	
	comp=Z,11nm,0.8s						
MSTX	Muleshoe	70.30	331	P	P	09 53 15.7	+0.5
MSTX				IAmb	IAmb	09 53 16.9	
	comp=Z,16nm,0.8s						
R40A	Maddies Statio	70.46	341	P	P	09 53 15.9	0.0
AMTX	Amarillo	70.63	332	P	P	09 53 17.8	+0.7
AMTX				IAmb	IAmb	09 53 19.7	
	comp=Z,8.0nm,1.1s						
LIC	Lamto	71.17	71	eP	P	09 53 20.9	+0.1
	comp=Z,91nm,2.2s						
N47A	Urbana	71.34	347	P	P	09 53 20.6	-0.6
N47A				IAmb	IAmb	09 53 21.5	
	comp=Z,20nm,1.2s						
121A	Cookes Peak, D	71.37	326	P	P	09 53 23.8	+2.0
TIC	Toumodi	71.41	71	eP	P	09 53 21.7	-0.5
KIC	Kosan Boka	71.49	71	eP	P	09 53 22.8	+0.1
	comp=Z,14nm,0.8s						
P40A	Paris	71.55	342	P	P	09 53 22.3	-0.2
P40A				IAmb	IAmb	09 53 23.8	
	comp=Z,14nm,0.7s						
DBIC	Dimbokro	71.56	71	P	P	09 53 23.7	+0.6
	comp=Z,5.4nm,0.6s,baz=227,slow=5.8,SNR=8.1						
	comp=Z,5.4nm,0.6s						
DBIC	Dimbokro	71.56	71	P	P	09 53 23.1	0.0
ANMO	Albuquerque	72.74	329	P	P	09 53 31.1	+1.3
CBKS	Cedar Bluff	73.34	336	P	P	09 53 33.8	+0.6
CBKS				IAmb	IAmb	09 53 35.3	
	comp=Z,11nm,0.9s						
T25A	Trinidad	73.70	332	P	P	09 53 36.2	+0.7
T25A				IAmb	IAmb	09 53 38.3	
	comp=Z,7.7nm,1.1s						
L40A	Anamosa	73.71	343	P	P	09 53 34.9	-0.3
N35A	Tabor	73.82	340	P	P	09 53 35.7	-0.1
W18A	Petrified Fore	74.41	327	P	P	09 53 41.0	+1.4
W18A				IAmb	IAmb	09 53 42.7	
	comp=Z,7.8nm,1.0s						
SDCO	Great Sand Dun	74.67	331	P	P	09 53 42.7	+1.5
L34A	Svendsen Farm,	75.06	340	P	P	09 53 42.8	-0.2
WUAZ	Wupatki	75.53	326	P	P	09 53 47.1	+1.0
WUAZ				IAmb	IAmb	09 53 49.4	
	comp=Z,8.7nm,1.1s						
MVCO	Mesa Verde	75.54	329	P	P	09 53 46.2	+0.1
D62A	Allapoint, All	75.94	0	P	P	09 53 48.4	+0.5
D62A				IAmb	IAmb	09 53 50.0	
	comp=Z,13nm,0.8s						
I37A	Lemond, Waseca	76.10	342	P	P	09 53 49.0	+0.1
K31A	O'Neill	76.40	338	P	P	09 53 51.5	+0.8
ISCO	Idaho Springs	76.45	332	P	P	09 53 52.2	+0.8
PV13	Radium Mtn., P	76.46	329	P	P	09 53 52.5	+1.1
PV13				IAmb	IAmb	09 53 54.1	
	comp=Z,6.7nm,0.8s						
ECSD	EROS Data Cent	76.74	340	P	P	09 53 52.6	+0.1
ECSD				IAmb	IAmb	09 53 54.0	
	comp=Z,11nm,0.8s						
MAW	Mawson	77.12	163	P	P	09 53 55.1	+0.6
	comp=Z,4.4nm,0.8s,baz=178,slow=2.2,SNR=7.8						
	comp=Z,4.4nm,0.8s						
PKCU	Pink Cliffs	77.52	326	P	P	09 53 59.4	+2.0
LCMT	Little Creek M	77.63	325	P	P	09 53 59.5	+1.7
SRU	San Rafael Swe	78.01	329	P	P	09 54 01.2	+1.2
SRU				IAmb	IAmb	09 54 02.3	
	comp=Z,7.1nm,1.1s						
SZCU	Shurtz Canyon	78.01	326	P	P	09 54 01.7	+1.6
CCUT	Cedar City	78.11	326	P	P	09 54 02.1	+1.5
CCUT				IAmb	IAmb	09 54 04.2	
	comp=Z,9.1nm,0.9s						
Q16A	Castle Valley	78.15	328	P	P	09 54 02.8	+2.1
SHPR	Sheep Range	78.21	324	P	P	09 54 01.9	+0.8
RWWY	Rawlins	78.69	332	P	P	09 54 04.3	+0.5
RWWY				IAmb	IAmb	09 54 05.3	
	comp=Z,9.6nm,0.8s						
R11A	Troy Canyon, C	79.84	325	P	P	09 54 10.7	+0.7
R11A				IAmb	IAmb	09 54 13.0	
	comp=Z,9.2nm,1.4s						
BOSA	Boshof	80.33	117	P	P	09 54 12.8	-0.1
	comp=Z,6.2nm,0.8s,baz=254,slow=3.1,SNR=17						
	comp=Z,6.2nm,0.8s						
BOSA	Boshof	80.33	117	P	P	09 54 12.2	-0.7
BOSA				IAmb	IAmb	09 54 13.6	
	comp=Z,5.9nm,0.8s						
TPH	Tonopah	80.47	324	P	P	09 54 14.4	+1.0
HWUT	Hardware Ranch	80.49	329	P	P	09 54 13.8	+0.4
TOA0	Torodi Ar. Sit	80.49	69	P	P	09 54 13.7	0.0
TOA0				IAmb	IAmb	09 54 14.8	
	comp=Z,12nm,0.7s						
TORD	Torodi Ar. Bea	80.49	69	P	P	09 54 13.9	+0.2
	comp=Z,9.7nm,0.6s,baz=270,slow=5.2,SNR=72						
TORD				pP	pP	09 54 44.0	+1.4
	comp=Z,3.5nm,0.8s,baz=266,slow=5.2,SNR=4.9						
	comp=Z,9.7nm,0.6s						
PD31	Pinedale Array	80.56	331	P	P	09 54 14.4	+0.6
PDAR	Pinedale Array	80.56	331	P	P	09 54 14.8	+1.0
	comp=Z,1.7nm,0.7s,baz=128,slow=6.7,SNR=10						
	comp=Z,1.7nm,0.7s						
PDAR	Pinedale Array	80.56	331	P	P	09 54 14.4	+0.6
BW06	Boulder Array	80.56	331	P	P	09 54 14.6	+0.8
OMMB	Old Mammoth Mi	81.06	322	P	P	09 54 17.6	+1.0
NVAR	Mina Array Bea	81.29	323	P	P	09 54 19.6	+1.8
	comp=Z,1.9nm,0.8s,baz=154,slow=6.0,SNR=10						
NVAR				pP	pP	09 54 50.0	+2.9
	comp=Z,1.2nm,0.9s,baz=169,slow=6.5,SNR=4.4						
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	81.29	323	P	P	09 54 18.1	+0.3
LBTB	Lobatse	82.29	114	P	P	09 54 21.7	-1.6
LBTB				IAmb	IAmb	09 54 24.0	
	comp=Z,6.3nm,0.7s						
ULM	Lac du Bonnet	82.51	343	P	P	09 54 23.8	+0.2
	comp=Z,7.9nm,0.8s,baz=150,slow=6.5,SNR=7.0						
	comp=Z,7.9nm,0.8s						
LAO	LASA Array	82.53	335	P	P	09 54 24.5	+0.6
LAO				IAmb	IAmb	09 54 25.8	
	comp=Z,8.0nm,0.9s						
YHH	Holmes Hill	82.75	332	P	P	09 54 26.5	+1.1
YHH				IAmb	IAmb	09 54 27.9	
	comp=Z,4.4nm,0.7s						
YHL	Hebgen Lake	82.94	332	P	P	09 54 27.9	+1.5
YHL				IAmb	IAmb	09 54 29.9	
	comp=Z,8.5nm,1.4s						
DGMT	Dagmar	83.36	338	P	P	09 54 28.5	+0.4
MCMT	McKenzie Canyo	83.63	331	P	P	09 54 30.8	+1.0
SCHQ	Schefferville	83.73	2	P	P	09 54 29.8	+0.1
	comp=Z,4.1nm,0.9s,baz=191,slow=4.6,SNR=5.3						
	comp=Z,4.1nm,0.9s						
MOD	Modoc Plateau	84.89	324	P	P	09 54 36.9	+0.8
J08A	Circle Bar Ran	85.06	326	P	P	09 54 37.5	+0.6
J08A				IAmb	IAmb	09 54 38.9	
	comp=Z,5.0nm,0.7s						
PINE	Pine Mountain	86.59	325	P	P	09 54 46.0	+1.4
PINE				IAmb	IAmb	09 54 47.2	
	comp=Z,5.5nm,0.8s						
WALA	Waterton Lakes	87.43	333	P	P	09 54 49.0	+0.6
WALA				IAmb	IAmb	09 54 50.3	
	comp=Z,8.9nm,0.9s						
C09A	Chrisman Ranch	88.31	330	P	P	09 54 52.5	0.0
C09A				IAmb	IAmb	09 54 54.2	
	comp=Z,4.5nm,0.8s						
ESDC	Sonseca Array	91.66	45	P	P	09 55 09.0	+0.7
	comp=Z,0.3nm,0.6s,baz=242,slow=4.3,SNR=2.0						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	98.27	341	P	P	09 55 37.9	+0.1
	comp=Z,0.7nm,0.8s,baz=135,slow=4.7,SNR=16						
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	122.82	206	PKP	PKPdf	10 00 56.8	-0.5
	comp=Z,1.0nm,0.9s,baz=172,slow=2.7,SNR=7.7						
WRA	Warramunga Arr	126.00	208	PKP	PKPdf	10 01 03.5	+0.1
	comp=Z,1.8nm,0.7s,baz=149,slow=2.1,SNR=5.4						
TIXI	Tiksi	136.34	352	PKP	PKPdf	10 01 21.1	-0.2
	comp=Z,0.8nm,0.3s,baz=92,slow=22,SNR=4.9						
TIXI	Tiksi	136.34	352		PKPdf	10 01 22.0	+0.8
SEY	Seymchan	136.86	333	PKP	PKPdf	10 01 22.3	-0.2
	comp=Z,2.8nm,0.6s,baz=40,slow=8.8,SNR=6.2						
PETK	Petropavlovsk-	138.22	318	PKP	PKPdf	10 01 26.4	+1.1
	comp=Z,1.3nm,0.9s,baz=151,slow=6.8,SNR=5.0						
PETK	Petropavlovsk-	138.22	318		PKPdf	10 01 25.8	+0.5
LEM	Lembang	144.06	175	PKP	PKPdf	10 01 37.0	-0.2
	comp=Z,13nm,0.4s,baz=341,slow=22,SNR=4.4						
SIJI	Sorong	144.11	217	PKP	PKPdf	10 01 36.7	-0.4
	comp=Z,5.8nm,0.4s,baz=36,slow=6.8,SNR=5.1						
KAPI	Kappang	144.83	196	PKP	PKPbc	10 01 38.2	+0.7
	comp=Z,12nm,0.6s,baz=187,slow=4.3,SNR=5.8						
KAPI	Kappang	144.83	196		PKPab	10 01 36.1	-1.4
YAK	Yakutsk	144.84	344	PKP	PKPab	10 01 35.8	-0.4
	comp=Z,9.7nm,0.5s,baz=134,slow=1.2,SNR=7.6						
KURBB	Kurchatov Arra	147.84	39	PKP	PKPdf	10 01 42.6	+0.4
	comp=Z,5.1nm,0.6s,baz=303,slow=3.1,SNR=50						
KURBB				PKPbc	PKPbc	10 01 45.9	+0.6
	comp=Z,5.1nm,0.6s,baz=303,slow=3.1,SNR=30						
KURBB				pPKPbc	pPKPab	10 02 16.9	-1.0
	comp=Z,2.3nm,0.7s,baz=304,slow=3.2,SNR=7.2						
KURK	Kurchatov	147.84	39	PKPdf	PKPdf	10 01 40.8	-1.4
KURK					PKPbc	10 01 45.3	0.0
ZALV	Zalesovo Beam	149.01	30	PKPbc	PKPbc	10 01 48.8	+0.6
	comp=Z,13nm,0.6s,baz=305,slow=3.6,SNR=49						
ZALV				pPKPbc	pPKPab	10 02 19.9	-2.6
	comp=Z,4.3nm,0.6s,baz=311,slow=3.2,SNR=6.9						
ZALV	Zalesovo Beam	149.01	30	PKPdf	PKPdf	10 01 43.6	-0.4
ZALV					PKPbc	10 01 48.5	+0.3
ZALV				PKPab	PKPab	10 01 53.5	+0.8
ASAJ	Asahikawa	150.51	309	PKPbc	PKPbc	10 01 52.9	+0.7
	comp=Z,8.5nm,0.8s,baz=258,slow=28,SNR=6.3						
MKAR	Makanchi Array	151.88	44	PKPbc	PKPbc	10 01 55.6	+0.2
	comp=Z,4.9nm,0.7s,baz=314,slow=2.1,SNR=43						
MKAR				pPKPbc	pPKPbc	10 02 26.9	+0.8
	comp=Z,2.2nm,0.6s,baz=313,slow=2.2,SNR=6.6						
KLR	Kul'dur	154.28	327	PKPbc	PKPbc	10 02 00.8	+0.3
	comp=Z,1.4nm,0.7s,baz=24,slow=5.5,SNR=6.0						
SONM	Songino Array	161.13	9	PKPab	PKPab	10 02 45.0	+0.4
	comp=Z,1.1nm,0.7s,baz=318,slow=4.7,SNR=4.7						
PZH	PanZhiHua	171.77	107	PKP	PKPdf	10 02 08.1	-1.6

NOU 15 09:51:23.1, 14°.60S×167°.30E, h123^{km}, MLv4.3/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.85	186	P	Pn	09 51 44.4	+0.4
DVP	Devils Point	3.22	165	P	Pn	09 52 12.6	+0.2
YATNC	Mamie plateau,	7.43	183	P	Pn	09 53 08.5	-0.4
DZM	Mont Dzumac	7.47	186	P	Pn	09 53 09.7	+0.1

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*IGQ **15** 09:51:32±1.1, 1°N±4°×8°1W±°, h5^{km}*
*VAO **15** 09:51:37.0±0.4, 0°.41N×80°.33W, h10^{km}, mb5.0*
*NEIC **15** 09:51:41.0±1.8, 0°.56N±0°.07×80°.30W±0°.07, h42^{km}±6^{km}, mb4.8/97, Error ellipse: s-maj=11.2km s-min=9.3km az=217.0*
*IDC **15** 09:51:41.9±2.3, 0°.62N×80°.39W, h55^{km}±21^{km}, mb4.1/21, mbtmp4.4/24, ML3.0/3, MS3.7/32, Error ellipse: s-maj=16.6km s-min=10.1km az=69.0*

ISC 15 09:51:36.6±0.3, 0°.53N±0°.03×80°.37W±0°.04, h11^{km}, n411, σ1^{s}35/396, mb4.7/64, MS3.6/29, 2C, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMA1	Acelerografo,	0.76	58	P	Pb	09 51 52.0	+0.1
AMA1				S	Sn	09 52 07.0	+2.2
JAMA	Jama	0.81	168	P	Pg	09 51 51.0	-1.2
AV21	Acelerografo,	0.83	81	P	Pg	09 51 53.0	+0.2
MAG1	Magdalena	0.85	135	P	Pg	09 51 53.0	0.0
CABP	Cabo Pasado	0.92	184	P	Pg	09 51 53.0	-1.3
AV18	Acelerografo,	0.92	104	P	Pb	09 51 55.0	+0.4
FLF1	Flavio Alfaro-	1.03	149	P	Pg	09 51 56.0	-0.5
BV15	Puerto Quito-O	1.21	108	P	Pn	09 51 59.0	-0.5
APR2	Miler	1.48	108	P	Pn	09 52 03.0	-0.2
ASDO	Santo Domingo	1.48	122	P	Pn	09 52 02.0	-1.2
APR1	Acelerografo,	1.85	108	P	Pn	09 52 09.0	+0.3
PINO	Pino	1.89	111	P	Pn	09 52 09.0	-0.4
TERV	Terraza Guagua	1.90	112	P	Pn	09 52 09.0	-0.5
GGPT	Toaza - Volcan	1.91	113	P	Pn	09 52 09.0	-0.4
GGPC	Guagua Pichinc	1.91	112	P	Pn	09 52 09.0	-0.7
YANA	Yana	1.91	110	P	Pn	09 52 09.0	-0.6
JUA2	San Juan 2	1.92	113	P	Pn	09 52 09.0	-0.6
OTAV	Otavalo	1.94	99	Pn	Pn	09 52 10.4	+0.5
OTAV	Otavalo	1.94	99	eP	Pn	09 52 10.5	+0.5
OTAV	Otavalo	1.94	99	eP	Pn	09 52 10.4	+0.5
OTAV	Otavalo	1.94	99	P	Pn	09 52 10.0	0.0

CUSE	Cuicocha Este	1.99	97	P	Pn	09 52 11.0	+0.4
CUIC	Cuicocha-Domo	2.02	96	P	Pn	09 52 12.0	+0.9
ALIT	Ecuador-Imbabu	2.03	83	P	Pn	09 52 11.0	+0.1
LITE1	Lita	2.03	83	P	Pn	09 52 10.0	-0.9
CUSW	Cuicocha Oeste	2.04	97	P	Pb	09 52 13.0	-0.9
ILLI	Illinizas Sur	2.06	127	P	Pn	09 52 11.0	-0.6
CTUM2	Tumaco	2.09	52	*e*P	Pn	09 52 10.5	-1.0
TUMC	Tumaco	2.09	52	Pn	Pn	09 52 09.8	-1.8
TUMC	Tumaco	2.09	52	*e*P	Pn	09 52 09.6	-2.0
TUMC	Tumaco	2.09	52	P	Pn	09 52 10.0	-1.5
PPLP	Puerto Lpez	2.10	191	P	Pn	09 52 09.0	-2.8
PAST	Pastocalle	2.12	125	P	Pn	09 52 12.0	-0.4
URCU	Urcuqui	2.12	93	P	Pn	09 52 13.0	+0.6
SRAM	San Ramn-Vol	2.21	125	P	Pn	09 52 14.0	+0.4
SUCR	Mariscal Sucre	2.21	122	P	Pn	09 52 14.0	+0.3
CAMI	Rancho Maria	2.22	123	P	Pn	09 52 15.0	+1.2
NAS2	Nasa	2.23	122	P	Pn	09 52 14.0	-0.1
BNAS	Cotopaxi Volca	2.24	122	P	Pn	09 52 15.0	+0.9
SLOR	San Lorenzo -	2.26	124	P	Pn	09 52 15.0	+0.7
BREF	Cotopaxi Volca	2.27	122	P	Pn	09 52 16.0	+1.3
BMOR	Cotopaxi Volca	2.29	123	P	Pn	09 52 16.0	+1.2
VC1	Cotopaxi 1	2.29	121	P	Pn	09 52 16.0	+1.2
BVC2	Cotopaxi Volca	2.29	121	P	Pn	09 52 16.0	+1.1
BRRN	Barrancas-Volc	2.30	125	P	Pn	09 52 15.0	0.0
YAHU	Yahuarcocha	2.31	94	P	Pb	09 52 17.0	-1.5
BTAM	Cotopaxi Volca	2.31	121	P	Pn	09 52 16.0	+0.8
TAMB	Tambo	2.35	121	P	Pn	09 52 17.0	+1.4
ANTG	Antisana-Guama	2.35	116	P	Pn	09 52 17.0	+1.3
LNGL	El Angel-Carch	2.38	85	P	Pn	09 52 17.0	+1.0
VCES	Cotopaxi	2.38	124	P	Pn	09 52 17.0	+0.9
ANTM	Antisana-La Mi	2.40	116	P	Pn	09 52 18.0	+1.7
ANTI	Antisana	2.42	114	P	Pn	09 52 18.0	+1.4
ECEN	Cerro Negro	2.42	83	P	Pn	09 52 16.0	-0.6
CAYR	Refugio Cayamb	2.42	102	P	Pb	09 52 19.0	-1.6
CAYA	Cayambe	2.43	101	P	Pb	09 52 19.0	-1.6
ANTS	Antisana-Sarah	2.43	115	P	Pn	09 52 18.0	+1.2
CHL1	Volc¡n Chiles	2.44	84	P	Pn	09 52 17.0	+0.1
CHL2	Volc¡n Chiles	2.47	84	P	Pn	09 52 17.0	-0.3
CHSH	Refugio Sur-Vo	2.51	143	P	Pn	09 52 18.0	+0.1
PORT	Chimborazo Vol	2.55	141	P	Pn	09 52 18.0	-0.4
CMBC	Cumbal	2.58	81	*e*P	Pb	09 52 21.1	-2.1
CMBC	Cumbal	2.58	81	P	Pn	09 52 20.0	+1.3
TULM	Tulcn-Chalpat	2.59	86	P	Pn	09 52 21.0	+2.1
PIAT	Ana Tenorio	2.60	126	P	Pn	09 52 20.0	+1.0
TAMH	Tambohuasha Ch	2.60	142	P	Pn	09 52 19.0	-0.1
ATUL	Tulcn	2.66	85	P	Pb	09 52 23.0	-1.5
JUI6	Juive	2.72	136	P	Pn	09 52 22.0	+1.4
POND	Pondoa	2.73	135	P	Pn	09 52 22.0	+1.3
RETU	Refugio	2.76	136	P	Pn	09 52 23.0	+1.8
BRUN	Tungurahua Vol	2.76	135	P	Pn	09 52 22.0	+0.9
BMAS	Trigal station	2.77	137	P	Pn	09 52 23.0	+1.7
ARRY	Arrayan	2.79	137	P	Pn	09 52 22.0	+0.4
CONE	Cono NE Rev Vo	2.79	102	P	Pn	09 52 24.0	+2.4
BPAT	Tungurahua Vol	2.80	136	P	Pb	09 52 25.0	-2.0
BONI	La Bonita	2.84	92	P	Pn	09 52 24.0	+1.8
CASC	Dorado de Casc	3.06	97	P	Pn	09 52 27.0	+1.9
PUYO	Puyo, Santa Ro	3.09	131	P	Pn	09 52 28.0	+2.5
CCUFI	Cufio, Nario	3.10	77	*e*P	Pn	09 52 26.8	+0.8
GCUF	Volcan Galeras	3.10	77	*e*P	Pn	09 52 27.7	+1.7
CPAS2	Pasto	3.19	78	*e*P	Pb	09 52 34.4	+0.8
GR1C	Gorgona, Isla	3.30	42	*e*P	Pb	09 52 33.5	-1.7
CRUC	La Cruz	3.57	73	*e*P	Pn	09 52 31.6	-0.8
ARNL	Arenillas	4.07	176	P	Pn	09 52 39.0	+0.2
SOTA	Rioblanco	4.09	67	*e*P	Pn	09 52 39.2	-0.3
BOSC	San Juan Bosco	4.11	153	P	Pn	09 52 42.0	+2.4
PCON	Cinco Dias	4.36	66	*e*P	Pn	09 52 45.9	+2.6
MALC	Bahia Malaga	4.60	41	*e*P	Pb	09 52 56.4	-1.0
MARP	Paez Belalcaza	4.98	62	*e*P	Pn	09 52 57.4	+5.8
YOTC	Yotoco, Valle	5.29	50	*e*P	Pn	09 52 57.4	+1.7
BETC	Betania	5.37	67	*e*P	Pb	09 53 07.0	-3.6
PLMC	San Jos del P	5.96	43	*e*P	Pn	09 53 12.7	+7.7
ORTC	Ortega, Tolima	6.12	57	*e*P	Pn	09 53 14.6	+7.5
PRAC	Prado	6.33	60	*e*P	Pn	09 53 14.6	+4.6
ANIL	Santa Ana	6.33	52	*e*P	Pn	09 53 18.4	+8.2
MACC	Macarena, Meta	6.72	76	*e*P	Pn	09 53 17.5	+2.2
CBOC	Ciudad Bolivar	6.86	39	*e*P	Pn	09 53 19.4	+2.1
ROSC	El Rosal	7.41	55	P	Pn	09 53 28.9	+3.8
	2.0nm,0.3s,baz=245,slow=17,SNR=4.3						
ROSC				S	Sn	09 54 49.2	-0.1
	30nm,0.6s,baz=251,slow=18,SNR=1.2						
ROSC				LR	LR	09 56 35.3	
	comp=Z,526nm,20.6s,baz=225,slow=40						
	13nm,0.6s						
ROSC	El Rosal	7.41	55	Pn	Pn	09 53 26.4	+1.3
ROSC	El Rosal	7.41	55	*e*P	Pn	09 53 34.7	+10
HELC	Santa Helena	7.41	41	*e*P	Pn	09 53 25.1	0.0
NORC	Norcasia	7.43	48	*e*P	Pn	09 53 28.9	+3.9
CHIC	Chingaza	7.78	58	*e*P	Pn	09 53 33.7	+3.5
ATAH	Atahualpa	7.87	166	P	Pn	09 53 35.6	+4.2
	0.5nm,0.3s,baz=359,slow=10.0,SNR=4.3						
ATAH				S	Sn	09 55 05.8	+5.0
	16nm,0.9s,baz=11,slow=10.0,SNR=0.9						
ATAH				LR	LR	09 56 45.1	
	comp=Z,758nm,18.8s,baz=340,slow=38						
	7.4nm,0.6s						
PTBC	PUERTO BERRIO,	8.39	45	*e*P	Pn	09 53 42.3	+4.0
UPA	Univ. de Panam	8.43	6	*e*P	Pn	09 53 38.5	-0.3
BRU2	Volcan	8.53	344	Pn	Pn	09 53 41.1	+0.8
UREC	San Jos de Ur	8.64	34	*e*P	Pn	09 53 41.4	-0.4
ZARC	Zaragoza, Cauc	8.83	38		Pn	09 53 45.5	+1.1
ZARC	Zaragoza, Cauc	8.83	38	*e*P	Pn	09 53 45.2	+0.8
PTGC	Puerto Gaitan,	9.00	66	*e*P	Pn	09 53 54.8	+8.1
RUSC	La Rusia	9.02	54	*e*P	Pn	09 53 50.0	+2.7
DRK0	Durika	9.13	342		Pn	09 53 49.7	+1.1
SRBA	San Rafael, Bu	9.14	341	Pn	Pn	09 53 48.9	+0.3
PEZE	Perez Zeledon,	9.39	340		Pn	09 53 53.9	+1.9
RIMA	Rio Macho	9.81	339		Pn	09 53 58.1	+0.2
PAYG	Puerto Ayora	9.98	263		Pn	09 54 03.3	+3.1
HDC	Heredia	10.12	339	Pn	Pn	09 54 02.6	+0.5
OCAC	Ocana	10.39	42		Pn	09 54 06.6	+0.8
SJCC	San Jacinto, C	10.64	29		Pn	09 54 09.9	+0.8
JTS	Las Juntas de	10.71	335	Pn	Pn	09 54 11.4	+1.3
CZSB	Cruzeiro do Su	11.22	137	*e*P	Pn	09 54 15.8	-1.2
TBTG	Tabatinga, AM	11.46	114	*e*P	Pn	09 54 20.2	-0.1
LL6C	La Loma 6 Bece	11.55	37	*e*P	Pn	09 54 23.4	+1.8
SDV	Santo Domingo	12.76	49	P	Pn	09 54 39.7	+1.3
	1.2nm,0.3s,baz=219,slow=7.1,SNR=3.9						
	7.3nm,0.4s						
SDV	Santo Domingo	12.76	49	Pn	Pn	09 54 38.5	+0.1
SDV	Santo Domingo	12.76	49	*e*P	Pn	09 54 39.3	+0.9
NNA	Nana	12.92	164	P	P	09 54 49.2	-2.0
	21nm,0.9s,baz=329,slow=10.0,SNR=6.2						
NNA				LR	LR	09 59 57.4	
	comp=Z,193nm,18.3s,baz=334,slow=38						
BAUV	El Baul	14.85	55	P	P	09 55 12.9	+0.3
TGUH	Tegucigalpa,Un	15.07	333		Pn	09 55 10.5	+0.7
TGUH	Tegucigalpa,Un	15.07	333	*e*P	Pn	09 55 09.3	-0.5
ESQI	Esquipulas	16.52	328	P	P	09 55 31.0	-0.2
ESQI				IAmb	IAmb	09 55 42.6	
	comp=Z,65nm,1.2s						
BIRV	Birongo	17.15	54		P	09 55 38.4	+0.3
MACA	Manacapuru-AM	20.02	101	*e*P	P	09 56 07.8	-1.8
LPAZ	La Paz	20.62	145	P	P	09 56 17.4	+0.5
	comp=Z,6.6nm,0.6s,baz=325,slow=11,SNR=21						
LPAZ				LR	LR	10 06 25.6	
	comp=Z,167nm,19.8s,baz=320,slow=43						
	comp=Z,6.6nm,0.6s						
LPAZ	La Paz	20.62	145	P	P	09 56 17.1	+0.3
LPAZ	La Paz	20.62	145	*e*P	P	09 56 15.7	-1.2
PB12	IPOC Station P	21.43	153	P	P	09 56 24.9	-0.2
PB16	IPOC Station P	21.58	151	P	P	09 56 27.1	0.0
CMIG	Matias Romero	21.79	320	P	P	09 56 27.4	-1.4
	comp=Z,3.5nm,0.9s,baz=145,slow=9.1,SNR=3.6						
CMIG				LR	LR	10 03 15.8	
	comp=Z,235nm,18.7s,baz=148,slow=32						
	comp=Z,3.5nm,0.9s						
AOPR	Arecibo Observ	22.19	36	P	P	09 56 33.8	+0.7
AOPR				IAmb	IAmb	09 56 38.5	
	comp=Z,42nm,0.9s						
SJG	San Juan	22.37	38	P	P	09 56 35.8	+0.8
	comp=Z,10nm,0.8s,baz=201,slow=3.8,SNR=4.5						
SJG				LR	LR	10 07 42.3	
	comp=Z,118nm,18.5s,baz=220,slow=43						
	comp=Z,10nm,0.8s						
SJG	San Juan	22.37	38	P	P	09 56 33.9	-1.1
SJG				IAmb	IAmb	09 56 47.8	
	comp=Z,33nm,1.0s						
GCPR	Guaynabo City	22.56	38	P	P	09 56 37.5	+0.5
GCPR				IAmb	IAmb	09 56 42.5	
	comp=Z,46nm,0.9s						
PB11	IPOC Station P	22.74	153	P	P	09 56 38.7	-0.4
VILB	Vilhena	24.08	125	*e*P	P	09 56 51.8	-0.6
ITTB	Itaituba	25.09	101	*e*P	P	09 57 00.7	-0.9
SIV	San Ignacio	25.15	132	P	P	09 57 02.3	+0.1
	comp=Z,6.4nm,0.8s,baz=305,slow=8.3,SNR=12						
	comp=Z,6.4nm,0.8s						
LVC	Limon Verde	25.57	155	P	P	09 57 07.4	+1.1
	comp=Z,9.2nm,1.0s,baz=17,slow=4.1,SNR=6.0						
LVC				LR	LR	10 08 37.7	
	comp=Z,155nm,21.6s,baz=322,slow=40						
	comp=Z,9.2nm,1.0s						
LVC	Limon Verde	25.57	155	P	P	09 57 07.3	+1.1
MALB	Monte Alegre	26.21	95	*e*P	P	09 57 12.3	+0.5
PTLB	Pontes e Lacer	26.32	128	*e*P	P	09 57 12.4	-0.2
PDRB	Porto dos Gac	26.41	118	*e*P	P	09 57 12.8	-0.7
CLDB	Colider	26.93	116	*e*P	P	09 57 17.3	-1.0
GO02	Mina Guanaco	27.59	159		P	09 57 23.7	-0.7
GO02				IAmb	IAmb	09 57 31.0	
	comp=Z,27nm,1.2s						
MDP	Montagnes des	28.06	80	P	P	09 57 28.4	0.0
	comp=Z,19nm,1.0s,baz=262,slow=6.5,SNR=5.7						
MDP				LR	LR	10 08 25.8	
	comp=Z,162nm,19.7s,baz=258,slow=36						
	comp=Z,19nm,1.0s						
MCPB	Macapa, AP	28.33	92	*e*P	P	09 57 32.6	+1.8
NBRS	Nobres	28.47	122	*e*P	P	09 57 31.8	-0.3
AC02	Maricunga	29.29	159	P	P	09 57 40.1	+0.4
AC02				IAmb	IAmb	09 57 47.0	
	comp=Z,16nm,1.1s						
SNDB	Serra Nova Dou	31.43	114	*e*P	P	09 57 57.5	-0.9
AQDB	Aquidauana	31.93	132	P	P	09 58 02.5	0.0
AQDB				IAmb	IAmb	09 58 07.6	
	comp=Z,19nm,1.1s						
AQDB	Aquidauana	31.93	132	*e*P	P	09 58 01.3	-1.2
344A	Westbrook Farm	32.28	343	P	P	09 58 04.9	-0.6
344A				IAmb	IAmb	09 58 13.7	
	comp=Z,17nm,1.1s						
LRAL	Lakeview Retre	32.93	350	P	P	09 58 09.6	-1.5
	baz=168						
833A	Chaparral WMA,	33.09	328	P	P	09 58 12.3	-0.4
833A				IAmb	IAmb	09 58 25.2	
	comp=Z,7.1nm,0.8s						
833A	Chaparral WMA,	33.09	328	P	P	09 58 13.2	+0.6
	baz=143						
SMTB	Santa Maria do	33.97	107	*e*P	P	09 58 20.8	+0.3
FPAL	Fort Paine	34.19	352	P	P	09 58 23.1	+0.9
FPAL				IAmb	IAmb	09 58 30.4	
	comp=Z,14nm,1.1s						
PEXB	Peixe	34.23	113	*e*P	P	09 58 22.8	0.0
BG3	Lake Jocassee	34.37	356	P	P	09 58 24.1	+0.4
KMSC	Kings Mountain	34.44	359	P	P	09 58 23.4	-0.9
	baz=178						
ROC1	El Roble	34.48	166	P	P	09 58 24.4	-0.6
CPUP	Villa Florida	34.74	142	P	P	09 58 28.3	+1.3
	comp=Z,5.3nm,1.0s,baz=305,slow=6.1,SNR=6.1						
CPUP				LR	LR	10 14 11.8	
	comp=Z,112nm,18.4s,baz=12,slow=39						
	comp=Z,5.3nm,1.0s						
CPUP	Villa Florida	34.74	142	P	P	09 58 27.4	+0.3
CPUP				IAmb	IAmb	09 58 31.5	
	comp=Z,12nm,1.2s						
CPUP	Villa Florida	34.74	142	*e*P	P	09 58 28.5	+1.4
CPUP	Villa Florida	34.74	142	P	P	09 58 30.4	+3.4
CPCT	Cooper Cave	34.95	354	P	P	09 58 27.9	-0.8
JCT	Junction City	35.04	330	P	P	09 58 29.6	0.0
JCT				IAmb	IAmb	09 58 46.4	
	comp=Z,18nm,1.1s						
JCT	Junction City	35.04	330	P	P	09 58 29.6	0.0
	baz=145,SNR=6.2						
TKL	Tuckaleechee C	35.09	355	LR	LR	10 12 27.6	
	comp=Z,121nm,19.1s,baz=175,slow=36						
V48A	Smith Brothers	35.54	351	P	P	09 58 32.0	-1.8
V48A				IAmb	IAmb	09 58 42.4	
	comp=Z,17nm,1.1s						
BO04	La Punta	35.54	166	P	P	09 58 34.2	+0.2
BDFB	Brasilia	35.77	118	P	P	09 58 36.1	-0.2
	comp=Z,8.0nm,1.0s,baz=262,slow=15,SNR=5.9						
BDFB				LR	LR	10 12 56.7	
	comp=Z,153nm,20.2s,baz=310,slow=36						
	comp=Z,8.0nm,1.0s						
BDFB	Brasilia	35.77	118	P	P	09 58 36.9	+0.7
BDFB				IAmb	IAmb	09 58 52.1	
	comp=Z,18nm,1.3s						
HPIG		35.78	319	P	P	09 58 35.6	-0.6
TZTN	Tazewell	35.95	356	P	P	09 58 36.1	-1.2
TZTN	Tazewell	35.95	356	P	P	09 58 36.0	-1.4
	baz=174						
MIAR	Mount Ida	36.02	341	P	P	09 58 35.5	-2.4
	baz=157						
W41B	Gary Mavity, V	36.20	343	P	P	09 58 38.0	-1.5
W41B				IAmb	IAmb	09 58 38.7	
	comp=Z,11nm,1.2s						
W41B	Gary Mavity, V	36.20	343	P	P	09 58 38.0	-1.5
	baz=160						
TX31	Lajitas Ar. Si	36.25	324	P	P	09 58 40.2	+0.1
TX31				IAmb	IAmb	09 59 02.6	
	comp=Z,13nm,1.2s						
TX32	Lajitas Array	36.25	324	P	P	09 58 40.2	+0.1
TXAR	Lajitas Array	36.25	324	P	P	09 58 40.0	-0.1
	comp=Z,0.9nm,0.9s,baz=143,slow=10,SNR=7.0						
TXAR				PcP	PcP	10 01 04.3	-1.1
	comp=Z,1.1nm,0.9s,baz=139,slow=5.9,SNR=6.7						
TXAR				LR	LR	10 12 37.0	
	comp=Z,49nm,19.3s,baz=129,slow=35						
	comp=Z,0.9nm,0.9s						
TXAR	Lajitas Array	36.25	324	P	P	09 58 40.0	-0.1
IPMB	Ipameri, GO	36.60	122	*e*P	P	09 58 41.8	-1.4
W39A	Magazine	36.69	341	P	P	09 58 42.7	-0.9
W39A				IAmb	IAmb	09 58 51.0	
	comp=Z,8.5nm,1.0s						
W39A	Magazine	36.69	341	P	P	09 58 42.6	-1.0
	baz=157						
ABTX	Abilene, Hawle	36.73	332	P	P	09 58 43.4	-0.7
	baz=146						
LCAR	Lake Charles	36.75	345	P	P	09 58 42.4	-1.8
LCAR				IAmb	IAmb	09 58 50.0	
	comp=Z,7.8nm,0.8s						
SLBS	Sierra La Lagu	36.78	311	P	P	09 58 43.5	-1.2
SLBS				IAmb	IAmb	09 58 53.9	
	comp=Z,20nm,1.2s						
FCAR	Ozark Folk Cen	36.84	344	P	P	09 58 43.0	-1.9
PTGB	Pitanga	37.17	134	*e*P	P	09 58 46.8	-1.3
LPIG	La Paz	37.28	311	LR	LR	10 10 21.5	
	comp=Z,85nm,21.6s,baz=167,slow=30						
SDBA	SAO DESIDERIO	37.47	111	*e*P	P	09 58 49.7	-0.9
U40A	Yellville	37.48	343	P	P	09 58 49.0	-1.4
U40A				IAmb	IAmb	09 58 57.2	
	comp=Z,12nm,1.1s						
U40A	Yellville	37.48	343	P	P	09 58 49.0	-1.4
	baz=159,SNR=6.7						
ITQB	Itaqui	37.62	145	*e*P	P	09 58 51.1	-0.5
R50A	Paris	37.74	355	P	P	09 58 51.0	-1.5
R50A				IAmb	IAmb	09 59 01.4	
	comp=Z,9.4nm,0.9s						
BB19B	Bebedouro	37.81	127	*e*P	P	09 58 51.7	-1.7
TUL1	Leonard	38.01	339	P	P	09 58 53.7	-1.1
	baz=154						
CCM	Cathedral Cave	38.66	346	P	P	09 58 57.9	-2.3
	baz=162						
CCM	Cathedral Cave	38.66	346	P	P	09 58 57.1	-3.1
CCM				pP	sP	09 59 04.6	-0.2
CCM				sP	pP	09 59 11.3	+7.8
ITAB	Concordia	38.73	138	*e*P	P	09 58 59.8	-1.3
S39A	Bolivar	38.86	344	P	P	09 59 00.2	-1.8
JANB	Januaria	38.87	115	*e*P	P	09 59 02.8	+0.3
MNTX	Cornudas Mount	38.99	325	P	P	09 59 02.7	-0.5
MNTX	Cornudas Mount	38.99	325	P	P	09 59 02.6	-0.5
	baz=138,SNR=11						
P49A	Miami Univ. Ec	39.02	355	P	P	09 59 00.6	-2.7
	baz=173						
RPN	Rapa Nui	39.14	223	LR	LR	10 09 31.3	
	comp=Z,55nm,19.3s,baz=130,slow=27						
MSTX	Muleshoe	39.33	330	P	P	09 59 05.1	-1.1
MSTX	Muleshoe	39.33	330	P	P	09 59 05.6	-0.6
	baz=143						
AMTX	Amarillo	39.54	332	P	P	09 59 07.8	0.0
	baz=145						
SSPA	Standing Stone	39.98	3	P	P	09 59 09.9	-1.4
SSPA				pP	sP	09 59 15.7	-0.1
DIAM	Diamantina, MG	40.64	119	*e*P	P	09 59 17.0	-0.3
HDIL	Hopedale	40.65	350	P	P	09 59 13.8	-3.0
	baz=166						
PLTB	Pedras Altas	40.92	144	P	P	09 59 20.5	+1.3
PLTB				IAmb	IAmb	09 59 23.6	
	comp=Z,24nm,1.1s						
PLTB	Pedras Altas	40.92	144	*e*P	P	09 59 20.1	+0.8
121A	Cookes Peak, D	40.99	324	P	P	09 59 20.4	+0.4
121A				IAmb	IAmb	09 59 29.3	
	comp=Z,21nm,1.1s						
121A	Cookes Peak, D	40.99	324	P	P	09 59 21.0	+0.9
	baz=135,SNR=7.1						
319A	Douglas	41.11	321	P	P	09 59 21.2	+0.3
KSU1	Kansas State U	41.16	341	P	P	09 59 19.9	-1.2
	baz=155						
NBPB	Pedra_Branca-C	41.17	99	*e*P	P	09 59 22.7	+1.1
R32A	Long Quarter,	41.30	338	P	P	09 59 21.8	-0.4
BNM	Barren Site	41.51	326	P	P	09 59 24.9	+0.6
NBPN	Ponto Novo - B	41.51	107	*e*P	P	09 59 25.3	+1.0
LL04	Puerto Octay	41.88	171	P	P	09 59 26.6	-0.3
LL04				IAmb	IAmb	09 59 32.2	
	comp=Z,16nm,1.1s						
ANMO	Albuquerque	42.01	327	LR	LR	10 16 36.4	
	comp=Z,46nm,19.6s,baz=144,slow=36						
ANMO	Albuquerque	42.01	327	P	P	09 59 28.8	+0.4
ANMO				IAmb	IAmb	09 59 37.6	
	comp=Z,19nm,1.0s						
ANMO	Albuquerque	42.01	327	P	P	09 59 28.8	+0.4
	baz=139						
ANMO	Albuquerque	42.01	327	⇑P	P	09 59 28.8	+0.4
ANMO				pP	sP	09 59 35.6	+2.7
ANMO				sP	pP	09 59 43.0	+11
CBKS	Cedar Bluff	42.03	337	P	P	09 59 27.4	-0.8
CBKS				IAmb	IAmb	09 59 36.6	
	comp=Z,25nm,1.1s						
CBKS	Cedar Bluff	42.03	337	P	P	09 59 28.0	-0.3
	baz=150,SNR=5.5						
PLCA	Paso Flores	42.03	169	P	P	09 59 28.1	-0.2
	comp=Z,23nm,1.0s,baz=342,slow=9.3,SNR=21						
PLCA				LR	LR	10 15 31.4	
	comp=Z,54nm,18.9s,baz=3.5,slow=34						
	comp=Z,23nm,1.0s						
PLCA	Paso Flores	42.03	169	P	P	09 59 28.6	+0.2
PLCA				IAmb	IAmb	09 59 33.6	
	comp=Z,19nm,0.9s						
PLCA	Paso Flores	42.03	169	*e*P	P	09 59 28.4	+0.1
PLCA	Paso Flores	42.03	169	P	P	09 59 28.3	0.0
PLCA				pP	sP	09 59 33.1	+0.3
PLCA				sP	pP	09 59 38.1	+6.5
T25A	Trinidad	42.66	331	P	P	09 59 33.2	-0.5
T25A	Trinidad	42.66	331	P	P	09 59 34.3	+0.6
	baz=143,SNR=5.7						
TUC	Tucson	42.68	321	P	P	09 59 33.5	-0.2
TUC	Tucson	42.68	321	P	P	09 59 33.5	-0.2
	baz=132						
TUC	Tucson	42.68	321	P	P	09 59 33.8	+0.1
TUC				pP	pwP	09 59 41.1	+4.0
TUC				sP	sP	09 59 50.8	+12
SCIA	State Center	42.79	346	P	P	09 59 32.5	-1.8
	baz=161						
CMC01	Camacan, BA	43.34	113	*e*P	P	09 59 39.2	0.0
SDCO	Great Sand Dun	43.67	331	P	P	09 59 42.1	+0.2
SDCO				IAmb	IAmb	09 59 50.7	
	comp=Z,12nm,1.0s						
SDCO	Great Sand Dun	43.67	331	P	P	09 59 42.5	+0.5
	baz=142,SNR=26						
X18A	Snowflake	43.68	324	P	P	09 59 41.5	-0.4
W18A	Petrified Fore	43.97	325	P	P	09 59 44.8	+0.5
W18A				IAmb	IAmb	09 59 53.2	
	comp=Z,25nm,1.1s						
W18A	Petrified Fore	43.97	325	P	P	09 59 45.0	+0.7
	baz=135,SNR=6.0						
SADO	Sadowa	44.06	1	LR	LR	10 17 26.6	
	comp=Z,50nm,22.0s,baz=161,slow=35						
S22A	4UR Ranch, Cre	44.33	330	P	P	09 59 47.4	+0.2
	baz=140,SNR=5.2						
OGNE	Ogallala	44.76	337		P	09 59 50.5	+0.1
OGNE				IAmb	IAmb	09 59 60.0	
	comp=Z,14nm,0.9s						
OGNE	Ogallala	44.76	337	P	P	09 59 51.6	+1.2
	baz=148						
MVCO	Mesa Verde	44.80	328	P	P	09 59 50.7	-0.2
MVCO				IAmb	IAmb	10 00 07.6	
	comp=Z,12nm,1.1s						
MVCO	Mesa Verde	44.80	328	P	P	09 59 50.9	0.0
	baz=138,SNR=6.1						
RCBR	Riachuelo	44.85	99	LR	LR	10 18 59.7	
	comp=Z,114nm,21.7s,baz=70,slow=36						
K31A	O'Neill	45.04	341	P	P	09 59 51.3	-1.1
WUAZ	Wupatki	45.21	324	P	P	09 59 54.1	0.0
WUAZ	Wupatki	45.21	324	P	P	09 59 54.6	+0.5
	baz=134,SNR=11						
G62A	West of Eustis	45.34	10		P	09 59 54.8	0.0
ISCO	Idaho Springs	45.36	333	P	P	09 59 55.1	-0.3
	baz=143,SNR=6.5						
ECSD	EROS Data Cent	45.39	343	P	P	09 59 52.4	-2.8
	baz=157						
SMCO	Snowmass	45.51	331	P	P	09 59 56.4	-0.3
PV07	Paradox Valley	45.79	329	P	P	09 59 58.2	-0.5
PV07				IAmb	IAmb	10 00 07.2	
	comp=Z,12nm,1.2s						
SPMN	Marine on St.	45.84	348	P	P	09 59 55.9	-2.9
	baz=162						
U15A	North Rim	46.37	324	P	P	10 00 03.7	+0.3
U15A				IAmb	IAmb	10 00 12.4	
	comp=Z,14nm,1.2s						
N23A	Red Feather La	46.38	333	P	P	10 00 03.4	-0.1
	baz=143						
W13A	Hualapai Mount	46.46	321		P	10 00 03.7	-0.4
W13A				IAmb	IAmb	10 00 12.7	
	comp=Z,7.4nm,1.0s						
BC3	Big Chuckawall	46.56	319	P	P	10 00 04.7	0.0
	baz=128						
IRM	Iron Mountain	46.66	319	P	P	10 00 05.5	+0.1
	baz=128						
BELC	Belle Mtn. Jos	47.13	319	P	P	10 00 09.5	+0.3
	baz=127						
PFO	Pinyon Flats O	47.20	318	LR	LR	10 18 20.3	
	comp=Z,114nm,20.6s,baz=184,slow=34						
SRU	San Rafael Swe	47.27	328	P	P	10 00 09.8	-0.5
GMRC	Granite Mounta	47.38	320	P	P	10 00 11.6	+0.4
	baz=128						
RWWY	Rawlins	47.59	333	P	P	10 00 12.0	-0.9
RWWY				IAmb	IAmb	10 00 20.2	
	comp=Z,13nm,1.1s						
K22A	Casper	48.05	334	P	P	10 00 16.1	-0.2
	baz=144						
RSSD	Black Hills	48.24	337	P	P	10 00 17.6	-0.2
RSSD	Black Hills	48.24	337	P	P	10 00 18.0	+0.2
	baz=147						
RSSD	Black Hills	48.24	337	P	P	10 00 17.9	+0.2
RSSD				pP	sP	10 00 25.4	+3.0
RSSD				sP	pP	10 00 35.1	+14
TPNV	Topopah Spring	49.11	322	P	P	10 00 24.7	+0.2
	baz=129,SNR=7.1						
FURC	Furnace Creek,	49.19	321	P	P	10 00 25.5	+0.6
	baz=128						
DUG	Dugway, Tooele	49.28	327	P	P	10 00 25.4	-0.4
DUG	Dugway, Tooele	49.28	327	P	P	10 00 25.4	-0.4
	baz=135						
PDAR	Pinedale Array	49.52	332	P	P	10 00 25.9	-1.8
	comp=Z,0.8nm,0.8s,baz=128,slow=9.6,SNR=6.7						
PDAR				LR	LR	10 22 13.8	
	comp=Z,120nm,19.6s,baz=172,slow=37						
	comp=Z,0.8nm,0.8s						
R11A	Troy Canyon, C	49.60	323	P	P	10 00 28.4	+0.1
	baz=131						
VES	Vestal, Richgr	50.26	319	P	P	10 00 33.5	+0.4
	baz=126						
TPH	Tonopah	50.42	322	P	P	10 00 33.9	-0.7
NV11	Mina Array Sit	51.22	322	P	P	10 00 39.9	-0.6
NV11				IAmb	IAmb	10 00 53.2	
	comp=Z,12nm,1.1s						
RLMT	Red Lodge	51.22	334	P	P	10 00 39.5	-1.0
	baz=142						
OMMB	Old Mammoth Mi	51.25	321	P	P	10 00 40.8	-0.1
OMMB				IAmb	IAmb	10 00 49.3	
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	51.27	347	P	P	10 00 37.7	-2.7
	comp=Z,6.5nm,0.9s,baz=165,slow=10,SNR=4.9						
	comp=Z,6.5nm,0.9s						
NVAR	Mina Array Bea	51.30	322	P	P	10 00 41.4	+0.2
	comp=Z,5.8nm,0.9s,baz=139,slow=7.3,SNR=34						
	comp=Z,5.8nm,0.9s						
GCMT	Greycliff	51.92	334	P	P	10 00 45.0	-0.6
BMN	Battle Mountai	51.92	324	P	P	10 00 45.7	0.0
BMN				IAmb	IAmb	10 00 54.0	
	comp=Z,11nm,1.1s						
HLID	Hailey	52.51	329	P	P	10 00 49.7	-0.4
	baz=135,SNR=9.6						
BCYI	Bear Canyon	52.54	330	P	P	10 00 49.8	-0.5
BOZ	Bozeman (W)	52.65	333	P	P	10 00 50.5	-0.5
	baz=139,SNR=10						
EGMT	Eagleton	53.72	336	P	P	10 00 58.2	-0.5

EGMT				IAmb	IAmb	10 01 06.6	
	comp=Z,14nm,1.1s						
EGMT	Eagleton	53.72	336	P	P	10 00 58.3	-0.5
	baz=142						
MSO	Missoula	54.63	332		P	10 01 05.0	-0.5
MSO				IAmb	IAmb	10 01 13.5	
	comp=Z,10.0nm,1.2s						
MSO	Missoula	54.63	332	P	P	10 01 04.6	-1.0
	baz=137						
MOD	Modoc Plateau	54.65	324		P	10 01 04.8	-1.1
YBH	Yreka Blue Hor	55.99	323	LR	LR	10 23 34.8	
	comp=Z,71nm,20.6s,baz=140,slow=34						
L04D	Klamath Falls	56.03	323	P	P	10 01 14.7	-1.0
	baz=126						
J05D	Fort Rock, OR	56.04	325	P	P	10 01 15.6	-0.2
	baz=128,SNR=6.0						
L02F	Cave Junction	56.74	322	P	P	10 01 19.6	-1.0
	baz=125						
I05D	Terrebonne, OR	56.75	326	P	P	10 01 20.9	+0.1
	baz=128						
K02D	Willamette Mer	57.12	323	P	P	10 01 23.3	-0.2
	baz=125						
NEW	Newport	57.16	332	LR	LR	10 26 52.2	
	comp=Z,75nm,18.2s,baz=117,slow=37						
J01E	Myrtle Point	57.55	323	P	P	10 01 26.8	+0.5
	baz=125						
I02E	Swisshome, OR	58.05	324	P	P	10 01 30.0	+0.1
	baz=126						
EDM	Edmonton	59.22	338	P	P	10 01 36.6	-1.3
BBB	Bella Bella	65.08	330	LR	LR	10 31 33.2	
	comp=Z,31nm,20.1s,baz=150,slow=37						
YKA	Yellowknife Ar	66.92	344	P	P	10 02 26.9	-1.8
	comp=Z,2.2nm,0.9s,baz=137,slow=6.1,SNR=33						
	comp=Z,2.2nm,0.9s						
YKA	Yellowknife Ar	66.92	344	P	P	10 02 27.7	-1.1
DLBC	Dease Lake	69.61	335	LR	LR	10 34 51.1	
	comp=Z,66nm,18.8s,baz=138,slow=37						
P33M	Teslin, Yukon	71.80	335	P	P	10 02 57.9	-1.3
P33M	Teslin, Yukon	71.80	335	P	P	10 02 58.9	-0.3
	baz=123						
M31M	Drury Creek, Y	73.53	337		P	10 03 08.8	-0.6
N30M	Aishikik Lake	74.24	335	P	P	10 03 13.4	-0.1
	baz=120,SNR=6.3						
RES	Resolute Bay	74.56	356	LR	LR	10 36 09.5	
	comp=Z,57nm,18.9s,baz=111,slow=36						
M30M	Minto, Yukon	74.68	336	P	P	10 03 15.4	-0.7
	baz=120						
LIC	Lamto	75.37	84	*e*P	P	10 03 20.2	-0.8
	comp=Z,48nm,1.2s						
TIC	Toumodi	75.39	83	*e*P	P	10 03 20.0	-1.1
DBIC	Dimbokro	75.55	83	P	P	10 03 23.0	+0.9
	comp=Z,20nm,1.1s,baz=275,slow=3.5,SNR=6.2						
	comp=Z,20nm,1.1s						
DBIC	Dimbokro	75.55	83	P	P	10 03 20.6	-1.4
KIC	Kosan Boka	75.66	84	*e*P	P	10 03 21.4	-1.3
	comp=Z,28nm,0.8s						
YUK3	Moose Creek	75.81	335	P	P	10 03 22.5	-0.3
	baz=117						
DAWY	Dawson	76.43	337	P	P	10 03 24.4	-1.7
DAWY	Dawson	76.43	337	P	P	10 03 24.7	-1.4
	baz=118,SNR=5.4						
SUMG	Summit	76.53	12	P	P	10 03 27.6	+0.7
SUMG				IAmb	IAmb	10 03 35.5	
	comp=Z,15nm,1.1s						
EPYK	Eagle Plains	76.60	340	P	P	10 03 26.4	-0.6
	baz=121						
INK	Inuvik	76.61	342	P	P	10 03 26.1	-0.9
	comp=Z,5.8nm,1.0s,baz=124,slow=5.7,SNR=10						
INK				LR	LR	10 38 48.7	
	comp=Z,55nm,19.6s,baz=125,slow=37						
	comp=Z,5.8nm,1.0s						
INK	Inuvik	76.61	342	P	P	10 03 26.1	-0.9
INK				IAmb	IAmb	10 03 35.3	
	comp=Z,13nm,1.1s						
INK	Inuvik	76.61	342	P	P	10 03 26.1	-0.9
	baz=125,SNR=6.8						
I29M	Ogilvie Camp,	76.65	339	P	P	10 03 26.3	-1.0
	baz=119						
M27K	Edge Creek, AK	76.66	335	P	P	10 03 27.2	-0.3
	baz=115						
MCARA	McCarthy VSAT	76.75	334	P	P	10 03 28.4	+0.5
MCARA	McCarthy VSAT	76.75	334	P	P	10 03 28.0	+0.1
	baz=114						
BCAR	Beaver Creek A	76.93	336	P	P	10 03 28.3	-0.6
L27K	Beaver Creek,	76.95	336	P	P	10 03 28.4	-0.6
	baz=116						
M26K	Nabesna, AK	77.16	335	P	P	10 03 29.7	-0.5
	baz=114						
BMRM	Bremner River	77.28	333	P	P	10 03 30.6	-0.4
	baz=113						
EGAK	Eagle	77.44	337	P	P	10 03 30.7	-1.0
EGAK				IAmb	IAmb	10 03 39.4	
	comp=Z,11nm,1.1s						
EGAK	Eagle	77.44	337	P	P	10 03 30.9	-0.8
	baz=116,SNR=7.3						
K27K	Chicken	77.47	337	P	P	10 03 31.7	-0.2
	baz=116						
EYAK	Cordova Ski Ar	77.65	333		P	10 03 32.4	-0.5
KLU	Klutina	78.07	333	P	P	10 03 34.3	-1.1
	baz=112						
J26L	Joseph Creek	78.26	337	P	P	10 03 35.7	-0.7
	baz=114,SNR=6.7						
M24K	Tolsona, Glenn	78.41	334	P	P	10 03 36.8	-0.5
	baz=111						
PAX	Paxson	78.43	335	P	P	10 03 36.2	-1.2
	baz=112,SNR=5.6						
SCM	Sheep Creek Mo	78.82	334	P	P	10 03 38.2	-1.3
	baz=110						
PAB	San Pablo	78.90	50	P	P	10 03 39.7	-0.8
PAB				IAmb	IAmb	10 03 45.9	
	comp=Z,9.0nm,1.1s						
M23K	Glacier View	78.98	333	P	P	10 03 39.2	-1.1
	baz=110						
J25K	Salcha River,	79.02	337	P	P	10 03 39.3	-1.2
	baz=113						
KNK	Knik Glacier	79.19	333	P	P	10 03 40.6	-0.9
	baz=109						
ESDC	Sonseca Array	79.21	50	P	P	10 03 41.0	-1.1
	comp=Z,2.0nm,1.0s,baz=272,slow=4.7,SNR=11						
	comp=Z,2.0nm,1.0s						
ESDC	Sonseca Array	79.21	50	P	P	10 03 41.3	-0.8
ESDC				IAmb	IAmb	10 03 47.9	
	comp=Z,9.2nm,1.2s						
SEW	Seward	79.23	332	P	P	10 03 40.2	-1.4
	baz=108						
SML	Sawmill	79.26	333	P	P	10 03 40.9	-1.0
	baz=109						
WAT6	Susitna Watana	79.26	334	P	P	10 03 41.0	-1.1
	baz=110						
ILAR	Eielson Array	79.68	336	P	P	10 03 42.8	-1.3
	comp=Z,1.3nm,1.0s,baz=115,slow=3.3,SNR=8.8						
ILAR				LR	LR	10 41 04.1	
	comp=Z,48nm,18.2s,baz=124,slow=37						
	comp=Z,1.3nm,1.0s						
ILAR	Eielson Array	79.68	336	P	P	10 03 42.1	-1.9
BRSE	Bradley Lake S	79.74	331	P	P	10 03 43.8	-0.8
	baz=107						
BMAR	Burnt Mountain	79.84	339	P	P	10 03 44.3	-0.6
KDAK	Kodiak Island	80.13	329	LR	LR	10 41 33.2	
	comp=Z,44nm,18.3s,baz=153,slow=37						
H24K	Noodor Dome	80.45	337	P	P	10 03 47.2	-1.0
H24K	Noodor Dome	80.45	337	P	P	10 03 47.3	-1.0
	baz=110						
NEA2	Nenana	80.50	336	P	P	10 03 47.2	-1.3
	baz=109						
SPU	Mount Spurr	80.77	332	P	P	10 03 49.2	-0.9
BPAW	Bear Paw Mtn.	81.14	335	P	P	10 03 50.3	-1.6
	baz=107						
PPLA	Purkeypile	81.31	334	P	P	10 03 51.5	-1.5
	baz=106						
CAST	Castle Rocks	81.41	334	P	P	10 03 51.1	-2.3
	baz=106						
N19K	Bonanza Creek	81.82	332	P	P	10 03 54.0	-1.7
N19K				IAmb	IAmb	10 04 03.5	
	comp=Z,14nm,1.4s						
N19K	Bonanza Creek	81.82	332	P	P	10 03 52.6	-3.2
	baz=104						
L20K	Farewell, AK	81.95	333	P	P	10 03 54.2	-2.1
	baz=104						
TOA0	Torodi Ar. Sit	82.15	77	P	P	10 03 57.5	-0.8
TOA0				IAmb	IAmb	10 04 04.0	
	comp=Z,15nm,1.4s						
TORD	Torodi Ar. Bea	82.15	77	P	P	10 03 57.1	-1.2
	comp=Z,3.9nm,1.1s,baz=274,slow=4.1,SNR=13						
	comp=Z,3.9nm,1.1s						
K20K	Telida	82.25	334	P	P	10 03 56.3	-1.5
	baz=104						
L19K	White Mountain	82.32	333	P	P	10 03 56.6	-1.7
	baz=104						
N18K	Kilae Creek	82.47	331	P	P	10 03 57.6	-1.4
	baz=102						
VNA3	Neumayer Olymp	84.37	162	P	P	10 04 08.1	-0.5
A21K	Barrow	85.10	342	P	P	10 04 10.4	-1.9
A21K				IAmb	IAmb	10 04 19.4	
	comp=Z,6.1nm,1.2s						
SNAA	Sanae	86.59	162	P	P	10 04 19.0	-0.8
SNAA	Sanae	86.59	162	P	P	10 04 18.5	-1.2
SNAA				IAmb	IAmb	10 04 19.8	
	comp=Z,3.8nm,1.0s						
TROLL	Troll, Antarti	88.30	162	P	P	10 04 27.7	-0.4
QSPA	South Pole Qui	90.58	180	P	P	10 04 38.4	-0.4
	comp=Z,3.7nm,0.8s,baz=156,slow=1.9,SNR=17						
	comp=Z,3.7nm,0.8s						
QSPA	South Pole Qui	90.58	180	P	P	10 04 39.1	+0.3
GERES	GERESS Array B	92.29	41	P	P	10 04 46.5	-0.7
	comp=Z,0.6nm,0.9s,baz=218,slow=8.5,SNR=3.6						
	comp=Z,0.6nm,0.9s						
VRAC	Vranov	94.15	41	LR	LR	10 44 53.5	
	comp=Z,18nm,19.1s,baz=230,slow=34						
MODS	Modra-Piesok	94.70	42	*e*P	P	10 05 02.5	+4.4
TSUM	Tsumeb	97.69	109	LR	LR	10 49 02.4	
	comp=Z,53nm,18.6s,baz=327,slow=35						
SHEM	Shemya Is, Ala	98.94	324	LR	LR	10 48 29.7	
	comp=Z,15nm,19.0s,baz=26,slow=34						
SUR	Sutherland	99.73	123	LR	LR	10 48 01.7	
	comp=Z,40nm,18.1s,baz=222,slow=34						
ZALV	Zalesovo Beam	124.33	11	PKP	PKPdf	10 10 34.1	-1.6
	comp=Z,0.4nm,0.3s,baz=320,slow=4.3,SNR=1.4						
MKAR	Makanchi Array	130.47	16	PKP	PKPdf	10 10 45.7	-2.0
	comp=Z,0.5nm,0.8s,baz=336,slow=2.7,SNR=3.7						
MKAR	Makanchi Array	130.47	16		PKPdf	10 10 46.4	-1.3
ASAR	Alice Springs	139.58	233	PKhKP	PKPpre	10 10 57.6	
	comp=Z,0.3nm,0.6s,baz=124,slow=3.6,SNR=4.8						
WRA	Warramunga Arr	140.94	238	PKhKP	PKPpre	10 11 00.7	
	comp=Z,0.4nm,0.9s,baz=218,slow=26,SNR=2.2						
XAN	Xi'an	144.52	347	⇑PKP	PKPbc	10 11 12.6	+0.2
WHN	Wuhan	146.07	337	PKPbc	PKPdf	10 11 15.3	-1.3
PZH	PanZhiHua	153.04	356	PKPbc	PKPdf	10 11 25.5	-2.5

MEX ***15*** *10:03:06.5±0.9, 14°.86N×92°.42W, h105^{km}±6^{km}, MD4.1*

GCG ***15*** *10:03:08.7±0.7, 15°.25N×92°.32W, h41^{km}±59^{km}, MD3.7*

ISC 15 10:03:07.1±1.8**, 14°.98N**±0°.10×**92°.39W**±0°.07**, h95**^{km}±10^{km}**,** **n11, σ1^{s}26**/21**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.14	121	*e*P	Pn	10 03 20.4	-0.1
THIG				*i* S	Sn	10 03 30.3	-0.1
PATR	El Naranjo	0.20	49	*e*P	Pn	10 03 20.0	-1.0
PATR				*i* S	Sn	10 03 31.4	+0.1
CHUJ	Union Juarez	0.30	68	*e*P	Pn	10 03 21.1	-0.3
CHUJ				*i* S	Sn	10 03 32.6	+0.6
PAVE	Pavencul	0.30	45	*e*P	Pn	10 03 20.9	-0.4
PAVE				*e*S	Sn	10 03 33.0	+1.0
STG3	Santiaguito 3,	0.84	109	*e*P	Pn	10 03 25.9	+0.3
STG3				*e*S	Sn	10 03 38.4	-1.1
PCIG		1.07	312	*e*P	Pn	10 03 27.5	-0.4
PCIG				*e*S	Sn	10 03 44.2	+0.6
CCIG	Comitan	1.32	11	*e*P	Pn	10 03 31.5	+0.4
CCIG				*i* S	Sn	10 03 50.6	+1.5
FUG	Fuego 3	1.59	109	*e*P	Pn	10 03 35.6	+1.2
FUG				*e*S	Sn	10 03 56.9	+1.7
TGIG		1.92	339	*e*P	Pn	10 03 37.8	-0.8
CARR	Arriaga	1.93	311	*e*P	Pn	10 03 38.6	+0.1
CARR				*i* S	Sn	10 04 02.5	0.0
MRL	Marmol	2.62	87	*e*P	Pn	10 03 48.4	+0.5
MRL				*e*S	Sn	10 04 15.3	-3.9

NOU ***15*** *10:21:39.9, 43°.60S×173°.00E, h8^{km}, MLv4.2/10, Off E. Coast of S. Island, N.Z.*

IDC ***15*** *10:21:39.9±3.2, 43°.32S×172°.87E, h0^{km}, mb3.3/2, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=83.7km s-min=16.6km az=150.0*

WEL ***15*** *10:21:42.0±0.6, 43°S±3°×17°3E±°, h5^{km}, M3.8/8, ML4.1/8, MLv3.8/8, Error ellipse: s-maj=0.0km s-min=0.0km az=79.7*

ISC 15 10:21:40.8±0.8**, 43°.48S**±0°.03×**172°.89E**±0°.03**, h10**^{km}**, n110,** **σ1^{s}29**/115**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCZ	Okains Bay	0.28	153	P	Pg	10 21 48.4	+2.0
MQZ	McQueen's Vall	0.28	216	P	Pg	10 21 47.2	+0.7
MQZ				S	Sg	10 21 51.2	+0.8
AMCZ	Amberley	0.35	330	P	Pg	10 21 48.6	+1.0
AKCZ	Akaroa Harbour	0.40	178	P	Pb	10 21 50.1	+0.2
GVZ	Greta Valley S	0.52	12	P	Pb	10 21 52.7	+0.6
RACZ	Rakaia	0.60	245	P	Pg	10 21 53.1	+0.7
OXZ	Oxford	0.64	283	P	Pg	10 21 53.3	+0.2
OXZ				S	Sg	10 22 01.6	+0.1
LTZ	Lake Taylor	0.83	327	P	Pg	10 21 57.5	+0.7
LTZ				S	Sg	10 22 08.4	+0.9
WACZ	Wakanui South	0.89	238	P	Pb	10 21 58.7	+0.4
MHCZ	Mount Hutt	0.96	266	P	Pg	10 21 59.7	+0.4
KHZ	Kahutara	1.16	25	P	Pb	10 22 02.7	-0.3
KHZ	Kahutara	1.16	25	P	Pn	10 22 03.1	0.0
INZ	Inchbonnie	1.30	305	P	Pn	10 22 04.3	-0.7
ARCZ	Arundel	1.33	249	P	Pn	10 22 04.4	-1.0
RPZ	Rata Peaks	1.35	259	Pn	Pn	10 22 05.0	-0.8
	79nm,0.3s,baz=30,slow=1.9,SNR=71						
RPZ				Pg	Pg	10 22 07.4	+0.6
	79nm,0.3s,baz=78,slow=2.2,SNR=51						
RPZ				Lg	Lg	10 22 24.0	
	182nm,0.3s,baz=134,slow=15,SNR=11						
RPZ	Rata Peaks	1.35	259	P	Pn	10 22 04.9	-0.8
RPZ	Rata Peaks	1.35	259	P	Pn	10 22 05.0	-0.8
WVZ	Waitaha Valley	1.62	284	P	Pn	10 22 09.3	-0.1
TMZ	Timaru	1.63	236	P	Pn	10 22 09.0	-0.7
TMZ				S	Sb	10 22 32.3	+0.6
THZ	Tophouse	1.71	0	P	Pn	10 22 10.6	-0.2
BSWZ	Blackbirch Sta	1.91	23	P	Pn	10 22 13.6	+0.2
DSZ	Denniston Nort	1.91	335	P	Pn	10 22 13.3	-0.1
MRNZ	Matariki Terra	2.08	357	P	Pn	10 22 16.3	+0.5
LBZ	Lake Benmore	2.15	244	P	Pn	10 22 16.6	-0.2
TUWZ	Tuamarina	2.19	21	P	Pb	10 22 19.2	-1.3
FOZ	Fox Glacier	2.24	268	P	Pn	10 22 18.7	+0.8
ODZ	Otahua Downs	2.25	225	P	Pn	10 22 17.5	-0.6
ODZ	Otahua Downs	2.25	225	P	Pn	10 22 17.5	-0.6
NNZ	Nelson	2.29	9	P	Pn	10 22 18.9	+0.3
TKNZ	Takaka Hill	2.44	1	P	Pn	10 22 21.7	+0.9
TCW	Tory Channel	2.49	25	P	Pn	10 22 21.2	-0.1
BHW	Baring Head	2.54	36	P	Pn	10 22 21.7	-0.3
SNZO	South Karori	2.55	32	P	Pn	10 22 21.7	-0.5
PLWZ	Palliser	2.59	43	P	Pn	10 22 22.3	-0.5
WEL	Wellington	2.60	33	P	Pn	10 22 22.4	-0.4
QRZ	Quartz Range	2.66	354	P	Pn	10 22 24.2	+0.4
QRZ	Quartz Range	2.66	354	P	Pn	10 22 24.5	+0.7
MSWZ	Moikau Station	2.70	41	P	Pn	10 22 23.6	-0.7
DUWZ	D'Urville Isla	2.78	16	P	Pn	10 22 26.4	+1.0
CAW	Cannon Point	2.87	35	P	Pn	10 22 26.1	-0.5
HHSZ	Highcliff Hill	2.91	213	P	Pn	10 22 26.6	-0.5
TRWZ	Traveller	2.94	46	P	Pn	10 22 29.0	+1.5
KIW	Kapiti Island	3.02	31	P	Pn	10 22 30.0	+1.4
MTW	Mount Morrison	3.02	41	P	Pn	10 22 27.7	-1.0
WKZ	Wanaka	3.10	243	P	Pn	10 22 29.7	0.0
EAZ	Earnscleugh	3.11	234	P	Pn	10 22 29.3	-0.6
OGWZ	Otaki Gorge	3.15	33	P	Pn	10 22 30.9	+0.4
TUZ	Tuapeka	3.39	222	P	Pn	10 22 33.3	-0.5
MRZ	Mangatainoka R	3.46	36	P	Pn	10 22 34.7	0.0
BFZ	Birch Farm	3.75	43	P	Pn	10 22 37.7	-1.0
BFZ	Birch Farm	3.75	43	P	Pn	10 22 38.3	-0.4
MLZ	Mavora Lakes	3.90	239	P	Pn	10 22 40.4	-0.4
ANWZ	Angora Road	4.03	43	P	Pn	10 22 43.0	+0.5
WAZ	Wanganui	4.04	24	P	Pn	10 22 45.5	+2.8
SYZ	Scrubby Hill	4.05	220	P	Pn	10 22 42.5	-0.3
TSZ	Takapari Road	4.12	35	P	Pn	10 22 45.1	+1.3
LREZ	Lake Rotokare	4.17	16	P	Pn	10 22 48.8	+4.3
PREZ	Palmer Road	4.24	13	P	Pn	10 22 48.4	+3.0
PRHZ	Porangahau	4.26	42	P	Pn	10 22 45.9	+0.2
KHEZ	Kahui Hut	4.26	12	P	Pn	10 22 48.3	+2.4
NBEZ	Newall Road No	4.27	10	P	Pn	10 22 47.9	+2.1
WHZ	Wether Hill Ro	4.27	234	P	Pn	10 22 44.2	-1.7
NEZ	North Egmont	4.30	13	P	Pn	10 22 50.0	+3.7
PKE	Pukeiti	4.36	11	P	Pn	10 22 49.0	+1.9
DREZ	Durham Road	4.40	13	P	Pn	10 22 49.9	+2.3
MHEZ	Mangahewa	4.53	14	P	Pn	10 22 54.3	+4.9
PXZ	Pawanui	4.55	42	P	Pn	10 22 50.2	+0.6
DCZ	Deep Cove	4.56	242	P	Pn	10 22 49.7	-0.1
VRZ	Vera Road	4.57	19	P	Pn	10 22 52.1	+2.1
PKVZ	Pokaka	4.58	25	P	Pn	10 22 51.7	+1.6
MOVZ	Moawhango	4.60	29	P	Pn	10 22 51.5	+1.0
WNVZ	Wahianoa	4.62	27	P	Pn	10 22 52.4	+1.6
KRHZ	Kereru	4.64	35	P	Pn	10 22 51.1	+0.2
BHHZ	Black Hill Sta	4.64	32	P	Pn	10 22 51.4	+0.3
WHVZ	Whangaehu Hut	4.66	27	P	Pn	10 22 53.1	+1.7
TUVZ	Tukino	4.69	27	P	Pn	10 22 53.0	+1.2
KAHZ	Kahuranaki	4.74	40	P	Pn	10 22 52.8	+0.4
NGZ	Ngauruhoe	4.76	26	P	Pn	10 22 54.3	+1.5
NNVZ	North Ngauruho	4.80	26	P	Pn	10 22 54.1	+0.8
TWVZ	Taurewa	4.80	24	P	Pn	10 22 54.1	+0.8
WTVZ	West Tongariro	4.81	26	P	Pn	10 22 54.1	+0.7
APZ	The Paps	4.82	224	P	Pn	10 22 52.6	-0.8
ETVZ	East Tongariro	4.83	27	P	Pn	10 22 54.5	+0.8
KWHZ	Kaweka Forest	4.84	34	P	Pn	10 22 55.7	+2.0
TMVZ	Te Maari	4.85	27	P	Pn	10 22 54.7	+0.8
BKZ	Black Stump Fm	5.09	33	P	Pn	10 22 56.8	-0.4
BKZ	Black Stump Fm	5.09	33	P	Pn	10 22 57.7	+0.5
HIZ	Hauiti	5.18	17	P	Pn	10 22 59.0	+0.6
HIZ	Hauiti	5.18	17	P	Pn	10 22 59.2	+0.9
RAHZ	Arahi	5.55	36	P	Pn	10 23 04.3	+0.9
PRRZ	Plateau Road	5.64	29	P	Pn	10 23 05.1	+0.5
KNZ	Kokohu	5.73	41	P	Pn	10 23 04.5	-1.3
SNGZ	Shannon Statio	5.77	37	P	Pn	10 23 07.1	+0.6
URZ	Urewera	6.12	33	Pn	Pn	10 23 09.3	-1.9
	1.4nm,0.3s,baz=163,slow=5.4,SNR=10.0						
URZ				Sn	Sn	10 24 16.3	-4.9
	1.1nm,0.3s,baz=18,slow=11,SNR=2.2						
	4.6nm,0.4s						
URZ	Urewera	6.12	33	P	Pn	10 23 09.7	-1.5
URZ	Urewera	6.12	33	P	Pn	10 23 10.7	-0.5
MWZ	Matawai	6.22	36	P	Pn	10 23 10.9	-1.8
AWAZ	Awhitu Peninsu	6.54	12	P	Pn	10 23 17.9	+0.9
MKAZ	Moumakai	6.60	16	P	Pn	10 23 17.7	-0.2
RUGZ	Raukumara Rang	6.60	35	P	Pn	10 23 16.0	-1.9
ETAZ	East Tamaki Re	6.70	14	P	Pn	10 23 20.0	+0.7
PUZ	Puketiti	6.76	39	P	Pn	10 23 18.7	-1.5
HAZ	Te Kaha	6.82	35	P	Pn	10 23 19.0	-1.8
MBAZ	Motutapu North	6.88	14	P	Pn	10 23 24.3	+2.6
MXZ	Matakaoa Point	7.21	37	P	Pn	10 23 26.9	+0.7
OUZ	Omahuta	8.27	4	P	Pn	10 23 42.3	+1.5
OUZ	Omahuta	8.27	4	P	Pn	10 23 42.2	+1.5
ASAR	Alice Springs	37.58	289	P	P	10 28 55.3	-0.3
	0.2nm,0.5s,baz=133,slow=8.0,SNR=6.4						
	0.2nm,0.5s						
WRA	Warramunga Arr	39.82	294	P	P	10 29 14.5	+0.2
	0.5nm,0.8s,baz=135,slow=7.9,SNR=11						
	0.5nm,0.8s						
ARCES	ARCESS Array B	149.03	338	PKPbc	PKPbc	10 41 27.7	-0.1
	1.2nm,1.0s,baz=38,slow=4.6,SNR=1.1						

IDC ***15*** *11:00:34.8±0.8, 20°.65S×174°.04E, h0^{km}, mb4.0/16, mbtmp4.1/17, ML3.5/1, MS4.0/35, Error ellipse: s-maj=25.6km s-min=18.7km az=129.0*

NEIC ***15*** *11:00:37.4±2.0, 20°.8S±0°.1×174°.3E±0°.1, h14^{km}±4^{km}, mb4.7/25, Error ellipse: s-maj=19.4km s-min=16.6km az=140.0*

GCMT ***15*** *11:00:40.4±0.2, 20°.62S±0°.02×174°.22E±0°.01, h23^{km}±1^{km}, MW5.0/97, Moment Tensor Solution. s40,c48; s97,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.27±.17; $M_{\theta\theta}$-2.39±.12; $M_{\phi\phi}$3.66±.14; $M_{r\theta}$0.09±.17; $M_{\theta\phi}$-1.75±.08; $M_{\phi r}$0.18±.17; Best double couple: $M_0$3.50300×10^{16} NP1:ϕ_s300.00000°,δ85.00000°,λ-178.00000°. NP2: ϕ_s210.00000°,δ88.00000°,λ-5.00000°. Principal axes: T 4.1340, Plg2.0000°, Azm255.0000°; N -1.2630, Plg85.0000°, Azm3.0000°; P -2.8720, Plg5.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 11:00:39.6±0.4**, 20°.75S**±0°.09×**174°.24E**±0°.08**, h35**^{km}**, n107,** **σ1^{s}03**/83**, mb4.4**/28**, MS4.1**/35**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.85	262	Pn	Pn	11 02 03.4	-0.4
PINNC	Pines Island,	6.59	252	Pn	Pn	11 02 14.2	+0.2
OUENC	Ouen Island, N	7.08	255		Pn	11 02 21.2	+0.4
DZM	Mont Dzumac	7.38	258	Pn	Pn	11 02 24.4	-0.6
	1.5nm,0.3s,baz=77,slow=18,SNR=20						
DZM	Mont Dzumac	7.38	258	*e*Pn	Pn	11 02 24.1	-0.9
	338nm,1.6s						
DZM	Mont Dzumac	7.38	258		Pn	11 02 24.6	-0.4
ONTNC	Ouen Toro	7.42	257		Pn	11 02 25.5	+0.2
RAO	Raoul Island	11.05	142	LR	LR	11 06 40.7	
	comp=Z,810nm,19.3s,baz=322,slow=32						
AFI	Afiamalu	14.97	65	LR	LR	11 08 43.7	
	comp=Z,835nm,21.1s,baz=230,slow=32						
URZ	Urewera	17.62	173	P	P	11 04 43.5	+0.5
	0.2nm,0.3s,baz=359,slow=6.1,SNR=8.2						
URZ				LR	LR	11 09 52.1	
	comp=Z,759nm,21.6s,baz=31,slow=31						
	31nm,1.1s						
URZ	Urewera	17.62	173	P	P	11 04 43.4	+0.3
URZ				IAmb	IAmb	11 04 48.0	
	comp=Z,103nm,1.4s						
EIDS	Eidsvold	21.79	253	P	P	11 05 28.9	+0.3
EIDS				IAmb	IAmb	11 05 37.7	
	comp=Z,47nm,1.1s						
ARMA	Armidale	22.52	240	P	P	11 05 36.8	+0.3
ARMA				IAmb	IAmb	11 05 41.3	
	comp=Z,24nm,1.1s						
RPZ	Rata Peaks	23.05	186	LR	LR	11 13 55.0	
	comp=Z,635nm,18.7s,baz=342,slow=35						
RAR	Rarotonga	24.26	96	LR	LR	11 13 13.8	
	comp=Z,285nm,21.0s,baz=263,slow=31						
CTA	Charters Tower	26.23	266	P	P	11 06 11.3	-0.2
	comp=Z,6.4nm,1.0s,baz=83,slow=12,SNR=2.3						
CTA				LR	LR	11 15 50.0	
	comp=Z,720nm,20.1s,baz=92,slow=35						
	comp=Z,6.4nm,1.0s						
CTAO	Charters Tower	26.23	266	P	P	11 06 10.1	-1.4
CTAO				IAmb	IAmb	11 06 20.1	
	comp=Z,23nm,1.3s						
KRVT	Keravat (AS076	27.09	304	P	P	11 06 20.5	+1.2
	comp=Z,7.9nm,0.6s,baz=183,slow=18,SNR=1.6						
KRVT				LR	LR	11 16 23.7	
	comp=Z,208nm,19.9s,baz=272,slow=35						
PMG	Port Moresby	28.43	289	LR	LR	11 16 19.6	
	comp=Z,398nm,18.1s,baz=78,slow=34						
STKA	Stephens Creek	31.18	242	P	P	11 06 54.3	-1.2
	comp=Z,1.6nm,0.7s,baz=66,slow=12,SNR=3.5						
STKA				LR	LR	11 17 53.5	
	comp=Z,465nm,21.5s,baz=65,slow=33						
	comp=Z,1.6nm,0.7s						
STKA	Stephens Creek	31.18	242	P	P	11 06 54.6	-0.9
TBI	Tubuai	33.69	101	*e*LQ	LQ	11 14 31.1	
	comp=Z,661nm,27.5s						
TBI				*e*LR	LR	11 15 59.9	
	comp=Z,515nm,29.8s,baz=265						
PPT2	Papeete2	34.27	91	*e*S	S	11 12 37.0	-11
	comp=Z,118nm,26.0s						
PPT2				*e*LQ	LQ	11 14 40.2	
	comp=Z,694nm,32.0s						
PPT2				*e*LR	LR	11 16 22.8	
	comp=Z,1µm,28.5s,baz=257						
PPT	Papeete	34.28	91	LR	LR	11 17 28.4	
	comp=Z,476nm,20.0s,baz=263,slow=29						
BBOO	Buckleboo	35.96	242	P	P	11 07 36.1	-0.9
WB0	Warramunga Arr	37.34	264	P	P	11 07 49.6	+0.6
WB0				IAmb	IAmb	11 07 50.1	
	comp=Z,10nm,1.0s						
WB2	Warramunga Arr	37.35	264	P	P	11 07 49.0	0.0
WB2				IAmb	IAmb	11 07 53.9	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	37.36	264	P	P	11 07 46.9	-2.3
	comp=Z,3.9nm,0.9s,baz=95,slow=8.8,SNR=13						
WRA				PP	PnPn	11 09 16.3	+0.8
	comp=Z,0.5nm,0.4s,baz=98,slow=8.3,SNR=4.7						
WRA				LR	LR	11 23 08.4	
	comp=Z,783nm,18.7s,baz=52,slow=36						
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	37.36	264	P	P	11 07 48.0	-1.1
AS31	Alice Springs	37.38	258	P	P	11 07 48.5	-0.8
ASAR	Alice Springs	37.38	258	P	P	11 07 47.5	-1.8
	comp=Z,4.3nm,1.1s,baz=86,slow=8.8,SNR=26						
ASAR				LR	LR	11 22 23.7	
	comp=Z,609nm,21.0s,baz=118,slow=35						
	comp=Z,4.3nm,1.1s						
ASAR	Alice Springs	37.38	258	P	P	11 07 47.7	-1.6

H11N1	WAKE ISLAND Hy	40.86	349	T	T	11 51 37.4	
	baz=172						
H11N3	WAKE ISLAND Hy	40.86	349	T	T	11 51 32.6	
	baz=172						
H11N2	WAKE ISLAND Hy	40.87	349	T	T	11 51 34.5	
	baz=172						
FORT	Forrest	42.52	247	P	P	11 08 31.5	-0.4
FORT				IAmb	IAmb	11 08 45.9	
	comp=Z,15nm,0.9s						
GUMO	Guam	44.70	317	LR	LR	11 26 16.6	
	comp=Z,66nm,18.7s,baz=141,slow=35						
TAOE	Nuku Hiva Isla	45.50	82	*e*S	S	11 15 33.0	-3.0
	comp=Z,102nm,24.9s						
TAOE				*e*LR	LR	11 21 33.1	
	comp=Z,585nm,29.1s,baz=252						
SIJI	Sorong	46.37	290	LR	LR	11 27 21.2	
	comp=Z,123nm,20.9s,baz=150,slow=35						
BATI	Baumata	49.68	274	LR	LR	11 30 28.3	
	comp=Z,192nm,19.3s,baz=143,slow=36						
PSA00	Pilbara Seismi	50.51	259	P	P	11 09 34.6	-0.1
PSA00				IAmb	IAmb	11 09 36.7	
	comp=Z,13nm,1.4s						
TOLI2	Tolitoli	56.61	286	P	P	11 10 20.2	+0.7
TOLI2				IAmb	IAmb	11 10 21.3	
	comp=Z,15nm,1.2s						
JCJ	Chichijima	56.80	326	LR	LR	11 31 43.9	
	comp=Z,64nm,20.4s,baz=83,slow=33						
VNDA	Vanda	57.13	183	P	P	11 10 22.9	+0.6
	comp=Z,1.2nm,1.0s,baz=16,slow=7.5,SNR=3.7						
VNDA				LR	LR	11 31 52.6	
	comp=Z,79nm,19.0s,baz=14,slow=33						
	comp=Z,1.2nm,1.0s						
VNDA	Vanda	57.13	183	P	P	11 10 22.4	+0.2
SBA	Scott Base	57.26	182	P	P	11 10 23.3	+0.2
SBA				IAmb	IAmb	11 10 32.1	
	comp=Z,15nm,1.1s						
CASY	Casey	60.67	205	P	P	11 10 46.6	-0.4
JHJ	Hachijo jima 2	62.87	328	LR	LR	11 38 06.5	
	comp=Z,48nm,18.1s,baz=196,slow=36						
JOW	Kunigami	64.97	315	LR	LR	11 35 01.2	
	comp=Z,92nm,21.9s,baz=115,slow=32						
LEM	Lembang	65.78	272	LR	LR	11 41 20.4	
	comp=Z,119nm,19.1s,baz=158,slow=37						
MJAR	Matsushiro Arr	66.38	329	P	P	11 11 23.0	-2.0
	comp=Z,0.7nm,0.5s,baz=159,slow=5.9,SNR=2.8						
MJAR				LR	LR	11 35 59.2	
	comp=Z,56nm,21.9s,baz=140,slow=32						
	comp=Z,0.7nm,0.5s						
RPN	Rapa Nui	69.17	112	LR	LR	11 38 37.6	
	comp=Z,30nm,19.3s,baz=268,slow=33						
QSPA	South Pole Qui	69.31	180	LR	LR	11 36 51.7	
	comp=Z,110nm,21.0s,baz=42,slow=31						
QSPA	South Pole Qui	69.31	180	P	P	11 11 42.4	-0.9
ASAJ	Asahikawa	70.76	336	LR	LR	11 37 09.0	
	comp=Z,197nm,21.6s,baz=170,slow=31						
KSRS	Korea Array	72.48	323	P	P	11 12 02.5	-0.2
	comp=Z,0.6nm,0.8s,baz=138,slow=5.4,SNR=5.8						
KSRS				LR	LR	11 40 19.5	
	comp=Z,44nm,20.9s,baz=150,slow=33						
	comp=Z,0.6nm,0.8s						
PETK	Petropavlovsk-	74.94	350	P	P	11 12 16.4	-0.3
	comp=Z,3.7nm,1.1s,baz=117,slow=5.0,SNR=4.9						
	comp=Z,3.7nm,1.1s						
PETK	Petropavlovsk-	74.94	350	P	P	11 12 16.9	+0.2
USRK	Ussuriysk Ar.	75.31	330	LR	LR	11 40 43.3	
	comp=Z,44nm,19.7s,baz=142,slow=32						
KLR	Kul'dur	79.26	333	P	P	11 12 41.5	+0.4
	comp=Z,0.2nm,0.3s,baz=272,slow=13,SNR=2.4						
KLR				LR	LR	11 42 15.1	
	comp=Z,80nm,21.7s,baz=188,slow=32						
	comp=Z,0.2nm,0.3s						
XAN	Xi'an	82.64	310	⇑P	P	11 12 59.1	-0.5
XAN				pP	PcP	11 13 04.3	-0.2
XAN				sP	pP	11 13 07.8	-1.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CM31	Chiang Mai Arr	83.42	292	P	P	11 13 05.2	+1.3
CM31				IAmb	IAmb	11 13 12.1	
	comp=Z,5.3nm,0.8s						
CMAR	Chiang Mai Arr	83.42	292	P	P	11 13 04.2	+0.3
	comp=Z,0.7nm,0.3s,baz=117,slow=3.0,SNR=12						
	comp=Z,0.7nm,0.3s						
CHTO	Chiang Mai	83.57	293	P	P	11 13 06.6	+1.9
P18K	Big Mountain,	83.69	15	P	P	11 13 05.2	+0.8
PMSA	Palmer Station	83.83	158	LR	LR	11 44 39.6	
	comp=Z,87nm,19.1s,baz=218,slow=32						
O18K	Koktuh Hills	84.11	15	P	P	11 13 07.6	+1.1
CNPM	China Poot	84.84	17	P	P	11 13 11.3	+1.1
CNPM				IAmb	IAmb	11 13 17.6	
	comp=Z,6.0nm,0.9s						
SEY	Seymchan	85.17	350	P	P	11 13 11.5	-0.3
	comp=Z,2.1nm,0.8s,baz=161,slow=9.6,SNR=4.2						
	comp=Z,2.1nm,0.8s						
PFO	Pinyon Flats O	85.30	52	LR	LR	11 42 16.3	
	comp=Z,136nm,21.7s,baz=218,slow=29						
LPIG	La Paz	85.88	62	LR	LR	11 42 12.1	
	comp=Z,132nm,21.7s,baz=209,slow=29						
NVAR	Mina Array Bea	86.34	47	P	P	11 13 18.8	+0.4
	comp=Z,0.2nm,0.7s,baz=240,slow=14,SNR=2.5						
	comp=Z,0.2nm,0.7s						
TROLL	Troll, Antarti	87.31	183	P	P	11 13 22.4	-0.1
SNAA	Sanae	87.80	181	P	P	11 13 25.2	+0.4
SNAA	Sanae	87.80	181	LR	LR	11 50 47.2	
	comp=Z,55nm,19.5s,baz=148,slow=34						
SNAA	Sanae	87.80	181	P	P	11 13 26.4	+1.6
SNAA				IAmb	IAmb	11 13 30.6	
	comp=Z,4.3nm,0.9s						
VNA3	Neumayer Olymp	88.21	179	P	P	11 13 27.8	+1.0
VNA1	Neumayer--Stat	88.83	179	P	P	11 13 34.6	+5.0
IL31		90.34	16	P	P	11 13 36.9	+0.4
ILAR	Eielson Array	90.34	16	P	P	11 13 36.6	0.0
	comp=Z,0.6nm,0.9s,baz=235,slow=4.9,SNR=5.6						
	comp=Z,0.6nm,0.9s						
ILAR	Eielson Array	90.34	16	P	P	11 13 36.0	-0.5
SONM	Songino Array	91.29	321	P	P	11 13 42.8	+1.2
	comp=Z,0.7nm,0.9s,baz=105,slow=3.3,SNR=2.2						
	comp=Z,0.7nm,0.9s						
SONM	Songino Array	91.29	321	P	P	11 13 41.3	-0.2
TXAR	Lajitas Array	93.39	60	P	P	11 13 53.8	+2.1
	comp=Z,0.4nm,0.9s,baz=224,slow=6.1,SNR=3.5						
TXAR				LR	LR	11 48 02.2	
	comp=Z,95nm,19.6s,baz=268,slow=30						
	comp=Z,0.4nm,0.9s						
PLCA	Paso Flores	94.24	136	LR	LR	11 48 59.5	
	comp=Z,39nm,19.0s,baz=224,slow=31						
PALK	Pallekele	95.83	276	LR	LR	12 00 25.8	
	comp=Z,67nm,18.1s,baz=229,slow=38						
CMIG	Matias Romero	96.69	74	LR	LR	11 48 39.2	
	comp=Z,109nm,20.9s,baz=270,slow=30						
YKA	Yellowknife Ar	99.88	26	P	Pdif	11 14 19.7	-0.4
	comp=Z,0.3nm,0.9s,baz=208,slow=29,SNR=3.5						
	comp=Z,0.3nm,0.9s						
DPC	Dobruska-Polom	145.70	335	*e*PKP	PKiKP	11 20 19.9	+1.5
CLL	Collm	146.15	339	*e*PKPbc	PKiKP	11 20 18.0	-1.2
	comp=Z,5.0nm,1.0s						
CLL				*i* sPKPdf	pPKPdf	11 20 23.2	-2.2
	comp=Z,17nm,1.4s						
BRG	Berggiesshubel	146.18	337	*e*PKP	PKiKP	11 20 18.5	-0.8
BRG				Amp		11 20 25.7	
	comp=Z,5.9nm,1.1s						
CKRC	Cesky Krumlov	147.71	335	*e*PKP	PKiKP	11 20 22.5	0.0
KHC	Kasperske Hory	147.75	336		PKPdf	11 20 18.0	+0.3
KHC					PKiKP	11 20 22.5	-0.1
KHC	Kasperske Hory	147.75	336	*e*PKP	PKPbc	11 20 20.6	0.0
KHC				*e*x	x	11 20 29.5	
GEC2	GERESS Array S	147.93	336		PKPdf	11 20 17.8	-0.3
GERES	GERESS Array B	147.93	336	PKPbc	PKPbc	11 20 21.9	+0.7
	comp=Z,1.7nm,1.0s,baz=20,slow=2.0,SNR=5.8						
GERES	GERESS Array B	147.93	336	PKPdf	PKPdf	11 20 16.9	-1.3
GERES					PKiKP	11 20 22.2	-0.9
KBA	Koelnbreinsper	149.49	334	*e*P	PKPab	11 20 30.8	+0.5
	comp=Z,6.7nm,1.4s						
WATA	Walderalm	149.98	336	*e*P	PKiKP	11 20 28.6	+1.2
	comp=Z,7.9nm,1.3s						
WTTA	Wattenberg	150.02	336	*e*P	PKiKP	11 20 29.0	+1.5
	comp=Z,13nm,1.5s						
ABTA	Abfaltersbach	150.10	334	*e*P	PKPab	11 20 30.9	-1.7
	comp=Z,3.4nm,0.7s						
MOTA	Moosalm	150.15	337	*e*P	PKiKP	11 20 28.0	+0.2
	comp=Z,6.1nm,1.2s						
SQTA	Sankt Quirin	150.22	336	*e*P	PKPbc	11 20 27.3	+0.3
	comp=Z,1.1nm,0.6s						
FETA	Feichten	150.56	337	*e*P	PKiKP	11 20 30.7	+2.1
	comp=Z,11nm,1.0s						
ESDC	Sonseca Array	161.08	356	PKPab	PKPab	11 21 18.9	-0.7
	comp=Z,2.5nm,1.1s,baz=342,slow=4.2,SNR=6.7						
ESDC	Sonseca Array	161.08	356	PKPdf	PKPdf	11 20 35.2	-1.4
ESDC					PKPab	11 21 19.1	-0.5
TORD	Torodi Ar. Bea	169.61	224	PKP	PKPdf	11 20 45.4	+1.1
	comp=Z,1.4nm,1.0s,baz=108,slow=4.7,SNR=3.6						
TORD				PKPab	PKPab	11 21 58.7	+0.9
	comp=Z,0.3nm,0.7s,baz=126,slow=7.3,SNR=4.0						

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*IDC **15** 11:47:28.6±3.4, 53°.57N×162°.16W, h0^{km}, mb3.4/2, mbtmp3.5/6, ML3.7/4, Error ellipse: s-maj=78.8km s-min=23.9km az=162.0*

*NEIC **15** 11:47:34.6±1.5, 53°.82N±0°.10×162°.01W±0°.10, h30^{km}±10^{km}, ML3.5/12, ML3.2(AEIC), Error ellipse: s-maj=14.5km s-min=7.2km az=160.0*

*AEIC **15** 11:47:35±1.6, 53°.86N±0°.10×162°.06W±0°.09, h45^{km}±10^{km}, Error ellipse: s-maj=14.4km s-min=7.2km az=163.0*

ISC 15 11:47:31.7±1.1**, 53°.91N**±0°.08×**162°.05W**±0°.04**, h6^{km}, n71, σ1^{s}26**/64**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DT1	Dutton Round H	1.21	354		Pn	11 47 55.4	+0.3
BRPK	Brown Peak	1.24	307		Pg	11 47 55.3	-0.1
FALS	False Pass	1.24	320		Pg	11 47 55.4	-0.1
FALS	False Pass	1.24	320	P	Pg	11 47 55.4	-0.1
	baz=141						
FALS				S	Sg	11 48 10.9	-0.7
	baz=141						
ISNN	Isanotski Nort	1.37	313		Pg	11 47 58.0	0.0
HAG	Hague Volcano	1.41	3		Pg	11 47 59.2	+0.5
PS4A	Pavlof South-4	1.44	4		Pg	11 47 59.7	+0.3
SSLN	Shishaldin Nor	1.46	309		Pg	11 47 59.6	0.0
SSLW	Shishaldin Wes	1.49	306		Pn	11 47 59.6	+0.6
WTUG	Tugumak	1.66	305		Pn	11 48 02.1	+0.8
CNBA	Chernabura Isl	1.70	57		Pn	11 48 02.7	+0.8
SDPT	Sand Point	1.71	32		Pb	11 48 03.1	-0.3
SDPT	Sand Point	1.71	32	IAML		11 48 28.8	
	comp=E,333nm,0.6s						
SDPT				IAML		11 48 29.5	
	comp=N,447nm,0.4s						
SDPT	Sand Point	1.71	32	P	Pb	11 48 03.1	-0.3
	baz=211						
SDPT				S	Sn	11 48 24.0	0.0
	baz=211						
CHNA	Chernabura Isl	1.71	56	P	Pn	11 48 02.7	+0.8
	baz=235						
CHNA				S	Sn	11 48 24.3	+0.2
	baz=235						
WECS	Westdahl Cape	1.72	292		Pn	11 48 02.8	+0.6
AKSA	Akutan Strait	2.17	277		Pn	11 48 09.1	+0.9
AKSA	Akutan Strait	2.17	277		Pn	11 48 08.8	+0.6
AKUT	Akutan	2.21	277		Pn	11 48 09.7	+0.9
AKUT	Akutan	2.21	277	IAML		11 48 52.0	
	comp=N,173nm,3.3s						
AKBBA	Akutan Broad B	2.30	276		Pn	11 48 11.1	+1.0
UNV	Unalaska Valle	2.64	270		Pn	11 48 15.8	+1.1
UNV	Unalaska Valle	2.64	270	P	Pn	11 48 15.8	+1.1
	baz=89						
UNV				S	Sn	11 48 44.9	-2.2
	baz=89						
MTBL	Makushin Table	2.74	273		Pn	11 48 17.2	+1.0
MSW	Makushin Switc	2.80	272		Pn	11 48 18.2	+1.2
VNHG	Veniaminof 1	2.85	34		Pn	11 48 19.3	+1.6
MGOD	Makushin Gods	2.86	270		Pn	11 48 19.0	+1.1
OKFG	Magazine Ridge	3.53	264		Pn	11 48 27.8	+0.8
CHIR	Chirikof Islan	4.18	60		Pn	11 48 36.7	+0.9
CHIR	Chirikof Islan	4.18	60	IAML		11 49 31.3	
	comp=E,55nm,1.9s						
CHIR				IAML		11 49 53.5	
	comp=N,55nm,1.8s						
CHIR	Chirikof Islan	4.18	60	P	Pn	11 48 36.7	+0.9
	baz=244						
NIKH	Nikolski High	4.18	260		Pn	11 48 37.3	+1.4
NIKH	Nikolski High	4.18	260	P	Pn	11 48 37.3	+1.4
	baz=76						
SII	Sitkinak Islan	5.22	56	Pn	Pn	11 48 50.8	+0.5
SII				IAML		11 50 21.6	
	comp=E,46nm,1.2s						
CAHL	Cahill	5.62	40		Pn	11 48 57.2	+1.5
SPIA	Saint Paul Isl	5.69	308	Pn	Pn	11 48 56.2	-0.4
OHAK	Old Harbor	5.97	53		Pn	11 49 00.6	+0.1
OHAK	Old Harbor	5.97	53	P	Pn	11 49 00.6	+0.1
	baz=239						
KDAK	Kodiak Island	6.59	50	Pn	Pn	11 49 08.7	-0.2
	comp=E,0.3nm,0.3s,baz=208,slow=6.0,SNR=18						
KDAK				Sn	Sn	11 50 19.4	-5.0
	baz=221,slow=21,SNR=1.5						
	comp=E,4.4nm,0.9s						
KDAK	Kodiak Island	6.59	50	P	Pn	11 49 08.8	-0.2
	baz=237						
P18K	Big Mountain,	6.66	32		Pn	11 49 10.1	+0.1
P18K	Big Mountain,	6.66	32	P	Pn	11 49 10.1	+0.1
	baz=217						
Q19K	Cape Douglas,	6.85	39		Pn	11 49 13.6	+0.9
Q19K	Cape Douglas,	6.85	39	P	Pn	11 49 13.5	+0.9
	baz=226						
O18K	Koktuh Hills	7.04	29		Pn	11 49 17.0	+1.9
O18K	Koktuh Hills	7.04	29	P	Pn	11 49 17.0	+1.9
	baz=214						
P19K	Oil Pt	7.52	36	Pn	Pn	11 49 22.3	+0.6
N18K	Kilae Creek	7.56	24	Pn	Pn	11 49 23.4	+1.1
SVW2	Sparrevohn	8.00	23	Pn	Pn	11 49 30.5	+2.2
N19K	Bonanza Creek	8.03	27	Pn	Pn	11 49 30.8	+1.9
CNPM	China Poot	8.18	42	Pn	Pn	11 49 29.9	-0.9
M19K	Big River Lodg	8.98	24	Pn	Pn	11 49 43.4	+1.6
SEW	Seward	9.25	43	Pn	Pn	11 49 45.2	-0.2
O22K	Cooper Landing	9.38	40	Pn	Pn	11 49 48.0	+0.9
TTA	Tatalina	9.58	17	Pn	Pn	11 49 50.4	+0.4
K20K	Telida	10.34	20	Pn	Pn	11 50 02.9	+2.6
PPLA	Purkeypile	10.38	26	Pn	Pn	11 50 03.3	+2.3
ILAR	Eielson Array	13.31	29	Pn	Pn	11 50 41.8	+1.0
	baz=231,slow=8.0,SNR=2.0						
	comp=E,0.1nm,0.5s						
DLBC	Dease Lake	18.28	63	P	P	11 51 47.7	+1.8
	comp=E,0.9nm,0.3s,baz=310,slow=9.6,SNR=16						
	comp=E,5.2nm,0.6s						
INK	Inuvik	19.66	32	P	P	11 52 00.2	-0.6
	comp=E,0.1nm,0.3s,baz=256,slow=11,SNR=1.7						
	comp=E,0.9nm,0.8s						
PETK	Petropavlovsk-	23.73	285	P	P	11 52 42.5	-1.8
	comp=E,1.7nm,0.5s,baz=83,slow=11,SNR=14						
	comp=E,1.7nm,0.5s						
YKA	Yellowknife Ar	25.86	52	P	P	11 53 03.5	-0.1
	comp=E,0.2nm,0.8s,baz=272,slow=9.4,SNR=2.7						
	comp=E,0.2nm,0.8s						
H11N2	WAKE ISLAND Hy	41.58	227	T	T	12 40 00.2	
	baz=27,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	41.59	227	T	T	12 39 58.6	
	baz=27,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	41.60	227	T	T	12 39 58.1	
	baz=27,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	42.75	226	T	T	12 41 24.3	
	baz=26,slow=76,SNR=62						
H11S2	WAKE ISLAND Hy	42.76	226	T	T	12 41 29.1	
	baz=26,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	42.77	227	T	T	12 41 26.4	
	baz=26,slow=76,SNR=23						
H03N2	Juan Fernandez	112.51	116	T	T	14 08 41.9	
	baz=322,slow=74						
H03N1	Juan Fernandez	112.52	116	T	T	14 08 35.2	
	baz=322						
H03N3	Juan Fernandez	112.53	116	T	T	14 08 40.8	
	baz=322,slow=74						

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*IDC **15** 12:04:52.4±0.4, 52°.62N×167°.99W, h0^{km}, mb4.9/35, mbtmp4.9/36, ML4.1/1, MS5.0/82, Error ellipse: s-maj=13.1km s-min=8.5km az=176.0*

*BJI **15** 12:04:53.0±0.0, 52°.60N×168°.00W, h20^{km}, mb5.2/84, mB5.5/74, Ms5.6/89, Ms7 5.4/82*

*AEIC **15** 12:04:54±2.9, 52°.37N±0°.06×167°.86W±0°.06, h14^{km}±3^{km}, Error ellipse: s-maj=8.0km s-min=5.4km az=185.0*

*NEIC **15** 12:04:54.3±2.5, 52°.51N±0°.07×167°.94W±0°.07, h10^{km}±1^{km}, mb5.3/286, Mww5.4, ML4.6(AEIC), Error ellipse: s-maj=12.4km s-min=6.4km az=169.0*

*MOS **15** 12:04:56.9±1.0, 52°.48N×168°.22W, h43^{km}, mb5.4/67, MS5.2/28, Error ellipse: s-maj=11.6km s-min=4.9km az=110.6*

*GCMT **15** 12:04:58.3±0.1, 52°.36N±0°.01×167°.83W±0°.01, h21^{km}, MW5.5/145, Moment Tensor Solution. s126,c228; s145,c278; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.48±.03; M$_{\theta\theta}$-1.11±.02; M$_{\phi\phi}$-0.37±.02; M$_{r\theta}$1.17±.04; M$_{\theta\phi}$-0.75±.01; M$_{\phi r}$0.45±.03; Best double couple: M$_0$1.97800×10^{17} NP1:φ$_s$230.00000°, δ26.00000°, λ77.00000°. NP2:φ$_s$65.00000°, δ65.00000°, λ96.00000°. Principal axes: T 1.9410, Plg70.0000°, Azm348.0000°; N 0.0720, Plg6.0000°, Azm242.0000°; P -2.0150, Plg20.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 12:05:03, 52°.55N×168°.12W, h24^{km}, Moment Tensor Solution. Duration: 10^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.07; M$_{\theta\theta}$-0.75; M$_{\phi\phi}$-0.32; M$_{r\theta}$1.27; M$_{\theta\phi}$-0.23; M$_{\phi r}$0.61; Fault plane solution: M$_0$1.71000×10^{17} NP1: φ$_s$247.00000°, δ17.00000°, λ92.00000°. NP2:φ$_s$65.00000°, δ73.00000°, λ89.00000°. Principal axes: T 1.8115, Plg62.0000°, Azm334.0000°; N -0.2178, Plg1.0000°, Azm65.0000°; P -1.5937, Plg28.0000°, Azm155.0000°;*

ISC 15 12:04:57.2±0.4**, 52°.55N**±0°.04×**168°.02W**±0°.02**, h28^{km}**±2^{km}**, h28^{km}:pP-P, n1392, σ1^{s}72**/1585**, mb5.3**/294**, MS5.1**/140**, 376C-117D, Fault plane solution: NP1:**φ$_s$63.20402°, δ79.42387°, λ93.73302°. **NP2:**φ$_s$223.63464°, δ11.20853°, λ70.77626°. **Principal axes:** T Plg55.4269°, Azm337.8575°; N Plg3.6695°, Azm242.5179°; P Plg34.3215°, Azm150.0085°; **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.66	310		Pn	12 05 10.8	+0.2
NIKH					Sn	12 05 23.6	+3.6
NIKH	Nikolski High	0.66	310	P	Pn	12 05 11.0	+0.3
	baz=132,SNR=894						
MGOD	Makushin Gods	1.42	29		Pn	12 05 21.5	+0.3
MSW	Makushin Switc	1.55	28		Pn	12 05 23.2	+0.3
UNV	Unalaska Valle	1.58	35		Pn	12 05 22.6	-0.7
UNV	Unalaska Valle	1.58	35	P	Pn	12 05 23.0	-0.3
	baz=214,SNR=168						
UNV	Unalaska Valle	1.58	35	P	Pn	12 05 23.7	+0.4
MTBL	Makushin Table	1.63	29		Pn	12 05 24.5	+0.4
AKBBA	Akutan Broad B	1.99	38		Pn	12 05 29.4	+0.4
AKBBA					Sb	12 05 57.4	+0.3
AKUT	Akutan	2.08	39		Pn	12 05 29.7	-0.5
AKSA	Akutan Strait	2.11	40		Pn	12 05 30.1	-0.5
WECS	Westdahl Cape	2.77	43		Pn	12 05 40.2	+0.5
SSLN	Shishaldin Nor	3.29	45		Pn	12 05 47.0	+0.2
FALS	False Pass	3.58	48		Pn	12 05 50.7	0.0
FALS	False Pass	3.58	48	P	Pn	12 05 50.8	0.0
	baz=230,SNR=29						
FALS	False Pass	3.58	48	P	Pn	12 05 52.0	+1.3
KOKL	Mount Kliuchef	3.79	269		Pn	12 05 55.2	+1.5
ATKA	Atka Island	3.80	267		Pn	12 05 54.5	+0.7
ATKA					Sn	12 06 40.0	+2.5
ATKA	Atka Island	3.80	267	P	Pn	12 05 55.5	+1.7
BLHA	Black Hill	4.71	46		Pn	12 06 07.4	+1.1
SPIA	Saint Paul Isl	4.81	345	Pn	Pn	12 06 10.9	+3.3
SPIA	Saint Paul Isl	4.81	345	P	Pn	12 06 10.8	+3.1
	baz=164,SNR=7.2						
SPIA	Saint Paul Isl	4.81	345	P	Pn	12 06 09.1	+1.5
GSTR	Great Sitkin T	4.95	268	Pn	Pn	12 06 10.6	+1.0
GSMY	Great Sitkin M	4.96	267		Pn	12 06 11.0	+1.2
GSTD	Great Sitkin T	5.01	268		Pn	12 06 11.5	+1.0
GSCK	Great Sitkin C	5.03	267		Pn	12 06 11.6	+0.9
SDPT	Sand Point	5.26	55	Pn	Pn	12 06 13.5	-0.4
SDPT	Sand Point	5.26	55	P	Pn	12 06 13.3	-0.6
	baz=240,SNR=18						
ADK	Adak	5.37	266	Pn	Pn	12 06 15.8	+0.5
ADK	Adak	5.37	266	P	Pn	12 06 16.6	+1.3
CNBA	Chernabura Isl	5.50	62		Pn	12 06 15.6	-1.5
CHNA	Chernabura Isl	5.50	62	P	Pn	12 06 15.6	-1.6
	baz=248,SNR=13						
KIWB	Kanaga Island	5.66	267		Pn	12 06 20.0	+0.7
KICM	Kanaga Island	5.67	267		Pn	12 06 20.2	+0.7
KIMD	Kanaga Island	5.73	266		Pn	12 06 21.3	+1.0
TAFP	Tanaga Falls P	6.16	268		Pn	12 06 27.9	+1.7
TASE	Tanaga Southea	6.20	267		Pn	12 06 28.4	+1.5
GAEA	Gareloi East	6.64	268		Pn	12 06 33.8	+0.9
GASW	Gareloi Southw	6.71	268		Pn	12 06 34.5	+0.8
CHIR	Chirikof Islan	7.97	61		Pn	12 06 49.6	-1.5
CHIR	Chirikof Islan	7.97	61	P	Pn	12 06 50.0	-1.1
	baz=250						
PLK1	Peulik 1	8.38	47		Pn	12 06 58.0	+1.4
PLK3	Peulik 3	8.47	48		Pn	12 06 59.6	+1.7
SII	Sitkinak Islan	8.98	58		Pn	12 07 05.6	+0.7
SII	Sitkinak Islan	8.98	58	P	Pn	12 07 04.9	0.0
	baz=249						
SII	Sitkinak Islan	8.98	58	P	Pn	12 07 06.2	+1.3
ANCK	Angle Creek	9.10	47		Pn	12 07 08.1	+1.6
CAHL	Cahill	9.10	48		Pn	12 07 08.3	+1.8
KELA	Mount Kelaz	9.12	45		Pn	12 07 08.2	+1.4
OHAK	Old Harbor	9.69	55	Pn	Pn	12 07 13.8	-0.7
OHAK	Old Harbor	9.69	55	P	Pn	12 07 13.6	-0.8
	baz=247,SNR=14						
P18K	Big Mountain,	9.90	41		Pn	12 07 18.0	+0.5
P18K	Big Mountain,	9.90	41	P	Pn	12 07 18.2	+0.7
	baz=231						
O18K	Koktuh Hills	10.21	39		Pn	12 07 22.6	+0.9
O18K	Koktuh Hills	10.21	39	P	Pn	12 07 22.7	+1.0
	baz=229,SNR=107						
KDAK	Kodiak Island	10.26	53	Pn	Pn	12 07 21.0	-1.3
	6.2nm,0.3s,baz=195,slow=4.4,SNR=90						
KDAK				Sn	Sn	12 09 17.5	+1.3
	1.4nm,0.3s,baz=195,slow=17,SNR=1.1						
KDAK	Kodiak Island	10.26	53	P	Pn	12 07 21.2	-1.1
	baz=245						
Q19K	Cape Douglas,	10.31	46	Pn	Pn	12 07 22.5	-0.5
Q19K	Cape Douglas,	10.31	46	P	Pn	12 07 22.8	-0.3
	baz=238,SNR=74						
N18K	Kilae Creek	10.52	35		Pn	12 07 28.5	+2.6
N18K	Kilae Creek	10.52	35	P	Pn	12 07 30.0	+4.0
	baz=224,SNR=20						
O19K	Port Alsworth	10.77	39		Pn	12 07 30.8	+1.5
O19K	Port Alsworth	10.77	39	P	Pn	12 07 32.2	+2.9
	baz=230,SNR=7.3						
SHEM	Shemya Is, Ala	10.87	278	Pn	Pn	12 07 32.8	+2.2
	3.2nm,0.3s,baz=5.7,slow=10,SNR=5.4						
SHEM				LR	LR	12 11 35.5	
	comp=Z,14μm,20.8s,baz=118,slow=37						
SMY	Shemya	10.87	278	Pn	Pn	12 07 33.0	+2.3
P19K	Oil Pt	10.88	43	Pn	Pn	12 07 31.0	+0.1
P19K	Oil Pt	10.88	43	P	Pn	12 07 31.7	+0.9
	baz=235,SNR=23						
SVW2	Sparrevohn	10.93	34		Pn	12 07 34.4	+3.0
N19K	Bonanza Creek	11.11	37		Pn	12 07 34.5	+0.5
N19K	Bonanza Creek	11.11	37	P	Pn	12 07 36.1	+2.0
	baz=228,SNR=89						
O20K	Slope Mountain	11.38	42	P	Pn	12 07 38.5	+0.8
	baz=235,SNR=15						
GAMB	Gambell	11.42	352		Pn	12 07 41.5	+3.3
GAMB	Gambell	11.42	352	P	Pn	12 07 41.4	+3.3
	baz=168						
RSO	Redoubt South	11.55	41		Pn	12 07 40.7	+0.5
HOM	Homer	11.56	46		Pn	12 07 39.9	-0.3
HOM	Homer	11.56	46	P	Pn	12 07 39.3	-0.8
	baz=239,SNR=14						
CNPM	China Poot	11.68	47		Pn	12 07 40.2	-1.5
M19K	Big River Lodg	11.90	33		Pn	12 07 47.9	+3.1
M19K	Big River Lodg	11.90	33	P	Pn	12 07 46.9	+2.1
	baz=224,SNR=46						
BRLK	Bradley Lake	11.95	46		Pn	12 07 44.9	-0.6
L19K	White Mountain	11.96	31	Pn	Pn	12 07 46.2	+0.6
L19K	White Mountain	11.96	31	P	Pn	12 07 46.4	+0.8
	baz=222,SNR=10						
BRSE	Bradley Lake S	12.00	46	P	Pn	12 07 44.8	-1.3
	baz=240,SNR=23						
ANM	Nome	12.12	5		Pn	12 07 52.1	+4.3
ANM	Nome	12.12	5	P	Pn	12 07 49.9	+2.0
	baz=188,SNR=5.0						
TTA	Tatalina	12.20	27		Pn	12 07 49.4	+0.5
TTA	Tatalina	12.20	27	P	Pn	12 07 50.6	+1.7
	baz=217,SNR=34						
SPCR	Spurr Chakacha	12.21	39	P	Pn	12 07 50.4	+1.4
	baz=232,SNR=13						
SPU	Mount Spurr	12.26	39		Pn	12 07 51.1	+1.4
CAPN	Captain Cook N	12.37	42	P	P	12 07 59.1	-3.7
	baz=235						
L20K	Farewell, AK	12.48	32	P	Pn	12 07 54.7	+1.9
	baz=223,SNR=41						
SEW	Seward	12.75	46		Pn	12 07 53.5	-2.8
SEW	Seward	12.75	46	P	Pn	12 07 53.6	-2.7
	baz=241,SNR=27						
O22K	Cooper Landing	12.81	45		Pn	12 07 56.4	-0.8
O22K	Cooper Landing	12.81	45	P	Pn	12 07 56.2	-1.0
	baz=240,SNR=32						
TNA	Tin City	13.05	0		Pn	12 08 03.1	+2.6

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TNA    Tin City          13.05    0 P     Pn    12 08 03.0 +2.6
       baz=180
K20K   Telida            13.08   29       Pn    12 08 02.5 +1.6
K20K   Telida            13.08   29 P     Pn    12 08 01.7 +0.8
       baz=220,SNR=36
RC01   Rabbit Creek A    13.12   42 Pn    Pn    12 08 00.2 -1.2
RC01   Rabbit Creek A    13.12   42 P     Pn    12 07 59.6 -1.9
       baz=237,SNR=14
PPLA   Purkeypile        13.33   33       Pn    12 08 05.5 +1.1
PPLA   Purkeypile        13.33   33 P     Pn    12 08 06.0 +1.5
       baz=226,SNR=30
M22K   Willow            13.34   39       Pn    12 08 03.8 -0.6
M22K   Willow            13.34   39 P     Pn    12 08 03.3 -1.1
       baz=234,SNR=8.6
GCSA   Galena City Sc    13.50   21 P     Pn    12 08 08.0 +1.4
       baz=210,SNR=34
PMR    Palmer            13.64   41       Pn    12 08 06.3 -2.2
PMR    Palmer            13.64   41 P     P     12 08 13.1 -3.9
       baz=237,SNR=11
CUT    Chulitna          13.68   37       Pn    12 08 09.7 +0.6
CUT    Chulitna          13.68   37 P     Pn    12 08 10.2 +1.2
       baz=232
J20K   Nowinta River     13.70   26       Pn    12 08 09.9 +0.6
J20K   Nowinta River     13.70   26 P     Pn    12 08 10.4 +1.2
       baz=218,SNR=31
CAST   Castle Rocks      13.73   31       Pn    12 08 10.7 +0.9
CAST   Castle Rocks      13.73   31 P     Pn    12 08 10.4 +0.6
       baz=225,SNR=131
KNK    Knik Glacier      13.82   42 Pn    Pn    12 08 09.5 -1.5
KNK    Knik Glacier      13.82   42 P     Pn    12 08 08.5 -2.5
       baz=238,SNR=29
GHO    Glory Hole Cre    13.82   41       Pn    12 08 09.0 -2.1
Q23K   Middleton Isla    13.90   52 Pn    Pn    12 08 08.9 -3.1
Q23K   Middleton Isla    13.90   52 P     Pn    12 08 08.1 -3.9
       baz=250,SNR=24
MID    Middleton Isla    13.91   52       Pn    12 08 09.0 -3.1
CHUM   Lake Minchumin    14.00   30 P     Pn    12 08 14.4 +1.1
       baz=223,SNR=38
SML    Sawmill           14.08   41       Pn    12 08 12.1 -2.4
SML    Sawmill           14.08   41 P     Pn    12 08 12.2 -2.4
       baz=237,SNR=34
GLI    Glacier Island    14.14   46       Pn    12 08 12.5 -2.8
GLI    Glacier Island    14.14   46 P     Pn    12 08 11.3 -4.0
       baz=243
KTH    Kantishna Hill    14.20   32       Pn    12 08 17.1 +0.8
M23K   Glacier View      14.32   42 P     Pn    12 08 15.0 -2.7
       baz=239,SNR=50
TRF    Thorofare Moun    14.34   34 Pn    Pn    12 08 18.1 -0.1
TRF    Thorofare Moun    14.34   34 P     Pn    12 08 17.4 -0.8
       baz=228,SNR=29
FID    Port Fidalgo      14.35   47       Pn    12 08 14.0 -4.2
SCM    Sheep Creek Mo    14.50   42 P     Pn    12 08 17.4 -2.9
       baz=239,SNR=146
BPAW   Bear Paw Mtn.     14.56   31 Pn    Pn    12 08 21.1  0.0
BPAW   Bear Paw Mtn.     14.56   31 P     Pn    12 08 21.2 +0.2
       baz=225,SNR=114
EYAK   Cordova Ski Ar    14.60   48 Pn    Pn    12 08 18.0 -3.5
EYAK   Cordova Ski Ar    14.60   48 P     Pn    12 08 18.4 -3.2
       baz=246,SNR=32
WAT6   Susitna Watana    14.73   39 P     Pn    12 08 21.5 -2.0
       baz=236,SNR=27
RND    Reindeer          14.81   35       Pn    12 08 23.1 -1.4
KLU    Klutina           14.92   44 P     Pn    12 08 21.7 -4.3
       baz=243,SNR=218
MCK    McKinley          14.99   34       Pn    12 08 27.0 +0.1
MCK    McKinley          14.99   34 P     Pn    12 08 28.2 +1.4
       baz=230,SNR=14
I21K   Tanana            15.06   27       Pn    12 08 27.7 -0.1
I21K                                IAmb  IAmb  12 08 48.5
       comp=Z,218nm,1.1s
I21K   Tanana            15.06   27 P     Pn    12 08 28.4 +0.6
       baz=220,SNR=255
BWN    Browne            15.10   32       Pn    12 08 28.9 +0.6
BWN                                 IAmb  IAmb  12 09 05.0
       comp=Z,247nm,1.1s
M24K   Tolsona, Glenn    15.11   42 Pn    Pn    12 08 25.0 -3.5
M24K   Tolsona, Glenn    15.11   42 P     Pn    12 08 25.5 -3.0
       baz=240,SNR=212
DHY    Denali Highway    15.15   38       Pn    12 08 27.0 -2.1
DHY    Denali Highway    15.15   38 P     Pn    12 08 27.4 -1.7
       baz=235,SNR=33
H21K   Melozitna Rive    15.22   24       Pn    12 08 30.9 +1.0
H21K                                IAmb  IAmb  12 08 36.8
       comp=Z,235nm,0.9s
H21K   Melozitna Rive    15.22   24 P     Pn    12 08 30.2 +0.3
       baz=217,SNR=304
IMAR   Indian Mountai    15.26   23 Pn    Pn    12 08 29.6 -0.7
BMRM   Bremner River     15.28   47 Pn    Pn    12 08 26.7 -4.0
BMRM                                IAmb  IAmb  12 08 45.9
       comp=Z,113nm,0.9s
BMRM   Bremner River     15.28   47 P     Pn    12 08 26.3 -4.4
       baz=247,SNR=63
SUCK   Suckling Hills    15.34   51       Pn    12 08 30.3 -1.2
NEA2   Nenana            15.51   32       Pn    12 08 32.5 -1.1
NEA2                                IAmb  IAmb  12 08 59.5
       comp=Z,203nm,1.7s
NEA2   Nenana            15.51   32 P     Pn    12 08 31.6 -2.0
       baz=228,SNR=50
N25K   Chitina, Valde    15.54   45 Pn    Pn    12 08 30.6 -3.6
N25K   Chitina, Valde    15.54   45 P     Pn    12 08 30.7 -3.5
       baz=245,SNR=80
BGLC   Bering Glacier    15.59   51 P     P     12 08 41.1 +2.4
       baz=252
HARP   HAARP             15.67   42 P     Pn    12 08 34.0 -1.7
       baz=241,SNR=34
RDOG   Red Dog Mine      15.75    7       Pn    12 08 36.5 -0.2
RDOG   Red Dog Mine      15.75    7 P     Pn    12 08 36.7  0.0
       baz=191
WRH    Wood River Hil    15.75   33       Pn    12 08 35.2 -1.5
I23K   Minto, Yukon-K    15.80   30       Pn    12 08 37.2 -0.1
I23K                                IAmb  IAmb  12 08 51.3
       comp=Z,166nm,1.1s
I23K   Minto, Yukon-K    15.80   30 P     Pn    12 08 36.6 -0.8
       baz=226,SNR=85
SNH    Sunshine Point    15.82   51       Pn    12 08 35.3 -2.5
SNH                                 IAmb  IAmb  12 09 16.7
       comp=Z,260nm,1.1s
PAX    Paxson            15.83   40       Pn    12 08 35.7 -2.1
PAX    Paxson            15.83   40 P     Pn    12 08 35.6 -2.2
       baz=239,SNR=26
TGL    Tana Glacier      16.01   49       Pn    12 08 38.3 -1.9
TGL                                 IAmb  IAmb  12 08 55.1
       comp=Z,238nm,0.9s
MDM    Murphy Dome       16.02   31 Pn    Pn    12 08 38.7 -1.6
TCOL   CIGO, UAF Yank    16.08   32       Pn    12 08 39.2 -1.8
TCOL   CIGO, UAF Yank    16.08   32 P     Pn    12 08 38.8 -2.2
       baz=229,SNR=30
COLA   College           16.09   32       Pn    12 08 39.2 -1.8
COLA   College           16.09   32c iP   Pn    12 08 38.6 -2.4
COLA                                pmax  pmax
       comp=Z,58nm,0.9s
HDA    Harding Lake      16.09   34       Pn    12 08 39.0 -2.1
HDA    Harding Lake      16.09   34 P     Pn    12 08 41.4 +0.2
       baz=232,SNR=17
MCARA  McCarthy VSAT     16.15   47       Pn    12 08 39.3 -2.6
MCARA  McCarthy VSAT     16.15   47 P     Pn    12 08 39.3 -2.6
       baz=248,SNR=28
K24K   Donnelly Dome     16.16   37 P     Pn    12 08 41.8 -0.2
       baz=236,SNR=23
ISLE   Juniper Island    16.19   50       Pn    12 08 40.3 -2.2
ISLE                                IAmb  IAmb  12 09 22.6
       comp=Z,618nm,1.6s
H23K   Yukon River       16.23   28       Pn    12 08 43.2 +0.3
H23K                                IAmb  IAmb  12 08 57.6
       comp=Z,334nm,1.4s
H23K   Yukon River       16.23   28 P     Pn    12 08 42.5 -0.4
       baz=224,SNR=245
IL31                     16.34   33       Pn    12 08 42.0 -2.2
ILAR   Eielson Array     16.34   33 Pn    Pn    12 08 41.5 -2.8
       comp=Z,0.7nm,0.3s,baz=228,slow=11,SNR=54
       comp=Z,10.0nm,0.8s
ILAR   Eielson Array     16.34   33 Pn    Pn    12 08 40.1 -4.2
POKR   Poker Plat Res    16.38   32       Pn    12 08 42.9 -1.9
POKR   Poker Plat Res    16.38   32 P     Pn    12 08 42.5 -2.4
       baz=229,SNR=9.4
YAH    Yahtse            16.40   51       Pn    12 08 43.5 -1.8
YAH                                 IAmb  IAmb  12 09 22.8
       comp=Z,173nm,1.0s
GRNC   Granite Creek     16.51   50       Pn    12 08 44.8 -1.8
GRNC                                IAmb  IAmb  12 09 03.1
       comp=Z,194nm,0.8s
MENT   Mentasta          16.51   41       Pn    12 08 44.6 -1.9
M26K   Nabesna, AK       16.57   44       Pn    12 08 44.8 -2.5
M26K                                IAmb  IAmb  12 08 58.9
       comp=Z,310nm,1.4s
M26K   Nabesna, AK       16.57   44 P     Pn    12 08 44.4 -2.8
       baz=245,SNR=106
BARN   Barnard Glacie    16.65   49       Pn    12 08 45.6 -2.9
L26K   Log Cabin Wild    16.70   41       Pn    12 08 46.5 -2.4
L26K   Log Cabin Wild    16.70   41 P     Pn    12 08 47.1 -1.8
       baz=242,SNR=103
TABL   Table Mountain    16.71   51       Pn    12 08 47.2 -1.9
TABL                                IAmb  IAmb  12 09 24.9
       comp=Z,433nm,1.5s
DOT    Dot Lake          16.72   39       Pn    12 08 47.5 -1.7
H24K   Noodor Dome       16.72   30       Pn    12 08 47.9 -1.3
H24K   Noodor Dome       16.72   30 P     Pn    12 08 48.2 -1.0
       baz=227,SNR=115
J25K   Salcha River,     16.77   35 P     Pn    12 08 46.7 -3.1
J25K   Salcha River,     16.77   35 P     Pn    12 08 49.2 -0.5
       baz=234
CTG    Chitna Glacier    16.77   49 P     Pn    12 08 48.2 -1.7
       baz=252,SNR=106
CTGM   Chitina Glacie    16.77   49 P     Pn    12 08 47.5 -2.5
CTGM                                IAmb  IAmb  12 09 05.9
       comp=Z,142nm,0.8s
LOGN   Logan Glacier     16.89   50 P     Pn    12 08 50.4 -1.0
LOGN                                IAmb  IAmb  12 09 07.3
       comp=Z,148nm,0.9s
M27K   Edge Creek, AK    17.02   45 P     Pn    12 08 50.6 -2.4
M27K                                IAmb  IAmb  12 09 07.8
       comp=Z,175nm,1.0s
M27K   Edge Creek, AK    17.02   45 P     Pn    12 08 51.3 -1.8
       baz=246,SNR=126
PCA    Pinnacle          17.05   53 P     Pn    12 08 52.3 -1.0
PINM   Pinnacle          17.05   53 P     Pn    12 08 52.1 -1.2
       baz=256,SNR=46
COLD   Coldfoot          17.11   24 P     Pn    12 08 54.2 +0.3
COLD   Coldfoot          17.11   24 P     P     12 08 54.7 -0.7
       baz=219,SNR=72
COLD                                S     S     12 12 14.2 +2.3
       baz=219
L27K   Beaver Creek,     17.34   42 P     Pn    12 08 54.6 -2.2
L27K   Beaver Creek,     17.34   42 P     Pn    12 08 55.0 -1.9
       baz=244,SNR=80
L27K                                S     S     12 12 30.4  +14
       baz=244
J26L   Joseph Creek      17.35   37 P     Pn    12 08 55.1 -2.0
       baz=238,SNR=189
BCAR   Beaver Creek A    17.36   42       Pn    12 08 53.7 -3.4
PNL    Peninsula         17.37   55 P     Pn    12 08 55.6 -1.7
       baz=258,SNR=24
PNL                                 S     S     12 12 19.4 +1.9
       baz=258
YUK3   Moose Creek       17.43   47 P     Pn    12 08 55.7 -2.6
       baz=250,SNR=121
YUK3                                S     S     12 12 32.4  +13
       baz=250
BVCY   Beaver Creek      17.48   45 P     Pn    12 08 57.0 -1.7
       baz=248,SNR=15
K27K   Chicken           17.68   39 P     Pn    12 08 59.4 -1.6
K27K   Chicken           17.68   39 P     Pn    12 08 60.0 -1.0
       baz=241
YUK4   Talbot Arm        18.13   49 P     Pn    12 09 06.0 -0.8
       baz=254,SNR=134
YUK6   Outpost Mounta    18.16   51 P     Pn    12 09 05.7 -1.5
       baz=256,SNR=87
YUK6                                S     S     12 12 36.6 +2.8
       baz=256
TOLK   Toolik Lake Re    18.36   22       Pn    12 09 10.0 +0.5
TOLK   Toolik Lake Re    18.36   22 P     Pn    12 09 10.2 +0.7
       baz=218,SNR=71
TOLK                                S     S     12 12 38.1 +0.7
       baz=218
EGAK   Eagle             18.39   38 P     P     12 09 07.1 -2.4
EGAK   Eagle             18.39   38 P     P     12 09 07.0 -2.6
       baz=241,SNR=74
HYT    Haines Junctio    18.54   51 P     Pn    12 09 11.6 -0.2
HYT                                 IAmb  IAmb  12 09 27.4
       comp=Z,171nm,0.9s
HYT    Haines Junctio    18.54   51 P     P     12 09 10.9 -0.5
       baz=257,SNR=94
HYT                                 S     S     12 12 44.2 +3.1
       baz=257
DAWY   Dawson            18.75   41 P     P     12 09 12.7 -0.9
DAWY   Dawson            18.75   41 P     P     12 09 13.2 -0.4
       baz=245,SNR=92
DAWY                                S     S     12 12 57.3  +12
       baz=245
BMAR   Burnt Mountain    18.77   29 P     P     12 09 11.2 -2.6
N30M   Aishikik Lake     18.89   50 P     P     12 09 13.9 -1.2
       baz=256,SNR=266
N30M                                S     S     12 12 53.2 +5.3
       baz=256
SIT    Sitka             19.26   63 P     P     12 09 19.4 +0.3
SIT    Sitka             19.26   63 P     Pn    12 09 20.3  0.0
       baz=270,SNR=23
SIT                                 S     S     12 12 56.7 +1.4
       baz=270
M30M   Minto, Yukon      19.32   47 P     P     12 09 19.5 -0.4
M30M   Minto, Yukon      19.32   47 P     P     12 09 19.8 -0.1
       baz=253,SNR=66
J29M   Klondike Camp     19.38   41 P     P     12 09 19.8 -0.7
       baz=246
SKAG   Skagway           19.39   56 P     Pn    12 09 21.5 -0.3
SKAG                                IAmb  IAmb  12 09 41.7
       comp=Z,171nm,1.1s
SKAG   Skagway           19.39   56 P     Pn    12 09 21.9 +0.2
       baz=263,SNR=52
SKAG                                S     Sn    12 12 60.0 +1.9
       baz=263
N31M   Braeburn, Yuko    19.50   50 P     Pn    12 09 22.8 -0.4
N31M   Braeburn, Yuko    19.50   50 P     Pn    12 09 23.6 +0.4
       baz=257,SNR=240
N31M                                S     Sn    12 13 02.9 +1.9
       baz=257
A21K   Barrow            19.52   11 P     P     12 09 20.9 -0.9
A21K   Barrow            19.52   11 P     P     12 09 21.0 -0.8
       baz=201,SNR=61
A21K                                S     Sn    12 13 04.2 +3.2
       baz=201
BESE   Bessie Mountai    19.55   59 P     P     12 09 21.7 -0.7
BESE                                IAmb  IAmb  12 09 48.9
       comp=Z,148nm,0.9s
I29M   Ogilvie Camp,     19.73   38 P     P     12 09 21.9 -2.4
I29M   Ogilvie Camp,     19.73   38 P     P     12 09 22.5 -1.8
       baz=244,SNR=101
WHY    Whitehorse        19.77   53       Pn    12 09 26.4 -0.1
WHY                                 IAmb  IAmb  12 09 46.2
       comp=Z,175nm,1.0s
WHY    Whitehorse        19.77   53 P     Pn    12 09 26.5 -0.1
       baz=260,SNR=113
WHY                                 S     Sn    12 13 09.7 +2.1
       baz=260
BILL   Bilibino          19.83  331 P     P     12 09 25.4 +0.1
BILL   Bilibino          19.83  331d iP   Pn    12 09 26.1 -0.9
BILL                               i S    S     12 13 02.9 -3.9
BILL                                pmax  pmax
       comp=Z,28nm,1.3s
BILL                                MLR   MLR
       comp=Z,8µm,15.0s
PET    Petropavlovsk     20.06  285 P     P     12 09 27.8 -0.1
PET                                 IAmb  IAmb  12 09 29.0
       comp=Z,125nm,0.9s
PET    Petropavlovsk     20.06  285c iP   P     12 09 28.2 +0.3
PET                                eS     S     12 13 07.7 -4.0
PET                                 pmax  pmax
       comp=Z,900nm,7.6s
PET                                 pmax  pmax
       comp=Z,212nm,0.9s
PET                                 pmax  pmax
       comp=Z,1µm,12.6s
PET                                 MLR   MLR
       comp=Z,5µm,19.0s
PET                                 MLR   MLR
       comp=Z,4µm,17.0s
PET    Petropavlovsk     20.06  285 P     P     12 09 28.6 +0.7
M31M   Drury Creek, Y    20.30   48 P     P     12 09 31.2 +0.6
M31M                                IAmb  IAmb  12 09 33.2
       comp=Z,231nm,0.9s
M31M   Drury Creek, Y    20.30   48 P     Pn    12 09 31.8 -0.8
       baz=257,SNR=355
M31M                                S     S     12 13 17.1 +0.6
       baz=257
CRAG   Craig             20.58   68 P     P     12 09 33.2 -0.3
CRAG   Craig             20.58   68 P     P     12 09 34.4 +0.9
       baz=276,SNR=7.1
CRAG                                S     Sn    12 13 26.4 -0.5
       baz=276
PEA0B  Petropavlovsk-    20.61  285 P     P     12 09 33.3 -0.6
PEA0B                               IAmb  IAmb  12 09 48.3
       comp=Z,99nm,0.7s
PEA0B  Petropavlovsk-    20.61  285c iP   P     12 09 33.1 -0.8
PETK   Petropavlovsk-    20.61  285 P     P     12 09 33.5 -0.3
       comp=Z,55nm,0.7s,baz=87,slow=15,SNR=116
PETK                                LR    LR    12 18 14.6
       comp=Z,3µm,20.2s,baz=91,slow=39
       comp=Z,55nm,0.7s
PETK   Petropavlovsk-    20.61  285 P     P     12 09 33.7 -0.2
P33M   Teslin, Yukon     20.73   54 P     Pn    12 09 36.4 -1.3
P33M                                IAmb  IAmb  12 09 49.2
       comp=Z,367nm,1.7s
P33M   Teslin, Yukon     20.73   54 P     P     12 09 36.0 +0.8
       baz=264,SNR=136
P33M                                S     Sn    12 13 28.3 -2.3
       baz=264
EPYK   Eagle Plains      20.76   36 P     P     12 09 34.1 -1.4
EPYK                                IAmb  IAmb  12 09 34.9
       comp=Z,152nm,0.8s
EPYK   Eagle Plains      20.76   36 P     P     12 09 33.6 -1.9
       baz=243,SNR=127
WRAK   Wrangell Islan    20.93   65 P     Pn    12 09 38.8 -1.1
WRAK                                IAmb  IAmb  12 09 45.8
       comp=Z,259nm,2.0s
WRAK   Wrangell Islan    20.93   65 P     P     12 09 38.2 +1.0
       baz=274,SNR=13
WRAK                                S     Sn    12 13 36.1 +0.9
       baz=274
DIB    Dawson Inlet,     21.33   74 P     P     12 09 42.5 +0.9
H02S1  DAWSON INLET T    21.33   74 T     T     12 32 21.6
       SNR=6.4
S34M   Telegraph Cree    21.51   61 P     P     12 09 44.4 +0.9
       baz=271,SNR=32
S34M                                S     S     12 13 44.6 +4.3
       baz=271
DLBC   Dease Lake        22.08   59 P     P     12 09 49.2 -0.5
       comp=Z,22nm,0.9s,baz=263,slow=11,SNR=29
DLBC                                S     S     12 13 51.2 -0.3
       comp=Z,8.6nm,1.1s,baz=173,slow=12,SNR=2.0
       comp=Z,22nm,0.9s
DLBC   Dease Lake        22.08   59 P     P     12 09 49.9 +0.1
SKR    Severo-Kuril's    22.21  280 eP    P     12 09 49.3 -1.7
SKR                                 pmax  pmax
       comp=Z,300nm,3.4s
SKR                                 pmax  pmax
       comp=Z,400nm,4.3s
SKR                                 MLR   MLR
       comp=Z,2µm,19.0s
SKR                                 MLR   MLR
       comp=Z,1µm,19.0s
HG4B   Hotspring         22.31   76 P     P     12 09 51.8 -0.3
HG4B                                IAmb  IAmb  12 10 06.9
       comp=Z,110nm,1.3s
GRNB   Grenville Isla    22.66   71 P     P     12 09 56.9 +0.9
INK    Inuvik            22.74   33 P     P     12 09 53.9 -2.7
       comp=Z,35nm,0.6s,baz=228,slow=8.0,SNR=66
INK                                 S     S     12 13 57.1 -6.0
       comp=Z,10.0nm,0.9s,baz=292,slow=9.4,SNR=3.2
INK                                 LR    LR    12 19 43.7
       comp=Z,8µm,18.9s,baz=231,slow=39
       comp=Z,35nm,0.6s
INK    Inuvik            22.74   33 P     P     12 09 54.5 -2.1
INK                                 IAmb  IAmb  12 10 23.4
       comp=Z,66nm,0.8s
INK    Inuvik            22.74   33 P     P     12 09 53.9 -2.7
       baz=243,SNR=48
INK                                 S     S     12 14 02.0 -1.1
       baz=243
TGTN   Hyland Airport    23.07   51 P     P     12 09 60.0 -0.1
       baz=265,SNR=13
TGTN                                S     S     12 14 11.3 +2.3
       baz=265
SEY    Seymchan          23.15  312 P     P     12 09 59.6 -1.2
       comp=Z,53nm,1.1s,baz=98,slow=10,SNR=62
SEY                                 S     S     12 14 10.7 +0.4
       comp=Z,2.5nm,0.7s,baz=132,slow=23,SNR=1.5
SEY                                 LR    LR    12 19 01.7
       comp=Z,6µm,19.5s,baz=104,slow=37
       comp=Z,53nm,1.1s
SEY    Seymchan          23.15  312c iP   P     12 10 00.4 -0.5
SEY                                 pmax  pmax
       comp=Z,123nm,1.4s
MA2    Magadan           23.73  304 P     P     12 10 06.1 -0.4
       comp=Z,9.9nm,0.6s,baz=90,slow=10.0,SNR=11
MA2                                 S     S     12 14 24.6 +5.0
       comp=Z,2.9nm,0.6s,baz=179,slow=22,SNR=1.4
MA2                                 LR    LR    12 19 08.8
       comp=Z,4µm,18.4s,baz=108,slow=36
       comp=Z,9.9nm,0.6s
MA2    Magadan           23.73  304 P     P     12 10 06.1 -0.4
MA2    Magadan           23.73  304c iP   P     12 10 06.3 -0.2
MA2                                 pmax  pmax
       comp=Z,75nm,1.7s
MA2    Magadan           23.73  304 P     P     12 10 07.5 +1.0
BBB    Bella Bella       24.16   75 P     P     12 10 05.1 -5.5
       comp=Z,12nm,1.1s,baz=336,slow=8.7,SNR=2.8
BBB                                 S     S     12 14 30.5 +3.9
       comp=Z,3.6nm,0.9s,baz=201,slow=13,SNR=0.7
HOLB   Holberg           24.64   78 P     P     12 10 15.8 +0.8
C36M   Paulatuk          26.31   34 P     P     12 10 28.3 -1.6
C36M   Paulatuk          26.31   34 P     P     12 10 29.3 -0.6
       baz=253,SNR=6.2
A36M   Sachs Harbour     26.86   28 P     P     12 10 34.8 -0.1
A36M                                IAmb  IAmb  12 11 03.3
       comp=Z,45nm,0.9s
NLWA   Neilton Lookou    28.51   83 P     P     12 10 50.9 +1.0
A04D   Lummi Island      28.63   79 S     S     12 15 43.0 +5.6
       baz=295
D03D   Eldon             28.92   82 P     P     12 10 56.1 +2.6
       baz=297
D03D                                S     S     12 15 46.4 +4.4
       baz=297
E03A   Lebam             29.09   84 P     P     12 10 54.8 -0.3
E03A                                IAmb  IAmb  12 11 14.9
       comp=Z,70nm,1.0s
B05A   Bryant            29.19   80 P     P     12 10 57.4 +1.5
       baz=296,SNR=9.3
B05A                                S     S     12 15 49.7 +3.3
       baz=296
D04E   Lakebay           29.27   82 P     P     12 10 59.8 +3.1
       baz=297
YKA    Yellowknife Ar    29.50   49 P     P     12 10 57.9 -0.6
       comp=Z,7.2nm,0.8s,baz=271,slow=8.5,SNR=48
YKA                                 PcP   PcP   12 14 00.8 -2.2
       comp=Z,2.2nm,0.8s,baz=287,slow=2.0,SNR=4.6
YKA                                 ScP   ScP   12 17 44.2 +1.6
       comp=Z,2.1nm,0.9s,baz=278,slow=2.9,SNR=5.6
YKA                                 LR    LR    12 24 56.9
       comp=Z,7µm,19.1s,baz=272,slow=41
       comp=Z,7.2nm,0.8s
YKA    Yellowknife Ar    29.50   49 P     P     12 10 57.4 -1.1
YKA    Yellowknife Ar    29.50   49ceP    P     12 10 59.0 +0.5
YKA                                 pmax  pmax
       comp=Z,7.0nm,0.8s
KUR    Kuril'sk          29.52  274c iP   P     12 10 57.2 -1.7
KUR                                e            12 11 55.8
KUR                                 S     S     12 15 50.6 -1.0
KUR                                eSS    SnSn  12 17 23.5 +3.4
KUR                                eSSS   SSS   12 17 38.3
KUR                                 pmax  pmax
       comp=Z,800nm,4.5s
KUR                                 MLR   MLR
       comp=Z,1µm,15.0s
HEBO   Mount Hebo        29.63   86 P     P     12 10 59.7 -0.2
HEBO                                IAmb  IAmb  12 11 19.9
       comp=Z,101nm,1.2s
F04D   Rainier, OR       29.65   84 P     P     12 11 01.2 +1.2
       baz=299
E04D   Cinebar           29.69   83 P     P     12 11 00.1 -0.3
E04D                                IAmb  IAmb  12 11 20.8
       comp=Z,107nm,1.2s
E04D   Cinebar           29.69   83 P     P     12 11 02.8 +2.5
       baz=298
E04D                                S     S     12 15 59.9 +5.7
       baz=298
D05A   Enumclaw          29.74   82 P     P     12 11 01.6 +0.8
G03D   McMinnville, O    29.93   86 P     P     12 11 01.9 -0.5
G03D   McMinnville, O    29.93   86 P     P     12 11 03.5 +1.1
       baz=300,SNR=6.0
G03D                                S     S     12 16 02.8 +4.9
       baz=300
C06D   Leavenworth       30.07   80 P     P     12 11 06.6 +2.8
       baz=297
C06D                                S     S     12 16 03.1 +3.0
       baz=297
F04A   Amboy             30.08   84 P     P     12 11 04.4 +0.6
F04A                                IAmb  IAmb  12 11 34.0
       comp=Z,32nm,0.9s
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TYV   Tymovskoe         30.14 287  eP      P       12 11 03.4  -0.9
TYV                                eS      S       12 16 01.7  +0.6
TYV                                 pmax   pmax
      comp=Z,20nm,1.0s
TYV                                 pmax   pmax
      comp=Z,300nm,9.2s
TYV                                 smax   smax
      comp=N,18nm,1.7s
TYV                                 smax   smax
      comp=E,26nm,1.7s
TYV                                 smax   smax
      comp=N,400nm,13.0s
TYV                                 smax   smax
      comp=E,2µm,13.0s
TYV                                 MLR    MLR
      comp=N,4µm,22.0s
TYV                                 MLR    MLR
      comp=Z,4µm,22.0s
I02E  Swisshome, OR     30.14  88   P      P       12 11 07.4  +3.0
      baz=302,SNR=6.8
I02E                                S      S       12 16 07.0  +5.6
      baz=302
NKL   Nikolayevsk       30.44 292  eP      P       12 11 05.5  -1.4
NKL                                eS      S       12 16 06.4  +0.6
NKL                                 pmax   pmax
      comp=E,3.0nm,0.9s
NKL                                 pmax   pmax
      comp=N,10.0nm,1.1s
NKL                                 pmax   pmax
      comp=Z,33nm,1.2s
NKL                                 smax   smax
      comp=E,3.0nm,0.9s
NKL                                 smax   smax
      comp=N,10.0nm,1.6s
NKL                                 MLR    MLR
      comp=E,15nm,18.0s
NKL                                 MLR    MLR
      comp=N,5.0nm,17.0s
NKL                                 MLR    MLR
      comp=Z,2µm,17.0s
H04D  Lebanon           30.60  87   P      P       12 11 09.6  +1.2
H04D                                IAmb   IAmb    12 11 43.4
      comp=Z,54nm,1.1s
H04D  Lebanon           30.60  87   P      P       12 11 09.7  +1.2
      baz=302,SNR=14
H04D                                S      S       12 16 13.5  +4.9
      baz=302
J01E  Myrtle Point      30.61  90   P      P       12 11 09.4  +0.9
J01E  Myrtle Point      30.61  90   P      P       12 11 09.7  +1.3
      baz=303
J01E                                S      S       12 16 13.5  +5.0
      baz=303
I03D  Drain, OR         30.67  89   P      P       12 11 10.0  +0.9
      baz=303
F05D  White Salmon      30.69  84   P      P       12 11 09.7  +0.5
      baz=300
F05D                                S      S       12 16 14.4  +4.5
      baz=300
HOOD  Mount Hood Mea    30.85  85   P      P       12 11 11.3  +0.5
HOOD                                IAmb   IAmb    12 11 31.3
      comp=Z,54nm,1.0s
KBO   Bosley Butte      30.96  92   P      P       12 11 13.1  +1.4
KBO                                 IAmb   IAmb    12 11 20.6
      comp=Z,93nm,1.2s
K02D  Willamette Mer    31.03  91   P      P       12 11 13.8  +1.4
      baz=304,SNR=15
K02D                                S      S       12 16 20.8  +5.4
      baz=304
DBO   Dodson Butte      31.05  90   P      P       12 11 13.8  +1.2
DBO                                 IAmb   IAmb    12 11 35.7
      comp=Z,44nm,1.1s
G05D  Wamic, OR         31.10  85   P      P       12 11 14.3  +1.4
      baz=301,SNR=6.6
G05D                                S      S       12 16 20.8  +4.5
      baz=301
I04A  Tendick Farm,     31.19  88   P      P       12 11 14.4  +0.7
      baz=302,SNR=35
I04A                                S      S       12 16 20.8  +3.0
      baz=302
UGL   Uglegorsk         31.22 284  eP      P       12 11 13.2  -0.6
UGL                                e               12 12 18.3
UGL                                eS      S       12 16 20.7  +2.7
UGL                                 pmax   pmax
      comp=Z,80nm,1.0s
UGL                                 pmax   pmax
      comp=Z,630nm,3.4s
UGL                                 MLR    MLR
      comp=E,3µm,17.0s
UGL                                 MLR    MLR
      comp=N,4µm,18.0s
UGL                                 MLR    MLR
      comp=Z,2µm,16.0s
YUK   Yuzh-Kuril'sk     31.37 273⇑eP      P       12 11 16.2  +1.0
L02F  Cave Junction     31.41  91   P      P       12 11 16.5  +0.9
      baz=305,SNR=40
L02F                                S      S       12 16 23.7  +2.4
      baz=305
HUMO  Hull Mountain     31.51  90   P      P       12 11 17.8  +1.3
HUMO                                IAmb   IAmb    12 11 37.3
      comp=Z,80nm,1.4s
I05D  Terrebonne, OR    31.55  86   P      P       12 11 18.0  +1.1
      baz=302,SNR=8.8
I05D                                S      S       12 16 27.6  +4.0
      baz=302
HAWA  Hanford           31.60  82   P      P       12 11 17.9  +0.6
HAWA                                IAmb   IAmb    12 11 37.1
      comp=Z,51nm,1.4s
J04D  Umpqua Nationa    31.67  88   P      P       12 11 19.7  +1.6
      baz=303
J04D                                S      S       12 16 30.3  +4.6
      baz=303
YSS   Yuzh-Sakhalins    31.77 280   P      P       12 11 18.5  -0.2
YSS                                 IAmb   IAmb    12 11 24.6
      comp=Z,34nm,1.0s
YSS   Yuzh-Sakhalins    31.77 280c iP      P       12 11 18.5  -0.2
YSS                                 pmax   pmax
      comp=Z,34nm,1.3s
YSS   Yuzh-Sakhalins    31.77 280   P      P       12 11 19.3  +0.6
KIP   Kipapa            32.02 162⇓eP      P       12 11 20.0  -1.1
KIP                                 pmax   pmax
      comp=Z,41nm,1.1s
L04D  Klamath Falls     32.13  90   P      P       12 11 23.5  +1.5
      baz=305,SNR=11
YBH   Yreka Blue Hor    32.16  91   LR     LR      12 21 27.9
      comp=Z,2µm,19.8s,baz=306,slow=31
YBH   Yreka Blue Hor    32.16  91   P      P       12 11 23.1  +0.8
YBH                                 IAmb   IAmb    12 11 43.3
      comp=Z,56nm,1.1s
NEW   Newport           32.16  77   LR     LR      12 23 23.7
      comp=Z,2µm,19.5s,baz=302,slow=35
NEW   Newport           32.16  77   P      P       12 11 22.2  -0.1
      baz=297,SNR=10.0
NEW                                 S      S       12 16 35.0  +2.0
      baz=297
J05D  Fort Rock, OR     32.18  88   P      P       12 11 23.9  +1.4
      baz=303,SNR=18
J05D                                S      S       12 16 37.0  +3.4
      baz=303
K04D  Chiloquin, OR     32.23  89   P      P       12 11 24.2  +1.2
      baz=304
K04D                                S      S       12 16 38.3  +3.9
      baz=304
EDM   Edmonton          32.32  67   P      P       12 11 23.5  -0.1
TIXI  Tiksi             33.01 329   LR     LR      12 27 20.1
      comp=Z,4µm,18.1s,baz=359,slow=41
TIXI  Tiksi             33.01 329c iP      P       12 11 28.7  -0.5
TIXI                                pmax   pmax
      comp=Z,29nm,1.7s
TIXI                                MLR    MLR
      comp=Z,5µm,15.0s
JKA   Kamikawa-asahi    33.31 275   P      P       12 11 31.5  -0.7
JKA                                 IAmb   IAmb    12 11 55.6
      comp=Z,69nm,1.3s
ASAJ  Asahikawa         33.31 275   LR     LR      12 24 18.0
      comp=Z,4µm,20.8s,baz=78,slow=35
YAK   Yakutsk           33.67 311   LR     LR      12 25 55.5
      comp=Z,5µm,18.6s,baz=102,slow=38
YAK   Yakutsk           33.67 311c iP      P       12 11 33.4  -1.7
YAK                                e*PP    pP      12 11 41.5  -1.0
YAK                                e               12 12 48.3
YAK                                e               12 14 14.0
YAK                                eS      S       12 16 54.3  -1.7
YAK                                e*SS    sS      12 17 12.0  +3.5
YAK                                e               12 21 57.3
YAK                                 pmax   pmax
      comp=Z,54nm,1.1s
YAK                                 pmax   pmax
      comp=N,5.0nm,1.0s
YAK                                 pmax   pmax
      comp=E,21nm,1.1s
YAK                                 pmax   pmax
      comp=Z,222nm,3.3s
YAK                                 pmax   pmax
      comp=E,131nm,2.8s
YAK                                 pmax   pmax
      comp=N,60nm,2.3s
YAK                                 smax   smax
      comp=N,172nm,4.9s
YAK                                 smax   smax
      comp=E,144nm,4.8s
YAK                                 MLR    MLR
      comp=Z,5µm,17.0s
YAK                                 MLR    MLR
      comp=E,4µm,17.0s
YAK                                 MLR    MLR
      comp=N,3µm,19.0s
WALA  Waterton Lakes    33.70  74   P      P       12 11 35.5  -0.3
WALA                                IAmb   IAmb    12 12 17.3
      comp=Z,35nm,1.2s
BMO   Blue Mountains    33.73  82   P      P       12 11 36.3  +0.3
BMO                                 IAmb   IAmb    12 11 49.0
      comp=Z,105nm,1.9s
GRNR  Gornyy            33.79 290  iP      P       12 11 35.5  -0.9
GRNR                                pmax   pmax
      comp=Z,40nm,1.1s
GRNR                                MLR    MLR
      comp=E,2µm,17.0s
GRNR                                MLR    MLR
      comp=N,1µm,15.0s
GRNR                                MLR    MLR
      comp=Z,2µm,18.0s
ERM   Erimo             34.14 272   P      P       12 11 39.5  +0.1
ERM   Erimo             34.14 272c iP      P       12 11 39.2  -0.2
ERM                                 pmax   pmax
      comp=Z,85nm,1.1s
ERM   Erimo             34.14 272   P      P       12 11 40.5  +1.1
WVOR  Wild Horse Val    34.24  87   P      P       12 11 41.1  +0.6
PLID  Pearl Lake        34.40  81   P      P       12 11 41.6  -0.3
BEKR  Beckworth         34.70  92   P      P       12 11 44.8  +0.3
BEKR                                IAmb   IAmb    12 12 04.5
      comp=Z,112nm,1.6s
MSO   Missoula          34.74  77   P      P       12 11 45.1  +0.3
      baz=300,SNR=11
CMB   Columbia Colle    35.83  95   P      P       12 11 53.8  -0.3
CMB                                 IAmb   IAmb    12 12 12.5
      comp=Z,35nm,1.1s
RES   Resolute Bay      35.85  26   LR     LR      12 29 30.4
      comp=Z,4µm,19.8s,baz=271,slow=41
RES   Resolute Bay      35.85  26   P      P       12 11 52.3  -1.5
HRY   Holter Researc    36.06  76   P      P       12 11 55.6  -0.5
HLID  Hailey            36.18  82   P      P       12 11 57.5  +0.3
      baz=304,SNR=13
HLID                                S      S       12 17 37.5  +2.2
      baz=304
MCMT  McKenzie Canyo    36.43  80   P      P       12 11 59.6  +0.1
TEY   Ternei            36.44 281⇑eP      P       12 11 55.7  -3.5
TEY                                 pmax   pmax
      comp=Z,20nm,1.1s
TEY                                 pmax   pmax
      comp=E,10.0nm,1.0s
TEY                                 pmax   pmax
      comp=Z,100nm,5.2s
EGMT  Eagleton          36.62  73   P      P       12 11 59.8  -1.1
EGMT                                IAmb   IAmb    12 12 21.7
      comp=Z,83nm,1.1s
EGMT  Eagleton          36.62  73   P      P       12 12 00.8   0.0
      baz=299,SNR=23
EGMT                                S      S       12 17 42.8  +1.0
      baz=299
BOZ   Bozeman (W)       36.75  78   P      P       12 12 00.6  -1.4
BOZ   Bozeman (W)       36.75  78   P      P       12 12 01.9  -0.2
      baz=302,SNR=20
BOZ                                 S      S       12 17 44.3  +0.3
      baz=302
NVAR  Mina Array Bea    36.84  92   P      P       12 12 03.2  +0.2
      comp=Z,14nm,0.8s,baz=294,slow=8.6,SNR=91
NVAR                                PcP    PcP     12 14 24.1  -0.3
      comp=Z,1.9nm,0.8s,baz=319,slow=3.6,SNR=1.9
NVAR                                ScP    ScP     12 18 09.4  +0.5
      comp=Z,1.9nm,1.1s,baz=274,slow=5.4,SNR=3.9
NVAR                                LR     LR      12 26 00.1
      comp=Z,1µm,18.6s,baz=299,slow=34
      comp=Z,14nm,0.8s
NV11  Mina Array Sit    36.93  92   P      P       12 12 04.0  +0.3
OMMB  Old Mammoth Mi    36.94  94   P      P       12 12 04.8  +0.9
OMMB                                IAmb   IAmb    12 12 24.3
      comp=Z,40nm,0.9s
MLAC  Mammoth, Mammo37.03  94   P      P       12 12 07.1  +2.5
      baz=310,SNR=12
KLR   Kul'dur           37.17 290   LR     LR      12 29 00.2
      comp=Z,5µm,18.2s,baz=64,slow=39
KLR   Kul'dur           37.17 290c iP      P       12 12 03.8  -1.6
KLR                                 pmax   pmax
      comp=Z,36nm,1.3s
QLMT  Earthquake Lak    37.28  79   P      P       12 12 06.2  -0.5
ELK   Elko              37.30  87   LR     LR      12 26 02.1
      comp=Z,3µm,19.3s,baz=302,slow=34
EUNU  Eureka            37.31  16   P      P       12 12 07.1  +0.8
PAGB  Antelope Grade    37.41  97   P      P       12 12 08.4  +0.8
PAGB                                IAmb   IAmb    12 12 27.5
      comp=Z,90nm,1.1s
YHL   Hebgen Lake       37.42  79   P      P       12 12 07.3  -0.5
VOG   Valley Oaks Go    37.54  96   P      P       12 12 08.9  +0.3
      baz=311
ZEA   Zeya              37.64 298  eP      P       12 12 07.9  -1.4
ZEA                                e               12 13 40.1
ZEA                                eS      S       12 17 50.8  -6.1
ZEA                                 pmax   pmax
      comp=Z,10.0nm,0.8s
ZEA                                 smax   smax
      comp=N,200nm,8.8s
ZEA                                 smax   smax
      comp=E,400nm,11.6s
ZEA                                 MLR    MLR
      comp=E,2µm,19.0s
ZEA                                 MLR    MLR
      comp=N,1µm,17.0s
ZEA                                 MLR    MLR
      comp=Z,2µm,17.0s
YMR   Madison River     37.65  79   P      P       12 12 09.5  -0.2
YMR                                 IAmb   IAmb    12 12 22.9
      comp=Z,47nm,1.1s
TIN   Tinemaha, Big     37.77  94   P      P       12 12 12.6  +1.9
      baz=310
TIN                                 S      S       12 18 05.0  +5.5
      baz=310
GCMT  Greycliff         37.82  76   P      P       12 12 11.0  -0.1
SMMC  Simmler           37.84  98   P      P       12 12 13.2  +1.9
      baz=312
H17A  Grant Village     38.03  79   P      P       12 12 15.0  +2.0
      baz=303
H17A                                S      S       12 18 09.4  +5.7
      baz=303
VES   Vestal, Richgr    38.04  96   P      P       12 12 13.5  +0.6
      baz=312,SNR=18
VES                                 S      S       12 18 06.8  +3.4
      baz=312
H11N2 WAKE ISLAND Hy 38.12 220   T      T       12 52 54.0
      baz=23
H11N3 WAKE ISLAND Hy 38.13 220   T      T       12 53 29.9
      baz=23,slow=74
H11N1 WAKE ISLAND Hy 38.14 220   T      T       12 53 26.2
      baz=23,slow=74
PKM   Mcpherson Peak    38.24  98   P      P       12 12 15.9  +1.2
      baz=313,SNR=8.7
PKM                                 S      S       12 18 12.1  +5.3
      baz=313
CWC   Cottonwood Cre    38.26  95   P      P       12 12 16.1  +1.2
      baz=311
CWC                                 S      S       12 18 11.3  +4.3
      baz=311
ECR   Eagle Creek       38.30  81   P      P       12 12 14.8  -0.5
RLMT  Red Lodge         38.41  77   P      P       12 12 15.6  -0.6
RLMT  Red Lodge         38.41  77   P      P       12 12 16.6  +0.3
      baz=303,SNR=25
RLMT                                S      S       12 18 10.9  +1.6
      baz=303
SNOW  Snow King Moun    38.44  80   P      P       12 12 16.8  +0.3
ISA   Isabella, Lake    38.53  96   P      P       12 12 17.1   0.0
      baz=312,SNR=14
R11A  Troy Canyon, C    38.55  90   P      P       12 12 17.0  -0.4
R11A                                IAmb   IAmb    12 12 36.4
      comp=Z,100nm,1.4s
R11A  Troy Canyon, C    38.55  90   P      P       12 12 18.2  +0.8
      baz=309,SNR=42
R11A                                S      S       12 18 13.2  +1.6
      baz=309
ARVC  Arvin             38.67  97   P      P       12 12 18.8  +0.6
      baz=312
FURC  Furnace Creek,    38.98  94   P      P       12 12 22.0  +1.2
      baz=311,SNR=40
FURC                                S      S       12 18 22.0  +4.5
      baz=311
TPNV  Topopah Spring    39.04  92   P      P       12 12 22.2  +0.7
      baz=310,SNR=37
OSI   Osito Audit: C    39.08  97   P      P       12 12 22.9  +1.2
      baz=313
OSI                                 S      S       12 18 23.5  +4.2
      baz=313
DUG   Dugway, Tooele    39.11  86   P      P       12 12 22.7  +0.7
      baz=307,SNR=12
DUG                                 S      S       12 18 23.7  +4.0
      baz=307
LRMC  Laurel Mtn Rad    39.13  95   P      P       12 12 22.6  +0.4
      baz=312
H11S1 WAKE ISLAND Hy 39.30 220   P      P       12 12 25.8  +2.4
      baz=23,slow=3.7,SNR=3.4
H11S1                               T      T       12 54 23.0
      baz=24,slow=76,SNR=409
H11S2 WAKE ISLAND Hy 39.32 220   P      P       12 12 26.1  +2.6
      baz=23,slow=3.7,SNR=3.0
H11S2                               T      T       12 54 24.7
      baz=24,slow=76,SNR=295
H11S3 WAKE ISLAND Hy 39.32 220   P      P       12 12 26.4  +2.9
      baz=23,slow=3.7,SNR=3.2
H11S3                               T      T       12 54 50.9
      baz=24,slow=76,SNR=417
EDW2  Edwards Air Fo    39.34  96   P      P       12 12 24.7  +0.8
      baz=312
EDW2                                S      S       12 18 26.0  +2.7
      baz=312
LAO   LASA Array        39.37  73   P      P       12 12 24.0   0.0
      baz=302
LAO                                 S      S       12 18 24.9  +1.5
      baz=302
LAO   LASA Array        39.37  73   P      P       12 12 24.9  +0.9
      baz=302
LAO                                 S      S       12 18 25.2  +1.8
      baz=302
JYT   Yasato            39.52 267   P      P       12 12 24.9  -0.3
JYT                                 IAmb   IAmb    12 12 27.0
      comp=Z,85nm,1.0s
JSD   Sado              39.53 270   P      P       12 12 24.7  -0.7
BW06  Boulder Array     39.56  80   P      P       12 12 25.1  -0.7
BW06                                IAmb   IAmb    12 12 38.2
      comp=Z,170nm,1.9s
BW06  Boulder Array     39.56  80   P      P       12 12 25.6  -0.2
      baz=305,SNR=32
BW06                                S      S       12 18 27.4  +0.8
      baz=305
PD31  Pinedale Array    39.56  80   P      P       12 12 24.9  -0.9
PD31                                IAmb   IAmb    12 12 38.2
      comp=Z,165nm,2.0s
PDAR  Pinedale Array    39.56  80   P      P       12 12 24.9  -0.9
      comp=Z,15nm,0.8s,baz=308,slow=4.9,SNR=86
PDAR                                LR     LR      12 28 00.6
      comp=Z,1µm,18.2s,baz=321,slow=35
      comp=Z,15nm,0.8s
PDAR  Pinedale Array    39.56  80   P      P       12 12 25.5  -0.3
DECC  Green Verdugo     39.56  97   P      P       12 12 26.1  +0.4
      baz=313
DGMT  Dagmar            39.62  70   P      P       12 12 25.5  -0.5
DGMT  Dagmar            39.62  70   P      P       12 12 26.2  +0.3
      baz=301
DGMT                                S      S       12 18 26.9  -0.1
      baz=301
USRK  Ussuriysk Ar.     39.66 283   P      P       12 12 23.9  -2.4
      comp=Z,9.8nm,0.9s,baz=49,slow=8.0,SNR=9.5
USRK                                PcP    PcP     12 14 32.9  +0.2
      comp=Z,4.5nm,0.8s,baz=72,slow=6.2,SNR=4.3
USRK                                LR     LR      12 30 42.4
      comp=Z,3µm,19.2s,baz=61,slow=39
      comp=Z,9.8nm,0.9s
PASC  Pasadena Art C    39.71  97   P      P       12 12 26.9   0.0
PASC                                IAmb   IAmb    12 12 45.4
      comp=Z,151nm,1.9s
SHOC  Shoshone, Teco    39.71  94   P      P       12 12 27.5  +0.6
      baz=311,SNR=17
GSC   Goldstone, Bar    39.79  95   P      P       12 12 27.7  +0.1
GSC                                 IAmb   IAmb    12 12 47.2
      comp=Z,73nm,0.9s
GSC   Goldstone, Bar    39.79  95   P      P       12 12 28.0  +0.4
      baz=312,SNR=26
GSC                                 S      S       12 18 32.9  +3.0
      baz=312
RRX   Edison Barstow    39.95  96   P      P       12 12 30.6  +1.6
      baz=312
BFSC  Mount Baldy Ra    39.98  97   P      P       12 12 30.2  +0.9
      baz=313,SNR=14
BFSC                                S      S       12 18 36.3  +3.3
      baz=313
CIS   Catalina Islan    40.10  98   P      P       12 12 32.0  +1.9
      baz=314
FCC   Fort Churchill    40.19  51   P      P       12 12 30.5   0.0
FCC                                 IAmb   IAmb    12 12 55.2
      comp=Z,80nm,1.2s
TUQ   Turquoise Moun    40.23  94   P      P       12 12 32.6  +1.2
      baz=312
VLA   Vladivostok       40.33 281c iP      P       12 12 31.3  -0.6
VLA                                 pmax   pmax
      comp=Z,41nm,0.9s
HEC   Hector,Ludlow     40.39  95   P      P       12 12 33.3  +0.7
      baz=312
HEC                                 S      S       12 18 41.8  +2.9
      baz=312
BBRC  Big Bear Solar    40.41  96   P      P       12 12 33.9  +0.9
      baz=313
BBRC                                S      S       12 18 42.8  +3.2
      baz=313
MAJO  Matsushiro        40.53 269   P      P       12 12 33.1  -0.5
MAJO                                IAmb   IAmb    12 12 54.2
      comp=Z,63nm,0.9s
MAJO  Matsushiro        40.53 269c iP      P       12 12 33.4  -0.2
MAJO                                pmax   pmax
      comp=Z,31nm,1.0s
MAJO  Matsushiro        40.53 269   P      P       12 12 34.2  +0.6
MJAR  Matsushiro Arr    40.53 269   P      P       12 12 32.9  -0.7
      comp=Z,21nm,1.0s,baz=46,slow=7.5,SNR=25
MJAR                                PcP    PcP     12 14 36.3  +0.7
      comp=Z,0.9nm,0.6s,baz=258,slow=28,SNR=1.9
MJAR                                LR     LR      12 29 08.8
      comp=Z,2µm,21.2s,baz=56,slow=36
      comp=Z,21nm,1.0s
MJAR  Matsushiro Arr    40.53 269   P      P       12 12 32.9  -0.7
MJAR                                IAmb   IAmb    12 12 35.5
      comp=Z,101nm,1.7s
MJB9  Matsu-Tunnel      40.53 269   P      P       12 12 33.1  -0.5
MJB9                                IAmb   IAmb    12 12 54.2
      comp=Z,63nm,0.9s
MURC  Murrieta          40.70  97   P      P       12 12 35.2   0.0
      baz=314
MURC                                S      S       12 18 46.0  +2.6
      baz=314
GMRC  Granite Mounta    40.83  94   P      P       12 12 36.7  +0.4
      baz=312,SNR=10.0
GMRC                                S      S       12 18 47.6  +2.0
      baz=312
MDJ   Mudanjiang        40.85 285   P      P       12 12 34.5  -1.7
MDJ                                 pP     sP      12 12 45.4  -1.0
MDJ                                 sP     pwP     12 12 50.5  +2.8
MDJ                                 S      S       12 18 43.8  -1.6
MDJ                                 pmax   pmax
      comp=Z,17nm,0.7s
MDJ                                 pmax   pmax
      comp=Z,470nm,8.7s
MDJ                                 LR     LR
      comp=Z,2µm,17.4s
MDJ                                 LR     LR
      comp=Z,2µm,18.4s
MDJ                                 LR     LR
      comp=Z,4µm,18.5s
MDJ   Mudanjiang        40.85 285   P      P       12 12 35.7  -0.5
RDMU  Red Mountain      40.85  83   P      P       12 12 36.0  -0.5
RDMU                                IAmb   IAmb    12 12 58.5
      comp=Z,69nm,1.1s
MSHR  Mys Shultsa       41.08 281⇓eP      P       12 12 38.5  +0.4
MSHR                                pmax   pmax
      comp=Z,36nm,1.0s
PFO   Pinyon Flats O    41.14  96   LR     LR      12 26 04.2
      comp=Z,2µm,21.1s,baz=298,slow=31
PFO   Pinyon Flats O    41.14  96   P      P       12 12 39.7  +0.9
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	baz=313,SNR=11						
PFO				S	S	12 18 52.7	+2.5
	baz=313						
BELC	**Belle Mtn. Jos**	41.15	96	P	P	12 12 38.7	-0.3
	baz=313,SNR=11						
BELC				S	S	12 18 51.7	+1.2
	baz=313						
109C	**Camp Elliot, M**	41.24	98	P	P	12 12 39.7	+0.1
109C				IAmb	IAmb	12 12 52.3	
	comp=Z,116nm,1.4s						
109C	**Camp Elliot, M**	41.24	98	P	P	12 12 39.7	+0.1
	baz=314,SNR=6.4						
109C				S	S	12 18 55.2	+3.7
	baz=314						
K22A	**Casper**	41.45	78	P	P	12 12 40.3	-1.1
	baz=306,SNR=8.4						
K22A				S	S	12 18 54.1	-0.6
	baz=306						
K22A	**Casper**	41.45	78	P	P	12 12 40.9	-0.5
	baz=306,SNR=8.4						
K22A				S	S	12 18 54.2	-0.4
	baz=306						
NEE2	**Needles Airpor**	41.47	94	P	P	12 12 42.0	+0.5
	baz=312						
NEE2				S	S	12 18 58.1	+3.2
	baz=312						
BNX	**BinXian**	41.51	287	⇑P	P	12 12 39.4	-2.2
BNX				pmax	pmax		
	comp=Z,71nm,1.0s						
BNX				pmax	pmax		
	comp=Z,580nm,5.7s						
IRM	**Iron Mountain**	41.56	95	P	P	12 12 42.7	+0.5
	baz=313,SNR=12						
IRM				S	S	12 18 59.1	+2.8
	baz=313						
MONP2	**Monument Peak**	41.66	97	P	P	12 12 44.2	+1.0
	baz=314,SNR=8.7						
MONP2				S	S	12 19 02.4	+4.4
	baz=314						
W13A	**Hualapai Mount**	41.70	93	P	P	12 12 43.3	-0.2
BC3	**Big Chuckawall**	41.72	96	P	P	12 12 44.2	+0.6
	baz=313						
CBX	**Cerro Bola**	41.91	98	P	P	12 12 45.5	+0.3
O20A	**White River Ci**	41.92	83	P	P	12 12 45.0	-0.2
	baz=308,SNR=28						
O20A				S	S	12 19 01.5	-0.3
	baz=308						
SWSC	**Sam W. Stewart**	42.00	97	P	P	12 12 46.4	+0.7
	baz=314						
SWSC				S	S	12 19 05.5	+2.9
	baz=314						
IKP	**In-Ko-Pah, Jac**	42.01	97	P	P	12 12 47.2	+1.2
	baz=314						
INU	**Inuyama**	42.04	268	P	P	12 12 46.6	+0.6
RSSD	**Black Hills**	42.07	75	P	P	12 12 45.4	-1.1
RSSD	**Black Hills**	42.07	75	P	P	12 12 45.5	-1.0
	baz=305						
RSSD	**Black Hills**	42.07	75	P	P	12 12 45.6	-0.9
	baz=305						
RSSD				S	S	12 19 02.0	-1.9
	baz=305						
PDMCI	**Parker Dam,Lak**	42.08	94	P	P	12 12 47.5	+1.1
	baz=313						
PDMCI				S	S	12 19 06.3	+2.6
	baz=313						
YUH	**Yuha Desert**	42.13	97	P	P	12 12 47.0	+0.2
BLYC	**Blythe**	42.22	95	P	P	12 12 47.4	-0.2
BLYC				IAmb	IAmb	12 12 59.9	
	comp=Z,92nm,1.4s						
PV23	**Carpenter Ridg**	42.50	85	P	P	12 12 49.5	-0.6
PV23				IAmb	IAmb	12 13 03.0	
	comp=Z,45nm,1.0s						
GLA	**Glamis**	42.51	96	P	P	12 12 50.2	+0.2
GLA				IAmb	IAmb	12 13 02.5	
	comp=Z,76nm,1.4s						
GLA	**Glamis**	42.51	96	P	P	12 12 50.7	+0.7
	baz=314						
GLA				S	S	12 19 13.2	+2.9
	baz=314						
BOD	**Bodaibo**	42.52	309	*e*P	P	12 12 48.1	-1.6
BOD				pmax	pmax		
	comp=Z,39nm,1.1s						
MDND	**Maddock**	42.56	68	P	P	12 12 50.5	+0.4
	baz=303						
N23A	**Red Feather La**	42.84	80	P	P	12 12 52.2	-0.6
N23A				IAmb	IAmb	12 13 11.3	
	comp=Z,79nm,1.4s						
N23A	**Red Feather La**	42.84	80	P	P	12 12 52.6	-0.3
	baz=308,SNR=12						
N23A				S	S	12 19 16.6	+1.1
	baz=308						
WUAZ	**Wupatki**	42.95	90	P	P	12 12 54.5	+0.8
	baz=312,SNR=10.0						
WUAZ				S	S	12 19 19.2	+2.1
	baz=312						
ULM	**Lac du Bonnet**	43.33	63	P	P	12 12 55.0	-1.4
	comp=Z,6.4nm,0.7s,baz=304,slow=8.3,SNR=6.7						
ULM				LR	LR	12 30 51.7	
	comp=Z,2µm,21.5s,baz=308,slow=36						
	comp=Z,6.4nm,0.7s						
MVCO	**Mesa Verde**	43.60	86	P	P	12 12 58.3	-0.7
MVCO				IAmb	IAmb	12 13 57.3	
	comp=Z,48nm,1.3s						
MVCO	**Mesa Verde**	43.60	86	P	P	12 12 58.9	-0.1
	baz=310,SNR=15						
MVCO				S	S	12 19 28.8	+2.1
	baz=310						
ISCO	**Idaho Springs**	43.71	81	P	P	12 12 59.6	-0.4
ISCO	**Idaho Springs**	43.71	81	P	P	12 13 00.1	+0.2
	baz=308,SNR=12						
ISCO	**Idaho Springs**	43.71	81	P	P	12 13 00.1	+0.2
	baz=308,SNR=12						
ISCO				S	S	12 19 31.1	+2.8
	baz=308						
CN2	**Changchun**	43.76	286	*e*P	P	12 12 58.5	-1.3
CN2				*e*S	S	12 19 33.4	+5.2
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				pmax	pmax		
	comp=Z,500nm,9.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,4µm,21.0s						
W18A	**Petrified Fore**	44.22	89	P	P	12 13 04.6	+0.7
	baz=312						
W18A				S	S	12 19 39.5	+3.9
	baz=312						
S22A	**4UR Ranch, Cre**	44.27	84	P	P	12 13 04.6	+0.1
	baz=310,SNR=26						
S22A				S	S	12 19 40.1	+3.5
	baz=310						
AGMN	**Agassiz Nation**	44.40	65	P	P	12 13 03.4	-1.6
AGMN	**Agassiz Nation**	44.40	65	P	P	12 13 04.3	-0.7
	baz=304,SNR=7.2						
AGMN				S	S	12 19 36.3	-1.3
	baz=304						
AGMN	**Agassiz Nation**	44.40	65	P	P	12 13 04.0	-1.0
	baz=304,SNR=7.2						
AGMN				S	S	12 19 36.4	-1.2
	baz=304						
X18A	**Snowflake**	44.48	90	P	P	12 13 06.6	+0.6
214A	**Organ Pipe Nat**	44.50	95	P	P	12 13 06.8	+0.9
	baz=314,SNR=8.0						
214A				S	S	12 19 43.0	+3.6
	baz=314						
Q24A	**Divide**	44.52	82	P	P	12 13 06.2	-0.3
	baz=309						
Q24A				S	S	12 19 42.3	+2.2
	baz=309						
JCJ	**Chichijima**	44.75	255	LR	LR	12 29 33.3	
	comp=Z,1µm,22.0s,baz=50,slow=33						
SUSD	**Miller**	44.86	72	P	P	12 13 07.9	-0.7
	baz=306						
SUSD				S	S	12 19 43.1	-1.2
	baz=306						
SDCO	**Great Sand Dun**	45.08	83	P	P	12 13 10.5	-0.4
SDCO				IAmb	IAmb	12 13 24.2	
	comp=Z,34nm,1.1s						
SDCO	**Great Sand Dun**	45.08	83	P	P	12 13 10.8	-0.1
	baz=310,SNR=26						
SDCO				S	S	12 19 50.5	+2.3
	baz=310						
SDCO	**Great Sand Dun**	45.08	83	P	P	12 13 10.9	0.0
	baz=310,SNR=26						
SDCO				S	S	12 19 51.2	+3.0
	baz=310						
OGNE	**Ogallala**	45.15	77	P	P	12 13 12.7	+1.5
	baz=308						
OGNE				S	S	12 19 50.2	+1.4
	baz=308						
NOR	**Nord**	45.21	6	*i* P	P	12 13 09.8	-1.2
NOR				IAmb	IAmb	12 13 38.8	
	comp=Z,2.7nm,0.7s						
SEHB	**SEOHWA**	45.48	278	P	P	12 13 13.8	+0.1
TUC	**Tucson**	45.49	93	P	P	12 13 15.0	+1.1
	baz=314						
TUC				S	S	12 19 57.1	+3.3
	baz=314						
B35A	**Bob, Littlefor**	45.55	64	P	P	12 13 12.7	-1.4
B35A	**Bob, Littlefor**	45.55	64	P	P	12 13 12.9	-1.1
	baz=304,SNR=8.2						
B35A				S	S	12 19 51.8	-2.3
	baz=304						
F33A	**5 Mile Ranch,**	45.56	68	S	S	12 19 52.0	-2.4
	baz=306						
KSCO	**Kaye Shedlock'**	46.01	80	P	P	12 13 17.6	-0.4
KSCO	**Kaye Shedlock'**	46.01	80	P	P	12 13 18.2	+0.2
	baz=310,SNR=6.1						
KSCO	**Kaye Shedlock'**	46.01	80	P	P	12 13 18.0	0.0
	baz=310,SNR=6.1						
KSCO				S	S	12 20 02.8	+1.6
	baz=310						
SNY	**Shenyang**	46.04	285	⇑P	P	12 13 18.1	+0.1
SNY				pmax	pmax		
	comp=Z,66nm,1.5s						
SNY				pmax	pmax		
	comp=Z,920nm,4.9s						
SNY				LR	LR		
	comp=Z,3µm,17.3s						
SNY				LR	LR		
	comp=Z,2µm,19.6s						
SNY				LR	LR		
	comp=Z,4µm,17.6s						
T25A	**Trinidad**	46.13	83	P	P	12 13 18.6	-0.5
T25A	**Trinidad**	46.13	83	P	P	12 13 19.4	+0.3
	baz=311,SNR=33						
T25A				S	S	12 20 06.9	+3.7
	baz=311						
KSRS	**Korea Array**	46.20	277	P	P	12 13 19.4	+0.1
	comp=Z,46nm,1.0s,baz=58,slow=7.4,SNR=64						
KSRS				PcP	PcP	12 14 55.7	+1.0
	comp=Z,1.4nm,0.9s,baz=90,slow=29,SNR=2.5						
KSRS				LR	LR	12 31 12.5	
	comp=Z,1µm,20.9s,baz=60,slow=34						
	comp=Z,46nm,1.0s						
KSAR	**Wonju Array Be**	46.23	278	P	P	12 13 18.9	-0.7
ANMO	**Albuquerque**	46.34	87	LR	LR	12 30 44.5	
	comp=Z,2µm,19.8s,baz=314,slow=34						
ANMO	**Albuquerque**	46.34	87	P	P	12 13 19.9	-0.8
ANMO	**Albuquerque**	46.34	87	*ce*P	P	12 13 20.8	+0.1
ANMO				pmax	pmax		
	comp=Z,30nm,1.7s						
ANMO	**Albuquerque**	46.34	87	P	P	12 13 20.4	-0.4
	baz=312,SNR=16						
ANMO				S	S	12 20 07.0	+0.8
	baz=312						
ANMO	**Albuquerque**	46.34	87	P	P	12 13 21.1	+0.4
	baz=312						
ANMO				S	S	12 20 07.7	+1.5
	baz=312						
ECSD	**EROS Data Cent**	46.63	71	P	P	12 13 20.3	-2.4
ECSD	**EROS Data Cent**	46.63	71	P	P	12 13 21.2	-1.5
	baz=307,SNR=16						
ECSD				S	S	12 20 07.5	-2.4
	baz=307						
ECSD	**EROS Data Cent**	46.63	71	P	P	12 13 21.2	-1.5
	baz=307,SNR=16						
ECSD				S	S	12 20 07.6	-2.3
	baz=307						
Y22D	**IRIS PASSCAL I**	46.64	88	P	P	12 13 23.4	+0.3
	baz=313						
NRIK	**Noril'sk**	46.65	332	P	P	12 13 21.9	-0.5
	comp=Z,10nm,1.1s,baz=69,slow=6.6,SNR=23						
NRIK				LR	LR	12 35 52.2	
	comp=Z,4µm,19.4s,baz=68,slow=40						
	comp=Z,10nm,1.1s						
NRIK	**Noril'sk**	46.65	332	P	P	12 13 21.8	-0.7
NRIK				IAmb	IAmb	12 13 52.4	
	comp=Z,30nm,1.2s						
NRIK	**Noril'sk**	46.65	332	*ce*P	P	12 13 22.2	-0.3
NRIK				pmax	pmax		
	comp=Z,30nm,1.4s						
Y22A	**Socorro**	46.70	88	P	P	12 13 23.9	+0.3
	baz=313,SNR=21						
BNM	**Barren Site**	46.77	88	P	P	12 13 23.5	-0.6
INCN	**Inchon**	46.96	278	P	P	12 13 26.3	+0.9
EYMN	**Ely**	47.01	63	P	P	12 13 24.5	-1.1
EYMN				IAmb	IAmb	12 13 40.4	
	comp=Z,24nm,0.9s						
EYMN	**Ely**	47.01	63	P	P	12 13 24.2	-1.4
	baz=306,SNR=8.3						
EYMN				S	S	12 20 12.5	-2.6
	baz=306						
EYMN	**Ely**	47.01	63	P	P	12 13 24.9	-0.7
	baz=306,SNR=8.3						
EYMN				S	S	12 20 13.0	-2.1
	baz=306						
F36A	**Milaca**	47.11	67	P	P	12 13 24.5	-1.9
	baz=307,SNR=7.0						
121A	**Cookes Peak, D**	47.16	90	P	P	12 13 27.3	+0.1
	baz=314,SNR=10						
121A	**Cookes Peak, D**	47.16	90	P	P	12 13 27.6	+0.4
	baz=314,SNR=10						
BGNE	**Belgrade**	47.16	74	P	P	12 13 26.2	-0.7
	baz=309						
BGNE				S	S	12 20 17.0	-0.5
	baz=309						
TJN	**Taejon**	47.24	277	⇓*e*P	P	12 13 28.2	+0.7
TJN	**Taejon**	47.24	277	P	P	12 13 28.3	+0.7
JNU	**Nakatsue**	47.29	271	P	P	12 13 28.5	+0.5
L34A	**Svendsen Farm,**	47.86	73	P	P	12 13 30.8	-1.4
	baz=309						
CBKS	**Cedar Bluff**	47.87	78	P	P	12 13 31.2	-1.2
	baz=310,SNR=6.7						
CBKS				S	S	12 20 26.1	-1.5
	baz=310						
CBKS	**Cedar Bluff**	47.87	78	P	P	12 13 32.2	-0.2
	baz=310,SNR=6.7						
CBKS				S	S	12 20 29.4	+1.8
	baz=310						
SPMN	**Marine on St.**	47.90	67	P	P	12 13 31.4	-1.2
	baz=307						
SPMN				S	S	12 20 25.7	-2.1
	baz=307						
SPMN	**Marine on St.**	47.90	67	S	S	12 20 26.6	-1.3
	baz=307						
N33B	**J Bar K, Exete**	48.00	75	S	S	12 20 27.3	-2.0
	baz=309						
I37A	**Lemond, Waseca**	48.30	69	P	P	12 13 34.1	-1.5
I37B	**Waseca**	48.30	69	P	P	12 13 34.5	-1.2
	baz=308,SNR=13						
FRB	**Frobisher Bay**	48.35	36	LR	LR	12 36 14.1	
	comp=Z,5µm,19.6s,baz=298,slow=39						
R32A	**Long Quarter,**	48.73	78	P	P	12 13 38.3	-0.8
	baz=311,SNR=6.1						
R32A				S	S	12 20 39.3	-0.5
	baz=311						
KBS	**Kingsbay**	48.78	0	⇑*e*P	P	12 13 41.2	+2.3
KBS				pmax	pmax		
	comp=Z,45nm,1.6s						
N35A	**Tabor**	48.98	73	S	S	12 20 40.9	-2.3
	baz=310						
DL2	**Dalian**	49.04	283	P	P	12 13 39.6	-1.7
DL2				S	S	12 20 46.8	+2.8
DL2				pmax	pmax		
	comp=Z,35nm,1.1s						
DL2				pmax	pmax		
	comp=Z,430nm,3.9s						
DL2				LR	LR		
	comp=Z,2µm,16.5s						
DL2				LR	LR		
	comp=Z,950nm,15.9s						
DL2				LR	LR		
	comp=Z,2µm,17.9s						
XLT	**XiLinHaoTe**	49.10	292	⇑*i*P	P	12 13 42.0	+0.1
XLT				sP	pwP	12 13 54.8	+1.3
XLT				S	S	12 20 45.0	+0.1
XLT				sS	sS	12 21 00.6	+3.0
XLT				pmax	pmax		
	comp=Z,32nm,1.0s						
XLT				LR	LR		
	comp=Z,3µm,19.2s						
XLT				LR	LR		
	comp=Z,4µm,19.4s						
MNTX	**Cornudas Mount**	49.21	89	P	P	12 13 42.6	-0.2
MNTX				IAmb	IAmb	12 14 01.8	
	comp=Z,81nm,1.4s						
MNTX	**Cornudas Mount**	49.21	89	P	P	12 13 42.9	+0.1
	baz=314,SNR=40						
MNTX	**Cornudas Mount**	49.21	89	P	P	12 13 42.9	+0.1
	baz=314,SNR=40						
MNTX				S	S	12 20 50.9	+4.3
	baz=314						
MSTX	**Muleshoe**	49.24	85	P	P	12 13 42.8	-0.3
	baz=313,SNR=20						
MSTX	**Muleshoe**	49.24	85	P	P	12 13 42.6	-0.5
	baz=313,SNR=20						
MSTX				S	S	12 20 48.9	+1.7
	baz=313						
AMTX	**Amarillo**	49.28	83	P	P	12 13 42.9	-0.5
	baz=312						
AMTX	**Amarillo**	49.28	83	P	P	12 13 43.0	-0.5
	baz=312						
AMTX				S	S	12 20 49.7	+2.0
	baz=312						
G40A	**Rib Lake**	49.33	66	S	S	12 20 44.8	-3.2
	baz=308						
DAG	**Danmarks Havn**	49.48	9	*i* P	P	12 13 41.9	-2.4
DAG				IAmb	IAmb	12 13 43.9	
	comp=Z,12nm,0.9s						
SPITS	**Spitsbergen Ar**	49.51	359	LR	LR	12 35 50.9	
	comp=Z,2µm,19.2s,baz=294,slow=38						
KSU1	**Kansas State U**	49.54	76	S	S	12 20 47.9	-3.2
	baz=310						
KSU1	**Kansas State U**	49.54	76	P	P	12 13 43.6	-1.6
	baz=310						
KSU1				S	S	12 20 48.9	-2.1
	baz=310						
SCIA	**State Center**	49.73	71	P	P	12 13 45.3	-1.3
	baz=309,SNR=7.1						
SCIA				S	S	12 20 51.9	-1.7
	baz=309						
U32A	**Winter Ranch,**	49.90	80	S	S	12 20 55.3	-0.9
	baz=312						
I40A	**Norwalk**	49.95	67	P	P	12 13 46.8	-1.5
I40A				IAmb	IAmb	12 14 00.1	
	comp=Z,59nm,1.4s						
I40A	**Norwalk**	49.95	67	S	S	12 20 54.5	-2.3
	baz=309						
F42A	**Maple Grove Fa**	50.17	64	S	S	12 20 57.9	-1.7
	baz=308						
IRK	**Irkutsk**	50.24	307	*e*P	P	12 13 49.1	-1.3
IRK				pmax	pmax		
	comp=Z,105nm,2.4s						
SUMG	**Summit**	50.36	18	P	P	12 13 50.9	-0.6
SUMG				IAmb	IAmb	12 13 52.6	
	comp=Z,78nm,1.2s						
SUMG	**Summit**	50.36	18	*i* P	P	12 13 49.9	-1.5
SUMG				IAmb	IAmb	12 13 52.7	
	comp=Z,23nm,0.8s						
E43A	**Lone Tree Farm**	50.40	63	S	S	12 21 01.3	-1.6
	baz=308						
N38A	**Joes South For**	50.43	72	P	P	12 13 50.4	-1.5
	baz=310						
N38A				S	S	12 21 01.1	-2.3
	baz=310						
L40A	**Anamosa**	50.77	69	P	P	12 13 52.6	-1.9
	baz=310,SNR=6.8						
JFWS	**Jewell Farm**	50.78	68	S	S	12 21 05.0	-3.2
	baz=310						
JFWS	**Jewell Farm**	50.78	68	S	S	12 21 04.8	-3.5
	baz=310						
I42A	**Draeger Farm,**	50.91	66	S	S	12 21 08.4	-1.6
	baz=309						
P38A	**Dawn**	51.01	73	P	P	12 13 54.8	-1.5
	baz=311,SNR=13						
P38A				S	S	12 21 07.7	-3.8
	baz=311						
T35B	**Sooner Cattle**	51.04	78	P	P	12 13 55.1	-1.4
	baz=312						
T35B				S	S	12 21 09.0	-3.0
	baz=312						
WMOK	**Wichita Mounta**	51.14	81	P	P	12 13 56.6	-0.8
	baz=313,SNR=19						
WMOK	**Wichita Mounta**	51.14	81	P	P	12 13 56.7	-0.6
	baz=313,SNR=19						
WMOK				S	S	12 21 14.7	+1.3
	baz=313						
BJI	**Beijing**	51.51	288	P	P	12 13 59.8	-0.2
BJI				pP	sP	12 14 09.1	-1.3
BJI				sP	pwP	12 14 12.0	+0.4
BJI				PP	PP	12 15 57.5	+0.4
BJI				S	S	12 21 17.5	-0.8
BJI				SS	SS	12 24 47.1	-6.8
BJI				pmax	pmax		
	comp=Z,23nm,1.0s						
BJI				pmax	pmax		
	comp=Z,580nm,4.8s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
BJI				LR	LR		
	comp=Z,3µm,17.6s						
BJI				LR	LR		
	comp=Z,4µm,17.5s						
ULN	**Ulaanbaatar**	51.55	301	P	P	12 13 59.7	-0.7
ULN	**Ulaanbaatar**	51.55	301	*c i*P	P	12 14 00.0	-0.4
ULN				pmax	pmax		
	comp=Z,27nm,1.0s						
DBG	**Daneborg**	51.58	11	*i* P	P	12 13 57.4	-2.7
DBG				IAmb	IAmb	12 13 59.2	
	comp=Z,16nm,0.7s						
L42A	**Oliver, Polo**	51.70	68	P	P	12 14 00.1	-1.4
LPIG	**La Paz**	51.71	100	LR	LR	12 30 47.4	
	comp=Z,562nm,20.6s,baz=316,slow=30						
X34A	**Smith Ranch, M**	51.80	81	P	P	12 14 03.4	+1.1
X34A				IAmb	IAmb	12 14 15.8	
	comp=Z,136nm,1.9s						
SFJD	**Kangerlussuaq**	51.85	26	LR	LR	12 38 24.1	
	comp=Z,2µm,19.3s,baz=316,slow=39						
E46A	**Sault Ste Mari**	51.86	61	P	P	12 14 01.5	-1.1
	baz=310						
ZAK	**Zakamensk**	51.88	306	*e*P	P	12 14 01.4	-1.5
ZAK				pmax	pmax		
	comp=Z,46nm,1.6s						
SONM	**Songino Array**	51.91	301	P	P	12 14 02.0	-1.2
	comp=Z,23nm,1.1s,baz=55,slow=7.0,SNR=74						
SONM				PcP	PcP	12 15 16.8	+1.3
	comp=Z,4.8nm,0.8s,baz=53,slow=2.4,SNR=1.9						
SONM				ScP	ScP	12 19 11.9	+1.8
	comp=Z,0.5nm,0.4s,baz=124,slow=44,SNR=3.1						
SONM				LR	LR	12 36 45.1	
	comp=Z,2µm,19.8s,baz=53,slow=37						
	comp=Z,23nm,1.1s						
SONM	**Songino Array**	51.91	301	P	P	12 14 03.1	0.0
SONM				IAmb	IAmb	12 14 04.5	
	comp=Z,54nm,1.4s						
TX31	**Lajitas Ar. Si**	51.92	90	P	P	12 14 02.6	-0.8
TX31	**Lajitas Ar. Si**	51.92	90	P	P	12 14 03.0	-0.4
	baz=316,SNR=21						
TX32	**Lajitas Array**	51.92	90	P	P	12 14 02.6	-0.8
TXAR	**Lajitas Array**	51.92	90	P	P	12 14 03.0	-0.4
	comp=Z,21nm,0.8s,baz=297,slow=5.5,SNR=134						
TXAR				ScP	ScP	12 19 12.2	+1.9
	comp=Z,0.1nm,0.4s,baz=253,slow=25,SNR=2.6						
TXAR				LR	LR	12 33 48.1	
	comp=Z,1µm,20.2s,baz=322,slow=33						
	comp=Z,21nm,0.8s						
TXAR	**Lajitas Array**	51.92	90	P	P	12 14 03.0	-0.4
P40A	**Paris**	51.94	72	P	P	12 14 01.2	-2.0
P40A	**Paris**	51.94	72	P	P	12 14 01.6	-1.7
	baz=311,SNR=15						
P40A				S	S	12 21 20.0	-4.3
	baz=311						
K43A	**Burlington**	52.00	67	S	S	12 21 22.3	-2.7
	baz=310						
ABTX	**Abilene, Hawle**	52.06	84	P	P	12 14 03.3	-1.0
	baz=314,SNR=13						
ABTX				S	S	12 21 26.3	0.0
	baz=314						
ABTX	**Abilene, Hawle**	52.06	84	P	P	12 14 03.9	-0.4
	baz=314,SNR=13						
ABTX				S	S	12 21 26.3	0.0
	baz=314						
TUL1	**Leonard**	52.14	78	P	P	12 14 03.9	-0.9
	baz=313						
MOY	**Mondy**	52.19	308	*e*P	P	12 14 05.1	0.0
MOY				pmax	pmax		
	comp=Z,47nm,1.4s						

L44A	Lake County Fo	52.57	67	S	S	12 21 30.8	-2.1
	baz=311						
R40A	Maddies Statio	52.63	74	P	P	12 14 06.0	-2.4
	baz=312,SNR=8.6						
HDIL	Hopedale	52.85	70	P	P	12 14 08.3	-1.7
	baz=311,SNR=7.1						
HDIL	Hopedale	52.85	70	P	P	12 14 08.2	-1.7
	baz=311,SNR=7.1						
HDIL				S	S	12 21 34.7	-2.0
	baz=311						
ICESG	Greenland Ices	52.91	21	*i* P	P	12 14 08.1	-2.3
ICESG				IAmb	IAmb	12 14 09.9	
	comp=Z,14nm,0.7s						
HHAR	Hobbs	52.99	77	P	P	12 14 09.5	-1.6
HHAR	Hobbs	52.99	77	P	P	12 14 08.9	-2.2
	baz=313						
X37A	Clayton	53.29	79	P	P	12 14 12.4	-1.0
X37A				IAmb	IAmb	12 14 35.5	
	comp=Z,32nm,1.0s						
X37A	Clayton	53.29	79	P	P	12 14 12.9	-0.4
	baz=313,SNR=11						
JOW	Kunigami	53.33	267	LR	LR	12 36 10.3	
	comp=Z,685nm,20.9s,baz=84,slow=35						
JOW	Kunigami	53.33	267	P	P	12 14 13.1	-0.6
JOW	Kunigami	53.33	267	P	P	12 14 14.6	+0.9
P43A	Skaggs, Pawnee	53.33	71	P	P	12 14 11.9	-1.6
	baz=312,SNR=5.8						
P43A				S	S	12 21 40.3	-2.9
	baz=312						
CCM	Cathedral Cave	53.39	73	P	P	12 14 12.0	-2.0
CCM				IAmb	IAmb	12 15 32.9	
	comp=Z,45nm,1.6s						
CCM	Cathedral Cave	53.39	73	P	P	12 14 11.7	-2.3
	baz=312,SNR=6.3						
CCM				S	S	12 21 38.1	-6.0
	baz=312						
CCM	Cathedral Cave	53.39	73	P	P	12 14 11.2	-2.8
	baz=312						
CCM				S	S	12 21 39.7	-4.4
	baz=312						
DY2G	Dye2	53.39	25	*i* P	P	12 14 13.5	-0.4
DY2G				IAmb	IAmb	12 14 20.0	
	comp=Z,8.9nm,0.5s						
MGMO	Mountain Grove	53.39	75	P	P	12 14 11.8	-2.3
JCT	Junction City	53.47	86	P	P	12 14 13.8	-0.9
JCT	Junction City	53.47	86	P	P	12 14 13.4	-1.3
	baz=315,SNR=17						
JCT	Junction City	53.47	86	P	P	12 14 13.4	-1.3
	baz=315,SNR=17						
JCT				S	S	12 21 44.9	-0.6
	baz=315						
TIA	Tai'an	53.50	284	⇑P	P	12 14 14.5	-0.4
TIA				PcS	PcS	12 19 21.0	+0.5
TIA				S	S	12 21 48.6	+2.9
TIA				ScS	ScS	12 24 03.9	+1.8
TIA				pmax	pmax		
	comp=Z,53nm,1.1s						
TIA				pmax	pmax		
	comp=Z,500nm,7.5s						
TIA				LR	LR		
	comp=Z,850nm,16.9s						
TIA				LR	LR		
	comp=Z,2µm,18.8s						
TIA				LR	LR		
	comp=Z,2µm,18.2s						
SLM	Saint Louis	53.59	72	S	S	12 21 42.8	-4.0
	baz=312						
U40A	Yellville	53.59	76	P	P	12 14 13.0	-2.5
	baz=313,SNR=8.6						
U40A				P	P	12 14 13.0	-2.5
	baz=313,SNR=8.6						
U40A				S	S	12 21 41.5	-5.4
	baz=313						
U40A				S	S	12 21 41.5	-5.4
	baz=313						
U40A	Yellville	53.59	76	P	P	12 14 13.2	-2.3
	baz=313,SNR=8.6						
U40A				S	S	12 21 42.0	-4.9
	baz=313						
O44A	Mansfield	53.59	69	S	S	12 21 44.4	-2.4
	baz=312						
HHC	Hu-ho-hao-te	53.62	292	*e*P	P	12 14 16.3	+0.5
HHC				pP	pP	12 14 24.3	+0.7
HHC				S	S	12 21 51.4	+4.0
HHC				sS	sS	12 22 04.1	+3.9
HHC				pmax	pmax		
	comp=Z,91nm,1.1s						
HHC				LR	LR		
	comp=Z,5µm,15.9s						
HHC				LR	LR		
	comp=Z,3µm,22.0s						
HHC				LR	LR		
	comp=Z,7µm,17.4s						
W39A	Magazine	53.83	78	P	P	12 14 15.2	-2.0
	baz=313,SNR=6.7						
W39A	Magazine	53.83	78	P	P	12 14 16.1	-1.2
	baz=313,SNR=6.7						
W39A				S	S	12 21 48.2	-1.9
	baz=313						
WHTX	Lake Whitney,	53.83	83	P	P	12 14 16.5	-0.8
WHTX	Lake Whitney,	53.83	83	P	P	12 14 17.2	-0.2
	baz=314,SNR=6.1						
WHTX				S	S	12 21 49.3	-0.9
	baz=314						
WHTX	Lake Whitney,	53.83	83	P	P	12 14 17.2	-0.2
	baz=314,SNR=6.1						
WHTX				S	S	12 21 51.3	+1.1
	baz=314						
FVM	French Village	53.91	73	P	P	12 14 15.6	-2.2
	baz=312,SNR=7.3						
HNS	HongShan	54.12	287	⇑P	P	12 14 20.0	+0.7
HNS				PP	PP	12 16 26.0	+5.2
HNS				S	S	12 21 58.3	+4.3
HNS				ScS	ScS	12 24 06.3	-0.1
HNS				pmax	pmax		
	comp=Z,130nm,1.3s						
HNS				pmax	pmax		
	comp=Z,790nm,4.5s						
HNS				LR	LR		
	comp=Z,1µm,19.2s						
HNS				LR	LR		
	comp=Z,2µm,17.1s						
HNS				LR	LR		
	comp=Z,3µm,17.9s						
SFIN	Lafayette	54.22	68	P	P	12 14 15.9	-4.2
	baz=312						
SFIN				S	S	12 21 53.2	-2.1
	baz=312						
VLDQ	Val d'Or	54.29	56	P	P	12 14 17.5	-2.9
FCAR	Ozark Folk Cen	54.34	76	P	P	12 14 19.0	-2.0
FCAR				IAmb	IAmb	12 14 38.2	
	comp=Z,19nm,0.8s						
MIAR	Mount Ida	54.40	78	P	P	12 14 20.2	-1.2
MIAR				IAmb	IAmb	12 14 35.8	
	comp=Z,40nm,1.2s						
MIAR	Mount Ida	54.40	78	P	P	12 14 20.4	-1.0
	baz=314,SNR=15						
MIAR	Mount Ida	54.40	78	P	P	12 14 20.6	-0.8
	baz=314,SNR=15						
SSE	Sheshan	54.60	276	P	P	12 14 23.5	+0.6
SSE				S	S	12 21 54.4	-6.1
SSE				pmax	pmax		
	comp=Z,66nm,1.6s						
SSE				pmax	pmax		
	comp=Z,490nm,4.8s						
SSE				LR	LR		
	comp=Z,460nm,24.5s						
SSE				LR	LR		
	comp=Z,330nm,19.9s						
435B	Jarrell	54.60	84	P	P	12 14 22.9	-0.1
	baz=315,SNR=5.5						
435B	Jarrell	54.60	84	P	P	12 14 22.8	-0.2
	baz=315						
435B				S	S	12 22 02.7	+2.0
	baz=315						
BTO	Baotou	54.66	292	*e*P	P	12 14 23.3	-0.1
BTO				S	S	12 22 01.8	+0.4
N47A	Urbana	54.68	67	P	P	12 14 21.4	-2.0
	baz=312						
N47A				P	P	12 14 21.4	-2.0
	baz=312						
SCHQ	Schefferville	54.73	44	P	P	12 14 22.8	-0.8
	comp=Z,12nm,0.9s,baz=310,slow=8.7,SNR=13						
SCHQ				LR	LR	12 40 18.3	
	comp=Z,3µm,18.1s,baz=317,slow=39						
	comp=Z,12nm,0.9s						
SCHQ	Schefferville	54.73	44	P	P	12 14 23.8	+0.2
SCHQ				IAmb	IAmb	12 14 47.4	
	comp=Z,29nm,0.9s						
OLIL	Olney	54.76	71	P	P	12 14 22.4	-1.6
	baz=313,SNR=5.9						
LCAR	Lake Charles	54.79	75	P	P	12 14 22.4	-1.8
LCAR	Lake Charles	54.79	75	P	P	12 14 21.7	-2.5
	baz=313						
S44A	Carbondale	54.79	72	P	P	12 14 22.4	-1.8
	baz=313						
SCO	Scoresbysund	54.86	13	*i* P	P	12 14 23.0	-1.2
SCO				IAmb	IAmb	12 14 49.9	
	comp=Z,9.1nm,0.7s						
X40A	Basin Creek Fa	54.88	78	P	P	12 14 24.6	-0.3
	baz=314						
X40A				S	S	12 22 02.0	-2.2
	baz=314						
TIY	Taiyuan	55.23	288	P	P	12 14 28.0	+0.5
TIY				PP	PP	12 16 32.6	+1.8
TIY				S	S	12 22 14.8	+5.7
TIY				pmax	pmax		
	comp=Z,500nm,9.3s						
TIY				LR	LR		
	comp=Z,2µm,17.9s						
TIY				LR	LR		
	comp=Z,2µm,15.8s						
TIY				LR	LR		
	comp=Z,2µm,17.9s						
833A	Chaparral WMA,	55.25	88	P	P	12 14 27.3	-0.4
	baz=316,SNR=12						
833A	Chaparral WMA,	55.25	88	P	P	12 14 27.3	-0.4
	baz=316,SNR=12						
833A				S	S	12 22 10.0	+0.5
	baz=316						
WLAR	White Oak Lake	55.27	78	P	P	12 14 26.9	-0.7
SOEG	Soedalen	55.33	18	*i* P	P	12 14 24.5	-3.2
SOEG				IAmb	IAmb	12 14 37.0	
	comp=Z,10nm,0.6s						
NJ2	Nanjing	55.34	279	⇑*i*P	P	12 14 27.6	-0.6
NJ2				sP	pP	12 14 34.9	-0.9
NJ2				pmax	pmax		
	comp=Z,45nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,700nm,4.6s						
NJ2				LR	LR		
	comp=Z,990nm,18.0s						
NJ2				LR	LR		
	comp=Z,810nm,19.9s						
NJ2				LR	LR		
	comp=Z,2µm,21.6s						
O48B	Farmland	55.40	67	P	P	12 14 26.2	-2.4
	baz=313,SNR=9.3						
O48B	Farmland	55.40	67	P	P	12 14 26.3	-2.4
	baz=313,SNR=9.3						
SADO	Sadowa	55.64	60	LR	LR	12 39 22.2	
	comp=Z,2µm,19.1s,baz=343,slow=37						
NATX	Nacogdoches	55.68	81	P	P	12 14 30.4	-0.3
	baz=315						
P48A	Milroy	55.79	68	S	S	12 22 11.7	-4.7
	baz=313						
P48A				S	S	12 22 11.7	-4.7
	baz=313						
JMIC	Jan Mayen	55.89	8	LR	LR	12 40 55.1	
	comp=Z,853nm,18.1s,baz=32,slow=39						
CCAR	Cane Creek	55.91	77	P	P	12 14 31.8	-0.5
ANGG	Ammassalik, Gr	56.20	22	P	P	12 14 32.8	-1.2
ANGG				IAmb	IAmb	12 14 33.3	
	comp=Z,34nm,1.1s						
HKT	Hockley	56.26	84	P	P	12 14 34.0	-0.7
HKT	Hockley	56.26	84	⇓*e*P	P	12 14 34.3	-0.5
HKT				pmax	pmax		
	comp=Z,20nm,1.4s						
HKT	Hockley	56.26	84	S	S	12 22 23.1	+0.5
	baz=316						
T47A	Sharon Grove	56.52	71	P	P	12 14 34.9	-1.8
T47A				IAmb	IAmb	12 14 48.4	
	comp=Z,32nm,0.9s						
T47A	Sharon Grove	56.52	71	P	P	12 14 35.4	-1.2
	baz=314,SNR=8.0						
T47A				S	S	12 22 24.0	-2.1
	baz=314						
WVT	Waverly	56.69	73	P	P	12 14 36.5	-1.4
WVT				IAmb	IAmb	12 14 49.7	
	comp=Z,23nm,0.9s						
WVT	Waverly	56.69	73	P	P	12 14 35.1	-2.8
	baz=314,SNR=12						
WVT				S	S	12 22 25.3	-3.1
	baz=314						
WVT	Waverly	56.69	73	P	P	12 14 37.0	-0.9
	baz=314						
WVT				S	S	12 22 26.3	-2.1
	baz=314						
HAMF	Hammerfest	56.82	355	*e*P	P	12 14 37.0	-1.3
OXF	Oxford	56.89	75	P	P	12 14 37.7	-1.6
OXF	Oxford	56.89	75	P	P	12 14 38.0	-1.3
	baz=314,SNR=6.5						
OXF	Oxford	56.89	75	P	P	12 14 38.4	-0.9
	baz=314,SNR=6.5						
IVI	Ivigtut	56.92	30	*i* P	P	12 14 37.5	-1.6
IVI				IAmb	IAmb	12 14 52.0	
	comp=Z,13nm,1.0s						
TRQ	Mont Tremblant	57.02	56	P	P	12 14 38.7	-1.5
TRQ				IAmb	IAmb	12 14 52.2	
	comp=Z,50nm,1.1s						
Q51A	Peebles	57.26	67	P	P	12 14 40.8	-1.2
	baz=314,SNR=6.3						
Q51A				P	P	12 14 40.8	-1.2
	baz=314,SNR=6.3						
ZAIG	Zacatecas	57.39	95	P	P	12 14 42.2	-1.2
ZAIG				IAmb	IAmb	12 14 55.1	
	comp=Z,52nm,1.3s						
LYN	LuoYang	57.40	286	⇑*i*P	P	12 14 43.0	+0.1
LYN				sP	pP	12 14 49.9	-0.6
LYN				S	S	12 22 37.3	-0.4
LYN				pmax	pmax		
	comp=Z,60nm,1.5s						
LYN				pmax	pmax		
	comp=Z,980nm,6.2s						
LYN				LR	LR		
	comp=Z,2µm,17.0s						
LYN				LR	LR		
	comp=Z,1µm,18.2s						
LYN				LR	LR		
	comp=Z,3µm,16.6s						
KEV	Kevo	57.51	354	P	P	12 14 42.5	-0.7
KEV				IAmb	IAmb	12 14 43.6	
	comp=Z,57nm,1.2s						
V48A	Smith Brothers	57.55	72	S	S	12 22 37.0	-2.7
	baz=314						
CLTN	Cedars of Leba	57.59	72	P	P	12 14 43.9	-0.3
CLTN				IAmb	IAmb	12 15 50.1	
	comp=Z,35nm,1.2s						
O53A	New Philadelph	57.61	65	P	P	12 14 44.0	-0.3
O53A				IAmb	IAmb	12 15 12.8	
	comp=Z,60nm,1.5s						
U49A	Red Boiling Sp	57.62	71	P	P	12 14 43.4	-1.0
U49A				IAmb	IAmb	12 15 50.1	
	comp=Z,24nm,0.9s						
U49A	Red Boiling Sp	57.62	71	S	S	12 22 39.1	-1.5
	baz=314						
T50A	Nancy	57.81	70	P	P	12 14 44.3	-1.5
	baz=314						
T50A				P	P	12 14 44.3	-1.5
	baz=314						
T50A				S	S	12 22 39.6	-3.4
	baz=314						
T50A				S	S	12 22 39.6	-3.4
	baz=314						
ARA0	ARCESS Array S	57.82	354	*e*P	P	12 14 44.8	-0.6
ARCES	ARCESS Array B	57.82	354	P	P	12 14 44.5	-0.9
	comp=Z,31nm,1.1s,baz=13,slow=6.9,SNR=22						
ARCES				LR	LR	12 41 49.7	
	comp=Z,1µm,18.7s,baz=1.0,slow=38						
	comp=Z,31nm,1.1s						
ZAA0	Zalesovo Array	57.84	318	P	P	12 14 45.7	0.0
ZAA0				IAmb	IAmb	12 15 55.5	
	comp=Z,56nm,1.9s						
ZALV	Zalesovo Beam	57.84	318	P	P	12 14 44.4	-1.3
	comp=Z,2.3nm,0.6s,baz=21,slow=9.3,SNR=8.0						
ZALV				LR	LR	12 40 56.9	
	comp=Z,3µm,20.2s,baz=54,slow=37						
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	57.84	318	P	P	12 14 45.0	-0.7
ZALV	Zalesovo Beam	57.84	318	*i* P	P	12 14 45.2	-0.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VBMS	Vicksburg	57.85	78	P	P	12 14 45.7	-0.3
VBMS	Vicksburg	57.85	78	S	S	12 22 43.0	-0.6
	baz=315						
VBMS	Vicksburg	57.85	78	P	P	12 14 46.4	+0.3
	baz=315						
MNTQ	Montreal, Queb	57.99	56	P	P	12 14 45.5	-1.4
MNTQ				IAmb	IAmb	12 14 47.7	
	comp=Z,30nm,1.1s						
BMNY	Brushton-Moira	58.00	57	P	P	12 14 45.6	-1.4
	baz=314,SNR=7.0						
WCNY	West Carthage	58.01	58	P	P	12 14 46.5	-0.6
	baz=314,SNR=6.2						
WCNY				S	S	12 22 44.1	-1.4
	baz=314						
TRO	Tromso	58.02	357	*e*P	P	12 14 46.2	-0.5
JETT	Jettan, Norway	58.05	357	*e*P	P	12 14 47.1	+0.1
M55A	Ridgway	58.10	62	P	P	12 14 47.0	-0.8
	baz=314,SNR=7.0						
M55A				P	P	12 14 47.0	-0.8
	baz=314,SNR=7.0						
LONY	Lake Ozonia	58.12	57	P	P	12 14 46.1	-1.7
LONY				IAmb	IAmb	12 14 59.8	
	comp=Z,27nm,0.9s						
O54A	Avella	58.12	64	P	P	12 14 46.4	-1.5
	baz=314						
O54A				P	P	12 14 46.4	-1.5
	baz=314						
J57A	Williamstown	58.23	59	S	S	12 22 47.0	-1.3
	baz=314						
J57A				S	S	12 22 47.0	-1.3
	baz=314						
344A	Westbrook Farm	58.26	79	P	P	12 14 48.9	-0.1
	baz=316,SNR=6.7						
L56A	Greenwood	58.29	61	P	P	12 14 48.5	-0.6
	baz=314,SNR=7.3						
L56A				P	P	12 14 48.5	-0.6
	baz=314,SNR=7.3						
X48A	Hartselle	58.33	74	P	P	12 14 47.4	-2.0
	baz=315						
X48A				S	S	12 22 47.1	-2.8
	baz=315						
146A	Union	58.42	76	P	P	12 14 49.1	-1.0
	baz=315,SNR=6.6						
KTK1	Kautokeino	58.47	355	*e*P	P	12 14 48.9	-1.0
FRNY	Flat Rock	58.47	56	P	P	12 14 48.6	-1.7
	baz=314						
J58A	Remsen	58.63	59	P	P	12 14 51.1	-0.3
	baz=314,SNR=6.0						
J58A				P	P	12 14 51.1	-0.3
	baz=314,SNR=6.0						
J58A				S	S	12 22 52.3	-1.4
	baz=314						
J58A				S	S	12 22 52.3	-1.4
	baz=314						
LVZ	Lovozero	58.68	350	P	P	12 14 51.1	-0.3
LVZ	Lovozero	58.68	350	*ce*P	P	12 14 50.8	-0.6
LVZ				pmax	pmax		
	comp=Z,106nm,1.3s						
NCB	Newcomb	58.75	57	P	P	12 14 51.4	-0.9
NCB				IAmb	IAmb	12 14 58.4	
	comp=Z,34nm,1.1s						
NCB	Newcomb	58.75	57	P	P	12 14 51.6	-0.7
	baz=315						
MCWV	Mont Chateau	58.77	64	P	P	12 14 51.3	-1.1
MCWV				IAmb	IAmb	12 15 47.9	
	comp=Z,52nm,1.2s						
W50A	Signal Mountai	58.81	72	P	P	12 14 51.3	-1.5
W50A				IAmb	IAmb	12 15 17.5	
	comp=Z,29nm,1.1s						
J59A	Piesco	58.96	58	P	P	12 14 52.6	-1.1
	baz=315,SNR=6.1						
J59A				P	P	12 14 52.6	-1.1
	baz=315,SNR=6.1						
FPAL	Fort Paine	59.10	72	P	P	12 14 52.8	-2.1
FPAL				IAmb	IAmb	12 15 19.9	
	comp=Z,36nm,1.0s						
WHN	Wuhan	59.12	281	⇑P	P	12 14 54.8	-0.1
WHN				sP	pP	12 15 02.6	0.0
WHN				S	S	12 23 06.3	+6.1
WHN				sS	sS	12 23 15.4	+2.2
WHN				pmax	pmax		
	comp=Z,120nm,0.9s						
WHN				pmax	pmax		
	comp=Z,2µm,3.7s						
WHN				LR	LR		
	comp=Z,1µm,11.0s						
WHN				LR	LR		
	comp=Z,810nm,12.2s						
WHN				LR	LR		
	comp=Z,2µm,16.9s						
Y49A	Blount Mountai	59.12	74	P	P	12 14 52.8	-2.2
	baz=315						
APA	Apatity	59.12	351	⇓*i*P	P	12 14 51.5	-3.0
APA				pmax	pmax		
	comp=Z,18nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,18.0s						
D62A	Allapoint, All	59.13	52	P	P	12 14 53.9	-0.9
	baz=315,SNR=7.7						
D62A				P	P	12 14 53.9	-0.9
	baz=315,SNR=7.7						
SSPA	Standing Stone	59.16	62	P	P	12 14 53.5	-1.6
SSPA				IAmb	IAmb	12 15 07.2	
	comp=Z,49nm,1.2s						
SSPA	Standing Stone	59.16	62	P	P	12 14 53.9	-1.2
	baz=315,SNR=6.7						
VT1	Waterbury	59.25	56	P	P	12 14 54.7	-1.0
	baz=315						
LRAL	Lakeview Retre	59.35	75	P	P	12 14 55.3	-1.3
TKL	Tuckaleechee C	59.37	70	LR	LR	12 40 46.8	
	comp=Z,2µm,19.4s,baz=322,slow=36						
ACCN	Adirondack Com	59.45	58	P	P	12 14 56.1	-1.0
ACCN				IAmb	IAmb	12 15 09.8	
	comp=Z,32nm,1.1s						
ACCN	Adirondack Com	59.45	58	P	P	12 14 55.9	-1.2
	baz=315						
F62A	Pittston Farm,	59.53	53	P	P	12 14 56.6	-1.0
	baz=316						
F62A				P	P	12 14 56.6	-1.0
	baz=316						
HCNY	Howe Caverns	59.56	59	P	P	12 14 57.5	-0.4
	baz=315,SNR=15						
HCNY				S	S	12 23 05.5	-0.2
	baz=315						
L59A	Walton	59.58	59	P	P	12 14 57.5	-0.6
	baz=315						
L59A				P	P	12 14 57.5	-0.6
	baz=315						
L59A				S	S	12 23 06.2	+0.1
	baz=315						
L59A				S	S	12 23 06.2	+0.1
	baz=315						
LOF	Lofoten	59.63	359	*e*P	P	12 14 57.5	-0.4
G62A	West of Eustis	59.74	54	P	P	12 14 58.3	-0.7
	baz=316,SNR=6.4						
G62A				P	P	12 14 58.3	-0.7
	baz=316,SNR=6.4						
STEI	Steigen	59.81	359	*e*P	P	12 14 58.4	-0.7
XAN	Xi'an	59.83	288	⇑P	P	12 14 59.8	-0.1
XAN				S	S	12 23 12.4	+2.9
XAN				sS	sS	12 23 25.8	+3.3
XAN				SS	SS	12 27 07.6	+2.3
XAN				pmax	pmax		
	comp=Z,73nm,1.1s						
XAN				pmax	pmax		
	comp=Z,830nm,8.6s						
XAN				LR	LR		
	comp=Z,2µm,17.8s						
XAN				LR	LR		
	comp=Z,3µm,18.4s						
XAN				LR	LR		
	comp=Z,4µm,18.1s						
U54A	Nelsons Funny	59.88	68	P	P	12 14 59.0	-1.2
	baz=315						
U54A				P	P	12 14 59.0	-1.2
	baz=315						
H62A	Milan	59.88	55	P	P	12 14 59.2	-0.9
	baz=316,SNR=5.8						
H62A				P	P	12 14 59.2	-0.9
	baz=316,SNR=5.8						
E63A	Oxbow	59.91	52	P	P	12 14 59.0	-1.2
	baz=316						
E63A				P	P	12 14 59.0	-1.2
	baz=316						
SSLB	Suanglung	60.03	271	P	P	12 15 00.7	-0.7
SSLB	Suanglung	60.03	271	P	P	12 15 01.2	-0.2
F63A	Nahmakanta, Br	60.09	53	P	P	12 14 59.9	-1.5
	baz=316,SNR=6.1						
F63A				P	P	12 14 59.9	-1.5

	baz=316,SNR=6.1						
BLA	**Blacksburg**	**60.18**	**67**	P	**P**	**12 15 01.3**	**-1.0**
	baz=315,SNR=5.3						
BORG	**Borgarnes**	**60.23**	**16**	LR	LR	12 44 53.2	
	comp=Z,1µm,18.4s,baz=337,slow=40						
F64A	**Sherman**	**60.34**	**52**	P	**P**	**12 15 02.1**	**-1.0**
	baz=316,SNR=5.9						
F64A				P	**P**	**12 15 02.1**	**-1.0**
	baz=316,SNR=5.9						
FAUS	**Fauske**	**60.36**	**359**	*e*P	**P**	**12 15 02.2**	**-0.8**
NPNY	**Mohonk Preserv**	**60.36**	**59**	P	**P**	**12 15 02.8**	**-0.6**
	baz=316						
LUPA	**Lehigh Univers**	**60.54**	**61**	P	**P**	**12 15 04.0**	**-0.6**
LUPA				IAmb	IAmb	12 15 19.3	
	comp=Z,53nm,1.3s						
250A	**Grady**	**60.54**	**75**	P	**P**	**12 15 03.3**	**-1.4**
	baz=316,SNR=6.1						
QZH	**Quanzhou**	**60.62**	**273**	⇑*i*P	**P**	**12 15 05.1**	**-0.2**
QZH				S	**S**	**12 23 18.1**	**-1.6**
QZH				sS	**sS**	**12 23 33.8**	**+1.4**
QZH				pmax	pmax		
	comp=Z,520nm,4.3s						
QZH				LR	LR		
	comp=Z,390nm,19.0s						
QZH				LR	LR		
	comp=Z,460nm,17.5s						
QZH				LR	LR		
	comp=Z,760nm,22.3s						
GTA	**Gaotai**	**61.12**	**298**	⇑P	**P**	**12 15 08.1**	**-0.7**
GTA				pP	pP	12 15 16.9	+0.2
GTA				sP	pwP	12 15 22.0	+1.5
GTA				S	**S**	**12 23 23.8**	**-2.3**
GTA				pmax	pmax		
	comp=Z,32nm,1.2s						
GTA				pmax	pmax		
	comp=Z,490nm,10.8s						
GTA				LR	LR		
	comp=Z,2µm,18.3s						
GTA				LR	LR		
	comp=Z,3µm,18.7s						
GTA				LR	LR		
	comp=Z,3µm,19.9s						
KONS	**Konsvik**	**61.27**	**359**	*e*P	**P**	**12 15 08.3**	**-0.9**
LZH	**Lanzhou**	**61.28**	**293**	*e*P	**P**	**12 15 10.3**	**+0.4**
LZH				pP	pwP	12 15 22.5	+0.9
LZH				pmax	pmax		
	comp=Z,77nm,1.1s						
LZH				pmax	pmax		
	comp=Z,590nm,4.9s						
LZH				LR	LR		
	comp=Z,4µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,4µm,18.4s						
MOR8	**Moi Rana**	**61.59**	**359**	*e*P	**P**	**12 15 09.4**	**-1.9**
LMN	**Caledonia Moun**	**62.04**	**50**	P	**P**	**12 15 13.7**	**-1.0**
ENH	**Enshi**	**62.21**	**284**	P	**P**	**12 15 15.7**	**-0.4**
SEM	**Semipalatinsk**	**62.36**	**318**	*e*P	**P**	**12 15 15.0**	**-2.0**
SEM	**Semipalatinsk**	**62.36**	**318**	*e*P	**P**	**12 15 15.1**	**-2.0**
	baz=318						
ZSN	**Zaisan**	**62.63**	**313**	*c i*P	**P**	**12 15 18.4**	**-0.3**
ZSN	**Zaisan**	**62.63**	**313**	⇑*i*P	**P**	**12 15 18.4**	**-0.3**
	baz=313						
DRLN	**Deer Lake**	**62.74**	**44**	P	**P**	**12 15 18.9**	**-0.3**
KURK	**Kurchatov**	**62.78**	**319**	P	**P**	**12 15 19.3**	**-0.2**
KURK				IAmb	IAmb	12 16 17.9	
	comp=Z,23nm,1.1s						
KURK	**Kurchatov**	**62.78**	**319**	*ce*P	**P**	**12 15 18.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,15nm,1.2s						
KURBB	**Kurchatov Arra**	**62.89**	**319**	LR	LR	12 44 10.1	
	comp=Z,4µm,20.0s,baz=29,slow=38						
KURBB	**Kurchatov Arra**	**62.89**	**319**	P	**P**	**12 15 18.8**	**-1.5**
PRGR	**Permogore**	**63.06**	**343**	⇑*i*P	**P**	**12 15 20.6**	**-0.6**
PRGR				*e*		12 15 32.7	
NSS	**Namsos**	**63.25**	**0**	*e*P	**P**	**12 15 21.9**	**-0.5**
TLIG	**Tlapa**	**63.77**	**95**	P	**P**	**12 15 26.4**	**-0.3**
TLIG				IAmb	IAmb	12 15 38.5	
	comp=Z,43nm,1.1s						
SVE	**Sverdlovsk**	**63.91**	**333**	*d i*P	**P**	**12 15 27.1**	**+0.2**
SVE				*e*S	**S**	**12 24 04.1**	**+3.8**
SVE				pmax	pmax		
	comp=Z,70nm,1.4s						
SVE				MLR	MLR		
	comp=Z,3µm,17.0s						
BRVK	**Borovoye**	**64.04**	**325**	P	**P**	**12 15 27.5**	**-0.3**
BRVK				IAmb	IAmb	12 15 29.1	
	comp=Z,39nm,1.1s						
BRVK	**Borovoye**	**64.04**	**325**	*ce*P	**P**	**12 15 27.5**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,32nm,1.2s						
WMQ	**Urumqi**	**64.06**	**309**	*e*P	**P**	**12 15 28.8**	**+0.6**
WMQ				pP	pwP	12 15 40.5	0.0
WMQ				S	**S**	**12 24 05.9**	**+3.1**
WMQ				ScS	**ScS**	**12 25 20.5**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,49nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,560nm,4.5s						
WMQ				LR	LR		
	comp=Z,3µm,21.9s						
WMQ				LR	LR		
	comp=Z,3µm,18.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
MK31	**Makanchi Array**	**64.27**	**314**	P	**P**	**12 15 29.1**	**-0.4**
MK31	**Makanchi Array**	**64.27**	**314**	*de*P	**P**	**12 15 28.6**	**-0.9**
MKAR	**Makanchi Array**	**64.27**	**314**	P	**P**	**12 15 28.0**	**-1.5**
	comp=Z,2.6nm,0.7s,baz=60,slow=7.2,SNR=22						
MKAR				PKP2bc		12 44 26.9	
	comp=Z,0.9nm,1.0s,baz=200,slow=2.9,SNR=4.0						
MKAR				LR	LR	12 44 40.4	
	comp=Z,3µm,18.8s,baz=38,slow=37						
	comp=Z,2.6nm,0.7s						
MKAR	**Makanchi Array**	**64.27**	**314**	P	**P**	**12 15 28.9**	**-0.6**
MKAR	**Makanchi Array**	**64.27**	**314**	*i* P	**P**	**12 15 28.2**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	**Makanchi**	**64.40**	**314**	P	**P**	**12 15 29.3**	**-1.0**
TBLU	**Trondheim**	**64.53**	**1**	*e*P	**P**	**12 15 29.2**	**-1.6**
KLMR	**Klimovskoe**	**64.82**	**346**	*e*P	**P**	**12 15 29.5**	**-3.2**
KLMR				pmax	pmax		
	comp=Z,51nm,1.3s						
KLMR	**Klimovskoe**	**64.82**	**346**	*e*P	**P**	**12 15 29.6**	**-3.2**
KLMR				AMP		12 15 33.2	
	comp=Z,51nm,1.3s						
KLMR				LQ	LQ	12 39 51.4	
KLMR				LQ	LQ	12 39 51.4	
KLMR				LR	LR	12 44 36.3	
ARU	**Arti**	**64.83**	**334**	LR	LR	12 48 28.4	
	comp=Z,2µm,18.1s,baz=44,slow=40						
ARU	**Arti**	**64.83**	**334**	P	**P**	**12 15 32.2**	**-0.7**
ARU	**Arti**	**64.83**	**334**	*c i*P	**P**	**12 15 32.6**	**-0.3**
ARU						12 16 07.8	
ARU						12 17 52.6	
ARU				S	**S**	**12 24 13.0**	**+1.4**
ARU						12 25 23.7	
ARU				SS	**SS**	**12 28 22.7**	**+0.6**
ARU				pmax	pmax		
	comp=Z,77nm,1.3s						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s						
CD2	**Chengdu**	**65.10**	**289**	P	**P**	**12 15 35.5**	**+0.4**
CD2				pP	pwP	12 15 47.8	+1.0
CD2				sP	sP	12 15 51.1	+5.4
CD2				S	**S**	**12 24 16.3**	**+0.5**
CD2				SS	**SS**	**12 28 29.8**	**+2.1**
CD2				pmax	pmax		
	comp=Z,130nm,0.8s						
CD2				pmax	pmax		
	comp=Z,640nm,4.2s						
CD2				LR	LR		
	comp=Z,1µm,18.6s						
CD2				LR	LR		
	comp=Z,3µm,17.6s						
KIRV	**Kirov**	**65.12**	**339**	LR	LR	12 48 39.2	
	comp=Z,1µm,18.2s,baz=34,slow=40						
KIRV	**Kirov**	**65.12**	**339**	*c i*P	**P**	**12 15 34.2**	**-0.6**
MOL	**Molde**	**65.17**	**2**	*e*P	**P**	**12 15 34.7**	**-0.3**
GULI	**GuiLin**	**65.35**	**280**	⇑P	**P**	**12 15 35.4**	**-1.4**
GULI				S	**S**	**12 24 20.4**	**+1.5**
GULI				pmax	pmax		
	comp=Z,30nm,1.1s						
GULI				LR	LR		
	comp=Z,1µm,19.5s						
AKN	**Aaknes**	**65.55**	**3**	*e*P	**P**	**12 15 37.5**	**0.0**
TAOE	**Nuku Hiva Isla**	**65.65**	**150**	*e*S	**S**	**12 24 27.3**	**+4.6**
	comp=Z,497nm,24.1s						
TAOE	**Nuku Hiva Isla**	**65.65**	**150**	*e*LR	LR	12 34 54.7	
	comp=Z,1µm,22.8s,baz=346						
TAOE	**Nuku Hiva Isla**	**65.65**	**150**	*e*T	T	13 27 34.2	
	comp=Z,16nm,0.2s						
DOMB	**Dombas**	**65.73**	**2**	*e*P	**P**	**12 15 38.1**	**-0.6**
FIA1	**FINESS Array S**	**65.80**	**353**	P	**P**	**12 15 37.9**	**-1.2**
FINES	**FINESS Array B**	**65.80**	**353**	P	**P**	**12 15 37.9**	**-1.2**
	comp=Z,38nm,0.8s,baz=22,slow=6.8,SNR=71						
FINES				PKP2bc		12 44 21.9	
	comp=Z,1.9nm,0.9s,baz=310,slow=7.2,SNR=2.8						
FINES				LR	LR	12 46 29.6	
	comp=Z,1µm,19.3s,baz=38,slow=38						
	comp=Z,38nm,0.8s						
FINES	**FINESS Array B**	**65.80**	**353**	P	**P**	**12 15 39.0**	**-0.1**
FINES	**FINESS Array B**	**65.80**	**353**	*i* P	**P**	**12 15 38.4**	**-0.7**
FINES				pmax	pmax		
	comp=Z,38nm,0.9s						
KRVT	**Keravat (AS076**	**65.94**	**225**	LR	LR	12 40 07.8	
	comp=Z,624nm,19.7s,baz=157,slow=32						
FOO	**Floro**	**66.06**	**4**	*e*P	**P**	**12 15 40.0**	**-0.8**
GOMU	**GeErMu**	**66.17**	**299**	P	**P**	**12 15 41.9**	**-0.5**
GOMU				pP	pP	12 15 47.4	-2.8
GOMU				sP	sP	12 15 48.9	-4.3
GOMU				S	S	12 24 19.0	-10
GOMU				pmax	pmax		
	comp=Z,48nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,240nm,4.3s						
GOMU				LR	LR		
	comp=Z,1µm,16.7s						
GOMU				LR	LR		
	comp=Z,1µm,19.1s						
GOMU				LR	LR		
	comp=Z,600nm,21.4s						
AFI	**Afiamalu**	**66.27**	**184**	LR	LR	12 44 50.0	
	comp=Z,745nm,18.0s,baz=2.0,slow=36						
CMIG	**Matias Romero**	**66.38**	**93**	LR	LR	12 40 14.2	
	comp=Z,673nm,21.9s,baz=315,slow=32						
RAF	**Rauma**	**66.50**	**355**	*e*P	**P**	**12 15 43.1**	**-0.5**
NC204	**NORSAR Array S**	**66.52**	**1**	P	**P**	**12 15 42.8**	**-1.0**
HYA	**Hoyanger**	**66.54**	**3**	*e*P	**P**	**12 15 43.8**	**0.0**
GYA	**Guiyang**	**66.69**	**283**	⇓P	**P**	**12 15 46.3**	**+0.7**
GYA				pP	pwP	12 15 57.3	-0.5
GYA				S	**S**	**12 24 35.3**	**-0.2**
GYA				SKS	**SKSac**	**12 25 40.5**	**+0.1**
GYA				pmax	pmax		
	comp=Z,59nm,1.4s						
GYA				pmax	pmax		
	comp=Z,800nm,3.5s						
GYA				LR	LR		
	comp=Z,530nm,20.1s						
GYA				LR	LR		
	comp=Z,450nm,20.4s						
GYA				LR	LR		
	comp=Z,400nm,21.8s						
NB2	**NORSAR Subarra**	**66.75**	**0**	P	**P**	**12 15 44.6**	**-0.7**
	comp=Z,40nm,1.1s,baz=360,slow=6.5						
NB2	**NORSAR Subarra**	**66.75**	**0**	P	**P**	**12 15 44.6**	**-0.7**
	baz=360,slow=6.5						
NOA	**NORSAR Array B**	**66.75**	**0**	P	**P**	**12 15 44.3**	**-1.1**
	comp=Z,14nm,0.9s,baz=0.5,slow=6.3,SNR=33						
NOA				LR	LR	12 43 31.6	
	comp=Z,505nm,21.9s,baz=345,slow=35						
NOA				PKP2bc		12 44 19.4	
	comp=Z,0.9nm,0.8s,baz=44,slow=19,SNR=2.6						
	comp=Z,14nm,0.9s						
PUL	**Pulkovo**	**67.06**	**350**	⇓*e*P	**P**	**12 15 47.2**	**0.0**
PUL				pmax	pmax		
	comp=Z,46nm,0.7s						
NC602	**NORSAR Array S**	**67.06**	**0**	*e*P	**P**	**12 15 46.6**	**-0.6**
SKAR	**Skarslia**	**67.08**	**2**	*e*P	**P**	**12 15 47.1**	**-0.3**
MEF	**Metsahovi**	**67.14**	**353**	*e*P	**P**	**12 15 47.0**	**-0.6**
OTUK	**Ortayu**	**67.22**	**321**	P	**P**	**12 15 48.2**	**-0.3**
BER	**Bergen**	**67.29**	**4**	*e*P	**P**	**12 15 48.2**	**-0.4**
TDK	**Taldyqorghan**	**67.36**	**315**	*e*P	**P**	**12 15 49.1**	**-0.3**
TDK				pmax	pmax		
	comp=Z,25nm,1.3s						
TDK	**Taldyqorghan**	**67.36**	**315**	*e*P	**P**	**12 15 49.2**	**-0.3**
	comp=Z,25nm,1.3s,baz=315						
HFS	**Hagfors**	**67.66**	**359**	LR	LR	12 46 52.4	
	comp=Z,852nm,18.1s,baz=7.0,slow=37						
ODD1	**Odda**	**67.81**	**3**	*e*P	**P**	**12 15 52.0**	**0.0**
UPP	**Uppsala**	**67.85**	**357**	*e*P	**P**	**12 15 51.8**	**-0.3**
OSL	**Oslo**	**67.86**	**1**	*e*P	**P**	**12 15 52.2**	**0.0**
KONO	**Kongsberg**	**68.14**	**1**	P	**P**	**12 15 53.8**	**-0.2**
KONO	**Kongsberg**	**68.14**	**1**	⇓*e*P	**P**	**12 15 54.3**	**+0.3**
KONO				pmax	pmax		
	comp=Z,52nm,1.3s						
KONO	**Kongsberg**	**68.14**	**1**	*e*P	**P**	**12 15 54.0**	**0.0**
BLS5	**Blasjo**	**68.29**	**3**	*e*P	**P**	**12 15 54.9**	**-0.1**
SHLS	**Shalkode**	**68.37**	**313**	*c i*P	**P**	**12 15 54.8**	**-1.1**
SHLS				pmax	pmax		
	comp=Z,19nm,1.0s						
SHLS	**Shalkode**	**68.37**	**313**	⇑*i*P	**P**	**12 15 54.8**	**-1.1**
	comp=Z,19nm,1.0s,baz=313						
KPKS	**Kokpek**	**68.47**	**314**	*c i*P	**P**	**12 15 56.2**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,37nm,1.9s						
KPKS	**Kokpek**	**68.47**	**314**	⇑*i*P	**P**	**12 15 56.3**	**-0.3**
	comp=Z,37nm,1.9s,baz=314						
UZB	**Uzynbulak**	**68.57**	**314**	*c i*P	**P**	**12 15 56.7**	**-0.5**
UZB				pmax	pmax		
	comp=Z,27nm,2.1s						
UZB	**Uzynbulak**	**68.57**	**314**	⇑*i*P	**P**	**12 15 56.7**	**-0.5**
	comp=Z,27nm,2.1s,baz=314						
CCIG	**Comitan**	**68.67**	**91**	P	**P**	**12 15 57.9**	**-0.3**
MTSE	**Matsula**	**68.67**	**353**	*e*P	**P**	**12 15 56.8**	**-0.5**
VSU	**Vasula**	**68.69**	**352**	*c i*P	**P**	**12 15 57.1**	**-0.4**
VSU				pmax	pmax		
	comp=Z,150nm,1.0s						
VSU	**Vasula**	**68.69**	**352**	*e*P	**P**	**12 15 56.5**	**-1.0**
ZHN	**Zhinishke**	**68.81**	**314**	*e*P	**P**	**12 15 58.5**	**-0.2**
ZHN	**Zhinishke**	**68.81**	**314**	*e*P	**P**	**12 15 58.5**	**-0.2**
	baz=314						
CHKK	**Chushkaly**	**68.89**	**315**	*e*P	**P**	**12 15 57.9**	**-1.1**
CHKK	**Chushkaly**	**68.89**	**315**	*e*P	**P**	**12 15 58.0**	**-1.1**
	baz=315						
SATY	**Saty**	**68.91**	**314**	*c i*P	**P**	**12 15 59.2**	**-0.1**
SATY				pmax	pmax		
	comp=Z,41nm,2.0s						
SATY	**Saty**	**68.91**	**314**	⇑*i*P	**P**	**12 15 59.2**	**-0.1**
	comp=Z,41nm,2.0s,baz=314						
BTLS	**Baital**	**69.16**	**318**	*c i*P	**P**	**12 16 00.2**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,28nm,1.9s						
BTLS	**Baital**	**69.16**	**318**	⇑*i*P	**P**	**12 16 00.3**	**-0.4**
	comp=Z,28nm,1.9s,baz=318						
SOR	**Soroa**	**69.27**	**79**	P	**P**	**12 16 01.8**	**+0.1**
DGTI	**Dogotuki**	**69.38**	**193**	P	**P**	**12 16 03.2**	**+1.0**
MDOK	**Medeo**	**69.42**	**315**	*i* P	**P**	**12 16 02.0**	**-0.5**
MDOK	**Medeo**	**69.42**	**315**	*i* P	**P**	**12 16 02.1**	**-0.5**
	baz=315						
AAA	**Alma-Ata**	**69.44**	**315**	*c i*P	**P**	**12 16 02.4**	**-0.1**
AAA	**Alma-Ata**	**69.44**	**315**	⇑*i*P	**P**	**12 16 02.5**	**-0.1**
	baz=315						
PMOR	**Pomariorio Ree**	**69.49**	**159**	*e*T	T	13 32 33.4	
	comp=Z,2.3nm,0.3s						
HOMB	**Homborsund**	**69.50**	**2**	*e*P	**P**	**12 16 02.4**	**-0.1**
MCD	**Coleburn Disti**	**69.52**	**9**	*e*P	**P**	**12 16 01.8**	**-0.8**
KPL	**Plockton**	**69.52**	**10**	*e*P	**P**	**12 16 02.1**	**-0.5**
PZH	**PanZhiHua**	**69.56**	**287**	⇑P	**P**	**12 16 03.9**	**+0.3**
PZH				pP	**sP**	**12 16 14.3**	**+0.1**
PZH				PP	**PP**	**12 18 38.3**	**+1.2**
PZH				S	**S**	**12 25 08.9**	**-0.8**
PZH				sS	**sS**	**12 25 24.6**	**+1.9**
PZH				ScS	**SKiKP**	**12 25 54.8**	**+5.2**
PZH				SS	**SS**	**12 29 36.4**	**-0.7**
PZH				pmax	pmax		
	comp=Z,80nm,1.4s						
PZH				pmax	pmax		
	comp=Z,910nm,4.3s						
PZH				LR	LR		
	comp=Z,970nm,17.7s						
PZH				LR	LR		
	comp=Z,1µm,17.5s						
PZH				LR	LR		
	comp=Z,970nm,19.0s						
TNSS	**Tian-Shan**	**69.57**	**315**	*e*P	**P**	**12 16 03.3**	**-0.4**
TNSS	**Tian-Shan**	**69.57**	**315**	*e*P	**P**	**12 16 03.3**	**-0.4**
	baz=315						
SLIT	**Slitere, Latvi**	**69.86**	**354**	*e*P	**P**	**12 16 04.0**	**-0.7**
MOS	**Moscow**	**70.01**	**345**	*e*P	**P**	**12 16 03.9**	**-1.8**
MOS				*e*S	**SKiKP**	**12 25 45.4**	**-3.9**
MOS				pmax	pmax		
	comp=Z,62nm,1.1s						
KMI	**Kunming**	**70.02**	**285**	⇑P	**P**	**12 16 07.0**	**+0.5**
KMI				pP	pwP	12 16 18.9	-0.4
KMI				PP	**PP**	**12 18 41.4**	**+0.1**
KMI				S	**S**	**12 25 15.5**	**+0.2**
KMI				sS	sS	12 25 30.8	+2.4
KMI				SKS	**SKSac**	**12 26 02.3**	**-3.5**
KMI				pmax	pmax		
	comp=Z,36nm,1.8s						
KMI				pmax	pmax		
	comp=Z,860nm,5.3s						
KMI				LR	LR		
	comp=Z,1µm,18.4s						
KMI				LR	LR		
	comp=Z,1µm,19.8s						
KMI				LR	LR		
	comp=Z,1µm,17.0s						
DAV	**Davao City (W)**	**70.16**	**255**	LR	LR	12 42 46.5	
	comp=Z,2µm,21.8s,baz=65,slow=32						
BORU	**Boraas**	**70.17**	**360**	*i* P	**P**	**12 16 05.4**	**-1.2**
KDJ	**Kajisay**	**70.20**	**314**	P	**P**	**12 16 07.0**	**-0.3**
KDJ				IAmb	IAmb	12 16 08.0	
	comp=Z,25nm,1.2s						
SGDS	**Sogindy**	**70.22**	**317**	*c i*P	**P**	**12 16 07.2**	**-0.1**
SGDS	**Sogindy**	**70.22**	**317**	⇑*i*P	**P**	**12 16 07.3**	**-0.1**
	baz=317						
TKM2	**Tokmak 2**	**70.24**	**316**	P	**P**	**12 16 07.6**	**-0.1**
	SNR=12						
TKM2	**Tokmak 2**	**70.24**	**316**	P	**P**	**12 16 07.1**	**-0.5**
DRUM	**Mains of Drumt**	**70.25**	**8**	*e*P	**P**	**12 16 06.9**	**-0.2**
DRUM				IAmb	IAmb	12 16 07.8	
	comp=Z,66nm,0.9s						
AKTO	**Aktyubinsk**	**70.26**	**331**	P	**P**	**12 16 06.4**	**-0.9**
QIZ	**Qiongzhong**	**70.39**	**276**	P	**P**	**12 16 08.8**	**+0.3**
QIZ				pP	**pP**	**12 16 16.8**	**+0.4**
QIZ				S	**S**	**12 25 20.0**	**+0.7**
QIZ				sS	**sS**	**12 25 35.0**	**+2.7**
QIZ				SS	**SS**	**12 29 53.6**	**+3.7**
QIZ				pmax	pmax		
	comp=Z,450nm,3.1s						
QIZ				LR	LR		
	comp=Z,580nm,16.1s						
QIZ				LR	LR		
	comp=Z,560nm,18.2s						
QIZ				LR	LR		
	comp=Z,670nm,24.0s						
QIZ	**Qiongzhong**	**70.39**	**276**	P	**P**	**12 16 09.9**	**+1.4**
USP	**Ospenovka**	**70.42**	**317**	P	**P**	**12 16 08.8**	**+0.2**
	SNR=20						
BOOM	**Boomskoye usch**	**70.44**	**315**	P	**P**	**12 16 08.3**	**-0.5**
BOOM				IAmb	IAmb	12 16 09.7	
	comp=Z,24nm,1.1s						
ULHL	**Ulahol**	**70.51**	**315**	P	**P**	**12 16 09.1**	**-0.2**
	SNR=5.8						
CHMS	**Chumysh**	**70.54**	**316**	P	**P**	**12 16 09.4**	**+0.2**
	SNR=5.8						
INVG	**Invergeldie, C**	**70.58**	**9**	*e*P	**P**	**12 16 08.8**	**-0.4**
INVG				IAmb	IAmb	12 16 09.9	
	comp=Z,16nm,0.9s						
LAWE	**Loch Awe, Argy**	**70.61**	**10**	*e*P	**P**	**12 16 09.2**	**-0.2**
LAWE				IAmb	IAmb	12 16 09.8	
	comp=Z,31nm,0.9s						
AB31	**Akbulak array**	**70.71**	**329**	*i* P	**P**	**12 16 09.7**	**-0.4**
ABKAR	**Akbulak array**	**70.71**	**329**	P	**P**	**12 16 10.0**	**-0.1**
ABKAR	**Akbulak array**	**70.71**	**329**	P	**P**	**12 16 09.7**	**-0.4**
ABKAR				IAmb	IAmb	12 16 11.3	
	comp=Z,29nm,1.1s						
KBK	**Karagaybulak**	**70.73**	**316**	P	**P**	**12 16 11.4**	**+0.8**
	SNR=8.1						
OBN	**Obninsk**	**70.78**	**345**	⇓P	**P**	**12 16 09.3**	**-1.0**
OBN	**Obninsk**	**70.78**	**345**	LR	LR	12 51 54.2	
	comp=Z,267nm,18.6s,baz=16,slow=40						
OBN	**Obninsk**	**70.78**	**345**	P	**P**	**12 16 09.8**	**-0.6**
OBN	**Obninsk**	**70.78**	**345**	⇓*e*P	**P**	**12 16 09.3**	**-1.0**
OBN				*e*		12 18 45.9	
OBN				*e*S	**S**	**12 25 30.0**	**+7.2**
OBN				*e*SS	**SS**	**12 29 53.0**	**-0.9**
OBN				pmax	pmax		
	comp=Z,50nm,1.2s						
EAB	**Aberfoyle**	**70.79**	**10**	*e*P	**P**	**12 16 10.4**	**-0.1**
FABU	**Falkenberg**	**70.81**	**360**	*i* P	**P**	**12 16 09.0**	**-1.5**
AAK	**Ala-Archa**	**70.94**	**316**	P	**P**	**12 16 12.2**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**70.94**	**316**	LR	LR	12 50 28.4	
	comp=Z,2µm,18.2s,baz=38,slow=39						
AAK	**Ala-Archa**	**70.94**	**316**	P	**P**	**12 16 11.8**	**0.0**
AAK				IAmb	IAmb	12 16 12.7	
	comp=Z,25nm,1.1s						
AAK	**Ala-Archa**	**70.94**	**316**	*c i*P	**P**	**12 16 11.9**	**0.0**
AAK				pmax	pmax		
	comp=Z,16nm,1.0s						
PGBU	**Glenifferbraes**	**71.15**	**10**	*e*P	**P**	**12 16 12.6**	**0.0**
EKS2	**Erkin-Say**	**71.22**	**317**	P	**P**	**12 16 13.7**	**+0.2**
	SNR=13						
BELG	**Belogornoye**	**71.23**	**338**	LR	LR	12 52 57.2	
	comp=Z,2µm,18.1s,baz=43,slow=40						
BELG	**Belogornoye**	**71.23**	**338**	*c i*P	**P**	**12 16 12.6**	**-0.6**
BELG				pmax	pmax		
	comp=Z,11nm,1.0s						
UCH	**Uchtor**	**71.27**	**316**	P	**P**	**12 16 14.5**	**+0.3**
	SNR=9.2						
EBL	**Broad Law**	**71.33**	**9**	*e*P	**P**	**12 16 13.7**	**0.0**
DEL	**Delary**	**71.33**	**359**	*e*P	**P**	**12 16 13.8**	**+0.1**
DEL	**Delary**	**71.33**	**359**	*i* P	**P**	**12 16 12.0**	**-1.7**
MUD	**Monsted U'grnd**	**71.33**	**2**	*i* P	**P**	**12 16 12.9**	**-0.7**
MUD				IAmb	IAmb	12 16 14.2	
	comp=Z,13nm,0.6s						
VSVD	**Vaisvydziai**	**71.38**	**353**	*e*P	**P**	**12 16 14.1**	**+0.1**
BLEU	**Blekinge**	**71.46**	**358**	*i* P	**P**	**12 16 12.8**	**-1.7**
ISAL	**Salakas**	**71.61**	**352**	*e*P	**P**	**12 16 15.5**	**+0.1**
PPT	**Papeete**	**71.64**	**161**	LR	LR	12 43 15.5	
	comp=Z,633nm,18.4s,baz=332,slow=32						
PPT2	**Papeete2**	**71.66**	**161**	*e*S	S	12 25 18.3	-16
PPT2				*e*LQ	LQ	12 34 28.0	
	comp=Z,546nm,25.2s						
PPT2				*e*LR	LR	12 36 41.5	
	comp=Z,1µm,22.2s,baz=342						
AML	**Almayashu**	**71.70**	**316**	P	**P**	**12 16 17.3**	**+0.6**
	SNR=13						
BJUU	**Bjuv**	**71.73**	**359**	*i* P	**P**	**12 16 15.1**	**-1.0**
EKA	**Eskdalemuir Ar**	**71.75**	**9**	LR	LR	12 49 12.5	
	comp=Z,1µm,19.1s,baz=342,slow=37						
ESK	**Eskdalemuir**	**71.76**	**9**	*e*P	**P**	**12 16 16.1**	**-0.3**
ESK				IAmb	IAmb	12 16 16.9	
	comp=Z,48nm,1.0s						
ESK	**Eskdalemuir**	**71.76**	**9**	P	**P**	**12 16 16.1**	**-0.3**
ESK				IAmb	IAmb	12 16 17.1	
	comp=Z,45nm,1.1s						
IDID	**Didziasalis**	**71.81**	**351**	*e*P	**P**	**12 16 16.1**	**-0.4**
IIGN	**Ignalina**	**71.82**	**351**	*e*P	**P**	**12 16 16.3**	**-0.3**
PABE	**Paberze**	**71.85**	**353**	P	**P**	**12 16 16.4**	**-0.4**
PABE	**Paberze**	**71.85**	**353**	*e*P	**P**	**12 16 15.1**	**-1.7**
DZA	**Taraz**	**72.04**	**318**	*c i*P	**P**	**12 16 18.2**	**-0.1**
DZA	**Taraz**	**72.04**	**318**	⇑*i*P	**P**	**12 16 18.2**	**-0.1**
	baz=318						
GAL1	**Galloway**	**72.06**	**10**	*e*P	**P**	**12 16 17.4**	**-0.6**
GAL1				IAmb	IAmb	12 16 18.9	
	comp=Z,43nm,1.0s						
KK31	**Karatay Array**	**72.20**	**319**	P	**P**	**12 16 18.5**	**-0.6**
KK31				IAmb	IAmb	12 16 19.6	
	comp=Z,29nm,1.1s						
KK31	**Karatay Array**	**72.20**	**319**	*i* P	**P**	**12 16 18.6**	**-0.6**
KKAR	**Karatay Array**	**72.20**	**319**	P	**P**	**12 16 18.3**	**-0.9**
KKAR	**Karatay Array**	**72.20**	**319**	P	**P**	**12 16 19.0**	**-0.2**
KKAR				IAmb	IAmb	12 16 19.6	
	comp=Z,29nm,1.1s						
NACGM	**Naroch**	**72.21**	**351**	⇑*e*P	**P**	**12 16 19.0**	**0.0**
	baz=9.6						
EDMD	**Edmundbyers**	**72.36**	**8**	*e*P	**P**	**12 16 19.3**	**-0.7**
KESW	**Keswick, Cumbr**	**72.49**	**9**	*e*P	**P**	**12 16 20.9**	**+0.2**
PMG	**Port Moresby**	**72.61**	**227**	LR	LR	12 43 58.8	
	comp=Z,658nm,21.1s,baz=360,slow=32						
IOMK	**Kirk Michael**	**72.67**	**10**	*e*P	**P**	**12 16 21.5**	**-0.2**
BSD	**Bornholm Skovb**	**72.67**	**358**	*i* P	**P**	**12 16 20.3**	**-1.5**
BSD				IAmb	IAmb	12 16 35.7	
	comp=Z,8.3nm,0.6s						
ILTH	**Belurgan, Co L**	**72.70**	**11**	*e*P	**P**	**12 16 21.6**	**-0.3**
LPSR	**Galich'ya Gora**	**72.81**	**343**	*e*P	**P**	**12 16 21.5**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,40nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,2µm,20.0s						

KSH	Kashi	72.86	313	P	P	12 16 27.1	+3.8
KSH				sP	PcP	12 16 41.4	+1.0
KSH				PcP	pwP	12 16 45.0	+9.4
KSH				S	SKiKP	12 25 52.3	-1.9
KSH				pmax	pmax		
	comp=Z,47nm,1.3s						
KSH				pmax	pmax		
	comp=Z,360nm,3.9s						
KSH				LR	LR		
	comp=Z,2µm,22.0s						
KSH				LR	LR		
	comp=Z,4µm,21.0s						
KSH				LR	LR		
	comp=Z,5µm,20.3s						
IGLA	Glengowla, Co	72.90	13	eP	P	12 16 22.9	-0.2
IUG	Iuzhnay	73.19	319c	iP	P	12 16 25.4	+0.2
IUG	Iuzhnay	73.19	319⇑	iP	P	12 16 25.5	+0.2
	baz=319						
SUW	Suwalki	73.39	353	eP	P	12 16 25.3	-0.7
SUW	Suwalki	73.39	353	P	P	12 16 24.6	-1.4
SUW	Suwalki	73.39	353	eP	P	12 16 24.9	-1.2
WPS	Cemaes, Angles	73.52	10	eP	P	12 16 26.5	-0.3
WPS				IAmb	IAmb	12 16 27.1	
	comp=Z,50nm,1.1s						
WME	Myndd Eilian	73.55	10	eP	P	12 16 26.8	-0.1
VRH	Novokhopyorsk	73.62	341	eP	P	12 16 25.3	-2.1
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
VRH				MLR	MLR		
	comp=Z,3µm,18.0s						
VORR	Voronezh	73.65	343	eP	P	12 16 28.4	+0.8
VORR				pmax	pmax		
	comp=Z,40nm,0.4s						
LBWR	Ladybower, Pea	73.80	8	eP	P	12 16 28.5	0.0
LBWR				IAmb	IAmb	12 16 29.6	
	comp=Z,69nm,1.1s						
RAR	Rarotonga	73.80	172	LR	LR	12 45 23.9	
	comp=Z,602nm,18.8s,baz=345,slow=33						
STNC	Stoke	74.06	9	eP	P	12 16 30.2	+0.3
STNC				IAmb	IAmb	12 16 31.0	
	comp=Z,74nm,0.9s						
VSR	Storozhevoye	74.09	343	eP	P	12 16 29.1	-1.1
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR				MLR	MLR		
	comp=Z,3µm,21.0s						
LLW	Llanuwychllyn	74.15	10	eP	P	12 16 30.5	0.0
FOEL	Foel Wylfa	74.16	9	eP	P	12 16 30.8	+0.1
FOEL				IAmb	IAmb	12 16 31.9	
	comp=Z,110nm,1.0s						
IWEX	Carrickbyrne,	74.27	12	eP	P	12 16 31.1	-0.1
VORD	Divnogorie	74.31	342	eP	P	12 16 30.6	-0.8
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
GKP	Gorka Klasztor	74.46	357	eP	P	12 16 32.5	+0.3
CWF	Charnwood Fore	74.49	8	eP	P	12 16 32.3	-0.2
CWF				IAmb	IAmb	12 16 33.0	
	comp=Z,60nm,1.2s						
HLM1	Long Mynd	74.56	9	eP	P	12 16 33.2	+0.2
HLM1				IAmb	IAmb	12 16 34.1	
	comp=Z,161nm,1.9s						
BTK	Batken	74.62	317	P	P	12 16 33.2	-0.4
BTK				IAmb	IAmb	12 16 36.8	
	comp=Z,55nm,1.1s						
RSBS	Rosebush, Pemb	74.92	11	eP	P	12 16 34.9	-0.1
RSBS				IAmb	IAmb	12 16 36.2	
	comp=Z,78nm,1.0s						
MONM	Monmouth	75.24	9	eP	P	12 16 36.8	0.0
MONM				IAmb	IAmb	12 16 37.6	
	comp=Z,62nm,1.1s						
RUE	Ruedersdorf	75.33	359	eP	P	12 16 38.2	+0.9
BEL	Belsk	75.72	354	eP	P	12 16 40.1	+0.5
GAR	Garm	75.72	317	P	P	12 16 39.2	-0.8
HTL	Hartland	75.89	11	eP	P	12 16 40.4	-0.2
UBPT	Khong Chiam	75.92	277	P	P	12 16 40.8	-0.5
AKASG	Malin Array Be	76.09	349	P	P	12 16 40.1	-1.6
	comp=Z,7.1nm,0.5s,baz=15,slow=5.9,SNR=79						
AKASG				LR	LR	12 58 08.4	
	comp=Z,1µm,18.1s,baz=29,slow=42						
	comp=Z,7.1nm,0.5s						
AKASG	Malin Array Be	76.09	349	P	P	12 16 40.9	-0.8
AKASG	Malin Array Be	76.09	349	i P	P	12 16 40.7	-1.0
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKBB	Malin Array Si	76.09	349	P	P	12 16 40.2	-1.5
AKBB				IAmb	IAmb	12 16 42.0	
	comp=Z,35nm,0.9s						
AKBB	Malin Array Si	76.09	349c	eP	P	12 16 40.5	-1.2
CHGR	Chuyangaron	76.49	317	P	P	12 16 44.1	-0.2
DYA	Yadsworthy	76.51	10	eP	P	12 16 43.7	-0.4
DYA				IAmb	IAmb	12 16 45.1	
	comp=Z,59nm,1.2s						
CLL	Collm	76.51	359	P	P	12 16 43.6	-0.4
CLL				IAmb	IAmb	12 16 44.8	
	comp=Z,30nm,1.2s						
CLL	Collm	76.51	359⇑	iP	P	12 16 43.9	-0.2
CLL				eS	S	12 26 31.0	+3.4
CLL				pmax	pmax		
	comp=Z,31nm,1.2s						
CLL				MLR	MLR		
	comp=Z,900nm,19.0s						
CLL	Collm	76.51	359⇑	iP	P	12 16 43.9	-0.2
	comp=Z,31nm,1.2s						
CLL				i x	x	12 17 09.3	
CLL				eS	S	12 26 31.0	+3.4
CLL				ePS	PnS	12 27 14.0	+6.9
CLL				eSS	SS	12 31 30.0	+8.8
CLL				eSSS	SSS	12 34 36.0	
CLL				ex	x	12 36 06.0	
CLL				eSSSS		12 37 06.0	
CLL				LmV		12 57 00.0	
	comp=Z,900nm,19.0s						
CLL				Lm	MLR	13 01 00.0	
	comp=N,800nm,18.0s						
CLL				Lm	MLR	13 01 00.0	
	comp=E,600nm,18.7s						
CCA1	Carnmenellis	76.60	11	eP	P	12 16 44.4	-0.3
KSP	Ksiaz	76.92	357	eP	P	12 16 46.6	+0.2
BRG	Berggiesshubel	76.94	359	eP	P	12 16 46.7	+0.2
BRG				Amp		12 16 48.2	
	comp=Z,36nm,1.2s						
BRG				ex	x	12 17 00.3	
BRG				Amp		12 17 02.1	
	comp=Z,27nm,1.4s						
BRG				Amp		12 56 59.0	
	comp=Z,1.1nm,18.3s						
BRG				Amp		12 57 03.0	
	comp=N,0.8nm,19.7s						
BRG				Amp		12 57 21.0	
	comp=E,0.5nm,15.7s						
BRG	Berggiesshubel	76.94	359	eP	P	12 16 46.7	+0.2
BRG				e		12 17 00.3	
BRG				pmax	pmax		
	comp=Z,36nm,1.2s						
BRG				pmax	pmax		
	comp=Z,27nm,1.4s						
MEM	Membach	77.09	4	dP	P	12 16 47.8	+0.5
	comp=Z,18nm,1.2s						
BSTI	Sart Tilman	77.10	4	dP	P	12 16 47.9	+0.5
CHTO	Chiang Mai	77.10	284	P	P	12 16 47.3	-0.6
CHTO				IAmb	IAmb	12 17 02.1	
	comp=Z,24nm,0.9s						
CHTO	Chiang Mai	77.10	284	P	P	12 16 48.1	+0.2
SNF	Seneffe	77.11	5	dP	P	12 16 47.9	+0.4
BTNL	Ternell	77.12	4	dP	P	12 16 48.0	+0.4
	comp=Z,20nm,1.1s						
CHVC	Chvalec	77.18	357	eP	P	12 16 48.0	+0.1
CHVC				AMS	AMS	12 56 10.0	
	comp=Z,1µm,18.6s						
OSTC	Ostas	77.20	357	eP	P	12 16 48.2	+0.1
OSTC				AMS	AMS	13 00 50.0	
	comp=Z,1µm,16.7s						
BCLA	Clavier	77.25	4	dP	P	12 16 48.2	-0.1
	comp=Z,12nm,1.1s						
BCLA				dx	x	12 17 06.5	
UPC	Upice	77.26	357	eP	P	12 16 48.3	-0.1
UPC				MLR	MLR		
	comp=Z,1µm,16.4s						
UPC	Upice	77.26	357	eP	P	12 16 48.3	-0.1
UPC				AMS	AMS	13 00 50.0	
	comp=Z,1µm,16.4s						
PVCC	Panska Ves	77.27	358	eP	P	12 16 48.8	+0.4
PVCC				MLR	MLR		
	comp=Z,1µm,17.2s						
PVCC	Panska Ves	77.27	358	eP	P	12 16 48.8	+0.4
PVCC				AMS	AMS	12 58 20.0	
	comp=Z,1µm,17.2s						
BGES	Gesves	77.27	5	dP	P	12 16 48.8	+0.4
	comp=Z,14nm,1.1s						
SANI	Sanana	77.28	249	P	P	12 16 50.9	+2.0
TBI	Tubuai	77.30	163	eS	S	12 26 45.5	+9.0
TBI				eLQ	LQ	12 36 41.9	
	comp=Z,391nm,24.2s						
TBI				eLR	LR	12 39 19.8	
	comp=Z,1µm,31.8s,baz=348						
BMRD	Maredsous	77.34	5	dP	P	12 16 49.1	+0.3
BHOU	Houvegnez	77.34	4	dP	P	12 16 49.3	+0.4
CM31	Chiang Mai Arr	77.38	284	P	P	12 16 50.0	+0.5
CM31				IAmb	IAmb	12 17 11.0	
	comp=Z,46nm,1.0s						
CMAR	Chiang Mai Arr	77.38	284	P	P	12 16 49.5	-0.1
	comp=Z,31nm,1.1s,baz=25,slow=5.8,SNR=110						
CMAR				LR	LR	12 54 08.2	
	comp=Z,820nm,19.3s,baz=5.0,slow=38						
	comp=Z,31nm,1.1s						
CMAR	Chiang Mai Arr	77.38	284	P	P	12 16 49.8	+0.3
CMAR	Chiang Mai Arr	77.38	284	i P	P	12 16 49.7	+0.2
CMAR				pmax	pmax		
	comp=Z,32nm,1.1s						
JIRN	Jiri	77.39	299⇑	iP	P	12 16 49.8	-0.1
OJC	Ojcow	77.39	355	eP	P	12 16 49.3	+0.2
OJC	Ojcow	77.39	355	P	P	12 16 48.8	-0.3
DPC	Dobruska-Polom	77.41	357	eP	P	12 16 49.6	+0.4
DPC				eS	S	12 26 32.5	-5.1
DPC				MLR	MLR		
	comp=Z,1µm,17.4s						
DPC	Dobruska-Polom	77.41	357	eP	P	12 16 49.6	+0.4
DPC				eS	S	12 26 32.5	-5.1
DPC				AMS	AMS	12 58 50.0	
	comp=Z,1µm,17.4s						
LVV	L'vov	77.49	352	eP	P	12 16 49.2	-0.5
LVV				eS	S	12 26 36.4	-2.0
RCHB	Rochefort	77.51	4	dP	P	12 16 49.2	-0.6
	comp=Z,19nm,1.2s						
DOU	Dourbes	77.53	5	dP	P	12 16 49.9	0.0
	comp=Z,14nm,1.1s						
DZM	Mont Dzumac	77.57	204	P	P	12 16 50.1	-0.3
	comp=Z,8.9nm,1.1s,baz=256,slow=22,SNR=2.9						
DZM				LR	LR	12 44 26.6	
	comp=Z,1µm,20.9s,baz=32,slow=31						
	comp=Z,8.9nm,1.1s						
DZM	Mont Dzumac	77.57	204	eS	SKSac	12 27 14.6	+13
DZM	Mont Dzumac	77.57	204	eLR	LR	12 40 27.0	
	comp=Z,2µm,21.8s						
NKC	Novy Kostel	77.59	360	eP	P	12 16 50.5	+0.3
NKC				MLR	MLR		
	comp=Z,1µm,16.7s						
NKC	Novy Kostel	77.59	360	eP	P	12 16 50.5	+0.3
NKC				AMS	AMS	13 01 50.0	
	comp=Z,1µm,16.7s						
KRLC	Kraliky	77.67	357	eP	P	12 16 51.6	+0.9
KRLC				MLR	MLR		
	comp=Z,1µm,17.7s						
KRLC	Kraliky	77.67	357	eP	P	12 16 51.6	+0.9
KRLC				AMS	AMS	13 00 50.0	
	comp=Z,1µm,17.7s						
RAMN	Ramite	77.73	298⇑	iP	P	12 16 51.2	-0.5
	comp=Z,238nm,1.3s						
TOLI2	Tolitoli	77.76	256	P	P	12 16 50.2	-1.4
TOLI2				IAmb	IAmb	12 17 06.6	
	comp=Z,47nm,1.5s						
TOLI2	Tolitoli	77.76	256	P	P	12 16 51.3	-0.3
KKN	Kakani	77.77	300⇑	iP	P	12 16 51.6	-0.3
	comp=Z,201nm,1.4s						
KWP	Kalwaria Pacla	77.78	353	eP	P	12 16 51.7	+0.4
KWP	Kalwaria Pacla	77.78	353	P	P	12 16 51.0	-0.3
PRU	Pruhonice	77.81	358	eP	P	12 16 51.8	+0.4
PRU				eS	S	12 26 42.1	+0.3
PRU				MLR	MLR		
	comp=Z,1µm,16.5s						
PRU	Pruhonice	77.81	358	eP	P	12 16 51.8	+0.4
PRU				eS	S	12 26 42.1	+0.3
PRU				AMS	AMS	13 01 20.0	
	comp=Z,1µm,16.5s						
OKC	Ostrava-Krasne	77.85	356	eP	P	12 16 52.1	+0.4
OKC				MLR	MLR		
	comp=Z,900nm,18.4s						
OKC	Ostrava-Krasne	77.85	356	eP	P	12 16 52.1	+0.4
OKC				AMS	AMS	12 58 50.0	
	comp=Z,900nm,18.4s						
PKI	Pulchoki	77.88	300⇑	iP	P	12 16 52.1	-0.5
	comp=Z,208nm,1.3s						
PKIN	Phulchoki	77.88	300⇑	iP	P	12 16 52.3	-0.2
	comp=Z,166nm,1.2s						
JSA	Saint Aubin	77.92	9	eP	P	12 16 52.0	0.0
MORC	Moravsky Berou	77.94	356	⇓P	P	12 16 52.9	+0.7
MORC	Moravsky Berou	77.94	356	P	P	12 16 51.9	-0.3
MORC				IAmb	IAmb	12 16 53.4	
	comp=Z,36nm,1.2s						
MORC	Moravsky Berou	77.94	356	eP	P	12 16 52.3	+0.1
DMN	Daman	78.01	300⇑	iP	P	12 16 53.0	-0.2
	comp=Z,141nm,1.3s						
WLF	Walferdange	78.04	4	dP	P	12 16 52.9	+0.1
	comp=Z,15nm,1.3s						
GRA1	Grafenberg Arr	78.13	1	P	P	12 16 53.8	+0.6
GRFO	Grafenberg	78.13	1	P	P	12 16 54.2	+1.0
GRFO				IAmb	IAmb	12 17 05.5	
	comp=Z,52nm,1.1s						
NIE	Niedzica	78.16	354	eP	P	12 16 54.9	+1.5
LUWI	Luwuk	78.32	253	P	P	12 16 56.0	+1.3
MAUC	Maruska	78.34	356	eP	P	12 16 54.6	+0.2
MAUC				AMS	AMS	12 58 50.0	
	comp=Z,1µm,18.7s						
VRAC	Vranov	78.44	357	⇓P	P	12 16 55.7	+0.8
VRAC	Vranov	78.44	357	eP	P	12 16 55.4	+0.4
LANS	Liptovska Anna	78.47	355	eP	P	12 16 56.9	+1.7
LANS				pmax	pmax		
	comp=Z,56nm,1.5s						
LANS	Liptovska Anna	78.47	355	eP	P	12 16 56.9	+1.7
TREC	Trest	78.48	358	AMS	AMS	12 59 20.0	
	comp=Z,1µm,19.2s						
KOLS	Kolonicke sedl	78.51	353	eP	P	12 16 56.3	+0.9
KOLS				pmax	pmax		
	comp=Z,19nm,1.1s						
KOLS	Kolonicke sedl	78.51	353	eP	P	12 16 56.3	+0.9
CRVS	Cervenica-Dubn	78.60	354	eP	P	12 16 56.1	+0.2
CRVS				pmax	pmax		
	comp=Z,65nm,1.2s						
CRVS	Cervenica-Dubn	78.60	354	eP	P	12 16 56.1	+0.2
KHC	Kasperske Hory	78.68	359	P	P	12 16 56.4	0.0
KHC	Kasperske Hory	78.68	359	eP	P	12 16 56.6	+0.3
KHC				eS	S	12 26 52.1	+0.8
KHC				MLR	MLR		
	comp=Z,1µm,20.6s						
KHC	Kasperske Hory	78.68	359	eP	P	12 16 56.6	+0.3
KHC				eS	S	12 26 52.1	+0.8
KHC				AMS	AMS	12 59 00.0	
	comp=Z,1µm,20.6s						
KRUC	Moravsky	78.69	357	eP	P	12 16 56.5	+0.2
SORM	Soroca	78.72	349	⇓P	P	12 16 55.9	-0.6
UZH	Uzhgorod	78.81	353⇓	iP	P	12 16 54.9	-2.1
UZH				e		12 17 07.3	
UZH				e		12 17 14.2	
UZH				e		12 19 55.0	
UZH				eS	S	12 26 46.4	-6.2
UZH				e		12 27 05.4	
UZH				ePS	PnS	12 27 37.4	+1.0
UZH				eSS	SS	12 31 54.7	-1.3
JAVC	Velka Javorina	78.85	356	eP	P	12 16 58.7	+1.4
GEC2	GERESS Array S	78.97	359	P	P	12 16 57.8	-0.2
GEC2				IAmb	IAmb	12 16 59.1	
	comp=Z,29nm,1.2s						
GERES	GERESS Array B	78.97	359	P	P	12 16 58.2	+0.2
	comp=Z,5.6nm,0.8s,baz=21,slow=6.4,SNR=44						
	comp=Z,5.6nm,0.8s						
GERES	GERESS Array B	78.97	359	P	P	12 16 57.8	-0.2
CKRC	Cesky Krumlov	78.98	358	eP	P	12 16 58.1	+0.1
CKRC				eS	S	12 26 51.2	-3.3
STU	Stuttgart	79.02	2	P	P	12 16 58.3	+0.1
STU				IAmb	IAmb	12 16 60.0	
	comp=Z,63nm,1.5s						
KECS	Kecovo	79.08	354	eP	P	12 16 59.0	+0.5
KECS	Kecovo	79.08	354	eP	P	12 16 59.0	+0.5
KOLL	Kolacno	79.10	356	eP	P	12 16 59.2	+0.6
VYHS	Vyhne	79.16	355	eP	P	12 16 59.8	+0.9
VYHS				pmax	pmax		
	comp=Z,31nm,1.2s						
VYHS	Vyhne	79.16	355	eP	P	12 16 59.8	+0.9
GOF	Gofitskoye	79.17	338⇑	iP	P	12 16 59.9	+0.9
GOF				pmax	pmax		
	comp=Z,76nm,1.1s						
SMOL	Smolenice	79.20	356	eP	P	12 17 00.4	+1.2
SMOL	Smolenice	79.20	356	eP	P	12 17 00.4	+1.2
BHK	Bhakra	79.31	308	ex	P	12 17 02.5	+2.5
MODS	Modra-Piesok	79.35	356	eP	P	12 17 01.0	+1.0
MODS				pmax	pmax		
	comp=Z,196nm,1.4s						
MODS	Modra-Piesok	79.35	356	eP	P	12 17 01.0	+1.0
BFO	Black Forest	79.45	2	P	P	12 17 00.2	-0.3
BFO				IAmb	IAmb	12 17 02.3	
	comp=Z,49nm,1.4s						
CLF	Chambon-Foret	79.46	7	P	P	12 17 00.9	+0.4
ECH	Echery	79.53	3	P	P	12 17 00.7	-0.3
ECH				IAmb	IAmb	12 17 02.7	
	comp=Z,43nm,1.2s						
ZST	Bratislava	79.53	357	eP	P	12 17 02.1	+1.2
ZST				pmax	pmax		
	comp=Z,165nm,1.2s						
ZST	Bratislava	79.53	357	eP	P	12 17 02.1	+1.2
DRK0	Durika	79.54	88	P	P	12 17 02.9	+1.2
BUR08	Bucovina Ar. S	79.54	351	P	P	12 17 00.5	-0.7
BURAR	Bucovina Array	79.57	351	⇑P	P	12 17 01.3	0.0
BURAR	Bucovina Array	79.57	351	P	P	12 17 00.6	-0.7
BMR	Baia Mare	79.67	352	⇑P	P	12 17 02.0	+0.3
PSZ	Piszkesteto	79.68	355	⇑P	P	12 17 02.6	+0.8
PSZ	Piszkesteto	79.68	355	P	P	12 17 01.8	0.0
PSZ	Piszkesteto	79.68	355	P	P	12 17 02.6	+0.8
PSZ	Piszkesteto	79.68	355	P	P	12 17 02.0	+0.2
KIS	Kishinev	79.79	348⇑	iP	P	12 17 00.6	-1.7
	comp=Z,180nm,4.3s						
KIS	Kishinev	79.79	348c	iP	P	12 17 00.6	-1.7
KIS				pmax	pmax		
	comp=Z,180nm,4.3s						
CONA	Conrad Observa	79.84	357	eP	P	12 17 03.6	+0.8
	comp=Z,44nm,1.1s,SNR=25						
MILM	Milestii Mici	79.86	348	⇑P	P	12 17 02.8	+0.1
MILM	Milestii Mici	79.86	348	eP	P	12 17 01.0	-1.7
MILM				eS	S	12 27 05.0	+1.2
MILM				pmax	pmax		
	comp=Z,400nm,8.6s						
MILM	Milestii Mici	79.86	348	eS	S	12 27 05.0	+1.2
SRO	Srobarova	79.86	356	eP	P	12 17 04.3	+1.5
SRO				pmax	pmax		
	comp=Z,71nm,1.5s						
SRO	Srobarova	79.86	356	eP	P	12 17 04.2	+1.5
MILM	Milestii Mici	79.87	348	eL	L	12 44 57.0	
MILM	Milestii Mici	79.87	348	LQ	LQ	12 56 49.0	
	comp=Z,1µm,17.5s						
MILM	Milestii Mici	79.87	348	LRM	MLR	13 00 23.0	
	comp=Z,1µm,17.0s						
SRO2	Moca	79.91	356	eP	P	12 17 03.0	0.0
SRO2				pmax	pmax		
	comp=Z,31nm,1.1s						
SRO2	Moca	79.91	356	eP	P	12 17 03.0	0.0
MOA	Molln	79.96	358	eP	P	12 17 03.7	+0.4
	comp=Z,27nm,1.1s,SNR=13						
MAK	Makhachkala	80.04	334	eP	P	12 16 59.1	-4.6
MAK				eS	S	12 26 59.3	-6.5
MAK				eSS	SS	12 32 13.9	-0.8
MAK				pmax	pmax		
	comp=Z,364nm,2.0s						
KBL	Kabul	80.04	315	P	P	12 17 02.8	-1.5
KBL				IAmb	IAmb	12 17 04.6	
	comp=Z,75nm,1.2s						
RONA	Rosalia, Austr	80.06	357	eP	P	12 17 04.8	+1.0
	comp=Z,31nm,1.3s,SNR=10						
SOP	Sopron	80.06	357	P	P	12 17 04.9	+1.0
SOP	Sopron	80.06	357	P	P	12 17 05.1	+1.2
BIOA	Bad Ischl, Aus	80.12	359	eP	P	12 17 04.7	+0.5
	comp=Z,29nm,1.2s,SNR=9.8						
BIZ	Bicaz	80.15	350	⇑P	P	12 17 04.3	0.0
BUD	Budapest	80.16	355	P	P	12 17 05.5	+1.2
ARCR	ARCALIA	80.18	351	⇑P	P	12 17 05.2	+0.8
MESR	Meseseni	80.23	352	⇑P	P	12 17 05.8	+1.0
GROC	Groznyy	80.26	336	eP	P	12 17 02.4	-2.5
GROC				eS	S	12 27 07.0	-1.1
GROC				pmax	pmax		
	comp=Z,16nm,0.5s						
BSZH	Besenyszg	80.27	354	⇑P	P	12 17 05.5	+0.6
BSZH	Besenyszg	80.27	354	P	P	12 17 06.9	+2.0
KVAR	Kislovodsk Arr	80.29	338	LR	LR	12 57 06.6	
	comp=Z,1µm,20.8s,baz=282,slow=39						
KIV	Kislovodsk	80.29	338	⇑P	P	12 17 04.7	-0.5
KIV	Kislovodsk	80.29	338	P	P	12 17 05.3	+0.1
KIV				IAmb	IAmb	12 17 38.2	
	comp=Z,31nm,1.0s						
KIV	Kislovodsk	80.29	338	eP	P	12 17 05.9	+0.6
KIV				e		12 20 08.7	
KIV				eS	S	12 27 09.5	+0.8
KIV				eSS	SS	12 32 22.0	+3.4
KIV				pmax	pmax		
	comp=Z,34nm,1.1s						
EGYH	Egyhazaskeszo	80.30	356	P	P	12 17 06.9	+1.8
EGYH	Egyhazaskeszo	80.30	356	P	P	12 17 06.5	+1.4
CSKK	Cskako	80.32	356	P	P	12 17 06.5	+1.3
CSKK	Cskako	80.32	356	P	P	12 17 06.5	+1.3
RETA	Reutte	80.33	1	i P	P	12 17 05.8	+0.4
	comp=Z,27nm,1.2s,SNR=13						
BORR	Bors	80.38	353	⇑P	P	12 17 06.8	+1.3
KBZ	Khabaz	80.46	338	P	P	12 17 07.0	+1.0
	comp=Z,16nm,0.9s,baz=57,slow=2.2,SNR=24						
KBZ				LR	LR	12 56 57.1	
	comp=Z,1µm,20.6s,baz=30,slow=39						
	comp=Z,16nm,0.9s						
KBZ	Khabaz	80.46	338c	eP	P	12 17 06.7	+0.7
KBZ				pmax	pmax		
	comp=Z,20nm,1.1s						
MOTA	Moosalm	80.48	1	eP	P	12 17 06.7	+0.4
	comp=Z,45nm,1.1s,SNR=21						
WATA	Walderalm	80.49	0	eP	P	12 17 06.9	+0.6
	comp=Z,47nm,1.2s,SNR=26						
TESR	Tescani	80.52	350	⇑P	P	12 17 05.5	-0.8
NCK	Nalchik	80.52	337⇑	eP	P	12 17 07.4	+1.0
NCK				pmax	pmax		
	comp=Z,128nm,1.3s						
DAVA	Damuels	80.52	1	eP	P	12 17 06.8	+0.3
	comp=Z,21nm,1.6s,SNR=10						
ARSA	Arzberg	80.53	358	eP	P	12 17 07.2	+0.9
	comp=Z,35nm,1.2s,SNR=20						
MPLH	Magyarpolny	80.54	356	P	P	12 17 07.7	+1.3
MPLH	Magyarpolny	80.54	356	P	P	12 17 07.5	+1.0
WTTA	Wattenberg	80.56	0	i P	P	12 17 07.4	+0.7
	comp=Z,44nm,1.1s,SNR=20						
ANN	Anapa	80.58	342	eP	P	12 17 05.5	-1.1
ANN				eS	S	12 27 11.8	+0.4
ANN				pmax	pmax		
	comp=Z,64nm,1.2s						
SQTA	Sankt Quirin	80.60	1	eP	P	12 17 07.6	+0.7
	comp=Z,82nm,1.4s,SNR=29						
DRGR		80.61	353	⇑P	P	12 17 06.4	-0.4
CJR	Cluj-Napoca	80.61	352	⇑P	P	12 17 07.6	+0.7
KBA	Koelnbreinsper	80.74	359	eP	P	12 17 08.9	+1.2
	comp=Z,91nm,1.1s,SNR=33						
FETA	Feichten	80.80	1	i P	P	12 17 08.8	+0.8
	comp=Z,42nm,1.1s,SNR=20						
GHRR		80.88	349	⇑P	P	12 17 07.6	-0.6
OZUR		81.02	350	⇑P	P	12 17 08.2	-0.8
ABTA	Abfaltersbach	81.08	360	i P	P	12 17 09.9	+0.5
	comp=Z,60nm,1.2s,SNR=18						
SOKA	Soboth	81.11	358	eP	P	12 17 10.2	+0.6
	comp=Z,108nm,1.3s,SNR=22						
VRI	Vrincioaia	81.14	350	⇑P	P	12 17 08.9	-0.8
PERS	Pernice	81.15	358	i P	P	12 17 10.4	+0.6
PERS				IAMb		12 17 11.7	
	comp=Z,45nm,1.1s						
PLOR	Plostina	81.17	350	⇑P	P	12 17 10.0	+0.2
MYKA	Terra Mystica	81.19	359	eP	P	12 17 10.1	+0.2
	comp=Z,33nm,1.1s,SNR=7.3						
DOPR	Dopca	81.19	351	⇑P	P	12 17 10.4	+0.5
SIRR	Siria	81.21	353	⇑P	P	12 17 09.4	-0.6
COVR	Voineasa-Covas	81.22	350	⇓P	P	12 17 10.7	+0.6
OBKA	Obir	81.29	358	eP	P	12 17 11.1	+0.6
	comp=Z,42nm,1.1s,SNR=8.0						
SOC	Sochi	81.30	340	eP	P	12 17 09.0	-1.5
SOC				e		12 20 11.2	
SOC				ePPP	PPP	12 22 07.7	
SOC				eS	S	12 27 19.2	+0.3
SOC				eSSS	SSS	12 36 00.9	
SOC				pmax	pmax		
	comp=Z,60nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,22.0s						
SLCR	Slobozia Conac	81.30	349	⇑P	P	12 17 09.7	-0.7

KOGS	Kog	81.31	357	iP	P	12 17 11.2	+0.6
KOGS				IAMb		12 17 12.3	
	comp=Z,39nm,1.4s						
TUE	Stuetta	81.33	2	P	P	12 17 11.9	+1.0
GEYT	Alibeck	81.36	325	P	P	12 17 11.2	+0.1
	comp=Z,22nm,0.8s,baz=256,slow=6.0,SNR=37						
GEYT				LR	LR	12 57 18.6	
	comp=Z,2µm,19.5s,baz=46,slow=39						
	comp=Z,22nm,0.8s						
GEYT	Alibeck	81.36	325	P	P	12 17 11.1	+0.1
GEYT				IAmb	IAmb	12 17 16.5	
	comp=Z,46nm,1.1s						
GYA0	ALIBECK ARRAY	81.36	325	P	P	12 17 10.6	-0.4
GYA0B	ALIBECK ARRAY	81.36	325	P	P	12 17 11.1	+0.1
SENIN	Lac Senin/Sane	81.38	3	P	P	12 17 11.3	+0.1
SENIN				IAmb	IAmb	12 17 20.0	
	comp=Z,57nm,1.8s						
MORH	Mrgy, Hungar	81.44	355	⇓P	P	12 17 12.0	+0.8
MORH	Mrgy, Hungar	81.44	355	P	P	12 17 11.5	+0.3
MORH	Mrgy, Hungar	81.44	355	P	P	12 17 11.6	+0.3
DEV	Deva	81.50	352	⇑P	P	12 17 10.9	-0.6
CADS	Cadrg	81.59	359	iP	P	12 17 11.8	-0.3
KOVH	Kovagotottos	81.60	356	P	P	12 17 12.3	+0.3
KOVH	Kovagotottos	81.60	356	P	P	12 17 12.0	0.0
MLR	Muntele Rosu	81.60	350	⇓P	P	12 17 13.4	+1.2
MLR	Muntele Rosu	81.60	350	LR	LR	12 56 20.4	
	comp=Z,901nm,21.7s,baz=30,slow=38						
CHVG	Ch'k'valeri	81.61	338	⇑P	P	12 17 12.6	+0.5
CFR	Carcaliu	81.66	349	⇑P	P	12 17 11.5	-0.8
CTI	Castel Tesino	81.78	0	P	P	12 17 13.0	-0.2
CTI				IAmb	IAmb	12 17 29.1	
	comp=Z,53nm,1.3s						
BZS	Buzias	81.86	353	⇑P	P	12 17 12.8	-0.7
ISR	Istrita	81.90	350	⇑P	P	12 17 13.9	+0.1
RAO	Raoul Island	81.91	189	LR	LR	12 51 00.4	
	comp=Z,823nm,18.4s,baz=2.0,slow=34						
TPGR	Topolog	81.94	348	⇓P	P	12 17 14.3	+0.4
JURR	Jurilovca	81.97	348	⇑P	P	12 17 14.0	0.0
GZR	Gura Zlata	81.99	352	⇑P	P	12 17 14.2	-0.1
SECR		82.04	350	⇓P	P	12 17 15.0	+0.6
HARR	Harsova	82.17	349	⇑P	P	12 17 15.9	+0.9
TLBR	Topalu	82.30	348	⇑P	P	12 17 16.5	+0.8
TIRR	Tirgusor	82.34	348	⇑P	P	12 17 16.6	+0.7
SSB	Saint Sauveur	82.34	5	P	P	12 17 16.3	+0.3
SSB				IAmb	IAmb	12 17 18.2	
	comp=Z,32nm,1.2s						
SULR		82.37	350	⇑P	P	12 17 15.1	-1.0
FRGS	Fruska Gora	82.44	354	⇑P	P	12 17 16.6	+0.1
TEOL	Teolo	82.47	0	P	P	12 17 15.7	-0.9
AKH	Akhalkalaki	82.51	337	⇑P	P	12 17 18.2	+1.1
CTA	Charters Tower	82.52	223	P	P	12 17 18.7	+1.6
	comp=Z,4.9nm,0.8s,baz=12,slow=8.9,SNR=2.3						
CTA				LR	LR	12 48 27.8	
	comp=Z,346nm,21.6s,baz=21,slow=32						
	comp=Z,4.9nm,0.8s						
HERR	Herculane	82.53	353	⇑P	P	12 17 15.9	-1.1
KDU	Kakadu	82.56	238	P	P	12 17 17.4	+0.1
	comp=Z,33nm,1.5s						
BNI	Bardonecchia	82.67	4	P	P	12 17 19.1	+1.3
MDVR	Moldovita	82.68	353	⇓P	P	12 17 17.9	+0.1
ICOR	Ion Corvin	82.75	349	⇓P	P	12 17 18.8	+0.8
SJG	San Juan	82.81	70	LR	LR	12 57 06.7	
	comp=Z,474nm,18.1s,baz=329,slow=38						
SJG	San Juan	82.81	70	eP	P	12 17 25.7	+6.9
HRA	Herat	82.97	320	P	P	12 17 19.4	-0.4
HRA				IAmb	IAmb	12 17 20.3	
	comp=Z,35nm,1.1s						
KAPI	Kappang	83.28	253	LR	LR	12 49 30.5	
	comp=Z,180nm,21.9s,baz=34,slow=32						
MTN	Manton Dam	83.39	239	P	P	12 17 20.7	-0.9
GNI	Garni	83.39	335	LR	LR	13 02 45.9	
	comp=Z,2µm,18.1s,baz=20,slow=42						
GNI	Garni	83.39	335	ceP	P	12 17 22.9	+1.2
GNI				pmax	pmax		
	comp=Z,15nm,1.1s						
RAZG	Razgrad	83.44	349	⇑P	P	12 17 21.6	-0.2
ZCCA	Zocca	83.47	1	P	P	12 17 23.1	+1.2
DIVS	Divibare	83.48	354	P	P	12 17 22.3	+0.3
DIVS				IAmb	IAmb	12 17 28.8	
	comp=Z,43nm,1.4s						
SMRC	Santa Marta, M	83.53	80	eP	P	12 17 25.9	+3.3
PRD	Provadia	83.70	349	P	P	12 17 23.4	+0.4
BLKB	Belogradchik	83.76	352	⇑P	P	12 17 22.7	-0.7
KSM	Kuching	83.76	264	P	P	12 17 23.7	0.0
KSM	Kuching	83.76	264	P	P	12 17 24.5	+0.8
KTUT	Trabzon	83.77	339	⇑P	P	12 17 23.8	+0.4
SZH	Strazhica	83.80	350	P	P	12 17 22.8	-0.8
BOVS	Bovan	83.82	353	⇑P	P	12 17 22.9	-0.8
MPEP	Malo Peshtene	83.93	351	P	P	12 17 23.3	-0.9
SJCC	San Jacinto, C	83.95	82	eP	P	12 17 25.7	+0.9
DIKM	Dikmen	84.03	343	⇑P	P	12 17 23.8	-1.0
PGAV	Gavieira, Arco	84.24	15	eP	P	12 17 26.6	+0.6
	comp=Z,68nm,1.8s						
PGAV	Gavieira, Arco	84.24	15	eS	S	12 27 57.2	+8.0
PGAV	Gavieira, Arco	84.24	15	eLR	LR	12 48 14.7	
	comp=Z,1µm,20.0s						
OSSC	Osservatorio P	84.30	1	P	P	12 17 26.2	+0.1
JMB	Yambol	84.52	349	P	P	12 17 27.3	+0.1
PCAB	Cabril	84.53	15	eP	P	12 17 27.5	+0.2
	comp=Z,43nm,1.6s						
PBRG	Braganca	84.63	14	eP	P	12 17 28.0	+0.1
	comp=Z,49nm,1.6s						
PGB	Panagyurishte	84.69	351	P	P	12 17 28.2	0.0
VTS	Vitosha	84.71	352	⇑P	P	12 17 28.1	-0.2
VTS	Vitosha	84.71	352	P	P	12 17 27.7	-0.7
VTS				IAmb	IAmb	12 17 28.7	
	comp=Z,18nm,1.2s						
VTS	Vitosha	84.71	352	P	P	12 17 27.6	-0.7
POLO	Lamas de Olo	84.89	15	eP	P	12 17 29.1	-0.2
	comp=Z,28nm,1.6s						
POLO	Lamas de Olo	84.89	15	ePP	PP	12 20 44.4	-0.6
CASP	Castiglione de	85.03	1	P	P	12 17 29.9	+0.1
DIM	Dimitrovgrad	85.05	350	P	P	12 17 30.3	+0.4
PLD	Plovdiv	85.08	351	P	P	12 17 29.6	-0.4
TOKA	Tokat	85.09	341	P	P	12 17 32.0	+1.8
EDRB	Edirne	85.11	349	P	P	12 17 31.0	+0.8
PDG	Podgorica	85.19	355	⇓P	P	12 17 30.7	+0.1
MVO	Moncorvo	85.22	14	eP	P	12 17 30.7	-0.1
	comp=Z,46nm,1.6s						
MVO	Moncorvo	85.22	14	eS	S	12 28 09.9	+11
MVO	Moncorvo	85.22	14	eLR	LR	12 49 05.4	
	comp=Z,992nm,18.0s						
UREC	San Jos de Ur	85.42	83	eP	P	12 17 31.8	-0.4
KDZ	Kurdzhali	85.45	350	P	P	12 17 32.1	+0.1
KKB	Krupnik	85.47	352	P	P	12 17 31.8	-0.2
RZN	Rozhen	85.49	350	P	P	12 17 32.5	+0.2
SKO	Skopje	85.50	353	iP	P	12 17 32.9	+0.8
PVIS	Viseu	85.52	15	eP	P	12 17 33.0	+0.6
	comp=Z,50nm,1.7s						
GEVA	Gevas	85.55	336	P	P	12 17 33.7	+1.0
MMB	Musomiste	85.68	351	P	P	12 17 33.6	+0.5
PHP	Peshkopia	85.85	354	P	P	12 17 34.4	+0.4
MTE	Manteigas	85.89	15	eP	P	12 17 34.2	0.0
	comp=Z,23nm,2.2s						
MTE	Manteigas	85.89	15	ePP	PP	12 20 53.5	+0.5
MTE				eS	S	12 28 15.2	+10
MTE	Manteigas	85.89	15	eLR	LR	12 49 41.2	
	comp=Z,1µm,18.0s						
NVR	Nevrokopi	85.91	351	P	P	12 17 34.7	+0.5
COI	Coimbra	85.93	16	eP	P	12 17 34.9	+0.6
	comp=Z,56nm,1.6s						
RDO	Rodhopi	85.94	350	P	P	12 17 35.0	+0.7
RDO	Rodhopi	85.94	350	P	P	12 17 34.5	+0.2
ZARC	Zaragoza, Cauc	86.03	83	eP	P	12 17 32.9	-2.3
VAY	Valandovo	86.05	352	iP	P	12 17 35.3	+0.5
PCAS	Casmilo, Conde	86.07	16	eP	P	12 17 34.8	-0.2
	comp=Z,50nm,2.0s						
ALN	Alexandroupoli	86.13	349	P	P	12 17 35.5	+0.2
SRS	Serrai	86.16	351	P	P	12 17 35.8	+0.3
KNT	Kendrikon	86.18	352	P	P	12 17 36.0	+0.4
BR131	Keskin Array S	86.19	343	P	P	12 17 36.0	+0.2
BR131	Keskin Array S	86.19	343	c iP	P	12 17 36.2	+0.4
BRTR	Keskin Array B	86.19	343	P	P	12 17 36.4	+0.6
	comp=Z,23nm,1.1s,baz=51,slow=2.0,SNR=68						
BRTR				LR	LR	13 00 11.0	
	comp=Z,1µm,21.0s,baz=0.0,slow=38						
	comp=Z,23nm,1.1s						
BRTR	Keskin Array B	86.19	343	P	P	12 17 35.1	-0.7
BRTR	Keskin Array B	86.19	343	iP	P	12 17 36.4	+0.6
BRTR				pmax	pmax		
	comp=Z,25nm,1.1s						
ANTO	Ankara	86.19	344	P	P	12 17 36.9	+1.1
KAVA	Kavala	86.19	351	P	P	12 17 35.7	+0.1
OCAC	Ocana	86.38	81	P	P	12 17 35.9	-1.2
OCAC				IAmb	IAmb	12 17 49.4	
	comp=Z,17nm,1.2s						
OCAC	Ocana	86.38	81	eP	P	12 17 34.5	-2.5
OHR	Ohrid	86.40	353	iP	P	12 17 37.0	+0.3
GRG	Griva	86.43	352	P	P	12 17 37.2	+0.4
PCBR	Castelo Branco	86.44	15	eP	P	12 17 37.1	+0.3
	comp=Z,24nm,1.7s						
PSBE	So Bento	86.55	16	eP	P	12 17 37.3	-0.1
	comp=Z,43nm,1.5s						
BORA	Eskisehir	86.55	346	P	P	12 17 38.2	+0.7
CBOC	Ciudad Bolivar	86.61	85	eP	P	12 17 37.2	-1.0
KULM	Kulim	86.65	274	P	P	12 17 37.5	-0.7
FNA	Florina	86.68	353	P	P	12 17 37.7	-0.4
HORT	Hortiatis	86.72	352	P	P	12 17 34.3	-4.0
PMRV	Marv??o	86.86	15	eP	P	12 17 37.9	-1.0
	comp=Z,18nm,1.6s						
PMRV	Marv??o	86.86	15	ePP	PP	12 21 01.4	+0.6
PMRV	Marv??o	86.86	15	eLR	LR	12 49 54.9	
	comp=Z,914nm,18.0s						
OUR	Ouranopolis	86.90	351	P	P	12 17 39.5	+0.4
PTBC	PUERTO BERRIO,	87.03	83	eP	P	12 17 38.1	-2.0
IPM	Ipoh	87.06	273	P	P	12 17 40.6	+0.4
	comp=Z,34nm,1.0s						
PMTG	Montargil	87.08	16	eP	P	12 17 39.0	-0.9
	comp=Z,20nm,1.5s						
ESDC	Sonseca Array	87.11	12	P	P	12 17 39.9	-0.3
	comp=Z,6.1nm,0.9s,baz=346,slow=4.7,SNR=38						
ESDC				LR	LR	12 59 59.4	
	comp=Z,1µm,18.0s,baz=346,slow=38						
	comp=Z,6.1nm,0.9s						
ESDC	Sonseca Array	87.11	12	P	P	12 17 39.7	-0.5
PAB	San Pablo	87.19	13	P	P	12 17 40.4	-0.2
PAB				IAmb	IAmb	12 17 56.8	
	comp=Z,20nm,1.6s						
PLMC	San Jos del P	87.20	86	eP	P	12 17 41.0	0.0
LIA	Limnos Island	87.21	350	P	P	12 17 40.8	+0.2
RMQ	Roma	87.28	218	P	P	12 17 41.9	+1.0
PAIG	Paliouri	87.34	351	P	P	12 17 41.1	-0.1
LSK	Leskovik	87.37	353	P	P	12 17 42.1	+0.6
PESTR	Estremoz	87.38	15	eP	P	12 17 40.8	-0.6
	comp=Z,19nm,1.4s						
SDV	Santo Domingo	87.48	79	eP	P	12 17 40.5	-2.0
NORC	Norcasia	87.54	84	eP	P	12 17 40.7	-1.9
WR0	Warramunga Arr	87.69	233	P	P	12 17 41.4	-1.5
WR0				IAmb	IAmb	12 17 55.7	
	comp=Z,27nm,1.4s						
WRAB	Tennant Creek	87.75	233	⇑eP	P	12 17 41.9	-1.4
WRAB				pmax	pmax		
	comp=Z,20nm,2.5s						
BARC	Barichara	87.76	82	eP	P	12 17 42.2	-1.7
WB2	Warramunga Arr	87.76	233	P	P	12 17 41.3	-2.0
WB2				IAmb	IAmb	12 17 58.0	
	comp=Z,28nm,1.1s						
WRA	Warramunga Arr	87.77	233	P	P	12 17 41.8	-1.6
	comp=Z,4.4nm,0.9s,baz=40,slow=5.0,SNR=23						
WRA				LR	LR	12 53 39.4	
	comp=Z,427nm,21.3s,baz=33,slow=33						
	comp=Z,4.4nm,0.9s						
WRA	Warramunga Arr	87.77	233	P	P	12 17 42.1	-1.3
WRA	Warramunga Arr	87.77	233	iP	P	12 17 41.7	-1.6
WRA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
THL	Klokotos Trika	87.84	352	P	P	12 17 42.9	-0.7
YOTC	Yotoco, Valle	87.89	86	eP	P	12 17 43.1	-1.2
XOR	Xorichti	87.94	351	P	P	12 17 42.6	-1.5
SPBC	San Pablo de B	87.96	83	eP	P	12 17 44.8	+0.2
PNCL	Nicolau / Gran	87.96	16	eP	P	12 17 43.2	-1.0
NEO	Neokhori	87.99	351	P	P	12 17 43.5	-0.9
ANIL	Santa Ana	88.06	85	eP	P	12 17 44.2	-1.2
PBAR	Barrancos	88.14	15	eP	P	12 17 44.5	-0.6
	comp=Z,33nm,1.5s						
MESJ	Messejana	88.28	16	eP	P	12 17 45.0	-0.7
MESJ				eSKSac	SKSac	12 28 10.7	-1.6
MESJ				IAMs_20	IAMs_20	12 56 31.6	
	comp=N,1µm,34.0s						
MESJ	Messejana	88.28	16	eP	P	12 17 45.5	-0.2
MESJ	Messejana	88.28	16	eP	P	12 17 45.0	-0.7
MESJ				e		12 28 10.7	
AGG	Agios Georgios	88.36	352	P	P	12 17 45.3	-0.8
AGG	Agios Georgios	88.36	352	P	P	12 17 44.8	-1.3
AGG				IAmb	IAmb	12 18 00.3	
	comp=Z,38nm,1.4s						
RUSC	La Rusia	88.37	83	eP	P	12 17 43.7	-3.3
MAKR	Makrakomi, Fth	88.38	352	P	P	12 17 46.5	+0.2
ROSC	El Rosal	88.45	84	P	P	12 17 47.4	+0.1
	comp=Z,4.4nm,0.4s,baz=345,slow=4.9,SNR=4.2						
	comp=Z,4.4nm,0.4s						
PCVE	Castro Verde	88.51	16	eP	P	12 17 48.6	+1.8
ORTC	Ortega, Tolima	88.62	85	eP	P	12 17 45.4	-2.3
MORF	Marmelete	88.72	16	eP	P	12 17 47.3	-0.7
MORF				eSKSac	SKSac	12 28 13.5	-1.7
MORF				IAMs_20	IAMs_20	12 58 51.4	
	comp=Z,2µm,27.5s						
MORF	Marmelete	88.72	16	eP	P	12 17 46.9	-1.0
	comp=Z,59nm,1.5s						
MORF	Marmelete	88.72	16	eP	P	12 17 47.2	-0.7
MORF				e		12 28 13.5	
PVAQ	Vaqueiros	88.78	16	eP	P	12 17 47.7	-0.4
	comp=Z,29nm,1.7s						
PVAQ	Vaqueiros	88.78	16	eS	S	12 28 33.8	+0.5
PVAQ	Vaqueiros	88.78	16	eLR	LR	12 51 55.8	
	comp=Z,2µm,20.0s						
PBDV	Barranco-do-Ve	88.91	16	eP	P	12 17 48.7	0.0
	comp=Z,48nm,1.5s						
BAUV	El Baul	88.98	77	P	P	12 17 48.3	-1.1
QLP	Quilpie	89.13	222	P	P	12 17 50.3	+0.7
PCON	Cinco Dias	89.16	87	eP	P	12 17 47.4	-3.5
OTAV	Otavalo	89.55	90	P	P	12 17 51.9	-0.7
OTAV				IAmb	IAmb	12 18 05.2	
	comp=Z,15nm,1.0s						
OTAV	Otavalo	89.55	90	eP	P	12 17 52.7	+0.1
OTAV	Otavalo	89.55	90	eP	P	12 17 52.6	0.0
HYBB	Hyderabad (bro	89.78	299	eP	P	12 17 52.3	-0.8
GARC	Garzon, Huila	89.82	87	eP	P	12 17 54.2	+0.6
PTGC	Puerto Gaitan,	90.28	83	eP	P	12 17 54.9	-0.5
MACC	Macarena, Meta	90.86	85	eP	P	12 17 56.9	-1.2
AS31	Alice Springs	91.15	231	P	P	12 17 57.5	-1.6
ASAR	Alice Springs	91.15	231	P	P	12 17 58.0	-1.2
	comp=Z,6.2nm,0.9s,baz=26,slow=3.9,SNR=42						
ASAR				LR	LR	13 02 22.6	
	comp=Z,321nm,18.1s,baz=24,slow=38						
	comp=Z,6.2nm,0.9s						
ASAR	Alice Springs	91.15	231	P	P	12 17 58.0	-1.2
PMOZ	Porto Moniz, M	91.24	24	eLR	LR	12 51 42.6	
	comp=Z,818nm,22.0s						
POO	Poona	91.32	303	eP	P	12 17 56.0	-4.3
URZ	Urewera	91.36	192	LR	LR	12 56 28.7	
	comp=Z,1µm,18.4s,baz=31,slow=34						
INKA	Innaminka	91.59	224	P	P	12 18 02.0	+0.9
	comp=Z,26nm,1.0s						
IDI	Anoyia	91.80	349	LR	LR	13 06 48.3	
	comp=Z,390nm,18.4s,baz=0.0,slow=40						
LEM	Lembang	91.94	261	LR	LR	13 00 09.2	
	comp=Z,156nm,19.0s,baz=44,slow=36						
KEST	Kesra	92.05	2	P	P	12 18 02.8	-0.7
	comp=Z,4.1nm,0.9s,baz=0.0,slow=0.0,SNR=3.1						
	comp=Z,4.1nm,0.9s						
MMAI	Mount Meron Ar	92.37	340	LR	LR	13 07 41.1	
	comp=Z,675nm,18.2s,baz=184,slow=41						
UOSS	Minazif	93.73	321	P	P	12 18 09.6	-1.7
UOSS				IAmb	IAmb	12 18 11.0	
	comp=Z,17nm,1.1s						
MDT	Midelt	93.77	14	LR	LR	13 00 59.7	
	comp=Z,427nm,21.2s,baz=347,slow=36						
WSAR	Wadi Sarin	94.29	318	LR	LR	13 04 42.4	
	comp=Z,490nm,20.3s,baz=60,slow=38						
STKA	Stephens Creek	94.87	221	P	P	12 18 17.1	+1.0
	comp=Z,2.0nm,0.8s,baz=356,slow=15,SNR=3.6						
STKA				LR	LR	12 54 50.1	
	comp=Z,296nm,21.9s,baz=18,slow=32						
	comp=Z,2.0nm,0.8s						
EIL	Elat	95.70	340	LR	LR	13 07 19.2	
	comp=Z,367nm,18.4s,baz=26,slow=39						
PALK	Pallekele	96.91	291	LR	LR	13 07 15.5	
	comp=Z,368nm,20.5s,baz=134,slow=39						
RPZ	Rata Peaks	97.57	195	LR	LR	12 56 29.1	
	comp=Z,515nm,20.7s,baz=4.0,slow=32						
RAYN	Ar Rayn	98.80	329	P	P	12 18 33.2	-1.2
CZSB	Cruzeiro do Su	99.32	91	eP	Pdif	12 18 38.1	+1.4
TORD	Torodi Ar. Bea	113.97	11	PKiKP	PKiKP	12 23 32.3	-1.3
	comp=Z,0.4nm,0.5s,baz=348,slow=3.9,SNR=2.4						
TORD				PKKPbc	PKKPbc	12 34 12.8	-0.1
	comp=Z,2.5nm,1.3s,baz=132,slow=2.1,SNR=3.9						
H03N2	Juan Fernandez	115.23	112	T	T	14 29 37.1	
	baz=324,slow=76,SNR=6.1						
H03N1	Juan Fernandez	115.24	112	T	T	14 29 40.1	
	baz=324,slow=76,SNR=6.4						
H03N3	Juan Fernandez	115.25	112	T	T	14 29 33.2	
	baz=324,SNR=5.0						
JANB	Januaria	122.13	72	eP	PKiKP	12 23 49.4	+0.1
KMBO	Kilima Mbogo	124.58	329	PKP	PKiKP	12 23 54.6	0.0
	comp=Z,2.0nm,0.7s,baz=26,slow=4.9,SNR=4.3						
PLCA	Paso Flores	125.11	113	PKP	PKPdf	12 23 53.7	-0.5
	comp=Z,1.1nm,0.8s,baz=226,slow=7.4,SNR=1.9						
BLWY	Bulawayo	145.16	332	iP	PKPdf	12 24 32.4	+0.3
BLWY	Bulawayo	145.16	332	iP	PKPdf	12 24 32.4	+0.3
MATP	Matopo	145.47	332	iP	PKPab	12 24 33.0	+0.2
MATP	Matopo	145.47	332	iP	PKPab	12 24 33.0	+0.2
MOPA	Mopani	147.44	325	iP	PKPdf	12 24 36.2	+0.5
MOPA	Mopani	147.44	325	iP	PKPdf	12 24 36.2	+0.5
ORCD	Orcadas	148.69	128		PKPbc	12 24 38.6	-1.7
ORCD				PKPab	pPKPdf	12 24 43.6	-0.9
BELA	Belgrano 2	149.62	162		PKPbc	12 24 40.9	-1.4
BELA				PKPab	sPKPdf	12 24 47.7	-0.8
LBTB	Lobatse	150.63	334	iP	PKPdf	12 24 42.9	+2.0
LBTB	Lobatse	150.63	334	iP	PKPdf	12 24 42.9	+2.0
MAW	Mawson	151.53	219	PKPbc	PKPbc	12 24 46.2	-0.8
	comp=Z,4.9nm,1.0s,baz=71,slow=4.9,SNR=6.9						
MAW	Mawson	151.53	219		PKPbc	12 24 45.6	-1.3
MAW				PKPab	PKPab	12 24 55.3	-0.4
BOSA	Boshof	154.13	332	PKPbc	PKPbc	12 24 52.5	-1.6
	comp=Z,2.5nm,0.7s,baz=349,slow=4.5,SNR=5.5						
BOSA	Boshof	154.13	332		PKPbc	12 24 52.2	-1.9
BOSA				PKPab	PKPab	12 25 07.4	-0.4
BOSA	Boshof	154.13	332	iP	PKPbc	12 24 50.5	-3.6
BOSA	Boshof	154.13	332	iP	PKPbc	12 24 50.5	-3.6
VNA3	Neumayer Olymp	158.90	161	PKPdf	PKPdf	12 24 50.2	-0.4
VNA1	Neumayer--Stat	159.65	161	PKPab	PKPab	12 25 28.2	-2.1
VNA1	Neumayer--Stat	159.65	161	SKPdf	SKPdf	12 28 19.2	-2.2
VNA1	Neumayer--Stat	159.65	161	pPKPab	pPKPab	12 25 40.5	+2.2
SNAA	Sanae	159.72	166	PKPab	PKPab	12 25 28.4	-2.3
TROLL	Troll, Antarti	160.03	171	PKPab	PKPab	12 25 31.1	-1.1

TUL ***15*** *12:38:20.2±1.2,35°.67N±0°.02×97°.16W±0°.02,h6^{km}±6^{km}, ML2.6,mb_Lg2.3/22(NEIC) Error ellipse: s-maj=2.5km s-min=1.3km az=142.0*

NEIC 15 12:38:20.3±1.3**,35°.68N**±0°.01×**97°.16W**±0°.01**,h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.4km az=157.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.17	262	Pg	Pg	12 38 23.9	+0.2
ADOK				Sg	Sg	12 38 26.4	+0.5
OK009	Oakdale Elemen	0.23	246		Pg	12 38 24.9	+0.1
OK009				Sg	Sg	12 38 28.2	+0.3
OKCFA	Oklahoma City	0.35	222	Pg	Pg	12 38 27.2	+0.1
OKCFA				Sg	Sg	12 38 31.8	+0.1
OKCSW	OKLAHOMA CITY	0.35	220		Pg	12 38 27.2	+0.1
OKCSW				Sg	Sg	12 38 31.6	-0.1
FNO	Franklin	0.46	205	Pg	Pg	12 38 29.1	-0.1
FNO				Sg	Sg	12 38 35.6	+0.4
TUL1	Leonard	1.14	78		Pg	12 38 41.1	-1.1
TUL1				Sg	Sg	12 38 56.8	-0.2
X34A	Smith Ranch, M	1.20	207	Pg	Pg	12 38 43.0	-0.5
X34A				Sg	Sg	12 38 58.2	-0.8
T35A	Sooner Cattle	1.34	23	Pn	Pn	12 38 45.2	-0.7
WMOK	Wichita Mounta	1.62	235	Pn	Pn	12 38 49.3	-0.3
U32A	Winter Ranch,	1.65	296	Pn	Pn	12 38 49.8	-0.2
X37A	Clayton	1.82	126	Pn	Pn	12 38 52.9	+0.5
X37A				IAmb_Lg		12 39 22.4	
	comp=Z,9.6nm,0.7s						
Z35A	Perchaven, San	2.34	182	Pn	Pn	12 38 59.1	-0.3
Z35A				IAmb_Lg		12 39 38.1	
	comp=Z,13nm,0.8s						
HHAR	Hobbs	2.68	76		Pn	12 39 05.1	+0.9
W39A	Magazine	2.80	99		Pn	12 39 05.8	0.0
R32A	Long Quarter,	3.01	336	Pn	Pn	12 39 08.0	-0.7
R32A				IAmb_Lg		12 39 55.0	
	comp=Z,10nm,1.3s						
MIAR	Mount Ida	3.15	110	Pn	Pn	12 39 11.0	+0.4
MIAR				IAmb_Lg		12 40 08.6	
	comp=Z,10nm,1.0s						
KSU1	Kansas State U	3.45	7	IAmb_Lg		12 40 15.7	
	comp=Z,8.1nm,0.8s						
U40A	Yellville	3.56	78	Pn	Pn	12 39 16.9	+0.7
ABTX	Abilene, Hawle	3.67	215	Pn	Pn	12 39 17.7	-0.1
S39A	Bolivar	3.69	56	Pn	Pn	12 39 17.4	-0.5
S39A				IAmb_Lg		12 40 20.3	
	comp=Z,6.6nm,0.8s						
X40A	Basin Creek Fa	3.74	107	Pn	Pn	12 39 20.7	+1.9
CBKS	Cedar Bluff	3.75	328		Pn	12 39 17.7	-1.2
CBKS				IAmb_Lg		12 40 20.7	
	comp=Z,8.4nm,0.9s						
AMTX	Amarillo	3.78	259	Pn	Pn	12 39 17.5	-1.8
AMTX				IAmb_Lg		12 40 21.0	
	comp=Z,9.7nm,0.9s						
WHAR	Wooly Hollow	4.00	94	Pn	Pn	12 39 23.1	+0.9
W41B	Gary Mavity, V	4.04	96	Pn	Pn	12 39 21.4	-1.5
W41B				IAmb_Lg		12 40 34.4	
	comp=Z,7.2nm,0.8s						
UALR	University of	4.05	101	Pn	Pn	12 39 21.7	-1.3
FCAR	Ozark Folk Cen	4.10	86	Pn	Pn	12 39 22.9	-0.8
MGMO	Mountain Grove	4.21	68	Pn	Pn	12 39 24.0	-1.2
MGMO				IAmb_Lg		12 40 34.8	
	comp=Z,8.4nm,0.7s						
R40A	Maddies Statio	4.71	55	Pn	Pn	12 39 31.1	-1.0
P38A	Dawn	4.88	35	Pn	Pn	12 39 33.9	-0.5
LCAR	Lake Charles	4.90	84	Pn	Pn	12 39 33.8	-0.8
MSTX	Muleshoe	4.92	251	Pn	Pn	12 39 34.2	-0.8
CCM	Cathedral Cave	5.31	62	Pn	Pn	12 39 38.6	-1.6
JCT	Junction City	5.63	204	Pn	Pn	12 39 42.5	-2.3
JCT				IAmb_Lg		12 41 25.0	
	comp=Z,5.1nm,0.8s						
FVM	French Village	5.88	65	Pn	Pn	12 39 46.6	-1.4
T25A	Trinidad	6.02	286	Pn	Pn	12 39 49.5	-0.8
S44A	Carbondale	6.67	70	Pn	Pn	12 39 58.6	-0.3
SIUC	Southern Illin	6.70	70	Pn	Pn	12 39 59.4	0.0
SDCO	Great Sand Dun	7.01	290	Pn	Pn	12 40 04.8	+0.9
WVT	Waverly	7.59	84	Pn	Pn	12 40 10.6	-1.0
ANMO	Albuquerque	7.63	267	Pn	Pn	12 40 12.2	-0.2
ISCO	Idaho Springs	7.86	304	Pn	Pn	12 40 13.2	-2.3

NNC ***15*** *12:44:58.9±1.1,39°.75N×75°.96E,h0^{km},mb3.6,mpv3.3, Error ellipse: s-maj=7.4km s-min=5.7km az=164.0*

SOME ***15*** *12:45:00.1,39°.77N×75°.82E,h10^{km}*

KRNET ***15*** *12:45:04.5±0.1,39°.84N×75°.97E,mb3.1*

ISC 15 12:45:09.4±2.2**,40°.1N**±0°.1×**75°.95E**±0°.04**,h10**^{km}**,n34,** σ**1^{s}.76**/51**,24C-4D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	2.14	325	⇑iP	Pb	12 45 46.8	-1.5
	baz=29						
ARLS				⇑iS	Sg	12 46 17.7	-0.4
	baz=29						
ULHL	Ulahol	2.15	6	⇑iP	Pb	12 45 47.4	-1.1
	baz=5.0						
ULHL				⇑iS	Sg	12 46 18.9	+0.5
	baz=5.0						
KDJ	Kajisay	2.22	24	⇑iP	Pb	12 45 48.3	-1.5
	baz=22						
KDJ				⇑iS	Sg	12 46 20.1	-0.7
	baz=22						
UCH	Uchtor	2.38	333	P	Pb	12 45 50.9	-1.7
	SNR=22						
UCH	Uchtor	2.38	333	⇑iP	Pb	12 45 50.7	-1.8
	baz=36						
UCH				⇑iS	Sg	12 46 24.5	-1.3
	baz=36						
BOOM	Boomskoye usch	2.38	360	⇓iP	Pb	12 45 50.8	-1.6
	baz=60						
BOOM				⇓iS	Sg	12 46 24.7	-1.1
	baz=60						
AML	Almayashu	2.64	321	P	Pn	12 45 53.9	+1.5
	SNR=12						
KBK	Karagaybulak	2.65	344	P	Pb	12 45 56.7	-0.4
	SNR=16						
KBK	Karagaybulak	2.65	344	⇑iP	Pn	12 45 54.4	+2.0
	baz=45						
KBK				⇑iS	Sb	12 46 31.0	+1.2
	baz=45						
AAK	Ala-Archa	2.75	337	P	Pb	12 45 56.6	-2.2
	SNR=8.0						
AAK	Ala-Archa	2.75	337	⇑eP	Pn	12 45 55.7	+2.0

	baz=39						
AAK				⇑iS	Sb	12 46 33.2	+0.6
	baz=39						
TKM2	Tokmak 2	2.82	355	P	Pb	12 45 58.0	-2.0
	SNR=10						
TKM2	Tokmak 2	2.82	355	⇑Pg	Pb	12 45 57.3	-2.7
	3.6nm,0.4s						
TKM2				⇑Lg	Lg	12 46 40.3	
	6.9nm,0.3s						
TKM2	Tokmak 2	2.82	355	⇑iP	Pn	12 45 57.0	+2.3
	baz=55						
TKM2				⇑iS	Sb	12 46 35.2	+0.5
	baz=55						
KST	Kastek	2.93	0	eP	Pb	12 46 01.0	-0.8
	6.7nm,0.3s						
KST				eS	Sg	12 46 44.2	+0.7
	11nm,0.4s						
KST	Kastek	2.93	0	Pg	Pb	12 45 59.1	-2.7
	7.7nm,0.3s						
KST				Lg	Lg	12 46 44.0	
	11nm,0.4s						
ANVS	Anan'yevo	2.97	25	⇑iP	Pn	12 45 58.6	+1.9
	baz=23						
ANVS				⇑iS	Sb	12 46 38.3	-0.5
	baz=23						
TNSS	Tian-Shan	3.02	14	eP	Pb	12 46 02.4	-1.0
	4.0nm,0.3s						
TNSS				eS	Sg	12 46 46.8	+0.4
	5.5nm,0.3s						
TNSS	Tian-Shan	3.02	14	Pg	Pn	12 46 00.1	+2.5
	5.0nm,0.3s						
TNSS				Lg	Lg	12 46 46.8	
	5.5nm,0.3s						
CHMS	Chumysh	3.02	343	⇓Pg	Pb	12 46 00.7	-2.6
	2.4nm,0.5s						
CHMS				⇑Lg	Lg	12 46 45.8	
	4.6nm,0.4s						
CHMS	Chumysh	3.02	343	⇑iP	Pn	12 45 59.6	+2.3
	baz=44						
CHMS				⇑iS	Sb	12 46 39.6	-0.7
	baz=44						
MDOK	Medeo	3.16	15	eP	Pb	12 46 04.4	-1.3
	2.6nm,0.4s						
MDOK				eS	Sg	12 46 50.7	-0.2
	6.8nm,0.6s						
MDOK	Medeo	3.16	15	⇑Pg	Pn	12 46 02.3	+2.9
	7.4nm,0.9s						
MDOK				⇑Lg	Lg	12 46 49.4	
	10nm,1.0s						
MDOK	Medeo	3.16	15	Pg	Pn	12 46 01.9	+2.6
	2.0nm,0.4s						
MDOK				Lg	Lg	12 46 49.4	
	6.8nm,0.6s						
SATY	Saty	3.48	31	eP	Pb	12 46 10.3	-0.8
	1.1nm,0.1s						
SATY				eS	Sg	12 47 00.3	-0.7
	8.2nm,0.4s						
SATY	Saty	3.48	31	Pg	Pb	12 46 07.9	-3.2
	2.0nm,0.2s						
SATY				Lg	Lg	12 46 59.9	
	8.2nm,0.4s						
KURS	Kuram	3.76	25	eP	Pb	12 46 15.2	-0.7
	2.1nm,0.3s						
KURS				eS	Sg	12 47 09.0	-1.2
	5.3nm,0.9s						
KURS	Kuram	3.76	25	Pg	Pb	12 46 12.7	-3.2
	1.3nm,0.2s						
KURS				Lg	Lg	12 47 08.7	
	5.3nm,0.9s						
KUU	Kurty	3.79	4	eP	Pb	12 46 16.0	-0.4
	2.0nm,0.1s						
KUU				eS	Sg	12 47 10.3	-0.9
	16nm,0.8s						
KUU	Kurty	3.79	4	Pg	Pb	12 46 14.0	-2.4
	1.9nm,0.1s						
KUU				Lg	Lg	12 47 10.3	
	16nm,0.8s						
UZB	Uzynbulak	3.81	36	eP	Pb	12 46 16.7	-0.1
	1.1nm,0.1s						
UZB				eS	Sg	12 47 11.4	-0.4
	4.9nm,0.6s						
UZB	Uzynbulak	3.81	36	Pg	Pb	12 46 14.9	-1.9
	4.3nm,0.2s						
UZB				Lg	Lg	12 47 11.4	
	4.9nm,0.6s						
PDGK	Podgornoye	4.17	38	Pg	Pb	12 46 19.6	-3.3
	0.3nm,0.2s						
PDGK				Lg	Lg	12 47 20.8	
	3.7nm,0.5s						
KK31	Karatay Array	5.05	308	⇑Pg	Pb	12 46 36.2	-1.7
	0.5nm,0.4s,baz=128,slow=15,SNR=5.1						
KK31				⇓Lg	Lg	12 47 46.5	
	1.2nm,0.5s,baz=123,slow=31,SNR=3.9						

IDC ***15*** *12:53:36.2±1.3, 29°.45N×102°.22E, h0^{km}, mb3.3/4, mbtmp3.3/6, ML3.6/2, Error ellipse: s-maj=56.3km s-min=23.1km az=74.0*

ISC 15 12:53:41.2±1.0, **29°.4N**±0°.1×**102°.1E**±0°.3, **h35**^{km}, **n6**, σ**0^{s}.52**/6, **mb3.4**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.31	196	Pn	Pn	12 56 20.6	+0.1
	0.1nm,0.3s,baz=20,slow=13,SNR=2.2						
	0.3nm,0.4s						
SONM	Songino Array	18.66	9	P	Pn	12 57 57.3	+0.6
	0.1nm,0.3s,baz=186,slow=12,SNR=5.0						
	1.0nm,0.9s						
MKAR	Makanchi Array	23.21	324	P	P	12 58 45.0	0.0
	0.3nm,0.7s,baz=126,slow=9.3,SNR=2.6						
	0.3nm,0.7s						
WRA	Warramunga Arr	58.09	144	P	P	13 03 31.4	+0.1
	0.4nm,0.5s,baz=330,slow=8.2,SNR=5.8						
	0.4nm,0.5s						
ASAR	Alice Springs	61.01	146	P	P	13 03 51.4	0.0
	0.4nm,1.0s,baz=332,slow=7.0,SNR=4.5						
	0.4nm,1.0s						
YKA	Yellowknife Ar	83.77	16	P	P	13 06 05.8	-0.6
	0.1nm,0.5s,baz=326,slow=5.0,SNR=2.9						
	0.1nm,0.5s						

NOU 15 12:55:30.1, 15°.42S×167°.56E, h91^{km}, MLv3.9/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.34	265	P	Pn	12 55 45.1	+1.2
DVP	Devils Point	2.37	165	P	Pn	12 56 07.4	+0.2
YATNC	Mamie plateau,	6.63	185	P	Pn	12 57 04.6	-0.4
DZM	Mont Dzumac	6.70	189	P	Pn	12 57 06.3	+0.3

IDC ***15*** *13:27:15.4±0.9, 26°.11N×128°.51E, h0^{km}, mb3.7/9, mbtmp3.7/10, ML3.6/1, MS3.5/5, Error ellipse: s-maj=41.4km s-min=14.4km az=76.0*

JMA ***15*** *13:27:17.6±0.3, 26°.1N±1°.0×12°9E±°, h35^{km}, MV3.6/11, NEAR OKINAWAJIMA ISLAND*

NIED ***15*** *13:27:17.6, 26°.06N×128°.71E, h35^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.30; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-1.89; $M_{r\theta}$0.02; $M_{\theta\phi}$-1.74; $M_{\phi r}$0.10; Fault plane solution: $M_0$2.67000×10^{15} NP1: ϕ_s215.00000°, δ44.00000°, λ92.00000°. NP2: ϕ_s32.00000°, δ46.00000°, λ88.00000°.*

ISC 15 13:27:19.0±2.1, **26°.11N**±0°.07×**128°.60E**±0°.08, **h25**^{km}±13^{km}, **n26**, σ**0^{s}.74**/28, **mb3.7**/9, **MS3.5**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.66	308	P	Pb	13 27 31.7	-0.2
JNTH				eS	Sn	13 27 42.3	0.0
JJT3	Tamagusuku3	0.74	273	P	Pn	13 27 33.4	-0.4
JJT3				eS	Sn	13 27 44.5	+0.2
JOW	Kunigami	0.78	338	Pn	Pn	13 27 33.7	-0.7
	332nm,0.3s,baz=131,slow=24,SNR=1429						
JOW				Sn	Sn	13 27 45.0	-0.2
	699nm,0.3s,baz=92,slow=27,SNR=10						
JOW	Kunigami	0.78	338	P	Pn	13 27 33.6	-0.7
JOW				eS	Sb	13 27 44.7	+0.6
JYRO	Yoronjima	0.92	352	P	Pn	13 27 35.4	-0.9
JYRO				eS	Sn	13 27 48.6	-0.2
JIH	Iheya	1.08	328	P	Pn	13 27 38.4	-0.1
JIH				S	Sb	13 27 54.1	+1.4
JOKE	Okinoerabujima	1.24	359	P	Pn	13 27 40.4	-0.4
JAGN	Aguni-jima	1.31	292	P	Pb	13 27 41.9	-1.0
JKE	Kume jima 2	1.65	278	P	Pn	13 27 45.7	-0.6
JTK	Tokunoshima	1.70	10	P	Pn	13 27 46.4	-0.7
JTK				eS	Sn	13 28 06.6	-1.4
JNU	Nakatsue	7.26	15	Pn	Pn	13 29 04.2	+0.6
	1.0nm,0.3s,baz=0.2,slow=24,SNR=11						
	7.3nm,0.7s						
KSRS	Korea Array	11.32	357	LR	LR	13 34 41.7	
	comp=Z,170nm,18.4s,baz=325,slow=40						
GUMO	Guam	19.70	126	LR	LR	13 37 42.0	
	comp=Z,46nm,19.2s,baz=330,slow=32						
ASAJ	Asahikawa	21.25	29	LR	LR	13 40 33.2	
	comp=Z,174nm,19.9s,baz=348,slow=38						
SONM	Songino Array	27.83	327	P	P	13 33 08.1	+1.6
	1.1nm,0.6s,baz=139,slow=10,SNR=6.3						
	1.1nm,0.6s						
CMAR	Chiang Mai Arr	28.43	261	LR	LR	13 44 12.4	
	comp=Z,60nm,18.2s,baz=260,slow=36						
SEY	Seymchan	40.04	17	LR	LR	13 51 16.5	
	comp=Z,214nm,18.3s,baz=303,slow=36						
MKAR	Makanchi Array	41.86	312	P	P	13 35 07.1	+0.1
	0.6nm,0.6s,baz=93,slow=9.7,SNR=6.6						
	0.6nm,0.6s						
WRA	Warramunga Arr	46.12	173	P	P	13 35 41.1	-0.2
	0.5nm,0.8s,baz=351,slow=8.5,SNR=5.6						
	0.5nm,0.8s						
ASAR	Alice Springs	49.75	174	P	P	13 36 10.2	+0.7
	0.4nm,0.8s,baz=5.7,slow=10,SNR=7.3						
	0.4nm,0.8s						
FINES	FINESS Array B	73.13	331	P	P	13 38 46.4	-0.6
	1.0nm,0.6s,baz=90,slow=7.6,SNR=5.4						
	1.0nm,0.6s						
AKASG	Malin Array Be	75.84	320	P	P	13 39 02.4	-0.6
	0.7nm,0.5s,baz=63,slow=6.4,SNR=4.0						
	0.7nm,0.5s						
BRTR	Keskin Array B	77.37	308	P	P	13 39 12.0	-0.1
	0.9nm,0.8s,baz=66,slow=3.0,SNR=5.2						
	0.9nm,0.8s						
YKA	Yellowknife Ar	78.49	25	P	P	13 39 18.3	+0.6
	0.2nm,0.6s,baz=301,slow=5.7,SNR=7.0						
	0.2nm,0.6s						
NB2	NORSAR Subarra	79.56	334	P	P	13 39 23.3	-0.4
	comp=Z,0.6nm,0.6s,baz=53,slow=5.6						
NOA	NORSAR Array B	79.56	334	P	P	13 39 23.6	0.0
	comp=Z,0.9nm,0.7s,baz=52,slow=5.5,SNR=4.6						
	comp=Z,0.9nm,0.7s						

IDC 15 13:32:31.7±3.0, **5°.16S**×**130°.09E**, **h238**^{km}±41^{km}, **mb3.2**/1, **mbtmp3.7**/4, **MS2.7**/1, **Error ellipse: s-maj=77.4km s-min=15.7km az=76.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.42	15	P	Pn	13 33 41.5	+1.4
	9.3nm,0.2s,baz=87,slow=1.5,SNR=42						
SIJI				S	S	13 34 33.4	-0.9
	33nm,0.2s,baz=79,slow=24,SNR=13						
SIJI				LR	LR	13 35 47.6	
	comp=Z,81nm,18.8s,baz=34,slow=44						
WRA	Warramunga Arr	15.27	165	P	P	13 35 55.0	-0.3
	0.7nm,0.7s,baz=343,slow=12,SNR=10						
WRA				S	S	13 38 40.3	-3.8
	0.4nm,0.3s,baz=332,slow=22,SNR=7.7						
ASAR	Alice Springs	18.77	169	P	P	13 36 35.0	+1.5
	0.8nm,0.3s,baz=345,slow=9.7,SNR=17						
ASAR				S	S	13 39 53.8	-0.5
	0.5nm,0.9s,baz=356,slow=21,SNR=4.4						
MKAR	Makanchi Array	66.75	326	P	P	13 42 57.9	+0.3
	1.0nm,0.9s,baz=108,slow=7.3,SNR=2.9						
	1.0nm,0.9s						

IDC ***15*** *13:35:31.4±0.8, 6°.72N×72°.92W, h160^{km}±9^{km}, mb3.1/3, mbtmp3.8/5, Error ellipse: s-maj=36.6km s-min=7.8km az=131.0*

NEIC ***15*** *13:35:32.3±2.4, 6°.95N±0°.06×73°.13W±0°.07, h150^{km}±7^{km}, mb4.2/20, Error ellipse: s-maj=10.5km s-min=9.2km az=115.0*

RSNC ***15*** *13:35:32.9±1.1, 6°.81N×73°.14W, h149^{km}±4^{km}, ML3.8, Mw4.2, Fault plane solution: NP1: ϕ_s128.00000°, δ78.00000°, λ-124.00000°.*

ISC 15 13:35:31.6±0.6, **6°.83N**±0°.03×**73°.10W**±0°.03, **h157**^{km}±5^{km}, **n80**, σ**1^{s}.63**/120, **mb4.1**/13, **4C-5D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	200	⇓iP	Pn	13 35 53.0	-0.2
BARC				eS	Sn	13 36 08.6	-1.0
BARC				i		13 36 11.1	
	comp=Z,2μm,0.3s						
PAMC	Pamplona, Colo	0.65	38	⇑iP	Pn	13 35 55.9	+0.8
PAMC				eS	Sn	13 36 12.8	-0.3
PAMC				i		13 36 15.3	
	comp=Z,2μm,0.5s						
BRRC	Barranca, Sant	0.67	295	⇓iP	Pn	13 35 54.8	+0.1
BRRC				eS	Sn	13 36 11.8	-0.5
BRRC				i		13 36 15.8	
	comp=Z,744nm,0.3s						
RUSC	La Rusia	0.93	179	eP	Pn	13 35 57.0	-0.1
RUSC				eS	Sn	13 36 15.4	-1.1
RUSC				i		13 36 16.9	
	comp=Z,1μm,0.4s						
TAMC	Tame, Arauca	1.36	107	⇑iP	Pn	13 36 01.5	+1.2
TAMC				i		13 36 22.4	
	comp=Z,380nm,0.4s						
TAMC				eS	Sn	13 36 22.7	+0.4
PTBC	PUERTO BERRIO,	1.38	258	eP	Pn	13 35 59.5	-0.9
PTBC				eS	Sn	13 36 20.6	-2.0
PTBC				i		13 36 23.3	
	comp=Z,436nm,0.4s						
OCAC	Ocana	1.42	351	Pn	Pn	13 36 01.1	0.0
OCAC	Ocana	1.42	351	⇑iP	Pn	13 36 01.1	0.0
OCAC				eS	Sn	13 36 23.0	-0.8
OCAC				i		13 36 31.7	
	comp=Z,1μm,0.5s						
SPBC	San Pablo de B	1.51	220	eP	Pn	13 36 01.8	-0.1
SPBC				eS	Sn	13 36 23.6	-1.6
SPBC				i		13 36 30.9	
	comp=Z,914nm,0.3s						
ZARC	Zaragoza, Cauc	1.87	291	Pn	Pn	13 36 04.7	-0.9
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	13 36 05.5	-0.1
ZARC				eS	Sn	13 36 31.0	-0.9
ZARC				i		13 36 36.7	
	comp=Z,872nm,0.3s						
NORC	Norcasia	2.16	235	eP	Pn	13 36 08.9	-0.1
NORC				eS	Sn	13 36 36.4	-1.6
NORC				i		13 36 42.7	
	comp=Z,343nm,0.2s						
CHIC	Chingaza	2.27	196	eP	Pn	13 36 11.0	+0.2
CHIC				eS	Sn	13 36 40.3	-0.6
CHIC				i		13 36 46.8	
	comp=Z,498nm,0.3s						
ROSC	El Rosal	2.32	212	P	Pn	13 36 12.7	+1.5
	comp=Z,402nm,0.3s,baz=5.1,slow=4.8,SNR=97						
ROSC				S	Sn	13 36 42.5	+0.6
	comp=Z,2μm,0.4s,baz=49,slow=22,SNR=7.5						
ROSC	El Rosal	2.32	212		Pn	13 36 12.5	+1.3
ROSC	El Rosal	2.32	212	⇓iP	Pn	13 36 12.7	+1.5
ROSC				eS	Sn	13 36 42.8	+0.9
HELC	Santa Helena	2.50	256	eP	Pn	13 36 13.8	+0.4
HELC				eS	Sn	13 36 45.0	-0.5
HELC				i		13 36 53.4	
	comp=Z,326nm,0.4s						
UREC	San Jos de Ur	2.58	291	eP	Pn	13 36 12.8	-1.2
UREC				eS	Sn	13 36 44.2	-2.7
UREC				i		13 36 58.1	
	comp=Z,401nm,0.3s						
LL1C	La Loma 1 Cana	2.74	351	eP	Pn	13 36 18.4	+2.4
LL1C				eS	Sn	13 36 52.9	+2.5
VILC	Villavicencio,	2.76	192	eP	Pn	13 36 16.3	-0.1
VILC				eS	Sn	13 36 50.3	-0.8
PTGC	Puerto Gaitan,	2.78	160	⇓iP	Pn	13 36 16.2	-0.3
PTGC				eS	Sn	13 36 49.5	-1.8
PTGC				i		13 36 54.5	
	comp=Z,459nm,0.3s						
LL6C	La Loma 6 Bece	2.90	357	eP	Pn	13 36 17.8	-0.1
LL6C				eS	Sn	13 36 51.6	-2.4
LL6C				i		13 37 06.9	
	comp=Z,207nm,0.5s						
CBOC	Ciudad Bolivar	3.05	252	eP	Pn	13 36 20.7	+0.7
CBOC				eS	Sn	13 36 57.5	0.0
CBOC				i		13 37 08.0	
	comp=Z,147nm,0.4s						
DBBC	Dabeiba	3.09	274	⇑iP	Pn	13 36 20.4	-0.1
DBBC				eS	Sn	13 36 56.7	-1.7
SDV	Santo Domingo	3.19	50	P	Pn	13 36 22.6	+0.8
	comp=Z,198nm,0.4s,baz=229,slow=9.5,SNR=62						
SDV				S	Sn	13 36 59.2	-1.5
	comp=Z,178nm,0.5s,baz=62,slow=23,SNR=21						
SDV	Santo Domingo	3.19	50	Pn	Pn	13 36 21.8	+0.1
SDV	Santo Domingo	3.19	50	eP	Pn	13 36 22.6	+0.8
SDV				eS	Sn	13 36 59.5	-1.2
SDV				i		13 37 03.7	
	comp=Z,124nm,0.6s						
ARGC	Ariguani, Magd	3.22	339	eP	Pn	13 36 22.9	+0.9
ARGC				eS	Sn	13 37 01.7	+0.5
ARGC				i		13 37 08.8	
	comp=Z,114nm,0.4s						
ANIL	Santa Ana	3.26	225	eP	Pn	13 36 24.2	+1.4
ANIL				eS	Sn	13 37 03.9	+1.3
PRAC	Prado	3.57	210	eP	Pn	13 36 26.1	-0.4
PRAC				eS	Sn	13 37 08.0	-1.1
PRAC				i		13 37 15.3	
	comp=Z,564nm,0.5s						
ORTC	Ortega, Tolima	3.60	217	eP	Pn	13 36 27.2	+0.3
ORTC				eS	Sn	13 37 10.2	+0.3
ORTC				i		13 37 17.0	
	comp=Z,315nm,0.4s						
SJCC	San Jacinto, C	3.68	326	Pn	Pn	13 36 26.0	-1.9
SJCC	San Jacinto, C	3.68	326	eP	Pn	13 36 26.8	-1.2
SJCC				eS	Sn	13 37 07.5	-4.3
SJCC				i		13 37 12.5	
	comp=Z,102nm,0.2s						
PLMC	San Jos del P	3.70	239	eP	Pn	13 36 28.5	+0.3
PLMC				eS	Sn	13 37 10.7	-1.5
PLMC				i		13 37 14.7	
	comp=Z,118nm,0.5s						
LCBC	Los crdobas,	3.82	302	eP	Pn	13 36 28.5	-1.1
LCBC				eS	Sn	13 37 15.5	+0.7
LCBC				i		13 37 23.3	
	comp=Z,117nm,0.4s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	13 36 33.4	-0.9
CRJC				eS	Sn	13 37 21.1	-2.3
CRJC				i		13 37 22.9	
	comp=Z,156nm,0.4s						
GUVC	San Jose del G	4.28	174	eP	Pn	13 36 35.3	-0.4
GUVC				eS	Sn	13 37 24.1	-1.6
GUVC				i		13 37 28.8	
	comp=Z,257nm,0.4s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	13 36 35.2	-0.7
YOTC				eS	Sn	13 37 25.8	-0.3
SMRC	Santa Marta, M	4.45	346	eP	Pn	13 36 37.6	-0.3
SMRC				eS	Sn	13 37 25.6	-4.1
SMRC				i		13 37 30.5	
	comp=Z,80nm,0.3s						
MACC	Macarena, Meta	4.71	189	⇓iP	Pn	13 36 39.9	-1.4
MACC				eS	Sn	13 37 31.4	-4.4
MACC				i		13 37 37.4	
	comp=Z,92nm,0.7s						
BETC	Betania	4.73	210	eP	Pn	13 36 41.2	-0.4
BETC				eS	Sn	13 37 30.1	-6.3
BETC				i		13 37 45.5	
	comp=Z,72nm,0.6s						
MARP	Paez Belalcaza	4.87	216	eP	Pn	13 36 43.5	-0.2
MARP				eS	Sn	13 37 35.5	-4.5
URIC	Uribia, Colomb	4.97	13	Pn	Pn	13 36 42.8	-1.9
GARC	Garzon, Huila	5.19	207	eP	Pn	13 36 47.1	-0.7
GARC				eS	Sn	13 37 43.3	-4.2
GARC				i		13 37 49.5	
	comp=Z,95nm,0.3s						
BAUV	El Baul	5.43	67		Pn	13 36 48.9	-2.0
PCON	Cinco Dias	5.55	216	eP	Pn	13 36 54.0	+1.1
PCON				eS	Sn	13 37 57.0	+0.6
PCON				i		13 37 59.5	
	comp=Z,34nm,0.4s						
SOTA	Rioblanco	5.83	217	eP	Pn	13 36 58.0	+1.5
SOTA				eS	Sn	13 38 06.0	+3.1
SOTA				i		13 38 14.6	
	comp=Z,23nm,0.5s						
BIRV	Birongo	7.67	61		Pn	13 37 18.8	-1.7
OTAV	Otavalo	8.45	219	Pn	Pn	13 37 32.2	+0.9
MTDJ	Mount Denham	12.13	340		Pn	13 38 20.9	+1.5
ORTG	Ortega, Santa	12.71	287	P	P	13 38 34.3	+2.2
GTBY	Guantanamo Bay	13.17	352	P	P	13 38 35.9	-1.1
GCPR	Guaynabo City	13.30	30	Pn	Pn	13 38 33.8	-0.6
DLPL	La Plaine	14.37	53	Pn	Pn	13 38 46.5	-1.5
833A	Chaparral WMA,	32.80	314	P	P	13 41 49.6	-0.4
833A				IAmb	IAmb	13 42 06.9	
	comp=Z,3.4nm,0.8s						
P52A	Corning	33.66	347	P	P	13 41 58.0	+0.6
CCM	Cathedral Cave	35.18	335	P	P	13 42 10.0	-0.5
CCM				IAmb	IAmb	13 42 12.6	
	comp=Z,6.7nm,1.1s						
TXAR	Lajitas Array	36.48	312	P	P	13 42 22.7	+1.0
	comp=Z,0.3nm,0.5s,baz=125,slow=7.8,SNR=2.4						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	36.48	312	P	P	13 42 18.7	-3.1
TX31	Lajitas Ar. Si	36.48	312	P	P	13 42 18.6	-3.2
TX32	Lajitas Array	36.48	312	P	P	13 42 19.0	-2.8
LMN	Caledonia Moun	39.54	9	P	P	13 42 48.2	+1.1
D62A	Allapoint, All	40.26	4	P	P	13 42 54.6	+1.7
D62A				IAmb	IAmb	13 43 10.1	
	comp=Z,6.5nm,1.1s						
E46A	Sault Ste Mari	40.56	348	P	P	13 42 56.5	+1.1
BATG	Bathurst New B	40.75	7	P	P	13 42 58.5	+1.5
BATG				IAmb	IAmb	13 43 02.2	
	comp=Z,8.0nm,1.2s						
319A	Douglas	41.69	311	P	P	13 43 06.6	+1.5
319A				IAmb	IAmb	13 43 08.5	
	comp=Z,2.8nm,0.8s						
EYMN	Ely	43.87	342	P	P	13 43 22.3	+0.1
EYMN				IAmb	IAmb	13 43 46.6	
	comp=Z,11nm,1.4s						
214A	Organ Pipe Nat	44.64	309	P	P	13 43 27.4	-1.2
214A				IAmb	IAmb	13 43 37.0	
	comp=Z,5.6nm,1.0s						
ULM	Lac du Bonnet	47.29	340	P	P	13 43 48.6	-0.5
ULM				IAmb	IAmb	13 43 49.4	
	comp=Z,2.7nm,0.6s						
SCHQ	Schefferville	48.13	5	P	P	13 43 56.5	+1.0
SCHQ				IAmb	IAmb	13 43 58.3	
	comp=Z,5.3nm,1.1s						
PMPB	Monarch Peak	52.42	311	P	P	13 44 27.0	-1.1
YKA	Yellowknife Ar	63.27	340	P	P	13 45 43.5	+0.3
	comp=Z,0.6nm,0.5s,baz=132,slow=6.7,SNR=26						
	comp=Z,0.6nm,0.5s						
YKA	Yellowknife Ar	63.27	340	P	P	13 45 43.0	-0.1
SUMG	Summit	68.98	11	P	P	13 46 20.2	+0.3
M30M	Minto, Yukon	72.04	334	P	P	13 46 39.3	+1.2
ILAR	Eielson Array	76.97	335	P	P	13 47 07.9	+1.3
	comp=Z,0.2nm,0.6s,baz=105,slow=6.9,SNR=2.1						
	comp=Z,0.2nm,0.6s						
SEW	Seward	77.32	330	P	P	13 47 08.9	+0.4
PPLA	Purkeypile	78.99	333	P	P	13 47 19.1	+1.2
PPLA				IAmb	IAmb	13 47 20.0	
	comp=Z,5.0nm,1.4s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	13 55 01.3	-1.0
	comp=Z,0.7nm,0.5s,baz=116,slow=3.7,SNR=17						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	13 55 04.6	-0.7
	comp=Z,0.8nm,0.5s,baz=107,slow=2.9,SNR=21						

IDC ***15*** *13:35:33.4±0.7, 52°.53N×167°.99W, h0^{km}, mb3.8/18, mbtmp3.8/19, ML3.3/1, MS3.6/7, Error ellipse: s-maj=22.2km s-min=13.8km az=168.0*

NEIC ***15*** *13:35:34.3±2.0, 52°.40N±0°.06×167°.89W±0°.06, h6^{km}±4^{km}, mb4.0/93, ML3.6(AEIC), Error ellipse: s-maj=9.3km s-min=4.3km az=157.0*

AEIC ***15*** *13:35:36±1.9, 52°.35N±0°.08×167°.84W±0°.06, h25^{km}±5^{km}, Error ellipse: s-maj=12.0km s-min=5.0km az=166.0*

ISC 15 13:35:38.1±0.5, **52°.53N**±0°.07×**167°.86W**±0°.05, **h31**^{km}, **n177**, σ**1^{s}.01**/170, **mb4.0**/39, **MS3.5**/7, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.75	307		Pn	13 35 52.1	-0.4
NIKH					Sn	13 36 04.5	+1.6
MGOD	Makushin Gods	1.40	25		Pb	13 36 02.4	-1.3
MNAT	Makushin Natee	1.53	27		Pn	13 36 04.1	+0.8
MNAT					Sb	13 36 25.6	+0.7
MSW	Makushin Switc	1.53	25		Pn	13 36 04.1	+0.8
MSW					Sb	13 36 26.5	+1.6
UNV	Unalaska Valle	1.55	31	Pn	Pn	13 36 04.1	+0.6
UNV	Unalaska Valle	1.55	31		Sb	13 36 26.2	+0.8
MTBL	Makushin Table	1.61	26		Pb	13 36 05.4	-1.8
AKBBA	Akutan Broad B	1.95	36		Pn	13 36 10.0	+0.9
AKUT	Akutan	2.04	37	Pn	Pn	13 36 10.9	+0.6
AKSA	Akutan Strait	2.07	38		Pn	13 36 11.8	+1.1

AKSA	Akutan Strait	2.07	38		Pn	13 36 10.9	+0.3
WECS	Westdahl Cape	2.72	41		Pn	13 36 20.7	+1.0
SSLN	Shishaldin Nor	3.24	44		Pn	13 36 27.6	+0.7
FALS	False Pass	3.52	47		Pn	13 36 32.2	+1.6
KOFP	Korovin Flat P	3.83	269		Pn	13 36 34.7	-0.1
ATKA	Atka Island	3.90	268		Pn	13 36 35.4	-0.4
GSTR	Great Sitkin T	5.05	268	Pn	Pn	13 36 50.5	-1.1
GSTD	Great Sitkin T	5.11	268		Pn	13 36 52.0	-0.4
GSCK	Great Sitkin C	5.13	268		Pn	13 36 52.1	-0.5
SDPT	Sand Point	5.20	54		Pn	13 36 54.2	+0.7
CNBA	Chernabura Isl	5.43	62		Pn	13 36 56.3	-0.4
ADK	Adak	5.47	267	Pn	Pn	13 36 57.1	-0.2
KIWB	Kanaga Island	5.76	267		Pn	13 37 01.5	+0.2
KIMD	Kanaga Island	5.83	266		Pn	13 37 02.1	-0.2
CHIR	Chirikof Islan	7.90	60	Pn	Pn	13 37 29.4	-1.3
SII	Sitkinak Islan	8.91	58	Pn	Pn	13 37 44.8	+0.2
OHAK	Old Harbor	9.62	55	Pn	Pn	13 37 54.0	-0.2
P18K	Big Mountain,	9.86	41		Pn	13 37 56.7	-0.8
KDAK	Kodiak Island	10.19	53	Pn	Pn	13 38 01.5	-0.6
	1.3nm,0.3s,baz=248,slow=5.4,SNR=30						
KDAK				Sn	Sn	13 39 50.6	-4.6
	baz=255,slow=4.1,SNR=1.1						
Q19K	Cape Douglas,	10.25	46	Pn	Pn	13 38 02.8	-0.1
N18K	Kilae Creek	10.49	34	Pn	Pn	13 38 06.8	+0.7
P19K	Oil Pt	10.83	43	Pn	Pn	13 38 11.9	+1.1
SVW2	Sparrevohn	10.89	33		Pn	13 38 12.3	+0.7
CNPM	China Poot	11.62	46	Pn	Pn	13 38 21.6	0.0
TTA	Tatalina	12.17	26	Pn	Pn	13 38 29.7	+0.5
SPU	Mount Spurr	12.21	39	Pn	Pn	13 38 30.2	+0.4
SEW	Seward	12.69	46	Pn	Pn	13 38 34.6	-1.5
K20K	Telida	13.06	28		Pn	13 38 42.4	+1.2
RC01	Rabbit Creek A	13.08	42	Pn	Pn	13 38 41.3	-0.2
GHO	Glory Hole Cre	13.78	40	Pn	Pn	13 38 51.3	+0.2
Q23K	Middleton Isla	13.84	52	Pn	Pn	13 38 50.8	-1.1
MID	Middleton Isla	13.85	52	Pn	Pn	13 38 50.8	-1.1
FID	Port Fidalgo	14.30	46	Pn	Pn	13 38 57.0	-1.2
SCM	Sheep Creek Mo	14.45	42	Pn	Pn	13 38 59.9	-0.4
EYAK	Cordova Ski Ar	14.54	48	Pn	Pn	13 38 59.9	-1.5
RND	Reindeer	14.78	35	Pn	Pn	13 39 05.8	+1.2
KLU	Klutina	14.87	44	Pn	Pn	13 39 04.8	-1.2
M24K	Tolsona, Glenn	15.06	42	Pn	Pn	13 39 06.8	-1.6
DHY	Denali Highway	15.11	38	Pn	Pn	13 39 07.2	-2.0
DHY				IAmb	IAmb	13 39 14.9	
	comp=Z,7.3nm,1.4s						
HMT	Hamilton	15.15	50	Pn	Pn	13 39 08.5	-1.0
HMT				IAmb	IAmb	13 39 24.9	
	comp=Z,6.0nm,1.0s						
SUCK	Suckling Hills	15.28	51	Pn	Pn	13 39 11.6	+0.2
SUCK				IAmb	IAmb	13 39 31.1	
	comp=Z,14nm,1.2s						
N25K	Chitina, Valde	15.49	45	Pn	Pn	13 39 13.8	-0.3
N25K				IAmb	IAmb	13 39 34.5	
	comp=Z,3.5nm,0.7s						
GLB	Gilahina Butte	15.77	46	Pn	Pn	13 39 16.9	-0.8
I23K	Minto, Yukon-K	15.77	30	Pn	Pn	13 39 17.2	-0.4
I23K				IAmb	IAmb	13 39 22.2	
	comp=Z,7.8nm,1.1s						
PAX	Paxson	15.78	40	Pn	Pn	13 39 17.3	-0.6
VRDI	Verde Repeater	15.84	47	Pn	Pn	13 39 17.9	-0.9
CCB	Clear Creek Bu	15.92	33		Pn	13 39 19.0	-0.5
MDM	Murphy Dome	15.99	31	Pn	Pn	13 39 19.8	-0.7
TCOL	CIGO, UAF Yank	16.05	32		Pn	13 39 21.3	+0.1
COLA	College	16.06	32		Pn	13 39 21.4	+0.2
COLA				IAmb	IAmb	13 39 24.2	
	comp=Z,6.5nm,0.8s						
HDA	Harding Lake	16.06	34	Pn	Pn	13 39 22.1	+0.7
ISLE	Juniper Island	16.13	50	Pn	Pn	13 39 22.7	+0.3
ISLE				IAmb	IAmb	13 39 36.6	
	comp=Z,16nm,1.3s						
H23K	Yukon River	16.20	28	Pn	Pn	13 39 23.7	+0.5
IL31		16.31	33	Pn	Pn	13 39 24.5	+0.1
ILAR	Eielson Array	16.31	33	Pn	Pn	13 39 22.9	-1.6
	comp=Z,0.1nm,0.3s,baz=241,slow=11,SNR=11						
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	16.31	33		Pn	13 39 25.0	+0.5
YAH	Yahtse	16.34	51	Pn	Pn	13 39 24.9	-0.2
YAH				IAmb	IAmb	13 39 34.3	
	comp=Z,10.0nm,0.7s						
POKR	Poker Plat Res	16.35	32	P	P	13 39 27.8	+0.1
POKR				IAmb	IAmb	13 39 27.9	
	comp=Z,5.4nm,0.7s						
GRNC	Granite Creek	16.45	50		Pn	13 39 26.3	-0.1
GRNC				IAmb	IAmb	13 39 34.8	
	comp=Z,10nm,0.8s						
M26K	Nabesna, AK	16.52	44	Pn	Pn	13 39 27.7	+0.5
M26K				IAmb	IAmb	13 39 31.5	
	comp=Z,6.8nm,0.7s						
BARN	Barnard Glacie	16.60	49	Pn	Pn	13 39 28.2	-0.1
BARN				IAmb	IAmb	13 39 45.5	
	comp=Z,5.7nm,0.8s						
TABL	Table Mountain	16.65	51	Pn	P	13 39 29.7	-1.5
TABL				IAmb	IAmb	13 39 57.3	
	comp=Z,13nm,0.8s						
L26K	Log Cabin Wild	16.65	41	Pn	Pn	13 39 29.0	+0.1
L26K				IAmb	IAmb	13 39 32.2	
	comp=Z,5.5nm,0.7s						
DOT	Dot Lake	16.68	39	Pn	Pn	13 39 28.1	-1.1
H24K	Noodor Dome	16.70	29	P	P	13 39 31.9	+0.3
H24K				IAmb	IAmb	13 39 33.8	
	comp=Z,7.0nm,0.9s						
CTGM	Chitina Glacie	16.72	49	P	P	13 39 32.7	+0.8
CTGM				IAmb	IAmb	13 39 35.2	
	comp=Z,7.4nm,0.8s						
J25K	Salcha River,	16.73	35		Pn	13 39 30.1	+0.2
LOGN	Logan Glacier	16.83	50		P	13 39 32.2	-0.9
M27K	Edge Creek, AK	16.97	44	Pn	Pn	13 39 32.3	-0.7
M27K				IAmb	IAmb	13 39 37.6	
	comp=Z,6.5nm,0.8s						
PCA	Pinnacle	16.98	53		P	13 39 34.1	-0.6
PCA				IAmb	IAmb	13 39 55.6	
	comp=Z,19nm,1.3s						
YKU2	Yakutat	17.14	55	P	P	13 39 36.5	+0.1
L27K	Beaver Creek,	17.29	42		Pn	13 39 36.3	-0.5
BCAR	Beaver Creek A	17.31	42		P	13 39 37.6	-0.7
EGAK	Eagle	18.35	38	P	Pn	13 39 49.3	-0.5
TOLK	Toolik Lake Re	18.35	21		Pn	13 39 51.4	+1.5
DAWY	Dawson	18.70	41	P	Pn	13 39 53.8	-0.4
BMAR	Burnt Mountain	18.75	28	P	Pn	13 39 54.0	-0.7
M30M	Minto, Yukon	19.27	46	P	Pn	13 40 00.2	-0.8
A21K	Barrow	19.52	11	P	Pn	13 40 03.0	-0.9
A21K				IAmb	IAmb	13 40 03.9	
	comp=Z,5.6nm,0.8s						
BILL	Bilibino	19.90	331	P	P	13 40 05.5	-1.1
PET	Petropavlovsk	20.17	285	P	P	13 40 08.9	-0.7
PET				IAmb	IAmb	13 40 10.1	
	comp=Z,9.2nm,0.8s						
M31M	Drury Creek, Y	20.25	48		Pn	13 40 12.9	+0.3
M31M				IAmb	IAmb	13 40 14.3	
	comp=Z,15nm,0.8s						
PEA0B	Petropavlovsk-	20.71	285	P	P	13 40 14.9	-0.7
PEA0B				IAmb	IAmb	13 40 43.3	
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	20.71	285	P	P	13 40 14.7	-0.8
	comp=Z,2.8nm,0.6s,baz=88,slow=14,SNR=12						
	comp=Z,2.8nm,0.6s						
DLBC	Dease Lake	22.01	59	P	P	13 40 33.8	+4.3
	comp=Z,0.9nm,0.5s,baz=291,slow=11,SNR=3.8						
INK	Inuvik	22.71	33	P	P	13 40 35.2	-1.5
	comp=Z,4.5nm,0.8s,baz=226,slow=17,SNR=12						
	comp=Z,4.5nm,0.8s						
INK	Inuvik	22.71	33	P	P	13 40 35.1	-1.7
INK				IAmb	IAmb	13 40 39.1	
	comp=Z,5.7nm,0.8s						
YKA	Yellowknife Ar	29.44	49	P	P	13 41 39.7	+1.2
	comp=Z,0.5nm,0.9s,baz=276,slow=7.5,SNR=9.8						
YKA				PcP	PcP	13 44 44.6	+1.2
	comp=Z,0.2nm,0.6s,baz=299,slow=1.2,SNR=5.1						
YKA				LR	LR	13 55 34.6	
	comp=Z,82nm,18.3s,baz=12,slow=41						
	comp=Z,0.5nm,0.9s						
I02E	Swisshome, OR	30.05	88	P	P	13 41 46.1	+2.1
KEBM	Edson Butte	30.42	91	P	P	13 41 46.4	-1.1
H04A	Detroit Lake	30.76	86	P	P	13 41 52.0	+1.6
H04A				IAmb	IAmb	13 41 53.3	
	comp=Z,3.9nm,0.8s						
DBO	Dodson Butte	30.95	90	P	P	13 41 50.9	-1.2
DBO				IAmb	IAmb	13 41 55.3	
	comp=Z,3.2nm,1.0s						
HAWA	Hanford	31.51	82	P	P	13 41 58.2	+1.2
HAWA				IAmb	IAmb	13 42 15.1	
	comp=Z,6.6nm,1.4s						
NEW	Newport	32.07	77	P	P	13 42 02.0	0.0
NEW				IAmb	IAmb	13 42 04.0	
	comp=Z,1.9nm,1.1s						
K05A	Summer Lake	32.60	88	P	P	13 42 08.4	+1.6
I07A	Izee	32.71	85	P	P	13 42 09.3	+1.7
I07A				IAmb	IAmb	13 42 10.0	
	comp=Z,1.4nm,0.8s						
TIXI	Tiksi	33.08	329	LR	LR	13 57 31.3	
	comp=Z,91nm,18.1s,baz=357,slow=40						
JTMT	Jette	34.00	76	P	P	13 42 19.7	+0.8
PNTR	Pine Nut	35.54	93	P	P	13 42 32.8	+0.4
YERR	Yerington	35.83	92	P	P	13 42 35.1	+0.3
YERR				IAmb	IAmb	13 42 37.4	
	comp=Z,3.8nm,0.9s						
BCYI	Bear Canyon	36.28	81	P	P	13 42 39.3	+0.6
MCMT	McKenzie Canyo	36.34	80	P	P	13 42 39.6	+0.4
RYN	Ryan	36.48	92	P	P	13 42 41.9	+1.5
RYN				IAmb	IAmb	13 42 53.3	
	comp=Z,5.4nm,1.3s						
NVAR	Mina Array Bea	36.74	92	P	P	13 42 43.9	+1.2
	comp=Z,1.1nm,0.7s,baz=302,slow=8.7,SNR=10						
	comp=Z,1.1nm,0.7s						
NVAR	Mina Array Bea	36.74	92	P	P	13 42 43.6	+0.9
ELK	Elko	37.20	87	LR	LR	13 57 31.0	
	comp=Z,66nm,18.1s,baz=26,slow=35						
YHH	Holmes Hill	37.56	78	P	P	13 42 50.3	+0.7
YHH				IAmb	IAmb	13 43 08.3	
	comp=Z,1.9nm,0.9s						
H11N2	WAKE ISLAND Hy	38.16	221	T	T	14 24 14.9	
	baz=24,slow=76						
H11N3	WAKE ISLAND Hy	38.17	221	T	T	14 24 26.1	
	baz=24,slow=76						
H11N1	WAKE ISLAND Hy	38.18	221	T	T	14 24 01.5	
	baz=24,slow=76						
GWY	Greenwater Val	39.18	94	P	P	13 43 04.3	+1.1
GWY				IAmb	IAmb	13 43 09.2	
	comp=Z,4.8nm,1.5s						
H11S1	WAKE ISLAND Hy	39.35	220	T	T	14 25 29.7	
	baz=24,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	39.36	220	T	T	14 25 26.0	
	baz=24,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	39.36	220	T	T	14 25 33.0	
	baz=24,slow=76,SNR=44						
PSUT	Pine Spring	39.40	89	P	P	13 43 05.4	+0.4
BW06	Boulder Array	39.47	80	P	P	13 43 06.1	+0.6
BW06				IAmb	IAmb	13 43 07.0	
	comp=Z,1.6nm,0.7s						
PD31	Pinedale Array	39.47	80	P	P	13 43 06.2	+0.6
PDAR	Pinedale Array	39.47	80	P	P	13 43 06.4	+0.8
	comp=Z,1.1nm,0.6s,baz=310,slow=5.0,SNR=10						
	comp=Z,1.1nm,0.6s						
PDAR	Pinedale Array	39.47	80	P	P	13 43 05.9	+0.4
TCRU	Three Creeks R	40.21	88	P	P	13 43 11.8	0.0
TCRU				IAmb	IAmb	13 43 24.4	
	comp=Z,3.5nm,0.6s						
MAJO	Matsushiro	40.62	269	P	P	13 43 15.0	0.0
MAJO				IAmb	IAmb	13 43 29.9	
	comp=Z,6.3nm,0.9s						
MJAR	Matsushiro Arr	40.62	269	P	P	13 43 14.2	-0.7
	comp=Z,0.8nm,0.7s,baz=16,slow=4.0,SNR=4.1						
	comp=Z,0.8nm,0.7s						
MJB9	Matsu-Tunnel	40.62	269	P	P	13 43 15.0	0.0
MJB9				IAmb	IAmb	13 43 29.9	
	comp=Z,6.4nm,1.0s						
O20A	White River Ci	41.82	83	P	P	13 43 25.5	+0.5
O20A				IAmb	IAmb	13 43 26.3	
	comp=Z,4.7nm,0.8s						
PV13	Radium Mtn., P	42.70	85	P	P	13 43 32.5	+0.3
PV13				IAmb	IAmb	13 43 34.0	
	comp=Z,6.5nm,1.0s						
PV15	Paradox Valley	42.79	85	P	P	13 43 32.2	-0.8
PV15				IAmb	IAmb	13 43 34.0	
	comp=Z,6.6nm,1.2s						
KSRS	Korea Array	46.30	278	P	P	13 44 01.5	+0.8
	comp=Z,1.2nm,0.9s,baz=51,slow=7.7,SNR=2.6						
	comp=Z,1.2nm,0.9s						
BNM	Barren Site	46.67	88	P	P	13 44 05.0	+1.1
MNTX	Cornudas Mount	49.11	89	P	P	13 44 23.3	+0.8
MNTX				IAmb	IAmb	13 44 24.5	
	comp=Z,1.5nm,0.8s						
SUMG	Summit	50.35	18	P	P	13 44 32.6	+0.7
TX31	Lajitas Ar. Si	51.82	90	P	P	13 44 43.2	+0.1
TX32	Lajitas Array	51.82	90	P	P	13 44 43.2	0.0
TX32				IAmb	IAmb	13 44 44.3	
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	51.82	90	P	P	13 44 43.5	+0.4
	comp=Z,2.2nm,0.7s,baz=299,slow=5.6,SNR=17						
	comp=Z,2.2nm,0.7s						
P40A	Paris	51.85	72	P	P	13 44 42.1	-1.0
SONM	Songino Array	52.01	302	P	P	13 44 44.7	+0.4
	comp=Z,0.3nm,0.4s,baz=44,slow=6.0,SNR=2.5						
	comp=Z,0.3nm,0.4s						
TUL1	Leonard	52.05	78	P	P	13 44 45.1	+0.5
TUL1				IAmb	IAmb	13 45 10.6	
	comp=Z,5.1nm,1.1s						
R40A	Maddies Statio	52.54	74	P	P	13 44 47.6	-0.7
SCHQ	Schefferville	54.68	44	P	P	13 45 04.9	+1.2
SCHQ				IAmb	IAmb	13 45 32.4	
	comp=Z,2.2nm,0.8s						
SADO	Sadowa	55.57	60	LR	LR	14 08 03.6	
	comp=Z,42nm,20.2s,baz=228,slow=35						
U49A	Red Boiling Sp	57.53	71	P	P	13 45 24.7	+0.4
T50A	Nancy	57.72	70	P	P	13 45 25.6	-0.1
T50A				IAmb	IAmb	13 45 35.6	
	comp=Z,1.3nm,1.3s						
ARCES	ARCESS Array B	57.86	354	P	P	13 45 25.9	-0.2
	comp=Z,1.5nm,1.0s,baz=24,slow=6.9,SNR=5.7						
ARCES				LR	LR	14 11 52.6	
	comp=Z,36nm,18.8s,baz=202,slow=38						
	comp=Z,1.5nm,1.0s						
F64A	Sherman	60.28	53	P	P	13 45 42.7	-0.5
BATG	Bathurst New B	60.35	50	P	P	13 45 43.2	-0.5
LMN	Caledonia Moun	61.98	50	P	P	13 45 54.5	-0.3
MKAR	Makanchi Array	64.36	314	P	P	13 46 10.4	-0.2
	comp=Z,0.4nm,0.7s,baz=36,slow=7.7,SNR=1.9						
	comp=Z,0.4nm,0.7s						
MAKZ	Makanchi	64.49	314	P	P	13 46 10.3	-1.1
FIA1	FINESS Array S	65.84	353	P	P	13 46 19.8	-0.1
FIA0	FINESS Array S	65.84	353	P	P	13 46 20.0	+0.2
FINES	FINESS Array B	65.84	353	P	P	13 46 19.8	-0.1
	comp=Z,4.6nm,0.8s,baz=10,slow=7.2,SNR=23						
	comp=Z,4.6nm,0.8s						
NC303	NORSAR Array S	66.60	0	P	P	13 46 25.1	+0.3
NC405	NORSAR Array S	66.71	0	P	P	13 46 26.0	+0.5
NOA	NORSAR Array B	66.78	0	P	P	13 46 25.6	-0.4
	comp=Z,0.4nm,0.5s,baz=0.9,slow=5.9,SNR=2.5						
	comp=Z,0.4nm,0.5s						
ABKAR	Akbulak array	70.78	329	P	P	13 46 51.4	+0.4
PABE	Paberze	71.89	353	P	P	13 46 58.2	+0.6
KKAR	Karatay Array	72.28	319	P	P	13 47 00.5	+0.3
AKASG	Malin Array Be	76.14	349	P	P	13 47 21.7	-0.7
	comp=Z,0.4nm,0.4s,baz=15,slow=6.0,SNR=4.2						
	comp=Z,0.4nm,0.4s						
CMAR	Chiang Mai Arr	77.48	284	P	P	13 47 31.9	+1.3
	comp=Z,0.2nm,0.3s,baz=27,slow=8.1,SNR=2.3						
	comp=Z,0.2nm,0.3s						
BURAR	Bucovina Array	79.61	351	P	P	13 47 43.7	+1.7
GEYT	Alibeck	81.44	325	LR	LR	14 27 07.0	
	comp=Z,68nm,18.6s,baz=212,slow=38						
ESDC	Sonseca Array	87.11	12	P	P	13 48 21.2	+0.5
	comp=Z,0.3nm,0.8s,baz=352,slow=4.1,SNR=5.5						
ESDC				LR	LR	14 28 48.0	
	comp=Z,52nm,20.4s,baz=173,slow=37						
	comp=Z,0.3nm,0.8s						
ESDC	Sonseca Array	87.11	12	IAmb	IAmb	13 48 22.7	
	comp=Z,1.7nm,1.4s						
WB0	Warramunga Arr	87.66	233	P	P	13 48 21.8	-1.6
WR0	Warramunga Arr	87.75	233	P	P	13 48 21.9	-1.8
WB2	Warramunga Arr	87.83	233	P	P	13 48 22.7	-1.4
WRA	Warramunga Arr	87.83	233	P	P	13 48 22.4	-1.7
	comp=Z,0.4nm,0.6s,baz=31,slow=5.7,SNR=7.5						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	91.21	231	P	P	13 48 38.9	-1.0
	comp=Z,0.8nm,0.7s,baz=33,slow=4.5,SNR=16						
	comp=Z,0.8nm,0.7s						

BJI ***15*** *13:51:30.2±0.0, 36°.27N×70°.35E, h176km, mb4.3/8, mB4.5/4*

IDC ***15*** *13:51:32.2±2.6, 36°.15N×70°.76E, h148km±24km, mb3.4/13, mbtmp4.0/19, Error ellipse: s-maj=17.1km s-min=14.2km az=25.0*

NEIC ***15*** *13:51:36.8±1.3, 36°.43N±0°.06×70°.69E±0°.09, h176km±3km, mb4.1/51, Error ellipse: s-maj=11.0km s-min=8.5km az=123.0*

NNC ***15*** *13:51:41.1±1.9, 36°.87N×70°.75E, h190km±16km, mb3.4, mpv4.3, Error ellipse: s-maj=16.2km s-min=10.5km az=14.0*

ISC 15 13:51:36.1±0.4, 36°.39N±0°.04×70°.78E±0°.05, h188km, n131, σ2s.10/142, mb4.0/35, 9C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBL	Kabul	2.33	218	Pn	Pn	13 52 17.4	-0.2
CHGR	Chuyangaron	2.60	331	Pn	Pn	13 52 19.7	-0.8
GAR	Garm	2.63	352	Pn	Pn	13 52 20.4	-0.5
CEP	Cherat	2.73	160	P	Pn	13 52 22.5	+0.4
CEP				S	Sn	13 52 57.0	-0.9
DRK	Karamyk	3.18	14		Pn	13 52 27.6	0.0
CHCP	Chirah Chowk	3.41	143	P	Pn	13 52 30.4	+0.2
BTK	Batken	3.66	0	Pn	Pn	13 52 33.4	+0.2
THW	Thamme Wali	3.68	167	P	Pn	13 52 33.6	+0.1
JMU	Jammu	5.00	136	*e*P	Pn	13 52 50.7	+0.5
JMU				*e*S	Sn	13 53 45.4	-3.2
TAS	Tashkent	5.06	347	Pn	Pn	13 52 50.6	-0.3
KSH	Kashi	5.15	51	P	Pn	13 52 48.6	-3.7
KSH				S	Sn	13 53 41.4	-11
KSH				smax	smax		
	comp=N,590nm,0.7s						
KSH				smax	smax		
	comp=E,480nm,0.7s						
THN	Thein Dam	5.68	133	*e*P	Pn	13 52 58.9	-0.2
THN				*e*S	Sn	13 54 01.4	-2.9
AML	Almayashu	6.16	21	P	Pn	13 53 05.1	-0.5
	SNR=134						
UCH	Uchtor	6.50	25	P	Pn	13 53 09.6	-0.5
	SNR=19						
EKS2	Erkin-Say	6.67	19	P	Pn	13 53 12.7	+0.6
	SNR=9.6						
KK31	Karatay Array	6.70	358	Pn	Pn	13 53 11.9	-0.5
KK31	Karatay Array	6.70	358	P	Pn	13 53 11.8	-0.5
	10nm,0.2s,baz=178,slow=13,SNR=512						
KK31				⇑S	Sn	13 54 22.6	-5.8
	30nm,0.3s,baz=190,slow=24,SNR=5.9						
KKAR	Karatay Array	6.70	358		Pn	13 53 11.8	-0.5
KKAR	Karatay Array	6.70	358	Pn	Pn	13 53 11.9	-0.5
AAK	Ala-Archa	6.86	24	P	Pn	13 53 14.4	-0.1
	SNR=13						
AAK	Ala-Archa	6.86	24	P	Pn	13 53 13.8	-0.7
	7.9nm,0.3s,baz=206,slow=7.5,SNR=26						
AAK				S	Sn	13 54 28.2	-4.2
	34nm,0.6s,baz=322,slow=23,SNR=20						
AAK	Ala-Archa	6.86	24	Pn	Pn	13 53 14.0	-0.5
ULHL	Ulahol	7.21	34	P	Pn	13 53 18.8	-0.4
	SNR=10						
CHMS	Chumysh	7.27	24	P	Pn	13 53 19.5	-0.2
	SNR=5.3						
CHMS	Chumysh	7.27	24	⇑P	Pn	13 53 18.8	-0.9
	13nm,0.8s						
CHMS				⇑S	Sn	13 54 38.0	-3.9
	58nm,1.1s						
BOOM	Boomskoye usch	7.28	32	Pn	Pn	13 53 19.9	-0.1
USP	Ospenovka	7.43	21	P	Pn	13 53 20.9	-1.0
	SNR=13						
SMLA	Simla	7.47	133	*e*P	Pn	13 53 21.4	-1.0
SMLA				*e*S	Sn	13 54 41.2	-5.5
SMLA				IAML		13 54 45.1	
	comp=E,120nm,0.3s						
SMLA				IAML		13 54 45.4	
	comp=N,139nm,0.0s						
SMLA				IAML		13 54 47.7	
	comp=N,136nm,0.2s						
SMLA				IAML		13 54 48.0	
	comp=E,141nm,0.4s						
TKM2	Tokmak 2	7.50	28	P	Pn	13 53 22.6	-0.3
	SNR=23						
TKM2	Tokmak 2	7.50	28	⇑P	Pn	13 53 22.2	-0.8
	comp=E,18nm,0.9s						
TKM2				⇑S	Sn	13 54 44.0	-3.7
	comp=E,21nm,0.8s						
KDJ	Kajisay	7.58	39	Pn	Pn	13 53 24.1	+0.2
MDOK	Medeo	8.30	34	⇑P	Pn	13 53 33.5	+0.1
	comp=E,9.4nm,0.8s						
KHET	Khetri	9.32	151	*e*P	Pn	13 53 45.4	-1.3
KHET				*e*S	Sn	13 55 22.8	-8.1
KUDL	Kundal	9.54	148	*e*P	Pn	13 53 47.9	-1.6
KUDL				*e*S	Sn	13 55 27.3	-8.7
GEYT	Alibeck	10.22	282	P	Pn	13 53 55.8	-2.6
	comp=E,1.6nm,0.6s,baz=61,slow=46,SNR=2.1						
GEYT				S	Sn	13 55 46.6	-5.8
	comp=E,2.7nm,0.5s,baz=40,slow=44,SNR=1.5						
GEYT	Alibeck	10.22	282	Pn	Pn	13 53 59.7	+1.3
GYA0B	ALIBECK ARRAY	10.22	282	Pn	Pn	13 53 59.6	+1.2
AJM	Ajmer	10.42	161	*e*x	Pn	13 53 59.2	-1.9
MAKZ	Makanchi	13.34	35		Pn	13 54 37.7	-0.5
MK31	Makanchi Array	13.48	36	Pn	Pn	13 54 39.8	-0.1
MK31	Makanchi Array	13.48	36	P	Pn	13 54 39.8	-0.1
	comp=E,7.8nm,0.7s,baz=211,slow=10,SNR=25						
MKAR	Makanchi Array	13.48	36	P	Pn	13 54 40.1	+0.2
	comp=E,4.8nm,0.7s,baz=212,slow=10.0,SNR=20						
MKAR	Makanchi Array	13.48	36	Pn	Pn	13 54 39.1	-0.8
BHPL	Bhopal	14.31	155	*e*P	P	13 54 54.6	+2.4
BHPL				*e*S	Sn	13 57 20.2	-10
WMQ	Urumqi	14.90	55	*e*P	P	13 55 00.0	+1.4
DMN	Daman	14.97	122	*e*P	P	13 55 01.1	+1.4
	comp=E,48nm,0.5s						
KKN	Kakani	14.97	121	*e*P	P	13 55 01.4	+1.7
	comp=E,71nm,0.5s						
AB31	Akbulak array	15.09	332	P	Pn	13 54 59.2	-0.5
	comp=E,2.0nm,0.4s,baz=145,slow=12,SNR=99						
AB31				S	Sn	13 57 40.5	-7.8
	comp=E,5.7nm,0.5s,baz=150,slow=23,SNR=8.3						
ABKAR	Akbulak array	15.09	332	Pn	Pn	13 54 59.2	-0.6
PKIN	Phulchoki	15.19	121	*e*P	P	13 55 02.8	+0.7
	comp=E,79nm,0.5s						
PKI	Pulchoki	15.20	121	*e*P	P	13 55 03.7	+1.4
	comp=E,67nm,0.5s						
KURBB	Kurchatov Arra	15.28	19	P	Pn	13 55 01.0	-1.1
	comp=E,6.1nm,0.8s,baz=210,slow=10,SNR=26						
KURBB	Kurchatov Arra	15.28	19	⇓P	Pn	13 55 01.6	-0.4
	comp=E,8.2nm,0.6s						
KURK	Kurchatov	15.39	19		P	13 55 04.0	+0.2
KURK				IAmb	IAmb	13 55 06.4	
	comp=Z,5.7nm,0.8s						
JIRN	Jiri	15.69	119	*e*P	Pn	13 55 07.9	+0.3
	comp=Z,24nm,0.3s						
RAMN	Ramite	16.41	121	*e*P	P	13 55 12.9	-2.7
	comp=Z,20nm,0.5s						
BRVK	Borovoye	16.67	359		Pn	13 55 18.8	0.0
BRVK				IAmb	IAmb	13 55 20.7	
	comp=Z,9.1nm,0.9s						
BRVK	Borovoye	16.67	359	⇑P	Pn	13 55 19.2	+0.4
	comp=Z,4.7nm,0.5s						
AKTO	Aktyubinsk	16.79	331	P	Pn	13 55 21.5	+1.3
	comp=Z,13nm,0.7s,baz=142,slow=11,SNR=40						
AKTO				S	S	13 58 18.5	-6.0
	comp=Z,1.1nm,0.5s,baz=159,slow=19,SNR=2.5						
AKTO	Aktyubinsk	16.79	331	⇑P	Pn	13 55 20.8	+0.6
	comp=Z,16nm,0.8s						
WSAR	Wadi Sarin	16.80	222	P	P	13 55 16.5	-3.2
	comp=Z,2.2nm,0.8s,baz=354,slow=13,SNR=1.5						
GOMU	GeErMu	19.37	83	P	P	13 55 42.1	-5.8
GOMU				pP	Pn	13 55 45.9	-5.3
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,31nm,5.7s						
ZAA0	Zalesovo Array	20.08	25	P	P	13 55 55.5	+0.5
ZAA0	Zalesovo Array	20.08	25	⇑P	P	13 55 55.2	+0.2
	comp=Z,1.8nm,0.5s						
ZALV	Zalesovo Beam	20.08	25	P	P	13 55 56.0	+1.0
	comp=Z,17nm,0.4s,baz=214,slow=10,SNR=60						
	comp=Z,17nm,0.4s						
ZALV	Zalesovo Beam	20.08	25	P	P	13 55 55.5	+0.5
ARU	Arti	21.68	341	P	P	13 56 12.8	+1.0
	comp=Z,1.4nm,0.3s,baz=161,slow=11,SNR=7.5						
	comp=Z,1.4nm,0.3s						
ARU	Arti	21.68	341	P	P	13 56 12.2	+0.5
ARU				IAmb	IAmb	13 56 15.9	
	comp=Z,7.5nm,0.9s						
SONM	Songino Array	28.54	55	P	P	13 57 15.8	+1.6
	comp=Z,0.8nm,0.5s,baz=273,slow=9.4,SNR=5.7						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	28.54	55	IAmb	IAmb	13 57 16.8	
	comp=Z,1.0nm,1.0s						
CMAR	Chiang Mai Arr	30.56	118	P	P	13 57 31.3	-0.9
	comp=Z,0.4nm,0.3s,baz=311,slow=9.5,SNR=1.9						
	comp=Z,0.4nm,0.3s						
HHC	Hu-ho-hao-te	31.96	69	*e*P	P	13 57 45.5	+1.1
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						

NRIK	**Noril'sk**	**34.26**	**10**	P	**P**	**13 58 06.0**	**+2.2**
	comp=Z,3.1nm,0.7s,baz=202,slow=5.0,SNR=5.2						
	comp=Z,3.1nm,0.7s						
NRIK	**Noril'sk**	**34.26**	**10**	P	**P**	**13 58 06.0**	**+2.2**
NRIK				IAmb	IAmb	13 58 07.2	
	comp=Z,4.0nm,0.8s						
FIA1	**FINESS Array S**	**37.47**	**326**	P	**P**	**13 58 32.5**	**+1.4**
FINES	**FINESS Array B**	**37.47**	**326**	P	**P**	**13 58 32.5**	**+1.4**
	comp=Z,2.5nm,1.0s,baz=125,slow=12,SNR=11						
	comp=Z,2.5nm,1.0s						
NJ2	**Nanjing**	**39.66**	**82**	*e*P	**P**	**13 58 49.1**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KEV	**Kevo**	**40.83**	**338**	P	**P**	**13 59 00.7**	**+1.9**
ARCES	**ARCESS Array B**	**41.17**	**338**	P	**P**	**13 59 03.7**	**+2.1**
	comp=Z,2.1nm,0.7s,baz=115,slow=8.6,SNR=13						
	comp=Z,2.1nm,0.7s						
ARCES	**ARCESS Array B**	**41.17**	**338**	P	**P**	**13 59 03.8**	**+2.1**
IPM	**Ipoh**	**42.20**	**132**	P	**P**	**13 59 11.8**	**+1.2**
IPM				IAmb	IAmb	13 59 12.8	
	comp=Z,4.3nm,0.7s						
GSI	**Gunungsitoli**	**42.83**	**138**	P	**P**	**13 59 18.2**	**+2.5**
NC303	**NORSAR Array S**	**44.30**	**323**	P	**P**	**13 59 28.9**	**+1.9**
NC303				IAmb	IAmb	13 59 47.1	
	comp=Z,20nm,1.5s						
NB201	**NORSAR Array S**	**44.32**	**323**	P	**P**	**13 59 28.5**	**+1.4**
NB2	**NORSAR Subarra**	**44.36**	**323**	P	**P**	**13 59 28.8**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**13 59 29.1**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=90,slow=8.0,SNR=4.9						
	comp=Z,0.5nm,0.4s						
NC204	**NORSAR Array S**	**44.60**	**323**	P	**P**	**13 59 31.0**	**+1.6**
TIXI	**Tiksi**	**45.94**	**22**	P	**P**	**13 59 40.9**	**+1.3**
TIXI				IAmb	IAmb	13 59 41.6	
	comp=Z,3.5nm,0.4s						
SPB2	**Spitsbergen Ar**	**47.55**	**347**	P	**P**	**13 59 54.9**	**+2.8**
KBS	**Kingsbay**	**48.67**	**347**	P	**P**	**14 00 02.8**	**+2.1**
SUMG	**Summit**	**61.10**	**341**	P	**P**	**14 01 31.6**	**+1.4**
SUMG				IAmb	IAmb	14 01 43.9	
	comp=Z,3.7nm,1.1s						
TOA0	**Torodi Ar. Sit**	**65.54**	**269**	P	**P**	**14 01 59.7**	**-0.1**
TOA0				IAmb	IAmb	14 02 00.0	
	comp=Z,6.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**65.54**	**269**	P	**P**	**14 01 59.7**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=49,slow=5.9,SNR=13						
	comp=Z,0.5nm,0.5s						
A21K	**Barrow**	**67.46**	**15**	P	**P**	**14 02 13.2**	**+2.2**
A21K				IAmb	IAmb	14 02 15.2	
	comp=Z,9.0nm,1.4s						
TOLK	**Toolik Lake Re**	**71.07**	**15**	P	**P**	**14 02 35.5**	**+2.2**
TOLK				IAmb	IAmb	14 02 36.0	
	comp=Z,2.0nm,0.5s						
COLD	**Coldfoot**	**72.12**	**16**	P	**P**	**14 02 41.4**	**+1.9**
COLD				IAmb	IAmb	14 02 42.7	
	comp=Z,4.0nm,1.4s						
IMAR	**Indian Mountai**	**72.33**	**18**	P	**P**	**14 02 42.1**	**+1.3**
H21K	**Melozitna Rive**	**72.82**	**17**	P	**P**	**14 02 45.6**	**+1.9**
BMAR	**Burnt Mountain**	**73.08**	**14**	P	**P**	**14 02 46.3**	**+1.0**
J20K	**Nowinta River**	**73.69**	**19**	P	**P**	**14 02 50.8**	**+2.0**
J20K				IAmb	IAmb	14 03 06.3	
	comp=Z,4.7nm,1.4s						
H24K	**Noodor Dome**	**73.80**	**16**	P	**P**	**14 02 51.5**	**+2.0**
C36M	**Paulatuk**	**74.00**	**5**	P	**P**	**14 02 52.1**	**+1.6**
INK	**Inuvik**	**74.04**	**9**	P	**P**	**14 02 52.8**	**+2.1**
INK				IAmb	IAmb	14 03 19.6	
	comp=Z,3.6nm,1.4s						
TTA	**Tatalina**	**74.18**	**20**	P	**P**	**14 02 53.7**	**+1.9**
K20K	**Telida**	**74.37**	**19**	P	**P**	**14 02 54.9**	**+2.1**
K20K				IAmb	IAmb	14 03 01.8	
	comp=Z,3.4nm,1.2s						
MDM	**Murphy Dome**	**74.47**	**16**	P	**P**	**14 02 55.5**	**+2.1**
POKR	**Poker Plat Res**	**74.51**	**16**	P	**P**	**14 02 56.3**	**+2.7**
POKR				IAmb	IAmb	14 03 02.1	
	comp=Z,4.0nm,0.9s						
DBIC	**Dimbokro**	**74.52**	**267**	P	**P**	**14 02 55.5**	**+1.1**
BPAW	**Bear Paw Mtn.**	**74.55**	**18**	P	**P**	**14 02 54.8**	**+1.0**
BPAW				IAmb	IAmb	14 03 02.2	
	comp=Z,3.5nm,1.4s						
NEA2	**Nenana**	**74.59**	**17**	P	**P**	**14 02 55.6**	**+1.6**
CAST	**Castle Rocks**	**74.84**	**18**	P	**P**	**14 02 57.5**	**+2.0**
CAST				IAmb	IAmb	14 03 00.5	
	comp=Z,4.5nm,1.4s						
ILAR	**Eielson Array**	**74.93**	**16**	P	**P**	**14 02 57.5**	**+1.6**
	comp=Z,0.1nm,0.6s,baz=298,slow=4.8,SNR=2.6						
	comp=Z,0.1nm,0.6s						
PPLA	**Purkeypile**	**75.24**	**19**	P	**P**	**14 02 59.6**	**+1.7**
PPLA				IAmb	IAmb	14 03 09.6	
	comp=Z,6.9nm,1.4s						
RND	**Reindeer**	**75.65**	**17**	P	**P**	**14 03 01.4**	**+1.3**
RND				IAmb	IAmb	14 03 27.0	
	comp=Z,3.9nm,1.4s						
PAX	**Paxson**	**76.81**	**16**	P	**P**	**14 03 08.3**	**+1.6**
SML	**Sawmill**	**77.14**	**18**	P	**P**	**14 03 09.9**	**+1.4**
SML				IAmb	IAmb	14 03 11.7	
	comp=Z,5.8nm,1.4s						
P18K	**Big Mountain,**	**77.24**	**22**	P	**P**	**14 03 11.0**	**+1.9**
P18K				IAmb	IAmb	14 03 24.9	
	comp=Z,2.7nm,1.1s						
SCM	**Sheep Creek Mo**	**77.36**	**17**	P	**P**	**14 03 11.3**	**+1.5**
L27K	**Beaver Creek,**	**77.50**	**15**	P	**P**	**14 03 12.9**	**+2.4**
BCAR	**Beaver Creek A**	**77.51**	**15**	P	**P**	**14 03 12.8**	**+2.2**
KDAK	**Kodiak Island**	**79.36**	**22**	P	**P**	**14 03 22.3**	**+1.6**
KDAK				IAmb	IAmb	14 03 37.8	
	comp=Z,8.3nm,1.2s						
OHAK	**Old Harbor**	**79.61**	**23**	P	**P**	**14 03 23.6**	**+1.6**
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**14 03 32.9**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=352,slow=5.3,SNR=11						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**14 03 33.3**	**+2.0**
P33M	**Teslin, Yukon**	**81.80**	**12**	P	**P**	**14 03 35.3**	**+1.6**
WRA	**Warramunga Arr**	**82.08**	**122**	P	**P**	**14 03 35.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=324,slow=5.0,SNR=12						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**82.08**	**122**	P	**P**	**14 03 35.9**	**+0.2**
WB2	**Warramunga Arr**	**82.09**	**122**	P	**P**	**14 03 35.8**	**0.0**
WB2				IAmb	IAmb	14 03 56.2	
	comp=Z,9.1nm,1.5s						
WR0	**Warramunga Arr**	**82.23**	**122**	P	**P**	**14 03 36.5**	**0.0**
WR0				IAmb	IAmb	14 03 44.3	
	comp=Z,6.5nm,1.3s						
ASAR	**Alice Springs**	**84.34**	**125**	P	**P**	**14 03 47.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=313,slow=5.0,SNR=11						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**84.34**	**125**	P	**P**	**14 03 48.1**	**+0.9**

IDC ***15*** *14:53:13.6±0.8, 24°.07N×123°.49E, h0^{km}, mb3.7/12, mbtmp3.7/13, ML2.7/1, MS3.2/11, Error ellipse: s-maj=26.9km s-min=18.8km az=71.0*

JMA ***15*** *14:53:18.4±0.2, 24°.0N±0°.8×123°.6E±0°.6, h33^{km}±1^{km}, MV3.7/8, NEAR ISHIGAKIJIMA ISLAND*

JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.

ISC 15 14:53:18.4±1.0, **24°.01N**±0°.08×**123°.59E**±0°.03, **h33**^{km}±3^{km}, **n33**, σ**0^{s}.83**/29, **mb3.7**/12, **MS3.3**/10, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.20**	**75**	P	**Pn**	**14 53 24.9**	**+0.4**
HATJ				S	**Sb**	**14 53 29.8**	**+0.4**
IRIF	**Iriomote-Funau**	**0.35**	**21**	P	**Pb**	**14 53 27.1**	**+0.3**
IRIF				S	**Sn**	**14 53 33.4**	**+0.5**
JKRS	**Kuro-shima**	**0.45**	**59**	P	**Pn**	**14 53 28.6**	**+0.1**
JKRS				S	**Sn**	**14 53 35.9**	**+0.6**
JIJ	**Ishigaki jima**	**0.62**	**54**	P	**Pn**	**14 53 30.7**	**-0.1**
JIJ				S	**Sb**	**14 53 39.4**	**0.0**
YOJ	**Yonaguni jima**	**0.70**	**311**	P	**Pb**	**14 53 32.2**	**0.0**
YOJ				*e*S	**Sn**	**14 53 42.6**	**+1.0**
JYNG	**Yonagunijimaku**	**0.74**	**307**	P	**Pn**	**14 53 32.8**	**+0.3**
JYNG				S	**Sb**	**14 53 43.1**	**+0.4**
JTJ	**Tarama**	**1.19**	**58**	P	**Pb**	**14 53 40.2**	**-0.3**
JTJ				S	**Sb**	**14 53 56.9**	**+1.3**
JOW	**Kunigami**	**5.08**	**55**	Pn	**Pn**	**14 54 33.0**	**+0.8**
	0.6nm,0.3s,baz=243,slow=13,SNR=1.1						
JOW				Sn	**Sn**	**14 55 27.8**	**-2.0**
	0.4nm,0.3s,baz=82,slow=28,SNR=1.2						
	2.8nm,0.3s						
KSRS	**Korea Array**	**13.91**	**14**	LR	LR	15 01 48.2	
	comp=Z,36nm,20.4s,baz=200,slow=37						
GUMO	**Guam**	**22.62**	**113**	LR	LR	15 06 50.3	
	comp=Z,22nm,19.6s,baz=256,slow=36						
CMAR	**Chiang Mai Arr**	**23.61**	**261**	P	**P**	**14 58 27.4**	**+0.8**
	0.3nm,0.6s,baz=60,slow=8.7,SNR=4.0						
CMAR				LR	LR	15 08 51.3	
	comp=Z,40nm,18.2s,baz=125,slow=40						
	0.3nm,0.6s						
SIJI	**Sorong**	**25.82**	**162**	LR	LR	15 06 47.9	
	comp=Z,37nm,20.7s,baz=35,slow=31						
KLR	**Kul'dur**	**25.98**	**12**	LR	LR	15 10 24.0	
	comp=Z,71nm,19.0s,baz=216,slow=40						
SONM	**Songino Array**	**27.43**	**334**	P	**P**	**14 59 00.9**	**-0.3**
	0.7nm,0.7s,baz=153,slow=9.7,SNR=3.7						
SONM				LR	LR	15 12 11.4	
	comp=Z,51nm,18.7s,baz=171,slow=42						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**40.01**	**315**	LR	LR	15 18 51.0	
	comp=Z,40nm,18.8s,baz=129,slow=38						
H11N1	**WAKE ISLAND Hy**	**40.30**	**87**	T	T	15 43 34.7	
	baz=283,slow=74,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**40.30**	**87**	T	T	15 43 34.2	
	baz=283,slow=74,SNR=6.4						
H11N3	**WAKE ISLAND Hy**	**40.31**	**87**	T	T	15 43 37.4	
	baz=283,slow=74,SNR=6.2						
H11S3	**WAKE ISLAND Hy**	**40.42**	**89**	T	T	15 43 54.8	
	baz=279						
H11S1	**WAKE ISLAND Hy**	**40.43**	**89**	T	T	15 44 02.6	
	baz=279,slow=74						
H11S2	**WAKE ISLAND Hy**	**40.44**	**89**	T	T	15 43 59.5	
	baz=279,slow=74						
ZALV	**Zalesovo Beam**	**41.60**	**326**	P	**P**	**15 01 01.1**	**-2.0**
	1.2nm,0.6s,baz=101,slow=7.7,SNR=5.4						
ZALV				LR	LR	15 19 36.7	
	comp=Z,52nm,18.2s,baz=124,slow=38						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**44.92**	**166**	P	**P**	**15 01 30.2**	**+0.1**
	0.8nm,0.7s,baz=346,slow=8.9,SNR=6.5						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**48.43**	**167**	P	**P**	**15 01 58.4**	**+0.7**
	0.3nm,0.5s,baz=358,slow=14,SNR=16						
	0.3nm,0.5s						
AKTO	**Aktyubinsk**	**56.44**	**316**	LR	LR	15 28 45.4	
	comp=Z,28nm,19.7s,baz=116,slow=38						
ILAR	**Eielson Array**	**68.36**	**27**	P	**P**	**15 04 17.4**	**+1.1**
	0.2nm,0.5s,baz=284,slow=6.2,SNR=2.2						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**72.70**	**330**	P	**P**	**15 04 42.3**	**-0.4**
	1.4nm,0.8s,baz=67,slow=5.0,SNR=6.2						
FINES				LR	LR	15 39 34.9	
	comp=Z,44nm,20.3s,baz=32,slow=38						
	1.4nm,0.8s						
AKASG	**Malin Array Be**	**74.46**	**319**	P	**P**	**15 04 52.2**	**-1.1**
	1.0nm,0.7s,baz=59,slow=5.6,SNR=4.7						
	1.0nm,0.7s						
BRTR	**Keskin Array B**	**75.04**	**307**	P	**P**	**15 04 57.6**	**+0.5**
	0.8nm,0.6s,baz=110,slow=5.0,SNR=6.3						
	0.8nm,0.6s						
NB2	**NORSAR Subarra**	**79.40**	**333**	P	**P**	**15 05 20.5**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=54,slow=5.9						
NOA	**NORSAR Array B**	**79.40**	**333**	P	**P**	**15 05 20.6**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=55,slow=5.7,SNR=5.3						
NOA				LR	LR	15 44 13.5	
	comp=Z,24nm,18.6s,baz=30,slow=39						
	comp=Z,0.9nm,0.6s						
YKA	**Yellowknife Ar**	**82.27**	**23**	P	**P**	**15 05 36.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=305,slow=5.2,SNR=9.5						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**84.37**	**321**	P	**P**	**15 05 47.2**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=77,slow=5.1,SNR=2.1						
	comp=Z,0.2nm,0.4s						

IDC ***15*** *14:59:46.8±1.1, 35°.73N×97°.27W, h0^{km}, mbtmp3.7/4, ML2.4/2, Error ellipse: s-maj=14.5km s-min=11.5km az=132.0*

TUL ***15*** *14:59:47.2±1.0, 35°.67N±0°.04×97°.16W±0°.05, h6^{km}±6^{km}, ML3.9, mb_Lg3.8/122(NEIC), Mwr3.4/17(SLM), Error ellipse: s-maj=6.0km s-min=5.5km az=86.0*

NEIC ***15*** *14:59:47.2, 35°.69N×97°.17W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.02; $M_{\theta\theta}$0.94; $M_{\phi\phi}$-0.96; $M_{r\theta}$0.16; $M_{\theta\phi}$-1.12; $M_{\phi r}$-0.07; Fault plane solution: $M_0$1.48000×10^{14} NP1:ϕ_s160.00000°, δ85.00000°, λ5.00000°. NP2:ϕ_s70.00000°, δ85.00000°, λ175.00000°. Principal axes: T 1.4812, Plg7.0000°, Azm25.0000°; N -0.0003, Plg83.0000°, Azm205.0000°; P -1.4809, Plg0.0000°, Azm115.0000°;*

ANF ***15*** *14:59:47.2±0.2, 35°.69N×97°.14W, h6^{km}, ML4.5/15 Error ellipse: s-maj=2.6km s-min=1.8km az=144.0*

NEIC ***15*** *14:59:47.3±0.8, 35°.69N±0°.04×97°.18W±0°.05, h8^{km}±6^{km}, Error ellipse: s-maj=6.2km s-min=5.7km az=79.0*

ISC 15 14:59:46.2±1.1, **35°.72N**±0°.02×**97°.15W**±0°.02, **h4**^{km}±9^{km}, **n169**, σ**1^{s}.46**/187, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.19**	**215**	Pg	**Pg**	**14 59 50.2**	**+0.3**
OK009	**Oakdale Elemen**	**0.26**	**238**		**Pg**	**14 59 51.8**	**+0.6**
OKCFA	**Oklahoma City**	**0.39**	**219**	Pg	**Pg**	**14 59 54.1**	**+0.4**
OKCFA	**Oklahoma City**	**0.39**	**219**	P	**Pg**	**14 59 54.1**	**+0.4**
	baz=43,SNR=456						
OKCFA				S	**Sg**	**14 59 59.3**	**+0.5**
	baz=43						
OKCSW	**OKLAHOMA CITY**	**0.39**	**217**		**Pg**	**14 59 54.1**	**+0.4**
FNO	**Franklin**	**0.51**	**204**	Pg	**Pg**	**14 59 56.0**	**+0.1**
TUL1	**Leonard**	**1.12**	**80**		**Pg**	**15 00 08.0**	**+0.3**
TUL1	**Leonard**	**1.12**	**80**	P	**Pg**	**15 00 07.9**	**+0.3**
	baz=258						
TUL1				S	**Sg**	**15 00 23.8**	**+1.5**
	baz=258						
TUL1	**Leonard**	**1.12**	**80**	P	**Pg**	**15 00 07.9**	**+0.3**
	baz=258,SNR=80						
TUL1				S	**Sg**	**15 00 23.8**	**+1.5**
	baz=258						
X34A	**Smith Ranch, M**	**1.25**	**207**		**Pg**	**15 00 09.8**	**-0.3**
T35A	**Sooner Cattle**	**1.30**	**23**	Pn	**Pn**	**15 00 11.8**	**+0.6**
T35B	**Sooner Cattle**	**1.30**	**23**	P	**Pn**	**15 00 11.8**	**+0.6**
	baz=203,SNR=412						
T35B				S	**Sn**	**15 00 30.6**	**+1.6**
	baz=203						
U32A	**Winter Ranch,**	**1.64**	**294**		**Pn**	**15 00 16.7**	**+0.9**
U32A	**Winter Ranch,**	**1.64**	**294**	P	**Pn**	**15 00 17.0**	**+1.2**
	baz=115						
U32A				S	**Sg**	**15 00 40.2**	**+1.4**
	baz=115						
WMOK	**Wichita Mounta**	**1.66**	**234**	Pn	**Pn**	**15 00 15.9**	**-0.1**
WMOK	**Wichita Mounta**	**1.66**	**234**	P	**Pn**	**15 00 16.0**	**-0.1**
	baz=54,SNR=488						
WMOK	**Wichita Mounta**	**1.66**	**234**	P	**Pn**	**15 00 16.1**	**-0.1**
	baz=54						
WMOK				S	**Sn**	**15 00 37.9**	**0.0**
	baz=54						
X37A	**Clayton**	**1.84**	**127**	Pn	**Pn**	**15 00 19.6**	**+1.0**
X37A				IAmb_Lg		15 00 46.6	
	comp=Z,744nm,1.1s						
X37A	**Clayton**	**1.84**	**127**	P	**Pn**	**15 00 19.7**	**+1.0**
	baz=307,SNR=364						
X37A				Sb	**Sg**	**15 00 45.4**	**-0.1**
	baz=307						
Z35A	**Perchaven, San**	**2.38**	**182**		**Pn**	**15 00 26.4**	**+0.3**
Z35A				IAmb_Lg		15 01 03.4	
	comp=Z,284nm,0.7s						
Z35A	**Perchaven, San**	**2.38**	**182**	P	**Pn**	**15 00 27.0**	**+0.9**
	baz=1.8,SNR=17						
Z35A				S	**Sn**	**15 00 57.4**	**+1.6**
	baz=1.8						
HHAR	**Hobbs**	**2.66**	**77**		**Pn**	**15 00 31.1**	**+1.1**
W39A	**Magazine**	**2.80**	**100**		**Pn**	**15 00 32.7**	**+0.9**
W39A				IAmb_Lg		15 01 22.5	
	comp=Z,336nm,0.7s						
W39A	**Magazine**	**2.80**	**100**	P	**Pn**	**15 00 32.9**	**+1.1**
	baz=281,SNR=147						
W39A				S	**Sn**	**15 01 07.1**	**+1.1**
	baz=281						
W39A	**Magazine**	**2.80**	**100**	P	**Pn**	**15 00 32.9**	**+1.1**
	baz=281,SNR=36						
W39A				S	**Sn**	**15 01 06.9**	**+0.9**
	baz=281						
R32A	**Long Quarter,**	**2.97**	**336**	Pn	**Pn**	**15 00 34.9**	**+0.7**
R32A				IAmb_Lg		15 01 29.0	
	comp=Z,162nm,0.8s						
R32A	**Long Quarter,**	**2.97**	**336**	P	**Pg**	**15 00 43.2**	**0.0**
	baz=155						
Z38A	**Mt. Pleasant**	**3.04**	**143**		**Pn**	**15 00 35.6**	**+0.6**
Z38A				IAmb_Lg		15 01 23.9	
	comp=Z,178nm,0.7s						
Z38A	**Mt. Pleasant**	**3.04**	**143**	P	**Pn**	**15 00 36.1**	**+1.0**
	baz=324,SNR=10						
MIAR	**Mount Ida**	**3.16**	**111**	Pn	**Pn**	**15 00 37.5**	**+0.9**
MIAR				IAmb_Lg		15 01 35.3	
	comp=Z,152nm,0.8s						
MIAR	**Mount Ida**	**3.16**	**111**	P	**Pn**	**15 00 38.0**	**+1.4**
	baz=292,SNR=36						
MIAR				S	**Sn**	**15 01 18.0**	**+3.2**
	baz=292						
KSU1	**Kansas State U**	**3.40**	**7**		**Pn**	**15 00 41.4**	**+1.3**
KSU1				IAmb_Lg		15 01 39.6	
	comp=Z,287nm,0.9s						
KSU1	**Kansas State U**	**3.40**	**7**	P	**Pn**	**15 00 41.7**	**+1.6**
	baz=188,SNR=16						
KSU1	**Kansas State U**	**3.40**	**7**	Pn	**Pn**	**15 00 41.7**	**+1.6**
	baz=188						
KSU1				Pb	**Pb**	**15 00 50.0**	**+3.0**
	baz=188,SNR=24						
KSU1				Sb	**Sg**	**15 01 35.6**	**+0.1**
	baz=188						
U40A	**Yellville**	**3.54**	**78**		**Pn**	**15 00 43.0**	**+1.1**
U40A	**Yellville**	**3.54**	**78**	P	**Pn**	**15 00 42.8**	**+0.8**
	baz=260,SNR=17						
U40A				Sn	**Sn**	**15 01 25.7**	**+1.4**
	baz=260						
U40A				Sb	**Sg**	**15 01 38.1**	**-1.9**
	baz=260						
S39A	**Bolivar**	**3.65**	**56**		**Pn**	**15 00 44.7**	**+1.2**
S39A				IAmb_Lg		15 01 53.4	
	comp=Z,135nm,0.7s						
S39A	**Bolivar**	**3.65**	**56**	P	**Pn**	**15 00 45.0**	**+1.5**
	baz=238,SNR=36						
S39A				S	**Sn**	**15 01 28.9**	**+1.9**
	baz=238						
CBKS	**Cedar Bluff**	**3.71**	**327**	IAmb_Lg		15 01 50.0	
	comp=Z,132nm,0.8s						
CBKS	**Cedar Bluff**	**3.71**	**327**	P	**Pb**	**15 00 54.8**	**+2.4**
	baz=146						
CBKS	**Cedar Bluff**	**3.71**	**327**	Pn	**Pn**	**15 00 46.8**	**+2.4**
	baz=146						
CBKS				Pb	**Pb**	**15 00 55.0**	**+2.6**
	baz=146,SNR=15						
CBKS				Sb	**Sg**	**15 01 45.2**	**-0.2**
	baz=146						
ABTX	**Abilene, Hawle**	**3.71**	**214**		**Pn**	**15 00 44.4**	**0.0**
ABTX	**Abilene, Hawle**	**3.71**	**214**	P	**Pn**	**15 00 44.5**	**0.0**
	baz=33						
ABTX	**Abilene, Hawle**	**3.71**	**214**	Pn	**Pn**	**15 00 44.4**	**0.0**
	baz=33,SNR=7.5						
ABTX				Pb	**Pb**	**15 00 51.8**	**-0.6**
	baz=33						
WHTX	**Lake Whitney,**	**3.73**	**184**	Pn	**Pn**	**15 00 44.6**	**+0.1**
WHTX	**Lake Whitney,**	**3.73**	**184**	P	**Pb**	**15 00 51.5**	**-1.1**
	baz=3.7						
WHTX				Sb	**Sb**	**15 01 39.6**	**+1.4**
	baz=3.7						
WHTX	**Lake Whitney,**	**3.73**	**184**	Pb	**Pb**	**15 00 51.5**	**-1.1**
	baz=3.7,SNR=15						
WHTX				Sb	**Sb**	**15 01 39.5**	**+1.4**
	baz=3.7						
X40A	**Basin Creek Fa**	**3.75**	**108**		**Pn**	**15 00 45.5**	**+0.7**
X40A				IAmb_Lg		15 01 52.5	
	comp=Z,369nm,0.8s						
X40A	**Basin Creek Fa**	**3.75**	**108**	Pn	**Pn**	**15 00 46.3**	**+1.4**
	baz=290,SNR=9.0						
X40A				Pb	**Pb**	**15 00 53.7**	**+0.7**
	baz=290						
X40A				Sb	**Sg**	**15 01 44.3**	**-2.3**
	baz=290						
AMTX	**Amarillo**	**3.80**	**259**	IAmb_Lg		15 01 54.2	
	comp=Z,195nm,0.8s						
AMTX	**Amarillo**	**3.80**	**259**	P	**Pn**	**15 00 47.4**	**+1.8**
	baz=77						
AMTX				Sb	**Sb**	**15 01 43.8**	**+3.5**
	baz=77						
237A	**Washetta, Mont**	**3.87**	**163**	Pn	**Pn**	**15 00 46.8**	**+0.3**
237A				IAmb_Lg		15 01 56.7	
	comp=Z,122nm,0.8s						
WLAR	**White Oak Lake**	**3.90**	**120**		**Pn**	**15 00 47.4**	**+0.5**
WHAR	**Wooly Hollow**	**3.99**	**95**		**Pn**	**15 00 49.2**	**+1.0**
WHAR				IAmb_Lg		15 01 57.2	
	comp=Z,126nm,0.7s						
W41B	**Gary Mavity, V**	**4.04**	**96**		**Pn**	**15 00 49.9**	**+1.1**
W41B	**Gary Mavity, V**	**4.04**	**96**	P	**Pn**	**15 00 50.1**	**+1.2**
	baz=278,SNR=72						
W41B				S	**Sn**	**15 01 37.4**	**+0.9**
	baz=278						
W41B	**Gary Mavity, V**	**4.04**	**96**	P	**Pn**	**15 00 50.1**	**+1.2**
	baz=278,SNR=34						
W41B				Sn	**Sn**	**15 01 37.5**	**+0.9**
	baz=278						
W41B				Sb	**Sg**	**15 01 53.7**	**-2.3**
	baz=278						
UALR	**University of**	**4.05**	**102**		**Pn**	**15 00 49.6**	**+0.7**
UALR				IAmb_Lg		15 02 02.4	
	comp=Z,286nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.09**	**86**		**Pn**	**15 00 50.2**	**+0.7**
FCAR				IAmb_Lg		15 02 01.7	
	comp=Z,326nm,0.9s						
MGMO	**Mountain Grove**	**4.19**	**69**		**Pn**	**15 00 52.1**	**+1.2**
MGMO				IAmb_Lg		15 02 00.6	
	comp=Z,275nm,0.8s						
Z41A	**Richland Creek**	**4.35**	**123**	Pn	**Pn**	**15 00 54.1**	**+1.0**
Z41A	**Richland Creek**	**4.35**	**123**	S	**Sn**	**15 01 44.1**	**-0.2**
	baz=305						
Z41A				S	**Sn**	**15 01 44.1**	**-0.2**
	baz=305						
Z41A	**Richland Creek**	**4.35**	**123**	S	**Sn**	**15 01 44.0**	**-0.2**
	baz=305						
R40A	**Maddies Statio**	**4.67**	**55**		**Pn**	**15 00 58.4**	**+0.9**
R40A				IAmb_Lg		15 02 18.3	
	comp=Z,127nm,0.8s						
CCAR	**Cane Creek**	**4.78**	**111**	Pn	**Pn**	**15 00 59.6**	**+0.7**
CCAR				IAmb_Lg		15 02 28.8	
	comp=Z,210nm,0.9s						
P38A	**Dawn**	**4.84**	**35**		**Pn**	**15 01 00.7**	**+0.9**
P38A				IAmb_Lg		15 02 29.7	
	comp=Z,190nm,0.8s						
LCAR	**Lake Charles**	**4.88**	**84**	Pn	**Pn**	**15 01 01.0**	**+0.6**
LCAR				IAmb_Lg		15 02 28.1	
	comp=Z,148nm,0.9s						
435B	**Jarrell**	**4.94**	**184**	Pn	**Pn**	**15 01 01.3**	**+0.1**
435B				IAmb_Lg		15 02 26.4	
	comp=Z,197nm,0.9s						
435B	**Jarrell**	**4.94**	**184**	Sb	**Sb**	**15 02 17.1**	**+4.1**
	baz=4.0						
MSTX	**Muleshoe**	**4.94**	**251**	IAmb_Lg		15 02 26.6	
	comp=Z,132nm,1.1s						
MSTX	**Muleshoe**	**4.94**	**251**	Sb	**Sb**	**15 02 18.8**	**+5.6**
	baz=68						
N33A	**J Bar K, Exete**	**5.02**	**357**	IAmb_Lg		15 02 38.1	
	comp=Z,149nm,0.9s						
N35A	**Tabor**	**5.27**	**13**		**Pn**	**15 01 06.5**	**+0.8**
CCM	**Cathedral Cave**	**5.28**	**62**		**Pn**	**15 01 06.7**	**+0.9**
CCM				IAmb_Lg		15 02 33.9	
	comp=Z,147nm,0.8s						
CCM	**Cathedral Cave**	**5.28**	**62**	P	**Pn**	**15 01 07.2**	**+1.4**
	baz=245						
HBAR	**Harrisburg**	**5.29**	**90**	Pn	**Pn**	**15 01 06.9**	**+0.8**
KSCO	**Kaye Shedlock'**	**5.46**	**309**	IAmb_Lg		15 02 56.6	
	comp=Z,105nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.46**	**309**	Pn	**Pn**	**15 01 12.4**	**+4.0**
	baz=126						
KSCO				Pb	**Pg**	**15 01 27.7**	**-3.1**
	baz=126,SNR=14						
P40A	**Paris**	**5.56**	**45**		**Pn**	**15 01 10.7**	**+1.0**
P40A				IAmb_Lg		15 02 48.8	
	comp=Z,106nm,0.8s						
143A	**Socs Landing,**	**5.63**	**121**	Pn	**Pn**	**15 01 11.1**	**+0.4**
143A				IAmb_Lg		15 02 59.7	
	comp=Z,83nm,0.9s						
JCT	**Junction City**	**5.68**	**204**		**Pn**	**15 01 11.0**	**-0.4**
JCT				IAmb_Lg		15 02 56.8	
	comp=Z,131nm,0.7s						
JCT	**Junction City**	**5.68**	**204**	Pn	**Pn**	**15 01 11.1**	**-0.3**
	baz=22						
JCT				Pb	**Pb**	**15 01 29.9**	**+4.0**
	baz=22,SNR=15						
BGNE	**Belgrade**	**5.73**	**352**	Pn	**Pn**	**15 01 12.8**	**+0.7**
BGNE	**Belgrade**	**5.73**	**352**	P	**Pn**	**15 01 14.0**	**+1.8**
	baz=172						
BGNE				S	**Sn**	**15 02 17.2**	**-1.2**
	baz=172						
FVM	**French Village**	**5.85**	**65**		**Pn**	**15 01 14.2**	**+0.5**
FVM				IAmb_Lg		15 03 05.9	
	comp=Z,112nm,0.8s						
FVM	**French Village**	**5.85**	**65**	P	**Pn**	**15 01 14.4**	**+0.7**
	baz=249,SNR=12						
MET	**Memphis--Engin**	**5.92**	**94**	IAmb_Lg		15 03 11.6	
	comp=Z,196nm,0.7s						
N38A	**Joes South For**	**5.93**	**30**		**Pn**	**15 01 15.5**	**+0.8**
N38A				IAmb_Lg		15 03 06.2	

	comp=Z,138nm,0.7s						
N38A	Joes South For	5.93	30	P	Pn	15 01 15.8	+1.0
	baz=212,SNR=14						
T25A	Trinidad	6.02	286		Pn	15 01 16.3	0.0
T25A				IAmb_Lg		15 03 02.2	
	comp=Z,105nm,0.8s						
T25A	Trinidad	6.02	286	P	Pn	15 01 17.7	+1.5
	baz=102						
T25A				Sb	Sg	15 02 55.5	-4.0
	baz=102						
LNXT	Lenox	6.23	84	Pn	Pn	15 01 19.4	+0.5
SLM	Saint Louis	6.24	60	IAmb_Lg		15 03 05.0	
	comp=Z,187nm,0.9s						
OXF	Oxford	6.46	99		Pn	15 01 22.8	+0.7
OXF				IAmb_Lg		15 03 14.9	
	comp=Z,126nm,0.9s						
OXF	Oxford	6.46	99	P	Pn	15 01 22.7	+0.7
	baz=282						
OXF				S	Sn	15 02 35.0	-1.2
	baz=282						
HICK	Hickman	6.46	80	Pn	Pn	15 01 23.0	+0.9
OGNE	Ogallala	6.47	325	Pn	Pn	15 01 22.9	+0.5
OGNE				IAmb_Lg		15 03 17.7	
	comp=Z,155nm,0.8s						
OGNE	Ogallala	6.47	325	P	Pn	15 01 24.3	+2.0
	baz=143						
OGNE				Sb	Sg	15 03 11.4	-2.7
	baz=143						
W45A	Hickory Valley	6.53	93	Pn	Pn	15 01 23.7	+0.6
W45A				IAmb_Lg		15 03 28.1	
	comp=Z,190nm,0.7s						
Y45A	Yeager Farm, C	6.53	104	Pn	Pn	15 01 23.5	+0.5
Y45A				IAmb_Lg		15 03 27.4	
	comp=Z,120nm,0.9s						
S44A	Carbondale	6.64	70	Pn	Pn	15 01 25.1	+0.5
SIUC	Southern Illin	6.68	70	Pn	Pn	15 01 25.4	+0.4
735A	Kenedy	6.87	185	IAmb_Lg		15 03 37.8	
	comp=Z,103nm,1.1s						
SCIA	State Center	6.90	25		Pn	15 01 29.0	+0.9
SCIA				IAmb_Lg		15 03 43.7	
	comp=Z,112nm,0.8s						
SCIA	State Center	6.90	25	P	Pn	15 01 29.6	+1.4
	baz=208,SNR=6.6						
SCIA	State Center	6.90	25	P	Pn	15 01 29.4	+1.3
	baz=208						
SCIA				S	Sn	15 02 48.1	+1.1
	baz=208						
SDCO	Great Sand Dun	7.00	289	P	Pn	15 01 31.7	+1.9
	baz=105						
SDCO				Sb	Sg	15 03 26.2	-4.8
	baz=105						
Q24A	Divide	7.14	299	Pn	Pn	15 01 32.4	+0.6
Q24A				IAmb_Lg		15 03 34.4	
	comp=Z,59nm,0.8s						
Q24A	Divide	7.14	299	P	Pn	15 01 32.8	+1.0
	baz=115						
P43A	Skaggs, Pawnee	7.21	55	Pn	Pn	15 01 33.2	+0.9
Q44A	Meyer Farm, Va	7.22	61	IAmb_Lg		15 03 52.1	
	comp=Z,179nm,1.1s						
PLAL	Pickwick Lake	7.45	93	IAmb_Lg		15 03 47.5	
	comp=Z,67nm,0.9s						
WVT	Waverly	7.57	84	Pn	Pn	15 01 37.7	+0.3
WVT				IAmb_Lg		15 03 57.5	
	comp=Z,56nm,0.8s						
WVT	Waverly	7.57	84	S	Sn	15 03 02.4	-1.3
	baz=269						
833A	Chaparral WMA,	7.62	195	IAmb_Lg		15 03 59.6	
	comp=Z,85nm,1.0s						
ANMO	Albuquerque	7.64	267	Pg	Pb	15 02 05.2	+5.7
	comp=Z,0.4nm,0.3s,baz=80,slow=18,SNR=5.6						
ANMO				Lg	Lg	15 03 44.0	
	comp=Z,1.4nm,0.3s,baz=158,slow=22,SNR=3.1						
K38A	Parkersburg	7.71	25		Pn	15 01 39.6	+0.5
L40A	Anamosa	7.84	34		Pn	15 01 41.2	+0.2
L40A				IAmb_Lg		15 04 15.8	
	comp=Z,73nm,0.8s						
ISCO	Idaho Springs	7.84	304		Pn	15 01 41.6	+0.3
ISCO	Idaho Springs	7.84	304	P	Pn	15 01 42.3	+0.9
	baz=119						
HDIL	Hopedale	7.85	50		Pn	15 01 41.4	+0.2
HDIL	Hopedale	7.85	50	P	Pn	15 01 42.3	+1.2
	baz=234						
MNTX	Cornudas Mount	7.94	242		Pn	15 01 42.4	0.0
MNTX	Cornudas Mount	7.94	242	P	Pn	15 01 42.9	+0.5
	baz=58						
ECSD	EROS Data Cent	8.01	3		Pn	15 01 43.4	-0.1
ECSD				IAmb_Lg		15 04 11.8	
	comp=Z,59nm,0.9s						
ECSD	EROS Data Cent	8.01	3	P	Pn	15 01 43.4	-0.1
	baz=183,SNR=5.9						
ECSD				S	Sn	15 03 12.3	-2.2
	baz=183						
O44A	Mansfield	8.16	55	IAmb_Lg		15 04 07.7	
	comp=Z,125nm,0.8s						
Y22D	IRIS PASSCAL I	8.19	261	IAmb_Lg		15 04 25.3	
	comp=Z,121nm,1.0s						
T47A	Sharon Grove	8.20	78	Pn	Pn	15 01 46.8	+0.8
X48A	Hartselle	8.38	96	Pn	Pn	15 01 48.8	+0.3
TXAR	Lajitas Array	8.41	223	Pn	Pn	15 01 47.7	-1.3
	comp=Z,1.4nm,0.6s,baz=53,slow=12,SNR=19						
TXAR				Lg	Lg	15 04 07.2	
	comp=Z,2.3nm,0.3s,baz=45,slow=28,SNR=6.5						
TXAR	Lajitas Array	8.41	223	Pn	Pn	15 01 48.9	-0.2
L42A	Oliver, Polo	8.57	41		Pn	15 01 51.6	+0.6
L42A				IAmb_Lg		15 04 19.7	
	comp=Z,102nm,0.8s						
PHWY	Pilot Hill	8.57	313		Pn	15 01 51.4	+0.1
PHWY				IAmb_Lg		15 04 35.4	
	comp=Z,82nm,1.3s						
N23A	Red Feather La	8.63	309	IAmb_Lg		15 04 31.9	
	comp=Z,80nm,0.8s						
N23A	Red Feather La	8.63	309	P	Pn	15 01 54.2	+2.2
	baz=124						
LRAL	Lakeview Retre	8.81	105	Pn	Pn	15 01 54.7	+0.4
LRAL	Lakeview Retre	8.81	105	P	Pn	15 01 54.5	+0.1
	baz=290						
SUSD	Miller	8.82	352	S	Sn	15 03 29.8	-4.6
	baz=170						
JFWS	Jewell Farm	8.95	35		Pn	15 01 56.3	0.0
JFWS				IAmb_Lg		15 04 46.6	
	comp=Z,75nm,0.8s						
JFWS	Jewell Farm	8.95	35	P	Pn	15 01 56.5	+0.2
	baz=219,SNR=10						
JFWS	Jewell Farm	8.95	35	P	Pn	15 01 56.6	+0.3
	baz=219						
Y49A	Blount Mountai	9.03	99	Pn	Pn	15 01 56.9	-0.5
M44A	Midewin, Midew	9.10	49	IAmb_Lg		15 04 33.7	
	comp=Z,106nm,0.9s						
BLO	Bloomington	9.13	65		Pn	15 01 59.1	+0.4
FPAL	Fort Paine	9.53	94	Pn	Pn	15 02 04.3	0.0
BRAL	Brewton	9.58	115	Pn	Pn	15 02 04.5	-0.4
I40A	Norwalk	9.58	30		Pn	15 02 04.6	-0.3
I40A				IAmb_Lg		15 04 57.4	
	comp=Z,46nm,1.0s						
L44A	Lake County Fo	9.66	45	IAmb_Lg		15 04 59.2	
	comp=Z,103nm,0.9s						
250A	Grady	9.79	109	Pn	Pn	15 02 08.1	+0.3
RSSD	Black Hills	9.91	330	IAmb_Lg		15 05 21.0	
	comp=Z,65nm,1.1s						
SPMN	Marine on St.	10.05	18		Pn	15 02 11.9	+0.5
F33A	5 Mile Ranch,	10.13	3	Pn	Pn	15 02 12.9	+0.5
X51A	Calhoun	10.13	93	Pn	Pn	15 02 12.6	+0.1
I42A	Draeger Farm,	10.33	35	Pn	Pn	15 02 14.9	-0.2
I42A	Draeger Farm,	10.33	35	P	Pn	15 02 14.8	-0.2
	baz=220,SNR=11						
F36A	Milaca	10.50	14	Pn	Pn	15 02 17.2	-0.2
TKL	Tuckaleechee C	10.88	86	Pn	Pn	15 02 24.2	+1.4
	comp=Z,0.1nm,0.3s,baz=278,slow=7.1,SNR=1.8						
TKL				Lg	Lg	15 05 24.8	
	comp=Z,3.2nm,0.3s,baz=161,slow=16,SNR=8.1						
	comp=Z,3.5nm,1.0s						
G40A	Rib Lake	10.90	27		Pn	15 02 22.5	-0.4
S51A	Beattyville	11.06	76	Pn	Pn	15 02 25.6	+0.5
PDAR	Pinedale Array	11.91	310	Pn	Pn	15 02 36.9	-0.1
	comp=Z,0.3nm,0.3s,baz=124,slow=12,SNR=6.3						
PDAR				Lg	Lg	15 05 56.2	
	comp=Z,0.3nm,0.3s,baz=109,slow=33,SNR=2.5						
PDAR	Pinedale Array	11.91	310	Pn	Pn	15 02 37.6	+0.6
EYMN	Ely	12.92	17	Pn	Pn	15 02 47.9	-2.7
EYMN	Ely	12.92	17	P	Pn	15 02 48.1	-2.4
	baz=201						
D41A	Chassel	13.02	27	Pn	Pn	15 02 49.0	-3.0
E43A	Lone Tree Farm	13.10	33	Pn	Pn	15 02 50.4	-2.7
R55A	Marlinton	13.85	74	Pn	Pn	15 03 02.0	-1.4
ULM	Lac du Bonnet	14.55	3	Pn	Pn	15 03 10.2	-2.6
	comp=Z,0.1nm,0.3s,baz=184,slow=15,SNR=3.3						
ULM				Sn	Sn	15 05 42.1	-12
	comp=Z,0.6nm,0.3s,baz=108,slow=15,SNR=2.2						
ULM				Lg	Lg	15 07 18.0	
	comp=Z,0.3nm,0.3s,baz=257,slow=10,SNR=1.6						
	comp=Z,2.6nm,0.7s						
SADO	Sadowa	16.43	51	Lg	Lg	15 08 15.9	
	comp=Z,0.9nm,0.3s,baz=176,slow=20,SNR=2.2						

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*IDC **15** 15:13:02.8±0.6, 27°.66N×140°.76E, h0^{km}, mb3.8/14, mbtmp3.8/16, ML4.1/1, MS3.3/4, Error ellipse: s-maj=20.2km s-min=14.3km az=80.0*

*NEIC **15** 15:13:08.1±2.2, 27°.65N±0°.08×140°.96E±0°.09, h32^{km}±5^{km}, mb4.7/27, Error ellipse: s-maj=14.0km s-min=8.7km az=225.0*

ISC 15 15:13:07.6±0.4**, 27°.62N**±0°.07×**140°.87E**±0°.07**, h35**^{km}**, n63,** σ**1^{s}.08**/60**, mb4.2**/26**, MS3.1**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.28	114	Pn	Pn	15 13 28.0	-1.0
	72nm,0.3s,baz=293,slow=16,SNR=45						
JCJ				Sn	Sn	15 13 44.0	-0.9
	148nm,0.3s,baz=295,slow=23,SNR=8.6						
JCJ	Chichijima	1.28	114		Pn	15 13 27.8	-1.2
JGF	Kuroka	8.51	340	Pn	Pn	15 15 08.3	0.0
MJAR	Matsushiro Arr	9.18	346	Pn	Pn	15 15 17.2	-0.4
	0.4nm,0.6s,baz=167,slow=17,SNR=1.8						
MJAR	Matsushiro Arr	9.18	346	Pn	Pn	15 15 19.1	+1.6
MAJO	Matsushiro	9.18	346	Pn	Pn	15 15 19.1	+1.5
MJB9	Matsu-Tunnel	9.19	346	Pn	Pn	15 15 19.0	+1.4
JMM	Marumori	10.22	360	Pn	Pn	15 15 30.8	-1.0
JOW	Kunigami	11.24	269	Pn	Pn	15 15 44.6	-1.1
	2.6nm,0.3s,baz=94,slow=14,SNR=7.5						
	6.2nm,0.3s						
JOW	Kunigami	11.24	269	Pn	Pn	15 15 45.0	-0.7
SEHB	SEOHWA	14.98	318	Pn	P	15 16 38.8	-3.1
SEHB				IAmb	IAmb	15 17 07.0	
	comp=Z,48nm,1.5s						
JKA	Kamikawa-asahi	16.52	4	Pn	Pn	15 16 55.6	-1.0
JKA				IAmb	IAmb	15 17 04.8	
	comp=Z,18nm,1.1s						
KLR	Kul'dur	22.70	344	P	P	15 18 06.6	+0.5
	comp=Z,2.3nm,0.7s,baz=157,slow=9.0,SNR=8.4						
	comp=Z,2.3nm,0.7s						
DAV	Davao City (W)	25.06	218	LR	LR	15 26 23.5	
	comp=Z,48nm,21.8s,baz=117,slow=32						
SHEM	Shemya Is, Ala	35.17	35	LR	LR	15 31 49.3	
	comp=Z,51nm,21.8s,baz=123,slow=32						
CMAR	Chiang Mai Arr	39.49	266	LR	LR	15 35 40.2	
	comp=Z,27nm,21.5s,baz=75,slow=34						
TIXI	Tiksi	44.58	355	P	P	15 21 15.7	-0.1
WB0	Warramunga Arr	47.52	188	P	P	15 21 40.4	+0.9
WB0				IAmb	IAmb	15 21 41.3	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	47.69	188	P	P	15 21 41.9	+1.0
WRAB				IAmb	IAmb	15 21 42.7	
	comp=Z,15nm,0.7s						
WR0	Warramunga Arr	47.69	188	P	P	15 21 41.7	+0.8
WR0				IAmb	IAmb	15 21 42.7	
	comp=Z,10nm,0.8s						
WB2	Warramunga Arr	47.70	188	P	P	15 21 41.9	+0.9
WRA	Warramunga Arr	47.70	188	P	P	15 21 42.2	+1.3
	comp=Z,13nm,0.7s,baz=8.3,slow=8.3,SNR=127						
WRA				PcP	PcP	15 23 10.0	0.0
	comp=Z,0.2nm,0.4s,baz=359,slow=3.7,SNR=1.2						
MKAR	Makanchi Array	49.24	309	P	P	15 21 52.3	-0.4
	comp=Z,0.2nm,0.6s,baz=108,slow=7.7,SNR=1.9						
	comp=Z,0.2nm,0.6s						
ANM	Nome	50.03	27	P	P	15 21 56.1	-2.2
SDPT	Sand Point	50.05	40	P	P	15 21 58.0	-0.6
AS31	Alice Springs	51.42	188	P	P	15 22 08.1	-1.2
ASAR	Alice Springs	51.42	188	P	P	15 22 10.1	+0.7
	comp=Z,2.1nm,1.0s,baz=1.3,slow=5.7,SNR=32						
ASAR				PcP	PcP	15 23 24.5	+1.0
	comp=Z,0.3nm,0.8s,baz=18,slow=3.2,SNR=1.9						
	comp=Z,2.1nm,1.0s						
ASAR	Alice Springs	51.42	188	P	P	15 22 08.2	-1.1
FUNA	Funafuti	51.64	129	P	P	15 22 09.0	-2.1
NEA2	Nenana	56.87	29	P	P	15 22 49.6	+1.0
NEA2				IAmb	IAmb	15 22 51.5	
	comp=Z,3.7nm,1.0s						
HDA	Harding Lake	57.77	29	P	P	15 22 55.6	+0.7
ILAR	Eielson Array	57.82	29	P	P	15 22 55.9	+0.7
	comp=Z,0.8nm,0.9s,baz=264,slow=5.8,SNR=8.9						
	comp=Z,0.8nm,0.9s						
KK31	Karatay Array	57.83	305	P	P	15 22 56.5	+0.7
KK31				IAmb	IAmb	15 22 57.6	
	comp=Z,1.9nm,0.8s						
KKAR	Karatay Array	57.83	305	P	P	15 22 56.2	+0.5
STKA	Stephens Creek	59.17	179	P	P	15 23 05.2	+0.3
	comp=Z,1.5nm,0.9s,baz=290,slow=7.9,SNR=3.4						
	comp=Z,1.5nm,0.9s						
STKA	Stephens Creek	59.17	179	IAmb	IAmb	15 23 08.4	
	comp=Z,1.1nm,1.3s						
FORT	Forrest	59.34	193	P	P	15 23 07.2	+1.0
CHGR	Chuyangaron	59.68	301	P	P	15 23 10.2	+1.5
CHGR				IAmb	IAmb	15 23 10.8	
	comp=Z,9.0nm,0.6s						
BBOO	Buckleboo	60.27	185	P	P	15 23 13.1	+0.6
BBOO				IAmb	IAmb	15 23 17.7	
	comp=Z,12nm,1.2s						
INK	Inuvik	63.04	25	P	P	15 23 31.4	+0.6
	comp=Z,0.4nm,0.4s,baz=236,slow=7.3,SNR=5.5						
	comp=Z,0.4nm,0.4s						
INK	Inuvik	63.04	25	IAmb	IAmb	15 23 52.9	
	comp=Z,4.1nm,1.4s						
WHY	Whitehorse	63.57	33	P	P	15 23 33.5	-1.1
ABKAR	Akbulak array	63.89	314	P	P	15 23 36.4	-0.4
C36M	Paulatuk	66.21	23	P	P	15 23 52.0	+0.5
RAO	Raoul Island	68.95	142	LR	LR	15 48 06.2	
	comp=Z,68nm,21.0s,baz=75,slow=30						
EUNU	Eureka	69.55	8	P	P	15 24 13.4	+1.0
EUNU				IAmb	IAmb	15 24 14.2	
	comp=Z,2.2nm,0.7s						
KBS	Kingsbay	69.84	351	P	P	15 24 15.3	+1.2
KBS				IAmb	IAmb	15 24 17.1	
	comp=Z,18nm,1.2s						
YKA	Yellowknife Ar	72.24	28	P	P	15 24 29.7	+0.8
	comp=Z,0.7nm,0.8s,baz=291,slow=5.7,SNR=10.0						
	comp=Z,0.7nm,0.8s						
ARCES	ARCESS Array B	72.67	341	P	P	15 24 31.4	+0.1
	comp=Z,1.6nm,0.9s,baz=68,slow=5.9,SNR=4.4						
	comp=Z,1.6nm,0.9s						
ARCES	ARCESS Array B	72.67	341	P	P	15 24 31.4	+0.1
ARCES				IAmb	IAmb	15 24 54.7	
	comp=Z,5.4nm,1.4s						
BKZ	Black Stump Fm	74.29	152	P	P	15 24 41.6	+0.3
BKZ				IAmb	IAmb	15 24 45.7	
	comp=Z,15nm,1.3s						
FINES	FINESS Array B	76.96	333	P	P	15 24 55.6	-0.7
	comp=Z,0.6nm,0.5s,baz=46,slow=5.5,SNR=4.9						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	81.11	51	P	P	15 25 21.1	+1.3
	comp=Z,0.5nm,0.6s,baz=290,slow=6.2,SNR=5.2						
	comp=Z,0.5nm,0.6s						
AKASG	Malin Array Be	81.50	323	P	P	15 25 20.7	-0.6
	comp=Z,0.3nm,0.5s,baz=64,slow=3.1,SNR=1.2						
	comp=Z,0.3nm,0.5s						
NOA	NORSAR Array B	82.69	338	P	P	15 25 26.7	-0.7
	comp=Z,0.7nm,0.7s,baz=49,slow=4.8,SNR=2.3						
	comp=Z,0.7nm,0.7s						
RAYN	Ar Rayn	83.87	293	P	P	15 25 34.4	+0.2
RAYN				IAmb	IAmb	15 25 36.2	
	comp=Z,4.0nm,1.1s						
BRTR	Keskin Array B	84.79	312	P	P	15 25 38.0	-0.7
	comp=Z,0.5nm,0.8s,baz=83,slow=4.5,SNR=2.9						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	96.22	52	P	P	15 26 34.8	+2.1
	comp=Z,0.4nm,0.7s,baz=350,slow=4.6,SNR=2.8						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	123.36	310	PKP	PKPdf	15 32 00.6	-1.1
	comp=Z,0.5nm,0.9s,baz=331,slow=1.8,SNR=2.0						
LPAZ	La Paz	150.91	73	PKPbc	PKiKP	15 32 59.8	+1.1
	comp=Z,1.4nm,0.5s,baz=323,slow=1.9,SNR=9.2						
LPAZ	La Paz	150.91	73		PKPbc	15 32 57.9	-0.1
PLCA	Paso Flores	151.06	125	PKPbc	PKiKP	15 32 59.0	+1.4
	comp=Z,2.0nm,0.8s,baz=260,slow=3.3,SNR=5.0						
PLCA	Paso Flores	151.06	125		PKPbc	15 32 57.0	-0.1

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*NEIC **15** 15:14:00.1±2.2, 23°.66S±0°.07×67°.99W±0°.09, h104^{km}±5^{km}, mb4.5/69, ML4.3(GUC), Error ellipse: s-maj=12.6km s-min=9.8km az=69.0*

*GUC **15** 15:14:01.5±0.8, 23°.63S×68°.21W, h130^{km}±4^{km}, ML4.3*

*IDC **15** 15:14:02.3±0.7, 23°.53S×68°.05W, h122^{km}±5^{km}, mb4.0/9, mbtmp4.2/12, MS2.8/2, Error ellipse: s-maj=19.3km s-min=10.8km az=42.0*

*VAO **15** 15:14:02.7±0.5, 23°.31S×68°.20W, h142^{km}±4^{km}, mb4.5*

ISC 15 15:14:01.2±0.5**, 23°.61S**±0°.04×**68°.10W**±0°.05**, h121**^{km}±4^{km}**, n156,** σ**1^{s}.37**/171**, mb4.4**/35**, 9C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	0.65	353	⇓ *i*P	Pn	15 14 21.4	+0.7
AF01				*i* S	Sn	15 14 36.2	+0.9
LVC	Limon Verde	1.24	323	P	Pn	15 14 26.7	+0.5
	375nm,0.3s,baz=162,slow=8.1,SNR=1106						
LVC				S	Sn	15 14 45.5	+0.5
	2µm,0.3s,baz=299,slow=22,SNR=21						
LVC	Limon Verde	1.24	323	*e*P	Pn	15 14 26.3	+0.1
LVC				*i* S	Sn	15 14 45.7	+0.6
LVC	Limon Verde	1.24	323	*e*P	Pn	15 14 26.6	+0.4
PB15	IPOC Station P	1.32	287	⇑ *i*P	Pn	15 14 27.1	+0.2
PB15				*i* S	Sn	15 14 45.9	-0.5
PB06	IPOC Station P	1.62	303	⇑ *i*P	Pn	15 14 30.6	+0.3
PB06				*i* S	Sn	15 14 52.4	-0.1
PB06				IAML		15 14 58.0	
	comp=N,3µm,0.3s						
GO02	Mina Guanaco	2.06	221	⇑ *i*P	Pn	15 14 36.0	+0.2
GO02				*i* S	Sn	15 15 02.0	-0.3
PB09	IPOC Station P	2.09	329	⇑ *i*P	Pn	15 14 37.1	+1.1
PB09				*i* S	Sn	15 15 03.8	+1.2
PB09				IAML		15 15 09.2	
	comp=E,1µm,0.5s						
PB10	IPOC Station P	2.26	272	⇑ *i*P	Pn	15 14 37.4	-0.5
PB10				*i* S	Sn	15 15 04.4	-1.7
PB10				IAML		15 15 10.6	
	comp=E,923nm,0.5s						
PB04	IPOC Station P	2.27	303	⇑ *i*P	Pn	15 14 38.0	-0.3
PB04				*i* S	Sn	15 15 05.0	-1.8
PB04				IAML		15 15 12.1	
	comp=E,1µm,0.3s						
PB14	IPOC Station P	2.34	244	*e*P	Pn	15 14 38.5	-0.9
PB14				*i* S	Sn	15 15 05.9	-2.6
PB14				IAML		15 15 12.8	
	comp=N,521nm,0.7s						
PB07	IPOC Station P	2.49	318	⇓ *i*P	Pn	15 14 41.3	+0.1
PB07				*i* S	Sn	15 15 11.4	-0.4
PB07				IAML		15 15 12.2	
	comp=N,1µm,0.3s						
PB02	IPOC Station P	2.82	323	*e*P	Pn	15 14 45.0	-0.3
PB02				*i* S	Sn	15 15 18.7	-0.4
PB02				IAML		15 15 24.6	
	comp=N,1µm,0.5s						
PB01	IPOC Station P	2.85	333	⇑ *i*P	Pn	15 14 45.9	+0.1
PB01				*i* S	Sn	15 15 19.5	-0.5
PB01				IAML		15 15 24.8	
	comp=N,1µm,0.3s						
AC02	Maricunga	3.35	196	⇑ *i*P	Pn	15 14 53.2	+0.6
PATCX	Punta Patache	3.36	325	*e*P	Pn	15 14 51.2	-1.2
PATCX				IAML		15 15 45.1	
	comp=N,516nm,0.5s						
AC01	Pan de Azucar	3.40	221	⇓ *i*P	Pn	15 14 51.1	-1.7
AC01				IAML		15 15 36.4	
	comp=E,703nm,0.9s						
PB08	IPOC Station P	3.58	344	⇓ *i*P	Pn	15 14 56.5	+0.8
PB08				*i* S	Sn	15 15 39.2	+1.5
TA01	Diego Aracena	3.59	327	*e*P	Pn	15 14 53.8	-1.6
TA01				*i* S	Sn	15 15 36.8	-0.4
TA01				IAML		15 15 46.5	
	comp=E,478nm,0.5s						
HMBC	Humberstone	3.70	333	*e*P	Pn	15 14 56.3	-0.7
PB11	IPOC Station P	4.09	339	⇓ *i*P	Pn	15 15 00.9	-1.2
PB11				*i* S	Sn	15 15 47.2	-2.2
AC06	Mina Casimiro	4.26	208	⇑ *i*P	Pn	15 15 01.7	-2.5
LCO	Las Campanas	5.87	203	Pn	Pn	15 15 22.4	-3.7
LPAZ	La Paz	7.28	360	P	Pn	15 15 45.9	+0.3
	comp=E,7.0nm,0.3s,baz=232,slow=2.9,SNR=78						
LPAZ				S	Sn	15 17 07.6	+0.6
	comp=E,4.2nm,0.6s,baz=21,slow=25,SNR=1.3						
LPAZ				LR	LR	15 18 57.3	
	comp=E,25nm,19.9s,baz=246,slow=41						
LPAZ	La Paz	7.28	360	Pn	Pn	15 15 45.2	-0.4
SIV	San Ignacio	10.05	42	P	Pn	15 16 19.9	-2.6
	comp=E,41nm,0.4s,baz=234,slow=9.0,SNR=121						
SIV				S	Sn	15 18 06.9	-6.6
	comp=E,6.4nm,0.9s,baz=314,slow=22,SNR=1.6						
CPUP	Villa Florida	10.14	108	P	Pn	15 16 24.9	+1.3
	comp=E,0.7nm,0.4s,baz=287,slow=17,SNR=1.7						
CPUP	Villa Florida	10.14	108	*e*P	Pn	15 16 27.4	+3.8
PTLB	Pontes e Lacer	11.71	48	*e*P	Pn	15 16 42.3	-2.3
ITQB	Itaqui	11.90	123	*e*P	P	15 16 51.1	-3.9
AQDB	Aquidauana	11.91	77		Pn	15 16 46.1	-1.2
MCR1	Marechal Candi	12.88	97	*e*P	P	15 17 02.9	-3.1
VILB	Vilhena	12.97	37	*e*P	Pn	15 16 59.5	-1.8
ETMB	Extrema	13.83	8	*e*P	Pn	15 17 08.4	-3.8
SALV	Santo Antonio	13.96	59	*e*P	Pn	15 17 12.5	-1.4
TRCB	Terra Rica	14.24	90	P	P	15 17 20.2	-1.0
TRCB	Terra Rica	14.24	90	*e*P	P	15 17 19.9	-1.3
PTGB	Pitanga	14.68	98	*e*P	P	15 17 26.4	+0.4
CPSB	Cacapava Do Su	14.71	121	*e*P	P	15 17 26.2	-0.1
NBRS	Nobres	14.86	54	*e*P	P	15 17 26.1	-2.0
ITAB	Concordia	14.87	107	*e*P	P	15 17 27.9	-0.2
C2SB	Chapadao do Su	15.02	74	*e*P	P	15 17 28.7	-1.1
PCMB	Pacaembu	15.68	86	*e*P	P	15 17 38.0	+0.9
PDRB	Porto dos Gac	16.10	44	*e*P	Pn	15 17 40.4	-0.4
DVLD	Doverlandia	16.48	68	*e*P	P	15 17 46.4	+0.3
ITRB	Iturama	16.94	80	*e*P	P	15 17 51.7	+0.6
FRTB	Fartura	17.01	93	*e*P	Pn	15 17 52.4	+0.4
PLCA	Paso Flores	17.20	186	P	Pn	15 17 55.4	+1.3
	comp=E,0.8nm,0.6s,baz=343,slow=17,SNR=1.8						
ARAG	Araguaiana, MT	17.22	66	*e*P	Pn	15 17 54.3	-0.2
CLDB	Colider	17.25	45	*e*P	P	15 17 53.8	-0.8
RCLB	Rio Claro- Sao	18.97	91	*e*P	P	15 18 13.0	-0.4
VAO	Valinhos	19.42	92	*e*P	P	15 18 17.6	-0.7
SNDB	Serra Nova Dou	19.72	57	*e*P	P	15 18 19.7	-1.7
BDFB	Brasilia	20.49	71	P	P	15 18 28.9	-1.1
	comp=E,12nm,0.4s,baz=238,slow=11,SNR=25						
	comp=E,12nm,0.4s						
BDFB	Brasilia	20.49	71	P	P	15 18 28.3	-1.6
BDFB				IAmb	IAmb	15 18 30.3	
	comp=Z,19nm,0.9s						
MACA	Manacapuru-AM	21.55	21	*e*P	P	15 18 39.0	-2.1
PEXB	Peixe	22.01	62	*e*P	P	15 18 43.9	-2.1
ITTB	Itaituba	22.54	34	*e*P	P	15 18 49.0	-2.3
JANB	Januaria	23.97	74	*e*P	P	15 19 04.1	-0.7
SMTB	Santa Maria do	24.50	57	*e*P	P	15 19 08.4	-1.0
SDBA	SAO DESIDERIO	24.67	67	*e*P	P	15 19 10.4	-0.7
PRPB	Parauapebas	24.69	48	*e*P	P	15 19 09.4	-1.8
MALB	Monte Alegre	25.44	34	*e*P	P	15 19 16.7	-1.2
GUA01	Guaratinga, BA	27.44	81	*e*P	P	15 19 35.7	-0.3
MCPB	Macapa, AP	27.86	36	*e*P	P	15 19 39.0	-0.8
TMAB	Tom-Au,PA,Br	28.64	45	*e*P	P	15 19 44.4	-2.3
MDP	Montagnes des	32.27	30	LR	LR	15 35 40.0	
	comp=Z,47nm,18.3s,baz=296,slow=40						
BELA	Belgrano 2	56.57	172	P	P	15 23 29.8	-1.0
BELA				IAmb	IAmb	15 23 32.4	
	comp=Z,2.8nm,0.6s						
VNA3	Neumayer Olymp	57.85	161	P	P	15 23 40.6	+0.7
VNA3	Neumayer Olymp	57.85	161	pP	pP	15 24 04.9	-5.2
GOGA	Godfrey	58.56	345	P	P	15 23 45.5	+0.3
X58A	Rowland	58.82	349	P	P	15 23 48.1	+1.2
JSC	Jenkinsville	58.91	347	P	P	15 23 48.1	+0.5
JSC				IAmb	IAmb	15 24 14.8	
	comp=Z,3.6nm,1.0s						
BIRD	Birdtown, Kers	59.11	348	P	P	15 23 50.0	+1.0
W57A	Gilead	59.52	349	P	P	15 23 52.1	+0.3
Z47A	Carrollton	59.61	341	P	P	15 23 52.2	-0.2
Y49A	Blount Mountai	59.74	342	P	P	15 23 52.8	-0.6
Y49A				IAmb	IAmb	15 23 53.6	
	comp=Z,8.4nm,1.4s						
BG3	Lake Jocassee	59.95	346	P	P	15 23 55.4	+0.6
SNAA	Sanae	60.05	161	P	P	15 23 55.8	+0.7
SNAA	Sanae	60.05	161	PcP	PcP	15 24 40.7	+0.9
SNAA	Sanae	60.05	161	pP	pP	15 24 21.0	-4.7
SNAA	Sanae	60.05	161	P	P	15 23 55.7	+0.5
SNAA				IAmb	IAmb	15 23 57.5	
	comp=Z,6.3nm,1.4s						
X48A	Hartselle	60.48	342	P	P	15 23 58.6	+0.2
X48A				IAmb	IAmb	15 23 59.0	
	comp=Z,4.2nm,0.5s						
V53A	Saluda	60.58	346	P	P	15 23 59.2	+0.2
W50A	Signal Mountai	60.72	344	P	P	15 23 60.0	-0.1
W50A				IAmb	IAmb	15 24 01.0	
	comp=Z,5.5nm,0.8s						
TKL	Tuckaleechee C	60.78	345	P	P	15 24 00.2	-0.2
SWET	Sewanee	60.89	343	P	P	15 24 01.2	0.0

V52A	Sevierville	60.92	346	P	P	15 24 01.1	-0.2
V52A				IAmb	IAmb	15 24 07.8	
	comp=Z,9.6nm,1.3s						
PLAL	Pickwick Lake	61.27	341	P	P	15 24 02.8	-0.9
PLAL				IAmb	IAmb	15 24 04.5	
	comp=Z,7.3nm,1.1s						
TROLL	Troll, Antarti	61.77	161	P	P	15 24 07.9	+1.0
JCT	Junction City	61.78	329	P	P	15 24 07.6	+0.3
WVT	Waverly	62.27	342	P	P	15 24 09.7	-0.7
WVT				IAmb	IAmb	15 24 18.1	
	comp=Z,15nm,1.5s						
S54A	Dingess, Beckl	62.33	348	P	P	15 24 10.9	+0.1
X37A	Clayton	63.41	335	P	P	15 24 18.9	+0.9
X37A				IAmb	IAmb	15 24 19.4	
	comp=Z,13nm,1.3s						
FVM	French Village	64.76	341	P	P	15 24 26.6	-0.2
WMOK	Wichita Mounta	64.92	332	P	P	15 24 27.6	-0.3
CCM	Cathedral Cave	65.08	340	P	P	15 24 28.5	-0.3
CCM				IAmb	IAmb	15 24 29.3	
	comp=Z,3.7nm,0.7s						
S39A	Bolivar	65.42	338	P	P	15 24 31.1	0.0
S39A				IAmb	IAmb	15 24 32.1	
	comp=Z,5.7nm,0.8s						
MNTX	Cornudas Mount	65.55	325	P	P	15 24 32.0	0.0
MNTX				IAmb	IAmb	15 24 32.8	
	comp=Z,2.2nm,0.7s						
R40A	Maddies Statio	65.62	339	P	P	15 24 31.9	-0.3
R40A				IAmb	IAmb	15 24 32.7	
	comp=Z,3.0nm,0.7s						
J47A	Sunmer	68.27	347	P	P	15 24 49.0	+0.1
DBIC	Dimbokro	68.64	72	P	P	15 24 52.2	+0.4
	comp=Z,2.7nm,0.5s,baz=231,slow=6.5,SNR=4.3						
	comp=Z,2.7nm,0.5s						
DBIC	Dimbokro	68.64	72	P	P	15 24 52.3	+0.4
DBIC				IAmb	IAmb	15 25 17.1	
	comp=Z,7.3nm,1.1s						
ANMO	Albuquerque	68.66	327	P	P	15 24 53.1	+1.2
ANMO				IAmb	IAmb	15 24 54.5	
	comp=Z,3.2nm,0.8s						
I42A	Draeger Farm,	69.83	344	P	P	15 24 58.7	+0.2
I42A				IAmb	IAmb	15 25 26.7	
	comp=Z,14nm,1.1s						
ISCO	Idaho Springs	72.14	330	P	P	15 25 14.7	+1.7
SMCO	Snowmass	72.27	329	P	P	15 25 15.9	+2.0
KOWA	Kowa	73.18	66	P	P	15 25 19.5	+0.2
O20A	White River Ci	73.62	329	P	P	15 25 23.1	+1.4
O20A				IAmb	IAmb	15 25 24.4	
	comp=Z,5.8nm,0.8s						
LCMT	Little Creek M	73.79	324	P	P	15 25 24.6	+2.0
SBA	Scott Base	73.90	190	P	P	15 25 23.9	+1.4
P18A	Preston Nutter	74.20	327	P	P	15 25 27.2	+2.1
P18A				IAmb	IAmb	15 25 27.6	
	comp=Z,4.5nm,0.8s						
CCUT	Cedar City	74.25	324	P	P	15 25 28.0	+2.6
CCUT				IAmb	IAmb	15 25 29.0	
	comp=Z,4.4nm,0.8s						
P17A	Butcher Ranch,	74.33	327	P	P	15 25 27.7	+2.0
P17A				IAmb	IAmb	15 25 28.4	
	comp=Z,3.4nm,0.8s						
TCRU	Three Creeks R	74.55	325	P	P	15 25 28.3	+1.2
TCRU				IAmb	IAmb	15 25 39.9	
	comp=Z,4.2nm,0.5s						
PSUT	Pine Spring	75.23	324	P	P	15 25 33.1	+2.1
PDAR	Pinedale Array	76.30	330	P	P	15 25 38.0	+0.9
	comp=Z,0.8nm,0.6s,baz=137,slow=8.1,SNR=7.8						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	76.30	330	P	P	15 25 37.8	+0.7
HWUT	Hardware Ranch	76.36	328	P	P	15 25 37.2	-0.1
TOA0	Torodi Ar. Sit	77.37	70	P	P	15 25 44.3	+1.0
TOA0				IAmb	IAmb	15 25 45.2	
	comp=Z,4.0nm,0.6s						
TORD	Torodi Ar. Bea	77.37	70	P	P	15 25 44.4	+1.1
	comp=Z,3.3nm,0.5s,baz=259,slow=5.7,SNR=37						
TORD				pP	pP	15 26 16.3	+1.2
	comp=Z,0.7nm,0.5s,baz=256,slow=5.8,SNR=1.9						
	comp=Z,3.3nm,0.5s						
TPAW	Teton Pass	77.50	330	P	P	15 25 44.4	+0.6
ULM	Lac du Bonnet	77.54	342	P	P	15 25 43.8	+0.3
	comp=Z,4.4nm,0.6s,baz=169,slow=5.4,SNR=4.3						
	comp=Z,4.4nm,0.6s						
ULM	Lac du Bonnet	77.54	342	P	P	15 25 43.3	-0.2
ULM				IAmb	IAmb	15 25 44.1	
	comp=Z,4.0nm,0.6s						
ELK	Elko	77.57	325	P	P	15 25 45.2	+1.0
KVN	Kaiserville	77.92	322	P	P	15 25 47.2	+1.1
RLMT	Red Lodge	78.01	332	P	P	15 25 47.9	+1.3
SCHQ	Schefferville	78.12	1	P	P	15 25 46.9	+0.3
	comp=Z,1.2nm,0.6s,baz=198,slow=9.6,SNR=1.8						
	comp=Z,1.2nm,0.6s						
SCHQ	Schefferville	78.12	1	IAmb	IAmb	15 26 16.1	
	comp=Z,9.7nm,1.4s						
YHH	Holmes Hill	78.46	330	P	P	15 25 50.8	+1.8
PAHR	Pah Rah Range	79.09	322	P	P	15 25 54.2	+1.8
PAHR				IAmb	IAmb	15 25 55.5	
	comp=Z,5.0nm,0.9s						
HLID	Hailey	79.21	328	P	P	15 25 55.1	+2.1
MCMT	McKenzie Canyo	79.41	329	P	P	15 25 55.8	+1.6
BEKR	Beckworth	79.75	322	P	P	15 25 57.6	+1.5
LRM	Limekiln Ridge	79.98	330	P	P	15 25 58.1	+0.9
PLID	Pearl Lake	81.11	328	P	P	15 26 04.5	+1.2
PLID				IAmb	IAmb	15 26 05.7	
	comp=Z,3.7nm,0.8s						
BOSA	Boshof	81.81	118	P	P	15 26 07.6	+0.2
	comp=Z,0.7nm,0.4s,baz=283,slow=2.8,SNR=4.8						
	comp=Z,0.7nm,0.4s						
BOSA	Boshof	81.81	118	IAmb	IAmb	15 26 30.6	
	comp=Z,6.2nm,1.4s						
K05A	Summer Lake	81.98	324	P	P	15 26 09.6	+1.7
K05A				IAmb	IAmb	15 26 10.9	
	comp=Z,4.3nm,0.9s						
MAW	Mawson	82.11	163	P	P	15 26 08.7	+0.8
	comp=Z,1.3nm,0.4s,baz=188,slow=10.0,SNR=3.8						
	comp=Z,1.3nm,0.4s						
MAW	Mawson	82.11	163	IAmb	IAmb	15 26 10.2	
	comp=Z,1.5nm,1.2s						
PINE	Pine Mountain	82.72	324	P	P	15 26 13.3	+1.5
PINE				IAmb	IAmb	15 26 14.6	
	comp=Z,3.6nm,0.8s						
BUCK	Buck Mountain	84.09	324	P	P	15 26 19.8	+1.2
BUCK				IAmb	IAmb	15 26 20.2	
	comp=Z,8.5nm,1.1s						
YKA	Yellowknife Ar	93.41	340	P	P	15 27 03.2	+0.9
	comp=Z,1.3nm,0.7s,baz=136,slow=4.7,SNR=31						
YKA				pP	pP	15 27 33.9	-0.4
	comp=Z,0.4nm,0.7s,baz=134,slow=4.6,SNR=3.1						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	128.38	206	PKP	PKiKP	15 32 54.9	-0.2
	comp=Z,1.6nm,0.7s,baz=134,slow=1.8,SNR=32						
WRA	Warramunga Arr	131.50	209	PKP	PKiKP	15 33 01.3	-0.1
	comp=Z,1.0nm,0.4s,baz=152,slow=1.7,SNR=21						
PETK	Petropavlovsk-	134.69	323	PKP	PKiKP	15 33 06.9	+0.2
	comp=Z,1.0nm,0.7s,baz=84,slow=2.9,SNR=5.7						
ZALV	Zalesovo Beam	143.51	27	PKP	PKPdf	15 33 20.2	-1.1
	comp=Z,2.6nm,0.7s,baz=311,slow=3.7,SNR=9.3						
ZALV				pPKP	pPKPdf	15 33 54.5	-0.2
	comp=Z,1.3nm,0.7s,baz=318,slow=8.0,SNR=2.5						
ZALV	Zalesovo Beam	143.51	27	PKPpre	PKPpre	15 33 18.4	
KSH	Kashi	145.78	54	PKPbc	PKPab	15 33 28.4	+1.2
MKAR	Makanchi Array	146.85	38	PKPbc	PKPbc	15 33 28.4	-1.0
	comp=Z,3.7nm,0.7s,baz=331,slow=1.0,SNR=27						
MKAR				pPKPbc	pPKPbc	15 34 01.3	-1.2
	comp=Z,1.2nm,0.8s,baz=273,slow=2.3,SNR=3.0						
MKAR	Makanchi Array	146.85	38	PKPdf	PKPdf	15 33 27.5	+0.2
LEM	Lembang	149.47	172	PKPbc	PKiKP	15 33 39.0	+0.5
	comp=Z,15nm,0.3s,baz=152,slow=22,SNR=4.2						
SONM	Songino Array	155.42	9	PKP	PKPdf	15 33 42.1	+1.6
	comp=Z,0.3nm,0.5s,baz=245,slow=3.0,SNR=2.0						
SONM				PKPab	PKPab	15 34 07.7	+1.2
	comp=Z,0.6nm,0.6s,baz=336,slow=3.2,SNR=3.0						
SONM	Songino Array	155.42	9	PKPab	PKPab	15 34 07.5	+1.0
PZH	PanZhiHua	170.35	71	PKP	PKPdf	15 33 54.8	-0.7

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*OSPL **15** 15:26:03.1±1.2, 20°.28N×74°.51W, h31km±195km, ML2.4*

*SSNC **15** 15:26:04.1±1.8, 19°.96N×74°.44W, h20km±13km, MD3.1, ML2.4, MW3.0*

ISC 15 15:25:58.9±1.4**, 20°.3N**±0°.1×**74°.48W**±0°.05**, h10km, n8, σ1ˢ.04**/13**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOAC	Moa	0.56	306	*e*P	Pn	15 26 19.4	+6.4
GTBY	Guantanamo Bay	0.72	236	*e*P	Pn	15 26 14.5	-0.5
GTBY				*e*S	Sg	15 26 22.3	+0.2
GTBY	Guantanamo Bay	0.72	236	*i* P	Pn	15 26 14.6	-0.5
GTBY				*e*S	Sg	15 26 22.4	+0.3
GTBY				IAML		15 26 25.5	
	comp=Z,44nm,0.1s						
RCC	Rio Carpintero	1.19	254	*e*P	Pg	15 26 22.4	+0.5
RCC				*e*S	Sb	15 26 37.2	+0.1
RCC				*e*Sg	Sn	15 26 39.2	+1.3
RCC				IAML		15 26 40.4	
	comp=N,128nm,0.2s						
RCC				IAML		15 26 40.7	
	comp=E,106nm,0.2s						
LMGC	Las Mercedes	2.39	264	*e*P	Pb	15 26 41.0	-1.0
LMGC				*e*S	Sn	15 27 07.8	+0.4
LMGC				IAML		15 27 11.6	
	comp=N,32nm,0.1s						
LMGC				IAML		15 27 11.7	
	comp=E,15nm,0.1s						
CCCC	Cccc	3.20	286	*e*P	Pn	15 26 50.6	+1.4
CCCC				*e*S	Sn	15 27 25.4	-2.1
CCCC				IAML		15 27 31.4	
	comp=E,2.1nm,0.2s						
CCCC				IAML		15 27 32.4	
	comp=N,2.4nm,0.3s						
SDDR	Presa de Saban	3.29	113	*i* P	Pn	15 26 50.1	-0.4
SDDR				IAML		15 27 35.6	
	comp=Z,8.0nm,0.7s						
LONE2	Loma La Sidra	3.34	121	*i* P	Pn	15 26 52.0	+0.8
LONE2				IAML		15 27 42.1	
	comp=Z,8.3nm,0.3s						

DJA 15 15:41:26.4±0.8**, 2°N**±3°×**12°6E**±°**, h14km**±7km**, M3.9**/14**, mb4.1**/4**, mB5.0**/1**, MLv3.8**/14**, Mw(mB)4.3**/1**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.64	117	P	Pn	15 41 55.0	+0.2
TNTI				S	Sb	15 42 16.7	-0.2
KMSI	Cibinong	2.15	244	P	Pn	15 42 02.0	+0.2
KMSI				S	Sn	15 42 29.1	+0.9
SGSI	Sangihe	2.19	350	P	Pn	15 42 02.2	-0.2
LBMI	Labuha	2.67	143	P	Pn	15 42 08.8	-0.2
GTOI	Gorontalo	3.03	253	P	Pn	15 42 14.5	+0.5
SANI	Sanana	3.55	179	P	Pn	15 42 18.3	-2.8
LUWI	Luwuk	4.04	231	P	Pn	15 42 28.9	+1.0
MRSI	Marisa	4.10	255	P	Pn	15 42 28.9	+0.2
APSI	Ampana	4.90	240	P	Pn	15 42 39.4	-0.3
AAI	Ambon	5.65	156	P	Pn	15 42 50.3	+0.2
	0.2nm41nm,1.0s						
MPSI	Mapaga	6.12	259	P	Pn	15 42 58.2	+1.6

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*IDC **15** 16:06:20.7±1.1, 3°.62N×126°.65E, h0km, mb3.7/5, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=87.7km s-min=18.5km az=64.0*

*DJA **15** 16:06:24.1±0.6, 4°N±5°×12°7E±°, h10km, M4.0/13, mb4.0/7, mB4.7/2, MLv4.0/13, Mw(mB)3.9/2*

*NEIC **15** 16:06:29.9±1.5, 3°.65N±0°.08×127°.0E±0°.1, h69km±10km, mb4.2/15, Error ellipse: s-maj=17.3km s-min=10.1km az=65.0*

ISC 15 16:06:26.2±0.7**, 3°.86N**±0°.08×**127°.20E**±0°.07**, h35km, n37, σ1ˢ.55**/39**, mb4.2**/12**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.68	264	P	Pn	16 06 53.1	0.0
SGSI				S	Sn	16 07 15.5	+2.1
TNTI	Ternate	3.08	177	Pn	Pn	16 07 13.2	+0.9
TNTI	Ternate	3.08	177	P	Pn	16 07 13.4	+1.1
LBMI	Labuha	4.48	176	P	Pn	16 07 32.7	+1.0
KMSI	Cibinong	4.58	225	P	Pn	16 07 33.4	+0.3
GTOI	Gorontalo	5.27	233	P	Pn	16 07 44.2	+1.6
	0.0nm5.7nm,0.6s						
SANI	Sanana	6.00	192	P	Pn	16 07 51.2	-1.3
	0.1nm636nm5.9nm,0.5s						
SWI	Sorong	6.20	139	P	Pn	16 07 57.2	+1.8
	0.1nm14nm,0.8s						
SIJI	Sorong	6.21	139	Pn	Pn	16 07 57.6	+2.1
	1.9nm,0.3s,baz=331,slow=19,SNR=12						
SIJI				Sn	Sn	16 09 08.8	+3.4
	0.5nm,0.3s,baz=177,slow=23,SNR=1.5						
	4.2nm,0.2s						
MRSI	Marisa	6.24	238	P	Pn	16 07 57.8	+1.9
	0.1nm542nm34nm,0.6s						
LUWI	Luwuk	6.58	222	Pn	Pn	16 08 01.6	+1.0
LUWI	Luwuk	6.58	222	P	Pn	16 08 00.1	-0.5
TOLI2	Tolitoli	6.97	247	Pn	Pn	16 08 05.9	0.0
APSI	Ampana	7.30	230	P	Pn	16 08 11.7	+1.3
	0.1nm18nm,0.7s						
MYLDM	Lahad Datu	8.77	279	Pn	Pn	16 08 33.7	+3.1
BKSI	Bulukumba	11.54	218	P	Pn	16 09 09.5	+0.9
	10nm,1.1s						
MTN	Manton Dam	17.05	167	P	Pn	16 10 21.1	-1.0
MTN				IAmb	IAmb	16 10 45.4	
	comp=Z,24nm,1.4s						
KNRA	Kununurra	19.48	175		P	16 10 48.9	-1.3
KNRA				IAmb	IAmb	16 11 00.5	
	comp=Z,20nm,1.2s						
WB0	Warramunga Arr	24.52	163	P	P	16 11 41.0	-1.7
WB0				IAmb	IAmb	16 11 50.5	
	comp=Z,7.3nm,1.1s						
WRAB	Tennant Creek	24.67	164	P	P	16 11 42.3	-1.7
WRAB				IAmb	IAmb	16 11 48.6	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	24.68	164	P	P	16 11 41.7	-2.3
	comp=Z,0.9nm,0.6s,baz=344,slow=10,SNR=13						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	24.68	164	P	P	16 11 42.1	-2.0
WB2	Warramunga Arr	24.68	164	P	P	16 11 42.0	-2.1
WB2				IAmb	IAmb	16 12 00.1	
	comp=Z,7.5nm,1.1s						
WR0	Warramunga Arr	24.75	163	P	P	16 11 43.3	-1.4
WR0				IAmb	IAmb	16 11 50.9	
	comp=Z,7.8nm,1.4s						
AS31	Alice Springs	28.13	167	P	P	16 12 13.8	-1.4
ASAR	Alice Springs	28.13	167	P	P	16 12 14.2	-1.0
	comp=Z,0.2nm,0.5s,baz=345,slow=7.8,SNR=7.5						
	comp=Z,0.2nm,0.5s						
KS19	Wonju Array Si	33.48	1	P	P	16 13 04.3	+2.1
STKA	Stephens Creek	38.09	160	P	P	16 13 41.4	-0.4
	comp=Z,0.9nm,0.4s,baz=323,slow=7.3,SNR=5.6						
	comp=Z,0.9nm,0.4s						
STKA	Stephens Creek	38.09	160	P	P	16 13 40.6	-1.2
ARMA	Armidale	41.32	147	P	P	16 14 08.4	-0.5
ARMA				IAmb	IAmb	16 14 22.2	
	comp=Z,5.4nm,1.1s						
DZM	Mont Dzumac	46.23	126	P	P	16 14 48.4	0.0
SONM	Songino Array	47.32	341	P	P	16 14 56.6	-0.1
	comp=Z,0.5nm,0.8s,baz=156,slow=7.6,SNR=1.6						
	comp=Z,0.5nm,0.8s						
MK31	Makanchi Array	57.72	325	P	P	16 16 12.3	-1.3
MK31				IAmb	IAmb	16 16 13.2	
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	57.72	325	P	P	16 16 12.6	-1.0
	comp=Z,1.2nm,0.5s,baz=118,slow=8.0,SNR=20						
	comp=Z,1.2nm,0.5s						
MAKZ	Makanchi	57.90	325	P	P	16 16 13.5	-1.3
MAKZ				IAmb	IAmb	16 16 29.5	
	comp=Z,2.7nm,1.1s						
KURK	Kurchatov	61.88	327	P	P	16 16 41.1	-0.9
ABKAR	Akbulak array	72.35	321	P	P	16 17 48.0	-0.6

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*REN **15** 16:10:47.0±0.6, 40°.65N±0°.03×119°.47W±0°.06, h9km±7km, ML2.9/7, ML2.8/40(NEIC), Error ellipse: s-maj=6.1km s-min=4.1km az=91.0*

NEIC 15 16:10:46.6±0.6**, 40°.65N**±0°.03×**119°.44W**±0°.04**, h8km**±6km**, Error ellipse: s-maj=4.6km s-min=3.8km az=66.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAHR	Pah Rah Range	0.94	177		Pg	16 11 04.8	0.0
PAHR				IAML		16 11 20.9	
	comp=E,233nm,0.3s						
BEKR	Beckworth	1.05	222		Pg	16 11 06.5	-0.3
BEKR				IAML		16 11 24.5	
	comp=E,206nm,0.4s						
BEKR				IAML		16 11 24.6	
	comp=N,210nm,0.4s						
VCNR	Virginia City	1.36	187		Pn	16 11 11.7	-0.4
MOD	Modoc Plateau	1.41	333		Pb	16 11 13.3	0.0
MOD	Modoc Plateau	1.41	333	Pn	Pn	16 11 12.7	0.0
MPK	Martis Peak	1.43	199		Pn	16 11 12.8	-0.2
MPK				IAML		16 11 35.5	
	comp=N,141nm,0.4s						
MPK				IAML		16 11 35.5	
	comp=E,140nm,0.6s						
PNTR	Pine Nut	1.56	185		Pn	16 11 14.9	+0.1
PNTR				IAML		16 11 40.6	
	comp=E,126nm,0.7s						
PNTR				IAML		16 11 46.9	
	comp=N,154nm,0.8s						
LCMM	Colby Mountain	1.67	253		Pn	16 11 16.3	+0.1
YERR	Yerington	1.67	175		Pn	16 11 16.1	-0.1
YERR				IAML		16 11 42.0	
	comp=N,139nm,0.5s						
BMN	Battle Mountai	1.71	97		Pn	16 11 16.3	-0.4
BMN				IAML		16 11 42.1	
	comp=N,89nm,0.6s						
BMN				IAML		16 11 42.9	
	comp=E,95nm,0.6s						
EMB	Emerald Bay	1.75	197		Pn	16 11 16.7	-0.7
WVOR	Wild Horse Val	1.88	18		Pn	16 11 19.4	+0.2
KVN	Kaiserville	1.90	147		Pn	16 11 19.3	-0.1
ORV	Oroville	1.92	236		Pn	16 11 20.1	+0.6
ORV	Oroville	1.92	236	Pn	Pn	16 11 19.4	-0.1
RYN	Ryan	2.14	160	Pn	Pn	16 11 22.8	0.0
RYN				IAML		16 11 57.4	
	comp=N,57nm,0.3s						
NVAR	Mina Array Bea	2.38	158		Pn	16 11 26.4	+0.2
J08A	Circle Bar Ran	2.80	15	Pn	Pn	16 11 31.5	-0.3
J08A				IAML		16 12 17.7	
	comp=E,33nm,0.7s						
J08A				IAML		16 12 19.1	
	comp=N,31nm,0.6s						
LCH	Last Change Ra	3.69	157	Pn	Pn	16 11 44.4	+0.4
MFID	Camas Ranch	3.86	43	Pn	Pn	16 11 45.6	-0.7
MFID				IAML		16 12 54.5	
	comp=N,19nm,0.8s						
MFID				IAML		16 12 54.9	
	comp=N,20nm,0.7s						
PRN	Pahroc Range	4.71	132	Pn	Pn	16 11 57.5	-0.6
HLID	Hailey	4.74	50	Pn	Pn	16 11 58.8	+0.3
HLID				IAML		16 13 20.2	
	comp=N,7.4nm,0.8s						

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*NEIC **15** 16:25:02.4±1.3, 19°.8S±0°.1×177°.5W±0°.2, h452km±9km, mb4.2/20, Error ellipse: s-maj=21.1km s-min=15.9km az=104.0*

*IDC **15** 16:25:08.0±10.0, 19°.97S×177°.68W, h520km±368km, mb2.8/3, mbtmp4.0/5, Error ellipse: s-maj=278.0km s-min=36.5km az=75.0*

ISC 15 16:25:01.6±0.8**, 19°.8S**±0°.2×**177°.5W**±0°.1**, h450km, n26, σ0ˢ.57**/24**, mb4.0**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.18	86	P	P	16 26 47.9	-0.4
AFI	Afiamalu	8.01	44	P	P	16 27 07.8	+11
	10nm,0.3s,baz=191,slow=9.4,SNR=6.1						
AFI				S	S	16 28 43.0	+11
	6.8nm,0.5s,baz=240,slow=20,SNR=1.1						
URZ	Urewera	19.00	193	P	P	16 28 53.7	0.0
	2.5nm,0.3s,baz=72,slow=19,SNR=11						
BKZ	Black Stump Fm	20.01	194	P	P	16 29 02.2	-0.8
BKZ				IAmb	IAmb	16 29 23.9	
	comp=Z,16nm,1.3s						
THZ	Tophouse	23.38	198	P	P	16 29 34.0	+0.4
PPTF	Pamatai, Papee	26.55	90	P	P	16 30 02.4	+0.5
TOO	Toolangi	36.70	233	P	P	16 31 29.5	+0.5
TOO				IAmb	IAmb	16 31 32.7	
	comp=Z,19nm,1.3s						
COEN	Coen	38.01	273	P	P	16 31 40.3	+0.3
STKA	Stephens Creek	38.52	243	P	P	16 31 44.6	+0.5
	comp=Z,2.4nm,1.0s,baz=84,slow=10,SNR=2.9						
	comp=Z,2.4nm,1.0s						
STKA	Stephens Creek	38.52	243	P	P	16 31 44.5	+0.5
BBOO	Buckleboo	43.29	243	P	P	16 32 21.5	-0.7
BBOO				IAmb	IAmb	16 32 49.2	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	44.98	261	P	P	16 32 35.4	-0.1
WR0				IAmb	IAmb	16 32 35.7	
	comp=Z,8.8nm,1.3s						
AS31	Alice Springs	45.14	256	P	P	16 32 36.4	-0.4
ASAR	Alice Springs	45.14	256	P	P	16 32 36.6	-0.2
	comp=Z,0.7nm,0.6s,baz=89,slow=7.8,SNR=24						
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	45.14	256	P	P	16 32 36.2	-0.6
WB0	Warramunga Arr	45.14	261	P	P	16 32 36.4	-0.5
WB0				IAmb	IAmb	16 32 55.9	
	comp=Z,4.8nm,1.1s						
WB2	Warramunga Arr	45.15	261	P	P	16 32 36.5	-0.4
WB2				IAmb	IAmb	16 32 55.3	
	comp=Z,8.8nm,1.4s						
WRAB	Tennant Creek	45.16	261	P	P	16 32 36.5	-0.5
WRA	Warramunga Arr	45.17	261	P	P	16 32 36.2	-0.8
	comp=Z,0.3nm,0.5s,baz=95,slow=8.1,SNR=9.9						
	comp=Z,0.3nm,0.5s						
WRA	Warramunga Arr	45.17	261	IAmb	IAmb	16 32 45.6	
	comp=Z,0.4nm,1.5s						
MTN	Manton Dam	49.63	270	P	P	16 33 10.5	-0.3
MTN				IAmb	IAmb	16 33 11.2	
	comp=Z,21nm,1.3s						
FORT	Forrest	50.01	246	P	P	16 33 12.5	-0.9
VNDA	Vanda	58.67	185	P	P	16 34 14.9	+1.0
MAJO	Matsushiro	69.91	323	P	P	16 35 26.7	+0.4
MAJO				IAmb	IAmb	16 35 48.6	
	comp=Z,10.0nm,1.4s						
MJB9	Matsu-Tunnel	69.92	323	P	P	16 35 26.7	+0.3
MJB9				IAmb	IAmb	16 35 48.6	
	comp=Z,9.9nm,1.4s						
QSPA	South Pole Qui	70.29	180	P	P	16 35 27.7	-0.6
QSPA				IAmb	IAmb	16 35 36.1	
	comp=Z,5.2nm,1.5s						

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*IDC **15** 16:35:08.1±3.0, 16°.56S×174°.24W, h87km±29km, mb3.5/7, mbtmp3.8/8, Error ellipse: s-maj=46.1km s-min=18.4km az=132.0*

*NEIC **15** 16:35:12.4±0.8, 16°.65S±0°.09×174°.1W±0°.1, h128km±5km, mb4.2/32, Error ellipse: s-maj=17.1km s-min=12.1km az=103.0*

*NOU **15** 16:35:45.4, 13°.75S×171°.87W, h102km, MLv2.4/4, Samoa Islands*

ISC 15 16:35:10.1±0.5**, 16°.55S**±0°.07×**174°.0W**±0°.1**, h111km, n49, σ1ˢ.23**/50**, mb4.1**/22**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.40	40	P	Pn	16 36 01.1	-0.4
	54nm,0.3s,baz=189,slow=1.5,SNR=33						
AFI				S	Sn	16 36 36.9	-4.4
	163nm,0.4s,baz=53,slow=20,SNR=25						
AFI	Afiamalu	3.40	40		Pn	16 36 01.0	-0.6
AFI	Afiamalu	3.40	40	P	Pn	16 36 00.7	-0.9
NIUE	Niue	4.63	123	Pn	Pn	16 36 16.9	-1.1
RAO	Raoul Island	13.14	195	Pn	Pn	16 38 11.6	-0.8
URZ	Urewera	22.99	198	P	P	16 40 05.2	0.0
	1.3nm,0.3s,baz=311,slow=19,SNR=1.0						
	1.3nm,0.3s						
URZ	Urewera	22.99	198	IAmb	IAmb	16 40 33.2	
	comp=Z,13nm,1.1s						
BKZ	Black Stump Fm	24.01	198	P	P	16 40 13.9	-0.7
BKZ				IAmb	IAmb	16 40 16.8	
	comp=Z,16nm,1.3s						
TOO	Toolangi	41.28	231	P	P	16 42 43.5	-1.2
STKA	Stephens Creek	42.95	241	P	P	16 42 57.3	-1.0
	comp=Z,0.4nm,0.4s,baz=71,slow=12,SNR=4.8						
	comp=Z,0.4nm,0.4s						
BBOO	Buckleboo	47.73	241	P	P	16 43 35.5	-0.5
WR0	Warramunga Arr	48.82	258	P	P	16 43 43.5	-1.0
WR0				IAmb	IAmb	16 43 51.2	
	comp=Z,6.1nm,1.2s						
WB0	Warramunga Arr	48.98	258	P	P	16 43 44.5	-1.2
WB0				IAmb	IAmb	16 43 44.7	
	comp=Z,8.6nm,1.4s						
WB2	Warramunga Arr	49.00	258	P	P	16 43 44.3	-1.6
WB2				IAmb	IAmb	16 43 59.3	
	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	49.01	258	P	P	16 43 44.4	-1.6
	comp=Z,0.3nm,0.4s,baz=96,slow=7.7,SNR=2.0						
	comp=Z,0.3nm,0.4s						
AS31	Alice Springs	49.20	253	P	P	16 43 46.2	-1.2
ASAR	Alice Springs	49.20	253	P	P	16 43 45.8	-1.6
	comp=Z,2.0nm,0.6s,baz=89,slow=8.4,SNR=62						
ASAR				PcP	PcP	16 45 08.3	-0.7

	comp=Z,0.4nm,0.7s,baz=100,slow=4.4,SNR=4.1						
	comp=Z,2.0nm,0.6s						
SBA	**Scott Base**	**62.06**	**185**	P	**P**	**16 45 19.6**	**+1.2**
SBA				IAmb	IAmb	16 45 35.5	
	comp=Z,3.1nm,1.5s						
NWAO	**Narrogin (SRO)**	**63.54**	**241**	P	**P**	**16 45 28.0**	**-1.0**
MJAR	**Matsushiro Arr**	**69.44**	**320**	P	**P**	**16 46 06.5**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=134,slow=6.8,SNR=1.9						
	comp=Z,0.4nm,0.4s						
UNV	**Unalaska Valle**	**70.41**	**5**	P	**P**	**16 46 12.4**	**+0.5**
PAGB	**Antelope Grade**	**72.75**	**43**	P	**P**	**16 46 27.7**	**+1.3**
QSPA	**South Pole Qui**	**73.50**	**180**	P	**P**	**16 46 32.2**	**+1.8**
KDAK	**Kodiak Island**	**76.16**	**12**	P	**P**	**16 46 47.1**	**+1.6**
P18K	**Big Mountain,**	**77.21**	**10**	P	**P**	**16 46 52.3**	**+0.7**
P18K				IAmb	IAmb	16 46 53.2	
	comp=Z,5.5nm,0.8s						
O18K	**Koktuh Hills**	**77.66**	**10**	P	**P**	**16 46 55.2**	**+1.2**
P19K	**Oil Pt**	**77.80**	**11**	P	**P**	**16 46 56.0**	**+1.3**
P19K				IAmb	IAmb	16 46 56.7	
	comp=Z,2.8nm,0.9s						
CNPM	**China Poot**	**78.05**	**12**	P	**P**	**16 46 57.1**	**+0.9**
CNPM				IAmb	IAmb	16 47 25.7	
	comp=Z,3.9nm,1.2s						
N18K	**Kilae Creek**	**78.34**	**9**	P	**P**	**16 46 58.6**	**+0.9**
N19K	**Bonanza Creek**	**78.68**	**10**	P	**P**	**16 47 00.5**	**+0.8**
N19K				IAmb	IAmb	16 47 01.4	
	comp=Z,3.0nm,0.9s						
SVW2	**Sparrevohn**	**78.78**	**9**	P	**P**	**16 47 01.6**	**+1.4**
M19K	**Big River Lodg**	**79.73**	**9**	P	**P**	**16 47 06.3**	**+1.0**
J20K	**Nowinta River**	**81.92**	**9**	P	**P**	**16 47 18.1**	**+1.2**
WRH	**Wood River Hil**	**83.19**	**11**	P	**P**	**16 47 24.2**	**+0.8**
WRH				IAmb	IAmb	16 47 26.0	
	comp=Z,3.0nm,0.8s						
LRM	**Limekiln Ridge**	**83.28**	**38**	P	**P**	**16 47 26.3**	**+1.6**
HDA	**Harding Lake**	**83.35**	**11**	P	**P**	**16 47 25.3**	**+1.1**
HDA				IAmb	IAmb	16 47 27.0	
	comp=Z,2.4nm,0.7s						
CCB	**Clear Creek Bu**	**83.40**	**11**	P	**P**	**16 47 24.9**	**+0.3**
CCB				IAmb	IAmb	16 47 26.7	
	comp=Z,2.6nm,0.8s						
PDAR	**Pinedale Array**	**83.52**	**42**	P	**P**	**16 47 27.1**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=199,slow=4.1,SNR=3.8						
	comp=Z,0.3nm,0.6s						
MDM	**Murphy Dome**	**83.61**	**11**	P	**P**	**16 47 26.4**	**+0.7**
MDM				IAmb	IAmb	16 47 28.1	
	comp=Z,4.9nm,1.2s						
IL31		**83.69**	**11**	P	**P**	**16 47 26.8**	**+0.8**
IL31				IAmb	IAmb	16 47 28.1	
	comp=Z,5.6nm,1.5s						
ILAR	**Eielson Array**	**83.69**	**11**	P	**P**	**16 47 26.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=220,slow=6.5,SNR=17						
	comp=Z,0.7nm,0.6s						
IMAR	**Indian Mountai**	**83.69**	**8**	P	**P**	**16 47 26.4**	**+0.4**
J25K	**Salcha River,**	**83.84**	**12**	P	**P**	**16 47 28.1**	**+1.3**
J25K				IAmb	IAmb	16 47 29.1	
	comp=Z,3.2nm,1.2s						
BMAR	**Burnt Mountain**	**86.49**	**11**	P	**P**	**16 47 41.0**	**+1.0**
MKAR	**Makanchi Array**	**111.21**	**314**	PKiKP	**PKiKP**	**16 53 30.4**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=140,slow=1.4,SNR=4.2						
CLL	**Collm**	**144.88**	**352**	*e*(PKPbc)	**PKPdf**	**16 54 35.0**	**+1.1**
BRTR	**Keskin Array B**	**146.66**	**319**	PKPbc	**PKPbc**	**16 54 40.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=76,slow=0.6,SNR=6.1						
BRTR	**Keskin Array B**	**146.66**	**319**	PKPab	**PKPbc**	**16 54 39.9**	**+0.5**
GERES	**GERESS Array B**	**147.18**	**351**	PKPbc	**PKPbc**	**16 54 41.2**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=5.7,slow=2.0,SNR=2.5						

IDC ***15*** *16:46:56.1±5.7, 0°.45N×79°.43W, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=158.6km s-min=120.4km az=60.0*

ISC 15 16:47:02.0±1.1**, 1°.17N**±0°.08×**79°.88W**±0°.07**, h10**^{km}**, n15,** σ**2^{s}.45**/17**, mb3.7**/3**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**1.33**	**60**	*e*P	**Pg**	**16 47 29.9**	**+2.4**
OTAV	**Otavalo**	**1.70**	**123**	*e*P	**Pn**	**16 47 31.9**	**-0.3**
OTAV				*e*S	**Sg**	**16 47 56.2**	**-0.6**
GR1C	**Gorgona, Isla**	**2.50**	**43**	*e*P	**Pb**	**16 47 46.8**	**-0.4**
GCUF	**Volcan Galeras**	**2.54**	**89**	*e*P	**Pg**	**16 47 51.9**	**+1.2**
GCUF				*e*S	**Sg**	**16 48 26.5**	**+2.8**
GCUF				*i*		16 48 28.4	
	comp=Z,48nm,0.5s						
CRUC	**La Cruz**	**2.96**	**82**	*e*P	**Pb**	**16 47 56.3**	**+1.2**
CRUC				*e*S	**Sg**	**16 48 37.8**	**+0.6**
CRUC				*i*		16 48 48.8	
	comp=Z,2µm,0.6s						
PCON	**Cinco Dias**	**3.67**	**72**	*e*P	**Pb**	**16 48 08.1**	**+0.8**
YOTC	**Yotoco, Valle**	**4.51**	**52**	*e*P	**Pb**	**16 48 21.7**	**+0.3**
ORTC	**Ortega, Tolima**	**5.37**	**59**	*e*P	**Pb**	**16 48 35.1**	**-1.0**
ANIL	**Santa Ana**	**5.56**	**53**	*e*P	Pb	16 48 33.9	-5.6
ANIL				*e*S	**Sb**	**16 49 41.8**	**-4.6**
PRAC	**Prado**	**5.60**	**63**	*e*P	**Pb**	**16 48 36.8**	**-3.1**
PDAR	**Pinedale Array**	**49.21**	**331**	P	**P**	**16 55 52.4**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=120,slow=11,SNR=3.8						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**51.12**	**321**	P	**P**	**16 56 07.4**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=134,slow=7.6,SNR=6.9						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**66.46**	**343**	P	**P**	**16 57 52.6**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=134,slow=6.3,SNR=8.3						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**140.35**	**233**	PKhKP	PKPpre	17 06 22.4	
	comp=Z,0.9nm,1.2s,baz=130,slow=3.4,SNR=4.1						
WRA	**Warramunga Arr**	**141.68**	**239**	PKP	**PKPdf**	**17 06 29.6**	**-5.2**
	comp=Z,0.4nm,0.9s,baz=108,slow=2.8,SNR=2.0						

SOME ***15*** *16:59:08.6, 39°.75N×75°.45E, h10^{km}, MS4.0*
KRNET ***15*** *16:59:09.0±0.1, 39°.58N×75°.69E, mb4.9*
NEIC ***15*** *16:59:10.8±1.7, 39°.80N±0°.08×75°.36E±0°.09, h10^{km}±1^{km}, mb4.5/83, ML4.4(BJI), Error ellipse: s-maj=14.9km s-min=9.0km az=144.0*
NNC ***15*** *16:59:13.5±0.8, 39°.91N×75°.37E, h0^{km}, mb4.9, mpv4.6, Error ellipse: s-maj=7.0km s-min=4.1km az=163.0*
MOS ***15*** *16:59:15.4±1.0, 39°.81N×75°.41E, h64^{km}, mb4.7/12, MS4.1/5, Error ellipse: s-maj=5.7km s-min=3.6km az=91.0*
IDC ***15*** *16:59:17.2±2.2, 39°.82N×75°.47E, h64^{km}±19^{km}, mb3.9/25, mbtmp4.2/30, Error ellipse: s-maj=14.9km s-min=11.1km az=180.0*

ISC 15 16:59:09.7±0.3**, 39°.60N**±0°.03×**75°.37E**±0°.02**, h10**^{km}**, n377,** σ**2^{s}.11**/416**, mb4.5**/84**, MS4.1**/7**, 60C-24D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.48**	**100**	Pg	**Pn**	**16 59 25.0**	**+2.2**
KSH				Sg	**Sb**	**16 59 34.9**	**+7.5**
KSH				pmax	pmax		
	comp=Z,3µm,1.0s						
KSH				smax	smax		
	comp=N,16µm,0.9s						
KSH				smax	smax		
	comp=E,9µm,1.0s						
OHH	**Osh**	**2.19**	**296**	⇑*i*P	**Pb**	**16 59 50.8**	**+1.4**
	baz=94						
OHH				⇑*i*S	**Sg**	**17 00 21.1**	**+1.1**
	baz=94						
ARLS	**Aral**	**2.39**	**341**	⇑*i*P	**Pn**	**16 59 51.8**	**+2.6**
	baz=36						
ARLS				⇑*i*S	**Sn**	**17 00 23.0**	**+4.3**
	baz=36						
UCH	**Uchtor**	**2.70**	**346**	P	**Pn**	**16 59 57.0**	**+3.3**
	SNR=576						
UCH	**Uchtor**	**2.70**	**346**	⇑*e*P	**Pn**	**16 59 56.2**	**+2.5**
	baz=42						
UCH				⇑*i*S	**Sn**	**17 00 30.4**	**+3.7**
	baz=42						
ULHL	**Ulahol**	**2.73**	**14**	P	**Pn**	**16 59 56.5**	**+2.7**
	SNR=88						
ULHL	**Ulahol**	**2.73**	**14**	⇓*i*P	**Pn**	**16 59 54.7**	**+0.9**
	baz=9.0						
ULHL				⇓*i*S	**Sn**	**17 00 28.0**	**+1.1**
	baz=9.0						
DRK	**Karamyk**	**2.76**	**269**		**Pn**	**16 59 55.4**	**+1.0**
DRK	**Karamyk**	**2.76**	**269**	⇓*i*P	**Pb**	**16 59 59.3**	**-0.1**
	baz=69						
DRK				⇓*i*S	**Sb**	**17 00 35.5**	**+2.1**
	baz=69						
TARG	**Taragay, Kyrgy**	**2.82**	**40**	Pn	**Pn**	**16 59 53.1**	**-2.2**
AML	**Almayashu**	**2.83**	**334**	P	**Pn**	**16 59 58.6**	**+3.3**
	SNR=335						
KDJ	**Kajisay**	**2.88**	**28**		**Pn**	**16 59 55.6**	**-0.2**
KDJ	**Kajisay**	**2.88**	**28**	PN	**Pn**	**16 59 55.6**	**-0.2**
KDJ	**Kajisay**	**2.88**	**28**	⇓*i*P	**Pn**	**16 59 56.2**	**+0.4**
	baz=24						
KDJ				⇓*i*S	**Sn**	**17 00 30.5**	**-0.1**
	baz=24						
BOOM	**Boomskoye usch**	**2.92**	**8**		**Pn**	**16 59 55.3**	**-1.1**
BOOM	**Boomskoye usch**	**2.92**	**8**	PN	**Pn**	**16 59 55.3**	**-1.1**
BOOM	**Boomskoye usch**	**2.92**	**8**	⇑*e*P	**Pn**	**16 59 57.7**	**+1.3**
	baz=4.0						
BOOM				⇑*i*S	**Sn**	**17 00 33.3**	**+1.6**
	baz=4.0						
KBK	**Karagaybulak**	**3.07**	**354**	P	**Pn**	**17 00 01.9**	**+3.4**
	SNR=490						
KBK	**Karagaybulak**	**3.07**	**354**	⇑*i*P	**Pn**	**17 00 00.7**	**+2.2**
	baz=50						
KBK				⇑*i*S	**Sn**	**17 00 38.2**	**+2.8**
	baz=50						
AAK	**Ala-Archa**	**3.11**	**348**	P	**Pn**	**17 00 02.9**	**+3.9**
	SNR=637						
AAK	**Ala-Archa**	**3.11**	**348**	P	**Pn**	**17 00 02.8**	**+3.9**
	comp=E,592nm,0.6s,baz=163,slow=7.7,SNR=1081						
AAK				S	**Sn**	**17 00 35.9**	**-0.3**
	comp=E,184nm,0.5s,baz=187,slow=23,SNR=1.6						
AAK	**Ala-Archa**	**3.11**	**348**	Pn	**Pn**	**17 00 02.5**	**+3.5**
AAK	**Ala-Archa**	**3.11**	**348**	*c i*PN	**Pn**	**17 00 02.7**	**+3.7**
AAK				pmax	pmax		
	comp=Z,711nm,0.7s						
AAK	**Ala-Archa**	**3.11**	**348**	⇑*e*P	**Pn**	**17 00 01.4**	**+2.4**
	baz=44						
AAK				⇑*i*S	**Sn**	**17 00 39.6**	**+3.4**
	baz=44						
FRU1	**Bishkek**	**3.25**	**350**		**Pn**	**17 00 05.0**	**+4.1**
FRU1	**Bishkek**	**3.25**	**350**	PN	**Pn**	**17 00 05.1**	**+4.1**
FRU1	**Bishkek**	**3.25**	**350**	⇑*i*P	**Pn**	**17 00 03.7**	**+2.8**
	baz=46						
FRU1				⇑*i*S	**Sn**	**17 00 43.4**	**+3.6**
	baz=46						
EKS2	**Erkin-Say**	**3.29**	**339**	P	**Pn**	**17 00 04.9**	**+3.5**
	SNR=187						
TKM2	**Tokmak 2**	**3.32**	**3**	P	**Pn**	**17 00 05.5**	**+3.5**
	SNR=354						
TKM2	**Tokmak 2**	**3.32**	**3**	*i* PN	**Pn**	**17 00 04.9**	**+2.9**
TKM2				pmax	pmax		
	comp=Z,163nm,0.5s						
TKM2	**Tokmak 2**	**3.32**	**3**	⇑Pn	**Pn**	**17 00 03.3**	**+1.3**
	comp=Z,163nm,0.6s						
TKM2				⇓Lg	Lg	17 00 50.9	
	comp=Z,1µm,1.1s						
TKM2	**Tokmak 2**	**3.32**	**3**	⇑*i*P	**Pn**	**17 00 03.7**	**+1.7**
	baz=59						
TKM2				⇑*i*S	**Sn**	**17 00 43.4**	**+1.8**
	baz=59						
ARK	**Arkit**	**3.39**	**311**	⇑*i*P	**Pn**	**17 00 07.2**	**+4.3**
	baz=9.0						
ARK				⇑*i*S	**Sb**	**17 00 50.0**	**-1.4**
	baz=9.0						
CHMS	**Chumysh**	**3.43**	**352**	P	**Pn**	**17 00 06.9**	**+3.7**
	SNR=113						
CHMS	**Chumysh**	**3.43**	**352**	*i* PN	**Pn**	**17 00 06.7**	**+3.4**
CHMS				pmax	pmax		
	comp=Z,256nm,0.5s						
CHMS	**Chumysh**	**3.43**	**352**	⇑Pn	**Pn**	**17 00 04.9**	**+1.6**
	comp=Z,256nm,0.5s						
CHMS				⇓Lg	Lg	17 00 53.8	
	comp=Z,1µm,0.8s						
KST	**Kastek**	**3.47**	**7**	*e*P	**Pb**	**17 00 11.0**	**-0.3**
	comp=Z,232nm,0.6s						
KST				*e*S	**Sb**	**17 00 55.7**	**+2.1**
	comp=Z,4µm,1.1s						
KST	**Kastek**	**3.47**	**7**	Pg	**Pb**	**17 00 10.7**	**-0.6**
	comp=Z,232nm,0.6s						
KST				Lg	Lg	17 00 52.8	
	comp=Z,4µm,1.1s						
BTK	**Batken**	**3.53**	**279**	Pn	**Pn**	**17 00 06.0**	**+1.2**
BTK	**Batken**	**3.53**	**279**	PN	**Pn**	**17 00 06.0**	**+1.2**
BTK	**Batken**	**3.53**	**279**	⇓*i*P	**Pb**	**17 00 09.6**	**-2.8**
	baz=79						
BTK				⇓*i*S	**Sb**	**17 00 54.2**	**-1.2**
	baz=79						
MRKS	**Merke**	**3.53**	**333**	*e*P	**Pb**	**17 00 14.4**	**+2.0**
	comp=Z,91nm,0.5s						
MRKS				*e*S	**Sb**	**17 01 01.9**	**+6.5**
	comp=Z,706nm,0.8s						
MRKS	**Merke**	**3.53**	**333**	Pg	**Pb**	**17 00 12.4**	**0.0**
	comp=Z,120nm,0.4s						
MRKS				Lg	Lg	17 00 56.3	
	comp=Z,706nm,0.8s						
ANVS	**Anan'yevo**	**3.62**	**28**	⇑*i*P	**Pn**	**17 00 06.2**	**+0.1**
	baz=24						
ANVS				⇑*i*S	**Sn**	**17 00 48.1**	**-0.9**
	baz=24						
TNSS	**Tian-Shan**	**3.63**	**19**	*i* PN	**Pn**	**17 00 09.2**	**+2.8**
TNSS	**Tian-Shan**	**3.63**	**19**	*e*P	**Pb**	**17 00 13.8**	**-0.5**
	comp=Z,349nm,0.6s						
TNSS				*e*S	**Sb**	**17 01 00.2**	**+1.6**
	comp=Z,460nm,1.0s						
TNSS	**Tian-Shan**	**3.63**	**19**	*i* Pn	**Pn**	**17 00 09.2**	**+2.8**
	baz=20						
TNSS	**Tian-Shan**	**3.63**	**19**	Pg	**Pb**	**17 00 15.1**	**+0.8**
	comp=Z,349nm,0.6s						
TNSS				Lg	Lg	17 01 00.2	
	comp=Z,460nm,1.0s						
PRZ	**Przheval'sk**	**3.68**	**38**		**Pn**	**17 00 07.0**	**+0.2**
PRZ	**Przheval'sk**	**3.68**	**38**	PN	**Pn**	**17 00 07.1**	**+0.2**
PRZ	**Przheval'sk**	**3.68**	**38**	⇓*i*P	**Pn**	**17 00 06.6**	**-0.3**
	baz=34						
PRZ				⇓*i*S	**Sn**	**17 00 48.9**	**-1.6**
	baz=34						
USP	**Ospenovka**	**3.72**	**350**	P	**Pn**	**17 00 10.6**	**+3.3**
	SNR=250						
TRKS	**Terek-Say**	**3.75**	**302**	⇑*i*P	**Pn**	**17 00 11.6**	**+3.7**
	baz=0.0						
TRKS				⇑*i*S	**Sn**	**17 00 57.6**	**+5.4**
	baz=0.0						
MDOK	**Medeo**	**3.78**	**19**	*i* PN	**Pn**	**17 00 11.0**	**+2.8**
MDOK	**Medeo**	**3.78**	**19**	*e*P	**Pb**	**17 00 16.1**	**-0.5**
	comp=Z,170nm,0.7s						
MDOK				*e*S	**Sb**	**17 01 04.2**	**+1.7**
	comp=Z,935nm,1.0s						
MDOK	**Medeo**	**3.78**	**19**	*i* Pn	**Pn**	**17 00 11.0**	**+2.8**
	baz=20						
MDOK				*e*Pg	**Pb**	**17 00 19.5**	**+2.9**
	baz=20						
MDOK				*i* Lg	Lg	17 01 04.9	
	baz=20						
MDOK	**Medeo**	**3.78**	**19**	⇑Pn	**Pn**	**17 00 09.9**	**+1.7**
	comp=Z,42nm,0.5s						
MDOK				⇑Pg	**Pb**	**17 00 17.3**	**+0.7**
	comp=Z,251nm,0.9s						
MDOK				⇑Lg	Lg	17 01 04.7	
	comp=Z,1µm,0.8s						
MDOK	**Medeo**	**3.78**	**19**	Pg	**Pb**	**17 00 17.2**	**+0.6**
	comp=Z,170nm,0.7s						
MDOK				Lg	Lg	17 01 04.2	
	comp=Z,935nm,1.0s						
AAA	**Alma-Ata**	**3.79**	**17**	*d i*PN	**Pn**	**17 00 12.4**	**+4.1**
AAA	**Alma-Ata**	**3.79**	**17**	*e*P	**Pb**	**17 00 17.1**	**+0.3**
	comp=Z,179nm,0.4s						
AAA				*e*S	**Sb**	**17 01 06.6**	**+3.8**
	comp=Z,2µm,0.8s						
AAA	**Alma-Ata**	**3.79**	**17**	⇓*i*Pn	**Pn**	**17 00 12.4**	**+4.1**
	baz=18						
AAA	**Alma-Ata**	**3.79**	**17**	Pg	**Pb**	**17 00 18.5**	**+1.8**
	comp=Z,179nm,0.4s						
AAA				Lg	Lg	17 01 06.6	
	comp=Z,2µm,0.8s						
KNDC	**Almaty**	**3.81**	**18**	⇑Pn	**Pn**	**17 00 10.4**	**+1.9**
	comp=Z,112nm,0.6s						
KNDC				⇑Pg	**Pb**	**17 00 18.8**	**+1.7**
	comp=Z,152nm,0.6s						
KNDC				⇑Lg	Lg	17 01 06.4	
	comp=Z,3µm,0.8s						
SGDS	**Sogindy**	**3.89**	**352**	*c i*PN	**Pn**	**17 00 12.4**	**+2.8**
SGDS	**Sogindy**	**3.89**	**352**	⇑*i*Pn	**Pn**	**17 00 12.4**	**+2.8**
	baz=351						
SGDS				*i* Pg	**Pb**	**17 00 20.6**	**+2.2**
	baz=351						
SGDS				*i* Lg	Lg	17 01 09.6	
	baz=351						
GAR	**Garm**	**3.96**	**263**	Pn	**Pn**	**17 00 11.0**	**+0.3**
SATY	**Saty**	**4.14**	**33**	*c i*PN	**Pn**	**17 00 15.6**	**+2.4**
SATY	**Saty**	**4.14**	**33**	*e*P	**Pb**	**17 00 22.7**	**-0.1**
	comp=Z,114nm,0.8s						
SATY				*e*S	**Sb**	**17 01 15.9**	**+2.8**
	comp=Z,373nm,1.4s						
SATY	**Saty**	**4.14**	**33**	⇑*i*Pn	**Pn**	**17 00 15.7**	**+2.4**
	baz=35						
SATY				*e*Sb	**Sb**	**17 01 15.5**	**+2.5**
	baz=35						
SATY	**Saty**	**4.14**	**33**	Pg	**Pb**	**17 00 24.1**	**+1.2**
	comp=Z,114nm,0.8s						
SATY				Lg	Lg	17 01 15.9	
	comp=Z,373nm,1.4s						
KTBS	**Karatobe**	**4.22**	**13**	*e*P	**Pb**	**17 00 24.1**	**-0.1**
	comp=Z,86nm,0.7s						
KTBS				*e*S	**Sb**	**17 01 19.0**	**+3.7**
	comp=Z,1µm,0.9s						
KTBS	**Karatobe**	**4.22**	**13**	Pg	**Pb**	**17 00 25.8**	**+1.6**
	comp=Z,86nm,0.7s						
KTBS				Lg	Lg	17 01 19.0	
	comp=Z,1µm,0.9s						
ZHN	**Zhinishke**	**4.25**	**32**	*i* PN	**Pn**	**17 00 16.9**	**+2.3**
ZHN	**Zhinishke**	**4.25**	**32**	*e*P	**Pb**	**17 00 24.3**	**-0.2**
	comp=Z,60nm,0.5s						
ZHN				*e*S	**Sb**	**17 01 18.9**	**+3.0**
	comp=Z,228nm,0.6s						
ZHN	**Zhinishke**	**4.25**	**32**	*i* Pn	**Pn**	**17 00 17.0**	**+2.3**
	baz=34						
ZHN	**Zhinishke**	**4.25**	**32**	Pg	**Pb**	**17 00 25.8**	**+1.2**
	comp=Z,60nm,0.5s						
ZHN				Lg	Lg	17 01 18.9	
	comp=Z,228nm,0.6s						
KUU	**Kurty**	**4.35**	**9**	*e*PN	**Pn**	**17 00 17.6**	**+1.7**
KUU	**Kurty**	**4.35**	**9**	*e*P	**Pb**	**17 00 26.8**	**+0.5**
	comp=Z,24nm,0.6s						
KUU				*e*S	**Sb**	**17 01 22.8**	**+3.9**
	comp=Z,2µm,1.0s						
KUU	**Kurty**	**4.35**	**9**	*e*Pn	**Pn**	**17 00 17.7**	**+1.7**
	baz=9.6						
KUU				*e*Pg	**Pb**	**17 00 29.6**	**+3.3**
	baz=9.6						
KUU	**Kurty**	**4.35**	**9**	Pg	**Pb**	**17 00 28.4**	**+2.1**
	comp=Z,114nm,1.1s						
KUU				Lg	Lg	17 01 22.8	
	comp=Z,2µm,1.0s						
KURS	**Kuram**	**4.42**	**28**	*e*P	**Pb**	**17 00 27.6**	**+0.2**
	comp=Z,204nm,1.1s						
KURS				*e*S	**Sb**	**17 01 24.6**	**+3.8**
	comp=Z,188nm,0.9s						
KURS	**Kuram**	**4.42**	**28**	Pg	**Pb**	**17 00 29.4**	**+1.9**
	comp=Z,204nm,1.1s						
KURS				Lg	Lg	17 01 24.6	
	comp=Z,188nm,0.9s						
CHKK	**Chushkaly**	**4.42**	**15**	*i* PN	**Pn**	**17 00 19.0**	**+2.1**
CHKK	**Chushkaly**	**4.42**	**15**	*e*P	**Pb**	**17 00 27.0**	**-0.5**
	comp=Z,118nm,0.6s						
CHKK				*e*S	**Sb**	**17 01 23.8**	**+2.9**
	comp=Z,970nm,1.1s						
CHKK	**Chushkaly**	**4.42**	**15**	*i* Pn	**Pn**	**17 00 19.1**	**+2.1**
	baz=16						
CHKK	**Chushkaly**	**4.42**	**15**	Pg	**Pb**	**17 00 28.7**	**+1.2**
	comp=Z,118nm,0.6s						
CHKK				Lg	Lg	17 01 23.7	
	comp=Z,970nm,1.1s						
DZA	**Taraz**	**4.48**	**319**	*e*PN	**Pn**	**17 00 20.9**	**+3.2**
DZA	**Taraz**	**4.48**	**319**	*e*P	**Pb**	**17 00 32.5**	**+4.0**
	comp=Z,106nm,0.5s						
DZA				*e*S	**Sg**	**17 01 32.8**	**-0.8**
	comp=Z,1µm,0.7s						
DZA	**Taraz**	**4.48**	**319**	*e*Pn	**Pn**	**17 00 21.0**	**+3.2**
	baz=315						
DZA	**Taraz**	**4.48**	**319**	Pg	**Pg**	**17 00 34.4**	**-1.1**
	comp=Z,106nm,0.5s						
DZA				Lg	Lg	17 01 33.7	
	comp=Z,1µm,0.7s						
UZB	**Uzynbulak**	**4.49**	**37**	*c i*PN	**Pn**	**17 00 20.3**	**+2.4**
UZB	**Uzynbulak**	**4.49**	**37**	*e*P	**Pb**	**17 00 28.2**	**-0.4**
	comp=Z,120nm,1.0s						
UZB				*e*S	**Sb**	**17 01 26.2**	**+3.4**
	comp=Z,174nm,1.0s						
UZB	**Uzynbulak**	**4.49**	**37**	⇑*i*Pn	**Pn**	**17 00 20.3**	**+2.4**
	baz=39						
UZB	**Uzynbulak**	**4.49**	**37**	Pg	**Pb**	**17 00 30.1**	**+1.4**
	comp=Z,120nm,1.0s						
UZB				Lg	Lg	17 01 26.2	
	comp=Z,174nm,1.0s						
KPKS	**Kokpek**	**4.59**	**32**	*c i*PN	**Pn**	**17 00 21.9**	**+2.5**
KPKS	**Kokpek**	**4.59**	**32**	⇑*i*Pn	**Pn**	**17 00 21.9**	**+2.5**
	baz=34						
SHLS	**Shalkode**	**4.70**	**40**	*e*PN	Pn	17 00 26.7	+5.8
SHLS	**Shalkode**	**4.70**	**40**	*e*P	**Pg**	**17 00 37.5**	**-2.3**
	comp=Z,70nm,0.8s						
SHLS				*e*S	**Sg**	**17 01 42.0**	**+1.3**
	comp=Z,291nm,1.7s						
SHLS	**Shalkode**	**4.70**	**40**	*e*Pn	Pn	17 00 26.7	+5.8
	baz=45						
SHLS	**Shalkode**	**4.70**	**40**	Pg	**Pg**	**17 00 39.3**	**-0.5**
	comp=Z,70nm,0.8s						
SHLS				Lg	Lg	17 01 42.1	
	comp=Z,291nm,1.7s						
IUG	**Iuzhnay**	**4.78**	**304**	*c i*PN	**Pn**	**17 00 25.1**	**+3.2**
IUG	**Iuzhnay**	**4.78**	**304**	*e*P	**Pb**	**17 00 37.7**	**+4.0**
	comp=Z,3µm,0.7s						
IUG				*e*S	**Sg**	**17 01 42.1**	**-1.1**
	comp=Z,1µm,0.7s						
IUG	**Iuzhnay**	**4.78**	**304**	⇑*i*Pn	**Pn**	**17 00 25.2**	**+3.2**
	baz=300						
IUG	**Iuzhnay**	**4.78**	**304**	Pg	**Pb**	**17 00 35.5**	**+1.9**
	comp=Z,2µm,0.4s						
IUG				Lg	Lg	17 01 35.8	
	comp=Z,1µm,0.7s						
PDGK	**Podgornoye**	**4.84**	**38**	Pg	**Pb**	**17 00 35.1**	**+0.4**
	comp=Z,32nm,0.8s						
PDGK				Lg	Lg	17 01 35.2	
	comp=Z,107nm,0.9s						
PDGK	**Podgornoye**	**4.84**	**38**	⇑Pn	**Pn**	**17 00 24.1**	**+1.2**
	comp=Z,51nm,1.2s						
PDGK				⇑Pg	**Pb**	**17 00 37.0**	**+2.2**
	comp=Z,167nm,1.0s						
PDGK				⇑Lg	Lg	17 01 40.2	
	comp=Z,349nm,0.9s						
CHGR	**Chuyangaron**	**4.92**	**261**	PN	**Pn**	**17 00 27.4**	**+3.6**
TAS	**Tashkent**	**4.94**	**292**	⇓*e*P	**Pn**	**17 00 28.7**	**+4.6**
	baz=92						
TAS				⇓*e*S	**Sn**	**17 01 27.7**	**+6.4**
	baz=92						
KK31	**Karatay Array**	**5.06**	**315**	Pn	**Pn**	**17 00 24.7**	**-1.0**
KK31	**Karatay Array**	**5.06**	**315**	*e*PN	**Pn**	**17 00 28.0**	**+2.3**
KK31	**Karatay Array**	**5.06**	**315**	Pn	**Pn**	**17 00 28.0**	**+2.3**
	comp=Z,12nm,0.5s,baz=124,slow=12,SNR=234						
KK31				⇑Pg	**Pb**	**17 00 42.2**	**+3.9**
	comp=Z,39nm,0.6s,baz=135,slow=15,SNR=16						
KK31				⇑Lg	Lg	17 01 48.0	
	comp=Z,73nm,0.5s,baz=138,slow=29,SNR=6.4						
KKAR	**Karatay Array**	**5.06**	**315**	Pn	**Pn**	**17 00 24.6**	**-1.0**
CHM	**Chimkent**	**5.14**	**304**	*e*P	**Pb**	**17 00 44.1**	**+4.4**
	comp=Z,61nm,0.2s						
CHM				*e*S	**Sg**	**17 01 53.3**	**-1.4**
	comp=Z,622nm,0.5s						
BRLS	**Borolday**	**5.39**	**311**	*e*P	**Pb**	**17 00 47.8**	**+3.7**
	comp=Z,40nm,0.7s						
BRLS				*e*S	**Sg**	**17 01 59.0**	**-3.8**
	comp=Z,233nm,0.9s						
BRLS	**Borolday**	**5.39**	**311**	*e*Pg	**Pg**	**17 00 50.4**	**-2.6**
	baz=305						
BRLS				*i* Lg	Lg	17 02 00.6	
	baz=305						
BRLS	**Borolday**	**5.39**	**311**	Pg	Pb	17 00 49.0	+5.0
	comp=Z,40nm,0.7s						
BRLS				Lg	Lg	17 01 59.0	
	comp=Z,233nm,0.9s						
BTLS	**Baital**	**5.53**	**350**	*c i*PN	**Pn**	**17 00 34.3**	**+2.3**
BTLS	**Baital**	**5.53**	**350**	*e*P	**Pb**	**17 00 47.3**	**+1.0**
	comp=Z,36nm,0.7s						
BTLS				*e*S	**Sb**	**17 01 59.0**	**+6.4**
	comp=Z,70nm,0.9s						
BTLS	**Baital**	**5.53**	**350**	⇑*i*Pn	**Pn**	**17 00 34.3**	**+2.3**
	baz=349						
BTLS				*i* Pb	**Pb**	**17 00 47.5**	**+1.2**
	baz=349						
BTLS	**Baital**	**5.53**	**350**	Pg	**Pb**	**17 00 48.2**	**+1.9**
	comp=Z,34nm,1.1s						
BTLS				Lg	Lg	17 01 58.0	
	comp=Z,70nm,0.9s						
DJR	**Jarkent**	**5.76**	**33**	*e*P	**Pb**	**17 00 51.1**	**+0.7**
	comp=Z,15nm,0.4s						
DJR				*e*S	**Sb**	**17 02 04.7**	**+5.2**
	comp=Z,113nm,1.3s						
DJR	**Jarkent**	**5.76**	**33**	Pg	Pb	17 00 55.5	+5.1
	comp=Z,18nm,0.7s						
DJR				Lg	Lg	17 02 09.5	
	comp=Z,113nm,1.3s						
TDK	**Taldyqorghan**	**5.85**	**22**	*e*PN	**Pn**	**17 00 38.9**	**+2.4**
TDK	**Taldyqorghan**	**5.85**	**22**	*e*P	**Pb**	**17 00 53.4**	**+1.5**
	comp=Z,65nm,0.7s						
TDK				*e*S	**Sb**	**17 02 08.9**	**+7.0**

	comp=Z,676nm,1.3s						
TDK	Taldyqorghan	5.85	22	ePn	Pn	17 00 38.9	+2.4
	baz=23						
TDK	Taldyqorghan	5.85	22	Pg	Pb	17 00 54.9	+3.1
	comp=Z,166nm,0.8s						
TDK				Lg	Lg	17 02 08.9	
	comp=Z,676nm,1.3s						
CHCP	Chirah Chowk	6.17	197	P	Pb	17 00 49.0	-8.2
CEP	Cherat	6.40	207	P	Pn	17 00 51.3	+7.1
KAPS	Kapalarasan	6.40	26	eP	Pb	17 01 04.0	+2.7
	comp=Z,47nm,0.8s						
KAPS				eS	Sb	17 02 27.5	+10
	comp=Z,102nm,1.3s						
KAPS	Kapalarasan	6.40	26	Pg	Pb	17 01 05.9	+4.7
	comp=Z,47nm,0.8s						
KAPS				Lg	Lg	17 02 27.5	
	comp=Z,102nm,1.3s						
KBL	Kabul	7.14	227	Pn	Pn	17 00 57.0	+2.5
KBL	Kabul	7.14	227	P	Pn	17 00 57.0	+2.5
THW	Thamme Wali	7.39	204	P	Pn	17 01 03.5	+5.7
SARP	Sargodha	7.97	197	P	Pn	17 01 10.9	+5.3
BHK	Bhakra	8.21	174	eP	Pn	17 01 13.0	+4.1
SMLA	Simla	8.58	170	eP	Pn	17 01 17.9	+4.0
MAKZ	Makanchi	8.67	32		Pn	17 01 13.8	-1.4
MAKZ	Makanchi	8.67	32	P	Pn	17 01 13.8	-1.4
MK31	Makanchi Array	8.79	33		Pn	17 01 15.6	-1.2
MK31	Makanchi Array	8.79	33	c iP	Pn	17 01 18.3	+1.5
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	Makanchi Array	8.79	33	⇓Pn	Pn	17 01 18.6	+1.8
	comp=Z,3.8nm,0.6s,baz=212,slow=13,SNR=27						
MKAR	Makanchi Array	8.79	33	P	Pn	17 01 18.2	+1.4
	comp=Z,2.5nm,0.6s,baz=210,slow=13,SNR=22						
MKAR				Lg	Lg	17 03 42.0	
	comp=Z,0.6nm,0.3s,baz=223,slow=27,SNR=3.6						
MKAR	Makanchi Array	8.79	33		Pn	17 01 16.0	-0.8
OTUK	Ortayu	8.91	347	⇑Pn	Pn	17 01 19.2	+0.6
	comp=Z,17nm,1.4s						
WMQ	Urumqi	10.13	61	eP	Pn	17 01 41.1	+5.8
WMQ				smax	smax		
	comp=N,200nm,1.7s						
WMQ				smax	smax		
	comp=E,170nm,1.5s						
ZSN	Zaisan	10.44	38	eP	Pn	17 01 42.2	+2.8
ZSN	Zaisan	10.44	38	ePn	Pn	17 01 42.2	+2.8
	baz=39						
KURBB	Kurchatov Arra	11.24	10	P	Pn	17 01 50.4	0.0
	comp=E,1.2nm,0.8s,baz=198,slow=12,SNR=8.2						
KURBB				Lg	Lg	17 04 57.6	
	comp=E,0.2nm,0.3s,baz=193,slow=29,SNR=11						
KURBB	Kurchatov Arra	11.24	10	P	Pn	17 01 49.2	-1.2
KURBB	Kurchatov Arra	11.24	10	⇓Pn	Pn	17 01 50.3	-0.1
	comp=E,14nm,1.3s						
KURBB				⇑Lg	Lg	17 04 58.1	
	comp=E,262nm,1.1s						
SEM	Semipalatinsk	11.34	16	eP	Pn	17 01 51.6	-0.4
SEM	Semipalatinsk	11.34	16	ePn	Pn	17 01 51.6	-0.4
	baz=16						
KURK	Kurchatov	11.35	11	Pn	Pn	17 01 49.4	-2.5
KURK	Kurchatov	11.35	11	⇓eP	Pn	17 01 51.8	0.0
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AJM	Ajmer	13.10	183	eP	Pn	17 02 18.0	+2.1
AJM				i S	Sn	17 04 38.0	-3.7
GEYT	Alibeck	13.57	268	P	Pn	17 02 23.1	+0.9
	comp=Z,2.3nm,0.5s,baz=96,slow=8.8,SNR=2.6						
GEYT				S	Sn	17 04 48.1	-5.0
	comp=Z,3.0nm,0.5s,baz=147,slow=24,SNR=2.5						
GEYT	Alibeck	13.57	268	Pn	Pn	17 02 22.8	+0.5
GYA0B	ALIBECK ARRAY	13.57	268	Pn	Pn	17 02 22.6	+0.4
BRVK	Borovoye	13.91	347	Pn	Pn	17 02 24.8	-1.9
BRVK	Borovoye	13.91	347	ceP	Pn	17 02 26.0	-0.8
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	13.91	347	⇑P	Pn	17 02 25.5	-1.3
	comp=Z,39nm,1.0s						
KKN	Kakani	14.37	142	eP	Pn	17 02 32.2	-1.2
	comp=Z,56nm,0.5s						
DMN	Daman	14.44	143	eP	Pn	17 02 32.9	-1.5
	comp=Z,37nm,0.6s						
PKIN	Phulchoki	14.60	142	eP	Pn	17 02 35.2	-1.5
	comp=Z,18nm,0.3s						
PKI	Pulchoki	14.61	142	eP	Pn	17 02 35.1	-1.8
	comp=Z,22nm,0.4s						
AB31	Akbulak array	14.62	316	i P	Pn	17 02 35.6	-1.0
AB31	Akbulak array	14.62	316	P	Pn	17 02 35.6	-1.0
	comp=Z,4.8nm,0.7s,baz=124,slow=11,SNR=60						
ABKAR	Akbulak array	14.62	316	Pn	Pn	17 02 35.2	-1.4
JIRN	Jiri	14.92	140	eP	Pn	17 02 39.7	-1.4
	comp=Z,274nm,0.8s						
RAMN	Ramite	15.71	140	eP	Pn	17 02 48.2	-3.2
	comp=Z,179nm,0.9s						
GOMU	GeErMu	15.72	96	P	Pn	17 02 50.3	-1.3
GOMU				pP	P	17 02 53.4	-2.3
GOMU				sP	pP	17 02 54.3	-4.9
GOMU				S	Sn	17 05 25.3	-21
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,68nm,4.6s						
GOMU				LR	LR		
	comp=N,170nm,6.7s						
GOMU				LR	LR		
	comp=E,110nm,5.7s						
GOMU				LR	LR		
	comp=Z,87nm,7.0s						
ZAA0	Zalesovo Array	15.72	21	Pn	Pn	17 02 49.1	-2.0
ZAA0	Zalesovo Array	15.72	21	⇑P	Pn	17 02 49.3	-1.8
	comp=Z,2.3nm,1.0s						
ZALV	Zalesovo Beam	15.72	21	P	Pn	17 02 50.1	-1.1
	comp=Z,6.1nm,0.8s,baz=203,slow=11,SNR=28						
ZALV	Zalesovo Beam	15.72	21	Pn	Pn	17 02 49.1	-2.0
LSA	Lhasa	16.29	122	P	Pn	17 02 53.8	-5.3
AKTO	Aktyubinsk	16.32	317	P	Pn	17 02 59.1	+0.2
	comp=Z,11nm,1.1s,baz=125,slow=12,SNR=19						
AKTO	Aktyubinsk	16.32	317	⇓P	Pn	17 02 58.9	0.0
	comp=Z,11nm,0.8s						
BHPL	Bhopal	16.40	173	eP	P	17 03 03.8	+0.9
GTA	Gaotai	18.86	83	eP	Pn	17 03 31.9	+1.3
GTA				pP	sP	17 03 43.3	+8.2
GTA				sP	pP	17 03 51.8	+18
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,45nm,6.0s						
GTA				LR	LR		
	comp=N,280nm,11.2s						
GTA				LR	LR		
	comp=E,520nm,10.8s						
GTA				LR	LR		
	comp=Z,580nm,12.0s						
SHL	Shillong	19.69	130	eP	Pn	17 03 42.1	+1.3
SHL				IAmb	IAmb	17 03 43.0	
	comp=Z,12nm,0.7s						
SVE	Sverdlovsk	19.76	336	eP	P	17 03 40.1	+0.5
SVE				eS	S	17 07 06.1	-16
SVE				pmax	pmax		
	comp=Z,18nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,15.0s						
ARU	Arti	20.15	332	P	P	17 03 44.1	+0.2
	comp=Z,4.3nm,0.7s,baz=137,slow=7.1,SNR=16						
ARU				Lg	Lg	17 09 42.5	
	baz=146,slow=22						
ARU	Arti	20.15	332	P	P	17 03 42.5	-1.4
ARU	Arti	20.15	332	d iP	P	17 03 44.3	+0.4
ARU				S	S	17 07 20.3	-10
ARU				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU				MLR	MLR		
	comp=Z,277nm,14.0s						
MAK	Makhachkala	21.17	288	eP	P	17 03 56.3	+1.3
MAK				e*SP	sP	17 04 19.5	+19
MAK				eS	S	17 07 47.6	-2.7
MAK				e*SS	pS	17 08 11.1	+13
MAK				pmax	pmax		
	comp=Z,140nm,1.1s						
RAGD	RAYAGADA	21.45	159	eP	P	17 04 11.2	+13
MOY	Mondy	21.48	47	eP	P	17 03 59.9	+1.5
MOY				pmax	pmax		
	comp=Z,12nm,1.8s						
SEKA	Sheki	21.48	283	P	P	17 04 00.2	+1.7
MNGR	Mingechevir, A	21.61	282	P	P	17 04 02.2	+2.5
WSAR	Wadi Sarin	21.62	226	P	P	17 04 04.2	+4.2
	comp=Z,3.3nm,0.8s,baz=56,slow=6.8,SNR=4.4						
	comp=Z,3.3nm,0.8s						
GANJ	Ganja	22.20	282	P	P	17 04 08.0	+1.8
ZAK	Zakamensk	22.36	52	eP	P	17 04 07.3	-0.6
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
GROC	Groznyy	22.42	289	eP	P	17 04 08.6	+0.2
GROC				e*SP	sP	17 04 35.8	+22
GROC				eS	S	17 08 09.5	-5.0
GROC				pmax	pmax		
	comp=Z,50nm,1.0s						
BELG	Belogornoye	22.97	313	P	P	17 04 13.9	-0.2
	comp=Z,19nm,0.9s,baz=129,slow=6.4,SNR=5.3						
	comp=Z,19nm,0.9s						
NAX	Nakhchivan	23.05	279	P	P	17 04 17.3	+2.1
GNI	Garni	23.46	281	P	P	17 04 22.8	+3.3
	comp=Z,7.8nm,0.7s,baz=48,slow=14,SNR=2.8						
	comp=Z,7.8nm,0.7s						
GNI	Garni	23.46	281	ceP	P	17 04 20.9	+1.4
GNI				pmax	pmax		
	comp=Z,17nm,1.3s						
SONM	Songino Array	23.76	60	P	P	17 04 22.4	+0.1
	comp=Z,2.0nm,0.8s,baz=266,slow=10,SNR=18						
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	23.76	60	P	P	17 04 22.0	-0.4
SONM	Songino Array	23.76	60	P	P	17 04 22.0	-0.4
SONM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ONI	Oni	24.16	287	P	P	17 04 25.7	-0.4
ONI				IAmb	IAmb	17 04 40.2	
	comp=Z,15nm,1.1s						
ONI	Oni	24.16	287	P	P	17 04 25.7	-0.4
ONI				pmax	pmax		
	comp=Z,15nm,1.1s						
ULN	Ulaanbaatar	24.21	60	P	P	17 04 25.8	-0.8
ULN	Ulaanbaatar	24.21	60	ceP	P	17 04 26.6	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	Khabaz	24.52	290	P	P	17 04 30.4	+1.2
	comp=Z,1.4nm,0.7s,baz=97,slow=6.4,SNR=3.7						
	comp=Z,1.4nm,0.7s						
KIV	Kislovodsk	24.66	291	P	P	17 04 29.8	-0.8
KIV				IAmb	IAmb	17 04 59.2	
	comp=Z,10nm,0.8s						
KIV	Kislovodsk	24.66	291	eP	P	17 04 33.8	+3.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIRV	Kirov	25.22	327	P	P	17 04 35.5	+0.2
	comp=Z,20nm,0.6s,baz=54,slow=2.1,SNR=5.7						
	comp=Z,20nm,0.6s						
PZH	PanZhiHua	25.57	113	P	P	17 04 42.6	+3.5
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,6.3s						
XAN	Xi'an	27.33	91	P	P	17 05 00.0	+5.2
XAN				pP	sP	17 05 07.9	+7.8
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC	Hu-ho-hao-te	27.55	76	eP	P	17 04 55.8	-1.0
HHC				pmax	pmax		
	comp=Z,47nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
HHC				LR	LR		
	comp=N,480nm,11.2s						
HHC				LR	LR		
	comp=E,340nm,12.3s						
HHC				LR	LR		
	comp=Z,710nm,13.3s						
VORR	Voronezh	27.72	308	eP	P	17 04 56.3	-1.8
VORR				pmax	pmax		
	comp=Z,40nm,0.4s						
CMAR	Chiang Mai Arr	29.32	129	P	P	17 05 15.4	+2.8
	comp=Z,0.4nm,0.7s,baz=308,slow=9.0,SNR=1.5						
	comp=Z,0.4nm,0.7s						
OBN	Obninsk	30.05	314	P	P	17 05 18.8	+0.1
OBN	Obninsk	30.05	314	deP	P	17 05 19.1	+0.4
OBN				e		17 06 16.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	30.51	8	P	P	17 05 21.4	-1.3
	comp=Z,4.5nm,0.9s,baz=183,slow=5.1,SNR=12						
	comp=Z,4.5nm,0.9s						
NRIK	Noril'sk	30.51	8	P	P	17 05 22.4	-0.3
NRIK	Noril'sk	30.51	8	c iP	P	17 05 22.5	-0.1
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	Klimovskoe	30.66	326	eP	P	17 05 22.9	-1.2
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	30.66	326	eP	P	17 05 22.9	-1.2
KLMR				AMP		17 05 25.0	
	comp=Z,12nm,1.4s						
BJI	Beijing	31.15	76	P	P	17 05 22.4	-6.2
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				LR	LR		
	comp=N,200nm,16.7s						
BJI				LR	LR		
	comp=E,180nm,14.4s						
BJI				LR	LR		
	comp=Z,330nm,14.8s						
BR131	Keskin Array S	31.91	284	P	P	17 05 36.8	+1.3
BR131				IAmb	IAmb	17 05 38.2	
	comp=Z,7.7nm,0.7s						
BR131	Keskin Array S	31.91	284	d iP	P	17 05 37.4	+1.9
BRTR	Keskin Array B	31.91	284	P	P	17 05 37.2	+1.7
	comp=Z,5.0nm,0.8s,baz=91,slow=8.1,SNR=37						
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	31.91	284	P	P	17 05 37.0	+1.4
AKASG	Malin Array Be	33.86	305	P	P	17 05 52.2	-0.1
	comp=Z,1.1nm,0.7s,baz=76,slow=8.2,SNR=6.3						
	comp=Z,1.1nm,0.7s						
AKASG	Malin Array Be	33.86	305	IAmb	IAmb	17 05 55.9	
	comp=Z,1.0nm,0.7s						
AKBB	Malin Array Si	33.86	305	P	P	17 05 51.8	-0.5
AKBB				IAmb	IAmb	17 05 53.4	
	comp=Z,4.3nm,0.8s						
AKBB	Malin Array Si	33.86	305	deP	P	17 05 52.7	+0.5
MNK	Minsk	34.89	311	i P	P	17 06 00.2	-0.9
MNK				i *PP	sP	17 06 16.1	+10
MNK				i *SP	pP	17 06 25.6	+21
MNK				i		17 07 16.9	
MNK				i S	S	17 11 26.6	-5.5
MNK				i *SS	sS	17 11 56.3	+18
MNK				i SS	SnSn	17 13 47.6	+1.4
MNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				MLR	MLR		
	comp=N,66nm,14.0s						
MNK				MLR	MLR		
	comp=E,15nm,15.0s						
MNK				MLR	MLR		
	comp=Z,136nm,13.0s						
MNK	Minsk	34.89	311	i P	P	17 06 00.2	-0.9
MNK				i P	P	17 06 00.2	-0.9
	comp=N,16nm,0.8s						
MNK				i P	P	17 06 00.2	-0.9
	comp=Z,4.0nm,0.5s,baz=96						
MNK				i pP	sP	17 06 16.1	+10
MNK				i sP	pP	17 06 25.6	+21
MNK				i PP	PnPn	17 07 16.9	-0.6
MNK				i PPP	PPP	17 07 30.0	
MNK				i S	S	17 11 26.6	-5.5
MNK				i sS	sS	17 11 56.4	+18
MNK				i SS	SnSn	17 13 47.6	+1.4
MNK				i SSS	SSS	17 14 02.3	
MNK				i LR	LR	17 19 16.4	
MNK				i LRM	MLR	17 20 58.1	
	comp=N,66nm,14.0s						
MNK				i LRM	MLR	17 21 01.9	
	comp=E,15nm,15.3s						
MNK				i LRM	MLR	17 21 09.6	
	comp=Z,136nm,12.7s						
NACGM	Naroch	35.56	312	eP	P	17 06 07.5	+0.6
	baz=93						
IDID	Didziasalis	35.63	313	eP	P	17 06 08.7	+1.3
NJ2	Nanjing	35.78	88	eP	P	17 06 09.9	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
IIGN	Ignalina	35.92	313	eP	P	17 06 10.6	+0.6
LVZ	Lovozero	35.98	335	P	P	17 06 10.1	-0.2
LVZ	Lovozero	35.98	335	P	P	17 06 10.1	-0.2
LVZ				pmax	pmax		
	comp=Z,19nm,1.0s						
ISAL	Salakas	36.00	313	eP	P	17 06 12.4	+1.8
QIZ	Qiongzhong	36.07	115	P	P	17 06 14.4	+2.8
QIZ				S	S	17 11 50.3	-0.6
QIZ				LR	LR		
	comp=N,280nm,13.7s						
QIZ				LR	LR		
	comp=E,220nm,13.3s						
QIZ				LR	LR		
	comp=Z,190nm,16.1s						
MLR	Muntele Rosu	36.41	296	P	P	17 06 16.4	+1.9
MLR				IAmb	IAmb	17 06 19.0	
	comp=Z,6.2nm,0.9s						
MLR	Muntele Rosu	36.41	296	P	P	17 06 16.4	+1.9
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BURAR	Bucovina Array	36.63	299	P	P	17 06 16.9	+0.6
BUR08	Bucovina Ar. S	36.64	300	P	P	17 06 16.9	+0.5
FIA1	FINESS Array S	36.97	323	P	P	17 06 18.5	-0.4
FIA1				IAmb	IAmb	17 06 46.5	
	comp=Z,15nm,1.3s						
FINES	FINESS Array B	36.97	323	P	P	17 06 18.7	-0.2
	comp=Z,2.6nm,0.4s,baz=111,slow=9.5,SNR=27						
	comp=Z,2.6nm,0.4s						
PABE	Paberze	37.22	313	P	P	17 06 21.3	+0.3
PABE	Paberze	37.22	313	eP	P	17 06 22.1	+1.1
MEF	Metsahovi	37.53	320	eP	P	17 06 24.1	+0.5
MTSE	Matsula	37.60	318	eP	P	17 06 24.6	+0.4
KEV	Kevo	39.30	336	P	P	17 06 38.2	-0.2
KEV				IAmb	IAmb	17 06 50.8	
	comp=Z,16nm,1.3s						
KEV	Kevo	39.30	336	P	P	17 06 38.2	-0.2
KEV				pmax	pmax		
	comp=Z,16nm,1.3s						
YAK	Yakutsk	39.43	37	P	P	17 06 38.7	-0.9
	comp=Z,4.3nm,0.6s,baz=214,slow=0.2,SNR=5.9						
	comp=Z,4.3nm,0.6s						
YAK	Yakutsk	39.43	37	eP	P	17 06 38.8	-0.7
YAK				e*PP	sP	17 06 57.3	+12
YAK				e		17 08 16.0	
YAK				e		17 08 43.1	
YAK				eS	S	17 12 33.8	-7.2
YAK				e		17 16 40.5	
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,40nm,2.9s						
YAK				pmax	pmax		
	comp=E,37nm,2.7s						
YAK				smax	smax		
	comp=E,63nm,3.3s						
ARCES	ARCESS Array B	39.69	335	P	P	17 06 41.7	0.0
	comp=E,5.9nm,0.5s,baz=110,slow=9.5,SNR=88						
	comp=E,5.9nm,0.5s						
ARCES	ARCESS Array B	39.69	335	P	P	17 06 41.9	+0.2
ARCES				IAmb	IAmb	17 06 53.7	
	comp=Z,19nm,1.4s						
ARCES	ARCESS Array B	39.69	335	P	P	17 06 41.9	+0.2
ARCES				pmax	pmax		
	comp=Z,19nm,1.5s						
OJC	Ojcow	39.90	304	P	P	17 06 43.2	-0.4
OJC	Ojcow	39.90	304	P	P	17 06 43.2	-0.4
OJC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AGG	Agios Georgios	40.54	287	P	P	17 06 50.1	+1.0
AGG				IAmb	IAmb	17 07 18.4	
	comp=Z,17nm,1.3s						
AGG	Agios Georgios	40.54	287	P	P	17 06 50.1	+1.0
AGG				pmax	pmax		
	comp=Z,17nm,1.3s						
KLR	Kul'dur	40.55	57	P	P	17 06 48.5	-0.6
	comp=Z,0.3nm,0.3s,baz=309,slow=14,SNR=2.0						
	comp=Z,0.3nm,0.3s						
FNA	Florina	40.71	290	P	P	17 06 51.1	+0.5
FNA	Florina	40.71	290	P	P	17 06 51.1	+0.5
FNA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DIVS	Divibare	40.84	295	P	P	17 06 52.9	+1.3
OKC	Ostrava-Krasne	41.00	304	ex	x	17 30 05.1	
	comp=Z,341nm,18.1s						
MAUC	Maruska	41.28	303	ex	x	17 30 06.4	
	comp=Z,876nm,21.1s						
ITM	Ithomi	41.44	284	P	P	17 06 56.0	-0.6
ITM				IAmb	IAmb	17 07 02.7	
	comp=Z,15nm,1.0s						
TIXI	Tiksi	41.60	23	P	P	17 06 56.7	-0.7
	comp=Z,6.1nm,0.7s,baz=315,slow=7.7,SNR=55						
	comp=Z,6.1nm,0.7s						
TIXI	Tiksi	41.60	23	P	P	17 06 56.5	-0.9
TIXI				IAmb	IAmb	17 06 57.7	
	comp=Z,7.3nm,0.8s						
TIXI	Tiksi	41.60	23	ceP	P	17 06 56.8	-0.6
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MODS	Modra-Piesok	41.80	302	ePP	PP	17 08 37.0	+1.2
KRLC	Kraliky	41.84	304	ex	x	17 28 48.6	
	comp=Z,350nm,14.7s						
DPC	Dobruska-Polom	42.09	305	eP	P	17 07 02.9	+1.2
DPC	Dobruska-Polom	42.09	305	eP	P	17 07 02.9	+1.2
DPC				ex	x	17 30 01.1	
	comp=Z,446nm,21.8s						
OSTC	Ostas	42.13	305	ex	x	17 30 05.8	
	comp=Z,425nm,16.5s						
CHVC	Chvalec	42.22	305	eP	P	17 07 03.9	+1.1
CHVC				ex	x	17 29 33.7	
	comp=Z,465nm,22.6s						
UPC	Upice	42.26	305	eP	P	17 07 04.5	+1.4
UPC	Upice	42.26	305	eP	P	17 07 04.5	+1.4
UPC				ex	x	17 29 40.3	
	comp=Z,529nm,25.3s						
TREC	Trest	42.80	304	ex	x	17 31 56.1	
	comp=Z,395nm,16.2s						
SCTE	Santa Cesarea	43.04	290	P	P	17 07 10.2	+0.6
PVCC	Panska Ves	43.17	305	ex	x	17 29 29.4	
	comp=Z,491nm,15.0s						
PRU	Pruhonice	43.28	305	eP	P	17 07 12.4	+1.1
PRU	Pruhonice	43.28	305	eP	P	17 07 12.4	+1.1
PRU				ex	x	17 29 32.7	
	comp=Z,411nm,14.1s						
BRG	Berggiesshubel	43.50	306	i P	P	17 07 14.4	+1.3
BRG				Amp		17 07 15.2	
	comp=Z,7.4nm,0.9s						
BRG	Berggiesshubel	43.50	306	i P	P	17 07 14.4	+1.3
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CKRC	Cesky Krumlov	43.65	303	eP	P	17 07 15.6	+1.2
NC405	NORSAR Array S	43.82	321	P	P	17 07 15.3	-0.3
NC602	NORSAR Array S	43.91	321	P	P	17 07 15.9	-0.4
NC303	NORSAR Array S	43.99	321	P	P	17 07 17.2	+0.3
NC303				IAmb	IAmb	17 07 27.8	
	comp=Z,9.6nm,1.1s						
CLL	Collm	44.01	307	P	P	17 07 17.0	-0.2
CLL				IAmb	IAmb	17 07 18.6	
	comp=Z,5.1nm,0.7s						
CLL	Collm	44.01	307	eP	P	17 07 15.0	-2.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL				MLR	MLR		
	comp=Z,500nm,19.9s						
CLL	Collm	44.01	307	eP	P	17 07 15.0	-2.2
CLL				i Pmax		17 07 17.6	
	comp=Z,5.0nm,0.7s						
CLL				ex	x	17 12 29.0	
CLL				eSS	SS	17 17 12.0	+6.3
CLL				Lm	MLR	17 30 00.0	
	comp=N,100nm,21.3s						
CLL				Lm	MLR	17 30 00.0	
	comp=E,300nm,20.4s						
CLL				Lm	MLR	17 30 00.0	
	comp=Z,500nm,19.9s						
NB201	NORSAR Array S	44.03	321	P	P	17 07 17.1	-0.1
GEC2	GERESS Array S	44.04	303	P	P	17 07 18.3	+0.7
GEC2				IAmb	IAmb	17 07 19.8	
	comp=Z,7.2nm,1.0s						
GERES	GERESS Array B	44.04	303	P	P	17 07 18.8	+1.2
	comp=Z,3.0nm,0.8s,baz=86,slow=5.5,SNR=15						
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	44.04	303	P	P	17 07 18.2	+0.7
KHC	Kasperske Hory	44.06	304	P	P	17 07 18.4	+0.6
KHC	Kasperske Hory	44.06	304	ceP	P	17 07 18.7	+1.0
KHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						

KHC	**Kasperske Hory**	**44.06**	**304**	*e*P	**P**	**17 07 18.3**	**+0.6**
KHC				*e*x	x	17 31 06.3	
	comp=Z,390nm,19.7s						
NB2	**NORSAR Subarra**	**44.06**	**321**	P	**P**	**17 07 17.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=89,slow=8.6						
NOA	**NORSAR Array B**	**44.06**	**321**	P	**P**	**17 07 16.9**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=90,slow=7.9,SNR=9.5						
	comp=Z,2.3nm,0.7s						
NAO01	**NORSAR Array S**	**44.23**	**321**	P	**P**	**17 07 18.6**	**-0.3**
NC204	**NORSAR Array S**	**44.28**	**321**	P	**P**	**17 07 18.8**	**-0.5**
NKC	**Novy Kostel**	**44.56**	**305**	*e*x	x	17 30 21.4	
	comp=Z,674nm,15.4s						
SPB2	**Spitsbergen Ar**	**45.30**	**346**	P	**P**	**17 07 28.0**	**+0.8**
SPITS	**Spitsbergen Ar**	**45.31**	**346**	P	**P**	**17 07 27.8**	**+0.6**
SPITS				pmax	pmax		
	comp=Z,41nm,1.4s						
KBS	**Kingsbay**	**46.39**	**346**	P	**P**	**17 07 36.2**	**+0.5**
KBS	**Kingsbay**	**46.39**	**346**	P	**P**	**17 07 36.2**	**+0.5**
KBS				pmax	pmax		
	comp=Z,12nm,1.0s						
TUE	**Stuetta**	**47.48**	**301**	P	**P**	**17 07 44.9**	**-0.1**
TUE				IAmb	IAmb	17 08 12.1	
	comp=Z,6.8nm,1.3s						
BFO	**Black Forest**	**47.62**	**304**	P	**P**	**17 07 46.4**	**+0.6**
BFO				IAmb	IAmb	17 07 47.4	
	comp=Z,3.7nm,0.9s						
BFO	**Black Forest**	**47.62**	**304**	P	**P**	**17 07 46.4**	**+0.6**
BFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	**48.67**	**73**	P	**P**	**17 07 53.0**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=293,slow=9.8,SNR=4.1						
	comp=Z,0.7nm,0.5s						
SENIN	**Lac Senin/Sane**	**48.86**	**301**	P	**P**	**17 07 56.4**	**+0.7**
SENIN				IAmb	IAmb	17 07 58.3	
	comp=Z,5.4nm,0.9s						
BNI	**Bardonecchia**	**49.69**	**300**	P	**P**	**17 08 02.6**	**+0.7**
BNI	**Bardonecchia**	**49.69**	**300**	P	**P**	**17 08 02.6**	**+0.7**
BNI				pmax	pmax		
	comp=Z,12nm,1.2s						
SSB	**Saint Sauveur**	**51.04**	**301**	P	**P**	**17 08 12.4**	**+0.4**
SSB				IAmb	IAmb	17 08 13.5	
	comp=Z,12nm,1.4s						
SSB	**Saint Sauveur**	**51.04**	**301**	P	**P**	**17 08 12.4**	**+0.4**
SSB				pmax	pmax		
	comp=Z,12nm,1.4s						
KEST	**Kesra**	**51.35**	**288**	P	**P**	**17 08 14.8**	**+0.3**
KEST				IAmb	IAmb	17 08 19.8	
	comp=Z,9.3nm,1.2s						
BILL	**Bilibino**	**54.29**	**28**	P	**P**	**17 08 35.7**	**+0.1**
BILL				IAmb	IAmb	17 08 36.7	
	comp=Z,3.5nm,0.9s						
BILL	**Bilibino**	**54.29**	**28**	*i* P	**P**	**17 08 34.3**	**-1.3**
BILL				*i*		17 09 38.7	
BILL				*i*		17 10 37.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,264nm,21.0s						
RES	**Resolute Bay**	**65.81**	**357**	P	**P**	**17 09 54.2**	**-0.4**
RES				IAmb	IAmb	17 10 14.7	
	comp=Z,6.3nm,1.5s						
RES	**Resolute Bay**	**65.81**	**357**	P	**P**	**17 09 54.2**	**-0.4**
RES				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TOLK	**Toolik Lake Re**	**67.02**	**16**	P	**P**	**17 10 01.9**	**-0.5**
A36M	**Sachs Harbour**	**67.77**	**7**	P	**P**	**17 10 06.2**	**-0.8**
COLD	**Coldfoot**	**68.02**	**17**	P	**P**	**17 10 08.1**	**-0.7**
COLD				IAmb	IAmb	17 10 09.3	
	comp=Z,5.0nm,0.9s						
IMAR	**Indian Mountai**	**68.14**	**19**	P	**P**	**17 10 08.3**	**-1.2**
BMAR	**Burnt Mountain**	**69.08**	**15**	P	**P**	**17 10 15.2**	**-0.3**
TOA0	**Torodi Ar. Sit**	**69.20**	**270**	P	**P**	**17 10 16.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**69.20**	**270**	P	**P**	**17 10 17.2**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=46,slow=5.4,SNR=32						
	comp=Z,3.2nm,0.5s						
H23K	**Yukon River**	**69.32**	**18**	P	**P**	**17 10 16.9**	**0.0**
H23K				IAmb	IAmb	17 10 28.4	
	comp=Z,3.6nm,1.1s						
J20K	**Nowinta River**	**69.45**	**21**	P	**P**	**17 10 17.3**	**-0.4**
J20K				IAmb	IAmb	17 10 26.2	
	comp=Z,2.9nm,0.9s						
H24K	**Noodor Dome**	**69.70**	**17**	P	**P**	**17 10 19.0**	**-0.3**
K20K	**Telida**	**70.11**	**21**	P	**P**	**17 10 21.6**	**-0.3**
INK	**Inuvik**	**70.25**	**11**	P	**P**	**17 10 22.1**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=335,slow=5.3,SNR=18						
	comp=Z,3.9nm,0.7s						
INK	**Inuvik**	**70.25**	**11**	P	**P**	**17 10 22.1**	**-0.4**
INK	**Inuvik**	**70.25**	**11**	P	**P**	**17 10 22.1**	**-0.4**
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDM	**Murphy Dome**	**70.34**	**18**	P	**P**	**17 10 22.7**	**-0.5**
MDM				IAmb	IAmb	17 10 31.3	
	comp=Z,5.5nm,1.4s						
BPAW	**Bear Paw Mtn.**	**70.36**	**20**	P	**P**	**17 10 22.9**	**-0.5**
C36M	**Paulatuk**	**70.42**	**7**	P	**P**	**17 10 22.6**	**-0.9**
NEA2	**Nenana**	**70.44**	**19**	P	**P**	**17 10 23.2**	**-0.6**
NEA2				IAmb	IAmb	17 10 34.6	
	comp=Z,4.2nm,1.3s						
COLA	**College**	**70.51**	**18**	⇑*e*P	**P**	**17 10 23.3**	**-0.8**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KTH	**Kantishna Hill**	**70.81**	**20**	P	**P**	**17 10 25.2**	**-1.0**
KTH				IAmb	IAmb	17 10 26.4	
	comp=Z,6.5nm,1.2s						
IL31		**70.82**	**18**	P	**P**	**17 10 24.3**	**-1.8**
ILAR	**Eielson Array**	**70.82**	**18**	P	**P**	**17 10 24.7**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=315,slow=4.7,SNR=18						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**70.82**	**18**	P	**P**	**17 10 24.3**	**-1.8**
DHY	**Denali Highway**	**72.12**	**19**	P	**P**	**17 10 33.0**	**-1.2**
DHY				IAmb	IAmb	17 10 33.6	
	comp=Z,2.6nm,0.8s						
O18K	**Koktuh Hills**	**72.52**	**24**	P	**P**	**17 10 37.1**	**+0.7**
O18K				IAmb	IAmb	17 10 37.8	
	comp=Z,6.3nm,1.1s						
PAX	**Paxson**	**72.68**	**18**	P	**P**	**17 10 36.2**	**-1.3**
PAX				IAmb	IAmb	17 10 37.3	
	comp=Z,5.3nm,1.2s						
PAX	**Paxson**	**72.68**	**18**	P	**P**	**17 10 36.2**	**-1.3**
PAX				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KOWA	**Kowa**	**72.80**	**275**	P	**P**	**17 10 39.0**	**+0.3**
KOWA				IAmb	IAmb	17 10 51.6	
	comp=Z,10nm,1.4s						
P18K	**Big Mountain,**	**72.87**	**24**	P	**P**	**17 10 38.7**	**+0.1**
P18K				IAmb	IAmb	17 10 39.7	
	comp=Z,4.9nm,0.9s						
SML	**Sawmill**	**72.94**	**20**	P	**P**	**17 10 38.2**	**-0.7**
SML				IAmb	IAmb	17 10 48.9	
	comp=Z,5.6nm,0.9s						
SCM	**Sheep Creek Mo**	**73.18**	**20**	P	**P**	**17 10 39.2**	**-1.2**
SCM				IAmb	IAmb	17 10 40.3	
	comp=Z,4.9nm,0.7s						
SCM	**Sheep Creek Mo**	**73.18**	**20**	P	**P**	**17 10 39.2**	**-1.2**
SCM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KNK	**Knik Glacier**	**73.23**	**20**	P	**P**	**17 10 39.4**	**-1.3**
KNK				IAmb	IAmb	17 11 00.9	
	comp=Z,4.8nm,0.7s						
M24K	**Tolsona, Glenn**	**73.24**	**19**	P	**P**	**17 10 40.1**	**-0.6**
L27K	**Beaver Creek,**	**73.45**	**17**	P	**P**	**17 10 41.3**	**-0.6**
BCAR	**Beaver Creek A**	**73.45**	**17**	P	**P**	**17 10 41.5**	**-0.5**
M27K	**Edge Creek, AK**	**74.05**	**17**	P	**P**	**17 10 45.4**	**-0.2**
FID	**Port Fidalgo**	**74.31**	**20**	P	**P**	**17 10 46.7**	**-0.3**
FID				IAmb	IAmb	17 10 58.8	
	comp=Z,4.7nm,1.2s						
M30M	**Minto, Yukon**	**74.94**	**15**	P	**P**	**17 10 50.0**	**-0.6**
KDAK	**Kodiak Island**	**75.00**	**24**	P	**P**	**17 10 50.5**	**-0.4**
KDAK				IAmb	IAmb	17 11 01.9	
	comp=Z,8.8nm,1.4s						
KDAK	**Kodiak Island**	**75.00**	**24**	P	**P**	**17 10 50.5**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
M31M	**Drury Creek, Y**	**75.74**	**14**	P	**P**	**17 10 54.3**	**-0.9**
M31M				IAmb	IAmb	17 10 55.8	
	comp=Z,5.3nm,1.3s						
HYT	**Haines Junctio**	**76.38**	**16**	P	**P**	**17 10 58.6**	**-0.4**
HYT				IAmb	IAmb	17 11 10.0	
	comp=Z,4.4nm,1.0s						
P33M	**Teslin, Yukon**	**77.88**	**14**	P	**P**	**17 11 06.3**	**-1.1**
YKA	**Yellowknife Ar**	**77.94**	**5**	P	**P**	**17 11 06.9**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=348,slow=5.5,SNR=49						
	comp=Z,3.8nm,0.8s						
YKA	**Yellowknife Ar**	**77.94**	**5**	P	**P**	**17 11 06.6**	**-0.9**
YKA	**Yellowknife Ar**	**77.94**	**5**	P	**P**	**17 11 06.6**	**-0.9**
DBIC	**Dimbokro**	**78.25**	**269**	P	**P**	**17 11 10.8**	**+0.8**
	comp=Z,8.9nm,1.1s,baz=104,slow=12,SNR=3.0						
	comp=Z,8.9nm,1.1s						
DBIC	**Dimbokro**	**78.25**	**269**	P	**P**	**17 11 10.9**	**+0.8**
DBIC				pmax	pmax		
	comp=Z,27nm,1.5s						
WRA	**Warramunga Arr**	**80.83**	**125**	P	**P**	**17 11 24.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=321,slow=5.3,SNR=5.7						
	comp=Z,0.6nm,0.8s						
WB2	**Warramunga Arr**	**80.84**	**125**	P	**P**	**17 11 24.6**	**+0.6**
WB2				IAmb	IAmb	17 11 36.2	
	comp=Z,5.6nm,1.1s						
ASAR	**Alice Springs**	**83.32**	**128**	P	**P**	**17 11 37.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=320,slow=5.5,SNR=9.0						
	comp=Z,0.4nm,0.6s						
ULM	**Lac du Bonnet**	**90.20**	**354**	P	**P**	**17 12 09.8**	**-0.4**
ULM				IAmb	IAmb	17 12 28.9	
	comp=Z,4.8nm,1.1s						
ULM	**Lac du Bonnet**	**90.20**	**354**	P	**P**	**17 12 09.8**	**-0.4**
ULM				pmax	pmax		
	comp=Z,5.0nm,1.1s						

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*IDC **15** 17:02:24.6±0.7, 39°.61N×75°.53E, h0^{km}, mb4.2/23, mbtmp4.2/27, ML3.4/2, MS4.1/56, Error ellipse: s-maj=15.0km s-min=12.3km az=26.0*

*KRNET **15** 17:02:25.5±0.1, 39°.61N×75°.70E, mb5.1*

*SOME **15** 17:02:25.7, 39°.70N×75°.52E, h10^{km}, MS4.5*

*NEIC **15** 17:02:26.7±2.6, 39°.77N±0°.08×75°.62E±0°.08, h10^{km}±1^{km}, mb4.6/15, ML4.7(BJI), Error ellipse: s-maj=14.4km s-min=8.8km az=148.0*

*BJI **15** 17:02:29.5±0.0, 39°.76N×75°.46E, h10^{km}, mb4.3/19, mB4.5/15, ML4.7/5, Ms4.3/16, Ms7 4.1/14*

*NNC **15** 17:02:32.8±0.8, 39°.98N×75°.50E, h0^{km}, mb5.2, mpv4.9, Error ellipse: s-maj=5.9km s-min=4.4km az=167.0*

ISC 15 17:02:27.3±0.8**, 39°.83N**±0°.03×**75°.52E**±0°.02**, h11**^{km}±4^{km}**, n223,** σ2^{s}.**29**/240**, mb4.4**/34**, MS4.2**/56**, 37C-23D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.47**	**131**	Pg	**Pn**	**17 02 41.8**	**+1.7**
KSH				Sg	**Sb**	**17 02 51.5**	**+6.9**
KSH				smax	smax		
	comp=N,10µm,0.8s						
KSH				smax	smax		
	comp=E,12µm,0.9s						
OHH	**Osh**	**2.21**	**289**	⇑*i*P	**Pg**	**17 03 08.4**	**-1.2**
	baz=93						
OHH				⇑*i*S	**Sg**	**17 03 39.5**	**+1.2**
	baz=93						
ARLS	**Aral**	**2.23**	**336**	⇑*e*P	**Pg**	**17 03 09.0**	**-1.0**
	baz=36						
ARLS				⇑*i*S	**Sg**	**17 03 40.6**	**+1.7**
	baz=36						
ULHL	**Ulahol**	**2.48**	**12**	P	**Pg**	**17 03 13.1**	**-1.7**
	SNR=53						
ULHL	**Ulahol**	**2.48**	**12**	⇑*e*P	**Pb**	**17 03 11.6**	**-0.4**
	baz=9.0						
ULHL				⇑*i*S	**Sg**	**17 03 45.3**	**-1.6**
	baz=9.0						
UCH	**Uchtor**	**2.52**	**343**	P	**Pb**	**17 03 13.3**	**+0.5**
	SNR=95						
UCH	**Uchtor**	**2.52**	**343**	⇑*e*P	**Pb**	**17 03 13.2**	**+0.4**
	baz=41						
UCH				⇑*i*S	**Sg**	**17 03 47.9**	**-0.3**
	baz=41						
TARG	**Taragay, Kyrgy**	**2.57**	**42**	Pn	**Pn**	**17 03 07.5**	**-1.8**
KDJ	**Kajisay**	**2.62**	**28**	Pn	**Pb**	**17 03 11.8**	**-2.6**
KDJ	**Kajisay**	**2.62**	**28**	⇑*e*P	**Pb**	**17 03 13.0**	**-1.4**
	baz=24						
KDJ				⇑*i*S	**Sb**	**17 03 47.6**	**+0.9**
	baz=24						
BOOM	**Boomskoye usch**	**2.68**	**7**	Pn	**Pb**	**17 03 14.7**	**-0.7**
BOOM	**Boomskoye usch**	**2.68**	**7**	⇑*i*P	**Pb**	**17 03 14.7**	**-0.7**
	baz=4.0						
BOOM				⇑*i*S	**Sg**	**17 03 50.4**	**-3.0**
	baz=4.0						
AML	**Almayashu**	**2.69**	**330**	P	**Pb**	**17 03 15.4**	**-0.3**
	SNR=38						
KBK	**Karagaybulak**	**2.86**	**352**	P	**Pb**	**17 03 18.7**	**+0.2**
	SNR=28						
KBK	**Karagaybulak**	**2.86**	**352**	⇑*i*P	**Pb**	**17 03 17.7**	**-0.8**
	baz=50						
KBK				⇑*i*S	**Sb**	**17 03 55.6**	**+2.0**
	baz=50						
DRK	**Karamyk**	**2.89**	**264**	⇑*i*P	**Pb**	**17 03 16.6**	**-2.5**
	baz=69						
DRK				⇑*i*S	**Sb**	**17 03 54.0**	**-0.6**
	baz=69						
AAK	**Ala-Archa**	**2.91**	**345**	P	**Pb**	**17 03 19.3**	**-0.1**
	SNR=174						
AAK	**Ala-Archa**	**2.91**	**345**	Pn	**Pb**	**17 03 19.3**	**-0.1**
	504nm,0.4s,baz=157,slow=8.0,SNR=41						
AAK				Sn	**Sb**	**17 03 55.9**	**+0.9**
	109nm,0.3s,baz=2.5,slow=21,SNR=3.6						
AAK	**Ala-Archa**	**2.91**	**345**		**Pn**	**17 03 13.4**	**-0.4**
AAK	**Ala-Archa**	**2.91**	**345**	⇓*e*P	**Pb**	**17 03 18.4**	**-1.0**
	baz=44						
AAK				⇓*i*S	**Sb**	**17 03 57.1**	**+2.0**
	baz=44						
FRU1	**Bishkek**	**3.06**	**348**	Pn	**Pb**	**17 03 18.4**	**-3.3**
FRU1	**Bishkek**	**3.06**	**348**	⇑*i*P	**Pb**	**17 03 20.6**	**-1.1**
	baz=46						
FRU1				⇑*i*S	**Sb**	**17 04 00.9**	**+1.8**
	baz=46						
TKM2	**Tokmak 2**	**3.09**	**1**	P	**Pb**	**17 03 21.9**	**-0.6**
	SNR=52						
TKM2	**Tokmak 2**	**3.09**	**1**	⇓Pn	**Pb**	**17 03 21.2**	**-1.3**
	183nm,0.6s						
TKM2				⇓Pg	**Pg**	**17 03 28.3**	**+1.7**
	361nm,0.6s						
TKM2				⇑Lg	Lg	17 04 07.2	
	4µm,0.7s						
TKM2	**Tokmak 2**	**3.09**	**1**	⇑*e*P	**Pb**	**17 03 20.6**	**-1.9**
	baz=59						
TKM2				⇑*i*S	**Sb**	**17 04 00.8**	**+0.5**
	baz=59						
EKS2	**Erkin-Say**	**3.12**	**336**	P	**Pb**	**17 03 21.8**	**-1.1**
	SNR=31						
EKS2	**Erkin-Say**	**3.12**	**336**	⇑*e*P	**Pb**	**17 03 21.4**	**-1.5**
	baz=35						
EKS2				⇑*i*S	**Sb**	**17 04 02.2**	**+1.1**
	baz=35						
CHMS	**Chumysh**	**3.22**	**350**	P	**Pb**	**17 03 23.3**	**-1.2**
	SNR=28						
CHMS	**Chumysh**	**3.22**	**350**	⇓Pn	**Pb**	**17 03 23.0**	**-1.6**
	253nm,0.5s						
CHMS				⇓Pg	**Pg**	**17 03 29.0**	**0.0**
	461nm,0.8s						
CHMS				⇑Lg	Lg	17 04 10.9	
	4µm,1.1s						
CHMS	**Chumysh**	**3.22**	**350**	⇓*i*P	**Pb**	**17 03 22.5**	**-2.1**
	baz=48						
CHMS				⇓*i*S	**Sb**	**17 04 04.2**	**+0.4**
	baz=48						
KST	**Kastek**	**3.23**	**6**	*e*P	**Pg**	**17 03 27.5**	**-1.7**
	362nm,0.6s						
KST				*e*S	**Sg**	**17 04 12.3**	**+1.2**
	17µm,1.1s						
KST	**Kastek**	**3.23**	**6**	Pg	**Pg**	**17 03 28.4**	**-0.8**
	362nm,0.6s						
KST				Lg	Lg	17 04 09.9	
	17µm,1.1s						
ARK	**Arkit**	**3.34**	**307**	⇓*i*P	**Pb**	**17 03 24.2**	**-2.4**
	baz=9.0						
ARK				⇓*i*S	**Sb**	**17 04 07.3**	**0.0**
	baz=9.0						
ANVS	**Anan'yevo**	**3.37**	**28**	⇓*i*P	**Pn**	**17 03 23.1**	**+3.1**
	baz=24						
ANVS				⇓*i*S	**Sb**	**17 04 05.1**	**-3.1**
	baz=24						
TNSS	**Tian-Shan**	**3.38**	**18**	*e*P	**Pg**	**17 03 30.2**	**-2.0**
	416nm,0.5s						
TNSS				*e*S	**Sg**	**17 04 16.7**	**+0.7**
	3µm,1.0s						
TNSS	**Tian-Shan**	**3.38**	**18**	*i* Pn	**Pb**	**17 03 25.8**	**-1.7**
	baz=19						
TNSS				*e*Sb	**Sg**	**17 04 16.9**	**+0.9**
	baz=19						
TNSS	**Tian-Shan**	**3.38**	**18**	Pg	**Pg**	**17 03 32.5**	**+0.4**
	416nm,0.5s						
TNSS				Lg	Lg	17 04 16.7	
	3µm,1.0s						
MRKS	**Merke**	**3.39**	**330**	*e*P	**Pg**	**17 03 31.1**	**-1.2**
	192nm,0.6s						
MRKS				*e*S	**Sg**	**17 04 19.1**	**+2.9**
	692nm,0.8s						
MRKS	**Merke**	**3.39**	**330**	Pg	**Pg**	**17 03 31.1**	**-1.2**
	192nm,0.6s						
MRKS				Lg	Lg	17 04 14.6	
	692nm,0.8s						
PRZ	**Przheval'sk**	**3.43**	**38**	Pn	**Pn**	**17 03 22.4**	**+1.5**
PRZ	**Przheval'sk**	**3.43**	**38**	⇓*i*P	**Pn**	**17 03 23.8**	**+2.9**
	baz=34						
PRZ				⇓*i*S	**Sb**	**17 04 06.6**	**-3.4**
	baz=34						
USP	**Ospenovka**	**3.52**	**348**	P	**Pb**	**17 03 27.2**	**-2.5**
	SNR=33						
MDOK	**Medeo**	**3.52**	**19**	*e*P	**Pg**	**17 03 32.5**	**-2.4**
	271nm,0.7s						
MDOK				*e*S	**Sg**	**17 04 21.1**	**+0.6**
	6µm,0.7s						
MDOK	**Medeo**	**3.52**	**19**	*i* Pn	**Pb**	**17 03 27.1**	**-2.7**
	baz=20						
MDOK				*i* Sb	**Sg**	**17 04 20.9**	**+0.4**
	baz=20						
MDOK	**Medeo**	**3.52**	**19**	⇑Pn	**Pb**	**17 03 27.2**	**-2.6**
	161nm,1.0s						
MDOK				⇓Pg	**Pg**	**17 03 33.7**	**-1.1**
	713nm,1.0s						
MDOK				⇑Lg	Lg	17 04 21.2	
	7µm,0.8s						
MDOK	**Medeo**	**3.52**	**19**	Pg	**Pg**	**17 03 34.8**	**-0.1**
	271nm,0.7s						
MDOK				Lg	Lg	17 04 21.1	
	6µm,0.7s						
AAA	**Alma-Ata**	**3.54**	**17**	*e*P	**Pg**	**17 03 33.0**	**-2.1**
	343nm,0.5s						
AAA				*e*S	**Sg**	**17 04 22.1**	**+1.2**
	10µm,0.7s						
AAA	**Alma-Ata**	**3.54**	**17**	*e*Pn	**Pb**	**17 03 28.6**	**-1.4**
	baz=18						
AAA	**Alma-Ata**	**3.54**	**17**	Pg	**Pg**	**17 03 35.1**	**0.0**
	343nm,0.5s						
AAA				Lg	Lg	17 04 21.5	
	10µm,0.7s						
KNDC	**Almaty**	**3.56**	**17**	⇑Pn	**Pb**	**17 03 29.0**	**-1.3**
	132nm,0.5s						
KNDC				⇑Pg	**Pg**	**17 03 35.3**	**-0.1**
	1µm,0.8s						
KNDC				⇑Lg	Lg	17 04 22.7	
	12µm,0.7s						
BTK	**Batken**	**3.62**	**275**	⇑*i*P	**Pn**	**17 03 26.7**	**+3.3**
	baz=78						
BTK				⇑*i*S	**Sb**	**17 04 12.0**	**-3.4**
	baz=78						
SGDS	**Sogindy**	**3.68**	**350**	*i* Pn	**Pb**	**17 03 29.0**	**-3.5**
	baz=351						
SGDS				*i* Pg	**Pg**	**17 03 38.6**	**+0.8**
	baz=351						
SGDS				*i* Sb	**Sg**	**17 04 24.9**	**-0.6**
	baz=351						
SATY	**Saty**	**3.89**	**33**	*e*P	**Pg**	**17 03 38.8**	**-3.1**
	314nm,0.8s						
SATY				*e*S	**Sg**	**17 04 31.5**	**-0.8**
	3µm,1.1s						
SATY	**Saty**	**3.89**	**33**	*e*Pn	**Pb**	**17 03 34.3**	**-1.8**
	baz=34						
SATY				*i* Sb	**Sg**	**17 04 33.4**	**+1.2**
	baz=34						
SATY	**Saty**	**3.89**	**33**	Pg	**Pg**	**17 03 41.2**	**-0.7**
	314nm,0.8s						
SATY				Lg	Lg	17 04 31.5	
	3µm,1.1s						
KTBS	**Karatobe**	**3.98**	**12**	*e*P	**Pg**	**17 03 40.9**	**-2.6**
	184nm,0.5s						
KTBS				*e*S	**Sg**	**17 04 35.2**	**+0.2**
	5µm,1.1s						
KTBS	**Karatobe**	**3.98**	**12**	Pg	**Pg**	**17 03 42.7**	**-0.8**
	184nm,0.5s						
KTBS				Lg	Lg	17 04 34.6	
	5µm,1.1s						
ZHN	**Zhinishke**	**3.99**	**32**	*e*P	**Pg**	**17 03 40.6**	**-3.2**
	114nm,0.3s						
ZHN				*e*S	**Sg**	**17 04 34.7**	**-0.8**
	2µm,1.6s						
ZHN	**Zhinishke**	**3.99**	**32**	*e*Pn	**Pb**	**17 03 34.0**	**-3.8**
	baz=33						
ZHN				*i* Sb	**Sg**	**17 04 35.5**	**0.0**
	baz=33						
ZHN	**Zhinishke**	**3.99**	**32**	Pg	**Pg**	**17 03 42.9**	**-0.9**
	114nm,0.3s						
ZHN				Lg	Lg	17 04 34.7	
	2µm,1.6s						
KUU	**Kurty**	**4.11**	**8**	*e*P	**Pg**	**17 03 42.9**	**-3.1**
	75nm,0.7s						
KUU				*e*S	**Sg**	**17 04 38.6**	**-0.6**
	1µm,0.9s						
KUU	**Kurty**	**4.11**	**8**	*e*Pn	Pb	17 03 34.8	-4.9
	baz=9.2						
KUU				*i* Pg	**Pg**	**17 03 46.3**	**+0.3**
	baz=9.2						
KUU				*i* Sb	**Sg**	**17 04 38.9**	**-0.3**
	baz=9.2						
KUU	**Kurty**	**4.11**	**8**	Pg	**Pg**	**17 03 45.3**	**-0.7**
	193nm,0.9s						
KUU				Lg	Lg	17 04 38.6	
	1µm,0.9s						
KURS	**Kuram**	**4.16**	**28**	*e*P	**Pg**	**17 03 43.8**	**-3.2**
	440nm,0.9s						
KURS				*e*S	**Sg**	**17 04 39.9**	**-1.0**
	2µm,1.0s						
KURS	**Kuram**	**4.16**	**28**	Pg	**Pg**	**17 03 46.6**	**-0.4**
	440nm,0.9s						
KURS				Lg	Lg	17 04 41.2	
	2µm,1.0s						
CHKK	**Chushkaly**	**4.17**	**15**	*e*P	**Pg**	**17 03 44.5**	**-2.6**
	203nm,0.7s						
CHKK				*e*S	**Sg**	**17 04 41.4**	**+0.2**
	5µm,1.0s						
CHKK	**Chushkaly**	**4.17**	**15**	*e*Pn	**Pb**	**17 03 36.1**	**-4.6**
	baz=16						
CHKK				*e*Pb	**Pg**	**17 03 46.6**	**-0.6**
	baz=16						
CHKK				*i* Pg	Pn	17 03 47.0	+16
	baz=16						
CHKK				*i* Sb	**Sg**	**17 04 41.2**	**0.0**
	baz=16						
CHKK	**Chushkaly**	**4.17**	**15**	Pg	**Pg**	**17 03 46.6**	**-0.6**
	203nm,0.7s						
CHKK				Lg	Lg	17 04 41.4	
	5µm,1.0s						
UZB	**Uzynbulak**	**4.23**	**37**	*e*P	**Pg**	**17 03 45.1**	**-3.3**
	237nm,0.7s						
UZB				*e*S	**Sg**	**17 04 42.7**	**-0.5**
	1µm,1.0s						
UZB	**Uzynbulak**	**4.23**	**37**	*i* Pn	**Pn**	**17 03 36.1**	**+4.2**
	baz=38						
UZB				*i* Pb	**Pg**	**17 03 46.7**	**-1.7**
	baz=38						
UZB				*i* Pg	Pb	17 03 49.3	+7.4
	baz=38						
UZB				*i* Sb	**Sg**	**17 04 42.7**	**-0.5**
	baz=38						
UZB	**Uzynbulak**	**4.23**	**37**	Pg	**Pg**	**17 03 47.4**	**-1.0**
	237nm,0.7s						
UZB				Lg	Lg	17 04 42.7	
	1µm,1.0s						
KPKS	**Kokpek**	**4.34**	**32**	*e*Pn	Pb	17 03 38.5	-5.2
	baz=33						
DZA	**Taraz**	**4.39**	**316**	*e*P	**Pg**	**17 03 49.4**	**-2.0**
	50nm,0.3s						
DZA				*e*S	**Sg**	**17 04 50.3**	**+1.9**
	283nm,0.5s						
SHLS	**Shalkode**	**4.45**	**40**	*e*Pn	**Pb**	**17 03 43.3**	**-2.3**
	baz=44						
SHLS				*e*Pg	Pg	17 03 57.4	+4.8
	baz=44						
PDGK	**Podgornoye**	**4.59**	**39**	Pg	**Pg**	**17 03 53.3**	**-2.0**
	63nm,0.7s						
PDGK				Lg	Lg	17 04 52.6	
	1µm,0.9s						
PDGK	**Podgornoye**	**4.59**	**39**	⇓Pn	Pn	17 03 41.8	+5.0
	212nm,0.9s						
PDGK				⇓Pg	**Pg**	**17 03 53.7**	**-1.6**
	212nm,0.9s						
PDGK				⇑Lg	Lg	17 04 54.9	
	2µm,0.8s						
IUG	**Iuzhnay**	**4.76**	**301**	*e*Pn	**Pn**	**17 03 43.1**	**+4.1**
	baz=301						
IUG				*e*Sn	**Sn**	**17 04 39.5**	**+5.3**
	baz=301						
TAS	**Tashkent**	**4.97**	**290**	⇓*e*P	**Pn**	**17 03 45.7**	**+3.8**

	baz=91						
TAS				⇓*e*S	**Sn**	**17 04 44.7**	**+5.3**
	baz=91						
KK31	**Karatay Array**	**4.99**	**313**	⇑Pg	**Pg**	**17 04 00.4**	**-2.4**
	36nm,0.6s,baz=111,slow=16,SNR=7.1						
KK31				⇓Lg	Lg	17 05 07.2	
	114nm,0.8s,baz=121,slow=25,SNR=3.8						
KKAR	**Karatay Array**	**4.99**	**313**	Pn	**Pn**	**17 03 44.0**	**+1.9**
KKAR	**Karatay Array**	**4.99**	**313**	Pn	**Pn**	**17 03 45.1**	**+3.0**
CHGR	**Chuyangaron**	**5.08**	**259**	Pn	**Pn**	**17 03 44.9**	**+1.5**
BTLS	**Baital**	**5.32**	**349**	*e*P	**Pb**	**17 04 04.1**	**+3.8**
	36nm,0.9s						
BTLS				*e*S	**Sg**	**17 05 15.6**	**-2.5**
	188nm,0.8s						
BTLS	**Baital**	**5.32**	**349**	*e*Pn	Pn	17 03 51.6	+4.9
	baz=349						
BTLS				*i* Pg	**Pg**	**17 04 08.1**	**-1.1**
	baz=349						
BTLS				*i* Lg	Lg	17 05 19.9	
	baz=349						
BTLS	**Baital**	**5.32**	**349**	Pg	**Pg**	**17 04 06.5**	**-2.7**
	36nm,0.9s						
BTLS				Lg	Lg	17 05 15.6	
	188nm,0.8s						
BRLS	**Borolday**	**5.34**	**309**	*e*P	**Pg**	**17 04 04.9**	**-4.6**
	50nm,1.1s						
BRLS				*e*S	**Sg**	**17 05 16.2**	**-2.4**
	259nm,1.4s						
BRLS	**Borolday**	**5.34**	**309**	*e*Pg	**Pg**	**17 04 06.5**	**-3.0**
	baz=306						
BRLS				*e*Lg	Lg	17 05 17.3	
	baz=306						
BRLS	**Borolday**	**5.34**	**309**	Pg	**Pg**	**17 04 06.8**	**-2.7**
	50nm,1.1s						
BRLS				Lg	Lg	17 05 16.2	
	259nm,1.4s						
DJR	**Jarkent**	**5.51**	**34**	*e*P	**Pg**	**17 04 09.0**	**-3.8**
	69nm,0.7s						
DJR				*e*S	**Sg**	**17 05 23.2**	**-0.9**
	613nm,1.2s						
DJR	**Jarkent**	**5.51**	**34**	Pg	**Pg**	**17 04 11.1**	**-1.7**
	69nm,0.7s						
DJR				Lg	Lg	17 05 23.2	
	613nm,1.2s						
TDK	**Taldyqorghan**	**5.59**	**21**	*e*P	**Pg**	**17 04 09.8**	**-4.6**
	380nm,0.6s						
TDK				*e*S	**Sg**	**17 05 24.3**	**-2.6**
	3µm,0.9s						
TDK	**Taldyqorghan**	**5.59**	**21**	*e*Pb	**Pg**	**17 04 09.8**	**-4.6**
	baz=22						
TDK	**Taldyqorghan**	**5.59**	**21**	Pg	**Pg**	**17 04 12.1**	**-2.4**
	380nm,0.6s						
TDK				Lg	Lg	17 05 24.8	
	3µm,0.9s						
KAPS	**Kapalarasan**	**6.15**	**26**	*e*P	Pg	17 04 19.4	-5.6
	77nm,0.8s						
KAPS				*e*S	**Sg**	**17 05 40.5**	**-4.0**
	447nm,1.8s						
KAPS	**Kapalarasan**	**6.15**	**26**	Pg	**Pg**	**17 04 22.8**	**-2.2**
	77nm,0.8s						
KAPS				Lg	Lg	17 05 43.1	
	447nm,1.8s						
CHCP	**Chirah Chowk**	**6.42**	**197**	P	**Pn**	**17 04 05.0**	**+3.2**
CEP	**Cherat**	**6.65**	**207**	P	**Pn**	**17 04 08.1**	**+2.9**
JMU	**Jammu**	**7.11**	**184**	*e*P	**Pn**	**17 04 08.2**	**-3.1**
THW	**Thamme Wali**	**7.65**	**205**	P	**Pn**	**17 04 20.8**	**+2.0**
SARP	**Sargodha**	**8.22**	**197**	P	**Pn**	**17 04 27.4**	**+0.9**
BHK	**Bhakra**	**8.42**	**175**	*e*P	**Pn**	**17 04 26.7**	**-2.6**
MK31	**Makanchi Array**	**8.53**	**33**	⇓Pn	Pn	17 04 35.6	+4.8
	44nm,1.0s,baz=204,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**8.53**	**33**	Pn	Pn	17 04 35.4	+4.6
	1.3nm,0.3s,baz=212,slow=16,SNR=2.4						
MKAR				Lg	Lg	17 06 55.9	
	3.8nm,0.3s,baz=223,slow=26,SNR=1.3						
MKAR				LR	LR	17 07 39.8	
	comp=Z,230nm,18.3s,baz=219,slow=36						
MKAR	**Makanchi Array**	**8.53**	**33**		**Pn**	**17 04 30.8**	**0.0**
OTUK	**Ortayu**	**8.72**	**346**	⇑Lg	Lg	17 06 59.6	
	990nm,1.4s						
SMLA	**Simla**	**8.78**	**171**	IAML		17 03 12.7	
	comp=N,129nm,0.6s						
SMLA				IAML		17 03 14.3	
	comp=E,145nm,1.1s						
SMLA				IAML		17 03 17.1	
	comp=N,108nm,0.5s						
WMQ	**Urumqi**	**9.92**	**62**	*e*P	**Pn**	**17 04 52.8**	**+2.9**
WMQ				pP		17 04 59.3	
WMQ				S	**Sn**	**17 06 48.3**	**+7.0**
WMQ				pmax	pmax		
	comp=N,37nm,1.3s						
WMQ				LR	LR		
	comp=N,1µm,6.1s						
WMQ				LR	LR		
	comp=N,1µm,6.5s						
WMQ				LR	LR		
	comp=N,370nm,15.5s						
PTH	**Pithoragarh**	**10.95**	**158**	*e*x	**Sn**	**17 07 09.3**	**+2.5**
KURBB	**Kurchatov Arra**	**11.00**	**10**	Lg	Lg	17 08 13.5	
	comp=N,0.7nm,0.3s,baz=195,slow=29,SNR=16						
KURBB				LR	LR	17 09 36.3	
	comp=N,2µm,19.1s,baz=171,slow=38						
KURBB	**Kurchatov Arra**	**11.00**	**10**	⇑Lg	Lg	17 08 20.0	
	comp=N,664nm,0.8s						
KURK	**Kurchatov**	**11.10**	**10**	Pn	**Pn**	**17 05 04.7**	**-1.2**
GEYT	**Alibeck**	**13.69**	**268**	Pn	**Pn**	**17 05 39.8**	**-1.7**
	comp=N,3.6nm,0.5s,baz=98,slow=9.6,SNR=1.4						
GEYT				Sn	**Sn**	**17 08 05.6**	**-8.0**
	comp=N,0.7nm,0.3s,baz=147,slow=24,SNR=1.8						
GEYT				LR	LR	17 11 49.7	
	comp=N,690nm,18.3s,baz=76,slow=41						
KKN	**Kakani**	**14.48**	**143**	*e*P	**Pn**	**17 05 49.5**	**-2.9**
	comp=N,83nm,0.4s						
ABKAR	**Akbulak array**	**14.54**	**316**	Pn	**Pn**	**17 05 53.4**	**+0.5**
DMN	**Daman**	**14.55**	**144**	*e*P	**Pn**	**17 05 50.7**	**-2.7**
	comp=N,49nm,0.5s						
PKIN	**Phulchoki**	**14.71**	**143**	*e*P	**Pn**	**17 05 52.2**	**-3.4**
	comp=N,37nm,0.4s						
PKI	**Pulchoki**	**14.72**	**143**	*e*P	**Pn**	**17 05 52.5**	**-3.3**
	comp=N,47nm,0.4s						
JIRN	**Jiri**	**15.02**	**141**	*e*P	**Pn**	**17 05 56.7**	**-3.2**
	comp=N,164nm,0.5s						
ZAA0	**Zalesovo Array**	**15.47**	**21**	⇑P	**P**	**17 06 09.4**	**-0.4**
	comp=N,7.7nm,1.4s						
ZALV	**Zalesovo Beam**	**15.47**	**21**	Pn	**Pn**	**17 06 06.8**	**+1.5**
	comp=N,0.4nm,0.3s,baz=207,slow=12,SNR=11						
ZALV				Lg	Lg	17 10 41.8	
	comp=N,0.3nm,0.3s,baz=199,slow=29,SNR=4.9						
ZALV				LR	LR	17 12 30.9	
	comp=N,778nm,21.4s,baz=228,slow=39						
	comp=N,18nm,1.1s						
ZALV	**Zalesovo Beam**	**15.47**	**21**		**P**	**17 06 07.4**	**-2.4**
GOMU	**GeErMu**	**15.63**	**97**	P	**Pn**	**17 06 05.4**	**-2.5**
GOMU				pP	P	17 06 08.9	-3.2
GOMU				sP	pP	17 06 10.5	-5.3
GOMU				S	**Sn**	**17 08 56.0**	**-5.3**
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,59nm,4.6s						
GOMU				LR	LR		
	comp=N,230nm,8.4s						
GOMU				LR	LR		
	comp=E,440nm,11.7s						
GOMU				LR	LR		
	comp=Z,270nm,11.3s						
RAMN	**Ramite**	**15.81**	**141**	*e*P	**Pn**	**17 06 05.0**	**-5.2**
	comp=Z,198nm,0.9s						
AKTO	**Aktyubinsk**	**16.24**	**317**	Pn	**Pn**	**17 06 14.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=135,slow=18,SNR=2.4						
AKTO				Lg	Lg	17 11 02.8	
	comp=Z,0.1nm,0.3s,baz=169,slow=23,SNR=0.9						
AKTO				LR	LR	17 13 25.5	
	comp=Z,456nm,21.9s,baz=133,slow=40						
	comp=Z,2.7nm,0.7s						
LSA	**Lhasa**	**16.32**	**123**	P	**P**	**17 06 18.8**	**-1.1**
BHPL	**Bhopal**	**16.61**	**174**	*e*P	**Pn**	**17 06 16.0**	**-4.3**
BOK	**Bokaro**	**18.23**	**148**	*e*P	**Pn**	**17 06 36.7**	**-3.6**
BLSP	**Bilaspur**	**18.52**	**160**	*e*P	**P**	**17 06 42.3**	**-1.4**
AKL	**Akola**	**19.11**	**176**	*e*x	x	17 06 37.9	
SHL	**Shillong**	**19.75**	**131**	*e*P	**Pn**	**17 06 58.7**	**-0.2**
ARU	**Arti**	**20.01**	**332**	P	**Pn**	**17 07 00.9**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=160,slow=11,SNR=6.2						
ARU				Lg	Lg	17 12 58.7	
	baz=115,slow=23,SNR=1.1						
ARU				LR	LR	17 15 17.8	
	comp=Z,974nm,20.1s,baz=132,slow=38						
	comp=Z,1.9nm,0.5s						
BWNR	**Bhubaneshwar**	**21.38**	**153**	*e*P	**P**	**17 07 20.8**	**+6.0**
RAGD	**RAYAGADA**	**21.62**	**159**	*e*P	**P**	**17 07 23.1**	**+5.7**
BELG	**Belogornoye**	**22.90**	**313**	P	**P**	**17 07 32.2**	**+1.3**
	comp=Z,16nm,0.9s,baz=21,slow=5.9,SNR=3.8						
BELG				LR	LR	17 17 39.6	
	comp=Z,344nm,21.8s,baz=137,slow=40						
	comp=Z,16nm,0.9s						
GNI	**Garni**	**23.53**	**281**	P	**P**	**17 07 37.6**	**0.0**
	comp=Z,3.2nm,0.4s,baz=49,slow=19,SNR=1.4						
GNI				LR	LR	17 18 44.9	
	comp=Z,211nm,19.0s,baz=80,slow=42						
	comp=Z,3.2nm,0.4s						
SONM	**Songino Array**	**23.55**	**60**	P	**P**	**17 07 39.0**	**+1.3**
	comp=Z,3.0nm,0.9s,baz=261,slow=11,SNR=9.7						
SONM				LR	LR	17 17 55.5	
	comp=Z,664nm,20.4s,baz=268,slow=39						
	comp=Z,3.0nm,0.9s						
KBZ	**Khabaz**	**24.55**	**290**	LR	LR	17 19 45.0	
	comp=Z,268nm,19.2s,baz=92,slow=42						
CD2	**Chengdu**	**24.61**	**102**	P	**P**	**17 07 49.8**	**+2.1**
CD2				S	**S**	**17 12 12.3**	**+3.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,360nm,13.2s						
CD2				LR	LR		
	comp=Z,520nm,11.8s						
KVAR	**Kislovodsk Arr**	**24.69**	**290**	LR	LR	17 18 20.2	
	comp=Z,315nm,20.8s,baz=249,slow=39						
KIRV	**Kirov**	**25.09**	**327**	P	**P**	**17 07 52.4**	**+0.8**
	comp=Z,12nm,0.6s,baz=119,slow=13,SNR=4.3						
KIRV				LR	LR	17 18 29.1	
	comp=Z,1µm,19.4s,baz=129,slow=38						
	comp=Z,12nm,0.6s						
PZH	**PanZhiHua**	**25.55**	**113**	P	**P**	**17 07 58.5**	**+2.2**
PZH				sP	**sP**	**17 08 05.6**	**+3.6**
PZH				S	**S**	**17 12 26.4**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,4.3s						
PZH				LR	LR		
	comp=Z,350nm,14.3s						
PZH				LR	LR		
	comp=Z,420nm,14.9s						
PZH				LR	LR		
	comp=Z,470nm,14.9s						
BTO	**Baotou**	**26.26**	**77**	*e*P	**P**	**17 07 58.8**	**-3.8**
BTO				S	**S**	**17 12 35.8**	**+0.8**
BTO				LR	LR		
	comp=N,1µm,10.8s						
BTO				LR	LR		
	comp=E,1µm,13.1s						
XAN	**Xi'an**	**27.21**	**92**	⇓P	**P**	**17 08 12.8**	**+1.6**
XAN				pP	sP	17 08 18.3	+1.4
XAN				pmax	pmax		
	comp=E,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=E,62nm,5.7s						
XAN				LR	LR		
	comp=E,470nm,16.5s						
XAN				LR	LR		
	comp=E,430nm,17.5s						
XAN				LR	LR		
	comp=E,520nm,15.5s						
GYA	**Guiyang**	**29.13**	**108**	⇓P	**P**	**17 08 32.1**	**+3.7**
GYA				S	**S**	**17 13 22.4**	**+2.0**
GYA				pmax	pmax		
	comp=E,11nm,0.6s						
GYA				pmax	pmax		
	comp=E,170nm,5.5s						
GYA				LR	LR		
	comp=E,160nm,3.8s						
GYA				LR	LR		
	comp=E,140nm,3.8s						
GYA				LR	LR		
	comp=E,85nm,4.6s						
CMAR	**Chiang Mai Arr**	**29.37**	**130**	P	**P**	**17 08 32.4**	**+1.9**
	comp=E,0.3nm,0.5s,baz=311,slow=8.2,SNR=1.8						
CMAR				LR	LR	17 22 35.9	
	comp=E,261nm,18.3s,baz=315,slow=41						
OBN	**Obninsk**	**29.98**	**314**	LR	LR	17 21 17.0	
	comp=E,132nm,20.5s,baz=90,slow=38						
RAYN	**Ar Rayn**	**30.09**	**246**	P	**P**	**17 08 35.0**	**-2.0**
NRIK	**Noril'sk**	**30.27**	**8**	P	**P**	**17 08 39.0**	**+1.1**
	comp=E,2.6nm,0.7s,baz=212,slow=7.9,SNR=5.7						
NRIK				LR	LR	17 22 25.7	
	comp=E,584nm,19.2s,baz=202,slow=39						
	comp=E,2.6nm,0.7s						
HNS	**HongShan**	**30.55**	**82**	⇑P	P	17 08 52.4	+12
HNS				*e*S	S	17 14 03.4	+21
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
HNS				LR	LR		
	comp=N,280nm,12.8s						
HNS				LR	LR		
	comp=Z,230nm,12.2s						
BR131	**Keskin Array S**	**31.98**	**284**	P	**P**	**17 08 53.0**	**-0.6**
BR131				IAmb	IAmb	17 08 55.8	
	comp=Z,3.8nm,0.6s						
BRTR	**Keskin Array B**	**31.98**	**284**	P	**P**	**17 08 53.6**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=84,slow=6.5,SNR=11						
BRTR				LR	LR	17 24 20.1	
	comp=Z,112nm,18.9s,baz=96,slow=41						
	comp=Z,1.7nm,0.5s						
AKASG	**Malin Array Be**	**33.83**	**304**	P	**P**	**17 09 08.9**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=113,slow=8.2,SNR=4.1						
AKASG				LR	LR	17 25 55.3	
	comp=Z,456nm,18.2s,baz=81,slow=42						
	comp=Z,0.3nm,0.4s						
EIL	**Elat**	**34.58**	**266**	LR	LR	17 26 14.3	
	comp=Z,264nm,18.1s,baz=64,slow=41						
NACGM	**Naroch**	**35.50**	**312**	*e*P	P	17 09 35.0	+11
	baz=93						
MLR	**Muntele Rosu**	**36.42**	**296**	LR	LR	17 26 53.3	
	comp=Z,567nm,20.9s,baz=64,slow=40						
FIA1	**FINESS Array S**	**36.86**	**323**	P	**P**	**17 09 34.4**	**-0.9**
FIA1				IAmb	IAmb	17 09 47.9	
	comp=Z,25nm,1.4s						
FIA0	**FINESS Array S**	**36.86**	**323**	P	**P**	**17 09 34.6**	**-0.8**
FINES	**FINESS Array B**	**36.86**	**323**	P	**P**	**17 09 35.5**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=109,slow=9.9,SNR=15						
FINES				LR	LR	17 25 26.3	
	comp=Z,772nm,18.1s,baz=103,slow=37						
	comp=Z,2.2nm,0.5s						
FINES	**FINESS Array B**	**36.86**	**323**	P	**P**	**17 09 35.1**	**-0.3**
YAK	**Yakutsk**	**39.18**	**37**	P	**P**	**17 09 55.0**	**+0.1**
	comp=Z,4.1nm,0.4s,baz=217,slow=4.6,SNR=6.0						
YAK				LR	LR	17 27 00.2	
	comp=Z,741nm,19.7s,baz=270,slow=38						
	comp=Z,4.1nm,0.4s						
ARCES	**ARCESS Array B**	**39.54**	**335**	P	**P**	**17 09 58.1**	**+0.3**
	comp=Z,3.8nm,0.5s,baz=111,slow=9.4,SNR=44						
ARCES				LR	LR	17 26 55.5	
	comp=Z,590nm,18.3s,baz=108,slow=37						
	comp=Z,3.8nm,0.5s						
ARCES	**ARCESS Array B**	**39.54**	**335**	P	**P**	**17 09 57.9**	**+0.1**
ARCES				IAmb	IAmb	17 10 05.5	
	comp=Z,20nm,1.4s						
IDI	**Anoyia**	**39.96**	**280**	LR	LR	17 29 44.0	
	comp=Z,80nm,20.4s,baz=68,slow=41						
KLR	**Kul'dur**	**40.33**	**57**	LR	LR	17 28 05.2	
	comp=Z,420nm,19.7s,baz=284,slow=38						
ATD	**Arta Tunnel**	**40.36**	**235**	LR	LR	17 30 19.0	
	comp=Z,84nm,18.9s,baz=22,slow=42						
KSRS	**Korea Array**	**40.52**	**76**	P	**P**	**17 10 05.7**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=305,slow=8.8,SNR=1.7						
	comp=Z,1.2nm,1.0s						
TIXI	**Tiksi**	**41.35**	**23**	P	**P**	**17 10 13.2**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=270,slow=19,SNR=9.3						
TIXI				LR	LR	17 28 31.0	
	comp=Z,479nm,21.2s,baz=179,slow=38						
	comp=Z,2.3nm,0.5s						
TIXI	**Tiksi**	**41.35**	**23**	P	**P**	**17 10 13.1**	**+0.4**
TIXI				IAmb	IAmb	17 10 23.0	
	comp=Z,8.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**41.48**	**65**	LR	LR	17 29 26.1	
	comp=Z,288nm,20.1s,baz=277,slow=39						
VRAC	**Vranov**	**42.06**	**303**	LR	LR	17 31 02.8	
	comp=Z,382nm,20.1s,baz=80,slow=41						
PSI	**Prapat**	**42.53**	**144**	LR	LR	17 30 00.7	
	comp=Z,157nm,21.2s,baz=311,slow=39						
HFS	**Hagfors**	**42.76**	**319**	LR	LR	17 28 50.1	
	comp=Z,692nm,19.2s,baz=98,slow=37						
BRG	**Berggiesshubel**	**43.47**	**306**	*e*(P)	**P**	**17 10 30.6**	**+0.4**
BRG				Amp		17 10 32.0	
	comp=Z,2.2nm,0.7s						
BRG				Amp		17 29 57.0	
	comp=N,0.3nm,21.4s						
BRG				Amp		17 29 58.0	
	comp=E,0.4nm,14.1s						
BRG				Amp		17 30 10.0	
	comp=Z,0.6nm,14.3s						
NB2	**NORSAR Subarra**	**43.96**	**321**	P	**P**	**17 10 34.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**43.96**	**321**	P	**P**	**17 10 33.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=89,slow=7.9,SNR=4.2						
NOA				LR	LR	17 29 58.7	
	comp=Z,413nm,20.2s,baz=90,slow=38						
	comp=Z,0.6nm,0.5s						
CLL	**Collm**	**43.97**	**307**	*e*P	**P**	**17 10 36.0**	**+1.7**
GERES	**GERESS Array B**	**44.01**	**303**	P	**P**	**17 10 35.6**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=67,slow=8.0,SNR=12						
GERES				LR	LR	17 31 51.1	
	comp=Z,371nm,19.6s,baz=84,slow=40						
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**44.01**	**303**	P	**P**	**17 10 35.3**	**+0.4**
SPITS	**Spitsbergen Ar**	**45.12**	**346**	LR	LR	17 32 18.7	
	comp=Z,478nm,20.6s,baz=189,slow=40						
VAE	**Valguarnera**	**46.96**	**288**	LR	LR	17 35 18.3	
	comp=Z,112nm,18.1s,baz=334,slow=42						
DAVOX	**Davos/Dischmat**	**47.02**	**301**	LR	LR	17 34 18.0	
	comp=Z,206nm,18.4s,baz=80,slow=41						
MJAR	**Matsushiro Arr**	**48.49**	**73**	P	**P**	**17 11 10.0**	**-0.1**
	comp=Z,2.1nm,1.0s,baz=297,slow=8.3,SNR=4.5						
	comp=Z,2.1nm,1.0s						
MA2	**Magadan**	**49.54**	**40**	LR	LR	17 33 05.5	
	comp=Z,365nm,19.4s,baz=278,slow=37						
SEY	**Seymchan**	**49.66**	**36**	LR	LR	17 33 31.5	
	comp=Z,321nm,20.9s,baz=283,slow=38						
JMIC	**Jan Mayen**	**51.03**	**335**	LR	LR	17 33 10.3	
	comp=Z,121nm,18.2s,baz=45,slow=36						
EKA	**Eskdalemuir Ar**	**52.42**	**315**	LR	LR	17 35 48.0	
	comp=Z,325nm,20.8s,baz=80,slow=38						
KMBO	**Kilima Mbogo**	**53.70**	**230**	LR	LR	17 37 09.0	
	comp=Z,66nm,18.1s,baz=92,slow=39						
LEM	**Lembang**	**55.08**	**140**	LR	LR	17 39 05.6	
	comp=Z,148nm,18.4s,baz=341,slow=40						
MBAR	**Mbarara**	**57.32**	**237**	LR	LR	17 39 53.0	
	comp=Z,80nm,18.8s,baz=28,slow=39						
BORG	**Borgarnes**	**57.53**	**330**	LR	LR	17 36 48.8	
	comp=Z,315nm,18.9s,baz=91,slow=36						
ESDC	**Sonseca Array**	**59.06**	**298**	P	**P**	**17 12 26.9**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=56,slow=6.8,SNR=4.9						
ESDC				LR	LR	17 41 43.8	
	comp=Z,148nm,18.4s,baz=51,slow=40						
	comp=Z,2.2nm,0.6s						
KAPI	**Kappang**	**60.38**	**127**	LR	LR	17 43 59.2	
	comp=Z,63nm,20.8s,baz=286,slow=41						
MDT	**Midelt**	**62.92**	**291**	LR	LR	17 44 10.9	
	comp=Z,48nm,21.5s,baz=350,slow=40						
SIJI	**Sorong**	**64.93**	**114**	LR	LR	17 42 22.4	
	comp=Z,56nm,21.1s,baz=4.5,slow=37						
RES	**Resolute Bay**	**65.59**	**357**	LR	LR	17 45 23.7	
	comp=Z,181nm,18.5s,baz=62,slow=39						
SFJD	**Kangerlussuaq**	**65.92**	**340**	LR	LR	17 42 20.3	
	comp=Z,116nm,20.1s,baz=30,slow=36						
TOLK	**Toolik Lake Re**	**66.77**	**16**	P	**P**	**17 13 18.4**	**+0.1**
COLD	**Coldfoot**	**67.77**	**18**	P	**P**	**17 13 22.4**	**-2.2**
COLD				IAmb	IAmb	17 13 35.0	
	comp=Z,5.8nm,1.0s						
IMAR	**Indian Mountai**	**67.89**	**20**	P	**P**	**17 13 23.2**	**-2.2**
BMAR	**Burnt Mountain**	**68.83**	**15**	P	**P**	**17 13 30.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**69.32**	**270**	P	**P**	**17 13 33.4**	**-1.7**
	comp=Z,2.1nm,0.6s,baz=48,slow=5.4,SNR=9.8						
	comp=Z,2.1nm,0.6s						
INK	**Inuvik**	**70.01**	**11**	P	**P**	**17 13 38.1**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=329,slow=5.9,SNR=29						
	comp=Z,2.8nm,0.4s						
INK	**Inuvik**	**70.01**	**11**	P	**P**	**17 13 38.5**	**+0.1**
LSZ	**Lusaka**	**70.33**	**229**	LR	LR	17 44 26.0	
	comp=Z,66nm,20.3s,baz=82,slow=36						
ILAR	**Eielson Array**	**70.57**	**18**	P	**P**	**17 13 41.2**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=318,slow=4.9,SNR=8.1						
ILAR				LR	LR	17 49 45.6	
	comp=Z,88nm,18.9s,baz=298,slow=40						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**70.57**	**18**	P	**P**	**17 13 40.2**	**-1.8**
I29M	**Ogilvie Camp,**	**71.88**	**14**	P	**P**	**17 13 49.3**	**-0.7**
O18K	**Koktuh Hills**	**72.26**	**24**	P	**P**	**17 13 50.7**	**-1.6**
O18K				IAmb	IAmb	17 14 04.5	
	comp=Z,8.0nm,1.1s						
GLI	**Glacier Island**	**73.79**	**20**	P	**P**	**17 13 58.6**	**-2.7**
GLI				IAmb	IAmb	17 14 11.0	
	comp=Z,3.7nm,0.8s						
KDAK	**Kodiak Island**	**74.74**	**24**	LR	LR	17 50 20.7	
	comp=Z,188nm,20.3s,baz=335,slow=38						
HYT	**Haines Junctio**	**76.13**	**16**	P	**P**	**17 14 14.2**	**-0.8**
HYT				IAmb	IAmb	17 14 26.5	
	comp=Z,5.9nm,1.0s						
YKA	**Yellowknife Ar**	**77.70**	**5**	P	**P**	**17 14 23.4**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=348,slow=5.6,SNR=20						
	comp=Z,1.9nm,0.6s						
YKA	**Yellowknife Ar**	**77.70**	**5**	P	**P**	**17 14 23.0**	**-0.6**
DBIC	**Dimbokro**	**78.38**	**269**	LR	LR	17 54 01.2	
	comp=Z,116nm,18.1s,baz=76,slow=40						
DLBC	**Dease Lake**	**79.80**	**13**	LR	LR	17 55 22.4	
	comp=Z,90nm,18.9s,baz=304,slow=40						
SCHQ	**Schefferville**	**80.36**	**339**	LR	LR	17 50 09.5	
	comp=Z,150nm,21.5s,baz=74,slow=36						
WRA	**Warramunga Arr**	**80.86**	**125**	P	**P**	**17 14 40.0**	**-1.5**
	comp=Z,2.5nm,1.1s,baz=321,slow=4.9,SNR=5.3						
	comp=Z,2.5nm,1.1s						
WB2	**Warramunga Arr**	**80.87**	**125**	P	**P**	**17 14 40.2**	**-1.4**
WR0	**Warramunga Arr**	**81.00**	**125**	P	**P**	**17 14 41.2**	**-1.0**
WR0				IAmb	IAmb	17 14 56.8	
	comp=Z,9.6nm,1.3s						
AS31	**Alice Springs**	**83.37**	**128**	P	**P**	**17 14 53.5**	**-1.1**
ASAR	**Alice Springs**	**83.37**	**128**	P	**P**	**17 14 53.5**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=315,slow=4.8,SNR=8.2						
	comp=Z,1.6nm,0.9s						
ASAR	**Alice Springs**	**83.37**	**128**	P	**P**	**17 14 53.0**	**-1.6**
ELK	**Elko**	**99.21**	**8**	LR	LR	18 06 08.5	
	comp=Z,66nm,18.8s,baz=330,slow=38						

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*MDD **15** 17:07:42.0±0.2, 36°.61N×5°.84W, h12^{km}, mb_Lg3.2/26, Error ellipse: s-maj=1.9km s-min=1.2km az=8.0*

*SFS **15** 17:07:41.0, 36°.60N×5°.80W, h12^{km}, ML3.2, PATERNA DE RIVERA (CADIZ)*

*INMG **15** 17:07:42.8±1.9, 36°.64N×5°.80W, h16^{km}±3^{km}, MD3.5, ML3.2, Error ellipse: s-maj=2.7km s-min=2.3km az=26.0*

*LDG **15** 17:07:42.7±0.2, 36°.62N×5°.81W, h12^{km}, Ml3.0/4, Error ellipse: s-maj=4.4km s-min=2.5km az=9.0*

*IGIL **15** 17:07:42.0, 36°.61N×5°.84W, h12^{km}, ML3.2*

*CNRM **15** 17:07:45.6, 36°.39N×5°.79W, h59^{km}, ml2.7*

ISC 15 17:07:41.4±0.8**, 36°.62N**±0°.02×**5°.81W**±0°.01**, h17^{km}**±6^{km}**, n108, σ2^{s}.12**/213**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJ	**Aljibe**	**0.16**	**125**	P	**Pg**	**17 07 43.3**	**-2.4**
ALJ				S	**Sg**	**17 07 48.6**	**+0.1**
ESPR	**Espera**	**0.25**	**352**	Pg	**Pg**	**17 07 46.1**	**-0.8**
ESPR				Sg	**Sg**	**17 07 50.0**	**-0.7**
ESPR				*i* Vmb_Lg		17 07 56.8	
CNIL	**Conil**	**0.32**	**218**	P	**Pg**	**17 07 48.4**	**+0.3**
EJIF	**Jimena Fronter**	**0.33**	**122**	Pg	**Pg**	**17 07 46.5**	**-1.7**
EJIF				Sg	**Sg**	**17 07 54.2**	**+1.3**
SFS	**San Fernando**	**0.35**	**244**	P	**Pb**	**17 07 50.1**	**+0.9**
SFS				S	**Sb**	**17 07 55.8**	**+1.3**
SFS	**San Fernando**	**0.35**	**244**	P	**Pn**	**17 07 51.8**	**+0.1**
LIJA	**Lijar**	**0.43**	**49**	P	**Pg**	**17 07 48.6**	**-1.6**
LIJA				S	**Sg**	**17 07 55.4**	**-0.8**
CEU	**Ceuta**	**0.81**	**154**	P	**Pn**	**17 07 58.8**	**+0.8**
CEU				S	**Sn**	**17 08 13.2**	**+3.7**
ECEU	**Ceuta**	**0.81**	**154**	Pg	**Pb**	**17 07 58.2**	**+1.3**
ECEU				*i* Vmb_Lg		17 08 03.5	
ECEU				Sg	**Sg**	**17 08 07.7**	**0.0**
EMIJ	**Mijas**	**0.84**	**94**	Pg	**Pg**	**17 07 56.7**	**-1.0**
EMIJ				Sg	**Sg**	**17 08 09.0**	**+0.2**
EMIJ				*i* Vmb_Lg		17 08 15.8	
SMIR	**Smir Dam**	**1.00**	**159**	P	**Pn**	**17 08 02.0**	**+1.3**
SMIR	**Smir Dam**	**1.00**	**159**	P	**Pn**	**17 08 01.5**	**+0.9**
SMIR				S	**Sg**	**17 08 11.9**	**-2.1**
EMIN	**Mina Concepcio**	**1.33**	**329**	Pn	**Pn**	**17 08 05.3**	**+0.1**
EMIN				Pg	**Pb**	**17 08 06.0**	**+0.1**
EMIN				Sn	**Sb**	**17 08 22.0**	**-0.7**
EMIN				Sg	**Sn**	**17 08 22.9**	**+0.3**
EMIN				*i* Vmb_Lg		17 08 30.9	
EGOR	**Sierra Gorda,**	**1.45**	**70**	Pn	**Pn**	**17 08 07.3**	**+0.3**
EGOR				Pg	**Pb**	**17 08 08.4**	**+0.4**
EGOR				Sn	**Sn**	**17 08 24.7**	**-1.0**

EGOR				Sg	Sb	17 08 27.1	+0.9
EGOR				*i* Vmb_Lg		17 08 38.2	
ECAB	El Cabril	1.48	12	Pg	Pn	17 08 08.2	+0.9
ECAB				Sn	Sn	17 08 25.7	-0.6
ECAB				Sg	Sb	17 08 27.9	+0.8
ECAB				*i* Vmb_Lg		17 08 30.8	
CHEFC	Chefchaouen	1.56	166	P	Pb	17 08 10.3	+0.4
CHEFC				S	Sn	17 08 23.4	-4.9
EGRO	El Granado	1.62	305	Pn	Pn	17 08 08.6	-0.5
EGRO				Pg	Pb	17 08 10.6	-0.1
EGRO				Sn	Sn	17 08 28.7	-0.8
EGRO				Sg	Sb	17 08 31.6	+0.8
EGRO				*i* Vmb_Lg		17 08 33.2	
PVAQ	Vaqueiros	1.71	298	*e*Pn	Pn	17 08 09.6	-0.8
PVAQ	Vaqueiros	1.71	298	*e*Pg	Pb	17 08 12.6	+0.2
PVAQ				*e*Sg	Sg	17 08 35.8	-0.7
PVAQ				A	A	17 08 42.4	
	123nm,0.5s						
PVAQ	Vaqueiros	1.71	298	P	Pb	17 08 12.5	+0.1
PVAQ	Vaqueiros	1.71	298	P	Pb	17 08 13.8	+1.4
PVAQ				S	Sg	17 08 36.1	-0.4
ELGU	Los Guajares,	1.77	81	Pn	Pn	17 08 11.2	-0.2
ELGU				Pg	Pb	17 08 13.7	+0.2
ELGU				Sn	Sn	17 08 33.1	-0.4
ELGU				*i* Vmb_Lg		17 08 51.3	
PBDV	Barranco-do-Ve	1.81	291⇑	*e*Pn	Pn	17 08 11.0	-0.8
PBDV				*e*Sg	Sg	17 08 39.0	-0.6
PBDV				A	A	17 08 45.9	
	118nm,0.5s						
EADA	Adamuz	1.83	32	Pn	Pn	17 08 13.3	+1.2
EADA				Pg	Pb	17 08 14.2	-0.2
EADA				Sn	Sn	17 08 34.5	-0.4
EADA				Sg	Sb	17 08 38.7	+1.7
EADA				*i* Vmb_Lg		17 08 43.8	
PBAR	Barrancos	1.83	328⇑	*e*Pg	Pb	17 08 14.4	0.0
PBAR				*e*Sg	Sg	17 08 39.9	-0.4
PBAR				A	A	17 08 43.7	
	156nm,0.4s						
PVLZ	Peæn de	1.90	139	P	Pn	17 08 12.7	-0.3
PVLZ				S	Sn	17 08 36.0	-0.4
EQUE	Quentar	1.99	72	Pn	Pn	17 08 14.7	+0.4
EQUE				Sn	Sn	17 08 38.1	-0.8
EQUE				Sg	Sb	17 08 43.6	+1.9
EQUE				*i* Vmb_Lg		17 08 50.9	
PCVE	Castro Verde	2.04	300	*e*Pn	Pn	17 08 14.3	-0.7
PCVE	Castro Verde	2.04	300	*e*Pg	Pb	17 08 18.6	+0.6
PCVE				*e*Sg	Sg	17 08 45.8	-1.4
PCVE				A	A	17 08 57.6	
	106nm,0.5s						
PALE	Palemas	2.07	132	P	Pn	17 08 15.8	+0.4
PALE				S	Sn	17 08 39.5	-1.3
PBEJ	Beja	2.15	311	*e*Pg	Pb	17 08 20.8	+0.9
PBEJ				*e*Sg	Sb	17 08 49.2	+2.8
PBEJ				A	A	17 08 58.1	
	92nm,0.6s						
MESJ	Messejana	2.27	303	*e*P	Pn	17 08 17.6	-0.5
MESJ				*e*Sg	Sb	17 08 52.4	+2.7
MESJ				IAML		17 08 58.1	
	comp=N,115nm,0.4s						
MESJ	Messejana	2.27	303	*e*Pn	Pn	17 08 17.6	-0.5
MESJ	Messejana	2.27	303	*e*Pg	Pb	17 08 23.9	+2.0
MESJ				*e*Sg	Sg	17 08 53.1	-1.4
MESJ				A	A	17 09 02.4	
	comp=N,99nm,0.6s						
EBAD	Badajoz	2.33	336	Pn	Pn	17 08 19.1	+0.2
EBAD				Pg	Pb	17 08 23.0	0.0
EBAD				Sn	Sn	17 08 46.2	-1.0
EBAD				Sg	Sb	17 08 53.0	+1.5
EBAD				*i* Vmb_Lg		17 08 58.6	
EBER	Berja	2.36	82	Pn	Pn	17 08 20.1	+0.5
EBER				Sn	Sn	17 08 48.0	-0.3
EBER				*i* Vmb_Lg		17 09 12.6	
MORF	Marmelete	2.37	288	*e*P	Pn	17 08 18.9	-0.7
MORF				*e*Sg	Sb	17 08 55.2	+2.5
MORF				IAML		17 09 05.3	
	comp=N,182nm,0.6s						
MORF	Marmelete	2.37	288	*e*Pn	Pn	17 08 19.0	-0.6
MORF	Marmelete	2.37	288	*e*Pg	Pb	17 08 24.4	+0.7
MORF				*e*Sg	Sg	17 08 56.7	-1.0
MORF				A	A	17 09 06.0	
	comp=N,48nm,0.5s						
PFVI	Vila Bisbo	2.47	283	*e*Pn	Pn	17 08 19.8	-1.0
PFVI				*e*Sn	Sn	17 08 49.1	-1.5
PFVI				A	A	17 09 11.3	
	comp=N,46nm,0.6s						
PFVI	Vila Bisbo	2.47	283	P	Pn	17 08 23.1	+2.3
PFVI				S	Sg	17 08 58.5	-2.2
EQES	Quesada	2.48	61	Pn	Pn	17 08 20.8	-0.3
EQES				Sn	Sn	17 08 50.6	-0.6
EQES				*i* Vmb_Lg		17 09 08.7	
PTEO	Sao Teotonio	2.50	292	*e*Pn	Pn	17 08 22.1	+0.8
PTEO	Sao Teotonio	2.50	292	*e*Pg	Pb	17 08 27.9	+2.0
PTEO				*e*Sn	Sn	17 08 51.7	+0.3
PTEO				*e*Sg	Sg	17 09 02.4	+0.6
PTEO				A	A	17 09 11.7	
	comp=N,99nm,0.6s						
PNCL	Nicolau / Gran	2.62	305	*e*Pn	Pn	17 08 22.4	-0.6
PNCL	Nicolau / Gran	2.62	305	*e*Pg	Pb	17 08 29.8	+1.9
PNCL				*e*Sg	Sb	17 09 03.1	+3.2
PNCL				A	A	17 09 05.3	
	comp=N,64nm,0.4s						
AKLM	AKL	2.64	142	P	Pn	17 08 25.1	+1.8
AKLM	AKL	2.64	142	P	Pn	17 08 23.1	-0.1
AKLM				S	Sn	17 08 50.9	-4.1
PESTR	Estremoz	2.65	328	*e*Pn	Pn	17 08 23.6	+0.3
PESTR	Estremoz	2.65	328	*e*Pg	Pb	17 08 30.1	+1.8
PESTR				*e*Sn	Sn	17 08 54.5	-0.5
PESTR				*e*Sg	Sg	17 09 06.1	-0.3
PESTR				A	A	17 09 10.0	
	comp=N,67nm,0.4s						
PESTR	Estremoz	2.65	328	P	Pb	17 08 30.3	+2.0
PESTR	Estremoz	2.65	328	P	Pb	17 08 30.3	+2.0
PESTR				S	Sb	17 09 01.7	+1.2
GOG	Mont Gurugu	2.68	121	P	Pn	17 08 22.9	-0.9
GOG				S	Sn	17 08 54.8	-1.1
PMRV	Marv??o	3.06	336	*e*Pn	Pn	17 08 29.3	+0.2
PMRV	Marv??o	3.06	336	*e*Pg	Pb	17 08 37.1	+1.6
PMRV				*e*Sn	Sn	17 09 05.0	-0.4
PMRV				*e*Sg	Sb	17 09 17.1	+4.5
PMRV				A	A	17 09 22.8	
	comp=N,70nm,0.6s						
CHAS	Isla Isabel II	3.10	117	P	Pn	17 08 28.6	-0.9
CHAS				S	Sn	17 09 03.8	-2.3
PMTG	Montargil	3.10	323	*e*Pn	Pn	17 08 29.7	+0.2
PMTG	Montargil	3.10	323	*e*Pg	Pb	17 08 37.2	+1.2
PMTG				*e*Sg	Sg	17 09 18.6	-2.3
PMTG				A	A	17 09 25.3	
	comp=N,69nm,0.4s						
PAB	San Pablo	3.14	21	Pn	Pn	17 08 31.0	+0.8
PAB				Sn	Sn	17 09 05.6	-1.6
PAB				Sg	Sb	17 09 18.5	+3.8
PAB				*i* Vmb_Lg		17 09 27.3	
PACT	Alcochete	3.21	313	*e*Pn	Pn	17 08 33.8	+2.8
PACT				*e*Sn	Sn	17 09 09.3	+0.4
PACT				*e*Sg	Sg	17 09 23.4	-1.2
PACT				A	A	17 09 27.8	
	comp=N,67nm,0.4s						
ZHG	ZHG	3.24	192	P	Pn	17 08 32.7	+1.2
ZHG				S	Sn	17 09 09.2	-0.6
LIS	Lisbon	3.37	309	*e*Sg	Sg	17 09 27.0	-2.7
ESDC	Sonseca Array	3.38	25	Pn	Pn	17 08 33.0	-0.4
ESDC				Sn	Sn	17 09 11.5	-1.6
ESDC				Sg	Sb	17 09 26.0	+4.4
ESDC				*i* Vmb_Lg		17 09 30.5	
PMST	Lisbon--Monsan	3.41	309	*e*Pg	Pg	17 08 46.1	-0.5
PMST				*e*Sg	Sg	17 09 28.3	-2.4
PMST				A	A	17 09 42.4	
	comp=N,60nm,1.0s						
EPLA	Plasencia	3.44	357	Pn	Pn	17 08 34.2	-0.1
EPLA				Sn	Sn	17 09 13.3	-1.4
EPLA				Sg	Sb	17 09 27.7	+4.2
EPLA				*i* Vmb_Lg		17 09 34.9	
PCBR	Castelo Branco	3.47	338	*e*Pn	Pn	17 08 35.0	+0.4
PCBR				*e*Sn	Sn	17 09 15.4	+0.1
PCBR				*e*Sg	Sg	17 09 31.6	-1.2
PCBR				A	A	17 09 46.0	
	comp=N,34nm,0.6s						
JBK	JBK	3.50	130	P	Pn	17 08 36.0	+0.8
JBK				S	Sn	17 09 10.1	-6.2
EZAR	Zarzadilla de	3.52	68	Pn	Pn	17 08 35.2	-0.2
EZAR				Sn	Sn	17 09 16.1	-0.5
PMAFR	Mafra	3.60	311	*e*Pn	Pn	17 08 37.3	+0.9
PMAFR	Mafra	3.60	311	*e*Pg	Pb	17 08 47.5	+2.9
PMAFR				*e*Sn	Sn	17 09 17.7	-0.9
PMAFR				*e*Sg	Sg	17 09 35.0	-2.0
PMAFR				A	A	17 09 47.9	
	comp=N,86nm,0.5s						
PSBE	So Bento	3.72	322	*e*Pn	Pn	17 08 38.3	+0.2
PSBE				*e*Sg	Sg	17 09 39.5	-1.4
PSBE				A	A	17 09 48.3	
	comp=N,46nm,0.5s						
EMUR	La Murta	3.85	70	Pn	Pn	17 08 39.3	-0.5
EMUR				Sn	Sn	17 09 22.7	-2.0
EMUR				*i* Vmb_Lg		17 09 59.4	
MD31	MD31	3.85	167	P	Pn	17 08 40.5	+0.6
MD31				S	Sn	17 09 23.5	-1.2
MDT	Midelt	3.93	165	P	Pn	17 08 40.8	-0.2
MDT	Midelt	3.93	165	P	Pn	17 08 40.8	-0.2
MDT				S	Sn	17 09 22.4	-4.4
ETOB	Tobarra	3.94	58	Pn	Pn	17 08 40.2	-0.9
ETOB				Sn	Sn	17 09 26.2	-0.8
ETOB				Sg	Sb	17 09 43.1	+5.2
ETOB				*i* Vmb_Lg		17 10 11.0	
MTE	Manteigas	4.01	341	*e*Pg	Pb	17 08 55.0	+3.4
MTE				*e*Sg	Sg	17 09 48.6	-1.4
MTE				A	A	17 09 55.5	
	comp=N,119nm,0.5s						
PCAS	Casmilo, Conde	4.02	329	*e*Pn	Pn	17 08 42.7	+0.5
PCAS	Casmilo, Conde	4.02	329	*e*Pg	Pg	17 08 57.1	-1.3
PCAS				*e*Sg	Sg	17 09 50.7	+0.2
PCAS				A	A	17 09 55.4	
	comp=N,45nm,0.7s						
COI	Coimbra	4.12	331	*e*Sg	Sg	17 09 51.7	-1.9
UCM	Universidad Co	4.19	28	P	Pn	17 08 43.6	-1.0
UCM				S	Sn	17 09 29.7	-3.5
PVIS	Viseu	4.40	339	*e*Pn	Pn	17 08 48.6	+1.2
PVIS				*e*Sg	Sg	17 09 58.7	-3.9
PVIS				A	A	17 10 13.6	
	comp=N,32nm,0.5s						
MVO	Moncorvo	4.63	349	*e*Pn	Pn	17 08 51.7	+1.1
MVO				*e*Sg	Sg	17 10 06.3	-3.8
MVO				A	A	17 10 09.7	
	comp=N,38nm,0.6s						
ECHE	Chera	4.83	51	Pn	Pn	17 08 52.9	-0.5
ECHE				Sn	Sn	17 09 47.3	-1.8
ECHE				Sg	Sb	17 10 11.3	+7.7
ECHE				*i* Vmb_Lg		17 10 30.7	
PVRL	Vila Real	4.88	343	*e*Sn	Sn	17 09 48.0	-2.1
PVRL				*e*Sg	Sg	17 10 14.7	-3.2
PVRL				A	A	17 10 20.0	
	comp=N,32nm,0.5s						
POLO	Lamas de Olo	4.99	343	*e*Pn	Pn	17 08 57.4	+1.8
POLO				*e*Sn	Sn	17 09 51.0	-1.9
POLO				A	A	17 10 35.1	
	comp=N,11nm,0.5s						
ETOR	Torete	5.12	34	Pn	Pn	17 08 57.0	-0.3
ETOR				Sn	Sn	17 09 54.2	-1.8
ETOR				Sg	Sb	17 10 19.3	+7.6
ETOR				*i* Vmb_Lg		17 10 38.1	
PBRG	Braganca	5.22	352	*e*Pn	Pn	17 08 59.6	+0.8
PBRG				*e*Sg	Sg	17 10 24.6	-4.4
PBRG				A	A	17 10 42.9	
	comp=N,18nm,0.6s						
PCAB	Cabril	5.36	342	*e*Sg	Sg	17 10 29.9	-3.6
PCAB				A	A	17 10 48.1	
	comp=N,28nm,0.6s						
ELOB	Lobios	5.52	342	Pn	Pn	17 09 02.5	-0.3
ELOB				Sn	Sn	17 10 02.6	-3.3
ELOB				Sg	Sb	17 10 30.6	+7.4
ELOB				*i* Vmb_Lg		17 10 43.9	
EMOS	Mosqueruela	5.61	47	Pn	Pn	17 09 04.1	-0.1
EMOS				Sn	Sn	17 10 05.2	-3.2
EMOS				Sg	Sb	17 10 33.7	+7.7
EMOS				*i* Vmb_Lg		17 10 52.1	
PGAV	Gavieira, Arco	5.66	341	*e*Pn	Pn	17 09 06.3	+1.5
PGAV				*e*Sg	Sg	17 10 39.5	-3.6
PGAV				A	A	17 10 56.1	
	comp=N,23nm,0.6s						
OUK	Oukaimeden	5.67	198	P	Pn	17 09 05.9	+0.8
OUK				S	Sn	17 10 07.2	-2.8
OUZM	OUZ	5.75	188	P	Pn	17 09 07.2	+1.1
OUZM				S	Sn	17 10 11.1	-0.8
TTIG	Tnine Tigouga,	6.45	201	P	Pn	17 09 13.1	-2.5
TTIG				S	Sn	17 10 25.3	-3.6
ESAC	San Caprasio	6.57	38	Pn	Pn	17 09 17.9	+0.7
ELAN	Lanestosa	6.85	15	Pn	Pn	17 09 20.7	-0.3
ELAN				Sn	Sn	17 10 34.7	-3.9
ELAN				Sg	Sg	17 11 13.2	-7.9
ELAN				*i* Vmb_Lg		17 11 29.2	
EALK	Alkurruntz	7.37	25	Pn	Pn	17 09 29.0	+0.7
EALK				Sn	Sn	17 10 47.2	-4.3
SJPF	Ste Jean	7.38	27	*e*Pn	Pn	17 09 29.6	+1.3
SJPF				*e*Sn	Sn	17 10 47.1	-4.5
	comp=N,0.9nm,0.3s						
ETSF	Etsaut	7.46	31	*e*Pn	Pn	17 09 30.1	+0.6
ETSF				*e*Sn	Sn	17 10 48.9	-4.8
	comp=N,1.2nm,0.3s						
ECHI	Chisagues Biel	7.61	36	Pn	Pn	17 09 30.6	-1.0
EPF	Esparros	7.96	35	*e*Pn	Pn	17 09 37.7	+1.4
EPF				*e*Sn	Sn	17 11 02.5	-3.4
	comp=N,2.3nm,0.4s						
EPF				*e*Sg		17 11 53.0	
	comp=N,4.6nm,0.5s						
MFF	Saint Martin d	10.83	21	*e*Pn	Pn	17 10 15.6	0.0
QUIF	Quistinic	11.45	9	*e*Pn	Pn	17 10 23.4	-0.7
ROSF	Rostrenen	11.85	8	*e*Pn	Pn	17 10 29.1	-0.5
SGMF	Saint Gilles	11.87	11	*e*Pn	Pn	17 10 29.7	0.0
FLN	La Foliniere	12.74	16	*e*Pn	Pn	17 10 40.9	-0.8
CLL	Collm	19.89	37	*e*(PP)		17 12 28.0	

IDC ***15*** *17:11:32.7±2.0, 55°65N×162°45E, h0^{km}, mb3.4/2, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=146.8km s-min=25.7km az=142.0*

KRSC ***15*** *17:11:35.4±0.5, 55°79N×162°05E, h60^{km}±11^{km}, ML3.7*

ISC 15 17:11:38.1±1.0**, 55°81N**±0°03×**162°02E**±0°03**, h42**^{km}±14^{km}**, n47, σ1^{s}03**/70**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.59	41	*e*P	Pn	17 11 49.7	-0.3
KBG				*e*S	Sn	17 11 59.5	+0.9
KBTR	Krutoberegovo	0.60	48	*e*P	Pn	17 11 50.1	-0.1
KBTR				*e*S	Sn	17 12 00.1	+1.2
ZLN	Zelenaya	0.71	287	*e*P	Pn	17 11 51.2	-0.6
ZLN				*e*S	Sn	17 12 02.3	+0.6
BZGR	Bezymyannyi-Gr	0.76	280	*e*P	Pn	17 11 51.8	-0.6
BZGR				*e*S	Sn	17 12 02.8	+0.1
SMKR	Semkarok	0.83	339	*e*P	Pn	17 11 53.0	-0.4
SMKR				*e*S	Sn	17 12 05.0	+0.5
BZWR	Bezymyannyi-We	0.87	281	*e*P	Pn	17 11 53.5	-0.5
BZWR				*e*S	Sn	17 12 06.1	+0.5
BDR	Baidarnaya	0.88	330	*i* P	Pn	17 11 53.9	-0.2
BDR				*e*S	Sn	17 12 06.4	+0.6
KRSR	Krestovskiy	0.91	297	*i* P	Pn	17 11 53.4	-1.1
KRSR				*e*S	Sn	17 12 05.4	-1.1
KLY	Klyuchi	0.92	304	*e*P	Pn	17 11 52.4	-2.0
KLY				*e*S	Sn	17 12 03.9	-2.5
KIRR	Kirishev	0.95	279	*e*P	Pn	17 11 54.8	-0.3
KIRR				*e*S	Sn	17 12 08.5	+0.9
SRKR	Sorokina	0.97	331	*e*P	Pn	17 11 54.9	-0.4
KMNR	Kamenistaya	1.01	268	*e*P	Pn	17 11 55.5	-0.3
KMNR				*e*S	Sn	17 12 09.5	+0.7
KPT	Kopyto	1.02	279	*e*P	Pn	17 11 55.6	-0.4
KPT				*e*S	Sn	17 12 09.8	+0.6
TUMD	Tumrok D	1.10	237	*e*P	Pn	17 11 56.5	-0.6
TUMD				*e*S	Sn	17 12 10.1	-1.0
TUMR	Tumrok	1.19	244	*e*P	Pn	17 11 58.2	-0.1
TUMR				*e*S	Sn	17 12 13.5	+0.2
KOZ	Kozyrevsk	1.23	282	*e*P	Pn	17 11 58.9	+0.1
KOZ				*e*S	Sn	17 12 15.9	+1.7
MKZ	Mys Kozlova	1.27	188	*e*P	Pn	17 11 58.4	-0.9
MKZ				*e*S	Sn	17 12 14.2	-0.9
ESO	Esso	1.87	275	*e*P	Pn	17 12 07.1	-0.5
KII	Karymskiy	2.31	221	*e*P	Pn	17 12 13.8	+0.1
BKI	Bering	2.33	104	*e*P	Pn	17 12 14.0	+0.2
BKI				*e*S	Sn	17 12 40.9	-0.3
SPN	Mys Shipunski	2.96	204	*e*P	Pn	17 12 21.3	-1.2
SPN				*e*S	Sn	17 12 54.1	-2.6
NLC	Nalytchevo	3.07	212	*e*P	Pn	17 12 23.8	-0.2
NLC				*e*S	Sn	17 12 58.6	-0.8
SDLR	Sedlovina	3.13	217	*e*P	Pn	17 12 25.2	+0.3
KRX	Arik	3.14	220	*e*P	Pn	17 12 25.9	+0.8
KRER	Koryakskii	3.15	218	*e*P	Pn	17 12 26.0	+0.7
SMAR	Somma	3.17	218	*e*P	Pn	17 12 26.0	+0.5
GNL	Ganaly	3.17	230	*e*P	Pn	17 12 25.6	+0.1
AVH	Avacha	3.19	218	*e*P	Pn	17 12 26.6	+0.9
KOK	Koryaka	3.20	219	*e*P	Pn	17 12 26.6	+0.7
UGLR	Uglovaya	3.20	217	*e*P	Pn	17 12 26.5	+0.5
DALK	Dalny	3.38	216	*e*P	Pn	17 12 28.2	0.0
DALK				*e*S	Sn	17 13 07.0	+0.1
PET	Petropavlovsk	3.42	216	*e*P	Pn	17 12 29.2	+0.5
PET				*e*S	Sn	17 13 08.3	+0.4
PALN	Palana	3.47	342	*e*P	Pn	17 12 31.4	+2.0
OSSR	Ossora	3.49	9	*e*P	Pn	17 12 30.0	+0.2
OSSR				*e*S	Sn	17 13 09.3	-0.5
PETK	Petropavlovsk-	3.70	225	Pn	Pn	17 12 31.9	-0.7
	0.8nm,0.3s,baz=63,slow=16,SNR=40						
PETK				Sn	Sn	17 13 18.3	+3.3
	1.0nm,0.3s,baz=98,slow=20,SNR=1.4						
PETK				LR	LR	17 14 31.7	
	comp=Z,44nm,21.3s,baz=334,slow=48						
	1.8nm,0.5s						
KRMR	Karymshinskiy	3.75	219	*e*P	Pn	17 12 33.9	+0.5
KRMR				*e*S	Sn	17 13 17.3	+1.0
RUS	Russkaya	3.96	213	*e*P	Pn	17 12 35.9	-0.3
GRL	Gorelyy	4.00	217	*e*P	Pn	17 12 38.7	+1.8
GRL				*e*S	Sn	17 13 24.7	+2.1
MTVR	Mutnovka	4.03	216	*e*P	Pn	17 12 38.4	+1.1
MTVR				*e*S	Sn	17 13 24.1	+0.9
ASAK	Asacha	4.20	217	*e*P	Pn	17 12 40.6	+1.0
KDTR	Khodutka, Kamc	4.64	212	*e*P	Pn	17 12 46.6	+1.1
MIPR	Malaya Ipel'ka	4.71	223	*e*P	Pn	17 12 48.2	+1.7
H11N2	WAKE ISLAND Hy	36.21	172	T	T	17 56 09.9	
	baz=355,slow=76,SNR=7.2						
H11N3	WAKE ISLAND Hy	36.23	172	T	T	17 56 12.9	
	baz=355,slow=76,SNR=5.1						
H11N1	WAKE ISLAND Hy	36.23	172	T	T	17 56 09.3	
	baz=355,slow=76,SNR=8.1						
YKA	Yellowknife Ar	40.42	45	P	P	17 19 11.3	-0.3
	0.2nm,0.5s,baz=300,slow=8.6,SNR=2.8						
	0.2nm,0.5s						
NVAR	Mina Array Bea	53.82	73	P	P	17 20 55.9	-0.6
	0.3nm,0.6s,baz=297,slow=6.0,SNR=2.2						
	0.3nm,0.6s						

NEIC ***15*** *17:27:34.8±2.7, 3°3S±0°1×146°2E±0°1, h45^{km}±16^{km}, mb4.2/10, Error ellipse: s-maj=22.6km s-min=11.2km az=130.0*

IDC ***15*** *17:27:45.5±5.7, 4°18S×146°36E, h98^{km}±59^{km}, mb3.4/3, mbtmp3.9/5, ML3.8/1, MS3.3/3, Error ellipse: s-maj=57.3km s-min=31.7km az=126.0*

ISC 15 17:27:37.9±1.0**, 4°1S**±0°1×**146°4E**±0°1**, h35**^{km}**, n23, σ1^{s}61**/17**, mb3.8**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	2.22	25	Pn	Pn	17 28 00.3	-12
PMG	Port Moresby	5.35	172	P	Pn	17 29 02.1	+6.9
	16nm,0.8s,baz=19,slow=18,SNR=5.7						
PMG	Port Moresby	5.35	172		Pn	17 29 00.2	+5.0
COEN	Coen	10.34	198	Pn	Pn	17 30 04.9	+1.1
HNR	Honiara	14.43	112	LR	LR	17 36 46.9	
	comp=Z,148nm,19.3s,baz=293,slow=37						
HNR	Honiara	14.43	112	Pn	Pn	17 30 57.5	-2.2
MTN	Manton Dam	17.46	239	Pn	Pn	17 31 34.4	-4.3
MTN				IAmb	IAmb	17 31 52.2	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	19.53	216	P	Pn	17 32 03.8	-0.1
WB0				IAmb	IAmb	17 32 05.6	
	comp=Z,9.6nm,0.8s						
WR0	Warramunga Arr	19.59	215	P	Pn	17 32 04.4	-0.3
WR0				IAmb	IAmb	17 32 08.2	
	comp=Z,9.2nm,1.0s						
WRAB	Tennant Creek	19.68	216	P	Pn	17 32 05.8	+0.1
WRAB				IAmb	IAmb	17 32 07.5	
	comp=Z,13nm,0.8s						
WB2	Warramunga Arr	19.69	216	P	Pn	17 32 06.2	+0.3
WB2				IAmb	IAmb	17 32 07.7	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	19.70	216	P	Pn	17 32 05.6	-0.4
	comp=Z,0.3nm,0.3s,baz=36,slow=11,SNR=36						
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	19.70	216	P	P	17 32 04.5	+0.1
KNRA	Kununurra	20.86	235	P	P	17 32 15.3	-1.6
KNRA				IAmb	IAmb	17 32 20.4	
	comp=Z,18nm,0.8s						
AS31	Alice Springs	22.93	211	P	P	17 32 40.5	+1.4
ASAR	Alice Springs	22.93	211	P	P	17 32 40.2	+1.1
	comp=Z,3.8nm,0.9s,baz=44,slow=7.7,SNR=45						
	comp=Z,3.8nm,0.9s						
ASAR	Alice Springs	22.93	211	P	P	17 32 40.0	+0.9
SANVU	Saraoutou	23.35	120	P	P	17 32 44.8	+1.5
DZM	Mont Dzumac	26.39	134	LR	LR	17 41 52.3	
	comp=Z,155nm,18.2s,baz=173,slow=32						
TOO	Toolangi	33.35	181	P	P	17 34 12.6	-0.2
KSRS	Korea Array	44.76	339	LR	LR	17 55 28.8	
	comp=Z,11nm,18.0s,baz=225,slow=37						
CMAR	Chiang Mai Arr	51.86	297	P	P	17 36 44.2	+1.0
	comp=Z,0.4nm,0.7s,baz=126,slow=5.7,SNR=1.9						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	83.94	23	P	P	17 40 04.9	+0.8
	comp=Z,0.7nm,1.0s,baz=262,slow=4.5,SNR=4.0						
	comp=Z,0.7nm,1.0s						

IDC ***15*** *17:27:47.2±0.6, 27°65N×140°95E, h0^{km}, mb3.9/13, mbtmp3.9/14, ML4.0/1, MS3.5/11, Error ellipse: s-maj=17.7km s-min=14.4km az=62.0*

JMA ***15*** *17:27:50.9±0.1, 27°8N±0°6×14°3E±°, h120^{km}, MV3.5/9, NEAR CHICHIJIMA ISLAND*

ISC 15 17:27:48.8±0.6**, 27°58N**±0°08×**140°92E**±0°07**, h10**^{km}**, n30, σ1^{s}02**/26**, mb4.0**/14**, MS3.4**/10**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.23	113	P	Pb	17 28 12.1	0.0
CBIJ				*e*S	Sb	17 28 28.0	+0.1
JCJ	Chichijima	1.23	113	Pn	Pb	17 28 12.0	-0.1
	120nm,0.3s,baz=277,slow=21,SNR=50						
JCJ				Sn	Sg	17 28 28.3	0.0
	281nm,0.3s,baz=141,slow=23,SNR=8.4						
JCJ				LR	LR	17 28 40.6	
	comp=Z,298nm,19.9s,baz=98,slow=43						
JHH2	Haha-jima-NKT2	1.47	130	P	Pb	17 28 16.3	+0.2
JHH2				S	Sb	17 28 35.5	+0.6
BSO1	Boso 1	7.05	0	*e*P	Pn	17 29 31.9	+0.4
JRY	Ryogami san	8.58	349	*e*P	Pn	17 29 55.5	+2.5
MJAR	Matsushiro Arr	9.22	346	Pn	Pn	17 30 03.5	+1.6
	0.1nm,0.3s,baz=160,slow=12,SNR=2.5						
JOW	Kunigami	11.28	269	Pn	Pn	17 30 29.0	-1.1
	2.2nm,0.3s,baz=96,slow=16,SNR=9.3						
JOW				LR	LR	17 33 50.0	
	comp=Z,302nm,22.0s,baz=110,slow=32						
	8.0nm,0.4s						
KLR	Kul'dur	22.74	344	P	P	17 32 51.2	+0.3
	2.3nm,0.8s,baz=146,slow=7.9,SNR=9.1						
KLR				LR	LR	17 42 24.5	
	comp=Z,75nm,18.9s,baz=168,slow=39						
	2.3nm,0.8s						
MA2	Magadan	32.69	9	LR	LR	17 46 51.8	
	comp=Z,38nm,22.0s,baz=134,slow=35						
SONM	Songino Array	33.58	316	LR	LR	17 47 43.9	
	comp=Z,50nm,20.1s,baz=155,slow=36						
SHEM	Shemya Is, Ala	35.17	35	LR	LR	17 45 57.8	
	comp=Z,60nm,21.0s,baz=318,slow=31						
CMAR	Chiang Mai Arr	39.53	266	P	P	17 35 21.5	+1.4
	0.2nm,0.5s,baz=85,slow=5.9,SNR=2.4						
CMAR				LR	LR	17 51 28.6	
	comp=Z,46nm,19.6s,baz=90,slow=36						
	0.2nm,0.5s						
PSI	Prapat	47.06	246	LR	LR	17 57 12.3	
	comp=Z,190nm,18.1s,baz=164,slow=37						
WRA	Warramunga Arr	47.67	188	P	P	17 36 26.1	+0.6
	23nm,0.8s,baz=8.9,slow=8.3,SNR=65						
MKAR	Makanchi Array	49.30	309	P	P	17 36 37.5	-0.4
	0.4nm,0.6s,baz=94,slow=8.5,SNR=2.8						
	0.4nm,0.6s						
ASAR	Alice Springs	51.40	188	P	P	17 36 54.0	+0.1
	2.3nm,0.9s,baz=10,slow=11,SNR=35						
	2.3nm,0.9s						
ILAR	Eielson Array	57.83	29	P	P	17 37 38.1	-2.0
	1.1nm,0.9s,baz=251,slow=6.0,SNR=9.2						
	1.1nm,0.9s						
STKA	Stephens Creek	59.13	179	P	P	17 37 49.4	-0.2
	2.1nm,0.8s,baz=360,slow=6.0,SNR=7.2						

	2.1nm,0.8s						
ARU	**Arti**	**63.35**	**322**	LR	LR	18 07 24.4	
	comp=Z,28nm,20.1s,baz=94,slow=38						
AKTO	**Aktyubinsk**	**64.90**	**316**	LR	LR	18 07 51.6	
	comp=Z,32nm,18.1s,baz=65,slow=37						
YKA	**Yellowknife Ar**	**72.25**	**28**	P	**P**	**17 39 13.6**	**-0.3**
	1.1nm,0.9s,baz=291,slow=5.5,SNR=11						
	1.1nm,0.9s						
ARCES	**ARCESS Array B**	**72.71**	**341**	P	**P**	**17 39 17.2**	**+0.6**
	1.9nm,0.9s,baz=66,slow=9.0,SNR=3.5						
	1.9nm,0.9s						
FINES	**FINESS Array B**	**77.01**	**333**	P	**P**	**17 39 39.7**	**-1.8**
	1.3nm,0.9s,baz=76,slow=5.9,SNR=1.6						
	1.3nm,0.9s						
NVAR	**Mina Array Bea**	**81.10**	**51**	P	**P**	**17 40 05.6**	**+0.9**
	0.3nm,0.5s,baz=312,slow=7.2,SNR=3.0						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**81.56**	**323**	LR	LR	18 18 01.4	
	comp=Z,30nm,18.5s,baz=3.5,slow=37						
NOA	**NORSAR Array B**	**82.74**	**338**	P	**P**	**17 40 11.3**	**-1.3**
	1.1nm,0.9s,baz=44,slow=5.5,SNR=3.4						
NOA				LR	LR	18 20 32.4	
	comp=Z,33nm,18.5s,baz=100,slow=38						
	1.1nm,0.9s						
PDAR	**Pinedale Array**	**84.65**	**44**	P	**P**	**17 40 23.8**	**+0.6**
	1.7nm,1.1s,baz=282,slow=2.9,SNR=5.6						
	1.7nm,1.1s						
TXAR	**Lajitas Array**	**96.21**	**52**	P	**P**	**17 41 17.7**	**0.0**
	0.4nm,0.8s,baz=316,slow=2.5,SNR=3.8						
	0.4nm,0.8s						
LPAZ	**La Paz**	**150.88**	**73**	PKPbc	**PKiKP**	**17 47 43.8**	**+0.1**
	1.8nm,0.7s,baz=254,slow=3.4,SNR=9.8						
PLCA	**Paso Flores**	**151.01**	**125**	PKPbc	**PKiKP**	**17 47 42.7**	**+0.1**
	3.0nm,0.8s,baz=281,slow=3.5,SNR=4.9						

TAP 15 17:29:42.3, 24°.66N×121°.75E, h12^{km}, ML2.0, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDS	**Dongshan**	**0.04**	**226**	P	Pg	17 29 45.1	+0.6
	baz=225						
NDS				*e*S	Sg	17 29 46.7	+0.6
	baz=225						
TWE	**Neicheng**	**0.09**	**308**	P	Pg	17 29 45.8	+0.8
	baz=312						
TWE				S	Sg	17 29 47.5	+0.5
	baz=312						
ILA	**Ilan**	**0.10**	**359**	P	Pb	17 29 45.8	-0.5
	baz=3.0						
ILA				S	Sg	17 29 48.4	+1.2
	baz=3.0						
TWC	**Suao**	**0.11**	**120**	P	Pb	17 29 45.9	-0.5
	baz=118						
TWC				S	Sg	17 29 47.9	+0.7
	baz=118						
ENTT	**Nioudou**	**0.17**	**262**	P	Pb	17 29 46.9	-0.6
	baz=261						
FUSB	**Fushanzhiwuyua**	**0.18**	**303**	P	Pb	17 29 47.4	-0.2
	baz=303						
NTC	**Toucheng**	**0.20**	**21**	*e*P	Pb	17 29 48.1	0.0
	baz=21						
NTC				*e*S	Sg	17 29 52.0	+2.2
	baz=21						
EWUT	**Wuta**	**0.22**	**173**	P	Pb	17 29 47.6	-0.6
	baz=172						
EWUT				*e*S	Sg	17 29 50.7	+0.6
	baz=172						
ENA	**Nanau**	**0.23**	**182**	P	Pb	17 29 48.1	-0.5
	baz=179						
ENA				*e*S	Sg	17 29 51.3	+0.7
	baz=179						
LATG	**Datong**	**0.24**	**238**	P	Pb	17 29 48.3	-0.4
	baz=237						
EGS		**0.25**	**43**	*e*P	Pb	17 29 48.6	-0.2
	baz=44						
EGS				S	Sg	17 29 52.9	+1.9
	baz=44						
NWLT	**Wulai**	**0.25**	**297**	P	Pb	17 29 48.4	-0.4
	baz=296						
TIPB	**Shuangxi**	**0.32**	**13**	P	Pb	17 29 49.8	-0.2
	baz=12						
TIPB				S	Sg	17 29 54.0	+0.9
	baz=12						
YHNB	**Yeheng**	**0.34**	**271**	P	Pb	17 29 50.0	-0.4
	baz=271						
YHNB				S	Sg	17 29 54.3	+0.5
	baz=271						
NSK	**Sanguang**	**0.36**	**272**	P	Pb	17 29 50.3	-0.4
	baz=271						
NSK				S	Sb	17 29 55.3	-0.9
	baz=271						
NHDH	**Xindian Distri**	**0.36**	**326**	*e*P	Pb	17 29 50.5	-0.2
	baz=325						
NHDH				*e*S	Sb	17 29 56.1	-0.3
	baz=325						
NNSB	**Datong**	**0.41**	**235**	*e*P	Pb	17 29 51.4	-0.2
	baz=235						
NNSB				*e*S	Sb	17 29 56.9	-0.9
	baz=235						
NWF	**Wu-fen Shan**	**0.41**	**4**	*e*P	Pb	17 29 51.9	+0.3
	baz=4.0						
NWF				S	Sb	17 29 57.1	-0.7
	baz=4.0						
TWB1	**Santiao Chiao**	**0.41**	**32**	*e*P	Pb	17 29 51.1	-0.4
	baz=33						
TWB1				*e*S	Sb	17 29 57.1	-0.6
	baz=33						
NNS	**Nan Shan**	**0.41**	**237**	*e*P	Pb	17 29 51.3	-0.3
	baz=236						
NNS				*e*S	Sb	17 29 57.0	-0.8
	baz=236						
NACB	**Ninganchiao**	**0.51**	**196**	*e*P	Pb	17 29 53.4	+0.2
	baz=196						
NACB				*e*S	Sb	17 30 01.3	+0.8
	baz=196						
YM01	**YM01**	**0.51**	**341**	*e*P	Pb	17 29 53.9	+0.6
	baz=341						
YM01				*e*S	Sn	17 30 02.5	-1.7
	baz=341						
ETL	**Fush Village**	**0.52**	**193**	*e*S	Sb	17 30 01.9	+1.1
	baz=192						
ETLH	**Xiulin Townshi**	**0.52**	**208**	*e*P	Pb	17 29 53.9	+0.5
	baz=208						
ETLH				*e*S	Sb	17 30 01.9	+1.0
	baz=208						
TWS1	**Kuangyinshan**	**0.53**	**325**	*e*P	Pb	17 29 54.4	+0.8
	baz=325						
TWS1				*e*S	Sb	17 30 02.0	+0.8
	baz=325						
ANP	**Anpu**	**0.56**	**338**	*e*P	Pb	17 29 54.8	+0.6
	baz=338						
TWD	**Chiawan**	**0.60**	**194**	*e*S	Sb	17 30 04.0	+0.9
	baz=192						
FUSS	**Fushou**	**0.62**	**228**	*e*P	Pb	17 29 55.3	+0.1
	baz=228						
FUSS				*e*S	Sb	17 30 04.7	+0.6
	baz=228						
LIOB	**Emei**	**0.67**	**269**	*e*P	Pb	17 29 56.1	+0.1
	baz=268						
LIOB				*e*S	Sb	17 30 06.4	+1.2
	baz=268						
WHF	**Hehuan Shan**	**0.68**	**221**	*e*P	Pb	17 29 56.6	+0.2
	baz=220						
WHF				*e*S	Sb	17 30 06.4	+0.5
	baz=220						
NSTT	**Nanjuang**	**0.68**	**267**	*e*P	Pb	17 29 56.6	+0.4
	baz=267						
NSTT				*e*S	Sb	17 30 06.6	+1.0
	baz=267						
CHGB	**Renai**	**0.80**	**221**	*e*P	Pb	17 29 58.9	+0.6
	baz=221						
CHGB				*e*S	Sb	17 30 10.3	+1.2
	baz=221						
OWD	**Renai**	**0.88**	**217**	*e*P	Pn	17 30 00.2	-0.4
	baz=216						
OWD				*e*S	Sn	17 30 13.1	-0.4
	baz=216						
WUSB	**Renai**	**0.88**	**221**	*e*P	Pn	17 30 00.4	-0.3
	baz=220						
WUSB				*e*S	Sn	17 30 12.8	-0.8
	baz=220						
ESL	**Shilin**	**0.89**	**199**	*e*P	Pb	17 30 00.1	+0.3
	baz=198						
ESL				*e*S	Sn	17 30 13.3	-0.4
	baz=198						
EGFH	**Guangfu**	**1.03**	**197**	*e*P	Pn	17 30 03.1	+0.5
	baz=196						
EGFH				*e*S	Sn	17 30 17.8	+0.7
	baz=196						
VWDT	**VWDT**	**1.06**	**212**	*e*P	Pn	17 30 03.2	+0.1
	baz=211						
VWDT				*e*S	Sn	17 30 18.9	+1.1
	baz=211						
SSLB	**Suanglung**	**1.13**	**220**	*e*P	Pg	17 30 04.6	+0.4
	baz=219						
SSLB				*e*S	Sn	17 30 20.7	+1.0
	baz=219						
YOJ	**Yonaguni jima**	**1.17**	**100**	*e*P	Pg	17 30 05.4	+0.6
	baz=99						
YOJ				*e*S	Sn	17 30 21.6	+1.3
	baz=99						
YULB	**Yu-li**	**1.33**	**198**	*e*P	Pb	17 30 07.4	+0.1
	baz=198						
YULB				*e*S	Sg	17 30 25.7	+0.5
	baz=198						
ALS	**Alishan**	**1.44**	**217**	*e*P	Pb	17 30 08.9	-0.3
	baz=216						
ALS				*e*S	Sg	17 30 28.2	-0.4
	baz=216						

*NAO **15** 17:31:05.0±1.6, 59°.76N×2°.39E, ML1.1*
*BGS **15** 17:31:07.2±1.2, 59°.81N×2°.45E, h10^{km}, ML2.3*
*BER **15** 17:31:08.2±1.9, 59°.80N×2°.47E, h15^{km}, ML2.0, ML2.3(BGS), Confirmed Earthquake*
*DNK **15** 17:31:10.8±0.6, 59°.76N×3°.35E, h0^{km}, ML1.9(UPP), Suspected explosion*
*IDC **15** 17:31:10.3±9.0, 59°.98N×3°.08E, h0^{km}, mbtmp3.3/3, ML2.4/3, Error ellipse: s-maj=94.6km s-min=57.4km az=43.0*
*UPP **15** 17:31:14.4±3.2, 59°.74N×3°.72E, h0^{km}, ML1.9, Suspected explosion*
ISC 15 17:31:03.4±0.9**, 59°.79N**±0°.04×**2°.45E**±0°.02**, h0^{km}, n96, σ2^{s}.13**/135**, 2C-6D, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMY	**Karmoy**	**1.54**	**111**	Pn	**Pb**	**17 31 34.0**	**+1.3**
KMY				Lg	Lg	17 31 52.0	
KMY	**Karmoy**	**1.54**	**111**	*e*P	**Pb**	**17 31 34.1**	**+1.3**
KMY				*e*S	**Sn**	**17 31 52.1**	**-0.6**
KMY				IAML		17 31 52.8	
	comp=Z,61nm,0.3s						
ASK	**Askoy**	**1.54**	**62**	⇓*i*P	**Pn**	**17 31 33.6**	**+1.5**
ASK				*e*S	**Sn**	**17 31 50.8**	**-2.0**
ASK				IAML		17 31 51.5	
	comp=Z,58nm,0.1s						
BER	**Bergen**	**1.57**	**66**	*e*P	**Pn**	**17 31 33.9**	**+1.5**
BER				*e*S	**Sn**	**17 31 51.0**	**-2.3**
BER				IAML		17 31 51.3	
	comp=N,3.6nm,0.2s						
BER				IAML		17 31 51.6	
	comp=E,3.8nm,0.1s						
BER	**Bergen**	**1.57**	**66**	*e*P	**Pn**	**17 31 33.9**	**+1.5**
BER				*e*S	**Sn**	**17 31 51.0**	**-2.3**
BER				IAML		17 31 51.3	
	comp=N,3.6nm,0.2s						
BER				IAML		17 31 51.6	
	comp=E,3.8nm,0.1s						
BER	**Bergen**	**1.57**	**66**	Pn	**Pn**	**17 31 34.0**	**+1.5**
BER				Lg	Lg	17 31 51.3	
BER	**Bergen**	**1.57**	**66**	⇓*i*P	**Pn**	**17 31 33.9**	**+1.5**
BER				*e*S	**Sn**	**17 31 51.4**	**-2.0**
BER				IAML		17 31 52.3	
	comp=Z,26nm,0.2s						
SUE	**Sulen**	**1.72**	**41**	⇓*i*P	**Pn**	**17 31 35.9**	**+1.5**
SUE				*e*S	**Sn**	**17 31 55.1**	**-2.0**
SUE				IAML		17 31 56.5	
	comp=Z,74nm,0.2s						
LRW	**Lerwick**	**1.86**	**282**	*e*P	**Pn**	**17 31 37.9**	**+1.5**
LRW				*e*S	**Sn**	**17 31 59.1**	**-1.4**
LRW				IAML		17 32 11.0	
	comp=E,8.5nm,0.4s						
LRW				IAML		17 32 14.1	
	comp=N,8.8nm,0.4s						
LRW	**Lerwick**	**1.86**	**282**	*e*P	**Pn**	**17 31 37.9**	**+1.5**
LRW				*e*S	**Sn**	**17 31 59.1**	**-1.4**
LRW				IAML		17 32 11.0	
	comp=E,8.5nm,0.4s						
LRW				IAML		17 32 14.1	
	comp=N,8.8nm,0.4s						
LRW	**Lerwick**	**1.86**	**282**	*e*P	**Pn**	**17 31 37.9**	**+1.5**
LRW				*e*S	**Sn**	**17 31 58.1**	**-2.4**
LRW				IAML		17 32 11.0	
	comp=E,8.5nm,0.4s						
BLS5	**Blasjo**	**2.07**	**98**	⇓*i*P	**Pn**	**17 31 41.4**	**+2.0**
BLS5				*e*S	**Sn**	**17 32 04.1**	**-1.8**
BLS5				IAML		17 32 25.2	
	comp=Z,15nm,0.4s						
ODD1	**Odda**	**2.12**	**85**	⇓*i*P	**Pn**	**17 31 42.0**	**+2.0**
ODD1				*e*S	**Sn**	**17 32 05.5**	**-1.5**
ODD1				IAML		17 32 06.0	
	comp=Z,24nm,0.2s						
FOO	**Floro**	**2.22**	**34**	*e*P	**Pn**	**17 31 42.9**	**+1.5**
FOO				*e*S	**Sn**	**17 32 07.0**	**-2.5**
FOO				IAML		17 32 08.7	
	comp=E,15nm,0.6s						
FOO				IAML		17 32 08.8	
	comp=N,13nm,0.4s						
FOO	**Floro**	**2.22**	**34**	*e*P	**Pn**	**17 31 42.9**	**+1.5**
FOO				*e*S	**Sn**	**17 32 07.0**	**-2.5**
FOO				IAML		17 32 08.7	
	comp=E,15nm,0.6s						
FOO				IAML		17 32 08.8	
	comp=N,13nm,0.4s						
FOO	**Floro**	**2.22**	**34**	Pn	**Pn**	**17 31 43.1**	**+1.7**
FOO				Sn	**Sn**	**17 32 07.0**	**-2.5**
FOO	**Floro**	**2.22**	**34**	*e*P	**Pn**	**17 31 43.1**	**+1.7**
FOO				*e*S	**Sn**	**17 32 07.0**	**-2.5**
FOO				IAML		17 32 09.0	
	comp=Z,106nm,0.2s						
HYA	**Hoyanger**	**2.31**	**52**	⇓*i*P	**Pn**	**17 31 44.3**	**+1.6**
HYA				*e*S	**Sn**	**17 32 09.5**	**-2.2**
HYA				IAML		17 32 11.6	
	comp=Z,27nm,0.3s						
SNART	**Snartemo**	**2.86**	**118**	*e*P	**Pn**	**17 31 52.5**	**+2.3**
SNART				*e*S	**Sn**	**17 32 23.2**	**-2.0**
SNART				IAML		17 32 35.4	
	comp=Z,19nm,0.3s						
SKAR	**Skarslia**	**3.06**	**70**	*e*P	**Pn**	**17 31 55.0**	**+2.0**
SKAR				*e*S	**Sn**	**17 32 28.0**	**-2.3**
AKN	**Aaknes**	**3.27**	**41**	Pn	**Pn**	**17 31 58.0**	**+2.1**
AKN				Sn	**Sn**	**17 32 32.8**	**-2.6**
AKN	**Aaknes**	**3.27**	**41**	⇑*i*P	**Pn**	**17 31 57.9**	**+2.1**
AKN				*e*S	**Sn**	**17 32 32.9**	**-2.5**
AKN				IAML		17 32 34.8	
	comp=Z,50nm,0.1s						
HOMB	**Homborsund**	**3.48**	**113**	*e*P	**Pn**	**17 32 00.9**	**+2.2**
HOMB				*e*S	**Sn**	**17 32 38.4**	**-2.2**
HOMB				IAML		17 32 53.2	
	comp=Z,8.6nm,0.5s						
BIGH	**Upper Bighouse**	**3.52**	**251**	*e*P	**Pn**	**17 32 00.8**	**+1.5**
BIGH				*e*S	**Sn**	**17 32 38.2**	**-3.3**
BIGH				IAML		17 32 40.3	
	comp=E,7.2nm,0.3s						
BIGH				IAML		17 32 40.6	
	comp=N,6.1nm,0.2s						
BIGH	**Upper Bighouse**	**3.52**	**251**	*e*P	**Pn**	**17 32 00.8**	**+1.5**
BIGH				*e*S	**Sn**	**17 32 38.2**	**-3.3**
BIGH				IAML		17 32 40.3	
	comp=E,7.2nm,0.3s						
BIGH				IAML		17 32 40.6	
	comp=N,6.1nm,0.2s						
BIGH	**Upper Bighouse**	**3.52**	**251**	⇑*i*P	**Pn**	**17 32 00.8**	**+1.5**
BIGH				*e*S	**Sn**	**17 32 38.3**	**-3.3**
KONO	**Kongsberg**	**3.63**	**89**	*e*P	**Pn**	**17 32 03.0**	**+2.3**
KONO				*e*S	**Sn**	**17 32 40.6**	**-3.6**
KONO				IAML		17 32 58.5	
	comp=Z,3.4nm,0.3s						
MCD	**Coleburn Disti**	**3.71**	**236**	*e*P	**Pn**	**17 32 03.4**	**+1.6**
MCD	**Coleburn Disti**	**3.71**	**236**	*e*P	**Pn**	**17 32 03.4**	**+1.6**
MCD	**Coleburn Disti**	**3.71**	**236**	*e*P	**Pn**	**17 32 03.4**	**+1.6**
MOL	**Molde**	**3.73**	**39**	Pn	**Pn**	**17 32 04.6**	**+2.5**
MOL				Sn	**Sn**	**17 32 43.8**	**-2.8**
MOL	**Molde**	**3.73**	**39**	*e*P	**Pn**	**17 32 04.3**	**+2.2**
MOL				*e*S	**Sn**	**17 32 43.9**	**-2.8**
MOL				IAML		17 32 45.1	
	comp=Z,14nm,0.1s						
DRUM	**Mains of Drumt**	**3.88**	**224**	*e*P	**Pn**	**17 32 05.9**	**+1.7**
DRUM	**Mains of Drumt**	**3.88**	**224**	*e*P	**Pn**	**17 32 05.9**	**+1.7**
DRUM	**Mains of Drumt**	**3.88**	**224**	*e*P	**Pn**	**17 32 05.9**	**+1.7**
DOMB	**Dombas**	**3.94**	**52**	Pn	**Pn**	**17 32 07.7**	**+2.5**
DOMB				Sn	**Sn**	**17 32 49.4**	**-2.7**
DOMB	**Dombas**	**3.94**	**52**	*e*P	**Pn**	**17 32 07.7**	**+2.5**
DOMB				*e*S	**Sn**	**17 32 49.1**	**-3.0**
DOMB				IAML		17 32 52.2	
	comp=Z,8.1nm,0.2s						
LINV	**Loch Inver, As**	**4.28**	**251**	*e*P	**Pn**	**17 32 10.8**	**+1.1**
LINV				IAML		17 32 57.8	
	comp=E,4.5nm,0.2s						
LINV				IAML		17 32 58.5	
	comp=N,4.1nm,0.3s						
LINV	**Loch Inver, As**	**4.28**	**251**	*e*P	**Pn**	**17 32 10.8**	**+1.1**
LINV				IAML		17 32 57.8	
	comp=E,4.5nm,0.2s						
LINV				IAML		17 32 58.5	
	comp=N,4.1nm,0.3s						
LINV	**Loch Inver, As**	**4.28**	**251**	*e*P	**Pn**	**17 32 10.8**	**+1.1**
LINV				IAML		17 32 57.8	
	comp=E,4.5nm,0.2s						
NAO01	**NORSAR Array S**	**4.33**	**72**	*e*P	**Pn**	**17 32 12.4**	**+2.0**
NAO01				*e*S	**Sn**	**17 32 57.9**	**-3.6**
NB2	**NORSAR Subarra**	**4.53**	**70**	Pn	**Pn**	**17 32 14.6**	**+1.5**
	baz=260,slow=14						
NB2				Sn	**Sn**	**17 33 02.6**	**-3.8**
	baz=257,slow=22						
NOA	**NORSAR Array B**	**4.53**	**70**	Pn	**Pn**	**17 32 14.3**	**+1.2**
	comp=E,0.1nm,0.3s,baz=255,slow=12,SNR=17						
NOA				Sn	**Sn**	**17 33 03.4**	**-3.0**
	comp=E,0.1nm,0.3s,baz=234,slow=24,SNR=4.0						
NOA				Lg	Lg	17 33 18.7	
	comp=E,0.1nm,0.3s,baz=290,slow=18,SNR=3.4						
	comp=E,0.5nm,0.2s						
STRU	**Stroemstad**	**4.53**	**96**	P	**Pn**	**17 32 14.3**	**+1.3**
STRU				S	**Sn**	**17 33 01.1**	**-5.2**
STRU	**Stroemstad**	**4.53**	**96**	*e*P	**Pn**	**17 32 14.4**	**+1.3**
STRU				*e*S	**Sn**	**17 33 01.2**	**-5.2**
STRU	**Stroemstad**	**4.53**	**96**	P	**Pn**	**17 32 14.3**	**+1.3**
STRU				S	**Sn**	**17 33 01.1**	**-5.2**
NC602	**NORSAR Array S**	**4.63**	**74**	*e*P	**Pn**	**17 32 15.8**	**+1.3**
NC602				*e*S	**Sn**	**17 33 04.2**	**-4.6**
NRA0	**NORESS Array S**	**4.63**	**74**	Pn	**Pn**	**17 32 15.8**	**+1.3**
	baz=267,slow=12						
NRA0				Sn	**Sn**	**17 33 04.4**	**-4.5**
	baz=279,slow=22						
KAC	**Achnashellach**	**4.65**	**244**	*e*P	**Pn**	**17 32 15.3**	**+0.6**
KAC	**Achnashellach**	**4.65**	**244**	*e*P	**Pn**	**17 32 15.3**	**+0.6**
KAC	**Achnashellach**	**4.65**	**244**	*e*P	**Pn**	**17 32 15.3**	**+0.6**
ESY	**Stoneypath**	**4.73**	**217**	*e*P	**Pn**	**17 32 17.2**	**+1.4**
ESY	**Stoneypath**	**4.73**	**217**	*e*P	**Pn**	**17 32 17.2**	**+1.4**
ESY	**Stoneypath**	**4.73**	**217**	*e*P	**Pn**	**17 32 17.2**	**+1.4**
INVG	**Invergeldie, C**	**4.81**	**228**	*e*P	**Pn**	**17 32 18.4**	**+1.4**
INVG				IAML		17 33 12.1	
	comp=E,4.0nm,0.2s						
INVG				IAML		17 33 13.2	
	comp=N,3.7nm,0.2s						
INVG	**Invergeldie, C**	**4.81**	**228**	*e*P	**Pn**	**17 32 18.4**	**+1.4**
INVG				IAML		17 33 12.1	
	comp=E,4.0nm,0.2s						
INVG				IAML		17 33 13.2	
	comp=N,3.7nm,0.2s						
INVG	**Invergeldie, C**	**4.81**	**228**	*e*P	**Pn**	**17 32 18.4**	**+1.4**
INVG				IAML		17 33 12.1	
	comp=E,4.0nm,0.2s						
KPL	**Plockton**	**4.90**	**243**	*e*P	**Pn**	**17 32 19.3**	**+1.1**
KPL				IAML		17 33 14.5	
	comp=N,2.8nm,0.6s						
KPL				IAML		17 33 50.7	
	comp=E,1.5nm,0.3s						
KPL	**Plockton**	**4.90**	**243**	*e*P	**Pn**	**17 32 19.3**	**+1.1**
KPL				IAML		17 33 14.5	
	comp=N,2.8nm,0.6s						
KPL				IAML		17 33 50.7	
	comp=E,1.5nm,0.3s						
KPL	**Plockton**	**4.90**	**243**	*e*P	**Pn**	**17 32 19.3**	**+1.1**
KPL				IAML		17 33 14.5	
	comp=N,2.8nm,0.6s						
KPL				IAML		17 33 50.7	
	comp=E,1.5nm,0.3s						
TJOU	**Tjoern**	**5.07**	**106**	P	**Pn**	**17 32 22.3**	**+1.7**
TJOU	**Tjoern**	**5.07**	**106**	P	**Pn**	**17 32 22.3**	**+1.7**
LEWI	**Lewis, Hebride**	**5.09**	**255**	*e*P	**Pn**	**17 32 22.2**	**+1.4**
LEWI				IAML		17 33 16.7	
	comp=N,2.6nm,0.3s						
LEWI				IAML		17 33 44.5	
	comp=E,3.1nm,0.8s						
LEWI	**Lewis, Hebride**	**5.09**	**255**	*e*P	**Pn**	**17 32 22.2**	**+1.4**
LEWI				IAML		17 33 16.7	
	comp=N,2.6nm,0.3s						
LEWI				IAML		17 33 44.5	
	comp=E,3.1nm,0.8s						
LEWI	**Lewis, Hebride**	**5.09**	**255**	*e*P	**Pn**	**17 32 22.2**	**+1.4**
LEWI				IAML		17 33 16.7	
	comp=N,2.6nm,0.3s						
EAB	**Aberfoyle**	**5.10**	**228**	*e*P	**Pn**	**17 32 23.5**	**+2.5**
EAB	**Aberfoyle**	**5.10**	**228**	*e*P	**Pn**	**17 32 23.5**	**+2.5**
EAB	**Aberfoyle**	**5.10**	**228**	*e*P	**Pn**	**17 32 23.5**	**+2.5**
FINU	**Finntorp**	**5.11**	**90**	P	**Pn**	**17 32 23.1**	**+2.0**
FINU	**Finntorp**	**5.11**	**90**	P	**Pn**	**17 32 23.1**	**+2.0**
SOFL	**Sornfelli, Far**	**5.13**	**301**	*e*P	**Pn**	**17 32 23.4**	**+1.9**
SOFL				*e*S	**Sn**	**17 33 19.1**	**-2.1**
EKA	**Eskdalemuir Ar**	**5.39**	**216**	Pn	**Pn**	**17 32 25.9**	**+0.9**
EKA				Sn	**Sn**	**17 33 22.8**	**-4.7**
ESK	**Eskdalemuir**	**5.42**	**217**	*e*P	**Pn**	**17 32 26.5**	**+1.2**
ESK	**Eskdalemuir**	**5.42**	**217**	*e*P	**Pn**	**17 32 26.5**	**+1.2**
ESK	**Eskdalemuir**	**5.42**	**217**	*e*P	**Pn**	**17 32 26.5**	**+1.2**
LAWE	**Loch Awe, Argy**	**5.46**	**233**	*e*P	**Pn**	**17 32 26.6**	**+0.6**
LAWE				IAML		17 33 26.5	
	comp=N,6.1nm,0.3s						
LAWE				IAML		17 33 26.7	
	comp=E,6.9nm,0.4s						
LAWE	**Loch Awe, Argy**	**5.46**	**233**	*e*P	**Pn**	**17 32 26.6**	**+0.6**
LAWE				IAML		17 33 26.5	
	comp=N,6.1nm,0.3s						
LAWE				IAML		17 33 26.7	
	comp=E,6.9nm,0.4s						
LAWE	**Loch Awe, Argy**	**5.46**	**233**	*e*P	**Pn**	**17 32 26.6**	**+0.6**
LAWE				IAML		17 33 26.5	
	comp=N,6.1nm,0.3s						
ONAU	**Onsala**	**5.50**	**112**	P	**Pn**	**17 32 28.3**	**+1.9**
ONAU	**Onsala**	**5.50**	**112**	P	**Pn**	**17 32 28.3**	**+1.9**
EDMD	**Edmundbyers**	**5.51**	**208**	*e*P	**Pn**	**17 32 27.4**	**+0.8**
EDMD	**Edmundbyers**	**5.51**	**208**	*e*P	**Pn**	**17 32 27.4**	**+0.8**
EDMD	**Edmundbyers**	**5.51**	**208**	*e*P	**Pn**	**17 32 27.4**	**+0.8**
NASU	**Vaermlandsnaes**	**5.56**	**94**	P	**Pn**	**17 32 28.6**	**+1.3**
NASU	**Vaermlandsnaes**	**5.56**	**94**	P	**Pn**	**17 32 28.6**	**+1.3**
UDD	**Uddeholm**	**5.62**	**82**	P	**Pn**	**17 32 29.6**	**+1.5**
BORU	**Boraas**	**5.80**	**107**	P	**Pn**	**17 32 32.2**	**+1.7**
BORU	**Boraas**	**5.80**	**107**	P	**Pn**	**17 32 32.2**	**+1.7**
NEWG	**New Galloway**	**5.91**	**220**	*e*P	**Pn**	**17 32 33.3**	**+1.3**
NEWG	**New Galloway**	**5.91**	**220**	*e*P	**Pn**	**17 32 33.3**	**+1.3**
NEWG	**New Galloway**	**5.91**	**220**	*e*P	**Pn**	**17 32 33.3**	**+1.3**
FKPU	**Falk**	**6.06**	**101**	P	**Pn**	**17 32 35.9**	**+1.8**
FKPU	**Falk**	**6.06**	**101**	P	**Pn**	**17 32 35.9**	**+1.8**
FIA0	**FINESS Array S**	**11.71**	**72**	Pn	**Pn**	**17 33 52.3**	**+0.9**
	baz=256,slow=8.6						
FINES	**FINESS Array B**	**11.71**	**72**	Pn	**Pn**	**17 33 52.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=266,slow=11,SNR=3.8						
	comp=N,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**13.78**	**35**	Pn	**Pn**	**17 34 19.7**	**+0.1**
	baz=230,slow=14,SNR=1.4						
	comp=N,0.9nm,0.8s						

*JMA **15** 17:31:03.8±0.2, 24°.0N±0°.8×12°2E±°, h23^{km}±1^{km}, MV2.7/11, TAIWAN REGION*
*TAP **15** 17:31:06.6, 24°.21N×121°.73E, h14^{km}, ML3.4, B*
ISC 15 17:31:06.3±0.8**, 24°.16N**±0°.01×**121°.79E**±0°.02**, h12^{km}**±5^{km}**, n121, σ0^{s}.66**/196**, 5C-30D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.15**	**343**	⇓*i*P	**Pg**	**17 31 09.7**	**-0.2**
	baz=10.0						
EHP				*i* S	**Sg**	**17 31 12.4**	**0.0**
	baz=10.0						
ETL	**Fush Village**	**0.15**	**268**	⇓*i*P	**Pg**	**17 31 09.9**	**0.0**
	baz=244						
ETL				S	**Sg**	**17 31 12.7**	**+0.2**
	baz=244						
NACB	**Ninganchiao**	**0.18**	**273**	⇓*i*P	**Pg**	**17 31 10.1**	**-0.2**
	baz=255						
NACB				S	**Sg**	**17 31 13.0**	**-0.1**
	baz=255						
TWD	**Chiawan**	**0.20**	**245**	⇓*i*P	**Pg**	**17 31 10.7**	**+0.1**
	baz=222						

TWD				*i* S	Sg	17 31 14.0	+0.5
	baz=222						
HWA	**Hwalien**	0.25	222	*i* P	Pb	17 31 12.5	-0.3
	baz=205						
HWA				*e*S	Sg	17 31 17.7	+2.7
	baz=205						
ENA	**Nanau**	0.27	350	⇓*i*P	Pg	17 31 11.6	-0.3
	baz=5.0						
ENA				S	Sg	17 31 15.3	-0.2
	baz=5.0						
EWUT	**Wuta**	0.28	358	⇓*i*P	Pg	17 31 11.8	-0.2
	baz=11						
EWUT				*i* S	Sg	17 31 15.7	-0.3
	baz=11						
ETLH	**Xiulin Townshi**	0.29	279	⇓*i*P	Pg	17 31 11.9	-0.3
	baz=270						
ETLH				S	Sg	17 31 15.9	-0.3
	baz=270						
ETM	**Tongmen**	0.34	234	⇓*i*P	Pg	17 31 13.2	+0.1
	baz=222						
ETM				*e*S	Sg	17 31 18.3	+0.7
	baz=222						
TEYL	**Yanliau Villag**	0.34	211	*e*P	Pb	17 31 13.9	-0.4
	baz=201						
TEYL				*e*S	Sb	17 31 21.2	+1.5
	baz=201						
LATG	**Datong**	0.44	327	⇓*i*P	Pg	17 31 14.8	-0.3
	baz=331						
LATG				*e*S	Sg	17 31 20.7	-0.3
	baz=331						
TWC	**Suao**	0.45	7	⇓*i*P	Pg	17 31 15.0	-0.1
	baz=17						
TWC				*e*S	Sg	17 31 21.2	+0.2
	baz=17						
NNSB	**Datong**	0.46	305	⇓*i*P	Pg	17 31 15.0	-0.3
	baz=305						
NNSB				*e*S	Sg	17 31 21.1	-0.3
	baz=305						
NNS	**Nan Shan**	0.47	306	⇓*i*P	Pg	17 31 15.2	-0.3
	baz=306						
NNS				S	Sg	17 31 21.5	-0.4
	baz=306						
NDS	**Dongshan**	0.47	352	⇓*i*P	Pg	17 31 15.4	-0.2
	baz=358						
NDS				S	Sg	17 31 21.6	-0.3
	baz=358						
ESL	**Shilin**	0.48	223	⇓*i*P	Pg	17 31 15.8	+0.2
	baz=214						
ESL				*e*S	Sb	17 31 23.0	-0.6
	baz=214						
WHF	**Hehuan Shan**	0.48	268	⇓*i*P	Pg	17 31 15.7	-0.2
	baz=261						
WHF				*e*S	Sg	17 31 22.2	-0.2
	baz=261						
NDT	**Datong Townshi**	0.51	330	⇓*e*P	Pg	17 31 16.1	-0.1
	baz=333						
NDT				*e*S	Sg	17 31 22.9	-0.1
	baz=333						
FUSS	**Fushou**	0.51	280	⇓*i*P	Pg	17 31 16.2	-0.1
	baz=275						
FUSS				*e*S	Sg	17 31 23.1	0.0
	baz=275						
TEGC	**Jichi Village**	0.51	207	*e*P	Pb	17 31 17.3	+0.1
	baz=199						
TEGC				*e*S	Sn	17 31 26.5	-1.5
	baz=199						
ENTT	**Nioudou**	0.52	337	⇓*i*P	Pg	17 31 16.3	-0.2
	baz=342						
ENTT				*e*S	Sg	17 31 23.1	-0.2
	baz=342						
TWE	**Neicheng**	0.57	349	⇓P	Pg	17 31 17.1	-0.2
	baz=355						
TWE				*e*S	Sg	17 31 24.8	-0.1
	baz=355						
TWT	**Tachien**	0.57	279	⇓*i*P	Pg	17 31 17.8	+0.3
	baz=275						
TWT				*e*S	Sg	17 31 25.4	+0.4
	baz=275						
CHGB	**Renai**	0.57	260	⇓*i*P	Pg	17 31 17.6	+0.1
	baz=254						
CHGB				*e*S	Sg	17 31 25.3	+0.1
	baz=254						
TDCB	**Techi**	0.58	279	⇓*e*P	Pg	17 31 17.8	+0.1
	baz=275						
TDCB				*e*S	Sg	17 31 25.3	-0.2
	baz=275						
EGFH	**Guangfu**	0.59	214	⇑P	Pg	17 31 18.1	+0.2
	baz=207						
EGFH				*e*S	Sb	17 31 27.2	+0.2
	baz=207						
OWD	**Renai**	0.60	250	⇓*i*P	Pg	17 31 17.9	-0.1
	baz=244						
OWD				*e*S	Sg	17 31 25.9	-0.1
	baz=244						
ILA	**Ilan**	0.60	356	*e*P	Pg	17 31 18.1	+0.1
	baz=3.0						
ILA				*e*S	Sg	17 31 26.5	+0.5
	baz=3.0						
FUSB	**Fushanzhiwuyua**	0.62	343	⇓*e*P	Pg	17 31 18.2	-0.3
	baz=347						
FUSB				*e*S	Sg	17 31 26.3	-0.3
	baz=347						
YHNB	**Yeheng**	0.63	323	⇓P	Pg	17 31 18.4	-0.2
	baz=325						
YHNB				*e*S	Sg	17 31 26.6	-0.3
	baz=325						
WUSB	**Renai**	0.64	255	⇓P	Pg	17 31 18.8	+0.1
	baz=249						
WUSB				*e*S	Sg	17 31 27.0	-0.2
	baz=249						
NSK	**Sanguang**	0.65	322	⇓P	Pg	17 31 18.6	-0.3
	baz=325						
NSK				*e*S	Sg	17 31 26.9	-0.5
	baz=325						
NWLT	**Wulai**	0.67	337	⇓P	Pg	17 31 18.9	-0.4
	baz=340						
NWLT				*e*S	Sg	17 31 27.4	-0.6
	baz=340						
NTC	**Toucheng**	0.69	3	⇓P	Pg	17 31 19.6	-0.1
	baz=8.0						
NTC				*e*S	Sg	17 31 28.1	-0.6
	baz=8.0						
EGS		0.69	11	*e*P	Pg	17 31 19.6	-0.1
	baz=17						
VWDT	**VWDT**	0.72	236	P	Pg	17 31 20.4	+0.2
	baz=230						
VWDT				*e*S	Sb	17 31 30.6	-0.1
	baz=230						
HGSD	**Ruisui**	0.75	207	*e*P	Pb	17 31 21.4	+0.2
	baz=201						
HGSD				*e*S	Sn	17 31 34.9	+0.9
	baz=201						
NFF	**Wufeng Townshi**	0.77	307	*e*P	Pg	17 31 20.9	-0.4
	baz=307						
NFF				*e*S	Sg	17 31 31.2	-0.2
	baz=307						
WPL	**Puli Township**	0.78	259	*e*P	Pg	17 31 21.5	+0.2
	baz=255						
WPL				*e*S	Sg	17 31 31.3	-0.2
	baz=255						
WHP	**Taichung City**	0.78	279	*e*P	Pg	17 31 21.6	+0.1
	baz=276						
WHP				*e*S	Sb	17 31 32.1	-0.3
	baz=276						
EHY	**Hungye**	0.78	213	*e*P	Pg	17 31 20.6	-0.8
	baz=208						
EHY				*e*S	Sb	17 31 33.7	+1.3
	baz=208						
DPDB	**Guoxing**	0.80	261	P	Pg	17 31 22.0	+0.2
	baz=257						
DPDB				*e*S	Sb	17 31 32.6	-0.4
	baz=257						
TIPB	**Shuangxi**	0.81	2	⇓P	Pg	17 31 21.6	-0.3
	baz=7.0						
TIPB				*e*S	Sg	17 31 31.8	-0.7
	baz=7.0						
NHDH	**Xindian Distri**	0.83	343	*e*P	Pg	17 31 22.2	-0.2
	baz=346						
NHDH				*e*S	Sg	17 31 32.9	-0.4
	baz=346						
SSLB	**Suanglung**	0.85	244	⇑*e*P	Pg	17 31 22.5	-0.3
	baz=240						
SSLB				*e*S	Sg	17 31 33.8	-0.2
	baz=240						
LIOB	**Emei**	0.85	304	*e*P	Pg	17 31 22.9	+0.1
	baz=304						
LIOB				*e*S	Sb	17 31 34.5	0.0
	baz=304						
NJD	**Zhudong**	0.86	312	*e*P	Pb	17 31 23.6	+0.5
	baz=312						
NSTT	**Nanjuang**	0.86	303	*e*P	Pg	17 31 22.7	-0.2
	baz=303						
NSTT				*e*S	Sg	17 31 33.9	-0.2
	baz=303						
TWB1	**Santiao Chiao**	0.86	12	*e*P	Pg	17 31 22.8	-0.1
	baz=17						
TWB1				*e*S	Sg	17 31 34.1	-0.1
	baz=17						
SMLT	**Sun Moon Lake**	0.86	251	⇑P	Pg	17 31 22.8	-0.1
	baz=247						
SMLT				*e*S	Sb	17 31 34.4	-0.4
	baz=247						
YULB	**Yu-li**	0.89	211	*e*P	Pg	17 31 22.2	-1.3
	baz=206						
YULB				*e*S	Sb	17 31 36.7	+1.1
	baz=206						
TYC	**Yuchr**	0.89	253	*e*P	Pg	17 31 23.3	-0.2
	baz=249						
TYC				*e*S	Sg	17 31 35.1	-0.1
	baz=249						
ECBN	**Changbin**	0.90	200	*e*P	Pg	17 31 23.9	+0.2
	baz=196						
ECBN				*e*S	Sn	17 31 37.1	-0.6
	baz=196						
NWF	**Wu-fen Shan**	0.90	359	*e*P	Pg	17 31 24.0	+0.2
	baz=3.0						
NWF				*e*S	Sg	17 31 35.3	-0.3
	baz=3.0						
WFSB	**Wu-fen Shan**	0.90	359	*e*P	Pg	17 31 24.0	+0.2
	baz=3.0						
WFSB				*e*S	Sg	17 31 35.4	-0.2
	baz=3.0						
EYUL	**Yuli**	0.92	208	*e*P	Pg	17 31 24.1	0.0
	baz=204						
TWF1	**Yuli**	0.93	209	*e*P	Pg	17 31 22.7	-1.4
	baz=205						
TWF1				*e*S	Sn	17 31 37.8	-0.6
	baz=205						
HSN1	**Hsinchu**	0.93	311	*e*P	Pb	17 31 24.8	+0.4
	baz=311						
TWQ1	**Liyutan**	0.95	281	*e*P	Pn	17 31 25.3	-0.2
	baz=279						
TWQ1				*e*S	Sn	17 31 38.2	-0.8
	baz=279						
SBCB	**Hsinchu**	0.96	311	*e*P	Pn	17 31 25.5	-0.2
	baz=311						
NCUH	**Zhongli**	0.97	326	*e*P	Pb	17 31 25.5	+0.4
	baz=327						
NCU	**National Centr**	0.97	326	*e*P	Pb	17 31 25.6	+0.5
	baz=327						
NSY	**Sanyi**	0.97	285	*e*P	Pn	17 31 25.9	0.0
	baz=283						
WHYT	**Xinyi Township**	0.98	242	*e*P	Pb	17 31 25.2	+0.1
	baz=238						
HSN	**Hsinchu**	0.98	311	*e*P	Pg	17 31 25.1	-0.2
	baz=314						
TNOU	**National Taiwa**	0.98	359	*e*P	Pg	17 31 25.1	-0.1
	baz=2.0						
NMLH	**Miaoli**	0.98	292	*e*P	Pn	17 31 26.2	+0.2
	baz=291						
TWS1	**Kuangyinshan**	0.99	340	*e*P	Pg	17 31 25.5	+0.1
	baz=343						
YM01	**YM01**	1.00	348	*e*P	Pg	17 31 25.7	+0.1
	baz=351						
WWF	**Wufeng**	1.01	263	*e*P	Pn	17 31 26.9	+0.7
	baz=260						
TCU	**Taichung**	1.02	269	*e*P	Pn	17 31 26.8	+0.4
	baz=266						
TCU				*e*S	Sn	17 31 41.8	+1.1
	baz=266						
YUS	**Yu-Shan**	1.02	229	⇑*e*P	Pg	17 31 25.7	-0.3
	baz=225						
YUS				*e*S	Sb	17 31 39.6	-0.2
	baz=225						
WJS	**Zhushan**	1.03	251	*e*P	Pn	17 31 26.6	0.0
	baz=247						
WJS				*e*S	Sn	17 31 41.7	+0.7
	baz=247						
YM08	**YM08**	1.04	350	*e*P	Pg	17 31 25.9	-0.4
	baz=353						
NTST	**Danshui**	1.04	343	*e*P	Pb	17 31 26.3	-0.1
	baz=345						
WNT	**Mingjian**	1.05	255	*e*P	Pn	17 31 27.3	+0.4
	baz=251						
FULB	**Fuli**	1.06	205	*e*P	Pb	17 31 25.7	-1.0
	baz=202						
WDJ	**Dajia District**	1.07	280	*e*P	Pn	17 31 27.7	+0.6
	baz=278						
JYNG	**Yonagunijimaku**	1.09	75	P	Pb	17 31 27.7	+0.5
ALS	**Alishan**	1.11	234	⇑*e*P	Pg	17 31 27.5	-0.3
	baz=230						
ALS				*e*S	Sn	17 31 43.2	-0.2
	baz=230						
TWY	**Chenhua**	1.12	351	*e*P	Pb	17 31 27.9	+0.2
	baz=354						
CHKT	**Chengkung**	1.13	200	*e*P	Pb	17 31 24.9	-2.9
	baz=196						
WCHH	**Zhanghua**	1.13	266	*e*P	Pn	17 31 28.4	+0.5
	baz=263						
YOJ	**Yonaguni jima**	1.15	75	P	Pb	17 31 28.2	+0.1
	baz=77						
YOJ				*e*S	Sg	17 31 44.1	+0.7
	baz=77						
YOJ	**Yonaguni jima**	1.15	75	P	Pb	17 31 28.3	+0.1
YOJ				*e*S	Sn	17 31 44.9	+1.0
ELDTW	**Lidau**	1.20	216	*e*P	Pb	17 31 27.1	-2.0
	baz=212						
ELDTW				*e*S	Sb	17 31 44.3	-0.4
	baz=212						
WGK	**Gukeng**	1.22	247	*e*P	Pg	17 31 29.9	+0.1
	baz=244						
WDLH	**Douliu**	1.24	248	*e*P	Pg	17 31 30.5	+0.3
	baz=245						
EDH	**Donghe**	1.27	201	*e*P	Pn	17 31 28.7	-1.2
	baz=198						
EDH				*e*S	Sg	17 31 47.5	+0.4
	baz=198						
WRL	**Guolierlin Hig**	1.32	259	*e*P	Pb	17 31 31.0	0.0
	baz=256						
STYH	**Taoyuan**	1.36	223	*e*P	Pn	17 31 30.8	-0.3
	baz=220						
TPUB	**Ta-pu**	1.37	231	*e*P	Pb	17 31 32.0	+0.2
	baz=228						
WTK	**Tuku**	1.37	250	*e*P	Pb	17 31 32.0	+0.1
	baz=247						
WTK				*e*S	Sg	17 31 51.7	+1.4
	baz=247						
STYT	**Tauyuan**	1.38	224	*e*P	Pn	17 31 31.2	-0.2
	baz=220						
WTP	**Ta-pu**	1.41	230	*e*P	Pn	17 31 32.3	+0.4
	baz=227						
WTP				*e*S	Sg	17 31 52.8	+1.0
	baz=227						
CHY	**Chiayi**	1.42	242	*e*P	Pg	17 31 33.2	-0.3
	baz=239						
TWG	**Pinlang**	1.49	206	*e*P	Pn	17 31 30.2	-2.7
	baz=203						
TWK	**Hsinying**	1.49	233	*e*P	Pb	17 31 33.8	-0.1
	baz=230						
TWK				*e*S	Sg	17 31 54.9	+0.6
	baz=230						
CHN1	**Nanshi**	1.51	230	*e*P	Pb	17 31 34.4	0.0
	baz=227						
CHN1				*e*S	Sg	17 31 55.7	+0.7
	baz=227						
LDUT	**Ludao**	1.51	191	*e*P	Pn	17 31 31.4	-1.8
	baz=189						
SNST	**Tainan City**	1.51	232	*e*P	Pb	17 31 34.2	-0.2
	baz=229						
WSF	**Szhu**	1.53	250	*e*P	Pb	17 31 34.3	-0.3
	baz=248						
WSL	**Shuilin Townsh**	1.57	246	*e*P	Pb	17 31 35.1	-0.2
	baz=244						
WSL				*e*S	Sg	17 31 57.9	+1.1
	baz=244						
SLGT	**Liugui**	1.57	222	*e*P	Pg	17 31 36.0	-0.4
	baz=219						
ICHU	**Yijhu**	1.60	240	*e*P	Pb	17 31 35.7	0.0
	baz=238						
ICHU				*e*S	Sg	17 32 00.2	+2.4
	baz=238						
CHN8	**Yiju**	1.66	241	*e*P	Pb	17 31 36.4	-0.4
	baz=238						
ECL	**Taimali**	1.74	206	*e*P	Pn	17 31 34.7	-1.6
	baz=204						
SCST	**Cishan**	1.74	223	*e*P	Pb	17 31 38.0	-0.2
	baz=221						
SSD	**Sandimen**	1.77	217	*e*P	Pn	17 31 37.5	+0.7
	baz=214						
IRIF	**Iriomote-Funau**	1.78	84	*e*P	Pn	17 31 36.9	+0.1
IRIF				*e*S	Sn	17 32 00.1	+0.7
TSMG	**Majia**	1.79	216	*e*P	Pb	17 31 38.3	-0.8
	baz=214						
HATJ	**Hateruma jima**	1.84	93	*e*S	Sn	17 32 02.2	+1.1
MASBT	**Mashibuluo**	1.88	215	*e*P	Pn	17 31 38.6	+0.4
	baz=212						
JKRS	**Kuro-shima**	2.03	87	P	Pn	17 31 41.0	+0.7
JKRS				*e*S	Sb	17 32 07.7	-0.6
PHUB	**P'eng-hu**	2.13	253	*e*P	Pn	17 31 41.7	0.0
	baz=251						
WDGT	**Dungji**	2.15	246	*e*P	Pn	17 31 42.6	+0.6
	baz=243						
WDGT				*e*S	Sn	17 32 09.7	+1.1
	baz=243						
JIJ	**Ishigaki jima**	2.16	84	P	Pn	17 31 42.0	0.0
JIJ				*e*S	Sn	17 32 08.5	-0.3
VWUC	**VWUC**	2.29	292	*e*P	Pn	17 31 42.9	-1.0
	baz=291						
VWUC				*e*S	Sn	17 32 11.1	-0.8
	baz=291						
JISG	**Ishigakijimahi**	2.34	79	P	Pn	17 31 44.7	+0.2
JISG				S	Sn	17 32 13.2	0.0
VCHM	**Qimei**	2.36	247	*e*P	Pn	17 31 45.5	+0.5
	baz=245						
JTJ	**Tarama**	2.70	79	*e*S	Sn	17 32 23.6	+1.5

DJA ***15*** *17:33:00.5±0.3, 8°S±2°×12°0E±°, h31^{km}±5^{km}, M3.9/12, mb4.2/4, MLv3.8/12*

IDC ***15*** *17:33:06.5±3.8, 7°.45S×120°.58E, h110^{km}±40^{km}, mb3.5/2, mbtmp3.7/5, Error ellipse: s-maj=146.2km s-min=21.6km az=59.0*

ISC 15 17:33:00.9±1.0**, 8°.03S**±0°.05×**119°.83E**±0°.04**, h100^{km}, n22, σ1^{s}.94**/25**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	1.66	195	P	Pn	17 33 28.0	-1.2
EDFI	**Ende, Flores**	1.97	111	P	Pn	17 33 32.5	-0.8
EDFI				S	Sn	17 33 55.5	-2.5
PLAI	**Plampang**	2.18	249	P	Pn	17 33 35.3	-0.6
PLAI				S	Sn	17 34 00.6	-2.0
PLAI	**Plampang**	2.18	249	P	Pn	17 33 35.7	-0.2
MMRI	**Maumere**	2.46	104	P	Pn	17 33 38.7	-0.8
MMRI				S	Sn	17 34 07.4	-1.7
MMRI	**Maumere**	2.46	104	P	Pn	17 33 39.1	-0.4
BKSI	**Bulukumba**	2.71	6	P	Pn	17 33 42.1	-0.8
KAPI	**Kappang**	3.00	359	P	Pn	17 33 46.3	-0.4
	9.8nm,0.3s,baz=186,slow=6.1,SNR=14						
KAPI				S	Sn	17 34 18.0	-4.0
	55nm,0.3s,baz=338,slow=24,SNR=28						
KAPI	**Kappang**	3.00	359	P	Pn	17 33 48.2	+1.5
BNSI	**Bone**	3.62	4	P	Pn	17 33 56.7	+1.6
BBSI	**Bau Bau**	3.72	47	P	Pn	17 33 56.2	-0.1
SPSI	**Sidrap Palu**	4.04	359	P	Pn	17 34 01.0	+0.2
BATI	**Baumata**	4.36	120	P	Pn	17 34 07.5	+2.5
	7.2nm,0.3s,baz=288,slow=23,SNR=1.8						
JAGI	**Jajag, Banyuwa**	5.64	265	P	Pn	17 34 22.3	0.0
JAGI	**Jajag, Banyuwa**	5.64	265	P	Pn	17 34 26.0	+3.7
KMMI	**Kalianget**	5.89	279	P	Pn	17 34 26.8	+1.0
	0.4nm48nm,0.5s						
KNRA	**Kununurra**	11.58	132	P	Pn	17 35 42.4	-0.7
MTN	**Manton Dam**	12.10	114	P	Pn	17 35 49.2	-0.8
KDU	**Kakadu**	13.27	111	P	Pn	17 36 05.4	0.0
WRA	**Warramunga Arr**	18.38	132	P	Pn	17 37 11.0	+1.7
	0.7nm,0.5s,baz=308,slow=13,SNR=2.3						
ASAR	**Alice Springs**	20.58	141	P	Pn	17 37 36.9	+1.7
	1.4nm,0.4s,baz=318,slow=11,SNR=54						
ASAR				S	S	17 41 21.3	+4.4
	0.3nm,0.9s,baz=315,slow=22,SNR=2.3						
	1.4nm,0.4s						
STKA	**Stephens Creek**	31.19	142	P	P	17 39 16.1	+5.4
	1.2nm,0.8s,baz=324,slow=12,SNR=4.6						
	1.2nm,0.8s						

IDC 15 17:44:34.0±2.3**, 14°.37N×147°.46E, h0^{km}, mb3.3**/3**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=43.1km s-min=35.2km az=78.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	2.63	253	Pn	Pn	17 45 17.5	-0.2
	4.5nm,0.3s,baz=144,slow=19,SNR=1.9						
GUMO				Sn	Sn	17 45 50.8	+0.5
	14nm,0.3s,baz=345,slow=21,SNR=9.1						
	17nm,0.4s						
H11N1	**WAKE ISLAND Hy**	19.32	71	T	T	18 08 24.6	
	baz=257,slow=74,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	19.33	71	T	T	18 08 27.8	
	baz=257,slow=74,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	19.34	71	T	T	18 08 32.6	
	baz=257,slow=74,SNR=8.0						
WRA	**Warramunga Arr**	36.46	201	P	P	17 51 41.3	+0.4
	0.9nm,1.2s,baz=27,slow=9.3,SNR=1.7						
	0.9nm,1.2s						
ASAR	**Alice Springs**	40.06	199	P	P	17 52 10.9	-0.3
	0.2nm,0.8s,baz=24,slow=6.8,SNR=7.9						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	62.68	315	P	P	17 55 00.6	-0.1
	0.2nm,0.5s,baz=88,slow=7.7,SNR=2.1						
	0.2nm,0.5s						

IDC ***15*** *18:04:06.1±1.8, 6°.08S×154°.53E, h45^{km}±14^{km}, mb4.2/25, mbtmp4.5/28, ML4.3/4, MS4.1/44, Error ellipse: s-maj=15.4km s-min=10.0km az=87.0*

NEIC ***15*** *18:04:06.2±1.6, 6°.12S±0°.06×154°.46E±0°.08, h35^{km}±1^{km}, mb4.9/42, Error ellipse: s-maj=12.9km s-min=10.6km az=246.0*

DJA ***15*** *18:04:08.6±0.5, 6°S±3°×15°4E±°, h57^{km}±5^{km}, M5.1/38, mB5.3/11, mb5.0/38, MLv5.6/3, Mw(mB)4.8/11*

GCMT ***15*** *18:04:08.2±0.2, 6°.42S±0°.02×154°.29E±0°.02, h36^{km}, MW5.0/69, Moment Tensor Solution. s69,c91; s68,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.18±.15; M$_{\theta\theta}$-2.33±.10; M$_{\phi\phi}$-1.85±.10; M$_{r\theta}$1.17±.14; M$_{\theta\phi}$2.23±.09; M$_{\phi r}$-0.95±.14; Best double couple: M$_{0}$4.51500×10^{16} NP1:φ$_{s}$313.00000°, δ35.00000°, λ92.00000°. NP2: φ$_{s}$131.00000°, δ55.00000°, λ89.00000°. Principal axes: T 4.4390, Plg80.0000°, Azm36.0000°; N 0.1520, Plg1.0000°, Azm132.0000°; P -4.5910, Plg10.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 18:04:06.5±0.4**, 6°.08S**±0°.04×**154°.38E**±0°.05**, h44^{km}**±3^{km}**, h45^{km}:pP-P, n310, σ1^{s}.36**/315**, mb4.9**/80**, MS4.2**/52**, 11C-3D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	2.90	310		Pn	18 04 53.2	+2.9
RABL	**Rabaul**	2.90	310	P	Pn	18 04 56.5	+6.2
KRVT	**Keravat (AS076**	2.94	307	P	Pn	18 04 53.5	+2.8
	86nm,0.3s,baz=43,slow=19,SNR=200						
KRVT				S	Sn	18 05 28.1	+3.3
	835nm,0.4s,baz=246,slow=20,SNR=13						
KRVT				LR	LR	18 06 28.0	
	comp=Z,5µm,18.6s,baz=228,slow=46						
	222nm,0.2s						
HNR	**Honiara**	6.44	121	P	Pn	18 05 41.4	+2.5
	309nm,0.7s,baz=260,slow=2.1,SNR=17						
HNR				S	Sn	18 06 54.5	+3.4
	329nm,0.8s,baz=336,slow=20,SNR=1.7						
HNR				LR	LR	18 08 05.5	
	comp=Z,2µm,21.5s,baz=275,slow=38						
HNR	**Honiara**	6.44	121	Pn	Pn	18 05 40.6	+1.7
HNR	**Honiara**	6.44	121	P	Pn	18 05 42.5	+3.6
PMG	**Port Moresby**	7.88	245	P	Pn	18 06 00.4	+1.7
	76nm,0.3s,baz=50,slow=9.6,SNR=140						
PMG				S	Sn	18 07 28.9	+2.2
	528nm,0.9s,baz=19,slow=20,SNR=11						
PMG				LR	LR	18 08 57.2	
	comp=Z,2µm,20.8s,baz=62,slow=36						
PMG	**Port Moresby**	7.88	245	Pn	Pn	18 06 00.2	+1.5
PMG	**Port Moresby**	7.88	245	P	Pn	18 06 00.5	+1.8
PMG	**Port Moresby**	7.88	245	P	Pn	18 06 00.4	+1.7
PATS	**Pohnpei**	13.42	17	P	Pn	18 07 16.0	+1.5
	baz=14						
PATS	**Pohnpei**	13.42	17		Pn	18 07 15.2	+0.8

COEN	Coen	13.53	234	P	Pn	18 07 14.9	-1.0
	baz=13						
MTSU	Mount Surprise	15.49	218	P	Pn	18 07 43.1	+0.9
	baz=15,SNR=8.7						
MTSU	Mount Surprise	15.49	218	P	Pn	18 07 41.5	-0.7
CTA	Charters Tower	16.01	209	P	Pn	18 07 48.2	-0.6
	0.5nm,0.3s,baz=34,slow=14,SNR=6.9						
	22nm,1.0s						
CTA	Charters Tower	16.01	209	P	Pn	18 07 48.1	-0.7
CTAO	Charters Tower	16.01	209	Pn	Pn	18 07 47.8	-1.0
CTAO				IAmb	IAmb	18 07 54.2	
	comp=Z,57nm,0.8s						
CTAO	Charters Tower	16.01	209	P	Pn	18 07 48.6	-0.2
SMPI	Sarmi	16.15	284	P	P	18 07 53.5	+0.2
	comp=Z,31nm,0.9s						
LIFNC	LIFOU	19.21	141	P	P	18 08 24.7	-2.2
LIFNC	LIFOU	19.21	141	P	P	18 08 27.0	+0.1
EIDS	Eidsvold	19.44	189	P	Pn	18 08 30.3	-0.6
	baz=19,SNR=8.4						
EIDS	Eidsvold	19.44	189	P	P	18 08 28.8	-0.7
EIDS				IAmb	IAmb	18 08 46.0	
	comp=Z,75nm,1.5s						
EIDS	Eidsvold	19.44	189	P	Pn	18 08 30.5	-0.4
NOUC	Port Laguerre	19.66	145	P	P	18 08 31.6	-0.2
DZM	Mont Dzumac	19.71	145	P	P	18 08 32.7	+0.2
	comp=Z,2.4nm,0.3s,baz=305,slow=9.3,SNR=21						
DZM				LR	LR	18 15 10.4	
	comp=Z,765nm,20.8s,baz=321,slow=34						
	comp=Z,41nm,1.0s						
DZM	Mont Dzumac	19.71	145	*e*P	P	18 08 31.8	-0.8
	comp=Z,102nm,0.9s						
DZM				*e*LR	LR	18 13 20.9	
	comp=Z,1µm,24.6s						
DZM	Mont Dzumac	19.71	145	P	P	18 08 32.8	+0.2
DZM				IAmb	IAmb	18 08 51.2	
	comp=Z,44nm,0.8s						
DZM	Mont Dzumac	19.71	145	P	P	18 08 32.7	+0.2
ONTNC	Ouen Toro	19.91	145	P	P	18 08 33.3	-1.3
ONTNC				IAmb	IAmb	18 08 52.1	
	comp=Z,49nm,0.9s						
ONTNC	Ouen Toro	19.91	145	P	P	18 08 35.1	+0.6
YATNC	Mamie plateau,	19.96	144	P	P	18 08 36.0	+0.8
OUENC	Ouen Island, N	20.21	145	P	P	18 08 36.6	-1.3
OUENC				IAmb	IAmb	18 08 38.8	
	comp=Z,68nm,1.2s						
OUENC	Ouen Island, N	20.21	145	P	P	18 08 37.9	0.0
MARNC	Mare, Loyalty	20.22	141	P	P	18 08 35.1	-2.9
QIS	Mount Isa	20.32	224	P	P	18 08 39.9	+0.8
	baz=20,SNR=12						
QIS	Mount Isa	20.32	224	P	Pn	18 08 41.1	-0.3
RMQ	Roma	20.99	194	P	P	18 08 47.0	+0.7
	baz=21,SNR=20						
RMQ	Roma	20.99	194	P	P	18 08 47.1	+0.8
QLP	Quilpie	22.57	204	P	P	18 09 03.0	-0.3
	baz=22,SNR=22						
QLP	Quilpie	22.57	204	P	P	18 09 04.4	+1.2
KDU	Kakadu	22.58	252	P	P	18 09 03.5	0.0
	baz=22,SNR=9.2						
KDU	Kakadu	22.58	252	P	P	18 09 05.6	+2.1
SIJI	Sorong	23.64	282	P	P	18 09 14.8	+0.7
	comp=Z,15nm,0.8s,baz=69,slow=7.6,SNR=7.5						
SIJI				LR	LR	18 20 14.1	
	comp=Z,346nm,20.8s,baz=137,slow=41						
	comp=Z,15nm,0.8s						
SWI	Sorong	23.65	282	P	P	18 09 14.4	+0.2
	comp=Z,40nm,0.9s						
WR0	Warramunga Arr	23.71	233	P	P	18 09 14.9	+0.3
WB0	Warramunga Arr	23.72	233	P	P	18 09 14.8	0.0
WC3	Warramunga Arr	23.84	233	P	P	18 09 16.1	+0.2
	baz=24						
WRAB	Tennant Creek	23.84	233	P	P	18 09 15.9	-0.1
WRAB	Tennant Creek	23.84	233	P	P	18 09 16.2	+0.2
WB2	Warramunga Arr	23.85	233	P	P	18 09 16.2	+0.2
WRA	Warramunga Arr	23.86	233	P	P	18 09 15.9	-0.1
	comp=Z,8.2nm,0.7s,baz=58,slow=10,SNR=37						
WRA				PcP	PcP	18 12 58.5	0.0
	comp=Z,5.7nm,0.5s,baz=58,slow=2.5,SNR=17						
	comp=Z,8.2nm,0.7s						
WRA	Warramunga Arr	23.86	233	P	P	18 09 15.7	-0.4
WRA					PcP	18 12 58.7	+0.3
MTN	Manton Dam	23.89	252	P	P	18 09 16.6	+0.3
	baz=24,SNR=6.5						
MTN	Manton Dam	23.89	252	P	P	18 09 17.6	+1.2
ARMA	Armidale	24.35	186	P	P	18 09 21.2	+0.6
	baz=24,SNR=8.5						
ARMA	Armidale	24.35	186	P	P	18 09 20.2	-0.4
ARMA				IAmb	IAmb	18 09 38.2	
	comp=Z,56nm,1.4s						
ARMA	Armidale	24.35	186	P	P	18 09 21.3	+0.7
INKA	Innaminka	25.14	209	P	P	18 09 27.5	-0.1
AAI	Ambon	26.20	274	P	P	18 09 40.2	+2.8
	comp=Z,39nm,0.8s						
AS31	Alice Springs	26.34	226	P	P	18 09 38.4	-0.2
ASAR	Alice Springs	26.34	226	P	P	18 09 38.5	-0.2
	comp=Z,3.5nm,0.7s,baz=57,slow=9.2,SNR=58						
ASAR				PcP	PcP	18 13 04.1	+0.1
	comp=Z,9.6nm,0.8s,baz=60,slow=2.6,SNR=15						
ASAR				ScP	ScP	18 16 40.9	+0.4
	comp=Z,0.8nm,0.6s,baz=57,slow=2.7,SNR=5.8						
	comp=Z,3.5nm,0.7s						
CMSA	Cobar Meteorol	26.60	197	P	P	18 09 42.4	+1.5
	baz=27,SNR=6.0						
CMSA	Cobar Meteorol	26.60	197	P	P	18 09 40.9	0.0
KNRA	Kununurra	26.88	247	P	P	18 09 44.0	+0.5
	baz=27,SNR=6.4						
MGCD	Mangrove Creek	27.16	186	P	P	18 09 45.0	-0.9
H11S3	WAKE ISLAND Hy	27.27	26	T	T	18 38 20.5	
	baz=206,slow=72,SNR=89						
H11S2	WAKE ISLAND Hy	27.27	26	T	T	18 38 15.5	
	baz=206,slow=72,SNR=54						
H11S1	WAKE ISLAND Hy	27.29	26	T	T	18 38 22.5	
	baz=206,slow=72,SNR=48						
LBMI	Labuha	27.36	280	P	P	18 09 49.6	+1.6
	comp=Z,716nmcomp=Z,44nm,0.9s						
RIV	Riverview	27.77	186	P	P	18 09 51.6	+0.3
	baz=28						
OOD	Oodnadatta	27.95	217	P	P	18 09 55.2	+2.2
STKA	Stephens Creek	28.31	203	P	P	18 09 56.4	+0.2
	comp=Z,2.9nm,0.6s,baz=19,slow=9.4,SNR=9.4						
STKA				PcP	PcP	18 13 07.9	-0.6
	comp=Z,5.6nm,0.8s,baz=34,slow=1.4,SNR=4.1						
STKA				ScP	ScP	18 16 46.0	-0.2
	comp=Z,4.3nm,1.1s,baz=124,slow=3.6,SNR=3.4						
STKA				LR	LR	18 21 09.9	
	comp=Z,526nm,19.9s,baz=12,slow=36						
	comp=Z,2.9nm,0.6s						
STKA	Stephens Creek	28.31	203	P	P	18 09 56.9	+0.7
	baz=28,SNR=5.0						
STKA	Stephens Creek	28.31	203	P	P	18 09 56.8	+0.6
STKA					PcP	18 13 07.3	-1.2
STKA	Stephens Creek	28.31	203	P	P	18 09 57.0	+0.7
SANI	Sanana	28.60	277	P	P	18 10 00.0	+1.0
	comp=Z,27nm,1.0s						
LCRK	Leigh Creek	28.61	210	P	P	18 09 57.3	-1.6
SOEI	Soe	30.04	261	P	P	18 10 12.1	+0.2
	comp=Z,68nm,1.0s						
BATI	Baumata	30.68	260	P	P	18 10 19.6	+2.2
	comp=Z,26nm,1.2s						
MULG	Mulgathing	30.74	216	P	P	18 10 15.9	-1.9
HTT	Hallett	30.77	206	P	P	18 10 18.3	+0.3
KMSI	Cibinong	31.06	281	P	P	18 10 22.4	+1.6
	comp=Z,733nmcomp=Z,80nm,0.7s						
WRKA	Warakurna	31.30	230	P	P	18 10 22.2	-0.6
	baz=31,SNR=18						
WRKA	Warakurna	31.30	230	P	P	18 10 22.6	-0.2
DAV	Davao City (W)	31.57	294	LR	LR	18 23 23.8	
	comp=Z,143nm,18.6s,baz=107,slow=36						
BBOO	Buckleboo	31.60	210	P	P	18 10 24.5	-0.8
LUWI	Luwuk	31.93	278	P	P	18 10 30.5	+2.0
	comp=Z,54nm,1.2s						
MMRI	Maumere	31.98	263	P	P	18 10 29.2	+0.4
	comp=Z,100nm,0.9s						
GTOI	Gorontalo	32.02	281	P	P	18 10 32.2	+3.0
	comp=Z,12nm,0.7s						
EDFI	Ende, Flores	32.52	263	P	P	18 10 33.5	-0.2
	comp=Z,24nm,0.8s						
ARPS	Mount Arapiles	32.63	199	P	P	18 10 34.2	-0.1
MRSI	Marisa	33.03	280	P	P	18 10 38.7	+0.6
	comp=Z,19nm,0.9s						
APSI	Ampana	33.06	278	P	P	18 10 40.5	+2.2
	comp=Z,399nmcomp=Z,41nm,1.3s						
AFI	Afiamalu	34.19	106	LR	LR	18 23 04.2	
	comp=Z,272nm,18.7s,baz=276,slow=33						
TOLI2	Tolitoli	34.30	281	P	P	18 10 49.2	+0.1
TOLI2				IAmb	IAmb	18 11 14.3	
	comp=Z,11nm,0.8s						
TOLI2	Tolitoli	34.30	281	P	P	18 10 50.2	+1.1
KAPI	Kappang	34.48	270	LR	LR	18 26 21.4	
	comp=Z,127nm,22.0s,baz=76,slow=39						
FORT	Forrest	34.84	222	P	P	18 10 53.7	+0.1
RAO	Raoul Island	34.86	135	LR	LR	18 23 04.2	
	comp=Z,339nm,21.4s,baz=302,slow=33						
MPSI	Mapaga	35.01	279	P	P	18 10 56.0	+0.8
	comp=Z,318nmcomp=Z,39nm,0.8s						
PLAI	Plampang	36.39	263	P	P	18 11 09.0	+1.9
TAU	Tasmania Unive	37.21	189	P	P	18 11 14.5	+0.9
URZ	Urewera	38.10	150	LR	LR	18 23 58.0	
	comp=Z,159nm,18.4s,baz=31,slow=31						
URZ	Urewera	38.10	150	P	P	18 11 19.3	-1.9
URZ				IAmb	IAmb	18 11 36.2	
	comp=Z,19nm,0.8s						
URZ	Urewera	38.10	150	P	P	18 11 21.7	+0.5
BKZ	Black Stump Fm	38.52	152	P	P	18 11 24.2	-0.6
BKZ				IAmb	IAmb	18 11 49.9	
	comp=Z,42nm,1.4s						
BKZ	Black Stump Fm	38.52	152	P	P	18 11 24.5	-0.3
TUWZ	Tuamarina	39.28	157	P	P	18 11 29.7	-1.4
MEEK	Meekatharra	39.73	235	P	P	18 11 35.5	+0.4
	baz=40,SNR=9.2						
MEEK	Meekatharra	39.73	235	P	P	18 11 35.5	+0.4
MTKI	Muara Teweh, K	39.73	276	P	P	18 11 35.1	-0.2
	comp=Z,9.1nm,1.5s						
KHZ	Kahutara	39.97	158	P	P	18 11 35.7	-1.1
RPZ	Rata Peaks	40.25	161	LR	LR	18 27 35.5	
	comp=Z,315nm,18.1s,baz=306,slow=35						
JOW	Kunigami	41.35	323	LR	LR	18 26 28.2	
	comp=Z,121nm,21.5s,baz=85,slow=32						
KLBR	Kellerberrin	42.62	229	P	P	18 11 59.5	+0.7
MORW	Morawa	42.81	233	P	P	18 12 00.7	+0.3
STKI	Sintang	43.26	277	P	P	18 12 06.2	+2.0
	comp=Z,2µmcomp=Z,14nm,1.5s						
NACB	Ninganchiao	43.89	314	P	P	18 12 08.4	-0.6
TPUB	Ta-pu	44.05	313	P	P	18 12 10.5	+0.1
TPUB	Ta-pu	44.05	313	P	P	18 12 11.2	+0.8
SSLB	Suanglung	44.11	314	P	P	18 12 11.6	+0.7
SSLB	Suanglung	44.11	314	P	P	18 12 12.9	+2.0
TATO	Taipei	44.47	315	P	P	18 12 12.1	-1.6
KSM	Kuching	44.64	278	P	P	18 12 14.5	-0.8
KSM				IAmb	IAmb	18 12 16.9	
	comp=Z,18nm,0.8s						
JNU	Nakatsue	44.92	332	P	P	18 12 16.6	-0.7
	comp=Z,19nm,0.9s,baz=90,slow=2.0						
	comp=Z,19nm,0.9s						
MJAR	Matsushiro Arr	45.03	342	P	P	18 12 16.5	-1.5
	comp=Z,1.5nm,0.8s,baz=164,slow=8.1,SNR=3.5						
MJAR				PcP	PcP	18 13 56.7	-1.7
	comp=Z,1.5nm,0.9s,baz=147,slow=5.0,SNR=4.5						
	comp=Z,1.5nm,0.8s						
LEM	Lembang	46.46	266	LR	LR	18 35 04.0	
	comp=Z,157nm,18.4s,baz=220,slow=40						
RAR	Rarotonga	46.83	113	LR	LR	18 28 42.9	
	comp=Z,208nm,20.1s,baz=266,slow=32						
KSRS	Korea Array	49.85	332	P	P	18 12 55.4	0.0
	comp=Z,3.8nm,0.7s,baz=149,slow=8.7,SNR=13						
	comp=Z,3.8nm,0.7s						
QIZ	Qiongzhong	50.47	301	P	P	18 12 59.6	-0.9
QIZ				S	S	18 20 12.0	+0.4
QIZ				LR	LR		
	comp=N,180nm,14.9s						
QIZ				LR	LR		
	comp=E,210nm,17.5s						
QIZ				LR	LR		
	comp=Z,250nm,20.4s						
INCN	Inchon	50.48	331	P	P	18 13 00.6	+0.3
INCN				x	x	18 13 04.3	
INCN				pP	pP	18 13 08.6	-3.7
NJ2	Nanjing	50.83	320	*e*P	P	18 13 05.3	+2.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAJ	Asahikawa	51.09	349	P	P	18 13 05.7	+1.0
	comp=Z,8.6nm,0.8s,baz=180,slow=9.1,SNR=3.0						
ASAJ				LR	LR	18 32 14.4	
	comp=Z,236nm,21.6s,baz=167,slow=33						
	comp=Z,8.6nm,0.8s						
WHN	Wuhan	52.87	316	⇓P	P	18 13 20.3	+2.2
WHN				sP	pP	18 13 28.1	-1.7
USRK	Ussuriysk Ar.	53.97	340	P	P	18 13 26.2	+0.2
	comp=Z,2.9nm,0.7s,baz=111,slow=10,SNR=4.7						
	comp=Z,2.9nm,0.7s						
IPM	Ipoh	54.30	280	P	P	18 13 29.3	+0.3
	comp=Z,25nm,1.2s						
TIA	Tai'an	54.68	323	⇑P	P	18 13 32.1	+0.8
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ	Mudanjiang	55.17	339	P	P	18 13 34.3	-0.4
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,81nm,4.6s						
POHA	Pohakuloa	55.55	61	P	P	18 13 38.3	+0.1
PPT	Papeete	55.84	107	LR	LR	18 31 54.7	
	comp=Z,56nm,21.9s,baz=308,slow=30						
PPT2	Papeete2	55.84	107	*e*S	S	18 21 29.9	+5.0
PPT2				*e*LR	LR	18 30 05.5	
	comp=Z,198nm,27.2s						
CN2	Changchun	56.11	335	*e*P	P	18 13 40.8	-0.7
CN2				*e*S	S	18 21 24.8	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,15.0s						
CN2				LR	LR		
	comp=E,100nm,15.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
ENH	Enshi	56.17	313	P	P	18 13 43.2	+0.9
ENH				pP	pP	18 13 49.8	-4.3
ENH				sP	pwP	18 13 57.2	+0.4
TBI	Tubuai	56.60	114	*e*S	S	18 21 35.8	+1.2
TBI				*e*LR	LR	18 30 21.5	
	comp=Z,456nm,28.5s,baz=276						
HNS	HongShan	56.91	323	⇓P	P	18 13 48.1	+0.8
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNX	BinXian	56.94	338	⇓P	P	18 13 46.8	-0.5
BNX				pmax	pmax		
	comp=Z,28nm,0.9s						
BNX				pmax	pmax		
	comp=Z,150nm,6.4s						
KLR	Kul'dur	58.52	343	P	P	18 13 58.3	0.0
	comp=Z,7.1nm,0.8s,baz=160,slow=3.1,SNR=29						
	comp=Z,7.1nm,0.8s						
XAN	Xi'an	58.63	316	⇑P	P	18 13 59.8	+0.3
XAN				pP	pP	18 14 11.5	-0.1
XAN				sP	sP	18 14 16.3	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				pmax	pmax		
	comp=Z,52nm,6.5s						
XAN				LR	LR		
	comp=N,170nm,18.7s						
XAN				LR	LR		
	comp=E,270nm,19.7s						
XAN				LR	LR		
	comp=Z,310nm,19.7s						
XAN	Xi'an	58.63	316	P	P	18 13 59.9	+0.4
XAN				pP	pP	18 14 08.9	-2.7
XAN				sP	pwP	18 14 13.0	-0.6
KMI	Kunming	59.00	304	⇑P	P	18 14 04.8	+2.3
KMI				pP	sP	18 14 20.8	+1.5
KMI				pmax	pmax		
	comp=Z,37nm,1.0s						
KMI				LR	LR		
	comp=N,140nm,18.2s						
KMI				LR	LR		
	comp=E,140nm,22.3s						
KMI				LR	LR		
	comp=Z,220nm,18.6s						
KMI	Kunming	59.00	304	P	P	18 14 04.6	+2.1
PETK	Petropavlovsk-	59.03	2	P	P	18 14 02.1	+0.2
	comp=Z,1.1nm,0.5s,baz=146,slow=6.1,SNR=11						
PETK				LR	LR	18 35 45.1	
	comp=Z,190nm,21.9s,baz=171,slow=32						
	comp=Z,1.1nm,0.5s						
PETK	Petropavlovsk-	59.03	2	P	P	18 14 01.6	-0.2
CM31	Chiang Mai Arr	59.84	295	P	P	18 14 08.6	+0.5
CM31				IAmb	IAmb	18 14 31.4	
	comp=Z,9.7nm,0.8s						
CMAR	Chiang Mai Arr	59.84	295	P	P	18 14 09.7	+1.6
	comp=Z,2.8nm,0.8s,baz=126,slow=5.5,SNR=35						
CMAR				LR	LR	18 38 41.5	
	comp=Z,74nm,20.4s,baz=130,slow=35						
CMAR				PKP2bc		18 43 44.1	
	comp=Z,1.1nm,1.0s,baz=284,slow=3.6,SNR=5.9						
	comp=Z,2.8nm,0.8s						
PZH	PanZhiHua	60.39	305	⇑P	P	18 14 12.8	+0.9
PZH				pP	pwP	18 14 28.6	+2.2
PZH				S	S	18 22 28.6	+4.5
PZH				pmax	pmax		
	comp=Z,20nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.9s						
PZH				LR	LR		
	comp=N,370nm,20.8s						
PZH				LR	LR		
	comp=E,480nm,21.8s						
PZH				LR	LR		
	comp=Z,500nm,21.1s						
XLT	XiLinHaoTe	60.57	329	*e*P	P	18 14 13.0	+0.3
XLT				pP	pP	18 14 25.3	+0.5
XLT				sP	sP	18 14 32.3	+2.7
XLT				pmax	pmax		
	comp=Z,35nm,0.8s						
SHEM	Shemya Is, Ala	60.94	14	LR	LR	18 36 49.8	
	comp=Z,270nm,21.3s,baz=180,slow=32						
HHC	Hu-ho-hao-te	61.00	324	*e*P	P	18 14 18.9	+3.1
HHC				pmax	pmax		
	comp=Z,43nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.2s						
HHC				LR	LR		
	comp=N,230nm,17.1s						
HHC				LR	LR		
	comp=Z,300nm,19.8s						
DRV	Dumont d'Urvil	61.30	186	P	P	18 14 17.0	-0.2
DRV				sP	sP	18 14 31.4	-1.0
HIA	Hailar	62.84	335	P	P	18 14 27.8	-0.1
LZH	Lanzhou	63.24	316	*e*P	P	18 14 33.1	+2.1
LZH				sP	sP	18 14 57.8	+10
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				LR	LR		
	comp=N,160nm,15.7s						
LZH				LR	LR		
	comp=E,190nm,18.4s						
LZH				LR	LR		
	comp=Z,200nm,15.2s						
MA2	Magadan	65.51	358	LR	LR	18 43 08.4	
	comp=Z,62nm,19.3s,baz=170,slow=36						
CASY	Casey	67.27	198	P	P	18 14 55.0	-1.3
CASY				pP	pP	18 15 07.7	-0.2
CASY				sP	sP	18 15 13.7	+1.1
GTA	Gaotai	67.66	317	*e*P	P	18 15 00.6	+1.2
GTA				pP	pP	18 15 08.3	-3.4
GTA				sP	sP	18 15 11.9	-4.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,56nm,6.0s						
GTA				LR	LR		
	comp=N,77nm,15.5s						
GTA				LR	LR		
	comp=E,78nm,16.7s						
GTA				LR	LR		
	comp=Z,160nm,17.5s						
ULN	Ulaanbaatar	67.91	328	P	P	18 15 02.2	+1.4
ULN				IAmb	IAmb	18 15 06.1	
	comp=Z,8.6nm,0.9s						
ULN	Ulaanbaatar	67.91	328	P	P	18 15 01.6	+0.8
ULN				x	x	18 15 05.5	
ULN				pP	pP	18 15 12.6	-0.5
SONM	Songino Array	68.24	327	P	P	18 15 03.4	+0.4
	comp=Z,4.4nm,0.8s,baz=131,slow=5.9,SNR=18						
	comp=Z,4.4nm,0.8s						
SONM	Songino Array	68.24	327	P	P	18 15 03.4	+0.4
SONM				IAmb	IAmb	18 15 15.8	
	comp=Z,9.9nm,1.2s						
SEY	Seymchan	68.83	359	LR	LR	18 42 26.1	
	comp=Z,53nm,21.8s,baz=156,slow=33						
GOMU	GeErMu	69.78	312	P	P	18 15 14.6	+1.6
GOMU				pP	pP	18 15 18.3	-7.1
GOMU				sP	sP	18 15 22.0	-8.2
GOMU				PcP	PcP	18 15 30.3	-5.2
GOMU				PP	PP	18 17 06.8	-41
GOMU				S	S	18 24 13.0	-6.6
GOMU				sS	pS	18 24 25.8	-8.9
LSA	Lhasa	70.26	304	P	P	18 15 18.0	+1.8
LSA				pmax	pmax		
	comp=Z,42nm,0.8s						
LSA	Lhasa	70.26	304	P	P	18 15 17.8	+1.6
LSA				x	x	18 15 20.7	
YAK	Yakutsk	70.54	348	P	P	18 15 16.3	-0.3
	comp=Z,3.8nm,0.4s,baz=213,slow=0.6,SNR=4.2						
YAK				LR	LR	18 48 09.9	
	comp=Z,40nm,18.2s,baz=98,slow=38						
	comp=Z,3.8nm,0.4s						
CCD	Concordia, Ant	71.22	188	P	P	18 15 21.0	-0.1
CCD				pP	pP	18 15 29.6	-3.2
VNDA	Vanda	71.51	178	P	P	18 15 21.6	-0.7
	comp=Z,3.7nm,0.9s,baz=335,slow=6.7,SNR=20						
	comp=Z,3.7nm,0.9s						
VNDA	Vanda	71.51	178	P	P	18 15 22.2	-0.1
VNDA	Vanda	71.51	178	P	P	18 15 22.3	0.0
VNDA				pP	pP	18 15 34.5	+0.6
SBA	Scott Base	72.03	177	P	P	18 15 25.8	+0.4
SBA	Scott Base	72.03	177	P	P	18 15 26.6	+1.1
SBA				pP	pP	18 15 37.1	+0.1
SBA				sP	PcP	18 15 43.4	-0.3
RAMN	Ramite	73.25	300	⇑*i*P	P	18 15 34.5	+0.5
	comp=Z,29nm,0.6s						
JIRN	Jiri	73.80	301	⇑*i*P	P	18 15 38.1	+0.8
	comp=Z,81nm,0.9s						
PKI	Pulchoki	74.44	301	⇑*i*P	P	18 15 41.4	+0.4
	comp=Z,114nm,1.1s						
PKIN	Phulchoki	74.45	301	⇑*i*P	P	18 15 41.2	+0.2
	comp=Z,88nm,1.1s						
KKN	Kakani	74.61	301	⇑*i*P	P	18 15 42.4	+0.6
KKN	Kakani	74.61	301	⇑*i*P	P	18 15 42.5	+0.6
	comp=Z,68nm,0.7s						
DMN	Daman	74.71	301	⇑*i*P	P	18 15 43.2	+0.7
	comp=Z,244nm,0.9s						
P18K	Big Mountain,	76.47	24	P	P	18 15 54.2	+2.6
	baz=232						
KDAK	Kodiak Island	76.61	26	LR	LR	18 44 32.7	
	comp=Z,168nm,21.9s,baz=256,slow=32						
N18K	Kilae Creek	77.01	23	P	P	18 15 56.5	+1.9
N18K				IAmb	IAmb	18 15 59.8	
	comp=Z,11nm,0.8s						
N18K	Kilae Creek	77.01	23	P	P	18 15 55.7	+1.1
	baz=231						
P19K	Oil Pt	77.44	24	P	P	18 15 56.9	-0.1
	baz=234						
WMQ	Urumqi	77.75	317	*e*P	P	18 16 03.8	+4.6
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				LR	LR		
	comp=Z,110nm,20.5s						
O20K	Slope Mountain	77.94	24	P	P	18 15 59.0	-0.8
	baz=234						
L19K	White Mountain	78.34	22	P	P	18 16 02.7	+0.7
L19K				IAmb	IAmb	18 16 20.8	
	comp=Z,15nm,0.8s						
L19K	White Mountain	78.34	22	P	P	18 16 02.4	+0.4
	baz=232						
M19K	Big River Lodg	78.34	22	P	P	18 16 02.0	0.0
	baz=232						
TTA	Tatalina	78.39	21	P	P	18 16 02.4	+0.1
	baz=230						
HYBB	Hyderabad (bro	78.40	289	*e*P	P	18 16 03.5	+0.2
L20K	Farewell, AK	78.88	22	P	P	18 16 05.4	+0.5
	baz=233						
K20K	Telida	79.34	21	P	P	18 16 07.7	+0.2
K20K	Telida	79.34	21	P	P	18 16 07.9	+0.4
	baz=232						
TIXI	Tiksi	79.37	352	P	P	18 16 05.7	-1.7
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=7.4						
	comp=Z,0.4nm,0.3s						
TIXI	Tiksi	79.37	352	P	P	18 16 07.6	+0.2
RC01	Rabbit Creek A	79.68	24	P	P	18 16 08.5	-0.8
	baz=237						
J20K	Nowinta River	79.82	20	P	P	18 16 10.7	+0.7
J20K				IAmb	IAmb	18 16 14.7	
	comp=Z,7.5nm,0.8s						
J20K	Nowinta River	79.82	20	P	P	18 16 10.3	+0.3
	baz=232						
CAST	Castle Rocks	80.10	22	P	P	18 16 10.4	-1.2

	baz=234						
CHUM	Lake Minchumin	80.29	21	P	P	18 16 12.5	0.0
	baz=234						
GHO	Glory Hole Cre	80.38	24	P	P	18 16 12.4	-0.9
GHO				IAmb	IAmb	18 16 33.6	
	comp=Z,12nm,0.9s						
SML	Sawmill	80.64	24	P	P	18 16 14.7	+0.2
SML	Sawmill	80.64	24	P	P	18 16 14.3	-0.3
	baz=238						
GLI	Glacier Island	80.66	25	P	P	18 16 13.8	-0.8
GLI				IAmb	IAmb	18 16 19.9	
	comp=Z,12nm,0.7s						
GLI	Glacier Island	80.66	25	P	P	18 16 14.3	-0.4
	baz=239						
TRF	Thorofare Moun	80.78	22	P	P	18 16 14.2	-1.3
	baz=236						
SCM	Sheep Creek Mo	81.06	24	P	P	18 16 16.8	0.0
	baz=239						
IMAR	Indian Mountai	81.06	19	P	P	18 16 16.7	0.0
WAT1	Susitna Watana	81.10	23	P	P	18 16 16.3	-0.7
	baz=238						
H21K	Melozitna Rive	81.18	20	P	P	18 16 17.1	-0.2
	baz=233						
WAT6	Susitna Watana	81.28	23	P	P	18 16 20.1	+2.0
	baz=238						
MCK	McKinley	81.44	22	P	P	18 16 17.8	-0.9
	baz=237						
KLU	Klutina	81.46	25	P	P	18 16 19.0	+0.1
	baz=240						
M24K	Tolsona, Glenn	81.67	24	P	P	18 16 20.4	+0.3
	baz=240						
DHY	Denali Highway	81.69	23	P	P	18 16 20.8	+0.6
DHY				IAmb	IAmb	18 16 40.0	
	comp=Z,8.0nm,1.0s						
DHY	Denali Highway	81.69	23	P	P	18 16 19.3	-0.9
	baz=239						
NEA2	Nenana	81.86	21	P	P	18 16 19.2	-1.7
	baz=237						
N25K	Chitina, Valde	82.07	25	P	P	18 16 22.2	0.0
	baz=241						
MK31	Makanchi Array	82.32	319	P	P	18 16 23.8	0.0
MKAR	Makanchi Array	82.32	319	P	P	18 16 23.4	-0.4
	comp=Z,1.1nm,0.5s,baz=94,slow=6.3,SNR=18						
MKAR				LR	LR	18 52 56.5	
	comp=Z,85nm,20.5s,baz=100,slow=36						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	82.32	319	P	P	18 16 23.7	-0.1
H23K	Yukon River	82.38	20	P	P	18 16 23.0	-0.6
	baz=236						
HDA	Harding Lake	82.54	22	P	P	18 16 26.2	+1.7
	baz=239						
MCARA	McCarthy VSAT	82.64	26	P	P	18 16 25.5	+0.5
	baz=243						
ILAR	Eielson Array	82.75	22	P	P	18 16 23.4	-2.1
	comp=Z,2.8nm,0.7s,baz=253,slow=5.1,SNR=19						
ILAR				LR	LR	18 52 01.4	
	comp=Z,274nm,19.3s,baz=244,slow=35						
	comp=Z,2.8nm,0.7s						
ILAR	Eielson Array	82.75	22	P	P	18 16 23.6	-1.9
H24K	Noodor Dome	82.96	21	P	P	18 16 26.5	-0.2
H24K	Noodor Dome	82.96	21	P	P	18 16 25.6	-1.1
	baz=238						
ZALV	Zalesovo Beam	83.09	326	P	P	18 16 26.4	-1.1
	comp=Z,1.6nm,0.5s,baz=116,slow=6.0,SNR=8.0						
ZALV				LR	LR	18 53 45.4	
	comp=Z,32nm,22.0s,baz=124,slow=36						
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	83.09	326	P	P	18 16 27.1	-0.5
CTG	Chitna Glacier	83.18	26	P	P	18 16 28.1	0.0
	baz=244						
J25K	Salcha River,	83.23	22	P	P	18 16 27.3	-0.8
	baz=240						
PNL	Peninsula	83.52	28	P	P	18 16 30.0	+0.3
	baz=246						
M27K	Edge Creek, AK	83.56	25	P	P	18 16 29.7	-0.3
M27K				IAmb	IAmb	18 16 56.2	
	comp=Z,9.1nm,0.9s						
M27K	Edge Creek, AK	83.56	25	P	P	18 16 30.4	+0.4
	baz=244						
J26L	Joseph Creek	83.86	23	P	P	18 16 31.3	-0.1
	baz=242						
L27K	Beaver Creek,	83.89	24	P	P	18 16 31.3	-0.2
	baz=244						
YUK3	Moose Creek	83.91	26	P	P	18 16 32.3	+0.4
	baz=245						
K27K	Chicken	84.23	23	P	P	18 16 33.6	+0.4
	baz=243						
YUK4	Talbot Arm	84.53	26	P	P	18 16 35.3	+0.3
	baz=247						
HYT	Haines Junctio	84.84	27	P	P	18 16 37.2	+0.7
HYT				IAmb	IAmb	18 16 50.6	
	comp=Z,6.2nm,0.9s						
HYT	Haines Junctio	84.84	27	P	P	18 16 36.9	+0.4
	baz=248						
EGAK	Eagle	84.91	23	P	P	18 16 37.0	+0.4
	baz=244						
KSH	Kashi	84.96	310	P	P	18 16 40.0	+2.4
KSH				pP	pP	18 16 50.3	+0.5
KSH				sP	sP	18 16 56.4	+2.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,130nm,6.0s						
KSH				LR	LR		
	comp=Z,130nm,18.6s						
MAW	Mawson	85.00	203	P	P	18 16 36.7	-0.3
	comp=Z,6.5nm,0.9s,baz=71,slow=6.6,SNR=11						
MAW				LR	LR	18 50 38.2	
	comp=Z,74nm,21.2s,baz=98,slow=33						
	comp=Z,6.5nm,0.9s						
MAW	Mawson	85.00	203	P	P	18 16 37.0	0.0
	baz=85,SNR=6.1						
MAW	Mawson	85.00	203	P	P	18 16 37.1	0.0
M30M	Minto, Yukon	85.81	26	P	P	18 16 41.3	+0.1
	baz=248						
N31M	Braeburn, Yuko	85.86	27	P	P	18 16 41.5	+0.1
	baz=249						
I29M	Ogilvie Camp,	86.26	23	P	P	18 16 43.2	-0.1
I29M				IAmb	IAmb	18 16 52.5	
	comp=Z,5.2nm,1.0s						
I29M	Ogilvie Camp,	86.26	23	P	P	18 16 42.8	-0.5
	baz=247						
AAK	Ala-Archa	86.69	313	LR	LR	18 57 47.6	
	comp=Z,56nm,18.7s,baz=110,slow=37						
M31M	Drury Creek, Y	86.73	26	P	P	18 16 45.7	0.0
	baz=250						
S34M	Telegraph Cree	86.96	31	P	P	18 16 47.5	+0.6
	baz=254						
BBB	Bella Bella	87.16	37	LR	LR	18 48 24.6	
	comp=Z,135nm,21.3s,baz=264,slow=30						
DLBC	Dease Lake	87.67	31	LR	LR	18 49 55.0	
	comp=Z,150nm,21.1s,baz=257,slow=31						
NRIK	Noril'sk	87.68	341	P	P	18 16 48.0	-2.1
	comp=Z,5.0nm,0.8s,baz=176,slow=5.0,SNR=3.6						
NRIK				LR	LR	18 55 24.2	
	comp=Z,99nm,21.7s,baz=125,slow=35						
	comp=Z,5.0nm,0.8s						
YBH	Yreka Blue Hor	88.73	48	LR	LR	18 51 55.1	
	comp=Z,381nm,19.2s,baz=279,slow=32						
INK	Inuvik	89.08	21	P	P	18 16 54.9	-1.8
	comp=Z,2.0nm,0.9s,baz=215,slow=11,SNR=4.1						
INK				LR	LR	18 56 10.3	
	comp=Z,212nm,19.4s,baz=230,slow=35						
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	91.63	52	P	P	18 17 09.6	0.0
	comp=Z,6.1nm,0.9s,baz=254,slow=6.3,SNR=34						
NVAR				LR	LR	18 54 13.2	
	comp=Z,160nm,19.0s,baz=272,slow=33						
	comp=Z,6.1nm,0.9s						
BFSC	Mount Baldy Ra	91.69	56	P	P	18 17 10.4	+0.5
	baz=264						
NV11	Mina Array Sit	91.75	52	P	P	18 17 10.0	-0.1
LRMC	Laurel Mtn Rad	91.81	55	P	P	18 17 11.3	+1.0
	baz=264						
FURC	Furnace Creek,	92.57	54	P	P	18 17 14.6	+1.0
	baz=264						
MONP2	Monument Peak	92.58	57	P	P	18 17 15.2	+1.1
	baz=264						
PFO	Pinyon Flats O	92.62	57	LR	LR	18 52 59.6	
	comp=Z,201nm,19.1s,baz=251,slow=32						
PFO	Pinyon Flats O	92.62	57	P	P	18 17 14.7	+0.5
	baz=264						
RPN	Rapa Nui	92.82	118	LR	LR	18 50 43.3	
	comp=Z,92nm,21.3s,baz=248,slow=30						
SHOC	Shoshone, Teco	92.99	54	P	P	18 17 16.3	+0.6
	baz=265						
BELC	Belle Mtn. Jos	93.04	56	P	P	18 17 17.1	+0.9
	baz=265,SNR=6.4						
TPNV	Topopah Spring	93.11	53	P	P	18 17 16.8	+0.4
	baz=265						
TUQ	Turquoise Moun	93.23	55	P	P	18 17 16.9	-0.1
	baz=265						
GMRC	Granite Mounta	93.39	56	P	P	18 17 18.2	+0.5
	baz=265						
BC3	Big Chuckawall	93.46	57	P	P	18 17 19.2	+1.1
	baz=265,SNR=5.1						
NEW	Newport	93.49	42	LR	LR	18 52 57.7	
	comp=Z,508nm,20.7s,baz=280,slow=31						
R11A	Troy Canyon, C	93.75	52	P	P	18 17 19.8	+0.5
	baz=265						
IRM	Iron Mountain	93.76	56	P	P	18 17 20.3	+1.0
	baz=265,SNR=7.1						
ELK	Elko	94.21	50	LR	LR	18 55 19.4	
	comp=Z,153nm,19.1s,baz=258,slow=33						
YKA	Yellowknife Ar	95.82	28	P	P	18 17 27.4	-0.5
	comp=Z,1.3nm,0.9s,baz=267,slow=4.8,SNR=9.5						
YKA				PKKPbc	PKKPbc	18 34 16.1	-3.8
	comp=Z,0.7nm,0.7s,baz=86,slow=2.9,SNR=10						
YKA				LR	LR	18 57 55.3	
	comp=Z,62nm,18.9s,baz=268,slow=34						
	comp=Z,1.3nm,0.9s						
LPIG	La Paz	97.28	67	LR	LR	18 54 08.1	
	comp=Z,175nm,20.5s,baz=230,slow=31						
ARU	Arti	98.25	326	LR	LR	19 03 04.3	
	comp=Z,65nm,20.8s,baz=98,slow=36						
PDAR	Pinedale Array	98.54	48	P	P	18 17 39.8	-1.3
	comp=Z,0.7nm,0.7s,baz=207,slow=3.0,SNR=6.9						
PDAR				LR	LR	18 55 30.5	
	comp=Z,147nm,21.8s,baz=273,slow=31						
	comp=Z,0.7nm,0.7s						
AKTO	Aktyubinsk	98.71	320	LR	LR	19 05 16.8	
	comp=Z,32nm,18.4s,baz=88,slow=37						
TROLL	Troll, Antarti	99.93	189	Pdiff	Pdif	18 17 45.8	-0.8
VNA3	Neumayer Olymp	102.11	185	Pdiff	Pdif	18 17 55.7	-0.5
FINES	FINESS Array B	112.86	336	PKKPbc	PKKPbc	18 33 24.8	-3.6
	comp=Z,3.2nm,1.1s,baz=176,slow=3.6,SNR=4.2						
AKASG	Malin Array Be	116.45	325	PKP	PKPdf	18 22 45.3	-0.3
	comp=Z,0.3nm,0.5s,baz=59,slow=2.3,SNR=2.3						
AKASG				PKKPab	PKKPbc	18 33 16.8	+1.1
	comp=Z,0.4nm,0.3s,baz=267,slow=3.4,SNR=8.7						
BRTR	Keskin Array B	117.33	312	PP	PP	18 23 58.9	-0.2
	comp=Z,0.5nm,0.8s,baz=90,slow=7.2,SNR=4.7						
BOSA	Boshof	120.11	232	PKP	PKPdf	18 22 53.0	-0.6
	comp=Z,2.9nm,0.5s,baz=130,slow=1.4,SNR=19						
GERES	GERESS Array B	125.96	329	PKP	PKPdf	18 23 03.1	-1.0
	comp=Z,0.2nm,0.6s,baz=80,slow=1.2,SNR=2.4						
LPAZ	La Paz	132.43	118	PKP	PKPdf	18 23 17.2	-0.7
	comp=Z,2.9nm,1.1s,baz=316,slow=3.9,SNR=7.4						
LPAZ				SKPab	SKPbc	18 26 41.2	-0.3
	comp=Z,0.7nm,0.6s,baz=256,slow=3.1,SNR=3.6						
SIV	San Ignacio	138.62	122	PKP	PKPdf	18 23 27.6	-1.2
	comp=Z,0.8nm,0.6s,baz=268,slow=1.3,SNR=4.2						
SIV				SKPbc	SKPbc	18 26 58.9	-1.2
	comp=Z,0.4nm,0.3s,baz=186,slow=4.4,SNR=3.5						
PSBE	So Bento	143.42	338	*e*PKP	PKPdf	18 23 37.7	+0.9
PNCL	Nicolau / Gran	144.54	336	*e*PKP	PKPab	18 23 36.5	-0.6
PVAQ	Vaqueiros	144.81	335	*e*PKP	PKPab	18 23 37.7	-0.5
PTEO	Sao Teotonio	145.10	336	*e*PKP	PKPbc	18 23 38.9	-0.3
BDFB	Brasilia	149.05	134	PKPbc	PKPbc	18 23 49.6	-1.6
	comp=Z,3.4nm,0.5s,baz=180,slow=7.1,SNR=8.7						
TORD	Torodi Ar. Bea	152.19	287	PKP	PKPdf	18 23 51.5	-0.3
	comp=Z,1.2nm,0.5s,baz=45,slow=2.2,SNR=3.9						
TORD				PKPbc	PKPbc	18 23 56.9	-1.6
	comp=Z,3.9nm,0.5s,baz=30,slow=2.6,SNR=43						
TORD				PKPab	PKPab	18 24 07.7	-0.6
	comp=Z,15nm,0.8s,baz=50,slow=2.3,SNR=23						
DBIC	Dimbokro	159.36	273	PKPab	PKPab	18 24 38.6	-0.4
	comp=Z,9.0nm,0.9s,baz=113,slow=6.8,SNR=4.8						

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*IDC **15** 18:05:38.6±3.2, 32°.07S×71°.75W, h0^{km}, mb4.0/1, mbtmp3.6/2, ML3.3/1, Error ellipse: s-maj=142.9km s-min=45.9km az=96.0*

*GUC **15** 18:05:43.4±0.8, 32°.25S×71°.66W, h46^{km}±3^{km}, ML3.6*

ISC 15 18:05:43.2±1.6, 32°.24S±0°.04×71°.75W±0°.08, h28^{km}±11^{km}, n24, σ0^{s}84/29, 5C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.50	130	⇓*i*P	Pb	18 05 53.5	-0.1
VA06				*i* S	Sb	18 06 00.4	-0.2
VA06				IAML		18 06 01.7	
	comp=E,18μm,0.6s						
VA01	Torpederas	0.79	173	*e*P	Pn	18 05 58.2	-0.2
VA01				IAML		18 06 10.2	
	comp=E,2μm,0.2s						
VA03	San Esteban	1.14	117	⇓*i*P	Pn	18 06 03.0	-0.4
VA03				*i* S	Sn	18 06 17.6	-0.7
VA03				IAML		18 06 20.5	
	comp=N,2μm,0.4s						
CO02	Combarbal	1.22	32	⇓*i*P	Pn	18 06 04.4	-0.1
CO02				*i* S	Sn	18 06 20.0	-0.1
CO02				IAML		18 06 21.7	
	comp=E,12μm,0.3s						
PEL	Peldehue	1.27	135	⇓*i*P	Pn	18 06 05.3	0.0
PEL				*i* S	Sn	18 06 21.2	-0.2
VA05	Santo Domingo	1.42	175	*e*P	Pn	18 06 07.6	+0.5
VA05				*i* S	Sn	18 06 25.5	+0.6
VA05				IAML		18 06 35.4	
	comp=E,2μm,0.5s						
MT05	Renca	1.43	144	⇑*i*P	Pn	18 06 08.1	+0.7
MT05				*i* S	Sn	18 06 26.1	+0.8
MT05				IAML		18 06 30.5	
	comp=E,1μm,0.4s						
CO06	Fray Jorge	1.57	4	⇓*i*P	Pn	18 06 09.0	-0.2
CO06				*i* S	Sn	18 06 30.0	+1.5
CO06				IAML		18 06 35.7	
	comp=E,1μm,0.6s						
MT03	Universidad Ad	1.63	140	⇓*i*P	Pn	18 06 11.1	+1.0
MT03				IAML		18 06 34.5	
	comp=N,2μm,0.3s						
FCH	Farellones	1.64	132	*e*P	Pn	18 06 10.9	+0.4
FCH				*i* S	Sn	18 06 31.5	+0.6
FCH				IAML		18 06 33.4	
	comp=E,639nm,0.5s						
MT09	Talagante	1.66	157	⇑*i*P	Pn	18 06 11.9	+1.3
MT09				IAML		18 06 41.9	
	comp=N,2μm,0.9s						
BO04	La Punta	1.99	151	⇑*i*P	Pn	18 06 16.6	+1.5
BO04				IAML		18 06 48.5	
	comp=E,571nm,0.5s						
LMEL	Las Melosas	2.06	141	⇑*i*P	Pn	18 06 17.7	+1.5
LMEL				IAML		18 06 49.2	
	comp=N,550nm,0.3s						
GO04	Tololo Observa	2.22	22	⇑*i*P	Pn	18 06 18.9	+0.5
GO04				*i* S	Sn	18 06 46.6	+1.6
BO03	Pichilemu	2.26	184	⇓*i*P	Pn	18 06 18.6	-0.1
BO03				IAML		18 07 02.0	
	comp=E,199nm,0.5s						
CO01	Juntas del Tor	2.67	33	IAML		18 07 05.4	
	comp=N,356nm,0.6s						
GO05	Huala	2.77	183	*e*P	Pn	18 06 25.4	-0.3
H03N1	Juan Fernandez	6.14	257	T	T	18 13 48.8	
	baz=77,slow=73						
H03N3	Juan Fernandez	6.16	257	T	T	18 13 46.4	
	baz=77,slow=73						
H03N2	Juan Fernandez	6.16	257	T	T	18 13 45.2	
	baz=77,slow=73						
PLCA	Paso Flores	8.53	174	Pn	Pn	18 07 46.0	+1.1
	comp=N,0.1nm,0.3s,baz=350,slow=13,SNR=1.6						
	comp=N,0.7nm,0.6s						
TORD	Torodi Ar. Bea	83.39	70	P	P	18 18 07.6	-0.6
	comp=N,1.1nm,0.8s,baz=225,slow=3.5,SNR=4.2						
	comp=N,1.1nm,0.8s						
ZALV	Zalesovo Beam	152.60	31	PKPbc	PKPbc	18 25 35.8	-0.7
	comp=N,0.6nm,0.5s,baz=318,slow=1.9,SNR=2.3						
MKAR	Makanchi Array	155.40	46	PKPab	PKPab	18 25 59.1	-0.2
	comp=N,0.2nm,0.6s,baz=273,slow=5.2,SNR=1.7						

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*NNC **15** 18:25:05.4±1.6, 39°.59N×75°.50E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.5km s-min=8.0km az=157.0*

*SOME **15** 18:25:07.2, 39°.62N×75°.48E, h10^{km}*

*KRNET **15** 18:25:10.3±0.1, 39°.57N×75°.45E, mb2.9*

ISC 15 18:25:12.2±1.3, 39°.81N±0°.06×75°.50E±0°.03, h10^{km}, n46, σ1^{s}68/71, 25C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	2.20	290	⇓*i*P	Pn	18 25 51.1	+2.2
	baz=96						
OHH				⇓*i*S	Sb	18 26 20.9	+1.4
	baz=96						
ARLS	Aral	2.23	337	⇑*e*P	Pb	18 25 52.9	+0.2
	baz=40						
ARLS				⇑*i*S	Sg	18 26 24.6	+0.6
	baz=40						
ULHL	Ulahol	2.49	13	P	Pg	18 25 59.6	-0.4
	SNR=8.2						
ULHL	Ulahol	2.49	13	⇑*i*P	Pb	18 25 57.7	+0.5
	baz=12						
ULHL				⇑*i*S	Sg	18 26 31.9	-0.4
	baz=12						
UCH	Uchtor	2.52	343	P	Pb	18 25 57.8	-0.1
	SNR=11						
UCH	Uchtor	2.52	343	⇑*i*P	Pb	18 25 57.8	-0.1
	baz=45						
UCH				⇑*i*S	Sg	18 26 32.6	-0.8
	baz=45						
KDJ	Kajisay	2.64	28	⇑*e*P	Pb	18 25 59.6	-0.1
	baz=27						
KDJ				⇑*i*S	Sg	18 26 35.0	-2.0
	baz=27						
AML	Almayashu	2.69	330	P	Pb	18 25 59.6	-1.1
	SNR=12						
BOOM	Boomskoye usch	2.69	7	⇑*i*P	Pb	18 26 00.8	+0.2
	baz=7.0						
BOOM				⇑*i*S	Sg	18 26 37.2	-1.6
	baz=7.0						
KBK	Karagaybulak	2.87	352	P	Pb	18 26 02.5	-1.1
	SNR=9.9						
KBK	Karagaybulak	2.87	352	⇑*e*P	Pb	18 26 03.0	-0.6
	baz=53						
KBK				⇑*i*S	Sg	18 26 41.5	-2.9
	baz=53						
DRK	Karamyk	2.88	265	⇑*i*P	Pn	18 25 58.9	+0.5
	baz=69						
DRK				⇑*i*S	Sn	18 26 34.3	+1.0
	baz=69						
AAK	Ala-Archa	2.92	345	P	Pb	18 26 03.8	-0.7
	SNR=13						
AAK	Ala-Archa	2.92	345	⇑*i*P	Pb	18 26 03.4	-1.1
	baz=47						
AAK				⇑*i*S	Sb	18 26 42.4	+2.1
	baz=47						
TKM2	Tokmak 2	3.10	1	P	Pb	18 26 05.8	-1.8
	SNR=7.7						
TKM2	Tokmak 2	3.10	1	⇑Pg	Pb	18 26 05.9	-1.7
	2.0nm,0.4s						
TKM2				⇓Lg	Lg	18 26 51.9	
	12nm,0.5s						
TKM2	Tokmak 2	3.10	1	⇑*i*P	Pb	18 26 06.2	-1.4
	baz=2.0						
TKM2				⇑*i*S	Sb	18 26 47.8	+2.2
	baz=2.0						
EKS2	Erkin-Say	3.13	336	⇑*i*P	Pb	18 26 05.4	-2.6
	baz=38						
EKS2				⇑*i*S	Sb	18 26 46.2	0.0
	baz=38						
CHMS	Chumysh	3.23	350	⇑Pg	Pb	18 26 07.3	-2.4
	5.0nm,0.6s						
CHMS				⇑Lg	Lg	18 26 55.7	
	7.0nm,0.6s						
KST	Kastek	3.24	6	*e*P	Pb	18 26 11.4	+1.5
	3.1nm,0.8s						
KST				*e*S	Sg	18 26 57.2	+0.8
	19nm,0.8s						
KST	Kastek	3.24	6	Pg	Pb	18 26 08.2	-1.8
	3.5nm,0.6s						
KST				Lg	Lg	18 26 56.0	
	19nm,0.8s						
ARK	Arkit	3.34	308	⇓*i*P	Pn	18 26 07.5	+2.9
	baz=11						
ARK				⇓*i*S	Sb	18 26 49.6	-2.7
	baz=11						
ANVS	Anan'yevo	3.38	28	⇓*i*P	Pb	18 26 10.1	-2.3
	baz=27						
ANVS				⇓*i*S	Sb	18 26 53.3	-0.4
	baz=27						
MRKS	Merke	3.39	330	*e*P	Pb	18 26 12.2	-0.4
	5.1nm,0.4s						
MRKS				*e*S	Sg	18 26 58.3	-2.9
	4.3nm,0.4s						
TNSS	Tian-Shan	3.40	18	*e*P	Pb	18 26 14.1	+1.4
	1.3nm,0.3s						
TNSS				*e*S	Sg	18 27 01.9	+0.5
	4.3nm,0.4s						
TNSS	Tian-Shan	3.40	18	Pg	Pb	18 26 10.5	-2.2
	1.6nm,0.6s						
TNSS				Lg	Lg	18 26 59.7	
	4.3nm,0.4s						
PRZ	Przheval'sk	3.45	38	⇓*i*P	Pb	18 26 10.8	-2.7
	baz=36						
PRZ				⇓*i*S	Sb	18 26 54.8	-0.7
	baz=36						
USP	Ospenovka	3.53	348	P	Pb	18 26 11.4	-3.4
	SNR=5.3						
MDOK	Medeo	3.54	19	*e*P	Pb	18 26 16.0	+0.9
	1.3nm,0.5s						
MDOK				*e*S	Sg	18 27 05.2	-0.7
	4.6nm,0.6s						
MDOK	Medeo	3.54	19	Pg	Pb	18 26 15.0	-0.1
	1.1nm,0.4s						
MDOK				Lg	Lg	18 27 05.2	
	4.3nm,0.6s						
MDOK	Medeo	3.54	19	Pg	Pb	18 26 13.3	-1.7
	1.1nm,0.3s						
MDOK				Lg	Lg	18 27 04.5	
	4.6nm,0.6s						
BTK	Batken	3.61	275	⇓*i*P	Pn	18 26 09.7	+1.4
	baz=79						
BTK				⇓*i*S	Sn	18 26 52.9	+1.9
	baz=79						
SGDS	Sogindy	3.69	350	*e*P	Pb	18 26 19.0	+1.4
	0.8nm,0.4s						
SGDS				*e*S	Sg	18 27 10.3	-0.5
	7.5nm,0.7s						
TRKS	Terek-Say	3.73	299	⇑*i*P	Pn	18 26 11.9	+1.8
	baz=1.0						
TRKS				⇑*i*S	Sn	18 26 56.6	+2.4
	baz=1.0						
SATY	Saty	3.91	33	*e*P	Pg	18 26 24.0	-3.0
	1.1nm,0.1s						
SATY				*e*S	Sg	18 27 19.1	+1.5
	5.5nm,0.2s						
SATY	Saty	3.91	33	Pg	Pb	18 26 22.2	+0.9
	1.1nm,0.1s						
SATY				Lg	Lg	18 27 19.5	
	5.5nm,0.2s						
KTBS	Karatobe	3.99	12	*e*P	Pb	18 26 24.1	+1.4
	2.6nm,0.4s						
KTBS				*e*S	Sg	18 27 19.2	-1.3
	5.0nm,0.5s						
KTBS	Karatobe	3.99	12	Pg	Pb	18 26 21.9	-0.8
	2.6nm,0.4s						
KTBS				Lg	Lg	18 27 19.2	
	5.0nm,0.5s						
KUU	Kurty	4.12	8	*e*P	Pb	18 26 26.5	+1.7
	1.2nm,0.4s						
KUU				*e*S	Sg	18 27 23.4	-1.1
	12nm,0.8s						
KUU	Kurty	4.12	8	Pg	Pb	18 26 24.6	-0.3
	1.2nm,0.3s						
KUU				Lg	Lg	18 27 23.4	
	12nm,0.8s						
UZB	Uzynbulak	4.25	37	*e*P	Pb	18 26 28.8	+1.7
	2.0nm,0.3s						
UZB				*e*S	Sg	18 27 27.3	-1.4
	3.4nm,0.9s						
UZB	Uzynbulak	4.25	37	Pg	Pb	18 26 26.6	-0.5
	2.0nm,0.5s						
UZB				Lg	Lg	18 27 27.1	
	3.4nm,0.9s						
PDGK	Podgornoye	4.61	39	Pg	Pb	18 26 32.4	-0.8
	0.3nm,0.1s						
PDGK				Lg	Lg	18 27 37.3	
	1.2nm,0.5s						
PDGK	Podgornoye	4.61	39	⇓Lg	Lg	18 27 37.5	
	5.1nm,1.0s						
IUG	Iuzhnay	4.75	301	*e*P	Pb	18 26 36.3	+0.7
	21nm,0.7s						
IUG				*e*S	Sg	18 27 40.0	-4.8
	8.6nm,0.6s						
IUG	Iuzhnay	4.75	301	Pg	Pb	18 26 35.4	-0.2
	21nm,0.3s						
IUG				Lg	Lg	18 27 42.9	
	8.6nm,0.6s						

ISC 15 18:33:52.0±0.9, 44°.99N±0°.03×14°.98E±0°.03, h10^{km}±7^{km}, n14, σ0^{s}54/27, 1C, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A250A	Rusevo Krmpots	0.10	331	ePg	Pg	18 33 54.8	0.0
A250A				Sg	Sg	18 33 56.7	-0.1
RABC	Rab	0.28	211	ePg	Pg	18 33 57.7	0.0
RABC				Sg	Sg	18 34 01.8	+0.3
PLIT	Plitvice	0.47	104	ePg	Pg	18 34 00.7	-0.5
PLIT				Sg	Sg	18 34 07.5	+0.1
RIY	Rijeka	0.48	313	ePg	Pg	18 34 01.1	-0.4
RIY				Sg	Sg	18 34 08.2	+0.3
BOJS	Bojanci	0.55	20	⇑iPg	Pg	18 34 02.8	+0.2
BOJS				eSg	Sb	18 34 10.7	-0.8
BOJS				IAML		18 34 12.1	
	comp=Z,3.4nm,0.1s						
SMRN	Sveta Marina	0.59	275	ePg	Pg	18 34 03.1	-0.4
SMRN				Sg	Sg	18 34 11.6	+0.4
VIRC	Vir	0.70	176	ePg	Pg	18 34 04.8	-0.7
VIRC				Sg	Sg	18 34 15.0	+0.2
UDBI	Udbina	0.72	130	ePg	Pg	18 34 05.8	-0.3
UDBI				Sg	Sg	18 34 15.3	-0.3
BRJN	Brijuni	0.88	265	ePg	Pb	18 34 09.3	-0.1
BRJN				Sg	Sb	18 34 21.2	+0.1
SKDS	Skadanscina	0.88	309	i Pg	Pn	18 34 10.7	+0.2
DUGI	Dugi Otok	1.00	177	ePg	Pg	18 34 10.5	-0.8
DUGI				Sg	Sn	18 34 25.6	-0.7
MORI	Morici	1.24	155	ePg	Pg	18 34 16.2	+0.3
MORI				Sg	Sn	18 34 33.1	+1.0
MOSL	Moslavina	1.40	63	ePg	Pg	18 34 18.7	-0.1
MOSL				Sg	Sg	18 34 37.3	+0.4
ZIRJ	Zirje	1.42	160	ePn	Pb	18 34 18.5	0.0
ZIRJ				Sg	Sg	18 34 39.0	+1.3

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*MOS **15** 18:41:25.7±0.9, 36.°52N×70.°91E, h193^{km}, mb4.7/27, Error ellipse: s-maj=5.3km s-min=3.2km az=85.8*

*BJI **15** 18:41:26.8±0.0, 36.°60N×70.°98E, h186^{km}, mb4.1/36, mB4.6/21*

*NEIC **15** 18:41:26.6±1.8, 36.°49N±0.°04×70.°86E±0.°08, h193^{km}±6^{km}, mb4.5/43, Error ellipse: s-maj=10.4km s-min=3.7km az=57.0*

*IDC **15** 18:41:27.8±0.8, 36.°44N×70.°88E, h204^{km}±7^{km}, mb4.0/27, mbtmp4.6/31, MS2.8/1, Error ellipse: s-maj=9.4km s-min=8.5km az=34.0*

*NNC **15** 18:41:28.4±1.5, 36.°82N×70.°69E, h187^{km}±16^{km}, mb3.9, mpv5.2, Error ellipse: s-maj=14.5km s-min=8.0km az=164.0*

ISC 15 18:41:26.5±0.3**, 36.°50N**±0.°03×**70.°82E**±0.°03**, h192**^{km}±3^{km}**, h192**^{km}**:pP-P, n443,** σ1.^{s}**61**/498**, mb4.4**/93**, 27C-40D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.43	217	Pn	Pn	18 42 09.8	+0.4
KBL	Kabul	2.43	217	PN	Pn	18 42 09.8	+0.4
CHGR	Chuyangaron	2.53	329	Pn	Pn	18 42 10.0	-0.3
CHGR	Chuyangaron	2.53	329	PN	Pn	18 42 10.0	-0.3
GAR	Garm	2.53	351	Pn	Pn	18 42 10.5	+0.2
DRK	Karamyk	3.08	14		Pn	18 42 17.1	+0.2
CHCP	Chirah Chowk	3.47	144	P	Pn	18 42 22.2	+0.7
BTK	Batken	3.56	360		Pn	18 42 23.3	+0.8
BTK	Batken	3.56	360	PN	Pn	18 42 23.3	+0.8
TAS	Tashkent	4.97	347	Pn	Pn	18 42 41.0	+0.8
TAS	Tashkent	4.97	347	PN	Pn	18 42 41.0	+0.8
JMU	Jammu	5.05	137	i P	Pn	18 42 40.7	-0.7
JMU				eS	Sn	18 43 36.9	-3.4
KSH	Kashi	5.06	52	P	Pn	18 42 37.5	-4.1
KSH				S	Sn	18 43 30.9	-10
KSH				smax	smax		
	comp=N,630nm,1.0s						
KSH				smax	smax		
	comp=E,410nm,1.3s						
IUG	Iuzhnay	5.68	354	i PN	Pn	18 42 49.6	+0.2
IUG	Iuzhnay	5.68	354	i P	Pn	18 42 49.7	+0.2
	baz=353						
THN	Thein Dam	5.72	134	eP	Pn	18 42 50.3	+0.2
THN				eS	Sn	18 43 53.8	-2.2
AML	Almayashu	6.05	21	P	Pn	18 42 54.0	-0.6
	SNR=954						
AML	Almayashu	6.05	21	PN	Pn	18 42 53.9	-0.7
UCH	Uchtor	6.40	25	P	Pn	18 42 58.6	-0.5
	SNR=341						
UCH	Uchtor	6.40	25	PN	Pn	18 42 58.4	-0.8
DZA	Taraz	6.40	3	ePN	Pn	18 42 58.7	0.0
DZA	Taraz	6.40	3	eP	Pn	18 42 58.8	0.0
	baz=2.8						
EKS2	Erkin-Say	6.57	19	P	Pn	18 43 00.8	-0.2
	SNR=250						
EKS2	Erkin-Say	6.57	19	PN	Pn	18 43 00.8	-0.2
BRLS	Borolday	6.57	354	ePN	Pn	18 42 58.5	-2.5
BRLS	Borolday	6.57	354	eP	Pn	18 42 58.5	-2.5
	baz=352						
KK31	Karatay Array	6.60	358	Pn	Pn	18 43 01.0	-0.4
KK31	Karatay Array	6.60	358	PN	Pn	18 43 01.1	-0.4
KK31	Karatay Array	6.60	358	P	Pn	18 43 00.7	-0.7
	112nm,0.7s,baz=195,slow=15,SNR=1005						
KK31				⇓S	Sn	18 44 11.5	-5.1
	62nm,0.4s,baz=319,slow=49,SNR=5.0						
KKAR	Karatay Array	6.60	358		Pn	18 43 00.9	-0.5
KKAR	Karatay Array	6.60	358		Pn	18 43 00.9	-0.5
KKAR	Karatay Array	6.60	358	PN	Pn	18 43 01.0	-0.5
AAK	Ala-Archa	6.76	24	P	Pn	18 43 03.5	0.0
	SNR=87						
AAK	Ala-Archa	6.76	24	P	Pn	18 43 03.6	0.0
	41nm,0.3s,baz=201,slow=9.4,SNR=144						
AAK				S	Sn	18 44 17.7	-2.7
	56nm,0.6s,baz=346,slow=23,SNR=11						
AAK	Ala-Archa	6.76	24	Pn	Pn	18 43 03.3	-0.2
BHK	Bhakra	6.88	136	ePN	Pn	18 43 03.0	-2.1
BHK				eP	Pn	18 43 04.5	-0.6
BHK				eSN	Sn	18 44 16.0	-7.1
BHK				eS	Sn	18 44 18.4	-4.8
KBK	Karagaybulak	6.93	26	P	Pn	18 43 05.8	-0.1
	SNR=114						
ULHL	Ulahol	7.11	35	P	Pn	18 43 08.2	0.0
	SNR=14						
CHMS	Chumysh	7.16	24	P	Pn	18 43 08.7	-0.1
	SNR=13						
CHMS	Chumysh	7.16	24	PN	Pn	18 43 08.0	-0.7
CHMS	Chumysh	7.16	24	⇓P	Pn	18 43 08.1	-0.7
	95nm,0.7s						
CHMS				⇑S	Sn	18 44 25.5	-4.4
	51nm,0.7s						
BOOM	Boomskoye usch	7.17	32		Pn	18 43 08.5	-0.5
BOOM	Boomskoye usch	7.17	32	PN	Pn	18 43 08.5	-0.5
HRA	Herat	7.31	256	Pn	Pn	18 43 12.7	+1.7
USP	Ospenovka	7.33	22	P	Pn	18 43 11.4	+0.5
	SNR=33						
USP	Ospenovka	7.33	22	PN	Pn	18 43 10.0	-0.9
TKM2	Tokmak 2	7.39	28	P	Pn	18 43 12.2	+0.2
	SNR=29						
TKM2	Tokmak 2	7.39	28	⇓P	Pn	18 43 11.7	-0.3
	228nm,0.7s						
TKM2				⇑S	Sn	18 44 32.4	-3.2
	61nm,0.9s						
KDJ	Kajisay	7.48	39		Pn	18 43 12.4	-0.5
KDJ	Kajisay	7.48	39	PN	Pn	18 43 12.5	-0.5
SMLA	Simla	7.52	134	eP	Pn	18 43 12.4	-1.1
SMLA				eS	Sn	18 44 33.1	-5.2
SMLA				IAML		18 44 36.7	
	comp=N,891nm,0.7s						
SGDS	Sogindy	7.54	22	d iPN	Pn	18 43 12.6	-1.0
SGDS				pmax	pmax		
	comp=Z,17nm,0.6s						
SGDS	Sogindy	7.54	22	⇓iP	Pn	18 43 12.6	-1.0
	comp=Z,17nm,0.6s,baz=21						
TNSS	Tian-Shan	8.05	34	ePN	Pn	18 43 20.1	-0.6
TNSS	Tian-Shan	8.05	34	eP	Pn	18 43 20.2	-0.6
	baz=34						
AAA	Alma-Ata	8.18	33	ePN	Pn	18 43 21.7	-0.3
AAA	Alma-Ata	8.18	33	eP	Pn	18 43 21.8	-0.3
	baz=33						
MDOK	Medeo	8.20	34	ePN	Pn	18 43 22.1	-0.3
MDOK	Medeo	8.20	34	eP	Pn	18 43 22.1	-0.3
	baz=34						
MDOK	Medeo	8.20	34	⇓P	Pn	18 43 22.1	-0.3
	comp=Z,55nm,0.6s						
MDOK				⇑S	Sn	18 44 50.8	-3.8
	comp=Z,26nm,0.8s						
KNDC	Almaty	8.21	33	⇑P	Pn	18 43 22.3	-0.1
PRZ	Przheval'sk	8.37	42		Pn	18 43 24.9	+0.2
PRZ	Przheval'sk	8.37	42	PN	Pn	18 43 24.9	+0.2
KUU	Kurty	8.51	28	ePN	Pn	18 43 24.8	-1.4
KUU	Kurty	8.51	28	eP	Pn	18 43 24.9	-1.4
	baz=28						
DDI	Dehra Dun	8.63	133	eP	Pn	18 43 27.2	-0.8
CHKK	Chushkaly	8.73	31	ePN	Pn	18 43 28.4	-0.8
CHKK	Chushkaly	8.73	31	eP	Pn	18 43 28.4	-0.8
	baz=30						
SATY	Saty	8.77	39	ePN	Pn	18 43 29.1	-0.8
SATY	Saty	8.77	39	eP	Pn	18 43 29.1	-0.8
	baz=39						
ZHN	Zhinishke	8.87	39	ePN	Pn	18 43 29.9	-1.2
ZHN	Zhinishke	8.87	39	eP	Pn	18 43 30.0	-1.2
	baz=39						
BTLS	Baital	8.88	15	d iPN	Pn	18 43 30.3	-0.8
BTLS	Baital	8.88	15	⇓iP	Pn	18 43 30.4	-0.8
	baz=15						
UZB	Uzynbulak	9.16	41	eP	Pn	18 43 33.9	-1.0
UZB	Uzynbulak	9.16	41	eP	Pn	18 43 34.0	-1.0
	baz=41						
KPKS	Kokpek	9.21	38	d iP	Pn	18 43 34.6	-0.9
KPKS	Kokpek	9.21	38	⇓iP	Pn	18 43 34.7	-0.9
	baz=38						
SHLS	Shalkode	9.40	42	eP	Pn	18 43 39.8	+1.8
SHLS	Shalkode	9.40	42	eP	Pn	18 43 39.9	+1.8
	baz=43						
NDI	New Delhi	9.47	144	eP	Pn	18 43 39.0	0.0
PDGK	Podgornoye	9.53	42	P	Pn	18 43 37.0	-2.7
PDGK	Podgornoye	9.53	42	⇓P	Pn	18 43 37.9	-1.9
	comp=Z,10nm,0.8s						
GEYT	Alibeck	10.23	282	P	Pn	18 43 46.7	-2.2
	comp=Z,5.9nm,0.8s,baz=78,slow=16,SNR=9.6						
GEYT				S	Sn	18 45 36.3	-6.8
	comp=Z,11nm,0.8s,baz=88,slow=26,SNR=4.0						
GEYT	Alibeck	10.23	282		Pn	18 43 46.5	-2.4
GYA0B	ALIBECK ARRAY	10.23	282		Pn	18 43 46.3	-2.5
GYA0B	ALIBECK ARRAY	10.23	282	⇓P	Pn	18 43 46.7	-2.2
GYA0B				⇓S	Sn	18 45 40.9	-2.1
TDK	Taldyqorghan	10.26	32	eP	Pn	18 43 48.6	-0.4
TDK	Taldyqorghan	10.26	32	eP	Pn	18 43 48.6	-0.4
	baz=32						
AJM	Ajmer	10.50	161	⇓iP	Pn	18 43 51.0	-1.5
AJM				eP	P	18 43 51.3	-8.7
AJM				i S	Sn	18 45 38.0	-12
OTUK	Ortayu	11.79	5	P	Pn	18 44 07.2	-1.6
OTUK	Ortayu	11.79	5	⇑P	Pn	18 44 07.2	-1.6
	comp=Z,28nm,1.1s						
MAKZ	Makanchi	13.24	35	P	Pn	18 44 26.3	-0.8
MAKZ	Makanchi	13.24	35	P	Pn	18 44 26.3	-0.8
MK31	Makanchi Array	13.38	36	P	Pn	18 44 28.4	-0.5
MK31	Makanchi Array	13.38	36	i P	Pn	18 44 28.8	0.0
MK31	Makanchi Array	13.38	36	⇓P	Pn	18 44 28.8	0.0
	comp=Z,4.1nm,0.6s,baz=222,slow=12,SNR=53						
MKAR	Makanchi Array	13.38	36	P	Pn	18 44 28.7	-0.1
	comp=Z,5.3nm,0.6s,baz=214,slow=12,SNR=31						
BHPL	Bhopal	14.39	155	eP	P	18 44 42.8	-0.4
BHPL				ex	Sn	18 47 10.6	-12
WMQ	Urumqi	14.82	55	eP	P	18 44 48.5	+0.7
DMN	Daman	14.99	122	eP	Pn	18 44 48.1	-1.1
KKN	Kakani	15.00	121	eP	Pn	18 44 48.2	-1.0
	comp=Z,58nm,0.5s						
KKN	Kakani	15.00	121	eP	Pn	18 44 48.3	-1.0
	comp=Z,23nm,0.2s						
AB31	Akbulak array	15.02	331	i P	Pn	18 44 48.1	-0.9
AB31				i S	S	18 47 29.0	-7.4
AB31	Akbulak array	15.02	331	P	Pn	18 44 48.1	-0.9
	comp=Z,20nm,0.6s,baz=144,slow=12,SNR=357						
AB31				⇑S	S	18 47 29.0	-7.4
	comp=Z,22nm,1.2s,baz=146,slow=23,SNR=8.5						
ABKAR	Akbulak array	15.02	331	P	Pn	18 44 47.6	-1.4
ABKAR	Akbulak array	15.02	331	P	Pn	18 44 48.0	-1.0
ABKAR				IAmb	IAmb	18 44 52.2	
	comp=Z,43nm,0.8s						
KURBB	Kurchatov Arra	15.17	19	P	Pn	18 44 49.4	-1.5
	comp=Z,1.9nm,0.3s,baz=215,slow=8.4,SNR=35						
KURBB				S	S	18 47 37.4	-2.4
	comp=Z,1.6nm,0.8s,baz=210,slow=20,SNR=4.4						
KURBB	Kurchatov Arra	15.17	19	P	Pn	18 44 49.3	-1.6
KURBB	Kurchatov Arra	15.17	19	⇓P	Pn	18 44 49.4	-1.6
	comp=Z,6.8nm,0.7s						
PKIN	Phulchoki	15.21	122	eP	Pn	18 44 50.9	-1.0
	comp=Z,55nm,0.6s						
PKI	Pulchoki	15.22	122	eP	Pn	18 44 50.6	-1.5
	comp=Z,61nm,0.7s						
KURK	Kurchatov	15.28	19	P	Pn	18 44 49.7	-2.5
KURK	Kurchatov	15.28	19	ceP	Pn	18 44 50.8	-1.4
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	Kurchatov	15.28	19	⇑P	Pn	18 44 50.0	-2.2
	comp=Z,12nm,1.2s						
JBP	Jabalpur	15.47	147	ex	Pn	18 44 54.9	+0.2
JBP				eP	Pn	18 44 54.9	+0.2
JBP				IAmb	IAmb	18 44 57.3	
	comp=Z,60nm,0.8s						
JBP				eS	S	18 47 32.8	-14
SEM	Semipalatinsk	15.48	23	eP	Pn	18 44 54.1	-0.8
SEM	Semipalatinsk	15.48	23	eP	Pn	18 44 54.2	-0.8
	baz=23						
JIRN	Jiri	15.71	120	eP	Pn	18 44 57.7	-0.4
	comp=Z,71nm,0.5s						
RAMN	Ramite	16.44	121	eP	P	18 45 05.6	-0.4
BRVK	Borovoye	16.57	359	P	P	18 45 06.5	-0.4
BRVK				IAmb	IAmb	18 45 09.2	
	comp=Z,19nm,0.8s						
BRVK	Borovoye	16.57	359	⇓eP	Pn	18 45 07.4	-0.3
BRVK				pmax	pmax		
	comp=Z,31nm,1.3s						
AKL	Akola	16.64	159	eP	Pn	18 45 09.5	+0.5
AKTO	Aktyubinsk	16.71	330	P	Pn	18 45 09.8	+0.3
	comp=Z,85nm,1.0s,baz=142,slow=11,SNR=178						
AKTO				S	S	18 48 09.1	-3.9
	comp=Z,3.2nm,0.7s,baz=220,slow=16,SNR=1.7						
AKTO	Aktyubinsk	16.71	330	P	Pn	18 45 09.2	-0.3
AKTO				S	S	18 48 08.7	-4.3
AKTO	Aktyubinsk	16.71	330	⇓P	Pn	18 45 09.3	-0.3
	comp=Z,98nm,0.9s						
AKTO				⇓S	S	18 48 08.8	-4.3
	comp=Z,40nm,1.6s						
WSAR	Wadi Sarin	16.90	222	P	Pn	18 45 13.2	+1.2
	comp=Z,9.2nm,1.0s,baz=76,slow=5.9,SNR=7.4						
BLSP	Bilaspur	17.36	142	eP	Pn	18 45 17.6	+0.1
LKRN	Lenkeran, Azer	17.60	284	P	Pn	18 45 21.9	+1.7
POO	Poona	18.10	171	eP	P	18 45 24.0	0.0
	comp=Z,50nm,1.0s						
POO				eS	Sn	18 48 48.0	-2.5
BOK	Bokaro	18.14	130	eP	Pn	18 45 26.5	0.0
BOK				IAmb	IAmb	18 45 28.8	
	comp=Z,23nm,0.4s						
SEKA	Sheki	18.97	292	P	Pn	18 45 35.0	-1.3
MNGR	Mingechevir, A	19.01	290	P	Pn	18 45 35.9	-0.8
MAK	Makhachkala	19.03	297	eP	P	18 45 31.9	-1.9
MAK				eS	S	18 48 58.7	-0.7
MAK				pmax	pmax		
	comp=Z,121nm,1.0s						
GOMU	GeErMu	19.32	84	P	Pn	18 45 40.1	-0.7
GOMU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,79nm,4.8s						
ZKTA	Zakatala	19.45	293	P	Pn	18 45 40.9	-1.1
GANJ	Ganja	19.58	290	P	P	18 45 41.2	+1.4
ZAA0	Zalesovo Array	19.98	25	P	P	18 45 44.0	+0.1
ZAA0				IAmb	IAmb	18 45 45.1	
	comp=Z,14nm,0.8s						
ZAA0	Zalesovo Array	19.98	25	⇓P	P	18 45 43.7	-0.2
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	19.98	25	P	P	18 45 44.4	+0.5
	comp=Z,6.9nm,0.3s,baz=223,slow=10,SNR=47						
ZALV				S	S	18 49 15.6	-2.2
	comp=Z,2.6nm,0.7s,baz=210,slow=20,SNR=3.7						
	comp=Z,6.9nm,0.3s						
ZALV	Zalesovo Beam	19.98	25	P	P	18 45 43.7	-0.2
NAX	Nakhchivan	20.16	285	P	Pn	18 45 49.0	-1.7
HYBB	Hyderabad (bro	20.20	158	eP	P	18 45 47.8	+1.1
HYBB				epP	pP	18 46 19.7	+0.7
HYBB				eS	S	18 49 21.6	-1.2
GROC	Groznyy	20.30	297	eP	P	18 45 49.5	+2.0
GROC				e*PP	pP	18 46 20.9	+0.9
GROC				e*SP	sP	18 46 45.7	+1.2
GROC				eS	S	18 49 27.7	+3.3
GROC				pmax	pmax		
	comp=Z,27nm,0.5s						
RAGD	RAYAGADA	20.46	144	eP	Pn	18 45 52.3	-2.1
GNI	Garni	20.76	288	P	P	18 45 55.1	+2.5
	comp=Z,27nm,1.0s,baz=163,slow=5.0,SNR=20						
GNI				LR	LR	18 56 50.2	
	comp=Z,28nm,19.9s,baz=324,slow=44						
	comp=Z,27nm,1.0s						
GNI	Garni	20.76	288	c iP	P	18 45 54.7	+2.1
GNI				pmax	pmax		
	comp=Z,39nm,1.1s						
SHL	Shillong	21.04	115	eP	P	18 45 57.8	+2.1
SHL				IAmb	IAmb	18 45 59.0	
	comp=Z,24nm,1.1s						
SVE	Sverdlovsk	21.46	345	⇑eP	P	18 46 00.6	+1.0
SVE				eS	S	18 49 38.7	-6.2
SVE				pmax	pmax		
	comp=Z,43nm,1.1s						
ARU	Arti	21.59	341	P	P	18 46 01.7	+0.7
	comp=Z,5.1nm,0.5s,baz=151,slow=8.4,SNR=41						
	comp=Z,5.1nm,0.5s						
ARU	Arti	21.59	341	P	P	18 46 01.3	+0.4
ARU	Arti	21.59	341	c iP	P	18 46 01.6	+0.7
ARU				*PP	pP	18 46 33.9	-0.4
ARU				S	S	18 49 49.8	+2.8
ARU				pmax	pmax		
	comp=Z,65nm,1.2s						
ZEI	Tsey	21.61	295	eP	P	18 46 04.6	+3.1
ZEI				pmax	pmax		
	comp=Z,13nm,1.3s						
AKH	Akhalkalaki	21.77	291	⇑P	P	18 46 05.9	+2.8
NCK	Nalchik	21.94	297	⇓iP	P	18 46 05.3	+0.7
NCK				pmax	pmax		
	comp=Z,19nm,1.0s						
KBZ	Khabaz	22.48	297	P	P	18 46 09.8	+0.2
	comp=Z,5.4nm,0.9s,baz=121,slow=8.9,SNR=9.9						
	comp=Z,5.4nm,0.9s						
KBZ	Khabaz	22.48	297	⇑eP	P	18 46 10.0	+0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOF	Gofitskoye	22.62	301	⇓iP	P	18 46 13.4	+2.5
GOF				pmax	pmax		
	comp=Z,59nm,1.1s						
KIV	Kislovodsk	22.66	298	⇑P	P	18 46 14.0	+2.6
KIV	Kislovodsk	22.66	298	eP	P	18 46 12.0	+0.6
KIV				eS	S	18 50 07.0	+2.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17nm,14.0s						
BELG	Belogornoye	22.80	321	P	P	18 46 13.9	+1.5
	comp=Z,110nm,0.9s,baz=161,slow=0.9,SNR=24						
	comp=Z,110nm,0.9s						
BELG	Belogornoye	22.80	321	deP	P	18 46 13.7	+1.3
BELG				pmax	pmax		
	comp=Z,17nm,0.9s						
GTA	Gaotai	23.00	74	eP	P	18 46 16.3	+1.7
GTA				pP	pP	18 46 54.4	+3.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VRH	Novokhopyorsk	25.41	315	eP	P	18 46 35.8	-0.3
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
KIRV	Kirov	26.18	334	P	P	18 46 44.0	+1.2
	comp=Z,15nm,0.7s,baz=136,slow=14,SNR=10						
	comp=Z,15nm,0.7s						
VORD	Divnogorie	26.74	313	eP	P	18 46 48.2	+0.2
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	26.90	313	eP	P	18 46 48.8	-0.6
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORR	Voronezh	27.04	314	eP	P	18 46 50.9	+0.2
VORR				pmax	pmax		
	comp=Z,37nm,1.5s						
LPSR	Galich'ya Gora	27.55	316	eP	P	18 46 55.7	+0.5
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH	PanZhiHua	28.08	102	P	P	18 47 01.3	+0.9
PZH				S	S	18 51 40.3	+9.3
PZH				ScS	ScS	18 57 21.4	-4.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,7.5s						
SONM	Songino Array	28.45	55	P	P	18 47 04.8	+1.3
	comp=Z,2.1nm,0.8s,baz=257,slow=9.9,SNR=13						
	comp=Z,2.1nm,0.8s						
SONM	Songino Array	28.45	55	P	P	18 47 03.5	+0.1
ULN	Ulaanbaatar	28.90	55	⇓eP	P	18 47 08.9	+1.5
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BR131	Keskin Array S	29.30	288	d iP	P	18 47 12.2	+1.2
BRTR	Keskin Array B	29.30	288	P	P	18 47 12.5	+1.4
	comp=Z,1.3nm,0.7s,baz=104,slow=8.8,SNR=14						
BRTR				PcP	PcP	18 50 12.2	-0.5
	comp=Z,0.8nm,0.9s,baz=104,slow=4.6,SNR=4.2						
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	29.30	288	P	P	18 47 09.2	-1.8
MOS	Moscow	29.57	321	eP	P	18 47 13.0	0.0
MOS				pmax	pmax		
	comp=Z,42nm,1.0s						
PRGR	Permogore	29.71	336	eP	P	18 47 13.8	-0.4
OBN	Obninsk	29.85	319	P	P	18 47 16.7	+1.2
	comp=Z,7.5nm,0.6s,baz=112,slow=22,SNR=11						
	comp=Z,7.5nm,0.6s						
OBN	Obninsk	29.85	319	P	P	18 47 15.6	+0.2
OBN	Obninsk	29.85	319	ceP	P	18 47 16.5	+1.0
OBN				e		18 48 20.7	
OBN				pmax	pmax		
	comp=Z,63nm,1.3s						
CMAR	Chiang Mai Arr	30.58	118	P	P	18 47 22.9	+0.5
	comp=Z,2.4nm,0.9s,baz=302,slow=8.0,SNR=22						
CMAR				pP	pP	18 48 03.4	+0.2
	comp=Z,0.9nm,0.7s,baz=299,slow=8.7,SNR=2.0						
	comp=Z,2.4nm,0.9s						
CMAR	Chiang Mai Arr	30.58	118	P	P	18 47 21.5	-0.8
XAN	Xi'an	31.07	83	⇑P	P	18 47 28.3	+1.7
XAN				sP	sP	18 48 25.8	-3.9
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLMR	Klimovskoe	31.41	331	eP	P	18 47 28.5	-0.6
KLMR				pmax	pmax		
	comp=Z,33nm,1.2s						
KLMR	Klimovskoe	31.41	331	eP	P	18 47 28.6	-0.6
KLMR				AMP		18 47 31.5	
	comp=Z,33nm,1.2s						
HHC	Hu-ho-hao-te	31.90	70	eP	P	18 47 35.0	+1.2
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,4.8s						
ELL	Elmali	32.66	283	P	P	18 47 41.5	+0.9
ELL	Elmali	32.66	283	P	P	18 47 41.5	+0.9
ELL				pmax	pmax		
	comp=Z,51nm,0.6s						
AKASG	Malin Array Be	32.84	309	P	P	18 47 42.2	+0.5
	comp=Z,7.0nm,0.7s,baz=81,slow=7.0,SNR=62						
AKASG				ScP	ScP	18 53 45.2	-2.3
	comp=Z,0.4nm,0.5s,baz=73,slow=3.2,SNR=5.6						
	comp=Z,7.0nm,0.7s						
AKASG	Malin Array Be	32.84	309	P	P	18 47 41.8	+0.1
AKASG				IAmb	IAmb	18 47 43.4	
	comp=Z,7.3nm,0.9s						
AKBB	Malin Array Si	32.84	309	P	P	18 47 42.4	+0.6
AKBB				IAmb	IAmb	18 47 43.3	
	comp=Z,13nm,0.7s						
AKBB	Malin Array Si	32.84	309	c iP	P	18 47 42.1	+0.4
TPGR	Topolog	32.91	298	⇓P	P	18 47 43.8	+1.3
SORM	Soroca	33.09	304	⇓P	P	18 47 44.7	+0.8
CFR	Carcaliu	33.12	299	⇓P	P	18 47 45.6	+1.4
VRI	Vrincioaia	34.10	300	⇓P	P	18 47 54.2	+1.4
NRIK	Noril'sk	34.16	10	P	P	18 47 54.4	+1.5
	comp=Z,14nm,0.8s,baz=193,slow=5.1,SNR=18						
	comp=Z,14nm,0.8s						
PLOR	Plostina	34.16	300	⇓P	P	18 47 55.7	+2.4
TESR	Tescani	34.16	301	⇑P	P	18 47 54.4	+1.1
MNK	Minsk	34.40	315	i P	P	18 47 56.5	+1.4
MNK				i *PP	pP	18 48 37.9	+2.6
MNK				i *SP	sP	18 49 01.1	+3.7
MNK				i		18 49 18.2	
MNK				i S	S	18 53 12.6	+4.2
MNK				i SS	SnSn	18 55 37.3	-6.2
MNK				pmax	pmax		
	comp=E,1.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,2.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,15nm,0.6s						
MNK	Minsk	34.40	315	i P	P	18 47 56.5	+1.4
	comp=E,1.0nm,0.7s						
MNK				i P	P	18 47 56.5	+1.4
	comp=N,2.0nm,0.7s						

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MNK                              i P     P         18 47 56.5 +1.4
      comp=Z,15nm,0.6s,baz=104
MNK                              i pP    pP        18 48 37.9 +2.6
MNK                              i sP    sP        18 49 01.1 +3.7
MNK                              i PP    PnPn      18 49 18.2 +0.9
MNK                              i S     S         18 53 12.6 +4.2
MNK                              i sS    sS        18 54 17.4 -3.0
MNK                              i SS    SnSn      18 55 37.3 -6.2
MNK                              i LR    LR        19 01 12.5
BIZ   Bicaz            34.55 302 ⇓P      P         18 47 58.3 +1.7
MLR   Muntele Rosu     34.66 299 ⇑P      P         18 47 59.8 +2.1
MLR   Muntele Rosu     34.66 299  P      P         18 47 57.7  0.0
MLR                               IAmb   IAmb      18 48 01.2
      comp=Z,16nm,0.8s
MLR   Muntele Rosu     34.66 299  P      P         18 47 57.7  0.0
MLR                               pmax   pmax
      comp=Z,16nm,0.8s
DOPR  Dopca            35.04 300 ⇑P      P         18 48 02.7 +1.9
NACGM Naroch           35.12 316 i P     P         18 48 02.4 +1.2
      baz=102
BURAR Bucovina Array   35.17 303 ⇓P      P         18 48 03.7 +1.7
BURAR Bucovina Array   35.17 303  P      P         18 48 03.4 +1.4
BUR08 Bucovina Ar. S   35.18 303  P      P         18 48 02.9 +0.8
IDID  Didziasalis      35.24 316 eP      P         18 48 04.1 +1.8
BJI   Beijing          35.49  70  P      P         18 48 06.4 +1.7
BJI                               pmax   pmax
      comp=Z,4.0nm,0.5s
IIGN  Ignalina         35.53 316 eP      P         18 48 06.6 +1.8
ARCR  ARCALIA          35.75 302 ⇑P      P         18 48 09.4 +2.6
VSU   Vasula           36.10 322d iP     P         18 48 10.6 +1.1
VSU                               pmax   pmax
      comp=Z,72nm,0.9s
VSU   Vasula           36.10 322 eP      P         18 48 10.7 +1.1
VTS   Vitosha          36.80 295 ⇑P      P         18 48 17.0 +1.1
PABE  Paberze          36.82 316 eP      P         18 48 17.4 +1.7
DRGR                   36.88 302  P      P         18 48 18.3 +1.9
GZR   Gura Zlata       36.89 299 ⇓P      P         18 48 17.7 +1.2
VSVD  Vaisvydziai      36.94 317 eP      P         18 48 18.4 +1.7
UZH   Uzhgorod         37.14 305 eP      P         18 48 35.7  +17
KOLS  Kolonicke sedl   37.16 305 eP      P         18 48 19.8 +1.1
KOLS  Kolonicke sedl   37.16 305 eP      P         18 48 19.8 +1.1
FIA1  FINESS Array S   37.41 326  P      P         18 48 21.7 +1.2
FINES FINESS Array B   37.41 326  P      P         18 48 21.8 +1.2
      comp=Z,20nm,0.8s,baz=117,slow=9.0,SNR=53
      comp=Z,20nm,0.8s
LVZ   Lovozero         37.41 338deP      P         18 48 21.5 +0.9
LVZ                               pmax   pmax
      comp=Z,22nm,1.3s
MTSE  Matsula          37.64 321 eP      P         18 48 24.1 +1.6
BZS   Buzias           37.69 300 ⇓P      P         18 48 24.9 +1.7
MEF   Metsahovi        37.78 324 eP      P         18 48 25.3 +1.6
BOVS  Bovan            37.80 296 ⇓P      P         18 48 25.3 +1.2
LANS  Liptovska Anna   39.01 305 eP      P         18 48 36.4 +2.2
LANS  Liptovska Anna   39.01 305 eP      P         18 48 36.3 +2.1
RAF   Rauma            39.25 324 eP      P         18 48 36.4 +0.5
NJ2   Nanjing          39.62  82 eP      P         18 48 39.4  0.0
NJ2                               pmax   pmax
      comp=Z,6.0nm,0.5s
MORH  Mrgy, Hungar     39.71 301  P      P         18 48 41.6 +1.7
SRO2  Moca             39.77 303 eP      P         18 48 41.6 +1.2
SRO2  Moca             39.77 303 eP      P         18 48 41.6 +1.2
SRO   Srobarova        39.82 303 eP      P         18 48 43.1 +2.2
SRO   Srobarova        39.82 303 eP      P         18 48 43.1 +2.2
CSKK  Cskako           39.89 303  P      P         18 48 37.6 -3.8
KOVH  Kovagotottos     40.10 301  P      P         18 48 43.9 +0.7
JAVC  Velka Javorina   40.20 305 eP      P         18 48 48.3 +4.3
MORC  Moravsky Berou   40.25 306 ⇑P      P         18 48 46.0 +1.6
MORC  Moravsky Berou   40.25 306  P      P         18 48 45.4 +1.0
MORC  Moravsky Berou   40.25 306  P      P         18 48 45.4 +1.0
MORC                              pmax   pmax
      comp=Z,5.0nm,0.7s
MORC  Moravsky Berou   40.25 306 eP      P         18 48 45.5 +1.0
SMOL  Smolenice        40.38 305 eP      P         18 48 47.2 +1.8
SMOL  Smolenice        40.38 305 eP      P         18 48 47.2 +1.8
VRAC  Vranov           40.88 306 ⇓P      P         18 48 51.6 +2.0
VRAC  Vranov           40.88 306 eP      P         18 48 50.8 +1.2
UPP   Uppsala          40.99 322 eP      P         18 48 50.7 +0.5
DPC   Dobruska-Polom   41.02 307 eP      P         18 48 51.6 +0.9
DPC   Dobruska-Polom   41.02 307 eP      P         18 48 51.6 +0.9
KRUC  Moravsky         41.03 305 eP      P         18 48 51.4 +0.7
OSTC  Ostas            41.08 308 eP      P         18 48 52.9 +1.7
ARA0  ARCESS Array S   41.09 338 eP      P         18 48 52.1 +1.1
ARCES ARCESS Array B   41.09 338  P      P         18 48 52.2 +1.2
      comp=Z,20nm,0.8s,baz=116,slow=8.5,SNR=36
      comp=Z,20nm,0.8s
ARCES ARCESS Array B   41.09 338  P      P         18 48 52.2 +1.2
ARCES                             IAmb   IAmb      18 48 53.3
      comp=Z,24nm,0.8s
ARCES ARCESS Array B   41.09 338  P      P         18 48 52.2 +1.2
ARCES                             pmax   pmax
      comp=Z,24nm,0.9s
RONA  Rosalia, Austr   41.19 303 i P     P         18 48 53.2 +1.1
      comp=Z,1.1nm,0.4s
CONA  Conrad Observa   41.46 304 i P     P         18 48 55.7 +1.4
      comp=Z,4.1nm,0.7s
KTK1  Kautokeino       41.56 336 eP      P         18 48 55.3 +0.5
SOKA  Soboth           42.15 302 eP      P         18 49 01.0 +1.0
      comp=Z,6.3nm,0.7s,SNR=7.9
ZEA   Zeya             42.18  47 eP      P         18 49 01.8 +1.8
HAMF  Hammerfest       42.18 339 eP      P         18 49 01.2 +1.5
PRU   Pruhonice        42.18 307 eP      P         18 49 01.5 +1.4
PRU   Pruhonice        42.18 307 eP      P         18 49 01.5 +1.4
CKRC  Cesky Krumlov    42.42 305 eP      P         18 49 03.2 +1.2
BRG   Berggiesshubel   42.51 308 eP      P         18 49 04.0 +1.2
BRG                               Amp              18 49 05.5
      comp=Z,5.2nm,0.7s
BRG   Berggiesshubel   42.51 308 eP      P         18 49 03.9 +1.2
BRG                               pmax   pmax
      comp=Z,5.0nm,0.7s
MOA   Molln            42.54 304 eP      P         18 49 04.1 +1.1
      comp=Z,3.1nm,0.7s,SNR=5.5
JETT  Jettan, Norway   42.70 336 eP      P         18 49 04.8 +0.7
GERES GERESS Array B   42.81 305  P      P         18 49 05.6 +0.3
      comp=Z,0.6nm,0.5s,baz=81,slow=8.5,SNR=7.8
GERES                             PcP    PcP       18 50 52.2 -0.6
      comp=Z,2.0nm,0.9s,baz=91,slow=4.9,SNR=7.2
      comp=Z,0.6nm,0.5s
GERES GERESS Array B   42.81 305  P      P         18 49 03.5 -1.8
KHC   Kasperske Hory   42.87 306 eP      P         18 49 06.5 +0.8
KHC   Kasperske Hory   42.87 306 eP      P         18 49 06.5 +0.8
CLL   Collm            43.08 309 i P     P         18 49 07.5 +0.2
CLL                               pmax   pmax
      comp=Z,6.0nm,1.1s
CLL   Collm            43.08 309 i P     P         18 49 07.5 +0.2
      comp=Z,6.0nm,1.1s
CLL                               Lm     MLR       19 19 00.0
      comp=Z,100nm,21.5s
CLL                               Lm     MLR       20 44 00.0
      comp=Z,100nm,21.3s
TRO   Tromso           43.21 336 eP      P         18 49 08.9 +0.9
KBA   Koelnbreinsper   43.25 303 i P     P         18 49 10.1 +1.2
      comp=Z,1.3nm,0.5s
FAUS  Fauske           43.74 333 eP      P         18 49 13.5 +1.2
MOR8  Moi Rana         43.75 331 eP      P         18 49 12.3 -0.1
STEI  Steigen          43.91 333 eP      P         18 49 14.4 +0.8
YAK   Yakutsk          44.05  35 eP      P         18 49 14.0 -0.8
YAK                              e*PP    pP        18 49 56.3 -1.2
YAK                              e                 18 50 53.3
YAK                              e                 18 51 00.1
YAK                              eS      S         18 55 33.8 +1.7
YAK                              e*SS    sS        18 56 51.4 +5.0
YAK                              e                 18 58 50.0
YAK                               pmax   pmax
      comp=Z,10.0nm,0.9s
YAK                               pmax   pmax
      comp=Z,53nm,2.8s
YAK                               pmax   pmax
      comp=N,45nm,2.9s
YAK                               pmax   pmax
      comp=E,24nm,3.0s
YAK                               smax   smax
      comp=N,35nm,2.1s
YAK                               smax   smax
      comp=E,29nm,2.3s
NC405 NORSAR Array S   44.06 323  P      P         18 49 13.7 -1.3
NC602 NORSAR Array S   44.11 323 eP      P         18 49 15.9 +0.6
NB2   NORSAR Subarra   44.30 323  P      P         18 49 16.8 -0.1
      comp=Z,24nm,0.8s,baz=96,slow=7.4
NB2   NORSAR Subarra   44.30 323  P      P         18 49 16.8 -0.1
      baz=96,slow=7.4
NOA   NORSAR Array B   44.30 323  P      P         18 49 17.0 +0.1
      comp=Z,17nm,0.8s,baz=96,slow=7.8,SNR=71
      comp=Z,17nm,0.8s
KONS  Konsvik          44.34 331 eP      P         18 49 18.3 +1.2
WTTA  Wattenberg       44.38 303 eP      P         18 49 17.7 -0.2
      comp=Z,4.5nm,1.1s
WATA  Walderalm        44.41 303 eP      P         18 49 17.6 -0.5
      comp=Z,2.6nm,0.8s
NSS   Namsos           44.42 328 eP      P         18 49 18.5 +0.7
OSL   Oslo             44.45 321 eP      P         18 49 18.8 +0.8
NC204 NORSAR Array S   44.54 323  P      P         18 49 17.8 -1.0
LOF   Lofoten          44.58 333 eP      P         18 49 18.7 -0.3
SQTA  Sankt Quirin     44.67 303 eP      P         18 49 19.6 -0.6
      comp=Z,2.0nm,0.5s
MOTA  Moosalm          44.73 303 eP      P         18 49 20.1 -0.5
      comp=Z,4.0nm,0.7s
KONO  Kongsberg        45.00 321 eP      P         18 49 22.8 +0.4
FETA  Feichten         45.03 303 eP      P         18 49 22.8 -0.2
      comp=Z,3.2nm,0.9s
BJO1  Bjornoya         45.23 343 eP      P         18 49 25.5 +1.5
KLR   Kul'dur          45.26  54⇑eP      P         18 49 26.1 +1.5
KLR                               pmax   pmax
      comp=Z,2.0nm,1.1s
DOMB  Dombas           45.41 324 eP      P         18 49 25.4 -0.2
DAVA  Damuels          45.56 304 eP      P         18 49 26.1 -1.1
      comp=Z,9.6nm,0.6s,SNR=9.2
SKAR  Skarslia         45.69 322 eP      P         18 49 28.3 +0.4
TIXI  Tiksi            45.83  22  P      P         18 49 29.1 +0.4
TIXI                              IAmb   IAmb      18 49 30.3
      comp=Z,19nm,0.9s
TIXI  Tiksi            45.83  22ceP      P         18 49 29.2 +0.5
TIXI                              pmax   pmax
      comp=Z,15nm,0.7s
MOL   Molde            46.16 325 eP      P         18 49 32.3 +1.0
BLS5  Blasjo           46.59 321 eP      P         18 49 36.9 +2.0
SPA0  Spitsbergen Ar   47.46 347 eP      P         18 49 43.5 +2.1
SENIN Lac Senin/Sane   47.47 303  P      P         18 49 41.1 -1.0
SENIN                             IAmb   IAmb      18 49 44.1
      comp=Z,9.6nm,0.8s
DSRI  Dabo             48.32 132  P      P         18 49 49.3 +0.6
      comp=Z,6.4nm,0.9s
KBS   Kingsbay         48.58 347deP      P         18 49 51.8 +1.9
KBS                               pmax   pmax
      comp=Z,53nm,2.5s
KMBO  Kilima Mbogo     48.72 227  P      P         18 49 53.6 +1.5
      comp=Z,3.2nm,0.6s,baz=23,slow=12,SNR=8.3
      comp=Z,3.2nm,0.6s
KMBO  Kilima Mbogo     48.72 227  P      P         18 49 52.5 +0.5
KEST  Kesra            48.90 288  P      P         18 49 53.9 +0.8
      comp=Z,5.1nm,0.8s,baz=339,slow=2.7,SNR=5.7
      comp=Z,5.1nm,0.8s
MBAR  Mbarara          52.39 234ceP      P         18 50 20.7 +1.3
MBAR                              pmax   pmax
      comp=Z,4.0nm,0.7s
NOR   Nord             53.78 350 i P     P         18 50 28.3 -0.2
NOR                               IAmb   IAmb      18 50 41.5
      comp=Z,2.1nm,0.7s
SEY   Seymchan         54.50  34⇓eP      P         18 50 35.1 +1.2
SEY                               pmax   pmax
      comp=Z,6.0nm,1.3s
DAG   Danmarks Havn    54.69 344 i P     P         18 50 35.0 -0.1
DAG                               IAmb   IAmb      18 50 36.6
      comp=Z,12nm,0.7s
ESDC  Sonseca Array    57.33 298  P      P         18 50 54.2 -0.2
      comp=Z,2.7nm,0.9s,baz=58,slow=7.4,SNR=24
      comp=Z,2.7nm,0.9s
ESDC  Sonseca Array    57.33 298  P      P         18 50 53.5 -0.9
BILL  Bilibino         58.67  26 i P     P         18 51 04.3 +1.1
BILL                             i *PP   PcP       18 51 50.2 -0.8
BILL                             i                 18 53 15.3
BILL                             i SS    SS        19 02 52.3 +4.8
BILL                              pmax   pmax
      comp=Z,11nm,1.0s
SUMG  Summit           61.02 341  P      P         18 51 20.8 +1.2
SUMG                              IAmb   IAmb      18 51 21.7
      comp=Z,9.9nm,0.9s
SUMG  Summit           61.02 341  P      P         18 51 20.8 +1.2
SUMG                              pmax   pmax
      comp=Z,10.0nm,0.9s
SUMG  Summit           61.02 341 i P     P         18 51 20.0 +0.4
SUMG                              IAmb   IAmb      18 51 21.3
      comp=Z,5.9nm,0.7s
ICESG Greenland Ices   63.16 338 i P     P         18 51 34.0 +0.2
ICESG                             IAmb   IAmb      18 51 36.6
      comp=Z,3.0nm,1.1s
TOA0  Torodi Ar. Sit   65.57 269  P      P         18 51 48.6 -1.3
TORD  Torodi Ar. Bea   65.57 269  P      P         18 51 48.6 -1.3
      comp=Z,13nm,0.5s,baz=49,slow=6.0,SNR=132
      comp=Z,13nm,0.5s
DY2G  Dye2             66.73 337 i P     P         18 51 56.9 +0.2
DY2G                              IAmb   IAmb      18 51 58.7
      comp=Z,5.6nm,0.6s
A21K  Barrow           67.36  15  P      P         18 52 00.2  0.0
A21K  Barrow           67.36  15  P      P         18 52 01.5 +1.2
      baz=320
KOWA  Kowa             69.42 273  P      P         18 52 13.5 -0.5
KOWA                              IAmb   IAmb      18 53 02.1
      comp=Z,50nm,1.9s
A36M  Sachs Harbour    71.22   5  P      P         18 52 23.4 -0.6
A36M  Sachs Harbour    71.22   5  P      P         18 52 25.2 +1.2
      baz=346,SNR=5.4
COLD  Coldfoot         72.01  16  P      P         18 52 29.8 +1.0
      baz=326
IMAR  Indian Mountai   72.22  18  P      P         18 52 30.2 +0.1
H21K  Melozitna Rive   72.71  17  P      P         18 52 33.6 +0.6
      baz=324
BMAR  Burnt Mountain   72.98  14  P      P         18 52 35.7 +1.1
H23K  Yukon River      73.33  16  P      P         18 52 38.0 +1.3
      baz=327,SNR=11
J20K  Nowinta River    73.58  19  P      P         18 52 39.0 +0.9
J20K                              IAmb   IAmb      18 52 39.9
      comp=Z,8.5nm,0.7s
J20K  Nowinta River    73.58  19  P      P         18 52 38.9 +0.9
      baz=324,SNR=10
H24K  Noodor Dome      73.69  16  P      P         18 52 38.5 -0.3
H24K                              IAmb   IAmb      18 52 40.8
      comp=Z,4.5nm,0.7s
H24K  Noodor Dome      73.69  16  P      P         18 52 39.8 +1.1
      baz=328,SNR=8.0
C36M  Paulatuk         73.89   5  P      P         18 52 40.2 +0.4
      baz=348
INK   Inuvik           73.93   9  P      P         18 52 40.8 +0.8
      baz=340,SNR=11
I23K  Minto, Yukon-K   73.95  16  P      P         18 52 40.9 +0.7
      baz=327
TTA   Tatalina         74.08  20  P      P         18 52 42.0 +0.9
TTA   Tatalina         74.08  20  P      P         18 52 42.0 +0.9
TTA                               pmax   pmax
      comp=Z,4.0nm,0.8s
TTA   Tatalina         74.08  20  P      P         18 52 41.8 +0.7
      baz=322
K20K  Telida           74.26  19  P      P         18 52 43.3 +1.2
K20K                              IAmb   IAmb      18 52 44.0
      comp=Z,9.4nm,0.7s
K20K  Telida           74.26  19  P      P         18 52 43.1 +1.0
      baz=324,SNR=15
CHUM  Lake Minchumin   74.29  18  P      P         18 52 43.0 +0.8
      baz=325,SNR=7.0
MDM   Murphy Dome      74.36  16  P      P         18 52 42.5 -0.2
MDM                               IAmb   IAmb      18 52 44.4
      comp=Z,8.1nm,1.0s
POKR  Poker Plat Res   74.40  16  P      P         18 52 43.9 +1.1
      baz=329
BPAW  Bear Paw Mtn.    74.44  18  P      P         18 52 42.9 -0.2
BPAW                              IAmb   IAmb      18 52 44.3
      comp=Z,6.6nm,1.1s
BPAW  Bear Paw Mtn.    74.44  18  P      P         18 52 43.2 +0.1
      baz=326,SNR=7.6
NEA2  Nenana           74.48  17  P      P         18 52 43.8 +0.5
      baz=328,SNR=12
TCOL  CIGO, UAF Yank   74.52  16  P      P         18 52 44.5 +1.0
      baz=329
COLA  College          74.52  16c iP     P         18 52 43.9 +0.4
COLA                              pmax   pmax
      comp=Z,10.0nm,0.9s
DBIC  Dimbokro         74.56 267  P      P         18 52 43.4 -1.1
      comp=Z,2.8nm,0.7s,baz=47,slow=7.3,SNR=4.5
      comp=Z,2.8nm,0.7s
LBTB  Lobatse          74.58 222  P      P         18 52 45.2 +0.7
LBTB                              IAmb   IAmb      18 52 46.0
      comp=Z,28nm,1.6s
LBTB  Lobatse          74.58 222  P      P         18 52 45.2 +0.7
LBTB                              pmax   pmax
      comp=Z,28nm,1.6s
CAST  Castle Rocks     74.73  19  P      P         18 52 45.3 +0.5
CAST                              IAmb   IAmb      18 52 46.5
      comp=Z,16nm,1.0s
CAST  Castle Rocks     74.73  19  P      P         18 52 45.3 +0.5
      baz=325,SNR=20
TSUM  Tsumeb           74.80 232  P      P         18 52 45.6 -0.3
TSUM                              IAmb   IAmb      18 52 47.3
      comp=Z,5.8nm,1.0s
ILAR  Eielson Array    74.82  16  P      P         18 52 45.0 -0.3
      comp=Z,2.3nm,0.8s,baz=301,slow=4.8,SNR=23
ILAR                              PP     PP        18 55 35.9 +1.4
      comp=Z,0.5nm,0.8s,baz=312,slow=7.0,SNR=4.7
      comp=Z,2.3nm,0.8s
ILAR  Eielson Array    74.82  16  P      P         18 52 45.0 -0.3
L19K  White Mountain   75.00  20  P      P         18 52 46.4 +0.1
L19K                              IAmb   IAmb      18 52 48.4
      comp=Z,6.8nm,1.2s
L19K  White Mountain   75.00  20  P      P         18 52 47.2 +0.9
      baz=323
L20K  Farewell, AK     75.03  20  P      P         18 52 47.3 +0.8
      baz=324,SNR=6.5
HDA   Harding Lake     75.12  16  P      P         18 52 46.2 -0.7
      baz=329
PPLA  Purkeypile       75.14  19  P      P         18 52 47.5 +0.2
      baz=325,SNR=6.4
TRF   Thorofare Moun   75.16  18  P      P         18 52 47.4  0.0
      baz=327
MCK   McKinley         75.24  17  P      P         18 52 48.0 +0.3
      baz=328
J25K  Salcha River,    75.28  15  P      P         18 52 48.1 +0.1
      baz=331
M19K  Big River Lodg   75.35  20  P      P         18 52 49.5 +1.1
      baz=324
J26L  Joseph Creek     75.76  15  P      P         18 52 51.2 +0.5
      baz=332,SNR=16
N18K  Kilae Creek      75.90  22  P      P         18 52 52.8 +1.3
      baz=323
K24K  Donnelly Dome    75.90  16  P      P         18 52 51.6 +0.1
      baz=330,SNR=14
I29M  Ogilvie Camp,    75.96  12  P      P         18 52 52.3 +0.6
      baz=336,SNR=10
EGAK  Eagle            75.98  14  P      P         18 52 52.2 +0.3
      baz=334
DHY   Denali Highway   76.17  17  P      P         18 52 53.1  0.0
      baz=329,SNR=14
N19K  Bonanza Creek    76.21  21  P      P         18 52 53.8 +0.5
      baz=324
K27K  Chicken          76.48  14  P      P         18 52 55.8 +1.2
      baz=333
WAT6  Susitna Watana   76.51  17  P      P         18 52 54.9 -0.2
      baz=329,SNR=8.6
PAX   Paxson           76.70  16  P      P         18 52 56.3 +0.2
      baz=331,SNR=19
O18K  Koktuh Hills     76.77  22  P      P         18 52 57.5 +1.1
      baz=324,SNR=6.8
DAWY  Dawson           76.96  13  P      P         18 52 58.1 +0.7
      baz=335,SNR=6.4
SML   Sawmill          77.03  18  P      P         18 52 58.2 +0.4
      baz=329,SNR=11
L26K  Log Cabin Wild   77.11  15  P      P         18 52 59.2 +1.0
      baz=332
P18K  Big Mountain,    77.14  22  P      P         18 52 58.1 -0.3
P18K                              IAmb   IAmb      18 52 59.7
      comp=Z,6.2nm,0.8s
P18K  Big Mountain,    77.14  22  P      P         18 52 59.2 +0.8
      baz=324
M23K  Glacier View     77.19  18  P      P         18 52 58.8  0.0
      baz=329,SNR=11
SCM   Sheep Creek Mo   77.26  17  P      P         18 52 59.5 +0.3
      baz=329,SNR=8.4
HARP  HAARP            77.27  16  P      P         18 53 00.5 +1.4
      baz=331,SNR=8.4
RC01  Rabbit Creek A   77.29  19  P      P         18 52 59.1 -0.1
      baz=328
M24K  Tolsona, Glenn   77.29  17  P      P         18 53 00.7 +1.3
      baz=330,SNR=10
KNK   Knik Glacier     77.34  18  P      P         18 53 00.3 +0.8
      baz=328
L27K  Beaver Creek,    77.40  15  P      P         18 53 00.9 +1.1
      baz=334,SNR=9.7
BCAR  Beaver Creek A   77.40  15  P      P         18 53 00.8 +0.9
P19K  Oil Pt           77.52  21  P      P         18 53 00.4 -0.2
      baz=325
BOSA  Boshof           77.65 220  P      P         18 53 01.8 +0.1
      comp=Z,6.8nm,0.7s,baz=24,slow=4.2,SNR=22
      comp=Z,6.8nm,0.7s
BOSA  Boshof           77.65 220  P      P         18 53 02.0 +0.2
BOSA                              IAmb   IAmb      18 53 02.8
      comp=Z,9.3nm,1.0s
BOSA  Boshof           77.65 220  P      P         18 53 02.0 +0.2
BOSA                              pmax   pmax
      comp=Z,9.0nm,1.0s
M26K  Nabesna, AK      77.75  15  P      P         18 53 02.6 +0.8
      baz=333
KLU   Klutina          77.89  17  P      P         18 53 03.4 +0.8
      baz=330,SNR=6.3
M27K  Edge Creek, AK   78.02  15  P      P         18 53 04.8 +1.3
      baz=334,SNR=13
BRLK  Bradley Lake     78.09  20  P      P         18 53 02.8 -0.9
BRLK                              IAmb   IAmb      18 53 04.0
      comp=Z,6.0nm,0.6s
N25K  Chitina, Valde   78.10  16  P      P         18 53 04.9 +1.1
      baz=332
GLI   Glacier Island   78.14  18  P      P         18 53 03.2 -0.7
      baz=330
BRSE  Bradley Lake S   78.15  20  P      P         18 53 03.4 -0.6
      baz=327
BVCY  Beaver Creek     78.18  14  P      P         18 53 05.4 +1.3
      baz=334
SEW   Seward           78.20  19  P      P         18 53 04.3 +0.1
      baz=328
MCARA McCarthy VSAT    78.65  16  P      P         18 53 07.8 +1.1
      baz=333
BMRM  Bremner River    78.66  17  P      P         18 53 07.6 +0.7
      baz=332
EYAK  Cordova Ski Ar   78.75  17  P      P         18 53 08.4 +1.2
      baz=331
M30M  Minto, Yukon     78.80  13  P      P         18 53 07.6 +0.1
      baz=338
YUK3  Moose Creek      78.84  15  P      P         18 53 09.0 +1.0
      baz=335,SNR=9.5
KDAK  Kodiak Island    79.25  22  P      P         18 53 10.5 +0.5
      baz=326
CTG   Chitna Glacier   79.39  15  P      P         18 53 11.8 +0.9
      baz=334,SNR=8.0
M31M  Drury Creek, Y   79.55  12  P      P         18 53 12.2 +0.6
      baz=340
YUK4  Talbot Arm       79.59  14  P      P         18 53 12.9 +0.8
      baz=336
YUK6  Outpost Mounta   80.01  14  P      P         18 53 14.5 +0.1
      baz=336
YKA   Yellowknife Ar   81.25   3  P      P         18 53 21.0 +0.4
      comp=Z,3.2nm,0.5s,baz=347,slow=5.1,SNR=55
YKA                               pP     pP        18 54 10.0 +1.7
      comp=Z,0.9nm,0.6s,baz=352,slow=5.4,SNR=2.2
YKA                               PP     PP        18 56 28.8 +0.8
      comp=Z,0.9nm,1.0s,baz=355,slow=8.2,SNR=4.7
      comp=Z,3.2nm,0.5s
YKA   Yellowknife Ar   81.25   3  P      P         18 53 19.4 -1.2
YKA   Yellowknife Ar   81.25   3  P      P         18 53 21.0 +0.4
YKA                               *PP    pP        18 54 10.0 +1.7
P33M  Teslin, Yukon    81.69  12  P      P         18 53 23.3 +0.3
      baz=341
SCHQ  Schefferville    82.04 337  P      P         18 53 25.2 +0.2
      comp=Z,3.5nm,0.6s,baz=60,slow=5.8,SNR=8.5
      comp=Z,3.5nm,0.6s
WRA   Warramunga Arr   82.11 122  P      P         18 53 24.7 -1.1
      comp=Z,2.9nm,0.4s,baz=324,slow=5.0,SNR=99
      comp=Z,2.9nm,0.4s
WRA   Warramunga Arr   82.11 122  P      P         18 53 24.5 -1.2
S34M  Telegraph Cree   84.15  12  P      P         18 53 37.3 +1.7
      baz=342
AS31  Alice Springs    84.37 125  P      P         18 53 36.1 -1.1
ASAR  Alice Springs    84.37 125  P      P         18 53 36.2 -1.1
      comp=Z,3.2nm,0.6s,baz=310,slow=4.9,SNR=67
ASAR                              pP     pP        18 54 25.6  0.0
      comp=Z,0.6nm,0.7s,baz=309,slow=4.9,SNR=2.1
      comp=Z,3.2nm,0.6s
TROLL Troll, Antarti  118.05 199  PKPdf  PKPdf     18 59 49.3 -0.1
TROLL Troll, Antarti  118.05 199  Pdiff  Pdif      18 56 09.5 +0.4
VNA3  Neumayer Olymp  121.15 202  PKPdf  PKPdf     18 59 54.5 -0.7
VNA3  Neumayer Olymp  121.15 202  Pdiff  Pdif      18 56 22.2 -0.5
CPUP  Villa Florida   135.07 268  PKP    PKPdf     19 00 22.0 -1.0
      comp=Z,1.7nm,0.6s,baz=130,slow=3.9,SNR=6.8
CPUP  Villa Florida   135.07 268  PKIKP  PKPdf     19 00 22.0 -1.0
PLCA  Paso Flores     149.69 250  PKPbc  PKPbc     19 00 53.4 +0.1
      comp=Z,7.6nm,0.8s,baz=13,slow=4.5,SNR=20
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TAP 15 18:58:40.9,24°.23N×121°.73E,h11^{km},ML1.5,5C-10D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.12**	**233**	⇓P	Pb	18 58 44.8	-0.5
	baz=233						
ETL				*e*S	Sg	18 58 47.6	+1.3
	baz=233						
NACB	**Ninganchiao**	**0.14**	**245**	⇓P	Pb	18 58 44.9	-0.6
	baz=244						
NACB				S	Sg	18 58 47.9	+1.3
	baz=244						
ENA	**Nanau**	**0.19**	**3**	⇓P	Pb	18 58 45.9	-0.6
	baz=4.0						
ENA				S	Sg	18 58 49.5	+1.5
	baz=4.0						
TWD	**Chiawan**	**0.20**	**219**	⇓P	Pg	18 58 45.7	+0.5
	baz=217						
TWD				S	Sg	18 58 49.4	+1.3
	baz=217						
EWUT	**Wuta**	**0.22**	**12**	⇓P	Pg	18 58 46.2	+0.7
	baz=11						
EWUT				S	Sg	18 58 49.9	+1.3
	baz=11						
ETLH	**Xiulin Townshi**	**0.23**	**264**	⇓P	Pb	18 58 46.5	-0.7
	baz=263						
ETLH				S	Sg	18 58 50.5	+1.4
	baz=263						
LATG	**Datong**	**0.35**	**328**	⇓P	Pb	18 58 49.0	-0.3
	baz=328						
LATG				S	Sb	18 58 54.5	-0.4
	baz=328						
NNSB	**Datong**	**0.37**	**302**	⇓P	Pb	18 58 49.3	-0.3
	baz=301						
NNSB				S	Sb	18 58 55.3	-0.1
	baz=301						
NNS	**Nan Shan**	**0.39**	**302**	⇑*e*P	Pb	18 58 49.6	-0.2
	baz=302						
NNS				*e*S	Sb	18 58 55.9	0.0
	baz=302						
NDS	**Dongshan**	**0.40**	**358**	*e*P	Pb	18 58 49.6	-0.4
	baz=358						
NDS				*e*S	Sb	18 58 55.7	-0.4
	baz=358						
ENTT	**Nioudou**	**0.43**	**340**	⇑*e*P	Pb	18 58 50.4	-0.1
	baz=340						
ENTT				*e*S	Sb	18 58 57.1	+0.1
	baz=340						
WHF	**Hehuan Shan**	**0.43**	**258**	⇓P	Pb	18 58 50.3	-0.6
	baz=258						
WHF				S	Sb	18 58 56.7	-0.8
	baz=258						
FUSS	**Fushou**	**0.45**	**272**	⇑*e*P	Pb	18 58 50.7	-0.2
	baz=271						
FUSS				*e*S	Sb	18 58 57.5	-0.2
	baz=271						
TWE	**Neicheng**	**0.49**	**353**	*e*P	Pb	18 58 51.4	-0.1
	baz=354						
TWE				*e*S	Sb	18 58 58.6	-0.1
	baz=354						
ESL	**Shilin**	**0.50**	**213**	*e*P	Pb	18 58 51.4	-0.2
	baz=212						
ESL				*e*S	Sb	18 58 58.8	-0.1
	baz=212						
TWT	**Tachien**	**0.51**	**272**	*e*P	Pb	18 58 52.0	+0.1
	baz=271						
TWT				*e*S	Sb	18 58 59.6	+0.2
	baz=271						
CHGB	**Renai**	**0.54**	**251**	⇑*e*P	Pb	18 58 52.3	-0.1
	baz=251						
CHGB				*e*S	Sb	18 58 59.9	-0.4
	baz=251						
FUSB	**Fushanzhiwuyua**	**0.54**	**346**	*e*P	Pb	18 58 52.4	-0.1
	baz=346						
FUSB				*e*S	Sb	18 59 00.5	+0.2
	baz=346						
YHNB	**Yeheng**	**0.54**	**323**	⇑P	Pb	18 58 52.6	+0.1
	baz=323						
YHNB				S	Sb	18 59 00.9	+0.6
	baz=323						
NSK	**Sanguang**	**0.56**	**322**	*e*P	Pb	18 58 52.8	0.0
	baz=322						
NSK				*e*S	Sb	18 59 00.8	+0.1
	baz=322						
OWD	**Renai**	**0.58**	**241**	*e*P	Pb	18 58 53.0	-0.1
	baz=241						
OWD				*e*S	Sb	18 59 01.6	+0.2
	baz=241						
NWLT	**Wulai**	**0.58**	**339**	*e*P	Pb	18 58 53.1	0.0
	baz=338						
NWLT				*e*S	Sb	18 59 01.4	0.0
	baz=338						
WUSB	**Renai**	**0.61**	**247**	⇓P	Pb	18 58 53.6	0.0
	baz=246						
WUSB				S	Sb	18 59 02.0	-0.3
	baz=246						
VWDT	**VWDT**	**0.72**	**229**	*e*P	Pb	18 58 55.7	+0.3
	baz=228						
VWDT				*e*S	Sb	18 59 06.1	+0.8
	baz=228						
SSLB	**Suanglung**	**0.84**	**238**	*e*P	Pb	18 58 57.6	+0.1
	baz=238						
SSLB				*e*S	Sb	18 59 09.6	+0.9
	baz=238						

JMA 15 18:59:06.5±0.4**, 25°N**±1°×**123.°9E**±0.°8**, h13**^{km}**, MV1.8**/8**, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.65**	**191**	P	Pg	18 59 19.1	-0.1
IRIF				*e*S	Sg	18 59 27.8	0.0
JIJ	**Ishigaki jima**	**0.66**	**158**	P	Pg	18 59 18.9	-0.5
JIJ				S	Sg	18 59 27.2	-0.9
JKRS	**Kuro-shima**	**0.75**	**170**	P	Pg	18 59 20.9	-0.1
JKRS				S	Sg	18 59 30.7	-0.1
JTJ	**Tarama**	**0.83**	**114**	S	Sb	18 59 33.9	+0.2
HATJ	**Hateruma jima**	**0.92**	**184**	P	Pg	18 59 24.0	-0.2
HATJ				S	Sg	18 59 36.0	-0.2
JYNG	**Yonagunijimaku**	**0.99**	**238**	*e*S	Sb	18 59 37.0	-1.6

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*IDC **15** 19:13:51.7±0.6, 28.°02S×178.°30W, h0^{km}, mb4.1/12, mbtmp4.2/16, ML3.8/4, MS4.4/55, Error ellipse: s-maj=18.8km s-min=16.4km az=86.0*

*GCMT **15** 19:13:54.0±0.1, 27.°80S±0.°01×178.°29W±0.°01, h12^{km}, MW5.2/135, Moment Tensor Solution. s88,c131; s135,c232; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.65±.13; $M_{\theta\theta}$-1.70±.11; $M_{\phi\phi}$4.35±.13; $M_{r\theta}$3.08±.35; $M_{\theta\phi}$6.49±.11; $M_{\phi r}$0.56±.28; Best double couple: $M_0$7.99600×10^{16} NP1:ϕ_s350.00000°, δ62.00000°, λ-166.00000°. NP2:ϕ_s253.00000°, δ78.00000°, λ-29.00000°. Principal axes: T 8.8910, Plg11.0000°, Azm304.0000°; N -1.7890, Plg59.0000°, Azm53.0000°; P -7.1020, Plg29.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **15** 19:13:56.7, 27.°91S×178.°09W, h0^{km}, mb4.8/28, Kermadec Islands Region*

*NEIC **15** 19:13:58.0±1.4, 27.°95S±0.°09×178.°2W±0.°1, h56^{km}±8^{km}, mb4.7/13, Error ellipse: s-maj=17.2km s-min=13.5km az=88.0*

ISC 15 19:13:58.2±0.4**, 27.°98S**±0.°06×**178.°23W**±0.°08**, h50**^{km}**, n138,** σ1^s**76**/69**, mb4.7**/36**, MS4.4**/56**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.30**	**168**	Pn	**Pn**	**19 14 16.8**	**-3.1**
	257nm,0.3s,baz=162,slow=13,SNR=7.4						
RAO	**Raoul Island**	**1.30**	**168**	Pn	**Pn**	**19 14 19.9**	**0.0**
RAO	**Raoul Island**	**1.30**	**168**	P	**Pn**	**19 14 21.3**	**+1.4**
LKBA	**Tubou, Lakemba**	**9.72**	**357**	P	**Pn**	**19 16 16.4**	**+1.0**
OUZ	**Omahuta**	**10.03**	**222**	Pn	**Pn**	**19 16 20.4**	**+0.9**
OUZ	**Omahuta**	**10.03**	**222**	P	**Pn**	**19 16 21.5**	**+2.0**
URZ	**Urewera**	**10.96**	**200**	Pn	**Pn**	**19 16 30.3**	**-2.0**
	0.5nm,0.3s,baz=96,slow=12,SNR=4.8						
URZ				Sn	**Sn**	**19 18 36.9**	**+3.4**
	0.3nm,0.3s,baz=108,slow=15,SNR=1.0						
URZ				LR	LR	19 20 26.3	
	comp=Z,6μm,18.6s,baz=31,slow=36						
	11nm,0.9s						
DGTI	**Dogotuki**	**11.78**	**350**	P	**Pn**	**19 16 44.1**	**+0.6**
MARNC	**Mare, Loyalty**	**14.05**	**294**	Pn	**Pn**	**19 17 12.3**	**-2.2**
YATNC	**Mamie plateau,**	**14.71**	**290**	P	**Pn**	**19 17 24.5**	**+1.2**
ONTNC	**Ouen Toro**	**14.97**	**289**	P	**P**	**19 17 32.6**	**+1.4**
DZM	**Mont Dzumac**	**15.08**	**290**	Pn	**Pn**	**19 17 24.6**	**-3.6**
	0.4nm,0.3s,baz=104,slow=10,SNR=8.3						
DZM				LR	LR	19 21 51.5	
	comp=Z,4μm,21.8s,baz=108,slow=32						
	10nm,0.9s						
DZM	**Mont Dzumac**	**15.08**	**290**	*e*P	**Pn**	**19 17 25.9**	**-2.3**
	187nm,1.6s						
DZM				*e*LR	LR	19 20 43.5	
	comp=Z,8μm,26.8s						
DZM	**Mont Dzumac**	**15.08**	**290**	P	**P**	**19 17 30.0**	**-2.5**
NOUC	**Port Laguerre**	**15.18**	**289**	P	**P**	**19 17 33.1**	**-0.5**
	55nm,1.6s						
AFI	**Afiamalu**	**15.24**	**25**	Pn	Pn	19 17 18.9	-11
	2.5nm,0.3s,baz=290,slow=4.5,SNR=4.1						
RTV	**Rentapao**	**15.92**	**307**	P	**P**	**19 17 45.5**	**+3.7**
RPZ	**Rata Peaks**	**17.91**	**206**	P	**P**	**19 18 02.8**	**-0.9**
	0.3nm,0.3s,baz=288,slow=22,SNR=1.4						
	4.4nm,0.6s						
RAR	**Rarotonga**	**18.08**	**72**	P	**P**	**19 18 04.9**	**-0.7**
	4.3nm,0.3s,baz=48,slow=17,SNR=2.0						
RAR				LR	LR	19 23 02.2	
	comp=Z,704nm,21.1s,baz=242,slow=30						
	12nm,0.4s						
TBI	**Tubuai**	**26.31**	**86**	*e*S	S	19 24 16.6	+18
TBI				*e*LQ	LQ	19 24 35.0	
TBI				*e*LQ	LQ	19 24 36.9	
TBI				*e*LR	LR	19 25 29.0	
	comp=Z,2μm,29.5s						
TBI	**Tubuai**	**26.31**	**86**	*e*T	T	19 46 35.9	
	53nm,0.3s						
EIDS	**Eidsvold**	**27.51**	**268**	P	P	19 19 47.3	+7.2
HNR	**Honiara**	**27.62**	**308**	LR	LR	19 29 28.4	
	comp=Z,460nm,18.2s,baz=156,slow=34						
PAE	**Paea**	**28.27**	**75**	*e*T	T	19 49 01.7	
	50nm,0.2s						
PPT2	**Papeete2**	**28.31**	**75**	*e*S	S	19 24 15.9	-15
PPT2				*e*LR	LR	19 26 41.7	
	comp=Z,1μm,25.8s						
PPT2	**Papeete2**	**28.31**	**75**	*e*T	T	19 49 05.8	
	21nm,0.3s						
PPT	**Papeete**	**28.32**	**75**	LR	LR	19 27 47.6	
	comp=Z,492nm,21.7s,baz=250,slow=30						
RMQ	**Roma**	**29.34**	**265**	P	P	19 20 01.1	+4.7
	10nm,0.8s						
VAH	**Vaihoa**	**31.06**	**72**	*e*T	T	19 52 36.8	
	35nm,0.2s						
CMSA	**Cobar Meteorol**	**31.43**	**255**	P	P	19 20 23.2	+8.4
	12nm,0.9s						
CTA	**Charters Tower**	**33.28**	**276**	LR	LR	19 32 04.4	
	comp=Z,2μm,19.3s,baz=110,slow=33						
CTA	**Charters Tower**	**33.28**	**276**	P	P	19 20 38.4	+7.3
	28nm,2.5s						
CTAO	**Charters Tower**	**33.28**	**276**	P	**P**	**19 20 29.3**	**-1.9**
CTAO	**Charters Tower**	**33.28**	**276**	P	P	19 20 38.4	+7.3
	24nm,2.6s						
STKA	**Stephens Creek**	**34.89**	**254**	P	**P**	**19 20 44.7**	**-0.3**
	3.4nm,1.1s,baz=111,slow=11,SNR=3.6						
STKA				LR	LR	19 33 37.0	
	comp=Z,609nm,18.8s,baz=86,slow=34						
	3.4nm,1.1s						
STKA	**Stephens Creek**	**34.89**	**254**	P	**P**	**19 20 44.4**	**-0.6**
STKA	**Stephens Creek**	**34.89**	**254**	P	P	19 20 51.6	+6.6
MTSU	**Mount Surprise**	**35.70**	**278**	P	**P**	**19 20 55.9**	**+3.8**
HTT	**Hallett**	**37.04**	**251**	P	P	19 21 12.3	+8.9
	26nm,0.8s						
PMG	**Port Moresby**	**37.44**	**293**	LR	LR	19 34 31.5	
	comp=Z,1μm,18.2s,baz=107,slow=33						
NAPP	**Napperby**	**37.70**	**251**	P	P	19 21 15.5	+6.5
	19nm,0.8s						
LCRK	**Leigh Creek**	**37.92**	**256**	P	P	19 21 14.8	+4.0
	32nm,0.8s						
WHYH	**Whyalla**	**38.20**	**251**	P	P	19 21 22.2	+9.1
	14nm,0.9s						
COEN	**Coen**	**38.47**	**283**	P	**P**	**19 21 12.8**	**-2.8**
COEN				IAmb	IAmb	19 21 16.1	
	comp=Z,22nm,1.1s						
QIS	**Mount Isa**	**38.99**	**271**	P	P	19 21 26.5	+6.6
	comp=Z,9.8nm,1.9s						
BBOO	**Buckleboo**	**39.48**	**251**	P	P	19 21 31.6	+7.7
	comp=Z,21nm,1.8s						
OOD	**Oodnadatta**	**40.54**	**259**	P	**P**	**19 21 34.8**	**+2.1**
	comp=Z,45nm,1.7s						
TAOE	**Nuku Hiva Isla**	**40.60**	**70**	*e*T	T	20 04 30.8	
	comp=Z,28nm,0.2s						
MULG	**Mulgathing**	**41.50**	**255**	P	P	19 21 46.1	+5.5
	comp=Z,29nm,1.6s						
AS31	**Alice Springs**	**43.09**	**264**	P	**P**	**19 21 52.5**	**-1.1**
ASAR	**Alice Springs**	**43.09**	**264**	P	**P**	**19 21 52.7**	**-0.9**
	comp=Z,9.6nm,1.0s,baz=100,slow=7.2,SNR=42						
ASAR				PcP	**PcP**	**19 23 44.7**	**+1.7**
	comp=Z,1.1nm,1.1s,baz=130,slow=4.1,SNR=0.9						
ASAR				LR	LR	19 38 32.6	
	comp=Z,870nm,19.0s,baz=122,slow=34						
	comp=Z,9.6nm,1.0s						
ASAR	**Alice Springs**	**43.09**	**264**	P	**P**	**19 21 52.2**	**-1.4**
WR0	**Warramunga Arr**	**43.67**	**270**	P	**P**	**19 21 57.1**	**-1.2**
WR0				IAmb	IAmb	19 22 02.6	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**43.84**	**270**	P	**P**	**19 21 58.7**	**-1.0**
WB2				IAmb	IAmb	19 22 08.8	
	comp=Z,20nm,1.0s						
WRAB	**Tennant Creek**	**43.85**	**270**	P	**P**	**19 22 03.3**	**+3.6**
	comp=Z,18nm,2.4s						
WRA	**Warramunga Arr**	**43.85**	**270**	P	**P**	**19 21 58.3**	**-1.5**
	comp=Z,3.8nm,0.9s,baz=107,slow=8.0,SNR=13						
WRA				PcP	**PcP**	**19 23 45.9**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=118,slow=3.2,SNR=1.4						
WRA				LR	LR	19 37 53.5	
	comp=Z,564nm,20.4s,baz=159,slow=33						
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**43.85**	**270**	P	**P**	**19 21 58.3**	**-1.5**
WB0	**Warramunga Arr**	**43.87**	**270**	P	**P**	**19 21 58.9**	**-1.0**
VNDA	**Vanda**	**50.47**	**186**	P	**P**	**19 22 49.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=354,slow=9.6,SNR=3.8						
VNDA				LR	LR	19 41 22.2	
	comp=Z,190nm,19.4s,baz=28,slow=33						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**50.47**	**186**	P	**P**	**19 22 49.1**	**-1.4**
VNDA				IAmb	IAmb	19 23 24.7	
	comp=Z,6.7nm,1.2s						
SRPI	**Serui, Papua**	**50.62**	**293**	P	**P**	**19 22 52.1**	**-0.4**
	comp=Z,23nm,0.5s						
GUMO	**Guam**	**54.64**	**314**	LR	LR	19 44 24.2	
	comp=Z,284nm,20.1s,baz=140,slow=34						
SIJI	**Sorong**	**55.28**	**290**	LR	LR	19 45 28.2	
	comp=Z,456nm,21.7s,baz=80,slow=34						
SWI	**Sorong**	**55.29**	**290**	P	**P**	**19 23 25.7**	**-1.2**
	comp=Z,493nmcomp=Z,35nm,1.1s						
MBWA	**Marble Bar**	**56.32**	**262**	P	P	19 23 40.4	+6.2
	comp=Z,11nm,0.9s						
BATI	**Baumata**	**57.17**	**276**	LR	LR	19 48 20.9	
	comp=Z,1μm,18.6s,baz=132,slow=36						
RPN	**Rapa Nui**	**60.30**	**107**	LR	LR	19 45 45.7	
	comp=Z,141nm,18.0s,baz=244,slow=32						
QSPA	**South Pole Qui**	**62.12**	**180**	P	**P**	**19 24 14.5**	**+0.7**
	comp=Z,8.2nm,0.8s,baz=33,slow=0.9,SNR=29						
QSPA				LR	LR	19 48 20.0	
	comp=Z,341nm,19.9s,baz=41,slow=33						
	comp=Z,8.2nm,0.8s						
QSPA	**South Pole Qui**	**62.12**	**180**	P	**P**	**19 24 14.5**	**+0.7**
KAPI	**Kappang**	**63.00**	**279**	LR	LR	19 52 43.9	
	comp=Z,277nm,19.2s,baz=120,slow=37						
DAV	**Davao City (W)**	**64.44**	**294**	LR	LR	19 51 15.9	
	comp=Z,139nm,20.2s,baz=126,slow=35						
BELA	**Belgrano 2**	**72.20**	**172**	P	**P**	**19 25 16.3**	**-1.0**
BELA				IAmb	IAmb	19 25 29.2	
	comp=Z,8.4nm,1.1s						
JHJ	**Hachijo jima 2**	**72.67**	**324**	LR	LR	19 49 37.9	
	comp=Z,123nm,21.6s,baz=150,slow=30						
LEM	**Lembang**	**72.84**	**271**	LR	LR	19 57 15.8	
	comp=Z,602nm,19.4s,baz=114,slow=36						
MAW	**Mawson**	**74.49**	**200**	LR	LR	19 56 46.3	
	comp=Z,380nm,19.5s,baz=116,slow=35						
PMSA	**Palmer Station**	**74.55**	**156**	LR	LR	19 54 08.6	
	comp=Z,216nm,18.9s,baz=244,slow=32						
JOW	**Kunigami**	**74.89**	**312**	LR	LR	19 53 01.7	
	comp=Z,223nm,21.4s,baz=116,slow=31						
MJAR	**Matsushiro Arr**	**76.15**	**325**	P	**P**	**19 25 42.8**	**+2.0**
	comp=Z,2.7nm,0.9s,baz=169,slow=4.6,SNR=7.2						
MJAR				LR	LR	19 55 28.9	
	comp=Z,131nm,19.6s,baz=142,slow=33						
	comp=Z,2.7nm,0.9s						
USHA	**Ushuaia**	**78.03**	**146**	LR	LR	19 51 52.2	
	comp=Z,156nm,19.8s,baz=210,slow=29						
ASAJ	**Asahikawa**	**80.21**	**333**	LR	LR	19 59 46.1	
	comp=Z,167nm,18.9s,baz=178,slow=34						
TROLL	**Troll, Antarti**	**80.28**	**180**	P	**P**	**19 26 03.5**	**0.0**
SNAA	**Sanae**	**80.57**	**179**	P	**P**	**19 26 04.5**	**-0.4**
SNAA	**Sanae**	**80.57**	**179**	LR	LR	20 00 19.9	
	comp=Z,338nm,18.9s,baz=208,slow=35						
SNAA	**Sanae**	**80.57**	**179**	P	**P**	**19 26 03.5**	**-1.4**
SNAA				IAmb	IAmb	19 26 13.5	
	comp=Z,9.0nm,1.1s						
SHEM	**Shemya Is, Ala**	**80.65**	**355**	LR	LR	19 55 46.1	
	comp=Z,299nm,20.8s,baz=139,slow=31						
VNA3	**Neumayer Olymp**	**80.72**	**176**	P	**P**	**19 26 05.2**	**-0.5**
VNA1	**Neumayer--Stat**	**81.39**	**177**	P	**P**	**19 26 09.0**	**-0.1**
H03S2	**Juan Fernandez**	**81.97**	**124**	T	T	20 56 39.4	
	baz=238						
H03S1	**Juan Fernandez**	**81.98**	**124**	T	T	20 56 40.6	
	baz=238						
H03S3	**Juan Fernandez**	**81.99**	**124**	T	T	20 56 39.4	
	baz=238						
H03N3	**Juan Fernandez**	**82.16**	**124**	T	T	20 56 49.4	
	baz=244,slow=72,SNR=452						
H03N2	**Juan Fernandez**	**82.16**	**124**	T	T	20 56 47.2	
	baz=244,slow=72,SNR=315						
H03N1	**Juan Fernandez**	**82.17**	**124**	T	T	20 56 48.5	
	baz=244,slow=72,SNR=748						
KSRS	**Korea Array**	**82.38**	**320**	LR	LR	20 00 56.8	
	comp=Z,82nm,18.4s,baz=130,slow=34						
PETK	**Petropavlovsk-**	**83.43**	**346**	P	**P**	**19 26 21.3**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=256,slow=41,SNR=1.9						
PETK				LR	LR	19 57 42.2	
	comp=Z,233nm,21.6s,baz=166,slow=32						
	comp=Z,2.0nm,1.0s						
LPIG	**La Paz**	**83.44**	**58**	LR	LR	19 57 00.6	
	comp=Z,149nm,19.4s,baz=218,slow=31						
PLCA	**Paso Flores**	**84.30**	**133**	P	**P**	**19 26 27.6**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=212,slow=23,SNR=1.1						
PLCA				LR	LR	19 55 26.6	
	comp=Z,138nm,21.6s,baz=250,slow=30						
	comp=Z,0.5nm,0.7s						
PFO	**Pinyon Flats O**	**84.73**	**48**	LR	LR	19 59 01.7	
	comp=Z,282nm,18.0s,baz=233,slow=32						
PSI	**Prapat**	**84.99**	**276**	LR	LR	20 06 06.7	
	comp=Z,440nm,18.4s,baz=126,slow=37						
USRK	**Ussuriysk Ar.**	**85.04**	**327**	LR	LR	19 58 09.3	
	comp=Z,132nm,21.6s,baz=136,slow=31						
YBH	**Yreka Blue Hor**	**86.26**	**38**	LR	LR	19 58 14.2	
	comp=Z,106nm,20.6s,baz=230,slow=31						
NVAR	**Mina Array Bea**	**86.61**	**43**	P	**P**	**19 26 35.8**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=219,slow=8.0,SNR=5.3						
NVAR				LR	LR	19 57 58.1	
	comp=Z,207nm,20.1s,baz=263,slow=30						
	comp=Z,0.8nm,0.8s						
CN2	**Changchun**	**88.10**	**323**	*e*P	**P**	**19 26 43.4**	**+0.2**
CN2	**Changchun**	**88.10**	**323**	*e*S	**S**	**19 37 19.3**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s						
CN2				LR	LR		
	comp=E,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,23.0s						
KDAK	**Kodiak Island**	**88.11**	**13**	LR	LR	19 59 59.8	
	comp=Z,203nm,20.6s,baz=230,slow=31						
KLR	**Kul'dur**	**88.85**	**330**	LR	LR	19 59 27.3	
	comp=Z,153nm,21.8s,baz=137,slow=31						
O18K	**Koktuh Hills**	**89.55**	**11**	P	**P**	**19 26 48.8**	**-0.9**
O18K				IAmb	IAmb	19 26 55.8	
	comp=Z,7.7nm,0.9s						
ELK	**Elko**	**89.91**	**43**	LR	LR	20 00 12.2	
	comp=Z,237nm,20.2s,baz=236,slow=31						
MA2	**Magadan**	**90.91**	**345**	LR	LR	20 01 36.9	
	comp=Z,161nm,21.9s,baz=138,slow=32						
BBB	**Bella Bella**	**91.07**	**28**	LR	LR	20 07 16.1	
	comp=Z,85nm,18.1s,baz=228,slow=35						
TXAR	**Lajitas Array**	**91.26**	**57**	P	**P**	**19 26 58.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=264,slow=8.0,SNR=2.7						
TXAR				LR	LR	20 00 42.6	
	comp=Z,55nm,20.6s,baz=231,slow=31						
	comp=Z,0.4nm,0.6s						
CMIG	**Matias Romero**	**92.20**	**72**	LR	LR	19 58 52.3	
	comp=Z,75nm,20.8s,baz=216,slow=29						
ANMO	**Albuquerque**	**92.23**	**51**	LR	LR	20 00 31.6	
	comp=Z,168nm,20.8s,baz=242,slow=30						
CMAR	**Chiang Mai Arr**	**92.41**	**290**	P	**P**	**19 27 05.9**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=100,slow=3.7,SNR=3.1						
CMAR				PP	**PP**	**19 30 45.4**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=106,slow=6.0,SNR=4.1						
CMAR				LR	LR	20 10 30.9	
	comp=Z,122nm,18.9s,baz=100,slow=37						
	comp=Z,0.3nm,0.8s						
NEW	**Newport**	**93.54**	**36**	LR	LR	20 02 38.6	
	comp=Z,151nm,19.9s,baz=215,slow=31						
SEY	**Seymchan**	**93.58**	**347**	LR	LR	20 03 30.8	
	comp=Z,211nm,21.7s,baz=174,slow=32						
PZH	**PanZhiHua**	**94.01**	**298**	P	**P**	**19 27 11.8**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,7.9s						
NNA	**Nana**	**94.28**	**106**	LR	LR	20 01 24.5	
	comp=Z,69nm,21.4s,baz=222,slow=30						
HHC	**Hu-ho-hao-te**	**94.41**	**314**	*e*P	**P**	**19 27 11.1**	**-1.6**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,4.6s						
HHC				LR	LR		
	comp=N,400nm,19.8s						
HHC				LR	LR		
	comp=E,300nm,18.2s						
HHC				LR	LR		
	comp=Z,810nm,22.9s						
PDAR	**Pinedale Array**	**94.53**	**43**	P	**P**	**19 27 13.8**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=254,slow=2.6,SNR=2.0						
PDAR				LR	LR	20 01 31.9	
	comp=Z,125nm,21.4s,baz=244,slow=30						
	comp=Z,0.4nm,0.6s						
DLBC	**Dease Lake**	**94.99**	**23**	LR	LR	20 07 16.9	
	comp=Z,110nm,18.1s,baz=255,slow=34						
LVC	**Limon Verde**	**95.28**	**119**	LR	LR	20 00 04.0	
	comp=Z,173nm,22.0s,baz=228,slow=29						
ATAH	**Atahualpa**	**95.30**	**101**	LR	LR	19 59 46.5	
	comp=Z,327nm,21.6s,baz=230,slow=29						
ILAR	**Eielson Array**	**95.62**	**13**	LR	LR	20 03 10.8	
	comp=Z,101nm,21.9s,baz=218,slow=31						
LPAZ	**La Paz**	**99.31**	**114**	LR	LR	20 03 32.5	
	comp=Z,82nm,21.6s,baz=244,slow=30						
MKAR	**Makanchi Array**	**116.05**	**311**	PKP	**PKiKP**	**19 32 37.4**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=64,slow=6.6,SNR=2.7						
H10S3	**ASCENSION HYDR**	**139.99**	**154**	T	T	22 10 06.7	
	baz=204,slow=74,SNR=413						
H10S2	**ASCENSION HYDR**	**139.99**	**154**	T	T	22 10 10.9	
	baz=16,slow=74,SNR=89						
H10N3	**ASCENSION HYDR**	**141.07**	**154**	T	T	22 11 35.7	
	baz=203,slow=75,SNR=358						
H10N1	**ASCENSION HYDR**	**141.07**	**154**	T	T	22 11 39.8	
	baz=203,slow=75,SNR=302						
H10N2	**ASCENSION HYDR**	**141.09**	**154**	T	T	22 11 39.1	
	baz=203,slow=75,SNR=391						
FINES	**FINESS Array B**	**142.81**	**341**	PKP	**PKPdf**	**19 33 24.0**	**-1.3**
	comp=Z,1.8nm,1.0s,baz=72,slow=4.5,SNR=1.7						
NB2	**NORSAR Subarra**	**146.34**	**352**	PKP	**PKiKP**	**19 33 35.7**	**-0.2**
	comp=Z,7.3nm,1.2s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**146.34**	**352**	PKPbc	**PKiKP**	**19 33 35.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=16,slow=4.8,SNR=7.1						
AKASG	**Malin Array Be**	**149.23**	**325**	PKPbc	**PKPbc**	**19 33 39.4**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=43,slow=4.5,SNR=4.1						
BRTR	**Keskin Array B**	**151.20**	**302**	PKPbc	**PKPbc**	**19 33 44.6**	**-1.6**
	comp=Z,2.2nm,1.1s,baz=102,slow=3.0,SNR=6.7						
TORD	**Torodi Ar. Bea**	**165.24**	**180**	PKPab	**PKPab**	**19 34 54.3**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=185,slow=4.7,SNR=5.0						
ESDC	**Sonseca Array**	**167.41**	**21**	PKPab	**PKPab**	**19 35 06.8**	**+2.7**
	comp=Z,0.9nm,1.0s,baz=327,slow=3.8,SNR=3.3						

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*IDC **15** 19:33:45.1±0.7, 27.°59N×141.°00E, h0^{km}, mb3.5/10, mbtmp3.5/11, ML1.3/1, MS3.8/4, Error ellipse: s-maj=20.2km s-min=14.9km az=48.0*

ISC 15 19:33:50.3±0.6**, 27.°68N**±0.°09×**141.°0E**±0.°1**, h35**^{km}**, n21,** σ1^s**25**/18**, mb3.6**/11**, MS4.1**/3**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.20**	**119**	Pn	**Pn**	**19 34 09.4**	**-1.1**
	49nm,0.3s,baz=39,slow=11,SNR=61						
JCJ				Sn	**Sn**	**19 34 25.7**	**+0.2**
	204nm,0.3s,baz=290,slow=23,SNR=12						

JHJ	**Hachijo jima 2**	**5.52**	**349**	Pn	Pn	19 35 16.4	+6.4
	2.2nm,0.3s,baz=69,slow=20,SNR=1.8						
JHJ				Sn	**Sn**	**19 36 10.0**	**-2.3**
	0.5nm,0.3s,baz=227,slow=20,SNR=1.8						
MJAR	**Matsushiro Arr**	**9.15**	**346**	Pn	**Pn**	**19 36 00.8**	**+1.0**
	baz=156,slow=11,SNR=3.0						
	0.9nm,0.7s						
JOW	**Kunigami**	**11.37**	**269**	LR	LR	19 40 10.4	
	comp=Z,189nm,20.1s,baz=80,slow=34						
KSRS	**Korea Array**	**14.71**	**315**	Pn	**P**	**19 37 20.3**	**-1.1**
	0.1nm,0.3s,baz=140,slow=26,SNR=2.3						
KLR	**Kul'dur**	**22.67**	**344**	P	**P**	**19 38 49.5**	**+1.1**
	2.3nm,0.9s,baz=142,slow=7.4,SNR=7.8						
	2.3nm,0.9s						
SONM	**Songino Array**	**33.57**	**316**	P	**P**	**19 40 27.6**	**+0.6**
	0.3nm,0.8s,baz=144,slow=10.0,SNR=2.4						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.62**	**266**	P	**P**	**19 41 20.0**	**+1.2**
	0.2nm,0.6s,baz=72,slow=5.8,SNR=2.4						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**47.78**	**188**	P	**P**	**19 42 23.3**	**-0.9**
	19nm,0.8s,baz=8.6,slow=8.4,SNR=42						
MKAR	**Makanchi Array**	**49.30**	**309**	P	**P**	**19 42 35.1**	**-0.7**
	0.3nm,0.7s,baz=87,slow=8.9,SNR=1.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**51.51**	**188**	P	**P**	**19 42 51.4**	**-1.2**
	1.8nm,0.9s,baz=12,slow=14,SNR=27						
	1.8nm,0.9s						
ILAR	**Eielson Array**	**57.70**	**29**	P	**P**	**19 43 36.4**	**-0.6**
	0.4nm,0.9s,baz=215,slow=7.7,SNR=2.3						
	0.4nm,0.9s						
YKA	**Yellowknife Ar**	**72.12**	**28**	P	**P**	**19 45 11.1**	**+0.3**
	0.3nm,0.7s,baz=297,slow=6.0,SNR=3.2						
	0.3nm,0.7s						
YBH	**Yreka Blue Hor**	**76.48**	**50**	LR	LR	20 13 25.0	
	comp=Z,39nm,19.6s,baz=244,slow=31						
NVAR	**Mina Array Bea**	**80.97**	**51**	P	**P**	**19 46 03.2**	**+1.4**
	0.5nm,0.7s,baz=288,slow=4.3,SNR=3.6						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**84.53**	**44**	P	**P**	**19 46 21.4**	**+1.3**
	0.2nm,0.4s,baz=232,slow=4.4,SNR=2.3						
	0.2nm,0.4s						
BRTR	**Keskin Array B**	**84.84**	**312**	P	**P**	**19 46 23.0**	**+1.3**
	0.2nm,0.3s,baz=22,slow=14,SNR=1.8						
	0.2nm,0.3s						
SFJD	**Kangerlussuaq**	**85.21**	**5**	LR	LR	20 29 30.1	
	comp=Z,72nm,18.1s,baz=300,slow=39						
ATD	**Arta Tunnel**	**91.81**	**284**	LR	LR	20 29 56.2	
	comp=Z,138nm,19.6s,baz=125,slow=37						
TORD	**Torodi Ar. Bea**	**123.41**	**310**	PKP	**PKPdf**	**19 52 42.6**	**-1.9**
	0.3nm,0.7s,baz=48,slow=2.1,SNR=1.8						
PLCA	**Paso Flores**	**151.00**	**125**	PKPbc	**PKiKP**	**19 53 40.1**	**-0.1**
	3.5nm,1.0s,baz=254,slow=2.4,SNR=4.7						

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*IDC **15** 19:48:03.1±0.9, 4°.40S×136°.98E, h0^{km}, mb4.0/5, mbtmp4.2/11, ML4.1/5, Error ellipse: s-maj=30.5km s-min=18.0km az=65.0*

*DJA **15** 19:48:08.6±0.3, 4°S±5°×13°7E±°, h109^{km}±13^{km}, M4.2/9, mB4.6/2, mb4.3/9, MLv4.2/6, Mw(mB)3.8/2*

ISC 15 19:48:07.9±0.6, **4°.52S**±0°.06×**136°.83E**±0°.07, **h35**^{km}, **n32**, σ**2^{s}.40**/36, **mb4.2**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**2.70**	**347**	P	**Pn**	**19 48 47.4**	**-1.4**
SMPI	**Sarmi**	**3.14**	**37**	P	**Pn**	**19 48 55.2**	**+0.3**
BAKI	**Biak**	**3.38**	**348**	P	**Pn**	**19 48 57.1**	**-1.2**
MMPI	**Merauke**	**5.28**	**138**	P	**Pn**	**19 49 28.1**	**+3.8**
	1.7nm171nm,1.1s						
SIJI	**Sorong**	**6.63**	**303**	Pn	**Pn**	**19 49 42.0**	**-0.9**
	5.4nm,0.3s,baz=94,slow=18,SNR=33						
SIJI				Sn	**Sn**	**19 50 55.0**	**-2.4**
	1.4nm,0.3s,baz=109,slow=23,SNR=2.2						
	11nm,0.3s						
SWI	**Sorong**	**6.64**	**303**	P	**Pn**	**19 49 42.9**	**-0.2**
	0.1nm38nm,0.6s						
KDU	**Kakadu**	**9.18**	**208**	P	**Pn**	**19 50 18.8**	**+0.8**
MTN	**Manton Dam**	**10.00**	**214**	P	**Pn**	**19 50 31.4**	**+2.2**
LBMI	**Labuha**	**10.08**	**292**	P	**Pn**	**19 50 30.8**	**+0.5**
	498nm6.9nm,1.1s						
SANI	**Sanana**	**11.10**	**282**	P	**Pn**	**19 50 43.8**	**-0.4**
	12nm,0.6s						
COEN	**Coen**	**11.27**	**147**	P	**Pn**	**19 50 47.1**	**+0.5**
PMG	**Port Moresby**	**11.34**	**116**	Pn	**Pn**	**19 50 44.7**	**-2.9**
	16nm,1.0s,baz=340,slow=7.8,SNR=2.2						
KNRA	**Kununurra**	**13.63**	**215**	P	**Pn**	**19 51 18.6**	**-0.2**
BATI	**Baumata**	**14.22**	**246**	Pn	**Pn**	**19 51 27.4**	**+0.4**
	2.7nm,0.3s,baz=74,slow=4.7,SNR=5.5						
BATI				Sn	**Sn**	**19 54 03.7**	**+0.1**
	1.6nm,0.3s,baz=302,slow=19,SNR=1.9						
	7.6nm,0.4s						
BATI	**Baumata**	**14.22**	**246**	P	**Pn**	**19 51 27.3**	**+0.4**
	18nm,0.8s						
WRAB	**Tennant Creek**	**15.51**	**189**	P	**Pn**	**19 51 42.3**	**-1.8**
WRA	**Warramunga Arr**	**15.52**	**189**	Pn	**Pn**	**19 51 44.1**	**-0.1**
	0.6nm,0.3s,baz=1.1,slow=13,SNR=19						
WRA				Sn	**Sn**	**19 54 29.3**	**-5.9**
	0.5nm,0.3s,baz=9.1,slow=22,SNR=5.0						
WRA				Lg	Lg	19 56 14.6	
	0.2nm,0.3s,baz=17,slow=29,SNR=2.9						
	0.9nm,0.3s						
QIS	**Mount Isa**	**16.17**	**171**	P	**Pn**	**19 51 53.0**	**+0.4**
CTA	**Charters Tower**	**17.99**	**150**	P	**Pn**	**19 52 15.0**	**-0.4**
	0.1nm,0.3s,baz=99,slow=9.3,SNR=2.4						
CTA				Lg	Lg	19 57 43.2	
	0.2nm,0.3s,baz=244,slow=16,SNR=2.6						
	13nm,1.2s						
ASAR	**Alice Springs**	**19.24**	**188**	P	**Pn**	**19 52 31.9**	**+1.4**
	0.7nm,0.3s,baz=15,slow=10,SNR=21						
ASAR				S	**Sn**	**19 55 57.8**	**-7.6**
	1.0nm,0.8s,baz=8.0,slow=27,SNR=2.6						
ASAR				Lg	Lg	19 58 14.4	
	baz=16,slow=31						
	4.0nm,0.8s						
WRKA	**Warakurna**	**21.98**	**201**	P	**P**	**19 53 00.8**	**+1.7**
QLP	**Quilpie**	**23.05**	**163**	P	**P**	**19 53 12.8**	**+2.5**
OOD	**Oodnadatta**	**23.17**	**183**	P	**P**	**19 53 14.8**	**+3.3**
INKA	**Innaminka**	**23.39**	**171**	P	**P**	**19 53 16.7**	**+3.1**
LCRK	**Leigh Creek**	**25.82**	**177**	P	**P**	**19 53 40.4**	**+4.4**
STKA	**Stephens Creek**	**27.58**	**171**	P	**P**	**19 53 52.6**	**+0.8**
	2.4nm,0.9s,baz=336,slow=16,SNR=3.7						
	2.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**43.76**	**303**	P	**P**	**19 56 12.0**	**+1.5**
	0.4nm,0.7s,baz=127,slow=7.4,SNR=5.1						
	0.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**48.69**	**355**	P	**P**	**19 56 48.8**	**+0.1**
	1.8nm,0.6s,baz=166,slow=26,SNR=3.2						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**70.09**	**323**	P	**P**	**19 59 17.0**	**+0.3**
	0.9nm,0.4s,baz=104,slow=8.6,SNR=22						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**88.25**	**25**	P	**P**	**20 00 54.9**	**-0.4**
	1.2nm,0.9s,baz=268,slow=4.5,SNR=6.1						
	1.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**134.91**	**284**	PKP	**PKPdf**	**20 07 24.7**	**+0.3**
	0.2nm,0.6s,baz=128,slow=2.0,SNR=1.3						
LPAZ	**La Paz**	**147.80**	**130**	PKPbc	**PKPbc**	**20 07 51.7**	**+0.8**
	0.9nm,0.7s,baz=76,slow=2.3,SNR=3.8						

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*IDC **15** 19:53:59.6±1.1, 52°.51N×170°.60W, h0^{km}, mb3.7/12, mbtmp3.8/15, ML3.6/2, Error ellipse: s-maj=31.5km s-min=18.0km az=173.0*

*AEIC **15** 19:54:04±1.8, 52°.15N±0°.10×170°.4W±0°.1, h34^{km}±9^{km}, ML3.4, Error ellipse: s-maj=17.6km s-min=3.1km az=144.0*

*NEIC **15** 19:54:07.5±1.6, 52°.5N±0°.4×170°.6W±0°.2, h51^{km}±17^{km}, Error ellipse: s-maj=57.2km s-min=6.6km az=163.0*

ISC 15 19:54:07.0±0.9, **52°.5N**±0°.2×**170°.64W**±0°.07, **h55**^{km}, **n42**, σ**0^{s}.96**/37, **mb3.7**/12, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**1.19**	**64**		**Pn**	**19 54 25.6**	**-1.8**
OKFG	**Magazine Ridge**	**1.90**	**59**		**Pn**	**19 54 36.8**	**-0.2**
OKFG					**Sn**	**19 55 00.4**	**+0.6**
KOKL	**Mount Kliuchef**	**2.19**	**268**		**Pn**	**19 54 41.7**	**+0.7**
ATKA	**Atka Island**	**2.20**	**264**		**Pn**	**19 54 41.1**	**0.0**
ATKA					**Sn**	**19 55 08.0**	**+0.9**
MSW	**Makushin Switc**	**2.73**	**56**		**Pn**	**19 54 48.9**	**+0.5**
MSW					**Sn**	**19 55 20.8**	**+0.6**
MTBL	**Makushin Table**	**2.81**	**56**		**Pn**	**19 54 49.7**	**+0.2**
UNV	**Unalaska Valle**	**2.84**	**59**		**Pn**	**19 54 50.0**	**+0.1**
UNV					**Sn**	**19 55 23.5**	**+0.6**
AKBBA	**Akutan Broad B**	**3.26**	**58**		**Pn**	**19 54 55.2**	**-0.4**
GSTD	**Great Sitkin T**	**3.41**	**265**		**Pn**	**19 54 58.4**	**+0.7**
GSCK	**Great Sitkin C**	**3.43**	**265**		**Pn**	**19 54 58.5**	**+0.6**
ADK	**Adak**	**3.77**	**263**		**Pn**	**19 55 03.0**	**+0.5**
KIWB	**Kanaga Island**	**4.06**	**264**		**Pn**	**19 55 08.0**	**+1.5**
KICM	**Kanaga Island**	**4.07**	**265**		**Pn**	**19 55 07.3**	**+0.6**
KIMD	**Kanaga Island**	**4.13**	**263**		**Pn**	**19 55 07.8**	**+0.3**
TAFP	**Tanaga Falls P**	**4.56**	**266**		**Pn**	**19 55 14.1**	**+0.7**
TASE	**Tanaga Southea**	**4.60**	**265**		**Pn**	**19 55 14.8**	**+0.8**
FALS	**False Pass**	**4.91**	**58**		**Pn**	**19 55 17.7**	**-0.5**
SHEM	**Shemya Is, Ala**	**9.30**	**278**	Pn	**Pn**	**19 56 15.3**	**-2.9**
	1.0nm,0.3s,baz=350,slow=7.4,SNR=8.3						
	6.7nm,0.5s						
KDAK	**Kodiak Island**	**11.61**	**56**	Pn	**Pn**	**19 56 47.6**	**-2.1**
	2.5nm,0.6s,baz=304,slow=8.9,SNR=1.1						
KDAK	**Kodiak Island**	**11.61**	**56**		**Pn**	**19 56 47.5**	**-2.2**
PETK	**Petropavlovsk-**	**19.09**	**285**	P	**P**	**19 58 25.2**	**+0.4**
	0.6nm,0.3s,baz=89,slow=12,SNR=20						
	1.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**37.06**	**217**	T	T	20 40 24.1	
	baz=23,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**37.07**	**217**	T	T	20 40 31.6	
	baz=23,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**37.08**	**217**	T	T	20 40 24.0	
	baz=23,slow=76,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**38.25**	**216**	T	T	20 41 57.0	
	baz=22,slow=76,SNR=129						
H11S2	**WAKE ISLAND Hy**	**38.27**	**216**	T	T	20 41 58.1	
	baz=22,slow=76,SNR=191						
H11S3	**WAKE ISLAND Hy**	**38.27**	**216**	T	T	20 41 58.3	
	baz=22,slow=76,SNR=107						
PDAR	**Pinedale Array**	**41.14**	**78**	P	**P**	**20 01 46.6**	**+0.8**
	0.5nm,0.7s,baz=305,slow=4.9,SNR=3.9						
	0.5nm,0.7s						
SPITS	**Spitsbergen Ar**	**49.55**	**358**	P	**P**	**20 02 51.7**	**+0.1**
	4.6nm,1.0s,baz=56,slow=6.2,SNR=5.1						
	4.6nm,1.0s						
SONM	**Songino Array**	**50.58**	**300**	P	**P**	**20 03 00.5**	**+0.5**
	0.3nm,0.5s,baz=68,slow=4.9,SNR=3.9						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**53.52**	**88**	P	**P**	**20 03 22.1**	**+0.1**
	0.5nm,0.7s,baz=305,slow=5.1,SNR=4.5						
	0.5nm,0.7s						
ARCES	**ARCESS Array B**	**57.73**	**353**	P	**P**	**20 03 51.4**	**-0.1**
	2.0nm,0.9s,baz=18,slow=8.9,SNR=2.1						
	2.0nm,0.9s						
MKAR	**Makanchi Array**	**63.17**	**313**	P	**P**	**20 04 28.6**	**-0.3**
	0.2nm,0.5s,baz=52,slow=9.3,SNR=2.0						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**65.66**	**351**	P	**P**	**20 04 44.3**	**-0.6**
	1.0nm,0.9s,baz=359,slow=7.2,SNR=1.4						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**66.83**	**359**	P	**P**	**20 04 52.5**	**0.0**
	0.5nm,0.6s,baz=9.1,slow=5.1,SNR=1.5						
	0.5nm,0.6s						
HFS	**Hagfors**	**67.69**	**358**	P	**P**	**20 04 57.4**	**-0.5**
	0.4nm,0.4s,baz=274,slow=18,SNR=10						
	0.4nm,0.4s						
EKA	**Eskdalemuir Ar**	**72.06**	**7**	P	**P**	**20 05 24.8**	**+0.1**
	0.4nm,0.5s,baz=346,slow=4.8,SNR=6.1						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**75.84**	**282**	P	**P**	**20 05 47.8**	**+0.4**
	0.7nm,0.6s,baz=29,slow=5.8,SNR=7.4						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**89.87**	**229**	P	**P**	**20 06 59.1**	**-0.7**
	0.3nm,0.8s,baz=29,slow=5.1,SNR=4.8						
	0.3nm,0.8s						
H03N2	**Juan Fernandez**	**116.68**	**111**	T	T	22 20 07.9	
	baz=318,slow=78,SNR=9.5						
H03N1	**Juan Fernandez**	**116.70**	**111**	T	T	22 20 12.8	
	baz=318,slow=78,SNR=12						
H03N3	**Juan Fernandez**	**116.70**	**111**	T	T	22 20 13.0	
	baz=318,slow=78,SNR=7.7						

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*DJA **15** 20:10:20.4±1.0, 4°N±8°×12°3E±°, h566^{km}±13^{km}, M4.4/11, mb4.7/5, mB4.5/4, MLv4.5/11, Mw(mB)3.7/4*

*NEIC **15** 20:10:20.3±1.4, 4°.1N±0°.2×123°.3E±0°.2, h551^{km}±11^{km}, mb4.3/21, Error ellipse: s-maj=41.7km s-min=6.5km az=52.0*

*IDC **15** 20:10:21.5±0.7, 3°.84N×122°.84E, h570^{km}±9^{km}, mb3.4/18, mbtmp4.4/22, Error ellipse: s-maj=15.5km s-min=7.4km az=67.0*

*MAN **15** 20:10:26.3, 4°.02N×123°.25E, h504^{km}, mb4.8, ML3.7, MS3.7, Hypocentre not reviewed by the ISC*

ISC 15 20:10:21.5±0.4, **3°.82N**±0°.05×**122°.88E**±0°.07, **h573**^{km}, **n100**, σ**1^{s}.09**/115, **mb4.2**/39, **2C-5D**, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**3.17**	**178**	P	**P**	**20 11 37.0**	**-2.5**
KMSI	**Cibinong**	**3.41**	**161**	P	**P**	**20 11 40.6**	**-0.4**
TOLI2	**Tolitoli**	**3.41**	**218**		**P**	**20 11 39.3**	**-1.7**
TOLI2	**Tolitoli**	**3.41**	**218**	P	**P**	**20 11 39.4**	**-1.7**
MRSI	**Marisa**	**3.45**	**196**	P	**P**	**20 11 39.9**	**-1.4**
DDMP	**Don Marcelino,**	**3.62**	**51**	⇓*e*P	**P**	**20 11 39.9**	**-2.4**
DDMP				*e*S	S	20 12 37.3	-11
KCP	**Kidapawan**	**3.85**	**35**	⇑*i*P	**P**	**20 11 43.2**	**-0.8**
PAGZ	**Pagadian**	**4.03**	**7**	⇓*e*P	**P**	**20 11 44.3**	**-0.9**
DAV	**Davao City (W)**	**4.20**	**40**	P	**P**	**20 11 47.1**	**+0.6**
	211nm,0.3s,baz=119,slow=1.2,SNR=16						
DAV				S	**S**	**20 12 55.4**	**-0.3**
	167nm,0.3s,baz=253,slow=22,SNR=8.1						
MPSI	**Mapaga**	**4.57**	**221**	P	**P**	**20 11 47.6**	**-1.7**
MYLDM	**Lahad Datu**	**4.57**	**287**		**P**	**20 11 49.2**	**-0.1**
LUWI	**Luwuk**	**4.83**	**181**	P	**P**	**20 11 50.0**	**-1.4**
APSI	**Ampana**	**4.86**	**195**	P	**P**	**20 11 50.3**	**-1.3**
TNTI	**Ternate**	**5.41**	**124**	P	**P**	**20 11 55.2**	**-0.9**
	0.6nm1μm177nm,1.0s						
TNTI				S	**S**	**20 13 12.2**	**-1.2**
	0.6nm1μm177nm,1.0s						
TNTI	**Ternate**	**5.41**	**124**	P	**P**	**20 11 55.0**	**-1.1**
BIPH	**Bislig**	**5.54**	**38**	⇓*i*P	**P**	**20 11 55.9**	**-1.4**
BIPH				*i* S	S	20 13 02.2	-13
TBP	**Tagbilaran**	**5.91**	**9**	⇓*i*P	**P**	**20 12 00.0**	**-0.5**
TBP				*i* S	**S**	**20 13 20.5**	**-0.9**
CNOP	**Candoni, Negro**	**5.97**	**358**	⇓*e*P	**P**	**20 11 59.4**	**-1.6**
LBMI	**Labuha**	**6.40**	**134**	P	**P**	**20 12 04.1**	**-0.8**
	0.4nm867nm92nm,0.7s						
LBMI				S	**S**	**20 13 26.8**	**-2.6**
	0.4nm867nm92nm,0.7s						
SANI	**Sanana**	**6.61**	**152**	P	**P**	**20 12 04.1**	**-2.7**
SANI	**Sanana**	**6.61**	**152**	P	**P**	**20 12 04.4**	**-2.4**
SIJI	**Sorong**	**9.59**	**119**	P	**P**	**20 12 36.0**	**+0.3**
	9.6nm,0.5s,baz=339,slow=14,SNR=9.2						
KSM	**Kuching**	**12.78**	**260**	P	**P**	**20 13 07.3**	**-0.9**
BATI	**Baumata**	**13.96**	**177**	P	**P**	**20 13 20.4**	**+0.1**
	36nm,0.5s,baz=346,slow=1.3,SNR=16						
JAGI	**Jajag, Banyuwa**	**15.00**	**215**	P	**P**	**20 13 32.4**	**+1.9**
LEM	**Lembang**	**18.55**	**235**	P	**P**	**20 14 04.7**	**+1.1**
	17nm,0.6s,baz=24,slow=19,SNR=5.1						
KDU	**Kakadu**	**18.97**	**150**	P	**P**	**20 14 07.8**	**+0.6**
KNRA	**Kununurra**	**20.23**	**163**	P	**P**	**20 14 19.3**	**+0.7**
KNRA	**Kununurra**	**20.23**	**163**	P	**P**	**20 14 19.6**	**+1.0**
PSI	**Prapat**	**23.94**	**268**	P	**P**	**20 14 50.8**	**-1.2**
	6.1nm,0.8s,baz=56,slow=6.4,SNR=3.7						
	6.1nm,0.8s						
WB0	**Warramunga Arr**	**26.03**	**155**	P	**P**	**20 15 10.1**	**-0.1**
WB0				IAmb	IAmb	20 15 10.9	
	comp=Z,7.4nm,0.9s						
WRAB	**Tennant Creek**	**26.16**	**155**	P	**P**	**20 15 10.0**	**-1.4**
WRAB				IAmb	IAmb	20 15 12.2	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**26.16**	**155**	P	**P**	**20 15 11.6**	**+0.2**
WRA	**Warramunga Arr**	**26.16**	**155**	P	**P**	**20 15 11.4**	**0.0**
	comp=Z,6.9nm,0.7s,baz=333,slow=9.5,SNR=28						
WRA				PcP	**PcP**	**20 18 18.7**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=319,slow=3.0,SNR=2.8						
WRA				S	**S**	**20 19 01.3**	**-2.5**
	comp=Z,1.0nm,0.8s,baz=330,slow=16,SNR=5.3						
WRA				ScP	**ScP**	**20 21 06.1**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=338,slow=3.1,SNR=14						
	comp=Z,6.9nm,0.7s						
WB2	**Warramunga Arr**	**26.17**	**155**	P	**P**	**20 15 11.5**	**+0.1**
WB2				IAmb	IAmb	20 15 12.2	
	comp=Z,9.9nm,0.8s						
WR0	**Warramunga Arr**	**26.26**	**155**	P	**P**	**20 15 12.1**	**-0.1**
WR0				IAmb	IAmb	20 15 13.1	
	comp=Z,9.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**27.57**	**304**	P	**P**	**20 15 23.9**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=122,slow=7.1,SNR=25						
CMAR				ScP	**ScP**	**20 21 10.4**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=197,slow=1.9,SNR=5.0						
	comp=Z,2.8nm,0.8s						
CHTO	**Chiang Mai**	**27.74**	**304**	P	**P**	**20 15 25.1**	**-0.1**
CHTO				IAmb	IAmb	20 15 25.9	
	comp=Z,8.9nm,0.6s						
CHTO	**Chiang Mai**	**27.74**	**304**	P	**P**	**20 15 25.7**	**+0.4**
NJ2	**Nanjing**	**28.34**	**353**	*e*P	**P**	**20 15 32.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRKA	**Warakurna**	**29.16**	**170**	P	**P**	**20 15 38.5**	**+0.9**
QIS	**Mount Isa**	**29.26**	**147**	P	**P**	**20 15 39.8**	**+1.3**
AS31	**Alice Springs**	**29.36**	**159**	P	**P**	**20 15 40.2**	**+0.9**
ASAR	**Alice Springs**	**29.36**	**159**	P	**P**	**20 15 40.1**	**+0.8**
	comp=Z,3.7nm,0.5s,baz=342,slow=7.1,SNR=122						
ASAR				PcP	**PcP**	**20 18 27.6**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=346,slow=2.1,SNR=7.6						
ASAR				S	**S**	**20 19 52.9**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=346,slow=19,SNR=9.8						
ASAR				ScP	**ScP**	**20 21 15.9**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=340,slow=2.7,SNR=17						
	comp=Z,3.7nm,0.5s						
PZH	**PanZhiHua**	**30.31**	**320**	P	**P**	**20 15 47.8**	**+0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,9.8s						
XAN	**Xi'an**	**32.76**	**338**	⇑P	**P**	**20 16 08.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MORW	**Morawa**	**33.35**	**191**	P	**P**	**20 16 13.8**	**+0.6**
OOD	**Oodnadatta**	**33.77**	**159**	P	**P**	**20 16 17.9**	**+1.2**
KSRS	**Korea Array**	**33.79**	**7**	P	**P**	**20 16 17.4**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=188,slow=9.5,SNR=2.7						
	comp=Z,1.0nm,0.6s						
FORT	**Forrest**	**34.76**	**172**	P	**P**	**20 16 25.8**	**+0.9**
FORT	**Forrest**	**34.76**	**172**	P	**P**	**20 16 26.1**	**+1.2**
KLBR	**Kellerberrin**	**35.55**	**188**	P	**P**	**20 16 32.0**	**+0.5**
MULG	**Mulgathing**	**35.56**	**163**	P	**P**	**20 16 33.0**	**+1.5**
BBOO	**Buckleboo**	**38.52**	**162**	P	**P**	**20 16 56.3**	**+0.6**
BBOO				IAmb	IAmb	20 16 57.2	
	comp=Z,9.3nm,0.8s						
LSA	**Lhasa**	**39.56**	**314**	P	**P**	**20 17 06.3**	**+1.6**
LSA	**Lhasa**	**39.56**	**314**	P	**P**	**20 17 06.1**	**+1.4**
STKA	**Stephens Creek**	**39.72**	**155**	P	**P**	**20 17 06.6**	**+1.2**
	comp=Z,7.3nm,0.7s,baz=327,slow=7.7,SNR=20						
	comp=Z,7.3nm,0.7s						
STKA	**Stephens Creek**	**39.72**	**155**	P	**P**	**20 17 06.9**	**+1.6**
GTA	**Gaotai**	**41.14**	**333**	*e*P	**P**	**20 17 17.6**	**+0.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GOMU	**GeErMu**	**41.31**	**325**	P	**P**	**20 17 20.0**	**+1.5**
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GOMU				pmax	pmax		
	comp=Z,31nm,4.6s						
RAMN	**Ramite**	**41.60**	**307**	*e*P	**P**	**20 17 21.2**	**+0.5**
	comp=Z,32nm,0.7s						
JIRN	**Jiri**	**42.25**	**308**	*e*P	**P**	**20 17 26.0**	**0.0**
	comp=Z,34nm,0.4s						
PKI	**Pulchoki**	**42.82**	**307**	*e*P	**P**	**20 17 29.9**	**-0.5**
	comp=Z,21nm,0.4s						
PKIN	**Phulchoki**	**42.84**	**307**	*e*P	**P**	**20 17 30.1**	**-0.3**
	comp=Z,21nm,0.4s						
KKN	**Kakani**	**43.02**	**308**	*e*P	**P**	**20 17 31.8**	**0.0**
	comp=Z,20nm,0.5s						
DMN	**Daman**	**43.08**	**307**	*e*P	**P**	**20 17 32.2**	**-0.1**
ASAJ	**Asahikawa**	**43.74**	**21**	P	**P**	**20 17 37.5**	**+0.7**
	comp=Z,5.3nm,0.6s,baz=180,slow=2.7,SNR=6.7						
	comp=Z,5.3nm,0.6s						
HYBB	**Hyderabad (bro**	**45.48**	**291**	*e*P	**P**	**20 17 50.3**	**-0.4**
ULN	**Ulaanbaatar**	**45.95**	**345**	P	**P**	**20 17 53.9**	**0.0**
ULN				IAmb	IAmb	20 17 55.0	
	comp=Z,3.4nm,0.8s						
CAN	**Canberra**	**46.01**	**150**	P	**P**	**20 17 55.4**	**+1.0**
SONM	**Songino Array**	**46.09**	**345**	P	**P**	**20 17 54.6**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=160,slow=8.5,SNR=32						
SONM				ScP	**ScP**	**20 22 17.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=125,slow=2.1,SNR=4.7						
	comp=Z,3.2nm,0.7s						
SONM	**Songino Array**	**46.09**	**345**	P	**P**	**20 17 54.2**	**-0.7**
PRZ	**Przheval'sk**	**55.17**	**321**	P	**P**	**20 19 02.0**	**+1.0**
MK31	**Makanchi Array**	**55.34**	**327**	P	**P**	**20 19 02.2**	**+0.3**
MK31				IAmb	IAmb	20 19 02.9	
	comp=Z,6.1nm,0.9s						
MKAR	**Makanchi Array**	**55.34**	**327**	P	**P**	**20 19 02.3**	**+0.4**
	comp=Z,7.4nm,0.3s,baz=125,slow=7.6,SNR=251						
MKAR				PcP	**PcP**	**20 19 53.6**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=132,slow=4.4,SNR=4.4						
MKAR				ScP	**ScP**	**20 22 58.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=123,slow=4.5,SNR=4.0						
	comp=Z,7.4nm,0.3s						
MKAR	**Makanchi Array**	**55.34**	**327**	P	**P**	**20 19 02.2**	**+0.2**
MAKZ	**Makanchi**	**55.52**	**327**	P	**P**	**20 19 03.5**	**+0.3**
MAKZ				IAmb	IAmb	20 19 03.8	
	comp=Z,8.1nm,0.5s						
BOOM	**Boomskoye usch**	**56.74**	**320**	P	**P**	**20 19 11.6**	**-0.3**
TKM2	**Tokmak 2**	**57.17**	**320**	P	**P**	**20 19 15.6**	**+0.7**
	SNR=9.3						
UCH	**Uchtor**	**57.54**	**319**	P	**P**	**20 19 18.8**	**+1.1**
	SNR=11						
AAK	**Ala-Archa**	**57.75**	**319**	P	**P**	**20 19 19.5**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=130,slow=3.0,SNR=11						
	comp=Z,1.2nm,0.4s						
AAK	**Ala-Archa**	**57.75**	**319**	P	**P**	**20 19 19.5**	**+0.8**
AML	**Almayashu**	**58.04**	**318**	P	**P**	**20 19 21.9**	**+1.0**
	SNR=9.4						
USP	**Ospenovka**	**58.04**	**320**	P	**P**	**20 19 21.2**	**+0.6**
	SNR=8.6						
EKS2	**Erkin-Say**	**58.23**	**319**	P	**P**	**20 19 22.9**	**+1.0**
	SNR=9.1						
ZALV	**Zalesovo Beam**	**58.82**	**335**	P	**P**	**20 19 24.6**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=135,slow=5.5,SNR=9.5						
	comp=Z,1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**58.82**	**335**	P	**P**	**20 19 22.4**	**-3.0**
KURBB	**Kurchatov Arra**	**59.63**	**329**	P	**P**	**20 19 30.9**	**-0.1**
	comp=Z,6.3nm,0.6s,baz=133,slow=6.6,SNR=150						
KURBB				PcP	**PcP**	**20 20 10.5**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=134,slow=6.1,SNR=5.4						
	comp=Z,6.3nm,0.6s						
KURK	**Kurchatov**	**59.64**	**329**	P	**P**	**20 19 31.1**	**+0.1**
KURK				IAmb	IAmb	20 19 31.7	
	comp=Z,15nm,0.7s						
KKAR	**Karatay Array**	**60.58**	**318**	P	**P**	**20 19 37.0**	**-0.4**
BRVK	**Borovoye**	**65.25**	**328**	P	**P**	**20 20 06.8**	**-0.4**
BRVK				IAmb	IAmb	20 20 07.9	
	comp=Z,6.3nm,1.1s						
NRIK	**Noril'sk**	**69.46**	**347**	P	**P**	**20 20 32.3**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=144,slow=6.5,SNR=5.4						
	comp=Z,2.9nm,0.7s						
AKTO	**Aktyubinsk**	**71.22**	**322**	P	**P**	**20 20 43.2**	**-0.1**
	comp=Z,3.7nm,0.4s,baz=95,slow=9.6,SNR=17						
	comp=Z,3.7nm,0.4s						
ARU	**Arti**	**72.83**	**328**	P	**P**	**20 20 51.4**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=146,slow=3.9,SNR=4.9						
	comp=Z,0.6nm,0.4s						
KLMR	**Klimovskoe**	**83.44**	**331**	*e*P	**P**	**20 21 47.5**	**-1.7**
KLMR				AMP		20 21 49.4	
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	**86.67**	**25**	P	**P**	**20 22 04.4**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=239,slow=6.1,SNR=6.3						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**87.00**	**309**	P	**P**	**20 22 05.9**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=140,slow=4.7,SNR=3.9						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**89.93**	**332**	P	**P**	**20 22 19.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=46,slow=5.5,SNR=7.3						
	comp=Z,1.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**119.23**	**287**	PKP	**PKPdf**	**20 28 07.1**	**0.0**
	comp=Z,0.1nm,0.4s,baz=317,slow=3.7,SNR=1.5						
TXAR	**Lajitas Array**	**124.53**	**50**	PKP	**PKiKP**	**20 28 17.9**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=147,slow=2.5,SNR=4.3						

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*JMA **15** 20:13:10.6±0.2, 24°.4N±0°.8×122°.1E±0°.4, h64^{km}±2^{km}, MV2.4/12, TAIWAN REGION*

*TAP **15** 20:13:10.6, 24°.42N×122°.10E, h65^{km}, ML3.0, B*

ISC 15 20:13:10.8±1.2, **24°.39N**±0°.03×**122°.13E**±0°.02, **h64**^{km}±6^{km}, **n130**, σ**0^{s}.94**/192, **15C-1D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.32**	**280**	*i* P	**Pn**	**20 13 21.5**	**+0.1**
	baz=276						
EWUT				S	**Sn**	**20 13 29.6**	**+0.4**
	baz=276						
TWC	**Suao**	**0.33**	**311**	*i* P	**Pn**	**20 13 21.7**	**+0.1**
	baz=316						
TWC				*i* S	**Sn**	**20 13 29.5**	**+0.1**
	baz=316						
ENA	**Nanau**	**0.35**	**276**	⇑*i*P	**Pn**	**20 13 21.8**	**+0.1**
	baz=272						
ENA				*i* S	**Sn**	**20 13 29.9**	**+0.3**

	baz=272						
EHP	**Heping Village**	0.36	257	P	Pn	20 13 21.8	0.0
	baz=258						
EHP				*e*S	Sn	20 13 30.6	+0.8
	baz=258						
NDS	**Dongshan**	0.45	303	P	Pn	20 13 22.8	+0.2
	baz=298						
NDS				*e*S	Sn	20 13 31.6	+0.5
	baz=298						
EGS		0.49	339	*e*P	Pn	20 13 23.1	+0.1
	baz=352						
EGS				S	Sn	20 13 31.9	+0.1
	baz=352						
ILA	**Ilan**	0.51	317	*e*P	Pn	20 13 23.6	+0.4
	baz=324						
ETL	**Fush Village**	0.51	244	P	Pn	20 13 23.0	-0.2
	baz=234						
NACB	**Ninganchiao**	0.53	246	⇑*i*P	Pn	20 13 23.0	-0.4
	baz=242						
NACB				*i* S	Sn	20 13 32.2	-0.4
	baz=242						
TWE	**Neicheng**	0.53	308	*i* P	Pn	20 13 23.8	+0.4
	baz=309						
TWE				S	Sn	20 13 33.1	+0.5
	baz=309						
NTC	**Toucheng**	0.54	330	*e*P	Pn	20 13 23.7	+0.2
	baz=336						
LATG	**Datong**	0.57	285	⇑*i*P	Pn	20 13 23.9	0.0
	baz=279						
LATG				*i* S	Sn	20 13 33.8	+0.4
	baz=279						
ENTT	**Nioudou**	0.57	296	⇑*i*P	Pn	20 13 24.1	+0.3
	baz=291						
ENTT				S	Sn	20 13 33.8	+0.5
	baz=291						
TWD	**Chiawan**	0.57	238	P	Pn	20 13 23.7	-0.2
	baz=229						
TWD				S	Sn	20 13 33.4	+0.1
	baz=229						
NDT	**Datong Townshi**	0.60	291	P	Pn	20 13 24.3	+0.2
	baz=285						
NDT				*i* S	Sn	20 13 34.2	+0.4
	baz=285						
FUSB	**Fushanzhiwuyua**	0.61	307	⇑*i*P	Pn	20 13 24.8	+0.5
	baz=307						
FUSB				S	Sn	20 13 34.7	+0.4
	baz=307						
ETLH	**Xiulin Townshi**	0.61	253	⇑P	Pn	20 13 24.4	-0.1
	baz=250						
ETLH				*e*S	Sn	20 13 34.4	0.0
	baz=250						
HWA	**Hwalien**	0.63	229	P	Pn	20 13 24.6	+0.2
	baz=225						
TWB1	**Santiao Chiao**	0.63	349	⇓*i*P	Pn	20 13 23.9	-0.5
	baz=352						
TWB1				*i* S	Sn	20 13 32.9	-1.5
	baz=352						
TIPB	**Shuangxi**	0.64	335	*e*P	Pn	20 13 24.5	-0.1
	baz=346						
TIPB				*e*S	Sn	20 13 33.8	-1.0
	baz=346						
NNSB	**Datong**	0.68	273	⇑*i*P	Pn	20 13 25.1	0.0
	baz=265						
NNSB				*e*S	Sn	20 13 35.4	-0.3
	baz=265						
NWLT	**Wulai**	0.69	304	*e*P	Pn	20 13 25.6	+0.4
	baz=296						
NWLT				*e*S	Sn	20 13 36.1	+0.4
	baz=296						
NNS	**Nan Shan**	0.69	274	⇑P	Pn	20 13 25.2	-0.1
	baz=266						
NNS				*e*S	Sn	20 13 35.7	-0.2
	baz=266						
TEYL	**Yanliau Villag**	0.71	223	⇑*i*P	Pn	20 13 25.3	-0.1
	baz=213						
TEYL				*e*S	Sn	20 13 36.8	+0.7
	baz=213						
ETM	**Tongmen**	0.72	234	P	Pn	20 13 25.4	-0.1
	baz=231						
YHNB	**Yeheng**	0.74	292	P	Pn	20 13 26.1	+0.2
	baz=285						
YHNB				S	Sn	20 13 36.7	-0.1
	baz=285						
NWF	**Wu-fen Shan**	0.75	335	*e*P	Pn	20 13 25.7	-0.3
	baz=345						
NWF				*e*S	Sn	20 13 36.0	-1.1
	baz=345						
WFSB	**Wu-fen Shan**	0.75	335	*e*P	Pn	20 13 25.8	-0.1
	baz=345						
WFSB				*e*S	Sn	20 13 35.9	-1.0
	baz=345						
JYNG	**Yonagunijimaku**	0.75	85	P	Pn	20 13 26.0	+0.2
JYNG				*e*S	Sn	20 13 37.3	+0.4
NSK	**Sanguang**	0.76	292	*e*P	Pn	20 13 26.1	+0.1
	baz=285						
NSK				*e*S	Sn	20 13 36.9	-0.3
	baz=285						
NHDH	**Xindian Distri**	0.79	316	*e*P	Pn	20 13 26.7	+0.4
	baz=317						
YOJ	**Yonaguni jima**	0.81	85	P	Pn	20 13 26.5	0.0
	baz=86						
YOJ				*e*S	Sn	20 13 38.8	+0.6
	baz=86						
YOJ	**Yonaguni jima**	0.81	85	P	Pn	20 13 26.7	+0.1
YOJ				*e*S	Sn	20 13 38.0	-0.2
FUSS	**Fushou**	0.82	260	*e*P	Pn	20 13 27.3	+0.3
	baz=259						
FUSS				*e*S	Sn	20 13 38.8	0.0
	baz=259						
NHY	**Taipei**	0.82	322	*e*P	Pn	20 13 26.6	-0.1
	baz=333						
TATO	**Taipei**	0.82	315	P	Pn	20 13 26.8	0.0
	baz=326						
TATO				S	Sn	20 13 38.5	0.0
	baz=326						
TNOU	**National Taiwa**	0.82	337	*e*P	Pn	20 13 27.0	+0.2
	baz=346						
WHF	**Hehuan Shan**	0.82	253	⇑P	Pn	20 13 27.1	-0.1
	baz=251						
WHF				S	Sn	20 13 38.8	-0.4
	baz=251						
ESL	**Shilin**	0.85	228	⇑*i*P	Pn	20 13 26.7	-0.4
	baz=236						
ESL				*e*S	Sn	20 13 38.7	-0.5
	baz=236						
TEGC	**Jichi Village**	0.86	218	*e*P	Pn	20 13 27.2	-0.1
	baz=208						
TWT	**Tachien**	0.88	261	*e*P	Pn	20 13 28.4	+0.8
	baz=258						
TWT				*e*S	Sn	20 13 40.6	+0.6
	baz=258						
TDCB	**Techi**	0.89	261	P	Pn	20 13 28.4	+0.6
	baz=257						
TDCB				S	Sn	20 13 40.2	-0.1
	baz=257						
CHGB	**Renai**	0.93	250	⇑*i*P	Pn	20 13 28.7	+0.4
	baz=241						
CHGB				*i* S	Sn	20 13 41.1	-0.1
	baz=241						
NFF	**Wufeng Townshi**	0.95	285	P	Pn	20 13 29.2	+0.8
	baz=293						
NFF				S	Sn	20 13 42.1	+0.6
	baz=293						
TWS1	**Kuangyinshan**	0.96	318	*e*P	Pn	20 13 29.0	+0.6
	baz=327						
EGFH	**Guangfu**	0.96	222	*e*P	Pn	20 13 28.1	-0.4
	baz=230						
ANP	**Anpu**	0.97	325	*e*P	Pn	20 13 29.5	+0.8
	baz=326						
OWD	**Renai**	0.97	244	⇑P	Pn	20 13 28.9	+0.2
	baz=236						
OWD				*e*S	Sn	20 13 41.5	-0.5
	baz=236						
NTST	**Danshui**	0.99	322	*e*P	Pn	20 13 29.4	+0.6
	baz=332						
NTST				*e*S	Sn	20 13 42.7	+0.6
	baz=332						
WUSB	**Renai**	1.00	247	⇑P	Pn	20 13 29.7	+0.6
	baz=240						
WUSB				S	Sn	20 13 43.2	+0.5
	baz=240						
TWY	**Chenhua**	1.00	332	*e*P	Pn	20 13 30.1	+1.1
	baz=333						
NCUH	**Zhongli**	1.03	304	*e*P	Pn	20 13 29.6	+0.2
	baz=305						
NCUH				*e*S	Sn	20 13 43.5	+0.2
	baz=305						
LIOB	**Emei**	1.04	284	*e*P	Pn	20 13 30.4	+0.8
	baz=284						
LIOB				*e*S	Sn	20 13 44.6	+1.0
	baz=284						
NSTT	**Nanjuang**	1.05	283	*e*P	Pn	20 13 30.3	+0.6
	baz=283						
NSTT				S	Sn	20 13 44.3	+0.6
	baz=283						
WHP	**Taichung City**	1.08	264	*e*P	Pn	20 13 31.4	+1.3
	baz=262						
WHP				S	Sn	20 13 45.2	+0.7
	baz=262						
HGSD	**Ruisui**	1.10	216	P	Pn	20 13 30.1	-0.2
	baz=205						
VWDT	**VWDT**	1.10	235	⇑*i*P	Pn	20 13 30.8	+0.5
	baz=228						
VWDT				S	Sn	20 13 44.7	-0.1
	baz=228						
WPL	**Puli Township**	1.13	251	*e*P	Pn	20 13 31.3	+0.6
	baz=245						
EHY	**Hungye**	1.15	220	*e*P	Pn	20 13 30.0	-0.9
	baz=226						
DPDB	**Guoxing**	1.15	252	P	Pn	20 13 31.7	+0.7
	baz=249						
DPDB				*e*S	Sn	20 13 46.7	+0.6
	baz=249						
NHW	**Xinwu Township**	1.16	302	*e*P	Pn	20 13 32.6	+1.6
	baz=302						
NMLH	**Miaoli**	1.23	277	*e*P	Pn	20 13 32.3	+0.4
	baz=277						
SSLB	**Suanglung**	1.23	241	*e*P	Pn	20 13 32.5	+0.5
	baz=233						
SMLT	**Sun Moon Lake**	1.23	246	*e*P	Pn	20 13 32.9	+0.8
	baz=237						
ECBN	**Changbin**	1.23	210	*e*P	Pn	20 13 31.8	-0.2
	baz=200						
TWQ1	**Liyutan**	1.23	268	*e*P	Pn	20 13 32.9	+0.8
	baz=267						
NSY	**Sanyi**	1.25	272	*e*P	Pn	20 13 33.1	+0.9
	baz=271						
YULB	**Yu-li**	1.25	218	P	Pn	20 13 31.6	-0.7
	baz=225						
TYC	**Yuchr**	1.26	248	*e*P	Pn	20 13 32.8	+0.4
	baz=239						
EYUL	**Yuli**	1.27	216	*e*P	Pn	20 13 32.1	-0.5
	baz=224						
TWF1	**Yuli**	1.28	216	P	Pn	20 13 32.1	-0.6
	baz=224						
TCU	**Taichung**	1.34	260	*e*P	Pn	20 13 35.0	+1.5
	baz=259						
WWF	**Wufeng**	1.35	255	*e*P	Pn	20 13 34.3	+0.8
	baz=266						
WJS	**Zhushan**	1.40	246	*e*P	Pn	20 13 35.2	+1.0
	baz=257						
YUS	**Yu-Shan**	1.40	230	*e*P	Pn	20 13 35.0	+0.3
	baz=229						
FULB	**Fuli**	1.41	213	*e*P	Pn	20 13 34.3	-0.1
	baz=221						
WNT	**Mingjian**	1.41	249	*e*P	Pn	20 13 35.8	+1.4
	baz=259						
CHKT	**Chengkung**	1.46	209	*e*P	Pn	20 13 34.3	-0.8
	baz=199						
CHKT				*e*S	Sn	20 13 51.0	-2.3
	baz=199						
IRIF	**Iriomote-Funau**	1.46	92	P	Pn	20 13 35.1	+0.1
IRIF				S	Sn	20 13 53.1	-0.2
WCHH	**Zhanghua**	1.46	258	*e*P	Pn	20 13 35.9	+0.8
	baz=257						
WYL	**Yuanlin Townsh**	1.48	254	*e*P	Pn	20 13 37.6	+2.4
	baz=263						
ALS	**Alishan**	1.49	234	*e*P	Pn	20 13 36.9	+1.1
	baz=226						
ECS	**Chishang**	1.53	213	*e*P	Pn	20 13 36.0	-0.1
	baz=212						
ELDTW	**Lidau**	1.57	221	*e*P	Pn	20 13 36.5	-0.1
	baz=214						
ELDTW				*e*S	Sn	20 13 55.1	-0.9
	baz=214						
HATJ	**Hateruma jima**	1.57	102	P	Pn	20 13 37.8	+1.3
HATJ				S	Sn	20 13 57.4	+1.5
WGK	**Gukeng**	1.59	244	*e*P	Pn	20 13 37.7	+0.9
	baz=234						
WGK				*e*S	Sn	20 13 59.2	+2.7
	baz=234						
EDH	**Donghe**	1.60	208	*e*P	Pn	20 13 35.9	-1.1
	baz=218						
EDH				*e*S	Sn	20 13 55.6	-1.0
	baz=218						
WDLH	**Douliu**	1.61	245	*e*P	Pn	20 13 38.2	+1.1
	baz=258						
WDLH				*e*S	Sn	20 13 60.0	+3.1
	baz=258						
WRL	**Guolierlin Hig**	1.67	253	*e*P	Pn	20 13 38.0	+0.2
	baz=261						
JKRS	**Kuro-shima**	1.72	95	P	Pn	20 13 39.3	+0.7
JKRS				S	Sn	20 14 00.3	+0.7
STYH	**Taoyuan**	1.73	226	*e*P	Pn	20 13 39.7	+1.0
	baz=225						
STYH				*e*S	Sn	20 14 01.1	+1.2
	baz=225						
WTK	**Tuku**	1.73	247	*e*P	Pn	20 13 39.9	+1.1
	baz=246						
LONT	**Longtian**	1.74	212	*e*P	Pn	20 13 38.3	-0.5
	baz=211						
TPUB	**Ta-pu**	1.75	232	*e*P	Pn	20 13 40.4	+1.5
	baz=231						
STYT	**Tauyuan**	1.75	226	*e*P	Pn	20 13 40.0	+1.0
	baz=217						
CHY	**Chiayi**	1.79	241	*e*P	Pn	20 13 39.5	0.0
	baz=252						
WTP	**Ta-pu**	1.79	231	*e*P	Pn	20 13 41.0	+1.4
	baz=230						
LDUT	**Ludao**	1.81	200	*e*P	Pn	20 13 38.6	-1.2
	baz=199						
LDUT				*e*S	Sn	20 13 59.8	-1.9
	baz=199						
TWG	**Pinlang**	1.84	212	*e*P	Pn	20 13 39.1	-1.1
	baz=211						
JIJ	**Ishigaki jima**	1.84	90	P	Pn	20 13 40.2	+0.1
JIJ				S	Sn	20 14 01.5	-0.9
TWK	**Hsinying**	1.87	234	*e*P	Pn	20 13 42.3	+1.7
	baz=233						
TWK				*e*S	Sn	20 14 05.7	+2.5
	baz=233						
CHN1	**Nanshi**	1.89	231	*e*P	Pn	20 13 42.7	+1.8
	baz=231						
CHN1				*e*S	Sn	20 14 06.3	+2.5
	baz=231						
SNST	**Tainan City**	1.89	232	*e*P	Pn	20 13 41.5	+0.6
	baz=232						
WSL	**Shuilin Townsh**	1.94	244	*e*P	Pn	20 13 42.6	+1.1
	baz=254						
ICHU	**Yijhu**	1.98	239	*e*P	Pn	20 13 44.0	+2.0
	baz=228						
JISG	**Ishigakijimahi**	2.00	84	P	Pn	20 13 42.4	+0.1
ECL	**Taimali**	2.08	211	*e*P	Pn	20 13 42.3	-1.1
	baz=210						
SSD	**Sandimen**	2.13	220	*e*P	Pn	20 13 44.5	+0.4
	baz=219						
TSMG	**Majia**	2.16	219	*e*P	Pn	20 13 46.3	+1.8
	baz=219						
MASBT	**Mashibuluo**	2.24	218	*e*P	Pn	20 13 46.2	+0.7
	baz=218						
EAST	**Anshuo**	2.32	211	*e*P	Pn	20 13 46.9	+0.2
	baz=203						
TAWH	**Dawu Township**	2.34	209	*e*P	Pn	20 13 46.2	-0.6
	baz=209						
JTJ	**Tarama**	2.36	83	P	Pn	20 13 47.9	+0.7
JTJ				S	Sn	20 14 14.9	-0.2
SSPT	**Xinbi**	2.38	217	*e*P	Pn	20 13 49.7	+2.2
	baz=217						
LAY	**Lan-yu**	2.40	193	*e*P	Pn	20 13 47.0	-0.8
	baz=186						
LYUB	**Lan-yu**	2.43	192	*e*P	Pn	20 13 47.1	-1.1
	baz=191						
SCZT	**Fangliau**	2.44	215	*e*P	Pn	20 13 50.7	+2.4
	baz=214						
SLIU	**Shizi**	2.48	210	*e*P	Pn	20 13 48.8	-0.1
	baz=209						
PNG	**Penghu**	2.49	251	*e*P	Pn	20 13 48.7	-0.3
	baz=250						
PHUB	**P'eng-hu**	2.49	250	*e*P	Pn	20 13 48.1	-0.9
	baz=251						
PHUB				*e*S	Sn	20 14 16.1	-2.2
	baz=251						
VWUC	**VWUC**	2.51	284	P	Pn	20 13 48.7	-0.5
	baz=286						
VWUC				*e*S	Sn	20 14 15.9	-2.8
	baz=286						
WDGT	**Dungji**	2.52	244	*e*P	Pn	20 13 50.4	+1.0
	baz=242						
TWKBT	**Hengchun**	2.72	207	*e*P	Pn	20 13 52.0	-0.1
	baz=200						
VCHM	**Qimei**	2.73	245	*e*P	Pn	20 13 52.7	+0.3
	baz=234						
JIRB	**Irabujima**	2.81	80	*e*P	Pn	20 13 54.4	+1.1
JIRB				S	Sn	20 14 26.3	+0.3
PTMZ	**Houxiangcun**	2.81	284	*e*P	Pn	20 13 52.7	-0.6
	baz=286						
PTMZ				*e*S	Sn	20 14 23.1	-3.0
	baz=286						
XPSS	**Dashiqiu**	3.08	326	*e*P	Pn	20 13 56.2	-0.8
	baz=337						
KNMB	**Chin-men Tao**	3.41	272	*e*P	Pn	20 14 00.4	-1.1
	baz=273						
AXDP	**Jialang**	3.82	279	*e*P	Pn	20 14 06.6	-0.5
	baz=280						
ZPLA	**Ao Xicun**	4.02	264	*e*P	Pn	20 14 09.6	-0.4
	baz=262						

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*IDC **15** 20:17:14.8±13.0, 14°.96S×165°.83E, h0^{km}, mb3.9/3, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=233.9km s-min=37.0km az=56.0*

*NOU **15** 20:17:16.2, 14°.75S×167°.37E, h89^{km}, MLv4.7/12, Vanuatu Islands*

ISC 15 20:17:13.1±2.1**, 14°.6S**±0°.2×**166°.6E**±0°.2**, h35^{km}, n12, σ1^{s}41**/13**, mb4.0**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	1.05	145	P	Pn	20 17 33.6	+2.3
DVP	**Devils Point**	3.48	154	P	Pn	20 18 02.6	-2.2
LIFNC	**LIFOU**	6.19	174	P	Pn	20 18 42.1	+0.1
YATNC	**Mamie plateau,**	7.44	178	P	Pn	20 19 00.3	+1.1
DZM	**Mont Dzumac**	7.44	181	Pn	Pn	20 19 00.2	+0.8
	2.0nm,0.3s,baz=300,slow=22,SNR=23						
DZM				Sn	Sn	20 20 21.8	-0.8
	2.7nm,0.3s,baz=309,slow=23,SNR=8.3						
	9.6nm,0.5s						
DZM	**Mont Dzumac**	7.44	181	P	Pn	20 18 59.7	+0.3
NOUC	**Port Laguerre**	7.48	182	P	Pn	20 19 01.7	+2.0
ONTNC	**Ouen Toro**	7.68	181	P	Pn	20 19 03.8	+1.3
OUENC	**Ouen Island, N**	7.79	178	P	Pn	20 19 05.2	+1.1
STKA	**Stephens Creek**	28.58	229	P	P	20 23 05.7	-0.3
	2.2nm,0.6s,baz=58,slow=8.9,SNR=13						
	2.2nm,0.6s						
WRA	**Warramunga Arr**	31.21	256	P	P	20 23 29.3	-0.2
	0.3nm,0.4s,baz=85,slow=9.0,SNR=1.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	32.10	249	P	P	20 23 36.9	-0.4
	1.1nm,0.5s,baz=78,slow=9.0,SNR=33						
	1.1nm,0.5s						

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*JMA **15** 20:17:14.1±0.3, 24°N±1°×12°2E±°, h20^{km}±1^{km}, TAIWAN REGION*

*TAP **15** 20:17:15.8, 24°.20N×121°.74E, h11^{km}, ML2.9, D*

ISC 15 20:17:16.0±0.9**, 24°.20N**±0°.03×**121°.68E**±0°.04**, h17^{km}**±5^{km}**, n30, σ1^{s}06**/41**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	0.07	237	P	Pg	20 17 19.5	+0.1
	baz=248						
ETL				S	Sg	20 17 21.9	+0.4
	baz=248						
NACB	**Ninganchiao**	0.08	255	P	Pg	20 17 19.7	+0.3
	baz=258						
NACB				S	Sg	20 17 22.3	+0.6
	baz=258						
EHP	**Heping Village**	0.13	25	P	Pg	20 17 19.4	-0.5
	baz=5.0						
EHP				*e*S	Sg	20 17 21.9	-0.6
	baz=5.0						
TWD	**Chiawan**	0.14	215	P	Pg	20 17 20.2	+0.2
	baz=225						
TWD				S	Sg	20 17 23.5	+0.7
	baz=225						
ETLH	**Xiulin Townshi**	0.18	274	P	Pb	20 17 21.6	+0.5
	baz=271						
ENA	**Nanau**	0.24	13	P	Pg	20 17 21.2	-0.3
	baz=2.0						
ENA				S	Sg	20 17 24.9	-0.3
	baz=2.0						
EWUT	**Wuta**	0.26	19	P	Pg	20 17 21.6	-0.3
	baz=8.0						
EWUT				S	Sg	20 17 25.4	-0.6
	baz=8.0						
NNSB	**Datong**	0.36	310	P	Pn	20 17 24.7	-1.8
	baz=305						
NNSB				*e*S	Sb	20 17 30.4	+1.0
	baz=305						
LATG	**Datong**	0.37	337	P	Pb	20 17 24.4	+0.2
	baz=329						
LATG				*e*S	Sb	20 17 30.4	+0.7
	baz=329						
NNS	**Nan Shan**	0.37	311	P	Pn	20 17 24.9	-1.8
	baz=306						
NNS				S	Sb	20 17 30.7	+0.9
	baz=306						
WHF	**Hehuan Shan**	0.39	263	P	Pn	20 17 25.4	-1.8
	baz=262						
FUSS	**Fushou**	0.41	277	P	Pn	20 17 25.7	-1.6
	baz=276						
NDS	**Dongshan**	0.44	4	P	Pg	20 17 25.3	+0.3
	baz=357						
ESL	**Shilin**	0.44	211	P	Pn	20 17 25.5	-2.1
	baz=215						
ENTT	**Nioudou**	0.46	346	P	Pb	20 17 25.9	+0.3
	baz=341						
TWT	**Tachien**	0.47	277	P	Pn	20 17 27.4	-0.7
	baz=275						
CHGB	**Renai**	0.48	254	P	Pn	20 17 27.1	-1.2
	baz=254						
CHGB				S	Sn	20 17 34.7	-1.9
	baz=254						
OWD	**Renai**	0.52	243	P	Pn	20 17 27.5	-1.3
	baz=244						
YHNB	**Yeheng**	0.55	329	P	Pn	20 17 28.0	-1.1
	baz=324						
WUSB	**Renai**	0.56	249	P	Pn	20 17 28.6	-0.7
	baz=249						
NSK	**Sanguang**	0.56	328	P	Pn	20 17 28.2	-1.1
	baz=324						
FUSB	**Fushanzhiwuyua**	0.57	351	P	Pg	20 17 28.0	+0.6
	baz=346						
FUSB				*e*S	Sg	20 17 36.5	+1.5
	baz=346						
EGFH	**Guangfu**	0.57	204	P	Pn	20 17 28.1	-1.3
	baz=208						
VWDT	**VWDT**	0.66	229	P	Pn	20 17 30.1	-0.5
	baz=230						
NFF	**Wufeng Townshi**	0.68	310	P	Pn	20 17 30.5	-0.3
	baz=307						
SSLB	**Suanglung**	0.78	239	P	Pn	20 17 32.4	+0.1
	baz=240						
YULB	**Yu-li**	0.87	204	P	Pn	20 17 32.7	-0.8
	baz=206						
IRIF	**Iriomote-Funau**	1.87	85	S	Sn	20 18 11.7	+1.2
JKRS	**Kuro-shima**	2.12	88	*e*S	Sn	20 18 18.2	+1.6
JIJ	**Ishigaki jima**	2.25	85	*e*S	Sn	20 18 19.1	-0.7

IDC 15 20:33:25.6±2.8**, 3°.46S**×**129°.99E, h0^{km}, mb3.1**/2**, mbtmp3.1**/3**, ML2.7**/1**, MS3.1**/1**, Error ellipse: s-maj=184.7km s-min=30.9km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	10.33	261	LR	LR	20 40 43.6	
	comp=Z,107nm,18.5s,baz=92,slow=42						
WRA	**Warramunga Arr**	16.93	166	Pn	Pn	20 37 22.0	-2.1
	baz=349,slow=13,SNR=1.1						
	0.1nm,0.6s						
ASAR	**Alice Springs**	20.44	170	P	P	20 38 05.8	+0.9
	0.8nm,0.7s,baz=347,slow=11,SNR=11						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	65.29	326	P	P	20 44 09.4	0.0
	0.1nm,0.5s,baz=131,slow=8.0,SNR=2.0						
	0.1nm,0.5s						

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*JMA **15** 20:37:59.2±0.3, 23°N±1°×12°2E±°, h27^{km}, MV2.9/11, TAIWAN REGION*

TAP ***15*** *20:38:00.4, 23°.31N×121°.57E, h42^{km}, ML3.1, B*
ISC 15 20:38:00.2±1.0**, 23°.27N**±0°.02×**121°.64E**±0°.02**, h33**^{km}±2^{km}**,**
n77, σ**0^{s}.83**/139**, 17C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin** baz=273	**0.18**	**284**	⇑*i*P	**Pb**	**20 38 07.4**	**+0.8**
ECBN	baz=273			*i* S	**Sb**	**20 38 12.5**	**+1.5**
HGSD	**Ruisui** baz=324	**0.29**	**318**	⇑*i*P	**Pn**	**20 38 07.7**	**-0.3**
HGSD	baz=324			S	**Sn**	**20 38 13.4**	**+0.7**
EYUL	**Yuli** baz=279	**0.30**	**284**	*i* P	**Pb**	**20 38 08.4**	**+0.4**
EYUL	baz=279			*e*S	**Sb**	**20 38 14.4**	**+1.1**
CHKT	**Chengkung** baz=220	**0.31**	**235**	*e*P	**Pb**	**20 38 07.7**	**-0.3**
CHKT	baz=220			*e*S	**Sb**	**20 38 14.1**	**+0.8**
TWF1	**Yuli** baz=280	**0.32**	**284**	⇓*i*P	**Pb**	**20 38 08.4**	**+0.1**
TWF1	baz=280			*i* S	**Sn**	**20 38 14.2**	**+0.5**
FULB	**Fuli** baz=246	**0.33**	**257**	⇓*i*P	**Pb**	**20 38 08.4**	**+0.1**
FULB	baz=246			S	**Sb**	**20 38 14.6**	**+0.8**
YULB	**Yu-li** baz=288	**0.34**	**291**	⇑*i*P	**Pb**	**20 38 08.4**	**0.0**
YULB	baz=288			S	**Sn**	**20 38 14.1**	**0.0**
EHY	**Hungye** baz=312	**0.37**	**308**	⇑*i*P	**Pb**	**20 38 08.6**	**-0.3**
EHY	baz=312			*i* S	**Sn**	**20 38 14.7**	**-0.5**
ECS	**Chishang** baz=236	**0.42**	**245**	P	**Pb**	**20 38 10.2**	**+0.5**
ECS	baz=236			*e*S	**Sn**	**20 38 18.1**	**+1.4**
EDH	**Donghe** baz=216	**0.43**	**226**	⇑*i*P	**Pb**	**20 38 09.8**	**0.0**
EDH	baz=216			S	**Sn**	**20 38 17.1**	**+0.4**
EGFH	**Guangfu** baz=340	**0.44**	**334**	⇑*i*P	**Pb**	**20 38 09.4**	**-0.4**
EGFH	baz=340			*e*S	**Sb**	**20 38 16.4**	**-0.1**
TEGC	**Jichi Village** baz=358	**0.44**	**348**	*i* P	**Pb**	**20 38 09.8**	**-0.2**
TEGC	baz=358			S	**Sb**	**20 38 16.9**	**+0.3**
ESL	**Shilin** baz=347	**0.57**	**341**	⇑*i*P	**Pn**	**20 38 10.7**	**-1.2**
ESL	baz=347			*e*S	**Sn**	**20 38 19.3**	**-0.9**
ELDTW	**Lidau** baz=256	**0.58**	**262**	⇓*i*P	**Pn**	**20 38 11.2**	**-0.9**
ELDTW	baz=256			S	**Sn**	**20 38 18.8**	**-1.7**
TEYL	**Yanliau Villag** baz=3.0	**0.59**	**356**	⇑*i*P	**Pn**	**20 38 12.1**	**-0.1**
TEYL	baz=3.0			*e*S	**Sb**	**20 38 21.1**	**+0.6**
LONT	**Longtian** baz=225	**0.59**	**232**	⇓*i*P	**Pn**	**20 38 11.7**	**-0.5**
LONT	baz=225			S	**Sn**	**20 38 20.2**	**-0.6**
LDUT	**Ludao** baz=188	**0.62**	**195**	⇑*i*P	**Pn**	**20 38 12.1**	**-0.5**
LDUT	baz=188			S	**Sn**	**20 38 20.9**	**-0.4**
VWDT	**VWDT** baz=319	**0.66**	**316**	⇑*i*P	**Pn**	**20 38 12.7**	**-0.5**
VWDT	baz=319			*e*S	**Sn**	**20 38 21.9**	**-0.5**
YUS	**Yu-Shan** baz=288	**0.67**	**289**	⇑*i*P	**Pn**	**20 38 13.2**	**-0.5**
TTN	**Taitung** baz=214	**0.69**	**221**	*e*P	**Pn**	**20 38 13.5**	**0.0**
TTN	baz=214			*e*S	**Sb**	**20 38 25.0**	**+1.9**
TWG	**Pinlang** baz=222	**0.69**	**229**	⇓*i*P	**Pn**	**20 38 12.8**	**-0.8**
TWG	baz=222			S	**Sn**	**20 38 22.1**	**-1.0**
HWA	**Hwalien** baz=4.0	**0.70**	**357**	P	**Pn**	**20 38 13.0**	**-0.7**
HWA	baz=4.0			*e*S	**Sn**	**20 38 23.4**	**0.0**
ETM	**Tongmen** baz=354	**0.70**	**349**	P	**Pn**	**20 38 12.7**	**-1.0**
ETM	baz=354			*e*S	**Sn**	**20 38 21.9**	**-1.5**
OWD	**Renai** baz=331	**0.80**	**328**	⇑*i*P	**Pn**	**20 38 14.2**	**-1.0**
OWD	baz=331			*e*S	**Sn**	**20 38 24.5**	**-1.6**
ALS	**Alishan** baz=286	**0.80**	**287**	⇓P	**Pn**	**20 38 15.4**	**0.0**
ALS	baz=286			*e*S	**Sn**	**20 38 25.9**	**-0.4**
STYH	**Taoyuan** baz=260	**0.80**	**263**	⇓P	**Pn**	**20 38 15.0**	**-0.1**
STYH	baz=260			*e*S	**Sn**	**20 38 25.5**	**-0.4**
TWD	**Chiawan** baz=3.0	**0.80**	**357**	P	**Pn**	**20 38 14.2**	**-0.9**
TWD	baz=3.0			*e*S	**Sn**	**20 38 24.8**	**-1.1**
SSLB	**Suanglung** baz=310	**0.81**	**309**	⇑P	**Pn**	**20 38 14.7**	**-0.6**
SSLB	baz=310			*e*S	**Sn**	**20 38 24.7**	**-1.5**
STYT	**Tauyuan** baz=259	**0.82**	**262**	⇓*e*P	**Pn**	**20 38 15.3**	**-0.2**
STYT	baz=259			*e*S	**Sn**	**20 38 26.1**	**-0.4**
WHYT	**Xinyi Township** baz=300	**0.83**	**300**	*e*P	**Pn**	**20 38 15.7**	**0.0**
WUSB	**Renai** baz=329	**0.86**	**326**	⇑*e*P	**Pn**	**20 38 15.4**	**-0.7**
WUSB	baz=329			*e*S	**Sn**	**20 38 26.9**	**-0.7**
ETL	**Fush Village** baz=4.0	**0.88**	**359**	*e*P	**Pn**	**20 38 15.5**	**-0.7**
ETL	baz=4.0			*e*S	**Sn**	**20 38 26.8**	**-1.1**
CHGB	**Renai** baz=334	**0.89**	**332**	⇑P	**Pn**	**20 38 15.9**	**-0.7**
CHGB	baz=334			*e*S	**Sn**	**20 38 27.7**	**-0.7**
NACB	**Ninganchiao** baz=2.0	**0.90**	**357**	*e*P	**Pn**	**20 38 15.4**	**-1.1**
NACB	baz=2.0			*e*S	**Sn**	**20 38 27.1**	**-1.1**
SMLT	**Sun Moon Lake** baz=313	**0.91**	**312**	⇑*e*P	**Pn**	**20 38 16.5**	**-0.2**
SMLT	baz=313			*e*S	**Sn**	**20 38 28.1**	**-0.6**
ECL	**Taimali** baz=218	**0.92**	**223**	P	**Pn**	**20 38 15.7**	**-1.1**
ECL	baz=218			*e*S	**Sn**	**20 38 27.3**	**-1.6**
TPUB	**Ta-pu** baz=269	**0.93**	**272**	*e*P	**Pn**	**20 38 17.3**	**+0.4**
TPUB	baz=269			*e*S	**Sn**	**20 38 29.8**	**+0.8**
WHF	**Hehuan Shan** baz=342	**0.93**	**338**	⇑*e*P	**Pn**	**20 38 16.2**	**-1.2**
WHF	baz=342			*e*S	**Sn**	**20 38 28.7**	**-1.0**
ETLH	**Xiulin Townshi** baz=355	**0.94**	**351**	*e*P	**Pn**	**20 38 15.8**	**-1.4**
ETLH	baz=355			*e*S	**Sn**	**20 38 28.4**	**-1.1**
WTP	**Ta-pu** baz=266	**0.94**	**268**	*e*P	**Pn**	**20 38 17.5**	**+0.4**
WTP	baz=266			*e*S	**Sb**	**20 38 30.9**	**+0.5**
TYC	**Yuchr** baz=313	**0.95**	**311**	*e*P	**Pn**	**20 38 17.2**	**0.0**
SLGT	**Liugui** baz=250	**0.96**	**253**	*e*P	**Pb**	**20 38 18.2**	**-0.1**
WPL	**Puli Township** baz=321	**0.96**	**320**	*e*P	**Pn**	**20 38 17.1**	**-0.3**
SGST	**Jiashian** baz=256	**0.99**	**259**	*e*P	**Pn**	**20 38 17.7**	**0.0**
WJS	**Zhushan** baz=304	**1.00**	**303**	*e*P	**Pn**	**20 38 18.2**	**+0.3**
WJS	baz=304			*e*S	**Sn**	**20 38 31.5**	**+0.7**
DPDB	**Guoxing** baz=321	**1.00**	**319**	*e*P	**Pn**	**20 38 17.9**	**-0.1**
DPDB	baz=321			*e*S	**Sn**	**20 38 31.1**	**+0.2**
CHN1	**Nanshi** baz=263	**1.03**	**265**	*e*P	**Pn**	**20 38 19.0**	**+0.7**
CHN1	baz=263			*e*S	**Sb**	**20 38 32.7**	**0.0**
FUSS	**Fushou** baz=342	**1.03**	**340**	*e*P	**Pn**	**20 38 18.0**	**-0.6**
FUSS	baz=342			*e*S	**Sn**	**20 38 30.2**	**-1.8**
SNST	**Tainan City** baz=265	**1.05**	**267**	*e*P	**Pn**	**20 38 19.2**	**+0.7**
TWK	**Hsinying** baz=267	**1.06**	**270**	*e*P	**Pn**	**20 38 19.2**	**+0.5**
TWK	baz=267			*e*S	**Sn**	**20 38 33.3**	**+1.0**
WNT	**Mingjian** baz=305	**1.06**	**305**	*e*P	**Pn**	**20 38 19.4**	**+0.7**
WNT	baz=305			*e*S	**Sn**	**20 38 33.5**	**+1.1**
TWT	**Tachien** baz=338	**1.06**	**337**	*e*P	**Pn**	**20 38 18.8**	**-0.1**
SSD	**Sandimen** baz=237	**1.07**	**241**	*e*P	**Pn**	**20 38 18.7**	**-0.1**
SSD	baz=237			*e*S	**Sb**	**20 38 33.8**	**0.0**
TSMG	**Majia** baz=235	**1.08**	**238**	*e*P	**Pn**	**20 38 18.8**	**-0.2**
WDLH	**Douliu** baz=292	**1.09**	**292**	*e*P	**Pn**	**20 38 20.2**	**+1.1**
WDLH	baz=292			*e*S	**Sb**	**20 38 34.5**	**0.0**
EAST	**Anshuo** baz=215	**1.15**	**220**	*e*P	**Pn**	**20 38 19.4**	**-0.6**
EAST	baz=215			*e*S	**Sn**	**20 38 33.9**	**-0.7**
ENA	**Nanau** baz=9.0	**1.15**	**5**	*e*P	**Pn**	**20 38 19.4**	**-0.6**
ENA	baz=9.0			*e*S	**Sn**	**20 38 33.8**	**-0.8**
TAWH	**Dawu Township** baz=213	**1.16**	**217**	*e*P	**Pn**	**20 38 19.5**	**-0.5**
TAWH	baz=213			*e*S	**Sn**	**20 38 33.7**	**-1.1**
EWUT	**Wuta** baz=10.0	**1.17**	**6**	*e*P	**Pn**	**20 38 19.7**	**-0.6**
EWUT	baz=10.0			*e*S	**Sn**	**20 38 34.0**	**-1.1**
WHP	**Taichung City** baz=329	**1.18**	**328**	*e*P	**Pn**	**20 38 21.6**	**+1.1**
WHP	baz=329			*e*S	**Sb**	**20 38 37.8**	**+0.6**
NNS	**Nan Shan** baz=351	**1.19**	**348**	*e*P	**Pn**	**20 38 20.1**	**-0.5**
NNS	baz=351			*e*S	**Sn**	**20 38 34.5**	**-1.1**
LAY	**Lan-yu** baz=180	**1.23**	**184**	*e*P	**Pn**	**20 38 20.7**	**-0.4**
LAY	baz=180			*e*S	**Sn**	**20 38 35.6**	**-1.0**
TCU	**Taichung** baz=316	**1.24**	**315**	*e*P	**Pn**	**20 38 22.2**	**+1.0**
TCU	baz=316			*e*S	**Sb**	**20 38 38.5**	**-0.2**
LYUB	**Lan-yu** baz=179	**1.27**	**182**	*e*P	**Pn**	**20 38 20.3**	**-1.2**
LYUB	baz=179			*e*S	**Sn**	**20 38 34.8**	**-2.6**
WCHH	**Zhanghua** baz=310	**1.27**	**309**	*e*P	**Pn**	**20 38 23.0**	**+1.3**
WCHH	baz=310			*e*S	**Sb**	**20 38 39.8**	**0.0**
TWQ1	**Liyutan** baz=325	**1.33**	**324**	*e*P	**Pn**	**20 38 23.5**	**+1.0**
TWQ1	baz=325			*e*S	**Sb**	**20 38 40.7**	**-0.7**
WDJ	**Dajia District** baz=321	**1.41**	**320**	*e*P	**Pn**	**20 38 24.4**	**+0.9**
NFF	**Wufeng Townshi** baz=343	**1.43**	**341**	*e*P	**Pn**	**20 38 24.7**	**+0.8**
JYNG	**Yonagunijimaku**	**1.67**	**45**	P	**Pn**	**20 38 27.9**	**+0.8**
JYNG				*e*S	**Sn**	**20 38 48.0**	**+0.5**
YOJ	**Yonaguni jima** baz=49	**1.73**	**46**	*e*P	**Pn**	**20 38 28.7**	**+0.9**
YOJ	baz=49			*e*S	**Sn**	**20 38 48.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.73**	**46**	*i* P	**Pn**	**20 38 28.7**	**+0.9**
YOJ				*e*S	**Sn**	**20 38 49.7**	**+1.0**
HATJ	**Hateruma jima**	**2.13**	**68**	P	**Pn**	**20 38 34.1**	**+0.7**
IRIF	**Iriomote-Funau**	**2.19**	**61**	P	**Pn**	**20 38 35.6**	**+1.4**
JKRS	**Kuro-shima**	**2.37**	**66**	P	**Pn**	**20 38 37.7**	**+0.9**
JIJ	**Ishigaki jima**	**2.54**	**64**	P	**Pn**	**20 38 39.4**	**+0.3**
JIJ				*e*S	**Sn**	**20 39 08.8**	**0.0**
JTJ	**Tarama**	**3.12**	**63**	P	**Pn**	**20 38 47.2**	**+0.2**
JTJ				*e*S	**Sn**	**20 39 24.4**	**+1.3**
JIRB	**Irabujima**	**3.58**	**64**	*e*P	**Pn**	**20 38 53.5**	**+0.2**

TAP ***15*** *20:38:56.9, 24°.69N×122°.02E, h8^{km}, ML2.7, C*
JMA ***15*** *20:38:57.4±0.1, 24°.7N±0°.4×122°.0E±0°.4, h22^{km}, MV2.2/7,*
TAIWAN REGION
ISC 15 20:38:56.8±0.9**, 24°.63N**±0°.03×**122°.04E**±0°.02**, h10**^{km}±7^{km}**,**
n48, σ**0^{s}.72**/80**, 4C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao** baz=239	**0.17**	**262**	⇓*i*P	**Pg**	**20 39 00.8**	**+0.3**
TWC	baz=239			*i* S	**Sg**	**20 39 03.0**	**0.0**
EGS	baz=336	**0.23**	**336**	*i* P	**Pg**	**20 39 01.1**	**-0.4**
EGS	baz=336			*i* S	**Sg**	**20 39 03.8**	**-1.0**
NTC	**Toucheng** baz=313	**0.29**	**319**	⇑*i*P	**Pg**	**20 39 02.3**	**-0.3**
NDS	**Dongshan** baz=258	**0.29**	**270**	*i* P	**Pg**	**20 39 02.8**	**+0.1**
ILA	**Ilan** baz=286	**0.29**	**297**	P	**Pg**	**20 39 02.6**	**-0.1**
ILA	baz=286			S	**Sg**	**20 39 06.7**	**+0.1**
EWUT	**Wuta** baz=221	**0.30**	**232**	*i* P	**Pg**	**20 39 03.5**	**+0.7**
EWUT	baz=221			*i* S	**Sg**	**20 39 07.6**	**+0.7**
ENA	**Nanau** baz=223	**0.34**	**233**	P	**Pb**	**20 39 04.2**	**-0.6**
ENA	baz=223			*e*S	**Sb**	**20 39 08.9**	**-1.4**
TWE	**Neicheng** baz=275	**0.35**	**285**	⇓*i*P	**Pg**	**20 39 03.6**	**0.0**
TWE	baz=275			*e*S	**Sg**	**20 39 08.1**	**-0.3**
TWB1	**Santiao Chiao** baz=357	**0.38**	**353**	⇑*i*P	**Pg**	**20 39 03.6**	**-0.6**
TWB1	baz=357			*e*S	**Sg**	**20 39 07.6**	**-1.6**
TIPB	**Shuangxi** baz=328	**0.39**	**330**	⇑*i*P	**Pg**	**20 39 04.1**	**-0.4**
TIPB	baz=328			*e*S	**Sg**	**20 39 08.5**	**-1.1**
EHP	**Heping Village** baz=213	**0.42**	**220**	*e*P	**Pb**	**20 39 06.3**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=280	**0.43**	**287**	*e*P	**Pg**	**20 39 05.2**	**0.0**
FUSB	baz=280			*e*S	**Sg**	**20 39 12.0**	**+1.1**
ENTT	**Nioudou** baz=262	**0.43**	**271**	*e*P	**Pg**	**20 39 05.2**	**0.0**
ENTT	baz=262			*e*S	**Sg**	**20 39 11.5**	**+0.6**
LATG	**Datong** baz=251	**0.47**	**258**	P	**Pg**	**20 39 06.5**	**+0.4**
LATG	baz=251			*e*S	**Sb**	**20 39 13.4**	**-1.0**
NDT	**Datong Townshi** baz=259	**0.48**	**266**	*e*P	**Pg**	**20 39 06.3**	**+0.2**
NDT	baz=259			*e*S	**Sb**	**20 39 13.7**	**-0.6**
NWF	**Wu-fen Shan** baz=330	**0.49**	**332**	*e*P	**Pg**	**20 39 06.4**	**-0.1**
NWF	baz=330			*e*S	**Sg**	**20 39 13.3**	**+0.3**
WFSB	**Wu-fen Shan** baz=330	**0.49**	**332**	*e*P	**Pg**	**20 39 06.4**	**0.0**
WFSB	baz=330			*e*S	**Sg**	**20 39 13.2**	**+0.3**
NWLT	**Wulai** baz=280	**0.51**	**287**	*e*P	**Pg**	**20 39 06.6**	**-0.1**
NWLT	baz=280			*e*S	**Sg**	**20 39 14.0**	**+0.6**
TNOU	**National Taiwa** baz=334	**0.57**	**335**	*e*P	**Pg**	**20 39 07.6**	**-0.2**
TNOU	baz=334			*e*S	**Sg**	**20 39 14.3**	**-1.0**
NHDH	**Xindian Distri** baz=301	**0.57**	**305**	*e*P	**Pg**	**20 39 08.0**	**+0.2**
NHDH	baz=301			*e*S	**Sg**	**20 39 15.1**	**-0.2**
YHNB	**Yeheng** baz=268	**0.60**	**274**	*e*P	**Pg**	**20 39 08.6**	**+0.1**
YHNB	baz=268			*e*S	**Sg**	**20 39 16.8**	**+0.3**
ETL	**Fush Village** baz=214	**0.60**	**219**	*e*P	**Pb**	**20 39 09.0**	**-0.4**
ETL	baz=214			*e*S	**Sb**	**20 39 18.0**	**0.0**
TATO	**Taipei** baz=301	**0.60**	**304**	*e*P	**Pg**	**20 39 08.5**	**0.0**
NACB	**Ninganchiao** baz=217	**0.61**	**222**	*e*P	**Pb**	**20 39 09.2**	**-0.3**
NACB	baz=217			*e*S	**Sb**	**20 39 17.6**	**-0.5**
NSK	**Sanguang** baz=268	**0.62**	**274**	*e*P	**Pg**	**20 39 09.1**	**+0.3**
NSK	baz=268			*e*S	**Sg**	**20 39 16.7**	**-0.2**
NNSB	**Datong** baz=245	**0.63**	**251**	*e*P	**Pb**	**20 39 09.2**	**-0.7**
NNSB	baz=245			*e*S	**Sb**	**20 39 18.9**	**+0.1**
NNS	**Nan Shan** baz=246	**0.64**	**253**	*e*P	**Pb**	**20 39 09.9**	**-0.1**
NNS	baz=246			*e*S	**Sb**	**20 39 18.8**	**-0.2**
BACT	**New Taipei Cit** baz=300	**0.65**	**304**	*e*P	**Pg**	**20 39 10.4**	**+1.0**
ETLH	**Xiulin Townshi** baz=225	**0.66**	**230**	*e*P	**Pb**	**20 39 10.3**	**-0.2**
ETLH	baz=225			*e*S	**Sb**	**20 39 18.4**	**-1.3**
YM01	**YM01** baz=318	**0.66**	**320**	⇑P	**Pg**	**20 39 09.9**	**+0.3**
YM01	baz=318			*e*S	**Sg**	**20 39 18.2**	**-0.1**
TWD	**Chiawan** baz=212	**0.68**	**216**	*e*P	**Pb**	**20 39 10.6**	**-0.1**
YM08	**YM08** baz=322	**0.69**	**324**	*e*P	**Pg**	**20 39 09.9**	**-0.1**
TWS1	**Kuangyinshan** baz=307	**0.73**	**310**	*e*P	**Pg**	**20 39 11.6**	**+0.7**
TWS1	baz=307			*e*S	**Sg**	**20 39 21.1**	**+0.6**
FUSS	**Fushou** baz=238	**0.82**	**242**	*e*P	**Pb**	**20 39 13.3**	**0.0**
ETM	**Tongmen** baz=213	**0.83**	**217**	*e*P	**Pb**	**20 39 13.4**	**+0.1**
NFF	**Wufeng Townshi** baz=266	**0.84**	**270**	*e*P	**Pn**	**20 39 14.9**	**+0.3**
NCU	**National Centr** baz=290	**0.84**	**294**	*e*P	**Pb**	**20 39 15.3**	**+1.8**
NCU	baz=290			*e*S	**Sb**	**20 39 27.6**	**+2.8**
JYNG	**Yonagunijimaku**	**0.85**	**102**	P	**Pg**	**20 39 13.6**	**+0.5**
JYNG				S	**Sg**	**20 39 25.2**	**+1.0**
WHF	**Hehuan Shan** baz=231	**0.86**	**236**	*e*P	**Pb**	**20 39 14.0**	**+0.1**
WHF	baz=231			*e*S	**Sn**	**20 39 26.5**	**-1.5**
NJD	**Zhudong** baz=273	**0.87**	**277**	*e*P	**Pn**	**20 39 16.2**	**+1.2**
YOJ	**Yonaguni jima** baz=104	**0.90**	**101**	*e*P	**Pg**	**20 39 14.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.90**	**101**	P	**Pg**	**20 39 14.5**	**+0.3**
YOJ				*e*S	**Sg**	**20 39 27.0**	**+1.1**
LIOB	**Emei** baz=267	**0.93**	**271**	*e*P	**Pn**	**20 39 16.7**	**+0.9**
NSTT	**Nanjuang** baz=266	**0.94**	**270**	*e*P	**Pb**	**20 39 16.2**	**+1.0**
CHGB	**Renai** baz=231	**0.97**	**234**	*e*P	**Pn**	**20 39 16.4**	**-0.3**
CHGB	baz=231			*e*S	**Sn**	**20 39 30.0**	**-0.6**
ESL	**Shilin** baz=211	**0.98**	**214**	*e*P	**Pn**	**20 39 16.0**	**-0.6**
IRIF	**Iriomote-Funau**	**1.57**	**101**	*e*S	**Sn**	**20 39 44.3**	**-0.7**
JKRS	**Kuro-shima**	**1.84**	**102**	P	**Pn**	**20 39 28.7**	**+0.3**
JKRS				*e*S	**Sn**	**20 39 51.4**	**-0.3**

KRSC 15 20:47:02.9±1.7**, 48°.41N**×**156°.78E, h16**^{km}±37^{km}**, ML3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**3.50**	**13**	*e*P	Pn	20 48 00.1	+3.5
KDTR				*e*S	Sb	20 48 42.4	-4.3
MIPR	**Malaya Ipel'ka**	**3.87**	**360**	*e*P	Pn	20 48 04.5	+2.8
ASAK	**Asacha**	**4.04**	**10**	*e*P	Pn	20 48 07.8	+3.7
MTVR	**Mutnovka**	**4.17**	**12**	*e*P	Pn	20 48 09.4	+3.4
MTVR				*e*S	Sn	20 48 58.6	+4.1
RUS	**Russkaya**	**4.17**	**15**	*e*P	Pn	20 48 09.1	+3.2
RUS				*e*S	Sn	20 48 57.9	+3.6
GRL	**Gorelyy**	**4.23**	**11**	*e*P	Pn	20 48 10.8	+4.1
GRL				*e*S	Sn	20 49 01.1	+5.3
KRMR	**Karymshinskiy**	**4.51**	**10**	*e*P	Pn	20 48 15.4	+5.0
DALK	**Dalny**	**4.79**	**14**	*e*P	Pn	20 48 18.4	+4.1
UGLR	**Uglovaya**	**4.97**	**14**	*e*P	Pn	20 48 21.6	+4.6
AVH	**Avacha**	**5.01**	**14**	*e*P	Pn	20 48 22.8	+5.3
SMAR	**Somma**	**5.02**	**14**	*e*P	Pn	20 48 22.0	+4.3
KOK	**Koryaka**	**5.03**	**13**	*e*P	Pn	20 48 23.3	+5.6
SDLR	**Sedlovina**	**5.05**	**14**	*e*P	Pn	20 48 21.7	+3.7
KRX	**Arik**	**5.09**	**13**	*e*P	Pn	20 48 22.8	+4.2
SPN	**Mys Shipunski**	**5.12**	**22**	*e*P	Pn	20 48 23.9	+5.0
SPN				*e*S	Sn	20 49 23.3	+5.7
MKZ	**Mys Kozlova**	**6.88**	**25**	*e*P	Pn	20 48 48.1	+5.1

TAP 15 20:47:19.9, 24°.20N×**121°.75E, h13**^{km}**, ML2.2, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village** baz=357	**0.11**	**354**	P	Pb	20 47 23.6	-0.3
EHP	baz=357			S	Sb	20 47 26.4	-0.1
ETL	**Fush Village** baz=249	**0.13**	**249**	P	Pb	20 47 23.9	-0.4
ETL	baz=249			S	Sb	20 47 26.7	-0.4
NACB	**Ninganchiao** baz=258	**0.15**	**258**	*i* P	Pg	20 47 24.1	+0.5
NACB	baz=258			S	Sb	20 47 27.1	-0.6
TWD	**Chiawan** baz=228	**0.19**	**229**	P	Pg	20 47 24.6	+0.4
TWD	baz=228			S	Sb	20 47 28.1	-0.8
ENA	**Nanau** baz=358	**0.22**	**357**	*i* P	Pb	20 47 25.4	-0.5
ENA	baz=358			S	Sb	20 47 29.2	-0.6
EWUT	**Wuta** baz=5.0	**0.24**	**5**	*i* P	Pb	20 47 25.7	-0.5
EWUT	baz=5.0			S	Sb	20 47 29.7	-0.6
ETLH	**Xiulin Townshi** baz=270	**0.25**	**271**	P	Pb	20 47 25.9	-0.5
ETLH	baz=270			S	Sb	20 47 30.2	-0.4
HWA	**Hwalien** baz=209	**0.26**	**211**	*e*P	Pb	20 47 27.0	+0.5
HWA	baz=209			*e*S	Sb	20 47 32.1	+1.1
LATG	**Datong** baz=327	**0.39**	**328**	*i* P	Pb	20 47 28.6	-0.2

LATG				*i* S	Sb	20 47 34.6	-0.1
	baz=327						
NNSB	**Datong**	**0.41**	**303**	*i* P	Pb	20 47 28.9	-0.1
	baz=303						
NNSB				S	Sb	20 47 35.1	-0.1
	baz=303						
TWC	**Suao**	**0.41**	**12**	P	Pb	20 47 28.8	-0.3
	baz=13						
TWC				S	Sb	20 47 34.6	-0.7
	baz=13						
NNS	**Nan Shan**	**0.42**	**304**	P	Pb	20 47 29.1	-0.2
	baz=304						
NNS				S	Sb	20 47 35.4	-0.2
	baz=304						
NDS	**Dongshan**	**0.43**	**355**	P	Pb	20 47 29.3	-0.1
	baz=355						
NDS				S	Sb	20 47 35.6	-0.2
	baz=355						
WHF	**Hehuan Shan**	**0.45**	**263**	P	Pb	20 47 29.6	-0.4
	baz=262						
WHF				S	Sb	20 47 36.3	-0.5
	baz=262						
ENTT	**Nioudou**	**0.47**	**338**	P	Pb	20 47 30.1	0.0
	baz=339						
ENTT				S	Sb	20 47 36.9	0.0
	baz=339						
FUSS	**Fushou**	**0.47**	**275**	*e*P	Pb	20 47 30.3	+0.1
	baz=275						
FUSS				*e*S	Sb	20 47 37.5	+0.4
	baz=275						
ESL	**Shilin**	**0.49**	**217**	P	Pg	20 47 29.9	+0.4
	baz=216						
ESL				*e*S	Sb	20 47 37.4	0.0
	baz=216						
TWE	**Neicheng**	**0.52**	**351**	P	Pb	20 47 31.1	+0.1
	baz=352						
TWE				*e*S	Sb	20 47 38.5	+0.1
	baz=352						
TWT	**Tachien**	**0.53**	**275**	*e*P	Pb	20 47 31.7	+0.5
	baz=274						
TWT				*e*S	Sb	20 47 39.5	+0.6
	baz=274						
TDCB	**Techi**	**0.55**	**275**	*e*P	Pb	20 47 31.8	+0.3
	baz=275						
TDCB				*e*S	Sb	20 47 39.1	-0.2
	baz=275						
CHGB	**Renai**	**0.55**	**255**	*e*P	Pb	20 47 31.5	-0.1
	baz=254						
CHGB				*e*S	Sb	20 47 39.2	-0.3
	baz=254						
FUSB	**Fushanzhiwuyua**	**0.57**	**345**	*e*P	Pb	20 47 32.2	+0.3
	baz=344						
FUSB				*e*S	Sb	20 47 40.1	+0.1
	baz=344						
YHNB	**Yeheng**	**0.58**	**323**	*e*P	Pb	20 47 32.3	+0.3
	baz=323						
YHNB				*e*S	Sb	20 47 40.4	+0.3
	baz=323						
OWD	**Renai**	**0.58**	**245**	*e*P	Pb	20 47 32.3	+0.2
	baz=244						
OWD				*e*S	Sb	20 47 41.4	+1.0
	baz=244						
NSK	**Sanguang**	**0.59**	**323**	P	Pb	20 47 32.4	+0.2
	baz=322						
NSK				*e*S	Sb	20 47 40.9	+0.4
	baz=322						
EGFH	**Guangfu**	**0.61**	**209**	*e*P	Pb	20 47 32.3	-0.2
	baz=209						
EGFH				*e*S	Sb	20 47 41.7	+0.8
	baz=209						
NWLT	**Wulai**	**0.61**	**338**	*e*P	Pb	20 47 32.9	+0.3
	baz=338						
NWLT				*e*S	Sb	20 47 41.8	+0.6
	baz=338						
WUSB	**Renai**	**0.62**	**250**	*e*P	Pb	20 47 32.8	+0.1
	baz=250						
WUSB				*e*S	Sb	20 47 41.3	0.0
	baz=250						
VWDT	**VWDT**	**0.72**	**231**	*e*P	Pb	20 47 34.4	+0.1
	baz=231						
VWDT				*e*S	Sb	20 47 44.8	+0.8
	baz=231						
NFF	**Wufeng Townshi**	**0.72**	**306**	*e*P	Pn	20 47 35.2	-0.6
	baz=306						
NFF				*e*S	Sb	20 47 44.9	+0.7
	baz=306						
TIPB	**Shuangxi**	**0.77**	**5**	*e*P	Pb	20 47 35.6	+0.5
	baz=4.0						
TIPB				*e*S	Sb	20 47 45.7	+0.2
	baz=4.0						
HGSD	**Ruisui**	**0.77**	**203**	*e*P	Pn	20 47 36.0	-0.5
	baz=203						
HGSD				*e*S	Sn	20 47 47.7	-0.2
	baz=203						
EHY	**Hungye**	**0.80**	**210**	*e*P	Pg	20 47 35.1	-0.3
	baz=209						
EHY				*e*S	Sb	20 47 46.7	+0.3
	baz=209						
NSTT	**Nanjuang**	**0.81**	**302**	*e*P	Pn	20 47 37.1	+0.1
	baz=301						
NSTT				*e*S	Sn	20 47 48.2	-0.7
	baz=301						
SSLB	**Suanglung**	**0.84**	**241**	*e*P	Pb	20 47 36.7	+0.3
	baz=240						
SSLB				*e*S	Sb	20 47 48.0	+0.3
	baz=240						
SMLT	**Sun Moon Lake**	**0.84**	**248**	*e*P	Pn	20 47 37.2	-0.4
	baz=247						
SMLT				*e*S	Sn	20 47 49.0	-1.0
	baz=247						
YULB	**Yu-li**	**0.91**	**207**	*e*P	Pg	20 47 36.4	-1.1
	baz=207						
YULB				*e*S	Sb	20 47 49.5	-0.1
	baz=207						
YM01	**YM01**	**0.95**	**350**	*e*P	Pn	20 47 39.3	+0.2
	baz=349						
YM01				*e*S	Sn	20 47 52.5	0.0
	baz=349						
YUS	**Yu-Shan**	**1.02**	**226**	*e*P	Pg	20 47 39.6	-0.1
	baz=225						
YUS				*e*S	Sn	20 47 54.8	0.0
	baz=225						
ALS	**Alishan**	**1.11**	**232**	*e*P	Pg	20 47 41.4	0.0
	baz=231						
ALS				*e*S	Sn	20 47 57.9	+1.1
	baz=231						
ELDTW	**Lidau**	**1.22**	**214**	*e*P	Pn	20 47 41.8	-1.0
	baz=213						
ELDTW				*e*S	Sg	20 47 59.4	+0.2
	baz=213						

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*IDC **15** 20:47:26.4±4.4, 6°.15S×129°.91E, h58^{km}±55^{km}, mb3.0/3, mbtmp3.5/6, ML3.7/3, Error ellipse: s-maj=82.3km s-min=24.7km az=81.0*

ISC 15 20:47:20.7±1.0, **6°.21S**±0°.08×**130°.6E**±0°.3, **h35**^{km}**, n6,** σ**0^s.81**/7, **mb3.4**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.34**	**7**	P	Pn	20 48 44.6	+6.5
	2.6nm,0.3s,baz=113,slow=1.9,SNR=28						
SIJI				S	**Sn**	**20 49 38.1**	**-0.4**
	5.1nm,0.2s,baz=168,slow=21,SNR=7.9						
	6.0nm,0.3s						
WRA	**Warramunga Arr**	**14.12**	**166**	P	**P**	**20 50 45.0**	**-0.5**
	0.3nm,0.3s,baz=342,slow=13,SNR=24						
WRA				S	**Sn**	**20 53 14.1**	**+0.2**
	1.6nm,0.5s,baz=349,slow=20,SNR=12						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.64**	**170**	P	P	20 51 31.8	+7.2
	0.2nm,0.3s,baz=350,slow=11,SNR=18						
ASAR				S	**Sn**	**20 54 40.0**	**+0.5**
	0.7nm,0.5s,baz=355,slow=26,SNR=7.1						
	0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**39.71**	**309**	P	**P**	**20 54 49.6**	**-0.5**
	0.2nm,0.4s,baz=131,slow=6.5,SNR=2.8						
	0.2nm,0.4s						
SONM	**Songino Array**	**57.90**	**341**	P	**P**	**20 57 10.6**	**+1.3**
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.91**	**326**	P	**P**	**20 58 15.7**	**-0.2**
	0.2nm,0.5s,baz=142,slow=7.2,SNR=4.2						
	0.2nm,0.5s						

JMA 15 20:47:33.8±0.1, **24°.1N**±0°.6×**124°.0E**±0°.5, **h12**^{km}±1^{km}, **MV0.8**/7, **NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.13**	**6**	*i* P	Pg	20 47 37.2	+0.1
JKRS				*e*S	Sg	20 47 39.4	0.0
HATJ	**Hateruma jima**	**0.18**	**254**	*i* P	Pg	20 47 37.8	0.0
HATJ				*e*S	Sg	20 47 41.0	+0.4
JIJ	**Ishigaki jima**	**0.29**	**28**	*i* P	Pg	20 47 39.8	+0.1
IRIF	**Iriomote-Funau**	**0.33**	**313**	*e*P	Pg	20 47 40.5	0.0
JTJ	**Tarama**	**0.84**	**50**	*e*P	Pb	20 47 50.3	+0.1
JTJ				*e*S	Sb	20 48 01.8	+0.4

IDC 15 20:59:37.1±1.8, **6°.65S**×**129°.13E**, **h0**^{km}, **mb3.6**/2, **mbtmp3.7**/4, **ML3.9**/2, **Error ellipse: s-maj=117.7km s-min=29.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.15**	**160**	Pn	Pn	21 02 58.8	-0.2
	0.6nm,0.3s,baz=338,slow=13,SNR=21						
WRA				Sn	Sn	21 05 23.8	-13
	0.8nm,0.3s,baz=335,slow=23,SNR=5.9						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**17.53**	**165**	P	Pn	21 03 43.3	+0.2
	0.4nm,0.3s,baz=337,slow=9.4,SNR=36						
ASAR				S	Sn	21 06 43.3	-16
	0.4nm,0.4s,baz=318,slow=17,SNR=2.5						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	21 10 35.0	+0.2
	0.2nm,0.3s,baz=122,slow=6.7,SNR=6.4						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**71.76**	**329**	P	P	21 11 01.1	-0.1
	0.5nm,0.5s,baz=127,slow=5.9,SNR=5.9						
	0.5nm,0.5s						

IDC 15 21:09:21.2±5.6, **22°.07S**×**178°.28W**, **h0**^{km}, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=260.2km s-min=34.8km az=149.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.92**	**258**	P	P	21 17 29.3	-0.9
	0.3nm,0.4s,baz=86,slow=9.1,SNR=7.6						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.15**	**264**	P	P	21 17 32.5	+0.5
	0.6nm,0.5s,baz=102,slow=7.7,SNR=11						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**89.89**	**13**	P	P	21 22 21.2	-0.5
	0.2nm,0.8s,baz=227,slow=6.1,SNR=2.5						
	0.2nm,0.8s						
YKA	**Yellowknife Ar**	**98.04**	**25**	P	Pdif	21 22 59.4	+0.3
	0.2nm,0.7s,baz=236,slow=4.4,SNR=3.0						
	0.2nm,0.7s						

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*IDC **15** 21:27:28.8±0.5, 36°.74N×23°.05E, h0^{km}, mb4.1/28, mbtmp4.1/40, ML3.5/10, MS3.6/38, Error ellipse: s-maj=11.1km s-min=10.3km az=6.0*

*MOS **15** 21:27:29.7±1.2, 36°.65N×22°.88E, h17^{km}, mb4.4/14, Error ellipse: s-maj=5.7km s-min=3.6km az=82.8*

*ISK **15** 21:27:29.9, 36°.75N×22°.93E, h3^{km}, ML4.3/18*

*TIR **15** 21:27:29.7, 36°.91N×23°.66E, h30^{km}±1^{km}, Md5.0, Ml4.6*

*NEIC **15** 21:27:30.3±1.9, 36°.70N±0°.05×22°.91E±0°.06, h6^{km}±5^{km}, mb4.4/39, Mwr4.3/12, ML4.2(ATH), Error ellipse: s-maj=9.4km s-min=4.6km az=221.0*

*NEIC **15** 21:27:30.2, 36°.70N×22°.91E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.88; M$_{\theta\theta}$-1.07; M$_{\phi\phi}$2.95; M$_{r\theta}$1.42; M$_{\theta\phi}$0.37; M$_{\phi r}$-1.95; Fault plane solution: M$_0$3.56000×10^{15} NP1:φ$_s$335.66000°, δ70.68000°, λ-120.69000°. NP2:φ$_s$216.51000°, δ35.76000°, λ-34.49000°. Principal axes: T 3.6411, Plg20.0000°, Azm88.0000°; N -0.1760, Plg29.0000°, Azm347.0000°; P -3.4652, Plg54.0000°, Azm208.0000°;*

*IASPEI **15** 21:27:31.3±0.9, 36°.70N±0°.02×22°.86E±0°.03, h15^{km}±5^{km}, mb4.4/73, MS3.6/32 Error ellipse: s-maj=4.6km s-min=3.4km az=65.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*PDG **15** 21:27:31.5±0.4, 36°.73N×22°.94E, h14^{km}, ML4.3/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*ATH **15** 21:27:31.7, 36°.71N×22°.91E, h17^{km}±1^{km}, ML4.2/23, Error ellipse: s-maj=1.8km s-min=1.0km az=163.0*

*THE **15** 21:27:32.0, 36°.70N×22°.88E, h6^{km}, ML4.2/15, Error ellipse: s-maj=0.6km s-min=0.3km az=200.0*

*MED_RC **15** 21:27:32.0±0.3, 36°.53N×22°.89E, h16^{km}±1^{km}, MW4.6/22, Moment Tensor Solution.Mantle waves: s22,c35; Duration: 1^s.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.71±.08; M$_{\theta\theta}$0.02±.04; M$_{\phi\phi}$0.69±.05; M$_{r\theta}$-0.35±.08; M$_{\theta\phi}$0.03±.03; M$_{\phi r}$-0.65±.09; Best double couple: M$_0$1.01000×10^{16} NP1:φ$_s$20.00000°, δ69.00000°, λ-78.00000°. NP2:φ$_s$169.00000°, δ24.00000°, λ-119.00000°. Principal axes: T 0.9700, Plg23.0000°, Azm101.0000°; N 0.0800, Plg11.0000°, Azm196.0000°; P -1.0600, Plg64.0000°, Azm311.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*HLW **15** 21:27:33.5, 36°.84N×23°.52E, h25^{km}±25^{km}, Md4.4, Ml4.7*

*GII **15** 21:27:34.2±0.0, 36°.27N×23°.32E, h8^{km}, mb4.6/1, MD4.5/1, Mm4.3/9*

ISC 15 21:27:31.3±0.5, **36°.68N**±0°.02×**22°.92E**±0°.02, **h15**^{km}±3^{km}, **n564,** σ**2^s.05**/638, **mb4.4**/73, **MS3.6**/32, **53C-25D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.04**	**24**	P	**Pg**	**21 27 34.5**	**+0.3**
VLI				S	**Sg**	**21 27 36.3**	**+0.2**
VLI				AML	AML	21 27 36.6	
VLI				AML	AML	21 27 37.1	
VLI	**Veliai**	**0.04**	**24**	P	**Pg**	**21 27 34.2**	**0.0**
VLI				S	**Sg**	**21 27 35.0**	**-1.1**
	488µm,0.7s						
MNVA	**Monemvasia**	**0.10**	**87**	P	**Pg**	**21 27 35.7**	**+1.0**
MNVA				S	**Sg**	**21 27 38.0**	**+1.2**
MNVA				AML	AML	21 27 38.5	
MNVA				AML	AML	21 27 38.6	
KTHR	**Kythira**	**0.43**	**171**	P	**Pb**	**21 27 40.8**	**+0.2**
KTHR				AML	AML	21 27 49.0	
KTHR				AML	AML	21 27 49.0	
KTHR	**Kythira**	**0.43**	**171**	P	**Pb**	**21 27 40.8**	**+0.2**
KTHR				S	**Sb**	**21 27 47.9**	**+1.1**
	38µm,0.4s						
KTHA	**Kythira Island**	**0.44**	**165**	P	**Pb**	**21 27 41.2**	**+0.4**
KTHA				S	**Sb**	**21 27 48.0**	**+0.8**
KTHA				AML	AML	21 27 49.9	
	comp=E,71755µm,0.4s						
KTHA				AML	AML	21 27 50.4	
	comp=N,44918µm,0.4s						
KTHA	**Kythira Island**	**0.44**	**165**	P	**Pb**	**21 27 41.0**	**+0.2**
KTHA				S	**Sb**	**21 27 48.1**	**+0.9**
	comp=N,29µm,0.4s						
KRND	**KRANIDI**	**0.72**	**15**	P	**Pb**	**21 27 45.8**	**+0.2**
KRND				AML	AML	21 28 00.8	
	comp=E,50872µm,0.4s						
KRND				AML	AML	21 28 02.3	
	comp=N,29319µm,0.2s						
KRND	**KRANIDI**	**0.72**	**15**	P	**Pb**	**21 27 45.8**	**+0.2**
KRND				S	**Sb**	**21 27 55.4**	**0.0**
	comp=N,20µm,0.3s						
YDRA	**Hydra**	**0.80**	**33**	P	**Pg**	**21 27 47.2**	**+0.3**
YDRA				S	**Sb**	**21 27 58.2**	**+0.7**
YDRA				AML	AML	21 28 02.0	
	comp=E,42241µm,0.2s						
YDRA				AML	AML	21 28 02.5	
	comp=N,80320µm,0.2s						
ITM	**Ithomi**	**0.94**	**302**	P	**Pb**	**21 27 48.0**	**-1.3**
ITM				AML	AML	21 28 04.8	
	comp=N,20299µm,0.4s						
ITM				AML	AML	21 28 05.7	
	comp=E,20472µm,0.6s						
ITM	**Ithomi**	**0.94**	**302**	P	**Pb**	**21 27 48.0**	**-1.3**
ITM				S	**Sg**	**21 28 01.8**	**0.0**
	comp=E,10µm,0.5s						
ITM	**Ithomi**	**0.94**	**302**	PG	**Pb**	**21 27 47.7**	**-1.6**
ITM	**Ithomi**	**0.94**	**302**	Pg	**Pb**	**21 27 48.0**	**-1.3**
ITM				Sg	**Sb**	**21 27 58.8**	**-2.7**
EPID	**Epidavros**	**0.94**	**10**	P	**Pg**	**21 27 49.5**	**-0.2**
EPID				S	**Sb**	**21 28 00.1**	**-1.6**
EPID	**Epidavros**	**0.94**	**10**	P	**Pg**	**21 27 49.5**	**-0.2**
EPID				S	**Sn**	**21 28 03.1**	**-0.2**
	comp=E,18µm,0.4s						
PYL	**PYLOS**	**0.97**	**283**	P	**Pb**	**21 27 48.4**	**-1.4**
PYL				S	**Sb**	**21 28 02.6**	**+0.3**
PYL				AML	AML	21 28 11.1	
	comp=E,16282µm,0.9s						
PYL				AML	AML	21 28 11.1	
	comp=N,11084µm,0.5s						
PYL	**PYLOS**	**0.97**	**283**	P	**Pb**	**21 27 48.3**	**-1.4**
PYL				S	**Sg**	**21 28 03.3**	**+0.5**
	comp=N,8µm,0.9s						
MHLO	**Agia Marina, M**	**1.19**	**89**	P	**Pg**	**21 27 54.4**	**+0.1**
MHLO				AML	AML	21 28 17.2	
	comp=N,54242µm,0.6s						
MHLO				AML	AML	21 28 18.9	
	comp=E,42998µm,0.6s						
MHLO	**Agia Marina, M**	**1.19**	**89**	P	**Pg**	**21 27 54.3**	**-0.1**
RODP	**Rodopos**	**1.31**	**148**	P	**Pb**	**21 27 56.0**	**+0.4**
RODP	**Rodopos**	**1.31**	**148**	PN	**Pg**	**21 27 56.7**	**+0.1**
RODP				SN	**Sg**	**21 28 15.8**	**+2.2**
LTK	**Loutraki**	**1.34**	**2**	P	**Pb**	**21 27 56.5**	**+0.3**
LTK				AML	AML	21 28 20.1	
	comp=N,84998µm,0.8s						
LTK				AML	AML	21 28 22.3	
VLY	**Voula,Athens**	**1.36**	**31**	P	**Pb**	**21 27 56.5**	**0.0**
VLY				S	**Sn**	**21 28 13.2**	**-0.4**
VLY				AML	AML	21 28 20.0	
	comp=N,17082µm,0.4s						
VLY				AML	AML	21 28 21.4	
	comp=E,25565µm,0.6s						
VLY	**Voula,Athens**	**1.36**	**31**	P	**Pn**	**21 27 56.0**	**+0.2**
VLY				S	**Sg**	**21 28 15.9**	**+0.6**
	comp=E,11µm,0.5s						
THAL	**Thalero**	**1.37**	**352**	P	**Pb**	**21 27 56.6**	**0.0**
THAL	**Thalero**	**1.37**	**352**	P	**Pn**	**21 27 56.1**	**+0.3**
THAL				S	**Sg**	**21 28 14.6**	**-0.9**
ATH	**Athens Observa**	**1.44**	**26**	P	**Pb**	**21 27 57.8**	**+0.1**
ATH				AML	AML	21 28 23.1	
	comp=N,17014µm,1.0s						
ATH				AML	AML	21 28 26.1	
	comp=E,10119µm,0.4s						
ATH	**Athens Observa**	**1.44**	**26**	P	**Pb**	**21 27 57.4**	**-0.4**
ATH				S	**Sg**	**21 28 17.3**	**-0.4**
	comp=E,6µm,0.8s						
ATHU	**Athens Univers**	**1.46**	**28**	P	**Pb**	**21 27 57.9**	**-0.2**
ATHU				S	**Sn**	**21 28 15.6**	**-0.3**
ATHU				AML	AML	21 28 23.2	
	comp=N,5986µm,0.8s						
ATHU				AML	AML	21 28 28.4	
	comp=E,3497µm,0.9s						
ATHU	**Athens Univers**	**1.46**	**28**	P	**Pn**	**21 27 57.5**	**+0.4**
ATHU				S	**Sg**	**21 28 17.9**	**-0.4**
	comp=E,3µm,0.8s						
CHAN	**Chania**	**1.48**	**142**	P	**Pb**	**21 27 58.2**	**-0.2**
CHAN				AML	AML	21 28 24.1	
	comp=N,16095µm,0.6s						
CHAN				AML	AML	21 28 32.5	
	comp=E,15617µm,0.4s						
KLV	**Kalavryta, Ach**	**1.49**	**336**	P	**Pn**	**21 27 58.0**	**+0.4**
KLV				AML	AML	21 28 23.8	
	comp=N,12493µm,0.7s						
KLV				AML	AML	21 28 27.4	
	comp=E,11750µm,0.4s						
KLV	**Kalavryta, Ach**	**1.49**	**336**	P	**Pn**	**21 27 57.7**	**+0.1**
IMMV	**Iera Moni Meta**	**1.49**	**144**	P	**Pb**	**21 27 58.7**	**0.0**
IMMV				AML	AML	21 28 33.4	
	comp=E,12148µm,0.4s						
IMMV				AML	AML	21 28 35.2	
	comp=N,14519µm,0.7s						
IMMV	**Iera Moni Meta**	**1.49**	**144**	P	**Pb**	**21 27 58.5**	**-0.2**
IMMV	**Iera Moni Meta**	**1.49**	**144**	PN	**Pb**	**21 27 58.9**	**+0.2**
IMMV				SN	**Sg**	**21 28 20.3**	**+0.8**
VILL	**Villia**	**1.51**	**12**	P	**Pb**	**21 27 58.5**	**-0.6**
VILL				S	**Sg**	**21 28 19.3**	**-0.8**
	comp=N,10µm,0.7s						
VIL2	**Platees**	**1.55**	**10**	P	**Pn**	**21 27 58.6**	**+0.2**
PTL	**Penteli**	**1.56**	**29**	P	**Pb**	**21 27 59.4**	**-0.5**
PTL	**Penteli**	**1.56**	**29**	P	**Pb**	**21 27 59.2**	**-0.7**
PTL				S	**Sg**	**21 28 20.4**	**-1.2**
	comp=N,7µm,0.7s						
KNDR	**Palaiochora Ch**	**1.57**	**156**	P	**Pb**	**21 28 01.0**	**+0.9**
KNDR				AML	AML	21 28 31.7	
	comp=E,17125µm,0.4s						
KNDR				AML	AML	21 28 32.3	
	comp=N,12426µm,0.5s						
KNDR	**Palaiochora Ch**	**1.57**	**156**	P	**Pb**	**21 28 00.5**	**+0.5**
KNDR	**Palaiochora Ch**	**1.57**	**156**	PN	**Pb**	**21 28 00.6**	**+0.5**
KNDR				SN	**Sg**	**21 28 22.3**	**+0.3**
DRO	**Drossia**	**1.59**	**323**	P	**Pb**	**21 28 00.3**	**-0.2**
DRO				AML	AML	21 28 35.9	
	comp=N,18017µm,0.7s						
DRO				AML	AML	21 28 40.3	
	comp=E,10379µm,0.7s						
DRO	**Drossia**	**1.59**	**323**	P	**Pb**	**21 27 59.8**	**-0.6**
DRO				S	**Sb**	**21 28 21.2**	**+0.8**
	comp=E,8µm,0.7s						
DION	**Dionisos Attik**	**1.61**	**30**	P	**Pb**	**21 28 00.1**	**-0.7**
DION				AML	AML	21 28 28.3	
	comp=E,20283µm,1.0s						
DION				AML	AML	21 28 31.5	
	comp=N,17970µm,0.7s						
DION	**Dionisos Attik**	**1.61**	**30**	P	**Pb**	**21 28 00.1**	**-0.7**
DION				S	**Sb**	**21 28 21.7**	**+0.8**
	comp=N,14µm,0.8s						
ALIK	**Aliki, Aigiali**	**1.70**	**338**	P	**Pb**	**21 28 01.6**	**-0.7**
ALIK				S	**Sb**	**21 28 23.7**	**+0.2**
LAKA	**Lakka**	**1.73**	**335**	P	**Pb**	**21 28 02.1**	**-0.6**
LAKA	**Lakka**	**1.73**	**335**	P	**Pb**	**21 28 01.8**	**-0.9**
RLS	**Riolos of Patr**	**1.79**	**320**	P	**Pb**	**21 28 03.5**	**-0.4**
RLS	**Riolos of Patr**	**1.79**	**320**	P	**Pn**	**21 28 02.2**	**+0.5**
RLS				S	**Sb**	**21 28 25.4**	**-0.8**
	comp=N,6µm,1.0s						
KARY	**Karystos**	**1.81**	**41**	P	**Pn**	**21 28 03.0**	**+1.0**
KARY	**Karystos**	**1.81**	**41**	P	**Pn**	**21 28 02.8**	**+0.8**
KARY				S	**Sb**	**21 28 27.3**	**+0.6**
DLFA	**Delphi**	**1.82**	**350**	P	**Pn**	**21 28 02.9**	**+0.8**
DLFA				AML	AML	21 28 31.5	
	comp=N,9060µm,0.6s						
DLFA				AML	AML	21 28 31.5	
	comp=E,7604µm,0.4s						
UPR	**University Cam**	**1.83**	**331**	P	**Pn**	**21 28 03.4**	**+1.1**
EFP	**Efpalio**	**1.92**	**336**	P	**Pb**	**21 28 05.1**	**-0.9**
EFP	**Efpalio**	**1.92**	**336**	P	**Pb**	**21 28 04.8**	**-1.2**
LTHK	**Lithakia**	**1.95**	**302**	P	**Pb**	**21 28 05.3**	**-1.3**
LKR	**Lokris**	**1.97**	**2**	P	**Pn**	**21 28 04.0**	**-0.1**
SAP3	**Santorini-Thir**	**1.97**	**96**	P	**Pn**	**21 28 05.5**	**+1.4**
SAP3	**Santorini-Thir**	**1.97**	**96**	P	**Pb**	**21 28 06.0**	**-0.9**
TNSA	**Tinos**	**1.99**	**64**	P	**Pn**	**21 28 05.0**	**+0.7**
TNSA				AML	AML	21 28 43.4	
	comp=E,2814µm,0.4s						
TNSA				AML	AML	21 28 47.6	
	comp=N,2764µm,0.6s						
ATAL	**Atalanti**	**2.01**	**2**	P	**Pn**	**21 28 06.0**	**+1.3**
ATAL	**Atalanti**	**2.01**	**2**	P	**Pn**	**21 28 05.3**	**+0.6**
CMBO	**Columbo, Santo**	**2.01**	**95**	P	**Pb**	**21 28 06.3**	**-1.3**
SNT5	**Nea Kammeni, S**	**2.02**	**97**	P	**Pb**	**21 28 06.2**	**-1.4**
ANX	**Ano Chora**	**2.06**	**338**	P	**Pb**	**21 28 07.1**	**-1.5**
ANX				S	**Sb**	**21 28 32.7**	**-1.3**
ANX	**Ano Chora**	**2.06**	**338**	P	**Pn**	**21 28 06.8**	**+1.3**
GVDS	**Gavdos**	**2.07**	**152**	P	**Pb**	**21 28 07.8**	**-0.7**
GVD	**Gavdhos**	**2.07**	**152**	P	**Pn**	**21 28 07.1**	**+1.6**
GVD	**Gavdhos**	**2.07**	**152**	PN	**Pb**	**21 28 07.4**	**-1.2**
THR8	**Santorini-Mono**	**2.08**	**97**	P	**Pn**	**21 28 07.0**	**+1.4**
IDI	**Anoyia**	**2.12**	**130**	⇑P	**Pn**	**21 28 06.7**	**+0.4**
IDI				⇑S	**Sb**	**21 28 35.1**	**-0.5**
IDI	**Anoyia**	**2.12**	**130**	Pn	**Pn**	**21 28 05.2**	**-1.0**
	comp=N,73nm,0.3s,baz=259,slow=21,SNR=174						
IDI				Sn	**Sn**	**21 28 33.3**	**+1.0**
	comp=N,198nm,0.3s,baz=1.1,slow=16,SNR=5.5						
	comp=N,195nm,0.3s						
IDI	**Anoyia**	**2.12**	**130**	P	**Pn**	**21 28 06.6**	**+0.4**
IDI	**Anoyia**	**2.12**	**130**	PN	**Pn**	**21 28 06.9**	**+0.7**
IDI	**Anoyia**	**2.12**	**130**	Pn	**Pn**	**21 28 06.5**	**+0.2**
APE	**Apeiranthos**	**2.13**	**79**	⇓P	**Pn**	**21 28 07.4**	**+1.0**
APE				⇑S	**Sb**	**21 28 36.9**	**+1.0**
APE	**Apeiranthos**	**2.13**	**79**	P	**Pn**	**21 28 07.1**	**+0.7**
APE	**Apeiranthos**	**2.13**	**79**	PN	**Pn**	**21 28 07.1**	**+0.7**
APE	**Apeiranthos**	**2.13**	**79**	*c i*P	**Pn**	**21 28 07.1**	**+0.7**
APE	**Apeiranthos**	**2.13**	**79**	Pn	**Pn**	**21 28 06.7**	**+0.3**
KYMI	**Kymi, Euboea I**	**2.16**	**25**	P	**Pn**	**21 28 07.7**	**+0.9**
KYMI				AML	AML	21 28 51.9	

	comp=E,5558µm,1.3s						
KYMI				AML	AML	21 28 53.0	
	comp=N,6883µm,1.0s						
KYMI	Kymi, Euboea I	2.16	25	P	Pn	21 28 07.5	+0.7
TMBK	Timbaki Herakl	2.20	136	P	Pb	21 28 09.9	-0.8
TMBK				AML	AML	21 28 51.1	
	comp=N,8508µm,0.4s						
TMBK				AML	AML	21 28 55.0	
	comp=E,8387µm,0.5s						
TMBK	Timbaki Herakl	2.20	136	P	Pb	21 28 09.1	-1.7
IACM	Heraklion	2.22	128	P	Pn	21 28 08.8	+1.2
KSTL	Kastelli Herak	2.22	128	P	Pb	21 28 11.8	+0.6
PVO	Paravola	2.23	331	P	Pb	21 28 11.4	+0.2
HRKL	Herakleio	2.24	127	P	Pb	21 28 10.1	-1.3
HRKL	Herakleio	2.24	127	P	Pn	21 28 09.1	+1.3
HRKL	Herakleio	2.24	127	PN	Pb	21 28 09.7	-1.7
SIVA	Sivas	2.26	137	P	Pb	21 28 10.5	-1.4
PSDA	Pessada-Kefalo	2.34	308	P	Pn	21 28 11.0	+1.8
VLS	Valsamata	2.38	310	P	Pn	21 28 10.6	+0.8
AGG	Agios Georgios	2.38	349	P	Pn	21 28 11.1	+1.3
AGG	Agios Georgios	2.38	349	PN	Pn	21 28 10.5	+0.7
AGG	Agios Georgios	2.38	349	Pn	Pn	21 28 09.8	-0.1
AGG	Agios Georgios	2.38	349	P	Pn	21 28 09.8	-0.1
EVR	Evrytania	2.40	339	P	Pb	21 28 12.2	-2.0
EVR	Evrytania	2.40	339	P	Pn	21 28 11.7	+1.6
MAKR	Makrakomi, Fth	2.41	345	P	Pb	21 28 12.4	-1.9
MAKR	Makrakomi, Fth	2.41	345	P	Pn	21 28 11.6	+1.4
SKY	Skiros Island	2.54	30	P	Pn	21 28 12.5	+0.5
KEF3	Kipouria, Keph	2.55	307	P	Pn	21 28 13.7	+1.7
DMLN	Damoulianata-K	2.55	308	P	Pb	21 28 14.6	-2.2
FSK	Fiskardo	2.58	314	P	Pn	21 28 14.1	+1.6
NPS	Neapolis	2.60	122	P	Pn	21 28 14.0	+1.1
NEO	Neokhori	2.63	5	P	Pn	21 28 14.4	+1.1
NYDR	Nydri-Lefkada	2.69	320	P	Pn	21 28 14.8	+0.9
XOR	Xorichti	2.69	5	P	Pn	21 28 15.2	+1.2
LKD2	Lefkada island	2.76	320	P	Pn	21 28 16.6	+1.5
LKD2	Lefkada island	2.76	320	P	Pb	21 28 22.1	+1.7
	baz=310						
LKD2				S	Sg	21 28 57.9	-2.3
	baz=310						
FRMA	Ierapetra Chan	2.83	125	P	Pb	21 28 19.4	-2.1
THL	Klokotos Trika	2.96	346	P	Pn	21 28 19.2	+1.4
CHOS	Chios island	3.02	55	P	Pn	21 28 19.5	+0.9
CHOS	Chios island	3.02	55	PN	Pn	21 28 19.5	+0.9
TYRN	Tyrnavos	3.07	350	P	Pn	21 28 20.3	+1.0
ZKR	Zakros	3.10	119	P	Pn	21 28 21.5	+1.8
ZKR	Zakros	3.10	119	PN	Pn	21 28 21.9	+2.2
KOSK	Kos Island	3.26	88	PN	Pn	21 28 23.5	+1.6
SMG	Samos	3.29	71	P	Pn	21 28 23.1	+0.8
PAIG	Paliouri	3.29	10	P	Pn	21 28 23.0	+0.7
URLA	Izmir	3.37	59	PN	Pn	21 28 24.6	+1.2
NIS1	Nisyros Isl.	3.43	90	PN	Pn	21 28 26.1	+1.9
LIT	Litokhoron	3.43	355	P	Pn	21 28 25.3	+1.1
LIT	Litokhoron	3.43	355	Pn	Pn	21 28 25.0	+0.8
LIT	Litokhoron	3.43	355	P	Pn	21 28 25.0	+0.8
SIGR	SIGRI	3.43	42	P	Pn	21 28 25.0	+0.8
KPRO	Kipourio	3.49	340	P	Pn	21 28 25.9	+0.8
IGT	Igoumenitsa	3.50	325	P	Pn	21 28 25.5	+0.3
IGT	Igoumenitsa	3.50	325	P	Pn	21 28 28.9	+3.7
	baz=316						
IGT				S	Sg	21 29 25.7	+2.0
	baz=316						
BODT	Bodrum	3.54	83	PN	Pn	21 28 26.9	+1.1
GCAM	G?zelcaml?	3.59	72	PN	Pn	21 28 28.2	+1.8
KARP	Karpathos	3.62	107	P	Pn	21 28 28.9	+2.1
KARP	Karpathos	3.62	107	Pn	Pn	21 28 28.7	+1.9
LIA	Limnos Island	3.67	28	P	Pn	21 28 28.1	+0.6
PRK	Paraskevi	3.69	45	P	Pn	21 28 29.6	+1.9
PLG	Polygyros	3.71	6	P	Pn	21 28 28.7	+0.6
KZN	Kozani	3.73	346	P	Pn	21 28 29.9	+1.5
OUR	Ouranopolis	3.74	13	P	Pn	21 28 29.1	+0.6
DAT	Datca	3.75	88	P	Pn	21 28 30.6	+2.0
KTI	Kastanea	3.76	351	P	Pn	21 28 30.6	+1.8
KEK	Kerkira	3.90	322	Pn	Pn	21 28 31.0	+0.3
LSK	Leskovik	3.91	333	P	Pn	21 28 32.5	+1.6
LSK	Leskovik	3.91	333	P	Pn	21 28 34.9	+4.0
	baz=325						
LSK				S	Sb	21 29 29.9	+2.7
	baz=325						
LSK				AMP			
	comp=N,6.2nm,1.1s,baz=325						
HORT	Hortiatis	3.91	2	P	Pn	21 28 31.7	+0.8
HORT	Hortiatis	3.91	2	PN	Pn	21 28 32.1	+1.2
SRN	Sarande	3.93	325	P	Pn	21 28 33.2	+2.2
	baz=318						
SRN				S	Sb	21 29 24.3	-3.4
	baz=318						
SRN				AMP			
	comp=E,1.4nm,1.9s,baz=318						
DKL	Dikili	3.96	52	PN	Pn	21 28 32.4	+1.0
BOZC	Bozcaada	4.00	37	PN	Pn	21 28 32.5	+0.4
EZN	Ezine	4.13	39	PN	Pn	21 28 34.8	+1.0
SOH	Sokhos	4.15	5	P	Pn	21 28 36.3	+2.2
THAS	Thassos island	4.17	19	P	Pn	21 28 34.6	+0.3
GADA	Gvkgeada	4.21	33	PN	Pn	21 28 35.7	+0.8
KOKK	Kokkinochori,	4.21	11	P	Pn	21 28 35.7	+0.7
ARG	Arkhangelos	4.22	95	P	Pn	21 28 38.0	+2.9
ARG	Arkhangelos	4.22	95		Pn	21 28 35.4	+0.3
ARG	Arkhangelos	4.22	95	P	Pn	21 28 35.4	+0.3
FNA	Florina	4.27	344	P	Pn	21 28 37.7	+1.9
FNA	Florina	4.27	344	PN	Pn	21 28 37.7	+1.9
FNA	Florina	4.27	344		Pn	21 28 34.9	-0.9
FNA	Florina	4.27	344	P	Pn	21 28 34.9	-0.9
KBN	Korca	4.27	338		Pn	21 28 34.4	-1.5
KBN	Korca	4.27	338	P	Pn	21 28 34.4	-1.5
KBN	Korca	4.27	338	P	Pn	21 28 40.7	+4.8
	baz=330						
KBN				S	Sb	21 29 33.3	-4.3
	baz=330						
KBN				AMP			
	comp=N,1.7nm,1.4s,baz=330						
GRG	Griva	4.29	355	P	Pn	21 28 36.8	+0.8
GRG	Griva	4.29	355	PN	Pn	21 28 37.5	+1.5
GRG	Griva	4.29	355	P	Pn	21 28 38.2	+2.2
YER	Yerkesik	4.32	82	P	Pn	21 28 39.5	+3.0
SRS	Serrai	4.46	7	P	Pn	21 28 39.8	+1.4
SRS	Serrai	4.46	7	P	Pn	21 28 40.5	+2.1
KNT	Kendrikon	4.47	360	P	Pn	21 28 40.0	+1.4
KNT	Kendrikon	4.47	360	PN	Pn	21 28 40.3	+1.7
VLO	Vlora	4.63	326		Pn	21 28 40.8	+0.1
VLO	Vlora	4.63	326	P	Pn	21 28 40.8	+0.1
VAY	Valandovo	4.64	357	*i* Pn	Pn	21 28 42.8	+2.0
NVR	Nevrokopi	4.72	9	P	Pn	21 28 43.1	+1.1
SCTE	Santa Cesarea	4.87	315	Pn	Pn	21 28 45.1	+1.2
ALN	Alexandroupoli	4.87	29	Pn	Pn	21 28 43.6	-0.3
ALN	Alexandroupoli	4.87	29	P	Pn	21 28 43.6	-0.3
RDO	Rodhopi	4.90	24	Pn	Pn	21 28 44.7	+0.2
TIR	Tirane	5.23	334	⇓P	Pn	21 28 51.4	+2.5
TIR	Tirane	5.23	334	⇑S	Sn	21 29 53.6	+4.6
TIR	Tirane	5.23	334	P	Pg	21 29 10.0	-1.5
	baz=328						
TIR				S	Sb	21 30 11.7	+6.7
	baz=328						
PHP	Peshkopia	5.35	340	P	Pn	21 28 54.3	+3.7
	baz=334						
PHP				S	Sn	21 29 55.0	+3.0
	baz=334						
KSL	Kastellorizon	5.40	94	P	Pn	21 28 54.8	+3.5
AKAS	Kas	5.41	93		Pn	21 28 53.7	+2.2
TIP	Timpagrande	5.47	299	⇓P	Pn	21 28 54.1	+1.8
TIP				⇑S	Sn	21 29 56.9	+1.9
TIP	Timpagrande	5.47	299	Pn	Pn	21 28 52.6	+0.3
SLUM	Salum	5.52	159	P	Pn	21 28 54.7	+1.8
	baz=164						
SLUM				S	Sn	21 29 52.9	-3.1
	baz=164						
CEL	Celeste	5.80	288		Pn	21 28 57.0	+0.1
VTS	Vitosha	5.93	2	⇓P	Pn	21 29 01.1	+2.3
VTS	Vitosha	5.93	2	Pn	Pn	21 28 58.1	-0.6
VTS	Vitosha	5.93	2	P	Pn	21 28 58.2	-0.6
BCI	Bajram Curri	6.09	340	P	Pn	21 29 06.5	+5.7
	baz=335						
ISP	Isparta	6.17	77	Pn	Pn	21 29 01.9	-0.1
ISP	Isparta	6.17	77	⇑*e*P	Pn	21 29 04.5	+2.5
DRME	Dracevica, Mon	6.21	333	*e*Pn	Pn	21 29 04.0	+1.6
DRME	Dracevica, Mon	6.21	333	⇓*i*Pn	Pn	21 29 03.9	+1.6
DRME				*i* Sn	Sn	21 30 13.4	+0.3
MATE	Matera	6.27	311	⇓P	Pn	21 29 04.4	+1.2
PVY	Plav	6.33	340	⇓*i*Pn	Pn	21 29 05.5	+1.3
PVY				*i* Sn	Sn	21 30 16.4	+0.2
PDG	Podgorica	6.40	335	⇑P	Pn	21 29 07.0	+2.0
PDG	Podgorica	6.40	335	Pn	Pn	21 29 04.4	-0.5
PDG	Podgorica	6.40	335	*e*Pn	Pn	21 29 06.3	+1.3
TTG	Podgorica	6.40	335	*e*Pn	Pn	21 29 06.8	+1.8
TTG				*i* Sn	Sn	21 30 18.3	+0.6
BUM	Brajici-Budva	6.42	332	⇑*i*Pn	Pn	21 29 06.4	+1.1
BUM				*i* Sn	Sn	21 30 18.7	+0.5
CUC	Castrocucco	6.49	303	Pn	Pn	21 29 05.7	-0.6
IVA	Berane	6.61	340	⇑*i*Pn	Pn	21 29 09.2	+1.3
IVA				*i* Sn	Sn	21 30 23.2	+0.3
CEME	Cevo	6.62	333	⇑*i*Pn	Pn	21 29 09.4	+1.3
CEME				*i* Sn	Sn	21 30 23.2	-0.1
HCY	Herceg Novi	6.69	331	*e*Pn	Pn	21 29 10.0	+1.0
HCY	Herceg Novi	6.69	331	⇑*i*Pn	Pn	21 29 10.2	+1.2
HCY				*i* Sn	Sn	21 30 25.0	0.0
KOME	Kolasin	6.69	338	*e*Pn	Pn	21 29 10.9	+1.8
KOME				*i* Sn	Sn	21 30 24.9	-0.2
BORA	Eskisehir	6.73	59	Pn	Pn	21 29 08.7	-1.0
NKME	Niksic	6.80	335	⇑*i*Pn	Pn	21 29 12.2	+1.7
NKME				*i* Sn	Sn	21 30 27.6	-0.1
VAE	Valguarnera	6.85	279	Pn	Pn	21 29 12.8	+1.6
	comp=N,1.3nm,0.3s,baz=58,slow=8.9,SNR=6.5						
VAE				Sn	Sn	21 30 27.6	-1.2
	comp=N,4.1nm,0.3s,baz=198,slow=17,SNR=1.5						
VAE				LR	LR	21 31 48.5	
	comp=N,231nm,21.1s,baz=122,slow=37						
	comp=N,70nm,0.9s						
BLKB	Belogradchik	6.94	359	⇑P	Pn	21 29 14.9	+2.5
SJES	Sjenica	6.95	342	*e*Pn	Pn	21 29 15.1	+2.5
TREB	Trebinje	6.98	331	*e*Pn	Pn	21 29 14.0	+1.1
BOVS	Bovan	7.01	353	⇑P	Pn	21 29 15.7	+2.3
BRY	Bratogost	7.07	333	*e*Pn	Pn	21 29 15.2	+0.9
BRY	Bratogost	7.07	333	⇓*i*Pn	Pn	21 29 15.9	+1.6
BRY				*i* Sn	Sn	21 30 34.1	-0.3
PLE	Pljevlja	7.17	339	⇓*i*Pn	Pn	21 29 17.2	+1.5
PLE				*i* Sn	Sn	21 30 36.5	-0.4
UPM	Unac-Piva	7.20	336	*e*Pn	Pn	21 29 18.0	+1.8
UPM	Unac-Piva	7.20	336	⇑*i*Pn	Pn	21 29 17.5	+1.3
UPM				*i* Sn	Sn	21 30 37.7	-0.1
STON	Ston	7.37	329	*e*Pn	Pn	21 29 18.1	-0.2
RAZG	Razgrad	7.41	21	⇓P	Pn	21 29 21.0	+2.2
RUDO	Rudo	7.44	340	*e*Pn	Pn	21 29 20.0	+0.7
MDUB	Mudurnu	7.51	57	Pn	Pn	21 29 19.6	-0.8
SGRT	San Giovanni R	7.53	314	Pn	Pn	21 29 18.9	-1.6
BBLS	Lazići	7.66	341	*e*Pn	Pn	21 29 24.1	+1.7
SWA2		7.72	163	P	Pn	21 29 24.7	+1.6
	baz=167						
DIVS	Divibare	7.74	344	Pn	Pn	21 29 22.0	-1.4
DIVS	Divibare	7.74	344	*e*Pn	Pn	21 29 25.4	+2.0
CLTB	Caltabellotta	7.80	279	Pn	Pn	21 29 24.6	+0.3
PAOL	Paolisi	7.83	306		Pn	21 29 25.3	+0.7
HUMR	Humele	7.99	11	⇓P	Pn	21 29 29.1	+2.3
HERR	Herculane	8.20	358	⇑P	Pn	21 29 32.2	+2.5
ICOR	Ion Corvin	8.31	25	⇑P	Pn	21 29 32.9	+1.8
ANTO	Ankara	8.39	65		Pn	21 29 32.8	+0.4
ANTO	Ankara	8.39	65	P	Pn	21 29 32.8	+0.4
SRKY	Kupres RS	8.58	331	*e*Pn	Pn	21 29 36.2	+1.2
CSS	Mathiatis	8.63	98	Pn	Pn	21 29 35.0	-0.6
CSS	Mathiatis	8.63	98	Pn	Pn	21 29 35.5	-0.1
CSS				Sn	Sn	21 31 08.5	-4.2
GZR	Gura Zlata	8.70	359	⇑P	Pn	21 29 39.7	+3.0
TLBR	Topalu	8.77	25	⇑P	Pn	21 29 39.1	+1.6
LOT	Lotru	8.78	4	⇑P	Pn	21 29 39.6	+1.8
FRGS	Fruska Gora	8.79	345	*e*Pn	Pn	21 29 40.0	+2.2
TIRR	Tirgusor	8.82	27	⇑P	Pn	21 29 39.9	+1.7
TIRR	Tirgusor	8.82	27	⇑P	Pn	21 29 39.9	+1.7
TIRR	Tirgusor	8.82	27	Pn	Pn	21 29 37.9	-0.2
TIRR	Tirgusor	8.82	27	P	Pn	21 29 37.9	-0.2
HARR	Harsova	8.86	24	⇑P	Pn	21 29 41.1	+2.4
MGRS	Mrkonjic Grad	8.91	332	*e*Pn	Pn	21 29 40.6	+1.2
BR131	Keskin Array S	8.97	67	*de*P	Pn	21 29 44.2	+3.8
BRTR	Keskin Array B	8.97	67	Pn	Pn	21 29 44.1	+3.7
	comp=N,0.4nm,0.3s,baz=247,slow=12,SNR=37						
BRTR				LR	LR	21 33 59.8	
	comp=N,517nm,19.8s,baz=260,slow=44						
BRTR	Keskin Array B	8.97	67	*i* P	Pn	21 29 47.0	+6.6
BRTR				pmax	pmax		
	comp=Z,11nm,0.9s						
BZS	Buzias	8.98	354	⇑P	Pn	21 29 43.2	+2.8
BZS	Buzias	8.98	354	P	Pn	21 29 46.4	+6.0
MLR	Muntele Rosu	9.09	14	⇓P	Pn	21 29 45.0	+3.0
MLR	Muntele Rosu	9.09	14	Pn	Pn	21 29 42.2	+0.1
	comp=Z,3.6nm,0.7s,baz=175,slow=12						
MLR				LR	LR	21 33 58.9	
	comp=Z,183nm,21.0s,baz=172,slow=43						
MLR	Muntele Rosu	9.09	14	Pn	Pn	21 29 42.9	+0.9
MLR	Muntele Rosu	9.09	14	P	Pn	21 29 42.9	+0.9
NEHR	Nehoiu	9.10	15	⇑P	Pn	21 29 44.4	+2.4
BLY	Banja Luka	9.16	333	*e*Pn	Pn	21 29 42.5	-0.3
TPGR	Topolog	9.17	25	⇑P	Pn	21 29 45.4	+2.4
DEV	Deva	9.19	360	⇑P	Pn	21 29 46.2	+2.9
AQU	L'Aquila	9.28	311		Pn	21 29 45.3	+0.8
AQU	L'Aquila	9.28	311	P	Pn	21 29 45.3	+0.8
CFR	Carcaliu	9.36	23	⇑P	Pn	21 29 47.5	+2.0
DOPR	Dopca	9.46	11	⇑P	Pn	21 29 50.3	+3.3
COVR	Voineasa-Covas	9.48	14	⇑P	Pn	21 29 50.5	+3.2
PLOR	Plostina	9.58	16	⇑P	Pn	21 29 51.2	+2.6
ODBI	Odobesti	9.59	18	⇑P	Pn	21 29 51.8	+3.0
TLCR		9.59	26	⇑P	Pn	21 29 51.1	+2.3
VRI	Vrincioaia	9.61	16	⇑P	Pn	21 29 51.7	+2.6
OZUR		9.65	12	⇑P	Pn	21 29 52.2	+2.6
NRCA	Norcia	9.73	312		Pn	21 29 51.3	+0.6
RYAN	Fayoum	9.78	139	P	Pn	21 29 50.7	-0.7
	baz=141						
VLDR	Vladesti	9.94	21	⇑P	Pn	21 29 55.9	+2.4
MORH	Mrgy, Hungar	10.05	343	⇑P	Pn	21 29 56.7	+1.7
MORH	Mrgy, Hungar	10.05	343	*e*Pn	Pn	21 29 54.3	-0.7
MORH	Mrgy, Hungar	10.05	343	P	Pn	21 29 57.1	+2.1
KOVH	Kovagotottos	10.07	340	P	Pn	21 29 56.6	+1.4
BZK	Bozkurt	10.07	55	⇑P	Pn	21 29 57.3	+2.0
HSAF	As Saff	10.10	132	P	Pn	21 29 55.1	-0.7
	baz=134						
DRGR		10.10	359	⇑P	Pn	21 29 58.6	+2.8
TESR	Tescani	10.21	15	⇓P	Pn	21 30 00.1	+2.9
GLL	Jalalah	10.22	131	P	Pn	21 29 56.4	-1.1
	baz=134						
MURB	Monte Urbino	10.33	313		Pn	21 30 00.2	+1.3
BIZ	Bicaz	10.52	12	⇑P	Pn	21 30 04.2	+2.7
NBNS	Bani Suef	10.69	136	P	Pn	21 30 03.2	-0.8
	baz=139						
CRES	Cresnjev	10.72	331	*e*Pn	Pn	21 30 04.3	+0.1
OFRI	`Ofer	10.73	109	Pn	Pn	21 30 02.3	-2.2
OFRI				Sn	Sn	21 31 57.9	-6.4
MMA0B	Mount Meron ar	10.89	106	Pn	Pn	21 30 04.6	-2.1
MMA0B				Sn	Sn	21 32 02.8	-5.5
MMAI	Mount Meron Ar	10.89	106	Pn	Pn	21 30 03.5	-3.2
	comp=Z,1.2nm,0.3s,baz=283,slow=28,SNR=5.0						
MMAI				Sn	Sn	21 32 04.0	-4.3
	comp=Z,6.2nm,0.3s,baz=287,slow=29,SNR=6.4						
SLTI	Sal'it	10.94	110	Pn	Pn	21 30 05.7	-1.6
KEST	Kesra	11.01	269	Pn	Pn	21 30 08.9	+0.7
	comp=Z,0.1nm,0.3s,baz=45,slow=16,SNR=2.0						
KEST				Sn	Sn	21 32 09.4	-1.7
	comp=Z,0.1nm,0.3s,baz=49,slow=20,SNR=1.4						
KEST				LR	LR	21 35 00.3	
	comp=Z,198nm,21.2s,baz=32,slow=41						
	comp=Z,2.5nm,0.8s						
KEST	Kesra	11.01	269		Pn	21 30 08.5	+0.2
GEM	Giv'at Ha'Em	11.02	105	Pn	Pn	21 30 06.7	-1.6
GEM				Sn	Sn	21 32 05.7	-5.6
NATI	Neve Ativ	11.06	104	Pn	Pn	21 30 07.1	-1.7
NATI				Sn	Sn	21 32 07.5	-4.7
BURAR	Bucovina Array	11.06	8	⇓P	Pn	21 30 11.5	+2.6
CEY	Cerknica	11.07	327	*e*Pn	Pn	21 30 09.5	+0.4
BUR08	Bucovina Ar. S	11.08	8	Pn	Pn	21 30 10.0	+0.7
SKDS	Skadanscina	11.11	326	*e*Pn	Pn	21 30 13.3	+3.8
MMLI	Mount Malkishu	11.14	109	Pn	Pn	21 30 08.1	-2.0
MMLI				Sn	Sn	21 32 07.8	-6.6
KZIT	Kziot	11.15	118	Pn	Pn	21 30 06.9	-3.3
KZIT				Sn	Sn	21 32 07.6	-6.9
AMAZ	Amatzia	11.19	114	Pn	Pn	21 30 08.2	-2.5
AMAZ				Sn	Sn	21 32 09.2	-6.4
MPLH	Magyarpolny	11.21	341	P	Pn	21 30 12.3	+1.3
CSKK	Cskako	11.22	344	P	Pn	21 30 13.5	+2.4
HMDT	Nahal Hemdat	11.30	109	Pn	Pn	21 30 10.0	-2.3
HMDT				Sn	Sn	21 32 12.4	-5.9
YTIR	Yattir	11.42	114	Pn	Pn	21 30 11.7	-2.3
PSZ	Piszkesteto	11.45	350	⇓P	Pn	21 30 16.4	+2.1
PSZ	Piszkesteto	11.45	350	P	Pn	21 30 18.4	+4.2
DSI	Dead Sea	11.52	113	Pn	Pn	21 30 12.9	-2.2
DSI				Sn	Sn	21 32 17.5	-6.0
SRO2	Moca	11.57	345	*e*SN	Sn	21 32 23.3	-1.3
SOKA	Soboth	11.59	332	*e*Pn	Pn	21 30 16.5	+0.3
	comp=Z,5.7nm,0.8s						
MDBI	Mazsada	11.63	114	Pn	Pn	21 30 14.2	-2.4
MDBI				Sn	Sn	21 32 19.1	-7.0
OBKA	Obir	11.64	330	*e*Pn	Pn	21 30 16.2	-0.7
	comp=Z,1.4nm,0.5s						
GHAJ	Ghor Haditha	11.79	113	Pn	Pn	21 30 18.1	-0.8
SIM	Simferopol'	11.83	42	*e*P	Pn	21 30 20.5	+1.1
SIM				S	Sn	21 32 38.0	+6.9
KRMI	Paran Flat	11.84	120	Pn	Pn	21 30 17.3	-2.3
KRMI				Sn	Sn	21 32 23.9	-7.5
PRNI	Paran	11.89	119	Pn	Pn	21 30 17.8	-2.6
PRNI				Sn	Sn	21 32 25.9	-6.9
ARSA	Arzberg	11.90	335	*e*Pn	Pn	21 30 22.6	+2.3
	comp=Z,1.2nm,0.4s						
UZH	Uzhgorod	11.95	358	*e*P	Pn	21 30 29.1	+8.1
HRFI	Mount Harif	12.10	120	Pn	Pn	21 30 21.3	-1.9
HRFI				Sn	Sn	21 32 30.0	-7.9
MBRI	Mt Berech	12.16	121	Pn	Pn	21 30 20.8	-3.3
MBRI				Sn	Sn	21 32 32.3	-7.1
EIL	Elat	12.26	121	Pn	Pn	21 30 23.7	-1.7
	comp=Z,2.6nm,0.3s,baz=242,slow=2.0,SNR=43						
EIL				Sn	Sn	21 32 32.9	-8.9
	comp=Z,4.0nm,0.3s,baz=96,slow=2.7,SNR=8.6						
	comp=Z,11nm,0.4s						
EIL	Elat	12.26	121	Pn	Pn	21 30 23.4	-2.0
EIL				Sn	Sn	21 32 34.6	-7.2
ASF	Jabal al Asfar	12.39	107	Pn	Pn	21 30 25.9	-1.3
	comp=Z,0.8nm,0.3s,baz=326,slow=4.0,SNR=7.5						
ASF				Sn	Sn	21 32 43.2	-1.7
	comp=Z,0.4nm,0.3s,baz=6.4,slow=18,SNR=1.5						
	comp=Z,3.5nm,0.5s						
MODS	Modra-Piesok	12.40	342	*e*P	Pn	21 30 30.5	+3.3
MODS				*e*		21 32 43.9	
MODS	Modra-Piesok	12.40	342	*e*PN	Pn	21 30 30.5	+3.3
MODS	Modra-Piesok	12.40	342	*e*SN	Sn	21 32 43.9	-1.0
KBA	Koelnbreinsper	12.59	329	*e*Pn	Pn	21 30 32.0	+2.0
	comp=Z,2.8nm,0.7s						
KBA	Koelnbreinsper	12.59	329	P	P	21 30 36.4	-5.1
CTI	Castel Tesino	12.60	321	Pn	Pn	21 30 29.5	-0.6
CTI	Castel Tesino	12.60	321	P	Pn	21 30 29.5	-0.6
ABTA	Abfaltersbach	12.70	326	*e*Pn	Pn	21 30 32.7	+1.4
	comp=Z,3.2nm,0.5s						
MOA	Molln	12.86	333	*e*Pn	Pn	21 30 34.0	+0.5
	comp=Z,1.3nm,0.4s						
BIOA	Bad Ischl, Aus	12.96	331	*e*Pn	Pn	21 30 36.7	+1.8
	comp=Z,2.9nm,0.4s						
LVV	L'vov	13.16	3	*e*P	Pn	21 30 40.1	+2.6
LVV				*e*S	Sn	21 33 04.5	+1.1
LVV				MLR	MLR		
	comp=Z,300nm,11.0s						
VRAC	Vranov	13.43	342	⇑P	Pn	21 30 44.1	+2.8
VRAC	Vranov	13.43	342	Pn	Pn	21 30 38.8	-2.4
	comp=Z,0.1nm,0.3s,baz=237,slow=17,SNR=1.5						
VRAC				LR	LR	21 37 30.5	
	comp=Z,297nm,20.9s,baz=174,slow=45						
WTTA	Wattenberg	13.48	325	*e*Pn	Pn	21 30 41.6	-0.5
	comp=Z,1.6nm,0.4s						
WATA	Walderalm	13.56	325	*e*Pn	Pn	21 30 44.1	+0.9
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	13.65	324	*e*Pn	Pn	21 30 47.2	+2.8
	comp=Z,1.7nm,0.4s						
CKRC	Cesky Krumlov	13.67	335	*e*P	P	21 30 55.6	+2.3
FETA	Feichten	13.74	323	*e*Pn	Pn	21 30 49.0	+3.4
	comp=Z,4.3nm,0.8s						
MOTA	Moosalm	13.79	324	*e*Pn	Pn	21 30 46.3	0.0
	comp=Z,2.4nm,0.6s						
GEC2	GERESS Array S	13.90	334	Pn	Pn	21 30 45.7	-2.0
GERES	GERESS Array B	13.90	334	Pn	Pn	21 30 47.4	-0.3
	comp=Z,0.1nm,0.3s,baz=188,slow=29,SNR=2.4						
	comp=Z,0.2nm,0.5s						
DAVOX	Davos/Dischmat	14.00	320	Pn	Pn	21 30 49.4	+0.1
	comp=Z,0.1nm,0.3s,baz=288,slow=11,SNR=1.7						
DAVOX				Sn	Sn	21 33 25.5	+1.1
	comp=Z,0.3nm,0.3s,baz=234,slow=17,SNR=5.2						
DAVOX				LR	LR	21 36 56.9	
	comp=Z,272nm,21.2s,baz=116,slow=40						
	comp=Z,0.5nm,0.5s						
RETA	Reutte	14.05	324	*e*Pn	Pn	21 30 53.1	+3.3
	comp=Z,1.0nm,0.5s						
TUE	Stuetta	14.08	318	Pn	Pn	21 30 48.5	-1.8
KHC	Kasperske Hory	14.18	334	Pn	Pn	21 30 51.8	+0.2
KHC	Kasperske Hory	14.18	334	⇑*e*P	Pn	21 30 53.4	+1.8
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	14.18	334	*e*P	P	21 31 00.7	+1.7
KHC				*e*x	x	21 31 04.4	
DAVA	Damuels	14.34	322	*e*Pn	P	21 30 58.7	-2.2
	comp=Z,3.4nm,0.6s						
DPC	Dobruska-Polom	14.47	343	*e*P	P	21 31 04.9	+2.7
DPC	Dobruska-Polom	14.47	343	*e*P	P	21 31 04.9	+2.7
SOC	Sochi	14.57	57	*e*P	Pn	21 30 56.9	+0.1
SOC				*e*		21 33 39.1	
SOC				MLR	MLR		
	comp=Z,64nm,12.0s						
PRU	Pruhonice	14.62	338	*e*P	P	21 31 04.8	+1.1
PRU	Pruhonice	14.62	338	*e*P	P	21 31 04.8	+1.1
OSTC	Ostas	14.68	343	*e*P	P	21 31 07.5	+3.0
AKASG	Malin Array Be	14.73	16	Pn	Pn	21 30 56.9	-2.0
	comp=Z,0.4nm,0.3s,baz=205,slow=11,SNR=12						
	comp=Z,0.6nm,0.5s						
AKASG	Malin Array Be	14.73	16	Pn	Pn	21 30 57.8	-1.1
AKASG	Malin Array Be	14.73	16	*i* P	Pn	21 30 59.7	+0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	14.73	16	⇑*e*P	Pn	21 31 01.9	+3.0
CHVC	Chvalec	14.75	343	*e*P	P	21 31 10.9	+5.6
KSP	Ksiaz	14.93	344	*e*P	P	21 31 13.1	+5.8
PVCC	Panska Ves	15.09	339	*e*P	P	21 31 10.8	+1.8
PVCC	Panska Ves	15.09	339	*e*P	P	21 31 10.8	+1.8
SENIN	Lac Senin/Sane	15.15	315	Pn	Pn	21 31 01.8	-3.1
SENIN				IAmb	IAmb	21 31 26.6	
	comp=Z,7.7nm,0.8s						
GURO	Guroymak-BITLI	15.27	77	Pn	Pn	21 31 05.8	-0.5
NKC	Novy Kostel	15.51	334	*e*P	P	21 31 16.1	+2.4
NKC	Novy Kostel	15.51	334	*e*P	P	21 31 16.1	+2.4
GRFO	Grafenberg	15.52	331	Pn	Pn	21 31 10.0	+0.5
GRFO	Grafenberg	15.52	331	P	Pn	21 31 10.0	+0.5
GRFO				pmax	pmax		
	comp=Z,60nm,1.2s						
GRA1	Grafenberg Arr	15.53	331	Pn	Pn	21 31 10.0	+0.5
GRF	Grafenberg Arr	15.53	331	P	Pn	21 31 10.0	+0.5
GRF				pmax	pmax		
	comp=Z,63nm,1.2s						
BRG	Berggiesshubel	15.58	338	*e*P	P	21 31 18.2	+3.7
BRG				Amp		21 31 22.3	
	comp=Z,12nm,0.9s						
BRG				Amp		21 38 42.0	
	comp=Z,0.3nm,11.5s						
BRG				Amp		21 38 43.0	
	comp=E,0.3nm,16.0s						
BRG				Amp		21 38 51.0	
	comp=N,0.3nm,11.7s						
BRG	Berggiesshubel	15.58	338	*e*P	P	21 31 18.1	+3.7
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
BRG				MLR	MLR		
	comp=Z,340nm,11.5s						
BRG				MLR	MLR		
	comp=E,290nm,16.0s						
BRG				MLR	MLR		
	comp=N,250nm,11.7s						
BFO	Black Forest	15.82	322	Pn	Pn	21 31 12.2	-1.2
BFO	Black Forest	15.82	322	P	Pn	21 31 12.2	-1.2
BFO				pmax	pmax		
	comp=Z,13nm,1.2s						
MOX	Moxa	16.15	333	P	P	21 31 22.8	+2.0
CLL	Collm	16.25	337	Pn	Pn	21 31 17.6	-1.2
CLL				IAmb	IAmb	21 31 31.0	
	comp=Z,24nm,0.9s						
CLL	Collm	16.25	337	*e*P	P	21 31 23.0	+1.2
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL	Collm	16.25	337	*e*Px	Px	21 31 23.0	
	comp=Z,8.0nm,0.9s						
CLL				*i* PP	pP	21 31 25.9	-0.3
CLL				*i* x	x	21 31 29.4	
CLL				*i* x	x	21 31 38.5	
CLL				*e*SS	S	21 34 36.0	+4.6
ECH	Echery	16.34	320	Pn	Pn	21 31 19.1	-0.9
ECH	Echery	16.34	320	P	Pn	21 31 19.1	-0.9
ECH				pmax	pmax		
	comp=Z,17nm,1.3s						
AKH	Akhalkalaki	16.66	67	⇑P	P	21 31 26.2	-0.4
KIV	Kislovodsk	16.71	58	⇑P	P	21 31 26.3	-0.9
KIV	Kislovodsk	16.71	58	*e*P	P	21 31 27.0	-0.2

KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,44nm,13.0s						
KVAR	**Kislovodsk Arr**	**16.72**	**58**	Pn	**Pn**	**21 31 23.3**	**-1.7**
	baz=291,slow=0.9						
	comp=Z,2.8nm,0.9s						
KBZ	**Khabaz**	**16.79**	**59**	Pn	**Pn**	**21 31 25.1**	**-0.6**
	baz=274,slow=19,SNR=2.3						
	comp=Z,1.6nm,0.8s						
KBZ	**Khabaz**	**16.79**	**59**	⇑*e*P	**P**	**21 31 29.7**	**+1.9**
NCK	**Nalchik**	**17.20**	**60**	⇓*e*P	**P**	**21 31 35.1**	**+2.6**
NCK				pmax	pmax		
	comp=Z,12nm,1.4s						
ZEI	**Tsey**	**17.24**	**63**	*e*P	**P**	**21 31 34.9**	**+1.8**
ZEI				pmax	pmax		
	comp=Z,15nm,1.0s						
SUW	**Suwalki**	**17.33**	**1**	Pn	**Pn**	**21 31 30.4**	**-2.1**
SUW				IAmb	IAmb	21 31 43.1	
	comp=Z,54nm,1.1s						
SUW	**Suwalki**	**17.33**	**1**	P	**Pn**	**21 31 30.4**	**-2.1**
SUW				pmax	pmax		
	comp=Z,55nm,1.1s						
SUW	**Suwalki**	**17.33**	**1**	*e*P	**P**	**21 31 35.3**	**+1.4**
GNI	**Garni**	**17.44**	**72**	*i* P	**P**	**21 31 36.8**	**+1.4**
SSF	**Saint Saulge**	**17.75**	**312**	P	**P**	**21 31 39.4**	**+0.9**
WLF	**Walferdange**	**17.77**	**322**	Pn	**Pn**	**21 31 36.6**	**-1.4**
WLF				IAmb	IAmb	21 31 43.5	
	comp=Z,26nm,1.3s						
WLF	**Walferdange**	**17.77**	**322**	P	**Pn**	**21 31 36.6**	**-1.4**
WLF				pmax	pmax		
	comp=Z,26nm,1.3s						
MNK	**Minsk**	**18.15**	**9**	*i* P	**Pn**	**21 31 39.5**	**-3.0**
MNK				*i* S	**Sn**	**21 34 59.1**	**-5.5**
MNK				pmax	pmax		
	comp=E,2.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,12nm,1.1s						
MNK				pmax	pmax		
	comp=Z,11nm,1.2s						
MNK				MLR	MLR		
	comp=E,2.0nm,15.0s						
MNK				MLR	MLR		
	comp=Z,116nm,14.0s						
MNK				MLR	MLR		
	comp=N,95nm,14.0s						
MNK	**Minsk**	**18.15**	**9**	*i* P	**Pn**	**21 31 39.5**	**-3.0**
	comp=E,2.0nm,1.3s						
MNK				*i* P	**Pn**	**21 31 39.5**	**-3.0**
	comp=N,12nm,1.1s						
MNK				*i* P	**Pn**	**21 31 39.5**	**-3.0**
	comp=Z,11nm,1.2s,baz=193						
MNK				*i* PP	**sP**	**21 31 50.4**	**+1.1**
MNK				*i* S	**Sn**	**21 34 59.2**	**-5.5**
MNK				*i* SS	**SnSn**	**21 35 16.2**	**-2.2**
MNK				*i* LQ	LQ	21 37 01.0	
MNK				*i* LR	LR	21 38 23.2	
MNK				*i* LRM	MLR	21 39 42.1	
	comp=E,2.0nm,14.9s						
MNK				*i* LRM	MLR	21 39 42.1	
	comp=Z,116nm,14.3s						
MNK				*i* LRM	MLR	21 39 45.1	
	comp=N,95nm,14.0s						
NACGM	**Naroch**	**18.42**	**7**	*e*P	Pn	21 31 54.0	+8.2
	baz=189						
VSR	**Storozhevoye**	**18.59**	**34**	*e*P	**Pn**	**21 31 50.5**	**+2.5**
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
IIGN	**Ignalina**	**18.81**	**6**	*e*P	**Pn**	**21 31 51.4**	**+0.8**
IIGN				IAmb	IAmb	21 31 59.0	
	comp=Z,5.2nm,0.8s						
IDID	**Didziasalis**	**18.82**	**7**	*e*P	**Pn**	**21 31 51.4**	**+0.7**
PABE	**Paberze**	**18.84**	**2**	*e*P	**Pn**	**21 31 51.6**	**+0.6**
VORR	**Voronezh**	**18.93**	**33**	*e*P	**Pn**	**21 31 52.4**	**+0.2**
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSVD	**Vaisvydziai**	**19.32**	**2**	*e*P	**Pn**	**21 31 57.2**	**+0.5**
VSVD				IAmb	IAmb	21 31 60.0	
	comp=Z,11nm,0.6s						
DBC	**Dubki**	**19.39**	**64**	*e*P	**Pn**	**21 31 58.5**	**+0.7**
DBC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ARKR	**Arakani**	**19.43**	**65**	*e*P	**Pn**	**21 31 58.7**	**+0.4**
ARKR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LPSR	**Galich'ya Gora**	**19.50**	**30**	*e*P	**Pn**	**21 31 58.6**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH	**Novokhopyorsk**	**19.77**	**37**	*e*P	**Pn**	**21 32 01.5**	**-0.6**
VRH				pmax	pmax		
	comp=Z,50nm,1.3s						
MAK	**Makhachkala**	**19.86**	**64**	*e*P	**P**	**21 31 59.4**	**-2.3**
MAK				*e*S	**S**	**21 35 41.3**	**-3.5**
MAK				pmax	pmax		
	comp=Z,368nm,1.2s						
MAK				MLR	MLR		
	comp=Z,59nm,12.0s						
OBN	**Obninsk**	**20.67**	**23**	P	**P**	**21 32 09.8**	**-0.5**
	comp=Z,2.5nm,0.4s,baz=241,slow=19,SNR=5.9						
OBN				LR	LR	21 40 50.3	
	comp=Z,35nm,21.9s,baz=197,slow=39						
	comp=Z,2.5nm,0.4s						
OBN	**Obninsk**	**20.67**	**23**	P	**P**	**21 32 08.0**	**-2.4**
OBN				IAmb	IAmb	21 32 13.1	
	comp=Z,33nm,1.1s						
OBN	**Obninsk**	**20.67**	**23**	⇑*e*P	**P**	**21 32 10.5**	**+0.2**
OBN				*i*		21 32 20.2	
OBN				*e*		21 32 32.9	
OBN				*e*S	Sn	21 36 04.5	-0.9
OBN				*e*SS	**SnSn**	**21 36 28.0**	**+7.9**
OBN				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN				MLR	MLR		
	comp=Z,94nm,17.0s						
ESBB	**Sonseca Array**	**21.31**	**286**	P	**P**	**21 32 16.4**	**-1.1**
ESBB				IAmb	IAmb	21 32 28.1	
	comp=Z,13nm,1.2s						
ESDC	**Sonseca Array**	**21.31**	**286**	P	**P**	**21 32 18.4**	**+0.9**
	comp=Z,5.2nm,1.0s,baz=79,slow=10,SNR=23						
	comp=Z,5.2nm,1.0s						
ESDC	**Sonseca Array**	**21.31**	**286**	P	**P**	**21 32 18.0**	**+0.4**
MOS	**Moscow**	**21.52**	**23**	*e*P	**P**	**21 32 17.7**	**-1.8**
MOS				*e*S	**S**	**21 36 18.1**	**+0.6**
MOS				pmax	pmax		
	comp=Z,36nm,0.9s						
PAB	**San Pablo**	**21.61**	**286**	P	**P**	**21 32 20.9**	**+0.1**
PAB	**San Pablo**	**21.61**	**286**	P	**P**	**21 32 20.9**	**+0.1**
PAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSU	**Vasula**	**21.94**	**5**	⇓*e*P	**P**	**21 32 28.2**	**+4.3**
VSU				pmax	pmax		
	comp=Z,40nm,0.7s						
MDT	**Midelt**	**22.91**	**268**	P	**P**	**21 32 35.0**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=100,slow=13,SNR=3.6						
MDT				LR	LR	21 43 16.7	
	comp=Z,94nm,18.6s,baz=98,slow=41						
	comp=Z,2.2nm,0.7s						
BELG	**Belogornoye**	**23.43**	**40**	P	**P**	**21 32 38.3**	**-1.4**
	comp=Z,12nm,0.6s,baz=311,slow=19,SNR=5.5						
	comp=Z,12nm,0.6s						
BELG	**Belogornoye**	**23.43**	**40**	*de*P	**P**	**21 32 42.1**	**+2.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAYN	**Ar Rayn**	**23.46**	**118**	P	**P**	**21 32 39.5**	**-0.8**
RAYN	**Ar Rayn**	**23.46**	**118**	P	**P**	**21 32 39.5**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PBRG	**Braganca**	**23.47**	**292**	*e*P	**P**	**21 32 43.6**	**+3.4**
	comp=Z,15nm,1.5s						
MVO	**Moncorvo**	**23.66**	**290**	*e*P	**P**	**21 32 43.7**	**+1.5**
	comp=Z,21nm,1.4s						
MVO				*e*S	**S**	**21 36 59.0**	**+2.6**
PBAR	**Barrancos**	**23.79**	**283**	*e*P	**P**	**21 32 47.5**	**+4.2**
	comp=Z,27nm,1.2s						
PMRV	**Marv??o**	**23.97**	**286**	*e*P	**P**	**21 32 46.0**	**+0.9**
	comp=Z,17nm,1.4s						
PMRV				*e*S	**S**	**21 37 03.7**	**+2.5**
PCBR	**Castelo Branco**	**24.02**	**287**	*e*P	**P**	**21 32 49.0**	**+3.5**
	comp=Z,13nm,1.4s						
MTE	**Manteigas**	**24.05**	**288**	*e*P	**P**	**21 32 50.6**	**+4.7**
PESTR	**Estremoz**	**24.16**	**284**	*e*P	**P**	**21 32 47.6**	**+0.7**
	comp=Z,14nm,1.5s						
PESTR	**Estremoz**	**24.16**	**284**	P	**P**	**21 32 45.2**	**-1.6**
PESTR				IAmb	IAmb	21 32 52.2	
	comp=Z,5.7nm,0.9s						
HFS	**Hagfors**	**24.21**	**349**	P	**P**	**21 32 45.4**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=133,slow=15,SNR=3.2						
HFS				LR	LR	21 44 43.3	
	comp=Z,78nm,18.7s,baz=172,slow=43						
	comp=Z,1.2nm,0.5s						
POLO	**Lamas de Olo**	**24.24**	**291**	*e*P	**P**	**21 32 50.1**	**+2.4**
PVIS	**Viseu**	**24.32**	**289**	*e*P	**P**	**21 32 51.0**	**+2.7**
PVAQ	**Vaqueiros**	**24.41**	**281**	*e*P	**P**	**21 32 53.9**	**+4.7**
	comp=Z,24nm,1.5s						
PVAQ				*e*S	**S**	**21 37 14.5**	**+6.2**
PBEJ	**Beja**	**24.46**	**282**	*e*P	**P**	**21 32 53.7**	**+4.2**
	comp=Z,29nm,1.6s						
PGAV	**Gavieira, Arco**	**24.62**	**292**	*e*S	**S**	**21 37 19.9**	**+8.2**
MESJ	**Messejana**	**24.75**	**282**	*e*P	**P**	**21 32 57.3**	**+5.1**
FINES	**FINESS Array B**	**24.86**	**4**	P	**P**	**21 32 52.4**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=156,slow=11,SNR=17						
FINES				PcP	**PcP**	**21 36 29.7**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=158,slow=2.4,SNR=9.0						
FINES				LR	LR	21 43 40.8	
	comp=Z,173nm,18.6s,baz=193,slow=39						
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**24.86**	**4**	P	**P**	**21 32 52.0**	**-0.9**
NB201	**NORSAR Array S**	**25.48**	**347**	P	**P**	**21 32 58.9**	**+0.3**
NB2	**NORSAR Subarra**	**25.48**	**347**	P	**P**	**21 32 59.0**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**25.48**	**347**	P	**P**	**21 32 58.8**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=155,slow=10,SNR=30						
NOA				PcP	**PcP**	**21 36 31.3**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=140,slow=4.6,SNR=2.4						
NOA				LR	LR	21 45 35.2	
	comp=Z,114nm,18.4s,baz=165,slow=43						
	comp=Z,1.1nm,0.6s						
EKA	**Eskdalemuir Ar**	**25.75**	**325**	P	**P**	**21 33 01.7**	**+0.6**
	comp=Z,21nm,0.7s,baz=125,slow=9.2,SNR=54						
EKA				PcP	**PcP**	**21 36 32.4**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=124,slow=2.2,SNR=2.1						
EKA				LR	LR	21 45 17.8	
	comp=Z,102nm,19.5s,baz=123,slow=42						
ESK	**Eskdalemuir**	**25.76**	**325**	P	**P**	**21 33 02.4**	**+1.3**
ESK	**Eskdalemuir**	**25.76**	**325**	P	**P**	**21 33 02.4**	**+1.3**
ESK				pmax	pmax		
	comp=Z,44nm,1.0s						
NC204	**NORSAR Array S**	**25.79**	**346**	P	**P**	**21 33 02.5**	**+1.0**
NC204				IAmb	IAmb	21 33 19.2	
	comp=Z,19nm,1.1s						
KLMR	**Klimovskoe**	**26.39**	**18**	*e*P	**P**	**21 33 09.0**	**+2.2**
KLMR				pmax	pmax		
	comp=Z,13nm,0.7s						
KLMR	**Klimovskoe**	**26.39**	**18**	*e*P	**P**	**21 33 09.0**	**+2.2**
KLMR				AMP		21 33 12.3	
	comp=Z,13nm,0.7s						
GEYT	**Alibeck**	**27.93**	**77**	P	**P**	**21 33 19.2**	**-1.8**
	comp=Z,2.2nm,0.5s,baz=250,slow=21,SNR=4.9						
GEYT				LR	LR	21 46 40.5	
	comp=Z,65nm,20.4s,baz=293,slow=41						
	comp=Z,2.2nm,0.5s						
KIRV	**Kirov**	**27.93**	**30**	⇑*e*P	**P**	**21 33 21.5**	**+0.9**
AKTO	**Aktyubinsk**	**28.61**	**50**	P	**P**	**21 33 25.4**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=247,slow=6.4,SNR=2.8						
	comp=Z,0.5nm,0.3s						
PRGR	**Permogore**	**28.75**	**23**	*e*P	**P**	**21 33 26.7**	**-1.2**
TOA0	**Torodi Ar. Sit**	**30.18**	**225**	P	**P**	**21 33 40.6**	**-0.5**
TOA0				IAmb	IAmb	21 33 52.1	
	comp=Z,4.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.18**	**225**	P	**P**	**21 33 41.6**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=36,slow=9.4,SNR=20						
TORD				PcP	**PcP**	**21 36 43.3**	**+1.2**
	comp=Z,0.8nm,1.1s,baz=24,slow=1.2,SNR=2.0						
	comp=Z,1.4nm,0.6s						
ARU	**Arti**	**30.96**	**39**	P	**P**	**21 33 46.9**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=224,slow=11,SNR=6.0						
ARU				LR	LR	21 47 22.9	
	comp=Z,52nm,18.5s,baz=218,slow=39						
	comp=Z,0.7nm,0.3s						
ARU	**Arti**	**30.96**	**39**	*c i*P	**P**	**21 33 47.8**	**+0.2**
ARU						21 36 40.8	
ARU				S	**S**	**21 38 52.5**	**+1.1**
ARU				SS	**ScP**	**21 40 28.2**	**+2.6**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,92nm,13.0s						
SVE	**Sverdlovsk**	**32.18**	**39**	*e*P	**P**	**21 33 57.8**	**-0.4**
ARCES	**ARCESS Array B**	**32.94**	**2**	P	**P**	**21 34 04.1**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=183,slow=7.3,SNR=9.3						
ARCES				PcP	**PcP**	**21 36 49.2**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=222,slow=1.6,SNR=1.5						
ARCES				LR	LR	21 48 31.0	
	comp=Z,98nm,18.6s,baz=186,slow=38						
	comp=Z,0.7nm,0.5s						
WSAR	**Wadi Sarin**	**33.52**	**103**	LR	LR	21 51 40.8	
	comp=Z,30nm,18.5s,baz=308,slow=43						
CHGR	**Chuyangaron**	**36.36**	**73**	P	**P**	**21 34 34.0**	**-0.8**
CHGR	**Chuyangaron**	**36.36**	**73**	P	**P**	**21 34 34.0**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,21nm,0.7s						
BRVK	**Borovoye**	**36.59**	**48**	P	**P**	**21 34 37.4**	**+0.8**
BRVK	**Borovoye**	**36.59**	**48**	⇑*e*P	**P**	**21 34 36.2**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KK31	**Karatay Array**	**36.68**	**65**	P	**P**	**21 34 38.2**	**+0.8**
KK31				IAmb	IAmb	21 34 39.0	
	comp=Z,4.9nm,0.5s						
KK31	**Karatay Array**	**36.68**	**65**	P	**P**	**21 34 38.2**	**+0.8**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KKAR	**Karatay Array**	**36.68**	**65**	P	**P**	**21 34 38.0**	**+0.6**
KKAR				IAmb	IAmb	21 34 39.0	
	comp=Z,4.9nm,0.5s						
KKAR	**Karatay Array**	**36.68**	**65**	P	**P**	**21 34 37.8**	**+0.4**
KKAR	**Karatay Array**	**36.68**	**65**	P	**P**	**21 34 37.8**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GAR	**Garm**	**37.18**	**72**	P	**P**	**21 34 42.2**	**+0.4**
BTK	**Batken**	**37.35**	**70**	P	**P**	**21 34 43.9**	**+0.6**
BTK				IAmb	IAmb	21 34 53.0	
	comp=Z,8.5nm,1.2s						
BTK	**Batken**	**37.35**	**70**	P	**P**	**21 34 43.9**	**+0.6**
BTK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MBAR	**Mbarara**	**37.80**	**167**	LR	LR	21 50 35.1	
	comp=Z,89nm,21.8s,baz=341,slow=37						
DRK	**Karamyk**	**38.21**	**71**	P	**P**	**21 34 50.9**	**+0.2**
DRK				IAmb	IAmb	21 34 53.3	
	comp=Z,7.9nm,0.6s						
BORG	**Borgarnes**	**38.34**	**331**	LR	LR	21 53 36.2	
	comp=Z,36nm,18.0s,baz=120,slow=41						
DBIC	**Dimbokro**	**39.18**	**227**	P	**P**	**21 34 59.5**	**+0.8**
	comp=Z,8.2nm,0.9s,baz=46,slow=6.1,SNR=12						
	comp=Z,8.2nm,0.9s						
DBIC	**Dimbokro**	**39.18**	**227**	P	**P**	**21 34 57.4**	**-1.4**
DBIC				IAmb	IAmb	21 35 06.3	
	comp=Z,28nm,1.4s						
TIC	**Toumodi**	**39.30**	**227**	*e*PKP2	**P**	**21 35 00.9**	**+1.1**
KIC	**Kosan Boka**	**39.36**	**227**	*e*PKP2	**P**	**21 35 02.4**	**+2.1**
	comp=Z,8.4nm,0.7s						
LIC	**Lamto**	**39.64**	**227**	*e*PKP2	**P**	**21 35 02.3**	**-0.3**
	comp=Z,30nm,1.3s						
AAK	**Ala-Archa**	**39.64**	**65**	LR	LR	21 52 18.5	
	comp=Z,71nm,22.0s,baz=248,slow=38						
AAK	**Ala-Archa**	**39.64**	**65**	*de*P	**P**	**21 35 03.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	**Kilima Mbogo**	**39.91**	**157**	PcP	**PcP**	**21 37 07.8**	**-2.8**
	comp=Z,1.3nm,0.6s,baz=76,slow=8.3,SNR=1.8						
KMBO				LR	LR	21 51 58.4	
	comp=Z,72nm,19.3s,baz=90,slow=37						
BOOM	**Boomskoye usch**	**40.72**	**65**	P	**P**	**21 35 12.0**	**+0.5**
BOOM	**Boomskoye usch**	**40.72**	**65**	P	**P**	**21 35 12.0**	**+0.5**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH	**Kashi**	**41.35**	**69**	P	**P**	**21 35 16.8**	**+0.1**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**41.66**	**52**	P	**P**	**21 35 18.4**	**-0.4**
KURK				IAmb	IAmb	21 35 19.3	
	comp=Z,3.9nm,0.7s						
KURK	**Kurchatov**	**41.66**	**52**	*de*P	**P**	**21 35 18.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KDJ	**Kajisay**	**41.69**	**65**	P	**P**	**21 35 20.0**	**+0.5**
KDJ	**Kajisay**	**41.69**	**65**	P	**P**	**21 35 20.0**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**44.26**	**58**	P	**P**	**21 35 39.5**	**-0.6**
MAKZ				IAmb	IAmb	21 35 40.7	
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**44.26**	**58**	⇓P	**P**	**21 35 39.9**	**-0.2**
MK31	**Makanchi Array**	**44.48**	**58**	P	**P**	**21 35 41.5**	**-0.3**
MK31				IAmb	IAmb	21 35 42.3	
	comp=Z,9.9nm,1.3s						
MK31	**Makanchi Array**	**44.48**	**58**	*c i*P	**P**	**21 35 41.2**	**-0.6**
MKAR	**Makanchi Array**	**44.48**	**58**	P	**P**	**21 35 41.1**	**-0.7**
	comp=Z,3.1nm,0.4s,baz=268,slow=7.9,SNR=92						
MKAR				PcP	**PP**	**21 37 26.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=262,slow=4.5,SNR=2.8						
	comp=Z,3.1nm,0.4s						
MKAR	**Makanchi Array**	**44.48**	**58**	P	**P**	**21 35 41.5**	**-0.3**
ZAA0	**Zalesovo Array**	**45.29**	**47**	P	**P**	**21 35 47.1**	**-1.0**
ZALV	**Zalesovo Beam**	**45.29**	**47**	P	**P**	**21 35 47.4**	**-0.7**
	comp=Z,5.7nm,0.4s,baz=270,slow=9.1,SNR=29						
ZALV				PcP	**PcP**	**21 37 28.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=282,slow=6.5,SNR=1.5						
ZALV				LR	LR	21 56 59.8	
	comp=Z,50nm,18.3s,baz=252,slow=39						
	comp=Z,5.7nm,0.4s						
ZALV	**Zalesovo Beam**	**45.29**	**47**	P	**P**	**21 35 47.6**	**-0.5**
NRIK	**Noril'sk**	**47.29**	**26**	LR	LR	21 58 01.5	
	comp=Z,66nm,18.1s,baz=236,slow=39						
NRIK	**Noril'sk**	**47.29**	**26**	⇑*e*P	**P**	**21 36 04.8**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SFJD	**Kangerlussuaq**	**50.47**	**331**	LR	LR	21 59 56.2	
	comp=Z,57nm,18.1s,baz=89,slow=39						
DMN	**Daman**	**52.62**	**81**	*e*P	**P**	**21 36 45.4**	**+0.3**
	comp=Z,21nm,0.5s						
KKN	**Kakani**	**52.68**	**81**	*e*P	**P**	**21 36 45.7**	**+0.2**
	comp=Z,15nm,0.7s						
PKIN	**Phulchoki**	**52.87**	**81**	*e*P	**P**	**21 36 47.0**	**+0.1**
PKI	**Pulchoki**	**52.88**	**81**	*e*P	**P**	**21 36 47.3**	**+0.2**
JIRN	**Jiri**	**53.46**	**80**	*e*P	**P**	**21 36 51.7**	**+0.3**
RAMN	**Ramite**	**54.11**	**81**	*e*P	**P**	**21 36 55.9**	**-0.1**
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**56.46**	**76**	P	**P**	**21 37 12.7**	**-0.5**
LSA	**Lhasa**	**56.46**	**76**	P	**P**	**21 37 12.7**	**-0.5**
LSA				pmax	pmax		
	comp=Z,13nm,1.4s						
GOMU	**GeErMu**	**56.51**	**67**	P	P	21 37 05.3	-8.0
GOMU				pP	pP	21 37 08.3	-10
GOMU				sP	sP	21 37 09.6	-11
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,36nm,5.7s						
ZAK	**Zakamensk**	**57.11**	**49**	*e*P	**P**	**21 37 17.3**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FRB	**Frobisher Bay**	**58.43**	**329**	LR	LR	22 05 42.6	
	comp=Z,37nm,19.9s,baz=146,slow=39						
GTA	**Gaotai**	**58.85**	**62**	*e*P	**P**	**21 37 28.8**	**-0.7**
GTA				pP	pP	21 37 34.3	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**59.93**	**51**	P	**P**	**21 37 35.9**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=281,slow=8.2,SNR=8.8						
	comp=Z,1.1nm,0.6s						
ULN	**Ulaanbaatar**	**60.33**	**50**	⇓*e*P	**P**	**21 37 39.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TIXI	**Tiksi**	**60.38**	**21**	P	**P**	**21 37 38.3**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=305,slow=8.8,SNR=3.5						
TIXI				LR	LR	22 06 48.7	
	comp=Z,45nm,20.1s,baz=358,slow=39						
	comp=Z,0.7nm,0.3s						
TIXI	**Tiksi**	**60.38**	**21**	⇓*e*P	**P**	**21 37 41.4**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SCHQ	**Schefferville**	**60.85**	**319**	P	**P**	**21 37 43.7**	**+0.9**
	comp=Z,4.9nm,0.6s,baz=64,slow=4.9,SNR=15						
SCHQ				LR	LR	22 04 41.2	
	comp=Z,35nm,18.1s,baz=326,slow=37						
	comp=Z,4.9nm,0.6s						
SCHQ	**Schefferville**	**60.85**	**319**	P	**P**	**21 37 43.4**	**+0.6**
LBTB	**Lobatse**	**61.42**	**177**	LR	LR	22 05 27.9	
	comp=Z,61nm,18.7s,baz=17,slow=37						
BOSA	**Boshof**	**64.99**	**178**	P	**P**	**21 38 10.5**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=4.0,slow=6.4,SNR=11						
BOSA				LR	LR	22 08 09.3	
	comp=Z,66nm,19.3s,baz=7.5,slow=38						
	comp=Z,1.4nm,0.5s						
BOSA	**Boshof**	**64.99**	**178**	P	**P**	**21 38 10.2**	**-0.4**
BOSA				IAmb	IAmb	21 38 16.4	
	comp=Z,5.2nm,1.0s						
PZH	**PanZhiHua**	**66.20**	**74**	P	**P**	**21 38 19.1**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,9.4s						
XAN	**Xi'an**	**67.80**	**63**	P	**P**	**21 38 29.8**	**+1.1**
XAN				pP	pP	21 38 33.8	0.0
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**68.20**	**83**	P	**P**	**21 38 30.5**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=302,slow=7.7,SNR=7.2						
	comp=Z,0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**68.20**	**83**	*i* P	**P**	**21 38 32.0**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SUR	**Sutherland**	**68.73**	**182**	LR	LR	22 11 39.1	
	comp=Z,64nm,19.8s,baz=8.0,slow=38						
RCBR	**Riachuelo**	**69.26**	**246**	LR	LR	22 08 26.1	
	comp=Z,81nm,18.9s,baz=180,slow=35						
BILL	**Bilibino**	**72.03**	**14**	⇓*e*P	**P**	**21 38 55.3**	**+1.2**
BILL				*i*		21 39 09.0	
BILL				*i*		21 41 35.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KLR	**Kul'dur**	**73.80**	**40**	LR	LR	22 14 56.9	
	comp=Z,64nm,18.5s,baz=250,slow=39						
INK	**Inuvik**	**73.85**	**351**	P	**P**	**21 39 04.1**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=0.2,slow=14,SNR=2.7						
	comp=Z,0.4nm,0.4s						
MDP	**Montagnes des**	**75.39**	**265**	LR	LR	22 12 56.9	
	comp=Z,38nm,18.1s,baz=12,slow=36						
YKA	**Yellowknife Ar**	**75.43**	**341**	P	**P**	**21 39 13.3**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=34,slow=5.2,SNR=9.6						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**75.43**	**341**	P	**P**	**21 39 14.2**	**+0.1**
YKA	**Yellowknife Ar**	**75.43**	**341**	*i* P	**P**	**21 39 14.8**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NJ2	**Nanjing**	**75.91**	**61**	*e*P	**P**	**21 39 19.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ULM	**Lac du Bonnet**	**78.03**	**325**	P	**P**	**21 39 27.1**	**-1.9**
	comp=Z,2.8nm,0.4s,baz=60,slow=5.5,SNR=3.8						
	comp=Z,2.8nm,0.4s						
ILAR	**Eielson Array**	**78.56**	**356**	P	**P**	**21 39 29.5**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=359,slow=4.7,SNR=8.2						
	comp=Z,0.5nm,0.7s						
KSRS	**Korea Array**	**78.78**	**52**	P	**P**	**21 39 31.0**	**-2.4**
	comp=Z,1.0nm,0.5s,baz=309,slow=4.7,SNR=5.7						
	comp=Z,1.0nm,0.5s						
MJAR	**Matsushiro Arr**	**85.64**	**47**	P	**P**	**21 40 08.0**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=329,slow=3.0,SNR=1.5						
	comp=Z,0.9nm,0.7s						
KDAK	**Kodiak Island**	**85.82**	**358**	LR	LR	22 23 27.6	
	comp=Z,26nm,18.6s,baz=29,slow=39						
NEW	**Newport**	**88.23**	**335**	LR	LR	22 21 24.4	
	comp=Z,54nm,18.1s,baz=354,slow=37						
PDAR	**Pinedale Array**	**89.85**	**327**	P	**P**	**21 40 29.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=53,slow=5.7,SNR=4.0						
PDAR				LR	LR	22 22 23.3	
	comp=Z,35nm,19.2s,baz=32,slow=37						
	comp=Z,0.2nm,0.4s						
ELK	**Elko**	**93.92**	**329**	LR	LR	22 26 56.8	
	comp=Z,42nm,19.2s,baz=56,slow=38						
ANMO	**Albuquerque**	**94.58**	**320**	LR	LR	22 25 17.8	
	comp=Z,35nm,19.0s,baz=56,slow=37						
TXAR	**Lajitas Array**	**97.38**	**315**	P	**P**	**21 41 03.6**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=60,slow=5.4,SNR=3.2						
TXAR				LR	LR	22 27 50.4	
	comp=Z,39nm,18.7s,baz=63,slow=37						
	comp=Z,0.1nm,0.4s						
WRA	**Warramunga Arr**	**118.55**	**94**	PKP	**PKPdf**	**21 46 18.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=318,slow=2.1,SNR=1.9						
ASAR	**Alice Springs**	**120.09**	**98**	PKP	**PKPdf**	**21 46 21.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=301,slow=1.7,SNR=5.7						
ASAR	**Alice Springs**	**120.09**	**98**		**PKPdf**	**21 46 21.5**	**-0.3**
ASAR	**Alice Springs**	**120.09**	**98**	PKIKP	**PKPdf**	**21 46 21.5**	**-0.3**

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*GII **15** 21:32:38.5±0.0, 36°.72N×22°.95E, h10^{km}, mb4.3/1,*
MD4.1/1, Mm4.1/2

*IDC **15** 21:32:40.9±0.6, 36°.72N×23°.00E, h0^{km}, mb3.9/17, mbtmp3.9/26, ML3.5/8, Error ellipse: s-maj=13.7km s-min=12.6km az=33.0*

*ISK **15** 21:32:42.2, 36°.75N×22°.91E, h7^{km}, ML3.8/18*

*NEIC **15** 21:32:42.5±1.7, 36°.64N±0°.06×22°.78E±0°.07, h10^{km}±1^{km}, mb4.4/9, ML3.8(ATH), Error ellipse: s-maj=13.3km s-min=5.8km az=221.0*

*ATH **15** 21:32:43.5, 36°.69N×22°.87E, h15^{km}, ML3.8/17, Error ellipse: s-maj=1.6km s-min=0.7km az=88.0*

*THE **15** 21:32:43.8, 36°.69N×22°.86E, h7^{km}, ML3.7/7, Error ellipse: s-maj=0.6km s-min=0.3km az=224.0*

ISC 15 21:32:42.3±0.8**, 36°.60N**±0°.02×**22°.94E**±0°.02**, h13**^{km}±5^{km}**, n150, σ1^{s}.71**/179**, mb4.0**/21**, 7C-2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	Veliai	0.12	360	P	Pb	21 32 46.2	-0.2
VLI				S	Sg	21 32 48.1	+0.4
VLI				AML	AML	21 32 48.4	
VLI				AML	AML	21 32 48.6	
VLI	Veliai	0.12	360	P	Pg	21 32 46.1	+0.6
VLI				S	Sg	21 32 47.0	-0.8
	319μm,0.3s						
MNVA	Monemvasia	0.12	43	P	Pb	21 32 47.4	+1.0
MNVA				S	Sb	21 32 50.0	+0.9
MNVA				AML	AML	21 32 50.3	
	comp=N,84269μm,0.2s						
MNVA				AML	AML	21 32 50.5	
KTHR	Kythira	0.34	171	P	Pn	21 32 52.5	-0.5
KTHR				S	Sn	21 32 58.9	-0.9
KTHR				AML	AML	21 33 00.8	
KTHR				AML	AML	21 33 02.7	
KTHR	Kythira	0.34	171	P	Pn	21 32 52.6	-0.4
KTHR				S	Sn	21 32 59.2	-0.6
	comp=N,18μm,0.2s						
KTHA	Kythira Island	0.36	164	P	Pn	21 32 52.8	-0.4
KTHA				S	Sn	21 32 59.4	-0.7
KTHA				AML	AML	21 33 00.2	
	comp=N,21252μm,0.2s						
KTHA				AML	AML	21 33 00.3	
	comp=E,39158μm,0.4s						
KTHA	Kythira Island	0.36	164	P	Pn	21 32 52.9	-0.3
KTHA				S	Sn	21 32 59.9	-0.2
	comp=E,15μm,0.3s						
KRND	KRANIDI	0.80	12	P	Pg	21 32 57.5	-0.2
KRND				S	Sg	21 33 07.9	-0.4
KRND				AML	AML	21 33 12.4	
	comp=N,8569μm,0.2s						
KRND				AML	AML	21 33 12.6	
	comp=E,7721μm,0.2s						
KRND	KRANIDI	0.80	12	P	Pg	21 32 57.7	0.0
KRND				S	Sg	21 33 08.2	0.0
	comp=E,4μm,0.3s						
YDRA	Hydra	0.86	29	P	Pg	21 32 58.9	0.0
YDRA				S	Sb	21 33 10.2	-0.2
YDRA				AML	AML	21 33 13.2	
	comp=N,19931μm,0.2s						
YDRA				AML	AML	21 33 14.9	
	comp=E,15354μm,0.3s						
ITM	Ithomi	0.99	306	P	Pb	21 32 59.8	-1.6
ITM				S	Sb	21 33 12.9	-1.5
ITM				AML	AML	21 33 16.9	
	comp=E,6476μm,0.4s						
ITM				AML	AML	21 33 17.0	
	comp=N,7062μm,0.3s						
ITM	Ithomi	0.99	306	P	Pb	21 32 59.8	-1.6
ITM				S	Sb	21 33 14.3	-0.1
	comp=N,3μm,0.3s						
ITM	Ithomi	0.99	306	PG	Pb	21 32 59.8	-1.6
ITM	Ithomi	0.99	306	Pg	Pb	21 32 59.8	-1.6
ITM					Sb	21 33 10.7	-3.7
PYL	PYLOS	1.00	287	P	Pb	21 33 00.3	-1.2
PYL				S	Sb	21 33 14.2	-0.5
	comp=N,3μm,0.5s						
EPID	Epidavros	1.02	8	P	Pb	21 33 01.2	-0.6
EPID				S	Sb	21 33 13.9	-1.2
EPID	Epidavros	1.02	8	P	Pb	21 33 01.4	-0.4
EPID				S	Sg	21 33 15.5	+0.2
	comp=N,4μm,0.3s						
MHLO	Agia Marina, M	1.18	85	P	Pg	21 33 06.2	+1.2
MHLO				AML	AML	21 33 31.8	
	comp=N,24404μm,0.8s						
MHLO				AML	AML	21 33 34.2	
	comp=E,18776μm,0.5s						
MHLO	Agia Marina, M	1.18	85	P	Pg	21 33 06.2	+1.2
MHLO				S	Sn	21 33 24.2	+3.8
RODP	Rodopos	1.23	147	PN	Pg	21 33 08.3	+2.3
CHAN	Chania	1.40	140	P	Pg	21 33 10.1	+0.8
CHAN				AML	AML	21 33 35.3	
	comp=N,6953μm,0.5s						
CHAN				AML	AML	21 33 35.3	
	comp=E,6777μm,0.4s						
IMMV	Iera Moni Meta	1.42	143	P	Pg	21 33 10.3	+0.8
IMMV				AML	AML	21 33 36.8	
	comp=N,4341μm,0.5s						
IMMV				AML	AML	21 33 39.3	
	comp=E,4207μm,0.4s						
IMMV	Iera Moni Meta	1.42	143	PN	Pg	21 33 10.9	+1.4
VLY	Voula,Athens	1.42	28	P	Pn	21 33 08.2	+0.3
VLY				S	Sn	21 33 25.9	-0.5
VLY				AML	AML	21 33 33.0	
	comp=N,4715μm,0.4s						
VLY				AML	AML	21 33 33.1	
	comp=E,7837μm,0.7s						
THAL	Thalero	1.45	351	P	Pn	21 33 08.4	+0.2
THAL				AML	AML	21 33 32.5	
	comp=N,13020μm,0.4s						
THAL				AML	AML	21 33 34.0	
	comp=E,9880μm,0.3s						
KNDR	Palaiochora Ch	1.49	156	P	Pg	21 33 12.4	+1.5
KNDR				AML	AML	21 33 45.7	
	comp=N,8221μm,0.7s						
KNDR				AML	AML	21 33 50.9	
	comp=E,7523μm,0.5s						
KNDR	Palaiochora Ch	1.49	156	PN	Pg	21 33 11.9	+0.9
ATH	Athens Observa	1.50	24	P	Pn	21 33 09.4	+0.5
ATHU	Athens Univers	1.52	26	P	Pn	21 33 09.5	+0.4
ATHU				AML	AML	21 33 33.2	
	comp=N,997μm,0.5s						
ATHU				AML	AML	21 33 33.2	
	comp=E,885μm,0.5s						
KLV	Kalavryta, Ach	1.57	337	P	Pn	21 33 10.1	+0.1
KLV				S	Sn	21 33 28.8	-1.4
KLV				AML	AML	21 33 33.5	
	comp=E,1899μm,0.4s						
KLV				AML	AML	21 33 36.9	
	comp=N,2369μm,0.7s						
PTL	Penteli	1.62	27	P	Pn	21 33 10.9	+0.3
VIL2	Platees	1.63	9	P	Pn	21 33 10.2	-0.5
DRO	Drossia	1.67	324	P	Pn	21 33 11.9	+0.7
DRO				AML	AML	21 33 42.4	
	comp=N,3651μm,0.4s						
DRO				AML	AML	21 33 43.4	
	comp=E,1826μm,0.8s						
DION	Dionisos Attik	1.67	28	P	Pn	21 33 12.0	+0.7
DION				AML	AML	21 33 39.3	
	comp=E,3836μm,0.5s						
DION				AML	AML	21 33 41.9	
	comp=N,3562μm,0.5s						
LAKA	Lakka	1.81	335	P	Pn	21 33 13.6	+0.5
KARY	Karystos	1.86	39	P	Pn	21 33 14.7	+0.9
RLS	Riolos of Patr	1.87	322	P	Pn	21 33 15.4	+1.5
GVD	Gavdhos	1.99	152	PN	Pb	21 33 19.3	+0.9
EFP	Efpalio	2.00	336	P	Pn	21 33 16.9	+1.2
IDI	Anoyia	2.06	129	⇑P	Pb	21 33 19.0	-0.5
IDI	Anoyia	2.06	129	Pn	Pb	21 33 18.5	-1.0
	comp=N,26nm,0.3s,baz=237,slow=9.9,SNR=24						
IDI				Sn	Sb	21 33 45.9	+0.9
	comp=N,72nm,0.3s,baz=330,slow=19,SNR=7.0						
	comp=N,53nm,0.3s						
IDI	Anoyia	2.06	129	PN	Pb	21 33 19.8	+0.3
IDI	Anoyia	2.06	129	Pn	Pb	21 33 18.6	-0.9
ATAL	Atalanti	2.09	2	P	Pn	21 33 17.2	+0.2
APE	Apeiranthos	2.13	77	⇑P	Pb	21 33 19.3	-1.5
APE	Apeiranthos	2.13	77	PN	Pb	21 33 19.2	-1.5
APE	Apeiranthos	2.13	77	Pn	Pn	21 33 17.3	-0.3
ANX	Ano Chora	2.15	338	P	Pn	21 33 18.6	+0.7
HRKL	Herakleio	2.18	126	PN	Pb	21 33 21.5	0.0
AGG	Agios Georgios	2.46	349	PN	Pn	21 33 21.9	-0.3
AGG	Agios Georgios	2.46	349	Pn	Pn	21 33 23.1	+0.9
ZKR	Zakros	3.05	118	PN	Pb	21 33 33.7	-2.7
CHOS	Chios island	3.05	53	PN	Pn	21 33 31.5	+1.2
URLA	Izmir	3.40	58	PN	Pn	21 33 36.6	+1.6
NIS1	Nisyros Isl.	3.41	89	PN	Pn	21 33 37.9	+2.7
LIT	Litokhoron	3.51	354	Pn	Pn	21 33 36.5	-0.1
BODT	Bodrum	3.54	81	PN	Pn	21 33 39.5	+2.6
KARP	Karpathos	3.58	106	Pn	Pn	21 33 40.7	+3.2
KEK	Kerkira	3.97	322	Pn	Pn	21 33 42.4	-0.4
HORT	Hortiatis	3.99	2	PN	Pn	21 33 43.8	+0.6
DKL	Dikili	3.99	51	PN	Pn	21 33 44.5	+1.4
BOZC	Bozcaada	4.06	36	PN	Pn	21 33 44.3	+0.2
EZN	Ezine	4.18	39	PN	Pn	21 33 47.0	+1.3
ARG	Arkhangelos	4.20	94		Pn	21 33 50.1	+4.1
GADA	Gvkgeada	4.27	32	PN	Pn	21 33 47.5	+0.5
FNA	Florina	4.35	344	PN	Pn	21 33 48.8	+0.7
FNA	Florina	4.35	344		Pn	21 33 48.0	-0.1
KBN	Korca	4.35	338	Pn	Pn	21 33 46.9	-1.3
GRG	Griva	4.37	355	PN	Pn	21 33 49.1	+0.7
KNT	Kendrikon	4.55	360	PN	Pn	21 33 51.8	+0.9
ALN	Alexandroupoli	4.93	29	Pn	Pn	21 33 56.2	+0.2
SCTE	Santa Cesarea	4.94	316	Pn	Pn	21 33 56.4	+0.3
RDO	Rodhopi	4.97	23		Pn	21 33 56.7	+0.1
TIR	Tirane	5.31	334	⇑P	Pb	21 34 18.8	+3.9
AKAS	Kas	5.39	92		Pn	21 34 07.4	+4.9
TIP	Timpagrande	5.52	300	⇑P	Pn	21 34 03.4	-0.8
TIP	Timpagrande	5.52	300	Pn	Pn	21 34 04.4	+0.2
ELL	Elmali	5.61	86	Pn	Pn	21 34 10.2	+4.8
CEL	Celeste	5.84	289		Pn	21 34 07.8	-0.8
VTS	Vitosha	6.01	2	Pn	Pn	21 34 10.8	-0.2
PDG	Podgorica	6.48	335	Pn	Pn	21 34 18.0	+0.8
CUC	Castrocucco	6.54	303	Pn	Pn	21 34 20.9	+2.7
VAE	Valguarnera	6.88	280	Pn	Pn	21 34 25.0	+2.2
	comp=N,1.2nm,0.3s,baz=344,slow=13,SNR=3.1						
VAE				Sn	Sn	21 35 45.9	+4.9
	comp=N,2.7nm,0.3s,baz=106,slow=19,SNR=2.2						
	comp=N,7.1nm,0.4s						
BLKB	Belogradchik	7.02	358	⇑P	Pn	21 34 26.6	+1.9
CSS	Mathiatis	8.60	98	Pn	Pn	21 34 43.6	-2.9
CSS				Sn	Sn	21 36 20.5	-2.9
TLBR	Topalu	8.83	24	⇑P	Pn	21 34 50.6	+1.1
BR131	Keskin Array S	8.99	66	Pn	Pn	21 34 55.0	+3.2
BRTR	Keskin Array B	8.99	66	Pn	Pn	21 34 55.6	+3.7
	comp=N,0.1nm,0.3s,baz=252,slow=13,SNR=13						
BRTR	Keskin Array B	8.99	66		Pn	21 34 54.2	+2.3
MLR	Muntele Rosu	9.16	13	⇑P	Pn	21 34 52.3	-2.0
MLR	Muntele Rosu	9.16	13	Pn	Pn	21 34 52.7	-1.6
	comp=N,2.4nm,1.2s,baz=138,slow=14						
TPGR	Topolog	9.23	25	⇓P	Pn	21 35 05.6	+10
NRCA	Norcia	9.79	312		Pn	21 35 04.7	+1.8
BIZ	Bicaz	10.60	12	⇓P	Pn	21 35 06.9	-6.8
HNTI	Hanita	10.65	106	Sn	Sn	21 37 10.6	-3.1
MMA0B	Mount Meron ar	10.85	106	Pn	Pn	21 35 14.0	-3.4
MMA0B				Sn	Sn	21 37 15.7	-3.0
MMAI	Mount Meron Ar	10.85	106	Pn	Pn	21 35 15.7	-1.7
	comp=N,1.5nm,0.3s,baz=320,slow=16,SNR=2.2						
	comp=N,0.6nm,0.3s						
SLTI	Sal'it	10.90	110	Pn	Pn	21 35 15.3	-2.7
SLTI				Sn	Sn	21 37 17.0	-2.8
GEM	Giv'at Ha'Em	10.98	104	Pn	Pn	21 35 16.0	-3.1
GEM				Sn	Sn	21 37 18.5	-3.3
KZIT	Kziot	11.10	117	Pn	Pn	21 35 18.8	-1.9
AMAZ	Amatzia	11.14	114	Pn	Pn	21 35 18.4	-2.9
HMDT	Nahal Hemdat	11.26	109	Sn	Sn	21 37 26.1	-2.5
YTIR	Yattir	11.38	114	Pn	Pn	21 35 21.5	-3.1
YTIR				Sn	Sn	21 37 29.4	-2.2
DSI	Dead Sea	11.47	112	Pn	Pn	21 35 23.6	-2.1
DSI				Sn	Sn	21 37 31.3	-2.4
MDBI	Mazsada	11.58	114	Pn	Pn	21 35 24.4	-2.8
GHAJ	Ghor Haditha	11.74	113	Pn	Pn	21 35 29.8	+0.4
GHAJ	Ghor Haditha	11.74	113	Pn	Pn	21 35 26.4	-3.0
GHAJ				Sn	Sn	21 37 37.9	-2.4
KRMI	Paran Flat	11.78	120	Pn	Pn	21 35 28.3	-1.8
HRFI	Mount Harif	12.05	119	Pn	Pn	21 35 32.0	-1.7
MBRI	Mt Berech	12.11	121	Pn	Pn	21 35 31.4	-3.1
MBRI				Sn	Sn	21 37 47.5	-2.0
EIL	Elat	12.21	121	Pn	Pn	21 35 35.2	-0.6
	comp=N,1.3nm,0.3s,baz=309,slow=6.5,SNR=18						
	comp=N,11nm,0.7s						
ASF	Jabal al Asfar	12.35	107	Pn	Pn	21 35 37.6	-0.2
	comp=N,0.4nm,0.3s,baz=321,slow=5.0,SNR=6.7						
	comp=N,3.8nm,0.6s						
CKRC	Cesky Krumlov	13.75	335	*e*P	P	21 36 09.0	+3.6
GERES	GERESS Array B	13.98	334	Pn	Pn	21 36 03.0	+2.9
	comp=N,0.1nm,0.3s,baz=152,slow=15,SNR=2.2						
DAVOX	Davos/Dischmat	14.07	320	Pn	Pn	21 35 59.5	-1.9
	comp=N,0.1nm,0.3s,baz=147,slow=22,SNR=1.2						
	comp=N,0.8nm,0.6s						
KHC	Kasperske Hory	14.26	334	*e*P	P	21 36 11.7	+0.5
PRU	Pruhonice	14.70	338	*e*P	P	21 36 18.7	+2.8
AKASG	Malin Array Be	14.80	16	Pn	Pn	21 36 09.7	-1.5
	comp=N,0.4nm,0.3s,baz=205,slow=11,SNR=2.0						
	comp=N,0.1nm,0.2s						
CLL	Collm	16.32	337	*e*PP	P	21 36 39.0	+5.0
CLL				*i* x	x	21 36 41.6	
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	16.81	59	Pn	Pn	21 36 37.1	-0.1
	baz=292,slow=18,SNR=1.8						
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	21.35	286	P	P	21 37 29.4	+0.1
	comp=Z,1.1nm,0.8s,baz=109,slow=7.3,SNR=5.5						
	comp=Z,1.1nm,0.8s						
PAB	San Pablo	21.65	286	P	P	21 37 30.6	-1.8
PAB				IAmb	IAmb	21 37 43.9	
	comp=Z,9.8nm,1.5s						
BELG	Belogornoye	23.48	40	P	P	21 37 51.4	-0.1
	comp=Z,9.8nm,0.7s,baz=310,slow=16,SNR=1.7						
	comp=Z,9.8nm,0.7s						
FINES	FINESS Array B	24.94	4	P	P	21 38 04.2	-0.8
	comp=Z,1.7nm,0.6s,baz=164,slow=9.9,SNR=4.2						
FINES				PcP	PcP	21 41 41.4	+1.4
	comp=Z,0.8nm,0.6s,baz=199,slow=4.0,SNR=3.9						
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	24.94	4	P	P	21 38 05.4	+0.4
FINES					PcP	21 41 40.1	+0.1
NC602	NORSAR Array S	25.22	347	P	P	21 38 07.7	+0.2
NB2	NORSAR Subarra	25.57	347	P	P	21 38 11.3	+0.6
	comp=Z,3.0nm,1.1s,baz=156,slow=9.3						
NOA	NORSAR Array B	25.57	347	P	P	21 38 10.0	-0.7
	comp=Z,0.3nm,0.4s,baz=152,slow=10,SNR=8.2						
	comp=Z,0.3nm,0.4s						
EKA	Eskdalemuir Ar	25.82	325	P	P	21 38 12.9	-0.1
	comp=Z,8.6nm,0.8s,baz=124,slow=9.3,SNR=28						
	comp=Z,8.6nm,0.8s						
ESK	Eskdalemuir	25.84	325	P	P	21 38 12.8	-0.3
ESK				IAmb	IAmb	21 38 18.6	
	comp=Z,14nm,0.9s						
TORD	Torodi Ar. Bea	30.14	225	P	P	21 38 52.8	+0.8
	comp=Z,0.8nm,0.5s,baz=36,slow=9.4,SNR=9.9						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	33.02	2	P	P	21 39 16.8	0.0
	comp=Z,0.5nm,0.6s,baz=179,slow=6.1,SNR=3.9						
	comp=Z,0.5nm,0.6s						
DBIC	Dimbokro	39.14	227	P	P	21 40 11.2	+1.6
	comp=Z,2.0nm,0.6s,baz=23,slow=11,SNR=1.4						
	comp=Z,2.0nm,0.6s						
BOOM	Boomskoye usch	40.74	65	P	P	21 40 22.7	-0.3
MK31	Makanchi Array	44.51	57	P	P	21 40 53.2	-0.1
MK31				IAmb	IAmb	21 40 54.0	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	44.51	57	P	P	21 40 53.2	-0.2
	comp=Z,3.2nm,0.6s,baz=280,slow=6.8,SNR=28						
MKAR				PcP	PP	21 42 37.4	+0.4
	comp=Z,0.3nm,0.5s,baz=269,slow=4.1,SNR=2.4						
	comp=Z,3.2nm,0.6s						
MKAR	Makanchi Array	44.51	57	P	P	21 40 53.3	0.0
ZAA0	Zalesovo Array	45.33	47	P	P	21 40 59.4	-0.3
ZAA0				IAmb	IAmb	21 40 59.8	
	comp=Z,4.7nm,0.6s						
ZALV	Zalesovo Beam	45.33	47	P	P	21 40 59.4	-0.4
	comp=Z,5.0nm,0.6s,baz=272,slow=8.5,SNR=17						
	comp=Z,5.0nm,0.6s						
ZALV	Zalesovo Beam	45.33	47	P	P	21 40 58.6	-1.2
NRIK	Noril'sk	47.36	26	P	P	21 41 15.8	+0.4
	comp=Z,0.9nm,0.3s,baz=170,slow=20,SNR=2.1						
	comp=Z,0.9nm,0.3s						
SONM	Songino Array	59.97	51	P	P	21 42 47.8	-0.6
	comp=Z,0.2nm,0.4s,baz=279,slow=9.5,SNR=1.3						
	comp=Z,0.2nm,0.4s						
SCHQ	Schefferville	60.92	319	P	P	21 42 55.2	+0.6
	comp=Z,1.6nm,0.4s,baz=56,slow=5.6,SNR=6.6						
	comp=Z,1.6nm,0.4s						
SCHQ	Schefferville	60.92	319	P	P	21 42 54.2	-0.4
SCHQ				IAmb	IAmb	21 43 20.6	
	comp=Z,5.1nm,1.4s						
BOSA	Boshof	64.91	178	P	P	21 43 23.1	+1.7
	comp=Z,1.5nm,0.8s,baz=34,slow=3.6,SNR=3.5						
	comp=Z,1.5nm,0.8s						
BOSA	Boshof	64.91	178	P	P	21 43 21.9	+0.5
CMAR	Chiang Mai Arr	68.19	83	P	P	21 43 43.1	+0.5
	comp=Z,0.2nm,0.3s,baz=236,slow=9.7,SNR=1.7						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	75.51	341	P	P	21 44 27.1	+1.2
	comp=Z,0.5nm,0.7s,baz=32,slow=5.5,SNR=5.4						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	89.92	327	P	P	21 45 41.9	+0.4
	comp=Z,0.2nm,0.5s,baz=40,slow=13,SNR=1.7						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	120.06	98	PKP	PKPdf	21 51 32.6	-0.5
	comp=Z,0.2nm,0.5s,baz=306,slow=1.4,SNR=1.7						

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*KRNET **15** 21:36:08.1±0.1, 39°.72N×75°.61E, mb3.0*

*SOME **15** 21:36:16.6, 40°.13N×75°.35E, h10^{km}*

*NNC **15** 21:36:19.3±1.3, 40°.22N×75°.37E, h7^{km}±6^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=8.9km s-min=5.3km az=0.0*

ISC 15 21:36:13.6±1.2**, 39°.99N**±0°.06×**75°.43E**±0°.03**, h10**^{km}**, n58, σ1^{s}.71**/87**, 29C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	Aral	2.05	336	⇑*i*P	Pb	21 36 49.7	-1.3
	baz=36						
ARLS				⇑*i*S	Sg	21 37 20.2	+0.7
	baz=36						
OHH	Osh	2.09	286	⇑*e*P	Pn	21 36 49.3	+0.5
	baz=91						
OHH				⇑*i*S	Sb	21 37 19.3	+1.5
	baz=91						
ULHL	Ulahol	2.34	15	P	Pb	21 36 54.8	-1.1
	SNR=9.1						
ULHL	Ulahol	2.34	15	⇓*i*P	Pn	21 36 52.9	+0.6
	baz=11						
ULHL				⇓*i*S	Sb	21 37 25.8	+0.9
	baz=11						
UCH	Uchtor	2.34	343	P	Pn	21 36 53.6	+1.0
	SNR=18						
UCH	Uchtor	2.34	343	⇑*i*P	Pn	21 36 54.0	+1.4
	baz=42						
UCH				⇑*i*S	Sg	21 37 27.7	-1.2
	baz=42						
AML	Almayashu	2.51	329	P	Pn	21 36 55.5	+0.7
	SNR=12						
KDJ	Kajisay	2.52	31	⇑*i*P	Pn	21 36 54.6	-0.1
	baz=26						
KDJ				⇑*i*S	Sb	21 37 28.5	-1.6
	baz=26						
BOOM	Boomskoye usch	2.53	9	⇑*i*P	Pn	21 36 56.0	+1.1
	baz=5.0						
BOOM				⇑*i*S	Sb	21 37 30.7	+0.3
	baz=5.0						
KBK	Karagaybulak	2.69	352	P	Pn	21 36 58.9	+1.8
	SNR=10.0						
KBK	Karagaybulak	2.69	352	⇑*e*P	Pn	21 36 58.6	+1.5
	baz=51						
KBK				⇑*i*S	Sb	21 37 35.5	+0.4
	baz=51						
AAK	Ala-Archa	2.74	345	P	Pn	21 36 59.7	+2.0
	SNR=8.6						
AAK	Ala-Archa	2.74	345	⇑*i*P	Pn	21 36 59.4	+1.6
	baz=44						
AAK				⇑*i*S	Sb	21 37 36.9	+0.5
	baz=44						
DRK	Karamyk	2.84	261	⇑*i*P	Pn	21 36 58.6	-0.8
	baz=67						
DRK				⇑*i*S	Sn	21 37 35.3	+1.5
	baz=67						
TKM2	Tokmak 2	2.93	2	P	Pn	21 37 02.0	+1.6
	SNR=7.4						
TKM2	Tokmak 2	2.93	2	⇑Pn	Pn	21 37 02.5	+2.0
	3.3nm,0.5s						
TKM2				⇑Lg	Lg	21 37 46.0	
	11nm,0.5s						
TKM2	Tokmak 2	2.93	2	⇓*i*P	Pn	21 37 01.8	+1.3
	baz=60						
TKM2				⇓*i*S	Sb	21 37 40.9	-1.2
	baz=60						
EKS2	Erkin-Say	2.94	336	⇑*e*P	Pn	21 37 02.3	+1.7
	baz=35						
EKS2				⇑*i*S	Sb	21 37 41.8	-0.6
	baz=35						
CHMS	Chumysh	3.05	351	P	Pn	21 37 03.7	+1.7
	SNR=5.3						
CHMS	Chumysh	3.05	351	⇓Pn	Pb	21 37 05.3	-2.7
	4.9nm,0.6s						
CHMS				⇓Lg	Lg	21 37 47.9	
	9.9nm,0.6s						
KST	Kastek	3.08	7	*e*P	Pg	21 37 11.5	-1.1
	4.0nm,0.5s						
KST				*e*S	Sg	21 37 49.8	-2.7
	24nm,0.4s						
KST	Kastek	3.08	7	Pg	Pg	21 37 11.5	-1.1
	4.0nm,0.5s						
KST				Lg	Lg	21 37 49.7	
	24nm,0.4s						
ARK	Arkit	3.19	306	⇓*i*P	Pn	21 37 05.3	+1.4
	baz=8.0						
ARK				⇓*i*S	Sb	21 37 46.9	-2.5
	baz=8.0						
MRKS	Merke	3.21	330	*e*P	Pb	21 37 13.0	+2.1
	2.3nm,0.3s						
MRKS				*e*S	Sb	21 37 52.3	+2.3
	8.1nm,0.5s						
MRKS	Merke	3.21	330	Pg	Pb	21 37 13.0	+2.1
	2.3nm,0.3s						
MRKS				Lg	Lg	21 37 52.3	
	8.1nm,0.5s						
TNSS	Tian-Shan	3.25	20	*e*P	Pg	21 37 15.6	-0.3
	2.4nm,0.3s						
TNSS				*e*S	Sg	21 37 56.5	-1.6
	8.1nm,0.3s						
TNSS	Tian-Shan	3.25	20	Pg	Pg	21 37 15.6	-0.3
	2.4nm,0.3s						
TNSS				Lg	Lg	21 37 56.5	
	8.1nm,0.3s						
ANVS	Anan'yevo	3.26	30	⇑*i*P	Pn	21 37 04.9	-0.1
	baz=26						
ANVS				⇑*i*S	Sn	21 37 46.5	+2.6
	baz=26						
PRZ	Przheval'sk	3.35	41	⇑*i*P	Pn	21 37 05.7	-0.5
	baz=36						
PRZ				⇑*i*S	Sn	21 37 47.6	+1.5
	baz=36						
MDOK	Medeo	3.40	20	*e*P	Pg	21 37 18.4	-0.3
	1.5nm,0.3s						
MDOK				*e*S	Sg	21 38 01.2	-1.5
	9.4nm,0.6s						
MDOK	Medeo	3.40	20	Pn	Pb	21 37 10.7	-3.3
	1.1nm,0.4s						
MDOK				⇓Lg	Lg	21 38 00.8	
	12nm,0.8s						
MDOK	Medeo	3.40	20	Pg	Pg	21 37 18.4	-0.3
	1.5nm,0.3s						
MDOK				Lg	Lg	21 38 01.2	
	9.4nm,0.6s						
AAA	Alma-Ata	3.40	19	*e*P	Pg	21 37 19.3	+0.5
	9.1nm,0.2s						
AAA				*e*S	Sg	21 38 03.0	+0.1
	26nm,0.3s						
AAA	Alma-Ata	3.40	19	Pg	Pg	21 37 19.3	+0.5
	9.1nm,0.2s						
AAA				Lg	Lg	21 38 03.0	
	26nm,0.3s						
KNDC	Almaty	3.42	19	⇑Lg	Lg	21 38 02.4	
	38nm,0.5s						
BTK	Batken	3.54	273	⇓*i*P	Pn	21 37 08.3	-0.4
	baz=77						
BTK				⇓*i*S	Sn	21 37 52.9	+2.2
	baz=77						
TRKS	Terek-Say	3.60	297	⇑*i*P	Pn	21 37 10.2	+0.5
	baz=99						
TRKS				⇑*i*S	Sn	21 37 55.1	+2.8
	baz=99						
SATY	Saty	3.79	35	*e*P	Pg	21 37 26.1	-0.2
	1.7nm,0.2s						
SATY				*e*S	Sg	21 38 14.6	-0.8
	5.5nm,0.3s						
SATY	Saty	3.79	35	Pg	Pg	21 37 26.1	-0.2
	1.7nm,0.2s						
SATY				Lg	Lg	21 38 14.6	
	5.5nm,0.3s						
KTBS	Karatobe	3.83	14	*e*P	Pg	21 37 26.6	-0.5
	1.9nm,0.3s						
KTBS				*e*S	Sg	21 38 15.8	-1.0
	14nm,0.4s						
KTBS	Karatobe	3.83	14	Pg	Pg	21 37 26.5	-0.5
	1.9nm,0.3s						

KTBS				Lg	Lg	21 38 15.8	
	14nm,0.4s						
ZHN	**Zhinishke**	**3.89**	**34**	eP	**Pg**	**21 37 27.3**	**-1.0**
	3.1nm,0.1s						
ZHN				eS	**Sg**	**21 38 16.8**	**-1.8**
	11nm,0.2s						
ZHN	**Zhinishke**	**3.89**	**34**	Pg	**Pg**	**21 37 27.3**	**-1.0**
	3.1nm,0.1s						
ZHN				Lg	Lg	21 38 16.8	
	11nm,0.2s						
KUU	**Kurty**	**3.96**	**10**	eP	**Pg**	**21 37 28.4**	**-1.0**
	1.5nm,0.3s						
KUU				eS	**Sg**	**21 38 18.9**	**-1.9**
	16nm,0.5s						
KUU	**Kurty**	**3.96**	**10**	Pg	**Pg**	**21 37 28.4**	**-1.0**
	1.5nm,0.3s						
KUU				Lg	Lg	21 38 18.8	
	16nm,0.5s						
KURS	**Kuram**	**4.05**	**30**	eP	**Pg**	**21 37 30.0**	**-1.2**
	3.4nm,0.5s						
KURS				eS	**Sg**	**21 38 21.0**	**-2.7**
	7.1nm,0.8s						
KURS	**Kuram**	**4.05**	**30**	Pg	**Pg**	**21 37 30.0**	**-1.2**
	3.4nm,0.5s						
KURS				Lg	Lg	21 38 21.0	
	7.1nm,0.8s						
UZB	**Uzynbulak**	**4.15**	**39**	eP	**Pg**	**21 37 31.5**	**-1.6**
	2.2nm,0.1s						
UZB				eS	**Sg**	**21 38 23.9**	**-2.9**
	5.6nm,1.1s						
UZB	**Uzynbulak**	**4.15**	**39**	Pg	**Pg**	**21 37 31.5**	**-1.6**
	2.2nm,0.1s						
UZB				Lg	Lg	21 38 23.9	
	5.6nm,1.1s						
SHLS	**Shalkode**	**4.38**	**42**	eP	**Pg**	**21 37 40.2**	**+2.7**
	1.7nm,0.2s						
SHLS				eS	**Sg**	**21 38 38.6**	**+4.4**
	4.7nm,0.3s						
SHLS	**Shalkode**	**4.38**	**42**	Pg	**Pg**	**21 37 40.2**	**+2.7**
	1.7nm,0.2s						
SHLS				Lg	Lg	21 38 38.6	
	4.7nm,0.3s						
PDGK	**Podgornoye**	**4.51**	**41**	Pg	**Pg**	**21 37 37.0**	**-3.1**
	0.8nm,0.5s						
PDGK				Lg	Lg	21 38 33.3	
	3.4nm,0.6s						
PDGK	**Podgornoye**	**4.51**	**41**	⇑Pn	**Pn**	**21 37 26.8**	**+4.6**
	3.9nm,0.9s						
PDGK				⇑Lg	Lg	21 38 38.4	
	5.8nm,0.6s						
IUG	**Iuzhnay**	**4.62**	**300**	eP	**Pg**	**21 37 40.7**	**-1.3**
	20nm,0.4s						
IUG				eS	**Sg**	**21 38 39.8**	**-1.9**
	16nm,0.6s						
IUG	**Iuzhnay**	**4.62**	**300**	Pg	**Pg**	**21 37 40.7**	**-1.3**
	20nm,0.4s						
IUG				Lg	Lg	21 38 39.8	
	16nm,0.6s						
KK31	**Karatay Array**	**4.83**	**312**	⇓Sn	**Sn**	**21 38 24.7**	**+2.4**
	0.6nm,0.4s						
KK31				⇓Lg	Lg	21 38 44.8	
	2.0nm,0.7s						
BTLS	**Baital**	**5.15**	**349**	eP	**Pg**	**21 37 50.9**	**-1.4**
	0.6nm,0.1s						
BTLS				eS	**Sg**	**21 38 57.1**	**-1.9**
	2.1nm,0.7s						
BTLS	**Baital**	**5.15**	**349**	Pg	**Pg**	**21 37 50.8**	**-1.4**
	0.6nm,0.1s						
BTLS				Lg	Lg	21 38 57.1	
	2.1nm,0.7s						

IDC 15 21:52:38.2±29.0, 18°.90S×174°.88W, h0^{km}, mb4.2/4, mbtmp4.2/4, MS3.9/1, Error ellipse: s-maj=529.3km s-min=157.3km az=75.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.61**	**262**	P	P	21 59 47.7	+1.2
	2.5nm,0.4s,baz=98,slow=7.2,SNR=3.3						
	2.5nm,0.4s						
PMG	**Port Moresby**	**37.93**	**279**	LR	LR	22 13 10.8	
	comp=Z,158nm,20.2s,baz=289,slow=32						
STKA	**Stephens Creek**	**41.13**	**243**	P	P	22 00 24.3	0.0
	2.5nm,0.8s,baz=73,slow=11,SNR=3.7						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**47.76**	**260**	P	P	22 01 16.8	-0.7
	0.5nm,0.3s,baz=96,slow=7.7,SNR=32						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**47.76**	**255**	P	P	22 01 17.0	-0.5
	2.6nm,0.8s,baz=95,slow=8.0,SNR=19						
	2.6nm,0.8s						

THE 15 22:04:24.6, 38°.10N×20°.14E, h1^{km}±2^{km}, ML3.1/5, Error ellipse: s-maj=3.0km s-min=0.8km az=244.0

ATH 15 22:04:24.9, 38°.12N×20°.23E, h23^{km}±1^{km}, ML2.9/5, Error ellipse: s-maj=2.8km s-min=1.3km az=61.0

BEO 15 22:04:33.5±1.0, 38°.68N×19°.79E, h18^{km}±6^{km}, ML3.0/8

ISC 15 22:04:23.1±1.4, 38°.12N±0°.05×20°.09E±0°.06, h24^{km}±7^{km}, n45, σ1^{s}.94/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.22**	**68**	P	**Pb**	**22 04 29.8**	**+0.8**
KEF3				S	**Sb**	**22 04 33.1**	**+0.1**
DMLN	**Damoulianata-K**	**0.26**	**62**	P	**Pb**	**22 04 29.9**	**+0.4**
DMLN				S	**Sb**	**22 04 33.2**	**-0.6**
DMLN	**Damoulianata-K**	**0.26**	**62**	P	**Pb**	**22 04 29.7**	**+0.2**
DMLN				S	**Sb**	**22 04 32.9**	**-0.9**
	19µm,0.1s						
LXRA	**Lixouri, Kepha**	**0.29**	**73**	P	**Pb**	**22 04 30.2**	**+0.3**
LXRA				S	**Sb**	**22 04 34.0**	**-0.5**
KEF4	**Livadi, Kephal**	**0.30**	**62**	P	**Pb**	**22 04 30.5**	**+0.4**
KEF4				S	**Sb**	**22 04 34.2**	**-0.6**
KEF4	**Livadi, Kephal**	**0.30**	**62**	P	**Pb**	**22 04 30.5**	**+0.4**
KEF4				S	**Sb**	**22 04 34.5**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.39**	**90**	P	**Pb**	**22 04 31.6**	**+0.1**
PSDA				S	**Sb**	**22 04 35.9**	**-1.4**
PSDA	**Pessada-Kefalo**	**0.39**	**90**	P	**Pb**	**22 04 31.6**	**+0.1**
PSDA				S	**Sb**	**22 04 36.5**	**-0.7**
VLS	**Valsamata**	**0.40**	**81**	P	**Pb**	**22 04 31.6**	**-0.1**
VLS				S	**Sb**	**22 04 36.3**	**-1.2**
VLS				AML	AML	22 04 37.0	
	comp=N,14350µm,0.2s						
VLS				AML	AML	22 04 37.4	
	comp=E,8560µm,0.2s						
VLS	**Valsamata**	**0.40**	**81**	P	**Pb**	**22 04 31.7**	**0.0**
VLS				S	**Sb**	**22 04 36.8**	**-0.7**
	comp=E,6µm,0.1s						
FSK	**Fiskardo**	**0.51**	**48**	P	**Pb**	**22 04 34.4**	**+0.9**
FSK				S	**Sb**	**22 04 40.5**	**+0.1**
FSK				AML	AML	22 04 42.6	
	comp=E,3153µm,0.1s						
FSK				AML	AML	22 04 42.8	
	comp=N,1265µm,0.3s						
FSK	**Fiskardo**	**0.51**	**48**	P	**Pb**	**22 04 34.4**	**+0.9**
FSK				S	**Sb**	**22 04 41.3**	**+0.9**
EVGI	**Lefkada island**	**0.67**	**42**	P	**Pb**	**22 04 36.8**	**+0.5**
EVGI				S	**Sb**	**22 04 46.1**	**+1.0**
EVGI	**Lefkada island**	**0.67**	**42**	P	**Pb**	**22 04 36.8**	**+0.5**
EVGI				S	**Sb**	**22 04 46.2**	**+1.0**
	comp=N,1µm,0.2s						
LTHK	**Lithakia**	**0.72**	**124**	P	**Pb**	**22 04 37.2**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.77**	**39**	P	**Pb**	**22 04 38.1**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.77**	**39**	P	**Pb**	**22 04 38.4**	**+0.6**
LKD2	**Lefkada island**	**0.81**	**34**	P	**Pb**	**22 04 39.1**	**+0.6**
LKD2				AML	AML	22 04 56.5	
	comp=E,3593µm,0.2s						
LKD2				AML	AML	22 04 57.9	
	comp=N,1851µm,0.3s						
LKD2	**Lefkada island**	**0.81**	**34**	P	**Pn**	**22 04 39.3**	**+0.2**
LKD2				S	**Sn**	**22 04 51.0**	**+0.7**
	comp=N,1µm,0.2s						
TSLK	**Tsoukalades, L**	**0.84**	**32**	P	**Pn**	**22 04 40.3**	**+0.8**
TSLK				AML	AML	22 04 58.3	
	comp=E,2236µm,0.3s						
TSLK				AML	AML	22 04 59.3	
	comp=N,2209µm,0.5s						
TSLK	**Tsoukalades, L**	**0.84**	**32**	P	**Pn**	**22 04 40.1**	**+0.7**
TSLK				S	**Sn**	**22 04 52.4**	**+1.4**
	comp=N,1µm,0.4s						
RLS	**Riolos of Patr**	**1.09**	**93**	P	**Pb**	**22 04 43.6**	**+0.2**
RLS				AML	AML	22 05 04.1	
	comp=E,416µm,0.4s						
RLS				AML	AML	22 05 06.0	
	comp=N,567µm,0.4s						
RLS	**Riolos of Patr**	**1.09**	**93**	P	**Pb**	**22 04 43.8**	**+0.5**
PVO	**Paravola**	**1.24**	**66**	P	**Pb**	**22 04 46.7**	**+0.9**
DRO	**Drossia**	**1.29**	**97**	P	**Pb**	**22 04 47.6**	**+0.9**
DRO	**Drossia**	**1.29**	**97**	P	**Pb**	**22 04 47.7**	**+0.9**
IGT	**Igoumenitsa**	**1.43**	**8**	P	**Pb**	**22 04 51.2**	**+2.1**
EFP	**Efpalio**	**1.47**	**77**	P	**Pb**	**22 04 49.9**	**+0.2**
EFP	**Efpalio**	**1.47**	**77**	P	**Pb**	**22 04 50.6**	**+0.9**
ANX	**Ano Chora**	**1.52**	**71**	P	**Pb**	**22 04 51.2**	**+0.5**
ANX	**Ano Chora**	**1.52**	**71**	P	**Pb**	**22 04 51.6**	**+0.9**
ALIK	**Aliki, Aigiali**	**1.60**	**84**	P	**Pb**	**22 04 53.0**	**+1.0**
KEK	**Kerkira**	**1.61**	**352**	P	**Pb**	**22 04 53.7**	**+1.5**
KLV	**Kalavryta, Ach**	**1.63**	**92**	P	**Pb**	**22 04 52.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.63**	**92**	P	**Pb**	**22 04 53.1**	**+0.5**
ITM	**Ithomi**	**1.74**	**122**	P	**Pb**	**22 04 54.9**	**+0.6**
THL	**Klokotos Trika**	**2.09**	**46**	P	**Pb**	**22 04 59.4**	**-0.9**
OHR	**Ohrid**	**3.04**	**10**	ePn	**Pb**	**22 05 14.0**	**-2.6**
OHR				eSn	**Sn**	**22 05 45.3**	**-0.2**
TIR	**Tirane**	**3.23**	**357**	ePn	**Pn**	**22 05 15.5**	**+3.2**
TIR				eSn	**Sn**	**22 05 48.5**	**-1.6**
PDG	**Podgorica**	**4.35**	**352**	ePn	**Pn**	**22 05 30.4**	**+2.6**
PDG				eSn	**Sn**	**22 06 14.5**	**-3.2**
STON	**Ston**	**5.08**	**340**	ePn	**Pn**	**22 05 40.5**	**+2.7**
STON				eSn	**Sn**	**22 06 30.4**	**-5.3**
SJES	**Sjenica**	**5.14**	**359**	ePn	**Pn**	**22 05 42.9**	**+4.2**
SJES				eSn	**Sn**	**22 06 32.4**	**-4.9**
IVAS	**Ivanjica**	**5.45**	**1**	ePn	**Pn**	**22 05 45.4**	**+2.4**
IVAS				eSn	**Sn**	**22 06 40.6**	**-4.3**
BBLS	**Lazići**	**5.76**	**355**	ePn	**Pn**	**22 05 50.8**	**+3.6**
BBLS				eSn	**Sn**	**22 06 47.4**	**-5.2**
DIVS	**Divibare**	**5.97**	**359**	ePn	**Pn**	**22 05 52.7**	**+2.6**
DIVS				eSn	**Sn**	**22 06 52.4**	**-5.4**

IDC 15 22:04:38.9±30.0, 21°.68S×178°.55W, h432^{km}±291^{km}, mb3.3/5, mbtmp4.2/5, Error ellipse: s-maj=168.4km s-min=109.2km az=62.0

ISC 15 22:04:50.1±2.6, 22°.1S±0°.7×178°.9W±0°.4, h550^{km}, n8, σ1^{s}.16/8, mb3.8/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.57**	**267**	P	**P**	**22 10 36.5**	**-0.3**
	1.6nm,0.4s,baz=80,slow=6.1,SNR=1.8						
	1.6nm,0.4s						
STKA	**Stephens Creek**	**36.40**	**246**	P	**P**	**22 11 09.2**	**+0.7**
	1.0nm,0.4s,baz=68,slow=11,SNR=5.4						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**43.40**	**258**	P	**P**	**22 12 04.2**	**-0.6**
	2.0nm,0.5s,baz=100,slow=8.2,SNR=28						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**43.61**	**264**	P	**P**	**22 12 05.1**	**-1.3**
	1.3nm,0.5s,baz=101,slow=8.4,SNR=35						
	1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.89**	**290**	P	**P**	**22 16 53.0**	**+1.8**
	0.4nm,0.3s,baz=141,slow=3.5,SNR=5.1						
	0.4nm,0.3s						
AKASG	**Malin Array Be**	**143.97**	**329**	PKP	**PKPdf**	**22 23 22.1**	**-0.8**
	0.7nm,0.3s,baz=42,slow=3.8,SNR=8.0						
BRTR	**Keskin Array B**	**147.26**	**310**	PKPbc	**PKPbc**	**22 23 32.3**	**-0.1**
	0.3nm,0.5s,baz=130,slow=2.3,SNR=1.8						
GERES	**GERESS Array B**	**151.47**	**342**	PKPbc	**PKiKP**	**22 23 41.9**	**-0.5**
	0.1nm,0.4s,baz=45,slow=5.7,SNR=2.0						

WEL 15 22:13:45.4±0.9, 36°S±6°×17°8E±°, h193^{km}±8^{km}, M3.3/12, ML3.8/14, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=72.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.82**	**174**	P	Pn	22 14 21.4	-0.2
MXZ				S	Sn	22 14 49.0	-0.8
HAZ	**Te Kaha**	**2.02**	**186**	P	Pn	22 14 23.8	+0.3
HAZ				S	Sn	22 14 54.1	+0.8
WMGZ	**Waiomatatini S**	**2.09**	**172**	P	Pn	22 14 24.7	+0.5
WMGZ				S	Sn	22 14 55.6	+0.9
PKGZ	**Pakihiroa**	**2.14**	**179**	P	Pn	22 14 24.9	+0.1
GRZ	**Great Barrier**	**2.16**	**256**	P	Pn	22 14 26.1	+1.1
GRZ				S	Sn	22 14 55.1	-0.8
RUGZ	**Raukumara Rang**	**2.23**	**188**	P	Pn	22 14 25.7	-0.3
RUGZ				S	Sn	22 14 55.7	-2.1
PUZ	**Puketiti**	**2.33**	**176**	P	Pn	22 14 26.9	0.0
PUZ				S	Sn	22 14 59.0	-0.4
MWZ	**Matawai**	**2.62**	**189**	P	Pn	22 14 30.7	+0.6
MWZ				S	Sn	22 15 05.9	+0.6
URZ	**Urewera**	**2.62**	**196**	P	Pn	22 14 31.0	+0.9
URZ				S	Sn	22 15 06.5	+1.3
TKGZ	**Te Karaka**	**2.69**	**183**	P	Pn	22 14 31.2	+0.3
TKGZ				S	Sn	22 15 07.0	+0.2
MUGZ	**Murupara**	**2.91**	**200**	P	Pn	22 14 34.5	+0.9
RIGZ	**Rimuhau**	**2.96**	**184**	P	Pn	22 14 34.2	0.0
RIGZ				S	Sn	22 15 12.7	+0.2
RTZ	**Ruatahuna**	**2.99**	**196**	P	Pn	22 14 35.0	+0.4
SNGZ	**Shannon Statio**	**3.08**	**190**	P	Pn	22 14 35.7	+0.1
SNGZ				S	Sn	22 15 16.2	+1.1
RAHZ	**Arahi**	**3.26**	**193**	P	Pn	22 14 38.2	+0.5
RAHZ				S	Sn	22 15 20.3	+1.5
KNZ	**Kokohu**	**3.28**	**185**	P	Pn	22 14 37.4	-0.5
KNZ				S	Sn	22 15 17.9	-1.4
BKZ	**Black Stump Fm**	**3.63**	**199**	P	Pn	22 14 42.6	+0.3
BKZ				S	Sn	22 15 28.6	+1.6
ETVZ	**East Tongariro**	**3.86**	**208**	P	Pn	22 14 46.0	+0.8
KWHZ	**Kaweka Forest**	**3.89**	**199**	P	Pn	22 14 45.6	0.0
BHHZ	**Black Hill Sta**	**4.05**	**202**	P	Pn	22 14 47.3	-0.3
BHHZ				S	Sn	22 15 37.3	+0.7
KRHZ	**Kereru**	**4.11**	**198**	P	Pn	22 14 47.9	-0.4
KRHZ				S	Sn	22 15 37.2	-0.6
KAHZ	**Kahuranaki**	**4.15**	**193**	P	Pn	22 14 48.2	-0.5
KAHZ				S	Sn	22 15 39.8	+1.2
PNHZ	**Pukenui**	**4.41**	**199**	P	Pn	22 14 51.2	-0.9
PNHZ				S	Sn	22 15 43.7	-0.8
PRHZ	**Porangahau**	**4.65**	**193**	P	Pn	22 14 53.5	-1.5
MRZ	**Mangatainoka R**	**5.28**	**201**	P	Pn	22 15 01.3	-1.8

VIE 15 22:34:37.1±0.8, 47°.20N×11°.42E, h11^{km}±7^{km}, ml0.3/5, Error ellipse: s-maj=3.0km s-min=2.2km az=172.0 7 km SSE of Innsbruck, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.15**	**277**	ePg	Pg	22 34 40.8	+0.2
	0.4nm,0.1s						
WTTA	**Wattenberg**	**0.16**	**68**	ePg	Pg	22 34 41.0	+0.2
	0.8nm,0.0s						
WATA	**Walderalm**	**0.17**	**39**	ePg	Pg	22 34 41.2	+0.3
	0.4nm,0.1s						
WATA				eSg	Sg	22 34 43.8	+0.1
	0.7nm,0.1s						
MOTA	**Moosalm**	**0.26**	**303**	i Pg	Pg	22 34 42.4	-0.1
	0.1nm,0.1s						
MOTA				eSg	Sg	22 34 46.9	+0.7
	0.4nm,0.1s						

VIE 15 22:34:40.1±0.8, 47°.19N×11°.42E, h8^{km}±8^{km}, ml0.4/5, Error ellipse: s-maj=2.9km s-min=1.6km az=167.0 7 km NE of Fulpmes, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.14**	**280**	ePg	Pg	22 34 43.1	-0.2
	1.5nm,0.1s						
SQTA				eSg	Sg	22 34 45.9	+0.4
	1.1nm,0.1s						
WTTA	**Wattenberg**	**0.16**	**65**	i Pg	Pg	22 34 43.9	+0.2
	1.6nm,0.1s						
WTTA				eSg	Sg	22 34 46.7	+0.5
	0.7nm,0.1s						
WTTA	**Wattenberg**	**0.16**	**65**	eSg	Pg	22 34 43.8	+0.2
	0.4nm,0.1s						
WATA	**Walderalm**	**0.18**	**37**	eSg	Sg	22 34 46.7	+0.2
	1.0nm,0.1s						
MOTA	**Moosalm**	**0.26**	**305**	eSg	Sg	22 34 49.8	+0.9
	0.8nm,0.2s						

REN 15 23:04:58.5±2.3, 40°.65N±0°.03×119°.46W±0°.03, h0^{km}±6^{km}, ML3.0/10, ML2.8/88(NEIC), Error ellipse: s-maj=5.1km s-min=2.0km az=139.0

NEIC 15 23:04:59.1±2.3, 40°.64N±0°.02×119°.44W±0°.04, h4^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=1.4km az=68.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAHR	**Pah Rah Range**	**0.93**	**178**		Pg	23 05 16.6	-0.3
PAHR				Sg	Sg	23 05 29.6	+0.5
PAHR				IAML		23 05 32.5	
	comp=E,308nm,0.3s						
PAHR				IAML		23 05 32.9	
	comp=N,189nm,0.4s						
BEKR	**Beckworth**	**1.05**	**223**		Pg	23 05 18.3	-0.9
BEKR				Sg	Sg	23 05 32.6	-0.2
BEKR				IAML		23 05 36.4	
	comp=E,154nm,0.5s						
VCNR	**Virginia City**	**1.35**	**187**		Pn	23 05 23.9	-1.1
VCNR				IAML		23 05 45.4	
	comp=N,260nm,0.5s						
MPK	**Martis Peak**	**1.42**	**199**	Pn	Pn	23 05 25.1	-0.8
MPK				IAML		23 05 49.1	
	comp=N,129nm,0.7s						
MPK				IAML		23 05 49.6	
	comp=E,142nm,0.8s						
MOD	**Modoc Plateau**	**1.42**	**333**		Pn	23 05 24.6	-1.3
MOD					Sg	23 05 44.2	-0.5
MOD	**Modoc Plateau**	**1.42**	**333**	Pn	Pn	23 05 24.4	-1.4
PNTR	**Pine Nut**	**1.56**	**185**		Pn	23 05 27.7	0.0
PNTR				IAML		23 05 56.6	
	comp=E,187nm,1.2s						
PNTR				IAML		23 05 58.7	
	comp=N,189nm,0.9s						
YERR	**Yerington**	**1.66**	**175**		Pn	23 05 28.5	-0.7
YERR				IAML		23 05 54.3	
	comp=N,153nm,0.8s						
LCMM	**Colby Mountain**	**1.67**	**253**		Pb	23 05 30.1	-0.4
BMN	**Battle Mountai**	**1.70**	**96**		Pn	23 05 28.6	-1.1
BMN				IAML		23 05 54.0	
	comp=N,137nm,1.2s						
BMN				IAML		23 05 54.7	
	comp=E,88nm,0.7s						
EMB	**Emerald Bay**	**1.74**	**197**		Pn	23 05 30.5	+0.1
EMB				IAML		23 05 58.8	
	comp=E,63nm,0.9s						
EMB				IAML		23 06 01.8	
	comp=N,71nm,0.7s						
WVOR	**Wild Horse Val**	**1.89**	**18**		Pn	23 05 31.1	-1.1
WVOR				IAML		23 06 02.0	
	comp=N,52nm,0.5s						
WVOR				IAML		23 06 02.1	
	comp=N,81nm,0.9s						
KVN	**Kaiserville**	**1.89**	**147**	Pn	Pb	23 05 33.5	-0.8
ORV	**Oroville**	**1.92**	**236**	Pn	Pn	23 05 33.0	+0.4
RYN	**Ryan**	**2.13**	**160**		Pb	23 05 38.0	-0.3
RYN				IAML		23 06 09.4	
	comp=N,62nm,0.3s						
K05A	**Summer Lake**	**2.35**	**333**		Pn	23 05 40.3	+1.6
NVAR	**Mina Array Bea**	**2.38**	**158**		Pn	23 05 39.1	+0.1
NV11	**Mina Array Sit**	**2.42**	**155**		Pn	23 05 39.3	-0.3
LHV	**Little Huntoon**	**2.49**	**163**		Pn	23 05 41.4	+1.0
Q09A	**Carvers**	**2.50**	**135**		Pn	23 05 40.5	-0.2
Q09A				IAML		23 06 21.2	
	comp=E,65nm,0.7s						
Q09A				IAML		23 06 27.4	
	comp=N,50nm,0.6s						
L04D	**Klamath Falls**	**2.67**	**307**		Pn	23 05 42.9	-0.2
L04D				IAML		23 06 36.4	
	comp=N,49nm,1.2s						
YBH	**Yreka Blue Hor**	**2.70**	**295**	Pn	Pn	23 05 43.6	+0.2
CMB	**Columbia Colle**	**2.71**	**196**		Pb	23 05 48.7	+0.6
J08A	**Circle Bar Ran**	**2.81**	**14**		Pn	23 05 43.4	-1.5
J08A				IAML		23 06 29.6	
	comp=E,52nm,0.8s						
J08A				IAML		23 06 31.0	
	comp=N,56nm,0.5s						
MDPB	**Devils Postpil**	**3.02**	**175**		Pn	23 05 45.9	-1.9
MDPB				IAML		23 06 43.9	
	comp=E,18nm,0.7s						
MDPB				IAML		23 06 44.2	
	comp=N,19nm,0.7s						
OMMB	**Old Mammoth Mi**	**3.04**	**173**		Pg	23 05 57.6	+0.2
TPH	**Tonopah**	**3.08**	**145**		Pn	23 05 48.5	-0.3
ELK	**Elko**	**3.19**	**87**		Pb	23 05 58.3	+1.8
KHMM	**Horse Mountain**	**3.27**	**275**		Pg	23 06 00.9	-0.8
KHMM				IAML		23 06 55.6	
	comp=N,17nm,2.1s						
KHMM				IAML		23 07 50.2	
	comp=E,16nm,2.1s						
J04D	**Umpqua Nationa**	**3.27**	**323**		Pb	23 05 59.5	+1.6
HUMO	**Hull Mountain**	**3.29**	**308**		Pn	23 05 52.9	+1.5
HUMO				IAML		23 06 40.6	
	comp=N,16nm,0.6s						
PINE	**Pine Mountain**	**3.34**	**341**		Pg	23 06 01.9	-1.2
PINE				IAML		23 06 55.7	
	comp=E,34nm,0.9s						
PINE				IAML		23 07 01.2	
	comp=N,28nm,1.2s						
I07A	**Izee**	**3.44**	**359**	Pg	Pb	23 06 02.0	+1.4
I07A				IAML		23 06 48.7	
	comp=E,12nm,0.6s						
I07A				IAML		23 06 52.2	
	comp=N,17nm,1.1s						
KSXB	**Camp Six Broad**	**3.55**	**291**		Pg	23 06 06.6	-0.5
KSXB				IAML		23 07 00.6	
	comp=E,12nm,1.4s						
LCH	**Last Change Ra**	**3.68**	**157**		Pn	23 05 57.4	+0.5
R11A	**Troy Canyon, C**	**3.76**	**126**		Pn	23 05 58.7	+0.7
DBO	**Dodson Butte**	**3.77**	**312**	Pn	Pn	23 05 57.6	-0.5
DBO				IAML		23 07 04.7	
	comp=N,16nm,1.1s						
DBO				IAML		23 07 15.5	
	comp=E,10nm,2.8s						
MFID	**Camas Ranch**	**3.86**	**43**	Pn	Pn	23 05 59.4	0.0
KBO	**Bosley Butte**	**3.93**	**295**	Pg	Pb	23 06 11.4	+2.4
SAO	**San Andreas Ge**	**4.18**	**203**	Pn	Pn	23 06 03.2	-0.4
J01E	**Myrtle Point**	**4.20**	**308**	Pg	Pb	23 06 16.1	+2.7
J01E				IAML		23 07 37.5	
	comp=N,14nm,3.0s						
J01E				IAML		23 07 38.2	
	comp=E,14nm,2.5s						
BBGB	**Big Mountain B**	**4.25**	**198**	Pn	Pn	23 06 04.4	-0.2
KEBM	**Edson Butte**	**4.29**	**303**	Pn	Pn	23 06 05.2	+0.1
TPNV	**Topopah Spring**	**4.45**	**145**		Pn	23 06 08.2	+0.7
TPNV				IAML		23 07 29.4	
	comp=E,9.5nm,0.9s						
TPNV				IAML		23 07 32.9	
	comp=E,12nm,1.9s						
BMO	**Blue Mountains**	**4.49**	**20**	Pn	Pn	23 06 09.3	+1.4
BMO				Pg	Pg	23 06 22.3	-2.8
HLID	**Hailey**	**4.74**	**50**	Pn	Pn	23 06 10.7	-0.8
HLID				IAML		23 07 32.0	
	comp=E,11nm,0.8s						
HLID				IAML		23 07 42.1	
	comp=E,7.9nm,0.7s						
PSUT	**Pine Spring**	**4.80**	**114**		Pn	23 06 13.9	+1.6
G03D	**McMinnville, O**	**5.36**	**330**	Pn	Pn	23 06 17.9	-2.0
CCUT	**Cedar City**	**5.64**	**121**	Pn	Pn	23 06 21.4	-2.5

IDC 15 23:14:44.3±4.8, 16°.32S×172°.52W, h190^{km}±48^{km}, mb3.7/4, mbtmp4.3/5, Error ellipse: s-maj=112.3km s-min=55.7km az=128.0

NEIC 15 23:14:44.4±2.8, 16°.42S±0°.07×172°.8W±0°.1, h153^{km}±10^{km}, mb4.6/24, Error ellipse: s-maj=17.1km s-min=9.9km az=75.0

ISC 15 23:14:44.7±0.8, 16°.34S±0°.09×173°.1W±0°.1, h150^{km}, n35, σ1^{s}.41/33, mb4.6/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.75**	**29**	P	**Pn**	**23 15 28.3**	**-0.8**
	172nm,0.3s,baz=203,slow=2.6,SNR=63						
AFI				S	**Sn**	**23 16 01.8**	**-1.5**
	538nm,0.5s,baz=251,slow=4.8,SNR=13						
NIUE	**Niue**	**4.09**	**132**	Pn	Pn	23 15 42.1	-4.0
NIUE				Sn	Sn	23 16 24.8	-9.1
FUNA	**Funafuti**	**10.79**	**315**	Pn	**Pn**	**23 17 15.3**	**0.0**
KNTN	**Kanton**	**13.55**	**6**	P	**Pn**	**23 17 52.7**	**+1.6**
RAO	**Raoul Island**	**13.58**	**198**	P	**P**	**23 17 54.5**	**-0.7**
OUENC	**Ouen Island, N**	**19.83**	**249**	P	**P**	**23 19 03.5**	**-0.4**
OUENC				IAmb	IAmb	23 19 15.8	
	comp=Z,11nm,1.0s						
DZM	**Mont Dzumac**	**20.11**	**250**	P	**Pn**	**23 19 09.9**	**-0.6**
	comp=Z,4.9nm,0.7s,baz=87,slow=19,SNR=5.9						
	comp=Z,4.9nm,0.7s						
DZM	**Mont Dzumac**	**20.11**	**250**	P	**Pn**	**23 19 09.4**	**-1.0**
OUZ	**Omahuta**	**22.23**	**210**	P	**P**	**23 19 27.7**	**-1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
OUZ				IAmb	IAmb	23 19 31.1	
	comp=Z,15nm,1.0s						
MXZ	Matakaoa Point	22.45	198	P	P	23 19 31.2	-0.1
URZ	Urewera	23.46	200	P	P	23 19 40.6	0.0
URZ				IAmb	IAmb	23 19 44.9	
	comp=Z,14nm,0.5s						
HIZ	Hauiti	24.48	203	P	P	23 19 48.7	-1.2
BKZ	Black Stump Fm	24.48	200	P	P	23 19 49.9	-0.1
BFZ	Birch Farm	25.94	199	P	P	23 20 03.3	+0.2
BFZ				IAmb	IAmb	23 20 14.9	
	comp=Z,17nm,0.9s						
PLWZ	Palliser	27.06	199	P	P	23 20 09.9	-3.3
QRZ	Quartz Range	27.38	204	P	P	23 20 17.6	+1.7
NNZ	Nelson	27.39	202	P	P	23 20 18.7	+2.6
BSWZ	Blackbirch Sta	27.65	201	P	P	23 20 21.3	+3.0
THZ	Tophouse	28.04	203	P	P	23 20 25.4	+3.5
THZ				IAmb	IAmb	23 20 37.4	
	comp=Z,23nm,1.1s						
KHZ	Kahutara	28.39	201	P	P	23 20 26.9	+2.0
KHZ				IAmb	IAmb	23 20 31.0	
	comp=Z,20nm,1.0s						
LTZ	Lake Taylor	29.16	202	P	P	23 20 25.9	-5.9
LTZ				IAmb	IAmb	23 20 26.5	
	comp=Z,21nm,0.7s						
ARMA	Armidale	35.09	240	P	P	23 21 23.2	-0.6
ARMA				IAmb	IAmb	23 21 29.1	
	comp=Z,5.5nm,1.1s						
STKA	Stephens Creek	43.80	241	P	P	23 22 35.0	-0.8
	comp=Z,3.5nm,0.8s,baz=79,slow=9.3,SNR=5.4						
	comp=Z,3.5nm,0.8s						
BBOO	Buckleboo	48.57	241	P	P	23 23 14.1	+0.9
BBOO				IAmb	IAmb	23 23 16.2	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	49.70	258	P	P	23 23 22.5	+0.7
WB0	Warramunga Arr	49.85	258	P	P	23 23 23.3	+0.2
WB2	Warramunga Arr	49.88	258	P	P	23 23 23.6	+0.4
WB2				IAmb	IAmb	23 23 39.2	
	comp=Z,5.7nm,1.1s						
WRA	Warramunga Arr	49.89	258	P	P	23 23 23.2	-0.2
	comp=Z,0.5nm,0.5s,baz=95,slow=7.2,SNR=16						
	comp=Z,0.5nm,0.5s						
AS31	Alice Springs	50.07	253	P	P	23 23 24.8	0.0
ASAR	Alice Springs	50.07	253	P	P	23 23 24.6	-0.2
	comp=Z,8.0nm,0.5s,baz=88,slow=8.4,SNR=101						
	comp=Z,8.0nm,0.5s						
FORT	Forrest	55.23	244	P	P	23 24 02.0	-0.4
FORT				IAmb	IAmb	23 24 03.3	
	comp=Z,19nm,0.9s						
SOEI	Soe	61.15	268	P	P	23 24 44.1	+0.1
MBWA	Marble Bar	63.35	254	P	P	23 24 58.6	+0.1
MBWA				IAmb	IAmb	23 25 16.4	
	comp=Z,3.8nm,0.9s						
YUH	Yuha Desert	73.23	48	P	P	23 25 56.1	-3.5
QSPA	South Pole Qui	73.71	180	P	P	23 26 02.5	+0.5

IDC 15 23:20:42.2±2.8**, 9°.54N×104°.86W, h0^{km}, mb3.5**/4**, mbtmp3.5**/5**, ML3.6**/1**, MS3.2**/3**, Error ellipse: s-maj=117.0km s-min=26.9km az=59.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	15.39	341	LR	LR	23 28 52.3	
	comp=Z,58nm,20.9s,baz=358,slow=32						
TXAR	Lajitas Array	19.73	3	P	Pn	23 25 14.4	-0.6
	baz=172,slow=14,SNR=6.2						
	1.0nm,0.9s						
ATAH	Atahualpa	31.14	121	LR	LR	23 36 52.1	
	comp=Z,131nm,19.1s,baz=301,slow=31						
TKL	Tuckaleechee C	32.33	33	LR	LR	23 43 06.5	
	comp=Z,25nm,18.6s,baz=226,slow=42						
PDAR	Pinedale Array	33.36	354	P	P	23 27 22.2	-0.1
	0.1nm,0.4s,baz=168,slow=9.2,SNR=2.3						
	0.1nm,0.4s						
LPAZ	La Paz	44.49	125	P	P	23 28 56.4	0.0
	1.2nm,0.7s,baz=305,slow=6.7,SNR=6.7						
	1.2nm,0.7s						
H03N2	Juan Fernandez	49.35	151	T	T	00 22 49.5	
	baz=329,slow=77,SNR=8.7						
H03N1	Juan Fernandez	49.36	151	T	T	00 22 49.0	
	baz=329,slow=77,SNR=10						
H03N3	Juan Fernandez	49.36	151	T	T	00 22 52.1	
	baz=329,slow=77,SNR=7.4						
YKA	Yellowknife Ar	53.34	354	P	P	23 30 02.4	-0.5
	0.2nm,0.5s,baz=156,slow=6.0,SNR=2.7						
	0.2nm,0.5s						
ILAR	Eielson Array	62.44	341	P	P	23 31 06.8	-0.1
	0.7nm,0.8s,baz=153,slow=4.8,SNR=11						
	0.7nm,0.8s						

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*IDC **15** 23:46:50.1±0.9, 32°.56N×96°.15E, h0^{km}, mb3.5/12, mbtmp3.5/15, ML4.0/3, MS3.4/7, Error ellipse: s-maj=31.3km s-min=17.5km az=53.0*

ISC 15 23:46:51.8±0.7**, 32°.6N**±0°.1×**96°.3E**±0°.1**, h10^{km}, n22, σ0^{s}91**/16**, mb3.6**/12**, MS3.4**/6**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.28	170	Pn	Pn	23 50 14.2	0.0
	1.0nm,0.3s,baz=341,slow=11,SNR=9.3						
	1.2nm,0.4s						
SONM	Songino Array	17.06	24	P	P	23 50 52.7	+0.5
	0.4nm,0.3s,baz=207,slow=13,SNR=9.7						
	1.7nm,0.7s						
MKAR	Makanchi Array	17.75	327	P	P	23 50 59.9	+0.1
	0.1nm,0.3s,baz=134,slow=14,SNR=5.8						
	0.4nm,0.6s						
AAK	Ala-Archa	19.89	306	P	Pn	23 51 27.0	+2.0
	0.6nm,0.4s,baz=104,slow=4.4,SNR=1.6						
AAK				LR	LR	00 00 25.2	
	comp=Z,137nm,19.0s,baz=135,slow=41						
KURBB	Kurchatov Arra	22.26	329	P	P	23 51 49.2	+0.4
	0.5nm,0.2s,baz=147,slow=9.2,SNR=8.4						
	0.5nm,0.2s						
ZALV	Zalesovo Beam	22.85	342	P	P	23 51 53.2	-1.8
	0.7nm,0.7s,baz=177,slow=8.7,SNR=1.4						
	0.7nm,0.7s						
KSRS	Korea Array	26.32	70	P	P	23 52 27.8	+0.1
	1.3nm,0.5s,baz=249,slow=9.2,SNR=2.6						
	1.3nm,0.5s						
KLR	Kul'dur	31.20	47	LR	LR	00 07 12.5	
	comp=Z,52nm,18.4s,baz=226,slow=39						
GEYT	Alibeck	31.43	291	LR	LR	00 08 19.4	
	comp=Z,81nm,19.5s,baz=152,slow=41						
ARU	Arti	35.23	324	LR	LR	00 08 32.4	
	comp=Z,59nm,18.1s,baz=142,slow=37						
YAK	Yakutsk	36.40	26	LR	LR	00 10 25.9	
	comp=Z,40nm,20.9s,baz=268,slow=39						
KBZ	Khabaz	42.73	301	LR	LR	00 16 07.7	
	comp=Z,44nm,18.9s,baz=74,slow=41						
AKASG	Malin Array Be	51.44	312	P	P	23 55 56.9	-0.1
	0.1nm,0.3s,baz=69,slow=6.9,SNR=2.6						
	0.1nm,0.3s						
FINES	FINESS Array B	52.57	325	P	P	23 56 05.8	+0.6
	1.4nm,1.0s,baz=82,slow=4.0,SNR=1.3						
	1.4nm,1.0s						
MLR	Muntele Rosu	54.47	306	LR	LR	00 23 17.2	
	comp=Z,41nm,19.7s,baz=31,slow=40						
NOA	NORSAR Array B	59.74	326	P	P	23 56 55.8	-0.7
	0.6nm,0.8s,baz=76,slow=6.7,SNR=2.3						
	0.6nm,0.8s						
GERES	GERESS Array B	61.65	312	P	P	23 57 09.0	-0.9
	0.1nm,0.2s,baz=71,slow=10,SNR=1.4						
	0.1nm,0.2s						
WRA	Warramunga Arr	63.69	140	P	P	23 57 23.5	0.0
	0.4nm,0.8s,baz=317,slow=8.7,SNR=2.0						
	0.4nm,0.8s						
ASAR	Alice Springs	66.50	142	P	P	23 57 42.4	+0.6
	0.4nm,0.6s,baz=320,slow=5.8,SNR=5.3						
	0.4nm,0.6s						
ILAR	Eielson Array	71.28	24	P	P	23 58 11.3	+0.3
	0.1nm,0.5s,baz=253,slow=5.6,SNR=2.1						
	0.1nm,0.5s						
YKA	Yellowknife Ar	82.05	14	P	P	23 59 11.9	0.0
	0.2nm,0.7s,baz=330,slow=5.7,SNR=2.0						
	0.2nm,0.7s						
TORD	Torodi Ar. Bea	86.80	283	P	P	23 59 35.9	-1.0
	0.3nm,0.8s,baz=182,slow=3.1,SNR=2.4						
	0.3nm,0.8s						

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*IDC **15** 23:53:21.0±1.4, 26°.59N×142°.19E, h0^{km}, mb3.7/6, mbtmp3.7/6, MS3.0/3, Error ellipse: s-maj=61.6km s-min=13.0km az=93.0*

ISC 15 23:53:26.0±1.9**, 26°.6N**±0°.1×**142°.2E**±0°.6**, h35^{km}, n16, σ0^{s}74**/8**, mb3.9**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	0.50	354	Pn	Pn	23 53 35.7	-1.0
	134nm,0.3s,baz=277,slow=23,SNR=198						
JCJ				LR	LR	23 53 41.3	
	comp=Z,31nm,19.7s,baz=128,slow=40						
JCJ				Sn	Sn	23 53 44.5	+0.4
	409nm,0.3s,baz=276,slow=22,SNR=13						
KSRS	Korea Array	16.25	315	LR	LR	00 03 11.6	
	comp=Z,44nm,18.4s,baz=130,slow=36						
H11N2	WAKE ISLAND Hy	23.65	102	T	T	00 22 46.5	
	baz=292,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	23.65	102	T	T	00 22 46.9	
	baz=292,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	23.67	102	T	T	00 22 46.5	
	baz=292,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	23.94	105	T	T	00 23 07.6	
	baz=294,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	23.95	105	T	T	00 23 08.8	
	baz=294,slow=75,SNR=9.7						
H11S2	WAKE ISLAND Hy	23.96	105	T	T	00 23 09.0	
	baz=294,slow=75,SNR=14						
KLR	Kul'dur	24.02	343	P	P	23 58 38.3	+0.9
	3.9nm,0.7s,baz=140,slow=8.3,SNR=17						
	3.9nm,0.7s						
SONM	Songino Array	35.11	317	LR	LR	00 13 58.1	
	comp=Z,31nm,18.1s,baz=184,slow=35						
CMAR	Chiang Mai Arr	40.65	268	LR	LR	00 19 05.6	
	comp=Z,11nm,18.0s,baz=190,slow=38						
WRA	Warramunga Arr	46.89	190	P	P	00 01 53.1	+0.1
	2.8nm,0.5s,baz=11,slow=8.6,SNR=39						
	2.8nm,0.5s						
ASAR	Alice Springs	50.61	190	P	P	00 02 21.3	-0.3
	0.3nm,0.7s,baz=11,slow=5.7,SNR=4.6						
	0.3nm,0.7s						
MKAR	Makanchi Array	50.83	310	P	P	00 02 22.9	-0.3
	0.1nm,0.3s,baz=89,slow=6.2,SNR=2.0						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	53.43	315	P	P	00 02 41.9	-0.4
	0.4nm,0.5s,baz=91,slow=7.8,SNR=5.4						
	0.4nm,0.5s						
FINES	FINESS Array B	78.42	334	P	P	00 05 23.5	+0.7
	0.8nm,0.5s,baz=72,slow=6.0,SNR=12						
	0.8nm,0.5s						

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*NAO **16** 00:26:14.2±1.9, 79°.41N×2°.99E, ML3.0*

*IDC **16** 00:26:15.9±1.6, 79°.41N×2°.88E, h0^{km}, mb3.5/2, mbtmp3.6/6, ML3.1/4, MS2.7/2, Error ellipse: s-maj=40.5km s-min=23.0km az=31.0*

*BER **16** 00:26:16.9±2.4, 79°.36N×3°.24E, h10^{km}, ML2.4, ML3.0(NAO), Confirmed Earthquake*

*DNK **16** 00:26:18.4±3.8, 79°.41N×3°.64E, h36^{km}±84^{km}, ML2.0*

*IEPN **16** 00:26:20.0, 79°.35N×4°.68E, h10^{km}*

ISC 16 00:26:13.5±1.7**, 79°.36N**±0°.07×**3°.54E**±0°.05**, h4^{km}**±12^{km}**, n37, σ2^{s}79**/58**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.65	101	Pn	Pg	00 26 44.7	-0.3
KBS				Sn	Sn	00 27 03.6	-1.1
KBS	Kingsbay	1.65	101	*i* P	Pg	00 26 43.8	-1.2
KBS				*i* S	Sn	00 27 02.5	-2.3
KBS	Kingsbay	1.65	101	*e*P	Pg	00 26 44.6	-0.4
KBS				*e*S	Sn	00 27 03.0	-1.7
KBS				IAML		00 27 09.0	
	comp=Z,48nm,0.2s						
KBS	Kingsbay	1.65	101	*e*P	Pg	00 26 44.3	-0.8
KBS				*e*S	Sn	00 27 02.6	-2.2
BRBB	Barentsburg B	2.45	116	Pn	Pb	00 26 56.4	-1.6
BRBB				Sn	Sn	00 27 23.6	-0.9
BRBB	Barentsburg B	2.45	116	*e*P	Pb	00 26 56.4	-1.6
BRBB				*e*S	Sn	00 27 23.4	-1.0
BRBA	Barentsburg A	2.47	117	Pn	Pb	00 26 56.7	-1.6
BRBA				Sn	Sn	00 27 24.4	-0.6
BRBA	Barentsburg A	2.47	117	*e*P	Pb	00 26 57.9	-0.5
BRBA				*e*S	Sn	00 27 24.6	-0.4
BRBA				IAML		00 27 30.8	
	comp=Z,42nm,0.6s						
SPA0	Spitsbergen Ar	2.77	109	Pn	Pb	00 27 01.2	-2.3
	baz=297,slow=8.6						
SPA0				Sn	Sn	00 27 32.2	-0.3
SPA0	Spitsbergen Ar	2.77	109	Pn	Pb	00 27 01.2	-2.3
	baz=297,slow=8.6						
SPA0				Sn	Sn	00 27 32.2	-0.3
SPA0	Spitsbergen Ar	2.77	109	⇑*i*P	Pb	00 27 01.2	-2.3
SPA0				*i* S	Sn	00 27 32.2	-0.3
SPITS	Spitsbergen Ar	2.77	109	Pn	Pb	00 27 01.2	-2.3
	baz=299,slow=9.4						
SPITS				Sn	Sn	00 27 32.3	-0.2
	baz=319,slow=8.8						
	comp=Z,11nm,0.3s						
HSPB	Hornsund (broa	3.42	128	Pn	Pn	00 27 10.1	+2.8
HSPB				Sn	Sn	00 27 47.1	-1.2
HSPB	Hornsund (broa	3.42	128	*e*P	Pn	00 27 09.9	+2.6
HSPB				*e*S	Sn	00 27 48.0	-0.2
HSPB				IAML		00 27 51.2	
	comp=Z,23nm,0.5s						
HSPB	Hornsund (broa	3.42	128	*e*P	Pn	00 27 09.7	+2.3
HSPB				*e*S	Sn	00 27 47.0	-1.2
NOR	Nord	4.02	313	Pn	Pn	00 27 15.3	-0.3
NOR	Nord	4.02	313	*i* P	Pn	00 27 15.0	-0.6
NOR	Nord	4.02	313	*e*P	Pn	00 27 15.6	0.0
DAG	Danmarks Havn	5.26	252	*i* P	Pn	00 27 32.2	-0.4
	comp=Z,3.1nm,0.5s						
DAG				*i* S	Sn	00 28 26.7	-6.9
DAG				IAML		00 28 27.2	
	comp=Z,6.4nm,0.4s						
DAG	Danmarks Havn	5.26	252	*e*P	Pn	00 27 32.8	+0.1
DAG				*e*S	Sn	00 28 27.0	-6.5
HOPEN	Hopen	5.30	112	Pn	Pn	00 27 35.5	+2.3
HOPEN				Sn	Sn	00 28 32.5	-2.2
HOPEN	Hopen	5.30	112	*e*P	Pn	00 27 35.8	+2.5
HOPEN				*e*S	Sn	00 28 31.2	-3.5
HOPEN				IAML		00 28 34.7	
	comp=Z,14nm,0.9s						
HOPEN	Hopen	5.30	112	*e*P	Pn	00 27 35.4	+2.1
HOPEN				*e*S	Sn	00 28 31.5	-3.2
BJO1	Bjornoya	5.98	137	*e*S	Sn	00 28 48.3	-3.1
BJO1				IAML		00 29 01.9	
	comp=Z,11nm,0.7s						
DBG	Daneborg	7.35	239	Pn	Pn	00 28 01.8	+0.4
DBG				Sn	Sn	00 29 16.4	-8.6
DBG	Daneborg	7.35	239	*e*P	Pn	00 28 01.1	-0.2
DBG				*i* S	Sn	00 29 17.9	-7.2
DBG				IAML		00 29 23.4	
	comp=Z,3.7nm,0.5s						
DBG	Daneborg	7.35	239	*e*P	Pn	00 28 01.6	+0.2
DBG				*e*S	Sn	00 29 16.5	-8.6
ZFI2	Zemlya Franca-	7.58	58	*e*P	Pn	00 28 07.3	+2.8
ZFI2				*e*S	Sn	00 29 24.4	-6.3
	comp=Z,26nm,1.3s						
ZFI	Zemlya Franca-	7.59	58	*e*P	Pn	00 28 07.2	+2.7
ZFI				*e*S	Sn	00 29 24.5	-6.3
	comp=Z,27nm,2.1s						
ARCES	ARCESS Array B	11.36	138	Pn	Pn	00 28 58.2	+2.0
	baz=343,slow=14,SNR=1.9						
ARCES				Sn	Sn	00 30 57.7	-5.6
	baz=339,slow=17,SNR=1.6						
	comp=Z,3.3nm,1.0s						
SUMG	Summit	11.89	258	*i* P	Pn	00 29 04.0	+0.1
FINES	FINESS Array B	19.23	146	P	Pn	00 30 42.6	+3.5
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=3.9						
	comp=Z,1.4nm,0.9s						
RES	Resolute Bay	19.95	310	P	Pn	00 30 47.0	-0.5
	comp=Z,0.2nm,0.3s,baz=54,slow=12,SNR=8.1						
	comp=Z,2.1nm,0.8s						
AKASG	Malin Array Be	30.14	147	LR	LR	00 45 45.6	
	comp=Z,8.4nm,18.8s,baz=340,slow=39						
DAVOX	Davos/Dischmat	32.78	172	LR	LR	00 45 28.8	
	comp=Z,18nm,18.5s,baz=263,slow=35						
MKAR	Makanchi Array	42.37	90	P	P	00 34 12.8	+4.6
	comp=Z,0.3nm,0.6s,baz=352,slow=7.4,SNR=5.0						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	66.23	182	P	P	00 37 05.9	+3.7
	comp=Z,0.8nm,1.1s,baz=15,slow=6.0,SNR=2.6						
	comp=Z,0.8nm,1.1s						

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*IDC **16** 00:41:50.8±0.5, 22°.52S×173°.04E, h0^{km}, mb5.1/26, mbtmp5.2/29, ML5.2/3, MS5.2/54, Error ellipse: s-maj=14.6km s-min=13.5km az=129.0*

*MOS **16** 00:41:52.2±1.3, 22°.53S×172°.93E, h13^{km}, mb5.6/48, MS5.3/17, Error ellipse: s-maj=7.6km s-min=7.0km az=104.0*

*NEIC **16** 00:41:53.3±1.4, 22°.52S±0°.07×172°.99E±0°.08, h10^{km}±1^{km}, mb5.5/341, Ms_20 5.5/363, Mwb5.7/29, Mww5.8, Error ellipse: s-maj=12.0km s-min=11.5km az=64.0*

*NEIC **16** 00:41:53.4, 22°.45S×172°.93E, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.28; $M_{\theta\theta}$-2.60; $M_{\phi\phi}$3.88; $M_{r\theta}$1.87; $M_{\theta\phi}$0.44; $M_{\phi r}$2.24; Fault plane solution: $M_0$4.52000×10^{17} NP1:ϕ_s321.52000°, δ44.77000°, λ-165.57000°. NP2:ϕ_s221.17000°, δ79.89000°, λ-46.14000°. Principal axes: T 4.8795, Plg22.0000°, Azm279.0000°; N -0.8297, Plg43.0000°, Azm32.0000°; P -4.0498, Plg39.0000°, Azm170.0000°;*

*BJI **16** 00:41:55.0±0.0, 21°.80S×172°.60E, h10^{km}, mb5.0/46, mB5.5/52, Ms5.3/59, Ms7 5.2/55*

*GCMT **16** 00:41:56.3±0.1, 22°.56S±0°.01×172°.99E, h15^{km}, MW5.8/165, Moment Tensor Solution. s140,c284; s165,c463; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.43±.05; $M_{\theta\theta}$-3.34±.04; $M_{\phi\phi}$6.77±.05; $M_{r\theta}$1.26±.09; $M_{\theta\phi}$-0.72±.04; $M_{\phi r}$2.07±.10; Best double couple: $M_0$6.09300×10^{17} NP1:ϕ_s320.00000°, δ49.00000°, λ-148.00000°. NP2:ϕ_s207.00000°, δ67.00000°, λ-46.00000°. Principal axes: T 7.1950, Plg11.0000°, Azm267.0000°; N -2.2040, Plg40.0000°, Azm6.0000°; P -4.9910, Plg48.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NOU **16** 00:41:57.3, 22°.52S×172°.94E, h28^{km}, ML5.7/102, Southeast of Loyalty Islands*

*NEIC **16** 00:41:57, 22°.57S×172°.83E, h18^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.61; $M_{\theta\theta}$-3.54; $M_{\phi\phi}$7.15; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.54; $M_{\phi r}$-1.51; Fault plane solution: $M_0$6.41000×10^{17} NP1: ϕ_s207.00000°, δ46.00000°, λ-45.00000°. NP2: ϕ_s332.00000°, δ60.00000°, λ-125.00000°. Principal axes: T 7.3903, Plg8.0000°, Azm87.0000°; N -3.4356, Plg30.0000°, Azm352.0000°; P -3.9548, Plg58.0000°, Azm190.0000°;*

ISC 16 00:41:52.9±0.4**, 22°.57S**±0°.04×**173°.01E**±0°.04**, h12^{km}**±1^{km}**, h12^{km}:pP-P, n1161, σ1^{s}82**/1067**, mb5.5**/248**, MS5.4**/257**, 89C-45D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	4.75	282	Pn	Pn	00 43 02.5	-1.9
MARNC	Mare, Loyalty	4.75	282	P	Pn	00 43 05.0	+0.6
PINNC	Pines Island,	5.14	268	Pn	Pn	00 43 09.3	-0.5
PINNC	Pines Island,	5.14	268	P	Pn	00 43 09.9	+0.1
LIFNC	LIFOU	5.66	287	Pn	Pn	00 43 16.1	-0.7
LIFNC	LIFOU	5.66	287	P	Pn	00 43 18.2	+1.3
YATNC	Mamie plateau,	5.69	274	P	Pn	00 43 18.2	+0.8
OUENC	Ouen Island, N	5.71	270	Pn	Pn	00 43 16.7	-0.9
OUENC	Ouen Island, N	5.71	270	P	Pn	00 43 17.6	0.0
ONTNC	Ouen Toro	6.07	271	Pn	Pn	00 43 22.5	-0.1
ONTNC	Ouen Toro	6.07	271	P	Pn	00 43 24.5	+1.9
DZM	Mont Dzumac	6.10	273	Pn	Pn	00 43 22.5	-0.6
	124nm,0.3s,baz=137,slow=14,SNR=210						
DZM				Sn	Sn	00 44 30.5	-2.4
	baz=319,slow=23						
	201nm,0.3s						
DZM	Mont Dzumac	6.10	273	*e*P	Pn	00 43 22.3	-0.8
	20μm,26.5s						
DZM				*e*S	Sn	00 44 34.3	+1.4
	952nm,1.2s						
DZM	Mont Dzumac	6.10	273	Pn	Pn	00 43 22.1	-1.0
DZM	Mont Dzumac	6.10	273	P	Pn	00 43 23.2	+0.1
NOUC	Port Laguerre	6.23	273	P	Pn	00 43 24.7	0.0
RTV	Rentapao	6.41	317	P	Pn	00 43 30.0	+2.7
DVP	Devils Point	6.61	316	P	Pn	00 43 32.9	+2.9
NFK	Norfolk Island	7.90	214	P	Pn	00 43 49.8	+2.0
	baz=8.0,SNR=8.5						
NFK	Norfolk Island	7.90	214	P	Pn	00 43 49.5	+1.8
LKBA	Tubou, Lakemba	8.79	62	P	Pn	00 44 03.2	+3.2
DGTI	Dogotuki	8.89	47	P	Pn	00 44 03.2	+1.8
SANVU	Saraoutou	8.96	321	Pn	Pn	00 44 02.1	-0.2
RAO	Raoul Island	10.53	131	LR	LR	00 47 14.8	
	comp=Z,23μm,20.5s,baz=302,slow=31						
OUZ	Omahuta	12.62	178	Pn	Pn	00 44 53.6	+1.3
LHI	Lord Howe Isla	15.28	231	P	Pn	00 45 30.4	+1.8
	baz=15						
LHI	Lord Howe Isla	15.28	231	Pn	Pn	00 45 29.1	+0.5
LHI				IAmb	IAmb	00 45 40.8	
	comp=Z,282nm,1.4s						
MXZ	Matakaoa Point	15.63	164	Pn	Pn	00 45 34.9	+1.9
MXZ				IAmb	IAmb	00 45 42.5	
	comp=Z,755nm,1.8s						
HIZ	Hauiti	15.97	175	Pn	Pn	00 45 39.2	+1.7
URZ	Urewera	16.03	168	Pn	P	00 45 42.5	+0.8
	comp=Z,1.5nm,0.3s,baz=356,slow=6.9,SNR=17						
URZ				LR	LR	00 50 25.0	
	comp=Z,21μm,20.0s,baz=30,slow=32						
URZ	Urewera	16.03	168	Pn	Pn	00 45 40.2	+2.0
NIUE	Niue	16.32	81	P	Pn	00 45 41.6	-0.5
	baz=16						
NIUE	Niue	16.32	81	Pn	Pn	00 45 41.6	-0.5
NIUE				IAmb	IAmb	00 45 54.0	
	comp=Z,650nm,1.4s						
AFI	Afiamalu	16.81	62	Pn	Pn	00 45 47.3	-1.1
	comp=Z,2.0nm,0.3s,baz=236,slow=23,SNR=7.3						
AFI				LR	LR	00 51 06.3	
	comp=Z,11μm,19.1s,baz=244,slow=33						
	comp=Z,89nm,0.8s						
AFI	Afiamalu	16.81	62	Pn	Pn	00 45 47.8	-0.6
AFI	Afiamalu	16.81	62	P	Pn	00 45 47.8	-0.6
AFI				pmax	pmax		
	comp=Z,128nm,1.0s						
AFI	Afiamalu	16.81	62	P	Pn	00 45 49.7	+1.3
BKZ	Black Stump Fm	16.81	171	P	P	00 45 52.0	+1.6
BKZ	Black Stump Fm	16.81	171	P	P	00 45 52.3	+1.9
HNR	Honiara	18.10	314	Pn	P	00 46 04.9	+0.2
	comp=Z,18nm,0.3s,baz=254,slow=4.8,SNR=14						
HNR				LR	LR	00 51 52.8	
	comp=Z,4μm,20.2s,baz=152,slow=33						
	comp=Z,855nm,1.0s						
HNR	Honiara	18.10	314	P	P	00 46 04.6	-0.1
HNR	Honiara	18.10	314	P	P	00 46 05.9	+1.2
QRZ	Quartz Range	18.21	181	P	P	00 46 07.1	+1.3
QRZ				IAmb	IAmb	00 46 13.4	
	comp=Z,626nm,1.8s						
NNZ	Nelson	18.60	179	P	Pn	00 46 12.2	+1.9
SNZO	South Karori	18.74	176	P	Pn	00 46 13.8	+1.8
SNZO				IAmb	IAmb	00 46 19.6	
	comp=Z,299nm,1.1s						
SNZO	South Karori	18.74	176	P	Pn	00 46 14.6	+2.6
TUWZ	Tuamarina	18.82	178	P	P	00 46 13.9	+1.4
BHW	Baring Head	18.85	176	P	P	00 46 13.4	+0.6
MSWZ	Moikau Station	18.89	175	P	P	00 46 14.4	+1.1
PLWZ	Palliser	19.04	175	P	P	00 46 16.3	+1.3
BSWZ	Blackbirch Sta	19.11	178	P	Pn	00 46 17.6	+1.1
THZ	Tophouse	19.14	180	P	Pn	00 46 17.8	+0.8
THZ				IAmb	IAmb	00 46 29.3	
	comp=Z,446nm,1.6s						
KHZ	Kahutara	19.80	179	P	P	00 46 24.7	+1.5
LTZ	Lake Taylor	20.17	182	P	P	00 46 29.1	+1.8
LTZ				IAmb	IAmb	00 46 31.7	
	comp=Z,277nm,0.9s						
LTZ				IAMs_20	IAMs_20	00 53 29.6	
	comp=Z,18μm,20.0s						
EIDS	Eidsvold	20.23	258	P	Pn	00 46 29.9	-0.1
	baz=20,SNR=28						
EIDS	Eidsvold	20.23	258	P	P	00 46 28.4	+0.3
EIDS				IAmb	IAmb	00 46 42.2	
	comp=Z,299nm,1.1s						
EIDS	Eidsvold	20.23	258	P	Pn	00 46 30.3	+0.3
ARMA	Armidale	20.65	243	P	Pn	00 46 35.8	+0.8
	baz=21,SNR=22						
ARMA	Armidale	20.65	243	P	P	00 46 34.1	+1.4
ARMA				IAmb	IAmb	00 46 40.7	
	comp=Z,600nm,1.9s						
ARMA	Armidale	20.65	243	P	Pn	00 46 35.7	+0.7
OXZ	Oxford	20.72	182	P	P	00 46 34.5	+1.3
OXZ				IAmb	IAmb	00 46 36.9	
	comp=Z,260nm,0.9s						
OXZ				IAMs_20	IAMs_20	00 54 06.2	
	comp=Z,19μm,18.0s						
RK1H	Rockhampton Ha	20.75	263	P	Pn	00 46 36.2	+0.1
FOZ	Fox Glacier	21.08	186	P	P	00 46 38.7	+1.7
FOZ				IAmb	IAmb	00 46 43.8	
	comp=Z,205nm,0.8s						

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MQZ   McQueen’s Vall     21.09 181  P         P         00 46 38.0 +0.9
RPZ   Rata Peaks         21.15 184  P         P         00 46 37.8 -0.1
      comp=Z,90nm,0.9s,baz=278,slow=2.1,SNR=17
RPZ                                 LR        LR        00 54 19.0
      comp=Z,18µm,18.6s,baz=356,slow=35
      comp=Z,90nm,0.9s
RPZ   Rata Peaks         21.15 184  P         P         00 46 39.4 +1.5
RPZ                                 IAmb      IAmb      00 46 46.2
      comp=Z,147nm,0.9s
RPZ                                 IAMs_20   IAMs_20   00 53 48.7
      comp=Z,20µm,20.0s
NTLH  Newcastle Hard     21.45 237  P         P         00 46 43.6 +2.4
LBZ   Lake Benmore       21.89 185  P         P         00 46 47.1 +1.3
LBZ                                 IAmb      IAmb      00 46 50.6
      comp=Z,332nm,1.5s
LBZ                                 IAMs_20   IAMs_20   00 53 49.1
      comp=Z,15µm,21.0s
MGCD  Mangrove Creek     22.03 236  P         P         00 46 50.6 +3.2
      baz=22,SNR=8.1
MGCD  Mangrove Creek     22.03 236  P         P         00 46 50.8 +3.4
RMQ   Roma               22.40 255  P         P         00 46 53.5 +2.0
      baz=22,SNR=138
RMQ   Roma               22.40 255  P         P         00 46 53.8 +2.3
WKZ   Wanaka             22.44 187  P         P         00 46 53.2 +1.4
WKZ                                 IAMs_20   IAMs_20   00 54 12.1
      comp=Z,15µm,20.0s
ODZ   Otahua Downs       22.50 184  P         P         00 46 53.0 +0.7
ODZ                                 IAmb      IAmb      00 47 00.3
      comp=Z,268nm,1.7s
ODZ                                 IAMs_20   IAMs_20   00 54 59.4
      comp=Z,16µm,18.0s
SYDH  Sydney Hard Ro     22.53 235  P         P         00 46 55.9 +3.1
MLZ   Mavora Lakes       23.09 189  P         P         00 46 59.8 +1.2
DCZ   Deep Cove          23.34 190  P         P         00 47 02.3 +1.3
DCZ                                 IAmb      IAmb      00 47 04.7
      comp=Z,155nm,1.4s
WHZ   Wether Hill Ro     23.63 189  P         P         00 47 04.0 +0.1
TARA  Tarawa             23.78 360  P         P         00 47 03.9 -1.6
TARA                                IAmb      IAmb      00 47 12.1
      comp=Z,163nm,1.1s
TARA  Tarawa             23.78 360  P         P         00 47 07.8 +2.2
CNB   Canberra Magne     24.21 233  P         P         00 47 11.5 +1.8
      baz=24,SNR=14
CNB   Canberra Magne     24.21 233  P         P         00 47 12.4 +2.7
CAN   Canberra           24.48 233  P         P         00 47 11.9 -0.3
CAN                                 IAmb      IAmb      00 47 31.8
      comp=Z,230nm,1.5s
CAN   Canberra           24.48 233  P         P         00 47 11.9 -0.3
CAN                                 pmax      pmax
      comp=Z,230nm,1.5s
CAN                                 MLR       MLR
      comp=Z,5µm,19.0s
CAN   Canberra           24.48 233  P         P         00 47 14.5 +2.4
KNTN  Kanton             24.63  39  P         P         00 47 12.5 -1.0
CTA   Charters Tower     25.04 271  P         P         00 47 17.4 +0.1
      comp=Z,27nm,1.0s,baz=99,slow=8.7,SNR=16
CTA                                 LR        LR        00 56 30.9
      comp=Z,12µm,20.4s,baz=90,slow=35
      comp=Z,27nm,1.0s
CTA   Charters Tower     25.04 271  P         P         00 47 18.6 +1.4
CTAO  Charters Tower     25.04 271  P         P         00 47 15.4 -1.8
CTAO  Charters Tower     25.04 271  IAMs_20   IAMs_20   00 55 45.1
      comp=Z,13µm,22.0s
CTAO  Charters Tower     25.04 271  P         P         00 47 15.4 -1.8
CTAO                                pmax      pmax
      comp=Z,53nm,0.9s
CTAO                                MLR       MLR
      comp=Z,13µm,22.0s
CTAO  Charters Tower     25.04 271  P         P         00 47 18.7 +1.5
RAR   Rarotonga          25.28  92  LR        LR        00 57 11.2
      comp=Z,4µm,18.1s,baz=260,slow=36
RAR   Rarotonga          25.28  92  P         P         00 47 20.0 +0.7
RAR                                 IAmb      IAmb      00 48 06.4
      comp=Z,175nm,1.6s
RAR   Rarotonga          25.28  92  P         P         00 47 20.0 +0.7
RAR                                 pmax      pmax
      comp=Z,175nm,1.7s
RAR                                 MLR       MLR
      comp=Z,5µm,20.0s
CMSA  Cobar Meteorol     25.86 244  P         P         00 47 26.1 +1.5
      baz=26,SNR=22
CMSA  Cobar Meteorol     25.86 244  P         P         00 47 27.8 +3.2
QLP   Quilpie            26.45 255  P         P         00 47 30.5 +0.5
      baz=26,SNR=12
QLP   Quilpie            26.45 255  P         P         00 47 30.6 +0.6
RABL  Rabaul             27.22 309  P         P         00 47 35.4 -1.6
KRVT  Keravat (AS076     27.24 309  P         P         00 47 36.9 -0.2
      comp=Z,169nm,1.0s,baz=198,slow=1.7,SNR=16
KRVT                                LR        LR        00 55 44.1
      comp=Z,3µm,21.0s,baz=264,slow=31
      comp=Z,169nm,1.0s
MTSU  Mount Surprise     27.24 274  P         P         00 47 37.4 +0.2
      baz=27,SNR=37
MTSU  Mount Surprise     27.24 274  P         P         00 47 38.5 +1.3
GLAD  Gladstone          27.93 223  P         P         00 47 46.0 +2.9
TOO   Toolangi           27.99 231  P         P         00 47 44.8 +1.0
      baz=28,SNR=9.0
TOO   Toolangi           27.99 231  P         P         00 47 44.0 +0.2
TOO   Toolangi           27.99 231  P         P         00 47 44.0 +0.2
TOO                                 pmax      pmax
      comp=Z,44nm,1.0s
TOO   Toolangi           27.99 231  P         P         00 47 45.5 +1.7
PMG   Port Moresby       28.02 294  P         P         00 47 43.7 -0.5
      comp=Z,35nm,0.8s,baz=64,slow=4.7,SNR=6.3
PMG                                 LR        LR        00 57 09.9
      comp=Z,9µm,19.7s,baz=136,slow=33
      comp=Z,35nm,0.8s
PMG   Port Moresby       28.02 294  P         P         00 47 43.1 -1.0
PMG   Port Moresby       28.02 294  IAMs_20   IAMs_20   00 56 47.8
      comp=Z,9µm,19.0s
PMG   Port Moresby       28.02 294⇑eP         P         00 47 44.1 -0.1
PMG                                 pmax      pmax
      comp=Z,73nm,1.4s
PMG   Port Moresby       28.02 294  P         P         00 47 45.2 +1.0
PMG   Port Moresby       28.02 294  P         P         00 47 44.7 +0.5
BRAT  Ballarat           29.12 233  P         P         00 47 55.4 +1.7
MOO   Moorlands          29.25 221  P         P         00 47 57.4 +2.5
STKA  Stephens Creek     29.35 245  P         P         00 47 57.1 +1.3
      comp=Z,33nm,0.7s,baz=91,slow=11,SNR=60
STKA                                LR        LR        00 58 37.3
      comp=Z,6µm,19.4s,baz=73,slow=34
      comp=Z,33nm,0.7s
STKA  Stephens Creek     29.35 245  P         P         00 47 57.5 +1.6
      baz=29,SNR=31
STKA  Stephens Creek     29.35 245  P         P         00 47 56.1 +0.2
STKA  Stephens Creek     29.35 245  P         P         00 47 57.7 +1.8
TAU   Tasmania Unive     29.44 220  P         P         00 47 56.2 -0.4
TAU                                 IAmb      IAmb      00 48 07.2
      comp=Z,99nm,1.3s
TAU   Tasmania Unive     29.44 220  P         P         00 47 56.2 -0.4
TAU                                 pmax      pmax
      comp=Z,99nm,1.3s
COEN  Coen               29.55 282  P         P         00 47 58.7 +0.9
      baz=30,SNR=5.8
COEN  Coen               29.55 282  P         P         00 47 57.2 -0.6
COEN                                IAmb      IAmb      00 48 00.2
      comp=Z,70nm,1.4s
COEN  Coen               29.55 282  P         P         00 47 59.6 +1.8
INKA  Innaminka          29.61 253  P         P         00 48 00.2 +2.0
ARPS  Mount Arapiles     30.41 235  P         P         00 48 07.1 +2.0
QIS   Mount Isa          31.10 267  P         P         00 48 11.4 -0.1
      baz=31,SNR=7.7
QIS   Mount Isa          31.10 267  P         P         00 48 12.2 +0.7
HTT   Hallett            31.86 243  P         P         00 48 19.5 +1.4
      baz=32,SNR=22
HTT   Hallett            31.86 243  P         P         00 48 20.6 +2.5
LCRK  Leigh Creek        32.02 248  P         P         00 48 21.6 +2.2
MANU  Manus Island       32.19 306  P         P         00 48 20.2 -0.9
NAPP  Napperby           32.45 243  P         P         00 48 26.0 +2.8
TWOA  Tennyson Woods     32.47 240  P         P         00 48 25.4 +2.1
WHYH  Whyalla            32.90 244  P         P         00 48 28.5 +1.4
OOD   Oodnadatta         34.09 253  P         P         00 48 39.1 +1.6
BBOO  Buckleboo          34.12 244  P         P         00 48 38.7 +0.8
      baz=34,SNR=36
BBOO  Buckleboo          34.12 244  P         P         00 48 38.0 +0.2
BBOO  Buckleboo          34.12 244  P         P         00 48 39.6 +1.8
TBI   Tubuai             34.50  99 eS         S         00 54 06.7 -3.1
      comp=Z,3µm,27.8s
TBI                                eLR        LR        00 57 27.3
      comp=Z,14µm,31.0s
PPT2  Papeete2           35.42  89 eS         S         00 54 20.3 -3.9
      comp=Z,4µm,25.5s
PPT2                               eLR        LR        00 57 54.9
      comp=Z,22µm,29.8s
PPT   Papeete            35.43  89  LR        LR        00 59 28.1
      comp=Z,4µm,21.8s,baz=262,slow=30
PPTF  Pamatai, Papee     35.43  89  P         P         00 48 49.9 +0.5
MULG  Mulgathing         35.59 249  P         P         00 48 51.5 +1.0
AS31  Alice Springs      35.91 260  P         P         00 48 52.1 -1.3
ASAR  Alice Springs      35.91 260  P         P         00 48 52.8 -0.6
      comp=Z,32nm,0.9s,baz=88,slow=8.4,SNR=112
ASAR                                PcP       PcP       00 51 19.7 -0.8
      comp=Z,2.6nm,0.8s,baz=109,slow=4.3,SNR=2.1
ASAR                                S         S         00 54 27.1 -4.5
      comp=Z,1.6nm,0.9s,baz=86,slow=16,SNR=4.2
ASAR                                ScP       ScP       00 55 08.5 +1.8
      comp=Z,2.4nm,0.9s,baz=101,slow=4.8,SNR=3.4
ASAR                                LR        LR        01 03 35.3
      comp=Z,9µm,19.0s,baz=107,slow=36
      comp=Z,32nm,0.9s
ASAR  Alice Springs      35.91 260  P         P         00 48 51.7 -1.7
WB0   Warramunga Arr     36.05 267  P         P         00 48 52.7 -1.9
WB2   Warramunga Arr     36.06 267  P         P         00 48 53.2 -1.5
      baz=36
WB2   Warramunga Arr     36.06 267  P         P         00 48 52.5 -2.2
WB2                                 IAmb      IAmb      00 48 57.5
      comp=Z,184nm,1.9s
WRAB  Tennant Creek      36.06 267  P         P         00 48 52.1 -2.6
WRAB                                IAmb      IAmb      00 48 57.4
      comp=Z,182nm,1.9s
WRAB  Tennant Creek      36.06 267⇓eP         P         00 48 53.9 -0.8
WRAB                                pmax      pmax
      comp=Z,76nm,1.7s
WRAB  Tennant Creek      36.06 267  P         P         00 48 54.9 +0.2
WRA   Warramunga Arr     36.07 267  P         P         00 48 52.9 -1.9
      comp=Z,9.8nm,0.7s,baz=97,slow=8.5,SNR=86
WRA                                 PP        PP        00 50 20.3 +3.5
      comp=Z,22nm,1.2s,baz=101,slow=11,SNR=5.5
WRA                                 S         S         00 54 30.5 -3.6
      comp=Z,1.9nm,1.1s,baz=98,slow=13,SNR=2.5
WRA                                 LR        LR        01 03 44.8
      comp=Z,12µm,18.5s,baz=100,slow=36
      comp=Z,9.8nm,0.7s
GENI  Genyem             37.54 297  P         P         00 49 06.8 -0.5
      comp=Z,5µmcomp=Z,261nm,1.7s
GENI  Genyem             37.54 297  P         P         00 49 09.2 +1.9
XMAS  Kiritimati         37.80  54  P         P         00 49 09.0 -0.5
XMAS  Kiritimati         37.80  54  IAMs_20   IAMs_20   01 01 19.0
      comp=Z,7µm,20.0s
SMPI  Sarmi              39.08 297  P         P         00 49 23.9 +3.7
      comp=Z,38nm,0.9s
KDU   Kakadu             39.75 277  P         P         00 49 25.6 -0.3
      baz=40,SNR=3.9
KDU   Kakadu             39.75 277  P         P         00 49 26.3 +0.4
FORT  Forrest            40.77 249  P         P         00 49 34.1 -0.1
      baz=41,SNR=63
FORT  Forrest            40.77 249  P         P         00 49 33.3 -1.0
FORT  Forrest            40.77 249  P         P         00 49 35.8 +1.6
WRKA  Warakurna          40.85 257  P         P         00 49 34.2 -0.8
      baz=41,SNR=77
WRKA  Warakurna          40.85 257  P         P         00 49 36.2 +1.2
MTN   Manton Dam         40.93 276  P         P         00 49 34.8 -0.9
      baz=41,SNR=7.1
MTN   Manton Dam         40.93 276  P         P         00 49 32.9 -2.8
MTN   Manton Dam         40.93 276  P         P         00 49 35.2 -0.5
H11S2 WAKE ISLAND Hy     41.27 351  T         T         01 33 28.8
      baz=171,slow=76,SNR=1139
H11S3 WAKE ISLAND Hy     41.28 351  T         T         01 33 22.9
      baz=171,slow=76,SNR=547
H11S1 WAKE ISLAND Hy     41.29 351  T         T         01 33 30.3
      baz=171,slow=76,SNR=788
BAKI  Biak               41.68 295  P         P         00 49 44.1 +2.3
      comp=Z,3µmcomp=Z,163nm,1.1s
WAKE  Wake Island        42.06 351  P         P         00 49 43.0 -1.7
WAKE                                IAmb      IAmb      00 49 53.3
      comp=Z,94nm,1.1s
KNRA  Kununurra          42.25 271  P         P         00 49 46.5 +0.1
      baz=42,SNR=8.5
KNRA  Kununurra          42.25 271  P         P         00 49 44.9 -1.5
KNRA  Kununurra          42.25 271  P         P         00 49 46.9 +0.5
H11N1 WAKE ISLAND Hy     42.45 351  T         T         01 34 51.6
      baz=172,slow=76,SNR=84
H11N3 WAKE ISLAND Hy     42.45 351  T         T         01 34 59.6
      baz=172,slow=76,SNR=38
H11N2 WAKE ISLAND Hy     42.46 351  T         T         01 35 01.2
      baz=172,slow=76,SNR=64
SAUI  Saumlaki           42.60 283  IAMs_20   IAMs_20   01 06 45.1
      comp=Z,6µm,18.0s
JOHN  Johnston Islan     42.63  25  P         P         00 49 49.1 -0.3
GUMO  Guam               45.30 320  LR        LR        01 06 52.3
      comp=Z,2µm,22.0s,baz=141,slow=33
GUMO  Guam               45.30 320  P         P         00 50 10.3 -0.6
GUMO  Guam               45.30 320  P         P         00 50 10.3 -0.6
GUMO                                pmax      pmax
      comp=Z,233nm,1.4s
SIJI  Sorong             45.95 292  LR        LR        01 09 15.7
      comp=Z,4µm,20.9s,baz=106,slow=36
SWI   Sorong             45.95 292  P         P         00 50 17.2 +1.0
      comp=Z,2µmcomp=Z,210nm,1.2s
TAOE  Nuku Hiva Isla     46.91  81 eS         S         00 57 10.1 -4.9
      comp=Z,4µm,26.1s
TAOE                               eLR        LR        01 03 10.9
      comp=Z,15µm,27.1s
AAI   Ambon              47.26 287  P         P         00 50 30.4 +4.0
      comp=Z,143nm,1.4s
SOEI  Soe                48.31 277  P         P         00 50 33.0 -1.8
SOEI  Soe                48.31 277  P         P         00 50 37.8 +3.0
      comp=Z,69nm,1.0s
SOEI  Soe                48.31 277  P         P         00 50 36.8 +2.0
BATI  Baumata            48.70 276  LR        LR        01 11 17.7
      comp=Z,14µm,21.0s,baz=144,slow=36
PSA00 Pilbara Seismi     49.06 260  P         P         00 50 38.8 -1.5
PSA00                               IAmb      IAmb      00 50 45.1
      comp=Z,44nm,1.1s
PSA00 Pilbara Seismi     49.06 260  P         P         00 50 40.1 -0.3
PSA00                               IAmb      IAmb      00 50 45.2
      comp=Z,48nm,1.4s
PSA00 Pilbara Seismi     49.06 260  P         P         00 50 40.8 +0.5
MBWA  Marble Bar         49.25 261  P         P         00 50 40.0 -1.8
MBWA                                IAmb      IAmb      00 50 43.2
      comp=Z,40nm,0.9s
MBWA  Marble Bar         49.25 261  P         P         00 50 42.2 +0.4
LBMI  Labuha             49.31 290  P         P         00 50 44.8 +2.5
      comp=Z,2µmcomp=Z,2µmcomp=Z,59nm,1.5s
MEEK  Meekatharra        49.32 254  P         P         00 50 41.9 -0.4
      baz=49,SNR=19
MEEK  Meekatharra        49.32 254  P         P         00 50 42.9 +0.6
KLBR  Kellerberrin       49.58 247  P         P         00 50 44.0 -0.2
      baz=50,SNR=22
KLBR  Kellerberrin       49.58 247  P         P         00 50 44.0 -0.2
NWAO  Narrogin (SRO)     49.94 245  P         P         00 50 46.2 -0.7
NWAO  Narrogin (SRO)     49.94 245  P         P         00 50 46.2 -0.7
NWAO                                pmax      pmax
      comp=Z,194nm,0.5s
NWAO                                MLR       MLR
      comp=Z,6µm,19.0s
NWAO  Narrogin (SRO)     49.94 245  P         P         00 50 48.4 +1.5
SANI  Sanana             49.96 287  P         P         00 50 46.8 -0.5
      comp=Z,3µmcomp=Z,139nm,1.2s
SANI  Sanana             49.96 287  P         P         00 50 48.5 +1.2
TNTI  Ternate            50.13 291  P         P         00 50 48.8 +0.2
BLDU  Ballidu            50.55 248  P         P         00 50 51.3 -0.3
      baz=51,SNR=18
BLDU  Ballidu            50.55 248  P         P         00 50 51.7 +0.2
MMRI  Maumere            50.59 277  P         P         00 50 52.1 +0.1
MMRI                                IAmb      IAmb      00 50 57.4
      comp=Z,72nm,1.0s
MMRI  Maumere            50.59 277  P         P         00 50 53.5 +1.5
MUN   Mundaring          50.86 246  P         P         00 50 55.2 +1.3
      baz=51,SNR=5.0
MUN   Mundaring          50.86 246  P         P         00 50 56.1 +2.2
EDFI  Ende, Flores       51.05 277  P         P         00 50 56.5 +0.9
      comp=Z,21nm,1.4s
MORW  Morawa             51.28 250  P         P         00 50 56.7 -0.5
      baz=51,SNR=9.8
MORW  Morawa             51.28 250  IAmb      IAmb      00 51 08.2
      comp=Z,67nm,0.9s
MORW  Morawa             51.28 250  P         P         00 50 58.7 +1.6
MIDW  Midway             51.33  11  P         P         00 50 54.8 -2.4
HMH   Humu‘ula Sheep     52.00  39  P         P         00 51 03.0 +0.2
KIP   Kipapa             52.06  35  P         P         00 51 01.9 -0.9
KIP   Kipapa             52.06  35⇑eP         P         00 51 03.8 +1.0
KIP                                 pmax      pmax
      comp=Z,76nm,1.3s
KIP   Kipapa             52.06  35  P         P         00 51 06.0 +3.2
      comp=Z,64nm,1.0s
LUWI  Luwuk              53.27 286  P         P         00 51 12.5 +0.4
LUWI  Luwuk              53.27 286  P         P         00 51 15.5 +3.4
      comp=Z,9µmcomp=Z,301nm,1.3s
LUWI  Luwuk              53.27 286  P         P         00 51 13.9 +1.8
BKSI  Bulukumba          53.81 280  P         P         00 51 15.4 -0.6
      comp=Z,974nmcomp=Z,51nm,1.2s
BNSI  Bone               54.20 281  P         P         00 51 18.2 -0.7
      comp=Z,1µmcomp=Z,72nm,1.2s
KAPI  Kappang            54.27 280  P         P         00 51 18.5 -0.9
      comp=Z,41nm,1.0s,baz=96,slow=1.4,SNR=11
KAPI                                LR        LR        01 13 46.8
      comp=Z,2µm,21.3s,baz=122,slow=35
      comp=Z,41nm,1.0s
KAPI  Kappang            54.27 280  P         P         00 51 19.8 +0.4
KAPI  Kappang            54.27 280  P         P         00 51 19.8 +0.4
KAPI                                pmax      pmax
      comp=Z,223nm,1.6s
KAPI  Kappang            54.27 280  P         P         00 51 20.6 +1.2
APSI  Ampana             54.33 286  P         P         00 51 21.8 +2.0
      comp=Z,1µmcomp=Z,65nm,1.2s
SPSI  Sidrap Palu        54.69 282  P         P         00 51 22.5 +0.1
      comp=Z,844nmcomp=Z,31nm,1.0s
MRSI  Marisa             54.72 288  P         P         00 51 23.1 +0.5
      comp=Z,799nmcomp=Z,41nm,1.1s
DAV   Davao City (W)     54.98 297  LR        LR        01 13 49.6
      comp=Z,1µm,20.5s,baz=114,slow=35
TTSI  Tana Toraja        55.03 283  P         P         00 51 26.1 +1.2
      comp=Z,2µmcomp=Z,60nm,1.2s
VNDA  Vanda              55.27 183  P         P         00 51 26.2 +0.5
      comp=Z,15nm,0.9s,baz=360,slow=7.8,SNR=62
VNDA                                LR        LR        01 11 09.0
      comp=Z,6µm,21.8s,baz=14,slow=32
      comp=Z,15nm,0.9s
VNDA  Vanda              55.27 183  P         P         00 51 26.8 +1.1
VNDA  Vanda              55.27 183  P         P         00 51 26.8 +1.1
VNDA                                pmax      pmax
      comp=Z,210nm,1.8s
SBA   Scott Base         55.42 182  P         P         00 51 28.3 +1.5
SBA   Scott Base         55.42 182  IAMs_20   IAMs_20   01 10 47.0
      comp=Z,4µm,21.0s
SBA   Scott Base         55.42 182  P         P         00 51 28.3 +1.5
SBA                                 pmax      pmax
      comp=Z,456nm,1.2s
TOLI2 Tolitoli           56.03 288  IAmb      IAmb      00 51 33.6
      comp=Z,57nm,0.8s
TOLI2 Tolitoli           56.03 288  P         P         00 51 31.8 -0.3
MPSI  Mapaga             56.46 286  P         P         00 51 35.0 -0.1
      comp=Z,3µmcomp=Z,836nmcomp=Z,60nm,1.4s
SRBI  Singaraja          57.24 275  P         P         00 51 44.0 +3.3
      comp=Z,95nm,1.7s
JCJ   Chichijima         57.67 327  P         P         00 51 42.7 -0.8
JAGI  Jajag, Banyuwa     58.08 274  IAMs_20   IAMs_20   01 15 13.5
      comp=Z,3µm,19.0s
BKB   Balikpapan         58.43 283  IAMs_20   IAMs_20   01 20 51.3
      comp=Z,3µm,21.0s
CASY  Casey              58.55 205  P         P         00 51 49.1  0.0
CASY  Casey              58.55 205  IAMs_20   IAMs_20   01 12 09.6
      comp=Z,4µm,19.0s
KMMI  Kalianget          58.77 276  P         P         00 51 53.9 +2.4
      comp=Z,98nm,1.6s
BBKI  Banjar Baru        59.37 280  P         P         00 51 57.1 +1.5
      comp=Z,10µmcomp=Z,38nm,1.3s
MYLDM Lahad Datu         59.98 291  P         P         00 52 00.2 +0.4
PCJI  Pacitan            60.93 273  P         P         00 52 09.3 +3.0
      comp=Z,149nm,0.4s
WOJI  Wonogiri, Jawa     61.29 273  P         P         00 52 10.4 +1.7
      comp=Z,127nm,1.9s
SMRI  Semarang           62.02 274  P         P         00 52 13.1 -0.7
SMRI  Semarang           62.02 274  P         P         00 52 19.1 +5.4
      comp=Z,96nm,1.6s
SMRI  Semarang           62.02 274  P         P         00 52 15.4 +1.7
PBKI  Pangkalan Bun      62.57 279  P         P         00 52 21.2 +3.8
      comp=Z,6µmcomp=Z,176nm,1.0s
TGY   Tagaytay City      62.69 301  LR        LR        01 13 54.6
      comp=Z,680nm,22.0s,baz=147,slow=31
STKI  Sintang            63.89 282  P         P         00 52 27.9 +1.8
LEM   Lembang            64.71 273  P         P         00 52 32.1 +0.4
      comp=Z,132nm,0.9s,baz=96,slow=6.7,SNR=12
LEM                                 LR        LR        01 20 40.7
      comp=Z,3µm,21.4s,baz=117,slow=36
      comp=Z,132nm,0.9s
JOW   Kunigami           65.46 316  LR        LR        01 16 23.2
      comp=Z,1µm,21.8s,baz=116,slow=32
JOW   Kunigami           65.46 316  P         P         00 52 35.1 -1.0
KSM   Kuching            65.54 283  P         P         00 52 36.4 -0.6
KSM                                 IAmb      IAmb      00 52 46.0
      comp=Z,41nm,1.1s
KSM   Kuching            65.54 283  P         P         00 52 37.1 +0.2
CBJI  Citeko             65.56 273  P         P         00 52 37.6 +0.5
      comp=Z,167nm,0.9s
DBJI  Dramaga            65.61 273  P         P         00 52 39.8 +2.4
      comp=Z,33µmcomp=Z,98nm,0.6s
JYT   Yasato             66.20 331  P         P         00 52 41.0 +0.4
INU   Inuyama            66.95 329  P         P         00 52 45.3 -0.1
INU                                 IAmb      IAmb      00 52 50.0
      comp=Z,44nm,1.1s
INU   Inuyama            66.95 329  P         P         00 52 47.4 +2.0
JGF   Kuroka             66.99 329  P         P         00 52 46.1 +0.4
JGF                                 IAmb      IAmb      00 52 52.9
      comp=Z,50nm,1.2s
JMM   Marumori           67.31 333  P         P         00 52 47.4 -0.3
MJAR  Matsushiro Arr     67.35 330  P         P         00 52 47.6 -0.5
      comp=Z,34nm,1.1s,baz=153,slow=8.0,SNR=39
MJAR                                LR        LR        01 16 48.8
      comp=Z,671nm,21.4s,baz=134,slow=31
      comp=Z,34nm,1.1s
MJAR  Matsushiro Arr     67.35 330  P         P         00 52 47.8 -0.2
MJAR  Matsushiro Arr     67.35 330  P         P         00 52 47.8 -0.2
MJAR                                pmax      pmax
      comp=Z,96nm,1.7s
MAJO  Matsushiro         67.36 330  P         P         00 52 47.4 -0.6
MAJO  Matsushiro         67.36 330d iP        P         00 52 47.5 -0.5
MAJO                                pmax      pmax
      comp=Z,58nm,1.3s
MAJO  Matsushiro         67.36 330  P         P         00 52 48.5 +0.5
MJB9  Matsu-Tunnel       67.36 330  P         P         00 52 47.5 -0.5
YOJ   Yonaguni jima      67.40 311  P         P         00 52 48.0 -0.5
YOJ   Yonaguni jima      67.40 311  P         P         00 52 48.0 -0.5
YOJ                                 pmax      pmax
      comp=Z,456nm,1.6s
JSU   Suzuyama           67.47 321  P         P         00 52 48.5 -0.3
QSPA  South Pole Qui     67.50 180  LR        LR        01 20 00.3
      comp=Z,3µm,18.4s,baz=34,slow=34
QSPA  South Pole Qui     67.50 180  P         P         00 52 48.7 -0.2
QSPA  South Pole Qui     67.50 180  IAMs_20   IAMs_20   01 19 40.3
      comp=Z,3µm,19.0s
PPBI  Pangkal Pinang     67.85 277  P         P         00 52 52.1 +0.4
KASI  Kota Agung         68.07 273  P         P         00 52 54.0 +1.0
      comp=Z,169nm,1.1s
SSLB  Suanglung          68.43 309  IAMs_20   IAMs_20   01 16 12.2
      comp=Z,2µm,22.0s
JSD   Sado               68.56 331  P         P         00 52 55.8 +0.3
MDSI  Maura Dua          68.75 274  P         P         00 52 56.1 -1.2
      comp=Z,40nm,1.0s
ERM   Erimo              69.94 337  IAMs_20   IAMs_20   01 17 04.5
      comp=Z,3µm,22.0s
QZH   Quanzhou           70.84 309⇑iP         P         00 53 11.3 +1.4
QZH                                 S         S         01 02 24.8 -0.3
QZH                                 LR        LR
      comp=Z,780nm,16.1s
QZH                                 LR        LR
      comp=Z,810nm,18.0s
KUR   Kuril'sk           71.26 342 eP         P         00 53 11.7 -0.3
KUR                                e                    00 55 47.0
KUR                                ePPP       PPP       00 57 30.6
KUR                                eS         S         01 02 33.9 +4.8
KUR                                 pmax      pmax
      comp=Z,1µm,2.4s
KUR                                 pmax      pmax
      comp=Z,462nm,1.6s
KUR                                 MLR       MLR
      comp=Z,2µm,16.0s
MYKOM Kota Tinggi        71.53 280  P         P         00 53 14.5 +0.1
MYKOM                               IAMs_20   IAMs_20   01 24 37.1
      comp=Z,3µm,21.0s
JKA   Kamikawa-asahi     71.97 337  P         P         00 53 16.6 +0.3
JKA                                 IAmb      IAmb      00 53 27.4
      comp=Z,58nm,0.9s
ASAJ  Asahikawa          71.97 337  P         P         00 53 17.4 +1.1
      comp=Z,63nm,1.1s,baz=220,slow=12,SNR=11
ASAJ                                LR        LR        01 18 53.2
      comp=Z,2µm,21.8s,baz=166,slow=31
      comp=Z,63nm,1.1s
TJN   Taejon             72.77 323  P         P         00 53 20.9 -0.3
TJN   Taejon             72.77 323ceP         P         00 53 21.4 +0.1
TJN   Taejon             72.77 323  P         P         00 53 21.8 +0.5
SSE   Sheshan            72.90 315  P         P         00 53 21.3 -0.9
SSE                                 S         S         01 02 47.3 -1.3
SSE                                 pmax      pmax
      comp=Z,20nm,0.9s
SSE                                 pmax      pmax
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          comp=Z,210nm,3.8s
SSE                                    LR       LR
          comp=Z,370nm,21.3s
SSE                                    LR       LR
          comp=Z,350nm,21.3s
KSRS  Korea Array        73.25 324     P        P         00 53 23.8  -0.2
          comp=Z,11nm,1.0s,baz=146,slow=6.5,SNR=23
          comp=Z,11nm,1.0s
KSAR  Wonju Array Be     73.26 324     P        P         00 53 24.4 +0.3
KSAR  Wonju Array Be     73.26 324     P        P         00 53 24.4 +0.3
BKNI  Bangkinang         73.51 277     P        P         00 53 25.7  -0.5
BKNI                                   IAMs_20  IAMs_20   01 24 50.3
          comp=Z,3µm,21.0s
SEHB  SEOHWA             73.66 325     P        P         00 53 26.3  -0.2
SEHB                                   IAmb     IAmb      00 53 35.7
          comp=Z,99nm,1.8s
QIZ   Qiongzhong         74.28 299     P        P         00 53 29.0  -1.5
QIZ                                    S        S         01 03 07.4 +2.8
QIZ                                    ScS      SKSac     01 03 39.1 +0.5
QIZ                                    pmax     pmax
          comp=Z,390nm,7.8s
QIZ                                    LR       LR
          comp=Z,980nm,21.6s
QIZ                                    LR       LR
          comp=Z,500nm,26.5s
YSS   Yuzh-Sakhalins     74.40 339     P        P         00 53 31.3 +0.7
YSS                                    IAMs_20  IAMs_20   01 21 02.4
          comp=Z,3µm,21.0s
YSS   Yuzh-Sakhalins     74.40 339deP           P         00 53 31.9 +1.3
YSS                                  e*SP       pwP       00 53 38.1  -1.1
YSS                                  eS         S         01 03 03.7  -1.1
YSS                                    pmax     pmax
          comp=Z,60nm,1.0s
YSS                                    pmax     pmax
          comp=Z,900nm,2.5s
YSS                                    smax     smax
          comp=N,2µm,8.9s
YSS                                    smax     smax
          comp=E,800nm,9.1s
YSS   Yuzh-Sakhalins     74.40 339     P        P         00 53 32.8 +2.2
SKR   Severo-Kuril's     74.44 349   eP         P         00 53 30.9 +0.2
SKR                                  e                    00 53 37.2
SKR                                  e                    00 56 14.5
SKR                                  ePPP       PPP       00 58 08.8
SKR                                  i S        S         01 03 09.4 +4.3
SKR                                    pmax     pmax
          comp=Z,200nm,4.7s
SKR                                    pmax     pmax
          comp=Z,500nm,4.9s
SKR                                    pmax     pmax
          comp=Z,66nm,1.1s
SKR                                    MLR      MLR
          comp=Z,600nm,15.0s
SKR                                    MLR      MLR
          comp=Z,600nm,17.0s
KIWB  Kanaga Island      74.60   6     P        P         00 53 32.2 +0.6
ADK   Adak               74.68   7     P        P         00 53 31.9  -0.2
ADK   Adak               74.68   7     IAMs_20  IAMs_20   01 20 04.1
          comp=Z,2µm,20.0s
ADK   Adak               74.68   7     P        P         00 53 31.9  -0.2
ADK                                    pmax     pmax
          comp=Z,108nm,1.0s
ADK   Adak               74.68   7     P        P         00 53 33.0 +0.9
SHEM  Shemya Is, Ala     74.98   1     LR       LR        01 22 56.5
          comp=Z,755nm,20.1s,baz=172,slow=33
SMY   Shemya             74.98   1     P        P         00 53 33.7  -0.1
SMY   Shemya             74.98   1     P        P         00 53 33.7  -0.1
SMY                                    pmax     pmax
          comp=Z,146nm,1.0s
NJ2   Nanjing            75.04 315   eP         P         00 53 38.8 +4.1
NJ2                                    pmax     pmax
          comp=Z,9.0nm,0.5s
NJ2                                    LR       LR
          comp=Z,630nm,21.8s
NJ2                                    LR       LR
          comp=Z,720nm,20.8s
NJ2                                    LR       LR
          comp=Z,1µm,21.6s
IPM   Ipoh               75.20 281     P        P         00 53 35.4  -0.7
IPM                                    IAmb     IAmb      00 53 54.2
          comp=Z,31nm,0.8s
IPM                                    IAMs_20  IAMs_20   01 31 33.2
          comp=Z,2µm,18.0s
IPM   Ipoh               75.20 281     P        P         00 53 38.4 +2.3
ATKA  Atka Island        75.29   8     P        P         00 53 36.3 +0.7
MSHR  Mys Shultsa        75.45 329⇑eP           P         00 53 37.0 +0.3
MSHR                                   pmax     pmax
          comp=Z,64nm,1.7s
KULM  Kulim              75.88 282     P        P         00 53 39.2  -0.7
KULM                                   IAmb     IAmb      00 53 43.8
          comp=Z,36nm,1.2s
KULM                                   IAMs_20  IAMs_20   01 31 57.3
          comp=Z,2µm,19.0s
PET   Petropavlovsk      76.30 351     P        P         00 53 41.1  -0.2
PET                                    IAmb     IAmb      00 53 43.9
          comp=Z,40nm,0.6s
PET                                    IAMs_20  IAMs_20   01 20 26.6
          comp=Z,2µm,22.0s
PET   Petropavlovsk      76.30 351deP           P         00 53 42.3 +1.0
PET                                  e*SP       pwP       00 53 50.6 +1.1
PET                                  i S        S         01 03 26.5 +0.8
PET                                  ePPS       PPS       01 04 21.8
PET                                  eSS        SS        01 08 23.9 +3.5
PET                                    pmax     pmax
          comp=Z,80nm,0.6s
PET                                    pmax     pmax
          comp=Z,800nm,11.2s
PET                                    pmax     pmax
          comp=Z,400nm,12.2s
PET                                    MLR      MLR
          comp=Z,900nm,18.0s
PET                                    MLR      MLR
          comp=Z,900nm,18.0s
PET   Petropavlovsk      76.30 351     P        P         00 53 43.2 +1.9
USRK  Ussuriysk Ar.      76.32 331     P        P         00 53 41.4  -0.3
          comp=Z,22nm,0.9s,baz=130,slow=4.7,SNR=16
USRK                                   LR       LR        01 22 44.6
          comp=Z,1µm,21.9s,baz=137,slow=32
          comp=Z,22nm,0.9s
PSI   Prapat             76.43 279     P        P         00 53 42.5  -0.7
          comp=Z,11nm,0.9s,baz=192,slow=3.3,SNR=8.3
          comp=Z,11nm,0.9s
UGL   Uglegorsk          76.48 340   eP         P         00 53 46.0 +3.5
UGL                                  eS         S         01 03 32.6 +4.8
UGL                                    pmax     pmax
          comp=Z,670nm,4.0s
UGL                                    smax     smax
          comp=E,720nm,6.5s
UGL                                    smax     smax
          comp=N,2µm,9.0s
PEA0B Petropavlovsk-     76.52 351d iP          P         00 53 42.8 +0.1
PETK  Petropavlovsk-     76.52 351     P        P         00 53 43.3 +0.7
          comp=N,60nm,0.9s,baz=152,slow=6.6,SNR=69
PETK                                   LR       LR        01 20 57.2
          comp=N,2µm,21.1s,baz=155,slow=31
          comp=N,60nm,0.9s
MAW   Mawson             76.67 202     P        P         00 53 44.3 +0.9
          comp=N,9.5nm,0.7s,baz=124,slow=7.9,SNR=14
MAW                                    LR       LR        01 24 29.5
          comp=N,1µm,18.2s,baz=94,slow=33
          comp=N,9.5nm,0.7s
MAW   Mawson             76.67 202     P        P         00 53 44.3 +0.9
          baz=77,SNR=11
MAW   Mawson             76.67 202     P        P         00 53 43.9 +0.4
NIKH  Nikolski High      76.86  11     P        P         00 53 44.7 +0.1
NIKH  Nikolski High      76.86  11     P        P         00 53 42.3  -2.2
          baz=197,SNR=12
WHN   Wuhan              77.19 311   ⇑P         P         00 53 47.8 +0.9
WHN                                    S        S         01 03 34.3  -2.0
WHN                                    LR       LR
          comp=N,3µm,20.4s
WHN                                    LR       LR
          comp=N,3µm,22.1s
WHN                                    LR       LR
          comp=N,3µm,19.8s
MDJ   Mudanjiang         77.74 330     P        P         00 53 48.7  -1.0
MDJ                                    IAmb     IAmb      00 53 52.6
          comp=Z,45nm,1.2s
MDJ   Mudanjiang         77.74 330     P        P         00 53 50.4 +0.7
MDJ                                    pP       sP        00 53 53.3 +0.2
MDJ                                    PP       PP        00 56 47.8 +2.3
MDJ                                    S        S         01 03 44.9 +3.1
MDJ                                    pmax     pmax
          comp=Z,24nm,0.9s
MDJ                                    pmax     pmax
          comp=Z,560nm,3.9s
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MDJ                                    LR       LR
          comp=Z,1µm,21.6s
MDJ                                    LR       LR
          comp=Z,1µm,24.4s
MDJ                                    LR       LR
          comp=Z,1µm,24.4s
MDJ   Mudanjiang         77.74 330     P        P         00 53 51.2 +1.5
          comp=Z,34nm,1.0s
DL2   Dalian             77.79 321⇓iP           P         00 53 48.8  -1.3
DL2                                    S        S         01 03 42.4  -0.2
DL2                                    pmax     pmax
          comp=Z,34nm,1.3s
DL2                                    pmax     pmax
          comp=Z,220nm,5.1s
DL2                                    LR       LR
          comp=Z,1µm,27.5s
DL2                                    LR       LR
          comp=Z,470nm,20.0s
DL2                                    LR       LR
          comp=Z,1µm,26.9s
TYV   Tymovskoe          77.86 341   eP         P         00 53 54.4 +4.2
TYV                                  eS         S         01 03 51.6 +8.8
TYV                                    pmax     pmax
          comp=Z,800nm,5.4s
TYV                                    pmax     pmax
          comp=Z,33nm,1.8s
TYV                                    smax     smax
          comp=N,800nm,7.8s
TYV                                    smax     smax
          comp=E,700nm,7.8s
TYV                                    MLR      MLR
          comp=Z,2µm,16.0s
UNV   Unalaska Valle     78.13  12     P        P         00 53 50.9  -0.7
UNV   Unalaska Valle     78.13  12     P        P         00 53 50.3  -1.3
          baz=199,SNR=5.4
SRIT  Nakonsritamara     78.21 284     P        P         00 53 53.5 +0.5
SRIT                                   IAmb     IAmb      00 54 13.0
          comp=Z,72nm,1.7s
BELA  Belgrano 2         78.47 174     P        P         00 53 52.4  -1.0
BELA                                   IAmb     IAmb      00 54 01.9
          comp=Z,75nm,1.2s
SNY   Shenyang           78.71 325   ⇓P         P         00 53 53.8  -1.3
SNY                                    S        S         01 03 51.6  -0.7
SNY                                    pmax     pmax
          comp=Z,390nm,9.2s
SNY                                    LR       LR
          comp=Z,630nm,23.9s
SNY                                    LR       LR
          comp=Z,800nm,23.5s
SNY                                    LR       LR
          comp=Z,1µm,23.5s
TIA   Tai'an             78.77 317   ⇑P         P         00 53 55.4  -0.2
TIA                                    PP       PP        00 56 50.5  -3.8
TIA                                    S        S         01 03 51.0  -2.2
TIA                                    pmax     pmax
          comp=Z,9.0nm,0.8s
TIA                                    pmax     pmax
          comp=Z,250nm,4.7s
TIA                                    LR       LR
          comp=Z,480nm,13.5s
TIA                                    LR       LR
          comp=Z,590nm,17.8s
TIA                                    LR       LR
          comp=Z,720nm,20.6s
CN2   Changchun          79.14 327   eP         P         00 53 56.0  -1.4
CN2                                  ePP        PP        00 56 56.6  -0.6
CN2                                  eS         S         01 03 53.3  -3.5
CN2                                    pmax     pmax
          comp=Z,20nm,0.9s
CN2                                    pmax     pmax
          comp=Z,310nm,5.0s
CN2                                    LR       LR
          comp=Z,1µm,26.0s
CN2                                    LR       LR
          comp=Z,990nm,26.0s
CN2                                    LR       LR
          comp=Z,1µm,28.0s
LHMI  Lhok Sumawe        79.21 280     IAMs_20  IAMs_20   01 29 53.6
          comp=Z,3µm,20.0s
SMAI  San Martin Ant     79.56 161     P        P         00 54 00.2 +0.7
BNX   BinXian            79.60 329   ⇑P         P         00 53 59.3  -0.6
BNX                                    pP       sP        00 54 04.0 +0.7
BNX                                    sP       pwP       00 54 06.3  -2.2
BNX                                    PP       PP        00 57 02.5 +1.5
BNX                                    S        S         01 03 59.3  -2.4
BNX                                    sS       sS        01 04 08.1 +2.7
BNX                                    pmax     pmax
          comp=Z,110nm,1.3s
BNX                                    pmax     pmax
          comp=Z,530nm,4.3s
BNX                                    LR       LR
          comp=Z,3µm,21.6s
FALS  False Pass         79.72  14     P        P         00 53 57.7  -2.6
          baz=202
GRNR  Gornyy             79.83 337⇓iP           P         00 54 02.3 +1.2
GRNR                                 eS         S         01 04 10.4 +6.5
GRNR                                   pmax     pmax
          comp=Z,30nm,1.0s
GRNR                                   smax     smax
          comp=E,9.0nm,0.7s
KLR   Kul'dur            80.37 334     P        P         00 54 03.3  -0.7
          comp=E,7.1nm,0.9s,baz=145,slow=5.7,SNR=11
KLR                                    LR       LR        01 28 13.1
          comp=E,472nm,19.6s,baz=148,slow=35
          comp=E,7.1nm,0.9s
KLR   Kul'dur            80.37 334deP           P         00 54 04.0   0.0
KLR                                    pmax     pmax
          comp=Z,36nm,1.7s
NKL   Nikolayevsk        80.45 341   eP         P         00 54 05.9 +1.6
NKL                                  eS         S         01 04 14.5 +4.2
NKL                                    pmax     pmax
          comp=E,3.0nm,0.7s
NKL                                    pmax     pmax
          comp=N,10.0nm,1.0s
NKL                                    pmax     pmax
          comp=Z,38nm,1.1s
NKL                                    smax     smax
          comp=E,2.0nm,1.5s
NKL                                    smax     smax
          comp=N,50nm,2.8s
NKL                                    MLR      MLR
          comp=E,91nm,14.0s
NKL                                    MLR      MLR
          comp=N,2.0nm,13.0s
NKL                                    MLR      MLR
          comp=Z,771nm,16.0s
ENH   Enshi              80.50 308     P        P         00 54 04.4  -0.8
CNBA  Chernabura Isl     80.58  16     P        P         00 54 04.5  -0.4
CNBA                                   IAmb     IAmb      00 54 06.8
          comp=Z,77nm,1.2s
CNBA                                   IAMs_20  IAMs_20   01 23 25.4
          comp=Z,3µm,20.0s
CHNA  Chernabura Isl     80.58  16     P        P         00 54 02.9  -2.1
          baz=206,SNR=5.3
GYA   Guiyang            80.60 304⇑iP           P         00 54 06.3 +0.4
GYA                                    pmax     pmax
          comp=Z,310nm,8.9s
GYA                                    LR       LR
          comp=Z,540nm,16.6s
GYA                                    LR       LR
          comp=Z,580nm,17.8s
GYA                                    LR       LR
          comp=Z,1µm,20.4s
SPIA  Saint Paul Isl     80.67   9     P        P         00 54 03.0  -2.4
          baz=196
LYN   LuoYang            80.81 313   eP         P         00 54 06.9 +0.2
LYN                                    S        S         01 04 09.9  -4.9
LYN                                    SS       SS        01 09 25.6  -3.4
LYN                                    pmax     pmax
          comp=Z,480nm,4.1s
LYN                                    LR       LR
          comp=Z,1µm,18.8s
LYN                                    LR       LR
          comp=Z,900nm,21.0s
LYN                                    LR       LR
          comp=Z,1µm,22.7s
SDPT  Sand Point         80.84  15     P        P         00 54 05.9  -0.4
SDPT                                   IAmb     IAmb      00 54 09.3
          comp=Z,62nm,1.1s
SDPT  Sand Point         80.84  15     P        P         00 54 03.9  -2.4
          baz=205
HNS   HongShan           81.03 317   eP         P         00 54 09.8 +2.0
HNS                                    PP       PP        00 57 11.1  -1.9
HNS                                    S        S         01 04 19.5 +2.5
HNS                                    pmax     pmax
          comp=Z,15nm,1.7s
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HNS                                    pmax     pmax
          comp=Z,370nm,8.4s
HNS                                    LR       LR
          comp=Z,430nm,22.0s
HNS                                    LR       LR
          comp=Z,1µm,19.2s
HNS                                    LR       LR
          comp=Z,1µm,21.1s
BJT   Baijiatuau         81.73 319     P        P         00 54 11.8 +0.3
BJT                                    IAmb     IAmb      00 54 17.0
          comp=Z,72nm,1.9s
BJT   Baijiatuau         81.73 319     P        P         00 54 11.8 +0.3
BJT                                    pmax     pmax
          comp=Z,72nm,1.9s
BJI   Beijing            81.74 320     P        P         00 54 11.6 +0.1
BJI                                    pP       sP        00 54 15.8 +0.9
BJI                                    sP       pwP       00 54 19.9  -0.2
BJI                                    S        S         01 04 23.4  -0.8
BJI                                    SS       SS        01 09 40.4  -2.3
BJI                                    pmax     pmax
          comp=Z,320nm,4.7s
BJI                                    LR       LR
          comp=Z,550nm,17.9s
BJI                                    LR       LR
          comp=Z,260nm,21.7s
BJI                                    LR       LR
          comp=Z,810nm,17.7s
CHIR  Chirikof Islan     82.51  17     P        P         00 54 12.7  -2.5
          baz=209
PMSA  Palmer Station     82.57 159     LR       LR        01 23 58.4
          comp=Z,1µm,21.1s,baz=234,slow=31
PMSA  Palmer Station     82.57 159     P        P         00 54 15.4  -0.1
PMSA  Palmer Station     82.57 159   eP         P         00 54 15.9 +0.4
TIY   Taiyuan            82.66 316   eP         P         00 54 19.5 +3.0
TIY                                    pmax     pmax
          comp=Z,340nm,3.9s
TIY                                    LR       LR
          comp=Z,780nm,19.2s
TIY                                    LR       LR
          comp=Z,660nm,18.6s
TIY                                    LR       LR
          comp=Z,1µm,20.8s
XAN   Xi'an              82.95 311     P        P         00 54 16.4  -1.7
XAN                                    pP       pwP       00 54 28.8 +2.2
XAN                                    S        S         01 04 32.4  -4.7
XAN                                    pmax     pmax
          comp=Z,11nm,1.5s
XAN                                    pmax     pmax
          comp=Z,510nm,10.0s
XAN                                    LR       LR
          comp=Z,740nm,22.0s
XAN                                    LR       LR
          comp=Z,750nm,22.0s
XAN                                    LR       LR
          comp=Z,2µm,22.0s
KMI   Kunming            83.01 301   ⇑P         P         00 54 20.3 +1.5
KMI                                    pP       PcP       00 54 23.3  -0.2
KMI                                    S        S         01 04 39.4 +1.0
KMI                                    pmax     pmax
          comp=Z,8.0nm,1.3s
KMI                                    pmax     pmax
          comp=Z,290nm,8.6s
KMI                                    LR       LR
          comp=Z,560nm,22.2s
KMI                                    LR       LR
          comp=Z,420nm,22.2s
KMI                                    LR       LR
          comp=Z,960nm,27.3s
CMAR  Chiang Mai Arr     83.06 293     P        P         00 54 19.5 +0.5
          comp=Z,2.4nm,0.3s,baz=125,slow=3.8,SNR=16
          comp=Z,2.4nm,0.3s
CMAR  Chiang Mai Arr     83.06 293     P        P         00 54 18.8  -0.1
CMAR  Chiang Mai Arr     83.06 293ceP           P         00 54 20.2 +1.2
CMAR                                   pmax     pmax
          comp=Z,3.0nm,0.3s
CHTO  Chiang Mai         83.22 293     P        P         00 54 19.6  -0.2
CHTO  Chiang Mai         83.22 293     P        P         00 54 19.6  -0.2
CHTO                                   pmax     pmax
          comp=Z,19nm,1.4s
CHTO  Chiang Mai         83.22 293     P        P         00 54 20.9 +1.1
SII   Sitkinak Islan     83.55  18     P        P         00 54 20.7 +0.1
SII                                    IAMs_20  IAMs_20   01 23 57.9
          comp=Z,2µm,21.0s
SII   Sitkinak Islan     83.55  18     P        P         00 54 17.4  -3.1
          baz=210
SII   Sitkinak Islan     83.55  18     P        P         00 54 22.2 +1.6
MA2   Magadan            83.86 349     LR       LR        01 30 14.3
          comp=Z,1µm,18.8s,baz=146,slow=35
MA2   Magadan            83.86 349     P        P         00 54 22.9 +0.9
MA2                                    IAMs_20  IAMs_20   01 30 03.5
          comp=Z,2µm,19.0s
MA2   Magadan            83.86 349     P        P         00 54 23.0 +0.9
MA2                                    pmax     pmax
          comp=Z,141nm,1.8s
XLT   XiLinHaoTe         84.21 322⇑iP           P         00 54 24.3  -0.1
XLT                                    pP       PcP       00 54 28.3 +0.2
XLT                                    sP       pwP       00 54 32.5  -0.4
XLT                                    S        S         01 04 48.1  -1.3
XLT                                    pmax     pmax
          comp=Z,330nm,4.8s
XLT                                    LR       LR
          comp=Z,63nm,22.2s
XLT                                    LR       LR
          comp=Z,610nm,22.1s
XLT                                    LR       LR
          comp=Z,730nm,21.3s
OHAK  Old Harbor         84.37  18     P        P         00 54 23.2  -1.5
          baz=211
OHAK                                   S        S         01 04 53.6 +3.4
          baz=211
PZH   PanZhiHua          84.45 302     P        P         00 54 26.9 +0.8
PZH                                    SKS      SKSac     01 04 45.5  -4.7
PZH                                    S        S         01 04 50.4  -2.3
PZH                                    pmax     pmax
          comp=Z,10.0nm,0.7s
PZH                                    pmax     pmax
          comp=Z,260nm,8.9s
PZH                                    LR       LR
          comp=Z,560nm,19.3s
PZH                                    LR       LR
          comp=Z,510nm,21.0s
PZH                                    LR       LR
          comp=Z,810nm,17.9s
HHC   Hu-ho-hao-te       85.04 318   eP         P         00 54 29.6 +1.0
HHC                                    SKS      SKSac     01 04 51.4  -1.9
HHC                                    S        S         01 04 56.3  -1.6
HHC                                    pmax     pmax
          comp=Z,30nm,1.1s
HHC                                    pmax     pmax
          comp=Z,610nm,5.4s
HHC                                    LR       LR
          comp=Z,2µm,18.4s
HHC                                    LR       LR
          comp=Z,880nm,19.2s
HHC                                    LR       LR
          comp=Z,2µm,20.3s
CD2   Chengdu            85.05 306     P        P         00 54 27.0  -1.9
CD2                                    pP       PcP       00 54 32.4 +0.3
CD2                                    PP       PP        00 57 45.9  -0.3
CD2                                    SKS      SKSac     01 04 48.8  -4.8
CD2                                    S        S         01 04 56.8  -1.5
CD2                                    pmax     pmax
          comp=Z,340nm,9.5s
CD2                                    LR       LR
          comp=Z,710nm,20.6s
CD2                                    LR       LR
          comp=Z,1µm,32.4s
KDAK  Kodiak Island      85.05  18     LR       LR        01 25 56.9
          comp=Z,2µm,20.4s,baz=231,slow=31
KDAK  Kodiak Island      85.05  18     P        P         00 54 28.7 +0.6
KDAK                                   IAmb     IAmb      00 54 30.7
          comp=Z,60nm,1.2s
KDAK  Kodiak Island      85.05  18     IAMs_20  IAMs_20   01 25 35.6
          comp=Z,2µm,20.0s
KDAK  Kodiak Island      85.05  18     P        P         00 54 28.7 +0.6
KDAK                                   pmax     pmax
          comp=Z,60nm,1.3s
KDAK  Kodiak Island      85.05  18     P        P         00 54 25.4  -2.7
          baz=212
KDAK                                   S        S         01 05 00.3 +3.4
          baz=212
MCCM  Marconi Confer     85.21  45     IAMs_20  IAMs_20   01 23 00.1
          comp=Z,2µm,22.0s
SAO   San Andreas Ge     85.42  47     P        P         00 54 30.2  -0.3
SAO                                    IAmb     IAmb      00 54 39.6
          comp=Z,28nm,1.0s
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SAO                                      IAMs_20  IAMs_20  01 24 10.8
      comp=Z,2µm,20.0s
SAO   San Andreas Ge   85.42  47         P        P        00 54 30.2  -0.3
SAO                                      pmax     pmax
      comp=Z,28nm,1.0s
TROLL Troll, Antarti   85.45 183         P        P        00 54 29.6  -0.7
HOPS  Hopland Field    85.55  45         IAMs_20  IAMs_20  01 23 23.2
      comp=Z,2µm,22.0s
PKM   Mcpherson Peak   85.56  49         P        P        00 54 28.8  -2.7
      baz=239
GDXM  Geysers          85.63  45         P        P        00 54 31.4  -0.3
GDXM                                     IAmb     IAmb     00 54 41.7
      comp=Z,44nm,1.6s
ZEA   Zeya             85.63 335        eP        P        00 54 31.6  +0.5
ZEA                                     eS        S        01 05 06.0  +3.1
ZEA                                      pmax     pmax
      comp=E,100nm,7.4s
ZEA                                      pmax     pmax
      comp=N,100nm,5.3s
ZEA                                      pmax     pmax
      comp=Z,200nm,5.0s
ZEA                                      pmax     pmax
      comp=E,10.0nm,1.3s
ZEA                                      pmax     pmax
      comp=N,10.0nm,0.7s
ZEA                                      pmax     pmax
      comp=Z,20nm,1.1s
ZEA                                      smax     smax
      comp=E,300nm,10.3s
ZEA                                      smax     smax
      comp=N,600nm,13.7s
SMMC  Simmler          85.65  49         P        P        00 54 29.5  -2.2
      baz=238
KMPM  Mount Pierce     85.68  43         P        P        00 54 31.6  -0.2
PAGB  Antelope Grade   85.69  49         P        P        00 54 32.0  +0.1
P18K  Big Mountain,    85.74  16         P        P        00 54 29.2  -2.4
      baz=209
P18K                                     S        S        01 05 03.5  -0.4
      baz=209
Q19K  Cape Douglas,    85.74  17         P        P        00 54 30.2  -1.4
      baz=211,SNR=22
Q19K                                     S        S        01 05 04.0  +0.2
      baz=211
HIA   Hailar           85.77 328⇓eP      P        00 54 32.0   0.0
HIA                                      pmax     pmax
      comp=Z,19nm,1.4s
CIS   Catalina Islan   85.79  51         P        P        00 54 28.4  -4.1
      baz=240
KMRM  Mail Ridge       85.83  43         P        P        00 54 32.3  -0.3
KMRM                                     IAmb     IAmb     00 54 42.1
      comp=Z,59nm,1.2s
BCW   Bitter Crk WRg   85.86  50         P        P        00 54 32.9  -0.1
BCW                                      IAmb     IAmb     00 54 41.5
      comp=Z,33nm,0.9s
JCC   Jacoby Creek,    85.96  43         IAMs_20  IAMs_20  01 25 55.8
      comp=Z,2µm,20.0s
SNAA  Sanae            85.97 181         P        P        00 54 31.7  -1.2
SNAA  Sanae            85.97 181         LR       LR       01 29 20.5
      comp=Z,2µm,22.0s,baz=158,slow=33
SNAA  Sanae            85.97 181         P        P        00 54 31.6  -1.3
SNAA                                     IAmb     IAmb     00 54 40.4
      comp=Z,51nm,1.0s
SNAA                                     IAMs_20  IAMs_20  01 28 57.1
      comp=Z,2µm,22.0s
SNAA  Sanae            85.97 181deP      P        00 54 31.0  -1.9
SNAA                                     pmax     pmax
      comp=Z,45nm,1.0s
NVL   N'lazarevskaya   85.98 186⇓iP      P        00 54 31.7  -1.1
NVL                                     eS        SKSac    01 04 53.0  -5.3
NVL                                      pmax     pmax
      comp=Z,39nm,1.2s
KHMM  Horse Mountain   86.18  43         P        P        00 54 34.3  -0.1
KHMM                                     IAmb     IAmb     00 54 43.9
      comp=Z,47nm,1.2s
OSI   Osito Audit: C   86.18  50         P        P        00 54 30.2  -4.2
      baz=239
DECC  Green Verdugo    86.28  51         P        P        00 54 31.1  -3.8
      baz=240
PASC  Pasadena Art C   86.34  51         IAMs_20  IAMs_20  01 24 35.8
      comp=Z,2µm,20.0s
ARVC  Arvin            86.37  50         P        P        00 54 33.5  -1.8
      baz=239
P19K  Oil Pt           86.47  16         IAmb     IAmb     00 55 57.9
      comp=Z,39nm,0.8s
P19K                                     IAMs_20  IAMs_20  01 26 49.2
      comp=Z,2µm,20.0s
P19K  Oil Pt           86.47  16         P        P        00 54 33.4  -1.8
      baz=211,SNR=14
P19K                                     S        S        01 05 11.3  +0.2
      baz=211
109C  Camp Elliot, M   86.49  52         P        P        00 54 32.8  -3.1
      baz=240
GO10  Punta Arenas     86.50 147         P        P        00 54 36.1  +0.4
VES   Vestal, Richgr   86.56  49         P        P        00 54 33.2  -3.0
      baz=239
KSXB  Camp Six Broad   86.62  42         P        P        00 54 36.4  -0.1
KSXB                                     IAmb     IAmb     00 54 42.3
      comp=Z,43nm,1.1s
O19K  Port Alsworth    86.67  16         P        P        00 54 33.9  -2.2
      baz=210
O19K                                     S        S        01 05 12.2  -0.5
      baz=210
N18K  Kilae Creek      86.71  15         IAMs_20  IAMs_20  01 27 39.3
      comp=Z,2µm,20.0s
N18K  Kilae Creek      86.71  15         P        P        00 54 35.2  -1.1
      baz=209,SNR=5.9
N18K                                     S        S        01 05 14.4  +1.1
      baz=209
BFSC  Mount Baldy Ra   86.75  51         P        P        00 54 36.2  -1.2
      baz=240,SNR=5.2
SEY   Seymchan         86.77 351⇓eP      P        00 54 37.0  +0.5
SEY                                      pmax     pmax
      comp=Z,66nm,1.7s
MURC  Murrieta         86.77  52         P        P        00 54 34.9  -2.5
      baz=240
CMB   Columbia Colle   86.81  47         P        P        00 54 37.2  -0.2
CMB                                      IAmb     IAmb     00 54 41.2
      comp=Z,30nm,1.1s
CMB                                      IAMs_20  IAMs_20  01 24 11.6
      comp=Z,2µm,22.0s
CMB   Columbia Colle   86.81  47         P        P        00 54 37.2  -0.2
CMB                                      pmax     pmax
      comp=Z,30nm,1.1s
USHA  Ushuaia          86.81 149         LR       LR       01 25 17.0
      comp=Z,868nm,20.2s,baz=214,slow=30
EDW2  Edwards Air Fo   86.84  50         P        P        00 54 37.5  -0.2
      baz=240,SNR=10
EDW2                                     S        S        01 05 17.6  +1.9
      baz=240
ORV   Oroville         86.88  45         IAmb     IAmb     00 54 39.8
      comp=Z,23nm,1.1s
GAMB  Gambell          86.89   7         P        P        00 54 36.6  -0.4
      baz=194
GAMB                                     S        S        01 05 17.1  +2.4
      baz=194
ISA   Isabella, Lake   86.89  49         P        P        00 54 38.8  +0.9
ISA                                      IAmb     IAmb     00 54 42.0
      comp=Z,41nm,1.0s
ISA   Isabella, Lake   86.89  49         P        P        00 54 38.8  +0.9
ISA                                      pmax     pmax
      comp=Z,41nm,1.0s
ISA   Isabella, Lake   86.89  49         P        P        00 54 37.3  -0.6
      baz=239,SNR=27
CNPM  China Poot       86.90  17         IAmb     IAmb     00 56 30.2
      comp=Z,27nm,0.6s
CNPM                                     IAMs_20  IAMs_20  01 25 47.6
      comp=Z,2µm,22.0s
HOM   Homer            86.90  17         IAMs_20  IAMs_20  01 26 21.5
      comp=Z,2µm,20.0s
L02F  Cave Junction    86.98  42         P        P        00 54 37.4  -0.7
      baz=236,SNR=8.6
L02F                                     S        S        01 05 20.3  +3.7
      baz=236
MONP2 Monument Peak    86.99  53         P        P        00 54 37.7  -0.9
      baz=241,SNR=6.2
O20K  Slope Mountain   87.00  16         P        P        00 54 36.3  -1.6
      baz=212,SNR=6.8
O20K                                     S        S        01 05 15.8  -0.4
      baz=212
VNA1  Neumayer--Stat   87.03 180         P        P        00 54 29.9  -8.1
IKP   In-Ko-Pah, Jac   87.10  53         P        P        00 54 36.2  -2.8
      baz=241
SVW2  Sparrevohn       87.15  15         P        P        00 54 38.3  -0.2
N19K  Bonanza Creek    87.16  15         IAMs_20  IAMs_20  01 27 32.3
      comp=Z,1µm,20.0s
N19K  Bonanza Creek    87.16  15         P        P        00 54 36.4  -2.3
      baz=210,SNR=5.7
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N19K                                     S        S        01 05 16.8  -1.0
      baz=210
BRLK  Bradley Lake     87.20  17         IAmb     IAmb     00 56 34.1
      comp=Z,15nm,0.6s
BRLK                                     IAMs_20  IAMs_20  01 26 06.0
      comp=Z,2µm,22.0s
BRSE  Bradley Lake S   87.22  17         P        P        00 54 37.3  -1.5
      baz=213,SNR=7.9
K02D  Willamette Mer   87.24  41         P        P        00 54 38.7  -0.7
      baz=236,SNR=11
K02D                                     S        S        01 05 19.9  +0.6
      baz=236
YBH   Yreka Blue Hor   87.29  42         LR       LR       01 27 01.8
      comp=Z,1µm,19.9s,baz=236,slow=31
YBH   Yreka Blue Hor   87.29  42         P        P        00 54 39.5  -0.2
YBH                                      IAmb     IAmb     00 54 42.4
      comp=Z,22nm,1.2s
YBH                                      IAMs_20  IAMs_20  01 26 40.1
      comp=Z,2µm,21.0s
YBH   Yreka Blue Hor   87.29  42         P        P        00 54 39.5  -0.2
YBH                                      pmax     pmax
      comp=Z,22nm,1.3s
PFO   Pinyon Flats O   87.31  52         LR       LR       01 24 34.5
      comp=Z,2µm,22.0s,baz=250,slow=29
PFO   Pinyon Flats O   87.31  52         IAMs_20  IAMs_20  01 24 30.6
      comp=Z,2µm,21.0s
PFO   Pinyon Flats O   87.31  52         P        P        00 54 38.9  -1.2
      baz=241
TPFO  Pinon Flats      87.31  52         P        P        00 54 38.4  -1.7
      baz=241
TPFO                                     S        S        01 05 23.2  +2.7
      baz=241
J01E  Myrtle Point     87.34  41         P        P        00 54 40.3  +0.5
J01E                                     IAmb     IAmb     00 54 42.2
      comp=Z,26nm,1.0s
J01E                                     IAMs_20  IAMs_20  01 26 03.2
      comp=Z,1µm,20.0s
J01E  Myrtle Point     87.34  41         P        P        00 54 38.4  -1.4
      baz=236
J01E                                     S        S        01 05 23.2  +3.1
      baz=236
SWSC  Sam W. Stewart   87.47  53         P        P        00 54 39.0  -1.6
      baz=241
MDPB  Devils Postpil   87.48  47         P        P        00 54 40.9  -0.1
MDPB                                     IAmb     IAmb     00 54 43.9
      comp=Z,27nm,1.1s
OMMB  Old Mammoth Mi   87.52  47         P        P        00 54 41.5  +0.3
OMMB                                     IAmb     IAmb     00 54 44.3
      comp=Z,29nm,1.3s
CWC   Cottonwood Cre   87.56  49         P        P        00 54 39.7  -1.5
      baz=240
LZH   Lanzhou          87.56 311 ⇑P      P        00 54 43.1  +1.8
LZH                                      sP       pwP      00 54 53.3  +3.5
LZH                                      SKS      SKSac    01 05 06.4  -2.9
LZH                                      S        S        01 05 24.6  +1.7
LZH                                      pmax     pmax
      comp=Z,340nm,4.1s
LZH                                      LR       LR
      comp=Z,770nm,16.5s
LZH                                      LR       LR
      comp=Z,740nm,14.6s
LZH                                      LR       LR
      comp=Z,1µm,20.3s
HUMO  Hull Mountain    87.62  42         P        P        00 54 42.1  +0.9
HUMO                                     IAmb     IAmb     00 54 50.6
      comp=Z,31nm,1.1s
MLAC  Mammoth, Mammo87.64  48            P        P        00 54 40.2  -1.5
      baz=239
LPIG  La Paz           87.73  63         LR       LR       01 24 44.5
      comp=Z,2µm,21.7s,baz=232,slow=29
DBO   Dodson Butte     87.73  41         P        P        00 54 42.0  +0.2
DBO                                      IAmb     IAmb     00 54 44.3
      comp=Z,29nm,1.2s
BEKR  Beckworth        87.79  45         P        P        00 54 42.5  +0.2
BEKR                                     IAmb     IAmb     00 54 44.4
      comp=Z,20nm,1.2s
L04D  Klamath Falls    87.81  42         P        P        00 54 42.3   0.0
L04D                                     IAmb     IAmb     00 54 44.5
      comp=Z,33nm,1.1s
L04D                                     IAMs_20  IAMs_20  01 29 09.8
      comp=Z,1µm,18.0s
L04D  Klamath Falls    87.81  42         P        P        00 54 41.0  -1.3
      baz=237
L04D                                     S        S        01 05 26.8  +1.8
      baz=237
BELC  Belle Mtn. Jos   87.84  52         P        P        00 54 41.3  -1.3
      baz=241,SNR=9.7
SLBS  Sierra La Lagu   87.85  63         P        P        00 54 43.6  +0.8
PNTR  Pine Nut         87.88  46         P        P        00 54 42.8   0.0
SEW   Seward           87.88  18         P        P        00 54 40.8  -1.1
      baz=214
SEW                                      S        S        01 05 26.6  +2.2
      baz=214
GSC   Goldstone, Bar   87.89  50         P        P        00 54 42.9  +0.1
GSC                                      IAmb     IAmb     00 54 45.6
      comp=Z,23nm,1.3s
GSC   Goldstone, Bar   87.89  50         P        P        00 54 42.9  +0.1
GSC                                      pmax     pmax
      comp=Z,23nm,1.3s
GSC   Goldstone, Bar   87.89  50         P        P        00 54 41.4  -1.4
      baz=240,SNR=6.0
I02E  Swisshome, OR    87.93  40         IAMs_20  IAMs_20  01 26 20.6
      comp=Z,2µm,20.0s
I02E  Swisshome, OR    87.93  40         S        S        01 05 27.9  +2.3
      baz=236
VCNR  Virginia City    87.96  46         P        P        00 54 43.3  +0.2
VCNR                                     IAmb     IAmb     00 55 12.2
      comp=Z,27nm,1.4s
CAPN  Captain Cook N   87.97  17         P        P        00 54 41.2  -1.1
      baz=213
CAPN                                     S        S        01 05 27.3  +2.1
      baz=213
I03D  Drain, OR        87.99  41         P        P        00 54 41.8  -1.1
      baz=236,SNR=5.3
SPCR  Spurr Chakacha   88.06  16         P        P        00 54 41.3  -1.6
      baz=212
BC3   Big Chuckawall   88.07  52         P        P        00 54 42.0  -1.7
      baz=241
YERR  Yerington        88.07  46         IAmb     IAmb     00 54 46.6
      comp=Z,61nm,1.6s
M19K  Big River Lodg   88.13  15         IAMs_20  IAMs_20  01 28 43.0
      comp=Z,2µm,20.0s
M19K  Big River Lodg   88.13  15         P        P        00 54 41.9  -1.3
      baz=210
M19K                                     S        S        01 05 32.0  +5.1
      baz=210
LHV   Little Huntoon   88.19  47         P        P        00 54 44.7  +0.7
LHV                                      IAmb     IAmb     00 54 47.3
      comp=Z,51nm,1.4s
GLA   Glamis           88.24  53         P        P        00 54 45.3  +0.9
GLA   Glamis           88.24  53         P        P        00 54 45.3  +0.9
GLA                                      pmax     pmax
      comp=Z,73nm,1.8s
GLA   Glamis           88.24  53         P        P        00 54 41.8  -2.7
      baz=242
Q23K  Middleton Isla   88.25  19         P        P        00 54 42.2  -1.5
      baz=217
Q23K                                     S        S        01 05 31.2  +3.2
      baz=217
LCH   Last Change Ra   88.26  48         IAmb     IAmb     00 54 47.3
      comp=Z,25nm,1.4s
L19K  White Mountain   88.27  14         IAmb     IAmb     00 54 48.1
      comp=Z,21nm,0.9s
L19K                                     IAMs_20  IAMs_20  01 28 57.5
      comp=Z,1µm,20.0s
L19K  White Mountain   88.27  14         P        P        00 54 42.7  -1.1
      baz=210,SNR=25
L19K                                     S        S        01 05 32.1  +3.9
      baz=210
PAHR  Pah Rah Range    88.34  46         P        P        00 54 45.0  +0.1
PAHR                                     IAmb     IAmb     00 54 47.8
      comp=Z,45nm,1.3s
RYN   Ryan             88.37  47         P        P        00 54 44.8  -0.2
RYN                                      IAmb     IAmb     00 54 48.0
      comp=Z,40nm,1.6s
K04D  Chiloquin, OR    88.38  42         P        P        00 54 43.3  -1.7
      baz=237
NVAR  Mina Array Bea   88.41  47         P        P        00 54 45.2  -0.2
      comp=Z,15nm,1.1s,baz=225,slow=7.3,SNR=37
NVAR                                     PP       PP       00 58 11.9  -1.6
      comp=Z,0.3nm,0.4s,baz=225,slow=8.4,SNR=1.8
NVAR                                     LR       LR       01 26 02.6
      comp=Z,2µm,21.6s,baz=246,slow=30
      comp=Z,15nm,1.1s
NVAR  Mina Array Bea   88.41  47         P        P        00 54 44.5  -0.8
GWY   Greenwater Val   88.42  50         P        P        00 54 44.7  -0.7
GWY                                      IAmb     IAmb     00 54 47.2
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      comp=Z,26nm,1.5s
FURC  Furnace Creek,   88.42  49         P        P        00 54 43.9  -1.2
      baz=240
ANM   Nome             88.46   9         IAMs_20  IAMs_20  01 28 52.5
      comp=Z,2µm,20.0s
ANM   Nome             88.46   9         P        P        00 54 43.0  -1.6
      baz=200
ANM                                      S        S        01 05 32.9  +3.2
      baz=200
GMRC  Granite Mounta   88.46  51         P        P        00 54 43.5  -2.1
      baz=241
BUCK  Buck Mountain    88.49  40         P        P        00 54 45.8  +0.4
BUCK                                     IAmb     IAmb     00 54 47.9
      comp=Z,42nm,1.1s
J04D  Umpqua Nationa   88.49  41         P        P        00 54 45.8  +0.2
J04D                                     IAmb     IAmb     00 54 47.9
      comp=Z,38nm,0.9s
J04D  Umpqua Nationa   88.49  41         P        P        00 54 44.4  -1.2
      baz=237,SNR=6.0
NV11  Mina Array Sit   88.51  47         IAmb     IAmb     00 54 48.7
      comp=Z,43nm,1.4s
COR   Corvallis        88.52  40         IAMs_20  IAMs_20  01 25 35.3
      comp=Z,2µm,22.0s
IRM   Iron Mountain    88.53  52         P        P        00 54 45.1  -0.7
      baz=241,SNR=9.8
IRM                                      S        S        01 05 36.0  +4.0
      baz=241
SHOC  Shoshone, Teco   88.56  50         P        P        00 54 44.4  -1.4
      baz=241
TUQ   Turquoise Moun   88.58  51         P        P        00 54 44.7  -1.5
      baz=241,SNR=7.5
I04A  Tendick Farm,    88.61  41         P        P        00 54 44.7  -1.2
      baz=237,SNR=9.1
I04A                                     S        S        01 05 34.7  +2.5
      baz=237
RC01  Rabbit Creek A   88.62  17         IAmb     IAmb     00 54 47.0
      comp=Z,27nm,1.0s
RC01                                     IAMs_20  IAMs_20  01 26 53.0
      comp=Z,2µm,22.0s
RC01  Rabbit Creek A   88.62  17         P        P        00 54 43.7  -1.8
      baz=214,SNR=7.8
RC01                                     S        S        01 05 33.7  +2.2
      baz=214
TTA   Tatalina         88.67  14         P        P        00 54 43.7  -2.1
      baz=208
TTA                                      S        S        01 05 34.8  +2.8
      baz=208
L20K  Farewell, AK     88.75  15         P        P        00 54 44.6  -1.6
      baz=210,SNR=21
L20K                                     S        S        01 05 36.6  +3.8
      baz=210
BLYC  Blythe           88.80  53         P        P        00 54 47.9  +0.9
BLYC                                     IAmb     IAmb     00 54 50.1
      comp=Z,39nm,1.6s
H04D  Lebanon          88.82  40         P        P        00 54 46.9  +0.1
H04D                                     IAmb     IAmb     00 54 49.2
      comp=Z,35nm,1.1s
H04D                                     IAMs_20  IAMs_20  01 25 34.3
      comp=Z,2µm,22.0s
H04D  Lebanon          88.82  40         P        P        00 54 45.4  -1.4
      baz=236
H04D                                     S        S        01 05 36.8  +2.8
      baz=236
KVN   Kaiserville      88.86  47         IAmb     IAmb     00 54 50.2
      comp=Z,40nm,1.4s
G03D  McMinnville, O   88.89  39         P        P        00 54 47.9  +0.8
G03D                                     IAmb     IAmb     00 54 50.2
      comp=Z,27nm,1.1s
G03D  McMinnville, O   88.89  39         P        P        00 54 45.8  -1.3
      baz=236
G03D                                     S        S        01 05 37.2  +2.5
      baz=236
113A  Mohawk Valley,   88.90  54         P        P        00 54 48.1  +0.6
113A                                     IAmb     IAmb     00 54 50.5
      comp=Z,26nm,1.4s
MOD   Modoc Plateau    88.90  43         P        P        00 54 47.7  +0.2
MOD                                      IAmb     IAmb     00 54 50.3
      comp=Z,35nm,1.2s
MOD                                      IAMs_20  IAMs_20  01 27 53.6
      comp=Z,2µm,20.0s
K05A  Summer Lake      88.97  42         IAmb     IAmb     00 54 50.4
      comp=Z,37nm,1.1s
DIB   Dawson Inlet,    88.97  29         P        P        00 54 47.7  +0.4
DIB                                      IAmb     IAmb     00 54 56.3
      comp=Z,42nm,1.1s
TPH   Tonopah          88.97  48         P        P        00 54 48.2  +0.3
TPH   Tonopah          88.97  48         P        P        00 54 48.2  +0.3
TPH                                      pmax     pmax
      comp=Z,212nm,1.3s
J05D  Fort Rock, OR    89.05  42         P        P        00 54 47.7  -0.4
      baz=237,SNR=18
J05D                                     S        S        01 05 40.1  +3.5
      baz=237
TNA   Tin City         89.06   8         P        P        00 54 46.9  -0.5
      baz=198
TNA                                      S        S        01 05 38.8  +3.5
      baz=198
TPNV  Topopah Spring   89.09  49         IAMs_20  IAMs_20  01 26 39.3
      comp=Z,2µm,21.0s
TPNV  Topopah Spring   89.09  49         P        P        00 54 48.2  -0.3
      baz=241,SNR=17
TPNV                                     S        S        01 05 40.5  +3.2
      baz=241
GLI   Glacier Island   89.19  18         IAmb     IAmb     00 54 49.4
      comp=Z,36nm,1.1s
GLI                                      IAMs_20  IAMs_20  01 26 38.2
      comp=Z,2µm,21.0s
GLI   Glacier Island   89.19  18         P        P        00 54 46.3  -1.9
      baz=216,SNR=9.5
GLI                                      S        S        01 05 40.9  +4.0
      baz=216
PMR   Palmer           89.20  17         IAmb     IAmb     00 54 49.6
      comp=Z,35nm,1.3s
PMR   Palmer           89.20  17         P        P        00 54 46.3  -1.8
      baz=215,SNR=7.2
PMR                                      S        S        01 05 42.6  +5.7
      baz=215
NEE2  Needles Airpor   89.20  52         P        P        00 54 46.5  -2.3
      baz=242
NEE2                                     S        S        01 05 43.0  +4.9
      baz=242
H04A  Detroit Lake     89.24  40         IAmb     IAmb     00 54 51.3
      comp=Z,30nm,1.2s
214A  Organ Pipe Nat   89.24  55         P        P        00 54 48.8  -0.4
214A  Organ Pipe Nat   89.24  55         P        P        00 54 46.0  -3.2
      baz=243
KNK   Knik Glacier     89.24  17         P        P        00 54 46.3  -2.2
      baz=215
FID   Port Fidalgo     89.27  19         IAMs_20  IAMs_20  01 26 34.8
      comp=Z,2µm,22.0s
EYAK  Cordova Ski Ar   89.33  19         P        P        00 54 47.1  -1.6
      baz=218,SNR=5.5
EYAK                                     S        S        01 05 41.8  +3.7
      baz=218
PDMCI Parker Dam,Lak   89.33  52         P        P        00 54 46.7  -2.8
      baz=242,SNR=13
HSIG                   89.36  58         P        P        00 54 49.4  -0.4
HSIG                                     IAmb     IAmb     00 54 52.7
      comp=Z,36nm,1.3s
GHO   Glory Hole Cre   89.41  17         P        P        00 54 48.7  -0.6
GHO                                      IAmb     IAmb     00 54 56.0
      comp=Z,33nm,1.1s
GHO                                      IAMs_20  IAMs_20  01 27 19.8
      comp=Z,2µm,22.0s
E03A  Lebam            89.47  38         P        P        00 54 49.8   0.0
K20K  Telida           89.47  14         IAMs_20  IAMs_20  01 29 16.3
      comp=Z,1µm,20.0s
K20K  Telida           89.47  14         P        P        00 54 47.4  -2.0
      baz=210,SNR=6.4
K20K                                     S        S        01 05 43.8  +4.4
      baz=210
PINE  Pine Mountain    89.51  41         P        P        00 54 50.5  +0.2
PINE                                     IAmb     IAmb     00 54 52.9
      comp=Z,36nm,1.1s
PPLA  Purkeypile       89.52  15         P        P        00 54 47.4  -2.4
      baz=212
F04D  Rainier, OR      89.53  39         P        P        00 54 47.7  -2.4
      baz=236
I05D  Terrebonne, OR   89.56  41         P        P        00 54 49.8  -0.5
      baz=237,SNR=12
I05D                                     S        S        01 05 45.8  +4.7
      baz=237
SUCK  Suckling Hills   89.56  20         IAMs_20  IAMs_20  01 25 51.0
      comp=Z,2µm,22.0s
CUT   Chulitna         89.58  16         IAMs_20  IAMs_20  01 28 20.3
      comp=Z,2µm,20.0s
SML   Sawmill          89.60  17         P        P        00 54 49.7  -0.4
SML                                      IAmb     IAmb     00 55 11.8
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	comp=Z,19nm,1.0s						
SML	**Sawmill**	**89.60**	**17**	P	**P**	**00 54 48.4**	**-1.7**
	baz=215						
SML				S	**S**	**01 05 43.3**	**+2.6**
	baz=215						
HMT	**Hamilton**	**89.61**	**20**	IAMs_20	IAMs_20	01 30 53.4	
	comp=Z,1µm,20.0s						
SHPR	**Sheep Range**	**89.64**	**50**	P	**P**	**00 54 51.5**	**+0.4**
SHPR				IAmb	IAmb	00 54 54.3	
	comp=Z,25nm,1.3s						
BGLC	**Bering Glacier**	**89.75**	**20**	P	**P**	**00 54 49.3**	**-1.4**
	baz=220						
NLWA	**Neilton Lookou**	**89.77**	**37**	P	**P**	**00 54 52.0**	**+0.8**
NLWA				IAmb	IAmb	00 55 00.3	
	comp=Z,22nm,1.1s						
S11A	**Rachel**	**89.78**	**49**	P	**P**	**00 54 52.2**	**+0.5**
S11A				IAmb	IAmb	00 54 54.5	
	comp=Z,34nm,1.2s						
DIV	**Divide**	**89.78**	**19**	IAmb	IAmb	00 54 58.3	
	comp=Z,29nm,1.2s						
F04A	**Amboy**	**89.79**	**39**	IAmb	IAmb	00 54 55.8	
	comp=Z,26nm,1.0s						
W13A	**Hualapai Mount**	**89.89**	**52**	P	**P**	**00 54 52.5**	**+0.1**
SCM	**Sheep Creek Mo**	**89.90**	**18**	IAmb	IAmb	00 54 52.5	
	comp=Z,34nm,1.1s						
SCM	**Sheep Creek Mo**	**89.90**	**18**	P	**P**	**00 54 49.7**	**-1.9**
	baz=216						
SCM				S	**S**	**01 05 47.8**	**+4.2**
	baz=216						
HOOD	**Mount Hood Mea**	**89.90**	**40**	P	**P**	**00 54 52.1**	**+0.1**
HOOD				IAmb	IAmb	00 54 53.9	
	comp=Z,26nm,1.0s						
SNH	**Sunshine Point**	**89.94**	**20**	IAMs_20	IAMs_20	01 26 15.2	
	comp=Z,2µm,22.0s						
CAST	**Castle Rocks**	**89.99**	**15**	P	**P**	**00 54 49.3**	**-2.6**
	baz=212						
Y14A	**Wickenburg**	**90.00**	**53**	P	**P**	**00 54 52.8**	**+0.1**
BMRM	**Bremner River**	**90.00**	**19**	P	**P**	**00 54 50.7**	**-1.3**
BMRM				IAmb	IAmb	00 57 36.1	
	comp=Z,19nm,0.8s						
BMRM	**Bremner River**	**90.00**	**19**	P	**P**	**00 54 50.1**	**-1.9**
	baz=218,SNR=6.9						
BMRM				S	**S**	**01 05 46.9**	**+2.3**
	baz=218						
KLU	**Klutina**	**90.03**	**18**	IAmb	IAmb	00 54 53.9	
	comp=Z,35nm,1.4s						
KLU				IAMs_20	IAMs_20	01 27 01.2	
	comp=Z,2µm,22.0s						
KLU	**Klutina**	**90.03**	**18**	P	**P**	**00 54 49.5**	**-2.7**
	baz=217						
E04D	**Cinebar**	**90.04**	**38**	P	**P**	**00 54 52.5**	**0.0**
E04D				IAmb	IAmb	00 54 55.0	
	comp=Z,28nm,1.1s						
E04D	**Cinebar**	**90.04**	**38**	P	**P**	**00 54 49.7**	**-2.8**
	baz=236						
E04D				S	**S**	**01 05 50.6**	**+5.2**
	baz=236						
G05D	**Wamic, OR**	**90.06**	**40**	P	**P**	**00 54 50.1**	**-2.5**
	baz=237						
GCSA	**Galena City Sc**	**90.10**	**12**	P	**P**	**00 54 50.3**	**-1.9**
	baz=208						
GCSA				S	**S**	**01 05 50.3**	**+5.3**
	baz=208						
COYC	**Coyhaique**	**90.11**	**140**	P	**P**	**00 54 53.0**	**0.0**
COYC				IAmb	IAmb	00 54 55.7	
	comp=Z,44nm,1.2s						
PRN	**Pahroc Range**	**90.15**	**49**	IAmb	IAmb	00 54 56.8	
	comp=Z,48nm,1.3s						
J20K	**Nowinta River**	**90.17**	**14**	P	**P**	**00 54 52.9**	**+0.3**
J20K				IAMs_20	IAMs_20	01 30 29.9	
	comp=Z,2µm,20.0s						
J20K	**Nowinta River**	**90.17**	**14**	P	**P**	**00 54 50.3**	**-2.3**
	baz=210						
J20K				S	**S**	**01 05 49.8**	**+4.1**
	baz=210						
CRAG	**Craig**	**90.19**	**27**	P	**P**	**00 54 50.5**	**-2.4**
	baz=228						
CRAG				S	**S**	**01 05 50.5**	**+4.2**
	baz=228						
R11A	**Troy Canyon, C**	**90.23**	**48**	P	**P**	**00 54 50.1**	**-3.8**
	baz=241,SNR=14						
R11A				S	**S**	**01 05 52.0**	**+4.1**
	baz=241						
MESA	**MESA**	**90.23**	**21**	IAMs_20	IAMs_20	01 26 11.8	
	comp=Z,2µm,22.0s						
MESA	**MESA**	**90.23**	**21**	P	**P**	**00 54 51.9**	**-1.4**
	baz=221						
WVOR	**Wild Horse Val**	**90.23**	**43**	IAMs_20	IAMs_20	01 28 48.0	
	comp=Z,2µm,20.0s						
D04E	**Lakebay**	**90.27**	**38**	P	**P**	**00 54 51.1**	**-2.4**
	baz=236						
D04E				S	**S**	**01 05 52.2**	**+4.8**
	baz=236						
D03D	**Eldon**	**90.29**	**37**	P	**P**	**00 54 52.0**	**-1.6**
	baz=236,SNR=9.6						
D03D				S	**S**	**01 05 50.9**	**+3.3**
	baz=236						
F05D	**White Salmon**	**90.32**	**39**	P	**P**	**00 54 53.8**	**-0.1**
F05D	**White Salmon**	**90.32**	**39**	P	**P**	**00 54 51.7**	**-2.1**
	baz=237						
CHUM	**Lake Minchumin**	**90.33**	**15**	P	**P**	**00 54 49.6**	**-3.8**
	baz=212						
SIT	**Sitka**	**90.36**	**25**	P	**P**	**00 54 50.4**	**-3.2**
	baz=226						
BBB	**Bella Bella**	**90.37**	**32**	LR	LR	01 28 30.3	
	comp=Z,1µm,20.1s,baz=240,slow=31						
WAT1	**Susitna Watana**	**90.38**	**17**	P	**P**	**00 54 50.3**	**-3.4**
	baz=215						
KTH	**Kantishna Hill**	**90.38**	**15**	IAMs_20	IAMs_20	01 29 54.3	
	comp=Z,2µm,20.0s						
AY01	**Puyuhuapi**	**90.39**	**139**	P	**P**	**00 54 54.5**	**+0.1**
WAT6	**Susitna Watana**	**90.39**	**17**	P	**P**	**00 54 49.9**	**-4.1**
	baz=216,SNR=8.3						
WAT6				S	**S**	**01 05 50.3**	**+2.0**
	baz=216						
ISLE	**Juniper Island**	**90.43**	**20**	IAmb	IAmb	00 57 02.6	
	comp=Z,22nm,1.1s						
ISLE				IAMs_20	IAMs_20	01 26 31.0	
	comp=Z,2µm,22.0s						
CLRS	**Cowichan Lake**	**90.44**	**36**	IAmb	IAmb	00 54 56.4	
	comp=Z,19nm,1.0s						
YAH	**Yahtse**	**90.44**	**21**	IAMs_20	IAMs_20	01 26 19.2	
	comp=Z,2µm,22.0s						
M24K	**Tolsona, Glenn**	**90.44**	**18**	IAmb	IAmb	00 54 56.3	
	comp=Z,47nm,1.2s						
M24K	**Tolsona, Glenn**	**90.44**	**18**	P	**P**	**00 54 53.1**	**-1.0**
	baz=217						
M24K				S	**S**	**01 05 51.1**	**+2.5**
	baz=217						
TRF	**Thorofare Moun**	**90.45**	**16**	IAmb	IAmb	00 54 56.6	
	comp=Z,21nm,1.0s						
TRF				IAMs_20	IAMs_20	01 29 58.2	
	comp=Z,1µm,20.0s						
TRF	**Thorofare Moun**	**90.45**	**16**	P	**P**	**00 54 51.6**	**-2.6**
	baz=214,SNR=20						
BILL	**Bilibino**	**90.47**	**357**	P	**P**	**00 54 53.1**	**-0.9**
BILL				IAmb	IAmb	00 54 56.9	
	comp=Z,21nm,1.0s						
BILL	**Bilibino**	**90.47**	**357**	*d i*P	**P**	**00 54 54.7**	**+0.7**
BILL				*i* *SP	**pwP**	**00 54 59.3**	**-2.8**
BILL				*i*		00 55 02.9	
BILL				*i*		00 58 32.9	
BILL				*i* PPP	PPP	01 00 32.7	
BILL				*i* S	**SKSac**	**01 05 26.1**	**+1.3**
BILL				*i*		01 05 49.0	
BILL				*e*SS	**SS**	**01 11 47.5**	**-2.3**
BILL				*e*SSS	SSS	01 15 32.4	
BILL				pmax	pmax		
	comp=Z,25nm,1.1s						
CBB	**Campbell River**	**90.48**	**35**	P	**P**	**00 54 54.5**	**0.0**
CBB				IAmb	IAmb	00 54 56.8	
	comp=Z,28nm,1.0s						
N25K	**Chitina, Valde**	**90.51**	**19**	IAmb	IAmb	00 55 02.5	
	comp=Z,21nm,0.9s						
N25K				IAMs_20	IAMs_20	01 27 15.0	
	comp=Z,1µm,21.0s						
N25K	**Chitina, Valde**	**90.51**	**19**	P	**P**	**00 54 53.2**	**-1.3**
	baz=218,SNR=15						
N25K				S	**S**	**01 05 50.9**	**+1.6**
	baz=218						
I07A	**Izee**	**90.54**	**42**	P	**P**	**00 54 54.8**	**-0.2**
I07A				IAmb	IAmb	00 54 57.4	
	comp=Z,24nm,1.0s						
GLB	**Gilahina Butte**	**90.61**	**19**	IAmb	IAmb	00 55 03.6	
	comp=Z,17nm,1.0s						
TABL	**Table Mountain**	**90.69**	**21**	IAMs_20	IAMs_20	01 26 39.1	
	comp=Z,2µm,22.0s						
PNL	**Peninsula**	**90.71**	**22**	P	**P**	**00 54 54.0**	**-1.4**
	baz=223						
GRNC	**Granite Creek**	**90.71**	**20**	IAmb	IAmb	00 57 00.0	
	comp=Z,18nm,0.8s						
GRNC				IAMs_20	IAMs_20	01 26 28.5	
	comp=Z,2µm,22.0s						
D05A	**Enumclaw**	**90.72**	**38**	P	**P**	**00 54 56.4**	**+0.7**
PINM	**Pinnacle**	**90.73**	**21**	P	**P**	**00 54 53.2**	**-2.3**
	baz=222						
RND	**Reindeer**	**90.78**	**16**	IAmb	IAmb	00 54 56.9	
	comp=Z,33nm,1.2s						
J08A	**Circle Bar Ran**	**90.81**	**43**	IAmb	IAmb	00 54 58.5	
	comp=Z,28nm,1.1s						
MCARA	**McCarthy VSAT**	**90.81**	**20**	IAmb	IAmb	00 55 04.0	
	comp=Z,24nm,1.0s						
MCARA	**McCarthy VSAT**	**90.81**	**20**	P	**P**	**00 54 54.3**	**-1.4**
	baz=220,SNR=6.7						
BPAW	**Bear Paw Mtn.**	**90.82**	**15**	IAMs_20	IAMs_20	01 30 08.1	
	comp=Z,1µm,20.0s						
BPAW	**Bear Paw Mtn.**	**90.82**	**15**	P	**P**	**00 54 53.0**	**-2.7**
	baz=213						
BCPM	**Bancas Point**	**90.84**	**22**	IAMs_20	IAMs_20	01 26 29.9	
	comp=Z,2µm,22.0s						
DHY	**Denali Highway**	**90.89**	**17**	IAmb	IAmb	00 55 00.1	
	comp=Z,44nm,1.6s						
DHY				IAMs_20	IAMs_20	01 27 52.0	
	comp=Z,2µm,22.0s						
DHY	**Denali Highway**	**90.89**	**17**	P	**P**	**00 54 54.7**	**-1.6**
	baz=216,SNR=11						
DHY				S	**S**	**01 05 55.1**	**+2.3**
	baz=216						
TUC	**Tucson**	**90.94**	**55**	P	**P**	**00 54 56.9**	**-0.2**
TUC				IAmb	IAmb	00 55 01.1	
	comp=Z,20nm,1.2s						
TUC	**Tucson**	**90.94**	**55**	IAMs_20	IAMs_20	01 26 35.8	
	comp=Z,2µm,21.0s						
TUC	**Tucson**	**90.94**	**55**	P	**P**	**00 54 56.9**	**-0.2**
TUC				pmax	pmax		
	comp=Z,20nm,1.2s						
TUC	**Tucson**	**90.94**	**55**	P	**P**	**00 54 54.1**	**-3.0**
	baz=244						
HARP	**HAARP**	**90.97**	**18**	P	**P**	**00 54 54.0**	**-2.4**
	baz=218						
BARN	**Barnard Glacie**	**90.99**	**20**	IAmb	IAmb	00 55 00.4	
	comp=Z,25nm,1.1s						
BARN				IAMs_20	IAMs_20	01 26 34.9	
	comp=Z,1µm,22.0s						
MCK	**McKinley**	**91.02**	**16**	IAmb	IAmb	00 55 03.3	
	comp=Z,19nm,1.0s						
MCK	**McKinley**	**91.02**	**16**	P	**P**	**00 54 54.4**	**-2.3**
	baz=215						
CTG	**Chitna Glacier**	**91.02**	**20**	P	**P**	**00 54 54.6**	**-2.3**
	baz=221						
CTGM	**Chitina Glacie**	**91.03**	**20**	IAmb	IAmb	00 57 03.3	
	comp=Z,13nm,0.6s						
CTGM				IAMs_20	IAMs_20	01 26 37.8	
	comp=Z,2µm,22.0s						
LOGN	**Logan Glacier**	**91.03**	**21**	IAmb	IAmb	00 56 57.9	
	comp=Z,17nm,0.6s						
LOGN				IAMs_20	IAMs_20	01 26 37.9	
	comp=Z,2µm,22.0s						
YAK	**Yakutsk**	**91.12**	**341**	LR	LR	01 35 31.4	
	comp=Z,1µm,18.3s,baz=101,slow=35						
YAK	**Yakutsk**	**91.12**	**341**	IAMs_20	IAMs_20	01 35 20.5	
	comp=Z,1µm,19.0s						
YAK	**Yakutsk**	**91.12**	**341**	*e*P	**P**	**00 54 57.0**	**-0.1**
YAK				pmax	pmax		
	comp=Z,27nm,1.0s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				MLR	MLR		
	comp=Z,2µm,23.0s						
YAK				MLR	MLR		
	comp=N,895nm,23.0s						
YAK				MLR	MLR		
	comp=E,671nm,23.0s						
WRAK	**Wrangell Islan**	**91.15**	**27**	IAMs_20	IAMs_20	01 26 46.6	
	comp=Z,2µm,22.0s						
WRAK	**Wrangell Islan**	**91.15**	**27**	P	**P**	**00 54 55.2**	**-2.1**
	baz=229						
A04D	**Lummi Island**	**91.16**	**37**	P	**P**	**00 54 55.4**	**-2.2**
	baz=236						
F07A	**Phinny Hill Vi**	**91.23**	**40**	P	**P**	**00 54 58.5**	**+0.4**
LCMT	**Little Creek M**	**91.24**	**50**	P	**P**	**00 54 59.0**	**+0.5**
LCMT				IAmb	IAmb	00 55 02.2	
	comp=Z,21nm,1.1s						
B05A	**Bryant**	**91.25**	**37**	P	**P**	**00 54 55.8**	**-2.3**
	baz=237,SNR=8.1						
B05A				S	**S**	**01 05 59.6**	**+3.2**
	baz=237						
BWN	**Browne**	**91.25**	**15**	IAMs_20	IAMs_20	01 30 04.6	
	comp=Z,2µm,20.0s						
PAX	**Paxson**	**91.33**	**18**	P	**P**	**00 54 56.0**	**-2.2**
	baz=218,SNR=8.7						
CCUT	**Cedar City**	**91.40**	**50**	P	**P**	**00 54 59.4**	**0.0**
CCUT				IAmb	IAmb	00 55 02.7	
	comp=Z,28nm,1.3s						
G08A	**Pilot Rock**	**91.50**	**41**	IAmb	IAmb	00 55 01.4	
	comp=Z,21nm,1.0s						
I21K	**Tanana**	**91.51**	**14**	P	**P**	**00 54 56.1**	**-2.8**
	baz=212						
PSUT	**Pine Spring**	**91.51**	**49**	P	**P**	**00 55 00.3**	**+0.5**
LL02	**Futaleuf**	**91.55**	**139**	IAmb	IAmb	00 55 02.0	
	comp=Z,17nm,1.0s						
H03S2	**Juan Fernandez**	**91.55**	**128**	T	T	02 36 53.1	
	baz=240						
H03S1	**Juan Fernandez**	**91.56**	**128**	T	T	02 36 57.1	
	baz=240						
H03S3	**Juan Fernandez**	**91.57**	**128**	T	T	02 36 58.7	
	baz=240						
BESE	**Bessie Mountai**	**91.59**	**24**	P	**P**	**00 54 59.3**	**-0.2**
BESE				IAmb	IAmb	00 55 08.0	
	comp=Z,31nm,1.1s						
M26K	**Nabesna, AK**	**91.60**	**19**	IAmb	IAmb	00 55 07.0	
	comp=Z,24nm,1.2s						
M26K				IAMs_20	IAMs_20	01 27 03.9	
	comp=Z,2µm,22.0s						
M26K	**Nabesna, AK**	**91.60**	**19**	P	**P**	**00 54 58.0**	**-1.5**
	baz=220,SNR=10						
M26K				S	**S**	**01 06 01.8**	**+2.6**
	baz=220						
ELK	**Elko**	**91.61**	**46**	LR	LR	01 27 39.1	
	comp=Z,1µm,21.5s,baz=241,slow=30						
ELK	**Elko**	**91.61**	**46**	IAmb	IAmb	00 55 03.0	
	comp=Z,22nm,1.2s						
SZCU	**Shurtz Canyon**	**91.62**	**50**	IAmb	IAmb	00 55 03.6	
	comp=Z,26nm,1.2s						
E07A	**Sunnyside**	**91.62**	**40**	P	**P**	**00 55 00.2**	**+0.3**
E07A				IAmb	IAmb	00 55 02.0	
	comp=Z,18nm,0.8s						
ULN	**Ulaanbaatar**	**91.64**	**322**	P	**P**	**00 54 58.7**	**-1.4**
ULN	**Ulaanbaatar**	**91.64**	**322**	⇓*e*P	**P**	**00 54 59.1**	**-1.0**
ULN				pmax	pmax		
	comp=Z,17nm,1.6s						
U15A	**North Rim**	**91.65**	**51**	IAmb	IAmb	00 55 04.6	
	comp=Z,36nm,1.1s						
319A	**Douglas**	**91.68**	**57**	P	**P**	**00 55 01.0**	**+0.3**
319A				IAmb	IAmb	00 55 04.0	
	comp=Z,32nm,1.3s						
NEA2	**Nenana**	**91.70**	**15**	IAmb	IAmb	00 55 06.3	
	comp=Z,20nm,1.4s						
NEA2	**Nenana**	**91.70**	**15**	P	**P**	**00 54 58.0**	**-1.8**
	baz=215,SNR=6.3						
HAWA	**Hanford**	**91.73**	**40**	P	**P**	**00 55 00.1**	**-0.3**
HAWA				IAmb	IAmb	00 55 02.5	
	comp=Z,19nm,0.9s						
H21K	**Melozitna Rive**	**91.74**	**13**	IAMs_20	IAMs_20	01 30 48.4	
	comp=Z,2µm,20.0s						
H21K	**Melozitna Rive**	**91.74**	**13**	P	**P**	**00 54 57.8**	**-2.2**
	baz=211,SNR=7.7						
H21K				S	**S**	**01 06 03.8**	**+3.6**
	baz=211						
MENT	**Mentasta**	**91.80**	**18**	IAmb	IAmb	00 55 07.9	
	comp=Z,15nm,1.0s						
WRH	**Wood River Hil**	**91.84**	**16**	IAmb	IAmb	00 55 07.9	
	comp=Z,22nm,1.1s						
M27K	**Edge Creek, AK**	**91.91**	**19**	IAmb	IAmb	00 55 08.8	
	comp=Z,31nm,1.2s						
M27K	**Edge Creek, AK**	**91.91**	**19**	P	**P**	**00 54 59.4**	**-1.6**
	baz=221,SNR=18						
M27K				S	**S**	**01 06 05.1**	**+3.0**
	baz=221						
K24K	**Donnelly Dome**	**91.91**	**17**	P	**P**	**00 54 59.2**	**-1.7**
	baz=218,SNR=11						
WUAZ	**Wupatki**	**91.91**	**52**	P	**P**	**00 55 02.5**	**+0.8**
WUAZ				IAmb	IAmb	00 55 05.4	
	comp=Z,28nm,1.2s						
WUAZ				IAMs_20	IAMs_20	01 26 57.3	
	comp=Z,2µm,21.0s						
WUAZ	**Wupatki**	**91.91**	**52**	P	**P**	**00 54 58.2**	**-3.5**
	baz=244						
YUK3	**Moose Creek**	**91.91**	**20**	P	**P**	**00 54 58.7**	**-2.4**
	baz=222,SNR=20						
YUK3				S	**S**	**01 06 04.0**	**+1.7**
	baz=222						
GTA	**Gaotai**	**91.96**	**312**	*e*P	**P**	**00 55 03.5**	**+1.7**
GTA				pP	pwP	00 55 08.5	-1.8
GTA				sP	sP	00 55 13.5	+8.2
GTA				SKS	**SKSac**	**01 05 30.8**	**-4.1**
GTA				SS	**SS**	**01 12 08.0**	**-4.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,230nm,10.0s						
GTA				LR	LR		
	comp=Z,390nm,19.1s						
GTA				LR	LR		
	comp=Z,440nm,22.7s						
GTA				LR	LR		
	comp=Z,800nm,22.7s						
L26K	**Log Cabin Wild**	**91.98**	**18**	IAMs_20	IAMs_20	01 28 14.9	
	comp=Z,2µm,22.0s						
YUK6	**Outpost Mounta**	**91.99**	**22**	P	**P**	**00 54 58.9**	**-2.7**
	baz=224						
SONM	**Songino Array**	**92.00**	**322**	P	**P**	**00 55 00.7**	**-1.0**
	comp=Z,5.3nm,1.1s,baz=138,slow=4.1,SNR=17						
SONM				LR	LR	01 35 02.6	
	comp=Z,430nm,20.9s,baz=124,slow=35						
	comp=Z,5.3nm,1.1s						
SKAG	**Skagway**	**92.02**	**24**	P	**P**	**00 55 01.2**	**-0.1**
SKAG				IAmb	IAmb	00 55 09.9	
	comp=Z,29nm,1.3s						
SKAG	**Skagway**	**92.02**	**24**	P	**P**	**00 54 59.2**	**-2.1**
	baz=226						
SKAG				S	**S**	**01 06 07.9**	**+5.0**
	baz=226						
E08A	**Dider Farm, El**	**92.06**	**40**	P	**P**	**00 55 02.2**	**+0.3**
E08A				IAmb	IAmb	00 55 03.8	
	comp=Z,17nm,1.0s						
CCB	**Clear Creek Bu**	**92.06**	**16**	IAmb	IAmb	00 55 02.2	
	comp=Z,24nm,1.3s						
HDA	**Harding Lake**	**92.08**	**16**	IAmb	IAmb	00 55 02.9	
	comp=Z,44nm,1.3s						
HDA				IAMs_20	IAMs_20	01 29 16.5	
	comp=Z,2µm,21.0s						
HDA	**Harding Lake**	**92.08**	**16**	P	**P**	**00 54 60.0**	**-1.6**
	baz=216,SNR=30						
RDOG	**Red Dog Mine**	**92.08**	**9**	P	**P**	**00 55 00.3**	**-1.2**
RDOG				IAmb	IAmb	00 55 02.6	
	comp=Z,15nm,1.0s						
RDOG				IAMs_20	IAMs_20	01 30 52.4	
	comp=Z,2µm,21.0s						
RDOG	**Red Dog Mine**	**92.08**	**9**	P	**P**	**00 54 58.9**	**-2.6**
	baz=202						
I23K	**Minto, Yukon-K**	**92.09**	**15**	IAMs_20	IAMs_20	01 42 03.5	
	comp=Z,1µm,18.0s						
I23K	**Minto, Yukon-K**	**92.09**	**15**	P	**P**	**00 54 58.7**	**-2.8**
	baz=214						
PKCU	**Pink Cliffs**	**92.10**	**50**	P	**P**	**00 55 03.0**	**+0.3**
YUK4	**Talbot Arm**	**92.19**	**21**	P	**P**	**00 55 00.3**	**-2.0**
	baz=224						
HYT	**Haines Junctio**	**92.20**	**22**	P	**P**	**00 54 59.6**	**-2.8**
	baz=225						
MDM	**Murphy Dome**	**92.21**	**15**	IAmb	IAmb	00 55 08.7	
	comp=Z,30nm,1.2s						
MDM				IAMs_20	IAMs_20	01 30 41.7	
	comp=Z,2µm,20.0s						
TCOL	**CIGO, UAF Yank**	**92.23**	**16**	IAmb	IAmb	00 55 08.8	
	comp=Z,23nm,0.9s						
TCOL	**CIGO, UAF Yank**	**92.23**	**16**	P	**P**	**00 54 59.2**	**-3.0**
	baz=216						
COLA	**College**	**92.23**	**16**	P	**P**	**00 55 00.8**	**-1.4**
COLA	**College**	**92.23**	**16**	IAMs_20	IAMs_20	01 30 43.3	
	comp=Z,2µm,20.0s						
COLA	**College**	**92.23**	**16**	*c i*P	**P**	**00 55 00.4**	**-1.8**
COLA				pmax	pmax		
	comp=Z,25nm,1.2s						
COLA	**College**	**92.23**	**16**	P	**P**	**00 54 59.8**	**-2.4**
	baz=216						
DOT	**Dot Lake**	**92.26**	**18**	IAmb	IAmb	00 55 09.7	
	comp=Z,28nm,1.2s						
BVCY	**Beaver Creek**	**92.26**	**20**	P	**P**	**00 54 59.7**	**-2.8**
	baz=222						
BMO	**Blue Mountains**	**92.29**	**42**	IAMs_20	IAMs_20	01 32 59.2	
	comp=Z,1µm,19.0s						
IL31		**92.39**	**16**	IAmb	IAmb	00 55 03.9	
	comp=Z,18nm,1.1s						
ILAR	**Eielson Array**	**92.39**	**16**	P	**P**	**00 55 01.4**	**-1.5**
	comp=Z,6.3nm,0.9s,baz=235,slow=5.8,SNR=48						
ILAR				PP	**PP**	**00 58 42.8**	**-1.5**
	comp=Z,3.2nm,1.1s,baz=220,slow=6.1,SNR=4.6						
ILAR				PKKPbc	**PKKPdf**	**01 12 15.5**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=339,slow=2.3,SNR=2.4						
ILAR				LR	LR	01 30 48.6	
	comp=Z,2µm,20.3s,baz=209,slow=32						
	comp=Z,6.3nm,0.9s						
D08A	**Wollman Farm,**	**92.43**	**39**	P	**P**	**00 55 04.0**	**+0.5**
D08A				IAmb	IAmb	00 55 05.5	
	comp=Z,17nm,1.0s						
LL04	**Puerto Octay**	**92.44**	**136**	P	**P**	**00 55 03.7**	**-0.3**
LL04				IAmb	IAmb	00 55 05.9	
	comp=Z,22nm,1.2s						
L27K	**Beaver Creek,**	**92.46**	**19**	IAMs_20	IAMs_20	01 27 41.5	
	comp=Z,2µm,22.0s						
L27K	**Beaver Creek,**	**92.46**	**19**	P	**P**	**00 55 01.6**	**-1.8**
	baz=221,SNR=7.0						
L27K				S	**S**	**01 06 08.2**	**+1.4**
	baz=221						
MTPU	**Mount Pierson**	**92.46**	**50**	P	**P**	**00 55 05.1**	**+0.7**
MFID	**Camas Ranch**	**92.51**	**44**	P	**P**	**00 55 03.8**	**-0.5**
TCRU	**Three Creeks R**	**92.53**	**49**	P	**P**	**00 55 05.1**	**+0.5**
X18A	**Snowflake**	**92.53**	**54**	P	**P**	**00 55 04.5**	**-0.1**
X18A				IAmb	IAmb	00 55 07.5	
	comp=Z,22nm,1.5s						
POKR	**Poker Plat Res**	**92.53**	**16**	IAMs_20	IAMs_20	01 31 03.3	
	comp=Z,2µm,21.0s						
POKR	**Poker Plat Res**	**92.53**	**16**	P	**P**	**00 55 00.4**	**-3.2**
	baz=216						
POKR				S	**S**	**01 06 08.8**	**+1.5**
	baz=216						
H23K	**Yukon River**	**92.61**	**15**	IAMs_20	IAMs_20	01 30 03.2	
	comp=Z,1µm,22.0s						
H23K	**Yukon River**	**92.61**	**15**	P	**P**	**00 55 02.0**	**-2.0**
	baz=214						
S34M	**Telegraph Cree**	**92.62**	**26**	P	**P**	**00 55 02.4**	**-1.7**
	baz=230						
J25K	**Salcha River,**	**92.66**	**17**	P	**P**	**00 55 02.8**	**-1.5**
J25K				IAmb	IAmb	00 55 05.8	
	comp=Z,13nm,0.9s						
J25K				IAMs_20	IAMs_20	01 28 57.7	
	comp=Z,2µm,22.0s						
J25K	**Salcha River,**	**92.66**	**17**	P	**P**	**00 55 02.5**	**-1.8**
	baz=218,SNR=14						
J25K				S	**S**	**01 06 08.6**	**0.0**
	baz=218						
MSU	**Marysvale**	**92.67**	**49**	P	**P**	**00 55 05.9**	**+0.7**
MSU	**Marysvale**	**92.67**	**49**	P	**P**	**00 55 05.9**	**+0.7**
N30M	**Aishikik Lake**	**92.79**	**22**	P	**P**	**00 55 02.9**	**-2.1**
	baz=225						
N30M				S	**S**	**01 06 16.1**	**+6.3**
	baz=225						
DUG	**Dugway, Tooele**	**92.99**	**48**	P	**P**	**00 55 07.1**	**+0.6**
DUG				IAMs_20	IAMs_20	01 31 03.5	
	comp=Z,1µm,20.0s						
DUG	**Dugway, Tooele**	**92.99**	**48**	P	**P**	**00 55 07.1**	**+0.6**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DUG	**Dugway, Tooele**	**92.99**	**48**	P	**P**	**00 55 03.4**	**-3.2**
	baz=243,SNR=5.5						
DUG				S	**S**	**01 06 16.4**	**+3.7**
	baz=243						
WHY	**Whitehorse**	**93.01**	**23**	P	**P**	**00 55 04.0**	**-2.1**
	baz=227,SNR=5.4						
H24K	**Noodor Dome**	**93.01**	**15**	P	**P**	**00 55 03.1**	**-2.8**
	baz=216						
J26L	**Joseph Creek**	**93.06**	**17**	P	**P**	**00 55 04.6**	**-1.6**
	baz=220,SNR=40						
J26L				S	**S**	**01 06 14.9**	**+2.7**
	baz=220						
K27K	**Chicken**	**93.12**	**18**	IAmb	IAmb	00 55 09.6	
	comp=Z,25nm,1.2s						
K27K				IAMs_20	IAMs_20	01 28 49.9	
	comp=Z,2µm,22.0s						

K27K	**Chicken**	**93.12**	**18**	P	**P**	**00 55 03.8**	**-2.6**
	baz=221,SNR=14						
K27K				S	**S**	**01 06 17.3**	**+4.8**
	baz=221						
BGU	**Big Grassy Mou**	**93.18**	**47**	P	**P**	**00 55 06.6**	**-0.8**
PLID	**Pearl Lake**	**93.21**	**42**	P	**P**	**00 55 07.2**	**-0.3**
PLID				IAMs_20	IAMs_20	01 33 10.7	
	comp=Z,1µm,21.0s						
N31M	**Braeburn, Yuko**	**93.26**	**22**	P	**P**	**00 55 06.5**	**-0.6**
N31M				IAmb	IAmb	00 55 14.2	
	comp=Z,18nm,1.4s						
N31M	**Braeburn, Yuko**	**93.26**	**22**	P	**P**	**00 55 05.6**	**-1.5**
	baz=226						
121A	**Cookes Peak, D**	**93.32**	**56**	P	**P**	**00 55 08.4**	**+0.1**
121A	**Cookes Peak, D**	**93.32**	**56**	P	**P**	**00 55 06.0**	**-2.3**
	baz=245						
NLU	**North Lily Min**	**93.39**	**48**	P	**P**	**00 55 08.1**	**-0.4**
DLBC	**Dease Lake**	**93.41**	**26**	LR	LR	01 31 43.4	
	comp=Z,1µm,19.4s,baz=236,slow=32						
P33M	**Teslin, Yukon**	**93.47**	**24**	P	**P**	**00 55 06.9**	**-1.3**
	baz=229						
P33M				S	**S**	**01 06 15.6**	**-0.3**
	baz=229						
HLID	**Hailey**	**93.49**	**44**	P	**P**	**00 55 08.7**	**-0.1**
HLID	**Hailey**	**93.49**	**44**	P	**P**	**00 55 06.0**	**-2.8**
	baz=242,SNR=8.0						
HLID				S	**S**	**01 06 20.9**	**+3.9**
	baz=242						
EFI	**East Falkland**	**93.61**	**151**	*de*P	**P**	**00 55 09.2**	**+0.1**
EFI				pmax	pmax		
	comp=Z,39nm,1.0s						
COLD	**Coldfoot**	**93.63**	**14**	IAmb	IAmb	00 55 22.8	
	comp=Z,17nm,1.1s						
COLD	**Coldfoot**	**93.63**	**14**	P	**P**	**00 55 05.9**	**-2.8**
	baz=214						
M30M	**Minto, Yukon**	**93.68**	**21**	IAMs_20	IAMs_20	01 28 36.1	
	comp=Z,2µm,22.0s						
M30M	**Minto, Yukon**	**93.68**	**21**	P	**P**	**00 55 05.9**	**-3.1**
	baz=225,SNR=15						
TMUT	**Trail Mountain**	**93.70**	**49**	P	**P**	**00 55 10.2**	**+0.2**
PLCA	**Paso Flores**	**93.71**	**137**	P	**P**	**00 55 09.7**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=230,slow=2.8,SNR=8.2						
PLCA				LR	LR	01 31 20.5	
	comp=Z,397nm,18.3s,baz=244,slow=32						
	comp=Z,4.7nm,0.9s						
PLCA	**Paso Flores**	**93.71**	**137**	P	**P**	**00 55 10.0**	**0.0**
PLCA				IAmb	IAmb	00 55 33.1	
	comp=Z,38nm,1.9s						
PLCA	**Paso Flores**	**93.71**	**137**	P	**P**	**00 55 10.0**	**0.0**
PLCA				pmax	pmax		
	comp=Z,38nm,1.9s						
PLCA	**Paso Flores**	**93.71**	**137**	*e*P	**P**	**00 55 10.2**	**+0.2**
MPU	**Maple Canyon**	**93.72**	**48**	P	**P**	**00 55 09.8**	**-0.2**
HVU	**Hansel Valley**	**93.74**	**46**	P	**P**	**00 55 09.7**	**-0.3**
HVU	**Hansel Valley**	**93.74**	**46**	P	**P**	**00 55 09.7**	**-0.3**
HVU				pmax	pmax		
	comp=Z,12nm,1.1s						
DAWY	**Dawson**	**93.94**	**19**	P	**P**	**00 55 06.8**	**-3.3**
	baz=223,SNR=7.5						
EGAK	**Eagle**	**93.94**	**18**	IAmb	IAmb	00 55 12.7	
	comp=Z,24nm,1.1s						
EGAK				IAMs_20	IAMs_20	01 30 37.8	
	comp=Z,1µm,20.0s						
EGAK	**Eagle**	**93.94**	**18**	P	**P**	**00 55 06.9**	**-3.2**
	baz=222,SNR=15						
NEW	**Newport**	**94.09**	**39**	LR	LR	01 31 45.0	
	comp=Z,656nm,19.4s,baz=246,slow=32						
NEW	**Newport**	**94.09**	**39**	P	**P**	**00 55 11.3**	**0.0**
NEW	**Newport**	**94.09**	**39**	P	**P**	**00 55 11.3**	**0.0**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.6s						
NEW				MLR	MLR		
	comp=Z,900nm,18.0s						
NEW	**Newport**	**94.09**	**39**	S	**S**	**01 06 22.3**	**+0.5**
	baz=240						
GOMU	**GeErMu**	**94.10**	**307**	P	**P**	**00 55 13.8**	**+1.8**
GOMU				pP	sP	00 55 15.4	-0.1
GOMU				sP	pP	00 55 16.3	+2.0
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,64nm,5.2s						
GOMU				LR	LR		
	comp=Z,290nm,18.2s						
GOMU				LR	LR		
	comp=Z,490nm,19.0s						
GOMU				LR	LR		
	comp=Z,640nm,18.3s						
SRU	**San Rafael Swe**	**94.10**	**49**	P	**P**	**00 55 11.0**	**-0.7**
SRU	**San Rafael Swe**	**94.10**	**49**	P	**P**	**00 55 11.0**	**-0.7**
SRU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
P17A	**Butcher Ranch,**	**94.10**	**49**	P	**P**	**00 55 11.8**	**+0.1**
JLU	**Jordanelle**	**94.11**	**48**	P	**P**	**00 55 12.1**	**+0.3**
M31M	**Drury Creek, Y**	**94.23**	**22**	P	**P**	**00 55 08.5**	**-3.0**
	baz=227						
HWUT	**Hardware Ranch**	**94.47**	**47**	P	**P**	**00 55 13.1**	**-0.3**
HWUT				IAMs_20	IAMs_20	01 28 46.5	
	comp=Z,2µm,22.0s						
P18A	**Preston Nutter**	**94.51**	**49**	P	**P**	**00 55 13.7**	**-0.1**
Y22D	**IRIS PASSCAL I**	**94.61**	**55**	IAMs_20	IAMs_20	01 28 12.2	
	comp=Z,1µm,22.0s						
MVCO	**Mesa Verde**	**94.73**	**52**	IAMs_20	IAMs_20	01 29 10.0	
	comp=Z,1µm,22.0s						
MVCO	**Mesa Verde**	**94.73**	**52**	S	**S**	**01 06 29.1**	**+0.7**
	baz=245						
MNTX	**Cornudas Mount**	**94.85**	**58**	P	**P**	**00 55 15.0**	**-0.1**
MNTX	**Cornudas Mount**	**94.85**	**58**	P	**P**	**00 55 11.9**	**-3.2**
	baz=247						
BNM	**Barren Site**	**94.87**	**55**	P	**P**	**00 55 15.8**	**+0.3**
PALK	**Pallekele**	**94.87**	**276**	LR	LR	01 40 29.5	
	comp=Z,2µm,18.7s,baz=226,slow=37						
TOLK	**Toolik Lake Re**	**94.94**	**13**	IAMs_20	IAMs_20	01 33 02.0	
	comp=Z,2µm,21.0s						
TOLK	**Toolik Lake Re**	**94.94**	**13**	P	**P**	**00 55 12.7**	**-1.9**
	baz=214						
TOLK				S	**S**	**01 06 30.9**	**+2.5**
	baz=214						
ZAK	**Zakamensk**	**95.06**	**323**	*e*P	**P**	**00 55 14.2**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
MCMT	**McKenzie Canyo**	**95.07**	**43**	P	**P**	**00 55 16.5**	**+0.4**
I29M	**Ogilvie Camp,**	**95.20**	**18**	P	**P**	**00 55 16.7**	**+0.8**
I29M				IAmb	IAmb	00 55 18.3	
	comp=Z,15nm,1.1s						
I29M				IAMs_20	IAMs_20	01 30 02.9	
	comp=Z,2µm,22.0s						
I29M	**Ogilvie Camp,**	**95.20**	**18**	P	**P**	**00 55 13.4**	**-2.6**
	baz=224,SNR=5.8						
TX31	**Lajitas Ar. Si**	**95.28**	**61**	P	**P**	**00 55 17.0**	**-0.3**
TX32	**Lajitas Array**	**95.28**	**61**	P	**P**	**00 55 18.1**	**+0.9**
TX32				IAmb	IAmb	00 56 19.6	
	comp=Z,23nm,1.9s						
TXAR	**Lajitas Array**	**95.28**	**61**	P	**P**	**00 55 17.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=202,slow=6.5,SNR=9.2						
TXAR				LR	LR	01 29 24.5	
	comp=Z,2µm,21.7s,baz=244,slow=30						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**95.28**	**61**	P	**P**	**00 55 17.6**	**+0.3**
TXAR	**Lajitas Array**	**95.28**	**61**	P	**P**	**00 55 17.0**	**-0.3**
UNM	**Universidad Na**	**95.29**	**71**	IAMs_20	IAMs_20	01 28 42.5	
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**95.30**	**41**	IAMs_20	IAMs_20	01 31 06.8	
	comp=Z,1µm,20.0s						
MSO	**Missoula**	**95.30**	**41**	P	**P**	**00 55 14.6**	**-2.3**
	baz=243						
ANMO	**Albuquerque**	**95.32**	**54**	LR	LR	01 29 38.7	
	comp=Z,2µm,21.6s,baz=245,slow=30						
ANMO	**Albuquerque**	**95.32**	**54**	P	**P**	**00 55 17.2**	**-0.2**
ANMO	**Albuquerque**	**95.32**	**54**	IAMs_20	IAMs_20	01 29 27.7	
	comp=Z,2µm,21.0s						
ANMO	**Albuquerque**	**95.32**	**54**	⇑*e*P	**P**	**00 55 17.3**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ANMO	**Albuquerque**	**95.32**	**54**	P	**P**	**00 55 13.7**	**-3.7**
	baz=246						
ANMO				S	**S**	**01 06 34.8**	**+1.3**
	baz=246						
DLMT	**Dillon**	**95.47**	**43**	P	**P**	**00 55 17.6**	**-0.2**
DLMT				IAmb	IAmb	00 55 29.1	
	comp=Z,26nm,1.1s						
TPAW	**Teton Pass**	**95.70**	**45**	P	**P**	**00 55 19.0**	**-0.1**
REDW	**Red Top Meadow**	**95.71**	**45**	P	**P**	**00 55 18.6**	**-0.5**
LRM	**Limekiln Ridge**	**95.76**	**43**	P	**P**	**00 55 19.4**	**+0.1**
MOOW	**Moose Ponds**	**95.95**	**45**	P	**P**	**00 55 20.2**	**+0.1**
A21K	**Barrow**	**95.99**	**9**	IAMs_20	IAMs_20	01 34 24.5	
	comp=Z,2µm,20.0s						
FLWY	**Flagg Ranch**	**96.12**	**45**	P	**P**	**00 55 21.3**	**+0.4**
O20A	**White River Ci**	**96.12**	**49**	P	**P**	**00 55 18.8**	**-2.2**
	baz=246						
YHL	**Hebgen Lake**	**96.14**	**44**	P	**P**	**00 55 21.4**	**+0.3**
S22A	**4UR Ranch, Cre**	**96.16**	**52**	P	**P**	**00 55 22.1**	**+0.7**
S22A				IAmb	IAmb	00 55 24.9	
	comp=Z,26nm,2.0s						
S22A	**4UR Ranch, Cre**	**96.16**	**52**	P	**P**	**00 55 18.8**	**-2.5**
	baz=246						
S22A				S	**S**	**01 06 40.9**	**-0.1**
	baz=246						
BOZ	**Bozeman (W)**	**96.18**	**43**	P	**P**	**00 55 20.9**	**-0.2**
BOZ				IAMs_20	IAMs_20	01 34 24.4	
	comp=Z,1µm,20.0s						
BOZ	**Bozeman (W)**	**96.18**	**43**	P	**P**	**00 55 20.9**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BOZ	**Bozeman (W)**	**96.18**	**43**	P	**P**	**00 55 18.8**	**-2.2**
	baz=244,SNR=6.6						
BOZ				S	**S**	**01 06 42.4**	**+2.0**
	baz=244						
BW06	**Boulder Array**	**96.32**	**46**	P	**P**	**00 55 21.5**	**-0.3**
BW06	**Boulder Array**	**96.32**	**46**	P	**P**	**00 55 18.7**	**-3.1**
	baz=245						
PDAR	**Pinedale Array**	**96.32**	**46**	P	**P**	**00 55 21.3**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=214,slow=1.1,SNR=7.9						
PDAR				PP	**PP**	**00 59 13.9**	**-1.8**
	comp=Z,2.1nm,1.0s,baz=235,slow=6.7,SNR=7.5						
PDAR				LR	LR	01 30 52.4	
	comp=Z,846nm,22.0s,baz=246,slow=31						
	comp=Z,1.4nm,1.0s						
H17A	**Grant Village**	**96.34**	**45**	P	**P**	**00 55 21.4**	**-0.5**
H17A	**Grant Village**	**96.34**	**45**	P	**P**	**00 55 19.3**	**-2.6**
	baz=245						
SDCO	**Great Sand Dun**	**97.13**	**52**	P	**P**	**00 55 25.1**	**-0.6**
SDCO				IAMs_20	IAMs_20	01 31 31.5	
	comp=Z,1µm,20.0s						
SDCO	**Great Sand Dun**	**97.13**	**52**	P	**P**	**00 55 23.3**	**-2.5**
	baz=247						
RLMT	**Red Lodge**	**97.49**	**44**	P	**P**	**00 55 26.9**	**-0.1**
RLMT	**Red Lodge**	**97.49**	**44**	P	**P**	**00 55 25.0**	**-2.1**
	baz=246						
RLMT				S	**S**	**01 06 52.7**	**+0.9**
	baz=246						
CMIG	**Matias Romero**	**98.28**	**75**	LR	LR	01 29 39.0	
	comp=Z,2µm,21.9s,baz=246,slow=29						
EGMT	**Eagleton**	**98.38**	**41**	IAMs_20	IAMs_20	01 32 23.3	
	comp=Z,1µm,21.0s						
PHWY	**Pilot Hill**	**98.53**	**49**	IAMs_20	IAMs_20	01 31 56.2	
	comp=Z,2µm,21.0s						
INK	**Inuvik**	**98.61**	**18**	LR	LR	01 34 14.9	
	comp=Z,1µm,21.1s,baz=215,slow=32						
TIXI	**Tiksi**	**98.73**	**347**	P	**P**	**00 55 31.0**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=270,slow=23,SNR=2.4						
TIXI				LR	LR	01 34 43.6	
	comp=Z,1µm,21.7s,baz=181,slow=32						
	comp=Z,2.4nm,0.3s						
TIXI	**Tiksi**	**98.73**	**347**	IAMs_20	IAMs_20	01 34 22.4	
	comp=Z,2µm,21.0s						
TIXI	**Tiksi**	**98.73**	**347**	⇑*e*P	**P**	**00 55 31.4**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
JCT	**Junction City**	**98.83**	**61**	IAMs_20	IAMs_20	01 32 18.2	
	comp=Z,1µm,21.0s						
KVTX	**Kingsville**	**99.36**	**64**	IAMs_20	IAMs_20	01 29 33.6	
	comp=Z,1µm,20.0s						
RSSD	**Black Hills**	**100.55**	**47**	IAMs_20	IAMs_20	01 34 16.3	
	comp=Z,1µm,21.0s						
435B	**Jarrell**	**100.72**	**61**	IAMs_20	IAMs_20	01 33 08.5	
	comp=Z,1µm,20.0s						
HKT	**Hockley**	**101.87**	**62**	IAMs_20	IAMs_20	01 33 59.0	
	comp=Z,1µm,20.0s						
DGMT	**Dagmar**	**101.98**	**42**	IAMs_20	IAMs_20	01 35 21.8	
	comp=Z,2µm,20.0s						
YKA	**Yellowknife Ar**	**102.01**	**27**	P	**Pdif**	**00 55 45.6**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=262,slow=4.3,SNR=7.0						
YKA				PP	**PP**	**00 59 57.2**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=276,slow=9.9,SNR=5.0						
YKA				PKKPbc	**PKKPbc**	**01 11 54.3**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=69,slow=4.0,SNR=2.6						
WMQ	**Urumqi**	**102.04**	**312**	*e*P	**Pdif**	**00 55 48.3**	**+1.1**
WMQ				LR	LR		
	comp=Z,480nm,15.7s						
WMQ				LR	LR		
	comp=Z,520nm,19.9s						
WMQ				LR	LR		
	comp=Z,800nm,23.1s						
SNET	**Serv Nac Est T**	**102.18**	**80**	IAMs_20	IAMs_20	01 30 57.6	
	comp=Z,2µm,21.0s						
NATX	**Nacogdoches**	**103.41**	**61**	IAMs_20	IAMs_20	01 34 30.5	
	comp=Z,2µm,20.0s						
TUL1	**Leonard**	**103.80**	**57**	IAMs_20	IAMs_20	01 35 38.4	
	comp=Z,2µm,20.0s						
TGUH	**Tegucigalpa,Un**	**104.09**	**80**	IAMs_20	IAMs_20	01 31 56.3	
	comp=Z,1µm,22.0s						
KSU1	**Kansas State U**	**104.15**	**53**	IAMs_20	IAMs_20	01 36 38.4	
	comp=Z,1µm,20.0s						
JTS	**Las Juntas de**	**104.92**	**85**	IAMs_20	IAMs_20	01 32 35.0	
	comp=Z,2µm,21.0s						
ECSD	**EROS Data Cent**	**105.50**	**49**	IAMs_20	IAMs_20	01 35 55.6	
	comp=Z,2µm,21.0s						
HDC	**Heredia**	**105.59**	**85**	IAMs_20	IAMs_20	01 32 35.9	
	comp=Z,1µm,21.0s						
X40A	**Basin Creek Fa**	**105.69**	**59**	IAMs_20	IAMs_20	01 36 45.7	
	comp=Z,1µm,21.0s						
U40A	**Yellville**	**106.20**	**57**	IAMs_20	IAMs_20	01 36 42.1	
	comp=Z,1µm,20.0s						
MKAR	**Makanchi Array**	**106.57**	**314**	Pdiff	**Pdif**	**00 56 07.5**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=101,slow=4.7,SNR=3.9						
MKAR				PP	**PP**	**01 00 32.0**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=103,slow=8.0,SNR=4.0						
VBMS	**Vicksburg**	**106.90**	**62**	IAMs_20	IAMs_20	01 37 11.2	
	comp=Z,1µm,22.0s						
SCIA	**State Center**	**107.42**	**51**	IAMs_20	IAMs_20	01 37 19.6	
	comp=Z,2µm,21.0s						
OXF	**Oxford**	**108.41**	**60**	IAMs_20	IAMs_20	01 38 29.0	
	comp=Z,1µm,20.0s						
NRIK	**Noril'sk**	**109.31**	**338**	PP	**PP**	**01 00 49.7**	**-2.4**
	comp=Z,4.4nm,1.0s,baz=121,slow=6.2,SNR=6.4						
PLAL	**Pickwick Lake**	**109.59**	**59**	IAMs_20	IAMs_20	01 40 54.3	
	comp=Z,1µm,20.0s						
JFWS	**Jewell Farm**	**109.79**	**51**	IAMs_20	IAMs_20	01 39 53.4	
	comp=Z,1µm,20.0s						
KURBB	**Kurchatov Arra**	**109.89**	**318**	PP	**PP**	**01 00 52.5**	**-4.2**
	comp=Z,1.6nm,0.9s,baz=98,slow=7.8,SNR=6.3						
KURBB				PKKPbc	**PKKPbc**	**01 11 25.1**	**-3.0**
	comp=Z,0.6nm,0.7s,baz=280,slow=3.9,SNR=9.0						
HDIL	**Hopedale**	**109.96**	**53**	IAMs_20	IAMs_20	01 39 43.3	
	comp=Z,1µm,21.0s						
LRAL	**Lakeview Retre**	**109.98**	**62**	IAMs_20	IAMs_20	01 42 41.8	
	comp=Z,941nm,20.0s						
EYMN	**Ely**	**110.00**	**45**	IAMs_20	IAMs_20	01 38 56.1	
	comp=Z,1µm,22.0s						
COWI	**Conover**	**111.22**	**48**	IAMs_20	IAMs_20	01 42 10.8	
	comp=Z,938nm,20.0s						
L44A	**Lake County Fo**	**111.32**	**52**	IAMs_20	IAMs_20	01 40 09.1	
	comp=Z,1µm,21.0s						
VOI	**Vohitsoka**	**111.45**	**234**	IAMs_20	IAMs_20	01 48 30.1	
	comp=Z,1µm,19.0s						
ABPO	**Ambohimpanom**	**112.81**	**236**	IAMs_20	IAMs_20	01 38 48.6	
	comp=Z,2µm,21.0s						
GOGA	**Godfrey**	**112.95**	**62**	IAMs_20	IAMs_20	01 40 59.3	
	comp=Z,1µm,22.0s						
MTDJ	**Mount Denham**	**114.28**	**79**	IAMs_20	IAMs_20	01 38 32.2	
	comp=Z,1µm,21.0s						
AAM	**Ann Arbor**	**114.46**	**52**	IAMs_20	IAMs_20	01 42 38.1	
	comp=Z,1µm,20.0s						
BRVK	**Borovoye**	**115.29**	**319**	⇑*i*PKIKP	**PKiKP**	**01 00 34.2**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
O53A	**New Philadelph**	**115.97**	**55**	IAMs_20	IAMs_20	01 41 56.5	
	comp=Z,1µm,21.0s						
M53A	**WI Miller and**	**116.54**	**54**	IAMs_20	IAMs_20	01 41 53.3	
	comp=Z,1µm,22.0s						
ALE	**Alert**	**116.57**	**7**	IAMs_20	IAMs_20	01 46 06.2	
	comp=Z,888nm,21.0s						
CNNC	**Cliffs of the**	**117.82**	**61**	IAMs_20	IAMs_20	01 43 10.2	
	comp=Z,1µm,22.0s						
TULEG	**Thule**	**118.24**	**14**	IAMs_20	IAMs_20	01 44 46.7	
	comp=Z,968nm,22.0s						
SSPA	**Standing Stone**	**118.54**	**55**	IAMs_20	IAMs_20	01 44 57.4	
	comp=Z,1µm,21.0s						
SVE	**Sverdlovsk**	**120.81**	**324**	*i* PKIKP	**PKPdf**	**01 00 44.7**	**0.0**
SVE				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SVE				MLR	MLR		
	comp=Z,767nm,20.0s						
GRTK	**Grand Turk**	**120.96**	**78**	IAMs_20	IAMs_20	01 42 54.1	
	comp=Z,902nm,22.0s						
LONY	**Lake Ozonia**	**121.25**	**51**	IAMs_20	IAMs_20	01 49 11.5	
	comp=Z,1µm,20.0s						
ARU	**Arti**	**121.99**	**323**	PKP	**PKPdf**	**01 00 46.2**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=320,slow=2.3,SNR=5.7						
ARU				PP	**PP**	**01 02 21.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=226,slow=6.1,SNR=3.7						
ARU	**Arti**	**121.99**	**323**	PKPdf	**PKPdf**	**01 00 46.0**	**-1.0**
ARU				IAMs_20	IAMs_20	01 51 53.7	
	comp=Z,887nm,21.0s						
ARU	**Arti**	**121.99**	**323**	*i* PKIKP	**PKPdf**	**01 00 45.9**	**-1.0**
ARU						01 02 19.0	
ARU				PPP	PPP	01 04 54.7	
ARU						01 07 57.6	
ARU				SP	SP	01 12 13.4	+0.4
ARU				MLR	MLR		
	comp=Z,870nm,21.0s						
AKTO	**Aktyubinsk**	**122.90**	**316**	PKP	**PKPdf**	**01 00 48.6**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=294,slow=1.4,SNR=3.7						
KBS	**Kingsbay**	**122.92**	**356**	IAMs_20	IAMs_20	01 46 19.7	
	comp=Z,866nm,22.0s						
SPITS	**Spitsbergen Ar**	**123.25**	**354**	PKP	**PKPdf**	**01 00 47.1**	**-1.8**
	comp=Z,8.9nm,0.8s,baz=125,slow=6.6,SNR=5.9						
NUUG	**Nuugaatsiaq**	**124.44**	**16**	*i* P	PKPpre	01 00 44.2	
NUUG				IAmb	IAmb	01 01 43.4	
	comp=Z,12nm,0.8s						
PKME	**Peaks-Kenny Pk**	**125.00**	**50**	IAMs_20	IAMs_20	01 51 36.7	
	comp=Z,1µm,20.0s						
KIRV	**Kirov**	**126.37**	**327**	PKP	**PKPdf**	**01 00 54.0**	**-1.3**
	comp=Z,5.1nm,0.6s,baz=184,slow=5.7,SNR=4.6						
KIRV	**Kirov**	**126.37**	**327**	⇓*i*PKIKP	**PKPdf**	**01 00 55.1**	**-0.1**
ILULI	**Ilulissat**	**126.39**	**18**	IAMs_20	IAMs_20	01 55 40.3	
	comp=Z,1µm,20.0s						
SUMG	**Summit**	**126.97**	**11**	PKPdf	**PKPdf**	**01 00 55.9**	**-0.7**
SUMG	**Summit**	**126.97**	**11**	PKIKP	**PKPdf**	**01 00 55.9**	**-0.7**
SUMG				MLR	MLR		
	comp=Z,700nm,20.0s						
SUMG	**Summit**	**126.97**	**11**	*i* P	**PKPdf**	**01 00 52.6**	**-4.0**
SUMG				IAmb	IAmb	01 01 05.8	
	comp=Z,16nm,1.1s						
DBG	**Daneborg**	**127.74**	**5**	*i* P	PKPpre	01 00 47.9	
DBG				IAmb	IAmb	01 00 52.0	
	comp=Z,7.6nm,1.1s						
SFJD	**Kangerlussuaq**	**127.86**	**20**	IAMs_20	IAMs_20	01 56 00.4	
	comp=Z,1µm,21.0s						
LVZ	**Lovozero**	**127.92**	**341**	IAMs_20	IAMs_20	02 00 10.2	
	comp=Z,867nm,21.0s						
SVN	**Savane Anatole**	**128.34**	**89**	IAMs_20	IAMs_20	01 57 21.8	
	comp=Z,863nm,20.0s						
APA	**Apatity**	**128.50**	**341**	⇓*i*PKIKP	**PKPdf**	**01 00 54.5**	**-4.6**
APA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KEV	**Kevo**	**128.64**	**346**	IAMs_20	IAMs_20	01 55 35.0	
	comp=Z,892nm,20.0s						
ARCES	**ARCESS Array B**	**129.15**	**346**	PKP	**PKPdf**	**01 00 59.4**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=48,slow=1.8,SNR=10						
ICESG	**Greenland Ices**	**129.46**	**15**	*i* P	**PKPdf**	**01 00 59.4**	**-2.0**
ICESG				IAmb	IAmb	01 01 06.3	
	comp=Z,9.9nm,1.0s						
KIBK	**Kibwezi**	**129.58**	**247**	IAMs_20	IAMs_20	02 02 12.2	
	comp=Z,876nm,19.0s						
KLMR	**Klimovskoe**	**130.10**	**332**	*e*PKIKP	**PKPdf**	**01 00 59.3**	**-3.0**
KLMR				*e*		01 03 18.5	
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
KLMR	**Klimovskoe**	**130.10**	**332**	*e*PKPdf	**PKPdf**	**01 00 59.3**	**-3.0**
KLMR				AMP		01 01 09.3	
	comp=Z,19nm,1.4s						
KLMR				*e*PP	**PP**	**01 03 18.6**	**+3.6**
MAK	**Makhachkala**	**130.78**	**308**	*e*P	**Pdif**	**00 57 49.9**	**-5.0**
MAK				pmax	pmax		
	comp=Z,79nm,1.0s						
KMBO	**Kilima Mbogo**	**130.89**	**247**	IAMs_20	IAMs_20	01 54 21.1	
	comp=Z,1µm,21.0s						
SOEG	**Soedalen**	**131.94**	**12**	*i* P	**PKiKP**	**01 01 14.4**	**+7.8**
SOEG				IAmb	IAmb	01 01 18.4	
	comp=Z,3.6nm,0.7s						
ANGG	**Ammassalik, Gr**	**132.63**	**17**	IAMs_20	IAMs_20	01 59 29.0	
	comp=Z,1µm,20.0s						
GNI	**Garni**	**133.15**	**304**	⇑*i*PKIKP	**PKPdf**	**01 01 07.9**	**-1.1**
KIV	**Kislovodsk**	**134.10**	**310**	*i* PKIKP	**PKPdf**	**01 01 11.2**	**+0.6**
KIV				*e*		01 03 40.3	
KIV				*e*SS	SS	01 21 30.4	0.0
KIV				*e*SSS	SSS	01 26 27.4	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN	**Obninsk**	**134.20**	**326**	IAMs_20	IAMs_20	02 04 30.2	
	comp=Z,869nm,20.0s						
OBN	**Obninsk**	**134.20**	**326**	⇓*e*PKIKP	**PKPdf**	**01 01 07.7**	**-2.5**
OBN				*i*		01 01 13.0	
OBN				*e*		01 08 22.8	
OBN				*e*SS	SS	01 21 30.9	+0.6
OBN				SSS	SSS	01 26 35.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
OBN				pmax	pmax		
	comp=Z,12nm,1.5s						
FINES	**FINESS Array B**	**134.98**	**338**	PKhKP	PKPpre	01 01 02.9	
	comp=Z,2.6nm,1.0s,baz=96,slow=2.8,SNR=1.9						
SOC	**Sochi**	**136.28**	**310**	*i* PKIKP	**PKPdf**	**01 01 14.8**	**+0.3**
SOC				*e*		01 03 52.1	
SOC				*e*PPP	PPP	01 06 50.3	
SOC				*e*PS	**PS**	**01 14 16.2**	**-4.0**
SOC				*e*SS	SS	01 21 58.1	+1.7
SOC				*e*SSS	SSS	01 27 02.1	
SOC				MLR	MLR		
	comp=Z,736nm,20.0s						
ANN	**Anapa**	**137.56**	**312**	*i* PKIKP	**PKiKP**	**01 01 21.9**	**+3.2**
ANN				pmax	pmax		
	comp=Z,114nm,1.1s						
NACGM	**Naroch**	**139.05**	**331**	PP	PP	01 04 03.6	-8.1
	baz=51						
NB2	**NORSAR Subarra**	**139.53**	**346**	PKP	PKPdf	01 01 12.7	-7.3
	comp=Z,3.4nm,1.1s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.53**	**346**	PKhKP	PKPpre	01 01 13.6	
	comp=Z,1.0nm,0.8s,baz=34,slow=2.1,SNR=2.8						
NOA				PKP	**PKPdf**	**01 01 19.9**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=33,slow=2.0,SNR=4.8						
RCBR	**Riachuelo**	**140.04**	**131**	IAMs_20	IAMs_20	01 56 06.6	
	comp=Z,746nm,20.0s						
AKASG	**Malin Array Be**	**140.24**	**324**	PKhKP	PKPpre	01 01 13.7	
	comp=Z,0.4nm,0.5s,baz=58,slow=2.6,SNR=1.2						
AKASG				PKP	pPKPdf	01 01 23.2	-1.0
	comp=Z,1.6nm,0.5s,baz=58,slow=2.5,SNR=12						
AKBB	**Malin Array Si**	**140.24**	**324**	*c i*PKIKP	**PKiKP**	**01 01 24.7**	**+0.7**
KONO	**Kongsberg**	**141.13**	**347**	IAMs_20	IAMs_20	02 11 08.0	
	comp=Z,898nm,20.0s						
SUW	**Suwalki**	**141.23**	**332**	IAMs_20	IAMs_20	02 04 20.7	
	comp=Z,1µm,21.0s						
BRTR	**Keskin Array B**	**141.62**	**306**	PKhKP	PKPpre	01 01 20.8	
	comp=Z,0.4nm,0.6s,baz=90,slow=0.8,SNR=4.5						
BRTR				PP	**PP**	**01 04 27.9**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=99,slow=4.5,SNR=2.6						
MILM	**Milestii Mici**	**142.35**	**319**	*e*PKP	**PKPdf**	**01 01 27.0**	**+1.5**
	comp=Z,120nm,4.9s						
MILM	**Milestii Mici**	**142.35**	**319**	*e*PKIKP	**PKPdf**	**01 01 27.0**	**+1.5**
MILM				*e*		01 23 50.0	
MILM				pmax	pmax		
	comp=Z,120nm,4.9s						
MILM				MLR	MLR		
	comp=Z,800nm,17.5s						
VLDR	**Vladesti**	**143.29**	**318**	⇑P	PKPab	01 01 23.0	0.0
VARL	**Varlezi**	**143.41**	**318**	⇓P	PKPab	01 01 23.6	+0.1
SCTR	**Scanteiesti**	**143.42**	**318**	⇑P	PKPab	01 01 23.5	0.0
LVV	**L'vov**	**143.50**	**326**	*e*PKHKP	PKPpre	01 01 19.1	
TPGR	**Topolog**	**143.52**	**316**	⇑P	PKPab	01 01 23.3	-0.7
CFR	**Carcaliu**	**143.56**	**317**	⇑P	PKPbc	01 01 25.2	+0.2
CFR	**Carcaliu**	**143.56**	**317**	⇑PKIKP	PKPbc	01 01 25.2	+0.2
SLCR	**Slobozia Conac**	**143.60**	**318**	⇑P	PKPbc	01 01 25.6	+0.5
GHRR		**143.61**	**318**	⇑P	PKPab	01 01 25.1	+0.8
SCHL	**Schela**	**143.61**	**317**	⇑P	PKPbc	01 01 25.7	+0.6
IZVR	**Izvoarele**	**143.63**	**318**	⇑P	PKPab	01 01 24.9	+0.6
TESR	**Tescani**	**143.85**	**320**	⇑P	PKPab	01 01 24.5	-0.7
PANC	**Panciu**	**143.86**	**318**	⇑P	PKPab	01 01 25.0	-0.2
TLBR	**Topalu**	**143.90**	**316**	⇑P	PKPab	01 01 25.6	+0.2
HARR	**Harsova**	**143.91**	**316**	⇓P	PKPab	01 01 25.6	+0.1
BIZ	**Bicaz**	**143.95**	**321**	⇑P	PKPab	01 01 25.3	-0.3
ODBI	**Odobesti**	**143.96**	**318**	⇑P	PKPbc	01 01 26.6	+0.4
BURAR	**Bucovina Array**	**144.11**	**322**	⇓P	**PKPab**	**01 01 26.3**	**0.0**
BURAR	**Bucovina Array**	**144.11**	**322**	⇓PKIKP	**PKPab**	**01 01 26.3**	**0.0**
VRI	**Vrincioaia**	**144.12**	**319**	⇑P	**PKPab**	**01 01 25.2**	**-1.0**
VRI	**Vrincioaia**	**144.12**	**319**	⇑PKIKP	**PKPab**	**01 01 25.2**	**-1.0**
PLOR	**Plostina**	**144.17**	**319**	⇑P	**PKPab**	**01 01 25.7**	**-0.8**
PLOR	**Plostina**	**144.17**	**319**	⇑PKIKP	**PKPab**	**01 01 25.7**	**-0.8**

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GRER                    144.20 318 ⇑P        PKPbc    01 01 28.2 +1.3
GKP   Gorka Klasztor    144.23 335 ePKP      PKPab    01 01 26.8 +0.5
ICOR  Ion Corvin        144.24 315 ⇑P        PKPab    01 01 26.8 +0.1
BISRR Bisoca            144.28 318 ⇑P        PKPab    01 01 27.0  0.0
KWP   Kalwaria Pacla    144.29 327 ePKP      PKPab    01 01 27.0 +0.2
PGOR  Pogoanele         144.41 317 ⇑P        PKPab    01 01 27.6 +0.3
COVR  Voineasa-Covas    144.44 319 ⇑P        PKPab    01 01 25.8 -1.7
ISP   Isparta           144.45 304  PKPdf    PKPab    01 01 25.1 -2.8
OZUR                    144.57 319 ⇑P        PKPab    01 01 27.8 -0.1
ISR   Istrita           144.59 318 ⇑P        PKPab    01 01 27.9 -0.2
ISR   Istrita           144.59 318 ⇑PKIKP    PKPab    01 01 27.9 -0.2
NEHR  Nehoiu            144.59 318 ⇑P        PKPbc    01 01 28.9 +0.7
RGN   Rugen             144.60 340  IAMs_20  IAMs_20  02 20 01.3
      comp=Z,875nm,20.0s
LEHL  Lehliu            144.71 316 ⇑P        PKPab    01 01 27.6 -0.9
MLR   Muntele Rosu      144.78 318 ⇑P        PKPab    01 01 27.8 -1.1
MLR   Muntele Rosu      144.78 318  PKPdf    PKPab    01 01 27.4 -1.4
MLR   Muntele Rosu      144.78 318 ⇑PKIKP    PKPab    01 01 27.8 -1.1
DOPR  Dopca             144.88 320 ⇑P        PKPab    01 01 29.0  0.0
ARCR  ARCALIA           144.89 322 ⇑P        PKPbc    01 01 29.5 +0.4
SECR                    144.92 318 ⇑P        PKPab    01 01 28.0 -1.3
KOLS  Kolonicke sedl    144.95 326 ePKIKP    PKPab    01 01 28.5 -0.7
KOLS  Kolonicke sedl    144.95 326 ePKP      PKPab    01 01 28.5 -0.7
SULR                    144.98 317 ⇑P        PKPdf    01 01 30.3 +0.2
BMR   Baia Mare         145.04 323 ⇑P        PKPab    01 01 29.3 -0.3
BMR   Baia Mare         145.04 323 ⇑PKIKP    PKPab    01 01 29.3 -0.3
TGMR  Targu Mures       145.10 321 ⇑P        PKPab    01 01 30.5 +0.7
UZH   Uzhgorod          145.12 325 ePKP2     PKPbc    01 01 27.3 -2.5
UZH                                i                  01 01 30.0
ELL   Elmali            145.19 302           PKPbc    01 01 29.1 -1.5
ELL   Elmali            145.19 302  PKP2     PKPbc    01 01 29.1 -1.5
RAZG  Razgrad           145.32 315 ⇑P        PKPbc    01 01 28.4 -2.2
OJC   Ojcow             145.34 329 ePKP      PKPbc    01 01 30.2 -0.2
OJC   Ojcow             145.34 329           PKPbc    01 01 27.5 -2.9
OJC   Ojcow             145.34 329  PKP2     PKPbc    01 01 27.5 -2.9
SGRR  Singureni         145.37 317 ⇑P        PKPdf    01 01 33.2 +2.4
CRVS  Cervenica-Dubn    145.38 326 ePKIKP    PKPbc    01 01 30.1 -0.5
CRVS  Cervenica-Dubn    145.38 326 ePKP      PKPbc    01 01 30.1 -0.5
CJR   Cluj-Napoca       145.53 322 ⇑P        PKPdf    01 01 30.8 -0.3
CJR   Cluj-Napoca       145.53 322 ⇑PKIKP    PKPdf    01 01 30.8 -0.3
NIE   Niedzica          145.63 328 ePKP      PKPbc    01 01 31.9 +0.5
HUMR  Humele            145.85 318 ⇑P        PKPdf    01 01 30.5 -1.2
COPA  Copaceanca        145.89 317 ⇑P        PKPdf    01 01 31.2 -0.5
DRGR                    145.99 323 ⇓P        PKPdf    01 01 31.6 -0.4
DRGR                    145.99 323 ⇓PKP2     PKPdf    01 01 31.6 -0.4
LTVH  Ltavrtes, Hu      146.09 324 ⇑P        PKPdf    01 01 32.2 +0.3
LOT   Lotru             146.12 320 ⇑P        PKPdf    01 01 32.7 +0.5
KECS  Kecovo            146.15 327 ePKP2     PKPbc    01 01 33.7 +0.7
KECS  Kecovo            146.15 327 ePKP      PKPbc    01 01 33.7 +0.7
BORR  Bors              146.33 324 ⇑P        PKPbc    01 01 34.2 +0.6
OKC   Ostrava-Krasne    146.37 330 ePKP2     PKPbc    01 01 33.6  0.0
OKC   Ostrava-Krasne    146.37 330 ePKP      PKPbc    01 01 33.6  0.0
OKC                                ex        x        01 02 37.0
DEV   Deva              146.39 321 ⇑P        PKPdf    01 01 31.9 -0.7
DEV   Deva              146.39 321 ⇑PKIKP    PKPdf    01 01 31.9 -0.7
KSP   Ksiaz             146.45 333 ePKP      PKPbc    01 01 34.3 +0.4
VLAD  Vladila           146.47 317 ⇑P        PKPbc    01 01 34.9 +0.8
MORC  Moravsky Berou    146.69 331 ⇑P        PKPdf    01 01 33.6 +0.6
MORC  Moravsky Berou    146.69 331 ⇑PKP2     PKPdf    01 01 33.6 +0.6
MORC  Moravsky Berou    146.69 331 ePKP      PKPdf    01 01 33.7 +0.7
OSTC  Ostas             146.70 333 ePKP      PKPbc    01 01 34.3 -0.3
OSTC                               ex        x        01 02 39.0
GZR   Gura Zlata        146.74 320 ⇑P        PKPdf    01 01 32.9 -0.4
GZR   Gura Zlata        146.74 320 ⇑PKHKP    PKPpre   01 01 32.9
CHVC  Chvalec           146.74 333 ePKP      PKPbc    01 01 34.4 -0.3
DPC   Dobruska-Polom    146.81 332 ePKP2     PKPdf    01 01 33.8 +0.6
DPC   Dobruska-Polom    146.81 332 ePKP      PKPdf    01 01 33.8 +0.6
DPC                                ex        x        01 02 39.2
KRLC  Kraliky           146.81 332 ePKP2     PKPdf    01 01 34.4 +1.2
KRLC  Kraliky           146.81 332 ePKP      PKPdf    01 01 34.4 +1.2
KRLC                               ex        x        01 02 38.3
PSZ   Piszkesteto       146.82 326 ⇑P        PKPdf    01 01 33.6 +0.3
PSZ   Piszkesteto       146.82 326  PKPdf    PKPdf    01 01 32.9 -0.4
PSZ                                 IAMs_20  IAMs_20  02 06 31.0
      comp=Z,958nm,20.0s
PSZ   Piszkesteto       146.82 326 ⇑PKP2     PKPdf    01 01 33.6 +0.3
PSZ   Piszkesteto       146.82 326  PKP      PKPdf    01 01 34.6 +1.3
UPC   Upice             146.82 333 ePKP2     PKPdf    01 01 34.2 +1.1
UPC   Upice             146.82 333 ePKP      PKPdf    01 01 34.2 +1.1
UPC                                ex        x        01 02 38.9
MAUC  Maruska           146.85 330 ePKP      PKPdf    01 01 34.6 +1.3
MAUC                               ex        x        01 02 39.1
SIRR  Siria             146.88 323 ⇑P        PKPdf    01 01 34.4 +1.0
VYHS  Vyhne             146.97 328 ePKP2     PKPbc    01 01 35.7 +0.3
VYHS  Vyhne             146.97 328 ePKP      PKPbc    01 01 35.7 +0.3
RDO   Rodhopi           147.00 312           PKPdf    01 01 34.8 +1.1
BSZH  Besenyszg         147.02 325 ⇑P        PKPdf    01 01 34.5 +1.0
BSZH  Besenyszg         147.02 325  PKP      PKPdf    01 01 34.8 +1.3
BAIL  Bailesti          147.12 318 ⇑P        PKiKP    01 01 38.9 +0.5
KOLL  Kolacno           147.12 328 ePKP      PKPdf    01 01 35.0 +1.3
EKA   Eskdalemuir Ar    147.15 356  PKPbc    PKPdf    01 01 33.7 +0.2
      comp=Z,18nm,0.7s,baz=356,slow=2.5,SNR=39
EKA                                 PP       PP       01 04 55.9 -4.1
      comp=Z,4.3nm,1.1s,baz=38,slow=4.8,SNR=4.6
ESK   Eskdalemuir       147.17 356  PKPdf    PKPdf    01 01 32.9 -0.7
ESK                                 IAMs_20  IAMs_20  02 15 35.5
      comp=Z,702nm,21.0s
ESK   Eskdalemuir       147.17 356  PKIKP    PKPdf    01 01 32.9 -0.7
HERR  Herculane         147.23 320 ⇑P        PKPdf    01 01 34.9 +0.9
JAVC  Velka Javorina    147.28 329 ePKP      PKPbc    01 01 36.3 -0.1
BZS   Buzias            147.28 322 ⇑P        PKPbc    01 01 36.2 -0.2
BZS   Buzias            147.28 322 ⇑PKP2     PKPbc    01 01 36.2 -0.2
BRG   Berggiesshubel    147.38 335 i PKP     PKPdf    01 01 35.6 +1.5
BRG                                 Amp               01 01 38.6
      comp=Z,42nm,1.2s
BRG                                ex        x        01 01 45.5
BRG                                 Amp               01 01 46.7
      comp=Z,27nm,1.0s
BRG   Berggiesshubel    147.38 335 i PKP2    PKPdf    01 01 35.5 +1.5
BRG                                 pmax     pmax
      comp=Z,42nm,1.2s
BRG                                 pmax     pmax
      comp=Z,27nm,1.0s
CLL   Collm             147.38 337⇓iPKP2     PKPdf    01 01 34.9 +0.9
CLL                                e                  01 05 10.0
CLL                                 pmax     pmax
      comp=Z,46nm,1.2s
CLL                                 MLR      MLR
      comp=Z,1μm,20.5s
CLL   Collm             147.38 337⇓iPKPdf    PKPdf    01 01 34.9 +0.9
CLL                                i PKPbc   pPKPdf   01 01 35.8 -0.9
      comp=Z,46nm,1.2s
CLL                                i PKiKP   sPKPab   01 01 41.3 -0.5
CLL                                ex        x        01 02 31.0
CLL                                ePP       PP       01 05 04.0 +2.3
CLL                                eSKPdf    SKPdf    01 05 10.0 +2.0
      comp=Z,21nm,1.5s
CLL                                eSKKSac   SKKSac   01 11 54.0 +0.3
CLL                                ePSKS              01 15 18.0
CLL                                ePPS      PPS      01 17 42.0
CLL                                ePPPPrev           01 19 12.0
CLL                                eSS       SS       01 24 06.0 +2.3
CLL                                ex        x        01 27 12.0
CLL                                eSSS      SSS      01 29 33.0
CLL                                eSSSS              01 33 30.0
CLL                                 LmV               02 06 00.0
      comp=Z,1μm,20.5s
PVCC  Panska Ves        147.40 334 ePKP2     PKPbc    01 01 36.0 -0.5
PVCC  Panska Ves        147.40 334 ePKP      PKPbc    01 01 36.0 -0.5
PVCC                               ex        x        01 02 41.1
VRAC  Vranov            147.45 331 ⇑P        PKPdf    01 01 36.0 +1.7
VRAC  Vranov            147.45 331  PKPbc    PKPdf    01 01 35.9 +1.7
      comp=Z,20nm,1.0s,baz=64,slow=2.2,SNR=20
VRAC  Vranov            147.45 331 ⇑PKP2     PKPdf    01 01 36.0 +1.7
VRAC  Vranov            147.45 331 ePKP      PKPdf    01 01 35.7 +1.4
SMOL  Smolenice         147.63 329 ePKP2     PKPbc    01 01 36.6 -0.7
SMOL  Smolenice         147.63 329 ePKP      PKPbc    01 01 36.6 -0.7
SRO   Srobarova         147.69 327 ePKP2     PKPbc    01 01 36.7 -0.7
SRO   Srobarova         147.69 327 ePKP      PKPbc    01 01 36.7 -0.7
MDVR  Moldovita         147.70 320 ⇑P        PKPdf    01 01 35.0 +0.1
KRUC  Moravsky          147.72 331 ePKP      PKPdf    01 01 35.1 +0.4
BLKB  Belogradchik      147.74 318 ⇑P        PKPdf    01 01 36.6 +1.6
MODS  Modra-Piesok      147.81 329 ePKIKP    PKPdf    01 01 35.6 +0.7
MODS  Modra-Piesok      147.81 329 ePKP      PKPdf    01 01 35.6 +0.7
PRU   Pruhonice         147.83 334 ePKP2     PKPdf    01 01 36.6 +1.8
PRU   Pruhonice         147.83 334 ePKP      PKPdf    01 01 36.6 +1.8
PRU                                ex        x        01 02 37.2
VTS   Vitosha           147.88 316 ⇑P        PKPdf    01 01 35.6 +0.3
VTS   Vitosha           147.88 316           PKPdf    01 01 36.9 +1.6
VTS   Vitosha           147.88 316 ⇑PKIKP    PKPdf    01 01 35.6 +0.3
TREC  Trest             147.95 332 ePKP2     PKPbc    01 01 37.8 -0.3
TREC  Trest             147.95 332 ePKP      PKPbc    01 01 37.8 -0.3
TREC                               ex        x        01 02 42.8
ZST   Bratislava        148.01 329 ePKP2     PKPdf    01 01 36.8 +1.6
ZST   Bratislava        148.01 329 ePKP      PKPdf    01 01 36.8 +1.6
CSKK  Cskako            148.01 327  PKP      PKPbc    01 01 39.0 +0.7
BOVS  Bovan             148.33 318 ⇑P        PKPdf    01 01 37.4 +1.5
NKC   Novy Kostel       148.46 336 ePKP2     PKPbc    01 01 38.8 -0.6
NKC   Novy Kostel       148.46 336 ePKP      PKPbc    01 01 38.8 -0.6
NKC                                ex        x        01 02 39.8
MPLH  Magyarpolny       148.51 327  PKP      PKPbc    01 01 39.3 -0.3
FRGS  Fruska Gora       148.59 322 ⇑P        PKPdf    01 01 38.2 +2.0
RONA  Rosalia, Austr    148.75 329 i P       PKPbc    01 01 40.1 -0.2
      comp=Z,21nm,1.4s,SNR=11
CONA  Conrad Observa    148.79 330 i P       PKPbc    01 01 39.4 -1.1
      comp=Z,26nm,1.5s,SNR=12
CKRC  Cesky Krumlov     148.82 332 ePKP      PKPbc    01 01 39.3 -1.1
CKRC                               ex        x        01 02 40.9
ASCN  Ascension         148.84 166  PKPbc    PKPbc    01 01 40.6 -0.8
KHC   Kasperske Hory    148.89 333 i PKP2    PKPbc    01 01 40.5 -0.1
KHC   Kasperske Hory    148.89 333 ePKP      PKPbc    01 01 39.4 -1.2
KHC                                 pPKP     pPKPab   01 01 46.0 -1.0
KHC                                ex        x        01 02 37.7
KOVH  Kovagotottos      148.94 325  PKP      PKPdf    01 01 39.2 +2.4
GERES GERESS Array B    149.06 333  PKPbc    PKPbc    01 01 39.6 -1.5
      comp=Z,12nm,1.0s,baz=230,slow=1.0,SNR=56
DIVS  Divibare          149.10 320  IAMs_20  IAMs_20  02 20 22.1
      comp=Z,810nm,19.0s
ARSA  Arzberg           149.44 329 eP        PKPbc    01 01 41.1 -0.9
      comp=Z,12nm,1.4s
MOA   Molln             149.57 331 eP        PKPbc    01 01 41.4 -0.9
      comp=Z,17nm,1.4s
BIOA  Bad Ischl, Aus    149.97 332 eP        PKPbc    01 01 42.4 -0.9
      comp=Z,18nm,1.3s
SOKA  Soboth            150.08 329 i P       PKPbc    01 01 41.9 -1.8
      comp=Z,24nm,1.3s,SNR=6.0
BTNL  Ternell           150.21 343 dPKPbc    PKPbc    01 01 42.5 -1.3
BTNL                               dPKPab    sPKPbc   01 01 48.4 +1.1
MEM   Membach           150.22 343 dPKPbc    PKPbc    01 01 42.8 -0.9
BSTI  Sart Tilman       150.36 344 dPKPbc    PKPbc    01 01 43.2 -0.9
OBKA  Obir              150.43 329 eP        PKPbc    01 01 45.2 +0.7
      comp=Z,12nm,1.6s
BHOU  Houvegnez         150.45 343 dPKPdf    PKPdf    01 01 38.4 -0.7
BHOU                               dPKPbc    sPKPdf   01 01 43.2 +0.6
PDG   Podgorica         150.49 318 ⇑P        PKPbc    01 01 44.1 -0.6
KBA   Koelnbreinsper    150.57 331 i P       PKPbc    01 01 43.7 -1.3
      comp=Z,17nm,1.1s,SNR=8.5
BCLA  Clavier           150.58 344 dPKPbc    PKPbc    01 01 44.0 -0.6
BCLA                               dPKPab    PKPab    01 01 49.9 -1.4
BGES  Gesves            150.67 344 dPKPbc    PKPbc    01 01 44.3 -0.5
SNF   Seneffe           150.75 345 dPKPbc    PKPbc    01 01 43.6 -1.4
SNF                                dPKP      pPKPbc   01 01 47.5 -0.1
MYKA  Terra Mystica     150.77 330 eP        PKPbc    01 01 43.3 -2.0
      comp=Z,10nm,1.1s
BMRD  Maredsous         150.82 344 dPKPbc    PKPbc    01 01 44.1 -1.0
BMRD                               dPKPab    pPKPbc   01 01 47.7 -0.1
RCHB  Rochefort         150.84 344 dPKPbc    PKPbc    01 01 43.8 -1.5
RCHB                               dPKPab    sPKPbc   01 01 49.7 +0.9
STU   Stuttgart         150.86 338  IAMs_20  IAMs_20  02 06 45.8
      comp=Z,827nm,22.0s
WLF   Walferdange       151.04 342 dPKPbc    PKPbc    01 01 45.4 -0.3
WLF                                dPKPab    PKPab    01 01 51.2 -2.0
DOU   Dourbes           151.06 345 dPKPbc    PKPbc    01 01 44.5 -1.2
WATA  Walderalm         151.13 333 i P       PKPbc    01 01 45.5 -0.7
      comp=Z,23nm,1.3s,SNR=8.2
WTTA  Wattenberg        151.16 333 i P       PKPbc    01 01 45.8 -0.6
      comp=Z,34nm,1.4s,SNR=7.7
ABTA  Abfaltersbach     151.19 332 eP        PKPbc    01 01 44.6 -1.7
      comp=Z,20nm,1.2s
MOTA  Moosalm           151.31 334 i P       PKPbc    01 01 46.0 -0.7
      comp=Z,23nm,1.1s,SNR=6.5
RETA  Reutte            151.34 334 eP        PKPbc    01 01 45.9 -0.8
      comp=Z,8.5nm,1.1s
SQTA  Sankt Quirin      151.37 334 i P       PKPbc    01 01 46.0 -0.8
      comp=Z,23nm,1.4s,SNR=8.3
BFO   Black Forest      151.53 338  PKPbc    PKPbc    01 01 45.0 -2.0
BFO                                 IAMs_20  IAMs_20  02 06 18.7
      comp=Z,791nm,22.0s
BFO   Black Forest      151.53 338  PKIKP    PKPbc    01 01 45.0 -2.0
FETA  Feichten          151.73 334 i P       PKPbc    01 01 47.2 -0.4
      comp=Z,14nm,1.0s,SNR=6.7
DAVA  Damuels           151.85 335 eP        PKPbc    01 01 46.1 -1.8
      comp=Z,6.2nm,1.1s
ECH   Echery            152.02 340  IAMs_20  IAMs_20  02 07 17.5
      comp=Z,920nm,22.0s
DAVOX Davos/Dischmat    152.26 335  PKPbc    PKPbc    01 01 47.3 -1.6
      comp=Z,12nm,0.9s,baz=203,slow=2.5,SNR=14
TUE   Stuetta           152.73 335  PKPab    PKPab    01 02 02.4 +1.7
SENIN Lac Senin/Sane    153.58 337  PKPbc    PKPbc    01 01 50.2 -1.6
SENIN                               PKPab    PKPab    01 02 05.3 +1.0
SENIN                               IAMs_20  IAMs_20  02 07 57.9
      comp=Z,756nm,19.0s
CEL   Celeste           154.92 314  IAMs_20  IAMs_20  01 59 46.8
      comp=Z,833nm,22.0s
SSB   Saint Sauveur     155.46 340  IAMs_20  IAMs_20  02 16 14.4
      comp=Z,685nm,19.0s
PGAV  Gavieira, Arco    160.63   3 eP        PKPdf    01 01 55.0 +1.9
PGAV  Gavieira, Arco    160.63   3 eLR       LR       01 57 46.4
      comp=Z,1μm,18.0s
KEST  Kesra             160.66 316  PKPab    PKPab    01 02 35.3 +0.3
      comp=Z,4.0nm,0.9s,baz=292,slow=5.5,SNR=3.9
MVO   Moncorvo          161.46   0 eP        PKPdf    01 01 52.0 -1.9
MVO   Moncorvo          161.46   0 eLQ       LQ       01 48 46.8
MVO                                eLR       LR       01 57 49.8
      comp=Z,1μm,20.0s
MTE   Manteigas         162.22   1 eP        PKPdf    01 01 57.1 +2.4
MTE   Manteigas         162.22   1 eLQ       LQ       01 27 08.8
MTE   Manteigas         162.22   1 eLQ       LQ       01 49 23.6
MTE                                eLR       LR       01 58 36.1
      comp=Z,845nm,20.0s
ESDC  Sonseca Array     162.75 352  PKPab    PKPab    01 02 44.3 +0.5
      comp=Z,2.4nm,0.9s,baz=18,slow=3.8,SNR=14
PMRV  Marv??o           163.19   1 eP        PKPdf    01 01 55.1 -0.6
PMRV  Marv??o           163.19   1 ePP       PP       01 06 35.4 +5.8
PMRV  Marv??o           163.19   1 eLQ       LQ       01 50 39.4
PMRV                               eLR       LR       01 58 42.9
      comp=Z,924nm,18.0s
LIC   Lamto             163.64 187 eP        PKPab    01 02 48.0 -0.2
      comp=Z,44nm,1.4s
KIC   Kosan Boka        163.74 188 eP        PKPab    01 02 48.6 -0.1
      comp=Z,30nm,1.4s
TIC   Toumodi           164.06 187 eP        PKPab    01 02 50.1  0.0
DBIC  Dimbokro          164.06 188  PKPab    PKPab    01 02 49.8 -0.3
      comp=Z,32nm,1.4s,baz=150,slow=5.4,SNR=4.1
MESJ  Messejana         164.74   4 ePKPdf    PKPdf    01 01 57.0 -0.1
MESJ                                IAMs_20  IAMs_20  02 08 49.1
      comp=Z,2μm,33.9s
MESJ  Messejana         164.74   4 ePKIKP    PKPdf    01 01 57.0 -0.1
PVAQ  Vaqueiros         165.20   2 eP        PKPdf    01 01 58.7 +1.2
PVAQ  Vaqueiros         165.20   2 ePP       PP       01 06 42.8 +2.7
PVAQ  Vaqueiros         165.20   2 eLQ       LQ       01 51 14.3
PVAQ                               eLR       LR       01 59 55.2
      comp=Z,2μm,20.0s
MORF  Marmelete         165.24   5 ePKPdf    PKPdf    01 01 57.5 -0.2
MORF                                IAMs_20  IAMs_20  02 12 09.6
      comp=Z,2μm,24.4s
MORF  Marmelete         165.24   5 ePKIKP    PKPdf    01 01 57.4 -0.2
PMOZ  Porto Moniz, M    166.37  39 eP        PKPdf    01 02 01.2 +2.5
PMOZ  Porto Moniz, M    166.37  39 ePP       PP       01 06 45.6 -1.6
PMOZ  Porto Moniz, M    166.37  39 eLR       LR       02 02 44.3
      comp=Z,637nm,20.0s
TOA0  Torodi Ar. Sit    167.51 223  PKPab    PKPab    01 03 02.9 -2.5
TORD  Torodi Ar. Bea    167.51 223  PKP      PKPdf    01 01 58.5 -1.4
      comp=Z,1.4nm,1.0s,baz=82,slow=3.1,SNR=5.5
TORD                                PKPab    PKPab    01 03 05.2 -0.2
      comp=Z,5.5nm,0.9s,baz=114,slow=6.5,SNR=13
TORD                                PP       PP       01 06 55.5 +2.4
      comp=Z,3.6nm,1.1s,baz=173,slow=2.5,SNR=4.3
KOWA  Kowa              171.49 200  PKPab    PKPab    01 03 22.5 -0.3
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WEL 16 00:45:42.9, 40°S ± 24° × 17°5E ± 2°7, h34km ± 21km, M2.8/4, ML2.6/4, MLv2.8/4, Error ellipse: s-maj=0.0km s-min=0.0km az=129.1, Cook Strait

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Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s   ISC
KIW   Kapiti Island       0.44 164  P        Pb       00 45 52.5 -0.2
KIW                                 S        Sn       00 46 00.5 +0.9
OGWZ  Otaki Gorge         0.50 140  P        Pn       00 45 53.7 +0.1
OGWZ                                S        Sn       00 46 02.4 +1.4
MRZ   Mangatainoka R      0.67 110  P        Pn       00 45 55.7 -0.2
MRZ                                 S        Sb       00 46 06.6 +1.1
HOWZ  Holdsworth Sta      0.74 128  P        Pn       00 45 57.1 +0.1
TCW   Tory Channel        0.85 205  P        Pn       00 45 57.7 -0.7
TCW                                 S        Sn       00 46 08.9 -0.8
DVHZ  Dannevirke          1.09  83  P        Pb       00 46 04.8 +1.4
BFZ   Birch Farm          1.17 102  P        Pb       00 46 08.2 +3.6
BFZ   Birch Farm          1.17 102  P        Pb       00 46 07.6 +3.0
BFZ   Birch Farm          1.17 102  P        Pb       00 46 08.0 +3.4
PNHZ  Pukenui             1.23  65  P        Pn       00 46 01.9 -1.8
ANWZ  Angora Road         1.32  91  P        Pb       00 46 06.5 -0.6
BHHZ  Black Hill Sta      1.39  47  P        Pn       00 45 58.1 -7.8
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*IDC **16** 00:48:30.7 ± 1.6, 22°.47S × 172°.97E, h0km, mb3.7/3, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=47.2km s-min=36.7km az=5.0*

*NEIC **16** 00:48:33.6 ± 1.6, 22°.2S ± 0°.1 × 172°.99E ± 0°.09, h10km ± 1km, mb4.6/14, Error ellipse: s-maj=22.9km s-min=13.5km az=354.0*

ISC 16 00:48:30.8 ± 0.9, **22°.0S** ± 0°.1 × **173°.11E** ± 0°.09, **h10km, n33, σ1§14**/27, **mb4.5**/8, **Southeast of Loyalty Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s   ISC
MARNC Mare, Loyalty       4.75 276  Pn       Pn       00 49 43.8 +1.3
PINNC Pines Island,       5.27 263  Pn       Pn       00 49 50.8 +1.2
PINNC                               Sn       Sn       00 50 48.5 -2.0
LIFNC LIFOU               5.60 282  Pn       Pn       00 49 55.1 +0.8
OUENC Ouen Island, N      5.82 265  Pn       Pn       00 49 58.2 +1.0
ONTNC Ouen Toro           6.17 266  Pn       Pn       00 50 03.4 +1.3
DZM   Mont Dzumac         6.18 268  Pn       Pn       00 50 02.9 +0.6
      3.4nm,0.3s,baz=136,slow=15,SNR=6.7
DZM                                 Sn       Sn       00 51 04.0 -9.0
      1.0nm,0.3s,baz=332,slow=17,SNR=1.2
      5.8nm,0.3s
DZM   Mont Dzumac         6.18 268           Pn       00 50 03.5 +1.3
LHI   Lord Howe Isla     15.69 230           Pn       00 52 12.2 +0.2
LHI                                 IAmb     IAmb     00 52 18.8
      comp=Z,67nm,1.1s
NIUE  Niue               16.16  83  Pn       P        00 52 22.5 +1.1
PLWZ  Palliser           19.57 175  P        Pn       00 53 00.3 +0.1
EIDS  Eidsvold           20.44 256           Pn       00 53 11.6 +1.1
LTZ   Lake Taylor        20.71 182  P        P        00 53 11.2 -0.1
LTZ                                 IAmb     IAmb     00 53 11.6
      comp=Z,16nm,0.8s
ARMA  Armidale           20.98 242  Pn       P        00 53 16.9 +2.5
ARMA                                IAmb     IAmb     00 53 36.4
      comp=Z,6.7nm,1.0s
FOZ   Fox Glacier        21.62 187  P        P        00 53 21.6 +0.6
FOZ                                 IAmb     IAmb     00 53 23.4
      comp=Z,39nm,1.0s
RPZ   Rata Peaks         21.70 184  P        P        00 53 22.8 +0.9
RPZ                                 IAmb     IAmb     00 53 38.5
      comp=Z,20nm,1.1s
COEN  Coen               29.53 281  P        P        00 54 35.8  0.0
COEN                                IAmb     IAmb     00 54 50.4
      comp=Z,15nm,1.1s
BBOO  Buckleboo          34.44 244  P        P        00 55 18.4 -0.3
BBOO                                IAmb     IAmb     00 55 37.9
      comp=Z,9.3nm,1.1s
WR0   Warramunga Arr     36.00 266  P        P        00 55 32.5 +0.2
ASAR  Alice Springs      36.09 260  P        P        00 55 33.2 +0.1
      comp=Z,1.4nm,0.8s,baz=84,slow=9.4,SNR=3.6
      comp=Z,1.4nm,0.8s
WRA   Warramunga Arr     36.19 266  P        P        00 55 32.7 -1.3
      comp=Z,0.3nm,0.3s,baz=96,slow=8.4,SNR=6.1
      comp=Z,0.3nm,0.3s
WRA   Warramunga Arr     36.19 266  P        P        00 55 34.3 +0.3
H11S2 WAKE ISLAND Hy     40.75 351  T        T        01 40 11.3
      baz=172
H11S3 WAKE ISLAND Hy     40.76 351  T        T        01 40 08.5
      baz=172
H11S1 WAKE ISLAND Hy     40.77 351  T        T        01 40 12.7
      baz=172
FORT  Forrest            41.05 248  P        P        00 56 13.8 -0.8
H11N1 WAKE ISLAND Hy     41.92 351  T        T        01 41 37.3
      baz=173
H11N3 WAKE ISLAND Hy     41.93 351  T        T        01 41 39.3
      baz=173
H11N2 WAKE ISLAND Hy     41.94 351  T        T        01 41 37.1
      baz=173
VNDA  Vanda              55.81 183  P        P        00 58 05.7 -2.1
      comp=Z,0.7nm,0.8s,baz=353,slow=6.4,SNR=2.3
      comp=Z,0.7nm,0.8s
SBA   Scott Base         55.96 182  P        P        00 58 09.5 +0.7
QSPA  South Pole Qui     68.05 180  P        P        00 59 29.4 -1.0
QSPA                                IAmb     IAmb     00 59 30.6
      comp=Z,4.0nm,1.1s
EKA   Eskdalemuir Ar    146.62 356  PKPbc    PKiKP    01 08 14.1 -1.1
      comp=Z,1.7nm,0.9s,baz=348,slow=3.2,SNR=4.3
GERES GERESS Array B    148.62 333  PKPbc    PKPab    01 08 21.2 -0.5
      comp=Z,0.6nm,0.8s,baz=35,slow=4.1,SNR=2.7
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*VAO **16** 00:51:08.2 ± 0.3, 13°.83S × 73°.26W, h10km, mb4.6*

*ARE **16** 00:51:09 ± 2.3, 13°.71S ± 0°.07 × 73°.10W ± 0°.08, h16km ± 4km, Error ellipse: s-maj=12.0km s-min=8.8km az=64.0*

*NEIC **16** 00:51:14.0 ± 1.6, 13°.76S ± 0°.07 × 73°.01W ± 0°.08, h26km ± 5km, mb4.5/58, ML4.3(ARE), Error ellipse: s-maj=12.2km s-min=9.0km az=65.0*

*IDC **16** 00:51:15.4 ± 1.6, 13°.85S × 73°.04W, h51km ± 15km, mb3.8/13, mbtmp4.1/20, ML3.7/6, MS3.8/4, Error ellipse: s-maj=20.4km s-min=10.6km az=47.0*

ISC 16 00:51:10.5 ± 0.4, **13°.78S** ± 0°.05 × **72°.98W** ± 0°.06, **h10km, n147, σ1§21**/147, **mb4.5**/37, **Central Peru**

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Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s   ISC
NNA   Nana                4.17 295  P        Pn       00 52 15.4 +1.2
      18nm,0.3s,baz=121,slow=12,SNR=34
NNA                                 S        Sn       00 53 04.6 +1.6
      101nm,0.7s,baz=180,slow=18,SNR=1.7
      40nm,0.3s
NNA   Nana                4.17 295  Pn       Pn       00 52 15.3 +1.0
LPAZ  La Paz              5.31 119  P        Pn       00 52 35.0 +4.6
      2.5nm,0.3s,baz=303,slow=11,SNR=48
LPAZ                                LR       LR       00 55 01.2
      comp=Z,769nm,20.1s,baz=309,slow=42
      11nm,0.5s
LPAZ  La Paz              5.31 119  Pn       Pn       00 52 34.0 +3.6
PB12  IPOC Station P      5.44 152  Pn       Pn       00 52 33.8 +2.0
PB16  IPOC Station P      5.63 144  Pn       Pn       00 52 38.0 +3.3
CZSB  Cruzeiro do Su      6.01   3  eP       Pn       00 52 39.2 -0.4
PB11  IPOC Station P      6.75 152           Pn       00 52 50.7 +0.9
TA01  Diego Aracena       7.26 159  Pn       Pn       00 52 56.9 +0.1
PB08  IPOC Station P      7.31 151           Pn       00 52 59.2 +1.5
PATCX Punta Patache       7.51 159  Pn       Pn       00 53 00.6 +0.4
ETMB  Extrema             7.70  60  eP       Pn       00 53 04.8 +2.0
PB01  IPOC Station P      7.96 156           Pn       00 53 06.7 +0.3
PB02  IPOC Station P      8.06 159           Pn       00 53 07.6 -0.2
PB07  IPOC Station P      8.44 160           Pn       00 53 13.9 +0.9
ATAH  Atahualpa           8.48 321  P        Pn       00 53 16.2 +2.4
      2.5nm,0.3s,baz=208,slow=3.3,SNR=17
ATAH                                LR       LR       00 56 38.4
      comp=Z,542nm,18.9s,baz=155,slow=38
      39nm,0.8s
PB09  IPOC Station P      8.73 157           Pn       00 53 18.9 +1.8
PB04  IPOC Station P      8.93 163  Pn       Pn       00 53 19.1 -0.6
PB06  IPOC Station P      9.45 160  Pn       Pn       00 53 26.5 -0.4
LVC   Limon Verde         9.60 157  P        Pn       00 53 29.7 +0.6
      0.9nm,0.3s,baz=28,slow=6.4,SNR=7.7
LVC                                 LR       LR       00 57 24.6
      comp=Z,331nm,20.0s,baz=348,slow=39
      3.5nm,0.5s
LVC   Limon Verde         9.60 157  eP       Pn       00 53 28.2 -0.9
TBTG  Tabatinga, AM      10.00  18  eP       Pn       00 53 34.0 -0.3
SIV   San Ignacio        11.72 102  P        Pn       00 53 59.3 +1.4
      baz=269,slow=12,SNR=12
      1.9nm,0.6s
VILB  Vilhena            12.46  88  eP       Pn       00 54 08.0 -0.1
AC02  Maricunga          13.48 165  Pn       Pn       00 54 23.3 +0.9
PTLB  Pontes e Lacer     13.50  99  eP       Pn       00 54 22.1 -0.1
OTAV  Otavalo            14.94 338           Pn       00 54 42.2 -0.2
OTAV  Otavalo            14.94 338  eP       Pn       00 54 38.3 -4.1
PDRB  Porto dos Gac      16.00  84  eP       P        00 54 58.6 -0.7
NBRS  Nobres             16.70  94  eP       P        00 55 06.3 -0.8
SALV  Santo Antonio      16.84  99  eP       Pn       00 55 06.2 -0.3
CLDB  Colider            17.03  82  eP       P        00 55 11.4 +0.6
AQDB  Aquidauana         17.80 114           Pn       00 55 19.0 +0.6
AQDB                                IAmb     IAmb     00 55 21.2
      comp=Z,27nm,1.0s
AQDB  Aquidauana         17.80 114  eP       Pn       00 55 18.9 +0.4
PP1B  Ponte de Pedra     17.83 105  eP       P        00 55 20.4 +0.8
ROSC  El Rosal           18.54 356  P        Pn       00 55 29.6 +1.6
      comp=Z,0.9nm,0.3s,baz=103,slow=23,SNR=2.0
ROSC                                LR       LR       01 03 15.3
```

```
         comp=Z,446nm,18.8s,baz=298,slow=39
         comp=Z,3.4nm,0.4s
ROSC  El Rosal          18.54 356        Pn     00 55 28.5 +0.5
ROC1  El Roble          19.20 175  P     P      00 55 35.0 +0.2
CPUP  Villa Florida     19.26 133  P     P      00 55 35.5 +0.2
         comp=Z,13nm,0.7s,baz=311,slow=11,SNR=24
CPUP  Villa Florida     19.26 133  P     P      00 55 35.5 +0.2
CPUP                               IAmb  IAmb   00 55 36.9
         comp=Z,21nm,0.9s
CPUP  Villa Florida     19.26 133  eP    P      00 55 35.7 +0.4
PEL   Peldehue          19.39 174  P     Pn     00 55 38.5 +0.7
ITTB  Itaituba          19.41  63  eP    P      00 55 36.9 -0.1
MT05  Renca             19.64 174  P     P      00 55 39.6 +0.3
MT05                               IAmb  IAmb   00 55 58.6
         comp=Z,50nm,1.4s
C2SB  Chapadao do Su    19.95 107  eP    P      00 55 44.2 +1.2
MT01  Popeta            20.06 176  P     P      00 55 45.1 +1.2
LMEL  Las Melosas       20.14 173  P     P      00 55 45.9 +0.8
BO04  La Punta          20.24 174  P     Pn     00 55 48.5 +0.6
BOAV  Boa Vista         20.27  38  eP    P      00 55 47.0 +0.7
DVLD  Doverlandia       20.28 101  eP    P      00 55 47.2 +0.6
ARAG  Araguaiana, MT    20.56  98  eP    P      00 55 50.4 +0.9
BO01  Tunca             20.60 176  P     P      00 55 51.2 +1.5
MCR1  Marechal Candi    20.79 124  eP    P      00 55 50.2 -1.8
ZARC  Zaragoza, Cauc    21.21 355  P     P      00 55 56.0 -0.5
ZARC                               IAmb  IAmb   00 56 08.1
         comp=Z,19nm,0.9s
SNDB  Serra Nova Dou    21.21  88  eP    P      00 55 57.2 +0.6
TRCB  Terra Rica        21.28 118  eP    P      00 55 57.6 +0.3
ITQB  Itaqui            21.89 139  P     P      00 56 04.6 +0.8
ITQB  Itaqui            21.89 139  eP    P      00 56 01.3 -2.4
ML02  Panimavida        21.94 177  P     P      00 56 05.0 +0.7
MALB  Monte Alegre      21.97  59  eP    P      00 56 04.8  0.0
PCMB  Pacaembu          22.09 114  eP    P      00 56 07.0 +1.0
ITRB  Iturama           22.44 108  eP    P      00 56 08.7 -1.1
PTGB  Pitanga           22.51 122  eP    P      00 56 09.3 -1.3
SDV   Santo Domingo     22.63   6  P     P      00 56 14.7 +2.7
         comp=Z,0.9nm,0.4s,baz=51,slow=19,SNR=1.5
         comp=Z,0.9nm,0.4s
SDV   Santo Domingo     22.63   6  eP    P      00 56 10.6 -1.4
BAUV  El Baul           23.10  13  P     P      00 56 15.9 -0.7
SJCC  San Jacinto, C    23.62 355  P     P      00 56 21.7 -0.3
ITAB  Concordia         23.63 128  eP    P      00 56 22.1 +0.2
PEXB  Peixe             24.11  89  eP    P      00 56 25.1 -1.6
FRTB  Fartura           24.12 117  eP    P      00 56 26.4 -0.3
BDFB  Brasilia          24.21  98  P     P      00 56 28.0 +0.2
         comp=Z,2.1nm,0.5s,baz=246,slow=10.0,SNR=2.3
         comp=Z,2.1nm,0.5s
BB19B Bebedouro         24.41 111  eP    P      00 56 28.3 -1.1
CPSB  Cacapava Do Su    24.46 136  eP    P      00 56 29.7 -0.1
MCPB  Macapa, AP        24.63  59  eP    P      00 56 32.2 +0.8
PLTB  Pedras Altas      25.22 138  eP    P      00 56 35.4 -1.2
SMTB  Santa Maria do    25.36  82  eP    P      00 56 38.9 +0.8
CNLB  Canela            25.67 131  eP    P      00 56 40.1 -0.6
VAO   Valinhos          26.30 114  eP    P      00 56 47.4 +0.9
PLCA  Paso Flores       26.94 176  P     P      00 56 51.3 -0.8
         comp=Z,4.1nm,0.8s,baz=350,slow=9.1,SNR=6.4
         comp=Z,4.1nm,0.8s
PLCA  Paso Flores       26.94 176  eP    P      00 56 50.1 -2.0
NBPN  Ponto Novo - B    32.14  89  eP    P      00 57 38.0 -0.6
NBPS  Pedro II - PI     32.46  76  eP    P      00 57 42.2 +0.7
NBPB  Pedra_Branca-C    33.88  79  eP    P      00 57 54.1 +0.3
NBMO  Morrinhos-CE      34.14  75  eP    P      00 57 55.1 -0.9
NBMA  Muriti-CE         34.20  83  eP    P      00 57 57.7 +1.1
NBCL  Cascavel-CE       35.50  78  eP    P      00 58 08.2 +0.4
NBAN  Anadia - AL       36.14  88  eP    P      00 58 12.6 -0.7
RCBR  Riachuelo         37.34  81  eP    P      00 58 24.0 +0.5
NBRF  Rio Formoso -     37.44  86  eP    P      00 58 23.7 -0.6
USHA  Ushuaia           41.12 176  P     P      00 58 53.9 -0.6
         comp=Z,3.9nm,0.6s,baz=34,slow=4.5,SNR=5.3
         comp=Z,3.9nm,0.6s
TXAR  Lajitas Array     52.10 326  P     P      01 00 19.8 -1.4
         comp=Z,1.0nm,0.8s,baz=139,slow=8.4,SNR=5.9
         comp=Z,1.0nm,0.8s
MGMO  Mountain Grove    53.81 341  P     P      01 00 33.6 +0.1
MGMO                               IAmb  IAmb   01 00 35.5
         comp=Z,7.8nm,1.1s
CCM   Cathedral Cave    54.33 342  P     P      01 00 37.1 -0.1
CCM                                IAmb  IAmb   01 00 41.5
         comp=Z,4.4nm,0.9s
Q44A  Meyer Farm, Va    54.51 345  P     P      01 00 39.2 +0.7
S39A  Bolivar           54.65 340  P     P      01 00 40.1 +0.5
S39A                               IAmb  IAmb   01 00 44.0
         comp=Z,4.5nm,1.1s
R40A  Maddies Statio    54.86 341  P     P      01 00 36.7 -4.3
HDIL  Hopedale          56.14 345  P     P      01 00 50.9 +0.7
WVNY  West Valley, N    56.14 355  P     P      01 00 51.6 +1.3
121A  Cookes Peak, D    56.82 325  P     P      01 00 55.4 -0.1
121A                               IAmb  IAmb   01 00 58.9
         comp=Z,5.4nm,1.1s
FRNY  Flat Rock         58.33 359  P     P      01 01 06.1 +0.5
FRNY                               IAmb  IAmb   01 01 20.1
         comp=Z,8.2nm,1.0s
TUC   Tucson            58.39 322  P     P      01 01 06.7 +0.3
SDCO  Great Sand Dun    59.66 330  P     P      01 01 16.2 +0.8
SDCO                               IAmb  IAmb   01 01 18.5
         comp=Z,3.5nm,1.0s
LCMT  Little Creek M    63.15 325  P     P      01 01 39.2 +0.3
SRU   San Rafael Swe    63.21 328  P     P      01 01 39.3  0.0
SRU                                IAmb  IAmb   01 01 50.5
         comp=Z,2.7nm,0.9s
MSU   Marysvale         63.64 326  P     P      01 01 43.4 +1.2
RDMU  Red Mountain      63.84 330  P     P      01 01 43.1 -0.3
RDMU                               IAmb  IAmb   01 01 46.4
         comp=Z,3.6nm,0.8s
SHPR  Sheep Range       63.90 323  P     P      01 01 44.2 +0.4
SHPR                               IAmb  IAmb   01 01 48.5
         comp=Z,6.1nm,1.5s
AGMN  Agassiz Nation    65.06 343  P     P      01 01 51.6 +0.6
AGMN                               IAmb  IAmb   01 01 56.2
         comp=Z,3.7nm,0.7s
DUG   Dugway, Tooele    65.20 327  P     P      01 01 52.9 +0.6
DUG                                IAmb  IAmb   01 01 56.0
         comp=Z,3.4nm,0.8s
R11A  Troy Canyon, C    65.41 324  P     P      01 01 53.4 -0.3
PDAR  Pinedale Array    65.51 331  P     P      01 01 54.8 +0.4
         comp=Z,0.4nm,0.6s,baz=129,slow=4.2,SNR=3.7
         comp=Z,0.4nm,0.6s
PDAR  Pinedale Array    65.51 331  P     P      01 01 55.1 +0.7
BELA  Belgrano 2        66.90 172  P     P      01 02 03.8 +1.3
BELA                               IAmb  IAmb   01 02 09.3
         comp=Z,7.2nm,1.3s
OMMB  Old Mammoth Mi    66.92 322  P     P      01 02 03.4 -0.2
OMMB                               IAmb  IAmb   01 02 07.2
         comp=Z,4.4nm,0.8s
NVAR  Mina Array Bea    67.04 323  P     P      01 02 04.1 -0.1
         comp=Z,0.7nm,0.6s,baz=150,slow=7.5,SNR=4.6
         comp=Z,0.7nm,0.6s
YHH   Holmes Hill       67.67 332  P     P      01 02 09.7 +1.5
YHL   Hebgen Lake       67.87 332  P     P      01 02 10.3 +0.9
YHL                                IAmb  IAmb   01 02 15.0
         comp=Z,4.5nm,1.0s
YERR  Yerington         67.96 323  P     P      01 02 10.9 +0.9
YERR                               IAmb  IAmb   01 02 13.9
         comp=Z,3.6nm,0.7s
PNTR  Pine Nut          68.24 322  P     P      01 02 11.4 -0.3
PNTR                               IAmb  IAmb   01 02 16.3
         comp=Z,6.5nm,0.8s
PAHR  Pah Rah Range     68.52 323  P     P      01 02 14.0 +0.6
PAHR                               IAmb  IAmb   01 02 17.5
         comp=Z,5.4nm,0.8s
VNA3  Neumayer Olymp    68.59 162  P     P      01 02 11.4 -1.9
MCMT  McKenzie Canyo    68.63 331  P     P      01 02 14.0 -0.1
VNA1  Neumayer--Stat    68.81 161  P     P      01 02 13.1 -1.5
MFID  Camas Ranch       69.08 328        P      01 02 17.5 +0.7
MFID                               IAmb  IAmb   01 02 20.7
         comp=Z,4.8nm,0.9s
BEKR  Beckworth         69.19 323  P     P      01 02 18.8 +1.1
BEKR                               IAmb  IAmb   01 02 21.1
         comp=Z,4.4nm,1.2s
ORV   Oroville          69.67 322  P     P      01 02 21.2 +0.8
MOD   Modoc Plateau     70.48 324  P     P      01 02 26.1 +0.6
MOD                                IAmb  IAmb   01 02 29.1
         comp=Z,5.7nm,0.8s
MSO   Missoula          70.63 332  P     P      01 02 26.8 +0.5
MSO                                IAmb  IAmb   01 02 29.5
         comp=Z,8.6nm,1.5s
SNAA  Sanae             70.80 162  P     P      01 02 27.3 +0.3
SNAA  Sanae             70.80 162  P     P      01 02 27.5 +0.6
I07A  Izee              71.47 327  P     P      01 02 32.3 +0.8
I07A                               IAmb  IAmb   01 02 35.6
         comp=Z,4.0nm,1.1s
TROLL Troll, Antarti    72.52 162  P     P      01 02 38.5 +1.1
QSPA  South Pole Qui    76.37 180  P     P      01 03 00.9 +1.0
QSPA                               IAmb  IAmb   01 03 01.9
         comp=Z,8.7nm,1.1s
YKA   Yellowknife Ar    82.67 342  P     P      01 03 32.4 -1.5
         comp=Z,0.8nm,0.9s,baz=137,slow=5.3,SNR=7.5
         comp=Z,0.8nm,0.9s
YKA   Yellowknife Ar    82.67 342  P     P      01 03 35.0 +1.2
HG4B  Hotspring         82.67 328  P     P      01 03 35.4 +1.2
ESDC  Sonseca Array     83.22  47  P     P      01 03 36.4 -1.0
         comp=Z,0.6nm,0.9s,baz=266,slow=5.5,SNR=1.8
         comp=Z,0.6nm,0.9s
VNDA  Vanda             83.73 190  P     P      01 03 38.8 -0.5
         comp=Z,0.8nm,0.9s,baz=178,slow=3.0,SNR=4.1
         comp=Z,0.8nm,0.9s
BOSA  Boshof            90.55 120  P     P      01 04 13.1 -0.5
         comp=Z,1.7nm,1.0s,baz=110,slow=19,SNR=1.7
         comp=Z,1.7nm,1.0s
INK   Inuvik            92.41 341  P     P      01 04 19.6 -1.3
         comp=Z,1.3nm,0.9s,baz=98,slow=5.6,SNR=2.2
         comp=Z,1.3nm,0.9s
MAW   Mawson            92.78 164  P     P      01 04 21.5 -1.3
         comp=Z,2.4nm,0.8s,baz=235,slow=4.8,SNR=4.8
         comp=Z,2.4nm,0.8s
AKTO  Aktyubinsk       126.12  37  PKP   PKPdf  01 10 12.2 -0.9
         comp=Z,0.8nm,0.6s,baz=36,slow=5.3,SNR=3.6
ZALV  Zalesovo Beam    136.27  19  PKP   PKPdf  01 10 30.2 -1.9
         comp=Z,2.1nm,0.7s,baz=298,slow=2.3,SNR=8.7
KURBB Kurchatov Arra   136.58  26  PKP   PKPdf  01 10 33.0 +0.1
         comp=Z,0.7nm,0.8s,baz=312,slow=2.7,SNR=7.4
WRA   Warramunga Arr   137.05 219  PKP   PKPdf  01 10 33.3 -1.4
         comp=Z,0.9nm,0.9s,baz=147,slow=2.0,SNR=2.3
SONM  Songino Array    146.04   1  PKPbc PKPdf  01 10 49.9 -0.2
         comp=Z,1.1nm,0.7s,baz=336,slow=1.5,SNR=5.4
KSRS  Korea Array      149.95 325  PKPbc PKPbc  01 11 00.7 -0.8
         comp=Z,0.9nm,0.4s,baz=34,slow=3.7,SNR=3.1
```

IDC 16 00:58:33.7±10.0**, 39°.48N**×**97°.62E, h0^{km}, mbtmp3.4**/4**, ML3.1**/3**, Error ellipse: s-maj=126.0km s-min=36.3km az=159.0, Gansu**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op    ISC       h  m  s    ISC
SONM  Songino Array     10.49  34   Pn    Pn      01 01 05.4   0.0
         0.3nm,0.3s,baz=220,slow=13,SNR=4.9
SONM                                Lg    Lg      01 04 07.2
         0.1nm,0.3s,baz=221,slow=31,SNR=6.6
         0.7nm,0.4s
MKAR  Makanchi Array    13.36 308   Pn    Pn      01 01 40.6  -3.9
         0.1nm,0.3s,baz=116,slow=14,SNR=1.6
         0.5nm,0.9s
ZALV  Zalesovo Beam     16.88 333   Pn    Pn      01 02 31.3  +0.1
         0.2nm,0.3s,baz=139,slow=13,SNR=5.1
         1.5nm,0.6s
KURBB Kurchatov Arra    17.44 316   P     Pn      01 02 37.6  -0.7
         0.4nm,0.5s,baz=118,slow=12,SNR=3.1
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*IDC **16** 01:15:52.8±1.4, 17°.96S×178°.11W, h458^{km}±15^{km}, mb3.7/18, mbtmp4.4/20, Error ellipse: s-maj=14.1km s-min=9.9km az=126.0*

*NEIC **16** 01:15:54.0±2.2, 18°.14S±0°.07×178°.07W±0°.09, h470^{km}±6^{km}, mb4.3/77, Error ellipse: s-maj=15.0km s-min=6.9km az=54.0*

*NOU **16** 01:15:56.7, 18°.07S×177°.76W, h493^{km}, MLv4.4/7, Fiji Islands Region*

ISC 16 01:15:55.9±0.3**, 18°.12S**±0°.07×**178°.13W**±0°.07**, h500^{km}, n396, σ0^{s}.92**/404**, mb4.2**/59**, 46C-46D, Fiji Islands region**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op    ISC       h  m  s    ISC
LKBA  Tubou, Lakemba     0.66 260   P     P       01 16 57.5  +1.1
DGTI  Dogotuki           2.73 311   P     P       01 17 06.0  +0.8
AFI   Afiamalu           7.41  56   P     P       01 17 42.0  -4.4
         30nm,0.5s,baz=14,slow=2.1,SNR=5.6
AFI                                 S     S       01 19 08.2  -8.6
         48nm,0.5s,baz=334,slow=23,SNR=6.0
AFI   Afiamalu           7.41  56   P     P       01 17 41.7  -4.7
NIUE  Niue               7.84  98   P     P       01 17 47.0  -3.7
FUNA  Funafuti           9.88 344   P     P       01 18 11.3  -0.9
LIFNC LIFOU             14.05 257   P     P       01 18 54.1  -2.0
PINNC Pines Island,     14.24 249   P     P       01 18 56.4  -1.8
OUENC Ouen Island, N    14.73 251   P     P       01 19 01.3  -2.1
DZM   Mont Dzumac       15.01 252   P     P       01 19 05.2  -1.2
         2.8nm,0.7s,baz=106,slow=23,SNR=1.9
DZM   Mont Dzumac       15.01 252   P     P       01 19 05.3  -1.1
DZM                                 IAmb  IAmb    01 19 11.8
         comp=Z,4.8nm,0.8s
OUZ   Omahuta           18.55 202   P     P       01 19 42.9  +1.7
OUZ   Omahuta           18.55 202   P     P       01 19 43.4  +2.2
         comp=Z,98nm,0.8s
MXZ   Matakaoa Point    19.62 188   P     P       01 19 49.8  -1.2
URZ   Urewera           20.49 191   P     P       01 19 56.5  -2.3
         comp=Z,15nm,0.5s,baz=46,slow=2.7,SNR=10
URZ   Urewera           20.49 191   P     P       01 19 56.8  -2.1
THZ   Tophouse          24.78 196   P     P       01 20 36.1  -1.2
RPZ   Rata Peaks        27.10 197   P     P       01 20 58.9  +1.1
         comp=Z,10nm,0.8s,baz=278,slow=0.8,SNR=5.6
         comp=Z,10nm,0.8s
RPZ   Rata Peaks        27.10 197   P     P       01 20 59.0  +1.2
LBZ   Lake Benmore      27.96 198   P     P       01 21 04.3  -1.0
MLZ   Mavora Lakes      29.49 200   P     P       01 21 19.7  +1.0
WHZ   Wether Hill Ro    30.01 200   P     P       01 21 23.2   0.0
ARMA  Armidale          30.07 240   P     P       01 21 24.9  +0.9
ARMA                                IAmb  IAmb    01 21 26.0
         comp=Z,5.6nm,0.7s
TOO   Toolangi          37.24 231   P     P       01 22 24.8  +0.4
TOO                                 IAmb  IAmb    01 22 26.8
         comp=Z,21nm,1.3s
COEN  Coen              37.37 271   P     P       01 22 25.5  -0.2
COEN                                IAmb  IAmb    01 22 32.0
         comp=Z,28nm,1.3s
STKA  Stephens Creek    38.76 241   P     P       01 22 37.5  +0.6
         comp=Z,5.0nm,0.5s,baz=90,slow=11,SNR=16
         comp=Z,5.0nm,0.5s
STKA  Stephens Creek    38.76 241   P     P       01 22 37.6  +0.7
WAKE  Wake Island       40.06 337   P     P       01 22 47.0  -0.5
BBOO  Buckleboo         43.54 241   P     P       01 23 15.1  +0.2
WR0   Warramunga Arr    44.66 260   P     P       01 23 23.0  -0.8
WR0                                 IAmb  IAmb    01 23 25.8
         comp=Z,7.6nm,1.2s
WB0   Warramunga Arr    44.82 260   P     P       01 23 24.1  -1.0
WB0                                 IAmb  IAmb    01 23 41.0
         comp=Z,11nm,1.4s
WB2   Warramunga Arr    44.84 260   P     P       01 23 24.5  -0.7
WRA   Warramunga Arr    44.85 260   P     P       01 23 24.6  -0.6
         comp=Z,0.8nm,0.3s,baz=92,slow=7.9,SNR=59
WRA                                 S     S       01 29 22.3  -3.9
         comp=Z,0.3nm,0.7s,baz=99,slow=17,SNR=1.7
         comp=Z,0.8nm,0.3s
WRA   Warramunga Arr    44.85 260   P     P       01 23 24.7  -0.6
ASAR  Alice Springs     44.99 254   P     P       01 23 26.6  +0.3
         comp=Z,3.8nm,0.3s,baz=89,slow=8.5,SNR=61
ASAR                                S     S       01 29 26.9  -1.2
         comp=Z,2.4nm,1.0s,baz=89,slow=15,SNR=12
         comp=Z,3.8nm,0.3s
ASAR  Alice Springs     44.99 254   P     P       01 23 26.1  -0.3
FORT  Forrest           50.16 245   P     P       01 24 05.0  -0.1
KNRA  Kununurra         50.73 264   P     P       01 24 09.6  +0.1
KNRA                                IAmb  IAmb    01 24 10.3
         comp=Z,15nm,0.8s
MBWA  Marble Bar        58.28 256   P     P       01 25 02.5   0.0
MBWA                                IAmb  IAmb    01 25 28.3
         comp=Z,17nm,1.4s
SBA   Scott Base        60.23 184   P     P       01 25 14.9  +0.3
SBA                                 IAmb  IAmb    01 25 18.5
         comp=Z,7.5nm,1.0s
VNDA  Vanda             60.26 185   P     P       01 25 16.8  +1.9
         comp=Z,1.8nm,0.6s,baz=352,slow=7.6,SNR=11
         comp=Z,1.8nm,0.6s
VNDA  Vanda             60.26 185   P     P       01 25 14.7  -0.1
CASY  Casey             66.06 205   P     P       01 25 52.7  +0.4
CASY                                IAmb  IAmb    01 25 54.5
         comp=Z,5.7nm,0.8s
JYT   Yasato            66.89 324   P     P       01 25 58.0   0.0
MJAR  Matsushiro Arr    68.23 323   P     P       01 26 05.2  -1.0
         comp=Z,8.5nm,0.7s,baz=160,slow=6.2,SNR=19
         comp=Z,8.5nm,0.7s
MJAR  Matsushiro Arr    68.23 323   P     P       01 26 06.2  -0.1
MJAR                                IAmb  IAmb    01 26 07.4
         comp=Z,5.3nm,0.7s
MAJO  Matsushiro        68.24 323   P     P       01 26 06.2   0.0
MJB9  Matsu-Tunnel      68.24 323   P     P       01 26 06.2  -0.1
JSD   Sado              69.27 324   P     P       01 26 12.7  +0.3
QSPA  South Pole Qui    71.94 180   P     P       01 26 29.3  +1.4
         comp=Z,6.2nm,0.6s,baz=313,slow=0.3,SNR=60
         comp=Z,6.2nm,0.6s
QSPA  South Pole Qui    71.94 180   P     P       01 26 28.2  +0.3
QSPA                                IAmb  IAmb    01 26 29.8
         comp=Z,7.4nm,0.7s
PETK  Petropavlovsk-    73.95 345   P     P       01 26 38.7  -0.8
         comp=Z,5.3nm,0.7s,baz=147,slow=8.9,SNR=13
         comp=Z,5.3nm,0.7s
PETK  Petropavlovsk-    73.95 345   P     P       01 26 38.4  -1.1
KSRS  Korea Array       75.03 318   P     P       01 26 47.3  +1.4
         comp=Z,2.3nm,0.7s,baz=127,slow=6.4,SNR=6.7
         comp=Z,2.3nm,0.7s
CIS   Catalina Islan    76.60  48   P     P       01 26 55.3  +0.6
         baz=237
USRK  Ussuriysk Ar.     76.94 326   P     P       01 26 58.1  +1.8
         comp=Z,3.3nm,0.5s,baz=109,slow=6.2,SNR=6.1
         comp=Z,3.3nm,0.5s
KMRM  Mail Ridge        77.01  40   P     P       01 26 58.7  +1.8
BFSC  Mount Baldy Ra    77.57  48   P     P       01 27 01.0  +0.8
         baz=238
EDW2  Edwards Air Fo    77.68  47   P     P       01 27 01.7  +1.0
         baz=237
MONP2 Monument Peak     77.75  49   P     P       01 27 02.0  +0.7
         baz=239
ISA   Isabella, Lake    77.77  46   P     P       01 27 02.2  +1.1
         baz=237
OHAK  Old Harbor        77.88  14   P     P       01 27 01.3  +0.2
OHAK                                IAmb  IAmb    01 27 10.4
         comp=Z,23nm,1.2s
L02F  Cave Junction     78.25  38   P     P       01 27 04.4  +0.9
         baz=232
CWC   Cottonwood Cre    78.46  45   P     P       01 27 05.7  +0.7
         baz=237
MDJ   Mudanjiang        78.51 325   P     P       01 27 06.4  +1.6
YBH   Yreka Blue Hor    78.52  39   P     P       01 27 06.4  +1.3
K02D  Willamette Mer    78.54  38   P     P       01 27 05.8  +0.6
         baz=232
KDAK  Kodiak Island     78.54  14   P     P       01 27 05.2  +0.5
KDAK                                IAmb  IAmb    01 27 05.3
         comp=Z,9.0nm,1.0s
BELC  Belle Mtn. Jos    78.62  49   P     P       01 27 06.7  +0.8
         baz=239
BEKR  Beckworth         78.87  42   P     P       01 27 08.2  +1.1
HUMO  Hull Mountain     78.90  38   P     P       01 27 08.7  +1.6
PNTR  Pine Nut          78.92  43   P     P       01 27 08.9  +1.5
PNTR                                IAmb  IAmb    01 27 09.4
         comp=Z,10nm,0.9s
L04D  Klamath Falls     79.06  39   P     P       01 27 09.0  +1.0
         baz=233
YERR  Yerington         79.09  43   P     P       01 27 09.3  +1.0
YERR                                IAmb  IAmb    01 27 10.1
         comp=Z,6.5nm,0.8s
FURC  Furnace Creek,    79.30  46   P     P       01 27 10.5  +1.3
         baz=238
IRM   Iron Mountain     79.31  49   P     P       01 27 10.3  +0.9
         baz=239
Q19K  Cape Douglas,     79.36  13   P     P       01 27 09.3  +0.2
         baz=204
NVAR  Mina Array Bea    79.39  44   P     P       01 27 10.6  +0.6
         comp=Z,2.7nm,0.7s,baz=224,slow=9.1,SNR=16
         comp=Z,2.7nm,0.7s
NVAR  Mina Array Bea    79.39  44   P     P       01 27 11.2  +1.2
P18K  Big Mountain,     79.47  12   P     P       01 27 09.2  -0.5
         baz=202
NV11  Mina Array Sit    79.49  44   P     P       01 27 11.4  +1.0
J04D  Umpqua Nationa    79.78  38   P     P       01 27 13.0  +1.1
J04D  Umpqua Nationa    79.78  38   P     P       01 27 13.0  +1.1
         baz=233
KVN   Kaiserville       79.87  43   P     P       01 27 13.0  +0.5
214A  Organ Pipe Nat    79.94  52   P     P       01 27 13.8  +1.1
         baz=241
I04A  Tendick Farm,     79.94  37   P     P       01 27 13.6  +1.1
         baz=233
TPNV  Topopah Spring    79.98  46   P     P       01 27 13.8  +0.8
         baz=238
MOD   Modoc Plateau     80.08  40   P     P       01 27 14.1  +0.7
MOD                                 IAmb  IAmb    01 27 15.2
         comp=Z,4.0nm,0.7s
PDMCI Parker Dam,Lak    80.11  49   P     P       01 27 13.6  +0.1
         baz=240
P19K  Oil Pt            80.11  13   P     P       01 27 13.4  +0.4
         baz=204
K05A  Summer Lake       80.20  39   P     P       01 27 15.2  +1.1
K05A                                IAmb  IAmb    01 27 15.8
         comp=Z,5.7nm,0.7s
J05D  Fort Rock, OR     80.32  38   P     P       01 27 15.7  +1.0
         baz=234
CN2   Changchun         80.35 322   eP    P       01 27 14.9  +0.3
CN2                                 pmax  pmax
         comp=Z,20nm,1.0s
O19K  Port Alsworth     80.39  12   P     P       01 27 14.4   0.0
         baz=203
BNX   BinXian           80.42 325   ⇑P    P       01 27 16.1  +1.2
BNX                                 pmax  pmax
         comp=Z,48nm,0.9s
BNX                                 pmax  pmax
         comp=Z,470nm,4.2s
N18K  Kilae Creek       80.55  11   P     P       01 27 14.4  -0.8
         baz=201
H04A  Detroit Lake      80.60  37   P     P       01 27 16.4  +0.5
O20K  Slope Mountain    80.63  13   P     P       01 27 15.4  -0.4
         baz=204
BRSE  Bradley Lake S    80.73  14   P     P       01 27 16.2   0.0
         baz=206
PINE  Pine Mountain     80.79  38   P     P       01 27 17.9  +0.8
PINE                                IAmb  IAmb    01 27 19.4
         comp=Z,6.0nm,0.8s
N19K  Bonanza Creek     80.94  11   P     P       01 27 17.0  -0.4
         baz=203
SEW   Seward            81.35  14   P     P       01 27 18.8  -0.5
         baz=207
WVOR  Wild Horse Val    81.40  40   P     P       01 27 21.3  +1.0
WVOR                                IAmb  IAmb    01 27 22.2
         comp=Z,8.5nm,1.2s
TUC   Tucson            81.62  52   P     P       01 27 22.9  +1.3
TUC   Tucson            81.62  52   P     P       01 27 22.6  +1.1
         baz=242
I07A  Izee              81.81  38   P     P       01 27 23.3  +1.0
I07A                                IAmb  IAmb    01 27 24.3
         comp=Z,4.8nm,0.8s
M19K  Big River Lodg    81.96  11   P     P       01 27 22.0  -0.5
         baz=203
L19K  White Mountain    82.14  11   P     P       01 27 23.6  +0.2
L19K                                IAmb  IAmb    01 27 25.7
         comp=Z,7.4nm,1.5s
L19K  White Mountain    82.14  11   P     P       01 27 23.8  +0.4
         baz=202
RC01  Rabbit Creek A    82.16  13   P     P       01 27 23.5   0.0
         baz=207
CCUT  Cedar City        82.26  47   P     P       01 27 26.5  +1.6
U15A  North Rim         82.46  48   P     P       01 27 27.0  +1.0
U15A                                IAmb  IAmb    01 27 28.4
         comp=Z,5.7nm,0.7s
L20K  Farewell, AK      82.59  11   P     P       01 27 25.7   0.0
         baz=203
GLI   Glacier Island    82.59  15   P     P       01 27 25.5  -0.3
         baz=210
ELK   Elko              82.63  43   P     P       01 27 27.4  +0.7
TTA   Tatalina          82.64  10   P     P       01 27 26.2  +0.2
TTA                                 IAmb  IAmb    01 27 27.4
         comp=Z,5.6nm,1.0s
TTA   Tatalina          82.64  10   P     P       01 27 26.5  +0.5
         baz=201
G08A  Pilot Rock        82.81  38   P     P       01 27 28.5  +1.1
G08A                                IAmb  IAmb    01 27 29.2
         comp=Z,8.4nm,1.3s
SML   Sawmill           83.11  14   P     P       01 27 28.9  +0.5
         baz=208
PPLA  Purkeypile        83.29  12   P     P       01 27 29.6  +0.3
         baz=205
BMRM  Bremner River     83.29  16   P     P       01 27 29.3   0.0
         baz=212
MESA  MESA              83.34  17   P     P       01 27 29.6  -0.1
         baz=214
K20K  Telida            83.36  11   P     P       01 27 29.8  +0.2
         baz=203,SNR=9.9
SCM   Sheep Creek Mo    83.37  14   P     P       01 27 29.7   0.0
SCM                                 IAmb  IAmb    01 27 30.5
         comp=Z,9.6nm,0.9s
SCM   Sheep Creek Mo    83.37  14   P     P       01 27 29.4  -0.2
         baz=209,SNR=5.9
BMO   Blue Mountains    83.54  39   P     P       01 27 32.0  +1.0
MFID  Camas Ranch       83.66  40   P     P       01 27 32.5  +0.8
PNL   Peninsula         83.68  19   P     P       01 27 32.2  +1.0
         baz=217
MAW   Mawson            83.75 200   P     P       01 27 31.7  +0.2
         comp=Z,1.6nm,0.8s,baz=118,slow=9.4,SNR=2.6
         comp=Z,1.6nm,0.8s
CAST  Castle Rocks      83.78  11   P     P       01 27 29.6  -2.1
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CAST				IAmb	IAmb	01 27 31.2	
	comp=Z,6.5nm,0.8s						
CAST	Castle Rocks	83.78	11	P	P	01 27 30.5	-1.2
	baz=205,SNR=8.0						
VRDI	Verde Repeater	83.81	16	P	P	01 27 31.8	-0.3
VRDI				IAmb	IAmb	01 27 33.0	
	comp=Z,11nm,1.4s						
N25K	Chitina, Valde	83.83	15	P	P	01 27 31.5	-0.5
N25K				IAmb	IAmb	01 27 33.1	
	comp=Z,6.2nm,0.9s						
N25K	Chitina, Valde	83.83	15	P	P	01 27 31.6	-0.4
	baz=212,SNR=5.3						
M24K	Tolsona, Glenn	83.88	14	P	P	01 27 32.8	+0.6
	baz=210						
WAT6	Susitna Watana	83.93	14	P	P	01 27 32.1	-0.5
	baz=209,SNR=7.7						
DUG	Dugway, Tooele	83.94	44	P	P	01 27 33.0	-0.2
	baz=240						
MCARA	McCarthy VSAT	84.05	16	P	P	01 27 33.0	0.0
	baz=213						
J20K	Nowinta River	84.11	10	P	P	01 27 33.2	0.0
	baz=203,SNR=5.6						
BARN	Barnard Glacie	84.15	17	P	P	01 27 33.7	0.0
BARN				IAmb	IAmb	01 27 36.2	
	comp=Z,8.1nm,1.0s						
TRF	Thorofare Moun	84.16	12	P	P	01 27 32.7	-1.0
	baz=206,SNR=7.2						
CTG	Chitna Glacier	84.16	17	P	P	01 27 33.1	-0.6
	baz=215						
F10A	Beach Ranch, E	84.20	38	P	P	01 27 34.4	+0.1
F10A				IAmb	IAmb	01 27 35.6	
	comp=Z,5.2nm,0.9s						
RND	Reindeer	84.42	13	P	P	01 27 34.4	-0.5
RND				IAmb	IAmb	01 27 35.6	
	comp=Z,12nm,1.0s						
DHY	Denali Highway	84.44	14	P	P	01 27 35.1	0.0
	baz=209						
BPAW	Bear Paw Mtn.	84.61	12	P	P	01 27 35.3	-0.4
	baz=206						
HLID	Hailey	84.61	41	P	P	01 27 36.7	+0.2
HLID	Hailey	84.61	41	P	P	01 27 35.9	-0.6
	baz=239						
MCK	McKinley	84.69	13	P	P	01 27 35.4	-0.7
MCK				IAmb	IAmb	01 27 36.7	
	comp=Z,16nm,1.4s						
MCK	McKinley	84.69	13	P	P	01 27 35.9	-0.2
	baz=208						
PAX	Paxson	84.79	14	P	P	01 27 36.3	-0.4
	baz=211						
M26K	Nabesna, AK	84.91	16	P	P	01 27 37.5	+0.2
M26K				IAmb	IAmb	01 27 38.5	
	comp=Z,8.2nm,1.1s						
M26K	Nabesna, AK	84.91	16	P	P	01 27 37.6	+0.2
	baz=213,SNR=6.2						
YUK6	Outpost Mounta	85.00	18	P	P	01 27 38.8	+0.8
	baz=218						
YUK3	Moose Creek	85.07	17	P	P	01 27 38.7	+0.4
	baz=216,SNR=10						
S34M	Telegraph Cree	85.14	23	P	P	01 27 39.1	+0.8
	baz=224						
M27K	Edge Creek, AK	85.17	16	P	P	01 27 38.7	+0.1
M27K				IAmb	IAmb	01 27 40.2	
	comp=Z,9.9nm,1.1s						
M27K	Edge Creek, AK	85.17	16	P	P	01 27 38.9	+0.3
	baz=214,SNR=8.7						
HYT	Haines Junctio	85.17	19	P	P	01 27 38.8	+0.1
	baz=218						
YUK4	Talbot Arm	85.24	18	P	P	01 27 39.7	+0.6
	baz=217						
L26K	Log Cabin Wild	85.35	15	P	P	01 27 39.6	+0.2
	baz=213						
K24K	Donnelly Dome	85.44	14	P	P	01 27 40.0	+0.2
	baz=211,SNR=6.5						
MNTX	Cornudas Mount	85.48	55	P	P	01 27 40.3	-0.5
	baz=246						
BVCY	Beaver Creek	85.48	16	P	P	01 27 40.9	+0.8
	baz=215						
WRH	Wood River Hil	85.52	13	P	P	01 27 39.1	-1.0
WRH				IAmb	IAmb	01 27 41.2	
	comp=Z,7.5nm,1.0s						
NEW	Newport	85.53	36	P	P	01 27 40.9	+0.4
	baz=236						
H21K	Melozitna Rive	85.70	10	P	P	01 27 41.7	+0.7
	baz=204						
HDA	Harding Lake	85.70	13	P	P	01 27 40.7	-0.3
	baz=210,SNR=5.7						
N30M	Aishikik Lake	85.79	18	P	P	01 27 41.9	+0.3
	baz=219						
I23K	Minto, Yukon-K	85.86	12	P	P	01 27 42.8	+1.1
	baz=207						
WHY	Whitehorse	85.86	20	P	P	01 27 42.6	+0.6
	baz=221						
TXAR	Lajitas Array	85.88	58	P	P	01 27 43.5	+0.7
	comp=Z,2.6nm,0.7s,baz=220,slow=6.1,SNR=29						
	comp=Z,2.6nm,0.7s						
ANMO	Albuquerque	86.02	51	P	P	01 27 43.6	+0.1
	baz=245						
IL31		86.03	13	P	P	01 27 42.0	-0.6
IL31				IAmb	IAmb	01 27 43.0	
	comp=Z,5.6nm,1.1s						
ILAR	Eielson Array	86.03	13	P	P	01 27 41.7	-0.9
	comp=Z,2.2nm,0.7s,baz=220,slow=5.4,SNR=30						
	comp=Z,2.2nm,0.7s						
ILAR	Eielson Array	86.03	13	P	P	01 27 41.4	-1.2
XLT	XiLinHaoTe	86.08	319	⇑iP	P	01 27 45.1	+1.7
XLT				pmax	pmax		
	comp=Z,14nm,1.1s						
P33M	Teslin, Yukon	86.21	21	P	P	01 27 43.9	+0.3
	baz=223						
N31M	Braeburn, Yuko	86.21	19	P	P	01 27 44.3	+0.8
	baz=220						
POKR	Poker Plat Res	86.22	13	P	P	01 27 43.1	-0.3
	baz=209						
J25K	Salcha River,	86.23	14	P	P	01 27 43.6	0.0
	baz=211						
MCMT	McKenzie Canyo	86.23	40	P	P	01 27 44.6	+0.3
K27K	Chicken	86.50	15	P	P	01 27 45.1	+0.3
	baz=214						
J26L	Joseph Creek	86.54	14	P	P	01 27 45.4	+0.3
	baz=213,SNR=5.7						
XAN	Xi'an	86.60	307	⇑P	P	01 27 48.6	+2.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL	Bilibino	86.67	354	P	P	01 27 45.7	+0.2
BILL				IAmb	IAmb	01 27 47.3	
	comp=Z,3.8nm,0.8s						
M30M	Minto, Yukon	86.75	18	P	P	01 27 46.2	+0.1
	baz=219,SNR=7.3						
REDW	Red Top Meadow	86.77	42	P	P	01 27 46.9	0.0
REDW				IAmb	IAmb	01 27 48.2	
	comp=Z,4.9nm,1.2s						
S22A	4UR Ranch, Cre	86.95	49	P	P	01 27 48.6	+0.6
	baz=244						
O20A	White River Ci	87.01	46	P	P	01 27 48.7	+0.6
	baz=243						
M31M	Drury Creek, Y	87.19	19	P	P	01 27 49.1	+1.0
	baz=221						
DAWY	Dawson	87.22	16	P	P	01 27 49.3	+1.0
	baz=216						
BW06	Boulder Array	87.32	43	P	P	01 27 49.6	+0.1
	baz=242						
PD31	Pinedale Array	87.32	43	P	P	01 27 49.1	-0.4
PDAR	Pinedale Array	87.32	43	P	P	01 27 49.6	+0.2
	comp=Z,0.9nm,0.6s,baz=218,slow=2.9,SNR=12						
	comp=Z,0.9nm,0.6s						
EGAK	Eagle	87.35	15	P	P	01 27 50.0	+1.2
	baz=215						
BOZ	Bozeman (W)	87.36	40	P	P	01 27 50.2	+0.7
BOZ	Bozeman (W)	87.36	40	P	P	01 27 49.9	+0.5
	baz=241						
COLD	Coldfoot	87.57	11	P	P	01 27 51.1	+1.3
	baz=206						
HHC	Hu-ho-hao-te	87.61	314	eP	P	01 27 51.0	+0.3
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.9s						
SDCO	Great Sand Dun	87.90	49	P	P	01 27 52.7	+0.3
	baz=245						
MSTX	Muleshoe	88.40	54	P	P	01 27 54.7	+0.1
	baz=247						
RLMT	Red Lodge	88.60	41	P	P	01 27 56.4	+1.0
	baz=242						
BMAR	Burnt Mountain	88.81	12	P	P	01 27 55.9	+0.3
TOLK	Toolik Lake Re	88.95	10	P	P	01 27 57.3	+1.1
	baz=207						
CMAR	Chiang Mai Arr	89.20	290	P	P	01 27 58.4	-0.2
	comp=Z,1.5nm,0.6s,baz=123,slow=2.3,SNR=11						
	comp=Z,1.5nm,0.6s						
AMTX	Amarillo	89.59	53	P	P	01 28 00.1	0.0
	baz=248						
TROLL	Troll, Antarti	90.10	180	P	P	01 28 02.1	+0.3
ABTX	Abilene, Hawle	90.33	56	P	P	01 28 03.9	+0.5
	baz=249						
SNAA	Sanae	90.38	179	P	P	01 28 03.1	+0.1
VNA3	Neumayer Olymp	90.51	176	P	P	01 28 03.6	0.0
VNA1	Neumayer--Stat	91.18	177	P	P	01 28 06.5	-0.1
SONM	Songino Array	93.88	319	P	P	01 28 20.2	+0.7
	comp=Z,0.6nm,0.4s,baz=135,slow=4.8,SNR=6.9						
	comp=Z,0.6nm,0.4s						
YKA	Yellowknife Ar	94.41	25	P	P	01 28 21.1	-0.3
	comp=Z,0.6nm,0.6s,baz=240,slow=4.4,SNR=8.3						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	94.41	25	P	P	01 28 20.7	-0.7
EYMN	Ely	101.03	43	P	Pdif	01 28 51.7	+0.3
	baz=255						
LPAZ	La Paz	103.07	112	Pdiff	Pdif	01 29 03.0	+0.9
	comp=Z,0.7nm,0.4s,baz=136,slow=4.4,SNR=7.3						
P52A	Corning	105.85	53	P	PKiKP	01 33 22.8	+0.3
	baz=259						
ZALV	Zalesovo Beam	108.56	322	PKiKP	PKiKP	01 33 26.8	-0.4
	comp=Z,1.5nm,0.7s,baz=131,slow=1.9,SNR=5.3						
ZALV	Zalesovo Beam	108.56	322		PKiKP	01 33 26.3	-0.9
MKAR	Makanchi Array	109.47	314	PKiKP	PKiKP	01 33 29.1	-0.1
	comp=Z,1.4nm,0.5s,baz=203,slow=1.0,SNR=24						
MKAR	Makanchi Array	109.47	314		PKiKP	01 33 28.5	-0.7
KKAR	Karatay Array	117.66	310	PKPdf	PKPdf	01 33 44.2	-0.7
GAR	Garm	117.77	305	PKPdf	PKiKP	01 33 45.8	+0.4
ARU	Arti	123.17	326	PKPdf	PKPdf	01 33 54.2	-0.9
ABKAR	Akbulak array	124.27	318	PKPdf	PKPdf	01 33 56.3	-1.1
ABKAR	Akbulak array	124.27	318	PKPdf	PKPdf	01 33 57.1	-0.3
ARCES	ARCESS Array B	126.57	350	PKP	PKPdf	01 34 01.5	+0.2
	comp=Z,4.2nm,0.8s,baz=27,slow=1.6,SNR=13						
ARCES	ARCESS Array B	126.57	350		PKPdf	01 34 00.6	-0.7
GEYT	Alibeck	127.38	304	PKP	PKiKP	01 34 04.9	+0.5
	comp=Z,1.4nm,0.4s,baz=207,slow=11,SNR=5.2						
GEYT	Alibeck	127.38	304	PKPdf	PKPdf	01 34 03.7	-0.1
FINES	FINESS Array B	133.46	344	PKhKP	PKPpre	01 33 59.4	
	comp=Z,2.3nm,1.0s,baz=8.7,slow=1.8,SNR=2.1						
FINES				PKP	PKPdf	01 34 14.3	-0.2
	comp=Z,2.1nm,0.7s,baz=336,slow=1.5,SNR=8.2						
FINES				SKPbc	SKPab	01 36 58.9	+0.1
	comp=Z,0.5nm,0.6s,baz=60,slow=5.5,SNR=1.3						
FINES	FINESS Array B	133.46	344	PKPdf	PKPdf	01 34 13.7	-0.8
NB2	NORSAR Subarra	136.62	353	PKP	PKPdf	01 34 13.8	-6.7
	comp=Z,0.8nm,0.7s,baz=20,slow=3.8						
NOA	NORSAR Array B	136.62	353	PKhKP	PKPpre	01 34 11.1	
	comp=Z,0.3nm,0.6s,baz=16,slow=3.8,SNR=1.7						
NOA				PKP	PKPdf	01 34 21.3	+0.8
	comp=Z,0.4nm,0.7s,baz=26,slow=2.1,SNR=3.6						
KBZ	Khabaz	137.14	316	PKP	PKPdf	01 34 22.6	+0.7
	comp=Z,1.7nm,0.9s,baz=100,slow=3.6,SNR=2.6						
AKASG	Malin Array Be	140.87	332	PKhKP	PKPpre	01 34 22.1	
	comp=Z,1.2nm,0.4s,baz=45,slow=4.4,SNR=6.8						
AKASG				PKP	PKPdf	01 34 28.9	+0.5
	comp=Z,2.5nm,0.5s,baz=44,slow=3.3,SNR=8.6						
SORM	Soroca	143.10	330	⇑P	PKPab	01 34 30.2	+0.2
PURM	Purcari	143.45	327	⇑P	PKPdf	01 34 32.7	-0.5
MILM	Milestii Mici	143.73	328	⇑P	PKPbc	01 34 32.9	+0.4
BNN	Bunyan	143.99	312	PKPdf	PKPdf	01 34 35.1	+0.6
IAS	Iasi	144.15	330	⇑P	PKPab	01 34 34.0	+0.1
LEOM	Leova	144.32	328	⇑P	PKPdf	01 34 35.5	+0.9
KWP	Kalwaria Pacla	144.37	337	eP	PKPdf	01 34 35.0	+0.3
VASR	Vaslui	144.43	329	⇓P	PKPab	01 34 35.7	+0.6
VLDR	Vladesti	144.83	328	⇓P	PKPab	01 34 37.6	+1.0
TLCR		144.90	326	⇓P	PKiKP	01 34 40.1	+0.4
OJC	Ojcow	144.90	340	eP	PKPab	01 34 36.7	-0.1
OJC	Ojcow	144.90	340	PKPdf	PKPdf	01 34 35.5	-0.1
VARL	Varlezi	144.91	328	⇑P	PKPab	01 34 37.4	+0.6
BURAR	Bucovina Array	144.92	332	⇑P	PKPab	01 34 37.8	+0.7
BURAR	Bucovina Array	144.92	332	PKPdf	PKPab	01 34 37.2	+0.2
SCTR	Scanteiesti	144.99	327	⇑P	PKPab	01 34 38.2	+1.0
BIZ	Bicaz	145.02	331	⇓P	PKPab	01 34 38.2	+0.9
GHRR		145.02	328	⇑P	PKPab	01 34 38.2	+0.9
TESR	Tescani	145.07	330	⇑P	PKPab	01 34 37.1	-0.4
KOLS	Kolonicke sedl	145.10	336	ePKP	PKPab	01 34 38.0	+0.4
BR131	Keskin Array S	145.12	315	PKPdf	PKPbc	01 34 37.2	0.0
BRTR	Keskin Array B	145.12	315	PKPbc	PKPab	01 34 38.1	0.0
	comp=Z,14nm,0.9s,baz=134,slow=4.5,SNR=68						
BRTR	Keskin Array B	145.12	315	PKPdf	PKPdf	01 34 36.7	+0.2
SLCR	Slobozia Conac	145.17	328	⇑P	PKPab	01 34 38.7	+0.8
IZVR	Izvoarele	145.20	327	⇓P	PKiKP	01 34 39.7	-0.7
CFR	Carcaliu	145.26	327	⇑P	PKPab	01 34 38.5	+0.3
PANC	Panciu	145.28	328	⇓P	PKPab	01 34 38.4	0.0
TPGR	Topolog	145.32	326	⇓P	PKPab	01 34 38.9	+0.4
KSP	Ksiaz	145.39	344	eP	PKPab	01 34 38.2	-0.4
ODBI	Odobesti	145.41	328	⇑P	PKiKP	01 34 40.0	-0.8
NIE	Niedzica	145.42	339	eP	PKPab	01 34 39.4	+0.6
CRVS	Cervenica-Dubn	145.44	337	ePKP	PKPab	01 34 38.9	+0.1
VRI	Vrincioaia	145.50	329	⇓P	PKPab	01 34 38.9	-0.3
PLOR	Plostina	145.55	329	⇑P	PKPab	01 34 39.0	-0.4
BMR	Baia Mare	145.62	334	⇓P	PKPab	01 34 39.3	-0.3
OSTC	Ostas	145.67	344	⇑ePKP	PKPbc	01 34 39.1	+0.8
CHVC	Chvalec	145.68	344	⇑ePKP	PKPab	01 34 39.8	0.0
HARR	Harsova	145.69	326	⇑P	PKPab	01 34 40.0	+0.1
ARCR	ARCALIA	145.71	332	⇑P	PKPab	01 34 40.3	+0.3
CLL	Collm	145.73	348	⇓iPKPbc	PKPbc	01 34 38.6	+0.2
	comp=Z,20nm,0.8s						
CLL				epPKPdf	pPKPab	01 36 32.0	-1.8
TLBR	Topalu	145.73	326	⇑P	PKPab	01 34 40.1	0.0
OKC	Ostrava-Krasne	145.76	341	⇑ePKP	PKPab	01 34 39.8	-0.2
UPC	Upice	145.77	344	⇑ePKP	PKPab	01 34 40.0	-0.1
COVR	Voineasa-Covas	145.77	329	⇑P	PKPab	01 34 39.7	-0.6
OZUR		145.79	330	⇓P	PKPab	01 34 40.2	-0.1
DPC	Dobruska-Polom	145.83	343	⇑ePKP	PKPab	01 34 40.3	-0.1
LANS	Liptovska Anna	145.93	339	ePKP	PKPab	01 34 41.2	+0.4
BRG	Berggiesshubel	145.93	346	eP	PKPbc	01 34 39.2	+0.2
BRG				Amp		01 34 41.0	
	comp=Z,15nm,1.0s						
MORC	Moravsky Berou	146.00	342	⇑P	PKPab	01 34 40.6	-0.4
MORC	Moravsky Berou	146.00	342	eP	PKPbc	01 34 40.2	+0.9
NEHR	Nehoiu	146.02	329	⇓P	PKPbc	01 34 39.6	+0.1
DOPR	Dopca	146.07	330	⇑P	PKiKP	01 34 43.8	+1.6
SHAB	Shabla	146.08	324	⇑P	PKPbc	01 34 40.3	+0.6
PVCC	Panska Ves	146.11	345	⇑ePKP	PKPab	01 34 41.2	-0.2
MLR	Muntele Rosu	146.15	329	⇓P	PKPbc	01 34 40.8	+0.8
MLR	Muntele Rosu	146.15	329	PKPdf	PKPdf	01 34 38.5	+0.4
MAUC	Maruska	146.27	341	⇑ePKP	PKPab	01 34 41.7	-0.5
CJR	Cluj-Napoca	146.33	333	⇓P	PKPab	01 34 41.9	-0.6
SECR		146.41	328	⇑P	PKPab	01 34 41.8	-1.1
LTVH	Ltavrtes, Hu	146.51	335	⇑P	PKiKP	01 34 42.4	-0.5
LTVH	Ltavrtes, Hu	146.51	335	PKP	PKiKP	01 34 42.3	-0.7
PRU	Pruhonice	146.62	345	⇑ePKP	PKiKP	01 34 42.2	-0.9
DRGR		146.65	334	⇓P	PKPbc	01 34 42.2	+1.0
VRAC	Vranov	146.69	342	⇑P	PKiKP	01 34 42.5	-0.8
VRAC	Vranov	146.69	342	eP	PKiKP	01 34 42.4	-0.9
VYHS	Vyhne	146.71	339	ePKP	PKPbc	01 34 42.4	+1.1
JAVC	Velka Javorina	146.77	341	eP	PKiKP	01 34 43.6	0.0
KOLL	Kolacno	146.78	340	ePKP	PKiKP	01 34 43.0	-0.5
PSZ	Piszkesteto	146.83	338	⇑P	PKPbc	01 34 41.1	-0.6
PSZ	Piszkesteto	146.83	338	PKPdf	PKPdf	01 34 40.3	+1.3
PSZ	Piszkesteto	146.83	338	PKP	PKiKP	01 34 42.9	-0.8
NKC	Novy Kostel	146.86	348	⇑ePKP	PKPbc	01 34 42.7	+1.1
KRUC	Moravsky	146.97	342	eP	PKPbc	01 34 43.0	+1.1
TREC	Trest	147.01	344	⇑ePKP	PKPbc	01 34 43.1	+1.0
BSZH	Besenyszg	147.21	337	⇑P	PKiKP	01 34 43.9	-0.5
BSZH	Besenyszg	147.21	337	PKP	PKiKP	01 34 44.6	+0.2
LOT	Lotru	147.22	331	⇓P	PKPbc	01 34 43.6	+0.7
DEV	Deva	147.27	332	⇓P	PKPbc	01 34 43.8	+1.0
HUMR	Humele	147.32	329	⇑P	PKPbc	01 34 43.5	+0.5
MODS	Modra-Piesok	147.32	341	ePKP	PKiKP	01 34 44.6	-0.1
MEM	Membach	147.42	355	dPKP	PKPbc	01 34 43.9	+0.8
BTNL	Ternell	147.43	355	dPKPbc	PKPbc	01 34 43.5	+0.4
SRO	Srobarova	147.47	339	ePKP	PKiKP	01 34 44.8	-0.1
BSTI	Sart Tilman	147.48	356	dPKPbc	PKPbc	01 34 43.7	+0.5
SIRR	Siria	147.50	334	⇓P	PKiKP	01 34 44.6	-0.5
BUD	Budapest	147.51	338	PKP	PKiKP	01 34 44.6	-0.4
ZST	Bratislava	147.53	341	ePKP	PKiKP	01 34 45.1	0.0
SNF	Seneffe	147.63	357	dPKP	PKiKP	01 34 44.8	-0.4
KHC	Kasperske Hory	147.65	346	PKPdf	PKPdf	01 34 40.1	-0.1
KHC				PKPbc	PKPbc	01 34 44.2	+0.4
KHC	Kasperske Hory	147.65	346	ePKPDF	PKPdf	01 34 40.6	+0.3
KHC				⇑ePKP	PKiKP	01 34 44.9	-0.4
BCLA	Clavier	147.66	356	dPKPdf	PKPdf	01 34 41.6	+1.4
BHOU	Houvegnez	147.67	355	dPKPdf	PKPdf	01 34 41.0	+0.7
BHOU				dPKP	PKiKP	01 34 44.9	-0.4
BGES	Gesves	147.71	356	dPKPab	PKPab	01 34 47.3	-0.6
GZR	Gura Zlata	147.71	332	⇓P	PKPbc	01 34 44.7	+0.6
CKRC	Cesky Krumlov	147.76	345	ePKPDF	PKPdf	01 34 41.0	+0.6
CKRC				⇑ePKP	PKiKP	01 34 45.5	-0.1
BMRD	Maredsous	147.81	357	dPKPdf	PKPdf	01 34 40.6	+0.2
BMRD				dPKPbc	PKPbc	01 34 44.2	+0.2
BMRD				dPKiKP	PKiKP	01 34 45.6	0.0
CSKK	Cskako	147.88	339	PKP	PKiKP	01 34 45.6	-0.2
GERES	GERESS Array B	147.88	345	PKPbc	PKPbc	01 34 45.3	+0.9
	comp=Z,7.7nm,0.5s,baz=39,slow=5.1,SNR=58						
RCHB	Rochefort	147.93	356	dPKP	PKPbc	01 34 45.2	+0.8
DOU	Dourbes	148.03	357	dPKPbc	PKPbc	01 34 45.1	+0.4
BZS	Buzias	148.04	333	⇓P	PKPdf	01 34 42.1	+1.2
CONA	Conrad Observa	148.15	342	i P	PKiKP	01 34 46.3	-0.1
	comp=Z,11nm,0.7s,SNR=8.3						
EGYH	Egyhazaskeszo	148.15	340	PKP	PKiKP	01 34 46.7	+0.4
ISP	Isparta	148.18	314	PKPdf	PKPdf	01 34 41.0	-0.6
ISP				PKPbc	PKPbc	01 34 45.2	-0.4
RONA	Rosalia, Austr	148.22	341	i P	PKiKP	01 34 46.5	-0.1
	comp=Z,12nm,0.7s,SNR=6.7						
HERR	Herculane	148.27	332	⇑P	PKiKP	01 34 46.5	-0.2
MPLH	Magyarpolny	148.29	339	PKP	PKiKP	01 34 47.0	+0.4
WLF	Walferdange	148.34	355	dPKP	PKiKP	01 34 46.9	+0.2
BANR	Banloc	148.43	334	⇑P	PKiKP	01 34 47.7	+0.7
MDVR	Moldovita	148.66	332	⇓P	PKiKP	01 34 47.2	-0.3
MOA	Molln	148.66	344	eP	PKiKP	01 34 47.1	-0.4
	comp=Z,6.7nm,0.9s						
MORH	Mrgy, Hungar	148.73	337	⇓iP	PKPbc	01 34 46.9	+0.4
MPEP	Malo Peshtene	148.78	328	P	PKPab	01 34 59.6	+7.1
ARSA	Arzberg	148.86	342	eP	PKiKP	01 34 48.1	+0.2
	comp=Z,8.5nm,1.1s						
BIOA	Bad Ischl, Aus	148.97	344	eP	PKiKP	01 34 47.8	-0.3
	comp=Z,8.3nm,1.0s						
KOVH	Kovagotottos	149.03	338	PKP	PKiKP	01 34 48.1	-0.1
KDZ	Kurdzhali	149.10	324	i P	PKPdf	01 34 31.6	-11
BLKB	Belogradchik	149.11	330	⇓P	PKiKP	01 34 48.3	-0.2
FRGS	Fruska Gora	149.16	335	⇑P	PKiKP	01 34 48.9	+0.3
FRGS	Fruska Gora	149.16	335	⇓iP	PKPbc	01 34 48.0	+0.3
PLD	Plovdiv	149.18	326	P	PKPdf	01 34 42.4	-0.5
RZN	Rozhen	149.46	325	i P	PKPbc	01 34 48.9	+0.2
SOKA	Soboth	149.52	342	eP	PKPbc	01 34 48.6	0.0
	comp=Z,12nm,1.1s						
PERS	Pernice	149.53	342	i P	PKPbc	01 34 48.8	+0.2
BOVS	Bovan	149.55	331	⇓P	PKPbc	01 34 48.9	+0.3
VTS	Vitosha	149.58	328	⇑P	PKiKP	01 34 50.1	+0.5
VTS	Vitosha	149.58	328	i P	PKiKP	01 34 49.7	0.0
KBA	Koelnbreinsper	149.62	344	eP	PKPbc	01 34 49.0	+0.1
	comp=Z,9.4nm,0.6s						
WATA	Walderalm	149.79	347	i P	PKPbc	01 34 49.7	+0.5
	comp=Z,21nm,1.3s,SNR=6.0						
RETA	Reutte	149.82	348	eP	PKPbc	01 34 49.6	+0.3
	comp=Z,9.3nm,1.2s						
WTTA	Wattenberg	149.85	347	i P	PKiKP	01 34 50.1	0.0
	comp=Z,16nm,0.6s,SNR=8.8						
MOTA	Moosalm	149.88	347	eP	PKiKP	01 34 50.0	-0.2
	comp=Z,12nm,0.9s						
DIVS	Divibare	149.95	333	⇓iP	PKiKP	01 34 50.3	0.0
MYKA	Terra Mystica	149.95	344	eP	PKPbc	01 34 49.8	+0.3
	comp=Z,8.4nm,0.5s						
SQTA	Sankt Quirin	149.98	347	i P	PKPbc	01 34 49.8	+0.1
	comp=Z,12nm,0.7s,SNR=5.7						
MMB	Musomiste	150.06	326	i P	PKPbc	01 34 50.3	+0.4
ABTA	Abfaltersbach	150.13	345	i P	PKPbc	01 34 50.2	+0.2
	comp=Z,19nm,0.7s,SNR=8.0						
VNDS	Vrh nad Dolski	150.14	342	i P	PKiKP	01 34 50.4	-0.1
CRES	Cresnjev	150.16	341	⇓iP	PKPbc	01 34 50.3	+0.3
CRES	Cresnjev	150.16	341	eP	PKiKP	01 34 50.5	-0.1
DAVA	Damuels	150.18	349	i P	PKiKP	01 34 51.3	+0.5
	comp=Z,12nm,1.1s,SNR=5.3						
KKB	Krupnik	150.20	327	i P	PKiKP	01 34 50.9	+0.1
LJU	Ljubljana	150.24	342	eP	PKiKP	01 34 51.0	+0.3
FETA	Feichten	150.27	348	i P	PKPdf	01 34 45.6	+0.9
	comp=Z,15nm,1.2s,SNR=5.4						
BBLS	Lazići	150.38	334	⇓iP	PKiKP	01 34 51.6	+0.4
BOJS	Bojanci	150.51	341	i P	PKiKP	01 34 51.8	+0.5
BLY	Banja Luka	150.51	338	⇓iP	PKiKP	01 34 51.2	-0.1
CEY	Cerknica	150.55	342	⇓iP	PKPbc	01 34 51.3	+0.4
RUDO	Rudo	150.60	334	eP	PKPbc	01 34 51.1	0.0
SJES	Sjenica	150.63	332	⇓iP	PKiKP	01 34 52.2	+0.4
MGRS	Mrkonjic Grad	150.84	337	eP	PKiKP	01 34 52.5	+0.4
SKDS	Skadanscina	150.84	342	eP	PKPbc	01 34 51.5	-0.1
TUE	Stuetta	151.06	349		PKPdf	01 34 46.3	+0.4
TUE				PKPbc	PKiKP	01 34 52.9	+0.2
PDG	Podgorica	151.61	332	⇓P	PKiKP	01 34 53.9	+0.3
PDG	Podgorica	151.61	332	eP	PKiKP	01 34 53.8	+0.2
TREB	Trebinje	151.77	334	eP	PKPbc	01 34 53.6	-0.1
LIT	Litokhoron	151.77	325		PKPbc	01 34 53.3	-0.6
ESDC	Sonseca Array	157.93	12	PKP	PKPdf	01 34 55.6	+0.2
	comp=Z,0.7nm,1.0s,baz=339,slow=2.7,SNR=5.1						
ESDC				PKPab	PKPab	01 35 31.2	-0.3
	comp=Z,1.0nm,1.0s,baz=338,slow=3.4,SNR=6.5						
TORD	Torodi Ar. Bea	175.05	178	PKP	PKPdf	01 35 08.2	-0.6
	comp=Z,1.5nm,1.0s,baz=282,slow=1.4,SNR=5.4						
TORD				PKPab	PKPab	01 36 48.0	+0.5
	comp=Z,0.8nm,1.1s,baz=186,slow=5.8,SNR=2.7						

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*DJA **16** 01:26:00.6±0.4, 8°S±4°×10°8E±°, h10km, M4.0/14, mb3.9/2, MLv4.0/14*

*NEIC **16** 01:26:01.3±1.0, 7°.8S±0°.1×107°.64E±0°.09, h61km±12km, mb4.2/8, Error ellipse: s-maj=18.3km s-min=11.7km az=158.0*

*IDC **16** 01:26:05.5±3.3, 7°.84S×107°.80E, h105km±19km, mb3.5/3, mbtmp3.8/3, Error ellipse: s-maj=99.3km s-min=22.4km az=52.0*

ISC 16 01:26:03.3±0.8, **8°.07S**±0°.06×**107°.85E**±0°.05, **h70**km, **n34**, σ**1s.55**/33, **mb4.1**/6, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	1.04	316	P	Pn	01 26 21.8	-0.5
CNJI				S	Sn	01 26 35.5	-0.9
LEM	Lembang	1.25	349	P	Pn	01 26 25.6	+0.4
	518nm,0.5s,baz=144,slow=14,SNR=69						
LEM				S	Sn	01 26 43.4	+1.8
	260nm,0.4s,baz=331,slow=20,SNR=6.1						
LEM	Lembang	1.25	349	P	Pn	01 26 24.9	-0.3
SKJI	Sukabumi	1.66	309	P	Pn	01 26 31.1	+0.7
SKJI				S	Sn	01 26 51.6	+0.6
DBJI	Dramaga	1.86	324	P	Pn	01 26 33.7	+0.6
YOGI	Yogyakarta	2.43	84	P	Pn	01 26 39.8	-1.0
UGM	Wanagama	2.65	87	Pn	Pn	01 26 42.5	-1.3
UGM	Wanagama	2.65	87	P	Pn	01 26 42.6	-1.2
SMRI	Semarang	2.76	69		Pn	01 26 45.2	0.0
SMRI	Semarang	2.76	69	P	Pn	01 26 44.5	-0.7
WOJI	Wonogiri, Jawa	3.05	86	P	Pn	01 26 48.0	-1.2
XMIS	Christmas Isla	3.24	222	Pn	Pn	01 26 50.6	-1.2
PCJI	Pacitan	3.29	92	P	Pn	01 26 51.9	-0.6
UWJI	Ujung Watu	3.48	62	P	Pn	01 26 54.2	-0.8
PWJI	Pagerwojo	3.91	90	P	Pn	01 27 00.2	-0.7
TPI	Tanjungpandan	5.28	358	P	Pn	01 27 20.0	+0.3
	0.0nm5.2nm,0.8s						
JAGI	Jajag, Banyuwa	6.25	94	Pn	Pn	01 27 33.9	+1.0
JAGI	Jajag, Banyuwa	6.25	94	P	Pn	01 27 32.2	-0.7
GIRL	Giralia	15.74	158	P	P	01 29 47.7	+4.2
KNRA	Kununurra	21.80	112	P	P	01 30 52.7	+2.9
KNRA				IAmb	IAmb	01 31 14.4	
	comp=Z,8.4nm,0.9s						
WB0	Warramunga Arr	28.21	117	P	P	01 31 50.6	+0.8
WB0				IAmb	IAmb	01 31 56.5	
	comp=Z,8.2nm,1.2s						
WRA	Warramunga Arr	28.23	117	P	P	01 31 50.5	+0.6
	comp=Z,0.8nm,0.9s,baz=292,slow=12,SNR=5.3						
	comp=Z,0.8nm,0.9s						
WRA	Warramunga Arr	28.23	117	P	P	01 31 51.0	+1.1
WB2	Warramunga Arr	28.24	117	P	P	01 31 50.7	+0.7
WR0	Warramunga Arr	28.41	117	P	P	01 31 52.2	+0.7
WR0				IAmb	IAmb	01 32 10.9	
	comp=Z,11nm,1.4s						
H08S2	Diego Garcia H	35.02	268	T	T	02 10 02.6	
	baz=92,slow=76,SNR=103						
H08S3	Diego Garcia H	35.03	268	T	T	02 10 03.5	
	baz=92,slow=76,SNR=120						
H08S1	Diego Carcia H	35.04	268	T	T	02 10 04.1	
	baz=92,slow=76,SNR=74						
STKA	Stephens Creek	39.30	132	P	P	01 33 26.1	+0.6
	comp=Z,0.8nm,0.4s,baz=319,slow=9.3,SNR=3.4						
	comp=Z,0.8nm,0.4s						
STKA	Stephens Creek	39.30	132	P	P	01 33 26.2	+0.6
STKA				IAmb	IAmb	01 33 35.6	
	comp=Z,2.6nm,1.4s						
MK31	Makanchi Array	59.17	340	P	P	01 35 51.6	-5.3
MKAR	Makanchi Array	59.17	340	P	P	01 35 53.8	-3.1
	comp=Z,0.8nm,0.5s,baz=148,slow=8.2,SNR=8.8						
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	59.17	340	P	P	01 35 53.1	-3.8

ABKAR	Akbulak array	70.76	329	P	P	01 37 10.8	-1.3

IDC 16 01:38:13.1±2.4,**7°.66S**×**127°.64E**,**h0**^{km},**mb3.2**/1, **mbtmp3.6**/3,**ML3.9**/2,**MS3.5**/1,**Error ellipse: s-maj=280.0km s-min=33.3km az=64.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.68	237	LR	LR	01 41 06.9	
	comp=Z,524nm,18.4s,baz=40,slow=37						
WRA	Warramunga Arr	13.83	153	Pn	Pn	01 41 30.0	-0.6
	0.6nm,0.3s,baz=329,slow=14,SNR=22						
WRA				Sn	Sn	01 43 54.5	-11
	1.5nm,0.3s,baz=337,slow=22,SNR=11						
	1.0nm,0.4s						
ASAR	Alice Springs	17.02	160	P	Pn	01 42 13.2	+0.5
	0.3nm,0.3s,baz=342,slow=10,SNR=18						
ASAR				S	Sn	01 45 16.1	-6.5
	0.4nm,0.4s,baz=128,slow=8.6,SNR=7.0						
	1.1nm,0.6s						
MKAR	Makanchi Array	67.52	328	P	P	01 49 11.2	0.0
	0.1nm,0.5s,baz=112,slow=6.4,SNR=1.9						
	0.1nm,0.5s						

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*GII **16** 01:42:03.7±0.0,28°.49N×34°.81E,h5^{km},mb4.3/2,MD4.1/2, Mm3.7/2*

*HLW **16** 01:42:04.3,28°.47N×34°.72E,h7^{km}±1^{km},Md2.5,Ml4.3*

*IDC **16** 01:42:05.2±1.8,28°.57N×34°.67E,h0^{km},mb3.4/4, mbtmp3.3/8,ML2.8/4,Error ellipse: s-maj=30.5km s-min=14.6km az=115.0*

ISC 16 01:42:04.6±1.4,**28°.49N**±0°.04×**34°.71E**±0°.05,**h4**^{km}±9^{km}, **n43**,σ**1^{s}17**/54,**mb3.2**/4,**Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDHB	Dhahab	0.24	341	P	Pg	01 42 10.0	+0.7
	baz=340						
NUB	Nuweibaa	0.53	354	P	Pg	01 42 14.3	-0.6
	baz=352						
HKAT	Jabal Katrina	0.63	273	P	Pg	01 42 16.7	-0.1
	baz=275						
HKAT				S	Sg	01 42 25.4	+0.4
	baz=275						
HBST	Basata	0.72	2	P	Pg	01 42 18.7	+0.2
	baz=0.0						
HBST				S	Sb	01 42 29.0	-1.1
	baz=0.0						
TR1	Tor 1	0.82	234	P	Pb	01 42 21.0	-0.5
	baz=237						
TR2	Tor 2	0.88	263	P	Pg	01 42 21.2	-0.2
	baz=265						
EIL	Elat	1.19	10	Pg	Pg	01 42 26.4	-1.1
	44nm,0.3s,baz=189,slow=15,SNR=197						
EIL				Lg	Lg	01 42 43.2	
	292nm,0.3s,baz=146,slow=21,SNR=14						
EIL	Elat	1.19	10	Pg	Pg	01 42 25.6	-1.9
EIL				Sg	Sg	01 42 42.2	-0.7
HRDS	Abu Rudays	1.26	280	P	Pg	01 42 27.8	-1.0
	baz=282						
MBRI	Mt Berech	1.31	8	Pg	Pn	01 42 27.7	-2.1
MBRI				Sg	Sg	01 42 46.4	-0.3
HRFI	Mount Harif	1.56	11	Pn	Pn	01 42 31.8	-1.5
HRFI				Sn	Sn	01 42 51.7	-2.3
KRMI	Paran Flat	1.62	1	Pn	Pn	01 42 32.5	-1.5
KRMI				Sn	Sn	01 42 53.7	-1.7
HHRG	Al Ghardaqah	1.62	219	P	Pn	01 42 33.4	-0.7
	baz=216						
GRB	Gharib	1.71	263	P	Pn	01 42 33.3	-1.9
	baz=264						
PRNI	Paran	1.87	8	Pn	Pn	01 42 36.0	-1.5
PRNI				Sn	Sb	01 43 02.1	-1.1
ZAF	Zafarana	2.05	293	P	Pn	01 42 38.5	-1.4
	baz=294						
SUZ	Suez	2.12	310	P	Pn	01 42 40.2	-0.7
	baz=310						
KZIT	Kziot	2.42	354	Pn	Pn	01 42 44.0	-1.0
KZIT				Sn	Sn	01 43 14.6	-0.5
HHAG	Hagoal	2.70	303	P	Pn	01 42 47.5	-1.5
	baz=304						
GLL	Jalalah	2.84	293	P	Pn	01 42 50.3	-0.5
	baz=294						
YTIR	Yattir	2.88	7	Pn	Pn	01 42 50.4	-1.1
KOT	Kottamia	2.89	300	P	Pn	01 42 50.8	-0.7
	baz=301						
GHAJ	Ghor Haditha	2.90	15	Pn	Pn	01 42 50.3	-1.3
HSAF	As Saff	2.98	293	P	Pn	01 42 51.8	-1.0
	baz=294						
ASUT		2.99	249	P	Pn	01 42 52.0	-0.9
	baz=250						
NBNS	Bani Suef	3.01	273	P	Pn	01 42 52.6	-0.5
	baz=274						
AMAZ	Amatzia	3.03	3	Pn	Pn	01 42 52.4	-1.1
DSI	Dead Sea	3.12	11	Pn	Pn	01 42 53.5	-1.2
NADB	Abo Dabab	3.15	183	P	Pn	01 42 53.0	-2.0
	baz=184						
SLTI	Sal'it	3.75	4	Pn	Pn	01 43 02.5	-0.8
HNAT	Natroun	3.76	289	P	Pn	01 43 02.6	-0.8
	baz=289						
HMDT	Nahal Hemdat	3.81	10	Pn	Pn	01 43 03.5	-0.7
RYAN	Fayoum	3.93	280	P	Pn	01 43 05.0	-0.8
	baz=280						
MMLI	Mount Malkishu	3.98	9	Pn	Pn	01 43 05.5	-1.0
ASF	Jabal al Asfar	4.12	27	Pn	Pn	01 43 07.9	-0.6
	0.4nm,0.3s,baz=212,slow=6.1,SNR=2.2						
ASF				Pg	Pb	01 43 19.9	+2.0
	2.3nm,0.3s,baz=210,slow=19,SNR=10						
ASF				Lg	Lg	01 44 11.9	
	40nm,0.3s,baz=233,slow=20,SNR=15						
	1.0nm,0.3s						
MMAI	Mount Meron Ar	4.55	7	Pn	Pn	01 43 14.4	+0.1
	1.5nm,0.3s,baz=181,slow=31,SNR=2.9						
MMAI				Pg	Pb	01 43 27.0	+1.9
	3.8nm,0.3s,baz=200,slow=18,SNR=3.1						
MMAI				Lg	Lg	01 44 26.1	
	22nm,0.3s,baz=109,slow=20,SNR=2.6						
	0.3nm,0.2s						
GEM	Giv'at Ha'Em	4.77	10	Pn	Pn	01 43 16.4	-1.0
IDI	Anoyia	10.74	312	Pn	Pn	01 44 39.4	+0.1
	0.2nm,0.3s,baz=106,slow=15,SNR=2.3						
IDI				Sn	Sn	01 46 39.8	-0.3
	0.4nm,0.3s,baz=309,slow=23,SNR=1.7						
	12nm,1.1s						
BRTR	Keskin Array B	11.24	356	Pn	Pn	01 44 46.8	+0.6
	baz=180,slow=16,SNR=1.7						
	0.2nm,0.6s						
AKASG	Malin Array Be	22.57	351	P	P	01 47 06.2	+0.4
	0.3nm,0.4s,baz=177,slow=9.9,SNR=4.7						
	0.3nm,0.4s						
FINES	FINESS Array B	33.45	352	P	P	01 48 45.6	+1.1
	1.8nm,0.9s,baz=159,slow=8.7,SNR=1.6						
	1.8nm,0.9s						
TORD	Torodi Ar. Bea	34.28	250	P	P	01 48 53.3	+1.0
	0.2nm,0.6s,baz=59,slow=8.7,SNR=2.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	41.17	50	P	P	01 49 51.2	+1.0
	0.3nm,0.7s,baz=274,slow=5.2,SNR=1.9						
	0.3nm,0.7s						

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*BJI **16** 01:45:51.9±0.0,28°.19N×33°.96E,h10^{km},mb4.6/40, mB5.1/18,Ms4.8/23,Ms7 4.6/23*

*IDC **16** 01:45:57.4±0.5,28°.56N×34°.65E,h0^{km},mb4.4/30, mbtmp4.4/38,ML4.0/6,MS4.5/39,Error ellipse: s-maj=10.3km s-min=9.0km az=106.0*

*HLW **16** 01:45:58.5,28°.49N×34°.70E,h9^{km}±1^{km},Md4.0*

*MOS **16** 01:45:58.8±1.4,28°.62N×34°.71E,h18^{km},mb5.0/37, MS4.3/25,Error ellipse: s-maj=6.1km s-min=3.0km az=94.0*

*GCMT **16** 01:45:59.7±0.2,28°.45N±0°.01×34°.58E±0°.01,h15^{km}, MW5.3/119,Moment Tensor Solution. s41,c51; s119,c192; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.03±.03; M$_{\theta\theta}$-0.51±.02; M$_{\phi\phi}$0.47±.02; M$_{r\theta}$0.74±.07; M$_{\theta\phi}$-0.59±.02; M$_{\phi r}$0.11±.07; Best double couple: M$_0$1.02100×10^{17} NP1:ϕ$_s$194.00000°,δ50.00000°, λ-6.00000°. NP2:ϕ$_s$288.00000°,δ85.00000°, λ-140.00000°. Principal axes: T 0.8410, Plg23.0000°, Azm54.0000°; N 0.3610, Plg50.0000°, Azm293.0000°; P -1.2010, Plg30.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 01:45:59.7±2.2,28°.65N±0°.05×34°.62E±0°.08,h10^{km}±1^{km}, mb5.0/124 Error ellipse: s-maj=12.8km s-min=7.4km az=106.0*

*MED_RC **16** 01:45:59.0±0.4,28°.45N×34°.51E,h18^{km}±1^{km},MW5.2/32, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s32,c43; Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.38±.43; M$_{\theta\theta}$-5.43±.33; M$_{\phi\phi}$5.05±.35; M$_{r\theta}$-0.48±.65; M$_{\theta\phi}$-6.51±.34; M$_{\phi r}$-0.34±.65; Best double couple: M$_0$8.38000×10^{16} NP1:ϕ$_s$19.00000°,δ88.00000°, λ-3.00000°. NP2:ϕ$_s$109.00000°,δ87.00000°, λ-178.00000°. Principal axes: T 8.1700, Plg1.0000°, Azm64.0000°; N 0.4200, Plg86.0000°, Azm166.0000°; P -8.5800, Plg4.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*SGS **16** 01:45:59.6,28°.54N×34°.73E,h13^{km},Ml4.8*

*GII **16** 01:45:59.9±0.0,28°.58N×34°.75E,h18^{km}±1^{km},mb5.0/2, MD5.1/2,Mm4.8/5*

ISC 16 01:45:59.3±0.6,**28°.55N**±0°.02×**34°.69E**±0°.02,**h13**^{km}±3^{km}, **n739**,σ**1^{s}72**/738,**mb4.8**/145,**MS4.5**/63,**83C-78D**,**Fault plane solution: NP1:**ϕ$_s$50.58863°,δ83.87125°, λ9.26784°. **NP2:**ϕ$_s$319.59055°,δ80.78560°,λ173.79082°. **Principal axes:** T Plg10.8782°, Azm275.3011°; N Plg78.9038°, Azm83.7840°; P Plg2.1626°, Azm184.8853°; **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAYS	Tayyib Ism	0.16	89	S	Sg	01 46 05.4	-0.3
TAYS	Tayyib Ism	0.16	89	P	Pg	01 46 02.7	-0.4
HDHB	Dhahab	0.18	340	Sg	Sb	01 46 08.0	-0.2
HDHB	Dhahab	0.18	340	P	Pg	01 46 03.6	+0.1
	baz=343						
HDHB				S	Sb	01 46 08.0	-0.2
	baz=343						
BDAS	Al Bad`	0.38	108	S	Sg	01 46 11.6	-0.4
BDAS				P	Pg	01 46 06.5	-0.4
NUB	Nuweibaa	0.48	355	P	Pg	01 46 07.9	-0.9
	baz=354						
NUB				S	Sg	01 46 14.7	-0.5
	baz=354						
HAQS	Haql	0.54	22	S	Sg	01 46 17.5	+0.3
HAQS				P	Pg	01 46 09.6	-0.3
HKAT	Jabal Katrina	0.61	268	Sg	Sb	01 46 19.3	-1.4
HKAT	Jabal Katrina	0.61	268	P	Pg	01 46 10.4	-1.0
	baz=274						
HKAT				S	Sb	01 46 19.3	-1.4
	baz=274						
AYUS	`Aynunah	0.62	125	P	Pg	01 46 10.6	-0.8
AYUS	`Aynunah	0.62	125	S	Sg	01 46 19.1	-0.6
HBST	Basata	0.67	3	Pg	Pg	01 46 12.4	+0.1
HBST	Basata	0.67	3	P	Pg	01 46 12.4	+0.1
	baz=1.0						
HBST				S	Sb	01 46 23.1	+1.0
	baz=1.0						
JMOS	Jabal al Moall	0.72	31	P	Pg	01 46 12.7	-0.6
JLOS		0.73	75	S	Sg	01 46 22.1	-1.0
JLOS				P	Pg	01 46 12.6	-0.9
HQLS		0.82	23	P	Pg	01 46 14.6	-0.6
TR1	Tor 1	0.85	231	P	Pg	01 46 14.7	-1.0
	baz=235						
TR2	Tor 2	0.87	259	P	Pg	01 46 14.9	-1.2
	baz=264						
TR2				S	Sb	01 46 27.4	-0.4
	baz=264						
EIL	Elat	1.14	11	Pg	Pb	01 46 19.9	-1.0
	848nm,0.3s,baz=194,slow=8.9,SNR=101						
EIL				Lg	Lg	01 46 36.0	
	5μm,0.3s,baz=119,slow=18,SNR=16						
EIL	Elat	1.14	11	*e*P	Pb	01 46 18.9	-2.1
EIL	Elat	1.14	11	Pg	Pb	01 46 18.9	-2.1
EIL				Sg	Sb	01 46 35.1	-0.6
HRDS	Abu Rudays	1.24	278	P	Pn	01 46 21.3	-1.1
	baz=281						
MBRI	Mt Berech	1.26	9	Pg	Pn	01 46 21.1	-1.6
MBRI				Sg	Sb	01 46 38.1	-1.0
NDEBA	Dheba	1.37	142	P	Pn	01 46 21.8	-2.5
SHQRE	Shigry	1.46	116	P	Pn	01 46 24.3	-1.2
HRFI	Mount Harif	1.51	11	Pn	Pn	01 46 24.4	-1.8
HRFI				Sn	Sn	01 46 43.4	-2.4
KRMI	Paran Flat	1.56	1	Pn	Pn	01 46 25.7	-1.2
KRMI				Sn	Sn	01 46 45.6	-1.5
HHRG	Al Ghardaqah	1.66	217	P	Pn	01 46 27.0	-1.1
	baz=215						
TBKS	Tabuk	1.66	101	P	Pb	01 46 29.2	-0.6
GRB	Gharib	1.70	261	P	Pn	01 46 27.0	-1.8
	baz=264						
PRNI	Paran	1.82	9	Pn	Pn	01 46 29.2	-1.2
PRNI				Sn	Sn	01 46 51.3	-2.0
ZAF	Zafarana	2.02	292	P	Pn	01 46 32.2	-0.8
	baz=294						
SUZ	Suez	2.07	309	P	Pn	01 46 33.7	-0.2
	baz=310						
KZIT	Kziot	2.36	354	Pn	Pn	01 46 36.9	-1.0
KZIT				Sn	Sn	01 47 05.5	-1.3
HHAG	Hagoal	2.66	302	P	Pn	01 46 41.3	-0.7
	baz=304						
GLL	Jalalah	2.81	292	P	Pn	01 46 43.8	-0.2
	baz=294						
MDBI	Mazsada	2.82	12	Pn	Pn	01 46 42.6	-1.4
YTIR	Yattir	2.83	7	Pn	Pn	01 46 43.5	-0.9
GHAJ	Ghor Haditha	2.85	15	Pn	Pn	01 46 43.0	-1.6
GHAJ	Ghor Haditha	2.85	15	Pn	Pn	01 46 43.2	-1.3
KOT	Kottamia	2.85	299	P	Pn	01 46 44.1	-0.6
	baz=301						
HSAF	As Saff	2.95	292	P	Pn	01 46 45.5	-0.4
	baz=293						
AMAZ	Amatzia	2.98	4	Pn	Pn	01 46 45.5	-0.9
AMAZ				Sn	Sn	01 47 19.7	-2.3
NBNS	Bani Suef	2.99	272	P	Pn	01 46 45.8	-0.7
	baz=274						
ASUT		3.00	248	P	Pn	01 46 45.3	-1.3
	baz=250						
DSI	Dead Sea	3.07	11	Pn	Pn	01 46 46.6	-1.0
DSI				Sn	Sn	01 47 22.3	-1.9
NADB	Abo Dabab	3.20	183	P	Pn	01 46 47.0	-2.4
	baz=184						
TAMRE	El Minia	3.44	256	P	Pn	01 46 51.7	-1.0
	baz=258						
UJAP	Al Uja	3.46	11	*e*P	Pn	01 46 52.1	-0.8
UJAP	Al Uja	3.46	11	Pn	Pn	01 46 51.8	-1.1
HMYD	Mayadein	3.62	291	P	Pn	01 46 55.4	+0.2
	baz=292						
SLTI	Sal'it	3.69	5	Pn	Pn	01 46 55.8	-0.3
SLTI				Sn	Sn	01 47 38.6	-1.0
HNAT	Natroun	3.73	288	P	Pn	01 46 56.5	-0.1
	baz=289						
HMDT	Nahal Hemdat	3.76	11	Pn	Pn	01 46 56.6	-0.5
RYAN	Fayoum	3.91	279	P	Pn	01 46 58.7	-0.4
	baz=280						
MMLI	Mount Malkishu	3.93	9	*e*P	Pn	01 46 59.0	-0.5
MMLI	Mount Malkishu	3.93	9	Pn	Pn	01 46 58.9	-0.5
OFRI	`Ofer	4.07	3	Pn	Pn	01 47 00.7	-0.6
ASF	Jabal al Asfar	4.08	27	Pn	Pn	01 47 01.6	-0.1
	7.6nm,0.3s,baz=232,slow=11,SNR=3.3						
ASF				Pg	Pb	01 47 12.1	+0.9
	90nm,0.3s,baz=214,slow=8.3,SNR=53						
ASF				Lg	Lg	01 48 05.8	
	928nm,0.3s,baz=18,slow=23,SNR=11						
	19nm,0.4s						
BLGI	Bet Lehem HaGe	4.19	6	Pn	Pn	01 47 02.7	-0.3
MMAI	Mount Meron Ar	4.50	8	Pn	Pn	01 47 06.5	-0.7
	21nm,0.3s,baz=90,slow=31,SNR=6.5						
MMAI				Pg	Pb	01 47 19.8	+1.6
	151nm,0.3s,baz=254,slow=12,SNR=21						
MMAI				Lg	Lg	01 48 16.1	
	308nm,0.3s,baz=74,slow=31,SNR=5.1						
	4.2nm,0.3s						
HNTI	Hanita	4.54	5	Pn	Pn	01 47 07.8	0.0
GEM	Giv'at Ha'Em	4.72	10	Pn	Pn	01 47 09.8	-0.5
NATI	Neve Ativ	4.78	11	Pn	Pn	01 47 10.7	-0.4
AKUR	Kurkur	4.94	201	P	Pn	01 47 11.2	-2.1
	baz=203						
KASR	Kasr	5.12	197	P	Pn	01 47 14.5	-1.3
	baz=198						
NGWR	NGWR	5.15	200	P	Pn	01 47 14.7	-1.5
	baz=201						
NGMR	NGMR	5.41	203	P	Pn	01 47 19.2	-0.6
	baz=204						
APRS	Wahet Paris	5.48	222	P	Pn	01 47 19.9	-0.8
	baz=222						
AWKL	West Kalabsha	5.49	202	P	Pn	01 47 20.3	-0.5
	baz=203						
MABD	Mabed	5.95	202	P	Pn	01 47 26.0	-1.2
	baz=202						
HMSM	Jabal Masmas	6.18	205	P	Pn	01 47 29.9	-0.6
	baz=206						
CSS	Mathiatis	6.50	350	*e*P	Pn	01 47 34.1	-0.6
CSS	Mathiatis	6.50	350	Pn	Pn	01 47 32.9	-1.8
CSS	Mathiatis	6.50	350	Pn	Pn	01 47 33.6	-1.1
AKIN	Akıncılar- Kıb	6.53	351	*e*P	Pn	01 47 34.6	-0.6
LEF	Lefka	6.73	347	*e*P	Pn	01 47 36.9	-0.9
LFK	Lefkose	6.78	352	*e*P	Pn	01 47 37.6	-1.1
AKDN	Akdeniz- Kıbrı	6.89	348	*e*P	Pn	01 47 39.6	-0.4
EREN	Erenkoy	6.98	356	*e*P	Pn	01 47 41.6	+0.4
MATC	Matruh	7.05	295	P	Pn	01 47 42.7	+0.5
	baz=296						
YAYL	Yayladag	7.56	9	*e*P	Pn	01 47 49.9	+0.5
AKKU	Akkuyu-Mersin	7.65	353	*e*P	Pn	01 47 50.2	-0.3
TEKE	Tekeli-Mersin	7.69	350	*e*P	Pn	01 47 49.9	-1.1
IKL	Isikli	7.72	354	*e*P	Pn	01 47 50.9	-0.5
SILI	Silifke-Mersin	7.82	355	*e*P	Pn	01 47 52.4	-0.5
BERE	Bereket-Mersin	7.88	351	*e*P	Pn	01 47 53.1	-0.6
TAHT	Tahtakopru-Hat	7.91	9	*e*P	Pn	01 47 54.7	+0.7
KEBE	Keben-Mersin	7.92	354	*e*P	Pn	01 47 53.9	-0.4
GAZI	Gazipasa	7.92	346	*e*P	Pn	01 47 52.9	-1.4
TEVE	Tevekalti-Mers	7.94	353	*e*P	Pn	01 47 53.7	-0.8
MERS	Mersin	8.30	359	*e*P	Pn	01 47 57.9	-1.6
CEYT	Ceyhan	8.48	6	*e*P	Pn	01 48 02.3	+0.4
HDMB	Hadim	8.60	348	*e*P	Pn	01 48 02.1	-1.6
KRMN	Karaman	8.69	352	*e*P	Pn	01 48 04.1	-0.7
KARA	Karaisali	8.69	2	*e*P	Pn	01 48 04.9	+0.1
AKAS	Kas	8.79	332	*e*P	Pn	01 48 04.2	-2.0
AKAS	Kas	8.79	332	Pn	Pn	01 48 04.2	-2.0
KOZT	Kozan	8.96	6	*e*P	Pn	01 48 08.7	+0.2
ANTB	Antalya	8.99	339	*e*P	Pn	01 48 07.6	-1.3
CMRD	Camardi-Nigde	9.09	2	*e*P	Pn	01 48 09.3	-1.1
ELL	Elmali	9.12	335	*e*P	Pn	01 48 08.7	-2.0
ELL	Elmali	9.12	335	Pn	Pn	01 48 08.4	-2.3
ELL	Elmali	9.12	335	P	Pn	01 48 08.4	-2.3
SEYD	Seydisehir-KON	9.15	346	*e*P	Pn	01 48 09.3	-1.9
KORT	Korkueli	9.19	338	*e*P	Pn	01 48 10.0	-1.7
YESY	Yesilyurt	9.24	355	*e*P	Pn	01 48 10.7	-1.8
FETY	Fethiye	9.35	331	*e*P	Pn	01 48 10.9	-2.9
ARG	Arkhangelos	9.45	326	*e*P	Pn	01 48 12.9	-2.2
ARG	Arkhangelos	9.45	326	Pn	Pn	01 48 13.0	-2.1
ARG	Arkhangelos	9.45	326	P	Pn	01 48 13.0	-2.1
KARP	Karpathos	9.46	319	*e*P	Pn	01 48 11.1	-4.3
KARP	Karpathos	9.46	319	Pn	Pn	01 48 12.6	-2.7
CAME	Cameli-Denizli	9.52	333	*e*P	Pn	01 48 14.1	-2.2
KONT	Konya--Tatoy	9.57	349	*e*P	Pn	01 48 15.8	-1.1
SULT	Sultanhani-AKS	9.68	354	*e*P	Pn	01 48 17.1	-1.3
DALY	Dalyan (Mula)	9.69	330	*e*P	Pn	01 48 15.2	-3.2
GULA	Gulagac	9.78	358	*e*P	Pn	01 48 19.0	-0.8
LADK	Ladik-KONYA	9.82	349	*e*P	Pn	01 48 19.0	-1.4
TURN	Turunc	9.84	328	*e*P	Pn	01 48 17.6	-2.9
ISP	Isparta	9.88	340	Pn	Pn	01 48 22.5	+1.2
ISP	Isparta	9.88	340	⇑*e*P	Pn	01 48 20.3	-1.0
ISP				pmax	pmax		
	comp=Z,13nm,0.8s						
SARI	SarD1z-Kayseri	9.94	8	*e*P	Pn	01 48 21.6	-0.4
YER	Yerkesik	10.11	329	*e*P	Pn	01 48 21.6	-2.8
BASM	Basmaki-Afyon	10.12	339	*e*P	Pn	01 48 22.3	-2.1
MARD	Mardin	10.12	29	Pn	Pn	01 48 24.5	0.0
BNN	Bunyan	10.32	5	Pn	Pn	01 48 28.5	+1.2
IDI	Anoyia	10.70	311	⇓P	Pn	01 48 32.8	+0.5
IDI	Anoyia	10.70	311	Pn	Pn	01 48 30.7	-1.6
	comp=Z,2.6nm,0.3s,baz=226,slow=2.9,SNR=12						
IDI				Sn	Sn	01 50 27.5	-4.6
	comp=Z,2.1nm,0.3s,baz=24,slow=14,SNR=2.3						
	comp=Z,11nm,0.5s						
IDI	Anoyia	10.70	311	Pn	Pn	01 48 31.6	-0.8
BRTR	Keskin Array B	11.18	356	Pn	Pn	01 48 39.8	+0.7
	comp=Z,0.2nm,0.3s,baz=173,slow=14,SNR=29						
BRTR				LR	LR	01 53 21.0	
	comp=Z,4μm,19.2s,baz=184,slow=40						
	comp=Z,5.7nm,0.8s						
BRTR	Keskin Array B	11.18	356		Pn	01 48 40.3	+1.2
BRTR	Keskin Array B	11.18	356	P	Pn	01 48 40.3	+1.2
BR131	Keskin Array S	11.18	356	Pn	Pn	01 48 40.0	+1.0
BR131	Keskin Array S	11.18	356	*d i*P	Pn	01 48 39.8	+0.7
BR131	Keskin Array S	11.18	356	P	Pn	01 48 40.6	+1.6
ANTO	Ankara	11.40	353	Pn	Pn	01 48 41.4	-0.6
ANTO	Ankara	11.40	353	P	Pn	01 48 41.4	-0.6
GURO	Guroymak-BITLI	11.70	30	Pn	Pn	01 48 45.0	-1.1
BORA	Eskisehir	11.83	344	Pn	Pn	01 48 47.4	-0.5
TOKA	Tokat	11.84	7	Pn	Pn	01 48 48.4	+0.5
MDUB	Mudurnu	12.24	347	Pn	Pn	01 48 51.9	-1.5
KOPT	Kop Dagi	12.40	21	Pn	Pn	01 48 54.4	-1.4
ILGA	Ilgaz	12.50	357	Pn	Pn	01 48 55.9	-1.3
DIKM	Dikmen	13.08	2	⇑P	P	01 49 10.1	-5.0
ITM	Ithomi	13.74	312	Pn	Pn	01 49 13.2	-0.8
KARS	Kars	13.88	28	Pn	Pn	01 49 16.9	+1.0
KARS	Kars	13.88	28	P	Pn	01 49 16.9	+1.0
ALN	Alexandroupoli	14.21	332	Pn	Pn	01 49 20.5	+0.2
ALN	Alexandroupoli	14.21	332	P	Pn	01 49 20.5	+0.2
GNI	Garni	14.23	33	Pn	Pn	01 49 21.9	+1.2
	comp=Z,15nm,0.9s,baz=52,slow=3.7,SNR=7.7						
GNI				Lg	Lg	01 53 35.1	
	comp=Z,0.1nm,0.3s,baz=26,slow=1.3,SNR=3.1						
GNI	Garni	14.23	33	Pn	Pn	01 49 21.5	+0.8
GNI	Garni	14.23	33	⇓*e*P	Pn	01 49 21.1	+0.4
GNI	Garni	14.23	33	P	Pn	01 49 21.5	+0.8
GNI	Garni	14.23	33	P	Pn	01 49 21.8	+1.0
SAKB	Bahrain	14.32	97	P	Pn	01 49 22.1	+0.2
RDO	Rodhopi	14.63	332	Pn	Pn	01 49 25.7	-0.3
AGG	Agios Georgios	14.64	319	Pn	Pn	01 49 23.5	-2.7
AGG	Agios Georgios	14.64	319	P	Pn	01 49 23.5	-2.7
AKH	Akhalkalaki	14.71	27	⇑P	P	01 49 30.9	-2.6
SMRA	Abu-Samra	14.91	101	P	Pn	01 49 29.5	-0.5
KDZ	Kurdzhali	15.10	332	*i* P	Pn	01 49 31.6	-0.8
TRNA	Turayna	15.25	101	P	P	01 49 37.0	-2.4
KHOR	Al-Khor Airpor	15.26	97	P	P	01 49 37.4	-2.1
LIT	Litokhoron	15.29	322	Pn	Pn	01 49 33.2	-1.7
LIT				IAmb	IAmb	01 49 51.8	
	comp=Z,44nm,0.7s						
LIT	Litokhoron	15.29	322	P	Pn	01 49 33.2	-1.7
LIT				pmax	pmax		
	comp=Z,44nm,0.7s						
RZN	Rozhen	15.43	331	*i* P	Pn	01 49 35.9	-1.0
SOC	Sochi	15.54	14	*e*P	Pn	01 49 36.0	-2.1
SOC				*e*		01 52 28.7	
SOC				MLR	MLR		
	comp=Z,2μm,13.0s						
ONI	Oni	15.71	25	Pn	Pn	01 49 39.8	-0.6
ONI	Oni	15.71	25	P	Pn	01 49 39.8	-0.6
ONI				pmax	pmax		
	comp=Z,22nm,1.0s						
PLD	Plovdiv	15.78	332	*i* P	Pn	01 49 42.4	+1.2
MMB	Musomiste	15.79	328	*i* P	Pn	01 49 41.9	+0.5
MANR	Mangalia	16.01	344	⇑P	P	01 49 48.5	+0.9
ZEI	Tsey	16.04	25	*e*P	Pn	01 49 46.0	+1.1
ZEI				pmax	pmax		
	comp=Z,38nm,1.3s						
KKB	Krupnik	16.30	328	*i* P	P	01 49 49.7	-1.3
ANN	Anapa	16.37	7	*e*P	Pn	01 49 47.9	-0.9
ANN				pmax	pmax		
	comp=Z,56nm,0.9s						
ANN				MLR	MLR		
	comp=Z,3μm,16.0s						
RAZG	Razgrad	16.37	338	⇑P	P	01 49 52.6	+0.9
FNA	Florina	16.38	322	Pn	Pn	01 49 46.2	-2.8
FNA	Florina	16.38	322	P	Pn	01 49 46.2	-2.8
FNA				pmax	pmax		
	comp=Z,46nm,1.0s						
MFTR	Murfatlar	16.39	344	⇓P	P	01 49 52.0	+0.2
ICOR	Ion Corvin	16.49	342	⇑P	P	01 49 53.7	+0.8
KBZ	Khabaz	16.52	21	Pn	Pn	01 49 51.5	+0.8
	comp=Z,0.2nm,0.3s,baz=208,slow=8.1,SNR=17						
KBZ				Sn	S	01 53 02.0	-3.7
	comp=Z,0.1nm,0.3s,baz=177,slow=11,SNR=1.2						
KBZ				Lg	Lg	01 54 48.3	
	baz=190,slow=17,SNR=1.5						
KBZ				LR	LR	01 56 01.2	
	comp=Z,3μm,19.4s,baz=164,slow=36						
	comp=Z,23nm,1.1s						
KBZ	Khabaz	16.52	21	⇓*e*P	Pn	01 49 48.8	-1.9
NCK	Nalchik	16.55	23	⇓*e*P	Pn	01 49 51.8	+0.7
NCK				pmax	pmax		
	comp=Z,11nm,0.8s						
KEK	Kerkira	16.59	316	Pn	Pn	01 49 49.3	-2.3
KEK				IAmb	IAmb	01 50 00.8	
	comp=Z,110nm,1.2s						
KBN	Korca	16.59	320	Pn	Pn	01 49 50.0	-1.8
KBN				IAmb	IAmb	01 50 08.4	

	comp=Z,98nm,1.0s						
KBN	Korca	16.59	320	P	Pn	01 49 50.0	-1.8
KBN				pmax	pmax		
	comp=Z,98nm,1.0s						
TIRR	Tirgusor	16.65	344	⇑P	P	01 49 56.5	+1.7
TIRR	Tirgusor	16.65	344	Pn	Pn	01 49 52.1	-0.2
TIRR	Tirgusor	16.65	344	P	Pn	01 49 52.2	-0.2
TIRR				pmax	pmax		
	comp=Z,220nm,1.1s						
KIV	Kislovodsk	16.66	21	⇑P	P	01 49 56.1	+1.1
KIV	Kislovodsk	16.66	21		Pn	01 49 53.1	+0.5
KIV	Kislovodsk	16.66	21	*e*P	Pn	01 49 53.0	+0.4
KIV				*e*S	Sn	01 52 58.5	+1.0
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,13.0s						
KIV	Kislovodsk	16.66	21	P	P	01 49 56.6	+1.6
KIV				P	P	01 49 56.6	+1.6
KIV	Kislovodsk	16.66	21	*i* P	P	01 49 54.1	-0.9
	SNR=8.6						
KVAR	Kislovodsk Arr	16.66	21	Pn	P	01 49 56.4	+1.3
	baz=266,slow=22						
KVAR				LR	LR	01 56 10.8	
	comp=Z,3µm,19.1s,baz=38,slow=37						
TLBR	Topalu	16.82	343	⇑P	P	01 49 58.2	+1.5
VTS	Vitosha	16.83	330	⇑P	P	01 49 55.8	-1.1
VTS	Vitosha	16.83	330	Pn	Pn	01 49 53.8	-1.0
VTS	Vitosha	16.83	330	P	Pn	01 49 53.8	-1.0
VTS				pmax	pmax		
	comp=Z,24nm,1.0s						
VTS	Vitosha	16.83	330	*i* P	Pn	01 49 52.4	-2.4
GHWR	Ruwais	16.93	101	P	Pn	01 49 55.8	-0.3
HARR	Harsova	16.99	343	⇓P	P	01 50 00.1	+1.6
TPGR	Topolog	17.03	345	⇑P	P	01 49 59.9	+0.9
GROC	Groznyy	17.15	29	*e*P	Pn	01 49 58.6	0.0
GROC				*e*S	Sn	01 53 06.0	-3.1
GROC				pmax	pmax		
	comp=Z,79nm,0.9s						
GROC				MLR	MLR		
	comp=Z,648nm,9.0s						
MPEP	Malo Peshtene	17.21	332	*i* P	Pn	01 49 59.6	+0.2
VLO	Vlora	17.24	318		Pn	01 49 59.2	-0.6
VLO				IAmb	IAmb	01 50 30.3	
	comp=Z,128nm,1.0s						
VLO	Vlora	17.24	318	P	Pn	01 49 59.2	-0.6
VLO				pmax	pmax		
	comp=Z,128nm,1.0s						
CFR	Carcaliu	17.40	344	⇑P	P	01 50 04.2	+1.2
VLAD	Vladila	17.48	335	⇑P	P	01 50 05.8	+1.8
TIR	Tirane	17.60	320		P	01 50 04.9	-0.4
TIR				IAmb	IAmb	01 50 47.5	
	comp=Z,78nm,1.1s						
TIR	Tirane	17.60	320	P	P	01 50 04.9	-0.4
TIR				pmax	pmax		
	comp=Z,79nm,1.1s						
SCTE	Santa Cesarea	17.63	315	Pn	Pn	01 50 02.6	-2.0
SCTE				IAmb	IAmb	01 50 20.1	
	comp=Z,178nm,1.2s						
MAK	Makhachkala	17.72	32	*e*P	Pn	01 50 01.3	-4.4
MAK				*e*S	Sn	01 53 16.1	-6.8
MAK				pmax	pmax		
	comp=Z,155nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3µm,11.0s						
ISR	Istrita	17.76	341	⇑P	P	01 50 09.3	+2.2
GOF	Gofitskoye	17.77	20	⇑*e*P	P	01 50 08.9	+1.8
GOF				pmax	pmax		
	comp=Z,55nm,0.9s						
MZR	Muzera	17.79	104	P	P	01 50 09.8	+2.3
TATR	Tatarca	17.81	345	⇑P	P	01 50 09.4	+1.9
SLCR	Slobozia Conac	17.87	344	⇑P	P	01 50 10.4	+2.1
BLKB	Belogradchik	17.88	330	⇓P	P	01 50 09.9	+1.5
SCTR	Scanteiesti	17.90	345	⇑P	P	01 50 10.3	+1.8
VLDR	Vladesti	18.04	345	⇑P	P	01 50 11.4	+1.3
BISRR	Bisoca	18.11	342	⇑P	P	01 50 12.7	+1.8
NEHR	Nehoiu	18.11	341	⇑P	P	01 50 12.6	+1.6
VARL	Varlezi	18.14	345	⇑P	P	01 50 14.1	+2.9
TIP	Timpagrande	18.25	310	⇑P	Pn	01 50 09.9	-2.5
TIP	Timpagrande	18.25	310		Pn	01 50 09.8	-2.5
TIP				IAmb	IAmb	01 50 34.5	
	comp=Z,87nm,1.1s						
MLR	Muntele Rosu	18.28	340	⇑P	P	01 50 14.9	+2.1
MLR	Muntele Rosu	18.28	340	P	P	01 50 15.0	+2.1
	baz=143,slow=10						
MLR	Muntele Rosu	18.28	340		Pn	01 50 12.0	-0.8
MLR	Muntele Rosu	18.28	340	P	Pn	01 50 12.0	-0.8
MLR				pmax	pmax		
	comp=Z,48nm,1.3s						
PANC	Panciu	18.29	343	⇑P	P	01 50 15.0	+2.1
BOVS	Bovan	18.32	329	⇓P	P	01 50 13.2	0.0
VRI	Vrincioaia	18.40	342	⇓P	Pn	01 50 15.8	+1.7
PLOR	Plostina	18.40	342	⇓P	Pn	01 50 15.7	+1.5
CEL	Celeste	18.41	307		P	01 50 13.3	-1.1
CEL				IAmb	IAmb	01 50 38.7	
	comp=Z,67nm,1.0s						
COVR	Voineasa-Covas	18.52	341	⇑P	Pn	01 50 17.4	+1.8
DRME	Dracevica, Mon	18.54	321	*e*P	Pn	01 50 16.3	+0.5
DRME	Dracevica, Mon	18.54	321	⇓*i*P	P	01 50 15.0	-0.6
ATD	Arta Tunnel	18.57	154	P	Pn	01 50 17.5	+1.1
	comp=Z,0.7nm,0.3s,baz=344,slow=7.6,SNR=11						
ATD				Lg	Lg	01 55 51.6	
	comp=Z,1.0nm,0.3s,baz=258,slow=22,SNR=1.5						
	comp=Z,3.9nm,0.4s						
ATD	Arta Tunnel	18.57	154	P	Pn	01 50 17.3	+0.8
IVA	Berane	18.63	324	⇓*i*P	P	01 50 15.7	-1.1
PDG	Podgorica	18.66	322	P	P	01 50 14.9	-2.1
PDG	Podgorica	18.66	322	*e*P	P	01 50 14.6	-2.4
TTG	Podgorica	18.66	322	⇓*i*P	P	01 50 16.3	-0.7
BUM	Brajici-Budva	18.77	321	⇓*i*P	P	01 50 17.2	-1.1
KOME	Kolasin	18.81	323	⇓*i*P	P	01 50 18.2	-0.6
VASR	Vaslui	18.86	345	⇑P	Pn	01 50 20.6	+1.0
ASUD	Al Ashush, Dub	18.86	97	P	Pn	01 50 20.3	+0.4
ASUD	Al Ashush, Dub	18.86	97	P	Pn	01 50 20.1	+0.2
SJES	Sjenica	18.87	325	*e*P	P	01 50 19.1	-0.3
OZUR		18.87	341	⇓P	Pn	01 50 21.5	+1.7
DOPR	Dopca	18.87	340	⇓P	Pn	01 50 21.0	+1.1
MILM	Milestii Mici	18.91	347	*e*P	P	01 50 18.0	-1.6
	comp=Z,140nm,3.5s						
MILM	Milestii Mici	18.91	347	*e*P	P	01 50 18.0	-1.6
MILM				*e*S	Sn	01 53 52.0	+0.3
MILM				pmax	pmax		
	comp=Z,140nm,3.5s						
MILM				MLR	MLR		
	comp=Z,900nm,15.0s						
CEME	Cevo	18.93	322	⇓*i*P	P	01 50 19.3	-0.7
LOT	Lotru	18.96	336	⇑P	Pn	01 50 22.1	+1.1
KIS	Kishinev	18.98	348	*e*P	P	01 50 18.0	-2.5
KIS				*e*S	Sn	01 53 54.0	+0.5
KIS				pmax	pmax		
	comp=Z,130nm,6.3s						
KIS				MLR	MLR		
	comp=Z,300nm,13.5s						
HERR	Herculane	19.00	332	⇑P	Pn	01 50 21.6	+0.1
TESR	Tescani	19.01	343	⇑P	Pn	01 50 22.6	+1.0
NAZ	Nazwa, Dubai	19.05	96	P	Pn	01 50 22.2	-0.1
NAZ	Nazwa, Dubai	19.05	96	P	P	01 50 21.3	-0.2
MATE	Matera	19.06	314	⇑P	P	01 50 19.5	-1.9
HCY	Herceg Novi	19.09	321	*e*P	Pn	01 50 29.0	+6.5
VAE	Valguarnera	19.17	303	P	Pn	01 50 22.7	-0.9
	comp=Z,9.4nm,0.9s,baz=190,slow=17,SNR=1.6						
VAE				S	Sn	01 53 56.1	-2.1
	comp=Z,17nm,0.7s,baz=9.0,slow=18,SNR=3.0						
PLE	Pljevlja	19.22	324	⇓*i*P	Pn	01 50 23.2	-1.0
MDVR	Moldovita	19.22	331	⇓P	Pn	01 50 23.7	-0.4
SHME	Shamm	19.22	92	P	P	01 50 23.0	-0.3
SHME	Shamm	19.22	92	P	P	01 50 22.6	-0.7
GZR	Gura Zlata	19.28	334	⇑P	Pn	01 50 25.0	+0.1
CUC	Castrocucco	19.29	311		P	01 50 23.7	-0.3
CUC				IAmb	IAmb	01 50 41.2	
	comp=Z,82nm,0.8s						
UMZA	Um Al Zommool	19.34	103	P	Pn	01 50 27.4	+1.7
TREB	Trebinje	19.35	321	*e*P	P	01 50 23.8	-0.7
BRY	Bratogost	19.37	322	*e*P	P	01 50 24.1	-0.8
BRY	Bratogost	19.37	322	⇓*i*P	P	01 50 23.9	-1.0
BANOM	Banah	19.39	93	P	P	01 50 24.9	-0.2
BANOM	Banah	19.39	93	*i* P	P	01 50 24.4	-0.8
	SNR=8.9						
MASF	Masafi	19.39	94	P	P	01 50 25.1	-0.1
MSFE	Esma-Masafi	19.40	94	P	P	01 50 25.5	+0.3
ALNE	Al Ain	19.40	98	P	Pn	01 50 26.1	-0.3
RUDO	Rudo	19.43	325	*e*P	P	01 50 24.9	-0.5
DIVS	Divibare	19.47	327	P	P	01 50 25.4	-0.6
DIVS	Divibare	19.47	327	*e*P	P	01 50 25.9	-0.1
ASHO	Ashiyiah	19.48	96	P	P	01 50 26.4	+0.2
ASHO	Ashiyiah	19.48	96	*i* P	P	01 50 25.7	-0.5
	SNR=13						
HATD	Hatta, Dubai	19.51	96	P	P	01 50 26.4	-0.1
HATD	Hatta, Dubai	19.51	96	*i* P	P	01 50 26.3	-0.1
	SNR=7.9						
UOSS	Minazif	19.54	96	P	P	01 50 25.3	-1.5
UOSS				IAmb	IAmb	01 51 03.6	
	comp=Z,41nm,0.8s						
UOSS	Minazif	19.54	96	P	P	01 50 26.9	+0.1
UOSS	Minazif	19.54	96	*i* P	P	01 50 25.9	-0.9
	SNR=10						
BIZ	Bicaz	19.55	342	⇑P	Pn	01 50 28.6	+0.5
BBLS	Lazići	19.59	325	*e*P	P	01 50 26.4	-0.9
DEV	Deva	19.65	335	⇑P	Pn	01 50 29.6	+0.4
FURI	Furi	19.91	168	P	Pn	01 50 33.6	+0.9
FURI				IAmb	IAmb	01 50 44.9	
	comp=Z,114nm,1.4s						
BZS	Buzias	19.93	332	⇑P	Pn	01 50 31.4	-1.2
CLTB	Caltabellotta	20.09	302	P	P	01 50 30.6	-2.2
CLTB				IAmb	IAmb	01 50 56.9	
	comp=Z,104nm,1.4s						
ARCR	ARCALIA	20.20	339	⇑P	Pn	01 50 35.3	-0.3
ARQ	Araqi	20.30	100	P	Pn	01 50 36.0	-1.0
DOK	Doka	20.35	115	P	P	01 50 35.9	+0.4
FRGS	Fruska Gora	20.36	329	⇓P	P	01 50 35.8	+0.3
FRGS	Fruska Gora	20.36	329	*e*P	Pn	01 50 36.1	-1.5
ABTO	Aybut	20.41	119	P	Pn	01 50 37.5	-0.9
ABTO				P	Pn	01 50 37.5	-0.9
BURAR	Bucovina Array	20.41	341	⇑P	Pn	01 50 38.6	+0.3
BURAR	Bucovina Array	20.41	341	P	Pn	01 50 37.3	-1.1
BURAR				IAmb	IAmb	01 50 45.8	
	comp=Z,68nm,0.8s						
BUR08	Bucovina Ar. S	20.45	341	P	P	01 50 36.8	+0.2
BUR08				IAmb	IAmb	01 51 00.8	
	comp=Z,129nm,1.6s						
SIRR	Siria	20.45	333	⇑P	Pn	01 50 37.4	-1.2
DRGR		20.49	336	⇓P	Pn	01 50 38.7	-0.5
MESR	Meseseni	20.71	337	⇑P	Pn	01 50 41.0	-0.8
HOQ	Hoqain	20.90	98	P	P	01 50 41.5	-0.1
BMR	Baia Mare	20.99	339	⇓P	Pn	01 50 44.1	-0.8
BORR	Bors	21.08	335	⇑P	P	01 50 44.9	+1.6
BSY	Bisya	21.08	101	P	P	01 50 44.5	+0.9
MGRS	Mrkonjic Grad	21.17	323	*e*P	P	01 50 51.0	+6.6
LTVH	Ltavrtes, Hu	21.29	336	⇑P	P	01 50 46.4	+0.9
LTVH	Ltavrtes, Hu	21.29	336	P	P	01 50 47.3	+1.8
BLY	Banja Luka	21.35	324	*e*P	P	01 50 45.9	-0.3
DMTO	DMTO	21.49	116	P	P	01 50 48.6	+0.6
BIDO	Bidbid	21.63	98	P	P	01 50 50.4	+0.9
GEYT	Alibeck	21.66	58	P	P	01 50 49.6	-0.1
	comp=Z,18nm,0.8s,baz=247,slow=15,SNR=24						
GEYT				LR	LR	02 00 32.6	
	comp=Z,2µm,21.2s,baz=188,slow=40						
	comp=Z,18nm,0.8s						
GEYT	Alibeck	21.66	58	P	P	01 50 49.6	-0.1
GYA0	ALIBECK ARRAY	21.66	58	P	P	01 50 49.6	-0.1
GYA0B	ALIBECK ARRAY	21.66	58	P	P	01 50 50.0	+0.2
MORH	Mrgy, Hungar	21.69	329	*e*P	P	01 50 49.5	-0.3
SMDO	Samad	21.71	99	P	P	01 50 51.5	+1.1
SMDO				S	S	01 54 45.2	-5.5
BSZH	Besenyszg	21.84	333	⇓P	P	01 50 52.5	+1.1
BSZH	Besenyszg	21.84	333	P	P	01 50 53.1	+1.6
KOVH	Kovagotottos	21.85	328	P	P	01 50 52.5	+1.0
JMDO	Jabal Madar	22.00	101	P	P	01 50 54.6	+1.2
JMDO				S	S	01 54 53.1	-2.9
AQU	L'Aquila	22.07	314	P	P	01 50 53.9	-0.1
AQU				IAmb	IAmb	01 51 33.8	
	comp=Z,92nm,1.1s						
AQU	L'Aquila	22.07	314	P	P	01 50 53.9	-0.1
AQU				pmax	pmax		
	comp=Z,92nm,1.1s						
WSAR	Wadi Sarin	22.16	98	P	P	01 50 56.7	+1.6
	comp=Z,10nm,0.5s,baz=282,slow=8.4,SNR=16						
WSAR				S	S	01 55 02.3	+3.2
	comp=Z,8.8nm,0.8s,baz=330,slow=18,SNR=1.8						
WSAR				Lg	Lg	01 57 48.6	
	baz=308,slow=11						
	comp=Z,10nm,0.5s						
WSAR	Wadi Sarin	22.16	98	P	P	01 50 57.2	+2.0
WSAR				S	S	01 54 56.7	-2.5
UZH	Uzhgorod	22.22	338	⇑*e*P	P	01 50 58.7	+3.2
UZH				*i*		01 51 03.2	
UZH				*i*		01 51 21.0	
UZH				*i* S	S	01 54 58.7	-1.0
UZH				*i* SS	SnSn	01 55 39.0	+12
UZH				MLR	MLR		
	comp=N,190nm,16.0s						
UZH				MLR	MLR		
	comp=E,130nm,16.0s						
UZH				MLR	MLR		
	comp=Z,100nm,16.0s						
MHTO	MHTO	22.41	104	P	P	01 51 01.8	+3.9
MHTO				S	S	01 55 00.1	-3.7
KOLS	Kolonicke sedl	22.49	338	*e*P	P	01 51 00.6	+2.1
KOLS				*e*		01 51 04.5	
KOLS				pmax	pmax		
	comp=Z,26nm,1.0s						
KOLS	Kolonicke sedl	22.49	338	*e*P	P	01 51 00.5	+2.1
KOLS	Kolonicke sedl	22.49	338	*e*PN	P	01 51 04.5	+6.1
PSZ	Piszkesteto	22.49	333	⇓P	P	01 50 59.1	+0.5
PSZ	Piszkesteto	22.49	333	P	P	01 50 57.7	-0.8
PSZ				IAmb	IAmb	01 51 31.1	
	comp=Z,38nm,0.9s						
PSZ	Piszkesteto	22.49	333	P	P	01 50 57.7	-0.8
PSZ				pmax	pmax		
	comp=Z,38nm,0.9s						
PSZ	Piszkesteto	22.49	333	P	P	01 50 58.3	-0.3
BUD	Budapest	22.50	331	P	P	01 51 00.7	+2.1
DQM	DQM	22.50	107	P	P	01 51 00.1	+1.3
DQM				S	S	01 55 03.0	-2.6
NRCA	Norcia	22.50	315	P	P	01 50 59.5	+0.7
NRCA				IAmb	IAmb	01 51 42.8	
	comp=Z,39nm,1.0s						
AKASG	Malin Array Be	22.51	351	P	P	01 50 57.2	-1.4
	comp=Z,2.3nm,0.5s,baz=176,slow=9.0,SNR=5.0						
	comp=Z,2.3nm,0.5s						
AKASG	Malin Array Be	22.51	351	P	P	01 50 56.3	-2.3
AKBB	Malin Array Si	22.51	351	P	P	01 50 56.7	-1.9
AKBB	Malin Array Si	22.51	351	*de*P	P	01 50 57.7	-0.9
KEST	Kesra	22.59	295	P	P	01 50 58.5	-1.2
	comp=Z,9.1nm,0.9s,baz=337,slow=13,SNR=5.2						
	comp=Z,9.1nm,0.9s						
KEST	Kesra	22.59	295	P	P	01 51 01.0	+1.3
KEST	Kesra	22.59	295	P	P	01 51 03.3	+3.6
KEST				S	Sn	01 55 17.5	-3.1
WBK	Wadi Bani Khal	22.66	100	P	P	01 50 59.8	-0.8
WBK				S	S	01 55 07.3	-1.3
KECS	Kecovo	22.73	335	*e*P	P	01 51 08.6	+7.6
KECS	Kecovo	22.73	335	*e*PN	P	01 51 08.6	+7.6
CRVS	Cervenica-Dubn	22.73	337	*e*P	P	01 51 02.7	+1.7
CRVS				*e*		01 51 07.4	
CRVS				pmax	pmax		
	comp=Z,47nm,1.2s						
CRVS	Cervenica-Dubn	22.73	337	*e*P	P	01 51 02.7	+1.7
CRVS	Cervenica-Dubn	22.73	337	*e*PN	P	01 51 07.4	+6.4
CSKK	Cskako	22.73	330	P	P	01 51 01.2	+0.2
LVV	L'vov	22.75	342	*e*P	P	01 51 02.2	+1.1
LVV				*e*		01 51 36.9	
LVV				*e*S	S	01 55 05.4	-4.1
LVV				*e*SS	SnSn	01 55 59.7	+20
VSR	Storozhevoye	22.89	7	*e*P	P	01 51 01.5	-1.1
MPLH	Magyarpolny	22.91	329	P	P	01 51 06.2	+3.3
KWP	Kalwaria Pacla	22.96	340	*e*P	P	01 51 02.1	-1.3
KWP				*e*S	S	01 55 19.4	+6.1
KWP	Kalwaria Pacla	22.96	340	P	P	01 51 03.7	+0.3
KWP	Kalwaria Pacla	22.96	340	P	P	01 51 03.7	+0.3
KWP				pmax	pmax		
	comp=Z,639nm,1.0s						
CRES	Cresnjev	22.97	324	*e*P	P	01 51 05.3	+1.7
SRO	Srobarova	23.06	331	*e*P	P	01 51 12.1	+7.7
SRO	Srobarova	23.06	331	*e*PN	P	01 51 12.1	+7.7
MURB	Monte Urbino	23.10	315	P	P	01 51 03.2	-1.7
MURB				IAmb	IAmb	01 51 57.3	
	comp=Z,55nm,1.0s						
EGYH	Egyhazaskeszo	23.19	329	P	P	01 51 08.2	+2.5
LATE	Laterza	23.22	313	P	P	01 51 06.0	-0.1
LATE				IAmb	IAmb	01 51 46.4	
	comp=Z,62nm,1.0s						
VRH	Novokhopyorsk	23.24	11	*e*P	P	01 51 05.0	-1.2
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VRH				MLR	MLR		
	comp=Z,670nm,12.0s						
VORR	Voronezh	23.34	7	*e*P	P	01 51 08.5	+1.3
VORR				pmax	pmax		
	comp=Z,16nm,1.1s						
VYHS	Vyhne	23.38	333	*e*P	P	01 51 09.0	+1.4
VYHS				*e*		01 51 14.9	
VYHS				pmax	pmax		
	comp=Z,14nm,1.0s						
VYHS	Vyhne	23.38	333	*e*P	P	01 51 09.0	+1.4
VYHS	Vyhne	23.38	333	*e*PN	P	01 51 14.9	+7.3
CEY	Cerknica	23.46	322	*e*P	P	01 51 12.6	+4.1
SKDS	Skadanscina	23.56	322	*e*P	P	01 51 16.2	+6.7
NIE	Niedzica	23.57	336	*e*P	P	01 51 10.6	+1.0
NIE				*e*S	S	01 55 26.5	+3.0
VSL	Villasalto	23.58	304	P	P	01 51 11.5	+1.8
VSL				IAmb	IAmb	01 51 25.3	
	comp=Z,60nm,1.1s						
LJU	Ljubljana	23.60	323	*e*P	P	01 51 14.7	+4.8
KOLL	Kolacno	23.62	332	*e*P	P	01 51 11.6	+1.6
LANS	Liptovska Anna	23.66	335	*e*P	P	01 51 11.2	+0.7
LANS				pmax	pmax		
	comp=Z,20nm,0.9s						
LANS	Liptovska Anna	23.66	335	*e*P	P	01 51 11.2	+0.7
SOP	Sopron	23.74	329	P	P	01 51 14.9	+3.7
SOKA	Soboth	23.76	325	*e*P	P	01 51 13.4	+1.9
	comp=Z,22nm,1.3s						
TRI	Trieste	23.80	322	P	P	01 51 10.5	-1.3
TRI				IAmb	IAmb	01 51 20.0	
	comp=Z,73nm,1.3s						
TRI	Trieste	23.80	322	P	P	01 51 10.5	-1.3
TRI				pmax	pmax		
	comp=Z,73nm,1.3s						
RONA	Rosalia, Austr	23.87	328	*e*P	P	01 51 14.3	+1.8
	comp=Z,32nm,1.1s						
ZST	Bratislava	23.88	330	*e*P	P	01 51 14.3	+1.8
ZST	Bratislava	23.88	330	*e*P	P	01 51 14.3	+1.8
OBKA	Obir	23.90	324	*e*P	P	01 51 17.3	+4.5
	comp=Z,31nm,1.4s						
CASP	Castiglione de	23.91	313	P	P	01 51 14.3	+1.4
CASP				IAmb	IAmb	01 52 11.7	
	comp=Z,40nm,1.1s						
ARSA	Arzberg	23.92	327	*e*P	P	01 51 12.9	-0.1
	comp=Z,15nm,0.9s						
MODS	Modra-Piesok	23.93	331	*e*P	P	01 51 15.1	+2.0
MODS	Modra-Piesok	23.93	331	*e*P	P	01 51 15.1	+2.0
SMOL	Smolenice	23.98	331	*e*P	P	01 51 20.3	+6.8
SMOL	Smolenice	23.98	331	*e*	P	01 51 20.2	+6.7
OSSC	Osservatorio P	24.03	315	P	P	01 51 13.4	-0.6
OSSC				IAmb	IAmb	01 52 02.5	
	comp=Z,40nm,1.1s						
JAVC	Velka Javorina	24.14	332	*e*P	P	01 51 17.2	+2.1
HRA	Herat	24.17	69	P	P	01 51 15.8	+0.2
LPSR	Galich'ya Gora	24.23	6	*e*P	P	01 51 14.7	-1.1
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,580nm,13.0s						
CONA	Conrad Observa	24.24	328	*e*P	P	01 51 18.5	+2.4
	comp=Z,14nm,0.9s						
OJC	Ojcow	24.42	336	*e*P	P	01 51 17.2	-0.4
OJC				*e*S	S	01 55 44.0	+7.0
OJC	Ojcow	24.42	336	P	P	01 51 17.4	-0.2
OJC				IAmb	IAmb	01 51 27.6	
	comp=Z,50nm,1.1s						
OJC	Ojcow	24.42	336	P	P	01 51 17.4	-0.2
OJC				pmax	pmax		
	comp=Z,50nm,1.1s						
MYKA	Terra Mystica	24.45	323	*e*P	P	01 51 18.8	+0.9
	comp=Z,18nm,0.9s						
MAUC	Maruska	24.47	333	*e*P	P	01 51 19.4	+1.3
MAUC				*e*S	S	01 55 43.3	+5.4
MAUC				AMS	AMS	02 04 50.0	
	comp=Z,2µm,27.9s						
STAL	STALIGIAL	24.72	322	P	P	01 51 20.2	-0.1
STAL				IAmb	IAmb	01 51 52.7	
	comp=Z,33nm,1.0s						
OKC	Ostrava-Krasne	24.72	334	*e*P	P	01 51 21.5	+1.2
OKC				MLR	MLR		
	comp=Z,1µm,21.5s						
OKC	Ostrava-Krasne	24.72	334	*e*P	P	01 51 21.5	+1.2
OKC				*e*S	S	01 55 51.9	+10
OKC				AMS	AMS	02 05 00.0	
	comp=Z,1µm,21.5s						
TEOL	Teolo	24.77	319	P	P	01 51 21.6	+0.9
KRUC	Moravsky	24.84	331	*e*P	P	01 51 21.2	-0.1
KBA	Koelnbreinsper	24.90	324	*i* P	P	01 51 23.7	+1.6
	comp=Z,26nm,1.0s,SNR=14						
MORC	Moravsky Berou	24.91	333	⇑P	P	01 51 21.2	-0.8
MORC	Moravsky Berou	24.91	333	P	P	01 51 22.1	+0.1
MORC	Moravsky Berou	24.91	333	P	P	01 51 22.2	+0.1
MORC				pmax	pmax		
	comp=Z,23nm,1.2s						
MORC	Moravsky Berou	24.91	333	*e*P	P	01 51 23.8	+1.8
VRAC	Vranov	24.94	331	⇑P	P	01 51 22.1	-0.2
VRAC	Vranov	24.94	331	P	P	01 51 22.0	-0.2
	comp=Z,8.9nm,0.9s,baz=151,slow=8.2,SNR=8.6						
	comp=Z,8.9nm,0.9s						
VRAC	Vranov	24.94	331	*e*P	P	01 51 23.5	+1.3
MOA	Molln	24.95	326	*e*P	P	01 51 24.4	+2.1
	comp=Z,8.5nm,0.9s						
LODK	Lodwar	25.00	178	P	P	01 51 24.5	+1.4
ABTA	Abfaltersbach	25.13	322	*i* P	P	01 51 27.4	+3.3
	comp=Z,30nm,0.8s,SNR=14						
BIOA	Bad Ischl, Aus	25.15	325	*i* P	P	01 51 26.3	+2.1
	comp=Z,14nm,1.0s,SNR=14						
CTI	Castel Tesino	25.18	320	P	P	01 51 25.5	+1.0
CTI				IAmb	IAmb	01 51 55.7	
	comp=Z,31nm,0.9s						
CTI	Castel Tesino	25.18	320	P	P	01 51 25.5	+1.0
CTI				pmax	pmax		
	comp=Z,31nm,0.9s						
PRMA	PARMA	25.25	316	P	P	01 51 24.8	-0.2
TREC	Trest	25.41	330	*e*P	P	01 51 27.5	+1.0
TREC				MLR	MLR		
	comp=Z,2µm,25.3s						
TREC	Trest	25.41	330	*e*P	P	01 51 27.5	+1.0
TREC				AMS	AMS	02 04 20.0	
	comp=Z,2µm,25.3s						
KRLC	Kraliky	25.45	333	*e*S	S	01 56 04.8	+11
KRLC				AMS	AMS	02 06 50.0	
	comp=Z,1µm,20.4s						
SALO	Salr	25.58	318	P	P	01 51 28.1	0.0
CKRC	Cesky Krumlov	25.60	328	*e*P	P	01 51 29.4	+1.1
CKRC				*e*S	S	01 56 07.3	+11
CKRC				AMS	AMS	02 01 40.0	
	comp=Z,1µm,27.0s						
BELG	Belogornoye	25.69	18	P	P	01 51 28.5	-0.5
	comp=Z,28nm,0.7s,baz=336,slow=4.0,SNR=8.7						
BELG				LR	LR	02 01 48.8	
	comp=Z,1µm,22.0s,baz=105,slow=37						
	comp=Z,28nm,0.7s						
BELG	Belogornoye	25.69	18	*ce*P	P	01 51 27.9	-1.1
BELG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DPC	Dobruska-Polom	25.85	332	*e*P	P	01 51 32.1	+1.5
DPC				MLR	MLR		
	comp=Z,2µm,21.7s						
DPC	Dobruska-Polom	25.85	332	*e*P	P	01 51 32.1	+1.5
DPC				*e*S	S	01 56 11.4	+11
DPC				AMS	AMS	02 03 50.0	
	comp=Z,2µm,21.7s						
GEC2	GERESS Array S	25.91	327	P	P	01 51 31.1	0.0
GEC2				IAmb	IAmb	01 52 01.2	
	comp=Z,50nm,1.1s						
GERES	GERESS Array B	25.91	327	P	P	01 51 31.9	+0.8
	comp=Z,4.6nm,0.9s,baz=115,slow=9.0,SNR=27						
	comp=Z,4.6nm,0.9s						
GERES	GERESS Array B	25.91	327	P	P	01 51 31.2	+0.1
GERES	GERESS Array B	25.91	327	P	P	01 51 31.2	+0.1
WTTA	Wattenberg	25.92	322	*i* P	P	01 51 34.1	+2.8
	comp=Z,30nm,0.9s,SNR=23						
WATA	Walderalm	25.99	322	*i* P	P	01 51 35.0	+3.0
	comp=Z,65nm,1.1s,SNR=14						
OSTC	Ostas	26.05	333	*e*P	P	01 51 34.4	+2.0
OSTC				*e*S	S	01 56 15.9	+13
OSTC				AMS	AMS	02 03 40.0	
	comp=Z,2µm,24.3s						
UPC	Upice	26.10	332	*e*P	P	01 51 34.8	+2.1
UPC				MLR	MLR		
	comp=Z,2µm,23.5s						
UPC	Upice	26.10	332	*e*P	P	01 51 34.8	+2.1
UPC				*e*S	S	01 56 16.5	+13
UPC				AMS	AMS	02 03 30.0	
	comp=Z,2µm,23.5s						
SQTA	Sankt Quirin	26.12	322	*i* P	P	01 51 36.6	+3.5

	comp=Z,24nm,0.8s,SNR=13						
CHVC	**Chvalec**	**26.14**	**332**	*e*P	**P**	**01 51 35.2**	**+2.0**
CHVC				AMS	AMS	02 03 30.0	
	comp=Z,2µm,24.6s						
KHC	**Kasperske Hory**	**26.16**	**328**	P	**P**	**01 51 33.1**	**-0.3**
KHC	**Kasperske Hory**	**26.16**	**328**	*e*P	**P**	**01 51 33.3**	**-0.1**
KHC				*e*		01 51 42.0	
KHC				MLR	MLR		
	comp=Z,1µm,17.1s						
KHC	**Kasperske Hory**	**26.16**	**328**	*e*P	**P**	**01 51 33.3**	**-0.1**
KHC				x	x	01 51 42.0	
KHC				x	x	01 51 53.5	
KHC				*e*S	S	01 56 18.5	+14
KHC				AMS	AMS	02 06 50.0	
	comp=Z,1µm,17.1s						
KSP	**Ksiaz**	**26.25**	**333**	*e*P	**P**	**01 51 34.9**	**+0.8**
KSP				*e*S	**S**	**01 56 08.8**	**+2.8**
MOTA	**Moosalm**	**26.25**	**322**	*i* P	**P**	**01 51 37.4**	**+3.0**
	comp=Z,16nm,0.9s,SNR=21						
FETA	**Feichten**	**26.26**	**321**	*i* P	**P**	**01 51 38.3**	**+3.8**
	comp=Z,51nm,0.9s,SNR=33						
PRU	**Pruhonice**	**26.33**	**330**	*e*P	**P**	**01 51 37.0**	**+2.1**
PRU				MLR	MLR		
	comp=Z,1µm,25.2s						
PRU	**Pruhonice**	**26.33**	**330**	*e*P	**P**	**01 51 37.0**	**+2.1**
PRU				*e*S	S	01 56 20.8	+13
PRU				AMS	AMS	02 06 00.0	
	comp=Z,1µm,25.2s						
MNK	**Minsk**	**26.40**	**351**	*i* P	**P**	**01 51 34.1**	**-1.3**
MNK				*i* PPP	PPP	01 52 19.8	
MNK				*i* S	**S**	**01 56 04.4**	**-4.0**
MNK				pmax	pmax		
	comp=Z,58nm,0.9s						
MNK				pmax	pmax		
	comp=N,101nm,1.5s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=E,197nm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,19.0s						
MNK				MLR	MLR		
	comp=Z,988nm,20.0s						
MNK	**Minsk**	**26.40**	**351**	*i* P	**P**	**01 51 34.2**	**-1.3**
	comp=E,4.0nm,1.0s						
MNK				*i* P	**P**	**01 51 34.2**	**-1.3**
	comp=N,101nm,1.4s						
MNK				*i* P	**P**	**01 51 34.2**	**-1.3**
	comp=Z,58nm,0.9s,baz=346						
MNK				*i* PP	**PnPn**	**01 52 11.9**	**-3.2**
MNK				*i* PPP	PPP	01 52 19.9	
MNK				*i* S	**S**	**01 56 04.4**	**-4.0**
MNK				*i* SS	**SnSn**	**01 57 04.5**	**-4.7**
MNK				*i* LQ	LQ	01 59 47.3	
MNK				*i* LR	LR	02 01 46.1	
MNK				*i* LRM	MLR	02 03 50.6	
	comp=E,197nm,16.5s						
MNK				*i* LRM	MLR	02 03 57.0	
	comp=N,1µm,19.1s						
MNK				*i* LRM	MLR	02 04 17.3	
	comp=Z,988nm,19.5s						
RETA	**Reutte**	**26.52**	**322**	*i* P	**P**	**01 51 39.6**	**+2.9**
	comp=Z,15nm,0.7s,SNR=14						
OBN	**Obninsk**	**26.58**	**2**	⇑P	**P**	**01 51 37.0**	**0.0**
OBN	**Obninsk**	**26.58**	**2**	P	**P**	**01 51 36.9**	**-0.1**
	comp=Z,5.2nm,0.5s,baz=315,slow=3.0,SNR=7.2						
OBN				LR	LR	02 04 33.6	
	comp=Z,207nm,19.3s,baz=6.5,slow=42						
	comp=Z,5.2nm,0.5s						
OBN	**Obninsk**	**26.58**	**2**	P	**P**	**01 51 36.2**	**-0.8**
OBN	**Obninsk**	**26.58**	**2**	*d* *i*P	**P**	**01 51 36.4**	**-0.6**
OBN				*i* *PP	**pP**	**01 51 41.3**	**+0.6**
OBN				*e**SP	**sP**	**01 51 43.5**	**+1.2**
OBN				*i*		01 52 21.2	
OBN				*e*S	**S**	**01 56 15.1**	**+4.0**
OBN				SSS	SSS	01 57 41.0	
OBN				pmax	pmax		
	comp=Z,35nm,1.0s						
OBN				MLR	MLR		
	comp=Z,744nm,19.0s						
DAVOX	**Davos/Dischmat**	**26.60**	**320**	P	**P**	**01 51 38.8**	**+1.2**
	comp=Z,7.2nm,0.7s,baz=139,slow=17,SNR=18						
	comp=Z,7.2nm,0.7s						
PVCC	**Panska Ves**	**26.72**	**331**	*e*P	**P**	**01 51 41.4**	**+3.1**
PVCC				MLR	MLR		
	comp=Z,700nm,26.7s						
PVCC	**Panska Ves**	**26.72**	**331**	*e*P	**P**	**01 51 41.4**	**+3.1**
PVCC				*e*S	S	01 56 27.1	+14
PVCC				AMS	AMS	02 03 00.0	
	comp=Z,700nm,26.7s						
TUE	**Stuetta**	**26.73**	**319**	P	**P**	**01 51 39.6**	**+0.8**
TUE				IAmb	IAmb	01 52 38.0	
	comp=Z,35nm,1.1s						
SUW	**Suwalki**	**26.80**	**345**	P	**P**	**01 51 39.0**	**0.0**
SUW	**Suwalki**	**26.80**	**345**	P	**P**	**01 51 39.0**	**0.0**
SUW				pmax	pmax		
	comp=Z,65nm,1.0s						
SUW	**Suwalki**	**26.80**	**345**	*e*P	**P**	**01 51 39.5**	**+0.5**
DAVA	**Damuels**	**26.89**	**321**	*i* P	**P**	**01 51 44.0**	**+3.8**
	comp=Z,24nm,0.8s,SNR=19						
NACGM	**Naroch**	**26.95**	**350**	*e*P	**P**	**01 51 42.2**	**+1.8**
	baz=165						
BRG	**Berggiesshubel**	**27.24**	**331**	*e*P	**P**	**01 51 43.5**	**+0.5**
BRG				Amp		01 51 49.9	
	comp=Z,16nm,0.9s						
BRG				Amp		02 02 28.0	
	comp=E,0.4nm,25.9s						
BRG				Amp		02 02 32.0	
	comp=N,0.8nm,25.0s						
BRG				Amp		02 02 51.0	
	comp=Z,0.8nm,22.8s						
BRG	**Berggiesshubel**	**27.24**	**331**	*e*P	**P**	**01 51 43.5**	**+0.5**
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG				MLR	MLR		
	comp=E,400nm,25.9s						
BRG				MLR	MLR		
	comp=N,790nm,25.0s						
BRG				MLR	MLR		
	comp=Z,790nm,22.8s						
MOS	**Moscow**	**27.25**	**4**	*e*P	**P**	**01 51 42.6**	**-0.5**
MOS				*e*		01 52 28.1	
MOS				pmax	pmax		
	comp=Z,69nm,0.9s						
MOS				pmax	pmax		
	comp=Z,100nm,1.2s						
IDID	**Didziasalis**	**27.36**	**350**	*e*P	**P**	**01 51 43.6**	**-0.4**
NKC	**Novy Kostel**	**27.46**	**328**	*e*P	**P**	**01 51 48.5**	**+3.5**
NKC				MLR	MLR		
	comp=Z,1µm,21.9s						
NKC	**Novy Kostel**	**27.46**	**328**	*e*P	**P**	**01 51 48.5**	**+3.5**
NKC				*e*S	S	01 56 44.6	+19
NKC				AMS	AMS	02 03 10.0	
	comp=Z,1µm,21.9s						
IIGN	**Ignalina**	**27.47**	**349**	*e*P	**P**	**01 51 45.2**	**+0.1**
BNI	**Bardonecchia**	**27.64**	**314**	P	**P**	**01 51 46.8**	**0.0**
BNI				IAmb	IAmb	01 52 21.5	
	comp=Z,17nm,1.0s						
BNI	**Bardonecchia**	**27.64**	**314**	P	**P**	**01 51 46.8**	**0.0**
BNI				pmax	pmax		
	comp=Z,17nm,1.0s						
GRA1	**Grafenberg Arr**	**27.68**	**326**	P	**P**	**01 51 47.2**	**+0.2**
GRF	**Grafenberg Arr**	**27.68**	**326**	P	**P**	**01 51 47.2**	**+0.2**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s						
ISAL	**Salakas**	**27.70**	**350**	*e*P	**P**	**01 51 47.1**	**+0.1**
SENIN	**Lac Senin/Sane**	**27.88**	**317**	P	**P**	**01 51 49.0**	**-0.1**
SENIN				IAmb	IAmb	01 52 45.0	
	comp=Z,38nm,1.0s						
CLL	**Collm**	**27.97**	**330**	P	**P**	**01 51 48.6**	**-0.9**
CLL				IAmb	IAmb	01 52 41.4	
	comp=Z,21nm,0.9s						
CLL	**Collm**	**27.97**	**330**	*e*P	**P**	**01 51 50.0**	**+0.5**
CLL				*i*		01 51 56.5	
CLL				pmax	pmax		
	comp=Z,29nm,1.2s						
CLL	**Collm**	**27.97**	**330**	*e*P	**P**	**01 51 50.0**	**+0.5**
	comp=Z,7.0nm,1.3s						
CLL				*i* x	x	01 51 52.8	
	comp=Z,12nm,1.0s						
CLL				*e*PP	**PnPn**	**01 52 33.0**	**-3.4**
CLL				*i* x	x	01 52 39.5	
	comp=Z,31nm,1.1s						
PABE	**Paberze**	**28.02**	**347**	P	**P**	**01 51 49.4**	**-0.6**
PABE	**Paberze**	**28.02**	**347**	*e*P	**P**	**01 51 50.1**	**+0.1**
AKTO	**Aktyubinsk**	**28.10**	**33**	P	**P**	**01 51 51.1**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=222,slow=9.0,SNR=5.7						
AKTO				LR	LR	02 04 14.8	
	comp=Z,816nm,21.8s,baz=187,slow=39						
	comp=Z,3.1nm,0.6s						
AKTO	**Aktyubinsk**	**28.10**	**33**	P	**P**	**01 51 51.3**	**+0.6**
STU	**Stuttgart**	**28.13**	**323**	P	**P**	**01 51 50.0**	**-1.1**
STU				IAmb	IAmb	01 52 42.3	
	comp=Z,31nm,0.9s						
STU	**Stuttgart**	**28.13**	**323**	P	**P**	**01 51 50.0**	**-1.1**
STU				pmax	pmax		
	comp=Z,31nm,0.9s						
AB31	**Akbulak array**	**28.30**	**36**	*i* P	**P**	**01 51 51.1**	**-1.4**
ABKAR	**Akbulak array**	**28.30**	**36**	P	**P**	**01 51 51.0**	**-1.5**
ABKAR	**Akbulak array**	**28.30**	**36**	P	**P**	**01 51 50.2**	**-2.3**
ABKAR				IAmb	IAmb	01 52 35.3	
	comp=Z,12nm,1.0s						
BFO	**Black Forest**	**28.34**	**321**	P	**P**	**01 51 52.3**	**-0.7**
BFO	**Black Forest**	**28.34**	**321**	P	**P**	**01 51 52.3**	**-0.7**
BFO				pmax	pmax		
	comp=Z,47nm,1.2s						
KMBO	**Kilima Mbogo**	**29.61**	**175**	P	**P**	**01 52 06.3**	**+1.6**
	comp=Z,1.3nm,0.4s,baz=357,slow=8.3,SNR=4.2						
	comp=Z,1.3nm,0.4s						
KMBO	**Kilima Mbogo**	**29.61**	**175**	P	**P**	**01 52 05.8**	**+1.1**
KMBO	**Kilima Mbogo**	**29.61**	**175**	⇑*e*P	**P**	**01 52 07.4**	**+2.7**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KBL	**Kabul**	**29.78**	**70**	P	**P**	**01 52 03.3**	**-2.8**
KBL	**Kabul**	**29.78**	**70**	P	**P**	**01 52 03.3**	**-2.8**
KBL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CHGR	**Chuyangaron**	**30.27**	**62**	P	**P**	**01 52 10.6**	**+0.3**
CHGR				IAmb	IAmb	01 53 13.5	
	comp=Z,14nm,0.8s						
CHGR	**Chuyangaron**	**30.27**	**62**	P	**P**	**01 52 10.6**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,14nm,0.8s						
WLF	**Walferdange**	**30.28**	**322**	*d*P	**P**	**01 52 12.3**	**+2.2**
VSU	**Vasula**	**30.41**	**352**	*e*P	**P**	**01 52 11.6**	**+0.5**
BHOU	**Houvegnez**	**30.74**	**323**	*d*P	P	01 52 19.9	+5.7
BTNL	**Ternell**	**30.81**	**323**	*d*P	P	01 52 19.1	+4.3
MEM	**Membach**	**30.89**	**323**	*d*P	**P**	**01 52 14.7**	**-0.8**
BCLA	**Clavier**	**31.15**	**323**	*d*x	x	01 52 23.2	
BCLA				*d*PnPn	PnPn	01 53 17.6	-1.8
GAR	**Garm**	**31.22**	**61**	P	**P**	**01 52 19.6**	**+1.0**
BGES	**Gesves**	**31.25**	**322**	*d*x	x	01 52 22.6	
BGES				*d*PnPn	PnPn	01 53 20.0	-0.6
DOU	**Dourbes**	**31.36**	**322**	*d*P	**P**	**01 52 20.1**	**+0.5**
BMRD	**Maredsous**	**31.38**	**322**	*d*P	**P**	**01 52 20.6**	**+0.9**
CLF	**Chambon-Foret**	**31.70**	**317**	P	**P**	**01 52 23.2**	**+0.6**
KIRV	**Kirov**	**31.72**	**15**	⇓*e*P	**P**	**01 52 22.0**	**-0.6**
SNF	**Seneffe**	**31.75**	**322**	*d*P	**P**	**01 52 23.4**	**+0.4**
BTK	**Batken**	**31.77**	**59**	P	**P**	**01 52 23.2**	**-0.3**
BTK	**Batken**	**31.77**	**59**	P	**P**	**01 52 23.2**	**-0.3**
BTK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KK31	**Karatay Array**	**32.20**	**54**	P	**P**	**01 52 26.8**	**-0.3**
KK31	**Karatay Array**	**32.20**	**54**	*i* P	**P**	**01 52 26.9**	**-0.3**
KKAR	**Karatay Array**	**32.20**	**54**	P	**P**	**01 52 26.1**	**-1.0**
KKAR	**Karatay Array**	**32.20**	**54**	P	**P**	**01 52 26.1**	**-1.0**
MEF	**Metsahovi**	**32.43**	**350**	*e*P	**P**	**01 52 29.1**	**+0.3**
KLMR	**Klimovskoe**	**32.47**	**4**	*e*P	**P**	**01 52 27.8**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,56nm,1.1s						
KLMR	**Klimovskoe**	**32.47**	**4**	*e*P	**P**	**01 52 27.9**	**-1.3**
KLMR				AMP		01 52 35.1	
	comp=Z,56nm,1.1s						
ARU	**Arti**	**32.62**	**25**	LR	LR	02 08 04.4	
	comp=Z,768nm,18.2s,baz=228,slow=41						
ARU	**Arti**	**32.62**	**25**	P	**P**	**01 52 30.1**	**-0.5**
ARU	**Arti**	**32.62**	**25**	*c* *i*P	**P**	**01 52 30.0**	**-0.6**
ARU						01 53 38.5	
ARU				S	**S**	**01 57 46.9**	**+0.9**
ARU				SS	**SnSn**	**01 59 44.9**	**+4.4**
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
FINES	**FINESS Array B**	**33.40**	**352**	P	**P**	**01 52 36.5**	**-0.8**
	comp=Z,5.3nm,0.7s,baz=162,slow=9.3,SNR=17						
	comp=Z,5.3nm,0.7s						
FINES	**FINESS Array B**	**33.40**	**352**	P	**P**	**01 52 36.0**	**-1.3**
FIA1	**FINESS Array S**	**33.40**	**352**	P	**P**	**01 52 36.3**	**-1.0**
ESBB	**Sonseca Array**	**33.64**	**300**	P	**P**	**01 52 40.9**	**+1.1**
ESBB				IAmb	IAmb	01 52 55.9	
	comp=Z,32nm,1.4s						
ESDC	**Sonseca Array**	**33.64**	**300**	P	**P**	**01 52 40.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=91,slow=7.8,SNR=18						
	comp=Z,1.4nm,0.7s						
ESDC	**Sonseca Array**	**33.64**	**300**	P	**P**	**01 52 41.1**	**+1.3**
ESDC				IAmb	IAmb	01 52 55.8	
	comp=Z,22nm,1.4s						
SVE	**Sverdlovsk**	**33.69**	**26**	*e*P	**P**	**01 52 39.8**	**-0.1**
SVE				pmax	pmax		
	comp=Z,48nm,1.4s						
PRGR	**Permogore**	**33.88**	**9**	*e*P	**P**	**01 52 39.7**	**-1.8**
TOA0	**Torodi Ar. Sit**	**34.29**	**250**	P	**P**	**01 52 46.6**	**+1.0**
TOA0				IAmb	IAmb	01 52 53.4	
	comp=Z,23nm,1.6s						
TOA0	**Torodi Ar. Sit**	**34.29**	**250**	P	P	01 52 49.7	+4.2
TORD	**Torodi Ar. Bea**	**34.29**	**250**	P	**P**	**01 52 45.2**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=52,slow=9.7,SNR=4.5						
TORD				PcP	**PcP**	**01 55 22.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=66,slow=2.1,SNR=1.5						
	comp=Z,2.2nm,0.8s						
AAK	**Ala-Archa**	**34.96**	**56**	LR	LR	02 10 60.0	
	comp=Z,595nm,18.2s,baz=241,slow=43						
AAK	**Ala-Archa**	**34.96**	**56**	P	**P**	**01 52 50.6**	**-0.7**
AAK	**Ala-Archa**	**34.96**	**56**	⇓*e*P	**P**	**01 52 52.6**	**+1.3**
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
OTUK	**Ortayu**	**34.99**	**45**	P	**P**	**01 52 51.7**	**+0.3**
FRU1	**Bishkek**	**35.09**	**55**	P	**P**	**01 52 51.3**	**-1.0**
FRU1				IAmb	IAmb	01 54 04.9	
	comp=Z,17nm,0.6s						
FRU1	**Bishkek**	**35.09**	**55**	P	**P**	**01 52 51.3**	**-1.0**
FRU1				pmax	pmax		
	comp=Z,17nm,0.6s						
KONO	**Kongsberg**	**35.50**	**338**	*e*P	**P**	**01 52 56.0**	**+0.5**
KSH	**Kashi**	**35.64**	**61**	P	**P**	**01 52 55.6**	**-1.6**
KSH				sP	sP	01 53 03.6	+1.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				LR	LR		
	comp=Z,230nm,9.6s						
KSH				LR	LR		
	comp=Z,1µm,13.4s						
KSH				LR	LR		
	comp=Z,1µm,16.5s						
NC602	**NORSAR Array S**	**35.75**	**341**	*e*P	**P**	**01 52 58.0**	**+0.2**
TKM2	**Tokmak 2**	**35.80**	**55**	*i* P	**P**	**01 52 59.3**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	**Borovoye**	**35.82**	**37**	P	**P**	**01 52 57.7**	**-0.7**
BRVK	**Borovoye**	**35.82**	**37**	⇑*e*P	**P**	**01 52 58.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	**Borovoye**	**35.82**	**37**	P	**P**	**01 52 58.6**	**+0.2**
PBAR	**Barrancos**	**35.90**	**297**	*e*P	**P**	**01 53 01.9**	**+2.7**
	comp=Z,25nm,1.4s						
BOOM	**Boomskoye usch**	**35.98**	**56**	P	**P**	**01 52 59.2**	**-1.0**
BOOM	**Boomskoye usch**	**35.98**	**56**	P	**P**	**01 52 59.2**	**-1.0**
BOOM				pmax	pmax		
	comp=Z,12nm,1.1s						
NAO01	**NORSAR Array S**	**36.03**	**340**	P	**P**	**01 52 59.3**	**-0.8**
NB201	**NORSAR Array S**	**36.08**	**341**	P	**P**	**01 52 59.7**	**-0.8**
NB2	**NORSAR Subarra**	**36.09**	**341**	P	**P**	**01 53 00.1**	**-0.6**
	comp=Z,13nm,1.2s,baz=141,slow=8.6						
NB2	**NORSAR Subarra**	**36.09**	**341**	P	**P**	**01 53 00.1**	**-0.6**
	baz=141,slow=8.6						
NOA	**NORSAR Array B**	**36.09**	**341**	P	**P**	**01 52 59.9**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=140,slow=8.8,SNR=12						
NOA				LR	LR	02 11 48.9	
	comp=Z,438nm,18.4s,baz=130,slow=43						
	comp=Z,1.9nm,0.8s						
MVO	**Moncorvo**	**36.15**	**302**	*e*P	P	01 53 08.8	+7.4
	comp=Z,29nm,1.5s						
MVO				*e*S	S	01 58 24.6	-16
MVO				*e*LR	LR	02 07 43.2	
	comp=Z,1µm,20.0s						
PMRV	**Marv??o**	**36.25**	**299**	*e*P	P	01 53 09.6	+7.3
	comp=Z,36nm,1.4s						
PMRV	**Marv??o**	**36.25**	**299**	*e*LR	LR	02 04 37.3	
	comp=Z,924nm,18.0s						
PESTR	**Estremoz**	**36.37**	**298**	*e*P	P	01 53 10.6	+7.3
	comp=Z,33nm,1.5s						
BLS5	**Blasjo**	**36.41**	**336**	*e*P	**P**	**01 53 04.2**	**+0.9**
PVAQ	**Vaqueiros**	**36.41**	**295**	*e*P	**P**	**01 53 04.5**	**+0.9**
	comp=Z,47nm,1.7s						
PVAQ	**Vaqueiros**	**36.41**	**295**	*e*LR	LR	02 05 38.6	
	comp=Z,2µm,20.0s						
PVAQ	**Vaqueiros**	**36.41**	**295**	P	**P**	**01 53 03.4**	**-0.2**
PVAQ				IAmb	IAmb	01 53 18.9	
	comp=Z,29nm,1.3s						
NC204	**NORSAR Array S**	**36.42**	**341**	P	**P**	**01 53 03.3**	**-0.2**
MTE	**Manteigas**	**36.45**	**300**	*e*S	**S**	**01 58 38.8**	**-6.8**
MTE				*e*LR	LR	02 06 12.8	
	comp=Z,845nm,20.0s						
PBDV	**Barranco-do-Ve**	**36.57**	**295**	*e*P	P	01 53 10.8	+5.7
	comp=Z,49nm,1.7s						
PCVE	**Castro Verde**	**36.67**	**296**	*e*P	P	01 53 14.6	+8.8
SKAR	**Skarslia**	**36.70**	**339**	*e*P	**P**	**01 53 06.1**	**+0.1**
POLO	**Lamas de Olo**	**36.74**	**302**	*e*P	P	01 53 13.9	+7.3
KDJ	**Kajisay**	**36.84**	**57**	P	**P**	**01 53 07.6**	**+0.1**
KDJ	**Kajisay**	**36.84**	**57**	P	**P**	**01 53 07.6**	**+0.1**
KDJ				pmax	pmax		
	comp=Z,16nm,1.3s						
PCAS	**Casmilo, Conde**	**37.15**	**300**	*e*P	P	01 53 16.6	+6.7
PGAV	**Gavieira, Arco**	**37.17**	**303**	*e*LR	LR	02 06 48.1	
	comp=Z,1µm,18.0s						
TARG	**Taragay, Kyrgy**	**37.25**	**58**	P	**P**	**01 53 10.9**	**-0.4**
DOMB	**Dombas**	**37.52**	**340**	*e*P	**P**	**01 53 13.8**	**+1.0**
ASK	**Askoy**	**37.61**	**336**	*e*P	**P**	**01 53 13.3**	**-0.2**
KOWA	**Kowa**	**38.45**	**257**	P	**P**	**01 53 22.6**	**+1.5**
KOWA				IAmb	IAmb	01 53 40.4	
	comp=Z,48nm,1.7s						
NSS	**Namsos**	**38.78**	**345**	*e*P	**P**	**01 53 23.2**	**-0.1**
APA	**Apatity**	**39.05**	**359**	⇓*i*P	**P**	**01 53 22.9**	**-2.7**
APA				pmax	pmax		
	comp=Z,20nm,0.8s						
APA				MLR	MLR		
	comp=Z,700nm,20.0s						
LVZ	**Lovozero**	**39.38**	**360**	P	**P**	**01 53 28.1**	**-0.3**
LVZ	**Lovozero**	**39.38**	**360**	⇑*e*P	**P**	**01 53 29.2**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,52nm,1.3s						
KURBB	**Kurchatov Arra**	**39.58**	**44**	P	**P**	**01 53 30.4**	**+0.2**
KURK	**Kurchatov**	**39.67**	**44**	P	**P**	**01 53 30.3**	**-0.6**
KURK				IAmb	IAmb	01 53 36.7	
	comp=Z,25nm,1.0s						
KURK	**Kurchatov**	**39.67**	**44**	*ce*P	**P**	**01 53 31.5**	**+0.6**
KURK				pmax	pmax		
	comp=Z,36nm,1.3s						
KURK	**Kurchatov**	**39.67**	**44**	P	**P**	**01 53 32.0**	**+1.1**
KURK				P	**P**	**01 53 32.0**	**+1.1**
MOR8	**Moi Rana**	**39.67**	**347**	*e*P	**P**	**01 53 30.6**	**-0.2**
STOK	**Stokkvaagen**	**40.09**	**347**	*e*P	**P**	**01 53 34.8**	**+0.6**
KONS	**Konsvik**	**40.22**	**347**	*e*P	**P**	**01 53 35.2**	**0.0**
FAUS	**Fauske**	**40.59**	**349**	*e*P	**P**	**01 53 39.1**	**+0.7**
MAKZ	**Makanchi**	**40.94**	**50**	P	**P**	**01 53 41.0**	**-0.6**
MAKZ	**Makanchi**	**40.94**	**50**	P	**P**	**01 53 41.9**	**+0.3**
KTK1	**Kautokeino**	**41.05**	**354**	*e*P	**P**	**01 53 42.1**	**-0.1**
STEI	**Steigen**	**41.09**	**349**	*e*P	**P**	**01 53 43.0**	**+0.5**
MK31	**Makanchi Array**	**41.15**	**50**	P	**P**	**01 53 43.2**	**-0.1**
MK31	**Makanchi Array**	**41.15**	**50**	*c* *i*P	**P**	**01 53 43.5**	**+0.2**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**41.15**	**50**	P	**P**	**01 53 43.8**	**+0.4**
	comp=Z,11nm,0.9s,baz=267,slow=6.1,SNR=49						
MKAR				LR	LR	02 14 26.3	
	comp=Z,725nm,18.8s,baz=268,slow=42						
	comp=Z,11nm,0.9s						
MKAR	**Makanchi Array**	**41.15**	**50**	P	**P**	**01 53 42.8**	**-0.5**
ARA0	**ARCESS Array S**	**41.37**	**355**	*e*P	**P**	**01 53 45.0**	**+0.2**
ARCES	**ARCESS Array B**	**41.37**	**355**	P	**P**	**01 53 44.9**	**+0.2**
	comp=Z,8.6nm,0.7s,baz=169,slow=8.6,SNR=55						
	comp=Z,8.6nm,0.7s						
ARCES	**ARCESS Array B**	**41.37**	**355**	P	**P**	**01 53 43.7**	**-1.0**
ARCES				IAmb	IAmb	01 53 51.9	
	comp=Z,20nm,0.9s						
LOF	**Lofoten**	**41.57**	**348**	*e*P	**P**	**01 53 46.9**	**+0.5**
JETT	**Jettan, Norway**	**41.87**	**353**	*e*P	**P**	**01 53 49.4**	**+0.5**
TRO	**Tromso**	**42.12**	**352**	*e*P	**P**	**01 53 50.4**	**-0.5**
DBIC	**Dimbokro**	**43.22**	**247**	P	**P**	**01 53 59.8**	**-0.8**
	comp=Z,7.0nm,0.8s,baz=211,slow=6.4,SNR=2.8						
	comp=Z,7.0nm,0.8s						
KIC	**Kosan Boka**	**43.31**	**247**	*e*PKP2	**P**	**01 54 03.2**	**+2.0**
	comp=Z,21nm,1.1s						
TIC	**Toumodi**	**43.37**	**248**	*e*PKP2	**P**	**01 54 04.5**	**+2.7**
LIC	**Lamto**	**43.62**	**247**	*e*PKP2	**P**	**01 54 03.0**	**-0.7**
	comp=Z,51nm,1.9s						
LSZ	**Lusaka**	**44.02**	**189**	LR	LR	02 12 09.8	
	comp=Z,566nm,18.5s,baz=12,slow=36						
ZAA0	**Zalesovo Array**	**44.20**	**41**	P	**P**	**01 54 07.0**	**-1.0**
ZALV	**Zalesovo Beam**	**44.20**	**41**	P	**P**	**01 54 07.5**	**-0.5**
	comp=Z,5.6nm,0.7s,baz=257,slow=8.4,SNR=22						
ZALV				LR	LR	02 13 15.3	
	comp=Z,338nm,19.9s,baz=238,slow=37						
	comp=Z,5.6nm,0.7s						
ZALV	**Zalesovo Beam**	**44.20**	**41**	P	**P**	**01 54 06.6**	**-1.4**
PMOZ	**Porto Moniz, M**	**44.47**	**289**	*e*LR	LR	02 10 12.4	
	comp=Z,637nm,20.0s						
WMQ	**Urumqi**	**44.66**	**55**	*e*P	**P**	**01 54 14.6**	**+2.7**
WMQ				pP	sP	01 54 17.3	+0.1
WMQ				sP	pP	01 54 21.3	+5.7
WMQ				pmax	pmax		
	comp=Z,40nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.9s						
WMQ				LR	LR		
	comp=Z,640nm,16.1s						
WMQ				LR	LR		
	comp=Z,490nm,18.1s						
PALK	**Pallekele**	**48.24**	**107**	LR	LR	02 13 29.3	
	comp=Z,991nm,20.9s,baz=44,slow=34						
OPO	**Ambohidratompo**	**48.38**	**164**	LR	LR	02 13 37.6	
	comp=Z,195nm,20.1s,baz=186,slow=34						
TSUM	**Tsumeb**	**50.27**	**201**	P	**P**	**01 54 55.6**	**-0.1**
SPB2	**Spitsbergen Ar**	**50.40**	**355**	P	**P**	**01 54 55.2**	**-0.7**
SPA0	**Spitsbergen Ar**	**50.40**	**355**	*e*P	**P**	**01 54 56.4**	**+0.4**
SPITS	**Spitsbergen Ar**	**50.40**	**355**	P	**P**	**01 54 56.1**	**+0.2**
SPITS				pmax	pmax		
	comp=Z,44nm,0.8s						
GOMU	**GeErMu**	**50.65**	**65**	P	**P**	**01 55 00.4**	**+1.5**
GOMU				pP	pP	01 55 01.5	-1.1
GOMU				sP	sP	01 55 03.8	-0.4
GOMU				S	**S**	**02 02 20.8**	**+6.9**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				LR	LR		
	comp=Z,160nm,18.4s						
GOMU				LR	LR		
	comp=Z,140nm,18.2s						
GOMU				LR	LR		
	comp=Z,140nm,18.0s						
NRIK	**Noril'sk**	**50.73**	**21**	P	**P**	**01 54 58.7**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=266,slow=4.7,SNR=5.7						
NRIK				LR	LR	02 18 01.2	
	comp=Z,687nm,21.4s,baz=234,slow=38						
	comp=Z,3.8nm,0.8s						
NRIK	**Noril'sk**	**50.73**	**21**	P	**P**	**01 54 58.3**	**-0.2**
NRIK				IAmb	IAmb	01 55 04.7	
	comp=Z,13nm,1.1s						
NRIK	**Noril'sk**	**50.73**	**21**	⇓*e*P	**P**	**01 54 59.6**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,14nm,1.1s						
KBS	**Kingsbay**	**51.44**	**355**	⇓*e*P	**P**	**01 55 03.3**	**-0.4**
KBS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LBTB	**Lobatse**	**53.97**	**190**	LR	LR	02 16 07.9	
	comp=Z,451nm,18.3s,baz=9.5,slow=34						
LBTB	**Lobatse**	**53.97**	**190**	P	**P**	**01 55 23.2**	**+0.2**
LBTB				IAmb	IAmb	01 55 36.1	
	comp=Z,29nm,1.7s						
LBTB	**Lobatse**	**53.97**	**190**	P	**P**	**01 55 23.3**	**+0.2**
LBTB				pmax	pmax		
	comp=Z,29nm,1.7s						
GTA	**Gaotai**	**54.03**	**60**	*e*P	**P**	**01 55 24.3**	**+0.6**
GTA				pP	pP	01 55 28.3	+0.9
GTA				sP	sP	01 55 31.3	+2.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DAG	**Danmarks Havn**	**54.30**	**347**	*i* P	**P**	**01 55 29.0**	**+4.2**
DAG				IAmb	IAmb	01 55 31.8	
	comp=Z,3.7nm,0.6s						
ZAK	**Zakamensk**	**55.19**	**47**	*e*P	**P**	**01 55 32.2**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NOR	**Nord**	**56.56**	**352**	*i* P	**P**	**01 55 39.5**	**-1.6**

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NOR                               IAmb   IAmb     01 55 47.9
      comp=Z,8.5nm,0.7s
SONM  Songino Array     57.49  49  P      P        01 55 47.9 -0.4
      comp=Z,1.2nm,0.7s,baz=281,slow=7.5,SNR=9.8
SONM                               LR     LR       02 23 49.7
      comp=Z,439nm,20.0s,baz=269,slow=40
      comp=Z,1.2nm,0.7s
SONM  Songino Array     57.49  49  P      P        01 55 48.0 -0.4
SONM  Songino Array     57.49  49  P      P        01 55 48.0 -0.4
SONM                               pmax   pmax
      comp=Z,6.0nm,1.1s
BOSA  Boshof            57.55 190  P      P        01 55 48.2 -0.6
      comp=Z,2.7nm,0.9s,baz=3.6,slow=7.9,SNR=4.1
BOSA                               LR     LR       02 18 57.7
      comp=Z,545nm,18.1s,baz=4.5,slow=34
      comp=Z,2.7nm,0.9s
BOSA  Boshof            57.55 190  P      P        01 55 48.4 -0.4
BOSA                               IAmb   IAmb     01 56 00.8
      comp=Z,15nm,1.2s
BOSA  Boshof            57.55 190  P      P        01 55 48.4 -0.4
BOSA                               pmax   pmax
      comp=Z,15nm,1.3s
LZH   Lanzhou           57.83  63 eP      P        01 55 50.0 -1.0
LZH                                pP     sP       01 55 57.3 +1.0
LZH                                sP     pP       01 56 00.8 +6.0
LZH                                pmax   pmax
      comp=Z,19nm,1.3s
LZH                                LR     LR
      comp=Z,680nm,13.6s
LZH                                LR     LR
      comp=Z,490nm,13.8s
LZH                                LR     LR
      comp=Z,610nm,15.2s
SUMG  Summit            57.98 340  P      P        01 55 50.7 -1.0
SUMG                               IAmb   IAmb     01 55 58.8
      comp=Z,14nm,1.1s
SUMG  Summit            57.98 340  P      P        01 55 50.7 -1.0
SUMG                               pmax   pmax
      comp=Z,14nm,1.1s
SUMG  Summit            57.98 340 i P     P        01 55 52.0 +0.3
SUMG                               IAmb   IAmb     01 56 02.6
      comp=Z,3.4nm,0.6s
ICESG Greenland Ices    58.06 336 i P     P        01 55 51.7 -0.5
ICESG                              IAmb   IAmb     01 55 57.8
      comp=Z,4.5nm,0.8s
PZH   PanZhiHua         58.77  75  P      P        01 55 59.6 +1.9
PZH                                pmax   pmax
      comp=Z,10.0nm,0.5s
CMAR  Chiang Mai Arr    59.18  85  P      P        01 56 01.1 +0.7
      comp=Z,1.6nm,0.3s,baz=296,slow=8.4,SNR=6.0
CMAR                               LR     LR       02 24 33.9
      comp=Z,372nm,20.3s,baz=285,slow=39
      comp=Z,1.6nm,0.3s
CMAR  Chiang Mai Arr    59.18  85ceP      P        01 56 04.3 +3.9
CMAR                               pmax   pmax
      comp=Z,2.0nm,0.3s
DY2G  Dye2              60.60 333 i P     P        01 56 09.7  0.0
DY2G                               IAmb   IAmb     01 56 16.0
      comp=Z,9.4nm,0.7s
BOD   Bodaibo           60.73  37 eP      P        01 56 09.5 -0.9
BOD                                pmax   pmax
      comp=Z,17nm,1.6s
SUR   Sutherland        62.01 193  LR     LR       02 23 05.7
      comp=Z,392nm,20.5s,baz=10,slow=36
XAN   Xi'an             62.39  64 ⇓P      P        01 56 25.8 +3.7
XAN                                pP     sP       01 56 34.3 +6.8
XAN                                ScP    ScP      02 01 05.1 +1.6
XAN                                pmax   pmax
      comp=Z,9.0nm,1.4s
XAN                                LR     LR
      comp=Z,730nm,18.5s
XAN                                LR     LR
      comp=Z,260nm,18.6s
XAN                                LR     LR
      comp=Z,700nm,21.3s
HHC   Hu-ho-hao-te      62.53  56 eP      P        01 56 23.8 +0.8
HHC                                pmax   pmax
      comp=Z,26nm,0.9s
HHC                                pmax   pmax
      comp=Z,260nm,5.2s
TIXI  Tiksi             64.49  20  LR     LR       02 29 54.8
      comp=Z,202nm,18.1s,baz=359,slow=41
TIXI  Tiksi             64.49  20⇓eP      P        01 56 35.0 -0.3
TIXI                               pmax   pmax
      comp=Z,4.0nm,0.7s
LYN   LuoYang           65.03  63 eP      P        01 56 39.1 -0.4
LYN                                LR     LR
      comp=Z,740nm,19.4s
LYN                                LR     LR
      comp=Z,480nm,22.2s
HIA   Hailar            65.86  46⇑eP      P        01 56 44.7  0.0
HIA                                pmax   pmax
      comp=Z,3.0nm,0.8s
PSI   Prapat            66.10 100  LR     LR       02 26 03.0
      comp=Z,638nm,18.2s,baz=277,slow=36
BJI   Beijing           66.13  56  P      P        01 56 44.8 -1.7
BJI                                pmax   pmax
      comp=Z,5.0nm,0.7s
BJI                                LR     LR
      comp=Z,250nm,22.6s
BJI                                LR     LR
      comp=Z,390nm,19.7s
EUNU  Eureka            67.10 351  P      P        01 56 52.4 +0.3
YAK   Yakutsk           67.47  31  LR     LR       02 30 22.5
      comp=Z,294nm,19.7s,baz=274,slow=40
NJ2   Nanjing           70.91  63 eP      P        01 57 24.4 +7.9
NJ2                                pmax   pmax
      comp=Z,16nm,0.5s
BNX   BinXian           71.93  47 ⇑P      P        01 57 21.9 -0.5
BNX                                pmax   pmax
      comp=Z,10.0nm,0.7s
BNX                                pmax   pmax
      comp=Z,200nm,3.5s
RES   Resolute Bay      71.98 348  P      P        01 57 22.7 +0.5
RES                                IAmb   IAmb     01 57 34.0
      comp=Z,33nm,1.8s
RES   Resolute Bay      71.98 348  P      P        01 57 22.7 +0.5
RES                                pmax   pmax
      comp=Z,33nm,1.8s
KLR   Kul'dur           73.25  43  LR     LR       02 33 08.6
      comp=Z,307nm,18.0s,baz=304,slow=39
KLR   Kul'dur           73.25  43⇑eP      P        01 57 29.5 -0.7
KLR                                pmax   pmax
      comp=Z,2.0nm,0.9s
SCHQ  Schefferville     73.38 324  P      P        01 57 30.2 -0.7
      comp=Z,2.9nm,0.9s,baz=18,slow=4.2,SNR=5.4
      comp=Z,2.9nm,0.9s
SCHQ  Schefferville     73.38 324  P      P        01 57 30.9  0.0
SCHQ                               IAmb   IAmb     01 57 38.8
      comp=Z,30nm,1.5s
USRK  Ussuriysk Ar.     75.53  47  P      P        01 57 42.5 -1.1
      comp=Z,3.1nm,0.7s,baz=279,slow=6.2,SNR=5.1
USRK                               LR     LR       02 35 03.1
      comp=Z,284nm,19.1s,baz=278,slow=39
      comp=Z,3.1nm,0.7s
KSRS  Korea Array       75.62  55  P      P        01 57 42.8 -1.4
      comp=Z,1.0nm,0.7s,baz=276,slow=5.7,SNR=2.0
KSRS                               LR     LR       02 35 44.1
      comp=Z,488nm,20.1s,baz=290,slow=40
      comp=Z,1.0nm,0.7s
RCBR  Riachuelo         75.94 255  LR     LR       02 31 33.8
      comp=Z,581nm,19.1s,baz=201,slow=36
SEY   Seymchan          76.36  25⇑eP      P        01 57 49.4 +1.4
SEY                                pmax   pmax
      comp=Z,16nm,1.3s
BILL  Bilibino          77.24  17⇑eP      P        01 57 53.1 +0.3
BILL                              i                01 57 58.1
BILL                                               01 58 03.0
BILL                               pmax   pmax
      comp=Z,8.0nm,3.3s
BILL                               MLR    MLR
      comp=Z,264nm,22.0s
MA2   Magadan           77.73  28  LR     LR       02 36 47.7
      comp=Z,344nm,18.9s,baz=294,slow=39
A36M  Sachs Harbour     78.77 354  P      P        01 58 01.7 +0.4
A36M  Sachs Harbour     78.77 354  P      P        01 58 02.3 +1.1
      baz=18
JOW   Kunigami          80.54  65  LR     LR       02 37 52.7
      comp=Z,172nm,19.0s,baz=124,slow=39
C36M  Paulatuk          81.17 353  P      P        01 58 13.9 -0.4
C36M  Paulatuk          81.17 353  P      P        01 58 14.4 +0.2
      baz=19
ASAJ  Asahikawa         82.24  44  LR     LR       02 41 07.7
      comp=Z,295nm,18.6s,baz=292,slow=40
INK   Inuvik            83.04 356  P      P        01 58 24.0 -0.1
INK                                IAmb   IAmb     01 58 32.3
      comp=Z,7.8nm,1.0s
INK   Inuvik            83.04 356  P      P        01 58 24.0 -0.1
INK                                pmax   pmax
      comp=Z,8.0nm,1.0s
TOLK  Toolik Lake Re    83.05   2  P      P        01 58 24.4 +0.1
TOLK                               IAmb   IAmb     01 58 33.8
      comp=Z,8.4nm,0.9s
TOLK  Toolik Lake Re    83.05   2  P      P        01 58 25.3 +1.0
      baz=356
MJAR  Matsushiro Arr    83.33  52  P      P        01 58 26.2  0.0
      comp=Z,2.8nm,0.8s,baz=310,slow=3.5,SNR=1.6
MJAR                               LR     LR       02 39 26.3
      comp=Z,148nm,19.1s,baz=308,slow=38
      comp=Z,2.8nm,0.8s
BMAR  Burnt Mountain    84.32 360  P      P        01 58 32.1 +1.3
L59A  Walton            84.41 315  P      P        01 58 33.1 +1.4
ODNJ  Ogdensburg        84.75 314  P      P        01 58 33.5  0.0
PETK  Petropavlovsk-    84.81  31  P      P        01 58 34.0 +0.5
      comp=Z,9.9nm,1.1s,baz=197,slow=4.6,SNR=7.6
PETK                               LR     LR       02 41 21.0
      comp=Z,162nm,18.1s,baz=307,slow=39
      comp=Z,9.9nm,1.1s
PETK  Petropavlovsk-    84.81  31  P      P        01 58 33.5  0.0
PETK  Petropavlovsk-    84.81  31  P      P        01 58 34.0 +0.5
IMAR  Indian Mountai    85.55   3  P      P        01 58 37.3 +0.4
H21K  Melozitna Rive    85.92   3  P      P        01 58 38.7 -0.1
H21K                               IAmb   IAmb     01 58 50.5
      comp=Z,6.8nm,0.9s
H21K  Melozitna Rive    85.92   3  P      P        01 58 40.5 +1.7
      baz=354
YKA   Yellowknife Ar    85.99 346  P      P        01 58 39.0 -0.2
      comp=Z,1.6nm,0.7s,baz=29,slow=5.5,SNR=17
      comp=Z,1.6nm,0.7s
YKA   Yellowknife Ar    85.99 346  P      P        01 58 39.0 -0.2
I29M  Ogilvie Camp,     86.24 357  P      P        01 58 40.6 +0.2
I29M                               IAmb   IAmb     01 58 48.9
      comp=Z,12nm,1.2s
I29M  Ogilvie Camp,     86.24 357  P      P        01 58 40.8 +0.4
      baz=6.2
MDM   Murphy Dome       86.78   1  P      P        01 58 43.8 +0.8
MDM                                IAmb   IAmb     01 58 52.7
      comp=Z,17nm,1.1s
ILAR  Eielson Array     86.98   1  P      P        01 58 45.2 +1.2
      comp=Z,0.6nm,0.9s,baz=335,slow=3.5,SNR=4.9
      comp=Z,0.6nm,0.9s
J20K  Nowinta River     87.33   4  P      P        01 58 46.0 +0.3
J20K                               IAmb   IAmb     01 58 55.2
      comp=Z,14nm,1.0s
J20K  Nowinta River     87.33   4  P      P        01 58 47.1 +1.4
      baz=352
DAV   Davao City (W)    87.44  83  LR     LR       02 42 48.1
      comp=Z,111nm,18.7s,baz=330,slow=39
DAWY  Dawson            87.58 357  P      P        01 58 53.2 +6.2
      baz=5.2
K24K  Donnelly Dome     87.96   0  P      P        01 58 49.3 +0.5
      baz=360
KTH   Kantishna Hill    88.11   3  P      P        01 58 50.4 +0.9
DOT   Dot Lake          88.11 359  P      P        01 58 50.1 +0.6
DOT                                IAmb   IAmb     01 58 58.7
      comp=Z,6.0nm,1.0s
K20K  Telida            88.15   4  P      P        01 58 49.1 -0.6
K20K                               IAmb   IAmb     01 58 58.9
      comp=Z,7.8nm,0.9s
K20K  Telida            88.15   4  P      P        01 58 50.8 +1.1
      baz=352
CAST  Castle Rocks      88.19   3  P      P        01 58 50.9 +1.1
      baz=354
TRF   Thorofare Moun    88.23   2  P      P        01 58 49.3 -0.9
TRF                                IAmb   IAmb     01 58 58.7
      comp=Z,11nm,1.1s
TRF   Thorofare Moun    88.23   2  P      P        01 58 50.2  0.0
      baz=356
RND   Reindeer          88.32   2  P      P        01 58 49.3 -1.2
RND                                IAmb   IAmb     01 58 58.6
      comp=Z,3.9nm,0.7s
RND   Reindeer          88.32   2  P      P        01 58 49.3 -1.2
RND                                pmax   pmax
      comp=Z,4.0nm,0.7s
TTA   Tatalina          88.44   5  P      P        01 58 58.0 +6.9
      baz=351
BCAR  Beaver Creek A    88.66 358  P      P        01 58 52.0 -0.1
L27K  Beaver Creek,     88.67 358  P      P        01 58 51.5 -0.6
L27K                               IAmb   IAmb     01 59 01.5
      comp=Z,9.7nm,1.1s
L27K  Beaver Creek,     88.67 358  P      P        01 58 53.5 +1.3
      baz=3.1
DHY   Denali Highway    88.68   1  P      P        01 58 52.5 +0.1
DHY                                IAmb   IAmb     01 59 00.9
      comp=Z,9.9nm,1.0s
M31M  Drury Creek, Y    89.14 355  P      P        01 58 53.2 -1.2
M31M                               IAmb   IAmb     01 59 03.6
      comp=Z,11nm,1.1s
M31M  Drury Creek, Y    89.14 355  P      P        01 58 55.6 +1.2
      baz=9.6
WAT6  Susitna Watana    89.17   1  P      P        01 58 55.2 +0.5
      baz=358
M27K  Edge Creek, AK    89.37 358  P      P        01 58 56.9 +1.3
SCM   Sheep Creek Mo    89.93   1  P      P        01 58 58.3 +0.2
SCM                                IAmb   IAmb     01 59 07.3
      comp=Z,12nm,1.0s
SCM   Sheep Creek Mo    89.93   1  P      P        01 58 58.3 +0.2
SCM                                pmax   pmax
      comp=Z,12nm,1.0s
SCM   Sheep Creek Mo    89.93   1  P      P        01 58 59.7 +1.6
      baz=358
N30M  Aishikik Lake     90.07 356  P      P        01 58 59.5 +0.8
      baz=7.3
VRDI  Verde Repeater    90.53 359  P      P        01 58 59.1 -2.0
VRDI                               IAmb   IAmb     01 59 10.7
      comp=Z,5.5nm,1.0s
BDFB  Brasilia          91.13 253  LR     LR       02 42 01.9
      comp=Z,433nm,18.2s,baz=47,slow=37
SHEM  Shemya Is, Ala    91.66  23  LR     LR       02 44 34.2
      comp=Z,131nm,20.1s,baz=316,slow=38
DLBC  Dease Lake        92.41 352  LR     LR       02 44 44.9
      comp=Z,150nm,19.1s,baz=29,slow=38
BATI  Baumata           93.91  99  LR     LR       02 43 04.4
      comp=Z,432nm,19.9s,baz=276,slow=36
MAW   Mawson            98.16 169  LR     LR       02 42 08.4
      comp=Z,122nm,18.1s,baz=332,slow=34
QSPA  South Pole Qui   118.41 180  PKPdf  PKiKP    02 04 48.4 +2.4
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*ANF **16** 02:00:57.3±0.5, 35°.87N×97°.26W, h5^{km}, ML3.2/12 Error ellipse: s-maj=4.6km s-min=3.4km az=143.0*

*TUL **16** 02:00:57.4±0.6, 35°.84N±0°.01×97°.27W±0°.02, h5^{km}±4^{km}, ML2.8, mb_Lg2.6/54(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=134.0*

*NEIC **16** 02:00:58.1±0.5, 35°.84N±0°.01×97°.27W±0°.01, h1^{km}±4^{km}, Error ellipse: s-maj=1.8km s-min=1.5km az=167.0*

ISC 16 02:00:56.6±1.2**, 35°.90N**±0°.03×**97°.29W**±0°.03**, h4**^{km}±13^{km}**, n56, σ1^{s}05**/47**, Oklahoma**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
OKCFA Oklahoma City      0.50 195   Pg     Pg       02 01 06.5 +0.3
OKCFA                               Sg     Sg       02 01 12.9 +0.3
OKCFA Oklahoma City      0.50 195   S      Sg       02 01 13.0 +0.3
      baz=20
OKCSW OKLAHOMA CITY      0.51 194          Pg       02 01 06.5 +0.2
OKCSW                               Sg     Sg       02 01 13.2 +0.3
FNO   Franklin           0.65 188   Pg     Pg       02 01 09.0  0.0
FNO                                 Sg     Sg       02 01 17.2 -0.1
T35B  Sooner Cattle      1.20  32   S      Sn       02 01 37.0 +0.1
      baz=210
TUL1  Leonard            1.22  89          Pn       02 01 19.1 -1.3
TUL1                                Sg     Sb       02 01 35.6 -0.7
TUL1  Leonard            1.22  89   P      Pn       02 01 19.2 -1.3
      baz=267
TUL1                                S      Sg       02 01 36.2 +0.4
      baz=267
X34A  Smith Ranch, M     1.37 199   Pg     Pb       02 01 22.4 -0.4
U32A  Winter Ranch,      1.47 290          Pn       02 01 23.0 -0.9
U32A  Winter Ranch,      1.47 290   S      Sg       02 01 45.6 +1.9
      baz=110
WMOK  Wichita Mounta     1.68 227          Pb       02 01 27.6 -0.6
WMOK  Wichita Mounta     1.68 227   P      Pb       02 01 27.5 -0.6
      baz=48
X37A  Clayton            2.04 129   Pn     Pn       02 01 32.6 +0.8
X37A                                IAmb_Lg         02 02 05.7
      comp=Z,37nm,0.8s
X37A  Clayton            2.04 129   P      Pb       02 01 32.9 -1.4
      baz=310
X37A                                S      Sb       02 01 59.4 -0.6
      baz=310
Z35A  Perchaven, San     2.56 179   Pn     Pn       02 01 39.6 +0.7
Z35A  Perchaven, San     2.56 179   Sb     Sb       02 02 15.2 +0.2
      baz=360
HHAR  Hobbs              2.74  81   Pn     Pn       02 01 42.4 +1.0
R32A  Long Quarter,      2.76 336   IAmb_Lg         02 02 34.5
      comp=Z,17nm,0.7s
R32A  Long Quarter,      2.76 336   P      Pg       02 01 49.4 -0.2
      baz=156
W39A  Magazine           2.94 103   Pn     Pn       02 01 44.8 +0.6
W39A                                IAmb_Lg         02 02 35.9
      comp=Z,25nm,0.8s
W39A  Magazine           2.94 103   P      Pn       02 01 45.0 +0.8
      baz=284
W39A                                Sb     Sb       02 02 25.9 -0.1
      baz=284
KSU1  Kansas State U     3.24   9   IAmb_Lg         02 02 49.0
      comp=Z,28nm,0.8s
Z38A  Mt. Pleasant       3.25 143   Pn     Pn       02 01 48.5 +0.2
Z38A                                IAmb_Lg         02 02 46.9
      comp=Z,13nm,0.8s
MIAR  Mount Ida          3.33 113   Pn     Pn       02 01 51.1 +1.7
MIAR                                IAmb_Lg         02 02 46.3
      comp=Z,12nm,0.9s
MIAR  Mount Ida          3.33 113   P      Pn       02 01 51.2 +1.7
      baz=294
CBKS  Cedar Bluff        3.50 327   Pn     Pn       02 01 52.0 +0.1
CBKS  Cedar Bluff        3.50 327   P      Pg       02 02 02.2 -1.5
      baz=146
U40A  Yellville          3.62  81   Pn     Pn       02 01 53.8 +0.3
S39A  Bolivar            3.65  59   Pn     Pn       02 01 54.2 +0.2
S39A  Bolivar            3.65  59   P      Pn       02 01 55.2 +1.2
      baz=241
AMTX  Amarillo           3.73 256   IAmb_Lg         02 02 57.0
      comp=Z,15nm,1.0s
AMTX  Amarillo           3.73 256   Pb     Pb       02 02 03.2 +0.2
      baz=74
ABTX  Abilene, Hawle     3.80 211   IAmb_Lg         02 02 58.2
      comp=Z,13nm,1.0s
X40A  Basin Creek Fa     3.91 110   Pn     Pn       02 01 59.1 +1.6
X40A                                IAmb_Lg         02 03 03.4
      comp=Z,19nm,0.7s
237A  Washetta, Mont     4.08 162   Pn     Pn       02 01 58.7 -1.1
WLAR  White Oak Lake     4.08 121   IAmb_Lg         02 03 12.9
      comp=Z,24nm,1.1s
WHAR  Wooly Hollow       4.12  97   Pn     Pn       02 02 01.5 +1.1
WHAR                                IAmb_Lg         02 03 14.4
      comp=Z,9.9nm,0.7s
W41B  Gary Mavity, V     4.18  98   Pn     Pn       02 02 01.9 +0.8
W41B                                IAmb_Lg         02 03 16.5
      comp=Z,12nm,0.7s
FCAR  Ozark Folk Cen     4.20  89   Pn     Pn       02 02 00.5 -0.8
UALR  University of      4.20 104   IAmb_Lg         02 03 16.5
      comp=Z,13nm,0.7s
MGMO  Mountain Grove     4.24  71   Pn     Pn       02 02 02.3 +0.3
MGMO                                IAmb_Lg         02 03 13.8
      comp=Z,11nm,0.8s
Z41A  Richland Creek     4.54 124   IAmb_Lg         02 03 30.1
      comp=Z,13nm,0.8s
R40A  Maddies Statio     4.67  58   Pn     Pn       02 02 08.5 +0.5
R40A                                IAmb_Lg         02 03 28.9
      comp=Z,8.6nm,0.8s
P38A  Dawn               4.77  38   Pn     Pn       02 02 11.7 +2.4
P38A                                IAmb_Lg         02 03 40.7
      comp=Z,11nm,0.8s
435B  Jarrell            5.11 183   IAmb_Lg         02 03 44.0
      comp=Z,9.9nm,0.7s
KSCO  Kaye Shedlock'     5.26 308   Pn     Pn       02 02 16.6 +0.4
KSCO                                IAmb_Lg         02 03 53.8
      comp=Z,11nm,0.7s
CCM   Cathedral Cave     5.30  64   Pn     Pn       02 02 18.2 +1.7
CCM                                 IAmb_Lg         02 03 46.0
      comp=Z,8.2nm,0.8s
X43A  Marvell            5.42 103   Pn     Pn       02 02 20.7 +2.4
P40A  Paris              5.51  47   IAmb_Lg         02 04 01.0
      comp=Z,13nm,0.8s
JCT   Junction City      5.80 202   IAmb_Lg         02 04 15.1
      comp=Z,16nm,0.7s
T25A  Trinidad           5.87 284   IAmb_Lg         02 04 11.0
      comp=Z,11nm,0.8s
FVM   French Village     5.88  67   IAmb_Lg         02 04 09.7
      comp=Z,7.2nm,0.8s
S44A  Carbondale         6.69  72   IAmb_Lg         02 04 40.1
      comp=Z,9.7nm,0.9s
SIUC  Southern Illin     6.73  72   IAmb_Lg         02 04 26.7
      comp=Z,8.6nm,1.0s
ECSD  EROS Data Cent     7.84   4   IAmb_Lg         02 05 08.4
      comp=Z,4.3nm,1.0s
PHWY  Pilot Hill         8.36 313   IAmb_Lg         02 05 41.9
      comp=Z,6.9nm,1.2s
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*IDC **16** 02:00:59.1±1.2, 14°.17S×166°.77E, h0^{km}, mb3.9/6, mbtmp3.9/7, ML3.9/1, Error ellipse: s-maj=48.6km s-min=23.7km az=130.0*

*NEIC **16** 02:01:05.9±2.6, 14°.33S±0°.10×166°.8E±0°.2, h35^{km}±11^{km}, mb4.5/11, Error ellipse: s-maj=25.2km s-min=10.6km az=66.0*

ISC 16 02:01:04.1±1.0**, 14°.29S**±0°.09×**166°.9E**±0°.1**, h35**^{km}**, n28, σ1^{s}30**/28**, mb4.3**/11**, Vanuatu Islands**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC      h  m  s    ISC
SANVU Saraoutou          1.18 166   Pn     Pn       02 01 23.0 -1.2
SANVU                               Sn     Sn       02 01 39.1 -0.1
LIFNC LIFOU              6.46 177   Pn     Pn       02 02 37.7 +0.9
MARNC Mare, Loyalty      7.23 172   Pn     Pn       02 02 48.6 +1.2
DZM   Mont Dzumac        7.75 183   Pn     Pn       02 02 54.8 +0.2
      1.6nm,0.3s,baz=314,slow=22,SNR=18
DZM                                 Sn     Sn       02 04 19.8 -1.4
      baz=210,slow=7.6
      4.8nm,0.4s
DZM   Mont Dzumac        7.75 183   Pn     Pn       02 02 54.6  0.0
ONTNC Ouen Toro          7.99 183   Pn     Pn       02 02 58.2 +0.5
OUENC Ouen Island, N     8.09 180   Pn     Pn       02 03 01.1 +2.0
PINNC Pines Island,      8.29 177   Pn     Pn       02 03 03.7 +1.7
EIDS  Eidsvold          18.51 231   P      Pn       02 05 20.1 +2.2
EIDS                                IAmb   IAmb     02 05 33.6
      comp=Z,16nm,1.5s
STKA  Stephens Creek    29.02 229   P      P        02 07 01.3 +0.3
      comp=Z,2.2nm,0.5s,baz=57,slow=8.8,SNR=7.2
      comp=Z,2.2nm,0.5s
STKA  Stephens Creek    29.02 229   P      P        02 07 01.6 +0.7
WB0   Warramunga Arr    31.53 255   P      P        02 07 21.7 -1.6
WB0                                 IAmb   IAmb     02 07 48.8
      comp=Z,8.3nm,1.1s
WB2   Warramunga Arr    31.59 255   P      P        02 07 22.1 -1.7
WB2                                 IAmb   IAmb     02 07 34.6
      comp=Z,7.4nm,1.3s
WRA   Warramunga Arr    31.60 255   P      P        02 07 22.3 -1.6
      comp=Z,1.0nm,0.6s,baz=85,slow=9.4,SNR=16
      comp=Z,1.0nm,0.6s
WRA   Warramunga Arr    31.60 255   P      P        02 07 21.7 -2.2
ASAR  Alice Springs     32.51 248   P      P        02 07 30.8 -1.1
      comp=Z,1.0nm,0.7s,baz=72,slow=9.7,SNR=12
      comp=Z,1.0nm,0.7s
BBOO  Buckleboo         33.58 231   P      P        02 07 41.9 +0.8
KNRA  Kununurra         36.85 263   P      P        02 08 08.8 -0.5
KNRA                                IAmb   IAmb     02 08 10.1
      comp=Z,7.6nm,0.8s
FORT  Forrest           39.23 239   P      P        02 08 29.3  0.0
FORT                                IAmb   IAmb     02 08 30.2
      comp=Z,17nm,0.7s
PSA00 Pilbara Seismi    45.23 254   P      P        02 09 18.6 +0.2
PSA00                               IAmb   IAmb     02 09 41.3
      comp=Z,16nm,1.4s
MORW  Morawa            49.15 244   P      P        02 09 46.5 -2.4
QSPA  South Pole Qui    75.73 180   P      P        02 12 48.4 +2.3
QSPA                                IAmb   IAmb     02 12 56.3
      comp=Z,5.4nm,1.4s
ILAR  Eielson Array     86.22  18   P      P        02 13 41.2 -0.4
      comp=Z,0.3nm,0.6s,baz=240,slow=5.2,SNR=5.7
      comp=Z,0.3nm,0.6s
MKAR  Makanchi Array    96.65 316   P      P        02 14 32.0 +1.2
      comp=Z,0.2nm,0.7s,baz=108,slow=4.7,SNR=2.3
      comp=Z,0.2nm,0.7s
YKA   Yellowknife Ar    97.32  27   P      Pdif     02 14 33.6 +0.3
      comp=Z,0.1nm,0.6s,baz=275,slow=6.8,SNR=2.0
      comp=Z,0.1nm,0.6s
ARCES ARCESS Array B   119.74 345   PKP    PKiKP    02 19 49.3 -0.8
      comp=Z,2.7nm,1.1s,baz=85,slow=2.2,SNR=1.5
ARCES ARCESS Array B   119.74 345          PKiKP    02 19 51.0 +0.9
FINES FINESS Array B   125.19 338   PKP    PKiKP    02 20 00.9  0.0
      comp=Z,2.5nm,1.0s,baz=66,slow=2.1,SNR=1.8
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*IDC **16** 02:10:32.2±11.0, 14°.85N×92°.00W, h0^{km}, mb3.6/2,*

mbtmp3.4/3,ML3.3/1,MS4.2/1,Error ellipse: s-maj=225.9km s-min=105.1km az=10.0
*GCG **16** 02:10:38.6±0.8,14.°10N×92.°56W,h90km±48km,MD4.0*
*MEX **16** 02:10:38.4±0.7,14.°40N×92.°78W,h18km±29km,MD4.2*
*NEIC **16** 02:10:39.1±2.0,14.°57N±0.°06×92.°72W±0.°03,h41km±11km, mb4.2/7,Md4.2/38(MEX),Error ellipse: s-maj=8.2km s-min=4.3km az=190.0*
ISC 16 02:10:37.6±1.2,**14.°45N**±0.°06×**92.°79W**±0.°03,**h37**km±2km,**n60,**σ**1.ˢ57**/88,**mb3.9**/3,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.68	48		Pn	02 10 50.5	-0.3
THIG					Sn	02 10 58.2	-2.0
THIG		0.68	48	*e*P	Pn	02 10 50.5	-0.3
THIG				*e*S	Sn	02 10 58.2	-2.0
PATR	El Naranjo	0.85	39	*i* P	Pn	02 10 52.5	-0.8
PATR				*i* S	Sn	02 11 03.5	-1.3
CHUJ	Union Juarez	0.92	46	*e*P	Pn	02 10 53.2	-1.0
CHUJ				*i* S	Sn	02 11 05.2	-1.2
PAVE	Pavencul	0.95	39	*i* P	Pn	02 10 53.9	-0.7
PAVE				*e*S	Sn	02 11 06.0	-1.0
RTAL	Retalhuleu	1.06	86		Pn	02 10 55.8	-0.1
RTAL				Sn	Sn	02 11 09.4	-0.1
PCIG		1.31	342		Pn	02 10 59.3	-0.1
PCIG					Sn	02 11 15.2	-0.5
PCIG		1.31	342	*e*P	Pn	02 10 59.3	-0.1
PCIG				*e*S	Sn	02 11 15.2	-0.5
HUEH	Huehuetenango	1.52	55		Pn	02 11 03.1	+0.8
FUG	Fuego 3	1.89	90	*e*P	Pn	02 11 07.9	+0.5
FUG				*e*S	Sn	02 11 30.0	-0.1
CCIG	Comitan	1.93	19	Pn	Pn	02 11 09.9	+1.9
CCIG	Comitan	1.93	19	*e*P	Pn	02 11 10.0	+1.9
CCIG				*e*S	Sn	02 11 32.0	+0.9
PCG	Pacaya	2.12	91	*e*P	Pn	02 11 10.3	-0.3
PCG				*e*S	Sn	02 11 36.2	+0.4
TGIG		2.34	352		Pn	02 11 14.2	+0.7
TGIG					Sn	02 11 41.1	+0.1
TGIG		2.34	352	*e*P	Pn	02 11 14.2	+0.7
TGIG				*e*S	Sn	02 11 41.1	+0.1
NBG	Las Nubes	2.37	86	*e*P	Pn	02 11 14.5	+0.4
NBG				*e*S	Sn	02 11 42.2	+0.1
MRL	Marmol	3.07	78	*e*P	Pn	02 11 26.7	+3.0
MRL				*e*S	Sn	02 12 00.6	+1.2
UXUV	UXUV	3.14	336	*e*P	Pn	02 11 26.5	+2.0
UXUV				*e*S	Sn	02 12 01.1	+0.5
CMIG	Matias Romero	3.31	323		Pn	02 11 27.8	+0.9
CMIG					Sn	02 12 05.3	+0.3
CMIG	Matias Romero	3.31	323	*e*P	Pn	02 11 27.8	+0.9
CMIG				*e*S	Sn	02 12 05.3	+0.3
MTO3	Montecristo	3.32	90	Pn	Pn	02 11 27.1	-0.2
ESQI	Esquipulas	3.34	88	Pn	Pn	02 11 31.5	+4.2
HUIG	Huatulco	3.46	293		Pn	02 11 29.0	+0.1
HUIG	Huatulco	3.46	293	*e*P	Pn	02 11 29.0	+0.1
HUIG				*e*S	Sn	02 12 04.7	-4.0
SNET	Serv Nac Est T	3.54	102	Pn	Pn	02 11 30.6	+0.6
PETF	Flores	3.73	49	Pn	Pn	02 11 33.4	+0.8
NEUV	Arroyo Zacate	4.35	319	*e*P	Pn	02 11 41.6	+0.5
NEUV				*e*S	Sn	02 12 29.1	-1.4
PEIG	Puerto Escondi	4.48	291	*e*P	Pn	02 11 43.5	+0.6
PEIG				*i* S	Sn	02 12 29.6	-4.3
VHO	Vista Hermosa	4.61	305	*e*P	Pn	02 11 47.3	+2.5
VHO				*e*S	Sn	02 12 38.5	+1.4
YOIG	Yosondua	5.17	298	*e*P	Pn	02 11 55.6	+3.0
YOIG				*e*S	Sn	02 12 51.8	+0.6
TGUH	Tegucigalpa,Un	5.36	93	Pn	Pn	02 11 56.1	+0.9
TOIG	Toxpalan	5.48	312	*e*P	Pn	02 11 58.7	+2.0
TOIG				*e*S	Sn	02 12 59.0	+0.5
PNIG	Pinotepa	5.50	291		Pn	02 11 58.5	+1.6
PNIG					Sn	02 12 57.3	-1.6
PNIG	Pinotepa	5.50	291	*e*P	Pn	02 11 58.5	+1.6
PNIG				*e*S	Sn	02 12 57.3	-1.6
TXIG	Tlaxiaco	5.54	301	*e*P	Pn	02 12 00.7	+2.9
TXIG				*e*S	Sn	02 13 02.2	+1.8
CRIN	San Cristobal	5.85	107	Pn	Pn	02 12 02.6	+0.8
HLIG	Huajuapan de L	5.87	306	*e*P	Pn	02 12 05.5	+3.2
HLIG				*e*S	Sn	02 13 09.7	+1.3
FTIG	Fresnillo de T	6.18	305	*e*P	Pn	02 12 09.7	+3.3
FTIG				*e*S	Sn	02 13 16.4	+0.5
TLIG	Tlapa	6.36	300		Pn	02 12 11.8	+3.0
MATN	Matagalpa	6.84	102	Pn	Pn	02 12 15.4	-0.1
BOAB	BOACO BROADBAN	7.21	105	Pn	Pn	02 12 20.3	-0.2
HZTE	Horizontes, Gu	7.94	117	Pn	Pn	02 12 32.2	+1.7
ORTG	Ortega, Santa	8.23	119	Pn	Pn	02 12 36.1	+1.6
JTS	Las Juntas de	8.70	117	Pn	Pn	02 12 41.7	+0.7
RIMA	Rio Macho	9.89	117	Pn	Pn	02 12 59.2	+1.7
SRBA	San Rafael, Bu	10.59	118	Pn	Pn	02 13 08.3	+1.4
SOR	Soroa	12.44	47	Pn	Pn	02 13 29.9	-2.2
061Z	Ochoppi	15.91	43	Pn	Pn	02 14 16.3	-2.4
553A	Crawfordville	17.46	25		Pn	02 14 38.4	+0.3
553A				IAmb	IAmb	02 14 41.1	
	comp=Z,26nm,1.1s						
656A	Willston	17.62	31		Pn	02 14 39.2	-1.0
656A				IAmb	IAmb	02 14 54.0	
	comp=Z,25nm,1.3s						
TXAR	Lajitas Array	17.91	328	P	Pn	02 14 43.3	-0.6
	baz=142,slow=13,SNR=2.1						
	comp=Z,0.4nm,0.8s						
143A	Socs Landing,	18.22	4		P	02 14 46.3	-1.1
143A				IAmb	IAmb	02 14 51.4	
	comp=Z,13nm,0.4s						
MNTX	Cornudas Mount	20.68	328	P	P	02 15 15.3	+0.9
GOGA	Godfrey	20.69	23	P	P	02 15 14.4	-0.1
GOGA				IAmb	IAmb	02 15 21.8	
	comp=Z,8.9nm,1.4s						
NVAR	Mina Array Bea	32.84	321	P	P	02 17 09.7	+1.7
	comp=Z,0.3nm,0.5s,baz=140,slow=7.1,SNR=2.4						
	comp=Z,0.3nm,0.5s						
MCMT	McKenzie Canyo	34.74	335	P	P	02 17 25.7	+1.3
YKA	Yellowknife Ar	50.42	347	P	P	02 19 29.4	-1.6
	comp=Z,0.6nm,0.5s,baz=152,slow=6.9,SNR=14						
	comp=Z,0.6nm,0.5s						
INK	Inuvik	59.80	344	P	P	02 20 37.3	-1.3
INK				IAmb	IAmb	02 20 38.2	
	comp=Z,3.5nm,1.3s						
RES	Resolute Bay	60.24	359	LR	LR	02 50 53.1	
	comp=Z,184nm,18.1s,baz=74,slow=40						
BMAR	Burnt Mountain	62.61	340	P	P	02 20 57.8	0.0

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*INET **16** 02:25:10.5±0.9,13.°24N×88.°16W,h20km±2km,MW3.5*
*SNET **16** 02:25:11.5±1.0,13.°35N×88.°08W,h7km±6km,MD3.0*
ISC 16 02:25:11.7±1.1,**13.°39N**±0.°08×**88.°08W**±0.°04,**h16**km±12km,**n14,**σ**0.ˢ39**/17,**2D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.19	283	⇓*i*P	Pb	02 25 16.8	-0.2
LCY	Lacayo	0.21	280	*e*P	Pb	02 25 17.3	0.0
PACA	Pacayal	0.25	290	*e*P	Pb	02 25 17.6	-0.3
PACA				*e*S	Sb	02 25 22.4	+0.3
PACA	Pacayal	0.25	290	*i* P	Pb	02 25 17.7	-0.3
CNCH	Conchagua	0.27	114	*e*S	Sg	02 25 21.8	+0.3
CAHU	Cacacuatique	0.40	342	*e*P	Pb	02 25 20.7	+0.1
COEB	Comit de Eme	0.45	284	*e*P	Pb	02 25 21.2	-0.1
CSGN	Cosiguina Volc	0.65	128	*e*P	Pg	02 25 24.0	-0.5
PAVA	Las Pavas	0.89	292	*e*P	Pb	02 25 28.9	0.0
LFRS	El Faro	0.98	284	*e*P	Pb	02 25 30.6	+0.1
LFRS				*e*S	Sg	02 25 44.1	+0.5
TGUH	Tegucigalpa,Un	1.03	50	*i* P	Pb	02 25 31.2	-0.1
CRIN	San Cristobal	1.22	124	⇓*i*P	Pn	02 25 34.2	+0.1
CRIN				*e*S	Sg	02 25 52.0	+1.0
MTO3	Montecristo	1.60	309	*e*P	Pb	02 25 40.7	-0.3
BOAB	BOACO BROADBAN	2.53	111	*e*P	Pn	02 25 52.1	-0.1

IDC 16 02:38:37.2±9.5,**22.°02S**×**173.°40E,h0**km,**mb3.6**/3, **mbtmp3.7**/4,**ML3.5**/1,**MS3.5**/6,**Error ellipse: s-maj=181.0km s-min=110.1km az=34.0,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.46	268	Pn	Pn	02 40 13.3	-0.3
	1.0nm,0.3s,baz=119,slow=10,SNR=17						
DZM				Sn	Sn	02 41 20.9	-7.2
	baz=143,slow=22						
DZM				LR	LR	02 41 53.4	
	comp=Z,182nm,18.9s,baz=108,slow=30						
	3.4nm,0.3s						
AFI	Afiamalu	16.23	63	LR	LR	02 47 57.0	
	comp=Z,70nm,20.5s,baz=262,slow=34						
RPZ	Rata Peaks	21.73	185	LR	LR	02 50 58.8	
	comp=Z,181nm,18.9s,baz=298,slow=34						
RAR	Rarotonga	24.94	93	LR	LR	02 52 42.2	
	comp=Z,55nm,18.9s,baz=224,slow=34						
CTA	Charters Tower	25.40	269	LR	LR	02 53 50.2	
	comp=Z,190nm,20.6s,baz=256,slow=36						
STKA	Stephens Creek	29.91	244	P	P	02 44 48.1	+1.2
	1.8nm,0.9s,baz=95,slow=9.9,SNR=1.9						
	1.8nm,0.9s						
ASAR	Alice Springs	36.36	260	P	P	02 45 43.5	+0.2
	0.5nm,0.8s,baz=108,slow=8.0,SNR=5.0						
	0.5nm,0.8s						
WRA	Warramunga Arr	36.47	266	P	P	02 45 42.8	-1.5
	0.5nm,0.9s,baz=105,slow=8.0,SNR=3.3						
WRA				LR	LR	03 02 30.6	
	comp=Z,136nm,18.0s,baz=213,slow=39						
	0.5nm,0.9s						

KRSC 16 02:43:36.6±2.8,**49.°50N**×**156.°79E,h41**km±28km,**ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.27	340	*e*P	Pn	02 43 56.4	-1.3
SKR				*e*S	Sn	02 44 11.4	-2.1
PAU	Pauzhetka	1.97	0	*e*P	Pn	02 44 09.9	+2.4
PAU				*e*S	Sn	02 44 34.7	+3.8
KDTR	Khodutka, Kamc	2.46	19	*e*P	Pn	02 44 16.6	+2.5
KDTR				*e*S	Sn	02 44 47.0	+4.2
ASAK	Asacha	2.98	13	*e*P	Pn	02 44 25.4	+4.1
MTVR	Mutnovka	3.12	16	*e*P	Pn	02 44 27.1	+3.8
MTVR				*e*S	Sn	02 45 05.4	+6.0
RUS	Russkaya	3.14	20	*e*P	Pn	02 44 26.8	+3.4
RUS				*e*S	Sn	02 45 04.2	+4.6
GRL	Gorelyy	3.17	14	*e*P	Pn	02 44 27.6	+3.6
GRL				*e*S	Sn	02 45 06.2	+5.7
UGLR	Uglovaya	3.93	18	*e*P	Pn	02 44 39.1	+4.7
AVH	Avacha	3.97	17	*e*P	Pn	02 44 39.8	+4.9
KOK	Koryaka	3.97	16	*e*P	Pn	02 44 40.0	+5.0
SMAR	Somma	3.98	18	P	Pn	02 44 39.2	+4.0
SDLR	Sedlovina	4.01	18	*e*P	Pn	02 44 39.5	+4.0
KRX	Arik	4.04	16	*e*P	Pn	02 44 40.4	+4.4
SPN	Mys Shipunski	4.14	28	*e*S	Sn	02 45 31.2	+6.9
GNL	Ganaly	4.27	9	*e*P	Pn	02 44 43.3	+4.3
MKZ	Mys Kozlova	5.91	29	*e*P	Pn	02 45 04.7	+3.2
MKZ				*e*S	Sn	02 46 10.7	+2.8
KBTR	Krutoberegovo	7.65	26	*e*P	Pn	02 45 29.6	+4.3

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*IDC **16** 03:02:27.9±1.0,14.°45S×166.°47E,h0km,mb4.0/9, mbtmp4.1/10,ML4.2/1,MS3.8/4,Error ellipse: s-maj=31.4km s-min=19.3km az=111.0*
*NEIC **16** 03:02:32.4±1.4,14.°37S±0.°09×166.°8E±0.°1,h35km±2km, mb4.6/22,Error ellipse: s-maj=21.7km s-min=15.1km az=75.0*
ISC 16 03:02:31.2±0.6,**14.°40S**±0.°07×**166.°7E**±0.°1,**h28**km,**n51,** σ**1.ˢ25**/46,**mb4.5**/18,**MS3.8**/3,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.15	155	Pn	Pn	03 02 49.3	-2.1
LIFNC	LIFOU	6.36	175	Pn	Pn	03 04 04.7	+1.6
MARNC	Mare, Loyalty	7.16	170	Pn	Pn	03 04 14.2	+0.2
DZM	Mont Dzumac	7.63	182	Pn	Pn	03 04 20.1	-0.5
	4.0nm,0.3s,baz=188,slow=19,SNR=43						
DZM				Sn	Sn	03 05 44.8	-1.5
	2.8nm,0.3s,baz=322,slow=23,SNR=9.6						
DZM				LR	LR	03 06 51.6	
	comp=Z,511nm,18.3s,baz=342,slow=35						
	8.4nm,0.3s						
ONTNC	Ouen Toro	7.87	182	Pn	Pn	03 04 23.5	-0.3
OUENC	Ouen Island, N	7.98	179	Pn	Pn	03 04 26.2	+0.9
PINNC	Pines Island,	8.20	175	Pn	Pn	03 04 29.9	+1.6
EIDS	Eidsvold	18.28	231	P	Pn	03 06 43.8	+0.9
CTA	Charters Tower	20.32	251	P	P	03 07 05.0	-0.3
	16nm,0.7s,baz=80,slow=11,SNR=16						
	16nm,0.7s						
CTAO	Charters Tower	20.32	251	P	Pn	03 07 06.9	-0.6
CTAO				IAmb	IAmb	03 07 07.9	
	comp=Z,20nm,0.8s						
RAO	Raoul Island	20.52	139	LR	LR	03 13 28.1	
	comp=Z,340nm,19.6s,baz=338,slow=32						
BKZ	Black Stump Fm	26.14	163	P	P	03 08 04.0	+1.0
BKZ				IAmb	IAmb	03 08 30.7	
	comp=Z,32nm,1.5s						
STKA	Stephens Creek	28.79	229	P	P	03 08 26.1	-0.8
	comp=Z,2.1nm,0.6s,baz=42,slow=6.8,SNR=5.3						
	comp=Z,2.1nm,0.6s						
STKA	Stephens Creek	28.79	229	P	P	03 08 26.7	-0.1
WR0	Warramunga Arr	31.19	255	P	P	03 08 48.0	-0.2
WR0				IAmb	IAmb	03 09 06.3	
	comp=Z,13nm,1.5s						
WB0	Warramunga Arr	31.31	256	P	P	03 08 47.8	-1.4
WB0				IAmb	IAmb	03 08 49.4	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	31.38	255	P	P	03 08 47.6	-2.2
	comp=Z,1.3nm,0.8s,baz=84,slow=9.1,SNR=6.8						
	comp=Z,1.3nm,0.8s						
WRA	Warramunga Arr	31.38	255	P	P	03 08 48.0	-1.9
AS19	Alice Springs	32.23	248	P	P	03 08 57.0	-0.4
ASAR	Alice Springs	32.28	248	P	P	03 08 56.0	-1.9
	comp=Z,1.7nm,0.7s,baz=75,slow=9.3,SNR=17						
	comp=Z,1.7nm,0.7s						
H11S2	WAKE ISLAND Hy	32.68	0	T	T	03 44 09.2	
	baz=184,slow=76						
H11S3	WAKE ISLAND Hy	32.69	360	T	T	03 44 08.1	
	baz=184,slow=76						
H11S1	WAKE ISLAND Hy	32.70	360	T	T	03 44 09.5	
	baz=184,slow=76						
BBOO	Buckleboo	33.35	231	P	P	03 09 07.0	0.0
KNRA	Kununurra	36.63	263	P	P	03 09 34.5	-1.0
KNRA				IAmb	IAmb	03 09 50.0	
	comp=Z,19nm,1.4s						
FORT	Forrest	39.00	239	P	P	03 09 55.6	+0.3
MORW	Morawa	48.92	244	P	P	03 11 14.8	-0.3
MJB9	Matsu-Tunnel	57.37	333		P	03 12 15.5	-1.5
MJB9					P	03 12 15.9	-1.1
PTCN	Pitcairn Islan	59.98	111	P	P	03 12 34.8	-0.7
VNDA	Vanda	63.18	181	P	P	03 12 57.6	+1.4
	comp=Z,0.9nm,0.9s,baz=358,slow=7.8,SNR=5.7						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	63.18	181	P	P	03 12 56.4	+0.2
PETK	Petropavlovsk-	67.68	354	P	P	03 13 28.4	+2.8
	comp=Z,0.8nm,0.8s,baz=148,slow=8.4,SNR=1.4						
	comp=Z,0.8nm,0.8s						
PETK	Petropavlovsk-	67.68	354	P	P	03 13 25.7	+0.1
QSPA	South Pole Qui	75.63	180	P	P	03 14 15.1	+1.6
QSPA				IAmb	IAmb	03 14 27.4	
	comp=Z,7.8nm,1.3s						
SONM	Songino Array	81.91	324	P	P	03 14 49.0	+0.7
	comp=Z,0.5nm,0.8s,baz=131,slow=4.5,SNR=4.7						
	comp=Z,0.5nm,0.8s						
SONM	Songino Array	81.91	324	P	P	03 14 48.5	+0.2
SONM				IAmb	IAmb	03 14 56.6	
	comp=Z,5.0nm,1.5s						
TTA	Tatalina	82.36	16	P	P	03 14 49.4	-0.8
IMAR	Indian Mountai	85.39	15	P	P	03 15 05.8	+0.3
WRH	Wood River Hil	85.81	18	P	P	03 15 08.1	+0.5
WRH				IAmb	IAmb	03 15 16.0	
	comp=Z,5.3nm,1.2s						
CCB	Clear Creek Bu	86.02	18	P	P	03 15 08.2	-0.4
CCB				IAmb	IAmb	03 15 16.5	
	comp=Z,1.9nm,0.6s						
MDM	Murphy Dome	86.12	18	P	P	03 15 06.4	-2.8
MDM				IAmb	IAmb	03 15 18.1	
	comp=Z,3.8nm,1.0s						
IL31		86.38	18	P	P	03 15 10.7	+0.3
IL31				IAmb	IAmb	03 15 18.9	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	86.38	18	P	P	03 15 11.2	+0.8
	comp=Z,1.1nm,0.6s,baz=240,slow=5.2,SNR=28						
	comp=Z,1.1nm,0.6s						
ILAR	Eielson Array	86.38	18	P	P	03 15 11.6	+1.2
J25K	Salcha River,	86.74	19	P	P	03 15 09.9	-2.3
J25K				IAmb	IAmb	03 15 21.3	
	comp=Z,3.1nm,0.8s						
ANMO	Albuquerque	95.57	56	LR	LR	03 52 53.9	
	comp=Z,50nm,18.9s,baz=259,slow=32						
MKAR	Makanchi Array	96.59	317	P	P	03 15 59.1	+0.6
	comp=Z,0.4nm,0.7s,baz=94,slow=3.6,SNR=4.8						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	96.59	317	P	P	03 15 58.7	+0.2
TXAR	Lajitas Array	96.60	62	LR	LR	03 54 31.5	
	comp=Z,30nm,18.8s,baz=242,slow=32						
ARCES	ARCESS Array B	119.80	345	PKP	PKiKP	03 21 19.4	+1.1
	comp=Z,2.4nm,0.8s,baz=47,slow=1.7,SNR=14						
ARCES	ARCESS Array B	119.80	345		PKPdf	03 21 17.4	-0.8

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*IDC **16** 03:05:07.9±1.9,2.°66N×31.°62E,h0km,mb3.4/4, mbtmp3.5/5,ML3.5/1,MS2.9/1,Error ellipse: s-maj=50.6km s-min=20.8km az=38.0*
*EAF **16** 03:05:16.7±3.7,2.°49N×31.°36E,h0km±20km,MD3.9*
ISC 16 03:05:09.9±0.7,**2.°70N**±0.°05×**31.°51E**±0.°05,**h10**km,**n14,** σ**1.ˢ77**/21,**mb3.5**/4,**Uganda**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEBE	Entebbe	2.80	160	*e*P	Pb	03 06 01.7	+1.6
TEBE				*e*S	Sb	03 06 34.1	-0.4
KIL	Kilembe	2.90	211	*e*P	Pb	03 05 59.7	-2.2
KIL				*e*S	Sb	03 06 34.9	-2.6
MBAR	Mbarara	3.37	193	*e*P	Pn	03 06 05.8	+3.0
MBAR				*e*S	Sb	03 06 50.9	-0.1
MBAR	Mbarara	3.37	193	*e*P	Pn	03 06 04.2	+1.5
MBAR				*e*S	Sn	03 06 41.6	-1.3
MBAR	Mbarara	3.37	193	*e*P	Pn	03 06 05.8	+3.0
MBAR				*e*S	Sb	03 06 50.9	-0.1
MBAR				IAML		03 06 56.0	
	526nm,0.6s						
LODK	Lodwar	3.92	79	*e*P	Pn	03 06 12.2	+2.0
LODK				*e*S	Sn	03 06 55.0	-1.3
LODK	Lodwar	3.92	79	*e*P	Pn	03 06 12.2	+2.0
LODK				*e*S	Sb	03 07 04.3	-2.3
LODK				IAML		03 07 22.4	
	comp=N,558nm,0.6s						
KMBO	Kilima Mbogo	6.89	123	Pn	Pn	03 06 50.5	-0.8
	comp=N,1.0nm,0.3s,baz=275,slow=18,SNR=7.7						
KMBO				Sn	Sn	03 08 08.0	-1.9
	comp=N,1.9nm,0.3s,baz=279,slow=13,SNR=3.1						
KMBO				Lg	Lg	03 08 41.5	
	comp=N,2.2nm,0.3s,baz=241,slow=15,SNR=4.3						
KMBO				LR	LR	03 09 29.0	
	comp=N,110nm,21.2s,baz=274,slow=38						
	comp=N,2.8nm,0.3s						
KMBO	Kilima Mbogo	6.89	123	*e*P	Pn	03 06 56.5	+5.3
KMBO				*e*S	Sb	03 08 32.6	+0.2
KMBO	Kilima Mbogo	6.89	123	*e*P	Pn	03 06 56.5	+5.3
KMBO				*e*S	Sb	03 08 21.9	-10
KMBO				IAML		03 08 52.8	
	comp=N,48nm,0.5s						
TORD	Torodi Ar. Bea	31.26	291	P	P	03 11 30.6	+0.4
	comp=N,0.3nm,0.7s,baz=105,slow=11,SNR=2.1						
	comp=N,0.3nm,0.7s						
BRTR	Keskin Array B	36.91	3	P	P	03 12 19.4	+0.3
	comp=N,0.6nm,0.8s,baz=165,slow=12,SNR=4.1						
	comp=N,0.6nm,0.8s						
MKAR	Makanchi Array	62.10	37	P	P	03 15 30.2	-0.9
	comp=N,0.2nm,0.5s,baz=249,slow=7.8,SNR=2.5						
	comp=N,0.2nm,0.5s						
ARCES	ARCESS Array B	66.85	358	P	P	03 16 01.5	-0.2
	comp=N,0.6nm,0.7s,baz=169,slow=6.0,SNR=5.9						
	comp=N,0.6nm,0.7s						

IDC 16 03:10:03.1±8.7,**14.°66S**×**166.°69E,h72**km±90km,**mb3.4**/4, **mbtmp3.8**/5,**ML3.8**/1,**Error ellipse: s-maj=62.9km s-min=36.9km az=164.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.38	182	P	Pn	03 11 48.1	-0.2
	1.6nm,0.3s,baz=315,slow=18,SNR=18						
DZM				S	Sn	03 13 11.2	+0.7
	7.7nm,0.7s,baz=308,slow=24,SNR=5.7						
	4.0nm,0.3s						
CTA	Charters Tower	20.23	252	P	P	03 14 33.1	+0.5
	6.2nm,0.8s,baz=99,slow=12,SNR=4.4						
	6.2nm,0.8s						
WRA	Warramunga Arr	31.30	256	P	P	03 16 16.5	-0.3
	0.7nm,1.0s,baz=86,slow=8.3,SNR=2.0						
	0.7nm,1.0s						
ASAR	Alice Springs	32.18	249	P	P	03 16 24.3	-0.1
	1.1nm,1.1s,baz=73,slow=9.4,SNR=4.5						
	1.1nm,1.1s						
ILAR	Eielson Array	86.63	18	P	P	03 22 38.4	+0.1
	0.4nm,0.8s,baz=232,slow=6.2,SNR=2.8						
	0.4nm,0.8s						

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*JMA **16** 03:11:44.1±0.1,36.°5N±0.°3×140.°6E±0.°5,h56km,MV3.7/35, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
*IDC **16** 03:11:45.5±3.0,36.°43N×140.°55E,h72km±28km,mb3.4/9, mbtmp3.7/10,Error ellipse: s-maj=34.8km s-min=16.7km az=69.0*
ISC 16 03:11:44.0±0.8,**36.°49N**±0.°04×**140.°55E**±0.°06,**h57**km±6km, **n29,**σ**1.ˢ43**/29,**mb3.6**/9,**6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.12	6	P	Pn	03 11 52.9	+0.2
JHO				S	Sn	03 11 58.9	-0.1
JHYU	Hitachinakayam	0.15	169	P	Pn	03 11 52.8	0.0
JHYU				*e*S	Sn	03 11 58.8	-0.3
JYT	Yasato	0.39	228	P	Pn	03 11 54.8	+0.2
JYT				S	Sn	03 12 01.9	-0.2
ONAJ	Iwakimizuishiy	0.64	18	P	Pn	03 11 57.3	-0.1
ONAJ				*e*S	Sn	03 12 06.8	-0.4
JSB	Shiboa	0.70	314	⇓P	Pn	03 11 59.0	+0.9
JSB				⇓*e*S	Sn	03 12 09.6	+1.3
JAG	Ashikaga	0.89	266	⇓P	Pn	03 12 01.3	+0.9
JAG				⇓S	Sn	03 12 13.2	+0.6
JFK	Kawauchi	0.91	16	P	Pn	03 12 00.6	-0.2
JFT	Otama	1.04	351	⇓P	Pn	03 12 03.2	+0.8
JFT				⇓S	Sn	03 12 17.0	+0.8
JKT	Katashina	1.08	285	P	Pn	03 12 04.2	+1.1
MJAR	Matsushiro Arr	1.89	272	P	Pn	03 12 15.1	+1.3
	28nm,0.4s,baz=102,slow=9.9,SNR=81						
MJAR				S	Sn	03 12 30.4	-6.1
	27nm,0.3s,baz=263,slow=21,SNR=14						
JHJ	Hachijo jima 2	3.42	191	P	Pn	03 12 36.0	+1.2
	34nm,0.3s,baz=18,slow=20,SNR=1.5						
JHJ				S	Sn	03 13 14.5	+0.4
	40nm,0.3s,baz=60,slow=20,SNR=1.6						
SONM	Songino Array	27.52	305	P	P	03 17 24.3	-0.9
	0.5nm,0.5s,baz=103,slow=8.9,SNR=2.5						
	0.5nm,0.5s						
H11N2	WAKE ISLAND Hy	28.48	119	T	T	03 47 32.7	
	baz=313,slow=75						
H11N1	WAKE ISLAND Hy	28.48	119	T	T	03 47 26.1	
	baz=313,slow=75						
H11N3	WAKE ISLAND Hy	28.50	119	T	T	03 47 37.8	
	baz=313,slow=75						
H11S1	WAKE ISLAND Hy	29.16	121	T	T	03 48 26.4	
	baz=314,slow=75						
H11S3	WAKE ISLAND Hy	29.16	121	T	T	03 48 27.5	
	baz=314,slow=75						
H11S2	WAKE ISLAND Hy	29.18	121	T	T	03 48 27.6	
	baz=314,slow=75						
ZALV	Zalesovo Beam	41.77	313	P	P	03 19 28.3	+0.8
	1.4nm,0.4s,baz=88,slow=7.8,SNR=5.5						
	1.4nm,0.4s						
MKAR	Makanchi Array	43.83	302	P	P	03 19 45.4	+1.1
	0.6nm,0.8s,baz=97,slow=8.6,SNR=5.4						
	0.6nm,0.8s						
ILAR	Eielson Array	50.32	32	P	P	03 20 35.0	+0.4
	0.5nm,0.8s,baz=264,slow=5.9,SNR=5.7						
	0.5nm,0.8s						
WRA	Warramunga Arr	56.43	187	P	P	03 21 19.4	-0.4
	0.4nm,0.6s,baz=4.1,slow=7.5,SNR=1.7						
	0.4nm,0.6s						
FINES	FINESS Array B	68.97	332	P	P	03 22 42.9	+0.1
	0.7nm,0.5s,baz=48,slow=4.3,SNR=5.0						
	0.7nm,0.5s						
AKASG	Malin Array Be	74.30	322	P	P	03 23 14.4	-0.7
	0.2nm,0.3s,baz=46,slow=6.2,SNR=2.9						
	0.2nm,0.3s						
NOA	NORSAR Array B	74.42	337	P	P	03 23 15.1	-0.5
	0.4nm,0.6s,baz=40,slow=5.6,SNR=3.0						
	0.4nm,0.6s						
GERES	GERESS Array B	82.81	328	P	P	03 24 02.1	0.0
	0.1nm,0.3s,baz=31,slow=5.9,SNR=1.8						
	0.1nm,0.3s						
H03N2	Juan Fernandez	147.65	96	T	T	06 16 29.8	
	baz=291,slow=76						
H03N3	Juan Fernandez	147.66	96	T	T	06 16 32.5	
	baz=291,slow=76						
H03N1	Juan Fernandez	147.67	96	T	T	06 16 33.2	

baz=291,slow=76

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*IDC **16** 03:13:07.2±0.6, 14°.53S×166°.46E, h0^{km}, mb4.4/16, mbtmp4.4/17, ML4.3/1, MS3.9/21, Error ellipse: s-maj=22.5km s-min=15.0km az=96.0*

*NEIC **16** 03:13:12±1.8, 14°.58S±0°.06×166°.7E±0°.1, h32^{km}±4^{km}, mb4.8/69, Error ellipse: s-maj=17.4km s-min=4.2km az=62.0*

ISC 16 03:13:11.5±0.4**, 14°.56S**±0°.06×**166°.65E**±0°.09**, h28**^{km}**, n156, σ1^{s}.33**/147**, mb4.7**/59**, MS3.9**/20**, 2C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.03	149	Pn	Pn	03 13 28.6	-1.5
LIFNC	LIFOU	6.21	175	Pn	Pn	03 14 39.7	-1.6
MARNC	Mare, Loyalty	7.01	169	Pn	Pn	03 14 50.8	-1.5
DZM	Mont Dzumac	7.47	181	Pn	Pn	03 14 59.4	+0.6
	4.6nm,0.3s,baz=312,slow=23,SNR=33						
DZM				Sn	Sn	03 16 23.5	+0.7
	3.2nm,0.3s,baz=320,slow=23,SNR=6.2						
	16nm,0.4s						
ONTNC	Ouen Toro	7.71	181	Pn	Pn	03 15 01.5	-0.5
OUENC	Ouen Island, N	7.82	179	Pn	Pn	03 15 04.4	+0.9
PINNC	Pines Island,	8.04	175	Pn	Pn	03 15 07.5	+0.9
HNR	Honiara	8.30	307	LR	LR	03 18 44.4	
	comp=Z,198nm,18.5s,baz=104,slow=41						
EIDS	Eidsvold	18.14	231	P	P	03 17 22.4	+0.8
CTA	Charters Tower	20.22	251	P	P	03 17 42.5	-2.0
	34nm,0.9s,baz=78,slow=11,SNR=22						
	34nm,0.9s						
CTAO	Charters Tower	20.22	251	P	P	03 17 44.8	+0.2
CTAO				IAmb	IAmb	03 17 46.7	
	comp=Z,49nm,0.9s						
RAO	Raoul Island	20.43	138	LR	LR	03 24 07.3	
	comp=Z,336nm,19.3s,baz=342,slow=32						
AFI	Afiamalu	20.92	91	LR	LR	03 24 09.8	
	comp=Z,280nm,18.9s,baz=237,slow=31						
URZ	Urewera	25.36	161	P	P	03 18 36.7	+0.5
	comp=Z,12nm,1.0s,baz=248,slow=3.4,SNR=9.7						
URZ				LR	LR	03 27 22.1	
	comp=Z,344nm,18.6s,baz=31,slow=34						
	comp=Z,12nm,1.0s						
URZ	Urewera	25.36	161	P	P	03 18 36.4	+0.2
URZ				IAmb	IAmb	03 18 52.8	
	comp=Z,27nm,1.1s						
BKZ	Black Stump Fm	26.00	162	P	P	03 18 41.3	-0.8
BKZ				IAmb	IAmb	03 19 00.7	
	comp=Z,18nm,1.0s						
STKA	Stephens Creek	28.65	229	P	P	03 19 05.0	-0.9
	comp=Z,5.2nm,0.9s,baz=52,slow=9.2,SNR=6.3						
STKA				LR	LR	03 30 21.0	
	comp=Z,525nm,18.4s,baz=83,slow=36						
	comp=Z,5.2nm,0.9s						
STKA	Stephens Creek	28.65	229	P	P	03 19 06.2	+0.3
RPZ	Rata Peaks	29.30	173	LR	LR	03 30 17.7	
	comp=Z,314nm,18.6s,baz=186,slow=35						
WB0	Warramunga Arr	31.22	256	P	P	03 19 27.1	-1.8
WB2	Warramunga Arr	31.27	256	P	P	03 19 27.2	-2.1
WRA	Warramunga Arr	31.28	256	P	P	03 19 26.1	-3.3
	comp=Z,3.4nm,0.9s,baz=85,slow=8.5,SNR=12						
WRA				LR	LR	03 31 11.6	
	comp=Z,321nm,18.6s,baz=182,slow=35						
	comp=Z,3.4nm,0.9s						
WRA	Warramunga Arr	31.28	256	P	P	03 19 27.7	-1.7
AS06	Alice Springs	32.11	249	P	P	03 19 35.9	-0.8
AS31	Alice Springs	32.17	249	P	P	03 19 35.7	-1.6
ASAR	Alice Springs	32.17	249	P	P	03 19 34.9	-2.4
	comp=Z,3.7nm,0.9s,baz=75,slow=9.6,SNR=21						
ASAR				PcP	PcP	03 22 25.7	-0.2
	comp=Z,0.8nm,0.6s,baz=72,slow=4.1,SNR=3.9						
	comp=Z,3.7nm,0.9s						
ASAR	Alice Springs	32.17	249	P	P	03 19 35.8	-1.4
RAR	Rarotonga	32.59	107	LR	LR	03 32 05.4	
	comp=Z,114nm,19.4s,baz=313,slow=35						
BBOO	Buckleboo	33.21	231	P	P	03 19 45.9	-0.3
KNRA	Kununurra	36.56	263	P	P	03 20 13.9	-1.3
KNRA				IAmb	IAmb	03 20 15.0	
	comp=Z,18nm,0.9s						
SIJI	Sorong	37.52	288	LR	LR	03 37 42.1	
	comp=Z,148nm,19.2s,baz=108,slow=40						
FORT	Forrest	38.87	239	P	P	03 20 34.7	+0.1
BATI	Baumata	42.16	271	LR	LR	03 37 58.5	
	comp=Z,473nm,19.0s,baz=254,slow=36						
PSA00	Pilbara Seismi	44.91	254	P	P	03 21 23.8	-0.4
PSA00				IAmb	IAmb	03 21 25.0	
	comp=Z,16nm,1.4s						
MBWA	Marble Bar	45.01	255	P	P	03 21 24.2	-0.8
MBWA	Marble Bar	45.01	255	P	P	03 21 24.8	-0.2
MBWA				sP	sP	03 21 46.1	+10
LUWI	Luwuk	45.38	283	P	P	03 21 28.2	+0.2
KAPI	Kappang	47.09	277	P	P	03 21 41.2	-0.2
TOLI2	Tolitoli	47.99	285	P	P	03 21 47.4	-1.0
TOLI2				IAmb	IAmb	03 21 49.0	
	comp=Z,9.5nm,1.0s						
MPSI	Mapaga	48.55	284	P	P	03 21 51.5	-1.2
	comp=Z,18nm,1.3s						
MYLDM	Lahad Datu	51.61	289	P	P	03 22 16.9	+1.0
SBUM	Sibu	56.48	283	P	P	03 22 52.3	+0.7
SBUM				IAmb	IAmb	03 22 53.7	
	comp=Z,10nm,0.9s						
JGF	Kuroka	57.08	332	P	P	03 22 54.2	-1.3
JGF				IAmb	IAmb	03 23 02.2	
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	57.48	333	P	P	03 22 56.9	-1.3
	comp=Z,2.6nm,0.9s,baz=289,slow=42,SNR=4.2						
	comp=Z,2.6nm,0.9s						
MJAR	Matsushiro Arr	57.48	333	P	P	03 22 57.5	-0.7
MAJO	Matsushiro	57.48	333	P	P	03 23 00.1	+1.9
MAJO				IAmb	IAmb	03 23 04.4	
	comp=Z,8.2nm,0.9s						
MJB9	Matsu-Tunnel	57.49	333	P	P	03 22 60.0	+1.8
MJB9				IAmb	IAmb	03 23 04.4	
	comp=Z,7.9nm,0.9s						
ASAJ	Asahikawa	62.38	341	LR	LR	03 44 42.4	
	comp=Z,54nm,21.3s,baz=299,slow=30						
VNDA	Vanda	63.02	181	P	P	03 23 36.3	+0.8
	comp=Z,1.5nm,0.8s,baz=360,slow=6.3,SNR=9.6						
	comp=Z,1.5nm,0.8s						
VNDA	Vanda	63.02	181	P	P	03 23 35.9	+0.4
VNDA	Vanda	63.02	181	P	P	03 23 36.8	+1.3
KSRS	Korea Array	63.26	326	P	P	03 23 37.6	-0.1
	comp=Z,1.0nm,0.7s,baz=139,slow=7.6,SNR=2.5						
KSRS				LR	LR	03 48 27.7	
	comp=Z,42nm,19.9s,baz=5.0,slow=34						
	comp=Z,1.0nm,0.7s						
SBA	Scott Base	63.30	180	P	P	03 23 39.2	+1.8
SBA				IAmb	IAmb	03 23 40.3	
	comp=Z,10nm,1.1s						
SBA	Scott Base	63.30	180	P	P	03 23 39.7	+2.3
SBA				x	x	03 23 43.4	
SBA				pP	sP	03 23 53.3	+4.0
CASY	Casey	63.46	202	P	P	03 23 38.7	+0.1
CASY				IAmb	IAmb	03 23 39.9	
	comp=Z,5.8nm,0.9s						
CASY	Casey	63.46	202	P	P	03 23 39.6	+1.0
CASY				pP	pP	03 23 45.4	-1.6
CCD	Concordia, Ant	64.95	191	P	P	03 23 50.3	+1.6
CCD				pP	pP	03 23 57.8	+0.6
NJ2	Nanjing	65.14	316	*e*P	P	03 23 49.3	-0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	66.47	334	P	P	03 23 58.8	+0.4
	comp=Z,4.1nm,0.9s,baz=148,slow=8.5,SNR=3.8						
	comp=Z,4.1nm,0.9s						
SHEM	Shemya Is, Ala	67.32	5	LR	LR	03 51 58.7	
	comp=Z,28nm,18.4s,baz=357,slow=35						
PEA0B	Petropavlovsk-	67.83	354	P	P	03 24 06.9	+0.1
PETK	Petropavlovsk-	67.83	354	P	P	03 24 07.4	+0.5
	comp=Z,6.1nm,0.7s,baz=149,slow=9.5,SNR=5.8						
	comp=Z,6.1nm,0.7s						
PETK	Petropavlovsk-	67.83	354	P	P	03 24 07.1	+0.2
BNX	BinXian	69.70	332	⇑P	P	03 24 25.3	+6.6
BNX				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI	Beijing	71.76	321	P	P	03 24 31.8	+0.5
BJI				pP	sP	03 24 44.6	+1.7
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN	Xi'an	73.13	313	⇑P	P	03 24 46.0	+6.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI	Kunming	73.71	302	⇓P	P	03 24 51.4	+7.8
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XLT	XiLinHaoTe	74.22	325	*e*P	P	03 24 48.0	+2.0
XLT				pmax	pmax		
	comp=Z,12nm,0.6s						
XLT				pmax	pmax		
	comp=Z,120nm,3.9s						
CMAR	Chiang Mai Arr	74.33	294	P	P	03 24 46.8	-0.3
	comp=Z,1.7nm,0.4s,baz=123,slow=4.6,SNR=13						
	comp=Z,1.7nm,0.4s						
MA2	Magadan	74.99	352	LR	LR	03 52 14.6	
	comp=Z,27nm,21.0s,baz=136,slow=31						
HHC	Hu-ho-hao-te	75.07	320	*e*P	P	03 24 52.4	+1.4
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
PZH	PanZhiHua	75.10	303	P	P	03 24 52.8	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,8.4s						
QSPA	South Pole Qui	75.47	180	P	P	03 24 54.0	+1.0
QSPA				IAmb	IAmb	03 25 16.0	
	comp=Z,9.2nm,1.1s						
LZH	Lanzhou	77.76	313	*e*P	P	03 25 11.6	+5.1
LZH				pP	sP	03 25 23.8	+5.7
LZH				sP	PcP	03 25 28.8	+12
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
KDAK	Kodiak Island	79.52	21	LR	LR	03 55 30.6	
	comp=Z,82nm,19.3s,baz=223,slow=32						
P18K	Big Mountain,	79.91	19	P	P	03 25 16.8	-0.8
P18K				IAmb	IAmb	03 25 21.4	
	comp=Z,6.5nm,1.0s						
ULN	Ulaanbaatar	81.65	324	P	P	03 25 27.0	-0.3
ULN				IAmb	IAmb	03 25 34.2	
	comp=Z,4.2nm,0.7s						
YAK	Yakutsk	81.70	343	LR	LR	04 02 40.1	
	comp=Z,40nm,18.0s,baz=267,slow=36						
MAW	Mawson	81.81	202	LR	LR	03 55 35.0	
	comp=Z,91nm,18.4s,baz=100,slow=31						
SONM	Songino Array	82.00	324	P	P	03 25 29.0	-0.1
	comp=Z,1.0nm,0.8s,baz=145,slow=6.4,SNR=7.8						
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	82.00	324	P	P	03 25 29.1	0.0
GTA	Gaotai	82.12	314	*e*P	P	03 25 31.1	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
M19K	Big River Lodg	82.16	17	P	P	03 25 29.4	-0.1
L19K	White Mountain	82.25	17	P	P	03 25 31.0	+1.1
BILL	Bilibino	82.37	360	P	P	03 25 30.5	+0.1
TTA	Tatalina	82.53	16	P	P	03 25 31.7	+0.2
TTA				IAmb	IAmb	03 25 37.9	
	comp=Z,6.0nm,1.1s						
K20K	Telida	83.40	17	P	P	03 25 36.5	+0.6
PMR	Palmer	83.54	20	P	P	03 25 36.4	-0.2
PMR				IAmb	IAmb	03 25 39.5	
	comp=Z,5.6nm,0.9s						
KNK	Knik Glacier	83.63	20	P	P	03 25 37.1	0.0
FID	Port Fidalgo	83.83	21	P	P	03 25 37.5	-0.6
FID				IAmb	IAmb	03 25 44.9	
	comp=Z,5.3nm,0.9s						
SML	Sawmill	83.96	20	P	P	03 25 38.5	-0.3
SML				IAmb	IAmb	03 25 55.0	
	comp=Z,9.4nm,1.0s						
CAST	Castle Rocks	84.01	17	P	P	03 25 37.8	-1.2
CAST				IAmb	IAmb	03 25 52.7	
	comp=Z,7.1nm,0.8s						
J20K	Nowinta River	84.03	16	P	P	03 25 39.5	+0.5
SCM	Sheep Creek Mo	84.31	20	P	P	03 25 40.8	+0.2
KLU	Klutina	84.54	21	P	P	03 25 41.2	-0.7
KLU				IAmb	IAmb	03 25 50.6	
	comp=Z,6.4nm,1.0s						
TRF	Thorofare Moun	84.56	18	P	P	03 25 40.9	-1.1
TRF				IAmb	IAmb	03 25 43.2	
	comp=Z,6.9nm,1.0s						
BPAW	Bear Paw Mtn.	84.85	17	P	P	03 25 42.3	-1.0
RND	Reindeer	84.97	18	P	P	03 25 42.9	-1.0
MCK	McKinley	85.18	18	P	P	03 25 44.5	-0.4
H21K	Melozitna Rive	85.55	16	P	P	03 25 47.0	+0.3
H21K				IAmb	IAmb	03 26 01.9	
	comp=Z,6.4nm,1.0s						
IMAR	Indian Mountai	85.56	15	P	P	03 25 47.0	+0.3
MDM	Murphy Dome	86.29	18	P	P	03 25 50.0	-0.4
TCOL	CIGO, UAF Yank	86.33	18	P	P	03 25 50.5	-0.1
COLA	College	86.34	18	P	P	03 25 49.7	-0.9
M27K	Edge Creek, AK	86.54	21	P	P	03 25 51.1	-0.7
H23K	Yukon River	86.55	17	P	P	03 25 51.0	-0.7
H23K				IAmb	IAmb	03 25 56.8	
	comp=Z,11nm,1.4s						
IL31		86.55	18	P	P	03 25 49.4	-2.2
IL31				IAmb	IAmb	03 25 57.2	
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	86.55	18	P	P	03 25 50.4	-1.3
	comp=Z,3.0nm,0.8s,baz=234,slow=5.5,SNR=28						
ILAR				LR	LR	03 58 03.8	
	comp=Z,67nm,21.2s,baz=246,slow=31						
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	86.55	18	P	P	03 25 49.2	-2.5
DOT	Dot Lake	86.66	20	P	P	03 25 51.9	-0.3
DOT				IAmb	IAmb	03 26 01.4	
	comp=Z,3.5nm,1.0s						
J25K	Salcha River,	86.91	19	P	P	03 25 53.0	-0.5
J25K				IAmb	IAmb	03 26 00.6	
	comp=Z,7.4nm,0.9s						
BELA	Belgrano 2	86.94	176	P	P	03 25 52.6	-1.0
BELA				IAmb	IAmb	03 25 54.3	
	comp=Z,7.9nm,1.3s						
BBB	Bella Bella	86.97	34	LR	LR	04 02 03.3	
	comp=Z,47nm,18.1s,baz=316,slow=34						
PFO	Pinyon Flats O	87.39	54	LR	LR	03 59 38.3	
	comp=Z,147nm,18.6s,baz=238,slow=32						
COLD	Coldfoot	87.43	15	P	P	03 25 56.3	+0.4
COLD				IAmb	IAmb	03 26 05.4	
	comp=Z,5.1nm,0.9s						
TOLK	Toolik Lake Re	88.64	15	P	P	03 26 02.2	+0.5
TOLK				IAmb	IAmb	03 26 09.3	
	comp=Z,8.7nm,1.2s						
DLBC	Dease Lake	89.07	28	LR	LR	04 05 29.1	
	comp=Z,33nm,18.1s,baz=247,slow=35						
J08A	Circle Bar Ran	89.23	45	P	P	03 26 04.8	-0.3
J08A				IAmb	IAmb	03 26 11.6	
	comp=Z,7.0nm,1.3s						
I29M	Ogilvie Camp,	89.67	20	P	P	03 26 07.6	+1.1
TIXI	Tiksi	89.69	349	P	P	03 26 05.7	-0.8
TIXI				IAmb	IAmb	03 26 13.4	
	comp=Z,3.4nm,0.9s						
PRN	Pahroc Range	89.70	51	P	P	03 26 06.4	-1.1
PRN				IAmb	IAmb	03 26 12.4	
	comp=Z,6.3nm,1.3s						
ELK	Elko	90.62	48	P	P	03 26 11.9	0.0
PMSA	Palmer Station	92.13	161	P	P	03 26 14.9	-3.2
WMQ	Urumqi	92.18	315	*e*P	P	03 26 19.8	+1.0
TROLL	Troll, Antarti	92.98	185	PcP	PcP	03 26 22.4	-0.3
SNAA	Sanae	93.68	183	PcP	P	03 26 24.8	-0.5
SNAA	Sanae	93.68	183	P	P	03 26 24.0	-1.3
SNAA				IAmb	IAmb	03 26 32.3	
	comp=Z,3.5nm,0.8s						
VNA3	Neumayer Olymp	94.37	181	PcP	P	03 26 28.0	-0.3
MK31	Makanchi Array	96.67	316	P	P	03 26 38.6	-0.7
MK31				IAmb	IAmb	03 26 45.6	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	96.67	316	P	P	03 26 38.4	-0.8
	comp=Z,1.6nm,0.9s,baz=90,slow=7.0,SNR=9.6						
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	96.67	316	P	P	03 26 38.3	-0.9
MAKZ	Makanchi	96.88	316	P	P	03 26 40.6	+0.4
ZALV	Zalesovo Beam	96.90	324	P	P	03 26 39.0	-1.1
	comp=Z,0.5nm,0.2s,baz=108,slow=4.7,SNR=2.3						
	comp=Z,0.5nm,0.2s						
YKA	Yellowknife Ar	97.67	27	P	P	03 26 42.6	-0.7
	comp=Z,0.4nm,0.6s,baz=264,slow=4.3,SNR=2.9						
	comp=Z,0.4nm,0.6s						
ARCES	ARCESS Array B	119.94	345	PKP	PKiKP	03 31 59.5	+0.6
	comp=Z,2.9nm,0.7s,baz=64,slow=2.1,SNR=11						
ARCES	ARCESS Array B	119.94	345		PKPdf	03 31 58.6	-0.2
KLMR	Klimovskoe	120.26	333	*e*PKPdf	PKPdf	03 31 59.2	-0.4
KLMR				AMP		03 32 07.8	
	comp=Z,6.0nm,0.9s						
FINES	FINESS Array B	125.34	338	PKP	PKPdf	03 32 09.2	-0.1
	comp=Z,3.1nm,1.0s,baz=15,slow=5.8,SNR=4.1						
FINES	FINESS Array B	125.34	338	PKPdf	PKPdf	03 32 08.8	-0.5
AKASG	Malin Array Be	130.26	326	PKP	PKPdf	03 32 18.2	-0.8
	comp=Z,0.2nm,0.3s,baz=39,slow=2.0,SNR=4.5						
AKASG				SKiKP	SKiKP	03 35 54.8	+0.7
	comp=Z,0.8nm,0.5s,baz=47,slow=3.7,SNR=7.1						
NB2	NORSAR Subarra	130.30	345	PKPdf	PKiKP	03 32 24.7	+4.9
	comp=Z,3.9nm,1.2s,baz=27,slow=1.8						
NOA	NORSAR Array B	130.30	345	PKP	PKPdf	03 32 18.3	-0.7
	comp=Z,0.4nm,0.9s,baz=53,slow=2.2,SNR=1.2						
NOA				SKPbc	SKPbc	03 35 43.2	+3.0
	comp=Z,0.8nm,0.7s,baz=31,slow=3.0,SNR=4.6						
NOA				SKP		03 35 55.5	
	comp=Z,2.6nm,0.9s,baz=17,slow=4.2,SNR=5.8						
BRTR	Keskin Array B	131.94	311	PP	PP	03 34 43.5	-0.4
	comp=Z,0.3nm,0.4s,baz=94,slow=8.7,SNR=3.8						
BRTR				SKPbc	SKiKP	03 35 53.8	-4.3
	comp=Z,0.3nm,0.7s,baz=95,slow=3.8,SNR=1.4						
CLL	Collm	137.66	336	*e*SKPbc	SKPbc	03 36 05.0	+0.2
CLL				*e*PKSbc	PKSbc	03 36 07.0	-0.7
MODS	Modra-Piesok	137.88	330	*e*PKP	PKPdf	03 32 32.1	-1.4
CONA	Conrad Observa	138.87	330	*e*P	PKPdf	03 32 34.0	-1.5
	comp=Z,0.9nm,0.5s						
GERES	GERESS Array B	139.22	333	PKP	PKPdf	03 32 34.6	-1.4
	comp=Z,0.2nm,0.4s,baz=28,slow=4.4,SNR=2.3						
GERES				SKPbc	SKiKP	03 36 12.2	-0.5
	comp=Z,0.7nm,0.8s,baz=328,slow=3.5,SNR=5.3						
GERES				SKPab	SKPab	03 36 22.9	+3.5
	comp=Z,0.9nm,0.9s,baz=70,slow=1.6,SNR=5.9						
ARSA	Arzberg	139.51	330	*e*P	PKiKP	03 32 39.4	+0.5
	comp=Z,2.0nm,0.9s						
OBKA	Obir	140.51	329	*e*P	PKiKP	03 32 40.7	-0.3
	comp=Z,1.8nm,0.8s						
ABTA	Abfaltersbach	141.31	331	*e*P	PKiKP	03 32 42.0	-0.7
	comp=Z,0.8nm,0.4s						
WTTA	Wattenberg	141.32	333	*e*P	PKiKP	03 32 41.5	-1.3
	comp=Z,0.2nm,0.2s						
MOTA	Moosalm	141.50	333	*e*P	PKPdf	03 32 38.9	-1.4
	comp=Z,1.8nm,0.6s						
SQTA	Sankt Quirin	141.54	333	*e*P	PKPdf	03 32 39.6	-0.8
	comp=Z,1.1nm,0.5s						
KEST	Kesra	150.70	320	PKPbc	PKPbc	03 33 01.6	0.0
	comp=Z,5.4nm,0.9s,baz=310,slow=3.0,SNR=5.6						
ESDC	Sonseca Array	153.66	344	PKPbc	PKPbc	03 33 07.2	-0.9
	comp=Z,1.1nm,0.9s,baz=5.7,slow=2.6,SNR=4.7						
TORD	Torodi Ar. Bea	165.32	266	PKP	PKPdf	03 33 18.4	+4.0
	comp=Z,0.4nm,0.7s,baz=85,slow=3.9,SNR=2.4						
TORD				PKPab	PKPab	03 34 11.6	-0.5
	comp=Z,1.3nm,1.0s,baz=94,slow=4.8,SNR=3.9						

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*GII **16** 03:24:08.7±0.0, 28°.47N×34°.91E, h5^{km}, MD3.3/1, Mm3.1/2*

*HLW **16** 03:24:10.3, 28°.47N×34°.74E, h9^{km}±2^{km}*

*SGS **16** 03:24:11.1, 28°.55N×34°.67E, h9^{km}, Ml3.2*

ISC 16 03:24:10.9±0.9**, 28°.53N**±0°.03×**34°.70E**±0°.02**, h14**^{km}±7^{km}**, n67, σ0^{s}.85**/72**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAYS	Tayyib Ism	0.15	81	S	Sg	03 24 17.6	+0.3
TAYS	Tayyib Ism	0.15	81	P	Pg	03 24 14.9	+0.1
HDHB	Dhahab	0.21	340	P	Pg	03 24 15.7	0.0
	baz=337						
BDAS	Al Bad`	0.36	105	P	Pb	03 24 18.7	-0.5
BDAS	Al Bad`	0.36	105	S	Sb	03 24 24.0	-0.7
NUB	Nuweibaa	0.50	355	P	Pg	03 24 19.9	-0.9
	baz=351						
HAQS	Haql	0.56	20	S	Sg	03 24 29.1	-0.2
HAQS	Haql	0.56	20	P	Pg	03 24 21.5	-0.4
AYUS	`Aynunah	0.60	124	P	Pb	03 24 22.9	-0.3
HKAT	Jabal Katrina	0.62	270	P	Pg	03 24 22.9	-0.3
	baz=275						
HKAT				S	Sg	03 24 31.9	+0.4
	baz=275						
HBST	Basata	0.69	2	P	Pg	03 24 24.3	-0.1
	baz=0.0						
HBST				S	Sb	03 24 35.5	+1.5
	baz=0.0						
JLOS		0.73	73	P	Pb	03 24 24.6	-0.8
JMOS	Jabal al Moall	0.73	29	P	Pg	03 24 24.6	-0.7
HQLS		0.83	22	P	Pg	03 24 26.5	-0.7
TR1	Tor 1	0.84	232	P	Pb	03 24 27.4	+0.1
	baz=237						
TR2	Tor 2	0.87	261	P	Pg	03 24 27.5	-0.4
	baz=265						
EIL	Elat	1.16	11	Pg	Pb	03 24 31.0	-1.8
EIL				Sg	Sb	03 24 48.3	+0.6
HRDS	Abu Rudays	1.25	279	P	Pn	03 24 33.7	-0.2
	baz=281						
MBRI	Mt Berech	1.28	8	Pn	Pn	03 24 33.6	-0.8
MBRI				Sn	Sb	03 24 52.2	+1.1
NDEBA	Dheba	1.35	141	P	Pn	03 24 34.2	-1.2
SHQRE	Shigry	1.44	115	P	Pb	03 24 36.6	-1.1
HRFI	Mount Harif	1.53	11	Pn	Pn	03 24 37.2	-0.7
HRFI				Sn	Sn	03 24 58.3	+0.7
KRMI	Paran Flat	1.59	1	Pn	Pn	03 24 38.1	-0.5
HHRG	Al Ghardaqah	1.64	218	P	Pn	03 24 39.5	+0.1
	baz=216						
TBKS	Tabuk	1.65	100	P	Pb	03 24 39.6	-1.5
GRB	Gharib	1.71	262	P	Pn	03 24 39.3	-0.9
	baz=264						
PRNI	Paran	1.84	8	Pn	Pn	03 24 41.3	-0.8
URD07	Al Anba	1.87	116	P	Pb	03 24 43.3	-1.7
ZAF	Zafarana	2.03	292	P	Pn	03 24 44.2	-0.5
	baz=294						
SUZ	Suez	2.09	309	P	Pn	03 24 46.1	+0.6
	baz=310						
URD06	Shuwaq	2.11	120	P	Pn	03 24 46.0	0.0
WJHS		2.33	140	P	Pn	03 24 48.4	-0.5
KZIT	Kziot	2.39	354	Pn	Pn	03 24 49.7	+0.1
URD11	Tayma	2.50	103	P	Pn	03 24 51.6	+0.3
BIDS	Bi'r al Bayda'	2.59	129	P	Pn	03 24 52.6	+0.2
URD13	Abu Rakah	2.64	111	P	Pn	03 24 53.5	+0.3
HHAG	Hagoal	2.68	303	P	Pn	03 24 53.6	-0.1
	baz=304						
URD04	Abu Rakah	2.69	122	P	Pn	03 24 54.3	+0.5
URD15	Abu Rakah	2.75	117	P	Pn	03 24 55.4	+0.7
GLL	Jalalah	2.82	293	P	Pn	03 24 55.9	+0.2
	baz=294						
URD14	Abu Rakah	2.90	111	P	Pn	03 24 57.1	+0.4
QLABS	Al Qalibar	2.92	102	P	Pn	03 24 57.4	+0.3
EWJHS	Al Wajh	2.93	143	P	Pn	03 24 56.3	-0.7
ASUT		3.00	249	P	Pn	03 24 57.3	-0.6
	baz=250						
NBNS	Bani Suef	3.00	273	P	Pn	03 24 59.3	+1.3
	baz=274						
URD01	URD01	3.06	120	P	Pn	03 24 59.8	+0.9
URD03	Al Ula	3.06	127	P	Pn	03 24 59.5	+0.6
DSI	Dead Sea	3.09	11	Pn	Pn	03 24 59.2	-0.1
NADB	Abo Dabab	3.18	183	P	Pn	03 24 59.0	-1.5
	baz=184						
URD02	Al Ula	3.39	123	P	Pn	03 25 03.9	+0.4
JOFS	JOFS	3.54	75	P	Pb	03 25 15.1	+1.8
NUMJS	Khuff	3.69	141	P	Pn	03 25 06.7	-0.7
RYAN	Fayoum	3.92	279	P	Pn	03 25 10.8	+0.1
	baz=280						
UMJS	Umm Lajj	4.02	144	P	Pn	03 25 11.2	-0.9
LNY07	LNY07	4.24	142	P	Pn	03 25 14.6	-0.5
LNY14	LNY14	4.26	139	P	Pn	03 25 16.2	+0.8
LNY15	LNY15	4.27	139	P	Pn	03 25 15.8	+0.2
LNY17	LNY17	4.29	139	P	Pn	03 25 16.7	+0.9
LNY01	LNY01	4.39	138	P	Pn	03 25 18.4	+1.1
MURBA	Al Muraba'a	4.44	134	P	Pn	03 25 19.0	+1.2
SUMJS	Umluj	4.46	147	P	Pn	03 25 18.0	-0.1
LNY08	LNY08	4.47	140	P	Pn	03 25 19.1	+0.6
LNYS	LNYS	4.49	139	P	Pn	03 25 19.4	+0.8
KBR13	Birmah	4.61	126	P	Pn	03 25 21.2	+1.0
YNBS	Yanbu` al Bahr	5.11	144	P	Pn	03 25 27.6	+0.6
KBR07	Khaybar	5.36	126	P	Pn	03 25 32.6	+2.1
YOBS		5.51	138	P	Pn	03 25 34.3	+1.7

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*IDC **16** 03:26:54.4±1.3, 51°.91N×175°.12E, h0^{km}, mb3.6/11, mbtmp3.7/13, ML3.5/2, MS3.9/1, Error ellipse: s-maj=32.8km s-min=15.5km az=10.0*

*NEIC **16** 03:27:00.5±1.8, 51°.9N±0°.1×175°.0E±0°.1, h37^{km}±3^{km}, mb4.1/24, Error ellipse: s-maj=18.6km s-min=8.0km az=210.0*

ISC 16 03:27:00.1±0.8**, 51°.9N**±0°.1×**174°.92E**±0°.06**, h39**^{km}**, n56, σ1^{s}.20**/51**, mb3.8**/18**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	Shemya Is, Ala	0.99	330	Pn	Pn	03 27 17.3	-0.2
	326nm,0.3s,baz=145,slow=3.3,SNR=335						
SHEM				LR	LR	03 27 22.4	
	comp=Z,53nm,21.5s,baz=290,slow=27						
SHEM				Sn	Sn	03 27 31.8	+1.5
	651nm,0.3s,baz=246,slow=20,SNR=12						
SMY	Shemya	0.99	330		Pn	03 27 17.1	-0.4

KIWB	**Kanaga Island**	**4.92**	**87**	Pn	**Pn**	**03 28 11.8**	**+0.4**
ADK	**Adak**	**5.20**	**87**	Pn	**Pn**	**03 28 15.4**	**+0.1**
PETK	**Petropavlovsk-**	**10.57**	**283**	Pn	**Pn**	**03 29 29.7**	**+0.7**
	0.3nm,0.3s,baz=100,slow=14,SNR=6.2						
PETK				Sn	**Sn**	**03 31 23.9**	**-2.1**
	0.4nm,0.3s,baz=6.7,slow=26,SNR=4.0						
	2.0nm,0.7s						
UNV	**Unalaska Valle**	**11.40**	**73**	Pn	**Pn**	**03 29 40.1**	**-0.1**
CNBA	**Chernabura Isl**	**15.47**	**69**	P	**P**	**03 30 39.4**	**+0.2**
CNBA				IAmb	IAmb	03 30 50.0	
	comp=Z,15nm,1.1s						
Q19K	**Cape Douglas,**	**19.05**	**56**	P	**P**	**03 31 18.1**	**-0.7**
Q19K				IAmb	IAmb	03 31 24.3	
	comp=Z,12nm,0.6s						
KDAK	**Kodiak Island**	**19.50**	**60**	P	**P**	**03 31 21.1**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=276,slow=6.5,SNR=10						
	comp=Z,2.8nm,0.4s						
KDAK	**Kodiak Island**	**19.50**	**60**	P	**P**	**03 31 20.8**	**-2.7**
KDAK				IAmb	IAmb	03 31 36.7	
	comp=Z,8.9nm,0.8s						
K20K	**Telida**	**19.96**	**43**	P	**Pn**	**03 31 31.8**	**+1.3**
J20K	**Nowinta River**	**20.23**	**41**	P	**P**	**03 31 31.0**	**-0.5**
CNPM	**China Poot**	**20.36**	**55**	P	**P**	**03 31 31.9**	**-1.1**
CNPM				IAmb	IAmb	03 31 44.5	
	comp=Z,17nm,1.4s						
BRLK	**Bradley Lake**	**20.57**	**54**	P	**P**	**03 31 33.6**	**-1.6**
BRLK				IAmb	IAmb	03 31 59.9	
	comp=Z,7.9nm,1.2s						
IM03		**21.15**	**36**	P	**P**	**03 31 45.2**	**+3.9**
WRH	**Wood River Hil**	**22.82**	**42**	P	**P**	**03 32 00.4**	**+1.1**
MDM	**Murphy Dome**	**22.90**	**41**	P	**P**	**03 31 59.9**	**-0.3**
IL31		**23.40**	**42**	P	**P**	**03 32 05.2**	**+0.2**
ILAR	**Eielson Array**	**23.40**	**42**	P	**P**	**03 32 03.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=247,slow=6.6,SNR=6.6						
	comp=Z,0.3nm,0.6s						
TOLK	**Toolik Lake Re**	**23.80**	**32**	P	**P**	**03 32 08.1**	**-0.8**
TOLK				IAmb	IAmb	03 32 13.4	
	comp=Z,3.8nm,0.6s						
BM03	**Burnt Mountain**	**25.05**	**36**	P	**P**	**03 32 19.6**	**-0.8**
KLR	**Kul'dur**	**27.26**	**282**	P	**P**	**03 32 41.5**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=98,slow=7.1,SNR=2.5						
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**29.34**	**36**	P	**P**	**03 33 01.8**	**+3.1**
INK				IAmb	IAmb	03 33 14.7	
	comp=Z,2.7nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**32.69**	**194**	T	T	04 08 29.2	
	baz=9.8,slow=76						
H11N3	**WAKE ISLAND Hy**	**32.70**	**194**	T	T	04 08 30.1	
	baz=9.8,slow=76						
H11N1	**WAKE ISLAND Hy**	**32.71**	**194**	T	T	04 08 55.2	
	baz=9.8,slow=76						
H11S1	**WAKE ISLAND Hy**	**33.92**	**194**	T	T	04 10 01.6	
	baz=9.4,slow=76						
H11S3	**WAKE ISLAND Hy**	**33.94**	**194**	T	T	04 10 02.7	
	baz=9.4,slow=76						
H11S2	**WAKE ISLAND Hy**	**33.94**	**194**	T	T	04 10 03.6	
	baz=9.4,slow=76						
YKA	**Yellowknife Ar**	**37.71**	**46**	P	**P**	**03 34 11.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=289,slow=7.2,SNR=3.2						
	comp=Z,0.4nm,0.7s						
EUNU	**Eureka**	**40.84**	**15**	P	**P**	**03 34 36.7**	**-0.7**
EUNU				IAmb	IAmb	03 34 45.6	
	comp=Z,5.4nm,1.4s						
DBO	**Dodson Butte**	**41.53**	**77**	P	**P**	**03 34 44.0**	**+0.4**
DBO				IAmb	IAmb	03 34 51.7	
	comp=Z,13nm,1.4s						
SONM	**Songino Array**	**42.88**	**293**	P	**P**	**03 34 55.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=61,slow=7.8,SNR=5.8						
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**42.88**	**293**	P	**P**	**03 34 54.6**	**+0.1**
SPB5	**Spitsbergen Ar**	**49.54**	**354**	P	**P**	**03 35 45.5**	**-0.9**
SPB3	**Spitsbergen Ar**	**49.55**	**354**	P	**P**	**03 35 45.2**	**-1.1**
PDAR	**Pinedale Array**	**49.84**	**69**	P	**P**	**03 35 48.0**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=306,slow=7.7,SNR=1.8						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**55.77**	**310**	P	**P**	**03 36 33.7**	**+1.0**
MK31	**Makanchi Array**	**56.59**	**305**	P	**P**	**03 36 38.4**	**-0.3**
MK31				IAmb	IAmb	03 36 39.0	
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**56.59**	**305**	P	**P**	**03 36 38.7**	**0.0**
	comp=Z,0.9nm,0.4s,baz=56,slow=6.5,SNR=18						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**56.59**	**305**	P	**P**	**03 36 38.9**	**+0.2**
ARCES	**ARCESS Array B**	**56.85**	**348**	P	**P**	**03 36 39.4**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=32,slow=7.6,SNR=5.0						
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**57.92**	**316**	P	**P**	**03 36 48.1**	**+0.2**
TX04	**Lajitas Array**	**62.40**	**77**	P	**P**	**03 37 17.8**	**-1.2**
TXAR	**Lajitas Array**	**62.40**	**77**	P	**P**	**03 37 18.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=316,slow=5.0,SNR=5.0						
	comp=Z,0.4nm,0.7s						
AB06	**Akbulak array**	**65.07**	**319**	P	**P**	**03 37 36.8**	**+0.7**
ABKAR	**Akbulak array**	**65.08**	**319**	P	**P**	**03 37 36.4**	**+0.2**
NC304	**NORSAR Array S**	**66.43**	**351**	P	**P**	**03 37 44.8**	**+0.1**
NB2	**NORSAR Subarra**	**66.68**	**351**	P	**P**	**03 37 45.9**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=8.3,slow=6.2						
NOA	**NORSAR Array B**	**66.68**	**351**	P	**P**	**03 37 45.7**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=9.0,slow=6.3,SNR=6.7						
	comp=Z,0.4nm,0.5s						
Y52A	**Lilburn**	**70.33**	**60**	P	**P**	**03 38 10.1**	**+0.5**
AKASG	**Malin Array Be**	**73.74**	**338**	P	**P**	**03 38 29.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=26,slow=6.2,SNR=3.0						
	comp=Z,0.2nm,0.3s						
BUR05	**Bucovina Ar. S**	**77.53**	**340**	P	**P**	**03 38 52.6**	**+1.0**
BUR05				IAmb	IAmb	03 38 53.3	
	comp=Z,1.4nm,0.8s						
BURAR	**Bucovina Array**	**77.55**	**340**	P	**P**	**03 38 52.4**	**+0.7**
BURAR				IAmb	IAmb	03 38 53.4	
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**82.73**	**331**	P	**P**	**03 39 20.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=28,slow=3.3,SNR=4.3						
	comp=Z,0.6nm,0.7s						
RPZ	**Rata Peaks**	**95.27**	**183**	LR	LR	04 15 09.6	
	comp=Z,54nm,20.6s,baz=278,slow=30						

*NEIC **16** 03:33:57.5±2.2, 10°.57S±0°.07×113°.19E±0°.08, h12^{km}±5^{km}, mb4.1/13, Error ellipse: s-maj=11.3km s-min=10.5km az=119.0*
*DJA **16** 03:33:59.3±1.3, 11°S±4°×11°3E±°, h33^{km}±24^{km}, M4.5/12, mb4.5/5, mB5.1/1, MLv4.5/12, Mw(mB)4.4/1*
*IDC **16** 03:34:01.6±3.4, 10°.38S×113°.38E, h47^{km}±33^{km}, mb4.0/9, mbtmp4.2/9, Error ellipse: s-maj=31.3km s-min=12.7km az=49.0*
ISC 16 03:33:58.7±0.6**, 10°.60S**±0°.06×**113°.16E**±0°.06**, h28**^{km}**, n51,** σ1^s**25**/51**, mb4.2**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.33**	**25**		**Pn**	**03 34 34.3**	**-0.9**
JAGI	**Jajag, Banyuwa**	**2.33**	**25**	P	**Pn**	**03 34 34.4**	**-0.8**
JAGI				S	**Sn**	**03 35 02.9**	**0.0**
IGBI	**Denpasar**	**2.64**	**48**	P	**Pn**	**03 34 40.3**	**+0.9**
DNP	**Denpasar**	**2.78**	**47**	P	**Pn**	**03 34 42.7**	**+1.3**
DNP				S	**Sn**	**03 35 15.0**	**+1.0**
PWJI	**Pagerwojo**	**2.89**	**332**	P	**Pn**	**03 34 41.7**	**-1.1**
PCJI	**Pacitan**	**3.08**	**321**	P	**Pn**	**03 34 44.0**	**-1.5**
SRBI	**Singaraja**	**3.22**	**39**	P	**Pn**	**03 34 47.5**	**+0.2**
WOJI	**Wonogiri, Jawa**	**3.52**	**321**	P	**Pn**	**03 34 51.0**	**-0.5**
KMMI	**Kalianget**	**3.61**	**13**	P	**Pn**	**03 34 52.8**	**0.0**
UGM	**Wanagama**	**3.73**	**316**	Pn	**Pn**	**03 34 54.1**	**-0.3**
UGM	**Wanagama**	**3.73**	**316**	P	**Pn**	**03 34 54.0**	**-0.3**
PLAI	**Plampang**	**4.88**	**69**	P	**Pn**	**03 35 11.0**	**+0.7**
CNJI	**Cibinong**	**6.79**	**298**	P	**Pn**	**03 35 36.1**	**-0.4**
	0.5nm85nm,1.5s						
EDFI	**Ende, Flores**	**8.61**	**78**	P	**Pn**	**03 36 01.7**	**+0.1**
	7.6nm,0.6s						
BKSI	**Bulukumba**	**8.66**	**53**	P	**Pn**	**03 36 02.6**	**+0.4**
	12nm,0.8s						
GIRL	**Giralia**	**12.02**	**175**	Pn	**Pn**	**03 36 46.7**	**-1.6**
MBWA	**Marble Bar**	**12.26**	**150**	Pn	**Pn**	**03 36 47.1**	**-4.4**
PSA00	**Pilbara Seismi**	**12.66**	**150**		**Pn**	**03 36 53.4**	**-3.6**
GTOI	**Gorontalo**	**14.85**	**42**	P	**P**	**03 37 32.9**	**+0.5**
KNRA	**Kununurra**	**16.01**	**110**	P	**P**	**03 37 46.4**	**+1.1**
KNRA				IAmb	IAmb	03 38 08.2	
	comp=Z,11nm,0.9s						
MORW	**Morawa**	**18.57**	**172**	P	**Pn**	**03 38 14.0**	**+0.1**
SWI	**Sorong**	**20.42**	**63**	P	Pn	03 38 39.1	+3.0
SIJI	**Sorong**	**20.43**	**63**	P	**P**	**03 38 32.4**	**-1.6**
	comp=Z,3.8nm,0.5s,baz=119,slow=23,SNR=1.8						
	comp=Z,3.8nm,0.5s						
WB0	**Warramunga Arr**	**22.41**	**117**	P	**P**	**03 38 55.3**	**+0.1**
WB0				IAmb	IAmb	03 38 58.5	
	comp=Z,6.3nm,0.9s						
WRA	**Warramunga Arr**	**22.42**	**117**	P	**P**	**03 38 55.6**	**+0.2**
	comp=Z,7.6nm,0.8s,baz=292,slow=11,SNR=42						
WRA				S	**S**	**03 42 57.9**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=290,slow=26,SNR=6.4						
	comp=Z,7.6nm,0.8s						
WRA	**Warramunga Arr**	**22.42**	**117**	P	**P**	**03 38 55.8**	**+0.4**
WB2	**Warramunga Arr**	**22.43**	**117**	P	**P**	**03 38 55.4**	**-0.2**
WB2				IAmb	IAmb	03 38 58.8	
	comp=Z,8.1nm,0.8s						
WR2	**Warramunga Arr**	**22.45**	**117**	P	**P**	**03 38 55.9**	**+0.2**
WR2				IAmb	IAmb	03 38 59.0	
	comp=Z,7.3nm,0.8s						
WR0	**Warramunga Arr**	**22.61**	**117**	P	**P**	**03 38 57.2**	**-0.2**
AS13	**Alice Springs**	**23.65**	**126**	P	**P**	**03 39 08.4**	**+0.5**
AS31	**Alice Springs**	**23.66**	**126**	P	**P**	**03 39 08.9**	**+0.8**
ASAR	**Alice Springs**	**23.66**	**126**	P	**P**	**03 39 08.8**	**+0.8**
	comp=Z,6.4nm,0.7s,baz=304,slow=9.0,SNR=53						
ASAR				S	**S**	**03 43 22.5**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=301,slow=22,SNR=1.9						
	comp=Z,6.4nm,0.7s						
AS17	**Alice Springs**	**23.73**	**126**	P	**P**	**03 39 10.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**32.10**	**334**	P	**P**	**03 40 24.1**	**+0.5**
	comp=Z,3.1nm,0.2s,baz=163,slow=8.5,SNR=8.7						
	comp=Z,3.1nm,0.2s						
STKA	**Stephens Creek**	**33.74**	**133**	P	**P**	**03 40 39.1**	**+1.1**
	comp=Z,12nm,0.7s,baz=306,slow=9.0,SNR=20						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**33.74**	**133**	P	**P**	**03 40 39.4**	**+1.4**
STKA				IAmb	IAmb	03 40 40.6	
	comp=Z,2.7nm,0.8s						
H08S2	**Diego Garcia H**	**40.24**	**271**	T	T	04 24 43.7	
	baz=96,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**40.25**	**271**	T	T	04 24 38.8	
	baz=96,slow=76,SNR=21						
H08S1	**Diego Carcia H**	**40.26**	**271**	T	T	04 24 32.4	
	baz=96,slow=76,SNR=15						
MJAR	**Matsushiro Arr**	**52.48**	**25**	P	**P**	**03 43 07.3**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=192,slow=8.3,SNR=7.1						
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**58.48**	**355**	P	**P**	**03 43 51.8**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=178,slow=7.4,SNR=4.4						
	comp=Z,0.8nm,0.8s						
SONM	**Songino Array**	**58.48**	**355**	P	**P**	**03 43 53.2**	**+0.9**
MK07	**Makanchi Array**	**63.40**	**337**	P	**P**	**03 44 27.2**	**+1.5**
MK31	**Makanchi Array**	**63.44**	**337**	P	**P**	**03 44 26.7**	**+0.8**
MK31				IAmb	IAmb	03 44 45.4	
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**63.44**	**337**	P	**P**	**03 44 25.6**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=146,slow=7.2,SNR=11						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**63.44**	**337**	P	**P**	**03 44 25.8**	**-0.1**
VNDA	**Vanda**	**71.37**	**170**	P	**P**	**03 45 16.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=304,slow=5.8,SNR=6.3						
	comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**71.37**	**170**	P	**P**	**03 45 17.0**	**+1.4**
VNDA				IAmb	IAmb	03 45 17.8	
	comp=Z,1.3nm,0.9s						
PETK	**Petropavlovsk-**	**73.94**	**26**	P	**P**	**03 45 30.8**	**-0.4**
ABKAR	**Akbulak array**	**75.66**	**327**	P	**P**	**03 45 40.5**	**-0.7**
BOSA	**Boshof**	**83.18**	**242**	P	**P**	**03 46 24.4**	**+1.4**

*IDC **16** 03:58:12.2±2.2, 14°.00N×92°.40W, h0^{km}, mb3.9/8, mbtmp3.8/10, ML3.4/2, MS3.5/11, Error ellipse: s-maj=61.3km s-min=27.4km az=31.0*
*MEX **16** 03:58:15.0±0.9, 13°.73N×92°.77W, h23^{km}±39^{km}, MD4.2*
*GCG **16** 03:58:17.7±2.6, 13°.60N×92°.56W, h15^{km}±999^{km}, MD4.0*
*NEIC **16** 03:58:18.4±2.5, 14°.09N±0°.07×92°.78W±0°.05, h24^{km}±7^{km}, mb4.3/54, Md4.2/36(MEX), Error ellipse: s-maj=10.1km s-min=6.9km az=176.0*
*INET **16** 03:58:28.1±0.2, 14°.14N×91°.91W, h22^{km}±2^{km}, MW3.7*
ISC 16 03:58:15.2±0.7**, 13°.86N**±0°.07×**92°.82W**±0°.04**, h21**^{km}±4^{km}**, n120,** σ1^s**82**/135**, mb4.2**/24**, MS3.6**/11**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
THIG		**1.18**	**27**		**Pn**	**03 58 34.8**	**-1.7**
THIG					**Sn**	**03 58 48.7**	**-3.2**
THIG		**1.18**	**27**	*e*P	**Pn**	**03 58 34.8**	**-1.7**
THIG				*i* S	**Sn**	**03 58 48.7**	**-3.2**
RTAL	**Retalhuleu**	**1.28**	**59**		**Pn**	**03 58 37.0**	**-0.9**
PATR	**El Naranjo**	**1.38**	**24**	*e*P	**Pn**	**03 58 37.3**	**-2.2**
PATR				*e*S	**Sn**	**03 58 54.6**	**-2.5**
CHUJ	**Union Juarez**	**1.41**	**29**	*e*P	**Pn**	**03 58 38.0**	**-1.9**
CHUJ				*i* S	**Sn**	**03 58 56.1**	**-1.9**
PAVE	**Pavencul**	**1.47**	**25**	*e*P	**Pn**	**03 58 38.8**	**-2.0**
PAVE				*e*S	**Sn**	**03 58 57.6**	**-1.9**
PCIG		**1.87**	**348**		**Pn**	**03 58 44.6**	**-1.5**
PCIG					**Sn**	**03 59 08.8**	**-0.3**
PCIG		**1.87**	**348**	*e*P	**Pn**	**03 58 44.6**	**-1.5**
PCIG				*e*S	**Sn**	**03 59 08.8**	**-0.3**
HUEH	**Huehuetenango**	**1.93**	**41**	Pn	**Pn**	**03 58 46.7**	**-0.5**
FUG	**Fuego 3**	**2.01**	**73**	*e*P	**Pn**	**03 58 47.9**	**-0.2**
FUG				*e*S	**Sb**	**03 59 14.2**	**-1.7**
CCIG	**Comitan**	**2.50**	**15**	Pn	**Pn**	**03 58 55.1**	**+0.3**
CCIG	**Comitan**	**2.50**	**15**	*e*P	**Pn**	**03 58 56.1**	**+1.2**
CCIG				*e*S	**Sn**	**03 59 24.2**	**-0.7**
NBG	**Las Nubes**	**2.51**	**73**	*e*P	**Pb**	**03 58 57.2**	**-2.6**
NBG				*e*S	**Sb**	**03 59 35.8**	**+5.5**
TGIG		**2.92**	**354**		**Pn**	**03 59 01.0**	**+0.5**
TGIG					**Sn**	**03 59 34.6**	**-0.4**
TGIG		**2.92**	**354**	*e*P	**Pn**	**03 59 01.0**	**+0.5**
TGIG				*e*S	**Sn**	**03 59 34.6**	**-0.4**
MRL	**Marmol**	**3.27**	**68**	*e*P	**Pn**	**03 59 08.4**	**+2.8**
MRL				*e*S	**Sb**	**03 59 53.6**	**+1.3**
MTO3	**Montecristo**	**3.40**	**81**	Pn	**Pn**	**03 59 06.6**	**-0.8**
MTO3	**Montecristo**	**3.40**	**81**	*e*P	**Pn**	**03 59 06.7**	**-0.6**
ESQI	**Esquipulas**	**3.45**	**78**	Pn	**Pn**	**03 59 09.4**	**+1.6**
UXUV	**UXUV**	**3.67**	**340**	*e*P	**Pn**	**03 59 11.8**	**+1.0**
UXUV				*i* S	**Sn**	**03 59 52.1**	**-1.3**
HUIG	**Huatulco**	**3.70**	**301**		**Pn**	**03 59 09.7**	**-1.6**
HUIG					**Sn**	**03 59 49.3**	**-5.0**
HUIG	**Huatulco**	**3.70**	**301**	*e*P	**Pn**	**03 59 09.7**	**-1.6**
HUIG				*e*S	**Sn**	**03 59 49.3**	**-5.0**
CMIG	**Matias Romero**	**3.78**	**329**	Pn	**Pn**	**03 59 12.1**	**-0.2**
	2.9nm,0.3s,baz=145,slow=12,SNR=38						
CMIG				Sn	**Sn**	**03 59 54.6**	**-1.6**
	6.7nm,0.3s,baz=158,slow=14,SNR=8.6						
	15nm,0.6s						
CMIG	**Matias Romero**	**3.78**	**329**		**Pn**	**03 59 11.9**	**-0.4**
CMIG					**Sn**	**03 59 55.7**	**-0.4**
CMIG	**Matias Romero**	**3.78**	**329**	*e*P	**Pn**	**03 59 11.9**	**-0.4**
CMIG				*i* S	**Sn**	**03 59 55.7**	**-0.4**
PAVA	**Las Pavas**	**3.78**	**92**	*e*P	**Pn**	**03 59 12.4**	**-0.1**
PETF	**Flores**	**4.17**	**43**	Pn	**Pn**	**03 59 17.2**	**-0.4**
PETF	**Flores**	**4.17**	**43**	*e*P	**Pn**	**03 59 17.6**	**-0.1**
NEUV	**Arroyo Zacate**	**4.79**	**324**	*e*P	**Pn**	**03 59 26.1**	**0.0**
NEUV				*e*S	**Sn**	**04 00 20.0**	**-1.0**
VHO	**Vista Hermosa**	**4.94**	**311**	*e*P	**Pn**	**03 59 31.5**	**+3.0**
VHO				*e*S	**Sn**	**04 00 26.0**	**+0.9**
CSGN	**Cosiguina Volc**	**5.20**	**99**	*e*P	**Pn**	**03 59 32.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**5.39**	**87**	Pn	**Pn**	**03 59 36.0**	**+1.3**
YOIG	**Yosondua**	**5.44**	**304**	*e*P	**Pn**	**03 59 38.6**	**+3.2**
YOIG				*e*S	**Sn**	**04 00 34.7**	**-2.9**
PNIG	**Pinotepa**	**5.71**	**297**		**Pn**	**03 59 39.6**	**+0.7**
PNIG					**Sn**	**04 00 40.3**	**-3.5**
PNIG	**Pinotepa**	**5.71**	**297**	*e*P	**Pn**	**03 59 39.6**	**+0.7**
PNIG				*i* S	**Sn**	**04 00 40.3**	**-3.5**
TXIG	**Tlaxiaco**	**5.84**	**306**	*e*P	**Pn**	**03 59 43.3**	**+2.4**
TXIG				*e*S	**Sn**	**04 00 50.7**	**+3.3**
TOIG	**Toxpalan**	**5.86**	**316**	*e*P	**Pn**	**03 59 43.2**	**+2.1**
TOIG				*e*S	**Sn**	**04 00 51.0**	**+3.3**
CNGN	**Cerro Negro**	**6.12**	**102**	Pn	Pn	03 59 48.6	+4.1
HLIG	**Huajuapan de L**	**6.21**	**310**	*e*P	**Pn**	**03 59 47.1**	**+1.2**
HLIG				*e*S	**Sn**	**04 00 54.4**	**-2.1**
FTIG	**Fresnillo de T**	**6.50**	**309**	*e*P	**Pn**	**03 59 54.0**	**+4.1**
FTIG				*e*S	**Sn**	**04 01 03.1**	**-0.5**
TLIG	**Tlapa**	**6.64**	**304**	Pn	**Pn**	**03 59 54.6**	**+2.8**
MATN	**Matagalpa**	**6.78**	**97**	Pn	**Pn**	**03 59 54.4**	**+0.8**
BOAB	**BOACO BROADBAN**	**7.11**	**101**	Pn	**Pn**	**03 59 58.1**	**-0.1**
HZTE	**Horizontes, Gu**	**7.72**	**113**	Pn	**Pn**	**04 00 08.9**	**+2.4**
ORTG	**Ortega, Santa**	**8.00**	**115**	Pn	**Pn**	**04 00 12.8**	**+2.5**
DUNO	**Dulce Nombre,**	**8.10**	**117**	Pn	**Pn**	**04 00 14.3**	**+2.6**
RIMA	**Rio Macho**	**9.67**	**114**		Pn	04 00 36.7	+3.2
DRK0	**Durika**	**10.44**	**115**	Pn	Pn	04 00 47.1	+3.1
833A	**Chaparral WMA,**	**15.64**	**338**	P	**P**	**04 01 59.8**	**+1.3**
JCT	**Junction City**	**17.75**	**340**	P	**Pn**	**04 02 22.1**	**+0.9**
TX31	**Lajitas Ar. Si**	**18.39**	**329**	P	**P**	**04 02 30.0**	**+1.0**
TX31				IAmb	IAmb	04 02 43.1	
	comp=Z,14nm,1.1s						
TX32	**Lajitas Array**	**18.39**	**329**	P	**P**	**04 02 29.8**	**+0.8**
TXAR	**Lajitas Array**	**18.39**	**329**	P	**P**	**04 02 29.6**	**+0.5**
	baz=149,slow=11,SNR=7.6						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**18.39**	**329**	P	**Pn**	**04 02 30.2**	**+1.2**
ABTX	**Abilene, Hawle**	**19.69**	**343**	P	**P**	**04 02 43.1**	**-0.2**
MIAR	**Mount Ida**	**20.61**	**358**	P	**P**	**04 02 53.1**	**0.0**
MIAR				IAmb	IAmb	04 03 02.0	
	comp=Z,7.8nm,0.9s						
MNTX	**Cornudas Mount**	**21.16**	**329**	P	**P**	**04 03 00.2**	**+1.0**
FNO	**Franklin**	**21.70**	**350**	P	**P**	**04 03 04.3**	**-0.6**
FCAR	**Ozark Folk Cen**	**21.95**	**2**	P	**P**	**04 03 07.9**	**+0.4**
LCAR	**Lake Charles**	**22.17**	**4**	P	**P**	**04 03 08.6**	**-1.3**
HHAR	**Hobbs**	**22.35**	**358**	P	**P**	**04 03 11.1**	**-0.8**
U40A	**Yellville**	**22.40**	**360**	P	**P**	**04 03 11.2**	**-1.2**
AMTX	**Amarillo**	**22.41**	**341**	P	**P**	**04 03 12.0**	**-0.6**
AMTX				IAmb	IAmb	04 03 15.0	
	comp=Z,12nm,0.8s						
PBMO	**Poplar Bluff**	**22.92**	**5**	P	**P**	**04 03 15.6**	**-2.4**
121A	**Cookes Peak, D**	**23.07**	**326**	P	**P**	**04 03 21.2**	**+1.5**
121A				IAmb	IAmb	04 03 31.7	
	comp=Z,7.2nm,1.0s						
TKL	**Tuckaleechee C**	**23.18**	**19**	P	**P**	**04 03 18.7**	**-1.9**
	comp=Z,2.9nm,0.9s,baz=205,slow=5.3,SNR=4.2						
TKL				LR	LR	04 12 57.9	
	comp=Z,122nm,20.3s,baz=200,slow=39						
	comp=Z,2.9nm,0.9s						
TKL	**Tuckaleechee C**	**23.18**	**19**	P	**P**	**04 03 18.9**	**-1.7**
TKL				IAmb	IAmb	04 03 28.8	
	comp=Z,6.7nm,1.1s						
BNM	**Barren Site**	**23.76**	**331**	P	**P**	**04 03 29.4**	**+2.8**
S44A	**Carbondale**	**23.95**	**7**	P	**P**	**04 03 25.8**	**-2.3**
S44A				IAmb	IAmb	04 03 41.7	
	comp=Z,8.6nm,0.8s						
ANMO	**Albuquerque**	**24.34**	**332**	P	**P**	**04 03 33.1**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=162,slow=15,SNR=4.8						
	comp=Z,1.2nm,0.7s						
ANMO	**Albuquerque**	**24.34**	**332**	P	**P**	**04 03 33.2**	**+1.3**
R40A	**Maddies Statio**	**24.34**	**1**	P	**P**	**04 03 28.9**	**-2.7**
R40A				IAmb	IAmb	04 03 32.1	
	comp=Z,8.1nm,1.3s						
R32A	**Long Quarter,**	**25.02**	**349**	P	**P**	**04 03 37.0**	**-0.8**
T25A	**Trinidad**	**25.39**	**338**	P	**P**	**04 03 41.9**	**+0.5**
T25A				IAmb	IAmb	04 03 46.1	
	comp=Z,13nm,1.4s						
SDCO	**Great Sand Dun**	**26.33**	**337**	P	**P**	**04 03 50.9**	**+0.8**
SDCO				IAmb	IAmb	04 03 53.0	
	comp=Z,6.4nm,1.3s						
S22A	**4UR Ranch, Cre**	**26.86**	**335**	P	**P**	**04 03 55.6**	**+0.8**
PV07	**Paradox Valley**	**28.21**	**333**	P	**P**	**04 04 09.8**	**+2.9**
PV07				IAmb	IAmb	04 04 13.7	
	comp=Z,4.7nm,0.9s						
PDAR	**Pinedale Array**	**32.22**	**337**	P	**P**	**04 04 42.6**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=150,slow=7.3,SNR=3.7						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**32.22**	**337**	P	**P**	**04 04 42.8**	**+0.5**
SADO	**Sadowa**	**32.94**	**18**	LR	LR	04 18 06.4	
	comp=Z,104nm,18.7s,baz=276,slow=36						
REDW	**Red Top Meadow**	**33.23**	**336**	P	**P**	**04 04 52.0**	**+0.8**
SNOW	**Snow King Moun**	**33.28**	**336**	P	**P**	**04 04 52.8**	**+1.1**
NVAR	**Mina Array Bea**	**33.28**	**322**	P	**P**	**04 04 53.1**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=138,slow=9.5,SNR=8.6						
	comp=Z,1.8nm,0.7s						
NVAR	**Mina Array Bea**	**33.28**	**322**	P	**P**	**04 04 54.6**	**+3.0**
LOHW	**Long Hollow**	**33.35**	**336**	P	**P**	**04 04 53.5**	**+1.3**
LOHW				IAmb	IAmb	04 04 54.7	
	comp=Z,3.0nm,0.8s						
TPAW	**Teton Pass**	**33.38**	**336**	P	**P**	**04 04 53.6**	**+1.1**
TPAW				IAmb	IAmb	04 05 07.0	
	comp=Z,4.9nm,1.1s						
YHL	**Hebgen Lake**	**34.61**	**337**	P	**P**	**04 05 04.6**	**+1.4**
YHL				IAmb	IAmb	04 05 14.1	
	comp=Z,5.1nm,1.3s						
GCMT	**Greycliff**	**34.87**	**339**	P	**P**	**04 05 05.7**	**+0.4**
HLID	**Hailey**	**34.92**	**332**	P	**P**	**04 05 07.7**	**+1.9**
HLID				IAmb	IAmb	04 05 21.6	
	comp=Z,2.7nm,1.1s						
MCMT	**McKenzie Canyo**	**35.26**	**335**	P	**P**	**04 05 10.9**	**+2.2**
DLMT	**Dillon**	**35.59**	**336**	P	**P**	**04 05 13.5**	**+2.0**
LRM	**Limekiln Ridge**	**35.92**	**336**	P	**P**	**04 05 15.4**	**+1.1**
HRY	**Holter Researc**	**36.43**	**338**	P	**P**	**04 05 20.4**	**+1.8**
J08A	**Circle Bar Ran**	**36.73**	**328**	P	**P**	**04 05 23.1**	**+1.9**
J08A				IAmb	IAmb	04 05 24.1	
	comp=Z,3.0nm,0.8s						
F10A	**Beach Ranch, E**	**38.05**	**332**	P	**P**	**04 05 33.2**	**+0.9**
F10A				IAmb	IAmb	04 05 47.8	
	comp=Z,4.3nm,0.8s						
SCHQ	**Schefferville**	**45.63**	**21**	LR	LR	04 27 26.2	
	comp=Z,104nm,18.1s,baz=195,slow=39						
YKA	**Yellowknife Ar**	**50.98**	**347**	P	**P**	**04 07 15.3**	**+0.1**
	comp=Z,6.8nm,0.7s,baz=149,slow=7.5,SNR=50						
	comp=Z,6.8nm,0.7s						
YKA	**Yellowknife Ar**	**50.98**	**347**	P	**P**	**04 07 15.1**	**-0.1**
FRB	**Frobisher Bay**	**52.63**	**13**	LR	LR	04 31 02.7	
	comp=Z,57nm,18.3s,baz=209,slow=38						
RCBR	**Riachuelo**	**59.78**	**105**	LR	LR	04 38 08.4	
	comp=Z,57nm,19.3s,baz=327,slow=40						
BCAR	**Beaver Creek A**	**59.85**	**337**	P	**P**	**04 08 20.3**	**+1.2**
L27K	**Beaver Creek,**	**59.86**	**337**	P	**P**	**04 08 20.1**	**+0.9**
L27K				IAmb	IAmb	04 08 21.5	
	comp=Z,2.2nm,1.0s						
SFJD	**Kangerlussuaq**	**59.89**	**18**	LR	LR	04 34 56.1	
	comp=Z,51nm,18.9s,baz=240,slow=37						
INK	**Inuvik**	**60.35**	**344**	P	**P**	**04 08 22.4**	**0.0**
INK				IAmb	IAmb	04 08 24.6	
	comp=Z,2.6nm,0.8s						
IL31		**62.65**	**337**	P	**P**	**04 08 39.4**	**+1.4**
ILAR	**Eielson Array**	**62.65**	**337**	P	**P**	**04 08 38.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=113,slow=5.4,SNR=9.1						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**62.65**	**337**	P	**P**	**04 08 38.1**	**+0.1**
BMAR	**Burnt Mountain**	**63.15**	**340**	P	**P**	**04 08 42.2**	**+0.8**
TRF	**Thorofare Moun**	**63.42**	**335**	P	**P**	**04 08 45.3**	**+1.9**
BORG	**Borgarnes**	**69.68**	**26**	LR	LR	04 38 27.7	
	comp=Z,15nm,21.5s,baz=293,slow=35						
ESDC	**Sonseca Array**	**80.43**	**51**	P	**P**	**04 10 23.3**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=319,slow=5.6,SNR=4.8						
	comp=Z,0.5nm,0.8s						
BILL	**Bilibino**	**81.29**	**338**	P	**P**	**04 10 30.7**	**+1.0**
BILL				IAmb	IAmb	04 10 42.7	
	comp=Z,3.8nm,1.0s						
NOA	**NORSAR Array B**	**84.65**	**28**	LR	LR	04 47 17.2	
	comp=Z,9.0nm,20.7s,baz=15,slow=35						
HFS	**Hagfors**	**86.11**	**29**	LR	LR	04 50 27.7	
	comp=Z,15nm,18.7s,baz=350,slow=36						
ARCES	**ARCESS Array B**	**86.52**	**18**	LR	LR	04 49 05.9	
	comp=Z,31nm,19.9s,baz=324,slow=35						
TORD	**Torodi Ar. Bea**	**91.19**	**76**	P	**P**	**04 11 17.6**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=311,slow=3.1,SNR=1.8						
	comp=Z,0.3nm,0.7s						
NRIK	**Noril'sk**	**97.02**	**360**	LR	LR	04 59 51.0	
	comp=Z,44nm,19.3s,baz=334,slow=38						
PZH	**PanZhiHua**	**137.45**	**341**	PKP	**PKPdf**	**04 17 38.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**145.86**	**340**	PKPbc	**PKPab**	**04 17 54.6**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=333,slow=3.3,SNR=14						
CMAR	**Chiang Mai Arr**	**145.86**	**340**		**PKPab**	**04 17 54.2**	**-0.1**

*IDC **16** 04:27:42.9±1.4, 38°.79N×21°.05E, h0^{km}, mb3.4/5, mbtmp3.3/6, ML2.3/1, MS3.3/2, Error ellipse: s-maj=37.4km s-min=24.2km az=131.0*
*TIR **16** 04:27:43.2, 38°.72N×21°.04E, h13^{km}±1^{km}, Md3.5, Ml3.4*
*THE **16** 04:27:44.9, 38°.80N×20°.96E, h11^{km}±1^{km}, ML2.7/5, Error ellipse: s-maj=1.1km s-min=0.3km az=211.0*
*ATH **16** 04:27:45.0, 38°.81N×20°.97E, h9^{km}±2^{km}, ML2.9/13, Error ellipse: s-maj=2.9km s-min=0.6km az=211.0*
*BEO **16** 04:27:51.6±0.9, 39°.19N×20°.61E, h27^{km}±4^{km}, ML2.9/5*
ISC 16 04:27:45.0±0.8**, 38°.80N**±0°.02×**20°.96E**±0°.02**, h17**^{km}±5^{km}**, n69,** σ1^s**41**/97**, mb3.4**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.22**	**246**	P	**Pg**	**04 27 49.4**	**-0.8**
NYDR				S	**Sg**	**04 27 53.4**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.22**	**246**	P	**Pg**	**04 27 49.4**	**-0.8**
NYDR				S	**Sg**	**04 27 53.3**	**-0.3**
	2μm,0.3s						
LKD2	**Lefkada island**	**0.23**	**266**	P	**Pg**	**04 27 50.0**	**-0.3**
LKD2				S	**Sg**	**04 27 53.8**	**-0.2**
LKD2				AML	AML	04 27 56.4	
	comp=E,8452μm,0.3s						
LKD2				AML	AML	04 27 57.5	
	comp=N,10626μm,0.6s						
LKD2	**Lefkada island**	**0.23**	**266**	P	**Pg**	**04 27 50.0**	**-0.3**
LKD2				S	**Sg**	**04 27 53.4**	**-0.7**
	comp=N,5μm,0.4s						

LKD2	Lefkada island	0.23	266	P	Pg	04 27 50.1	-0.3
	baz=283						
LKD2				S	Sg	04 27 54.4	+0.4
	baz=283						
TSLK	Tsoukalades, L	0.24	275	P	Pg	04 27 50.2	-0.3
TSLK				S	Sg	04 27 53.9	-0.2
TSLK				AML	AML	04 27 57.2	
	comp=N,5397µm,0.3s						
TSLK				AML	AML	04 27 58.3	
	comp=E,7967µm,0.3s						
TSLK	Tsoukalades, L	0.24	275	P	Pg	04 27 50.0	-0.4
EVGI	Lefkada island	0.30	232	P	Pg	04 27 50.9	-0.5
EVGI				S	Sg	04 27 55.9	+0.2
EVGI	Lefkada island	0.30	232	P	Pg	04 27 51.0	-0.5
DRAG	Dragano-Lefkad	0.32	248	P	Pg	04 27 51.7	-0.1
FSK	Fiskardo	0.46	222	P	Pg	04 27 54.5	+0.1
FSK				S	Sb	04 28 01.2	-0.1
FSK				AML	AML	04 28 05.8	
	comp=E,3338µm,0.4s						
FSK				AML	AML	04 28 07.3	
	comp=N,2631µm,0.4s						
PVO	Paravola	0.48	113	P	Pg	04 27 54.4	-0.4
PVO				S	Sg	04 28 01.3	0.0
EVR	Evrytania	0.68	80	P	Pg	04 27 57.4	-0.9
EVR				S	Sg	04 28 06.6	-0.7
EVR				AML	AML	04 28 14.6	
	comp=E,1204µm,0.4s						
EVR				AML	AML	04 28 14.9	
	comp=N,1070µm,0.4s						
EVR	Evrytania	0.68	80	P	Pg	04 27 57.4	-0.9
EVR				S	Sb	04 28 07.6	+0.1
	comp=N,375nm,0.3s						
KEF4	Livadi, Kephal	0.69	218	P	Pg	04 27 57.7	-0.8
VLS	Valsamata	0.69	205	P	Pg	04 27 57.6	-1.0
VLS				S	Sb	04 28 08.1	+0.2
VLS				AML	AML	04 28 18.6	
	comp=N,1313µm,0.5s						
VLS				AML	AML	04 28 18.7	
	comp=E,1529µm,0.4s						
VLS	Valsamata	0.69	205	P	Pg	04 27 57.8	-0.7
DMLN	Damoulianata-K	0.73	219	P	Pg	04 27 58.5	-0.8
ARGA	Argostoli. Kep	0.73	211	P	Pb	04 27 59.4	+0.2
PSDA	Pessada-Kefalo	0.75	203	P	Pg	04 27 58.8	-0.8
KEF3	Kipouria, Keph	0.77	219	P	Pg	04 27 58.6	-1.4
ANX	Ano Chora	0.78	105	P	Pg	04 27 59.3	-1.1
ANX				S	Sg	04 28 10.5	-0.3
ANX				AML	AML	04 28 15.3	
	comp=N,4454µm,0.4s						
ANX				AML	AML	04 28 15.8	
	comp=E,2268µm,0.4s						
ANX	Ano Chora	0.78	105	P	Pg	04 27 59.5	-0.8
ANX				S	Sb	04 28 11.2	+0.5
	comp=E,2µm,0.4s						
EFP	Efpalio	0.83	117	P	Pg	04 28 00.7	-0.5
EFP				S	Sb	04 28 12.0	0.0
EFP				AML	AML	04 28 19.9	
	comp=E,2419µm,0.7s						
EFP				AML	AML	04 28 20.1	
	comp=N,2038µm,0.3s						
EFP	Efpalio	0.83	117	P	Pg	04 28 00.7	-0.5
RLS	Riolos of Patr	0.85	152	P	Pg	04 28 01.1	-0.4
RLS				S	Sb	04 28 12.6	+0.3
RLS				AML	AML	04 28 20.2	
	comp=E,1616µm,0.4s						
RLS				AML	AML	04 28 21.2	
	comp=N,1493µm,0.5s						
JAN	Janina	0.86	355	P	Pg	04 28 00.4	-1.3
JAN				S	Sg	04 28 13.0	0.0
JAN				AML	AML	04 28 17.1	
	comp=E,2946µm,0.4s						
JAN				AML	AML	04 28 17.9	
	comp=N,1688µm,0.4s						
IGT	Igoumenitsa	0.88	327	P	Pg	04 28 01.0	-1.1
IGT				S	Sg	04 28 13.5	-0.1
IGT				AML	AML	04 28 23.9	
	comp=E,557µm,0.5s						
IGT				AML	AML	04 28 24.7	
	comp=N,698µm,0.7s						
IGT	Igoumenitsa	0.88	327	P	Pg	04 28 01.2	-0.9
IGT	Igoumenitsa	0.88	327	P	Pg	04 28 01.2	-0.9
	baz=326						
IGT				S	Sn	04 28 17.5	+2.6
	baz=326						
MAKR	Makrakomi, Fth	0.94	77	P	Pg	04 28 02.4	-0.9
MAKR	Makrakomi, Fth	0.94	77	P	Pg	04 28 02.6	-0.7
LAKA	Lakka	0.98	125	P	Pg	04 28 03.5	-0.5
LAKA				S	Sb	04 28 17.0	+0.8
LAKA				AML	AML	04 28 26.4	
	comp=N,3034µm,0.5s						
LAKA				AML	AML	04 28 27.4	
	comp=E,2675µm,0.5s						
LAKA	Lakka	0.98	125	P	Pg	04 28 03.5	-0.5
DRO	Drossia	1.04	145	P	Pg	04 28 04.1	-1.0
DRO				S	Sb	04 28 18.7	+0.8
DRO				AML	AML	04 28 24.3	
	comp=E,1406µm,0.6s						
DRO				AML	AML	04 28 25.3	
	comp=N,3313µm,0.4s						
DRO	Drossia	1.04	145	P	Pg	04 28 04.1	-1.0
AGG	Agios Georgios	1.09	78	P	Pb	04 28 05.3	-0.3
AGG	Agios Georgios	1.09	78	P	Pb	04 28 05.3	-0.3
THL	Klokotos Trika	1.12	47	P	Pb	04 28 05.5	-0.5
THL				S	Sn	04 28 21.3	+0.4
THL				AML	AML	04 28 26.9	
	comp=E,948µm,0.4s						
THL				AML	AML	04 28 30.0	
	comp=N,634µm,1.0s						
THL	Klokotos Trika	1.12	47	P	Pb	04 28 05.6	-0.3
KPRO	Kipourio	1.19	15	P	Pb	04 28 07.3	0.0
KPRO	Kipourio	1.19	15	P	Pb	04 28 06.9	-0.3
KLV	Kalavryta, Ach	1.21	129	P	Pb	04 28 07.2	-0.3
KEK	Kerkira	1.28	316	P	Pn	04 28 08.9	+0.8
SRN	Sarande	1.31	326	P	Pg	04 28 10.7	+0.5
	baz=326						
LSK	Leskovik	1.37	349	P	Pb	04 28 10.9	+0.6
	baz=347						
LSK				S	Sg	04 28 32.0	+2.6
	baz=347						
LSK				AMP			
	comp=N,2.1nm,0.6s,baz=347						
PENT	Pentalofos	1.40	6	P	Pb	04 28 11.1	+0.3
KZN	Kozani	1.63	22	P	Pb	04 28 14.6	0.0
KBN	Korca	1.82	356	P	Pg	04 28 20.4	+0.4
	baz=355						
KBN				S	Sg	04 28 44.9	+1.1
	baz=355						
KBN				AMP			
	comp=N,0.8nm,0.7s,baz=355						
FNA	Florina	2.00	9	P	Pb	04 28 21.3	+0.2
	baz=7.0						
FNA				S	Sg	04 28 50.0	+0.4
	baz=7.0						
OHR	Ohrid	2.31	357	*e*Pn	Pn	04 28 23.6	+1.2
OHR				*e*Sn	Sn	04 28 45.5	-4.9
OHR	Ohrid	2.31	357	*i* Pn	Pb	04 28 25.5	-0.8
TIR	Tirane	2.67	342	*e*Pn	Pn	04 28 26.3	-1.0
VAY	Valandovo	2.80	26	*e*Pn	Pn	04 28 31.9	+2.8
VAY				*e*Sn	Sn	04 29 03.0	+0.5
BOSS	Bosilegrad	3.87	17	*e*Pn	Pn	04 28 45.9	+2.2
BARS	Barje	4.06	9	*e*Pn	Pn	04 28 48.0	+1.6
VTS	Vitosha	4.18	24	*e*Pn	Pn	04 28 50.4	+2.2
VTS				*e*Sn	Sn	04 29 34.2	-2.6
SELS	Selova	4.41	2	*e*Pn	Pn	04 28 51.9	+0.6
SJES	Sjenica	4.51	351	*e*Pn	Pn	04 28 52.0	-0.7
SJES				*e*Sn	Sn	04 29 38.5	-6.4
IVAS	Ivanjica	4.81	353	*e*Pn	Pn	04 28 56.4	-0.3
DIVS	Divibare	5.34	353	*e*Pn	Pn	04 29 03.9	-0.1
DIVS				*e*Sn	Sn	04 29 58.8	-6.4
BRTR	Keskin Array B	9.88	81	Pn	Pn	04 30 08.8	+2.4
	baz=261,slow=15,SNR=2.4						
	comp=N,0.3nm,0.5s						
EIL	Elat	14.72	124	LR	LR	04 39 13.9	
	comp=N,68nm,18.1s,baz=284,slow=47						
FINES	FINESS Array B	22.89	6	P	P	04 32 48.8	+1.2
	comp=N,0.3nm,0.3s,baz=200,slow=15,SNR=1.3						
	comp=N,0.3nm,0.3s						
NOA	NORSAR Array B	23.08	348	P	P	04 32 49.5	0.0
	comp=N,0.2nm,0.6s,baz=147,slow=10,SNR=1.5						
	comp=N,0.2nm,0.6s						
TORD	Torodi Ar. Bea	30.73	219	P	P	04 34 00.1	+0.8
	comp=N,0.3nm,0.5s,baz=37,slow=9.2,SNR=7.8						
	comp=N,0.3nm,0.5s						
WSAR	Wadi Sarin	35.54	105	LR	LR	04 55 11.6	
	comp=N,61nm,18.3s,baz=140,slow=46						
MKAR	Makanchi Array	44.69	59	P	P	04 35 57.1	+0.2
	comp=N,0.2nm,0.4s,baz=280,slow=7.3,SNR=4.5						
	comp=N,0.2nm,0.4s						
ZALV	Zalesovo Beam	45.02	49	P	P	04 35 58.8	-0.6
	comp=N,1.3nm,0.5s,baz=271,slow=7.4,SNR=5.3						
	comp=N,1.3nm,0.5s						

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*IDC **16** 04:39:10.7±1.2, 12°.72N×126°.07E, h0^{km}, mb4.0/11, mbtmp4.0/11, MS3.2/9, Error ellipse: s-maj=41.1km s-min=25.5km az=78.0*

*NEIC **16** 04:39:11.4±1.2, 12°.5N±0°.1×126°.1E±0°.1, h10^{km}±2^{km}, mb4.6/20, Error ellipse: s-maj=22.0km s-min=14.5km az=145.0*

ISC 16 04:39:13.3±0.6, **12°.84N**±0°.06×**125°.92E**±0°.09, **h10^{km}**, **n64**, σ**1^s.04**/53, **mb4.4**/18, **MS3.3**/6, **1C-7D**, **Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	1.87	294	⇓*e*P	Pn	04 39 44.6	-0.8
PVCP				*e*S	Sn	04 40 07.4	-1.7
GLSP	General Luna,	3.04	176	⇓*e*P	Pn	04 40 00.8	-0.8
LLP	Lapu-Lapu	3.15	218	*e*P	Pn	04 40 06.3	+3.3
LLP				*e*S	Sn	04 40 39.7	-1.0
RCP	Roxas	3.35	248	⇑*e*P	Pn	04 40 07.3	+1.5
JCNP	Jose Panganiba	3.44	295	⇓*e*P	Pn	04 40 08.2	+1.1
JCNP				*e*S	Sn	04 40 47.2	-0.7
TBP	Tagbilaran	3.72	213	*e*P	Pn	04 40 11.6	+0.8
LQP	Lukban	4.44	287	⇓*e*P	Pb	04 40 31.6	+0.1
DAV	Davao City (W)	5.74	183	LR	LR	04 42 32.3	
	comp=Z,147nm,19.1s,baz=178,slow=36						
SMPP	San Manuel, Pa	6.04	304	⇓*e*P	Pn	04 40 44.1	+1.3
APYP	Conner	6.73	319	⇓*e*P	Pn	04 40 53.1	+0.9
BOLP	Bolinao	6.79	302	⇓*e*P	Pn	04 40 54.6	+1.5
JOW	Kunigami	14.10	9	LR	LR	04 46 47.2	
	comp=Z,79nm,20.0s,baz=334,slow=32						
GUMO	Guam	18.47	86	LR	LR	04 49 22.0	
	comp=Z,29nm,21.1s,baz=101,slow=33						
BATI	Baumata	23.00	186	LR	LR	04 53 51.4	
	comp=Z,342nm,19.1s,baz=213,slow=38						
ENH	Enshi	23.07	321		P	04 44 19.6	+0.5
ENH				IAmb	IAmb	04 44 20.6	
	comp=Z,12nm,0.3s						
KS14	Wonju Array Si	24.56	4	P	P	04 44 35.2	+1.9
KSAR	Wonju Array Be	24.56	4		P	04 44 34.1	+0.8
KSRS	Korea Array	24.58	4	P	P	04 44 34.0	+0.5
	comp=Z,1.5nm,0.7s,baz=182,slow=10.0,SNR=6.1						
KSRS				LR	LR	04 54 31.3	
	comp=Z,35nm,19.1s,baz=220,slow=37						
	comp=Z,1.5nm,0.7s						
MJAR	Matsushiro Arr	26.06	23	LR	LR	04 55 49.1	
	comp=Z,26nm,18.3s,baz=198,slow=38						
CM10	Chiang Mai Arr	26.49	286	P	P	04 44 51.4	+0.3
CMAR	Chiang Mai Arr	26.55	286	P	P	04 44 52.2	+0.6
	comp=Z,2.1nm,0.4s,baz=96,slow=7.2,SNR=18						
	comp=Z,2.1nm,0.4s						
CMAR	Chiang Mai Arr	26.55	286	P	P	04 44 51.5	-0.1
LEM	Lembang	26.69	224	LR	LR	04 56 40.0	
	comp=Z,227nm,20.2s,baz=168,slow=39						
KNRA	Kununurra	28.47	174	P	P	04 45 02.2	-6.5
ASAJ	Asahikawa	34.30	22	LR	LR	05 00 37.3	
	comp=Z,23nm,19.8s,baz=81,slow=37						
LSA	Lhasa	36.30	303	P	P	04 46 19.0	+1.2
LSA				IAmb	IAmb	04 46 20.5	
	comp=Z,12nm,1.2s						
ASAR	Alice Springs	37.11	168	P	P	04 46 22.6	-1.6
	comp=Z,0.6nm,0.8s,baz=346,slow=8.0,SNR=2.0						
	comp=Z,0.6nm,0.8s						
SONB3	Songino Array	38.50	339	P	P	04 46 36.2	+0.4
SONM	Songino Array	38.51	339	P	P	04 46 36.7	+0.8
	comp=Z,1.9nm,0.7s,baz=156,slow=9.2,SNR=9.0						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	38.51	339	P	P	04 46 35.6	-0.3
H11S3	WAKE ISLAND Hy	39.60	76	T	T	05 30 26.4	
	baz=268						
H11S1	WAKE ISLAND Hy	39.61	76	T	T	05 30 29.1	
	baz=268						
H11S2	WAKE ISLAND Hy	39.61	77	T	T	05 30 29.7	
	baz=268						
H11N1	WAKE ISLAND Hy	39.85	75	T	T	05 30 46.2	
	baz=266,slow=75,SNR=9.0						
H11N2	WAKE ISLAND Hy	39.85	75	T	T	05 30 46.1	
	baz=266,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	39.87	75	T	T	05 30 35.7	
	baz=266,slow=75,SNR=7.0						
MK07	Makanchi Array	49.76	322	P	P	04 48 07.2	+1.1
MK31	Makanchi Array	49.80	322	P	P	04 48 06.7	+0.4
MK31				IAmb	IAmb	04 48 08.6	
	comp=Z,3.6nm,0.8s						
MKAR	Makanchi Array	49.80	322	P	P	04 48 07.1	+0.8
	comp=Z,3.9nm,0.7s,baz=114,slow=8.8,SNR=41						
MKAR				PcP	PcP	04 49 26.5	-0.6
	comp=Z,0.9nm,0.8s,baz=103,slow=3.9,SNR=4.4						
	comp=Z,3.9nm,0.7s						
MKAR	Makanchi Array	49.80	322	P	P	04 48 06.9	+0.6
MAKZ	Makanchi	49.99	322	P	P	04 48 08.2	+0.4
ZALV	Zalesovo Beam	52.23	331	P	P	04 48 24.5	+0.1
	comp=Z,2.2nm,0.6s,baz=112,slow=7.7,SNR=8.1						
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	52.23	331	P	P	04 48 23.7	-0.7
BOOM	Boomskoye usch	52.23	314	P	P	04 48 25.7	+0.8
KURK	Kurchatov	53.77	325	P	P	04 48 36.7	+0.8
KURK				IAmb	IAmb	04 48 37.8	
	comp=Z,7.3nm,0.8s						
DRK	Karamyk	54.39	310	P	P	04 48 42.2	+1.2
GAR	Garm	55.41	309	P	P	04 48 48.6	+0.5
CHGR	Chuyangaron	56.22	308	P	P	04 48 53.5	-0.5
KK31	Karatay Array	56.23	314	P	P	04 48 54.3	+0.5
KK31				IAmb	IAmb	04 48 55.5	
	comp=Z,4.2nm,0.9s						
KKAR	Karatay Array	56.23	314	P	P	04 48 54.1	+0.3
BRVK	Borovoye	59.45	325	P	P	04 49 16.5	+0.3
BRVK				IAmb	IAmb	04 49 17.9	
	comp=Z,5.8nm,1.0s						
NRIK	Noril'sk	61.45	345	P	P	04 49 29.1	-0.5
	comp=Z,4.4nm,0.9s,baz=138,slow=6.9,SNR=5.0						
	comp=Z,4.4nm,0.9s						
NRIK	Noril'sk	61.45	345	P	P	04 49 29.7	+0.1
NRIK				IAmb	IAmb	04 49 31.0	
	comp=Z,4.8nm,0.9s						
ABKAR	Akbulak array	64.72	319	P	P	04 49 51.6	-0.1
GEYT	Alibeck	64.75	306	P	P	04 49 53.7	+1.5
	comp=Z,2.2nm,0.5s,baz=102,slow=12,SNR=2.4						
	comp=Z,2.2nm,0.5s						
GEYT	Alibeck	64.75	306	P	P	04 49 53.0	+0.9
GEYT				IAmb	IAmb	04 49 53.9	
	comp=Z,2.3nm,0.8s						
RAYN	Ar Rayn	76.31	291	P	P	04 51 01.9	-1.2
RAYN				IAmb	IAmb	04 51 04.1	
	comp=Z,3.5nm,1.0s						
BMAR	Burnt Mountain	78.06	23	P	P	04 51 12.8	+0.8
ARCES	ARCESS Array B	81.68	340	P	P	04 51 31.5	-0.1
	comp=Z,0.4nm,0.5s,baz=75,slow=6.9,SNR=5.2						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	81.68	340	P	P	04 51 31.6	0.0
ARCES				IAmb	IAmb	04 51 38.4	
	comp=Z,11nm,1.4s						
INK	Inuvik	82.04	22	LR	LR	05 32 26.9	
	comp=Z,24nm,18.1s,baz=272,slow=39						
BRTR	Keskin Array B	83.64	309	P	P	04 51 41.6	-1.0
	comp=Z,0.5nm,0.8s,baz=18,slow=5.0,SNR=2.7						
	comp=Z,0.5nm,0.8s						
AKASG	Malin Array Be	84.37	321	P	P	04 51 44.7	-1.1
	comp=Z,0.1nm,0.3s,baz=63,slow=3.0,SNR=1.9						
	comp=Z,0.1nm,0.3s						
TORD	Torodi Ar. Bea	118.97	293	PKP	PKPdf	04 58 01.4	-1.9
	comp=Z,0.3nm,0.9s,baz=61,slow=2.7,SNR=1.8						

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*NNC **16** 04:50:14.0±0.2, 44°.11N×79°.31E, h0^{km}, mb3.4, mpv3.6, Error ellipse: s-maj=2.0km s-min=1.6km az=90.0*

*SOME **16** 04:50:15.0, 44°.10N×79°.27E, h15^{km}*

ISC 16 04:50:14.3±1.1, **44°.11N**±0°.02×**79°.28E**±0°.02, **h5^{km}**±10^{km}, **n50**, σ**0^s.86**/87, **8C-13D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.43	59	⇓*e*P	Pg	04 50 22.9	+0.3
	405nm,0.1s						
DJR				*e*S	Sg	04 50 28.8	+0.5
	1µm,0.2s						
DJR	Jarkent	0.43	59	P	Pg	04 50 23.0	+0.3
	405nm,0.1s						
DJR				S	Sg	04 50 28.8	+0.5
	1µm,0.2s						
KPKS	Kokpek	0.77	214	⇓*e*P	Pb	04 50 30.0	-0.3
	249nm,0.1s						
KPKS				*e*S	Sb	04 50 40.9	-0.3
	517nm,0.2s						
PDGK	Podgornoye	0.80	169	P	Pg	04 50 29.5	-0.1
	109nm,0.2s						
PDGK				S	Sg	04 50 39.9	-0.1
	69nm,0.1s						
PDGK	Podgornoye	0.80	169	⇓P	Pg	04 50 29.6	-0.1
	38nm,0.2s						
PDGK				⇓S	Sg	04 50 40.4	+0.5
	111nm,0.4s						
SHLS	Shalkode	0.96	172	⇓*e*P	Pb	04 50 33.7	+0.1
	35nm,0.1s						
SHLS				*e*S	Sn	04 50 47.5	-1.2
	240nm,0.1s						
SHLS	Shalkode	0.96	172	P	Pb	04 50 33.6	+0.1
	35nm,0.1s						
SHLS				S	Sb	04 50 47.2	+0.5
	240nm,0.1s						
UZB	Uzynbulak	0.98	191	⇓*e*P	Pg	04 50 33.1	0.0
	106nm,0.1s						
UZB				*e*S	Sb	04 50 46.5	-0.7
	217nm,0.1s						
UZB	Uzynbulak	0.98	191	P	Pg	04 50 33.1	0.0
	106nm,0.1s						
UZB				S	Sg	04 50 46.2	+0.3
	217nm,0.1s						
KURS	Kuram	1.01	232	*e*P	Pb	04 50 34.4	0.0
	9.8nm,0.1s						
KURS				*e*S	Sb	04 50 48.4	+0.4
	63nm,0.1s						
KURS	Kuram	1.01	232	P	Pb	04 50 34.6	+0.2
	9.8nm,0.1s						
KURS				S	Sb	04 50 48.8	+0.8
	63nm,0.1s						
TDK	Taldyqorghan	1.09	325	*e*P	Pg	04 50 35.4	+0.2
	55nm,0.2s						
TDK				*e*S	Sb	04 50 50.1	+0.1
	395nm,0.2s						
TDK	Taldyqorghan	1.09	325	P	Pg	04 50 35.4	+0.2
	55nm,0.2s						
TDK				S	Sb	04 50 50.2	+0.1
	395nm,0.2s						
ZHN	Zhinishke	1.12	213	*e*P	Pg	04 50 35.8	-0.1
	126nm,0.2s						
ZHN				*e*S	Sb	04 50 51.3	+0.1
	1µm,0.2s						
ZHN	Zhinishke	1.12	213	P	Pg	04 50 35.8	-0.1
	126nm,0.2s						
ZHN				S	Sg	04 50 50.7	+0.3
	1µm,0.2s						
KAPS	Kapalarasan	1.18	3	*e*P	Pg	04 50 36.6	-0.3
	37nm,0.1s						
KAPS				*e*S	Sg	04 50 52.3	+0.1
	211nm,0.1s						
KAPS	Kapalarasan	1.18	3	P	Pg	04 50 36.6	-0.3
	37nm,0.1s						
KAPS				S	Sg	04 50 52.3	+0.1
	211nm,0.1s						
SATY	Saty	1.23	211	⇓*e*P	Pg	04 50 37.6	-0.2
	112nm,0.1s						
SATY				*e*S	Sb	04 50 54.4	+0.1
	852nm,0.1s						
SATY	Saty	1.23	211	P	Pg	04 50 37.6	-0.2
	112nm,0.1s						
SATY				S	Sb	04 50 54.1	-0.1
	852nm,0.1s						
CHKK	Chushkaly	1.67	262	*e*P	Pb	04 50 45.5	-0.1
	6.4nm,0.1s						
CHKK				*e*S	Sg	04 51 08.0	0.0
	392nm,0.2s						
CHKK	Chushkaly	1.67	262	P	Pb	04 50 45.2	-0.3
	13nm,0.1s						
CHKK				S	Sb	04 51 07.4	+0.5
	392nm,0.2s						
MDOK	Medeo	1.87	240	*e*P	Pb	04 50 49.0	-0.1
	8.5nm,0.2s						
MDOK				*e*S	Sb	04 51 13.6	+0.7
	88nm,0.3s						
MDOK	Medeo	1.87	240	⇓P	Pn	04 50 47.6	+0.4
	9.6nm,0.4s						
MDOK				⇑S	Sb	04 51 13.6	+0.7
	54nm,0.4s						
MDOK	Medeo	1.87	240	Pg	Pb	04 50 49.0	-0.1
	8.5nm,0.2s						
MDOK				Lg	Lg	04 51 13.6	
	88nm,0.3s						
KTBS	Karatobe	1.92	259	*e*P	Pb	04 50 50.0	+0.3
	11nm,0.2s						
KTBS				*e*S	Sg	04 51 15.3	-0.6
	129nm,0.2s						
KTBS	Karatobe	1.92	259	P	Pb	04 50 49.8	0.0
	11nm,0.2s						
KTBS				S	Sb	04 51 14.9	+0.9
	129nm,0.2s						
AAA	Alma-Ata	1.94	243	*e*P	Pb	04 50 49.6	-0.5
	48nm,0.1s						
AAA				*e*S	Sb	04 51 14.6	+0.1
	228nm,0.4s						
AAA	Alma-Ata	1.94	243	P	Pb	04 50 49.6	-0.5
	48nm,0.1s						
AAA				S	Sb	04 51 14.6	+0.1
	228nm,0.4s						
TNSS	Tian-Shan	2.00	238	*e*P	Pb	04 50 51.4	-0.1
	7.9nm,0.1s						
TNSS				*e*S	Sg	04 51 18.1	-0.7
	17nm,0.2s						
TNSS	Tian-Shan	2.00	238	Pg	Pb	04 50 51.1	-0.4
	7.9nm,0.1s						
TNSS				Lg	Lg	04 51 17.3	
	17nm,0.2s						
KUU	Kurty	2.13	265	*e*P	Pb	04 50 53.6	+0.2
	10nm,0.2s						
KUU				*e*S	Sb	04 51 21.3	+1.2
	83nm,0.3s						
KUU	Kurty	2.13	265	Pg	Pb	04 50 53.3	-0.1
	10nm,0.2s						
KUU				Lg	Lg	04 51 20.9	
	83nm,0.3s						
MTBS	Maitube	2.29	246	*e*P	Pb	04 50 56.4	+0.3
	20nm,0.3s						
MTBS				*e*S	Sb	04 51 26.1	+1.4
	106nm,0.2s						
MTBS	Maitube	2.29	246	Pg	Pb	04 50 56.0	-0.1
	20nm,0.3s						
MTBS				Lg	Lg	04 51 25.6	
	106nm,0.2s						
KST	Kastek	2.63	247	*e*P	Pb	04 51 02.0	0.0
	5.2nm,0.2s						
KST				*e*S	Sb	04 51 35.9	+1.2
	30nm,0.3s						
KST	Kastek	2.63	247	Pg	Pb	04 51 02.0	0.0
	5.2nm,0.2s						
KST				Lg	Lg	04 51 35.8	
	30nm,0.3s						
KRBS	Karabastau	2.63	262	*e*P	Pb	04 51 02.1	+0.1
	6.3nm,0.3s						
KRBS				*e*S	Sb	04 51 36.0	+1.3
	22nm,0.3s						
KRBS	Karabastau	2.63	262	Pg	Pb	04 51 02.1	+0.1
	6.3nm,0.3s						
KRBS				Lg	Lg	04 51 36.0	
	22nm,0.3s						
TKM2	Tokmak 2	2.93	247	⇓Pn	Pn	04 51 02.7	+1.0
	0.7nm,0.4s						
TKM2				⇑Pg	Pg	04 51 11.0	+0.6
	2.3nm,0.4s						
TKM2				⇑Lg	Lg	04 51 45.5	
	33nm,0.7s						
MAKZ	Makanchi	3.30	34	⇓Pn	Pn	04 51 07.2	+0.6
	0.4nm,0.4s						
MAKZ				⇓Pg	Pb	04 51 14.0	+0.6
	1.5nm,0.5s						
MAKZ				⇑Lg	Lg	04 51 54.1	
	6.9nm,0.4s						
MK31	Makanchi Array	3.42	37	⇓Pn	Pn	04 51 08.7	+0.4
	0.1nm,0.1s,baz=210,slow=14,SNR=41						
MK31				⇑Pg	Pb	04 51 14.4	-0.9
	1.3nm,0.3s,baz=197,slow=13,SNR=20						
MK31				Sn	Sn	04 51 49.4	+0.2
	0.7nm,0.2s,baz=216,slow=26,SNR=5.0						
MK31				Lg	Lg	04 51 59.4	
	6.2nm,0.5s,baz=214,slow=29,SNR=11						
SGDS	Sogindy	3.43	261	*e*P	Pb	04 51 15.7	+0.2
	1.1nm,0.2s						
SGDS				*e*S	Sb	04 51 59.4	+1.9
	9.6nm,0.1s						
SGDS	Sogindy	3.43	261	Pg	Pb	04 51 15.9	+0.4
	1.1nm,0.2s						

SGDS				Lg	Lg	04 51 59.7	
	9.6nm,0.1s						
CHMS	**Chumysh**	**3.47**	**253**	⇑Pg	**Pb**	**04 51 18.6**	**+2.4**
	3.2nm,0.5s						
CHMS				⇑Lg	Lg	04 52 05.3	
	17nm,0.5s						
BTLS	**Baital**	**3.85**	**286**	*e*P	**Pb**	**04 51 24.3**	**+1.6**
	2.4nm,0.3s						
BTLS				*e*S	**Sg**	**04 52 14.2**	**-3.7**
	5.5nm,0.5s						
BTLS	**Baital**	**3.85**	**286**	Pg	**Pb**	**04 51 24.3**	**+1.6**
	2.4nm,0.3s						
BTLS				Lg	Lg	04 52 14.2	
	5.5nm,0.5s						
ZSN	**Zaisan**	**5.14**	**48**	*e*P	**Pb**	**04 51 43.1**	**-1.6**
ZSN				*e*S	**Sb**	**04 52 46.0**	**-0.7**
OTUK	**Ortayu**	**6.35**	**313**	⇑Lg	Lg	04 53 35.5	
	4.3nm,0.8s						
KK31	**Karatay Array**	**6.44**	**264**	Pg	**Pg**	**04 52 14.2**	**-3.4**
	0.3nm,0.4s,baz=75,slow=16,SNR=3.9						
KK31				Lg	Lg	04 53 36.3	
	2.5nm,0.6s,baz=80,slow=28,SNR=9.3						
KURK	**Kurchatov**	**6.62**	**356**	⇓Lg	Lg	04 53 40.7	
	9.2nm,0.7s						

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*IDC **16** 06:02:15.8±3.2, 6°.90N×73°.15W, h163^{km}±31^{km}, mb3.1/3, mbtmp3.6/4, Error ellipse: s-maj=60.9km s-min=37.1km az=97.0*

*RSNC **16** 06:02:16.9±0.8, 6°.79N×73°.14W, h151^{km}±3^{km}, ML3.3, Mw3.8, Fault plane solution: NP1:ϕ_s98.00000°, δ18.00000°, λ-166.00000°.*

ISC 16 06:02:14.8±0.8**, 6°.81N**±0°.03×**73°.11W**±0°.04**, h163**^{km}±6^{km}**, n37, σ1^{s}.36**/70**, mb3.1**/3**, 3C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**198**	⇓*i*P	**Pn**	**06 02 37.1**	**+0.1**
BARC				*e*S	**Sn**	**06 02 52.5**	**-1.5**
BARC				*i*		06 02 54.0	
	comp=Z,403nm,0.4s						
BRRC	**Barranca, Sant**	**0.67**	**296**	⇑*i*P	**Pn**	**06 02 39.0**	**+0.5**
BRRC				*e*S	**Sn**	**06 02 56.4**	**-0.3**
BRRC				*i*		06 03 01.3	
	comp=Z,248nm,0.2s						
PAMC	**Pamplona, Colo**	**0.67**	**38**	⇓*i*P	**Pn**	**06 02 39.9**	**+0.8**
PAMC				*e*S	**Sn**	**06 02 57.4**	**-0.3**
PAMC				*i*		06 02 59.4	
	comp=Z,242nm,0.5s						
RUSC	**La Rusia**	**0.91**	**178**	*e*P	**Pn**	**06 02 41.0**	**+0.2**
RUSC				*e*S	**Sn**	**06 02 59.8**	**-0.8**
RUSC				*i*		06 03 00.8	
	comp=Z,246nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	⇑*i*P	**Pn**	**06 02 43.5**	**-0.5**
PTBC				*e*S	**Sn**	**06 03 04.9**	**-1.6**
PTBC				*i*		06 03 09.7	
	comp=Z,241nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**106**	⇓*i*P	**Pn**	**06 02 45.2**	**+1.1**
TAMC				*e*S	**Sn**	**06 03 06.7**	**+0.2**
OCAC	**Ocana**	**1.43**	**352**	*e*P	**Pn**	**06 02 45.3**	**+0.4**
OCAC				*e*S	**Sn**	**06 03 08.2**	**+0.1**
OCAC				*i*		06 03 13.1	
	comp=Z,531nm,0.2s						
SPBC	**San Pablo de B**	**1.50**	**220**	⇑*i*P	**Pn**	**06 02 45.9**	**+0.4**
SPBC				*e*S	**Sn**	**06 03 08.7**	**-0.3**
SPBC				*i*		06 03 10.6	
	comp=Z,326nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**06 02 49.7**	**+0.5**
ZARC				*e*S	**Sn**	**06 03 15.1**	**-0.6**
ZARC				*i*		06 03 20.9	
	comp=Z,304nm,0.6s						
NORC	**Norcasia**	**2.14**	**235**	*e*P	**Pn**	**06 02 52.7**	**+0.2**
NORC				*e*S	**Sn**	**06 03 20.7**	**-0.8**
NORC				*i*		06 03 28.5	
	comp=Z,199nm,0.2s						
CHIC	**Chingaza**	**2.25**	**196**	*e*P	**Pn**	**06 02 55.0**	**+0.9**
CHIC				*e*S	**Sn**	**06 03 24.3**	**-0.2**
CHIC				*i*		06 03 30.4	
	comp=Z,113nm,0.3s						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**06 02 56.9**	**+2.2**
	comp=Z,57nm,0.3s,baz=78,slow=19,SNR=43						
ROSC				S	**Sn**	**06 03 27.9**	**+2.6**
	comp=Z,78nm,0.3s,baz=100,slow=18,SNR=10.0						
ROSC	**El Rosal**	**2.30**	**212**	*e*P	**Pn**	**06 02 56.8**	**+2.2**
ROSC				*e*S	**Sn**	**06 03 26.2**	**+0.9**
ROSC				*i*		06 03 30.6	
	comp=Z,240nm,0.4s						
HELC	**Santa Helena**	**2.48**	**256**	*e*P	**Pn**	**06 02 57.7**	**+1.0**
HELC				*e*S	**Sn**	**06 03 29.5**	**+0.5**
HELC				*i*		06 03 36.0	
	comp=Z,99nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**06 02 55.8**	**-1.8**
UREC				*e*S	**Sn**	**06 03 28.2**	**-2.4**
UREC				*i*		06 03 38.1	
	comp=Z,176nm,0.2s						
VILC	**Villavicencio,**	**2.74**	**192**	*e*P	**Pn**	**06 03 00.0**	**+0.3**
VILC				*e*S	**Sn**	**06 03 35.0**	**+0.4**
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**06 03 02.4**	**+2.8**
LL1C				*e*S	**Sn**	**06 03 36.6**	**+2.2**
LL1C				*i*		06 03 45.5	
	comp=Z,251nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇓*i*P	**Pn**	**06 02 59.9**	**0.0**
PTGC				*e*S	**Sn**	**06 03 33.0**	**-1.9**
PTGC				*i*		06 03 38.0	
	comp=Z,63nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P	**Pn**	**06 03 04.5**	**+1.2**
CBOC				*e*S	**Sn**	**06 03 41.2**	**+0.4**
CBOC				*i*		06 03 53.6	
	comp=Z,43nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**06 03 04.5**	**+0.7**
DBBC				*e*S	**Sn**	**06 03 41.6**	**-0.3**
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**06 03 06.5**	**+1.0**
SDV				*e*S	**Sn**	**06 03 44.1**	**-0.7**
SDV				*i*		06 03 45.7	
	comp=Z,35nm,0.4s						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**06 03 07.1**	**+1.5**
ARGC				*e*S	**Sn**	**06 03 45.9**	**+0.8**
ARGC				*i*		06 03 56.7	
	comp=Z,28nm,0.3s						
ANIL	**Santa Ana**	**3.24**	**225**	*e*P	**Pn**	**06 03 07.4**	**+1.4**
ANIL				*e*S	**Sn**	**06 03 47.2**	**+1.4**
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**06 03 10.6**	**+0.8**
PRAC				*e*S	**Sn**	**06 03 53.1**	**+0.6**
PRAC				*i*		06 03 56.4	
	comp=Z,101nm,0.3s						
ORTC	**Ortega, Tolima**	**3.58**	**217**	*e*P	**Pn**	**06 03 11.0**	**+0.8**
ORTC				*e*S	**Sn**	**06 03 54.0**	**+0.9**
ORTC				*i*		06 03 58.6	
	comp=Z,56nm,0.7s						
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	**Pn**	**06 03 12.6**	**+1.2**
PLMC				*e*S	**Sn**	**06 03 55.0**	**-0.5**
PLMC				*i*		06 04 01.6	
	comp=Z,37nm,0.5s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**06 03 10.8**	**-0.7**
SJCC				*e*S	**Sn**	**06 03 52.4**	**-3.2**
SJCC				*i*		06 03 56.8	
	comp=Z,32nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*e*P	**Pn**	**06 03 17.4**	**-0.5**
CRJC				*e*S	**Sn**	**06 04 05.0**	**-2.3**
CRJC				*i*		06 04 10.7	
	comp=Z,47nm,0.4s						
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	**Pn**	**06 03 18.7**	**-0.2**
GUVC				*e*S	**Sn**	**06 04 08.1**	**-0.9**
GUVC				*i*		06 04 14.0	
	comp=Z,80nm,0.2s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	**Pn**	**06 03 19.6**	**+0.4**
YOTC				*e*S	**Sn**	**06 04 08.3**	**-1.0**
SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P	**Pn**	**06 03 22.3**	**+0.8**
SMRC				*e*S	**Sn**	**06 04 10.2**	**-3.3**
SMRC				*i*		06 04 16.3	
	comp=Z,34nm,0.8s						
MACC	**Macarena, Meta**	**4.69**	**189**	*e*P	**Pn**	**06 03 23.5**	**-1.0**
MACC				*e*S	**Sn**	**06 04 15.2**	**-3.8**
MACC				*i*		06 04 24.0	
	comp=Z,17nm,0.3s						
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	**Pn**	**06 03 30.8**	**-0.2**
GARC				*e*S	**Sn**	**06 04 29.6**	**-1.0**
GARC				*i*		06 04 34.0	
	comp=Z,29nm,0.2s						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**06 09 06.2**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=122,slow=9.0,SNR=3.6						
	comp=Z,0.2nm,0.7s						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**06 10 36.6**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=140,slow=7.1,SNR=2.0						
	comp=Z,0.2nm,0.4s						
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**06 10 38.7**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=188,slow=7.1,SNR=2.4						
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKiKP**	**06 21 48.6**	**0.0**
	comp=Z,0.4nm,0.9s,baz=104,slow=3.3,SNR=1.4						

IDC 16 06:06:40.1±4.7**, 6°.65S**×**147°.39E, h208**^{km}±48^{km}**, mb3.0**/1**, mbtmp3.7**/3**, Error ellipse: s-maj=117.9km s-min=45.8km az=125.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.75**	**185**	P	Pn	06 07 27.4	0.0
	11nm,0.3s,baz=30,slow=7.2,SNR=3.1						
PMG				S	S	06 07 57.8	-6.2
	13nm,0.4s,baz=227,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**18.31**	**223**	P	P	06 10 38.6	-0.3
	1.1nm,0.3s,baz=48,slow=12,SNR=45						
ASAR	**Alice Springs**	**21.32**	**216**	P	P	06 11 11.2	+0.2
	0.9nm,0.5s,baz=48,slow=8.8,SNR=15						
	0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**145.62**	**284**	PKPbc	PKPdf	06 25 54.4	-0.3
	0.3nm,0.6s,baz=62,slow=3.9,SNR=1.8						

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*DDA **16** 06:07:53.9±0.0, 38°.82N×43°.67E, h7^{km}±7^{km}, ML2.3*

*ISK **16** 06:07:53.0, 38°.80N×43°.67E, h9^{km}, ML2.7/8*

ISC 16 06:07:53.4±1.3**, 38°.81N**±0°.03×**43°.66E**±0°.03**, h8**^{km}±11^{km}**, n16, σ0^{s}.78**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.30**	**120**	P	**Pg**	**06 07 59.1**	**-0.3**
OZAP				*i* AML	AML	06 08 06.0	
	comp=E,463nm,0.6s						
OZAP				S	**Sb**	**06 08 06.3**	**-0.1**
OZAP				*i* AML	AML	06 08 08.0	
	comp=N,422nm,0.5s						
VANB	**Van**	**0.31**	**225**	PG	**Pb**	**06 08 00.5**	**-0.7**
TVAN	**Van**	**0.35**	**215**	P	**Pg**	**06 08 00.5**	**+0.2**
TVAN				S	**Sb**	**06 08 06.9**	**-0.9**
TVAN				*i* AML	AML	06 08 10.0	
	comp=E,413nm,0.4s						
TVAN				*i* AML	AML	06 08 11.0	
	comp=N,417nm,0.3s						
CLDR	**Caldiran**	**0.38**	**31**	PG	**Pg**	**06 08 01.2**	**+0.2**
GEVA	**Gevas**	**0.69**	**224**	P	**Pb**	**06 08 07.4**	**-0.4**
GEVA				S	**Sb**	**06 08 18.6**	**+1.1**
AKDM	**Akdamar-Van**	**0.72**	**228**	PG	**Pg**	**06 08 06.9**	**-0.4**
AKDM				SG	**Sb**	**06 08 17.9**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.73**	**270**	P	**Pb**	**06 08 08.3**	**-0.3**
ADCV				S	**Sn**	**06 08 20.4**	**-1.3**
ADCV				*i* AML	AML	06 08 21.0	
	comp=N,86nm,0.4s						
ADCV				*i* AML	AML	06 08 21.0	
	comp=E,128nm,0.5s						
AGRB	**Hanur-Agry**	**0.92**	**326**	PG	**Pg**	**06 08 11.0**	**-0.1**
MLAZ	**Malazgirt-MUS**	**0.93**	**291**	PG	**Pg**	**06 08 11.5**	**+0.3**
MLAZ				SG	**Sb**	**06 08 25.1**	**+0.7**
KOTA	**Agri, Merkez-K**	**1.05**	**340**	P	**Pg**	**06 08 12.5**	**-1.0**
KOTA				S	**Sn**	**06 08 30.0**	**+0.4**
PERV	**Siirt/Pervari-**	**1.24**	**226**	P	**Pn**	**06 08 19.3**	**+2.2**
PERV				*i* AML	AML	06 08 42.0	
	comp=N,80nm,0.4s						
PERV				*i* AML	AML	06 08 42.0	
	comp=E,62nm,0.4s						
BLIS	**Bitlis-Merkez**	**1.28**	**252**	P	**Pn**	**06 08 17.2**	**-0.5**
BLIS				*i* AML	AML	06 08 40.0	
	comp=N,84nm,0.5s						
BLIS				*i* AML	AML	06 08 40.0	
	comp=E,45nm,0.5s						
GURO	**Guroymak-BITLI**	**1.30**	**259**	PN	**Pn**	**06 08 17.6**	**-0.4**
GURO				SN	**Sn**	**06 08 36.2**	**+0.5**
CUKT	**Cukurca**	**1.56**	**182**	PN	**Pn**	**06 08 21.9**	**+0.3**
GNI	**Garni**	**1.57**	**32**	PN	**Pn**	**06 08 22.3**	**+0.5**
MUSM	**Mu-Merkez**	**1.68**	**268**	P	**Pb**	**06 08 24.6**	**-0.1**
MUSM				S	**Sg**	**06 08 47.9**	**+0.4**

IDC 16 06:13:50.3±2.5**, 54°.08N**×**86°.47E, h0**^{km}**, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=20.0km s-min=12.5km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**263**	*i*		06 20 30.0	
	baz=80,slow=323,SNR=3.4						
ZALV	**Zalesovo Beam**	**0.98**	**263**	Pg	Pg	06 14 07.6	-1.6
	1.7nm,0.3s,baz=80,slow=17,SNR=17						
ZALV				Lg	Lg	06 14 23.6	
	2.2nm,0.3s,baz=86,slow=27,SNR=10						
ZALV				Rg	Rg	06 14 28.4	
	2.2nm,0.3s,baz=77,slow=34,SNR=7.6						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	06 15 20.9	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=4.5						
KURBB				Lg	Lg	06 17 00.3	
	baz=56,slow=32,SNR=1.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.77**	**202**	Pn	Pn	06 15 45.8	+1.2
	0.5nm,0.3s,baz=25,slow=12,SNR=17						
MKAR				Lg	Lg	06 17 57.0	
	0.1nm,0.3s,baz=115,slow=28,SNR=2.0						
	0.4nm,0.3s						

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*VAO **16** 06:23:26.6±0.5, 21°.05S×68°.47W, h230^{km}±5^{km}, mb4.1*

*NEIC **16** 06:23:27.9±2.4, 21°.01S±0°.03×67°.9W±0°.1, h176^{km}±10^{km}, mb4.4/10, Error ellipse: s-maj=13.9km s-min=4.5km az=94.0*

*IDC **16** 06:23:28.3±1.3, 20°.92S×67°.65W, h166^{km}±15^{km}, mb3.9/3, mbtmp4.1/9, Error ellipse: s-maj=30.9km s-min=16.0km az=115.0*

*SCB **16** 06:23:29.0±1.2, 20°.99S×67°.87W, h159^{km}±20^{km}, ML3.6/11, MW3.5, Error ellipse: s-maj=5.1km s-min=3.8km az=1.0*

*GUC **16** 06:23:29.1±0.7, 20°.97S×67°.92W, h179^{km}±5^{km}, ML3.9*

ISC 16 06:23:27.6±0.6**, 20°.97S**±0°.04×**67°.89W**±0°.05**, h177**^{km}±7^{km}**, n117, σ1^{s}.13**/132**, mb4.3**/4**, 1C-1D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.44**	**305**		**Pn**	**06 24 00.0**	**+0.8**
PB08	**IPOC Station P**	**1.44**	**305**	*e*P	**Pn**	**06 24 00.1**	**+0.9**
PB08				*e*S	**Sn**	**06 24 23.9**	**+0.2**
PB08				IAML		06 24 26.6	
	comp=E,597nm,0.6s						
PB08	**IPOC Station P**	**1.44**	**305**	P	**Pn**	**06 24 00.3**	**+1.0**
PB08				IAML		06 24 24.7	
	comp=E,252nm,0.7s						
PB01	**IPOC Station P**	**1.49**	**267**		**Pn**	**06 23 59.4**	**0.0**
PB01	**IPOC Station P**	**1.49**	**267**	*e*P	**Pn**	**06 23 59.5**	**+0.2**
PB01				*e*S	**Sn**	**06 24 23.7**	**-0.2**
PB01				IAML		06 24 26.3	
	comp=N,450nm,0.2s						
PB01	**IPOC Station P**	**1.49**	**267**	P	**Pn**	**06 24 00.0**	**+0.6**
PB01				IAML		06 24 25.6	
	comp=N,276nm,0.2s						
PB09	**IPOC Station P**	**1.50**	**237**		**Pn**	**06 24 00.8**	**+1.3**
PB09	**IPOC Station P**	**1.50**	**237**	*e*P	**Pn**	**06 24 00.8**	**+1.3**
PB09				*e*S	**Sn**	**06 24 25.3**	**+1.0**
PB09				IAML		06 24 26.1	
	comp=N,398nm,0.3s						
PB09	**IPOC Station P**	**1.50**	**237**	P	**Pn**	**06 24 00.9**	**+1.3**
PB09				IAML		06 24 26.8	
	comp=N,282nm,0.5s						
LVC	**Limon Verde**	**1.89**	**210**	P	**Pn**	**06 24 04.6**	**+0.9**
	comp=N,52nm,0.3s,baz=25,slow=6.8,SNR=170						
LVC				S	**Sn**	**06 24 32.7**	**+1.1**
	comp=N,99nm,0.4s,baz=198,slow=20,SNR=46						
LVC	**Limon Verde**	**1.89**	**210**	*e*P	**Pn**	**06 24 04.6**	**+0.9**
LVC				*e*S	**Sn**	**06 24 32.3**	**+0.6**
LVC	**Limon Verde**	**1.89**	**210**	P	**Pn**	**06 24 04.7**	**+1.0**
LVC	**Limon Verde**	**1.89**	**210**	*e*P	**Pn**	**06 24 04.1**	**+0.4**
PB02	**IPOC Station P**	**1.91**	**259**		**Pn**	**06 24 04.2**	**+0.6**
PB02	**IPOC Station P**	**1.91**	**259**	*e*P	**Pn**	**06 24 04.1**	**+0.6**
PB02				*e*S	**Sn**	**06 24 30.7**	**-0.7**
PB02				IAML		06 24 31.7	
	comp=N,1µm,0.5s						
PB02	**IPOC Station P**	**1.91**	**259**	P	**Pn**	**06 24 04.3**	**+0.6**
PB02				IAML		06 24 31.7	
	comp=N,863nm,0.4s						
AF01	**San Pedro de A**	**1.99**	**188**		**Pn**	**06 24 03.0**	**-1.7**
PB07	**IPOC Station P**	**2.01**	**248**		**Pn**	**06 24 05.3**	**+0.5**
PB07	**IPOC Station P**	**2.01**	**248**	*e*P	**Pn**	**06 24 05.2**	**+0.5**
PB07				*e*S	**Sn**	**06 24 32.7**	**-0.9**
PB07				IAML		06 24 33.7	
	comp=N,1µm,0.3s						
PB07	**IPOC Station P**	**2.01**	**248**	P	**Pn**	**06 24 05.7**	**+0.9**
PB07				IAML		06 24 35.3	
	comp=N,536nm,0.3s						
PB11	**IPOC Station P**	**2.05**	**306**		**Pn**	**06 24 05.6**	**+0.4**
PB11	**IPOC Station P**	**2.05**	**306**	*e*P	**Pn**	**06 24 05.5**	**+0.2**
PB11				*e*S	**Sn**	**06 24 33.7**	**-0.6**
PB11				IAML		06 24 36.5	
	comp=N,2µm,0.2s						
PB11	**IPOC Station P**	**2.05**	**306**	P	**Pn**	**06 24 05.7**	**+0.5**
PB11				IAML		06 24 36.3	
	comp=N,665nm,0.5s						
MOCB	**Mochara**	**2.12**	**98**	P	**Pn**	**06 24 06.7**	**+0.4**
MOCB				IAML		06 24 35.8	
	comp=N,257nm,0.6s						
PATCX	**Punta Patache**	**2.12**	**274**		**Pn**	**06 24 06.2**	**+0.3**
PATCX	**Punta Patache**	**2.12**	**274**	*e*P	**Pn**	**06 24 06.3**	**+0.4**
PATCX				*e*S	**Sn**	**06 24 34.7**	**-0.9**
PATCX				IAML		06 24 37.9	
	comp=N,403nm,0.2s						
TA01	**Diego Aracena**	**2.18**	**280**	Pn	**Pn**	**06 24 06.5**	**+0.1**
TA01	**Diego Aracena**	**2.18**	**280**	*e*P	**Pn**	**06 24 06.6**	**+0.1**
TA01				*e*S	**Sn**	**06 24 35.2**	**-1.4**
TA01				IAML		06 24 36.2	
	comp=E,387nm,0.2s						
PB06	**IPOC Station P**	**2.33**	**222**		**Pn**	**06 24 08.9**	**+0.6**
PB06	**IPOC Station P**	**2.33**	**222**	*e*P	**Pn**	**06 24 09.2**	**+0.9**
PB06				*i* S	**Sn**	**06 24 40.2**	**+0.2**
PB06				IAML		06 24 42.4	
	comp=E,845nm,0.2s						
PB06	**IPOC Station P**	**2.33**	**222**	P	**Pn**	**06 24 09.5**	**+1.2**
PB06				IAML		06 24 43.3	
	comp=E,188nm,0.3s						
PB04	**IPOC Station P**	**2.50**	**237**		**Pn**	**06 24 11.0**	**+0.6**
PB04	**IPOC Station P**	**2.50**	**237**	*e*P	**Pn**	**06 24 10.8**	**+0.4**
PB04				*e*S	**Sn**	**06 24 42.4**	**-1.2**
PB04				IAML		06 24 44.6	
	comp=N,502nm,0.2s						
PB04	**IPOC Station P**	**2.50**	**237**	P	**Pn**	**06 24 11.4**	**+1.1**
PB04				IAML		06 24 45.1	
	comp=N,234nm,0.4s						
YJA	**Yavi**	**2.52**	**119**	P	**Pn**	**06 24 11.5**	**+0.7**
YJA				IAML		06 24 48.9	
	comp=N,6.7nm,0.3s						
PB15	**IPOC Station P**	**2.67**	**213**		**Pn**	**06 24 13.1**	**+0.7**
PB15	**IPOC Station P**	**2.67**	**213**	⇑*e*P	**Pn**	**06 24 13.4**	**+1.1**
PB15				*e*S	**Sn**	**06 24 47.5**	**+0.3**
PB15	**IPOC Station P**	**2.67**	**213**	P	**Pn**	**06 24 14.1**	**+1.8**
PB15				IAML		06 24 53.5	
	comp=N,1µm,0.2s						
PB16	**IPOC Station P**	**3.03**	**330**		**Pn**	**06 24 18.6**	**+1.5**
PB16	**IPOC Station P**	**3.03**	**330**	*e*P	**Pn**	**06 24 18.6**	**+1.5**
PB16				*e*S	**Sn**	**06 24 56.6**	**+0.9**
PB16				IAML		06 24 58.4	
	comp=N,213nm,0.5s						
PB16	**IPOC Station P**	**3.03**	**330**	P	**Pn**	**06 24 18.7**	**+1.6**
PB12	**IPOC Station P**	**3.28**	**315**	Pn	**Pn**	**06 24 18.8**	**-0.9**
PB12	**IPOC Station P**	**3.28**	**315**	*e*P	**Pn**	**06 24 18.8**	**-0.9**
PB12				*e*S	**Sn**	**06 24 58.0**	**-2.3**
PB12				IAML		06 25 05.7	
	comp=E,210nm,0.3s						
AP01	**Chacalluta**	**3.47**	**318**	Pn	**Pn**	**06 24 21.9**	**0.0**
PB10	**IPOC Station P**	**3.54**	**224**	Pn	**Pn**	**06 24 23.0**	**+0.3**
PB10	**IPOC Station P**	**3.54**	**224**	*e*P	**Pn**	**06 24 23.0**	**+0.3**
PB10				⇓*e*S	**Sn**	**06 25 05.4**	**-0.5**
PB10	**IPOC Station P**	**3.54**	**224**	P	**Pn**	**06 24 23.5**	**+0.7**
BBOE	**La Paz, Chanca**	**4.14**	**359**	P	**Pn**	**06 24 33.3**	**+2.3**
PB14	**IPOC Station P**	**4.32**	**212**	Pn	**Pn**	**06 24 32.4**	**-0.5**
BBOD	**La Paz, Gloria**	**4.36**	**351**	P	**Pn**	**06 24 35.9**	**+2.1**
LPAZ	**La Paz**	**4.66**	**357**	P	**Pn**	**06 24 39.0**	**+1.2**
	comp=E,6.7nm,0.3s,baz=165,slow=5.8,SNR=67						
LPAZ				S	**Sn**	**06 25 32.1**	**-0.6**
	comp=E,4.7nm,0.6s,baz=51,slow=25,SNR=4.1						
LPAZ	**La Paz**	**4.66**	**357**	P	**Pn**	**06 24 39.2**	**+1.4**
LPAZ	**La Paz**	**4.66**	**357**	*e*P	**Pn**	**06 24 38.9**	**+1.2**
AC01	**Pan de Azucar**	**5.72**	**205**	Pn	**Pn**	**06 24 50.0**	**-1.0**
AC02	**Maricunga**	**5.95**	**191**	Pn	**Pn**	**06 24 54.7**	**+0.3**
AC06	**Mina Casimiro**	**6.75**	**199**	Pn	**Pn**	**06 25 02.8**	**-1.6**
AC04	**Llanos de Chal**	**7.76**	**201**	Pn	**Pn**	**06 25 15.1**	**-2.7**
SIV	**San Ignacio**	**8.14**	**54**	P	**Pn**	**06 25 20.2**	**-2.7**
	comp=E,5.6nm,0.4s,baz=238,slow=12,SNR=60						
SIV				S	Sn	06 26 45.0	-9.2
	comp=E,1.9nm,0.5s,baz=230,slow=15,SNR=1.4						
LCO	**Las Campanas**	**8.40**	**197**	Pn	**Pn**	**06 25 25.4**	**-1.0**
CO01	**Juntas del Tor**	**9.19**	**192**	Pn	**Pn**	**06 25 35.6**	**-1.2**
CO05	**La Serena**	**9.41**	**198**	Pn	**Pn**	**06 25 36.5**	**-2.9**
GO04	**Tololo Observa**	**9.53**	**195**	Pn	**Pn**	**06 25 38.9**	**-2.4**
CO06	**Fray Jorge**	**10.23**	**198**	Pn	**Pn**	**06 25 48.7**	**-1.5**
CO02	**Combarbal**	**10.57**	**195**	Pn	**Pn**	**06 25 51.2**	**-3.5**
CPUP	**Villa Florida**	**11.05**	**121**	P	**Pn**	**06 26 00.3**	**-0.5**
	comp=E,5.6nm,1.2s,baz=289,slow=17,SNR=2.3						
AQDB	**Aquidauana**	**11.42**	**90**	Pn	**Pn**	**06 26 06.4**	**+0.7**
VA06	**Catapilco**	**11.94**	**194**	Pn	**Pn**	**06 26 12.6**	**+0.4**
VA03	**San Esteban**	**11.98**	**191**	Pn	**Pn**	**06 26 12.5**	**-0.5**
ROC1	**El Roble**	**12.28**	**192**	Pn	**Pn**	**06 26 16.0**	**-0.9**
MT05	**Renca**	**12.63**	**191**	Pn	**Pn**	**06 26 20.7**	**-0.5**
MT03	**Universidad Ad**	**12.69**	**190**	Pn	**Pn**	**06 26 21.7**	**-0.3**
MT09	**Talagante**	**13.05**	**192**	Pn	**Pn**	**06 26 26.2**	**-0.4**
MT01	**Popeta**	**13.19**	**192**	Pn	**Pn**	**06 26 27.8**	**-0.4**
BO04	**La Punta**	**13.19**	**190**	Pn	**Pn**	**06 26 27.3**	**-1.0**
BO01	**Tunca**	**13.67**	**191**	Pn	**Pn**	**06 26 32.6**	**-1.5**
CZSB	**Cruzeiro do Su**	**13.96**	**340**	*e*P	Pn	06 26 33.9	-4.2
PDRB	**Porto dos Gac**	**14.18**	**51**	*e*P	**P**	**06 26 43.0**	**0.0**
TRCB	**Terra Rica**	**14.28**	**100**	Pn	**Pn**	**06 26 41.8**	**-0.2**
TRCB	**Terra Rica**	**14.28**	**100**	*e*P	**P**	**06 26 45.5**	**+1.4**
GO05	**Huala**	**14.43**	**193**	Pn	**Pn**	**06 26 41.9**	**-1.9**
ML02	**Panimavida**	**15.06**	**191**	Pn	**Pn**	**06 26 50.0**	**-1.5**
ML02				IAmb	IAmb	06 26 57.2	
	comp=Z,18nm,1.1s						
CLDB	**Colider**	**15.35**	**51**	*e*P	**Pn**	**06 26 55.7**	**+0.5**
FRTB	**Fartura**	**17.14**	**101**	*e*P	**P**	**06 27 16.8**	**+1.1**
BB19B	**Bebedouro**	**18.08**	**94**	*e*P	**P**	**06 27 26.2**	**+0.2**
SNDB	**Serra Nova Dou**	**18.24**	**63**	*e*P	**P**	**06 27 27.4**	**-0.4**
IPMB	**Ipameri, GO**	**18.79**	**84**	*e*P	**P**	**06 27 33.8**	**+0.1**
BDFB	**Brasilia**	**19.59**	**78**	P	**P**	**06 27 42.2**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=256,slow=8.2,SNR=4.2						
BDFB	**Brasilia**	**19.59**	**78**	P	**P**	**06 27 42.5**	**0.0**
BDFB				IAmb	IAmb	06 27 59.3	
	comp=Z,12nm,1.5s						
PLCA	**Paso Flores**	**19.83**	**186**	P	**Pn**	**06 27 47.3**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=3.0,slow=11,SNR=15						
PLCA	**Paso Flores**	**19.83**	**186**	P	**P**	**06 27 43.5**	**-1.3**
LL04	**Puerto Octay**	**20.25**	**190**	P	**P**	**06 27 49.4**	**+0.2**
ITTB	**Itaituba**	**20.30**	**37**	*e*P	**P**	**06 27 48.7**	**-1.2**
PEXB	**Peixe**	**20.73**	**68**	*e*P	**P**	**06 27 55.4**	**+0.9**
LL05	**Los Muermos**	**20.91**	**192**	P	**P**	**06 27 54.6**	**-1.6**
LL05				IAmb	IAmb	06 28 00.9	
	comp=Z,28nm,1.1s						
DIAM	**Diamantina, MG**	**22.96**	**88**	*e*P	**P**	**06 28 16.4**	**-0.5**
SMTB	**Santa Maria do**	**22.98**	**61**	*e*P	**P**	**06 28 16.7**	**-0.2**
JANB	**Januaria**	**23.17**	**79**	*e*P	**P**	**06 28 18.2**	**-0.5**
MALB	**Monte Alegre**	**23.19**	**37**	*e*P	**P**	**06 28 18.0**	**-0.8**
SDBA	**SAO DESIDERIO**	**23.58**	**72**	*e*P	**P**	**06 28 21.9**	**-0.6**
BOAV	**Boa Vista**	**24.32**	**18**	*e*P	**P**	**06 28 25.7**	**-3.3**
RIB01	**Linhares ES**	**25.86**	**91**	*e*P	**P**	**06 28 42.6**	**-0.4**
NAN01	**Guarapari, ES**	**26.36**	**88**	*e*P	**P**	**06 28 46.8**	**-0.7**
GUA01	**Guaratinga, BA**	**26.93**	**85**	*e*P	**P**	**06 28 52.5**	**-0.2**
GDU01	**Guandu, BA**	**27.94**	**80**	*e*P	**P**	**06 29 00.9**	**-0.7**
NBPN	**Ponto Novo - B**	**28.42**	**74**	*e*P	**P**	**06 29 05.4**	**-0.6**
NBPS	**Pedro II - PI**	**30.52**	**61**	*e*P	**P**	**06 29 23.8**	**-0.8**
NBLA	**Lagarto - SE**	**30.54**	**76**	*e*P	**P**	**06 29 23.7**	**-0.9**
NBAN	**Anadia - AL**	**32.43**	**75**	*e*P	**P**	**06 29 40.5**	**-0.7**
CRPR	**Cabo Rojo, PR**	**38.74**	**1**	P	**P**	**06 30 35.3**	**+0.5**
CRPR				IAmb	IAmb	06 30 44.9	
	comp=Z,17nm,0.9s						
OBIP	**Obispado Ponce**	**38.79**	**2**	P	**P**	**06 30 36.0**	**+0.8**
CELP	**Cerrillos**	**38.82**	**2**	P	**P**	**06 30 35.7**	**+0.2**
SNAA	**Sanae**	**62.47**	**161**	P	**P**	**06 33 34.3**	**+2.6**
	comp=Z,2.0nm,1.1s,baz=302,slow=13,SNR=2.2						
	comp=Z,2.0nm,1.1s						
SNAA	**Sanae**	**62.47**	**161**	IAmb	IAmb	06 33 48.8	
	comp=Z,3.8nm,1.3s						
DBIC	**Dimbokro**	**67.67**	**73**	P	**P**	**06 34 06.3**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=240,slow=8.1,SNR=1.9						
	comp=Z,3.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.28**	**70**	P	**P**	**06 34 57.6**	**+0.3**
	comp=Z,3.5nm,0.4s,baz=257,slow=5.9,SNR=46						
	comp=Z,3.5nm,0.4s						
MKAR	**Makanchi Array**	**144.65**	**36**	PKP	**PKPdf**	**06 42 44.4**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=320,slow=3.8,SNR=12						

MKAR	**Makanchi Array**	**144.65**	**36**		PKPab	06 42 42.1	-0.1

IDC 16 06:26:21.7±1.7**,15°.89S**×**175°.12W,h269**^{km}±27^{km}**,** **mb3.6**/4**,mbtmp4.2**/5**,Error ellipse: s-maj=134.2km s-min=25.8km az=149.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.79**	**59**	P	Pn	06 27 25.5	+1.4
	27nm,0.4s,baz=89,slow=3.9,SNR=8.7						
AFI				S	S	06 28 13.6	-0.2
	165nm,0.4s,baz=225,slow=24,SNR=18						
STKA	**Stephens Creek**	**42.35**	**240**	P	P	06 33 49.6	-0.4
	2.9nm,0.5s,baz=80,slow=10,SNR=5.9						
	2.9nm,0.5s						
WRA	**Warramunga Arr**	**48.12**	**257**	P	P	06 34 35.0	-0.2
	1.4nm,0.4s,baz=92,slow=6.8,SNR=72						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**48.38**	**252**	P	P	06 34 37.2	0.0
	7.7nm,0.5s,baz=88,slow=8.1,SNR=120						
	7.7nm,0.5s						
PDAR	**Pinedale Array**	**83.74**	**42**	P	P	06 38 21.3	+0.2
	0.3nm,0.5s,baz=211,slow=5.1,SNR=2.2						
	0.3nm,0.5s						

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*NCEDC **16** 06:26:54.4±2.0, 38°.82N±0°.02×122°.77W±0°.05, h0^{km}±7^{km}, ML3.0/45, ML2.8/86(NEIC), Error ellipse: s-maj=6.2km s-min=2.9km az=66.0*

NEIC 16 06:26:54.5±1.5**,38°.82N**±0°.02×**122°.739W**±0°.009**,** **h5**^{km}±2^{km}**,Error ellipse: s-maj=3.4km s-min=3.0km az=346.0,Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.04**	**258**	Pg	Pg	06 26 55.0	-0.8
GDXM				IAML		06 26 55.4	
	comp=N,18µm,0.1s						
GCRM	**Castle Rock Sp**	**0.05**	**157**		Pg	06 26 55.8	0.0
GSGM	**Seigler Mounta**	**0.05**	**24**		Pg	06 26 56.3	+0.5
GPMM	**Pine Mountain**	**0.17**	**281**		Pg	06 26 57.9	+0.1
MNRC	**McLaughlin Min**	**0.24**	**75**		Pg	06 27 00.5	+1.3
HOPS	**Hopland Field**	**0.31**	**304**	Pg	Pg	06 27 00.7	+0.1
HOPS					Sg	06 27 00.9	-3.9
CVS	**Carmenet Viney**	**0.52**	**155**		Pg	06 27 05.1	+0.7
MCCM	**Marconi Confer**	**0.68**	**189**		Sg	06 27 08.4	-8.0
MCCM	**Marconi Confer**	**0.68**	**189**	Pg	Pg	06 27 07.9	+0.4
MCCM	**Marconi Confer**	**0.68**	**189**	IAML		06 27 22.4	
	comp=N,601nm,0.6s						
MCCM				IAML		06 27 22.4	
	comp=E,558nm,0.5s						
GNAM	**Navarro Ridge**	**0.79**	**299**		Pb	06 27 10.6	-0.1
GASB	**Alder Springs**	**0.84**	**1**		Pb	06 27 11.5	-0.1
SUTB	**Sutter Butte**	**0.85**	**61**		Pb	06 27 11.3	-0.4
HERB	**Hercules**	**0.89**	**155**		Pb	06 27 12.0	-0.3
BRK	**Berkeley--Havi**	**1.01**	**158**		Pb	06 27 14.4	-0.1
VAK	**Adit at Lawren**	**1.01**	**158**		Pg	06 27 14.0	+0.1
BL67	**Building 67, L**	**1.01**	**158**		Pb	06 27 14.4	-0.2
BKS	**Berkeley--Byer**	**1.02**	**157**		Pg	06 27 14.3	+0.3
KCPM	**Cahto Peak**	**1.09**	**323**	Pg	Pg	06 27 14.9	-0.4
KCPM				IAML		06 27 38.2	
	comp=N,322nm,0.9s						
BDM	**Black Diamond**	**1.10**	**141**		Pg	06 27 14.6	-1.0
FARB	**Farallon Islan**	**1.14**	**191**		Pg	06 27 15.4	-0.9
ORV	**Oroville**	**1.21**	**52**		Pg	06 27 16.7	-1.0
ORV	**Oroville**	**1.21**	**52**		Pg	06 27 17.2	-0.5
ORV				IAML		06 27 47.9	
	comp=E,27nm,0.9s						
ORV				IAML		06 27 49.1	
	comp=N,27nm,0.9s						
WENL	**Wente Vineyard**	**1.42**	**147**		Pn	06 27 19.7	-1.2
JRSC	**Jasper Ridge**	**1.47**	**164**		Pn	06 27 19.6	-1.9
LTCM	**Tuscan Springs**	**1.47**	**19**		Pn	06 27 20.6	-1.1
KMRM	**Mail Ridge**	**1.59**	**332**		Pn	06 27 22.8	-0.6
KMRM				IAML		06 27 58.6	
	comp=E,119nm,1.0s						
KMRM				IAML		06 28 01.2	
	comp=N,112nm,1.0s						
WDC	**Whiskeytown Da**	**1.77**	**5**	Pn	Pn	06 27 24.0	-1.8
CMPM	**Mikes Peak**	**1.84**	**142**		Pn	06 27 26.6	-0.1
KMPM	**Mount Pierce**	**1.92**	**327**		Pn	06 27 26.8	-1.1
KMPM				IAML		06 27 43.1	
	comp=N,66nm,1.0s						
KMPM				IAML		06 28 27.7	
	comp=E,62nm,1.9s						
GHS	**Gilroy Hot Spr**	**2.00**	**149**		Pn	06 27 28.0	-1.0
CMB	**Columbia Colle**	**2.01**	**112**		Pn	06 27 28.6	-0.4
CMB	**Columbia Colle**	**2.01**	**112**		Pn	06 27 28.9	-0.2
CMB				IAML		06 28 00.2	
	comp=N,57nm,0.7s						
CMB				IAML		06 28 00.3	
	comp=E,47nm,0.6s						
EMB	**Emerald Bay**	**2.06**	**85**		Pn	06 27 30.1	0.0
EMB				IAML		06 28 01.3	
	comp=E,116nm,0.8s						
EMB				IAML		06 28 04.3	
	comp=N,89nm,0.8s						
HFEM	**San Felipe**	**2.11**	**150**		Pn	06 27 29.8	-0.7
BEKR	**Beckworth**	**2.12**	**60**		Pn	06 27 30.9	+0.1
MPK	**Martis Peak**	**2.16**	**76**		Pn	06 27 31.5	+0.1
MOBB	**Monterey Bay O**	**2.17**	**168**		Pn	06 27 30.9	-0.2
JCC	**Jacoby Creek,**	**2.23**	**334**	Pn	Pn	06 27 32.8	+0.7
JCC				IAML		06 28 39.6	
	comp=E,38nm,1.7s						
SAO	**San Andreas Ge**	**2.29**	**153**	Pn	Pn	06 27 32.6	-0.3
VCNR	**Virginia City**	**2.45**	**78**		Pn	06 27 35.0	-0.3
VCNR				IAML		06 28 12.1	
	comp=E,45nm,0.7s						
VCNR				IAML		06 28 23.7	
	comp=N,48nm,1.1s						
PNTR	**Pine Nut**	**2.46**	**83**		Pn	06 27 35.6	+0.1
PNTR				IAML		06 28 21.5	
	comp=E,85nm,1.1s						
KRPM	**Rodgers**	**2.54**	**338**	Pn	Pn	06 27 37.9	+1.5
KRPM				IAML		06 28 00.9	
	comp=E,49nm,1.7s						
KRPM				IAML		06 28 54.2	
	comp=N,54nm,1.9s						
HAST	**Hastings Reser**	**2.60**	**158**		Pn	06 27 35.3	-1.9
BBGB	**Big Mountain B**	**2.61**	**148**	Pn	Pn	06 27 37.8	+0.3
YERR	**Yerington**	**2.73**	**85**		Pn	06 27 39.9	+0.6
YERR				IAML		06 28 39.8	
	comp=N,47nm,1.0s						
PAHR	**Pah Rah Range**	**2.75**	**70**		Pn	06 27 39.7	+0.3
YBH	**Yreka Blue Hor**	**2.91**	**0**	Pn	Pn	06 27 42.1	+0.5
PMPB	**Monarch Peak**	**3.02**	**149**	Pn	Pn	06 27 42.9	-0.1
MDPB	**Devils Postpil**	**3.12**	**111**		Pn	06 27 44.9	+0.4
MDPB				IAML		06 28 34.3	
	comp=E,31nm,0.6s						
MDPB				IAML		06 28 38.8	
	comp=N,35nm,0.7s						
KSXB	**Camp Six Broad**	**3.13**	**344**	Pn	Pn	06 27 44.5	-0.1
OMMB	**Old Mammoth Mi**	**3.18**	**111**		Pn	06 27 46.0	+0.5
OMMB				IAML		06 28 35.4	
	comp=E,17nm,0.9s						
OMMB				IAML		06 28 42.1	
	comp=N,18nm,0.8s						
RYN	**Ryan**	**3.30**	**92**		Pn	06 27 47.4	+0.3
RYN				IAML		06 28 44.6	
	comp=E,22nm,1.2s						
RYN				IAML		06 28 55.0	
	comp=N,18nm,0.8s						
LHV	**Little Huntoon**	**3.37**	**98**	Pn	Pn	06 27 48.2	+0.5
LHV				IAML		06 28 47.9	
	comp=E,38nm,1.3s						
L04D	**Klamath Falls**	**3.41**	**5**	Pn	Pn	06 27 49.1	+0.6
L04D				IAML		06 29 34.1	
	comp=E,15nm,2.7s						
NVAR	**Mina Array Bea**	**3.50**	**95**	Pn	Pn	06 27 49.4	-0.3
KBO	**Bosley Butte**	**3.58**	**342**	Pn	Pn	06 27 49.8	-0.9
MOD	**Modoc Plateau**	**3.60**	**30**	Pn	Pn	06 27 51.8	+0.7
NV11	**Mina Array Sit**	**3.61**	**95**		Pn	06 27 51.8	+0.5
NV11				IAML		06 29 01.8	
	comp=N,16nm,1.5s						
NV11				IAML		06 29 02.5	
	comp=E,13nm,1.5s						
KVN	**Kaiserville**	**3.62**	**85**	Pn	Pn	06 27 51.1	-0.3
PAGB	**Antelope Grade**	**3.67**	**146**	Pn	Pn	06 27 51.2	-0.6
PAGB				IAML		06 28 59.3	
	comp=E,27nm,3.6s						
PAGB				IAML		06 29 01.4	
	comp=N,26nm,3.3s						
HUMO	**Hull Mountain**	**3.79**	**358**	Pn	Pn	06 27 52.7	-0.8
LCH	**Last Change Ra**	**4.32**	**110**	Pn	Pn	06 28 00.5	-0.5
LCH				IAML		06 29 24.4	
	comp=E,7.2nm,1.9s						
TPH	**Tonopah**	**4.39**	**98**	Pn	Pn	06 28 01.9	-0.2
J01E	**Myrtle Point**	**4.43**	**349**	Pn	Pn	06 28 02.5	+0.1
J01E				IAML		06 29 31.7	
	comp=N,15nm,2.2s						
J01E				IAML		06 29 58.8	
	comp=E,19nm,2.9s						
ISA	**Isabella, Lake**	**4.63**	**131**	Pn	Pn	06 28 03.9	-1.4
ISA				IAML		06 29 19.4	
	comp=E,8.2nm,1.4s						
ISA				IAML		06 31 05.8	
	comp=N,5.9nm,4.0s						
BCW	**Bitter Crk WRg**	**4.70**	**144**	Pn	Pn	06 28 05.8	-0.4
WVOR	**Wild Horse Val**	**4.77**	**40**	Pn	Pn	06 28 05.0	-2.2
WVOR				IAML		06 29 17.0	
	comp=N,4.8nm,4.8s						
TPNV	**Topopah Spring**	**5.46**	**108**	Pn	Pn	06 28 17.9	+1.2
QSM	**Queen of Sheba**	**5.47**	**120**	Pn	Pn	06 28 15.7	-1.0
GWY	**Greenwater Val**	**5.49**	**117**	Pn	Pn	06 28 17.1	0.0
J08A	**Circle Bar Ran**	**5.56**	**34**	Pn	Pn	06 28 16.6	-1.4

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*TUL **16** 06:33:37.6±0.9, 36°.25N±0°.01×97°.37W±0°.01, h6^{km}±6^{km}, ML2.6, mb_Lg2.2/19(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=216.0*

NEIC 16 06:33:37.7±0.6**,36°.255N**±0°.007×**97°.39W**±0°.02**,h1**^{km}±6^{km}**,** **Error ellipse: s-maj=2.1km s-min=0.4km az=59.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.84**	**184**	Pg	Pg	06 33 53.8	0.0
OKCSW	**OKLAHOMA CITY**	**0.85**	**183**		Pg	06 33 53.9	-0.1
T35A	**Sooner Cattle**	**0.96**	**47**	Pg	Pg	06 33 55.9	-0.2
FNO	**Franklin**	**1.00**	**181**	Pg	Pg	06 33 56.4	-0.4
X34A	**Smith Ranch, M**	**1.69**	**193**		Pn	06 34 08.9	+0.6
X34A				Sn	Sg	06 34 32.6	+0.6
X37A	**Clayton**	**2.34**	**135**	Pn	Pn	06 34 17.5	+0.3
X37A				IAmb_Lg		06 34 53.6	
	comp=Z,15nm,0.9s						
R32A	**Long Quarter,**	**2.41**	**334**	Pn	Pn	06 34 17.5	-0.8
HHAR	**Hobbs**	**2.78**	**88**	Pn	Pn	06 34 23.9	+0.5
MIAR	**Mount Ida**	**3.55**	**118**	IAmb_Lg		06 35 39.2	
	comp=Z,5.6nm,1.0s						
S39A	**Bolivar**	**3.56**	**65**	Pn	Pn	06 34 35.0	+1.1
X40A	**Basin Creek Fa**	**4.12**	**114**	IAmb_Lg		06 35 55.2	
	comp=Z,6.0nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.28**	**93**	IAmb_Lg		06 35 51.0	
	comp=Z,3.4nm,0.8s						
R40A	**Maddies Statio**	**4.56**	**62**	IAmb_Lg		06 36 12.3	
	comp=Z,4.6nm,0.7s						
N35A	**Tabor**	**4.80**	**16**	IAmb_Lg		06 36 18.4	
	comp=Z,7.2nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.99**	**305**	IAmb_Lg		06 36 28.2	
	comp=Z,4.1nm,0.9s						
CCM	**Cathedral Cave**	**5.22**	**68**	IAmb_Lg		06 36 19.6	
	comp=Z,6.3nm,1.1s						
P40A	**Paris**	**5.34**	**51**	IAmb_Lg		06 36 27.6	
	comp=Z,4.9nm,0.7s						
PBMO	**Poplar Bluff**	**5.63**	**83**	IAmb_Lg		06 36 37.5	
	comp=Z,3.3nm,0.8s						

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*IDC **16** 06:39:01.9±0.7, 8°.32N×103°.20W, h0^{km}, mb4.5/22, mbtmp4.5/22, MS5.0/54, Error ellipse: s-maj=30.3km s-min=11.0km az=60.0*

*NEIC **16** 06:39:04.9±1.8, 8°.50N±0°.09×103°.1W±0°.1, h10^{km}±1^{km}, mb4.9/233, Ms_20 5.0/359, Mwc5.5(GCMT), Error ellipse: s-maj=19.0km s-min=14.0km az=243.0*

*NEIC **16** 06:39:07, 8°.56N×103°.13W, h12^{km}, Moment Tensor Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.15; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-0.62; $M_{r\theta}$-0.50; $M_{\theta\phi}$-1.99; $M_{\phi r}$-0.07; Fault plane solution: $M_0$2.17000×10^{17} NP1: ϕ_s350.00000°, δ76.00000°, λ-1.00000°. NP2: ϕ_s81.00000°, δ89.00000°, λ-166.00000°. Principal axes: T 2.2404, Plg9.0000°, Azm215.0000°; N -0.1440, Plg76.0000°, Azm84.0000°; P -2.0964, Plg10.0000°, Azm306.0000°;*

*GCMT **16** 06:39:08.0±0.1, 8°.55N±0°.01×103°.14W±0°.01, h12^{km}, MW5.5/144, Moment Tensor Solution. s124,c204; s144,c286; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.04±.02; $M_{\theta\theta}$0.49±.02; $M_{\phi\phi}$-0.45±.03; $M_{r\theta}$-0.24±.05; $M_{\theta\phi}$-1.89±.02; $M_{\phi r}$-0.24±.05; Best double couple: $M_0$1.97800×10^{17} NP1: ϕ_s353.00000°, δ82.00000°, λ-6.00000°. NP2: ϕ_s83.00000°, δ84.00000°, λ-172.00000°. Principal axes: T 1.9700, Plg1.0000°, Azm218.0000°; N 0.0160, Plg80.0000°, Azm120.0000°; P -1.9860, Plg10.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 06:39:03.6±0.4**,8°.20N**±0°.05×**103°.10W**±0°.06**,h10**^{km}**,n727,** σ**2^{s}32**/670**,mb4.9**/115**,MS5.0**/233**,Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**10.30**	**25**	Pn	**Pn**	**06 41 28.2**	**-3.5**
UNM	**Universidad Na**	**11.70**	**19**	Pn	**Pn**	**06 41 47.3**	**-3.7**
CMIG	**Matias Romero**	**11.93**	**41**	LR	LR	06 45 28.8	
	comp=Z,19µm,18.2s,baz=196,slow=32						
H06S1	**SOCORRO T**	**12.96**	**325**	T	T	06 55 08.0	
	SNR=66						
H06E1	**SOCORRO T-PHAS**	**12.98**	**325**	T	T	06 55 12.7	
	SNR=539						
HUEH	**Huehuetenango**	**13.38**	**57**	Pn	**Pn**	**06 42 11.7**	**-2.1**
ZAIG	**Zacatecas**	**14.50**	**2**	Pn	Pn	06 42 24.2	-5.1
MTO3	**Montecristo**	**14.81**	**64**	Pn	**Pn**	**06 42 31.6**	**-1.9**
PAYG	**Puerto Ayora**	**15.52**	**124**	Pn	**P**	**06 42 46.2**	**-0.9**
CRIN	**San Cristobal**	**16.41**	**73**	Pn	**Pn**	**06 42 54.0**	**-0.2**
TGUH	**Tegucigalpa,Un**	**16.58**	**68**	Pn	**Pn**	**06 42 54.0**	**-2.5**
TGUH	**Tegucigalpa,Un**	**16.58**	**68**	*e*P	**Pn**	**06 42 56.2**	**-0.3**
CNGN	**Cerro Negro**	**16.69**	**74**	Pn	**Pn**	**06 42 56.4**	**-1.4**
LPIG	**La Paz**	**17.25**	**337**	P	**P**	**06 43 06.9**	**+0.6**
	32nm,1.0s,baz=162,slow=8.1,SNR=2.5						
LPIG				S	**Sn**	**06 46 17.0**	**+0.2**
	17nm,0.9s,baz=176,slow=15,SNR=1.4						
LPIG				LR	LR	06 48 03.4	
	comp=Z,13µm,19.0s,baz=160,slow=32						
HZTE	**Horizontes, Gu**	**17.45**	**80**		**P**	**06 43 07.8**	**-0.7**
HZTE				IAmb	IAmb	06 43 13.4	
	comp=Z,222nm,1.7s						
DUNO	**Dulce Nombre,**	**17.49**	**83**	Pn	**P**	**06 43 07.7**	**-1.2**
MATN	**Matagalpa**	**17.52**	**73**	Pn	**Pn**	**06 43 07.5**	**-0.8**
ORTG	**Ortega, Santa**	**17.55**	**82**	Pn	**Pn**	**06 43 08.1**	**-0.4**
BOAB	**BOACO BROADBAN**	**17.66**	**75**	Pn	**Pn**	**06 43 08.9**	**-1.1**
CAO2	**Cobano, Puntar**	**17.84**	**84**	Pn	**P**	**06 43 11.7**	**-1.2**
CAO2				IAmb	IAmb	06 43 22.3	
	comp=Z,380nm,2.7s						
JTS	**Las Juntas de**	**18.04**	**82**		**P**	**06 43 14.2**	**-0.8**
JTS	**Las Juntas de**	**18.04**	**82**	*e*P	**P**	**06 43 16.3**	**+1.3**
ACON	**Acoyapa**	**18.04**	**77**		**Pn**	**06 43 13.8**	**-0.8**
ACON				IAmb	IAmb	06 43 23.1	
	comp=Z,347nm,2.4s						
JACO	**JACO, Garabito**	**18.28**	**84**	P	**Pn**	**06 43 16.5**	**-1.0**
HDC	**Heredia**	**18.84**	**83**	P	**Pn**	**06 43 23.6**	**-0.9**
ESPN	**Las Esperanzas**	**18.92**	**76**	P	**Pn**	**06 43 25.2**	**-0.2**
RIMA	**Rio Macho**	**19.07**	**84**	P	**Pn**	**06 43 27.1**	**-0.2**
CVTR	**Volcan Turrial**	**19.18**	**83**	P	**Pn**	**06 43 28.9**	**-0.1**
PEZE	**Perez Zeledon,**	**19.23**	**85**	P	**Pn**	**06 43 28.7**	**-0.5**
SRBA	**San Rafael, Bu**	**19.54**	**86**	P	**Pn**	**06 43 31.8**	**-1.1**
SRBA				IAmb	IAmb	06 43 43.5	
	comp=Z,153nm,2.0s						
DRK0	**Durika**	**19.66**	**85**	P	**Pn**	**06 43 33.4**	**-1.0**
KVTX	**Kingsville**	**19.87**	**14**	P	**P**	**06 43 33.2**	**-1.7**
CDITO	**Canoas**	**20.02**	**87**	P	Pn	06 43 39.8	+1.3
BRU2	**Volcan**	**20.20**	**87**	P	Pn	06 43 40.3	-0.4
BRU2				IAmb	IAmb	06 43 51.7	
	comp=Z,162nm,1.9s						
BRU2	**Volcan**	**20.20**	**87**	*e*P	Pn	06 43 43.5	+2.7
833A	**Chaparral WMA,**	**20.32**	**9**	P	**P**	**06 43 37.3**	**-2.6**
833A				IAmb	IAmb	06 43 50.3	
	comp=Z,83nm,1.3s						
833A	**Chaparral WMA,**	**20.32**	**9**	P	Pn	06 43 39.9	-2.1
	baz=191,SNR=13						
833A				S	Sn	06 47 29.9	-1.1
	baz=191						
SRIG	**Santa Rosalia**	**20.90**	**337**	P	**P**	**06 43 44.6**	**-1.6**
TX31	**Lajitas Ar. Si**	**21.03**	**359**	P	**P**	**06 43 46.2**	**-1.6**
TX32	**Lajitas Array**	**21.03**	**359**	P	**P**	**06 43 45.9**	**-1.9**
TXAR	**Lajitas Array**	**21.03**	**359**	P	**P**	**06 43 48.0**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=183,slow=11,SNR=35						
TXAR				S	Sn	06 47 48.8	+0.6
	comp=Z,0.2nm,0.8s,baz=176,slow=19,SNR=1.0						
TXAR				LR	LR	06 51 19.1	
	comp=Z,7µm,18.4s,baz=174,slow=35						
	comp=Z,4.7nm,0.9s						
TXAR	**Lajitas Array**	**21.03**	**359**	P	**P**	**06 43 46.1**	**-1.6**
735A	**Kenedy**	**21.15**	**13**	P	**P**	**06 43 47.3**	**-1.6**
735A				IAmb	IAmb	06 43 54.3	
	comp=Z,62nm,1.2s						
HSIG		**21.99**	**341**	P	**P**	**06 43 56.1**	**-1.8**
JCT	**Junction City**	**22.38**	**7**	P	**P**	**06 43 59.7**	**-2.5**
JCT				IAmb	IAmb	06 44 04.8	
	comp=Z,38nm,0.9s						
JCT	**Junction City**	**22.38**	**7**	P	**P**	**06 44 01.5**	**-0.7**
	baz=189,SNR=25						
JCT				S	**S**	**06 48 11.4**	**+3.1**
	baz=189						
HKT	**Hockley**	**22.69**	**17**	P	**P**	**06 44 03.2**	**-2.1**
HKT	**Hockley**	**22.69**	**17**	IAMs_20	IAMs_20	06 53 50.6	
	comp=Z,5µm,19.0s						
BCIP	**Isla Barro Col**	**23.02**	**86**	*e*P	**P**	**06 44 10.0**	**+1.0**
435B	**Jarrell**	**23.05**	**12**	P	**P**	**06 44 08.3**	**-1.0**
435B				IAmb	IAmb	06 44 12.1	
	comp=Z,54nm,1.1s						
435B	**Jarrell**	**23.05**	**12**	P	**P**	**06 44 08.6**	**-0.7**
	baz=194						
435B				S	**S**	**06 48 26.4**	**+6.1**
	baz=194						
MNTX	**Cornudas Mount**	**23.48**	**355**	P	**P**	**06 44 11.6**	**-1.9**
MNTX				IAmb	IAmb	06 44 22.9	
	comp=Z,51nm,1.6s						
MNTX				IAMs_20	IAMs_20	06 53 58.9	
	comp=Z,5µm,20.0s						
MNTX	**Cornudas Mount**	**23.48**	**355**	P	**P**	**06 44 12.5**	**-1.0**
	baz=174,SNR=25						
MNTX				S	Sn	06 48 37.1	-10
	baz=174						
EPT	**El Paso**	**23.67**	**353**	IAMs_20	IAMs_20	06 54 17.0	
	comp=Z,4µm,18.0s						
319A	**Douglas**	**23.77**	**347**	P	**P**	**06 44 14.7**	**-1.8**
319A				IAmb	IAmb	06 44 20.3	
	comp=Z,96nm,1.8s						
SOR	**Soroa**	**24.15**	**51**	P	**P**	**06 44 19.5**	**-0.5**
WHTX	**Lake Whitney,**	**24.25**	**12**	P	**P**	**06 44 19.0**	**-1.9**
WHTX				IAmb	IAmb	06 44 23.4	
	comp=Z,57nm,1.2s						
WHTX	**Lake Whitney,**	**24.25**	**12**	P	**P**	**06 44 20.0**	**-0.8**
	baz=194						
WHTX				S	**S**	**06 48 47.7**	**+8.1**
	baz=194						
ABTX	**Abilene, Hawle**	**24.52**	**7**	P	**P**	**06 44 20.5**	**-2.9**
ABTX				IAmb	IAmb	06 44 25.7	
	comp=Z,32nm,0.9s						
ABTX	**Abilene, Hawle**	**24.52**	**7**	P	**P**	**06 44 21.4**	**-1.9**
	baz=188,SNR=14						
121A	**Cookes Peak, D**	**24.60**	**350**	P	**P**	**06 44 21.9**	**-2.4**
121A	**Cookes Peak, D**	**24.60**	**350**	P	**P**	**06 44 23.9**	**-0.4**
	baz=169,SNR=9.2						
121A				S	**S**	**06 48 50.8**	**+5.2**
	baz=169						
237A	**Washetta, Mont**	**24.64**	**15**	P	**P**	**06 44 22.8**	**-1.6**
237A				IAmb	IAmb	06 44 52.3	
	comp=Z,32nm,1.1s						
NATX	**Nacogdoches**	**24.73**	**17**	P	**P**	**06 44 22.4**	**-2.8**
NATX	**Nacogdoches**	**24.73**	**17**	P	**P**	**06 44 24.1**	**-1.1**
	baz=200						
NATX				S	**S**	**06 48 51.6**	**+4.3**
	baz=200						
TUC	**Tucson**	**25.03**	**344**	P	**P**	**06 44 26.5**	**-1.5**
TUC				IAmb	IAmb	06 44 45.4	
	comp=Z,28nm,1.2s						
TUC	**Tucson**	**25.03**	**344**	P	**P**	**06 44 26.6**	**-1.4**
	baz=162						
LCCY	**Blossom Villag**	**25.05**	**61**	P	**P**	**06 44 28.5**	**+0.3**
TUMC	**Tumaco**	**25.08**	**103**	*e*P	**P**	**06 44 34.7**	**+6.1**
342A	**Flagon Creek P**	**25.16**	**22**	P	**P**	**06 44 27.4**	**-1.6**
214A	**Organ Pipe Nat**	**25.31**	**340**	P	**P**	**06 44 26.9**	**-3.6**
214A				IAmb	IAmb	06 44 33.3	
	comp=Z,32nm,1.4s						
214A	**Organ Pipe Nat**	**25.31**	**340**	P	**P**	**06 44 28.8**	**-1.7**
	baz=157						
214A				S	**S**	**06 48 59.9**	**+3.2**
	baz=157						
Z35A	**Perchaven, San**	**25.59**	**11**	P	**P**	**06 44 28.7**	**-4.3**
Z35A				IAmb	IAmb	06 44 34.5	
	comp=Z,34nm,1.1s						
MSTX	**Muleshoe**	**25.65**	**1**	P	**P**	**06 44 30.2**	**-3.5**
MSTX				IAmb	IAmb	06 44 36.2	
	comp=Z,25nm,1.2s						
MSTX	**Muleshoe**	**25.65**	**1**	P	**P**	**06 44 32.0**	**-1.7**
	baz=181,SNR=10						
MSTX				S	**S**	**06 49 04.6**	**+2.4**
	baz=181						
344A	**Westbrook Farm**	**25.85**	**25**	P	**P**	**06 44 32.3**	**-3.1**
344A				IAmb	IAmb	06 45 05.4	
	comp=Z,49nm,1.1s						
Y22D	**IRIS PASSCAL I**	**25.99**	**353**	P	**P**	**06 44 33.7**	**-3.1**
Y22D				IAMs_20	IAMs_20	06 55 34.5	
	comp=Z,4µm,19.0s						
Y22D	**IRIS PASSCAL I**	**25.99**	**353**	P	**P**	**06 44 35.2**	**-1.7**
	baz=171						
Y22D				S	**S**	**06 49 13.4**	**+5.7**
	baz=171						
BNM	**Barren Site**	**26.03**	**353**	P	**P**	**06 44 33.9**	**-3.4**
Z38A	**Mt. Pleasant**	**26.05**	**16**	P	**P**	**06 44 33.7**	**-3.4**
Z38A				IAmb	IAmb	06 44 38.4	
	comp=Z,22nm,0.7s						
113A	**Mohawk Valley,**	**26.37**	**339**	P	**P**	**06 44 37.1**	**-3.0**
113A				IAmb	IAmb	06 44 42.5	
	comp=Z,24nm,1.2s						
GCUF	**Volcan Galeras**	**26.57**	**104**	*e*P	**P**	**06 44 45.5**	**+2.8**
AMTX	**Amarillo**	**26.59**	**3**	P	**P**	**06 44 39.4**	**-2.8**
AMTX				IAmb	IAmb	06 45 01.4	
	comp=Z,37nm,1.4s						
AMTX	**Amarillo**	**26.59**	**3**	P	**P**	**06 44 40.4**	**-1.8**
	baz=183						
AMTX				S	**S**	**06 49 16.8**	**-0.3**
	baz=183						
VBMS	**Vicksburg**	**26.61**	**24**	P	**P**	**06 44 41.1**	**-1.2**
VBMS				IAmb	IAmb	06 44 44.6	
	comp=Z,43nm,1.0s						
VBMS	**Vicksburg**	**26.61**	**24**	P	**P**	**06 44 41.3**	**-1.0**
	baz=209						
VBMS				S	**S**	**06 49 22.3**	**+5.1**
	baz=209						
143A	**Socs Landing,**	**26.69**	**22**	P	**P**	**06 44 39.5**	**-3.4**
143A				IAmb	IAmb	06 44 46.1	
	comp=Z,39nm,0.9s						
Z41A	**Richland Creek**	**26.70**	**19**	P	**P**	**06 44 40.5**	**-2.5**
Z41A	**Richland Creek**	**26.70**	**19**	P	**P**	**06 44 41.7**	**-1.3**
	baz=203						
Z41A				S	**S**	**06 49 20.4**	**+1.9**
	baz=203						
WMOK	**Wichita Mounta**	**26.71**	**8**	P	**P**	**06 44 41.4**	**-1.8**
WMOK	**Wichita Mounta**	**26.71**	**8**	IAMs_20	IAMs_20	06 54 40.6	
	comp=Z,5µm,19.0s						
WMOK	**Wichita Mounta**	**26.71**	**8**	P	**P**	**06 44 40.9**	**-2.2**
	baz=190						
WMOK				S	**S**	**06 49 21.5**	**+2.7**
	baz=190						
X34A	**Smith Ranch, M**	**26.72**	**10**	P	**P**	**06 44 41.4**	**-1.9**
X34A				IAmb	IAmb	06 45 11.1	
	comp=Z,36nm,1.4s						
ANMO	**Albuquerque**	**26.80**	**354**	P	**P**	**06 44 44.1**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=149,slow=12,SNR=4.6						
ANMO				S	**S**	**06 49 18.2**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=292,slow=6.5,SNR=1.7						
ANMO				LR	LR	06 53 48.6	
	comp=Z,3µm,19.6s,baz=176,slow=33						
	comp=Z,1.4nm,0.8s						
ANMO	**Albuquerque**	**26.80**	**354**	P	**P**	**06 44 41.3**	**-2.9**
ANMO	**Albuquerque**	**26.80**	**354**	P	**P**	**06 44 41.2**	**-2.9**
	baz=173						
ANMO				S	**S**	**06 49 23.3**	**+2.8**
	baz=173						
PLMC	**San Jos del P**	**26.84**	**95**	*e*P	**P**	**06 44 44.1**	**-0.6**
YOTC	**Yotoco, Valle**	**26.93**	**97**	*e*P	**P**	**06 44 46.1**	**+0.6**
X18A	**Snowflake**	**26.95**	**347**	P	**P**	**06 44 42.3**	**-3.3**
X18A				IAmb	IAmb	06 45 01.5	
	comp=Z,35nm,1.8s						
CBOC	**Ciudad Bolivar**	**26.98**	**93**	*e*P	**P**	**06 44 43.6**	**-2.5**
WLAR	**White Oak Lake**	**26.99**	**19**	P	**P**	**06 44 42.0**	**-3.6**
GLA	**Glamis**	**27.01**	**338**	P	**P**	**06 44 42.2**	**-3.7**
GLA				IAmb	IAmb	06 44 53.3	

	comp=Z,21nm,0.8s						
GLA	Glamis	27.01	338	P	P	06 44 43.7	-2.2
	baz=154						
SOTA	Rioblanco	27.05	101	*e*P	P	06 44 49.3	+2.3
IKP	In-Ko-Pah, Jac	27.16	335	P	P	06 44 45.0	-2.3
	baz=151						
Y14A	Wickenburg	27.20	342	P	P	06 44 45.6	-2.0
Y14A				IAmb	IAmb	06 44 59.7	
	comp=Z,108nm,2.8s						
PCON	Cinco Dias	27.21	101	*e*P	P	06 44 52.9	+4.4
X37A	Clayton	27.21	14	P	P	06 44 45.6	-2.1
SWSC	Sam W. Stewart	27.29	336	P	P	06 44 47.3	-1.1
	baz=152						
TKX	Tecate	27.30	335	P	P	06 44 46.2	-2.3
UREC	San Jos de Ur	27.30	89	*e*P	P	06 44 53.2	+4.4
BRAL	Brewton	27.33	31	P	P	06 44 45.8	-2.9
BRAL				IAmb	IAmb	06 44 54.8	
	comp=Z,42nm,1.0s						
BRAL	Brewton	27.33	31	P	P	06 44 46.8	-1.9
	baz=217						
BRAL				S	S	06 49 32.4	+3.9
	baz=217						
BAR	Barrett	27.42	335	P	P	06 44 47.0	-2.6
BAR				IAmb	IAmb	06 45 00.3	
	comp=Z,66nm,1.7s						
HELC	Santa Helena	27.43	92	*e*P	P	06 44 52.6	+2.4
FNO	Franklin	27.44	10	P	P	06 44 47.8	-1.9
FNO				IAmb	IAmb	06 44 59.1	
	comp=Z,16nm,0.8s						
W18A	Petrified Fore	27.48	348	P	P	06 44 47.4	-2.9
W18A	Petrified Fore	27.48	348	P	P	06 44 48.4	-1.9
	baz=166						
W18A				S	S	06 49 35.6	+4.5
	baz=166						
MONP2	Monument Peak	27.50	335	P	P	06 44 48.0	-2.5
	baz=150						
MONP2				S	S	06 49 34.8	+3.2
	baz=150						
MARP	Paez Belalcaza	27.53	100	*e*P	P	06 44 53.7	+2.7
OKCFA	Oklahoma City	27.58	10	P	P	06 44 48.4	-2.6
OKCFA				IAmb	IAmb	06 44 52.4	
	comp=Z,19nm,0.9s						
SJCC	San Jacinto, C	27.62	84	P	P	06 44 52.8	+1.1
SJCC	San Jacinto, C	27.62	84	*e*P	P	06 44 55.3	+3.7
MIAR	Mount Ida	27.65	17	P	P	06 44 50.5	-1.1
MIAR				IAmb	IAmb	06 44 53.3	
	comp=Z,30nm,1.1s						
MIAR				IAMs_20	IAMs_20	06 56 12.7	
	comp=Z,3µm,20.0s						
MIAR	Mount Ida	27.65	17	P	P	06 44 50.0	-1.6
	baz=201,SNR=19						
MIAR				S	S	06 49 35.7	+2.2
	baz=201						
BC3	Big Chuckawall	27.78	337	P	P	06 44 50.4	-2.5
	baz=153						
BC3				S	S	06 49 41.0	+5.1
	baz=153						
109C	Camp Elliot, M	27.79	334	P	P	06 44 49.9	-2.9
	baz=149						
109C				S	S	06 49 40.5	+4.8
	baz=149						
X40A	Basin Creek Fa	27.82	18	P	P	06 44 50.7	-2.4
X40A				IAmb	IAmb	06 45 25.5	
	comp=Z,31nm,1.8s						
X40A				IAMs_20	IAMs_20	06 56 51.3	
	comp=Z,4µm,19.0s						
X40A	Basin Creek Fa	27.82	18	P	P	06 44 50.5	-2.6
	baz=202						
X40A				S	S	06 49 38.8	+2.6
	baz=202						
PDMCI	Parker Dam,Lak	27.90	340	P	P	06 44 50.9	-2.9
	baz=156						
PDMCI				S	S	06 49 42.0	+4.6
	baz=156						
IRM	Iron Mountain	28.12	338	P	P	06 44 54.1	-1.7
	baz=154,SNR=7.7						
IRM				S	S	06 49 45.6	+4.5
	baz=154						
TPFO	Pinon Flats	28.13	336	P	P	06 44 52.9	-3.2
	baz=151						
TPFO				S	S	06 49 45.7	+4.3
	baz=151						
PFO	Pinyon Flats O	28.14	336	P	P	06 44 55.7	-0.5
	comp=Z,4.6nm,0.8s,baz=134,slow=7.7,SNR=4.4						
PFO				LR	LR	06 53 56.2	
	comp=Z,5µm,21.9s,baz=142,slow=32						
	comp=Z,4.6nm,0.8s						
PFO	Pinyon Flats O	28.14	336	P	P	06 44 54.3	-1.9
PFO				IAmb	IAmb	06 45 08.1	
	comp=Z,25nm,1.6s						
PFO	Pinyon Flats O	28.14	336	IAMs_20	IAMs_20	06 53 42.9	
	comp=Z,5µm,20.0s						
PFO	Pinyon Flats O	28.14	336	P	P	06 44 53.1	-3.1
	baz=151						
NORC	Norcasia	28.15	94	*e*P	P	06 44 54.7	-1.7
W39A	Magazine	28.20	16	P	P	06 44 53.8	-2.7
W39A	Magazine	28.20	16	P	P	06 44 54.0	-2.5
	baz=200						
W39A				S	S	06 49 45.3	+3.2
	baz=200						
WUAZ	Wupatki	28.23	346	P	P	06 44 56.0	-0.9
WUAZ	Wupatki	28.23	346	P	P	06 44 55.1	-1.9
	baz=162,SNR=5.1						
WUAZ				S	S	06 49 46.5	+3.6
	baz=162						
UALR	University of	28.24	19	P	P	06 44 55.1	-1.7
UALR				IAmb	IAmb	06 45 02.1	
	comp=Z,18nm,1.1s						
BELC	Belle Mtn. Jos	28.30	337	P	P	06 44 54.8	-2.8
	baz=152						
BELC				S	S	06 49 47.7	+3.6
	baz=152						
U32A	Winter Ranch,	28.30	7	P	P	06 44 54.6	-2.8
U32A				IAmb	IAmb	06 45 16.9	
	comp=Z,43nm,1.6s						
250A	Grady	28.37	31	P	P	06 44 56.7	-1.4
TUL1	Leonard	28.38	13		P	06 44 56.6	-1.5
TUL1	Leonard	28.38	13	P	P	06 44 55.2	-2.9
	baz=196						
TUL1				S	S	06 49 48.0	+2.9
	baz=196						
PRAC	Prado	28.41	97	*e*P	P	06 44 60.0	+1.3
MURC	Murrieta	28.43	335	P	P	06 44 56.4	-2.3
	baz=149						
MURC				S	S	06 49 49.4	+3.4
	baz=149						
PTBC	PUERTO BERRIO,	28.45	91	*e*P	P	06 45 00.1	+1.1
DWPF	Disney Wildern	28.47	43	P	P	06 44 56.4	-2.6
	baz=230						
NEE2	Needles Airpor	28.48	340	P	P	06 44 57.0	-2.0
	baz=155						
Z47A	Carrollton	28.50	27	P	P	06 44 58.1	-1.1
Z47A				IAmb	IAmb	06 45 01.1	
	comp=Z,20nm,0.9s						
W13A	Hualapai Mount	28.54	341	P	P	06 44 57.8	-2.0
W41B	Gary Mavity, V	28.64	19	P	P	06 44 58.5	-1.8
W41B				IAmb	IAmb	06 45 02.5	
	comp=Z,43nm,1.5s						
W41B	Gary Mavity, V	28.64	19	P	P	06 44 57.4	-3.0
	baz=203,SNR=5.1						
W41B				S	S	06 49 50.8	+1.8
	baz=203						
352A	Blakely	28.70	34	P	P	06 45 00.3	-0.6
WHAR	Wooly Hollow	28.73	19	P	P	06 45 00.1	-1.1
ROSC	El Rosal	28.79	95	P	P	06 45 03.3	+0.9
	comp=Z,4.2nm,0.4s,baz=280,slow=17,SNR=1.9						
	comp=Z,4.2nm,0.4s						
ROSC	El Rosal	28.79	95	IAmb	IAmb	06 45 09.9	
	comp=Z,17nm,1.1s						
T25A	Trinidad	28.84	358	P	P	06 44 58.8	-3.6
T25A				IAmb	IAmb	06 45 12.0	
	comp=Z,19nm,1.2s						
T25A	Trinidad	28.84	358	P	P	06 44 59.5	-2.9
	baz=177						
T25A				S	S	06 49 53.0	+0.4
	baz=177						
LRAL	Lakeview Retre	28.86	29	P	P	06 45 01.4	-1.0
LRAL	Lakeview Retre	28.86	29	P	P	06 45 01.0	-1.4
	baz=215,SNR=6.4						
LRAL				S	S	06 49 55.6	+2.9
	baz=215						
GMRC	Granite Mounta	28.87	338	P	P	06 44 60.0	-2.6
	baz=153						
GMRC				S	S	06 49 57.4	+4.5
	baz=153						
BBRC	Big Bear Solar	28.89	336	P	P	06 45 00.7	-2.3
	baz=151						
SPBC	San Pablo de B	28.93	93	*e*P	P	06 45 04.9	+1.6
ATAH	Atahualpa	28.96	121	P	P	06 45 04.9	+0.9
	comp=Z,2.5nm,0.8s,baz=263,slow=11,SNR=2.1						
ATAH				LR	LR	06 54 21.1	
	comp=Z,10µm,20.3s,baz=289,slow=32						
	comp=Z,2.5nm,0.8s						
OXF	Oxford	29.06	24	P	P	06 45 02.3	-1.8
OXF				IAmb	IAmb	06 45 08.1	
	comp=Z,22nm,0.9s						
OXF	Oxford	29.06	24	P	P	06 45 02.4	-1.7
	baz=209						
BRRC	Barranca, Sant	29.15	90	*e*P	P	06 44 54.2	-11
HEC	Hector,Ludlow	29.16	337	S	S	06 50 02.7	+5.2
	baz=152						
HHAR	Hobbs	29.18	15	P	P	06 45 02.2	-3.0
BFSC	Mount Baldy Ra	29.18	335	P	P	06 45 03.3	-2.0
	baz=149						
BFSC				S	S	06 50 01.8	+3.9
	baz=149						
T35A	Sooner Cattle	29.21	11		P	06 45 03.9	-1.6
T35A				IAmb	IAmb	06 45 46.2	
	comp=Z,16nm,1.1s						
MVCO	Mesa Verde	29.30	351	IAMs_20	IAMs_20	06 56 57.6	
	comp=Z,3µm,18.0s						
MVCO	Mesa Verde	29.30	351	P	P	06 45 03.6	-2.9
	baz=169,SNR=5.3						
MVCO				S	S	06 50 03.2	+3.4
	baz=169						
U15A	North Rim	29.32	345	P	P	06 45 06.5	-0.3
U15A				IAmb	IAmb	06 45 27.9	
	comp=Z,26nm,1.6s						
FCAR	Ozark Folk Cen	29.33	18	P	P	06 45 04.6	-2.0
FCAR				IAmb	IAmb	06 45 53.2	
	comp=Z,20nm,1.4s						
TIGA	Tifton	29.42	36	P	P	06 45 06.4	-1.0
TIGA				IAmb	IAmb	06 45 09.5	
	comp=Z,45nm,1.3s						
TIGA	Tifton	29.42	36	P	P	06 45 04.7	-2.7
	baz=223						
TIGA				S	S	06 50 01.0	-0.4
	baz=223						
DECC	Green Verdugo	29.48	334	P	P	06 45 04.8	-3.2
	baz=148						
SDCO	Great Sand Dun	29.50	356	IAMs_20	IAMs_20	06 56 00.2	
	comp=Z,4µm,21.0s						
SDCO	Great Sand Dun	29.50	356	P	P	06 45 05.4	-2.9
	baz=175						
SDCO				S	S	06 50 05.2	+2.0
	baz=175						
TUQ	Turquoise Moun	29.55	338	S	S	06 50 08.2	+4.5
	baz=153						
U40A	Yellville	29.55	17	P	P	06 45 05.4	-3.1
U40A				IAmb	IAmb	06 45 10.1	
	comp=Z,20nm,1.1s						
U40A				IAMs_20	IAMs_20	06 57 20.0	
	comp=Z,4µm,20.0s						
U40A	Yellville	29.55	17	P	P	06 45 06.8	-1.6
	baz=201,SNR=9.7						
U40A				S	S	06 50 04.6	+1.2
	baz=201						
S22A	4UR Ranch, Cre	29.61	354	P	P	06 45 08.2	-1.2
S22A	4UR Ranch, Cre	29.61	354	P	P	06 45 07.5	-1.8
	baz=172,SNR=7.8						
S22A				S	S	06 50 07.7	+2.8
	baz=172						
152A	Waverly Hall	29.72	32	P	P	06 45 08.0	-2.0
MACC	Macarena, Meta	29.73	100	*e*P	P	06 45 11.6	+1.2
GSC	Goldstone, Bar	29.76	337	P	P	06 45 08.8	-1.6
	baz=152						
LCAR	Lake Charles	29.81	20	P	P	06 45 08.9	-1.9
Y49A	Blount Mountai	29.82	29	P	P	06 45 09.9	-1.1
456A	Hilliard	29.84	38	P	P	06 45 09.4	-1.7
EDW2	Edwards Air Fo	29.87	335	P	P	06 45 09.7	-1.7
	baz=149						
EDW2				S	S	06 50 07.4	-1.2
	baz=149						
RUSC	La Rusia	29.88	92	*e*P	P	06 45 11.9	-0.3
LRMC	Laurel Mtn Rad	30.26	336	P	P	06 45 13.3	-1.7
	baz=150						
PKM	Mcpherson Peak	30.68	332	P	P	06 45 16.3	-2.4
	baz=146						
KSCO	Kaye Shedlock’	30.68	1	S	S	06 50 23.5	+2.1
	baz=181						
Q24A	Divide	30.69	357	S	S	06 50 24.0	+2.2
	baz=176						
ISA	Isabella, Lake	30.74	335	P	P	06 45 16.9	-2.3
	baz=149						
FURC	Furnace Creek,	30.81	338	P	P	06 45 17.6	-2.0
	baz=152						
GOGA	Godfrey	30.96	33	P	P	06 45 19.4	-1.7
	baz=220						
GOGA				S	S	06 50 26.7	+1.0
	baz=220						
TPNV	Topopah Spring	31.02	339	P	P	06 45 19.4	-2.3
	baz=154						
TPNV				S	S	06 50 29.0	+2.2
	baz=154						
SMCO	Snowmass	31.04	354	IAmb	IAmb	06 45 35.1	
	comp=Z,18nm,1.4s						
WVT	Waverly	31.10	24	P	P	06 45 20.5	-1.7
WVT				IAmb	IAmb	06 45 23.1	
	comp=Z,12nm,1.1s						
WVT	Waverly	31.10	24	P	P	06 45 20.2	-2.0
	baz=210						
WVT				S	S	06 50 27.3	-0.5
	baz=210						
SMMC	Simmler	31.11	333	P	P	06 45 20.3	-2.1
	baz=146						
V48A	Smith Brothers	31.20	26	P	P	06 45 21.4	-1.7
MSU	Marysvale	31.27	346	P	P	06 45 21.5	-2.4
KSU1	Kansas State U	31.32	10	IAMs_20	IAMs_20	06 57 26.6	
	comp=Z,3µm,21.0s						
KSU1	Kansas State U	31.32	10	S	S	06 50 30.2	-0.9
	baz=192						
CCM	Cathedral Cave	31.60	18	P	P	06 45 24.6	-1.9
CCM				IAmb	IAmb	06 45 27.2	
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	31.60	18	IAMs_20	IAMs_20	06 58 44.4	
	comp=Z,4µm,19.0s						
CCM	Cathedral Cave	31.60	18	P	P	06 45 25.1	-1.5
	baz=203						
CCM				S	S	06 50 34.2	-1.3
	baz=203						
VOG	Valley Oaks Go	31.69	334	S	S	06 50 41.1	+4.3
	baz=148						
CPCT	Cooper Cave	32.02	29	P	P	06 45 29.0	-1.3
CPCT				IAmb	IAmb	06 45 31.9	
	comp=Z,16nm,1.1s						
W52A	Murphy	32.03	31	P	P	06 45 29.1	-1.3
W52A				IAmb	IAmb	06 45 32.0	
	comp=Z,15nm,1.1s						
R11A	Troy Canyon, C	32.06	341	P	P	06 45 29.1	-1.8
	baz=156						
R11A				S	S	06 50 46.5	+3.4
	baz=156						
SDV	Santo Domingo	32.11	86	LR	LR	06 56 56.9	
	comp=Z,2µm,20.5s,baz=270,slow=33						
SDV	Santo Domingo	32.11	86	P	P	06 45 32.4	+0.7
SDV				IAmb	IAmb	06 45 38.0	
	comp=Z,29nm,1.2s						
SDV	Santo Domingo	32.11	86	*e*P	P	06 45 35.4	+3.8
SDV	Santo Domingo	32.11	86	*e*P	P	06 45 33.4	+1.8
SDV				*e*pP	PP	06 47 00.1	+16
O20A	White River Ci	32.13	353	P	P	06 45 29.8	-1.7
	baz=170						
O20A				S	S	06 50 47.7	+3.5
	baz=170						
T47A	Sharon Grove	32.14	25	P	P	06 45 29.9	-1.4
T47A				IAmb	IAmb	06 45 32.6	
	comp=Z,18nm,1.0s						
P38A	Dawn	32.45	14	P	P	06 45 32.1	-1.9
P38A				IAmb	IAmb	06 45 42.4	
	comp=Z,31nm,1.8s						
BG3	Lake Jocassee	32.46	32	P	P	06 45 32.3	-1.9
BG3				IAmb	IAmb	06 45 35.8	
	comp=Z,14nm,1.0s						
TKL	Tuckaleechee C	32.55	30	LR	LR	06 59 36.2	
	comp=Z,2µm,21.4s,baz=218,slow=38						
NHSC	New Hope	32.62	37	IAMs_20	IAMs_20	06 58 56.9	
	comp=Z,2µm,19.0s						
NHSC	New Hope	32.62	37	P	P	06 45 35.0	-0.6
	baz=226,SNR=5.1						
OGNE	Ogallala	32.63	2	S	S	06 50 54.1	+2.5
	baz=182						
N23A	Red Feather La	32.66	356	P	P	06 45 33.8	-2.4
	baz=175						
N23A				S	S	06 50 56.5	+3.9
	baz=175						
SDDR	Presa de Saban	32.67	68	IAMs_20	IAMs_20	06 57 13.8	
	comp=Z,4µm,20.0s						
NNA	Nana	32.92	127	LR	LR	06 56 18.5	
	comp=Z,2µm,20.0s,baz=321,slow=31						
NNA	Nana	32.92	127	IAMs_20	IAMs_20	06 55 55.6	
	comp=Z,2µm,20.0s						
DUG	Dugway, Tooele	33.02	346	IAMs_20	IAMs_20	07 00 12.7	
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	33.02	346	P	P	06 45 37.5	-1.7
	baz=162,SNR=7.8						
DUG				S	S	06 51 03.3	+5.3
	baz=162						
V53A	Saluda	33.05	31	P	P	06 45 37.7	-1.7
V53A				IAmb	IAmb	06 45 41.6	
	comp=Z,15nm,1.1s						
NVAR	Mina Array Bea	33.08	338	P	P	06 45 39.6	-0.2
	comp=Z,3.7nm,0.9s,baz=168,slow=8.8,SNR=17						
NVAR				LR	LR	06 56 52.6	
	comp=Z,3µm,21.8s,baz=147,slow=33						
	comp=Z,3.7nm,0.9s						
NVAR	Mina Array Bea	33.08	338	P	P	06 45 38.7	-1.1
Q44A	Meyer Farm, Va	33.09	20	P	P	06 45 38.5	-1.2
JLU	Jordanelle	33.12	348	P	P	06 45 37.2	-3.0
BGNE	Belgrade	33.37	7	P	P	06 45 40.0	-2.1
	baz=189						
TZTN	Tazewell	33.37	29	P	P	06 45 40.3	-1.8
	baz=217						
TZTN				S	S	06 51 03.8	+0.7
	baz=217						
KMSC	Kings Mountain	33.43	33	P	P	06 45 41.1	-1.6
	baz=222						
KMSC				S	S	06 51 07.0	+2.9
	baz=222						
KVN	Kaiserville	33.55	339	IAmb	IAmb	06 45 51.9	
	comp=Z,13nm,1.0s						
RWWY	Rawlins	33.55	354	IAMs_20	IAMs_20	06 58 39.6	
	comp=Z,4µm,21.0s						
BGU	Big Grassy Mou	33.77	346	IAmb	IAmb	06 46 15.6	
	comp=Z,22nm,1.4s						
ELK	Elko	34.17	343	P	P	06 45 48.1	-1.2
ELK				IAMs_20	IAMs_20	07 01 19.1	
	comp=Z,2µm,19.0s						
EMB	Emerald Bay	34.24	336	P	P	06 45 49.2	-0.8
EMB				IAmb	IAmb	06 46 13.6	
	comp=Z,18nm,1.3s						
K22A	Casper	34.45	356	P	P	06 45 50.1	-1.5
	baz=174						
K22A				S	S	06 51 20.9	+0.9
	baz=174						
HDIL	Hopedale	34.49	19	IAMs_20	IAMs_20	07 00 23.0	
	comp=Z,2µm,19.0s						
HDIL	Hopedale	34.49	19	P	P	06 45 50.3	-1.6
	baz=205,SNR=11						
HDIL				S	S	06 51 20.3	-0.1
	baz=205						
SCIA	State Center	34.69	13	P	P	06 45 51.7	-1.8
	baz=198						
MCCM	Marconi Confer	34.76	332	IAMs_20	IAMs_20	06 56 57.3	
	comp=Z,3µm,19.0s						
BW06	Boulder Array	34.90	352	P	P	06 45 54.3	-1.3
	baz=169,SNR=14						
BW06				S	S	06 51 27.9	+0.8
	baz=169						
PDAR	Pinedale Array	34.90	352	P	P	06 45 55.2	-0.3
	comp=Z,4.5nm,0.8s,baz=160,slow=9.3,SNR=33						
	comp=Z,4.5nm,0.8s						
SFIN	Lafayette	35.09	21	P	P	06 45 55.1	-1.8
	baz=208						
SFIN				S	S	06 51 29.6	+0.1
	baz=208						
P49A	Miami Univ. Ec	35.29	25	P	P	06 45 56.8	-1.9
	baz=213,SNR=11						
P49A				S	S	06 51 31.9	-0.8
	baz=213						
ORV	Oroville	35.31	335	IAmb	IAmb	06 46 02.9	
	comp=Z,14nm,1.1s						
ORV				IAMs_20	IAMs_20	06 57 35.8	
	comp=Z,2µm,18.0s						
BLA	Blacksburg	35.46	32	P	P	06 45 59.8	-0.6
BLA				IAmb	IAmb	06 46 01.8	
	comp=Z,20nm,0.9s						
BLA	Blacksburg	35.46	32	P	P	06 45 58.8	-1.5
	baz=221,SNR=5.7						
BLA				S	S	06 51 32.4	-3.2
	baz=221						
CNNC	Cliffs of the	35.46	37	IAMs_20	IAMs_20	07 00 43.1	
	comp=Z,3µm,20.0s						
CNNC	Cliffs of the	35.46	37	S	S	06 51 36.1	+0.6
	baz=227						
R53A	Hurricane	35.55	29	P	P	06 45 59.7	-1.4
RPN	Rapa Nui	35.63	190	LR	LR	06 57 09.3	
	comp=Z,3µm,21.0s,baz=10,slow=30						
O48B	Farmland	35.72	24	P	P	06 46 00.3	-2.1
	baz=212						
O48B				S	S	06 51 39.2	-0.1
	baz=212						
RSSD	Black Hills	35.80	359	P	P	06 46 01.3	-2.0
RSSD				IAmb	IAmb	06 46 15.9	
	comp=Z,36nm,1.9s						
RSSD	Black Hills	35.80	359	P	P	06 46 00.7	-2.6
	baz=178						
RSSD				S	S	06 51 41.9	+1.0
	baz=178						
ECSD	EROS Data Cent	35.85	8	P	P	06 46 01.0	-2.5
ECSD	EROS Data Cent	35.85	8	IAMs_20	IAMs_20	07 00 20.5	
	comp=Z,3µm,22.0s						
ECSD	EROS Data Cent	35.85	8	P	P	06 46 01.0	-2.5
	baz=191						
ECSD				S	S	06 51 39.8	-1.5
	baz=191						
LOHW	Long Hollow	35.88	351	IAMs_20	IAMs_20	06 58 38.3	
	comp=Z,2µm,18.0s						
Q52A	Bidwell	35.91	28	P	P	06 46 02.3	-1.8
SUSD	Miller	36.29	5	S	S	06 51 48.7	+0.7
	baz=187						
FLWY	Flagg Ranch	36.36	351	IAMs_20	IAMs_20	07 01 23.8	
	comp=Z,2µm,19.0s						
JFWS	Jewell Farm	36.38	16	IAMs_20	IAMs_20	07 01 44.8	
	comp=Z,3µm,22.0s						
JFWS	Jewell Farm	36.38	16	P	P	06 46 06.0	-2.0
	baz=202						
JFWS				S	S	06 51 49.0	-0.4
	baz=202						
L44A	Lake County Fo	36.40	19	IAMs_20	IAMs_20	07 01 41.6	
	comp=Z,2µm,19.0s						
L44A	Lake County Fo	36.40	19	S	S	06 51 50.3	+0.5
	baz=206						
P52A	Corning	36.50	28	P	P	06 46 06.8	-2.4
	baz=217						
P52A				S	S	06 51 52.2	+0.8
	baz=217						
HLID	Hailey	36.59	346	P	P	06 46 09.5	-0.6
HLID				IAMs_20	IAMs_20	06 59 28.2	
	comp=Z,2µm,19.0s						
HLID	Hailey	36.59	346	P	P	06 46 07.5	-2.6
	baz=161						
HLID				S	S	06 51 54.4	+1.4
	baz=161						
ACSO	Alum Creek Sta	36.61	26	P	P	06 46 07.2	-2.8
	baz=215						
ACSO				S	S	06 51 52.6	-0.4
	baz=215						
H17A	Grant Village	36.64	351	S	S	06 51 57.9	+4.1
	baz=168						
WVOR	Wild Horse Val	36.75	341	IAMs_20	IAMs_20	07 03 14.5	
	comp=Z,2µm,20.0s						
MFID	Camas Ranch	36.81	344	IAMs_20	IAMs_20	07 00 15.0	
	comp=Z,2µm,18.0s						
KMRM	Mail Ridge	36.81	333	IAmb	IAmb	06 46 16.3	
	comp=Z,31nm,1.0s						
MOD	Modoc Plateau	36.85	338	IAmb	IAmb	06 46 24.7	
	comp=Z,51nm,1.9s						
T59A	Double "B" Far	36.86	35	IAmb	IAmb	06 46 14.2	
	comp=Z,24nm,1.2s						
RLMT	Red Lodge	37.17	353	IAMs_20	IAMs_20	07 01 23.4	
	comp=Z,3µm,18.0s						
RLMT	Red Lodge	37.17	353	P	P	06 46 13.6	-1.4
	baz=170						
RLMT				S	S	06 52 03.0	+1.1
	baz=170						
SJG	San Juan	37.24	71	LR	LR	07 01 01.6	
	comp=Z,1µm,19.7s,baz=269,slow=35						
O53A	New Philadelph	37.42	28	P	P	06 46 15.3	-1.7
	baz=218						
O53A				S	S	06 52 06.8	+1.4
	baz=218						
MCWV	Mont Chateau	37.62	30	P	P	06 46 17.3	-1.3

MCWV				IAmb	IAmb	06 46 20.7	
	comp=Z,18nm,0.9s						
MCWV	Mont Chateau	37.62	30	P	P	06 46 17.0	-1.6
	baz=220						
MCWV				S	S	06 52 10.0	+1.7
	baz=220						
YBH	Yreka Blue Hor	37.64	336	P	P	06 46 17.2	-1.6
	comp=Z,11nm,1.1s,baz=132,slow=5.5,SNR=14						
YBH				LR	LR	06 59 21.5	
	comp=Z,2µm,21.2s,baz=153,slow=32						
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	37.64	336	P	P	06 46 17.6	-1.3
YBH				IAMs_20	IAMs_20	06 59 10.3	
	comp=Z,2µm,21.0s						
CBN	Corbin Frederi	37.83	34	IAMs_20	IAMs_20	07 03 06.5	
	comp=Z,2µm,18.0s						
CBN	Corbin Frederi	37.83	34	P	P	06 46 19.0	-1.4
	baz=225						
CBN				S	S	06 52 13.4	+1.8
	baz=225						
L04D	Klamath Falls	37.88	337	IAMs_20	IAMs_20	06 59 51.8	
	comp=Z,3µm,19.0s						
L04D	Klamath Falls	37.88	337	P	P	06 46 18.6	-2.4
	baz=148,SNR=7.9						
L04D				S	S	06 52 13.6	+1.1
	baz=148						
SPMN	Marine on St.	37.95	12	P	P	06 46 19.4	-2.0
	baz=197,SNR=5.6						
SPMN				S	S	06 52 15.3	+2.1
	baz=197						
BOZ	Bozeman (W)	37.98	350	IAMs_20	IAMs_20	07 02 20.9	
	comp=Z,2µm,20.0s						
BOZ	Bozeman (W)	37.98	350	P	P	06 46 20.5	-1.3
	baz=166						
BOZ				S	S	06 52 15.0	+1.0
	baz=166						
K04D	Chiloquin, OR	38.02	337	P	P	06 46 20.5	-1.6
	baz=149						
K04D				S	S	06 52 18.9	+4.4
	baz=149						
AAM	Ann Arbor	38.05	24	P	P	06 46 20.3	-1.9
	baz=212						
AAM				S	S	06 52 14.1	-0.6
	baz=212						
L02F	Cave Junction	38.31	335	P	P	06 46 22.6	-1.9
	baz=146						
L02F				S	S	06 52 19.4	+0.5
	baz=146						
J05D	Fort Rock, OR	38.39	339	P	P	06 46 23.5	-1.9
	baz=150,SNR=9.5						
J05D				S	S	06 52 26.8	+6.5
	baz=150						
PLID	Pearl Lake	38.41	345	IAMs_20	IAMs_20	07 01 10.4	
	comp=Z,2µm,19.0s						
LAO	LASA Array	38.45	357	P	P	06 46 24.2	-1.4
	baz=175						
HUMO	Hull Mountain	38.47	336	IAMs_20	IAMs_20	06 59 47.4	
	comp=Z,2µm,22.0s						
BMO	Blue Mountains	38.54	344	IAMs_20	IAMs_20	07 01 05.9	
	comp=Z,2µm,18.0s						
M53A	WI Miller and	38.61	27	IAMs_20	IAMs_20	07 04 10.6	
	comp=Z,2µm,19.0s						
M53A	WI Miller and	38.61	27	P	P	06 46 25.6	-1.4
	baz=217						
M53A				S	S	06 52 22.0	-1.3
	baz=217						
J04D	Umpqua Nationa	38.68	338	P	P	06 46 26.9	-0.8
J04D				IAmb	IAmb	06 46 35.4	
	comp=Z,46nm,1.2s						
J04D	Umpqua Nationa	38.68	338	P	P	06 46 26.3	-1.5
	baz=149,SNR=6.7						
PINE	Pine Mountain	38.73	339	P	P	06 46 26.4	-1.7
PINE				IAmb	IAmb	06 46 30.5	
	comp=Z,20nm,0.9s						
K02D	Willamette Mer	38.83	336	P	P	06 46 27.3	-1.6
	baz=146						
K02D				S	S	06 52 30.5	+3.7
	baz=146						
I04A	Tendick Farm,	39.27	338	P	P	06 46 30.0	-2.5
	baz=149						
I04A				S	S	06 52 32.0	-1.2
	baz=149						
J01E	Myrtle Point	39.33	336	IAMs_20	IAMs_20	07 00 40.1	
	comp=Z,3µm,19.0s						
J01E	Myrtle Point	39.33	336	P	P	06 46 30.9	-2.0
	baz=146						
J01E				S	S	06 52 38.2	+4.2
	baz=146						
SSPA	Standing Stone	39.34	31	P	P	06 46 31.3	-1.8
	baz=222						
I05D	Terrebonne, OR	39.35	339	P	P	06 46 31.5	-1.7
	baz=151,SNR=7.2						
I05D				S	S	06 52 38.4	+4.0
	baz=151						
ERPA	Erie	39.46	27	P	P	06 46 32.1	-2.0
	baz=218						
ERPA				S	S	06 52 39.5	+3.4
	baz=218						
M55A	Ridgway	39.53	29	IAmb	IAmb	06 46 38.2	
	comp=Z,70nm,1.6s						
I03D	Drain, OR	39.54	337	P	P	06 46 34.1	-0.6
	baz=147						
I03D				S	S	06 52 39.0	+1.8
	baz=147						
MSO	Missoula	39.60	348	IAMs_20	IAMs_20	07 01 40.6	
	comp=Z,2µm,18.0s						
MSO	Missoula	39.60	348	P	P	06 46 33.7	-1.6
	baz=163						
MSO				S	S	06 52 37.4	-0.8
	baz=163						
MDND	Maddock	39.62	4	P	P	06 46 33.4	-2.0
	baz=186						
MDND				S	S	06 52 37.2	-1.3
	baz=186						
COWI	Conover	39.63	15	IAMs_20	IAMs_20	07 03 21.8	
	comp=Z,2µm,22.0s						
GLMI	Grayling	39.86	21	IAMs_20	IAMs_20	07 03 27.1	
	comp=Z,2µm,19.0s						
GLMI	Grayling	39.86	21	P	P	06 46 35.7	-1.7
	baz=209						
GLMI				S	S	06 52 43.8	+1.8
	baz=209						
H04A	Detroit Lake	39.95	339	P	P	06 46 36.3	-1.9
H04D	Lebanon	40.01	338	IAMs_20	IAMs_20	07 01 22.1	
	comp=Z,2µm,20.0s						
H04D	Lebanon	40.01	338	P	P	06 46 36.6	-2.0
	baz=149						
H04D				S	S	06 52 43.4	-0.9
	baz=149						
I02E	Swisshome, OR	40.08	337	P	P	06 46 37.3	-1.9
	baz=147						
I02E				S	S	06 52 49.2	+3.9
	baz=147						
EGMT	Eagleton	40.09	353	P	P	06 46 37.4	-1.9
EGMT				IAMs_20	IAMs_20	07 02 25.6	
	comp=Z,2µm,22.0s						
EGMT	Eagleton	40.09	353	P	P	06 46 37.4	-1.9
	baz=170						
SEUS	St. Eustatius	40.12	73	IAMs_20	IAMs_20	07 01 01.9	
	comp=Z,2µm,21.0s						
G05D	Wamic, OR	40.13	340	P	P	06 46 37.6	-2.0
	baz=151						
G05D				S	S	06 52 46.5	+0.4
	baz=151						
DGMT	Dagmar	40.15	359	IAmb	IAmb	06 46 48.7	
	comp=Z,20nm,0.9s						
DGMT	Dagmar	40.15	359	P	P	06 46 38.1	-1.6
	baz=178						
M57A	Sunshine Farm,	40.24	31	IAmb	IAmb	06 46 42.5	
	comp=Z,30nm,1.3s						
COR	Corvallis	40.28	338	IAMs_20	IAMs_20	07 01 09.1	
	comp=Z,3µm,20.0s						
AGMN	Agassiz Nation	40.43	7	IAMs_20	IAMs_20	07 02 10.7	
	comp=Z,2µm,21.0s						
AGMN	Agassiz Nation	40.43	7	P	P	06 46 40.0	-2.1
	baz=191,SNR=14						
AGMN				S	S	06 52 50.1	-0.4
	baz=191						
TAOE	Nuku Hiva Isla	40.61	246	*e*S	S	06 52 57.8	+3.6
	comp=Z,226nm,25.7s						
TAOE				*e*LR	LR	06 57 28.4	
	comp=Z,3µm,25.4s						
TAOE	Nuku Hiva Isla	40.61	246	*e*T	T	07 29 44.4	
	comp=Z,139nm,0.2s						
F05D	White Salmon	40.74	340	IAMs_20	IAMs_20	07 01 41.3	
	comp=Z,3µm,20.0s						
G03D	McMinnville, O	40.80	338	IAMs_20	IAMs_20	07 01 37.8	
	comp=Z,2µm,20.0s						
G03D	McMinnville, O	40.80	338	P	P	06 46 41.8	-3.3
	baz=148						
G03D				S	S	06 52 58.2	+2.3
	baz=148						
EYMN	Ely	40.82	12	P	P	06 46 43.5	-1.7
EYMN	Ely	40.82	12	IAMs_20	IAMs_20	07 03 25.1	
	comp=Z,3µm,19.0s						
EYMN	Ely	40.82	12	P	P	06 46 43.2	-2.1
	baz=198,SNR=6.6						
EYMN				S	S	06 52 58.0	+1.7
	baz=198						
E07A	Sunnyside	40.83	342	P	P	06 46 45.2	-0.3
E07A				IAmb	IAmb	06 47 01.5	
	comp=Z,22nm,1.1s						
ETMB	Extrema	40.86	115	*e*P	P	06 46 45.4	-0.7
D08A	Wollman Farm,	41.01	344	P	P	06 46 45.4	-1.5
TDBA	Terre de Bas,	41.20	75	IAMs_20	IAMs_20	07 05 53.0	
	comp=Z,2µm,19.0s						
CBE	Ff, Capester	41.25	75	IAMs_20	IAMs_20	07 03 40.2	
	comp=Z,2µm,19.0s						
BINY	Binghamton	41.45	31	P	P	06 46 49.4	-1.2
	baz=223						
MAGL	Barre de l'ile	41.55	75	IAMs_20	IAMs_20	07 06 02.2	
	comp=Z,2µm,18.0s						
NEW	Newport	41.66	346	P	P	06 46 50.8	-1.4
	comp=Z,6.4nm,0.9s,baz=158,slow=9.4,SNR=16						
	comp=Z,6.4nm,0.9s						
NEW	Newport	41.66	346	P	P	06 46 50.9	-1.4
NEW	Newport	41.66	346	IAMs_20	IAMs_20	07 05 52.2	
	comp=Z,2µm,19.0s						
NEW	Newport	41.66	346	P	P	06 46 50.5	-1.8
	baz=159,SNR=12						
NEW				S	S	06 53 10.6	+1.7
	baz=159						
PAL	Palisades	41.70	34	IAMs_20	IAMs_20	07 05 13.9	
	comp=Z,2µm,19.0s						
PAL	Palisades	41.70	34	P	P	06 46 49.6	-3.0
	baz=227						
PAL				S	S	06 53 14.7	+5.2
	baz=227						
E04D	Cinebar	41.70	340	P	P	06 46 51.4	-1.2
E04D				IAmb	IAmb	06 47 08.7	
	comp=Z,36nm,1.2s						
E04D	Cinebar	41.70	340	P	P	06 46 51.2	-1.4
	baz=150,SNR=7.7						
E04D				S	S	06 53 13.0	+3.6
	baz=150						
LTY	Liberty	41.71	342	P	P	06 46 51.8	-0.9
WALA	Waterton Lakes	41.73	349	P	P	06 46 52.0	-0.9
WALA				IAmb	IAmb	06 47 15.2	
	comp=Z,36nm,1.9s						
WSPT	Westport, CT	42.13	34	IAMs_20	IAMs_20	07 05 52.4	
	comp=Z,1µm,18.0s						
LPAZ	La Paz	42.31	125	P	P	06 47 00.1	+1.5
	comp=Z,16nm,1.0s,baz=306,slow=8.1,SNR=30						
	comp=Z,16nm,1.0s						
LPAZ	La Paz	42.31	125	P	P	06 47 00.0	+1.4
LPAZ	La Paz	42.31	125	*e*P	P	06 47 00.8	+2.2
LPAZ	La Paz	42.31	125	*e*P	P	06 46 59.0	+0.4
B08A	Colville Reser	42.31	344	P	P	06 46 55.6	-2.0
D04E	Lakebay	42.31	340	P	P	06 46 54.8	-2.7
	baz=150						
ULM	Lac du Bonnet	42.35	7	P	P	06 46 56.0	-1.8
	comp=Z,6.2nm,0.9s,baz=190,slow=9.0,SNR=4.8						
ULM				LR	LR	07 03 28.4	
	comp=Z,2µm,20.6s,baz=196,slow=35						
	comp=Z,6.2nm,0.9s						
ULM	Lac du Bonnet	42.35	7	P	P	06 46 55.6	-2.2
PB16	IPOC Station P	42.36	129	P	P	06 47 02.0	+3.0
YLE	Yale	42.45	34	IAMs_20	IAMs_20	07 07 25.1	
	comp=Z,2µm,18.0s						
D03D	Eldon	42.73	340	P	P	06 46 58.4	-2.5
	baz=150						
D03D				S	S	06 53 26.1	+1.5
	baz=150						
BOAV	Boa Vista	42.76	95	*e*P	P	06 47 02.0	+0.3
NLWA	Neilton Lookou	42.88	339	P	P	06 47 01.7	-0.5
NLWA				IAmb	IAmb	06 47 18.2	
	comp=Z,20nm,1.1s						
NLWA				IAMs_20	IAMs_20	07 03 16.8	
	comp=Z,2µm,20.0s						
BBSR	BB Station	42.95	50	IAMs_20	IAMs_20	07 02 02.9	
	comp=Z,2µm,22.0s						
B05A	Bryant	43.05	341	P	P	06 47 01.1	-2.4
	baz=152						
B05A				S	S	06 53 30.7	+1.6
	baz=152						
L61B	Northampton	43.36	33	IAMs_20	IAMs_20	07 06 57.8	
	comp=Z,2µm,19.0s						
L61B	Northampton	43.36	33	P	P	06 47 02.3	-3.8
	baz=227						
L61B				S	S	06 53 38.6	+4.6
	baz=227						
QUA2	Belchertown	43.42	34	IAMs_20	IAMs_20	07 08 11.5	
	comp=Z,2µm,18.0s						
BRYW	Bryant College	43.63	34	IAMs_20	IAMs_20	07 07 08.1	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	43.92	29	P	P	06 47 10.2	-0.4
	baz=223						
LONY				S	S	06 53 45.2	+3.0
	baz=223						
HRV	Adam Dziewonsk	44.01	34	IAMs_20	IAMs_20	07 08 10.1	
	comp=Z,2µm,18.0s						
WES	Weston	44.06	34	IAMs_20	IAMs_20	07 07 30.4	
	comp=Z,2µm,19.0s						
BCX	Boston College	44.11	34	IAMs_20	IAMs_20	07 07 58.8	
	comp=Z,2µm,18.0s						
HNH	Hanover	44.43	32	IAMs_20	IAMs_20	07 07 11.0	
	comp=Z,2µm,19.0s						
FFD	Franklin Falls	44.61	33	IAMs_20	IAMs_20	07 07 34.7	
	comp=Z,2µm,19.0s						
VT1	Waterbury	44.63	31	IAMs_20	IAMs_20	07 08 55.9	
	comp=Z,2µm,18.0s						
LBNH	Lisbon	44.99	32	IAMs_20	IAMs_20	07 07 27.7	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	44.99	32	P	P	06 47 17.5	-1.6
	baz=227						
LBNH				S	S	06 54 05.2	+7.5
	baz=227						
LVC	Limon Verde	45.37	133	P	P	06 47 25.6	+2.7
	comp=Z,9.8nm,1.1s,baz=316,slow=5.7,SNR=3.5						
LVC				LR	LR	07 01 50.5	
	comp=Z,3µm,21.3s,baz=300,slow=30						
	comp=Z,9.8nm,1.1s						
LVC	Limon Verde	45.37	133	IAmb	IAmb	06 47 29.6	
	comp=Z,34nm,1.6s						
LVC	Limon Verde	45.37	133	*e*P	P	06 47 25.9	+3.0
EDM	Edmonton	45.66	351	IAmb	IAmb	06 47 28.4	
	comp=Z,20nm,1.0s						
WVL	Waterville	46.41	33	IAMs_20	IAMs_20	07 09 29.4	
	comp=Z,2µm,18.0s						
PKME	Peaks-Kenny Pk	47.07	32	IAMs_20	IAMs_20	07 08 20.7	
	comp=Z,1µm,21.0s						
PKME	Peaks-Kenny Pk	47.07	32	P	P	06 47 33.8	-1.7
	baz=229						
H03N2	Juan Fernandez	47.35	152	T	T	07 38 31.5	
	baz=329,slow=77,SNR=1199						
H03N1	Juan Fernandez	47.36	152	T	T	07 38 32.6	
	baz=329,slow=77,SNR=2057						
H03N3	Juan Fernandez	47.37	152	T	T	07 38 31.7	
	baz=329,slow=77,SNR=1256						
VILB	Vilhena	47.52	116	*e*P	P	06 47 40.4	+0.9
EMMW	East Machias	47.71	34	IAMs_20	IAMs_20	07 09 48.8	
	comp=Z,1µm,19.0s						
BBB	Bella Bella	48.40	340	LR	LR	07 06 16.7	
	comp=Z,1µm,21.2s,baz=159,slow=34						
PQI	Presque Isle	48.66	32	IAMs_20	IAMs_20	07 11 46.8	
	comp=Z,1µm,20.0s						
MALB	Monte Alegre	49.71	99	*e*P	P	06 47 56.2	-0.2
PMOR	Pomariorio Ree	50.03	243	*e*T	T	07 41 41.3	
	comp=Z,12nm,0.3s						
PDRB	Porto dos Gac	50.14	112	*e*P	P	06 47 59.5	-0.1
MDP	Montagnes des	50.19	90	LR	LR	07 09 39.2	
	comp=Z,1µm,18.7s,baz=278,slow=36						
CLDB	Colider	50.74	111	*e*P	P	06 48 04.2	-0.1
MCPB	Macapa, AP	51.58	97	*e*P	P	06 48 11.6	+1.0
PPT	Papeete	52.57	241	LR	LR	07 04 48.8	
	comp=Z,2µm,18.6s,baz=60,slow=29						
PPT2	Papeete2	52.58	241	*e*P	P	06 48 23.6	+5.7
	comp=Z,62nm,24.8s						
PPT2				*e*S	S	06 55 51.5	+6.1
	comp=Z,639nm,26.5s						
PPT2				*e*LR	LR	07 03 17.4	
	comp=Z,4µm,25.0s						
SALV	Santo Antonio	52.70	117	*e*P	P	06 48 19.1	+0.3
WRAK	Wrangell Islan	53.29	340	IAMs_20	IAMs_20	07 12 55.2	
	comp=Z,2µm,19.0s						
PP1B	Ponte de Pedra	54.09	119	*e*P	P	06 48 29.3	+0.3
DLBC	Dease Lake	54.22	343	P	P	06 48 29.2	-0.2
	comp=Z,4.7nm,0.8s,baz=185,slow=8.1,SNR=6.6						
DLBC				LR	LR	07 10 39.6	
	comp=Z,2µm,19.4s,baz=147,slow=35						
	comp=Z,4.7nm,0.8s						
DLBC	Dease Lake	54.22	343	P	P	06 48 29.4	0.0
KIP	Kipapa	54.43	290	IAMs_20	IAMs_20	07 03 55.2	
	comp=Z,2µm,18.0s						
AQDB	Aquidauana	54.62	122	P	P	06 48 35.4	+2.5
AQDB	Aquidauana	54.62	122	*e*P	P	06 48 35.1	+2.3
SCHQ	Schefferville	54.74	25	P	P	06 48 31.1	-2.1
	comp=Z,17nm,1.0s,baz=245,slow=5.2,SNR=10						
SCHQ				LR	LR	07 13 38.3	
	comp=Z,2µm,18.8s,baz=224,slow=38						
	comp=Z,17nm,1.0s						
SCHQ	Schefferville	54.74	25	P	P	06 48 31.2	-1.9
SIT	Sitka	54.82	339	S	S	06 56 20.6	+6.1
	baz=140						
YKA	Yellowknife Ar	54.84	353	P	P	06 48 32.1	-1.6
	comp=Z,1.4nm,0.5s,baz=163,slow=7.7,SNR=18						
YKA				PcP	PcP	06 49 34.8	-1.0
	comp=Z,1.5nm,0.9s,baz=165,slow=2.9,SNR=4.7						
YKA				LR	LR	07 12 21.7	
	comp=Z,2µm,18.4s,baz=152,slow=37						
	comp=Z,1.4nm,0.5s						
YKA	Yellowknife Ar	54.84	353	P	P	06 48 32.2	-1.5
SNDB	Serra Nova Dou	55.27	111	*e*P	P	06 48 37.1	-0.5
TMAB	Tom-Au,PA,Br	55.85	98	*e*P	P	06 48 44.4	+2.6
ARAG	Araguaiana, MT	56.07	115	*e*P	P	06 48 42.9	-0.5
CPUP	Villa Florida	56.14	129	P	P	06 48 44.7	+1.1
	comp=Z,5.0nm,0.8s,baz=324,slow=10,SNR=6.5						
	comp=Z,5.0nm,0.8s						
CPUP	Villa Florida	56.14	129	P	P	06 48 46.3	+2.6
CPUP	Villa Florida	56.14	129	*e*P	P	06 48 46.4	+2.8
TGTN	Hyland Airport	56.38	346	P	P	06 48 44.0	-0.9
	baz=150						
TGTN				S	S	06 56 37.5	+2.1
	baz=150						
P33M	Teslin, Yukon	56.49	343	P	P	06 48 44.7	-1.1
	baz=144						
P33M				S	S	06 56 42.0	+5.0
	baz=144						
PLCA	Paso Flores	57.18	151	P	P	06 48 52.6	+1.7
	comp=Z,8.3nm,1.1s,baz=308,slow=7.9,SNR=7.6						
PLCA				LR	LR	07 08 18.7	
	comp=Z,2µm,18.1s,baz=321,slow=31						
	comp=Z,8.3nm,1.1s						
PLCA	Paso Flores	57.18	151	P	P	06 48 54.0	+3.1
PLCA				IAmb	IAmb	06 48 55.4	
	comp=Z,20nm,1.2s						
WHY	Whitehorse	57.47	342	P	P	06 48 51.9	-0.9
WHY	Whitehorse	57.47	342	P	P	06 48 51.6	-1.1
	baz=142						
WHY				S	S	06 56 54.6	+4.7
	baz=142						
SMTB	Santa Maria do	57.84	106	*e*P	P	06 48 56.2	+0.1
PEXB	Peixe	58.09	110	*e*P	P	06 48 56.2	-1.6
PNL	Peninsula	58.20	339	P	P	06 48 56.5	-1.3
	baz=136						
N31M	Braeburn, Yuko	58.39	342	IAmb	IAmb	06 49 01.9	
	comp=Z,16nm,1.1s						
N31M				IAMs_20	IAMs_20	07 13 51.9	
	comp=Z,1µm,18.0s						
N31M	Braeburn, Yuko	58.39	342	P	P	06 48 57.5	-1.6
	baz=141,SNR=6.9						
N31M				S	S	06 57 04.7	+2.9
	baz=141						
HYT	Haines Junctio	58.42	341	P	P	06 48 57.8	-1.6
	baz=139						
HYT				S	S	06 57 07.5	+5.1
	baz=139						
LL02	Futaleuf	58.51	154	P	P	06 49 01.8	+1.6
LL02				IAmb	IAmb	06 49 04.9	
	comp=Z,18nm,1.1s						
M31M	Drury Creek, Y	58.55	343	IAMs_20	IAMs_20	07 13 47.1	
	comp=Z,1µm,19.0s						
M31M	Drury Creek, Y	58.55	343	P	P	06 48 58.4	-1.8
	baz=143						
M31M				S	S	06 57 06.9	+3.0
	baz=143						
N30M	Aishikik Lake	58.77	342	P	P	06 49 00.2	-1.5
	baz=140,SNR=9.6						
N30M				S	S	06 57 11.5	+4.7
	baz=140						
YUK6	Outpost Mounta	58.79	341	P	P	06 49 00.2	-1.9
	baz=138						
YUK6				S	S	06 57 08.5	+1.1
	baz=138						
PINM	Pinnacle	58.81	339	P	P	06 49 00.9	-1.1
	baz=136						
YUK4	Talbot Arm	59.18	341	P	P	06 49 02.6	-2.1
	baz=138						
MESA	MESA	59.47	339	IAMs_20	IAMs_20	07 09 07.6	
	comp=Z,1µm,21.0s						
BDFB	Brasilia	59.48	113	P	P	06 49 08.3	+0.9
	comp=Z,6.9nm,0.9s,baz=295,slow=2.8,SNR=6.4						
BDFB				LR	LR	07 13 35.2	
	comp=Z,1µm,18.3s,baz=299,slow=35						
	comp=Z,6.9nm,0.9s						
BDFB	Brasilia	59.48	113	P	P	06 49 08.7	+1.2
BDFB				IAmb	IAmb	06 49 10.3	
	comp=Z,20nm,1.3s						
YAH	Yahtse	59.52	339	P	P	06 49 04.9	-2.3
YAH				IAmb	IAmb	06 49 14.9	
	comp=Z,14nm,1.2s						
YAH				IAMs_20	IAMs_20	07 16 44.0	
	comp=Z,1µm,19.0s						
M30M	Minto, Yukon	59.54	343	P	P	06 49 06.1	-1.0
M30M				IAmb	IAmb	06 49 14.3	
	comp=Z,14nm,1.8s						
M30M				IAMs_20	IAMs_20	07 15 17.3	
	comp=Z,898nm,19.0s						
M30M	Minto, Yukon	59.54	343	P	P	06 49 05.5	-1.6
	baz=140						
M30M				S	S	06 57 21.0	+4.3
	baz=140						
LOGN	Logan Glacier	59.59	340	IAMs_20	IAMs_20	07 16 40.7	
	comp=Z,1µm,19.0s						
SNH	Sunshine Point	59.79	338	IAMs_20	IAMs_20	07 17 30.2	
	comp=Z,1µm,20.0s						
CTGM	Chitina Glacie	59.80	340	IAMs_20	IAMs_20	07 16 07.4	
	comp=Z,1µm,20.0s						
CTG	Chitna Glacier	59.80	340	P	P	06 49 07.5	-1.5
	baz=135						
ROSB	Rosrio	59.84	98	*e*P	P	06 49 09.6	-0.3
ISLE	Juniper Island	59.90	339	IAMs_20	IAMs_20	07 16 56.1	
	comp=Z,1µm,19.0s						
SUCK	Suckling Hills	60.07	338	IAMs_20	IAMs_20	07 10 21.5	
	comp=Z,872nm,19.0s						
YUK3	Moose Creek	60.09	341	P	P	06 49 09.0	-2.1
	baz=136						
YUK3				S	S	06 57 26.9	+2.7
	baz=136						
IPMB	Ipameri, GO	60.10	116	*e*P	P	06 49 13.2	+1.5
COYC	Coyhaique	60.33	155	P	P	06 49 14.8	+2.2
HMT	Hamilton	60.42	338	IAMs_20	IAMs_20	07 09 18.9	
	comp=Z,864nm,20.0s						
MCARA	McCarthy VSAT	60.68	339	IAMs_20	IAMs_20	07 17 18.7	
	comp=Z,1µm,20.0s						
MCARA	McCarthy VSAT	60.68	339	P	P	06 49 13.2	-1.7
	baz=133						
MCARA				S	S	06 57 35.1	+3.7
	baz=133						
FRB	Frobisher Bay	60.70	17	P	P	06 49 12.7	-2.2
	comp=Z,5.9nm,0.9s,baz=233,slow=8.6,SNR=5.8						
FRB				LR	LR	07 17 18.4	
	comp=Z,969nm,18.6s,baz=212,slow=38						
	comp=Z,5.9nm,0.9s						
VRDI	Verde Repeater	60.73	339	P	P	06 49 14.4	-1.0
VRDI				IAmb	IAmb	06 49 17.6	
	comp=Z,14nm,1.4s						
VRDI				IAMs_20	IAMs_20	07 16 39.9	
	comp=Z,982nm,18.0s						
BMRM	Bremner River	60.97	338	P	P	06 49 15.9	-1.0
BMRM	Bremner River	60.97	338	P	P	06 49 14.6	-2.3
	baz=131						
BMRM				S	S	06 57 37.6	+2.4
	baz=131						
M27K	Edge Creek, AK	60.97	340	P	P	06 49 16.2	-0.8
M27K				IAmb	IAmb	06 49 23.5	
	comp=Z,11nm,1.1s						
M27K				IAMs_20	IAMs_20	07 12 00.3	
	comp=Z,971nm,21.0s						
M27K	Edge Creek, AK	60.97	340	P	P	06 49 14.2	-2.8
	baz=135						
M27K				S	S	06 57 39.1	+3.8

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      baz=135
GLB   Gilahina Butte    61.00 339  P        P        06 49 16.5  -0.5
GLB                                IAmb     IAmb     06 49 21.0
      comp=Z,11nm,1.1s
GLB                                IAMs_20  IAMs_20  07 17 31.1
      comp=Z,1µm,19.0s
EYAK  Cordova Ski Ar    61.12 338  P        P        06 49 15.2  -2.6
      baz=130
EYAK                               S        S        06 57 40.2  +3.3
      baz=130
M26K  Nabesna, AK       61.38 340  P        P        06 49 17.3  -2.3
M26K                               IAmb     IAmb     06 49 21.5
      comp=Z,19nm,1.5s
M26K                               IAMs_20  IAMs_20  07 15 43.9
      comp=Z,1µm,18.0s
M26K  Nabesna, AK       61.38 340  P        P        06 49 18.1  -1.5
      baz=134,SNR=6.9
M26K                               S        S        06 57 44.5  +4.2
      baz=134
N25K  Chitina, Valde    61.39 339  P        P        06 49 19.6  -0.2
N25K                               IAmb     IAmb     06 49 23.0
      comp=Z,18nm,1.2s
N25K                               IAMs_20  IAMs_20  07 17 10.4
      comp=Z,1µm,22.0s
N25K  Chitina, Valde    61.39 339  P        P        06 49 17.6  -2.1
      baz=132
N25K                               S        S        06 57 44.1  +3.5
      baz=132
DAWY  Dawson            61.44 343  P        P        06 49 18.1  -1.9
      baz=138,SNR=13
DAWY                               S        S        06 57 43.3  +2.3
      baz=138
BCAR  Beaver Creek A    61.45 341  P        P        06 49 18.8  -1.3
L27K  Beaver Creek,     61.46 341  P        P        06 49 19.5  -0.7
L27K                               IAmb     IAmb     06 49 23.7
      comp=Z,8.3nm,1.1s
L27K                               IAMs_20  IAMs_20  07 11 17.0
      comp=Z,1µm,22.0s
L27K  Beaver Creek,     61.46 341  P        P        06 49 18.5  -1.6
      baz=135,SNR=11
L27K                               S        S        06 57 45.0  +3.8
      baz=135
DIV   Divide            61.50 338  P        P        06 49 19.7  -0.8
DIV                                IAmb     IAmb     06 49 31.8
      comp=Z,15nm,1.1s
KLU   Klutina           61.80 338  P        P        06 49 21.1  -1.4
KLU                                IAmb     IAmb     06 49 27.0
      comp=Z,8.1nm,0.9s
KLU   Klutina           61.80 338  P        P        06 49 20.5  -2.0
      baz=130
KLU                                S        S        06 57 47.8  +2.2
      baz=130
GLI   Glacier Island    61.84 337  P        P        06 49 20.2  -2.5
      baz=129
GLI                                S        S        06 57 47.1  +1.0
      baz=129
L26K  Log Cabin Wild    61.92 340  IAMs_20  IAMs_20  07 18 03.4
      comp=Z,1µm,21.0s
L26K  Log Cabin Wild    61.92 340  P        P        06 49 21.2  -2.0
      baz=134
L26K                               S        S        06 57 48.7  +1.5
      baz=134
HARP  HAARP             62.12 339  P        P        06 49 22.5  -2.0
      baz=131
HARP                               S        S        06 57 55.2  +5.6
      baz=131
I29M  Ogilvie Camp,     62.12 344  P        P        06 49 22.6  -1.9
      baz=140
I29M                               S        S        06 57 48.9  -0.6
      baz=140
K27K  Chicken           62.22 342  IAMs_20  IAMs_20  07 15 09.2
      comp=Z,1µm,18.0s
K27K  Chicken           62.22 342  P        P        06 49 23.0  -2.2
      baz=135
K27K                               S        S        06 57 53.8  +3.0
      baz=135
M24K  Tolsona, Glenn    62.28 339  IAMs_20  IAMs_20  07 18 25.1
      comp=Z,1µm,21.0s
M24K  Tolsona, Glenn    62.28 339  P        P        06 49 24.1  -1.6
      baz=130
M24K                               S        S        06 57 54.8  +3.0
      baz=130
SEW   Seward            62.30 336  P        P        06 49 24.3  -1.4
      baz=126
KDAK  Kodiak Island     62.35 333  LR       LR       07 10 21.4
      comp=Z,814nm,18.5s,baz=150,slow=30
KDAK  Kodiak Island     62.35 333  P        P        06 49 24.5  -1.6
      baz=122
KDAK                               S        S        06 57 54.7  +2.2
      baz=122
OHAK  Old Harbor        62.38 332  P        P        06 49 24.8  -1.6
      baz=121
OHAK                               S        S        06 57 54.9  +2.0
      baz=121
SII   Sitkinak Islan    62.47 331  IAMs_20  IAMs_20  07 09 21.5
      comp=Z,1µm,21.0s
EGAK  Eagle             62.49 343  IAMs_20  IAMs_20  07 14 50.1
      comp=Z,964nm,20.0s
EGAK  Eagle             62.49 343  P        P        06 49 24.9  -2.1
      baz=136,SNR=8.6
EGAK                               S        S        06 57 56.6  +2.5
      baz=136
SCM   Sheep Creek Mo    62.53 338  S        S        06 57 55.9  +1.0
      baz=129
C36M  Paulatuk          62.59 352  P        P        06 49 25.7  -1.8
      baz=156
C36M                               S        S        06 57 55.2   0.0
      baz=156
PAX   Paxson            62.60 340  P        P        06 49 25.9  -2.0
      baz=131,SNR=6.8
PAX                                S        S        06 57 57.9  +2.1
      baz=131
BRSE  Bradley Lake S    62.62 335  P        P        06 49 25.8  -2.2
      baz=124
BRSE                               S        S        06 57 58.0  +2.1
      baz=124
O22K  Cooper Landing    62.63 336  IAMs_20  IAMs_20  07 13 00.4
      comp=Z,945nm,19.0s
O22K  Cooper Landing    62.63 336  S        S        06 57 58.1  +2.1
      baz=126
JANB  Januaria          62.68 112 eP        P        06 49 29.8  +0.6
BRLK  Bradley Lake      62.69 335  IAmb     IAmb     06 49 39.2
      comp=Z,14nm,1.1s
BRLK                               IAMs_20  IAMs_20  07 11 18.1
      comp=Z,986nm,19.0s
KNK   Knik Glacier      62.69 337  P        P        06 49 27.1  -1.4
      baz=128
KNK                                S        S        06 57 57.5  +0.6
      baz=128
CNPM  China Poot        62.70 335  IAMs_20  IAMs_20  07 11 08.4
      comp=Z,996nm,19.0s
NBPS  Pedro II - PI     62.75  99 eP        P        06 49 32.2  +2.5
RAR   Rarotonga         62.84 241  LR       LR       07 09 41.0
      comp=Z,876nm,19.1s,baz=65,slow=29
SML   Sawmill           62.89 338  P        P        06 49 27.5  -2.3
      baz=128,SNR=7.8
SML                                S        S        06 58 00.3  +1.0
      baz=128
HOM   Homer             62.95 335  IAMs_20  IAMs_20  07 10 49.0
      comp=Z,924nm,21.0s
HOM   Homer             62.95 335  P        P        06 49 28.9  -1.2
      baz=124
RC01  Rabbit Creek A    62.99 337  P        P        06 49 28.6  -1.8
      baz=126
RC01                               S        S        06 58 02.1  +1.5
      baz=126
J26L  Joseph Creek      63.02 342  P        P        06 49 28.9  -1.8
      baz=134,SNR=9.1
J26L                               S        S        06 58 04.3  +3.3
      baz=134
PMR   Palmer            63.06 337  S        S        06 58 03.6  +2.2
      baz=127
WAT6  Susitna Watana    63.15 339  P        P        06 49 29.1  -2.5
      baz=129,SNR=10
WAT6                               S        S        06 58 03.7  +0.8
      baz=129
FIS   Fire Island       63.22 337  IAMs_20  IAMs_20  07 10 18.8
      comp=Z,925nm,21.0s
K24K  Donnelly Dome     63.26 340  P        P        06 49 29.9  -2.3
      baz=131
K24K                               S        S        06 58 05.9  +2.0
      baz=131
INK   Inuvik            63.33 348  P        P        06 49 30.6  -1.9
      comp=Z,7.8nm,1.0s,baz=135,slow=8.8,SNR=16
INK                                LR       LR       07 15 18.6
      comp=Z,926nm,18.7s,baz=150,slow=34
      comp=Z,7.8nm,1.0s
INK   Inuvik            63.33 348  IAmb     IAmb     06 49 34.9
      comp=Z,16nm,1.2s
INK   Inuvik            63.33 348  P        P        06 49 30.1  -2.3
      baz=146,SNR=12
INK                                S        S        06 58 03.3  -1.2
      baz=146
DHY   Denali Highway    63.33 339  IAMs_20  IAMs_20  07 18 51.8
      comp=Z,1µm,19.0s
DHY   Denali Highway    63.33 339  P        P        06 49 30.1  -2.8
      baz=129
DHY                                S        S        06 58 04.9  -0.3
      baz=129
CAPN  Captain Cook N    63.37 336  S        S        06 58 08.2  +3.0
      baz=124
Q19K  Cape Douglas,     63.42 333  P        P        06 49 31.6  -1.7
      baz=121
Q19K                               S        S        06 58 06.5  +0.4
      baz=121
O20K  Slope Mountain    63.60 335  P        P        06 49 32.6  -1.9
      baz=123
O20K                               S        S        06 58 10.3  +2.0
      baz=123
WAT1  Susitna Watana    63.60 339  P        P        06 49 32.1  -2.4
      baz=128
P19K  Oil Pt            63.62 334  P        P        06 49 33.4  -1.3
P19K  Oil Pt            63.62 334  P        P        06 49 32.1  -2.5
      baz=122
P19K                               S        S        06 58 09.9  +1.3
      baz=122
J25K  Salcha River,     63.67 341  P        P        06 49 34.4  -0.5
J25K                               IAmb     IAmb     06 49 46.6
      comp=Z,15nm,1.6s
J25K                               IAMs_20  IAMs_20  07 18 05.4
      comp=Z,857nm,19.0s
J25K  Salcha River,     63.67 341  P        P        06 49 32.0  -2.9
      baz=132,SNR=7.2
J25K                               S        S        06 58 11.7  +2.7
      baz=132
SPU   Mount Spurr       63.97 336  P        P        06 49 34.4  -2.5
CUT   Chulitna          63.98 338  IAMs_20  IAMs_20  07 19 43.8
      comp=Z,817nm,20.0s
CUT   Chulitna          63.98 338  P        P        06 49 35.3  -1.5
      baz=126
SPCR  Spurr Chakacha    64.04 336  S        S        06 58 13.7  -0.1
      baz=124
HDA   Harding Lake      64.05 340  P        P        06 49 34.9  -2.4
      baz=130
HDA                                S        S        06 58 14.8  +1.1
      baz=130
HDA                                S        S        06 58 14.8  +1.1
      baz=130
RND   Reindeer          64.06 339  IAMs_20  IAMs_20  07 19 27.1
      comp=Z,1µm,20.0s
ILAR  Eielson Array     64.26 341  P        P        06 49 36.9  -1.9
      comp=Z,12nm,1.1s,baz=154,slow=5.0,SNR=59
ILAR                               LR       LR       07 16 24.0
      comp=Z,612nm,19.2s,baz=126,slow=35
      comp=Z,12nm,1.1s
ILAR  Eielson Array     64.26 341  P        P        06 49 37.0  -1.8
DIAM  Diamantina, MG    64.27 115 eP        P        06 49 41.0  +1.3
MCK   McKinley          64.29 339  P        P        06 49 38.2  -0.8
MCK                                IAmb     IAmb     06 49 57.5
      comp=Z,17nm,1.3s
MCK                                IAMs_20  IAMs_20  07 19 34.2
      comp=Z,1µm,20.0s
MCK   McKinley          64.29 339  P        P        06 49 36.4  -2.6
      baz=128
MCK                                S        S        06 58 16.9  +0.1
      baz=128
P18K  Big Mountain,     64.36 333  P        P        06 49 37.7  -1.9
      baz=120
P18K                               S        S        06 58 17.9  +0.1
      baz=120
O19K  Port Alsworth     64.38 334  IAMs_20  IAMs_20  07 11 31.7
      comp=Z,838nm,21.0s
O19K  Port Alsworth     64.38 334  S        S        06 58 16.9  -0.8
      baz=121
CHNA  Chernabura Isl    64.42 328  P        P        06 49 38.2  -1.7
      baz=114
CHNA                               S        S        06 58 20.4  +1.9
      baz=114
WRH   Wood River Hil    64.47 340  IAMs_20  IAMs_20  07 20 28.7
      comp=Z,783nm,18.0s
TRF   Thorofare Moun    64.61 339  P        P        06 49 40.2  -1.0
TRF                                IAMs_20  IAMs_20  07 19 44.4
      comp=Z,1µm,20.0s
TRF   Thorofare Moun    64.61 339  P        P        06 49 39.3  -1.9
      baz=126
COLA  College           64.64 341  IAMs_20  IAMs_20  07 17 38.4
      comp=Z,825nm,19.0s
COLA  College           64.64 341  S        S        06 58 22.3  +1.4
      baz=130
TCOL  CIGO, UAF Yank    64.65 341  IAMs_20  IAMs_20  07 17 39.4
      comp=Z,869nm,19.0s
POKR  Poker Plat Res    64.66 341  IAMs_20  IAMs_20  07 18 53.8
      comp=Z,848nm,22.0s
POKR  Poker Plat Res    64.66 341  P        P        06 49 38.8  -2.6
      baz=130
POKR                               S        S        06 58 20.9  -0.4
      baz=130
BWN   Browne            64.75 339  IAMs_20  IAMs_20  07 19 52.7
      comp=Z,1µm,18.0s
N19K  Bonanza Creek     64.77 335  IAMs_20  IAMs_20  07 12 24.0
      comp=Z,890nm,19.0s
N19K  Bonanza Creek     64.77 335  P        P        06 49 39.1  -3.2
      baz=121,SNR=8.3
N19K                               S        S        06 58 23.1  +0.3
      baz=121
MDM   Murphy Dome       64.82 341  IAmb     IAmb     06 50 27.2
      comp=Z,12nm,1.4s
MDM                                IAMs_20  IAMs_20  07 18 52.1
      comp=Z,804nm,20.0s
NEA2  Nenana            64.87 340  P        P        06 49 40.9  -1.9
      baz=128,SNR=17
NEA2                               S        S        06 58 24.3  +0.5
      baz=128
KTH   Kantishna Hill    64.89 339  IAMs_20  IAMs_20  07 19 19.1
      comp=Z,971nm,22.0s
PPLA  Purkeypile        64.98 338  P        P        06 49 41.4  -2.3
      baz=124,SNR=8.0
PPLA                               S        S        06 58 26.1  +0.5
      baz=124
SDPT  Sand Point        65.10 328  P        P        06 49 41.6  -2.7
      baz=113
A36M  Sachs Harbour     65.17 353  P        P        06 49 43.6  -0.9
A36M                               IAmb     IAmb     06 49 50.5
      comp=Z,14nm,1.0s
A36M  Sachs Harbour     65.17 353  P        P        06 49 41.0  -3.5
      baz=156
A36M                               S        S        06 58 28.9  +1.6
      baz=156
BPAW  Bear Paw Mtn.     65.24 339  IAMs_20  IAMs_20  07 20 13.2
      comp=Z,1µm,19.0s
BPAW  Bear Paw Mtn.     65.24 339  P        P        06 49 42.1  -3.0
      baz=126
BPAW                               S        S        06 58 27.8  -0.7
      baz=126
CAST  Castle Rocks      65.24 338  P        P        06 49 43.2  -2.0
CAST                               IAMs_20  IAMs_20  07 20 08.3
      comp=Z,919nm,19.0s
CAST  Castle Rocks      65.24 338  P        P        06 49 42.8  -2.4
      baz=125,SNR=15
H24K  Noodor Dome       65.27 341  IAmb     IAmb     06 49 46.0
      comp=Z,12nm,1.0s
H24K                               IAMs_20  IAMs_20  07 17 03.8
      comp=Z,990nm,18.0s
H24K  Noodor Dome       65.27 341  P        P        06 49 42.8  -2.6
      baz=130,SNR=15
H24K                               S        S        06 58 29.5  +0.7
      baz=130
N18K  Kilae Creek       65.29 334  P        P        06 49 43.6  -2.0
N18K                               IAmb     IAmb     06 49 55.8
      comp=Z,16nm,1.2s
N18K  Kilae Creek       65.29 334  P        P        06 49 42.7  -2.9
      baz=120,SNR=6.0
N18K                               S        S        06 58 27.6  -1.6
      baz=120
M19K  Big River Lodg    65.30 336  IAMs_20  IAMs_20  07 12 31.0
      comp=Z,836nm,21.0s
M19K  Big River Lodg    65.30 336  P        P        06 49 42.5  -3.1
      baz=122
M19K                               S        S        06 58 30.2  +1.0
      baz=122
I23K  Minto, Yukon-K    65.31 340  P        P        06 49 42.3  -3.3
      baz=128
I23K                               S        S        06 58 30.3  +1.1
      baz=128
BMAR  Burnt Mountain    65.36 344  P        P        06 49 44.5  -1.3
L20K  Farewell, AK      65.41 337  P        P        06 49 43.1  -3.2
      baz=122,SNR=9.6
L20K                               S        S        06 58 31.4  +0.9
      baz=122
CHUM  Lake Minchumin    65.59 338  P        P        06 49 44.6  -2.8
      baz=124
L19K  White Mountain    65.63 336  P        P        06 49 46.3  -1.5
L19K                               IAmb     IAmb     06 49 48.8
      comp=Z,11nm,1.2s
L19K                               IAMs_20  IAMs_20  07 19 57.8
      comp=Z,732nm,19.0s
L19K  White Mountain    65.63 336  P        P        06 49 45.3  -2.4
      baz=121,SNR=6.5
L19K                               S        S        06 58 31.3  -2.0
      baz=121
H23K  Yukon River       65.80 341  IAMs_20  IAMs_20  07 17 21.7
      comp=Z,887nm,21.0s
H23K  Yukon River       65.80 341  P        P        06 49 46.4  -2.3
      baz=128
H23K                               S        S        06 58 35.0  -0.2
      baz=128
K20K  Telida            65.95 337  P        P        06 49 47.8  -2.0
K20K                               IAMs_20  IAMs_20  07 20 45.1
      comp=Z,930nm,19.0s
K20K  Telida            65.95 337  P        P        06 49 46.5  -3.3
      baz=123,SNR=11
K20K                               S        S        06 58 36.5  -0.6
      baz=123
I21K  Tanana            66.22 340  IAMs_20  IAMs_20  07 14 17.1
      comp=Z,897nm,21.0s
I21K  Tanana            66.22 340  P        P        06 49 48.4  -3.0
      baz=125
J20K  Nowinta River     66.43 338  P        P        06 49 50.7  -2.1
J20K                               IAMs_20  IAMs_20  07 20 43.6
      comp=Z,776nm,20.0s
J20K  Nowinta River     66.43 338  P        P        06 49 49.6  -3.1
      baz=123,SNR=11
J20K                               S        S        06 58 40.6  -2.2
      baz=123
TTA   Tatalina          66.48 337  IAmb     IAmb     06 49 52.7
      comp=Z,6.4nm,1.0s
TTA   Tatalina          66.48 337  P        P        06 49 49.9  -3.4
      baz=120,SNR=6.5
TTA                                S        S        06 58 42.0  -1.7
      baz=120
RES   Resolute Bay      66.61   2  P        P        06 49 54.2  +0.5
      comp=Z,4.6nm,0.9s,baz=184,slow=9.5,SNR=4.4
RES                                LR       LR       07 17 51.1
      comp=Z,1µm,18.2s,baz=204,slow=35
      comp=Z,4.6nm,0.9s
H21K  Melozitna Rive    66.78 340  IAMs_20  IAMs_20  07 20 37.8
      comp=Z,754nm,19.0s
H21K  Melozitna Rive    66.78 340  P        P        06 49 52.1  -2.9
      baz=125,SNR=17
H21K                               S        S        06 58 44.9  -2.2
      baz=125
COLD  Coldfoot          66.87 342  P        P        06 49 54.6  -1.0
COLD                               IAmb     IAmb     06 49 58.1
      comp=Z,11nm,1.2s
COLD  Coldfoot          66.87 342  P        P        06 49 53.3  -2.3
      baz=128,SNR=11
COLD                               S        S        06 58 50.2  +2.1
      baz=128
TOLK  Toolik Lake Re    67.57 343  P        P        06 49 58.8  -1.2
TOLK                               IAmb     IAmb     06 50 02.6
      comp=Z,13nm,1.0s
TOLK                               IAMs_20  IAMs_20  07 18 44.5
      comp=Z,1µm,21.0s
TOLK  Toolik Lake Re    67.57 343  P        P        06 49 58.4  -1.7
      baz=129,SNR=13
TOLK                               S        S        06 58 55.6  -1.0
      baz=129
GCSA  Galena City Sc    67.73 338  P        P        06 49 58.5  -2.5
      baz=120
GCSA                               S        S        06 58 57.2  -1.3
      baz=120
RCBR  Riachuelo         68.45 100  LR       LR       07 19 21.8
      comp=Z,2µm,19.5s,baz=72,slow=35
SFJD  Kangerlussuaq     68.46  20  LR       LR       07 21 06.1
      comp=Z,1µm,19.1s,baz=234,slow=37
USHA  Ushuaia           69.17 159  LR       LR       07 14 46.1
      comp=Z,1µm,18.3s,baz=338,slow=31
ILULI Ilulissat         69.52  17  IAMs_20  IAMs_20  07 21 48.2
      comp=Z,1µm,20.0s
DY2G  Dye2              69.69  21 iP        P        06 50 07.2  -6.3
ANM   Nome              70.93 336  IAMs_20  IAMs_20  07 16 12.9
      comp=Z,665nm,19.0s
ANM   Nome              70.93 336  S        S        06 59 37.8  +1.5
      baz=112
RDOG  Red Dog Mine      71.43 340  IAMs_20  IAMs_20  07 22 26.8
      comp=Z,1µm,21.0s
AFI   Afiamalu          71.59 252  LR       LR       07 15 12.2
      comp=Z,479nm,18.4s,baz=78,slow=30
TNA   Tin City          72.30 337  P        P        06 50 28.8  -0.2
      baz=110
TNA                                S        S        06 59 53.9  +1.8
      baz=110
ICESG Greenland Ices    73.08  20 iP        P        06 50 29.6  -4.5
GAMB  Gambell           73.30 334  IAMs_20  IAMs_20  07 18 07.6
      comp=Z,711nm,21.0s
GAMB  Gambell           73.30 334  S        SKiKP    07 00 05.0  -1.8
      baz=106
SUMG  Summit            74.77  16  P        P        06 50 42.6  -1.3
SUMG                               IAmb     IAmb     06 50 45.6
      comp=Z,20nm,1.1s
SUMG  Summit            74.77  16 iP        P        06 50 42.2  -1.8
PMSA  Palmer Station    78.38 164  LR       LR       07 17 31.8
      comp=Z,416nm,19.5s,baz=326,slow=29
BORG  Borgarnes         79.12  26  LR       LR       07 26 50.2
      comp=Z,366nm,18.8s,baz=273,slow=36
SHEM  Shemya Is, Ala    79.17 322  LR       LR       07 18 09.6
      comp=Z,993nm,21.7s,baz=110,slow=30
SCO   Scoresbysund      79.36  20  IAMs_20  IAMs_20  07 29 50.5
      comp=Z,794nm,18.0s
RAO   Raoul Island      80.92 239  LR       LR       07 18 04.1
      comp=Z,563nm,21.6s,baz=108,slow=29
BILL  Bilibino          82.69 338  IAMs_20  IAMs_20  07 24 29.7
      comp=Z,707nm,18.0s
JMIC  Jan Mayen         83.81  19  LR       LR       07 30 17.6
      comp=Z,841nm,18.1s,baz=254,slow=37
URZ   Urewera           87.09 231  LR       LR       07 21 44.5
      comp=Z,709nm,21.7s,baz=31,slow=29
URZ   Urewera           87.09 231  IAMs_20  IAMs_20  07 21 33.9
      comp=Z,757nm,21.0s
SPITS Spitsbergen Ar    87.81  10  LR       LR       07 32 49.9
      comp=Z,1µm,18.6s,baz=0.0,slow=37
PGAV  Gavieira, Arco    88.16  48 eLR       LR       07 20 05.6
      comp=Z,652nm,22.0s
EKA   Eskdalemuir Ar    88.94  34  LR       LR       07 31 16.3
      comp=Z,626nm,19.2s,baz=280,slow=35
MTE   Manteigas         88.96  49 eS        S        07 02 51.5  +4.1
MTE                               eSS       SS       07 08 44.1  +4.3
MTE   Manteigas         88.96  49 eLR       LR       07 20 06.7
      comp=Z,690nm,20.0s
MTE   Manteigas         88.96  49  IAMs_20  IAMs_20  07 29 10.4
      comp=Z,774nm,20.0s
PETK  Petropavlovsk-    88.99 323  LR       LR       07 23 33.5
      comp=Z,336nm,21.4s,baz=85,slow=30
MVO   Moncorvo          89.21  49 ePP       PP       06 55 31.8  +1.5
MVO   Moncorvo          89.21  49 eLR       LR       07 20 39.6
      comp=Z,519nm,18.0s
PMRV  Marv??o           89.24  50 eS        SKSac    07 02 34.7  +4.1
PMRV                              eSS       SS       07 08 53.9   +10
PMRV  Marv??o           89.24  50 eLR       LR       07 19 50.0
      comp=Z,776nm,18.0s
PVAQ  Vaqueiros         89.33  52 ePP       PP       06 55 32.6  +1.3
PVAQ  Vaqueiros         89.33  52 eLR       LR       07 20 54.9
      comp=Z,461nm,20.0s
MA2   Magadan           91.03 331  IAMs_20  IAMs_20  07 31 30.8
      comp=Z,476nm,19.0s
ESDC  Sonseca Array     91.79  50  LR       LR       07 30 30.7
      comp=Z,583nm,18.6s,baz=292,slow=34
RPZ   Rata Peaks        92.61 226  LR       LR       07 24 01.7
      comp=Z,708nm,21.8s,baz=82,slow=29
MDT   Midelt            92.68  56  LR       LR       07 31 22.6
      comp=Z,257nm,18.1s,baz=306,slow=34
TIXI  Tiksi             93.37 346  LR       LR       07 36 32.1
      comp=Z,326nm,18.4s,baz=359,slow=37
TIXI  Tiksi             93.37 346  P        P        06 52 17.2  -1.5
TIXI                               IAMs_20  IAMs_20  07 32 57.4
      comp=Z,606nm,20.0s
DZM   Mont Dzumac       93.45 248  LR       LR       07 25 06.9
      comp=Z,408nm,21.6s,baz=109,slow=30
DZM   Mont Dzumac       93.45 248 eLR       LR       07 22 33.2
      comp=Z,798nm,27.3s
NOA   NORSAR Array B    94.28  26  LR       LR       07 32 49.9
      comp=Z,804nm,21.6s,baz=285,slow=34
ARCES ARCESS Array B    94.86  16  LR       LR       07 35 02.7
      comp=Z,1µm,21.9s,baz=307,slow=36
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEV	Kevo	95.12	16	IAMs_20	IAMs_20	07 34 09.4	
	comp=Z,704nm,22.0s						
HFS	Hagfors	95.78	27	LR	LR	07 33 21.3	
	comp=Z,981nm,21.8s,baz=283,slow=34						
SSB	Saint Sauveur	96.40	43	IAMs_20	IAMs_20	07 29 14.2	
	comp=Z,586nm,20.0s						
KOWA	Kowa	96.67	74	IAMs_20	IAMs_20	07 37 22.7	
	comp=Z,676nm,20.0s						
ECH	Echery	97.12	39	IAMs_20	IAMs_20	07 30 57.6	
	comp=Z,741nm,22.0s						
DBIC	Dimbokro	97.16	82	LR	LR	07 33 50.3	
	comp=Z,334nm,19.9s,baz=291,slow=34						
BFO	Black Forest	97.81	39	IAMs_20	IAMs_20	07 33 36.8	
	comp=Z,662nm,21.0s						
SENIN	Lac Senin/Sane	97.86	41	IAMs_20	IAMs_20	07 32 53.5	
	comp=Z,561nm,20.0s						
QSPA	South Pole Qui	98.17	180	LR	LR	07 30 36.4	
	comp=Z,696nm,19.4s,baz=114,slow=32						
QSPA	South Pole Qui	98.17	180	P	Pdif	06 52 43.5	+2.9
LVZ	Lovozero	98.41	15	IAMs_20	IAMs_20	07 36 49.3	
	comp=Z,708nm,21.0s						
VNDA	Vanda	99.04	193	LR	LR	07 28 53.2	
	comp=Z,387nm,20.2s,baz=95,slow=30						
YAK	Yakutsk	99.05	338	IAMs_20	IAMs_20	07 42 38.0	
	comp=Z,559nm,19.0s						
DAVOX	Davos/Dischmat	99.36	40	LR	LR	07 35 22.3	
	comp=Z,485nm,19.9s,baz=294,slow=34						
CLL	Collm	99.39	35	*e*PP	PP	06 56 51.0	+1.9
CLL				*e*x	x	06 57 44.0	
CLL				*e*PS	PS	07 05 45.0	-1.4
CLL				*e*PPS	PPS	07 06 27.0	
CLL				*e*SS	SS	07 11 00.0	-7.5
NKC	Novy Kostel	99.53	36	*e*SP	SP	07 05 37.6	-8.7
NKC				AMS	AMS	07 31 00.0	
	comp=Z,600nm,25.5s						
PVCC	Panska Ves	100.62	35	AMS	AMS	07 35 30.0	
	comp=Z,800nm,24.1s						
KHC	Kasperske Hory	100.67	37	*e*SP	SP	07 05 54.3	-4.3
KHC				*e*SS	SS	07 11 33.8	+8.2
KHC				AMS	AMS	07 37 10.0	
	comp=Z,1μm,19.3s						
PRU	Pruhonice	100.85	36	*e*SP	SP	07 05 59.9	-0.5
PRU				*e*SS	SS	07 11 37.6	+10
PRU				AMS	AMS	07 35 50.0	
	comp=Z,700nm,20.0s						
CKRC	Cesky Krumlov	101.24	37	*e*x	x	07 05 56.8	
CKRC				*e*SS	SS	07 11 41.3	+7.8
CKRC				AMS	AMS	07 37 30.0	
	comp=Z,900nm,18.1s						
CHVC	Chvalec	101.44	35	AMS	AMS	07 33 20.0	
	comp=Z,800nm,22.2s						
UPC	Upice	101.45	35	AMS	AMS	07 33 20.0	
	comp=Z,700nm,22.1s						
OSTC	Ostas	101.54	35	AMS	AMS	07 33 20.0	
	comp=Z,800nm,22.1s						
DPC	Dobruska-Polom	101.70	35	*e*x	x	07 05 51.5	
DPC				*e*SS	SS	07 11 49.3	+9.5
DPC				AMS	AMS	07 36 00.0	
	comp=Z,600nm,18.8s						
TREC	Trest	101.72	36	AMS	AMS	07 35 40.0	
	comp=Z,1μm,20.4s						
KRLC	Kraliky	102.09	35	AMS	AMS	07 36 20.0	
	comp=Z,400nm,23.9s						
OKC	Ostrava-Krasne	102.98	35	*e*SS	SS	07 12 08.4	+11
OKC				AMS	AMS	07 30 30.0	
	comp=Z,500nm,31.6s						
MAUC	Maruska	103.03	35	AMS	AMS	07 34 10.0	
	comp=Z,2μm,24.8s						
NACGM	Naroch	104.54	27	PP	PP	06 57 32.6	+5.0
	baz=308						
PSZ	Piszkesteto	104.94	36	IAMs_20	IAMs_20	07 41 21.9	
	comp=Z,633nm,21.0s						
CEL	Celeste	106.88	46	IAMs_20	IAMs_20	07 36 55.2	
	comp=Z,428nm,19.0s						
DIVS	Divibare	106.93	39	IAMs_20	IAMs_20	07 36 22.1	
	comp=Z,575nm,22.0s						
TIP	Timpagrande	107.10	45	IAMs_20	IAMs_20	07 40 41.6	
	comp=Z,465nm,20.0s						
PDG	Podgorica	107.28	41	IAMs_20	IAMs_20	07 44 08.8	
	comp=Z,455nm,21.0s						
TIR	Tirane	108.20	42	IAMs_20	IAMs_20	07 42 47.2	
	comp=Z,552nm,20.0s						
INU	Inuyama	108.76	312	IAMs_20	IAMs_20	07 31 36.8	
	comp=Z,357nm,22.0s						
MDJ	Mudanjiang	109.23	323	IAMs_20	IAMs_20	07 36 27.2	
	comp=Z,504nm,21.0s						
MILM	Milestii Mici	110.50	33	*e*PP	PP	06 58 10.0	-1.4
MILM				*e*L	L	07 31 37.0	
MILM				*e*LQ	LQ	07 36 32.0	
	comp=Z,300nm,23.0s						
MILM				LRM	MLR	07 46 17.0	
	comp=Z,400nm,20.0s						
HIA	Hailar	111.62	331	IAMs_20	IAMs_20	07 45 33.0	
	comp=Z,522nm,20.0s						
KARP	Karpathos	116.09	44	IAMs_20	IAMs_20	07 46 30.4	
	comp=Z,415nm,21.0s						
ISP	Isparta	117.02	40	IAMs_20	IAMs_20	07 47 17.9	
	comp=Z,446nm,21.0s						
ANTO	Ankara	117.17	37	IAMs_20	IAMs_20	07 45 54.7	
	comp=Z,446nm,21.0s						
BRTR	Keskin Array B	117.76	37	PKiKP	PKPdf	06 57 49.2	-1.6
	comp=Z,1.0nm,0.9s,baz=344,slow=3.1,SNR=2.7						
KIV	Kislovodsk	119.55	28	IAMs_20	IAMs_20	07 47 22.1	
	comp=Z,364nm,22.0s						
BJT	Baijiatuau	119.86	326	IAMs_20	IAMs_20	07 42 23.9	
	comp=Z,442nm,20.0s						
HHC	Hu-ho-hao-te	121.69	330	*e*P	PKPdf	06 57 53.3	-5.0
WRA	Warramunga Arr	123.31	252	PKP	PKiKP	06 58 00.6	-1.5
	comp=Z,1.7nm,1.0s,baz=91,slow=2.1,SNR=8.8						
ASAR	Alice Springs	123.42	247	PKP	PKiKP	06 58 00.6	-1.7
	comp=Z,0.7nm,0.6s,baz=90,slow=1.9,SNR=8.8						
GNI	Garni	123.46	29	IAMs_20	IAMs_20	07 48 29.8	
	comp=Z,486nm,22.0s						
MKAR	Makanchi Array	125.05	355	PKP	PKiKP	06 58 03.3	-1.5
	comp=Z,0.5nm,0.6s,baz=303,slow=0.5,SNR=5.2						
WMQ	Urumqi	127.31	350	*e*P	PKiKP	06 58 09.6	+0.1
WMQ				LR	LR		
	comp=N,770nm,17.7s						
WMQ				LR	LR		
	comp=E,470nm,17.1s						
WMQ				LR	LR		
	comp=Z,810nm,18.5s						
BOSA	Boshof	127.42	120	PKP	PKiKP	06 58 09.4	-0.7
	comp=Z,1.7nm,0.8s,baz=171,slow=4.2,SNR=2.5						
TNTI	Ternate	128.91	278	IAMs_20	IAMs_20	07 43 19.1	
	comp=Z,359nm,22.0s						
LZH	Lanzhou	129.18	332	*e*PKP	PKPdf	06 58 09.1	-3.8
LZH				sPKP		06 58 27.5	
LZH				LR	LR		
	comp=N,500nm,17.6s						
LZH				LR	LR		
	comp=E,480nm,17.6s						
LZH				LR	LR		
	comp=Z,830nm,19.0s						
RAYN	Ar Rayn	136.00	44	IAMs_20	IAMs_20	07 57 55.8	
	comp=Z,305nm,21.0s						
QIZ	Qiongzhong	137.73	310	PKP	PKPdf	06 58 25.5	-3.6
QIZ				PP	PP	07 01 15.8	+0.6
PZH	PanZhiHua	137.91	326	PKP	PKiKP	06 58 29.1	-2.4
FURI	Furi	138.31	67	IAMs_20	IAMs_20	07 57 27.4	
	comp=Z,312nm,20.0s						
ATD	Arta Tunnel	140.87	60	IAMs_20	IAMs_20	07 58 03.7	
	comp=Z,349nm,21.0s						
UOSS	Minazif	141.38	31	IAMs_20	IAMs_20	08 08 03.4	
	comp=Z,269nm,21.0s						
WSAR	Wadi Sarin	144.01	29	PKP	PKPdf	06 58 38.0	-2.4
	comp=Z,5.1nm,0.6s,baz=3.5,slow=2.4,SNR=5.2						
CMAR	Chiang Mai Arr	145.73	321	PKPbc	PKPab	06 58 43.6	-0.5
	comp=Z,3.2nm,0.7s,baz=17,slow=1.8,SNR=13						
CMAR	Chiang Mai Arr	145.73	321		PKPab	06 58 43.4	-0.7

MEX ***16*** *06:40:06.5±0.8, 13°.81N×92°.76W, h16^{km}±153^{km}, MD4.0*
GCG ***16*** *06:40:08.1±1.3, 13°.56N×92°.56W, h32^{km}±999^{km}, MD4.0*
ISC 16 06:40:04.9±1.1**, 13°.95N**±0°.07×**92°.79W**±0°.05**, h22**^{km}±8^{km}**,**
n23, σ2^{s}09/33**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.08	28	*e*P	Pn	06 40 25.2	+0.6
THIG				*i* S	Sb	06 40 38.6	+0.1
PATR	El Naranjo	1.28	25	*e*P	Pn	06 40 27.7	0.0
PATR				*i* S	Sn	06 40 44.2	0.0
CHUJ	Union Juarez	1.31	30	*e*P	Pn	06 40 28.4	+0.2
CHUJ				*i* S	Sn	06 40 45.5	+0.4
PAVE	Pavencul	1.37	26	*e*P	Pn	06 40 29.1	+0.2
PAVE				*e*S	Sn	06 40 47.3	+0.8
PCIG		1.79	347	*e*P	Pn	06 40 34.8	+0.3
PCIG				*e*S	Sn	06 40 56.8	+0.1
FUG	Fuego 3	1.95	75	*e*P	Pn	06 40 38.0	+1.2
FUG				*e*S	Sn	06 41 01.5	+0.7
PCG	Pacaya	2.16	78	*e*P	Pn	06 40 41.1	+1.3
PCG				*e*S	Sn	06 41 07.5	+1.4
CCIG	Comitan	2.40	15	*e*P	Pb	06 40 46.6	-1.0
CCIG				*e*S	Sn	06 41 14.6	+2.7
NBG	Las Nubes	2.45	75	*e*P	Pb	06 40 47.2	-1.2
NBG				*e*S	Sn	06 41 15.7	+2.4
TGIG		2.83	354	*e*P	Pn	06 40 51.1	+2.2
TGIG				*e*S	Sn	06 41 21.2	-1.1
MRL	Marmol	3.21	69	*e*P	Pn	06 40 57.1	+2.9
UXUV	UXUV	3.59	339	*e*P	Pn	06 41 02.5	+3.2
UXUV				*e*S	Sn	06 41 45.5	+4.4
CMIG	Matias Romero	3.72	327	*e*P	Pn	06 41 02.3	+1.3
CMIG				*e*S	Sn	06 41 45.9	+1.7
NEUV	Arroyo Zacate	4.73	323	*e*P	Pn	06 41 15.6	+0.7
NEUV				*i* S	Sn	06 42 10.6	+1.4
ZARC	Zaragoza, Cauc	18.74	108	*e*P	Pn	06 44 33.3	+10
OTAV	Otavalo	19.68	133	IAMs_20	IAMs_20	06 52 00.5	
	comp=Z,5μm,22.0s						
OTAV	Otavalo	19.68	133	*e*P	P	06 44 28.8	-4.3
OTAV	Otavalo	19.68	133	*e*P	Pn	06 44 35.9	+1.3
OTAV	Otavalo	19.68	133	P	Pn	06 44 36.0	+1.4
ORTC	Ortega, Tolima	19.98	118	*e*P	Pn	06 44 41.7	+3.9
ROSC	El Rosal	20.33	115	*e*P	P	06 44 30.1	-10
ITTB	Itaituba	41.02	114	*e*P	P	06 47 47.9	+1.0
DAG	Danmarks Havn	72.89	13	*i* P	P	06 51 28.0	-3.8

IDC ***16*** *06:48:24.6±2.4, 53°.61N×86°.99E, h0^{km}, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=23.0km s-min=13.2km az=74.0*
NNC ***16*** *06:48:26.0±3.0, 53°.53N×86°.77E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=23.2km s-min=11.7km az=61.0, Suspected Mining explosion.*
ISC 16 06:48:24.5±3.4**, 53°.7N**±0°.1×**86°.9E**±0°.2**, h0**^{km}**, n8, σ2^{s}00**/13**,**
6C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.25	284	*i*		06 57 00.0	
	0.1nm,0.8s,baz=102,slow=324,SNR=7.2						
ZAA0	Zalesovo Array	1.25	284	⇓P	Pb	06 48 47.9	-1.0
	0.6nm,0.2s						
ZAA0				⇑S	Sn	06 49 06.7	-0.1
	1.3nm,0.3s						
ZALV	Zalesovo Beam	1.25	284	Pg	Pg	06 48 47.9	-0.6
	5.7nm,0.3s,baz=108,slow=16,SNR=22						
ZALV				Lg	Lg	06 49 07.4	
	4.4nm,0.3s,baz=108,slow=28,SNR=5.0						
ZALV				Rg	Rg	06 49 19.0	
	18nm,0.9s,baz=98,slow=32,SNR=16						
KURK	Kurchatov	5.88	243	⇑Pn	Pn	06 49 54.7	+1.9
	1.3nm,0.6s						
KURK				⇑Sn	Sn	06 51 00.4	-0.4
	0.3nm,0.4s						
KURK				⇑Lg	Lg	06 51 31.1	
	11nm,1.4s						
KURBB	Kurchatov Arra	5.98	243	Pn	Pn	06 49 55.8	+1.7
	0.2nm,0.3s,baz=62,slow=14,SNR=7.4						
KURBB				Sn	Sn	06 51 07.2	+3.9
	baz=57,slow=20,SNR=1.6						
KURBB				Lg	Lg	06 51 34.7	
	baz=60,slow=31,SNR=5.9						
	1.0nm,0.3s						
KURBB	Kurchatov Arra	5.98	243	⇓Pn	Pn	06 49 54.7	+0.6
	1.3nm,0.2s						
KURBB				⇓Sn	Sn	06 51 00.4	-2.8
	0.9nm,0.3s						
KURBB				⇓Lg	Lg	06 51 33.3	
	6.7nm,0.8s						
MK31	Makanchi Array	7.49	205	⇑Pn	Pn	06 50 16.0	+1.1
	0.2nm,0.2s,baz=28,slow=13,SNR=32						
MK31				⇑Sn	Sn	06 51 38.4	-2.0
	0.5nm,0.5s,baz=28,slow=27,SNR=6.4						
MK31				⇓Lg	Lg	06 52 16.6	
	1.5nm,0.7s,baz=23,slow=20,SNR=5.1						
MKAR	Makanchi Array	7.49	205	Pn	Pn	06 50 16.2	+1.4
	0.8nm,0.3s,baz=27,slow=14,SNR=38						
MKAR				Sn	Sn	06 51 39.6	-0.8
	0.3nm,0.3s,baz=24,slow=31,SNR=8.2						
MKAR				Lg	Lg	06 52 19.1	
	baz=27,slow=29						
	1.2nm,0.3s						

IDC 16 06:50:57.7±3.0**, 53°.41N**×**87°.49E, h0**^{km}**, mbtmp2.7**/2**,**
ML2.2/1**, Error ellipse: s-maj=27.0km s-min=17.2km**
az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.68	290	*i*		07 01 41.4	
	baz=105,slow=326,SNR=2.5						
ZALV	Zalesovo Beam	1.68	290	Pn	Pn	06 51 27.1	-1.1
	1.3nm,0.3s,baz=108,slow=12,SNR=5.1						
ZALV				Lg	Lg	06 51 51.1	
	1.5nm,0.3s,baz=112,slow=25,SNR=3.0						
KURBB	Kurchatov Arra	6.20	247	Pn	Pn	06 52 31.2	+0.9
	0.1nm,0.3s,baz=62,slow=14,SNR=3.3						
KURBB				Lg	Lg	06 54 14.1	
	baz=63,slow=31,SNR=6.9						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.42	209	Pn	Pn	06 52 48.6	+1.4
	0.2nm,0.5s,baz=25,slow=13,SNR=1.4						
MKAR				Lg	Lg	06 54 52.1	
	0.1nm,0.3s,baz=18,slow=29,SNR=3.2						

IDC 16 06:51:59.2±10.0**, 17°.56S**×**173°.37W, h0**^{km}**, mb3.5**/3**,**
mbtmp3.5/3**, Error ellipse: s-maj=478.9km**
s-min=41.0km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.41	259	P	P	07 00 50.6	-0.7
	0.8nm,1.2s,baz=98,slow=7.0,SNR=1.6						
	0.8nm,1.2s						
ASAR	Alice Springs	49.50	254	P	P	07 00 52.2	+0.3
	0.3nm,0.5s,baz=89,slow=8.7,SNR=6.6						
	0.3nm,0.5s						
ILAR	Eielson Array	84.55	11	P	P	07 04 33.9	0.0
	0.4nm,0.9s,baz=206,slow=6.7,SNR=4.3						
	0.4nm,0.9s						

IDC 16 06:54:35.5±3.6**, 55°.63N**×**86°.03E, h0**^{km}**, mbtmp2.7**/2**,**
ML2.5/2**, Error ellipse: s-maj=31.1km s-min=26.2km**
az=41.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.83	203	*i*		07 07 13.8	
	baz=21,slow=321,SNR=4.2						
ZALV	Zalesovo Beam	1.83	203	Pn	Pn	06 55 07.3	-0.7
	2.0nm,0.3s,baz=22,slow=16,SNR=17						
ZALV				Lg	Lg	06 55 33.2	
	0.8nm,0.3s,baz=25,slow=27,SNR=6.4						
KURBB	Kurchatov Arra	6.75	225	Pn	Pn	06 56 15.4	-0.2
	baz=41,slow=14,SNR=4.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	9.15	196	Pn	Pn	06 56 49.2	+0.5
	0.1nm,0.3s,baz=21,slow=9.9,SNR=2.7						
	0.1nm,0.4s						

IASPEI ***16*** *07:02:38.9±0.9, 38°.85N±0°.02×21°.75E±0°.02, h11^{km}±6^{km}, mb3.5/8, Error ellipse: s-maj=3.6km s-min=2.7km az=118.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
IDC ***16*** *07:02:38.0±1.2, 38°.87N×21°.66E, h0^{km}, mb3.4/8, mbtmp3.5/11, ML3.5/3, Error ellipse: s-maj=23.8km s-min=19.9km az=104.0*
THE ***16*** *07:02:39.1, 38°.86N×21°.74E, h11^{km}, ML3.5/9, Error ellipse: s-maj=0.9km s-min=0.5km az=273.0*
ATH ***16*** *07:02:39.2, 38°.84N×21°.76E, h10^{km}±2^{km}, ML3.3/12, Error ellipse: s-maj=2.1km s-min=0.6km az=322.0*
ISC 16 07:02:39.3±0.8**, 38°.85N**±0°.02×**21°.76E**±0°.02**, h11**^{km}±5^{km}**,**
n71, σ1^{s}28/96**, mb3.5**/8**, 15C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.08	32	P	Pg	07 02 41.3	-0.5
EVR				S	Sg	07 02 43.3	-0.5
EVR				AML	AML	07 02 43.7	
EVR				AML	AML	07 02 43.8	
EVR	Evrytania	0.08	32	P	Pg	07 02 41.4	-0.5
EVR				S	Sg	07 02 43.2	-0.5
	161μm,0.4s						
ANX	Ano Chora	0.29	154	P	Pg	07 02 44.8	-0.3
ANX				S	Sg	07 02 48.2	-0.9
ANX				AML	AML	07 02 53.3	
	comp=N,39872μm,0.4s						
ANX				AML	AML	07 02 53.8	
	comp=E,36997μm,0.5s						
ANX	Ano Chora	0.29	154	P	Pg	07 02 44.9	-0.3
ANX				S	Sg	07 02 49.7	+0.6
	comp=E,19μm,0.4s						
PVO	Paravola	0.30	218	P	Pg	07 02 44.7	-0.6
PVO				S	Sg	07 02 49.5	+0.2
MAKR	Makrakomi, Fth	0.33	61	P	Pg	07 02 46.0	+0.1
MAKR				S	Sg	07 02 51.1	+0.6
MAKR				AML	AML	07 02 52.7	
	comp=N,21582μm,0.5s						
MAKR				AML	AML	07 02 53.7	
	comp=E,11998μm,0.4s						
MAKR	Makrakomi, Fth	0.33	61	P	Pg	07 02 46.1	+0.1
MAKR				S	Sg	07 02 51.6	+1.1
	comp=E,23μm,0.5s						
EFP	Efpalio	0.44	165	P	Pg	07 02 47.4	-0.6
EFP				S	Sg	07 02 53.8	0.0
EFP				AML	AML	07 02 59.7	
	comp=N,18636μm,0.4s						
EFP				AML	AML	07 03 00.0	
	comp=E,26000μm,0.7s						
EFP	Efpalio	0.44	165	P	Pg	07 02 47.5	-0.4
EFP				S	Sg	07 02 54.6	+0.8
	comp=E,8μm,0.4s						
AGG	Agios Georgios	0.48	69	P	Pg	07 02 48.6	0.0
AGG				S	Sg	07 02 55.6	+0.6
AGG				AML	AML	07 02 57.1	
	comp=E,13233μm,0.5s						
AGG				AML	AML	07 02 58.0	
	comp=N,15129μm,0.6s						
AGG	Agios Georgios	0.48	69	P	Pg	07 02 48.3	-0.4
AGG				S	Sb	07 02 56.4	-0.4
	comp=N,7μm,0.5s						
LAKA	Lakka	0.64	164	P	Pg	07 02 50.7	-0.9
LAKA				S	Sg	07 02 59.9	-0.1
LAKA				AML	AML	07 03 03.7	
	comp=N,10620μm,0.5s						
LAKA				AML	AML	07 03 09.6	
	comp=E,11671μm,0.7s						
ALIK	Aliki, Aigiali	0.65	155	P	Pg	07 02 51.4	-0.5
ALIK				S	Sb	07 03 01.6	-0.2
THL	Klokotos Trika	0.74	16	P	Pg	07 02 52.7	-0.8
THL				S	Sg	07 03 03.5	+0.3
THL				AML	AML	07 03 11.5	
	comp=E,1525μm,0.8s						
THL				AML	AML	07 03 13.3	
	comp=N,1249μm,0.8s						
THL	Klokotos Trika	0.74	16	P	Pg	07 02 52.9	-0.7
THL				S	Sg	07 03 03.3	+0.1
	comp=N,660nm,0.8s						
RLS	Riolos of Patr	0.83	196	P	Pg	07 02 55.0	-0.2
RLS				S	Sg	07 03 05.8	-0.2
RLS				AML	AML	07 03 10.8	
	comp=N,3088μm,0.4s						
RLS				AML	AML	07 03 13.7	
	comp=E,2969μm,0.8s						
RLS	Riolos of Patr	0.83	196	P	Pg	07 02 54.6	-0.6
NYDR	Nydri-Lefkada	0.84	261	P	Pg	07 02 54.6	-0.9
LKD2	Lefkada island	0.86	266	P	Pg	07 02 55.3	-0.6
TSLK	Tsoukalades, L	0.86	268	P	Pg	07 02 55.5	-0.4
KLV	Kalavryta, Ach	0.86	159	P	Pg	07 02 55.1	-0.9
KLV				S	Sg	07 03 07.1	-0.2
KLV				AML	AML	07 03 09.3	
	comp=E,2143μm,0.8s						
KLV				AML	AML	07 03 09.4	
	comp=N,2475μm,0.6s						
EVGI	Lefkada island	0.89	255	P	Pg	07 02 55.7	-0.8
DRO	Drossia	0.90	182	P	Pg	07 02 55.8	-0.8
DRO				S	Sg	07 03 07.6	-0.7
DRO				AML	AML	07 03 13.2	
	comp=E,2095μm,0.5s						
DRO				AML	AML	07 03 17.2	
	comp=N,3172μm,0.7s						
DRO	Drossia	0.90	182	P	Pg	07 02 56.0	-0.6
DRO				S	Sb	07 03 09.1	+0.2
	comp=N,2μm,0.5s						
ATAL	Atalanti	1.00	99	P	Pg	07 02 58.0	-0.5
ATAL	Atalanti	1.00	99	P	Pg	07 02 57.8	-0.7
FSK	Fiskardo	1.01	248	P	Pg	07 02 58.0	-0.8
FSK				S	Sn	07 03 12.8	-0.9
FSK				AML	AML	07 03 20.1	
	comp=N,1771μm,0.9s						
FSK				AML	AML	07 03 26.1	
	comp=E,2404μm,0.6s						
KPRO	Kipourio	1.14	345	P	Pb	07 03 00.1	-1.0
XOR	Xorichti	1.23	65	P	Pn	07 03 02.3	-0.1
XOR				S	Sb	07 03 18.1	-0.3
XOR				AML	AML	07 03 23.0	
	comp=N,3032μm,0.9s						
XOR				AML	AML	07 03 23.4	
	comp=E,1514μm,0.6s						
XOR	Xorichti	1.23	65	P	Pn	07 03 01.9	-0.5
XOR				S	Sb	07 03 18.2	-0.2
	comp=E,1μm,0.9s						
IGT	Igoumenitsa	1.30	302	P	Pb	07 03 03.4	-0.4
VILL	Villia	1.40	119	P	Pn	07 03 05.1	+0.3
VILL				S	Sn	07 03 23.6	+0.3
	comp=E,952nm,1.1s						
EPID	Epidavros	1.64	139	P	Pn	07 03 08.7	+0.6
VAY	Valandovo	2.54	14	*i* Pn	Pn	07 03 21.1	+0.6
TIR	Tirane	2.88	330	⇑P	Pn	07 03 27.4	+2.2
VTS	Vitosha	3.92	16	⇑P	Pn	07 03 40.4	+0.8
PDG	Podgorica	4.05	333	⇑P	Pn	07 03 43.0	+1.9
IDI	Anoyia	4.35	144	Pn	Pn	07 03 46.9	+1.5
	comp=E,0.7nm,0.3s,baz=299,slow=19,SNR=1.9						
IDI				Sn	Sn	07 04 32.6	-3.6
	comp=E,0.8nm,0.3s,baz=263,slow=23,SNR=1.3						
	comp=E,7.8nm,0.9s						
BOVS	Bovan	4.78	360	⇑P	Pn	07 03 51.7	+0.6
BLKB	Belogradchik	4.82	8	⇑P	Pn	07 03 53.3	+1.6
COPA	Copaceanca	5.88	25	⇑P	Pn	07 04 06.1	-0.2
MDVR	Moldovita	5.92	360	⇑P	Pn	07 04 09.0	+2.1
HERR	Herculane	6.04	4	⇑P	Pn	07 04 10.4	+1.8
GZR	Gura Zlata	6.58	6	⇑P	Pn	07 04 17.4	+1.4
BZS	Buzias	6.76	359	⇑P	Pn	07 04 19.3	+0.9
MLR	Muntele Rosu	7.33	24	⇑P	Pn	07 04 26.8	+0.5
MLR	Muntele Rosu	7.33	24	Pn	Pn	07 04 28.3	+2.0
	comp=E,1.1nm,0.3s,baz=166,slow=8.5,SNR=6.4						
MLR				Sn	Sn	07 05 43.4	-6.0
	baz=269,slow=19						
	comp=E,5.5nm,0.5s						
NEHR	Nehoiu	7.38	26	⇑P	Pn	07 04 27.1	+0.1
COVR	Voineasa-Covas	7.72	24	⇑P	Pn	07 04 32.3	+0.6
PLOR	Plostina	7.88	26	⇑P	Pn	07 04 34.0	+0.3
VRI	Vrincioaia	7.92	26	⇓P	Pn	07 04 34.5	+0.2
PSZ	Piszkesteto	9.16	352	⇑P	Pn	07 04 53.2	+1.7
SOKA	Soboth	9.25	330	*e*Pn	Pn	07 04 55.4	+2.8
	comp=E,1.2nm,0.6s						
BRTR	Keskin Array B	9.26	81	Pn	Pn	07 04 56.0	+3.2
	comp=E,0.1nm,0.3s,baz=259,slow=14,SNR=2.2						
	comp=E,0.5nm,0.5s						
OBKA	Obir	9.31	328	*e*Pn	Pn	07 04 56.0	+2.6
	comp=E,0.8nm,0.4s						
ARSA	Arzberg	9.55	334	*e*Pn	Pn	07 04 58.8	+2.1
	comp=E,1.9nm,0.4s						
KBA	Koelnbreinsper	10.27	326	*e*Pn	Pn	07 05 06.7	0.0
	comp=E,4.0nm,1.1s						
ABTA	Abfaltersbach	10.40	322	*e*Pn	Pn	07 05 10.6	+2.2
	comp=E,0.8nm,0.4s						
WTTA	Wattenberg	11.19	322	*e*Pn	Pn	07 05 21.7	+2.4
	comp=E,1.1nm,0.4s						
WATA	Walderalm	11.27	322	*e*Pn	Pn	07 05 22.5	+2.2
	comp=E,1.5nm,0.5s						
SQTA	Sankt Quirin	11.37	321	*e*Pn	Pn	07 05 19.6	-2.1
	comp=E,0.3nm,0.2s						
MOTA	Moosalm	11.51	321	*e*Pn	Pn	07 05 24.0	+0.4
	comp=E,1.0nm,0.5s						
HFS	Hagfors	21.90	349	P	P	07 07 31.8	-0.3

	comp=E,0.6nm,0.6s,baz=75,slow=34,SNR=1.1						
	comp=E,0.6nm,0.6s						
FINES	**FINESS Array B**	**22.77**	**5**	P	**P**	**07 07 41.6**	**+0.2**
	comp=E,2.7nm,0.8s,baz=186,slow=33,SNR=2.6						
	comp=E,2.7nm,0.8s						
NB2	**NORSAR Subarra**	**23.16**	**347**	P	**P**	**07 07 45.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**23.16**	**347**	P	**P**	**07 07 44.8**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=351,slow=18,SNR=2.1						
	comp=Z,0.4nm,0.7s						
EKA	**Eskdalemuir Ar**	**23.46**	**323**	P	**P**	**07 07 48.4**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=116,slow=9.4,SNR=5.9						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.17**	**220**	P	**P**	**07 08 58.5**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=34,slow=9.0,SNR=5.1						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**44.12**	**59**	P	**P**	**07 10 47.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=275,slow=8.7,SNR=4.9						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**44.52**	**49**	P	**P**	**07 10 51.4**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=71,slow=32,SNR=2.5						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**76.33**	**355**	P	**P**	**07 14 28.6**	**+0.8**
	comp=Z,0.1nm,0.7s,baz=20,slow=2.9,SNR=1.6						
	comp=Z,0.1nm,0.7s						

ISK ***16*** *07:07:09.4, 39°.79N×44°.06E, h5^{km}, ML2.5/4*

DDA ***16*** *07:07:10.8±0.0, 39°.78N×44°.04E, h9^{km}±1^{km}, ML2.6*

ISC 16 07:07:10.3±1.2**, 39°.77N**±0°.05×**44°.07E**±0°.04**, h12**^{km}±7^{km}**, n10, σ0**^{s}**.66**/17**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGDI	**IGDIR**	**0.10**	**6**	P	**Pg**	**07 07 13.3**	**+0.1**
IGDI				*i* AML	AML	07 07 15.0	
	comp=N,1µm,0.2s						
IGDI				*i* AML	AML	07 07 15.0	
	comp=E,1µm,0.1s						
IGDI				S	**Sg**	**07 07 15.3**	**0.0**
DYDN	**Diyadin**	**0.37**	**232**	P	**Pb**	**07 07 18.4**	**-0.5**
DYDN				S	**Sb**	**07 07 23.9**	**-0.8**
DYDN				*i* AML	AML	07 07 25.0	
	comp=N,649nm,0.5s						
GNI	**Garni**	**0.64**	**54**	PG	**Pg**	**07 07 22.7**	**-0.1**
GNI				SG	**Sb**	**07 07 32.7**	**+0.1**
KOTA	**Agri, Merkez-K**	**0.66**	**273**	P	**Pb**	**07 07 23.7**	**-0.2**
KOTA				S	**Sb**	**07 07 34.6**	**+1.4**
DIGO	**Kars**	**0.83**	**321**	P	**Pg**	**07 07 26.1**	**-0.3**
DIGO				S	**Sb**	**07 07 38.1**	**0.0**
DIGO				*i* AML	AML	07 07 45.0	
	comp=N,206nm,0.5s						
DIGO				*i* AML	AML	07 07 52.0	
	comp=E,262nm,0.6s						
AGRB	**Hanur-Agry**	**0.85**	**257**	PG	**Pb**	**07 07 27.1**	**0.0**
AGRB				SG	**Sb**	**07 07 39.7**	**+1.1**
EAK	**Akyaka**	**0.98**	**339**	P	**Pn**	**07 07 30.1**	**+0.1**
EAK				S	**Sn**	**07 07 44.4**	**+0.4**
EAK				*i* AML	AML	07 07 46.0	
	comp=N,167nm,0.4s						
EAK				*i* AML	AML	07 07 52.0	
	comp=E,134nm,0.8s						
KARS	**Kars**	**1.14**	**319**	PN	**Pg**	**07 07 31.7**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.33**	**242**	PN	**Pg**	**07 07 35.9**	**0.0**
SENK	**Senkaya-Erzuru**	**1.53**	**302**	PN	**Pg**	**07 07 38.9**	**-0.8**

SNET ***16*** *07:14:55.9±1.1, 13°.27N×91°.63W, h34^{km}±688^{km}, ML4.7*

UCR ***16*** *07:14:56.1±1.0, 13°.28N×91°.63W, h35^{km}±999^{km}, ML4.5, mb4.9(NEIC)*

IDC ***16*** *07:14:58.9±0.6, 13°.48N×90°.62W, h0^{km}, mb4.5/21, mbtmp4.5/23, ML4.2/2, MS4.3/48, Error ellipse: s-maj=24.0km s-min=11.3km az=51.0*

INET ***16*** *07:15:01.9±0.9, 13°.03N×91°.10W, h15^{km}±42^{km}, MW4.3*

GCG ***16*** *07:15:01.3±1.3, 13°.89N×91°.92W, h93^{km}±33^{km}, MD4.7*

GCMT ***16*** *07:15:02.6±0.2, 13°.10N±0°.01×91°.40W±0°.02, h13^{km}, MW5.0/109, Moment Tensor Solution. s50,c63; s109,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.30±.15; M$_{\theta\theta}$-2.22±.10; M$_{\phi\phi}$-1.08±.09; M$_{r\theta}$2.54±.28; M$_{\theta\phi}$1.34±.06; M$_{\phi r}$-2.45±.29; Best double couple: M$_0$4.76400×10^{16} NP1:ϕ_s297.00000°, δ22.00000°, λ77.00000°. NP2:ϕ_s131.00000°, δ69.00000°, λ95.00000°. Principal axes: T 4.8880, Plg66.0000°, Azm50.0000°; N -0.2470, Plg5.0000°, Azm309.0000°; P -4.6410, Plg24.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *07:15:04.6±2.4, 13°.33N±0°.07×90°.97W±0°.06, h51^{km}±6^{km}, mb4.9/455, Md4.7(SNET) Error ellipse: s-maj=10.8km s-min=7.4km az=218.0*

ISC 16 07:15:03.5±0.5**, 13°.32N**±0°.04×**91°.12W**±0°.04**, h43**^{km}±4^{km}**, n800, σ1**^{s}**.54**/687**, mb5.0**/206**, MS4.4**/51**, 3C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.16**	**13**	⇑*e*P	**Pn**	**07 15 25.1**	**+1.7**
FUG				*e*S	**Sn**	**07 15 41.4**	**+3.3**
PCG	**Pacaya**	**1.18**	**25**	*e*P	**Pn**	**07 15 25.9**	**+2.2**
PCG				*e*S	**Sn**	**07 15 46.8**	**+8.1**
RTAL	**Retalhuleu**	**1.33**	**335**		**Pn**	**07 15 26.7**	**+1.2**
NBG	**Las Nubes**	**1.47**	**30**	*e*P	**Pn**	**07 15 30.2**	**+2.5**
NBG				*e*S	**Sn**	**07 15 53.0**	**+7.1**
CEVE	**Cerro Verde**	**1.54**	**70**	*e*P	**Pn**	**07 15 28.5**	**-0.1**
CEVE				IAML		07 16 01.4	
	comp=Z,14µm,0.4s						
CEVE	**Cerro Verde**	**1.54**	**70**	*e*P	**Pn**	**07 15 28.5**	**-0.1**
CEVE				IAML		07 16 01.4	
	comp=Z,14µm,0.4s						
SBLS	**San Blas**	**1.54**	**70**	*e*P	**Pn**	**07 15 28.6**	**-0.1**
SBLS	**San Blas**	**1.54**	**70**	*e*P	**Pn**	**07 15 28.6**	**-0.1**
JAYA	**Jayaque - finc**	**1.66**	**78**	*e*P	**Pn**	**07 15 29.2**	**-1.0**
JAYA	**Jayaque - finc**	**1.66**	**78**	*e*P	**Pn**	**07 15 29.2**	**-1.0**
CEDA	**San Andres**	**1.74**	**74**	*e*P	**Pn**	**07 15 31.0**	**-0.2**
CEDA				*e*S	**Sn**	**07 15 57.7**	**+5.4**
CEDA				IAML		07 16 10.5	
	comp=Z,8µm,0.6s						
CEDA	**San Andres**	**1.74**	**74**	*e*P	**Pn**	**07 15 31.0**	**-0.2**
CEDA				*e*S	**Sn**	**07 15 57.7**	**+5.4**
CEDA				IAML		07 16 10.5	
	comp=Z,8µm,0.6s						
CEDA	**San Andres**	**1.74**	**74**	*e*P	**Pn**	**07 15 31.3**	**0.0**
LALI	**Alcalda de L**	**1.75**	**84**	*e*P	**Pn**	**07 15 30.6**	**-0.8**
BOQS	**Boqueron**	**1.83**	**77**	*e*P	**Pn**	**07 15 33.0**	**+0.3**
BOQS	**Boqueron**	**1.83**	**77**	*e*P	**Pn**	**07 15 33.0**	**+0.3**
SNET	**Serv Nac Est T**	**1.87**	**78**		**Pn**	**07 15 32.4**	**-0.7**
SNET	**Serv Nac Est T**	**1.87**	**78**	*e*P	**Pn**	**07 15 32.7**	**-0.4**
LFU	**La Fuente**	**1.99**	**77**	*e*P	**Pn**	**07 15 35.6**	**+0.9**
LFU	**La Fuente**	**1.99**	**77**	*e*P	**Pn**	**07 15 35.6**	**+0.9**
MTO3	**Montecristo**	**2.02**	**58**		**Pn**	**07 15 35.9**	**+0.7**
LFRS	**El Faro**	**2.02**	**81**	*e*P	**Pn**	**07 15 35.6**	**+0.4**
LFRS	**El Faro**	**2.02**	**81**	*e*P	**Pn**	**07 15 35.6**	**+0.4**
HUEH	**Huehuetenango**	**2.03**	**349**		**Pn**	**07 15 37.2**	**+1.9**
HUEH	**Huehuetenango**	**2.03**	**349**	*e*P	**Pn**	**07 15 38.1**	**+2.8**
ESQI	**Esquipulas**	**2.12**	**54**	Pn	**Pn**	**07 15 38.0**	**+1.4**
PAVA	**Las Pavas**	**2.15**	**79**	*i* P	**Pn**	**07 15 37.3**	**+0.3**
COEG	**Centro de Oper**	**2.20**	**82**	*e*P	**Pn**	**07 15 37.3**	**-0.2**
COEG	**Centro de Oper**	**2.20**	**82**	*e*P	**Pn**	**07 15 37.3**	**-0.2**
MRL	**Marmol**	**2.24**	**38**	⇓*e*P	**Pn**	**07 15 41.2**	**+3.0**
MRL				*e*S	**Sn**	**07 16 02.9**	**-1.9**
COEB	**Comit de Eme**	**2.52**	**86**	*e*P	**Pn**	**07 15 41.3**	**-0.8**
COEB				*e*S	**Sn**	**07 16 18.6**	**+7.0**
COEB	**Comit de Eme**	**2.52**	**86**	*e*P	**Pn**	**07 15 41.3**	**-0.8**
COEB				*e*S	**Sn**	**07 16 18.6**	**+7.0**
COEB	**Comit de Eme**	**2.52**	**86**	*e*P	**Pn**	**07 15 41.3**	**-0.8**
PACA	**Pacayal**	**2.72**	**86**	*e*P	**Pn**	**07 15 45.0**	**+0.2**
CAHU	**Cacacuatique**	**2.86**	**81**	*e*P	**Pn**	**07 15 46.9**	**+0.1**
CAHU	**Cacacuatique**	**2.86**	**81**	*e*P	**Pn**	**07 15 46.9**	**+0.1**
CCIG	**Comitan**	**3.11**	**342**		**Pn**	**07 15 53.6**	**+3.4**
CNCH	**Conchagua**	**3.19**	**90**	*e*P	**Pn**	**07 15 51.1**	**-0.2**
CNCH	**Conchagua**	**3.19**	**90**	*e*P	**Pn**	**07 15 51.1**	**-0.2**
CSGN	**Cosiguina Volc**	**3.48**	**95**	*e*P	**Pn**	**07 15 54.2**	**-1.1**
PETF	**Flores**	**3.78**	**18**		**Pn**	**07 16 02.1**	**+2.9**
PETF	**Flores**	**3.78**	**18**	*e*P	**Pn**	**07 16 02.4**	**+3.2**
TGUH	**Tegucigalpa,Un**	**3.81**	**78**	Pn	**Pn**	**07 15 59.3**	**-0.4**
TGUH	**Tegucigalpa,Un**	**3.81**	**78**	*e*P	**Pn**	**07 15 59.9**	**+0.1**
CRIN	**San Cristobal**	**4.01**	**98**		**Pn**	**07 16 01.3**	**-1.2**
CRIN	**San Cristobal**	**4.01**	**98**	*e*P	**Pn**	**07 16 01.2**	**-1.3**
CNGN	**Cerro Negro**	**4.38**	**100**		**Pn**	**07 16 05.6**	**-1.9**
CNGN	**Cerro Negro**	**4.38**	**100**	*e*P	**Pn**	**07 16 05.7**	**-1.9**
MOMN	**Momotombo**	**4.55**	**101**	*e*P	**Pn**	**07 16 07.8**	**-2.1**
COPN	**Copaltepe**	**4.56**	**104**	*e*P	**Pn**	**07 16 07.9**	**-2.0**
BRAN	**Las Pilas**	**4.68**	**97**	*e*P	**Pn**	**07 16 11.3**	**-0.3**
TISN	**Laguna Tiscapa**	**4.87**	**103**	*e*P	**Pn**	**07 16 11.4**	**-2.8**
MGAN	**Managua**	**4.89**	**103**	*e*P	**Pn**	**07 16 12.7**	**-1.8**
HUEN		**4.92**	**101**	*e*P	**Pn**	**07 16 13.0**	**-1.9**
WILN	**Americas 2**	**4.94**	**103**	*e*P	**Pn**	**07 16 13.5**	**-1.8**
MATN	**Matagalpa**	**5.07**	**94**		**Pn**	**07 16 15.5**	**-1.6**
MATN	**Matagalpa**	**5.07**	**94**	*e*P	**Pn**	**07 16 15.6**	**-1.5**
CMIG	**Matias Romero**	**5.23**	**316**	Pn	**Pn**	**07 16 19.8**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=158,slow=14,SNR=25						
CMIG				Sn	**Sn**	**07 17 18.1**	**-0.1**
	comp=Z,5.3nm,0.3s,baz=128,slow=20,SNR=4.4						
	comp=Z,6.6nm,0.5s						
BOAB	**BOACO BROADBAN**	**5.38**	**99**	Pn	**Pn**	**07 16 19.2**	**-2.1**
BOAB	**BOACO BROADBAN**	**5.38**	**99**	*i* P	**Pn**	**07 16 19.1**	**-2.1**
ACON	**Acoyapa**	**5.95**	**102**		**Pn**	**07 16 26.9**	**-2.3**
ACON	**Acoyapa**	**5.95**	**102**	*e*P	**Pn**	**07 16 26.8**	**-2.3**
HZTE	**Horizontes, Gu**	**5.99**	**115**		**Pn**	**07 16 29.3**	**-0.3**
GBS3	**Finca Las Img**	**6.08**	**114**	*e*P	**Pn**	**07 16 30.9**	**0.0**
GB1A	**Borinquen Arri**	**6.12**	**113**	*e*P	**Pn**	**07 16 31.5**	**0.0**
BUEV	**Buena Vista**	**6.12**	**114**	*e*P	**Pn**	**07 16 31.4**	**0.0**
BUAI	**Buenos Aires**	**6.15**	**113**	*e*P	**Pn**	**07 16 32.1**	**+0.2**
GPS2	**Hotel Rincn d**	**6.19**	**114**	*e*P	**Pn**	**07 16 32.6**	**+0.2**
GUAI	**GUAI**	**6.27**	**118**	*e*P	**Pn**	**07 16 32.6**	**-0.9**
ORTG	**Ortega, Santa**	**6.27**	**117**	Pn	**Pn**	**07 16 32.7**	**-0.8**
LIM1	**Limonal**	**6.30**	**114**	*e*P	**Pn**	**07 16 33.9**	**0.0**
GUAB	**Guayabo de Bag**	**6.32**	**114**	*e*P	**Pn**	**07 16 34.1**	**-0.1**
COLC	**Colonia**	**6.36**	**114**	*e*P	**Pn**	**07 16 34.7**	**0.0**
HORNC	**Hornillas**	**6.36**	**113**	*e*P	**Pn**	**07 16 33.9**	**-0.8**
DUNO	**Dulce Nombre,**	**6.38**	**120**		**Pn**	**07 16 34.0**	**-1.0**
CUI	**Cuipilapa**	**6.39**	**114**	*e*P	**Pn**	**07 16 35.1**	**-0.1**
ACAL	**Aguas Claras**	**6.52**	**113**	*e*P	**Pn**	**07 16 36.9**	**-0.1**
PTEN	**Parque Tenorio**	**6.53**	**113**	*e*P	**Pn**	**07 16 36.3**	**-0.8**
JTS	**Las Juntas de**	**6.74**	**116**	Pn	**Pn**	**07 16 39.2**	**-0.7**
JTS	**Las Juntas de**	**6.74**	**116**	⇑*e*P	**Pn**	**07 16 39.3**	**-0.7**
ESPN	**Las Esperanzas**	**6.74**	**99**		**Pn**	**07 16 37.9**	**-2.0**
ESPN	**Las Esperanzas**	**6.74**	**99**	*e*P	**Pn**	**07 16 36.5**	**-3.4**
CASO	**Castillo**	**6.87**	**114**	*e*P	**Pn**	**07 16 41.2**	**-0.6**
ARE1	**Arenal 1**	**6.87**	**114**	*e*P	**Pn**	**07 16 41.8**	**0.0**
CEDE	**Laguna Cedeo**	**6.88**	**113**	*e*P	**Pn**	**07 16 42.0**	**+0.1**
CAO2	**Cobano, Puntar**	**6.91**	**121**		**Pn**	**07 16 41.5**	**-0.6**
FORC	**Fortuna**	**6.92**	**113**	*e*P	**Pn**	**07 16 42.3**	**-0.1**
LAFE	**Finca La Fe, P**	**7.01**	**119**	⇑*i*P	**Pn**	**07 16 42.1**	**-1.5**
JACO	**JACO, Garabito**	**7.29**	**119**		**Pn**	**07 16 47.3**	**-0.3**
HDC	**Heredia**	**7.61**	**115**		**Pn**	**07 16 50.7**	**-1.3**
RIMA	**Rio Macho**	**7.93**	**116**		**Pn**	**07 16 56.5**	**+0.1**
BATAN	**Batan**	**8.23**	**112**	Pn	**Pn**	**07 17 00.3**	**0.0**
PEZE	**Perez Zeledon,**	**8.27**	**117**		**Pn**	**07 17 01.5**	**+0.5**
TLIG	**Tlapa**	**8.33**	**301**	Pn	**Pn**	**07 17 04.5**	**+2.6**
SRBA	**San Rafael, Bu**	**8.62**	**117**	Pn	**Pn**	**07 17 06.1**	**+0.2**
DRK0	**Durika**	**8.71**	**117**		**Pn**	**07 17 07.2**	**+0.1**
BRU2	**Volcan**	**9.41**	**118**	*e*P	**Pn**	**07 17 17.9**	**+1.2**
PAYG	**Puerto Ayora**	**13.92**	**177**	Pn	**Pn**	**07 18 17.5**	**-0.8**
MTDJ	**Mount Denham**	**13.95**	**68**	Pn	**Pn**	**07 18 16.9**	**-1.8**
ZAIG	**Zacatecas**	**14.38**	**312**		**Pn**	**07 18 26.0**	**+1.4**
061Z	**Ochoppi**	**15.75**	**36**	Pn	**Pn**	**07 18 39.9**	**-2.4**
061Z				IAmb	IAmb	07 18 58.4	
	comp=Z,140nm,1.1s						
DBBC	**Dabeiba**	**15.95**	**112**	*e*P	**P**	**07 18 47.0**	**-1.0**
SJCC	**San Jacinto, C**	**15.98**	**101**	Pn	**Pn**	**07 18 42.2**	**-3.2**
CBOC	**Ciudad Bolivar**	**16.62**	**115**	*e*P	**Pn**	**07 18 53.5**	**-0.2**
GTBY	**Guantanamo Bay**	**16.68**	**65**	Pn	**Pn**	**07 18 50.0**	**-4.2**
833A	**Chaparral WMA,**	**16.81**	**334**	Pn	**Pn**	**07 18 55.2**	**-0.5**
833A	**Chaparral WMA,**	**16.81**	**334**	P	**Pn**	**07 18 55.3**	**-0.5**
	baz=151						
PLMC	**San Jos del P**	**16.85**	**118**	*e*P	**Pn**	**07 18 56.0**	**-0.5**
HELC	**Santa Helena**	**16.91**	**113**	*e*P	**Pn**	**07 18 52.0**	**-5.4**
060A	**Indiantown**	**16.96**	**35**		**Pn**	**07 18 57.2**	**-0.5**
ZARC	**Zaragoza, Cauc**	**17.00**	**108**	Pn	**Pn**	**07 18 56.6**	**-1.7**
ZARC	**Zaragoza, Cauc**	**17.00**	**108**	*e*P	**Pn**	**07 18 57.0**	**-1.3**
HKT	**Hockley**	**17.12**	**346**	Pn	**Pn**	**07 18 58.1**	**-1.4**
DWPF	**Disney Wildern**	**17.27**	**30**	Pn	**Pn**	**07 18 58.5**	**-2.9**
DWPF				IAmb	IAmb	07 19 18.3	
	comp=Z,121nm,1.1s						
DWPF	**Disney Wildern**	**17.27**	**30**	P	**Pn**	**07 19 00.2**	**-1.3**
	baz=213						
YOTC	**Yotoco, Valle**	**17.29**	**121**	*e*P	**Pn**	**07 19 01.6**	**-0.3**
441A	**DeRidder**	**17.46**	**354**	Pn	**Pn**	**07 19 02.0**	**-1.8**
441A				IAmb	IAmb	07 19 12.6	
	comp=Z,185nm,1.6s						
PTBC	**PUERTO BERRIO,**	**17.73**	**111**	*e*P	**Pn**	**07 19 07.0**	**-0.3**
NORC	**Norcasia**	**17.77**	**114**	*e*P	**P**	**07 19 09.2**	**+0.9**
656A	**Willston**	**17.85**	**25**	Pn	**Pn**	**07 19 05.7**	**-2.9**
656A				IAmb	IAmb	07 19 24.7	
	comp=Z,79nm,1.1s						
553A	**Crawfordville**	**17.89**	**19**		**Pn**	**07 19 08.1**	**-1.1**
553A				IAmb	IAmb	07 19 29.6	
	comp=Z,156nm,1.1s						
346A	**Big Creek Wild**	**18.05**	**5**		**Pn**	**07 19 09.9**	**-1.2**
346A				IAmb	IAmb	07 19 37.9	
	comp=Z,137nm,1.1s						
344A	**Westbrook Farm**	**18.05**	**1**	P	**Pn**	**07 19 09.2**	**-1.9**
344A				IAmb	IAmb	07 19 28.3	
	comp=Z,125nm,1.1s						
OTAV	**Otavalo**	**18.06**	**135**		**Pn**	**07 19 10.1**	**-1.7**
OTAV	**Otavalo**	**18.06**	**135**	*e*P	**Pn**	**07 19 11.3**	**-0.5**
OTAV	**Otavalo**	**18.06**	**135**	*e*P	**P**	**07 19 12.2**	**+0.3**
BRAL	**Brewton**	**18.16**	**11**	P	**P**	**07 19 11.8**	**-0.5**
	baz=192						
GCUF	**Volcan Galeras**	**18.17**	**130**	*e*P	**Pn**	**07 19 14.0**	**+0.8**
OCAC	**Ocana**	**18.19**	**104**	P	**P**	**07 19 10.2**	**-2.8**
OCAC	**Ocana**	**18.19**	**104**	*e*P	P	07 19 03.2	-10
BRRC	**Barranca, Sant**	**18.20**	**108**	*e*P	P	07 19 05.2	-7.8
MARP	**Paez Belalcaza**	**18.25**	**123**	*e*P	**Pn**	**07 19 15.9**	**+2.0**
ORTC	**Ortega, Tolima**	**18.25**	**119**	*e*P	**Pn**	**07 19 14.7**	**+1.0**
435B	**Jarrell**	**18.38**	**342**	P	**Pn**	**07 19 15.8**	**+0.7**
	baz=159						
SPBC	**San Pablo de B**	**18.44**	**113**	*e*P	**P**	**07 19 15.2**	**-0.5**
ROSC	**El Rosal**	**18.59**	**115**	P	**P**	**07 19 17.4**	**-0.2**
	comp=Z,49nm,1.0s,baz=345,slow=3.7,SNR=38						
ROSC	**El Rosal**	**18.59**	**115**	*e*P	**Pn**	**07 19 20.3**	**+2.1**
NATX	**Nacogdoches**	**18.64**	**351**	P	**P**	**07 19 16.6**	**-1.1**
NATX	**Nacogdoches**	**18.64**	**351**	P	**Pn**	**07 19 18.1**	**-0.2**
	baz=169						
PRAC	**Prado**	**18.66**	**119**	*e*P	**Pn**	**07 19 18.8**	**+0.1**
VBMS	**Vicksburg**	**18.82**	**2**	P	**P**	**07 19 17.9**	**-1.7**
VBMS				IAmb	IAmb	07 19 28.3	
	comp=Z,178nm,1.4s						
VBMS	**Vicksburg**	**18.82**	**2**	P	**Pn**	**07 19 21.8**	**+1.4**
	baz=182,SNR=7.4						
JCT	**Junction City**	**18.87**	**336**	P	**P**	**07 19 19.8**	**-0.4**
JCT	**Junction City**	**18.87**	**336**	P	**Pn**	**07 19 21.9**	**+0.8**
	baz=153,SNR=18						
BARC	**Barichara**	**18.88**	**109**	*e*P	**Pn**	**07 19 22.1**	**+0.6**
352A	**Blakely**	**18.95**	**16**	P	**P**	**07 19 20.5**	**-0.6**
352A				IAmb	IAmb	07 19 33.7	
	comp=Z,116nm,1.1s						
GARC	**Garzon, Huila**	**19.00**	**124**	*e*P	**P**	**07 19 20.9**	**-1.1**
237A	**Washetta, Mont**	**19.09**	**348**	P	**P**	**07 19 21.7**	**-0.8**
237A				IAmb	IAmb	07 19 43.0	
	comp=Z,155nm,1.8s						
250A	**Grady**	**19.10**	**13**	P	**P**	**07 19 20.1**	**-2.5**
CHIC	**Chingaza**	**19.20**	**115**	*e*P	**Pn**	**07 19 25.8**	**+0.2**
HPIG		**19.21**	**317**	P	**P**	**07 19 23.6**	**-0.6**
HPIG				IAmb	IAmb	07 19 30.3	
	comp=Z,109nm,1.7s						
RUSC	**La Rusia**	**19.24**	**111**	*e*P	**P**	**07 19 24.7**	**-0.1**
456A	**Hilliard**	**19.25**	**24**	P	**P**	**07 19 21.7**	**-2.6**
456A				IAmb	IAmb	07 19 36.5	
	comp=Z,94nm,1.3s						
143A	**Socs Landing,**	**19.30**	**359**	P	**P**	**07 19 23.8**	**-1.0**
143A				IAmb	IAmb	07 19 29.1	
	comp=Z,86nm,0.9s						
TIGA	**Tifton**	**19.32**	**20**	P	**P**	**07 19 22.8**	**-2.3**
TIGA				IAmb	IAmb	07 19 57.0	
	comp=Z,149nm,1.2s						
TIGA	**Tifton**	**19.32**	**20**	P	**P**	**07 19 25.3**	**+0.3**
	baz=202						
146A	**Union**	**19.32**	**5**	P	**P**	**07 19 23.4**	**-1.7**
WHTX	**Lake Whitney,**	**19.48**	**344**	P	**P**	**07 19 25.4**	**-1.4**
WHTX	**Lake Whitney,**	**19.48**	**344**	P	**P**	**07 19 26.5**	**-0.3**
	baz=161						
VILC	**Villavicencio,**	**19.48**	**116**	*e*P	**P**	**07 19 28.0**	**+0.8**
TX31	**Lajitas Ar. Si**	**19.74**	**326**	P	**P**	**07 19 28.4**	**-1.5**
TXAR	**Lajitas Array**	**19.74**	**326**	P	**Pn**	**07 19 33.4**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=154,slow=12,SNR=140						
TXAR				PcP	**PcP**	**07 23 51.5**	**+4.3**
	comp=Z,0.6nm,0.9s,baz=163,slow=4.8,SNR=3.7						
	comp=Z,18nm,0.9s						
TXAR	**Lajitas Array**	**19.74**	**326**	P	**P**	**07 19 29.8**	**0.0**
H06E1	**SOCORRO T-PHAS**	**19.79**	**289**	T	T	07 39 49.6	
	SNR=84						
Z41A	**Richland Creek**	**19.91**	**356**	P	**P**	**07 19 29.8**	**-1.7**
Z41A				IAmb	IAmb	07 19 42.1	
	comp=Z,75nm,1.1s						
Z41A	**Richland Creek**	**19.91**	**356**	P	**P**	**07 19 31.9**	**+0.4**
	baz=175						
LRAL	**Lakeview Retre**	**19.99**	**10**	P	**P**	**07 19 30.7**	**-1.6**
LRAL				IAmb	IAmb	07 19 46.4	
	comp=Z,65nm,1.2s						
LRAL	**Lakeview Retre**	**19.99**	**10**	P	**P**	**07 19 31.9**	**-0.5**
	baz=191,SNR=17						
Z47A	**Carrollton**	**19.99**	**7**	P	**P**	**07 19 30.6**	**-1.7**
Z47A				IAmb	IAmb	07 19 45.4	
	comp=Z,133nm,1.2s						
152A	**Waverly Hall**	**20.13**	**16**	P	**P**	**07 19 33.1**	**-0.8**
152A				IAmb	IAmb	07 19 49.9	
	comp=Z,135nm,1.6s						
Z38A	**Mt. Pleasant**	**20.16**	**351**	P	**P**	**07 19 34.2**	**-0.1**
WLAR	**White Oak Lake**	**20.36**	**355**	P	**P**	**07 19 35.8**	**-0.6**
WLAR				IAmb	IAmb	07 20 02.6	
	comp=Z,83nm,1.2s						
MACC	**Macarena, Meta**	**20.37**	**122**	*e*P	**P**	**07 19 37.4**	**+0.7**
SC01	**Santiago de lo**	**20.48**	**70**	P	**P**	**07 19 35.5**	**-2.3**
CCAR	**Cane Creek**	**20.52**	**358**	P	**P**	**07 19 37.5**	**-0.6**
154A	**Montrose**	**20.56**	**20**	P	**P**	**07 19 37.1**	**-1.4**
154A				IAmb	IAmb	07 20 00.7	
	comp=Z,102nm,1.1s						
SDV	**Santo Domingo**	**20.57**	**100**	P	**P**	**07 19 36.4**	**-2.7**
	comp=Z,13nm,0.5s,baz=286,slow=6.2,SNR=9.0						
SDV				LR	LR	07 28 31.4	
	comp=Z,284nm,19.6s,baz=296,slow=40						
	comp=Z,13nm,0.5s						
SDV	**Santo Domingo**	**20.57**	**100**	P	**P**	**07 19 36.8**	**-2.3**
SDV	**Santo Domingo**	**20.57**	**100**	*e*P	Pn	07 19 40.3	-1.2
SDV	**Santo Domingo**	**20.57**	**100**	*e*P	**P**	**07 19 38.5**	**-0.5**
SLBS	**Sierra La Lagu**	**20.60**	**303**	P	**P**	**07 19 40.2**	**+1.1**
SLBS				IAmb	IAmb	07 19 47.8	
	comp=Z,62nm,1.3s						
Z35A	**Perchaven, San**	**20.70**	**345**	P	**P**	**07 19 39.9**	**-0.2**
Z35A				IAmb	IAmb	07 20 09.9	
	comp=Z,57nm,1.1s						
ABTX	**Abilene, Hawle**	**20.74**	**339**	P	**P**	**07 19 40.2**	**-0.3**
ABTX				IAmb	IAmb	07 19 44.6	
	comp=Z,51nm,0.9s						
ABTX	**Abilene, Hawle**	**20.74**	**339**	P	**P**	**07 19 40.3**	**-0.3**
	baz=156,SNR=19						
PTGC	**Puerto Gaitan,**	**20.82**	**114**	*e*P	**P**	**07 19 42.3**	**+0.8**
Y49A	**Blount Mountai**	**20.89**	**11**	P	**P**	**07 19 41.3**	**-0.9**
Y49A				IAmb	IAmb	07 19 58.2	
	comp=Z,71nm,1.3s						
LPIG	**La Paz**	**21.08**	**303**	LR	LR	07 27 55.2	
	comp=Z,344nm,19.3s,baz=134,slow=36						
X40A	**Basin Creek Fa**	**21.14**	**356**	P	**P**	**07 19 43.9**	**-0.8**
X40A				IAmb	IAmb	07 20 17.6	
	comp=Z,61nm,1.4s						
X40A	**Basin Creek Fa**	**21.14**	**356**	P	**P**	**07 19 44.4**	**-0.4**
	baz=175,SNR=19						
OXF	**Oxford**	**21.16**	**4**	P	**P**	**07 19 44.7**	**-0.3**
OXF				IAmb	IAmb	07 20 21.7	
	comp=Z,87nm,1.1s						
OXF	**Oxford**	**21.16**	**4**	P	**P**	**07 19 44.7**	**-0.3**
	baz=184,SNR=11						
GOGA	**Godfrey**	**21.18**	**18**	P	**P**	**07 19 43.9**	**-1.4**
GOGA				IAmb	IAmb	07 20 15.7	
	comp=Z,74nm,1.3s						
GOGA	**Godfrey**	**21.18**	**18**	P	**P**	**07 19 44.1**	**-1.2**
	baz=201						
MIAR	**Mount Ida**	**21.25**	**354**	P	**P**	**07 19 46.1**	**+0.1**
MIAR	**Mount Ida**	**21.25**	**354**	P	**P**	**07 19 45.4**	**-0.6**
	baz=173,SNR=22						
X48A	**Hartselle**	**21.36**	**9**	IAmb	IAmb	07 19 59.1	
	comp=Z,99nm,1.4s						
UALR	**University of**	**21.39**	**357**	P	**P**	**07 19 45.4**	**-2.1**
UALR				IAmb	IAmb	07 19 50.7	
	comp=Z,65nm,1.0s						
Y52A	**Lilburn**	**21.44**	**16**	P	**P**	**07 19 46.6**	**-1.4**
Y52A				IAmb	IAmb	07 20 19.3	
	comp=Z,152nm,1.5s						
X37A	**Clayton**	**21.53**	**350**		**P**	**07 19 48.4**	**-0.5**
X37A				IAmb	IAmb	07 20 22.8	
	comp=Z,84nm,1.2s						
FPAL	**Fort Paine**	**21.71**	**12**	P	**P**	**07 19 50.3**	**-0.7**
FPAL				IAmb	IAmb	07 20 23.0	
	comp=Z,64nm,1.3s						
PLAL	**Pickwick Lake**	**21.75**	**7**	P	**P**	**07 19 50.7**	**-0.6**
PLAL				IAmb	IAmb	07 20 07.5	
	comp=Z,93nm,1.5s						
W41B	**Gary Mavity, V**	**21.79**	**358**	P	**P**	**07 19 52.0**	**+0.3**
	baz=177,SNR=20						
W45A	**Hickory Valley**	**21.82**	**4**	P	**P**	**07 19 50.4**	**-1.6**
W45A				IAmb	IAmb	07 20 41.6	
	comp=Z,70nm,1.0s						
X51A	**Calhoun**	**21.90**	**14**	IAmb	IAmb	07 20 30.4	
	comp=Z,60nm,1.4s						
WHAR	**Wooly Hollow**	**21.91**	**357**	P	**P**	**07 19 52.4**	**-0.6**
WHAR				IAmb	IAmb	07 19 55.7	
	comp=Z,63nm,1.1s						
W39A	**Magazine**	**21.92**	**354**	P	**P**	**07 19 51.4**	**-1.7**
W39A				IAmb	IAmb	07 19 57.1	
	comp=Z,44nm,1.1s						
W39A	**Magazine**	**21.92**	**354**	P	**P**	**07 19 52.0**	**-1.1**
	baz=173,SNR=18						
X34A	**Smith Ranch, M**	**22.05**	**345**	P	**P**	**07 19 53.0**	**-1.5**
X34A				IAmb	IAmb	07 20 29.1	
	comp=Z,84nm,1.3s						
NHSC	**New Hope**	**22.09**	**25**	P	**P**	**07 19 55.9**	**+0.9**
NHSC	**New Hope**	**22.09**	**25**	P	**P**	**07 19 53.0**	**-2.0**
	baz=209						
SWET	**Sewanee**	**22.30**	**11**	P	**P**	**07 19 57.5**	**+0.1**
SWET				IAmb	IAmb	07 20 23.4	
	comp=Z,75nm,1.3s						
HODGE	**Hodges**	**22.32**	**20**	P	**P**	**07 19 57.0**	**-0.5**
WMOK	**Wichita Mounta**	**22.43**	**343**	P	**P**	**07 19 57.7**	**-1.0**
WMOK	**Wichita Mounta**	**22.43**	**343**	P	**P**	**07 19 57.8**	**-0.9**
	baz=160,SNR=8.8						
FCAR	**Ozark Folk Cen**	**22.50**	**358**	P	**P**	**07 19 58.7**	**-0.6**
FCAR				IAmb	IAmb	07 20 01.4	
	comp=Z,42nm,0.9s						
MNTX	**Cornudas Mount**	**22.50**	**327**	P	**P**	**07 19 60.0**	**+0.4**
MNTX				IAmb	IAmb	07 20 04.2	
	comp=Z,101nm,1.2s						
MNTX	**Cornudas Mount**	**22.50**	**327**	P	**P**	**07 20 01.1**	**+1.6**
	baz=141,SNR=67						
HALT	**Halls**	**22.55**	**4**	P	**P**	**07 19 58.0**	**-1.9**
HALT				IAmb	IAmb	07 20 34.2	
	comp=Z,87nm,1.1s						
FNO	**Franklin**	**22.57**	**347**		**P**	**07 19 58.7**	**-1.5**
FNO				IAmb	IAmb	07 20 03.0	
	comp=Z,56nm,0.8s						
W52A	**Murphy**	**22.64**	**15**	P	**P**	**07 20 01.9**	**+1.0**
LCAR	**Lake Charles**	**22.66**	**360**	P	**P**	**07 20 01.5**	**+0.5**
V48A	**Smith Brothers**	**22.66**	**9**	IAmb	IAmb	07 20 03.8	
	comp=Z,52nm,1.1s						
JSC	**Jenkinsville**	**22.71**	**22**	P	**P**	**07 20 00.3**	**-1.3**
OKCFA	**Oklahoma City**	**22.73**	**347**		**P**	**07 20 01.1**	**-0.8**
LNXT	**Lenox**	**22.74**	**3**	P	**P**	**07 20 00.3**	**-1.6**
Y57A	**Sumter**	**22.80**	**24**	P	**P**	**07 20 01.6**	**-0.9**
Y57A				IAmb	IAmb	07 20 15.9	
	comp=Z,56nm,1.4s						
BG3	**Lake Jocassee**	**22.82**	**18**	P	**P**	**07 20 03.5**	**+0.7**
BG3				IAmb	IAmb	07 20 27.7	
	comp=Z,157nm,1.9s						
CPCT	**Cooper Cave**	**22.83**	**14**	IAmb	IAmb	07 20 05.6	
	comp=Z,90nm,1.6s						
TUL1	**Leonard**	**22.89**	**350**		**P**	**07 20 03.5**	**+0.1**
TUL1				IAmb	IAmb	07 20 38.6	
	comp=Z,51nm,1.3s						
TUL1	**Leonard**	**22.89**	**350**	P	**P**	**07 20 00.3**	**-3.2**
	baz=168						
WVT	**Waverly**	**22.91**	**7**	P	**P**	**07 20 03.6**	**0.0**
WVT				IAmb	IAmb	07 20 20.6	
	comp=Z,72nm,1.4s						
WVT	**Waverly**	**22.91**	**7**	P	**P**	**07 20 02.5**	**-1.2**
	baz=188						
U40A	**Yellville**	**23.00**	**356**	IAmb	IAmb	07 20 06.3	
	comp=Z,47nm,1.0s						
U40A	**Yellville**	**23.00**	**356**	P	**P**	**07 20 04.6**	**0.0**
	baz=175,SNR=30						
PAULI	**Pauline**	**23.01**	**20**	IAmb	IAmb	07 20 18.4	
	comp=Z,112nm,1.9s						
HHAR	**Hobbs**	**23.01**	**354**	P	**P**	**07 20 03.0**	**-1.7**
BAUV	**El Baul**	**23.05**	**98**	P	**P**	**07 20 03.5**	**-1.8**
BAUV				IAmb	IAmb	07 20 30.5	
	comp=Z,47nm,1.2s						
CLTN	**Cedars of Leba**	**23.08**	**10**	P	**P**	**07 20 03.4**	**-2.0**
CLTN				IAmb	IAmb	07 20 07.8	
	comp=Z,63nm,1.1s						

MSTX	Muleshoe	23.13	335	P	P	07 20 05.5	-0.6
MSTX	Muleshoe	23.13	335	P	P	07 20 05.8	-0.3
	baz=150,SNR=14						
V51A	Loudon	23.21	14	IAmb	IAmb	07 20 09.2	
	comp=Z,84nm,1.4s						
TKL	Tuckaleechee C	23.21	15	P	P	07 20 07.5	+0.8
	comp=Z,23nm,0.8s,baz=178,slow=7.1,SNR=32						
TKL				LR	LR	07 29 58.5	
	comp=Z,2µm,20.4s,baz=196,slow=39						
TKL	Tuckaleechee C	23.21	15	P	P	07 20 05.5	-1.3
PARMO	Parma	23.28	3	IAmb	IAmb	07 20 53.2	
	comp=Z,38nm,0.8s						
BIRD	Birdtown, Kers	23.33	23	P	P	07 20 07.0	-0.9
PBMO	Poplar Bluff	23.37	1	P	P	07 20 07.4	-0.9
V52A	Sevierville	23.43	16	IAmb	IAmb	07 20 40.5	
	comp=Z,104nm,1.4s						
KMSC	Kings Mountain	23.46	20	P	P	07 20 07.5	-1.7
KMSC	Kings Mountain	23.46	20	P	P	07 20 07.0	-2.1
	baz=204						
V53A	Saluda	23.48	17	IAmb	IAmb	07 20 38.8	
	comp=Z,55nm,1.1s						
AMTX	Amarillo	23.51	338	P	P	07 20 10.0	+0.3
AMTX				IAmb	IAmb	07 20 12.6	
	comp=Z,47nm,1.0s						
AMTX	Amarillo	23.51	338	P	P	07 20 09.7	0.0
	baz=153						
U49A	Red Boiling Sp	23.59	11	IAmb	IAmb	07 20 12.3	
	comp=Z,44nm,0.9s						
X58A	Rowland	23.69	25	P	P	07 20 09.6	-1.7
X58A				IAmb	IAmb	07 20 34.5	
	comp=Z,49nm,1.4s						
MGMO	Mountain Grove	23.76	358	P	P	07 20 12.2	+0.2
ATAH	Atahualpa	23.93	147	P	P	07 20 15.8	+1.6
	comp=Z,15nm,0.8s,baz=344,slow=6.7,SNR=11						
	comp=Z,15nm,0.8s						
T35A	Sooner Cattle	23.99	349		P	07 20 13.0	-1.1
TZTN	Tazewell	24.11	15	IAmb	IAmb	07 21 01.9	
	comp=Z,52nm,1.3s						
TZTN	Tazewell	24.11	15	P	P	07 20 14.6	-0.5
	baz=198,SNR=8.7						
V55A	Taylorsville	24.15	20	P	P	07 20 15.0	-0.6
HSIG		24.15	313	P	P	07 20 15.9	+0.2
HSIG				IAmb	IAmb	07 20 23.3	
	comp=Z,65nm,1.7s						
T50A	Nancy	24.27	12	P	P	07 20 15.9	-0.7
T50A				IAmb	IAmb	07 20 48.4	
	comp=Z,38nm,1.1s						
S44A	Carbondale	24.33	4	P	P	07 20 17.5	+0.3
S44A				IAmb	IAmb	07 20 20.6	
	comp=Z,39nm,1.0s						
SIUC	Southern Illin	24.36	4	IAmb	IAmb	07 20 20.2	
	comp=Z,56nm,1.1s						
121A	Cookes Peak, D	24.46	324	P	P	07 20 22.2	+3.5
	baz=138,SNR=28						
SJG	San Juan	24.49	76	P	P	07 20 16.8	-2.0
	comp=Z,3.7nm,0.3s,baz=268,slow=21,SNR=6.0						
	comp=Z,3.7nm,0.3s						
319A	Douglas	24.54	320	IAmb	IAmb	07 20 26.5	
	comp=Z,33nm,1.0s						
U54A	Nelsons Funny	24.57	18	P	P	07 20 19.0	-0.5
U54A				IAmb	IAmb	07 21 06.2	
	comp=Z,53nm,1.2s						
FVM	French Village	24.57	1	P	P	07 20 18.9	-0.5
CCM	Cathedral Cave	24.64	360	P	P	07 20 19.6	-0.4
CCM				IAmb	IAmb	07 20 22.7	
	comp=Z,49nm,1.0s						
CCM	Cathedral Cave	24.64	360	P	P	07 20 19.6	-0.4
	baz=179						
V58A	Windy Hill, Pi	24.86	24	P	P	07 20 20.1	-1.8
R40A	Maddies Statio	24.89	358	P	P	07 20 22.1	-0.3
R40A				IAmb	IAmb	07 21 00.9	
	comp=Z,29nm,0.9s						
S51A	Beattyville	25.14	14	P	P	07 20 25.2	+0.6
S51A				IAmb	IAmb	07 20 26.3	
	comp=Z,35nm,1.1s						
Y22D	IRIS PASSCAL I	25.16	328	P	P	07 20 26.6	+1.7
	baz=141,SNR=5.9						
LENM	Lemitar	25.26	328	P	P	07 20 24.6	-1.3
R49A	Shelbyville	25.43	11	P	P	07 20 27.4	+0.2
R49A				IAmb	IAmb	07 20 28.4	
	comp=Z,29nm,1.0s						
OLIL	Olney	25.46	5	P	P	07 20 27.4	0.0
OLIL				IAmb	IAmb	07 21 17.8	
	comp=Z,49nm,1.1s						
Q44A	Meyer Farm, Va	25.55	4	P	P	07 20 28.2	-0.1
R50A	Paris	25.59	12	IAmb	IAmb	07 21 01.0	
	comp=Z,56nm,1.2s						
ANMO	Albuquerque	25.62	330	P	P	07 20 32.5	+3.3
	comp=Z,5.3nm,0.8s,baz=145,slow=12,SNR=36						
ANMO				LR	LR	07 32 21.0	
	comp=Z,245nm,19.4s,baz=138,slow=40						
	comp=Z,5.3nm,0.8s						
ANMO	Albuquerque	25.62	330	P	P	07 20 29.7	+0.5
ANMO	Albuquerque	25.62	330	P	P	07 20 30.5	+1.3
	baz=143						
BLA	Blacksburg	25.65	20	P	P	07 20 28.1	-1.1
BLA				IAmb	IAmb	07 21 11.9	
	comp=Z,40nm,1.2s						
BLA	Blacksburg	25.65	20	P	P	07 20 29.3	+0.1
	baz=204						
T57A	Hurt	25.86	22	P	P	07 20 30.2	-0.9
R32A	Long Quarter,	25.90	346	P	P	07 20 30.4	-1.1
S54A	Dingess, Beckl	25.90	18	P	P	07 20 30.4	-1.2
BLO	Bloomington	26.07	8	P	P	07 20 32.1	-0.9
TUC	Tucson	26.11	320	P	P	07 20 33.5	+0.1
TUC	Tucson	26.11	320	P	P	07 20 33.6	+0.1
	baz=132						
P40A	Paris	26.12	358	P	P	07 20 33.0	-0.4
P40A				IAmb	IAmb	07 21 05.5	
	comp=Z,47nm,1.4s						
KSU1	Kansas State U	26.14	350	P	P	07 20 32.8	-0.8
	baz=168						
R53A	Hurricane	26.21	16	P	P	07 20 33.4	-0.9
R53A				IAmb	IAmb	07 21 13.3	
	comp=Z,78nm,1.6s						
P43A	Skaggs, Pawnee	26.26	3	P	P	07 20 34.2	-0.5
P38A	Dawn	26.29	356	P	P	07 20 34.6	-0.4
P46A	Rosedale	26.43	7	IAmb	IAmb	07 20 37.7	
	comp=Z,38nm,0.9s						
T59A	Double "B" Far	26.50	25	P	P	07 20 35.3	-1.6
CBKS	Cedar Bluff	26.52	345	P	P	07 20 35.5	-1.6
	baz=161						
P48A	Milroy	26.52	10	P	P	07 20 36.4	-0.6
P48A				IAmb	IAmb	07 20 38.0	
	comp=Z,39nm,1.1s						
T25A	Trinidad	26.54	336	P	P	07 20 38.0	+0.5
T25A				IAmb	IAmb	07 20 42.5	
	comp=Z,44nm,1.6s						
T25A	Trinidad	26.54	336	P	P	07 20 37.8	+0.3
	baz=150,SNR=10						
R55A	Marlinton	26.72	20	P	P	07 20 38.4	-0.5
Q52A	Bidwell	26.72	15	IAmb	IAmb	07 20 40.6	
	comp=Z,46nm,1.1s						
P49A	Miami Univ. Ec	26.72	11	P	P	07 20 38.0	-0.8
P49A				IAmb	IAmb	07 21 03.8	
	comp=Z,31nm,1.1s						
P49A	Miami Univ. Ec	26.72	11	P	P	07 20 37.9	-0.9
	baz=194,SNR=5.9						
O44A	Mansfield	26.84	4	IAmb	IAmb	07 20 41.5	
	comp=Z,25nm,0.9s						
P51A	Williamsport	27.02	14	P	P	07 20 41.3	-0.2
P51A				IAmb	IAmb	07 21 41.3	
	comp=Z,41nm,1.1s						
Q54A	Coxs Mills	27.14	18	IAmb	IAmb	07 20 44.5	
	comp=Z,43nm,0.9s						
HDIL	Hopedale	27.18	3	P	P	07 20 42.8	-0.2
HDIL				IAmb	IAmb	07 21 38.1	
	comp=Z,37nm,1.1s						
HDIL	Hopedale	27.18	3	P	P	07 20 42.0	-1.0
	baz=184						
SFIN	Lafayette	27.19	7	IAmb	IAmb	07 21 26.6	
	comp=Z,36nm,1.1s						
SFIN	Lafayette	27.19	7	P	P	07 20 42.1	-0.9
	baz=188,SNR=5.2						
214A	Organ Pipe Nat	27.20	317	P	P	07 20 41.1	-2.2
	baz=128						
TBTG	Tabatinga, AM	27.31	128	*e*P	P	07 20 45.3	+0.9
O48B	Farmland	27.34	10	P	P	07 20 42.0	-2.4
	baz=192,SNR=5.7						
P52A	Corning	27.39	15	P	P	07 20 44.4	-0.5
P52A				IAmb	IAmb	07 21 44.2	
	comp=Z,48nm,1.3s						
P52A	Corning	27.39	15	P	P	07 20 44.6	-0.2
	baz=199,SNR=7.1						
O49A	Covington	27.43	11	P	P	07 20 42.9	-2.3
O49A				IAmb	IAmb	07 21 42.0	
	comp=Z,85nm,1.8s						
N38A	Joes South For	27.44	357	P	P	07 20 45.0	-0.2
N38A				IAmb	IAmb	07 21 14.8	
	comp=Z,43nm,1.1s						
P53A	Whipple	27.45	16	IAmb	IAmb	07 20 47.4	
	comp=Z,56nm,1.2s						
W18A	Petrified Fore	27.46	325	P	P	07 20 49.3	+3.5
	baz=138,SNR=15						
SDCO	Great Sand Dun	27.50	335	P	P	07 20 47.6	+1.3
	baz=148,SNR=7.6						
KSCO	Kaye Shedlock’	27.55	340	P	P	07 20 47.5	+1.1
KSCO	Kaye Shedlock’	27.55	340	P	P	07 20 46.6	+0.1
	baz=155						
CBN	Corbin Frederi	27.64	24	P	P	07 20 45.5	-1.5
CBN				IAmb	IAmb	07 21 38.6	
	comp=Z,42nm,1.4s						
CBN	Corbin Frederi	27.64	24	P	P	07 20 45.6	-1.5
	baz=210						
N35A	Tabor	27.73	353	P	P	07 20 46.7	-1.1
ACSO	Alum Creek Sta	27.75	13	P	P	07 20 48.5	+0.4
ACSO				IAmb	IAmb	07 20 49.7	
	comp=Z,46nm,0.9s						
ACSO	Alum Creek Sta	27.75	13	P	P	07 20 48.2	+0.2
	baz=197,SNR=10						
CZSB	Cruzeiro do Su	27.78	138	*e*P	P	07 20 49.9	+1.3
N47A	Urbana	27.87	9	IAmb	IAmb	07 20 49.6	
	comp=Z,34nm,1.1s						
O52A	Adamsville	27.92	15	IAmb	IAmb	07 20 51.7	
	comp=Z,48nm,1.1s						
MCWV	Mont Chateau	28.06	19	IAmb	IAmb	07 20 53.3	
	comp=Z,46nm,1.6s						
MCWV	Mont Chateau	28.06	19	P	P	07 20 49.7	-1.1
	baz=204						
S22A	4UR Ranch, Cre	28.07	333	P	P	07 20 53.0	+1.6
	baz=146,SNR=10						
M44A	Midewin, Midew	28.10	5	P	P	07 20 50.3	-0.8
O53A	New Philadelph	28.21	16	IAmb	IAmb	07 20 54.4	
	comp=Z,47nm,1.2s						
O53A	New Philadelph	28.21	16	P	P	07 20 52.2	+0.1
	baz=200,SNR=6.1						
O54A	Avella	28.38	17	IAmb	IAmb	07 20 55.2	
	comp=Z,27nm,0.9s						
MVCO	Mesa Verde	28.42	330	IAmb	IAmb	07 20 58.8	
	comp=Z,30nm,1.2s						
MVCO	Mesa Verde	28.42	330	P	P	07 20 56.0	+1.6
	baz=142,SNR=15						
N51A	Ashland	28.54	14	P	P	07 20 55.2	+0.1
N51A				IAmb	IAmb	07 20 56.4	
	comp=Z,59nm,1.2s						
SCIA	State Center	28.54	357	P	P	07 20 54.3	-0.8
	baz=176						
L40A	Anamosa	28.64	360	IAmb	IAmb	07 20 57.2	
	comp=Z,30nm,1.0s						
BGNE	Belgrade	28.65	349	P	P	07 20 55.1	-1.1
	baz=165						
WUAZ	Wupatki	28.67	324	IAmb	IAmb	07 21 02.7	
	comp=Z,25nm,1.0s						
WUAZ	Wupatki	28.67	324	P	P	07 20 58.8	+2.2
	baz=135,SNR=12						
N53A	Lisbon	28.83	16	P	P	07 20 58.2	+0.5
N53A				IAmb	IAmb	07 20 59.6	
	comp=Z,41nm,1.1s						
NNA	Nana	28.85	150	LR	LR	07 30 52.3	
	comp=Z,202nm,18.4s,baz=296,slow=33						
L44A	Lake County Fo	28.89	5	P	P	07 20 57.0	-1.2
	baz=186						
L48A	N Adams	29.11	10	P	P	07 20 59.8	-0.4
L48A				IAmb	IAmb	07 21 01.2	
	comp=Z,24nm,0.8s						
OGNE	Ogallala	29.14	343	P	P	07 20 59.7	-0.8
	baz=158						
GLA	Glamis	29.22	316	P	P	07 21 00.1	-1.2
	baz=127						
K38A	Parkersburg	29.26	358	P	P	07 21 01.4	-0.1
K38A				IAmb	IAmb	07 21 02.7	
	comp=Z,58nm,1.6s						
PV13	Radium Mtn., P	29.32	331	IAmb	IAmb	07 21 07.0	
	comp=Z,38nm,1.3s						
BLYC	Blythe	29.44	318	IAmb	IAmb	07 21 09.4	
	comp=Z,41nm,1.6s						
PV11	David Mesa, Pa	29.46	331	IAmb	IAmb	07 21 08.0	
	comp=Z,80nm,1.8s						
M53A	WI Miller and	29.46	16	P	P	07 20 59.9	-3.4
	baz=201						
PV07	Paradox Valley	29.47	331	P	P	07 21 06.7	+3.1
JFWS	Jewell Farm	29.50	1	P	P	07 21 03.9	+0.2
JFWS				IAmb	IAmb	07 22 05.4	
	comp=Z,20nm,0.9s						
JFWS	Jewell Farm	29.50	1	P	P	07 21 02.7	-0.9
	baz=182						
PDMCI	Parker Dam,Lak	29.54	319	P	P	07 21 06.3	+2.2
	baz=129,SNR=7.4						
PV20	West Nyswonger	29.54	331	P	P	07 21 07.8	+3.5
SSPA	Standing Stone	29.58	21	P	P	07 21 01.4	-3.0
	baz=206						
SSPA	Standing Stone	29.58	21	P	P	07 21 05.8	+1.4
SSPA				pP	sP	07 21 21.5	+0.5
AAM	Ann Arbor	29.60	11	P	P	07 21 02.8	-1.6
	baz=195						
PV23	Carpenter Ridg	29.65	331	P	P	07 21 08.1	+2.7
SWSC	Sam W. Stewart	29.82	315	P	P	07 21 06.4	-0.1
	baz=125						
U15A	North Rim	29.84	324	P	P	07 21 09.9	+2.9
U15A				IAmb	IAmb	07 21 19.5	
	comp=Z,49nm,1.6s						
IKP	In-Ko-Pah, Jac	29.86	314	P	P	07 21 05.5	-1.6
	baz=124						
BC3	Big Chuckawall	30.00	317	P	P	07 21 11.7	+3.4
	baz=127,SNR=13						
M55A	Ridgway	30.05	19	P	P	07 21 07.5	-1.0
M55A				IAmb	IAmb	07 21 09.8	
	comp=Z,46nm,1.3s						
IRM	Iron Mountain	30.10	318	P	P	07 21 10.2	+1.1
	baz=128						
NEE2	Needles Airpor	30.14	319	P	P	07 21 08.5	-0.9
	baz=129						
MONP2	Monument Peak	30.22	314	P	P	07 21 08.1	-2.2
	baz=124						
K50A	Casco	30.26	12	P	P	07 21 09.9	-0.4
N23A	Red Feather La	30.39	337	P	P	07 21 11.3	-0.5
	baz=150						
I42A	Draeger Farm,	30.53	3	P	P	07 21 12.7	+0.1
I42A				IAmb	IAmb	07 21 13.6	
	comp=Z,19nm,0.8s						
BELC	Belle Mtn. Jos	30.57	317	P	P	07 21 11.2	-2.1
	baz=126						
TPFO	Pinon Flats	30.64	316	P	P	07 21 12.2	-1.9
	baz=125						
PFO	Pinyon Flats O	30.65	316	LR	LR	07 34 03.8	
	comp=Z,443nm,18.3s,baz=114,slow=37						
PFO	Pinyon Flats O	30.65	316	P	P	07 21 14.3	+0.2
PFO	Pinyon Flats O	30.65	316	P	P	07 21 13.2	-0.8
	baz=125						
I37A	Lemond, Waseca	30.66	357	P	P	07 21 14.8	+1.0
I37A				IAmb	IAmb	07 21 15.7	
	comp=Z,34nm,1.1s						
O20A	White River Ci	30.67	334	P	P	07 21 12.7	-1.5
	baz=146						
ECSD	EROS Data Cent	30.68	352	P	P	07 21 11.1	-2.9
	baz=169						
109C	Camp Elliot, M	30.69	314	P	P	07 21 11.8	-2.5
	baz=123						
LCMT	Little Creek M	30.80	324	P	P	07 21 16.1	+0.8
GMRC	Granite Mounta	30.82	318	P	P	07 21 17.3	+1.8
	baz=128,SNR=5.2						
P18A	Preston Nutter	31.17	331	P	P	07 21 20.5	+1.7
CCUT	Cedar City	31.24	325	P	P	07 21 23.0	+3.7
CCUT				IAmb	IAmb	07 21 34.0	
	comp=Z,28nm,1.3s						
P17A	Butcher Ranch,	31.28	330	IAmb	IAmb	07 21 24.0	
	comp=Z,21nm,1.1s						
HEC	Hector,Ludlow	31.28	318	P	P	07 21 18.0	-1.5
	baz=127						
MSU	Marysvale	31.29	327	P	P	07 21 22.3	+2.6
TMUT	Trail Mountain	31.38	329	P	P	07 21 23.6	+3.0
RWWY	Rawlins	31.55	337	P	P	07 21 22.8	+0.7
BINY	Binghamton	31.63	22	P	P	07 21 19.4	-3.1
	baz=209						
SPMN	Marine on St.	31.84	358	P	P	07 21 24.2	0.0
SPMN	Marine on St.	31.84	358	P	P	07 21 23.4	-0.7
	baz=177,SNR=25						
G40A	Rib Lake	31.86	1	P	P	07 21 24.1	-0.3
GSC	Goldstone, Bar	31.88	318	IAmb	IAmb	07 21 30.2	
	comp=Z,44nm,1.9s						
GSC	Goldstone, Bar	31.88	318	P	P	07 21 22.7	-2.1
	baz=127						
GLMI	Grayling	31.89	9	P	P	07 21 24.3	-0.3
GLMI	Grayling	31.89	9	P	P	07 21 23.6	-1.1
	baz=192						
CIS	Catalina Islan	31.89	313	P	P	07 21 22.8	-2.1
	baz=122						
SHOC	Shoshone, Teco	31.90	319	P	P	07 21 24.5	-0.4
	baz=128						
K57A	Scipio Center	31.92	21	P	P	07 21 25.1	+0.1
G45A	Suttons Bay	31.96	7	P	P	07 21 25.1	-0.1
PRN	Pahroc Range	32.12	323	P	P	07 21 28.9	+1.9
PRN				IAmb	IAmb	07 21 58.6	
	comp=Z,54nm,2.0s						
K22A	Casper	32.13	338	P	P	07 21 27.3	+0.3
K22A	Casper	32.13	338	P	P	07 21 27.9	+0.8
	baz=151,SNR=7.2						
BOAV	Boa Vista	32.14	107	*e*P	P	07 21 27.7	+0.5
PSUT	Pine Spring	32.21	325	IAmb	IAmb	07 21 33.4	
	comp=Z,26nm,1.2s						
NLU	North Lily Min	32.31	329	P	P	07 21 30.0	+1.3
QSM	Queen of Sheba	32.32	319	IAmb	IAmb	07 21 33.6	
	comp=Z,30nm,1.4s						
GWY	Greenwater Val	32.33	319	P	P	07 21 31.2	+2.3
GWY				IAmb	IAmb	07 21 33.9	
	comp=Z,27nm,1.4s						
EDW2	Edwards Air Fo	32.42	316	P	P	07 21 30.6	+1.0
	baz=125						
JLU	Jordanelle	32.50	331	P	P	07 21 30.3	-0.1
F36A	Milaca	32.50	357	P	P	07 21 29.7	-0.4
TPNV	Topopah Spring	32.54	321	P	P	07 21 28.7	-2.0
TPNV				IAmb	IAmb	07 21 35.7	
	comp=Z,23nm,1.4s						
TPNV	Topopah Spring	32.54	321	P	P	07 21 33.5	+2.8
	baz=130,SNR=5.3						
LRMC	Laurel Mtn Rad	32.56	317	P	P	07 21 32.3	+1.5
	baz=126,SNR=6.0						
FURC	Furnace Creek,	32.62	319	P	P	07 21 33.2	+2.0
	baz=128,SNR=9.6						
RSSD	Black Hills	32.64	343	P	P	07 21 30.9	-0.6
RSSD	Black Hills	32.64	343	P	P	07 21 32.3	+0.8
	baz=156						
RSSD	Black Hills	32.64	343	P	P	07 21 33.4	+1.9
RSSD				pP	sP	07 21 49.9	+1.7
RSSD				sP	pP	07 22 01.5	+18
S11A	Rachel	32.69	322	P	P	07 21 35.0	+3.0
COWI	Conover	32.72	3	P	P	07 21 31.6	-0.3
COWI				IAmb	IAmb	07 21 32.5	
	comp=Z,24nm,0.7s						
PECO	Prince Edward	32.83	19	P	P	07 21 32.0	-0.9
DUG	Dugway, Tooele	32.87	329	P	P	07 21 35.8	+2.3
	baz=138,SNR=6.7						
SADO	Sadowa	32.97	16	LR	LR	07 36 00.6	
	comp=Z,2µm,18.7s,baz=192,slow=39						
SADO	Sadowa	32.97	16	IAmb	IAmb	07 21 35.0	
	comp=Z,28nm,1.0s						
R11A	Troy Canyon, C	33.06	323	IAmb	IAmb	07 21 42.0	
	comp=Z,20nm,1.2s						
R11A	Troy Canyon, C	33.06	323	P	P	07 21 36.8	+1.5
	baz=132,SNR=18						
ARVC	Arvin	33.12	316	P	P	07 21 35.7	0.0
	baz=124						
E43A	Lone Tree Farm	33.14	5	P	P	07 21 34.9	-0.6
DELO	Deloro Mine	33.17	18	P	P	07 21 35.7	-0.2
E38A	The Farm, Brul	33.19	359	P	P	07 21 36.0	0.0
ISA	Isabella, Lake	33.19	317	IAmb	IAmb	07 21 41.8	
	comp=Z,56nm,1.9s						
ISA	Isabella, Lake	33.19	317	P	P	07 21 37.8	+1.5
	baz=125						
HWUT	Hardware Ranch	33.34	332	IAmb	IAmb	07 21 41.7	
	comp=Z,30nm,1.4s						
CWC	Cottonwood Cre	33.38	318	P	P	07 21 39.8	+1.7
	baz=127						
BW06	Boulder Array	33.40	335	P	P	07 21 39.2	+1.0
	baz=146						
PDAR	Pinedale Array	33.40	335	P	P	07 21 40.2	+2.1
	comp=Z,3.1nm,1.1s,baz=134,slow=8.5,SNR=9.8						
PDAR				PcP	PcP	07 24 20.6	+1.5
	comp=Z,1.6nm,0.9s,baz=134,slow=4.3,SNR=5.1						
	comp=Z,3.1nm,1.1s						
PDAR	Pinedale Array	33.40	335	P	P	07 21 39.5	+1.3
E46A	Sault Ste Mari	33.44	9	P	P	07 21 36.9	-1.3
E46A				IAmb	IAmb	07 21 39.3	
	comp=Z,23nm,1.4s						
BGU	Big Grassy Mou	33.52	329	IAmb	IAmb	07 21 43.8	
	comp=Z,26nm,1.3s						
LCH	Last Change Ra	33.59	320	P	P	07 21 41.8	+1.9
LCH				IAmb	IAmb	07 21 45.1	
	comp=Z,37nm,1.5s						
PKM	Mcpherson Peak	33.67	315	P	P	07 21 41.4	+0.8
	baz=122						
VES	Vestal, Richgr	33.70	317	P	P	07 21 43.3	+2.7
	baz=125,SNR=11						
TIN	Tinemaha, Big	33.85	319	P	P	07 21 43.5	+1.5
	baz=127						
TPH	Tonopah	33.86	321	P	P	07 21 44.5	+2.3
SMMC	Simmler	34.02	315	P	P	07 21 44.8	+1.2
	baz=123						
AHID	Auburn Hatcher	34.05	333	IAmb	IAmb	07 21 47.3	
	comp=Z,12nm,1.1s						
VOG	Valley Oaks Go	34.17	317	P	P	07 21 44.5	-0.2
	baz=125						
LONY	Lake Ozonia	34.24	21	IAmb	IAmb	07 21 46.9	
	comp=Z,27nm,1.2s						
MACA	Manacapuru-AM	34.36	116	*e*P	P	07 21 46.6	0.0
REDW	Red Top Meadow	34.43	334	P	P	07 21 48.2	+1.1
SNOW	Snow King Moun	34.47	334	P	P	07 21 48.7	+1.2
EYMN	Ely	34.53	360	IAmb	IAmb	07 21 48.0	
	comp=Z,17nm,0.8s						
EYMN	Ely	34.53	360	P	P	07 21 46.5	-1.2
	baz=179,SNR=8.1						
LOHW	Long Hollow	34.53	335	P	P	07 21 48.8	+0.8
LOHW				IAmb	IAmb	07 21 51.7	
	comp=Z,12nm,1.0s						
ELK	Elko	34.53	327	LR	LR	07 36 59.0	
	comp=Z,353nm,20.1s,baz=126,slow=38						
ELK	Elko	34.53	327	IAmb	IAmb	07 21 54.4	
	comp=Z,14nm,1.1s						
TPAW	Teton Pass	34.57	334	P	P	07 21 49.8	+1.3
TPAW				IAmb	IAmb	07 21 59.4	
	comp=Z,22nm,1.1s						
MLAC	Mammoth, Mammo	34.58	319	P	P	07 21 48.8	+0.3
	baz=127						
OMMB	Old Mammoth Mi	34.68	319	IAmb	IAmb	07 21 56.6	
	comp=Z,31nm,1.3s						
MOOW	Moose Ponds	34.70	335	P	P	07 21 50.0	+0.6
MDPB	Devils Postpil	34.74	319	IAmb	IAmb	07 21 55.3	
	comp=Z,27nm,1.1s						
NVAR	Mina Array Bea	34.74	321	P	P	07 21 53.6	+3.8
	comp=Z,44nm,0.9s,baz=137,slow=8.2,SNR=127						
NVAR				PcP	PcP	07 24 25.9	+2.9
	comp=Z,3.4nm,0.9s,baz=147,slow=4.2,SNR=4.1						
NVAR				LR	LR	07 38 47.5	
	comp=Z,416nm,18.9s,baz=121,slow=41						
NVAR	Mina Array Bea	34.74	321	P	P	07 21 52.8	+2.9
RYN	Ryan	35.00	321	IAmb	IAmb	07 21 57.4	
	comp=Z,21nm,1.0s						
B35A	Bob, Littlefor	35.01	357	P	P	07 21 50.9	-0.9
KVN	Kaiserville	35.01	322	IAmb	IAmb	07 21 57.3	
	comp=Z,26nm,1.0s						
AGMN	Agassiz Nation	35.10	354	P	P	07 21 52.1	-0.4
	baz=172,SNR=15						
MDND	Maddock	35.15	350	P	P	07 21 51.6	-1.4
	baz=165						
H17A	Grant Village	35.16	335	P	P	07 21 54.9	+1.4
	baz=146						
RLMT	Red Lodge	35.26	338	P	P	07 21 55.8	+1.5
RLMT	Red Lodge	35.26	338	P	P	07 21 55.4	+1.1
	baz=148,SNR=8.6						
YMR	Madison River	35.54	335	IAmb	IAmb	07 22 01.4	
	comp=Z,11nm,0.9s						
CMB	Columbia Colle	35.81	319	IAmb	IAmb	07 22 03.6	
	comp=Z,21nm,1.1s						
GCMT	Greycliff	35.98	338	P	P	07 22 02.1	+1.7
VCNR	Virginia City	36.10	321	IAmb	IAmb	07 22 06.9	
	comp=Z,18nm,1.1s						
HLID	Hailey	36.19	331	IAmb	IAmb	07 22 17.7	
	comp=Z,20nm,1.2s						
HLID	Hailey	36.19	331	P	P	07 22 03.0	+0.8
	baz=139,SNR=18						
PAHR	Pah Rah Range	36.19	322	IAmb	IAmb	07 22 07.5	
	comp=Z,16nm,1.0s						
MCMT	McKenzie Canyo	36.46	334	P	P	07 22 07.3	+2.8
VLDQ	Val d'Or	36.51	15	IAmb	IAmb	07 22 07.5	
	comp=Z,14nm,1.0s						
BOZ	Bozeman (W)	36.57	336	P	P	07 22 06.1	+0.6
	baz=145,SNR=7.9						
DGMT	Dagmar	36.69	345	IAmb	IAmb	07 22 09.4	
	comp=Z,12nm,0.9s						

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DGMT  Dagmar           36.69 345  P     P      07 22 07.4 +1.2
      baz=158
MFID  Camas Ranch      36.76 329  IAmb  IAmb   07 22 20.1
      comp=Z,30nm,1.4s
ULM   Lac du Bonnet    37.04 355  P     P      07 22 08.8 -0.3
      comp=Z,32nm,1.0s,baz=175,slow=8.2,SNR=20
ULM                               PcP   PcP    07 24 30.4 +1.1
      comp=Z,7.2nm,0.8s,baz=127,slow=3.2,SNR=4.0
ULM                               LR    LR     07 40 54.6
      comp=Z,584nm,19.0s,baz=172,slow=42
      comp=Z,32nm,1.0s
LPAZ  La Paz           37.17 142 eP     P      07 22 11.2 -0.1
LPAZ  La Paz           37.17 142  P     P      07 22 11.0 -0.2
ORV   Oroville         37.40 320  IAmb  IAmb   07 22 17.8
      comp=Z,22nm,1.1s
WVOR  Wild Horse Val   37.54 326  P     P      07 22 15.7 +2.0
EGMT  Eagleton         37.92 340  P     P      07 22 18.5 +1.7
EGMT                              IAmb  IAmb   07 22 19.9
      comp=Z,15nm,1.1s
EGMT  Eagleton         37.92 340  P     P      07 22 16.0 -0.8
      baz=150,SNR=9.5
PLID  Pearl Lake       38.08 331  IAmb  IAmb   07 22 21.8
      comp=Z,37nm,1.2s
MOD   Modoc Plateau    38.12 324  IAmb  IAmb   07 22 29.9
      comp=Z,29nm,1.4s
MSO   Missoula         38.52 335  IAmb  IAmb   07 22 25.1
      comp=Z,16nm,1.2s
MSO   Missoula         38.52 335  P     P      07 22 21.1 -0.7
      baz=143,SNR=11
BMO   Blue Mountains   38.54 330  IAmb  IAmb   07 22 25.2
      comp=Z,25nm,1.3s
MDP   Montagnes des    38.80  98  LR    LR     07 41 35.4
      comp=Z,330nm,18.8s,baz=317,slow=42
I07A  Izee             39.12 327  P     P      07 22 29.3 +2.4
I07A                              IAmb  IAmb   07 22 30.8
      comp=Z,23nm,1.3s
JTMT  Jette            39.39 335  P     P      07 22 30.1 +1.0
K04D  Chiloquin, OR    39.41 324  P     P      07 22 28.4 -1.0
      baz=129
YBH   Yreka Blue Hor   39.43 322  LR    LR     07 39 09.6
      comp=Z,393nm,18.9s,baz=150,slow=37
L04D  Klamath Falls    39.48 323  IAmb  IAmb   07 22 33.9
      comp=Z,34nm,0.9s
L04D  Klamath Falls    39.48 323  P     P      07 22 28.6 -1.4
      baz=128,SNR=11
J05D  Fort Rock, OR    39.53 325  P     P      07 22 31.7 +1.3
      baz=130,SNR=7.5
MALB  Monte Alegre     39.54 110 eP     P      07 22 30.4 -0.2
G08A  Pilot Rock       39.67 329  IAmb  IAmb   07 22 35.1
      comp=Z,40nm,1.9s
PINE  Pine Mountain    39.70 326  P     P      07 22 33.8 +1.9
PINE                              IAmb  IAmb   07 22 36.0
      comp=Z,45nm,1.6s
J04D  Umpqua Nationa   40.00 324  P     P      07 22 36.6 +2.2
J04D  Umpqua Nationa   40.00 324  P     P      07 22 34.8 +0.4
      baz=129,SNR=17
L02F  Cave Junction    40.18 322  P     P      07 22 36.3 +0.7
      baz=126
I05D  Terrebonne, OR   40.27 326  P     P      07 22 37.6 +1.2
      baz=131
WALA  Waterton Lakes   40.30 337  P     P      07 22 38.7 +2.0
I04A  Tendick Farm,    40.52 325  P     P      07 22 40.4 +1.9
      baz=129,SNR=8.2
K02D  Willamette Mer   40.57 322  P     P      07 22 39.3 +0.3
      baz=126
DBO   Dodson Butte     40.58 323  IAmb  IAmb   07 22 53.6
      comp=Z,23nm,1.2s
G05D  Wamic, OR        40.86 327  P     P      07 22 42.7 +1.5
      baz=132,SNR=6.6
D08A  Wollman Farm,    40.91 331  IAmb  IAmb   07 22 45.1
      comp=Z,26nm,1.2s
H04A  Detroit Lake     40.96 326  P     P      07 22 43.7 +1.7
NEW   Newport          40.99 333  P     P      07 22 42.8 +0.6
NEW   Newport          40.99 333  P     P      07 22 43.4 +1.1
      baz=139,SNR=7.3
I03D  Drain, OR        40.99 324  P     P      07 22 44.3 +2.0
      baz=128,SNR=7.8
J01E  Myrtle Point     41.01 323  P     P      07 22 44.6 +2.2
      baz=126,SNR=18
MCPB  Macapa, AP       41.02 106 eP     P      07 22 42.8 -0.2
C09A  Chrisman Ranch   41.15 332  P     P      07 22 44.7 +1.1
C09A                              IAmb  IAmb   07 22 47.1
      comp=Z,27nm,1.1s
H04D  Lebanon          41.16 325  IAmb  IAmb   07 22 47.9
      comp=Z,32nm,1.1s
H04D  Lebanon          41.16 325  P     P      07 22 44.5 +0.9
      baz=129,SNR=6.9
F05D  White Salmon     41.36 328  P     P      07 22 48.2 +2.9
      baz=132,SNR=5.6
COR   Corvallis        41.51 325  P     P      07 22 49.6 +3.1
I02E  Swisshome, OR    41.53 324  P     P      07 22 47.4 +0.7
      baz=127
SIV   San Ignacio      41.60 134  P     P      07 22 47.1 -0.5
      comp=Z,16nm,0.9s,baz=304,slow=9.0,SNR=43
      comp=Z,16nm,0.9s
LVC   Limon Verde      41.81 148  LR    LR     07 37 52.0
      comp=Z,136nm,18.7s,baz=320,slow=33
G03D  McMinnville, O   41.88 326  P     P      07 22 51.4 +1.8
      baz=129,SNR=5.2
LTY   Liberty          41.90 330  IAmb  IAmb   07 23 03.3
      comp=Z,55nm,1.8s
B08A  Colville Reser   42.05 332  P     P      07 22 52.9 +2.0
F04D  Rainier, OR      42.30 327  P     P      07 22 54.0 +1.0
      baz=130
E04D  Cinebar          42.38 328  P     P      07 22 55.5 +1.9
E04D                              IAmb  IAmb   07 22 57.4
      comp=Z,42nm,1.4s
E04D  Cinebar          42.38 328  P     P      07 22 53.0 -0.6
      baz=131
D05A  Enumclaw         42.50 329  IAmb  IAmb   07 22 58.5
      comp=Z,36nm,1.1s
D04E  Lakebay          42.90 328  P     P      07 22 58.8 +1.0
      baz=131
E03A  Lebam            42.90 327  P     P      07 22 59.0 +1.3
B06A  Marblemount      43.17 331  P     P      07 23 01.3 +1.4
B06A                              IAmb  IAmb   07 23 03.1
      comp=Z,30nm,0.9s
B05A  Bryant           43.29 330  P     P      07 23 00.7 -0.2
      baz=133,SNR=5.6
D03D  Eldon            43.29 328  P     P      07 23 01.5 +0.5
      baz=131,SNR=5.2
WISH  Wishkah          43.37 328  P     P      07 23 02.6 +1.0
EDM   Edmonton         43.56 341  P     P      07 23 03.3 +0.2
NLWA  Neilton Lookou   43.60 328  P     P      07 23 05.9 +2.4
A04D  Lummi Island     43.90 330  P     P      07 23 06.3 +0.5
      baz=133
RPN   Rapa Nui         43.92 204  LR    LR     07 36 56.1
      comp=Z,204nm,19.6s,baz=32,slow=30
LLLB  Lillooet         44.82 332  IAmb  IAmb   07 23 17.0
      comp=Z,38nm,1.3s
FCC   Fort Churchill   45.42 358  P     P      07 23 16.4 -1.4
FCC                               IAmb  IAmb   07 23 18.7
      comp=Z,14nm,1.0s
TMAB  Tom-Au,PA,Br     45.44 107 eP     P      07 23 19.9 +1.3
SCHQ  Schefferville    45.57  19  P     P      07 23 18.2 -0.8
      comp=Z,41nm,1.0s,baz=223,slow=5.4,SNR=30
SCHQ                              LR    LR     07 43 29.1
      comp=Z,1µm,18.7s,baz=215,slow=38
      comp=Z,41nm,1.0s
SCHQ  Schefferville    45.57  19  P     P      07 23 18.1 -1.0
CBB   Campbell River   46.07 330  P     P      07 23 21.1 -1.9
CBB                               IAmb  IAmb   07 23 34.4
      comp=Z,19nm,1.2s
SMTB  Santa Maria do   48.51 115 eP     P      07 23 44.3 +1.7
BBB   Bella Bella      48.77 330  LR    LR     07 48 00.5
      comp=Z,336nm,18.4s,baz=123,slow=40
ROSB  Rosrio           49.33 106 eP     P      07 23 48.4 -0.5
CPUP  Villa Florida    51.31 140  P     P      07 24 02.3 -1.3
      comp=Z,2.9nm,0.8s,baz=352,slow=5.3,SNR=4.4
CPUP                              LR    LR     07 47 18.3
      comp=Z,177nm,19.2s,baz=325,slow=38
      comp=Z,2.9nm,0.8s
CPUP  Villa Florida    51.31 140  IAmb  IAmb   07 24 05.6
      comp=Z,38nm,1.6s
CPUP  Villa Florida    51.31 140  P     P      07 24 02.2 -1.3
BDFB  Brasilia         51.43 123  P     P      07 24 03.6 -1.3
      comp=Z,3.9nm,1.0s,baz=250,slow=8.6,SNR=3.8
      comp=Z,3.9nm,1.0s
BDFB  Brasilia         51.43 123  IAmb  IAmb   07 25 25.2
      comp=Z,11nm,1.1s
YKA   Yellowknife Ar   51.89 346  P     P      07 24 07.8 +0.4
      comp=Z,10nm,0.9s,baz=145,slow=8.0,SNR=50
YKA                               PcP   PcP    07 25 20.8 +1.1
      comp=Z,6.2nm,1.0s,baz=146,slow=4.0,SNR=9.6
YKA                               LR    LR     07 49 01.4
      comp=Z,242nm,19.2s,baz=126,slow=39
      comp=Z,10nm,0.9s
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NBPS  Pedro II - PI    52.35 106 eP     P      07 24 11.7 -0.1
SDBA  SAO DESIDERIO    52.47 117 eP     P      07 24 14.4 +1.9
FRB   Frobisher Bay    52.79  12  LR    LR     07 47 42.1
      comp=Z,1µm,20.3s,baz=200,slow=37
CRAG  Craig            53.13 332  P     P      07 24 17.5 +0.8
      baz=125
NBMO  Morrinhos-CE     53.31 104 eP     P      07 24 19.3 +0.6
WRAK  Wrangell Islan   53.34 333  P     P      07 24 17.5 -0.7
      baz=127
TAOE  Nuku Hiva Isla   53.44 248 eS     S      07 31 53.0 +3.4
      comp=Z,230nm,25.8s
TAOE                             eLR    LR     07 39 31.4
      comp=Z,360nm,26.0s
DLBC  Dease Lake       53.62 336  P     P      07 24 22.6 +2.2
DLBC                              IAmb  IAmb   07 24 24.9
      comp=Z,18nm,0.8s
PTGB  Pitanga          53.67 135 eP     P      07 24 22.9 +1.6
S34M  Telegraph Cree   53.74 335  P     P      07 24 20.9 -0.2
      baz=129
NBPB  Pedra_Branca-C   54.49 107 eP     P      07 24 27.2 -0.2
TGTN  Hyland Airport   55.06 339  P     P      07 24 32.3 +1.5
      baz=134
NBCL  Cascavel-CE      55.26 105 eP     P      07 24 34.6 +1.7
P33M  Teslin, Yukon    55.86 336  P     P      07 24 36.5 -0.2
      baz=128,SNR=5.5
NBMA  Muriti-CE        55.90 108 eP     P      07 24 37.8 +0.2
NBPN  Ponto Novo - B   55.94 113 eP     P      07 24 37.4 -0.4
TIJ01 Guaruva-PR       56.21 133 eP     P      07 24 41.3 +1.7
DIAM  Diamantina, MG   56.35 123 eP     P      07 24 40.6 -0.2
SKAG  Skagway          56.42 335  P     P      07 24 41.0 +0.5
      baz=125
WHY   Whitehorse       56.95 336  P     P      07 24 46.1 +1.8
WHY                               IAmb  IAmb   07 25 01.1
      comp=Z,12nm,1.4s
WHY   Whitehorse       56.95 336  P     P      07 24 43.7 -0.7
      baz=126
PLCA  Paso Flores      57.05 161  P     P      07 24 45.4 +0.1
      comp=Z,2.5nm,1.1s,baz=321,slow=13,SNR=4.6
PLCA                              LR    LR     07 43 56.8
      comp=Z,181nm,20.1s,baz=340,slow=30
      comp=Z,2.5nm,1.1s
PLCA  Paso Flores      57.05 161  IAmb  IAmb   07 24 46.1
      comp=Z,30nm,1.9s
GDU01 Guandu, BA       57.69 116 eP     P      07 24 50.0 -0.1
M31M  Drury Creek, Y   57.70 338  P     P      07 24 50.6 +1.1
M31M  Drury Creek, Y   57.70 338  P     P      07 24 50.4 +0.9
      baz=128,SNR=5.5
N31M  Braeburn, Yuko   57.79 337  P     P      07 24 51.7 +1.5
N31M                              IAmb  IAmb   07 24 53.6
      comp=Z,10nm,0.9s
N31M  Braeburn, Yuko   57.79 337  P     P      07 24 50.1 -0.1
      baz=126,SNR=6.7
RCBR  Riachuelo        58.03 106  LR    LR     07 50 38.9
      comp=Z,240nm,18.2s,baz=91,slow=37
RCBR  Riachuelo        58.03 106 eP     P      07 24 54.1 +1.5
HYT   Haines Junctio   58.10 335  IAmb  IAmb   07 25 48.9
      comp=Z,18nm,1.5s
HYT   Haines Junctio   58.10 335  P     P      07 24 53.0 +0.5
      baz=124,SNR=5.6
NBLA  Lagarto - SE     58.16 112 eP     P      07 24 55.0 +1.5
N30M  Aishikik Lake    58.29 336  P     P      07 24 54.9 +1.1
      baz=125,SNR=7.6
CMC01 Camacan, BA      58.46 117 eP     P      07 24 57.6 +2.1
YUK6  Outpost Mounta   58.51 335  P     P      07 24 56.9 +1.4
      baz=123
SJMB  Sao Joao De Ma   58.60 122 eP     P      07 24 56.3 -0.2
M30M  Minto, Yukon     58.82 337  P     P      07 24 57.5 +0.1
      baz=125
YUK4  Talbot Arm       58.85 335  P     P      07 24 58.3 +0.5
      baz=123
PINM  Pinnacle         58.86 334  P     P      07 24 58.3 +0.6
      baz=121
NBAN  Anadia - AL      59.03 110 eP     P      07 24 59.2 -0.4
NAN01 Guarapari, ES    59.07 120 eP     P      07 24 59.8  0.0
LOGN  Logan Glacier    59.55 334  P     P      07 25 03.2 +0.6
LOGN                              IAmb  IAmb   07 26 10.2
      comp=Z,9.6nm,0.9s
MESA  MESA             59.63 333  P     P      07 25 04.2 +0.9
      baz=119
YAH   Yahtse           59.64 334  P     P      07 25 01.8 -1.5
C36M  Paulatuk         59.75 347  P     P      07 25 03.3 -0.3
      baz=142
CTG   Chitna Glacier   59.76 334  P     P      07 25 05.3 +1.3
      baz=120
CAM01 Campos-RJ        59.78 125 eP     P      07 25 05.2 +0.7
YUK3  Moose Creek      59.81 335  P     P      07 25 06.3 +1.9
      baz=121,SNR=7.2
SFJD  Kangerlussuaq    59.91  17  LR    LR     07 51 58.6
      comp=Z,1µm,18.3s,baz=226,slow=37
ALF01 Guarapari-ES     59.92 123 eP     P      07 25 07.7 +2.2
BARN  Barnard Glacie   59.94 334  IAmb  IAmb   07 25 36.2
      comp=Z,22nm,1.6s
BVCY  Beaver Creek     60.30 336  P     P      07 25 08.7 +1.1
      baz=121
DAWY  Dawson           60.63 338  P     P      07 25 08.9 -1.0
      baz=123
MCARA McCarthy VSAT    60.68 334  P     P      07 25 11.1 +0.9
MCARA McCarthy VSAT    60.68 334  P     P      07 25 08.9 -1.2
      baz=118,SNR=6.0
M27K  Edge Creek, AK   60.68 336  IAmb  IAmb   07 25 57.5
      comp=Z,12nm,1.2s
M27K  Edge Creek, AK   60.68 336  P     P      07 25 08.7 -1.6
      baz=120
VRDI  Verde Repeater   60.79 334  IAmb  IAmb   07 25 14.4
      comp=Z,16nm,1.2s
I29M  Ogilvie Camp,    60.98 339  P     P      07 25 12.3 +0.1
I29M                              IAmb  IAmb   07 25 57.9
      comp=Z,15nm,1.1s
I29M  Ogilvie Camp,    60.98 339  P     P      07 25 12.8 +0.6
      baz=125
L27K  Beaver Creek,    61.02 336  IAmb  IAmb   07 25 15.8
      comp=Z,7.2nm,0.9s
L27K  Beaver Creek,    61.02 336  P     P      07 25 13.1 +0.6
      baz=120,SNR=14
GLB   Gilahina Butte   61.04 334  IAmb  IAmb   07 25 16.7
      comp=Z,18nm,1.1s
M26K  Nabesna, AK      61.16 335  IAmb  IAmb   07 25 16.3
      comp=Z,9.4nm,1.2s
M26K  Nabesna, AK      61.16 335  P     P      07 25 13.0 -0.5
      baz=119
BMRM  Bremner River    61.16 333  P     P      07 25 15.6 +2.1
BMRM  Bremner River    61.16 333  P     P      07 25 14.4 +0.9
      baz=117,SNR=6.4
INK   Inuvik           61.34 343  LR    LR     07 55 43.3
      comp=Z,242nm,19.5s,baz=127,slow=40
INK   Inuvik           61.34 343  P     P      07 25 15.5 +1.0
INK                               IAmb  IAmb   07 25 16.6
      comp=Z,12nm,0.9s
INK   Inuvik           61.34 343  P     P      07 25 15.0 +0.6
      baz=132,SNR=9.7
RES   Resolute Bay     61.40 359  LR    LR     07 54 35.2
      comp=Z,571nm,18.6s,baz=164,slow=39
N25K  Chitina, Valde   61.45 334  IAmb  IAmb   07 25 19.1
      comp=Z,15nm,0.9s
N25K  Chitina, Valde   61.45 334  P     P      07 25 15.3 -0.2
      baz=117,SNR=11
EYAK  Cordova Ski Ar   61.48 333  P     P      07 25 16.8 +1.2
EYAK  Cordova Ski Ar   61.48 333  P     P      07 25 17.6 +2.0
      baz=115,SNR=15
L26K  Log Cabin Wild   61.60 336  P     P      07 25 16.7 +0.3
      baz=119
K27K  Chicken          61.61 337  P     P      07 25 16.3 -0.1
      baz=121
EGAK  Eagle            61.66 338  P     P      07 25 17.1 +0.4
EGAK  Eagle            61.66 338  P     P      07 25 17.6 +0.9
      baz=122,SNR=6.3
KLU   Klutina          61.97 334  P     P      07 25 20.8 +1.8
      baz=116,SNR=17
HARP  HAARP            62.05 335  P     P      07 25 17.9 -1.5
      baz=117
A36M  Sachs Harbour    62.08 349  IAmb  IAmb   07 25 20.5
      comp=Z,11nm,0.9s
A36M  Sachs Harbour    62.08 349  P     P      07 25 17.0 -2.4
      baz=142
DOT   Dot Lake         62.19 336  P     P      07 25 21.8 +1.4
DOT                               IAmb  IAmb   07 25 23.1
      comp=Z,12nm,1.1s
GLI   Glacier Island   62.22 333  P     P      07 25 20.9 +0.3
      baz=114
M24K  Tolsona, Glenn   62.34 334  P     P      07 25 23.2 +1.8
      baz=116,SNR=8.6
J26L  Joseph Creek     62.41 337  P     P      07 25 22.5 +0.6
      baz=119,SNR=14
PAX   Paxson           62.43 335  P     P      07 25 23.4 +1.4
      baz=117,SNR=8.0
SCM   Sheep Creek Mo   62.72 334  P     P      07 25 25.5 +1.5
      baz=114,SNR=7.6
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PMOR  Pomariorio Ree   62.84 245 eT     T      08 33 47.7
      comp=Z,2.6nm,0.2s
M23K  Glacier View     62.88 334  P     P      07 25 26.6 +1.7
      baz=114,SNR=6.1
K24K  Donnelly Dome    62.94 336  P     P      07 25 26.0 +0.6
      baz=117,SNR=5.3
SEW   Seward           63.00 331  P     P      07 25 27.1 +1.4
      baz=112,SNR=11
KNK   Knik Glacier     63.04 333  P     P      07 25 28.0 +1.9
      baz=113,SNR=11
SML   Sawmill          63.15 333  P     P      07 25 28.4 +1.6
      baz=113,SNR=16
J25K  Salcha River,    63.15 337  IAmb  IAmb   07 26 07.3
      comp=Z,20nm,1.5s
J25K  Salcha River,    63.15 337  P     P      07 25 28.0 +1.2
      baz=118,SNR=8.6
WAT6  Susitna Watana   63.21 334  P     P      07 25 28.6 +1.3
      baz=114,SNR=22
O22K  Cooper Landing   63.26 332  P     P      07 25 27.3 -0.2
      baz=111
DHY   Denali Highway   63.26 335  P     P      07 25 27.0 -0.7
      baz=115
GHO   Glory Hole Cre   63.39 333  P     P      07 25 29.6 +1.2
PMR   Palmer           63.41 333  P     P      07 25 29.3 +0.9
PMR   Palmer           63.41 333  P     P      07 25 29.2 +0.9
      baz=112,SNR=13
BRSE  Bradley Lake S   63.47 331  P     P      07 25 30.1 +1.2
      baz=110,SNR=21
RC01  Rabbit Creek A   63.49 332  P     P      07 25 29.7 +0.7
      baz=112,SNR=11
BRLK  Bradley Lake     63.55 331  P     P      07 25 30.2 +0.7
WAT1  Susitna Watana   63.65 334  P     P      07 25 29.8 -0.3
      baz=114
HDA   Harding Lake     63.67 336  IAmb  IAmb   07 25 32.2
      comp=Z,14nm,1.2s
HDA   Harding Lake     63.67 336  P     P      07 25 29.9 -0.2
      baz=116,SNR=7.6
KDAK  Kodiak Island    63.75 328  P     P      07 25 30.5 -0.2
      baz=108
KDAK  Kodiak Island    63.75 328  P     P      07 25 33.7 +3.0
KDAK                              x     x      07 25 46.7
IL31                   63.80 337  P     P      07 25 30.3 -0.6
IL31                              IAmb  IAmb   07 25 33.8
      comp=Z,13nm,1.1s
ILAR  Eielson Array    63.80 337  P     P      07 25 32.7 +1.7
      comp=Z,5.2nm,0.9s,baz=124,slow=5.0,SNR=38
ILAR                              PcP   PcP    07 26 07.1 +0.5
      comp=Z,1.9nm,0.9s,baz=138,slow=4.7,SNR=4.8
ILAR                              LR    LR     07 56 38.5
      comp=Z,232nm,18.4s,baz=92,slow=39
      comp=Z,5.2nm,0.9s
ILAR  Eielson Array    63.80 337  P     P      07 25 31.7 +0.7
OHAK  Old Harbor       63.95 328  P     P      07 25 31.8 -0.2
      baz=106
CAPN  Captain Cook N   64.02 332  P     P      07 25 31.7 -0.7
      baz=110
CCB   Clear Creek Bu   64.10 336  IAmb  IAmb   07 26 10.6
      comp=Z,9.3nm,1.0s
WRH   Wood River Hil   64.14 336  IAmb  IAmb   07 26 11.0
      comp=Z,11nm,1.0s
POKR  Poker Plat Res   64.17 337  P     P      07 25 32.9 -0.5
      baz=116
MCK   McKinley         64.17 335  IAmb  IAmb   07 25 36.8
      comp=Z,29nm,1.4s
MCK   McKinley         64.17 335  P     P      07 25 33.1 -0.4
      baz=114,SNR=6.9
CUT   Chulitna         64.22 334  P     P      07 25 34.0 +0.3
      baz=112
COLA  College          64.22 337  P     P      07 25 33.9 +0.2
COLA                              IAmb  IAmb   07 26 11.3
      comp=Z,19nm,0.9s
COLA  College          64.22 337  P     P      07 25 33.5 -0.1
      baz=115
COLA  College          64.22 337  P     P      07 25 35.4 +1.8
COLA                              pP    sP     07 25 48.9 -2.2
COLA                              x     x      07 26 10.5
TCOL  CIGO, UAF Yank   64.22 337  P     P      07 25 33.1 -0.6
TCOL                              IAmb  IAmb   07 26 11.3
      comp=Z,22nm,1.0s
TCOL  CIGO, UAF Yank   64.22 337  P     P      07 25 33.5 -0.2
      baz=115
BMAR  Burnt Mountain   64.23 340  P     P      07 25 35.6 +1.9
SII   Sitkinak Islan   64.23 327  P     P      07 25 32.9 -1.1
      baz=105
MDM   Murphy Dome      64.40 337  P     P      07 25 35.1 +0.2
MDM                               IAmb  IAmb   07 26 12.1
      comp=Z,25nm,1.2s
ICESG Greenland Ices   64.45  18 iP     P      07 25 33.7 -1.8
ICESG                             IAmb  IAmb   07 25 34.6
      comp=Z,23nm,1.1s
O20K  Slope Mountain   64.48 331  P     P      07 25 35.3 -0.3
      baz=108,SNR=12
SPU   Mount Spurr      64.58 332  P     P      07 25 36.9 +0.7
NEA2  Nenana           64.58 336  P     P      07 25 33.8 -2.3
      baz=114
TRF   Thorofare Moun   64.62 335  P     P      07 25 36.8 +0.2
      baz=112,SNR=17
Q19K  Cape Douglas,    64.62 329  P     P      07 25 37.9 +1.4
Q19K  Cape Douglas,    64.62 329  P     P      07 25 37.1 +0.6
      baz=107,SNR=11
P19K  Oil Pt           64.64 330  P     P      07 25 37.4 +0.8
      baz=108,SNR=12
H24K  Noodor Dome      64.65 338  IAmb  IAmb   07 26 13.2
      comp=Z,9.8nm,0.9s
H24K  Noodor Dome      64.65 338  P     P      07 25 37.3 +0.7
      baz=116,SNR=9.0
SPCR  Spurr Chakacha   64.65 332  P     P      07 25 37.5 +0.8
      baz=109,SNR=6.6
CHIR  Chirikof Islan   64.83 326  P     P      07 25 38.6 +0.7
      baz=104
I23K  Minto, Yukon-K   64.92 337  IAmb  IAmb   07 25 40.8
      comp=Z,15nm,0.9s
I23K  Minto, Yukon-K   64.92 337  P     P      07 25 38.8 +0.6
      baz=114,SNR=7.2
KTH   Kantishna Hill   64.92 335  IAmb  IAmb   07 25 41.3
      comp=Z,21nm,1.2s
BPAW  Bear Paw Mtn.    65.15 335  IAmb  IAmb   07 25 42.7
      comp=Z,25nm,1.4s
BPAW  Bear Paw Mtn.    65.15 335  P     P      07 25 40.6 +0.7
      baz=112,SNR=6.0
PPLA  Purkeypile       65.22 334  P     P      07 25 42.0 +1.5
PPLA  Purkeypile       65.22 334  P     P      07 25 41.4 +0.9
      baz=110,SNR=9.2
H23K  Yukon River      65.26 337  P     P      07 25 39.0 -1.6
      baz=114
O19K  Port Alsworth    65.32 331  P     P      07 25 40.5 -0.5
      baz=107
PPT   Papeete          65.35 243  LR    LR     07 46 21.2
      comp=Z,217nm,19.1s,baz=46,slow=29
PPT2  Papeete2         65.36 243 eLR    LR     07 45 12.9
      comp=Z,464nm,27.2s
CAST  Castle Rocks     65.36 334  P     P      07 25 41.9 +0.7
CAST  Castle Rocks     65.36 334  P     P      07 25 42.0 +0.8
      baz=110,SNR=17
P18K  Big Mountain,    65.54 330  P     P      07 25 43.1 +0.7
      baz=106
N19K  Bonanza Creek    65.58 331  P     P      07 25 44.3 +1.5
      baz=107,SNR=24
CHUM  Lake Minchumin   65.62 335  P     P      07 25 42.6 -0.2
      baz=110
L20K  Farewell, AK     65.82 333  P     P      07 25 44.8 +0.6
      baz=108,SNR=31
M19K  Big River Lodg   65.87 332  P     P      07 25 45.0 +0.5
      baz=108
I21K  Tanana           65.95 336  P     P      07 25 45.2 +0.3
      baz=111
COLD  Coldfoot         66.08 339  P     P      07 25 46.5 +0.8
      baz=114,SNR=10
L19K  White Mountain   66.16 333  P     P      07 25 48.0 +1.6
L19K                              IAmb  IAmb   07 25 49.3
      comp=Z,16nm,1.1s
L19K  White Mountain   66.16 333  P     P      07 25 47.7 +1.3
      baz=107,SNR=9.5
SVW2  Sparrevohn       66.18 331  P     P      07 25 45.2 -1.3
SVW2                              IAmb  IAmb   07 25 48.6
      comp=Z,17nm,1.0s
K20K  Telida           66.18 334  P     P      07 25 46.7 +0.2
K20K  Telida           66.18 334  P     P      07 25 47.4 +0.9
      baz=108,SNR=16
N18K  Kilae Creek      66.21 331  P     P      07 25 47.6 +0.9
      baz=106,SNR=18
H21K  Melozitna Rive   66.44 337  P     P      07 25 47.6 -0.5
      baz=111
TOLK  Toolik Lake Re   66.45 340  P     P      07 25 49.0 +0.8
TOLK  Toolik Lake Re   66.45 340  P     P      07 25 48.6 +0.5
      baz=115,SNR=9.6
J20K  Nowinta River    66.48 335  IAmb  IAmb   07 25 50.3
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	comp=Z,16nm,1.2s						
J20K	Nowinta River	66.48	335	P	P	07 25 49.3	+1.0
	baz=109,SNR=9.7						
SUMG	Summit	66.67	15	P	P	07 25 49.8	-0.1
SUMG				IAmb	IAmb	07 25 52.3	
	comp=Z,23nm,1.2s						
SUMG	Summit	66.67	15	*i* P	P	07 25 48.0	-1.9
SUMG				IAmb	IAmb	07 25 52.0	
	comp=Z,23nm,1.2s						
EUNU	Eureka	66.79	1	P	P	07 25 50.5	+0.3
EUNU				IAmb	IAmb	07 25 51.6	
	comp=Z,14nm,0.9s						
TTA	Tatalina	66.89	333	P	P	07 25 52.0	+0.9
TTA				IAmb	IAmb	07 25 53.6	
	comp=Z,18nm,1.1s						
TTA	Tatalina	66.89	333	P	P	07 25 51.1	0.0
	baz=106,SNR=17						
BORG	Borgarnes	69.45	25	LR	LR	07 58 01.9	
	comp=Z,113nm,18.1s,baz=296,slow=37						
ALE	Alert	70.19	4	P	P	07 26 10.4	-0.9
USHA	Ushuaia	70.55	166	LR	LR	07 52 13.5	
	comp=Z,58nm,21.6s,baz=227,slow=32						
DAG	Danmarks Havn	73.13	13	*i* P	P	07 26 26.9	-2.1
DAG				IAmb	IAmb	07 26 28.3	
	comp=Z,10nm,1.0s						
JMIC	Jan Mayen	75.09	20	LR	LR	08 00 49.6	
	comp=Z,288nm,19.5s,baz=254,slow=37						
RAR	Rarotonga	75.63	244	LR	LR	07 52 31.0	
	comp=Z,105nm,18.6s,baz=348,slow=30						
EKA	Eskdalemuir Ar	78.02	36	LR	LR	07 59 19.1	
	comp=Z,180nm,19.8s,baz=318,slow=34						
ESDC	Sonseca Array	79.46	52	P	P	07 27 04.1	-1.7
	comp=Z,4.2nm,1.1s,baz=284,slow=5.7,SNR=16						
ESDC				LR	LR	07 57 28.5	
	comp=Z,194nm,19.7s,baz=295,slow=32						
	comp=Z,4.2nm,1.1s						
ESDC	Sonseca Array	79.46	52	P	P	07 27 03.7	-2.1
ESBB	Sonseca Array	79.47	52	P	P	07 27 03.7	-2.1
MDT	Midelt	80.02	59	LR	LR	07 56 29.4	
	comp=Z,233nm,20.9s,baz=289,slow=31						
PMSA	Palmer Station	80.52	169	LR	LR	07 55 30.7	
	comp=Z,150nm,18.9s,baz=302,slow=30						
SPITS	Spitsbergen Ar	80.58	11	LR	LR	08 04 46.1	
	comp=Z,694nm,19.4s,baz=19,slow=37						
BILL	Bilibino	82.41	338	P	P	07 27 20.3	-0.5
KOWA	Kowa	83.99	77	P	P	07 27 29.7	-0.4
KOWA				IAmb	IAmb	07 27 31.8	
	comp=Z,12nm,1.0s						
NOA	NORSAR Array B	84.33	29	P	P	07 27 31.0	+0.1
	comp=Z,1.3nm,0.9s,baz=295,slow=5.2,SNR=3.7						
NOA				LR	LR	08 02 39.4	
	comp=Z,180nm,21.7s,baz=295,slow=34						
	comp=Z,1.3nm,0.9s						
TIC	Toumodi	84.71	84	*e*P	P	07 27 30.0	-3.7
LIC	Lamto	84.80	85	*e*P	P	07 27 33.0	-1.1
	comp=Z,40nm,1.4s						
DBIC	Dimbokro	84.87	84	P	P	07 27 34.6	+0.1
	comp=Z,6.5nm,0.7s,baz=301,slow=5.4,SNR=11						
DBIC				LR	LR	08 00 54.6	
	comp=Z,168nm,21.9s,baz=318,slow=33						
	comp=Z,6.5nm,0.7s						
KIC	Kosan Boka	85.05	85	*e*P	P	07 27 33.4	-2.0
	comp=Z,20nm,0.8s						
HFS	Hagfors	85.78	29	LR	LR	08 03 21.5	
	comp=Z,145nm,21.8s,baz=302,slow=34						
ARCES	ARCESS Array B	86.51	18	P	P	07 27 41.7	+0.1
	comp=Z,2.3nm,0.8s,baz=297,slow=5.3,SNR=5.3						
ARCES				LR	LR	08 06 46.0	
	comp=Z,326nm,19.0s,baz=296,slow=36						
	comp=Z,2.3nm,0.8s						
DAVOX	Davos/Dischmat	87.78	42	P	P	07 27 47.5	-0.9
	comp=Z,2.9nm,1.0s,baz=264,slow=4.1,SNR=3.1						
	comp=Z,2.9nm,1.0s						
CLL	Collm	88.33	38	*i* P	P	07 27 50.1	-0.6
	comp=Z,14nm,1.4s						
CLL				*e*(pPP)		07 31 36.0	
CLL				LmV		08 17 00.0	
	comp=Z,200nm,18.3s						
GERES	GERESS Array B	89.58	40	P	P	07 27 56.0	-0.7
	comp=Z,0.6nm,0.6s,baz=236,slow=6.0,SNR=5.8						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	89.70	77	P	P	07 27 56.6	-1.2
	comp=Z,0.9nm,0.7s,baz=298,slow=3.8,SNR=5.3						
TORD				LR	LR	08 03 16.0	
	comp=Z,136nm,21.7s,baz=234,slow=32						
	comp=Z,0.9nm,0.7s						
FINES	FINESS Array B	90.75	25	LR	LR	08 09 21.6	
	comp=Z,259nm,19.1s,baz=312,slow=36						
TIXI	Tiksi	91.10	348	LR	LR	08 15 35.7	
	comp=Z,161nm,18.4s,baz=359,slow=40						
VRAC	Vranov	91.19	39	LR	LR	08 10 18.7	
	comp=Z,187nm,18.1s,baz=322,slow=37						
PETK	Petropavlovsk-	91.69	326	P	P	07 28 09.3	+3.0
	comp=Z,3.3nm,0.9s,baz=113,slow=6.9,SNR=5.2						
	comp=Z,3.3nm,0.9s						
VAE	Valguarnera	93.94	50	LR	LR	08 04 10.2	
	comp=Z,244nm,21.6s,baz=330,slow=32						
NRIK	Noril'sk	97.55	0	LR	LR	08 17 47.0	
	comp=Z,364nm,18.1s,baz=358,slow=39						
AKASG	Malin Array Be	97.82	34	LR	LR	08 10 48.6	
	comp=Z,103nm,21.2s,baz=348,slow=34						
YAK	Yakutsk	98.37	342	LR	LR	08 20 40.6	
	comp=Z,157nm,18.1s,baz=88,slow=40						
URZ	Urewera	99.49	233	LR	LR	08 03 19.3	
	comp=Z,79nm,21.3s,baz=31,slow=29						
KSRS	Korea Array	117.59	326	PKP	PKiKP	07 33 48.5	+3.3
	comp=Z,0.9nm,0.6s,baz=134,slow=3.5,SNR=2.4						
BOSA	Boshof	119.29	115	PKP	PKiKP	07 33 52.2	+3.3
	comp=Z,5.9nm,0.9s,baz=222,slow=5.6,SNR=8.6						
MKAR	Makanchi Array	119.88	5	PKP	PKiKP	07 33 50.6	+1.1
	comp=Z,0.2nm,0.4s,baz=19,slow=10,SNR=5.6						
HHC	Hu-ho-hao-te	122.16	340	*e*P	PKiKP	07 33 55.3	+1.0
WMQ	Urumqi	123.13	1	*e*P	PKPdf	07 33 55.1	-0.7
WMQ				LR	LR		
	comp=N,350nm,18.7s						
WMQ				LR	LR		
	comp=E,260nm,20.9s						
WMQ				LR	LR		
	comp=Z,220nm,21.7s						
KSH	Kashi	126.08	12	PKP	PKiKP	07 34 03.8	+1.7
XAN	Xi'an	129.19	338	PKP	PKiKP	07 34 11.3	+2.9
XAN				sPKP		07 34 27.1	
WRA	Warramunga Arr	136.06	255	PKP	PKiKP	07 34 22.5	0.0
	comp=Z,1.4nm,0.7s,baz=90,slow=2.8,SNR=12						
ASAR	Alice Springs	136.24	250	PKhKP	PKPpre	07 34 17.4	
	comp=Z,0.3nm,0.6s,baz=192,slow=35,SNR=2.2						
ASAR				PKP	PKiKP	07 34 22.6	-0.2
	comp=Z,0.9nm,0.9s,baz=207,slow=22,SNR=4.2						
ASAR	Alice Springs	136.24	250		PKPdf	07 34 21.6	+0.4
PZH	PanZhiHua	138.49	342	PKP	PKPdf	07 34 23.9	-1.5
POO	Poona	145.06	25	*e*P	PKPbc	07 34 34.0	-2.6
CMAR	Chiang Mai Arr	146.91	342	PKPbc	PKPab	07 34 43.1	-0.3
	comp=Z,5.2nm,0.5s,baz=342,slow=3.4,SNR=37						
HYBB	Hyderabad (bro	147.80	19	*e*PKiKP	PKPdf	07 34 39.3	-2.5

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*IDC **16** 07:28:56.0±0.7, 38°.25N×22°.57E, h0^{km}, mb4.1/18, mbtmp4.0/25, ML3.6/7, Error ellipse: s-maj=14.3km s-min=13.7km az=158.0*

*MOS **16** 07:28:56.9±1.1, 38°.24N×22°.60E, h11^{km}, mb4.5/10, Error ellipse: s-maj=7.6km s-min=4.6km az=89.0*

*ATH **16** 07:28:57.9, 38°.20N×22°.55E, h10^{km}±1^{km}, ML3.9/27, Error ellipse: s-maj=1.4km s-min=0.5km az=242.0*

*PDG **16** 07:28:57.5±0.2, 38°.18N×22°.60E, h18^{km}, ML3.9/9, Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*

*THE **16** 07:28:58.0, 38°.19N×22°.56E, h16^{km}, ML3.9/9, Error ellipse: s-maj=1.0km s-min=0.4km az=190.0*

*ISK **16** 07:28:58.3, 38°.30N×22°.67E, h15^{km}, ML4.1/25*

*NEIC **16** 07:28:58.5±2.0, 38°.23N±0°.04×22°.62E±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=8.2km s-min=6.6km az=249.0*

ISC 16 07:28:58.1±0.8**, 38°.21N**±0°.02×**22°.56E**±0°.02**, h12**^{km}±5^{km}**, n294,** σ1^{s}.07/353**, mb4.3**/33**, 22C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THAL	Thalero	0.19	155	P	Pg	07 29 02.0	-0.2
THAL				S	Sg	07 29 04.9	-0.3
THAL				AML	AML	07 29 10.6	
THAL				AML	AML	07 29 11.8	
THAL	Thalero	0.19	155	P	Pg	07 29 02.1	-0.2
THAL				S	Sg	07 29 05.9	+0.7
	271µm,0.5s						
DLFA	Delphi	0.27	349	P	Pg	07 29 03.2	-0.6
DLFA				S	Sg	07 29 07.8	+0.2
DLFA				AML	AML	07 29 08.8	
	comp=N,48422µm,0.2s						
DLFA				AML	AML	07 29 09.4	
	comp=E,36166µm,0.3s						
GUR	Goura	0.32	212	P	Pg	07 29 04.2	-0.6
ALIK	Aliki, Aigiali	0.36	278	P	Pg	07 29 05.5	+0.2
ALIK				S	Sg	07 29 11.4	+1.3
KLV	Kalavryta, Ach	0.36	243	P	Pg	07 29 04.6	-0.9
KLV				S	Sg	07 29 09.7	-0.6
KLV				AML	AML	07 29 11.6	
	comp=N,14770µm,0.3s						
KLV				AML	AML	07 29 14.9	
	comp=E,14898µm,0.4s						
KLV	Kalavryta, Ach	0.36	243	P	Pg	07 29 05.0	-0.4
KLV				S	Sg	07 29 10.8	+0.5
	comp=E,6µm,0.2s						
LTK	Loutraki	0.37	120	P	Pg	07 29 05.0	-0.5
LTK				S	Sb	07 29 10.9	-1.5
LTK				AML	AML	07 29 16.1	
LTK				AML	AML	07 29 17.4	
LAKA	Lakka	0.46	274	P	Pg	07 29 06.8	-0.4
LAKA				S	Sg	07 29 13.1	-0.2
LAKA				AML	AML	07 29 18.8	
	comp=N,37128µm,0.4s						
LAKA				AML	AML	07 29 23.4	
	comp=E,38831µm,0.7s						
LAKA	Lakka	0.46	274	P	Pg	07 29 07.1	-0.1
LAKA				S	Sg	07 29 13.8	+0.5
	comp=E,15µm,0.3s						
VIL2	Platees	0.56	90	P	Pb	07 29 09.4	-0.5
VIL2				S	Sb	07 29 17.5	-0.3
VIL2				AML	AML	07 29 25.4	
	comp=E,35300µm,0.5s						
VIL2				AML	AML	07 29 27.6	
	comp=N,20766µm,0.4s						
LKR	Lokris	0.56	38	P	Pg	07 29 07.8	-1.3
LKR				S	Sb	07 29 16.7	-1.1
LKR				AML	AML	07 29 18.2	
	comp=E,31430µm,0.3s						
LKR				AML	AML	07 29 20.2	
	comp=N,60402µm,0.3s						
EFP	Efpalio	0.56	293	P	Pg	07 29 08.6	-0.5
EFP				S	Sg	07 29 16.0	-0.4
EFP				AML	AML	07 29 26.0	
	comp=E,16232µm,0.5s						
EFP				AML	AML	07 29 27.4	
	comp=N,20160µm,0.4s						
EFP	Efpalio	0.56	293	P	Pg	07 29 08.6	-0.5
EFP				S	Sg	07 29 17.2	+0.7
	comp=N,8µm,0.5s						
VILL	Villia	0.59	94	P	Pg	07 29 09.3	-0.4
VILL				S	Sb	07 29 18.4	-0.4
	comp=N,14µm,0.2s						
ATAL	Atalanti	0.60	37	P	Pg	07 29 09.2	-0.6
ATAL				S	Sb	07 29 18.3	-0.8
ATAL				AML	AML	07 29 22.4	
	comp=E,44881µm,0.6s						
ATAL				AML	AML	07 29 23.1	
	comp=N,43588µm,0.6s						
ATAL	Atalanti	0.60	37	P	Pg	07 29 09.3	-0.6
ATAL				S	Sb	07 29 19.6	+0.5
	comp=N,22µm,0.6s						
UPR	University Cam	0.61	277	P	Pg	07 29 10.1	0.0
ANX	Ano Chora	0.63	307	P	Pg	07 29 09.3	-1.2
ANX				S	Sg	07 29 18.9	+0.1
ANX				AML	AML	07 29 24.5	
	comp=E,37709µm,0.5s						
ANX				AML	AML	07 29 26.8	
	comp=N,34119µm,0.5s						
ANX	Ano Chora	0.63	307	P	Pg	07 29 10.1	-0.4
ANX				S	Sb	07 29 20.3	+0.3
	comp=N,18µm,0.5s						
DRO	Drossia	0.72	249	P	Pg	07 29 11.3	-0.8
DRO				S	Sg	07 29 21.5	0.0
DRO				AML	AML	07 29 29.5	
	comp=E,12642µm,0.5s						
DRO				AML	AML	07 29 29.5	
	comp=N,30290µm,0.3s						
DRO	Drossia	0.72	249	P	Pg	07 29 11.5	-0.6
EPID	Epidavros	0.74	143	P	Pg	07 29 11.5	-0.9
EPID	Epidavros	0.74	143	P	Pg	07 29 11.7	-0.8
AGG	Agios Georgios	0.83	347	P	Pg	07 29 13.2	-1.1
AGG				S	Sb	07 29 25.5	-0.2
AGG				AML	AML	07 29 30.6	
	comp=E,11314µm,0.6s						
AGG				AML	AML	07 29 33.6	
	comp=N,12536µm,0.5s						
AGG	Agios Georgios	0.83	347	P	Pg	07 29 13.9	-0.3
AGG				S	Sb	07 29 26.2	+0.5
	comp=N,5µm,0.5s						
AGG	Agios Georgios	0.83	347	PG	Pg	07 29 13.5	-0.7
AGG				SG	Sg	07 29 24.7	-0.4
AGG	Agios Georgios	0.83	347	Pg	Pg	07 29 13.0	-1.2
AGG	Agios Georgios	0.83	347	P	Pg	07 29 13.0	-1.2
MAKR	Makrakomi, Fth	0.87	337	P	Pg	07 29 14.6	-0.4
MAKR				S	Sb	07 29 27.5	+0.7
MAKR				AML	AML	07 29 31.0	
	comp=E,11877µm,0.8s						
MAKR				AML	AML	07 29 33.5	
	comp=N,28613µm,0.8s						
MAKR	Makrakomi, Fth	0.87	337	P	Pg	07 29 14.6	-0.4
MAKR				S	Sb	07 29 27.6	+0.7
	comp=N,27µm,0.8s						
RLS	Riolos of Patr	0.88	260	P	Pg	07 29 13.9	-1.2
RLS				S	Sg	07 29 25.9	-0.6
RLS				AML	AML	07 29 32.4	
	comp=E,7842µm,0.5s						
RLS				AML	AML	07 29 41.5	
	comp=N,7282µm,0.5s						
PVO	Paravola	0.91	297	P	Pg	07 29 15.3	-0.4
EVR	Evrytania	0.92	320	P	Pg	07 29 15.4	-0.5
EVR				S	Sg	07 29 28.0	+0.1
EVR				AML	AML	07 29 33.7	
	comp=E,13628µm,0.8s						
EVR				AML	AML	07 29 33.9	
	comp=N,14391µm,0.6s						
EVR	Evrytania	0.92	320	P	Pg	07 29 15.4	-0.5
ATH	Athens Observa	0.94	104	P	Pb	07 29 16.0	-0.4
ATH				S	Sb	07 29 28.9	+0.1
ATH				AML	AML	07 29 30.8	
	comp=E,21078µm,0.5s						
ATH				AML	AML	07 29 31.5	
	comp=N,14692µm,0.3s						
KRND	KRANIDI	0.95	150	P	Pg	07 29 15.6	-0.8
KRND				S	Sg	07 29 28.3	-0.4
KRND				AML	AML	07 29 32.0	
	comp=E,41818µm,0.5s						
KRND				AML	AML	07 29 33.5	
	comp=N,46065µm,0.6s						
ATHU	Athens Univers	0.99	104	P	Pb	07 29 17.2	-0.1
ATHU				S	Sb	07 29 29.9	-0.4
ATHU				AML	AML	07 29 33.2	
	comp=E,3559µm,0.5s						
ATHU				AML	AML	07 29 33.4	
	comp=N,8976µm,0.5s						
VLY	Voula,Athens	1.04	110	P	Pb	07 29 17.8	-0.2
VLY				S	Sg	07 29 30.8	-0.8
VLY				AML	AML	07 29 33.5	
	comp=N,9710µm,0.3s						
VLY				AML	AML	07 29 33.5	
	comp=E,18649µm,0.4s						
PTL	Penteli	1.04	98	P	Pn	07 29 17.9	-0.7
PTL				S	Sb	07 29 31.6	0.0
PTL				AML	AML	07 29 33.4	
	comp=N,19606µm,0.6s						
PTL				AML	AML	07 29 35.4	
	comp=E,21163µm,0.5s						
DION	Dionisos Attik	1.09	97	P	Pn	07 29 18.8	-0.5
DION				S	Sn	07 29 33.7	-0.6
DION				AML	AML	07 29 34.9	
	comp=N,27628µm,0.7s						
DION				AML	AML	07 29 35.3	
	comp=E,37965µm,0.4s						
ITM	Ithomi	1.15	206	P	Pb	07 29 18.5	-1.4
ITM				S	Sb	07 29 34.0	-0.7
ITM				AML	AML	07 29 41.1	
	comp=N,8414µm,0.9s						
ITM				AML	AML	07 29 45.0	
	comp=E,7941µm,0.5s						
ITM	Ithomi	1.15	206		Pb	07 29 18.5	-1.4
NEO	Neokhori	1.21	25	P	Pn	07 29 20.5	-0.4
NEO				S	Sn	07 29 36.9	-0.4
NEO				AML	AML	07 29 42.6	
	comp=E,8798µm,0.9s						
NEO				AML	AML	07 29 45.3	
	comp=N,11127µm,0.4s						
XOR	Xorichti	1.25	23	P	Pg	07 29 21.4	-0.8
XOR				S	Sn	07 29 38.0	-0.4
XOR				AML	AML	07 29 42.4	
	comp=E,4966µm,0.4s						
XOR				AML	AML	07 29 46.2	
	comp=N,6945µm,0.7s						
KYMI	Kymi, Euboea I	1.28	70	P	Pn	07 29 21.2	-0.6
KYMI				S	Sg	07 29 38.7	-0.6
KYMI				AML	AML	07 29 45.4	
	comp=E,8867µm,0.6s						
KYMI				AML	AML	07 29 46.3	
	comp=N,9099µm,0.5s						
ALNA	Alonissos	1.39	47	P	Pn	07 29 23.0	-0.3
ALNA				S	Sg	07 29 42.5	-0.2
ALNA				AML	AML	07 29 47.0	
	comp=E,9984µm,0.9s						
ALNA				AML	AML	07 29 47.2	
	comp=N,12643µm,0.8s						
THL	Klokotos Trika	1.42	343	P	Pb	07 29 24.6	+0.1
THL				S	Sg	07 29 43.6	-0.2
THL				AML	AML	07 29 48.7	
	comp=N,3678µm,0.8s						
THL				AML	AML	07 29 49.7	
	comp=E,4359µm,0.7s						
PYL	PYLOS	1.47	207	P	Pn	07 29 24.7	+0.3
KARY	Karystos	1.49	96	P	Pn	07 29 24.6	-0.1
VLI	Veliai	1.52	169	P	Pn	07 29 25.2	+0.1
TYRN	Tyrnavos	1.52	350	P	Pg	07 29 26.4	-0.9
VLS	Valsamata	1.55	269	P	Pn	07 29 26.2	+0.6
LIT	Litokhoron	1.89	358	Pn	Pn	07 29 30.5	+0.3
LIT	Litokhoron	1.89	358	P	Pn	07 29 30.5	+0.3
KTHR	Kythira	1.98	170	P	Pb	07 29 33.0	-1.1
KTHA	Kythira Island	1.99	168	P	Pn	07 29 32.7	+1.1
KZN	Kozani	2.18	344	P	Pb	07 29 36.1	-1.5
HORT	Hortiatis	2.42	10	PN	Pn	07 29 36.8	-0.8
APE	Apeiranthos	2.62	115	⇑P	Pn	07 29 42.1	+1.9
APE	Apeiranthos	2.62	115	*i* P	Pb	07 29 43.1	-1.9
KEK	Kerkira	2.62	306		Pn	07 29 41.9	+1.6
SOH	Sokhos	2.68	13	P	Pn	07 29 41.4	+0.3
FNA	Florina	2.73	341	PN	Pn	07 29 42.4	+0.6
FNA	Florina	2.73	341		Pn	07 29 43.5	+1.8
FNA	Florina	2.73	341	P	Pn	07 29 43.6	+1.8
GRG	Griva	2.75	357	PN	Pn	07 29 41.8	-0.2
GRG	Griva	2.75	357	P	Pn	07 29 42.5	+0.5
CHOS	Chios island	2.75	85	PN	Pn	07 29 42.1	-0.1
KBN	Korca	2.77	331		Pb	07 29 45.0	-2.7
KBN	Korca	2.77	331	P	Pb	07 29 45.0	-2.7
RODP	Rodopos	2.81	160	PN	Pn	07 29 44.5	+1.6
KNT	Kendrikon	2.96	5	PN	Pn	07 29 44.7	-0.2
IMMV	Iera Moni Meta	2.97	157	PN	Pn	07 29 46.9	+1.8
SRS	Serrai	3.01	15	P	Pn	07 29 45.7	+0.1
KNDR	Palaiochora Ch	3.10	163	PN	Pn	07 29 49.1	+2.2
VAY	Valandovo	3.11	0	*i* Pn	Pn	07 29 47.8	+0.8
BOZC	Bozcaada	3.17	58	PN	Pn	07 29 47.5	-0.3
URLA	Izmir	3.18	86	PN	Pn	07 29 48.1	+0.1
GADA	Gvkgeada	3.26	52	PN	Pn	07 29 48.4	-0.7
VLO	Vlora	3.28	314	Pn	Pn	07 29 51.3	+2.0
VLO	Vlora	3.28	314	P	Pn	07 29 51.3	+2.0
EZN	Ezine	3.35	60	PN	Pn	07 29 49.6	-0.6
IDI	Anoyia	3.46	147	⇑P	Pn	07 29 54.3	+2.3
IDI	Anoyia	3.46	147	Pn	Pn	07 29 52.6	+0.7
	comp=E,5.3nm,0.3s,baz=321,slow=17,SNR=14						
IDI				Sn	Sn	07 30 29.9	-3.0
	comp=E,12nm,0.3s,baz=335,slow=23,SNR=2.9						
	comp=E,22nm,0.3s						
IDI	Anoyia	3.46	147	PN	Pn	07 29 52.7	+0.7
IDI	Anoyia	3.46	147	Pn	Pn	07 29 51.9	-0.1
DKL	Dikili	3.51	74	PN	Pn	07 29 52.5	+0.1
HRKL	Herakleio	3.54	144	PN	Pn	07 29 54.9	+2.0
GVD	Gavdhos	3.58	159	PN	Pn	07 29 55.9	+2.4
SCTE	Santa Cesarea	3.69	302		Pn	07 29 56.6	+1.7
RDO	Rodhopi	3.72	37	PN	Pn	07 29 54.9	-0.5
RDO	Rodhopi	3.72	37	Pn	Pn	07 29 55.1	-0.3
GCAM	G?zelcaml?	3.73	96	PN	Pn	07 29 56.5	+1.0
GELI	Tayfur-Gelibol	3.74	53	PN	Pn	07 29 55.4	-0.2
ENEZ	Enez	3.75	47	PN	Pn	07 29 55.9	+0.1
TIR	Tirane	3.76	327	⇓P	Pn	07 29 58.4	+2.4
TIR	Tirane	3.76	327	Pn	Pn	07 29 57.0	+1.1
TIR	Tirane	3.76	327	P	Pn	07 29 57.0	+1.1
ALN	Alexandroupoli	3.80	44	PN	Pn	07 29 55.4	-1.0
ALN	Alexandroupoli	3.80	44	Pn	Pn	07 29 55.5	-1.0
ALN	Alexandroupoli	3.80	44	P	Pn	07 29 55.5	-1.0
ERIK	Erikli-Kesan	3.92	50	PN	Pn	07 29 58.0	-0.2
BODT	Bodrum	3.94	105	PN	Pn	07 29 59.2	+0.8
NIS1	Nisyros Isl.	4.01	112	PN	Pn	07 30 00.5	+1.1
AYDB	Zeytinkoy-Aydi	4.21	92	PN	Pn	07 30 03.2	+0.9
PLD	Plovdiv	4.22	22	PN	Pn	07 30 02.7	+0.4
ZKR	Zakros	4.26	135	PN	Pn	07 30 05.0	+2.1
KRBG	Karabiga-Canak	4.27	58	PN	Pn	07 30 03.1	+0.2
RKY	Sarkoy-Tekirda	4.35	54	PN	Pn	07 30 04.0	0.0
VTS	Vitosha	4.43	6	⇑P	Pn	07 30 05.9	+0.6
VTS	Vitosha	4.43	6	Pn	Pn	07 30 05.7	+0.4
VTS	Vitosha	4.43	6	P	Pn	07 30 05.7	+0.4
KARP	Karpathos	4.54	124	PN	Pn	07 30 08.7	+1.9
KARP	Karpathos	4.54	124	Pn	Pn	07 30 07.2	+0.4
TIP	Timpagrande	4.64	284	⇑P	Pn	07 30 10.4	+2.3
TIP	Timpagrande	4.64	284	Pn	Pn	07 30 09.9	+1.8
YER	Yerkesik	4.66	102	PN	Pn	07 30 09.4	+1.0
DRME	Dracevica, Mon	4.74	328	*e*Pn	Pn	07 30 10.5	+1.1
DRME	Dracevica, Mon	4.74	328	⇑*i*Pn	Pn	07 30 10.2	+0.8
DRME				*i* Sn	Sn	07 31 05.1	+0.8
KULA	Kula-Manisa	4.80	84	PN	Pn	07 30 11.1	+0.7
PVY	Plav	4.81	336	⇑*i*Pn	Pn	07 30 11.0	+0.5
PVY				*i* Sn	Sn	07 31 06.9	+0.7
ARG	Arkhangelos	4.87	112		Pn	07 30 11.4	+0.3
ARG	Arkhangelos	4.87	112	P	Pn	07 30 11.4	+0.3
PDG	Podgorica	4.91	330	⇑P	Pn	07 30 13.7	+1.9
PDG	Podgorica	4.91	330		Pn	07 30 11.4	-0.3
PDG	Podgorica	4.91	330	*e*Pn	Pn	07 30 11.2	-0.6
TTG	Podgorica	4.91	330	⇑*i*Pn	Pn	07 30 12.2	+0.4
TTG				*i* Sn	Sn	07 31 09.0	+0.5
BUM	Brajici-Budva	4.96	327	⇑*i*Pn	Pn	07 30 13.5	+1.1
BUM				*i* Sn	Sn	07 31 10.6	+0.9
CEME	Cevo	5.15	328	⇓*i*Pn	Pn	07 30 16.1	+1.0
CEME				*i* Sn	Sn	07 31 14.7	+0.3
HCY	Herceg Novi	5.25	325	*e*Pn	Pn	07 30 16.0	-0.4
HCY	Herceg Novi	5.25	325	⇓*i*Pn	Pn	07 30 16.9	+0.5
HCY				*i* Sn	Sn	07 31 17.4	+0.5
BLKB	Belogradchik	5.41	1	⇑P	Pn	07 30 19.8	+1.2
SJES	Sjenica	5.42	340	*e*Pn	Pn	07 30 21.2	+2.4
TREB	Trebinje	5.53	326	*e*Pn	Pn	07 30 19.7	-0.5
CUC	Castrocucco	5.54	291	Pn	Pn	07 30 21.3	+0.8
BRY	Bratogost	5.60	328	⇓*i*Pn	Pn	07 30 22.0	+0.7
BRY				*i* Sn	Sn	07 31 26.0	+0.4
PLE	Pljevlja	5.65	336	*e*Pn	Pn	07 30 22.2	+0.2
PLE				*i* Sn	Sn	07 31 27.2	+0.3
UPM	Unac-Piva	5.71	332	*e*Pn	Pn	07 30 24.9	+2.0
UPM	Unac-Piva	5.71	332	⇑*i*Pn	Pn	07 30 23.4	+0.5
UPM				*i* Sn	Sn	07 31 28.7	+0.3
RUDO	Rudo	5.92	337	*e*Pn	Pn	07 30 26.4	+0.8
STON	Ston	5.95	323	*e*Pn	Pn	07 30 25.5	-0.5
ELL	Elmali	6.02	102	Pn	Pn	07 30 28.0	+0.9
ELL	Elmali	6.02	102	P	Pn	07 30 28.0	+0.9
BBLS	Lazići	6.13	338	*e*Pn	Pn	07 30 29.8	+1.2
DIVS	Divibare	6.19	343		Pn	07 30 31.7	+2.2
DIVS	Divibare	6.19	343	*e*Pn	Pn	07 30 31.2	+1.8
BORA	Eskisehir	6.37	72	Pn	Pn	07 30 31.7	-0.1
VAE	Valguarnera	6.49	266	Pn	Pn	07 30 35.5	+2.0
	comp=E,3.1nm,0.3s,baz=332,slow=8.7,SNR=2.3						
VAE				Sn	Sn	07 31 43.8	-3.8
	comp=E,1.0nm,0.3s,baz=187,slow=22,SNR=1.3						
	comp=E,6.7nm,0.3s						
MDVR	Moldovita	6.60	355	⇓P	Pn	07 30 35.9	+0.9
HERR	Herculane	6.67	359	⇓P	Pn	07 30 36.4	+0.6
MDUB	Mudurnu	7.06	69	Pn	Pn	07 30 41.1	-0.4
GZR	Gura Zlata	7.18	1	⇓P	Pn	07 30 44.4	+1.5
FRGS	Fruska Gora	7.24	344	⇑P	Pn	07 30 46.0	+2.3
BZS	Buzias	7.43	355	⇑P	Pn	07 30 47.3	+1.0
ISR	Istrita	7.52	22	⇑P	Pn	07 30 47.8	+0.2
HARR	Harsova	7.63	30	⇓P	Pn	07 30 49.8	+0.8
MLR	Muntele Rosu	7.70	18	⇓P	Pn	07 30 50.8	+0.7
MLR	Muntele Rosu	7.70	18	Pn	Pn	07 30 50.8	+0.7
	comp=E,1.5nm,0.3s,baz=164,slow=17,SNR=12						
	comp=E,7.7nm,0.6s						
MLR	Muntele Rosu	7.70	18	Pn	Pn	07 30 51.0	+0.9
TPGR	Topolog	7.96	32	⇑P	Pn	07 30 54.2	+0.6
DOPR	Dopca	8.03	14	⇑P	Pn	07 30 55.7	+1.1
AQU	L'Aquila	8.13	303	Pn	Pn	07 30 57.3	+1.3
AQU	L'Aquila	8.13	303	P	Pn	07 30 57.3	+1.3
PLOR	Plostina	8.22	20	⇑P	Pn	07 30 57.8	+0.6
VRI	Vrincioaia	8.25	21	⇑P	Pn	07 30 59.5	+1.8

MORH	Mrgy, Hungar	8.51	341	*e*Pn	Pn	07 30 59.9	-1.2
MORH	Mrgy, Hungar	8.51	341	P	Pn	07 31 03.1	+2.0
NRCA	Norcia	8.55	306		Pn	07 31 03.4	+1.7
BR131	Keskin Array S	8.76	77	Pn	Pn	07 31 05.5	+0.8
BR131	Keskin Array S	8.76	77	*i* P	Pn	07 31 07.1	+2.4
BRTR	Keskin Array B	8.76	77	Pn	Pn	07 31 06.0	+1.2
	comp=E,0.4nm,0.3s,baz=257,slow=11,SNR=12						
	comp=E,3.2nm,0.7s						
BRTR	Keskin Array B	8.76	77		Pn	07 31 05.2	+0.5
BRTR	Keskin Array B	8.76	77	P	Pn	07 31 06.0	+1.2
TESR	Tescani	8.83	19	⇑P	Pn	07 31 06.7	+1.2
ILGA	Ilgaz	9.06	68	Pn	Pn	07 31 08.6	-0.3
BIZ	Bicaz	9.11	16	⇑P	Pn	07 31 11.0	+1.7
CRES	Cresnjev	9.26	327	*e*Pn	Pn	07 31 10.8	-0.7
CEY	Cerknica	9.65	324	*e*Pn	Pn	07 31 16.8	0.0
MPLH	Magyarpolny	9.69	339	P	Pn	07 31 23.8	+6.6
SKDS	Skadanscina	9.71	322	*e*Pn	Pn	07 31 17.0	-0.6
SOKA	Soboth	10.12	329	*e*Pn	Pn	07 31 23.7	+0.4
	comp=E,0.7nm,0.4s						
SOKA				*e*Sn	Sn	07 33 13.2	-3.5
	comp=E,1.5nm,0.6s						
OBKA	Obir	10.19	327	*e*Pn	Pn	07 31 25.3	+1.0
	comp=E,3.8nm,0.8s						
OBKA				*e*Sn	Sn	07 33 18.1	-0.3
	comp=E,7.9nm,0.7s						
ARSA	Arzberg	10.41	332	*e*Pn	Pn	07 31 28.0	+0.8
	comp=E,8.0nm,1.1s						
ARSA				*e*Sn	Sn	07 33 22.2	-1.4
	comp=E,0.1nm,0.0s						
RONA	Rosalia, Austr	10.53	336	*e*Sn	Sn	07 33 23.6	-3.1
MYKA	Terra Mystica	10.68	325	*e*Sn	Sn	07 33 33.2	+2.7
	comp=E,1.8nm,0.4s						
CONA	Conrad Observa	10.87	335	*e*Pn	Pn	07 31 35.0	+1.4
	comp=E,3.8nm,1.1s						
CONA				*e*Sn	Sn	07 33 36.0	+0.8
	comp=E,0.8nm,0.5s						
KBA	Koelnbreinsper	11.15	326	*e*Pn	Pn	07 31 37.0	-0.6
	comp=E,5.9nm,1.5s						
KBA				*e*Sn	Sn	07 33 42.1	-0.1
	comp=E,0.8nm,0.3s						
CTI	Castel Tesino	11.26	318	Pn	Pn	07 31 37.6	-1.3
CTI	Castel Tesino	11.26	318	P	Pn	07 31 37.6	-1.3
ABTA	Abfaltersbach	11.30	322	*e*Pn	Pn	07 31 39.8	+0.4
	comp=E,0.6nm,0.3s						
ABTA				*e*Sn	Sn	07 33 44.4	-1.2
	comp=E,4.8nm,0.6s						
MOA	Molln	11.38	330	*e*Pn	Pn	07 31 42.0	+1.6
	comp=E,4.3nm,1.1s						
MOA				*e*Sn	Sn	07 33 46.6	-0.9
	comp=E,1.8nm,0.6s						
BIOA	Bad Ischl, Aus	11.50	328	*e*Sn	Sn	07 33 49.5	-1.0
	comp=E,1.2nm,0.3s						
WTTA	Wattenberg	12.09	322	*e*Pn	Pn	07 31 50.8	+0.5
	comp=E,1.4nm,0.4s						
WTTA				*e*Sn	Sn	07 34 03.4	-1.6
	comp=E,3.8nm,0.6s						
WATA	Walderalm	12.17	322	*e*Pn	Pn	07 31 50.8	-0.5
	comp=E,1.3nm,0.5s						
WATA				*e*Sn	Sn	07 34 05.0	-1.9
	comp=E,3.5nm,0.7s						
SQTA	Sankt Quirin	12.27	321	*e*Pn	Pn	07 31 51.5	-1.2
	comp=E,4.3nm,0.6s						
SQTA				*e*Sn	Sn	07 34 07.6	-1.8
	comp=E,2.2nm,0.5s						
FETA	Feichten	12.38	319	*e*Pn	Pn	07 31 55.1	+0.9
	comp=E,4.8nm,1.7s						
FETA				*e*Sn	Sn	07 34 10.9	-1.2
	comp=E,0.6nm,0.4s						
MOTA	Moosalm	12.40	321	*e*Pn	Pn	07 31 55.1	+0.5
	comp=E,2.5nm,0.8s						
MOTA				*e*Sn	Sn	07 34 12.7	-0.1
	comp=E,4.9nm,0.8s						
GERES	GERESS Array B	12.41	332	Pn	Pn	07 31 52.9	-1.7
	comp=E,0.1nm,0.3s,baz=55,slow=33,SNR=1.7						
	comp=E,0.2nm,0.4s						
RETA	Reutte	12.67	321	*e*Pn	Pn	07 31 59.4	+1.3
	comp=E,1.7nm,0.5s						
RETA				*e*Sn	Sn	07 34 19.3	+0.1
	comp=E,0.7nm,0.3s						
DAVOX	Davos/Dischmat	12.67	317	Pn	Pn	07 31 58.0	-0.3
	comp=E,0.1nm,0.3s,baz=146,slow=21,SNR=1.5						
	comp=E,0.5nm,0.3s						
DAVOX	Davos/Dischmat	12.67	317	P	Pn	07 31 58.0	-0.3
AKASG	Malin Array Be	13.36	19	Pn	Pn	07 32 06.4	-1.0
	comp=E,0.2nm,0.3s,baz=208,slow=12,SNR=4.0						
	comp=E,0.5nm,0.5s						
AKBB	Malin Array Si	13.36	19	*i* P	Pn	07 32 07.1	-0.3
SENIN	Lac Senin/Sane	13.91	311	Pn	Pn	07 32 18.0	+2.8
BFO	Black Forest	14.46	319	Pn	Pn	07 32 23.0	+0.4
BFO	Black Forest	14.46	319	P	Pn	07 32 23.0	+0.4
CLL	Collm	14.73	336	Pn	Pn	07 32 25.3	-0.9
CLL	Collm	14.73	336	*e*P	P	07 32 32.0	-0.3
CLL	Collm	14.73	336	*e*PP	P	07 32 32.0	-0.3
CLL				*e*x	x	07 32 35.0	
	comp=Z,11nm,1.3s						
CLL				*e*x	x	07 32 40.0	
NEY	Neytrino	16.08	65	*i* P	P	07 32 49.8	+2.3
KBZ	Khabaz	16.30	64	*i* P	P	07 32 51.9	+2.1
SSF	Saint Saulge	16.55	308	P	P	07 32 53.4	+0.9
NCK	Nalchik	16.75	65	*i* P	P	07 32 57.3	+2.5
ZEI	Tsey	16.85	68	*e*P	P	07 32 55.5	-0.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	Galich'ya Gora	18.35	33	*e*P	P	07 33 12.9	+0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VRH	Novokhopyorsk	18.75	40	*e*P	Pn	07 33 16.8	-0.3
VRH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	Obninsk	19.39	25	⇑*e*P	Pn	07 33 26.1	+1.3
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,780nm,20.0s						
MOS	Moscow	20.25	25	*e*P	Pn	07 33 36.3	+1.3
VSU	Vasula	20.45	6	*i* P	P	07 33 34.2	-1.0
ESBB	Sonseca Array	20.66	282	P	P	07 33 37.2	-0.6
ESDC	Sonseca Array	20.66	282	P	P	07 33 37.9	+0.1
	comp=Z,4.1nm,0.8s,baz=76,slow=10,SNR=26						
	comp=Z,4.1nm,0.8s						
ESDC	Sonseca Array	20.66	282	P	P	07 33 37.3	-0.5
FINES	FINESS Array B	23.36	4	P	P	07 34 05.1	-1.1
	comp=Z,3.4nm,0.9s,baz=169,slow=11,SNR=4.7						
	comp=Z,3.4nm,0.9s						
FINES	FINESS Array B	23.36	4	P	P	07 34 06.1	0.0
FINES	FINESS Array B	23.36	4	*e*P	P	07 34 08.2	+2.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NAO01	NORSAR Array S	23.82	346	P	P	07 34 09.6	-1.1
NC405	NORSAR Array S	23.91	347	P	P	07 34 11.1	-0.5
NC405				IAmb	IAmb	07 34 13.4	
	comp=Z,12nm,1.0s						
NB201	NORSAR Array S	23.93	346	P	P	07 34 11.0	-0.8
NB2	NORSAR Subarra	23.93	346	P	P	07 34 10.4	-1.4
	comp=Z,6.7nm,1.1s,baz=159,slow=11						
NOA	NORSAR Array B	23.93	346	P	P	07 34 10.4	-1.4
	comp=Z,2.4nm,1.0s,baz=156,slow=10,SNR=8.0						
	comp=Z,2.4nm,1.0s						
NC303	NORSAR Array S	24.08	347	P	P	07 34 12.3	-0.8
NC303				IAmb	IAmb	07 34 26.2	
	comp=Z,11nm,1.3s						
NC204	NORSAR Array S	24.24	346	P	P	07 34 14.2	-0.5
NC204				IAmb	IAmb	07 34 14.7	
	comp=Z,20nm,1.1s						
EKA	Eskdalemuir Ar	24.35	323	P	P	07 34 15.8	+0.1
	comp=Z,3.0nm,0.7s,baz=118,slow=9.6,SNR=10						
	comp=Z,3.0nm,0.7s						
RAYN	Ar Rayn	24.45	120	P	P	07 34 17.6	+0.7
RAYN	Ar Rayn	24.45	120	P	P	07 34 17.6	+0.7
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLMR	Klimovskoe	25.04	20	*e*P	P	07 34 20.5	-1.4
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLMR	Klimovskoe	25.04	20	*e*P	P	07 34 20.5	-1.4
KLMR				AMP		07 34 23.3	
	comp=Z,10.0nm,0.9s						
TOA0	Torodi Ar. Sit	31.10	222	P	P	07 35 17.0	+0.6
TOA0				IAmb	IAmb	07 35 43.3	
	comp=Z,4.7nm,1.1s						
TORD	Torodi Ar. Bea	31.10	222	P	P	07 35 16.6	+0.2
	comp=Z,1.5nm,0.7s,baz=30,slow=9.2,SNR=9.3						
	comp=Z,1.5nm,0.7s						
ARCES	ARCESS Array B	31.43	2	P	P	07 35 17.6	-1.2
	comp=Z,1.4nm,0.9s,baz=187,slow=9.2,SNR=3.7						
	comp=Z,1.4nm,0.9s						
ARCES	ARCESS Array B	31.43	2	IAmb	IAmb	07 35 25.0	
	comp=Z,4.9nm,1.1s						
ARCES	ARCESS Array B	31.43	2	*e*P	P	07 35 19.6	+0.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	36.31	67	P	P	07 36 01.5	-0.1
KK31				IAmb	IAmb	07 36 04.0	
	comp=Z,3.9nm,1.0s						
KK31	Karatay Array	36.31	67	P	P	07 36 01.5	-0.1
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	36.31	67	P	P	07 36 01.3	-0.3
KKAR	Karatay Array	36.31	67	P	P	07 36 01.3	-0.3
LODK	Lodwar	36.55	158	P	P	07 36 04.0	+0.1
LODK				IAmb	IAmb	07 36 05.0	
	comp=Z,7.5nm,1.5s						
AAK	Ala-Archa	39.27	67	P	P	07 36 27.9	+1.1
	comp=Z,2.2nm,0.6s,baz=232,slow=7.2,SNR=4.8						
	comp=Z,2.2nm,0.6s						
AAK	Ala-Archa	39.27	67		P	07 36 25.6	-1.2
AAK	Ala-Archa	39.27	67	*i* P	P	07 36 28.1	+1.3
MBAR	Mbarara	39.35	167	P	P	07 36 27.9	+0.3
MBAR				IAmb	IAmb	07 36 49.3	
	comp=Z,11nm,1.1s						
MBAR	Mbarara	39.35	167	P	P	07 36 27.9	+0.3
MBAR				pmax	pmax		
	comp=Z,11nm,1.2s						
SPITS	Spitsbergen Ar	40.16	358	P	P	07 36 34.1	+0.5
	comp=Z,0.7nm,0.3s,baz=157,slow=11,SNR=9.0						
	comp=Z,0.7nm,0.3s						
KURBB	Kurchatov Arra	40.92	54	P	P	07 36 39.9	-0.2
	comp=Z,2.4nm,0.5s,baz=281,slow=8.8,SNR=20						
	comp=Z,2.4nm,0.5s						
KURK	Kurchatov	40.97	54	P	P	07 36 40.4	-0.1
KURK	Kurchatov	40.97	54	*i* P	P	07 36 40.7	+0.2
MAKZ	Makanchi	43.70	59	P	P	07 37 02.7	-0.2
MAKZ				IAmb	IAmb	07 37 04.4	
	comp=Z,3.1nm,0.8s						
MAKZ	Makanchi	43.70	59	P	P	07 37 02.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	43.91	59	P	P	07 37 04.2	-0.4
MK31				IAmb	IAmb	07 37 06.0	
	comp=Z,5.3nm,0.6s						
MK31	Makanchi Array	43.91	59	P	P	07 37 04.2	-0.4
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	43.91	59	P	P	07 37 04.0	-0.6
	comp=Z,6.3nm,0.6s,baz=279,slow=6.5,SNR=66						
	comp=Z,6.3nm,0.6s						
MKAR	Makanchi Array	43.91	59	P	P	07 37 04.2	-0.4
MKAR	Makanchi Array	43.91	59	P	P	07 37 04.2	-0.4
ZAA0	Zalesovo Array	44.47	48	P	P	07 37 08.5	-0.4
ZAA0				IAmb	IAmb	07 37 09.0	
	comp=Z,5.5nm,0.7s						
ZALV	Zalesovo Beam	44.47	48	P	P	07 37 08.2	-0.7
	comp=Z,5.8nm,0.6s,baz=274,slow=8.3,SNR=21						
	comp=Z,5.8nm,0.6s						
ZALV	Zalesovo Beam	44.47	48	P	P	07 37 08.5	-0.4
ZALV	Zalesovo Beam	44.47	48	P	P	07 37 08.5	-0.4
SONM	Songino Array	59.19	51	P	P	07 38 57.8	-1.2
	comp=Z,2.3nm,1.0s,baz=290,slow=7.1,SNR=7.7						
	comp=Z,2.3nm,1.0s						
SCHQ	Schefferville	59.52	318	P	P	07 39 00.7	-0.4
	comp=Z,3.2nm,0.4s,baz=64,slow=5.7,SNR=14						
	comp=Z,3.2nm,0.4s						
SCHQ	Schefferville	59.52	318	P	P	07 39 01.5	+0.5
SCHQ				IAmb	IAmb	07 39 08.8	
	comp=Z,5.2nm,0.9s						
ULN	Ulaanbaatar	59.58	51	c*e*P	P	07 39 02.2	+0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BOSA	Boshof	66.52	177	P	P	07 39 48.2	+0.4
	comp=Z,2.7nm,1.0s,baz=183,slow=1.6,SNR=3.7						
	comp=Z,2.7nm,1.0s						
BOSA	Boshof	66.52	177	P	P	07 39 48.9	+1.1
BOSA	Boshof	66.52	177	P	P	07 39 48.9	+1.1
BOSA				pmax	pmax		
	comp=Z,13nm,1.5s						
A36M	Sachs Harbour	67.79	350	P	P	07 39 56.6	+1.3
C36M	Paulatuk	69.97	348	P	P	07 40 09.5	+0.7
BILL	Bilibino	70.61	14	⇓*e*P	P	07 40 11.9	-1.0
BILL				*e*		07 40 18.1	
BILL						07 40 36.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,160nm,15.0s						
INK	Inuvik	72.30	351	P	P	07 40 23.1	+0.2
INK				IAmb	IAmb	07 40 26.4	
	comp=Z,4.2nm,1.4s						
INK	Inuvik	72.30	351	P	P	07 40 23.2	+0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TOLK	Toolik Lake Re	73.31	357	P	P	07 40 30.4	+1.3
E46A	Sault Ste Mari	73.38	316	P	P	07 40 29.9	+0.1
YKA	Yellowknife Ar	73.90	341	P	P	07 40 32.3	-0.3
	comp=Z,0.8nm,0.7s,baz=37,slow=5.7,SNR=5.9						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	73.90	341	*e*P	P	07 40 33.5	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BMAR	Burnt Mountain	74.23	355	P	P	07 40 35.0	+0.5
Q56A	Snyder Ridge,	74.84	308	P	P	07 40 39.6	+1.1
Q56A				IAmb	IAmb	07 40 41.1	
	comp=Z,6.7nm,0.9s						
ILAR	Eielson Array	77.02	355	P	P	07 40 50.2	-0.3
	comp=Z,0.6nm,0.8s,baz=356,slow=2.8,SNR=6.4						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	77.02	355	*e*P	P	07 40 52.7	+2.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	Korea Array	78.06	52	P	P	07 40 55.1	-1.6
	comp=Z,1.5nm,0.7s,baz=326,slow=6.3,SNR=2.9						
	comp=Z,1.5nm,0.7s						
TXAR	Lajitas Array	96.10	315	P	P	07 42 25.4	-0.6
	comp=Z,0.6nm,1.0s,baz=64,slow=2.9,SNR=5.1						
	comp=Z,0.6nm,1.0s						
TXAR	Lajitas Array	96.10	315	P	P	07 42 26.2	+0.2
TXAR	Lajitas Array	96.10	315	P	P	07 42 26.2	+0.2
WRA	Warramunga Arr	118.93	93	PKP	PKPdf	07 47 45.2	-1.7
	comp=Z,0.4nm,0.8s,baz=323,slow=1.8,SNR=1.6						
ASAR	Alice Springs	120.58	97	PKP	PKPdf	07 47 48.8	-1.3
	comp=Z,0.4nm,0.6s,baz=295,slow=1.6,SNR=4.9						

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*IDC **16** 07:35:49.4±9.8, 36°.39N×72°.00E, h80^{km}±35^{km}, mb3.2/2, mbtmp3.8/8, MS4.1/1, Error ellipse: s-maj=141.7km s-min=30.1km az=157.0*

*NNC **16** 07:35:59.9±6.4, 37°.70N×71°.52E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=56.9km s-min=38.1km az=160.0*

ISC 16 07:35:54.9±1.6**, 37°.0N**±0°.1×**71°.75E**±0°.08**, h100^{km}, n20, σ2^{s}.90**/24**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	4.15	52	Pn	Pn	07 36 56.3	+0.1
KSH				Sn	Sn	07 37 36.6	-7.2
KSH				pmax	pmax		
	comp=Z,66nm,0.6s						
KSH				smax	smax		
	comp=N,150nm,0.7s						
KSH				smax	smax		
	comp=E,84nm,0.6s						
AML	Almayashu	5.32	16	P	Pn	07 37 14.4	+2.2
	SNR=111						
UCH	Uchtor	5.62	21	P	Pn	07 37 19.0	+2.6
	SNR=18						
EKS2	Erkin-Say	5.84	15	P	Pn	07 37 21.9	+2.7
	SNR=8.7						
AAK	Ala-Archa	5.99	20	P	Pn	07 37 24.0	+2.8
	SNR=12						
AAK	Ala-Archa	5.99	20	P	Pn	07 37 23.9	+2.8
	comp=E,7.0nm,0.3s,baz=178,slow=7.0,SNR=20						
AAK				S	Sn	07 38 26.0	-2.5
	comp=E,5.1nm,0.4s,baz=1.5,slow=21,SNR=12						
KK31	Karatay Array	6.15	351	P	Pn	07 37 24.4	+1.3
	comp=E,1.9nm,0.2s,baz=174,slow=12,SNR=66						
KK31				S	Sn	07 38 27.3	-4.7
	comp=E,6.2nm,0.3s,baz=182,slow=24,SNR=12						
CHMS	Chumysh	6.40	20	P	Pn	07 37 29.1	+2.5
	SNR=5.8						
TKM2	Tokmak 2	6.59	25	P	Pn	07 37 32.5	+3.2
	SNR=5.3						
TKM2	Tokmak 2	6.59	25	⇓P	Pn	07 37 31.5	+2.1
	comp=E,7.4nm,0.7s						
TKM2				⇓S	Sn	07 38 41.6	-1.4
	comp=E,3.3nm,0.6s						
GEYT	Alibeck	10.88	279	P	Pn	07 38 26.3	-1.2
	comp=E,1.8nm,0.3s,baz=72,slow=14,SNR=2.5						
GEYT				S	Sn	07 40 22.6	-4.5
	comp=E,2.6nm,0.3s,baz=52,slow=51,SNR=3.2						
MKAR	Makanchi Array	12.52	35	P	Pn	07 38 49.4	0.0
	comp=E,1.3nm,0.8s,baz=224,slow=12,SNR=6.9						
KURBB	Kurchatov Arra	14.44	18	P	Pn	07 39 15.8	+1.5
	comp=E,1.0nm,0.5s,baz=205,slow=10,SNR=12						
KURBB				S	Sn	07 41 47.3	-6.0
	comp=E,1.2nm,0.8s,baz=68,slow=30,SNR=5.1						
AB31	Akbulak array	14.94	329	P	Pn	07 39 19.2	-1.4
	comp=E,0.8nm,0.5s,baz=137,slow=13,SNR=24						
AKTO	Aktyubinsk	16.64	328	P	P	07 39 44.1	+1.5
	comp=E,1.3nm,0.4s,baz=114,slow=9.6,SNR=4.1						
AKTO	Aktyubinsk	16.64	328	⇑P	P	07 39 44.1	+1.5
	comp=E,0.6nm,0.3s						
ZALV	Zalesovo Beam	19.19	24	P	P	07 40 11.9	+1.4
	comp=E,1.8nm,0.4s,baz=214,slow=10,SNR=6.1						
ARCES	ARCESS Array B	40.90	337	P	P	07 43 28.8	+2.0
	comp=E,1.1nm,0.9s,baz=108,slow=7.8,SNR=8.2						
	comp=E,1.1nm,0.9s						
NOA	NORSAR Array B	44.33	323	P	P	07 43 56.1	+1.4
	comp=E,0.2nm,0.5s,baz=101,slow=6.8,SNR=1.2						
	comp=E,0.2nm,0.5s						
DAVOX	Davos/Dischmat	45.99	303	LR	LR	08 09 53.0	
	comp=E,208nm,18.2s,baz=284,slow=44						

WEL 16 07:42:12.7±1.1**, 38°S**±8°×**18°0W**±°**, h33^{km}, M3.3**/9**, ML3.6**/10**, MLv3.3**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=26.2, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.35	263	P	Pn	07 42 35.1	-0.1
MXZ	Matakaoa Point	1.43	274	P	Pn	07 42 35.9	-0.4
MXZ				S	Sn	07 42 52.8	-1.2
PUZ	Puketiti	1.51	254	P	Pn	07 42 37.4	-0.1
PUZ				S	Sn	07 42 56.6	+0.5
PKGZ	Pakihiroa	1.62	262	P	Pn	07 42 38.7	-0.3
PKGZ				S	Sn	07 42 58.3	-0.5
CNGZ	Carnagh Statio	1.70	241	P	Pn	07 42 40.9	+0.9
TWGZ	Tauwhareparae	1.75	253	P	Pn	07 42 41.3	+0.5
TWGZ				S	Sn	07 43 03.1	+1.1
HAZ	Te Kaha	1.84	267	P	Pn	07 42 42.1	+0.1
HAZ				S	Sn	07 43 04.6	+0.4
RUGZ	Raukumara Rang	1.94	261	P	Pn	07 42 44.5	+0.9
RIGZ	Rimuhau	2.11	240	P	Pn	07 42 46.1	+0.3
RIGZ				S	Sn	07 43 11.9	+1.0
MHGZ	Mahia Peninsul	2.27	229	P	Pn	07 42 48.6	+0.7
MHGZ				S	Sn	07 43 16.8	+2.0
URZ	Urewera	2.44	255	P	Pn	07 42 50.8	+0.7
URZ				S	Sn	07 43 18.8	0.0
CTZ	Chatham Island	6.54	159	P	Pn	07 43 48.7	+2.1
CTZ				S	Sn	07 44 57.9	-2.2

IDC 16 07:43:38.7±2.7**, 4°.75S**×**153°.54E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, MS4.0**/1**, Error ellipse: s-maj=49.2km s-min=40.9km az=65.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.57	286	Pn	Pb	07 44 08.4	-0.3
	106nm,0.3s,baz=240,slow=2.0,SNR=38						
KRVT				Sn	Sn	07 44 20.8	-8.2
	311nm,0.3s,baz=139,slow=22,SNR=15						
WRA	Warramunga Arr	24.04	229	P	P	07 48 56.0	+0.3
	1.4nm,0.5s,baz=54,slow=10.0,SNR=25						
	1.4nm,0.5s						
ASAR	Alice Springs	26.69	223	P	P	07 49 20.1	+0.3
	0.2nm,0.5s,baz=56,slow=9.1,SNR=5.1						
	0.2nm,0.5s						
RPZ	Rata Peaks	41.77	161	LR	LR	08 08 56.3	
	comp=Z,174nm,19.5s,baz=44,slow=36						
TORD	Torodi Ar. Bea	150.99	289	PKPbc	PKPbc	08 03 33.6	-1.1
	0.3nm,0.4s,baz=55,slow=2.0,SNR=5.4						

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*NNC **16** 07:45:40.9±2.7, 54°.36N×86°.40E, h0^{km}, mb2.7, mpv2.6, Error ellipse: s-maj=40.3km s-min=14.7km az=165.0, Suspected Mining explosion.*

*IDC **16** 07:45:43.0±2.6, 54°.18N×86°.33E, h0^{km}, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=19.7km s-min=12.4km az=57.0*

ISC 16 07:45:35.4±3.8**, 55°.1N**±0°.2×**84°.07E**±0°.09**, h0^{km}, n8, σ1^{s}.06**/9**, 5C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.25	159	*i*		07 52 10.0	
	baz=73,slow=327,SNR=1.2						
ZAA0	Zalesovo Array	1.25	159	⇑P	Pb	07 45 59.7	-0.2
	0.3nm,0.3s						
ZAA0				⇓S	Sg	07 46 14.6	-1.0
	2.0nm,0.4s						
ZALV	Zalesovo Beam	1.25	159	Pg	Pg	07 45 59.6	+0.2
	2.9nm,0.3s,baz=75,slow=17,SNR=25						
ZALV				Lg	Lg	07 46 14.1	
	4.6nm,0.3s,baz=78,slow=30,SNR=24						
ZALV				Rg	Rg	07 46 19.3	
	23nm,0.9s,baz=72,slow=32,SNR=8.1						
KURK	Kurchatov	5.51	219	⇓Pn	Pb	07 47 11.6	-0.8
	1.1nm,0.7s						
KURK				⇑Lg	Lg	07 48 52.8	
	1.0nm,0.7s						
KURBB	Kurchatov Arra	5.62	219	Pn	Pb	07 47 13.0	-1.3
	0.2nm,0.3s,baz=54,slow=14,SNR=5.2						
KURBB				Lg	Lg	07 48 52.2	
	0.1nm,0.3s,baz=60,slow=30,SNR=2.2						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	5.62	219	⇑Pn	Pb	07 47 13.6	-0.7
	0.6nm,0.3s						
KURBB				⇓Sn	Sb	07 48 23.5	+1.4
	1.1nm,0.6s						
KURBB				⇓Lg	Lg	07 48 54.3	
	1.4nm,0.6s						
MK31	Makanchi Array	8.41	188	⇑Pn	Pn	07 47 38.8	+0.2
	baz=25,slow=13,SNR=9.3						
MK31				⇑Lg	Lg	07 49 51.5	
	1.6nm,0.8s,baz=29,slow=31,SNR=4.3						
MKAR	Makanchi Array	8.41	188	Pn	Pn	07 47 39.5	+0.9
	0.2nm,0.3s,baz=25,slow=14,SNR=7.6						
MKAR				Lg	Lg	07 49 51.9	
	0.1nm,0.3s,baz=28,slow=32,SNR=8.1						
	0.2nm,0.3s						

IDC 16 08:07:59.3±3.1**, 54°.34N**×**86°.89E, h0^{km}, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=26.8km s-min=18.8km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.28	253	*i*		08 16 10.0	
	baz=74,slow=321,SNR=4.5						
ZALV	Zalesovo Beam	1.28	253	Pg	Pg	08 08 23.0	-0.9
	2.0nm,0.3s,baz=72,slow=17,SNR=14						
ZALV				Lg	Lg	08 08 40.5	
	2.1nm,0.3s,baz=82,slow=32,SNR=9.4						
ZALV				Rg	Rg	08 08 47.9	
	7.8nm,0.5s,baz=65,slow=26,SNR=7.3						
KURBB	Kurchatov Arra	6.32	237	Pn	Pn	08 09 34.0	+0.4
	0.2nm,0.3s,baz=55,slow=14,SNR=6.9						
KURBB				Lg	Lg	08 11 20.6	
	baz=58,slow=33,SNR=2.0						
	1.7nm,0.4s						
MKAR	Makanchi Array	8.10	203	Pn	Pn	08 09 59.5	+1.4
	0.1nm,0.3s,baz=25,slow=14,SNR=6.4						
MKAR				Lg	Lg	08 12 19.6	
	0.1nm,0.3s,baz=36,slow=27,SNR=4.0						
	0.3nm,0.4s						

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*BJI **16** 08:26:34.6±0.0, 13°.82N×146°.48E, h13^{km}, mb4.6/26, mB5.0/11, Ms4.1/1, Ms7 3.9/2*

*DJA **16** 08:26:35.0±0.4, 14°N±7°×14°7E±°, h10^{km}, M4.5/6, mb4.7/6, mB5.9/3, MLv4.4/1, Mw(mB)5.4/3, MwMwp5.6/1, Mwp5.8/1*

*NEIC **16** 08:26:36.4±1.6, 13°.89N±0°.07×146°.50E±0°.10, h10^{km}±1^{km}, mb4.7/84, Error ellipse: s-maj=17.0km s-min=10.2km az=111.0*

*IDC **16** 08:26:41.9±3.0, 13°.81N×146°.34E, h54^{km}±25^{km}, mb3.9/20, mbtmp4.2/20, MS3.3/1, Error ellipse: s-maj=22.0km*

s-min=13.9km az=97.0

ISC 16 08:26:39.7±0.5**, 13°.86N**±0°.08×**146°.43E**±0°.08**, h37^{km}, n134, σ1^{s}.24**/134**, mb4.6**/69**, 2D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.54	260	P	Pn	08 27 04.7	+0.2
	1µm,0.3s,baz=98,slow=4.4,SNR=289						
GUMO				S	Sn	08 27 23.8	+0.5
	743nm,0.4s,baz=337,slow=20,SNR=8.1						
JCJ	Chichijima	13.75	344	LR	LR	08 34 21.2	
	comp=Z,115nm,19.6s,baz=88,slow=33						
SIJI	Sorong	20.97	227	P	Pn	08 31 21.1	-1.4
	15nm,0.9s,baz=46,slow=8.5,SNR=11						
	15nm,0.9s						
JSU	Suzuyama	22.87	323	P	P	08 31 37.0	-3.0
JSU				IAmb	IAmb	08 31 46.8	
	comp=Z,44nm,1.2s						
PMG	Port Moresby	23.13	178	P	P	08 31 42.1	-0.6
PMG				IAmb	IAmb	08 31 47.2	
	comp=Z,22nm,0.9s						
MJAR	Matsushiro Arr	23.75	343	P	P	08 31 51.2	+2.6
	comp=Z,2.2nm,0.3s,baz=128,slow=18,SNR=14						
	comp=Z,2.2nm,0.3s						
MJAR	Matsushiro Arr	23.75	343	P	P	08 31 48.0	-0.6
MAJO	Matsushiro	23.75	343	P	P	08 31 47.4	-1.2
MAJO				IAmb	IAmb	08 31 54.1	
	comp=Z,9.9nm,0.5s						
MJB9	Matsu-Tunnel	23.76	343	P	P	08 31 47.4	-1.2
MJB9				IAmb	IAmb	08 31 54.1	
	comp=Z,9.7nm,0.5s						
JNU	Nakatsue	23.84	326	P	P	08 31 49.8	+0.4
	comp=Z,17nm,0.9s,baz=132,slow=3.0,SNR=4.3						
	comp=Z,17nm,0.9s						
JNU	Nakatsue	23.84	326	P	P	08 31 50.0	+0.6
JHS	Saijyo	24.23	333	P	P	08 31 53.0	-0.1
JSD	Sado	25.15	345	P	P	08 32 01.5	+0.2
JSD				IAmb	IAmb	08 32 06.3	
	comp=Z,19nm,1.0s						
NACB	Ninganchiao	25.58	297	P	P	08 32 05.0	-0.4
YULB	Yu-li	25.59	295	P	P	08 32 06.0	+0.4
JTU	Tsushima	25.70	326	P	P	08 32 06.3	0.0
GTOI	Gorontalo	26.64	242	P	P	08 32 17.2	+2.1
	comp=Z,8.4nm,0.8s						
MRSI	Marisa	27.64	243	P	P	08 32 24.9	+0.8
LUWI	Luwuk	27.72	240	P	P	08 32 24.0	-0.8
LUWI	Luwuk	27.72	240	P	P	08 32 26.3	+1.5
	comp=Z,3µmcomp=Z,94nm,1.0s						
KSCHJ	Chungju	28.23	328	P	P	08 32 29.1	0.0
TOLI2	Tolitoli	28.36	246	P	P	08 32 28.8	-1.7
KSRS	Korea Array	28.70	328	P	P	08 32 33.5	+0.2
	comp=Z,4.9nm,0.7s,baz=147,slow=9.4,SNR=16						
	comp=Z,4.9nm,0.7s						
KSAR	Wonju Array Be	28.71	328	P	P	08 32 33.0	-0.4
KS19	Wonju Array Si	28.77	328	P	P	08 32 33.7	-0.2
KS19				IAmb	IAmb	08 32 40.5	
	comp=Z,18nm,1.1s						
WB0	Warramunga Arr	35.45	200	P	P	08 33 31.6	-1.1
WB0				IAmb	IAmb	08 33 52.6	
	comp=Z,20nm,1.5s						
WR0	Warramunga Arr	35.59	199	P	P	08 33 33.0	-0.8
WR0				IAmb	IAmb	08 33 46.8	
	comp=Z,10nm,1.1s						
BNX	BinXian	35.61	337	⇓P	P	08 33 36.8	+3.1
BNX				pmax	pmax		
	comp=Z,11nm,0.5s						
BNX				pmax	pmax		
	comp=Z,190nm,4.0s						
WRAB	Tennant Creek	35.62	200	P	P	08 33 33.0	-1.1
WRAB				IAmb	IAmb	08 33 47.1	
	comp=Z,7.2nm,0.8s						
WB2	Warramunga Arr	35.63	200	P	P	08 33 32.9	-1.3
WB2				IAmb	IAmb	08 33 47.3	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	35.63	200	P	P	08 33 33.5	-0.7
	comp=Z,3.6nm,0.9s,baz=19,slow=9.6,SNR=15						
WRA				PcP	PcP	08 36 03.1	+0.7
	comp=Z,0.5nm,0.6s,baz=24,slow=3.9,SNR=5.2						
	comp=Z,3.6nm,0.9s						
WRA	Warramunga Arr	35.63	200	P	P	08 33 32.7	-1.5
HNS	HongShan	36.68	316	⇓P	P	08 33 44.0	+1.0
HNS				pmax	pmax		
	comp=Z,15nm,1.1s						
BJI	Beijing	37.19	320	P	P	08 33 47.4	+0.1
BJI				pP	pP	08 33 50.3	-6.1
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLR	Kul'dur	37.28	344	P	P	08 33 46.8	-1.1
	comp=Z,0.5nm,0.3s,baz=150,slow=16,SNR=2.2						
	comp=Z,0.5nm,0.3s						
AS31	Alice Springs	39.26	198	P	P	08 34 04.2	-0.6
ASAR	Alice Springs	39.26	198	P	P	08 34 04.0	-0.8
	comp=Z,1.0nm,0.8s,baz=22,slow=9.6,SNR=7.6						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	39.26	198	P	P	08 34 04.2	-0.7
XAN	Xi'an	39.42	307	P	P	08 34 07.3	+1.0
XAN				pP	pP	08 34 13.6	-2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT	XiLinHaoTe	39.61	325	*e*P	P	08 34 07.9	+0.2
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,82nm,4.9s						
XLT				LR	LR		
	comp=Z,190nm,21.9s						
PEA0B	Petropavlovsk-	40.16	11	P	P	08 34 11.7	-0.4
PEA0B				IAmb	IAmb	08 34 25.1	
	comp=Z,23nm,1.5s						
PETK	Petropavlovsk-	40.16	11	P	P	08 34 13.9	+1.9
	comp=Z,0.9nm,0.7s,baz=207,slow=5.8,SNR=2.2						
	comp=Z,0.9nm,0.7s						
PETK	Petropavlovsk-	40.16	11	P	P	08 34 10.2	-1.9
HHC	Hu-ho-hao-te	40.56	318	*e*P	P	08 34 16.6	+0.9
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.6s						
PZH	PanZhiHua	43.57	294	P	P	08 34 41.1	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
PSA00	Pilbara Seismi	43.82	217	P	P	08 34 42.7	+0.3
CHTO	Chiang Mai	45.73	283	P	P	08 34 57.1	-0.6
CMAR	Chiang Mai Arr	45.74	282	P	P	08 34 57.0	-0.7
	comp=Z,3.8nm,0.5s,baz=86,slow=6.0,SNR=21						
	comp=Z,3.8nm,0.5s						
CMAR	Chiang Mai Arr	45.74	282	P	P	08 34 58.2	+0.5
ULN	Ulaanbaatar	47.03	324	P	P	08 35 06.6	-1.0
ULN				IAmb	IAmb	08 35 09.9	
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	47.39	324	P	P	08 35 11.3	+0.8
	comp=Z,4.1nm,0.8s,baz=141,slow=8.2,SNR=11						
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	47.39	324	P	P	08 35 11.2	+0.8
SONM				IAmb	IAmb	08 35 14.6	
	comp=Z,5.3nm,1.0s						
BBOO	Buckleboo	47.45	192	P	P	08 35 10.9	+0.1
WMQ	Urumqi	58.05	313	*e*P	P	08 36 33.8	+4.6
WMQ				pP	pP	08 36 36.4	-2.6
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
SDPT	Sand Point	58.10	33	P	P	08 36 29.0	-0.2
ZALV	Zalesovo Beam	62.29	324	P	P	08 36 57.8	-0.1
	comp=Z,1.4nm,0.5s,baz=85,slow=6.3,SNR=6.3						
	comp=Z,1.4nm,0.5s						
MK31	Makanchi Array	62.35	316	P	P	08 36 58.7	+0.2
MKAR	Makanchi Array	62.35	316	P	P	08 36 59.1	+0.6
	comp=Z,2.5nm,0.5s,baz=91,slow=8.5,SNR=31						
	comp=Z,2.5nm,0.5s						
MAKZ	Makanchi	62.56	316	P	P	08 37 00.9	+0.9
MAKZ				IAmb	IAmb	08 37 05.0	
	comp=Z,4.4nm,0.7s						
SVW2	Sparrevohn	62.73	28	P	P	08 37 01.4	+0.6
Q19K	Cape Douglas,	62.87	30	P	P	08 37 02.3	+0.5
KDAK	Kodiak Island	63.04	32	P	P	08 37 04.3	+1.4
N19K	Bonanza Creek	63.12	28	P	P	08 37 03.2	-0.3
N19K				IAmb	IAmb	08 37 24.9	
	comp=Z,4.5nm,0.8s						
L19K	White Mountain	63.46	27	P	P	08 37 05.2	-0.5
L19K				IAmb	IAmb	08 37 29.4	
	comp=Z,5.0nm,1.1s						
HOM	Homer	64.08	30	P	P	08 37 09.0	-0.7
K20K	Telida	64.23	26	P	P	08 37 10.9	+0.2
K20K				IAmb	IAmb	08 37 34.4	
	comp=Z,6.0nm,1.1s						
CNPM	China Poot	64.24	30	P	P	08 37 11.1	+0.3
CNPM				IAmb	IAmb	08 37 32.9	
	comp=Z,5.9nm,0.9s						
J20K	Nowinta River	64.51	25	P	P	08 37 12.6	+0.2
J20K				IAmb	IAmb	08 37 21.5	
	comp=Z,6.4nm,1.1s						
PPLA	Purkeypile	64.87	26	P	P	08 37 15.5	+0.5
TARG	Taragay, Kyrgy	64.98	310	P	P	08 37 15.2	-1.3
TARG				IAmb	IAmb	08 37 18.4	
	comp=Z,6.4nm,1.5s						
CAST	Castle Rocks	65.09	26	P	P	08 37 15.6	-0.7
CAST				IAmb	IAmb	08 37 37.2	
	comp=Z,6.0nm,1.0s						
O22K	Cooper Landing	65.24	29	P	P	08 37 16.8	-0.4
SEW	Seward	65.27	30	P	P	08 37 17.6	+0.2
SEW				IAmb	IAmb	08 37 39.3	
	comp=Z,6.4nm,1.0s						
IMAR	Indian Mountai	65.35	23	P	P	08 37 17.9	0.0
KURK	Kurchatov	65.35	320	P	P	08 37 18.2	0.0
KURBB	Kurchatov Arra	65.40	320	P	P	08 37 18.4	0.0
	comp=Z,5.8nm,0.7s,baz=100,slow=6.6,SNR=25						
	comp=Z,5.8nm,0.7s						
H21K	Melozitna Rive	65.59	23	P	P	08 37 19.1	-0.4
H21K				IAmb	IAmb	08 37 28.2	
	comp=Z,4.1nm,1.1s						
PMR	Palmer	65.83	28	P	P	08 37 20.8	-0.2
TRF	Thorofare Moun	65.86	26	P	P	08 37 22.5	+1.0
TRF				IAmb	IAmb	08 37 31.7	
	comp=Z,5.3nm,1.1s						
KNK	Knik Glacier	66.09	29	P	P	08 37 23.0	+0.2
SML	Sawmill	66.25	28	P	P	08 37 24.5	+0.6
SML				IAmb	IAmb	08 37 43.9	
	comp=Z,6.8nm,0.9s						
KSH	Kashi	66.28	307	P	P	08 37 29.1	+4.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NRIK	Noril'sk	66.37	341	P	P	08 37 24.1	-0.3
	comp=Z,1.9nm,0.7s,baz=97,slow=10,SNR=5.0						
	comp=Z,1.9nm,0.7s						
NRIK	Noril'sk	66.37	341	P	P	08 37 24.1	-0.3
NRIK				IAmb	IAmb	08 37 30.2	
	comp=Z,3.8nm,1.0s						
BOOM	Boomskoye usch	66.41	310	P	P	08 37 26.4	+1.1
BOOM				IAmb	IAmb	08 37 26.9	
	comp=Z,3.9nm,0.9s						
BWN	Browne	66.44	25	P	P	08 37 24.3	-0.6
RND	Reindeer	66.47	26	P	P	08 37 24.4	-0.8
RND				IAmb	IAmb	08 37 32.6	
	comp=Z,5.7nm,1.2s						
SCM	Sheep Creek Mo	66.72	28	P	P	08 37 27.0	+0.1
FID	Port Fidalgo	66.86	29	P	P	08 37 28.7	+1.0
FID				IAmb	IAmb	08 37 44.1	
	comp=Z,6.7nm,1.0s						
H23K	Yukon River	66.92	24	P	P	08 37 29.4	+1.4
H23K				IAmb	IAmb	08 37 36.5	
	comp=Z,4.3nm,1.0s						
WRH	Wood River Hil	67.10	25	P	P	08 37 28.7	-0.4
WRH				IAmb	IAmb	08 37 35.6	
	comp=Z,6.9nm,1.2s						
COLD	Coldfoot	67.12	22	P	P	08 37 29.3	+0.1
MDM	Murphy Dome	67.18	25	P	P	08 37 31.6	+1.9
MDM				IAmb	IAmb	08 37 36.6	
	comp=Z,6.9nm,1.4s						
CCB	Clear Creek Bu	67.26	25	P	P	08 37 32.9	+2.8
KLU	Klutina	67.29	29	P	P	08 37 30.2	-0.3
HDA	Harding Lake	67.56	26	P	P	08 37 34.0	+1.9
HDA				IAmb	IAmb	08 37 38.0	
	comp=Z,8.0nm,1.5s						
H24K	Noodor Dome	67.57	24	P	P	08 37 32.8	+0.7
H24K				IAmb	IAmb	08 37 40.0	
	comp=Z,4.9nm,1.1s						
IL31		67.68	25	P	P	08 37 32.6	-0.1
ILAR	Eielson Array	67.68	25	P	P	08 37 32.2	-0.6
	comp=Z,0.8nm,0.6s,baz=252,slow=5.8,SNR=16						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	67.68	25	P	P	08 37 33.1	+0.4
BMRM	Bremner River	67.80	29	P	P	08 37 34.2	+0.5
BMRM				IAmb	IAmb	08 37 45.5	
	comp=Z,9.0nm,1.2s						
TOLK	Toolik Lake Re	67.82	21	P	P	08 37 34.2	+0.5
PAX	Paxson	67.84	27	P	P	08 37 33.3	-0.6
J25K	Salcha River,	68.27	26	P	P	08 37 37.8	+1.2
GLB	Gilahina Butte	68.27	29	P	P	08 37 36.8	+0.2
GLB				IAmb	IAmb	08 37 45.1	
	comp=Z,5.9nm,1.2s						
DOT	Dot Lake	68.61	27	P	P	08 37 39.3	+0.6
DOT				IAmb	IAmb	08 37 45.9	
	comp=Z,4.5nm,1.1s						
BMAR	Burnt Mountain	69.27	23	P	P	08 37 44.2	+1.4
BCAR	Beaver Creek A	69.50	28	P	P	08 37 45.6	+1.4
LOGN	Logan Glacier	69.51	30	P	P	08 37 46.4	+1.9
KK31	Karatay Array	70.41	311	P	P	08 37 50.2	0.0
KKAR	Karatay Array	70.41	311	P	P	08 37 50.8	+0.6
GAR	Garm	70.67	307	P	P	08 37 52.5	+0.4
BRVK	Borovoye	70.72	322	P	P	08 37 52.2	+0.4
BRVK				IAmb	IAmb	08 37 53.1	
	comp=Z,6.6nm,0.8s						
DAWY	Dawson	70.72	27	P	P	08 37 51.0	-0.7
HYT	Haines Junctio	71.21	30	P	P	08 37 54.3	-0.6
INK	Inuvik	73.54	22	P	P	08 38 11.2	+2.8
	comp=Z,1.9nm,0.8s,baz=234,slow=4.9,SNR=7.9						
	comp=Z,1.9nm,0.8s						
INK	Inuvik	73.54	22	P	P	08 38 09.2	+0.9
ABKAR	Akbulak array	77.36	318	P	P	08 38 30.4	-0.3
YKA	Yellowknife Ar	81.92	28	P	P	08 38 55.8	+0.6
	comp=Z,0.3nm,0.5s,baz=284,slow=5.9,SNR=3.5						
	comp=Z,0.3nm,0.5s						
PINE	Pine Mountain	82.42	47	P	P	08 38 57.4	-1.1
PINE				IAmb	IAmb	08 39 19.7	
	comp=Z,6.0nm,0.8s						
MOD	Modoc Plateau	83.28	49	P	P	08 39 02.1	-0.8
MOD				IAmb	IAmb	08 39 09.9	
	comp=Z,4.3nm,1.1s						
NVAR	Mina Array Bea	85.57	52	P	P	08 39 16.0	+1.3
	comp=Z,0.6nm,0.5s,baz=268,slow=5.8,SNR=5.6						
	comp=Z,0.6nm,0.5s						
ELK	Elko	87.26	49	P	P	08 39 22.3	-0.7
ARCES	ARCESS Array B	87.29	342	P	P	08 39 22.8	+0.6
	comp=Z,1.4nm,0.8s,baz=69,slow=6.8,SNR=9.1						
	comp=Z,1.4nm,0.8s						
HRY	Holter Researc	87.90	42	P	P	08 39 26.2	+0.5
LAO	LASA Array	91.53	41	P	P	08 39 42.8	+0.1
LAO				IAmb	IAmb	08 40 03.3	
	comp=Z,4.2nm,1.0s						
FINES	FINESS Array B	91.55	335	P	P	08 39 41.8	-0.5
	comp=Z,1.2nm,0.5s,baz=66,slow=4.6,SNR=9.0						
	comp=Z,1.2nm,0.5s						
H06S1	SOCORRO T	97.18	69	T	T	10 27 56.1	
	SNR=15						
TORD	Torodi Ar. Bea	135.94	306	PKP	PKiKP	08 45 59.0	-0.3
	comp=Z,0.4nm,0.8s,baz=34,slow=2.9,SNR=2.1						
DBIC	Dimbokro	144.95	304	PKP	PKPdf	08 46 14.0	+0.1
	comp=Z,17nm,0.8s,baz=36,slow=5.6,SNR=14						
DBIC	Dimbokro	144.95	304		PKPdf	08 46 13.8	-0.2
KIC	Kosan Boka	145.03	303	*e*PKP1	PKPbc	08 46 13.4	-0.1
	comp=Z,36nm,1.0s						
TIC	Toumodi	145.09	304	*e*PKP1	PKPbc	08 46 13.5	-0.2
LIC	Lamto	145.34	303	*e*PKP1	PKPbc	08 46 14.5	0.0
	comp=Z,34nm,0.9s						

IDC 16 08:29:03.6±2.5**, 53°.72N**×**86°.78E, h0^{km}, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=22.6km s-min=13.5km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.18	282	*i*		08 37 20.0	
	baz=99,slow=321,SNR=1.1						
ZALV	Zalesovo Beam	1.18	282	Pg	Pg	08 29 25.2	-1.0
	1.3nm,0.3s,baz=101,slow=16,SNR=28						
ZALV				Lg	Lg	08 29 42.6	
	1.9nm,0.3s,baz=102,slow=28,SNR=14						
KURBB	Kurchatov Arra	5.95	242	Pn	Pn	08 30 33.8	+1.0
	0.1nm,0.3s,baz=57,slow=13,SNR=3.3						
KURBB				Lg	Lg	08 32 10.9	
	0.1nm,0.3s,baz=61,slow=25,SNR=1.8						
	0.6nm,0.5s						
MKAR	Makanchi Array	7.50	204	Pn	Pn	08 30 55.5	+1.3
	0.2nm,0.3s,baz=25,slow=14,SNR=13						
	0.2nm,0.3s						

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*IDC **16** 08:39:40.2±1.8, 17°.86S×178°.14W, h550^{km}±23^{km}, mb3.6/7, mbtmp4.6/9, Error ellipse: s-maj=56.0km s-min=14.3km az=150.0*

*NEIC **16** 08:39:41.0±1.7, 18°.0S±0°.2×178°.0W±0°.1, h563^{km}±8^{km}, mb4.5/25, Error ellipse: s-maj=28.1km s-min=14.9km az=158.0*

ISC 16 08:39:39.3±0.6**, 17°.8S**±0°.1×**178°.04W**±0°.09**, h550^{km}, n47, σ1^{s}.10**/49**, mb4.4**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.17	58	P	P	08 41 30.8	+1.7
	43nm,0.5s,baz=85,slow=2.8,SNR=16						
AFI				S	S	08 42 54.8	-4.1
	14nm,0.7s,baz=333,slow=21,SNR=1.3						
NIUE	Niue	7.81	101	P	P	08 41 37.5	+2.4
MARNC	Mare, Loyalty	13.62	252	P	P	08 42 35.4	+0.8
PINNC	Pines Island,	14.43	248	P	P	08 42 44.1	+1.2
OUENC	Ouen Island, N	14.92	250	P	P	08 42 48.7	+0.8
DZM	Mont Dzumac	15.19	251	P	P	08 42 51.3	+0.5
	6.2nm,0.6s,baz=191,slow=22,SNR=13						
DZM	Mont Dzumac	15.19	251	IAmb	IAmb	08 42 53.4	
	comp=Z,7.1nm,0.7s						
ONTNC	Ouen Toro	15.24	250	P	P	08 42 49.6	-1.7
EIDS	Eidsvold	29.63	250	P	P	08 45 01.1	+0.5
EIDS				IAmb	IAmb	08 45 01.2	
	comp=Z,9.3nm,0.6s						
ARMA	Armidale	30.29	240	P	P	08 45 06.6	+0.2
ARMA				IAmb	IAmb	08 45 07.5	
	comp=Z,8.3nm,0.8s						
CTAO	Charters Tower	33.81	260	P	P	08 45 35.5	-0.8
CTAO				IAmb	IAmb	08 45 37.5	
	comp=Z,12nm,0.7s						
CAN	Canberra	34.04	233	P	P	08 45 38.1	0.0
COEN	Coen	37.45	270	P	P	08 46 08.0	+1.4
TOO	Toolangi	37.50	231	P	P	08 46 06.9	+0.1
STKA	Stephens Creek	38.98	241	P	P	08 46 19.0	+0.3
	comp=Z,11nm,0.5s,baz=90,slow=9.7,SNR=40						
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	38.98	241	P	P	08 46 19.1	+0.3
BBOO	Buckleboo	43.76	241	P	P	08 46 56.2	-0.3
BBOO				IAmb	IAmb	08 46 56.7	
	comp=Z,13nm,0.7s						
WR0	Warramunga Arr	44.80	259	P	P	08 47 04.2	-0.6
WR0				IAmb	IAmb	08 47 13.6	
	comp=Z,20nm,1.5s						
WB0	Warramunga Arr	44.96	260	P	P	08 47 05.3	-0.7
WB2	Warramunga Arr	44.98	259	P	P	08 47 05.8	-0.4
WB2				IAmb	IAmb	08 47 06.4	
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	44.98	259	P	P	08 47 05.7	-0.5
WRAB				IAmb	IAmb	08 47 06.3	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	44.99	259	P	P	08 47 05.5	-0.8
	comp=Z,8.5nm,0.5s,baz=95,slow=7.1,SNR=416						
	comp=Z,8.5nm,0.5s						
WRA	Warramunga Arr	44.99	259	P	P	08 47 05.5	-0.8
AS31	Alice Springs	45.15	254	P	P	08 47 07.3	-0.1
AS31				IAmb	IAmb	08 47 08.3	
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	45.15	254	P	P	08 47 07.2	-0.2
	comp=Z,16nm,0.4s,baz=87,slow=8.8,SNR=389						
	comp=Z,16nm,0.4s						
ASAR	Alice Springs	45.15	254	P	P	08 47 07.4	-0.1
MTN	Manton Dam	49.15	268	P	P	08 47 37.5	-0.1
MTN				IAmb	IAmb	08 47 38.2	
	comp=Z,11nm,0.8s						
FORT	Forrest	50.36	245	P	P	08 47 45.2	-1.0
KNRA	Kununurra	50.84	264	P	P	08 47 49.8	-0.1
KNRA				IAmb	IAmb	08 47 50.4	
	comp=Z,9.1nm,0.7s						
PSA00	Pilbara Seismi	58.27	255	P	P	08 48 41.0	-1.0
PSA00				IAmb	IAmb	08 48 41.4	
	comp=Z,6.2nm,0.6s						
MBWA	Marble Bar	58.44	256	P	P	08 48 42.3	-0.8
TOLI2	Tolitoli	63.04	281	P	P	08 49 13.0	-0.5
QSPA	South Pole Qui	72.25	180	P	P	08 50 07.7	-1.2
PETK	Petropavlovsk-	73.67	345	P	P	08 50 18.5	+1.5
	comp=Z,2.3nm,0.9s,baz=138,slow=6.7,SNR=3.2						
	comp=Z,2.3nm,0.9s						
NVAR	Mina Array Bea	79.11	44	P	P	08 50 48.6	+1.2
	comp=Z,0.5nm,0.6s,baz=233,slow=6.7,SNR=2.7						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	79.11	44	P	P	08 50 47.4	0.0
TX31	Lajitas Ar. Si	85.65	57	P	P	08 51 20.9	+0.4
TX31				IAmb	IAmb	08 51 23.1	
	comp=Z,5.4nm,0.9s						
TX32	Lajitas Array	85.65	57	P	P	08 51 20.8	+0.3
TXAR	Lajitas Array	85.65	57	P	P	08 51 22.1	+1.6
	comp=Z,1.1nm,0.7s,baz=217,slow=5.5,SNR=18						
	comp=Z,1.1nm,0.7s						
TXAR	Lajitas Array	85.65	57	P	P	08 51 20.9	+0.4
CMAR	Chiang Mai Arr	89.18	290	P	P	08 51 38.8	+1.6
	comp=Z,1.3nm,0.3s,baz=126,slow=2.6,SNR=5.0						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	89.18	290	P	P	08 51 37.0	-0.1
BRTR	Keskin Array B	144.96	315	PKP	PKPdf	08 58 14.9	+0.4
	comp=Z,0.7nm,0.4s,baz=142,slow=4.7,SNR=4.7						
BRTR	Keskin Array B	144.96	315		PKPdf	08 58 14.1	-0.5
GERES	GERESS Array B	147.60	345	PKPbc	PKPbc	08 58 21.8	-0.4
	comp=Z,0.5nm,0.5s,baz=91,slow=6.0,SNR=3.8						
GERES	GERESS Array B	147.60	345		PKPbc	08 58 22.3	+0.1
FNA	Florina	151.65	328	PKPdf	PKPdf	08 58 23.0	-2.1
FNA				PKPbc	PKPbc	08 58 31.5	-0.5
FNA					PKPab	08 58 43.1	-0.2

NOU 16 08:44:49.3, 14°.82S×166°.69E, h0^{km}, MLv4.6/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.80	142	P	Pg	08 45 04.3	-0.3
DVP	Devils Point	3.23	154	P	Pn	08 45 41.2	0.0
YATNC	Mamie plateau,	7.20	179	P	Pn	08 46 34.8	-1.1
DZM	Mont Dzumac	7.22	182	P	Pn	08 46 35.5	-0.7
NOUC	Port Laguerre	7.25	183	P	Pn	08 46 36.6	0.0
OUENC	Ouen Island, N	7.56	179	P	Pn	08 46 41.7	+0.9

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*DDA **16** 08:47:28.7±0.0, 35°.63N×29°.54E, h18^{km}±2^{km}, ML3.2*

*ISK **16** 08:47:35.5, 36°.09N×29°.69E, h5^{km}, ML3.3/16*

*IDC **16** 08:47:36.4±1.3, 36°.09N×29°.68E, h0^{km}, mb3.5/3, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=42.8km s-min=18.9km az=145.0*

ISC 16 08:47:30.6±1.5**, 35°.77N**±0°.05×**29°.58E**±0°.03**, h2^{km}**±12^{km}**, n41, σ1^{s}.90**/50**, mb3.2**/3**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	0.47	3	PG	Pg	08 47 39.3	-0.2
AKAS				SG	Sg	08 47 42.1	-3.5
AKAS	Kas	0.47	3	P	Pg	08 47 39.4	-0.1
AKAS				S	Sg	08 47 41.9	-3.7
AKAS				*i* AML	AML	08 47 43.0	
	comp=N,2µm,0.5s						
AKAS				*i* AML	AML	08 47 45.0	
	comp=E,2µm,0.7s						
DEMR	Demre-Antalya	0.54	29	PG	Pg	08 47 41.1	+0.2
DEMR				SG	Sg	08 47 45.2	-2.7
AKUM	Antalya-Kumluc	0.83	48	P	Pn	08 47 48.0	-1.3
AKUM				S	Sb	08 47 60.0	+0.5
AKUM				*i* AML	AML	08 48 04.0	
	comp=N,423nm,0.6s						
AKUM				*i* AML	AML	08 48 08.0	
	comp=E,404nm,0.3s						
FETY	Fethiye	0.95	335	PG	Pn	08 47 50.9	-0.2
FETY				SG	Sg	08 48 01.9	+0.6
ELL	Elmali	1.01	15	PG	Pb	08 47 48.7	-2.3
CAME	Cameli-Denizli	1.20	349	PG	Pg	08 47 54.1	+0.6
ARG	Arkhangelos	1.26	291	P	Pg	08 48 01.1	+6.3
ARG	Arkhangelos	1.26	291	PN	Pg	08 48 00.9	+6.1
DALY	Dalyan (Mula)	1.29	325	PN	Pg	08 47 57.0	+1.7
DALY				SN	Sg	08 48 14.2	+2.2
CAEL	Denizli, Camel	1.37	351	P	Pn	08 47 55.7	-1.2
CAEL				S	Sg	08 48 18.3	+3.6
CAEL				*i* AML	AML	08 48 23.0	
	comp=E,621nm,1.0s						
CAEL				*i* AML	AML	08 48 24.0	
	comp=N,748nm,1.0s						
KORT	Korkueli	1.38	27	PG	Pb	08 47 56.6	-0.6
KORT	Korkueli	1.38	27	P	Pn	08 47 55.9	-1.2
KORT				S	Sg	08 48 19.2	+4.3
KORT				*i* AML	AML	08 48 23.0	
	comp=N,228nm,0.5s						

KORT				*i* AML	AML	08 48 26.0	
	comp=E,415nm,0.6s						
GOLH	**Golhisar**	**1.47**	**359**	P	**Pg**	**08 47 59.6**	**+0.9**
GOLH				S	**Sg**	**08 48 20.1**	**+2.4**
GOLH				*i* AML	AML	08 48 25.0	
	comp=E,369nm,0.6s						
GOLH				*i* AML	AML	08 48 28.0	
	comp=N,416nm,1.1s						
YER	**Yerkesik**	**1.72**	**323**	P	**Pn**	**08 47 57.1**	**-4.6**
TAVA	**DENIZLI_Tavas**	**1.78**	**343**	P	**Pg**	**08 48 05.7**	**+1.0**
TAVA				S	**Sb**	**08 48 27.7**	**+0.8**
TAVA				*i* AML	AML	08 48 34.0	
	comp=E,199nm,0.7s						
TAVA				*i* AML	AML	08 48 35.0	
	comp=N,119nm,0.8s						
MULA	**Mugla, Merkez-**	**1.80**	**326**	P	Pn	08 47 56.8	-6.0
MULA				S	**Sg**	**08 48 30.2**	**+1.8**
DAT	**Datca**	**1.88**	**301**	P	**Pg**	**08 48 09.2**	**+2.5**
BRDR	**BURDUR-Merkez**	**1.96**	**11**	P	**Pg**	**08 48 08.4**	**+0.1**
BRDR				S	**Sb**	**08 48 32.5**	**+0.3**
BRDR				*i* AML	AML	08 48 38.0	
	comp=E,173nm,0.8s						
BRDR				*i* AML	AML	08 48 43.0	
	comp=N,102nm,0.9s						
KEPZ	**Antalya-Kepez**	**1.99**	**55**	P	**Pg**	**08 48 09.1**	**+0.4**
KEPZ				S	**Sb**	**08 48 33.0**	**+0.2**
MLSB	**Milas**	**2.11**	**317**	PN	**Pg**	**08 48 11.3**	**+0.3**
NIS1	**Nisyros Isl.**	**2.11**	**294**	PN	**Pg**	**08 48 13.2**	**+2.1**
BASM	**Basmaki-Afyon**	**2.18**	**10**	PN	**Pb**	**08 48 09.6**	**-1.3**
ISP	**Isparta**	**2.19**	**20**	PN	**Pb**	**08 48 09.8**	**-1.2**
BODT	**Bodrum**	**2.24**	**306**	P	**Pn**	**08 48 08.4**	**-0.4**
BODT	**Bodrum**	**2.24**	**306**	PN	**Pg**	**08 48 13.4**	**-0.2**
GAZI	**Gazipasa**	**2.27**	**77**	PN	**Pg**	**08 48 13.4**	**-0.6**
SEDI	**Konya, Seydise**	**2.43**	**46**	P	**Pb**	**08 48 15.9**	**+0.9**
SEDI				S	**Sb**	**08 48 47.6**	**+2.0**
SEYD	**Seydisehir-KON**	**2.44**	**47**	PN	**Pb**	**08 48 14.2**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**2.56**	**329**	PN	**Pb**	**08 48 16.7**	**-0.7**
PASA	**Karahalli, USA**	**2.58**	**358**	P	**Pb**	**08 48 15.2**	**-2.5**
PASA				S	**Sb**	**08 48 49.0**	**-0.8**
TEKE	**Tekeli-Mersin**	**2.89**	**82**	PN	**Pb**	**08 48 22.7**	**-0.2**
SMG	**Samos**	**2.93**	**312**	P	**Pn**	**08 48 17.3**	**-1.0**
BERE	**Bereket-Mersin**	**3.01**	**78**	PN	**Pb**	**08 48 24.0**	**-1.0**
LADK	**Ladik-KONYA**	**3.30**	**42**	PN	**Pn**	**08 48 25.8**	**+2.4**
IDI	**Anoyia**	**3.85**	**264**	Pn	**Pb**	**08 48 38.8**	**-0.6**
	1.2nm,0.3s,baz=27,slow=16,SNR=5.4						
IDI				Sn	**Sb**	**08 49 23.9**	**-2.7**
	1.3nm,0.3s,baz=114,slow=18,SNR=1.8						
	12nm,0.7s						
BRTR	**Keskin Array B**	**5.09**	**38**	Pn	Pn	08 48 52.2	+4.1
	0.6nm,0.3s,baz=222,slow=15,SNR=19						
BRTR				Sn	**Sn**	**08 49 49.9**	**+2.2**
	1.1nm,0.3s,baz=212,slow=23,SNR=16						
	6.9nm,0.9s						
MMAI	**Mount Meron Ar**	**5.54**	**118**	Pn	Pb	08 49 01.9	-6.2
	2.8nm,0.3s,baz=38,slow=9.7,SNR=1.9						
	0.8nm,0.3s						
TORD	**Torodi Ar. Bea**	**33.72**	**235**	P	P	08 54 21.9	+8.3
	1.1nm,0.9s,baz=39,slow=10,SNR=5.8						
	1.1nm,0.9s						
KURBB	**Kurchatov Arra**	**37.93**	**51**	P	P	08 54 52.3	+3.0
	0.2nm,0.4s,baz=277,slow=9.5,SNR=4.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**40.42**	**57**	P	P	08 55 14.0	+3.8
	0.3nm,0.6s,baz=271,slow=13,SNR=2.7						
	0.3nm,0.6s						

JMA ***16*** *08:50:17.3±0.1, 31°.7N±0°.3×131°.9E±0°.7, h24^{km}±1^{km}, MD4.8/36, MW4.8/36, HYUGANADA REGION*

JMA Felt III J1 at HYUGANADA REGION .

NIED ***16*** *08:50:17.3, 31°.73N×131°.90E, h24^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}2.31; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-1.90; $M_{r\theta}$-0.02; $M_{\theta\phi}$-1.66; $M_{\phi r}$1.32; Fault plane solution: $M_0$2.98000×10^{16} NP1: ϕ_s233.00000°, δ37.00000°, λ121.00000°. NP2: ϕ_s16.00000°, δ59.00000°, λ69.00000°.*

NEIC ***16*** *08:50:18.1, 31°.79N×131°.74E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.35; $M_{\theta\theta}$0.57; $M_{\phi\phi}$0.78; $M_{r\theta}$0.25; $M_{\theta\phi}$1.04; $M_{\phi r}$0.90; Fault plane solution: $M_0$1.82000×10^{16} NP1:ϕ_s60.82000°, δ33.49000°, λ-60.13000°. NP2:ϕ_s206.26000°, δ61.42000°, λ-108.24000°. Principal axes: T 1.9359, Plg15.0000°, Azm309.0000°; N -0.2523, Plg16.0000°, Azm215.0000°; P -1.6835, Plg68.0000°, Azm80.0000°;*

MOS ***16*** *08:50:18.3±0.9, 31°.78N×131°.60E, h42^{km}, mb5.0/42, MS4.8/6 Error ellipse: s-maj=8.5km s-min=5.1km az=101.9*

NEIC ***16*** *08:50:19.1±1.8, 31°.72N±0°.04×131°.80E±0°.06, h31^{km}±4^{km}, mb4.8/186, Mwr4.8/11, Error ellipse: s-maj=7.7km s-min=4.9km az=57.0*

GCMT ***16*** *08:50:20.1±0.5, 31°.69N±0°.03×132°.08E±0°.03, h36^{km}±1^{km}, MW4.9/64, Moment Tensor Solution. s35,c39; s64,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.53±.21; $M_{\theta\theta}$-0.81±.14; $M_{\phi\phi}$-1.73±.14; $M_{r\theta}$0.58±.13; $M_{\theta\phi}$-1.36±.07; $M_{\phi r}$1.12±.12; Best double couple: $M_0$2.90600×10^{16} NP1:ϕ_s220.00000°, δ32.00000°, λ97.00000°. NP2: ϕ_s32.00000°, δ58.00000°, λ86.00000°. Principal axes: T 2.8240, Plg77.0000°, Azm289.0000°; N 0.1580, Plg4.0000°, Azm34.0000°; P -2.9870, Plg13.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***16*** *08:50:22.5±1.7, 31°.83N×131°.50E, h63^{km}±14^{km}, mb4.2/37, mbtmp4.5/41, MS4.4/46 Error ellipse: s-maj=12.4km s-min=9.6km az=105.0*

ISC 16 08:50:17.8±0.3**, 31°.73N**±0°.03×**131°.78E**±0°.03**, h27**^{km}±1^{km}**, h27**^{km}**:pP-P, n610,** σ**1**^{s}**38**/587**, mb4.8**/164**, MS4.6**/71**, 25C-52D, Fault plane solution: NP1:**ϕ_s26.05241°, δ47.11335°, λ-103.94578°. **NP2:**ϕ_s226.09872°, δ44.67514°, λ-75.45412°. **Principal axes:** T Plg1.2380°, Azm125.8667°**;** N Plg10.1708°**,** Azm35.6446°**;** P Plg79.7525°**,** Azm222.7320°**; Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.35**	**259**	⇓*i*P	**Pb**	**08 50 26.2**	**+0.6**
JNKG				⇓S	**Sn**	**08 50 32.8**	**-0.3**
JNAR	**Kushima--Naru**	**0.47**	**245**	⇓*i*P	**Pn**	**08 50 28.8**	**0.0**
JNAR				⇓*e*S	**Sn**	**08 50 37.0**	**+0.7**
JTSN	**Tsuno**	**0.56**	**336**	⇓P	**Pb**	**08 50 29.1**	**0.0**
JTSN				⇓*e*S	**Sb**	**08 50 37.2**	**+0.4**
JTSN	**Tsuno**	**0.56**	**336**	A	A	08 50 29.1	
	comp=E,35nm,3.3s,comp=E,41nm,1.2s						
JTZ	**Takazaki**	**0.61**	**287**	*i* P	**Pn**	**08 50 30.8**	**+0.1**
JTZ				*e*S	**Sn**	**08 50 40.7**	**+1.0**
JTZ	**Takazaki**	**0.61**	**287**	A	A	08 50 30.8	
	comp=E,92nm,0.8s,comp=E,65nm,0.8s						
JHHC	**Hyugahichiya**	**0.72**	**351**	*i* P	**Pb**	**08 50 31.4**	**-0.3**
JHHC				*e*S	**Sb**	**08 50 41.6**	**+0.3**
JHHC	**Hyugahichiya**	**0.72**	**351**	A	A	08 50 31.4	
	comp=E,63nm,0.9s,comp=E,43nm,0.5s						
JTSR	**Tashiro 2**	**0.92**	**233**	A	A	08 50 35.6	
	comp=E,37nm,3.3s,comp=E,44nm,0.8s						
JKIT	**Kitakata**	**0.94**	**343**	A	A	08 50 35.1	
	comp=E,87nm,1.4s,comp=E,90nm,0.4s						
JSKE	**Saikikamae**	**1.07**	**6**	A	A	08 50 36.6	
	comp=E,42nm,2.6s,comp=E,22nm,2.0s						
JZO	**Okuchi**	**1.08**	**293**	*i* P	**Pb**	**08 50 37.9**	**+0.1**
JZO	**Okuchi**	**1.08**	**293**	A	A	08 50 37.9	
	comp=E,47nm,2.7s,comp=E,51nm,1.8s						
JSU	**Suzuyama**	**1.15**	**259**		**Pb**	**08 50 39.1**	**+0.2**
JSU	**Suzuyama**	**1.15**	**259**	A	A	08 50 39.5	
	comp=E,15nm,1.5s,comp=E,17nm,1.8s						
JIU3	**Izumi3**	**1.16**	**315**	*i* P	**Pb**	**08 50 39.2**	**+0.2**
JIU3				*e*S	**Sb**	**08 50 55.9**	**+2.2**
JIU3	**Izumi3**	**1.16**	**315**	A	A	08 50 39.2	
	comp=E,34nm,0.7s,comp=E,48nm,1.0s						
JTN	**Tanegashima 3**	**1.27**	**213**	A	A	08 50 40.6	
	comp=E,22nm,2.1s,comp=E,17nm,0.8s						
JUS	**Usuki**	**1.33**	**359**	A	A	08 50 40.9	
	comp=E,58nm,1.6s,comp=E,35nm,2.3s						
JTO	**Tosashimizu**	**1.43**	**37**	A	A	08 50 41.2	
	comp=E,8.0nm,3.3s,comp=E,10.0nm,2.3s						
JMTN	**Minamitane**	**1.52**	**210**	A	A	08 50 44.4	
	comp=E,17nm,1.8s,comp=E,14nm,2.8s						
JHD	**Hondo**	**1.57**	**298**	A	A	08 50 45.8	
	comp=E,37nm,1.7s,comp=E,19nm,1.7s						
JNU	**Nakatsue**	**1.58**	**332**	P	**Pn**	**08 50 45.0**	**+0.8**
	1µm,0.4s,baz=102,slow=1.3,SNR=949						
JNU				S	**Sb**	**08 51 07.9**	**+1.9**
	4µm,0.7s,baz=27,slow=23,SNR=9.1						
JNU				LR	LR	08 51 14.0	
	comp=Z,3µm,18.2s,baz=176,slow=37						
JNU	**Nakatsue**	**1.58**	**332**		**Pn**	**08 50 45.4**	**+1.3**
JNU	**Nakatsue**	**1.58**	**332**	P	**Pb**	**08 50 46.1**	**-0.3**
JNU	**Nakatsue**	**1.58**	**332**	A	A	08 50 45.3	
	comp=E,45nm,1.6s,comp=E,26nm,1.4s						
JTA	**Tamana**	**1.62**	**320**	A	A	08 50 46.1	
	comp=E,25nm,1.7s,comp=E,28nm,1.6s						
JBEP	**Beppuamama**	**1.63**	**349**	A	A	08 50 45.6	
	comp=E,61nm,3.3s,comp=E,63nm,2.3s						
UWA2	**Uwa jima 2**	**1.65**	**26**	A	A	08 50 44.8	
	comp=E,8.0nm,2.4s,comp=E,8.0nm,2.9s						
JKC	**Kuchinoerabu**	**1.85**	**227**	A	A	08 50 49.6	
	comp=E,9.0nm,2.1s,comp=E,13nm,3.7s						
NGSJ	**Nagasakinomoza**	**1.90**	**299**	A	A	08 50 50.5	
	comp=E,29nm,2.6s,comp=E,16nm,3.0s						
JKI	**Kunimi**	**1.91**	**355**	A	A	08 50 49.4	
	comp=E,32nm,6.1s,comp=E,31nm,2.6s						
JUR	**Ureshino**	**2.06**	**312**	A	A	08 50 52.6	
	comp=E,14nm,3.4s,comp=E,14nm,3.2s						
JFI	**Itaya**	**2.06**	**326**	A	A	08 50 52.4	
	comp=E,10.0nm,1.2s,comp=E,13nm,2.2s						
JTY	**Toyota**	**2.60**	**347**	A	A	08 50 59.6	
	comp=E,9.0nm,2.4s,comp=E,7.0nm,2.5s						
JMN	**Monobe**	**2.67**	**41**	Pn	**Pn**	**08 50 59.4**	**+0.3**
JII	**Iki**	**2.69**	**321**	A	A	08 51 01.4	
	comp=E,25nm,2.3s,comp=E,20nm,3.6s						
JFU	**Fukue jima 2**	**2.73**	**291**	A	A	08 51 02.5	
	comp=E,8.0nm,3.8s,comp=E,6.0nm,1.8s						
JHIK	**Hikimi**	**2.80**	**3**	A	A	08 51 02.0	
	comp=E,9.0nm,2.3s,comp=E,6.0nm,1.1s						
JHT	**Toyohira**	**2.98**	**10**	A	A	08 51 04.3	
	comp=E,13nm,2.5s,comp=E,5.0nm,1.2s						
JHGM	**Hagimishima**	**3.09**	**350**	A	A	08 51 06.5	
	comp=E,15nm,2.6s,comp=E,13nm,2.5s						
JTU	**Tsushima**	**3.43**	**325**	Pn	**Pn**	**08 51 10.5**	**+1.1**
JHS	**Saijyo**	**3.45**	**19**	Pn	**Pn**	**08 51 10.4**	**+0.7**
NAWB	**Namwon**	**5.19**	**316**		**Pn**	**08 51 34.3**	**+0.6**
INU	**Inuyama**	**5.67**	**49**	Pn	**Pn**	**08 51 41.0**	**+0.7**
INU	**Inuyama**	**5.67**	**49**	P	**Pn**	**08 51 41.4**	**+1.1**
JOW	**Kunigami**	**5.76**	**213**	P	**Pn**	**08 51 46.2**	**+4.8**
	46nm,0.2s,baz=26,slow=11,SNR=4.5						
JOW				S	**Sn**	**08 52 44.2**	**-2.5**
	106nm,0.2s,baz=199,slow=27,SNR=6.4						
TJN	**Taejon**	**5.91**	**323**	Pn	**Pn**	**08 51 44.1**	**+0.6**
TJN	**Taejon**	**5.91**	**323**	P	**Pn**	**08 51 44.1**	**+0.6**
TJN	**Taejon**	**5.91**	**323**	P	**Pn**	**08 51 47.1**	**+3.6**
KSCHJ	**Chungju**	**6.02**	**330**		**Pn**	**08 51 44.6**	**-0.5**
JGF	**Kuroka**	**6.05**	**49**		**Pn**	**08 51 45.5**	**0.0**
KSRS	**Korea Array**	**6.54**	**332**	P	**Pn**	**08 51 53.8**	**+1.7**
	5.4nm,0.5s,baz=148,slow=14,SNR=19						
KSRS				S	**Sn**	**08 53 08.7**	**+2.9**
	17nm,1.0s,baz=142,slow=22,SNR=5.4						
KSRS				LR	LR	08 54 43.9	
	comp=Z,4µm,19.1s,baz=155,slow=41						
KSAR	**Wonju Array Be**	**6.54**	**332**	Pn	**Pn**	**08 51 52.6**	**+0.4**
KSAR	**Wonju Array Be**	**6.54**	**332**	P	**Pn**	**08 51 52.6**	**+0.4**
KS19	**Wonju Array Si**	**6.60**	**332**		**Pn**	**08 51 52.5**	**-0.5**
JHJ	**Hachijo jima 2**	**6.91**	**76**	P	**Pn**	**08 51 56.7**	**-0.6**
	100nm,0.3s,baz=113,slow=11,SNR=18						
JHJ				LR	LR	08 54 44.9	
	comp=Z,1µm,19.1s,baz=283,slow=37						
JHJ2	**Mitsune**	**6.94**	**76**	Pn	**Pn**	**08 51 56.7**	**-1.0**
JHJ2	**Mitsune**	**6.94**	**76**	P	**Pn**	**08 51 57.2**	**-0.5**
INCN	**Inchon**	**7.13**	**325**	Pn	**Pn**	**08 52 02.9**	**+2.5**
INCN	**Inchon**	**7.13**	**325**	P	**Pn**	**08 52 02.9**	**+2.5**
MAJO	**Matsushiro**	**7.17**	**46**	Pn	**Pn**	**08 52 00.5**	**-0.4**
MAJO	**Matsushiro**	**7.17**	**46**	*e*P	**Pn**	**08 52 01.4**	**+0.4**
MAJO	**Matsushiro**	**7.17**	**46**	P	**Pn**	**08 52 02.3**	**+1.3**
MJB9	**Matsu-Tunnel**	**7.17**	**46**		**Pn**	**08 52 00.5**	**-0.4**
MJAR	**Matsushiro Arr**	**7.18**	**46**	P	**Pn**	**08 52 01.4**	**+0.5**
	4.6nm,0.3s,baz=277,slow=31,SNR=16						
MJAR				LR	LR	08 54 16.3	
	comp=Z,106nm,21.1s,baz=222,slow=32						
MJAR	**Matsushiro Arr**	**7.18**	**46**		**Pn**	**08 51 59.6**	**-1.4**
MJAR	**Matsushiro Arr**	**7.18**	**46**	P	**Pn**	**08 51 59.6**	**-1.4**
JSD	**Sado**	**8.24**	**38**	Pn	**Pn**	**08 52 16.1**	**+0.5**
SSE	**Sheshan**	**9.07**	**269**	P	**Pn**	**08 52 29.8**	**+2.9**
SSE				S	**Sn**	**08 54 10.4**	**+2.2**
SSE				pmax	pmax		
	comp=Z,17nm,0.8s						
SSE				LR	LR		
	comp=N,770nm,14.4s						
SSE				LR	LR		
	comp=E,310nm,13.4s						
SSE				LR	LR		
	comp=Z,1µm,14.4s						
JMM	**Marumori**	**9.61**	**48**	Pn	**Pn**	**08 52 33.2**	**-1.1**
JCJ	**Chichijima**	**10.18**	**114**	LR	LR	08 56 15.6	
	comp=Z,1µm,18.1s,baz=291,slow=34						
JCJ	**Chichijima**	**10.18**	**114**	Pn	**Pn**	**08 52 40.0**	**-2.2**
JCJ	**Chichijima**	**10.18**	**114**	P	**Pn**	**08 52 44.5**	**+2.3**
NJ2	**Nanjing**	**10.99**	**275**	⇓P	**Pn**	**08 52 57.6**	**+4.4**
NJ2				sP		08 53 05.9	
NJ2				pmax	pmax		
	comp=Z,54nm,1.2s						
NJ2				LR	LR		
	comp=N,980nm,11.4s						
NJ2				LR	LR		
	comp=E,4µm,15.2s						
NJ2				LR	LR		
	comp=Z,4µm,14.9s						
USRK	**Ussuriysk Ar.**	**12.45**	**1**	P	**Pn**	**08 53 15.2**	**+2.1**
	1.6nm,0.7s,baz=179,slow=14,SNR=2.1						
USRK				LR	LR	08 57 55.0	
	comp=Z,2µm,18.4s,baz=173,slow=37						
TIA	**Tai'an**	**12.96**	**294**	⇓P	**Pn**	**08 53 24.4**	**+4.3**
TIA				S	**Sn**	**08 55 42.3**	**-1.1**
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
TIA				pmax	pmax		
	comp=Z,360nm,5.4s						
TIA				LR	LR		
	comp=N,2µm,13.5s						
TIA				LR	LR		
	comp=E,2µm,15.7s						
TIA				LR	LR		
	comp=Z,4µm,14.2s						
MDJ	**Mudanjiang**	**12.98**	**353**	P	**Pn**	**08 53 23.3**	**+2.9**
MDJ				S	**Sn**	**08 55 44.8**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,220nm,5.0s						
MDJ				LR	LR		
	comp=N,2µm,18.6s						
MDJ				LR	LR		
	comp=E,1µm,12.3s						
MDJ				LR	LR		
	comp=Z,2µm,19.1s						
CN2	**Changchun**	**13.04**	**339**	*e*P	**Pn**	**08 53 20.8**	**-0.5**
CN2				*e*PP	**P**	**08 53 31.9**	**+0.6**
CN2				*e*S	**Sn**	**08 55 44.8**	**-0.6**
BNX	**BinXian**	**14.40**	**348**	⇓P	**P**	**08 53 47.8**	**+1.4**
BNX				pmax	pmax		
	comp=Z,190nm,1.1s						
BNX				pmax	pmax		
	comp=Z,490nm,4.7s						
BJT	**Baijiatuau**	**15.10**	**308**	Pn	**Pn**	**08 53 51.4**	**+2.1**
BJT				IAmb	IAmb	08 53 57.4	
	comp=Z,40nm,0.7s						
BJT	**Baijiatuau**	**15.10**	**308**	P	**Pn**	**08 53 51.4**	**+2.1**
BJT				pmax	pmax		
	comp=Z,40nm,0.7s						
BJI	**Beijing**	**15.11**	**308**	P	**Pn**	**08 53 50.8**	**+1.5**
BJI				pP	**P**	**08 53 56.4**	**+2.1**
BJI				S	**Sn**	**08 56 37.8**	**+2.1**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,170nm,4.4s						
BJI				LR	LR		
	comp=Z,990nm,14.3s						
BJI				LR	LR		
	comp=Z,2µm,13.8s						
BJI				LR	LR		
	comp=Z,3µm,13.8s						
HNS	**HongShan**	**15.15**	**297**	⇓P	**P**	**08 53 53.8**	**-1.0**
HNS				pmax	pmax		
	comp=Z,48nm,0.9s						
HNS				LR	LR		
	comp=Z,3µm,16.2s						
HNS				LR	LR		
	comp=Z,3µm,15.2s						
HNS				LR	LR		
	comp=Z,3µm,15.2s						
LYN	**LuoYang**	**16.41**	**285**	*e*P	**P**	**08 54 07.9**	**-0.9**
LYN				pP	pP	08 54 16.3	+0.3
LYN				S	**Sn**	**08 57 07.6**	**0.0**
LYN				SS	**SnSn**	**08 57 29.8**	**+9.1**
LYN				pmax	pmax		
	comp=Z,60nm,1.4s						
LYN				pmax	pmax		
	comp=Z,570nm,8.4s						
LYN				LR	LR		
	comp=Z,610nm,14.3s						
LYN				LR	LR		
	comp=Z,2µm,15.5s						
LYN				LR	LR		
	comp=Z,3µm,14.7s						
TIY	**Taiyuan**	**16.97**	**296**	*e*P	**P**	**08 54 18.8**	**+3.7**
TIY				PP	**sP**	**08 54 27.0**	**+1.3**
TIY				pmax	pmax		
	comp=Z,130nm,4.4s						
TIY				LR	LR		
	comp=Z,970nm,11.6s						
TIY				LR	LR		
	comp=Z,2µm,15.5s						
TIY				LR	LR		
	comp=Z,3µm,14.7s						
XLT	**XiLinHaoTe**	**17.32**	**319**	⇓*i*P	**P**	**08 54 22.1**	**+3.1**
XLT				sP	sP	08 54 31.4	+1.9
XLT				S	**Sn**	**08 57 32.3**	**+2.6**
XLT				pmax	pmax		
	comp=Z,33nm,1.0s						
XLT				pmax	pmax		
	comp=Z,340nm,6.3s						
XLT				LR	LR		
	comp=Z,3µm,13.7s						
XLT				LR	LR		
	comp=Z,4µm,13.9s						
YSS	**Yuzh-Sakhalins**	**17.39**	**26**	*e*P	**P**	**08 54 20.6**	**+1.1**
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS				MLR	MLR		
	comp=N,500nm,12.0s						
KLR	**Kul'dur**	**17.48**	**360**	P	**P**	**08 54 22.3**	**+1.7**
	comp=N,24nm,0.6s,baz=190,slow=9.1,SNR=75						
KLR				LR	LR	09 01 02.6	
	comp=N,876nm,18.0s,baz=174,slow=37						
KLR	**Kul'dur**	**17.48**	**360**	*ce*P	**P**	**08 54 20.4**	**-0.2**
KLR				pmax	pmax		
	comp=Z,32nm,0.7s						
HHC	**Hu-ho-hao-te**	**18.63**	**305**	*e*P	**Pn**	**08 54 35.5**	**+1.7**
HHC				sP	sP	08 54 44.8	+0.8
HHC				S	**Sn**	**08 57 58.3**	**-3.1**
HHC				pmax	pmax		
	comp=Z,61nm,1.0s						
HHC				pmax	pmax		
	comp=Z,550nm,5.5s						
HHC				LR	LR		
	comp=Z,2µm,14.2s						
HHC				LR	LR		
	comp=Z,4µm,14.2s						
HHC				LR	LR		
	comp=Z,6µm,13.9s						
ENH	**Enshi**	**19.16**	**271**		**Pn**	**08 54 40.1**	**-0.1**
XAN	**Xi'an**	**19.33**	**283**	⇑P	**Pn**	**08 54 41.8**	**-0.4**
XAN				pP	sP	08 54 50.5	-1.1
XAN				sP	pP	08 54 55.6	+7.4
XAN				PcP	**PcP**	**08 59 03.9**	**+1.2**
XAN				pmax	pmax		
	comp=Z,29nm,1.6s						
XAN				pmax	pmax		
	comp=Z,270nm,4.5s						
XAN				LR	LR		
	comp=Z,1µm,17.2s						
XAN				LR	LR		
	comp=Z,3µm,14.5s						
XAN				LR	LR		
	comp=Z,4µm,15.1s						
BTO	**Baotou**	**19.63**	**303**	*e*P	P	08 54 37.3	-7.1
BTO				S	S	08 58 10.6	-14
BTO				LR	LR		
	comp=N,7µm,14.9s						
BTO				LR	LR		
	comp=E,8µm,14.3s						
HIA	**Hailar**	**19.72**	**336**		**Pn**	**08 54 46.4**	**-0.4**
HIA				IAmb	IAmb	08 54 50.7	
	comp=Z,70nm,1.2s						
HIA	**Hailar**	**19.72**	**336**	P	**Pn**	**08 54 46.4**	**-0.4**
HIA				pmax	pmax		
	comp=Z,70nm,1.2s						
GUMO	**Guam**	**21.69**	**143**	LR	LR	09 02 17.3	
	comp=Z,389nm,18.6s,baz=314,slow=33						
ZEA	**Zeya**	**22.24**	**353**	*e*P	**P**	**08 55 11.5**	**-0.8**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
ZEA				MLR	MLR		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=N,400nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
GYA	**Guiyang**	**22.54**	**263**	⇑P	**P**	**08 55 13.3**	**-2.6**
GYA				S	**S**	**08 59 15.3**	**-6.4**
GYA				pmax	pmax		
	comp=Z,270nm,6.5s						
GYA				LR	LR		
	comp=Z,600nm,12.0s						
GYA				LR	LR		
	comp=Z,1µm,13.9s						
GYA				LR	LR		
	comp=Z,1µm,13.7s						
QIZ	**Qiongzhong**	**23.45**	**243**	P	**P**	**08 55 26.1**	**+1.0**
QIZ				S	**S**	**08 59 38.4**	**+1.4**
QIZ				LR	LR		
	comp=Z,790nm,19.1s						
QIZ				LR	LR		
	comp=Z,700nm,20.7s						
QIZ				LR	LR		
	comp=Z,790nm,20.7s						
LZH	**Lanzhou**	**23.55**	**288**	*e*P	**P**	**08 55 26.3**	**+0.1**
LZH				sP	sP	08 55 36.4	-0.7
LZH				S	**S**	**08 59 41.5**	**+2.7**
LZH				pmax	pmax		
	comp=Z,67nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,4.6s						
LZH				LR	LR		
	comp=Z,540nm,12.2s						
LZH				LR	LR		
	comp=Z,2µm,12.2s						
LZH				LR	LR		
	comp=Z,2µm,13.3s						
ULN	**Ulaanbaatar**	**24.75**	**318**	P	**P**	**08 55 37.3**	**0.0**
ULN				IAmb	IAmb	08 55 38.6	
	comp=Z,33nm,1.1s						
ULN	**Ulaanbaatar**	**24.75**	**318**	*ce*P	**P**	**08 55 36.3**	**-0.9**
ULN				pmax	pmax		
	comp=Z,50nm,1.3s						
SONM	**Songino Array**	**25.12**	**317**	P	**P**	**08 55 40.3**	**-0.2**
	comp=Z,28nm,0.9s,baz=132,slow=9.0,SNR=78						
SONM				LR	LR	09 06 57.7	
	comp=Z,2µm,18.5s,baz=125,slow=40						
	comp=Z,28nm,0.9s						
SONM	**Songino Array**	**25.12**	**317**	P	**P**	**08 55 39.9**	**-0.6**
SONM				IAmb	IAmb	08 55 42.1	
	comp=Z,33nm,0.9s						
SONM	**Songino Array**	**25.12**	**317**	P	**P**	**08 55 39.9**	**-0.6**
SONM				pmax	pmax		
	comp=Z,33nm,0.9s						
DAV	**Davao City (W)**	**25.21**	**195**	LR	LR	09 07 05.8	
	comp=Z,308nm,18.7s,baz=12,slow=40						
KMI	**Kunming**	**26.32**	**263**	⇓P	**P**	**08 55 53.1**	**+1.4**
KMI				sP	sP	08 56 03.3	+0.7
KMI				S	**S**	**09 00 22.8**	**-0.4**
KMI				sS	sS	09 00 36.0	-0.2
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				pmax	pmax		
	comp=Z,130nm,5.8s						
KMI				LR	LR		
	comp=Z,520nm,14.2s						
KMI				LR	LR		
	comp=Z,820nm,13.5s						
KMI				LR	LR		
	comp=Z,960nm,13.2s						

PZH	PanZhiHua	26.70	266	P	P	08 55 56.9	+1.9
PZH				sP	sP	08 56 08.8	+2.8
PZH				S	S	09 00 30.8	+1.7
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				pmax	pmax		
	comp=Z,120nm,4.8s						
PZH				LR	LR		
	comp=Z,2µm,21.0s						
PZH				LR	LR		
	comp=Z,1µm,19.4s						
PZH				LR	LR		
	comp=Z,840nm,14.5s						
GTA	Gaotai	27.00	295	eP	P	08 55 57.8	+0.2
GTA				pmax	pmax		
	comp=Z,20nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,7.2s						
GTA				LR	LR		
	comp=Z,750nm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,15.1s						
GTA				LR	LR		
	comp=Z,2µm,15.5s						
PETK	Petropavlovsk-	28.41	34	P	P	08 56 10.6	+0.7
	comp=Z,3.1nm,0.9s,baz=202,slow=16,SNR=5.9						
	comp=Z,3.1nm,0.9s						
PETK	Petropavlovsk-	28.41	34	P	P	08 56 10.1	+0.2
PETK	Petropavlovsk-	28.41	34	P	P	08 56 10.1	+0.2
YAK	Yakutsk	30.35	358	LR	LR	09 08 56.8	
	comp=Z,835nm,18.3s,baz=194,slow=37						
GOMU	GeErMu	30.86	289	P	P	08 56 31.0	-1.2
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,75nm,5.1s						
GOMU				LR	LR		
	comp=Z,250nm,15.5s						
GOMU				LR	LR		
	comp=Z,260nm,15.5s						
GOMU				LR	LR		
	comp=Z,290nm,15.1s						
TNTI	Ternate	31.07	189	P	P	08 56 33.6	-0.2
TOLI2	Tolitoli	32.18	201	P	P	08 56 42.1	-1.4
CHTO	Chiang Mai	32.22	254	P	P	08 56 43.5	-0.4
CHTO				IAmb	IAmb	08 56 46.2	
	comp=Z,7.0nm,0.6s						
CHTO	Chiang Mai	32.22	254	P	P	08 56 43.6	-0.4
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CHTO	Chiang Mai	32.22	254	P	P	08 56 44.5	+0.6
CHTO				sP	sP	08 56 54.5	-0.4
CMAR	Chiang Mai Arr	32.40	254	P	P	08 56 45.2	-0.3
	comp=Z,2.3nm,0.6s,baz=50,slow=7.7,SNR=9.1						
CMAR				LR	LR	09 11 24.0	
	comp=Z,434nm,19.4s,baz=65,slow=39						
	comp=Z,2.3nm,0.6s						
CMAR	Chiang Mai Arr	32.40	254	P	P	08 56 46.0	+0.5
SIJI	Sorong	32.42	181	LR	LR	09 08 28.0	
	comp=Z,360nm,22.0s,baz=25,slow=33						
H11N2	WAKE ISLAND Hy	33.68	102	T	T	09 32 32.0	
	baz=298,slow=74,SNR=94						
H11N1	WAKE ISLAND Hy	33.68	102	T	T	09 32 26.6	
	baz=298,slow=74,SNR=56						
H11N3	WAKE ISLAND Hy	33.69	102	T	T	09 32 34.3	
	baz=298,slow=74,SNR=97						
SEY	Seymchan	33.88	17	P	P	08 56 58.2	+0.4
	comp=Z,2.6nm,0.6s,baz=200,slow=4.7,SNR=6.3						
	comp=Z,2.6nm,0.6s						
SEY	Seymchan	33.88	17	ceP	P	08 56 57.2	-0.7
SEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11S3	WAKE ISLAND Hy	34.09	104	T	T	09 33 27.8	
	baz=304,slow=75,SNR=82						
H11S1	WAKE ISLAND Hy	34.10	104	T	T	09 33 27.2	
	baz=304,slow=75,SNR=89						
H11S2	WAKE ISLAND Hy	34.11	104	T	T	09 33 38.3	
	baz=304,slow=75,SNR=57						
WMQ	Urumqi	36.47	302	eP	P	08 57 23.3	+2.7
WMQ				LR	LR		
	comp=Z,760nm,14.7s						
WMQ				LR	LR		
	comp=Z,2µm,14.9s						
WMQ				LR	LR		
	comp=Z,930nm,17.5s						
SHEM	Shemya Is, Ala	37.01	43	LR	LR	09 12 09.8	
	comp=Z,102nm,21.0s,baz=254,slow=35						
KULM	Kulim	39.26	234	P	P	08 57 43.6	-0.7
KULM				IAmb	IAmb	08 57 46.0	
	comp=Z,32nm,1.2s						
IPM	Ipoh	39.58	233	P	P	08 57 45.1	-1.9
TIXI	Tiksi	40.01	359	P	P	08 57 49.7	-0.2
	comp=Z,2.2nm,0.5s,baz=88,slow=24,SNR=3.0						
TIXI				LR	LR	09 15 12.6	
	comp=Z,731nm,18.9s,baz=180,slow=37						
	comp=Z,2.2nm,0.5s						
TIXI	Tiksi	40.01	359	P	P	08 57 49.6	-0.2
TIXI	Tiksi	40.01	359	ceP	P	08 57 49.2	-0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	Tiksi	40.01	359	P	P	08 57 49.7	-0.2
TIXI				pP	pP	08 57 53.7	-3.9
ZAA0	Zalesovo Array	40.01	318	P	P	08 57 47.7	-2.4
ZALV	Zalesovo Beam	40.01	318	P	P	08 57 49.0	-1.1
	comp=Z,0.8nm,0.4s,baz=106,slow=11,SNR=3.6						
ZALV				PcP	PcP	08 59 54.7	-0.1
	comp=Z,2.4nm,0.5s,baz=117,slow=3.8,SNR=8.1						
ZALV				LR	LR	09 15 08.6	
	comp=Z,416nm,19.1s,baz=110,slow=37						
	comp=Z,0.8nm,0.4s						
MK31	Makanchi Array	40.48	306	P	P	08 57 53.3	-0.9
MK31	Makanchi Array	40.48	306	P	P	08 57 53.3	-0.9
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	40.48	306	P	P	08 57 53.4	-0.8
	comp=Z,7.5nm,0.6s,baz=90,slow=10,SNR=77						
MKAR				PcP	PcP	08 59 55.6	-0.9
	comp=Z,0.8nm,0.6s,baz=90,slow=5.8,SNR=2.5						
MKAR				LR	LR	09 16 12.8	
	comp=Z,765nm,18.7s,baz=96,slow=38						
	comp=Z,7.5nm,0.6s						
MKAR	Makanchi Array	40.48	306	P	P	08 57 52.8	-1.4
MAKZ	Makanchi	40.70	306	P	P	08 57 54.9	-1.1
MAKZ	Makanchi	40.70	306	P	P	08 57 54.9	-1.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	Makanchi	40.70	306	P	P	08 57 55.5	-0.4
MAKZ				pP	pP	08 58 01.2	-2.7
MAKZ				sP	sP	08 58 04.9	-2.2
BILL	Bilibino	41.49	19	P	P	08 58 02.8	+0.7
BILL				IAmb	IAmb	08 58 04.6	
	comp=Z,36nm,1.2s						
BILL	Bilibino	41.49	19	d iP	P	08 58 03.4	+1.2
BILL				e*PP	pP	08 58 10.9	+0.9
BILL				e*SP	sP	08 58 19.1	+5.9
BILL				S	S	09 04 15.0	-0.7
BILL				SS	SS	09 07 22.0	+1.6
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL				MLR	MLR		
	comp=Z,184nm,14.0s						
BILL	Bilibino	41.49	19	P	P	08 58 03.4	+1.2
BILL				sP	sP	08 58 13.5	+0.3
PSI	Prapat	42.23	234	P	P	08 58 09.1	+0.1
	comp=Z,4.8nm,0.4s,baz=0.0,slow=3.8,SNR=5.7						
PSI				LR	LR	09 14 58.2	
	comp=Z,245nm,21.9s,baz=26,slow=35						
	comp=Z,4.8nm,0.4s						
RPSI	Rantau Prapat	42.31	234	P	P	08 58 09.1	-0.4
KURK	Kurchatov	43.21	312	P	P	08 58 14.9	-1.5
KURK	Kurchatov	43.21	312	ceP	P	08 58 15.2	-1.2
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	Kurchatov	43.21	312	P	P	08 58 15.6	-0.8
KURK				sP	pP	08 58 24.9	+0.5
KURBB	Kurchatov Arra	43.26	312	P	P	08 58 15.8	-1.0
	comp=Z,3.6nm,0.6s,baz=98,slow=8.8,SNR=27						
KURBB				PcP	PcP	09 00 05.3	-0.2
	comp=Z,0.9nm,0.8s,baz=89,slow=3.8,SNR=4.8						
KURBB				LR	LR	09 18 08.5	
	comp=Z,1µm,18.6s,baz=70,slow=39						
	comp=Z,3.6nm,0.6s						
PMG	Port Moresby	43.47	158	LR	LR	09 16 14.9	
	comp=Z,279nm,18.7s,baz=325,slow=36						
TARG	Taragay, Kyrgy	43.76	299	P	P	08 58 20.8	-0.7
KPJI	Karang Pucung	44.55	213	P	P	08 58 28.0	+0.5
	comp=Z,72nm,0.9s						
MDSI	Maura Dua	44.58	221	P	P	08 58 27.6	-0.2
	comp=Z,19nm,1.4s						
LEM	Lembang	44.74	215	P	P	08 58 30.5	+1.3
	comp=Z,22nm,0.4s,baz=336,slow=18,SNR=12						
NRIK	Noril'sk	45.09	340	P	P	08 58 30.2	-1.0
	comp=Z,5.6nm,0.4s,baz=114,slow=9.7,SNR=16						
NRIK				LR	LR	09 19 02.7	
	comp=Z,754nm,20.2s,baz=134,slow=38						
	comp=Z,5.6nm,0.4s						
NRIK	Noril'sk	45.09	340	P	P	08 58 30.1	-1.0
NRIK				IAmb	IAmb	08 58 42.3	
	comp=Z,14nm,1.1s						
NRIK	Noril'sk	45.09	340	ceP	P	08 58 30.0	-1.2
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSH	Kashi	45.40	296	P	P	08 58 38.0	+3.7
KSH				PP	PP	09 00 25.6	+5.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				LR	LR		
	comp=Z,270nm,14.4s						
KSH				LR	LR		
	comp=Z,750nm,14.8s						
KSH				LR	LR		
	comp=Z,710nm,14.8s						
AAK	Ala-Archa	46.13	301	LR	LR	09 20 31.8	
	comp=Z,779nm,18.5s,baz=62,slow=39						
AAK	Ala-Archa	46.13	301	P	P	08 58 39.8	-0.2
AAK	Ala-Archa	46.13	301	ceP	P	08 58 39.0	-1.0
AAK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AAK	Ala-Archa	46.13	301	P	P	08 58 39.6	-0.4
KNRA	Kununurra	47.22	184	P	P	08 58 49.6	+1.2
BRVK	Borovoye	48.49	315	P	P	08 58 57.4	-0.6
BRVK	Borovoye	48.49	315	ceP	P	08 58 57.6	-0.4
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	Borovoye	48.49	315	P	P	08 58 57.3	-0.7
BRVK				pP	pP	08 59 03.1	-3.0
BRVK				sP	sP	08 59 06.7	-2.6
KK31	Karatay Array	48.98	302	P	P	08 59 01.7	-0.2
KK31				IAmb	IAmb	08 59 12.3	
	comp=Z,9.3nm,0.8s						
KK31	Karatay Array	48.98	302	P	P	08 59 01.7	-0.2
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	48.98	302	P	P	08 59 01.0	-1.0
KKAR	Karatay Array	48.98	302	P	P	08 59 01.0	-1.0
GAR	Garm	49.81	296	P	P	08 59 08.2	-0.3
CHGR	Chuyangaron	50.77	296	P	P	08 59 15.6	-0.2
CHGR	Chuyangaron	50.77	296	P	P	08 59 15.6	-0.2
CHGR				pmax	pmax		
	comp=Z,25nm,0.8s						
WB0	Warramunga Arr	51.26	177	P	P	08 59 19.3	-0.1
WB0				IAmb	IAmb	08 59 39.4	
	comp=Z,8.2nm,0.9s						
WRAB	Tennant Creek	51.42	177	P	P	08 59 20.7	+0.2
WRAB				IAmb	IAmb	08 59 31.1	
	comp=Z,8.7nm,0.9s						
WRAB	Tennant Creek	51.42	177	ceP	P	08 59 22.5	+1.9
WRAB				pmax	pmax		
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	51.42	177	P	P	08 59 21.2	+0.6
WRAB				pP	pP	08 59 28.7	+0.2
WRA	Warramunga Arr	51.43	177	P	P	08 59 20.6	0.0
	comp=Z,5.0nm,0.8s,baz=352,slow=8.3,SNR=41						
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	51.43	177	P	P	08 59 21.0	+0.3
WRA	Warramunga Arr	51.43	177	P	P	08 59 21.0	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WB2	Warramunga Arr	51.44	177	P	P	08 59 21.1	+0.5
WB2				IAmb	IAmb	08 59 22.4	
	comp=Z,10nm,0.8s						
WR0	Warramunga Arr	51.46	177	P	P	08 59 21.0	+0.2
WR0				IAmb	IAmb	08 59 32.9	
	comp=Z,13nm,0.8s						
KBL	Kabul	51.85	291	P	P	08 59 23.5	-0.6
KBL				IAmb	IAmb	08 59 24.6	
	comp=Z,15nm,1.3s						
KBL	Kabul	51.85	291	P	P	08 59 23.5	-0.6
KBL				pmax	pmax		
	comp=Z,15nm,1.3s						
SDPT	Sand Point	52.13	42	P	P	08 59 25.1	-0.4
	baz=273						
PALK	Pallekele	53.35	254	LR	LR	09 23 47.0	
	comp=Z,194nm,20.6s,baz=155,slow=38						
CTA	Charters Tower	53.36	163	LR	LR	09 22 18.0	
	comp=Z,146nm,18.5s,baz=316,slow=36						
GCSA	Galena City Sc	53.87	30	P	P	08 59 38.1	-0.1
	baz=268						
PSA00	Pilbara Seismi	54.22	194	P	P	08 59 41.0	-0.1
TTA	Tatalina	54.24	32	P	P	08 59 40.8	-0.2
TTA	Tatalina	54.24	32	P	P	08 59 40.8	-0.2
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TTA	Tatalina	54.24	32	P	P	08 59 41.3	+0.2
	baz=271,SNR=6.2						
N18K	Kilae Creek	54.35	35	P	P	08 59 41.2	-0.6
	baz=272						
P18K	Big Mountain,	54.75	37	P	P	08 59 46.0	+1.2
P18K	Big Mountain,	54.75	37	P	P	08 59 44.9	+0.1
	baz=274						
L19K	White Mountain	54.79	33	P	P	08 59 45.5	+0.5
L19K	White Mountain	54.79	33	P	P	08 59 46.7	+1.7
	baz=272,SNR=5.6						
CHIR	Chirikof Islan	54.84	41	P	P	08 59 46.8	+1.4
	baz=276						
M19K	Big River Lodg	55.02	34	P	P	08 59 46.5	-0.1
M19K	Big River Lodg	55.02	34	P	P	08 59 47.7	+1.0
	baz=273						
N19K	Bonanza Creek	55.03	35	P	P	08 59 48.8	+1.9
N19K	Bonanza Creek	55.03	35	P	P	08 59 47.5	+0.6
	baz=274						
J20K	Nowinta River	55.05	31	P	P	08 59 49.1	+2.3
J20K				IAmb	IAmb	08 59 50.0	
	comp=Z,9.8nm,0.8s						
J20K	Nowinta River	55.05	31	P	P	08 59 48.7	+1.9
	baz=271,SNR=14						
K20K	Telida	55.11	32	P	P	08 59 49.6	+2.3
K20K				IAmb	IAmb	09 00 06.6	
	comp=Z,8.8nm,0.8s						
K20K	Telida	55.11	32	P	P	08 59 49.0	+1.8
	baz=272,SNR=10.0						
AS31	Alice Springs	55.12	178	P	P	08 59 48.2	+0.5
ASAR	Alice Springs	55.12	178	P	P	08 59 48.6	+0.9
	comp=Z,4.9nm,0.7s,baz=11,slow=11,SNR=47						
	comp=Z,4.9nm,0.7s						
ARU	Arti	55.12	320	P	P	08 59 46.0	-1.5
	comp=Z,2.3nm,0.3s,baz=95,slow=3.4,SNR=12						
ARU				PcP	PcP	09 00 47.7	-0.8
	comp=Z,1.4nm,0.3s,baz=99,slow=2.3,SNR=3.3						
	comp=Z,2.3nm,0.3s						
ARU	Arti	55.12	320	P	P	08 59 46.5	-0.9
ARU	Arti	55.12	320	c iP	P	08 59 45.9	-1.5
ARU				*PP	pP	08 59 54.8	-0.8
ARU						09 00 46.1	
ARU						09 01 47.0	
ARU				S	S	09 07 26.9	-1.5
ARU				SS	SS	09 11 07.2	-4.9
ARU				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU				MLR	MLR		
	comp=Z,506nm,15.0s						
O19K	Port Alsworth	55.16	36	P	P	08 59 49.2	+1.7
O19K				IAmb	IAmb	08 59 50.4	
	comp=Z,8.9nm,0.8s						
O19K	Port Alsworth	55.16	36	P	P	08 59 47.6	0.0
	baz=274						
IMAR	Indian Mountai	55.19	29	P	P	08 59 49.0	+1.2
L20K	Farewell, AK	55.23	33	P	P	08 59 48.1	-0.1
	baz=273						
AB31	Akbulak array	55.29	311	i P	P	08 59 47.8	-0.9
ABKAR	Akbulak array	55.29	311	P	P	08 59 48.1	-0.6
ABKAR				IAmb	IAmb	08 59 48.9	
	comp=Z,7.0nm,0.6s						
H21K	Melozitna Rive	55.59	29	P	P	08 59 51.7	+1.1
H21K	Melozitna Rive	55.59	29	P	P	08 59 52.4	+1.7
	baz=272,SNR=6.7						
Q19K	Cape Douglas,	55.60	37	P	P	08 59 51.1	+0.2
Q19K	Cape Douglas,	55.60	37	P	P	08 59 50.6	-0.3
	baz=276						
P19K	Oil Pt	55.74	36	P	P	08 59 51.6	-0.3
P19K	Oil Pt	55.74	36	P	P	08 59 52.2	+0.3
	baz=275						
CHUM	Lake Minchumin	55.87	31	P	P	08 59 53.0	+0.3
	baz=273						
RSO	Redoubt South	55.91	35	P	P	08 59 53.3	0.0
I21K	Tanana	55.95	30	P	P	08 59 52.5	-0.7
	baz=273						
OHAK	Old Harbor	55.97	39	P	P	08 59 53.7	+0.2
	baz=277						
PPLA	Purkeypile	55.99	32	IAmb	IAmb	09 00 15.0	
	comp=Z,9.7nm,0.8s						
PPLA	Purkeypile	55.99	32	P	P	08 59 54.3	+0.6
	baz=274						
CAST	Castle Rocks	56.00	32	P	P	08 59 54.8	+1.1
CAST	Castle Rocks	56.00	32	P	P	08 59 55.3	+1.6
	baz=274,SNR=11						
O20K	Slope Mountain	56.01	36	P	P	08 59 54.1	+0.2
	baz=276						
KDAK	Kodiak Island	56.28	39	P	P	08 59 56.9	+1.2
	comp=Z,12nm,0.5s,baz=290,slow=4.5,SNR=52						
	comp=Z,12nm,0.5s						
KDAK	Kodiak Island	56.28	39	P	P	08 59 56.7	+1.0
KDAK	Kodiak Island	56.28	39	P	P	08 59 55.3	-0.4
	baz=277						
KDAK	Kodiak Island	56.28	39	P	P	08 59 56.6	+1.0
KDAK				sP	sP	09 00 06.4	-0.6
AKTO	Aktyubinsk	56.31	312	P	P	08 59 55.4	-0.6
	comp=Z,6.0nm,0.7s,baz=79,slow=12,SNR=20						
AKTO				LR	LR	09 26 18.3	
	comp=Z,392nm,18.3s,baz=83,slow=38						
	comp=Z,6.0nm,0.7s						
BPAW	Bear Paw Mtn.	56.44	31	P	P	08 59 57.1	+0.3
	baz=274						
KTH	Kantishna Hill	56.51	32	P	P	08 59 57.3	0.0
KTH				IAmb	IAmb	09 00 00.2	
	comp=Z,11nm,1.1s						
HOM	Homer	56.55	36	P	P	08 59 57.5	-0.1
	baz=277						
COLD	Coldfoot	56.57	27	P	P	08 59 57.4	-0.3
COLD	Coldfoot	56.57	27	P	P	08 59 59.1	+1.4
	baz=273,SNR=5.5						
CAPN	Captain Cook N	56.66	35	P	P	08 59 58.3	-0.1
	baz=276						
TOLK	Toolik Lake Re	56.74	25	IAmb	IAmb	09 00 01.7	
	comp=Z,16nm,1.2s						
TOLK	Toolik Lake Re	56.74	25	P	P	09 00 00.1	+1.2
	baz=272,SNR=9.5						
CNPM	China Poot	56.77	36	IAmb	IAmb	09 00 02.5	
	comp=Z,6.2nm,0.7s						
TRF	Thorofare Moun	56.80	32	P	P	09 00 00.7	+1.1
	baz=275						
BRLK	Bradley Lake	56.91	36	P	P	09 00 00.7	+0.4
BRLK				IAmb	IAmb	09 00 12.6	
	comp=Z,13nm,0.9s						
H23K	Yukon River	56.92	29	P	P	09 00 02.3	+2.1
	baz=274,SNR=21						
BRSE	Bradley Lake S	56.99	36	P	P	09 00 01.7	+0.9
	baz=277,SNR=8.2						
I23K	Minto, Yukon-K	57.05	30	P	P	09 00 01.6	+0.5
	baz=275						
NEA2	Nenana	57.23	30	P	P	09 00 03.4	+1.0
NEA2	Nenana	57.23	30	P	P	09 00 03.7	+1.4
	baz=276,SNR=16						
HRA	Herat	57.27	293	P	P	09 00 03.1	-0.3
HRA				IAmb	IAmb	09 00 04.5	
	comp=Z,6.8nm,0.7s						
RC01	Rabbit Creek A	57.31	34	P	P	09 00 02.8	-0.2
	baz=277						
MCK	McKinley	57.38	31	IAmb	IAmb	09 00 05.6	
	comp=Z,6.8nm,0.8s						
MCK	McKinley	57.38	31	P	P	09 00 03.2	-0.2
	baz=276						
RND	Reindeer	57.45	32	P	P	09 00 05.1	+1.1
RND	Reindeer	57.45	32	P	P	09 00 05.1	+1.1
RND				pmax	pmax		
	comp=Z,16nm,0.8s						
PMR	Palmer	57.54	34	P	P	09 00 05.1	+0.6
PMR				IAmb	IAmb	09 00 06.4	
	comp=Z,11nm,1.0s						
PMR	Palmer	57.54	34	P	P	09 00 05.1	+0.6
PMR				pmax	pmax		
	comp=Z,11nm,1.0s						
PMR	Palmer	57.54	34	P	P	09 00 04.8	+0.2
	baz=278,SNR=8.5						
SEW	Seward	57.59	36	P	P	09 00 05.3	+0.4
SEW				IAmb	IAmb	09 00 21.1	
	comp=Z,12nm,0.8s						
SEW	Seward	57.59	36	P	P	09 00 05.5	+0.6
	baz=278,SNR=8.4						
H24K	Noodor Dome	57.60	29	IAmb	IAmb	09 00 08.4	
	comp=Z,9.2nm,0.9s						
H24K	Noodor Dome	57.60	29	P	P	09 00 06.7	+1.7
	baz=276,SNR=9.8						
WAT1	Susitna Watana	57.65	32	P	P	09 00 05.8	+0.4
	baz=277						
WRH	Wood River Hil	57.66	30	P	P	09 00 05.9	+0.5
WRH				IAmb	IAmb	09 00 09.4	
	comp=Z,6.7nm,0.9s						
TCOL	CIGO, UAF Yank	57.72	30	P	P	09 00 06.3	+0.5
TCOL				IAmb	IAmb	09 00 19.7	
	comp=Z,7.3nm,0.8s						
TCOL	CIGO, UAF Yank	57.72	30	P	P	09 00 06.5	+0.8
	baz=276						
COLA	College	57.72	30	P	P	09 00 07.1	+1.3
COLA				IAmb	IAmb	09 00 19.7	
	comp=Z,7.0nm,0.8s						
COLA	College	57.72	30	P	P	09 00 07.1	+1.3
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	College	57.72	30	P	P	09 00 07.1	+1.3
	baz=276						
COLA	College	57.72	30	P	P	09 00 07.6	+1.8
COLA				pP	pP	09 00 14.9	+1.0
COLA				sP	sP	09 00 19.3	+2.3
CCB	Clear Creek Bu	57.77	30	P	P	09 00 06.5	+0.4
CCB				IAmb	IAmb	09 00 21.1	
	comp=Z,7.3nm,1.0s						
POKR	Poker Plat Res	57.87	30	P	P	09 00 08.4	+1.5
POKR	Poker Plat Res	57.87	30	P	P	09 00 08.3	+1.5
	baz=277,SNR=5.8						
KNK	Knik Glacier	57.88	34	P	P	09 00 07.9	+0.8
KNK	Knik Glacier	57.88	34	P	P	09 00 07.6	+0.6
	baz=278,SNR=7.5						
SML	Sawmill	57.89	34	P	P	09 00 07.8	+0.7
SML				IAmb	IAmb	09 00 09.2	
	comp=Z,13nm,1.0s						
SML	Sawmill	57.89	34	P	P	09 00 06.9	-0.2
	baz=278						
WAT6	Susitna Watana	58.06	33	P	P	09 00 09.0	+0.6
	baz=278,SNR=6.1						
IL31		58.14	30	P	P	09 00 09.4	+0.7
IL31				IAmb	IAmb	09 00 12.1	
	comp=Z,5.5nm,0.8s						
ILAR	Eielson Array	58.14	30	P	P	09 00 09.6	+0.8
	comp=Z,3.8nm,0.7s,baz=259,slow=5.9,SNR=39						
ILAR				LR	LR	09 28 14.8	
	comp=Z,58nm,18.4s,baz=249,slow=39						
	comp=Z,3.8nm,0.7s						
ILAR	Eielson Array	58.14	30	P	P	09 00 08.8	+0.1
DHY	Denali Highway	58.15	32	P	P	09 00 09.4	+0.3
	baz=278,SNR=7.3						
HDA	Harding Lake	58.16	30	P	P	09 00 09.2	+0.3
	baz=278,SNR=15						
M23K	Glacier View	58.18	33	P	P	09 00 10.1	+1.0
	baz=278						
SCM	Sheep Creek Mo	58.36	33	P	P	09 00 11.4	+1.0
	baz=279,SNR=7.6						
GLI	Glacier Island	58.62	34	P	P	09 00 12.9	+0.7
	baz=280						
BMAR	Burnt Mountain	58.72	27	P	P	09 00 13.0	+0.1
K24K	Donnelly Dome	58.76	31	P	P	09 00 12.6	-0.5
	baz=279						
J25K	Salcha River,	58.81	30	P	P	09 00 13.5	0.0
J25K	Salcha River,	58.81	30	P	P	09 00 13.6	0.0
	baz=279						
M24K	Tolsona, Glenn	58.85	33	P	P	09 00 14.9	+1.1
M24K	Tolsona, Glenn	58.85	33	P	P	09 00 14.2	+0.3
	baz=280						
PAX	Paxson	59.03	32	P	P	09 00 16.0	+0.9
PAX	Paxson	59.03	32	P	P	09 00 16.0	+0.9
PAX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PAX	Paxson	59.03	32	P	P	09 00 15.4	+0.3
	baz=280						
KLU	Klutina	59.07	34	IAmb	IAmb	09 00 27.4	
	comp=Z,5.7nm,0.8s						
KLU	Klutina	59.07	34	P	P	09 00 16.6	+1.2
	baz=280						
HARP	HAARP	59.27	33	P	P	09 00 17.1	+0.4

	baz=280						
EYAK	Cordova Ski Ar	59.33	35	P	P	09 00 16.6	-0.4
	baz=281						
GEYT	Alibeck	59.34	298	LR	LR	09 29 27.9	
	comp=Z,474nm,18.9s,baz=107,slow=40						
DOT	Dot Lake	59.54	31	P	P	09 00 18.9	+0.4
J26L	Joseph Creek	59.60	30	P	P	09 00 19.3	+0.3
	baz=280						
KIRV	Kirov	59.66	323	P	P	09 00 18.4	-0.9
	comp=Z,15nm,0.4s,baz=200,slow=19,SNR=4.6						
	comp=Z,15nm,0.4s						
KIRV	Kirov	59.66	323	ceP	P	09 00 18.6	-0.7
N25K	Chitina, Valde	59.68	33	P	P	09 00 21.1	+1.5
N25K				IAmb	IAmb	09 00 23.2	
	comp=Z,6.9nm,0.8s						
N25K	Chitina, Valde	59.68	33	P	P	09 00 20.7	+1.1
	baz=281,SNR=6.1						
BMRM	Bremner River	59.80	34	P	P	09 00 21.4	+0.9
BMRM	Bremner River	59.80	34	P	P	09 00 21.3	+0.9
	baz=282,SNR=7.0						
MENT	Mentasta	59.82	32	P	P	09 00 22.1	+1.6
L26K	Log Cabin Wild	59.97	32	P	P	09 00 23.0	+1.5
L26K				IAmb	IAmb	09 00 24.3	
	comp=Z,7.9nm,0.8s						
L26K	Log Cabin Wild	59.97	32	P	P	09 00 22.9	+1.4
	baz=282,SNR=9.4						
GLB	Gilahina Butte	60.08	33	P	P	09 00 23.1	+0.8
GLB				IAmb	IAmb	09 00 24.9	
	comp=Z,7.8nm,0.9s						
M26K	Nabesna, AK	60.26	32	P	P	09 00 25.1	+1.6
M26K	Nabesna, AK	60.26	32	P	P	09 00 24.9	+1.4
	baz=282,SNR=13						
VRDI	Verde Repeater	60.29	34	P	P	09 00 25.2	+1.3
VRDI				IAmb	IAmb	09 00 26.4	
	comp=Z,9.6nm,0.8s						
K27K	Chicken	60.33	30	P	P	09 00 25.4	+1.6
K27K				IAmb	IAmb	09 00 26.7	
	comp=Z,10nm,1.1s						
K27K	Chicken	60.33	30	P	P	09 00 24.3	+0.4
	baz=282						
MCARA	McCarthy VSAT	60.46	33	P	P	09 00 25.1	+0.3
MCARA	McCarthy VSAT	60.46	33	P	P	09 00 25.9	+1.0
	baz=283						
EGAK	Eagle	60.56	29	P	P	09 00 26.0	+0.5
EGAK	Eagle	60.56	29	P	P	09 00 26.3	+0.8
	baz=282,SNR=6.3						
L27K	Beaver Creek,	60.64	31	P	P	09 00 28.0	+1.9
L27K				IAmb	IAmb	09 00 29.1	
	comp=Z,8.4nm,0.9s						
L27K	Beaver Creek,	60.64	31	P	P	09 00 27.6	+1.4
	baz=283,SNR=11						
BCAR	Beaver Creek A	60.66	31	P	P	09 00 27.3	+1.1
M27K	Edge Creek, AK	60.77	32	P	P	09 00 28.0	+0.8
M27K	Edge Creek, AK	60.77	32	P	P	09 00 28.3	+1.1
	baz=283,SNR=11						
BVCY	Beaver Creek	61.22	32	P	P	09 00 31.6	+1.6
	baz=284,SNR=6.0						
CTG	Chitna Glacier	61.35	34	P	P	09 00 32.1	+1.0
	baz=284,SNR=5.1						
DAWY	Dawson	61.47	30	P	P	09 00 32.7	+1.0
DAWY	Dawson	61.47	30	P	P	09 00 32.7	+1.0
	baz=284,SNR=5.9						
YUK3	Moose Creek	61.56	33	P	P	09 00 33.5	+0.9
	baz=284,SNR=7.1						
I29M	Ogilvie Camp,	61.60	28	P	P	09 00 33.3	+0.7
I29M				IAmb	IAmb	09 00 35.4	
	comp=Z,9.1nm,1.1s						
I29M	Ogilvie Camp,	61.60	28	P	P	09 00 33.8	+1.2
	baz=284						
EPYK	Eagle Plains	61.97	27	P	P	09 00 36.7	+1.7
EPYK	Eagle Plains	61.97	27	P	P	09 00 35.4	+0.4
	baz=285						
PINM	Pinnacle	62.10	35	P	P	09 00 36.9	+0.9
	baz=286						
BELG	Belogornoye	62.17	316	LR	LR	09 29 39.7	
	comp=Z,444nm,19.6s,baz=49,slow=38						
FORT	Forrest	62.27	184	P	P	09 00 38.2	+1.0
YUK4	Talbot Arm	62.51	33	P	P	09 00 40.3	+1.4
	baz=286,SNR=6.1						
INK	Inuvik	62.62	25	P	P	09 00 40.0	+0.8
	comp=Z,2.7nm,0.4s,baz=287,slow=5.4,SNR=34						
INK				LR	LR	09 30 14.7	
	comp=Z,94nm,19.8s,baz=306,slow=38						
	comp=Z,2.7nm,0.4s						
INK	Inuvik	62.62	25	P	P	09 00 40.4	+1.1
INK				IAmb	IAmb	09 00 41.5	
	comp=Z,11nm,1.1s						
INK	Inuvik	62.62	25	P	P	09 00 40.4	+1.1
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	Inuvik	62.62	25	P	P	09 00 40.1	+0.8
	baz=287,SNR=9.2						
PNL	Peninsula	62.63	35	P	P	09 00 39.9	+0.3
	baz=286						
YUK6	Outpost Mounta	62.76	33	P	P	09 00 41.0	+0.4
	baz=287						
DZM	Mont Dzumac	62.96	144	P	P	09 00 42.9	+0.7
DZM	Mont Dzumac	62.96	144	P	P	09 00 44.2	+2.0
DZM				sP	sP	09 00 53.8	+0.2
M30M	Minto, Yukon	63.00	31	P	P	09 00 43.8	+1.8
M30M				IAmb	IAmb	09 00 56.0	
	comp=Z,5.6nm,0.9s						
M30M	Minto, Yukon	63.00	31	P	P	09 00 43.4	+1.4
	baz=287,SNR=9.2						
HYT	Haines Junctio	63.20	33	P	P	09 00 44.6	+1.2
HYT				IAmb	IAmb	09 00 46.6	
	comp=Z,10.0nm,1.0s						
HYT	Haines Junctio	63.20	33	P	P	09 00 45.1	+1.7
	baz=287,SNR=9.4						
N30M	Aishikik Lake	63.20	33	P	P	09 00 44.2	+0.9
	baz=287						
N31M	Braeburn, Yuko	63.79	32	P	P	09 00 48.1	+0.9
N31M				IAmb	IAmb	09 00 50.4	
	comp=Z,11nm,1.0s						
N31M	Braeburn, Yuko	63.79	32	P	P	09 00 48.9	+1.6
	baz=288,SNR=6.5						
KLMR	Klimovskoe	63.90	327	eP	P	09 00 45.2	-2.7
KLMR				pmax	pmax		
	comp=Z,15nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,845nm,16.0s						
KLMR	Klimovskoe	63.90	327	eP	P	09 00 45.2	-2.7
KLMR				AMP		09 00 47.2	
	comp=Z,15nm,1.0s						
KLMR				LQ	LQ	09 24 19.0	
KLMR				LQ	LQ	09 24 19.0	
KLMR				LR	LR	09 29 47.1	
KLMR				AMP		09 31 48.4	
	comp=Z,845nm,15.9s						
STKA	Stephens Creek	63.94	171	P	P	09 00 49.7	+1.3
	comp=Z,5.9nm,0.7s,baz=350,slow=5.8,SNR=20						
STKA				LR	LR	09 28 53.7	
	comp=Z,174nm,19.8s,baz=359,slow=36						
	comp=Z,5.9nm,0.7s						
STKA	Stephens Creek	63.94	171	P	P	09 00 49.4	+1.1
A36M	Sachs Harbour	64.03	20	P	P	09 00 49.9	+1.3
A36M	Sachs Harbour	64.03	20	P	P	09 00 49.4	+0.8
	baz=293,SNR=6.0						
SPITS	Spitsbergen Ar	64.11	348	LR	LR	09 30 35.2	
	comp=Z,330nm,19.8s,baz=256,slow=38						
M31M	Drury Creek, Y	64.18	31	P	P	09 00 51.1	+1.4
M31M				IAmb	IAmb	09 00 52.6	
	comp=Z,12nm,1.4s						
M31M	Drury Creek, Y	64.18	31	P	P	09 00 51.1	+1.4
	baz=289,SNR=6.1						
WSAR	Wadi Sarin	64.37	282	P	P	09 00 50.1	-1.5
	comp=Z,4.9nm,0.7s,baz=113,slow=6.1,SNR=5.2						
WSAR				LR	LR	09 30 52.3	
	comp=Z,137nm,20.3s,baz=110,slow=38						
	comp=Z,4.9nm,0.7s						
WHY	Whitehorse	64.47	33	P	P	09 00 53.6	+1.8
WHY				IAmb	IAmb	09 00 54.2	
	comp=Z,12nm,1.4s						
WHY	Whitehorse	64.47	33	P	P	09 00 53.2	+1.4
	baz=290,SNR=7.2						
SKAG	Skagway	64.66	34	P	P	09 00 54.2	+1.3
	baz=290						
MAK	Makhachkala	65.30	306	eP	P	09 00 55.1	-2.2
MAK				e		09 03 16.0	
MAK				eS	S	09 09 35.8	-3.6
MAK				pmax	pmax		
	comp=Z,139nm,1.3s						
MAK				MLR	MLR		
	comp=Z,645nm,14.0s						
C36M	Paulatuk	65.46	22	P	P	09 00 58.7	+0.8
C36M	Paulatuk	65.46	22	P	P	09 00 58.7	+0.8
	baz=295,SNR=7.1						
SIT	Sitka	65.50	37	P	P	09 00 59.0	+0.7
	baz=291						
P33M	Teslin, Yukon	65.59	33	P	P	09 01 00.6	+1.5
P33M				IAmb	IAmb	09 01 01.9	
	comp=Z,12nm,1.3s						
P33M	Teslin, Yukon	65.59	33	P	P	09 01 00.3	+1.3
	baz=291,SNR=6.6						
ALE	Alert	65.78	2	P	P	09 01 00.5	+0.7
ALE				pP	pP	09 01 05.3	-2.8
ALE				sP	sP	09 01 10.1	-1.1
ARCES	ARCESS Array B	66.05	338	P	P	09 00 59.7	-2.1
	comp=Z,3.0nm,0.9s,baz=66,slow=9.4,SNR=7.8						
ARCES				LR	LR	09 34 02.1	
	comp=Z,281nm,20.4s,baz=66,slow=40						
	comp=Z,3.0nm,0.9s						
EUNU	Eureka	66.49	7	P	P	09 01 04.9	+0.4
EUNU				IAmb	IAmb	09 01 05.8	
	comp=Z,8.2nm,0.8s						
MOS	Moscow	66.63	322	eP	P	09 01 02.8	-2.8
MOS				e		09 01 15.1	
MOS				eS	S	09 09 50.6	-4.5
MOS				pmax	pmax		
	comp=Z,35nm,0.8s						
MOS				MLR	MLR		
	comp=Z,800nm,19.0s						
TGTN	Hyland Airport	67.12	31	P	P	09 01 10.0	+1.2
	baz=294						
CRAG	Craig	67.23	38	P	P	09 01 08.3	-1.1
	baz=293						
S34M	Telegraph Cree	67.27	35	P	P	09 01 10.7	+0.9
	baz=294						
OBN	Obninsk	67.42	322	LR	LR	09 34 21.2	
	comp=Z,126nm,19.1s,baz=15,slow=39						
OBN	Obninsk	67.42	322⇑	eP	P	09 01 10.1	-0.6
OBN				e*PP	sP	09 01 21.2	-1.0
OBN				e*SP	PcP	09 01 28.6	-9.4
OBN				SSS	SSS	09 17 27.0	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,509nm,15.0s						
DLBC	Dease Lake	67.59	34	P	P	09 01 12.9	+1.0
	comp=Z,2.4nm,0.6s,baz=269,slow=7.4,SNR=5.0						
DLBC				LR	LR	09 32 24.6	
	comp=Z,61nm,19.3s,baz=310,slow=37						
	comp=Z,2.4nm,0.6s						
DLBC	Dease Lake	67.59	34	P	P	09 01 13.1	+1.2
DLBC				IAmb	IAmb	09 01 14.5	
	comp=Z,12nm,1.4s						
ZEI	Tsey	67.82	307	eP	P	09 01 11.4	-2.3
ZEI				pmax	pmax		
	comp=Z,11nm,1.4s						
KBZ	Khabaz	68.12	309	P	P	09 01 14.5	-0.8
	comp=Z,9.0nm,0.8s,baz=104,slow=2.3,SNR=20						
KBZ				LR	LR	09 35 22.7	
	comp=Z,538nm,18.0s,baz=50,slow=40						
	comp=Z,9.0nm,0.8s						
KBZ	Khabaz	68.12	309	ceP	P	09 01 14.9	-0.4
KIV	Kislovodsk	68.17	309	P	P	09 01 15.4	-0.4
KIV	Kislovodsk	68.17	309	eP	P	09 01 16.2	+0.4
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV				MLR	MLR		
	comp=Z,332nm,17.0s						
ONI	Oni	68.20	307	P	P	09 01 16.2	+0.2
ONI				IAmb	IAmb	09 01 16.8	
	comp=Z,8.3nm,1.1s						
ONI	Oni	68.20	307	P	P	09 01 16.2	+0.2
ONI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GNI	Garni	68.29	305	LR	LR	09 35 06.2	
	comp=Z,236nm,18.8s,baz=72,slow=39						
RES	Resolute Bay	69.57	12	P	P	09 01 24.2	+0.5
	comp=Z,6.6nm,1.0s,baz=312,slow=7.6,SNR=8.0						
	comp=Z,6.6nm,1.0s						
RES	Resolute Bay	69.57	12	P	P	09 01 24.9	+1.1
RES				IAmb	IAmb	09 01 36.2	
	comp=Z,8.7nm,0.8s						
RES	Resolute Bay	69.57	12	P	P	09 01 24.9	+1.1
RES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FINES	FINESS Array B	69.62	330	P	P	09 01 22.5	-1.8
	comp=Z,5.3nm,0.5s,baz=69,slow=5.8,SNR=32						
FINES				LR	LR	09 34 55.5	
	comp=Z,528nm,19.0s,baz=52,slow=38						
	comp=Z,5.3nm,0.5s						
FINES	FINESS Array B	69.62	330	P	P	09 01 23.2	-1.1
FINES	FINESS Array B	69.62	330	P	P	09 01 23.2	-1.1
DAG	Danmarks Havn	70.21	353	i P	P	09 01 27.0	-0.7
DAG				IAmb	IAmb	09 01 28.2	
	comp=Z,5.7nm,0.5s						
AFI	Afiamalu	70.59	121	LR	LR	09 26 15.8	
	comp=Z,98nm,22.0s,baz=308,slow=30						
GURO	Guroymak-BITLI	70.86	304	P	P	09 01 32.4	-0.2
GURO				IAmb	IAmb	09 01 33.8	
	comp=Z,4.9nm,0.7s						
TULEG	Thule	71.22	5	P	P	09 01 33.2	-0.7
YKA	Yellowknife Ar	72.24	27	P	P	09 01 40.5	+0.3
	comp=Z,4.9nm,0.7s,baz=304,slow=5.6,SNR=38						
	comp=Z,4.9nm,0.7s						
YKA	Yellowknife Ar	72.24	27	P	P	09 01 40.2	0.0
YKA	Yellowknife Ar	72.24	27	i P	P	09 01 41.4	+1.2
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MARD	Mardin	72.30	303	P	P	09 01 40.9	-0.4
MARD				IAmb	IAmb	09 01 52.8	
	comp=Z,9.3nm,0.7s						
AKASG	Malin Array Be	73.37	320	P	P	09 01 45.6	-1.5
	comp=Z,2.4nm,0.4s,baz=52,slow=6.8,SNR=18						
AKASG				LR	LR	09 36 29.3	
	comp=Z,480nm,18.6s,baz=37,slow=38						
	comp=Z,2.4nm,0.4s						
AKBB	Malin Array Si	73.37	320	P	P	09 01 46.0	-1.2
AKBB				IAmb	IAmb	09 01 46.4	
	comp=Z,8.4nm,1.0s						
AKBB	Malin Array Si	73.37	320	P	P	09 01 46.0	-1.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RAYN	Ar Rayn	75.02	289	P	P	09 01 56.8	-0.5
RAYN				IAmb	IAmb	09 02 07.4	
	comp=Z,10nm,0.9s						
RAYN	Ar Rayn	75.02	289	P	P	09 01 56.8	-0.5
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HFS	Hagfors	75.39	333	LR	LR	09 37 49.4	
	comp=Z,220nm,20.6s,baz=40,slow=38						
LLLB	Lillooet	75.49	39	P	P	09 01 59.6	0.0
NB2	NORSAR Subarra	75.74	334	P	P	09 01 59.5	-1.3
	comp=Z,0.6nm,0.5s,baz=47,slow=5.9						
NOA	NORSAR Array B	75.74	334	P	P	09 01 59.0	-1.8
	comp=Z,1.2nm,0.7s,baz=276,slow=5.1,SNR=6.6						
	comp=Z,1.2nm,0.7s						
NOA	NORSAR Array B	75.74	334	P	P	09 01 59.0	-1.8
SUMG	Summit	75.76	357	P	P	09 02 01.2	+0.1
SUMG				IAmb	IAmb	09 02 13.3	
	comp=Z,18nm,1.1s						
SUMG	Summit	75.76	357	P	P	09 02 01.2	+0.1
SUMG				pmax	pmax		
	comp=Z,18nm,1.1s						
SUMG	Summit	75.76	357	i P	P	09 02 00.0	-1.1
SUMG				IAmb	IAmb	09 02 12.5	
	comp=Z,6.6nm,0.7s						
BR131	Keskin Array S	76.11	308	P	P	09 02 02.9	-0.5
BR131				IAmb	IAmb	09 02 15.1	
	comp=Z,9.8nm,1.1s						
BR131	Keskin Array S	76.11	308	P	P	09 02 02.9	-0.5
BR131				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRTR	Keskin Array B	76.11	308	P	P	09 02 02.3	-1.1
	comp=Z,3.9nm,0.9s,baz=104,slow=5.2,SNR=16						
BRTR				LR	LR	09 40 39.6	
	comp=Z,229nm,18.8s,baz=68,slow=40						
	comp=Z,3.9nm,0.9s						
BRTR	Keskin Array B	76.11	308	P	P	09 02 01.7	-1.7
D03D	Eldon	76.46	42	P	P	09 02 06.3	+1.2
	baz=302						
B05A	Bryant	76.63	41	P	P	09 02 06.9	+0.9
	baz=303						
D04E	Lakebay	76.83	42	P	P	09 02 07.2	0.0
	baz=303						
BUR08	Bucovina Ar. S	77.22	318	P	P	09 02 08.7	-0.9
BURAR	Bucovina Array	77.23	318	P	P	09 02 09.2	-0.4
E04D	Cinebar	77.29	43	P	P	09 02 11.0	+1.2
	baz=303						
G03D	McMinnville, O	77.60	44	P	P	09 02 11.3	-0.3
	baz=303						
MLR	Muntele Rosu	77.97	316	LR	LR	09 39 48.8	
	comp=Z,545nm,19.4s,baz=62,slow=38						
B08A	Colville Reser	78.12	40	P	P	09 02 14.9	+0.5
B08A				IAmb	IAmb	09 02 16.5	
	comp=Z,6.9nm,0.9s						
H04D	Lebanon	78.29	45	P	P	09 02 17.8	+2.4
	baz=303						
F05D	White Salmon	78.30	43	P	P	09 02 16.9	+1.5
	baz=304						
J01E	Myrtle Point	78.30	46	P	P	09 02 17.6	+2.1
	baz=303						
EDM	Edmonton	78.31	34	P	P	09 02 16.4	+1.0
EDM				IAmb	IAmb	09 02 17.5	
	comp=Z,7.3nm,0.8s						
EDM	Edmonton	78.31	34	P	P	09 02 16.4	+1.0
EDM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
I03D	Drain, OR	78.37	46	P	P	09 02 17.0	+1.2
	baz=303						
H04A	Detroit Lake	78.53	44	P	P	09 02 16.4	-0.4
H04A				IAmb	IAmb	09 02 35.3	
	comp=Z,8.1nm,1.1s						
K02D	Willamette Mer	78.72	47	P	P	09 02 18.4	+0.5
	baz=303						
I04A	Tendick Farm,	78.89	45	P	P	09 02 19.6	+0.8
	baz=304						
C09A	Chrisman Ranch	79.02	40	P	P	09 02 20.3	+0.9
C09A				IAmb	IAmb	09 02 21.5	
	comp=Z,6.5nm,0.8s						
L02F	Cave Junction	79.09	47	P	P	09 02 21.6	+1.8
	baz=303						
I05D	Terrebonne, OR	79.23	44	P	P	09 02 22.3	+1.7
	baz=304						
ICESG	Greenland Ices	79.28	357	i P	P	09 02 18.4	-2.4
ICESG				IAmb	IAmb	09 02 21.3	
	comp=Z,4.4nm,0.8s						
J04D	Umpqua Nationa	79.38	46	P	P	09 02 22.1	+0.5
J04D	Umpqua Nationa	79.38	46	P	P	09 02 22.6	+0.9
	baz=304						
NEW	Newport	79.38	39	P	P	09 02 22.1	+0.8
NEW	Newport	79.38	39	P	P	09 02 22.1	+0.8
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	Newport	79.38	39	P	P	09 02 22.1	+0.8
	baz=306						
OKC	Ostrava-Krasne	79.77	323	AMS	AMS	09 42 20.0	
	comp=Z,800nm,14.6s						
PINE	Pine Mountain	79.77	45	P	P	09 02 24.0	+0.2
PINE				IAmb	IAmb	09 02 36.4	
	comp=Z,15nm,0.9s						
L04D	Klamath Falls	79.82	47	P	P	09 02 25.6	+1.6
	baz=304						
J05D	Fort Rock, OR	79.88	45	P	P	09 02 25.3	+1.0
	baz=304						
MAUC	Maruska	80.22	323	AMS	AMS	09 42 40.0	
	comp=Z,1µm,15.5s						
OSTC	Ostas	80.30	324	AMS	AMS	09 42 20.0	
	comp=Z,1µm,17.1s						
KRLC	Kraliky	80.31	324	AMS	AMS	09 42 20.0	
	comp=Z,1µm,16.9s						
CHVC	Chvalec	80.36	324	AMS	AMS	09 42 20.0	
	comp=Z,1µm,17.2s						
DPC	Dobruska-Polom	80.37	324	AMS	AMS	09 42 20.0	
	comp=Z,1µm,16.7s						
K05A	Summer Lake	80.40	46	P	P	09 02 28.1	+0.9
K05A				IAmb	IAmb	09 02 38.8	
	comp=Z,8.3nm,1.0s						
UPC	Upice	80.43	324	AMS	AMS	09 42 30.0	
	comp=Z,1µm,16.0s						
I07A	Izee	80.46	44	P	P	09 02 28.0	+0.6
WALA	Waterton Lakes	80.60	37	P	P	09 02 29.3	+1.3
WALA				IAmb	IAmb	09 02 30.3	
	comp=Z,6.0nm,0.8s						
F10A	Beach Ranch, E	80.67	41	P	P	09 02 28.3	-0.2
VRAC	Vranov	80.89	323	LR	LR	09 42 53.2	
	comp=Z,550nm,18.5s,baz=53,slow=39						
PVCC	Panska Ves	81.13	325	AMS	AMS	09 42 40.0	
	comp=Z,1µm,15.7s						
JTMT	Jette	81.21	39	P	P	09 02 32.0	+0.7
MOD	Modoc Plateau	81.23	46	P	P	09 02 32.5	+0.9
BMO	Blue Mountains	81.29	42	P	P	09 02 32.3	+0.5
BMO	Blue Mountains	81.29	42	P	P	09 02 32.3	+0.5
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	81.38	326	P	P	09 02 31.8	-0.1
CLL				IAmb	IAmb	09 02 43.5	
	comp=Z,11nm,0.9s						
CLL	Collm	81.38	326	eP	P	09 02 32.0	+0.1
CLL				i *PP	sP	09 02 42.7	-0.9
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL				MLR	MLR		
	comp=Z,1µm,18.5s						
CLL	Collm	81.38	326	eP	P	09 02 32.0	+0.1
	comp=Z,6.0nm,0.7s						
CLL				i PcP	pP	09 02 41.1	+0.7
CLL				i pP	sP	09 02 42.7	-0.9
	comp=Z,14nm,1.0s						
CLL				i sP	PcP	09 02 48.0	+10
CLL				Lm	MLR	09 42 00.0	
	comp=N,600nm,18.8s						
CLL				Lm	MLR	09 42 00.0	
	comp=E,400nm,19.0s						
CLL				Lm	MLR	09 42 00.0	
	comp=Z,1µm,18.5s						
TREC	Trest	81.46	324	AMS	AMS	09 43 00.0	
	comp=Z,1µm,17.2s						
PRU	Pruhonice	81.49	325	AMS	AMS	09 43 10.0	
	comp=Z,900nm,16.2s						
J08A	Circle Bar Ran	81.49	44	P	P	09 02 34.0	+1.1
J08A				IAmb	IAmb	09 02 35.5	
	comp=Z,9.1nm,0.7s						
SFJD	Kangerlussuaq	81.57	1	P	P	09 02 32.4	-0.3
	comp=Z,4.8nm,0.5s,baz=239,slow=1.8,SNR=4.5						
	comp=Z,4.8nm,0.5s						
PLID	Pearl Lake	81.89	41	P	P	09 02 35.2	+0.1
WVOR	Wild Horse Val	81.93	45	P	P	09 02 35.6	+0.4
WVOR	Wild Horse Val	81.93	45	P	P	09 02 35.7	+0.4
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MSO	Missoula	81.96	39	P	P	09 02 34.8	-0.5
	baz=308						
RONA	Rosalia, Austr	82.05	322	eP	P	09 02 36.5	+0.8
	comp=Z,6.5nm,1.4s						
DY2G	Dye2	82.10	359	i P	P	09 02 33.5	-2.3
DY2G				IAmb	IAmb	09 02 36.2	
	comp=Z,10nm,0.5s						
FCC	Fort Churchill	82.10	22	P	P	09 02 36.2	+0.7
FCC				IAmb	IAmb	09 02 37.2	
	comp=Z,10nm,0.7s						
FCC	Fort Churchill	82.10	22	P	P	09 02 36.3	+0.7
FCC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CONA	Conrad Observa	82.13	322	eP	P	09 02 36.8	+0.7
	comp=Z,5.7nm,1.0s						
NKC	Novy Kostel	82.35	326	AMS	AMS	09 43 20.0	
	comp=Z,1µm,16.7s						
CKRC	Cesky Krumlov	82.36	324	AMS	AMS	09 43 30.0	
	comp=Z,1µm,17.2s						
BEKR	Beckworth	82.36	48	P	P	09 02 38.3	+0.7
BEKR				IAmb	IAmb	09 02 48.9	
	comp=Z,7.6nm,1.1s						
KHC	Kasperske Hory	82.52	324	AMS	AMS	09 43 30.0	
	comp=Z,1µm,15.8s						
GERES	GERESS Array B	82.65	324	P	P	09 02 37.8	-1.0
	comp=Z,0.4nm,0.5s,baz=38,slow=6.8,SNR=5.0						
GERES				LR	LR	09 43 47.0	
	comp=Z,882nm,18.8s,baz=60,slow=39						
	comp=Z,0.4nm,0.5s						
MFID	Camas Ranch	83.00	43	P	P	09 02 42.6	+1.8
MFID				IAmb	IAmb	09 02 52.5	
	comp=Z,7.8nm,0.9s						
MOA	Molln	83.01	323	eP	P	09 02 37.6	-3.1
	comp=Z,7.9nm,1.5s						
SOKA	Soboth	83.37	322	eP	P	09 02 42.2	-0.4
	comp=Z,2.3nm,0.5s						
EGMT	Eagleton	83.39	36	P	P	09 02 43.7	+1.0
EGMT				IAmb	IAmb	09 02 44.6	
	comp=Z,11nm,0.9s						
EGMT	Eagleton	83.39	36	P	P	09 02 43.9	+1.3
	baz=311						
LRM	Limekiln Ridge	83.40	39	P	P	09 02 43.3	+0.3
BIOA	Bad Ischl, Aus	83.43	323	eP	P	09 02 42.6	-0.3
	comp=Z,3.2nm,0.7s						
DLMT	Dillon	83.61	40	P	P	09 02 44.8	+0.9
HLID	Hailey	83.73	42	P	P	09 02 45.4	+0.8

HLID				IAmb	IAmb	09 02 47.3	
	comp=Z,5.2nm,0.8s						
HLID	Hailey	83.73	42	P	P	09 02 45.8	+1.2
	baz=308						
MCMT	McKenzie Canyo	83.81	40	P	P	09 02 45.3	+0.2
BMN	Battle Mountai	83.98	46	P	P	09 02 46.8	+0.9
BMN				IAmb	IAmb	09 02 59.1	
	comp=Z,6.0nm,1.0s						
BMN	Battle Mountai	83.98	46	P	P	09 02 46.8	+0.9
BMN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOZ	Bozeman (W)	83.98	39	P	P	09 02 46.7	+0.9
BOZ	Bozeman (W)	83.98	39	P	P	09 02 46.7	+0.9
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOZ	Bozeman (W)	83.98	39	P	P	09 02 47.1	+1.2
	baz=310						
KBA	Koelnbreinsper	83.99	323	*e*P	P	09 02 45.3	-0.6
	comp=Z,2.8nm,0.7s						
RAR	Rarotonga	84.04	119	LR	LR	09 36 36.0	
	comp=Z,59nm,19.8s,baz=300,slow=33						
MYKA	Terra Mystica	84.13	322	*e*P	P	09 02 45.6	-0.9
	comp=Z,7.6nm,1.0s						
KVN	Kaiserville	84.26	47	P	P	09 02 48.1	+0.7
KVN				IAmb	IAmb	09 02 59.6	
	comp=Z,9.5nm,0.9s						
KVN	Kaiserville	84.26	47	P	P	09 02 48.1	+0.7
KVN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NVAR	Mina Array Bea	84.50	48	P	P	09 02 50.4	+1.7
	comp=Z,2.3nm,0.7s,baz=301,slow=4.7,SNR=17						
	comp=Z,2.3nm,0.7s						
NVAR	Mina Array Bea	84.50	48	P	P	09 02 49.6	+0.9
NV11	Mina Array Sit	84.59	48	P	P	09 02 50.4	+1.4
NV11				IAmb	IAmb	09 03 01.3	
	comp=Z,6.9nm,1.4s						
MLAC	Mammoth, Mammo	84.63	49	P	P	09 02 51.2	+1.8
	baz=306						
ABTA	Abfaltersbach	84.63	323	*e*P	P	09 02 47.4	-1.6
	comp=Z,5.8nm,1.1s						
YHL	Hebgen Lake	84.71	40	P	P	09 02 51.3	+1.6
WATA	Walderalm	84.72	324	*e*P	P	09 02 50.9	+1.4
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	84.73	324	*e*P	P	09 02 50.3	+0.7
	comp=Z,6.6nm,1.3s						
YHH	Holmes Hill	84.93	39	P	P	09 02 50.0	-0.9
MOTA	Moosalm	84.95	324	*e*P	P	09 02 53.5	+2.8
	comp=Z,3.0nm,1.0s						
SQTA	Sankt Quirin	84.98	324	*e*P	P	09 02 49.8	-1.0
	comp=Z,2.2nm,0.5s						
ELK	Elko	84.98	45	P	P	09 02 52.4	+1.3
	comp=Z,1.6nm,0.8s,baz=334,slow=7.6,SNR=7.1						
	comp=Z,1.6nm,0.8s						
ELK	Elko	84.98	45	P	P	09 02 50.8	-0.3
RETA	Reutte	85.02	324	*e*P	P	09 02 51.5	+0.5
	comp=Z,9.6nm,1.4s						
H17A	Grant Village	85.33	40	P	P	09 02 54.5	+1.7
	baz=311						
FETA	Feichten	85.35	324	*e*P	P	09 02 56.5	+3.8
	comp=Z,4.7nm,1.0s						
FLWY	Flagg Ranch	85.47	40	P	P	09 02 52.4	-1.0
FLWY				IAmb	IAmb	09 02 56.9	
	comp=Z,7.4nm,1.0s						
RLMT	Red Lodge	85.56	38	P	P	09 02 53.1	-0.7
RLMT				IAmb	IAmb	09 02 57.1	
	comp=Z,5.5nm,1.1s						
RLMT	Red Lodge	85.56	38	P	P	09 02 54.7	+0.8
	baz=312						
DAVA	Damuels	85.59	325	*e*P	P	09 02 53.6	-0.3
	comp=Z,8.2nm,1.0s						
PKM	Mcpherson Peak	85.60	51	P	P	09 02 52.8	-1.4
	baz=306						
LCH	Last Change Ra	85.63	49	P	P	09 02 54.5	+0.3
LCH				IAmb	IAmb	09 03 06.3	
	comp=Z,6.9nm,1.2s						
MOOW	Moose Ponds	85.66	40	P	P	09 02 55.1	+0.7
TPAW	Teton Pass	85.72	40	P	P	09 02 55.6	+0.8
TPAW				IAmb	IAmb	09 02 57.6	
	comp=Z,4.1nm,0.8s						
HVU	Hansel Valley	85.78	43	P	P	09 02 54.1	-0.9
HVU				IAmb	IAmb	09 03 07.0	
	comp=Z,4.8nm,0.8s						
HVU	Hansel Valley	85.78	43	P	P	09 02 54.1	-0.9
HVU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DGMT	Dagmar	85.80	34	P	P	09 02 55.2	+0.4
	baz=315						
CWC	Cottonwood Cre	85.82	49	P	P	09 02 56.0	+0.7
	baz=307						
REDW	Red Top Meadow	85.85	40	P	P	09 02 55.8	+0.4
REDW				IAmb	IAmb	09 03 07.9	
	comp=Z,7.5nm,1.2s						
DAVOX	Davos/Dischmat	85.94	324	P	P	09 02 54.8	-0.9
	comp=Z,2.5nm,0.5s,baz=182,slow=2.0,SNR=7.7						
DAVOX				LR	LR	09 46 02.4	
	comp=Z,1µm,18.6s,baz=64,slow=39						
	comp=Z,2.5nm,0.5s						
ISA	Isabella, Lake	86.03	50	P	P	09 02 55.5	-0.7
	baz=307						
LAO	LASA Array	86.06	36	P	P	09 02 57.7	+1.6
	baz=314						
AHID	Auburn Hatcher	86.10	41	P	P	09 02 57.3	+0.7
AHID				IAmb	IAmb	09 02 58.8	
	comp=Z,3.9nm,0.8s						
ARVC	Arvin	86.11	51	P	P	09 02 55.6	-0.9
	baz=306						
R11A	Troy Canyon, C	86.25	47	P	P	09 02 58.3	+0.9
	baz=308						
HWUT	Hardware Ranch	86.59	42	P	P	09 02 59.2	+0.2
DUG	Dugway, Tooele	86.77	44	P	P	09 03 00.2	+0.3
	baz=310						
EDW2	Edwards Air Fo	86.81	51	P	P	09 03 01.2	+1.1
	baz=307						
QSM	Queen of Sheba	86.89	49	P	P	09 03 00.1	-0.3
QSM				IAmb	IAmb	09 03 13.8	
	comp=Z,7.8nm,1.1s						
BW06	Boulder Array	86.96	40	P	P	09 03 01.2	+0.3
BW06	Boulder Array	86.96	40	P	P	09 03 01.3	+0.5
	baz=312						
PD31	Pinedale Array	86.96	40	P	P	09 03 00.5	-0.4
PDAR	Pinedale Array	86.96	40	P	P	09 03 01.3	+0.4
	comp=Z,2.4nm,0.9s,baz=294,slow=1.5,SNR=17						
	comp=Z,2.4nm,0.9s						
PDAR	Pinedale Array	86.96	40	P	P	09 03 01.6	+0.7
ULM	Lac du Bonnet	88.12	28	P	P	09 03 06.9	+0.9
	comp=Z,8.6nm,0.8s,baz=319,slow=4.3,SNR=9.8						
	comp=Z,8.6nm,0.8s						
ULM	Lac du Bonnet	88.12	28	P	P	09 03 06.1	+0.1
MSU	Marysvale	88.22	45	P	P	09 03 05.8	-1.2
MSU	Marysvale	88.22	45	P	P	09 03 05.8	-1.2
MDND	Maddock	88.36	32	P	P	09 03 08.3	+1.1
MDND	Maddock	88.36	32	P	P	09 03 07.6	+0.4
	baz=318						
GMRC	Granite Mounta	88.39	49	P	P	09 03 05.4	-2.3
	baz=308						
RDMU	Red Mountain	88.41	42	P	P	09 03 08.0	+0.2
RDMU				IAmb	IAmb	09 03 19.6	
	comp=Z,4.0nm,0.8s						
PFO	Pinyon Flats O	88.59	51	P	P	09 03 03.1	-5.6
	baz=308						
TPFO	Pinon Flats	88.59	51	P	P	09 03 03.7	-5.0
	baz=308						
109C	Camp Elliot, M	88.60	52	P	P	09 03 06.2	-2.4
	baz=308						
P18A	Preston Nutter	88.64	43	P	P	09 03 08.8	-0.3
K22A	Casper	88.69	39	P	P	09 03 09.0	-0.1
	baz=314						
SRU	San Rafael Swe	88.82	44	IAmb	IAmb	09 03 21.7	
	comp=Z,4.8nm,0.7s						
RSSD	Black Hills	88.96	37	P	P	09 03 09.4	-0.9
RSSD				IAmb	IAmb	09 03 13.2	
	comp=Z,4.3nm,0.8s						
RSSD	Black Hills	88.96	37	P	P	09 03 09.4	-0.9
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	88.96	37	P	P	09 03 11.1	+0.8
	baz=315						
O20A	White River Ci	89.45	42	P	P	09 03 12.6	-0.1
	baz=313						
AGMN	Agassiz Nation	89.65	30	P	P	09 03 12.4	-0.8
	baz=321						
PV23	Carpenter Ridg	90.14	43	P	P	09 03 16.2	+0.1
N23A	Red Feather La	90.21	40	IAmb	IAmb	09 03 19.2	
	comp=Z,8.2nm,1.2s						
N23A	Red Feather La	90.21	40	P	P	09 03 16.4	+0.1
	baz=314						
MVCO	Mesa Verde	91.27	44	P	P	09 03 21.5	+0.2
	baz=312						
F33A	5 Mile Ranch,	91.37	31	P	P	09 03 20.8	-0.4
F33A				IAmb	IAmb	09 03 23.2	
	comp=Z,4.2nm,0.9s						
EYMN	Ely	91.70	27	P	P	09 03 23.1	+0.3
	baz=324						
S22A	4UR Ranch, Cre	91.88	43	IAmb	IAmb	09 03 27.1	
	comp=Z,5.8nm,1.4s						
S22A	4UR Ranch, Cre	91.88	43	P	P	09 03 25.1	+1.0
	baz=314						
Q24A	Divide	92.00	41	P	P	09 03 25.3	+0.6
	baz=315						
214A	Organ Pipe Nat	92.02	50	P	P	09 03 25.7	+1.1
	baz=310						
SDCO	Great Sand Dun	92.65	42	P	P	09 03 28.3	+0.6
	baz=314						
ECSD	EROS Data Cent	92.85	33	P	P	09 03 28.5	+0.3
	baz=320						
TUC	Tucson	93.10	49	P	P	09 03 31.2	+1.6
	baz=311						
KSCO	Kaye Shedlock'	93.35	39	P	P	09 03 30.9	+0.2
	baz=316						
SPMN	Marine on St.	93.36	30	P	P	09 03 31.4	+0.9
	baz=323						
T25A	Trinidad	93.69	42	P	P	09 03 32.2	-0.2
	baz=315						
ESDC	Sonseca Array	97.94	327	LR	LR	09 54 27.0	
	comp=Z,515nm,18.2s,baz=32,slow=39						
TXAR	Lajitas Array	99.61	47	P	Pdif	09 04 00.5	+1.3
	comp=Z,0.3nm,0.6s,baz=285,slow=2.4,SNR=5.7						
	comp=Z,0.3nm,0.6s						
MIAR	Mount Ida	101.47	37	P	Pdif	09 04 07.7	+0.4
	baz=322						
TORD	Torodi Ar. Bea	114.59	305	PKP	PKiKP	09 08 55.5	-0.7
	comp=Z,0.2nm,0.3s,baz=83,slow=0.9,SNR=5.7						
H03N2	Juan Fernandez	154.11	102	T	T	12 03 04.6	
	baz=279,slow=75,SNR=10						
H03N3	Juan Fernandez	154.12	102	T	T	12 03 11.2	
	baz=279,slow=75,SNR=14						
H03N1	Juan Fernandez	154.13	102	T	T	12 03 01.8	
	baz=279,slow=75,SNR=12						

GRAL ***16*** *09:14:30.6±0.7, 35°.11N×38°.61E, h34^{km}±999^{km}, MD4.5*

IDC ***16*** *09:14:31.9±0.8, 34°.63N×38°.25E, h0^{km}, mb3.9/8, mbtmp3.9/14, ML3.7/6, MS3.0/4, Error ellipse: s-maj=18.0km s-min=12.8km az=132.0*

ISK ***16*** *09:14:31.2, 34°.75N×38°.15E, h5^{km}, ML4.4/39*

GII ***16*** *09:14:32.3±0.0, 34°.81N×38°.35E, h16^{km}±2^{km}, mb4.4/3, MD4.3/3, Mm4.4/4*

ISN ***16*** *09:14:34.7±0.8, 34°.77N×38°.26E, h10^{km}±88^{km}, ML4.4*

ISC 16 09:14:33.7±0.6**, 34°.72N**±0°.04×**38°.15E**±0°.03**, h10**^{km}**, n90, σ1^{s}.26**/106**, mb3.9**/8**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	1.87	257	*e*P	Pn	09 15 06.1	+0.2
HWQ				*e*P	Pb	09 15 06.3	-1.8
HWQ				*e*S	Sb	09 15 32.0	+0.4
HWQ				*e*S	Sg	09 15 32.2	-1.8
YAYL	Yayladag	2.12	309	PN	Pn	09 15 09.6	+0.3
YAYL				SN	Sb	09 15 36.8	-1.9
BHL	Bhannes	2.22	249	*e*P	Pn	09 15 11.4	+0.7
BHL				*e*S	Sb	09 15 41.4	-0.2
RCY	Rachaya	2.28	238	*e*P	Pn	09 15 12.0	+0.5
TAHT	Tahtakopru-Hat	2.30	316	PN	Pn	09 15 11.5	-0.2
BEYL	Beirut	2.36	250	*e*P	Pn	09 15 13.2	+0.7
QRWL	Qaraoun	2.36	241	*e*P	Pn	09 15 13.3	+0.7
QRWL				*e*S	Sb	09 15 45.4	-0.1
DQRL	Deir Qamar	2.37	245	*e*P	Pn	09 15 13.3	+0.7
SHBL	Chebaa	2.42	236	*e*P	Pn	09 15 14.1	+0.6
SHBL				*e*S	Sb	09 15 47.1	-0.4
NATI	Neve Ativ	2.48	235	Pn	Pn	09 15 14.3	+0.2
NATI				Sn	Sn	09 15 46.5	+2.1
GEM	Giv'at Ha'Em	2.56	235	Pn	Pn	09 15 15.4	+0.1
GEM				Sn	Sn	09 15 48.1	+1.7
ASF	Jabal al Asfar	2.75	203	Pn	Pn	09 15 16.4	-1.6
	28nm,0.3s,baz=35,slow=8.9,SNR=59						
ASF				Sn	Sn	09 15 50.0	-1.3
	72nm,0.3s,baz=315,slow=14,SNR=4.3						
	68nm,0.2s						
MMA0B	Mount Meron ar	2.85	234	Pn	Pn	09 15 20.5	+1.2
MMA0B				Sn	Sn	09 15 56.5	+2.7
MMAI	Mount Meron Ar	2.85	234	Pn	Pn	09 15 18.6	-0.7
	57nm,0.3s,baz=324,slow=32,SNR=30						
MMAI				Sn	Sn	09 15 56.4	+2.7
	296nm,0.3s,baz=119,slow=43,SNR=6.0						
	12nm,0.3s						
HNTI	Hanita	2.97	237	Pn	Pn	09 15 21.8	+0.9
HNTI				Sn	Sn	09 15 57.0	+0.5
CEYT	Ceyhan	3.00	320	PN	Pn	09 15 21.5	+0.2
BLGI	Bet Lehem HaGe	3.17	232	Pn	Pn	09 15 23.8	+0.2
MMLI	Mount Malkishu	3.22	226	PN	Pn	09 15 25.4	+1.0
MMLI	Mount Malkishu	3.22	226	Pn	Pn	09 15 24.8	+0.4
MMLI				Sn	Sn	09 16 05.5	+2.6
HMDT	Nahal Hemdat	3.30	222	Pn	Pn	09 15 25.4	0.0
MAZI	Mazidag	3.30	34	PN	Pn	09 15 25.9	+0.3
KOZT	Kozan	3.33	326	PN	Pn	09 15 26.5	+0.6
EREN	Erenkoy	3.36	285	PN	Pn	09 15 26.7	+0.5
OFRI	`Ofer	3.37	232	Pn	Pn	09 15 27.0	+0.5
OFRI				Sn	Sn	09 16 09.1	+2.6
UJAP	Al Uja	3.56	220	PN	Pn	09 15 30.1	+1.1
UJAP	Al Uja	3.56	220	Pn	Pn	09 15 28.9	-0.1
KARA	Karaisali	3.56	316	PN	Pn	09 15 29.6	+0.5
MALT	Malatya	3.59	4	PN	Pn	09 15 29.6	+0.1
SLTI	Sal'it	3.59	227	Pn	Pn	09 15 30.2	+0.8
DYBB	Diyarbakir	3.60	26	PN	Pn	09 15 30.4	+0.8
MERS	Mersin	3.64	307	PN	Pn	09 15 30.9	+0.7
SVRC	Sivrice-ELAZID	3.76	14	PN	Pn	09 15 32.7	+0.7
SILI	Silifke-Mersin	3.81	297	PN	Pn	09 15 33.2	+0.7
DARE	Darende-Malaty	3.88	352	PN	Pn	09 15 33.9	+0.4
CMRD	Camardi-Nigde	3.89	320	PN	Pn	09 15 33.8	+0.1
DSI	Dead Sea	3.91	217	Pn	Pn	09 15 33.7	-0.1
SARI	SarD1z-Kayseri	3.93	340	PN	Pn	09 15 34.7	+0.4
IKL	Isikli	3.94	294	PN	Pn	09 15 34.8	+0.5
CSS	Mathiatis	3.97	275	PN	Pn	09 15 35.6	+0.9
CSS	Mathiatis	3.97	275	Pn	Pn	09 15 34.9	+0.2
KEBE	Keben-Mersin	4.00	297	PN	Pn	09 15 35.9	+0.7
AKKU	Akkuyu-Mersin	4.02	292	PN	Pn	09 15 36.1	+0.8
MDBI	Mazsada	4.13	215	Pn	Pn	09 15 37.1	+0.3
TEVE	Tevekalti-Mers	4.20	295	PN	Pn	09 15 38.5	+0.6
SVAN	Silvan-Diyarba	4.21	35	PN	Pn	09 15 38.5	+0.5
BERE	Bereket-Mersin	4.33	293	PN	Pn	09 15 40.3	+0.5
LEF	Lefka	4.34	277	PN	Pn	09 15 40.9	+1.2
TEKE	Tekeli-Mersin	4.35	290	PN	Pn	09 15 40.5	+0.7
ARPR	Arapgir-MALATY	4.36	2	PN	Pn	09 15 40.7	+0.5
BNN	Bunyan	4.51	337	PN	Pn	09 15 42.5	+0.2
YESY	Yesilyurt	4.69	312	PN	Pn	09 15 44.8	+0.1
GULA	Gulagac	4.79	320	PN	Pn	09 15 46.9	+0.8
GURO	Guroymak-BITLI	4.93	38	PN	Pn	09 15 49.2	+1.2
KZIT	Kziot	4.95	221	Pn	Pn	09 15 49.4	+1.3
GAZI	Gazipasa	4.99	289	PN	Pn	09 15 49.2	+0.5
ERZN	Erzincan	5.01	14	PN	Pn	09 15 49.7	+0.6
YEDI	Yedisu-Bingol	5.08	21	PN	Pn	09 15 50.8	+0.8
CUKT	Cukurca	5.09	59	PN	Pn	09 15 51.7	+1.5
PRNI	Paran	5.11	212	Pn	Pn	09 15 49.9	-0.4
HDMB	Hadim	5.11	298	PN	Pn	09 15 51.5	+0.9
IKRK	Kirkuk	5.12	81	*e*Pn	Pn	09 15 54.0	+3.5
IKRK				*e*Sn	Sn	09 16 51.0	+1.3
IKRK				AML	AML	09 17 34.6	
	comp=E,477nm,0.5s						
IKRK				AML	AML	09 17 39.0	
	comp=N,467nm,0.5s						
VRTB	Varto-Mus	5.16	30	PN	Pn	09 15 52.1	+1.0
AKDM	Akdamar-Van	5.30	46	PN	Pn	09 15 54.1	+1.0
HRFI	Mount Harif	5.36	210	Pn	Pn	09 15 53.7	-0.2
BHD	Baghdad	5.38	104	*e*Pn	Pn	09 15 57.0	+3.0
BHD				*e*Sn	Sn	09 16 58.0	+2.1
BHD				AML	AML	09 17 40.8	
	comp=E,676nm,0.8s						
KRMI	Paran Flat	5.43	213	Pn	Pn	09 15 54.4	-0.4
YAYX	Yaylak	5.46	322	PN	Pn	09 15 56.5	+1.3
MLAZ	Malazgirt-MUS	5.64	37	PN	Pn	09 15 59.2	+1.4
EIL	Elat	5.72	209	Pn	Pn	09 15 58.0	-0.8
	comp=E,1.4nm,0.3s,baz=181,slow=7.9,SNR=6.8						
EIL				Lg	Lg	09 17 31.2	
	comp=E,14nm,0.3s,baz=81,slow=12,SNR=5.5						
	comp=E,3.9nm,0.4s						
EIL	Elat	5.72	209	PN	Pn	09 16 00.9	+2.2
EIL	Elat	5.72	209	Pn	Pn	09 15 59.5	+0.8
SEYD	Seydisehir-KON	5.77	299	PN	Pn	09 16 00.9	+1.4
LADK	Ladik-KONYA	5.81	308	PN	Pn	09 16 01.9	+1.9
BRTR	Keskin Array B	6.15	326	Pn	Pn	09 16 08.2	+3.4
	comp=E,0.3nm,0.3s,baz=152,slow=15,SNR=8.4						
BRTR				LR	LR	09 18 32.0	
	comp=E,90nm,19.6s,baz=152,slow=38						
	comp=E,1.6nm,0.6s						
AGRB	Hanur-Agry	6.20	37	PN	Pn	09 16 06.9	+1.5
IBDR	Badra	6.67	102	*e*Pn	Pn	09 16 15.0	+3.3
IBDR				*e*Sn	Sn	09 17 28.0	+0.3
IBDR				AML	AML	09 18 10.8	
	comp=N,155nm,0.4s						
IBDR				AML	AML	09 18 11.6	
	comp=E,152nm,0.4s						
RAFI	Al-Rafai	7.31	112	*e*Pn	Pn	09 16 24.0	+3.4
RAFI				*e*Sn	Sn	09 17 44.0	+0.3
RAFI				AML	AML	09 18 41.7	
	comp=E,305nm,0.8s						
GNI	Garni	7.54	42	LR	LR	09 19 48.1	
	comp=E,108nm,19.6s,baz=136,slow=42						
KBZ	Khabaz	9.71	21	LR	LR	09 21 19.9	
	comp=E,107nm,18.1s,baz=174,slow=42						
IDI	Anoyia	10.89	277	Pn	Pn	09 17 09.5	-0.2
	comp=E,1.0nm,0.3s,baz=115,slow=12,SNR=7.3						
	comp=E,3.0nm,0.3s						
MLR	Muntele Rosu	14.22	323	LR	LR	09 23 54.5	
	comp=E,60nm,18.1s,baz=212,slow=39						
AKASG	Malin Array Be	17.24	341	P	P	09 18 36.2	+0.2
	comp=E,0.1nm,0.3s,baz=149,slow=11,SNR=4.8						
	comp=E,0.2nm,0.3s						
WSAR	Wadi Sarin	21.22	117	P	P	09 19 17.9	-1.9
	comp=E,4.7nm,0.8s,baz=356,slow=8.0,SNR=2.3						
	comp=E,4.7nm,0.8s						
AKTO	Aktyubinsk	21.36	37	P	P	09 19 20.0	-1.0
	comp=E,9.4nm,0.8s,baz=229,slow=9.1,SNR=24						
	comp=E,9.4nm,0.8s						
GERES	GERESS Array B	22.92	315	P	P	09 19 38.4	+0.5
	comp=E,1.2nm,0.6s,baz=106,slow=10.0,SNR=9.8						
	comp=E,1.2nm,0.6s						
DAVOX	Davos/Dischmat	24.43	308	P	P	09 19 53.5	+0.9
	comp=E,1.4nm,0.5s,baz=181,slow=22,SNR=3.8						
	comp=E,1.4nm,0.5s						
ARU	Arti	25.80	26	P	P	09 20 04.5	-0.2
	comp=E,1.7nm,0.2s,baz=200,slow=14,SNR=4.3						
	comp=E,1.7nm,0.2s						
MKAR	Makanchi Array	35.10	56	P	P	09 21 26.8	-0.4
	comp=E,0.7nm,0.6s,baz=260,slow=7.6,SNR=6.8						
	comp=E,0.7nm,0.6s						
TORD	Torodi Ar. Bea	39.33	246	P	P	09 22 03.6	+0.3
	comp=E,1.2nm,0.6s,baz=50,slow=4.9,SNR=13						
	comp=E,1.2nm,0.6s						
CMAR	Chiang Mai Arr	55.95	90	P	P	09 24 11.9	-0.5
	comp=E,0.8nm,0.3s,baz=304,slow=9.8,SNR=5.3						
	comp=E,0.8nm,0.3s						

CRAAG ***16*** *09:19:02.7, 36°.34N×3°.48E, Ml4.7*

BJI ***16*** *09:19:02.0±0.0, 36°.30N×3°.50E, h10^{km}, mb4.7/25, mB5.0/11, Ms4.6/1, Ms7 4.4/2*

IDC ***16*** *09:19:03.3±0.5, 36°.41N×3°.49E, h0^{km}, mb4.3/28, mbtmp4.3/35, ML4.2/7, MS4.0/41, Error ellipse: s-maj=14.2km s-min=11.0km az=149.0*

MED_RC ***16*** *09:19:04.0±0.6, 36°.33N×3°.44E, h10^{km}, MW4.7/20, Moment Tensor Solution.Mantle waves: s20,c30; Duration: 1^{s}.1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.98±.05; $M_{\theta\theta}$-0.36±.04; $M_{\phi\phi}$-0.62±.04; $M_{r\theta}$-0.48±.20; $M_{\theta\phi}$-0.63±.03; $M_{\phi r}$-0.27±.16; Best double couple: $M_0$1.20000×10^{16} NP1:ϕ_s230.00000°,δ59.00000°, λ102.00000°. NP2:ϕ_s27.00000°,δ33.00000°,λ71.00000°. Principal axes: T 1.1400, Plg73.0000°, Azm171.0000°; N 0.1200, Plg11.0000°, Azm44.0000°; P -1.2600, Plg13.0000°, Azm311.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

INMG ***16*** *09:19:04.4±2.2, 36°.33N×3°.43E, h0^{km}, ML3.5 Error ellipse: s-maj=10.4km s-min=6.8km az=128.0*

MDD ***16*** *09:19:04.4±0.5, 36°.21N×3°.61E, h13^{km}±7^{km}, Mb5.0/30, M_mb4.5/30, Error ellipse: s-maj=8.9km s-min=2.5km az=140.0*

LDG ***16*** *09:19:05.2±0.2, 36°.11N×3°.67E, h25^{km}, Ml4.2/33, Error ellipse: s-maj=4.4km s-min=3.2km az=169.0*

NEIC ***16*** *09:19:05.0±1.5, 36°.34N±0°.08×3°.48E±0°.08, h13^{km}±3^{km}, mb4.7/152, Error ellipse: s-maj=12.2km s-min=9.0km az=161.0*

IGIL ***16*** *09:19:05.0, 36°.18N×3°.61E, h4^{km}*

CNRM ***16*** *09:19:09.5, 36°.41N×3°.09E, h29^{km}, ml4.8*

ISC 16 09:19:05.3±0.3**, 36°.36N**±0°.03×**3°.46E**±0°.03**, h18**^{km}**, n451, σ2^{s}.02**/440**, mb4.7**/106**, MS4.1**/37**, 51C-15D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.20	184	P	Pb	09 19 07.9	-2.4
ABMS	Boumerdes	0.39	3	P	Pg	09 19 12.4	-1.1
EMHD	Djebel Mahouad	0.44	249	P	Pg	09 19 12.7	-1.6
AKET	Djebel Ketaf	0.47	132	P	Pg	09 19 12.9	-2.0
ABA	Alger-Bouzarea	0.56	323	P	Pg	09 19 15.2	-1.3
ATAF	Djebel Tarf	0.82	126	P	Pb	09 19 19.0	-2.2
EBNR	Beni Rached	1.56	268	P	Pn	09 19 31.0	-1.2
SET	Setif	1.58	95	P	Pn	09 19 32.0	-0.5
CKHR	Kef el Ahmar	1.70	101	P	Pn	09 19 34.3	+0.1
ECHA	Ech Chlef	1.70	264	P	Pn	09 19 34.2	+0.1
EANR	'Ain N'Sour	1.95	259	P	Pn	09 19 37.0	-0.6
DFRA	Djebel Bou Aff	1.96	84	P	Pn	09 19 37.6	-0.2
OKGL	Djebel Kef Gue	2.30	263	P	Pg	09 19 57.0	+7.6
OJGS	Djebel Guires	2.36	250	P	Pg	09 19 50.0	-0.6
CTEI	Djebel Teioual	2.41	96	P	Pn	09 19 44.9	+1.0
CKFL	Kef-Lekhel	2.63	88	P	Pn	09 19 46.6	-0.5
OJBR	Djebel Berber	2.64	254	P	Pn	09 19 40.0	-7.1
ODJA	Bouhanifia	3.10	252	P	Pn	09 19 55.0	+1.5
EIBI	Ibiza	3.15	328	Pn	Pn	09 19 54.6	+0.6
EIBI				⇑*i*Vmb_V		09 19 57.3	
	8µm,SNR=52						
EIBI				Sn	Sn	09 20 28.4	-2.7
CMAH	Djebel Manchou	3.21	84	P	Pn	09 19 54.2	-0.7
ABSA	Djebel Ababsia	3.25	90	P	Pn	09 19 55.1	-0.4
ETOS	Mallorca	3.44	352	Pn	Pn	09 19 57.8	-0.3
ETOS				⇑*i*Vmb_V		09 20 00.4	
	4µm,SNR=19						
ETOS				Sn	Sn	09 20 34.8	-3.6
MAHO	Mahon	3.59	10	P	Pn	09 19 58.2	-1.8
MAHO				S	Sn	09 20 39.0	-2.9
CART	Cartagena	3.77	290	P	Pn	09 20 02.0	-0.6
CART				S	Sn	09 20 45.1	-1.4
CART	Cartagena	3.77	290	Pn	Pn	09 20 01.9	-0.6
CART	Cartagena	3.77	290	P	Pn	09 20 04.5	+1.9
CART	Cartagena	3.77	290	P	Pn	09 20 04.5	+1.9
CART				S	Sn	09 20 42.6	-4.0
EMUR	La Murta	4.04	293	Pn	Pn	09 20 06.2	-0.1
EMUR				⇑*i*Vmb_V		09 20 14.2	
	2µm,SNR=33						
EMUR				Sn	Sn	09 20 54.0	+1.0
ECOL	Islas Columbre	4.15	329	Pn	Pn	09 20 08.1	+0.3
ECOL				Sn	Sn	09 20 53.1	-2.8
EZAR	Zarzadilla de	4.38	292	Pn	Pn	09 20 11.4	+0.3
EZAR				Sn	Sn	09 21 01.5	-0.3
ETOB	Tobarra	4.58	301	Pn	Pn	09 20 14.5	+0.7
ETOB				⇑*i*Vmb_V		09 20 20.8	
	2µm,SNR=34						
ETOB				Sn	Sn	09 21 06.0	-0.7
ENIJ	Nijar	4.59	279	Pn	Pn	09 20 12.6	-1.3
ENIJ				⇑*i*Vmb_V		09 20 20.8	
	1µm,SNR=15						
ENIJ				Sn	Sn	09 21 05.8	-1.0
ECHE	Chera	4.75	314	Pn	Pn	09 20 17.3	+1.1
ECHE				⇑*i*Vmb_V		09 20 20.1	
	3µm,SNR=25						
ECHE				Sn	Sn	09 21 09.9	-1.0
CHAS	Isla Isabel II	4.93	258	P	Pn	09 20 17.6	-0.9
CHAS				S	Sn	09 21 09.1	-5.9
TAF	Taforalt	5.03	254	P	Pn	09 20 21.0	+1.1
TAF	Taforalt	5.03	254	P	Pn	09 20 20.1	+0.1
TAF				S	Sn	09 21 03.0	-15
EMOS	Mosqueruela	5.05	324	Pn	Pn	09 20 21.2	+0.9
EMOS				⇑*i*Vmb_V		09 20 25.5	
	2µm,SNR=18						
EMOS				Sn	Sn	09 21 15.8	-2.5
EBER	Berja	5.13	278	Pn	Pn	09 20 20.6	-0.9
EBER				⇑*i*Vmb_V		09 20 29.7	
	717nm,SNR=18						
EBER				Sn	Sn	09 21 18.4	-2.0
ERTA	Horta de San J	5.20	333	Pn	Pn	09 20 23.1	+0.8
ERTA				⇑*i*Vmb_V		09 20 32.1	
	1µm,SNR=10						

ERTA				Sn	Sn	09 21 18.4	-3.4
EALB	**Alboran**	5.27	267	Pn	Pn	09 20 22.8	-0.3
EALB				⇑iVmb_V		09 20 28.4	
	614nm,SNR=6.5						
EALB				Sn	Sn	09 21 21.1	-2.3
WMELI	**Melilla**	5.31	261	P	Pn	09 20 22.7	-1.0
WMELI				S	Sn	09 21 18.6	-5.8
EPOB	**Poblet**	5.32	340	Pn	Pn	09 20 23.9	-0.1
EPOB				⇑iVmb_V		09 20 33.2	
	538nm,SNR=5.9						
EPOB				Sn	Sn	09 21 22.0	-2.8
JBK	**JBK**	5.32	249	P	Pn	09 20 24.2	+0.1
JBK				S	Sb	09 21 41.5	0.0
GOG	**Mont Gurugu**	5.37	260	P	Pn	09 20 26.0	+1.4
GOG	**Mont Gurugu**	5.37	260	P	Pn	09 20 26.0	+1.4
GOG				S	Sn	09 21 22.4	-3.6
EQES	**Quesada**	5.41	287	Pn	Pn	09 20 26.8	+1.6
EQES				⇑iVmb_V		09 20 34.4	
	3µm,SNR=75						
EQES				Sn	Sn	09 21 28.8	+1.6
EQUE	**Quentar**	5.60	281	Pn	Pn	09 20 27.4	-0.4
EQUE				⇑iVmb_V		09 20 34.0	
	790nm,SNR=11						
EQUE				Sn	Sn	09 21 31.9	+0.2
TDRA	**Tendrara**	5.60	235	P	Pn	09 20 30.0	+2.0
TDRA	**Tendrara**	5.60	235	P	Pn	09 20 28.0	0.0
VSL	**Villasalto**	5.63	54	Pn	Pn	09 20 28.1	0.0
VSL	**Villasalto**	5.63	54	Sn	Sn	09 21 31.3	-1.1
ELGU	**Los Guajares,**	5.72	277	Pn	Pn	09 20 29.4	0.0
ELGU				⇑iVmb_V		09 20 34.0	
	657nm,SNR=17						
ELGU				Sn	Sn	09 21 33.7	-1.0
EMIR	**Miracle**	5.75	345	Pn	Pn	09 20 31.0	+1.2
EMIR				Sn	Sn	09 21 31.7	-3.6
FIGM	**Figuig**	5.75	224	P	Pn	09 20 30.1	+0.3
FIGM	**Figuig**	5.75	224	P	Pn	09 20 30.1	+0.3
FIGM				S	Sn	09 21 35.4	-0.1
EJON	**La Jonquera**	6.10	356	Pn	Pn	09 20 35.5	+0.9
EJON				⇑iVmb_V		09 20 39.5	
	2µm,SNR=5.2						
EJON				Sn	Sn	09 21 41.7	-2.2
PALE	**Palemas**	6.12	261	P	Pn	09 20 34.4	-0.5
PALE				S	Sn	09 21 41.0	-3.4
EGOR	**Sierra Gorda,**	6.12	279	Pn	Pn	09 20 34.4	-0.6
EGOR				⇑iVmb_V		09 20 43.7	
	406nm,SNR=13						
EGOR				Sn	Sn	09 21 46.0	+1.3
ETOR	**Torete**	6.20	318	Pn	Pn	09 20 38.5	+2.5
ETOR				⇑iVmb_V		09 20 48.0	
	936nm,SNR=14						
ETOR				Sn	Sn	09 21 49.9	+3.4
AKLM	**AKL**	6.25	255	P	Pn	09 20 37.4	+0.6
PVLZ	**Peæn de**	6.42	262	P	Pn	09 20 37.6	-1.3
PVLZ				S	Sn	09 21 48.9	-2.7
UCM	**Universidad Co**	6.58	309	P	Pn	09 20 41.6	+0.5
UCM				S	Sn	09 21 48.9	-6.8
EMIJ	**Mijas**	6.63	274	Pn	Pn	09 20 40.6	-1.4
EMIJ				⇑iVmb_V		09 20 46.9	
	257nm,SNR=6.2						
EMIJ				Sn	Sn	09 21 51.7	-5.4
EADA	**Adamuz**	6.66	288	Pn	Pn	09 20 42.3	+0.1
EADA				⇑iVmb_V		09 20 45.6	
	278nm,SNR=8.4						
EADA				Sn	Sn	09 22 00.4	+2.7
ESBB	**Sonseca Array**	6.73	302		Pn	09 20 43.8	+0.5
ESDC	**Sonseca Array**	6.73	302	Pn	Pn	09 20 43.7	+0.5
	5.3nm,0.3s,baz=108,slow=14,SNR=115						
ESDC				Sn	Sn	09 22 03.0	+3.6
	1.1nm,0.3s,baz=106,slow=25,SNR=4.6						
ESDC				LR	LR	09 23 12.8	
	comp=Z,2µm,22.0s,baz=128,slow=37						
	22nm,0.5s						
PAB	**San Pablo**	6.94	300	Pn	Pn	09 20 46.6	+0.4
PAB	**San Pablo**	6.94	300	Pn	Pn	09 20 46.6	+0.4
PAB				⇑iVmb_V		09 20 54.4	
	451nm,SNR=14						
PAB				Sn	Sn	09 22 08.3	+3.6
PAB	**San Pablo**	6.94	300	P	Pn	09 20 46.6	+0.4
MTLF	**Montolieu**	7.04	353	ePn	Pn	09 20 49.1	+1.6
MTLF				eSn	Sn	09 22 05.9	-1.1
	74nm,1.0s						
EPF	**Esparros**	7.08	341	ePn	Pn	09 20 49.1	+1.0
EPF				eSn	Sn	09 22 07.5	-0.6
	198nm,1.1s						
LIJA	**Lijar**	7.14	277	P	Pn	09 20 49.0	0.0
LIJA				S	Sn	09 22 03.0	-6.8
CEU	**Ceuta**	7.16	269	P	Pn	09 20 48.2	-0.9
CEU				S	Sn	09 22 02.4	-7.6
SMIR	**Smir Dam**	7.19	267	P	Pb	09 21 01.0	-8.7
ETSF	**Etsaut**	7.23	336	ePn	Pn	09 20 51.1	+1.0
ETSF				eSn	Sn	09 22 09.9	-1.9
	122nm,1.1s						
ECAB	**El Cabril**	7.29	286	Pn	Pn	09 20 50.0	-0.9
ECAB				⇑iVmb_V		09 20 55.1	
	328nm,SNR=11						
ECAB				Sn	Sn	09 22 13.1	0.0
LCRM	**LCR**	7.32	251	P	Pn	09 20 52.4	+0.9
GUD	**Guadarrama**	7.34	308	Pn	Pn	09 20 52.5	+0.7
GUD				⇑iVmb_V		09 20 55.6	
	346nm,SNR=13						
LMR	**La Mourre**	7.35	18	ePn	Pn	09 20 51.1	-0.6
LMR				eSn	Sn	09 22 09.3	-5.4
	46nm,0.7s						
EORO	**Oroz-Betelu**	7.49	332	Pn	Pn	09 20 56.2	+2.5
EORO				⇑iVmb_V		09 21 04.9	
	292nm,SNR=4.5						
EORO				Sn	Sn	09 22 16.9	-1.2
PGF	**Pioggiola**	7.52	33	ePn	Pn	09 20 54.5	+0.3
PGF				eSn	Sn	09 22 15.3	-3.7
	81nm,0.9s						
MDT	**Midelt**	7.53	244	Pn	Pn	09 20 54.9	+0.6
	1.7nm,0.3s,baz=84,slow=19,SNR=60						
MDT				Lg	Lg	09 23 02.6	
	2.2nm,0.3s,baz=324,slow=23,SNR=2.7						
MDT				LR	LR	09 24 00.1	
	comp=Z,535nm,21.6s,baz=64,slow=39						
	30nm,0.8s						
MDT	**Midelt**	7.53	244	P	Pn	09 20 55.3	+0.9
MDT	**Midelt**	7.53	244	P	Pn	09 20 55.3	+0.9
MD31	**MD31**	7.62	245	P	Pn	09 20 55.8	+0.3
LASF	**Ste Croix**	7.71	2	ePn	Pn	09 20 57.2	+0.4
LASF				eSn	Sn	09 22 19.9	-3.7
	170nm,0.9s						
CZD	**Col de Zad**	7.74	247	P	Pn	09 20 55.4	-2.1
SMRF	**Simiane la Rot**	7.78	11	ePn	Pn	09 20 58.3	+0.6
SMRF				eSn	Sn	09 22 22.2	-3.1
	22nm,0.8s						
EALK	**Alkurruntz**	7.84	332	Pn	Pn	09 21 01.0	+2.5
EALK				⇑iVmb_V		09 21 05.7	
	1µm,SNR=6.1						
EALK				Sn	Sn	09 22 24.0	-2.9
SBF	**Sospel**	8.09	21	ePn	Pn	09 21 01.6	-0.3
SBF				eSn	Sn	09 22 25.3	-7.7
	46nm,0.6s						
EMIN	**Mina Concepcio**	8.22	283	Pn	Pn	09 21 03.8	+0.1
EMIN				⇑iVmb_V		09 21 07.0	
	248nm,SNR=5.9						
EMIN				Sn	Sn	09 22 33.5	-2.6
VIVF	**Saint-Julien-l**	8.54	6	ePn	Pn	09 21 07.1	-1.0
VIVF				eSn	Sn	09 22 39.7	-4.2
	24nm,0.6s						
PBAR	**Barrancos**	8.56	285	ePn	Pn	09 21 08.9	+0.5
PBAR				eSn	Sn	09 22 42.8	-1.7
PBAR				A	A	09 23 29.4	
	12nm,0.7s						
CASP	**Castiglione de**	8.60	39		Pn	09 21 08.8	-0.1
CAF	**Calviac**	8.62	353	ePn	Pn	09 21 10.1	+0.9
CAF				eSn	Sn	09 22 44.3	-1.7
	28nm,0.8s						
ELAN	**Lanestosa**	8.67	324	Pn	Pn	09 21 12.2	+2.3
ELAN				⇑iVmb_V		09 21 16.2	
	739nm,SNR=10						
ELAN				Sn	Sn	09 22 54.6	+7.5
MBDF	**Montbardon**	8.73	16	ePn	Pn	09 21 11.5	+0.7
MBDF	**Montbardon**	8.73	16	ePg	Pn	09 21 48.4	+38
MBDF				eSn	Sn	09 22 45.4	-3.4
	19nm,0.7s						
ORIF	**Oris-en-Rattie**	8.74	11	ePn	Pn	09 21 12.1	+1.1
ORIF				eSn	Sn	09 22 45.6	-3.5
	30nm,0.9s						
ZHG	**ZHG**	8.79	254	P	Pn	09 21 11.8	+0.3
LFF	**La Frestale**	8.81	347	ePn	Pn	09 21 14.2	+2.4
LFF				eSn	Sn	09 22 48.6	-2.1
	37nm,0.6s						
VAE	**Valguarnera**	8.85	79	LR	LR	09 24 47.4	
	comp=Z,158nm,18.1s,baz=270,slow=39						
SSB	**Saint Sauveur**	8.95	5	Pn	Pn	09 21 14.7	+1.0
PVAQ	**Vaqueiros**	9.01	280	ePn	Pn	09 21 14.2	-0.4
PVAQ				eSn	Sn	09 22 51.6	-4.0
PVAQ				A	A	09 22 56.0	
	8.9nm,0.7s						
PVAQ	**Vaqueiros**	9.01	280		Pn	09 21 14.7	+0.1
PVAQ	**Vaqueiros**	9.01	280	P	Pn	09 21 15.3	+0.8
PVAQ	**Vaqueiros**	9.01	280	P	Pn	09 21 15.3	+0.8
PVAQ				S	Sn	09 22 52.1	-3.5
BNI	**Bardonecchia**	9.02	15	Pn	Pn	09 21 16.1	+1.3
RJF	**Les Rejaudoux**	9.05	351	ePn	Pn	09 21 14.6	-0.5
RJF				eSn	Sn	09 22 51.4	-5.2
	12nm,0.5s						
PMRV	**Marv??o**	9.11	293	ePn	Pn	09 21 18.2	+2.4
PMRV				eSn	Sn	09 23 01.5	+3.6
PMRV				A	A	09 23 33.1	
	13nm,0.8s						
PESTR	**Estremoz**	9.12	289	ePn	Pn	09 21 16.4	+0.4
PESTR				eSn	Sn	09 23 07.8	+10
PESTR				A	A	09 23 46.6	
	14nm,0.7s						
PESTR	**Estremoz**	9.12	289	Pn	Pn	09 21 15.7	-0.3
PESTR	**Estremoz**	9.12	289	P	Pn	09 21 15.2	-0.8
PBDV	**Barranco-do-Ve**	9.18	279	ePn	Pn	09 21 18.6	+1.8
PBDV				eSn	Sn	09 22 56.5	-3.1
PBDV				A	A	09 22 59.3	
	8.5nm,0.5s						
PBEJ	**Beja**	9.19	284	ePn	Pn	09 21 18.0	+1.0
MSSA	**Maissana**	9.19	28	Pn	Pn	09 21 17.2	+0.1
PCVE	**Castro Verde**	9.28	281	ePn	Pn	09 21 18.8	+0.5
PCVE				eSn	Sn	09 22 59.7	-2.5
PCVE				A	A	09 23 16.6	
	6.0nm,0.6s						
PCBR	**Castelo Branco**	9.29	295	ePn	Pn	09 21 20.3	+1.9
OSSC	**Osservatorio P**	9.32	37		Pn	09 21 19.5	+0.7
EVO	**Evora**	9.38	287	ePn	Pn	09 21 21.1	+1.6
MESJ	**Messejana**	9.45	282	eP	Pn	09 21 19.5	-0.9
MESJ	**Messejana**	9.45	282	ePn	Pn	09 21 20.7	+0.2
LPG	**La Plagne**	9.46	14	ePn	Pn	09 21 22.2	+1.2
LPG				eSn	Sn	09 23 04.4	-2.6
	11nm,0.2s						
LPL	**La Plagne**	9.48	14	ePn	Pn	09 21 23.2	+2.1
LPL	**La Plagne**	9.48	14	ePg	Pn	09 22 04.9	+44
LPL				eSn	Sn	09 23 03.1	-4.1
	20nm,0.6s						
MVO	**Moncorvo**	9.49	304	ePn	Pn	09 21 22.5	+1.4
MTE	**Manteigas**	9.53	298	ePn	Pn	09 21 24.4	+2.7
MTE	**Manteigas**	9.53	298	Pn	Pn	09 21 22.2	+0.5
PBRG	**Braganca**	9.61	308	ePn	Pn	09 21 23.4	+0.6
PMTG	**Montargil**	9.64	290	ePn	Pn	09 21 23.2	0.0
PMTG				eSn	Sn	09 23 08.9	-2.1
PMTG				A	A	09 24 01.6	
	10nm,0.6s						
PNCL	**Nicolau / Gran**	9.72	284	ePn	Pn	09 21 24.7	+0.5
PNCL				eSn	Sn	09 23 24.2	+11
MORF	**Marmelete**	9.75	279	ePn	Pn	09 21 25.7	+1.0
MORF				eSn	Sn	09 23 11.8	-2.0
MORF				A	A	09 23 54.4	
	5.1nm,0.7s						
MURB	**Monte Urbino**	9.80	43	Pn	Pn	09 21 25.8	+0.3
ZGR	**Zagora**	9.82	233	P	Pn	09 21 26.2	+0.4
PTEO	**Sao Teotonio**	9.82	281	ePn	Pn	09 21 27.0	+1.4
PFVI	**Vila Bisbo**	9.89	278	Pn	Pn	09 21 27.4	+0.9
PFVI	**Vila Bisbo**	9.89	278	P	Pn	09 21 25.7	-0.9
PVIS	**Viseu**	9.90	299	ePn	Pn	09 21 28.1	+1.4
TCF	**Toulx Ste Croi**	9.96	355	ePn	Pn	09 21 28.7	+1.1
TCF				eSn	Sn	09 23 14.3	-4.6
	15nm,0.8s						
PVRL	**Vila Real**	10.00	303	ePn	Pn	09 21 28.3	+0.2
POLO	**Lamas de Olo**	10.10	303	ePn	Pn	09 21 29.9	+0.4
OUZM	**OUZ**	10.10	240	P	Pn	09 21 31.7	+2.1
PCAS	**Casmilo, Conde**	10.10	295	ePn	Pn	09 21 30.8	+1.3
BGF	**Bois d'Agland**	10.20	358	ePn	Pn	09 21 32.4	+1.6
SMF	**Signal de Mont**	10.28	1	ePn	Pn	09 21 32.6	+0.7
SMF				eSn	Sn	09 23 22.3	-4.4
	17nm,0.7s						
SENIN	**Lac Senin/Sane**	10.40	15	Pn	Pn	09 21 35.2	+1.5
PCAB	**Cabril**	10.40	304	ePn	Pn	09 21 36.0	+2.4
AVF	**Avril sur Loir**	10.42	360	ePn	Pn	09 21 33.6	-0.2
AVF				eSn	Sn	09 23 25.8	-4.3
	5.1nm,0.6s						
CABF	**La Chapelle**	10.43	10	ePn	Pn	09 21 35.2	+1.2
CABF				eSn	Sn	09 23 26.5	-3.9
	18nm,0.7s						
MFF	**Saint Martin d**	10.58	346	ePn	Pn	09 21 37.2	+1.2
MFF				eSn	Sn	09 23 29.1	-4.9
	17nm,0.6s						
PGAV	**Gavieira, Arco**	10.68	305	ePn	Pn	09 21 38.3	+0.8
SSF	**Saint Saulge**	10.69	0	ePn	Pn	09 21 38.1	+0.5
SSF				eSn	Sn	09 23 33.6	-3.2
	21nm,0.9s						
OUK	**Oukaimeden**	10.73	245	P	Pn	09 21 38.7	+0.3
LOR	**Lormes**	10.90	1	ePn	Pn	09 21 41.7	+1.2
	baz=193						
LOR				eSn	Sn	09 23 37.2	-4.8
	38nm,1.2s,baz=187						
HYF	**Humbligny**	10.92	357	ePn	Pn	09 21 42.5	+1.9
TUE	**Stuetta**	11.03	22	Pn	Pn	09 21 42.9	+0.6
DAVOX	**Davos/Dischmat**	11.46	23	Pn	Pn	09 21 48.0	-0.3
	0.4nm,0.3s,baz=211,slow=9.7,SNR=4.4						
DAVOX				LR	LR	09 25 51.1	
	comp=Z,246nm,19.0s,baz=268,slow=36						
	1.7nm,0.5s						
HINF	**Hinteralfeld**	11.72	11	ePn	Pn	09 21 51.4	-0.3
SFTF	**Sexfontaines**	11.89	5	ePn	Pn	09 21 55.6	+1.6
DAVA	**Damuels**	11.92	22	P	Pn	09 21 58.1	+3.6
	9.9nm,0.8s,SNR=5.3						
FETA	**Feichten**	11.95	25	P	Pn	09 21 58.8	+3.9
	20nm,1.1s,SNR=7.3						
MEZF	**Maizieres J'vi**	12.19	5	ePn	Pn	09 21 58.3	+0.3
	baz=167						
SQTA	**Sankt Quirin**	12.29	26	P	Pn	09 22 03.0	+3.5
	39nm,1.3s,SNR=5.2						
PAGF	**Fort de Pagny**	12.30	7	ePn	Pn	09 22 01.4	+1.9
MOTA	**Moosalm**	12.36	25	P	Pn	09 22 04.2	+3.8
	31nm,1.1s,SNR=11						
CDF	**Champ du Feu**	12.37	12	ePn	Pn	09 22 00.5	0.0
ABTA	**Abfaltersbach**	12.39	30	P	Pn	09 22 03.5	+2.7
	12nm,0.8s,SNR=10						
GRR	**Gorron**	12.43	347	ePn	Pn	09 22 01.9	+0.6
GRR				eSn	Sn	09 24 14.9	-4.4
	18nm,0.8s						
WTTA	**Wattenberg**	12.48	27	P	Pn	09 22 05.2	+3.1
	11nm,1.0s,SNR=6.1						
BFO	**Black Forest**	12.49	15	Pn	Pn	09 22 01.4	-0.7
LDF	**La Druitiere**	12.51	349	ePn	Pn	09 22 03.4	+1.1
LDF				eSn	Sn	09 24 16.2	-4.9
	23nm,0.9s						
WATA	**Walderalm**	12.52	26	P	Pn	09 22 05.7	+3.0
	15nm,1.1s,SNR=7.1						
QUIF	**Quistinic**	12.54	339	ePn	Pn	09 22 03.3	+0.5
QUIF				eSn	Sn	09 24 15.9	-6.1
	27nm,1.0s						
SGMF	**Saint Gilles**	12.69	341	ePn	Pn	09 22 06.1	+1.3
SGMF				eSn	Sn	09 24 17.7	-7.8
	25nm,0.9s						
FLN	**La Foliniere**	12.73	348	ePn	Pn	09 22 05.3	0.0
	baz=177						
MYKA	**Terra Mystica**	12.78	33	eP	Pn	09 22 10.0	+3.9
	15nm,1.4s						
ROSF	**Rostrenen**	12.95	340	ePn	Pn	09 22 09.3	+0.9
KBA	**Koelnbreinsper**	13.00	31	P	Pn	09 22 11.8	+2.6
	16nm,1.2s,SNR=7.3						
OBKA	**Obir**	13.10	36	eP	Pn	09 22 12.2	+1.6
	11nm,1.1s						
WLF	**Walferdange**	13.44	8	Pn	Pn	09 22 15.1	+0.1
WLF	**Walferdange**	13.44	8	dP	Pn	09 22 15.6	+0.5
SOKA	**Soboth**	13.46	36	P	Pn	09 22 17.4	+2.1
	20nm,1.2s,SNR=7.8						
BIOA	**Bad Ischl, Aus**	13.60	31	eP	P	09 22 22.1	-4.1
	4.4nm,0.6s						
BAIF	**Baives**	13.70	2	ePn	Pn	09 22 20.3	+1.7
DOU	**Dourbes**	13.76	3	dP	Pn	09 22 20.7	+1.4
	comp=Z,34nm,0.8s						
GIVF	**Givet**	13.77	4	ePn	Pn	09 22 21.7	+2.1
BMRD	**Maredsous**	13.97	3	dP	Pn	09 22 24.3	+2.0
	comp=Z,15nm,0.8s						
MOA	**Molln**	13.99	32	P	P	09 22 26.3	-4.2
	comp=Z,9.4nm,1.1s,SNR=5.9						
BGES	**Gesves**	14.07	4	dP	Pn	09 22 25.3	+1.7
	comp=Z,28nm,0.6s						
ARSA	**Arzberg**	14.10	36	P	Pn	09 22 25.8	+1.7
	comp=Z,14nm,1.1s,SNR=8.7						
BHOU	**Houvegnez**	14.11	7	dP	Pn	09 22 25.4	+1.1
BCLA	**Clavier**	14.12	5	dP	Pn	09 22 26.2	+1.9
SNF	**Seneffe**	14.16	2	dP	Pn	09 22 27.8	+3.0
	comp=Z,62nm,0.7s						
BSTI	**Sart Tilman**	14.30	5	dP	Pn	09 22 29.1	+2.3
BTNL	**Ternell**	14.35	7	dP	Pn	09 22 29.1	+1.6
MEM	**Membach**	14.36	7	dP	Pn	09 22 29.1	+1.4
GRFO	**Grafenberg**	14.47	21	Pn	Pn	09 22 29.2	0.0
GRA1	**Grafenberg Arr**	14.47	21		Pn	09 22 29.4	+0.2
GEC2	**GERESS Array S**	14.56	28	Pn	Pn	09 22 31.1	+0.6
GERES	**GERESS Array B**	14.56	28	Pn	Pn	09 22 30.9	+0.4
	comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=51						
	comp=Z,19nm,1.1s						
GERES	**GERESS Array B**	14.56	28		Pn	09 22 31.4	+0.9
CONA	**Conrad Observa**	14.75	35	P	Pn	09 22 34.5	+1.5
	comp=Z,17nm,1.3s,SNR=10						
KHC	**Kasperske Hory**	14.75	27	Pn	Pn	09 22 32.6	-0.5
KHC	**Kasperske Hory**	14.75	27	eP	Pn	09 22 33.9	+0.9
KHC				AMS	AMS	09 31 10.0	
	comp=Z,400nm,9.5s						
CKRC	**Cesky Krumlov**	14.78	29	eP	Pn	09 22 34.9	+1.6
CKRC				AMS	AMS	09 29 20.0	
	comp=Z,200nm,15.0s						
RONA	**Rosalia, Austr**	14.79	36	i P	Pn	09 22 35.1	+1.6
	comp=Z,21nm,1.0s,SNR=7.8						
SOP	**Sopron**	14.90	37	P	Pn	09 22 37.0	+2.0
MPLH	**Magyarpolny**	15.04	40	P	P	09 22 40.2	-1.9
EGYH	**Egyhazaskeszo**	15.10	39	P	P	09 22 40.6	-2.2
NKC	**Novy Kostel**	15.32	22	AMS	AMS	09 27 40.0	
	comp=Z,300nm,17.9s						
ZST	**Bratislava**	15.52	36	eP	P	09 22 49.9	+2.4
TREC	**Trest**	15.63	30	AMS	AMS	09 30 20.0	
	comp=Z,300nm,14.1s						
MODS	**Modra-Piesok**	15.73	36	eP	P	09 22 52.0	+2.2
PRU	**Pruhonice**	15.81	27	AMS	AMS	09 31 20.0	
	comp=Z,400nm,9.2s						
KRUC	**Moravsky**	15.83	33	ePN	Pn	09 22 47.1	-0.1
VRAC	**Vranov**	16.10	32	Pn	P	09 22 52.6	-1.3
	comp=Z,0.5nm,0.3s,baz=234,slow=11,SNR=6.2						
	comp=Z,8.5nm,0.8s						
VRAC	**Vranov**	16.10	32	ePN	P	09 22 52.3	-1.6
KKB	**Krupnik**	16.19	64	P	Pn	09 22 52.7	+0.9
MDVR	**Moldovita**	16.20	53	⇑P	P	09 22 54.3	-0.8
JAVC	**Velka Javorina**	16.26	35	ePN	P	09 22 54.7	-1.0
PVCC	**Panska Ves**	16.27	26	AMS	AMS	09 29 50.0	
	comp=Z,400nm,14.5s						
BRG	**Berggiesshubel**	16.35	24	eP	Pn	09 22 54.1	+0.3
BRG				Amp		09 23 00.4	
	comp=Z,12nm,1.3s						
BRG				Amp		09 29 36.0	
	comp=N,0.7nm,12.7s						
BRG				Amp		09 29 37.0	
	comp=Z,0.3nm,15.9s						
BRG				Amp		09 29 43.0	
	comp=E,0.4nm,14.0s						
BRG				Amp		09 42 42.0	
	comp=E,0.7nm,17.1s						
BRG				Amp		09 42 44.0	
	comp=N,0.7nm,19.2s						
BRG				Amp		09 42 56.0	
	comp=Z,1.3nm,17.1s						
CLL	**Collm**	16.43	22	P	Pn	09 22 53.0	-1.8
CLL	**Collm**	16.43	22	eP	P	09 22 56.0	-1.5
	comp=Z,25nm,1.3s						
CLL				i pP	pP	09 22 59.2	-3.5
	comp=Z,25nm,1.3s						
CLL				ePP	sP	09 23 07.0	+1.8
CLL				ex	x	09 23 14.0	
CLL				ex	x	09 24 12.0	
CLL				eSx	Sx	09 26 13.0	
CLL				Lm	MLR	09 28 00.0	
	comp=Z,200nm,19.6s						
VTS	**Vitosha**	16.48	62	P	Pn	09 22 56.6	+0.9
BZS	**Buzias**	16.51	50	⇑P	P	09 22 57.4	-1.0
VYHS	**Vyhne**	16.57	38	eP	P	09 23 01.1	+1.9
MMB	**Musomiste**	16.60	66	P	Pn	09 22 56.1	-1.0
MAUC	**Maruska**	16.69	34	eP	P	09 23 01.0	+0.5
MAUC				AMS	AMS	09 30 00.0	
	comp=Z,600nm,14.8s						
HERR	**Herculane**	16.70	54	⇑P	P	09 22 59.8	-0.7
PSZ	**Piszkesteto**	16.75	41	⇑P	P	09 23 01.4	+0.2
PSZ	**Piszkesteto**	16.75	41		P	09 23 00.1	-1.2
PSZ	**Piszkesteto**	16.75	41	P	Pn	09 22 59.2	+0.2
KRLC	**Kraliky**	16.76	31	AMS	AMS	09 30 30.0	
	comp=Z,300nm,16.1s						
DPC	**Dobruska-Polom**	16.79	30	eP	Pn	09 23 00.1	+0.6
DPC				AMS	AMS	09 31 00.0	
	comp=Z,200nm,10.4s						
UPC	**Upice**	16.79	29	eP	P	09 23 02.7	+1.2
UPC				AMS	AMS	09 31 20.0	
	comp=Z,200nm,13.6s						
SIRR	**Siria**	16.85	48	⇑P	P	09 23 02.2	0.0
MORC	**Moravsky Berou**	16.86	33	⇑P	P	09 23 02.3	-0.1
MORC	**Moravsky Berou**	16.86	33		P	09 23 01.1	-1.4
MORC	**Moravsky Berou**	16.86	33	ePN	Pn	09 23 00.1	-0.3
CHVC	**Chvalec**	16.87	29	eP	P	09 23 03.9	+1.4
CHVC				AMS	AMS	09 31 50.0	
	comp=Z,300nm,9.8s						
OSTC	**Ostas**	16.91	29	eP	P	09 23 04.1	+1.2
OSTC				AMS	AMS	09 30 20.0	
	comp=Z,200nm,8.9s						
MPEP	**Malo Peshtene**	17.05	60	P	P	09 23 04.3	-0.1
GZR	**Gura Zlata**	17.14	52	⇑P	P	09 23 05.5	0.0
KSP	**Ksiaz**	17.17	29	eP	P	09 23 04.8	-0.9
OKC	**Ostrava-Krasne**	17.18	34	eP	P	09 23 06.2	+0.4
OKC				AMS	AMS	09 30 30.0	
	comp=Z,200nm,15.2s						
KECS	**Kecovo**	17.41	41	eP	P	09 23 13.2	+4.8
IDI	**Anoyia**	17.42	87	⇑P	P	09 23 08.4	-0.2
IDI	**Anoyia**	17.42	87	P	P	09 23 09.2	+0.6
	comp=Z,0.4nm,0.3s,baz=294,slow=12,SNR=4.0						
	comp=Z,13nm,0.8s						
DRGR		17.74	48	⇑P	P	09 23 13.6	+1.5
LOT	**Lotru**	17.80	53	⇑P	P	09 23 13.9	+1.1
RDO	**Rodhopi**	17.86	68	P	P	09 23 13.1	-0.3
NIE	**Niedzica**	17.91	38	eP	P	09 23 17.1	+3.2
CRVS	**Cervenica-Dubn**	18.18	41	eP	P	09 23 20.2	+3.3
OJC	**Ojcow**	18.20	35	eP	P	09 23 18.3	+1.2
OJC	**Ojcow**	18.20	35		P	09 23 17.2	+0.1
VOIR		18.63	54	⇑P	Pn	09 23 23.3	+1.0
KOLS	**Kolonicke sedl**	18.63	42	eP	Pn	09 23 25.3	+3.1
DOPR	**Dopca**	19.05	53	⇑P	Pn	09 23 27.8	+0.5
MLR	**Muntele Rosu**	19.24	55	⇑P	Pn	09 23 30.0	+0.3
MLR	**Muntele Rosu**	19.24	55	P	Pn	09 23 30.2	+0.5
	comp=Z,0.2nm,0.3s,baz=306,slow=7.2,SNR=13						
	comp=Z,32nm,1.1s						
MLR	**Muntele Rosu**	19.24	55	P	Pn	09 23 29.0	-0.7
MLR				IAmb	IAmb	09 23 34.1	
	comp=Z,35nm,1.1s						
KWP	**Kalwaria Pacla**	19.27	41	eP	Pn	09 23 31.3	+1.4
OZUR		19.35	53	⇑P	Pn	09 23 31.4	+0.4
NEHR	**Nehoiu**	19.45	55	⇑P	Pn	09 23 31.2	-0.9
EKA	**Eskdalemuir Ar**	19.51	349	P	Pn	09 23 35.0	+2.2
	comp=Z,5.7nm,0.8s,baz=152,slow=13,SNR=13						
EKA				LR	LR	09 30 36.4	
	comp=Z,280nm,18.5s,baz=164,slow=36						
ISR	**Istrita**	19.51	56	⇓P	Pn	09 23 33.2	+0.3
COVR	**Voineasa-Covas**	19.53	54	⇑P	Pn	09 23 32.5	-0.6
BURAR	**Bucovina Array**	19.63	48	⇓P	Pn	09 23 34.7	+0.4
BURAR	**Bucovina Array**	19.63	48	P	Pn	09 23 34.9	+0.5
VRI	**Vrincioaia**	19.88	54	⇑P	P	09 23 35.7	+0.1
BIZ	**Bicaz**	19.89	51	⇑P	Pn	09 23 37.4	+0.1
HARR	**Harsova**	20.33	58	⇑P	P	09 23 40.7	+0.3
CFR	**Carcaliu**	20.60	57	⇑P	P	09 23 43.2	-0.2
VARL	**Varlezi**	20.63	55	⇑P	Pn	09 23 44.6	-1.4
TPGR	**Topolog**	20.71	58	⇑P	P	09 23 44.8	+0.2
VASR	**Vaslui**	20.84	53	⇑P	P	09 23 46.3	+0.3
ELL	**Elmali**	21.24	81	P	P	09 23 50.6	+0.2
ELL				IAmb	IAmb	09 23 57.8	
	comp=Z,26nm,0.8s						
SORM	**Soroca**	21.76	50	⇑P	P	09 23 56.7	+0.9
SUW	**Suwalki**	22.34	32	P	P	09 24 01.6	-0.3
SUW	**Suwalki**	22.34	32	eP	P	09 24 02.2	+0.2
KOWA	**Kowa**	22.78	199	P	P	09 24 07.4	+0.5
TOA0	**Torodi Ar. Sit**	23.17	184	P	P	09 24 10.1	-0.8
TOA0				IAmb	IAmb	09 24 13.7	
	comp=Z,26nm,0.8s						
TORD	**Torodi Ar. Bea**	23.17	184	P	P	09 24 10.6	-0.4
	comp=Z,33nm,1.1s,baz=0.8,slow=9.9,SNR=44						
TORD				Lg	Lg	09 31 28.6	
	baz=350,slow=24,SNR=3.8						
	comp=Z,33nm,1.1s						

AKASG	Malin Array Be	23.39	44	P	P	09 24 11.1	-1.8
	comp=Z,12nm,0.9s,baz=245,slow=9.5,SNR=21						
	comp=Z,12nm,0.9s						
AKBB	Malin Array Si	23.39	44	P	P	09 24 10.5	-2.5
AKBB				IAmb	IAmb	09 24 13.6	
	comp=Z,27nm,1.1s						
PABE	Paberze	23.72	30	P	P	09 24 15.1	-0.9
PABE	Paberze	23.72	30	*e*P	P	09 24 16.7	+0.6
BR131	Keskin Array S	23.95	73	P	P	09 24 18.3	-0.4
BRTR	Keskin Array B	23.95	73	P	P	09 24 18.2	-0.4
	comp=Z,0.8nm,0.6s,baz=126,slow=16,SNR=4.2						
BRTR				PcP	PcP	09 28 01.8	+1.0
	comp=Z,2.1nm,1.0s,baz=224,slow=3.2,SNR=4.9						
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	23.95	73	P	P	09 24 19.2	+0.5
NACGM	Naroch	24.50	33	⇑*e*P	P	09 24 24.0	+0.7
	baz=230						
HFS	Hagfors	24.69	12	P	P	09 24 24.0	-1.1
	comp=Z,2.3nm,0.9s,baz=243,slow=45,SNR=3.4						
	comp=Z,2.3nm,0.9s						
MNK	Minsk	24.75	35	*i* P	P	09 24 23.4	-2.2
	comp=E,2.0nm,0.7s,baz=233						
MNK				*i* P	P	09 24 23.4	-2.2
	comp=N,20nm,1.2s						
MNK				*i* P	P	09 24 23.4	-2.2
	comp=Z,23nm,1.2s						
MNK				*i* PP	PnPn	09 24 54.7	-3.1
MNK				*i* S	S	09 28 44.4	-2.4
MNK				*i* SS	SnSn	09 29 40.0	+6.3
MNK				*i* LQ	LQ	09 32 04.6	
MNK				*i* LR	LR	09 33 57.0	
MNK				*i* LRM	MLR	09 34 41.3	
	comp=Z,69nm,12.9s						
MNK				*i* LRM	MLR	09 34 46.5	
	comp=E,24nm,14.2s						
MNK				*i* LRM	MLR	09 34 49.3	
	comp=N,167nm,13.7s						
NB2	NORSAR Subarra	25.19	9	P	P	09 24 29.3	-0.3
	comp=Z,32nm,2.5s,baz=191,slow=9.3						
NOA	NORSAR Array B	25.19	9	P	P	09 24 30.4	+0.8
	comp=Z,2.1nm,1.0s,baz=204,slow=11,SNR=5.4						
	comp=Z,2.1nm,1.0s						
BNN	Bunyan	25.71	75	P	P	09 24 34.7	0.0
VSU	Vasula	26.89	27	*e*P	P	09 24 45.2	+0.3
FINES	FINESS Array B	28.87	23	P	P	09 25 02.1	-0.6
	comp=Z,4.6nm,0.9s,baz=163,slow=7.4,SNR=4.1						
	comp=Z,4.6nm,0.9s						
DBIC	Dimbokro	30.51	196	LR	LR	09 37 59.7	
	comp=Z,171nm,18.8s,baz=27,slow=37						
KLMR	Klimovskoe	33.47	31	*e*P	P	09 25 42.0	-1.1
KLMR				AMP		09 25 45.7	
	comp=Z,22nm,1.2s						
KLMR				*e*PP	PnPn	09 26 52.6	-1.7
JMIC	Jan Mayen	35.27	353	LR	LR	09 40 46.8	
	comp=Z,166nm,18.1s,baz=344,slow=37						
ARCES	ARCESS Array B	35.34	13	P	P	09 25 59.2	0.0
	comp=Z,3.0nm,0.6s,baz=223,slow=4.6,SNR=17						
	comp=Z,3.0nm,0.6s						
ARU	Arti	41.64	43	P	P	09 26 51.6	-0.7
	comp=Z,1.3nm,0.4s,baz=258,slow=7.9,SNR=7.9						
	comp=Z,1.3nm,0.4s						
ARU	Arti	41.64	43	P	P	09 26 50.6	-1.7
SUMG	Summit	41.94	342	P	P	09 26 54.8	-0.2
SUMG	Summit	41.94	342	*i* P	P	09 26 54.0	-1.0
SFJD	Kangerlussuaq	43.21	332	LR	LR	09 42 58.1	
	comp=Z,306nm,18.0s,baz=78,slow=33						
ATD	Arta Tunnel	43.23	115	LR	LR	09 47 28.5	
	comp=Z,172nm,20.5s,baz=335,slow=39						
ASUD	Al Ashush, Dub	45.72	90	P	P	09 27 26.0	+0.5
SHME	Shamm	45.73	88	P	P	09 27 25.4	-0.2
FAQ	Al Faqa, Dubai	45.88	89	P	P	09 27 27.0	+0.2
BANOM	Banah	45.92	88	*i* P	P	09 27 27.3	+0.2
	SNR=9.5						
MSFE	Esma-Masafi	46.06	88	P	P	09 27 27.3	-0.9
HATD	Hatta, Dubai	46.28	89	*i* P	P	09 27 30.1	+0.2
	SNR=12						
UOSS	Minazif	46.28	89	P	P	09 27 28.5	-1.5
UOSS	Minazif	46.28	89	*i* P	P	09 27 29.7	-0.2
	SNR=11						
ASHO	Ashiyiah	46.28	89	*i* P	P	09 27 31.0	+1.0
	SNR=9.8						
SOHO	SOHO	46.92	90	*i* P	P	09 27 36.0	+1.0
	SNR=7.3						
KMBO	Kilima Mbogo	48.77	132	P	P	09 27 51.2	+1.6
	comp=Z,1.1nm,0.3s,baz=23,slow=19,SNR=4.4						
KMBO				LR	LR	09 50 03.5	
	comp=Z,179nm,18.0s,baz=290,slow=38						
	comp=Z,1.1nm,0.3s						
WSAR	Wadi Sarin	49.03	89	P	P	09 27 51.6	+0.2
	comp=Z,12nm,1.0s,baz=330,slow=3.2,SNR=4.2						
WSAR				LR	LR	09 53 42.8	
	comp=Z,148nm,18.7s,baz=286,slow=42						
	comp=Z,12nm,1.0s						
FRB	Frobisher Bay	50.24	327	LR	LR	09 46 16.8	
	comp=Z,137nm,20.1s,baz=21,slow=32						
SCHQ	Schefferville	50.29	315	P	P	09 28 01.1	+0.6
	comp=Z,5.0nm,0.8s,baz=88,slow=6.5,SNR=5.2						
SCHQ				LR	LR	09 46 52.7	
	comp=Z,277nm,19.6s,baz=74,slow=33						
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	53.71	60	P	P	09 28 26.2	-0.2
	comp=Z,1.7nm,0.8s,baz=224,slow=2.4,SNR=1.9						
AAK				PcP	PcP	09 29 34.0	+1.6
	comp=Z,0.9nm,0.3s,baz=252,slow=4.1,SNR=2.3						
	comp=Z,1.7nm,0.8s						
AAK	Ala-Archa	53.71	60	IAmb	IAmb	09 28 29.1	
	comp=Z,3.1nm,1.1s						
KURK	Kurchatov	54.05	49	P	P	09 28 28.1	-0.4
KURK				IAmb	IAmb	09 28 39.7	
	comp=Z,6.4nm,1.1s						
NRIK	Noril'sk	54.46	26	P	P	09 28 32.0	+0.8
NRIK				IAmb	IAmb	09 28 33.8	
	comp=Z,9.0nm,1.2s						
KSH	Kashi	55.83	63	P	P	09 28 41.4	-0.3
KSH				pP	pP	09 28 48.3	+0.6
KSH				PcP	PcP	09 29 42.6	+2.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
RCBR	Riachuelo	55.85	230	LR	LR	09 50 40.9	
	comp=Z,79nm,18.1s,baz=156,slow=34						
TARG	Taragay, Kyrgy	56.33	60	IAmb	IAmb	09 28 47.8	
	comp=Z,7.6nm,1.1s						
LSZ	Lusaka	56.42	151	LR	LR	09 54 49.2	
	comp=Z,389nm,20.1s,baz=340,slow=38						
ZALV	Zalesovo Beam	56.79	44	P	P	09 28 47.9	-0.3
	comp=Z,1.1nm,0.6s,baz=283,slow=9.0,SNR=4.5						
ZALV				LR	LR	09 54 58.1	
	comp=Z,63nm,18.2s,baz=195,slow=38						
	comp=Z,1.1nm,0.6s						
TSUM	Tsumeb	56.85	164	LR	LR	09 54 01.4	
	comp=Z,165nm,18.8s,baz=329,slow=37						
RES	Resolute Bay	57.46	342	LR	LR	09 52 03.2	
	comp=Z,147nm,20.0s,baz=33,slow=34						
MKAR	Makanchi Array	57.57	53	P	P	09 28 53.6	-0.2
	comp=Z,1.6nm,0.7s,baz=285,slow=5.9,SNR=16						
MKAR				PcP	PcP	09 29 47.5	+0.4
	comp=Z,3.7nm,1.0s,baz=286,slow=3.9,SNR=6.1						
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	57.57	53	P	P	09 28 53.5	-0.4
SADO	Sadowa	60.77	306	LR	LR	09 52 42.7	
	comp=Z,245nm,20.3s,baz=58,slow=33						
WMQ	Urumqi	62.23	54	*e*P	P	09 29 29.8	+3.8
WMQ				pmax	pmax		
	comp=Z,22nm,0.8s						
LBTB	Lobatse	64.52	158	LR	LR	10 01 39.8	
	comp=Z,135nm,19.6s,baz=350,slow=40						
TIXI	Tiksi	65.69	16	P	P	09 29 49.0	+0.9
	comp=Z,3.2nm,0.8s,baz=269,slow=24,SNR=9.4						
TIXI				LR	LR	10 01 21.2	
	comp=Z,58nm,18.4s,baz=188,slow=39						
	comp=Z,3.2nm,0.8s						
TIXI	Tiksi	65.69	16	P	P	09 29 47.3	-0.8
BOSA	Boshof	67.81	159	P	P	09 30 08.4	+6.1
	comp=Z,2.4nm,0.9s,baz=354,slow=5.3,SNR=3.7						
BOSA				LR	LR	09 59 25.3	
	comp=Z,164nm,18.9s,baz=6.0,slow=36						
TKL	Tuckaleechee C	68.02	299	LR	LR	09 59 44.2	
	comp=Z,153nm,18.1s,baz=10,slow=36						
ULM	Lac du Bonnet	68.37	317	P	P	09 30 05.5	-0.1
	comp=Z,11nm,0.9s,baz=65,slow=6.6,SNR=8.1						
ULM				LR	LR	09 56 56.9	
	comp=Z,166nm,18.9s,baz=53,slow=33						
	comp=Z,11nm,0.9s						
SPMN	Marine on St.	69.18	311	IAmb	IAmb	09 30 12.4	
	comp=Z,5.4nm,0.9s						
T47A	Sharon Grove	69.68	301	IAmb	IAmb	09 30 30.4	
	comp=Z,7.2nm,0.9s						
YKA	Yellowknife Ar	69.73	334	P	P	09 30 14.4	+0.7
	comp=Z,6.6nm,0.9s,baz=52,slow=6.2,SNR=35						
YKA				LR	LR	09 59 15.5	
	comp=Z,101nm,18.1s,baz=90,slow=35						
	comp=Z,6.6nm,0.9s						
SUR	Sutherland	70.29	164	LR	LR	10 00 56.3	
	comp=Z,191nm,18.3s,baz=336,slow=36						
INK	Inuvik	70.82	344	P	P	09 30 20.3	-0.1
	comp=Z,1.3nm,1.0s,baz=53,slow=14,SNR=3.1						
	comp=Z,1.3nm,1.0s						
F33A	5 Mile Ranch,	70.94	313	IAmb	IAmb	09 30 22.0	
	comp=Z,4.0nm,0.9s						
BDFB	Brasilia	70.96	233	P	P	09 30 23.8	+1.7
	comp=Z,6.7nm,0.9s,baz=52,slow=1.8,SNR=5.9						
BDFB				LR	LR	09 58 06.3	
	comp=Z,87nm,21.8s,baz=311,slow=33						
	comp=Z,6.7nm,0.9s						
SONM	Songino Array	71.67	44	P	P	09 30 27.0	+0.9
	comp=Z,3.2nm,1.0s,baz=294,slow=6.1,SNR=12						
	comp=Z,3.2nm,1.0s						
SONM	Songino Array	71.67	44	P	P	09 30 26.6	+0.5
SONM				IAmb	IAmb	09 30 28.0	
	comp=Z,6.6nm,1.2s						
ECSD	EROS Data Cent	72.28	311	P	P	09 30 29.4	-0.2
ECSD				IAmb	IAmb	09 30 30.4	
	comp=Z,9.9nm,1.1s						
MGMO	Mountain Grove	73.10	304	IAmb	IAmb	09 30 38.5	
	comp=Z,5.9nm,1.0s						
S39A	Bolivar	73.51	305	IAmb	IAmb	09 30 41.0	
	comp=Z,7.1nm,1.1s						
HHAR	Hobbs	74.70	304	P	P	09 30 43.5	-0.5
HHAR				IAmb	IAmb	09 31 02.5	
	comp=Z,6.8nm,1.1s						
W39A	Magazine	75.20	303	IAmb	IAmb	09 30 50.8	
	comp=Z,5.8nm,0.8s						
EDM	Edmonton	75.36	326	P	P	09 30 47.8	+0.3
EGAK	Eagle	75.44	345	P	P	09 30 49.1	+1.3
H23K	Yukon River	76.01	349	IAmb	IAmb	09 30 54.0	
	comp=Z,9.2nm,1.4s						
T35A	Sooner Cattle	76.05	306	IAmb	IAmb	09 30 55.0	
	comp=Z,6.5nm,0.8s						
M31M	Drury Creek, Y	76.06	341	IAmb	IAmb	09 30 54.8	
	comp=Z,6.7nm,1.2s						
ZARC	Zaragoza, Cauc	76.20	269	P	P	09 30 51.9	-1.0
ZARC				IAmb	IAmb	09 30 57.3	
	comp=Z,3.7nm,0.8s						
RSSD	Black Hills	76.42	315	P	P	09 30 53.9	-0.1
RSSD				IAmb	IAmb	09 30 57.1	
	comp=Z,5.4nm,1.1s						
ILAR	Eielson Array	76.55	347	P	P	09 30 55.9	+1.8
	comp=Z,2.8nm,1.2s,baz=11,slow=5.4,SNR=9.9						
	comp=Z,2.8nm,1.2s						
H21K	Melozitna Rive	76.65	350	IAmb	IAmb	09 30 58.0	
	comp=Z,12nm,1.4s						
LZH	Lanzhou	76.81	55	*e*P	P	09 30 58.0	+1.7
LZH				pP	sP	09 31 04.5	-0.1
LZH				sP	PcP	09 31 08.3	+0.8
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
HDA	Harding Lake	76.89	347	IAmb	IAmb	09 30 58.2	
	comp=Z,9.5nm,1.2s						
WRH	Wood River Hil	77.03	348	IAmb	IAmb	09 31 14.0	
	comp=Z,6.9nm,1.3s						
EGMT	Eagleton	77.06	321	P	P	09 30 57.6	+0.2
P33M	Teslin, Yukon	77.28	339	IAmb	IAmb	09 31 01.4	
	comp=Z,7.1nm,1.2s						
ROSC	El Rosal	77.30	267	LR	LR	10 03 59.0	
	comp=Z,104nm,18.4s,baz=52,slow=35						
DLBC	Dease Lake	77.89	337	IAmb	IAmb	09 31 05.4	
	comp=Z,12nm,1.3s						
SEY	Seymchan	77.96	14	P	P	09 31 03.0	+1.0
	comp=Z,1.2nm,0.6s,baz=161,slow=22,SNR=1.6						
	comp=Z,1.2nm,0.6s						
HYT	Haines Junctio	78.03	342	IAmb	IAmb	09 31 05.7	
	comp=Z,12nm,1.4s						
DHY	Denali Highway	78.19	347	IAmb	IAmb	09 31 12.9	
	comp=Z,9.7nm,1.0s						
KTH	Kantishna Hill	78.35	349	IAmb	IAmb	09 31 14.5	
	comp=Z,6.4nm,1.0s						
WALA	Waterton Lakes	78.43	323	IAmb	IAmb	09 31 07.8	
	comp=Z,5.2nm,1.0s						
RLMT	Red Lodge	78.69	318	IAmb	IAmb	09 31 09.0	
	comp=Z,6.7nm,1.2s						
K22A	Casper	78.76	315	IAmb	IAmb	09 31 07.8	
	comp=Z,7.5nm,0.9s						
HHC	Hu-ho-hao-te	78.80	47	*e*P	P	09 31 08.0	+0.8
HHC				pmax	pmax		
	comp=Z,34nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.3s						
K20K	Telida	79.01	350	IAmb	IAmb	09 31 12.3	
	comp=Z,8.0nm,1.1s						
JTMT	Jette	79.51	323	IAmb	IAmb	09 31 12.1	
	comp=Z,9.2nm,1.5s						
N23A	Red Feather La	79.53	313	IAmb	IAmb	09 31 13.8	
	comp=Z,11nm,1.1s						
BMRM	Bremner River	79.56	345	IAmb	IAmb	09 31 20.5	
	comp=Z,11nm,1.2s						
BOZ	Bozeman (W)	79.63	320	IAmb	IAmb	09 31 14.2	
	comp=Z,9.6nm,1.1s						
YHL	Hebgen Lake	79.89	319	IAmb	IAmb	09 31 16.9	
	comp=Z,6.5nm,1.1s						
YMR	Madison River	79.90	319	IAmb	IAmb	09 31 19.4	
	comp=Z,5.2nm,0.9s						
MSO	Missoula	79.97	322	IAmb	IAmb	09 31 15.1	
	comp=Z,9.1nm,1.4s						
FLWY	Flagg Ranch	80.14	318	IAmb	IAmb	09 31 21.2	
	comp=Z,8.7nm,1.2s						
BW06	Boulder Array	80.39	317	IAmb	IAmb	09 31 17.3	
	comp=Z,7.8nm,1.1s						
PD31	Pinedale Array	80.39	317	IAmb	IAmb	09 31 17.3	
	comp=Z,7.6nm,1.1s						
PDAR	Pinedale Array	80.39	317	P	P	09 31 16.4	+0.4
	comp=Z,3.5nm,0.8s,baz=64,slow=6.8,SNR=25						
PDAR				LR	LR	10 03 55.5	
	comp=Z,138nm,20.3s,baz=44,slow=34						
	comp=Z,3.5nm,0.8s						
NEW	Newport	80.52	324	LR	LR	10 04 41.5	
	comp=Z,50nm,18.4s,baz=32,slow=34						
SNOW	Snow King Moun	80.59	318	IAmb	IAmb	09 31 29.5	
	comp=Z,7.5nm,1.3s						
TPAW	Teton Pass	80.67	318	IAmb	IAmb	09 31 24.0	
	comp=Z,9.4nm,1.2s						
REDW	Red Top Meadow	80.70	318	IAmb	IAmb	09 31 20.0	
	comp=Z,8.8nm,1.2s						
PZH	PanZhiHua	80.92	64	⇓P	P	09 31 19.9	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,7.7s						
AHID	Auburn Hatcher	81.24	317	IAmb	IAmb	09 31 23.8	
	comp=Z,5.4nm,0.8s						
XAN	Xi'an	81.36	54	P	P	09 31 22.0	+0.9
XAN				pP	PcP	09 31 26.4	-0.8
XAN				sP	sP	09 31 29.3	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
B08A	Colville Reser	81.47	325	IAmb	IAmb	09 31 24.7	
	comp=Z,6.0nm,1.1s						
JCT	Junction City	82.06	302	IAmb	IAmb	09 31 29.5	
	comp=Z,5.2nm,1.1s						
BBB	Bella Bella	82.22	332	LR	LR	10 06 08.5	
	comp=Z,74nm,20.6s,baz=64,slow=34						
HWUT	Hardware Ranch	82.27	317	IAmb	IAmb	09 31 27.1	
	comp=Z,4.7nm,1.0s						
P18A	Preston Nutter	82.86	315	IAmb	IAmb	09 31 32.3	
	comp=Z,7.8nm,1.1s						
PV13	Radium Mtn., P	82.99	313	IAmb	IAmb	09 31 31.6	
	comp=Z,8.3nm,1.1s						
KLR	Kul'dur	83.23	31	LR	LR	10 11 01.5	
	comp=Z,84nm,18.9s,baz=324,slow=38						
MFID	Camas Ranch	83.31	320	IAmb	IAmb	09 31 33.0	
	comp=Z,7.6nm,1.3s						
MVCO	Mesa Verde	83.42	312	IAmb	IAmb	09 31 34.4	
	comp=Z,7.0nm,1.1s						
CMAR	Chiang Mai Arr	83.54	72	P	P	09 31 33.6	+1.0
	comp=Z,0.9nm,0.3s,baz=304,slow=7.7,SNR=12						
	comp=Z,0.9nm,0.3s						
TMUT	Trail Mountain	83.63	315	IAmb	IAmb	09 31 34.9	
	comp=Z,4.9nm,1.1s						
ANMO	Albuquerque	83.64	309	LR	LR	10 07 57.7	
	comp=Z,83nm,18.1s,baz=32,slow=35						
DUG	Dugway, Tooele	83.93	316	IAmb	IAmb	09 31 39.8	
	comp=Z,3.7nm,0.8s						
BNX	BinXian	83.94	36	⇓P	P	09 31 34.6	+0.4
BNX				pmax	pmax		
	comp=Z,33nm,1.0s						
BNX				pmax	pmax		
	comp=Z,490nm,4.2s						
KDAK	Kodiak Island	84.07	347	P	P	09 31 34.8	+0.1
	comp=Z,4.6nm,0.9s,baz=316,slow=23,SNR=10.0						
	comp=Z,4.6nm,0.9s						
KDAK	Kodiak Island	84.07	347	IAmb	IAmb	09 31 37.3	
	comp=Z,21nm,1.4s						
GYA	Guiyang	84.48	61	⇓P	P	09 31 38.8	+1.3
GYA				pmax	pmax		
	comp=Z,22nm,0.9s						
CPUP	Villa Florida	84.65	232	P	P	09 31 39.9	+1.9
	comp=Z,12nm,1.0s,baz=53,slow=7.0,SNR=11						
	comp=Z,12nm,1.0s						
CPUP	Villa Florida	84.65	232	P	P	09 31 38.7	+0.8
I07A	Izee	84.68	323	IAmb	IAmb	09 32 06.2	
	comp=Z,8.6nm,1.5s						
J08A	Circle Bar Ran	84.70	322	IAmb	IAmb	09 31 40.3	
	comp=Z,6.1nm,1.1s						
ELK	Elko	84.88	318	LR	LR	10 06 51.2	
	comp=Z,174nm,19.5s,baz=42,slow=34						
ELK	Elko	84.88	318	IAmb	IAmb	09 31 42.3	
	comp=Z,8.2nm,1.1s						
MNTX	Cornudas Mount	85.04	306	IAmb	IAmb	09 31 41.6	
	comp=Z,4.0nm,1.2s						
LPAZ	La Paz	85.39	246	P	P	09 31 43.4	+0.8
	comp=Z,3.0nm,1.0s,baz=59,slow=6.8,SNR=6.4						
	comp=Z,3.0nm,1.0s						
TXAR	Lajitas Array	85.40	303	P	P	09 31 43.4	+1.3
	comp=Z,1.8nm,0.8s,baz=83,slow=4.4,SNR=19						
TXAR				LR	LR	10 07 17.8	
	comp=Z,140nm,21.8s,baz=42,slow=34						
	comp=Z,1.8nm,0.8s						
WVOR	Wild Horse Val	85.45	321	IAmb	IAmb	09 31 44.5	
	comp=Z,6.7nm,1.1s						
PINE	Pine Mountain	85.59	323	IAmb	IAmb	09 31 49.4	
	comp=Z,8.3nm,1.2s						
SZCU	Shurtz Canyon	85.87	315	IAmb	IAmb	09 31 46.5	
	comp=Z,7.7nm,1.1s						
121A	Cookes Peak, D	86.05	308	IAmb	IAmb	09 31 48.0	
	comp=Z,12nm,1.4s						
CCUT	Cedar City	86.06	315	IAmb	IAmb	09 31 47.7	
	comp=Z,5.5nm,1.0s						
U15A	North Rim	86.20	313	IAmb	IAmb	09 31 49.4	
	comp=Z,4.3nm,0.9s						
CMIG	Matias Romero	86.53	289	LR	LR	10 10 18.6	
	comp=Z,80nm,19.7s,baz=38,slow=36						
MOD	Modoc Plateau	86.68	322	IAmb	IAmb	09 31 50.7	
	comp=Z,7.2nm,1.4s						
R11A	Troy Canyon, C	86.75	316	IAmb	IAmb	09 31 51.3	
	comp=Z,6.4nm,1.2s						
PRN	Pahroc Range	87.12	316	IAmb	IAmb	09 31 53.5	
	comp=Z,6.6nm,1.2s						
PB16	IPOC Station P	87.70	245	P	P	09 31 53.7	-0.1
YBH	Yreka Blue Hor	88.00	323	LR	LR	10 08 22.6	
	comp=Z,98nm,21.8s,baz=46,slow=34						
NVAR	Mina Array Bea	88.19	318	LR	LR	10 08 34.5	
	comp=Z,163nm,20.4s,baz=84,slow=34						
Y14A	Wickenburg	88.34	312	IAmb	IAmb	09 31 58.4	
	comp=Z,6.0nm,1.3s						
GWY	Greenwater Val	88.90	316	IAmb	IAmb	09 32 01.8	
	comp=Z,6.1nm,1.0s						
PFO	Pinyon Flats O	90.61	314	LR	LR	10 09 23.0	
	comp=Z,57nm,21.1s,baz=113,slow=33						
LPIG	La Paz	93.30	303	LR	LR	10 12 18.8	
	comp=Z,89nm,21.3s,baz=41,slow=34						
MJAR	Matsushiro Arr	96.19	35	LR	LR	10 19 52.2	
	comp=Z,18nm,18.3s,baz=294,slow=38						
WRA	Warramunga Arr	134.20	83	PKP	PKiKP	09 38 23.5	-0.2
	comp=Z,3.7nm,1.0s,baz=321,slow=1.4,SNR=11						
WRA	Warramunga Arr	134.20	83		PKPdf	09 38 20.6	-1.8
ASAR	Alice Springs	135.71	88	PKP	PKiKP	09 38 26.2	-0.5
	comp=Z,5.6nm,1.2s,baz=314,slow=0.6,SNR=13						
ASAR	Alice Springs	135.71	88		PKPdf	09 38 25.5	+0.5
STKA	Stephens Creek	145.25	95	PKPbc	PKPdf	09 38 42.2	+0.2
	comp=Z,15nm,1.0s,baz=318,slow=6.5,SNR=9.7						
STKA	Stephens Creek	145.25	95		PKPdf	09 38 42.1	+0.1

INET 16 09:20:30.1±0.4, 12°.06N×86°.23W, h2km±1km, MW2.5, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGAN	Managua	0.09	346	*e*P	Pg	09 20 32.7	+0.8
MASN	Masaya	0.10	134	*e*P	Pg	09 20 33.5	+1.4
WILN	Americas 2	0.11	20	*e*P	Pg	09 20 33.2	+1.0
WILN				IAML		09 21 25.9	

IDC 16 09:39:37.8±5.7, 56°.18S×144°.76W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=758.6km s-min=119.2km az=169.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N3	Juan Fernandez	49.74	92	T	T	10 42 01.1	
	baz=224,slow=72,SNR=6.5						
H03N2	Juan Fernandez	49.74	92	T	T	10 42 04.5	
	baz=224,slow=72,SNR=7.7						
H03N1	Juan Fernandez	49.76	92	T	T	10 42 01.7	
	baz=224,slow=72,SNR=15						
ASAR	Alice Springs	65.91	263	P	P	09 50 25.4	-0.1
	0.3nm,0.6s,baz=141,slow=6.7,SNR=7.7						
	0.3nm,0.6s						
H01W1	Cape Leeuwin H	67.44	241	T	T	11 04 58.3	
	baz=149,slow=74						
H01W2	Cape Leeuwin H	67.44	241	T	T	11 04 54.5	
	baz=149,slow=74						
H01W3	Cape Leeuwin H	67.45	241	T	T	11 04 59.0	
	baz=149						
WRA	Warramunga Arr	68.64	266	P	P	09 50 43.0	+0.2
	0.4nm,0.9s,baz=146,slow=6.4,SNR=2.0						
	0.4nm,0.9s						
H10N3	ASCENSION HYDR	104.22	129	T	T	11 51 20.5	
	baz=213						
H10N1	ASCENSION HYDR	104.23	129	T	T	11 51 16.7	
	baz=213						
H10N2	ASCENSION HYDR	104.24	129	T	T	11 51 16.7	
	baz=213						
MKAR	Makanchi Array	149.79	272	PKPbc	PKPbc	09 59 28.2	-0.5
	0.3nm,0.8s,baz=103,slow=4.6,SNR=2.6						

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*IDC **16** 09:42:35.7±2.7, 53°.51N×87°.61E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.7km s-min=14.5km az=67.0*

*NNC **16** 09:42:37.6±4.8, 53°.24N×87°.25E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=36.8km s-min=20.4km az=72.0, Suspected Mining explosion.*

ISC 16 09:42:41.7±3.0, 53°.35N±0°.08×86°.8E±0°.2, h0km, n8, σ1s.73/12, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.33	297	*i*		09 53 50.0	
	0.1nm,0.8s,baz=101,slow=328,SNR=4.6						
ZAA0	Zalesovo Array	1.33	297	⇑P	Pg	09 43 06.3	-0.8
	0.6nm,0.5s						
ZAA0				⇓S	Sn	09 43 29.2	+3.3
	3.5nm,0.7s						
ZALV	Zalesovo Beam	1.33	297	Pn	Pn	09 43 06.5	-1.0
	1.2nm,0.3s,baz=106,slow=13,SNR=16						
ZALV				Lg	Lg	09 43 29.9	
	2.7nm,0.3s,baz=105,slow=27,SNR=12						
KURK	Kurchatov	5.71	246	⇓Pn	Pn	09 44 06.6	-1.0
	0.6nm,0.6s						
KURK				⇑Sn	Sn	09 45 14.3	+0.5
	0.8nm,0.5s						
KURK				⇑Lg	Lg	09 45 51.1	
	4.6nm,0.8s						
KURBB	Kurchatov Arra	5.80	245	Pn	Pn	09 44 10.6	+1.6
	0.1nm,0.3s,baz=61,slow=14,SNR=5.6						
KURBB				Lg	Lg	09 45 53.3	
	0.1nm,0.3s,baz=59,slow=30,SNR=3.0						
	1.1nm,0.7s						
KURBB	Kurchatov Arra	5.80	245	⇑Pn	Pn	09 44 08.4	-0.5
	1.9nm,0.8s						
KURBB				⇓Sn	Sn	09 45 15.2	-0.9
	1.6nm,0.5s						
KURBB				⇓Lg	Lg	09 45 54.3	
	12nm,0.7s						
MK31	Makanchi Array	7.18	206	Pn	Pn	09 44 28.3	+0.4
	0.2nm,0.4s,baz=26,slow=9.7,SNR=8.7						
MK31				⇑Sn	Sn	09 45 48.5	-1.7
	0.3nm,0.6s,baz=30,slow=26,SNR=3.8						
MK31				⇑Lg	Lg	09 46 34.2	
	1.6nm,0.8s,baz=33,slow=30,SNR=5.5						
MKAR	Makanchi Array	7.18	206	Pn	Pn	09 44 28.0	+0.1
	0.2nm,0.3s,baz=30,slow=14,SNR=8.6						
MKAR				Sn	Sn	09 45 52.7	+2.5

```
      0.1nm,0.3s,baz=30,slow=26,SNR=4.8
MKAR                              Lg     Lg      09 46 34.6
      0.1nm,0.3s,baz=32,slow=30,SNR=11
      0.3nm,0.3s
```

*IDC **16** 09:50:45.7±2.2, 36°.04S×69°.06W, h0^{km}, mbtmp3.5/3, ML3.7/3, Error ellipse: s-maj=66.0km s-min=22.4km az=111.0*

ISC 16 09:50:46.5±2.2**, 35°.96S**±0°.05×**69°.03W**±0°.08**, h2**^{km}±19^{km}**, n21, σ1ˢ.78**/29**, Mendoza Province**

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
ML02  Panimavida         1.95 275 eP     Pb      09 51 21.5 -1.2
ML02                              i S    Sg      09 51 50.7 +1.5
ML02                               IAML          09 51 54.7
      comp=N,1µm,0.7s
BO01  Tunca              2.30 312 eP     Pb      09 51 29.1 +0.4
BO01                              eS     Sg      09 52 02.3 +1.9
LMEL  Las Melosas        2.32 335 eP     Pb      09 51 29.5 +0.3
LMEL                              i S    Sg      09 52 03.9 +2.9
LMEL                               IAML          09 52 06.9
      comp=N,248nm,0.7s
BO04  La Punta           2.36 326 eP     Pb      09 51 28.9 -0.8
GO05  Huala              2.55 291 eP     Pb      09 51 33.0  0.0
GO05                              i S    Sg      09 52 08.3 -0.1
GO05                               IAML          09 52 11.8
      comp=N,411nm,0.8s
MT09  Talagante          2.71 323 eP     Pb      09 51 34.5 -1.4
MT09                              i S    Sg      09 52 15.6 +2.0
MT09                               IAML          09 52 26.2
      comp=N,172nm,0.8s
MT03  Universidad Ad     2.75 333 eP     Pg      09 51 38.7 -0.5
MT01  Popeta             2.78 318 eP     Pb      09 51 35.2 -1.7
MT01                              eS     Sg      09 52 16.4 +0.7
BO03  Pichilemu          2.81 301 eP     Pb      09 51 37.6 +0.2
BO03                              i S    Sg      09 52 16.2 -0.6
BO03                               IAML          09 52 18.6
      comp=N,276nm,0.3s
FCH   Farellones         2.83 338 eP     Pb      09 51 39.1 +1.3
MT05  Renca              2.93 331 eP     Pg      09 51 41.1 -1.5
PEL   Peldehue           3.13 334 eP     Pb      09 51 41.0 -1.9
VA05  Santo Domingo      3.13 316 eP     Pb      09 51 40.2 -2.7
MT02  Curacav            3.21 327 eP     Pb      09 51 41.7 -2.5
VA03  San Esteban        3.43 338 eP     Pb      09 51 46.1 -2.0
VA01  Torpederas         3.65 323 eP     Pb      09 51 48.7 -2.9
VA06  Catapilco          3.88 330 eP     Pn      09 51 49.5 +2.4
PLCA  Paso Flores        4.91 194  Pn    Pn      09 52 00.1 -1.3
      comp=N,0.4nm,0.3s,baz=7.7,slow=8.5,SNR=13
PLCA                               Pg    Pb      09 52 13.7 +0.5
      comp=N,1.7nm,0.3s,baz=16,slow=16,SNR=22
PLCA                               Lg    Lg      09 53 13.4
      comp=N,9.3nm,0.3s,baz=93,slow=21,SNR=8.0
      comp=N,1.4nm,0.5s
CO02  Combarbal          5.02 340 i P    Pn      09 52 06.4 +3.4
CPUP  Villa Florida     13.87  49  Pn    Pn      09 54 03.1 -0.9
      comp=N,0.2nm,0.3s,baz=218,slow=14,SNR=1.7
CPUP                               Lg    Lg      09 58 10.6
      comp=N,0.2nm,0.3s,baz=50,slow=12,SNR=3.2
      comp=N,1.0nm,0.5s
LPAZ  La Paz            19.61   3  P     Pn      09 55 17.3 -0.8
      comp=N,0.1nm,0.3s,baz=168,slow=9.3,SNR=9.9
      comp=N,1.5nm,0.8s
```

IDC 16 10:00:55.4±522.0**, 3°.16N×6°.93E, h0**^{km}**, Error ellipse: s-maj=256.7km s-min=203.4km az=5.0, Off south coast of northwest Africa**

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
I17CI DIMBOKRO INFRA12.24 287 i                  11 17 40.0
      baz=104,slow=315,SNR=2.9
I32KE NAIROBI INFRAS  30.21  98 i                13 05 45.0
      baz=272,slow=320,SNR=4.9
I33MG ANTANANARIVO I 45.42 121 i                 14 59 30.0
      baz=293,slow=322,SNR=1.7
```

*IDC **16** 10:05:05.1±0.5, 55°.63S×27°.16W, h0^{km}, mb4.5/12, mbtmp4.5/13, ML4.3/1, MS3.7/24, Error ellipse: s-maj=18.9km s-min=15.3km az=62.0*

*NEIC **16** 10:05:11.9±1.9, 55°.7S±0°.1×27°.4W±0°.2, h47^{km}±6^{km}, mb4.9/54, Error ellipse: s-maj=16.0km s-min=12.8km az=209.0*

ISC 16 10:05:08.8±0.4**, 55°.69S**±0°.06×**27°.15W**±0°.07**, h25**^{km}**, n137, σ1ˢ.29**/122**, mb4.8**/31**, MS3.7**/23**, 1C, South Sandwich Islands region**

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
HOPE  Hope Point         5.56 281        Pn      10 06 29.3 -0.5
ORCD  Orcadas           10.55 234 Pn     Pn      10 07 38.0 -0.2
VNA1  Neumayer--Stat    17.12 159 P      P       10 09 10.9 +3.4
VNA3  Neumayer Olymp    17.32 161 P      P       10 09 10.4 +0.6
EFI   East Falkland     18.66 270 P      Pn      10 09 24.3 -0.7
EFI                               IAmb   IAmb    10 09 25.4
      comp=Z,46nm,0.9s
SNAA  Sanae             19.06 156 P      Pn      10 09 29.5 -0.3
SNAA  Sanae             19.06 156 P      Pn      10 09 30.9 +1.1
      comp=Z,0.9nm,0.3s,baz=309,slow=10,SNR=44
SNAA                              S      Sn      10 12 55.7 -6.6
      comp=Z,0.9nm,0.7s,baz=291,slow=16,SNR=1.2
SNAA                              LR     LR      10 15 17.5
      comp=Z,144nm,21.2s,baz=39,slow=32
      comp=Z,7.4nm,0.6s
SNAA  Sanae             19.06 156        Pn      10 09 30.0 +0.2
PMSA  Palmer Station    20.16 228 P      Pn      10 09 45.8 +3.0
      comp=Z,20nm,0.6s,baz=76,slow=9.4,SNR=9.7
PMSA                              LR     LR      10 16 13.2
      comp=Z,232nm,18.1s,baz=68,slow=33
PMSA  Palmer Station    20.16 228 IAmb   IAmb    10 10 03.6
      comp=Z,32nm,0.8s
TROLL Troll, Antarti    20.56 154 P      Pn      10 09 47.0 -0.6
BELA  Belgrano 2        22.44 184 P      P       10 10 04.7 -0.6
USHA  Ushuaia           23.30 255 P      P       10 10 13.5 -0.9
      comp=Z,10nm,0.8s,baz=110,slow=12,SNR=9.7
USHA                              LR     LR      10 17 24.3
      comp=Z,358nm,21.1s,baz=178,slow=32
      comp=Z,10nm,0.8s
DSPA  Despedida         23.51 257 P      P       10 10 15.2 -1.2
MG02  Cerro Sombrero    24.49 259 P      P       10 10 24.3 -1.3
MG03  Isla Dawson       24.76 256 P      P       10 10 26.9 -1.2
MG05  Puerto Natales    26.78 259 P      P       10 10 44.5 -1.8
TRQA  Tornquist         29.20 292 P      P       10 11 08.4 +0.2
TRQA                              IAmb   IAmb    10 11 08.8
      comp=Z,16nm,0.8s
COYC  Coyhaique         29.75 271 P      P       10 11 12.1 -0.8
PLTB  Pedras Altas      30.28 311 P      P       10 11 17.8 +0.1
PLTB                              IAmb   IAmb    10 11 30.1
      comp=Z,15nm,1.0s
PLCA  Paso Flores       31.96 279 LR     LR      10 24 40.1
      comp=Z,70nm,18.2s,baz=115,slow=37
PLCA  Paso Flores       31.96 279 P      P       10 11 32.2 -0.4
ITQB  Itaqui            33.39 309 P      P       10 11 44.9 -0.1
QSPA  South Pole Qui    34.56 180 P      P       10 11 55.7 +0.6
      comp=Z,7.0nm,0.7s,baz=13,slow=1.0,SNR=68
QSPA                              LR     LR      10 25 51.0
      comp=Z,110nm,18.9s,baz=198,slow=36
      comp=Z,7.0nm,0.7s
QSPA  South Pole Qui    34.56 180 P      P       10 11 55.6 +0.6
QSPA                              IAmb   IAmb    10 12 02.2
      comp=Z,12nm,0.9s
QSPA  South Pole Qui    34.56 180 P      P       10 11 55.6 +0.6
PTGB  Pitanga           35.93 319 eP     P       10 12 06.8 -0.3
CPUP  Villa Florida     36.59 311 P      P       10 12 12.3 -0.3
      comp=Z,12nm,0.9s,baz=149,slow=7.4,SNR=15
CPUP                              LR     LR      10 24 56.8
      comp=Z,124nm,21.3s,baz=121,slow=33
      comp=Z,12nm,0.9s
CPUP  Villa Florida     36.59 311 P      P       10 12 11.9 -0.7
CPUP                              IAmb   IAmb    10 12 13.3
      comp=Z,22nm,1.2s
CPUP  Villa Florida     36.59 311 eP     P       10 12 12.7 +0.1
CPUP  Villa Florida     36.59 311 P      P       10 12 12.1 -0.5
BO04  La Punta          36.86 288 P      P       10 12 14.7 -0.3
MT09  Talagante         37.22 287 P      P       10 12 16.6 -1.5
MT09                              IAmb   IAmb    10 12 17.8
      comp=Z,9.5nm,0.5s
MT01  Popeta            37.30 287 P      P       10 12 16.9 -1.7
MT01                              IAmb   IAmb    10 12 17.4
      comp=Z,12nm,1.1s
MT02  Curacav           37.70 288 P      P       10 12 21.3 -0.7
MT02                              IAmb   IAmb    10 12 22.1
      comp=Z,11nm,0.7s
ZON   Zonda             37.72 292 P      P       10 12 21.7 -0.6
ZON                               IAmb   IAmb    10 12 22.9
      comp=Z,13nm,0.7s
VA03  San Esteban       37.76 289 P      P       10 12 22.5 -0.2
VA03                              IAmb   IAmb    10 12 43.1
      comp=Z,11nm,0.8s
ROC1  El Roble          37.85 288 P      P       10 12 22.0 -1.6
ROC1                              IAmb   IAmb    10 12 30.2
      comp=Z,15nm,1.0s
NAN01 Guarapari, ES     39.05 340 eP     P       10 12 33.6 +0.2
CO02  Combarbal         39.21 290 P      P       10 12 34.3 -0.6
CO02                              IAmb   IAmb    10 12 36.4
      comp=Z,12nm,0.7s
DIAM  Diamantina, MG    39.38 335 eP     P       10 12 36.1 -0.3
CO01  Juntas del Tor    39.70 292 P      P       10 12 39.7 +0.6
CO01                              IAmb   IAmb    10 12 49.1
      comp=Z,13nm,0.9s
GO04  Tololo Observa    39.92 291 P      P       10 12 40.7 -0.2
GO04                              IAmb   IAmb    10 12 52.8
      comp=Z,24nm,1.2s
GUA01 Guaratinga, BA    40.22 341 eP     P       10 12 43.3 +0.2
MAW   Mawson            40.43 144 P      P       10 12 45.0 +0.7
      comp=Z,2.0nm,0.4s,baz=216,slow=9.8,SNR=10
MAW                               LR     LR      10 29 16.7
      comp=Z,118nm,18.3s,baz=282,slow=36
      comp=Z,2.0nm,0.4s
MAW   Mawson            40.43 144 P      P       10 12 45.1 +0.8
SUR   Sutherland        40.52  75 P      P       10 12 46.0 +0.1
      comp=Z,12nm,1.2s,baz=88,slow=7.6,SNR=2.5
SUR                               LR     LR      10 26 18.6
      comp=Z,110nm,18.5s,baz=244,slow=31
      comp=Z,12nm,1.2s
LCO   Las Campanas      40.79 292 P      P       10 12 47.8 -0.4
LCO                               IAmb   IAmb    10 12 51.7
      comp=Z,10.0nm,0.8s
LCO   Las Campanas      40.79 292 P      P       10 12 47.2 -1.0
AQDB  Aquidauana        41.15 317 P      P       10 12 49.8 -1.1
AQDB  Aquidauana        41.15 317 eP     P       10 12 50.4 -0.5
AC04  Llanos de Chal    41.63 293 P      P       10 12 54.4 -0.3
AC04                              IAmb   IAmb    10 12 55.2
      comp=Z,26nm,0.8s
AC02  Maricunga         41.74 296 P      P       10 12 56.7 +0.5
AC02                              IAmb   IAmb    10 12 58.1
      comp=Z,28nm,0.9s
AC06  Mina Casimiro     41.94 294 P      P       10 12 56.9 -0.5
AC06                              IAmb   IAmb    10 12 57.7
      comp=Z,40nm,1.4s
JANB  Januaria          42.65 335 eP     P       10 13 03.2  0.0
AC01  Pan de Azucar     43.05 295 P      P       10 13 05.7 -0.7
AC01                              IAmb   IAmb    10 13 07.1
      comp=Z,50nm,1.1s
BDFB  Brasilia          43.06 330 P      P       10 13 05.9 -0.7
      comp=Z,1.3nm,0.3s,baz=111,slow=17,SNR=2.3
      comp=Z,1.3nm,0.3s
PP1B  Ponte de Pedra    43.47 320 eP     P       10 13 09.7 -0.1
LVC   Limon Verde       45.14 300 LR     LR      10 32 00.3
      comp=Z,59nm,20.9s,baz=140,slow=36
LVC   Limon Verde       45.14 300 P      P       10 13 24.4 +0.9
LVC   Limon Verde       45.14 300 eP     P       10 13 24.5 +0.9
LVC   Limon Verde       45.14 300 P      P       10 13 24.5 +0.9
LVC                               pP     pwP     10 13 34.1 -0.2
LVC                               pwP    sP      10 13 38.5 +5.7
LVC                               sP     pP      10 13 41.5  +11
SALV  Santo Antonio     45.33 320 eP     P       10 13 24.9 +0.2
SDBA  SAO DESIDERIO     45.35 335 eP     P       10 13 24.4 -0.5
BOSA  Boshof            45.86  76 P      P       10 13 28.5 -0.4
      comp=Z,2.8nm,0.7s,baz=210,slow=6.4,SNR=6.5
BOSA                              LR     LR      10 30 32.1
      comp=Z,120nm,18.1s,baz=188,slow=33
      comp=Z,2.8nm,0.7s
BOSA  Boshof            45.86  76 IAmb   IAmb    10 13 29.8
      comp=Z,12nm,1.3s
BOSA  Boshof            45.86  76 P      P       10 13 28.8 -0.1
BOSA                              x      x       10 13 33.0
BOSA                              sP     pwP     10 13 47.8 +5.1
PB04  IPOC Station P    45.99 299 P      P       10 13 30.9 +0.8
PB07  IPOC Station P    46.37 299 P      P       10 13 33.3 +0.2
SBA   Scott Base        46.44 184 P      P       10 13 33.9 +1.2
SBA   Scott Base        46.44 184 P      P       10 13 34.3 +1.6
VNDA  Vanda             46.94 183 P      P       10 13 37.4 +0.7
      comp=Z,7.9nm,0.8s,baz=184,slow=5.9,SNR=45
      comp=Z,7.9nm,0.8s
VNDA  Vanda             46.94 183 P      P       10 13 37.3 +0.7
VNDA                              IAmb   IAmb    10 13 39.2
      comp=Z,7.3nm,0.8s
VNDA  Vanda             46.94 183 P      P       10 13 37.2 +0.6
VNDA                              x      x       10 13 42.1
VNDA                              pP     sP      10 13 48.4 +1.9
PTLB  Pontes e Lacer    47.05 316 eP     P       10 13 38.1  0.0
PB08  IPOC Station P    47.35 301 IAmb   IAmb    10 13 45.7
      comp=Z,20nm,0.8s
SNDB  Serra Nova Dou    47.51 327 eP     P       10 13 42.3 +0.5
CCD   Concordia, Ant    48.03 170 P      P       10 13 46.2 +0.6
H10N1 ASCENSION HYDR48.77  17     T      T       11 07 06.4
      baz=189,slow=76,SNR=56
H10N3 ASCENSION HYDR48.77  17     T      T       11 07 06.5
      baz=189,slow=76,SNR=97
H10N2 ASCENSION HYDR48.78  17     T      T       11 07 30.2
      baz=189,slow=76,SNR=71
LBTB  Lobatse           48.88  73 LR     LR      10 31 17.0
      comp=Z,45nm,18.8s,baz=241,slow=32
LBTB  Lobatse           48.88  73 P      P       10 13 52.5 +0.1
LBTB                              IAmb   IAmb    10 13 52.7
      comp=Z,9.4nm,1.1s
PB16  IPOC Station P    49.07 302 IAmb   IAmb    10 13 56.2
      comp=Z,11nm,1.3s
SMTB  Santa Maria do    49.42 333 eP     P       10 13 56.8 +0.3
TSUM  Tsumeb            49.48  61 LR     LR      10 30 01.6
      comp=Z,43nm,20.6s,baz=149,slow=30
PDRB  Porto dos Gac     49.66 321 eP     P       10 13 58.0 -0.3
VILB  Vilhena           49.74 316 eP     P       10 13 58.6 -0.4
CLDB  Colider           50.01 322 eP     P       10 14 00.7 -0.4
LPAZ  La Paz            50.19 305 P      P       10 14 03.6 +0.6
      comp=Z,14nm,0.7s,baz=145,slow=5.4,SNR=73
LPAZ                              LR     LR      10 34 51.0
      comp=Z,49nm,21.2s,baz=124,slow=36
      comp=Z,14nm,0.7s
LPAZ  La Paz            50.19 305 IAmb   IAmb    10 14 04.6
      comp=Z,18nm,0.8s
LPAZ  La Paz            50.19 305 eP     P       10 14 03.8 +0.8
LPAZ  La Paz            50.19 305 ⇑P     P       10 14 03.6 +0.6
LPAZ                              pP     pwP     10 14 13.2 -0.6
LPAZ                              sP     sP      10 14 16.5 +4.0
RCBR  Riachuelo         50.21 349 LR     LR      10 30 36.8
      comp=Z,52nm,19.6s,baz=312,slow=30
CASY  Casey             54.24 160 P      P       10 14 35.2 +3.4
CASY  Casey             54.24 160 P      P       10 14 34.0 +2.2
ETMB  Extrema           55.05 311 eP     P       10 14 38.1 -0.2
ITTB  Itaituba          56.07 325 eP     P       10 14 45.3 -0.3
MALB  Monte Alegre      57.98 327 eP     P       10 14 59.6 +0.5
NNA   Nana              58.10 298 LR     LR      10 40 22.8
      comp=Z,31nm,21.1s,baz=142,slow=36
LSZ   Lusaka            58.22  69 LR     LR      10 36 49.0
      comp=Z,69nm,21.4s,baz=196,slow=33
MCPB  Macapa, AP        58.75 330 eP     P       10 15 05.4 +0.9
MACA  Manacapuru-AM     58.91 320 eP     P       10 15 04.8 -0.8
CZSB  Cruzeiro do Su    59.80 305 eP     P       10 15 11.7 -0.1
BOAV  Boa Vista         64.01 322 eP     P       10 15 39.5 -0.6
MDP   Montagnes des     64.13 332 LR     LR      10 43 43.7
      comp=Z,62nm,18.6s,baz=189,slow=36
DBIC  Dimbokro          64.83  25 P      P       10 15 45.4  0.0
      comp=Z,2.5nm,0.9s,baz=128,slow=12,SNR=1.5
DBIC                              LR     LR      10 37 33.3
      comp=Z,40nm,19.3s,baz=176,slow=30
      comp=Z,2.5nm,0.9s
OTAV  Otavalo           69.47 304 P      P       10 16 15.1 -0.4
OTAV  Otavalo           69.47 304 eP     P       10 16 16.1 +0.6
MBAR  Mbarara           71.96  63 LR     LR      10 45 53.4
      comp=Z,62nm,18.0s,baz=170,slow=34
TOA0  Torodi Ar. Sit    72.73  29 P      P       10 16 35.0 +0.5
TOA0                              IAmb   IAmb    10 16 47.3
      comp=Z,5.7nm,0.6s
TORD  Torodi Ar. Bea    72.73  29 P      P       10 16 35.1 +0.6
      comp=Z,2.5nm,0.6s,baz=204,slow=6.6,SNR=13
      comp=Z,2.5nm,0.6s
BAUV  El Baul           72.81 317 P      P       10 16 33.8 -1.2
SDV   Santo Domingo     73.77 315 LR     LR      10 48 34.4
      comp=Z,88nm,21.8s,baz=167,slow=35
ZARC  Zaragoza, Cauc    74.27 310 P      P       10 16 41.5 -2.3
KMBO  Kilima Mbogo      74.89  69 LR     LR      10 47 55.9
      comp=Z,76nm,18.2s,baz=124,slow=34
SJG   San Juan          80.57 323 LR     LR      10 52 18.4
      comp=Z,31nm,21.5s,baz=120,slow=35
MTO3  Montecristo       87.01 301 P      P       10 17 50.7 -1.3
ATD   Arta Tunnel       88.50  67 LR     LR      10 56 45.5
      comp=Z,36nm,18.1s,baz=178,slow=35
MDT   Midelt            90.24  19 LR     LR      10 55 36.4
      comp=Z,48nm,18.1s,baz=168,slow=34
ASAR  Alice Springs     99.33 162 P      Pdif    10 18 47.2 -1.5
      comp=Z,0.8nm,0.6s,baz=180,slow=4.0,SNR=13
ASAR                              PP     PP      10 22 49.2 -1.7
      comp=Z,0.6nm,0.8s,baz=192,slow=7.3,SNR=4.8
ASAR                              PKKPbc PKKPdf  10 35 11.1 -1.1
      comp=Z,0.3nm,0.6s,baz=25,slow=1.6,SNR=6.6
      comp=Z,0.8nm,0.6s
WRA   Warramunga Arr   103.04 162 Pdiff  Pdif    10 19 04.2 -1.1
      comp=Z,0.3nm,0.7s,baz=197,slow=4.5,SNR=1.6
PDAR  Pinedale Array   120.17 302 PKP    PKiKP   10 23 57.9 +0.9
      comp=Z,0.2nm,0.4s,baz=76,slow=3.8,SNR=2.1
NOA   NORSAR Array B   120.26  20 PKP    PKiKP   10 23 56.3 +0.1
      comp=Z,0.6nm,0.6s,baz=205,slow=2.0,SNR=2.3
NVAR  Mina Array Bea   121.28 293 PKP    PKiKP   10 24 00.5 +1.2
      comp=Z,0.2nm,0.3s,baz=146,slow=1.8,SNR=1.9
FINES FINESS Array B   124.05  28 PKP    PKiKP   10 24 03.0 -0.7
      comp=Z,2.2nm,0.5s,baz=172,slow=1.9,SNR=14
CMAR  Chiang Mai Arr   125.17 110 PKP    PKiKP   10 24 06.7 -0.5
      comp=Z,0.8nm,0.2s,baz=235,slow=4.3,SNR=5.3
ARCES ARCESS Array B   130.60  22 PKP    PKiKP   10 24 15.4 -1.1
      comp=Z,3.1nm,0.6s,baz=176,slow=1.4,SNR=26
PZH   PanZhiHua        133.19 107 PKP    PKPdf   10 24 21.4 -0.7
YKA   Yellowknife Ar   135.92 318 PKP    PKPdf   10 24 25.6 -0.2
      comp=Z,1.5nm,0.6s,baz=130,slow=2.4,SNR=11
YKA                               PP     PP      10 27 05.8 -0.2
      comp=Z,0.4nm,0.7s,baz=116,slow=6.5,SNR=3.7
MKAR  Makanchi Array   136.75  71 PKP    PKPdf   10 24 26.4 -1.5
      comp=Z,0.3nm,0.6s,baz=206,slow=2.2,SNR=3.2
KURBB Kurchatov Arra   137.13  64 PKP    PKPdf   10 24 28.2 -0.2
      comp=Z,0.4nm,0.6s,baz=244,slow=2.2,SNR=3.1
ZALV  Zalesovo Beam    142.19  63 PKP    PKiKP   10 24 38.9 -1.7
      comp=Z,1.3nm,0.5s,baz=241,slow=3.1,SNR=5.7
NRIK  Noril'sk         148.71  38 PKPbc  PKiKP   10 24 52.3 -1.2
      comp=Z,1.0nm,0.3s,baz=97,slow=0.6,SNR=2.1
ILAR  Eielson Array    149.89 312 PKPbc  PKPbc   10 24 54.5 -0.6
      comp=Z,6.5nm,0.8s,baz=127,slow=1.5,SNR=64
ILAR  Eielson Array    149.89 312        PKPbc   10 24 54.1 -1.1
SONM  Songino Array    150.68  86 PKPbc  PKiKP   10 24 57.6 -0.8
      comp=Z,5.5nm,0.5s,baz=221,slow=3.8,SNR=22
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*JMA **16** 10:18:05.3±0.2, 24°N±1°×12°2E±°, h26^{km}±3^{km}, TAIWAN REGION*

*TAP **16** 10:18:05.5, 23°.68N×121°.92E, h42^{km}, ML3.4, C*

ISC 16 10:18:05.1±1.0**, 23°.66N**±0°.02×**121°.95E**±0°.02**, h27**^{km}±10^{km}**, n81, σ0ˢ.70**/150**, Taiwan**

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
TEGC  Jichi Village      0.38 278 eP     Pn      10 18 14.2 -0.5
      baz=269
TEGC                              eS     Sn      10 18 20.7 -0.3
      baz=269
HWA   Hwalien            0.45 316 i P    Pb      10 18 15.0 +0.5
      baz=317
HWA                               i S    Sn      10 18 22.3 -0.5
      baz=317
EGFH  Guangfu            0.47 271 i P    Pb      10 18 15.2 +0.2
      baz=266
EGFH                              i S    Sb      10 18 22.6 +0.9
      baz=266
HGSD  Ruisui             0.51 251 i P    Pb      10 18 15.6 +0.2
      baz=245
HGSD                              eS     Sb      10 18 23.1 +0.6
      baz=245
TWD   Chiawan            0.53 323 i P    Pb      10 18 15.6 -0.2
      baz=325
TWD                               i S    Sb      10 18 23.1 -0.1
      baz=325
ETL   Fush Village       0.58 329 i P    Pb      10 18 16.5 -0.3
      baz=326
ETL                               eS     Sb      10 18 24.4 -0.3
      baz=326
EHY   Hungye             0.59 255 eS     Sn      10 18 26.4  0.0
      baz=265
NACB  Ninganchiao        0.61 328 i P    Pb      10 18 16.8 -0.3
      baz=327
NACB                              i S    Sb      10 18 24.9 -0.4
      baz=327
YULB  Yu-li              0.65 246 i P    Pb      10 18 18.0 +0.1
      baz=256
YULB                              i S    Sb      10 18 26.9 +0.2
      baz=256
EYUL  Yuli               0.65 242 i P    Pb      10 18 18.2 +0.2
      baz=235
EYUL                              i S    Sn      10 18 27.7 -0.2
      baz=235
EHP   Heping Village     0.68 344 eS     Sn      10 18 28.5  0.0
      baz=346
ETLH  Xiulin Townshi     0.69 322 eP     Pb      10 18 18.3 -0.3
      baz=323
ETLH                              eS     Sb      10 18 27.3 -0.6
      baz=323
VWDT  VWDT               0.74 278 eP     Pb      10 18 19.4  0.0
      baz=276
VWDT                              eS     Sb      10 18 29.6 +0.4
      baz=276
FULB  Fuli               0.75 233  P     Pb      10 18 19.2 -0.4
      baz=223
FULB                              eS     Sb      10 18 29.4 -0.2
      baz=223
OWD   Renai              0.77 293  P     Pb      10 18 19.5 -0.4
      baz=292
OWD                               eS     Sb      10 18 29.1 -0.9
      baz=292
CHKT  Chengkung          0.77 224  P     Pb      10 18 19.2 -0.7
      baz=214
CHKT                               S     Sb      10 18 29.1 -0.9
      baz=214
ENA   Nanau              0.79 346  P     Pb      10 18 19.9 -0.3
      baz=348
ENA                               eS     Sb      10 18 30.3 -0.3
      baz=348
WHF   Hehuan Shan        0.79 308  P     Pb      10 18 19.8 -0.7
      baz=301
WHF                               eS     Sb      10 18 29.9 -1.2
      baz=301
EWUT  Wuta               0.80 349 eP     Pb      10 18 20.5 +0.1
      baz=350
EWUT                               S     Sb      10 18 30.6 -0.2
      baz=350
CHGB  Renai              0.81 300  P     Pb      10 18 20.4 -0.3
      baz=299
CHGB                              eS     Sb      10 18 30.8 -0.6
      baz=299
WUSB  Renai              0.83 294  P     Pb      10 18 20.7 -0.2
      baz=293
WUSB                               S     Sb      10 18 31.2 -0.6
      baz=293
FUSS  Fushou             0.87 313  P     Pb      10 18 21.3 -0.4
      baz=313
FUSS                               S     Sb      10 18 32.5 -0.6
      baz=313
EDH   Donghe             0.90 221  P     Pb      10 18 21.4 -0.7
      baz=212
EDH                               eS     Sb      10 18 32.2 -1.5
      baz=212
SSLB  Suanglung          0.92 278  P     Pb      10 18 21.6 -0.8
      baz=277
SSLB                              eS     Sb      10 18 33.9 -0.4
      baz=277
TWT   Tachien            0.92 310  P     Pb      10 18 22.1 -0.4
      baz=310
TWT                               eS     Sb      10 18 33.7 -0.8
      baz=310
NNSB  Datong             0.92 326  P     Pb      10 18 22.1 -0.5
      baz=319
NNSB                               S     Sb      10 18 33.4 -1.2
      baz=319
YUS   Yu-Shan            0.93 260  P     Pb      10 18 22.6 -0.2
      baz=258
YUS                               eS     Sb      10 18 34.0 -0.9
      baz=258
TDCB  Techi              0.93 310 eP     Pb      10 18 22.3 -0.4
      baz=310
TDCB                               S     Sb      10 18 33.5 -1.3
      baz=310
NNS   Nan Shan           0.94 326  P     Pb      10 18 22.2 -0.6
      baz=319
NNS                                S     Sb      10 18 34.0 -0.9
      baz=319
TWC   Suao               0.95 355  P     Pb      10 18 22.8 -0.1
      baz=356
```

TWC				*e*S	**Sb**	**10 18 35.2**	**0.0**
	baz=356						
LATG	**Datong**	**0.95**	**336**	P	**Pb**	**10 18 22.7**	**-0.4**
	baz=337						
LATG				*e*S	**Sb**	**10 18 34.8**	**-0.6**
	baz=337						
ELDTW	**Lidau**	**0.97**	**242**	*e*P	**Pb**	**10 18 22.4**	**-1.0**
	baz=239						
ELDTW				*e*S	**Sb**	**10 18 34.7**	**-1.2**
	baz=239						
SMLT	**Sun Moon Lake**	**0.98**	**283**	*e*P	**Pb**	**10 18 23.3**	**-0.3**
	baz=289						
SMLT				*e*S	**Sb**	**10 18 35.9**	**-0.4**
	baz=289						
NDS	**Dongshan**	**0.99**	**348**	*e*P	**Pb**	**10 18 22.8**	**-0.9**
	baz=344						
NDS				*e*S	**Sb**	**10 18 36.3**	**-0.1**
	baz=344						
WHYT	**Xinyi Township**	**1.00**	**272**	*e*P	**Pb**	**10 18 23.6**	**-0.3**
	baz=271						
WHYT				*e*S	**Sb**	**10 18 36.0**	**-0.7**
	baz=271						
TYC	**Yuchr**	**1.03**	**284**	*e*P	**Pb**	**10 18 23.6**	**-0.6**
	baz=284						
ENTT	**Nioudou**	**1.04**	**341**	*e*P	**Pb**	**10 18 24.0**	**-0.4**
	baz=342						
ENTT				*e*S	**Sb**	**10 18 37.6**	**-0.1**
	baz=342						
ALS	**Alishan**	**1.06**	**262**	*e*P	**Pn**	**10 18 24.9**	**+0.5**
	baz=269						
ALS				*e*S	**Sb**	**10 18 38.5**	**+0.1**
	baz=269						
LONT	**Longtian**	**1.06**	**225**	*e*P	**Pn**	**10 18 23.8**	**-0.4**
	baz=234						
LONT				*e*S	**Sb**	**10 18 37.8**	**-0.5**
	baz=234						
LDUT	**Ludao**	**1.07**	**204**	*e*S	**Sb**	**10 18 38.7**	**+0.1**
	baz=202						
TWE	**Neicheng**	**1.09**	**347**	*e*P	**Pn**	**10 18 24.9**	**+0.4**
	baz=356						
TWE				*e*S	**Sb**	**10 18 38.9**	**-0.2**
	baz=356						
WHP	**Taichung City**	**1.10**	**304**	*e*P	**Pn**	**10 18 24.9**	**+0.1**
	baz=311						
WHP				*e*S	**Sb**	**10 18 38.7**	**-0.9**
	baz=311						
YHNB	**Yeheng**	**1.14**	**333**	*e*P	**Pn**	**10 18 25.0**	**-0.2**
	baz=333						
YHNB				*e*S	**Sb**	**10 18 39.0**	**-1.5**
	baz=333						
FUSB	**Fushanzhiwuyua**	**1.15**	**343**	*e*P	**Pn**	**10 18 25.3**	**-0.1**
	baz=333						
FUSB				*e*S	**Sb**	**10 18 39.5**	**-1.3**
	baz=333						
NSK	**Sanguang**	**1.15**	**332**	*e*P	**Pn**	**10 18 25.8**	**+0.4**
	baz=333						
NSK				*e*S	**Sb**	**10 18 39.5**	**-1.4**
	baz=333						
TWG	**Pinlang**	**1.16**	**224**	*e*P	**Pn**	**10 18 24.4**	**-1.1**
	baz=232						
TWG				*e*S	**Sb**	**10 18 39.2**	**-1.8**
	baz=232						
TTN	**Taitung**	**1.16**	**219**	*e*S	**Sb**	**10 18 40.9**	**-0.3**
	baz=211						
WNT	**Mingjian**	**1.18**	**281**	*e*P	**Pb**	**10 18 26.8**	**+0.1**
	baz=280						
WNT				*e*S	**Sn**	**10 18 41.9**	**+1.0**
	baz=280						
STYH	**Taoyuan**	**1.18**	**246**	*e*P	**Pn**	**10 18 26.0**	**+0.2**
	baz=239						
STYH				*e*S	**Sb**	**10 18 40.7**	**-1.0**
	baz=239						
NWLT	**Wulai**	**1.19**	**340**	*e*P	**Pb**	**10 18 26.7**	**-0.3**
	baz=331						
NWLT				*e*S	**Sb**	**10 18 40.6**	**-1.3**
	baz=331						
NTC	**Toucheng**	**1.20**	**355**	*e*P	**Pb**	**10 18 26.8**	**-0.4**
	baz=9.0						
NTC				*e*S	**Sb**	**10 18 41.0**	**-1.2**
	baz=9.0						
NFF	**Wufeng Townshi**	**1.23**	**322**	*e*P	**Pn**	**10 18 26.8**	**+0.3**
	baz=322						
NFF				*e*S	**Sn**	**10 18 41.9**	**-0.4**
	baz=322						
TPUB	**Ta-pu**	**1.26**	**254**	*e*P	**Pb**	**10 18 28.2**	**0.0**
	baz=246						
TPUB				*e*S	**Sb**	**10 18 44.3**	**+0.3**
	baz=246						
YOJ	**Yonaguni jima**	**1.26**	**50**	P	**Pb**	**10 18 27.9**	**-0.2**
YOJ				*e*S	**Sb**	**10 18 44.0**	**0.0**
TWQ1	**Liyutan**	**1.27**	**303**	*e*P	**Pb**	**10 18 28.7**	**+0.3**
	baz=303						
TWQ1				*e*S	**Sn**	**10 18 44.0**	**+0.7**
	baz=303						
NSTT	**Nanjuang**	**1.30**	**319**	*e*P	**Pb**	**10 18 28.3**	**-0.5**
	baz=319						
NSTT				*e*S	**Sn**	**10 18 44.0**	**+0.1**
	baz=319						
LIOB	**Emei**	**1.30**	**319**	*e*P	**Pb**	**10 18 28.5**	**-0.3**
	baz=319						
LIOB				*e*S	**Sn**	**10 18 44.2**	**+0.2**
	baz=319						
TIPB	**Shuangxi**	**1.31**	**355**	*e*P	**Pb**	**10 18 28.6**	**-0.5**
	baz=3.0						
TIPB				*e*S	**Sn**	**10 18 44.9**	**+0.6**
	baz=3.0						
TWB1	**Santiao Chiao**	**1.35**	**2**	*e*P	**Pn**	**10 18 28.3**	**+0.2**
	baz=3.0						
TWB1				*e*S	**Sn**	**10 18 44.5**	**-0.5**
	baz=3.0						
NHDH	**Xindian Distri**	**1.36**	**344**	*e*S	**Sn**	**10 18 45.5**	**+0.3**
	baz=334						
TWA	**Mucha**	**1.36**	**346**	*e*P	**Pn**	**10 18 28.9**	**+0.6**
	baz=335						
TWA				*e*S	**Sn**	**10 18 45.6**	**+0.3**
	baz=335						
NMLH	**Miaoli**	**1.37**	**310**	*e*S	**Sb**	**10 18 47.1**	**-0.1**
	baz=310						
CHN1	**Nanshi**	**1.39**	**250**	*e*P	**Pb**	**10 18 29.9**	**-0.4**
	baz=249						
CHN1				*e*S	**Sb**	**10 18 49.1**	**+1.5**
	baz=249						
TWK	**Hsinying**	**1.39**	**254**	*e*P	**Pb**	**10 18 30.3**	**-0.1**
	baz=253						
TWK				*e*S	**Sb**	**10 18 48.8**	**+0.9**
	baz=253						
ECL	**Taimali**	**1.40**	**221**	*e*P	**Pn**	**10 18 28.6**	**-0.1**
	baz=220						
ECL				*e*S	**Sn**	**10 18 44.7**	**-1.6**
	baz=220						
SNST	**Tainan City**	**1.40**	**252**	*e*P	**Pb**	**10 18 31.2**	**+0.6**
	baz=251						
NWF	**Wu-fen Shan**	**1.42**	**354**	*e*P	**Pb**	**10 18 30.3**	**-0.5**
	baz=354						
NWF				*e*S	**Sn**	**10 18 47.9**	**+1.0**
	baz=354						
WRL	**Guolierlin Hig**	**1.46**	**280**	*e*P	**Pn**	**10 18 30.7**	**+1.1**
	baz=279						
WRL				*e*S	**Sn**	**10 18 48.8**	**+1.0**
	baz=279						
NCUH	**Zhongli**	**1.48**	**332**	*e*P	**Pn**	**10 18 30.9**	**+1.1**
	baz=332						
NCUH				*e*S	**Sn**	**10 18 49.4**	**+1.1**
	baz=332						
NCU	**National Centr**	**1.48**	**332**	*e*P	**Pb**	**10 18 31.2**	**-0.7**
	baz=332						
NCU				*e*S	**Sn**	**10 18 49.1**	**+0.7**
	baz=332						
SSD	**Sandimen**	**1.51**	**233**	*e*P	**Pn**	**10 18 31.5**	**+1.2**
	baz=227						
TSMG	**Majia**	**1.53**	**232**	*e*P	**Pn**	**10 18 30.9**	**+0.3**
	baz=225						
ANP	**Anpu**	**1.57**	**346**	*e*P	**Pb**	**10 18 33.5**	**0.0**
	baz=346						
ANP				*e*S	**Sb**	**10 18 52.4**	**-0.6**
	baz=346						
WSL	**Shuilin Townsh**	**1.58**	**265**	*e*P	**Pn**	**10 18 32.6**	**+1.4**
	baz=265						
WSL				*e*S	**Sn**	**10 18 52.0**	**+1.2**
	baz=265						
MASBT	**Mashibuluo**	**1.59**	**230**	*e*P	**Pn**	**10 18 31.9**	**+0.4**
	baz=223						
EAST	**Anshuo**	**1.62**	**219**	*e*P	**Pb**	**10 18 33.8**	**-0.6**
	baz=217						
HATJ	**Hateruma jima**	**1.75**	**76**	P	**Pn**	**10 18 34.6**	**+1.0**
HATJ				*e*S	**Sn**	**10 18 55.6**	**+0.6**
IRIF	**Iriomote-Funau**	**1.77**	**67**	P	**Pn**	**10 18 35.0**	**+1.1**
IRIF				*e*S	**Sb**	**10 18 57.0**	**-1.5**
SCZT	**Fangliau**	**1.77**	**224**	*e*P	**Pb**	**10 18 36.8**	**-0.1**
	baz=221						
SCZT				*e*S	**Sb**	**10 18 59.0**	**+0.4**
	baz=221						
JIJ	**Ishigaki jima**	**2.13**	**70**	P	**Pn**	**10 18 40.1**	**+1.2**
JIJ				*e*S	**Sn**	**10 19 04.8**	**+0.4**
JISG	**Ishigakijimahi**	**2.35**	**66**	*e*P	**Pn**	**10 18 42.7**	**+0.8**
JISG				*e*S	**Sn**	**10 19 09.7**	**-0.1**

IDC 16 10:28:29.4±5.0,55°.88S×144°.65W,h0^{km},mb3.7/2, mbtmp3.7/2,Error ellipse: s-maj=622.5km s-min=107.7km az=168.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N3	**Juan Fernandez**	**49.69**	**92**	T	T	11 30 57.5	
	baz=224,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**49.69**	**92**	T	T	11 30 52.0	
	baz=224,slow=72,SNR=22						
H03N1	**Juan Fernandez**	**49.70**	**92**	T	T	11 30 50.7	
	baz=224,slow=72,SNR=18						
ASAR	**Alice Springs**	**66.01**	**263**	P	P	10 39 17.8	+0.1
	0.8nm,0.7s,baz=141,slow=6.2,SNR=14						
	0.8nm,0.7s						
H01W1	**Cape Leeuwin H**	**67.64**	**241**	T	T	11 53 57.5	
	baz=142,slow=76,SNR=6.1						
H01W2	**Cape Leeuwin H**	**67.64**	**241**	T	T	11 53 54.9	
	baz=142,slow=76,SNR=7.5						
H01W3	**Cape Leeuwin H**	**67.65**	**241**	T	T	11 53 59.2	
	baz=142,slow=76,SNR=4.6						
WRA	**Warramunga Arr**	**68.72**	**266**	P	P	10 39 34.7	-0.2
	0.6nm,0.9s,baz=149,slow=5.6,SNR=2.7						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**149.84**	**272**	PKPbc	PKPbc	10 48 20.1	-0.3
	1.0nm,0.9s,baz=111,slow=3.7,SNR=5.2						

IDC 16 10:34:32.1±1.5,4°.41S×152°.62E,h0^{km},mb3.3/4, mbtmp3.3/4,MS3.3/1,Error ellipse: s-maj=19.9km s-min=11.8km az=9.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.60**	**280**	Pg	Pg	10 34 43.3	-0.3
	145nm,0.3s,baz=165,slow=1.2,SNR=83						
KRVT				Lg	Lg	10 34 52.4	
	220nm,0.3s,baz=98,slow=23,SNR=20						
WRA	**Warramunga Arr**	**23.57**	**228**	P	P	10 39 44.4	-0.2
	0.7nm,0.8s,baz=52,slow=9.7,SNR=3.0						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**26.32**	**222**	P	P	10 40 09.9	+0.1
	0.1nm,0.4s,baz=48,slow=9.2,SNR=4.5						
	0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**57.55**	**295**	LR	LR	11 11 47.5	
	comp=Z,21nm,18.3s,baz=200,slow=39						
MKAR	**Makanchi Array**	**79.91**	**319**	P	P	10 46 43.2	+0.2
	0.1nm,0.5s,baz=104,slow=6.4,SNR=2.0						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**81.87**	**22**	P	P	10 46 53.3	+0.2
	0.3nm,0.7s,baz=246,slow=5.8,SNR=2.9						
	0.3nm,0.7s						

*IDC **16** 10:46:39.5±11.0,14°.62S×169°.50E,h134^{km}±103^{km}, mb3.4/4,mbtmp3.7/5,ML3.5/1,Error ellipse: s-maj=128.4km s-min=33.4km az=165.0*

ISC 16 10:46:40.6±1.3,14°.7S±0°.2×169°.6E±0°.3,h150^{km},n6, σ1^{s}.77/6,mb3.6/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.92**	**202**	P	**Pn**	**10 48 33.2**	**+0.2**
	0.7nm,0.3s,baz=161,slow=17,SNR=6.8						
	2.0nm,0.3s						
STKA	**Stephens Creek**	**30.73**	**231**	P	**P**	**10 52 41.7**	**0.0**
	2.2nm,0.8s,baz=45,slow=8.6,SNR=3.7						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**34.00**	**256**	P	**P**	**10 53 09.5**	**-0.8**
	0.4nm,0.8s,baz=83,slow=7.7,SNR=1.2						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**34.77**	**250**	P	**P**	**10 53 16.7**	**-0.3**
	0.5nm,0.5s,baz=80,slow=8.9,SNR=16						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**94.31**	**61**	P	**P**	**10 59 42.4**	**-1.2**
	0.5nm,1.0s,baz=236,slow=4.2,SNR=2.5						
	0.5nm,1.0s						
ARCES	**ARCESS Array B**	**120.77**	**346**	PKP	**PKiKP**	**11 05 17.1**	**+2.7**
	1.6nm,0.8s,baz=64,slow=2.8,SNR=3.8						

*IDC **16** 10:55:31.4±1.4,15°.98S×176°.99W,h373^{km}±16^{km}, mb3.6/10,mbtmp4.4/12,Error ellipse: s-maj=22.4km s-min=10.8km az=138.0*

*NEIC **16** 10:55:32.1±1.4,15°.8S±0°.1×177°.0W±0°.1,h375^{km}±3^{km}, mb4.2/33,Error ellipse: s-maj=23.9km s-min=15.6km az=134.0*

ISC 16 10:55:33.3±0.5,15°.9S±0°.1×176°.95W±0°.09,h400^{km},n45, σ1^{s}.27/41,mb4.2/24,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.37**	**69**	P	**Pn**	**10 56 56.9**	**-2.3**
	60nm,0.4s,baz=193,slow=2.2,SNR=30						
AFI				S	**S**	**10 58 07.8**	**-1.4**
	20nm,0.4s,baz=307,slow=18,SNR=1.9						
NIUE	**Niue**	**7.42**	**116**	Pn	**Pn**	**10 57 21.0**	**-0.6**
DZM	**Mont Dzumac**	**16.87**	**246**	P	**P**	**10 59 04.0**	**-2.0**
	3.4nm,0.7s,baz=77,slow=18,SNR=2.1						
DZM	**Mont Dzumac**	**16.87**	**246**	IAmb	IAmb	11 00 01.3	
	comp=Z,8.8nm,0.9s						
OUZ	**Omahuta**	**21.05**	**202**	P	**P**	**10 59 47.7**	**+0.5**
URZ	**Urewera**	**22.91**	**192**	P	**P**	**11 00 01.1**	**-2.9**
	comp=Z,10.0nm,0.7s,baz=282,slow=3.3,SNR=11						
	comp=Z,10.0nm,0.7s						
THZ	**Tophouse**	**27.24**	**197**	P	**P**	**11 00 42.2**	**-0.5**
RPZ	**Rata Peaks**	**29.57**	**198**	P	**P**	**11 01 01.8**	**-1.3**
	comp=Z,44nm,1.2s,baz=122,slow=22,SNR=2.9						
	comp=Z,44nm,1.2s						
MLZ	**Mavora Lakes**	**31.97**	**200**	P	**P**	**11 01 23.6**	**-0.4**
STKA	**Stephens Creek**	**40.85**	**239**	P	**P**	**11 02 38.0**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=95,slow=9.8,SNR=8.6						
	comp=Z,3.0nm,0.8s						
BBOO	**Buckleboo**	**45.62**	**239**	P	**P**	**11 03 16.0**	**+0.1**
WR0	**Warramunga Arr**	**46.21**	**257**	P	**P**	**11 03 20.7**	**+0.1**
WR0				IAmb	IAmb	11 05 00.2	
	comp=Z,36nm,1.9s						
WB0	**Warramunga Arr**	**46.36**	**258**	P	**P**	**11 03 21.6**	**-0.2**
WB2	**Warramunga Arr**	**46.39**	**257**	P	**P**	**11 03 22.0**	**0.0**
WB2				IAmb	IAmb	11 03 36.6	
	comp=Z,21nm,1.5s						
WRAB	**Tennant Creek**	**46.40**	**257**	P	**P**	**11 03 22.1**	**+0.1**
WRAB				IAmb	IAmb	11 04 33.4	
	comp=Z,22nm,1.6s						
WRA	**Warramunga Arr**	**46.41**	**257**	P	**P**	**11 03 22.1**	**0.0**
	comp=Z,1.3nm,0.4s,baz=95,slow=8.0,SNR=95						
	comp=Z,1.3nm,0.4s						
AS31	**Alice Springs**	**46.71**	**252**	P	**P**	**11 03 24.8**	**+0.4**
AS31				IAmb	IAmb	11 03 25.7	
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**46.71**	**252**	P	**P**	**11 03 24.7**	**+0.3**
	comp=Z,16nm,0.5s,baz=86,slow=7.8,SNR=428						
	comp=Z,16nm,0.5s						
ASAR	**Alice Springs**	**46.71**	**252**	P	**P**	**11 03 24.9**	**+0.4**
KNRA	**Kununurra**	**52.11**	**262**	P	**P**	**11 04 05.2**	**+0.4**
FORT	**Forrest**	**52.15**	**243**	P	**P**	**11 04 04.5**	**-0.3**
FORT				IAmb	IAmb	11 04 28.6	
	comp=Z,27nm,1.0s						
PSA00	**Pilbara Seismi**	**59.79**	**254**	P	**P**	**11 04 58.3**	**-0.1**
SBA	**Scott Base**	**62.53**	**184**	P	**P**	**11 05 18.2**	**+2.6**
VNDA	**Vanda**	**62.58**	**185**	P	**P**	**11 05 17.3**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=355,slow=8.4,SNR=9.9						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**62.58**	**185**	IAmb	IAmb	11 07 15.6	
	comp=Z,10.0nm,2.0s						
MORW	**Morawa**	**62.59**	**245**	P	**P**	**11 05 17.2**	**+0.3**
NVAR	**Mina Array Bea**	**77.00**	**44**	P	**P**	**11 06 45.2**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=226,slow=9.8,SNR=9.6						
	comp=Z,1.1nm,0.7s						
P18K	**Big Mountain,**	**77.06**	**11**	P	**P**	**11 06 43.3**	**+0.1**
P18K				IAmb	IAmb	11 06 46.0	
	comp=Z,4.5nm,1.1s						
PINE	**Pine Mountain**	**78.34**	**38**	P	**P**	**11 06 52.4**	**+1.6**
G08A	**Pilot Rock**	**80.35**	**37**		**P**	**11 07 01.6**	**+0.2**
G08A				IAmb	IAmb	11 07 03.7	
	comp=Z,4.1nm,1.0s						
TRF	**Thorofare Moun**	**81.74**	**12**	P	**P**	**11 07 08.5**	**+0.2**
TRF				IAmb	IAmb	11 08 54.8	
	comp=Z,12nm,1.6s						
RND	**Reindeer**	**81.99**	**12**	P	**P**	**11 07 10.8**	**+1.4**
RND				IAmb	IAmb	11 07 11.2	
	comp=Z,3.3nm,0.6s						
HLID	**Hailey**	**82.19**	**41**		**P**	**11 07 13.0**	**+1.9**
HLID				IAmb	IAmb	11 07 13.7	
	comp=Z,2.8nm,0.8s						
SRU	**San Rafael Swe**	**82.61**	**46**	IAmb	IAmb	11 07 16.0	
	comp=Z,2.9nm,0.7s						
WRH	**Wood River Hil**	**83.09**	**12**	IAmb	IAmb	11 07 16.5	
	comp=Z,3.2nm,0.8s						
MNTX	**Cornudas Mount**	**83.27**	**55**	P	**P**	**11 07 17.6**	**+1.0**
HDA	**Harding Lake**	**83.27**	**13**	IAmb	IAmb	11 07 17.3	
	comp=Z,3.6nm,0.7s						
IL31		**83.61**	**12**	P	**P**	**11 07 18.1**	**+0.7**
ILAR	**Eielson Array**	**83.61**	**12**	P	**P**	**11 07 17.9**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=221,slow=5.3,SNR=35						
	comp=Z,1.6nm,0.6s						
TXAR	**Lajitas Array**	**83.73**	**57**	P	**P**	**11 07 21.3**	**+2.2**
	comp=Z,2.2nm,0.9s,baz=219,slow=5.8,SNR=27						
	comp=Z,2.2nm,0.9s						
J25K	**Salcha River,**	**83.79**	**13**	P	**P**	**11 07 19.5**	**+0.9**
J25K				IAmb	IAmb	11 07 20.2	
	comp=Z,4.6nm,0.6s						
PDAR	**Pinedale Array**	**84.92**	**43**	P	**P**	**11 07 25.5**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=247,slow=1.9,SNR=4.3						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**124.56**	**351**	PKP	**PKiKP**	**11 13 46.0**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=324,slow=1.2,SNR=9.2						
BRTR	**Keskin Array B**	**144.28**	**318**	PKP	**PKiKP**	**11 14 23.8**	**-2.8**
	comp=Z,2.5nm,0.8s,baz=79,slow=2.6,SNR=11						
GERES	**GERESS Array B**	**145.98**	**347**	PKPbc	**PKPab**	**11 14 27.1**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=31,slow=5.4,SNR=6.7						

*IDC **16** 11:03:33.7±1.0,32°.99N×139°.25E,h171^{km}±5^{km},mb3.2/5, mbtmp3.6/6,Error ellipse: s-maj=41.7km s-min=16.5km az=102.0*

*JMA **16** 11:03:34.9±0.3,33°.2N±0°.6×14°0E±°,h173^{km}±2^{km}, MV3.2/38,NEAR HACHIJOJIMA ISLAND*

ISC 16 11:03:34.5±0.9,33°.12N±0°.07×139°.53E±0°.08,h173^{km},n33, σ1^{s}.12/28,mb3.5/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.21**	**90**	P	**Pn**	**11 03 57.7**	**+0.2**
	245nm,0.2s,baz=335,slow=6.4,SNR=119						
JHJ				S	**Sn**	**11 04 16.6**	**+1.5**
	217nm,0.3s,baz=242,slow=22,SNR=14						
JHCJ	**Hachijojimakas**	**0.23**	**102**	*e*S	**Sn**	**11 04 15.8**	**+0.5**
JHJ2	**Mitsune**	**0.24**	**92**	P	**Pn**	**11 03 58.3**	**+0.7**
JAOM	**Aogashimamukai**	**0.68**	**163**	P	**Pn**	**11 03 59.9**	**+0.5**
JMKN	**Mikurajimanish**	**0.77**	**4**	P	**Pn**	**11 04 00.1**	**+0.2**
JKO	**Kozu shima**	**1.11**	**343**	*e*P	**Pn**	**11 04 02.8**	**+0.5**
JIM2	**Oshima 3**	**1.60**	**357**	P	**Pn**	**11 04 07.5**	**+0.7**
JIZS	**Izushimoda**	**1.68**	**341**	P	**Pn**	**11 04 08.4**	**+0.7**
TK02	**Tokai 2**	**1.69**	**300**	P	**Pn**	**11 04 08.4**	**+0.9**
BSO3	**Boso 3**	**1.87**	**26**	*i* P	**Pn**	**11 04 09.8**	**+0.5**
TK04	**Tokai 4**	**1.87**	**313**	*e*P	**Pn**	**11 04 10.5**	**+1.0**
BSO1	**Boso 1**	**1.95**	**38**	P	**Pn**	**11 04 10.2**	**+0.4**
JOD2	**Odawara 2**	**2.17**	**350**	P	**Pn**	**11 04 13.8**	**+0.8**
TTO2	**TONANKAI O.B.S**	**2.18**	**287**	P	**Pn**	**11 04 13.6**	**+0.9**
SHZ3	**Shizuoka 3**	**2.23**	**331**	P	**Pn**	**11 04 14.7**	**+1.1**
TTO1	**TONANKAI O.B.S**	**2.35**	**283**	*e*P	**Pn**	**11 04 15.3**	**+0.6**
JYN	**Shimob**	**2.51**	**341**	P	**Pn**	**11 04 18.2**	**+1.3**
JIE	**Ise**	**2.67**	**299**	*e*P	**Pn**	**11 04 19.4**	**+0.6**
JRY	**Ryogami san**	**2.94**	**350**	P	**Pn**	**11 04 23.2**	**+1.2**
MJAR	**Matsushiro Arr**	**3.58**	**343**	P	**Pn**	**11 04 30.4**	**+0.3**
	3.5nm,0.4s,baz=158,slow=12,SNR=20						
MJAR				S	**Sn**	**11 05 11.4**	**-2.1**
	1.3nm,0.4s,baz=284,slow=36,SNR=0.9						
JCJ	**Chichijima**	**6.43**	**158**	P	Pn	11 05 02.3	-4.8
	37nm,0.6s,baz=255,slow=23,SNR=7.8						
JCJ				S	Sn	11 06 11.5	-8.5
	24nm,0.3s,baz=301,slow=23,SNR=7.2						
ASAJ	**Asahikawa**	**11.24**	**11**	P	**Pn**	**11 06 08.1**	**-2.1**
	3.7nm,0.3s,baz=221,slow=11,SNR=12						
H11N2	**WAKE ISLAND Hy**	**27.80**	**112**	T	T	11 38 32.1	
	baz=306,slow=75,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**27.81**	**112**	T	T	11 38 25.4	
	baz=306,slow=75,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**27.82**	**112**	T	T	11 38 22.9	
	baz=306,slow=75,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**28.35**	**114**	T	T	11 39 57.1	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**28.35**	**114**	T	T	11 40 13.8	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**28.37**	**114**	T	T	11 40 07.1	
	baz=304						
KDAK	**Kodiak Island**	**51.07**	**40**	P	**P**	**11 12 19.9**	**+1.0**
	1.1nm,0.5s,baz=271,slow=9.2,SNR=4.7						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**53.00**	**186**	P	**P**	**11 12 31.4**	**-2.1**
	0.3nm,0.3s,baz=0.7,slow=7.6,SNR=16						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**53.63**	**31**	P	**P**	**11 12 38.0**	**+0.3**
	0.3nm,1.0s,baz=288,slow=6.6,SNR=2.2						
	0.3nm,1.0s						
ASAR	**Alice Springs**	**56.72**	**186**	P	**P**	**11 12 58.8**	**-1.4**
	0.3nm,0.4s,baz=354,slow=5.8,SNR=11						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**93.75**	**51**	P	**P**	**11 16 33.5**	**+1.4**
	0.3nm,0.5s,baz=325,slow=2.7,SNR=5.5						
	0.3nm,0.5s						

*IDC **16** 11:07:41.5±3.7,55°.59S×144°.88W,h0^{km},mb3.6/3, mbtmp3.6/3,MS3.8/4,Error ellipse: s-maj=112.4km s-min=45.6km az=54.0*

*NEIC **16** 11:07:44.2±2.7,55°.94S±0°.05×144°.9W±0°.2,h15^{km}±5^{km}, mb4.6/20,Error ellipse: s-maj=17.8km s-min=7.1km az=93.0*

ISC 16 11:07:43.3±0.8,55°.9S±0°.1×145°.1W±0°.1,h10^{km},n39, σ1^{s}.22/24,mb4.5/12,MS3.6/4,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**27.48**	**200**	P	**P**	**11 13 30.3**	**+1.3**
VNDA	**Vanda**	**28.33**	**202**	LR	LR	11 21 37.6	
	comp=Z,65nm,19.3s,baz=40,slow=29						
VNDA	**Vanda**	**28.33**	**202**	P	**P**	**11 13 37.0**	**+0.3**
URZ	**Urewera**	**30.72**	**289**	P	**P**	**11 13 56.2**	**-2.0**
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**11 14 31.5**	**+2.6**
	0.6nm,0.7s,baz=260,slow=9.4,SNR=1.4						
QSPA				LR	LR	11 25 33.7	
	comp=Z,92nm,19.8s,baz=9.5,slow=31						
	0.6nm,0.7s						
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**11 14 28.9**	**-0.1**
CASY	**Casey**	**45.64**	**213**	P	**P**	**11 16 01.2**	**-2.1**
CASY				IAmb	IAmb	11 16 02.1	
	comp=Z,3.2nm,0.9s						
H03S2	**Juan Fernandez**	**49.63**	**93**	T	T	12 11 12.8	
	baz=227						
H03S1	**Juan Fernandez**	**49.64**	**93**	T	T	12 11 14.0	
	baz=227						
H03S3	**Juan Fernandez**	**49.65**	**93**	T	T	12 11 12.9	
	baz=227						
H03N3	**Juan Fernandez**	**49.91**	**92**	T	T	12 11 23.4	
	baz=230,slow=72						
H03N2	**Juan Fernandez**	**49.92**	**92**	T	T	12 11 22.2	
	baz=230,slow=72						
H03N1	**Juan Fernandez**	**49.93**	**92**	T	T	12 11 22.6	
	baz=230,slow=72						
SNAA	**Sanae**	**49.97**	**165**	P	**P**	**11 16 36.9**	**+0.1**
SNAA				IAmb	IAmb	11 17 03.9	
	comp=Z,2.2nm,1.0s						
MAW	**Mawson**	**55.06**	**193**	LR	LR	11 38 27.6	
	comp=Z,52nm,18.4s,baz=70,slow=33						
MAW	**Mawson**	**55.06**	**193**	P	**P**	**11 17 14.9**	**+0.5**
STKA	**Stephens Creek**	**55.14**	**263**	P	**P**	**11 17 15.3**	**-0.3**
STKA				IAmb	IAmb	11 17 22.0	
	comp=Z,2.8nm,1.3s						
HOPE	**Hope Point**	**55.64**	**138**	P	**P**	**11 17 19.4**	**+0.6**
TRQA	**Tornquist**	**55.88**	**109**	P	**P**	**11 17 20.0**	**-0.9**
TRQA				IAmb	IAmb	11 17 31.3	
	comp=Z,12nm,1.2s						
XMAS	**Kiritimati**	**58.65**	**345**	P	**P**	**11 17 42.4**	**+1.8**
CTAO	**Charters Tower**	**61.68**	**276**	P	**P**	**11 18 02.7**	**+1.3**
CTAO				IAmb	IAmb	11 18 19.1	
	comp=Z,15nm,1.2s						
ITQB	**Itaqui**	**65.13**	**106**	P	**P**	**11 18 22.9**	**-1.3**
ASAR	**Alice Springs**	**65.78**	**263**	P	**P**	**11 18 29.1**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=138,slow=6.2,SNR=5.5						
	comp=Z,0.6nm,0.8s						

ASAR	Alice Springs	65.78	263	P	P	11 18 27.5	-0.9
H01W1	Cape Leeuwin H	67.42	241	T	T	12 33 11.8	
	baz=142,slow=76,SNR=58						
H01W2	Cape Leeuwin H	67.43	241	T	T	12 33 11.7	
	baz=142,slow=76,SNR=79						
H01W3	Cape Leeuwin H	67.44	241	T	T	12 33 13.1	
	baz=142,slow=76,SNR=47						
WB2	Warramunga Arr	68.48	266	P	P	11 18 47.0	+1.4
WB2				IAmb	IAmb	11 19 12.3	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	68.49	266	P	P	11 18 46.5	+0.8
	comp=Z,0.5nm,0.8s,baz=143,slow=5.9,SNR=7.0						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	68.49	266	P	P	11 18 46.9	+1.2
WRAB	Tennant Creek	68.49	266	P	P	11 18 46.8	+1.1
WRAB				IAmb	IAmb	11 18 56.6	
	comp=Z,7.3nm,1.3s						
WB0	Warramunga Arr	68.60	266	P	P	11 18 46.5	+0.1
WB0				IAmb	IAmb	11 18 50.5	
	comp=Z,6.7nm,1.2s						
MORW	Morawa	71.15	246	P	P	11 19 01.6	-0.3
KNRA	Kununurra	75.05	264	P	P	11 19 24.9	-0.2
KNRA				IAmb	IAmb	11 19 38.5	
	comp=Z,13nm,1.3s						
KAPI	Kappang	88.80	263	LR	LR	11 59 48.8	
	comp=Z,197nm,18.6s,baz=100,slow=35						
H10N3	ASCENSION HYDR	104.51	129	T	T	13 19 18.7	
	baz=206,slow=74,SNR=12						
H10N1	ASCENSION HYDR	104.52	129	T	T	13 19 12.7	
	baz=206,slow=74,SNR=18						
H10N2	ASCENSION HYDR	104.53	129	T	T	13 19 13.4	
	baz=206,slow=74,SNR=15						
MKAR	Makanchi Array	149.61	273	PKPbc	PKPbc	11 27 31.7	-0.3
	comp=Z,1.4nm,1.1s,baz=130,slow=2.3,SNR=7.6						

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*IDC **16** 11:20:20.1±1.6, 0.°60N×100.°05E, h164km±11km, mb3.5/8, mbtmp3.9/10, Error ellipse: s-maj=51.3km s-min=14.0km az=53.0*

*DJA **16** 11:20:21.5±0.5, 1°N±3°×10°0E±°, h170km±6km, M3.7/11, mb3.4/1, MLv3.9/11*

*NEIC **16** 11:20:22.9±3.0, 0.°61N±0.°08×100.°07E±0.°08, h188km±7km, mb4.2/22, Error ellipse: s-maj=12.5km s-min=9.7km az=224.0*

ISC 16 11:20:22.9±0.5**, 0.°61N**±0.°06×**100.°02E**±0.°06**, h200km, n47,** σ**2.s42**/51**, mb4.0**/18**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKNI	Bangkinang	1.06	106	Pn	Pn	11 20 50.0	-3.0
BKNI	Bangkinang	1.06	106	P	Pn	11 20 49.3	-3.8
SISI	Saibi	2.14	206	P	Pn	11 20 59.3	-3.6
SISI				S	Sn	11 21 28.3	-5.8
PSI	Prapat	2.43	333	P	Pn	11 21 00.8	-5.5
	8.7nm,0.4s,baz=155,slow=9.5,SNR=9.5						
PSI				S	Sn	11 21 32.1	-8.0
	11nm,0.5s,baz=32,slow=19,SNR=13						
GSI	Gunungsitoli	2.54	286	Pn	Pn	11 21 05.5	-1.8
GSI	Gunungsitoli	2.54	286	P	Pn	11 21 04.4	-2.9
KRJI	Kerinci	3.05	152	P	Pn	11 21 10.7	-2.6
KCSI	Kotacane, Aceh	3.66	322	P	Pn	11 21 18.3	-2.3
IPM	Ipoh	3.97	15	Pn	Pn	11 21 22.2	-2.2
MYKOM	Kota Tinggi	4.00	73	Pn	Pn	11 21 22.4	-2.4
KULM	Kulim	4.69	8		Pn	11 21 30.7	-2.7
MNAI	Manna	5.75	149	Pn	Pn	11 21 42.5	-4.4
MDSI	Maura Dua	6.55	141	P	Pn	11 21 56.2	-1.2
CMAR	Chiang Mai Arr	17.77	357	P	P	11 24 15.6	-0.7
	0.6nm,0.5s,baz=190,slow=9.2,SNR=4.5						
TOLI2	Tolitoli	20.77	88	P	P	11 24 48.1	-0.6
KNRA	Kununurra	32.68	121	P	P	11 26 38.0	+1.4
MTN	Manton Dam	33.63	115	P	P	11 26 40.7	-4.2
MTN				IAmb	IAmb	11 26 42.2	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	39.31	123	P	P	11 27 33.5	+0.6
WB0				IAmb	IAmb	11 27 44.9	
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	39.34	123	P	P	11 27 33.7	+0.5
	comp=Z,1.0nm,0.5s,baz=305,slow=8.7,SNR=20						
WRA				PcP	PcP	11 29 38.1	+0.5
	comp=Z,0.5nm,1.0s,baz=324,slow=2.7,SNR=2.0						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	39.34	123	P	P	11 27 34.2	+1.0
WRAB	Tennant Creek	39.35	123	P	P	11 27 34.5	+1.3
WRAB				IAmb	IAmb	11 27 37.0	
	comp=Z,3.7nm,0.8s						
WB2	Warramunga Arr	39.35	123	P	P	11 27 34.7	+1.5
WB2				IAmb	IAmb	11 27 56.8	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	39.52	123	P	P	11 27 35.7	+1.0
WR0				IAmb	IAmb	11 27 41.4	
	comp=Z,9.5nm,1.4s						
ASAR	Alice Springs	40.81	129	P	P	11 27 45.1	-0.1
	comp=Z,0.2nm,0.5s,baz=206,slow=16,SNR=4.5						
ASAR				PcP	PcP	11 29 42.8	+0.5
	comp=Z,0.4nm,0.9s,baz=314,slow=3.0,SNR=2.7						
ASAR				ScP	ScP	11 33 16.8	+3.8
	comp=Z,0.4nm,0.8s,baz=312,slow=4.3,SNR=1.3						
	comp=Z,0.2nm,0.5s						
FORT	Forrest	41.05	142	P	P	11 27 46.6	-0.3
SONM	Songino Array	47.36	6	P	P	11 28 36.9	0.0
	comp=Z,0.6nm,0.5s,baz=188,slow=9.0,SNR=5.2						
	comp=Z,0.6nm,0.5s						
SONM	Songino Array	47.36	6	P	P	11 28 36.5	-0.4
BBOO	Buckleboo	47.53	138	P	P	11 28 37.4	-1.0
BBOO				IAmb	IAmb	11 28 41.9	
	comp=Z,30nm,1.4s						
MK31	Makanchi Array	48.54	344	P	P	11 28 47.5	+1.6
MKAR	Makanchi Array	48.54	344	P	P	11 28 47.2	+1.3
	comp=Z,3.2nm,0.5s,baz=159,slow=8.5,SNR=41						
	comp=Z,3.2nm,0.5s						
MKAR	Makanchi Array	48.54	344	P	P	11 28 47.0	+1.1
MAKZ	Makanchi	48.64	344	P	P	11 28 48.0	+1.4
CTAO	Charters Tower	49.72	117	P	P	11 28 55.2	-0.1
CTAO				IAmb	IAmb	11 29 12.5	
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	49.87	332	P	P	11 28 57.5	+1.6
ZALV	Zalesovo Beam	54.62	349	P	P	11 29 31.6	+0.9
	comp=Z,1.3nm,0.3s,baz=167,slow=7.1,SNR=2.4						
	comp=Z,1.3nm,0.3s						
ABKAR	Akbulak array	59.38	331	P	P	11 30 05.3	+1.2
ABKAR	Akbulak array	59.38	331	P	P	11 30 04.5	+0.3
ABKAR				IAmb	IAmb	11 30 05.9	
	comp=Z,2.8nm,0.7s						
CASY	Casey	67.17	175	P	P	11 30 58.8	+3.9
CASY				IAmb	IAmb	11 31 16.4	
	comp=Z,3.6nm,1.0s						
BRTR	Keskin Array B	71.59	312	P	P	11 31 23.8	+0.9
	comp=Z,1.0nm,0.6s,baz=119,slow=6.7,SNR=4.7						
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	71.59	312	P	P	11 31 22.9	+0.1
TIXI	Tiksi	73.29	9	P	P	11 31 32.0	0.0
TIXI				IAmb	IAmb	11 31 50.8	
	comp=Z,1.3nm,0.4s						
IDI	Anoyia	77.52	306	P	P	11 31 58.6	+1.6
ITM	Ithomi	80.14	308	P	P	11 32 11.5	+0.4
FINES	FINESS Array B	81.82	332	P	P	11 32 21.1	+1.7
	comp=Z,1.1nm,0.5s,baz=120,slow=5.5,SNR=1.9						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	81.82	332	P	P	11 32 21.6	+2.2
ARCES	ARCESS Array B	84.04	340	P	P	11 32 32.1	+1.4
	comp=Z,0.9nm,0.7s,baz=103,slow=5.4,SNR=6.0						
	comp=Z,0.9nm,0.7s						
ARCES	ARCESS Array B	84.04	340	P	P	11 32 31.4	+0.8
ARCES				IAmb	IAmb	11 32 50.3	
	comp=Z,19nm,1.4s						

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*IDC **16** 11:24:02.9±0.5, 17.°43S×175.°95E, h0km, mb4.5/24, mbtmp4.5/26, ML3.4/2, MS4.4/49, Error ellipse: s-maj=18.0km s-min=13.1km az=135.0*

*MOS **16** 11:24:05.6±0.9, 17.°35S×175.°80E, h23km, mb5.4/39, MS4.6/5, Error ellipse: s-maj=11.9km s-min=10.1km az=76.2*

*NEIC **16** 11:24:07.4±2.0, 17.°2S±0.°1×175.°91E±0.°09, h17km±3km, mb5.3/102, Error ellipse: s-maj=16.6km s-min=11.1km az=149.0*

*BJI **16** 11:24:08.2±0.0, 16.°72S×176.°00E, h22km, mb4.9/49, mB5.4/33, Ms5.0/24, Ms7 4.7/24*

*GCMT **16** 11:24:08.4±0.1, 17.°30S±0.°01×176.°01E±0.°01, h12km, MW5.2/136, Moment Tensor Solution. s73,c102; s136,c232; Duration: 1.s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.72±.01; $M_{\theta\theta}$0.00±.01; $M_{\phi\phi}$0.71±.01; $M_{r\theta}$-0.22±.04; $M_{\theta\phi}$0.09±.01; $M_{\phi r}$0.01±.03; Best double couple: $M_0$0.75500×10^{17} NP1:ϕ_s171.00000°, δ46.00000°, λ-112.00000°. NP2:ϕ_s22.00000°, δ48.00000°, λ-68.00000°. Principal axes: T 0.7260, Plg1.0000°, Azm97.0000°; N 0.0570, Plg16.0000°, Azm187.0000°; P -0.7840, Plg74.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 11:24:08.3±0.3**, 17.°38S**±0.°07×**176.°02E**±0.°06**, h35km, n581,** σ**1.s12**/558**, mb5.2**/107**, MS4.6**/67**, 10C-20D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	8.56	240	Pn	Pn	11 26 10.7	+0.8
PINNC	Pines Island,	9.59	236	Pn	Pn	11 26 25.8	+1.9
OUENC	Ouen Island, N	9.98	238		Pn	11 26 32.4	+3.1
DZM	Mont Dzumac	10.15	241	Pn	Pn	11 26 29.6	-2.1
	0.1nm,0.3s,baz=242,slow=16,SNR=2.1						
DZM				LR	LR	11 29 54.5	
	comp=Z,5μm,20.4s,baz=70,slow=35						
	5.9nm,0.9s						
DZM	Mont Dzumac	10.15	241	Pn	Pn	11 26 33.1	+1.4
ONTNC	Ouen Toro	10.24	240	Pn	Pn	11 26 34.7	+1.8
AFI	Afiamalu	12.25	75	Pn	Pn	11 27 01.0	+0.5
	0.5nm,0.3s,baz=278,slow=18,SNR=3.3						
AFI				LR	LR	11 30 54.2	
	comp=Z,3μm,18.9s,baz=244,slow=33						
	55nm,1.1s						
AFI	Afiamalu	12.25	75		Pn	11 27 00.3	-0.2
AFI	Afiamalu	12.25	75	P	Pn	11 27 00.3	-0.2
RAO	Raoul Island	13.06	156	LR	LR	11 31 14.2	
	comp=Z,3μm,20.7s,baz=336,slow=33						
HNR	Honiara	17.50	295	LR	LR	11 34 33.7	
	comp=Z,1μm,18.3s,baz=118,slow=36						
URZ	Urewera	20.82	178	P	Pn	11 28 48.3	-1.1
	40nm,0.8s,baz=25,slow=5.3,SNR=8.1						
URZ				LR	LR	11 34 55.1	
	comp=Z,763nm,21.2s,baz=31,slow=31						
URZ	Urewera	20.82	178	P	Pn	11 28 49.4	0.0
URZ				IAmb	IAmb	11 29 02.6	
	comp=Z,184nm,1.1s						
BKZ	Black Stump Fm	21.71	179	P	P	11 28 57.3	+0.9
BKZ				IAmb	IAmb	11 29 28.1	
	comp=Z,252nm,1.9s						
RAR	Rarotonga	23.16	103	LR	LR	11 36 09.1	
	comp=Z,1μm,21.7s,baz=300,slow=31						
RAR	Rarotonga	23.16	103	P	P	11 29 13.6	+1.7
RAR	Rarotonga	23.16	103	P	P	11 29 13.6	+1.7
RAR				pmax	pmax		
	comp=Z,323nm,1.7s						
BFZ	Birch Farm	23.22	180	P	P	11 29 12.4	+0.1
NNZ	Nelson	23.86	185	P	P	11 29 19.4	+0.9
EIDS	Eidsvold	24.51	247	P	P	11 29 25.4	+0.8
	baz=24,SNR=5.7						
EIDS	Eidsvold	24.51	247	P	P	11 29 25.2	+0.6
LTZ	Lake Taylor	25.52	186	P	P	11 29 37.0	+3.4
LTZ				IAmb	IAmb	11 29 43.8	
	comp=Z,71nm,1.0s						
ARMA	Armidale	25.73	235	P	P	11 29 35.8	+0.1
	baz=25,SNR=5.3						
ARMA	Armidale	25.73	235	P	P	11 29 36.7	+0.9
RPZ	Rata Peaks	26.59	188	P	P	11 29 43.3	+0.1
	comp=Z,31nm,0.9s,baz=303,slow=19,SNR=3.4						
RPZ				LR	LR	11 39 15.0	
	comp=Z,587nm,18.3s,baz=45,slow=34						
	comp=Z,31nm,0.9s						
RMQ	Roma	26.81	246	P	P	11 29 45.9	+0.5
	baz=26,SNR=8.3						
KRVT	Keravat (AS076	26.86	296	P	P	11 29 45.4	-0.5
	comp=Z,30nm,0.5s,baz=189,slow=22,SNR=5.9						
KRVT				LR	LR	11 39 42.5	
	comp=Z,1μm,21.3s,baz=260,slow=35						
	comp=Z,30nm,0.5s						
CTA	Charters Tower	28.30	260	P	P	11 29 58.3	-0.5
	comp=Z,4.5nm,0.9s,baz=82,slow=11,SNR=2.3						
CTA				LR	LR	11 39 57.8	
	comp=Z,2μm,19.5s,baz=86,slow=34						
	comp=Z,4.5nm,0.9s						
MLZ	Mavora Lakes	28.67	192	P	P	11 30 02.6	+0.7
PMG	Port Moresby	29.14	282	LR	LR	11 40 42.4	
	comp=Z,3μm,18.4s,baz=95,slow=34						
CMSA	Cobar Meteorol	30.87	237	P	P	11 30 22.1	+0.7
	baz=30,SNR=8.3						
PPT	Papeete	32.80	96	LR	LR	11 40 46.8	
	comp=Z,1μm,21.3s,baz=280,slow=31						
STKA	Stephens Creek	34.29	239	P	P	11 30 50.9	-0.6
	comp=Z,6.2nm,0.9s,baz=66,slow=10,SNR=8.9						
STKA				LR	LR	11 43 48.4	
	comp=Z,982nm,19.7s,baz=61,slow=35						
	comp=Z,6.2nm,0.9s						
STKA	Stephens Creek	34.29	239	P	P	11 30 51.8	+0.3
STKA	Stephens Creek	34.29	239	P	P	11 30 51.8	+0.3
STKA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
H11S2	WAKE ISLAND Hy	36.80	345	T	T	12 10 11.6	
	baz=166,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	36.81	345	T	T	12 10 09.2	
	baz=166,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	36.82	345	T	T	12 10 13.0	
	baz=166,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	37.94	346	T	T	12 11 44.3	
	baz=165,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	37.94	346	T	T	12 11 37.8	
	baz=165,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	37.95	346	T	T	12 11 37.9	
	baz=165,slow=76,SNR=5.9						
BBOO	Buckleboo	39.06	239	P	P	11 31 32.2	+0.1
BBOO				IAmb	IAmb	11 31 38.7	
	comp=Z,107nm,1.5s						
WB2	Warramunga Arr	39.48	260	P	P	11 31 34.2	-1.6
WRAB	Tennant Creek	39.49	260	P	P	11 31 34.2	-1.6
WRAB	Tennant Creek	39.49	260	P	P	11 31 34.2	-1.6
WRAB				pmax	pmax		
	comp=Z,53nm,1.8s						
WRA	Warramunga Arr	39.50	260	P	P	11 31 34.5	-1.4
	comp=Z,4.2nm,0.7s,baz=93,slow=9.1,SNR=61						
WRA				PcP	PcP	11 33 42.8	-0.6
	comp=Z,0.7nm,0.8s,baz=92,slow=2.8,SNR=1.6						
WRA				LR	LR	11 46 38.7	
	comp=Z,1μm,19.9s,baz=51,slow=34						
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	39.50	260	P	P	11 31 34.3	-1.6
WRA	Warramunga Arr	39.50	260	P	P	11 31 34.3	-1.6
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
AS31	Alice Springs	39.82	254	P	P	11 31 37.3	-1.3
ASAR	Alice Springs	39.82	254	P	P	11 31 37.6	-1.0
	comp=Z,8.8nm,0.9s,baz=86,slow=9.2,SNR=57						
ASAR				PcP	PcP	11 33 43.7	-0.6
	comp=Z,1.3nm,0.7s,baz=100,slow=3.1,SNR=4.1						
ASAR				LR	LR	11 47 11.3	
	comp=Z,2μm,20.3s,baz=98,slow=35						
	comp=Z,8.8nm,0.9s						
ASAR	Alice Springs	39.82	254	P	P	11 31 37.1	-1.5
ASAR	Alice Springs	39.82	254	P	P	11 31 37.1	-1.5
MTN	Manton Dam	43.49	270	P	P	11 32 07.8	-0.9
	baz=43,SNR=3.8						
MTN	Manton Dam	43.49	270	P	P	11 32 07.1	-1.6
GUMO	Guam	43.50	313	LR	LR	11 49 16.5	
	comp=Z,275nm,19.6s,baz=136,slow=35						
WRKA	Warakurna	44.95	252	P	P	11 32 20.6	+0.3
	baz=44,SNR=11						
KNRA	Kununurra	45.24	265	P	P	11 32 22.1	-0.6
	baz=44,SNR=8.6						
KNRA	Kununurra	45.24	265	P	P	11 32 21.8	-0.9
KNRA				IAmb	IAmb	11 32 29.3	
	comp=Z,36nm,1.0s						
FORT	Forrest	45.45	244	P	P	11 32 24.5	+0.3
	baz=44,SNR=11						
FORT	Forrest	45.45	244	P	P	11 32 23.9	-0.3
SIJI	Sorong	46.95	286	LR	LR	11 51 29.2	
	comp=Z,894nm,20.9s,baz=113,slow=35						
PSA00	Pilbara Seismi	52.89	256	P	P	11 33 21.3	0.0
PSA00				IAmb	IAmb	11 33 27.2	
	comp=Z,49nm,1.4s						
PSA00	Pilbara Seismi	52.89	256	P	P	11 33 20.7	-0.5
PSA00				IAmb	IAmb	11 33 27.2	
	comp=Z,32nm,1.4s						
MBWA	Marble Bar	53.04	256	P	P	11 33 21.2	-1.1
MBWA				IAmb	IAmb	11 33 29.0	
	comp=Z,35nm,1.2s						
KLBR	Kellerberrin	54.31	243	P	P	11 33 31.1	-0.3
	baz=53,SNR=17						
JCJ	Chichijima	55.06	323	LR	LR	11 52 30.5	
	comp=Z,243nm,20.4s,baz=116,slow=31						
DAV	Davao City (W)	55.43	292	LR	LR	11 56 19.9	
	comp=Z,371nm,19.7s,baz=100,slow=35						
MORW	Morawa	55.82	246	P	P	11 33 42.3	-0.2
	baz=55,SNR=3.8						
TOLI2	Tolitoli	57.40	283	P	P	11 33 52.0	-1.9
TOLI2				IAmb	IAmb	11 34 00.2	
	comp=Z,45nm,1.4s						
VNDA	Vanda	60.58	184	P	P	11 34 14.4	-0.5
	comp=Z,3.8nm,0.8s,baz=1.3,slow=8.2,SNR=16						
VNDA				LR	LR	11 56 47.8	
	comp=Z,164nm,19.7s,baz=31,slow=32						
	comp=Z,3.8nm,0.8s						
VNDA	Vanda	60.58	184	P	P	11 34 14.6	-0.3
VNDA				IAmb	IAmb	11 34 22.1	
	comp=Z,45nm,1.8s						
VNDA	Vanda	60.58	184	P	P	11 34 14.6	-0.3
VNDA				pmax	pmax		
	comp=Z,45nm,1.8s						
SBA	Scott Base	60.67	182	P	P	11 34 16.4	+0.9
SBA	Scott Base	60.67	182	P	P	11 34 16.4	+0.9
SBA				pmax	pmax		
	comp=Z,60nm,1.1s						
JHJ	Hachijo jima 2	60.99	325	LR	LR	11 56 22.2	
	comp=Z,166nm,22.0s,baz=128,slow=32						
TGY	Tagaytay City	62.71	296	LR	LR	12 00 11.3	
	comp=Z,180nm,20.5s,baz=144,slow=35						
JOW	Kunigami	63.86	313	LR	LR	12 02 30.5	
	comp=Z,172nm,18.2s,baz=114,slow=36						
CASY	Casey	64.42	204	P	P	11 34 39.9	-0.8
CASY				IAmb	IAmb	11 34 46.5	
	comp=Z,29nm,1.2s						
MJAR	Matsushiro Arr	64.43	327	P	P	11 34 41.0	-0.2
	comp=Z,2.9nm,0.8s,baz=150,slow=7.1,SNR=5.5						
	comp=Z,2.9nm,0.8s						
MJAR	Matsushiro Arr	64.43	327	P	P	11 34 40.4	-0.8
MJAR	Matsushiro Arr	64.43	327	P	P	11 34 40.4	-0.8
MJAR				pmax	pmax		
	comp=Z,18nm,1.5s						
MAJO	Matsushiro	64.43	327	*i* P	P	11 34 40.2	-1.0
MAJO				pmax	pmax		
	comp=Z,24nm,1.4s						
LEM	Lembang	67.41	270	LR	LR	12 04 40.3	
	comp=Z,282nm,18.8s,baz=126,slow=36						
RPN	Rapa Nui	68.91	113	LR	LR	11 57 59.6	
	comp=Z,354nm,21.2s,baz=262,slow=30						
SHEM	Shemya Is, Ala	69.83	359	LR	LR	11 59 15.3	
	comp=Z,182nm,21.6s,baz=82,slow=30						
SKR	Severo-Kuril's	69.99	347	*e*P	P	11 35 06.7	-9.4
SKR				pmax	pmax		
	comp=Z,16nm,1.1s						
SKR				pmax	pmax		
	comp=Z,100nm,3.1s						
SKR				MLR	MLR		
	comp=Z,100nm,18.0s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
KSRS	Korea Array	70.86	321	P	P	11 35 21.8	0.0
	comp=Z,1.0nm,0.8s,baz=133,slow=6.8,SNR=3.1						
	comp=Z,1.0nm,0.8s						
KSAR	Wonju Array Be	70.88	321	P	P	11 35 21.1	-0.7
KSAR	Wonju Array Be	70.88	321	P	P	11 35 21.1	-0.7
PEA0B	Petropavlovsk-	71.96	349	P	P	11 35 28.5	+0.5
PEA0B	Petropavlovsk-	71.96	349	P	P	11 35 28.5	+0.5
PEA0B				pmax	pmax		
	comp=Z,86nm,1.7s						
PETK	Petropavlovsk-	71.96	349	P	P	11 35 27.8	-0.3
	comp=Z,6.7nm,0.9s,baz=163,slow=12,SNR=15						
PETK				LR	LR	12 01 13.4	
	comp=Z,209nm,21.8s,baz=181,slow=31						
	comp=Z,6.7nm,0.9s						
PETK	Petropavlovsk-	71.96	349	P	P	11 35 28.3	+0.3
PETK	Petropavlovsk-	71.96	349	P	P	11 35 28.3	+0.3
MSHR	Mys Shultsa	72.56	327	*i* P	P	11 35 31.8	0.0
QSPA	South Pole Qui	72.67	180	LR	LR	12 04 09.3	
	comp=Z,112nm,18.7s,baz=31,slow=33						
QSPA	South Pole Qui	72.67	180	P	P	11 35 32.1	-0.3
USRK	Ussuriysk Ar.	73.29	329	P	P	11 35 37.4	+1.3
	comp=Z,1.3nm,0.6s,baz=104,slow=6.1,SNR=4.4						
	comp=Z,1.3nm,0.6s						
NJ2	Nanjing	73.56	312	*e*P	P	11 35 38.5	+0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
QIZ	Qiongzhong	74.41	296	P	P	11 35 47.5	+4.2
QIZ				S	S	11 45 20.8	+5.0
QIZ				LR	LR		
	comp=Z,300nm,9.3s						
QIZ				LR	LR		
	comp=Z,330nm,18.6s						
QIZ				LR	LR		
	comp=Z,350nm,22.6s						
WHN	Wuhan	76.06	309	⇓P	P	11 35 54.1	+1.6
WHN				pP	pP	11 35 58.5	-3.9
CN2	Changchun	76.44	325	*e*P	P	11 35 53.8	-0.6
CN2				*e*pP	pP	11 35 59.9	-4.4
CN2				*e*PP	PP	11 38 47.6	+0.9
CN2				*e*S	S	11 45 37.8	+0.4
CN2				*e*sS	pS	11 45 48.3	-1.6
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				LR	LR		
	comp=Z,190nm,13.0s						
CN2				LR	LR		
	comp=Z,250nm,13.0s						
CN2				LR	LR		
	comp=Z,180nm,15.0s						
BNX	BinXian	76.69	327	⇑P	P	11 35 55.9	+0.2
BNX				pmax	pmax		
	comp=Z,16nm,0.8s						
BNX				pmax	pmax		
	comp=Z,350nm,4.4s						
CHIR	Chirikof Islan	76.75	16	P	P	11 35 55.8	0.0
	baz=208						
TIA	Tai'an	77.03	315	P	P	11 35 58.6	+0.7
TIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	77.05	332	*ce*P	P	11 35 58.0	+0.3
KLR				pmax	pmax		
	comp=Z,15nm,1.7s						
IPM	Ipoh	77.08	279	P	P	11 35 58.5	-0.2
IPM				IAmb	IAmb	11 36 05.8	
	comp=Z,49nm,1.3s						
KULM	Kulim	77.70	280	P	P	11 36 02.0	-0.1
KULM				IAmb	IAmb	11 36 09.3	
	comp=Z,34nm,1.3s						
SII	Sitkinak Islan	77.79	16	P	P	11 36 02.0	+0.4
	baz=209						
PSI	Prapat	78.54	277	LR	LR	12 12 44.1	
	comp=Z,343nm,18.1s,baz=120,slow=37						
OHAK	Old Harbor	78.61	16	P	P	11 36 06.4	+0.3
	baz=210						
KDAK	Kodiak Island	79.29	17	P	P	11 36 10.1	+0.3
	comp=Z,2.1nm,0.6s,baz=244,slow=18,SNR=1.4						
KDAK				LR	LR	12 04 13.9	
	comp=Z,183nm,21.0s,baz=234,slow=30						
	comp=Z,2.1nm,0.6s						
KDAK	Kodiak Island	79.29	17	P	P	11 36 10.8	+1.0
	baz=210						
HNS	HongShan	79.31	315	⇓P	P	11 36 11.3	+0.9
HNS				pmax	pmax		
	comp=Z,18nm,1.7s						
LYN	LuoYang	79.43	311	*e*P	P	11 36 11.9	+0.7
LYN				pmax	pmax		
	comp=Z,220nm,6.5s						
LYN				LR	LR		
	comp=Z,310nm,17.3s						
LYN				LR	LR		
	comp=Z,310nm,20.8s						
LYN				LR	LR		
	comp=Z,400nm,19.2s						
SNCC	San Nicolas Is	79.46	50	P	P	11 36 11.6	+0.2
	baz=241						
BJI	Beijing	79.74	318	P	P	11 36 13.8	+1.1
BJI				pP	PcP	11 36 18.9	-1.5
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
BJI				pmax	pmax		
	comp=Z,120nm,3.5s						
BJI				LR	LR		
	comp=Z,140nm,18.5s						
BJI				LR	LR		
	comp=Z,160nm,17.7s						
BJI				LR	LR		
	comp=Z,310nm,22.1s						
SBC	Santa Barbara	79.90	49	P	P	11 36 14.6	+0.8
	baz=241						
Q19K	Cape Douglas,	80.00	15	P	P	11 36 13.2	-0.6
	baz=209						

P18K	Big Mountain,	80.02	14	P	P	11 36 13.2	-0.7
P18K	Big Mountain,	80.02	14	P	P	11 36 13.5	-0.4
	baz=208						
PKM	Mcpherson Peak	80.04	49	P	P	11 36 14.4	-0.3
	baz=241						
SCI2	San Clemente I	80.05	51	P	P	11 36 14.4	-0.2
	baz=242						
SMMC	Simmler	80.12	48	P	P	11 36 14.5	-0.5
	baz=241						
CIS	Catalina Islan	80.35	51	P	P	11 36 15.5	-0.7
	baz=242						
P19K	Oil Pt	80.74	15	P	P	11 36 17.6	-0.1
	baz=210						
ARVC	Arvin	80.86	49	P	P	11 36 17.9	-1.0
	baz=241						
O19K	Port Alsworth	80.95	14	P	P	11 36 18.9	+0.2
O19K				IAmb	IAmb	11 36 30.5	
	comp=Z,47nm,1.6s						
O19K	Port Alsworth	80.95	14	P	P	11 36 18.3	-0.4
	baz=209						
VOG	Valley Oaks Go	81.05	48	P	P	11 36 18.5	-1.3
	baz=241						
109C	Camp Elliot, M	81.08	52	P	P	11 36 19.4	-0.7
	baz=243						
HOM	Homer	81.15	16	P	P	11 36 19.4	-0.4
	baz=211						
L02F	Cave Junction	81.24	41	P	P	11 36 20.1	-0.7
	baz=237						
O20K	Slope Mountain	81.27	15	P	P	11 36 20.1	-0.4
	baz=210						
BFSC	Mount Baldy Ra	81.29	50	P	P	11 36 20.8	-0.7
	baz=242						
MURC	Murrieta	81.34	51	P	P	11 36 20.7	-0.9
	baz=243						
EDW2	Edwards Air Fo	81.35	49	P	P	11 36 21.5	-0.1
	baz=242						
ISA	Isabella, Lake	81.37	49	P	P	11 36 23.1	+1.4
ISA	Isabella, Lake	81.37	49	P	P	11 36 23.1	+1.4
ISA				pmax	pmax		
	comp=Z,23nm,1.4s						
ISA	Isabella, Lake	81.37	49	P	P	11 36 21.5	-0.2
	baz=242						
N19K	Bonanza Creek	81.45	14	P	P	11 36 21.4	-0.2
	baz=208						
GAMB	Gambell	81.46	5	P	P	11 36 21.4	0.0
	baz=192						
BRSE	Bradley Lake S	81.46	16	P	P	11 36 21.2	-0.4
	baz=212						
K02D	Willamette Mer	81.49	40	P	P	11 36 21.6	-0.6
	baz=237						
RSO	Redoubt South	81.56	15	P	P	11 36 22.2	-0.1
YBH	Yreka Blue Hor	81.57	42	P	P	11 36 23.2	+0.5
	comp=Z,2.1nm,0.8s,baz=206,slow=8.7,SNR=6.1						
YBH				LR	LR	12 05 31.7	
	comp=Z,150nm,21.1s,baz=242,slow=30						
	comp=Z,2.1nm,0.8s						
YBH	Yreka Blue Hor	81.57	42	P	P	11 36 22.6	0.0
YBH	Yreka Blue Hor	81.57	42	P	P	11 36 22.6	0.0
YBH				pmax	pmax		
	comp=Z,12nm,1.3s						
J01E	Myrtle Point	81.58	40	P	P	11 36 23.5	+1.0
	baz=237						
MONP2	Monument Peak	81.59	52	P	P	11 36 23.7	+0.6
	baz=243						
IKP	In-Ko-Pah, Jac	81.72	52	P	P	11 36 24.2	+0.5
	baz=243						
XAN	Xi'an	81.77	309	⇓P	P	11 36 24.6	+0.8
XAN				pP	PcP	11 36 30.3	+0.8
XAN				sP	pP	11 36 33.6	-0.2
XAN				pmax	pmax		
	comp=Z,18nm,1.9s						
XAN				pmax	pmax		
	comp=Z,230nm,3.6s						
XAN				LR	LR		
	comp=Z,270nm,19.9s						
XAN				LR	LR		
	comp=Z,430nm,22.7s						
BBRC	Big Bear Solar	81.85	50	P	P	11 36 24.6	+0.1
	baz=243						
PFO	Pinyon Flats O	81.89	51	P	P	11 36 26.6	+2.0
	comp=Z,0.7nm,0.3s,baz=288,slow=8.2,SNR=3.7						
PFO				LR	LR	12 04 20.3	
	comp=Z,258nm,21.1s,baz=240,slow=30						
	comp=Z,0.7nm,0.3s						
PFO	Pinyon Flats O	81.89	51	P	P	11 36 25.6	+1.0
PFO	Pinyon Flats O	81.89	51	P	P	11 36 25.6	+1.0
PFO				pmax	pmax		
	comp=Z,34nm,2.0s						
PFO	Pinyon Flats O	81.89	51	P	P	11 36 25.1	+0.5
	baz=243						
TPFO	Pinon Flats	81.89	51	P	P	11 36 25.2	+0.6
	baz=243						
XLT	XiLinHaoTe	81.91	321	⇑iP	P	11 36 25.3	+0.9
XLT				sS	sS	11 46 45.0	-7.6
XLT				pmax	pmax		
	comp=Z,15nm,0.9s						
XLT				pmax	pmax		
	comp=Z,140nm,3.5s						
XLT				LR	LR		
	comp=Z,140nm,16.7s						
XLT				LR	LR		
	comp=Z,220nm,17.7s						
OMMB	Old Mammoth Mi	81.94	47	P	P	11 36 26.0	+1.0
MLAC	Mammoth, Mammo	82.06	47	P	P	11 36 25.6	+0.1
	baz=241						
RRX	Edison Barstow	82.07	50	P	P	11 36 26.1	+0.7
	baz=243						
L04D	Klamath Falls	82.08	41	P	P	11 36 26.0	+0.6
	baz=238						
SWSC	Sam W. Stewart	82.09	52	P	P	11 36 26.0	+0.5
	baz=244						
SEW	Seward	82.12	17	P	P	11 36 26.0	+1.1
	baz=213						
BEKR	Beckworth	82.13	44	P	P	11 36 26.3	+0.6
BEKR				IAmb	IAmb	11 36 29.4	
	comp=Z,36nm,1.7s						
I02E	Swisshome, OR	82.15	39	P	P	11 36 26.5	+1.0
	baz=237						
SEY	Seymchan	82.17	349	ceP	P	11 36 24.9	-0.3
SEY				pmax	pmax		
	comp=Z,23nm,1.4s						
TIN	Tinemaha, Big	82.21	47	P	P	11 36 27.4	+1.2
	baz=242						
I03D	Drain, OR	82.23	40	P	P	11 36 27.1	+1.2
	baz=237						
CAPN	Captain Cook N	82.23	16	P	P	11 36 27.3	+1.7
	baz=212						
ZEA	Zeya	82.24	333	eP	P	11 36 27.0	+1.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PNTR	Pine Nut	82.25	45	P	P	11 36 27.6	+1.1
VCNR	Virginia City	82.32	45	P	P	11 36 29.0	+2.2
VCNR				IAmb	IAmb	11 36 34.8	
	comp=Z,42nm,1.8s						
SPCR	Spurr Chakacha	82.34	15	P	P	11 36 26.8	+0.6
	baz=211						
SPU	Mount Spurr	82.36	15	P	P	11 36 25.9	-0.4
GSC	Goldstone, Bar	82.41	50	P	P	11 36 28.0	+0.8
GSC				IAmb	IAmb	11 36 36.1	
	comp=Z,53nm,1.9s						
GSC	Goldstone, Bar	82.41	50	P	P	11 36 28.0	+0.8
GSC				pmax	pmax		
	comp=Z,53nm,1.9s						
GSC	Goldstone, Bar	82.41	50	P	P	11 36 27.5	+0.3
	baz=243						
BELC	Belle Mtn. Jos	82.41	51	P	P	11 36 28.1	+0.8
	baz=243						
M19K	Big River Lodg	82.44	14	P	P	11 36 27.3	+0.7
M19K	Big River Lodg	82.44	14	P	P	11 36 26.8	+0.2
	baz=208						
YERR	Yerington	82.44	45	P	P	11 36 28.2	+0.7
YERR				IAmb	IAmb	11 36 40.4	
	comp=Z,54nm,1.9s						
MAW	Mawson	82.51	201	P	P	11 36 26.0	-1.0
	comp=Z,9.1nm,0.9s,baz=107,slow=6.1,SNR=11						
MAW				LR	LR	12 08 30.9	
	comp=Z,81nm,20.3s,baz=108,slow=32						
	comp=Z,9.1nm,0.9s						
MAW	Mawson	82.51	201	P	P	11 36 27.4	+0.3
	baz=81,SNR=7.2						
MAW	Mawson	82.51	201	P	P	11 36 27.3	+0.3
MAW	Mawson	82.51	201	P	P	11 36 27.3	+0.3
MAW				pmax	pmax		
	comp=Z,14nm,1.8s						
HEC	Hector,Ludlow	82.54	50	P	P	11 36 28.1	+0.2
	baz=243						
L19K	White Mountain	82.58	13	P	P	11 36 28.5	+1.1
L19K	White Mountain	82.58	13	P	P	11 36 27.9	+0.5
	baz=208,SNR=22						
K04D	Chiloquin, OR	82.64	41	P	P	11 36 28.4	+0.1
	baz=238						
BC3	Big Chuckawall	82.66	52	P	P	11 36 28.7	+0.1
	baz=244						
J04D	Umpqua Nationa	82.75	41	P	P	11 36 28.7	-0.2
	baz=238						
NVAR	Mina Array Bea	82.81	46	P	P	11 36 30.1	+0.6
	comp=Z,2.0nm,1.0s,baz=218,slow=8.3,SNR=12						
NVAR				LR	LR	12 05 44.1	
	comp=Z,385nm,20.8s,baz=268,slow=30						
	comp=Z,2.0nm,1.0s						
NVAR	Mina Array Bea	82.81	46	P	P	11 36 30.4	+1.0
LPIG	La Paz	82.84	62	LR	LR	12 04 20.8	
	comp=Z,272nm,21.6s,baz=209,slow=29						
GLA	Glamis	82.87	52	P	P	11 36 30.1	+0.5
	baz=244						
RC01	Rabbit Creek A	82.87	16	P	P	11 36 29.3	+0.4
	baz=213						
KMI	Kunming	82.89	299	⇑P	P	11 36 29.3	-0.8
KMI				pP	PcP	11 36 37.1	+2.3
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
FURC	Furnace Creek,	82.90	48	P	P	11 36 30.2	+0.6
	baz=242						
NV11	Mina Array Sit	82.92	46	P	P	11 36 31.4	+1.6
ANM	Nome	82.93	8	P	P	11 36 29.7	+0.5
	baz=198						
SLBS	Sierra La Lagu	82.99	63	P	P	11 36 31.6	+1.2
TTA	Tatalina	83.00	12	P	P	11 36 30.6	+1.0
TTA				IAmb	IAmb	11 36 32.8	
	comp=Z,60nm,1.8s						
TTA	Tatalina	83.00	12	P	P	11 36 30.6	+1.0
TTA				pmax	pmax		
	comp=Z,60nm,1.8s						
TTA	Tatalina	83.00	12	P	P	11 36 30.4	+0.8
	baz=207,SNR=15						
GMRC	Granite Mounta	83.01	50	P	P	11 36 30.0	-0.5
	baz=244						
H04D	Lebanon	83.05	39	P	P	11 36 30.6	+0.4
	baz=238						
L20K	Farewell, AK	83.06	14	P	P	11 36 30.3	+0.4
	baz=209,SNR=14						
SHOC	Shoshone, Teco	83.06	49	P	P	11 36 30.5	-0.1
	baz=243						
G03D	McMinnville, O	83.10	38	P	P	11 36 30.3	-0.1
	baz=237						
TUQ	Turquoise Moun	83.11	50	P	P	11 36 31.1	+0.2
	baz=243						
IRM	Iron Mountain	83.11	51	P	P	11 36 31.4	+0.6
	baz=244						
HHC	Hu-ho-hao-te	83.17	316	eP	P	11 36 32.8	+1.8
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,6.3s						
HHC				LR	LR		
	comp=Z,320nm,16.2s						
HHC				LR	LR		
	comp=Z,300nm,15.1s						
HHC				LR	LR		
	comp=Z,370nm,18.4s						
MOD	Modoc Plateau	83.19	42	P	P	11 36 32.0	+0.8
MOD				IAmb	IAmb	11 36 44.2	
	comp=Z,29nm,1.8s						
K05A	Summer Lake	83.24	41	P	P	11 36 31.2	-0.3
J05D	Fort Rock, OR	83.31	41	P	P	11 36 31.7	-0.1
	baz=239						
M22K	Willow	83.33	15	P	P	11 36 31.1	-0.1
	baz=212						
TPH	Tonopah	83.40	47	P	P	11 36 33.5	+1.1
TPH	Tonopah	83.40	47	P	P	11 36 33.5	+1.1
TPH				pmax	pmax		
	comp=Z,241nm,1.8s						
BLYC	Blythe	83.40	52	P	P	11 36 33.6	+1.3
BLYC				IAmb	IAmb	11 36 41.4	
	comp=Z,30nm,1.4s						
GLI	Glacier Island	83.42	17	P	P	11 36 31.8	+0.1
	baz=215						
PMR	Palmer	83.45	16	P	P	11 36 32.6	+0.8
PMR	Palmer	83.45	16	P	P	11 36 32.6	+0.8
PMR				pmax	pmax		
	comp=Z,80nm,1.8s						
PMR	Palmer	83.45	16	P	P	11 36 31.5	-0.3
	baz=213,SNR=6.6						
KNK	Knik Glacier	83.48	16	P	P	11 36 32.1	0.0
	baz=214						
EYAK	Cordova Ski Ar	83.54	18	P	P	11 36 31.7	-0.6
	baz=217						
TPNV	Topopah Spring	83.56	48	P	P	11 36 34.4	+1.2
TPNV				IAmb	IAmb	11 36 42.2	
	comp=Z,37nm,1.5s						
TPNV	Topopah Spring	83.56	48	P	P	11 36 34.4	+1.2
TPNV				pmax	pmax		
	comp=Z,37nm,1.5s						
TPNV	Topopah Spring	83.56	48	P	P	11 36 32.2	-1.0
	baz=243,SNR=7.2						
TNA	Tin City	83.58	7	P	P	11 36 32.4	0.0
	baz=196						
CMAR	Chiang Mai Arr	83.72	291	P	P	11 36 34.4	+0.1
	comp=Z,4.7nm,0.8s,baz=128,slow=4.1,SNR=34						
CMAR				LR	LR	12 10 25.8	
	comp=Z,182nm,21.8s,baz=85,slow=33						
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	83.72	291	P	P	11 36 34.5	+0.3
CMAR	Chiang Mai Arr	83.72	291	P	P	11 36 34.5	+0.3
F04D	Rainier, OR	83.72	38	P	P	11 36 33.2	-0.4
	baz=237						
NEE2	Needles Airpor	83.77	51	P	P	11 36 33.3	-0.9
	baz=244						
K20K	Telida	83.79	13	P	P	11 36 33.9	+0.3
K20K	Telida	83.79	13	P	P	11 36 33.6	0.0
	baz=209,SNR=11						
I05D	Terrebonne, OR	83.80	40	P	P	11 36 34.2	+0.1
	baz=239						
PPLA	Purkeypile	83.81	14	P	P	11 36 32.4	-1.4
	baz=210						
CHTO	Chiang Mai	83.85	292	P	P	11 36 35.9	+1.0
CHTO				IAmb	IAmb	11 36 42.2	
	comp=Z,22nm,1.2s						
CHTO	Chiang Mai	83.85	292	P	P	11 36 35.9	+1.0
CHTO				pmax	pmax		
	comp=Z,23nm,1.2s						
SML	Sawmill	83.85	16	P	P	11 36 33.4	-0.6
	baz=214						
CUT	Chulitna	83.85	15	P	P	11 36 33.1	-0.8
	baz=212						
PDMCI	Parker Dam,Lak	83.92	51	P	P	11 36 35.0	0.0
	baz=244						
214A	Organ Pipe Nat	83.94	54	P	P	11 36 34.4	-0.8
	baz=245						
M23K	Glacier View	84.00	16	P	P	11 36 34.5	-0.2
	baz=215						
SCM	Sheep Creek Mo	84.14	17	P	P	11 36 34.6	-0.8
	baz=215						
BMRM	Bremner River	84.21	18	P	P	11 36 34.5	-1.4
	baz=218						
E04D	Cinebar	84.24	38	P	P	11 36 34.2	-2.0
	baz=238						
KLU	Klutina	84.25	17	P	P	11 36 34.2	-1.9
	baz=216						
PZH	PanZhiHua	84.25	300	P	P	11 36 37.8	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,160nm,6.1s						
G05D	Wamic, OR	84.28	39	P	P	11 36 34.7	-1.8
	baz=239						
CAST	Castle Rocks	84.29	14	P	P	11 36 34.8	-1.3
CAST				IAmb	IAmb	11 36 48.1	
	comp=Z,34nm,1.6s						
CAST	Castle Rocks	84.29	14	P	P	11 36 34.0	-2.2
	baz=211,SNR=6.9						
CRAG	Craig	84.31	26	P	P	11 36 35.3	-1.0
	baz=228						
CD2	Chengdu	84.36	305	P	P	11 36 38.8	+1.5
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
MESA	MESA	84.41	20	P	P	11 36 36.3	-0.8
	baz=220						
D04E	Lakebay	84.46	37	P	P	11 36 36.8	-0.5
	baz=237						
W13A	Hualapai Mount	84.46	51	P	P	11 36 39.7	+1.8
W13A				IAmb	IAmb	11 36 47.0	
	comp=Z,34nm,1.6s						
GCSA	Galena City Sc	84.47	11	P	P	11 36 36.5	-0.5
	baz=206						
D03D	Eldon	84.47	36	P	P	11 36 36.8	-0.6
	baz=237						
SIT	Sitka	84.49	24	P	P	11 36 37.2	-0.1
	baz=226						
BBB	Bella Bella	84.50	31	LR	LR	12 07 00.0	
	comp=Z,197nm,20.1s,baz=218,slow=30						
J20K	Nowinta River	84.50	13	P	P	11 36 37.1	-0.1
	baz=209						
BMN	Battle Mountai	84.50	45	P	P	11 36 39.2	+1.2
BMN				IAmb	IAmb	11 36 46.8	
	comp=Z,42nm,1.5s						
BMN	Battle Mountai	84.50	45	P	P	11 36 39.2	+1.2
BMN				pmax	pmax		
	comp=Z,42nm,1.5s						
F05D	White Salmon	84.53	39	P	P	11 36 37.1	-0.7
	baz=238						
WVOR	Wild Horse Val	84.53	43	P	P	11 36 38.2	+0.3
WVOR	Wild Horse Val	84.53	43	P	P	11 36 38.3	+0.3
WVOR				pmax	pmax		
	comp=Z,56nm,2.0s						
TGL	Tana Glacier	84.58	19	P	P	11 36 38.1	+0.3
CHUM	Lake Minchumin	84.64	13	P	P	11 36 37.2	-0.6
	baz=210						
WAT1	Susitna Watana	84.64	16	P	P	11 36 37.1	-0.8
	baz=214						
WAT6	Susitna Watana	84.64	16	P	P	11 36 37.4	-0.7
	baz=215,SNR=6.9						
R11A	Troy Canyon, C	84.67	47	P	P	11 36 40.4	+1.5
R11A				IAmb	IAmb	11 36 42.5	
	comp=Z,27nm,1.8s						
R11A	Troy Canyon, C	84.67	47	P	P	11 36 38.8	0.0
	baz=243,SNR=7.2						
KTH	Kantishna Hill	84.67	14	P	P	11 36 37.5	-0.7
KTH				IAmb	IAmb	11 36 43.7	
	comp=Z,22nm,1.6s						
M24K	Tolsona, Glenn	84.68	17	P	P	11 36 37.5	-0.7
	baz=216						
N25K	Chitina, Valde	84.72	18	P	P	11 36 38.9	+0.5
	baz=218,SNR=5.5						
TRF	Thorofare Moun	84.73	14	P	P	11 36 38.2	-0.4
	baz=212						
I07A	Izee	84.80	41	P	P	11 36 40.8	+1.5
I07A				IAmb	IAmb	11 36 43.1	
	comp=Z,50nm,2.0s						
PNL	Peninsula	84.88	21	P	P	11 36 38.7	-0.5
	baz=222						
PINM	Pinnacle	84.91	20	P	P	11 36 39.1	-0.3
	baz=222						
MCARA	McCarthy VSAT	85.01	18	P	P	11 36 39.7	-0.1
	baz=219						
BPAW	Bear Paw Mtn.	85.12	14	P	P	11 36 39.5	-0.8
	baz=212						
DHY	Denali Highway	85.15	16	P	P	11 36 39.8	-0.9
	baz=215						
HARP	HAARP	85.20	17	P	P	11 36 38.3	-2.5
	baz=217						
CTG	Chitna Glacier	85.21	19	P	P	11 36 38.7	-2.3
	baz=221						
CTGM	Chitina Glacie	85.21	19	P	P	11 36 40.8	-0.2
CTGM				IAmb	IAmb	11 36 57.6	
	comp=Z,49nm,1.8s						
WRAK	Wrangell Islan	85.27	26	P	P	11 36 38.4	-2.7
	baz=229						
MCK	McKinley	85.30	15	P	P	11 36 38.5	-2.8
	baz=214						
A04D	Lummi Island	85.33	36	P	P	11 36 39.9	-1.7
	baz=237						
B05A	Bryant	85.43	36	P	P	11 36 40.8	-1.4
	baz=238						
BILL	Bilibino	85.47	356	P	P	11 36 41.4	-0.6
BILL				IAmb	IAmb	11 36 52.2	
	comp=Z,39nm,2.0s						
BILL	Bilibino	85.47	356	d iP	P	11 36 42.0	0.0
BILL				*PP	PcP	11 36 48.0	+3.1
BILL				e*SP	pP	11 36 52.1	+0.1
BILL				pmax	pmax		
	comp=Z,19nm,2.5s						
PAX	Paxson	85.57	17	P	P	11 36 41.2	-1.5
	baz=217						
TUC	Tucson	85.65	54	P	P	11 36 41.7	-2.1
	baz=246						
M26K	Nabesna, AK	85.82	18	P	P	11 36 43.3	-0.5
	baz=219,SNR=7.9						
I21K	Tanana	85.83	13	P	P	11 36 43.0	-0.8
	baz=211						
CCUT	Cedar City	85.89	49	P	P	11 36 46.5	+1.5
CCUT				IAmb	IAmb	11 36 49.3	
	comp=Z,50nm,2.0s						
ELK	Elko	85.99	45	LR	LR	12 09 56.9	
	comp=Z,356nm,18.7s,baz=217,slow=32						
ELK	Elko	85.99	45	P	P	11 36 46.2	+0.7
ELK				IAmb	IAmb	11 36 53.3	
	comp=Z,26nm,1.6s						
ELK	Elko	85.99	45	P	P	11 36 46.2	+0.7
ELK				pmax	pmax		
	comp=Z,26nm,1.6s						
NEA2	Nenana	85.99	14	P	P	11 36 44.0	-0.6
	baz=213						
MENT	Mentasta	86.03	17	P	P	11 36 45.8	+0.9
MENT				IAmb	IAmb	11 36 46.5	
	comp=Z,47nm,2.0s						
H21K	Melozitna Rive	86.08	12	P	P	11 36 44.3	-0.7
	baz=210						
YUK3	Moose Creek	86.10	19	P	P	11 36 45.1	-0.4
	baz=221,SNR=8.8						
SZCU	Shurtz Canyon	86.11	49	P	P	11 36 48.1	+2.0
SZCU				IAmb	IAmb	11 36 54.4	
	comp=Z,46nm,1.7s						
M27K	Edge Creek, AK	86.11	18	P	P	11 36 44.4	-1.1
	baz=220,SNR=5.6						
WRH	Wood River Hil	86.12	15	P	P	11 36 44.4	-0.9
K24K	Donnelly Dome	86.16	16	P	P	11 36 44.3	-1.2
	baz=216						
YUK6	Outpost Mounta	86.16	20	P	P	11 36 44.5	-1.3
	baz=223						
SKAG	Skagway	86.17	23	P	P	11 36 44.5	-1.0
	baz=226						
IMAR	Indian Mountai	86.17	12	P	P	11 36 46.3	+0.8
U15A	North Rim	86.19	50	P	P	11 36 46.9	+0.2
U15A				IAmb	IAmb	11 36 55.8	
	comp=Z,27nm,1.4s						
L26K	Log Cabin Wild	86.20	17	P	P	11 36 44.8	-0.9
	baz=219						
PMSA	Palmer Station	86.33	158	LR	LR	12 08 30.6	
	comp=Z,117nm,21.5s,baz=246,slow=31						
HDA	Harding Lake	86.35	15	P	P	11 36 45.2	-1.3
	baz=215,SNR=6.5						
RIDG	Independent Ri	86.36	16	P	P	11 36 46.0	-0.5
RIDG				IAmb	IAmb	11 36 48.7	
	comp=Z,34nm,1.4s						
YUK4	Talbot Arm	86.36	20	P	P	11 36 46.2	-0.6
	baz=223						
HYT	Haines Junctio	86.37	21	P	P	11 36 45.4	-1.3
	baz=224						
I23K	Minto, Yukon-K	86.39	14	P	P	11 36 45.3	-1.2
	baz=213						
LZH	Lanzhou	86.40	309	eP	P	11 36 49.8	+2.3
LZH				pP	pP	11 36 54.6	-3.0
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,5.8s						
LZH				LR	LR		
	comp=Z,320nm,17.9s						
LZH				LR	LR		
	comp=Z,350nm,18.5s						
LZH				LR	LR		
	comp=Z,320nm,18.9s						
BVCY	Beaver Creek	86.46	19	P	P	11 36 46.8	-0.3
	baz=221,SNR=6.5						
319A	Douglas	86.47	56	P	P	11 36 50.2	+2.3
319A				IAmb	IAmb	11 36 56.5	
	comp=Z,24nm,1.2s						
MDM	Murphy Dome	86.49	14	P	P	11 36 46.4	-0.7
WUAZ	Wupatki	86.50	51	P	P	11 36 46.5	-1.5
	baz=246						
TCOL	CIGO, UAF Yank	86.51	15	P	P	11 36 45.7	-1.4
	baz=214						
COLA	College	86.51	15	i P	P	11 36 47.1	0.0
COLA				pmax	pmax		
	comp=Z,12nm,1.5s						
COLA	College	86.51	15	P	P	11 36 45.7	-1.4
	baz=214						
BMO	Blue Mountains	86.55	41	P	P	11 36 48.9	+0.9

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BMO   Blue Mountains     86.55  41    P        P        11 36 48.9 +0.9
BMO                                   pmax     pmax
      comp=Z,28nm,2.0s
RDOG  Red Dog Mine       86.57   8    P        P        11 36 45.8 -1.6
      baz=200
IL31                     86.67  15    P        P        11 36 47.2 -0.6
ILAR  Eielson Array      86.67  15    P        P        11 36 47.0 -0.9
      comp=Z,1.3nm,0.8s,baz=230,slow=6.2,SNR=13
ILAR                                  PP       PP       11 40 11.8 +1.2
      comp=Z,0.7nm,1.2s,baz=204,slow=8.7,SNR=1.6
ILAR                                  LR       LR       12 09 26.7
      comp=Z,139nm,20.6s,baz=218,slow=31
      comp=Z,1.3nm,0.8s
ILAR  Eielson Array      86.67  15    P        P        11 36 47.4 -0.5
ILAR  Eielson Array      86.67  15    P        P        11 36 47.4 -0.5
L27K  Beaver Creek,      86.67  18    P        P        11 36 47.0 -1.1
      baz=220
BCAR  Beaver Creek A     86.69  18    P        P        11 36 47.4 -0.8
S34M  Telegraph Cree     86.75  25    P        P        11 36 47.7 -0.7
      baz=230
POKR  Poker Plat Res     86.82  15    P        P        11 36 47.5 -1.2
      baz=215
H23K  Yukon River        86.92  13    P        P        11 36 48.7 -0.4
      baz=213
J25K  Salcha River,      86.92  16    P        P        11 36 46.3 -3.0
      baz=217
N30M  Aishikik Lake      86.97  21    P        P        11 36 48.6 -0.9
      baz=224
WHY   Whitehorse         87.16  22    P        P        11 36 48.8 -1.8
      baz=226
YAK   Yakutsk            87.19 340  i P        P        11 36 49.7 -0.8
YAK                                   pmax     pmax
      comp=Z,12nm,0.5s
J26L  Joseph Creek       87.31  16    P        P        11 36 49.0 -2.2
      baz=218
H24K  Noodor Dome        87.31  14    P        P        11 36 50.6 -0.5
      baz=214
K27K  Chicken            87.34  17    P        P        11 36 50.8 -0.4
      baz=220
DUG   Dugway, Tooele     87.41  47    P        P        11 36 53.3 +1.0
DUG   Dugway, Tooele     87.41  47    P        P        11 36 53.3 +1.0
DUG                                   pmax     pmax
      comp=Z,18nm,1.6s
DUG   Dugway, Tooele     87.41  47    P        P        11 36 48.7 -3.6
      baz=245
N31M  Braeburn, Yuko     87.43  21    P        P        11 36 49.2 -2.6
      baz=226
DLBC  Dease Lake         87.53  25    LR       LR       12 11 12.7
      comp=Z,170nm,19.3s,baz=258,slow=32
W18A  Petrified Fore     87.57  52    P        P        11 36 49.7 -3.5
      baz=247
P33M  Teslin, Yukon      87.61  23    P        P        11 36 50.1 -2.6
      baz=228
HLID  Hailey             87.80  43    P        P        11 36 51.5 -2.7
      baz=244,SNR=10
M30M  Minto, Yukon       87.86  20    P        P        11 36 54.6 +0.8
M30M                                  IAmb     IAmb     11 36 56.3
      comp=Z,19nm,1.4s
M30M  Minto, Yukon       87.86  20    P        P        11 36 50.7 -3.2
      baz=225,SNR=6.8
COLD  Coldfoot           87.97  13    P        P        11 36 51.2 -2.9
      baz=212
121A  Cookes Peak, D     88.08  55    P        P        11 36 53.0 -2.7
      baz=248
HVU   Hansel Valley      88.11  45    P        P        11 36 57.2 +1.5
HVU   Hansel Valley      88.11  45    P        P        11 36 57.2 +1.5
HVU                                   pmax     pmax
      comp=Z,60nm,1.7s
DAWY  Dawson             88.15  18    P        P        11 36 55.9 +0.8
DAWY  Dawson             88.15  18    P        P        11 36 53.0 -2.2
      baz=222
MPU   Maple Canyon       88.16  47    P        P        11 36 57.2 +1.2
MPU                                   IAmb     IAmb     11 37 04.8
      comp=Z,20nm,1.4s
EGAK  Eagle              88.18  17    P        P        11 36 52.7 -2.5
      baz=221
NEW   Newport            88.29  38    LR       LR       12 11 07.4
      comp=Z,200nm,19.0s,baz=229,slow=32
NEW   Newport            88.29  38    P        P        11 36 54.6 -1.6
      baz=242
CTU   Camp Tracy         88.36  46    P        P        11 36 58.3 +1.5
CTU                                   IAmb     IAmb     11 37 05.5
      comp=Z,30nm,1.5s
BCYI  Bear Canyon        88.78  43    P        P        11 37 00.2 +1.3
Y22A  Socorro            89.24  54    P        P        11 37 02.3 +1.1
      baz=249
TOLK  Toolik Lake Re     89.29  12    P        P        11 36 59.9 -0.5
      baz=213
MVCO  Mesa Verde         89.30  51    P        P        11 37 00.8 -0.6
      baz=248
ULN   Ulaanbaatar        89.35 321ce  P        P        11 37 00.9 -0.4
ULN                                   pmax     pmax
      comp=Z,31nm,2.0s
MCMT  McKenzie Canyo     89.36  42    P        P        11 37 02.6 +1.0
BMAR  Burnt Mountain     89.37  14    P        P        11 37 02.1 +1.2
I29M  Ogilvie Camp,      89.42  17    P        P        11 36 58.9 -2.2
      baz=223
MSO   Missoula           89.55  40    P        P        11 37 00.4 -1.9
      baz=244
MNTX  Cornudas Mount     89.68  57    P        P        11 37 04.5 +1.4
      baz=250
MNTX  Cornudas Mount     89.68  57    P        P        11 37 01.7 -1.4
      baz=250
SONM  Songino Array      89.73 321    P        P        11 37 03.2 +0.1
      comp=Z,4.1nm,1.1s,baz=142,slow=3.5,SNR=24
      comp=Z,4.1nm,1.1s
SONM  Songino Array      89.73 321    P        P        11 37 03.0 -0.1
SONM                                  IAmb     IAmb     11 37 04.6
      comp=Z,21nm,1.5s
SONM  Songino Array      89.73 321    P        P        11 37 03.0 -0.1
SONM                                  pmax     pmax
      comp=Z,21nm,1.5s
USHA  Ushuaia            89.78 149    LR       LR       12 07 05.0
      comp=Z,179nm,21.5s,baz=180,slow=29
ANMO  Albuquerque        89.99  53    LR       LR       12 13 36.6
      comp=Z,184nm,18.2s,baz=246,slow=33
ANMO  Albuquerque        89.99  53    P        P        11 37 05.7 +1.0
ANMO                                  IAmb     IAmb     11 37 13.3
      comp=Z,32nm,1.6s
ANMO  Albuquerque        89.99  53    P        P        11 37 05.7 +1.0
ANMO                                  pmax     pmax
      comp=Z,32nm,1.6s
ANMO  Albuquerque        89.99  53    P        P        11 37 06.2 +1.5
      baz=249
ANMO  Albuquerque        89.99  53    P        P        11 37 02.8 -1.9
      baz=249
TGTN  Hyland Airport     90.16  23    P        P        11 37 04.1 -0.6
      baz=232
TX31  Lajitas Ar. Si     90.26  59    P        P        11 37 07.8 +1.8
TX31  Lajitas Ar. Si     90.26  59    P        P        11 37 07.7 +1.8
      baz=250
TX32  Lajitas Array      90.26  59    P        P        11 37 07.8 +1.9
TX32                                  IAmb     IAmb     11 37 22.1
      comp=Z,42nm,1.7s
TXAR  Lajitas Array      90.26  59    P        P        11 37 07.2 +1.2
      comp=Z,1.4nm,0.9s,baz=234,slow=4.2,SNR=14
TXAR                                  PP       PP       11 40 39.7 -0.7
      comp=Z,0.6nm,1.1s,baz=255,slow=6.5,SNR=2.5
TXAR                                  LR       LR       12 09 06.7
      comp=Z,287nm,21.4s,baz=248,slow=30
      comp=Z,1.4nm,0.9s
TXAR  Lajitas Array      90.26  59    P        P        11 37 07.0 +1.1
TXAR  Lajitas Array      90.26  59    P        P        11 37 07.0 +1.1
A21K  Barrow             90.45   9    P        P        11 37 05.3 -0.4
      baz=206
YPP   Pitchstone Pla     90.46  43    P        P        11 37 08.3 +1.5
BOZ   Bozeman (W)        90.47  42    P        P        11 37 06.4 -0.3
      baz=246,SNR=9.4
WALA  Waterton Lakes     90.55  38    P        P        11 37 09.1 +2.3
WALA                                  IAmb     IAmb     11 37 10.2
      comp=Z,36nm,1.9s
O20A  White River Ci     90.59  48    P        P        11 37 07.1 -0.3
      baz=248
EPYK  Eagle Plains       90.60  17    P        P        11 37 06.0 -0.6
      baz=225
GTA   Gaotai             90.65 311  ⇑P        P        11 37 09.0 +1.4
GTA                                   pP       pP       11 37 14.3 -3.4
GTA                                   sP       sP       11 37 17.8 -3.6
GTA                                   pmax     pmax
      comp=Z,12nm,1.4s
GTA                                   pmax     pmax
      comp=Z,140nm,5.6s
GTA                                   LR       LR
      comp=Z,130nm,17.9s
GTA                                   LR       LR
      comp=Z,270nm,21.5s
GTA                                   LR       LR
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      comp=Z,330nm,21.1s
H17A  Grant Village      90.66  43    P        P        11 37 07.4 -0.3
      baz=246
BW06  Boulder Array      90.69  45    P        P        11 37 08.7 +0.9
BW06                                  IAmb     IAmb     11 37 15.9
      comp=Z,33nm,1.7s
BW06  Boulder Array      90.69  45    P        P        11 37 07.1 -0.8
      baz=247
PD31  Pinedale Array     90.69  45    P        P        11 37 08.8 +1.0
PD31                                  IAmb     IAmb     11 37 15.9
      comp=Z,30nm,1.7s
PDAR  Pinedale Array     90.69  45    P        P        11 37 08.6 +0.8
      comp=Z,0.2nm,0.3s,baz=199,slow=3.1,SNR=5.3
PDAR                                  LR       LR       12 13 08.4
      comp=Z,180nm,18.3s,baz=252,slow=32
      comp=Z,0.2nm,0.3s
PDAR  Pinedale Array     90.69  45    P        P        11 37 08.0 +0.1
TROLL Troll, Antarti     90.72 182    P        P        11 37 06.8 -0.6
S22A  4UR Ranch, Cre     90.73  51    P        P        11 37 09.8 +1.5
S22A  4UR Ranch, Cre     90.73  51    P        P        11 37 07.3 -0.9
      baz=249
SMCO  Snowmass           91.14  49    P        P        11 37 10.9 +0.7
SMCO                                  IAmb     IAmb     11 37 25.7
      comp=Z,18nm,1.4s
SNAA  Sanae              91.17 180    P        P        11 37 08.4 -1.0
SNAA  Sanae              91.17 180    P        P        11 37 08.5 -1.0
SNAA                                  IAmb     IAmb     11 37 14.8
      comp=Z,14nm,1.3s
SNAA  Sanae              91.17 180  i P        P        11 37 08.5 -1.0
SNAA                                  pmax     pmax
      comp=Z,25nm,2.1s
NVL   N'lazarevskaya     91.39 185  eP        P        11 37 14.1 +3.8
NVL                                   pmax     pmax
      comp=Z,16nm,1.2s
VNA3  Neumayer Olymp     91.52 178    P        P        11 37 09.9 -1.1
SDCO  Great Sand Dun     91.71  51    P        P        11 37 14.1 +1.3
      baz=250
SDCO  Great Sand Dun     91.71  51    P        P        11 37 12.2 -0.5
      baz=250
RLMT  Red Lodge          91.81  43    P        P        11 37 12.6 -0.3
      baz=247
RWWY  Rawlins            91.90  47    P        P        11 37 14.2 +0.7
RWWY                                  IAmb     IAmb     11 37 20.7
      comp=Z,28nm,1.6s
T25A  Trinidad           92.32  52    P        P        11 37 15.4 -0.1
      baz=250
Q24A  Divide             92.40  50    P        P        11 37 15.4 -0.6
      baz=250
N23A  Red Feather La     92.50  48    P        P        11 37 15.5 -0.8
      baz=249
MSTX  Muleshoe           92.52  55    P        P        11 37 17.8 +1.4
      baz=251
MSTX  Muleshoe           92.52  55    P        P        11 37 15.4 -0.9
      baz=251
EGMT  Eagleton           92.63  40    P        P        11 37 15.5 -1.0
      baz=247
ZAK   Zakamensk          92.67 322  eP        P        11 37 16.6  0.0
ZAK                                   pmax     pmax
      comp=Z,13nm,1.7s
EDM   Edmonton           92.69  35    P        P        11 37 17.9 +1.4
EDM   Edmonton           92.69  35    P        P        11 37 18.0 +1.4
EDM                                   pmax     pmax
      comp=Z,46nm,1.9s
K22A  Casper             92.72  46    P        P        11 37 15.7 -1.4
      baz=249
INK   Inuvik             92.84  17    P        P        11 37 16.6 -0.2
      comp=Z,3.7nm,1.3s,baz=269,slow=2.1,SNR=6.1
      comp=Z,3.7nm,1.3s
INK   Inuvik             92.84  17    P        P        11 37 16.0 -0.8
      baz=228
GOMU  GeErMu             93.23 307    P        P        11 37 20.3 +0.4
GOMU                                  pmax     pmax
      comp=Z,2.0nm,0.7s
GOMU                                  pmax     pmax
      comp=Z,87nm,4.8s
833A  Chaparral WMA,     93.48  62    P        P        11 37 19.3 -1.5
      baz=252
AMTX  Amarillo           93.66  55    P        P        11 37 23.2 +1.6
AMTX                                  IAmb     IAmb     11 37 29.6
      comp=Z,24nm,1.4s
AMTX  Amarillo           93.66  55    P        P        11 37 23.0 +1.4
      baz=252
AMTX  Amarillo           93.66  55    P        P        11 37 20.3 -1.3
      baz=252
CMIG  Matias Romero      94.15  73    LR       LR       12 10 44.0
      comp=Z,226nm,20.9s,baz=248,slow=30
KSCO  Kaye Shedlock'     94.26  51    P        P        11 37 24.3  0.0
      baz=251
TIXI  Tiksi              94.35 347ce  P        P        11 37 21.6 -2.1
TIXI                                  pmax     pmax
      comp=Z,13nm,2.6s
LAO   LASA Array         94.36  42    P        P        11 37 25.1 +0.7
      baz=250
ABTX  Abilene, Hawle     94.58  57    P        P        11 37 26.9 +1.1
      baz=252
ABTX  Abilene, Hawle     94.58  57    P        P        11 37 25.1 -0.7
      baz=252
RSSD  Black Hills        94.93  45    P        P        11 37 26.5 -0.8
      baz=251
PLCA  Paso Flores        95.49 136    P        P        11 37 28.4 -1.5
      comp=Z,1.8nm,1.0s,baz=225,slow=6.4,SNR=3.3
PLCA                                  LR       LR       12 11 30.3
      comp=Z,97nm,21.8s,baz=240,slow=30
      comp=Z,1.8nm,1.0s
YKA   Yellowknife Ar     96.13  26    P        P        11 37 32.8 +0.7
      comp=Z,0.8nm,0.8s,baz=254,slow=4.4,SNR=2.4
YKA                                   LR       LR       12 17 38.1
      comp=Z,80nm,18.3s,baz=303,slow=33
      comp=Z,0.8nm,0.8s
KNGR  Kungurtug, Tuv     96.17 321  i P        P        11 37 32.0 -0.7
A36M  Sachs Harbour      97.35  16    P        P        11 37 37.1 -0.3
      baz=236
WMQ   Urumqi            100.64 313  eP        Pdif     11 37 54.3 +1.4
WMQ                                   LR       LR
      comp=Z,340nm,21.5s
WMQ                                   LR       LR
      comp=Z,260nm,23.9s
ZALV  Zalesovo Beam     104.55 322    PKiKP    PKiKP    11 42 26.3 +0.6
      comp=Z,0.5nm,0.4s,baz=95,slow=4.6,SNR=1.4
MKAR  Makanchi Array    104.97 315    Pdiff    Pdif     11 38 12.3 +0.3
      comp=Z,0.5nm,0.8s,baz=101,slow=6.3,SNR=4.1
MKAR                                  PKiKP    PKiKP    11 42 26.4 -0.4
      comp=Z,0.3nm,0.8s,baz=66,slow=3.5,SNR=2.6
KURBB Kurchatov Arra    107.94 318    PP       PP       11 42 56.0 +1.4
      comp=Z,0.6nm,0.9s,baz=99,slow=7.6,SNR=4.1
AKTO  Aktyubinsk        120.99 319    PKP      PKPdf    11 42 56.5 -0.6
      comp=Z,2.1nm,0.8s,baz=53,slow=3.1,SNR=5.2
GEYT  Alibeck           122.35 304    PKP      PKPdf    11 42 60.0 -0.2
      comp=Z,2.1nm,0.4s,baz=49,slow=32,SNR=1.7
KIRV  Kirov             123.44 330c iPKIKP    PKPdf    11 43 00.0 -1.5
KIRV                                i                   11 43 01.8
ARCES ARCESS Array B    124.77 348    PKP      PKPdf    11 43 03.2 -0.6
      comp=Z,3.8nm,0.9s,baz=90,slow=1.8,SNR=5.6
ARCES ARCESS Array B    124.77 348             PKPdf    11 43 03.7 -0.1
ARCES ARCESS Array B    124.77 348    PKIKP    PKPdf    11 43 03.7 -0.1
SUR   Sutherland        125.12 206    PKP      PKPdf    11 43 06.1 +0.2
      comp=Z,7.5nm,1.0s,baz=219,slow=8.8,SNR=3.5
SUR   Sutherland        125.12 206             PKiKP    11 43 06.7 +0.4
KLMR  Klimovskoe        126.72 335    PKIKP    PKPdf    11 43 06.6 -1.1
KLMR                                  pmax     pmax
      comp=Z,3.0nm,0.6s
KLMR  Klimovskoe        126.72 335    PKPdf    PKPdf    11 43 06.6 -1.1
KLMR                                  AMP               11 43 19.0
      comp=Z,3.0nm,0.6s
BELG  Belogornoye       126.73 323  i PKIKP    PKPdf    11 43 07.1 -0.8
MATP  Matopo            130.73 222    PKP      PKPdf    11 43 16.3 -0.5
      comp=Z,2.0nm,0.8s,baz=126,slow=5.4,SNR=3.8
FINES FINESS Array B    131.11 341    PKP      PKPdf    11 43 16.1 +0.1
      comp=Z,0.6nm,0.3s,baz=349,slow=36,SNR=2.1
OBN   Obninsk           131.29 330⇑iPKIKP    PKiKP    11 43 17.9 +0.4
OBN                                 e                   11 43 30.1
OBN                                                     11 50 30.0
OBN                                 eSS      SS       12 03 11.3 +6.9
OBN                                   pmax     pmax
      comp=Z,15nm,0.9s
KIV   Kislovodsk        132.73 314  i PKIKP    PKPdf    11 43 18.9 -0.9
KIV                                   pmax     pmax
      comp=Z,6.0nm,1.1s
NOA   NORSAR Array B    135.06 350    PKP      PKPdf    11 43 22.9 -0.7
      comp=Z,0.5nm,0.8s,baz=12,slow=8.9,SNR=3.7
AKASG Malin Array Be    137.49 329    PKP      PKPdf    11 43 28.9 +0.6
      comp=Z,0.9nm,0.5s,baz=49,slow=2.4,SNR=6.0
AKASG Malin Array Be    137.49 329             PKPdf    11 43 28.4 +0.1
AKASG Malin Array Be    137.49 329    PKIKP    PKPdf    11 43 28.4 +0.1
TSUM  Tsumeb            137.92 211    PKP      PKPdf    11 43 29.6 -0.7
      comp=Z,3.9nm,1.0s,baz=4.8,slow=17,SNR=1.9
BRTR  Keskin Array B    140.56 312    PKP      PKPdf    11 43 33.8 -0.7
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      comp=Z,0.9nm,0.8s,baz=90,slow=5.6,SNR=3.9
BRTR  Keskin Array B    140.56 312             PKPdf    11 43 34.0 -0.5
BRTR  Keskin Array B    140.56 312    PKIKP    PKPdf    11 43 34.0 -0.5
UZH   Uzhgorod          142.20 331  ePKIKP    PKPdf    11 43 33.5 -3.4
OKC   Ostrava-Krasne    143.03 336    AMS      AMS      12 48 10.0
      comp=Z,200nm,18.2s
OSTC  Ostas             143.16 338    AMS      AMS      12 45 30.0
      comp=Z,100nm,15.9s
CHVC  Chvalec           143.19 339    AMS      AMS      12 48 00.0
      comp=Z,100nm,14.9s
UPC   Upice             143.27 339    AMS      AMS      12 43 30.0
      comp=Z,200nm,25.4s
DPC   Dobruska-Polom    143.29 338  ePKIKP    PKiKP    11 43 41.6 -0.6
DPC                                   MLR      MLR
      comp=Z,100nm,15.5s
DPC   Dobruska-Polom    143.29 338  ePKP      PKiKP    11 43 41.6 -0.6
DPC                                   AMS      AMS      12 46 50.0
      comp=Z,100nm,15.5s
MORC  Moravsky Berou    143.31 337  ePKP      PKPbc    11 43 35.8 -0.3
KRLC  Kraliky           143.35 337    AMS      AMS      12 50 20.0
      comp=Z,200nm,21.3s
CLL   Collm             143.55 342  ePKIKP    PKPbc    11 43 37.0 +0.4
CLL                                 i                   11 43 42.2
CLL                                   pmax     pmax
      comp=Z,5.0nm,0.7s
CLL   Collm             143.55 342  ePKPRpre            11 43 37.0
      comp=Z,5.0nm,0.7s
CLL                                 i PKPdf    PKPdf    11 43 39.6 +0.3
CLL                                 i (PKiKP)           11 43 42.2
      comp=Z,8.0nm,1.0s
CLL                                 i pPKPdf   pPKPdf   11 43 47.8 -2.0
BRG   Berggiesshubel    143.64 341  ePKP      PKPdf    11 43 38.2 -1.2
BRG                                   Amp               11 43 39.2
      comp=Z,10nm,1.4s
BRG                                 ex        x        11 43 43.3
BRG                                   Amp               11 43 45.2
      comp=Z,24nm,1.5s
BRG   Berggiesshubel    143.64 341  ePKIKP    PKPdf    11 43 38.2 -1.2
BRG                                 e                   11 43 43.3
BRG                                   pmax     pmax
      comp=Z,11nm,1.4s
BRG                                   pmax     pmax
      comp=Z,24nm,1.5s
PVCC  Panska Ves        143.74 340    AMS      AMS      12 43 50.0
      comp=Z,200nm,21.3s
PSZ   Piszkesteto       143.81 333    PKP      PKPab    11 43 37.0  0.0
JAVC  Velka Javorina    144.00 336  ePKP      PKPdf    11 43 39.4 -0.8
VRAC  Vranov            144.06 337  ePKP      PKPbc    11 43 38.7 +0.5
PRU   Pruhonice         144.21 339    AMS      AMS      12 44 00.0
      comp=Z,200nm,30.6s
KRUC  Moravsky          144.33 337  ePKP      PKPbc    11 43 39.5 +0.4
TREC  Trest             144.47 338    AMS      AMS      12 49 00.0
      comp=Z,300nm,18.4s
MODS  Modra-Piesok      144.55 335  ePKIKP    PKPdf    11 43 40.9 -0.3
MODS  Modra-Piesok      144.55 335  ePKP      PKPdf    11 43 40.9 -0.3
NKC   Novy Kostel       144.66 342  ePKIKP    PKPdf    11 43 40.7 -0.6
NKC                                 e                   11 43 45.2
NKC                                   MLR      MLR
      comp=Z,100nm,17.4s
NKC   Novy Kostel       144.66 342  ePKP      PKPdf    11 43 40.7 -0.6
NKC                                 epPKP     PKiKP    11 43 45.2 +0.2
NKC                                   AMS      AMS      12 45 50.0
      comp=Z,100nm,17.4s
ZST   Bratislava        144.76 335  ePKIKP    PKPdf    11 43 42.1 +0.6
ZST   Bratislava        144.76 335  ePKP      PKPdf    11 43 42.1 +0.6
CSKK  Cskako            144.94 333    PKP      PKPdf    11 43 41.7 -0.2
MPEP  Malo Peshtene     145.05 324  i P        PKPab    11 43 41.7 +0.1
KDZ   Kurdzhali         145.09 320  i P        PKPdf    11 43 42.1 -0.2
KHC   Kasperske Hory    145.27 340             PKPdf    11 43 42.6 +0.2
KHC   Kasperske Hory    145.27 340  ePKIKP    PKPdf    11 43 42.6 +0.2
KHC                                 e                   11 43 49.0
KHC                                   MLR      MLR
      comp=Z,300nm,27.0s
KHC   Kasperske Hory    145.27 340  ePKP      PKPdf    11 43 42.6 +0.2
KHC                                 epPKP     PKiKP    11 43 49.0 +2.7
KHC                                   AMS      AMS      12 44 40.0
      comp=Z,300nm,27.0s
CKRC  Cesky Krumlov     145.29 339  ePKP      PKPdf    11 43 43.1 +0.7
CKRC                                ex        x        11 43 48.8
CKRC                                  AMS      AMS      12 46 40.0
      comp=Z,200nm,28.2s
EGYH  Egyhazaskeszo     145.29 334    PKP      PKPdf    11 43 43.5 +1.1
SOP   Sopron            145.39 335    PKP      PKPab    11 43 43.7 +1.0
MPLH  Magyarpolny       145.40 334    PKP      PKPab    11 43 42.9 +0.2
CONA  Conrad Observa    145.47 336  i P        PKPab    11 43 43.3 +0.2
      comp=Z,40nm,0.9s,SNR=33
GEC2  GERESS Array S    145.48 339             PKPab    11 43 43.3 +0.1
GERES GERESS Array B    145.48 339    PKPbc    PKPab    11 43 43.2 +0.1
      comp=Z,12nm,0.8s,baz=36,slow=2.5,SNR=103
GERES GERESS Array B    145.48 339             PKPab    11 43 43.0 -0.1
GERES GERESS Array B    145.48 339    PKIKP    PKPab    11 43 43.0 -0.1
RONA  Rosalia, Austr    145.48 336  i P        PKPab    11 43 43.7 +0.6
      comp=Z,74nm,1.7s,SNR=32
GRA1  Grafenberg Arr    145.51 342             PKPdf    11 43 42.8  0.0
GRF   Grafenberg Arr    145.51 342    PKIKP    PKPdf    11 43 42.8  0.0
GRFO  Grafenberg        145.51 342             PKPab    11 43 43.4 +0.3
GRFO  Grafenberg        145.51 342    PKIKP    PKPab    11 43 43.4 +0.3
MORH  Mrgy, Hungar      145.66 332    PKP      PKPbc    11 43 43.4  0.0
BEBN  Eben Emael        145.78 349  dPKP      PKPab    11 43 44.1 +0.1
VTS   Vitosha           145.80 323    PKPdf    PKPbc    11 43 44.1 -0.1
VTS   Vitosha           145.80 323    PKP2     PKPbc    11 43 44.1 -0.1
VTS   Vitosha           145.80 323  i P        PKPab    11 43 44.7 +0.1
BTNL  Ternell           145.90 348  dPKP      PKPbc    11 43 44.0  0.0
MEM   Membach           145.90 349  dPKPdf    PKPdf    11 43 43.3 -0.1
MEM                                 dpPKP     PKiKP    11 43 50.3 +2.9
BSTI  Sart Tilman       146.00 349  dPKP      PKPab    11 43 44.6 -0.3
BSTI                                dpPKP     PKiKP    11 43 50.8 +3.1
MOA   Molln             146.13 338  i P        PKPab    11 43 45.3 -0.2
      comp=Z,21nm,0.9s,SNR=13
BHOU  Houvegnez         146.14 348  dPKPab    PKPab    11 43 45.4 -0.1
MMB   Musomiste         146.15 321  i P        PKPbc    11 43 45.1  0.0
ARSA  Arzberg           146.15 336  i P        PKPab    11 43 45.4 -0.2
      comp=Z,27nm,1.5s,SNR=10.0
BCLA  Clavier           146.21 349  dPKPab    PKPab    11 43 45.4 -0.2
BGES  Gesves            146.28 350  dPKPab    PKPab    11 43 45.8 -0.2
SNF   Seneffe           146.29 350  dPKP      PKPbc    11 43 45.4 +0.2
SNF                                 dpPKP     pPKPdf   11 43 51.8 -2.7
KKB   Krupnik           146.36 322  i P        PKPbc    11 43 45.6 -0.1
BMRD  Maredsous         146.41 350  dPKPab    PKPbc    11 43 45.9 +0.4
BMRD                                dpPKP     pPKPdf   11 43 51.8 -3.0
RCHB  Rochefort         146.47 349  dPKP      PKPbc    11 43 45.7  0.0
BIOA  Bad Ischl, Aus    146.49 338  eP        PKPbc    11 43 45.8 -0.1
      comp=Z,8.5nm,0.8s
DIVS  Divibare          146.57 328             PKPbc    11 43 46.4 +0.1
DOU   Dourbes           146.64 350  dPKPab    PKPab    11 43 46.8 -0.5
WLF   Walferdange       146.77 348  dPKP      PKPab    11 43 47.6 -0.3
SOKA  Soboth            146.81 336  i P        PKPbc    11 43 46.9 -0.1
      comp=Z,25nm,1.6s,SNR=10
PERS  Pernice           146.82 336  ePKPbc    PKPbc    11 43 46.7 -0.2
KBA   Koelnbreinsper    147.11 338  i P        PKPbc    11 43 47.0 -0.9
      comp=Z,11nm,0.9s,SNR=7.3
OBKA  Obir              147.14 336  eP        PKPbc    11 43 47.8 -0.1
      comp=Z,13nm,1.1s
MYKA  Terra Mystica     147.38 337  i P        PKPbc    11 43 48.0 -0.5
      comp=Z,16nm,0.8s,SNR=11
WATA  Walderalm         147.49 340  i P        PKPbc    11 43 48.8 -0.2
      comp=Z,20nm,1.1s,SNR=10
BFO   Black Forest      147.53 345             PKPbc    11 43 48.8 -0.1
BFO   Black Forest      147.53 345    PKP2     PKPbc    11 43 48.8 -0.1
LJU   Ljubljana         147.54 336  ePKPbc    PKPbc    11 43 48.8 -0.1
WTTA  Wattenberg        147.54 340  i P        PKPbc    11 43 49.1  0.0
      comp=Z,22nm,0.9s,SNR=12
RETA  Reutte            147.62 341  i P        PKPbc    11 43 49.5 +0.3
      comp=Z,14nm,1.0s,SNR=6.5
MOTA  Moosalm           147.64 341  i P        PKPbc    11 43 49.1 -0.2
      comp=Z,17nm,0.9s,SNR=8.4
ABTA  Abfaltersbach     147.69 339  i P        PKPbc    11 43 48.8 -0.6
      comp=Z,14nm,0.9s,SNR=9.8
SQTA  Sankt Quirin      147.71 340  i P        PKPbc    11 43 49.7 +0.2
      comp=Z,18nm,0.8s,SNR=12
ROBS  Robic             147.76 337  i PKPbc    PKPbc    11 43 48.6 -0.9
VOJS  Vojsko            147.80 336  i PKPbc    PKPbc    11 43 49.1 -0.6
ECH   Echery            147.92 346             PKPbc    11 43 50.0 +0.1
ECH   Echery            147.92 346    PKP2     PKPbc    11 43 50.0 +0.1
FNA   Florina           148.04 322             PKPbc    11 43 49.3 -1.2
FNA   Florina           148.04 322    PKP2     PKPbc    11 43 49.3 -1.2
STAL  STALIGIAL         148.04 338             PKPbc    11 43 49.3 -0.9
FETA  Feichten          148.04 341  i P        PKPbc    11 43 50.5  0.0
      comp=Z,14nm,0.9s,SNR=6.2
DAVA  Damuels           148.06 342  i P        PKPbc    11 43 51.0 +0.5
      comp=Z,32nm,1.8s,SNR=9.0
CTI   Castel Tesino     148.59 339             PKPbc    11 43 52.1 +0.3
CTI   Castel Tesino     148.59 339    PKP2     PKPbc    11 43 52.1 +0.3
SENIN Lac Senin/Sane    149.62 344             PKPbc    11 43 55.0 +0.4
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MURB	Monte Urbino	150.64	335	PKPdf	PKPdf	11 43 50.7	-0.7
MURB					PKiKP	11 43 58.2	+0.6
NRCA	Norcia	150.75	334	PKPdf	PKPdf	11 43 51.5	-0.1
NRCA					PKPbc	11 43 57.3	+0.1
BNI	Bardonecchia	151.00	344	PKPdf	PKPdf	11 43 51.1	-0.9
BNI					PKiKP	11 43 58.5	+0.1
BNI	Bardonecchia	151.00	344	PKIKP	PKiKP	11 43 58.5	+0.1
SSB	Saint Sauveur	151.28	347	PKPdf	PKPdf	11 43 52.1	-0.2
SSB					PKiKP	11 43 58.8	0.0
SSB				PKPab	PKPab	11 44 06.1	-0.2
SSB	Saint Sauveur	151.28	347	PKIKP	PKPdf	11 43 52.1	-0.2
SSB						11 43 58.8	
SSB						11 44 06.1	
ESDC	Sonseca Array	157.79	360	PKPab	PKPab	11 44 32.3	-1.8
	comp=Z,0.7nm,0.7s,baz=2.2,slow=2.7,SNR=7.4						
ESDC	Sonseca Array	157.79	360	PKPdf	PKPdf	11 44 00.6	-0.9
ESDC				PKPab	PKPab	11 44 35.0	+0.9
TORD	Torodi Ar. Bea	173.09	233	PKP	PKPdf	11 44 14.4	-0.4
	comp=Z,1.1nm,1.0s,baz=274,slow=4.3,SNR=6.2						
TORD				PKPab	PKPab	11 45 41.5	-0.6
	comp=Z,1.6nm,0.9s,baz=144,slow=3.2,SNR=4.5						

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*BEO **16** 11:32:02.6±0.7, 43°.67N×17°.13E, h19^{km}±7^{km}, ML2.5/8*
*PDG **16** 11:32:03.1±0.3, 43°.70N×17°.34E, h3^{km}, ML2.7/10, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*
*RHSSO **16** 11:32:04.1±0.2, 43°.71N×17°.34E, h4^{km}±1^{km}, ML2.6/14*
ISC 16 11:32:03.4±1.0**, 43°.70N**±0°.02×**17°.34E**±0°.02**, h7**^{km}±9^{km}**, n76, σ0^{s}.92**/138**, 11C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.25	216	ePg	Pg	11 32 08.9	+0.6
RICI				Sg	Sg	11 32 13.2	+1.5
SRKY	Kupres RS	0.39	341	ePg	Pg	11 32 11.3	+0.3
SRKY				eSg	Sg	11 32 16.9	+0.7
MAKA	Makarska	0.47	210	ePg	Pg	11 32 12.4	0.0
MAKA				Sg	Sb	11 32 20.0	-1.1
KIJV	Kijevo	0.74	295	ePg	Pg	11 32 17.4	-0.3
KIJV				Sg	Sb	11 32 28.5	-0.5
MGRS	Mrkonjic Grad	0.74	346	ePg	Pg	11 32 17.7	0.0
MGRS				eSg	Sg	11 32 27.6	+0.3
HVAR	Hvar	0.83	232	i Pg	Pg	11 32 18.7	-0.6
HVAR				Sg	Sb	11 32 31.0	-0.6
STON	Ston	0.87	162	ePg	Pg	11 32 18.8	-1.2
STON				eSg	Sb	11 32 32.1	-0.4
STON	Ston	0.87	162	ePg	Pg	11 32 19.1	-0.9
STON				eSg	Sb	11 32 32.2	-0.4
STON	Ston	0.87	162	ePg	Pg	11 32 18.9	-1.0
STON				Sg	Sb	11 32 32.2	-0.4
A050A	Klekovaca	0.98	324	ePg	Pg	11 32 21.7	-0.4
A050A				eSg	Sb	11 32 35.4	-0.5
LSTV	Lastovo	0.98	200	ePg	Pg	11 32 21.0	-1.3
LSTV				Sg	Sb	11 32 35.8	-0.1
BLY	Banja Luka	1.06	354	ePg	Pb	11 32 23.7	-0.3
BLY				eSg	Sb	11 32 37.8	-0.3
BLY	Banja Luka	1.06	354	⇑iPg	Pg	11 32 23.5	-0.2
BLY				eSg	Sg	11 32 37.2	-0.2
BRY	Bratogost	1.18	132	ePg	Pg	11 32 25.3	-0.8
BRY				eSg	Sb	11 32 42.6	+0.8
BRY	Bratogost	1.18	132	⇓iPg	Pg	11 32 24.9	-1.2
BRY				i Sg	Sn	11 32 43.8	+0.8
DBRK	Dubrovnik	1.19	150	ePg	Pg	11 32 24.8	-1.3
DBRK				Sg	Sb	11 32 42.4	+0.6
MORI	Morici	1.19	279	ePg	Pg	11 32 25.4	-0.8
MORI				Sg	Sn	11 32 43.8	+0.8
TREB	Trebinje	1.23	143	ePg	Pg	11 32 25.5	-1.4
TREB				eSg	Sn	11 32 44.6	+0.8
TREB	Trebinje	1.23	143	ePg	Pg	11 32 26.3	-0.6
TREB				eSg	Sn	11 32 44.1	+0.3
ZIRJ	Zirje	1.23	269	ePg	Pg	11 32 26.2	-0.8
ZIRJ				Sg	Sn	11 32 44.2	+0.3
UPM	Unac-Piva	1.24	113	ePg	Pg	11 32 26.5	-0.7
UPM				eSg	Sb	11 32 43.8	+0.2
UPM	Unac-Piva	1.24	113	⇑iPg	Pg	11 32 26.2	-1.0
UPM				i Sg	Sn	11 32 45.8	+1.3
A051A	Mrakovica	1.35	347	ePg	Pn	11 32 28.5	-0.3
A051A				eSg	Sn	11 32 47.1	+0.1
UDBI	Udbina	1.41	307	ePn	Pn	11 32 29.2	-0.3
UDBI				Sn	Sn	11 32 50.0	+1.7
A052A	Srbac	1.41	5	ePg	Pn	11 32 28.8	-0.7
A052A				eSg	Sb	11 32 48.1	-0.1
RUDO	Rudo	1.48	92	ePn	Pn	11 32 29.8	-0.6
RUDO				eSn	Sg	11 32 50.5	-0.3
RUDO	Rudo	1.48	92	ePg	Pn	11 32 29.8	-0.6
RUDO				eSg	Sb	11 32 50.2	0.0
NKME	Niksic	1.50	128	⇑iPg	Pn	11 32 30.6	-0.2
NKME				i Sg	Sg	11 32 54.2	+2.6
BBLS	Lazići	1.51	83	ePn	Pn	11 32 31.3	+0.4
BBLS				eSn	Sn	11 32 51.1	+0.3
BBLS	Lazići	1.51	83	⇑iPg	Pn	11 32 30.7	-0.2
BBLS				eSg	Sg	11 32 52.1	+0.3
HCY	Herceg Novi	1.51	145	ePn	Pn	11 32 31.2	+0.3
HCY				eSn	Sg	11 32 52.7	+0.8
HCY	Herceg Novi	1.51	145	⇑iPg	Pn	11 32 30.4	-0.5
HCY				i Sg	Sg	11 32 53.8	+1.9
PLE	Pljevlja	1.54	103	⇑iPg	Pn	11 32 31.7	+0.4
PLE				i Sg	Sg	11 32 55.5	+2.8
CEME	Cevo	1.63	134	⇑iPn	Pn	11 32 33.1	+0.5
CEME				i Sn	Sg	11 32 58.0	+2.2
DUGI	Dugi Otok	1.68	281	ePn	Pn	11 32 33.8	+0.6
DUGI				Sn	Sg	11 32 56.8	-0.4
PLIT	Plitvice	1.71	314	ePn	Pb	11 32 34.6	-0.6
PLIT				Sn	Sg	11 32 57.7	-0.6
VIRC	Vir	1.75	291	ePn	Pb	11 32 35.2	-0.7
VIRC				Sn	Sg	11 32 59.0	-0.7
A252A	Venje	1.78	12	ePn	Pn	11 32 35.1	+0.5
A252A				Sn	Sn	11 32 57.9	+0.5
TEKS	Tekeris	1.79	61	ePn	Pb	11 32 35.7	-0.9
TEKS				eSn	Sb	11 32 59.3	0.0
KOME	Kolasin	1.80	117	⇑iPn	Pb	11 32 36.4	-0.4
KOME				i Sn	Sg	11 33 02.3	+1.1
BUM	Brajici-Budva	1.80	140	⇓iPn	Pb	11 32 36.2	-0.6
BUM				i Sn	Sg	11 33 02.1	+0.8
PDG	Podgorica	1.89	131	ePn	Pn	11 32 36.5	+0.4
PDG				eSn	Sb	11 33 02.2	+0.2
TTG	Podgorica	1.89	131	⇑iPn	Pb	11 32 37.6	-0.6
TTG				i Sn	Sg	11 33 04.3	+0.2
DIVS	Divibare	1.96	77	ePn	Pn	11 32 38.0	+0.9
DIVS				eSn	Sb	11 33 03.5	-0.6
DIVS	Divibare	1.96	77	ePn	Pn	11 32 38.0	+0.9
DIVS				eSn	Sb	11 33 03.5	-0.6
MOSL	Moslavina	1.96	348	ePn	Pn	11 32 37.0	-0.1
MOSL				Sn	Sn	11 33 02.6	+0.6
SJES	Sjenica	1.97	102	ePn	Pn	11 32 38.2	+0.9
SJES				eSn	Sb	11 33 03.6	-0.8
SJES	Sjenica	1.97	102	ePn	Pb	11 32 38.6	-1.0
SJES				eSn	Sb	11 33 03.8	-0.6
DRME	Dracevica, Mon	2.03	137	ePn	Pn	11 32 38.5	+0.5
DRME				eSn	Sb	11 33 05.5	-0.5
DRME	Dracevica, Mon	2.03	137	⇑iPn	Pb	11 32 39.5	-1.1
DRME				i Sn	Sg	11 33 07.7	-0.8
IVA	Berane	2.04	113	⇑iPn	Pb	11 32 39.9	-0.9
IVA				i Sn	Sg	11 33 08.1	-0.8
IVAS	Ivanjica	2.05	92	ePn	Pn	11 32 37.9	-0.4
RABC	Rab	2.12	301	ePn	Pb	11 32 40.7	-1.4
RABC				Sn	Sb	11 33 08.5	0.0
A250A	Rusevo Krmpots	2.23	309	ePn	Pn	11 32 42.1	+1.4
A250A				Sn	Sb	11 33 10.9	-0.9
TRUS	Trudelj	2.28	76	ePn	Pn	11 32 40.7	-0.7
FRGS	Fruska Gora	2.29	50	ePn	Pn	11 32 42.5	+0.8
FRGS				eSn	Sn	11 33 11.1	+0.9
PTJ	Puntijarka	2.42	337	ePn	Pn	11 32 44.0	+0.5
PTJ				Sn	Sb	11 33 15.7	-1.5
KALN	Kalnik	2.51	346	ePn	Pn	11 32 44.4	-0.3
KALN				Sn	Sn	11 33 17.3	+1.6
CRES	Cresnjev	2.52	328	ePn	Pn	11 32 45.7	+1.0
CRES				eSn	Sn	11 33 16.9	+1.2
SMRN	Sveta Marina	2.65	301	ePn	Pn	11 32 47.8	+1.3
SMRN				Sn	Sn	11 33 20.2	+1.4
MORH	Mrgy, Hungar	2.68	20	ePn	Pn	11 32 47.2	+0.2
MORH				eSn	Sn	11 33 20.4	+0.7
SELS	Selova	2.79	99	ePn	Pn	11 32 48.5	-0.1
BRJN	Brijuni	2.85	296	ePn	Pn	11 32 50.3	+1.1
BRJN				Sn	Sn	11 33 25.5	+1.8
CEY	Cerknica	2.91	316	ePn	Pn	11 32 50.6	+0.4
CEY				eSn	Sn	11 33 25.9	+0.4
SKDS	Skadanscina	3.01	309	ePn	Pn	11 32 51.6	+0.1
SKDS				eSn	Sn	11 33 28.5	+0.7
SOKA	Soboth	3.40	332	ePn	Pn	11 32 57.6	+0.7
	1.0nm,0.3s						
OBKA	Obir	3.44	326	ePn	Pn	11 32 59.2	+1.7
	6.9nm,0.5s						
ARSA	Arzberg	3.78	341	ePn	Pn	11 33 01.9	-0.2
	2.5nm,0.3s						
RONA	Rosalia, Austr	4.07	350	ePn	Pn	11 33 09.3	+3.2
	4.0nm,0.5s						
ABTA	Abfaltersbach	4.57	313	ePn	Pn	11 33 13.9	+0.9
	0.6nm,0.3s						
MOA	Molln	4.68	334	ePn	Pn	11 33 14.9	+0.5
	0.6nm,0.2s						
WTTA	Wattenberg	5.37	314	ePn	Pn	11 33 25.1	+1.0
	1.7nm,0.2s						
WATA	Walderalm	5.44	314	ePn	Pn	11 33 26.0	+0.9
	1.1nm,0.2s						
SQTA	Sankt Quirin	5.57	311	ePn	Pn	11 33 27.6	+0.9
	0.8nm,0.2s						
MOTA	Moosalm	5.70	312	ePn	Pn	11 33 28.1	-0.5
	0.4nm,0.1s						
FETA	Feichten	5.72	308	ePn	Pn	11 33 28.2	-0.7
	0.7nm,0.5s						

IDC 16 11:36:07.6±1.8**, 53°.63S**×**145°.10W, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/2**, Error ellipse: s-maj=363.8km s-min=46.2km az=178.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	49.80	95	T	T	12 38 13.2	
	baz=225						
H03S1	Juan Fernandez	49.81	95	T	T	12 38 15.6	
	baz=225						
H03S3	Juan Fernandez	49.82	95	T	T	12 38 15.6	
	baz=225						
H03N3	Juan Fernandez	50.07	94	T	T	12 38 30.9	
	baz=224,slow=72,SNR=16						
H03N2	Juan Fernandez	50.07	94	T	T	12 38 32.5	
	baz=224,slow=72,SNR=14						
H03N1	Juan Fernandez	50.09	94	T	T	12 38 32.0	
	baz=224,slow=72,SNR=10						
ASAR	Alice Springs	66.04	262	P	P	11 46 55.9	-0.2
	0.7nm,0.8s,baz=137,slow=6.1,SNR=11						
	0.7nm,0.8s						
H01W1	Cape Leeuwin H	68.52	240	T	T	13 01 36.2	
	baz=142,slow=76,SNR=4.8						
H01W2	Cape Leeuwin H	68.53	240	T	T	13 01 32.4	
	baz=142,slow=76,SNR=4.7						
H01W3	Cape Leeuwin H	68.54	240	T	T	13 01 34.3	
	baz=142,slow=76,SNR=5.8						
WRA	Warramunga Arr	68.64	265	P	P	11 47 13.1	+0.5
	0.6nm,0.9s,baz=153,slow=5.7,SNR=1.9						
	0.6nm,0.9s						
MKAR	Makanchi Array	149.39	277	PKPbc	PKPbc	11 55 56.7	-0.8
	0.9nm,0.9s,baz=114,slow=3.6,SNR=5.3						
ESDC	Sonseca Array	150.31	102	PKPbc	PKPbc	11 55 59.9	-0.2
	1.1nm,1.1s,baz=257,slow=2.0,SNR=5.6						

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*IDC **16** 11:41:20.8±1.0, 10°.77N×41°.17W, h0^{km}, mb4.0/8, mbtmp3.9/8, ML5.3/1, MS3.2/2, Error ellipse: s-maj=32.4km s-min=20.9km az=179.0*
*NEIC **16** 11:41:22.6±0.8, 10°.6N±0°.1×41°.27W±0°.07, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=21.6km s-min=6.9km az=155.0*
ISC 16 11:41:23.2±0.6**, 10°.6N**±0°.1×**41°.21W**±0°.09**, h17**^{km}**, n37, σ0^{s}.75**/26**, mb4.2**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	12.58	245	Pn	Pn	11 44 21.1	-0.4
	16nm,0.3s,baz=56,slow=14,SNR=149						
MDP				LR	LR	11 48 21.3	
	comp=Z,66nm,19.7s,baz=292,slow=33						
RCBR	Riachuelo	17.18	162	Pn	Pn	11 45 21.4	-1.2
RCBR				IAmb	IAmb	11 45 49.2	
	comp=Z,24nm,1.1s						
H05S1	Guadeloupe/Mar	19.53	283	T	T	12 05 53.3	
H05N1	Guadeloupe/Mar	20.11	289	T	T	12 06 32.1	
MTP	Monte Pirata	24.70	290	P	P	11 46 43.0	-0.7
H10N3	ASCENSION HYDR	32.30	124	T	T	12 21 49.6	
	baz=304,slow=75,SNR=336						
H10N2	ASCENSION HYDR	32.30	124	T	T	12 21 47.9	
	baz=304,slow=75,SNR=314						
H10N1	ASCENSION HYDR	32.32	124	T	T	12 21 49.1	
	baz=304,slow=75,SNR=375						
H10S3	ASCENSION HYDR	32.80	125	T	T	12 22 25.5	
	baz=302,slow=74,SNR=258						
H10S2	ASCENSION HYDR	32.82	125	T	T	12 22 26.8	
	baz=278,slow=74,SNR=83						
DBIC	Dimbokro	36.14	93	P	P	11 48 24.6	-0.3
	comp=Z,2.5nm,0.5s,baz=284,slow=9.8,SNR=8.8						
	comp=Z,2.5nm,0.5s						
DBIC	Dimbokro	36.14	93	P	P	11 48 24.8	-0.1
DBIC				IAmb	IAmb	11 48 47.3	
	comp=Z,19nm,1.4s						
LPAZ	La Paz	37.74	225	P	P	11 48 40.9	+1.7
	comp=Z,1.5nm,0.9s,baz=11,slow=5.0,SNR=3.9						
	comp=Z,1.5nm,0.9s						
TOA0	Torodi Ar. Sit	42.02	82	P	P	11 49 14.1	-0.1
TOA0				IAmb	IAmb	11 49 23.0	
	comp=Z,7.4nm,1.3s						
TORD	Torodi Ar. Bea	42.02	82	P	P	11 49 13.9	-0.3
	comp=Z,1.8nm,0.6s,baz=278,slow=10,SNR=12						
	comp=Z,1.8nm,0.6s						
BATG	Bathurst New B	42.14	335	P	P	11 49 14.4	-0.2
ESDC	Sonseca Array	43.91	42	LR	LR	12 03 49.0	
	comp=Z,40nm,19.6s,baz=215,slow=31						
SCHQ	Schefferville	48.53	340	P	P	11 50 04.0	-1.3
	comp=Z,1.4nm,0.5s,baz=258,slow=15,SNR=1.6						
	comp=Z,1.4nm,0.5s						
SCHQ	Schefferville	48.53	340	P	P	11 50 04.7	-0.6
WVT	Waverly	49.15	309	P	P	11 50 11.3	+1.1
WVT				IAmb	IAmb	11 50 12.1	
	comp=Z,1.7nm,0.5s						
FCAR	Ozark Folk Cen	52.40	307	P	P	11 50 34.3	-0.5
FCAR				IAmb	IAmb	11 50 53.3	
	comp=Z,6.0nm,1.5s						
TXAR	Lajitas Array	60.91	298	P	P	11 51 35.9	+0.2
	comp=Z,0.3nm,0.5s,baz=114,slow=6.0,SNR=5.3						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	60.91	298	P	P	11 51 35.3	-0.3
MORC	Moravsky Berou	61.96	39	P	P	11 51 42.7	+0.4
MORC				IAmb	IAmb	11 51 50.6	
	comp=Z,1.9nm,1.0s						
SDCO	Great Sand Dun	63.27	307	P	P	11 51 52.7	+1.1
SDCO				IAmb	IAmb	11 51 54.0	
	comp=Z,3.8nm,1.2s						
HLID	Hailey	70.59	312	P	P	11 52 37.9	-0.1
YKA	Yellowknife Ar	72.98	332	P	P	11 52 51.6	-0.1
	comp=Z,0.3nm,0.7s,baz=91,slow=5.7,SNR=2.2						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	72.98	332	P	P	11 52 51.0	-0.7
DLBC	Dease Lake	80.42	328	P	P	11 53 34.2	+0.3
INK	Inuvik	81.07	338	P	P	11 53 36.9	-0.1
INK				IAmb	IAmb	11 53 52.9	
	comp=Z,5.3nm,1.5s						
BCAR	Beaver Creek A	85.36	333	P	P	11 53 58.7	-0.7
ILAR	Eielson Array	87.04	336	P	P	11 54 07.3	-0.3
	comp=Z,0.2nm,0.6s,baz=59,slow=3.5,SNR=3.6						
	comp=Z,0.2nm,0.6s						
ABKAR	Akbulak array	89.21	40		P	11 54 19.5	+1.2
NRIK	Noril'sk	92.71	16	P	P	11 54 34.5	+0.5
	comp=Z,1.6nm,0.4s,baz=333,slow=2.3,SNR=1.7						
	comp=Z,1.6nm,0.4s						
H01W2	Cape Leeuwin H	147.00	141	T	T	14 45 46.0	
	baz=229						
H01W3	Cape Leeuwin H	147.01	141	T	T	14 45 48.5	
	baz=229						
H01W1	Cape Leeuwin H	147.02	141	T	T	14 45 54.9	
	baz=229						

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*IDC **16** 11:42:21.0±2.5, 39°.06N×142°.20E, h0^{km}, mb3.5/3, mbtmp3.4/4, ML2.1/1, MS3.2/2, Error ellipse: s-maj=52.3km s-min=31.8km az=84.0*
*JMA **16** 11:42:25.1±0.1, 38°.7N±0°.2×142°.3E±0°.7, h38^{km}±1^{km}, MV3.5/40, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
ISC 16 11:42:25.4±2.0**, 38°.74N**±0°.05×**142°.16E**±0°.10**, h26**^{km}±12^{km}**, n23, σ1^{s}.38**/23**, mb3.4**/3**, 12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.51	311	⇓iP	Pn	11 42 37.1	+0.1
OFUJ				⇓S	Sn	11 42 45.4	+0.4
JKMT	Kesennumamotoy	0.54	277	⇓iP	Pn	11 42 37.5	+0.1
JKMT				⇓S	Sn	11 42 45.9	+0.2
JIKH	Ishinomakikobu	0.70	232	⇓iP	Pb	11 42 38.9	0.0
JIKH				⇓iS	Sb	11 42 48.6	+0.5
JIO	Ouri	0.70	246	⇓iP	Pb	11 42 39.1	+0.2
JIO				⇓S	Sb	11 42 49.0	+0.8
JMK	Ichinoseki	0.76	286	⇓iP	Pn	11 42 40.8	+0.3
JMK				⇓S	Sn	11 42 51.9	+0.8
JOM	Ohasama	0.99	317	⇓iP	Pb	11 42 44.2	+0.3
JOM				⇓S	Sn	11 42 58.0	+1.1
JTH	Tanohata	1.22	349	P	Pn	11 42 46.6	-0.1
JOU	Okura	1.23	253	i P	Pn	11 42 47.6	+0.6
JOU				S	Sb	11 43 04.2	+0.7
JRG	Rokugo	1.36	299	P	Pb	11 42 49.7	-0.4
JMM	Marumori	1.39	231	i P	Pn	11 42 48.6	-0.5
JYK	Kaneyama	1.42	278	P	Pn	11 42 50.4	+0.9
MJAR	Matsushiro Arr	3.83	236	Pn	Pn	11 43 23.7	+1.0
	0.1nm,0.3s,baz=50,slow=17,SNR=7.6						
MJAR				Sn	Sb	11 44 13.7	-4.5
	baz=118,slow=40						
	1.1nm,0.4s						
ASAJ	Asahikawa	5.38	3	LR	LR	11 46 04.5	
	comp=Z,80nm,18.2s,baz=206,slow=44						
H11N2	WAKE ISLAND Hy	28.57	124	T	T	12 18 22.7	
	baz=317,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	28.58	125	T	T	12 18 41.6	
	baz=317,slow=75,SNR=53						
H11N3	WAKE ISLAND Hy	28.59	124	T	T	12 18 36.2	
	baz=317,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	29.34	126	T	T	12 19 36.8	
	baz=318,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.35	127	T	T	12 19 35.1	
	baz=318,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	29.36	126	T	T	12 19 37.0	
	baz=318,slow=76,SNR=10						
MKAR	Makanchi Array	43.73	301	P	P	11 50 26.8	-1.5
	0.3nm,0.5s,baz=79,slow=9.1,SNR=2.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	45.44	307	P	P	11 50 39.9	-2.0
	1.0nm,0.6s,baz=81,slow=8.3,SNR=8.9						
	1.0nm,0.6s						
WRA	Warramunga Arr	58.84	189	P	P	11 52 23.6	+1.9
	0.3nm,0.9s,baz=5.7,slow=7.2,SNR=1.8						
	0.3nm,0.9s						
RES	Resolute Bay	60.80	15	LR	LR	12 19 52.0	
	comp=Z,73nm,22.0s,baz=284,slow=37						

IDC 16 11:49:56.0±6.2**, 14°.09N**×**90°.42W, h0**^{km}**, mb3.5**/1**, mbtmp3.2**/2**, ML3.2**/1**, MS3.5**/3**, Error ellipse: s-maj=476.2km s-min=74.9km az=42.0, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	19.51	323	P	P	11 54 25.3	+0.2
	baz=137,slow=11,SNR=3.0						
	0.4nm,0.9s						
H06E1	SOCORRO T-PHAS	20.21	286	T	T	12 14 46.0	
	SNR=4.6						
TKL	Tuckaleechee C	22.30	14	LR	LR	12 04 16.1	
	comp=Z,54nm,21.3s,baz=126,slow=39						
NVAR	Mina Array Bea	34.59	320	P	P	11 56 46.7	-0.2
	0.4nm,0.6s,baz=141,slow=10,SNR=4.2						
	0.4nm,0.6s						
LVC	Limon Verde	42.12	150	LR	LR	12 15 21.2	
	comp=Z,81nm,18.9s,baz=258,slow=36						
CPUP	Villa Florida	51.47	141	LR	LR	12 20 36.2	
	comp=Z,88nm,18.9s,baz=230,slow=36						
CMAR	Chiang Mai Arr	146.37	344	PKPbc	PKPdf	12 09 39.0	+0.4
	0.3nm,0.3s,baz=347,slow=3.7,SNR=2.3						

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*IDC **16** 11:51:19.4±2.3, 6°.64S×129°.90E, h155^{km}±26^{km}, mb3.4/1, mbtmp3.8/5, Error ellipse: s-maj=28.8km s-min=21.0km az=110.0*
ISC 16 11:51:18.1±0.8**, 6°.68S**±0°.06×**130°.03E**±0°.09**, h146**^{km}**, n12, σ2^{s}.82**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.90	12	P	Pn	11 52 44.7	+1.2
	2.6nm,0.4s,baz=180,slow=20,SNR=2.0						
SIJI				S	Sn	11 53 45.8	-4.5
	20nm,0.2s,baz=88,slow=23,SNR=12						
MTN	Manton Dam	6.22	170	P	Pn	11 52 51.0	+3.3
KDU	Kakadu	6.43	158	P	Pn	11 52 53.8	+3.3
BATI	Baumata	7.21	241	P	Pn	11 53 02.8	+1.8
	13nm,0.4s,baz=211,slow=2.7,SNR=6.3						
BATI				S	Sn	11 54 19.8	-1.9
	11nm,0.4s,baz=36,slow=22,SNR=1.5						
KNRA	Kununurra	9.03	188	P	Pn	11 53 26.6	+1.4
WRAB	Tennant Creek	13.82	163	P	Pn	11 54 27.4	-0.6
WRA	Warramunga Arr	13.83	163	P	Pn	11 54 28.5	+0.5
	0.5nm,0.4s,baz=347,slow=13,SNR=16						
WRA				S	Sn	11 56 56.3	-4.9
	0.8nm,0.5s,baz=336,slow=22,SNR=6.0						
QIS	Mount Isa	16.62	147	P	P	11 55 03.5	+0.9
ASAR	Alice Springs	17.29	168	P	Pn	11 55 12.6	+1.8
	0.7nm,0.5s,baz=343,slow=9.4,SNR=17						
ASAR				S	S	11 58 18.9	-3.9
	0.3nm,0.5s,baz=0.7,slow=29,SNR=2.6						
PSA00	Pilbara Seismi	17.78	213	P	Pn	11 55 16.8	+0.2
MTSU	Mount Surprise	17.99	131	P	Pn	11 55 21.7	+2.6
MKAR	Makanchi Array	67.98	327	P	P	12 02 00.9	-0.5
	0.6nm,0.5s,baz=117,slow=7.9,SNR=7.4						
	0.6nm,0.5s						

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*IDC **16** 12:03:30.3±9.1, 17°.73S×178°.91W, h563^{km}±78^{km}, mb3.5/5, mbtmp4.4/6, Error ellipse: s-maj=92.9km s-min=32.4km az=49.0*
*NEIC **16** 12:03:41.9±1.6, 17°.9S±0°.3×179°.5W±0°.2, h670^{km}±10^{km}, mb4.1/16, Error ellipse: s-maj=41.1km s-min=24.8km az=181.0*
ISC 16 12:03:37.6±2.3**, 17°.9S**±0°.3×**179°.4W**±0°.2**, h622**^{km}**, n24, σ1^{s}.01**/26**, mb4.2**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.94	250	P	P	12 06 35.6	+0.3
	2.9nm,0.7s,baz=13,slow=23,SNR=1.2						
DZM	Mont Dzumac	13.94	250	P	P	12 06 36.1	+0.7
URZ	Urewera	20.53	188	P	P	12 07 31.8	-3.1
	15nm,1.1s,baz=354,slow=22,SNR=1.6						
	15nm,1.1s						
ARMA	Armidale	29.14	239	P	P	12 08 52.6	+1.6
CTAO	Charters Tower	32.52	261	P	P	12 09 19.7	0.0
COEN	Coen	36.16	271	P	P	12 09 50.4	+0.4
STKA	Stephens Creek	37.81	241	P	P	12 10 03.6	+0.4
	1.8nm,0.8s,baz=97,slow=16,SNR=3.3						
	1.8nm,0.8s						
STKA	Stephens Creek	37.81	241	P	P	12 10 03.1	-0.2
BBOO	Buckleboo	42.59	241	P	P	12 10 41.8	+0.6
WR0	Warramunga Arr	43.52	260	P	P	12 10 47.0	-1.5
WR0				IAmb	IAmb	12 10 55.1	
	comp=Z,7.0nm,1.2s						
WB0	Warramunga Arr	43.67	260	P	P	12 10 49.0	-0.7
WB0				IAmb	IAmb	12 11 10.7	
	comp=Z,8.8nm,1.2s						
WB2	Warramunga Arr	43.70	260	P	P	12 10 49.2	-0.7
WB2				IAmb	IAmb	12 10 50.4	
	comp=Z,19nm,1.5s						
WRAB	Tennant Creek	43.70	260	P	P	12 10 48.9	-1.0
WRAB				IAmb	IAmb	12 10 50.3	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	43.71	260	P	P	12 10 49.4	-0.6
	comp=Z,0.8nm,0.3s,baz=94,slow=8.2,SNR=46						
WRA				PcP	PcP	12 12 22.5	-0.2
	comp=Z,0.3nm,0.8s,baz=92,slow=4.3,SNR=1.6						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	43.71	260	P	P	12 10 48.9	-1.1
AS31	Alice Springs	43.89	254	P	P	12 10 51.9	+0.5
AS31				IAmb	IAmb	12 10 52.4	
	comp=Z,3.6nm,0.5s						
ASAR	Alice Springs	43.89	254	P	P	12 10 51.9	+0.6
	comp=Z,7.1nm,0.4s,baz=89,slow=7.8,SNR=266						
ASAR				PcP	PcP	12 12 23.3	0.0
	comp=Z,0.4nm,0.7s,baz=99,slow=3.3,SNR=3.1						
	comp=Z,7.1nm,0.4s						
ASAR	Alice Springs	43.89	254	P	P	12 10 51.5	+0.1
MTN	Manton Dam	47.86	269	P	P	12 11 21.2	-0.2
MTN				IAmb	IAmb	12 11 35.4	
	comp=Z,14nm,1.3s						
KNRA	Kununurra	49.55	264	P	P	12 11 34.2	+0.4
KNRA				IAmb	IAmb	12 11 55.9	

	comp=Z,15nm,1.3s						
SIJI	**Sorong**	**51.31**	**284**	P	**P**	**12 11 46.1**	**-0.5**
	comp=Z,6.3nm,0.5s,baz=84,slow=11,SNR=6.2						
	comp=Z,6.3nm,0.5s						
PSA00	**Pilbara Seismi**	**57.00**	**256**	P	**P**	**12 12 26.1**	**-0.2**
VNDA	**Vanda**	**60.39**	**185**	P	**P**	**12 12 49.6**	**+1.7**
QSPA	**South Pole Qui**	**72.17**	**180**	P	**P**	**12 14 01.2**	**+0.4**
QSPA				IAmb	IAmb	12 14 02.5	
	comp=Z,6.8nm,1.5s						

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*IDC **16** 12:15:24.9±2.2, 6°.41S×130°.01E, h145^{km}±23^{km}, mb3.6/4, mbtmp4.2/8, Error ellipse: s-maj=32.2km s-min=17.2km az=77.0*

*DJA **16** 12:15:25.8±0.4, 6°S±3°×13°0E±°, h188^{km}±8^{km}, M4.4/11, mb4.4/6, mB5.0/4, MLv4.5/11, Mw(mB)4.3/4*

ISC 16 12:15:24.8±0.8**, 6°.44S**±0°.05×**130°.00E**±0°.07**, h146**^{km}**, n17, σ3**^{s}**10**/21**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.00**	**140**	P	**Pn**	**12 16 02.1**	**+2.4**
SAUI				S	**Sn**	**12 16 31.5**	**+5.0**
MSAI	**Masohi**	**3.25**	**341**	P	**Pn**	**12 16 18.6**	**+3.4**
AAI	**Ambon**	**3.27**	**327**	P	**Pn**	**12 16 19.5**	**+4.0**
SIJI	**Sorong**	**5.67**	**13**	P	**Pn**	**12 16 46.9**	**-0.3**
	39nm,0.2s,baz=41,slow=21,SNR=79						
SIJI				S	**Sn**	**12 17 46.5**	**-5.0**
	107nm,0.2s,baz=1.5,slow=22,SNR=20						
SWI	**Sorong**	**5.68**	**13**	P	**Pn**	**12 16 47.4**	**+0.2**
SANI	**Sanana**	**5.92**	**317**	P	**Pn**	**12 16 53.7**	**+3.3**
	0.1nm38nm,0.8s						
LBMI	**Labuha**	**6.28**	**336**	P	**Pn**	**12 16 58.0**	**+2.8**
	0.2nm18nm,0.9s						
SOEI	**Soe**	**6.56**	**239**	P	**Pn**	**12 17 02.5**	**+3.4**
	0.3nm26nm,0.7s						
BATI	**Baumata**	**7.30**	**239**	P	**Pn**	**12 17 09.8**	**+0.9**
	34nm,0.4s,baz=114,slow=4.4,SNR=9.5						
BATI				S	**Sn**	**12 18 26.9**	**-3.7**
	22nm,0.5s,baz=205,slow=11,SNR=1.8						
BATI	**Baumata**	**7.30**	**239**	P	**Pn**	**12 17 12.1**	**+3.2**
	0.2nm28nm,0.5s						
BAKI	**Biak**	**8.02**	**50**	P	**Pn**	**12 17 19.5**	**+1.0**
	0.6nm2µm160nm,0.9s						
WRA	**Warramunga Arr**	**14.07**	**163**	P	**Pn**	**12 18 37.2**	**-0.6**
	1.0nm,0.3s,baz=355,slow=13,SNR=31						
WRA				S	Sn	12 21 03.3	-10
	5.4nm,0.5s,baz=333,slow=23,SNR=11						
ASAR	**Alice Springs**	**17.54**	**168**	P	**Pn**	**12 19 20.6**	**+0.2**
	1.8nm,0.6s,baz=342,slow=9.9,SNR=32						
ASAR				S	**S**	**12 22 28.6**	**-5.8**
	2.1nm,0.6s,baz=356,slow=28,SNR=7.9						
STKA	**Stephens Creek**	**27.53**	**158**	P	**P**	**12 20 58.0**	**+0.2**
	3.5nm,1.0s,baz=328,slow=10.0,SNR=2.6						
	3.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.38**	**309**	P	**P**	**12 22 39.6**	**-0.7**
	0.5nm,0.3s,baz=129,slow=8.3,SNR=5.6						
	0.5nm,0.3s						
SONM	**Songino Array**	**57.91**	**341**	P	**P**	**12 25 01.7**	**+0.1**
	0.4nm,0.5s,baz=143,slow=6.1,SNR=1.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.76**	**327**	P	**P**	**12 26 07.2**	**+0.4**
	2.2nm,0.6s,baz=119,slow=6.8,SNR=11						
	2.2nm,0.6s						

TAP 16 12:18:10.1, 22°.16N×119°.69E, h55^{km}, ML3.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWP	**Hsiaoliuchiu**	**0.65**	**73**	P	Pn	12 18 24.3	+0.8
	baz=69						
TWP				S	Sn	12 18 34.9	+1.7
	baz=69						
WLCH	**Liuqiu**	**0.67**	**73**	*e*P	Pn	12 18 24.4	+0.7
	baz=73						
WLCH				*e*S	Sn	12 18 34.7	+1.2
	baz=73						
KAU	**Kaohsiung**	**0.70**	**54**	*e*P	Pn	12 18 25.1	+1.0
	baz=55						
KAU				*e*S	Sn	12 18 35.4	+1.1
	baz=55						
SSPT	**Xinbi**	**0.88**	**68**	P	Pn	12 18 26.7	+0.4
	baz=68						
SSPT				S	Sn	12 18 39.2	+1.0
	baz=68						
SCZT	**Fangliau**	**0.89**	**76**	P	Pn	12 18 27.0	+0.5
	baz=76						
SCZT				S	Sn	12 18 39.6	+1.1
	baz=76						
SGLT	**Jiouru**	**0.93**	**53**	*e*P	Pn	12 18 27.6	+0.5
	baz=44						
SGLT				*e*S	Sn	12 18 40.9	+1.3
	baz=44						
TWM1	**Shoushan**	**0.95**	**46**	*e*P	Pn	12 18 29.5	+2.2
	baz=46						
TWM1				*e*S	Sn	12 18 42.1	+2.1
	baz=46						
MASBT	**Mashibuluo**	**0.98**	**62**	P	Pn	12 18 28.4	+0.6
	baz=75						
MASBT				S	Sn	12 18 41.0	+0.3
	baz=75						
HEN	**Hengchun**	**0.99**	**99**	P	Pn	12 18 28.7	+0.9
	baz=96						
HEN				*e*S	Sn	12 18 42.8	+2.0
	baz=96						
SLIU	**Shizi**	**1.03**	**87**	P	Pn	12 18 29.0	+0.6
	baz=87						
SLIU				S	Sn	12 18 43.1	+1.2
	baz=87						
SCST	**Cishan**	**1.04**	**46**	*e*P	Pn	12 18 29.2	+0.7
	baz=46						
SCST				*e*S	Sn	12 18 43.0	+0.9
	baz=46						
TSMG	**Majia**	**1.04**	**58**	P	Pn	12 18 29.2	+0.7
	baz=58						
TSMG				*e*S	Sn	12 18 43.3	+1.2
	baz=58						
SSD	**Sandimen**	**1.05**	**56**	P	Pn	12 18 29.8	+1.1
	baz=68						
SSD				*e*S	Sn	12 18 43.5	+1.1
	baz=68						
TWKBT	**Hengchun**	**1.06**	**101**	P	Pn	12 18 29.4	+0.5
	baz=102						
TWKBT				S	Sn	12 18 43.7	+1.0
	baz=102						
SMST	**Manzhou Townsh**	**1.07**	**97**	*e*P	Pn	12 18 29.6	+0.7
	baz=88						
VCHM	**Qimei**	**1.07**	**347**	*e*P	Pn	12 18 28.1	-0.8
	baz=348						
VCHM				*e*S	Sn	12 18 42.4	-0.5
	baz=348						
EAST	**Anshuo**	**1.10**	**78**	P	Pn	12 18 30.2	+1.0
	baz=78						
EAST				*e*S	Sn	12 18 45.1	+1.5
	baz=78						
WDGT	**Dungji**	**1.10**	**359**	*e*P	Pn	12 18 29.3	0.0
	baz=359						
WDGT				*e*S	Sn	12 18 43.1	-0.4
	baz=359						
CHN3	**Shinhua**	**1.11**	**34**	*e*P	Pn	12 18 29.3	-0.1
	baz=34						
CHN3				*e*S	Sn	12 18 45.0	+1.3
	baz=34						
SCLT	**Jiali**	**1.12**	**25**	*e*P	Pn	12 18 30.1	+0.6
	baz=37						
SCLT				*e*S	Sn	12 18 44.6	+0.7
	baz=37						
TAWH	**Dawu Township**	**1.13**	**80**	*e*P	Pn	12 18 30.1	+0.5
	baz=81						
TAWH				*e*S	Sn	12 18 45.6	+1.4
	baz=81						
TSEB	**Hengchuen, Pin**	**1.15**	**103**	*e*P	Pn	12 18 30.4	+0.4
	baz=103						
TSEB				*e*S	Sn	12 18 45.5	+0.8
	baz=103						
SGST	**Jiashian**	**1.24**	**42**	*e*P	Pn	12 18 31.6	+0.4
	baz=42						
SGST				*e*S	Sn	12 18 47.6	+0.8
	baz=42						
ECL	**Taimali**	**1.25**	**69**	P	Pn	12 18 32.5	+1.1
	baz=70						
ECL				*e*S	Sn	12 18 48.0	+0.9
	baz=70						
CHN8	**Yiju**	**1.28**	**22**	*e*P	Pn	12 18 32.2	+0.5
	baz=11						
CHN8				*e*S	Sn	12 18 48.8	+1.0
	baz=11						
CHN1	**Nanshi**	**1.28**	**37**	P	Pn	12 18 32.7	+0.9
	baz=27						
CHN1				S	Sn	12 18 49.4	+1.4
	baz=27						
SNST	**Tainan City**	**1.29**	**35**	P	Pn	12 18 32.2	+0.3
	baz=35						
SNST				*e*S	Sn	12 18 49.6	+1.3
	baz=35						
ICHU	**Yijhu**	**1.32**	**24**	*e*P	Pn	12 18 32.6	+0.4
	baz=34						
ICHU				*e*S	Sn	12 18 49.9	+1.2
	baz=34						
TWK	**Hsinying**	**1.33**	**34**	P	Pn	12 18 33.4	+1.0
	baz=34						
TWK				*e*S	Sn	12 18 50.6	+1.5
	baz=34						
PHUB	**P'eng-hu**	**1.35**	**355**	*e*P	Pn	12 18 32.6	-0.1
	baz=356						
PHUB				*e*S	Sn	12 18 49.6	0.0
	baz=356						
WTP	**Ta-pu**	**1.38**	**38**	P	Pn	12 18 33.8	+0.7
	baz=28						
WTP				*e*S	Sn	12 18 51.6	+1.3
	baz=28						
PNG	**Penghu**	**1.41**	**355**	*e*P	Pn	12 18 33.0	-0.4
	baz=356						
PNG				*e*S	Sn	12 18 50.3	-0.7
	baz=356						
STYH	**Taoyuan**	**1.42**	**45**	*e*P	Pn	12 18 34.4	+0.7
	baz=45						
STYH				*e*S	Sn	12 18 52.5	+1.2
	baz=45						
TPUB	**Ta-pu**	**1.43**	**37**	*i* P	Pn	12 18 34.7	+0.9
	baz=37						
TPUB				*e*S	Sn	12 18 52.2	+0.6
	baz=37						
TWG	**Pinlang**	**1.44**	**62**	P	Pn	12 18 35.6	+1.7
	baz=63						
TWG				S	Sn	12 18 53.3	+1.5
	baz=63						
WSL	**Shuilin Townsh**	**1.45**	**20**	*e*P	Pn	12 18 34.3	+0.3
	baz=10.0						
WSL				*e*S	Sn	12 18 52.5	+0.6
	baz=10.0						
TTN	**Taitung**	**1.48**	**66**	*e*S	Sn	12 18 54.9	+2.4
	baz=66						
CHY	**Chiayi**	**1.50**	**27**	*e*P	Pn	12 18 36.3	+1.7
	baz=38						
CHY				*e*S	Sn	12 18 55.0	+1.9
	baz=38						
LONT	**Longtian**	**1.53**	**61**	*e*P	Pn	12 18 36.2	+1.1
	baz=61						
LONT				*e*S	Sn	12 18 55.5	+1.6
	baz=61						
ELDTW	**Lidau**	**1.60**	**50**	P	Pn	12 18 37.7	+1.5
	baz=50						
ELDTW				S	Sn	12 18 57.4	+1.6
	baz=50						
WTK	**Tuku**	**1.66**	**23**	*e*P	Pn	12 18 37.4	+0.6
	baz=13						
WTK				*e*S	Sn	12 18 58.1	+1.2
	baz=13						
ALS	**Alishan**	**1.70**	**37**	P	Pn	12 18 38.5	+0.8
	baz=29						
ALS				*e*S	Sn	12 18 59.9	+1.5
	baz=29						
EDH	**Donghe**	**1.70**	**61**	*e*P	Pn	12 18 38.9	+1.5
	baz=73						
EDH				*e*S	Sn	12 18 59.2	+1.2
	baz=73						
WDLH	**Douliu**	**1.71**	**27**	*e*P	Pn	12 18 38.6	+1.0
	baz=36						
WDLH				*e*S	Sn	12 18 59.6	+1.2
	baz=36						
LDUT	**Ludao**	**1.73**	**72**	*e*P	Pn	12 18 38.5	+0.7
	baz=73						
LDUT				*e*S	Sn	12 19 00.4	+1.7
	baz=73						
LAY	**Lan-yu**	**1.73**	**94**	*e*P	Pn	12 18 39.3	+1.4
	baz=84						
LAY				*e*S	Sn	12 19 00.9	+2.1
	baz=84						
LYUB	**Lan-yu**	**1.77**	**95**	*e*P	Pn	12 18 39.4	+1.1
	baz=95						
YUS	**Yu-Shan**	**1.77**	**41**	P	Pn	12 18 40.2	+1.4
	baz=33						
YUS				*e*S	Sn	12 19 01.5	+1.1
	baz=33						
FULB	**Fuli**	**1.81**	**55**	*e*P	Pn	12 18 41.0	+2.0
	baz=47						
FULB				*e*S	Sn	12 19 03.5	+2.8
	baz=47						
CHKT	**Chengkung**	**1.81**	**59**	*e*P	Pn	12 18 40.2	+1.2
	baz=70						
CHKT				*e*S	Sn	12 19 02.3	+1.5
	baz=70						
WRL	**Guolierlin Hig**	**1.85**	**20**	*e*P	Pn	12 18 40.3	+0.8
	baz=13						
WRL				*e*S	Sn	12 19 02.9	+1.2
	baz=13						
WHYT	**Xinyi Township**	**1.87**	**35**	*e*P	Pn	12 18 40.7	+0.9
	baz=35						
WHYT				*e*S	Sn	12 19 03.5	+1.2
	baz=35						
WJS	**Zhushan**	**1.91**	**30**	*e*P	Pn	12 18 41.3	+1.0
	baz=30						
WJS				*e*S	Sn	12 19 04.3	+1.0
	baz=30						
EYUL	**Yuli**	**1.92**	**51**	*e*P	Pn	12 18 41.8	+1.4
	baz=52						
EYUL				*e*S	Sn	12 19 05.0	+1.7
	baz=52						
YULB	**Yu-li**	**1.93**	**50**	P	Pn	12 18 42.0	+1.4
	baz=50						
YULB				S	Sn	12 19 05.1	+1.5
	baz=50						
WNT	**Mingjian**	**1.94**	**28**	*e*P	Pn	12 18 41.5	+0.8
	baz=28						
WNT				*e*S	Sn	12 19 04.5	+0.4
	baz=28						
SSLB	**Suanglung**	**2.00**	**35**	P	Pn	12 18 42.9	+1.4
	baz=36						
SSLB				*e*S	Sn	12 19 06.5	+1.1
	baz=36						
EHY	**Hungye**	**2.02**	**48**	*e*P	Pn	12 18 43.6	+1.8
	baz=56						
EHY				*e*S	Sn	12 19 07.4	+1.5
	baz=56						
TYC	**Yuchr**	**2.04**	**32**	*e*P	Pn	12 18 43.6	+1.5
	baz=32						
TYC				*e*S	Sn	12 19 08.1	+1.6
	baz=32						
SMLT	**Sun Moon Lake**	**2.05**	**33**	*e*P	Pn	12 18 43.3	+1.1
	baz=33						
SMLT				*e*S	Sn	12 19 08.1	+1.3
	baz=33						
VWDT	**VWDT**	**2.08**	**40**	P	Pn	12 18 44.0	+1.5
	baz=32						
VWDT				*e*S	Sn	12 19 09.0	+1.7
	baz=32						
HGSD	**Ruisui**	**2.08**	**50**	*e*P	Pn	12 18 44.8	+2.2
	baz=50						
HGSD				*e*S	Sn	12 19 08.8	+1.4
	baz=50						
TCU	**Taichung**	**2.18**	**24**	*e*S	Sn	12 19 11.1	+1.3
	baz=25						
EGFH	**Guangfu**	**2.20**	**46**	*e*P	Pn	12 18 45.6	+1.4
	baz=38						
EGFH				*e*S	Sn	12 19 12.1	+1.8
	baz=38						
WUSB	**Renai**	**2.25**	**36**	*e*P	Pn	12 18 46.4	+1.3
	baz=36						
WUSB				*e*S	Sn	12 19 13.3	+1.6
	baz=36						
OWD	**Renai**	**2.25**	**37**	P	Pn	12 18 46.1	+1.0
	baz=29						
OWD				S	Sn	12 19 12.3	+0.5
	baz=29						
ESL	**Shilin**	**2.30**	**44**	*e*P	Pn	12 18 48.5	+2.8
	baz=44						
ESL				*e*S	Sn	12 19 15.0	+2.2
	baz=44						
CHGB	**Renai**	**2.34**	**36**	*e*P	Pn	12 18 47.9	+1.6
	baz=36						
CHGB				*e*S	Sn	12 19 16.0	+2.1
	baz=36						
TWQ1	**Liyutan**	**2.40**	**24**	*e*P	Pn	12 18 47.5	+0.6
	baz=25						
TWQ1				*e*S	Sn	12 19 15.7	+0.5
	baz=25						
WHP	**Taichung City**	**2.41**	**28**	*e*P	Pn	12 18 48.5	+1.3
	baz=39						
WHP				*e*S	Sn	12 19 16.7	+1.2
	baz=39						
WHF	**Hehuan Shan**	**2.45**	**36**	*e*P	Pn	12 18 49.6	+1.5
	baz=36						
WHF				*e*S	Sn	12 19 17.8	+0.7
	baz=36						
TDCB	**Techi**	**2.49**	**33**	*e*P	Pn	12 18 48.9	+0.6
	baz=33						
TDCB				*e*S	Sn	12 19 18.3	+0.8
	baz=33						
TWT	**Tachien**	**2.50**	**33**	*e*P	Pn	12 18 49.4	+0.9
	baz=33						
TWT				*e*S	Sn	12 19 19.4	+1.6
	baz=33						
ZPLA	**Ao Xicun**	**2.51**	**315**	*e*P	Pn	12 18 49.1	+0.7
	baz=315						
ZPLA				*e*S	Sn	12 19 16.9	-0.9
	baz=315						
FUSS	**Fushou**	**2.53**	**34**	*e*P	Pn	12 18 51.0	+2.0
	baz=35						
FUSS				*e*S	Sn	12 19 19.2	+0.6
	baz=35						
KNM	**Kinmen**	**2.53**	**333**	*e*P	Pn	12 18 49.6	+0.9
	baz=331						
KNM				*e*S	Sn	12 19 19.1	+0.8
	baz=331						
KNMB	**Chin-men Tao**	**2.59**	**333**	*e*P	Pn	12 18 49.5	-0.1
	baz=333						
KNMB				*e*S	Sn	12 19 19.7	-0.1
	baz=333						
ETLH	**Xiulin Townshi**	**2.62**	**39**	*e*P	Pn	12 18 51.9	+1.7
	baz=39						
ETLH				*e*S	Sn	12 19 23.1	+2.2
	baz=39						
NACB	**Ninganchiao**	**2.67**	**41**	*e*P	Pn	12 18 52.1	+1.5
	baz=52						
NACB				*e*S	Sn	12 19 22.6	+0.9
	baz=52						
ETL	**Fush Village**	**2.67**	**41**	*e*P	Pn	12 18 53.3	+2.6
	baz=52						
ETL				*e*S	Sn	12 19 23.5	+1.6
	baz=52						
NSTT	**Nanjuang**	**2.74**	**26**	*e*P	Pn	12 18 52.9	+1.2
	baz=26						
NSTT				*e*S	Sn	12 19 24.5	+0.9
	baz=26						
NNSB	**Datong**	**2.75**	**34**	*e*P	Pn	12 18 53.7	+1.8
	baz=23						
NNSB				*e*S	Sn	12 19 24.9	+1.0
	baz=23						
NNS	**Nan Shan**	**2.75**	**34**	*e*P	Pn	12 18 53.8	+1.9
	baz=23						
NNS				*e*S	Sn	12 19 24.9	+0.9
	baz=23						
LIOB	**Emei**	**2.76**	**26**	*e*P	Pn	12 18 53.2	+1.3
	baz=26						
LIOB				*e*S	Sn	12 19 25.4	+1.3
	baz=26						
NFF	**Wufeng Townshi**	**2.79**	**28**	*e*P	Pn	12 18 53.5	+1.2
	baz=28						
VWUC	**VWUC**	**2.83**	**356**	*e*P	Pn	12 18 53.7	+0.8
	baz=356						
VWUC				*e*S	Sn	12 19 26.1	+0.4
	baz=356						
LATG	**Datong**	**2.91**	**35**	*e*P	Pn	12 18 55.9	+1.9
	baz=44						
LATG				*e*S	Sn	12 19 28.9	+1.0
	baz=44						
PTMZ	**Houxiangcun**	**2.92**	**350**	*e*P	Pn	12 18 54.2	+0.2
	baz=350						
PTMZ				*e*S	Sn	12 19 27.5	-0.4
	baz=350						
NSK	**Sanguang**	**2.94**	**31**	*e*P	Pn	12 18 55.8	+1.4
	baz=19						
NSK				*e*S	Sn	12 19 29.3	+0.8
	baz=19						
YHNB	**Yeheng**	**2.94**	**31**	*e*P	Pn	12 18 55.7	+1.2
	baz=20						
YHNB				*e*S	Sn	12 19 29.3	+0.7
	baz=20						
ENA	**Nanau**	**2.94**	**39**	*e*P	Pn	12 18 56.2	+1.7
	baz=51						
ENA				*e*S	Sn	12 19 29.8	+1.2
	baz=51						
EWUT	**Wuta**	**2.98**	**40**	*e*S	Sn	12 19 30.8	+1.4
	baz=51						
ENTT	**Nioudou**	**3.01**	**35**	*e*P	Pn	12 18 57.3	+1.9
	baz=23						
ENTT				*e*S	Sn	12 19 31.7	+1.4
	baz=23						
NDS	**Dongshan**	**3.09**	**37**	*e*P	Pn	12 18 57.8	+1.3
	baz=37						
NDS				*e*S	Sn	12 19 33.3	+1.1
	baz=37						
NWLT	**Wulai**	**3.10**	**32**	*e*P	Pn	12 18 58.1	+1.6
	baz=22						
NWLT				*e*S	Sn	12 19 34.0	+1.6
	baz=22						
FUSB	**Fushanzhiwuyua**	**3.12**	**34**	*e*P	Pn	12 18 58.1	+1.2
	baz=22						
FUSB				*e*S	Sn	12 19 34.3	+1.2
	baz=22						
TWE	**Neicheng**	**3.13**	**35**	*e*P	Pn	12 18 58.8	+1.8
	baz=23						
TWE				*e*S	Sn	12 19 34.0	+0.8
	baz=23						
TWC	**Suao**	**3.15**	**39**	*e*P	Pn	12 18 59.2	+2.1
	baz=50						
AXDP	**Jialang**	**3.15**	**330**	*e*P	Pn	12 18 57.5	+0.3
	baz=330						
AXDP				*e*S	Sn	12 19 33.5	-0.2
	baz=330						
TIPB	**Shuangxi**	**3.42**	**35**	*e*P	Pn	12 19 02.6	+1.7
	baz=24						
TIPB				*e*S	Sn	12 19 41.2	+0.9
	baz=24						
MHZQ	**Yeshan**	**3.97**	**351**	*e*P	Pn	12 19 09.2	+0.7
	baz=352						
MHZQ				*e*S	Sn	12 19 53.7	-0.1
	baz=352						
MATB	**Ma-tsu**	**3.98**	**3**	*e*P	Pn	12 19 09.8	+1.1
	baz=3.0						
MATB				*e*S	Sn	12 19 53.5	-0.6
	baz=3.0						
LYJJ	**Jianjiangzhen**	**4.37**	**1**	*e*P	Pn	12 19 15.0	+1.0
	baz=1.0						
LYJJ				*e*S	Sn	12 20 03.2	-0.4
	baz=1.0						
SXFK	**Yanhouchang**	**4.62**	**337**	*e*S	Sn	12 20 08.9	-0.8
	baz=337						
XPSS	**Dashiqiu**	**4.77**	**5**	*e*P	Pn	12 19 20.8	+1.3
	baz=6.0						
XPSS				*e*S	Sn	12 20 12.9	-0.6
	baz=6.0						

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*BJI **16** 12:22:55.8±0.0, 35°.88N×140°.41E, h55^{km}, mb4.8/74, mB5.1/62, Ms4.9/91, Ms7 4.8/85*

*MOS **16** 12:22:59.8±1.0, 36°.07N×139°.76E, h41^{km}, mb5.6/94, MS5.0/22, Error ellipse: s-maj=6.0km s-min=3.6km az=113.2*

*IDC **16** 12:23:01.8±0.9, 35°.94N×139°.80E, h50^{km}±8^{km}, mb4.8/45, mbtmp5.0/50, MS4.6/82, Error ellipse: s-maj=9.2km s-min=5.8km az=69.0*

*NEIC **16** 12:23:02.5±1.6, 36°.02N±0°.05×139°.81E±0°.06, h45^{km}±4^{km}, mb5.4/225, Mww5.4, Error ellipse: s-maj=7.8km s-min=6.4km az=144.0*

*NIED **16** 12:23:02.3, 36°.03N×139°.89E, h42^{km}, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.04; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$-0.02; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.51; $M_{\phi r}$0.85; Fault plane solution: $M_0$1.55000×10^{17} NP1: ϕ_s268.00000°, δ30.00000°, λ129.00000°. NP2: ϕ_s46.00000°, δ67.00000°, λ70.00000°.*

*JMA **16** 12:23:02.3±0.1, 36°.0N±0°.3×139°.9E±0°.4, h42^{km}±1^{km}, MD5.5/39, MW5.4/39, SW IBARAKI PREF*

JMA Felt V J1 at SW IBARAKI PREF .

*GCMT **16** 12:23:04.5±0.1, 35°.94N±0°.01×139°.93E±0°.01, h47^{km}, MW5.4/141, Moment Tensor Solution. s130,c246; s141,c264; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.42±.03; $M_{\theta\theta}$-1.17±.02; $M_{\phi\phi}$-0.24±.02;*

$M_{r\theta}$0.77±.02; $M_{\theta\phi}$-0.55±.01; $M_{\phi r}$0.87±.02; Best double couple: $M_0$1.83500×10^{17} NP1:ϕ_s258.00000°,δ28.00000°, λ115.00000°. NP2:ϕ_s51.00000°,δ65.00000°,λ78.00000°. Principal axes: T 1.8810, Plg68.0000°, Azm297.0000°; N -0.0800, Plg11.0000°, Azm56.0000°; P -1.7900, Plg19.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NEIC **16** 12:23:05, 35°.95N×139°.83E, h46km, Moment Tensor Solution. Duration: $8^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}1.19; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$0.24; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.39; $M_{\phi r}$0.78; Fault plane solution: $M_0$1.67000×10^{17} NP1: ϕ_s282.00000°,δ37.00000°,λ132.00000°. NP2: ϕ_s54.00000°,δ63.00000°,λ63.00000°. Principal axes: T 1.6497, Plg62.0000°, Azm282.0000°; N 0.0410, Plg23.0000°, Azm66.0000°; P -1.6907, Plg14.0000°, Azm163.0000°;*

ISC 16 12:23:01.8±0.2**, 35°.99N**±0°.03×**139°.93E**±0°.03**, h50**km±1km**, h50**km**:pP-P, n1409, σ$1^{s}62$**/1457**, mb5.3**/280**, MS4.8**/122**, 252C-140D, Fault plane solution: NP1:**ϕ_s72.11589°**,** δ82.53927°**,** λ77.39224°. **NP2:**ϕ_s311.97940°**,** δ14.61902°, λ149.03818°. **Principal axes:** T Plg50.8985°, Azm327.9506°**;** N Plg12.4993°, Azm73.7794°**;** P Plg36.3274°, Azm173.1608°; **Fault plane solution: NP1:**ϕ_s30.21241°**,** δ58.82235°**,** λ61.59531°. **NP2:** ϕ_s256.46317°**,** δ41.18700°**,** λ128.17300°. **Principal axes:** T Plg63.9235°, Azm250.2860°**;** N Plg24.0159°, Azm45.8531°**;** P Plg9.5599°, Azm140.1566°; **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.32	42	Pn	Pn	12 23 11.1	-0.1
JYT	Yasato	0.32	42	P	Pn	12 23 10.8	-0.3
JYT				S	Sn	12 23 17.0	-0.8
JYT	Yasato	0.32	42	A	A	12 23 10.8	
	comp=E,947nm,0.5s,comp=E,1μm,1.1s						
TOK	Tokyo	0.34	205	P	Pn	12 23 12.4	+1.2
TOK	Tokyo	0.34	205	A	A	12 23 12.4	
	comp=E,2μm,2.4s,comp=E,1μm,1.4s						
JIHU	Itakohorinouch	0.48	93	A	A	12 23 13.3	
	comp=E,2μm,0.4s,comp=E,2μm,0.6s						
JSMT	Sammumatsuo	0.54	130	A	A	12 23 14.4	
	comp=E,410nm,3.0s,comp=E,472nm,1.9s						
JHU	Hanno	0.55	255	⇓iP	Pn	12 23 13.0	-0.6
JHU	Hanno	0.55	255	A	A	12 23 13.0	
	comp=E,181nm,2.7s,comp=E,243nm,5.4s						
JAG	Ashikaga	0.58	318	⇓iP	Pn	12 23 13.5	-0.6
JAG	Ashikaga	0.58	318	A	A	12 23 13.5	
	comp=E,205nm,1.8s,comp=E,276nm,1.5s						
JCN	Nagara	0.61	159	A	A	12 23 15.2	
	comp=E,973nm,4.7s,comp=E,1μm,5.0s						
JHYU	Hitachinakayam	0.63	56	A	A	12 23 15.0	
	comp=E,913nm,0.4s,comp=E,2μm,0.4s						
JSGW	Sagamiharawaka	0.71	237	A	A	12 23 15.8	
	comp=E,237nm,1.3s,comp=E,329nm,3.1s						
I30JP	ISUMI INFRASON	0.75	155	P	Pn	12 23 17.4	+1.2
	baz=356,slow=17,SNR=2.2						
I30JP				i		12 25 40.0	
	0.1nm,1.6s,baz=317,slow=321,SNR=1.3						
JYO	Yokosk	0.80	196	A	A	12 23 17.6	
	comp=E,974nm,1.4s,comp=E,441nm,1.1s						
JHO	Hitachi	0.80	39	A	A	12 23 17.2	
	comp=E,241nm,0.5s,comp=E,328nm,0.7s						
CHOJ	Chosi	0.81	111	A	A	12 23 18.0	
	comp=E,187nm,1.6s,comp=E,226nm,1.4s						
JRY	Ryogami san	0.84	272	⇓iP	Pn	12 23 16.8	-0.6
JRY				⇓eS	Sn	12 23 28.0	-0.8
JRY	Ryogami san	0.84	272	A	A	12 23 16.8	
	comp=E,79nm,1.0s,comp=E,116nm,2.6s						
JKUC	kamogawauchiur	0.86	165	A	A	12 23 18.8	
	comp=E,456nm,2.0s,comp=E,476nm,5.1s						
JKT	Katashina	0.95	325	⇓iP	Pn	12 23 18.3	-0.7
JKT	Katashina	0.95	325	A	A	12 23 18.3	
	comp=E,141nm,0.4s,comp=E,129nm,2.3s						
TATJ	Tateyama 2	0.96	182	A	A	12 23 20.1	
	comp=E,1μm,2.2s,comp=E,1μm,2.1s						
JSB	Shiboa	0.98	359	A	A	12 23 19.2	
	comp=E,346nm,1.9s,comp=E,296nm,2.5s						
JOD2	Odawara 2	1.00	224	⇓iP	Pn	12 23 19.6	+0.1
JOD2				⇓eS	Sn	12 23 32.5	-0.1
JOD2	Odawara 2	1.00	224	A	A	12 23 19.6	
	comp=E,360nm,3.0s,comp=E,325nm,2.7s						
JGK	Kuni	1.19	299	A	A	12 23 22.2	
	comp=E,79nm,2.1s,comp=E,74nm,3.4s						
JFFD	Fukushimafurud	1.21	25	A	A	12 23 22.9	
	comp=E,226nm,1.6s,comp=E,81nm,2.0s						
JYN	Shimob	1.23	247	P	Pn	12 23 23.3	+0.6
JYN	Shimob	1.23	247	A	A	12 23 23.3	
	comp=E,130nm,2.7s,comp=E,136nm,1.3s						
JHTM	Izuhatsuma	1.28	217	A	A	12 23 24.4	
	comp=E,280nm,1.1s,comp=E,325nm,1.9s						
JFNN	Fujinakano	1.29	232	eP	Pn	12 23 23.4	-0.1
JFNN	Fujinakano	1.29	232	A	A	12 23 23.4	
	comp=E,274nm,2.3s,comp=E,223nm,2.0s						
ONAJ	Iwakimizuishiy	1.31	32	A	A	12 23 24.5	
	comp=E,335nm,0.3s,comp=E,210nm,1.0s						
JIM2	Oshima 3	1.33	198	A	A	12 23 25.4	
	comp=E,356nm,1.5s,comp=E,303nm,1.4s						
JFY	Yanaizu	1.43	353	A	A	12 23 25.7	
	comp=E,112nm,2.0s,comp=E,64nm,3.6s						
JNT	Takato	1.46	266	A	A	12 23 26.5	
	comp=E,66nm,4.9s,comp=E,71nm,3.3s						
MJAR	Matsushiro Arr	1.50	292	P	Pn	12 23 24.8	-1.5
	2μm,0.5s,baz=100,slow=14,SNR=1406						
MJAR				S	Sn	12 23 42.6	-2.1
	2μm,0.8s,baz=78,slow=18,SNR=7.0						
MJAR				LR	LR	12 24 16.1	
	comp=Z,33μm,21.3s,baz=146,slow=52						
MJAR	Matsushiro Arr	1.50	292	Pn	Pn	12 23 25.8	-0.5
MAJO	Matsushiro	1.50	292		Pn	12 23 26.3	0.0
MAJO	Matsushiro	1.50	292	d iP	Pn	12 23 25.8	-0.5
MAJO	Matsushiro	1.50	292	P	Pn	12 23 27.0	+0.7
MJB9	Matsu-Tunnel	1.50	292		Pn	12 23 26.5	+0.1
JIZS	Izushimoda	1.54	214	A	A	12 23 28.1	
	comp=E,102nm,2.5s,comp=E,75nm,1.7s						
JNG	Nsakai	1.54	286	A	A	12 23 27.4	
	comp=E,52nm,4.0s,comp=E,58nm,4.1s						
JTHY	Toshimahigashi	1.56	200	A	A	12 23 28.7	
	comp=E,187nm,1.3s,comp=E,240nm,1.2s						
JFT	Otama	1.56	12	A	A	12 23 27.8	
	comp=E,233nm,2.7s,comp=E,119nm,0.9s						
JFK	Kawauchi	1.57	29	A	A	12 23 28.2	
	comp=E,119nm,1.3s,comp=E,82nm,1.2s						
SHZ3	Shizuoka 3	1.68	237	A	A	12 23 30.0	
	comp=E,116nm,1.4s,comp=E,157nm,1.3s						
JNIO	Niijimaoohara	1.72	199	A	A	12 23 31.0	
	comp=E,182nm,3.3s,comp=E,147nm,1.9s						
JSKK	Shikinejimakit	1.75	200	A	A	12 23 31.5	
	comp=E,129nm,1.7s,comp=E,92nm,3.2s						
JNY	Yasuok	1.80	250	A	A	12 23 31.5	
	comp=E,80nm,2.0s,comp=E,113nm,1.9s						
JJN	Nakama	1.81	308	A	A	12 23 31.1	
	comp=E,107nm,1.5s,comp=E,71nm,2.1s						
JIZZ	Izumozaki	1.82	328	A	A	12 23 31.4	
	comp=E,127nm,3.6s,comp=E,226nm,3.8s						
JNS	Sasagawa	1.89	345	A	A	12 23 32.4	
	comp=E,40nm,7.0s,comp=E,47nm,1.7s						
JMST	Minamisoumatoc	1.89	24	A	A	12 23 32.7	
	comp=E,155nm,1.2s,comp=E,72nm,1.2s						
JKO	Kozu shima	1.92	200	A	A	12 23 33.8	
	comp=E,221nm,3.3s,comp=E,135nm,2.8s						
JYAR	Yonezawaarcadi	1.93	5	A	A	12 23 33.0	
	comp=E,148nm,1.1s,comp=E,96nm,1.3s						
JSG	Sagara	1.94	228	A	A	12 23 33.8	
	comp=E,208nm,3.4s,comp=E,184nm,3.0s						
JMM	Marumori	1.99	20	Pn	Pn	12 23 35.1	+2.1
JMM	Marumori	1.99	20	A	A	12 23 34.2	
	comp=E,107nm,2.6s,comp=E,109nm,0.8s						
JKKS	Kakegawashinom	2.02	233	A	A	12 23 34.8	
	comp=E,171nm,3.4s,comp=E,133nm,3.9s						
JMKN	Mikurajimanish	2.11	188	A	A	12 23 36.8	
	comp=E,51nm,2.6s,comp=E,46nm,1.1s						
JGF	Kuroka	2.13	260		Pn	12 23 36.5	+1.6
JGF	Kuroka	2.13	260	A	A	12 23 36.1	
	comp=E,42nm,2.8s,comp=E,62nm,2.4s						
HMMJ	Hamamatsu 2	2.13	239	A	A	12 23 36.4	
	comp=E,49nm,3.1s,comp=E,55nm,2.9s						
JGN	Niukaw	2.13	277	A	A	12 23 36.0	
	comp=E,46nm,4.0s,comp=E,26nm,2.7s						
JTT	Ttatey	2.19	287	A	A	12 23 36.7	
	comp=E,47nm,3.2s,comp=E,53nm,3.4s						
JYS	Shirataka	2.23	3	A	A	12 23 37.4	
	comp=E,112nm,2.2s,comp=E,71nm,2.9s						
JSSY	Shinshiroyabe	2.25	242	A	A	12 23 38.1	
	comp=E,25nm,1.7s,comp=E,40nm,2.4s						
JAO	Obara	2.30	252	A	A	12 23 38.6	
	comp=E,67nm,2.7s,comp=E,74nm,2.6s						
JOU	Okura	2.44	14	A	A	12 23 40.5	
	comp=E,92nm,3.1s,comp=E,90nm,1.4s						
JSD	Sado	2.44	327	Pn	Pn	12 23 38.5	-0.7
JSD	Sado	2.44	327	A	A	12 23 40.2	
	comp=E,19nm,1.9s,comp=E,22nm,3.0s						
INU	Inuyama	2.46	256		Pn	12 23 41.4	+2.0
JAW	Awa shima	2.52	348	A	A	12 23 41.4	
	comp=E,32nm,2.6s,comp=E,28nm,3.8s						
JSZ	Suzu	2.53	306	A	A	12 23 41.4	
	comp=E,16nm,6.9s,comp=E,15nm,2.9s						
JYA	Atsumi	2.60	356	A	A	12 23 42.7	
	comp=E,58nm,4.6s,comp=E,32nm,1.2s						
JICN	Ichinomiyachia	2.61	256	A	A	12 23 43.0	
	comp=E,80nm,2.3s,comp=E,130nm,2.7s						
JIKH	Ishinomakikobu	2.62	27	A	A	12 23 43.2	
	comp=E,69nm,4.1s,comp=E,42nm,1.7s						
JYTA	Yamagatataniai	2.63	262	A	A	12 23 43.2	
	comp=E,25nm,3.9s,comp=E,44nm,1.9s						
JAA	Atsumi	2.65	240	A	A	12 23 43.8	
	comp=Z,26nm,2.6s,comp=Z,20nm,5.5s,comp=Z,34nm,3.2s						
JIO	Ouri	2.71	24	A	A	12 23 44.4	
	comp=E,80nm,3.6s,comp=E,29nm,3.4s						
JJH	Hakui	2.71	291	A	A	12 23 44.0	
	comp=E,21nm,4.1s,comp=E,25nm,4.3s						
JOFO	Osakifurukawao	2.72	16	A	A	12 23 44.5	
	comp=E,301nm,2.0s,comp=E,329nm,2.9s						
JHJ	Hachijo jima 2	2.87	183	P	Pn	12 23 45.2	+0.1
	4μm,0.3s,baz=325,slow=5.3,SNR=688						
JHJ				S	Sn	12 24 16.9	-1.3
	5μm,0.3s,baz=99,slow=23,SNR=10						
JHJ2	Mitsune	2.87	182	Pn	Pn	12 23 45.2	+0.1
JHJ2	Mitsune	2.87	182	P	Pn	12 23 45.6	+0.5
JHJ2	Mitsune	2.87	182	A	A	12 23 47.6	
	comp=E,53nm,3.1s,comp=E,40nm,2.6s						
JHCJ	Hachijojimakas	2.91	182	A	A	12 23 48.3	
	comp=E,31nm,2.5s,comp=E,30nm,2.1s						
JKG	Kaga	2.93	277	A	A	12 23 47.3	
	comp=E,24nm,3.6s,comp=E,22nm,6.1s						
JYK	Kaneyama	2.94	6	A	A	12 23 47.5	
	comp=E,31nm,4.8s,comp=E,34nm,2.2s						
JEG	Eigenji	3.01	255	A	A	12 23 48.7	
	comp=E,21nm,2.5s,comp=E,29nm,3.4s						
JYYZ	Yamagatayuza	3.02	360	A	A	12 23 48.6	
	comp=E,93nm,2.9s,comp=E,108nm,2.7s						
JHG	Hegura jima	3.04	308	A	A	12 23 48.8	
	comp=E,15nm,5.5s,comp=E,16nm,6.8s						
JKMT	Kesennumamotoy	3.07	23	A	A	12 23 49.5	
	comp=E,49nm,2.0s,comp=E,18nm,4.1s						
JIE	Ise	3.09	240	A	A	12 23 50.0	
	comp=E,24nm,3.7s,comp=E,24nm,3.5s						
JMK	Ichinoseki	3.13	19	A	A	12 23 50.3	
	comp=E,42nm,3.5s,comp=E,15nm,3.0s						
TSUJ	Tsu 2	3.14	247	A	A	12 23 50.7	
	comp=E,29nm,6.0s,comp=E,29nm,4.6s						
JTB	Tobi-shima	3.21	355	A	A	12 23 51.3	
	comp=E,27nm,6.1s,comp=E,24nm,2.3s						
JFM	Mihama	3.25	263	A	A	12 23 51.9	
	comp=E,22nm,5.6s,comp=E,33nm,2.3s						
OFUJ	Ofunato	3.38	24	A	A	12 23 53.9	
	comp=E,41nm,4.3s,comp=E,19nm,4.2s						
JRG	Rokugo	3.44	9	A	A	12 23 54.7	
	comp=E,38nm,4.3s,comp=E,33nm,2.8s						
JKN2	Miekihoku	3.47	241	A	A	12 23 55.4	
	comp=E,14nm,5.2s,comp=E,20nm,4.6s						
JAOM	Aogashimamukai	3.52	182	A	A	12 23 56.8	
	comp=E,59nm,1.2s,comp=E,59nm,2.7s						
JYW	Yuwa	3.55	3	A	A	12 23 56.1	
	comp=E,62nm,2.5s,comp=E,133nm,2.2s						
JOM	Ohasama	3.64	17	A	A	12 23 57.5	
	comp=E,31nm,3.5s,comp=E,13nm,5.2s						
JHE	Heguri	3.72	250	A	A	12 23 58.8	
	comp=E,21nm,3.0s,comp=E,33nm,2.7s						
JNTK	Naratenkawa	3.74	244	A	A	12 23 59.1	
	comp=E,16nm,4.3s,comp=E,14nm,4.1s						
JWT	Wachi	3.76	260	A	A	12 23 59.2	
	comp=E,12nm,6.1s,comp=E,24nm,2.5s						
JSZI	Iwateshizukuis	3.83	12	A	A	12 24 00.1	
	comp=E,111nm,3.3s,comp=E,101nm,2.1s						
JMMH	Miemihama	3.87	237	A	A	12 24 01.1	
	comp=E,9.0nm,2.6s,comp=E,10.0nm,1.9s						
MIYJ	Miyakonagasawa	3.88	22	A	A	12 24 00.9	
	comp=E,29nm,3.5s,comp=E,17nm,4.5s						
JKY	Yasaka	3.94	266	A	A	12 24 01.7	
	comp=E,18nm,3.6s,comp=E,26nm,1.8s						
JOG3	Oga3	3.98	351	A	A	12 24 01.3	
	comp=E,30nm,3.6s,comp=E,28nm,2.7s						
JKZ	Kuzumaki	4.14	15	A	A	12 24 04.5	
	comp=E,15nm,1.1s,comp=E,12nm,2.9s						
JMIK	Miki	4.16	255	A	A	12 24 04.9	
	comp=E,19nm,4.6s,comp=E,28nm,4.9s						
JTNC	Tanabenakahech	4.16	240	A	A	12 24 05.1	
	comp=E,14nm,7.0s,comp=E,19nm,2.9s						
JTH	Tanohata	4.23	21	A	A	12 24 05.8	
	comp=E,30nm,2.8s,comp=E,17nm,2.8s						
JAH	Hinai	4.23	7	A	A	12 24 05.7	
	comp=E,32nm,2.5s,comp=E,17nm,2.7s						
JNTW	Noshirotokiwa	4.28	2	A	A	12 24 06.3	
	comp=E,56nm,2.7s,comp=E,67nm,4.3s						
JKSM	Kasumi	4.30	266	A	A	12 24 06.8	
	comp=E,9.0nm,2.8s,comp=E,13nm,3.1s						
JWM	Minabe	4.33	242	A	A	12 24 07.4	
	comp=E,12nm,2.0s,comp=E,18nm,2.2s						
JAWN	Awajishima-nag	4.38	251	A	A	12 24 08.1	
	comp=E,16nm,5.4s,comp=E,26nm,3.8s						
JKEN	Kujiedanarisaw	4.43	18	A	A	12 24 08.7	
	comp=E,52nm,1.5s,comp=E,53nm,1.0s						
JANG	Nango	4.55	15	A	A	12 24 10.3	
	comp=E,19nm,3.6s,comp=E,10.0nm,1.7s						
JIW	Iwasaki	4.59	1	A	A	12 24 10.8	
	comp=E,13nm,2.9s,comp=E,11nm,3.4s						
JHHS	Hirosakihyakuz	4.67	4	A	A	12 24 11.8	
	comp=E,35nm,4.4s,comp=E,34nm,3.4s						
JAD	Aida	4.82	259	A	A	12 24 14.1	
	comp=E,5.0nm,10.3s,comp=E,12nm,2.3s						
JTM	Tenmabayashi	4.87	10	Pn	Pn	12 24 15.0	+2.5
JTM	Tenmabayashi	4.87	10	A	A	12 24 14.8	
	comp=E,21nm,5.2s,comp=E,12nm,4.4s						
JAI	Aioi	5.01	246	A	A	12 24 17.0	
	comp=E,9.0nm,2.9s,comp=E,12nm,3.2s						
JKR	Kurayoshi	5.01	265	A	A	12 24 16.8	
	comp=E,12nm,3.4s,comp=E,18nm,5.7s						
JSI2	Shiura 2	5.07	4	A	A	12 24 17.5	
	comp=E,14nm,3.2s,comp=E,9.0nm,2.4s						
JMAF	Mimaanabuki	5.13	249	A	A	12 24 18.5	
	comp=E,8.0nm,5.3s,comp=E,15nm,7.9s						
JARK	Aomorirokkasho	5.13	12	A	A	12 24 18.4	
	comp=E,26nm,3.5s,comp=E,16nm,4.2s						
JJS	Sakaide	5.17	254	A	A	12 24 19.2	
	comp=E,9.0nm,5.2s,comp=E,10.0nm,6.8s						
JAHD	Aomorihigashid	5.38	11	A	A	12 24 21.9	
	comp=E,26nm,1.2s,comp=E,33nm,2.1s						
MRT2	Murotomisaki 2	5.43	243	A	A	12 24 22.9	
	comp=E,11nm,2.7s,comp=E,9.0nm,2.8s						
JOT	Ohata	5.45	9	A	A	12 24 22.9	
	comp=E,23nm,5.7s,comp=E,12nm,3.9s						
JMN	Monobe	5.46	247	A	A	12 24 23.3	
	comp=E,14nm,2.1s,comp=E,13nm,3.0s						
JHS	Saijyo	5.65	262	Pn	Pn	12 24 24.5	+1.3
JJG	Jouge	5.70	258	A	A	12 24 26.5	
	comp=E,9.0nm,4.4s,comp=E,11nm,3.6s						
JISK	Izumosakaura	5.78	267	A	A	12 24 27.5	
	comp=E,6.0nm,3.3s,comp=E,8.0nm,2.9s						
JKHR	Kochiharuno	5.85	247	A	A	12 24 28.6	
	comp=E,9.0nm,4.3s,comp=E,11nm,3.0s						
JKB	Kayabe	5.95	8	A	A	12 24 29.8	
	comp=E,20nm,7.9s,comp=E,9.0nm,4.0s						
JET	Tanbara	6.07	251	A	A	12 24 31.8	
	comp=E,5.0nm,5.2s,comp=E,8.0nm,3.8s						
JKU	Kubokawa	6.26	247	A	A	12 24 34.4	
	comp=E,7.0nm,3.9s,comp=E,7.0nm,3.3s						
JHT	Toyohira	6.28	260	A	A	12 24 34.6	
	comp=E,6.0nm,5.1s,comp=E,8.0nm,2.8s						
JHM	Kurahashi	6.35	255	A	A	12 24 35.5	
	comp=E,6.0nm,2.2s,comp=E,9.0nm,8.8s						
ERM	Erimo	6.52	22	Pn	Pn	12 24 36.3	+1.3
ERM	Erimo	6.52	22	ceP	Pn	12 24 35.5	+0.5
ERM				pmax	pmax		
	comp=Z,191nm,1.0s						
ERM	Erimo	6.52	22	P	Pn	12 24 35.6	+0.5
JNB	Noboribetsu	6.53	7	A	A	12 24 37.9	
	comp=Z,5.0nm,4.5s,comp=Z,5.0nm,6.5s						
UWA2	Uwa jima 2	6.63	247	A	A	12 24 39.6	
	comp=Z,7.0nm,5.0s,comp=Z,7.0nm,5.1s						
JNBK	Urakawa-nobuka	6.65	18	A	A	12 24 39.7	
	comp=Z,15nm,3.5s,comp=Z,13nm,2.0s						
JSHD	Hidakashinhida	6.71	16	A	A	12 24 40.4	
	comp=Z,21nm,2.4s,comp=Z,21nm,2.2s						
JHIK	Hikimi	6.71	260	A	A	12 24 40.5	
	comp=Z,5.0nm,2.9s,comp=Z,8.0nm,6.3s						
JEW	Eniwo	6.94	9	Pn	Pn	12 24 43.2	+2.4
JKI	Kunimi	7.27	254	A	A	12 24 48.4	
	comp=Z,7.0nm,3.1s,comp=Z,5.0nm,7.2s						
JHGM	Hagimishima	7.28	263	A	A	12 24 48.5	
	comp=Z,6.0nm,1.9s,comp=Z,9.0nm,5.1s						
JUS	Usuki	7.36	249	A	A	12 24 49.7	
	comp=Z,10.0nm,3.5s,comp=Z,13nm,3.6s						
JTY	Toyota	7.47	259	A	A	12 24 51.1	
	comp=Z,6.0nm,7.6s,comp=Z,13nm,5.9s						
JAB	Ashibetsu	7.71	13	A	A	12 24 54.4	
	comp=Z,8.0nm,2.9s,comp=Z,10.0nm,2.8s						
JNU	Nakatsue	8.00	252	P	Pn	12 24 53.5	-1.9
	comp=Z,6.3nm,0.4s,baz=170,slow=5.9,SNR=2.9						
JNU				LR	LR	12 28 22.4	
	comp=Z,10μm,18.9s,baz=61,slow=41						
JNU	Nakatsue	8.00	252	Pn	Pn	12 24 55.6	+0.2
ASAJ	Asahikawa	8.37	13	P	Pn	12 24 59.6	-0.7
	comp=Z,24nm,0.4s,baz=205,slow=14,SNR=34						
ASAJ				S	Sn	12 26 33.1	-0.3
	comp=Z,75nm,0.8s,baz=196,slow=21,SNR=1.6						
ASAJ				LR	LR	12 28 26.6	
	comp=Z,4μm,21.9s,baz=200,slow=38						
ASAJ	Asahikawa	8.37	13	P	Pn	12 25 00.2	-0.2
JKA	Kamikawa-asahi	8.37	13	Pn	Pn	12 25 00.2	-0.1
NMR	Nemuro--Hokkai	8.62	29	eP	Pn	12 25 01.3	-2.4
JII	Iki	8.66	258	A	A	12 25 07.6	
	comp=Z,7.0nm,2.3s,comp=Z,8.0nm,2.6s						
JTU	Tsushima	8.74	263	Pn	Pn	12 25 08.0	+2.5
GLVR	Golovnino	8.85	27	eP	Pn	12 25 05.7	-1.2
GLVR				eS	Sn	12 26 41.5	-3.6
RUSJ	Misakicho	9.07	25	eP	Pn	12 25 09.9	0.0
RUSJ				eS	Sn	12 26 48.1	-2.4
JSU	Suzuyama	9.07	243	Pn	Pn	12 25 11.6	+1.5
JCJ	Chichijima	9.07	167	P	Pn	12 25 06.8	-3.4
	comp=Z,439nm,0.4s,baz=42,slow=3.8,SNR=153						
JCJ				S	Sn	12 26 43.3	-7.6
	comp=Z,278nm,0.5s,baz=143,slow=19,SNR=1.9						
JCJ	Chichijima	9.07	167	Pn	Pn	12 25 07.3	-2.8
JCJ	Chichijima	9.07	167	P	Pn	12 25 07.7	-2.4
YUK	Yuzh-Kuril'sk	9.23	28	eP	Pn	12 25 11.6	-0.5
YUK				eS	Sn	12 26 49.8	-4.7
YUK				pmax	pmax		
	comp=Z,372nm,0.6s						
YUK				pmax	pmax		
	comp=E,217nm,0.3s						
YUK				pmax	pmax		
	comp=N,59nm,0.2s						
YUK				MLR	MLR		
	comp=Z,3μm,18.0s						
YUK				MLR	MLR		
	comp=N,2μm,13.0s						
TEY	Ternei	9.38	345	⇑eP	Pn	12 25 20.4	+6.2
TEY				pmax	pmax		
	comp=Z,40nm,0.6s						
TEY				pmax	pmax		
	comp=N,60nm,0.7s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
VLA	Vladivostok	9.45	321	c iP	Pn	12 25 14.5	-0.6
MSHR	Mys Shultsa	9.46	317	i P	Pn	12 25 14.6	-0.7
SHO	Shikotan	9.48	32	eP	Pn	12 25 12.6	-3.0
SHO				pmax	pmax		
	comp=Z,92nm,0.5s						
SHO				pmax	pmax		
	comp=N,28nm,0.3s						
SHO				pmax	pmax		
	comp=E,56nm,0.3s						
SHO				MLR	MLR		
	comp=Z,3μm,23.0s						
SHO				MLR	MLR		
	comp=E,2μm,19.0s						
SEHB	SEOHWA	9.60	287	Pn	Pn	12 25 19.0	+1.7
KSRS	Korea Array	9.75	282	P	Pn	12 25 23.3	+3.9
	comp=E,28nm,0.6s,baz=99,slow=14,SNR=69						
KSRS				LR	LR	12 29 00.0	
	comp=E,8μm,20.1s,baz=90,slow=37						
KSRS				PcP	PcP	12 31 31.0	+0.7
	comp=E,2.7nm,1.0s,baz=319,slow=0.8,SNR=4.3						
KSAR	Wonju Array Be	9.78	282		Pn	12 25 22.4	+2.6
KSAR	Wonju Array Be	9.78	282	P	Pn	12 25 22.4	+2.6
KS19	Wonju Array Si	9.80	282	Pn	Pn	12 25 23.4	+3.3
USRK	Ussuriysk Ar.	10.21	326	P	Pn	12 25 29.4	+3.9
	comp=E,72nm,0.8s,baz=138,slow=11,SNR=52						
USRK				LR	LR	12 29 08.7	
	comp=E,3μm,20.1s,baz=135,slow=36						
KUR	Kuril'sk	11.02	31	P	Pn	12 25 30.3	-6.3
KUR				eS	Sn	12 27 33.3	-5.0
KUR				pmax	pmax		
	comp=Z,174nm,1.0s						
KUR				pmax	pmax		
	comp=E,65nm,0.5s						
KUR				pmax	pmax		
	comp=N,59nm,0.6s						
KUR				smax	smax		
	comp=N,306nm,1.0s						
KUR				smax	smax		
	comp=E,228nm,0.7s						
KUR				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS	Yuzh-Sakhalins	11.15	10	Pn	Pn	12 25 37.9	-0.5
YSS	Yuzh-Sakhalins	11.15	10	eP	Pn	12 25 38.9	+0.4
YSS				eS	Sn	12 27 38.9	-2.7
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				MLR	MLR		
	comp=N,4μm,17.0s						
YSS				MLR	MLR		
	comp=Z,5μm,17.0s						
YSS	Yuzh-Sakhalins	11.15	10	P	Pn	12 25 38.8	+0.3
MDJ	Mudanjiang	11.68	321	Pn	Pn	12 25 48.1	+2.5
MDJ	Mudanjiang	11.68	321	P	Pn	12 25 46.3	+0.7
MDJ				S	Sn	12 27 56.8	+2.4
MDJ				pmax	pmax		
	comp=Z,75nm,1.5s						
MDJ				LR	LR		
	comp=Z,3μm,15.2s						
MDJ				LR	LR		
	comp=Z,3μm,14.2s						
MDJ				LR	LR		
	comp=Z,6μm,24.5s						
UGL	Uglegorsk	13.17	6	P	P	12 26 18.3	+3.7
UGL				pmax	pmax		
	comp=Z,92nm,0.8s						
UGL				MLR	MLR		
	comp=Z,3μm,19.0s						
UGL				MLR	MLR		
	comp=N,4μm,17.0s						
UGL				MLR	MLR		
	comp=E,2μm,16.0s						
JOW	Kunigami	13.50	231	P	Pn	12 26 08.8	-1.8
	comp=E,30nm,1.0s,baz=325,slow=26,SNR=1.8						
JOW				LR	LR	12 31 14.5	
	comp=E,2μm,21.7s,baz=66,slow=37						
JOW	Kunigami	13.50	231	Pn	Pn	12 26 11.1	+0.5
CN2	Changchun	13.57	309	eP	Pn	12 26 11.5	0.0
CN2				ePP	PnPn	12 26 23.6	+4.1
CN2				eS	Sn	12 28 39.4	-1.2
CN2				pmax	pmax		
	comp=E,30nm,1.3s						
CN2				pmax	pmax		
	comp=E,560nm,6.0s						
CN2				LR	LR		
	comp=E,1μm,12.0s						
CN2				LR	LR		
	comp=E,3μm,12.0s						
CN2				LR	LR		
	comp=E,3μm,13.0s						
BNX	BinXian	13.57	320	⇓P	Pn	12 26 12.6	+1.1
BNX				pP	P	12 26 21.9	+2.8
BNX				PP	PnPn	12 26 24.8	+5.3
BNX				sP		12 26 31.3	
BNX				S	Sn	12 28 42.4	+1.7
BNX				sS	S	12 28 57.3	-4.3
BNX				pmax	pmax		
	comp=E,82nm,0.9s						
BNX				pmax	pmax		
	comp=E,2μm,6.0s						
BNX				LR	LR		
	comp=E,8μm,15.9s						
SNY	Shenyang	14.00	300	⇓P	Pn	12 26 20.1	+2.8

SNY				S	**Sn**	**12 28 58.8**	**+7.8**
SNY				pmax	pmax		
	comp=E,35nm,1.5s						
SNY				LR	LR		
	comp=E,3µm,14.5s						
SNY				LR	LR		
	comp=E,4µm,16.9s						
SNY				LR	LR		
	comp=E,6µm,18.6s						
KLR	**Kul'dur**	**14.53**	**338**	P	**Pn**	**12 26 24.0**	**-0.2**
	comp=E,7.5nm,0.7s,baz=141,slow=12,SNR=24						
KLR				LR	LR	12 31 52.6	
	comp=E,3µm,18.1s,baz=146,slow=36						
KLR	**Kul'dur**	**14.53**	**338**	ceP	**Pn**	**12 26 23.5**	**-0.7**
KLR				pmax	pmax		
	comp=Z,55nm,0.9s						
DL2	**Dalian**	**14.83**	**287**	⇑iP	**Pn**	**12 26 29.6**	**+1.3**
DL2				pmax	pmax		
	comp=Z,80nm,1.6s						
DL2				pmax	pmax		
	comp=Z,940nm,7.6s						
DL2				LR	LR		
	comp=Z,1µm,7.5s						
DL2				LR	LR		
	comp=Z,1µm,10.8s						
DL2				LR	LR		
	comp=Z,5µm,23.5s						
GRNR	**Gornyy**	**14.99**	**351**	⇓iP	**Pn**	**12 26 28.6**	**-1.7**
GRNR				pmax	pmax		
	comp=N,6.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,1µm,17.0s						
GRNR				MLR	MLR		
	comp=N,910nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,17.0s						
TYV	**Tymovskoe**	**14.99**	**7**	eP	**P**	**12 26 35.9**	**+1.0**
TYV				pmax	pmax		
	comp=Z,600nm,3.1s						
TYV				pmax	pmax		
	comp=Z,84nm,0.8s						
TYV				MLR	MLR		
	comp=Z,3µm,20.0s						
SSE	**Sheshan**	**16.37**	**258**	P	**P**	**12 26 49.1**	**-1.1**
SSE				sP	**sP**	**12 27 07.3**	**-0.8**
SSE				S	**Sn**	**12 29 51.0**	**+2.2**
SSE				pmax	pmax		
	comp=Z,35nm,0.9s						
SSE				pmax	pmax		
	comp=Z,650nm,5.3s						
SSE				LR	LR		
	comp=Z,1µm,17.9s						
JMJ	**Miyako jima 2**	**16.82**	**233**	P	**P**	**12 26 56.4**	**+1.2**
NKL	**Nikolayevsk**	**17.16**	**2**	eP	**Pn**	**12 26 53.8**	**-4.0**
NKL				eS	**Sn**	**12 30 07.0**	**-0.7**
NKL				pmax	pmax		
	comp=N,1.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,40nm,0.9s						
NKL				smax	smax		
	comp=N,40nm,2.0s						
NKL				smax	smax		
	comp=E,3.0nm,2.0s						
NKL				MLR	MLR		
	comp=E,9.0nm,10.0s						
NKL				MLR	MLR		
	comp=N,4.0nm,18.0s						
NKL				MLR	MLR		
	comp=Z,842nm,14.0s						
NJ2	**Nanjing**	**17.91**	**263**	eP	**P**	**12 27 09.0**	**+1.8**
NJ2				sP	**sP**	**12 27 27.1**	**+2.0**
NJ2				SS	**SnSn**	**12 30 49.4**	**+10**
NJ2				pmax	pmax		
	comp=Z,36nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,13.3s						
NJ2				LR	LR		
	comp=Z,2µm,20.2s						
NJ2				LR	LR		
	comp=Z,5µm,16.9s						
TIA	**Tai'an**	**18.43**	**277**	P	**P**	**12 27 11.3**	**-1.7**
TIA				PP	**sP**	**12 27 31.9**	**+1.0**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TIA				pmax	pmax		
	comp=Z,190nm,3.0s						
TIA				LR	LR		
	comp=Z,1µm,17.1s						
TIA				LR	LR		
	comp=Z,2µm,14.2s						
TIA				LR	LR		
	comp=Z,3µm,16.4s						
SKR	**Severo-Kuril's**	**18.76**	**33**	eP	**P**	**12 27 14.0**	**-2.4**
SKR				eS	**Sn**	**12 30 35.7**	**-10**
SKR				pmax	pmax		
	comp=Z,400nm,5.1s						
SKR				pmax	pmax		
	comp=Z,109nm,1.1s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
BJI	**Beijing**	**19.14**	**289**	P	**P**	**12 27 19.1**	**-1.6**
BJI				S	**S**	**12 30 51.1**	**-3.8**
BJI				pmax	pmax		
	comp=Z,11nm,1.7s						
BJI				pmax	pmax		
	comp=Z,280nm,3.6s						
BJI				LR	LR		
	comp=Z,1µm,16.2s						
BJI				LR	LR		
	comp=Z,1µm,23.6s						
BJI				LR	LR		
	comp=Z,2µm,31.5s						
BJT	**Baijiatuau**	**19.14**	**289**		**P**	**12 27 19.6**	**-1.1**
BJT	**Baijiatuau**	**19.14**	**289**	P	**P**	**12 27 19.6**	**-1.1**
BJT				pmax	pmax		
	comp=Z,60nm,1.1s						
ZEA	**Zeya**	**19.84**	**337**	eP	**P**	**12 27 28.6**	**+0.4**
ZEA				eS	S	12 30 57.3	-11
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=N,40nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.6s						
ZEA				pmax	pmax		
	comp=E,200nm,8.5s						
ZEA				pmax	pmax		
	comp=N,300nm,8.2s						
ZEA				pmax	pmax		
	comp=Z,600nm,10.8s						
ZEA				smax	smax		
	comp=E,400nm,8.3s						
ZEA				smax	smax		
	comp=N,700nm,12.9s						
ZEA				MLR	MLR		
	comp=E,900nm,19.0s						
ZEA				MLR	MLR		
	comp=N,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
HIA	**Hailar**	**19.84**	**318**	P	**P**	**12 27 25.9**	**-2.4**
HIA	**Hailar**	**19.84**	**318**	P	**P**	**12 27 25.9**	**-2.4**
HIA				pmax	pmax		
	comp=Z,46nm,1.1s						
XLT	**XiLinHaoTe**	**19.88**	**301**	⇑iP	**P**	**12 27 28.5**	**-0.3**
XLT				PP	**sP**	**12 27 47.3**	**+0.5**
XLT				S	**S**	**12 31 05.9**	**-3.9**
XLT				pmax	pmax		
	comp=Z,41nm,0.9s						
XLT				pmax	pmax		
	comp=Z,410nm,3.9s						
XLT				LR	LR		
	comp=Z,4µm,16.4s						
XLT				LR	LR		
	comp=Z,4µm,16.0s						
HNS	**HongShan**	**20.26**	**281**	⇑P	**P**	**12 27 30.5**	**-2.5**
HNS				S	**S**	**12 31 09.9**	**-7.5**
HNS				SS	Sn	12 31 43.4	+21
HNS				pmax	pmax		
	comp=Z,42nm,0.8s						
HNS				LR	LR		
	comp=Z,2µm,17.4s						
HNS				LR	LR		
	comp=Z,3µm,18.4s						
HNS				LR	LR		
	comp=Z,3µm,19.2s						
SSLB	**Suanglung**	**20.42**	**239**	P	**P**	**12 27 33.5**	**-1.3**
YULB	**Yu-li**	**20.44**	**237**	P	**P**	**12 27 33.4**	**-1.6**
TPUB	**Ta-pu**	**20.96**	**238**	P	**P**	**12 27 39.5**	**-1.1**
TPUB				IAmb	IAmb	12 28 23.7	
	comp=Z,244nm,1.5s						
TPUB	**Ta-pu**	**20.96**	**238**	P	**P**	**12 27 39.6**	**-1.1**
PEA0B	**Petropavlovsk-**	**21.19**	**31**	ceP	**P**	**12 27 42.5**	**-0.3**
PETK	**Petropavlovsk-**	**21.19**	**31**	P	**P**	**12 27 43.5**	**+0.6**
	comp=Z,16nm,1.0s,baz=183,slow=3.0,SNR=21						
PETK				LR	LR	12 35 30.9	
	comp=Z,877nm,20.7s,baz=224,slow=35						
	comp=Z,16nm,1.0s						
PETK	**Petropavlovsk-**	**21.19**	**31**	P	**P**	**12 27 43.4**	**+0.5**
PET	**Petropavlovsk**	**21.53**	**32**	P	**P**	**12 27 47.6**	**+1.2**
PET	**Petropavlovsk**	**21.53**	**32**	α iP	**P**	**12 27 47.2**	**+0.8**
PET				e*SP	**sP**	**12 28 03.8**	**-0.7**
PET				eS	**S**	**12 31 38.3**	**-3.9**
PET				pmax	pmax		
	comp=Z,600nm,6.8s						
PET				pmax	pmax		
	comp=Z,71nm,1.2s						
PET				pmax	pmax		
	comp=Z,400nm,9.3s						
PET				MLR	MLR		
	comp=Z,1µm,18.0s						
PET				MLR	MLR		
	comp=Z,1µm,20.0s						
WHN	**Wuhan**	**22.04**	**263**	⇑P	**P**	**12 27 52.4**	**+0.3**
WHN				sP	**sP**	**12 28 13.9**	**+3.7**
WHN				S	**S**	**12 31 48.6**	**-3.8**
WHN				LR	LR		
	comp=Z,2µm,12.7s						
WHN				LR	LR		
	comp=Z,6µm,17.2s						
WHN				LR	LR		
	comp=Z,6µm,14.2s						
LYN	**LuoYang**	**22.45**	**274**	eP	**P**	**12 27 52.5**	**-4.0**
LYN				PP	**PnPn**	**12 28 21.8**	**+0.7**
LYN				S	**S**	**12 31 50.4**	**-9.2**
LYN				pmax	pmax		
	comp=Z,30nm,1.4s						
LYN				pmax	pmax		
	comp=Z,470nm,7.7s						
LYN				LR	LR		
	comp=Z,3µm,18.8s						
LYN				LR	LR		
	comp=Z,3µm,17.1s						
LYN				LR	LR		
	comp=Z,4µm,18.0s						
HHC	**Hu-ho-hao-te**	**22.70**	**291**	eP	**P**	**12 27 59.8**	**+0.5**
HHC				sP	sP	12 28 14.8	-2.5
HHC				S	**S**	**12 32 09.4**	**+5.3**
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,5.1s						
HHC				LR	LR		
	comp=Z,2µm,11.8s						
HHC				LR	LR		
	comp=Z,3µm,15.1s						
HHC				LR	LR		
	comp=Z,4µm,15.2s						
GUMO	**Guam**	**22.74**	**168**	P	**P**	**12 27 59.4**	**-0.3**
	comp=Z,80nm,0.5s,baz=280,slow=3.3,SNR=8.7						
	comp=Z,80nm,0.5s						
GUMO	**Guam**	**22.74**	**168**	P	**P**	**12 27 58.9**	**-0.8**
GUMO	**Guam**	**22.74**	**168**	P	**P**	**12 27 58.9**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,723nm,1.3s						
GUMO	**Guam**	**22.74**	**168**	P	**P**	**12 27 59.9**	**+0.2**
BTO	**Baotou**	**23.86**	**290**	eP	**P**	**12 28 07.6**	**-3.0**
BTO				S	**S**	**12 32 22.3**	**-0.8**
BTO				LR	LR		
	comp=Z,4µm,19.0s						
BTO				LR	LR		
	comp=Z,4µm,17.3s						
CNSH	**ChangSha**	**24.11**	**259**	⇑P	**P**	**12 28 11.8**	**-1.0**
CNSH				S	**S**	**12 32 27.6**	**+0.5**
CNSH				LR	LR		
	comp=Z,1µm,15.4s						
CNSH				LR	LR		
	comp=Z,1µm,17.1s						
CNSH				LR	LR		
	comp=Z,1µm,19.9s						
MA2	**Magadan**	**24.63**	**13**	P	**P**	**12 28 18.4**	**+1.2**
	comp=Z,52nm,0.7s,baz=202,slow=9.6,SNR=38						
MA2				LR	LR	12 38 01.2	
	comp=Z,572nm,21.1s,baz=202,slow=36						
	comp=Z,52nm,0.7s						
MA2	**Magadan**	**24.63**	**13**	P	**P**	**12 28 18.4**	**+1.2**
MA2				IAmb	IAmb	12 28 45.5	
	comp=Z,180nm,1.2s						
MA2	**Magadan**	**24.63**	**13**	ceP	**P**	**12 28 17.3**	**+0.1**
MA2				pmax	pmax		
	comp=Z,132nm,1.3s						
MA2	**Magadan**	**24.63**	**13**	P	**P**	**12 28 18.6**	**+1.4**
CIT	**Chita**	**24.64**	**319**	eP	**P**	**12 28 14.4**	**-3.1**
CIT				e		12 28 28.4	
CIT				e		12 28 49.2	
XAN	**Xi'an**	**25.42**	**275**	⇑P	**P**	**12 28 22.3**	**-2.5**
XAN				pP	pP	12 28 34.3	-3.3
XAN				sP	sP	12 28 40.5	-3.1
XAN				S	**S**	**12 32 43.8**	**-4.3**
XAN				ScP	**ScP**	**12 35 27.8**	**-3.0**
XAN				ScS	**ScS**	**12 39 17.8**	**-2.1**
XAN				pmax	pmax		
	comp=Z,21nm,1.9s						
XAN				pmax	pmax		
	comp=Z,470nm,5.7s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,19.9s						
ENH	**Enshi**	**26.06**	**266**	P	**P**	**12 28 29.2**	**-1.4**
ENH				IAmb	IAmb	12 29 02.4	
	comp=Z,57nm,0.7s						
YAK	**Yakutsk**	**26.85**	**349**	P	**P**	**12 28 36.0**	**-1.3**
	comp=Z,42nm,0.7s,baz=153,slow=8.2,SNR=19						
YAK				LR	LR	12 39 23.5	
	comp=Z,2µm,18.9s,baz=154,slow=36						
	comp=Z,42nm,0.7s						
YAK	**Yakutsk**	**26.85**	**349**	P	**P**	**12 28 36.1**	**-1.1**
YAK				IAmb	IAmb	12 28 39.6	
	comp=Z,85nm,0.7s						
YAK	**Yakutsk**	**26.85**	**349**	c iP	**P**	**12 28 35.8**	**-1.4**
YAK				e*PP	**pP**	**12 28 50.2**	**0.0**
YAK				e		12 29 19.8	
YAK				eS	**S**	**12 33 08.2**	**-1.7**
YAK				e*SS	**sS**	**12 33 31.8**	**0.0**
YAK				pmax	pmax		
	comp=Z,124nm,1.3s						
YAK				pmax	pmax		
	comp=N,76nm,1.2s						
YAK				pmax	pmax		
	comp=E,24nm,1.4s						
YAK				pmax	pmax		
	comp=Z,179nm,2.2s						
YAK				pmax	pmax		
	comp=N,92nm,1.7s						
YAK				pmax	pmax		
	comp=E,103nm,2.2s						
YAK				smax	smax		
	comp=E,367nm,2.8s						
YAK				smax	smax		
	comp=N,385nm,2.7s						
YAK				MLR	MLR		
	comp=Z,2µm,16.0s						
YAK				MLR	MLR		
	comp=N,1µm,16.0s						
YAK				MLR	MLR		
	comp=E,1µm,19.0s						
ULN	**Ulaanbaatar**	**26.98**	**306**	P	**P**	**12 28 38.3**	**-0.5**
ULN	**Ulaanbaatar**	**26.98**	**306**	ceP	**P**	**12 28 36.9**	**-1.9**
ULN				pmax	pmax		
	comp=Z,36nm,1.7s						
ULN	**Ulaanbaatar**	**26.98**	**306**	P	**P**	**12 28 39.0**	**+0.2**
ULN				P	**P**	**12 28 39.0**	**+0.2**
ULN				P	**P**	**12 28 39.0**	**+0.2**
SONM	**Songino Array**	**27.41**	**306**	P	**P**	**12 28 42.2**	**-0.4**
	comp=Z,7.6nm,0.6s,baz=103,slow=8.9,SNR=25						
SONM				PcP	**PcP**	**12 32 00.9**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=93,slow=2.9,SNR=2.6						
SONM				LR	LR	12 39 58.1	
	comp=Z,2µm,18.5s,baz=108,slow=37						
	comp=Z,7.6nm,0.6s						
GULI	**GuiLin**	**27.49**	**255**	⇑P	**P**	**12 28 42.3**	**-1.1**
GULI				S	**S**	**12 33 15.9**	**-4.8**
GULI				pmax	pmax		
	comp=Z,30nm,1.0s						
GULI				LR	LR		
	comp=Z,650nm,18.4s						
GULI				LR	LR		
	comp=Z,850nm,18.4s						
GULI				LR	LR		
	comp=Z,1µm,26.0s						
BOD	**Bodaibo**	**27.80**	**330**	eP	**P**	**12 28 44.9**	**-1.0**
BOD				pmax	pmax		
	comp=Z,66nm,1.1s						
SEY	**Seymchan**	**28.05**	**12**	P	**P**	**12 28 49.7**	**+1.7**
	comp=Z,17nm,1.0s,baz=210,slow=12,SNR=14						
	comp=Z,17nm,1.0s						
SEY	**Seymchan**	**28.05**	**12**	ceP	**P**	**12 28 48.8**	**+0.8**
SEY				pmax	pmax		
	comp=Z,36nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**28.69**	**117**	T	T	12 59 06.9	
	baz=312,slow=75,SNR=1063						
H11N1	**WAKE ISLAND Hy**	**28.69**	**117**	T	T	12 59 07.6	
	baz=312,slow=75,SNR=495						
H11N3	**WAKE ISLAND Hy**	**28.70**	**117**	T	T	12 59 08.2	
	baz=312,slow=75,SNR=503						
LZH	**Lanzhou**	**29.08**	**281**	⇑P	**P**	**12 28 55.8**	**-1.9**
LZH				pP	pP	12 29 08.3	-2.4
LZH				sP	sP	12 29 13.5	-3.2
LZH				PP	**PnPn**	**12 29 56.5**	**+4.7**
LZH				pmax	pmax		
	comp=Z,320nm,4.9s						
LZH				LR	LR		
	comp=Z,950nm,15.2s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,17.6s						
SHEM	**Shemya Is, Ala**	**29.25**	**44**	LR	LR	12 43 22.3	
	comp=Z,120nm,18.1s,baz=250,slow=42						
H11S1	**WAKE ISLAND Hy**	**29.34**	**119**	T	T	12 59 58.6	
	baz=314,slow=76,SNR=1475						
H11S3	**WAKE ISLAND Hy**	**29.34**	**119**	T	T	12 59 59.9	
	baz=314,slow=76,SNR=860						
H11S2	**WAKE ISLAND Hy**	**29.36**	**119**	T	T	13 00 00.2	
	baz=314,slow=76,SNR=798						
GYA	**Guiyang**	**29.87**	**261**	⇑iP	**P**	**12 29 03.8**	**-0.9**
GYA				pP	pP	12 29 16.3	-1.4
GYA				S	**S**	**12 33 54.0**	**-4.5**
GYA				pmax	pmax		
	comp=Z,33nm,1.6s						
GYA				LR	LR		
	comp=Z,1µm,20.9s						
GYA				LR	LR		
	comp=Z,890nm,21.5s						
GYA				LR	LR		
	comp=Z,2µm,22.8s						
ZAK	**Zakamensk**	**30.00**	**310**	eP	**P**	**12 29 04.1**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,15nm,1.6s						
CD2	**Chengdu**	**30.49**	**271**	P	**P**	**12 29 08.8**	**-1.3**
CD2				sP	pP	12 29 24.5	+1.4
CD2				S	**S**	**12 34 00.4**	**-7.5**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				LR	LR		
	comp=Z,3µm,20.8s						
CD2				LR	LR		
	comp=Z,3µm,18.9s						
QIZ	**Qiongzhong**	**31.41**	**246**	P	**P**	**12 29 20.3**	**+2.1**
QIZ				S	**S**	**12 34 25.9**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,310nm,9.3s						
QIZ				LR	LR		
	comp=Z,1µm,19.4s						
QIZ				LR	LR		
	comp=Z,770nm,16.1s						
QIZ				LR	LR		
	comp=Z,810nm,21.5s						
MOY	**Mondy**	**31.72**	**312**	eP	**P**	**12 29 20.0**	**-0.8**
MOY				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA	**Gaotai**	**31.75**	**288**	eP	**P**	**12 29 21.6**	**+0.5**
GTA				PP	**PnPn**	**12 30 26.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,220nm,6.8s						
GTA				LR	LR		
	comp=Z,860nm,17.9s						
GTA				LR	LR		
	comp=Z,1µm,19.9s						
GTA				LR	LR		
	comp=Z,2µm,19.1s						
PATS	**Pohnpei**	**33.55**	**145**	P	**P**	**12 29 37.7**	**+0.8**
KMI	**Kunming**	**33.63**	**262**	⇑P	**P**	**12 29 36.3**	**-1.5**
KMI				pP	pP	12 29 49.8	-1.1
KMI				S	**S**	**12 34 56.8**	**-0.5**
KMI				pmax	pmax		
	comp=Z,20nm,1.6s						
KMI				LR	LR		
	comp=Z,930nm,17.3s						
KMI				LR	LR		
	comp=Z,1µm,19.3s						
KMI				LR	LR		
	comp=Z,2µm,18.8s						
PZH	**PanZhiHua**	**33.81**	**265**	P	**P**	**12 29 37.5**	**-1.8**
PZH				PP	**PP**	**12 30 56.3**	**-0.2**
PZH				S	**S**	**12 34 58.3**	**-1.6**
PZH				pmax	pmax		
	comp=Z,40nm,0.6s						
PZH				pmax	pmax		
	comp=Z,180nm,6.1s						
PZH				LR	LR		
	comp=Z,1µm,18.4s						
PZH				LR	LR		
	comp=Z,1µm,16.9s						
PZH				LR	LR		
	comp=Z,2µm,18.0s						
BILL	**Bilibino**	**35.37**	**17**	d iP	**P**	**12 29 51.8**	**-0.3**
BILL				i *PP	**pP**	**12 30 05.7**	**+0.5**
BILL				i *SP	**sP**	**12 30 09.9**	**-1.3**
BILL				e		12 31 17.2	
BILL				ePPP	PPP	12 31 31.1	
BILL				i		12 32 21.9	
BILL				eS	**S**	**12 35 21.0**	**-1.7**
BILL				SSS	SSS	12 38 09.0	
BILL				pmax	pmax		
	comp=Z,37nm,1.7s						
BILL				MLR	MLR		
	comp=Z,763nm,17.0s						
BILL	**Bilibino**	**35.37**	**17**	P	**P**	**12 29 52.9**	**+0.9**
TIXI	**Tiksi**	**36.19**	**354**	P	**P**	**12 29 58.5**	**-0.6**
	comp=Z,12nm,0.6s,baz=92,slow=23,SNR=53						
TIXI				LR	LR	12 45 48.4	
	comp=Z,919nm,18.3s,baz=180,slow=38						
	comp=Z,12nm,0.6s						
TIXI	**Tiksi**	**36.19**	**354**	P	**P**	**12 29 58.9**	**-0.2**
TIXI	**Tiksi**	**36.19**	**354**	ceP	**P**	**12 29 58.1**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,45nm,1.7s						
TIXI	**Tiksi**	**36.19**	**354**	P	**P**	**12 29 58.8**	**-0.2**
GOMU	**GeErMu**	**36.21**	**284**	P	**P**	**12 29 58.8**	**-1.3**
GOMU				S	**S**	**12 35 37.1**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,160nm,4.9s						
GOMU				LR	LR		
	comp=Z,770nm,17.6s						
GOMU				LR	LR		
	comp=Z,720nm,17.1s						
GOMU				LR	LR		
	comp=Z,970nm,17.3s						
MYLDM	**Lahad Datu**	**36.45**	**218**	P	**P**	**12 30 02.4**	**+0.5**
MYLDM				IAmb	IAmb	12 30 59.1	
	comp=Z,40nm,1.1s						
SWI	**Sorong**	**37.55**	**194**	P	**P**	**12 30 11.0**	**-0.2**
	comp=Z,42nm,0.7s						

SWI				pP	pP	12 30 23.0	-1.4
	comp=Z,42nm,0.7s						
SIJI	**Sorong**	37.55	194	LR	LR	12 44 26.4	
	comp=Z,2µm,20.0s,baz=25,slow=34						
KMSI	**Cibinong**	38.23	206	P	P	12 30 15.9	-1.0
	comp=Z,153nm,0.7s						
LBMI	**Labuha**	38.24	200	P	P	12 30 17.1	+0.1
	comp=Z,693nmcomp=Z,41nm,0.8s						
GTOI	**Gorontalo**	38.53	208	P	P	12 30 18.4	-1.1
	comp=Z,310nmcomp=Z,35nm,1.1s						
TOLI2	**Tolitoli**	38.99	211	P	P	12 30 21.7	-1.7
TOLI2	**Tolitoli**	38.99	211	P	P	12 30 24.2	+0.8
MRSI	**Marisa**	39.09	209	P	P	12 30 24.1	-0.1
	comp=Z,733nmcomp=Z,82nm,1.2s						
SPIA	**Saint Paul Isl**	39.13	41	P	P	12 30 25.7	+1.6
	baz=259						
NIKH	**Nikolski High**	39.36	48	P	P	12 30 27.7	+1.7
	baz=266						
CHTO	**Chiang Mai**	39.88	256	P	P	12 30 30.1	-0.7
CHTO	**Chiang Mai**	39.88	256	P	P	12 30 30.1	-0.7
CHTO				pmax	pmax		
	comp=Z,16nm,1.2s						
CHTO	**Chiang Mai**	39.88	256	P	P	12 30 29.8	-1.0
SANI	**Sanana**	40.02	202	P	P	12 30 31.4	-0.5
	comp=Z,847nmcomp=Z,69nm,0.8s						
SANI	**Sanana**	40.02	202	P	P	12 30 31.7	-0.2
MPSI	**Mapaga**	40.06	212	P	P	12 30 30.1	-2.2
	comp=Z,14nm,0.7s						
CM31	**Chiang Mai Arr**	40.08	255	P	P	12 30 31.3	-1.1
CMAR	**Chiang Mai Arr**	40.08	255	P	P	12 30 31.1	-1.3
	comp=Z,2.0nm,0.4s,baz=48,slow=7.6,SNR=19						
CMAR				PcP	PcP	12 32 36.8	+0.3
	comp=Z,5.5nm,1.0s,baz=32,slow=3.0,SNR=6.8						
CMAR				LR	LR	12 48 45.6	
	comp=Z,899nm,18.5s,baz=60,slow=39						
	comp=Z,2.0nm,0.4s						
GAMB	**Gambell**	40.22	31	P	P	12 30 34.1	+1.1
	baz=250						
GAMB				S	S	12 36 38.6	+2.4
	baz=250						
WMQ	**Urumqi**	40.26	298	*e*P	P	12 30 34.8	+1.1
WMQ				pP	pP	12 30 46.8	-0.3
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,640nm,4.7s						
WMQ				LR	LR		
	comp=Z,690nm,18.7s						
WMQ				LR	LR		
	comp=Z,1µm,18.1s						
WMQ				LR	LR		
	comp=Z,980nm,18.7s						
APSI	**Ampana**	40.47	209	P	P	12 30 36.7	+1.0
	comp=Z,569nmcomp=Z,54nm,1.1s						
UNV	**Unalaska Valle**	40.82	47	P	P	12 30 37.9	-0.2
	baz=266						
AAI	**Ambon**	40.97	198	P	P	12 30 40.7	+0.9
	comp=Z,1µmcomp=Z,80nm,0.6s						
LSA	**Lhasa**	41.12	276	P	P	12 30 41.6	+0.1
LSA	**Lhasa**	41.12	276	P	P	12 30 41.6	+0.1
LSA				pmax	pmax		
	comp=Z,26nm,0.7s						
LSA	**Lhasa**	41.12	276	P	P	12 30 41.6	+0.1
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
LSA	**Lhasa**	41.12	276	P	P	12 30 41.2	-0.3
LSA	**Lhasa**	41.12	276	P	P	12 30 42.4	+0.9
LSA				x	x	12 30 48.6	
KRVT	**Keravat (AS076**	41.66	162	P	P	12 30 45.9	+0.5
	comp=Z,11nm,0.8s,baz=252,slow=12,SNR=1.8						
KRVT				LR	LR	12 45 17.9	
	comp=Z,510nm,21.9s,baz=128,slow=32						
	comp=Z,11nm,0.8s						
ZAA0	**Zalesovo Array**	41.75	313	P	P	12 30 45.1	-0.6
ZALV	**Zalesovo Beam**	41.75	313	P	P	12 30 45.4	-0.4
	comp=Z,102nm,0.6s,baz=95,slow=6.7,SNR=218						
ZALV				PcP	PcP	12 32 41.7	+0.5
	comp=Z,14nm,0.6s,baz=103,slow=2.9,SNR=7.1						
ZALV				ScP	ScP	12 36 27.7	+0.4
	comp=Z,3.2nm,0.9s,baz=100,slow=6.0,SNR=3.8						
ZALV				LR	LR	12 48 52.1	
	comp=Z,634nm,18.8s,baz=84,slow=37						
	comp=Z,102nm,0.6s						
ZALV	**Zalesovo Beam**	41.75	313	P	P	12 30 44.8	-0.9
ZSN	**Zaisan**	41.85	303	c *i*P	P	12 30 46.6	-0.1
ZSN				*e*S	S	12 37 01.9	+0.9
ZSN	**Zaisan**	41.85	303	⇑*i*P	P	12 30 46.6	-0.1
	baz=304						
ZSN				*e*S	S	12 37 01.9	+0.9
	baz=304						
TNA	**Tin City**	42.35	29	P	P	12 30 50.8	+0.3
	baz=252						
FALS	**False Pass**	42.68	45	P	P	12 30 54.6	+1.3
	baz=268						
ANM	**Nome**	43.10	31	P	P	12 30 57.1	+0.4
	baz=256						
ANM				S	S	12 37 23.7	+4.8
	baz=256						
MK31	**Makanchi Array**	43.67	303	P	P	12 31 01.0	-0.5
MK31	**Makanchi Array**	43.67	303	P	P	12 31 01.0	-0.5
MK31				pmax	pmax		
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	43.67	303	P	P	12 31 01.0	-0.5
	comp=Z,17nm,0.6s,baz=87,slow=9.7,SNR=154						
MKAR				LR	LR	12 49 51.9	
	comp=Z,2µm,18.1s,baz=81,slow=37						
	comp=Z,17nm,0.6s						
MKAR	**Makanchi Array**	43.67	303	P	P	12 31 01.1	-0.4
MKAR	**Makanchi Array**	43.67	303	P	P	12 31 01.1	-0.4
NRIK	**Noril'sk**	43.72	336	P	P	12 31 01.0	-0.5
	comp=Z,29nm,0.8s,baz=116,slow=8.3,SNR=27						
NRIK				LR	LR	12 50 17.8	
	comp=Z,1µm,18.9s,baz=112,slow=37						
	comp=Z,29nm,0.8s						
NRIK	**Noril'sk**	43.72	336	P	P	12 31 01.2	-0.4
NRIK	**Noril'sk**	43.72	336	P	P	12 31 01.2	-0.4
NRIK				pmax	pmax		
	comp=Z,27nm,0.7s						
MAKZ	**Makanchi**	43.88	303	P	P	12 31 02.5	-0.7
MAKZ	**Makanchi**	43.88	303	P	P	12 31 02.5	-0.7
MAKZ				pmax	pmax		
	comp=Z,34nm,0.9s						
MAKZ	**Makanchi**	43.88	303	P	P	12 31 03.0	-0.2
KSM	**Kuching**	43.97	225	P	P	12 31 03.7	-0.5
KSM				IAmb	IAmb	12 31 56.3	
	comp=Z,84nm,1.7s						
KSM	**Kuching**	43.97	225	P	P	12 31 03.8	-0.4
BNSI	**Bone**	44.27	209	P	P	12 31 07.5	+1.0
	comp=Z,40nm,0.8s						
SDPT	**Sand Point**	44.38	45	P	P	12 31 07.7	+0.7
SDPT	**Sand Point**	44.38	45	P	P	12 31 06.6	-0.3
	baz=270						
SEM	**Semipalatinsk**	44.64	308	c *i*P	P	12 31 08.0	-1.4
SEM				*e*S	S	12 37 41.7	-0.4
SEM				pmax	pmax		
	comp=Z,26nm,0.9s						
SEM	**Semipalatinsk**	44.64	308	⇑*i*P	P	12 31 08.1	-1.4
	comp=Z,26nm,0.9s,baz=308						
SEM				*e*S	S	12 37 41.7	-0.4
	baz=308						
SEM				LR	LR	12 49 56.2	
	baz=308						
CHNA	**Chernabura Isl**	44.89	46	P	P	12 31 10.8	-0.2
	baz=271						
CHNA				S	S	12 37 44.0	-1.2
	baz=271						
KAPI	**Kappang**	44.97	209	P	P	12 31 12.5	+0.4
KAPI				IAmb	IAmb	12 31 28.7	
	comp=Z,50nm,1.0s						
KAPI	**Kappang**	44.97	209	P	P	12 31 12.5	+0.4
KAPI				pmax	pmax		
	comp=Z,50nm,1.0s						
KAPI	**Kappang**	44.97	209	P	P	12 31 16.8	+4.8
RDOG	**Red Dog Mine**	44.97	27	P	P	12 31 10.8	-0.8
	baz=255						
KURK	**Kurchatov**	45.65	309	P	P	12 31 16.4	-0.7
KURK	**Kurchatov**	45.65	309	c*e*P	P	12 31 15.8	-1.3
KURK				pmax	pmax		
	comp=Z,250nm,1.3s						
KURK	**Kurchatov**	45.65	309	P	P	12 31 16.6	-0.5
KURK				P	P	12 31 16.6	-0.5
KURK	**Kurchatov**	45.65	309	P	P	12 31 16.6	-0.5
PMG	**Port Moresby**	45.66	170	LR	LR	12 49 43.3	
	comp=Z,498nm,18.2s,baz=1.0,slow=35						
PMG	**Port Moresby**	45.66	170	P	P	12 31 22.9	+5.4
KURBB	**Kurchatov Arra**	45.71	309	P	P	12 31 16.8	-0.8
	comp=Z,77nm,0.6s,baz=84,slow=7.7,SNR=448						
KURBB				LR	LR	12 52 05.5	
	comp=Z,679nm,19.0s,baz=61,slow=38						
	comp=Z,77nm,0.6s						
KURBB	**Kurchatov Arra**	45.71	309	P	P	12 31 16.6	-1.0
SRIT	**Nakonsritamara**	45.71	243	P	P	12 31 18.6	+0.5
SRIT				IAmb	IAmb	12 31 37.9	
	comp=Z,42nm,0.9s						
RAMN	**Ramite**	45.89	274	*e*P	P	12 31 18.9	-0.8
	comp=Z,174nm,0.8s						
SHLS	**Shalkode**	46.27	298	c *i*P	P	12 31 19.2	-3.1
SHLS				pmax	pmax		
	comp=Z,29nm,1.0s						
SHLS	**Shalkode**	46.27	298	⇑*i*P	P	12 31 19.2	-3.1
	comp=Z,29nm,1.0s,baz=298						
UZB	**Uzynbulak**	46.59	298	c *i*P	P	12 31 24.2	-0.6
UZB				pmax	pmax		
	comp=Z,23nm,0.8s						
UZB	**Uzynbulak**	46.59	298	⇑*i*P	P	12 31 24.2	-0.6
	comp=Z,23nm,0.8s,baz=298						
PKI	**Pulchoki**	46.59	276	*e*P	P	12 31 24.3	-1.0
PKIN	**Phulchoki**	46.60	276	*e*P	P	12 31 24.3	-1.0
	comp=Z,49nm,0.6s						
KKN	**Kakani**	46.61	276	*e*P	P	12 31 24.8	-0.5
TDK	**Taldyqorghan**	46.64	301	c *i*P	P	12 31 25.0	0.0
TDK				pmax	pmax		
	comp=Z,23nm,0.6s						
TDK				MLR	MLR		
	comp=Z,2µm,18.0s						
TDK	**Taldyqorghan**	46.64	301	⇑*i*P	P	12 31 25.1	0.0
	comp=Z,23nm,0.6s,baz=301						
TDK				LR	LR	12 51 14.9	
	comp=Z,2µm,17.8s,baz=301						
GCSA	**Galena City Sc**	46.73	32	P	P	12 31 25.4	0.0
	baz=264						
KPKS	**Kokpek**	46.76	299	c *i*P	P	12 31 25.5	-0.6
KPKS				pmax	pmax		
	comp=Z,16nm,0.9s						
KPKS	**Kokpek**	46.76	299	⇑*i*P	P	12 31 25.6	-0.6
	comp=Z,16nm,0.9s,baz=299						
DMN	**Daman**	46.82	276	*e*P	P	12 31 26.2	-0.8
N18K	**Kilae Creek**	46.91	37	P	P	12 31 29.3	+2.3
N18K				IAmb	IAmb	12 31 42.2	
	comp=Z,61nm,1.1s						
N18K	**Kilae Creek**	46.91	37	P	P	12 31 28.3	+1.3
	baz=269,SNR=26						
N18K				S	S	12 38 18.6	+4.6
	baz=269						
TTA	**Tatalina**	46.95	34	P	P	12 31 29.4	+2.1
TTA	**Tatalina**	46.95	34	P	P	12 31 29.4	+2.1
TTA				pmax	pmax		
	comp=Z,21nm,1.2s						
TTA	**Tatalina**	46.95	34	P	P	12 31 27.6	+0.2
	baz=266,SNR=12						
ZHN	**Zhinishke**	47.00	298	*e*P	P	12 31 27.5	-0.5
ZHN	**Zhinishke**	47.00	298	*e*P	P	12 31 27.6	-0.5
	baz=298						
GKN	**Gorkha**	47.04	277	*e*P	P	12 31 27.9	-0.7
SATY	**Saty**	47.05	298	c *i*P	P	12 31 28.0	-0.4
SATY				*e*S	S	12 38 16.6	-0.1
SATY	**Saty**	47.05	298	⇑*i*P	P	12 31 28.1	-0.4
	baz=298						
SATY				*e*S	S	12 38 16.6	-0.1
	baz=298						
SVW2	**Sparrevohn**	47.07	37	P	P	12 31 30.1	+1.9
SVW2				IAmb	IAmb	12 31 43.3	
	comp=Z,46nm,1.2s						
CHIR	**Chirikof Islan**	47.12	44	P	P	12 31 28.5	-0.1
	baz=273						
PRZ	**Przheval'sk**	47.19	298	P	P	12 31 30.1	+0.5
PRZ	**Przheval'sk**	47.19	298	P	P	12 31 30.1	+0.5
PRZ				pmax	pmax		
	comp=Z,107nm,0.9s						
P18K	**Big Mountain,**	47.23	39	P	P	12 31 30.7	+1.2
P18K				IAmb	IAmb	12 31 44.0	
	comp=Z,56nm,1.1s						
P18K	**Big Mountain,**	47.23	39	P	P	12 31 31.0	+1.5
	baz=270						
P18K				S	S	12 38 21.7	+3.1
	baz=270						
KULM	**Kulim**	47.26	239	P	P	12 31 29.5	-0.7
L19K	**White Mountain**	47.45	35	P	P	12 31 33.0	+1.9
L19K				IAmb	IAmb	12 31 52.5	
	comp=Z,39nm,1.2s						
L19K	**White Mountain**	47.45	35	P	P	12 31 31.7	+0.5
	baz=268,SNR=19						
L19K				S	S	12 38 25.4	+3.7
	baz=268						
IPM	**Ipoh**	47.58	238	P	P	12 31 31.4	-1.3
IPM				IAmb	IAmb	12 31 51.5	
	comp=Z,28nm,0.9s						
N19K	**Bonanza Creek**	47.60	37	P	P	12 31 33.7	+1.3
N19K	**Bonanza Creek**	47.60	37	P	P	12 31 33.4	+1.0
	baz=270,SNR=13						
N19K				S	S	12 38 24.9	+0.8
	baz=270						
O19K	**Port Alsworth**	47.68	38	P	P	12 31 34.1	+1.2
O19K				IAmb	IAmb	12 32 06.1	
	comp=Z,37nm,1.1s						
O19K	**Port Alsworth**	47.68	38	P	P	12 31 33.8	+0.9
	baz=270,SNR=7.5						
O19K				S	S	12 38 29.3	+4.4
	baz=270						
EDFI	**Ende, Flores**	47.70	205	P	P	12 31 33.4	-0.3
	comp=Z,14nm,1.1s						
SOEI	**Soe**	47.84	201	P	P	12 31 35.6	+0.9
SOEI	**Soe**	47.84	201	P	P	12 31 35.4	+0.7
	comp=Z,157nm,1.1s						
SOEI	**Soe**	47.84	201	P	P	12 31 35.3	+0.6
K20K	**Telida**	47.86	34	P	P	12 31 36.5	+2.2
K20K				IAmb	IAmb	12 31 53.8	
	comp=Z,32nm,0.9s						
K20K	**Telida**	47.86	34	P	P	12 31 35.7	+1.4
	baz=268,SNR=29						
K20K				S	S	12 38 30.9	+3.4
	baz=268						
J20K	**Nowinta River**	47.86	33	P	P	12 31 35.7	+1.4
J20K				IAmb	IAmb	12 31 49.3	
	comp=Z,62nm,1.2s						
J20K	**Nowinta River**	47.86	33	P	P	12 31 34.5	+0.2
	baz=267,SNR=26						
J20K				S	S	12 38 31.2	+3.7
	baz=267						
CHKK	**Chushkaly**	47.87	300	*e*P	P	12 31 34.2	-0.4
CHKK	**Chushkaly**	47.87	300	*e*P	P	12 31 34.3	-0.4
	baz=300						
SII	**Sitkinak Islan**	47.88	43	P	P	12 31 34.4	-0.1
	baz=274						
A21K	**Barrow**	47.88	23	P	P	12 31 34.9	+0.7
	baz=258						
L20K	**Farewell, AK**	47.92	35	P	P	12 31 35.4	+0.6
	baz=269,SNR=19						
L20K				S	S	12 38 31.6	+3.3
	baz=269						
MDOK	**Medeo**	47.99	299	*i* P	P	12 31 35.8	+0.1
MDOK	**Medeo**	47.99	299	*i* P	P	12 31 35.9	+0.1
	baz=299						
MDOK				LR	LR	12 52 19.9	
	baz=299						
Q19K	**Cape Douglas,**	48.05	40	P	P	12 31 37.0	+1.1
Q19K	**Cape Douglas,**	48.05	40	P	P	12 31 35.4	-0.4
	baz=272,SNR=15						
AAA	**Alma-Ata**	48.07	299	*e*P	P	12 31 36.5	+0.2
AAA	**Alma-Ata**	48.07	299	*e*P	P	12 31 36.5	+0.2
	baz=299						
TNSS	**Tian-Shan**	48.09	299	*i* P	P	12 31 37.1	+0.3
TNSS	**Tian-Shan**	48.09	299	*i* P	P	12 31 37.1	+0.3
	baz=299						
KDJ	**Kajisay**	48.15	297	P	P	12 31 37.4	+0.4
KDJ				IAmb	IAmb	12 31 38.8	
	comp=Z,40nm,0.7s						
KDJ	**Kajisay**	48.15	297	P	P	12 31 37.4	+0.4
KDJ				pmax	pmax		
	comp=Z,40nm,0.7s						
IMAR	**Indian Mountai**	48.15	30	P	P	12 31 37.7	+1.2
P19K	**Oil Pt**	48.24	39	P	P	12 31 38.4	+1.1
P19K				IAmb	IAmb	12 32 11.9	
	comp=Z,37nm,0.9s						
P19K	**Oil Pt**	48.24	39	P	P	12 31 37.5	+0.3
	baz=272,SNR=11						
KUU	**Kurty**	48.32	300	c*e*P	P	12 31 37.1	-1.0
KUU				*e*S	S	12 38 34.7	+0.2
KUU				pmax	pmax		
	comp=Z,43nm,0.9s						
KUU	**Kurty**	48.32	300	⇑*e*P	P	12 31 37.2	-1.0
	comp=Z,43nm,0.9s,baz=300						
KUU				*e*S	S	12 38 34.7	+0.2
	baz=300						
OHAK	**Old Harbor**	48.33	42	P	P	12 31 38.7	+0.8
OHAK				IAmb	IAmb	12 31 50.7	
	comp=Z,26nm,0.8s						
OHAK	**Old Harbor**	48.33	42	P	P	12 31 37.9	0.0
	baz=274						
BATI	**Baumata**	48.45	202	LR	LR	12 51 22.5	
	comp=Z,779nm,22.0s,baz=1.5,slow=35						
BATI	**Baumata**	48.45	202	P	P	12 31 39.9	+0.6
	comp=Z,50nm,0.8s						
RSO	**Redoubt South**	48.46	38	P	P	12 31 40.7	+1.6
H21K	**Melozitna Rive**	48.52	31	P	P	12 31 40.6	+1.3
H21K				IAmb	IAmb	12 31 54.2	
	comp=Z,34nm,1.1s						
H21K	**Melozitna Rive**	48.52	31	P	P	12 31 39.8	+0.5
	baz=267,SNR=19						
H21K				S	S	12 38 39.1	+2.4
	baz=267						
O20K	**Slope Mountain**	48.53	38	P	P	12 31 40.2	+0.7
	baz=272,SNR=7.9						
O20K				S	S	12 38 39.9	+2.8
	baz=272						
CHUM	**Lake Minchumin**	48.66	33	P	P	12 31 42.5	+2.1
	baz=269						
CHUM				S	S	12 38 42.0	+3.3
	baz=269						
KDAK	**Kodiak Island**	48.67	41	P	P	12 31 41.7	+1.2
	comp=Z,40nm,0.6s,baz=292,slow=5.8,SNR=62						
KDAK				LR	LR	12 51 42.7	
	comp=Z,500nm,21.9s,baz=269,slow=35						
	comp=Z,40nm,0.6s						
KDAK	**Kodiak Island**	48.67	41	P	P	12 31 41.9	+1.4
KDAK	**Kodiak Island**	48.67	41	P	P	12 31 41.9	+1.4
KDAK				pmax	pmax		
	comp=Z,283nm,1.8s						
KDAK	**Kodiak Island**	48.67	41	P	P	12 31 41.5	+0.9
	baz=274						
KDAK	**Kodiak Island**	48.67	41	P	P	12 31 42.6	+2.1
PPLA	**Purkeypile**	48.70	34	P	P	12 31 42.6	+1.7
PPLA	**Purkeypile**	48.70	34	P	P	12 31 43.0	+2.1
	baz=270,SNR=14						
PPLA				S	S	12 38 43.8	+4.2
	baz=270						
SPCR	**Spurr Chakacha**	48.71	37	P	P	12 31 43.0	+2.1
	baz=271,SNR=17						
CAST	**Castle Rocks**	48.75	34	P	P	12 31 43.3	+2.1
CAST				IAmb	IAmb	12 31 56.3	
	comp=Z,110nm,1.8s						
CAST	**Castle Rocks**	48.75	34	P	P	12 31 43.0	+1.9
	baz=270,SNR=20						
SPU	**Mount Spurr**	48.78	37	P	P	12 31 43.3	+1.8
I21K	**Tanana**	48.84	31	P	P	12 31 43.8	+2.0
	baz=268						
TPI	**Tanjungpandan**	48.94	225	P	P	12 31 42.1	-1.0
	comp=Z,18nm,1.1s						
BOOM	**Boomskoye usch**	48.95	298	P	P	12 31 43.3	+0.2
BOOM				IAmb	IAmb	12 31 45.1	
	comp=Z,37nm,0.8s						
BOOM	**Boomskoye usch**	48.95	298	P	P	12 31 43.3	+0.2
BOOM				pmax	pmax		
	comp=Z,37nm,0.9s						
HNR	**Honiara**	48.96	153	LR	LR	12 54 18.8	
	comp=Z,288nm,18.7s,baz=322,slow=38						
HOM	**Homer**	49.04	39	P	P	12 31 43.9	+0.5
	baz=273						
TKM2	**Tokmak 2**	49.08	299	P	P	12 31 44.7	+0.5
	SNR=71						
TKM2	**Tokmak 2**	49.08	299	*i* P	P	12 31 44.2	0.0
TKM2				pmax	pmax		
	comp=Z,65nm,0.6s						
CAPN	**Captain Cook N**	49.23	37	P	P	12 31 46.1	+1.3
	baz=273						
BPAW	**Bear Paw Mtn.**	49.25	33	P	P	12 31 46.8	+1.9
BPAW				IAmb	IAmb	12 31 59.8	
	comp=Z,94nm,1.7s						
BPAW	**Bear Paw Mtn.**	49.25	33	P	P	12 31 46.4	+1.5
	baz=270,SNR=14						
BPAW				S	S	12 38 50.2	+3.2
	baz=270						
MTN	**Manton Dam**	49.28	191	P	P	12 31 45.2	-0.4
PPBI	**Pangkal Pinang**	49.34	227	P	P	12 31 46.0	-0.2
	comp=Z,23µmcomp=Z,28nm,0.8s						
BRSE	**Bradley Lake S**	49.50	39	P	P	12 31 48.0	+1.1
	baz=274,SNR=15						
TRF	**Thorofare Moun**	49.56	34	P	P	12 31 48.6	+1.1
	baz=271,SNR=10						
TRF				S	S	12 38 54.4	+2.7
	baz=271						
CUT	**Chulitna**	49.59	35	P	P	12 31 48.6	+1.0
CUT	**Chulitna**	49.59	35	P	P	12 31 48.7	+1.1
	baz=272						
KBK	**Karagaybulak**	49.61	299	P	P	12 31 48.6	+0.3
	SNR=61						
SGDS	**Sogindy**	49.63	300	c *i*P	P	12 31 47.8	-0.4
SGDS				pmax	pmax		
	comp=Z,25nm,1.0s						
SGDS	**Sogindy**	49.63	300	⇑*i*P	P	12 31 47.9	-0.4
	comp=Z,25nm,1.0s,baz=300						
COLD	**Coldfoot**	49.64	29	P	P	12 31 49.7	+1.9
COLD	**Coldfoot**	49.64	29	P	P	12 31 49.2	+1.4
	baz=268,SNR=11						
BTLS	**Baital**	49.65	302	c *i*P	P	12 31 47.6	-0.6
BTLS				*e*S	S	12 38 52.7	-0.3
BTLS				pmax	pmax		
	comp=Z,33nm,1.2s						
BTLS	**Baital**	49.65	302	⇑*i*P	P	12 31 47.7	-0.6
	comp=Z,33nm,1.2s,baz=302						
BTLS				*e*S	S	12 38 52.8	-0.3
	baz=302						
CHMS	**Chumysh**	49.66	299	P	P	12 31 48.4	0.0
	SNR=17						
CHMS	**Chumysh**	49.66	299	*i* P	P	12 31 47.6	-0.8
CHMS				pmax	pmax		
	comp=Z,91nm,1.6s						
KSH	**Kashi**	49.75	294	P	P	12 31 52.4	+3.2
KSH				sP	sP	12 32 10.3	+1.6
KSH				pmax	pmax		
	comp=Z,43nm,0.9s						
KSH				pmax	pmax		
	comp=Z,490nm,3.9s						
KSH				LR	LR		
	comp=Z,540nm,17.5s						
KSH				LR	LR		
	comp=Z,610nm,18.9s						
KSH				LR	LR		
	comp=Z,1µm,18.6s						
COEN	**Coen**	49.77	176	P	P	12 31 51.0	+1.6
COEN	**Coen**	49.77	176	P	P	12 31 50.3	+0.9
USP	**Ospenovka**	49.77	300	P	P	12 31 49.7	+0.4
	SNR=15						
FRU1	**Bishkek**	49.80	299	P	P	12 31 49.1	-0.4
FRU1	**Bishkek**	49.80	299	P	P	12 31 49.1	-0.4
FRU1				pmax	pmax		
	comp=Z,68nm,1.0s						
H23K	**Yukon River**	49.87	31	P	P	12 31 51.6	+2.0
H23K				IAmb	IAmb	12 32 05.1	
	comp=Z,63nm,1.1s						
H23K	**Yukon River**	49.87	31	P	P	12 31 51.8	+2.2
	baz=270,SNR=45						
H23K				S	S	12 38 58.7	+3.1
	baz=270						
RC01	**Rabbit Creek A**	49.91	37	P	P	12 31 51.6	+1.6
RC01				IAmb	IAmb	12 31 54.4	
	comp=Z,53nm,1.2s						
RC01	**Rabbit Creek A**	49.91	37	P	P	12 31 50.5	+0.5
	baz=274,SNR=7.4						
RC01				S	S	12 38 55.9	-0.4
	baz=274						
BWN	**Browne**	49.91	33	P	P	12 31 52.6	+2.6
AAK	**Ala-Archa**	49.94	299	P	P	12 31 50.7	-0.1
	SNR=34						
AAK	**Ala-Archa**	49.94	299	P	P	12 31 50.6	-0.1
	comp=Z,35nm,0.7s,baz=120,slow=5.1,SNR=83						
AAK				LR	LR	12 54 30.2	
	comp=Z,2µm,19.1s,baz=79,slow=38						
	comp=Z,35nm,0.7s						
AAK	**Ala-Archa**	49.94	299	P	P	12 31 50.6	-0.1
AAK				IAmb	IAmb	12 31 52.4	
	comp=Z,42nm,0.8s						
AAK	**Ala-Archa**	49.94	299	c*e*P	P	12 31 50.4	-0.3
AAK				pmax	pmax		
	comp=Z,42nm,0.7s						
AAK	**Ala-Archa**	49.94	299	P	P	12 31 50.6	-0.1
AAK				P	P	12 31 50.6	-0.1
AAK	**Ala-Archa**	49.94	299	*i* P	P	12 31 50.3	-0.3
	SNR=39						

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AAK   Ala-Archa        49.94 299   P       P        12 31 50.8 +0.1
TOLK  Toolik Lake Re   49.94  27   P       P        12 31 51.8 +1.6
TOLK                               IAmb    IAmb     12 32 05.0
      comp=Z,39nm,1.1s
TOLK  Toolik Lake Re   49.94  27   P       P        12 31 50.9 +0.8
      baz=267,SNR=22
TOLK                               S       S        12 38 58.0 +1.4
      baz=267
I23K  Minto, Yukon-K   49.95  31   P       P        12 31 52.3 +2.1
I23K                               IAmb    IAmb     12 31 53.8
      comp=Z,82nm,1.6s
I23K  Minto, Yukon-K   49.95  31   P       P        12 31 51.2 +1.0
      baz=270,SNR=8.9
I23K                               S       S        12 38 59.3 +2.7
      baz=270
O22K  Cooper Landing   49.95  38   P       P        12 31 52.2 +1.9
O22K  Cooper Landing   49.95  38   P       P        12 31 50.9 +0.6
      baz=274
UCH   Uchtor           50.04 298   P       P        12 31 52.2 +0.4
      SNR=62
OTUK  Ortayu           50.08 306   P       P        12 31 51.2 -0.3
NEA2  Nenana           50.08  32   P       P        12 31 52.6 +1.4
      baz=271,SNR=27
NEA2                               S       S        12 39 00.3 +1.8
      baz=271
SEW   Seward           50.12  38   P       P        12 31 52.5 +1.0
SEW   Seward           50.12  38   P       P        12 31 52.1 +0.6
      baz=275,SNR=5.9
MCK   McKinley         50.16  33   P       P        12 31 53.1 +1.2
MCK                                IAmb    IAmb     12 32 06.0
      comp=Z,71nm,1.3s
MCK   McKinley         50.16  33   P       P        12 31 53.1 +1.2
MCK                                pmax    pmax
      comp=Z,71nm,1.3s
MCK   McKinley         50.16  33   P       P        12 31 53.0 +1.1
      baz=272,SNR=16
PMR   Palmer           50.17  36   P       P        12 31 53.2 +1.3
PMR                                IAmb    IAmb     12 32 03.5
      comp=Z,26nm,0.9s
PMR   Palmer           50.17  36   P       P        12 31 53.2 +1.3
PMR                                pmax    pmax
      comp=Z,26nm,0.9s
PMR   Palmer           50.17  36   P       P        12 31 52.5 +0.6
      baz=274,SNR=9.1
PMR                                S       S        12 38 59.6 -0.2
      baz=274
PSI   Prapat           50.23 239   LR      LR       12 52 45.9
      comp=Z,470nm,20.2s,baz=44,slow=36
WAT1  Susitna Watana   50.37  34   P       P        12 31 54.3 +0.8
      baz=273
EKS2  Erkin-Say        50.44 299   P       P        12 31 54.4 -0.1
      SNR=28
BRVK  Borovoye         50.45 313   P       P        12 31 53.8 -0.4
BRVK                               IAmb    IAmb     12 32 31.1
      comp=Z,27nm,0.9s
BRVK  Borovoye         50.45 313ceP        P        12 31 53.4 -0.8
BRVK                               pmax    pmax
      comp=Z,22nm,0.7s
BRVK  Borovoye         50.45 313   P       P        12 31 54.3  0.0
BRVK                               P       P        12 31 54.3  0.0
BRVK  Borovoye         50.45 313   P       P        12 31 54.0 -0.2
KNK   Knik Glacier     50.50  36   P       P        12 31 55.7 +1.2
KNK                                IAmb    IAmb     12 32 33.1
      comp=Z,29nm,1.0s
KNK   Knik Glacier     50.50  36   P       P        12 31 55.8 +1.2
      baz=274
SML   Sawmill          50.54  36   P       P        12 31 55.5 +0.7
SML                                IAmb    IAmb     12 32 16.9
      comp=Z,34nm,0.8s
SML   Sawmill          50.54  36   P       P        12 31 55.9 +1.1
      baz=274,SNR=11
SML                                S       S        12 39 07.3 +2.2
      baz=274
H24K  Noodor Dome      50.56  30   P       P        12 31 56.9 +2.0
H24K                               IAmb    IAmb     12 32 10.1
      comp=Z,54nm,1.1s
H24K  Noodor Dome      50.56  30   P       P        12 31 56.5 +1.7
      baz=271,SNR=30
H24K                               S       S        12 39 07.1 +1.9
      baz=271
TCOL  CIGO, UAF Yank   50.59  32   P       P        12 31 56.5 +1.4
TCOL                               IAmb    IAmb     12 32 01.6
      comp=Z,36nm,0.8s
TCOL  CIGO, UAF Yank   50.59  32   P       P        12 31 56.5 +1.4
      baz=272,SNR=14
TCOL                               S       S        12 39 08.0 +2.4
      baz=272
COLA  College          50.59  32   P       P        12 31 56.7 +1.7
COLA                               IAmb    IAmb     12 32 01.6
      comp=Z,36nm,0.8s
COLA  College          50.59  32c iP       P        12 31 56.1 +1.1
COLA                               pmax    pmax
      comp=Z,31nm,0.8s
COLA  College          50.59  32   P       P        12 31 56.5 +1.4
      baz=272
COLA                               S       S        12 39 08.2 +2.6
      baz=272
COLA  College          50.59  32   P       P        12 31 59.2 +4.2
COLA                               pP      sP       12 32 11.6 -3.0
AML   Almayashu        50.65 298   P       P        12 31 57.0 +0.6
      SNR=239
AML   Almayashu        50.65 298 i P       P        12 31 56.6 +0.3
      SNR=242
WAT6  Susitna Watana   50.76  35   P       P        12 31 57.6 +1.0
      baz=274,SNR=11
WAT6                               S       S        12 39 09.3 +0.9
      baz=274
POKR  Poker Plat Res   50.76  31   P       P        12 31 58.5 +2.1
POKR  Poker Plat Res   50.76  31   P       P        12 31 58.3 +1.9
      baz=272,SNR=27
POKR                               S       S        12 39 09.5 +1.5
      baz=272
M23K  Glacier View     50.82  36   P       P        12 31 58.2 +1.3
      baz=275
DHY   Denali Highway   50.89  34   P       P        12 31 58.1 +0.5
      baz=274,SNR=16
DHY                                S       S        12 39 08.8 -1.4
      baz=274
HDA   Harding Lake     51.00  32   P       P        12 31 59.0 +0.8
HDA                                IAmb    IAmb     12 32 09.7
      comp=Z,32nm,0.8s
HDA   Harding Lake     51.00  32   P       P        12 31 58.7 +0.5
      baz=273,SNR=40
IL31                   51.01  32   P       P        12 31 59.5 +1.3
IL31                               IAmb    IAmb     12 32 14.3
      comp=Z,48nm,0.9s
ILAR  Eielson Array    51.01  32   P       P        12 31 58.9 +0.6
      comp=Z,16nm,0.7s,baz=258,slow=2.1,SNR=90
ILAR                               LR      LR       12 54 34.6
      comp=Z,250nm,21.2s,baz=270,slow=37
      comp=Z,16nm,0.7s
SCM   Sheep Creek Mo   51.01  36   P       P        12 31 59.7 +1.3
      baz=275,SNR=12
SCM                                S       S        12 39 13.5 +1.8
      baz=275
GLI   Glacier Island   51.21  37   P       P        12 32 00.7 +0.9
      baz=276
M24K  Tolsona, Glenn   51.53  35   P       P        12 32 04.3 +2.0
M24K  Tolsona, Glenn   51.53  35   P       P        12 32 02.7 +0.5
      baz=276,SNR=10
M24K                               S       S        12 39 21.1 +2.4
      baz=276
K24K  Donnelly Dome    51.55  33   P       P        12 32 03.3 +0.9
      baz=275,SNR=14
K24K                               S       S        12 39 19.0 -0.1
      baz=275
J25K  Salcha River,    51.67  32   P       P        12 32 03.2 -0.1
      baz=274
J25K                               S       S        12 39 23.0 +2.3
      baz=274
KLU   Klutina          51.71  36   P       P        12 32 05.0 +1.4
      baz=276,SNR=14
KLU                                S       S        12 39 24.0 +2.6
      baz=276
Q23K  Middleton Isla   51.75  39   P       P        12 32 05.2 +1.4
      baz=278
PAX   Paxson           51.77  34   P       P        12 32 05.3 +1.3
PAX   Paxson           51.77  34   P       P        12 32 05.4 +1.3
PAX                                pmax    pmax
      comp=Z,25nm,1.2s
PAX   Paxson           51.77  34   P       P        12 32 05.1 +1.0
      baz=276,SNR=12
PAX                                S       S        12 39 22.9 +0.8
      baz=276
BMAR  Burnt Mountain   51.82  28   P       P        12 32 06.6 +2.4
DIV   Divide           51.82  36   P       P        12 32 06.0 +1.5
EYAK  Cordova Ski Ar   51.90  37   P       P        12 32 06.8 +1.9
EYAK                               IAmb    IAmb     12 32 42.9
      comp=Z,40nm,1.1s
EYAK  Cordova Ski Ar   51.90  37   P       P        12 32 05.0 +0.1
      baz=277,SNR=6.4
HARP  HAARP            51.97  35   P       P        12 32 06.8 +1.4
      baz=276
HARP                               S       S        12 39 29.1 +4.3
      baz=276
RIDG  Independent Ri   51.97  33   P       P        12 32 06.3 +0.8
RIDG                               IAmb    IAmb     12 33 21.0
      comp=Z,102nm,1.7s
DZA   Taraz            52.10 300  eP       P        12 32 06.6 -0.2
DZA                               eS       S        12 39 27.6 +0.4
DZA                                pmax    pmax
      comp=Z,25nm,0.7s
DZA   Taraz            52.10 300  eP       P        12 32 06.7 -0.2
      comp=Z,25nm,0.7s,baz=300
DZA                               eS       S        12 39 27.6 +0.4
      baz=300
GSI   Gunungsitoli     52.24 238   P       P        12 32 08.0  0.0
GSI   Gunungsitoli     52.24 238   P       P        12 32 07.7 -0.3
      comp=Z,98nm,0.7s
GSI   Gunungsitoli     52.24 238   P       P        12 32 08.5 +0.5
KLI   Kotabumi         52.26 226   P       P        12 32 06.7 -1.4
      comp=Z,6µmcomp=Z,329nm,1.1s
LEM   Lembang          52.30 222   P       P        12 32 07.6 -1.0
      comp=Z,42nm,0.6s,baz=22,slow=8.1,SNR=7.4
      comp=Z,42nm,0.6s
N25K  Chitina, Valde   52.33  36   P       P        12 32 09.5 +1.3
N25K                               IAmb    IAmb     12 32 24.1
      comp=Z,79nm,1.6s
N25K  Chitina, Valde   52.33  36   P       P        12 32 09.7 +1.5
      baz=278,SNR=8.6
N25K                               S       S        12 39 31.5 +1.7
      baz=278
SCRK  Sand Creek       52.33  33   P       P        12 32 09.4 +1.1
SCRK                               IAmb    IAmb     12 32 26.8
      comp=Z,48nm,1.0s
DOT   Dot Lake         52.33  33   P       P        12 32 09.1 +1.0
DOT                                IAmb    IAmb     12 32 21.9
      comp=Z,119nm,1.8s
BMRM  Bremner River    52.41  37   P       P        12 32 10.3 +1.5
      baz=278,SNR=17
BMRM                               S       S        12 39 32.9 +2.1
      baz=278
J26L  Joseph Creek     52.46  32   P       P        12 32 09.8 +0.7
      baz=276,SNR=17
J26L                               S       S        12 39 31.8 +0.3
      baz=276
KNRA  Kununurra        52.46 194   P       P        12 32 10.0 +0.5
KNRA  Kununurra        52.46 194   P       P        12 32 10.6 +1.1
MENT  Mentasta         52.57  34   P       P        12 32 11.3 +1.4
MENT                               IAmb    IAmb     12 32 25.8
      comp=Z,79nm,1.2s
KK31  Karatay Array    52.62 300   P       P        12 32 10.3 -0.3
KK31                               IAmb    IAmb     12 32 12.8
      comp=Z,59nm,0.9s
KK31  Karatay Array    52.62 300   P       P        12 32 10.3 -0.3
KK31                               pmax    pmax
      comp=Z,59nm,1.0s
KKAR  Karatay Array    52.62 300   P       P        12 32 10.1 -0.5
KKAR  Karatay Array    52.62 300   P       P        12 32 10.7 +0.1
KKAR                               IAmb    IAmb     12 32 12.7
      comp=Z,59nm,0.9s
KKAR  Karatay Array    52.62 300   P       P        12 32 10.7 +0.1
KKAR                               pmax    pmax
      comp=Z,59nm,1.0s
L26K  Log Cabin Wild   52.72  34   P       P        12 32 12.9 +1.9
L26K                               IAmb    IAmb     12 32 30.6
      comp=Z,65nm,1.1s
L26K  Log Cabin Wild   52.72  34   P       P        12 32 13.0 +1.9
      baz=277,SNR=40
L26K                               S       S        12 39 37.6 +2.5
      baz=277
DRK   Karamyk          52.82 296   P       P        12 32 12.7 +0.2
M26K  Nabesna, AK      52.97  35   P       P        12 32 14.2 +1.3
M26K                               IAmb    IAmb     12 32 16.5
      comp=Z,56nm,1.3s
M26K  Nabesna, AK      52.97  35   P       P        12 32 14.8 +1.9
      baz=278,SNR=24
M26K                               S       S        12 39 41.4 +2.9
      baz=278
MCARA McCarthy VSAT    53.10  36   P       P        12 32 16.3 +2.5
MCARA McCarthy VSAT    53.10  36   P       P        12 32 15.4 +1.6
      baz=279,SNR=14
MCARA                              S       S        12 39 43.0 +2.8
      baz=279
K27K  Chicken          53.16  33   P       P        12 32 15.9 +1.7
      baz=278
K27K                               S       S        12 39 43.1 +2.2
      baz=278
IUG   Iuzhnay          53.25 299c iP       P        12 32 15.4 +0.1
IUG                              i S       S        12 39 43.8 +0.9
IUG   Iuzhnay          53.25 299⇑iP        P        12 32 15.5 +0.1
      baz=299
IUG                              i S       S        12 39 43.8 +0.9
      baz=299
L27K  Beaver Creek,    53.41  34   P       P        12 32 18.0 +1.9
L27K                               IAmb    IAmb     12 32 32.0
      comp=Z,47nm,1.1s
L27K  Beaver Creek,    53.41  34   P       P        12 32 17.8 +1.8
      baz=279,SNR=56
L27K                               S       S        12 39 47.5 +3.2
      baz=279
BCAR  Beaver Creek A   53.42  34   P       P        12 32 18.0 +1.8
EGAK  Eagle            53.45  32   P       P        12 32 17.4 +1.1
EGAK  Eagle            53.45  32   P       P        12 32 17.0 +0.7
      baz=278,SNR=21
M27K  Edge Creek, AK   53.49  35   P       P        12 32 18.3 +1.4
M27K                               IAmb    IAmb     12 32 31.5
      comp=Z,42nm,1.1s
M27K  Edge Creek, AK   53.49  35   P       P        12 32 18.2 +1.4
      baz=279,SNR=21
M27K                               S       S        12 39 57.2  +11
      baz=279
MESA  MESA             53.83  37   P       P        12 32 19.7 +0.3
      baz=281
BVCY  Beaver Creek     53.95  34   P       P        12 32 20.9 +0.8
      baz=280,SNR=16
BVCY                               S       S        12 40 01.4  +10
      baz=280
CTG   Chitna Glacier   53.98  36   P       P        12 32 21.4 +1.0
      baz=281
MTSU  Mount Surprise   53.99 175   P       P        12 32 21.8 +1.0
TAS   Tashkent         54.03 299   P       P        12 32 21.1 +0.1
TAS   Tashkent         54.03 299   P       P        12 32 21.1 +0.1
TAS                                pmax    pmax
      comp=Z,167nm,0.7s
GAR   Garm             54.07 296   P       P        12 32 20.8 -0.7
YUK3  Moose Creek      54.25  35   P       P        12 32 23.2 +0.7
      baz=281,SNR=12
DAWY  Dawson           54.32  32   P       P        12 32 24.4 +1.6
DAWY  Dawson           54.32  32   P       P        12 32 23.3 +0.6
      baz=280,SNR=7.6
DAWY                               S       S        12 40 00.6 +3.9
      baz=280
I29M  Ogilvie Camp,    54.56  31   P       P        12 32 25.9 +1.5
      baz=280
PINM  Pinnacle         54.68  37   P       P        12 32 26.5 +1.0
      baz=282
BCPM  Bancas Point     55.01  37   P       P        12 32 29.7 +1.9
EPYK  Eagle Plains     55.02  29   P       P        12 32 29.7 +1.9
EPYK  Eagle Plains     55.02  29   P       P        12 32 29.5 +1.7
      baz=281,SNR=55
EPYK                               S       S        12 40 08.8 +2.8
      baz=281
CHGR  Chuyangaron      55.04 296   P       P        12 32 28.0 -0.4
CHGR  Chuyangaron      55.04 296   P       P        12 32 28.0 -0.4
CHGR                               pmax    pmax
      comp=Z,226nm,0.6s
SVE   Sverdlovsk       55.14 319deP        P        12 32 28.9 +0.2
SVE                                pmax    pmax
      comp=Z,76nm,1.5s
SVE                                MLR     MLR
      comp=Z,1µm,17.0s
YUK4  Talbot Arm       55.19  35   P       P        12 32 30.9 +1.6
      baz=282,SNR=7.0
PNL   Peninsula        55.19  38   P       P        12 32 29.7 +0.6
      baz=283
PNL                                S       S        12 40 10.1 +1.7
      baz=283
YUK6  Outpost Mounta   55.41  36   P       P        12 32 32.3 +1.4
      baz=283,SNR=8.8
WB0   Warramunga Arr   55.70 186   P       P        12 32 32.8 -0.3
M30M  Minto, Yukon     55.77  34   P       P        12 32 35.5 +2.3
M30M                               IAmb    IAmb     12 32 54.4
      comp=Z,32nm,1.3s
M30M  Minto, Yukon     55.77  34   P       P        12 32 34.6 +1.4
      baz=283,SNR=14
M30M                               S       S        12 40 15.4 -0.7
      baz=283
HYT   Haines Junctio   55.84  36   P       P        12 32 35.6 +1.7
HYT                                IAmb    IAmb     12 33 24.4
      comp=Z,61nm,1.2s
HYT   Haines Junctio   55.84  36   P       P        12 32 35.6 +1.7
      baz=284,SNR=20
HYT                                S       S        12 40 21.5 +4.2
      baz=284
INK   Inuvik           55.85  27   P       P        12 32 34.3 +0.7
INK                                IAmb    IAmb     12 32 54.1
      comp=Z,37nm,1.1s
INK   Inuvik           55.85  27   P       P        12 32 34.3 +0.7
INK                                pmax    pmax
      comp=Z,37nm,1.1s
INK   Inuvik           55.85  27   P       P        12 32 34.5 +0.9
      baz=282,SNR=36
INK                                S       S        12 40 18.8 +1.9
      baz=282
WRAB  Tennant Creek    55.87 186   P       P        12 32 34.6 +0.3
WRAB  Tennant Creek    55.87 186ceP        P        12 32 34.3  0.0
WRAB                               pmax    pmax
      comp=Z,25nm,0.7s
WRAB  Tennant Creek    55.87 186   P       P        12 32 33.9 -0.4
WRAB  Tennant Creek    55.87 186   P       P        12 32 34.4 +0.1
WRAB                               pP      pP       12 32 48.1 -0.1
WB2   Warramunga Arr   55.88 186   P       P        12 32 33.9 -0.5
WR0   Warramunga Arr   55.88 186   P       P        12 32 34.1 -0.3
WRA   Warramunga Arr   55.88 186   P       P        12 32 33.6 -0.8
      comp=Z,23nm,0.5s,baz=0.5,slow=7.6,SNR=268
WRA                                S       S        12 40 17.3 -1.0
      comp=Z,3.7nm,1.2s,baz=12,slow=17,SNR=4.8
WRA                                LR      LR       12 56 01.3
      comp=Z,903nm,20.4s,baz=17,slow=36
WRA                                PKPPKP  P'P'df   13 02 32.8 +3.7
      comp=Z,0.5nm,0.9s,baz=183,slow=1.8,SNR=2.2
      comp=Z,23nm,0.5s
WRA   Warramunga Arr   55.88 186   P       P        12 32 34.1 -0.3
WRA   Warramunga Arr   55.88 186   P       P        12 32 34.1 -0.3
WRA                                pmax    pmax
      comp=Z,23nm,1.2s
N30M  Aishikik Lake    55.89  35   P       P        12 32 35.8 +1.7
      baz=284,SNR=6.4
N30M                               S       S        12 40 21.5 +3.7
      baz=284
CTA   Charters Tower   56.09 173   LR      LR       12 56 12.2
      comp=Z,534nm,20.8s,baz=348,slow=36
CTA   Charters Tower   56.09 173   P       P        12 32 37.4 +1.5
CTAO  Charters Tower   56.09 173   P       P        12 32 37.1 +1.2
CTAO  Charters Tower   56.09 173   P       P        12 32 38.9 +3.0
QIS   Mount Isa        56.24 180   P       P        12 32 38.4 +1.4
ARU   Arti             56.35 319   P       P        12 32 36.6 -0.8
      comp=Z,18nm,0.5s,baz=80,slow=3.4,SNR=68
ARU                                LR      LR       12 59 00.6
      comp=Z,543nm,19.3s,baz=76,slow=38
      comp=Z,18nm,0.5s
ARU   Arti             56.35 319   P       P        12 32 37.0 -0.4
ARU   Arti             56.35 319c iP       P        12 32 36.8 -0.6
ARU                                *PP     pP       12 32 50.4 -0.9
ARU                                                 12 33 30.9
ARU                                S       S        12 40 26.4 +2.5
ARU                                SS      SS       12 44 04.6 -6.2
ARU                                pmax    pmax
      comp=Z,125nm,1.5s
ARU   Arti             56.35 319   P       P        12 32 37.2 -0.2
ARU                                x       x        12 32 42.2
N31M  Braeburn, Yuko   56.49  35   P       P        12 32 40.8 +2.4
N31M                               IAmb    IAmb     12 32 58.9
      comp=Z,26nm,0.8s
N31M  Braeburn, Yuko   56.49  35   P       P        12 32 40.0 +1.6
      baz=285,SNR=18
N31M                               S       S        12 40 30.2 +4.4
      baz=285
KBL   Kabul            56.67 291   P       P        12 32 39.1 -1.2
KBL                                IAmb    IAmb     12 32 41.1
      comp=Z,32nm,0.7s
KBL   Kabul            56.67 291   P       P        12 32 39.1 -1.2
KBL                                pmax    pmax
      comp=Z,32nm,0.7s
KBL   Kabul            56.67 291   P       P        12 32 40.0 -0.3
      SNR=19
KBL                                P       P        12 32 40.0 -0.3
      SNR=19
M31M  Drury Creek, Y   56.94  34   P       P        12 32 43.0 +1.4
M31M  Drury Creek, Y   56.94  34   P       P        12 32 42.8 +1.3
      baz=285,SNR=13
HYBB  Hyderabad (bro   56.98 268  eP       P        12 32 42.0 -0.5
HYBB                               IVmB_BB          12 32 43.5
      comp=Z,274nm,1.4s
HYBB                              ePcP     PcP      12 33 37.7 +0.4
WHY   Whitehorse       57.13  36   P       P        12 32 44.5 +1.5
WHY                                IAmb    IAmb     12 32 59.4
      comp=Z,108nm,1.8s
WHY   Whitehorse       57.13  36   P       P        12 32 44.5 +1.5
      baz=286,SNR=17
WHY                                S       S        12 40 39.4 +5.0
      baz=286
SKAG  Skagway          57.25  37   P       P        12 32 44.9 +1.3
SKAG                               IAmb    IAmb     12 32 48.5
      comp=Z,82nm,1.4s
SKAG  Skagway          57.25  37   P       P        12 32 45.3 +1.6
      baz=286,SNR=8.5
A36M  Sachs Harbour    57.67  22   P       P        12 32 48.1 +1.7
A36M  Sachs Harbour    57.67  22   P       P        12 32 48.1 +1.7
      baz=287,SNR=21
A36M                               S       S        12 40 42.9 +2.2
      baz=287
AB31  Akbulak array    57.70 310 i P       P        12 32 46.4 -0.7
ABKAR Akbulak array    57.70 310   P       P        12 32 46.4 -0.7
ABKAR Akbulak array    57.70 310   P       P        12 32 46.5 -0.6
ABKAR                              IAmb    IAmb     12 32 49.1
      comp=Z,111nm,1.5s
BESE  Bessie Mountai   57.74  38   P       P        12 32 48.8 +1.5
BESE                               IAmb    IAmb     12 33 08.5
      comp=Z,51nm,1.1s
SIT   Sitka            57.95  40   P       P        12 32 51.2 +2.5
SIT   Sitka            57.95  40   P       P        12 32 51.2 +2.5
SIT                                pmax    pmax
      comp=Z,19nm,0.9s
SIT   Sitka            57.95  40   P       P        12 32 49.7 +1.0
      baz=288
SIT                                S       S        12 40 50.5 +5.6
      baz=288
JIS   Juneau Island    58.06  38   P       P        12 32 51.9 +2.5
JIS                                IAmb    IAmb     12 33 11.0
      comp=Z,50nm,1.0s
P33M  Teslin, Yukon    58.24  36   P       P        12 32 52.9 +2.1
P33M                               IAmb    IAmb     12 33 07.1
      comp=Z,55nm,1.1s
P33M  Teslin, Yukon    58.24  36   P       P        12 32 52.4 +1.7
      baz=288,SNR=28
P33M                               S       S        12 40 53.6 +4.7
      baz=288
AKTO  Aktyubinsk       58.48 312   P       P        12 32 52.0 -0.5
      comp=Z,17nm,0.7s,baz=64,slow=5.1,SNR=36
AKTO                               LR      LR       12 59 19.5
      comp=Z,639nm,18.3s,baz=71,slow=37
      comp=Z,17nm,0.7s
C36M  Paulatuk         58.87  24   P       P        12 32 56.3 +1.4
C36M  Paulatuk         58.87  24   P       P        12 32 55.7 +0.8
      baz=290,SNR=32
C36M                               S       S        12 40 57.2 +0.7
      baz=290
AS31  Alice Springs    59.61 186   P       P        12 33 00.7 +0.2
ASAR  Alice Springs    59.61 186   P       P        12 33 00.2 -0.3
      comp=Z,7.5nm,0.7s,baz=15,slow=6.0,SNR=83
ASAR                               S       S        12 41 03.9 -3.2
      comp=Z,0.7nm,0.7s,baz=14,slow=18,SNR=4.4
ASAR                               LR      LR       12 58 18.0
      comp=Z,737nm,21.4s,baz=12,slow=36
ASAR                               PKP2bc           13 02 40.6
      comp=Z,4.1nm,1.0s,baz=168,slow=2.0,SNR=12
      comp=Z,7.5nm,0.7s
ASAR  Alice Springs    59.61 186   P       P        12 33 00.8 +0.3
ASAR  Alice Springs    59.61 186   P       P        12 33 00.8 +0.3
CRAG  Craig            59.63  41   P       P        12 33 01.6 +1.3
      baz=290
WRAK  Wrangell Islan   59.71  40   P       P        12 33 03.4 +2.5
WRAK                               IAmb    IAmb     12 33 45.8
      comp=Z,34nm,1.2s
WRAK  Wrangell Islan   59.71  40   P       P        12 33 02.7 +1.8
      baz=290
S34M  Telegraph Cree   59.81  38   P       P        12 33 03.8 +2.2
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	baz=290,SNR=9.0						
TGTN	**Hyland Airport**	**59.91**	**34**	P	**P**	**12 33 03.9**	**+1.7**
	baz=291,SNR=10						
MBWA	**Marble Bar**	**59.97**	**202**	P	**P**	**12 33 03.4**	**+0.4**
MBWA	**Marble Bar**	**59.97**	**202**	P	**P**	**12 33 03.4**	**+0.4**
MBWA	**Marble Bar**	**59.97**	**202**	P	**P**	**12 33 03.2**	**+0.2**
MBWA				x	x	12 33 11.5	
DLBC	**Dease Lake**	**60.18**	**37**	LR	LR	13 02 36.4	
	comp=Z,118nm,18.1s,baz=299,slow=39						
DLBC	**Dease Lake**	**60.18**	**37**	P	**P**	**12 33 06.8**	**+2.6**
DLBC				IAmb	IAmb	12 33 20.8	
	comp=Z,42nm,1.1s						
POO	**Poona**	**60.22**	**272**	⇑*i*P	**P**	**12 33 03.0**	**-2.0**
	comp=Z,100nm,0.2s						
PSA00	**Pilbara Seismi**	**60.33**	**202**	P	**P**	**12 33 05.7**	**+0.3**
PSA00	**Pilbara Seismi**	**60.33**	**202**	P	**P**	**12 33 05.8**	**+0.3**
KIRV	**Kirov**	**60.36**	**323**	P	**P**	**12 33 05.5**	**+0.3**
	comp=Z,93nm,0.6s,baz=57,slow=0.8,SNR=26						
KIRV				LR	LR	13 00 31.9	
	comp=Z,902nm,22.0s,baz=59,slow=37						
	comp=Z,93nm,0.6s						
KIRV	**Kirov**	**60.36**	**323**	*ce*P	**P**	**12 33 05.0**	**-0.3**
HOPEN	**Hopen**	**60.76**	**346**	*e*P	**P**	**12 33 08.5**	**+0.8**
DIB	**Dawson Inlet,**	**60.80**	**44**	P	**P**	**12 33 09.6**	**+1.2**
DIB				IAmb	IAmb	12 33 25.9	
	comp=Z,26nm,1.1s						
PALK	**Pallekele**	**60.98**	**257**	LR	LR	13 01 41.9	
	comp=Z,304nm,20.6s,baz=150,slow=38						
PALK	**Pallekele**	**60.98**	**257**	P	**P**	**12 33 10.3**	**+0.1**
PALK	**Pallekele**	**60.98**	**257**	P	**P**	**12 33 10.3**	**+0.1**
PALK				sP	**sP**	**12 33 32.7**	**+2.7**
PRGR	**Permogore**	**60.99**	**327**	⇓*i*P	**P**	**12 33 09.6**	**+0.1**
PRGR				*e**PP	**pP**	**12 33 21.8**	**-1.7**
PRGR				*e*		12 33 51.5	
PRGR				*e*		12 35 23.7	
ALE	**Alert**	**61.22**	**3**	P	**P**	**12 33 11.7**	**+0.9**
ALE				pP	**sP**	**12 33 29.7**	**-0.9**
ALE				sP	pP	12 33 37.2	+12
SPB2	**Spitsbergen Ar**	**61.31**	**349**	P	**P**	**12 33 13.0**	**+1.5**
SPB2				IAmb	IAmb	12 33 13.5	
	comp=Z,57nm,1.2s						
SPA0	**Spitsbergen Ar**	**61.31**	**349**	*e*P	**P**	**12 33 12.9**	**+1.4**
SPITS	**Spitsbergen Ar**	**61.31**	**349**	P	**P**	**12 33 12.6**	**+1.1**
	comp=Z,6.3nm,0.6s,baz=76,slow=7.8,SNR=24						
SPITS				LR	LR	13 00 23.5	
	comp=Z,476nm,21.6s,baz=260,slow=36						
	comp=Z,6.3nm,0.6s						
SPITS	**Spitsbergen Ar**	**61.31**	**349**	P	**P**	**12 33 13.0**	**+1.4**
SPITS				pmax	pmax		
	comp=Z,68nm,1.4s						
EUNU	**Eureka**	**61.39**	**8**	P	**P**	**12 33 12.5**	**+0.4**
EUNU				IAmb	IAmb	12 33 14.6	
	comp=Z,32nm,0.7s						
KBS	**Kingsbay**	**61.48**	**350**	*e*P	**P**	**12 33 13.0**	**+0.4**
KBS	**Kingsbay**	**61.48**	**350**	P	**P**	**12 33 13.5**	**+0.9**
KBS				pP	**pP**	**12 33 28.3**	**+1.7**
KBS				sP	**sP**	**12 33 38.2**	**+5.8**
WRKA	**Warakurna**	**61.69**	**192**	P	**P**	**12 33 15.0**	**+0.3**
HRA	**Herat**	**61.84**	**294**	P	**P**	**12 33 16.2**	**+0.2**
HRA				IAmb	IAmb	12 33 17.8	
	comp=Z,34nm,0.7s						
EIDS	**Eidsvold**	**61.93**	**169**	P	**P**	**12 33 18.2**	**+1.9**
EIDS				IAmb	IAmb	12 33 35.2	
	comp=Z,34nm,1.0s						
GRNB	**Grenville Isla**	**61.94**	**42**	P	**P**	**12 33 17.3**	**+1.1**
GRNB				IAmb	IAmb	12 33 36.9	
	comp=Z,25nm,1.1s						
NOR	**Nord**	**62.01**	**356**	*i* P	**P**	**12 33 16.2**	**0.0**
NOR				IAmb	IAmb	12 33 41.8	
	comp=Z,6.7nm,0.8s						
HSPB	**Hornsund (broa**	**62.21**	**348**	*e*P	**P**	**12 33 17.1**	**-0.4**
HSPB	**Hornsund (broa**	**62.21**	**348**	*e*P	**P**	**12 33 16.7**	**-0.9**
QLP	**Quilpie**	**62.37**	**176**	P	**P**	**12 33 20.8**	**+1.7**
PCHI	**Peechi**	**62.55**	**263**	*e*P	**P**	**12 33 21.3**	**+0.6**
LVZ	**Lovozero**	**62.57**	**336**	P	**P**	**12 33 20.7**	**+0.6**
LVZ				IAmb	IAmb	12 33 41.7	
	comp=Z,56nm,1.4s						
LVZ	**Lovozero**	**62.57**	**336**	*ce*P	**P**	**12 33 21.0**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,32nm,1.7s						
LVZ	**Lovozero**	**62.57**	**336**	P	**P**	**12 33 21.3**	**+1.2**
RMQ	**Roma**	**62.70**	**171**	P	**P**	**12 33 23.4**	**+2.0**
NOUC	**Port Laguerre**	**62.94**	**152**	P	**P**	**12 33 26.6**	**+3.6**
NOUC				x	x	12 33 37.6	
DZM	**Mont Dzumac**	**62.96**	**152**	LR	LR	13 01 17.6	
	comp=Z,715nm,19.5s,baz=331,slow=36						
DZM	**Mont Dzumac**	**62.96**	**152**	*e*LR	LR	12 52 23.1	
	comp=Z,2µm,23.7s						
DZM				*e*LR	LR	12 52 34.8	
	comp=Z,2µm,31.9s						
DZM	**Mont Dzumac**	**62.96**	**152**	P	**P**	**12 33 25.8**	**+2.5**
DZM	**Mont Dzumac**	**62.96**	**152**	P	**P**	**12 33 26.8**	**+3.5**
DZM				x	x	12 33 38.2	
DZM				pP	**sP**	**12 33 44.9**	**+1.8**
DZM				sP	**PcP**	**12 33 56.1**	**-4.9**
APA	**Apatity**	**63.15**	**336**	⇓*i*P	**P**	**12 33 22.2**	**-1.7**
APA				*i* S	S	12 41 41.0	-10
APA				*i* SSS	SSS	12 48 49.0	
APA				MLR	MLR		
	comp=Z,1µm,19.0s						
GEYT	**Alibeck**	**63.29**	**299**	P	**P**	**12 33 25.4**	**0.0**
	comp=Z,14nm,0.7s,baz=62,slow=3.5,SNR=16						
GEYT				LR	LR	13 02 52.1	
	comp=Z,1µm,18.5s,baz=64,slow=38						
	comp=Z,14nm,0.7s						
GEYT	**Alibeck**	**63.29**	**299**	P	**P**	**12 33 25.6**	**+0.1**
GEYT				IAmb	IAmb	12 33 27.3	
	comp=Z,18nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**63.29**	**299**	P	**P**	**12 33 25.1**	**-0.3**
GYA0B				IAmb	IAmb	12 33 27.2	
	comp=Z,24nm,0.8s						
INKA	**Innaminka**	**63.40**	**179**	P	**P**	**12 33 27.1**	**+1.2**
OOD	**Oodnadatta**	**63.57**	**184**	P	**P**	**12 33 27.9**	**+0.8**
BBB	**Bella Bella**	**63.64**	**43**	LR	LR	12 56 32.8	
	comp=Z,139nm,21.9s,baz=254,slow=32						
BELG	**Belogornoye**	**63.75**	**317**	P	**P**	**12 33 26.9**	**-1.2**
	comp=Z,73nm,0.7s,baz=94,slow=0.7,SNR=17						
BELG				LR	LR	13 04 07.3	
	comp=Z,527nm,18.4s,baz=94,slow=39						
	comp=Z,73nm,0.7s						
BELG	**Belogornoye**	**63.75**	**317**	*c i*P	**P**	**12 33 27.4**	**-0.7**
BELG				pmax	pmax		
	comp=Z,13nm,0.8s						
RES	**Resolute Bay**	**63.90**	**14**	LR	LR	13 03 08.4	
	comp=Z,356nm,20.9s,baz=290,slow=38						
RES	**Resolute Bay**	**63.90**	**14**	P	**P**	**12 33 29.7**	**+0.9**
RES				IAmb	IAmb	12 33 31.6	
	comp=Z,95nm,1.8s						
RES	**Resolute Bay**	**63.90**	**14**	P	**P**	**12 33 29.7**	**+0.9**
RES				pmax	pmax		
	comp=Z,95nm,1.8s						
KEV	**Kevo**	**63.99**	**339**	P	**P**	**12 33 29.9**	**+0.5**
KLMR	**Klimovskoe**	**64.00**	**328**	*e*P	**P**	**12 33 27.9**	**-1.7**
KLMR				*e*		12 35 48.5	
KLMR				pmax	pmax		
	comp=Z,41nm,0.7s						
KLMR	**Klimovskoe**	**64.00**	**328**	*e*P	**P**	**12 33 27.9**	**-1.7**
KLMR				AMP		12 33 30.7	
	comp=Z,41nm,0.7s						
KLMR				*e*PP	**PP**	**12 35 48.6**	**-1.7**
HAMF	**Hammerfest**	**64.41**	**341**	*e*P	**P**	**12 33 32.0**	**-0.1**
ARA0	**ARCESS Array S**	**64.55**	**339**	*e*P	**P**	**12 33 33.5**	**+0.4**
ARCES	**ARCESS Array B**	**64.55**	**339**	P	**P**	**12 33 32.8**	**-0.3**
	comp=Z,13nm,0.8s,baz=50,slow=7.6,SNR=28						
ARCES				LR	LR	13 04 52.6	
	comp=Z,399nm,18.0s,baz=60,slow=39						
	comp=Z,13nm,0.8s						
ARCES	**ARCESS Array B**	**64.55**	**339**	P	**P**	**12 33 34.1**	**+1.0**
ARCES				IAmb	IAmb	12 33 54.9	
	comp=Z,38nm,1.2s						
ARCES	**ARCESS Array B**	**64.55**	**339**	P	**P**	**12 33 34.1**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,38nm,1.2s						
YKA	**Yellowknife Ar**	**65.30**	**30**	P	**P**	**12 33 38.6**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=299,slow=6.5,SNR=35						
YKA				LR	LR	13 03 14.7	
	comp=Z,82nm,21.1s,baz=284,slow=37						
	comp=Z,5.8nm,0.7s						
YKA	**Yellowknife Ar**	**65.30**	**30**	P	**P**	**12 33 39.1**	**+1.0**
YKA	**Yellowknife Ar**	**65.30**	**30**	P	**P**	**12 33 39.1**	**+1.0**
MEEK	**Meekatharra**	**65.46**	**201**	P	**P**	**12 33 39.9**	**+0.4**
KTK1	**Kautokeino**	**65.51**	**339**	*e*P	**P**	**12 33 39.0**	**-0.4**
JETT	**Jettan, Norway**	**65.96**	**340**	*e*P	**P**	**12 33 44.2**	**+1.9**
LCRK	**Leigh Creek**	**66.11**	**182**	P	**P**	**12 33 44.7**	**+1.2**
MULG	**Mulgathing**	**66.15**	**186**	P	**P**	**12 33 44.4**	**+0.6**
TULEG	**Thule**	**66.28**	**7**	P	**P**	**12 33 44.6**	**+0.5**
TULEG				IAmb	IAmb	12 33 45.9	
	comp=Z,37nm,0.8s						
TULEG	**Thule**	**66.28**	**7**	*i* P	**P**	**12 33 44.2**	**0.0**
TULEG				IAmb	IAmb	12 33 45.4	
	comp=Z,18nm,0.7s						
TRO	**Tromso**	**66.31**	**341**	*e*P	**P**	**12 33 44.8**	**+0.3**
DAG	**Danmarks Havn**	**66.70**	**355**	*i* P	**P**	**12 33 47.1**	**+0.2**
DAG				IAmb	IAmb	12 33 47.9	
	comp=Z,11nm,0.6s						
FORT	**Forrest**	**67.35**	**191**	P	**P**	**12 33 52.4**	**+1.0**
FORT	**Forrest**	**67.35**	**191**	P	**P**	**12 33 52.2**	**+0.8**
MOS	**Moscow**	**67.37**	**323**	*e*P	**P**	**12 33 48.9**	**-2.5**
MOS				pmax	pmax		
	comp=Z,91nm,1.5s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
CMSA	**Cobar Meteorol**	**67.39**	**175**	P	**P**	**12 33 52.8**	**+1.1**
AFI	**Afiamalu**	**67.40**	**128**	LR	LR	12 57 18.7	
	comp=Z,545nm,20.5s,baz=314,slow=30						
STKA	**Stephens Creek**	**67.53**	**178**	P	**P**	**12 33 52.6**	**0.0**
	comp=Z,8.5nm,0.8s,baz=336,slow=7.9,SNR=10.0						
STKA				LR	LR	13 02 31.6	
	comp=Z,638nm,21.4s,baz=0.2,slow=35						
	comp=Z,8.5nm,0.8s						
STKA	**Stephens Creek**	**67.53**	**178**	P	**P**	**12 33 53.4**	**+0.8**
STKA	**Stephens Creek**	**67.53**	**178**	P	**P**	**12 33 53.4**	**+0.8**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRH	**Novokhopyorsk**	**67.55**	**318**	*e*P	**P**	**12 33 51.5**	**-1.1**
VRH				pmax	pmax		
	comp=Z,70nm,0.7s						
LLLB	**Lillooet**	**67.83**	**43**	P	**P**	**12 33 55.5**	**+1.0**
MAK	**Makhachkala**	**68.16**	**308**	*e*P	**P**	**12 33 55.7**	**-0.9**
MAK				*e*		12 36 26.5	
MAK				*e*PPP	PPP	12 38 01.3	
MAK				*e*S	**S**	**12 42 53.1**	**+0.3**
MAK				*e*SS	**SS**	**12 47 21.0**	**+5.4**
MAK				pmax	pmax		
	comp=Z,51nm,0.7s						
MAK				MLR	MLR		
	comp=Z,751nm,16.0s						
OBN	**Obninsk**	**68.21**	**323**	LR	LR	13 06 11.8	
	comp=Z,125nm,18.6s,baz=44,slow=38						
OBN	**Obninsk**	**68.21**	**323**	P	**P**	**12 33 56.3**	**-0.4**
OBN				IAmb	IAmb	12 33 57.9	
	comp=Z,44nm,0.9s						
OBN	**Obninsk**	**68.21**	**323**	*c i*P	**P**	**12 33 56.2**	**-0.5**
OBN				*PP	**pP**	**12 34 08.0**	**-2.9**
OBN				*SP	**sP**	**12 34 13.0**	**-3.6**
OBN						12 34 25.0	
OBN						12 36 25.0	
OBN				S	**S**	**12 42 53.0**	**-0.1**
OBN				*i*		12 43 48.4	
OBN				*e*SS	**SS**	**12 47 15.3**	**-0.5**
OBN				pmax	pmax		
	comp=Z,94nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,16.0s						
NLWA	**Neilton Lookou**	**68.30**	**47**	P	**P**	**12 33 59.1**	**+1.7**
NLWA				IAmb	IAmb	12 34 16.4	
	comp=Z,46nm,1.2s						
A04D	**Lummi Island**	**68.31**	**45**	P	**P**	**12 33 58.8**	**+1.4**
	baz=300						
LPSR	**Galich'ya Gora**	**68.33**	**320**	*e*P	**P**	**12 33 56.6**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
STEI	**Steigen**	**68.45**	**340**	*e*P	**P**	**12 33 58.5**	**+0.5**
MORW	**Morawa**	**68.51**	**202**	P	**P**	**12 33 59.6**	**+0.8**
MORW				IAmb	IAmb	12 34 16.0	
	comp=Z,40nm,0.9s						
MORW	**Morawa**	**68.51**	**202**	P	**P**	**12 33 59.9**	**+1.1**
BBOO	**Buckleboo**	**68.54**	**184**	P	**P**	**12 33 59.6**	**+0.7**
VORR	**Voronezh**	**68.67**	**319**	*e*P	**P**	**12 33 58.9**	**-0.7**
VORR				pmax	pmax		
	comp=Z,59nm,1.7s						
D03D	**Eldon**	**68.68**	**46**	P	**P**	**12 34 02.2**	**+2.4**
	baz=300,SNR=11						
LOF	**Lofoten**	**68.77**	**341**	*e*P	**P**	**12 34 00.3**	**+0.3**
FAUS	**Fauske**	**68.83**	**340**	*e*P	**P**	**12 34 00.6**	**+0.2**
NAPP	**Napperby**	**68.83**	**182**	P	**P**	**12 34 02.3**	**+1.6**
B05A	**Bryant**	**68.89**	**45**	P	**P**	**12 34 02.8**	**+1.7**
	baz=301						
E03A	**Lebam**	**68.90**	**47**	P	**P**	**12 34 03.6**	**+2.4**
VSR	**Storozhevoye**	**68.93**	**319**	*e*P	**P**	**12 34 00.5**	**-0.8**
VSR				pmax	pmax		
	comp=Z,50nm,0.7s						
VORD	**Divnogorie**	**68.99**	**318**	*e*P	**P**	**12 34 00.9**	**-0.7**
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
D04E	**Lakebay**	**69.05**	**46**	P	**P**	**12 34 03.6**	**+1.5**
	baz=301						
HTT	**Hallett**	**69.07**	**181**	P	**P**	**12 34 04.1**	**+1.9**
B06A	**Marblemount**	**69.11**	**45**	P	**P**	**12 34 04.2**	**+1.8**
GROC	**Groznyy**	**69.13**	**309**	*e*P	**P**	**12 34 02.9**	**+0.2**
GROC				*e**PP	**pP**	**12 34 17.4**	**+0.5**
GROC				*e*		12 34 27.0	
GROC				pmax	pmax		
	comp=Z,28nm,0.5s						
FIA1	**FINESS Array S**	**69.17**	**332**	P	**P**	**12 34 02.6**	**0.0**
FIA1				IAmb	IAmb	12 34 04.0	
	comp=Z,30nm,0.8s						
FINES	**FINESS Array B**	**69.18**	**332**	P	**P**	**12 34 02.5**	**-0.1**
	comp=Z,17nm,0.6s,baz=74,slow=6.9,SNR=49						
	comp=Z,17nm,0.6s						
FINES	**FINESS Array B**	**69.18**	**332**	P	**P**	**12 34 02.6**	**0.0**
FINES	**FINESS Array B**	**69.18**	**332**	P	**P**	**12 34 02.6**	**0.0**
DBG	**Daneborg**	**69.18**	**354**	*i* P	**P**	**12 34 01.8**	**-0.7**
DBG				IAmb	IAmb	12 34 28.1	
	comp=Z,4.4nm,0.7s						
F04D	**Rainier, OR**	**69.47**	**48**	P	**P**	**12 34 05.3**	**+0.6**
	baz=301						
E04D	**Cinebar**	**69.49**	**47**	P	**P**	**12 34 06.8**	**+1.9**
E04D				IAmb	IAmb	12 34 09.3	
	comp=Z,59nm,1.4s						
E04D	**Cinebar**	**69.49**	**47**	P	**P**	**12 34 06.6**	**+1.8**
	baz=301,SNR=8.8						
D05A	**Enumclaw**	**69.50**	**46**	P	**P**	**12 34 07.0**	**+2.1**
D05A				IAmb	IAmb	12 34 26.6	
	comp=Z,88nm,1.3s						
MGCD	**Mangrove Creek**	**69.63**	**170**	P	**P**	**12 34 07.4**	**+1.8**
BLDU	**Ballidu**	**69.76**	**201**	P	**P**	**12 34 07.1**	**+0.6**
G03D	**McMinnville, O**	**69.76**	**48**	P	**P**	**12 34 08.3**	**+1.7**
	baz=301						
GOF	**Gofitskoye**	**69.89**	**311**	⇑*e*P	**P**	**12 34 05.4**	**-2.0**
GOF				pmax	pmax		
	comp=Z,37nm,0.7s						
MOR8	**Moi Rana**	**69.92**	**339**	*e*P	**P**	**12 34 05.8**	**-1.4**
JLN	**Jalan Bani Buh**	**69.93**	**283**	P	**P**	**12 34 07.6**	**-0.4**
I02E	**Swisshome, OR**	**69.97**	**50**	P	**P**	**12 34 08.8**	**+1.0**
	baz=301						
I02E				S	**S**	**12 43 13.7**	**-0.5**
	baz=301						
WSAR	**Wadi Sarin**	**69.98**	**285**	LR	LR	13 07 26.6	
	comp=Z,410nm,21.6s,baz=82,slow=38						
WSAR	**Wadi Sarin**	**69.98**	**285**	P	**P**	**12 34 08.8**	**+0.5**
WBK	**Wadi Bani Khal**	**70.04**	**284**	P	**P**	**12 34 09.3**	**+0.6**
WBK				P	**P**	**12 34 09.3**	**+0.6**
KONS	**Konsvik**	**70.06**	**340**	*e*P	**P**	**12 34 08.8**	**+0.8**
COR	**Corvallis**	**70.06**	**49**	P	**P**	**12 34 10.2**	**+1.9**
COR				IAmb	IAmb	12 34 25.2	
	comp=Z,48nm,1.1s						
COR	**Corvallis**	**70.06**	**49**	P	**P**	**12 34 10.2**	**+1.9**
COR				pmax	pmax		
	comp=Z,48nm,1.1s						
COR	**Corvallis**	**70.06**	**49**	P	**P**	**12 34 11.1**	**+2.7**
COR				pP	**pP**	**12 34 24.7**	**+2.0**
BIDO	**Bidbid**	**70.23**	**285**	P	**P**	**12 34 11.4**	**+1.6**
BIDO				P	**P**	**12 34 11.4**	**+1.6**
LTY	**Liberty**	**70.23**	**46**	P	**P**	**12 34 11.3**	**+1.7**
KLBR	**Kellerberrin**	**70.38**	**200**	P	**P**	**12 34 12.4**	**+2.1**
BANOM	**Banah**	**70.41**	**288**	P	**P**	**12 34 12.0**	**+1.1**
	SNR=9.2						
BANOM				P	**P**	**12 34 12.0**	**+1.1**
	SNR=9.2						
BANOM	**Banah**	**70.41**	**288**	*i* P	**P**	**12 34 10.8**	**0.0**
	SNR=17						
J01E	**Myrtle Point**	**70.41**	**51**	P	**P**	**12 34 12.2**	**+1.6**
	baz=301						
H04D	**Lebanon**	**70.44**	**49**	P	**P**	**12 34 12.6**	**+1.9**
H04D				IAmb	IAmb	12 34 45.4	
	comp=Z,50nm,1.4s						
H04D	**Lebanon**	**70.44**	**49**	P	**P**	**12 34 11.8**	**+1.1**
	baz=302						
H04D				S	**S**	**12 43 18.0**	**-1.7**
	baz=302						
SHME	**Shamm**	**70.46**	**288**	P	**P**	**12 34 11.5**	**+0.3**
	SNR=9.4						
SHME				P	**P**	**12 34 11.5**	**+0.3**
	SNR=9.4						
SHME	**Shamm**	**70.46**	**288**	*i* P	**P**	**12 34 10.8**	**-0.3**
	SNR=22						
I03D	**Drain, OR**	**70.49**	**50**	P	**P**	**12 34 13.2**	**+2.2**
	baz=302,SNR=7.7						
I03D				S	**S**	**12 43 22.2**	**+1.8**
	baz=302						
F05D	**White Salmon**	**70.49**	**47**	P	**P**	**12 34 13.3**	**+2.3**
F05D	**White Salmon**	**70.49**	**47**	P	**P**	**12 34 12.7**	**+1.7**
	baz=302						
F05D				S	**S**	**12 43 23.3**	**+2.9**
	baz=302						
SMDO	**Samad**	**70.53**	**285**	P	**P**	**12 34 12.5**	**+0.7**
ZEI	**Tsey**	**70.53**	**309**	*e*P	**P**	**12 34 11.2**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,24nm,1.4s						
MEF	**Metsahovi**	**70.58**	**331**	*e*P	**P**	**12 34 11.4**	**+0.1**
KBZ	**Khabaz**	**70.67**	**310**	P	**P**	**12 34 11.8**	**-0.3**
	comp=Z,19nm,0.9s,baz=33,slow=3.5,SNR=18						
KBZ				LR	LR	13 09 01.0	
	comp=Z,506nm,19.5s,baz=52,slow=39						
	comp=Z,19nm,0.9s						
KVAR	**Kislovodsk Arr**	**70.68**	**311**	P	**P**	**12 34 12.2**	**-0.1**
	comp=Z,10nm,0.8s,baz=260,slow=21,SNR=4.1						
KVAR				LR	LR	13 07 14.3	
	comp=Z,269nm,20.9s,baz=269,slow=38						
	comp=Z,10nm,0.8s						
KIV	**Kislovodsk**	**70.68**	**311**	⇑P	**P**	**12 34 13.4**	**+1.1**
KIV	**Kislovodsk**	**70.68**	**311**	P	**P**	**12 34 13.0**	**+0.6**
KIV				IAmb	IAmb	12 34 30.8	
	comp=Z,54nm,0.9s						
KIV	**Kislovodsk**	**70.68**	**311**	*e*P	**P**	**12 34 12.4**	**+0.1**
KIV				pmax	pmax		
	comp=Z,54nm,1.0s						
KIV				MLR	MLR		
	comp=Z,423nm,17.0s						
KIV	**Kislovodsk**	**70.68**	**311**	P	**P**	**12 34 13.5**	**+1.2**
KIV				P	**P**	**12 34 13.5**	**+1.2**
KIV	**Kislovodsk**	**70.68**	**311**	*i* P	**P**	**12 34 12.2**	**-0.1**
	SNR=8.6						
KIV	**Kislovodsk**	**70.68**	**311**	P	**P**	**12 34 13.1**	**+0.7**
KIV				pP	**sP**	**12 34 29.8**	**-2.5**
VSU	**Vasula**	**70.74**	**329**	*i* P	**P**	**12 34 12.0**	**-0.3**
VSU	**Vasula**	**70.74**	**329**	*e*P	**P**	**12 34 12.7**	**+0.5**
MASF	**Masafi**	**70.80**	**288**	P	**P**	**12 34 13.9**	**+0.6**
	SNR=8.7						
MASF				P	**P**	**12 34 13.9**	**+0.6**
	SNR=8.7						
MSFE	**Esma-Masafi**	**70.81**	**288**	*i* P	**P**	**12 34 13.3**	**0.0**
	SNR=5.7						
K02D	**Willamette Mer**	**70.81**	**51**	P	**P**	**12 34 14.2**	**+1.1**
	baz=302						
K02D				S	**S**	**12 43 26.8**	**+2.4**
	baz=302						
SHA1	**Shidzhatmaz**	**70.81**	**310**	*i* P	**P**	**12 34 13.1**	**-0.2**
HOQ	**Hoqain**	**70.83**	**286**	P	**P**	**12 34 14.5**	**+1.0**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.85**	**284**	P	**P**	**12 34 13.9**	**+0.3**
EDM	**Edmonton**	**70.90**	**38**	P	**P**	**12 34 14.5**	**+1.1**
EDM				IAmb	IAmb	12 34 16.6	
	comp=Z,62nm,1.4s						
EDM	**Edmonton**	**70.90**	**38**	P	**P**	**12 34 14.5**	**+1.1**
EDM				pmax	pmax		
	comp=Z,62nm,1.4s						
G05D	**Wamic, OR**	**70.92**	**48**	S	**S**	**12 43 27.3**	**+2.0**
	baz=302						
UOSS	**Minazif**	**70.99**	**287**	P	**P**	**12 34 14.3**	**-0.1**
UOSS	**Minazif**	**70.99**	**287**	P	**P**	**12 34 14.1**	**-0.2**
UOSS				P	**P**	**12 34 14.1**	**-0.2**
UOSS	**Minazif**	**70.99**	**287**	*i* P	**P**	**12 34 13.5**	**-0.9**
	SNR=11						
UOSS	**Minazif**	**70.99**	**287**	P	**P**	**12 34 14.2**	**-0.2**
I04A	**Tendick Farm,**	**71.02**	**49**	P	**P**	**12 34 15.7**	**+1.4**
	baz=302,SNR=14						
I04A				S	**S**	**12 43 28.3**	**+1.7**
	baz=302						
NEY	**Neytrino**	**71.03**	**310**	*i* P	**P**	**12 34 14.4**	**-0.2**
NEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RAF	**Rauma**	**71.06**	**333**	*e*P	**P**	**12 34 14.5**	**+0.4**
HATD	**Hatta, Dubai**	**71.10**	**287**	P	**P**	**12 34 15.7**	**+0.6**
	SNR=12						
HATD				P	**P**	**12 34 15.7**	**+0.6**
	SNR=12						
HATD	**Hatta, Dubai**	**71.10**	**287**	*i* P	**P**	**12 34 14.7**	**-0.4**
	SNR=17						
SOHO	**SOHO**	**71.15**	**286**	P	**P**	**12 34 15.6**	**+0.3**
SOHO	**SOHO**	**71.15**	**286**	*i* P	**P**	**12 34 14.7**	**-0.7**
	SNR=10						
L02F	**Cave Junction**	**71.17**	**51**	P	**P**	**12 34 16.7**	**+1.5**
	baz=302						
L02F				S	**S**	**12 43 28.1**	**-0.3**
	baz=302						
ASHO	**Ashiyiah**	**71.23**	**287**	P	**P**	**12 34 16.3**	**+0.3**
	SNR=12						
ASHO				P	**P**	**12 34 16.3**	**+0.3**
	SNR=12						
ASHO	**Ashiyiah**	**71.23**	**287**	*i* P	**P**	**12 34 15.5**	**-0.4**
	SNR=14						
BSY	**Bisya**	**71.36**	**285**	P	**P**	**12 34 17.2**	**+0.5**
	SNR=7.0						
GNI	**Garni**	**71.37**	**306**	P	**P**	**12 34 16.9**	**+0.2**
	comp=Z,4.9nm,0.5s,baz=224,slow=22,SNR=1.8						
GNI				LR	LR	13 08 25.1	
	comp=Z,907nm,18.1s,baz=60,slow=38						
	comp=Z,4.9nm,0.5s						
GNI	**Garni**	**71.37**	**306**	*c i*P	**P**	**12 34 18.0**	**+1.4**
GNI				pmax	pmax		
	comp=Z,56nm,1.3s						
I05D	**Terrebonne, OR**	**71.39**	**48**	P	**P**	**12 34 17.7**	**+1.2**
	baz=302,SNR=6.5						
I05D				S	**S**	**12 43 31.9**	**+1.1**
	baz=302						
CAN	**Canberra**	**71.45**	**172**	P	**P**	**12 34 19.3**	**+2.5**
CAN				pP	**PcP**	**12 34 35.2**	**-0.8**
CAN				pwP	**sP**	**12 34 40.9**	**+4.1**
J04D	**Umpqua Nationa**	**71.50**	**50**	P	**P**	**12 34 18.5**	**+1.1**
	baz=302,SNR=5.1						
FAQ	**Al Faqa, Dubai**	**71.56**	**287**	P	**P**	**12 34 16.8**	**-1.0**
FAQ				P	**P**	**12 34 16.8**	**-1.0**
FAQ	**Al Faqa, Dubai**	**71.56**	**287**	P	**P**	**12 34 17.0**	**-0.9**
ARQ	**Araqi**	**71.58**	**286**	P	**P**	**12 34 18.5**	**+0.5**
	SNR=6.5						
MHTO	**MHTO**	**71.69**	**283**	P	**P**	**12 34 18.8**	**+0.2**
	SNR=7.4						
MHTO				P	**P**	**12 34 18.8**	**+0.2**
	SNR=7.4						
NEW	**Newport**	**71.70**	**43**	LR	LR	13 06 30.2	
	comp=Z,38nm,19.6s,baz=310,slow=36						
NEW	**Newport**	**71.70**	**43**	P	**P**	**12 34 19.0**	**+0.7**
	baz=304						
NEW				S	**S**	**12 43 35.5**	**+1.1**
	baz=304						
SUMG	**Summit**	**71.72**	**359**	P	**P**	**12 34 18.8**	**+0.3**
SUMG				IAmb	IAmb	12 34 21.8	
	comp=Z,48nm,0.8s						
SUMG	**Summit**	**71.72**	**359**	P	**P**	**12 34 18.8**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,48nm,0.8s						
SUMG	**Summit**	**71.72**	**359**	*i* P	**P**	**12 34 19.4**	**+1.0**
SUMG				*i* P	**P**	**12 34 19.7**	**+1.3**
SUMG				IAmb	IAmb	12 34 20.9	
	comp=Z,32nm,0.6s						
MTSE	**Matsula**	**71.77**	**330**	*e*P	**P**	**12 34 18.6**	**+0.2**
NWAO	**Narrogin (SRO)**	**71.78**	**200**	P	**P**	**12 34 19.9**	**+1.2**
NWAO	**Narrogin (SRO)**	**71.78**	**200**	P	**P**	**12 34 19.8**	**+1.1**
ALNE	**Al Ain**	**71.80**	**287**	P	**P**	**12 34 19.9**	**+0.6**
	SNR=9.4						
ALNE	**Al Ain**	**71.80**	**287**	*i* P	**P**	**12 34 18.8**	**-0.5**
	SNR=5.0						
ASUD	**Al Ashush, Dub**	**71.83**	**288**	*i* P	**P**	**12 34 19.3**	**-0.1**
	SNR=11						
NSS	**Namsos**	**71.83**	**339**	*e*P	**P**	**12 34 20.1**	**+1.3**
L04D	**Klamath Falls**	**71.92**	**51**	P	**P**	**12 34 21.2**	**+1.3**
	baz=302,SNR=14						
L04D				S	**S**	**12 43 36.4**	**-0.9**
	baz=302						
YBH	**Yreka Blue Hor**	**71.92**	**51**	LR	LR	13 01 13.3	
	comp=Z,83nm,19.9s,baz=298,slow=32						
J05D	**Fort Rock, OR**	**72.01**	**49**	P	**P**	**12 34 22.2**	**+1.7**
	baz=303,SNR=10						
K04D	**Chiloquin, OR**	**72.05**	**50**	P	**P**	**12 34 21.5**	**+0.9**

	baz=303						
K04D				S	S	12 43 39.8	+1.1
	baz=303						
E09A	Wood Farm, Sta	72.09	45	P	P	12 34 21.7	+1.0
E09A				IAmb	IAmb	12 34 24.5	
	comp=Z,58nm,1.3s						
ARPS	Mount Arapiles	72.42	178	P	P	12 34 23.9	+1.5
DQM	DQM	72.59	282	P	P	12 34 24.7	+0.6
DQM				P	P	12 34 24.7	+0.6
MNK	Minsk	72.68	326	i P	P	12 34 20.1	-3.8
MNK				i *PP	pP	12 34 31.7	-6.7
MNK				i		12 37 01.9	
MNK				i PPP	PPP	12 38 46.6	
MNK				i S	S	12 43 40.3	-4.9
MNK				i SS	SS	12 48 26.6	+2.2
MNK				MLR	MLR		
	comp=N,475nm,14.0s						
MNK				MLR	MLR		
	comp=Z,478nm,14.0s						
MNK				MLR	MLR		
	comp=E,80nm,14.0s						
MNK	Minsk	72.68	326	i P	P	12 34 20.2	-3.8
MNK				i P	P	12 34 20.2	-3.8
MNK				i P	P	12 34 20.2	-3.8
	baz=232						
MNK				i pP	pP	12 34 31.7	-6.7
MNK				i PP	PP	12 37 02.0	-3.6
MNK				i PPP	PPP	12 38 46.6	
MNK				i S	S	12 43 40.4	-4.9
MNK				i SS	SS	12 48 26.7	+2.2
MNK				i SSS	SSS	12 51 44.9	
MNK				i LQ	LQ	13 01 26.2	
MNK				i LR	LR	13 05 39.0	
MNK				i LRM	MLR	13 08 49.7	
	comp=N,475nm,13.9s						
MNK				i LRM	MLR	13 08 49.7	
	comp=Z,478nm,14.5s						
MNK				i LRM	MLR	13 08 52.3	
	comp=E,80nm,14.3s						
IDID	Didziasalis	72.69	327	eP	P	12 34 25.0	+0.9
SOC	Sochi	72.70	311	eP	P	12 34 21.9	-2.4
SOC				e*PP	pP	12 34 33.7	-5.0
SOC				e*SP	PcP	12 34 38.6	-2.9
SOC				e		12 37 02.9	
SOC				ePPP	PPP	12 38 47.7	
SOC				eS	S	12 43 45.0	-0.8
SOC				pmax	pmax		
	comp=Z,24nm,0.6s						
SOC				MLR	MLR		
	comp=Z,333nm,15.0s						
ISAL	Salakas	72.81	327	eP	P	12 34 25.9	+1.1
IIGN	Ignalina	72.90	327	eP	P	12 34 26.8	+1.5
NACGM	Naroch	72.93	326	eP	P	12 34 23.2	-2.3
	baz=52						
UMZA	Um Al Zommool	72.97	286	P	P	12 34 26.0	-0.3
UMZA				P	P	12 34 26.0	-0.3
WALA	Waterton Lakes	73.01	41	P	P	12 34 28.0	+1.8
SCO	Scoresbysund	73.02	354	P	P	12 34 26.9	+1.2
SCO	Scoresbysund	73.02	354	P	P	12 34 26.9	+1.2
SCO				pmax	pmax		
	comp=Z,166nm,1.7s						
SCO	Scoresbysund	73.02	354	i P	P	12 34 26.9	+1.2
SCO				IAmb	IAmb	12 34 28.2	
	comp=Z,8.6nm,0.7s						
TBLU	Trondheim	73.29	339	eP	P	12 34 27.4	-0.1
MOD	Modoc Plateau	73.34	50	P	P	12 34 30.2	+1.9
UPP	Uppsala	73.36	334	eP	P	12 34 28.3	+0.4
ANN	Anapa	73.39	314	eP	P	12 34 27.6	-0.7
ANN				eS	S	12 43 53.8	+0.3
ANN				pmax	pmax		
	comp=Z,106nm,1.6s						
MZWR	Madinat Zayed	73.41	287	P	P	12 34 28.9	0.0
MZWR				P	P	12 34 28.9	0.0
JTMT	Jette	73.57	43	P	P	12 34 31.7	+2.1
JTMT				IAmb	IAmb	12 34 32.7	
	comp=Z,56nm,1.5s						
JRN	Qarnain Island	73.57	289	P	P	12 34 29.1	-0.7
JRN				P	P	12 34 29.1	-0.7
PABE	Paberze	73.79	328	eP	P	12 34 30.9	+0.4
MZR	Muzera	74.12	287	P	P	12 34 32.7	-0.4
	SNR=8.4						
MZR	Muzera	74.12	287	i P	P	12 34 32.0	-1.1
	SNR=15						
MSO	Missoula	74.29	43	P	P	12 34 34.4	+0.6
	baz=306,SNR=7.4						
AKASG	Malin Array Be	74.39	322	P	P	12 34 33.7	-0.3
	comp=Z,9.0nm,0.6s,baz=48,slow=6.3,SNR=49						
AKASG				LR	LR	13 10 16.0	
	comp=Z,1µm,18.0s,baz=44,slow=38						
	comp=Z,9.0nm,0.6s						
AKBB	Malin Array Si	74.39	322	P	P	12 34 33.5	-0.6
AKBB				IAmb	IAmb	12 35 12.7	
	comp=Z,33nm,0.9s						
AKBB	Malin Array Si	74.39	322	ceP	P	12 34 33.1	-1.0
SHMA	Al-Shehemyia	74.52	291	P	P	12 34 35.8	+0.5
HFS	Hagfors	74.54	335	LR	LR	13 09 57.5	
	comp=Z,915nm,20.5s,baz=43,slow=38						
DOMB	Dombas	74.58	338	eP	P	12 34 35.3	+0.3
MOL	Molde	74.61	339	eP	P	12 34 34.8	-0.3
VIKU	Vikbolandet	74.66	333	eP	P	12 34 35.6	+0.1
NB2	NORSAR Subarra	74.68	337	P	P	12 34 35.3	-0.4
	comp=Z,126nm,2.0s,baz=41,slow=5.9						
NB2	NORSAR Subarra	74.68	337	P	P	12 34 35.3	-0.4
	baz=41,slow=5.9						
NOA	NORSAR Array B	74.68	337	P	P	12 34 35.3	-0.4
	comp=Z,15nm,0.7s,baz=40,slow=5.8,SNR=69						
NOA				PP	PP	12 37 22.4	-0.1
	comp=Z,3.2nm,0.8s,baz=44,slow=8.8,SNR=4.3						
NOA				LR	LR	13 10 24.1	
	comp=Z,842nm,19.8s,baz=40,slow=38						
	comp=Z,15nm,0.7s						
SAKB	Bahrain	74.78	291	P	P	12 34 36.0	-0.8
ILULI	Ilulissat	74.79	4	i P	P	12 34 37.0	+0.9
ILULI				IAmb	IAmb	12 34 39.2	
	comp=Z,24nm,0.7s						
NC602	NORSAR Array S	74.81	336	eP	P	12 34 36.6	+0.3
SUW	Suwalki	75.12	327	eP	P	12 34 38.1	-0.2
SIM	Simferopol'	75.23	315	eP	P	12 34 40.0	+0.9
SIM				e		12 34 56.0	
SIM						12 37 32.0	
SIM				eSS	SS	12 48 58.0	-5.7
SIM				eSSS	SSS	12 52 19.0	
SIM				pmax	pmax		
	comp=Z,32nm,0.8s						
ICESG	Greenland Ices	75.23	360	i P	P	12 34 40.5	+1.4
ICESG				IAmb	IAmb	12 34 41.4	
	comp=Z,23nm,0.7s						
HRY	Holter Researc	75.53	42	P	P	12 34 42.5	+1.6
OSL	Oslo	75.68	336	eP	P	12 34 42.1	+0.8
EGMT	Eagleton	75.84	40	P	P	12 34 43.5	+0.9
EGMT				IAmb	IAmb	12 34 46.1	
	comp=Z,104nm,1.4s						
EGMT	Eagleton	75.84	40	P	P	12 34 43.0	+0.3
	baz=308,SNR=20						
EGMT				S	S	12 44 20.3	-0.7
	baz=308						
DMTO	DMTO	75.85	282	P	P	12 34 42.7	-0.3
DMTO				P	P	12 34 42.7	-0.3
SKAR	Skarslia	75.87	338	eP	P	12 34 43.2	+0.6
HLID	Hailey	75.95	46	P	P	12 34 44.9	+1.4
	baz=307,SNR=24						
HLID				S	S	12 44 24.0	+1.4
	baz=307						
DOK	Doka	76.00	283	P	P	12 34 43.5	-0.4
DOK				P	P	12 34 43.5	-0.4
RAO	Raoul Island	76.05	143	LR	LR	13 02 26.6	
	comp=Z,304nm,19.8s,baz=332,slow=31						
STRU	Stroemstad	76.21	335	i P	P	12 34 44.4	0.0
KONO	Kongsberg	76.26	337	eP	P	12 34 45.2	+0.5
BOZ	Bozeman (W)	76.32	43	P	P	12 34 46.6	+1.1
	baz=308,SNR=39						
BOZ				S	S	12 44 27.8	+1.2
	baz=308						
SORM	Soroca	76.43	320	⇑P	P	12 34 45.8	-0.1
DIKM	Dikmen	76.50	312	⇑P	P	12 34 47.6	+1.2
RBK	Rabkut	76.55	282	P	P	12 34 47.5	+0.4
RBK				P	P	12 34 47.5	+0.4
NVAR	Mina Array Bea	76.57	52	P	P	12 34 49.1	+1.9
	comp=Z,17nm,1.0s,baz=286,slow=4.2,SNR=45						
	comp=Z,17nm,1.0s						
NVAR	Mina Array Bea	76.57	52	P	P	12 34 48.7	+1.6
SUE	Sulen	76.62	339	eP	P	12 34 47.7	+1.0
NV11	Mina Array Sit	76.66	52	P	P	12 34 49.8	+2.2
WHFO	Wadi Hawf	76.67	283	P	P	12 34 46.6	-1.1
WHFO				P	P	12 34 46.6	-1.1
MLAC	Mammoth, Mammo	76.68	53	P	P	12 34 49.3	+1.5
	baz=305						
BORU	Boraas	76.72	334	i P	P	12 34 46.5	-0.8
QLMT	Earthquake Lak	76.90	44	P	P	12 34 51.0	+2.2
KIS	Kishinev	76.91	319	⇑iP	P	12 34 47.7	-0.9
	comp=Z,80nm,1.9s						
KIS				eL	L	13 09 00.0	
KIS				LRM	MLR	13 11 32.0	
	comp=Z,300nm,14.0s						
KIS	Kishinev	76.91	319	c iP	P	12 34 47.7	-0.9
KIS				pmax	pmax		
	comp=Z,80nm,1.9s						
KIS				MLR	MLR		
	comp=Z,300nm,14.0s						
MILM	Milestii Mici	76.96	319	⇑iP	P	12 34 47.8	-1.0
	comp=Z,200nm,4.4s						
MILM				eL	L	13 01 28.0	
MILM				eLR	LR	13 10 59.0	
	comp=Z,500nm,15.5s						
MILM	Milestii Mici	76.96	319	c iP	P	12 34 47.8	-1.0
MILM				pmax	pmax		
	comp=Z,200nm,4.4s						
MILM				MLR	MLR		
	comp=Z,800nm,16.0s						
MILM				MLR	MLR		
	comp=N,500nm,15.5s						
MILM				MLR	MLR		
	comp=E,400nm,15.5s						
ASK	Askoy	76.96	339	eP	P	12 34 50.2	+1.7
ODD1	Odda	76.99	338	eP	P	12 34 49.7	+0.8
BER	Bergen	77.00	339	eP	P	12 34 49.7	+0.9
SFJD	Kangerlussuaq	77.02	4	LR	LR	13 10 43.2	
	comp=E,180nm,21.1s,baz=347,slow=37						
SFJD	Kangerlussuaq	77.02	4	P	P	12 34 50.3	+1.5
SFJD	Kangerlussuaq	77.02	4	P	P	12 34 50.3	+1.5
SFJD				pmax	pmax		
	comp=Z,20nm,0.9s						
SFJD	Kangerlussuaq	77.02	4	i P	P	12 34 49.9	+1.1
SFJD				IAmb	IAmb	12 34 51.9	
	comp=Z,10nm,0.8s						
YHL	Hebgen Lake	77.02	44	P	P	12 34 50.9	+1.2
YHL				IAmb	IAmb	12 34 53.0	
	comp=Z,37nm,1.4s						
VOG	Valley Oaks Go	77.08	55	P	P	12 34 50.6	+0.9
	baz=305						
ELK	Elko	77.13	49	LR	LR	13 06 28.4	
	comp=Z,42nm,21.6s,baz=318,slow=34						
ELK	Elko	77.13	49	P	P	12 34 52.2	+2.0
ELK	Elko	77.13	49	P	P	12 34 52.3	+2.0
ELK				pmax	pmax		
	comp=Z,20nm,1.1s						
ONAU	Onsala	77.20	334	i P	P	12 34 49.6	-0.4
FABU	Falkenberg	77.21	333	i P	P	12 34 50.0	-0.1
SMMC	Simmler	77.25	56	P	P	12 34 51.9	+1.1
	baz=305						
YHH	Holmes Hill	77.25	44	P	P	12 34 52.6	+1.6
GCMT	Greycliff	77.28	42	P	P	12 34 52.7	+1.8
TIN	Tinemaha, Big	77.41	53	P	P	12 34 52.6	+0.8
	baz=306						
TPH	Tonopah	77.47	52	P	P	12 34 54.0	+1.8
TPH	Tonopah	77.47	52	P	P	12 34 54.0	+1.8
TPH				pmax	pmax		
	comp=Z,200nm,1.0s						
LVV	L'vov	77.51	323	eP	P	12 34 51.9	0.0
VES	Vestal, Richgr	77.55	55	P	P	12 34 53.4	+1.0
	baz=306,SNR=5.5						
PKM	Mcpherson Peak	77.61	56	P	P	12 34 54.3	+1.2
	baz=305						
PKM				S	S	12 44 41.0	-0.1
	baz=305						
H17A	Grant Village	77.65	44	P	P	12 34 56.5	+3.3
	baz=309,SNR=24						
DY2G	Dye2	77.75	3	i P	P	12 34 54.5	+1.2
DY2G				IAmb	IAmb	12 34 56.6	
	comp=Z,42nm,0.6s						
BSD	Bornholm Skovb	77.79	331	i P	P	12 34 53.3	-0.1
BSD				IAmb	IAmb	12 34 54.9	
	comp=Z,24nm,0.6s						
BJUU	Bjuv	77.80	333	i P	P	12 34 53.8	+0.4
CWC	Cottonwood Cre	77.87	54	P	P	12 34 55.7	+1.3
	baz=306						
RLMT	Red Lodge	77.92	43	P	P	12 34 55.4	+0.9
	baz=309,SNR=20						
SBC	Santa Barbara	77.94	56	P	P	12 34 54.8	+0.3
	baz=306						
KMY	Karmoy	77.97	338	eP	P	12 34 55.1	+0.8
FRB	Frobisher Bay	78.05	13	LR	LR	13 11 16.0	
	comp=Z,376nm,20.6s,baz=348,slow=37						
ISA	Isabella, Lake	78.06	55	P	P	12 34 55.1	-0.2
	baz=306						
SNART	Snartemo	78.06	337	i P	P	12 34 55.4	+0.6
SNART	Snartemo	78.06	337	eP	P	12 34 55.7	+0.9
ARVC	Arvin	78.14	55	P	P	12 34 56.2	+0.6
	baz=306						
R11A	Troy Canyon, C	78.34	51	P	P	12 34 58.5	+1.5
	baz=307,SNR=51						
R11A				S	S	12 44 49.6	+0.7
	baz=307						
TESR	Tescani	78.36	320	⇑P	P	12 34 56.5	-0.3
BIZ	Bicaz	78.37	320	⇑P	P	12 34 57.5	+0.8
BUR08	Bucovina Ar. S	78.37	321	P	P	12 34 57.0	+0.1
BURAR	Bucovina Array	78.38	321	⇑P	P	12 34 57.6	+0.7
BURAR	Bucovina Array	78.38	321	P	P	12 34 56.9	-0.1
DGMT	Dagmar	78.39	38	P	P	12 34 57.5	+0.6
	baz=312						
CFR	Carcaliu	78.43	318	⇑P	P	12 34 57.9	+0.9
TPGR	Topolog	78.48	318	⇑P	P	12 34 57.4	0.0
OSI	Osito Audit: C	78.50	56	P	P	12 34 58.7	+0.9
	baz=306						
BORG	Borgarnes	78.52	352	P	P	12 35 00.1	+2.9
	comp=Z,36nm,1.1s,baz=196,slow=2.4,SNR=4.4						
BORG				LR	LR	13 10 14.0	
	comp=Z,151nm,20.8s,baz=10,slow=36						
LAO	LASA Array	78.54	40	P	P	12 34 58.8	+1.0
	baz=311						
LAO				S	S	12 44 50.6	+0.2
	baz=311						
BR131	Keskin Array S	78.64	311	P	P	12 34 59.6	+1.0
BR131	Keskin Array S	78.64	311	P	P	12 34 59.6	+1.0
BR131				pmax	pmax		
	comp=Z,18nm,0.9s						
BR131	Keskin Array S	78.64	311	P	P	12 34 59.5	+0.9
	SNR=9.7						
BR131				P	P	12 34 59.5	+0.9
	SNR=9.7						
BRTR	Keskin Array B	78.64	311	P	P	12 34 58.9	+0.3
	comp=Z,4.5nm,0.8s,baz=97,slow=4.1,SNR=15						
BRTR				LR	LR	13 12 45.4	
	comp=Z,274nm,21.4s,baz=62,slow=38						
	comp=Z,4.5nm,0.8s						
BRTR	Keskin Array B	78.64	311	P	P	12 34 58.2	-0.4
FURC	Furnace Creek,	78.64	53	P	P	12 34 59.9	+1.5
	baz=307,SNR=11						
LRMC	Laurel Mtn Rad	78.69	54	P	P	12 35 00.6	+1.7
	baz=306						
TIRR	Tirgusor	78.74	317	⇑P	P	12 34 59.2	+0.4
VRI	Vrincioaia	78.74	319	⇑P	P	12 34 60.0	+1.1
TPNV	Topopah Spring	78.75	52	P	P	12 35 00.7	+1.4
	baz=307,SNR=16						
SNCC	San Nicolas Is	78.76	57	P	P	12 35 00.8	+1.6
	baz=306						
PLOR	Plostina	78.79	319	⇑P	P	12 35 00.6	+1.4
EDW2	Edwards Air Fo	78.83	55	P	P	12 35 01.0	+1.4
	baz=306,SNR=7.8						
HARR	Harsova	78.85	318	⇑P	P	12 34 59.8	+0.4
DUG	Dugway, Tooele	78.94	48	P	P	12 35 01.7	+1.5
	baz=308,SNR=20						
KOLS	Kolonicke sedl	78.96	323	eP	P	12 35 00.9	+0.9
KOLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLS	Kolonicke sedl	78.96	323	eP	P	12 35 00.9	+0.9
BISRR	Bisoca	78.96	319	⇑P	P	12 35 01.2	+1.2
DECC	Green Verdugo	78.98	56	P	P	12 35 01.3	+1.0
	baz=306						
COVR	Voineasa-Covas	79.03	319	⇑P	P	12 35 00.4	-0.1
OZUR		79.09	320	⇑P	P	12 35 01.6	+0.9
UZH	Uzhgorod	79.15	323	eP	P	12 35 00.0	-1.0
UZH				e		12 35 13.6	
OJC	Ojcow	79.23	326	eP	P	12 35 01.1	-0.3
BW06	Boulder Array	79.25	45	P	P	12 35 03.0	+1.0
BW06	Boulder Array	79.25	45	P	P	12 35 02.9	+1.0
	baz=310,SNR=18						
PD31	Pinedale Array	79.25	45	P	P	12 35 03.0	+1.0
PDAR	Pinedale Array	79.25	45	P	P	12 35 02.9	+0.9
	comp=Z,5.0nm,0.6s,baz=275,slow=1.3,SNR=44						
	comp=Z,5.0nm,0.6s						
FMP	Fort Macarthur	79.32	56	P	P	12 35 03.5	+1.3
	baz=306						
ISR	Istrita	79.33	319	⇑P	P	12 35 03.6	+1.5
SHOC	Shoshone, Teco	79.36	53	P	P	12 35 03.8	+1.4
	baz=307						
CRVS	Cervenica-Dubn	79.37	324	eP	P	12 35 02.8	+0.6
CRVS				pmax	pmax		
	comp=Z,169nm,2.0s						
CRVS	Cervenica-Dubn	79.37	324	eP	P	12 35 02.8	+0.6
GSC	Goldstone, Bar	79.37	54	P	P	12 35 03.9	+1.3
	baz=307,SNR=9.8						
DOPR	Dopca	79.38	320	⇑P	P	12 35 03.5	+1.2
MLR	Muntele Rosu	79.40	319	⇑P	P	12 35 03.6	+1.0
MLR	Muntele Rosu	79.40	319	LR	LR	13 14 00.9	
	comp=Z,718nm,18.3s,baz=44,slow=38						
CIS	Catalina Islan	79.42	56	P	P	12 35 03.0	+0.2
	baz=306						
BFSC	Mount Baldy Ra	79.44	55	P	P	12 35 03.3	+0.3
	baz=306						
NIE	Niedzica	79.56	325	eP	P	12 35 04.5	+1.3
SCI2	San Clemente I	79.58	57	P	P	12 35 04.1	+0.5
	baz=306						
SOCY	Socotra	79.70	278	P	P	12 35 03.1	-1.5
TUQ	Turquoise Moun	79.87	54	P	P	12 35 06.9	+1.6
	baz=307,SNR=19						
BBRC	Big Bear Solar	79.91	55	P	P	12 35 05.7	0.0
	baz=307						
RAYN	Ar Rayn	79.94	292	P	P	12 35 05.1	-0.7
RAYN				IAmb	IAmb	12 35 07.2	
	comp=Z,26nm,0.8s						
RAYN	Ar Rayn	79.94	292	P	P	12 35 05.1	-0.7
RAYN				pmax	pmax		
	comp=Z,26nm,0.9s						
RAYN	Ar Rayn	79.94	292	P	P	12 35 06.1	+0.3
HEC	Hector,Ludlow	79.96	54	P	P	12 35 06.9	+1.1
	baz=307,SNR=7.8						
MURC	Murrieta	80.13	56	P	P	12 35 07.4	+0.7
	baz=307,SNR=7.4						
LANS	Liptovska Anna	80.14	325	eP	P	12 35 08.1	+1.7
LANS				pmax	pmax		
	comp=Z,40nm,1.8s						
LANS	Liptovska Anna	80.14	325	eP	P	12 35 08.1	+1.7
OKC	Ostrava-Krasne	80.25	326	AMS	AMS	13 14 40.0	
	comp=Z,1µm,15.3s						
KSP	Ksiaz	80.35	328	eP	P	12 35 07.4	-0.1
GMRC	Granite Mounta	80.43	54	P	P	12 35 09.6	+1.3
	baz=307,SNR=14						
RAR	Rarotonga	80.53	125	LR	LR	13 05 18.2	
	comp=Z,399nm,20.0s,baz=324,slow=32						
MORC	Moravsky Berou	80.57	326	⇑P	P	12 35 08.9	+0.2
MORC	Moravsky Berou	80.57	326	P	P	12 35 08.8	+0.2
MORC	Moravsky Berou	80.57	326	P	P	12 35 08.8	0.0
MORC				pmax	pmax		
	comp=Z,26nm,1.2s						
MORC	Moravsky Berou	80.57	326	eP	P	12 35 08.7	0.0
OSTC	Ostas	80.59	327	eP	P	12 35 11.2	+2.4
OSTC				AMS	AMS	13 15 00.0	
	comp=Z,800nm,15.0s						
109C	Camp Elliot, M	80.61	56	P	P	12 35 10.2	+1.0
	baz=307						
PFO	Pinyon Flats O	80.61	55	LR	LR	13 04 09.1	
	comp=Z,340nm,21.0s,baz=302,slow=31						
PFO	Pinyon Flats O	80.61	55	P	P	12 35 10.9	+1.5
PFO				IAmb	IAmb	12 35 15.7	
	comp=Z,31nm,1.0s						
PFO	Pinyon Flats O	80.61	55	P	P	12 35 10.9	+1.5
PFO				pmax	pmax		
	comp=Z,31nm,1.0s						
PFO	Pinyon Flats O	80.61	55	P	P	12 35 09.7	+0.4
	baz=307,SNR=18						
TPFO	Pinon Flats	80.62	55	P	P	12 35 10.1	+0.7
	baz=307,SNR=18						
LCMT	Little Creek M	80.63	51	P	P	12 35 11.6	+2.1
RDMU	Red Mountain	80.63	46	P	P	12 35 11.2	+1.8
P17A	Butcher Ranch,	80.64	48	P	P	12 35 11.4	+2.0
P17A				IAmb	IAmb	12 35 14.0	
	comp=Z,28nm,0.7s						
CHVC	Chvalec	80.64	328	eP	P	12 35 09.6	+0.5
CHVC				AMS	AMS	13 15 10.0	
	comp=Z,700nm,16.4s						
MTPU	Mount Pierson	80.65	50	P	P	12 35 11.7	+1.9
BELC	Belle Mtn. Jos	80.68	55	P	P	12 35 10.4	+0.7
	baz=307						
KRLC	Kraliky	80.69	327	eP	P	12 35 10.4	+1.0
KRLC				MLR	MLR		
	comp=Z,600nm,16.0s						
KRLC	Kraliky	80.69	327	eP	P	12 35 10.4	+1.0
KRLC				AMS	AMS	13 14 40.0	
	comp=Z,600nm,16.0s						
DPC	Dobruska-Polom	80.70	327	eP	P	12 35 10.7	+1.3
DPC				MLR	MLR		
	comp=Z,700nm,14.2s						
DPC	Dobruska-Polom	80.70	327	eP	P	12 35 10.7	+1.3
DPC				AMS	AMS	13 15 00.0	
	comp=Z,700nm,14.2s						
UPC	Upice	80.72	328	eP	P	12 35 10.8	+1.4
UPC				MLR	MLR		
	comp=Z,900nm,15.5s						
UPC	Upice	80.72	328	eP	P	12 35 10.8	+1.4
UPC				AMS	AMS	13 15 10.0	
	comp=Z,900nm,15.5s						
MAUC	Maruska	80.74	326	AMS	AMS	13 14 40.0	
	comp=Z,1µm,14.9s						
PSZ	Piszkesteto	80.80	324	⇑P	P	12 35 10.6	+0.5
PSZ	Piszkesteto	80.80	324	P	P	12 35 10.4	+0.4
PSZ				IAmb	IAmb	12 35 13.1	
	comp=Z,110nm,1.8s						
PSZ	Piszkesteto	80.80	324	P	P	12 35 10.4	+0.4
PSZ				pmax	pmax		
	comp=Z,110nm,1.8s						
PSZ	Piszkesteto	80.80	324	P	P	12 35 10.0	0.0
VYHS	Vyhne	80.90	325	eP	P	12 35 11.7	+1.3
VYHS				pmax	pmax		
	comp=Z,29nm,1.9s						
VYHS	Vyhne	80.90	325	eP	P	12 35 11.7	+1.3
SRU	San Rafael Swe	80.99	48	P	P	12 35 13.0	+1.6
SRU				IAmb	IAmb	12 35 20.1	
	comp=Z,22nm,0.7s						
SRU	San Rafael Swe	80.99	48	P	P	12 35 13.0	+1.6
SRU				pmax	pmax		
	comp=Z,22nm,0.7s						
ULM	Lac du Bonnet	81.02	33	P	P	12 35 12.2	+1.1
	comp=Z,8.2nm,0.7s,baz=320,slow=7.8,SNR=8.2						
ULM				LR	LR	13 13 19.0	
	comp=Z,103nm,20.6s,baz=320,slow=37						
	comp=Z,8.2nm,0.7s						
K22A	Casper	81.03	43	P	P	12 35 12.0	+0.5
	baz=311,SNR=6.6						
K22A	Casper	81.03	43	P	P	12 35 11.6	+0.1
	baz=311,SNR=6.6						
MDND	Maddock	81.06	36	P	P	12 35 11.7	+0.4
	baz=315						
MONP2	Monument Peak	81.07	56	P	P	12 35 13.1	+1.2
	baz=307,SNR=9.2						
SIRR	Siria	81.09	322	⇑P	P	12 35 11.8	+0.3
GZR	Gura Zlata	81.12	321	⇑P	P	12 35 12.5	+0.7
IRM	Iron Mountain	81.15	54	P	P	12 35 13.4	+1.3
	baz=308						
JAVC	Velka Javorina	81.17	326	eP	P	12 35 12.9	+0.9
BC3	Big Chuckawall	81.25	55	P	P	12 35 14.2	+1.4
	baz=308,SNR=12						
PVCC	Panska Ves	81.33	328	AMS	AMS	13 11 10.0	
	comp=Z,600nm,23.6s						
BRG	Berggiesshubel	81.33	329	eP	P	12 35 13.2	+0.4
BRG				Amp		12 35 15.3	
	comp=Z,66nm,1.8s						
BRG				ex	x	12 35 25.3	
BRG				Amp		12 35 27.6	
	comp=Z,11nm,0.9s						
BRG				Amp		13 16 11.0	
	comp=Z,0.6nm,15.1s						
BRG				Amp		13 16 22.0	
	comp=E,0.4nm,15.8s						
BRG				Amp		13 16 23.0	
	comp=N,0.3nm,13.1s						
BRG	Berggiesshubel	81.33	329	eP	P	12 35 13.1	+0.4
BRG				e		12 35 25.3	
BRG				pmax	pmax		
	comp=Z,66nm,1.8s						
BRG				pmax	pmax		
	comp=Z,11nm,0.9s						
VRAC	Vranov	81.34	326	⇓P	P	12 35 13.9	+1.2
VRAC	Vranov	81.34	326	LR	LR	13 13 40.3	
	comp=Z,556nm,21.6s,baz=36,slow=37						

VRAC	Vranov	81.34	326	eP	P	12 35 12.9	+0.1
CLL	Collm	81.40	330	iP	P	12 35 12.6	-0.4
CLL				eS	S	12 45 18.0	-2.1
CLL				pmax	pmax		
	comp=Z,34nm,0.9s						
CLL				MLR	MLR		
	comp=Z,600nm,18.6s						
CLL	Collm	81.40	330	iP	P	12 35 12.6	-0.4
	comp=Z,34nm,0.9s						
CLL				epP	pP	12 35 25.0	-2.6
CLL				ix	x	12 35 30.9	
CLL				ix	x	12 35 40.5	
CLL				ePP	PP	12 38 19.0	+0.3
CLL				ePPPP		12 41 24.0	
CLL				eS	S	12 45 18.0	-2.1
CLL				ePS	PnS	12 46 17.0	+4.6
CLL				ex	x	12 47 04.0	
CLL				eSS	SS	12 50 48.0	+12
CLL				eSSSS		12 56 30.0	
CLL				LmH		13 13 00.0	
	comp=N,400nm,20.6s						
CLL				LmH		13 13 00.0	
	comp=E,700nm,21.0s						
CLL				LmV		13 18 00.0	
	comp=Z,600nm,18.6s						
RSSD	Black Hills	81.40	41	P	P	12 35 14.5	+1.1
RSSD	Black Hills	81.40	41	P	P	12 35 14.5	+1.1
RSSD				pmax	pmax		
	comp=Z,29nm,1.6s						
RSSD	Black Hills	81.40	41	P	P	12 35 14.3	+0.8
	baz=313						
RSSD	Black Hills	81.40	41	P	P	12 35 13.9	+0.5
	baz=313						
W13A	Hualapai Mount	81.40	53	P	P	12 35 15.1	+1.4
E28A	Huff	81.42	37	P	P	12 35 15.0	+1.7
E28A				IAmb	IAmb	12 35 15.6	
	comp=Z,130nm,2.0s						
E28A	Huff	81.42	37	P	P	12 35 14.6	+1.3
	baz=315						
IKP	In-Ko-Pah, Jac	81.42	56	P	P	12 35 15.0	+1.4
	baz=308,SNR=8.1						
SWSC	Sam W. Stewart	81.45	55	P	P	12 35 14.8	+1.1
	baz=308						
URZ	Urewera	81.50	151	LR	LR	13 08 38.8	
	comp=Z,249nm,20.6s,baz=31,slow=34						
SMOL	Smolenice	81.53	325	eP	P	12 35 14.8	+1.0
SMOL				pmax	pmax		
	comp=Z,31nm,1.8s						
SMOL	Smolenice	81.53	325	eP	P	12 35 14.8	+1.0
MMAI	Mount Meron Ar	81.59	305	LR	LR	13 15 16.7	
	comp=Z,697nm,19.4s,baz=229,slow=38						
KRUC	Moravsky	81.61	326	eP	P	12 35 14.1	-0.1
SRO	Srobarova	81.63	325	eP	P	12 35 15.4	+1.1
SRO	Srobarova	81.63	325	eP	P	12 35 15.4	+1.1
O20A	White River Ci	81.69	46	P	P	12 35 15.6	+0.6
	baz=311,SNR=12						
MODS	Modra-Piesok	81.71	325	eP	P	12 35 15.5	+0.8
MODS				pmax	pmax		
	comp=Z,83nm,1.5s						
MODS	Modra-Piesok	81.71	325	eP	P	12 35 15.5	+0.8
PDMCI	Parker Dam,Lak	81.72	54	P	P	12 35 15.9	+0.9
	baz=308,SNR=9.3						
PRU	Pruhonice	81.74	328	eP	P	12 35 15.5	+0.6
PRU				MLR	MLR		
	comp=Z,800nm,14.1s						
PRU	Pruhonice	81.74	328	eP	P	12 35 15.5	+0.6
PRU				AMS	AMS	13 15 30.0	
	comp=Z,800nm,14.1s						
TREC	Trest	81.84	327	AMS	AMS	13 15 30.0	
	comp=Z,800nm,15.4s						
ZST	Bratislava	81.92	325	eP	P	12 35 16.7	+0.9
ZST				pmax	pmax		
	comp=Z,145nm,1.8s						
ZST	Bratislava	81.92	325	eP	P	12 35 16.7	+0.9
CSKK	Cskako	81.97	324	P	P	12 35 17.1	+0.9
GLA	Glamis	82.03	55	P	P	12 35 17.9	+1.1
GLA				IAmb	IAmb	12 35 21.3	
	comp=Z,23nm,0.7s						
GLA	Glamis	82.03	55	P	P	12 35 17.9	+1.1
GLA				pmax	pmax		
	comp=Z,23nm,0.7s						
GLA	Glamis	82.03	55	P	P	12 35 18.0	+1.1
	baz=308						
MDVR	Moldovita	82.09	321	⇑P	P	12 35 17.1	+0.2
PV23	Carpenter Ridg	82.32	48	P	P	12 35 20.7	+2.2
PV23				IAmb	IAmb	12 35 45.2	
	comp=Z,32nm,0.7s						
KAC	Achnashellach	82.37	342	eP	P	12 35 18.4	+0.4
BLKB	Belogradchik	82.39	319	⇑P	P	12 35 19.3	+0.8
NKC	Novy Kostel	82.44	329	eP	P	12 35 20.0	+1.4
NKC				MLR	MLR		
	comp=Z,600nm,15.9s						
NKC	Novy Kostel	82.44	329	eP	P	12 35 20.0	+1.4
NKC				AMS	AMS	13 15 50.0	
	comp=Z,600nm,15.9s						
MPLH	Magyarpolny	82.45	324	P	P	12 35 19.0	+0.4
AGMN	Agassiz Nation	82.47	34	P	P	12 35 18.9	+0.2
	baz=318						
AGMN	Agassiz Nation	82.47	34	P	P	12 35 18.7	0.0
	baz=318,SNR=7.6						
N23A	Red Feather La	82.51	44	P	P	12 35 20.5	+1.0
	baz=312,SNR=18						
KPL	Plockton	82.60	342	eP	P	12 35 19.7	+0.5
KPL				IAmb	IAmb	12 35 22.9	
	comp=Z,49nm,1.1s						
MORH	Mrgy, Hungar	82.61	323	⇑P	P	12 35 19.8	+0.3
MORH	Mrgy, Hungar	82.61	323	eP	P	12 35 18.7	-0.8
MORH	Mrgy, Hungar	82.61	323	P	P	12 35 18.7	-0.8
RONA	Rosalia, Austr	82.65	325	iP	P	12 35 20.6	+0.9
	comp=Z,52nm,1.7s,SNR=14						
RONA				eP	PP	12 38 32.7	+3.5
	comp=Z,13nm,1.2s						
CONA	Conrad Observa	82.68	326	iP	P	12 35 20.8	+0.9
	comp=Z,45nm,1.7s,SNR=18						
CONA				eP	PP	12 38 32.6	+3.1
	comp=Z,18nm,1.3s						
CKRC	Cesky Krumlov	82.71	327	eP	P	12 35 20.0	0.0
CKRC				AMS	AMS	13 16 20.0	
	comp=Z,600nm,13.5s						
WUAZ	Wupatki	82.74	51	P	P	12 35 21.9	+1.3
	baz=310,SNR=12						
VTS	Vitosha	82.78	318	⇑P	P	12 35 21.0	+0.4
FRGS	Fruska Gora	82.79	322	⇑P	P	12 35 20.7	+0.2
FRGS	Fruska Gora	82.79	322	eP	P	12 35 21.2	+0.7
KHC	Kasperske Hory	82.80	328c	iP	P	12 35 20.2	-0.3
KHC				pmax	pmax		
	comp=Z,65nm,1.6s						
KHC	Kasperske Hory	82.80	328	eP	P	12 35 20.4	-0.1
KHC				pP	pP	12 35 33.5	-1.6
KHC				AMS	AMS	13 16 10.0	
	comp=Z,900nm,14.6s						
113A	Mohawk Valley,	82.91	55	P	P	12 35 23.3	+2.0
113A				IAmb	IAmb	12 35 24.2	
	comp=Z,53nm,1.6s						
IVI	Ivigtut	82.92	4	iP	P	12 35 21.1	+0.3
IVI				IAmb	IAmb	12 35 23.1	
	comp=Z,16nm,0.7s						
GEC2	GERESS Array S	82.96	328	P	P	12 35 21.5	+0.1
GEC2				IAmb	IAmb	12 35 22.8	
	comp=Z,54nm,1.9s						
GERES	GERESS Array B	82.96	328	P	P	12 35 21.4	+0.1
	comp=Z,2.6nm,0.6s,baz=45,slow=6.6,SNR=20						
GERES				LR	LR	13 16 12.2	
	comp=Z,421nm,18.5s,baz=43,slow=38						
	comp=Z,2.6nm,0.6s						
GERES	GERESS Array B	82.96	328	P	P	12 35 21.2	-0.1
INVG	Invergeldie, C	82.99	341	eP	P	12 35 21.1	-0.2
EAB	Aberfoyle	83.28	341	eP	P	12 35 22.9	+0.2
ARSA	Arzberg	83.33	326	iP	P	12 35 23.9	+0.6
	comp=Z,19nm,1.3s,SNR=11						
ARSA				eP	PP	12 38 36.2	+1.4
	comp=Z,7.0nm,1.6s						
GRA1	Grafenberg Arr	83.37	329	P	P	12 35 24.0	+0.6
GRF	Grafenberg Arr	83.37	329	P	P	12 35 24.0	+0.6
GRF				pmax	pmax		
	comp=Z,145nm,1.6s						
GRFO	Grafenberg	83.37	329	P	P	12 35 24.2	+0.8
GRFO	Grafenberg	83.37	329	P	P	12 35 24.2	+0.8
GRFO				pmax	pmax		
	comp=Z,154nm,1.7s						
B35A	Bob, Littlefor	83.37	33	P	P	12 35 24.3	+1.0
	baz=319						
MVCO	Mesa Verde	83.44	48	P	P	12 35 25.9	+1.7
MVCO				IAmb	IAmb	12 35 27.4	
	comp=Z,31nm,1.1s						
MVCO	Mesa Verde	83.44	48	P	P	12 35 24.8	+0.5
	baz=311,SNR=18						
DIVS	Divibare	83.45	321	P	P	12 35 24.3	+0.3
DIVS				IAmb	IAmb	12 35 26.4	
	comp=Z,33nm,1.4s						
DIVS	Divibare	83.45	321	eP	P	12 35 23.6	-0.4
MOA	Molln	83.46	327	iP	P	12 35 24.5	+0.6
	comp=Z,27nm,1.6s,SNR=10						
MOA				eP	PP	12 38 38.3	+2.6
	comp=Z,7.1nm,1.1s						
LAWE	Loch Awe, Argy	83.49	341	eP	P	12 35 24.0	+0.2
PGBU	Glenifferbraes	83.65	341	eP	P	12 35 24.6	-0.1
PGBU				IAmb	IAmb	12 35 26.5	
	comp=Z,109nm,1.5s						
EKA	Eskdalemuir Ar	83.71	340	P	P	12 35 25.7	+0.7
	comp=Z,1.7nm,0.5s,baz=38,slow=4.5,SNR=14						
EKA				LR	LR	13 18 55.2	
	comp=Z,410nm,18.1s,baz=34,slow=40						
	comp=Z,1.7nm,0.5s						
SUSD	Miller	83.79	38	P	P	12 35 25.7	0.0
	baz=316						
BIOA	Bad Ischl, Aus	83.86	327	iP	P	12 35 26.6	+0.7
	comp=Z,34nm,1.2s,SNR=16						
BBLS	Lazići	83.91	321	eP	P	12 35 26.5	+0.2
GROS	Grobnik	83.93	325	eP	P	12 35 25.7	-0.6
EIL	Elat	83.93	302	LR	LR	13 17 07.3	
	comp=Z,336nm,20.1s,baz=62,slow=39						
PERS	Pernice	83.98	325	iP	P	12 35 26.4	-0.1
SOKA	Soboth	83.98	325	iP	P	12 35 26.9	+0.2
	comp=Z,30nm,1.0s,SNR=25						
SOKA				eP	PP	12 38 43.1	+2.9
	comp=Z,3.2nm,1.0s						
VAY	Valandovo	84.03	318	iP	P	12 35 27.0	+0.1
W18A	Petrified Fore	84.03	51	P	P	12 35 27.9	+0.7
	baz=310						
214A	Organ Pipe Nat	84.05	55	P	P	12 35 27.8	+0.6
	baz=309,SNR=12						
SJES	Sjenica	84.05	320	eP	P	12 35 27.2	+0.1
F33A	5 Mile Ranch,	84.08	36	P	P	12 35 27.7	+0.7
	baz=318,SNR=8.7						
S22A	4UR Ranch, Cre	84.09	47	P	P	12 35 28.4	+0.8
	baz=312,SNR=26						
RUDO	Rudo	84.11	321	eP	P	12 35 26.8	-0.5
SKO	Skopje	84.19	319	iP	P	12 35 28.4	+0.7
RPZ	Rata Peaks	84.23	158	LR	LR	13 07 50.1	
	comp=Z,529nm,21.4s,baz=340,slow=32						
Q24A	Divide	84.26	45	P	P	12 35 28.5	-0.1
	baz=312,SNR=6.7						
OBKA	Obir	84.33	326	eP	P	12 35 28.9	+0.5
	comp=Z,7.4nm,0.7s						
OBKA				eP	PP	12 38 45.2	+2.2
	comp=Z,0.2nm,0.5s						
CRES	Cresnjev	84.42	325	eP	P	12 35 27.5	-1.3
KBA	Koelnbreinsper	84.45	327	iP	P	12 35 29.1	0.0
	comp=Z,13nm,0.8s,SNR=11						
KBA				eP	PP	12 38 48.0	+4.0
	comp=Z,10nm,1.4s						
UPM	Unac-Piva	84.64	321	eP	P	12 35 30.3	+0.1
OGNE	Ogallala	84.65	42	P	P	12 35 30.0	-0.2
	baz=314						
EYMN	Ely	84.65	32	P	P	12 35 30.9	+1.0
	baz=321						
EYMN	Ely	84.65	32	P	P	12 35 30.3	+0.4
	baz=321,SNR=7.4						
MYKA	Terra Mystica	84.66	326	iP	P	12 35 29.7	-0.4
	comp=Z,18nm,0.7s,SNR=11						
MYKA				eP	PP	12 38 47.7	+2.1
	comp=Z,9.1nm,1.1s						
BEBN	Eben Emael	84.67	333	dP	P	12 35 30.4	+0.5
MGRS	Mrkonjic Grad	84.67	323	eP	P	12 35 31.3	+1.2
LJU	Ljubljana	84.69	325	eP	P	12 35 28.2	-2.0
MEM	Membach	84.69	333	dP	P	12 35 30.0	0.0
CRNS	Crni Vrh	84.78	325	eP	P	12 35 29.7	-1.0
PMOR	Pomariorio Ree	84.87	113	eT	T	14 08 05.4	
	comp=Z,22nm,0.2s						
SDCO	Great Sand Dun	84.87	46	P	P	12 35 33.2	+1.6
SDCO	Great Sand Dun	84.87	46	P	P	12 35 32.9	+1.3
	baz=312,SNR=35						
SDCO	Great Sand Dun	84.87	46	P	P	12 35 32.4	+0.8
	baz=312,SNR=35						
BSTI	Sart Tilman	84.88	333	dP	P	12 35 31.7	+0.7
BHOU	Houvegnez	84.90	332	dP	P	12 35 31.2	0.0
CEY	Cerknica	84.97	325	eP	P	12 35 29.3	-2.3
LBWR	Ladybower, Pea	84.97	338	eP	P	12 35 31.0	-0.4
LBWR				IAmb	IAmb	12 35 32.9	
	comp=Z,137nm,1.5s						
PDG	Podgorica	85.01	320	⇓P	P	12 35 31.8	0.0
PDG	Podgorica	85.01	320	eP	P	12 35 31.6	-0.2
WATA	Walderalm	85.03	328	iP	P	12 35 31.4	-0.6
	comp=Z,6.9nm,0.9s,SNR=6.3						
WATA				eP	PP	12 38 52.1	+3.4
	comp=Z,12nm,1.3s						
BRY	Bratogost	85.04	321	eP	P	12 35 31.8	-0.4
WTTA	Wattenberg	85.06	328	iP	P	12 35 32.7	+0.4
	comp=Z,21nm,1.7s,SNR=5.5						
WTTA				eP	PP	12 38 51.1	+2.1
	comp=Z,7.4nm,0.9s						
ABTA	Abfaltersbach	85.07	327	iP	P	12 35 31.4	-0.8
	comp=Z,12nm,1.1s,SNR=6.7						
ABTA				eP	PP	12 38 52.2	+3.2
	comp=Z,4.1nm,0.9s						
BCLA	Clavier	85.11	333	dP	P	12 35 33.0	+0.8
OHR	Ohrid	85.13	319	iP	P	12 35 33.4	+0.9
TUC	Tucson	85.16	53	P	P	12 35 34.8	+1.9
TUC				IAmb	IAmb	12 35 39.3	
	comp=Z,25nm,1.0s						
TUC	Tucson	85.16	53	P	P	12 35 34.8	+1.9
TUC				pmax	pmax		
	comp=Z,25nm,1.0s						
TUC	Tucson	85.16	53	P	P	12 35 34.1	+1.3
	baz=310						
K31A	O'Neill	85.20	39	P	P	12 35 34.3	+1.4
BGES	Gesves	85.22	333	dP	P	12 35 33.4	+0.7
DRME	Dracevica, Mon	85.22	320	eP	P	12 35 32.5	-0.4
MOTA	Moosalm	85.23	328	iP	P	12 35 33.7	+0.6
	comp=Z,21nm,1.6s,SNR=5.7						
MOTA				eP	PP	12 38 47.9	-2.4
	comp=Z,5.1nm,0.9s						
PPT	Papeete	85.25	116	LR	LR	13 06 04.9	
	comp=Z,504nm,20.3s,baz=300,slow=30						
PPT2	Papeete2	85.26	116	eP	P	12 35 31.7	-1.7
	comp=Z,90nm,24.5s						
PPT2	Papeete2	85.26	116	eS	S	12 45 55.2	-4.9
	comp=Z,185nm,25.2s						
PPT2	Papeete2	85.26	116	eLR	LR	13 02 03.6	
	comp=Z,3µm,32.2s,baz=309						
PPT2	Papeete2	85.26	116	eT	T	14 08 33.9	
	comp=Z,2.9nm,0.3s						
RETA	Reutte	85.27	328	iP	P	12 35 33.2	+0.1
	comp=Z,43nm,1.9s,SNR=13						
SQTA	Sankt Quirin	85.28	328	eP	P	12 35 33.5	+0.3
	comp=Z,5.1nm,0.6s						
SQTA				eP	PP	12 38 51.8	+1.1
	comp=Z,9.0nm,0.9s						
SKDS	Skadanscina	85.30	325	eP	P	12 35 32.1	-1.2
RCHB	Rochefort	85.35	333	dP	P	12 35 32.7	-0.7
STAL	STALIGIAL	85.36	326	P	P	12 35 32.4	-1.1
STAL				IAmb	IAmb	12 36 00.6	
	comp=Z,20nm,0.8s						
HCY	Herceg Novi	85.39	321	eP	P	12 35 33.1	-0.6
BMRD	Maredsous	85.40	333	dP	P	12 35 34.5	+0.9
BMRD				dpP	pP	12 35 46.5	-1.7
WLF	Walferdange	85.41	332	P	P	12 35 33.9	+0.2
WLF				IAmb	IAmb	12 35 36.4	
	comp=Z,70nm,1.5s						
WLF	Walferdange	85.41	332	P	P	12 35 33.9	+0.2
WLF				pmax	pmax		
	comp=Z,70nm,1.5s						
WLF	Walferdange	85.41	332	dP	P	12 35 32.8	-0.8
WLF				dPcP	PcP	12 35 34.8	-1.9
SNF	Seneffe	85.41	333	dP	P	12 35 33.6	-0.1
GMM	Mts of Mourne	85.44	341	eP	P	12 35 33.6	-0.1
ECSD	EROS Data Cent	85.47	37	P	P	12 35 35.0	+0.9
ECSD	EROS Data Cent	85.47	37	P	P	12 35 34.4	+0.3
	baz=317						
ECSD	EROS Data Cent	85.47	37	P	P	12 35 34.5	+0.3
	baz=317,SNR=9.9						
STON	Ston	85.49	321	eP	P	12 35 34.7	+0.5
BFO	Black Forest	85.62	330	P	P	12 35 34.0	-0.8
BFO	Black Forest	85.62	330	P	P	12 35 34.0	-0.8
BFO				pmax	pmax		
	comp=Z,76nm,1.6s						
DOU	Dourbes	85.64	333	dP	P	12 35 33.7	-1.1
DOU				dPcP	PcP	12 35 36.6	-1.0
FETA	Feichten	85.64	328	eP	P	12 35 35.0	-0.1
	comp=Z,8.8nm,1.1s						
KSCO	Kaye Shedlock’	85.66	44	P	P	12 35 35.9	+0.6
	baz=314						
E38A	The Farm, Brul	85.66	33	P	P	12 35 35.6	+0.7
E38A				IAmb	IAmb	12 35 37.1	
	comp=Z,64nm,1.4s						
WME	Myndd Eilian	85.73	339	eP	P	12 35 35.3	+0.1
DAVA	Damuels	85.80	328	iP	P	12 35 36.0	+0.1
	comp=Z,21nm,1.2s,SNR=8.6						
WLF1	Llynfaes	85.85	339	eP	P	12 35 35.5	-0.2
WLF1				IAmb	IAmb	12 35 37.1	
	comp=Z,291nm,1.8s						
FOEL	Foel Wylfa	85.85	339	eP	P	12 35 36.1	+0.3
FOEL				IAmb	IAmb	12 35 37.5	
	comp=Z,145nm,1.6s						
T25A	Trinidad	85.92	46	P	P	12 35 38.2	+1.4
	baz=313,SNR=16						
YRC	Rhoscolyn	85.94	340	eP	P	12 35 35.8	-0.3
LLW	Llanuwychllyn	86.03	339	eP	P	12 35 36.6	0.0
HLM1	Long Mynd	86.08	338	eP	P	12 35 37.3	+0.3
SPMN	Marine on St.	86.16	34	P	P	12 35 37.7	+0.2
	baz=320						
ANMO	Albuquerque	86.17	49	LR	LR	13 08 06.3	
	comp=Z,124nm,21.8s,baz=325,slow=31						
ANMO	Albuquerque	86.17	49	P	P	12 35 40.0	+2.0
ANMO	Albuquerque	86.17	49c	iP	P	12 35 39.3	+1.3
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	Albuquerque	86.17	49	P	P	12 35 39.8	+1.9
	baz=312						
ANMO	Albuquerque	86.17	49	P	P	12 35 39.3	+1.3
	baz=312						
ECH	Echery	86.18	331	P	P	12 35 37.1	-0.4
ECH				IAmb	IAmb	12 35 39.6	
	comp=Z,54nm,1.7s						
ECH	Echery	86.18	331	P	P	12 35 37.1	-0.4
ECH				pmax	pmax		
	comp=Z,54nm,1.7s						
DAVOX	Davos/Dischmat	86.19	328	P	P	12 35 38.2	+0.3
	comp=Z,3.5nm,0.8s,baz=74,slow=7.4,SNR=8.5						
DAVOX				LR	LR	13 19 46.7	
	comp=Z,432nm,18.2s,baz=65,slow=40						
	comp=Z,3.5nm,0.8s						
BGNE	Belgrade	86.39	40	P	P	12 35 38.4	-0.3
	baz=317						
Y22D	IRIS PASSCAL I	86.46	50	P	P	12 35 38.8	-0.6
	baz=312						
STRD	Stroud	86.51	338	eP	P	12 35 38.8	-0.2
STRD				IAmb	IAmb	12 35 41.0	
	comp=Z,237nm,1.5s						
Y22A	Socorro	86.53	50	P	P	12 35 41.8	+2.0
	baz=312						
MCH1	Michaelchurch	86.57	338	eP	P	12 35 39.2	-0.1
MCH1				IAmb	IAmb	12 35 40.7	
	comp=Z,122nm,1.6s						
BNM	Barren Site	86.59	50	P	P	12 35 42.1	+1.9
MONM	Monmouth	86.65	338	eP	P	12 35 39.5	-0.2
MONM				IAmb	IAmb	12 35 41.0	
	comp=Z,133nm,1.6s						
SCHQ	Schefferville	86.66	15	P	P	12 35 40.2	+0.5
	comp=Z,10nm,0.7s,baz=1.3,slow=6.1,SNR=15						
SCHQ				LR	LR	13 18 35.3	
	comp=Z,219nm,18.6s,baz=342,slow=38						
	comp=Z,10nm,0.7s						
I37B	Waseca	86.81	35	P	P	12 35 42.1	+1.4
	baz=320,SNR=8.6						
IDI	Anoyia	86.81	312	P	P	12 35 41.1	+0.2
	comp=Z,12nm,0.7s,baz=52,slow=5.9,SNR=9.1						
IDI				LR	LR	13 20 20.7	
	comp=Z,206nm,18.9s,baz=74,slow=40						
	comp=Z,12nm,0.7s						
IDI	Anoyia	86.81	312	P	P	12 35 40.8	-0.2
121A	Cookes Peak, D	86.94	52	P	P	12 35 43.4	+1.6
	baz=312						
121A	Cookes Peak, D	86.94	52	P	P	12 35 42.1	+0.3
	baz=312,SNR=6.4						
TAOE	Nuku Hiva Isla	87.09	103	eP	P	12 35 42.0	-0.5
	comp=Z,108nm,25.1s						
TAOE	Nuku Hiva Isla	87.09	103	eS	S	12 46 11.5	-6.7
TAOE	Nuku Hiva Isla	87.09	103	eLR	LR	13 02 36.3	
	comp=Z,2µm,32.2s						
COWI	Conover	87.10	32	P	P	12 35 42.5	+0.4
	baz=322						
RSBS	Rosebush, Pemb	87.13	339	eP	P	12 35 41.6	-0.5
RSBS				IAmb	IAmb	12 35 43.3	
	comp=Z,66nm,1.4s						
G40A	Rib Lake	87.30	33	P	P	12 35 43.7	+0.6
	baz=322						
IWEX	Carrickbyrne,	87.33	340	eP	P	12 35 43.0	0.0
CBKS	Cedar Bluff	87.40	42	P	P	12 35 43.9	+0.1
	baz=316						
SCIA	State Center	88.50	37	P	P	12 35 49.4	+0.6
	baz=320						
JSA	Saint Aubin	88.76	336	eP	P	12 35 49.5	-0.4
JSA				IAmb	IAmb	12 35 51.0	
	comp=Z,79nm,1.6s						
KSU1	Kansas State U	88.88	40	P	P	12 35 50.4	-0.3
	baz=318						
ATD	Arta Tunnel	88.96	283	LR	LR	13 18 35.7	
	comp=Z,150nm,21.5s,baz=28,slow=38						
MNTX	Cornudas Mount	89.01	51	P	P	12 35 52.4	+1.0
	baz=313,SNR=6.2						
MSTX	Muleshoe	89.06	48	P	P	12 35 52.5	+0.7
	baz=314						
AMTX	Amarillo	89.08	46	P	P	12 35 52.9	+1.1
	baz=315,SNR=6.2						
AMTX	Amarillo	89.08	46	P	P	12 35 52.7	+0.9
	baz=315						
JFWS	Jewell Farm	89.12	34	P	P	12 35 51.6	-0.2
	baz=322						
VLDQ	Val d'Or	89.86	24	P	P	12 35 55.3	+0.2
VLDQ				IAmb	IAmb	12 35 56.4	
	comp=Z,21nm,0.9s						
GLMI	Grayling	90.01	30	P	P	12 35 56.9	+1.0
	baz=326						
L44A	Lake County Fo	90.75	33	P	P	12 35 60.0	+0.6
	baz=323						
WMOK	Wichita Mounta	90.86	45	P	P	12 35 59.8	-0.2
	baz=316,SNR=7.8						
P40A	Paris	90.88	38	P	P	12 36 01.1	+1.1
	baz=320,SNR=9.7						
VAE	Valguarnera	91.17	320	LR	LR	13 20 04.7	
	comp=Z,235nm,18.2s,baz=17,slow=38						
HDIL	Hopedale	91.41	35	P	P	12 36 02.8	+0.4
	baz=322						
S39A	Bolivar	91.64	39	P	P	12 36 03.9	+0.3
	baz=320,SNR=8.7						
TUL1	Leonard	91.67	42	P	P	12 36 04.9	+1.2
	baz=318,SNR=5.9						
TUL1	Leonard	91.67	42	P	P	12 36 04.2	+0.5
	baz=318,SNR=5.9						
TX31	Lajitas Ar. Si	91.70	51	P	P	12 36 05.1	+0.9
TX31	Lajitas Ar. Si	91.70	51	P	P	12 36 04.6	+0.5
	baz=314						
TXAR	Lajitas Array	91.70	51	P	P	12 36 05.3	+1.1
	comp=Z,6.5nm,0.6s,baz=300,slow=2.6,SNR=86						
TXAR				LR	LR	13 11 27.8	
	comp=Z,168nm,21.6s,baz=328,slow=32						
	comp=Z,6.5nm,0.6s						
R40A	Maddies Statio	91.72	38	P	P	12 36 04.5	+0.6
	baz=320,SNR=11						
ABTX	Abilene, Hawle	91.87	47	P	P	12 36 04.8	+0.1
	baz=316,SNR=6.2						
SADO	Sadowa	92.17	27	LR	LR	13 21 33.3	
	comp=Z,210nm,20.7s,baz=338,slow=38						
HHAR	Hobbs	92.39	41	P	P	12 36 07.8	+0.8
CCM	Cathedral Cave	92.42	38	P	P	12 36 08.1	+0.9
CCM	Cathedral Cave	92.42	38	P	P	12 36 08.1	+0.9
CCM				pmax	pmax		
	comp=Z,72nm,1.8s						
CCM	Cathedral Cave	92.42	38	P	P	12 36 07.7	+0.6
	baz=321,SNR=7.5						
CCM	Cathedral Cave	92.42	38	P	P	12 36 06.8	-0.4
	baz=321						
L48A	N Adams	92.46	31	P	P	12 36 07.6	+0.4
AAM	Ann Arbor	92.49	31	P	P	12 36 06.6	-0.8
	baz=326						
SFIN	Lafayette	92.56	34	P	P	12 36 08.0	+0.3
	baz=324						
Z35A	Perchaven, San	92.75	45	P	P	12 36 09.8	+1.0
	baz=317						
U40A	Yellville	92.90	40	P	P	12 36 10.0	+0.6
	baz=320,SNR=14						
U40A				P	P	12 36 10.0	+0.6
	baz=320,SNR=14						
U40A	Yellville	92.90	40	P	P	12 36 09.5	+0.1
	baz=320,SNR=14						
W39A	Magazine	93.29	41	P	P	12 36 12.4	+1.2

	baz=319						
W39A	Magazine	93.29	41	P	P	12 36 11.5	+0.3
	baz=319						
JCT	Junction City	93.30	48	P	P	12 36 12.6	+1.2
	baz=316						
JCT	Junction City	93.30	48	P	P	12 36 11.5	0.0
	baz=316						
O48B	Farmland	93.53	33	P	P	12 36 12.8	+0.5
	baz=325						
O48B	Farmland	93.53	33	P	P	12 36 12.5	+0.3
	baz=325						
WHTX	Lake Whitney,	93.61	46	P	P	12 36 13.1	+0.4
	baz=317						
FCAR	Ozark Folk Cen	93.64	40	P	P	12 36 14.1	+1.3
S44A	Carbondale	93.68	37	P	P	12 36 14.1	+1.1
	baz=322						
LONY	Lake Ozonia	93.88	24	P	P	12 36 13.9	+0.2
	baz=333						
MIAR	Mount Ida	93.89	42	P	P	12 36 15.3	+1.4
	baz=319						
MIAR	Mount Ida	93.89	42	P	P	12 36 14.7	+0.7
	baz=319,SNR=7.3						
ERPA	Erie	94.12	29	P	P	12 36 15.4	+0.5
	baz=329						
W41B	Gary Mavity, V	94.12	40	P	P	12 36 15.2	+0.2
	baz=320						
P49A	Miami Univ. Ec	94.31	33	P	P	12 36 16.1	+0.3
	baz=325						
X40A	Basin Creek Fa	94.33	41	P	P	12 36 16.3	+0.3
	baz=320						
M53A	WI Miller and	94.42	29	P	P	12 36 17.6	+1.3
	baz=328						
ACSO	Alum Creek Sta	94.49	32	P	P	12 36 17.4	+0.7
	baz=327						
PKME	Peaks-Kenny Pk	94.91	20	P	P	12 36 18.1	-0.3
	baz=337						
LBNH	Lisbon	95.07	22	P	P	12 36 19.6	+0.4
	baz=335						
833A	Chaparral WMA,	95.08	50	P	P	12 36 18.7	-0.8
	baz=316						
O53A	New Philadelph	95.21	30	P	P	12 36 20.7	+0.8
	baz=328						
P52A	Corning	95.35	31	P	P	12 36 20.8	+0.2
	baz=327						
BINY	Binghamton	95.53	26	P	P	12 36 21.9	+0.5
	baz=332						
WVT	Waverly	95.62	37	P	P	12 36 22.5	+0.6
WVT	Waverly	95.62	37	P	P	12 36 22.5	+0.6
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVT	Waverly	95.62	37	P	P	12 36 22.3	+0.4
	baz=323						
OXF	Oxford	96.11	39	P	P	12 36 24.3	+0.2
	baz=322						
MCWV	Mont Chateau	96.27	30	P	P	12 36 25.6	+0.9
	baz=329						
T50A	Nancy	96.32	35	P	P	12 36 25.7	+0.6
	baz=325						
T50A				P	P	12 36 25.7	+0.6
	baz=325						
HRV	Adam Dziewonsk	96.75	23	P	P	12 36 26.3	-0.6
	baz=335						
TZTN	Tazewell	97.30	34	P	Pdif	12 36 29.9	+0.3
	baz=326						
ESDC	Sonseca Array	97.68	333	P	Pdif	12 36 31.4	+0.1
	comp=Z,0.9nm,0.8s,baz=343,slow=1.9,SNR=8.2						
ESDC				LR	LR	13 24 38.7	
	comp=Z,272nm,21.7s,baz=20,slow=38						
	comp=Z,0.9nm,0.8s						
CPCT	Cooper Cave	97.75	35	P	Pdif	12 36 32.6	+1.0
TKL	Tuckaleechee C	97.92	35	LR	LR	13 22 20.7	
	comp=Z,133nm,21.9s,baz=336,slow=36						
TIGA	Tifton	101.47	37	P	Pdif	12 36 48.4	+0.1
	baz=326						
NHSC	New Hope	101.68	34	P	Pdif	12 36 49.5	+0.4
	baz=328						
DWPF	Disney Wildern	105.27	37	P	Pdif	12 37 04.6	-0.6
	baz=326						
VNDA	Vanda	114.04	175	PKP	PKPdf	12 41 33.7	-0.2
	comp=Z,0.5nm,0.6s,baz=49,slow=9.8,SNR=3.3						
TORD	Torodi Ar. Bea	117.20	313	PKP	PKPdf	12 41 41.5	-0.5
	comp=Z,1.5nm,0.6s,baz=43,slow=1.8,SNR=16						
TORD				PKKPbc	PKKPbc	12 52 05.0	0.0
	comp=Z,0.4nm,0.6s,baz=228,slow=4.3,SNR=2.3						
MAW	Mawson	118.09	205	PKP	PKiKP	12 41 42.8	+0.9
	comp=Z,1.2nm,0.5s,baz=83,slow=8.1,SNR=7.0						
MAW	Mawson	118.09	205		PKiKP	12 41 43.1	+1.2
BATAN	Batan	118.63	50		PKPdf	12 41 43.6	-1.1
KOWA	Kowa	119.31	319		PKPdf	12 41 45.7	-0.3
LBTB	Lobatse	123.32	262	PKPdf	PKiKP	12 41 54.3	+0.6
LBTB	Lobatse	123.32	262	PKIKP	PKiKP	12 41 54.3	+0.6
BOSA	Boshof	125.20	258	PKP	PKPdf	12 41 56.9	-0.1
	comp=Z,3.5nm,0.8s,baz=80,slow=4.3,SNR=6.4						
BOSA	Boshof	125.20	258		PKPdf	12 41 56.3	-0.7
QSPA	South Pole Qui	125.74	180		PKiKP	12 41 58.7	+1.5
DBIC	Dimbokro	126.20	315	PKP	PKiKP	12 41 59.7	0.0
	comp=Z,3.9nm,0.6s,baz=56,slow=2.0,SNR=9.6						
DBIC	Dimbokro	126.20	315		PKPdf	12 41 58.9	-0.4
SDV	Santo Domingo	126.89	39	*e*P	PKiKP	12 42 01.5	+0.2
BAUV	El Baul	128.12	36		PKiKP	12 42 03.8	+0.3
ROSC	El Rosal	128.24	46	PKP	PKiKP	12 42 04.4	+0.2
	comp=Z,7.7nm,0.4s,baz=293,slow=10,SNR=5.4						
ROSC	El Rosal	128.24	46		PKiKP	12 42 05.1	+0.8
OTAV	Otavalo	129.29	53	*e*P	PKPdf	12 42 06.0	+0.3
BOAV	Boa Vista	137.30	31	*e*P	PKPdf	12 42 20.9	+0.7
TROLL	Troll, Antarti	137.87	198	P	PKPdf	12 42 11.0	-8.7
TBTG	Tabatinga, AM	138.07	48	*e*P	PKPdf	12 42 22.6	+1.0
CZSB	Cruzeiro do Su	139.02	55	*e*P	PKiKP	12 42 25.3	-0.3
SNAA	Sanae	139.40	197	P	PKPdf	12 42 14.2	-8.1
SNAA	Sanae	139.40	197		PKPdf	12 42 22.8	+0.4
SNAA	Sanae	139.40	197	PKIKP	PKPdf	12 42 22.8	+0.4
VNA3	Neumayer Olymp	141.25	195	P	PKPdf	12 42 20.0	-5.7
VNA1	Neumayer--Stat	141.38	196	P	PKPdf	12 42 24.1	-1.8
MACA	Manacapuru-AM	142.18	35	*e*P	PKPdf	12 42 29.3	+0.3
MCPB	Macapa, AP	142.84	20	*e*P	PKPdf	12 42 29.7	-0.6
ITTB	Itaituba	145.37	28	*e*P	PKPab	12 42 35.2	+0.4
TMAB	Tom-Au,PA,Br	145.73	14	*e*P	PKPab	12 42 37.6	+1.6
ROSB	Rosrio	146.86	7	*e*P	PKPbc	12 42 38.8	-0.2
H03N2	Juan Fernandez	148.09	97	T	T	15 28 01.7	
	baz=291,slow=76,SNR=337						
H03N3	Juan Fernandez	148.10	97	T	T	15 28 02.8	
	baz=291,slow=76,SNR=358						
H03N1	Juan Fernandez	148.11	97	T	T	15 28 03.0	
	baz=291,slow=76,SNR=434						
LPAZ	La Paz	148.25	59	PKPbc	PKPbc	12 42 42.1	-1.4
	comp=Z,9.3nm,0.6s,baz=6.6,slow=3.0,SNR=30						
LPAZ	La Paz	148.25	59		PKPbc	12 42 43.0	-0.4
LPAZ	La Paz	148.25	59	*e*P	PKPdf	12 42 41.3	+1.2
NBPS	Pedro II - PI	148.53	3	*e*P	PKPdf	12 42 39.8	-0.2
PRPB	Parauapebas	149.00	19	*e*P	PKPdf	12 42 42.3	+1.5
NBPB	Pedra_Branca-C	149.69	359	*e*P	PKPbc	12 42 44.6	-1.9
VILB	Vilhena	150.76	43	*e*P	PKPdf	12 42 45.3	+1.8
CLDB	Colider	151.22	34	*e*P	PKPdf	12 42 45.1	+1.0
NBMA	Muriti-CE	151.48	357	*e*P	PKPdf	12 42 47.3	+2.7
SMTB	Santa Maria do	152.14	16	*e*P	PKPdf	12 42 47.0	+1.4
LCO	Las Campanas	153.31	84		PKiKP	12 42 56.3	+1.4
NBAN	Anadia - AL	153.57	352	*e*P	PKPdf	12 42 47.8	+0.1
PLCA	Paso Flores	155.70	110	PKP	PKPdf	12 42 49.9	0.0
	comp=Z,2.8nm,1.1s,baz=173,slow=15,SNR=2.6						
PLCA				PKPab	sPKPbc	12 43 18.1	-1.8
	comp=Z,2.1nm,0.8s,baz=312,slow=2.7,SNR=4.4						
BDFB	Brasilia	158.53	21	PKPab	PKPab	12 43 29.2	+0.1
	comp=Z,5.4nm,0.8s,baz=337,slow=4.7,SNR=4.7						

IDC 16 12:50:31.9±8.2**, 7°.72S**×**119°.09E, h261**^{km}±73^{km}**, mb2.5**/2**, mbtmp3.3**/4 **Error ellipse: s-maj=221.9km s-min=25.6km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.16	119	P	Pn	12 51 50.1	+0.1
	11nm,0.4s,baz=168,slow=20,SNR=1.8						
BATI				S	S	12 52 41.6	-11
	6.4nm,0.3s,baz=11,slow=22,SNR=1.2						
WRA	Warramunga Arr	19.14	131	P	P	12 54 35.6	-0.6
	0.2nm,0.4s,baz=304,slow=12,SNR=8.0						
ASAR	Alice Springs	21.30	140	P	P	12 54 59.2	+0.6
	0.2nm,0.4s,baz=313,slow=8.9,SNR=10						
	0.2nm,0.4s						
MKAR	Makanchi Array	63.36	333	P	P	13 00 33.4	-0.1
	0.1nm,0.3s,baz=154,slow=6.9,SNR=1.8						
	0.1nm,0.3s						

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*IDC **16** 12:50:51.0±2.9, 2°.44N×89°.76E, h0^{km}, mb3.8/5, mbtmp3.7/6, ML4.3/1, MS3.7/1, Error ellipse: s-maj=83.3km s-min=32.6km az=59.0*

ISC 16 12:50:52.5±2.6**, 2°.4N**±0°.3×**89°.8E**±0°.4**, h10**^{km}**, n13,** σ**1**^{s}**05**/6**, mb3.7**/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.27	29	P	P	12 55 06.3	-0.1
	0.3nm,0.3s,baz=212,slow=10,SNR=1.7						
	0.4nm,0.3s						
H08S3	Diego Garcia H	19.95	240	T	T	13 16 15.2	
	baz=60,slow=75,SNR=36						
H08S2	Diego Garcia H	19.95	240	T	T	13 16 19.8	
	baz=60,slow=75,SNR=26						
H08S1	Diego Carcia H	19.97	240	T	T	13 16 21.5	
	baz=60,slow=75,SNR=18						
KAPI	Kappang	30.84	104	LR	LR	13 09 35.0	
	comp=Z,120nm,18.8s,baz=308,slow=36						
H01W3	Cape Leeuwin H	43.59	151	T	T	13 45 48.8	
	baz=326,slow=76,SNR=3.3						
H01W2	Cape Leeuwin H	43.60	151	T	T	13 45 33.1	
	baz=326,slow=76,SNR=3.2						
H01W1	Cape Leeuwin H	43.61	151	T	T	13 45 29.9	
	baz=326,slow=76,SNR=3.3						
MKAR	Makanchi Array	44.66	353	P	P	12 59 05.2	-0.1
	0.6nm,0.7s,baz=168,slow=9.2,SNR=6.5						
	0.6nm,0.7s						
SONM	Songino Array	47.44	15	P	P	12 59 28.1	+0.7
	5.2nm,0.6s,baz=194,slow=9.7,SNR=28						
	5.2nm,0.6s						
KURBB	Kurchatov Arra	48.95	351	P	P	12 59 39.4	+0.6
	0.5nm,0.6s,baz=177,slow=6.7,SNR=8.0						
	0.5nm,0.6s						
WRA	Warramunga Arr	49.04	119	P	P	12 59 40.1	0.0
	0.2nm,0.6s,baz=298,slow=8.6,SNR=1.9						
	0.2nm,0.6s						
ZALV	Zalesovo Beam	51.50	356	P	P	12 59 56.6	-1.6
	0.4nm,0.4s,baz=189,slow=7.3,SNR=2.4						
	0.4nm,0.4s						

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*IDC **16** 13:06:26.4±1.2, 21°.91N×102°.55E, h0^{km}, mb3.4/5, mbtmp3.3/6, ML3.5/1, MS2.8/1, Error ellipse: s-maj=24.3km s-min=18.7km az=90.0*

ISC 16 13:06:28.0±1.2**, 21°.8N**±0°.1×**102°.3E**±0°.2**, h10**^{km}**, n6,** σ**1**^{s}**71**/7**, mb3.3**/5**, Laos**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	4.62	224	Pn	Pn	13 07 40.1	+2.2
	0.5nm,0.3s,baz=34,slow=11,SNR=9.7						
CMAR				Pg	Pg	13 07 55.0	-1.5
	2.2nm,0.3s,baz=40,slow=17,SNR=89						
CMAR				Lg	Lg	13 08 59.0	
	1.8nm,0.3s,baz=44,slow=29,SNR=13						
CMAR				LR	LR	13 09 58.2	
	comp=Z,92nm,18.4s,baz=110,slow=44						
	0.4nm,0.3s						
MKAR	Makanchi Array	29.73	332	P	P	13 12 34.0	-0.4
	0.2nm,0.5s,baz=147,slow=8.2,SNR=2.1						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	34.26	333	P	P	13 13 13.0	-1.1
	0.2nm,0.2s,baz=139,slow=8.6,SNR=1.4						
	0.2nm,0.2s						
ZALV	Zalesovo Beam	34.72	342	P	P	13 13 18.9	+0.9
	0.4nm,0.3s,baz=163,slow=10,SNR=1.3						
	0.4nm,0.3s						
WRA	Warramunga Arr	51.99	141	P	P	13 15 36.3	-1.4
	0.4nm,0.9s,baz=330,slow=8.6,SNR=1.7						
	0.4nm,0.9s						
ASAR	Alice Springs	54.67	144	P	P	13 15 58.2	+0.8
	0.2nm,0.6s,baz=325,slow=6.4,SNR=1.8						
	0.2nm,0.6s						

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*IDC **16** 13:39:29.6±0.9, 55°.66S×26°.72W, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=42.0km s-min=25.4km az=71.0*

*NEIC **16** 13:39:32.5±2.5, 55°.7S±0°.1×26°.8W±0°.2, h10^{km}±1^{km}, mb4.6/20, Error ellipse: s-maj=23.7km s-min=17.7km az=36.0*

ISC 16 13:39:33.8±0.8**, 55°.6S**±0°.1×**26°.8W**±0°.1**, h25**^{km}**, n31,** σ**1**^{s}**29**/30**, mb4.5**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.73	279	Pn	Pn	13 40 56.5	-0.6
ORCD	Orcadas	10.76	234	Pn	Pn	13 42 06.2	+0.2
VNA3	Neumayer Olymp	17.36	161	P	P	13 43 36.0	+0.8
SNAA	Sanae	19.08	157	P	Pn	13 43 57.9	+2.9
SNAA	Sanae	19.08	157	P	Pn	13 43 54.3	-0.7
PMSA	Palmer Station	20.36	228	P	Pn	13 44 07.9	-2.2
PMSA				IAmb	IAmb	13 44 18.4	
	comp=Z,28nm,1.1s						
BELA	Belgrano 2	22.55	184	P	P	13 44 29.9	-1.6
DSPA	Despedida	23.71	257	P	P	13 44 42.5	-0.9
MG02	Cerro Sombrero	24.69	259	P	P	13 44 51.5	-1.0
MG03	Isla Dawson	24.96	256	P	P	13 44 54.3	-0.6
MG03				IAmb	IAmb	13 45 04.1	
	comp=Z,14nm,1.1s						
GO09	Cerro Castillo	27.08	260	P	P	13 45 12.0	-2.0
GO09				IAmb	IAmb	13 45 31.6	
	comp=Z,21nm,1.4s						
QSPA	South Pole Qui	34.66	180	P	P	13 46 21.5	+0.6
QSPA				IAmb	IAmb	13 46 35.9	
	comp=Z,23nm,1.5s						
LC02	Puerto Saavedr	35.05	279	P	P	13 46 27.2	+2.9
LMEL	Las Melosas	36.89	288	P	P	13 46 41.1	+0.8
LMEL				IAmb	IAmb	13 46 53.3	
	comp=Z,11nm,1.1s						
MT02	Curacav	37.85	287	P	P	13 46 47.8	-0.5
MT02				IAmb	IAmb	13 47 05.3	
	comp=Z,13nm,1.2s						
CO01	Juntas del Tor	39.84	292	P	P	13 47 06.5	+1.2
CO01				IAmb	IAmb	13 47 12.5	
	comp=Z,13nm,1.5s						
GO04	Tololo Observa	40.06	291	P	P	13 47 06.1	-0.9
GO04				IAmb	IAmb	13 47 24.6	
	comp=Z,24nm,1.2s						
MAW	Mawson	40.39	144	P	P	13 47 07.2	-1.9
	comp=Z,2.5nm,1.0s,baz=21,slow=12,SNR=1.9						
	comp=Z,2.5nm,1.0s						
MAW	Mawson	40.39	144	IAmb	IAmb	13 47 14.7	
	comp=Z,2.1nm,1.4s						
AC04	Llanos de Chal	41.76	292	P	P	13 47 22.7	+1.8
AC04				IAmb	IAmb	13 47 29.5	
	comp=Z,38nm,1.3s						
SBA	Scott Base	46.55	184	P	P	13 47 59.9	+1.4
SBA				IAmb	IAmb	13 48 01.4	
	comp=Z,4.4nm,1.1s						
VNDA	Vanda	47.04	183	P	P	13 48 02.0	-0.4
	comp=Z,1.6nm,0.6s,baz=186,slow=7.1,SNR=28						
	comp=Z,1.6nm,0.6s						
VNDA	Vanda	47.04	183	P	P	13 48 02.8	+0.4
PB12	IPOC Station P	49.34	301	P	P	13 48 21.8	+0.9
LPAZ	La Paz	50.29	304	P	P	13 48 28.8	0.0
	comp=Z,1.6nm,0.7s,baz=142,slow=6.3,SNR=6.6						
	comp=Z,1.6nm,0.7s						
LPAZ	La Paz	50.29	304	P	P	13 48 29.6	+0.8
TORD	Torodi Ar. Bea	72.55	29	P	P	13 50 58.8	+0.3
	comp=Z,1.0nm,0.6s,baz=197,slow=6.4,SNR=6.2						
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	99.36	162	P	Pdif	13 53 12.4	-1.5
	comp=Z,0.5nm,1.1s,baz=180,slow=4.8,SNR=1.5						
	comp=Z,0.5nm,1.1s						
ILAR	Eielson Array	149.97	312	PKP	PKPdf	13 59 15.0	-0.4
	comp=Z,0.2nm,0.7s,baz=92,slow=0.5,SNR=1.8						
ILAR				PKPbc	PKPbc	13 59 19.9	-0.5
	comp=Z,1.6nm,0.9s,baz=109,slow=1.4,SNR=11						
ILAR	Eielson Array	149.97	312	PKPdf	PKPdf	13 59 16.2	+0.8
SONM	Songino Array	150.49	85	PKPbc	PKPbc	13 59 21.9	-0.5
	comp=Z,0.4nm,0.4s,baz=259,slow=2.4,SNR=4.2						

IDC 16 13:42:06.3±2.3**, 6°.47S**×**129°.36E, h0**^{km}**, mb3.4**/1**, mbtmp3.4**/3**, ML3.8**/2**, MS3.1**/1**, Error ellipse: s-maj=121.3km s-min=34.1km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.23	161	Pn	Pn	13 45 28.4	-0.9
	0.5nm,0.3s,baz=339,slow=13,SNR=12						
WRA				Sn	Sn	13 47 55.2	-13
	0.6nm,0.3s,baz=327,slow=25,SNR=8.7						
	0.4nm,0.3s						
ASAR	Alice Springs	17.64	166	Pn	P	13 46 14.4	-0.3
	0.2nm,0.3s,baz=344,slow=13,SNR=20						
ASAR				Sn	Sn	13 49 18.2	-13
	0.2nm,0.3s,baz=357,slow=27,SNR=7.9						
	0.4nm,0.7s						
MJAR	Matsushiro Arr	43.59	10	LR	LR	14 09 11.2	
	comp=Z,23nm,18.1s,baz=30,slow=37						
MKAR	Makanchi Array	67.44	327	P	P	13 53 03.9	0.0
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.5						
	0.2nm,0.5s						

IDC 16 13:42:25.2±1.4**, 55°.34S**×**25°.09W, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=56.4km s-min=34.7km az=84.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	47.34	182	P	P	13 50 59.7	-0.2
	0.7nm,0.6s,baz=203,slow=6.4,SNR=5.9						
	0.7nm,0.6s						
LPAZ	La Paz	50.97	302	P	P	13 51 28.8	-0.4
	1.4nm,0.8s,baz=180,slow=9.1,SNR=4.2						
	1.4nm,0.8s						
TORD	Torodi Ar. Bea	71.86	28	P	P	13 53 49.6	-0.1
	0.2nm,0.4s,baz=191,slow=6.8,SNR=1.7						
	0.2nm,0.4s						
ILAR	Eielson Array	150.52	312	PKPbc	PKPbc	14 02 17.5	+0.2
	0.3nm,0.7s,baz=126,slow=1.6,SNR=2.5						

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*IDC **16** 13:54:49.7±0.8, 0°.26S×125°.05E, h0^{km}, mb3.8/9, mbtmp3.8/9, MS3.3/2, Error ellipse: s-maj=47.0km s-min=17.4km az=75.0*

*DJA **16** 13:54:54.5±0.2, 0°S±2°×12°5E±°, h10^{km}, M4.2/15, mb4.3/4, mB4.8/1, MLv4.1/15, Mw(mB)4.1/1*

*NEIC **16** 13:54:57.7±2.2, 0°.30S±0°.03×125°.14E±0°.07, h61^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=10.9km s-min=3.8km az=95.0*

ISC 16 13:54:57.7±1.0**, 0°.34S**±0°.05×**125°.27E**±0°.04**, h63**^{km}±10^{km}**, n47,** σ**1**^{s}**49**/49**, mb4.1**/14**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.58	305	P	Pn	13 55 20.7	-2.8
KMSI				S	Sn	13 55 44.3	+1.3
SANI	Sanana	1.84	157	P	Pn	13 55 24.8	-2.3
SANI				S	Sn	13 55 50.4	+1.0
LBMI	Labuha	2.25	98	P	Pn	13 55 32.7	+0.1
LBMI				S	Sn	13 56 01.2	+1.9
TNTI	Ternate	2.37	62	Pn	Pn	13 55 36.0	+1.8
TNTI	Ternate	2.37	62	P	Pn	13 55 31.9	-2.3
TNTI				S	Sn	13 56 04.0	+1.8
GTOI	Gorontalo	2.46	293	P	Pn	13 55 37.1	+1.7
GTOI				S	Sn	13 56 08.8	+4.4
LUWI	Luwuk	2.59	254	Pn	Pn	13 55 36.3	-0.9
LUWI	Luwuk	2.59	254	P	Pn	13 55 38.3	+1.0
MRSI	Marisa	3.43	284	P	Pn	13 55 47.7	-1.0
APSI	Ampana	3.67	261	P	Pn	13 55 50.7	-1.2
SGSI	Sangihe	4.01	4	P	Pn	13 55 55.2	-1.4
AAI	Ambon	4.42	139	P	Pn	13 56 01.5	-0.8
TOLI2	Tolitoli	4.71	288	Pn	Pn	13 56 04.6	-1.7
MPSI	Mapaga	5.42	277	P	Pn	13 56 16.0	+0.1
	0.1nm876nm23nm,0.8s						
TTSI	Tana Toraja	6.08	244	P	Pn	13 56 24.0	-0.9
	0.1nm25nm,0.7s						
SPSI	Sidrap Palu	6.57	237	P	Pn	13 56 31.3	-0.4
	0.1nm15nm,0.5s						
KAPI	Kappang	7.21	230	Pn	Pn	13 56 40.0	-0.5
DAV	Davao City (W)	7.37	2	LR	LR	13 59 08.0	
	comp=Z,58nm,18.7s,baz=208,slow=35						
MTN	Manton Dam	13.71	155	Pn	Pn	13 58 09.3	+0.1
KSM	Kuching	15.07	277	P	P	13 58 30.1	-0.8
KNRA	Kununurra	15.62	167	Pn	Pn	13 58 33.7	-0.4
KNRA				IAmb	IAmb	13 58 38.6	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	21.27	156	P	P	13 59 38.1	-0.9
WB0				IAmb	IAmb	14 00 02.6	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	21.41	156	P	P	13 59 39.7	-0.8
	comp=Z,0.9nm,0.9s,baz=332,slow=11,SNR=4.8						
WRA				PcP	PcP	14 03 42.8	+0.6
	comp=Z,0.2nm,0.7s,baz=339,slow=1.8,SNR=1.3						
	comp=Z,0.9nm,0.9s						
WRA	Warramunga Arr	21.41	156	IAmb	IAmb	13 59 44.0	
	comp=Z,0.1nm,0.9s						
WR0	Warramunga Arr	21.51	156	P	P	13 59 40.7	-0.8
AS31	Alice Springs	24.65	161	P	P	14 00 14.1	+1.4
ASAR	Alice Springs	24.66	161	P	P	14 00 14.6	+1.9
	comp=Z,0.4nm,0.5s,baz=342,slow=11,SNR=15						
ASAR				PcP	PcP	14 03 50.5	+1.5
	comp=Z,0.4nm,0.5s,baz=353,slow=2.1,SNR=12						
	comp=Z,0.4nm,0.5s						
YHNB	Yeheng	25.15	352	P	P	14 00 15.3	-1.9
JOW	Kunigami	27.17	6	P	P	14 00 34.2	-1.1
KSRS	Korea Array	37.69	3	P	P	14 02 06.9	0.0
	comp=Z,0.8nm,0.6s,baz=179,slow=9.3,SNR=4.6						
	comp=Z,0.8nm,0.6s						
MJAR	Matsushiro Arr	38.61	17	P	P	14 02 14.0	-0.8
	comp=Z,1.7nm,0.7s,baz=183,slow=9.3,SNR=5.1						
	comp=Z,1.7nm,0.7s						
MJAR	Matsushiro Arr	38.61	17	IAmb	IAmb	14 02 40.0	
	comp=Z,5.9nm,1.5s						
SONM	Songino Array	50.72	344	P	P	14 03 50.6	-0.6
	comp=Z,0.8nm,0.6s,baz=163,slow=10,SNR=4.2						
	comp=Z,0.8nm,0.6s						
PETK	Petropavlovsk-	59.73	22	P	P	14 04 56.2	+0.4
	comp=Z,1.1nm,0.3s,baz=316,slow=4.8,SNR=7.0						
	comp=Z,1.1nm,0.3s						
MK31	Makanchi Array	60.11	327	P	P	14 04 56.8	-1.8
MKAR	Makanchi Array	60.11	327	P	P	14 04 57.0	-1.5
	comp=Z,0.7nm,0.4s,baz=125,slow=8.4,SNR=13						
	comp=Z,0.7nm,0.4s						
KURBB	Kurchatov Arra	64.41	329	P	P	14 05 26.7	-0.5
	comp=Z,0.8nm,0.6s,baz=126,slow=6.3,SNR=10						
	comp=Z,0.8nm,0.6s						
KURK	Kurchatov	64.42	329	P	P	14 05 26.9	-0.3
KURK				IAmb	IAmb	14 05 29.2	
	comp=Z,3.1nm,0.9s						
BRVK	Borovoye	70.03	328	P	P	14 06 01.1	-1.7
BRVK				IAmb	IAmb	14 06 28.4	
	comp=Z,1.6nm,0.8s						
TIXI	Tiksi	71.91	1	P	P	14 06 13.6	-0.1
	comp=Z,0.8nm,0.3s,baz=95,slow=23,SNR=5.8						
	comp=Z,0.8nm,0.3s						
TIXI	Tiksi	71.91	1	IAmb	IAmb	14 06 14.1	
	comp=Z,3.5nm,1.4s						
ABKAR	Akbulak array	74.39	322	P	P	14 06 27.8	-1.0
SDPT	Sand Point	81.36	34	P	P	14 07 09.6	+2.2
SDPT				IAmb	IAmb	14 07 10.5	
	comp=Z,18nm,1.0s						
RDOG	Red Dog Mine	83.58	21	P	P	14 07 19.0	+0.2
SCM	Sheep Creek Mo	89.06	28	P	P	14 07 45.7	-0.1
QSPA	South Pole Qui	89.59	180	P	P	14 07 50.2	+1.9
QSPA				IAmb	IAmb	14 08 14.5	
	comp=Z,5.1nm,1.4s						
FINES	FINESS Array B	94.70	332	LR	LR	14 54 21.2	
	comp=Z,46nm,19.8s,baz=232,slow=38						

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*DJA **16** 14:02:54.1±1.7, 0°N±20°×12°6E±2°1, h14^{km}±23^{km}, M3.7/5, MLv3.7/5*

*IDC **16** 14:02:56.2±2.0, 0°.51S×124°.57E, h0^{km}, mb3.0/3, mbtmp3.1/3, Error ellipse: s-maj=194.4km s-min=29.9km az=63.0*

ISC 16 14:02:56.9±1.3**, 0°.24S**±0°.10×**125°.4E**±0°.1**, h10**^{km}**, n9,** σ**1**^{s}**11**/12**, mb3.0**/3**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.64	300	P	Pn	14 03 25.9	+0.1
KMSI				S	Sg	14 03 50.2	+0.6
SANI	Sanana	1.89	162	P	Pb	14 03 30.3	-1.2
SANI				S	Sg	14 03 57.9	+0.2
GTOI	Gorontalo	2.55	290	P	Pb	14 03 41.7	-1.0
GTOI				S	Sb	14 04 14.3	+0.1
LUWI	Luwuk	2.75	253	P	Pb	14 03 45.1	-1.1
MRSI	Marisa	3.54	282	P	Pn	14 03 52.6	+0.7
APSI	Ampana	3.81	260	P	Pn	14 03 56.1	+0.3
WRA	Warramunga Arr	21.45	156	P	P	14 07 46.1	+0.6
	0.4nm,0.9s,baz=332,slow=12,SNR=1.5						
	0.4nm,0.9s						
ASAR	Alice Springs	24.70	161	P	P	14 08 20.8	+2.3
	0.2nm,0.6s,baz=340,slow=10,SNR=1.5						
	0.2nm,0.6s						
MKAR	Makanchi Array	60.10	327	P	P	14 13 03.7	-0.8
	0.2nm,0.4s,baz=122,slow=8.1,SNR=2.7						

0.2nm,0.4s

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*CNRM **16** 14:03:47.5, 35°.58N×3°.82W, h0^{km}, ml3.2*
*MDD **16** 14:03:48.4±0.6, 35°.36N×3°.73W, h12^{km}±3^{km}, mb_Lg2.8/22, Error ellipse: s-maj=3.8km s-min=2.1km az=3.0*
*SFS **16** 14:03:48.0, 35°.35N×3°.72W, h11^{km}, ML2.8, ALHUCEMAS (MARRUECOS)*
*INMG **16** 14:03:49.4±1.6, 35°.46N×3°.73W, h10^{km}, ML2.3, Error ellipse: s-maj=4.7km s-min=3.4km az=25.0*
ISC 16 14:03:48.6±1.0, **35°.47N**±0°.02×**3°.76W**±0°.02, **h18**^{km}±7^{km}, **n59**, σ**1^s.42**/104, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.29**	**211**	P	**Pg**	**14 03 54.7**	**-0.3**
PALE	**Palemas**	**0.29**	**211**	P	**Pb**	**14 03 55.2**	**-0.2**
PALE				S	**Sb**	**14 03 59.7**	**-0.3**
PVLZ	**Peæn de**	**0.54**	**236**	P	**Pg**	**14 03 58.6**	**-0.7**
PVLZ				S	**Sg**	**14 04 06.3**	**-0.3**
GOG	**Mont Gurugu**	**0.67**	**112**	P	**Pb**	**14 04 02.0**	**+0.1**
GOG				S	**Sb**	**14 04 11.0**	**+0.2**
GOG	**Mont Gurugu**	**0.67**	**112**	P	**Pg**	**14 04 01.8**	**0.0**
GOG				S	**Sb**	**14 04 11.1**	**+0.3**
EMEL	**Melilla**	**0.67**	**104**	Pg	**Pg**	**14 04 01.6**	**-0.2**
EMEL				Sg	**Sg**	**14 04 10.5**	**-0.4**
WMELI	**Melilla**	**0.67**	**103**	P	**Pg**	**14 04 01.8**	**-0.1**
WMELI				S	**Sg**	**14 04 10.2**	**-0.7**
EALB	**Alboran**	**0.75**	**51**	Pg	**Pg**	**14 04 02.6**	**-0.6**
EALB				Sg	**Sb**	**14 04 13.3**	**+0.3**
EALB				*i* Vmb_Lg		14 04 15.1	
CHAS	**Isla Isabel II**	**1.12**	**104**	P	**Pb**	**14 04 07.9**	**-1.6**
CHAS				S	**Sb**	**14 04 22.4**	**-1.3**
TAF	**Taforalt**	**1.28**	**120**	P	**Pg**	**14 04 15.0**	**+1.7**
TAF				S	**Sg**	**14 04 33.0**	**+2.9**
TAF	**Taforalt**	**1.28**	**120**	P	**Pn**	**14 04 11.0**	**-0.7**
TAF				S	**Sg**	**14 04 30.4**	**+0.3**
SMIR	**Smir Dam**	**1.34**	**279**	P	**Pb**	**14 04 13.0**	**-0.3**
SMIR	**Smir Dam**	**1.34**	**279**	P	**Pn**	**14 04 11.4**	**-1.1**
SMIR				S	**Sn**	**14 04 29.4**	**-0.5**
CHEFC	**Chefchaouen**	**1.35**	**255**	P	**Pn**	**14 04 12.7**	**0.0**
CHEFC	**Chefchaouen**	**1.35**	**255**	P	**Pn**	**14 04 12.9**	**+0.3**
CHEFC				S	**Sb**	**14 04 31.0**	**+0.7**
EMIJ	**Mijas**	**1.37**	**323**	Pn	**Pn**	**14 04 12.3**	**-0.6**
EMIJ				Sn	**Sg**	**14 04 31.9**	**-1.0**
EMIJ				*i* Vmb_Lg		14 04 39.6	
CEU	**Ceuta**	**1.39**	**288**	P	**Pn**	**14 04 10.3**	**-2.8**
CEU				S	**Sn**	**14 04 25.2**	**-5.8**
ECEU	**Ceuta**	**1.39**	**288**	Pn	**Pn**	**14 04 12.7**	**-0.4**
ECEU				Sn	**Sn**	**14 04 29.6**	**-1.5**
ECEU				*i* Vmb_Lg		14 04 40.0	
ELGU	**Los Guajares,**	**1.40**	**4**	Pn	**Pn**	**14 04 12.8**	**-0.5**
ELGU				Sn	**Sb**	**14 04 32.4**	**+0.6**
ELGU				*i* Vmb_Lg		14 04 40.9	
JBK	**JBK**	**1.50**	**139**	P	**Pn**	**14 04 14.0**	**-0.8**
JBK				S	**Sb**	**14 04 35.6**	**+0.9**
EBER	**Berja**	**1.59**	**26**	Pn	**Pn**	**14 04 14.7**	**-1.3**
EBER				Sn	**Sn**	**14 04 36.7**	**+0.5**
EBER				*i* Vmb_Lg		14 04 50.3	
EGOR	**Sierra Gorda,**	**1.66**	**350**	Pn	**Pn**	**14 04 17.4**	**+0.4**
EGOR				Sn	**Sb**	**14 04 39.9**	**+0.4**
EGOR				*i* Vmb_Lg		14 04 49.0	
EJIF	**Jimena Fronter**	**1.70**	**306**	Pn	**Pn**	**14 04 17.8**	**+0.3**
EJIF				Sn	**Sn**	**14 04 39.2**	**+0.5**
EQUE	**Quentar**	**1.75**	**8**	Pn	**Pb**	**14 04 19.8**	**-0.5**
EQUE				Sn	**Sb**	**14 04 42.4**	**+0.5**
EQUE				*i* Vmb_Lg		14 04 56.6	
SICH	**Sidi Chahed**	**1.88**	**224**	P	**Pb**	**14 04 22.0**	**-0.4**
SICH				S	**Sb**	**14 04 46.3**	**+0.8**
ENIJ	**Nijar**	**1.95**	**39**	Pn	**Pn**	**14 04 19.3**	**-1.6**
ENIJ				Sn	**Sn**	**14 04 43.5**	**-1.5**
ENIJ				*i* Vmb_Lg		14 04 47.2	
LCRM	**LCR**	**2.00**	**207**	P	**Pg**	**14 04 26.0**	**-1.1**
LCRM				S	**Sg**	**14 04 54.0**	**+0.9**
LCRM	**LCR**	**2.00**	**207**	P	**Pb**	**14 04 25.0**	**+0.4**
LCRM				S	**Sb**	**14 04 50.1**	**+0.8**
ESPR	**Espera**	**2.20**	**310**	Pn	**Pn**	**14 04 25.3**	**+1.0**
ESPR				Sn	**Sn**	**14 04 52.8**	**+1.8**
ESPR				*i* Vmb_Lg		14 05 11.8	
EQES	**Quesada**	**2.39**	**13**	Pn	**Pn**	**14 04 28.8**	**+1.8**
EQES				Sn	**Sn**	**14 04 58.2**	**+2.2**
EQES				*i* Vmb_Lg		14 05 08.0	
CZD	**Col de Zad**	**2.66**	**204**	P	**Pn**	**14 04 31.5**	**+0.6**
CZD				S	**Sn**	**14 05 02.0**	**-0.8**
MD31	**MD31**	**2.73**	**198**	P	**Pn**	**14 04 32.6**	**+0.9**
MDT	**Midelt**	**2.74**	**195**	P	**Pn**	**14 04 32.8**	**+0.9**
EADA	**Adamuz**	**2.77**	**346**	Pn	**Pn**	**14 04 33.6**	**+1.5**
EADA				Sn	**Sn**	**14 05 06.6**	**+1.4**
EADA				*i* Vmb_Lg		14 05 20.3	
TDRA	**Tendrara**	**2.81**	**149**	P	**Pn**	**14 04 34.0**	**+1.1**
ECAB	**El Cabril**	**2.92**	**333**	Pn	**Pn**	**14 04 35.9**	**+1.7**
ECAB				Sn	**Sn**	**14 05 11.1**	**+2.2**
ECAB				*i* Vmb_Lg		14 05 24.6	
EMUR	**La Murta**	**3.11**	**40**	Sn	**Sn**	**14 05 11.5**	**-2.1**
EMUR				*i* Vmb_Lg		14 05 33.9	
EMIN	**Mina Concepcio**	**3.28**	**315**	Pn	**Pn**	**14 04 39.4**	**+0.2**
EMIN				Sn	**Sn**	**14 05 18.8**	**+1.0**
EMIN				*i* Vmb_Lg		14 06 54.0	
ETOB	**Tobarra**	**3.63**	**28**	Pn	**Pn**	**14 04 44.0**	**0.0**
ETOB				Sn	**Sn**	**14 05 27.7**	**+1.3**
ETOB				*i* Vmb_Lg		14 06 00.3	
EGRO	**El Granado**	**3.64**	**306**	Pn	**Pn**	**14 04 43.2**	**-0.9**
EGRO				Sn	**Sn**	**14 05 25.1**	**-1.5**
EGRO				*i* Vmb_Lg		14 05 27.9	
PVAQ	**Vaqueiros**	**3.73**	**302**	*e*Pn	**Pn**	**14 04 46.9**	**+1.5**
PVAQ				*e*Sn	**Sn**	**14 05 28.0**	**-0.9**
PVAQ				A	A	14 05 35.2	
	6.8nm,0.6s						
PVAQ	**Vaqueiros**	**3.73**	**302**	P	**Pn**	**14 04 44.7**	**-0.7**
PBAR	**Barrancos**	**3.77**	**317**	*e*Pn	**Pn**	**14 04 48.2**	**+2.3**
PBAR				*e*Sn	**Sn**	**14 05 29.9**	**+0.1**
PBAR				A	A	14 05 40.7	
	4.3nm,0.4s						
PCVE	**Castro Verde**	**4.07**	**303**	*e*Pn	**Pn**	**14 04 51.9**	**+1.9**
PCVE				*e*Sn	**Sn**	**14 05 36.6**	**-0.6**
PCVE				A	A	14 05 43.2	
	4.6nm,0.7s						
PAB	**San Pablo**	**4.09**	**354**	Pn	**Pn**	**14 04 51.1**	**+0.7**
PAB				Sn	**Sn**	**14 05 38.3**	**+0.4**
PAB				*i* Vmb_Lg		14 06 10.3	
PBEJ	**Beja**	**4.17**	**309**	*e*Pn	**Pn**	**14 04 54.1**	**+2.7**
EBAD	**Badajoz**	**4.19**	**322**	Pn	**Pn**	**14 04 52.1**	**+0.5**
EBAD				Sn	**Sn**	**14 05 41.2**	**+1.1**
EBAD				*i* Vmb_Lg		14 05 45.2	
ESDC	**Sonseca Array**	**4.20**	**358**	Pn	**Pn**	**14 04 53.4**	**+1.6**
ESDC				Sn	**Sn**	**14 05 41.6**	**+1.2**
ESDC				*i* Vmb_Lg		14 06 30.9	
MESJ	**Messejana**	**4.30**	**305**	*e*Pn	**Pn**	**14 04 54.9**	**+1.8**
MESJ				*e*Sn	**Sn**	**14 05 42.5**	**-0.3**
MESJ				A	A	14 05 46.2	
	4.6nm,0.6s						
MORF	**Marmelete**	**4.35**	**296**	*e*Pn	**Pn**	**14 04 55.8**	**+1.8**
MORF				*e*Sn	**Sn**	**14 05 42.4**	**-1.9**
MORF				A	A	14 05 45.1	
	3.4nm,0.2s						
PTEO	**Sao Teotonio**	**4.51**	**299**	*e*Sn	**Sn**	**14 05 46.4**	**-1.6**
EVO	**Evora**	**4.58**	**313**	*e*Pn	**Pn**	**14 04 57.9**	**+0.9**
EVO				*e*Sn	**Sn**	**14 05 47.5**	**-2.2**
PNCL	**Nicolau / Gran**	**4.65**	**306**	*e*Pn	**Pn**	**14 04 59.1**	**+1.1**
PNCL				*e*Sn	**Sn**	**14 05 49.7**	**-1.8**
PNCL				A	A	14 06 00.7	
	2.6nm,0.5s						
PMRV	**Marv??o**	**4.90**	**325**	*e*Pn	**Pn**	**14 05 03.9**	**+2.5**
GUD	**Guadarrama**	**5.17**	**357**	Pn	**Pn**	**14 05 05.9**	**+0.6**
GUD				Sn	**Sn**	**14 06 03.4**	**-1.2**
GUD				*i* Vmb_Lg		14 07 45.7	
OUZM	**OUZ**	**5.20**	**210**	P	**Pn**	**14 05 07.2**	**+1.5**
EIBI	**Ibiza**	**5.40**	**47**	Sn	**Sn**	**14 06 06.3**	**-3.6**
OUK	**Oukaimeden**	**5.47**	**220**	P	**Pn**	**14 05 10.0**	**+0.4**
ETOR	**Torete**	**5.50**	**14**	Pn	**Pn**	**14 05 11.7**	**+1.9**
ETOR				Sn	**Sn**	**14 06 09.7**	**-3.0**

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*IDC **16** 14:06:06.5±5.2, 15°.35S×173°.29W, h0^{km}, mb3.9/2, mbtmp3.9/3, ML3.7/1, MS2.6/1, Error ellipse: s-maj=285.1km s-min=26.0km az=145.0*
*NEIC **16** 14:06:09.1±1.1, 14°.7S±0°.2×173°.5W±0°.1, h10^{km}±1^{km}, mb4.3/6, Error ellipse: s-maj=35.3km s-min=12.5km az=333.0*
ISC 16 14:06:07.6±1.1, **14°.8S**±0°.2×**173°.4W**±0°.1, **h10**^{km}, **n18**, σ**0^s.80**/12, **mb4.4**/5, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.76**	**62**	Pn	**Pg**	**14 06 41.5**	**+0.1**
	27nm,0.3s,baz=258,slow=19,SNR=29						
AFI				Sn	**Sb**	**14 07 02.3**	**+0.1**
	88nm,0.3s,baz=237,slow=21,SNR=13						
AFI				LR	LR	14 07 24.8	
	comp=Z,146nm,21.0s,baz=272,slow=38						
	80nm,0.3s						
KNTN	**Kanton**	**12.01**	**8**	Pn	**Pn**	**14 08 59.1**	**+0.1**
DZM	**Mont Dzumac**	**20.47**	**246**	P	**P**	**14 10 46.8**	**+1.1**
DZM				IAmb	IAmb	14 11 15.2	
	comp=Z,18nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**38.42**	**329**	T	T	14 54 20.9	
	baz=149,slow=75,SNR=3.8						
H11S3	**WAKE ISLAND Hy**	**38.43**	**329**	T	T	14 54 21.2	
	baz=149,slow=75,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**38.44**	**329**	T	T	14 54 22.0	
	baz=149,slow=75,SNR=3.2						
CTAO	**Charters Tower**	**38.81**	**256**	P	**P**	**14 13 33.6**	**+0.6**
CTAO				IAmb	IAmb	14 14 02.2	
	comp=Z,17nm,1.2s						
H11N3	**WAKE ISLAND Hy**	**39.36**	**330**	T	T	14 55 25.0	
	baz=150,slow=76,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**39.37**	**330**	T	T	14 55 28.0	
	baz=150,slow=76,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**39.38**	**330**	T	T	14 55 22.5	
	baz=150,slow=76,SNR=4.1						
WR0	**Warramunga Arr**	**49.83**	**256**	P	**P**	**14 15 00.6**	**-0.6**
WB0	**Warramunga Arr**	**49.97**	**256**	P	**P**	**14 15 01.5**	**-0.9**
WB0				IAmb	IAmb	14 15 27.3	
	comp=Z,8.1nm,1.3s						
WRA	**Warramunga Arr**	**50.02**	**256**	P	**P**	**14 15 01.3**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=90,slow=8.2,SNR=9.6						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**50.02**	**256**	IAmb	IAmb	14 15 01.8	
	comp=Z,0.2nm,1.3s						
AS31	**Alice Springs**	**50.33**	**251**	P	**P**	**14 15 04.6**	**-0.5**
AS31				IAmb	IAmb	14 15 06.3	
	comp=Z,1.3nm,0.9s						
ASAR	**Alice Springs**	**50.34**	**251**	P	**P**	**14 15 04.8**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=90,slow=7.5,SNR=45						
	comp=Z,1.8nm,0.4s						
ASAR	**Alice Springs**	**50.34**	**251**	P	**P**	**14 15 04.3**	**-0.8**
BRTR	**Keskin Array B**	**145.66**	**322**	PKPbc	**PKiKP**	**14 25 50.4**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=58,slow=3.6,SNR=5.0						

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*NEIC **16** 14:49:33.5±0.9, 18°.7S±0°.2×177°.8W±0°.2, h523^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=34.8km s-min=18.0km az=145.0*
*IDC **16** 14:49:34.7±2.1, 18°.55S×177°.95W, h531^{km}±27^{km}, mb2.9/5, mbtmp3.9/6, Error ellipse: s-maj=95.4km s-min=17.8km az=149.0*
ISC 16 14:49:34.8±0.7, **18°.8S**±0°.2×**177°.7W**±0°.1, **h550**^{km}, **n24**, σ**1^s.17**/23, **mb3.8**/12, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.33**	**93**	P	**P**	**14 51 24.5**	**-1.4**
AFI	**Afiamalu**	**7.45**	**50**	P	**P**	**14 51 27.9**	**+0.6**
	14nm,0.4s,baz=269,slow=11,SNR=5.1						
AFI				S	**S**	**14 52 58.7**	**-0.6**
	12nm,0.5s,baz=326,slow=23,SNR=1.4						
AFI	**Afiamalu**	**7.45**	**50**	P	**P**	**14 51 23.6**	**-3.7**
PINNC	**Pines Island,**	**14.44**	**252**	P	**P**	**14 52 38.3**	**-0.3**
OXZ	**Oxford**	**25.96**	**197**	P	**P**	**14 54 24.6**	**+0.8**
CTAO	**Charters Tower**	**34.01**	**262**	P	**P**	**14 55 33.4**	**-0.2**
CTAO				IAmb	IAmb	14 55 55.6	
	comp=Z,20nm,1.4s						
TOO	**Toolangi**	**37.18**	**232**	P	**P**	**14 56 00.3**	**+0.7**
COEN	**Coen**	**37.83**	**271**	P	**P**	**14 56 05.7**	**+0.6**
COEN				IAmb	IAmb	14 56 34.3	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**38.84**	**242**	P	**P**	**14 56 12.7**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=70,slow=8.8,SNR=4.7						
	comp=Z,1.1nm,0.7s						
STKA	**Stephens Creek**	**38.84**	**242**	IAmb	IAmb	14 56 19.2	
	comp=Z,1.7nm,1.2s						
BBOO	**Buckleboo**	**43.61**	**242**	P	**P**	**14 56 50.1**	**-0.8**
WB0	**Warramunga Arr**	**45.15**	**261**	P	**P**	**14 57 02.6**	**-0.3**
WB0				IAmb	IAmb	14 57 03.3	
	comp=Z,5.8nm,1.0s						
WB2	**Warramunga Arr**	**45.16**	**260**	P	**P**	**14 57 02.5**	**-0.6**
WB2				IAmb	IAmb	14 57 13.9	
	comp=Z,3.7nm,1.2s						
WRAB	**Tennant Creek**	**45.17**	**260**	P	**P**	**14 57 02.0**	**-1.1**
WRAB				IAmb	IAmb	14 57 12.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.17**	**260**	P	**P**	**14 57 02.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=97,slow=7.7,SNR=4.9						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**45.17**	**260**	IAmb	IAmb	14 57 03.5	
	comp=Z,0.3nm,1.0s						
AS31	**Alice Springs**	**45.24**	**255**	P	**P**	**14 57 03.5**	**-0.2**
ASAR	**Alice Springs**	**45.24**	**255**	P	**P**	**14 57 03.3**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=88,slow=8.8,SNR=31						
	comp=Z,2.1nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.43**	**242**	P	**P**	**14 58 44.6**	**-0.5**
NWAO				IAmb	IAmb	14 58 55.4	
	comp=Z,27nm,1.3s						
TXAR	**Lajitas Array**	**85.87**	**57**	P	**P**	**15 01 19.1**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=230,slow=5.6,SNR=4.0						
	comp=Z,0.5nm,0.6s						
CCB	**Clear Creek Bu**	**86.28**	**12**	P	**P**	**15 01 19.0**	**+0.9**
CCB				IAmb	IAmb	15 01 19.9	
	comp=Z,2.8nm,1.4s						
ILAR	**Eielson Array**	**86.58**	**13**	P	**P**	**15 01 20.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=218,slow=5.7,SNR=4.8						
	comp=Z,0.2nm,0.6s						
GCMT	**Greycliff**	**88.88**	**40**	P	**P**	**15 01 31.6**	**+0.8**
CLL	**Collm**	**146.47**	**348**	*i* PKPbc	**PKPbc**	**15 08 14.2**	**-0.2**

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*ISK **16** 15:11:30.1, 38°.70N×25°.96E, h7^{km}, ML2.5/12*
*DDA **16** 15:11:31.1±0.0, 38°.69N×26°.01E, h7^{km}±3^{km}, ML2.3*
*ATH **16** 15:11:31.9, 38°.66N×26°.01E, h18^{km}±5^{km}, ML2.5/4, Error ellipse: s-maj=6.0km s-min=1.1km az=224.0*
*THE **16** 15:11:31.4, 38°.67N×25°.92E, h10^{km}±2^{km}, ML2.4/3, Error ellipse: s-maj=2.7km s-min=0.6km az=263.0*
ISC 16 15:11:31.4±0.9, **38°.68N**±0°.02×**26°.02E**±0°.03, **h15**^{km}±9^{km}, **n27**, σ**0^s.57**/43, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.29**	**174**	P	**Pg**	**15 11 37.7**	**+0.1**
CHOS				S	**Sg**	**15 11 41.8**	**0.0**
CHOS				AML	AML	15 11 42.5	
	comp=N,1498μm,0.3s						
CHOS				AML	AML	15 11 43.0	
	comp=E,2501μm,0.1s						
CHOS	**Chios island**	**0.29**	**174**	P	**Pg**	**15 11 37.7**	**+0.1**
CHOS				S	**Sg**	**15 11 41.7**	**0.0**
	comp=E,1μm,0.2s						
CHOS	**Chios island**	**0.29**	**174**	PG	**Pg**	**15 11 37.3**	**-0.3**
CHOS				SG	**Sg**	**15 11 41.8**	**0.0**
PSRA	**Psara**	**0.38**	**249**	P	**Pb**	**15 11 40.0**	**+0.3**
PSRA				S	**Sg**	**15 11 45.0**	**+0.7**
PSRA				AML	AML	15 11 46.1	
	comp=N,2356μm,0.3s						
PSRA				AML	AML	15 11 46.2	
	comp=E,3414μm,0.2s						
SIGR	**SIGRI**	**0.55**	**347**	P	**Pg**	**15 11 42.1**	**-0.1**
SIGR				S	**Sb**	**15 11 51.0**	**+0.6**
SIGR				AML	AML	15 11 53.7	
	comp=E,900μm,0.5s						
SIGR				AML	AML	15 11 53.7	
	comp=N,783μm,0.4s						
SIGR	**SIGRI**	**0.55**	**347**	P	**Pg**	**15 11 42.1**	**-0.1**
SIGR				S	**Sg**	**15 11 49.7**	**+0.1**
	comp=N,428nm,0.4s						
URLA	**Izmir**	**0.55**	**125**	PG	**Pg**	**15 11 41.9**	**-0.4**
URLA	**Izmir**	**0.55**	**125**	P	**Pg**	**15 11 42.3**	**0.0**
URLA				S	**Sb**	**15 11 50.7**	**+0.1**
URLA				*i* AML	AML	15 11 54.0	
	comp=N,136nm,0.2s						
FOCM	**Foa**	**0.56**	**86**	PG	**Pg**	**15 11 42.3**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**0.58**	**139**	P	**Pg**	**15 11 42.6**	**-0.2**
ZEYE				S	**Sg**	**15 11 50.5**	**-0.1**
ZEYE				*i* AML	AML	15 11 54.0	
	comp=N,159nm,0.2s						
ZEYE				*i* AML	AML	15 11 55.0	
	comp=N,126nm,0.3s						
PRK	**Paraskevi**	**0.60**	**19**	P	**Pb**	**15 11 43.9**	**+0.3**
PRK				S	**Sb**	**15 11 52.9**	**+1.0**
PRK				AML	AML	15 11 56.1	
	comp=E,1141μm,0.4s						
PRK				AML	AML	15 11 56.4	
	comp=N,996μm,0.3s						
PRK	**Paraskevi**	**0.60**	**19**	P	**Pb**	**15 11 43.9**	**+0.3**
PRK				S	**Sb**	**15 11 53.0**	**+1.0**
	comp=N,535nm,0.3s						
GPNR	**Gulpinar-Canak**	**0.78**	**7**	PG	**Pg**	**15 11 45.4**	**-1.2**
GPNR				SG	**Sg**	**15 11 56.7**	**-0.3**
DKL	**Dikili**	**0.80**	**60**	PG	**Pg**	**15 11 46.4**	**-0.5**
DKL				SG	**Sb**	**15 11 57.9**	**+0.4**
AYVA	**Ayvalik**	**0.82**	**40**	P	**Pg**	**15 11 47.3**	**-0.1**
AYVA				S	**Sg**	**15 11 58.1**	**0.0**
ZEDA	**zmir-Bergama**	**0.88**	**70**	P	**Pb**	**15 11 48.6**	**+0.3**
ZEDA				S	**Sb**	**15 12 00.3**	**+0.4**
DGB	**zmir**	**0.92**	**132**	P	**Pg**	**15 11 48.5**	**-0.7**
DGB				S	**Sg**	**15 12 01.0**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**1.14**	**21**	P	**Pb**	**15 11 51.8**	**-1.0**
BAYC				S	**Sb**	**15 12 07.6**	**+0.1**
SMG	**Samos**	**1.16**	**146**	P	**Pb**	**15 11 52.8**	**-0.4**
SMG	**Samos**	**1.16**	**146**	P	**Pb**	**15 11 52.9**	**-0.3**
BOZC	**Bozcaada**	**1.16**	**1**	PN	**Pb**	**15 11 52.4**	**-0.8**
EZN	**Ezine**	**1.17**	**12**	PN	**Pb**	**15 11 52.4**	**-0.9**
GADA	**Gvkgeada**	**1.52**	**357**	PN	**Pn**	**15 11 57.6**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**116**	PN	**Pn**	**15 12 00.9**	**+1.1**
APE	**Apeiranthos**	**1.65**	**194**	PN	**Pn**	**15 11 58.7**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.76**	**12**	PN	**Pn**	**15 12 01.7**	**+0.5**
KRBG	**Karabiga-Canak**	**1.98**	**30**	PN	**Pn**	**15 12 05.1**	**+0.8**

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*NEIC **16** 15:46:19.0±1.4, 23°.8S±0°.2×178°.3W±0°.2, h289^{km}±11^{km}, mb4.2/25, Error ellipse: s-maj=32.1km s-min=22.7km az=64.0*
*IDC **16** 15:46:39.2±4.3, 24°.30S×178°.92W, h479^{km}±38^{km}, mb3.4/5, mbtmp4.3/5, Error ellipse: s-maj=43.0km s-min=25.9km az=46.0*
ISC 16 15:46:30.0±1.1, **23°.9S**±0°.2×**178°.6W**±0°.2, **h400**^{km}, **n34**, σ**1^s.70**/34, **mb4.0**/17, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**27.60**	**261**	P	**P**	**15 51 42.7**	**-0.1**
EIDS				IAmb	IAmb	15 51 47.9	
	comp=Z,3.9nm,1.0s						
CTA	**Charters Tower**	**32.78**	**270**	P	**P**	**15 52 28.9**	**+0.8**
	comp=Z,9.1nm,0.3s,baz=94,slow=11,SNR=39						
	comp=Z,9.1nm,0.3s						
CTAO	**Charters Tower**	**32.78**	**270**	P	**P**	**15 52 28.8**	**+0.8**
CTAO				IAmb	IAmb	15 52 29.4	
	comp=Z,11nm,0.6s						
PMG	**Port Moresby**	**35.72**	**288**	P	**P**	**15 52 52.0**	**-0.9**
STKA	**Stephens Creek**	**35.94**	**248**	P	**P**	**15 52 56.2**	**+1.6**
	comp=Z,2.3nm,1.0s,baz=89,slow=11,SNR=6.2						
	comp=Z,2.3nm,1.0s						
STKA	**Stephens Creek**	**35.94**	**248**	IAmb	IAmb	15 53 04.4	
	comp=Z,2.8nm,1.4s						
BBOO	**Buckleboo**	**40.65**	**247**	P	**P**	**15 53 34.0**	**+0.7**
BBOO				IAmb	IAmb	15 53 43.2	
	comp=Z,42nm,1.4s						
AS31	**Alice Springs**	**43.32**	**260**	P	**P**	**15 53 54.7**	**-0.1**
ASAR	**Alice Springs**	**43.32**	**260**	P	**P**	**15 53 55.1**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=96,slow=7.3,SNR=79						
ASAR				ScP	**ScP**	**15 58 39.5**	**-8.3**
	comp=Z,0.5nm,0.8s,baz=110,slow=4.3,SNR=4.1						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**43.32**	**260**	P	**P**	**15 53 54.7**	**-0.1**
WR0	**Warramunga Arr**	**43.52**	**266**	P	**P**	**15 53 55.7**	**-0.7**
WB2	**Warramunga Arr**	**43.70**	**266**	P	**P**	**15 53 57.2**	**-0.5**
WB2				IAmb	IAmb	15 54 01.1	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**43.70**	**266**	P	**P**	**15 53 57.2**	**-0.6**
WB0	**Warramunga Arr**	**43.70**	**266**	P	**P**	**15 53 57.1**	**-0.7**
WB0				IAmb	IAmb	15 53 57.9	
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**43.71**	**266**	P	**P**	**15 53 57.4**	**-0.5**
	comp=Z,3.9nm,0.5s,baz=95,slow=8.3,SNR=140						
	comp=Z,3.9nm,0.5s						
WRA	**Warramunga Arr**	**43.71**	**266**	P	**P**	**15 53 57.3**	**-0.6**
FORT	**Forrest**	**47.54**	**249**	P	**P**	**15 54 27.6**	**+0.3**
FORT				IAmb	IAmb	15 54 36.6	
	comp=Z,21nm,1.1s						
MTN	**Manton Dam**	**48.75**	**274**	P	**P**	**15 54 35.5**	**-1.1**
MTN				IAmb	IAmb	15 54 43.7	
	comp=Z,16nm,1.3s						
KNRA	**Kununurra**	**49.99**	**269**	P	**P**	**15 54 45.7**	**-0.1**
KNRA				IAmb	IAmb	15 55 08.6	
	comp=Z,18nm,1.4s						
VNDA	**Vanda**	**54.52**	**185**	P	**P**	**15 55 16.9**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=11,slow=4.3,SNR=7.3						
	comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**54.52**	**185**	P	**P**	**15 55 17.5**	**-0.3**
SOEI	**Soe**	**56.14**	**274**	P	**P**	**15 55 28.4**	**-1.9**
MBWA	**Marble Bar**	**56.66**	**260**	P	**P**	**15 55 33.6**	**-0.1**
MBWA				IAmb	IAmb	15 55 54.1	
	comp=Z,9.0nm,1.4s						
MORW	**Morawa**	**58.11**	**250**	P	**P**	**15 55 43.6**	**0.0**
CASY	**Casey**	**60.71**	**206**	P	**P**	**15 56 01.9**	**+1.5**
CASY				IAmb	IAmb	15 56 16.1	
	comp=Z,5.7nm,1.1s						
TOLI2	**Tolitoli**	**63.83**	**284**	P	**P**	**15 56 22.6**	**+0.8**
TOLI2				IAmb	IAmb	15 56 23.2	
	comp=Z,2.5nm,0.7s						
JGF	**Kuroka**	**72.37**	**324**	P	**P**	**15 57 15.6**	**+1.8**
JGF				IAmb	IAmb	15 57 40.1	
	comp=Z,9.5nm,0.9s						
MAJO	**Matsushiro**	**72.62**	**325**	P	**P**	**15 57 15.7**	**+0.5**
MJB9	**Matsu-Tunnel**	**72.62**	**325**	P	**P**	**15 57 15.6**	**+0.4**
SNAA	**Sanae**	**84.67**	**179**	P	**P**	**15 58 19.8**	**+0.1**
SNAA				IAmb	IAmb	15 58 46.0	
	comp=Z,6.6nm,1.4s						
ENH	**Enshi**	**87.49**	**305**	P	**P**	**15 58 34.7**	**+0.9**
AKASG	**Malin Array Be**	**145.64**	**328**	PKPbc	**PKPab**	**16 05 23.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=43,slow=3.5,SNR=5.1						
BRTR	**Keskin Array B**	**148.59**	**308**	PKPbc	**PKiKP**	**16 05 32.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=80,slow=3.9,SNR=2.1						
BRTR	**Keskin Array B**	**148.59**	**308**		**PKPbc**	**16 05 31.1**	**+0.2**

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*IDC **16** 15:48:49.4±1.1, 24°.51N×127°.75E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=54.7km s-min=18.7km az=73.0*
*NEIC **16** 15:48:50.5±0.7, 24°.52N±0°.10×127°.7E±0°.1, h4^{km}±6^{km}, mb4.4/15, Error ellipse: s-maj=18.7km s-min=11.7km az=123.0*
*JMA **16** 15:48:53.2±0.2, 24°.6N±0°.8×127°.6E±0°.8, h70^{km}, MV3.6/25, FAR S OFF OKINAWAJIMA*
ISC 16 15:48:49.7±3.7, **24°.53N**±0°.06×**127°.56E**±0°.06, **h1**^{km}±23^{km}, **n54**, σ**1^s.15**/50, **mb4.2**/14, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**1.62**	**7**	P	Pn	15 49 19.5	+0.2
JJT3				S	**Sn**	**15 49 39.1**	**-1.7**
JKE	**Kume jima 2**	**1.92**	**339**	P	**Pn**	**15 49 24.4**	**+0.9**
JKE				S	**Sn**	**15 49 47.2**	**-1.1**
JOGS	**Gusukube**	**1.97**	**277**	P	**Pb**	**15 49 26.0**	**-0.4**
JOGS				S	**Sb**	**15 49 50.3**	**-1.2**
JNTH	**Nagotoyohara**	**2.02**	**12**	P	Pn	15 49 25.1	+0.2
JNTH				S	Sn	15 49 47.9	-2.9
JMJ2	**Miyako jima3**	**2.04**	**276**	P	**Pb**	**15 49 26.9**	**-0.7**
JMJ2				S	**Sb**	**15 49 52.3**	**-1.2**
JAGN	**Aguni-jima**	**2.07**	**352**	P	**Pn**	**15 49 26.0**	**+0.5**
JAGN				S	**Sn**	**15 49 50.4**	**-1.6**
JIKM	**Ikemajima**	**2.14**	**281**	P	**Pn**	**15 49 28.2**	**+1.7**
JIKM				S	**Sb**	**15 49 54.2**	**-2.0**
JIRB	**Irabujima**	**2.19**	**278**	P	**Pn**	**15 49 28.6**	**+1.4**
JIRB				S	**Sn**	**15 49 54.8**	**-0.3**
JOW	**Kunigami**	**2.38**	**16**	Pn	Pn	15 49 29.9	+0.1
	13nm,0.3s,baz=148,slow=25,SNR=34						
JOW				Sn	Sn	15 49 54.0	-5.6
	12nm,0.3s,baz=181,slow=13,SNR=10						
	31nm,0.2s						
JOW	**Kunigami**	**2.38**	**16**		Pn	15 49 29.3	-0.5
JOW	**Kunigami**	**2.38**	**16**	P	Pn	15 49 29.9	+0.1
JOW				S	Sn	15 49 57.7	-2.0
JIH	**Iheya**	**2.52**	**8**	P	**Pn**	**15 49 32.6**	**+0.8**
JIH				S	**Sn**	**15 50 01.4**	**-1.7**
JTJ	**Tarama**	**2.60**	**273**	P	**Pn**	**15 49 34.3**	**+1.4**
JYRO	**Yoronjima**	**2.61**	**18**	P	Pn	15 49 33.3	+0.3

JISG	Ishigakijimahi	2.96	272	P	Pn	15 49 38.9	+1.1
JISG				S	Sn	15 50 12.8	-1.1
JIJ	Ishigaki jima	3.12	268	P	Pn	15 49 41.2	+1.2
JKRS	Kuro-shima	3.25	266	P	Pn	15 49 43.4	+1.6
JTK	Tokunoshima	3.47	21	P	Pn	15 49 45.5	+0.7
IRIF	Iriomote-Funau	3.50	268	P	Pn	15 49 46.3	+1.1
JMZ	Minamidaito 2	3.56	68	P	Pn	15 49 42.3	-3.7
JMZ				S	Sn	15 50 20.6	-8.0
JKDJ	Kitadaitoujima	3.67	67	P	Pn	15 49 44.1	-3.4
JKDJ				S	Sn	15 50 24.0	-7.4
JAM	Amami Oshima	4.28	25	P	Pn	15 49 55.7	-0.1
NACB	Ninganchiao	5.45	267	Pn	Pn	15 50 11.9	-0.2
TATO	Taipei	5.54	276	Pn	Pn	15 50 15.7	+2.4
YHNB	Yeheng	5.63	273	Pn	Pn	15 50 16.8	+2.2
YULB	Yu-li	5.84	260	Pn	Pn	15 50 16.4	-1.0
SSLB	Suanglung	6.08	264	Pn	Pn	15 50 20.6	-0.2
TPUB	Ta-pu	6.46	260	Pn	Pn	15 50 26.8	+0.9
KNMB	Chin-men Tao	8.36	271	Pn	Pn	15 50 51.9	0.0
MAJO	Matsushiro	15.06	35	Pn	Pn	15 52 17.6	-6.1
MJB9	Matsu-Tunnel	15.07	35	Pn	Pn	15 52 17.6	-6.2
KNRA	Kununurra	39.98	178	P	P	15 56 25.4	-0.6
KNRA				IAmb	IAmb	15 56 50.6	
	comp=Z,12nm,1.3s						
MKAR	Makanchi Array	42.23	313	P	P	15 56 44.9	+0.5
	comp=Z,0.5nm,0.7s,baz=104,slow=8.8,SNR=5.6						
	comp=Z,0.5nm,0.7s						
WB0	Warramunga Arr	44.53	171	P	P	15 57 02.4	-0.7
WRAB	Tennant Creek	44.69	171	P	P	15 57 03.8	-0.6
WRAB				IAmb	IAmb	15 57 18.5	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	44.70	171	P	P	15 57 03.9	-0.6
	comp=Z,2.2nm,0.7s,baz=353,slow=9.2,SNR=23						
	comp=Z,2.2nm,0.7s						
WRA	Warramunga Arr	44.70	171	IAmb	IAmb	15 57 04.3	
	comp=Z,0.4nm,1.3s						
WB2	Warramunga Arr	44.70	171	P	P	15 57 03.8	-0.7
WB2				IAmb	IAmb	15 57 19.6	
	comp=Z,9.3nm,1.4s						
WR0	Warramunga Arr	44.74	171	P	P	15 57 04.2	-0.6
WR0				IAmb	IAmb	15 57 25.2	
	comp=Z,8.3nm,1.5s						
KURK	Kurchatov	45.65	318	P	P	15 57 12.7	+0.9
KURBB	Kurchatov Arra	45.68	318	P	P	15 57 12.7	+0.7
	comp=Z,0.6nm,0.6s,baz=106,slow=7.7,SNR=7.0						
	comp=Z,0.6nm,0.6s						
AS31	Alice Springs	48.31	172	P	P	15 57 32.1	-0.7
ASAR	Alice Springs	48.31	172	P	P	15 57 32.6	-0.1
	comp=Z,0.8nm,0.8s,baz=3.7,slow=7.2,SNR=12						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	48.31	172	P	P	15 57 31.9	-0.9
ABKAR	Akbulak array	57.37	314	P	P	15 58 41.3	+1.8
STKA	Stephens Creek	57.67	166	P	P	15 58 40.7	-1.1
	comp=Z,2.1nm,0.9s,baz=6.9,slow=7.5,SNR=2.9						
	comp=Z,2.1nm,0.9s						
STKA	Stephens Creek	57.67	166	P	P	15 58 41.0	-0.8
J20K	Nowinta River	63.12	29	P	P	15 59 19.8	+1.1
J20K				IAmb	IAmb	15 59 31.9	
	comp=Z,2.7nm,1.4s						
H21K	Melozitna Rive	63.66	27	P	P	15 59 23.7	+1.4
H21K				IAmb	IAmb	15 59 42.6	
	comp=Z,1.7nm,1.1s						
RND	Reindeer	65.51	29	P	P	15 59 33.9	-0.6
RND				IAmb	IAmb	15 59 46.7	
	comp=Z,4.5nm,1.3s						
CCB	Clear Creek Bu	65.84	28	P	P	15 59 35.9	-0.5
CCB				IAmb	IAmb	15 59 48.9	
	comp=Z,2.0nm,1.2s						
RIDG	Independent Ri	67.24	29	P	P	15 59 46.1	+0.5
RIDG				IAmb	IAmb	16 00 13.9	
	comp=Z,3.1nm,1.2s						
RES	Resolute Bay	77.32	11	P	P	16 00 45.7	+0.2
CLL	Collm	85.19	325	*i* P	P	16 01 28.5	+0.7
CLL				Lm	MLR	22 08 00.0	
	comp=N,100nm,18.8s						
CLL				Lm	MLR	22 08 00.0	
	comp=E,100nm,18.2s						
CLL				Lm	MLR	22 08 00.0	
	comp=Z,100nm,21.3s						

WEL 16 15:52:06.4±0.8, 38°S±6°×18°0W±°, h33^{km}, M3.4/19, ML3.8/29, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=27.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.40	265	P	Pn	15 52 29.4	-0.2
MXZ	Matakaoa Point	1.49	275	P	Pn	15 52 30.5	-0.4
MXZ				S	Sn	15 52 47.1	-2.0
PUZ	Puketiti	1.56	256	P	Pn	15 52 31.8	-0.1
PUZ				S	Sn	15 52 50.7	-0.3
PKGZ	Pakihiroa	1.67	263	P	Pn	15 52 33.1	-0.4
PKGZ				S	Sn	15 52 52.5	-1.2
CNGZ	Carnagh Statio	1.74	243	P	Pn	15 52 35.4	+1.1
TWGZ	Tauwhareparae	1.80	254	P	Pn	15 52 35.6	+0.4
TWGZ				S	Sn	15 52 57.6	+0.7
HAZ	Te Kaha	1.90	268	P	Pn	15 52 36.1	-0.4
HAZ				S	Sn	15 52 59.2	0.0
TKGZ	Te Karaka	1.98	247	P	Pn	15 52 38.0	+0.5
TKGZ				S	Sn	15 53 02.6	+1.4
RUGZ	Raukumara Rang	2.00	262	P	Pn	15 52 38.8	+0.9
RIGZ	Rimuhau	2.15	241	P	Pn	15 52 40.6	+0.7
RIGZ				S	Sn	15 53 06.3	+0.8
PRGZ	Paritu Road	2.18	235	P	Pn	15 52 41.2	+0.9
MWZ	Matawai	2.19	252	P	Pn	15 52 40.1	-0.3
MWZ				S	Sn	15 53 05.2	-1.1
MHGZ	Mahia Peninsul	2.30	230	P	Pn	15 52 42.9	+1.0
MHGZ				S	Sn	15 53 12.0	+2.9
RAGZ	Rawiri	2.32	249	P	Pn	15 52 43.3	+1.0
RAGZ				S	Sn	15 53 09.9	+0.1
KNZ	Kokohu	2.37	235	P	Pn	15 52 43.2	+0.3
KNZ				S	Sn	15 53 12.5	+1.7
SNGZ	Shannon Statio	2.48	243	P	Pn	15 52 45.3	+0.8
URZ	Urewera	2.49	256	P	Pn	15 52 45.2	+0.7
URZ				S	Sn	15 53 13.4	-0.3
RTZ	Ruatahuna	2.68	249	P	Pn	15 52 48.0	+0.8
MUGZ	Murupara	2.80	253	P	Pn	15 52 49.0	+0.2
MTHZ	Maungataniwha	2.87	245	P	Pn	15 52 50.3	+0.6
OPRZ	Ohinepanea	2.87	266	P	Pn	15 52 49.1	-0.8
ARHZ	Aropaoanui	2.94	237	P	Pn	15 52 51.9	+1.1
NMHZ	Naumai	2.99	241	P	Pn	15 52 52.4	+0.8
MRHZ	Matea Rd	3.17	248	P	Pn	15 52 54.3	+0.3
MCHZ	McNeill Hill	3.23	236	P	Pn	15 52 55.5	+0.7
BKZ	Black Stump Fm	3.24	242	P	Pn	15 52 55.3	+0.4
KWHZ	Kaweka Forest	3.41	239	P	Pn	15 52 57.9	+0.7
KRHZ	Kereru	3.55	236	P	Pn	15 52 59.0	-0.2
PNHZ	Pukenui	3.81	233	P	Pn	15 53 02.6	-0.2
MOVZ	Moawhango	3.86	242	P	Pn	15 53 05.5	+2.0
TSZ	Takapari Road	4.04	233	P	Pn	15 53 05.1	-0.8
DVHZ	Dannevirke	4.06	229	P	Pn	15 53 05.3	-0.8
BFZ	Birch Farm	4.26	225	P	Pn	15 53 07.6	-1.3
PRWZ	Pori Road	4.34	228	P	Pn	15 53 10.1	+0.1
MRZ	Mangatainoka R	4.64	229	P	Pn	15 53 13.4	-0.6
WCZ	Waipu Caves	5.00	289	P	Pn	15 53 19.2	+0.2
OUZ	Omahuta	5.85	293	P	Pn	15 53 31.1	+0.4
CTZ	Chatham Island	6.50	159	P	Pn	15 53 43.1	+3.5
CTZ				S	Sn	15 54 50.0	-2.6

SKHL 16 16:28:53.1±0.5, 45°.30N×150°.90E, h65^{km}±5^{km}, mb4.9/5
MOS 16 16:28:53.0±1.1, 45°.59N×150°.67E, h55^{km}, mb4.3/1, Error ellipse: s-maj=19.2km s-min=9.8km az=135.2
JMA 16 16:28:54.0±0.8, 46°N±5°×15°1E±°, h30^{km}, MV4.4/11, KURILE ISLANDS REGION
IDC 16 16:28:56.8±2.9, 45°.62N×150°.66E, h68^{km}±26^{km}, mb3.3/12, mbtmp3.7/14, MS2.7/3, Error ellipse: s-maj=25.5km s-min=15.4km az=146.0
ISC 16 16:28:53.6±0.7, 45°.31N±0°.07×150°.85E±0°.07, h50^{km}, n50, σ1^{s}48/55, mb3.6/12, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.11	269	⇑ *i* PN	Pn	16 29 26.2	-0.2
KUR				*i* S	Sn	16 29 51.1	-0.4
KUR				pmax	pmax		
	comp=Z,261nm,0.4s						
KUR				smax	smax		
	comp=N,780nm,0.3s						
KUR				smax	smax		
	comp=E,361nm,0.2s						
KUR	Kuril'sk	2.11	269	*i* P	Pn	16 29 26.3	-0.2
KUR				AMB	AMB	16 29 29.4	
	comp=E,260nm,0.4s						
KUR				*i* S	Sn	16 29 51.0	-0.4
KUR				A	A	16 29 55.1	
	comp=E,780nm,0.3s						
KUR				A	A	16 29 55.1	
	comp=E,360nm,0.3s						
SHO	Shikotan	3.21	245	*e*PN	Pn	16 29 41.5	0.0
SHO				*e*S	Sn	16 30 16.5	-2.1
SHO				smax	smax		
	comp=N,182nm,0.3s						
SHO				smax	smax		
	comp=E,99nm,0.2s						
SHO	Shikotan	3.21	245	*e*P	Pn	16 29 41.6	0.0
SHO				AMB	AMB	16 29 42.3	
	comp=E,210nm,0.4s						
SHO				*e*S	Sn	16 30 17.8	-0.8
SHO				A	A	16 30 25.5	
	comp=E,180nm,0.3s						
SHO				A	A	16 30 25.5	
	comp=E,100nm,0.3s						
YUK	Yuzh-Kuril'sk	3.78	252	*e*PN	Pn	16 29 50.4	+1.1
YUK				*e*S	Sn	16 30 33.5	+1.0
YUK				pmax	pmax		
	comp=E,33nm,0.2s						
YUK				pmax	pmax		
	comp=Z,153nm,0.2s						
YUK				pmax	pmax		
	comp=N,117nm,0.1s						
YUK				smax	smax		
	comp=E,417nm,0.5s						
YUK				smax	smax		
	comp=N,156nm,0.6s						
YUK	Yuzh-Kuril'sk	3.78	252	*e*P	Pn	16 29 50.3	+0.9
YUK				AMB	AMB	16 29 55.3	
	comp=N,150nm,0.3s						
YUK				*e*S	Sn	16 30 33.6	+1.0
YUK				A	A	16 30 34.7	
	comp=N,160nm,0.6s						
YUK				A	A	16 30 34.7	
	comp=N,420nm,0.6s						
GLVR	Golovnino	4.12	250	*e*PN	Pn	16 29 55.0	+0.9
GLVR				*e*S	Sn	16 30 41.5	+0.5
GLVR	Golovnino	4.12	250	*e*P	Pn	16 29 55.0	+0.9
GLVR				*e*S	Sn	16 30 41.5	+0.5
NEM2	Nemuro 2	4.15	244	*e*P	Pn	16 29 54.5	+0.1
NEM2				*e*S	Sn	16 30 39.8	-1.8
NMR	Nemuro--Hokkai	4.16	244	*e*PN	Pn	16 29 53.5	-1.0
NMR	Nemuro--Hokkai	4.16	244	*e*P	Pn	16 29 54.4	-0.1
NMR				*e*S	Sn	16 30 40.0	-1.8
RUSJ	Misakicho	4.17	255	*e*PN	Pn	16 29 56.9	+2.2
RUSJ				*e*S	Sn	16 30 43.5	+1.3
JRA	Rausu	4.32	253	*e*P	Pn	16 29 58.4	+1.7
JNK	Nakash	4.72	251	*e*P	Pn	16 30 03.7	+1.5
JNK				*e*S	Sn	16 30 55.4	-0.2
AKK	Akkeshi	4.89	244	*e*P	Pn	16 30 05.6	+1.0
JAK	Akkeshi	5.00	245	*e*P	Pn	16 30 05.8	-0.2
JAK				*e*S	Sn	16 30 58.8	-3.6
JTKR	Abashiri--Toko	5.13	257	*e*P	Pn	16 30 10.2	+2.3
JAR	Ashorobuto	5.47	251	*e*P	Pn	16 30 14.4	+1.9
JAR				*e*S	Sn	16 31 13.9	-0.1
YSS	Yuzh-Sakhalins	5.86	289	*e*P	Pn	16 30 18.9	+1.0
YSS				AMB	AMB	16 30 20.1	
	comp=N,20nm,0.3s						
YSS				*e*S	Sn	16 31 22.6	-1.1
YSS				A	A	16 31 28.8	
	comp=N,10.0nm,0.4s						
YSS				A	A	16 31 28.8	
	comp=N,20nm,0.4s						
JKA	Kamikawa-asahi	6.00	261	*e*P	Pn	16 30 21.7	+1.9
ASAJ	Asahikawa	6.00	261	P	Pn	16 30 21.7	+1.8
	comp=N,25nm,1.1s,baz=66,slow=12,SNR=1.9						
ASAJ				S	Sn	16 31 30.2	+3.0
	comp=N,10nm,0.8s,baz=286,slow=20,SNR=1.7						
JNBK	Urakawa-nobuka	6.60	246	*e*P	Pn	16 30 28.0	0.0
JNBK				*e*S	Sn	16 31 38.0	-3.7
TYV	Tymovskoe	7.81	318	*e*P	Pn	16 30 45.4	+0.9
TYV				AMB	AMB	16 30 47.8	
	comp=N,20nm,0.3s						
JANG	Nango	8.45	238	*e*S	Sn	16 32 18.2	-9.1
JTH	Tanohata	8.53	234	*e*S	Sn	16 32 19.5	-10
PETK	Petropavlovsk-	9.00	27	P	Pn	16 30 59.3	-1.5
	comp=N,2.6nm,1.0s,baz=179,slow=13,SNR=1.8						
PETK				LR	LR	16 34 21.1	
	comp=N,42nm,18.8s,baz=287,slow=37						
MJAR	Matsushiro Arr	12.95	232	LR	LR	16 37 34.9	
	comp=N,26nm,18.8s,baz=236,slow=40						
MA2	Magadan	14.29	360	LR	LR	16 36 57.2	
	comp=N,39nm,21.1s,baz=169,slow=34						
H11N2	WAKE ISLAND Hy	28.76	147	T	T	17 05 22.8	
	baz=336,slow=75						
H11N1	WAKE ISLAND Hy	28.77	147	T	T	17 05 46.0	
	baz=336,slow=75						
H11N3	WAKE ISLAND Hy	28.78	147	T	T	17 05 38.7	
	baz=336,slow=75						
H11S1	WAKE ISLAND Hy	29.80	149	T	T	17 06 49.1	
	baz=337,slow=76						
H11S3	WAKE ISLAND Hy	29.81	149	T	T	17 06 59.3	
	baz=337,slow=76						
H11S2	WAKE ISLAND Hy	29.82	149	T	T	17 06 45.5	
	baz=337,slow=76						
ILAR	Eielson Array	38.65	37	P	P	16 36 11.5	-0.3
	comp=N,0.2nm,0.5s,baz=276,slow=6.4,SNR=2.0						
	comp=N,0.2nm,0.5s						
INK	Inuvik	43.70	31	P	P	16 36 53.9	+0.7
	comp=N,1.2nm,0.7s,baz=297,slow=8.7,SNR=4.2						
	comp=N,1.2nm,0.7s						
MKAR	Makanchi Array	46.21	298	P	P	16 37 12.9	-0.5
	comp=N,0.5nm,0.5s,baz=68,slow=7.8,SNR=8.5						
MKAR				PcP	PcP	16 38 48.9	+0.5
	comp=N,0.3nm,0.6s,baz=56,slow=4.8,SNR=2.9						
	comp=N,0.5nm,0.5s						
YKA	Yellowknife Ar	53.02	35	P	P	16 38 04.9	0.0
	comp=N,0.3nm,0.6s,baz=297,slow=6.7,SNR=2.7						
	comp=N,0.3nm,0.6s						
FINES	FINESS Array B	64.66	334	P	P	16 39 23.9	-1.8
	comp=N,2.2nm,0.9s,baz=321,slow=2.7,SNR=5.1						
	comp=N,2.2nm,0.9s						
WRA	Warramunga Arr	66.66	197	P	P	16 39 41.1	+2.1
	comp=N,0.4nm,0.9s,baz=16,slow=6.3,SNR=1.5						
	comp=N,0.4nm,0.9s						
PDAR	Pinedale Array	66.87	52	P	P	16 39 41.9	+1.3
	comp=N,0.4nm,0.6s,baz=259,slow=1.5,SNR=4.3						
	comp=N,0.4nm,0.6s						
NOA	NORSAR Array B	69.07	340	P	P	16 39 52.7	-1.1
	comp=N,0.5nm,0.5s,baz=29,slow=6.6,SNR=4.9						
	comp=N,0.5nm,0.5s						
ASAR	Alice Springs	70.36	196	P	P	16 40 04.4	+2.4
	comp=N,0.2nm,0.8s,baz=7.5,slow=5.5,SNR=2.1						
	comp=N,0.2nm,0.8s						
AKASG	Malin Array Be	71.85	325	P	P	16 40 09.6	-1.3
	comp=N,0.2nm,0.3s,baz=37,slow=6.2,SNR=3.2						
	comp=N,0.2nm,0.3s						
GERES	GERESS Array B	79.04	333	P	P	16 40 51.0	-1.2
	comp=N,0.3nm,0.4s,baz=40,slow=7.8,SNR=4.0						
	comp=N,0.3nm,0.4s						
GERES	GERESS Array B	79.04	333	P	P	16 40 51.0	-1.2
TXAR	Lajitas Array	79.58	59	P	P	16 40 57.0	+1.5
	comp=N,0.9nm,0.6s,baz=296,slow=4.3,SNR=5.4						
	comp=N,0.9nm,0.6s						
H03N2	Juan Fernandez	140.32	90	T	T	19 25 14.6	
	baz=305,slow=77						
H03N3	Juan Fernandez	140.33	90	T	T	19 25 15.4	
	baz=305,slow=77						
H03N1	Juan Fernandez	140.33	90	T	T	19 25 15.4	
	baz=305,slow=77						

JMA 16 16:46:59.4±0.4, 33°N±1°×14°2E±°, h85^{km}, MV2.8/16, E OFF HACHIJOJIMA ISLAND
IDC 16 16:47:00.2±2.4, 32°.58N×140°.02E, h0^{km}, mb3.4/4, mbtmp3.5/6, ML3.5/2, MS3.1/2, Error ellipse: s-maj=98.3km s-min=18.8km az=69.0
ISC 16 16:46:58.9±1.2, 33°.06N±0°.06×141°.7E±0°.1, h35^{km}, n15, σ1^{s}11/16, mb3.3/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.61	272	P	Pn	16 47 24.6	-0.2
JHCJ	Hachijojimakas	1.63	271	P	Pn	16 47 25.0	0.0
BSO1	Boso 1	1.71	339	P	Pn	16 47 25.4	-0.3
BSO1				*e*S	Sn	16 47 46.1	+0.1
BSO3	Boso 3	2.01	330	P	Pn	16 47 29.5	-0.6
JOD2	Odawara 2	3.10	316	P	Pn	16 47 44.4	-1.0
JRY	Ryogami san	3.76	322	P	Pn	16 47 54.0	-0.5
JAG	Ashikaga	3.84	331	P	Pn	16 47 55.3	-0.3
MJAR	Matsushiro Arr	4.52	321	Pn	Pn	16 48 04.8	-0.2
	0.5nm,0.3s,baz=158,slow=11,SNR=18						
MJAR				Sn	Sn	16 48 56.5	+0.3
	0.2nm,0.3s,baz=344,slow=20,SNR=4.5						
	4.4nm,0.4s						
JCJ	Chichijima	5.96	176	Pn	Pn	16 48 25.9	+1.3
	5.5nm,0.3s,baz=273,slow=22,SNR=14						
JCJ				Sn	Sn	16 49 29.2	-2.5
	2.4nm,0.3s,baz=270,slow=20,SNR=1.3						
	11nm,0.3s						
KSRS	Korea Array	12.11	295	LR	LR	16 54 09.2	
	comp=Z,21nm,20.2s,baz=225,slow=39						
SONM	Songino Array	30.37	310	P	P	16 53 07.2	-0.4
	0.3nm,0.5s,baz=107,slow=10,SNR=2.3						
	0.3nm,0.5s						
KAPI	Kappang	43.23	213	LR	LR	17 16 01.4	
	comp=Z,87nm,18.0s,baz=110,slow=41						
MKAR	Makanchi Array	46.54	305	P	P	16 55 22.4	-0.7
	0.2nm,0.5s,baz=81,slow=9.8,SNR=4.6						
	0.2nm,0.5s						
WRA	Warramunga Arr	53.18	189	P	P	16 56 15.4	+1.8
	0.5nm,0.4s,baz=2.4,slow=7.5,SNR=18						
	0.5nm,0.4s						
ASAR	Alice Springs	56.90	189	P	P	16 56 42.0	+1.6
	0.1nm,0.6s,baz=0.1,slow=7.7,SNR=5.3						
	0.1nm,0.6s						

NEIC 16 17:20:17.8±1.3, 47°.58N±0°.01×92°.54W±0°.03, h0^{km}±2^{km}, mb_Lg2.7/14, Error ellipse: s-maj=3.1km s-min=3.0km az=80.0
IDC 16 17:20:33.0±4.6, 47°.93N×93°.03W, h0^{km}, mbtmp2.5/1, ML1.2/1, Error ellipse: s-maj=70.3km s-min=27.2km az=53.0
ISC 16 17:20:17.9±1.0, 47°.58N±0°.05×92°.55W±0°.04, h0^{km}, n18, σ0^{s}74/15, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.80	62		Pg	17 20 32.8	-0.4
EYMN				Sg	Sg	17 20 43.6	0.0
B35A	Bob, Littlefor	1.12	315		Pg	17 20 38.6	-0.7
B35A				Sg	Sg	17 20 53.5	-0.3
E38A	The Farm, Brul	1.18	145		Pg	17 20 39.4	-1.1
F36A	Milaca	1.84	202		Pn	17 20 50.6	-0.2
F36A				IAmb_Lg		17 21 16.8	
	comp=Z,32nm,1.0s						
AGMN	Agassiz Nation	2.34	289	Pn	Pn	17 20 57.1	-0.5
AGMN				IAmb_Lg		17 21 31.4	
	comp=Z,43nm,1.2s						
SPMN	Marine on St.	2.36	184		Pn	17 20 58.2	+0.4
D41A	Chassel	2.76	99	Pn	Pn	17 21 02.2	-1.1
COWI	Conover	2.77	121	Pn	Pn	17 21 04.2	+0.7
COWI				IAmb_Lg		17 21 44.9	
	comp=Z,25nm,1.0s						
G40A	Rib Lake	2.82	144		Pn	17 21 05.3	+1.1
F33A	5 Mile Ranch,	3.11	237		Pn	17 21 08.3	+0.2
ULM	Lac du Bonnet	3.46	322	Pn	Pb	17 21 20.6	+0.5
	comp=Z,0.5nm,0.3s,baz=143,slow=14,SNR=2.0						
ULM				Sn	Sn	17 21 55.8	+1.1
	comp=Z,0.5nm,0.3s,baz=126,slow=21,SNR=1.5						
ULM				Lg	Lg	17 22 05.2	
	comp=Z,2.8nm,0.3s,baz=61,slow=16,SNR=26						
ULM				Rg	Rg	17 22 23.7	
	comp=Z,24nm,1.1s,baz=8.3,slow=3.9,SNR=5.4						
	comp=Z,1.5nm,0.4s						
ULM	Lac du Bonnet	3.46	322	Pn	Pn	17 21 12.9	-0.1
ULM				IAmb_Lg		17 22 07.0	
	comp=Z,27nm,0.9s						
I10CA	LAC DU BONNET	3.49	320	*i*		17 41 10.0	
	comp=Z,0.1nm,1.1s,baz=137,slow=324,SNR=11						
I40A	Norwalk	3.92	159	IAmb_Lg		17 22 22.8	
	comp=Z,11nm,0.8s						
I42A	Draeger Farm,	4.48	144	IAmb_Lg		17 22 38.8	
	comp=Z,24nm,0.9s						
ECSD	EROS Data Cent	4.79	218	IAmb_Lg		17 22 57.1	
	comp=Z,17nm,1.3s						
K38A	Parkersburg	4.93	182	IAmb_Lg		17 23 00.7	
	comp=Z,17nm,1.2s						
I56US	NEWPORT INFRAS	16.48	282	*i*		18 55 30.0	
	baz=84,slow=300,SNR=2.6						

IDC 16 17:31:16.7±0.9, 4°.08S×130°.07E, h0^{km}, mb3.9/6, mbtmp4.1/9, ML4.0/3, Error ellipse: s-maj=34.7km s-min=17.4km az=69.0
DJA 16 17:31:19.2±0.9, 4°S±4°×13°0E±°, h11^{km}±8^{km}, M4.1/8, mb4.3/5, mB4.9/3, MLv3.9/8, Mw(mB)4.2/3
NEIC 16 17:31:20.5±1.4, 4°.09S±0°.07×130°.1E±0°.1, h28^{km}±7^{km}, mb4.0/23, Error ellipse: s-maj=14.8km s-min=9.5km az=82.0
ISC 16 17:31:17.3±0.5, 4°.05S±0°.05×130°.02E±0°.06, h10^{km}, n49, σ1^{s}68/53, mb4.1/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.29	303	P	Pn	17 31 40.0	-1.5
MSAI				S	Sb	17 31 55.2	-3.3
AAI	Ambon	1.86	281	P	Pn	17 31 47.8	-1.4
SIJI	Sorong	3.40	22	Pn	Pn	17 32 11.8	+1.4
	10nm,0.3s,baz=35,slow=12,SNR=60						
SIJI				Sn	Sn	17 32 47.9	-2.9
	9.4nm,0.3s,baz=280,slow=23,SNR=10						
	34nm,0.5s						
SWI	Sorong	3.40	21	P	Pn	17 32 12.1	+1.6
SWI				S	Sn	17 32 51.7	+0.8
SAUI	Saumlaki	4.11	162	Pn	Pn	17 32 18.5	-1.6
LBMI	Labuha	4.22	323	P	Pn	17 32 23.3	+1.5
LBMI				S	Sn	17 33 10.3	-0.9
SANI	Sanana	4.49	296	P	Pn	17 32 25.4	0.0
LUWI	Luwuk	7.83	292	Pn	Pn	17 33 11.9	+0.5
LUWI	Luwuk	7.83	292	P	Pn	17 33 13.6	+2.2
	0.3nm2μm34nm,0.9s						
BATI	Baumata	8.78	226	Pn	Pn	17 33 26.3	+1.9
	0.7nm,0.3s,baz=76,slow=8.3,SNR=3.1						
	25nm,0.6s						
MTN	Manton Dam	8.80	173		Pn	17 33 26.2	+1.5
MRSI	Marisa	9.24	299	P	Pn	17 33 31.0	+0.3
TOLI2	Tolitoli	10.56	299	Pn	Pn	17 33 50.8	+1.9
KNRA	Kununurra	11.62	186		Pn	17 34 03.5	+0.2
WB0	Warramunga Arr	16.19	165	Pn	Pn	17 35 01.7	-3.4
WB0				IAmb	IAmb	17 35 14.1	
	comp=Z,12nm,1.1s						
COEN	Coen	16.29	128	P	Pn	17 35 04.8	-1.6
COEN				IAmb	IAmb	17 35 16.3	
	comp=Z,9.3nm,1.0s						
WRAB	Tennant Creek	16.34	165	Pn	Pn	17 35 03.8	-3.2
WRA	Warramunga Arr	16.35	165	Pn	Pn	17 35 04.0	-3.1
	comp=Z,0.2nm,0.3s,baz=349,slow=10,SNR=14						
WRA				Sn	Sn	17 37 54.9	-14
	comp=Z,0.1nm,0.3s,baz=339,slow=25,SNR=2.8						
WRA	Warramunga Arr	16.35	165		Pn	17 35 03.5	-3.5
WB2	Warramunga Arr	16.35	165	Pn	Pn	17 35 03.5	-3.7
WR0	Warramunga Arr	16.41	165	Pn	Pn	17 35 04.7	-3.2
MBWA	Marble Bar	19.73	210	P	Pn	17 35 47.6	-1.1
MBWA				IAmb	IAmb	17 36 10.2	
	comp=Z,7.3nm,1.1s						
AS31	Alice Springs	19.86	169	P	P	17 35 48.2	-0.5
AS31				IAmb	IAmb	17 35 50.7	
	comp=Z,3.8nm,0.3s						
ASAR	Alice Springs	19.86	169	P	Pn	17 35 49.7	-0.6
	comp=Z,1.5nm,0.3s,baz=351,slow=11,SNR=188						
ASAR				S	S	17 39 19.8	-13
	comp=Z,0.6nm,1.1s,baz=356,slow=24,SNR=2.0						
	comp=Z,3.8nm,0.4s						
PSA00	Pilbara Seismi	20.02	209	P	Pn	17 35 51.4	-0.8
PSA00				IAmb	IAmb	17 35 58.5	
	comp=Z,6.5nm,1.1s						
KSM	Kuching	20.45	285	P	P	17 35 55.5	+0.4
KSM				IAmb	IAmb	17 35 56.9	
	comp=Z,8.5nm,0.8s						
CTA	Charters Tower	22.46	137	P	P	17 36 17.3	+0.5
	comp=Z,9.3nm,1.0s,baz=299,slow=13,SNR=3.3						
	comp=Z,9.3nm,1.0s						
STKA	Stephens Creek	29.74	160	P	P	17 37 23.6	-0.3
	comp=Z,1.3nm,0.8s,baz=308,slow=16,SNR=4.7						
	comp=Z,1.3nm,0.8s						
CMAR	Chiang Mai Arr	37.92	307	P	P	17 38 36.6	+1.4
	comp=Z,1.5nm,0.8s,baz=141,slow=7.7,SNR=16						
	comp=Z,1.5nm,0.8s						
CHTO	Chiang Mai	38.11	308	P	P	17 38 38.2	+1.4
CHTO				IAmb	IAmb	17 38 40.0	
	comp=Z,4.8nm,0.8s						
SONM	Songino Array	55.67	341	P	P	17 40 55.8	+1.9
	comp=Z,0.8nm,0.9s,baz=152,slow=6.5,SNR=5.0						
	comp=Z,0.8nm,0.9s						

SONM	**Songino Array**	**55.67**	**341**	P	**P**	**17 40 54.6**	**+0.8**
SONM				IAmb	IAmb	17 41 00.2	
	comp=Z,1.5nm,1.1s						
MK31	**Makanchi Array**	**65.80**	**326**	P	**P**	**17 42 02.5**	**-0.2**
MK31				IAmb	IAmb	17 42 05.7	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**17 42 03.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=118,slow=8.4,SNR=22						
	comp=Z,1.6nm,0.6s						
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**17 42 01.0**	**-1.8**
YAK	**Yakutsk**	**65.90**	**360**	P	**P**	**17 42 03.3**	**+0.2**
MAKZ	**Makanchi**	**65.98**	**326**	P	**P**	**17 42 03.5**	**-0.5**
ZALV	**Zalesovo Beam**	**68.97**	**333**	P	**P**	**17 42 23.7**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=156,slow=7.4,SNR=1.8						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**68.97**	**333**	P	**P**	**17 42 23.2**	**+0.6**
GAR	**Garm**	**69.63**	**314**	P	**P**	**17 42 27.4**	**+0.2**
KURK	**Kurchatov**	**70.03**	**328**	P	**P**	**17 42 29.5**	**+0.2**
KK31	**Karatay Array**	**71.16**	**318**	P	**P**	**17 42 35.5**	**-0.9**
KK31				IAmb	IAmb	17 42 52.9	
	comp=Z,3.3nm,1.4s						
KKAR	**Karatay Array**	**71.16**	**318**	P	**P**	**17 42 36.3**	**-0.1**
KKAR	**Karatay Array**	**71.16**	**318**	P	**P**	**17 42 35.3**	**-1.1**
KKAR				IAmb	IAmb	17 42 52.9	
	comp=Z,3.3nm,1.4s						
BRVK	**Borovoye**	**75.67**	**327**	P	**P**	**17 43 04.0**	**+1.3**
BRVK				IAmb	IAmb	17 43 04.9	
	comp=Z,1.7nm,0.8s						
ABKAR	**Akbulak array**	**80.23**	**321**	P	**P**	**17 43 28.3**	**+0.1**
ABKAR	**Akbulak array**	**80.23**	**321**	P	**P**	**17 43 28.4**	**+0.2**
ABKAR				IAmb	IAmb	17 43 30.2	
	comp=Z,1.0nm,0.9s						
RAYN	**Ar Rayn**	**86.58**	**294**	P	**P**	**17 44 01.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**128.20**	**283**	PKP	**PKiKP**	**17 50 26.4**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=90,slow=2.9,SNR=2.5						

KRSC 16 17:56:22.2±1.7, 51°.63N×157°.56E, h127^{km}±13^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.37**	**60**	*i* P	Pn	17 56 41.6	+1.4
KDTR				*e*S	Sn	17 56 54.5	+0.7
PAU	**Pauzhetka**	**0.50**	**251**	*i* P	Pn	17 56 42.1	+1.2
PAU				*e*S	Sn	17 56 56.0	+1.1
ASAK	**Asacha**	**0.79**	**15**	*i* P	Pn	17 56 44.7	+1.7
ASAK				*e*S	Sn	17 57 00.5	+1.7
MIPR	**Malaya Ipel'ka**	**0.82**	**323**	*i* P	Pn	17 56 43.6	+0.4
MIPR				*e*S	Sn	17 56 58.2	-0.9
MTVR	**Mutnovka**	**0.94**	**24**	*e*P	Pn	17 56 46.0	+1.6
MTVR				*e*S	Sn	17 57 03.4	+2.1
GRL	**Gorelyy**	**0.98**	**19**	*e*P	Pn	17 56 46.7	+2.0
GRL				*e*S	Sn	17 57 04.5	+2.6
RUS	**Russkaya**	**1.00**	**36**	*e*P	Pn	17 56 46.2	+1.5
RUS				*e*S	Sn	17 57 03.2	+1.3
KRMR	**Karymshinskiy**	**1.25**	**16**	*i* P	Pn	17 56 48.9	+1.6
KRMR				*e*S	Sn	17 57 08.5	+2.0
SKR	**Severo-Kuril's**	**1.31**	**225**	*i* P	Pn	17 56 49.5	+1.5
SKR				*e*S	Sn	17 57 08.9	+1.4
APC	**Apacha**	**1.32**	**349**	*e*P	Pn	17 56 48.8	+0.7
APC				*e*S	Sn	17 57 07.9	+0.1
PET	**Petropavlovsk**	**1.55**	**25**	*e*P	Pn	17 56 52.2	+1.6
PET				*e*S	Sn	17 57 13.9	+1.6
DALK	**Dalny**	**1.58**	**27**	*e*P	Pn	17 56 52.9	+1.9
DALK				*e*S	Sn	17 57 14.8	+1.8
UGLR	**Uglovaya**	**1.76**	**25**	*e*P	Pn	17 56 56.2	+3.0
AVH	**Avacha**	**1.79**	**23**	*e*P	Pn	17 56 56.5	+3.0
KOK	**Koryaka**	**1.79**	**21**	*e*P	Pn	17 56 56.6	+3.1
SMAR	**Somma**	**1.81**	**24**	*e*P	Pn	17 56 56.7	+2.9
KRER	**Koryakskii**	**1.83**	**23**	*e*P	Pn	17 56 56.9	+2.8
SDLR	**Sedlovina**	**1.84**	**26**	*e*P	Pn	17 56 56.4	+2.3
KRX	**Arik**	**1.86**	**21**	*e*P	Pn	17 56 56.8	+2.4
NLC	**Nalytchevo**	**1.89**	**35**	*e*P	Pn	17 56 56.4	+1.8
NLC				*e*S	Sn	17 57 19.8	+0.3
GNL	**Ganaly**	**2.08**	**6**	*e*P	Pn	17 56 58.5	+1.4
SPN	**Mys Shipunski**	**2.11**	**45**	*e*P	Pn	17 56 59.3	+2.0
SPN				*e*S	Sn	17 57 24.4	+0.2
KII	**Karymskiy**	**2.67**	**25**	*e*P	Pn	17 57 06.9	+2.4
MKZ	**Mys Kozlova**	**3.86**	**39**	*e*P	Pn	17 57 21.2	+1.3
MKZ				*e*S	Sn	17 58 04.6	-0.1
TUMD	**Tumrok D**	**3.96**	**24**	*e*P	Pn	17 57 23.5	+2.2
TUMD				*e*S	Sn	17 58 09.1	+1.9
TUMR	**Tumrok**	**3.98**	**22**	*e*P	Pn	17 57 24.5	+2.9
KBTR	**Krutoberegovo**	**5.54**	**32**	*e*P	Pn	17 57 43.6	+1.2
BKI	**Bering**	**6.17**	**51**	*e*P	Pn	17 57 52.3	+1.5
BKI				*e*S	Sn	17 58 55.7	-4.4

ISK ***16*** *18:00:48.8, 35°.87N×27°.66E, h11^{km}, ML2.5/10*
ATH ***16*** *18:00:49.8, 35°.90N×27°.62E, h11^{km}±6^{km}, ML2.4/2, Error ellipse: s-maj=6.3km s-min=1.0km az=124.0*
DDA ***16*** *18:00:49.4±0.0, 35°.85N×27°.58E, h13^{km}±5^{km}, ML2.3*

ISC 16 18:00:48.4±1.3, 35°.91N±0°.03×27°.59E±0°.03, h8^{km}±11^{km}, n24, σ0^{s}.83/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.50**	**224**	P	**Pb**	**18 00 59.4**	**-0.1**
KARP				S	**Sb**	**18 01 07.0**	**-0.1**
KARP				AML	AML	18 01 10.0	
	comp=N,948µm,0.2s						
KARP				AML	AML	18 01 10.3	
	comp=E,1257µm,0.1s						
KARP	**Karpathos**	**0.50**	**224**	PG	**Pb**	**18 00 59.3**	**-0.3**
KARP				SG	**Sb**	**18 01 07.0**	**-0.1**
ARG	**Arkhangelos**	**0.53**	**55**	P	**Pb**	**18 00 59.6**	**-0.4**
ARG				S	**Sb**	**18 01 06.9**	**-1.0**
ARG				AML	AML	18 01 07.9	
	comp=N,765µm,0.1s						
ARG				AML	AML	18 01 08.3	
	comp=E,959µm,0.1s						
ARG	**Arkhangelos**	**0.53**	**55**	PG	**Pb**	**18 00 59.6**	**-0.4**
ARG				SG	**Sb**	**18 01 06.9**	**-1.0**
NIS1	**Nisyros Isl.**	**0.77**	**334**	P	**Pb**	**18 01 04.6**	**+0.6**
NIS1	**Nisyros Isl.**	**0.77**	**334**	PG	**Pn**	**18 01 05.4**	**-0.2**
NIS1				SG	**Sn**	**18 01 17.1**	**-0.3**
DAT	**Datca**	**0.82**	**359**	PG	**Pb**	**18 01 05.9**	**+0.9**
DAT				SG	**Sb**	**18 01 18.1**	**+1.9**
DAT	**Datca**	**0.82**	**359**	P	**Pn**	**18 01 06.0**	**-0.3**
DAT				S	**Sb**	**18 01 17.7**	**+1.5**
DAT				*i* AML	AML	18 01 18.0	
	comp=E,91nm,0.6s						
DAT				*i* AML	AML	18 01 19.0	
	comp=E,109nm,0.2s						
TURN	**Turunc**	**1.01**	**31**	PG	**Pg**	**18 01 07.8**	**-0.1**
TURN	**Turunc**	**1.01**	**31**	P	**Pg**	**18 01 07.5**	**-0.4**
TURN				S	**Sg**	**18 01 21.2**	**+0.2**
TURN				*i* AML	AML	18 01 25.0	
	comp=E,56nm,0.3s						
TURN				*i* AML	AML	18 01 28.0	
	comp=E,70nm,0.2s						
BDRM	**Kayabasi**	**1.16**	**354**	P	**Pg**	**18 01 10.1**	**-0.6**
BDRM				S	**Sg**	**18 01 25.5**	**-0.2**
DALY	**Dalyan (Mula)**	**1.25**	**43**	PN	**Pg**	**18 01 12.1**	**-0.3**
YER	**Yerkesik**	**1.34**	**24**	PN	**Pb**	**18 01 14.2**	**+0.3**
ZKR	**Zakros**	**1.37**	**235**	P	**Pg**	**18 01 15.1**	**+0.3**
FETY	**Fethiye**	**1.41**	**59**	PN	**Pn**	**18 01 14.7**	**+0.3**
FETY				SN	**Sn**	**18 01 33.6**	**+0.4**
FETY	**Fethiye**	**1.41**	**59**	P	**Pg**	**18 01 16.8**	**+1.3**
FETY				S	**Sn**	**18 01 35.5**	**+2.3**
MULA	**Mugla, Merkez-**	**1.47**	**23**	P	**Pb**	**18 01 16.3**	**+0.3**
MULA				S	**Sb**	**18 01 34.3**	**-0.6**
MULA				*i* AML	AML	18 01 39.0	
	comp=E,37nm,0.7s						
AKAS	**Kas**	**1.66**	**78**	PN	**Pn**	**18 01 18.1**	**0.0**
AKAS	**Kas**	**1.66**	**78**	P	**Pn**	**18 01 18.3**	**+0.3**
AKAS				S	**Sb**	**18 01 40.4**	**-0.2**
AKAS				*i* AML	AML	18 01 52.0	
	comp=E,43nm,1.4s						
AKAS				*i* AML	AML	18 02 01.0	
	comp=E,26nm,1.4s						
AKAS				*i* AML	AML	18 02 05.0	
	comp=E,59nm,1.6s						
CAME	**Cameli-Denizli**	**1.72**	**53**	PN	**Pn**	**18 01 19.4**	**+0.5**
CAME				SN	**Sn**	**18 01 41.8**	**+0.6**
AYDN	**Tasoluk**	**1.76**	**7**	P	**Pn**	**18 01 18.8**	**-0.6**
AYDN				S	**Sn**	**18 01 39.6**	**-2.4**
CAEL	**Denizli, Camel**	**1.84**	**49**	P	**Pn**	**18 01 20.3**	**-0.3**
CAEL				S	**Sb**	**18 01 46.1**	**+0.2**
CAEL				*i* AML	AML	18 01 56.0	
	comp=E,47nm,0.6s						
CAEL				*i* AML	AML	18 02 01.0	
	comp=E,63nm,1.5s						
CAEL				*i* AML	AML	18 02 17.0	
	comp=E,39nm,2.0s						
TAVA	**DENIZLI_Tavas**	**1.88**	**34**	P	**Pb**	**18 01 22.6**	**-0.5**
TAVA				S	**Sb**	**18 01 46.8**	**0.0**
TAVA				*i* AML	AML	18 01 51.0	
	comp=E,20nm,0.4s						
TAVA				*i* AML	AML	18 01 51.0	
	comp=E,23nm,0.2s						
TAVA				*i* AML	AML	18 01 51.0	
	comp=E,22nm,0.3s						
GOLH	**Golhisar**	**2.07**	**50**	P	**Pb**	**18 01 25.4**	**-0.9**
GOLH				S	**Sb**	**18 01 52.1**	**-0.1**
GOLH				*i* AML	AML	18 01 57.0	
	comp=E,19nm,0.4s						
GOLH				*i* AML	AML	18 01 59.0	
	comp=E,24nm,0.4s						

IDC ***16*** *18:03:42.0±1.4, 25°.88N×90°.26E, h0^{km}, mb3.7/7, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=62.1km s-min=19.2km az=59.0*
NDI ***16*** *18:03:46.3±2.1, 26°.13N×90°.28E, h33^{km}, ML4.0, mb4.3(NEIC)*
NEIC ***16*** *18:03:47.5±1.1, 25°.9N±0°.1×90°.2E±0°.2, h35^{km}±9^{km}, mb4.3/8, Error ellipse: s-maj=21.7km s-min=13.0km az=62.0*

ISC 16 18:03:46.2±0.7, 26°.20N±0°.06×90°.44E±0°.06, h24^{km}, n24, σ1^{s}.69/25, mb4.0/10, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURI	**Tura**	**0.66**	**188**	*e*P	**Pn**	**18 03 59.4**	**-0.7**
TURI				*e*S	**Sb**	**18 04 07.2**	**-0.6**
TURI				IAML		18 04 08.2	
	comp=E,30µm,0.2s						
TURI				IAML		18 04 08.3	
	comp=N,20µm,0.3s						
SHL	**Shillong**	**1.45**	**116**	*e*P	**Pn**	**18 04 10.1**	**-1.0**
SHL				*i* x	**Pb**	**18 04 12.3**	**-0.3**
TEZP	**TEZPUR**	**2.16**	**78**	*e*P	**Pb**	**18 04 23.2**	**-1.4**
SILR	**SILCHAR**	**2.56**	**123**	*e*x	Sb	18 05 11.7	+9.1
SILR				IAML		18 05 17.3	
	comp=E,882nm,0.8s						
SILR				IAML		18 05 18.5	
	comp=N,500nm,0.3s						
KOHI	**KOHIMA**	**3.34**	**97**	*e*P	**Pn**	**18 04 38.3**	**+1.2**
IMP	**Imphal**	**3.45**	**113**	*e*P	**Pn**	**18 04 39.6**	**+1.1**
IMP				*e*S	**Sn**	**18 05 19.4**	**+0.6**
LSA	**Lhasa**	**3.54**	**10**	Pn	**Pb**	**18 04 45.9**	**-2.5**
MOKO	**MOKOCHONG**	**3.66**	**87**	*e*S	**Sn**	**18 05 23.4**	**-0.7**
MOKO				IAML		18 05 24.6	
	comp=N,167nm,0.0s						
MOKO				IAML		18 05 25.1	
	comp=E,183nm,0.1s						
CMAR	**Chiang Mai Arr**	**11.01**	**133**	Pn	**Pn**	**18 06 18.6**	**-3.8**
	comp=E,0.2nm,0.3s,baz=302,slow=13,SNR=2.3						
	comp=E,0.4nm,0.3s						
BTK	**Batken**	**21.41**	**315**	P	**P**	**18 08 32.6**	**+0.2**
BTK				IAmb	IAmb	18 08 48.9	
	comp=Z,4.1nm,0.7s						
MK31	**Makanchi Array**	**21.54**	**345**	P	**P**	**18 08 35.9**	**+2.2**
MKAR	**Makanchi Array**	**21.54**	**345**	P	**P**	**18 08 35.9**	**+2.1**
	comp=Z,2.2nm,0.6s,baz=159,slow=9.2,SNR=26						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	**21.54**	**345**	P	**P**	**18 08 35.5**	**+1.8**
SONM	**Songino Array**	**24.97**	**26**	P	**P**	**18 09 10.6**	**+2.5**
	comp=Z,0.5nm,0.6s,baz=213,slow=11,SNR=5.0						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**26.04**	**343**	P	**P**	**18 09 19.5**	**+2.0**
	comp=Z,1.6nm,0.2s,baz=161,slow=8.9,SNR=2.1						
	comp=Z,1.6nm,0.2s						
KSAR	**Wonju Array Be**	**33.53**	**61**	P	**P**	**18 10 25.9**	**+1.9**
MJB9	**Matsu-Tunnel**	**41.70**	**64**	P	**P**	**18 11 33.7**	**+0.5**
MJB9				IAmb	IAmb	18 11 40.1	
	comp=Z,27nm,1.5s						
MAJO	**Matsushiro**	**41.70**	**64**	P	**P**	**18 11 33.5**	**+0.2**
BR131	**Keskin Array S**	**48.78**	**301**	P	**P**	**18 12 27.3**	**-2.2**
BR131				IAmb	IAmb	18 12 28.8	
	comp=Z,18nm,2.0s						
FINES	**FINESS Array B**	**55.11**	**328**	P	**P**	**18 13 16.7**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=102,slow=13,SNR=3.6						
	comp=Z,1.3nm,0.8s						
ARCES	**ARCESS Array B**	**56.98**	**338**	P	**P**	**18 13 30.5**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=98,slow=7.5,SNR=4.0						
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**62.61**	**133**	P	**P**	**18 14 07.9**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=322,slow=7.3,SNR=5.3						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**62.61**	**133**	IAmb	IAmb	18 15 12.7	
	comp=Z,1.1nm,2.0s						
ASAR	**Alice Springs**	**65.00**	**136**	P	**P**	**18 14 23.4**	**-1.1**
	comp=Z,0.2nm,0.8s,baz=314,slow=6.4,SNR=1.2						
	comp=Z,0.2nm,0.8s						

NEIC ***16*** *18:41:47.6±1.5, 11°.5S±0°.1×166°.3E±0°.1, h54^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=19.8km s-min=11.9km az=50.0*
IDC ***16*** *18:41:50.2±4.2, 11°.55S×166°.11E, h77^{km}±30^{km}, mb3.9/6, mbtmp4.2/8, MS3.4/14, Error ellipse: s-maj=38.1km s-min=22.7km az=62.0*

ISC 16 18:41:45.1±0.8, 11°.47S±0°.09×166°.4E±0°.1, h35^{km}, n32, σ1^{s}.93/25, mb4.3/12, MS3.5/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.05**	**168**	Pn	**Pn**	**18 42 47.7**	**+3.2**
HNR	**Honiara**	**6.61**	**287**	P	**Pn**	**18 43 22.3**	**+2.5**
	118nm,0.8s,baz=68,slow=1.5,SNR=6.3						
HNR				S	**Sn**	**18 44 34.0**	**+0.1**
	62nm,0.7s,baz=152,slow=9.3,SNR=1.5						
HNR				LR	LR	18 45 09.5	
	comp=Z,99nm,20.6s,baz=118,slow=31						
HNR	**Honiara**	**6.61**	**287**		**Pn**	**18 43 22.0**	**+2.2**
DZM	**Mont Dzumac**	**10.55**	**180**	P	**Pn**	**18 44 17.7**	**+3.8**
	1.5nm,0.3s,baz=135,slow=23,SNR=9.3						
DZM				S	**Sn**	**18 46 07.3**	**-3.6**
	3.1nm,0.8s,baz=84,slow=14,SNR=1.2						
DZM				LR	LR	18 48 07.1	
	comp=Z,114nm,19.7s,baz=24,slow=36						
PINNC	**Pines Island,**	**11.14**	**175**	Pn	**Pn**	**18 44 25.8**	**+4.0**
PMG	**Port Moresby**	**18.98**	**274**	LR	LR	18 53 28.3	
	comp=Z,116nm,18.1s,baz=121,slow=37						
CTA	**Charters Tower**	**21.13**	**244**	LR	LR	18 53 29.0	
	comp=Z,105nm,18.2s,baz=126,slow=34						
AFI	**Afiamalu**	**21.48**	**99**	LR	LR	18 53 09.7	
	comp=Z,37nm,20.8s,baz=276,slow=31						
URZ	**Urewera**	**28.37**	**162**	LR	LR	18 56 11.5	
	comp=Z,113nm,19.1s,baz=32,slow=30						
BKZ	**Black Stump Fm**	**29.03**	**164**	P	**P**	**18 47 41.0**	**-0.9**
BKZ				IAmb	IAmb	18 47 46.4	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**30.55**	**224**	P	**P**	**18 47 55.0**	**-0.4**
	comp=Z,5.2nm,1.0s,baz=360,slow=5.8,SNR=4.5						
STKA				LR	LR	18 59 40.3	
	comp=Z,98nm,19.0s,baz=200,slow=35						
	comp=Z,5.2nm,1.0s						
STKA	**Stephens Creek**	**30.55**	**224**	IAmb	IAmb	18 48 04.6	
	comp=Z,2.2nm,1.4s						
THZ	**Tophouse**	**30.72**	**170**	P	**P**	**18 47 56.8**	**-0.1**
LTZ	**Lake Taylor**	**31.62**	**172**	P	**P**	**18 48 04.3**	**-0.5**
WR0	**Warramunga Arr**	**31.71**	**251**	P	**P**	**18 48 04.6**	**-1.2**
WR0				IAmb	IAmb	18 48 26.3	
	comp=Z,4.0nm,1.0s						
WB0	**Warramunga Arr**	**31.82**	**251**	P	**P**	**18 48 06.0**	**-0.7**
WB0				IAmb	IAmb	18 48 06.9	
	comp=Z,7.9nm,0.9s						
WB2	**Warramunga Arr**	**31.89**	**251**	P	**P**	**18 48 06.6**	**-0.7**
WB2				IAmb	IAmb	18 48 08.3	
	comp=Z,3.7nm,1.1s						
WRA	**Warramunga Arr**	**31.90**	**251**	P	**P**	**18 48 06.2**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=83,slow=9.1,SNR=17						
WRA				PcP	**PcP**	**18 50 56.6**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=113,slow=3.8,SNR=1.8						
	comp=Z,3.5nm,0.8s						
RPZ	**Rata Peaks**	**32.39**	**174**	LR	LR	18 59 11.8	
	comp=Z,121nm,20.5s,baz=269,slow=32						
ASAR	**Alice Springs**	**33.13**	**244**	P	**P**	**18 48 16.8**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=70,slow=9.9,SNR=34						
ASAR				PcP	**PcP**	**18 50 59.1**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=84,slow=2.8,SNR=3.1						
ASAR				LR	LR	19 00 03.0	
	comp=Z,85nm,20.9s,baz=154,slow=33						
	comp=Z,2.7nm,0.8s						
RAR	**Rarotonga**	**33.86**	**111**	LR	LR	19 00 60.0	
	comp=Z,28nm,19.6s,baz=232,slow=34						
SIJI	**Sorong**	**36.38**	**284**	LR	LR	19 05 16.8	
	comp=Z,65nm,18.1s,baz=130,slow=39						
MBWA	**Marble Bar**	**45.62**	**252**	P	**P**	**18 50 01.1**	**-1.3**
MBWA				IAmb	IAmb	18 50 03.5	
	comp=Z,6.6nm,0.9s						
PETK	**Petropavlovsk-**	**64.74**	**354**	LR	LR	19 15 20.7	
	comp=Z,15nm,21.0s,baz=218,slow=31						
CMAR	**Chiang Mai Arr**	**72.82**	**293**	P	**P**	**18 53 11.6**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=120,slow=4.4,SNR=8.2						
	comp=Z,0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**72.82**	**293**	P	**P**	**18 53 10.4**	**-0.3**
KDAK	**Kodiak Island**	**76.75**	**21**	LR	LR	19 22 46.4	
	comp=Z,30nm,19.8s,baz=214,slow=32						
SONM	**Songino Array**	**79.35**	**324**	P	**P**	**18 53 47.1**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=142,slow=7.3,SNR=4.0						
	comp=Z,0.8nm,0.8s						
HMT	**Hamilton**	**81.60**	**22**	P	**P**	**18 54 00.1**	**+1.0**
J25K	**Salcha River,**	**84.09**	**19**	P	**P**	**18 54 11.5**	**-0.5**
J25K				IAmb	IAmb	18 54 26.9	
	comp=Z,3.7nm,1.3s						
PFO	**Pinyon Flats O**	**85.84**	**55**	LR	LR	19 30 35.8	
	comp=Z,26nm,18.2s,baz=117,slow=34						
MKAR	**Makanchi Array**	**94.23**	**317**	P	**P**	**18 54 59.5**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=103,slow=6.1,SNR=12						
	comp=Z,1.5nm,0.8s						

IDC ***16*** *19:03:18.0±15.0, 36°.02N×72°.23E, h82^{km}±45^{km}, mb3.4/1, mbtmp3.6/6, ML3.2/5, Error ellipse: s-maj=227.9km s-min=33.4km az=155.0*
NNC ***16*** *19:03:36.6±4.5, 37°.80N×71°.55E, h202^{km}±68^{km}, mb2.4, mpv3.5, Error ellipse: s-maj=46.8km s-min=28.5km az=13.0*

ISC 16 19:03:32.7±1.9, 37°.5N±0°.1×71°.3E±0°.1, h150^{km}, n9, σ1^{s}.34/12, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.59**	**354**	P	**Pn**	**19 04 55.6**	**+1.7**
	2.1nm,0.2s,baz=185,slow=14,SNR=91						
KK31				⇑S	**Sn**	**19 05 58.8**	**+1.3**
	1.2nm,0.2s,baz=177,slow=19,SNR=7.6						
AAK	**Ala-Archa**	**5.64**	**25**	P	**Pn**	**19 04 55.4**	**+0.6**
	1.9nm,0.3s,baz=179,slow=5.3,SNR=13						
AAK				S	**Sn**	**19 05 58.7**	**-0.2**
	3.7nm,0.4s,baz=84,slow=8.3,SNR=12						
	4.0nm,0.4s						
TKM2	**Tokmak 2**	**6.29**	**30**	⇓P	**Pn**	**19 05 03.1**	**-0.4**
	1.9nm,0.6s						
TKM2				⇑S	**Sn**	**19 06 13.6**	**-0.9**
	1.9nm,0.6s						
GEYT	**Alibeck**	**10.47**	**276**	P	**Pn**	**19 05 58.7**	**-0.2**
	0.3nm,0.3s,baz=128,slow=9.3,SNR=2.5						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**12.31**	**38**	P	**Pn**	**19 06 21.2**	**-1.6**
	baz=214,slow=12,SNR=3.3						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**14.06**	**19**	P	**P**	**19 06 49.7**	**+1.5**
	0.1nm,0.3s,baz=204,slow=11,SNR=3.0						
	0.3nm,0.2s						
AB31	**Akbulak array**	**14.32**	**328**	P	**P**	**19 06 50.4**	**-0.7**
	0.5nm,0.5s,baz=138,slow=12,SNR=17						
AB31				S	**Sn**	**19 09 24.8**	**-2.2**
	0.6nm,0.8s,baz=148,slow=24,SNR=7.2						
ZALV	**Zalesovo Beam**	**18.87**	**25**	P	**Pn**	**19 07 43.5**	**+0.1**
	0.3nm,0.3s,baz=212,slow=11,SNR=5.5						
	0.9nm,0.3s						
ARCES	**ARCESS Array B**	**40.29**	**337**	P	P	19 11 00.1	+5.5
	0.8nm,0.6s,baz=110,slow=7.8,SNR=3.5						
	0.8nm,0.6s						

SOME ***16*** *19:13:30.1, 40°.83N×75°.03E, h0^{km}*
KRNET ***16*** *19:13:31.6±0.1, 40°.88N×74°.78E, h15^{km}, mb2.3*
NNC ***16*** *19:13:32.5±1.3, 40°.88N×75°.01E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=9.7km s-min=4.9km az=160.0*

ISC 16 19:13:31.1±1.9, 40°.81N±0°.07×74°.80E±0°.05, h2^{km}±19^{km}, n29, σ1^{s}.12/47, 14C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**1.11**	**341**	⇑*i*P	**Pb**	**19 13 51.5**	**-1.6**
	baz=41						
ARLS				⇑*i*S	**Sb**	**19 14 05.8**	**-2.2**
	baz=41						
UCH	**Uchtor**	**1.43**	**351**	⇑*i*P	**Pb**	**19 13 57.8**	**-1.0**
	baz=52						
UCH				⇑*i*S	**Sg**	**19 14 16.7**	**-0.4**
	baz=52						
AAK	**Ala-Archa**	**1.84**	**353**	⇑*i*P	**Pb**	**19 14 04.8**	**-0.7**
	baz=53						
AAK				⇑*i*S	**Sg**	**19 14 29.0**	**-1.2**
	baz=53						
KBK	**Karagaybulak**	**1.84**	**3**	⇑*i*P	**Pb**	**19 14 05.0**	**-0.7**
	baz=4.0						
KBK				⇑*i*S	**Sg**	**19 14 29.3**	**-1.1**
	baz=4.0						
BOOM	**Boomskoye usch**	**1.88**	**27**	⇑*i*P	**Pb**	**19 14 05.9**	**-0.4**
	baz=28						
BOOM				⇑*i*S	**Sb**	**19 14 31.0**	**+0.7**
	baz=28						
TKM2	**Tokmak 2**	**2.19**	**15**	⇑Pg	**Pb**	**19 14 10.4**	**-1.1**
	0.4nm,0.2s						
TKM2				⇑Lg	Lg	19 14 39.1	
	1.6nm,0.3s						
TKM2	**Tokmak 2**	**2.19**	**15**	⇓*i*P	**Pb**	**19 14 10.6**	**-0.9**
	baz=16						
TKM2				⇓*i*S	**Sb**	**19 14 39.1**	**-0.1**
	baz=16						
KDJ	**Kajisay**	**2.22**	**53**	⇓*i*P	**Pb**	**19 14 11.8**	**-0.2**
	baz=55						
KDJ				⇓*i*S	**Sb**	**19 14 40.8**	**+0.8**
	baz=55						
MRKS	**Merke**	**2.26**	**329**	*e*P	**Pg**	**19 14 15.4**	**+0.9**
	0.8nm,0.2s						
MRKS				*e*S	**Sg**	**19 14 47.4**	**+3.6**
	4.9nm,0.3s						
MRKS	**Merke**	**2.26**	**329**	Pg	**Pg**	**19 14 15.3**	**+0.9**
	0.8nm,0.2s						
MRKS				Lg	Lg	19 14 47.5	
	4.9nm,0.3s						
KST	**Kastek**	**2.39**	**21**	*e*P	**Pb**	**19 14 14.3**	**-0.6**
	1.8nm,0.3s						
KST				*e*S	**Sb**	**19 14 45.4**	**+0.4**
	8.8nm,0.4s						
KST	**Kastek**	**2.39**	**21**	Pg	**Pb**	**19 14 13.7**	**-1.2**
	1.8nm,0.3s						
KST				Lg	Lg	19 14 44.7	
	8.8nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.44**	**67**	⇑*i*P	**Pb**	**19 14 14.9**	**-1.1**
	baz=69						
TARG				⇑*i*S	**Sb**	**19 14 46.5**	**-0.1**
	baz=69						
SGDS	**Sogindy**	**2.64**	**357**	*e*P	**Pb**	**19 14 19.8**	**+0.6**
	1.4nm,0.3s						
SGDS				*e*S	**Sg**	**19 14 54.5**	**-1.4**
	1.7nm,0.5s						
SGDS	**Sogindy**	**2.64**	**357**	Pg	**Pb**	**19 14 19.8**	**+0.6**
	1.4nm,0.3s						
SGDS				Lg	Lg	19 14 54.5	
	1.7nm,0.5s						
TNSS	**Tian-Shan**	**2.74**	**35**	*e*P	**Pb**	**19 14 20.7**	**-0.3**
	1.3nm,0.6s						
TNSS				*e*S	**Sb**	**19 14 56.0**	**+0.8**
	1.5nm,0.3s						
TNSS	**Tian-Shan**	**2.74**	**35**	Pg	**Pb**	**19 14 20.7**	**-0.3**
	0.9nm,0.3s						
TNSS				Lg	Lg	19 14 56.0	
	1.5nm,0.3s						
MDOK	**Medeo**	**2.88**	**35**	*e*P	**Pb**	**19 14 23.3**	**-0.1**
	1.0nm,0.3s						
MDOK				*e*S	**Sb**	**19 15 00.4**	**+1.2**
	3.6nm,0.5s						
MDOK	**Medeo**	**2.88**	**35**	Pg	**Pb**	**19 14 23.3**	**-0.1**
	1.0nm,0.3s						
MDOK				Lg	Lg	19 15 00.4	
	3.6nm,0.5s						
KRBS	**Karabastau**	**2.95**	**12**	*e*P	**Pb**	**19 14 23.6**	**-0.9**
	1.1nm,0.5s						
KRBS				*e*S	**Sb**	**19 15 01.2**	**+0.2**
	3.1nm,0.4s						
KRBS	**Karabastau**	**2.95**	**12**	Pg	**Pb**	**19 14 23.6**	**-0.9**
	1.1nm,0.5s						

KRBS				Lg	Lg	19 15 01.5	
	3.1nm,0.4s						
KTBS	**Karatobe**	**3.21**	**25**	*e*P	**Pb**	**19 14 28.6**	**-0.3**
	0.9nm,0.2s						
KTBS				*e*S	**Sb**	**19 15 09.7**	**+1.1**
	5.0nm,0.4s						
KTBS	**Karatobe**	**3.21**	**25**	Pg	**Pb**	**19 14 28.6**	**-0.3**
	0.9nm,0.2s						
KTBS				Lg	Lg	19 15 09.7	
	5.0nm,0.4s						
CHKK	**Chushkaly**	**3.44**	**27**	*e*P	**Pb**	**19 14 32.8**	**0.0**
	0.4nm,0.1s						
CHKK				*e*S	**Sb**	**19 15 16.9**	**+1.8**
	2.5nm,0.4s						
CHKK	**Chushkaly**	**3.44**	**27**	Pg	**Pb**	**19 14 32.8**	**0.0**
	0.4nm,0.1s						
CHKK				Lg	Lg	19 15 16.9	
	2.5nm,0.4s						
IUG	**Iuzhnay**	**3.82**	**292**	*e*P	**Pg**	**19 14 43.6**	**-0.7**
	19nm,0.3s						
IUG				*e*S	**Sg**	**19 15 35.7**	**+1.7**
	3.5nm,0.4s						
IUG	**Iuzhnay**	**3.82**	**292**	Pg	**Pg**	**19 14 43.7**	**-0.7**
	19nm,0.3s						
IUG				Lg	Lg	19 15 35.7	
	3.5nm,0.4s						
BRLS	**Borolday**	**4.32**	**303**	*e*P	**Pg**	**19 14 53.0**	**-0.8**
	3.0nm,0.5s						
BRLS				*e*S	**Sg**	**19 15 51.6**	**+1.8**
	1.5nm,0.7s						
BRLS	**Borolday**	**4.32**	**303**	Pg	**Pg**	**19 14 53.0**	**-0.8**
	3.0nm,0.5s						
BRLS				Lg	Lg	19 15 51.6	
	1.5nm,0.7s						

IDC ***16*** *19:32:06.1±4.7, 36°.05N×70°.56E, h161^{km}±40^{km}, mb3.2/10, mbtmp3.7/13, MS3.1/4, Error ellipse: s-maj=32.6km s-min=21.2km az=30.0*

NNC ***16*** *19:32:17.4±5.8, 36°.91N×70°.81E, h202^{km}±71^{km}, mb2.9, mpv4.2, Error ellipse: s-maj=57.8km s-min=38.1km az=176.0*

ISC 16 19:32:12.6±0.8**, 36°.55N**±0°.08×**70°.7E**±0°.1**, h204^{km}, n37, σ1^{s}50**/36**, mb3.3**/9**, 1C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.04**	**22**	P	**Pn**	**19 33 41.0**	**+0.2**
	SNR=152						
UCH	**Uchtor**	**6.40**	**27**	P	**Pn**	**19 33 45.7**	**+0.3**
	SNR=56						
KK31	**Karatay Array**	**6.54**	**359**	P	**Pn**	**19 33 47.2**	**+0.3**
	6.6nm,0.4s,baz=187,slow=13,SNR=91						
KK31				⇑S	**S**	**19 34 58.6**	**-2.9**
	15nm,0.5s,baz=207,slow=74,SNR=4.6						
EKS2	**Erkin-Say**	**6.55**	**21**	P	**Pn**	**19 33 47.7**	**+0.6**
	SNR=13						
AAK	**Ala-Archa**	**6.75**	**25**	P	**Pn**	**19 33 50.3**	**+0.5**
	SNR=15						
AAK	**Ala-Archa**	**6.75**	**25**	P	**Pn**	**19 33 50.3**	**+0.5**
	13nm,0.5s,baz=191,slow=6.2,SNR=34						
AAK				S	**S**	**19 35 04.9**	**-1.8**
	9.5nm,0.6s,baz=272,slow=22,SNR=17						
KBK	**Karagaybulak**	**6.93**	**27**	P	**Pn**	**19 33 52.8**	**+0.7**
	SNR=14						
ULHL	**Ulahol**	**7.13**	**35**	P	**Pn**	**19 33 55.0**	**+0.3**
	SNR=14						
CHMS	**Chumysh**	**7.16**	**25**	P	**Pn**	**19 33 55.4**	**+0.4**
	SNR=6.3						
USP	**Ospenovka**	**7.32**	**23**	P	**Pn**	**19 33 57.1**	**+0.1**
	SNR=5.3						
TKM2	**Tokmak 2**	**7.41**	**29**	P	**Pn**	**19 33 58.5**	**+0.2**
	SNR=40						
TKM2	**Tokmak 2**	**7.41**	**29**	⇓P	**Pn**	**19 33 58.1**	**-0.2**
	13nm,0.5s						
TKM2				⇓S	**S**	**19 35 18.9**	**-3.3**
	7.5nm,0.9s						
MKAR	**Makanchi Array**	**13.40**	**37**	P	**Pn**	**19 35 15.6**	**+0.7**
	0.6nm,0.4s,baz=210,slow=11,SNR=11						
GKN	**Gorkha**	**14.56**	**122**	*e*P	**P**	**19 35 32.2**	**+1.6**
	2.4nm,0.2s						
AB31	**Akbulak array**	**14.91**	**332**	P	**P**	**19 35 36.0**	**+2.0**
	0.2nm,0.3s,baz=138,slow=11,SNR=16						
DMN	**Daman**	**15.13**	**122**	*e*P	**P**	**19 35 38.4**	**+1.4**
	5.3nm,0.4s						
KKN	**Kakani**	**15.13**	**121**	*e*P	**P**	**19 35 38.2**	**+1.2**
KURBB	**Kurchatov Arra**	**15.16**	**19**	P	**Pn**	**19 35 35.5**	**-0.8**
	0.5nm,0.4s,baz=210,slow=9.4,SNR=8.9						
PKIN	**Phulchoki**	**15.35**	**121**	*e*P	**P**	**19 35 40.6**	**+1.2**
	2.6nm,0.4s						
PKI	**Pulchoki**	**15.36**	**121**	*e*P	**P**	**19 35 40.6**	**+1.0**
AKTO	**Aktyubinsk**	**16.60**	**331**	P	**P**	**19 35 52.7**	**0.0**
	0.9nm,0.4s,baz=107,slow=9.1,SNR=3.1						
AKTO	**Aktyubinsk**	**16.60**	**331**	⇓P	**P**	**19 35 54.1**	**+1.5**
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**19.98**	**25**	P	**P**	**19 36 30.0**	**+0.8**
	3.0nm,0.3s,baz=215,slow=11,SNR=21						
	3.0nm,0.3s						
ARU	**Arti**	**21.50**	**341**	P	**P**	**19 36 47.5**	**+2.3**
	0.5nm,0.4s,baz=180,slow=13,SNR=3.3						
	0.5nm,0.4s						
NRIK	**Noril'sk**	**34.12**	**11**	P	**P**	**19 38 39.5**	**+1.8**
	1.8nm,0.5s,baz=192,slow=9.3,SNR=2.4						
	1.8nm,0.5s						
MLR	**Muntele Rosu**	**34.52**	**299**	LR	LR	19 56 17.9	
	comp=Z,37nm,18.5s,baz=103,slow=42						
ATD	**Arta Tunnel**	**35.34**	**232**	LR	LR	19 54 59.0	
	comp=Z,37nm,18.3s,baz=98,slow=39						
FINES	**FINESS Array B**	**37.29**	**326**	P	**P**	**19 39 05.4**	**+0.7**
	0.9nm,0.7s,baz=120,slow=12,SNR=6.5						
	0.9nm,0.7s						
VRAC	**Vranov**	**40.75**	**306**	LR	LR	20 01 23.1	
	comp=Z,13nm,18.6s,baz=70,slow=43						
ARCES	**ARCESS Array B**	**40.99**	**338**	P	**P**	**19 39 36.7**	**+1.5**
	0.5nm,0.4s,baz=108,slow=6.5,SNR=11						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	**44.18**	**323**	P	**P**	**19 40 01.1**	**+0.2**
	0.4nm,0.7s,baz=103,slow=7.7,SNR=1.5						
	0.4nm,0.7s						
DAVOX	**Davos/Dischmat**	**45.51**	**303**	LR	LR	20 04 54.2	
	comp=Z,17nm,18.9s,baz=296,slow=43						
TORD	**Torodi Ar. Bea**	**65.45**	**268**	P	**P**	**19 42 31.0**	**-3.1**
	0.2nm,0.3s,baz=53,slow=6.0,SNR=5.0						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**81.20**	**2**	P	**P**	**19 44 05.7**	**+0.6**
	0.2nm,0.3s,baz=352,slow=5.5,SNR=2.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**82.25**	**122**	P	**P**	**19 44 08.7**	**-2.5**
	0.4nm,0.8s,baz=328,slow=4.6,SNR=1.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**84.50**	**125**	P	**P**	**19 44 20.4**	**-2.4**
	0.2nm,0.7s,baz=306,slow=2.2,SNR=1.9						
	0.2nm,0.7s						
TXAR	**Lajitas Array**	**114.24**	**355**	PKP	**PKiKP**	**19 50 28.4**	**+0.2**
	0.1nm,0.4s,baz=15,slow=3.9,SNR=2.1						

IDC ***16*** *19:59:51.7±1.4, 29°.38N×128°.14E, h224^{km}±16^{km}, mb3.0/5, mbtmp3.5/8, Error ellipse: s-maj=35.0km s-min=13.4km az=73.0*

JMA ***16*** *19:59:52.3±0.3, 29°N±1°×12°8E±°, h228^{km}, MV3.8/28, NW OFF AMAMI-OSHIMA IS*

ISC 16 19:59:51.2±0.8**, 29°.38N**±0°.06×**128°.25E**±0°.09**, h225^{km}**±9^{km}**, n26, σ1^{s}52**/40**, mb3.2**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTAJ	**Takarajima**	**0.86**	**105**	P	**Pn**	**20 00 24.5**	**+1.7**
JAMN	**Amaminishikomi**	**1.40**	**144**	P	**Pn**	**20 00 27.3**	**+0.9**
JAMN				S	**S**	**20 00 53.5**	**-0.2**
JNN	**Nakanoshima**	**1.49**	**72**	P	**Pn**	**20 00 28.3**	**+1.3**
JAM	**Amami Oshima**	**1.53**	**129**	*i* P	**Pn**	**20 00 28.2**	**+0.7**
JAM				S	**S**	**20 00 54.6**	**-0.9**
JTK	**Tokunoshima**	**1.71**	**159**	*e*P	**Pn**	**20 00 30.0**	**+1.0**
JTK				S	**S**	**20 00 58.1**	**-0.3**
JZK	**Kikaishima**	**1.85**	**125**	P	**Pn**	**20 00 32.2**	**+2.0**
JZK				S	**S**	**20 01 02.1**	**+1.6**
JKC	**Kuchinoerabu**	**2.00**	**57**	*e*P	**Pn**	**20 00 33.2**	**+1.6**
JOKE	**Okinoerabujima**	**2.03**	**172**	*e*P	**Pn**	**20 00 32.8**	**+0.8**
JOKE				*e*S	**S**	**20 01 02.7**	**-1.1**
JYAK	**Yakushimahirau**	**2.14**	**66**	P	**Pn**	**20 00 33.2**	**+0.3**
JYAK				S	**S**	**20 01 03.6**	**-1.9**
JIH	**Iheya**	**2.35**	**186**	P	**Pn**	**20 00 35.9**	**+0.8**
JIH				S	**S**	**20 01 09.0**	**-0.5**
JYRO	**Yoronjima**	**2.36**	**176**	*e*P	**Pn**	**20 00 35.9**	**+0.7**
JYRO				*e*S	**S**	**20 01 08.2**	**-1.3**
JMTN	**Minamitane**	**2.52**	**66**	P	**Pn**	**20 00 37.1**	**+0.3**
JMTN				*e*S	**S**	**20 01 10.0**	**-2.4**
JOW	**Kunigami**	**2.54**	**179**	P	**Pn**	**20 00 37.5**	**+0.3**
	22nm,0.3s,baz=116,slow=28,SNR=22						
JOW				S	**S**	**20 01 08.4**	**-4.6**
	320nm,0.2s,baz=75,slow=18,SNR=57						
JOW	**Kunigami**	**2.54**	**179**	*e*P	**Pn**	**20 00 37.8**	**+0.5**
JOW				*e*S	**S**	**20 01 11.7**	**-1.4**
JSJ	**Shimokoshiki**	**2.62**	**29**	*e*P	**Pn**	**20 00 39.5**	**+1.6**
JTN	**Tanegashima 3**	**2.69**	**61**	*e*P	**Pn**	**20 00 38.7**	**+0.1**
JTN				*e*S	**S**	**20 01 12.6**	**-3.1**
JKE	**Kume jima 2**	**3.31**	**203**	P	**Pn**	**20 00 46.2**	**+0.5**
JTZ	**Takazaki**	**3.50**	**44**	P	**Pn**	**20 00 49.1**	**+1.1**
JTZ				S	**S**	**20 01 30.9**	**-1.6**
JMZ	**Minamidaito 2**	**4.42**	**143**	*e*S	**S**	**20 01 51.9**	**-0.7**
KSRS	**Korea Array**	**8.05**	**358**	P	**Pn**	**20 01 46.7**	**+1.7**
	0.9nm,0.7s,baz=177,slow=12,SNR=5.0						
MJAR	**Matsushiro Arr**	**10.99**	**47**	P	**Pn**	**20 02 22.9**	**+0.3**
	1.1nm,0.6s,baz=239,slow=12,SNR=2.7						
SONM	**Songino Array**	**24.98**	**324**	P	**P**	**20 04 55.8**	**+1.5**
	0.5nm,0.4s,baz=137,slow=51,SNR=4.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**39.51**	**309**	P	**P**	**20 06 58.3**	**-1.8**
	0.4nm,0.7s,baz=95,slow=9.2,SNR=2.7						
MKAR				PcP	**PcP**	**20 09 03.0**	**+0.1**
	0.2nm,0.3s,baz=77,slow=5.1,SNR=6.1						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**42.63**	**314**	P	**P**	**20 07 24.9**	**-0.5**
	0.5nm,0.6s,baz=112,slow=6.2,SNR=1.7						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**49.39**	**172**	P	**P**	**20 08 18.4**	**+0.1**
	1.4nm,1.1s,baz=354,slow=8.6,SNR=6.7						
	1.4nm,1.1s						
ASAR	**Alice Springs**	**53.02**	**174**	P	**P**	**20 08 46.3**	**+1.1**
	0.4nm,0.5s,baz=2.1,slow=14,SNR=15						
	0.4nm,0.5s						

CNRM ***16*** *20:07:34.3, 36°.42N×3°.73E, h0^{km}, ml3.7*

IDC ***16*** *20:07:35.8±1.0, 36°.38N×3°.50E, h0^{km}, mb3.4/7, mbtmp3.5/11, ML3.6/4, MS3.1/3, Error ellipse: s-maj=26.7km s-min=17.8km az=139.0*

CRAAG ***16*** *20:07:36.6, 36°.36N×3°.48E, Ml3.9*

MDD ***16*** *20:07:38.9±0.5, 36°.35N×3°.47E, h3^{km}±4^{km}, Mb4.1/33, M_mb3.5/26, Error ellipse: s-maj=4.6km s-min=2.1km az=151.0*

LDG ***16*** *20:07:41.7±0.3, 36°.60N×3°.03E, h10^{km}, Ml3.3/23, Error ellipse: s-maj=7.3km s-min=3.5km az=149.0*

ISC 16 20:07:37.5±0.6**, 36°.47N**±0°.04×**3°.51E**±0°.03**, h10^{km}, n116, σ2^{s}32**/148**, mb3.5**/7**, MS3.0**/3**, 29C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.28**	**356**	P	**Pb**	**20 07 46.0**	**+1.3**
ADJB	**Djebel Djouab**	**0.31**	**190**	P	**Pg**	**20 07 41.8**	**-2.0**
AKET	**Djebel Ketaf**	**0.52**	**144**	P	**Pg**	**20 07 46.9**	**-0.6**
EBNR	**Beni Rached**	**1.60**	**264**	P	**Pn**	**20 08 06.0**	**+0.1**
CKHR	**Kef el Ahmar**	**1.68**	**105**	P	**Pb**	**20 08 09.6**	**+1.0**
ECHA	**Ech Chlef**	**1.76**	**260**	P	**Pb**	**20 08 10.0**	**+0.2**
DFRA	**Djebel Bou Aff**	**1.91**	**87**	P	**Pn**	**20 08 11.2**	**+1.0**
EANR	**'Ain N'Sour**	**2.01**	**256**	P	**Pg**	**20 08 16.0**	**-0.1**
OKGL	**Djebel Kef Gue**	**2.35**	**260**	P	**Pg**	**20 08 23.0**	**+0.4**
CTEI	**Djebel Teioual**	**2.38**	**99**	P	Pn	20 08 12.6	-4.0
OJGS	**Djebel Guires**	**2.43**	**248**	P	**Pn**	**20 08 19.0**	**+1.6**
OJBR	**Djebel Berber**	**2.71**	**252**	P	**Pn**	**20 08 22.0**	**+0.8**
EIBI	**Ibiza**	**3.08**	**327**	P	**Pn**	**20 08 27.9**	**+1.8**
EIBI				⇑*i*Vmb_V		20 08 31.0	
	839nm,SNR=6.6						
EIBI				S	**Sn**	**20 09 02.7**	**-0.3**
CMAH	**Djebel Manchou**	**3.15**	**86**	P	**Pn**	**20 08 28.0**	**+0.8**
ODJA	**Bouhanifia**	**3.18**	**250**	P	**Pn**	**20 08 31.0**	**+3.4**
ABSA	**Djebel Ababsia**	**3.21**	**92**	P	**Pn**	**20 08 26.0**	**-2.0**
ETOS	**Mallorca**	**3.34**	**351**	P	**Pn**	**20 08 31.3**	**+1.6**
ETOS				⇑*i*Vmb_V		20 08 33.2	
	252nm,SNR=1.2						
ETOS				S	**Sn**	**20 09 08.2**	**-1.3**
MAHO	**Mahon**	**3.48**	**10**	P	**Pn**	**20 08 32.2**	**+0.6**
MAHO				S	**Sn**	**20 09 12.2**	**-0.6**
EBEN2	**Beniarda presa**	**3.67**	**308**	P	**Pn**	**20 08 34.9**	**+0.5**
EBEN2				⇑*i*Vmb_V		20 08 37.0	
	265nm,SNR=1.1						
EBEN2				S	**Sn**	**20 09 17.5**	**-0.3**
CART	**Cartagena**	**3.78**	**289**	P	**Pn**	**20 08 35.8**	**0.0**
CART				S	**Sn**	**20 09 17.9**	**-2.4**
CART	**Cartagena**	**3.78**	**289**	P	**Pn**	**20 08 36.2**	**+0.5**
EMUR	**La Murta**	**4.03**	**291**	P	**Pn**	**20 08 40.0**	**+0.7**
EMUR				⇑*i*Vmb_V		20 08 42.4	
	107nm,SNR=2.6						
EMUR				S	**Sn**	**20 09 25.6**	**-1.1**
ECOL	**Islas Columbre**	**4.08**	**328**	P	**Pn**	**20 08 41.2**	**+1.2**
ECOL				S	**Sn**	**20 09 27.3**	**-0.5**
EZAR	**Zarzadilla de**	**4.39**	**290**	P	**Pn**	**20 08 45.4**	**+1.2**
EZAR				S	**Sn**	**20 09 34.0**	**-1.4**
ETOB	**Tobarra**	**4.57**	**300**	P	**Pn**	**20 08 48.3**	**+1.6**
ETOB				⇑*i*Vmb_V		20 08 52.5	
	348nm,SNR=6.5						
ETOB				S	**Sn**	**20 09 39.9**	**0.0**
ENIJ	**Nijar**	**4.62**	**278**	P	**Pn**	**20 08 48.2**	**+0.9**
ENIJ				⇑*i*Vmb_V		20 08 49.5	
	118nm,SNR=2.4						
ENIJ				S	**Sn**	**20 09 38.8**	**-2.3**
ECHE	**Chera**	**4.71**	**313**	P	**Pn**	**20 08 50.7**	**+2.0**
ECHE				⇑*i*Vmb_V		20 08 52.8	
	341nm,SNR=2.6						
ECHE				S	**Sn**	**20 09 42.7**	**-0.7**
EMOS	**Mosqueruela**	**4.99**	**322**	P	**Pn**	**20 08 54.7**	**+2.1**
EMOS				⇑*i*Vmb_V		20 08 57.7	
	185nm,SNR=2.2						
EMOS				S	**Sn**	**20 09 48.9**	**-1.5**
CHAS	**Isla Isabel II**	**4.99**	**257**	P	**Pn**	**20 08 52.0**	**-0.4**
CHAS				S	**Sn**	**20 09 43.1**	**-7.1**
TAF	**Taforalt**	**5.10**	**253**	P	**Pn**	**20 08 53.9**	**-0.1**
ERTA	**Horta de San J**	**5.12**	**332**	P	**Pn**	**20 08 56.4**	**+2.1**
ERTA				⇑*i*Vmb_V		20 09 03.6	
	144nm,SNR=2.4						
ERTA				S	**Sn**	**20 09 51.9**	**-1.6**
EBER	**Berja**	**5.16**	**277**	P	**Pn**	**20 08 54.5**	**-0.5**
EBER				⇑*i*Vmb_V		20 08 56.9	
	92nm,SNR=3.1						
EBER				S	**Sn**	**20 09 53.2**	**-1.4**
EPOB	**Poblet**	**5.23**	**340**	P	**Pn**	**20 08 58.2**	**+2.4**
EPOB				⇑*i*Vmb_V		20 09 01.1	
	80nm,SNR=1.2						
EPOB				S	**Sn**	**20 09 54.9**	**-1.4**
EALB	**Alboran**	**5.32**	**266**	P	**Pn**	**20 08 57.8**	**+1.0**
EALB				⇑*i*Vmb_V		20 09 00.0	
	81nm,SNR=0.8						
EALB				S	**Sn**	**20 09 55.0**	**-3.2**
JBK	**JBK**	**5.40**	**249**	P	**Pn**	**20 08 58.5**	**+0.3**
EQES	**Quesada**	**5.42**	**286**	P	**Pn**	**20 09 00.2**	**+1.7**
EQES				⇑*i*Vmb_V		20 09 04.9	
	299nm,SNR=9.0						
EQES				S	**Sn**	**20 10 02.7**	**+1.7**
GOG	**Mont Gurugu**	**5.43**	**259**	P	**Pn**	**20 08 59.1**	**+0.6**
VSL	**Villasalto**	**5.54**	**55**	P	**Pn**	**20 09 01.5**	**+1.6**
VSL				S	**Sn**	**20 10 03.3**	**-0.3**
EMIR	**Miracle**	**5.65**	**345**	P	**Pn**	**20 09 04.5**	**+2.9**
EMIR				⇑*i*Vmb_V		20 09 07.1	
	1µm,SNR=4.8						
EMIR				S	**Sn**	**20 10 05.3**	**-1.3**
TDRA	**Tendrara**	**5.70**	**235**	P	**Pn**	**20 09 03.2**	**+0.8**
ELGU	**Los Guajares,**	**5.75**	**276**	P	**Pn**	**20 09 02.9**	**0.0**
ELGU				⇑*i*Vmb_V		20 09 06.4	
	77nm,SNR=2.8						
ELGU				S	**Sn**	**20 10 06.2**	**-2.8**
FIGM	**Figuig**	**5.85**	**224**	P	**Pn**	**20 09 04.0**	**-0.4**
EJON	**La Jonquera**	**5.99**	**356**	P	**Pn**	**20 09 08.9**	**+2.6**
EJON				⇑*i*Vmb_V		20 09 11.6	
	190nm,SNR=1.1						
EJON				S	**Sn**	**20 10 14.7**	**-0.2**
ESAC	**San Caprasio**	**6.09**	**331**	P	**Pn**	**20 09 09.1**	**+1.6**
ESAC				⇑*i*Vmb_V		20 09 10.9	
	108nm,SNR=0.8						
ESAC				S	**Sn**	**20 10 16.9**	**-0.5**
EGOR	**Sierra Gorda,**	**6.15**	**278**	P	**Pn**	**20 09 09.4**	**+1.0**
EGOR				⇑*i*Vmb_V		20 09 16.4	
	37nm,SNR=1.5						
EGOR				S	**Sn**	**20 10 16.0**	**-2.8**
ETOR	**Torete**	**6.15**	**317**	P	**Pn**	**20 09 10.7**	**+2.2**
ETOR				⇑*i*Vmb_V		20 09 16.6	
	97nm,SNR=2.0						
ETOR				S	**Sn**	**20 10 23.4**	**+4.5**
EADA	**Adamuz**	**6.66**	**287**	P	**Pn**	**20 09 15.7**	**+0.2**
EADA				⇑*i*Vmb_V		20 09 21.0	
	48nm,SNR=1.3						
EADA				S	**Sn**	**20 10 31.0**	**-0.4**
EMIJ	**Mijas**	**6.67**	**273**	P	**Pn**	**20 09 16.6**	**+1.1**
EMIJ				⇑*i*Vmb_V		20 09 21.3	
	28nm,SNR=1.0						
EMIJ				S	**Sn**	**20 10 25.9**	**-5.6**
ESDC	**Sonseca Array**	**6.71**	**301**	Pn	**Pn**	**20 09 17.1**	**+1.1**
	0.9nm,0.3s,baz=111,slow=13,SNR=38						
ESDC				Sn	**Sn**	**20 10 28.9**	**-3.6**
	baz=108,slow=16						
	3.1nm,0.4s						
ESDC	**Sonseca Array**	**6.71**	**301**	P	**Pn**	**20 09 17.2**	**+1.1**
ESDC				⇑*i*Vmb_V		20 09 20.0	
	38nm,SNR=1.1						
PAB	**San Pablo**	**6.92**	**299**	P	**Pn**	**20 09 20.4**	**+1.3**
PAB				⇑*i*Vmb_V		20 09 23.6	
	44nm,SNR=1.5						
PAB				S	**Sn**	**20 10 39.6**	**+1.7**
MTLF	**Montolieu**	**6.94**	**352**	*e*P	**Pn**	**20 09 22.6**	**+3.4**
MTLF				*e*Sn	Sn	20 10 31.3	-6.8
	4.9nm,0.6s						
EPF	**Esparros**	**7.00**	**341**	*e*P	**Pn**	**20 09 23.8**	**+3.8**
EPF				*e*Sn	Sn	20 10 31.7	-7.9
	6.0nm,0.6s						
ETSF	**Etsaut**	**7.15**	**335**	*e*Pn	**Pn**	**20 09 25.1**	**+3.0**
ETSF				*e*Sn	Sn	20 10 34.3	-9.1
	8.5nm,0.8s						
LMR	**La Mourre**	**7.24**	**18**	*e*Pn	**Pn**	**20 09 23.9**	**+0.7**
LMR				*e*Sn	**Sn**	**20 10 42.0**	**-3.4**
	3.4nm,0.3s						
ECAB	**El Cabril**	**7.30**	**285**	P	**Pn**	**20 09 25.3**	**+1.1**
ECAB				⇑*i*Vmb_V		20 09 26.3	
	52nm,SNR=1.5						
ECAB				S	**Sn**	**20 10 45.0**	**-2.0**
GUD	**Guadarrama**	**7.31**	**307**	P	**Pn**	**20 09 26.1**	**+1.7**
GUD				⇑*i*Vmb_V		20 09 28.9	
	76nm,SNR=3.1						
GUD				S	**Sn**	**20 10 45.4**	**-2.0**
PGF	**Pioggiola**	**7.41**	**33**	*e*Pn	**Pn**	**20 09 27.4**	**+1.7**
PGF				*e*Sn	**Sn**	**20 10 47.8**	**-2.1**
	8.9nm,0.5s						
EORO	**Oroz-Betelu**	**7.41**	**331**	P	**Pn**	**20 09 28.1**	**+2.4**
EORO				S	**Sn**	**20 10 48.0**	**-2.0**
SJPF	**Ste Jean**	**7.57**	**333**	*e*P	**Pn**	**20 09 31.8**	**+3.9**
SJPF				*e*Sn	**Sn**	**20 10 47.1**	**-6.6**
	10nm,0.5s						
LASF	**Ste Croix**	**7.61**	**2**	*e*Pn	**Pn**	**20 09 30.2**	**+1.9**
LASF	**Ste Croix**	**7.61**	**2**	*e*P	Pn	20 09 33.4	+5.1
LASF				*e*Sn	**Sn**	**20 10 50.6**	**-4.0**
	15nm,0.6s						
MDT	**Midelt**	**7.61**	**244**	Pn	**Pn**	**20 09 28.8**	**+0.2**
	0.2nm,0.3s,baz=290,slow=8.9,SNR=3.2						
MDT				Lg	Lg	20 11 35.9	
	0.3nm,0.3s,baz=293,slow=14,SNR=2.0						
	2.5nm,0.7s						
MDT	**Midelt**	**7.61**	**244**	P	**Pn**	**20 09 29.9**	**+1.3**
SMRF	**Simiane la Rot**	**7.67**	**11**	*e*Pn	**Pn**	**20 09 31.7**	**+2.5**
SMRF				*e*Sn	**Sn**	**20 10 51.6**	**-4.5**
	7.0nm,0.6s						
MD31	**MD31**	**7.70**	**245**	P	**Pn**	**20 09 29.9**	**+0.2**
EALK	**Alkurruntz**	**7.77**	**332**	P	**Pn**	**20 09 32.6**	**+2.0**
EALK				⇑*i*Vmb_V		20 09 37.5	
	185nm,SNR=1.0						
EALK				S	**Sn**	**20 10 56.8**	**-1.9**
SBF	**Sospel**	**7.97**	**21**	*e*Pn	**Pn**	**20 09 36.2**	**+2.7**
SBF				*e*Sn	**Sn**	**20 10 59.6**	**-4.1**
	5.5nm,0.4s						
VIVF	**Saint-Julien-l**	**8.43**	**6**	*e*Pn	**Pn**	**20 09 41.6**	**+2.0**
VIVF				*e*Sn	**Sn**	**20 11 09.3**	**-5.5**
	4.1nm,0.5s						
CAF	**Calviac**	**8.52**	**353**	*e*Pn	**Pn**	**20 09 41.6**	**+0.7**
CAF	**Calviac**	**8.52**	**353**	*e*P	**Pn**	**20 09 45.1**	**+4.2**
CAF				*e*Sn	Sn	20 11 08.6	-8.5
	2.8nm,0.5s						
ELAN	**Lanestosa**	**8.61**	**324**	P	**Pn**	**20 09 44.3**	**+2.1**
ELAN				⇑*i*Vmb_V		20 09 51.3	
	61nm,SNR=1.1						
ELAN				S	**Sn**	**20 11 16.4**	**-2.9**
MBDF	**Montbardon**	**8.62**	**16**	*e*Pn	**Pn**	**20 09 44.6**	**+2.3**
MBDF				*e*Sn	**Sn**	**20 11 14.3**	**-5.3**
	2.1nm,0.2s						
ORIF	**Oris-en-Rattie**	**8.63**	**11**	*e*Pn	**Pn**	**20 09 45.4**	**+2.9**
ORIF				*e*Sn	**Sn**	**20 11 13.6**	**-6.3**
	3.2nm,0.6s						
EBAD	**Badajoz**	**8.66**	**288**	P	**Pn**	**20 09 43.5**	**+0.7**
EBAD				⇑*i*Vmb_V		20 09 45.2	
	46nm,SNR=1.0						
LFF	**La Frestale**	**8.72**	**347**	*e*Pn	**Pn**	**20 09 47.1**	**+3.5**
LFF				*e*Sn	Sn	20 11 14.4	-7.5
	9.3nm,0.6s						
RJF	**Les Rejaudoux**	**8.96**	**351**	*e*P	Pn	20 09 51.6	+4.7
RJF				*e*Sn	Sn	20 11 19.0	-8.8
	4.8nm,0.8s						
LPG	**La Plagne**	**9.35**	**14**	*e*Pn	**Pn**	**20 09 56.0**	**+3.5**
LPG				*e*Sn	Sn	20 11 30.5	-7.3
	1.3nm,0.4s						
LPL	**La Plagne**	**9.36**	**14**	*e*Pn	**Pn**	**20 09 56.3**	**+3.7**
LPL				*e*Sn	**Sn**	**20 11 32.9**	**-5.2**
	0.8nm,0.3s						
EARI	**Arriondas**	**9.56**	**318**	P	**Pn**	**20 09 57.6**	**+2.4**
EARI				⇑*i*Vmb_V		20 10 01.0	
	198nm,SNR=3.6						
TCF	**Toulx Ste Croi**	**9.86**	**355**	*e*Pn	**Pn**	**20 10 00.0**	**+0.7**
TCF				*e*Sn	Sn	20 11 41.2	-8.8
	1.0nm,0.4s						
BGF	**Bois d'Agland**	**10.10**	**357**	*e*Pn	**Pn**	**20 10 04.9**	**+2.5**
BGF				*e*Sn	Sn	20 11 48.2	-7.5
	1.0nm,0.3s						
SMF	**Signal de Mont**	**10.17**	**1**	*e*Pn	**Pn**	**20 10 03.7**	**+0.2**
SMF	**Signal de Mont**	**10.17**	**1**	*e*P	Pn	20 10 09.9	+6.4
SMF				*e*Sn	Sn	20 11 48.8	-8.8
	2.1nm,0.6s						
AVF	**Avril sur Loir**	**10.32**	**359**	*e*Pn	**Pn**	**20 10 06.1**	**+0.6**
AVF	**Avril sur Loir**	**10.32**	**359**	*e*P	Pn	20 10 10.8	+5.3
CABF	**La Chapelle**	**10.32**	**10**	*e*Pn	**Pn**	**20 10 07.7**	**+2.1**
MFF	**Saint Martin d**	**10.49**	**346**	*e*P	**Pn**	**20 10 11.0**	**+3.2**
MFF				*e*Sn	Sn	20 11 55.0	-10
	2.1nm,0.6s						
SSF	**Saint Saulge**	**10.59**	**360**	*e*Pn	**Pn**	**20 10 09.9**	**+0.7**
LOR	**Lormes**	**10.80**	**1**	*e*Pn	Pn	20 10 17.4	+5.3
	baz=184						
HINF	**Hinteralfeld**	**11.61**	**11**	*e*Pn	**Pn**	**20 10 24.8**	**+1.6**
SFTF	**Sexfontaines**	**11.79**	**5**	*e*Pn	**Pn**	**20 10 26.4**	**+0.8**
MEZF	**Maizieres J'vi**	**12.08**	**5**	*e*Pn	**Pn**	**20 10 30.8**	**+1.2**
	baz=187						
PAGF	**Fort de Pagny**	**12.19**	**7**	*e*Pn	**Pn**	**20 10 31.3**	**+0.2**
	baz=191						
CDF	**Champ du Feu**	**12.26**	**12**	*e*Pn	**Pn**	**20 10 32.5**	**+0.4**
LDF	**La Druitiere**	**12.41**	**349**	*e*Pn	**Pn**	**20 10 33.8**	**-0.3**
LDF	**La Druitiere**	**12.41**	**349**	*e*P	Pn	20 10 39.8	+5.7
QUIF	**Quistinic**	**12.46**	**339**	*e*P	**Pn**	**20 10 38.2**	**+3.5**
SGMF	**Saint Gilles**	**12.60**	**341**	*e*Pn	**Pn**	**20 10 36.6**	**-0.1**
SGMF	**Saint Gilles**	**12.60**	**341**	*e*P	**Pn**	**20 10 40.1**	**+3.4**
FLN	**La Foliniere**	**12.63**	**348**	*e*P	Pn	20 10 42.3	+5.2
	baz=170						
ROSF	**Rostrenen**	**12.87**	**339**	*e*Pn	**Pn**	**20 10 38.0**	**-2.4**
ROSF	**Rostrenen**	**12.87**	**339**	*e*P	**Pn**	**20 10 44.2**	**+3.8**
BAIF	**Baives**	**13.60**	**2**	*e*P	Pn	20 10 55.3	+5.0
GERES	**GERESS Array B**	**14.45**	**28**	Pn	**Pn**	**20 11 03.6**	**+1.6**
	0.1nm,0.3s,baz=207,slow=14,SNR=8.1						
	0.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**19.41**	**348**	P	**P**	**20 12 04.1**	**+0.5**
	baz=166,slow=13						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**23.28**	**184**	P	**P**	**20 12 44.4**	**-1.0**
	1.0nm,0.6s,baz=356,slow=10,SNR=12						
	1.0nm,0.6s						
AKASG	**Malin Array Be**	**23.29**	**44**	P	**P**	**20 12 45.1**	**0.0**
	0.5nm,0.5s,baz=242,slow=10,SNR=2.4						
	0.5nm,0.5s						
BORG	**Borgarnes**	**31.96**	**340**	LR	LR	20 26 30.9	
	comp=Z,21nm,19.4s,baz=300,slow=35						
SFJD	**Kangerlussuaq**	**43.13**	**332**	LR	LR	20 31 01.0	
	comp=Z,21nm,20.1s,baz=60,slow=32						
MBAR	**Mbarara**	**44.72**	**139**	LR	LR	20 37 11.7	
	comp=Z,28nm,18.0s,baz=127,slow=40						
KURBB	**Kurchatov Arra**	**53.92**	**50**	P	**P**	**20 17 01.7**	**+0.8**
	0.2nm,0.6s,baz=293,slow=7.7,SNR=2.3						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**56.68**	**44**	P	**P**	**20 17 21.0**	**+0.3**
	0.3nm,0.4s,baz=320,slow=6.4,SNR=2.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**57.47**	**53**	P	**P**	**20 17 26.9**	**+0.3**

	0.3nm,0.5s,baz=279,slow=6.9,SNR=4.6						
	0.3nm,0.5s						
YKA	Yellowknife Ar	69.65	334	P	P	20 18 46.4	-0.3
	0.4nm,0.6s,baz=49,slow=6.5,SNR=4.2						
	0.4nm,0.6s						
PDAR	Pinedale Array	80.34	317	P	P	20 19 49.4	+0.2
	0.2nm,0.5s,baz=64,slow=6.1,SNR=1.7						
	0.2nm,0.5s						

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*NEIC **16** 20:13:19.8±2.9, 22°.97S±0°.07×128°.58E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=11.3km s-min=10.6km az=194.0*

*IDC **16** 20:13:19.4±1.3, 22°.90S×128°.66E, h0^{km}, mb3.7/3, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=22.1km s-min=17.2km az=4.0*

*AUST **16** 20:13:20.4±0.8, 22°.90S×128°.60E, h10^{km}, Error ellipse: s-maj=11.0km s-min=9.1km az=95.0*

ISC 16 20:13:18.5±0.6**, 22°.99S**±0°.04×**128°.60E**±0°.04**, h10^{km}, n55, σ2^{s}.21**/71**, mb4.0**/4**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	2.06	188	P	Pb	20 13 57.5	+1.5
	baz=2.2,SNR=5.4						
WRKA				S	Sg	20 14 24.9	+0.3
	baz=2.2						
ASPA	Alice Springs	4.92	99	P	Pn	20 14 35.8	+3.2
	baz=4.9						
ASPA				S	Sn	20 15 32.5	+2.8
	baz=4.9						
ASAR	Alice Springs	4.92	99	Pn	Pn	20 14 35.6	+3.0
	1.9nm,0.3s,baz=280,slow=13,SNR=234						
ASAR				Sn	Sn	20 15 30.9	+1.1
	15nm,0.3s,baz=276,slow=24,SNR=25						
ASAR				Lg	Lg	20 15 52.1	
	18nm,0.3s,baz=278,slow=28,SNR=3.1						
	17nm,0.7s						
ASAR	Alice Springs	4.92	99		Pn	20 14 34.4	+1.8
AS31	Alice Springs	4.93	99		Pn	20 14 34.2	+1.5
AS31				Sn	Sn	20 15 29.9	+0.1
WRA	Warramunga Arr	6.15	62	Pn	Pn	20 14 51.1	+1.6
	2.2nm,0.3s,baz=233,slow=12,SNR=61						
WRA				Pg	Pb	20 15 11.6	+5.9
	1.4nm,0.3s,baz=243,slow=14,SNR=6.9						
WRA				Sn	Sn	20 16 01.6	+1.7
	7.9nm,0.3s,baz=243,slow=24,SNR=2.9						
WRA				Lg	Lg	20 16 30.5	
	8.7nm,0.3s,baz=243,slow=30,SNR=6.8						
	4.9nm,0.4s						
WRA	Warramunga Arr	6.15	62		Pn	20 14 50.2	+0.7
WB2	Warramunga Arr	6.16	62	P	Pn	20 14 51.1	+1.5
	baz=6.1						
WB2				S	Sn	20 15 60.0	-0.2
	baz=6.1						
WB2	Warramunga Arr	6.16	62		Pn	20 14 51.3	+1.7
WRAB	Tennant Creek	6.16	61		Pn	20 14 48.9	-0.8
WB0	Warramunga Arr	6.28	60		Pn	20 14 52.9	+1.6
WR0	Warramunga Arr	6.30	63		Pn	20 14 53.3	+1.7
KNRA	Kununurra	7.28	1	P	Pn	20 15 07.7	+2.8
	baz=7.2,SNR=29						
KNRA				S	Sn	20 16 25.4	-2.3
	baz=7.2						
KNRA	Kununurra	7.28	1		Pn	20 15 07.8	+2.8
FORT	Forrest	7.77	183	P	Pn	20 15 14.2	+2.5
	baz=7.9,SNR=18						
FORT				S	Sn	20 16 38.9	-0.9
	baz=7.9						
FORT	Forrest	7.77	183		Pn	20 15 14.0	+2.3
OOD	Oodnadatta	8.00	128	P	Pn	20 15 17.3	+2.5
	baz=8.1,SNR=12						
OOD				S	Sn	20 16 45.0	-0.4
	baz=8.1						
PSA00	Pilbara Seismi	8.22	278	Pn	Pn	20 15 19.0	+1.0
PSA00					Sn	20 16 47.7	-3.3
MBWA	Marble Bar	8.42	281	Pn	Pn	20 15 21.5	+0.8
MULG	Mulgathing	8.75	147	P	Pn	20 15 27.4	+2.2
	baz=8.8,SNR=6.3						
MULG				S	Sn	20 17 01.2	-2.7
	baz=8.8						
AUKAT	Katherine High	9.17	23	P	Pn	20 15 31.0	0.0
	baz=9.1						
AUKAT				S	Sn	20 17 05.0	-9.4
	baz=9.1						
MTN	Manton Dam	10.38	14	P	Pn	20 15 49.8	+2.3
	baz=10						
MTN	Manton Dam	10.38	14	Pn	Pn	20 15 48.1	+0.6
QIS	Mount Isa	10.51	79	P	Pn	20 15 50.4	+1.1
	baz=10,SNR=14						
AUDHS	Darwin High Sc	10.71	12	P	Pn	20 15 53.7	+1.7
	baz=11						
KDU	Kakadu	10.89	20	P	Pn	20 15 55.0	+0.4
	baz=11,SNR=13						
KDU				S	Sn	20 17 50.2	-6.3
	baz=11						
AUKAR	St Luke's Coll	11.16	279	P	Pn	20 15 58.8	+0.6
	baz=11						
LCRK	Leigh Creek	11.36	133	P	Pn	20 16 02.2	+1.4
	baz=11,SNR=4.1						
LCRK				S	Sn	20 18 04.7	-3.2
	baz=11						
BBOO	Buckleboo	11.79	148	P	Pn	20 16 07.3	+0.4
	baz=12,SNR=9.2						
BBOO				S	Sn	20 18 12.4	-6.2
	baz=12						
BBOO	Buckleboo	11.79	148	Pn	Pn	20 16 06.8	0.0
INKA	Innaminka	11.96	116	P	Pn	20 16 09.7	+0.6
	baz=12,SNR=14						
INKA				S	Sn	20 18 16.5	-6.1
	baz=12						
MORW	Morawa	12.80	239	P	Pn	20 16 18.5	-2.2
	baz=13						
MORW	Morawa	12.80	239	Pn	Pn	20 16 18.5	-2.2
KLBR	Kellerberrin	12.89	226	P	Pn	20 16 20.0	-1.8
	baz=13,SNR=11						
BLDU	Ballidu	13.04	232	P	Pn	20 16 22.6	-1.4
	baz=13						
BLDU				S	Sn	20 18 38.1	-11
	baz=13						
GIRL	Giralia	13.25	269	P	Pn	20 16 25.7	-1.1
	baz=13						
GIRL	Giralia	13.25	269	Pn	Pn	20 16 27.4	+0.6
BATI	Baumata	13.56	339	Pn	Pn	20 16 32.0	+0.9
	1.7nm,0.3s,baz=180,slow=9.1,SNR=1.8						
BATI				Sn	Sn	20 18 55.5	-6.4
	baz=89,slow=23						
	18nm,0.7s						
SOEI	Soe	13.80	342	Pn	Pn	20 16 33.4	-1.0
NWAO	Narrogin (SRO)	14.09	223	Pn	Pn	20 16 36.1	-2.1
MUN	Mundaring	14.17	228	P	Pn	20 16 37.3	-2.0
	baz=14						
STKA	Stephens Creek	14.53	130	Pn	Pn	20 16 43.2	-1.1
	2.1nm,0.3s,baz=304,slow=11,SNR=47						
STKA				Sn	Sn	20 19 15.7	-10
	0.9nm,0.3s,baz=42,slow=24,SNR=5.9						
STKA	Stephens Creek	14.53	130		Pn	20 16 43.3	-1.0
RKGY	Rocky Gully	15.40	219	P	Pn	20 16 53.9	-2.1
	baz=16						
MTSU	Mount Surprise	15.49	75	P	Pn	20 16 55.0	-2.2
	baz=16,SNR=4.5						
COEN	Coen	16.48	59	P	Pn	20 17 09.1	-0.9
	baz=16,SNR=5.7						
COEN	Coen	16.48	59	Pn	Pn	20 17 09.7	-0.3
COEN				IAmb	IAmb	20 17 23.7	
	comp=Z,25nm,1.2s						
CTA	Charters Tower	16.68	83	Pn	Pn	20 17 10.1	-2.4
	comp=Z,0.2nm,0.3s,baz=143,slow=11,SNR=2.0						
CTA				Sn	Sn	20 20 18.8	+0.8
	comp=Z,0.1nm,0.3s,baz=125,slow=20,SNR=1.0						
CTA				Lg	Lg	20 21 59.7	
	comp=Z,0.3nm,0.3s,baz=182,slow=14,SNR=4.0						
EIDS	Eidsvold	20.65	101		P	20 17 59.8	+1.3
CHTO	Chiang Mai	50.65	323	P	P	20 22 17.4	-0.7
CHTO				IAmb	IAmb	20 22 42.9	
	comp=Z,3.4nm,1.4s						
VNDA	Vanda	56.86	172	P	P	20 23 05.3	+2.4
	comp=Z,0.4nm,0.5s,baz=305,slow=9.8,SNR=5.6						
	comp=Z,0.4nm,0.5s						
VNDA	Vanda	56.86	172	P	P	20 23 04.6	+1.7
VNDA				IAmb	IAmb	20 23 13.9	
	comp=Z,3.6nm,1.5s						
MKAR	Makanchi Array	81.07	330	P	P	20 25 36.3	+2.6
	comp=Z,0.3nm,0.7s,baz=145,slow=3.5,SNR=2.3						
	comp=Z,0.3nm,0.7s						
KURBB	Kurchatov Arra	85.56	331	P	P	20 25 59.1	+2.4
	comp=Z,0.3nm,0.3s,baz=136,slow=4.4,SNR=5.7						
	comp=Z,0.3nm,0.3s						
KURK	Kurchatov	85.59	331	P	P	20 25 59.1	+2.3

IDC 16 20:20:49.0±5.8**, 2°.53S**×**152°.66E, h64^{km}**±41^{km}**, mb3.3**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=91.4km s-min=44.7km az=91.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.88	200	P	Pn	20 21 18.7	-0.2
	54nm,0.5s,baz=318,slow=1.9,SNR=10						
WRA	Warramunga Arr	24.89	225	P	P	20 26 06.4	+0.2
	1.3nm,0.6s,baz=49,slow=9.6,SNR=11						
	1.3nm,0.6s						
ASAR	Alice Springs	27.77	219	P	P	20 26 31.9	-0.2
	0.2nm,0.4s,baz=53,slow=8.7,SNR=5.6						
	0.2nm,0.4s						
CMAR	Chiang Mai Arr	56.81	294	P	P	20 30 27.3	0.0
	0.5nm,0.7s,baz=102,slow=4.8,SNR=5.3						
	0.5nm,0.7s						
TORD	Torodi Ar. Bea	149.41	292	PKPbc	PKPbc	20 40 31.4	-0.6
	0.2nm,0.5s,baz=55,slow=1.9,SNR=5.5						

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*IDC **16** 20:24:16.8±1.1, 55°.55S×26°.28W, h0^{km}, mb3.9/4, mbtmp3.9/4, MS3.2/5, Error ellipse: s-maj=47.0km s-min=27.1km az=71.0*

*NEIC **16** 20:24:18.7±2.7, 55°.6S±0°.1×27°.5W±0°.2, h16^{km}±7^{km}, mb4.2/8, Error ellipse: s-maj=20.0km s-min=14.2km az=197.0*

ISC 16 20:24:16.9±0.8**, 55°.5S**±0°.1×**27°.36W**±0°.09**, h10^{km}, n22, σ1^{s}.47**/16**, mb4.1**/6**, MS3.0**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.41	279	Pn	Pn	20 25 36.6	-0.9
HOPE				Sn	Sn	20 26 42.4	+2.8
ORCD	Orcadas	10.57	233	Pn	Pn	20 26 46.9	-1.3
VNA3	Neumayer Olymp	17.55	161	P	P	20 28 23.7	+1.3
SNAA	Sanae	19.29	157	P	Pn	20 28 42.4	-0.2
SNAA	Sanae	19.29	157	Pn	Pn	20 28 43.7	+1.2
PMSA	Palmer Station	20.20	228	LR	LR	20 35 21.0	
	comp=Z,57nm,18.2s,baz=96,slow=32						
BELA	Belgrano 2	22.63	184		P	20 29 16.8	-0.6
BELA				IAmb	IAmb	20 29 24.4	
	comp=Z,9.5nm,1.3s						
DSPA	Despedida	23.43	257	P	P	20 29 26.9	+1.0
PLCA	Paso Flores	31.81	279	LR	LR	20 46 01.1	
	comp=Z,18nm,18.0s,baz=155,slow=40						
QSPA	South Pole Qui	34.76	180	P	P	20 31 07.5	+0.4
QSPA				IAmb	IAmb	20 31 08.0	
	comp=Z,7.0nm,1.4s						
MAW	Mawson	40.66	144	P	P	20 31 55.1	-1.5
	comp=Z,0.8nm,0.4s,baz=281,slow=8.0,SNR=2.3						
	comp=Z,0.8nm,0.4s						
MAW	Mawson	40.66	144	IAmb	IAmb	20 31 59.7	
	comp=Z,0.9nm,1.1s						
LVC	Limon Verde	44.94	300	LR	LR	20 54 51.5	
	comp=Z,13nm,18.1s,baz=331,slow=40						
BOSA	Boshof	45.93	76	LR	LR	20 48 37.0	
	comp=Z,70nm,19.5s,baz=192,slow=32						
BOSA	Boshof	45.93	76	P	P	20 32 41.4	+1.5
VNDA	Vanda	47.13	183	P	P	20 32 49.4	+0.9
	comp=Z,1.2nm,0.7s,baz=190,slow=5.3,SNR=13						
	comp=Z,1.2nm,0.7s						
VNDA	Vanda	47.13	183	P	P	20 32 47.7	-0.8
VNDA				IAmb	IAmb	20 32 56.4	
	comp=Z,2.2nm,0.8s						
LPAZ	La Paz	49.98	305	P	P	20 33 17.8	+6.0
	comp=Z,1.4nm,0.6s,baz=127,slow=5.1,SNR=5.0						
	comp=Z,1.4nm,0.6s						
LPAZ	La Paz	49.98	305	P	P	20 33 09.2	-2.6
LPAZ				IAmb	IAmb	20 33 21.8	
	comp=Z,2.3nm,0.8s						
TORD	Torodi Ar. Bea	72.62	30	P	P	20 35 44.3	0.0
	comp=Z,0.7nm,0.6s,baz=210,slow=6.1,SNR=4.2						
	comp=Z,0.7nm,0.6s						
KMBO	Kilima Mbogo	74.93	69	LR	LR	21 08 16.8	
	comp=Z,28nm,18.4s,baz=96,slow=36						
ILAR	Eielson Array	149.67	312	PKPbc	PKiKP	20 44 06.9	+0.7
	comp=Z,0.5nm,0.6s,baz=118,slow=1.5,SNR=5.2						

NNC 16 20:24:23.9±8.2**, 39°.00N**×**79°.39E, h0^{km}, mb3.5, mpv3.1, 2D, Error ellipse: s-maj=150.0km s-min=58.7km az=63.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	4.43	336	Pg	Pb	20 25 43.2	+0.3
	1.0nm,0.4s						
TNSS				Lg	Lg	20 26 45.6	
	1.2nm,0.6s						
MDOK	Medeo	4.52	338	Pg	Pb	20 25 46.1	+2.0
	0.9nm,0.3s						
KST	Kastek	4.80	328	Pg	Pn	20 25 40.9	+3.4
	1.0nm,0.3s						
KST				Lg	Lg	20 26 41.6	
	8.1nm,0.8s						
TKM2	Tokmak 2	4.86	325	⇓P	Pn	20 25 39.6	+1.2
	0.8nm,0.3s						
TKM2				⇓S	Sn	20 26 36.1	+0.7
	2.2nm,0.6s						

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*SOME **16** 20:24:20.9, 38°.70N×75°.22E, h0^{km}*

KRNET 16 20:24:53.6±0.1**, 39°.54N**×**74°.74E, mb2.6, 4C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.79	304	⇓*i*P	Pb	20 25 27.5	0.0
	baz=4.0						
OHH				⇓*i*S	Sg	20 25 51.7	+0.4
	baz=4.0						
DRK	Karamyk	2.28	269	⇓*i*P	Pb	20 25 35.0	-0.8
	baz=69						
DRK				⇓*i*S	Sb	20 26 05.1	+0.4
	baz=69						
ARLS	Aral	2.34	352	⇑*i*P	Pb	20 25 35.4	-1.4
	baz=52						
ARLS				⇑*i*S	Sb	20 26 06.3	+0.1
	baz=52						
BTK	Batken	3.07	281	⇑*i*P	Pn	20 25 45.3	+1.8
	baz=81						
BTK				⇑*i*S	Sn	20 26 23.8	+2.9
	baz=81						
BOOM	Boomskoye usch	3.08	17	⇓*i*P	Pn	20 25 45.7	+2.0
	baz=17						
BOOM				⇓*i*S	Sb	20 26 24.5	-3.1
	baz=17						
KST	Kastek	3.62	14	*e*P	Pn	20 25 42.3	-8.7
	2.9nm,0.9s						
KST				*e*S	Sb	20 26 41.0	-2.0
	8.1nm,0.8s						
TNSS	Tian-Shan	3.87	25	*e*P	Pn	20 25 45.5	-9.2
	0.5nm,0.3s						
TNSS				*e*S	Sb	20 26 46.2	-4.2
	2.1nm,1.1s						
MDOK	Medeo	4.01	25	*e*P	Pn	20 25 47.8	-8.7
	1.8nm,0.6s						
MDOK				*e*S	Sb	20 26 50.2	-4.1
	4.3nm,0.6s						
KRBS	Karabastau	4.21	9	*e*P	Pn	20 25 53.8	-5.3
	0.6nm,0.8s						
KRBS				*e*S	Sb	20 27 00.8	+0.9
	2.4nm,1.0s						
KUU	Kurty	4.51	15	*e*P	Pn	20 25 58.3	-4.8
	0.8nm,0.5s						
KUU				*e*S	Sb	20 27 08.5	0.0
	2.4nm,0.7s						

IDC 16 20:57:54.4±8.0**, 7°.51S**×**117°.31E, h286^{km}**±72^{km}**, mb2.7**/4**, mbtmp3.5**/5**, Error ellipse: s-maj=164.1km s-min=21.7km az=57.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.82	114	P	Pn	20 59 33.4	0.0
	10nm,0.6s,baz=196,slow=2.9,SNR=6.7						
BATI				S	S	21 00 42.0	-11
	9.2nm,0.6s,baz=343,slow=18,SNR=1.2						
WRA	Warramunga Arr	20.62	129	P	P	21 02 12.7	0.0
	0.6nm,1.0s,baz=307,slow=8.7,SNR=6.6						
	0.6nm,1.0s						
ASAR	Alice Springs	22.62	137	P	P	21 02 31.3	+0.1
	0.5nm,0.4s,baz=313,slow=8.8,SNR=16						
	0.5nm,0.4s						
MKAR	Makanchi Array	62.38	334	P	P	21 07 47.6	+0.5
	0.2nm,0.7s,baz=132,slow=6.5,SNR=1.8						
	0.2nm,0.7s						
ZALV	Zalesovo Beam	67.07	340	P	P	21 08 16.5	-0.5
	0.3nm,0.4s,baz=130,slow=7.8,SNR=1.6						
	0.3nm,0.4s						

KRSC 16 21:11:43.0±2.2**, 49°.20N**×**157°.27E, h40^{km}**±26^{km}**, ML4.3, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.66	334	*e*P	Pn	21 12 09.1	-0.4
SKR				*e*S	Sn	21 12 27.5	-2.1
PAU	Pauzhetka	2.29	353	*e*P	Pn	21 12 20.7	+2.6
PAU				*e*S	Sn	21 12 47.3	+2.3
KDTR	Khodutka, Kamc	2.66	11	*e*P	Pn	21 12 27.2	+4.0
KDTR				*e*S	Sn	21 12 58.8	+4.6
MIPR	Malaya Ipel'ka	3.09	354	*e*P	Pn	21 12 31.6	+2.3
MIPR				*e*S	Sn	21 13 07.8	+2.8
ASAK	Asacha	3.21	7	*e*P	Pn	21 12 34.9	+4.0
ASAK				*e*S	Sn	21 13 13.3	+5.4
RUS	Russkaya	3.33	13	*e*P	Pn	21 12 36.2	+3.8
RUS				*e*S	Sn	21 13 15.7	+5.0
MTVR	Mutnovka	3.33	10	*e*P	Pn	21 12 36.9	+4.2
MTVR				*e*S	Sn	21 13 15.5	+4.4
GRL	Gorelyy	3.39	8	*e*P	Pn	21 12 37.9	+4.5
GRL				*e*S	Sn	21 13 17.5	+5.1
KRMR	Karymshinskiy	3.67	8	*e*P	Pn	21 12 41.7	+4.5
KRMR				*e*S	Sn	21 13 25.4	+6.3
APC	Apacha	3.73	359	*e*P	Pn	21 12 41.4	+3.5
PET	Petropavlovsk	3.92	12	*e*P	Pn	21 12 45.2	+4.6
PET				*e*S	Sn	21 13 31.1	+5.8
DALK	Dalny	3.94	13	*e*P	Pn	21 12 45.2	+4.3
DALK				*e*S	Sn	21 13 31.2	+5.3
UGLR	Uglovaya	4.13	13	*e*P	Pn	21 12 48.4	+4.9
AVH	Avacha	4.17	12	*e*P	Pn	21 12 49.7	+5.6
AVH				*e*S	Sn	21 13 37.7	+6.1
SMAR	Somma	4.18	13	*e*P	Pn	21 12 49.6	+5.3
SMAR				*e*S	Sn	21 13 37.3	+5.4
NLC	Nalytchevo	4.18	17	*e*P	Pn	21 12 47.9	+3.8
NLC				*e*S	Sn	21 13 34.9	+3.2
KOK	Koryaka	4.18	11	*e*P	Pn	21 12 49.5	+5.2
SDLR	Sedlovina	4.20	13	*e*P	Pn	21 12 48.9	+4.3
KRER	Koryakskii	4.21	12	*e*P	Pn	21 12 49.9	+5.2
KRX	Arik	4.25	11	*e*P	Pn	21 12 50.4	+5.1
SPN	Mys Shipunski	4.27	23	*e*P	Pn	21 12 50.4	+5.1
SPN				*e*S	Sn	21 13 39.9	+6.1
GNL	Ganaly	4.52	5	*e*P	Pn	21 12 53.4	+4.5
KII	Karymskiy	5.03	15	*e*S	Sn	21 13 57.3	+4.7
MKZ	Mys Kozlova	6.03	26	*e*P	Pn	21 13 13.6	+4.1
MKZ				*e*S	Sn	21 14 20.9	+3.8
TUMD	Tumrok D	6.31	17	*e*P	Pn	21 13 18.4	+5.0
TUMD				*e*S	Sn	21 14 29.3	+5.2
TUMR	Tumrok	6.34	15	*e*P	Pn	21 13 18.4	+4.5
KBTR	Krutoberegovo	7.78	24	*e*P	Pn	21 13 37.6	+4.1
BKI	Bering	8.04	38	*e*P	Pn	21 13 41.9	+4.9
BKI				*e*S	Sn	21 15 08.2	+1.7

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*TUL **16** 21:45:03.9±0.6, 35°.67N±0°.01×97°.15W±0°.01, h6^{km}±3^{km}, ML3.1, mb_Lg2.3/28(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=154.0*

NEIC 16 21:45:04.4±0.5**, 35°.67N**±0°.01×**97°.16W**±0°.01**, h5^{km}**±3^{km}**, Error ellipse: s-maj=2.2km s-min=0.7km az=143.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.35	223	Pg	Pg	21 45 11.0	-0.3
OKCFA				Sg	Sg	21 45 16.1	+0.2
OKCSW	OKLAHOMA CITY	0.35	220	Pg	Pg	21 45 11.0	-0.2
OKCSW				Sg	Sg	21 45 16.2	+0.4
FNO	Franklin	0.46	205	Pg	Pg	21 45 12.9	-0.3
FNO				Sg	Sg	21 45 19.6	+0.3
TUL1	Leonard	1.14	78	Pg	Pg	21 45 25.1	-1.2
TUL1				Sg	Sg	21 45 39.9	-1.1
X34A	Smith Ranch, M	1.20	207	Pg	Pg	21 45 26.6	-0.9
T35A	Sooner Cattle	1.35	23		Pn	21 45 28.4	-1.5
WMOK	Wichita Mounta	1.62	235		Pn	21 45 32.9	-0.8
U32A	Winter Ranch,	1.65	296	Pn	Pn	21 45 33.5	-0.6
X37A	Clayton	1.82	126	Pn	Pn	21 45 36.3	0.0
X37A				IAmb_Lg		21 46 06.4	
	comp=Z,16nm,0.7s						
W39A	Magazine	2.80	99	Pn	Pn	21 45 49.8	0.0
W39A				IAmb_Lg		21 46 37.0	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	3.15	110	Pn	Pn	21 45 54.5	-0.1
MIAR				IAmb_Lg		21 46 49.5	
	comp=Z,13nm,1.2s						
KSU1	Kansas State U	3.45	7	IAmb_Lg		21 46 57.0	
	comp=Z,7.3nm,0.7s						
U40A	Yellville	3.56	78	Pn	Pn	21 46 00.5	+0.2
ABTX	Abilene, Hawle	3.67	215	Pn	Pn	21 46 01.3	-0.6
CBKS	Cedar Bluff	3.75	328	IAmb_Lg		21 47 13.4	
	comp=Z,9.5nm,0.9s						
AMTX	Amarillo	3.78	259	IAmb_Lg		21 47 06.9	
	comp=Z,6.2nm,0.8s						
WHAR	Wooly Hollow	3.99	94	Pn	Pn	21 46 06.1	-0.2
WHAR				IAmb_Lg		21 47 10.3	
	comp=Z,11nm,1.3s						
W41B	Gary Mavity, V	4.04	96	Pn	Pn	21 46 06.5	-0.4
W41B				IAmb_Lg		21 47 13.4	
	comp=Z,6.2nm,0.7s						
UALR	University of	4.04	101	IAmb_Lg		21 47 16.5	
	comp=Z,8.6nm,0.8s						
FCAR	Ozark Folk Cen	4.10	86	IAmb_Lg		21 47 17.6	
	comp=Z,8.9nm,0.8s						
R40A	Maddies Statio	4.71	55	IAmb_Lg		21 47 35.4	
	comp=Z,8.3nm,0.7s						
P40A	Paris	5.59	45	IAmb_Lg		21 48 06.3	
	comp=Z,7.6nm,0.8s						
SMCO	Snowmass	8.55	297	IAmb_Lg		21 49 59.7	
	comp=Z,1.8nm,0.9s						
PHWY	Pilot Hill	8.59	313	IAmb_Lg		21 49 47.6	
	comp=Z,1.9nm,0.8s						

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*IDC **16** 21:48:48.7±4.8, 21°.86N×145°.08E, h134^{km}±43^{km}, mb3.3/5, mbtmp3.8/6, Error ellipse: s-maj=55.9km s-min=20.2km az=93.0*

ISC 16 21:48:50.7±1.3**, 22°.0N**±0°.1×**144°.8E**±0°.3**, h150^{km}, n6, σ2^{s}.11**/7**, mb3.4**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.63	335	P	Pn	21 50 13.2	+0.8
	30nm,0.7s,baz=264,slow=17,SNR=1.8						
JCJ				S	Sn	21 51 13.4	-3.0
	50nm,0.9s,baz=103,slow=23,SNR=7.3						
KSRS	Korea Array	21.23	320	P	P	21 53 26.8	+2.1
	1.1nm,0.7s,baz=145,slow=9.1,SNR=6.6						
	1.1nm,0.7s						
WRA	Warramunga Arr	42.90	195	P	P	21 56 33.7	-0.9
	0.5nm,0.5s,baz=14,slow=8.2,SNR=6.7						
	0.5nm,0.5s						
ASAR	Alice Springs	46.59	194	P	P	21 57 02.6	-1.2
	0.4nm,0.8s,baz=7.6,slow=8.4,SNR=2.5						
	0.4nm,0.8s						
INK	Inuvik	66.71	24	P	P	21 59 24.6	-0.6
	0.8nm,0.3s,baz=243,slow=4.5,SNR=5.2						
	0.8nm,0.3s						
FINES	FINESS Array B	83.57	335	P	P	22 01 03.1	+1.3
	1.7nm,0.8s,baz=76,slow=5.9,SNR=5.5						
	1.7nm,0.8s						

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*IDC **16** 21:52:12.8±0.9, 52°.49N×169°.63W, h0^{km}, mb4.1/30, mbtmp4.1/32, ML3.7/2, MS3.1/9, Error ellipse: s-maj=25.7km s-min=12.2km az=177.0*

*AEIC **16** 21:52:18.7±2.8, 52°.44N±0°.07×169°.36W±0°.07, h29^{km}±3^{km}, ML3.8/25, mb4.1/89(NEIC), Error ellipse: s-maj=10.7km s-min=4.9km az=157.0*

*NEIC **16** 21:52:19.1±2.1, 52°.53N±0°.08×169°.47W±0°.10, h42^{km}±6^{km}, Error ellipse: s-maj=11.8km s-min=7.3km az=153.0*

*ANF **16** 21:52:24.1±1.6, 52°.71N×168°.45W, h8^{km}±7^{km}, ML4.3/5, Error ellipse: s-maj=14.8km s-min=6.0km az=174.0*

ISC 16 21:52:18.2±0.5**, 52°.41N**±0°.08×**169°.33W**±0°.05**, h40^{km}, n246, σ1^{s}.59**/237**, mb4.1**/54**, MS3.1**/8**, 1D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.64	27		Pn	21 52 30.8	0.0
NIKH	Nikolski High	0.64	27		Sn	21 52 40.0	+0.2
NIKH	Nikolski High	0.64	27	P	Pn	21 52 30.9	+0.1
	baz=210,SNR=36						
NIKH				S	Sn	21 52 36.0	-3.7
	baz=210						
OKFG	Magazine Ridge	1.32	40		Pn	21 52 41.1	+1.0
OKFG					Sn	21 52 58.0	+1.4
MGOD	Makushin Gods	2.03	46		Pn	21 52 51.2	+1.3
MSW	Makushin Switc	2.15	44		Pn	21 52 53.1	+1.5
MNAT	Makushin Natee	2.17	46		Pn	21 52 53.6	+1.7
MNAT					Sn	21 53 21.6	+4.0
UNV	Unalaska Valle	2.23	49	Pn	Pn	21 52 53.0	+0.5
UNV	Unalaska Valle	2.23	49		Sn	21 53 22.8	+3.9
UNV	Unalaska Valle	2.23	49	P	Pn	21 52 53.4	+0.8
	baz=232,SNR=46						
UNV				S	Sn	21 53 13.1	-5.8
	baz=232						
MTBL	Makushin Table	2.23	44		Pn	21 52 54.6	+1.8
AKBBA	Akutan Broad B	2.65	49		Pn	21 53 01.4	+3.0
AKUT	Akutan	2.75	50	Pn	Pn	21 53 01.9	+2.1
AKSA	Akutan Strait	2.79	50		Pn	21 53 03.3	+3.1
KOKL	Mount Kliuchef	2.99	270		Pn	21 53 03.8	+0.7
ATKA	Atka Island	3.00	268		Pn	21 53 02.8	-0.3
GSCK	Great Sitkin C	4.22	267		Pn	21 53 20.2	+0.2
FALS	False Pass	4.29	53	Sg	Sn	21 54 25.3	+16
	baz=238						
ADK	Adak	4.56	266	Pn	Pn	21 53 24.6	0.0
SPIA	Saint Paul Isl	4.81	354	Pn	Pn	21 53 30.8	+2.7
SPIA	Saint Paul Isl	4.81	354	P	Pn	21 53 31.2	+3.2
	baz=174						
SPIA				S	Sn	21 54 29.8	+7.4
	baz=174						
TAPA	Tanaga Point A	5.26	267		Pn	21 53 36.6	+2.3
TASE	Tanaga Southea	5.40	267		Pn	21 53 38.1	+1.9
SDPT	Sand Point	6.01	57	Pn	Pn	21 53 47.0	+2.5
SDPT	Sand Point	6.01	57	Sb	Sn	21 55 09.1	+17
	baz=245						
CNBA	Chernabura Isl	6.28	63	Pn	Pn	21 53 50.4	+2.2
CHNA	Chernabura Isl	6.28	63	P	Pn	21 53 50.1	+1.9
	baz=252						
CHNA				Sg	Sn	21 55 29.2	+31
	baz=252						
SHEM	Shemya Is, Ala	10.10	278	LR	LR	21 58 41.7	
	comp=Z,50nm,18.5s,baz=298,slow=39						
SMY	Shemya	10.10	278	Pn	Pn	21 54 42.8	+2.3
KDAK	Kodiak Island	10.99	54	Pn	Pn	21 54 52.3	-0.3
	1.0nm,0.3s,baz=268,slow=8.9,SNR=4.5						
KDAK				Sn	Sn	21 56 46.9	-7.2
	baz=359,slow=21						
KDAK	Kodiak Island	10.99	54	Pn	Pn	21 54 52.9	+0.3
KDAK	Kodiak Island	10.99	54	P	Pn	21 54 52.3	-0.3
	baz=248						
N18K	Kilae Creek	11.10	36	Pn	Pn	21 54 56.5	+2.3
N18K	Kilae Creek	11.10	36	P	Pn	21 54 58.7	+4.5
	baz=228						
N19K	Bonanza Creek	11.71	38	Pn	Pn	21 55 05.9	+3.3
N19K	Bonanza Creek	11.71	38	P	Pn	21 55 08.2	+5.5
	baz=231						
M19K	Big River Lodg	12.47	34	Pn	Pn	21 55 16.0	+3.1
L19K	White Mountain	12.51	33	Pn	Pn	21 55 13.6	+0.2
L19K	White Mountain	12.51	33	P	Pn	21 55 17.0	+3.7
	baz=225						
TTA	Tatalina	12.70	29	Pn	Pn	21 55 18.1	+2.1
TTA	Tatalina	12.70	29	P	Pn	21 55 18.6	+2.5
	baz=220,SNR=6.3						
L20K	Farewell, AK	13.04	33	P	Pn	21 55 24.2	+3.5
	baz=226						
TNA	Tin City	13.22	3	Pn	Pn	21 55 25.3	+2.4
SEW	Seward	13.43	47	Pn	Pn	21 55 26.7	+0.8
SEW	Seward	13.43	47	P	Pn	21 55 26.2	+0.3
	baz=244						
K20K	Telida	13.60	30	P	P	21 55 33.1	-3.4
	baz=223						
J20K	Nowinta River	14.19	28		P	21 55 41.5	-1.4
J20K	Nowinta River	14.19	28	P	Pn	21 55 39.0	+2.7
	baz=221						
CAST	Castle Rocks	14.28	33	P	P	21 55 43.9	-0.1
CAST	Castle Rocks	14.28	33	P	P	21 55 43.1	-0.9
	baz=228						
KNK	Knik Glacier	14.47	43	Pn	Pn	21 55 39.0	-1.1
KNK	Knik Glacier	14.47	43	P	Pn	21 55 39.8	-0.3
	baz=241						
SML	Sawmill	14.72	42	P	P	21 55 48.4	-0.6
SML	Sawmill	14.72	42	P	Pn	21 55 44.2	+0.8
	baz=240						
KTH	Kantishna Hill	14.76	34	P	P	21 55 47.2	-2.2
GLI	Glacier Island	14.82	46	P	Pn	21 55 43.3	-1.4
	baz=245						
TRF	Thorofare Moun	14.91	35	Pn	Pn	21 55 48.1	+2.0
TRF	Thorofare Moun	14.91	35	P	P	21 55 49.4	-1.8
	baz=231						
M23K	Glacier View	14.96	43	P	Pn	21 55 47.2	+0.5
	baz=241						
FID	Port Fidalgo	15.04	47	Pn	Pn	21 55 45.6	-2.1
BPAW	Bear Paw Mtn.	15.10	32	P	P	21 55 52.2	-0.9
BPAW				IAmb	IAmb	21 55 58.6	
	comp=Z,9.3nm,0.8s						
BPAW	Bear Paw Mtn.	15.10	32	P	P	21 55 52.4	-0.7
	baz=228,SNR=9.6						
SCM	Sheep Creek Mo	15.15	43	Pn	Pn	21 55 48.9	-0.3
SCM				IAmb	IAmb	21 55 58.1	
	comp=Z,12nm,1.0s						
SCM	Sheep Creek Mo	15.15	43	P	Pn	21 55 48.8	-0.4
	baz=242						
EYAK	Cordova Ski Ar	15.29	49	Pn	Pn	21 55 50.4	-0.6
EYAK				IAmb	IAmb	21 56 19.1	
	comp=Z,14nm,1.2s						
EYAK	Cordova Ski Ar	15.29	49	P	Pn	21 55 50.7	-0.2
	baz=248						
WAT6	Susitna Watana	15.36	40	P	Pn	21 55 52.1	+0.1
	baz=238						
KLU	Klutina	15.59	45	Pn	Pn	21 55 54.5	-0.4
KLU				IAmb	IAmb	21 55 55.6	
	comp=Z,8.9nm,0.5s						
KLU	Klutina	15.59	45	P	Pn	21 55 53.4	-1.6
	baz=245,SNR=6.3						
H21K	Melozitna Rive	15.69	26	P	P	21 56 00.2	+0.6
H21K	Melozitna Rive	15.69	26	P	P	21 55 58.4	-1.3
	baz=220,SNR=5.2						
IMAR	Indian Mountai	15.71	24	Pn	P	21 55 57.7	-2.1
M24K	Tolsona, Glenn	15.76	43	Pn	Pn	21 55 56.2	-0.8
M24K				IAmb	IAmb	21 56 04.7	
	comp=Z,33nm,1.4s						
M24K	Tolsona, Glenn	15.76	43	P	Pn	21 55 56.9	-0.1
	baz=243						
DHY	Denali Highway	15.76	39	Pn	P	21 55 59.2	-1.4
DHY	Denali Highway	15.76	39	P	Pn	21 55 58.7	+1.5
	baz=238						
BMRM	Bremner River	15.97	48	Pn	Pn	21 55 59.2	-0.5
BMRM				IAmb	IAmb	21 56 06.8	
	comp=Z,11nm,1.1s						
BMRM	Bremner River	15.97	48	P	Pn	21 55 59.6	-0.2
	baz=249						
N25K	Chitina, Valde	16.22	46		Pn	21 56 02.6	-0.3
N25K	Chitina, Valde	16.22	46	P	Pn	21 56 02.7	-0.3
	baz=247						
WRH	Wood River Hil	16.31	34	Pn	Pn	21 56 04.6	+0.6
HARP	HAARP	16.32	43	P	Pn	21 56 05.2	+1.2
	baz=243						
PAX	Paxson	16.46	41	Pn	Pn	21 56 06.8	+0.9
PAX	Paxson	16.46	41	P	P	21 56 07.2	-1.1
	baz=241						
GLB	Gilahina Butte	16.50	47		Pn	21 56 05.9	-0.6
GLB				IAmb	IAmb	21 56 12.3	
	comp=Z,11nm,1.4s						
CCB	Clear Creek Bu	16.52	34	Pn	Pn	21 56 05.3	-1.2
MDM	Murphy Dome	16.57	32	Pn	P	21 56 08.3	-1.1
VRDI	Verde Repeater	16.59	48	Pn	Pn	21 56 07.1	-0.6
VRDI				IAmb	IAmb	21 56 23.5	
	comp=Z,9.1nm,1.2s						
HDA	Harding Lake	16.67	35	P	Pn	21 56 08.4	-0.1
	baz=234						
H23K	Yukon River	16.74	29	P	P	21 56 13.0	+1.8
	baz=226						
MCARA	McCarthy VSAT	16.83	47	P	P	21 56 12.8	+0.5
MCARA				IAmb	IAmb	21 56 40.6	
	comp=Z,10.0nm,0.8s						
MCARA	McCarthy VSAT	16.83	47	P	P	21 56 11.8	-0.6
	baz=250						
ISLE	Juniper Island	16.90	50	P	Pn	21 56 12.0	+0.5
ISLE				IAmb	IAmb	21 56 37.9	
	comp=Z,9.5nm,0.8s						
IL31		16.91	34	P	P	21 56 12.4	-0.6
ILAR	Eielson Array	16.91	34	Pn	Pn	21 56 10.6	-0.9
	comp=Z,0.2nm,0.3s,baz=231,slow=11,SNR=9.9						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	16.91	34	Pn	Pn	21 56 11.1	-0.4
MESA	MESA	16.97	52	P	Pn	21 56 13.0	+0.5
MESA				IAmb	IAmb	21 56 34.4	
	comp=Z,42nm,1.3s						
RIDG	Independent Ri	17.08	39	P	P	21 56 16.1	+1.0
MENT	Mentasta	17.15	42		P	21 56 18.0	+2.2
GRNC	Granite Creek	17.21	50	Pn	P	21 56 16.3	-0.4
GRNC				IAmb	IAmb	21 56 24.0	
	comp=Z,7.9nm,0.8s						
M26K	Nabesna, AK	17.23	44	P	Pn	21 56 15.8	+0.2
M26K				IAmb	IAmb	21 56 23.8	
	comp=Z,13nm,1.5s						
M26K	Nabesna, AK	17.23	44	P	Pn	21 56 15.3	-0.2
	baz=247						
H24K	Noodor Dome	17.25	30	Pn	P	21 56 16.2	-0.7
H24K	Noodor Dome	17.25	30	P	P	21 56 17.3	+0.4
	baz=229						
DOT	Dot Lake	17.34	40	P	P	21 56 17.9	0.0
J25K	Salcha River,	17.35	36	P	Pn	21 56 16.9	-0.2
J25K	Salcha River,	17.35	36	P	Pn	21 56 16.7	-0.3
	baz=237,SNR=6.5						
BARN	Barnard Glacie	17.35	49	P	Pn	21 56 17.5	+0.3
BARN				IAmb	IAmb	21 56 29.1	
	comp=Z,5.0nm,0.6s						
CTG	Chitna Glacier	17.47	50	P	P	21 56 19.8	+0.3
	baz=253						
CTGM	Chitina Glacie	17.48	50	P	P	21 56 19.7	+0.1
SCRK	Sand Creek	17.53	39	P	Pn	21 56 18.9	-0.4
SCRK	Sand Creek	17.53	39	P	P	21 56 19.7	-0.4
	baz=241						
COLD	Coldfoot	17.57	25	P	Pn	21 56 19.4	-0.3
COLD	Coldfoot	17.57	25	P	P	21 56 22.6	+2.2
	baz=222						
M27K	Edge Creek, AK	17.69	45	P	Pn	21 56 21.2	-0.1
M27K	Edge Creek, AK	17.69	45	P	P	21 56 21.7	-0.2
	baz=248						
J26L	Joseph Creek	17.95	38	P	Pn	21 56 24.3	-0.3
	baz=240,SNR=12						
L27K	Beaver Creek,	17.99	43	P	Pn	21 56 24.0	-0.9
BCAR	Beaver Creek A	18.01	43	P	P	21 56 25.3	0.0
BCPM	Bancas Point	18.05	54	P	P	21 56 27.6	+1.9
BCPM				IAmb	IAmb	21 56 53.5	
	comp=Z,15nm,1.0s						
PNL	Peninsula	18.11	55	P	P	21 56 27.7	+1.3
	baz=260						
YUK3	Moose Creek	18.12	48	P	Pn	21 56 26.7	0.0
	baz=252						
TOLK	Toolik Lake Re	18.80	23	P	Pn	21 56 35.6	+0.8
	baz=220						
YUK4	Talbot Arm	18.84	50	P	Pn	21 56 37.6	+2.3
	baz=256,SNR=7.7						
YUK6	Outpost Mounta	18.87	51	P	Pn	21 56 37.1	+1.2
	baz=257						
EGAK	Eagle	19.00	38	P	Pn	21 56 36.8	-0.2
HYT	Haines Junctio	19.26	52	P	Pn	21 56 41.3	+0.9
HYT				IAmb	IAmb	21 56 44.6	
	comp=Z,30nm,1.3s						
HYT	Haines Junctio	19.26	52	P	Pn	21 56 42.7	+2.4
	baz=258,SNR=15						
BMAR	Burnt Mountain	19.29	29	P	Pn	21 56 40.4	-0.2
N30M	Aishikik Lake	19.59	50	P	Pn	21 56 45.1	+0.9
	baz=257,SNR=12						
PEA0B	Petropavlovsk-	19.88	285	P	P	21 56 45.3	-0.5
PEA0B				IAmb	IAmb	21 56 45.9	
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	19.88	285	P	P	21 56 44.8	-1.0
	comp=Z,1.3nm,0.3s,baz=88,slow=13,SNR=29						
	comp=Z,4.7nm,0.5s						
M30M	Minto, Yukon	20.00	47	P	P	21 56 47.9	+0.8
M30M	Minto, Yukon	20.00	47	P	Pn	21 56 49.9	+0.9
	baz=254						
SKAG	Skagway	20.13	56	P	P	21 56 48.3	-0.1
SKAG				IAmb	IAmb	21 56 53.5	
	comp=Z,15nm,0.8s						
SKAG	Skagway	20.13	56	P	Pn	21 56 50.1	-0.4
	baz=265						
WHY	Whitehorse	20.50	53	P	Pn	21 56 54.2	-0.7
WHY				IAmb	IAmb	21 57 22.8	
	comp=Z,4.7nm,0.7s						
WHY	Whitehorse	20.50	53	P	P	21 56 53.9	+1.3
	baz=262						
M31M	Drury Creek, Y	21.00	49	P	P	21 56 58.8	+0.9
M31M				IAmb	IAmb	21 57 04.9	
	comp=Z,8.2nm,1.4s						
M31M	Drury Creek, Y	21.00	49	P	P	21 56 58.5	+0.6
	baz=258						
EPYK	Eagle Plains	21.36	37	P	P	21 57 01.2	-0.5
EPYK				IAmb	IAmb	21 57 07.3	
	comp=Z,12nm,0.9s						
EPYK	Eagle Plains	21.36	37	P	P	21 57 00.9	-0.8
	baz=245						
P33M	Teslin, Yukon	21.46	54	P	P	21 57 04.6	+1.7
P33M				IAmb	IAmb	21 57 14.6	
	comp=Z,6.1nm,0.8s						
P33M	Teslin, Yukon	21.46	54	P	P	21 57 04.3	+1.4
	baz=265						
DIB	Dawson Inlet,	22.14	73	P	P	21 57 10.9	+0.9
DIB				IAmb	IAmb	21 57 38.0	
	comp=Z,14nm,1.1s						
H02S1	DAWSON INLET T	22.14	73	T	T	22 20 18.1	
	SNR=7.4						
DLBC	Dease Lake	22.84	59	P	P	21 57 21.2	+3.6
	comp=Z,2.3nm,0.5s,baz=263,slow=11,SNR=5.3						
INK	Inuvik	23.30	33	P	P	21 57 21.8	-0.3
	comp=Z,1.9nm,0.4s,baz=250,slow=7.7,SNR=14						
INK				LR	LR	22 07 37.4	
	comp=Z,70nm,18.2s,baz=176,slow=40						
	comp=Z,1.9nm,0.4s						
INK	Inuvik	23.30	33	P	P	21 57 21.7	-0.3
INK				IAmb	IAmb	21 57 22.0	
	comp=Z,2.5nm,0.7s						
INK	Inuvik	23.30	33	P	P	21 57 21.4	-0.6
	baz=245						
BBB	Bella Bella	24.97	74	LR	LR	22 05 55.7	
	comp=Z,40nm,18.4s,baz=122,slow=33						
YKA	Yellowknife Ar	30.20	49	P	P	21 58 25.5	+1.2
	comp=Z,1.3nm,0.6s,baz=271,slow=7.6,SNR=23						
YKA				LR	LR	22 10 52.0	
	comp=Z,39nm,18.9s,baz=327,slow=37						
	comp=Z,1.3nm,0.6s						
YKA	Yellowknife Ar	30.20	49	P	P	21 58 24.1	-0.2
KRPM	Rodgers	32.48	92	P	P	21 58 45.2	+0.5
TIXI	Tiksi	32.72	329	P	P	21 58 44.3	-2.0
	comp=Z,0.5nm,0.2s,baz=272,slow=21,SNR=3.8						
	comp=Z,0.5nm,0.2s						
TIXI	Tiksi	32.72	329	P	P	21 58 46.0	-0.4
YBH	Yreka Blue Hor	32.95	90	LR	LR	22 08 24.7	
	comp=Z,34nm,20.2s,baz=283,slow=29						
NEW	Newport	32.98	76	P	P	21 58 50.0	+1.0
	comp=Z,1.9nm,0.6s,baz=283,slow=2.4,SNR=3.6						
	comp=Z,1.9nm,0.6s						
RES	Resolute Bay	36.33	26	LR	LR	22 16 06.4	
	comp=Z,37nm,19.5s,baz=56,slow=40						
KLR	Kul'dur	36.47	289	P	P	21 59 16.7	-2.3
	comp=Z,1.4nm,0.5s,baz=65,slow=5.8,SNR=6.6						
	comp=Z,1.4nm,0.5s						
MCMT	McKenzie Canyo	37.24	79	P	P	21 59 27.3	+1.4
EGMT	Eagleton	37.43	72	P	P	21 59 28.4	+1.1
H11N2	WAKE ISLAND Hy	37.50	219	T	T	22 39 57.2	
	baz=24,slow=76,SNR=50						
H11N3	WAKE ISLAND Hy	37.51	219	T	T	22 39 53.0	
	baz=24,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	37.52	219	T	T	22 39 59.1	
	baz=24,slow=76,SNR=47						
BOZ	Bozeman (W)	37.56	77	P	P	21 59 29.8	+1.2
BOZ				IAmb	IAmb	21 59 30.6	
	comp=Z,1.5nm,0.8s						
NVAR	Mina Array Bea	37.64	91	P	P	21 59 31.8	+2.5
	comp=Z,0.2nm,0.3s,baz=294,slow=6.2,SNR=1.9						
	comp=Z,0.2nm,0.3s						
QLMT	Earthquake Lak	38.09	78	P	P	21 59 34.2	+1.1
YHL	Hebgen Lake	38.23	78	P	P	21 59 33.9	-0.5
YHL				IAmb	IAmb	21 59 38.1	
	comp=Z,2.9nm,0.9s						
H11S1	WAKE ISLAND Hy	38.69	218	T	T	22 40 44.2	
	baz=23,slow=76,SNR=224						
H11S2	WAKE ISLAND Hy	38.70	218	T	T	22 40 44.8	
	baz=23,slow=76,SNR=202						
H11S3	WAKE ISLAND Hy	38.70	218	T	T	22 40 45.9	
	baz=23,slow=76,SNR=214						
RLMT	Red Lodge	39.23	76	P	P	21 59 44.0	+1.4
RLMT				IAmb	IAmb	21 59 46.1	
	comp=Z,5.1nm,1.1s						
BW06	Boulder Array	40.37	79	P	P	21 59 53.1	+1.0
BW06				IAmb	IAmb	21 59 54.5	
	comp=Z,2.5nm,0.6s						
PD31	Pinedale Array	40.37	79	P	P	21 59 53.7	+1.5
PD31				IAmb	IAmb	21 59 54.5	
	comp=Z,2.4nm,0.6s						
PDAR	Pinedale Array	40.37	79	P	P	21 59 54.0	+1.8
	comp=Z,2.1nm,0.5s,baz=300,slow=3.0,SNR=24						
	comp=Z,2.1nm,0.5s						
PDAR	Pinedale Array	40.37	79	P	P	21 59 53.8	+1.6
FCC	Fort Churchill	40.90	50	P	P	21 59 57.5	+1.5
FCC				IAmb	IAmb	21 59 58.3	
	comp=Z,7.6nm,0.9s						
RDMU	Red Mountain	41.66	82	P	P	22 00 04.5	+1.7
RDMU				IAmb	IAmb	22 00 06.0	
	comp=Z,12nm,1.5s						
SRU	San Rafael Swe	41.97	84	P	P	22 00 06.7	+1.4
SRU				IAmb	IAmb	22 00 08.9	
	comp=Z,4.2nm,1.1s						
O20A	White River Ci	42.73	81	P	P	22 00 12.9	+1.4
O20A				IAmb	IAmb	22 00 13.7	
	comp=Z,5.5nm,0.8s						
PV13	Radium Mtn., P	43.61	84	P	P	22 00 20.0	+1.3
PV13				IAmb	IAmb	22 00 21.4	
	comp=Z,6.9nm,1.0s						
PV01	Paradox Valley	43.78	84	P	P	22 00 21.4	+1.4
PV01				IAmb	IAmb	22 00 22.1	
	comp=Z,3.0nm,0.8s						
KSRS	Korea Array	45.43	277	P	P	22 00 31.3	-1.5
	comp=Z,1.0nm,0.6s,baz=50,slow=9.4,SNR=4.2						
KSRS				LR	LR	22 20 16.9	
	comp=Z,9.2nm,18.1s,baz=210,slow=37						
	comp=Z,1.0nm,0.6s						
B35A	Bob, Littlefor	46.33	63	P	P	22 00 40.2	+0.4
FRB	Frobisher Bay	48.93	35	P	P	22 01 00.1	+0.4
	comp=Z,0.7nm,0.4s,baz=300,slow=7.9,SNR=5.9						
	comp=Z,0.7nm,0.4s						
SPITS	Spitsbergen Ar	49.63	358	P	P	22 01 04.4	-0.6
	comp=Z,12nm,1.1s,baz=35,slow=3.5,SNR=6.9						
	comp=Z,12nm,1.1s						
SUMG	Summit	50.74	17	P	P	22 01 14.4	+0.6
SUMG				IAmb	IAmb	22 01 17.0	
	comp=Z,4.7nm,1.0s						
SONM	Songino Array	51.30	301	P	P	22 01 17.3	-0.9
	comp=Z,0.4nm,0.4s,baz=68,slow=6.1,SNR=3.6						
	comp=Z,0.4nm,0.4s						
P38A	Dawn	51.82	72	P	P	22 01 21.5	-0.4
TX32	Lajitas Array	52.72	89	P	P	22 01 29.8	+0.9
TX32				IAmb	IAmb	22 01 31.0	
	comp=Z,2.7nm,1.1s						
TXAR	Lajitas Array	52.72	89	P	P	22 01 29.5	+0.7
	comp=Z,0.8nm,0.7s,baz=307,slow=4.6,SNR=6.4						
	comp=Z,0.8nm,0.7s						
P40A	Paris	52.74	71	P	P	22 01 28.5	-0.3
HHC	Hu-ho-hao-te	52.93	291	*e*P	P	22 01 28.3	-2.0
X37A	Clayton	54.10	78	P	P	22 01 39.0	+0.2
SCO	Scoresbysund	55.18	13	P	P	22 01 46.8	+0.7
SCHQ	Schefferville	55.39	43	P	P	22 01 47.9	0.0
	comp=Z,4.0nm,0.9s,baz=329,slow=8.9,SNR=3.7						
	comp=Z,4.0nm,0.9s						
SCHQ	Schefferville	55.39	43	P	P	22 01 47.5	-0.3
ZAA0	Zalesovo Array	57.41	318	P	P	22 02 01.6	-0.6
ZAA0				IAmb	IAmb	22 02 10.5	
	comp=Z,2.1nm,1.1s						
ZALV	Zalesovo Beam	57.41	318	P	P	22 02 00.9	-1.3
	comp=Z,0.6nm,0.5s,baz=55,slow=7.1,SNR=3.0						
ZALV				LR	LR	22 27 21.2	
	comp=Z,22nm,19.4s,baz=90,slow=37						
	comp=Z,0.6nm,0.5s						
ZALV	Zalesovo Beam	57.41	318	P	P	22 02 01.1	-1.1
ARCES	ARCESS Array B	57.89	354	P	P	22 02 04.7	-0.7
	comp=Z,2.2nm,0.7s,baz=22,slow=7.0,SNR=8.1						
ARCES				PcP	PcP	22 02 57.2	-0.1
	comp=Z,2.5nm,0.7s,baz=27,slow=4.6,SNR=4.1						
ARCES				LR	LR	22 29 32.6	
	comp=Z,20nm,18.3s,baz=326,slow=39						
	comp=Z,2.2nm,0.7s						
ARCES	ARCESS Array B	57.89	354	P	P	22 02 04.9	-0.5
M55A	Ridgway	58.88	61	P	P	22 02 13.8	+1.1
L59A	Walton	60.34	59	P	P	22 02 22.6	-0.3
KURK	Kurchatov	62.36	318	P	P	22 02 35.7	-0.6
KURBB	Kurchatov Arra	62.47	318	P	P	22 02 36.6	-0.3
	comp=Z,2.3nm,0.8s,baz=44,slow=7.1,SNR=24						
	comp=Z,2.3nm,0.8s						
LMN	Caledonia Moun	62.75	50	P	P	22 02 40.2	+1.3
WMQ	Urumqi	63.53	308	*e*P	P	22 02 47.0	+2.8
BRVK	Borovoye	63.70	324	P	P	22 02 44.4	-0.7
BRVK				IAmb	IAmb	22 02 46.1	
	comp=Z,2.9nm,1.1s						
MK31	Makanchi Array	63.80	313	P	P	22 02 44.2	-1.7
MK31				IAmb	IAmb	22 02 45.1	
	comp=Z,1.6nm,1.1s						
MKAR	Makanchi Array	63.80	313	P	P	22 02 44.9	-1.0
	comp=Z,1.2nm,0.8s,baz=53,slow=6.5,SNR=7.3						
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	63.80	313	P	P	22 02 44.6	-1.3
FIA1	FINESS Array S	65.84	352	P	P	22 02 58.6	-0.2
FINES	FINESS Array B	65.84	352	P	P	22 02 58.5	-0.4
	comp=Z,1.8nm,0.5s,baz=17,slow=8.9,SNR=22						
	comp=Z,1.8nm,0.5s						
NC300	NORSAR Array S	66.68	360	P	P	22 03 03.8	-0.5
NC303	NORSAR Array S	66.72	360	P	P	22 03 03.9	-0.7
NC405	NORSAR Array S	66.83	359	P	P	22 03 04.3	-0.9
NB2	NORSAR Subarra	66.90	360	P	P	22 03 05.4	-0.4
	comp=Z,0.5nm,0.5s,baz=1.3,slow=6.9						
NOA	NORSAR Array B	66.90	360	P	P	22 03 05.3	-0.5
	comp=Z,0.9nm,0.7s,baz=2.1,slow=6.5,SNR=4.8						
	comp=Z,0.9nm,0.7s						
PZH	PanZhiHua	68.84	286	P	P	22 03 18.5	-0.1
KMI	Kunming	69.28	284	⇓P	P	22 03 21.8	+0.3
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AKTO	Aktyubinsk	69.99	330	P	P	22 03 24.6	-0.5
	comp=Z,1.7nm,0.5s,baz=81,slow=7.5,SNR=7.9						
	comp=Z,1.7nm,0.5s						
ABKAR	Akbulak array	70.42	328	P	P	22 03 26.7	-1.1
AAK	Ala-Archa	70.49	315	P	P	22 03 28.0	-0.5
	comp=Z,2.2nm,0.6s,baz=149,slow=3.0,SNR=7.4						
	comp=Z,2.2nm,0.6s						
AAK	Ala-Archa	70.49	315	P	P	22 03 27.5	-1.0
AAK				IAmb	IAmb	22 03 29.5	
	comp=Z,2.2nm,0.8s						
KK31	Karatay Array	71.78	318	P	P	22 03 35.6	-0.6
KK31				IAmb	IAmb	22 03 37.0	
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	71.78	318	P	P	22 03 35.5	-0.7
PABE	Paberze	71.89	352	P	P	22 03 36.8	+0.2
EKA	Eskdalemuir Ar	72.02	8	P	P	22 03 37.8	+0.4
	comp=Z,1.1nm,0.6s,baz=352,slow=4.7,SNR=8.4						
	comp=Z,1.1nm,0.6s						
KSH	Kashi	72.37	312	P	P	22 03 43.9	+4.0
KSH				pP	sP	22 03 55.3	-0.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
UBPT	Khong Chiam	75.14	276	P	P	22 03 56.2	0.0
GAR	Garm	75.28	316	P	P	22 03 57.3	+0.3
AKASG	Malin Array Be	76.08	348	P	P	22 04 00.3	-0.8
	comp=Z,0.5nm,0.4s,baz=7.5,slow=4.9,SNR=4.8						
	comp=Z,0.5nm,0.4s						
CMAR	Chiang Mai Arr	76.64	283	P	P	22 04 05.1	+0.3
	comp=Z,4.2nm,0.8s,baz=25,slow=6.6,SNR=29						
	comp=Z,4.2nm,0.8s						
CMAR	Chiang Mai Arr	76.64	283	P	P	22 04 04.8	0.0
GRA1	Grafenberg Arr	78.28	360	P	P	22 04 13.3	-0.2
GRFO	Grafenberg	78.28	360	P	P	22 04 12.8	-0.8
VRAC	Vranov	78.54	356	P	P	22 04 15.1	+0.2
	comp=Z,2.0nm,0.7s,baz=1.6,slow=7.8,SNR=3.7						
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	79.09	358	P	P	22 04 18.6	+0.5
	comp=Z,0.6nm,0.7s,baz=3.7,slow=4.1,SNR=5.9						
	comp=Z,0.6nm,0.7s						
BURAR	Bucovina Array	79.58	350	P	P	22 04 21.0	+0.2
BURAR				IAmb	IAmb	22 04 21.9	
	comp=Z,1.0nm,0.8s						
DAVOX	Davos/Dischmat	81.19	1	P	P	22 04 30.5	+1.0
	comp=Z,2.6nm,0.8s,baz=325,slow=14,SNR=4.0						
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	86.10	342	P	P	22 04 55.6	+0.8
	comp=Z,0.4nm,0.5s,baz=354,slow=4.3,SNR=2.5						
	comp=Z,0.4nm,0.5s						
ESDC	Sonseca Array	87.42	11	P	P	22 05 01.1	0.0
	comp=Z,1.5nm,0.8s,baz=351,slow=4.2,SNR=12						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	87.42	11	P	P	22 05 01.1	-0.1
ESDC				IAmb	IAmb	22 05 02.0	
	comp=Z,1.3nm,0.8s						
PSI	Prapat	88.87	273	P	P	22 05 08.5	+0.1

comp=Z,6.0nm,0.7s,baz=69,slow=8.6,SNR=1.8
comp=Z,6.0nm,0.7s

IDC ***16*** *21:54:49.1±3.8, 9.°10N×82.°42W, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.3/1, MS3.2/3, Error ellipse: s-maj=118.0km s-min=29.9km az=24.0*
UPA ***16*** *21:54:49.7±2.1, 8.°34N×82.°80W, h10^{km}±4^{km}, MW4.5*
UCR ***16*** *21:54:49.9±1.9, 8.°32N×82.°84W, h5^{km}, MW4.6*
ISC 16 21:54:49.2±0.8**, 8.°28N**±0.°03×**82.°80W**±0.°02**, h25**^{km}±5^{km}**, n57, σ1.^{s}61**/77**, mb3.7**/8**, 1C-6D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.10	225	⇑eP	Pb	21 54 53.8	-0.1
PTPM				eS	Sb	21 54 56.5	-0.6
CDITO	Canoas	0.30	347	eP	Pb	21 54 55.7	-0.6
CDITO				eS	Sb	21 54 59.3	-1.8
DVD	David	0.38	66	eP	Pb	21 54 57.5	0.0
DVD				eS	Sb	21 55 03.1	-0.1
LOCO3	Loma Colorada,	0.40	71	⇓eP	Pb	21 54 57.9	+0.1
LOCO3				eS	Sb	21 55 04.1	+0.3
CHIR3	Chiriqui UPA,	0.48	76	⇓iP	Pb	21 54 59.0	-0.1
CHIR3				eS	Sb	21 55 05.9	0.0
BRU2	Volcan	0.52	12	⇓iP	Pb	21 54 59.6	-0.4
BRU2				eS	Sb	21 55 07.5	+0.2
PIRO	Carate, Puerto	0.54	283	eP	Pb	21 54 58.9	-1.2
PIRO	Carate, Puerto	0.54	283	⇓iP	Pb	21 54 59.1	-1.1
PIRO				eS	Sb	21 55 08.3	+0.7
GUAL3	Gualaca, Chiri	0.56	63	⇓iP	Pb	21 55 00.1	-0.4
GUAL3				eS	Sb	21 55 07.8	-0.3
EDSV	San Vito	0.56	343	eP	Pb	21 55 00.2	-0.4
EDSV				eS	Sb	21 55 09.2	+0.9
LNBQ3	Los Naranjos,	0.62	35	⇓eP	Pb	21 55 00.9	-0.8
LNBQ3				eS	Sb	21 55 09.2	-0.8
CHGR2	Aguacate	0.93	45	eP	Pb	21 55 05.4	-1.3
CHGR2				eS	Sb	21 55 17.7	-0.9
NANC3	Nancito, Chiri	1.06	92	eP	Pb	21 55 07.7	-1.3
NANC3				eS	Sn	21 55 23.1	+0.5
DRK0	Durika	1.07	336	eP	Pb	21 55 07.9	-1.3
DRK0				eS	Sb	21 55 21.8	-1.1
SRBA	San Rafael, Bu	1.09	330	eP	Pn	21 55 07.9	-1.2
CNI2	El Empalme, Bo	1.18	16	eP	Pn	21 55 09.8	-0.4
CNI2				eS	Sb	21 55 23.6	-2.4
RGM0	Gandoca	1.32	8	eP	Pb	21 55 13.3	0.0
RGM0				eS	Sb	21 55 32.9	+3.1
PEZE	Perez Zeledon,	1.40	322	eP	Pn	21 55 13.6	+0.4
EDDO	Dominical	1.43	313	eP	Pn	21 55 13.9	+0.3
GMAL	Guarumal, Vera	1.64	108	eP	Pn	21 55 17.6	+1.1
GMAL				eS	Sb	21 55 39.2	+0.1
RSUS3	Rio de Jesus,	1.65	100	eP	Pn	21 55 16.6	-0.1
RIMA	Rio Macho	1.81	325	eP	Pn	21 55 19.6	+0.6
LCR2	La Lucha 2	1.88	321	eP	Pn	21 55 20.9	+0.9
BATAN	Batan	1.89	343	eP	Pb	21 55 22.2	-0.9
CACAO	El Cacao, Vera	2.14	116	eP	Pn	21 55 24.6	+1.2
CACAO				eS	Sb	21 55 51.7	-1.7
HDC	Heredia	2.15	323	eP	Pn	21 55 25.4	+1.8
HDC	Heredia	2.15	323	eP	Pb	21 55 25.8	-1.7
HDC				eS	Sb	21 55 53.6	-0.2
PNME	Penonome	2.46	85	eP	Pn	21 55 29.2	+1.4
PNME				eS	Sn	21 55 59.3	+2.2
AZU	Azuero	2.55	101	eP	Pn	21 55 30.6	+1.6
AZU				eS	Sb	21 56 03.0	-2.4
CASO	Castillo	2.87	318	eP	Pn	21 55 36.4	+2.9
ARE1	Arenal 1	2.88	319	eP	Pn	21 55 36.3	+2.8
CEDE	Laguna Cedeo	2.88	320	eP	Pn	21 55 36.2	+2.5
JTS	Las Juntas de	2.91	313	eP	Pn	21 55 34.7	+0.6
JTS	Las Juntas de	2.91	313	eP	Pn	21 55 34.8	+0.6
JTS				eS	Sn	21 56 09.2	+0.9
BCIP	Isla Barro Col	3.06	73	eP	Pn	21 55 37.1	+1.0
BCIP				eS	Sb	21 56 16.9	-3.2
ACAL	Aguas Claras	3.21	317	eP	Pn	21 55 41.5	+3.2
PTEN	Parque Tenorio	3.24	319	eP	Pn	21 55 41.3	+2.7
UPA	Univ. de Panam	3.31	78	eP	Pn	21 55 42.5	+3.1
UPA				eS	Sn	21 56 19.8	+1.8
CUI	Cuipilapa	3.32	316	eP	Pn	21 55 42.6	+2.9
GUAI	GUAI	3.32	307	eP	Pn	21 55 40.4	+0.7
COLC	Colonia	3.35	315	eP	Pn	21 55 42.8	+2.7
HORNC	Hornillas	3.37	316	eP	Pn	21 55 42.7	+2.4
LIM1	Limonal	3.41	315	eP	Pn	21 55 43.6	+2.7
BUAI	Buenos Aires	3.59	316	eP	Pn	21 55 45.8	+2.4
GBS3	Finca Las Img	3.61	314	eP	Pn	21 55 47.0	+3.3
CMIG	Matias Romero	14.68	308	Pn	Pn	21 58 15.9	+0.5
	0.1nm,0.3s,baz=90,slow=12,SNR=2.1						
	0.8nm,0.5s						
SJG	San Juan	18.91	57	LR	LR	22 06 16.4	
	comp=Z,27nm,19.9s,baz=245,slow=38						
TKL	Tuckaleechee C	27.27	358	LR	LR	22 12 24.8	
	comp=Z,43nm,18.8s,baz=180,slow=40						
PDAR	Pinedale Array	41.62	330	P	P	22 02 33.7	-2.0
	0.3nm,0.6s,baz=125,slow=8.9,SNR=3.1						
	0.3nm,0.6s						
ULM	Lac du Bonnet	43.23	348	P	P	22 02 46.0	-2.4
	2.5nm,0.6s,baz=144,slow=7.1,SNR=4.1						
	2.5nm,0.6s						
ELK	Elko	43.31	324	P	P	22 02 50.1	+0.7
	0.4nm,0.3s,baz=74,slow=5.4,SNR=4.3						
	0.4nm,0.3s						
NVAR	Mina Array Bea	43.83	319	P	P	22 02 55.1	+1.4
	0.4nm,0.4s,baz=130,slow=6.0,SNR=4.3						
	0.4nm,0.4s						
YKA	Yellowknife Ar	58.85	343	P	P	22 04 44.5	-1.1
	0.3nm,0.5s,baz=133,slow=7.0,SNR=5.3						
	0.3nm,0.5s						
ILAR	Eielson Array	71.66	336	P	P	22 06 08.9	+0.3
	0.9nm,1.0s,baz=93,slow=4.7,SNR=5.8						
	0.9nm,1.0s						
ESDC	Sonseca Array	76.19	51	P	P	22 06 36.3	+0.6
	0.2nm,0.5s,baz=295,slow=3.7,SNR=1.8						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	82.83	78	P	P	22 07 12.5	+0.2
	0.6nm,0.7s,baz=244,slow=5.3,SNR=2.8						
	0.6nm,0.7s						
GERES	GERESS Array B	88.09	41	LR	LR	22 42 21.0	
	comp=Z,36nm,18.9s,baz=46,slow=33						

NEIC ***16*** *21:55:04.9±1.5, 36.°05N±0.°06×139.°96E±0.°07, h49^{km}±4^{km}, mb4.5/24, Error ellipse: s-maj=9.0km s-min=6.9km az=138.0*
IDC ***16*** *21:55:05.3±1.4, 35.°92N×139.°84E, h58^{km}±13^{km}, mb3.7/22, mbtmp4.0/25, MS3.3/1, Error ellipse: s-maj=16.2km s-min=7.5km az=64.0*
NIED ***16*** *21:55:05.3, 36.°03N×139.°90E, h41^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.67; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$0.11; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.12000×10^{15} NP1: ϕ_s278.00000°, δ34.00000°, λ140.00000°. NP2: ϕ_s43.00000°, δ69.00000°, λ63.00000°.*
JMA ***16*** *21:55:05.3±0.1, 36.°0N±0.°3×139.°9E±0.°4, h41^{km}±1^{km}, MV3.9/37, SW IBARAKI PREF*
JMA Felt III J1 at SW IBARAKI PREF .
ISC 16 21:55:04.8±0.7**, 36.°00N**±0.°04×**139.°95E**±0.°04**, h50**^{km}±6^{km}**, n101, σ1.^{s}06**/102**, mb4.3**/36**, 6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.30	41	Pn	Pn	21 55 13.7	-0.2
JYT				Sn	Sn	21 55 19.6	-0.6
JYT	Yasato	0.30	41	iP	Pn	21 55 13.7	-0.2
JYT				S	Sn	21 55 19.7	-0.6
TOK	Tokyo	0.35	207	P	Pn	21 55 15.3	+1.0
JAG	Ashikaga	0.58	316	⇓iP	Pn	21 55 16.6	-0.5
JAG				⇓S	Sn	21 55 24.5	-1.4
JRY	Ryogami san	0.85	271	⇓iP	Pn	21 55 20.0	-0.6
JRY				⇓S	Sn	21 55 30.4	-1.7
JKT	Katashina	0.95	323	⇓iP	Pn	21 55 21.4	-0.6
JKT				⇓S	Sn	21 55 33.7	-0.8
JOD2	Odawara 2	1.02	224	P	Pn	21 55 23.1	+0.3
JOD2				S	Sn	21 55 35.7	-0.4
JYN	Shimob	1.25	247	iP	Pn	21 55 26.4	+0.4
JFNN	Fujinakano	1.31	232	P	Pn	21 55 27.4	+0.7
MJAR	Matsushiro Arr	1.51	291	P	Pn	21 55 28.2	-1.2
	81nm,0.3s,baz=90,slow=20,SNR=344						
MJAR				S	Sn	21 55 47.2	-0.8
	63nm,0.5s,baz=18,slow=8.2,SNR=4.4						
MJAR	Matsushiro Arr	1.51	291		Pn	21 55 28.7	-0.7
MAJO	Matsushiro	1.51	291		Pn	21 55 29.4	-0.1
MAJO	Matsushiro	1.51	291	P	Pn	21 55 29.9	+0.4
MJB9	Matsu-Tunnel	1.51	291		Pn	21 55 29.4	-0.2
JMM	Marumori	1.98	20	Pn	Pn	21 55 36.2	+0.4
JGF	Kuroka	2.15	260		Pn	21 55 39.8	+1.6
JSD	Sado	2.44	327	Pn	Pn	21 55 41.7	-0.5
INU	Inuyama	2.48	256		Pn	21 55 43.5	+0.8
INU	Inuyama	2.48	256	P	Pn	21 55 44.4	+1.7
JHJ	Hachijo jima 2	2.88	183	P	Pn	21 55 47.7	-0.6
	300nm,0.3s,baz=322,slow=21,SNR=83						
JHJ				S	Sn	21 56 20.4	-1.2
	211nm,0.3s,baz=61,slow=22,SNR=8.2						
JHJ2	Mitsune	2.89	182		Pn	21 55 48.0	-0.3
JHJ2	Mitsune	2.89	182	P	Pn	21 55 48.4	+0.1
JHS	Saijyo	5.67	262	Pn	Pn	21 56 27.9	+1.4
ERM	Erimo	6.50	22	Pn	Pn	21 56 37.5	-0.3
ERM	Erimo	6.50	22	P	Pn	21 56 38.6	+0.8
ASAJ	Asahikawa	8.35	13	P	Pn	21 57 04.3	+1.1
	2.8nm,0.3s,baz=214,slow=8.8,SNR=6.7						
JCJ	Chichijima	9.08	167	P	Pn	21 57 10.5	-2.8
	22nm,0.4s,baz=302,slow=23,SNR=17						
JCJ				S	Sn	21 58 46.1	-8.0
	44nm,0.9s,baz=97,slow=23,SNR=2.1						
JCJ	Chichijima	9.08	167	P	Pn	21 57 11.9	-1.4
KSRS	Korea Array	9.77	282	P	Pn	21 57 26.1	+3.5
	1.3nm,0.5s,baz=91,slow=14,SNR=3.1						
USRK	Ussuriysk Ar.	10.20	326	P	Pn	21 57 33.1	+4.6
	5.4nm,0.9s,baz=158,slow=12,SNR=5.5						
KLR	Kul'dur	14.52	338	P	Pn	21 58 28.3	+1.1
	0.9nm,0.5s,baz=127,slow=15,SNR=1.8						
HHC	Hu-ho-hao-te	22.71	291	eP	P	22 00 00.6	-1.9
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.5s						
XAN	Xi'an	25.44	275	P	P	22 00 27.1	-0.9
XAN				pP	pP	22 00 34.8	-5.9
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				LR	LR		
	comp=N,190nm,12.4s						
XAN				LR	LR		
	comp=Z,160nm,19.2s						
SONM	Songino Array	27.41	306	P	P	22 00 44.6	-1.1
	comp=Z,0.3nm,0.4s,baz=105,slow=8.4,SNR=3.6						
	comp=Z,0.3nm,0.4s						
SONM	Songino Array	27.41	306	P	P	22 00 43.0	-2.8
H11N2	WAKE ISLAND Hy	28.68	117	T	T	22 31 12.5	
	baz=313						
H11N1	WAKE ISLAND Hy	28.68	117	T	T	22 31 08.9	
	baz=313						
H11N3	WAKE ISLAND Hy	28.70	117	T	T	22 31 13.7	
	baz=313						
LZH	Lanzhou	29.09	281	eP	P	22 01 05.0	+4.1
LZH				pP	sP	22 01 17.8	-1.8
LZH				sP	pP	22 01 24.0	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
H11S1	WAKE ISLAND Hy	29.34	119	T	T	22 32 01.7	
	baz=314						
H11S3	WAKE ISLAND Hy	29.34	119	T	T	22 32 00.0	
	baz=314						
H11S2	WAKE ISLAND Hy	29.35	119	T	T	22 32 00.1	
	baz=314						
PZH	PanZhiHua	33.83	265	P	P	22 01 43.9	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.7s						
TIXI	Tiksi	36.18	354	P	P	22 02 01.0	-1.1
	comp=Z,0.7nm,0.3s,baz=273,slow=23,SNR=6.4						
	comp=Z,0.7nm,0.3s						
TIXI	Tiksi	36.18	354	P	P	22 02 01.5	-0.6
WMQ	Urumqi	40.27	298	eP	P	22 02 38.8	+1.9
ZAA0	Zalesovo Array	41.75	313	P	P	22 02 48.4	-0.5
ZAA0				IAmb	IAmb	22 02 49.3	
	comp=Z,4.9nm,0.7s						
ZALV	Zalesovo Beam	41.75	313	P	P	22 02 48.6	-0.3
	comp=Z,5.9nm,0.6s,baz=94,slow=6.3,SNR=23						
ZALV				PcP	PcP	22 04 44.0	-0.4
	comp=Z,0.7nm,0.4s,baz=107,slow=3.2,SNR=3.6						
	comp=Z,5.9nm,0.6s						
ZALV	Zalesovo Beam	41.75	313	P	P	22 02 48.0	-0.8
MK31	Makanchi Array	43.68	303	P	P	22 03 04.2	-0.5
MKAR	Makanchi Array	43.68	303	P	P	22 03 04.0	-0.7
	comp=Z,1.1nm,0.5s,baz=82,slow=9.6,SNR=14						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	43.68	303	P	P	22 03 03.8	-0.9
MAKZ	Makanchi	43.89	303	P	P	22 03 05.2	-1.1
KURK	Kurchatov	45.65	309	P	P	22 03 19.7	-0.5
KURK				IAmb	IAmb	22 03 20.3	
	comp=Z,9.0nm,0.8s						
KURBB	Kurchatov Arra	45.72	309	P	P	22 03 20.2	-0.5
	comp=Z,4.9nm,0.6s,baz=83,slow=7.7,SNR=57						
	comp=Z,4.9nm,0.6s						
KDAK	Kodiak Island	48.65	41	P	P	22 03 43.7	+0.3
	comp=Z,3.7nm,0.8s,baz=288,slow=6.4,SNR=1.5						
	comp=Z,3.7nm,0.8s						
KDAK	Kodiak Island	48.65	41	P	P	22 03 43.0	-0.5
AAK	Ala-Archa	49.95	299	P	P	22 03 53.4	-0.5
	comp=Z,1.2nm,0.3s,baz=99,slow=4.8,SNR=5.5						
	comp=Z,1.2nm,0.3s						
AAK	Ala-Archa	49.95	299	P	P	22 03 52.6	-1.3
AAK				IAmb	IAmb	22 03 54.4	
	comp=Z,2.5nm,0.9s						
BRVK	Borovoye	50.46	313	P	P	22 03 57.0	-0.3
BRVK				IAmb	IAmb	22 04 01.1	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	50.99	32	P	P	22 04 02.2	+1.0
	comp=Z,0.4nm,0.6s,baz=268,slow=5.8,SNR=5.7						
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	50.99	32	P	P	22 04 01.6	+0.4
KK31	Karatay Array	52.63	300	P	P	22 04 13.3	-0.4
KK31				IAmb	IAmb	22 04 14.8	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	52.63	300	P	P	22 04 12.7	-1.1
CHGR	Chuyangaron	55.05	296	P	P	22 04 31.3	-0.3
WB0	Warramunga Arr	55.72	186	P	P	22 04 35.4	-0.9
WB0				IAmb	IAmb	22 04 42.8	
	comp=Z,7.8nm,1.2s						
WB2	Warramunga Arr	55.89	186	P	P	22 04 36.4	-1.2
WB2				IAmb	IAmb	22 04 50.5	
	comp=Z,7.5nm,1.2s						
WR0	Warramunga Arr	55.89	186	P	P	22 04 37.0	-0.6
WR0				IAmb	IAmb	22 04 46.0	
	comp=Z,8.6nm,1.3s						
WRA	Warramunga Arr	55.89	186	P	P	22 04 37.1	-0.5
	comp=Z,0.9nm,0.3s,baz=0.9,slow=7.6,SNR=20						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	55.89	186	P	P	22 04 37.1	-0.5
ARU	Arti	56.35	319	LR	LR	22 30 20.4	
	comp=Z,29nm,19.7s,baz=101,slow=38						
ARU	Arti	56.35	319	P	P	22 04 39.2	-1.3
ARU				IAmb	IAmb	22 04 40.7	
	comp=Z,4.0nm,0.5s						
ABKAR	Akbulak array	57.70	310	P	P	22 04 49.5	-0.7
AKTO	Aktyubinsk	58.49	312	P	P	22 04 54.2	-1.4
	comp=Z,0.9nm,0.5s,baz=83,slow=10,SNR=3.0						
	comp=Z,0.9nm,0.5s						
ASAR	Alice Springs	59.62	186	P	P	22 05 02.9	-0.8
	comp=Z,0.3nm,0.6s,baz=25,slow=8.8,SNR=4.5						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	59.62	186	P	P	22 05 04.0	+0.3
SPITS	Spitsbergen Ar	61.30	349	P	P	22 05 14.6	0.0
	comp=Z,2.6nm,0.8s,baz=81,slow=8.9,SNR=1.1						
	comp=Z,2.6nm,0.8s						
EUNU	Eureka	61.38	8	P	P	22 05 15.6	+0.5
EUNU				IAmb	IAmb	22 05 16.7	
	comp=Z,3.0nm,0.8s						
RES	Resolute Bay	63.89	14	P	P	22 05 32.2	+0.5
	comp=Z,2.2nm,0.7s,baz=302,slow=2.4,SNR=4.0						
	comp=Z,2.2nm,0.7s						
RES	Resolute Bay	63.89	14	P	P	22 05 32.6	+0.9
ARCES	ARCESS Array B	64.54	339	P	P	22 05 36.2	0.0
	comp=Z,4.8nm,1.1s,baz=51,slow=7.2,SNR=4.9						
	comp=Z,4.8nm,1.1s						
ARCES	ARCESS Array B	64.54	339	P	P	22 05 36.3	+0.1
ARCES				IAmb	IAmb	22 05 43.3	
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	65.28	30	P	P	22 05 41.9	+0.9
	comp=Z,0.4nm,0.7s,baz=303,slow=6.8,SNR=3.8						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	65.28	30	P	P	22 05 41.0	-0.1
FIA1	FINESS Array S	69.17	332	P	P	22 06 05.4	-0.3
FIA1				IAmb	IAmb	22 06 12.0	
	comp=Z,12nm,1.3s						
FINES	FINESS Array B	69.17	332	P	P	22 06 05.2	-0.5
	comp=Z,2.0nm,0.8s,baz=59,slow=6.4,SNR=7.6						
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	69.17	332	P	P	22 06 05.3	-0.4
AKASG	Malin Array Be	74.39	322	P	P	22 06 36.0	-1.2
	comp=Z,0.3nm,0.3s,baz=48,slow=6.1,SNR=4.1						
	comp=Z,0.3nm,0.3s						
NC405	NORSAR Array S	74.46	337	P	P	22 06 36.7	-0.7
NC204	NORSAR Array S	74.64	337	P	P	22 06 38.5	-0.1
NB2	NORSAR Subarra	74.67	337	P	P	22 06 38.5	-0.3
	comp=Z,1.3nm,0.6s,baz=32,slow=6.5						
NOA	NORSAR Array B	74.67	337	P	P	22 06 38.2	-0.5
	comp=Z,0.5nm,0.4s,baz=55,slow=7.9,SNR=4.9						
	comp=Z,0.5nm,0.4s						
BURAR	Bucovina Array	78.38	321	P	P	22 06 59.5	-0.5
PDAR	Pinedale Array	79.22	45	P	P	22 07 06.2	+1.3
	comp=Z,0.2nm,0.4s,baz=303,slow=5.3,SNR=2.4						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	79.22	45	P	P	22 07 05.0	+0.1
CLL	Collm	81.39	330	eP	P	22 07 16.0	-0.1
GERES	GERESS Array B	82.96	328	P	P	22 07 23.6	-0.9
	comp=Z,0.3nm,0.4s,baz=43,slow=4.4,SNR=3.7						
	comp=Z,0.3nm,0.4s						
GERES	GERESS Array B	82.96	328	P	P	22 07 24.1	-0.3
EKA	Eskdalemuir Ar	83.70	340	P	P	22 07 27.6	-0.5
	comp=Z,0.2nm,0.4s,baz=32,slow=5.9,SNR=1.7						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	91.68	51	P	P	22 08 08.3	+1.2
	comp=Z,0.4nm,0.6s,baz=294,slow=3.5,SNR=5.7						
	comp=Z,0.4nm,0.6s						
TXAR	Lajitas Array	91.68	51	P	P	22 08 07.7	+0.5

IDC ***16*** *21:57:33.8±1.2, 35.°94N×139.°88E, h56^{km}±11^{km}, mb3.8/30, mbtmp4.1/33, MS3.0/6, Error ellipse: s-maj=13.2km s-min=7.1km az=61.0*
NEIC ***16*** *21:57:33.2±1.3, 36.°00N±0.°04×139.°98E±0.°07, h50^{km}±3^{km}, mb4.6/44, Error ellipse: s-maj=9.1km s-min=4.5km az=122.0*
NIED ***16*** *21:57:34.0, 36.°03N×139.°90E, h41^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.33; $M_{\theta\theta}$-1.25; $M_{\phi\phi}$-0.08; $M_{r\theta}$0.87; $M_{\theta\phi}$-0.69; $M_{\phi r}$1.20; Fault plane solution: $M_0$2.08000×10^{15} NP1: ϕ_s266.00000°, δ27.00000°, λ128.00000°. NP2: ϕ_s44.00000°, δ69.00000°, λ72.00000°.*
JMA ***16*** *21:57:34.0±0.1, 36.°0N±0.°3×139.°9E±0.°4, h41^{km}±1^{km}, MD4.1/37, MV4.1/37, SW IBARAKI PREF*
JMA Felt III J1 at SW IBARAKI PREF .
ISC 16 21:57:32.6±0.7**, 35.°98N**±0.°04×**139.°98E**±0.°04**, h47**^{km}±6^{km}**, n159, σ1.^{s}26**/132**, mb4.4**/57**, 4D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.30	36	Pn	Pn	21 57 42.3	+0.9
JYT				Sn	Sn	21 57 48.4	+0.6
JYT	Yasato	0.30	36	iP	Pn	21 57 42.4	+0.9
JYT				S	Sn	21 57 48.4	+0.6
JYT	Yasato	0.30	36	A	A	21 57 42.4	
	comp=E,54nm,0.2s,comp=E,128nm,0.3s						
TOK	Tokyo	0.34	211	P	Pn	21 57 44.1	+2.2
TOK	Tokyo	0.34	211	A	A	21 57 44.1	
	comp=E,34nm,0.6s,comp=E,38nm,0.3s						
JIHU	Itakohorinouch	0.45	92	A	A	21 57 44.8	
	comp=E,25nm,0.4s,comp=E,21nm,2.7s						
JHU	Hanno	0.58	257	A	A	21 57 45.2	
	comp=E,11nm,1.1s,comp=E,8.0nm,1.2s						
JAG	Ashikaga	0.61	316	⇓iP	Pn	21 57 45.3	+0.2
JAG				⇓S	Sn	21 57 53.4	-0.7
JAG	Ashikaga	0.61	316	A	A	21 57 45.3	
	comp=N,23nm,0.3s						
JHYU	Hitachinakayam	0.61	54	A	A	21 57 46.5	
	comp=E,29nm,0.3s,comp=E,80nm,0.4s						
JSGW	Sagamiharawaka	0.73	239	A	A	21 57 47.6	
	comp=E,11nm,0.5s,comp=E,13nm,0.6s						
JHO	Hitachi	0.79	37	A	A	21 57 48.8	
	comp=E,16nm,0.3s,comp=E,14nm,0.3s						
JYO	Yokosk	0.80	199	A	A	21 57 49.3	
	comp=E,21nm,1.3s,comp=E,13nm,1.0s						
JRY	Ryogami san	0.87	272	⇓iP	Pn	21 57 48.6	0.0
JRY				⇓S	Sn	21 57 59.4	-0.9
JRY	Ryogami san	0.87	272	A	A	21 57 48.6	
	comp=E,4.0nm,1.4s,comp=E,5.0nm,6.4s						
TATJ	Tateyama 2	0.95	184	A	A	21 57 51.7	
	comp=E,15nm,1.2s,comp=E,19nm,1.5s						
JKT	Katashina	0.98	323	iP	Pn	21 57 50.1	+0.1
JKT	Katashina	0.98	323	A	A	21 57 50.1	
	comp=E,18nm,0.3s,comp=E,12nm,0.3s						
JSB	Shiboa	0.98	357	A	A	21 57 51.0	
	comp=E,11nm,1.2s,comp=E,12nm,1.1s						
JOD2	Odawara 2	1.02	225	P	Pn	21 57 52.3	+1.8
JOD2				S	Sn	21 58 04.4	+0.7
JOD2	Odawara 2	1.02	225	A	A	21 57 52.3	
	comp=E,6.0nm,1.4s,comp=E,9.0nm,2.0s						
JFFD	Fukushimafurud	1.20	23	A	A	21 57 54.5	
	comp=E,13nm,1.7s,comp=E,6.0nm,1.0s						
JGK	Kuni	1.22	299	A	A	21 57 54.1	
	comp=E,4.0nm,0.4s,comp=E,3.0nm,0.5s						
JYN	Shimob	1.26	248	iP	Pn	21 57 55.1	+1.2
JYN	Shimob	1.26	248	A	A	21 57 55.1	
	comp=E,11nm,0.5s,comp=E,11nm,1.9s						
JHTM	Izuhatsuma	1.29	218	A	A	21 57 56.2	
	comp=E,13nm,1.0s,comp=E,13nm,1.0s						
ONAJ	Iwakimizuishiy	1.30	30	A	A	21 57 56.1	
	comp=E,37nm,0.3s,comp=E,21nm,0.2s						
JFNN	Fujinakano	1.31	234	P	Pn	21 57 56.2	+1.7
JIM2	Oshima 3	1.34	200	A	A	21 57 57.2	
	comp=E,13nm,1.5s,comp=E,10.0nm,0.5s						
JFY	Yanaizu	1.44	351	A	A	21 57 57.5	
	comp=E,4.0nm,1.2s,comp=E,2.0nm,2.5s						
MJAR	Matsushiro Arr	1.53	292	P	Pn	21 57 57.0	-0.5
	258nm,0.7s,baz=92,slow=13,SNR=34						
MJAR				S	Sn	21 58 16.3	-0.1
	104nm,0.4s,baz=137,slow=48,SNR=7.1						
MJAR				LR	LR	21 58 36.5	
	comp=Z,432nm,19.8s,baz=140,slow=42						
MJAR	Matsushiro Arr	1.53	292		Pn	21 57 57.5	0.0
MAJO	Matsushiro	1.53	292		Pn	21 57 58.3	+0.7
MJB9	Matsu-Tunnel	1.54	292		Pn	21 57 58.3	+0.6
JFK	Kawauchi	1.56	27	A	A	21 57 59.8	
	comp=E,4.0nm,1.0s,comp=E,4.0nm,0.4s						
JFT	Otama	1.56	11	A	A	21 57 59.6	
	comp=E,8.0nm,1.9s,comp=E,6.0nm,0.4s						
SHZ3	Shizuoka 3	1.71	238	A	A	21 58 01.8	
	comp=E,6.0nm,1.1s,comp=E,9.0nm,1.1s						
JNY	Yasuok	1.83	251	A	A	21 58 03.4	
	comp=E,4.0nm,1.5s,comp=E,4.0nm,0.5s						
JMST	Minamisoumatoc	1.89	23	A	A	21 58 04.4	
	comp=E,5.0nm,0.8s,comp=E,5.0nm,0.4s						
JMM	Marumori	1.99	19	Pn	Pn	21 58 04.7	+0.9
JGF	Kuroka	2.16	261	Pn	Pn	21 58 08.6	+2.4
JSD	Sado	2.47	327	Pn	Pn	21 58 10.7	+0.3
INU	Inuyama	2.49	256	Pn	Pn	21 58 12.7	+2.0
JHJ	Hachijo jima 2	2.86	183	P	Pn	21 58 17.1	+1.3
	585nm,0.3s,baz=315,slow=18,SNR=30						
JHJ				S	Sn	21 58 48.9	-0.1
	427nm,0.3s,baz=63,slow=22,SNR=8.6						
JHJ2	Mitsune	2.87	183	Pn	Pn	21 58 16.8	+1.0
JHS	Saijyo	5.68	262	Pn	Pn	21 58 56.1	+1.6
ERM	Erimo	6.51	21	Pn	Pn	21 59 06.2	+0.4
ASAJ	Asahikawa	8.37	13	P	Pn	21 59 33.2	+1.9
	3.7nm,0.3s,baz=246,slow=8.0,SNR=6.2						
ASAJ				LR	LR	22 02 55.7	
	comp=Z,73nm,19.0s,baz=116,slow=38						
JKA	Kamikawa-asahi	8.37	13	Pn	Pn	21 59 31.6	+0.3
JCJ	Chichijima	9.06	167	P	Pn	21 59 38.9	-1.9
	25nm,0.3s,baz=77,slow=15,SNR=13						
JCJ				S	Sn	22 01 14.2	-7.2
	48nm,0.7s,baz=268,slow=20,SNR=2.4						
JCJ	Chichijima	9.06	167	Pn	Pn	21 59 39.2	-1.6
KSRS	Korea Array	9.79	282	P	Pn	21 59 54.5	+3.8
	1.5nm,0.4s,baz=95,slow=14,SNR=6.3						
KSRS				LR	LR	22 03 31.4	
	comp=Z,111nm,20.0s,baz=90,slow=37						
USRK	Ussuriysk Ar.	10.23	326	P	Pn	22 00 02.2	+5.5
	8.3nm,0.8s,baz=156,slow=14,SNR=9.8						
JOW	Kunigami	13.52	231	LR	LR	22 06 05.6	
	comp=Z,72nm,18.1s,baz=12,slow=38						
KLR	Kul'dur	14.54	338	P	Pn	22 00 54.6	-0.8
	1.4nm,0.8s,baz=97,slow=21,SNR=2.4						
KLR				LR	LR	22 06 24.2	
	comp=Z,32nm,18.7s,baz=140,slow=36						
PETK	Petropavlovsk-	21.18	31	P	P	22 02 13.3	-0.5
	1.3nm,0.8s,baz=196,slow=41,SNR=1.9						
	1.3nm,0.8s						
HHC	Hu-ho-hao-te	22.73	291	eP	P	22 02 30.0	-0.7
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						

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HHC                                 pmax   pmax
      comp=Z,120nm,5.5s
HHC                                 pmax   pmax
      comp=Z,26nm,1.0s
HHC                                 pmax   pmax
      comp=Z,140nm,5.3s
YAK   Yakutsk           26.86 349   LR     LR     22 13 54.1
      comp=Z,48nm,18.5s,baz=89,slow=36
SONM  Songino Array     27.44 306   P      P      22 03 13.9  -0.2
      comp=Z,0.7nm,0.4s,baz=111,slow=8.8,SNR=4.5
SONM                                LR     LR     22 13 30.1
      comp=Z,39nm,21.1s,baz=106,slow=35
      comp=Z,0.7nm,0.4s
SONM  Songino Array     27.44 306   P      P      22 03 13.8  -0.2
H11N2 WAKE ISLAND Hy    28.65 117   T      T      22 33 38.6
      baz=312,slow=75
H11N1 WAKE ISLAND Hy    28.66 117   T      T      22 33 38.7
      baz=312,slow=75,SNR=119
H11N3 WAKE ISLAND Hy    28.67 117   T      T      22 33 43.4
      baz=312,slow=75,SNR=7.3
LZH   Lanzhou           29.11 281  eP      P      22 03 34.8  +5.7
LZH                                 pP     pP     22 03 45.6  +4.1
LZH                                 pmax   pmax
      comp=Z,7.0nm,1.1s
H11S1 WAKE ISLAND Hy    29.31 119   T      T      22 34 30.3
      baz=314,slow=75
H11S3 WAKE ISLAND Hy    29.31 119   T      T      22 34 30.4
      baz=314,slow=75
H11S2 WAKE ISLAND Hy    29.33 119   T      T      22 34 31.6
      baz=314,slow=75
GTA   Gaotai            31.78 288  eP      P      22 03 51.9  -0.7
GTA                                 pP     pP     22 04 04.4  -0.6
GTA                                 sP     sP     22 04 11.9  +1.3
GTA                                 pmax   pmax
      comp=Z,2.0nm,0.6s
PZH   PanZhiHua         33.85 265   P      P      22 04 12.3  +1.5
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
      comp=Z,80nm,5.3s
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                 pmax   pmax
      comp=Z,100nm,6.9s
TIXI  Tiksi             36.20 354   P      P      22 04 30.3   0.0
      comp=Z,1.5nm,0.5s,baz=90,slow=24,SNR=9.5
      comp=Z,1.5nm,0.5s
TIXI  Tiksi             36.20 354   P      P      22 04 29.8  -0.6
WMQ   Urumqi            40.29 298  eP      P      22 05 07.0  +1.8
ZAA0  Zalesovo Array    41.78 313   P      P      22 05 16.4  -0.8
ZAA0                                IAmb   IAmb   22 05 18.1
      comp=Z,9.0nm,0.7s
ZALV  Zalesovo Beam     41.78 313   P      P      22 05 17.3  +0.2
      comp=Z,10.0nm,0.6s,baz=91,slow=6.2,SNR=36
ZALV                                PcP    PcP    22 07 12.6   0.0
      comp=Z,1.4nm,0.5s,baz=109,slow=3.4,SNR=5.3
      comp=Z,10.0nm,0.6s
MK31  Makanchi Array    43.70 303   P      P      22 05 32.3  -0.6
MKAR  Makanchi Array    43.70 303   P      P      22 05 32.9  -0.1
      comp=Z,1.6nm,0.6s,baz=84,slow=9.2,SNR=17
MKAR                                PcP    PcP    22 07 19.3   0.0
      comp=Z,0.7nm,0.7s,baz=48,slow=4.3,SNR=3.9
      comp=Z,1.6nm,0.6s
MKAR  Makanchi Array    43.70 303   P      P      22 05 32.3  -0.6
NRIK  Noril'sk          43.74 336   P      P      22 05 32.4  -0.5
      comp=Z,2.1nm,0.6s,baz=119,slow=9.0,SNR=2.8
      comp=Z,2.1nm,0.6s
NRIK  Noril'sk          43.74 336   P      P      22 05 30.9  -2.0
MAKZ  Makanchi          43.91 303   P      P      22 05 33.6  -1.0
KURK  Kurchatov         45.68 309   P      P      22 05 48.4  -0.2
KURBB Kurchatov Arra    45.74 309   P      P      22 05 48.8  -0.3
      comp=Z,9.3nm,0.6s,baz=83,slow=7.7,SNR=68
      comp=Z,9.3nm,0.6s
KDAK  Kodiak Island     48.65  41   P      P      22 06 12.7  +1.2
      comp=Z,2.2nm,0.4s,baz=235,slow=3.1,SNR=6.7
      comp=Z,2.2nm,0.4s
MTN   Manton Dam        49.28 191   P      P      22 06 16.5  -0.3
KSH   Kashi             49.78 294   P      P      22 06 25.3  +4.6
KSH                                 pP     pP     22 06 39.0  +5.3
KSH                                 pmax   pmax
      comp=Z,4.0nm,0.6s
AAK   Ala-Archa         49.97 299   P      P      22 06 21.8  -0.3
      comp=Z,2.9nm,0.6s,baz=122,slow=6.0,SNR=8.8
      comp=Z,2.9nm,0.6s
AAK   Ala-Archa         49.97 299   P      P      22 06 20.3  -1.8
AAK                                 IAmb   IAmb   22 06 23.1
      comp=Z,3.3nm,0.8s
BRVK  Borovoye          50.48 313   P      P      22 06 25.8  +0.2
BRVK                                IAmb   IAmb   22 06 29.8
      comp=Z,3.3nm,1.1s
IL31                    51.00  32   P      P      22 06 29.4  +0.2
ILAR  Eielson Array     51.00  32   P      P      22 06 29.9  +0.6
      comp=Z,0.8nm,0.7s,baz=277,slow=6.5,SNR=7.3
      comp=Z,0.8nm,0.7s
ILAR  Eielson Array     51.00  32   P      P      22 06 29.1  -0.2
GLI   Glacier Island    51.20  37   P      P      22 06 30.3  -0.6
GLI                                 IAmb   IAmb   22 06 32.8
      comp=Z,10nm,1.0s
SCRK  Sand Creek        52.32  33   P      P      22 06 39.8  +0.4
SCRK                                IAmb   IAmb   22 07 03.3
      comp=Z,3.9nm,1.3s
KNRA  Kununurra         52.46 194   P      P      22 06 40.3  -0.4
KNRA                                IAmb   IAmb   22 06 44.7
      comp=Z,6.3nm,0.8s
KK31  Karatay Array     52.65 300   P      P      22 06 41.6  -0.4
KK31                                IAmb   IAmb   22 06 43.1
      comp=Z,5.8nm,0.9s
KKAR  Karatay Array     52.65 300   P      P      22 06 42.0   0.0
BCAR  Beaver Creek A    53.41  34   P      P      22 06 48.8  +1.5
M27K  Edge Creek, AK    53.48  35   P      P      22 06 50.9  +3.0
M27K                                IAmb   IAmb   22 07 02.8
      comp=Z,3.0nm,0.9s
YAH   Yahtse            53.88  37   P      P      22 06 50.6  -0.4
GAR   Garm              54.10 296   P      P      22 06 52.0  -0.9
CHGR  Chuyangaron       55.07 296   P      P      22 06 59.6  -0.3
WB0   Warramunga Arr    55.70 186   P      P      22 07 03.7  -0.6
WB0                                 IAmb   IAmb   22 07 18.9
      comp=Z,5.4nm,0.9s
INK   Inuvik            55.84  27   P      P      22 07 06.0  +1.2
      comp=Z,1.7nm,0.8s,baz=288,slow=4.5,SNR=4.2
      comp=Z,1.7nm,0.8s
INK   Inuvik            55.84  27   P      P      22 07 06.6  +1.8
WB2   Warramunga Arr    55.88 186   P      P      22 07 05.5   0.0
WB2                                 IAmb   IAmb   22 07 26.0
      comp=Z,6.5nm,1.1s
WR0   Warramunga Arr    55.88 186   P      P      22 07 05.8  +0.2
WR0                                 IAmb   IAmb   22 07 13.5
      comp=Z,5.5nm,1.1s
WRA   Warramunga Arr    55.88 186   P      P      22 07 05.7  +0.1
      comp=Z,1.2nm,0.3s,baz=1.1,slow=7.7,SNR=14
      comp=Z,1.2nm,0.3s
WRA   Warramunga Arr    55.88 186   P      P      22 07 05.2  -0.3
ARU   Arti              56.38 319   P      P      22 07 08.5  -0.3
ARU                                 IAmb   IAmb   22 07 09.5
      comp=Z,5.6nm,0.6s
KBL   Kabul             56.71 291   P      P      22 07 10.8  -1.0
KBL                                 IAmb   IAmb   22 07 15.3
      comp=Z,3.8nm,0.7s
ABKAR Akbulak array     57.73 310   P      P      22 07 17.9  -0.6
AKTO  Aktyubinsk        58.52 312   P      P      22 07 23.7  -0.2
      comp=Z,1.5nm,0.6s,baz=74,slow=13,SNR=4.9
      comp=Z,1.5nm,0.6s
C36M  Paulatuk          58.86  24   P      P      22 07 26.6  +0.6
C36M                                IAmb   IAmb   22 07 28.5
      comp=Z,3.7nm,0.6s
ASAR  Alice Springs     59.60 186   P      P      22 07 32.6  +0.9
      comp=Z,0.6nm,0.5s,baz=5.0,slow=7.3,SNR=5.7
      comp=Z,0.6nm,0.5s
MBWA  Marble Bar        59.98 202   P      P      22 07 36.1  +1.9
MBWA                                IAmb   IAmb   22 07 38.9
      comp=Z,14nm,1.4s
KIRV  Kirov             60.39 323   P      P      22 07 36.8  +0.1
      comp=Z,10nm,0.5s,baz=34,slow=2.3,SNR=6.0
      comp=Z,10nm,0.5s
SPITS Spitsbergen Ar    61.33 349   P      P      22 07 43.5  +0.7
      comp=Z,2.8nm,0.8s,baz=106,slow=7.9,SNR=1.2
      comp=Z,2.8nm,0.8s
EUNU  Eureka            61.39   8   P      P      22 07 44.2  +0.9
EUNU                                IAmb   IAmb   22 07 45.1
      comp=Z,3.2nm,0.7s
HRA   Herat             61.88 294   P      P      22 07 47.4  -0.1
HRA                                 IAmb   IAmb   22 07 49.2
      comp=Z,2.3nm,0.7s
BELG  Belogornoye       63.78 317   P      P      22 07 58.8  -0.7
      comp=Z,8.4nm,0.6s,baz=325,slow=1.1,SNR=4.3
      comp=Z,8.4nm,0.6s
RES   Resolute Bay      63.90  14   P      P      22 07 59.7  -0.3
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      comp=Z,0.9nm,0.6s,baz=335,slow=7.8,SNR=4.6
      comp=Z,0.9nm,0.6s
RES   Resolute Bay      63.90  14   P      P      22 07 59.4  -0.5
RES                                 IAmb   IAmb   22 08 20.6
      comp=Z,4.4nm,1.1s
ARCES ARCESS Array B    64.57 339   P      P      22 08 04.3  -0.1
      comp=Z,2.0nm,0.7s,baz=54,slow=7.2,SNR=7.1
      comp=Z,2.0nm,0.7s
ARCES ARCESS Array B    64.57 339   P      P      22 08 05.0  +0.5
YKA   Yellowknife Ar    65.29  30   P      P      22 08 09.8  +0.6
      comp=Z,0.7nm,0.7s,baz=305,slow=6.7,SNR=6.2
      comp=Z,0.7nm,0.7s
YKA   Yellowknife Ar    65.29  30   P      P      22 08 08.8  -0.5
FIA1  FINESS Array S    69.20 332   P      P      22 08 33.6  -0.3
FIA1                                IAmb   IAmb   22 08 34.7
      comp=Z,14nm,1.1s
FINES FINESS Array B    69.20 332   P      P      22 08 34.0   0.0
      comp=Z,3.0nm,0.7s,baz=54,slow=6.7,SNR=14
      comp=Z,3.0nm,0.7s
FINES FINESS Array B    69.20 332   P      P      22 08 33.9   0.0
KBZ   Khabaz            70.70 310   P      P      22 08 43.5   0.0
      comp=Z,3.4nm,1.0s,baz=0.0,slow=1.0,SNR=3.2
      comp=Z,3.4nm,1.0s
SUMG  Summit            71.73 360   P      P      22 08 49.7   0.0
SUMG                                IAmb   IAmb   22 08 52.1
      comp=Z,4.1nm,0.6s
SUMG  Summit            71.73 360 i P      P      22 08 50.0  +0.3
SUMG                                IAmb   IAmb   22 08 52.2
      comp=Z,3.9nm,0.7s
SCO   Scoresbysund      73.03 354 i P      P      22 08 43.1   -14
SCO                                 IAmb   IAmb   22 08 48.3
      comp=Z,6.9nm,1.1s
AKASG Malin Array Be    74.41 322   P      P      22 09 04.7  -0.8
      comp=Z,1.1nm,0.5s,baz=46,slow=6.7,SNR=7.2
      comp=Z,1.1nm,0.5s
NC405 NORSAR Array S    74.48 337   P      P      22 09 05.9  +0.2
NC204 NORSAR Array S    74.66 337   P      P      22 09 06.9  +0.1
NB2   NORSAR Subarra    74.70 337   P      P      22 09 06.8  -0.2
      comp=Z,0.9nm,0.5s,baz=42,slow=5.9
NOA   NORSAR Array B    74.70 337   P      P      22 09 07.0   0.0
      comp=Z,1.0nm,0.5s,baz=55,slow=7.9,SNR=6.5
      comp=Z,1.0nm,0.5s
ICESG Greenland Ices    75.24 360 i P      P      22 09 10.3  -0.1
ICESG                               IAmb   IAmb   22 09 12.6
      comp=Z,2.9nm,0.7s
FCC   Fort Churchill    75.45  26   P      P      22 09 11.2  -0.1
LRM   Limekiln Ridge    75.70  43   P      P      22 09 14.3  +0.9
EGMT  Eagleton          75.82  41   P      P      22 09 13.2  -0.6
EGMT                                IAmb   IAmb   22 09 21.9
      comp=Z,19nm,1.3s
NVAR  Mina Array Bea    76.55  52   P      P      22 09 20.3  +2.1
      comp=Z,0.4nm,0.5s,baz=297,slow=6.0,SNR=2.1
      comp=Z,0.4nm,0.5s
DY2G  Dye2              77.75   3 i P      P      22 09 25.4  +1.0
DY2G                                IAmb   IAmb   22 09 26.7
      comp=Z,3.2nm,0.7s
KWP   Kalwaria Pacla    78.30 324   P      P      22 09 28.0  +0.5
BUR08 Bucovina Ar. S    78.40 321   P      P      22 09 27.1  -1.2
BURAR Bucovina Array    78.41 321   P      P      22 09 26.5  -1.8
BRTR  Keskin Array B    78.67 311   P      P      22 09 28.6  -1.3
      comp=Z,0.4nm,0.5s,baz=87,slow=4.9,SNR=3.0
      comp=Z,0.4nm,0.5s
BRTR  Keskin Array B    78.67 311   P      P      22 09 30.2  +0.3
PDAR  Pinedale Array    79.23  45   P      P      22 09 34.7  +1.6
      comp=Z,0.4nm,0.6s,baz=298,slow=3.2,SNR=4.5
      comp=Z,0.4nm,0.6s
PDAR  Pinedale Array    79.23  45   P      P      22 09 33.5  +0.4
CLL   Collm             81.42 330  eP      P      22 09 44.0  -0.4
GERES GERESS Array B    82.98 328   P      P      22 09 52.9  +0.1
      comp=Z,0.2nm,0.4s,baz=32,slow=5.8,SNR=2.5
      comp=Z,0.2nm,0.4s
GERES GERESS Array B    82.98 328   P      P      22 09 52.0  -0.7
EKA   Eskdalemuir Ar    83.72 340   P      P      22 09 56.5  +0.3
      comp=Z,0.4nm,0.5s,baz=38,slow=5.8,SNR=3.9
      comp=Z,0.4nm,0.5s
TXAR  Lajitas Array     91.68  52   P      P      22 10 37.1  +1.9
      comp=Z,0.5nm,0.6s,baz=302,slow=2.8,SNR=10.0
      comp=Z,0.5nm,0.6s
TORD  Torodi Ar. Bea   117.23 313   PKP    PKPdf  22 16 12.9  -0.3
      comp=Z,0.2nm,0.5s,baz=83,slow=2.7,SNR=1.4
LPAZ  La Paz           148.22  59   PKPbc  PKiKP  22 17 16.1  -0.2
      comp=Z,1.3nm,0.6s,baz=233,slow=2.8,SNR=4.8
LPAZ  La Paz           148.22  59          PKPbc  22 17 13.1  -1.6
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TIR ***16*** *21:59:52.2, 39.°27N×20.°75E, h7km, Md3.3*

IDC ***16*** *21:59:53.7±1.1, 39.°40N×20.°72E, h0km, mb3.6/8, mbtmp3.5/14, ML3.2/6, MS2.7/5, Error ellipse: s-maj=18.8km s-min=17.2km az=22.0*

BEO ***16*** *21:59:54.7±0.7, 39.°28N×20.°64E, h7km±2km, ML3.2/10*

THE ***16*** *21:59:55.0, 39.°45N×20.°72E, h0km±2km, ML3.3/8, Error ellipse: s-maj=2.5km s-min=0.6km az=31.0*

ATH ***16*** *21:59:55.0, 39.°43N×20.°72E, h10km±31km, ML3.3/11, Error ellipse: s-maj=31.6km s-min=1.1km az=0.0*

PDG ***16*** *21:59:56.3±0.9, 39.°43N×20.°61E, h8km±1km, ML3.3/10, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*

ISC 16 21:59:55.2±0.9, **39.°42N**±0.°01×**20.°69E**±0.°02, **h8**km±7km, **n170**, σ1.s80/223, **mb3.6**/8, **5C-9D**, **Greece-Albania border region**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op     ISC      h  m  s     ISC
JAN   Janina             0.26  28   P      Pg     21 59 58.6  -1.8
JAN                                 S      Sg     22 00 03.6  -0.4
JAN   Janina             0.26  28   P      Pg     21 59 58.7  -1.8
JAN                                 S      Sg     22 00 03.8  -0.2
      13µm,0.4s
IGT   Igoumenitsa        0.30 291  ePg     Pg     22 00 00.9  -0.2
IGT                                eSg     Sg     22 00 06.6  +1.5
IGT   Igoumenitsa        0.30 291   P      Pg     22 00 00.7  -0.4
IGT                                 S      Sb     22 00 06.8  -1.1
IGT                                 AML    AML    22 00 09.1
      comp=N,14668µm,0.5s
IGT                                 AML    AML    22 00 09.2
      comp=E,18540µm,0.3s
IGT   Igoumenitsa        0.30 291   P      Pg     22 00 00.7  -0.4
IGT                                 S      Sg     22 00 06.5  +1.5
      comp=E,8µm,0.4s
IGT   Igoumenitsa        0.30 291   P      Pg     22 00 01.1   0.0
      baz=310
IGT                                 S      Sg     22 00 06.5  +1.4
      baz=310
TSLK  Tsoukalades, L     0.60 183   P      Pg     22 00 06.8   0.0
TSLK                                S      Sg     22 00 14.5   0.0
TSLK  Tsoukalades, L     0.60 183   P      Pg     22 00 06.8   0.0
TSLK                                S      Sb     22 00 16.4  -0.1
      comp=E,3µm,0.5s
LKD2  Lefkada island     0.63 182   P      Pg     22 00 06.9  -0.5
LKD2                                AML    AML    22 00 23.4
      comp=E,5181µm,0.3s
LKD2                                AML    AML    22 00 27.1
      comp=N,7231µm,0.6s
LKD2  Lefkada island     0.63 182   P      Pg     22 00 06.9  -0.5
KASA  Kassiopi           0.67 299   P      Pg     22 00 08.0   0.0
KASA                                AML    AML    22 00 24.0
      comp=N,4157µm,0.8s
KASA                                AML    AML    22 00 24.3
      comp=E,6672µm,1.1s
SRN   Sarande            0.70 311   P      Pg     22 00 08.4  -0.3
SRN   Sarande            0.70 311   P      Pg     22 00 08.6  -0.2
      baz=317
SRN                                 S      Sn     22 00 21.5  -0.9
      baz=317
NYDR  Nydri-Lefkada      0.71 180   P      Pg     22 00 08.0  -0.9
NYDR  Nydri-Lefkada      0.71 180   P      Pg     22 00 08.2  -0.6
NYDR                                S      Sb     22 00 20.5  +0.9
      comp=E,2µm,0.8s
LSK   Leskovik           0.73 354   P      Pg     22 00 08.1  -1.1
LSK   Leskovik           0.73 354   P      Pg     22 00 09.1  -0.2
      baz=353
LSK                                 S      Sn     22 00 23.2   0.0
      baz=353
KPRO  Kipourio           0.74  44   P      Pg     22 00 08.4  -1.1
KPRO                                S      Sg     22 00 18.8  -0.4
KPRO                                AML    AML    22 00 27.4
      comp=E,6938µm,0.7s
KPRO                                AML    AML    22 00 31.2
      comp=N,8889µm,1.3s
KPRO  Kipourio           0.74  44   P      Pg     22 00 08.4  -1.1
KEK   Kerkira            0.75 293   P      Pg     22 00 09.0  -0.6
KEK                                 AML    AML    22 00 28.5
      comp=E,4183µm,0.4s
KEK                                 AML    AML    22 00 29.6
      comp=N,5100µm,0.9s
KEK   Kerkira            0.75 293   P      Pg     22 00 09.0  -0.6
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EVGI  Lefkada island     0.80 182   P      Pg     22 00 09.4  -1.2
EVGI  Lefkada island     0.80 182   P      Pg     22 00 09.9  -0.7
PENT  Pentalofos         0.84  24   P      Pg     22 00 11.1  -0.3
FSK   Fiskardo           0.97 186   P      Pg     22 00 13.4  -0.4
FSK   Fiskardo           0.97 186   P      Pg     22 00 13.4  -0.4
EVR   Evrytania          1.00 120   P      Pg     22 00 13.3  -1.2
EVR                                 AML    AML    22 00 33.7
      comp=N,2210µm,0.7s
EVR                                 AML    AML    22 00 44.9
      comp=E,1963µm,0.7s
EVR   Evrytania          1.00 120   P      Pg     22 00 13.3  -1.2
NEST  Nestorio           1.03  15   P      Pg     22 00 14.2  -0.7
NEST                                AML    AML    22 00 40.9
      comp=N,1803µm,0.5s
NEST                                AML    AML    22 00 47.6
      comp=E,1962µm,0.6s
THL   Klokotos Trika     1.03  82   P      Pg     22 00 13.7  -1.3
PVO   Paravola           1.03 141   P      Pg     22 00 14.0  -1.1
KEF4  Livadi, Kephal     1.18 190   P      Pn     22 00 18.1  +0.1
KEF4  Livadi, Kephal     1.18 190   P      Pn     22 00 18.2  +0.2
KEF4                                S      Sn     22 00 36.1  +1.9
      comp=E,14µm,0.5s
MAKR  Makrakomi, Fth     1.19 110   P      Pb     22 00 17.0  -1.0
KBN   Korca              1.20   3   P      Pn     22 00 19.3  +1.0
      baz=1.0
KBN                                 S      Sn     22 00 38.3  +3.4
      baz=1.0
DMLN  Damoulianata-K     1.21 192   P      Pb     22 00 18.0  -0.3
DMLN                                S      Sn     22 00 36.8  +1.9
      comp=E,3µm,0.7s
KZN   Kozani             1.21  43   P      Pb     22 00 17.0  -1.5
KZN                                 AML    AML    22 00 40.9
      comp=E,1922µm,0.6s
KZN                                 AML    AML    22 00 43.1
      comp=N,938µm,0.9s
KZN   Kozani             1.21  43   P      Pb     22 00 16.9  -1.5
TYRN  Tyrnavos           1.23  76   P      Pb     22 00 17.9  -0.7
VLS   Valsamata          1.25 184   P      Pn     22 00 18.2  -0.7
VLS                                 S      Sn     22 00 38.0  +2.1
      comp=N,2µm,0.6s
KEF3  Kipouria, Keph     1.25 193   P      Pg     22 00 19.1   0.0
KEF3  Kipouria, Keph     1.25 193   P      Pg     22 00 19.3  +0.2
ANX   Ano Chora          1.27 131   P      Pn     22 00 18.3  -0.9
ANX                                 AML    AML    22 00 47.3
      comp=N,2710µm,0.5s
ANX                                 AML    AML    22 00 49.0
      comp=E,3748µm,0.6s
ANX   Ano Chora          1.27 131   P      Pn     22 00 18.5  -0.7
PSDA  Pessada-Kefalo     1.31 184   P      Pn     22 00 19.2  -0.5
PSDA                                S      Sn     22 00 39.8  +2.4
      comp=E,238nm,0.7s
AGG   Agios Georgios     1.33 107   P      Pn     22 00 19.4  -0.7
EFP   Efpalio            1.37 136   P      Pg     22 00 21.6  +0.1
VLO   Vlora              1.39 319   P      Pg     22 00 23.6  +1.8
      baz=322
VLO                                 S      Sg     22 00 44.7  +4.8
      baz=322
FNA   Florina            1.46  21  ePg     Pb     22 00 22.4  -0.2
FNA                                eSg     Sg     22 00 45.2  +3.2
FNA   Florina            1.46  21   P      Pn     22 00 22.1  +0.3
FNA   Florina            1.46  21   P      Pg     22 00 23.1  -0.1
      baz=17
FNA                                 S      Sg     22 00 45.4  +3.4
      baz=17
RLS   Riolos of Patr     1.49 156   P      Pn     22 00 22.4  +0.2
RLS   Riolos of Patr     1.49 156   P      Pb     22 00 22.8  -0.3
LIT   Litokhoron         1.54  63   P      Pn     22 00 23.4  +0.4
DRO   Drossia            1.67 151   P      Pb     22 00 25.8  -0.4
DRO   Drossia            1.67 151   P      Pb     22 00 25.8  -0.4
OHR   Ohrid              1.69   3  ePg     Pg     22 00 28.7  +1.1
OHR                                eSg     Sg     22 00 53.8  +4.3
OHR   Ohrid              1.69   3 i Pn     Pg     22 00 28.7  +1.1
KLV   Kalavryta, Ach     1.79 140   P      Pb     22 00 28.2  -0.1
KLV                                 AML    AML    22 01 10.5
      comp=N,907µm,0.9s
KLV                                 AML    AML    22 01 10.6
      comp=E,911µm,0.9s
LKR   Lokris             1.96 113   P      Pn     22 00 29.5  +0.9
NEO   Neokhori           1.97  93   P      Pn     22 00 29.7  +0.9
NEO                                 AML    AML    22 01 09.7
      comp=E,883µm,0.5s
NEO                                 AML    AML    22 01 11.3
      comp=N,1517µm,1.0s
TIR   Tirane             2.02 342 ⇓P       Pb     22 00 31.9  -0.3
TIR   Tirane             2.02 342  ePn     Pb     22 00 32.0  -0.2
TIR   Tirane             2.02 342   P      Pb     22 00 32.5  +0.3
      baz=343
TIR                                 S      Sg     22 01 02.9  +2.7
      baz=343
PHP   Peshkopia          2.27 355   P      Pb     22 00 36.3  -0.1
      baz=355
PHP                                 S      Sg     22 01 09.0  +1.0
      baz=355
VAY   Valandovo          2.38  37  ePn     Pb     22 00 36.3  -1.9
VAY                                eSn     Sb     22 01 06.8  -0.9
VAY   Valandovo          2.38  37 i Pn     Pb     22 00 36.5  -1.7
SRS   Serrai             2.79  52  ePn     Pn     22 00 40.7  +0.6
BCI   Bajram Curri       2.98 351   P      Pb     22 00 45.8  -2.7
      baz=351
BCI                                 S      Sb     22 01 25.8  +0.8
      baz=351
DRME  Dracevica, Mon     2.99 338  ePn     Pn     22 00 43.8  +1.0
DRME  Dracevica, Mon     2.99 338⇓iPn      Pn     22 00 44.0  +1.2
DRME                              i Sn     Sb     22 01 22.4  -2.9
TIP   Timpagrande        3.06 267 ⇓P       Pn     22 00 44.6  +0.7
BUM   Brajici-Budva      3.18 335⇑iPn      Pn     22 00 46.0  +0.4
BUM                               i Sn     Sn     22 01 27.0  +3.3
PDG   Podgorica          3.19 341  ePn     Pn     22 00 46.1  +0.5
TTG   Podgorica          3.19 341⇑iPn      Pn     22 00 47.4  +1.8
TTG                               i Sn     Sb     22 01 27.6  -3.6
PVY   Plav               3.22 350⇓iPn      Pn     22 00 48.3  +2.2
PVY                               i Sn     Sn     22 01 28.2  +3.6
MATE  Matera             3.30 293 ⇑P       Pn     22 00 47.7  +0.7
BOSS  Bosilegrad         3.35  23  ePn     Pn     22 00 50.8  +2.9
BOSS                               eSn     Sn     22 01 30.5  +2.6
CEME  Cevo               3.40 337⇓iPn      Pn     22 00 49.1  +0.6
CEME                              i Sn     Sn     22 01 31.7  +2.7
HCY   Herceg Novi        3.45 332  ePn     Pn     22 00 48.5  -0.7
HCY   Herceg Novi        3.45 332  ePn     Pn     22 00 49.2   0.0
HCY                               i Sn     Sn     22 01 33.1  +2.9
BARS  Barje              3.49  14  ePn     Pn     22 00 52.1  +2.3
BARS                               eSn     Sn     22 01 34.6  +3.3
IVA   Berane             3.50 350⇓iPn      Pn     22 00 51.9  +2.0
IVA                               i Sn     Sn     22 01 34.7  +3.2
KOME  Kolasin            3.54 346⇓iPn      Pn     22 00 52.0  +1.5
KOME                              i Sn     Sn     22 01 35.5  +3.0
NKME  Niksic             3.59 339⇑iPn      Pn     22 00 52.7  +1.6
NKME                              i Sn     Sn     22 01 36.5  +2.8
VTS   Vitosha            3.73  30 ⇓P       Pn     22 00 56.3  +3.2
TREB  Trebinje           3.74 332  ePn     Pn     22 00 52.9  -0.2
SELS  Selova             3.81   5  ePn     Pn     22 00 55.2  +1.1
BRY   Bratogost          3.84 336  ePn     Pn     22 00 54.6   0.0
BRY   Bratogost          3.84 336⇓iPn      Pn     22 00 54.7  +0.1
BRY                               i Sn     Sn     22 01 42.3  +2.4
SJES  Sjenica            3.87 352  ePn     Pn     22 00 56.3  +1.2
SJES                               eSn     Sn     22 01 42.1  +1.3
SJES  Sjenica            3.87 352  ePn     Pn     22 00 56.2  +1.2
UPM   Unac-Piva          4.01 341  ePn     Pn     22 00 58.4  +1.4
STON  Ston               4.12 328  ePn     Pn     22 00 57.6  -0.7
STON  Ston               4.12 328  ePn     Pn     22 00 57.7  -0.7
STON                                Sn     Sn     22 01 43.9  -2.8
IVAS  Ivanjica           4.17 355  ePn     Pn     22 00 59.7  +0.6
BOVS  Bovan              4.28  10  ePn     Pn     22 01 02.8  +2.3
RUDO  Rudo               4.31 347  ePn     Pn     22 01 02.9  +1.9
LSTV  Lastovo            4.41 321  ePn     Pn     22 01 00.9  -1.4
LSTV                                Sn     Sn     22 01 49.9  -3.8
GRUS  Gruza              4.46   0  ePn     Pn     22 01 05.3  +2.2
ZAGS  Zajecar            4.54  14  ePn     Pn     22 01 05.5  +1.4
BBLS  Lazi&#263;i        4.54 348  ePn     Pn     22 01 05.0  +0.7
BBLS  Lazi&#263;i        4.54 348  ePn     Pn     22 01 05.9  +1.6
DIVS  Divibare           4.70 354  ePn     Pn     22 01 07.1  +0.7
DIVS                               eSn     Sn     22 02 01.7  +0.5
DIVS  Divibare           4.70 354  ePn     Pn     22 01 06.2  -0.2
MAKA  Makarska           4.75 326  ePn     Pn     22 01 06.4  -0.6
MAKA                                Sn     Sn     22 01 59.0  -3.2
TRUS  Trudelj            4.80 358  ePn     Pn     22 01 09.1  +1.4
RICI  Ricice             4.87 328  ePn     Pn     22 01 08.0  -0.6
RICI                                Sn     Sn     22 02 02.9  -2.3
HVAR  Hvar               4.93 321  ePn     Pn     22 01 08.7  -0.8
HVAR                                Sn     Sn     22 02 02.6  -4.1
IDI   Anoyia             5.31 140   Pn     Pn     22 01 15.5  +0.7
      comp=N,0.5nm,0.3s,baz=347,slow=18,SNR=1.9
```

IDI				Sn	Sn	22 02 12.0	-4.2
	comp=N,0.8nm,0.3s,baz=108,slow=15,SNR=1.8						
	comp=N,12nm,1.1s						
SRKY	Kupres RS	5.34	332	ePn	Pn	22 01 16.1	+0.9
KIJV	Kijevo	5.59	326	ePn	Pn	22 01 18.3	-0.3
KIJV				Sn	Sn	22 02 19.8	-3.2
HERR	Herculane	5.60	13	⇑P	Pn	22 01 21.4	+2.7
MGRS	Mrkonjic Grad	5.67	333	ePn	Pn	22 01 19.2	-0.5
ZIRJ	Zirje	5.67	320	ePn	Pn	22 01 19.1	-0.6
ZIRJ				Sn	Sn	22 02 21.5	-3.5
FRGS	Fruska Gora	5.77	354	ePn	Pn	22 01 21.1	+0.1
FRGS	Fruska Gora	5.77	354	ePn	Pn	22 01 21.7	+0.7
MORI	Morici	5.80	322	ePn	Pn	22 01 21.0	-0.4
MORI				Sn	Sn	22 02 24.7	-3.4
BLY	Banja Luka	5.93	335	ePn	Pn	22 01 23.3	+0.1
DUGI	Dugi Otok	6.21	319	i Pn	Pn	22 01 26.2	-1.0
DUGI				Sn	Sn	22 02 34.7	-3.6
UDBI	Udbina	6.28	326	ePn	Pn	22 01 27.7	-0.5
UDBI				Sn	Sn	22 02 37.0	-3.2
A252A	Venje	6.37	342	ePn	Pn	22 01 28.7	-0.5
A252A				Sn	Sn	22 02 39.4	-2.6
VIRC	Vir	6.43	321	i Pn	Pn	22 01 29.6	-0.5
VIRC				Sn	Sn	22 02 39.8	-3.8
A251A	Rujevac	6.58	332	ePn	Pn	22 01 31.4	-0.7
A251A				Sn	Sn	22 02 44.3	-3.0
PLIT	Plitvice	6.62	327	ePn	Pn	22 01 31.4	-1.4
PLIT				Sn	Sn	22 02 45.9	-2.6
RABC	Rab	6.90	322	ePn	Pn	22 01 34.6	-1.9
RABC				Sn	Sn	22 02 50.6	-4.6
KOVH	Kovagotottos	6.93	345	P	Pn	22 01 38.5	+1.5
A250A	Rusevo Krmpots	7.10	325	ePn	Pn	22 01 38.0	-1.3
A250A				Sn	Sn	22 02 57.1	-3.0
MLR	Muntele Rosu	7.20	31	Pn	Pn	22 01 43.0	+2.2
	comp=N,0.1nm,0.3s,baz=349,slow=5.2,SNR=1.7						
	comp=N,2.3nm,0.8s						
BOJS	Bojanci	7.29	328	i Pn	Pn	22 01 41.5	-0.4
SMRN	Sveta Marina	7.41	321	ePn	Pn	22 01 42.0	-1.5
SMRN				Sn	Sn	22 03 03.6	-4.2
CRES	Cresnjev	7.47	331	ePn	Pn	22 01 43.4	-1.0
GBRS	Gornja Briga	7.49	326	i Pn	Pn	22 01 44.6	-0.1
BRJN	Brijuni	7.52	319	ePn	Pn	22 01 43.7	-1.3
BRJN				Sn	Sn	22 03 06.1	-4.3
CEY	Cerknica	7.82	326	ePn	Pn	22 01 48.7	-0.5
SKDS	Skadanscina	7.86	323	ePn	Pn	22 01 49.3	-0.4
VNDS	Vrh nad Dolski	8.00	329	ePn	Pn	22 01 50.7	-0.9
MPLH	Magyarpolny	8.08	345	P	Pn	22 01 57.7	+5.0
SOKA	Soboth	8.35	332	ePn	Pn	22 01 56.1	-0.4
	comp=N,1.2nm,0.4s						
OBKA	Obir	8.39	330	ePn	Pn	22 01 57.2	+0.1
	comp=N,2.4nm,0.7s						
PSZ	Piszkesteto	8.51	356	P	Pn	22 02 03.6	+4.9
ARSA	Arzberg	8.68	336	ePn	Pn	22 02 03.4	+2.4
	comp=N,0.8nm,0.3s						
SOP	Sopron	8.78	341	S	Sn	22 03 30.8	-11
MYKA	Terra Mystica	8.86	327	ePn	Pn	22 02 06.7	+3.2
	comp=N,1.2nm,0.3s						
RONA	Rosalia, Austr	8.87	340	ePn	Pn	22 02 06.9	+3.4
	comp=N,0.4nm,0.3s						
CONA	Conrad Observa	9.19	339	ePn	Pn	22 02 11.0	+3.0
	comp=N,0.5nm,0.4s						
KBA	Koelnbreinsper	9.34	327	ePn	Pn	22 02 13.0	+2.9
	comp=N,0.4nm,0.2s						
ABTA	Abfaltersbach	9.45	323	ePn	Pn	22 02 12.3	+0.7
	comp=N,0.7nm,0.4s						
MOA	Molln	9.62	333	ePn	Pn	22 02 14.6	+0.7
	comp=N,0.6nm,0.2s						
BIOA	Bad Ischl, Aus	9.72	331	ePn	Pn	22 02 15.7	+0.5
	comp=N,2.1nm,0.5s						
KEST	Kesra	9.73	251	LR	LR	22 07 15.9	
	comp=N,45nm,21.3s,baz=276,slow=45						
BRTR	Keskin Array B	10.00	84	Pn	Pn	22 02 22.9	+3.6
	comp=N,0.1nm,0.3s,baz=266,slow=11,SNR=1.9						
BRTR				LR	LR	22 06 24.9	
	comp=N,37nm,21.6s,baz=212,slow=39						
	comp=N,0.2nm,0.3s						
WTTA	Wattenberg	10.24	323	ePn	Pn	22 02 22.7	+0.3
	comp=N,1.4nm,0.6s						
VRAC	Vranov	10.31	345	LR	LR	22 07 14.3	
	comp=N,64nm,20.5s,baz=206,slow=43						
WATA	Walderalm	10.32	323	ePn	Pn	22 02 24.9	+1.4
	comp=N,1.6nm,0.3s						
SQTA	Sankt Quirin	10.41	322	ePn	Pn	22 02 27.4	+2.7
	comp=N,0.8nm,0.2s						
FETA	Feichten	10.51	320	ePn	Pn	22 02 28.6	+2.5
	comp=N,0.8nm,0.6s						
MOTA	Moosalm	10.55	322	ePn	Pn	22 02 27.5	+0.8
	comp=N,1.3nm,0.5s						
GERES	GERESS Array B	10.67	334	Pn	Pn	22 02 28.3	0.0
	comp=N,0.2nm,0.3s,baz=164,slow=15,SNR=5.1						
	comp=N,0.3nm,0.4s						
DAVOX	Davos/Dischmat	10.79	316	Pn	Pn	22 02 31.9	+1.9
	comp=N,0.1nm,0.3s,baz=134,slow=18,SNR=2.4						
DAVOX				LR	LR	22 07 33.1	
	comp=N,38nm,20.5s,baz=84,slow=42						
	comp=N,0.9nm,0.6s						
ESDC	Sonseca Array	19.00	279	P	Pn	22 04 18.9	+0.9
	baz=77,slow=10,SNR=7.5						
	comp=N,1.2nm,1.0s						
FINES	FINESS Array B	22.30	7	P	P	22 04 54.4	+1.7
	comp=N,1.0nm,0.7s,baz=187,slow=9.6,SNR=5.6						
	comp=N,1.0nm,0.7s						
NB2	NORSAR Subarra	22.43	348	P	P	22 04 54.7	+0.6
	comp=Z,5.7nm,1.2s,baz=160,slow=11						
NOA	NORSAR Array B	22.43	348	P	P	22 04 54.0	-0.2
	comp=Z,1.3nm,0.9s,baz=164,slow=10,SNR=4.1						
NOA				LR	LR	22 14 57.0	
	comp=Z,19nm,21.2s,baz=175,slow=40						
	comp=Z,1.3nm,0.9s						
EKA	Eskdalemuir Ar	22.50	323	P	P	22 04 54.4	-0.6
	comp=Z,1.0nm,0.6s,baz=122,slow=10,SNR=5.4						
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	30.28	3	P	P	22 06 06.5	+0.1
	comp=Z,1.1nm,1.0s,baz=185,slow=9.1,SNR=3.6						
	comp=Z,1.1nm,1.0s						
TORD	Torodi Ar. Bea	31.09	218	P	P	22 06 13.2	-0.7
	comp=Z,1.3nm,0.9s,baz=34,slow=10,SNR=6.3						
	comp=Z,1.3nm,0.9s						
KURBB	Kurchatov Arra	41.39	55	P	P	22 07 40.6	-1.1
	comp=Z,0.6nm,0.7s,baz=283,slow=9.0,SNR=3.5						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	44.55	59	P	P	22 08 06.2	-1.1
	comp=Z,0.5nm,0.5s,baz=292,slow=6.9,SNR=5.4						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	44.77	49	P	P	22 08 06.8	-2.1
	comp=Z,0.6nm,0.4s,baz=296,slow=8.8,SNR=3.4						
	comp=Z,0.6nm,0.4s						

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*IDC **16** 21:59:56.9±1.5, 56°.25S×143°.95W, h0^{km}, mb3.6/3, mbtmp3.6/3, MS3.6/13, Error ellipse: s-maj=54.8km s-min=45.6km az=154.0*

ISC 16 22:00:01.0±1.6**, 56°.3S**±0°.3×**144°.6W**±0°.4**, h10^{km}, n28, σ1^{s}34**/6**, mb3.8**/3**, MS3.6**/13**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	28.04	202	P	P	22 05 51.5	-0.2
	0.5nm,0.9s,baz=68,slow=6.6,SNR=2.4						
VNDA				LR	LR	22 14 15.7	
	comp=Z,66nm,21.3s,baz=48,slow=30						
	0.5nm,0.9s						
RPZ	Rata Peaks	30.61	275	LR	LR	22 16 55.8	
	comp=Z,63nm,19.8s,baz=324,slow=33						
URZ	Urewera	31.11	289	LR	LR	22 15 37.0	
	comp=Z,122nm,21.5s,baz=212,slow=30						
QSPA	South Pole Qui	33.82	180	LR	LR	22 19 06.4	
	comp=Z,122nm,18.1s,baz=63,slow=34						
RAR	Rarotonga	36.85	336	LR	LR	22 18 39.0	
	comp=Z,113nm,18.5s,baz=209,slow=30						
PMSA	Palmer Station	37.84	136	LR	LR	22 18 13.6	
	comp=Z,104nm,20.8s,baz=241,slow=29						
RPN	Rapa Nui	38.55	56	LR	LR	22 18 51.9	
	comp=Z,88nm,21.3s,baz=254,slow=30						
PPT	Papeete	38.89	352	LR	LR	22 18 37.3	
	comp=Z,93nm,20.5s,baz=172,slow=29						
AFI	Afiamalu	47.20	323	LR	LR	22 22 39.9	
	comp=Z,65nm,21.7s,baz=86,slow=29						
H03S2	Juan Fernandez	49.35	92	T	T	23 01 48.6	
	baz=220						
H03S1	Juan Fernandez	49.36	92	T	T	23 01 49.8	
	baz=220						
H03S3	Juan Fernandez	49.37	92	T	T	23 02 05.8	
	baz=220						
H03N3	Juan Fernandez	49.63	91	T	T	23 02 06.9	
	baz=223,slow=72,SNR=42						
H03N2	Juan Fernandez	49.64	91	T	T	23 02 06.0	
	baz=223,slow=72,SNR=69						
H03N1	Juan Fernandez	49.65	91	T	T	23 02 05.9	
	baz=223,slow=72,SNR=41						
MAW	Mawson	54.70	192	LR	LR	22 31 09.9	
	comp=Z,61nm,18.4s,baz=18,slow=34						
ASAR	Alice Springs	65.99	263	P	P	22 10 48.3	+0.8
	0.7nm,0.8s,baz=140,slow=7.3,SNR=4.9						
	0.7nm,0.8s						
H01W1	Cape Leeuwin H	67.44	241	T	T	23 25 33.0	
	baz=142,slow=76,SNR=49						
H01W2	Cape Leeuwin H	67.45	241	T	T	23 25 32.8	
	baz=142,slow=76,SNR=54						
H01W3	Cape Leeuwin H	67.46	241	T	T	23 25 34.0	
	baz=142,slow=76,SNR=45						
NNA	Nana	67.80	78	LR	LR	22 33 56.5	
	comp=Z,45nm,18.3s,baz=224,slow=30						
WRA	Warramunga Arr	68.72	266	P	P	22 11 03.8	-1.1
	0.5nm,0.8s,baz=149,slow=5.4,SNR=4.9						
	0.5nm,0.8s						
CMIG	Matias Romero	84.15	47	LR	LR	22 42 38.8	
	comp=Z,51nm,19.0s,baz=176,slow=31						
SUR	Sutherland	90.76	168	LR	LR	22 50 36.1	
	comp=Z,56nm,18.8s,baz=130,slow=34						
H02S1	DAWSON INLET T	109.63	8	T	T	00 16 35.7	
	SNR=5.1						
ILAR	Eielson Array	120.80	359	PKP	PKPdf	22 18 50.6	-1.0
	0.2nm,0.6s,baz=199,slow=2.5,SNR=3.0						
ESDC	Sonseca Array	149.36	106	PKPbc	PKPdf	22 19 45.0	0.0
	0.1nm,0.3s,baz=245,slow=2.7,SNR=2.4						
MKAR	Makanchi Array	149.89	272	PKPbc	PKPdf	22 19 47.1	+1.6
	0.4nm,0.7s,baz=122,slow=4.4,SNR=3.3						

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*IDC **16** 22:13:37.0±1.4, 7°.21S×124°.64E, h0^{km}, mb4.0/2, mbtmp4.2/5, ML4.4/3, Error ellipse: s-maj=65.4km s-min=23.5km az=73.0*

*DJA **16** 22:13:53.5±0.5, 9°S±6°×12°3E±°, h177^{km}±6^{km}, M3.9/7, mb4.5/1, mB5.3/1, MLv3.6/7, Mw(mB)4.7/1*

*NEIC **16** 22:13:54.2±2.7, 8°.4S±0°.1×123°.33E±0°.09, h162^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=18.1km s-min=8.5km az=218.0*

ISC 16 22:13:54.0±0.8**, 8°.51S**±0°.07×**123°.31E**±0°.07**, h169^{km}**±7^{km}**, n47, σ1^{s}14**/52**, mb3.9**/5**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.07	263		Pn	22 14 20.9	-0.3
MMRI	Maumere	1.07	263	P	Pn	22 14 20.6	-0.6
MMRI				S	Sn	22 14 41.7	-0.3
MMRI	Maumere	1.07	263	P	Pn	22 14 21.2	0.0
SOEI	Soe	1.56	143	Pn	Pn	22 14 26.0	+0.2
SOEI	Soe	1.56	143	P	Pn	22 14 26.5	+0.7
SOEI				S	Sn	22 14 50.8	+0.4
SOEI	Soe	1.56	143	P	Pn	22 14 25.6	-0.2
EDFI	Ende, Flores	1.62	261	P	Pn	22 14 26.5	+0.1
EDFI				S	Sn	22 14 50.9	-0.4
BATI	Baumata	1.73	168	Pn	Pn	22 14 27.8	+0.3
	105nm,0.3s,baz=11,slow=5.2,SNR=74						
BATI				Sn	Sn	22 14 53.3	0.0
	399nm,0.3s,baz=77,slow=3.7,SNR=11						
	357nm,0.4s						
BATI	Baumata	1.73	168	P	Pn	22 14 27.7	+0.3
BATI				S	Sn	22 14 53.9	+0.6
BBSI	Bau Bau	3.09	346	P	Pn	22 14 45.1	+1.8
BKSI	Bulukumba	4.47	315	P	Pn	22 14 59.4	-1.6
PLAI	Plampang	5.48	266	P	Pn	22 15 14.7	+0.6
MTN	Manton Dam	8.81	120	Pn	Pn	22 15 56.8	-1.4
MTN	Manton Dam	8.81	120	P	Pn	22 15 57.0	-1.2
KNRA	Kununurra	8.90	144	Pn	Pn	22 15 57.4	-1.9
KNRA	Kununurra	8.90	144	P	Pn	22 15 57.6	-1.7
KDU	Kakadu	9.92	116	P	Pn	22 16 11.1	-1.7
MBWA	Marble Bar	13.04	195	Pn	Pn	22 16 55.0	+1.8
PSA00	Pilbara Seismi	13.41	194		P	22 17 01.0	-0.4
WB0	Warramunga Arr	15.51	137	Pn	Pn	22 17 22.3	-1.7
WB0				IAmb	IAmb	22 17 26.9	
	comp=Z,7.3nm,0.8s						
WRA	Warramunga Arr	15.60	138	Pn	Pn	22 17 22.6	-2.4
	comp=Z,1.2nm,0.3s,baz=318,slow=12,SNR=57						
WRA				Sn	Sn	22 20 06.2	-13
	comp=Z,0.6nm,0.3s,baz=305,slow=23,SNR=3.4						
	comp=Z,3.7nm,0.5s						
WRA	Warramunga Arr	15.60	138		P	22 17 24.6	-1.1
WRAB	Tennant Creek	15.60	138	P	Pn	22 17 24.0	-1.1
WB2	Warramunga Arr	15.60	138	Pn	Pn	22 17 23.7	-1.4
WB2				IAmb	IAmb	22 17 27.6	
	comp=Z,6.9nm,0.8s						
WR0	Warramunga Arr	15.74	138	Pn	Pn	22 17 25.0	-1.9
WRKA	Warakurna	17.11	164	P	Pn	22 17 43.7	+0.3
AS31	Alice Springs	18.17	147	P	Pn	22 17 55.3	-0.7
AS31				IAmb	IAmb	22 17 57.3	
	comp=Z,3.3nm,0.5s						
ASAR	Alice Springs	18.17	147	P	Pn	22 17 55.4	-0.6
	comp=Z,1.1nm,0.3s,baz=329,slow=13,SNR=47						
ASAR				S	S	22 21 11.9	-1.5
	comp=Z,1.5nm,0.7s,baz=315,slow=22,SNR=6.8						
	comp=Z,4.7nm,0.5s						
ASAR	Alice Springs	18.17	147	P	Pn	22 17 55.5	-0.4
QIS	Mount Isa	19.79	129	P	Pn	22 18 13.1	-1.8
COEN	Coen	20.22	107	P	Pn	22 18 16.9	-3.3
COEN				IAmb	IAmb	22 18 22.3	
	comp=Z,18nm,1.3s						
MORW	Morawa	21.57	198	P	P	22 18 29.7	-0.7
MORW				IAmb	IAmb	22 18 38.4	
	comp=Z,18nm,1.2s						
MORW	Morawa	21.57	198	P	P	22 18 30.1	-0.3
OOD	Oodnadatta	22.47	150	P	P	22 18 40.7	+1.4
FORT	Forrest	22.60	169	P	P	22 18 40.6	+0.1
FORT	Forrest	22.60	169	P	P	22 18 41.0	+0.5
BLDU	Ballidu	22.84	195	P	P	22 18 42.7	0.0
KLBR	Kellerberrin	23.54	192	P	P	22 18 49.9	+0.8
MULG	Mulgathing	23.89	157	P	P	22 18 54.1	+1.9
HTT	Hallett	28.69	152	P	P	22 19 37.1	+1.7
STKA	Stephens Creek	28.81	146	P	P	22 19 37.6	+1.3
MK31	Makanchi Array	66.05	330	P	P	22 24 23.4	+0.7
MK31				IAmb	IAmb	22 24 31.6	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	66.05	330	P	P	22 24 23.1	+0.4
	comp=Z,0.5nm,0.5s,baz=136,slow=8.3,SNR=8.0						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	66.05	330	P	P	22 24 23.4	+0.7
KBL	Kabul	66.80	313	P	P	22 24 27.9	-0.1
KBL				IAmb	IAmb	22 24 28.1	
	comp=Z,2.4nm,0.5s						
ZALV	Zalesovo Beam	70.18	337	P	P	22 24 46.9	-1.3
	comp=Z,0.7nm,0.3s,baz=136,slow=4.8,SNR=4.8						
	comp=Z,0.7nm,0.3s						
ZALV	Zalesovo Beam	70.18	337	P	P	22 24 47.5	-0.7

GUC 16 22:20:56.1±0.7**, 39°.80S**×**72°.91W, h68^{km}**±3^{km}**, ML3.7, 4C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LR02	Universidad Au	0.26	268	⇑eP	Pn	22 21 07.0	+0.2
LR02				i S	Sn	22 21 14.4	-0.2
LR02				IAML		22 21 16.7	
	comp=E,18μm,0.5s						
LR03	Panguipulli	0.47	70	⇓iP	Pn	22 21 08.4	0.0
LR03				i S	Sn	22 21 17.3	-0.2
LR03				IAML		22 21 17.9	
	comp=E,7μm,0.4s						
LC02	Puerto Saavedr	1.07	340	⇑iP	Pn	22 21 15.0	-0.4
LC02				i S	Sn	22 21 29.2	-0.5
LL04	Puerto Octay	1.18	161	⇑iP	Pn	22 21 16.6	-0.2
LL04				i S	Sn	22 21 31.6	-0.6
LL04				IAML		22 21 32.5	
	comp=N,2μm,0.3s						
LL05	Los Muermos	1.66	195	eP	Pn	22 21 23.2	+0.1
LL05				i S	Sn	22 21 43.2	-0.5
LL05				IAML		22 21 45.7	
	comp=E,593nm,0.5s						
LL01	San Ignacio de	2.61	172	eP	Pn	22 21 36.1	+0.2
LL01				IAML		22 22 10.6	
	comp=E,120nm,0.2s						
BI05	Punta Hualpn	3.05	356	eP	Pn	22 21 39.9	-2.1
BI05				i S	Sn	22 22 11.1	-6.2
BI05				IAML		22 22 14.4	
	comp=E,295nm,0.3s						
LL07	Hotel Espejo d	3.06	188	eP	Pn	22 21 42.1	0.0
LL07				i S	Sn	22 22 14.7	-2.8
LL07				IAML		22 22 15.3	
	comp=N,273nm,0.5s						
LL02	Futaleuf	3.48	167	⇑iP	Pn	22 21 49.4	+1.6
AY01	Puyuhuapi	4.62	178	eP	Pn	22 22 04.1	+0.7
AY01				i S	Sn	22 22 55.3	-0.4
GO05	Huala	4.84	10	eP	Pn	22 22 04.3	-2.2

ATH 16 22:29:42.3, 37°.77N×20°.74E, h13^{km}±2^{km}**, ML1.6**/2**, Error ellipse: s-maj=2.8km s-min=1.2km az=357.0, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.43	344	P	Pg	22 29 51.0	+0.1
KEF3	Kipouria, Keph	0.54	325	P	Pg	22 29 52.3	-0.5
KEF4	Livadi, Kephal	0.55	333	P	Pg	22 29 52.6	-0.6
RLS	Riolos of Patr	0.65	63	P	Pg	22 29 54.9	0.0
RLS				S	Sg	22 30 03.3	-0.1
RLS				AML	AML	22 30 11.4	
	comp=E,92μm,0.6s						
RLS				AML	AML	22 30 12.7	
	comp=N,78μm,0.5s						
FSK	Fiskardo	0.71	349	P	Pg	22 29 56.2	+0.1
FSK				S	Sg	22 30 05.5	+0.1
FSK				AML	AML	22 30 18.6	
	comp=N,175μm,0.6s						
FSK				AML	AML	22 30 22.0	
	comp=E,163μm,0.7s						
DRO	Drossia	0.79	76	P	Pg	22 29 56.8	-0.8
EVGI	Lefkada island	0.86	356	P	Pb	22 29 59.0	0.0
LKD2	Lefkada island	1.02	356	S	Sb	22 30 15.1	-0.2
PVO	Paravola	1.05	36	P	Pb	22 30 01.7	-0.7
LAKA	Lakka	1.09	64	P	Pb	22 30 02.7	-0.3
ITM	Ithomi	1.11	121	P	Pb	22 30 03.0	-0.4
KLV	Kalavryta, Ach	1.15	76	P	Pb	22 30 03.3	-0.8
ANX	Ano Chora	1.25	48	P	Pn	22 30 04.7	-0.8

THE 16 22:29:49.3, 39°.44N×20°.71E, h4^{km}±4^{km}**, ML2.3**/4**, Error ellipse: s-maj=4.1km s-min=0.7km az=328.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.25	27	P	Pg	22 29 53.2	-0.9
JAN				S	Sg	22 29 58.0	+0.7
	1μm,0.4s						
IGT	Igoumenitsa	0.31	288	P	Pg	22 29 55.3	+0.1
IGT				S	Sg	22 29 58.9	-0.3
	718nm,0.5s						
TSLK	Tsoukalades, L	0.61	184	P	Pg	22 30 01.3	+0.3
LKD2	Lefkada island	0.65	183	P	Pg	22 30 01.6	-0.1
SRN	Sarande	0.70	309	P	Pg	22 30 02.8	0.0
LSK	Leskovik	0.72	353	P	Pg	22 30 03.2	+0.1
KPRO	Kipourio	0.72	44	P	Pg	22 30 03.0	-0.2
KPRO				S	Sg	22 30 13.6	+1.0
	345nm,1.0s						
KEK	Kerkira	0.76	292	P	Pg	22 30 03.8	0.0
EVR	Evrytania	1.00	121	P	Pg	22 30 07.8	-0.7
EVR				S	Sb	22 30 22.6	-0.3
	105nm,0.4s						
THL	Klokotos Trika	1.02	82	P	Pg	22 30 08.0	-0.8
AGG	Agios Georgios	1.33	108	P	Pn	22 30 13.7	-1.0
STON	Ston	4.12	327	ePn	Pn	22 30 51.8	-1.2
STON				Sn	Sn	22 31 38.4	-3.2
LSTV	Lastovo	4.40	320	i Pn	Pn	22 30 56.0	-1.0
LSTV				Sn	Sn	22 31 44.7	-3.9
RICI	Ricice	4.86	328	ePn	Pn	22 31 03.0	-0.3
RICI				Sn	Sn	22 31 57.4	-2.6
HVAR	Hvar	4.92	321	ePn	Pn	22 31 03.1	-1.0
HVAR				Sn	Sn	22 31 57.0	-4.6
KIJV	Kijevo	5.58	326	ePn	Pn	22 31 13.1	-0.2
KIJV				Sn	Sn	22 32 14.5	-3.4
ZIRJ	Zirje	5.67	320	ePn	Pn	22 31 13.4	-1.0
ZIRJ				Sn	Sn	22 32 15.9	-4.1
MORI	Morici	5.80	321	ePn	Pn	22 31 14.3	-1.8
MORI				Sn	Sn	22 32 18.4	-4.6
DUGI	Dugi Otok	6.21	319	ePn	Pn	22 31 20.8	-1.0
DUGI				Sn	Sn	22 32 29.4	-3.9
VIRC	Vir	6.43	321	ePn	Pn	22 31 24.1	-0.7
VIRC				Sn	Sn	22 32 35.0	-3.5

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*ISK **16** 22:36:20.9, 34°.89N×33°.96E, h23^{km}, ML2.5/7*

*GII **16** 22:36:22.1±0.0, 34°.96N×34°.25E, h1^{km}±1^{km}, Mm2.1/2*

*DDA **16** 22:36:23.9±0.0, 35°.15N×33°.72E, h8^{km}±1^{km}, ML1.9*

*NIC **16** 22:36:24.3±0.0, 35°.10N×33°.84E, h9^{km}±1^{km}, Ml2.3/6*

ISC 16 22:36:23.5±0.9**, 34°.94N**±0°.03×**33°.93E**±0°.03**, h24^{km}**±6^{km}**, n33, σ1^{s}20**/57**, 1C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.10	60	⇓iP	Pb	22 36 28.2	+0.2
PARAL				AML	AML	22 36 32.5	
	3.2nm,0.6s						
PARAL				AML	AML	22 36 32.5	
	3.2nm,0.6s						
PARAL				AML	AML	22 36 32.6	
	2.9nm,0.3s						
PARAL				AML	AML	22 36 32.6	
	2.9nm,0.3s						
PARAL				S	Sb	22 36 33.0	+1.9
MVOU	Mavrovouni	0.26	286	⇓iP	Pb	22 36 28.8	-1.0
MVOU				S	Sb	22 36 32.1	-1.9
MVOU				AML	AML	22 36 32.5	
	2.4nm,0.3s						
MVOU				AML	AML	22 36 32.5	
	2.4nm,0.3s						
MVOU				AML	AML	22 36 34.2	
	1.3nm,0.2s						
MVOU				AML	AML	22 36 34.2	
	1.3nm,0.2s						
AKIN	Akıncılar- Kıb	0.39	281	PG	Pb	22 36 30.3	-1.5
LFK	Lefkose	0.47	316	PG	Pb	22 36 32.2	-1.0
LFK				SG	Sb	22 36 40.1	+0.3
ATHAL	Athalassa	0.48	294	P	Pb	22 36 32.7	-0.7
ATHAL				S	Sb	22 36 38.3	-1.8
ATHAL				AML	AML	22 36 44.5	
	1.4nm,0.4s						
ATHAL				AML	AML	22 36 44.5	
	1.4nm,0.4s						
ATHAL				AML	AML	22 36 45.2	
	1.4nm,0.3s						
ATHAL				AML	AML	22 36 45.2	
	1.4nm,0.3s						
CSS	Mathiatis	0.49	272	PG	Pb	22 36 32.3	-1.3
CSS				SG	Sb	22 36 39.6	-0.8
CSS	Mathiatis	0.49	272	⇑iP	Pb	22 36 32.5	-1.1
CSS				S	Sb	22 36 39.6	-0.8
ASGA	Asgata	0.58	255	P	Pb	22 36 36.0	+0.9
ASGA				S	Sn	22 36 44.9	-0.2
ASGA				AML	AML	22 36 46.5	
	0.6nm,0.8s						
ASGA				AML	AML	22 36 46.5	
	0.6nm,0.8s						
ASGA				AML	AML	22 36 46.8	
	0.5nm,0.2s						
ASGA				AML	AML	22 36 46.8	
	0.5nm,0.2s						
EREN	Erenkoy	0.62	18	PG	Pb	22 36 34.2	-1.4
EREN				SG	Sb	22 36 44.2	+0.3
EREN	Erenkoy	0.62	18	P	Pb	22 36 34.2	-1.4
EREN				S	Sn	22 36 44.7	-1.2
EREN				i AML	AML	22 36 51.0	
	comp=E,108nm,0.5s						
EREN				i AML	AML	22 36 55.0	
	comp=N,72nm,0.4s						
EREN				i AML	AML	22 37 01.0	
	comp=Z,133nm,0.6s						
AKDN	Akdeniz- Kıbrı	0.87	294	PG	Pn	22 36 38.8	-1.4
LEF	Lefka	0.87	282	PG	Pn	22 36 38.8	-1.4
LEF	Lefka	0.87	282	P	Pn	22 36 38.1	-2.2
LEF				S	Sn	22 36 54.0	+1.8
SZAC	Souni	0.88	258	P	Pn	22 36 40.4	0.0
SZAC				S	Sn	22 36 54.3	+1.8
SZAC				AML	AML	22 36 54.5	
	0.8nm,0.5s						
SZAC				AML	AML	22 36 54.5	
	0.8nm,0.5s						
SZAC				AML	AML	22 36 55.2	
	0.4nm,0.2s						
SZAC				AML	AML	22 36 55.2	
	0.4nm,0.2s						
ALFC	Alefka	1.11	281	P	Pn	22 36 43.8	+0.2
ALFC				S	Sb	22 36 58.4	+0.3
ALFC				AML	AML	22 37 00.6	
	0.3nm,0.6s						
ALFC				AML	AML	22 37 00.6	

	0.3nm,0.6s						
ALFC				AML	AML	22 37 02.3	
	0.4nm,0.4s						
ALFC				AML	AML	22 37 02.3	
	0.4nm,0.4s						
NATA	Nata	1.13	262	P	Pn	22 36 44.2	+0.4
AKKU	Akkuyu-Mersin	1.25	346	PN	Pn	22 36 44.3	-1.2
AKMS	Akamas	1.31	274	P	Pb	22 36 47.5	+0.1
AKMS				S	Sb	22 37 05.7	+1.8
TEVE	Tevekalti-Mers	1.54	345	PN	Pn	22 36 48.7	-0.8
GAZI	Gazipasa	1.84	315	PN	Pn	22 36 52.9	-0.7
GAZI	Gazipasa	1.84	315	P	Pn	22 36 52.1	-1.5
GAZI				S	Sn	22 37 16.4	+0.2
GAZI				*i* AML	AML	22 37 17.0	
	comp=E,15nm,0.5s						
GAZI				*i* AML	AML	22 37 20.0	
	comp=Z,12nm,1.0s						
GAZI				*i* AML	AML	22 37 20.0	
	comp=N,26nm,1.0s						
ERMK	Ermenek	1.89	334	P	Pn	22 36 54.8	+0.4
ERMK				S	Sn	22 37 16.9	-0.7
ERMK				*i* AML	AML	22 37 21.0	
	comp=E,13nm,0.8s						
ERMK				*i* AML	AML	22 37 28.0	
	comp=N,14nm,0.4s						
GEM	Giv'at Ha'Em	2.25	140	Pn	Pn	22 36 58.5	-0.7
GEM				Sn	Sn	22 37 25.5	-0.7
NATI	Neve Ativ	2.25	138	Pn	Pn	22 36 59.0	-0.2
NATI				Sn	Sn	22 37 25.3	-0.8
MMC7	Mount Meron ar	2.27	147	Pn	Pn	22 36 58.7	-0.8
MMA0B	Mount Meron ar	2.28	147	Pn	Pn	22 36 59.0	-0.7
MMA0B				Sn	Sn	22 37 27.4	+0.4
KKBE	Karaman, Kazim	2.41	341	P	Pn	22 37 03.0	+1.5
KKBE				S	Sn	22 37 32.2	+1.9
KERG	Konya-Eregli	2.47	4	P	Pn	22 37 03.3	+1.0
KERG				S	Sn	22 37 33.1	+1.2
KEPZ	Antalya-Kepez	2.72	317	P	Pn	22 37 07.2	+1.5
KEPZ				*i* AML	AML	22 37 39.0	
	comp=N,5.1nm,1.2s						
KEPZ				S	Sn	22 37 39.7	+1.8
KEPZ				*i* AML	AML	22 38 09.0	
	comp=E,6.3nm,1.5s						
MMLI	Mount Malkishu	2.79	153	Pn	Pn	22 37 06.7	0.0
MMLI				Sn	Sn	22 37 40.8	+1.2
HMDT	Nahal Hemdat	3.00	153	Pn	Pn	22 37 09.8	+0.3
HMDT				Sn	Sn	22 37 45.2	+0.6
SEDI	Konya, Seydise	3.06	326	P	Pn	22 37 12.8	+2.3
SEDI				S	Sn	22 37 47.9	+1.5
SEDI				*i* AML	AML	22 37 54.0	
	comp=Z,6.9nm,2.3s						
SEDI				*i* AML	AML	22 38 00.0	
	comp=E,4.8nm,0.9s						
DSI	Dead Sea	3.58	160	Pn	Pn	22 37 17.3	-0.2

UPA ***16*** *22:43:37.5±0.6, 8°.31N×82°.83W, h19^{km}±2^{km}, MW4.0*
UCR ***16*** *22:43:39.7±2.1, 8°.48N×82°.78W, h22^{km}±15^{km}, MW3.7*
ISC 16 22:43:36.8±1.1**, 8°.32N**±0°.06×**82°.77W**±0°.05**, h28**^{km}±8^{km}**,**
n18, σ0^{s}.61/27**, 1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.16	224	*e*P	Pb	22 43 42.0	-0.3
PTPM				*e*S	Sb	22 43 46.3	+0.1
CDITO	Canoas	0.27	338	*e*P	Pb	22 43 43.7	-0.1
CDITO				*e*S	Sb	22 43 48.4	0.0
DVD	David	0.33	70	*e*P	Pn	22 43 45.7	-0.1
DVD				*e*S	Sn	22 43 52.2	+0.5
CHIR3	Chiriqui UPA,	0.44	80	*e*P	Pn	22 43 47.4	+0.1
CHIR3				*e*S	Sn	22 43 54.7	+0.4
BCO2	Palmira	0.46	31	*e*P	Pn	22 43 47.7	0.0
BCO2				*e*S	Sn	22 43 55.9	+0.8
BRU2	Volcan	0.48	9	⇓*i*P	Pn	22 43 47.8	-0.1
BRU2				*e*S	Sn	22 43 55.9	+0.4
GUAL3	Gualaca, Chiri	0.51	66	*e*P	Pn	22 43 48.3	+0.1
PIRO	Carate, Puerto	0.57	279	*e*P	Pb	22 43 47.0	-1.3
DRK0	Durika	1.05	333	*e*P	Pn	22 43 56.0	+0.1
DRK0	Durika	1.05	333	*e*P	Pn	22 43 55.9	+0.1
DRK0				*e*S	Sb	22 44 10.1	+0.1
SRBA	San Rafael, Bu	1.08	327	*e*P	Pn	22 43 56.2	+0.1
SRBA				*e*S	Sb	22 44 10.6	-0.1
EDDO	Dominical	1.43	311	*e*P	Pn	22 44 02.2	+1.4
CDM	Cerro de Muert	1.57	321	*e*P	Pn	22 44 03.9	+0.6
CDM				*e*S	Sb	22 44 24.5	-0.7
RIMA	Rio Macho	1.80	323	*e*P	Pb	22 44 09.2	-0.1
LCR2	La Lucha 2	1.87	319	*e*P	Pb	22 44 09.6	-0.9
JACO	JACO, Garabito	2.30	306	*e*P	Pn	22 44 13.1	+0.3
ARE1	Arenal 1	2.87	318	*e*P	Pb	22 44 26.3	-1.0
SAJU	San Juanillo,	3.38	301	*e*P	Pn	22 44 28.6	+0.8

IDC ***16*** *22:58:08.2±1.5, 6°.07S×152°.62E, h0^{km}, mb3.8/6, mbtmp3.8/7, ML2.2/1, Error ellipse: s-maj=45.0km s-min=19.2km az=106.0*
ISC 16 22:58:14.5±1.4**, 6°.1S**±0°.1×**152°.4E**±0°.2**, h38**^{km}**, n9,**
σ0^{s}.81/11**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.79	347	Pn	Pn	22 58 43.0	+0.2
	132nm,0.3s,baz=158,slow=11,SNR=31						
KRVT				Sn	Sn	22 59 04.7	+0.3
	440nm,0.3s,baz=216,slow=20,SNR=29						
PMG	Port Moresby	6.20	237	Pn	Pn	22 59 44.5	+0.9
	3.5nm,0.3s,baz=106,slow=15,SNR=2.3						
PMG				Sn	Sn	23 00 52.1	-1.1
	2.7nm,0.3s,baz=0.0,slow=19,SNR=1.9						
	12nm,0.4s						
WRA	Warramunga Arr	22.36	230	P	P	23 03 10.5	+1.0
	1.0nm,0.6s,baz=57,slow=10,SNR=7.8						
	1.0nm,0.6s						
ASAR	Alice Springs	24.99	224	P	P	23 03 34.7	-0.2
	1.5nm,0.7s,baz=58,slow=9.1,SNR=14						
	1.5nm,0.7s						
SONM	Songino Array	67.20	328	P	P	23 09 05.3	+0.4
	0.4nm,0.4s,baz=111,slow=7.9,SNR=1.5						
	0.4nm,0.4s						
MKAR	Makanchi Array	81.04	319	P	P	23 10 24.5	-1.0
	0.3nm,0.7s,baz=119,slow=8.9,SNR=2.0						
	0.3nm,0.7s						
ZALV	Zalesovo Beam	82.00	326	P	P	23 10 29.8	-0.6
	1.5nm,0.5s,baz=119,slow=7.6,SNR=6.8						
	1.5nm,0.5s						
ILAR	Eielson Array	83.45	22	P	P	23 10 38.0	+0.3
	1.0nm,0.9s,baz=255,slow=5.0,SNR=8.0						
	1.0nm,0.9s						
TORD	Torodi Ar. Bea	150.33	286	PKPbc	PKPbc	23 18 02.2	-0.6
	1.2nm,0.6s,baz=70,slow=2.8,SNR=10						

GUC ***16*** *23:01:37.9±0.7, 21°.24S×68°.98W, h105^{km}±3^{km}, ML3.7*
IDC ***16*** *23:01:38.4±1.2, 21°.31S×68°.91W, h121^{km}±17^{km}, mb3.3/3, mbtmp3.7/4, Error ellipse: s-maj=32.5km s-min=22.9km az=82.0*
VAO ***16*** *23:01:38.7±0.9, 21°.49S×69°.01W, h133^{km}±8^{km}, mb3.9*
ISC 16 23:01:37.1±0.8**, 21°.27S**±0°.03×**69°.12W**±0°.07**, h115**^{km}±7^{km}**,**
n31, σ1^{s}.50/48**, 10C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.41	303	⇑*i*P	Pn	23 01 53.7	-0.4
PB01				*i* S	Sn	23 02 05.9	-0.9
PB01				IAML		23 02 06.8	
	comp=E,8µm,0.2s						
PB09	IPOC Station P	0.54	192	*e*P	Pn	23 01 55.0	0.0
PB09				*i* S	Sn	23 02 08.4	-0.1
PB09				IAML		23 02 10.1	
	comp=N,2µm,0.2s						
PB02	IPOC Station P	0.72	266	⇑*i*P	Pn	23 01 56.9	+0.6
PB02				*i* S	Sn	23 02 11.1	+0.4
PB02				IAML		23 02 12.2	
	comp=N,4µm,0.3s						
PB07	IPOC Station P	0.85	237	⇑*i*P	Pn	23 01 58.1	+0.7
PB07				*i* S	Sn	23 02 13.8	+1.0
PB07				IAML		23 02 15.9	
	comp=N,2µm,0.3s						
PATCX	Punta Patache	1.06	295	⇑*i*P	Pn	23 02 00.5	+1.1
PATCX				*i* S	Sn	23 02 17.4	+1.1
PATCX				IAML		23 02 18.9	
	comp=E,2µm,0.4s						
PB08	IPOC Station P	1.12	359	⇑*i*P	Pn	23 02 00.2	-0.2
PB08				*i* S	Sn	23 02 17.3	-0.6
TA01	Diego Aracena	1.21	305	⇑*i*P	Pn	23 02 01.4	+0.5
TA01				*i* S	Sn	23 02 19.5	+0.6
TA01				IAML		23 02 20.6	
	comp=N,2µm,0.2s						
HMBC	Humberstone	1.22	324	⇑*i*P	Pn	23 02 01.2	+0.1
HMBC				*i* S	Sn	23 02 19.3	0.0
HMBC				IAML		23 02 20.1	
	comp=N,2µm,0.2s						
LVC	Limon Verde	1.35	172	P	Pn	23 02 03.5	+0.6
	comp=N,43nm,0.3s,baz=11,slow=13,SNR=235						
LVC				S	Sn	23 02 23.4	+1.0
	comp=N,451nm,0.3s,baz=93,slow=19,SNR=67						
LVC	Limon Verde	1.35	172	⇓*i*P	Pn	23 02 03.4	+0.5
LVC				*i* S	Sn	23 02 22.8	+0.3
LVC	Limon Verde	1.35	172	*e*P	Pn	23 02 03.3	+0.4
PB04	IPOC Station P	1.43	222	⇑*i*P	Pn	23 02 04.4	+0.9
PB04				*i* S	Sn	23 02 24.7	+1.0
PB04				IAML		23 02 29.7	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	1.49	196	⇑*i*P	Pn	23 02 05.2	+0.9
PB06				*i* S	Sn	23 02 26.3	+1.3
PB06				IAML		23 02 27.2	
	comp=E,2µm,0.2s						
PB11	IPOC Station P	1.58	341	⇓*i*P	Pn	23 02 05.2	-0.2
PB11				*i* S	Sn	23 02 26.3	-0.5
PB11				IAML		23 02 28.0	
	comp=N,806nm,0.2s						
PB15	IPOC Station P	1.96	189	*e*P	Pn	23 02 11.3	+1.2
PB15				*i* S	Sn	23 02 36.4	+1.2
PB10	IPOC Station P	2.60	210	⇑*i*P	Pn	23 02 18.7	+0.7
PB10				*i* S	Sn	23 02 43.4	-6.1
PB12	IPOC Station P	2.87	337	⇓*i*P	Pn	23 02 20.6	-1.1
PB12				*i* S	Sn	23 02 54.5	-1.5
PB16	IPOC Station P	2.94	353	⇓*i*P	Pn	23 02 23.9	+0.9
PB16				*i* S	Sn	23 02 58.9	+0.7
LPAZ	La Paz	5.04	11	P	Pn	23 02 53.1	+2.0
	comp=N,3.5nm,0.3s,baz=201,slow=7.1,SNR=22						
LPAZ	La Paz	5.04	11	*e*P	Pn	23 02 54.6	+3.4
SALV	Santo Antonio	13.80	70	*e*P	P	23 04 49.8	-2.8
PDRB	Porto dos Gac	15.27	53	*e*P	P	23 05 07.7	-1.2
IPMB	Ipameri, GO	19.96	84	*e*P	P	23 05 59.3	-1.2
BDFB	Brasilia	20.78	78	P	P	23 06 07.4	-1.9
	comp=N,2.8nm,0.4s,baz=247,slow=18,SNR=7.0						
	comp=N,2.8nm,0.4s						
PEXB	Peixe	21.90	69	*e*P	P	23 06 21.0	-0.2
JANB	Januaria	24.35	79	*e*P	P	23 06 43.0	-1.6
MCPB	Macapa, AP	26.63	41	*e*P	P	23 07 07.4	+2.2
GUA01	Guaratinga, BA	28.10	86	*e*P	P	23 07 18.0	-0.3
GDU01	Guandu, BA	29.13	80	*e*P	P	23 07 26.0	-1.4
TXAR	Lajitas Array	60.32	325	P	P	23 11 35.2	+1.1
	comp=N,0.6nm,1.1s,baz=146,slow=9.7,SNR=1.5						
	comp=N,0.6nm,1.1s						
TORD	Torodi Ar. Bea	77.46	70	P	P	23 13 20.5	+0.1
	comp=N,0.2nm,0.4s,baz=253,slow=5.6,SNR=10						
	comp=N,0.2nm,0.4s						

NEIC ***16*** *23:04:10.2±2.0, 6°.26S±0°.07×154°.72E±0°.07, h35^{km}±1^{km}, mb4.7/40, Error ellipse: s-maj=12.6km s-min=10.7km az=219.0*
IDC ***16*** *23:04:12.8±1.5, 6°.16S×154°.64E, h67^{km}±13^{km}, mb4.1/18, mbtmp4.5/23, MS3.6/35, Error ellipse: s-maj=14.0km s-min=9.4km az=47.0*
DJA ***16*** *23:04:18.3±0.6, 6°S±5°×15°5E±°, h121^{km}±6^{km}, M4.8/15, mb4.6/15, mB5.3/6, MLv5.1/3, Mw(mB)4.7/6, MwMwp5.4/1, Mwp5.5/1*
ISC 16 23:04:12.5±0.4**, 6°.19S**±0°.05×**154°.71E**±0°.05**, h61**^{km}**, n131,**
σ1^{s}.47/110**, mb4.7**/43**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.22	308		Pn	23 05 02.8	+2.1
RABL	Rabaul	3.22	308	P	Pn	23 05 09.8	+9.1
KRVT	Keravat (AS076	3.26	305	P	Pn	23 05 01.5	+0.2
	88nm,0.4s,baz=72,slow=12,SNR=1.8						
KRVT				S	Sn	23 05 36.6	-2.3
	303nm,0.5s,baz=32,slow=19,SNR=4.7						
KRVT				LR	LR	23 06 41.1	
	comp=Z,984nm,18.2s,baz=261,slow=46						
HNR	Honiara	6.11	122	P	Pn	23 05 42.2	+1.9
	336nm,0.8s,baz=264,slow=4.3,SNR=7.3						
HNR				S	Sn	23 06 51.7	+2.9
	194nm,0.8s,baz=225,slow=18,SNR=1.4						
HNR				LR	LR	23 07 35.0	
	comp=Z,176nm,21.1s,baz=152,slow=33						
HNR	Honiara	6.11	122	Pn	Pn	23 05 39.3	-0.9
HNR	Honiara	6.11	122	P	Pn	23 05 43.9	+3.7
PMG	Port Moresby	8.13	246	P	Pn	23 06 08.8	+0.8
	103nm,0.7s,baz=53,slow=8.1,SNR=21						
PMG				S	Sn	23 07 38.7	+0.2
	47nm,0.7s,baz=157,slow=21,SNR=2.4						
PMG				LR	LR	23 09 02.3	
	comp=Z,834nm,21.6s,baz=350,slow=36						
PMG	Port Moresby	8.13	246	Pn	Pn	23 06 07.2	-0.8
PMG	Port Moresby	8.13	246	P	Pn	23 06 11.7	+3.7
PMG	Port Moresby	8.13	246	P	Pn	23 06 11.6	+3.6
PATS	Pohnpei	13.43	16	Pn	Pn	23 07 16.7	-3.7
COEN	Coen	13.72	235		Pn	23 07 24.6	+0.3
COEN	Coen	13.72	235	P	Pn	23 07 26.7	+2.4
MTSU	Mount Surprise	15.61	220	P	P	23 07 51.1	-0.9
CTA	Charters Tower	16.07	210	P	Pn	23 07 55.0	+0.2
	23nm,1.2s,baz=14,slow=8.9,SNR=3.9						
CTA				LR	LR	23 13 23.2	
	comp=Z,303nm,19.3s,baz=76,slow=34						
NOUC	Port Laguerre	19.38	146	P	Pn	23 08 34.9	-0.3
EIDS	Eidsvold	19.38	190	P	P	23 08 33.0	-0.6
EIDS	Eidsvold	19.38	190	P	Pn	23 08 34.7	-0.5
DZM	Mont Dzumac	19.44	145	P	P	23 08 34.8	+0.5
	28nm,1.0s,baz=350,slow=8.2,SNR=11						
DZM				LR	LR	23 15 03.0	
	comp=Z,161nm,18.0s,baz=242,slow=33						
DZM	Mont Dzumac	19.44	145	P	P	23 08 33.4	-0.9
DZM				IAmb	IAmb	23 08 36.3	
	comp=Z,31nm,1.0s						
DZM	Mont Dzumac	19.44	145	P	Pn	23 08 35.7	-0.3
ONTNC	Ouen Toro	19.63	146	P	P	23 08 34.9	-1.3
ONTNC				IAmb	IAmb	23 08 37.4	
	comp=Z,83nm,1.4s						
TARA	Tarawa	19.67	68	P	Pn	23 08 38.4	-0.3
MARNC	Mare, Loyalty	19.93	141	P	P	23 08 38.8	-0.7
MARNC	Mare, Loyalty	19.93	141	P	Pn	23 08 40.8	-0.9
OUENC	Ouen Island, N	19.94	145	P	P	23 08 38.9	-0.6
PINNC	Pines Island,	20.44	144	P	P	23 08 44.6	-0.3
PINNC				IAmb	IAmb	23 08 46.2	
	comp=Z,30nm,1.0s						
QIS	Mount Isa	20.46	224	P	P	23 08 45.9	+0.6
RMQ	Roma	20.97	195	P	P	23 08 51.5	+0.8
GUMO	Guam	21.95	334	LR	LR	23 16 30.1	
	comp=Z,43nm,21.3s,baz=149,slow=34						
QLP	Quilpie	22.61	205	P	P	23 09 09.1	+0.8
WR0	Warramunga Arr	23.90	233	P	P	23 09 20.7	-0.2
WB0	Warramunga Arr	23.92	234	P	P	23 09 20.9	-0.1
SIJI	Sorong	23.98	282	P	P	23 09 22.0	+0.3
	comp=Z,4.9nm,0.3s,baz=77,slow=6.4,SNR=5.4						
	comp=Z,4.9nm,0.3s						
WRAB	Tennant Creek	24.04	233	P	P	23 09 21.5	-0.6
WRAB	Tennant Creek	24.04	233	P	P	23 09 22.4	+0.3
WB2	Warramunga Arr	24.04	233	P	P	23 09 21.8	-0.4
WRA	Warramunga Arr	24.05	233	P	P	23 09 22.0	-0.3
	comp=Z,48nm,1.0s,baz=59,slow=9.7,SNR=121						
WRA				PcP	PcP	23 13 01.8	-0.9
	comp=Z,0.9nm,0.9s,baz=72,slow=2.1,SNR=1.9						
WRA				LR	LR	23 18 38.2	
	comp=Z,221nm,20.4s,baz=44,slow=36						
	comp=Z,48nm,1.0s						
WRA	Warramunga Arr	24.05	233	P	P	23 09 21.0	-1.3
MTN	Manton Dam	24.16	252	P	P	23 09 23.0	-0.3
MTN				IAmb	IAmb	23 09 24.1	
	comp=Z,28nm,1.2s						
ARMA	Armidale	24.27	186	P	P	23 09 23.6	-0.7
ARMA				IAmb	IAmb	23 09 25.6	
	comp=Z,24nm,1.1s						
ARMA	Armidale	24.27	186	P	P	23 09 24.8	+0.5
FUNA	Funafuti	24.39	97	P	P	23 09 22.5	-2.9
INKA	Innaminka	25.20	210	P	P	23 09 32.3	-0.3
AS31	Alice Springs	26.50	227	P	P	23 09 43.3	-1.1
ASAR	Alice Springs	26.50	227	P	P	23 09 43.9	-0.6
	comp=Z,12nm,0.8s,baz=58,slow=9.2,SNR=86						
ASAR				PcP	PcP	23 13 07.5	-0.8
	comp=Z,1.3nm,0.8s,baz=93,slow=2.1,SNR=4.5						
ASAR				LR	LR	23 19 42.1	
	comp=Z,165nm,21.4s,baz=61,slow=35						
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	26.50	227	P	P	23 09 43.4	-1.1
CMSA	Cobar Meteorol	26.59	197	P	P	23 09 46.0	+0.9
H11S3	WAKE ISLAND Hy	27.23	25	T	T	23 38 33.6	
	baz=203,slow=74,SNR=28						
H11S2	WAKE ISLAND Hy	27.23	26	T	T	23 38 22.2	
	baz=203,slow=74,SNR=31						
H11S1	WAKE ISLAND Hy	27.24	26	T	T	23 38 27.1	
	baz=203,slow=74,SNR=35						
LBMI	Labuha	27.70	280	P	P	23 09 56.7	+1.4
	comp=Z,31nm,1.2s						
OOD	Oodnadatta	28.07	218	P	P	23 09 58.4	0.0
STKA	Stephens Creek	28.34	204	P	P	23 09 59.2	-1.6
	comp=Z,7.3nm,1.0s,baz=359,slow=11,SNR=6.0						
STKA				LR	LR	23 21 10.2	
	comp=Z,211nm,19.0s,baz=20,slow=36						
	comp=Z,7.3nm,1.0s						
STKA	Stephens Creek	28.34	204	P	P	23 09 59.4	-1.5
WRKA	Warakurna	31.48	231	P	P	23 10 28.6	-0.1
BBOO	Buckleboo	31.67	211	P	P	23 10 29.0	-1.2
BBOO				IAmb	IAmb	23 10 36.6	
	comp=Z,34nm,1.4s						
DAV	Davao City (W)	31.91	294	LR	LR	23 23 17.5	
	comp=Z,40nm,18.1s,baz=3.0,slow=36						
LUWI	Luwuk	32.27	278	P	P	23 10 36.8	+1.1
MMRI	Maumere	32.28	264	P	P	23 10 34.3	-1.5
GTOI	Gorontalo	32.36	281	P	P	23 10 37.9	+1.4
	comp=Z,9.2nm,0.9s						
EDFI	Ende, Flores	32.83	263	P	P	23 10 40.2	-0.6
	comp=Z,28nm,0.9s						
AFI	Afiamalu	33.84	106	LR	LR	23 21 55.4	
	comp=Z,99nm,21.9s,baz=298,slow=31						
TOLI2	Tolitoli	34.64	281	P	P	23 10 54.2	-2.2
TOLI2				IAmb	IAmb	23 10 56.0	
	comp=Z,9.7nm,1.2s						
KAPI	Kappang	34.81	270	LR	LR	23 26 14.2	
	comp=Z,86nm,20.5s,baz=103,slow=38						
FORT	Forrest	34.98	222	P	P	23 10 57.7	-1.4
MPSI	Mapaga	35.35	279	P	P	23 11 01.0	-1.5
	comp=Z,650nmcomp=Z,21nm,1.1s						
MBWA	Marble Bar	36.98	243	P	P	23 11 14.4	-1.9
MBWA				IAmb	IAmb	23 11 16.4	
	comp=Z,24nm,1.4s						
PSA00	Pilbara Seismi	37.01	242	P	P	23 11 15.2	-1.4
PSA00				IAmb	IAmb	23 11 16.6	
	comp=Z,14nm,1.1s						
URZ	Urewera	37.84	151	P	P	23 11 24.2	+0.9
	comp=Z,8.8nm,0.8s,baz=22,slow=7.9,SNR=1.5						
	comp=Z,8.8nm,0.8s						
MYLDM	Lahad Datu	37.87	287	P	P	23 11 23.3	-0.7
MYLDM				IAmb	IAmb	23 11 26.4	
	comp=Z,8.2nm,0.9s						
RPZ	Rata Peaks	40.04	162	P	P	23 11 41.2	-0.5
	comp=Z,38nm,1.2s,baz=40,slow=11,SNR=2.8						
RPZ				LR	LR	23 27 06.6	
	comp=Z,74nm,19.8s,baz=292,slow=34						
	comp=Z,38nm,1.2s						
JHJ2	Mitsune	41.57	341	P	P	23 11 55.5	+1.1
MORW	Morawa	43.00	233	P	P	23 12 05.2	-1.0
MORW				IAmb	IAmb	23 12 06.2	
	comp=Z,22nm,1.1s						
MJAR	Matsushiro Arr	45.23	341	LR	LR	23 29 21.8	
	comp=Z,32nm,20.8s,baz=194,slow=33						
RAR	Rarotonga	46.48	113	LR	LR	23 28 27.3	
	comp=Z,73nm,19.7s,baz=317,slow=31						
KSRS	Korea Array	50.10	332	P	P	23 13 00.8	-0.7
	comp=Z,1.7nm,0.8s,baz=157,slow=10,SNR=4.8						
KSRS				LR	LR	23 33 26.2	
	comp=Z,20nm,18.2s,baz=135,slow=35						
	comp=Z,1.7nm,0.8s						
ASAJ	Asahikawa	51.26	349	LR	LR	23 33 10.9	
	comp=Z,46nm,20.7s,baz=130,slow=34						
PPSI	Pulau Pagai	54.62	271	P	P	23 13 29.2	-6.3
PPT	Papeete	55.50	107	LR	LR	23 35 34.7	
	comp=Z,19nm,18.0s,baz=216,slow=34						
KLR	Kul'dur	58.72	343	LR	LR	23 39 30.1	
	comp=Z,20nm,19.7s,baz=276,slow=36						
PETK	Petropavlovsk-	59.13	2	P	P	23 14 07.9	+1.2
	comp=Z,5.9nm,0.9s,baz=190,slow=7.5,SNR=5.7						
PETK				LR	LR	23 35 35.8	
	comp=Z,41nm,21.9s,baz=161,slow=32						
	comp=Z,5.9nm,0.9s						
PETK	Petropavlovsk-	59.13	2	P	P	23 14 08.1	+1.4
KMI	Kunming	59.33	304	⇑P	P	23 14 10.1	+1.2
KMI				pP	sP	23 14 30.4	-1.1
KMI				pmax	pmax		
	comp=Z,11nm,1.4s						
CMAR	Chiang Mai Arr	60.19	295	P	P	23 14 14.6	0.0
	comp=Z,2.0nm,0.3s,baz=115,slow=5.1,SNR=16						
	comp=Z,2.0nm,0.3s						
CHTO	Chiang Mai	60.30	296	P	P	23 14 15.1	-0.2
CHTO				IAmb	IAmb	23 14 16.7	
	comp=Z,9.6nm,1.2s						
PZH	PanZhiHua	60.72	305	P	P	23 14 22.6	+4.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,7.3s						
SHEM	Shemya Is, Ala	60.97	13	LR	LR	23 36 39.7	
	comp=Z,80nm,21.1s,baz=36,slow=32						
HHC	Hu-ho-hao-te	61.28	324	*e*P	P	23 14 25.4	+3.6
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
GTA	Gaotai	67.96	317	*e*P	P	23 15 08.5	+3.1
GTA				pP	pP	23 15 20.5	-1.3
GTA				sP	sP	23 15 29.3	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	68.51	327	P	P	23 15 08.1	-0.6
	comp=Z,0.8nm,0.8s,baz=121,slow=1.0,SNR=4.0						
	comp=Z,0.8nm,0.8s						
VNDA	Vanda	71.39	178	P	P	23 15 25.1	-0.6
	comp=Z,1.0nm,0.9s,baz=330,slow=6.1,SNR=4.5						
	comp=Z,1.0nm,0.9s						
VNDA	Vanda	71.39	178	IAmb	IAmb	23 15 25.9	
	comp=Z,3.2nm,1.2s						
BILL	Bilibino	74.51	4	P	P	23 15 46.1	+1.9
KDAK	Kodiak Island	76.57	26	LR	LR	23 43 35.0	
	comp=Z,38nm,21.0s,baz=250,slow=31						
N18K	Kilae Creek	76.98	23	P	P	23 15 60.0	+1.5
N18K				IAmb	IAmb	23 16 01.8	
	comp=Z,7.6nm,1.0s						
WMQ	Urumqi	78.05	317	*e*P	P	23 16 06.8	+1.9
M19K	Big River Lodg	78.32	22	P	P	23 16 07.8	+1.9
M19K				IAmb	IAmb	23 16 23.0	
	comp=Z,7.9nm,1.2s						
L19K	White Mountain	78.32	22	P	P	23 16 06.6	+0.7
L19K				IAmb	IAmb	23 16 09.4	
	comp=Z,9.5nm,1.2s						
TTA	Tatalina	78.38	21	P	P	23 16 06.9	+0.6
TIXI	Tiksi	79.52	352	LR	LR	23 50 47.8	
	comp=Z,8.7nm,20.0s,baz=181,slow=35						
IMAR	Indian Mountai	81.06	19	P	P	23 16 20.2	-0.5
KLU	Klutina	81.43	25	P	P	23 16 23.2	+0.4
KLU				IAmb	IAmb	23 16 25.4	
	comp=Z,13nm,1.3s						
MK31	Makanchi Array	82.62	319	P	P	23 16 28.1	-1.2
MKAR	Makanchi Array	82.62	319	P	P	23 16 28.1	-1.2
	comp=Z,1.7nm,0.8s,baz=97,slow=8.0,SNR=7.2						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	82.62	319	P	P	23 16 28.7	-0.6
ILAR	Eielson Array	82.73	22	P	P	23 16 27.9	-1.6
	comp=Z,0.5nm,0.6s,baz=263,slow=4.9,SNR=6.1						
ILAR				LR	LR	23 48 50.5	
	comp=Z,65nm,21.6s,baz=254,slow=32						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	83.36	326	P	P	23 16 33.2	+0.3
	comp=Z,1.0nm,0.8s,baz=131,slow=6.1,SNR=4.2						
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	83.78	180	LR	LR	23 47 26.0	
	comp=Z,50nm,19.1s,baz=341,slow=31						
QSPA	South Pole Qui	83.78	180	P	P	23 16 34.7	-0.4
MAW	Mawson	85.03	203	P	P	23 16 40.7	-0.4
	comp=Z,3.9nm,0.5s,baz=96,slow=5.6,SNR=24						
	comp=Z,3.9nm,0.5s						
MAW	Mawson	85.03	203	P	P	23 16 40.7	-0.4
KSH	Kashi	85.28	310	P	P	23 16 44.4	+1.2
KSH				sP	sP	23 17 15.3	+8.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BBB	Bella Bella	87.05	37	LR	LR	23 49 16.4	
	comp=Z,31nm,20.1s,baz=248,slow=31						
DLBC	Dease Lake	87.60	31	LR	LR	23 52 31.2	
	comp=Z,27nm,18.1s,baz=226,slow=33						
YBH	Yreka Blue Hor	88.56	48	LR	LR	23 52 10.9	
	comp=Z,94nm,19.1s,baz=276,slow=32						
INK	Inuvik	89.07	21	LR	LR	23 53 30.2	

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              comp=Z,50nm,20.0s,baz=198,slow=33
NVAR   Mina Array Bea    91.45  52  P        P          23 17 12.4 -0.3
              comp=Z,2.7nm,0.9s,baz=246,slow=6.4,SNR=11
              comp=Z,2.7nm,0.9s
NVAR   Mina Array Bea    91.45  52  P        P          23 17 13.1 +0.4
NV11   Mina Array Sit    91.56  52  P        P          23 17 13.2  0.0
NV11                                IAmb     IAmb       23 17 16.5
              comp=Z,6.5nm,1.3s
KVN    Kaiserville       91.68  51  P        P          23 17 13.8  0.0
KVN                                 IAmb     IAmb       23 17 16.5
              comp=Z,6.4nm,1.2s
PFO    Pinyon Flats O    92.41  57  LR       LR         23 54 35.7
              comp=Z,40nm,18.0s,baz=229,slow=33
RPN    Rapa Nui          92.49 117  LR       LR         23 50 12.6
              comp=Z,24nm,21.8s,baz=261,slow=30
R11A   Troy Canyon, C    93.56  52  P        P          23 17 22.9 +0.5
R11A                                IAmb     IAmb       23 17 24.8
              comp=Z,3.6nm,1.2s
ELK    Elko              94.03  50  LR       LR         23 51 33.7
              comp=Z,31nm,21.8s,baz=252,slow=30
YKA    Yellowknife Ar    95.76  28  P        P          23 17 29.4 -2.3
              comp=Z,0.3nm,0.6s,baz=258,slow=3.1,SNR=2.7
YKA                                 LR       LR         23 59 31.7
              comp=Z,18nm,19.2s,baz=334,slow=35
              comp=Z,0.3nm,0.6s
LPIG   La Paz            97.03  67  LR       LR         23 56 25.7
              comp=Z,34nm,18.4s,baz=211,slow=32
PDAR   Pinedale Array    98.37  48  P        P          23 17 43.3 -1.0
              comp=Z,0.4nm,0.7s,baz=90,slow=1.5,SNR=3.9
PDAR                                LR       LR         23 58 36.4
              comp=Z,31nm,18.8s,baz=270,slow=33
              comp=Z,0.4nm,0.7s
CLL    Collm            124.97 332  ePKPdf   PKiKP      23 23 07.0 +0.8
CLL                                 i x      x          23 23 10.6
TORD   Torodi Ar. Bea   152.53 287  PKPbc    PKPbc      23 24 01.2 -1.9
              comp=Z,1.3nm,0.6s,baz=88,slow=2.4,SNR=27
TORD                                PKPab    PKPab      23 24 13.4 -0.3
              comp=Z,2.6nm,0.7s,baz=51,slow=1.8,SNR=11
TORD   Torodi Ar. Bea   152.53 287           PKPdf      23 23 59.4 +3.2
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*IDC **16** 23:28:47.4±2.1, 24.°19S×65.°01W, h0^{km}, mb4.0/1, mbtmp3.9/4, ML4.0/3, MS3.3/5, Error ellipse: s-maj=36.3km s-min=22.8km az=32.0*

*NEIC **16** 23:28:53.2±2.4, 24.°12S±0.°06×65.°12W±0.°08, h50^{km}±9^{km}, mb4.3/4, Md3.9(SJA), Error ellipse: s-maj=10.9km s-min=8.9km az=97.0*

ISC 16 23:28:52.0±0.8, **24.°11S**±0.°06×**65.°06W**±0.°08, **h35**^{km}, **n26**, σ**1.s40**/24, **mb4.1**/3, **MS3.7**/3, **Salta Province**

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Code   Station Name       Δ°   AZ°   Phase ID              Time     Res
                                    Op       ISC        h  m  s   ISC
LVC    Limon Verde        3.84 292  Pn       Pn         23 29 49.1 +0.1
              0.4nm,0.3s,baz=114,slow=10.0,SNR=2.3
PB15   IPOC Station P     4.14 282  Pn       Pn         23 29 54.3 +1.3
PB09   IPOC Station P     4.49 300  Pn       Pn         23 29 57.6 -0.1
AC02   Maricunga          4.57 233  Pn       Pn         23 30 00.5 +1.3
PB14   IPOC Station P     4.90 263  Pn       Pn         23 30 04.0 +0.4
PB07   IPOC Station P     5.04 297  Pn       Pn         23 30 05.3  0.0
PB10   IPOC Station P     5.07 276  Pn       Pn         23 30 04.7 -0.8
PB02   IPOC Station P     5.26 301  Pn       Pn         23 30 08.9 +0.7
LCO    Las Campanas       7.03 225  Pn       Pn         23 30 32.7 +0.1
PB16   IPOC Station P     7.08 323  Pn       Pn         23 30 36.4 +2.7
CPUP   Villa Florida      7.34 109  Pn       Pn         23 30 36.6 -0.2
              1.4nm,0.3s,baz=279,slow=12,SNR=24
CPUP                                Lg       Lg         23 32 38.8
              0.4nm,0.3s,baz=213,slow=17,SNR=1.3
CPUP                                LR       LR         23 33 31.3
              comp=Z,39nm,21.9s,baz=252,slow=39
              8.9nm,0.5s
CPUP   Villa Florida      7.34 109           Pn         23 30 38.8 +2.1
LPAZ   La Paz             8.29 339  Pn       Pn         23 30 52.3 +1.9
              0.2nm,0.3s,baz=167,slow=11,SNR=2.6
LPAZ                                Sn       Sn         23 32 24.2 +1.0
              0.1nm,0.3s,baz=121,slow=18,SNR=1.9
              0.6nm,0.4s
LPAZ   La Paz             8.29 339  Pn       Pn         23 30 52.0 +1.6
SIV    San Ignacio        8.90  26  Pn       Pn         23 30 58.5 +0.3
              0.3nm,0.3s,baz=209,slow=11,SNR=26
SIV                                 Sn       Sn         23 32 35.9 -1.3
              0.2nm,0.3s,baz=184,slow=12,SNR=2.5
SIV                                 Lg       Lg         23 33 30.8
              0.1nm,0.3s,baz=120,slow=20,SNR=3.8
              7.3nm,0.4s
AQDB   Aquidauana         9.39  69  Pn       Pn         23 31 06.0 +1.1
SAML   Samuel            15.18   7           Pn         23 32 21.5 -2.4
PLCA   Paso Flores       17.21 194  LR       LR         23 40 19.7
              comp=Z,76nm,19.2s,baz=351,slow=40
AY01   Puyuhuapi         21.20 195  P        P          23 33 33.7 -0.7
AY01                                IAmb     IAmb       23 33 34.6
              comp=Z,7.5nm,0.9s
ORCD   Orcadas           39.22 164  P        P          23 36 16.6 +0.1
CBYP   Canovanas         42.13 359  P        P          23 36 41.8 +0.7
CBYP                                IAmb     IAmb       23 36 47.2
              comp=Z,16nm,1.1s
BANI   BANI              42.55 353  P        P          23 36 41.8 -2.8
CMIG   Matias Romero     50.24 322  LR       LR         23 59 41.7
              comp=Z,76nm,18.7s,baz=228,slow=37
TKL    Tuckaleechee C    62.02 343  LR       LR         00 09 31.8
              comp=Z,48nm,19.1s,baz=332,slow=39
SUR    Sutherland        74.21 119  LR       LR         00 09 22.3
              comp=Z,40nm,20.6s,baz=126,slow=33
TORD   Torodi Ar. Bea    74.96  68  P        P          23 40 30.3 +0.3
              comp=Z,1.0nm,0.6s,baz=255,slow=5.1,SNR=12
              comp=Z,1.0nm,0.6s
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*TUL **17** 00:02:14.8±0.7, 35.°640N±0.°009×97.°44W±0.°01, h6^{km}±3^{km}, ML2.6, mb_Lg2.1/10(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=71.0*

NEIC 17 00:02:15.3±0.7, **35.°641N**±0.°010×**97.°43W**±0.°01, **h6**^{km}±2^{km}, **Error ellipse: s-maj=1.5km s-min=1.4km az=53.0, Oklahoma**

```
Code   Station Name       Δ°   AZ°   Phase ID              Time     Res
                                    Op       ISC        h  m  s   ISC
OK009  Oakdale Elemen     0.06 178           Pg         00 02 16.6 -0.3
OK009                               Sg       Sg         00 02 18.0  0.0
OKCFA  Oklahoma City      0.23 185  Pg       Pg         00 02 19.6 -0.2
OKCFA                               Sg       Sg         00 02 23.1 +0.3
OKCSW  OKLAHOMA CITY      0.23 182           Pg         00 02 19.7 -0.3
OKCSW                               Sg       Sg         00 02 23.5 +0.4
FNO    Franklin           0.38 177  Pg       Pg         00 02 22.5 -0.3
FNO                                 Sg       Sg         00 02 28.2 +0.4
X34A   Smith Ranch, M     1.09 198  Pg       Pg         00 02 35.5 -0.7
X34A                                Sg       Sb         00 02 51.1  0.0
TUL1   Leonard            1.36  78           Pn         00 02 38.9 -1.9
WMOK   Wichita Mounta     1.43 231           Pn         00 02 40.3 -1.5
T35A   Sooner Cattle      1.47  30           Pn         00 02 41.4 -1.1
U32A   Winter Ranch,      1.47 300           Pn         00 02 41.6 -0.9
X37A   Clayton            1.98 121  Pn       Pn         00 02 50.5 +1.0
X37A                                IAmb_Lg             00 03 18.0
              comp=Z,6.5nm,1.2s
W39A   Magazine           3.01  97  IAmb_Lg             00 03 56.1
              comp=Z,7.2nm,0.8s
MIAR   Mount Ida          3.34 108  Pn       Pn         00 03 08.4 +0.3
U40A   Yellville          3.77  78  Pn       Pn         00 03 12.5 -1.6
U40A                                IAmb_Lg             00 04 12.8
              comp=Z,3.7nm,1.0s
WHAR   Wooly Hollow       4.21  93  Pn       Pn         00 03 18.2 -1.9
W41B   Gary Mavity, V     4.25  95  Pn       Pn         00 03 19.4 -1.3
FCAR   Ozark Folk Cen     4.32  85  Pn       Pn         00 03 20.9 -0.6
R40A   Maddies Statio     4.90  56  Pn       Pn         00 03 30.2 +0.6
P38A   Dawn               5.04  37  IAmb_Lg             00 05 04.6
              comp=Z,3.9nm,0.9s
P40A   Paris              5.77  46  Pn       Pn         00 03 41.8 +0.3
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*IDC **17** 00:03:00.5±1.0, 26.°71N×60.°23E, h0^{km}, mb3.8/17, mbtmp3.9/20, ML4.0/2, MS3.2/10, Error ellipse: s-maj=21.4km s-min=15.3km az=151.0*

*DSN **17** 00:03:00.9±1.6, 26.°67N×60.°42E, h10^{km}, ML3.6/10, Error ellipse: s-maj=52.0km s-min=10.2km az=140.0*

*NEIC **17** 00:03:02.1±1.5, 26.°72N±0.°08×60.°15E±0.°09, h10^{km}±1^{km}, mb4.0/34, mb_Lg4.1(TEH), Error ellipse: s-maj=15.7km s-min=11.7km az=127.0*

*OMAN **17** 00:03:03.4±0.1, 26.°57N×60.°26E, h10^{km}, mb4.7/6, ml3.9/19, ms2.9/3, Error ellipse: s-maj=1.9km s-min=1.1km az=244.0*

*TEH **17** 00:03:03.3, 26.°74N×60.°17E, h20^{km}, ML4.0*

ISC 17 00:03:02.0±0.4, **26.°69N**±0.°04×**60.°21E**±0.°04, **h10**^{km}, **n176**, σ**1.s56**/187, **mb4.0**/25, **MS3.2**/7, **Southern Iran**

```
Code   Station Name       Δ°   AZ°   Phase ID              Time     Res
                                    Op       ISC        h  m  s   ISC
CHBR   Chabahar           1.12 167  ePg      Pn         00 03 26.1 +2.4
NGCH   Negor - Chabah     1.57 148  ePn      Pg         00 03 32.3 +0.3
SRVN   Saravan            2.08  70  ePn      Pb         00 03 39.1 -0.7
SRVN                                eSg      Sg         00 04 11.1 +2.3
SRVN                                e                   00 04 23.1
              comp=Z,12µm,0.7s
JASK   Jask - Hormozg     2.26 249  ePn      Pb         00 03 41.5 -1.4
KHNJ   Kahnooj            2.56 300  ePn      Pn         00 03 44.5 +1.0
KBAM   BAM                2.89 328  ePn      Pn         00 03 48.7 +0.5
IBND   Bandar-abas        3.36 284  ePn      Pn         00 03 54.8 +0.3
IBND                                e                   00 04 56.6
              comp=Z,5µm,0.8s
BANOM  Banah              3.59 259  ePn      Pn         00 03 59.0 +1.2
BANOM  Banah              3.59 259   P       Pn         00 03 59.7 +1.9
              SNR=26
BANOM  Banah              3.59 259  i P      Pn         00 03 58.2 +0.4
              SNR=11
GENO   Geno               3.67 282  ePn      Pn         00 03 59.9 +0.9
GENO                                e                   00 04 50.0
              comp=Z,2µm,0.4s
BIDO   Bidbid             3.68 211  ePn      Pn         00 03 59.4 +0.5
BIDO   Bidbid             3.68 211   P       Pn         00 03 59.3 +0.4
              SNR=8.8
BIDO                                 S       Sn         00 04 43.9 +1.6
SHME   Shamm              3.71 261  ePn      Pn         00 04 02.0 +2.7
SHME   Shamm              3.71 261   P       Pn         00 04 01.9 +2.6
              SNR=5.8
SHME   Shamm              3.71 261  i P      Pn         00 04 01.0 +1.7
              SNR=7.7
WSAR   Wadi Sarin         3.72 203   Pn      Pn         00 04 00.6 +1.0
              comp=Z,13nm,0.3s,baz=41,slow=11,SNR=115
WSAR                                Sn       Sn         00 04 43.7 +0.2
              comp=Z,24nm,0.3s,baz=28,slow=22,SNR=11
WSAR                                LR       LR         00 05 17.5
              comp=Z,95nm,20.2s,baz=39,slow=37
              comp=Z,27nm,0.3s
WSAR   Wadi Sarin         3.72 203   P       Pn         00 04 00.5 +1.0
              SNR=18
WSAR                                 S       Sn         00 04 43.4 -0.1
MASF   Masafi             3.87 251   P       Pn         00 04 03.7 +2.1
              SNR=13
MASF                                 S       Sn         00 04 49.9 +2.6
MSFE   Esma-Masafi        3.88 251  ePn      Pn         00 04 03.5 +1.8
MSFE   Esma-Masafi        3.88 251  i P      Pn         00 04 02.8 +1.1
              SNR=13
CHMN   Cheshme madani     3.94 324  ePn      Pn         00 04 03.4 +0.6
CHMN                                e                   00 05 23.7
              comp=Z,2µm,0.8s
UOSS   Minazif            4.01 245   Pn      Pn         00 04 02.1 -1.4
UOSS   Minazif            4.01 245  ePn      Pn         00 04 03.1 -0.3
UOSS   Minazif            4.01 245   P       Pn         00 04 03.1 -0.3
UOSS   Minazif            4.01 245  i P      Pn         00 04 02.0 -1.4
              SNR=13
HOQ    Hoqain             4.06 221   P       Pn         00 04 04.0 -0.1
              SNR=21
HOQ                                  S       Sn         00 04 50.0 -1.8
SMDO   Samad              4.11 209   P       Pn         00 04 06.2 +1.2
              SNR=11
SMDO                                 S       Sn         00 04 53.9 +0.6
HATD   Hatta, Dubai       4.12 244  ePn      Pn         00 04 05.0  0.0
HATD   Hatta, Dubai       4.12 244   P       Pn         00 04 05.1  0.0
              SNR=9.5
HATD   Hatta, Dubai       4.12 244  i P      Pn         00 04 03.8 -1.2
              SNR=11
WBK    Wadi Bani Khal     4.22 196   P       Pn         00 04 06.6 +0.3
              SNR=74
WBK                                  S       Sn         00 04 55.4 -0.3
ASHO   Ashiyiah           4.25 243  ePn      Pn         00 04 07.7 +0.9
ASHO   Ashiyiah           4.25 243   P       Pn         00 04 07.7 +0.9
              SNR=43
ASHO   Ashiyiah           4.25 243  i P      Pn         00 04 06.5 -0.2
              SNR=25
NGRK   Negar Kerman       4.25 315  ePn      Pn         00 04 08.8 +1.6
NGRK                                e                   00 05 14.1
              comp=Z,1µm,0.4s
NAZ    Nazwa, Dubai       4.43 249  ePn      Pn         00 04 10.8 +1.5
NAZ    Nazwa, Dubai       4.43 249   P       Pn         00 04 12.5 +3.2
              SNR=5.3
NAZ                                  S       Sn         00 05 04.7 +3.7
NAZ    Nazwa, Dubai       4.43 249   P       Pn         00 04 11.9 +2.6
KRBR   Kerman             4.47 318  ePn      Pn         00 04 12.7 +2.6
TVBK   TV Kerman          4.47 318  ePn      Pn         00 04 12.4 +2.2
TVBK                                e                   00 04 29.1
              comp=Z,2µm,0.6s
JLN    Jalan Bani Buh     4.58 189   P       Pn         00 04 11.0 -0.3
JLN                                  S       Sn         00 05 04.0 -0.6
FAQ    Al Faqa, Dubai     4.59 246  ePn      Pn         00 04 13.2 +1.7
FAQ    Al Faqa, Dubai     4.59 246   P       Pn         00 04 14.8 +3.2
              SNR=6.8
FAQ                                  S       Sn         00 05 08.1 +3.1
              SNR=6.7
FAQ    Al Faqa, Dubai     4.59 246  i P      Pn         00 04 14.4 +2.9
              SNR=6.7
NHDN   Nehbandan          4.69 358  ePn      Pn         00 04 14.1 +1.2
JMDO   Jabal Madar        4.71 204   P       Pn         00 04 15.1 +2.0
              SNR=34
JMDO                                 P       Pn         00 04 15.1 +2.0
              SNR=71
JMDO                                 S       Sn         00 05 05.9 -1.9
ARQ    Araqi              4.73 226   P       Pn         00 04 16.6 +3.3
              SNR=30
BSY    Bisya              4.79 216   P       Pn         00 04 16.6 +2.4
              SNR=49
ALNE   Al Ain             4.81 238  ePn      Pn         00 04 15.9 +1.4
ALNE   Al Ain             4.81 238   P       Pn         00 04 16.8 +2.3
              SNR=6.5
ALNE                                 S       Sn         00 05 14.5 +4.1
ALNE   Al Ain             4.81 238  i P      Pn         00 04 16.4 +1.9
              SNR=8.5
ASUD   Al Ashush, Dub     4.86 246  ePn      Pn         00 04 17.2 +2.0
ASUD   Al Ashush, Dub     4.86 246   P       Pn         00 04 18.4 +3.2
              SNR=24
ASUD                                 S       Sn         00 05 13.7 +2.1
ASUD   Al Ashush, Dub     4.86 246  i P      Pn         00 04 18.0 +2.8
              SNR=24
KHGB   Koh Gabri          4.93 319  ePn      Pn         00 04 17.0 +0.7
KHGB                                e                   00 04 36.2
              comp=Z,888nm,0.7s
AJN    Ajban              5.17 247   P       Pn         00 04 22.3 +2.9
AJN                                  S       Sn         00 05 19.7 +0.6
LAR1   LAR                5.29 282  ePn      Pn         00 04 22.2 +1.1
BSRN   Basiran            5.34 350  ePn      Pn         00 04 23.4 +1.5
MHTO   MHTO               6.04 200   P       Pn         00 04 33.2 +1.9
UMZA   Um Al Zommool      6.06 230  ePn      Pn         00 04 32.9 +1.2
UMZA   Um Al Zommool      6.06 230   P       Pn         00 04 32.7 +1.0
UMZA                                 S       Sn         00 05 42.8 +1.6
JHRM   Jahrom             6.16 289  ePn      Pn         00 04 34.0 +0.9
IBAF   Bafgh              6.35 321  ePn      Pn         00 04 37.7 +1.9
QIR1   Qir                6.60 287  ePn      Pn         00 04 40.1 +0.9
IMEH   Mehriz             6.78 315  ePn      Pn         00 04 43.1 +1.4
AFRZ   Afriz              6.79 352  ePn      Pn         00 04 43.9 +2.1
JRN    Qarnain Island     6.86 257   P       Pn         00 04 43.4 +0.8
SHRT   Shahrakht          6.93   1  ePn      Pn         00 04 45.9 +2.2
TPRV   Parvadeh(Tabas     7.02 335  ePn      Pn         00 04 46.0 +1.1
MZR    Muzera             7.13 240  ePn      Pn         00 04 47.7 +1.3
MZR    Muzera             7.13 240   P       Pn         00 04 48.1 +1.7
MZR                                  S       Sn         00 06 06.4 -1.1
DQM    DQM                7.16 201   P       Pn         00 04 48.1 +1.2
GHWR   Ruwais             7.17 249   P       Pn         00 04 47.4 +0.5
TKDS   Koohdasht(Taba     7.40 340  ePn      Pn         00 04 51.5 +1.4
TABS   Tabas              7.43 340  ePn      Pn         00 04 52.6 +2.0
YZKH   Yazd               7.50 321  ePn      Pn         00 04 53.5 +2.0
HRA    Herat              7.87  12   Pn      Pn         00 04 56.6 -0.1
TNSJ   Nastanj            7.89 338  ePn      Pn         00 04 58.1 +1.3
SLWR   Sila               8.13 253   P       Pn         00 05 02.1 +2.0
AHBU   AHRAM              8.19 287  ePn      Pn         00 05 02.2 +1.3
SHMA   Al-Shehemyia       8.34 266   P       Pn         00 05 04.6 +1.6
TRNA   Turayna            8.35 258   P       Pn         00 05 04.2 +1.2
IRAM   Ramesheh           8.53 309  ePn      Pn         00 05 06.0 +0.2
TBJM   Torbat-e-JAM       8.55   1  ePn      Pn         00 05 08.2 +2.2
ANAR   Anarak             8.57 321  ePn      Pn         00 05 07.9 +1.6
KLNJ   Kolanjah           8.69 302  ePn      Pn         00 05 08.6 +0.5
SAKB   Bahrain            8.71 267   P       Pn         00 05 09.4 +1.4
NASN   Na'in              8.86 315  ePn      Pn         00 05 12.7 +2.4
IBRJ   Brojen             9.38 306  ePn      Pn         00 05 18.2 +0.7
IPAY   Payeh              9.79 354  ePn      Pn         00 05 25.1 +2.1
DOK    Doka               9.80 216   P       Pn         00 05 23.4 +0.4
SHK1   Shahrekord         9.87 307  ePn      Pn         00 05 24.4 +0.2
SHRO   Shahrood           9.94 340  ePn      Pn         00 05 27.2 +2.2
IPIR   Pirpir            10.06 309  ePn      Pn         00 05 28.4 +1.5
DMTO   DMTO              10.17 210   P       Pn         00 05 29.2 +1.1
WHFO   Wadi Hawf         10.57 216  P        Pn         00 05 34.1 +0.5
WHFO                                P        Pn         00 05 34.1 +0.5
RBK    Rabkut            10.70 213  P        Pn         00 05 36.3 +0.8
AMIS   Naft Sefid        10.75 300  ePn      Pn         00 05 35.2 -0.9
KBL    Kabul             10.91  42  Pn       Pn         00 05 37.5 -0.9
BJRD   Bojnurd           11.23 349  ePn      Pn         00 05 44.2 +1.5
ABTO   Aybut             11.29 216  P        Pn         00 05 43.3 -0.1
KHMZ   Khomeyn           11.31 311  ePn      Pn         00 05 45.6 +1.8
GEYT   Alibeck           11.35 352  Pn       Pn         00 05 44.5 +0.3
GYA0B  ALIBECK ARRAY     11.35 352  Pn       Pn         00 05 42.0 -2.2
MRVT   Maraveh tapeh     11.48 343  ePn      Pn         00 05 49.1 +3.1
THW    Thamme Wali       11.72  56  P        Pn         00 05 50.2 +0.9
RAYN   Ar Rayn           13.69 260           Pn         00 06 13.4 -2.9
RAYN   Ar Rayn           13.69 260  P        Pn         00 06 14.2 -2.2
CHGR   Chuyangaron       14.10  30           Pn         00 06 21.0 -0.8
GAR    Garm              14.91  32  Pn       Pn         00 06 33.7 +0.8
SMLA   Simla             15.49  69  eP       Pn         00 06 42.3 +1.8
BTK    Batken            15.99  31  Pn       Pn         00 06 47.9 +0.9
BTK                                 IAmb     IAmb       00 06 50.9
              comp=Z,8.8nm,0.8s
DRK    Karamyk           16.01  34  Pn       Pn         00 06 48.4 +0.9
DRK                                 IAmb     IAmb       00 06 55.9
              comp=Z,8.4nm,0.7s
KSH    Kashi             18.35  42  P        Pn         00 07 11.9 -4.8
KSH                                 pP       P          00 07 14.9 -1.8
KSH                                 sP       pP         00 07 19.8 -0.1
KSH                                 PP       PnPn       00 07 27.8 -0.3
KSH                                 pmax     pmax
              comp=Z,4.0nm,0.7s
KK31   Karatay Array     18.40  25  P        Pn         00 07 16.5 -0.7
KKAR   Karatay Array     18.40  25  P        Pn         00 07 15.9 -1.2
KKAR   Karatay Array     18.40  25  P        Pn         00 07 15.8 -1.4
KKAR                                IAmb     IAmb       00 07 18.0
              comp=Z,2.1nm,0.7s
GEVA   Gevas             18.50 313  P        P          00 07 16.6 -1.9
GNI    Garni             18.59 320  P        P          00 07 18.8 -0.6
              comp=Z,1.8nm,0.5s,baz=142,slow=18,SNR=2.3
GNI                                 LR       LR         00 14 48.5
              comp=Z,39nm,18.8s,baz=60,slow=38
GNI    Garni             18.59 320  P        P          00 07 18.6 -0.8
AML    Almayashu         18.96  32  P        P          00 07 22.0 -1.8
GURO   Guroymak-BITLI    19.31 312  P        P          00 07 26.9 -0.4
MARD   Mardin            19.55 308  P        P          00 07 27.8 -2.2
MARD                                IAmb     IAmb       00 07 39.3
              comp=Z,7.8nm,0.9s
AAK    Ala-Archa         19.73  33  P        P          00 07 31.0 -1.0
              comp=Z,0.3nm,0.3s,baz=216,slow=13,SNR=4.2
AAK                                 LR       LR         00 16 24.3
              comp=Z,138nm,18.9s,baz=230,slow=41
              comp=Z,0.8nm,0.4s
AAK    Ala-Archa         19.73  33  P        P          00 07 31.6 -0.3
BOOM   Boomskoye usch    20.34  35  P        P          00 07 38.8 +0.2
KDJ    Kajisay           20.75  38  P        P          00 07 43.2 +0.1
KDJ                                 IAmb     IAmb       00 08 36.7
              comp=Z,11nm,0.9s
TARG   Taragay, Kyrgy    20.84  39  P        P          00 07 43.8 -0.4
TARG                                IAmb     IAmb       00 07 51.1
              comp=Z,7.8nm,1.4s
ASF    Jabal al Asfar    21.01 291  P        P          00 07 47.8 +2.0
              comp=Z,18nm,0.8s,baz=124,slow=7.7,SNR=15
              comp=Z,18nm,0.8s
GHAJ   Ghor Haditha      22.02 288  P        P          00 07 55.3 -1.3
GHAJ                                IAmb     IAmb       00 08 05.4
              comp=Z,17nm,1.1s
KBZ    Khabaz            22.04 325  P        P          00 07 58.7 +2.0
              comp=Z,1.8nm,0.8s,baz=127,slow=9.2,SNR=3.9
              comp=Z,1.8nm,0.8s
KIV    Kislovodsk        22.31 325  P        P          00 07 59.1 -0.5
KIV                                 IAmb     IAmb       00 08 31.1
              comp=Z,4.8nm,0.7s
EIL    Elat              22.45 283  P        P          00 08 01.1 -0.2
              comp=Z,5.5nm,1.1s,baz=63,slow=11,SNR=5.3
              comp=Z,5.5nm,1.1s
ABKAR  Akbulak array     22.53 360  P        P          00 08 01.8 -0.1
ABKAR  Akbulak array     22.53 360  P        P          00 08 01.2 -0.7
ABKAR                               IAmb     IAmb       00 08 08.3
              comp=Z,2.4nm,0.7s
AKTO   Aktyubinsk        23.77 357  P        P          00 08 13.2 -1.3
              comp=Z,1.4nm,0.5s,baz=180,slow=12,SNR=2.7
AKTO                                LR       LR         00 19 17.1
              comp=Z,21nm,18.6s,baz=166,slow=41
              comp=Z,1.4nm,0.5s
BR131  Keskin Array S    25.64 307  P        P          00 08 31.3 -0.6
BRTR   Keskin Array B    25.64 307  P        P          00 08 33.2 +1.3
              comp=Z,2.2nm,0.9s,baz=123,slow=10,SNR=14
              comp=Z,2.2nm,0.9s
BRTR   Keskin Array B    25.64 307  P        P          00 08 31.4 -0.6
ILGA   Ilgaz             26.12 310  P        P          00 08 33.7 -2.7
MAKZ   Makanchi          26.44  35  P        P          00 08 38.0 -0.9
MAKZ                                IAmb     IAmb       00 08 40.2
              comp=Z,2.2nm,0.7s
MK31   Makanchi Array    26.59  35  P        P          00 08 39.9 -0.4
MKAR   Makanchi Array    26.59  35  P        P          00 08 40.9 +0.5
              comp=Z,2.0nm,0.7s,baz=216,slow=8.9,SNR=14
              comp=Z,2.0nm,0.7s
MKAR   Makanchi Array    26.59  35  P        P          00 08 40.4  0.0
BRVK   Borovoye          27.39  13  P        P          00 08 46.9 -0.5
BRVK                                IAmb     IAmb       00 09 06.7
              comp=Z,6.0nm,1.6s
KURBB  Kurchatov Arra    27.70  26  P        P          00 08 50.9 +0.7
              comp=Z,1.7nm,0.7s,baz=222,slow=8.6,SNR=15
              comp=Z,1.7nm,0.7s
KURK   Kurchatov         27.81  25  P        P          00 08 50.2 -0.9
KURK                                IAmb     IAmb       00 08 53.0
              comp=Z,2.4nm,0.9s
IDI    Anoyia            31.34 295  LR       LR         00 26 30.5
              comp=Z,31nm,20.4s,baz=96,slow=45
ZAA0   Zalesovo Array    32.74  27  P        P          00 09 34.4 -0.4
ZALV   Zalesovo Beam     32.74  27  P        P          00 09 35.0 +0.3
              comp=Z,3.0nm,0.5s,baz=235,slow=9.8,SNR=18
              comp=Z,3.0nm,0.5s
ZALV   Zalesovo Beam     32.74  27  P        P          00 09 34.2 -0.5
AKASG  Malin Array Be    33.64 324  P        P          00 09 42.0 -0.6
              comp=Z,0.8nm,0.5s,baz=128,slow=7.5,SNR=2.9
              comp=Z,0.8nm,0.5s
AKASG  Malin Array Be    33.64 324  IAmb     IAmb       00 10 03.4
              comp=Z,3.9nm,1.4s
AKBB   Malin Array Si    33.64 324  P        P          00 09 41.6 -1.0
BURAR  Bucovina Array    34.43 317  P        P          00 09 48.9 -0.8
FNA    Florina           34.93 304  P        P          00 09 53.6 -0.4
FNA                                 IAmb     IAmb       00 10 01.4
              comp=Z,4.5nm,1.1s
KMBO   Kilima Mbogo      35.42 222  LR       LR         00 24 15.0
              comp=Z,57nm,18.1s,baz=94,slow=36
CMAR   Chiang Mai Arr    36.58  95  LR       LR         00 28 24.5
              comp=Z,37nm,19.0s,baz=135,slow=42
MBAR   Mbarara           39.27 231  LR       LR         00 27 37.8
              comp=Z,44nm,20.1s,baz=40,slow=38
FINES  FINESS Array B    41.61 336  P        P          00 10 49.1 -0.8
              comp=Z,0.5nm,0.3s,baz=138,slow=8.6,SNR=9.9
              comp=Z,0.5nm,0.3s
SONM   Songino Array     41.63  47  P        P          00 10 49.8 -0.7
              comp=Z,0.7nm,0.8s,baz=251,slow=8.4,SNR=3.4
              comp=Z,0.7nm,0.8s
SONM   Songino Array     41.63  47  IAmb     IAmb       00 10 57.3
              comp=Z,2.1nm,1.0s
ULN    Ulaanbaatar       42.07  47  P        P          00 10 54.8 +0.7
ULN                                 IAmb     IAmb       00 11 00.7
              comp=Z,2.8nm,0.8s
GERES  GERESS Array B    42.08 314  P        P          00 10 53.5 -0.6
              comp=Z,0.3nm,0.6s,baz=108,slow=11,SNR=4.8
              comp=Z,0.3nm,0.6s
DAVOX  Davos/Dischmat    44.19 311  LR       LR         00 33 12.3
              comp=Z,24nm,18.9s,baz=86,slow=41
ARCES  ARCESS Array B    47.40 344  P        P          00 11 35.7 -0.4
              comp=Z,3.0nm,1.0s,baz=139,slow=8.4,SNR=4.1
              comp=Z,3.0nm,1.0s
NOA    NORSAR Array B    47.47 330  P        P          00 11 35.4 -1.4
              comp=Z,0.4nm,0.7s,baz=118,slow=7.6,SNR=2.0
              comp=Z,0.4nm,0.7s
LSZ    Lusaka            52.04 220  LR       LR         00 35 21.5
              comp=Z,55nm,19.0s,baz=130,slow=37
ESDC   Sonseca Array     54.20 301  P        P          00 12 27.4 -0.5
              comp=Z,0.5nm,0.8s,baz=61,slow=6.6,SNR=4.9
              comp=Z,0.5nm,0.8s
ESDC   Sonseca Array     54.20 301  IAmb     IAmb       00 13 25.1
              comp=Z,3.5nm,1.6s
TOA0   Torodi Ar. Sit    56.21 268  P        P          00 12 42.2 -0.5
TORD   Torodi Ar. Bea    56.21 268  P        P          00 12 42.4 -0.3
              comp=Z,1.0nm,0.8s,baz=58,slow=4.8,SNR=12
              comp=Z,1.0nm,0.8s
BKB    Balikpapan        61.22 108  P        P          00 13 16.3 -1.2
TOLI2  Tolitoli          63.38 103  P        P          00 13 31.7 -0.3
WRA    Warramunga Arr    85.49 115  P        P          00 15 40.8 +0.3
              comp=Z,0.3nm,0.8s,baz=319,slow=4.1,SNR=2.3
              comp=Z,0.3nm,0.8s
```

IDC **17** *00:24:28.2±0.8, 39.°59N×75.°53E, h0km, mb3.9/18, mbtmp3.9/24, ML3.5/6, MS3.7/27, Error ellipse: s-maj=14.3km s-min=13.3km az=137.0*

SOME **17** *00:24:28.2, 39.°73N×75.°62E, h15km, MS3.8*

KRNET **17** *00:24:29.6±0.1, 39.°60N×75.°54E, mb4.8*

NEIC **17** *00:24:31.5±2.4, 39.°62N±0.°07×75.°62E±0.°05, h10km±2km, mb4.1/9, ML4.3(BJI), Error ellipse: s-maj=12.1km s-min=5.8km az=172.0*

BJI **17** *00:24:32.9±0.0, 39.°79N×75.°48E, h6km, mb3.9/8, mB4.3/4, ML4.2/7, Ms3.9/4, Ms7 3.7/5*

NNC **17** *00:24:33.8±1.6, 39.°89N×75.°47E, h0km, mb4.6, mpv4.4, Error ellipse: s-maj=14.5km s-min=12.2km az=161.0*

ISC 17 00:24:28.7±1.2**, 39.°63N**±0.°03×**75.°33E**±0.°02**, h1**km±7km**, n168, σ2.ˢ54**/189**, mb4.1**/20**, MS3.8**/23**, 45C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.51**	**103**	Pg	**Pn**	**00 24 44.8**	**+1.6**
KSH				Sg	**Sb**	**00 24 54.4**	**+6.0**
KSH				smax	smax		
	comp=N,5µm,0.7s						
KSH				smax	smax		
	comp=E,4µm,0.6s						
OHH	**Osh**	**2.15**	**295**	⇓*i*P	**Pg**	**00 25 11.0**	**+1.1**
	baz=95						
OHH				⇓*i*S	**Sg**	**00 25 41.2**	**+3.4**
	baz=95						
UCH	**Uchtor**	**2.67**	**347**	P	**Pb**	**00 25 16.9**	**-0.7**
	SNR=1811						
UCH	**Uchtor**	**2.67**	**347**	⇑*e*P	**Pb**	**00 25 17.0**	**-0.6**
	baz=44						
UCH				⇑*i*S	**Sb**	**00 25 51.7**	**+0.7**
	baz=44						
ULHL	**Ulahol**	**2.70**	**14**	P	**Pb**	**00 25 16.4**	**-1.5**
	SNR=242						
ULHL	**Ulahol**	**2.70**	**14**	⇓*i*P	**Pb**	**00 25 16.5**	**-1.5**
	baz=11						
ULHL				⇓*i*S	**Sb**	**00 25 50.5**	**-1.2**
	baz=11						
DRK	**Karamyk**	**2.74**	**268**		**Pb**	**00 25 19.5**	**+0.9**
AML	**Almayashu**	**2.79**	**334**	P	**Pb**	**00 25 18.8**	**-0.8**
	SNR=192						
TARG	**Taragay, Kyrgy**	**2.82**	**41**		**Pn**	**00 25 15.3**	**+0.1**
TARG				Pg	**Pg**	**00 25 21.8**	**-0.9**
KDJ	**Kajisay**	**2.86**	**29**	Pn	**Pn**	**00 25 16.4**	**+0.7**
KDJ	**Kajisay**	**2.86**	**29**	⇑*e*P	**Pb**	**00 25 18.1**	**-2.6**
	baz=26						
KDJ				⇑*i*S	**Sb**	**00 25 53.3**	**-3.0**
	baz=26						
BOOM	**Boomskoye usch**	**2.90**	**9**	Pn	**Pn**	**00 25 18.2**	**+2.1**
BOOM	**Boomskoye usch**	**2.90**	**9**	⇑*e*P	**Pb**	**00 25 19.3**	**-1.9**
	baz=6.0						
BOOM				⇑*i*S	**Sb**	**00 25 55.4**	**-1.8**
	baz=6.0						
KBK	**Karagaybulak**	**3.04**	**355**	P	**Pb**	**00 25 22.0**	**-1.7**
	SNR=103						
KBK	**Karagaybulak**	**3.04**	**355**	⇑*e*P	**Pb**	**00 25 21.4**	**-2.3**
	baz=52						
KBK				⇑*i*S	**Sb**	**00 25 59.5**	**-1.8**
	baz=52						
AAK	**Ala-Archa**	**3.07**	**348**	P	**Pb**	**00 25 22.7**	**-1.5**
	SNR=60						
AAK	**Ala-Archa**	**3.07**	**348**	Pn	**Pb**	**00 25 22.8**	**-1.5**
	36nm,0.3s,baz=165,slow=8.2,SNR=330						
AAK				Sn	**Sb**	**00 26 00.0**	**-2.3**
	50nm,0.3s,baz=329,slow=9.9,SNR=6.2						
AAK				LR	LR	00 26 46.7	
	comp=Z,1µm,18.8s,baz=106,slow=44						
	656nm,0.6s						
AAK	**Ala-Archa**	**3.07**	**348**	Pn	**Pb**	**00 25 22.4**	**-1.8**
AAK	**Ala-Archa**	**3.07**	**348**	⇑*i*P	**Pb**	**00 25 22.4**	**-1.8**
	baz=46						
AAK				⇑*i*S	**Sb**	**00 26 00.9**	**-1.4**
	baz=46						
FRU1	**Bishkek**	**3.22**	**351**		**Pb**	**00 25 24.3**	**-2.4**
FRU1	**Bishkek**	**3.22**	**351**	⇑*i*P	**Pb**	**00 25 24.5**	**-2.2**
	baz=48						
FRU1				⇑*i*S	**Sb**	**00 26 04.6**	**-1.9**
	baz=48						
EKS2	**Erkin-Say**	**3.25**	**339**	P	**Pb**	**00 25 25.4**	**-1.9**
	SNR=57						
EKS2	**Erkin-Say**	**3.25**	**339**	⇑*i*P	**Pb**	**00 25 25.1**	**-2.1**
	baz=37						
EKS2				⇑*i*S	**Sb**	**00 26 05.7**	**-1.7**
	baz=37						
TKM2	**Tokmak 2**	**3.29**	**3**	P	**Pb**	**00 25 25.3**	**-2.7**
	SNR=68						
TKM2	**Tokmak 2**	**3.29**	**3**	⇑Pn	**Pb**	**00 25 25.0**	**-3.0**
	190nm,0.9s						
TKM2				⇑Pg	**Pg**	**00 25 29.7**	**-2.2**
	235nm,0.8s						
TKM2				⇑Lg	Lg	00 26 11.6	
	1µm,0.6s						
TKM2	**Tokmak 2**	**3.29**	**3**	⇑*i*P	**Pb**	**00 25 24.8**	**-3.3**
	baz=1.0						
TKM2				⇑*i*S	**Sb**	**00 26 05.2**	**-3.5**
	baz=1.0						
ARK	**Arkit**	**3.35**	**311**	⇑*i*P	**Pb**	**00 25 27.4**	**-1.6**
	baz=10.0						
ARK				⇑*i*S	**Sb**	**00 26 09.5**	**-0.9**
	baz=10.0						
CHMS	**Chumysh**	**3.40**	**353**	P	**Pb**	**00 25 26.9**	**-2.8**
	SNR=139						
CHMS	**Chumysh**	**3.40**	**353**	⇑Pn	**Pb**	**00 25 26.3**	**-3.4**
	157nm,0.6s						
CHMS				⇓Pg	**Pg**	**00 25 31.6**	**-2.2**
	246nm,0.7s						
CHMS				⇑Lg	Lg	00 26 14.5	
	184nm,0.6s						
KST	**Kastek**	**3.44**	**8**	*e*P	**Pb**	**00 25 27.3**	**-3.2**
	277nm,0.6s						
KST				*e*S	**Sb**	**00 26 10.3**	**-2.6**
	4µm,0.8s						
MRKS	**Merke**	**3.50**	**334**	*e*P	**Pb**	**00 25 32.3**	**+0.9**
	103nm,0.9s						
MRKS				*e*S	**Sg**	**00 26 18.4**	**-2.6**
	284nm,1.1s						
BTK	**Batken**	**3.50**	**278**	Pn	**Pb**	**00 25 29.4**	**-2.2**
MTBS	**Maitube**	**3.59**	**13**	*e*P	**Pb**	**00 25 32.2**	**-0.9**
	185nm,0.6s						
MTBS				*e*S	**Sb**	**00 26 18.4**	**+1.2**
	731nm,0.4s						
ANVS	**Anan'yevo**	**3.61**	**28**	⇑*e*P	**Pn**	**00 25 28.4**	**+2.5**
	baz=26						
ANVS				⇑*i*S	**Sn**	**00 26 11.6**	**+2.3**
	baz=26						
TNSS	**Tian-Shan**	**3.62**	**19**	*e*P	**Pn**	**00 25 29.3**	**+3.1**
	171nm,0.5s						
TNSS				*e*S	**Sb**	**00 26 14.4**	**-3.8**
	435nm,0.7s						
TNSS	**Tian-Shan**	**3.62**	**19**	*i* P	**Pn**	**00 25 28.9**	**+2.7**
	baz=15						
PRZ	**Przheval'sk**	**3.67**	**38**	Pn	**Pn**	**00 25 29.3**	**+2.4**
PRZ	**Przheval'sk**	**3.67**	**38**	⇓*e*P	**Pn**	**00 25 29.2**	**+2.4**
	baz=36						
PRZ				⇓*e*S	**Sn**	**00 26 12.6**	**+1.7**
	baz=36						
USP	**Ospenovka**	**3.69**	**350**	P	**Pn**	**00 25 30.5**	**+3.6**
	SNR=79						
TRKS	**Terek-Say**	**3.71**	**302**	⇑*e*P	**Pb**	**00 25 32.1**	**-3.1**
	baz=1.0						
TRKS				⇑*i*S	**Sb**	**00 26 17.5**	**-3.3**
	baz=1.0						
MDOK	**Medeo**	**3.76**	**20**	*e*P	**Pb**	**00 25 35.4**	**-0.5**
	145nm,0.6s						
MDOK				*e*S	**Sb**	**00 26 24.1**	**+2.0**
	1µm,0.8s						
MDOK	**Medeo**	**3.76**	**20**	*i* P	**Pn**	**00 25 30.6**	**+2.7**
	baz=16						
MDOK	**Medeo**	**3.76**	**20**	⇑Pn	**Pn**	**00 25 30.1**	**+2.1**
	78nm,0.6s						
MDOK				⇓Pg	**Pb**	**00 25 36.4**	**+0.5**
	145nm,0.6s						
MDOK				⇓Lg	Lg	00 26 23.5	
	2µm,0.8s						
AAA	**Alma-Ata**	**3.77**	**18**	*e*P	**Pb**	**00 25 35.8**	**-0.3**
	78nm,0.5s						
AAA				*e*S	**Sb**	**00 26 25.1**	**+2.8**
	2µm,0.6s						
AAA	**Alma-Ata**	**3.77**	**18**	*e*P	**Pn**	**00 25 30.9**	**+2.9**
	baz=14						
KNDC	**Almaty**	**3.79**	**18**	⇓Pn	**Pn**	**00 25 27.9**	**-0.4**
	148nm,0.5s						
KNDC				⇓Lg	Lg	00 26 26.2	
	5µm,0.8s						
SGDS	**Sogindy**	**3.86**	**352**	*e*P	**Pb**	**00 25 37.8**	**+0.2**
	125nm,0.8s						
SGDS				*e*S	**Sb**	**00 26 28.4**	**+3.6**
	442nm,0.4s						
SGDS	**Sogindy**	**3.86**	**352**	⇑*i*P	**Pn**	**00 25 32.3**	**+3.1**
	baz=351						
GAR	**Garm**	**3.94**	**262**	Pn	**Pb**	**00 25 35.5**	**-3.5**
GAR	**Garm**	**3.94**	**262**	⇑*i*P	**Pb**	**00 25 35.8**	**-3.2**
	baz=63						
GAR				⇑*i*S	**Sb**	**00 26 24.2**	**-3.1**
	baz=63						
KRBS	**Karabastau**	**4.07**	**3**	*e*P	**Pb**	**00 25 41.8**	**+0.5**
	100nm,0.7s						
KRBS				*e*S	**Sb**	**00 26 34.5**	**+3.5**
	581nm,0.5s						
SATY	**Saty**	**4.13**	**33**	*e*P	**Pb**	**00 25 41.7**	**-0.6**
	148nm,0.7s						
SATY				*e*S	**Sb**	**00 26 34.6**	**+1.8**
	444nm,0.8s						
SATY	**Saty**	**4.13**	**33**	⇑*i*P	**Pn**	**00 25 35.3**	**+2.2**
	baz=29						
ZHN	**Zhinishke**	**4.24**	**32**	*e*P	**Pn**	**00 25 36.6**	**+2.1**
	baz=28						
KUU	**Kurty**	**4.33**	**10**	*e*P	**Pn**	**00 25 37.5**	**+1.9**
	baz=6.9						
CHKK	**Chushkaly**	**4.40**	**16**	*e*P	**Pn**	**00 25 38.7**	**+2.1**
	baz=13						
KURS	**Kuram**	**4.40**	**28**	*e*P	**Pb**	**00 25 46.4**	**-0.5**
	239nm,0.7s						
KURS				*e*S	**Sb**	**00 26 42.9**	**+2.4**
	417nm,0.9s						
DZA	**Taraz**	**4.44**	**319**	*e*P	**Pg**	**00 25 54.5**	**+0.7**
	33nm,0.3s						
DZA				*e*S	**Sg**	**00 26 57.2**	**+5.9**
	390nm,0.8s						
UZB	**Uzynbulak**	**4.48**	**37**	*e*P	**Pb**	**00 25 48.5**	**+0.3**
	54nm,0.6s						
UZB				*e*S	**Sb**	**00 26 46.4**	**+3.6**
	226nm,0.6s						
UZB	**Uzynbulak**	**4.48**	**37**	*e*P	**Pn**	**00 25 39.8**	**+2.0**
	baz=33						
SHLS	**Shalkode**	**4.70**	**40**	*e*P	**Pg**	**00 25 56.1**	**-2.6**
	66nm,0.7s						
SHLS				*e*S	**Sg**	**00 26 59.9**	**+0.3**
	340nm,0.8s						
SHLS	**Shalkode**	**4.70**	**40**	*e*P	**Pn**	**00 25 44.9**	**+4.1**
	baz=39						
IUG	**Iuzhnay**	**4.74**	**304**	*e*P	**Pn**	**00 25 44.9**	**+3.5**
	baz=306						
PDGK	**Podgornoye**	**4.84**	**39**	⇑Pn	**Pn**	**00 25 44.1**	**+1.3**
	46nm,1.3s						
PDGK				⇑Pg	**Pb**	**00 25 57.2**	**+2.9**
	85nm,0.7s						
PDGK				⇑Lg	Lg	00 26 56.1	
	550nm,0.8s						
CHGR	**Chuyangaron**	**4.90**	**261**	Pn	Pn	00 25 48.0	+4.4
CHGR	**Chuyangaron**	**4.90**	**261**	⇑*i*P	Pn	00 25 48.7	+5.2
	baz=61						
CHGR				⇑*i*S	**Sn**	**00 26 46.3**	**+5.4**
	baz=61						
TAS	**Tashkent**	**4.91**	**292**	Pn	**Pn**	**00 25 48.0**	**+4.4**
KK31	**Karatay Array**	**5.02**	**315**	Pn	**Pn**	**00 25 48.3**	**+3.2**
KK31	**Karatay Array**	**5.02**	**315**	⇑Pn	**Pn**	**00 25 47.9**	**+2.7**
	2.1nm,0.3s,baz=128,slow=12,SNR=95						
KK31				⇑Lg	Lg	00 27 08.0	
	144nm,1.1s,baz=126,slow=27,SNR=5.7						
KKAR	**Karatay Array**	**5.02**	**315**	Pn	**Pn**	**00 25 48.2**	**+3.0**
KKAR	**Karatay Array**	**5.02**	**315**		**Pn**	**00 25 47.7**	**+2.6**
CHM	**Chimkent**	**5.10**	**304**	*e*P	**Pg**	**00 26 06.2**	**-0.3**
	6.6nm,0.3s						
CHM				*e*S	**Sg**	**00 27 17.2**	**+4.6**
	158nm,0.3s						
BRLS	**Borolday**	**5.35**	**311**	*e*P	**Pg**	**00 26 08.2**	**-3.1**
	30nm,1.2s						
BRLS				*e*S	**Sg**	**00 27 20.7**	**0.0**
	81nm,1.0s						
BTLS	**Baital**	**5.49**	**350**	*e*P	**Pb**	**00 26 06.9**	**+1.6**
	47nm,0.7s						
BTLS				*e*S	**Sb**	**00 27 18.5**	**+6.8**
	47nm,0.7s						
BTLS	**Baital**	**5.49**	**350**	*e*P	**Pn**	**00 25 54.3**	**+2.7**
	baz=349						
DJR	**Jarkent**	**5.75**	**34**	*e*P	**Pb**	**00 26 10.7**	**+0.9**
	19nm,0.5s						
DJR				*e*S	**Sb**	**00 27 25.0**	**+5.7**
	97nm,0.8s						
TDK	**Taldyqorghan**	**5.83**	**22**	*e*P	**Pn**	**00 25 59.6**	**+3.4**
	baz=19						
CHCP	**Chirah Chowk**	**6.19**	**196**	P	Pb	00 26 09.5	-7.7
KAPS	**Kapalarasan**	**6.39**	**26**	*e*P	**Pb**	**00 26 21.4**	**+0.7**
	40nm,0.5s						
KAPS				*e*S	**Sb**	**00 27 43.3**	**+5.8**
	99nm,0.6s						
CEP	**Cherat**	**6.41**	**206**	P	Pn	00 26 11.8	+7.4
KBL	**Kabul**	**7.14**	**227**	Pn	**Pn**	**00 26 18.6**	**+4.1**
THW	**Thamme Wali**	**7.41**	**204**	P	Pn	00 26 24.7	+6.7
SMLA	**Simla**	**8.61**	**169**	*e*P	Pn	00 26 39.9	+5.5
SMLA				*e*S	**Sn**	**00 28 15.0**	**+2.8**
SMLA				IAML		00 28 23.4	
	comp=N,44nm,0.1s						
SMLA				IAML		00 28 23.5	
	comp=E,55nm,0.3s						
SMLA				IAML		00 28 27.6	
	comp=N,60nm,0.4s						
SMLA				IAML		00 28 30.0	
	comp=E,33nm,0.1s						
SMLA				IAML		00 28 31.0	
	comp=N,79nm,0.6s						
MAKZ	**Makanchi**	**8.66**	**32**		**Pn**	**00 26 35.4**	**+0.4**
MAKZ	**Makanchi**	**8.66**	**32**	⇑Pn	**Pn**	**00 26 38.4**	**+3.3**
	comp=N,5.3nm,0.9s						
MK31	**Makanchi Array**	**8.78**	**33**	Pn	**Pn**	**00 26 37.4**	**+0.7**
MK31	**Makanchi Array**	**8.78**	**33**	Pn	**Pn**	**00 26 38.1**	**+1.4**
	comp=N,11nm,0.8s,baz=212,slow=13,SNR=75						
MK31				⇑Lg	Lg	00 28 59.6	
	comp=N,14nm,0.7s,baz=210,slow=27,SNR=4.2						
MKAR	**Makanchi Array**	**8.78**	**33**	Pn	**Pn**	**00 26 38.2**	**+1.5**
	comp=N,0.5nm,0.3s,baz=208,slow=7.9,SNR=19						
MKAR				Lg	Lg	00 29 02.1	
	comp=N,1.6nm,0.3s,baz=220,slow=30,SNR=5.9						
	comp=N,2.3nm,0.6s						
MKAR	**Makanchi Array**	**8.78**	**33**	Pn	**Pn**	**00 26 37.6**	**+0.9**
OTUK	**Ortayu**	**8.88**	**347**	⇑Pn	**Pn**	**00 26 39.4**	**+1.3**
	comp=N,12nm,1.4s						
OTUK				⇑Lg	Lg	00 29 05.9	
	comp=N,150nm,1.4s						
WMQ	**Urumqi**	**10.14**	**62**	*e*P	Pn	00 27 00.8	+5.3
KURBB	**Kurchatov Arra**	**11.22**	**11**	Pn	**Pn**	**00 27 09.2**	**-0.9**
	baz=195,slow=12,SNR=6.3						
KURBB				Pg		00 27 53.1	
	comp=N,0.1nm,0.3s,baz=207,slow=16,SNR=4.6						
KURBB				Lg	Lg	00 30 19.1	
	comp=N,0.5nm,0.3s,baz=195,slow=28,SNR=11						
KURBB				LR	LR	00 31 38.3	
	comp=N,401nm,18.8s,baz=172,slow=38						
	comp=N,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**11.22**	**11**	⇓Pn	**Pn**	**00 27 10.2**	**+0.1**
	comp=N,4.7nm,0.8s						
KURBB				⇑Lg	Lg	00 30 17.4	
	comp=N,166nm,0.8s						
KURK	**Kurchatov**	**11.32**	**11**	Pn	**Pn**	**00 27 11.7**	**+0.2**
KURK	**Kurchatov**	**11.32**	**11**	⇓Pn	**Pn**	**00 27 11.8**	**+0.2**
	comp=N,3.6nm,0.8s						
KURK				⇓Lg	Lg	00 30 20.1	
	comp=N,257nm,1.0s						
HRA	**Herat**	**11.70**	**248**	Pn	**Pn**	**00 27 19.7**	**+2.8**
GEYT	**Alibeck**	**13.54**	**268**	Pn	**Pn**	**00 27 43.8**	**+1.9**
	comp=N,0.4nm,0.3s,baz=74,slow=21,SNR=2.3						
GEYT				Sn	**Sn**	**00 30 16.0**	**+2.9**
	comp=N,0.5nm,0.3s,baz=256,slow=18,SNR=2.4						
GEYT				LR	LR	00 33 52.7	
	comp=N,154nm,19.1s,baz=54,slow=41						
	comp=N,0.8nm,0.3s						
GEYT	**Alibeck**	**13.54**	**268**	Pn	P	00 27 46.4	-4.9
GYA0B	**ALIBECK ARRAY**	**13.54**	**268**	Pn	**P**	**00 27 46.5**	**-4.8**
BRVK	**Borovoye**	**13.87**	**347**	Pn	**P**	**00 27 54.1**	**-0.7**
GKN	**Gorkha**	**13.93**	**144**	*e*P	**Pn**	**00 27 45.3**	**-2.0**
KKN	**Kakani**	**14.41**	**142**	*e*P	**Pn**	**00 27 51.7**	**-2.3**
	comp=N,20nm,0.5s						
DMN	**Daman**	**14.48**	**143**	*e*P	**Pn**	**00 27 52.5**	**-2.5**
AB31	**Akbulak array**	**14.58**	**316**	Pn	**Pn**	**00 27 55.9**	**-0.2**
	comp=N,4.3nm,0.8s,baz=124,slow=12,SNR=8.5						
ABKAR	**Akbulak array**	**14.58**	**316**	Pn	**Pn**	**00 27 56.7**	**+0.7**
ABKAR	**Akbulak array**	**14.58**	**316**	Pn	**Pn**	**00 27 56.8**	**+0.7**
PKIN	**Phulchoki**	**14.64**	**142**	*e*P	**Pn**	**00 27 55.1**	**-2.1**
	comp=N,16nm,0.4s						
PKI	**Pulchoki**	**14.65**	**142**	*e*P	**Pn**	**00 27 54.7**	**-2.7**
	comp=N,14nm,0.4s						
ZAA0	**Zalesovo Array**	**15.71**	**21**	Pn	**Pn**	**00 28 10.5**	**-0.4**
ZAA0				IAmb	IAmb	00 28 24.1	
	comp=Z,8.5nm,1.1s						
ZALV	**Zalesovo Beam**	**15.71**	**21**	Pn	**Pn**	**00 28 10.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=17						
ZALV				Sn	**Sn**	**00 31 08.2**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=231,slow=18,SNR=2.6						
ZALV				Lg	Lg	00 32 42.0	
	baz=210,slow=26,SNR=2.3						
ZALV				LR	LR	00 34 32.9	
	comp=Z,140nm,21.8s,baz=228,slow=38						
	comp=Z,5.3nm,0.9s						
ZALV	**Zalesovo Beam**	**15.71**	**21**	Pn	**Pn**	**00 28 09.7**	**-1.3**
RAMN	**Ramite**	**15.75**	**140**	*e*P	**Pn**	**00 28 08.1**	**-3.9**
	comp=Z,108nm,0.9s						
GOMU	**GeErMu**	**15.75**	**96**	P	**Pn**	**00 28 05.8**	**-6.3**
GOMU				pP	P	00 28 09.5	-6.7
GOMU				sP	pP	00 28 12.9	-4.2
GOMU				S	**Sn**	**00 31 04.3**	**-3.1**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				LR	LR		
	comp=N,89nm,7.0s						
GOMU				LR	LR		
	comp=E,66nm,7.5s						
GOMU				LR	LR		
	comp=Z,42nm,7.0s						
AKTO	**Aktyubinsk**	**16.28**	**317**	Pn	**Pn**	**00 28 19.2**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=114,slow=21,SNR=6.1						
AKTO				LR	LR	00 35 02.4	
	comp=Z,269nm,19.6s,baz=134,slow=39						
	comp=Z,1.2nm,0.5s						
AKTO	**Aktyubinsk**	**16.28**	**317**	⇑Pn	**P**	**00 28 19.6**	**-2.0**
	comp=Z,9.9nm,1.0s						
LSA	**Lhasa**	**16.33**	**123**		**P**	**00 28 20.5**	**-2.2**
BHPL	**Bhopal**	**16.43**	**173**	*e*x	P	00 28 35.2	+12
BHPL				*e*x	**Sn**	**00 31 16.6**	**-7.0**
GTA	**Gaotai**	**18.88**	**83**	*e*P	**Pn**	**00 28 51.8**	**+0.8**
GTA				sP	sP	00 28 59.6	+7.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**20.11**	**332**	P	Pn	00 29 04.7	-0.8
	comp=Z,1.5nm,0.8s,baz=177,slow=2.7,SNR=6.9						
ARU				Lg	Lg	00 35 07.0	
	baz=142,slow=18,SNR=4.5						
ARU				LR	LR	00 37 19.9	
	comp=Z,222nm,19.6s,baz=110,slow=38						
	comp=Z,1.5nm,0.8s						
ARU	**Arti**	**20.11**	**332**	P	Pn	00 29 04.7	-0.8
ARU				IAmb	IAmb	00 29 18.4	
	comp=Z,8.7nm,1.0s						
KOHI	**KOHIMA**	**20.97**	**126**	*e*P	Pn	00 29 15.3	-0.6
IMP	**Imphal**	**21.52**	**128**	*e*P	**P**	**00 29 21.2**	**+2.0**
AZL	**Aizawl**	**21.60**	**132**	*e*P	**P**	**00 29 21.2**	**+1.1**
LZH	**Lanzhou**	**22.75**	**90**	*e*P	P	00 29 20.4	-12
LZH				pP	pP	00 29 27.0	-6.3
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
GNI	**Garni**	**23.43**	**281**	P	**P**	**00 29 41.7**	**+2.3**
	comp=Z,2.6nm,0.6s,baz=102,slow=23,SNR=3.7						
	comp=Z,2.6nm,0.6s						
GNI	**Garni**	**23.43**	**281**	P	**P**	**00 29 42.9**	**+3.5**
GNI				IAmb	IAmb	00 29 55.5	
	comp=Z,11nm,1.1s						
SONM	**Songino Array**	**23.77**	**60**	P	**P**	**00 29 42.5**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=260,slow=10,SNR=15						
SONM				LR	LR	00 39 56.2	
	comp=Z,154nm,20.4s,baz=254,slow=39						
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**23.77**	**60**		**P**	**00 29 41.9**	**-0.8**
KBZ	**Khabaz**	**24.48**	**290**	P	**P**	**00 29 52.3**	**+3.1**
	comp=Z,0.3nm,0.3s,baz=124,slow=15,SNR=1.1						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.35**	**129**	LR	LR	00 42 26.7	
	comp=Z,57nm,18.5s,baz=195,slow=37						
NRIK	**Noril'sk**	**30.48**	**9**	P	**P**	**00 30 42.9**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=189,slow=7.2,SNR=8.5						
	comp=Z,2.5nm,0.8s						
NRIK	**Noril'sk**	**30.48**	**9**	P	**P**	**00 30 42.9**	**+0.2**
BR131	**Keskin Array S**	**31.88**	**284**	P	**P**	**00 30 57.3**	**+1.7**
BR131				IAmb	IAmb	00 30 57.9	
	comp=Z,2.8nm,0.7s						
BRTR	**Keskin Array B**	**31.88**	**284**	P	**P**	**00 30 57.5**	**+2.0**
	comp=Z,1.7nm,0.7s,baz=86,slow=8.3,SNR=13						
	comp=Z,1.7nm,0.7s						
BRTR	**Keskin Array B**	**31.88**	**284**	P	**P**	**00 30 57.0**	**+1.4**
PALK	**Pallekele**	**32.58**	**170**	LR	LR	00 43 14.0	
	comp=Z,119nm,20.0s,baz=98,slow=35						
AKASG	**Malin Array Be**	**33.82**	**305**	P	**P**	**00 31 12.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=75,slow=8.3,SNR=4.6						
	comp=Z,0.2nm,0.3s						
MNK	**Minsk**	**34.85**	**311**	*i* P	**P**	**00 31 22.5**	**+1.4**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**00 31 22.5**	**+1.4**
	comp=N,11nm,1.0s						
MNK				*i* P	**P**	**00 31 22.5**	**+1.4**
	comp=Z,11nm,0.9s,baz=97						
MNK				*i* PP	**PP**	**00 32 41.0**	**+1.2**
MNK				*i* PPP	PPP	00 32 54.7	
MNK				*i* S	**S**	**00 36 53.6**	**+0.9**
MNK				*i* SS	**SS**	**00 39 14.9**	**-8.5**
MNK				*i* SSS	SSS	00 39 35.4	
MNK				*i* LQ	LQ	00 43 06.5	
MNK				*i* LR	LR	00 46 01.6	
MNK				*i* LRM	MLR	00 47 36.1	
	comp=N,31nm,14.7s						
MNK				*i* LRM	MLR	00 47 38.0	
	comp=E,6.0nm,14.7s						
MNK				*i* LRM	MLR	00 47 50.8	
	comp=Z,85nm,15.3s						
MLR	**Muntele Rosu**	**36.38**	**296**	LR	LR	00 49 06.0	
	comp=Z,150nm,20.6s,baz=78,slow=40						
FINES	**FINESS Array B**	**36.93**	**323**	P	**P**	**00 31 39.0**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=132,slow=11,SNR=6.9						
FINES				LR	LR	00 47 28.2	
	comp=Z,159nm,19.1s,baz=103,slow=37						
	comp=Z,0.6nm,0.4s						
YAK	**Yakutsk**	**39.42**	**37**	LR	LR	00 49 11.0	
	comp=Z,122nm,19.5s,baz=269,slow=38						
ARCES	**ARCESS Array B**	**39.66**	**335**	P	**P**	**00 32 02.1**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=110,slow=9.4,SNR=19						
ARCES				LR	LR	00 48 57.7	
	comp=Z,123nm,18.8s,baz=162,slow=37						
	comp=Z,2.2nm,0.5s						
TIXI	**Tiksi**	**41.59**	**23**	LR	LR	00 50 41.4	
	comp=Z,58nm,21.6s,baz=181,slow=38						
TIXI	**Tiksi**	**41.59**	**23**	P	**P**	**00 32 16.5**	**-1.1**
HFS	**Hagfors**	**42.81**	**320**	LR	LR	00 50 52.5	
	comp=Z,147nm,18.6s,baz=102,slow=37						
CLL	**Collm**	**43.98**	**307**	*e*P	**P**	**00 32 38.0**	**+0.8**
	comp=Z,3.0nm,0.8s						
CLL				LmV		00 52 00.0	
	comp=Z,100nm,19.4s						
GEC2	**GERESS Array S**	**44.00**	**303**	P	**P**	**00 32 39.3**	**+1.7**
GEC2				IAmb	IAmb	00 32 49.6	
	comp=Z,2.7nm,1.0s						
GERES	**GERESS Array B**	**44.00**	**303**	P	**P**	**00 32 39.1**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=74,slow=5.7,SNR=15						
	comp=Z,1.9nm,0.8s						
NB2	**NORSAR Subarra**	**44.03**	**321**	P	**P**	**00 32 36.8**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**44.03**	**321**	P	**P**	**00 32 37.1**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=90,slow=8.2,SNR=4.7						
	comp=Z,1.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**45.27**	**346**	LR	LR	00 54 30.3	
	comp=Z,107nm,19.9s,baz=198,slow=40						
DAVOX	**Davos/Dischmat**	**47.00**	**301**	LR	LR	00 53 41.9	
	comp=Z,62nm,21.7s,baz=65,slow=37						
MA2	**Magadan**	**49.78**	**40**	LR	LR	00 55 07.1	
	comp=Z,90nm,18.2s,baz=294,slow=37						
SEY	**Seymchan**	**49.90**	**36**	LR	LR	00 55 32.8	
	comp=Z,69nm,19.6s,baz=197,slow=37						
EKA	**Eskdalemuir Ar**	**52.45**	**315**	LR	LR	00 57 05.8	
	comp=Z,54nm,19.5s,baz=93,slow=37						
LEM	**Lembang**	**55.02**	**140**	LR	LR	01 00 15.3	
	comp=Z,90nm,19.6s,baz=304,slow=39						
BORG	**Borgarnes**	**57.63**	**330**	LR	LR	00 59 00.7	
	comp=Z,60nm,19.0s,baz=52,slow=36						
ESDC	**Sonseca Array**	**59.02**	**298**	P	**P**	**00 34 30.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=57,slow=6.8,SNR=22						
ESDC				LR	LR	01 03 56.5	
	comp=Z,46nm,19.6s,baz=72,slow=40						
	comp=Z,1.5nm,0.6s						
RES	**Resolute Bay**	**65.78**	**357**	LR	LR	01 07 25.8	
	comp=Z,52nm,18.3s,baz=307,slow=39						

TORD	Torodi Ar. Bea	69.18	270	P	P	00 35 37.1	0.0
	comp=Z,1.1nm,0.5s,baz=46,slow=5.4,SNR=25						
	comp=Z,1.1nm,0.5s						
LSZ	Lusaka	70.09	229	LR	LR	01 06 38.3	
	comp=Z,49nm,18.5s,baz=136,slow=36						
INK	Inuvik	70.23	11	P	P	00 35 41.5	-1.3
	comp=Z,1.8nm,0.5s,baz=339,slow=4.6,SNR=11						
	comp=Z,1.8nm,0.5s						
ILAR	Eielson Array	70.80	18	P	P	00 35 44.7	-1.7
	comp=Z,0.9nm,0.8s,baz=320,slow=5.2,SNR=8.4						
	comp=Z,0.9nm,0.8s						
FRB	Frobisher Bay	73.05	344	LR	LR	01 12 44.0	
	comp=Z,43nm,18.2s,baz=44,slow=40						
YKA	Yellowknife Ar	77.91	5	P	P	00 36 26.7	-1.1
	comp=Z,2.6nm,0.7s,baz=348,slow=5.5,SNR=28						
	comp=Z,2.6nm,0.7s						
WRA	Warramunga Arr	80.87	125	P	P	00 36 43.9	-0.6
	comp=Z,1.6nm,1.1s,baz=313,slow=6.4,SNR=4.3						
	comp=Z,1.6nm,1.1s						
ASAR	Alice Springs	83.36	128	P	P	00 36 57.1	-0.4
	comp=Z,0.7nm,0.7s,baz=333,slow=4.2,SNR=4.7						
	comp=Z,0.7nm,0.7s						
YBH	Yreka Blue Hor	97.37	14	LR	LR	01 26 34.0	
	comp=Z,28nm,19.1s,baz=266,slow=38						

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*IDC **17** 00:25:04.5±1.9, 34˚63S×179˚55E, h0^{km}, mb4.2/3, mbtmp4.1/4, ML3.4/1, MS3.5/1, Error ellipse: s-maj=50.3km s-min=29.8km az=53.0*

*WEL **17** 00:25:06.5±1.7, 35˚S±10˚×18˚0E±1˚5, h23^{km}, M4.2/8, ML4.3/15, MLv4.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=73.4*

*NEIC **17** 00:25:10.8±1.1, 34˚9S±0˚1×179˚2E±0˚2, h23^{km}±10^{km}, mb4.3/8, Error ellipse: s-maj=24.3km s-min=12.6km az=49.0*

ISC 17 00:25:11.3±1.1**, 34˚77S**±0˚08×**179˚4E**±0˚1**, h35**^{km}**, n47, σ2^{s}01**/42**, mb4.3**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.91	197	Pn	Pn	00 25 53.6	-1.5
MXZ	Matakaoa Point	2.91	197	P	Pn	00 25 51.8	-3.3
WMGZ	Waiomatatini S	3.13	194	P	Pn	00 25 57.1	-1.1
HAZ	Te Kaha	3.24	203	P	Pn	00 25 56.6	-3.0
PKGZ	Pakihiroa	3.28	198	P	Pn	00 25 57.7	-2.5
RUGZ	Raukumara Rang	3.46	203	P	Pn	00 26 02.0	-0.9
GRZ	Great Barrier	3.50	244	P	Pn	00 25 59.3	-4.0
TWGZ	Tauwhareparae	3.57	198	P	Pn	00 26 04.8	+0.5
TWGZ				S	Sn	00 26 51.9	+6.6
CNGZ	Carnagh Statio	3.82	194	P	Pn	00 26 07.6	0.0
MWZ	Matawai	3.85	202	P	Pn	00 26 07.1	-0.9
URZ	Urewera	3.92	207	Pn	Pn	00 26 07.0	-2.0
	2.5nm,0.3s,baz=39,slow=13,SNR=12						
URZ				Sn	Sn	00 26 51.8	-2.0
	3.5nm,0.3s,baz=345,slow=5.7,SNR=1.5						
	18nm,0.6s						
URZ	Urewera	3.92	207		Pn	00 26 07.7	-1.3
URZ	Urewera	3.92	207	P	Pn	00 26 07.0	-2.0
URZ				S	Sn	00 26 53.5	-0.3
MUGZ	Murupara	4.24	209	P	Pn	00 26 14.1	+0.7
RTZ	Ruatahuna	4.28	206	P	Pn	00 26 13.9	-0.2
TOZ	Tahuroa Road	4.29	225	P	Pn	00 26 16.7	+2.7
SNGZ	Shannon Statio	4.32	201	P	Pn	00 26 14.6	+0.1
OUZ	Omahuta	4.75	263	Pn	Pn	00 26 18.1	-2.3
OUZ	Omahuta	4.75	263	P	Pn	00 26 21.5	+1.2
BKZ	Black Stump Fm	4.95	207	Pn	Pn	00 26 21.7	-1.5
BKZ	Black Stump Fm	4.95	207	P	Pn	00 26 22.6	-0.5
HIZ	Hauiti	5.20	223	Pn	Pn	00 26 25.8	-0.8
HIZ	Hauiti	5.20	223	P	Pn	00 26 26.1	-0.5
NTVZ	North Tongarir	5.23	213	P	Pn	00 26 27.5	+0.4
KAHZ	Kahuranaki	5.39	201	P	Pn	00 26 27.3	-1.9
BFZ	Birch Farm	6.39	202	Pn	Pn	00 26 39.5	-3.5
THZ	Tophouse	8.62	214	Pn	Pn	00 27 12.5	-1.1
KHZ	Kahutara	8.88	209	Pn	Pn	00 27 15.1	-2.0
DZM	Mont Dzumac	16.98	315	LR	LR	00 34 22.8	
	comp=Z,161nm,18.2s,baz=102,slow=33						
DZM	Mont Dzumac	16.98	315		Pn	00 29 07.5	+1.3
ASAR	Alice Springs	40.88	273	P	P	00 32 49.7	-0.4
	2.5nm,0.8s,baz=115,slow=7.7,SNR=20						
	2.5nm,0.8s						
WR0	Warramunga Arr	42.10	279	P	P	00 32 59.2	-1.0
WR0				IAmb	IAmb	00 33 01.0	
	comp=Z,6.8nm,1.1s						
WB2	Warramunga Arr	42.26	278	P	P	00 33 01.4	-0.1
WB2				IAmb	IAmb	00 33 02.1	
	comp=Z,6.4nm,1.0s						
WRA	Warramunga Arr	42.27	278	P	P	00 33 01.2	-0.4
	comp=Z,2.5nm,0.7s,baz=121,slow=7.5,SNR=20						
	comp=Z,2.5nm,0.7s						
WB0	Warramunga Arr	42.31	279	P	P	00 33 01.6	-0.3
WB0				IAmb	IAmb	00 33 11.9	
	comp=Z,5.1nm,0.9s						
QSPA	South Pole Qui	55.35	180	P	P	00 34 42.5	+1.1
	comp=Z,3.4nm,0.9s,baz=12,slow=2.1,SNR=7.9						
	comp=Z,3.4nm,0.9s						
QSPA	South Pole Qui	55.35	180	IAmb	IAmb	00 34 44.0	
	comp=Z,4.2nm,1.0s						
MG03	Isla Dawson	73.20	144	P	P	00 36 38.4	0.0
MG04	Isla Riesco	73.24	143	P	P	00 36 39.5	+0.9
H03S2	Juan Fernandez	79.89	124	T	T	02 05 21.7	
	baz=232						
H03S1	Juan Fernandez	79.90	124	T	T	02 05 22.9	
	baz=232						
H03S3	Juan Fernandez	79.91	124	T	T	02 05 21.8	
	baz=232						
H03N3	Juan Fernandez	80.11	124	T	T	02 05 36.0	
	baz=237,slow=72,SNR=751						
H03N2	Juan Fernandez	80.12	124	T	T	02 05 30.4	
	baz=237,slow=72,SNR=723						
H03N1	Juan Fernandez	80.13	124	T	T	02 05 30.9	
	baz=237,slow=72,SNR=643						
FINES	FINESS Array B	148.34	336	PKPbc	PKPdf	00 44 50.9	+1.3
	comp=Z,0.7nm,0.8s,baz=64,slow=6.3,SNR=1.3						
TORD	Torodi Ar. Bea	158.37	186	PKPab	PKPab	00 45 36.7	-3.0
	comp=Z,1.2nm,1.1s,baz=148,slow=5.4,SNR=3.4						

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*NEIC **17** 00:41:10.6±2.5, 29˚87S±0˚06×177˚5W±0˚1, h19^{km}±3^{km}, mb4.9/49, Error ellipse: s-maj=13.8km s-min=7.7km az=69.0*

*BJI **17** 00:41:12.4±0.0, 29˚77S×177˚79W, h37^{km}, mb5.0/12, mB5.2/3, Ms4.8/2, Ms7 4.5/1*

*IDC **17** 00:41:14.1±0.9, 29˚64S×177˚71W, h45^{km}±6^{km}, mb4.4/15, mbtmp4.6/18, ML4.2/3, MS3.6/20, Error ellipse: s-maj=18.0km s-min=12.4km az=90.0*

*NOU **17** 00:41:53.7, 29˚76S×178˚44W, h411^{km}, mb4.7/17, Kermadec Islands, New Zealand*

ISC 17 00:41:12.4±0.3**, 29˚88S**±0˚04×**177˚52W**±0˚07**, h35**^{km}**, n300, σ1^{s}61**/298**, mb4.9**/44**, MS3.8**/20**, 1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	0.70	330	P	Pn	00 41 25.2	-0.6
GLKZ				S	Sn	00 41 33.0	-2.4
RAO	Raoul Island	0.71	331	P	Pn	00 41 25.5	-0.5
	49μm,0.2s,baz=88,slow=8.7,SNR=784						
RAO				S	Sn	00 41 33.9	-1.7
	116μm,0.5s,baz=87,slow=13,SNR=21						
RAO	Raoul Island	0.71	331		Pn	00 41 25.4	-0.5
RAO					Sn	00 41 34.2	-1.4
RIZ	Raoul Island	0.72	330	P	Pn	00 41 25.3	-0.7
RIZ				S	Sn	00 41 34.2	-1.7
MXZ	Matakaoa Point	8.42	203	P	Pn	00 43 10.3	-1.5
MXZ				S	Sn	00 44 44.5	-1.0
WMGZ	Waiomatatini S	8.61	202	P	Pn	00 43 13.4	-1.0
WMGZ				S	Sn	00 44 51.6	+1.3
HAZ	Te Kaha	8.78	205	P	Pn	00 43 14.8	-1.9
HAZ				S	Sn	00 44 55.2	+0.9
PKGZ	Pakihiroa	8.79	203	P	Pn	00 43 14.1	-2.8
PKGZ				S	Sn	00 44 50.7	-4.1
PUZ	Puketiti	8.89	202	P	Pn	00 43 15.4	-3.0
PUZ				S	Sn	00 44 54.7	-2.6
RUGZ	Raukumara Rang	9.00	205	P	Pn	00 43 18.0	-1.9
RUGZ				S	Sn	00 44 59.7	-0.3
TWGZ	Tauwhareparae	9.08	203	P	Pn	00 43 19.4	-1.6
TWGZ				S	Sn	00 45 00.6	-1.3
CNGZ	Carnagh Statio	9.29	201	P	Pn	00 43 22.0	-1.7
CNGZ				S	Sn	00 45 03.2	-3.7
MWZ	Matawai	9.38	205	P	Pn	00 43 21.6	-3.5
MWZ				S	Sn	00 45 07.2	-2.1
URZ	Urewera	9.47	207	P	Pn	00 43 29.6	+3.4
	2.7nm,0.3s,baz=27,slow=4.5,SNR=8.6						
URZ				S	Sn	00 45 10.0	-1.4
	19nm,0.3s,baz=57,slow=23,SNR=12						
	10.0nm,0.5s						
URZ	Urewera	9.47	207	Pn	Pn	00 43 25.9	-0.4
RAGZ	Rawiri	9.56	205	S	Sn	00 45 12.4	-1.4
MUGZ	Murupara	9.79	207	P	Pn	00 43 27.4	-3.2
MUGZ				S	Sn	00 45 18.0	-1.4
RTZ	Ruatahuna	9.83	206	P	Pn	00 43 27.9	-3.3
RTZ				S	Sn	00 45 17.7	-2.8
BKZ	Black Stump Fm	10.50	206	Pn	Pn	00 43 38.1	-2.2
BKZ	Black Stump Fm	10.50	206	P	Pn	00 43 36.1	-4.3
BKZ				S	Sn	00 45 33.2	-3.5
ETVZ	East Tongariro	10.79	209	P	Pn	00 43 43.7	-0.7
OTVZ	Oturere	10.83	209	P	Pn	00 43 44.9	-0.2
SNVZ	South Ngauruho	10.86	209	P	Pn	00 43 45.4	0.0
KAHZ	Kahuranaki	10.91	203	P	Pn	00 43 41.9	-4.1
KAHZ				S	Sn	00 45 43.2	-3.7
BHHZ	Black Hill Sta	10.95	207	P	Pn	00 43 45.6	-0.9
BHHZ				S	Sn	00 45 43.0	-4.7
BFZ	Birch Farm	11.92	204	Pn	Pn	00 43 59.1	-0.6
BFZ	Birch Farm	11.92	204	P	Pn	00 43 59.3	-0.4
BFZ				S	Sn	00 46 03.6	-7.9
NIUE	Niue	12.78	34	P	Pn	00 44 08.2	-3.4
	baz=12,SNR=3.4						
NIUE	Niue	12.78	34	Pn	Pn	00 44 08.4	-3.2
NNZ	Nelson	13.52	211	Pn	Pn	00 44 22.1	+0.6
QRZ	Quartz Range	13.60	214	Pn	Pn	00 44 24.7	+2.0
BSWZ	Blackbirch Sta	13.71	208	Pn	Pn	00 44 23.9	-0.4
THZ	Tophouse	14.16	211	Pn	Pn	00 44 30.5	0.0
KHZ	Kahutara	14.44	207	Pn	Pn	00 44 34.0	0.0
LTZ	Lake Taylor	15.27	210	Pn	Pn	00 44 44.3	-0.9
LTZ				IAmb	IAmb	00 44 46.9	
	comp=Z,89nm,1.5s						
OXZ	Oxford	15.81	209	Pn	Pn	00 44 52.3	+0.1
OXZ				IAmb	IAmb	00 44 57.6	
	comp=Z,39nm,0.4s						
OUENC	Ouen Island, N	15.88	294	P	P	00 45 06.9	+10
DZM	Mont Dzumac	16.37	295	P	P	00 45 03.2	+1.1
	comp=Z,18nm,0.9s,baz=151,slow=14,SNR=12						
DZM				LR	LR	00 49 53.1	
	comp=Z,443nm,20.2s,baz=103,slow=32						
DZM	Mont Dzumac	16.37	295	*e*P	P	00 45 05.3	+3.2
DZM				*e*LR	LR	00 48 38.4	
	comp=Z,725nm,25.2s						
DZM	Mont Dzumac	16.37	295	P	P	00 45 12.8	+11
NOUC	Port Laguerre	16.47	294	P	P	00 45 13.3	+10
RPZ	Rata Peaks	16.55	210	P	Pn	00 45 02.4	+0.8
	comp=Z,2.6nm,0.3s,baz=246,slow=1.0,SNR=8.2						
RPZ				S	Sn	00 47 49.5	-15
	comp=Z,10nm,0.6s,baz=173,slow=24,SNR=1.9						
RPZ				LR	LR	00 51 19.2	
	comp=Z,281nm,20.4s,baz=68,slow=36						
	comp=Z,22nm,0.8s						
RPZ	Rata Peaks	16.55	210	Pn	Pn	00 45 02.0	+0.4
AFI	Afiamalu	16.75	20	S	Sn	00 47 47.8	-22
	comp=Z,8.9nm,0.3s,baz=104,slow=23,SNR=2.0						
AFI				LR	LR	00 51 09.8	
	comp=Z,93nm,21.0s,baz=176,slow=36						
RAR	Rarotonga	18.17	66	P	P	00 45 23.0	+1.0
	comp=Z,1.7nm,0.3s,baz=245,slow=6.6,SNR=2.8						
RAR				S	Sn	00 48 23.9	-20
	comp=Z,7.6nm,0.6s,baz=173,slow=7.4,SNR=1.5						
RAR				LR	LR	00 50 56.7	
	comp=Z,103nm,21.0s,baz=252,slow=32						
	comp=Z,24nm,0.7s						
ARMA	Armidale	26.65	261	P	P	00 46 49.2	+1.2
	baz=27,SNR=19						
ARMA	Armidale	26.65	261	P	P	00 46 50.7	+2.7
ARMA				IAmb	IAmb	00 46 51.4	
	comp=Z,18nm,0.7s						
ARMA	Armidale	26.65	261	P	P	00 46 51.0	+3.0
EIDS	Eidsvold	28.13	272	P	P	00 47 01.9	+0.7
	baz=28,SNR=8.8						
EIDS	Eidsvold	28.13	272	P	P	00 47 02.2	+1.0
EIDS				IAmb	IAmb	00 47 03.0	
	comp=Z,14nm,0.7s						
EIDS	Eidsvold	28.13	272	P	P	00 47 02.6	+1.4
PAE	Paea	28.23	71	*e*T	T	01 16 31.6	
	comp=Z,11nm,0.2s						
PPT2	Papeete2	28.27	71	*e*LR	LR	00 53 44.8	
	comp=Z,302nm,26.2s						
PPT2	Papeete2	28.27	71	*e*T	T	01 16 37.0	
	comp=Z,13nm,0.3s						
PPT	Papeete	28.28	71	LR	LR	00 55 44.4	
	comp=Z,48nm,20.8s,baz=189,slow=31						
CAN	Canberra	28.64	250	P	P	00 47 08.0	+2.2
CAN				IAmb	IAmb	00 47 09.8	
	comp=Z,33nm,1.3s						
RK1H	Rockhampton Ha	29.25	275	P	P	00 47 13.0	+1.8
RMQ	Roma	29.86	268	P	P	00 47 17.3	+0.8
	baz=30,SNR=19						
RMQ	Roma	29.86	268	P	P	00 47 19.0	+2.5
VAH	Vaihoa	31.10	69	*e*T	T	01 20 00.5	
	comp=Z,23nm,0.2s						
TOO	Toolangi	31.55	246	P	P	00 47 31.3	-0.2
TOO				IAmb	IAmb	00 47 55.3	
	comp=Z,41nm,1.4s						
CMSA	Cobar Meteorol	31.58	258	P	P	00 47 32.5	+0.8
	baz=32,SNR=22						
CMSA	Cobar Meteorol	31.58	258	P	P	00 47 33.8	+2.1
QLP	Quilpie	33.76	266	P	P	00 47 51.4	+0.6
	baz=34,SNR=13						
QLP	Quilpie	33.76	266	P	P	00 47 51.7	+0.9
CTA	Charters Tower	34.13	278	LR	LR	01 00 15.3	
	comp=Z,199nm,19.1s,baz=82,slow=34						
CTAO	Charters Tower	34.13	278	P	P	00 47 54.8	+0.6
CTAO				IAmb	IAmb	00 47 56.4	
	comp=Z,34nm,1.1s						
CTAO	Charters Tower	34.13	278	P	P	00 47 55.0	+0.9
ARPS	Mount Arapiles	34.45	248	P	P	00 47 57.7	+1.0
	baz=35,SNR=5.3						
STKA	Stephens Creek	35.00	256	P	P	00 48 02.0	+0.5
	comp=Z,16nm,0.4s,baz=97,slow=11,SNR=46						
STKA				LR	LR	00 59 39.1	
	comp=Z,169nm,21.4s,baz=193,slow=32						
	comp=Z,16nm,0.4s						
STKA	Stephens Creek	35.00	256	P	P	00 48 02.4	+0.8
INKA	Innaminka	36.49	263	P	P	00 48 16.1	+1.8
	comp=Z,54nm,0.8s						
MTSU	Mount Surprise	36.61	280	P	P	00 48 15.3	-0.1
	baz=37,SNR=8.0						
MTSU	Mount Surprise	36.61	280	P	P	00 48 16.8	+1.3
HTT	Hallett	37.05	253	P	P	00 48 19.5	+0.4
	baz=37,SNR=18						
HTT	Hallett	37.05	253	P	P	00 48 19.7	+0.6
NAPP	Napperby	37.72	253	P	P	00 48 25.9	+1.2
LCRK	Leigh Creek	38.09	258	P	P	00 48 28.9	+1.0
WHYH	Whyalla	38.22	253	P	P	00 48 30.6	+1.7
	comp=Z,26nm,0.8s						
PMG	Port Moresby	38.76	294	LR	LR	01 02 12.5	
	comp=Z,129nm,21.5s,baz=149,slow=33						
BBOO	Buckleboo	39.51	254	P	P	00 48 40.3	+0.5
	baz=40,SNR=7.7						
BBOO	Buckleboo	39.51	254	P	P	00 48 39.0	-0.8
BBOO				IAmb	IAmb	00 48 40.5	
	comp=Z,18nm,0.7s						
COEN	Coen	39.53	285	P	P	00 48 37.9	-2.2
QIS	Mount Isa	39.69	273	P	P	00 48 41.0	-0.4
	baz=40,SNR=3.8						
TAOE	Nuku Hiva Isla	40.72	67	*e*LR	LR	00 59 38.3	
	comp=Z,203nm,30.6s						
OOD	Oodnadatta	40.83	261	P	P	00 48 51.5	+0.8
AS31	Alice Springs	43.55	266	P	P	00 49 11.2	-1.9
ASAR	Alice Springs	43.55	266	P	P	00 49 11.8	-1.3
	comp=Z,10nm,0.6s,baz=103,slow=7.0,SNR=57						
ASAR				PcP	PcP	00 51 01.6	+1.1
	comp=Z,2.6nm,0.6s,baz=118,slow=4.3,SNR=5.7						
ASAR				ScP	ScP	00 54 50.2	+0.9
	comp=Z,0.3nm,0.5s,baz=115,slow=4.2,SNR=2.1						
ASAR				LR	LR	01 06 44.2	
	comp=Z,217nm,18.1s,baz=129,slow=35						
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	43.55	266	P	P	00 49 11.6	-1.5
WR0	Warramunga Arr	44.32	271	P	P	00 49 17.9	-1.3
WB2	Warramunga Arr	44.49	271	P	P	00 49 19.3	-1.3
WRAB	Tennant Creek	44.49	271	P	P	00 49 19.1	-1.5
WRA	Warramunga Arr	44.50	271	P	P	00 49 19.2	-1.4
	comp=Z,26nm,0.5s,baz=110,slow=7.4,SNR=121						
WRA				PcP	PcP	00 51 02.6	-1.1
	comp=Z,2.4nm,1.0s,baz=118,slow=3.5,SNR=2.6						
WRA				ScP	ScP	00 54 53.9	+0.7
	comp=Z,0.4nm,0.7s,baz=105,slow=4.0,SNR=2.2						
WRA				LR	LR	01 06 31.8	
	comp=Z,84nm,18.0s,baz=58,slow=34						
	comp=Z,26nm,0.5s						
WRA	Warramunga Arr	44.50	271	P	P	00 49 19.1	-1.5
WB0	Warramunga Arr	44.52	272	P	P	00 49 19.6	-1.2
FORT	Forrest	46.59	255	P	P	00 49 35.3	-1.7
	baz=47,SNR=17						
FORT	Forrest	46.59	255	P	P	00 49 35.0	-2.0
WRKA	Warakurna	47.96	262	P	P	00 49 45.9	-1.9
	baz=48,SNR=29						
SBA	Scott Base	48.59	184	P	P	00 49 56.7	+4.8
SBA				IAmb	IAmb	00 50 01.1	
	comp=Z,10.0nm,0.8s						
VNDA	Vanda	48.66	186	P	P	00 49 55.5	+3.1
	comp=Z,1.9nm,0.5s,baz=5.9,slow=6.3,SNR=16						
VNDA				LR	LR	01 06 30.7	
	comp=Z,26nm,21.6s,baz=354,slow=31						
	comp=Z,1.9nm,0.5s						
VNDA	Vanda	48.66	186	P	P	00 49 56.0	+3.6
KDU	Kakadu	49.24	279	P	P	00 49 56.6	-1.1
	baz=49,SNR=4.7						
KNRA	Kununurra	51.08	274	P	P	00 50 10.5	-1.2
	baz=51,SNR=8.1						
KNRA	Kununurra	51.08	274	P	P	00 50 10.5	-1.2
KNRA				IAmb	IAmb	00 50 11.8	
	comp=Z,13nm,0.6s						
KLBR	Kellerberrin	54.91	251	P	P	00 50 37.8	-2.0
	baz=55,SNR=6.7						
CASY	Casey	55.80	208	P	P	00 50 45.5	0.0
BLDU	Ballidu	56.05	251	P	P	00 50 46.4	-1.6
	baz=56,SNR=6.5						
GUMO	Guam	56.41	315	LR	LR	01 12 01.1	
	comp=Z,26nm,20.1s,baz=120,slow=33						
PSA00	Pilbara Seismi	56.44	263	P	P	00 50 48.8	-2.1
PSA00				IAmb	IAmb	00 51 11.2	
	comp=Z,16nm,1.5s						
MBWA	Marble Bar	56.70	263	P	P	00 50 50.5	-2.2
MORW	Morawa	57.08	253	P	P	00 50 53.6	-1.7
	baz=57,SNR=10						
MORW	Morawa	57.08	253	P	P	00 50 53.5	-1.7
MORW				IAmb	IAmb	00 51 11.0	
	comp=Z,9.5nm,0.9s						
BATI	Baumata	58.00	277	LR	LR	01 16 14.0	
	comp=Z,389nm,18.1s,baz=136,slow=36						
RPN	Rapa Nui	59.17	106	LR	LR	01 10 31.3	
	comp=Z,28nm,21.8s,baz=254,slow=30						
QSPA	South Pole Qui	60.23	180	P	P	00 51 19.7	+2.9
	comp=Z,4.7nm,0.6s,baz=45,slow=1.3,SNR=28						
	comp=Z,4.7nm,0.6s						
QSPA	South Pole Qui	60.23	180	P	P	00 51 19.8	+2.9
GIRL	Giralia	60.85	259	P	P	00 51 21.0	-0.6
JCJ	Chichijima	68.53	322	LR	LR	01 16 28.9	
	comp=Z,52nm,20.8s,baz=338,slow=31						
JCJ	Chichijima	68.53	322	P	P	00 52 11.3	-0.1
BELA	Belgrano 2	70.25	172	P	P	00 52 22.4	+1.0
BELA				IAmb	IAmb	00 52 23.5	
	comp=Z,6.1nm,0.8s						
MAW	Mawson	72.94	200	P	P	00 52 39.1	+1.4
	comp=Z,9.4nm,0.8s,baz=129,slow=8.7,SNR=17						
	comp=Z,9.4nm,0.8s						
MAW	Mawson	72.94	200	P	P	00 52 38.3	+0.6
	baz=73,SNR=9.5						
MAW	Mawson	72.94	200	P	P	00 52 39.3	+1.6
LEM	Lembang	73.52	272	LR	LR	01 26 18.8	
	comp=Z,78nm,18.2s,baz=54,slow=37						
GO09	Cerro Castillo	75.95	141	P	P	00 52 51.6	-3.9
GO09				IAmb	IAmb	00 53 15.7	
	comp=Z,20nm,1.4s						
JGF	Kuroka	77.75	324	P	P	00 53 05.3	-0.5
JGF				IAmb	IAmb	00 53 05.9	
	comp=Z,12nm,0.8s						
MJAR	Matsushiro Arr	78.05	325	P	P	00 53 05.4	-2.0
	comp=Z,4.7nm,0.9s,baz=160,slow=5.1,SNR=8.3						
	comp=Z,4.7nm,0.9s						
MJAR	Matsushiro Arr	78.05	325	P	P	00 53 06.5	-0.9
TROLL	Troll, Antarti	78.40	180	P	P	00 53 10.4	+1.4
SNAA	Sanae	78.67	178	P	P	00 53 11.5	+1.0
SNAA	Sanae	78.67	178	P	P	00 53 11.4	+1.0
SNAA				IAmb	IAmb	00 53 24.2	
	comp=Z,12nm,1.3s						
VNA3	Neumayer Olymp	78.80	176	P	P	00 53 12.0	+0.9
VNA1	Neumayer--Stat	79.47	176	P	P	00 53 15.8	+1.1
SSLB	Suanglung	79.60	305	P	P	00 53 15.3	-0.9
SSLB				IAmb	IAmb	00 53 40.5	
	comp=Z,21nm,1.0s						
H03S2	Juan Fernandez	80.41	123	T	T	02 22 46.8	
	baz=236						
H03S1	Juan Fernandez	80.42	123	T	T	02 22 50.5	
	baz=236						
H03S3	Juan Fernandez	80.42	123	T	T	02 22 48.0	
	baz=236						
H03N3	Juan Fernandez	80.59	123	T	T	02 23 04.2	
	baz=257,slow=71,SNR=84						
H03N2	Juan Fernandez	80.60	123	T	T	02 23 02.8	
	baz=257,slow=71,SNR=78						
H03N1	Juan Fernandez	80.61	123	T	T	02 23 24.1	
	baz=257,slow=71,SNR=115						
ADK	Adak	81.41	1	P	P	00 53 24.8	-0.4
LC02	Puerto Saavedr	81.75	130	P	P	00 53 30.1	+2.5
PLCA	Paso Flores	82.56	133	P	P	00 53 34.6	+2.7
	comp=Z,2.6nm,1.0s,baz=246,slow=6.3,SNR=3.9						
	comp=Z,2.6nm,1.0s						
LPIG	La Paz	83.91	58	LR	LR	01 29 15.1	
	comp=Z,19nm,18.1s,baz=203,slow=34						
KSRS	Korea Array	84.22	319	P	P	00 53 40.4	+0.3
	comp=Z,2.7nm,0.7s,baz=139,slow=5.4,SNR=11						
	comp=Z,2.7nm,0.7s						
IPM	Ipoh	84.82	278	P	P	00 53 42.6	-1.2
IPM				IAmb	IAmb	00 53 43.3	
	comp=Z,9.3nm,0.6s						
PETK	Petropavlovsk-	85.41	345	P	P	00 53 45.6	-0.1
	comp=Z,4.0nm,0.6s,baz=133,slow=8.3,SNR=6.2						
	comp=Z,4.0nm,0.6s						
PFO	Pinyon Flats O	85.55	47	LR	LR	01 27 39.3	
	comp=Z,30nm,18.2s,baz=179,slow=33						
NJ2	Nanjing	86.22	310	*e*P	P	00 53 52.3	+2.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USRK	Ussuriysk Ar.	86.96	326	P	P	00 53 54.6	+1.1
	comp=Z,3.0nm,0.7s,baz=151,slow=4.4,SNR=4.1						
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	87.57	42	P	P	00 53 58.1	+1.1
	comp=Z,2.5nm,0.7s,baz=223,slow=7.9,SNR=14						
	comp=Z,2.5nm,0.7s						
NV11	Mina Array Sit	87.66	43	P	P	00 53 58.1	+0.8
NV11				IAmb	IAmb	00 53 59.5	
	comp=Z,5.4nm,1.1s						
PINE	Pine Mountain	89.73	37	P	P	00 54 08.2	+1.2
PINE				IAmb	IAmb	00 54 09.6	
	comp=Z,13nm,1.4s						
I07A	Izee	90.69	38	P	P	00 54 12.5	+1.1
I07A				IAmb	IAmb	00 54 13.5	
	comp=Z,6.9nm,1.3s						
TXAR	Lajitas Array	91.76	57	P	P	00 54 14.7	-1.9
	comp=Z,1.2nm,0.9s,baz=339,slow=3.1,SNR=3.6						
G08A	Pilot Rock	91.79	37	P	P	00 54 16.3	-0.2
G08A				IAmb	IAmb	00 54 18.5	
	comp=Z,5.6nm,1.2s						
MFID	Camas Ranch	92.25	40	P	P	00 54 19.8	+1.1
HVU	Hansel Valley	92.97	43	P	P	00 54 22.1	+0.1
HVU				IAmb	IAmb	00 54 24.1	
	comp=Z,4.5nm,0.9s						
HLID	Hailey	93.14	40	P	P	00 54 22.2	-0.6
F10A	Beach Ranch, E	93.15	37	P	P	00 54 22.3	-0.4
CMAR	Chiang Mai Arr	93.62	289	P	P	00 54 26.6	+1.2
	comp=Z,1.9nm,0.4s,baz=121,slow=3.4,SNR=2.1						
	comp=Z,1.9nm,0.4s						
NEW	Newport	94.71	36	LR	LR	01 32 52.5	
	comp=Z,31nm,18.4s,baz=223,slow=33						
PZH	PanZhiHua	95.43	297	P	P	00 54 34.8	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PDAR	Pinedale Array	95.47	43	P	P	00 54 33.6	0.0
	comp=Z,0.5nm,0.8s,baz=201,slow=2.5,SNR=4.4						
PDAR				LR	LR	01 33 05.5	
	comp=Z,21nm,18.2s,baz=276,slow=33						
	comp=Z,0.5nm,0.8s						
TRF	Thorofare Moun	95.49	12	P	P	00 54 33.5	+0.4
TRF				IAmb	IAmb	00 54 37.0	
	comp=Z,5.8nm,1.0s						
HHC	Hu-ho-hao-te	96.17	314	*e*P	P	00 54 37.9	+1.2
HHC				S	S	01 05 57.0	+3.5
HHC				sS	sS	01 06 10.5	+0.4
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				LR	LR		
	comp=Z,180nm,18.6s						
HHC				LR	LR		
	comp=Z,140nm,18.2s						
ILAR	Eielson Array	97.32	13	P	P	00 54 40.5	-0.6

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            comp=Z,0.5nm,0.7s,baz=220,slow=5.9,SNR=7.5
            comp=Z,0.5nm,0.7s
LZH   Lanzhou            98.74 307 eP       Pdif     00 54 48.9 +0.4
LZH                                 pP      pP       00 54 57.3 -1.3
LZH                                 sP      sP       00 55 01.6 -0.6
LZH                                 pmax    pmax
            comp=Z,13nm,1.0s
WMQ   Urumqi            113.23 308 ePKP     PKiKP    00 59 47.0 +0.9
MKAR  Makanchi Array    117.75 310  PKP     PKPdf    00 59 53.1 -1.5
            comp=Z,0.9nm,0.5s,baz=227,slow=2.1,SNR=15
BOSA  Boshof            117.90 203  PKP     PKiKP    00 59 55.6 -0.2
            comp=Z,1.4nm,0.8s,baz=187,slow=3.8,SNR=9.0
ZALV  Zalesovo Beam     117.92 318  PKP     PKPdf    00 59 52.4 -2.3
            comp=Z,1.3nm,0.9s,baz=204,slow=1.3,SNR=4.5
NRIK  Noril'sk          119.33 336  PKP     PKPdf    00 59 56.5 -0.4
            comp=Z,1.8nm,0.4s,baz=85,slow=4.8,SNR=8.1
KURK  Kurchatov         120.99 314  PKPdf   PKPdf    00 59 59.4 -1.3
KURBB Kurchatov Arra    121.03 314  PKP     PKPdf    00 59 59.3 -1.5
            comp=Z,3.7nm,0.7s,baz=107,slow=2.0,SNR=42
LBTB  Lobatse           121.09 205  PKPdf   PKiKP    01 00 02.9 +0.8
BOOM  Boomskoye usch121.09 304  PKPdf   PKPdf    01 00 00.6 -0.8
AAK   Ala-Archa         122.17 304  PKP     PKPdf    01 00 02.2 -1.3
            comp=Z,1.4nm,0.5s,baz=147,slow=5.6,SNR=5.9
AAK   Ala-Archa         122.17 304  PKPdf   PKPdf    01 00 02.9 -0.6
KBL   Kabul             124.39 293  PKPdf   PKPdf    01 00 07.7 -0.4
GAR   Garm              124.47 299  PKPdf   PKPdf    01 00 07.8 -0.2
KKAR  Karatay Array     125.13 304  PKPdf   PKPdf    01 00 08.2 -0.8
BRVK  Borovoye          126.39 316  PKPdf   PKPdf    01 00 10.5 -0.5
SPA0  Spitsbergen Ar    131.21 356 ePKPdf   PKiKP    01 00 20.1 -0.4
SPB2  Spitsbergen Ar    131.21 356  PKPdf   PKiKP    01 00 20.1 -0.4
ABKAR Akbulak array     132.88 311  PKPdf   PKPdf    01 00 23.6 +0.1
ARU   Arti              132.95 321  PKP     PKPdf    01 00 23.6 +0.3
            comp=Z,1.0nm,0.3s,baz=182,slow=1.5,SNR=8.1
HAMF  Hammerfest        137.50 350 ePKPdf   PKPdf    01 00 32.1 +0.7
ARA0  ARCESS Array S    138.16 348 ePKPdf   PKPdf    01 00 33.3 +0.6
ARCES ARCESS Array B    138.16 348  PKhKP   PKPpre   01 00 25.0
            comp=Z,0.9nm,0.4s,baz=29,slow=1.9,SNR=10
ARCES                               PKP     PKPdf    01 00 31.2 -1.5
            comp=Z,3.8nm,0.5s,baz=356,slow=3.7,SNR=4.5
ARCES ARCESS Array B    138.16 348  PKPpre  PKPpre   01 00 22.4
ARCES                               PKPdf   PKPdf    01 00 32.2 -0.5
KTK1  Kautokeino        139.02 349 ePKPdf   PKPdf    01 00 34.0 -0.4
H10N3 ASCENSION HYDR139.10 154  T       T        03 36 59.9
            baz=203,slow=74,SNR=308
TRO   Tromso            139.10 351 ePKPdf   PKPdf    01 00 35.3 +0.9
H10N1 ASCENSION HYDR139.10 154  T       T        03 37 03.3
            baz=203,slow=74,SNR=444
H10N2 ASCENSION HYDR139.12 154  T       T        03 37 01.2
            baz=203,slow=74,SNR=340
FAUS  Fauske            141.69 352 ePKPdf   PKPdf    01 00 39.5 +0.3
FIA1  FINESS Array S    144.79 341  PKPdf   PKPab    01 00 42.9 -0.8
FINES FINESS Array B    144.79 341  PKP     PKPab    01 00 42.8 -1.0
            comp=Z,16nm,0.5s,baz=56,slow=3.2,SNR=209
FINES FINESS Array B    144.79 341  PKPdf   PKPab    01 00 42.9 -0.8
NSS   Namsos            144.81 353 ePKPbc   PKPab    01 00 43.1 -0.6
KBZ   Khabaz            145.16 305  PKP     PKPbc    01 00 44.7 -0.9
            comp=Z,3.4nm,0.7s,baz=140,slow=3.9,SNR=6.8
KARS  Kars              145.43 299          PKPab    01 00 47.2 +0.2
GEVA  Gevas             145.58 295          PKPdf    01 00 46.1 -1.1
TBLU  Trondheim         146.24 354 ePKPdf   PKPdf    01 00 47.3 +0.1
MEF   Metsahovi         146.27 340 eP       PKPbc    01 00 48.1 -0.4
RAF   Rauma             146.31 343 eP       PKPdf    01 00 47.5 +0.1
VSU   Vasula            146.91 337 eP       PKPbc    01 00 50.1 -0.3
MOL   Molde             147.13 356 ePKPbc   PKPbc    01 00 50.5 -0.4
AAL   Aland             147.49 344 eP       PKPbc    01 00 51.0 -0.9
DOMB  Dombas            147.54 354 ePKPbc   PKPbc    01 00 51.7 -0.4
AKN   Aaknes            147.56 356 ePKPbc   PKPbc    01 00 52.1 -0.1
MTSE  Matsula           147.67 339 eP       PKPbc    01 00 52.2 -0.3
FOO   Floro             148.23 358 ePKPbc   PKPbc    01 00 53.6 -0.3
NB2   NORSAR Subarra148.29 352  PKP     PKPbc    01 00 53.2 -1.0
            comp=Z,15nm,0.6s,baz=12,slow=2.9
NOA   NORSAR Array B148.29 352  PKPbc   PKPbc    01 00 53.4 -0.8
            comp=Z,17nm,0.7s,baz=14,slow=4.4,SNR=78
UPP   Uppsala           148.32 345 eP       PKPbc    01 00 53.1 -1.1
NC602 NORSAR Array S148.55 351 ePKPbc   PKPbc    01 00 54.0 -0.8
SUE   Sulen             148.78 358 ePKPbc   PKPbc    01 00 55.2 -0.1
SKAR  Skarslia          148.95 354 ePKPbc   PKPbc    01 00 55.8 -0.2
IDID  Didziasalis       149.24 333 eP       PKPbc    01 00 56.7  0.0
ISAL  Salakas           149.29 334 eP       PKiKP    01 00 57.5 -0.5
MNK   Minsk             149.34 331 i PKP    PKPbc    01 00 56.5 -0.5
            comp=E,2.0nm,0.8s
MNK                                i PKP    PKPbc    01 00 56.5 -0.5
            comp=N,16nm,0.8s
MNK                                i PKP    PKPbc    01 00 56.5 -0.5
            comp=Z,31nm,0.8s,baz=225
MNK                                i PP     PP       01 04 33.2 +4.1
MNK                                i PPP    PPP      01 07 53.4
MNK                                i SKS    SKSdf    01 07 54.0 -3.8
MNK                                i SKKS   SKKSdf   01 16 57.5 +3.2
MNK                                i PPS    PPS      01 21 29.3
MNK                                i SS     SS       01 23 44.5 +5.0
MNK                                i SSS    SSS      01 29 22.8
MNK                                i LR     LR       02 04 56.0
MNK                                i LRM    MLR      02 08 16.2
            comp=E,14nm,16.1s
MNK                                i LRM    MLR      02 08 18.1
            comp=N,217nm,18.7s
MNK                                i LRM    MLR      02 08 18.8
            comp=Z,103nm,16.8s
ASK   Askoy             149.34 357 ePKPbc   PKPbc    01 00 56.7 -0.1
IIGN  Ignalina          149.42 333 eP       PKPbc    01 00 57.1 -0.1
OSL   Oslo              149.43 352 ePKPbc   PKPbc    01 00 56.7 -0.3
BER   Bergen            149.43 357 ePKPbc   PKPbc    01 00 56.8 -0.2
NACGM Naroch            149.51 332⇓ePKP     PKPbc    01 00 57.4  0.0
            baz=45
VIKU  Vikbolandet       149.75 345 eP       PKPbc    01 00 56.6 -1.2
ODD1  Odda              149.83 356 ePKPbc   PKPbc    01 00 58.0 -0.1
KONO  Kongsberg         149.84 353  PKPbc   PKPbc    01 00 57.8 -0.2
KONO  Kongsberg         149.84 353 ePKPbc   PKPbc    01 00 57.5 -0.5
PABE  Paberze           150.15 335  PKPbc   PKPbc    01 00 58.4 -0.5
PABE  Paberze           150.15 335 eP       PKPbc    01 00 58.9  0.0
STRU  Stroemstad        150.24 351 i P      PKPbc    01 00 58.0 -1.0
BLS5  Blasjo            150.33 356 ePKPbc   PKPbc    01 00 59.4 +0.1
PBUR  Paburge           150.45 338 eP       PKPbc    01 00 59.5 -0.1
KMY   Karmoy            150.61 357 ePKPbc   PKPbc    01 00 59.9  0.0
AKASG Malin Array Be    151.13 324  PKPbc   PKPbc    01 01 00.5 -0.9
            comp=Z,5.4nm,0.4s,baz=48,slow=3.7,SNR=64
AKASG Malin Array Be    151.13 324  PKPbc   PKPbc    01 01 00.6 -0.8
AKBB  Malin Array Si    151.13 324  PKPbc   PKPbc    01 01 00.8 -0.6
TJOU  Tjoern            151.15 350 i P      PKPbc    01 00 60.0 -1.2
BNN   Bunyan            151.17 297  PKPbc   PKPbc    01 01 01.4 -0.7
HOMB  Homborsund        151.31 353 i P      PKPbc    01 01 01.0 -0.5
HOMB  Homborsund        151.31 353 ePKPbc   PKiKP    01 01 01.7 -0.4
BORU  Boraas            151.34 348 i P      PKPbc    01 01 00.3 -1.4
SNART Snartemo          151.36 355 i P      PKPbc    01 01 01.0 -0.7
SNART Snartemo          151.36 355 ePKPbc   PKiKP    01 01 01.9 -0.3
SUW   Suwalki           151.59 334 ePKP     PKPbc    01 01 01.6 -0.7
SUW   Suwalki           151.59 334 eP       PKPbc    01 01 02.0 -0.4
ONAU  Onsala            151.71 349 i P      PKPbc    01 01 01.4 -1.1
BZK   Bozkurt           151.93 304  PKPbc   PKPbc    01 01 02.8 -0.7
FABU  Falkenberg        151.95 348 i P      PKPbc    01 01 02.0 -1.0
BLEU  Blekinge          151.95 344 i P      PKPbc    01 01 01.9 -1.2
DEL   Delary            152.23 346 i P      PKPbc    01 01 02.4 -1.3
BRTR  Keskin Array B    152.71 300  PKPbc   PKPbc    01 01 04.5 -1.1
            comp=Z,2.5nm,0.4s,baz=141,slow=5.0,SNR=25
BJUU  Bjuv              152.77 347 i P      PKPbc    01 01 04.4 -0.5
CSS   Mathiatis         153.53 289  PKPbc   PKPbc    01 01 05.9 -1.4
ESK   Eskdalemuir       154.25   7          PKPab    01 01 21.2 -1.0
BUR08 Bucovina Ar. S    155.07 322  PKPbc   PKPdf    01 01 11.3 +10
BURAR Bucovina Array    155.08 322  PKPbc   PKPdf    01 01 11.2 +10
KSP   Ksiaz             156.64 338 ePKP     PKPab    01 01 34.4 +1.9
OSTC  Ostas             156.91 337 ePKPAB   PKPab    01 01 34.5 +0.8
CHVC  Chvalec           156.93 338 ePKPAB   PKPab    01 01 35.5 +1.6
UPC   Upice             157.01 338 ePKPAB   PKPab    01 01 35.7 +1.5
DPC   Dobruska-Polom    157.04 337 ePKPAB   PKPab    01 01 36.0 +1.6
KRLC  Kraliky           157.12 336 ePKPAB   PKPab    01 01 33.8 -0.9
CLL   Collm             157.19 343  PKPdf   PKPdf    01 01 04.2 +0.1
CLL                                 PKPab   PKPab    01 01 35.6 +0.7
CLL   Collm             157.19 343 i PKPab  PKPab    01 01 35.8 +0.9
            comp=Z,6.0nm,0.7s
CLL   Collm             157.19 343 ePKPdf   PKPdf    01 01 04.0  0.0
CLL   Collm             157.19 343 ePKPdif  PKPdf    01 01 15.0 +11
BRG   Berggiesshubel    157.33 341  Amp              01 01 38.1
            comp=Z,6.5nm,0.7s
BRG   Berggiesshubel    157.33 341 ePKP     PKPab    01 01 36.9 +1.4
PVCC  Panska Ves        157.46 340 ePKPAB   PKPab    01 01 37.6 +1.5
NKC   Novy Kostel       158.32 342 ePKPAB   PKPab    01 01 41.5 +1.7
KHC   Kasperske Hory    158.99 339          PKPab    01 01 40.9 -1.9
KHC   Kasperske Hory    158.99 339 ePKPAB   PKPab    01 01 41.8 -1.0
CKRC  Cesky Krumlov     159.03 338 ePKPAB   PKPab    01 01 44.1 +1.1
GERES GERESS Array B    159.21 339  PKPab   PKPab    01 01 43.1 -0.7
            comp=Z,1.3nm,0.7s,baz=43,slow=6.0,SNR=10
GERES GERESS Array B    159.21 339  PKPab   PKPab    01 01 43.9  0.0
CONA  Conrad Observa    159.24 334 eP       PKPab    01 01 45.5 +1.5
            comp=Z,1.7nm,0.6s
RONA  Rosalia, Austr    159.25 333 eP       PKPab    01 01 45.8 +1.8
            comp=Z,3.0nm,1.0s
MOA   Molln             159.88 336 eP       PKPab    01 01 48.2 +1.4
            comp=Z,3.4nm,1.1s
ARSA  Arzberg           159.92 333 eP       PKPab    01 01 46.5 -0.4
            comp=Z,2.4nm,1.2s
BIOA  Bad Ischl, Aus    160.24 337 eP       PKPab    01 01 48.1 -0.2
            comp=Z,2.9nm,0.8s
SOKA  Soboth            160.59 333 eP       PKPab    01 01 50.5 +0.6
            comp=Z,2.7nm,1.1s
KBA   Koelnbreinsper    160.87 337 eP       PKPab    01 01 51.8 +0.6
            comp=Z,2.4nm,0.5s
OBKA  Obir              160.91 334 eP       PKPab    01 01 50.7 -0.6
            comp=Z,1.3nm,0.6s
MYKA  Terra Mystica     161.15 336 eP       PKPab    01 01 53.2 +0.9
            comp=Z,3.8nm,0.7s
WATA  Walderalm         161.20 341 i P      PKPab    01 01 53.9 +1.3
            comp=Z,3.6nm,0.5s,SNR=5.2
WTTA  Wattenberg        161.24 340 i P      PKPab    01 01 54.5 +1.7
            comp=Z,6.9nm,0.6s,SNR=8.0
RETA  Reutte            161.28 342 eP       PKPab    01 01 54.5 +1.6
            comp=Z,4.5nm,0.6s
MOTA  Moosalm           161.32 341 eP       PKPab    01 01 54.6 +1.4
            comp=Z,4.8nm,0.7s
SQTA  Sankt Quirin      161.41 341 eP       PKPab    01 01 54.9 +1.4
            comp=Z,3.5nm,0.6s
ABTA  Abfaltersbach     161.43 338 eP       PKPab    01 01 54.2 +0.6
            comp=Z,2.5nm,0.6s
DAVA  Damuels           161.69 344 i P      PKPab    01 01 56.4 +1.6
            comp=Z,6.1nm,0.7s,SNR=5.5
FETA  Feichten          161.72 342 eP       PKPab    01 01 56.1 +1.2
            comp=Z,1.9nm,0.7s
STAL  STALIGIAL         161.79 337  PKPab   PKPab    01 01 54.5 -0.6
TUE   Stuetta           162.59 344  PKPab   PKPab    01 02 01.2 +2.4
TORD  Torodi Ar. Bea    163.34 177  PKP     PKPdf    01 01 12.5 +0.5
            comp=Z,1.1nm,0.8s,baz=22,slow=0.8,SNR=4.6
TORD                                PKPab   PKPab    01 02 03.8 +1.3
            comp=Z,2.4nm,0.4s,baz=169,slow=3.2,SNR=17
```

IDC ***17*** *00:55:21.4±5.3, 19°34S×168°24E, h0^{km}, mb4.1/4, mbtmp4.1/5, ML3.9/1, MS3.3/2, Error ellipse: s-maj=90.7km s-min=55.7km az=79.0*

NOU ***17*** *00:55:25.2, 19°46S×167°76E, h0^{km}, MLv4.2/15, Vanuatu Islands Region*

NEIC ***17*** *00:55:29.8±1.2, 19°65S±0°06×167°8E±0°1, h26^{km}±4^{km}, mb4.3/11, Error ellipse: s-maj=14.5km s-min=8.5km az=93.0*

ISC 17 00:55:28.4±0.9**, 19°56S**±0°05×**167°9E**±0°1**, h26**^{km}**, n35,** σ1^{s}**13**/37**, mb4.2**/10**, Vanuatu Islands region**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op       ISC      h  m  s   ISC
LIFNC LIFOU               1.35 206 Pn       Pn       00 55 50.5 -1.1
LIFNC                              Sn       Sn       00 56 06.0 -2.6
LIFNC LIFOU               1.35 206 P        Pn       00 55 50.6 -1.0
RTV   Rentapao            1.83  16 P        Pn       00 55 56.7 -1.5
DVP   Devils Point        1.85   9 P        Pn       00 55 56.6 -1.8
MARNC Mare, Loyalty       1.92 176 Pn       Pn       00 55 58.9 -0.4
MARNC Mare, Loyalty       1.92 176 P        Pn       00 55 59.3 -0.1
YATNC Mamie plateau,      2.65 200 P        Pn       00 56 09.4 -0.1
DZM   Mont Dzumac         2.83 208 Pn       Pn       00 56 12.2 +0.1
            13nm,0.3s,baz=337,slow=2.2,SNR=133
DZM                                Sn       Sn       00 56 43.4 -2.1
            33nm,0.3s,baz=343,slow=23,SNR=9.8
            30nm,0.3s
DZM   Mont Dzumac         2.83 208          Pn       00 56 11.7 -0.4
DZM                                         Sn       00 56 42.8 -2.7
DZM   Mont Dzumac         2.83 208 P        Pn       00 56 12.2 +0.1
NOUC  Port Laguerre       2.93 210 P        Pn       00 56 14.1 +0.8
OUENC Ouen Island, N      3.00 199          Pn       00 56 14.6 +0.3
OUENC Ouen Island, N      3.00 199 P        Pn       00 56 15.4 +1.1
ONTNC Ouen Toro           3.04 206          Pn       00 56 14.4 -0.4
ONTNC                              Sn       Sn       00 56 50.5 +0.1
ONTNC Ouen Toro           3.04 206 P        Pn       00 56 15.5 +0.7
PINNC Pines Island,       3.06 188          Pn       00 56 15.1 -0.1
PINNC Pines Island,       3.06 188 P        Pn       00 56 16.0 +0.8
SANVU Saraoutou           4.14 351 Pn       Pn       00 56 31.9 +1.8
AFI   Afiamalu           20.27  77 LR       LR       01 06 40.0
            comp=Z,60nm,18.6s,baz=242,slow=34
CTA   Charters Tower     20.35 265 P        Pn       01 00 04.3 -0.9
            5.4nm,1.0s,baz=104,slow=8.3,SNR=2.0
            5.4nm,1.0s
STKA  Stephens Creek     26.59 237 P        P        01 01 06.0 +1.3
            2.4nm,0.7s,baz=31,slow=5.9,SNR=3.2
STKA                               LR       LR       01 12 38.4
            comp=Z,93nm,18.0s,baz=207,slow=38
            2.4nm,0.7s
WR0   Warramunga Arr     31.35 264 P        P        01 01 46.3 -0.8
WR0                                IAmb     IAmb     01 02 03.2
            comp=Z,4.3nm,1.1s
WB0   Warramunga Arr     31.51 264 P        P        01 01 47.9 -0.7
WB0                                IAmb     IAmb     01 01 50.0
            comp=Z,5.0nm,1.1s
WB2   Warramunga Arr     31.53 264 P        P        01 01 48.2 -0.5
WB2                                IAmb     IAmb     01 02 07.0
            comp=Z,2.8nm,0.9s
WRA   Warramunga Arr     31.54 264 P        P        01 01 48.0 -0.9
            comp=Z,0.9nm,0.5s,baz=84,slow=7.4,SNR=20
            comp=Z,0.9nm,0.5s
AS31  Alice Springs      31.80 256 P        P        01 01 51.3 +0.2
AS31                               IAmb     IAmb     01 01 51.9
            comp=Z,1.6nm,0.6s
ASAR  Alice Springs      31.80 256 P        P        01 01 51.3 +0.2
            comp=Z,2.6nm,0.5s,baz=84,slow=8.7,SNR=47
            comp=Z,2.6nm,0.5s
ASAR  Alice Springs      31.80 256 P        P        01 01 51.1  0.0
MTN   Manton Dam         35.86 275 P        P        01 02 26.8 +0.4
KNRA  Kununurra          37.43 270 P        P        01 02 39.4 -0.4
MBWA  Marble Bar         45.03 259 P        P        01 03 42.9 +0.7
MBWA                               IAmb     IAmb     01 03 43.9
            comp=Z,7.0nm,1.0s
MORW  Morawa             47.86 248 P        P        01 04 04.0 -0.4
MORW                               IAmb     IAmb     01 04 12.9
            comp=Z,9.3nm,1.1s
QSPA  South Pole Qui     70.49 180 P        P        01 06 41.9 +1.2
BELA  Belgrano 2         81.89 175 P        P        01 07 46.3 +1.3
BELA                               IAmb     IAmb     01 07 48.7
            comp=Z,1.9nm,1.0s
TORD  Torodi Ar. Bea    165.29 246 PKPab    PKPab    01 16 28.0 -1.1
            comp=Z,0.7nm,1.0s,baz=124,slow=0.5,SNR=3.1
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BJI ***17*** *00:57:38.6±0.0, 56°09N×114°10E, h8^{km}, mb3.9/5, mB4.4/2, ML4.9/1, Ms4.1/2, Ms7 3.8/2*

MOS ***17*** *00:57:40.4±1.2, 56°16N×113°90E, h10^{km}, mb4.2/4, Error ellipse: s-maj=9.4km s-min=6.2km az=70.7*

MOS Felt (III-IV) at Severomuisk.

IDC ***17*** *00:57:42.4±0.9, 56°53N×113°52E, h0^{km}, mb3.8/14, mbtmp3.8/16, ML3.4/2, MS3.3/18, Error ellipse: s-maj=21.7km s-min=18.0km az=8.0*

NEIC ***17*** *00:57:42.8±1.3, 56°7N±0°1×113°5E±0°2, h10^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=23.3km s-min=20.9km az=149.0*

BYKL ***17*** *00:57:42.6±0.1, 56°17N×113°87E, h20^{km}±2^{km}, FELT I=III-IV MSK at Severomuysk, III at Taksimo.*

ISC 17 00:57:41.9±0.7**, 56°14N**±0°02×**113°82E**±0°02**, h14**^{km}±4^{km}**, n114,** σ2^{s}**50**/154**, mb3.9**/20**, MS3.2**/15**, 9C-6D, East of Lake Baykal**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                   Op       ISC      h  m  s   ISC
SVKR  Severomuysk         0.15 260⇑iPg      Pg       00 57 47.5 +1.7
SVKR                                Pmax             00 57 47.7
            16μm,0.2s
SVKR                               eSg      Sg       00 57 50.9 +2.5
SVKR                                Smax             00 57 51.2
            162μm,0.5s
SVKR  Severomuysk         0.15 260⇑iPG      Pg       00 57 47.4 +1.7
SVKR                               eS       Sg       00 57 50.8 +2.4
UKT   Uakit               0.67 190⇑iPg      Pg       00 57 55.5 +0.6
UKT                                 Pmax             00 57 57.0
            583nm,0.5s
UKT                                eSg      Sg       00 58 04.2 +0.5
UKT                                 Smax             00 58 05.2
            9μm,0.6s
UKT   Uakit               0.67 190⇑iPG      Pg       00 57 55.4 +0.6
UKT                                e                 00 58 04.7
UKT                                 pmax    pmax
            comp=Z,593nm,0.5s
UKT                                 smax    smax
            comp=E,9μm,0.5s
NLYR  Nelyaty             1.10  71⇑iPg      Pg       00 58 02.6 -0.6
NLYR                                Pmax             00 58 04.3
            comp=E,1μm,0.4s
NLYR                               eSg      Sg       00 58 17.0 -0.6
NLYR                                Smax             00 58 19.6
            comp=E,12μm,1.2s
NLYR  Nelyaty             1.10  71 ePG      Pg       00 58 02.7 -0.5
NLYR                               e                 00 58 17.3
NLYR                                pmax    pmax
            comp=Z,1μm,0.7s
NLYR                                smax    smax
            comp=N,14μm,1.1s
YOA   Uoyan               1.18 270 ePg      Pb       00 58 04.8 +0.9
YOA                                ePb      Pg       00 58 05.7 +1.2
YOA                                 max              00 58 06.2
            comp=N,3μm,0.4s
YOA                                eSg      Sn       00 58 21.2 +1.5
YOA                                eSb      Sg       00 58 24.5 +4.7
YOA                                 max              00 58 26.8
            comp=N,38μm,0.6s
YOA   Uoyan               1.18 270⇑iPG      Pb       00 58 04.8 +0.9
YOA                                i                 00 58 21.6
YOA                                 pmax    pmax
            comp=Z,2μm,0.3s
YOA                                 smax    smax
            comp=N,67μm,0.6s
KMO   Kumora              1.50 261⇓iPg      Pb       00 58 10.0 +0.6
KMO                                 Pmax             00 58 10.7
            comp=N,1μm,0.4s
KMO                                eSg      Sg       00 58 30.5 +0.5
KMO                                 Smax             00 58 32.3
            comp=N,9μm,0.4s
KMO   Kumora              1.50 261⇓iPG      Pb       00 58 09.9 +0.6
KMO                                e                 00 58 30.4
KMO                                 pmax    pmax
            comp=Z,1μm,0.5s
KMO                                 smax    smax
            comp=N,10μm,0.9s
BOD   Bodaibo             1.68   3 ePn      Pn       00 58 11.8 +1.0
BOD                                ePg      Pb       00 58 12.6  0.0
BOD                                 Pmax             00 58 20.9
            comp=N,528nm,0.5s
BOD                                eSg      Sb       00 58 34.2 +0.6
BOD                                 Smax             00 58 35.4
            comp=N,7μm,1.0s
BOD   Bodaibo             1.68   3 ePN      Pn       00 58 11.9 +1.1
BOD                                e                 00 58 13.8
BOD                                e                 00 58 34.4
BOD                                 pmax    pmax
            comp=Z,207nm,0.3s
BOD                                 smax    smax
            comp=E,6μm,0.6s
YLYR  Ulyunkhan           1.98 231⇓iPn      Pn       00 58 16.7 +1.8
YLYR                               ePg      Pb       00 58 18.0 +0.4
YLYR                                Pmax             00 58 18.4
            comp=E,398nm,0.3s
YLYR                               e                 00 58 25.5
YLYR                               eSn      Sn       00 58 40.9 +1.5
YLYR                               eSg      Sg       00 58 45.1 -0.3
YLYR                                Smax             00 58 46.5
            comp=E,3μm,0.5s
YLYR  Ulyunkhan           1.98 231⇓iPN      Pn       00 58 16.6 +1.7
YLYR                               e                 00 58 17.8
YLYR                               e                 00 58 44.7
YLYR                                pmax    pmax
            comp=Z,401nm,0.4s
YLYR                                smax    smax
            comp=E,3μm,0.7s
NIZ   Nizh Angarsk        2.44 263 ePn      Pn       00 58 22.9 +1.7
NIZ                                ePg      Pb       00 58 26.9 +1.5
NIZ                                ePgPg    PbPb     00 58 29.6 +1.0
NIZ                                 max              00 58 29.8
            comp=E,814nm,0.7s
NIZ                                e                 00 58 54.6
NIZ                                eSg      Sg       00 58 59.5 -0.6
NIZ                                 Smax             00 59 07.0
            comp=E,2μm,0.9s
NIZ   Nizh Angarsk        2.44 263 ePN      Pn       00 58 23.1 +1.9
NIZ                                e                 00 58 27.1
NIZ                                e                 00 58 59.7
NIZ                                 pmax    pmax
            comp=Z,815nm,0.7s
NIZ                                 smax    smax
            comp=E,2μm,1.3s
CRS   Chara               2.58  71⇑iPn      Pn       00 58 24.1 +0.9
CRS                                ePg      Pb       00 58 29.2 +1.4
CRS                                 Pmax             00 58 38.8
            comp=E,837nm,0.9s
CRS                                eSg      Sb       00 59 02.1 +2.7
CRS                                 Smax             00 59 03.2
            comp=E,3μm,0.5s
CRS   Chara               2.58  71 ePN      Pn       00 58 23.9 +0.7
CRS                                e                 00 58 29.2
CRS                                e                 00 59 01.8
CRS                                 pmax    pmax
            comp=Z,837nm,0.5s
CRS                                 smax    smax
            comp=E,3μm,0.5s
SYVR  Suvo                3.33 223 ePn      Pn       00 58 34.6 +1.1
SYVR                               ePg      Pb       00 58 42.7 +2.1
SYVR                                Pmax             00 58 53.0
            comp=E,271nm,0.8s
SYVR                               eSn      Sn       00 59 13.5 +0.7
SYVR                               eSg      Sg       00 59 26.4 -2.3
SYVR                               eSgSg    SbSb     00 59 31.5 +5.5
SYVR                                max              00 59 32.8
            comp=E,974nm,1.0s
SYVR  Suvo                3.33 223 ePN      Pn       00 58 34.6 +1.1
SYVR                               e                 00 58 43.4
SYVR                               e                 00 59 26.8
SYVR                                pmax    pmax
            comp=Z,273nm,0.9s
SYVR                                smax    smax
            comp=E,1μm,1.0s
VTMR  Vitim               3.38 349 ePn      Pn       00 58 35.2 +1.1
VTMR                               ePg      Pb       00 58 42.2 +0.8
VTMR                               eSg      Sb       00 59 25.7 +3.4
KHNR  Khani               3.50  75 ePn      Pn       00 58 37.0 +1.2
KHNR                               ePg      Pb       00 58 44.6 +1.1
KHNR                               eSg      Sb       00 59 29.1 +3.3
TUP   Tupik               3.91 114⇑iPn      Pn       00 58 41.7 +0.3
TUP                                ePg      Pb       00 58 51.8 +1.3
TUP                                 Pmax             00 58 53.9
            comp=E,405nm,0.6s
TUP                                eSn      Sn       00 59 26.5 -0.5
TUP                                eSg      Sg       00 59 43.4 -3.8
TUP                                 Smax             00 59 47.1
            comp=E,2μm,0.7s
TUP   Tupik               3.91 114⇑iPN      Pn       00 58 41.7 +0.3
TUP                                e                 00 58 51.6
TUP                                eS       Sn       00 59 27.9 +0.9
TUP                                e                 00 59 42.9
TUP                                 pmax    pmax
            comp=Z,407nm,0.7s
TUP                                 smax    smax
            comp=N,2μm,0.8s
MXMB  Maximikha           4.12 228 ePn      Pn       00 58 45.0 +0.6
MXMB                               ePg      Pb       00 58 56.9 +2.7
MXMB                               eSn      Sn       00 59 32.4  0.0
MXMB                               eSg      Sg       00 59 51.7 -2.5
CIT   Chita               4.13 182 ePg      Pb       00 58 57.4 +3.0
CIT                                 Pmax             00 59 04.8
            comp=N,123nm,0.2s
CIT                                eSg      Sg       00 59 52.3 -2.2
CIT                                 Smax             00 59 57.1
            comp=N,1μm,0.7s
CIT   Chita               4.13 182 ePN      Pn       00 58 46.4 +1.8
CIT                                e                 00 58 57.1
CIT                                e                 00 59 50.3
CIT                                 pmax    pmax
            comp=Z,139nm,0.3s
CIT                                 smax    smax
            comp=E,2μm,0.9s
YKLR  Yuktali             4.38  81 ePn      Pn       00 58 48.4 +0.5
YKLR                               ePg      Pb       00 59 00.4 +1.9
YKLR                               eSg      Sg       00 59 57.0 -5.3
OGRR  Ongureny            4.38 238⇓iPn      Pn       00 58 51.3 +3.4
OGRR                               ePg      Pb       00 59 01.7 +3.1
OGRR                                Pmax             00 59 11.8
            comp=E,129nm,1.4s
OGRR                               eSn      Sn       00 59 38.7  0.0
OGRR                               eSg      Sg       01 00 00.2 -2.2
OGRR                                Smax             01 00 06.6
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	comp=E,747nm,1.5s						
OGRR	**Ongureny**	**4.38**	**238**	⇓*i*PN	**Pn**	**00 58 51.3**	**+3.4**
OGRR				*e*		00 59 03.1	
OGRR				*e*		01 00 00.2	
OGRR				pmax	pmax		
	comp=Z,128nm,1.4s						
OGRR				smax	smax		
	comp=E,713nm,1.8s						
KELR	**Kotokel**	**4.77**	**227**	*e*Pg	Pb	00 59 09.9	+4.8
KELR				*e*Sg	**Sg**	**01 00 12.2**	**-2.6**
TRG	**Tyrgan**	**5.52**	**235**	*e*Pn	**Pn**	**00 59 04.9**	**+1.3**
TRG				*e*		00 59 12.5	
TRG				*e*Pg	**Pb**	**00 59 22.1**	**+4.1**
TRG				Pmax		00 59 35.5	
	comp=E,50nm,1.0s						
TRG				*e*Sg	**Sg**	**01 00 34.2**	**-4.8**
TRG				Smax		01 00 54.6	
	comp=E,342nm,1.1s						
TRG	**Tyrgan**	**5.52**	**235**	*e*PN	**Pn**	**00 59 04.7**	**+1.1**
TRG				*e*		00 59 20.7	
TRG				*e*S	**Sn**	**01 00 06.5**	**-0.4**
TRG				*e*		01 00 34.4	
TRG				pmax	pmax		
	comp=Z,46nm,0.8s						
TRG				smax	smax		
	comp=N,342nm,1.1s						
UUDB	**Ulan-Yde**	**5.62**	**223**	*e*Pn	**Pn**	**00 59 05.5**	**+0.6**
UUDB				*e*Pg	**Pb**	**00 59 23.8**	**+4.2**
UUDB				Pmax		00 59 26.6	
	comp=N,138nm,0.7s						
UUDB				*e*Sg	**Sg**	**01 00 38.0**	**-4.0**
UUDB				Smax		01 00 44.2	
	comp=N,1µm,1.5s						
FFNB	**Fofonovo**	**5.84**	**228**	*e*	**Pg**	**00 59 36.9**	**+3.3**
FFNB				*e*Sg	**Sg**	**01 00 45.0**	**-4.1**
IENR	**Iengra**	**6.16**	**85**	*e*Pn	**Pn**	**00 59 12.7**	**+0.3**
IENR				*e*Pg	**Pb**	**00 59 32.8**	**+3.9**
IENR				*e*Sg	**Sg**	**01 00 53.0**	**-6.5**
CLNS	**Chul'man**	**6.17**	**79**	*e*Pg	**Pb**	**00 59 33.3**	**+4.2**
CLNS				*e*Sg	**Sg**	**01 00 53.1**	**-6.7**
BGT	**Bolshoye Golou**	**6.43**	**234**	*e*Pn	**Pn**	**00 59 17.2**	**+1.2**
BGT				*e*Pg	Pb	00 59 39.6	+6.2
BGT				Pmax		00 59 41.4	
	comp=N,21nm,0.5s						
BGT				*e*Sn	**Sn**	**01 00 29.1**	**-0.1**
BGT				*e*Sg	**Sg**	**01 01 02.9**	**-5.2**
BGT				Smax		01 01 09.3	
	comp=N,269nm,1.1s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*Pn	**Pn**	**00 59 17.1**	**-0.1**
KPC				max		00 59 53.3	
	comp=N,15nm,1.0s						
KPC				*e*Sn	**Sn**	**01 00 29.5**	**-1.7**
KPC				*e*Sg	**Sg**	**01 01 04.5**	**-6.1**
KPC				Smax		01 01 09.7	
	comp=N,717nm,1.0s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*PN	**Pn**	**00 59 17.5**	**+0.3**
KPC				*e*		00 59 41.5	
KPC				*e*		01 01 04.4	
KPC				pmax	pmax		
	comp=Z,15nm,1.0s						
KPC				smax	smax		
	comp=E,718nm,1.1s						
LSTR	**Listvyanka**	**6.81**	**235**	Pn	**Pn**	**00 59 22.9**	**+1.6**
LSTR				*e*Sn	**Sn**	**01 00 35.0**	**-3.5**
LSTR				*e*Sg	**Sg**	**01 01 13.3**	**-7.0**
LSTR				Smax		01 01 18.5	
	comp=E,330nm,1.9s						
IRK	**Irkutsk**	**6.83**	**239**	*e*Sg	**Sg**	**01 01 16.0**	**-4.9**
IRK				Smax		01 01 19.5	
	comp=E,913nm,1.3s						
IVK	**Ivanovka**	**7.05**	**236**	*e*Pn	**Pn**	**00 59 26.5**	**+2.0**
IVK				*e*Pg	Pb	00 59 50.4	+6.4
IVK				Pmax		01 00 02.8	
	comp=E,16nm,0.7s						
IVK				*e*Sg	**Sg**	**01 01 22.0**	**-5.9**
IVK				Smax		01 01 24.2	
	comp=E,252nm,1.7s						
ARS	**Arshan**	**7.93**	**243**	*e*Pg	Pb	01 00 06.4	+7.4
ARS				Pmax		01 00 10.4	
	comp=E,34nm,0.2s						
ARS				*e*Sg	Sg	01 01 48.5	-7.6
ARS				Smax		01 02 00.5	
	comp=E,967nm,0.9s						
ZEA	**Zeya**	**8.10**	**102**	*e*PN	**Pn**	**00 59 41.4**	**+2.5**
ZEA				*e*S	**Sn**	**01 01 12.0**	**+1.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				smax	smax		
	comp=N,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,300nm,7.0s						
ZAK	**Zakamensk**	**8.55**	**232**	*e*Pn	**Pn**	**00 59 46.2**	**+1.0**
ZAK				*e*Sn	**Sn**	**01 01 17.4**	**-4.1**
ZAK				*e*Sg	Sg	01 02 08.1	-7.9
ZAK				Smax		01 02 24.7	
	comp=Z,170nm,1.4s						
ZAK	**Zakamensk**	**8.55**	**232**	*e*PN	Pn	00 59 57.5	+12
ZAK				*e*		01 02 13.0	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MOY	**Mondy**	**8.80**	**245**	*e*Pn	**Pn**	**00 59 49.9**	**+1.3**
MOY				max		01 00 39.6	
	comp=Z,50nm,0.8s						
MOY				*e*		01 01 34.5	
MOY				*e*Sg	Sg	01 02 15.7	-8.2
MOY				Smax		01 02 24.1	
	comp=Z,386nm,1.5s						
MOY	**Mondy**	**8.80**	**245**	*e*PN	Pn	01 00 04.2	+16
MOY				*e*		01 02 15.7	
ORL	**Orlik**	**8.95**	**252**	*e*Pn	**Pn**	**00 59 51.4**	**+0.8**
ORL				max		01 00 37.2	
	comp=Z,29nm,1.3s						
ORL				*e*		01 01 48.4	
ORL				*e*Sg	Sg	01 02 19.7	-8.9
ORL				Smax		01 02 35.1	
	comp=Z,223nm,1.4s						
ORL	**Orlik**	**8.95**	**252**	*e*PG	Pg	01 00 23.9	-9.0
ORL				*e*		01 02 20.0	
ORL				pmax	pmax		
	comp=Z,36nm,0.7s						
ORL				smax	smax		
	comp=N,222nm,1.4s						
ULN	**Ulaanbaatar**	**9.28**	**210**	*i* P	**Pn**	**00 59 56.6**	**+1.4**
SONM	**Songino Array**	**9.49**	**212**	Pn	**Pn**	**01 00 00.1**	**+2.0**
	comp=N,0.7nm,0.3s,baz=22,slow=13,SNR=11						
SONM				Pg		01 00 40.1	
	comp=N,0.7nm,0.3s,baz=13,slow=14,SNR=4.7						
SONM				Sn	Sn	01 01 58.7	+14
	comp=N,0.9nm,0.3s,baz=16,slow=17,SNR=5.3						
SONM				Lg	Lg	01 02 42.2	
	comp=N,3.7nm,0.3s,baz=25,slow=27,SNR=11						
SONM	**Songino Array**	**9.49**	**212**	*e*P	**Pn**	**01 00 00.0**	**+1.8**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**10.05**	**48**	Lg	Lg	01 02 48.5	
	comp=Z,0.1nm,0.3s,baz=303,slow=23,SNR=7.2						
KNGR	**Kungurtug, Tuv**	**11.20**	**247**	*i* P	**Pn**	**01 00 23.0**	**+1.6**
KLR	**Kul'dur**	**12.87**	**115**	Pn	**Pn**	**01 00 44.6**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=310,slow=14,SNR=28						
KLR				Lg	Lg	01 04 26.9	
	comp=Z,0.7nm,0.3s,baz=345,slow=12,SNR=9.8						
KLR				LR	LR	01 06 19.0	
	comp=Z,103nm,19.5s,baz=283,slow=39						
KLR	**Kul'dur**	**12.87**	**115**	*i* P	**Pn**	**01 00 44.9**	**+0.8**
USRK	**Ussuriysk Ar.**	**16.62**	**128**	Lg	Lg	01 06 29.3	
	comp=Z,0.2nm,0.3s,baz=327,slow=27,SNR=9.2						
USRK				LR	LR	01 09 22.3	
	comp=Z,33nm,18.9s,baz=332,slow=41						
ZAA0	**Zalesovo Array**	**16.71**	**275**	Pn	**Pn**	**01 01 33.0**	**-2.3**
ZALV	**Zalesovo Beam**	**16.71**	**275**	Pn	**Pn**	**01 01 35.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=64,slow=10,SNR=5.0						
ZALV				Lg	Lg	01 06 26.2	
	comp=Z,0.1nm,0.3s,baz=4.7,slow=25,SNR=1.9						
ZALV				LR	LR	01 08 30.2	
	comp=Z,93nm,19.3s,baz=62,slow=39						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**16.71**	**275**		**Pn**	**01 01 33.4**	**-1.9**
ZALV	**Zalesovo Beam**	**16.71**	**275**	*e*P	**P**	**01 01 38.1**	**+0.5**
TIXI	**Tiksi**	**16.82**	**17**	Pn	**Pn**	**01 01 31.2**	**-5.3**
	comp=Z,42nm,0.3s,baz=272,slow=23,SNR=5.4						
TIXI				Sn	Sn	01 04 30.5	-12
	comp=Z,43nm,0.3s,baz=88,slow=23,SNR=4.3						
TIXI				Lg	Lg	01 06 26.8	
	comp=Z,209nm,0.3s,baz=268,slow=23,SNR=6.1						
TIXI				LR	LR	01 07 15.1	
	comp=Z,36nm,19.9s,baz=182,slow=35						
TIXI	**Tiksi**	**16.82**	**17**		**Pn**	**01 01 31.5**	**-5.0**
TIXI				IAmb	IAmb	01 01 38.9	
	comp=Z,8.5nm,0.7s						
TIXI	**Tiksi**	**16.82**	**17**	*i* P	**Pn**	**01 01 35.9**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NRIK	**Noril'sk**	**17.66**	**329**	Pn	**Pn**	**01 01 42.1**	**-4.9**
	comp=Z,0.6nm,0.3s,baz=130,slow=8.1,SNR=6.5						
NRIK				Sn	Sn	01 04 50.7	-13
	comp=Z,0.6nm,0.3s,baz=118,slow=22,SNR=4.1						
NRIK				Lg	Lg	01 06 45.8	
	comp=Z,0.2nm,0.3s,baz=252,slow=21,SNR=1.2						
NRIK				LR	LR	01 09 07.0	
	comp=Z,123nm,18.6s,baz=92,slow=40						
	comp=Z,1.6nm,0.4s						
NRIK	**Noril'sk**	**17.66**	**329**	P	**Pn**	**01 01 41.8**	**-5.3**
NRIK	**Noril'sk**	**17.66**	**329**	*i* P	**Pn**	**01 01 47.0**	**0.0**
MA2	**Magadan**	**19.78**	**65**	LR	LR	01 10 01.4	
	comp=Z,45nm,19.0s,baz=265,slow=37						
SEY	**Seymchan**	**20.43**	**55**	Lg	Lg	01 08 18.9	
	comp=Z,0.3nm,0.3s,baz=315,slow=22,SNR=4.5						
KSRS	**Korea Array**	**20.96**	**147**	P	Pn	01 02 31.1	+4.3
	comp=Z,1.1nm,0.8s,baz=350,slow=6.5,SNR=1.6						
KSRS				Lg	Lg	01 08 51.0	
	comp=Z,0.3nm,0.3s,baz=338,slow=29,SNR=4.6						
KSRS				LR	LR	01 11 26.4	
	comp=Z,86nm,18.1s,baz=150,slow=38						
	comp=Z,1.1nm,0.8s						
KURK	**Kurchatov**	**21.50**	**270**	P	**P**	**01 02 29.3**	**-0.6**
KURK	**Kurchatov**	**21.50**	**270**	P	**P**	**01 02 32.0**	**+2.1**
MK31	**Makanchi Array**	**21.58**	**258**	P	**P**	**01 02 31.7**	**+0.8**
MK31				IAmb	IAmb	01 02 32.9	
	comp=Z,6.5nm,0.8s						
MK31	**Makanchi Array**	**21.58**	**258**	*i* P	**P**	**01 02 32.3**	**+1.4**
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**01 02 32.0**	**+1.1**
	comp=Z,6.1nm,0.7s,baz=59,slow=9.5,SNR=53						
MKAR				LR	LR	01 11 31.7	
	comp=Z,76nm,21.5s,baz=44,slow=39						
	comp=Z,6.1nm,0.7s						
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**01 02 31.9**	**+1.0**
KURBB	**Kurchatov Arra**	**21.59**	**270**	P	**P**	**01 02 31.9**	**+1.0**
	comp=Z,7.4nm,0.8s,baz=67,slow=11,SNR=39						
KURBB				Lg	Lg	01 09 03.1	
	baz=358,slow=24,SNR=1.6						
	comp=Z,7.4nm,0.8s						
MAKZ	**Makanchi**	**21.75**	**258**	P	**P**	**01 02 32.6**	**0.0**
MAKZ				IAmb	IAmb	01 02 33.9	
	comp=Z,4.2nm,0.8s						
MAKZ	**Makanchi**	**21.75**	**258**	P	**P**	**01 02 32.6**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**25.10**	**281**	P	**P**	**01 03 04.9**	**-0.8**
BRVK	**Borovoye**	**25.10**	**281**	P	**P**	**01 03 04.9**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PETK	**Petropavlovsk-**	**25.26**	**78**	LR	LR	01 13 27.4	
	comp=Z,61nm,18.9s,baz=298,slow=37						
BILL	**Bilibino**	**26.34**	**42**	*e*P	**P**	**01 03 16.7**	**-0.2**
BILL				*e*PPP	PPP	01 04 01.8	
BILL				pmax	pmax		
	comp=Z,4.0nm,2.2s						
BILL				MLR	MLR		
	comp=Z,23nm,15.0s						
AAK	**Ala-Archa**	**28.51**	**258**	P	**P**	**01 03 38.3**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=50,slow=8.6,SNR=4.2						
AAK				LR	LR	01 15 31.1	
	comp=Z,132nm,19.4s,baz=98,slow=38						
	comp=Z,0.7nm,0.3s						
AAK	**Ala-Archa**	**28.51**	**258**	P	**P**	**01 03 37.9**	**+1.2**
AAK				IAmb	IAmb	01 03 40.3	
	comp=Z,1.7nm,0.8s						
KSH	**Kashi**	**29.88**	**252**	P	P	01 03 55.3	+6.4
KSH				sP	sP	01 04 02.9	+7.3
KSH				S	**S**	**01 08 48.3**	**+2.8**
ARU	**Arti**	**29.98**	**294**	LR	LR	01 17 26.9	
	comp=Z,57nm,19.8s,baz=58,slow=40						
AKTO	**Aktyubinsk**	**33.05**	**284**	LR	LR	01 18 47.5	
	comp=Z,39nm,19.5s,baz=106,slow=39						
ARCES	**ARCESS Array B**	**38.60**	**326**	LR	LR	01 23 16.8	
	comp=Z,37nm,19.7s,baz=44,slow=40						
GEYT	**Alibeck**	**40.83**	**268**	LR	LR	01 21 53.8	
	comp=Z,27nm,19.3s,baz=232,slow=36						
OBN	**Obninsk**	**41.48**	**302**	*e*P	**P**	**01 05 30.2**	**+2.4**
OBN				*e*		01 07 03.8	
OBN				*e*PPP	PPP	01 07 35.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,26nm,4.0s						
FINES	**FINESS Array B**	**42.50**	**315**	P	**P**	**01 05 36.5**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=54,slow=8.2,SNR=8.1						
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**42.50**	**315**	P	**P**	**01 05 33.2**	**-2.8**
MAK	**Makhachkala**	**43.30**	**281**	*e*P	**P**	**01 05 39.2**	**-3.6**
MAK				*e*S	**S**	**01 12 05.0**	**-4.5**
MAK				pmax	pmax		
	comp=Z,164nm,1.1s						
MAK				MLR	MLR		
	comp=Z,96nm,16.0s						
ILAR	**Eielson Array**	**44.77**	**37**	P	**P**	**01 05 55.8**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=304,slow=7.3,SNR=6.2						
	comp=Z,0.4nm,0.5s						
KVAR	**Kislovodsk Arr**	**45.26**	**286**	LR	LR	01 29 12.8	
	comp=Z,46nm,18.4s,baz=241,slow=42						
KIV	**Kislovodsk**	**45.26**	**286**	*e*P	**P**	**01 05 59.6**	**+0.9**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,45nm,16.0s						
KDAK	**Kodiak Island**	**47.08**	**47**	LR	LR	01 28 35.8	
	comp=Z,38nm,20.5s,baz=228,slow=40						
AKASG	**Malin Array Be**	**47.70**	**301**	P	**P**	**01 06 17.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=39,slow=7.9,SNR=4.5						
	comp=Z,0.3nm,0.4s						
AKASG	**Malin Array Be**	**47.70**	**301**	*i* P	**P**	**01 06 19.2**	**+1.7**
NB2	**NORSAR Subarra**	**48.36**	**321**	P	**P**	**01 06 23.2**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=48,slow=7.9						
NOA	**NORSAR Array B**	**48.36**	**321**	P	**P**	**01 06 22.6**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=48,slow=7.7,SNR=4.4						
NOA				LR	LR	01 28 26.6	
	comp=Z,22nm,19.6s,baz=90,slow=38						
	comp=Z,1.4nm,0.8s						
NOA	**NORSAR Array B**	**48.36**	**321**	*e*P	**P**	**01 06 23.5**	**+0.9**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**53.05**	**288**	P	**P**	**01 06 59.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=66,slow=8.3,SNR=2.9						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**55.84**	**25**	P	**P**	**01 07 17.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=332,slow=6.8,SNR=6.7						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**55.84**	**25**	P	**P**	**01 07 16.1**	**-2.0**
GERES	**GERESS Array B**	**56.14**	**308**	P	**P**	**01 07 20.5**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=52,slow=8.6,SNR=4.6						
	comp=Z,0.5nm,0.7s						
GERES	**GERESS Array B**	**56.14**	**308**	*e*P	**P**	**01 07 22.1**	**+1.5**
KAPI	**Kappang**	**61.14**	**173**	LR	LR	01 38 25.1	
	comp=Z,82nm,18.2s,baz=69,slow=40						
ESDC	**Sonseca Array**	**71.00**	**314**	P	**P**	**01 08 59.8**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=23,slow=6.7,SNR=18						
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**77.75**	**160**	P	P	01 09 43.7	+5.6
	comp=Z,1.1nm,0.9s,baz=353,slow=6.6,SNR=6.9						
	comp=Z,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**91.04**	**296**	P	**P**	**01 10 45.7**	**0.0**
	comp=Z,0.2nm,0.7s,baz=64,slow=3.4,SNR=1.7						
	comp=Z,0.2nm,0.7s						

ROM 17 00:59:02.0±0.1**, 43°.351N**±0°.003×**12°.567E**±0°.004**,**
h7^{km}, ML1.3/17**, 1C, Error ellipse: s-maj=0.3km**
s-min=0.2km az=223.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.12**	**285**	P	Pg	00 59 05.2	+0.6
ATVO				S	Sg	00 59 07.3	+0.9
ATVO				AML	AML		
	comp=E,199µm,0.8s						
ATVO				AML	AML		
	comp=N,219µm,0.4s						
ATVO				AML	AML		
	comp=E,200µm,0.8s						
ATVO				AML	AML		
	comp=N,218µm,0.4s						
ATPI	**Pietralunga -**	**0.16**	**310**	P	Pg	00 59 05.8	+0.5
ATPI				S	Sg	00 59 08.7	+1.3
ATPI				AML	AML		
	comp=E,118µm,0.5s						
ATPI				AML	AML		
	comp=N,108µm,0.3s						
ATPI				AML	AML		
	comp=N,108µm,0.3s						
ATPI				AML	AML		
	comp=E,118µm,0.5s						
SSFR	**Montelago di S**	**0.18**	**61**	P	Pg	00 59 06.3	+0.6
SSFR				S	Sg	00 59 09.5	+1.4
SSFR				AML	AML		
	comp=E,586µm,0.3s						
SSFR				AML	AML		
	comp=E,466µm,0.1s						
SSFR				AML	AML		
	comp=N,585µm,0.7s						
SSFR				AML	AML		
	comp=N,668µm,1.1s						
PIEI	**Pieia**	**0.19**	**353**	⇑P	Pg	00 59 06.4	+0.6
PIEI				S	Sg	00 59 09.5	+1.2
PIEI				AML	AML		
	comp=N,276µm,1.2s						
PIEI				AML	AML		
	comp=E,276µm,0.1s						
FRON	**Frontone**	**0.20**	**35**	P	Pg	00 59 06.6	+0.6
FRON				S	Sg	00 59 10.2	+1.4
FRON				AML	AML		
	comp=N,165µm,0.5s						
FRON				AML	AML		
	comp=E,157µm,0.1s						
ATMI	**Monte Miggiano**	**0.22**	**266**	S	Sg	00 59 12.0	+2.7
APEC	**Apecchio**	**0.23**	**333**	P	Pg	00 59 07.3	+0.6
APEC				S	Sg	00 59 11.0	+1.2
APEC				AML	AML		
	comp=E,131µm,1.2s						
APEC				AML	AML		
	comp=N,131µm,0.6s						
APEC				AML	AML		
	comp=E,130µm,1.2s						
NARO	**Abbazia di Nar**	**0.26**	**2**	P	Pg	00 59 07.5	+0.4
NARO				S	Sg	00 59 12.0	+1.4
NARO				AML	AML		
	comp=E,98µm,0.2s						
NARO				AML	AML		
	comp=E,98µm,0.2s						
NARO				AML	AML		
	comp=N,66µm,0.8s						
BADI	**Badiali**	**0.28**	**304**	P	Pg	00 59 08.3	+0.7
BADI				S	Sb	00 59 13.2	-1.2
BADI				AML	AML		
	comp=E,124µm,0.3s						
BADI				AML	AML		
	comp=N,143µm,1.5s						
BADI				AML	AML		
	comp=N,144µm,1.5s						
BADI				AML	AML		
	comp=E,124µm,0.3s						
SNTG	**Esanatoglia**	**0.29**	**109**	P	Pg	00 59 08.4	+0.8
SNTG				S	Sb	00 59 13.7	-0.9
SNTG				AML	AML		
	comp=E,98µm,0.3s						
SNTG				AML	AML		
	comp=N,202µm,0.2s						
ARVD	**Arcevia**	**0.31**	**62**	P	Pg	00 59 08.7	+0.7
ARVD				S	Sb	00 59 14.0	-1.2
ARVD				AML	AML		
	comp=N,67µm,1.1s						
ARVD				AML	AML		
	comp=E,50µm,0.2s						
MPAG	**Monte Paganucc**	**0.31**	**27**	P	Pg	00 59 08.7	+0.5
MPAG				S	Sb	00 59 14.2	-1.0
ASSB	**Assisi San Ben**	**0.32**	**168**	P	Pg	00 59 09.0	+0.8
ASSB				S	Sb	00 59 14.7	-0.6
ASSB				AML	AML		
	comp=E,60µm,0.7s						
ASSB				AML	AML		
	comp=N,75µm,0.1s						
PE3	**Peglio**	**0.35**	**352**	P	Pb	00 59 09.8	-0.8
PE3				S	Sb	00 59 16.1	-0.2
FSSB	**Fossombrone**	**0.37**	**24**	P	Pg	00 59 09.8	+0.6
FSSB				S	Sb	00 59 16.5	-0.5
FSSB				AML	AML		
	comp=N,118µm,1.3s						
FSSB				AML	AML		
	comp=E,110µm,0.3s						
PARC	**Parchiule**	**0.38**	**321**	P	Pb	00 59 10.9	-0.3
PARC				S	Sb	00 59 17.1	-0.1
PARC				AML	AML		
	comp=N,34µm,0.8s						
PARC				AML	AML		
	comp=E,33µm,1.5s						
SSP9	**Sansepolcro**	**0.39**	**305**	S	Sb	00 59 17.0	-0.4
EL6	**Elcito**	**0.39**	**93**	P	Pb	00 59 10.5	-0.8
EL6				S	Sb	00 59 17.1	-0.5
COR1	**Corinaldo**	**0.42**	**48**	P	Pb	00 59 11.5	-0.3
CESI	**CESI - Serrava**	**0.42**	**144**	P	Pg	00 59 10.9	+0.7
CESI				AML	AML		
	comp=E,39µm,0.6s						
CESI				AML	AML		
	comp=N,30µm,1.2s						
CAFI	**Castiglion Fio**	**0.44**	**267**	P	Pb	00 59 11.3	-0.7
CAFI				S	Sb	00 59 17.8	-1.1
CING	**Cingoli**	**0.46**	**87**	P	Pb	00 59 12.0	-0.4
CING				S	Sb	00 59 19.2	-0.3
CING				AML	AML		
	comp=N,62µm,0.3s						
CING				AML	AML		
	comp=E,32µm,0.7s						
FDMO	**Fiordimonte**	**0.49**	**129**	P	Pg	00 59 12.0	+0.5
FDMO				S	Sb	00 59 20.5	0.0
FDMO				AML	AML		
	comp=N,23µm,0.3s						
FDMO				AML	AML		
	comp=E,22µm,1.5s						
CSP1	**Cessapalombo**	**0.53**	**119**	P	Pg	00 59 12.9	+0.6
CSP1				S	Sb	00 59 21.0	-0.7
CSP1				AML	AML		
	comp=E,68µm,1.6s						
CSP1				AML	AML		
	comp=N,54µm,1.3s						

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*BJI **17** 01:47:46.2±0.0, 24°.37N×142°.49E, h114^{km}, mb4.8/58, mB4.8/42*

*JMA **17** 01:47:48.0±0.1, 24°N±1°×14°2E±°, h113^{km}±3^{km}, MD5.0/25, MW5.1/25, IOTO ISLANDS REGION*

JMA Felt I J1 at IOTO ISLANDS REGION .

*NEIC **17** 01:47:47.9±1.4, 24°.33N±0°.07×141°.77E±0°.10, h75^{km}±4^{km}, mb5.3/200, Error ellipse: s-maj=13.0km s-min=9.4km az=83.0*

*NIED **17** 01:47:48.0, 24°.38N×141°.92E, h113^{km}, MW5.1, Moment Tensor Solution. s1 Moment tensor: Scale 10^{16}Nm; M_{rr}1.81; $M_{\theta\theta}$-5.31; $M_{\phi\phi}$3.50; $M_{r\theta}$1.40; $M_{\theta\phi}$0.54; $M_{\phi r}$0.42; Fault plane solution: $M_0$4.64000×10^{16} NP1: ϕ_s319.00000°, δ70.00000°, λ175.00000°. NP2: ϕ_s50.00000°, δ86.00000°, λ20.00000°.*

*GCMT **17** 01:47:48.8±0.2, 24°.31N±0°.01×142°.07E±0°.01, h80^{km}±1^{km}, MW5.2/129, Moment Tensor Solution. s90,c122; s129,c202; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.33±.01; $M_{\theta\theta}$-0.86±.01; $M_{\phi\phi}$0.52±.02; $M_{r\theta}$0.09±.01; $M_{\theta\phi}$-0.05±.01; $M_{\phi r}$-0.24±.01; Best double couple: $M_0$0.77800×10^{17} NP1:ϕ_s228.00000°, δ63.00000°, λ23.00000°. NP2:ϕ_s127.00000°, δ70.00000°, λ152.00000°. Principal axes: T 0.6910, Plg34.0000°, Azm86.0000°; N 0.1740, Plg56.0000°, Azm274.0000°; P -0.8640, Plg4.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **17** 01:47:48.8±0.5, 24°.35N×141°.73E, h90^{km}±3^{km}, mb4.5/31, mbtmp4.9/37, MS4.0/46 Error ellipse: s-maj=11.8km s-min=7.2km az=87.0*

*MOS **17** 01:47:50.8±1.2, 24°.38N×141°.67E, h118^{km}, mb5.1/58, MS4.3/11, Error ellipse: s-maj=8.4km s-min=4.6km az=106.8*

ISC 17 01:47:49.4±0.3**, 24°.35N**±0°.03×**141°.87E**±0°.04**, h97**^{km}±2^{km}**, h98**^{km}**:pP-P, n798,** σ**1^{s}36**/855**, mb5.1**/191**, 22C-9D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.29**	**7**	P	**Pn**	**01 48 24.6**	**-1.2**
JHH2				*e*S	**Sn**	**01 48 52.8**	**-0.8**
JHH2	**Haha-jima-NKT2**	**2.29**	**7**	A	A	01 48 24.6	
	comp=E,33nm,0.4s,comp=E,31nm,0.5s						
CBIJ	**Chichi jima**	**2.75**	**6**	P	**Pn**	**01 48 30.9**	**-1.0**
CBIJ				S	**Sn**	**01 49 04.5**	**+0.1**
CBIJ	**Chichi jima**	**2.75**	**6**	A	A	01 48 30.9	
	comp=E,23nm,3.1s,comp=E,16nm,2.3s						
JCJ	**Chichijima**	**2.75**	**6**	P	**Pn**	**01 48 30.6**	**-1.2**
	2µm,0.4s,baz=6.2,slow=5.4,SNR=653						
JCJ				S	**Sn**	**01 49 03.0**	**-1.4**
	2µm,0.5s,baz=87,slow=19,SNR=4.1						
JCJ	**Chichijima**	**2.75**	**6**	Pn	**Pn**	**01 48 30.4**	**-1.5**
JCJ				Sn	**Sn**	**01 49 00.7**	**-3.7**
JHCJ	**Hachijojimakas**	**8.88**	**349**	P	**Pn**	**01 49 54.1**	**-0.8**
JHJ2	**Mitsune**	**8.92**	**349**	P	**Pn**	**01 49 54.6**	**-0.8**
JHJ	**Hachijo jima 2**	**8.93**	**349**	P	**Pn**	**01 49 54.6**	**-1.0**
	116nm,0.3s,baz=80,slow=10,SNR=10						
JHJ				S	**Sn**	**01 51 30.0**	**-4.3**
	103nm,0.5s,baz=164,slow=23,SNR=5.8						
JHJ				LR	LR	01 53 19.4	
	comp=Z,1µm,20.7s,baz=90,slow=37						
BSO3	**Boso 3**	**10.49**	**354**	P	**Pn**	**01 50 13.3**	**-3.2**
GUMO	**Guam**	**11.07**	**165**	P	**Pn**	**01 50 23.3**	**-1.5**
	133nm,0.9s,baz=321,slow=3.2,SNR=5.5						
GUMO				LR	LR	01 53 01.3	
	comp=Z,816nm,20.2s,baz=354,slow=28						
GUMO	**Guam**	**11.07**	**165**		**Pn**	**01 50 22.6**	**-2.2**
INU	**Inuyama**	**11.74**	**340**		**Pn**	**01 50 32.6**	**-1.0**
JGF	**Kuroka**	**11.88**	**342**		**Pn**	**01 50 34.0**	**-1.5**
JYT	**Yasato**	**11.93**	**353**	Pn	**Pn**	**01 50 31.8**	**-4.3**
JAG	**Ashikaga**	**12.22**	**351**	P	Pn	01 50 35.2	-4.8
JHO	**Hitachi**	**12.28**	**355**	P	**Pn**	**01 50 37.4**	**-3.4**
JSU	**Suzuyama**	**12.35**	**308**	Pn	**Pn**	**01 50 39.4**	**-2.5**
JOW	**Kunigami**	**12.51**	**284**	LR	LR	01 55 02.6	
	comp=Z,717nm,20.8s,baz=118,slow=35						
MJAR	**Matsushiro Arr**	**12.56**	**346**	P	**Pn**	**01 50 41.5**	**-3.1**
	5.4nm,0.3s,baz=165,slow=11,SNR=24						
MJAR				S	Sn	01 52 52.1	-10
	3.6nm,0.5s,baz=124,slow=18,SNR=1.9						
MJAR				LR	LR	01 55 23.0	
	comp=Z,952nm,19.9s,baz=168,slow=36						
MJAR	**Matsushiro Arr**	**12.56**	**346**		**Pn**	**01 50 40.4**	**-4.1**
MAJO	**Matsushiro**	**12.56**	**346**		**Pn**	**01 50 41.6**	**-3.0**
MAJO	**Matsushiro**	**12.56**	**346**	P	**Pn**	**01 50 41.6**	**-3.0**
MJB9	**Matsu-Tunnel**	**12.56**	**346**		**Pn**	**01 50 42.0**	**-2.6**
JNU	**Nakatsue**	**13.01**	**315**	P	**P**	**01 50 54.1**	**-3.1**
	34nm,0.9s,baz=125,slow=6.8,SNR=11						
JNU	**Nakatsue**	**13.01**	**315**		**Pn**	**01 50 48.6**	**-1.9**
JHS	**Saijyo**	**13.05**	**326**		**Pn**	**01 50 49.0**	**-2.1**
JMM	**Marumori**	**13.51**	**356**		**Pn**	**01 50 52.5**	**-4.5**
JSD	**Sado**	**13.99**	**348**	Pn	**Pn**	**01 50 58.8**	**-4.5**
JTU	**Tsushima**	**14.85**	**316**	Pn	**Pn**	**01 51 12.0**	**-2.3**
JTM	**Tenmabayashi**	**16.41**	**358**		**Pn**	**01 51 32.0**	**-1.8**
NAWB	**Namwon**	**16.69**	**315**	P	**Pn**	**01 51 37.2**	**-0.1**
NAWB				IAmb	IAmb	01 51 42.4	
	comp=Z,193nm,1.0s						
KSCHJ	**Chungju**	**17.26**	**320**	P	**P**	**01 51 43.0**	**-1.3**
KSCHJ				IAmb	IAmb	01 52 11.3	
	comp=Z,171nm,1.5s						
TJN	**Taejon**	**17.31**	**317**	P	**P**	**01 51 41.5**	**-3.3**
TJN	**Taejon**	**17.31**	**317**	*ce*P	**Pn**	**01 51 45.6**	**+0.8**
ERM	**Erimo**	**17.66**	**3**		**P**	**01 51 46.5**	**-2.1**
ERM				IAmb	IAmb	01 51 57.0	
	comp=Z,196nm,1.1s						
ERM	**Erimo**	**17.66**	**3**	*ce*P	**P**	**01 51 48.7**	**+0.1**
ERM				pmax	pmax		
	comp=Z,166nm,1.3s						
KSRS	**Korea Array**	**17.69**	**321**	P	**Pn**	**01 51 49.5**	**+0.1**
	comp=Z,20nm,0.7s,baz=138,slow=12,SNR=71						
KSRS				ScP	**ScP**	**01 59 48.4**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=151,slow=2.6,SNR=9.3						
KSAR	**Wonju Array Be**	**17.70**	**321**		**P**	**01 51 48.7**	**-0.4**
KSAR	**Wonju Array Be**	**17.70**	**321**	P	**P**	**01 51 48.7**	**-0.4**
KS19	**Wonju Array Si**	**17.75**	**321**	P	**P**	**01 51 48.8**	**-1.0**
SEHB	**SEOHWA**	**18.08**	**323**		**P**	**01 51 53.5**	**+0.2**
JEW	**Eniwo**	**18.45**	**359**		**P**	**01 51 57.8**	**+0.5**
INCN	**Inchon**	**18.47**	**319**		**P**	**01 51 56.5**	**-1.1**
INCN	**Inchon**	**18.47**	**319**	P	**P**	**01 51 56.5**	**-1.1**
INCN				pmax	pmax		
	comp=Z,79nm,1.0s						
SSE	**Sheshan**	**19.49**	**295**	P	**Pn**	**01 52 11.4**	**+0.5**
SSE				S	**Sn**	**01 55 52.8**	**+3.0**
SSE				pmax	pmax		
	comp=Z,24nm,0.7s						
SSE				pmax	pmax		
	comp=Z,250nm,5.8s						
SSE				LR	LR		
	comp=Z,210nm,17.9s						
SSE				LR	LR		
	comp=Z,220nm,17.7s						
JKA	**Kamikawa-asahi**	**19.73**	**2**		**P**	**01 52 11.7**	**+0.4**
JKA				IAmb	IAmb	01 52 14.6	
	comp=Z,180nm,1.0s						
ASAJ	**Asahikawa**	**19.73**	**2**	P	**Pn**	**01 52 12.9**	**-0.7**
	comp=Z,123nm,0.8s,baz=222,slow=14,SNR=34						
ASAJ				LR	LR	02 00 06.4	
	comp=Z,312nm,21.9s,baz=164,slow=37						
APYP	**Conner**	**20.28**	**255**	⇓*e*P	Pn	01 52 20.7	+0.4
SAMP	**Sagada Mountai**	**20.89**	**254**	⇓*e*P	Pn	01 52 26.2	-1.1
TEY	**Ternei**	**21.08**	**350**	*e*P	**P**	**01 52 26.1**	**+0.3**
USRK	**Ussuriysk Ar.**	**21.39**	**340**	P	**P**	**01 52 26.9**	**-2.2**
	comp=Z,22nm,0.8s,baz=165,slow=11,SNR=26						
USRK				LR	LR	02 00 07.1	
	comp=Z,274nm,18.9s,baz=158,slow=35						
	comp=Z,22nm,0.8s						
SMPP	**San Manuel, Pa**	**21.46**	**252**	⇓*e*P	**P**	**01 52 32.9**	**+2.8**
NJ2	**Nanjing**	**21.66**	**296**	⇑P	**P**	**01 52 33.8**	**+1.7**
NJ2				pP	**pwP**	**01 52 52.5**	**-0.6**
NJ2				S	**S**	**01 56 27.4**	**+1.0**
NJ2				sS	**sS**	**01 57 01.0**	**+4.3**
NJ2				pmax	pmax		
	comp=Z,42nm,0.9s						
LQP	**Lukban**	**21.70**	**246**	⇓*e*P	**P**	**01 52 34.8**	**+1.9**
MDJ	**Mudanjiang**	**22.56**	**337**	P	**P**	**01 52 40.1**	**-1.4**
MDJ				S	**S**	**01 56 42.4**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.6s						
MDJ				LR	LR		
	comp=Z,480nm,14.6s						
MDJ				LR	LR		
	comp=Z,180nm,6.6s						
MDJ				LR	LR		
	comp=Z,570nm,18.5s						
YSS	**Yuzh-Sakhalins**	**22.57**	**2**	P	**P**	**01 52 40.6**	**-0.9**
YSS				IAmb	IAmb	01 52 53.6	
	comp=Z,176nm,1.1s						
YSS	**Yuzh-Sakhalins**	**22.57**	**2**	*e*P	**P**	**01 52 42.1**	**+0.6**
YSS				*e**SP	**sP**	**01 53 10.5**	**-1.1**
YSS				*e*S	**S**	**01 56 42.1**	**+0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,3.4s						
YSS				pmax	pmax		
	comp=N,600nm,4.0s						
YSS				smax	smax		
	comp=N,800nm,4.4s						
YSS				MLR	MLR		
	comp=Z,700nm,13.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
SNY	**Shenyang**	**23.13**	**323**	⇑P	**P**	**01 52 45.8**	**-1.3**
SNY				S	**S**	**01 56 41.6**	**-9.2**
SNY				pmax	pmax		
	comp=E,57nm,0.9s						
SNY				pmax	pmax		
	comp=E,240nm,3.5s						
SNY				LR	LR		
	comp=E,490nm,21.4s						
SNY				LR	LR		
	comp=E,620nm,18.4s						
SNY				LR	LR		
	comp=E,600nm,23.9s						
DAV	**Davao City (W)**	**23.21**	**225**	LR	LR	02 00 25.0	
	comp=E,362nm,21.4s,baz=8.5,slow=33						
PATS	**Pohnpei**	**23.49**	**135**	P	**P**	**01 52 51.0**	**+0.3**
WAKE	**Wake Island**	**23.54**	**98**	P	**P**	**01 52 51.8**	**+0.7**
CN2	**Changchun**	**23.62**	**329**	*e*P	**P**	**01 52 48.0**	**-3.5**
CN2				*e*S	**S**	**01 56 52.3**	**-6.4**
CN2				pmax	pmax		
	comp=E,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=E,100nm,3.5s						
CN2				LR	LR		
	comp=E,750nm,21.0s						
CN2				LR	LR		
	comp=E,790nm,21.0s						
CN2				LR	LR		
	comp=E,500nm,22.0s						
H11N1	**WAKE ISLAND Hy**	**23.64**	**96**	P	**P**	**01 52 51.4**	**-0.4**
	baz=276,slow=11,SNR=11						
H11N1				T	T	02 17 35.0	
	baz=283,slow=74,SNR=55						
H11N2	**WAKE ISLAND Hy**	**23.64**	**96**	P	**P**	**01 52 51.5**	**-0.3**
	baz=276,slow=11,SNR=9.1						
H11N2				T	T	02 17 39.0	
	baz=283,slow=74,SNR=45						
H11N3	**WAKE ISLAND Hy**	**23.65**	**96**	P	**P**	**01 52 51.4**	**-0.5**
	baz=276,slow=11,SNR=10						
H11N3				T	T	02 17 51.1	
	baz=283,slow=74,SNR=48						
H11S3	**WAKE ISLAND Hy**	**23.81**	**99**	T	T	02 18 12.9	
	baz=289,slow=75,SNR=119						
H11S1	**WAKE ISLAND Hy**	**23.82**	**99**	T	T	02 18 16.2	
	baz=289,slow=75,SNR=153						
H11S2	**WAKE ISLAND Hy**	**23.83**	**99**	T	T	02 18 15.8	
	baz=289,slow=75,SNR=34						
BNX	**BinXian**	**24.33**	**335**	⇓P	**P**	**01 52 57.1**	**-0.9**
BNX				PP	**PnPn**	**01 53 33.5**	**-0.8**
BNX				S	**S**	**01 57 07.3**	**-2.9**
BNX				pmax	pmax		
	comp=E,56nm,0.5s						
BNX				pmax	pmax		
	comp=E,210nm,5.0s						
BNX				LR	LR		
	comp=E,540nm,16.6s						
TIA	**Tai'an**	**24.35**	**305**	⇑P	**P**	**01 52 59.0**	**+0.8**
TIA				S	**S**	**01 57 16.6**	**+5.9**
TIA				pmax	pmax		
	comp=E,46nm,0.9s						
TIA				LR	LR		
	comp=E,150nm,12.6s						
TIA				LR	LR		
	comp=E,350nm,14.7s						
TIA				LR	LR		
	comp=E,380nm,14.2s						
UGL	**Uglegorsk**	**24.69**	**0**	*e*P	**P**	**01 53 03.6**	**+2.5**
UGL				pmax	pmax		
	comp=Z,90nm,1.2s						
UGL				MLR	MLR		
	comp=E,3µm,15.0s						
UGL				MLR	MLR		
	comp=N,7µm,18.0s						
UGL				MLR	MLR		
	comp=Z,2µm,19.0s						
WHN	**Wuhan**	**25.15**	**290**	⇑P	**P**	**01 53 10.0**	**+4.4**
WHN				S	S	01 57 34.5	+11
WHN				pmax	pmax		
	comp=Z,60nm,0.8s						
WHN				LR	LR		
	comp=Z,920nm,22.7s						
KLR	**Kul'dur**	**26.08**	**345**	P	**P**	**01 53 13.5**	**-0.3**
	comp=Z,15nm,0.9s,baz=148,slow=9.2,SNR=22						
KLR				ScP	**ScP**	**02 00 07.9**	**-2.0**
	comp=Z,5.9nm,0.9s,baz=158,slow=2.1,SNR=7.3						
KLR				LR	LR	02 03 32.0	
	comp=Z,344nm,21.1s,baz=174,slow=36						
	comp=Z,15nm,0.9s						
KLR	**Kul'dur**	**26.08**	**345**	*ce*P	**P**	**01 53 12.8**	**-1.0**
KLR				pmax	pmax		
	comp=Z,49nm,1.5s						
HNS	**HongShan**	**26.59**	**306**	⇓P	**P**	**01 53 18.8**	**+0.3**
HNS				pP	**pP**	**01 53 41.8**	**+1.9**
HNS				S	**S**	**01 57 44.9**	**-1.2**
HNS				pmax	pmax		
	comp=Z,44nm,0.8s						
HNS				LR	LR		
	comp=Z,340nm,16.3s						
HNS				LR	LR		
	comp=Z,410nm,17.4s						
HNS				LR	LR		
	comp=Z,370nm,19.5s						
BJT	**Baijiatuau**	**26.65**	**312**	P	**P**	**01 53 20.2**	**+1.2**
BJT	**Baijiatuau**	**26.65**	**312**	P	**P**	**01 53 20.2**	**+1.2**
BJT				pmax	pmax		
	comp=Z,17nm,1.0s						
BJI	**Beijing**	**26.66**	**312**	P	**P**	**01 53 20.4**	**+1.3**
BJI				pP	**pP**	**01 53 41.1**	**+0.5**
BJI				S	**S**	**01 57 42.5**	**-4.6**
BJI				pmax	pmax		
	comp=Z,16nm,0.9s						
BJI				pmax	pmax		
	comp=Z,69nm,5.7s						
BJI				LR	LR		
	comp=Z,260nm,14.3s						
BJI				LR	LR		
	comp=Z,230nm,14.7s						
BJI				LR	LR		
	comp=Z,370nm,16.3s						
GRNR	**Gornyy**	**26.71**	**352**	*e*P	**P**	**01 53 18.5**	**-1.0**
SIJI	**Sorong**	**27.09**	**204**	LR	LR	02 01 38.0	
	comp=Z,554nm,20.4s,baz=50,slow=31						
LYN	**LuoYang**	**27.46**	**299**	*e*P	**P**	**01 53 27.6**	**+1.3**
LYN				S	**S**	**01 58 00.0**	**+0.1**
LYN				pmax	pmax		
	comp=Z,20nm,0.7s						
LYN				pmax	pmax		
	comp=Z,210nm,5.5s						
LYN				LR	LR		
	comp=Z,520nm,21.0s						
SKR	**Severo-Kuril's**	**28.52**	**19**	*e*P	**P**	**01 53 34.5**	**-1.0**
SKR				MLR	MLR		
	comp=Z,100nm,13.0s						
XLT	**XiLinHaoTe**	**28.72**	**319**	*e*P	**P**	**01 53 36.3**	**-1.3**
XLT				PP	**PnPn**	**01 54 34.3**	**+1.1**
XLT				PcP	**PcP**	**01 56 46.8**	**+1.2**
XLT				S	**S**	**01 58 19.4**	**-0.4**
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,5.0s						
XLT				LR	LR		
	comp=Z,62nm,19.0s						
XLT				LR	LR		
	comp=Z,480nm,15.6s						
XLT				LR	LR		
	comp=Z,240nm,17.7s						
MYLDM	**Lahad Datu**	**29.46**	**233**	P	**P**	**01 53 44.2**	**0.0**
MYLDM				IAmb	IAmb	01 54 11.7	
	comp=Z,99nm,1.4s						
KRVT	**Keravat (AS076**	**30.15**	**159**	LR	LR	02 05 03.3	
	comp=Z,151nm,20.6s,baz=126,slow=34						
HHC	**Hu-ho-hao-te**	**30.18**	**310**	*e*P	**P**	**01 53 52.3**	**+1.8**
HHC				pP	pP	01 54 13.0	+0.7
HHC				S	S	01 58 51.9	+9.2
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,4.5s						
HHC				LR	LR		
	comp=Z,390nm,17.8s						
HHC				LR	LR		
	comp=Z,450nm,20.2s						
HHC				LR	LR		
	comp=Z,640nm,17.7s						
QIZ	**Qiongzhong**	**30.18**	**266**	P	**P**	**01 53 50.5**	**-0.2**
QIZ				S	**S**	**01 58 42.8**	**-0.2**
QIZ				LR	LR		
	comp=Z,280nm,20.1s						
QIZ				LR	LR		
	comp=Z,220nm,20.1s						
QIZ				LR	LR		
	comp=Z,310nm,27.9s						
XAN	**Xi'an**	**30.23**	**296**	⇑P	**P**	**01 53 51.9**	**+0.9**
XAN				PcP	**PcP**	**01 56 50.4**	**+0.8**
XAN				PcS	**PcS**	**02 00 30.4**	**-2.9**
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN				LR	LR		
	comp=Z,630nm,19.9s						
XAN				LR	LR		
	comp=Z,310nm,19.2s						
XAN				LR	LR		
	comp=Z,420nm,19.2s						
XAN	**Xi'an**	**30.23**	**296**	P	**P**	**01 53 51.9**	**+0.9**
PET	**Petropavlovsk**	**31.33**	**20**	*e*P	P	01 54 06.2	+5.9
PET				*e*S	**S**	**01 59 05.7**	**+5.6**
PET				pmax	pmax		
	comp=Z,47nm,1.0s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
ZEA	**Zeya**	**31.34**	**343**	*e*P	**P**	**01 54 00.1**	**-0.4**
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=N,100nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,17.0s						
PMG	**Port Moresby**	**33.94**	**171**	LR	LR	02 08 10.2	
	comp=Z,208nm,18.1s,baz=30,slow=36						
PMG	**Port Moresby**	**33.94**	**171**	*ce*P	**P**	**01 54 27.9**	**+4.4**
PMG				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH	**Lanzhou**	**34.67**	**299**	*e*P	**P**	**01 54 31.6**	**+1.7**
LZH				PcP	**PcP**	**01 57 03.6**	**+1.6**
LZH				S	**S**	**01 59 55.8**	**+3.0**
LZH				SS	**SnSn**	**02 02 16.1**	**+0.7**
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,84nm,4.9s						
LZH				LR	LR		
	comp=Z,480nm,16.5s						
LZH				LR	LR		
	comp=Z,320nm,16.0s						
LZH				LR	LR		
	comp=Z,530nm,18.2s						
KMI	**Kunming**	**35.46**	**280**	⇓P	**P**	**01 54 39.8**	**+2.9**
KMI				pP	pP	01 54 59.1	+0.4
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
MA2	**Magadan**	**35.76**	**8**	P	**P**	**01 54 39.8**	**+1.1**
	comp=Z,9.4nm,0.7s,baz=183,slow=11,SNR=4.4						
MA2				LR	LR	02 07 48.5	
	comp=Z,75nm,21.5s,baz=192,slow=34						
	comp=Z,9.4nm,0.7s						
MA2	**Magadan**	**35.76**	**8**	P	**P**	**01 54 40.2**	**+1.5**
MA2				IAmb	IAmb	01 55 12.1	
	comp=Z,36nm,1.2s						
MA2	**Magadan**	**35.76**	**8**	P	**P**	**01 54 40.2**	**+1.5**
MA2				pmax	pmax		
	comp=Z,36nm,1.2s						
MA2	**Magadan**	**35.76**	**8**	P	**P**	**01 54 39.8**	**+1.1**
ULN	**Ulaanbaatar**	**36.16**	**319**	P	**P**	**01 54 41.4**	**-1.2**
ULN	**Ulaanbaatar**	**36.16**	**319**	*ce*P	**P**	**01 54 41.7**	**-0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ULN	**Ulaanbaatar**	**36.16**	**319**	P	**P**	**01 54 40.9**	**-1.7**
ULN				pP	**pP**	**01 55 05.8**	**+1.1**
PZH	**PanZhiHua**	**36.20**	**282**	⇑P	**P**	**01 54 44.9**	**+1.8**
PZH				S	**S**	**02 00 17.1**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.9s						
PZH				LR	LR		
	comp=Z,840nm,18.8s						
PZH				LR	LR		
	comp=Z,690nm,19.0s						
PZH				LR	LR		
	comp=Z,820nm,18.6s						
KAPI	**Kappang**	**36.27**	**219**	LR	LR	02 10 41.3	
	comp=Z,106nm,18.5s,baz=42,slow=38						
SONM	**Songino Array**	**36.54**	**319**	P	**P**	**01 54 45.1**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=124,slow=9.0,SNR=12						
SONM				PcP	**PcP**	**01 57 07.6**	**+0.4**
	comp=Z,6.4nm,0.9s,baz=131,slow=3.6,SNR=8.5						
SONM				ScP	**ScP**	**02 00 44.0**	**-1.1**
	comp=Z,3.1nm,0.9s,baz=155,slow=3.7,SNR=9.1						
SONM				LR	LR	02 11 02.0	
	comp=Z,265nm,18.7s,baz=118,slow=38						
	comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**36.54**	**319**	P	**P**	**01 54 44.9**	**-0.8**
SONM	**Songino Array**	**36.54**	**319**	P	**P**	**01 54 44.9**	**-0.8**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SHEM	**Shemya Is, Ala**	**37.38**	**32**	LR	LR	02 08 08.6	
	comp=Z,171nm,21.7s,baz=264,slow=33						
COEN	**Coen**	**38.09**	**178**	P	**P**	**01 54 56.8**	**-2.1**
COEN				IAmb	IAmb	01 55 00.2	
	comp=Z,35nm,1.1s						
GTA	**Gaotai**	**38.38**	**303**	*e*P	**P**	**01 55 02.1**	**+0.7**
GTA				pP	pP	01 55 24.8	+1.1
GTA				sP	sP	01 55 39.4	+4.6
GTA				PcP	**PcP**	**01 57 13.5**	**+0.4**
GTA				ScP	**ScP**	**02 00 52.5**	**+0.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,42nm,7.2s						
GTA				LR	LR		
	comp=Z,280nm,21.9s						
GTA				LR	LR		
	comp=Z,180nm,22.7s						
GTA				LR	LR		
	comp=Z,260nm,19.9s						
MTN	**Manton Dam**	**38.42**	**197**	P	**P**	**01 54 60.0**	**-1.7**
YAK	**Yakutsk**	**38.57**	**351**	P	**P**	**01 55 02.0**	**-0.4**
	comp=Z,9.9nm,0.4s,baz=53,slow=0.9,SNR=5.0						
YAK				LR	LR	02 10 41.8	
	comp=Z,368nm,21.1s,baz=116,slow=36						
	comp=Z,9.9nm,0.4s						
YAK	**Yakutsk**	**38.57**	**351**	*e*P	**P**	**01 55 01.8**	**-0.6**
YAK				*e*		01 56 31.9	
YAK				*e*S	**S**	**02 00 53.1**	**+2.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,16nm,0.5s						
YAK				smax	smax		
	comp=E,75nm,1.4s						
YAK				smax	smax		
	comp=N,55nm,1.5s						
BATI	**Baumata**	**38.67**	**209**	LR	LR	02 12 54.5	
	comp=N,247nm,18.5s,baz=110,slow=39						
BOD	**Bodaibo**	**38.94**	**337**	*e*P	**P**	**01 55 04.1**	**-1.5**
BOD				pmax	pmax		
	comp=Z,12nm,1.4s						
SEY	**Seymchan**	**39.21**	**8**	P	**P**	**01 55 09.3**	**+1.5**
	comp=Z,9.9nm,0.8s,baz=185,slow=5.5,SNR=18						
	comp=Z,9.9nm,0.8s						
SEY	**Seymchan**	**39.21**	**8**	*ce*P	**P**	**01 55 08.4**	**+0.6**
SEY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZAK	**Zakamensk**	**39.52**	**321**	*e*P	**P**	**01 55 08.8**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.27**	**270**	P	**P**	**01 55 17.9**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=64,slow=7.8,SNR=8.7						
CMAR				pP	**pP**	**01 55 38.8**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=59,slow=7.4,SNR=2.0						
CMAR				ScP	**ScP**	**02 01 01.2**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=124,slow=1.1,SNR=5.2						
CMAR				LR	LR	02 10 31.4	
	comp=Z,175nm,21.9s,baz=85,slow=34						
	comp=Z,1.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.27**	**270**	P	**P**	**01 55 18.0**	**+0.8**
KNRA	**Kununurra**	**41.79**	**199**	P	**P**	**01 55 28.6**	**-0.8**
GOMU	**GeErMu**	**41.95**	**298**	P	**P**	**01 55 33.5**	**+2.3**
GOMU				S	**S**	**02 01 46.0**	**+3.1**
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,64nm,4.6s						
GOMU				LR	LR		
	comp=Z,190nm,19.8s						
GOMU				LR	LR		
	comp=Z,140nm,19.6s						
GOMU				LR	LR		
	comp=Z,180nm,19.3s						
BLJI	**Banyuglugur**	**42.17**	**224**	P	P	01 55 41.4	+8.8
KNGR	**Kungurtug, Tuv**	**42.98**	**319**	*i* P	**P**	**01 55 38.4**	**-0.6**
KULM	**Kulim**	**43.88**	**251**	P	**P**	**01 55 46.9**	**+0.3**
KULM				IAmb	IAmb	01 56 13.7	
	comp=Z,27nm,0.9s						
CTA	**Charters Tower**	**44.37**	**174**	P	**P**	**01 55 49.7**	**-0.6**

Sta	Station	Dist	Az	Phase	ISC phase	Time	Res
	comp=Z,49nm,0.8s,baz=352,slow=7.9,SNR=31						
CTA				LR	LR	02 11 57.4	
	comp=Z,252nm,21.7s,baz=340,slow=33						
	comp=Z,49nm,0.8s						
CTAO	**Charters Tower**	**44.37**	**174**	P	**P**	**01 55 48.9**	**-1.4**
CTAO				IAmb	IAmb	01 55 50.4	
	comp=Z,53nm,0.8s						
CTAO	**Charters Tower**	**44.37**	**174**	P	**P**	**01 55 48.9**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,53nm,0.8s						
CTAO	**Charters Tower**	**44.37**	**174**	P	**P**	**01 55 49.5**	**-0.8**
CTAO				x	x	01 55 55.3	
WB0	**Warramunga Arr**	**44.45**	**190**	P	**P**	**01 55 49.7**	**-1.2**
WB0				IAmb	IAmb	01 55 51.4	
	comp=Z,74nm,1.1s						
WR0	**Warramunga Arr**	**44.61**	**190**	P	**P**	**01 55 51.3**	**-0.9**
WR0				IAmb	IAmb	01 55 52.8	
	comp=Z,55nm,1.1s						
WRAB	**Tennant Creek**	**44.62**	**190**	P	**P**	**01 55 51.4**	**-0.9**
WRAB	**Tennant Creek**	**44.62**	**190**	P	**P**	**01 55 51.4**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,73nm,1.0s						
WRAB	**Tennant Creek**	**44.62**	**190**	P	**P**	**01 55 51.4**	**-0.9**
WRAB				pP	**pP**	**01 56 13.7**	**-0.9**
WRAB				PP	**PcP**	**01 57 34.2**	**+0.6**
WRAB				ScP	**ScP**	**02 01 17.8**	**+0.9**
WB2	**Warramunga Arr**	**44.63**	**190**	P	**P**	**01 55 51.5**	**-0.8**
WRA	**Warramunga Arr**	**44.63**	**190**	P	**P**	**01 55 51.3**	**-1.0**
	comp=Z,15nm,0.4s,baz=8.7,slow=7.9,SNR=251						
WRA				pP	**pP**	**01 56 12.9**	**-1.8**
	comp=Z,45nm,1.0s,baz=7.3,slow=8.6,SNR=5.3						
WRA				PcP	**PcP**	**01 57 34.5**	**+1.0**
	comp=Z,13nm,0.7s,baz=2.6,slow=3.4,SNR=6.3						
WRA				ScP	**ScP**	**02 01 17.6**	**+0.6**
	comp=Z,12nm,0.9s,baz=4.6,slow=4.3,SNR=26						
WRA				S	**S**	**02 02 17.6**	**-3.7**
	comp=Z,9.5nm,0.9s,baz=7.9,slow=14,SNR=14						
WRA				LR	LR	02 14 30.4	
	comp=Z,52nm,19.8s,baz=16,slow=36						
	comp=Z,15nm,0.4s						
WRA	**Warramunga Arr**	**44.63**	**190**	P	**P**	**01 55 50.5**	**-1.9**
WRA					**PcP**	**01 57 34.2**	**+0.6**
WRA				ScP	**ScP**	**02 01 16.7**	**-0.2**
LEM	**Lembang**	**45.55**	**232**	LR	LR	02 18 06.3	
	comp=Z,74nm,18.1s,baz=68,slow=40						
BILL	**Bilibino**	**46.19**	**12**	P	**P**	**01 56 05.1**	**+1.0**
BILL				IAmb	IAmb	01 56 32.1	
	comp=Z,66nm,1.4s						
BILL	**Bilibino**	**46.19**	**12**	*e*P	**P**	**01 56 05.0**	**+0.9**
BILL				*e*		01 57 54.6	
BILL				*e*PPP	PPP	01 58 38.3	
BILL				pmax	pmax		
	comp=Z,21nm,1.2s						
BILL				MLR	MLR		
	comp=Z,255nm,23.0s						
BILL	**Bilibino**	**46.19**	**12**	P	**P**	**01 56 05.3**	**+1.2**
BILL				pP	**pwP**	**01 56 28.7**	**-1.1**
PSI	**Prapat**	**46.62**	**249**	LR	LR	02 13 57.2	
	comp=Z,144nm,19.0s,baz=84,slow=34						
SANVU	**Saraoutou**	**46.65**	**145**	P	**P**	**01 56 07.0**	**-1.3**
NIKH	**Nikolski High**	**46.66**	**39**	P	**P**	**01 56 08.2**	**+0.2**
	baz=252						
SPIA	**Saint Paul Isl**	**47.40**	**33**	P	**P**	**01 56 13.4**	**-0.2**
	baz=247						
TIXI	**Tiksi**	**47.91**	**354**	LR	LR	02 17 33.8	
	comp=Z,166nm,19.3s,baz=180,slow=37						
TIXI	**Tiksi**	**47.91**	**354**	P	**P**	**01 56 17.1**	**-0.3**
TIXI				IAmb	IAmb	01 56 18.3	
	comp=Z,21nm,0.9s						
TIXI	**Tiksi**	**47.91**	**354**	*ce*P	**P**	**01 56 17.4**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI	**Tiksi**	**47.91**	**354**	P	**P**	**01 56 17.5**	**+0.1**
WMQ	**Urumqi**	**47.99**	**308**	*e*P	**P**	**01 56 19.8**	**+1.3**
WMQ				pP	pP	01 56 43.3	+1.7
WMQ				PcP	**PcP**	**01 57 45.5**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				LR	LR		
	comp=Z,250nm,16.5s						
WMQ				LR	LR		
	comp=Z,250nm,18.1s						
UNV	**Unalaska Valle**	**48.26**	**39**	P	**P**	**01 56 20.6**	**+0.2**
	baz=253						
AS31	**Alice Springs**	**48.35**	**190**	P	**P**	**01 56 20.0**	**-1.4**
ASAR	**Alice Springs**	**48.35**	**190**	P	**P**	**01 56 20.3**	**-1.1**
	comp=Z,6.1nm,0.7s,baz=18,slow=11,SNR=50						
ASAR				ScP	**ScP**	**02 01 32.8**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=8.8,slow=4.7,SNR=13						
ASAR				S	**S**	**02 03 10.4**	**-4.0**
	comp=Z,13nm,0.9s,baz=16,slow=18,SNR=30						
ASAR				LR	LR	02 16 24.0	
	comp=Z,92nm,18.5s,baz=13,slow=36						
	comp=Z,6.1nm,0.7s						
ASAR	**Alice Springs**	**48.35**	**190**	P	**P**	**01 56 19.9**	**-1.5**
RAMN	**Ramite**	**49.56**	**285**	*e*P	**P**	**01 56 32.9**	**+1.9**
	comp=Z,13nm,0.3s						
MBWA	**Marble Bar**	**50.10**	**207**	P	**P**	**01 56 34.3**	**-0.4**
MBWA				x	x	01 56 41.3	
MBWA				pP	**pwP**	**01 56 59.8**	**-0.1**
EIDS	**Eidsvold**	**50.22**	**169**	P	**P**	**01 56 34.6**	**-1.0**
EIDS				IAmb	IAmb	01 56 35.3	
	comp=Z,24nm,0.8s						
PKI	**Pulchoki**	**50.49**	**286**	*e*P	**P**	**01 56 39.2**	**+1.0**
	comp=Z,5.7nm,0.3s						
PKIN	**Phulchoki**	**50.51**	**286**	*e*P	**P**	**01 56 39.4**	**+1.2**
	comp=Z,13nm,0.4s						
KKN	**Kakani**	**50.57**	**287**	*e*P	**P**	**01 56 40.4**	**+1.8**
	comp=Z,13nm,0.4s						
DMN	**Daman**	**50.75**	**287**	*e*P	**P**	**01 56 41.6**	**+1.5**
	comp=Z,14nm,0.3s						
GKN	**Gorkha**	**51.10**	**287**	*e*P	**P**	**01 56 44.0**	**+1.5**
	comp=Z,20nm,0.4s						
ZAA0	**Zalesovo Array**	**51.40**	**321**	P	**P**	**01 56 42.9**	**-1.3**
ZALV	**Zalesovo Beam**	**51.40**	**321**	P	**P**	**01 56 43.0**	**-1.1**
	comp=Z,7.5nm,0.6s,baz=100,slow=7.1,SNR=36						
ZALV				ScP	**ScP**	**02 01 44.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=108,slow=4.8,SNR=4.3						
ZALV				LR	LR	02 18 53.6	
	comp=Z,113nm,18.5s,baz=92,slow=36						
	comp=Z,7.5nm,0.6s						
ZALV	**Zalesovo Beam**	**51.40**	**321**	P	**P**	**01 56 43.1**	**-1.0**
ZALV	**Zalesovo Beam**	**51.40**	**321**	P	**P**	**01 56 43.0**	**-1.1**
NOUC	**Port Laguerre**	**51.92**	**151**	P	**P**	**01 56 48.5**	**+0.1**
DZM	**Mont Dzumac**	**51.96**	**151**	LR	LR	02 16 13.6	
	comp=Z,145nm,21.5s,baz=324,slow=33						
DZM	**Mont Dzumac**	**51.96**	**151**	*e*P	**P**	**01 56 48.0**	**-0.7**
DZM				*e*pP	**pP**	**01 57 09.4**	**-2.0**
DZM	**Mont Dzumac**	**51.96**	**151**	*e*LR	LR	02 11 34.4	
	comp=Z,425nm,27.9s						
DZM	**Mont Dzumac**	**51.96**	**151**	P	**P**	**01 56 48.4**	**-0.4**
DZM	**Mont Dzumac**	**51.96**	**151**	P	**P**	**01 56 48.8**	**+0.1**
DZM				x	x	01 57 03.2	
DZM				pP	**pP**	**01 57 12.3**	**+1.0**
MK31	**Makanchi Array**	**52.03**	**311**	P	**P**	**01 56 48.5**	**-0.6**
MK31	**Makanchi Array**	**52.03**	**311**	*i* P	**P**	**01 56 48.8**	**-0.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**52.03**	**311**	P	**P**	**01 56 49.0**	**0.0**
	comp=Z,3.7nm,0.4s,baz=89,slow=9.6,SNR=71						
MKAR				ScP	**ScP**	**02 01 47.4**	**-0.7**
	comp=Z,5.2nm,0.9s,baz=86,slow=5.6,SNR=11						
MKAR				LR	LR	02 19 36.3	
	comp=Z,182nm,20.3s,baz=92,slow=37						
	comp=Z,3.7nm,0.4s						
SDPT	**Sand Point**	**52.03**	**38**	P	**P**	**01 56 49.3**	**+0.5**
SDPT	**Sand Point**	**52.03**	**38**	P	**P**	**01 56 49.0**	**+0.1**
	baz=258						
MAKZ	**Makanchi**	**52.25**	**311**	P	**P**	**01 56 50.3**	**-0.3**
MAKZ	**Makanchi**	**52.25**	**311**	P	**P**	**01 56 50.3**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	**Makanchi**	**52.25**	**311**	P	**P**	**01 56 50.6**	**0.0**
MAKZ				x	x	01 57 03.5	
MAKZ				pP	**pP**	**01 57 13.9**	**+0.1**
MAKZ				sP	**sP**	**01 57 26.6**	**+2.0**
CHNA	**Chernabura Isl**	**52.43**	**39**	P	**P**	**01 56 52.3**	**+0.6**
	baz=259						
ANM	**Nome**	**52.55**	**26**	P	**P**	**01 56 54.2**	**+1.7**
	baz=246						
KURK	**Kurchatov**	**54.73**	**316**	P	**P**	**01 57 07.7**	**-0.9**
KURK				IAmb	IAmb	01 57 09.1	
	comp=Z,26nm,1.3s						
KURK	**Kurchatov**	**54.73**	**316**	*ce*P	**P**	**01 57 07.7**	**-0.9**
KURK				pmax	pmax		
	comp=Z,23nm,1.4s						
KURK	**Kurchatov**	**54.73**	**316**	⇓P	**P**	**01 57 08.1**	**-0.6**
KURK				x	x	01 57 19.0	
KURK				pP	**pP**	**01 57 31.2**	**-0.8**
KURBB	**Kurchatov Arra**	**54.78**	**316**	P	**P**	**01 57 08.5**	**-0.5**
	comp=Z,5.3nm,0.5s,baz=92,slow=7.8,SNR=67						
KURBB				S	**S**	**02 04 39.5**	**-2.8**
	comp=Z,0.7nm,0.8s,baz=85,slow=11,SNR=5.5						
KURBB				LR	LR	02 22 10.3	
	comp=Z,218nm,18.5s,baz=72,slow=38						
	comp=Z,5.3nm,0.5s						
KURBB	**Kurchatov Arra**	**54.78**	**316**	P	**P**	**01 57 08.2**	**-0.8**
CHIR	**Chirikof Islan**	**54.83**	**38**	P	**P**	**01 57 10.3**	**+1.1**
	baz=262						
RDOG	**Red Dog Mine**	**54.87**	**22**	P	**P**	**01 57 09.0**	**-0.4**
RDOG				IAmb	IAmb	01 57 34.9	
	comp=Z,29nm,1.0s						
RDOG	**Red Dog Mine**	**54.87**	**22**	P	**P**	**01 57 09.2**	**-0.3**
	baz=246						
KIP	**Kipapa**	**55.09**	**80**	P	**P**	**01 57 12.2**	**+0.5**
KIP	**Kipapa**	**55.09**	**80**	*ce*P	**P**	**01 57 13.4**	**+1.7**
KIP				pmax	pmax		
	comp=Z,195nm,2.5s						
KIP	**Kipapa**	**55.09**	**80**	P	**P**	**01 57 13.0**	**+1.3**
NRIK	**Noril'sk**	**55.10**	**339**	P	**P**	**01 57 10.6**	**-0.4**
	comp=Z,23nm,0.7s,baz=110,slow=8.9,SNR=53						
NRIK				ScP	**ScP**	**02 02 00.0**	**-1.0**
	comp=Z,4.4nm,0.8s,baz=126,slow=1.3,SNR=4.4						
NRIK				LR	LR	02 21 05.0	
	comp=Z,157nm,18.3s,baz=120,slow=36						
	comp=Z,23nm,0.7s						
NRIK	**Noril'sk**	**55.10**	**339**	P	**P**	**01 57 10.2**	**-0.8**
NRIK				IAmb	IAmb	01 57 11.2	
	comp=Z,25nm,0.8s						
NRIK	**Noril'sk**	**55.10**	**339**	*ce*P	**P**	**01 57 10.4**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,27nm,0.8s						
TARG	**Taragay, Kyrgy**	**55.22**	**305**	P	**P**	**01 57 12.5**	**-0.3**
ARMA	**Armidale**	**55.25**	**170**	P	**P**	**01 57 13.2**	**+0.5**
ARMA				IAmb	IAmb	01 57 13.3	
	comp=Z,26nm,1.1s						
N18K	**Kilae Creek**	**55.53**	**32**	P	**P**	**01 57 13.9**	**-0.4**
N18K				IAmb	IAmb	01 57 17.3	
	comp=Z,20nm,1.0s						
N18K	**Kilae Creek**	**55.53**	**32**	P	**P**	**01 57 16.1**	**+1.8**
	baz=258,SNR=9.2						
SII	**Sitkinak Islan**	**55.73**	**37**	P	**P**	**01 57 17.6**	**+1.9**
	baz=262						
SVW2	**Sparrevohn**	**55.77**	**31**	P	**P**	**01 57 17.4**	**+1.4**
SVW2				IAmb	IAmb	01 57 18.9	
	comp=Z,19nm,1.0s						
STKA	**Stephens Creek**	**55.91**	**180**	P	**P**	**01 57 16.7**	**-0.6**
	comp=Z,26nm,0.8s,baz=345,slow=8.8,SNR=35						
STKA				LR	LR	02 20 12.1	
	comp=Z,282nm,21.2s,baz=4.7,slow=35						
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**55.91**	**180**	P	**P**	**01 57 16.6**	**-0.6**
TTA	**Tatalina**	**55.97**	**29**	P	**P**	**01 57 18.4**	**+0.9**
TTA	**Tatalina**	**55.97**	**29**	P	**P**	**01 57 18.4**	**+0.9**
TTA				pmax	pmax		
	comp=Z,21nm,1.3s						
TTA	**Tatalina**	**55.97**	**29**	P	**P**	**01 57 18.6**	**+1.2**
	baz=257,SNR=9.8						
N19K	**Bonanza Creek**	**56.24**	**32**	P	**P**	**01 57 19.6**	**+0.2**
N19K				IAmb	IAmb	01 57 24.3	
	comp=Z,20nm,0.8s						
N19K	**Bonanza Creek**	**56.24**	**32**	P	**P**	**01 57 21.1**	**+1.7**
	baz=259,SNR=12						
OHAK	**Old Harbor**	**56.30**	**36**	P	**P**	**01 57 20.5**	**+0.8**
	baz=263						
L19K	**White Mountain**	**56.33**	**30**	P	**P**	**01 57 21.4**	**+1.5**
L19K				IAmb	IAmb	01 57 22.8	
	comp=Z,22nm,1.1s						
L19K	**White Mountain**	**56.33**	**30**	P	**P**	**01 57 21.6**	**+1.6**
	baz=258,SNR=14						
Q19K	**Cape Douglas,**	**56.34**	**34**	P	**P**	**01 57 20.0**	**-0.1**
	baz=261						
FORT	**Forrest**	**56.39**	**194**	P	**P**	**01 57 20.3**	**-0.3**
M19K	**Big River Lodg**	**56.49**	**31**	P	**P**	**01 57 22.6**	**+1.5**
	baz=259						
BOOM	**Boomskoye usch**	**56.56**	**306**	P	**P**	**01 57 20.2**	**-1.9**
BOOM	**Boomskoye usch**	**56.56**	**306**	P	**P**	**01 57 20.2**	**-1.9**
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
P19K	**Oil Pt**	**56.66**	**33**	P	**P**	**01 57 23.0**	**+0.6**
	baz=261,SNR=5.2						
KDAK	**Kodiak Island**	**56.74**	**36**	P	**P**	**01 57 23.7**	**+0.8**
	comp=Z,16nm,0.8s,baz=250,slow=2.9,SNR=7.3						
	comp=Z,16nm,0.8s						
KDAK	**Kodiak Island**	**56.74**	**36**	P	**P**	**01 57 24.0**	**+1.1**
KDAK	**Kodiak Island**	**56.74**	**36**	P	**P**	**01 57 24.0**	**+1.1**
KDAK				pmax	pmax		
	comp=Z,60nm,1.5s						
KDAK	**Kodiak Island**	**56.74**	**36**	P	**P**	**01 57 23.7**	**+0.8**
	baz=263						
KDAK	**Kodiak Island**	**56.74**	**36**	P	**P**	**01 57 23.5**	**+0.6**
KSH	**Kashi**	**56.77**	**302**	P	**P**	**01 57 27.8**	**+4.2**
KSH				PP	PP	01 59 39.1	+8.4
KSH				ScS	**ScS**	**02 07 06.1**	**+2.2**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				LR	LR		
	comp=Z,97nm,15.1s						
KSH				LR	LR		
	comp=Z,210nm,11.3s						
KSH				LR	LR		
	comp=Z,240nm,15.1s						
L20K	**Farewell, AK**	**56.83**	**30**	P	**P**	**01 57 25.1**	**+1.6**
	baz=259,SNR=12						
K20K	**Telida**	**56.92**	**29**	P	**P**	**01 57 23.8**	**-0.3**
K20K				IAmb	IAmb	01 57 27.4	
	comp=Z,32nm,1.0s						
K20K	**Telida**	**56.92**	**29**	P	**P**	**01 57 26.1**	**+2.0**
	baz=258,SNR=27						
O20K	**Slope Mountain**	**57.03**	**33**	P	**P**	**01 57 25.6**	**+0.6**
	baz=262						
J20K	**Nowinta River**	**57.06**	**28**	P	**P**	**01 57 27.1**	**+2.0**
	baz=258,SNR=31						
SPCR	**Spurr Chakacha**	**57.39**	**32**	P	**P**	**01 57 28.3**	**+0.7**
	baz=261						
AAK	**Ala-Archa**	**57.61**	**306**	LR	LR	02 25 40.2	
	comp=Z,112nm,18.3s,baz=82,slow=40						
AAK	**Ala-Archa**	**57.61**	**306**	P	**P**	**01 57 28.5**	**-1.0**
AAK	**Ala-Archa**	**57.61**	**306**	*ce*P	**P**	**01 57 30.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AAK	**Ala-Archa**	**57.61**	**306**	P	**P**	**01 57 31.3**	**+1.7**
AAK				x	x	01 58 22.7	
IMAR	**Indian Mountai**	**57.63**	**26**	P	**P**	**01 57 29.6**	**+0.6**
PPLA	**Purkeypile**	**57.67**	**30**	P	**P**	**01 57 29.1**	**-0.5**
PPLA				IAmb	IAmb	01 57 32.6	
	comp=Z,41nm,1.3s						
PPLA	**Purkeypile**	**57.67**	**30**	P	**P**	**01 57 31.1**	**+1.5**
	baz=260,SNR=6.8						
CHUM	**Lake Minchumin**	**57.79**	**29**	P	**P**	**01 57 31.9**	**+1.7**
	baz=260						
CAST	**Castle Rocks**	**57.81**	**29**	P	**P**	**01 57 31.2**	**+0.8**
CAST				IAmb	IAmb	01 57 33.2	
	comp=Z,31nm,1.0s						
CAST	**Castle Rocks**	**57.81**	**29**	P	**P**	**01 57 32.0**	**+1.6**
	baz=260,SNR=11						
CAPN	**Captain Cook N**	**57.84**	**32**	P	**P**	**01 57 31.8**	**+1.2**
	baz=262						
BRSE	**Bradley Lake S**	**57.92**	**33**	P	**P**	**01 57 31.3**	**+0.1**
	baz=264						
H21K	**Melozitna Rive**	**57.94**	**26**	P	**P**	**01 57 33.2**	**+2.0**
	baz=258,SNR=23						
I21K	**Tanana**	**58.18**	**27**	P	**P**	**01 57 34.9**	**+2.0**
	baz=259						
BPAW	**Bear Paw Mtn.**	**58.41**	**28**	P	**P**	**01 57 35.9**	**+1.4**
BPAW	**Bear Paw Mtn.**	**58.41**	**28**	P	**P**	**01 57 36.0**	**+1.4**
	baz=261,SNR=18						
M22K	**Willow**	**58.46**	**31**	P	**P**	**01 57 34.8**	**-0.1**
	baz=263						
CUT	**Chulitna**	**58.48**	**30**	P	**P**	**01 57 35.3**	**+0.3**
	baz=262						
O22K	**Cooper Landing**	**58.51**	**33**	P	**P**	**01 57 34.9**	**-0.3**
	baz=264						
RC01	**Rabbit Creek A**	**58.57**	**32**	P	**P**	**01 57 35.8**	**+0.1**
	baz=264						
SEW	**Seward**	**58.61**	**33**	P	**P**	**01 57 36.3**	**+0.5**
	baz=264						
TRF	**Thorofare Moun**	**58.61**	**29**	P	**P**	**01 57 36.8**	**+0.7**
	baz=262,SNR=21						
OTUK	**Ortayu**	**58.79**	**313**	P	**P**	**01 57 37.2**	**-0.3**
PMR	**Palmer**	**58.91**	**31**	P	**P**	**01 57 38.1**	**+0.1**
PMR	**Palmer**	**58.91**	**31**	P	**P**	**01 57 38.1**	**+0.1**
PMR				pmax	pmax		
	comp=Z,34nm,0.9s						
PMR	**Palmer**	**58.91**	**31**	P	**P**	**01 57 38.2**	**+0.1**
	baz=264,SNR=15						
KNK	**Knik Glacier**	**59.22**	**32**	P	**P**	**01 57 40.9**	**+0.7**
KNK	**Knik Glacier**	**59.22**	**32**	P	**P**	**01 57 40.9**	**+0.7**
	baz=265,SNR=7.7						
MCK	**McKinley**	**59.25**	**29**	P	**P**	**01 57 41.0**	**+0.6**
	baz=263,SNR=22						
I23K	**Minto, Yukon-K**	**59.26**	**27**	P	**P**	**01 57 41.9**	**+1.6**
	baz=262,SNR=9.8						
COLD	**Coldfoot**	**59.27**	**25**	P	**P**	**01 57 42.3**	**+1.9**
	baz=260,SNR=6.1						
H23K	**Yukon River**	**59.29**	**26**	P	**P**	**01 57 42.7**	**+2.0**
	baz=261,SNR=22						
NEA2	**Nenana**	**59.31**	**28**	P	**P**	**01 57 41.8**	**+1.1**
	baz=262,SNR=16						
SML	**Sawmill**	**59.31**	**31**	P	**P**	**01 57 40.6**	**-0.3**
SML	**Sawmill**	**59.31**	**31**	P	**P**	**01 57 41.7**	**+0.8**
	baz=264,SNR=21						
WAT1	**Susitna Watana**	**59.32**	**30**	P	**P**	**01 57 41.2**	**+0.3**
	baz=264						
M23K	**Glacier View**	**59.60**	**31**	P	**P**	**01 57 43.4**	**+0.6**
	baz=265,SNR=9.0						
WAT6	**Susitna Watana**	**59.66**	**30**	P	**P**	**01 57 44.2**	**+0.8**
	baz=264,SNR=31						
CAN	**Canberra**	**59.73**	**173**	P	**P**	**01 57 44.5**	**+0.6**
TOLK	**Toolik Lake Re**	**59.76**	**23**	P	**P**	**01 57 44.0**	**+0.2**
TOLK				IAmb	IAmb	01 58 16.1	
	comp=Z,16nm,1.1s						
TOLK	**Toolik Lake Re**	**59.76**	**23**	P	**P**	**01 57 45.6**	**+1.7**
	baz=259,SNR=9.0						
SCM	**Sheep Creek Mo**	**59.79**	**31**	P	**P**	**01 57 45.0**	**+0.8**
SCM	**Sheep Creek Mo**	**59.79**	**31**	P	**P**	**01 57 45.0**	**+0.8**
SCM				pmax	pmax		
	comp=Z,68nm,1.0s						
SCM	**Sheep Creek Mo**	**59.79**	**31**	P	**P**	**01 57 45.0**	**+0.8**
	baz=265,SNR=17						
GLI	**Glacier Island**	**59.83**	**32**	P	**P**	**01 57 45.1**	**+0.7**
	baz=266,SNR=7.4						
TCOL	**CIGO, UAF Yank**	**59.86**	**28**	P	**P**	**01 57 45.9**	**+1.5**
TCOL				IAmb	IAmb	01 57 48.6	
	comp=Z,18nm,0.8s						
COLA	**College**	**59.86**	**28**	P	**P**	**01 57 45.8**	**+1.3**
COLA				IAmb	IAmb	01 57 48.1	
	comp=Z,16nm,0.8s						
COLA	**College**	**59.86**	**28**	P	**P**	**01 57 45.8**	**+1.3**
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
COLA	**College**	**59.86**	**28**	P	**P**	**01 57 47.5**	**+3.0**
DHY	**Denali Highway**	**59.88**	**30**	P	**P**	**01 57 45.4**	**+0.5**
	baz=265,SNR=5.1						
BRVK	**Borovoye**	**59.95**	**319**	P	**P**	**01 57 44.7**	**-0.6**
BRVK	**Borovoye**	**59.95**	**319**	P	**P**	**01 57 44.7**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	**59.95**	**319**	⇓P	**P**	**01 57 45.0**	**-0.3**
BRVK				pP	**pP**	**01 58 09.6**	**+0.8**
H24K	**Noodor Dome**	**59.97**	**27**	P	**P**	**01 57 46.8**	**+1.5**
H24K				IAmb	IAmb	01 57 48.3	
	comp=Z,22nm,0.8s						
H24K	**Noodor Dome**	**59.97**	**27**	P	**P**	**01 57 47.1**	**+1.8**
	baz=262,SNR=30						
POKR	**Poker Plat Res**	**60.07**	**27**	P	**P**	**01 57 46.8**	**+0.8**
	baz=263,SNR=10						
HDA	**Harding Lake**	**60.20**	**28**	P	**P**	**01 57 47.1**	**+0.3**
HDA				IAmb	IAmb	01 57 48.1	
	comp=Z,29nm,1.0s						
HDA	**Harding Lake**	**60.20**	**28**	P	**P**	**01 57 46.8**	**0.0**
	baz=264,SNR=17						
IL31		**60.26**	**28**	P	**P**	**01 57 47.5**	**+0.3**
ILAR	**Eielson Array**	**60.26**	**28**	P	**P**	**01 57 47.1**	**-0.2**
	comp=Z,24nm,0.9s,baz=260,slow=5.5,SNR=136						
ILAR				PKPPKP	**P'P'df**	**02 27 11.2**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=104,slow=1.4,SNR=4.6						
	comp=Z,24nm,0.9s						
ILAR	**Eielson Array**	**60.26**	**28**	P	**P**	**01 57 47.3**	**0.0**
M24K	**Tolsona, Glenn**	**60.35**	**31**	P	**P**	**01 57 49.1**	**+1.1**
	baz=266						
KLU	**Klutina**	**60.44**	**32**	P	**P**	**01 57 49.6**	**+1.0**
	baz=267,SNR=10						
EYAK	**Cordova Ski Ar**	**60.48**	**33**	P	**P**	**01 57 49.2**	**+0.5**
EYAK				IAmb	IAmb	01 57 51.2	
	comp=Z,32nm,1.2s						
EYAK	**Cordova Ski Ar**	**60.48**	**33**	P	**P**	**01 57 49.9**	**+1.2**
	baz=268						
KK31	**Karatay Array**	**60.48**	**307**	P	**P**	**01 57 49.3**	**+0.1**
KK31	**Karatay Array**	**60.48**	**307**	P	**P**	**01 57 49.3**	**+0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KKAR	**Karatay Array**	**60.48**	**307**	P	**P**	**01 57 49.3**	**+0.1**
KKAR	**Karatay Array**	**60.48**	**307**	P	**P**	**01 57 49.3**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BTK	**Batken**	**60.65**	**304**	P	**P**	**01 57 50.2**	**-0.3**
BTK	**Batken**	**60.65**	**304**	P	**P**	**01 57 50.2**	**-0.3**
BTK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
K24K	**Donnelly Dome**	**60.66**	**29**	P	**P**	**01 57 50.6**	**+0.6**
	baz=266,SNR=11						
PAX	**Paxson**	**60.74**	**30**	P	**P**	**01 57 51.6**	**+0.9**
	baz=266,SNR=14						
HARP	**HAARP**	**60.85**	**31**	P	**P**	**01 57 52.6**	**+1.3**
	baz=267,SNR=9.8						
J25K	**Salcha River,**	**60.90**	**28**	P	**P**	**01 57 51.4**	**-0.3**
	baz=266,SNR=14						
BMRM	**Bremner River**	**61.05**	**32**	P	**P**	**01 57 54.0**	**+1.2**
	baz=268,SNR=11						
RIDG	**Independent Ri**	**61.06**	**29**	P	**P**	**01 57 53.6**	**+0.8**
RIDG	**Independent Ri**	**61.06**	**29**	P	**P**	**01 57 53.5**	**+0.7**
	baz=266,SNR=20						
N25K	**Chitina, Valde**	**61.08**	**32**	P	**P**	**01 57 53.9**	**+1.0**
	baz=268,SNR=5.6						
GAR	**Garm**	**61.19**	**302**	P	**P**	**01 57 53.8**	**-0.4**
GAR				IAmb	IAmb	01 58 19.7	
	comp=Z,17nm,0.6s						
GLB	**Gilahina Butte**	**61.45**	**32**	P	**P**	**01 57 56.5**	**+1.1**
GLB				IAmb	IAmb	01 57 57.8	
	comp=Z,29nm,1.1s						
BMAR	**Burnt Mountain**	**61.45**	**25**	P	**P**	**01 57 57.0**	**+1.7**
SCRK	**Sand Creek**	**61.46**	**29**	P	**P**	**01 57 56.4**	**+0.8**
	baz=267,SNR=64						
J26L	**Joseph Creek**	**61.67**	**28**	P	**P**	**01 57 57.5**	**+0.6**
	baz=267,SNR=42						
BGLC	**Bering Glacier**	**61.69**	**33**	P	**P**	**01 57 57.8**	**+0.8**
	baz=270						
L26K	**Log Cabin Wild**	**61.71**	**30**	P	**P**	**01 57 58.3**	**+1.2**
	baz=268,SNR=9.6						
MCARA	**McCarthy VSAT**	**61.83**	**32**	P	**P**	**01 57 58.9**	**+1.0**
	baz=269,SNR=9.2						
M26K	**Nabesna, AK**	**61.85**	**31**	P	**P**	**01 57 59.2**	**+1.1**
	baz=269,SNR=6.5						
CHGR	**Chuyangaron**	**62.14**	**302**	P	**P**	**01 58 01.0**	**+0.5**
CHGR	**Chuyangaron**	**62.14**	**302**	P	**P**	**01 58 01.0**	**+0.5**
CHGR				pmax	pmax		
	comp=Z,30nm,0.8s						
K27K	**Chicken**	**62.30**	**29**	P	**P**	**01 58 02.7**	**+1.7**
	baz=269						
MESA	**MESA**	**62.36**	**33**	P	**P**	**01 58 03.0**	**+1.3**
	baz=271						
M27K	**Edge Creek, AK**	**62.37**	**31**	P	**P**	**01 58 02.7**	**+0.9**
M27K				IAmb	IAmb	01 58 04.2	
	comp=Z,18nm,1.0s						
M27K	**Edge Creek, AK**	**62.37**	**31**	P	**P**	**01 58 02.8**	**+1.1**
	baz=270,SNR=10						
L27K	**Beaver Creek,**	**62.40**	**30**	P	**P**	**01 58 03.1**	**+1.4**
	baz=270,SNR=17						
BCAR	**Beaver Creek A**	**62.42**	**30**	P	**P**	**01 58 03.4**	**+1.5**
XMAS	**Kiritimati**	**62.56**	**101**	P	**P**	**01 58 04.5**	**+1.0**
XMAS	**Kiritimati**	**62.56**	**101**	P	**P**	**01 58 04.5**	**+1.0**
CTG	**Chitna Glacier**	**62.64**	**32**	P	**P**	**01 58 04.8**	**+1.2**
	baz=271						
EGAK	**Eagle**	**62.71**	**28**	P	**P**	**01 58 04.9**	**+1.2**
EGAK	**Eagle**	**62.71**	**28**	P	**P**	**01 58 04.4**	**+0.6**
	baz=269						
BVCY	**Beaver Creek**	**62.85**	**31**	P	**P**	**01 58 05.9**	**+1.2**
	baz=271						
KBL	**Kabul**	**63.02**	**298**	P	**P**	**01 58 07.2**	**+0.7**
KBL				IAmb	IAmb	01 58 10.9	
	comp=Z,15nm,0.8s						
KBL	**Kabul**	**63.02**	**298**	P	**P**	**01 58 07.2**	**+0.7**
KBL				pmax	pmax		
	comp=Z,15nm,0.9s						
YUK3	**Moose Creek**	**63.05**	**31**	P	**P**	**01 58 07.3**	**+1.0**
	baz=272,SNR=18						
PINM	**Pinnacle**	**63.21**	**33**	P	**P**	**01 58 08.5**	**+1.3**

	baz=272						
DAWY	Dawson	63.48	29	P	P	01 58 10.4	+1.5
DAWY				IAmb	IAmb	01 58 11.6	
	comp=Z,22nm,1.1s						
DAWY	Dawson	63.48	29	P	P	01 58 10.3	+1.4
	baz=271,SNR=20						
PNL	Peninsula	63.66	34	P	P	01 58 11.5	+1.3
	baz=273						
I29M	Ogilvie Camp,	63.91	27	P	P	01 58 13.0	+1.3
	baz=272,SNR=16						
YUK4	Talbot Arm	63.94	32	P	P	01 58 14.2	+2.1
	baz=273,SNR=8.8						
YUK6	Outpost Mounta	64.10	32	P	P	01 58 15.1	+1.8
	baz=274						
HYT	Haines Junctio	64.52	32	P	P	01 58 17.7	+1.8
	baz=274,SNR=21						
EPYK	Eagle Plains	64.53	26	P	P	01 58 17.4	+1.7
EPYK	Eagle Plains	64.53	26	P	P	01 58 17.3	+1.6
	baz=272,SNR=35						
N30M	Aishikik Lake	64.67	32	P	P	01 58 18.5	+1.7
	baz=274,SNR=7.8						
M30M	Minto, Yukon	64.73	30	P	P	01 58 18.7	+1.7
	baz=274,SNR=15						
SVE	Sverdlovsk	65.23	323	eP	P	01 58 20.4	0.0
N31M	Braeburn, Yuko	65.30	32	P	P	01 58 22.4	+1.7
	baz=276,SNR=7.3						
INK	Inuvik	65.64	24	P	P	01 58 23.6	+0.8
	comp=Z,13nm,0.8s,baz=280,slow=5.3,SNR=31						
	comp=Z,13nm,0.8s						
INK	Inuvik	65.64	24	P	P	01 58 23.7	+0.9
INK	Inuvik	65.64	24	P	P	01 58 23.7	+0.9
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	Inuvik	65.64	24	P	P	01 58 23.4	+0.6
	baz=274						
SKAG	Skagway	65.74	34	P	P	01 58 25.3	+1.7
	baz=277						
WHY	Whitehorse	65.82	32	P	P	01 58 26.0	+1.7
	baz=277,SNR=10						
M31M	Drury Creek, Y	65.88	31	P	P	01 58 25.9	+1.4
M31M	Drury Creek, Y	65.88	31	P	P	01 58 25.8	+1.3
	baz=276,SNR=13						
SIT	Sitka	66.06	36	P	P	01 58 27.1	+1.5
	baz=278						
BESE	Bessie Mountai	66.10	35	P	P	01 58 27.1	+1.1
BESE				IAmb	IAmb	01 58 28.9	
	comp=Z,41nm,1.1s						
JIS	Juneau Island	66.39	35	P	P	01 58 28.8	+1.1
ARU	Arti	66.42	323	LR	LR	02 28 58.5	
	comp=Z,128nm,19.7s,baz=77,slow=37						
ARU	Arti	66.42	323	P	P	01 58 26.9	-1.2
ARU	Arti	66.42	323c	iP	P	01 58 27.0	-1.0
ARU						01 58 56.5	
ARU				S	S	02 07 08.9	-1.5
ARU				SS	SS	02 11 23.4	-4.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	Arti	66.42	323	P	P	01 58 27.1	-1.0
ARU				pP	pP	01 58 50.5	-1.3
AB31	Akbulak array	66.82	315	eP	P	01 58 29.6	-1.1
ABKAR	Akbulak array	66.82	315	P	P	01 58 29.7	-1.0
ABKAR	Akbulak array	66.82	315	P	P	01 58 29.5	-1.2
ABKAR				IAmb	IAmb	01 58 54.5	
	comp=Z,7.1nm,0.8s						
P33M	Teslin, Yukon	66.90	33	P	P	01 58 32.6	+1.5
	baz=279,SNR=12						
CRAG	Craig	67.53	38	P	P	01 58 36.6	+1.5
	baz=280						
WRAK	Wrangell Islan	67.79	37	P	P	01 58 38.3	+1.7
	baz=281						
AKTO	Aktyubinsk	67.81	317	LR	LR	02 31 00.5	
	comp=Z,143nm,18.6s,baz=71,slow=38						
A36M	Sachs Harbour	67.96	20	P	P	01 58 38.1	+0.7
A36M				IAmb	IAmb	01 58 43.0	
	comp=Z,23nm,1.0s						
A36M	Sachs Harbour	67.96	20	P	P	01 58 38.2	+0.8
	baz=281						
S34M	Telegraph Cree	68.15	35	P	P	01 58 40.9	+2.0
	baz=281,SNR=14						
DLBC	Dease Lake	68.62	34	P	P	01 58 43.5	+1.6
DLBC				IAmb	IAmb	01 58 45.2	
	comp=Z,40nm,1.1s						
TGTN	Hyland Airport	68.85	31	P	P	01 58 45.0	+1.7
	baz=282,SNR=9.4						
C36M	Paulatuk	68.88	22	P	P	01 58 43.8	+0.6
	baz=283						
GEYT	Alibeck	70.76	304	P	P	01 58 56.7	+1.2
	comp=Z,3.2nm,0.9s,baz=178,slow=4.5,SNR=4.0						
GEYT				LR	LR	02 34 06.5	
	comp=Z,106nm,18.1s,baz=119,slow=39						
	comp=Z,3.2nm,0.9s						
KIRV	Kirov	70.81	326c	eP	P	01 58 54.7	-0.5
PRGR	Permogore	71.77	330	eP	P	01 59 01.3	+0.4
EUNU	Eureka	72.65	8	P	P	01 59 07.3	+1.2
SPITS	Spitsbergen Ar	73.03	350	LR	LR	02 32 32.8	
	comp=Z,151nm,21.4s,baz=259,slow=37						
BELG	Belogornoye	73.58	320	LR	LR	02 31 50.2	
	comp=Z,76nm,20.8s,baz=291,slow=36						
YKA	Yellowknife Ar	74.69	28	P	P	01 59 18.7	+0.6
	comp=Z,19nm,0.8s,baz=292,slow=5.7,SNR=125						
	comp=Z,19nm,0.8s						
YKA	Yellowknife Ar	74.69	28	P	P	01 59 18.9	+0.8
YKA	Yellowknife Ar	74.69	28	P	P	01 59 18.9	+0.8
KLMR	Klimovskoe	74.81	330	eP	P	01 59 18.8	0.0
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	Klimovskoe	74.81	330	eP	P	01 59 18.9	+0.1
KLMR				AMP		01 59 21.4	
	comp=Z,16nm,1.5s						
NLWA	Neilton Lookou	75.24	44	P	P	01 59 23.3	+1.7
NLWA				IAmb	IAmb	01 59 24.9	
	comp=Z,31nm,0.9s						
LLLB	Lillooet	75.36	41	P	P	01 59 23.3	+1.0
LLLB				IAmb	IAmb	01 59 25.0	
	comp=Z,42nm,1.0s						
D03D	Eldon	75.69	44	P	P	01 59 26.4	+2.2
	baz=290,SNR=29						
D04E	Lakebay	76.02	44	P	P	01 59 28.3	+2.3
	baz=291						
ARCES	ARCESS Array B	76.03	341	P	P	01 59 25.8	+0.1
	comp=Z,3.6nm,0.5s,baz=70,slow=8.5,SNR=40						
ARCES				pP	pP	01 59 50.0	0.0
	comp=Z,11nm,0.8s,baz=54,slow=6.4,SNR=6.4						
ARCES				LR	LR	02 35 50.9	
	comp=Z,174nm,21.8s,baz=60,slow=38						
	comp=Z,3.6nm,0.5s						
B05A	Bryant	76.06	43	P	P	01 59 27.8	+1.5
	baz=291,SNR=9.9						
F04D	Rainier, OR	76.25	46	P	P	01 59 28.7	+1.3
	baz=291						
E04D	Cinebar	76.37	45	P	P	01 59 29.9	+1.9
	baz=291,SNR=14						
G03D	McMinnville, O	76.39	46	P	P	01 59 30.0	+1.8
	baz=291						
I02E	Swisshome, OR	76.39	48	P	P	01 59 29.6	+1.4
	baz=291						
UOSS	Minazif	76.43	291	P	P	01 59 29.0	+0.2
COR	Corvallis	76.59	47	P	P	01 59 30.6	+1.3
COR	Corvallis	76.59	47	P	P	01 59 30.6	+1.3
COR				pmax	pmax		
	comp=Z,84nm,1.4s						
J01E	Myrtle Point	76.67	49	P	P	01 59 31.6	+1.8
	baz=291,SNR=8.2						
F04A	Amboy	76.69	46	P	P	01 59 30.8	+0.9
MAK	Makhachkala	76.85	311	eP	P	01 59 27.1	-3.7
MAK				e*PP	pP	01 59 53.3	-2.0
MAK				eS	S	02 09 05.6	-5.1
MAK				pmax	pmax		
	comp=Z,139nm,1.3s						
MAK				MLR	MLR		
	comp=Z,142nm,13.0s						
I03D	Drain, OR	76.88	48	P	P	01 59 32.8	+1.9
	baz=291,SNR=12						
H04D	Lebanon	76.99	47	P	P	01 59 33.4	+1.8
	baz=291,SNR=7.1						
K02D	Willamette Mer	77.02	49	P	P	01 59 33.1	+1.2
	baz=291,SNR=8.9						
L02F	Cave Junction	77.29	49	P	P	01 59 34.7	+1.3
	baz=291,SNR=6.9						
F05D	White Salmon	77.33	45	P	P	01 59 35.0	+1.5
F05D	White Salmon	77.33	45	P	P	01 59 35.1	+1.6
	baz=292						
HOOD	Mount Hood Mea	77.42	46	P	P	01 59 35.2	+1.0
HOOD				IAmb	IAmb	01 59 36.9	
	comp=Z,49nm,0.9s						
I04A	Tendick Farm,	77.47	48	P	P	01 59 35.6	+1.2
	baz=292,SNR=19						
TULEG	Thule	77.60	7	P	P	01 59 35.6	+1.2
TULEG				IAmb	IAmb	01 59 60.0	
	comp=Z,26nm,1.0s						
G05D	Wamic, OR	77.66	46	P	P	01 59 36.9	+1.6
	baz=292,SNR=5.8						
J04D	Umpqua Nationa	77.88	48	P	P	01 59 38.3	+1.5
	baz=292,SNR=14						
I05D	Terrebonne, OR	77.99	47	P	P	01 59 38.6	+1.3
	baz=292,SNR=7.3						
L04D	Klamath Falls	78.13	49	P	P	01 59 39.4	+1.2
	baz=292,SNR=15						
K04D	Chiloquin, OR	78.36	48	P	P	01 59 40.9	+1.5
	baz=292						
DAG	Danmarks Havn	78.41	356	i P	P	01 59 38.3	-0.6
DAG				IAmb	IAmb	01 59 49.0	
	comp=Z,2.2nm,0.7s						
J05D	Fort Rock, OR	78.46	48	P	P	01 59 41.7	+1.7
	baz=292,SNR=33						
PINE	Pine Mountain	78.46	47	P	P	01 59 41.4	+1.3
C09A	Chrisman Ranch	78.61	43	P	P	01 59 41.7	+1.2
C09A				IAmb	IAmb	01 59 42.9	
	comp=Z,42nm,1.2s						
OBN	Obninsk	78.62	326	LR	LR	02 38 25.9	
	comp=Z,36nm,18.8s,baz=28,slow=39						
OBN	Obninsk	78.62	326	eP	P	01 59 40.7	+0.3
OBN				e		01 59 50.4	
OBN				e*SP	sP	02 00 14.0	-1.1
OBN				e		02 02 38.7	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
OBN				MLR	MLR		
	comp=Z,188nm,14.0s						
VORR	Voronezh	78.68	322	eP	P	01 59 41.4	+0.6
VORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PPT2	Papeete2	78.76	115	eS	S	02 09 36.3	+4.3
	comp=Z,38nm,24.0s						
PMOR	Pomariorio Ree	78.90	112	eT	T	03 24 43.2	
	comp=Z,7.5nm,0.2s						
K05A	Summer Lake	78.91	48	P	P	01 59 42.5	+0.1
GDXM	Geysers	79.07	52	P	P	01 59 43.7	+0.4
GDXM				IAmb	IAmb	01 59 46.7	
	comp=Z,39nm,1.1s						
NEW	Newport	79.13	42	P	P	01 59 44.7	+1.3
NEW				IAmb	IAmb	01 59 45.8	
	comp=Z,41nm,0.9s						
NEW	Newport	79.13	42	P	P	01 59 44.7	+1.3
NEW				pmax	pmax		
	comp=Z,41nm,1.0s						
NEW	Newport	79.13	42	P	P	01 59 44.7	+1.3
	baz=294,SNR=43						
EDM	Edmonton	79.19	36	P	P	01 59 44.7	+1.1
EDM	Edmonton	79.19	36	P	P	01 59 44.7	+1.1
EDM				pmax	pmax		
	comp=Z,62nm,1.1s						
E09A	Wood Farm, Sta	79.21	44	P	P	01 59 45.3	+1.5
E09A				IAmb	IAmb	01 59 46.4	
	comp=Z,43nm,0.9s						
ZEI	Tsey	79.37	312	eP	P	01 59 43.8	-1.2
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	Khabaz	79.67	313	P	P	01 59 46.8	+0.5
	comp=Z,7.3nm,0.8s,baz=66,slow=5.1,SNR=14						
KBZ				LR	LR	02 39 34.2	
	comp=Z,112nm,18.9s,baz=65,slow=39						
	comp=Z,7.3nm,0.8s						
KBZ	Khabaz	79.67	313c	eP	P	01 59 46.2	-0.1
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	79.72	314	eP	P	01 59 47.8	+1.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,69nm,19.0s						
GNI	Garni	79.83	309	LR	LR	02 37 49.8	
	comp=Z,34nm,20.8s,baz=68,slow=38						
GNI	Garni	79.83	309	P	P	01 59 47.8	+0.3
GNI	Garni	79.83	309	P	P	01 59 47.8	+0.3
GNI				pmax	pmax		
	comp=Z,18nm,1.2s						
FINES	FINESS Array B	80.28	334	P	P	01 59 48.7	-0.6
	comp=Z,2.7nm,0.3s,baz=68,slow=5.0,SNR=72						
FINES				pP	pP	02 00 12.7	-1.0
	comp=Z,6.8nm,0.5s,baz=74,slow=5.3,SNR=6.6						
	comp=Z,2.7nm,0.3s						
J08A	Circle Bar Ran	80.28	47	P	P	01 59 51.1	+1.2
J08A				IAmb	IAmb	01 59 52.4	
	comp=Z,39nm,0.9s						
WVOR	Wild Horse Val	80.55	48	P	P	01 59 52.4	+1.1
WVOR				IAmb	IAmb	01 59 53.7	
	comp=Z,30nm,1.0s						
WVOR	Wild Horse Val	80.55	48	P	P	01 59 52.4	+1.1
WVOR				pmax	pmax		
	comp=Z,30nm,1.0s						
WALA	Waterton Lakes	80.71	40	P	P	01 59 53.4	+1.4
WALA				IAmb	IAmb	01 59 54.9	
	comp=Z,46nm,0.8s						
MPK	Martis Peak	80.86	51	P	P	01 59 54.5	+1.3
JTMT	Jette	81.08	42	P	P	01 59 55.2	+1.2
JTMT				IAmb	IAmb	01 59 56.5	
	comp=Z,60nm,1.1s						
CMB	Columbia Colle	81.11	52	P	P	01 59 55.3	+1.0
CMB				IAmb	IAmb	01 59 56.4	
	comp=Z,33nm,0.8s						
CMB	Columbia Colle	81.11	52	P	P	01 59 55.3	+1.0
CMB				pmax	pmax		
	comp=Z,33nm,0.9s						
PLID	Pearl Lake	81.17	44	P	P	01 59 54.5	-0.2
PNTR	Pine Nut	81.25	51	P	P	01 59 55.6	+0.3
PNTR				IAmb	IAmb	01 59 57.6	
	comp=Z,31nm,0.8s						
MSO	Missoula	81.69	42	P	P	01 59 57.7	+0.4
	baz=297,SNR=7.8						
MFID	Camas Ranch	82.00	46	P	P	02 00 00.2	+1.2
MFID				IAmb	IAmb	02 00 01.4	
	comp=Z,43nm,0.9s						
MDPB	Devils Postpil	82.22	52	P	P	02 00 01.2	+0.8
RAF	Rauma	82.22	335	eP	P	01 59 59.7	+0.1
OMMB	Old Mammoth Mi	82.29	52	P	P	02 00 00.8	0.0
KVN	Kaiserville	82.33	51	P	P	02 00 00.9	0.0
KVN				IAmb	IAmb	02 00 03.0	
	comp=Z,28nm,1.0s						
KVN	Kaiserville	82.33	51	P	P	02 00 00.9	0.0
KVN				pmax	pmax		
	comp=Z,28nm,1.0s						
BMN	Battle Mountai	82.36	49	P	P	02 00 01.2	+0.3
BMN	Battle Mountai	82.36	49	P	P	02 00 01.2	+0.3
BMN				pmax	pmax		
	comp=Z,19nm,1.0s						
LHV	Little Huntoon	82.38	52	P	P	02 00 02.0	+1.2
LHV				IAmb	IAmb	02 00 03.7	
	comp=Z,29nm,1.0s						
GURO	Guroymak-BITLI	82.40	309	P	P	02 00 00.8	-0.3
MLAC	Mammoth, Mammo	82.40	52	P	P	02 00 02.6	+1.3
	baz=295						
NVAR	Mina Array Bea	82.45	51	P	P	02 00 02.6	+1.1
	comp=Z,22nm,0.9s,baz=268,slow=5.6,SNR=78						
	comp=Z,22nm,0.9s						
SMMC	Simmler	82.51	55	P	P	02 00 03.0	+1.3
	baz=294						
VOG	Valley Oaks Go	82.55	54	P	P	02 00 02.2	+0.5
	baz=295						
NV11	Mina Array Sit	82.55	51	P	P	02 00 03.1	+1.1
ANN	Anapa	82.76	316	eP	P	02 00 00.3	-2.4
ANN				e*PP	pP	02 00 26.2	-1.1
ANN				e		02 03 10.9	
ANN				eS	S	02 10 09.3	-3.4
ANN				pmax	pmax		
	comp=Z,51nm,1.5s						
PKM	Mcpherson Peak	82.82	55	P	P	02 00 04.9	+1.4
	baz=295,SNR=7.0						
TAOE	Nuku Hiva Isla	82.82	103	eLR	LR	02 25 26.7	
	comp=Z,810nm,24.4s						
HLID	Hailey	82.86	45	P	P	02 00 04.4	+0.9
HLID	Hailey	82.86	45	P	P	02 00 04.8	+1.3
	baz=297,SNR=28						
VES	Vestal, Richgr	82.97	54	P	P	02 00 04.1	+0.1
	baz=295,SNR=8.6						
TIN	Tinemaha, Big	83.08	53	P	P	02 00 05.7	+1.1
	baz=295						
DLMT	Dillon	83.19	43	P	P	02 00 05.5	+0.4
DLMT				IAmb	IAmb	02 00 07.6	
	comp=Z,28nm,1.2s						
MNK	Minsk	83.30	328	i P	P	02 00 06.9	+1.7
MNK				i *PP	pwP	02 00 33.0	-0.2
MNK				i		02 03 18.7	
MNK				i PPP	PPP	02 05 10.5	
MNK				i S	S	02 10 17.8	0.0
MNK				i *SS	sS	02 11 03.6	+3.3
MNK				i SS	SS	02 15 44.9	+1.2
MNK				i SSS	SSS	02 19 14.3	
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,17nm,1.0s						
MNK				pmax	pmax		
	comp=N,14nm,1.1s						
MNK				MLR	MLR		
	comp=Z,158nm,20.0s						
MNK				MLR	MLR		
	comp=N,161nm,20.0s						
MNK				MLR	MLR		
	comp=E,16nm,22.0s						
MNK	Minsk	83.30	328	i P	P	02 00 07.0	+1.7
	comp=E,1.0nm,0.9s						
MNK				i P	P	02 00 07.0	+1.7
	comp=N,14nm,1.1s						
MNK				i P	P	02 00 07.0	+1.7
	comp=Z,17nm,1.1s,baz=237						
MNK				i pP	pwP	02 00 33.0	-0.2
MNK				i PP	PP	02 03 18.7	+1.2
MNK				i PPP	PPP	02 05 10.5	
MNK				i S	S	02 10 17.9	0.0
MNK				i sS	sS	02 11 03.7	+3.3
MNK				i SS	SS	02 15 45.0	+1.2
MNK				i SSS	SSS	02 19 14.3	
MNK				i LQ	LQ	02 29 23.2	
MNK				i LR	LR	02 33 55.3	
MNK				i LRM	MLR	02 38 28.1	
	comp=Z,158nm,20.4s						
MNK				i LRM	MLR	02 38 40.9	
	comp=N,161nm,20.4s						
MNK				i LRM	MLR	02 38 54.3	
	comp=E,16nm,22.4s						
SUMG	Summit	83.33	0	P	P	02 00 06.1	+0.5
SUMG	Summit	83.33	0	P	P	02 00 06.1	+0.5
SUMG				pmax	pmax		
	comp=Z,16nm,1.2s						
SUMG	Summit	83.33	0	i P	P	02 00 05.6	0.0
SUMG				IAmb	IAmb	02 00 09.0	
	comp=Z,4.8nm,0.7s						
IDID	Didziasalis	83.40	329	eP	P	02 00 06.8	+1.0
AAL	Aland	83.43	335	eP	P	02 00 05.8	-0.1
ARVC	Arvin	83.46	55	P	P	02 00 07.3	+0.8
	baz=295						
ISA	Isabella, Lake	83.49	54	P	P	02 00 07.5	+0.7
ISA	Isabella, Lake	83.49	54	P	P	02 00 07.5	+0.7
ISA				pmax	pmax		
	comp=Z,12nm,1.1s						
ISA	Isabella, Lake	83.49	54	P	P	02 00 07.1	+0.3
	baz=295,SNR=6.2						
ELK	Elko	83.58	48	P	P	02 00 08.4	+1.1
ELK				IAmb	IAmb	02 00 09.8	
	comp=Z,48nm,1.4s						
ELK	Elko	83.58	48	P	P	02 00 08.4	+1.1
ELK				pmax	pmax		
	comp=Z,48nm,1.4s						
NACGM	Naroch	83.61	328⇑	eP	P	02 00 08.1	+1.2
	baz=56						
EGMT	Eagleton	83.64	40	P	P	02 00 08.2	+0.9
EGMT				IAmb	IAmb	02 00 09.6	
	comp=Z,48nm,1.1s						
EGMT	Eagleton	83.64	40	P	P	02 00 08.3	+1.1
	baz=300,SNR=11						
BOZ	Bozeman (W)	83.69	43	P	P	02 00 08.5	+0.8
BOZ	Bozeman (W)	83.69	43	P	P	02 00 08.5	+0.8
BOZ				pmax	pmax		
	comp=Z,16nm,0.9s						
BOZ	Bozeman (W)	83.69	43	P	P	02 00 08.7	+1.0
	baz=298,SNR=27						
LRMC	Laurel Mtn Rad	84.16	54	P	P	02 00 11.1	+0.9
	baz=296,SNR=17						
QLMT	Earthquake Lak	84.17	43	P	P	02 00 11.2	+1.0
EDW2	Edwards Air Fo	84.18	54	P	P	02 00 11.3	+1.0
	baz=296,SNR=7.8						
DECC	Green Verdugo	84.20	55	P	P	02 00 10.9	+0.6
	baz=295						
FURC	Furnace Creek,	84.32	53	P	P	02 00 11.9	+1.1
	baz=296,SNR=18						
R11A	Troy Canyon, C	84.41	50	P	P	02 00 12.5	+1.0
	baz=297,SNR=41						
CIS	Catalina Islan	84.50	56	P	P	02 00 12.2	+0.4
	baz=296						
QSM	Queen of Sheba	84.54	53	P	P	02 00 12.7	+0.7
QSM				IAmb	IAmb	02 00 14.2	
	comp=Z,40nm,1.1s						
TPNV	Topopah Spring	84.56	52	P	P	02 00 13.1	+0.9
TPNV				IAmb	IAmb	02 00 13.8	
	comp=Z,24nm,0.8s						
TPNV	Topopah Spring	84.56	52	P	P	02 00 13.1	+0.9
TPNV				pmax	pmax		
	comp=Z,25nm,0.8s						
TPNV	Topopah Spring	84.56	52	P	P	02 00 13.1	+0.9
	baz=296,SNR=21						
PABE	Paberze	84.59	330	eP	P	02 00 12.7	+0.9
GWY	Greenwater Val	84.59	53	P	P	02 00 13.2	+0.8
GWY				IAmb	IAmb	02 00 14.4	
	comp=Z,34nm,0.8s						
AKASG	Malin Array Be	84.66	324	P	P	02 00 11.4	-0.8
	comp=Z,1.8nm,0.6s,baz=46,slow=6.5,SNR=15						
AKASG				pP	pP	02 00 35.1	-1.9
	comp=Z,3.9nm,0.6s,baz=52,slow=5.4,SNR=9.2						
AKASG				LR	LR	02 39 11.1	
	comp=Z,104nm,20.9s,baz=354,slow=36						
	comp=Z,1.8nm,0.6s						
AKASG	Malin Array Be	84.66	324	i P	P	02 00 11.6	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	84.66	324	P	P	02 00 13.1	+0.9
AKBB	Malin Array Si	84.66	324	P	P	02 00 13.1	+0.9
AKBB				pmax	pmax		
	comp=Z,12nm,0.9s						
BFSC	Mount Baldy Ra	84.71	55	P	P	02 00 13.6	+0.6
	baz=296						
SIM	Simferopol'	84.77	317	eP	P	02 00 20.7	+7.8
SIM				pmax	pmax		
	comp=Z,14nm,0.8s						
SIM				MLR	MLR		
	comp=Z,200nm,29.0s						
GSC	Goldstone, Bar	84.88	54	P	P	02 00 14.1	+0.3
GSC				IAmb	IAmb	02 00 16.0	
	comp=Z,35nm,1.1s						
GSC	Goldstone, Bar	84.88	54	P	P	02 00 14.1	+0.3
GSC				pmax	pmax		
	comp=Z,35nm,1.1s						
GSC	Goldstone, Bar	84.88	54	P	P	02 00 14.6	+0.8
	baz=296,SNR=18						
H17A	Grant Village	84.92	43	P	P	02 00 17.3	+3.3
	baz=299,SNR=8.1						
RRX	Edison Barstow	84.92	54	P	P	02 00 15.2	+1.2
	baz=296						
FLWY	Flagg Ranch	84.99	44	P	P	02 00 15.2	+0.8
SHOC	Shoshone, Teco	85.00	53	P	P	02 00 15.1	+0.8
	baz=296,SNR=6.8						
TPAW	Teton Pass	85.12	44	P	P	02 00 15.7	+0.6
TPAW				IAmb	IAmb	02 00 17.9	
	comp=Z,27nm,0.9s						
MOOW	Moose Ponds	85.13	44	P	P	02 00 15.7	+0.7
MOOW				IAmb	IAmb	02 00 17.3	
	comp=Z,17nm,0.9s						
FCC	Fort Churchill	85.20	26	P	P	02 00 14.4	-0.3
FCC				IAmb	IAmb	02 00 15.9	
	comp=Z,18nm,1.0s						
FCC	Fort Churchill	85.20	26	P	P	02 00 14.4	-0.3
FCC				pmax	pmax		
	comp=Z,18nm,1.0s						
REDW	Red Top Meadow	85.25	44	P	P	02 00 16.7	+1.1
BBRC	Big Bear Solar	85.25	55	P	P	02 00 16.6	+0.8
	baz=296						
LOHW	Long Hollow	85.28	44	P	P	02 00 16.9	+1.0
LOHW				IAmb	IAmb	02 00 18.5	
	comp=Z,20nm,0.9s						
MURC	Murrieta	85.33	55	P	P	02 00 16.7	+0.6
	baz=296,SNR=5.8						
RLMT	Red Lodge	85.37	42	P	P	02 00 17.4	+1.1
RLMT	Red Lodge	85.37	42	P	P	02 00 18.1	+1.9
	baz=300,SNR=90						
AHID	Auburn Hatcher	85.38	45	P	P	02 00 17.4	+1.1
AHID				IAmb	IAmb	02 00 18.7	
	comp=Z,29nm,1.1s						
HEC	Hector,Ludlow	85.43	54	P	P	02 00 17.5	+0.9
	baz=296,SNR=27						

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TUQ   Turquoise Moun  85.46  53  P       P        02 00 17.9 +1.2
      baz=297,SNR=18
PSUT  Pine Spring     85.53  50  P       P        02 00 18.1 +1.0
PSUT                             IAmb    IAmb     02 00 19.2
      comp=Z,35nm,1.2s
SHPR  Sheep Range     85.54  52  P       P        02 00 18.3 +1.1
SHPR                             IAmb    IAmb     02 00 19.6
      comp=Z,26nm,0.9s
HWUT  Hardware Ranch  85.63  46  P       P        02 00 18.6 +1.0
HWUT                             IAmb    IAmb     02 00 19.9
      comp=Z,34nm,0.9s
109C  Camp Elliot, M  85.71  56  P       P        02 00 18.5 +0.6
      baz=296
VIKU  Vikbolandet     85.81 335 eP       P        02 00 17.8  0.0
SUW   Suwalki         85.84 329 eP       P        02 00 18.5 +0.5
SUW   Suwalki         85.84 329 eP       P        02 00 18.0  0.0
PFO   Pinyon Flats O  85.88  55  P       P        02 00 19.5 +0.6
PFO                              IAmb    IAmb     02 00 20.9
      comp=Z,37nm,1.1s
PFO   Pinyon Flats O  85.88  55  P       P        02 00 19.5 +0.6
PFO                              pmax    pmax
      comp=Z,37nm,1.1s
PFO   Pinyon Flats O  85.88  55  P       P        02 00 19.7 +0.8
      baz=296,SNR=14
TPFO  Pinon Flats     85.89  55  P       P        02 00 19.7 +0.8
      baz=296,SNR=15
GMRC  Granite Mounta  85.95  54  P       P        02 00 20.2 +1.0
      baz=297,SNR=27
RAYN  Ar Rayn         85.99 294  P       P        02 00 19.9 +0.4
RAYN                             IAmb    IAmb     02 00 45.8
      comp=Z,29nm,1.2s
RAYN  Ar Rayn         85.99 294  P       P        02 00 19.9 +0.4
RAYN                             pmax    pmax
      comp=Z,29nm,1.3s
NB2   NORSAR Subarra  86.05 338  P       P        02 00 18.1 -0.9
      comp=Z,8.3nm,1.0s,baz=44,slow=5.1
NOA   NORSAR Array B  86.05 338  P       P        02 00 17.8 -1.2
      comp=Z,5.3nm,1.0s,baz=54,slow=6.7,SNR=10.0
NOA                              pP      pP       02 00 42.0 -1.8
      comp=Z,2.0nm,0.6s,baz=45,slow=4.9,SNR=4.5
NOA                              LR      LR       02 41 35.8
      comp=Z,65nm,19.5s,baz=290,slow=38
      comp=Z,5.3nm,1.0s
BELC  Belle Mtn. Jos  86.05  55  P       P        02 00 20.2 +0.4
      baz=297,SNR=10
BAR   Barrett         86.13  56  P       P        02 00 20.9 +0.9
BAR                              IAmb    IAmb     02 00 21.9
      comp=Z,36nm,1.2s
JLU   Jordanelle      86.19  47  P       P        02 00 21.3 +0.9
JLU                              IAmb    IAmb     02 00 22.1
      comp=Z,22nm,0.9s
MONP2 Monument Peak   86.23  56  P       P        02 00 21.5 +0.8
      baz=297,SNR=14
ILULI Ilulissat       86.24   5  P       P        02 00 20.3 +0.6
ILULI                            IAmb    IAmb     02 00 21.4
      comp=Z,23nm,1.0s
ILULI Ilulissat       86.24   5  P       P        02 00 20.3 +0.6
ILULI                            pmax    pmax
      comp=Z,23nm,1.0s
CBX   Cerro Bola      86.30  56  P       P        02 00 21.8 +0.8
CCUT  Cedar City      86.33  50  P       P        02 00 22.0 +0.8
CCUT                             IAmb    IAmb     02 00 23.7
      comp=Z,39nm,1.3s
BW06  Boulder Array   86.36  44  P       P        02 00 21.7 +0.5
      baz=300,SNR=15
PD31  Pinedale Array  86.37  44  P       P        02 00 21.6 +0.3
PDAR  Pinedale Array  86.37  44  P       P        02 00 21.4 +0.1
      comp=Z,11nm,1.0s,baz=277,slow=3.7,SNR=45
      comp=Z,11nm,1.0s
PDAR  Pinedale Array  86.37  44  P       P        02 00 21.7 +0.5
LAO   LASA Array      86.39  40  P       P        02 00 22.8 +1.8
      baz=302
LAO   LASA Array      86.39  40  P       P        02 00 22.4 +1.4
      baz=302
IKP   In-Ko-Pah, Jac  86.57  56  P       P        02 00 23.1 +0.8
      baz=297,SNR=8.0
DGMT  Dagmar          86.58  38  P       P        02 00 22.8 +0.9
      baz=303
DGMT  Dagmar          86.58  38  P       P        02 00 22.6 +0.7
      baz=303
BC3   Big Chuckawall  86.61  55  P       P        02 00 23.4 +1.0
      baz=297,SNR=18
IRM   Iron Mountain   86.61  54  P       P        02 00 23.4 +1.0
      baz=297,SNR=20
LCMT  Little Creek M  86.67  51  P       P        02 00 23.8 +1.1
LCMT                             IAmb    IAmb     02 00 25.1
      comp=Z,35nm,1.0s
SWSC  Sam W. Stewart  86.67  55  P       P        02 00 23.1 +0.5
      baz=297,SNR=5.1
NEE2  Needles Airpor  86.72  53  P       P        02 00 23.7 +0.9
      baz=297
ICESG Greenland Ices  86.83   1 iP       P        02 00 22.4 -0.7
ICESG                            IAmb    IAmb     02 00 49.5
      comp=Z,12nm,0.9s
W13A  Hualapai Mount  87.10  53  P       P        02 00 25.9 +0.9
W13A                             IAmb    IAmb     02 00 26.6
      comp=Z,14nm,1.0s
P17A  Butcher Ranch,  87.22  48  P       P        02 00 26.3 +0.9
P17A                             IAmb    IAmb     02 00 27.7
      comp=Z,43nm,1.2s
PDMCI Parker Dam,Lak  87.28  54  P       P        02 00 26.5 +1.0
      baz=298,SNR=18
GLA   Glamis          87.35  55  P       P        02 00 27.1 +1.1
GLA   Glamis          87.35  55  P       P        02 00 27.1 +1.1
GLA                              pmax    pmax
      comp=Z,47nm,1.0s
GLA   Glamis          87.35  55  P       P        02 00 27.1 +1.1
      baz=297,SNR=14
P18A  Preston Nutter  87.47  47  P       P        02 00 27.6 +0.8
SRU   San Rafael Swe  87.54  48  P       P        02 00 27.7 +0.8
SRU                              IAmb    IAmb     02 00 28.9
      comp=Z,27nm,1.0s
SRU   San Rafael Swe  87.54  48  P       P        02 00 27.7 +0.8
SRU                              pmax    pmax
      comp=Z,27nm,1.0s
BRTR  Keskin Array B  87.65 313  P       P        02 00 26.8 -0.6
      comp=Z,1.3nm,0.8s,baz=108,slow=3.2,SNR=6.3
      comp=Z,1.3nm,0.8s
BRTR  Keskin Array B  87.65 313  P       P        02 00 26.6 -0.8
BRTR  Keskin Array B  87.65 313  P       P        02 00 26.6 -0.8
SFX   San Felipe      88.25  57  P       P        02 00 30.8 +0.6
Y14A  Wickenburg      88.29  53  P       P        02 00 31.3 +0.9
K22A  Casper          88.34  43  P       P        02 00 31.2 +0.6
      baz=302
K22A  Casper          88.34  43  P       P        02 00 31.3 +0.6
      baz=302
O20A  White River Ci  88.55  46  P       P        02 00 32.2 +0.5
      baz=301,SNR=5.8
BUR08 Bucovina Ar. S  88.56 323  P       P        02 00 30.9 -0.6
WUAZ  Wupatki         88.71  51  P       P        02 00 32.2 -0.3
WUAZ                             IAmb    IAmb     02 00 35.0
      comp=Z,29nm,1.1s
WUAZ  Wupatki         88.71  51  P       P        02 00 33.7 +1.2
      baz=299,SNR=13
KWP   Kalwaria Pacla  88.71 325  P       P        02 00 33.0 +1.0
KWP   Kalwaria Pacla  88.71 325  P       P        02 00 33.0 +1.0
KWP                              pmax    pmax
      comp=Z,109nm,1.0s
RSSD  Black Hills     89.07  41  P       P        02 00 34.2 +0.1
RSSD                             IAmb    IAmb     02 00 37.1
      comp=Z,30nm,1.3s
RSSD  Black Hills     89.07  41  P       P        02 00 34.2 +0.1
RSSD                             pmax    pmax
      comp=Z,30nm,1.3s
RSSD  Black Hills     89.07  41  P       P        02 00 34.9 +0.7
      baz=304
RSSD  Black Hills     89.07  41  P       P        02 00 34.8 +0.7
      baz=304
PV13  Radium Mtn., P  89.17  48  P       P        02 00 35.4 +0.7
PV13                             IAmb    IAmb     02 00 36.7
      comp=Z,30nm,1.2s
DY2G  Dye2            89.25   3 iP       P        02 00 33.9 -0.6
DY2G                             IAmb    IAmb     02 00 36.6
      comp=Z,2.7nm,0.7s
214A  Organ Pipe Nat  89.37  55  P       P        02 00 36.7 +1.2
      baz=298,SNR=16
MLR   Muntele Rosu    89.37 321  LR      LR       02 41 27.6
      comp=Z,126nm,21.7s,baz=41,slow=36
MDND  Maddock         89.45  36  P       P        02 00 36.3 +0.8
      baz=307
UZH   Uzhgorod        89.53 325 eP       P        02 00 35.2 -0.7
E28A  Huff            89.61  38  P       P        02 00 38.0 +1.7
      baz=306
N23A  Red Feather La  89.64  45  P       P        02 00 38.5 +1.6
      baz=302
PHWY  Pilot Hill      89.74  44  P       P        02 00 38.2 +0.8
PHWY                             IAmb    IAmb     02 00 39.0
      comp=Z,13nm,1.1s
MVCO  Mesa Verde      89.88  49  P       P        02 00 38.8 +0.8
MVCO                             IAmb    IAmb     02 00 40.3
      comp=Z,30nm,1.4s
MVCO  Mesa Verde      89.88  49  P       P        02 00 38.5 +0.4
      baz=301,SNR=8.9
SMCO  Snowmass        89.88  46  P       P        02 00 38.8 +0.6
SMCO                             IAmb    IAmb     02 00 41.7
      comp=Z,39nm,1.5s
ULM   Lac du Bonnet   89.90  33  P       P        02 00 37.9 +0.4
      comp=Z,6.6nm,0.9s,baz=314,slow=6.0,SNR=6.3
      comp=Z,6.6nm,0.9s
ULM   Lac du Bonnet   89.90  33  P       P        02 00 37.3 -0.2
ULM                              IAmb    IAmb     02 00 39.0
      comp=Z,23nm,1.4s
ULM   Lac du Bonnet   89.90  33  P       P        02 00 37.3 -0.2
ULM                              pmax    pmax
      comp=Z,23nm,1.5s
W18A  Petrified Fore  90.07  51  P       P        02 00 39.8 +0.9
      baz=300
X18A  Snowflake       90.21  52  P       P        02 00 40.5 +0.9
X18A                             IAmb    IAmb     02 00 42.1
      comp=Z,20nm,1.1s
TUC   Tucson          90.70  54  P       P        02 00 42.8 +1.0
TUC                              IAmb    IAmb     02 00 44.5
      comp=Z,23nm,1.4s
TUC   Tucson          90.70  54  P       P        02 00 42.8 +1.0
TUC                              pmax    pmax
      comp=Z,23nm,1.4s
TUC   Tucson          90.70  54  P       P        02 00 43.1 +1.3
      baz=300
S22A  4UR Ranch, Cre  90.73  48  P       P        02 00 43.3 +1.2
      baz=302
OKC   Ostrava-Krasne  90.88 327  AMS     AMS      02 40 40.0
      comp=Z,200nm,16.8s
AGMN  Agassiz Nation  91.15  34  P       P        02 00 43.9 +0.5
AGMN  Agassiz Nation  91.15  34  P       P        02 00 43.9 +0.5
      baz=310
AGMN  Agassiz Nation  91.15  34  P       P        02 00 43.8 +0.5
      baz=310
Q24A  Divide          91.20  46  P       P        02 00 45.0 +0.8
Q24A                             IAmb    IAmb     02 00 46.6
      comp=Z,22nm,1.1s
Q24A  Divide          91.20  46  P       P        02 00 45.3 +1.1
      baz=303
MORC  Moravsky Berou  91.22 328 eP       P        02 00 43.9 +0.1
OSTC  Ostas           91.34 329  AMS     AMS      02 42 50.0
      comp=Z,200nm,20.6s
MAUC  Maruska         91.35 327 eP       P        02 00 49.1 +4.7
KRLC  Kraliky         91.39 328  AMS     AMS      02 41 30.0
      comp=Z,100nm,20.1s
CHVC  Chvalec         91.39 329 eP       P        02 00 44.9 +0.4
VYHS  Vyhne           91.41 326 eP       P        02 00 44.7 +0.1
VYHS  Vyhne           91.41 326 eP       P        02 00 44.7 +0.1
DPC   Dobruska-Polom  91.43 329 eP       P        02 00 44.8 +0.1
DPC                              MLR     MLR
      comp=Z,200nm,24.5s
DPC   Dobruska-Polom  91.43 329 eP       P        02 00 44.8 +0.1
DPC                              AMS     AMS      02 38 10.0
      comp=Z,200nm,24.5s
UPC   Upice           91.47 329  AMS     AMS      02 40 40.0
      comp=Z,100nm,16.0s
SDCO  Great Sand Dun  91.62  47  P       P        02 00 47.1 +0.9
SDCO  Great Sand Dun  91.62  47  P       P        02 00 47.3 +1.2
      baz=303
SDCO  Great Sand Dun  91.62  47  P       P        02 00 47.4 +1.2
      baz=303
JAVC  Velka Javorina  91.76 327 eP       P        02 00 47.9 +1.6
SUSD  Miller          91.86  39  P       P        02 00 47.2 +0.4
      baz=307
VRAC  Vranov          91.99 328 eP       P        02 00 47.4 +0.1
OGNE  Ogallala        92.08  43  P       P        02 00 48.9 +0.9
OGNE  Ogallala        92.08  43  P       P        02 00 48.9 +0.9
      baz=305
OGNE  Ogallala        92.08  43  P       P        02 00 48.6 +0.6
      baz=305
SMOL  Smolenice       92.11 327 eP       P        02 00 49.0 +1.2
SMOL  Smolenice       92.11 327 eP       P        02 00 49.0 +1.2
PVCC  Panska Ves      92.13 329  AMS     AMS      02 41 20.0
      comp=Z,100nm,17.6s
HSIG                  92.19  57  P       P        02 00 49.7 +1.1
B35A  Bob, Littlefor  92.19  33  P       P        02 00 48.8 +0.5
      baz=311
KRUC  Moravsky        92.25 328 eP       P        02 00 48.6 +0.1
MODS  Modra-Piesok    92.28 327 eP       P        02 00 49.6 +1.0
MODS  Modra-Piesok    92.28 327 eP       P        02 00 49.6 +1.0
CLL   Collm           92.30 331 eP       P        02 00 48.0 -0.6
CLL                              pmax    pmax
      comp=Z,5.0nm,1.1s
CLL   Collm           92.30 331 eP       P        02 00 48.0 -0.6
      comp=Z,5.0nm,1.1s
CLL                             ePP      PP       02 04 28.0 -1.6
CLL                             eSS      SS       02 17 42.0  -13
CLL                             eSSSS             02 24 54.0
ANMO  Albuquerque     92.46  50  P       P        02 00 51.2 +1.2
ANMO  Albuquerque     92.46  50ceP       P        02 00 51.5 +1.5
ANMO                             pmax    pmax
      comp=Z,40nm,1.3s
ANMO  Albuquerque     92.46  50  P       P        02 00 51.4 +1.3
      baz=302
ANMO  Albuquerque     92.46  50  P       P        02 00 51.2 +1.2
      baz=302
F33A  5 Mile Ranch,   92.48  36  P       P        02 00 50.3 +0.7
      baz=309
PRU   Pruhonice       92.51 329  AMS     AMS      02 44 10.0
      comp=Z,200nm,20.7s
TREC  Trest           92.54 328  AMS     AMS      02 43 20.0
      comp=Z,200nm,22.2s
Y22A  Socorro         92.64  51  P       P        02 00 52.0 +1.2
      baz=302
T25A  Trinidad        92.68  47  P       P        02 00 51.9 +0.9
T25A  Trinidad        92.68  47  P       P        02 00 52.3 +1.3
      baz=303
BNM   Barren Site     92.76  51  P       P        02 00 52.3 +0.8
121A  Cookes Peak, D  92.78  52  P       P        02 00 52.0 +0.5
121A  Cookes Peak, D  92.78  52  P       P        02 00 53.2 +1.6
      baz=301
121A  Cookes Peak, D  92.78  52  P       P        02 00 53.1 +1.6
      baz=301
KSCO  Kaye Shedlock’  92.81  45  P       P        02 00 52.3 +0.8
KSCO  Kaye Shedlock’  92.81  45  P       P        02 00 52.3 +0.8
      baz=305
KSCO  Kaye Shedlock’  92.81  45  P       P        02 00 52.1 +0.7
      baz=305
K31A  O'Neill         93.08  40  P       P        02 00 53.2 +0.7
      baz=307
RONA  Rosalia, Austr  93.22 327 eP       P        02 00 53.0  0.0
      comp=Z,5.0nm,1.1s
RONA                            eP       pP       02 01 16.5 -1.4
      comp=Z,5.0nm,1.1s
CONA  Conrad Observa  93.28 327 eP       P        02 00 52.7 -0.6
      comp=Z,6.1nm,1.6s
CONA                            eP       pP       02 01 18.7 +0.4
      comp=Z,6.1nm,1.4s
CONA                            eP       PKKPdf   02 17 59.3 +0.9
      comp=Z,1.6nm,1.0s
NKC   Novy Kostel     93.31 330  AMS     AMS      02 42 30.0
      comp=Z,200nm,29.0s
CKRC  Cesky Krumlov   93.43 328 eP       P        02 00 53.6 -0.4
KHC   Kasperske Hory  93.56 329 eP       P        02 00 54.2 -0.4
KHC                              MLR     MLR
      comp=Z,200nm,19.2s
KHC   Kasperske Hory  93.56 329 eP       P        02 00 54.2 -0.4
KHC                              AMS     AMS      02 44 50.0
      comp=Z,200nm,19.2s
EYMN  Ely             93.58  33  P       P        02 00 55.0 +0.4
      baz=313
EYMN  Ely             93.58  33  P       P        02 00 54.9 +0.3
      baz=313
ECSD  EROS Data Cent  93.63  38  P       P        02 00 55.2 +0.3
ECSD  EROS Data Cent  93.63  38  P       P        02 00 55.3 +0.3
      baz=309
ECSD  EROS Data Cent  93.63  38  P       P        02 00 55.2 +0.3
      baz=309
GERES GERESS Array B  93.70 329  P       P        02 00 53.5 -1.8
      comp=Z,1.0nm,0.8s,baz=72,slow=4.3,SNR=8.6
GERES                            PKKP    PKKPdf   02 17 58.0 +0.3
      comp=Z,0.8nm,0.8s,baz=238,slow=4.6,SNR=8.2
      comp=Z,1.0nm,0.8s
GERES GERESS Array B  93.70 329  P       P        02 00 55.2 -0.1
GERES GERESS Array B  93.70 329  P       P        02 00 55.2 -0.1
F36A  Milaca          93.94  35  P       P        02 00 56.3 -0.1
      baz=311
MOA   Molln           94.12 328 eP       P        02 00 57.0 -0.2
      comp=Z,2.4nm,1.1s
MOA                             eP       pP       02 01 22.7 +0.6
      comp=Z,3.9nm,1.5s
MOA                             eP       PKKPbc   02 17 57.8 -1.1
      comp=Z,1.3nm,0.6s
E38A  The Farm, Brul  94.46  34  P       P        02 00 58.7  0.0
      baz=313
SOKA  Soboth          94.54 326 eP       P        02 00 58.2 -1.0
      comp=Z,3.3nm,1.1s
SOKA                            eP       pP       02 01 22.3 -1.8
      comp=Z,2.5nm,1.1s
SPMN  Marine on St.   94.75  35  P       P        02 01 00.5 +0.5
SPMN                             IAmb    IAmb     02 01 01.6
      comp=Z,15nm,0.9s
CBKS  Cedar Bluff     94.76  44  P       P        02 01 00.4 +0.1
      baz=306
MNTX  Cornudas Mount  94.95  52  P       P        02 01 02.1 +0.9
MNTX  Cornudas Mount  94.95  52  P       P        02 01 02.5 +1.2
      baz=302
MNTX  Cornudas Mount  94.95  52  P       P        02 01 02.2 +0.9
      baz=302
LPIG  La Paz          95.09  61  LR      LR       02 38 52.1
      comp=Z,47nm,18.9s,baz=346,slow=32
ABTA  Abfaltersbach   95.74 328 eP       P        02 01 04.3 -0.3
      comp=Z,0.3nm,0.5s
ABTA                            eP       pwP      02 01 35.0 +2.1
      comp=Z,2.1nm,0.8s
ABTA                            eP       PKKPdf   02 17 54.0  0.0
      comp=Z,3.2nm,1.1s
AMTX  Amarillo        95.78  48  P       P        02 01 05.7 +0.6
AMTX                             IAmb    IAmb     02 01 07.2
      comp=Z,12nm,0.9s
AMTX  Amarillo        95.78  48  P       P        02 01 06.0 +0.9
      baz=305
WTTA  Wattenberg      95.80 328 eP       PKKPbc   02 17 54.2 -0.5
      comp=Z,5.6nm,0.9s
MOTA  Moosalm         95.99 329 eP       PKKPbc   02 17 53.7 -0.4
      comp=Z,2.3nm,1.0s
SQTA  Sankt Quirin    96.03 329 eP       PKKPbc   02 17 53.1 -0.9
      comp=Z,3.5nm,0.9s
RETA  Reutte          96.05 329 eP       PKKPbc   02 17 53.2 -0.7
      comp=Z,3.7nm,1.1s
FETA  Feichten        96.41 329 eP       PKKPbc   02 17 52.1 -1.0
      comp=Z,2.1nm,0.9s
DAVA  Damuels         96.61 329 eP       PKKPbc   02 17 52.0 -0.5
      comp=Z,1.4nm,0.6s
DAVOX Davos/Dischmat  96.98 329  LR      LR       02 48 53.4
      comp=Z,80nm,18.4s,baz=40,slow=38
TX31  Lajitas Ar. Si  97.47  53  P       Pdif     02 01 13.8 +0.8
TX32  Lajitas Array   97.47  53  P       Pdif     02 01 13.2 +0.3
TX32                             IAmb    IAmb     02 01 17.6
      comp=Z,11nm,1.4s
TXAR  Lajitas Array   97.47  53  P       Pdif     02 01 13.7 +0.7
      comp=Z,3.6nm,1.0s,baz=282,slow=2.4,SNR=16
TXAR                             PKKP    PKKPdf   02 17 51.0  0.0
      comp=Z,0.7nm,0.8s,baz=122,slow=4.7,SNR=4.1
TXAR                             LR      LR       02 39 13.0
      comp=Z,95nm,20.7s,baz=320,slow=32
      comp=Z,3.6nm,1.0s
WMOK  Wichita Mounta  97.80  46  P       Pdif     02 01 14.2  0.0
      baz=307
E46A  Sault Ste Mari  98.14  30  P       Pdif     02 01 16.1 +0.7
TUL1  Leonard         99.02  44  P       Pdif     02 01 19.3 -0.3
      baz=309
U40A  Yellville      100.56  42  P       Pdif     02 01 25.8 -0.6
      baz=311
ESDC  Sonseca Array  108.77 333  PKKPbc  PKKPbc   02 17 16.7  0.0
      comp=Z,0.9nm,0.7s,baz=220,slow=3.6,SNR=9.2
ESDC                             PKKP    PKKPdf   02 17 29.9 -0.4
      comp=Z,1.9nm,0.9s,baz=224,slow=5.2,SNR=10
QSPA  South Pole Qui 114.13 180  PKP     PKiKP    02 06 16.6 -0.1
      comp=Z,4.5nm,0.9s,baz=282,slow=0.6,SNR=11
LSZ   Lusaka         117.44 265          PKiKP    02 06 24.5 -0.1
LSZ   Lusaka         117.44 265  PKIKP   PKiKP    02 06 24.5 -0.1
LBTB  Lobatse        122.59 255          PKPdf    02 06 33.6 -0.7
LBTB  Lobatse        122.59 255  PKIKP   PKPdf    02 06 33.6 -0.7
BOSA  Boshof         123.68 251  PKP     PKiKP    02 06 36.7 +0.2
      comp=Z,2.5nm,0.9s,baz=126,slow=5.6,SNR=3.9
NVL   N'lazarevskaya 125.54 198 ePKIKP   PKPdf    02 06 38.3 -0.1
NVL                              pmax    pmax
      comp=Z,22nm,1.1s
TOA0  Torodi Ar. Sit 126.14 309          PKPdf    02 06 41.0 -0.3
TORD  Torodi Ar. Bea 126.14 309  PKP     PKPdf    02 06 40.6 -0.6
      comp=Z,4.4nm,0.8s,baz=26,slow=2.9,SNR=20
TORD                             pPKP    pPKPdf   02 07 05.5 -1.8
      comp=Z,4.5nm,0.9s,baz=346,slow=1.4,SNR=9.0
BELA  Belgrano 2     126.38 181  PKPdf   PKPdf    02 06 39.3 -0.6
TROLL Troll, Antarti 127.20 195  PKPdf   PKiKP    02 06 42.0 -0.3
TSUM  Tsumeb         128.28 264  PKPdf   PKPdf    02 06 42.9 -2.5
SNAA  Sanae          128.64 194  PKPdf   PKiKP    02 06 44.8 -0.3
SNAA  Sanae          128.64 194  PKP     PKPdf    02 06 44.3 -0.1
      comp=Z,8.3nm,1.1s,baz=154,slow=10.0,SNR=8.4
SNAA  Sanae          128.64 194  PKPdf   PKPdf    02 06 44.1 -0.3
SNAA  Sanae          128.64 194  PKIKP   PKPdf    02 06 44.1 -0.3
VNA3  Neumayer Olymp 130.34 192  PKPdf   PKiKP    02 06 48.0 -0.4
VNA3  Neumayer Olymp 130.34 192  SKPbc   SKPbc    02 10 02.3 +0.1
VNA1  Neumayer--Stat 130.55 193  PKPdf   PKPdf    02 06 48.0 +0.1
VNA1  Neumayer--Stat 130.55 193  SKPbc   SKPab    02 10 03.0 +0.1
ZARC  Zaragoza, Cauc 132.21  53          PKPdf    02 06 51.8 -1.0
OCAC  Ocana          132.81  51          PKPdf    02 06 53.2 -1.0
SDV   Santo Domingo  134.21  48  PKP     PKPdf    02 06 57.0 +0.2
      comp=Z,21nm,0.8s,baz=253,slow=1.4,SNR=25
DBIC  Dimbokro       135.25 309  PKP     PKPdf    02 06 59.0 +0.5
      comp=Z,6.4nm,0.8s,baz=199,slow=3.3,SNR=5.3
DBIC  Dimbokro       135.25 309  PKPdf   PKPdf    02 06 58.0 -0.5
DBIC  Dimbokro       135.25 309  PKIKP   PKPdf    02 06 58.0 -0.5
TIC   Toumodi        135.38 309 ePKP2    PKiKP    02 07 00.4  0.0
KIC   Kosan Boka     135.38 309 ePKP2    PKiKP    02 07 00.3 -0.1
      comp=Z,9.4nm,0.8s
LIC   Lamto          135.68 309 ePKP2    PKiKP    02 07 01.5 +0.5
      comp=Z,17nm,1.2s
BAUV  El Baul        135.88  45  PKPdf   PKPdf    02 06 59.4 -0.4
ATAH  Atahualpa      137.84  73  PKhKP   PKPpre   02 06 55.4
      comp=Z,4.4nm,0.7s,baz=2.3,slow=2.7,SNR=4.1
ATAH                             PKP     PKiKP    02 07 05.7 -0.2
      comp=Z,6.2nm,0.6s,baz=336,slow=6.2,SNR=4.3
USHA  Ushuaia        142.19 152  PKP     PKPdf    02 07 08.0 -2.0
      comp=Z,8.8nm,1.0s,baz=16,slow=3.6,SNR=4.0
GO09  Cerro Castillo 142.45 145          PKPdf    02 07 10.7 +0.1
GO07  Milladeo Hill, 145.36 132          PKPab    02 07 16.0 -0.2
COYC  Coyhaique      145.41 136  PKPdf   PKPab    02 07 16.2 -0.1
AY01  Puyuhuapi      145.54 134  PKPdf   PKPdf    02 07 15.5 -0.6
LL05  Los Muermos    146.08 129          PKPdf    02 07 17.4 +0.2
LL02  Futaleuf       146.56 133          PKPdf    02 07 17.9  0.0
LR03  Panguipulli    147.45 126  PKPdf   PKPdf    02 07 19.2 -0.4
MDP   Montagnes des  147.50  28  PKPbc   PKPbc    02 07 23.9 +0.8
      comp=Z,34nm,0.8s,baz=281,slow=3.2,SNR=6.2
PLCA  Paso Flores    148.38 129  PKPbc   PKPbc    02 07 25.1 +0.3
      comp=Z,22nm,0.9s,baz=239,slow=3.7,SNR=28
PLCA  Paso Flores    148.38 129  PKPdf   PKPdf    02 07 20.4 -0.8
PLCA  Paso Flores    148.38 129  PKIKP   PKPdf    02 07 20.4 -0.8
EFI   East Falkland  148.73 156  PKPdf   PKPdf    02 07 22.7 +1.5
EFI   East Falkland  148.73 156  PKIKP   PKPdf    02 07 22.7 +1.5
ML02  Panimavida     149.17 119          PKPbc    02 07 24.8 -2.0
VA01  Torpederas     149.46 114          PKPbc    02 07 27.3 -0.2
PB12  IPOC Station P 149.55  86  PKPdf   PKPdf    02 07 23.3 -0.4
MT01  Popeta         149.66 116          PKPbc    02 07 27.4 -0.7
BO01  Tunca          149.71 117          PKPbc    02 07 27.0 -1.1
VA06  Catapilco      149.81 113          PKPbc    02 07 26.4 -2.1
MT09  Talagante      149.89 116          PKPbc    02 07 28.4 -0.4
ROC1  El Roble       149.99 114          PKPbc    02 07 27.2 -2.0
CO05  La Serena      150.09 108          PKPbc    02 07 28.3 -0.9
BO04  La Punta       150.16 116          PKPbc    02 07 29.2 -0.1
CO02  Combarbal      150.20 111          PKPdf    02 07 25.0 +0.5
PEL   Peldehue       150.24 115          PKPbc    02 07 29.2 -0.4
PEL   Peldehue       150.24 115  PKIKP   PKPbc    02 07 29.2 -0.4
AC04  Llanos de Chal 150.27 105          PKPbc    02 07 29.7  0.0
MT03  Universidad Ad 150.33 115          PKPbc    02 07 29.6 -0.2
VA03  San Esteban    150.41 114          PKPdf    02 07 24.8 +0.1
GO04  Tololo Observa 150.45 109  PKPdf   PKPdf    02 07 24.8 -0.2
PB11  IPOC Station P 150.47  87          PKPdf    02 07 25.4 +0.2
LCO   Las Campanas   150.59 106          PKiKP    02 07 31.0 -0.5
LCO   Las Campanas   150.59 106  PKIKP   PKiKP    02 07 31.0 -0.5
PB14  IPOC Station P 150.66  97          PKPbc    02 07 30.9 -0.2
PB07  IPOC Station P 150.69  91          PKPbc    02 07 30.5 -0.7
LPAZ  La Paz         150.80  80  PKP     PKPdf    02 07 27.4 +1.1
      comp=Z,31nm,0.7s,baz=350,slow=2.9,SNR=26
LPAZ                             PKPbc   PKiKP    02 07 33.0 +0.3
      comp=Z,31nm,0.7s,baz=270,slow=2.2,SNR=57
LPAZ  La Paz         150.80  80  PKPdf   PKPdf    02 07 26.0 -0.3
LPAZ  La Paz         150.80  80  PKIKP   PKPdf    02 07 26.0 -0.3
PB01  IPOC Station P 150.92  90          PKPbc    02 07 31.6 +0.1
CO01  Juntas del Tor 151.07 108          PKPbc    02 07 31.3 -0.6
PB06  IPOC Station P 151.16  93          PKPbc    02 07 32.0 -0.2
PB09  IPOC Station P 151.30  91          PKPbc    02 07 30.0 -2.5
PB15  IPOC Station P 151.33  94          PKPbc    02 07 32.0 -0.6
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LVC	**Limon Verde**	**151.75**	**93**	PKPbc	**PKiKP**	**02 07 34.7**	**+0.6**
	comp=Z,38nm,0.9s,baz=264,slow=2.9,SNR=25						
LVC	**Limon Verde**	**151.75**	**93**		**PKPbc**	**02 07 32.5**	**-1.3**
LVC	**Limon Verde**	**151.75**	**93**	PKIKP	**PKPbc**	**02 07 32.5**	**-1.3**
AC02	**Maricunga**	**151.97**	**102**		**PKPbc**	**02 07 32.4**	**-1.9**
CPUP	**Villa Florida**	**162.53**	**101**	PKP	**PKPdf**	**02 07 41.0**	**+0.7**
	comp=Z,3.8nm,1.0s,baz=219,slow=6.5,SNR=4.1						
CPUP				PKPab	**PKPab**	**02 08 28.5**	**-0.4**
	comp=Z,9.9nm,1.0s,baz=294,slow=2.9,SNR=8.5						
BDFB	**Brasilia**	**167.31**	**49**	PKPab	**PKPab**	**02 08 50.3**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=312,slow=5.2,SNR=6.8						

IDC ***17*** *02:02:10.1±0.7, 8°.82S×108°.11W, h0^{km}, mb4.1/11, mbtmp4.1/11, MS4.5/47, Error ellipse: s-maj=30.9km s-min=16.9km az=68.0*

NEIC ***17*** *02:02:12.6±1.7, 9°.02S±0°.10×108°.1W±0°.1, h10^{km}±1^{km}, mb4.8/135, Error ellipse: s-maj=23.9km s-min=11.4km az=234.0*

GCMT ***17*** *02:02:14.6±0.1, 9°.02S±0°.01×108°.26W±0°.01, h19^{km}, MW5.2/146, Moment Tensor Solution. s92,c132; s146,c229; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.42±.15; M$_{\theta\theta}$2.41±.14; M$_{\phi\phi}$-1.99±.15; M$_{r\theta}$-0.66±.29; M$_{\theta\phi}$8.13±.13; M$_{\phi r}$-1.05±.30; Best double couple: M$_0$8.50800×10^{16} NP1:ϕ_s278.00000°,δ83.00000°, λ3.00000°. NP2:ϕ_s187.00000°,δ87.00000°,λ173.00000°. Principal axes: T 8.7790, Plg7.0000°, Azm142.0000°; N -0.5460, Plg82.0000°, Azm347.0000°; P -8.2370, Plg3.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 02:02:11.9±0.5**, 9°.00S**±0°.09×**108°.1W**±0°.1**, h10**^{km}**, n209, σ0^s.96**/162**, mb4.8**/74**, MS4.5**/46**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**18.07**	**184**	LR	LR	02 11 07.2	
	comp=Z,1µm,19.9s,baz=2.0,slow=29						
PAYG	**Puerto Ayora**	**19.53**	**66**	P	**Pn**	**02 06 40.9**	**-0.1**
CMIG	**Matias Romero**	**29.01**	**27**	LR	LR	02 17 26.6	
	comp=Z,1µm,19.0s,baz=210,slow=32						
DUNO	**Dulce Nombre,**	**29.38**	**50**	P	**P**	**02 08 15.7**	**+0.1**
ATAH	**Atahualpa**	**29.42**	**89**	LR	LR	02 17 29.1	
	comp=Z,358nm,20.6s,baz=266,slow=31						
NNA	**Nana**	**30.82**	**98**	LR	LR	02 17 41.9	
	comp=Z,277nm,20.3s,baz=268,slow=30						
ACON	**Acoyapa**	**30.84**	**48**	P	**P**	**02 08 28.5**	**+0.1**
LPIG	**La Paz**	**32.97**	**356**	LR	LR	02 18 56.4	
	comp=Z,609nm,18.9s,baz=189,slow=31						
H03N2	**Juan Fernandez**	**36.21**	**136**	T	T	02 47 39.0	
	baz=308,slow=77,SNR=189						
H03N1	**Juan Fernandez**	**36.23**	**136**	T	T	02 47 40.3	
	baz=308,slow=77,SNR=239						
H03N3	**Juan Fernandez**	**36.23**	**136**	T	T	02 47 39.9	
	baz=308,slow=77,SNR=261						
ROSC	**El Rosal**	**36.33**	**69**	LR	LR	02 21 26.6	
	comp=Z,758nm,20.9s,baz=234,slow=32						
H03S2	**Juan Fernandez**	**36.45**	**137**	T	T	02 48 00.3	
	baz=242,SNR=14						
H03S3	**Juan Fernandez**	**36.45**	**137**	T	T	02 48 00.4	
	baz=242,SNR=18						
H03S1	**Juan Fernandez**	**36.47**	**137**	T	T	02 48 01.5	
	baz=242,SNR=18						
ZARC	**Zaragoza, Cauc**	**36.91**	**65**	P	**P**	**02 09 22.4**	**+1.1**
TX31	**Lajitas Ar. Si**	**38.34**	**6**	P	**P**	**02 09 34.7**	**+1.5**
TX31				IAmb	IAmb	02 10 01.1	
	comp=Z,22nm,1.3s						
TX32	**Lajitas Array**	**38.34**	**6**	P	**P**	**02 09 34.4**	**+1.2**
TXAR	**Lajitas Array**	**38.34**	**6**	P	**P**	**02 09 33.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=193,slow=10,SNR=1.9						
TXAR				PcP	**PcP**	**02 11 47.9**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=191,slow=8.8,SNR=3.1						
TXAR				LR	LR	02 20 58.7	
	comp=Z,91nm,20.7s,baz=197,slow=30						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**38.34**	**6**	P	**P**	**02 09 35.4**	**+2.2**
TXAR					**PcP**	**02 11 47.5**	**+0.5**
LPAZ	**La Paz**	**39.57**	**105**	P	**P**	**02 09 44.8**	**+0.4**
	comp=Z,5.9nm,0.8s,baz=247,slow=6.2,SNR=2.9						
LPAZ				LR	LR	02 22 31.4	
	comp=Z,544nm,20.7s,baz=260,slow=31						
	comp=Z,5.9nm,0.8s						
LPAZ	**La Paz**	**39.57**	**105**	P	**P**	**02 09 42.8**	**-1.6**
LVC	**Limon Verde**	**39.88**	**115**	LR	LR	02 21 57.0	
	comp=Z,1µm,20.1s,baz=282,slow=30						
319A	**Douglas**	**40.16**	**358**		**P**	**02 09 49.2**	**+0.7**
MNTX	**Cornudas Mount**	**40.55**	**4**		**P**	**02 09 51.6**	**+0.1**
PPT	**Papeete**	**41.22**	**254**	LR	LR	02 22 14.5	
	comp=Z,789nm,18.4s,baz=88,slow=29						
SDV	**Santo Domingo**	**41.29**	**66**	LR	LR	02 25 11.3	
	comp=Z,467nm,20.2s,baz=238,slow=34						
121A	**Cookes Peak, D**	**41.30**	**0**	P	**P**	**02 09 58.7**	**+0.8**
ABTX	**Abilene, Hawle**	**42.16**	**11**		**P**	**02 10 05.0**	**+0.2**
ABTX				IAmb	IAmb	02 10 19.8	
	comp=Z,15nm,1.0s						
BNM	**Barren Site**	**42.93**	**2**		**P**	**02 10 12.3**	**+1.0**
Y14A	**Wickenburg**	**42.96**	**354**	P	**P**	**02 10 11.9**	**+0.6**
MSTX	**Muleshoe**	**43.02**	**6**		**P**	**02 10 13.2**	**+1.4**
PFO	**Pinyon Flats O**	**43.12**	**350**	LR	LR	02 23 45.3	
	comp=Z,871nm,20.7s,baz=185,slow=30						
X18A	**Snowflake**	**43.33**	**358**	P	**P**	**02 10 15.0**	**+0.6**
BAUV	**El Baul**	**43.65**	**67**	P	**P**	**02 10 16.5**	**-0.7**
BAUV				IAmb	IAmb	02 10 35.7	
	comp=Z,18nm,0.8s						
ANMO	**Albuquerque**	**43.73**	**2**	P	**P**	**02 10 19.5**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=170,slow=5.7,SNR=3.2						
ANMO				LR	LR	02 25 45.1	
	comp=Z,426nm,18.2s,baz=190,slow=32						
ANMO	**Albuquerque**	**43.73**	**2**		**P**	**02 10 20.0**	**+2.4**
W13A	**Hualapai Mount**	**44.20**	**353**	P	**P**	**02 10 21.8**	**+0.3**
SAML	**Samuel**	**44.30**	**94**	P	**P**	**02 10 22.2**	**-0.1**
SAML				IAmb	IAmb	02 10 23.9	
	comp=Z,17nm,0.9s						
GSC	**Goldstone, Bar**	**44.83**	**350**	P	**P**	**02 10 29.6**	**+3.3**
X37A	**Clayton**	**44.98**	**15**	P	**P**	**02 10 29.3**	**+1.8**
X37A				IAmb	IAmb	02 10 55.9	
	comp=Z,14nm,1.2s						
U15A	**North Rim**	**45.36**	**355**	P	**P**	**02 10 32.5**	**+1.8**
MIAR	**Mount Ida**	**45.43**	**17**	P	**P**	**02 10 32.5**	**+1.6**
MIAR				IAmb	IAmb	02 10 50.6	
	comp=Z,15nm,1.1s						
QSM	**Queen of Sheba**	**45.49**	**350**	P	**P**	**02 10 33.8**	**+2.3**
QSM				IAmb	IAmb	02 10 50.5	
	comp=Z,14nm,1.3s						
SHPR	**Sheep Range**	**45.75**	**352**		**P**	**02 10 34.2**	**+0.5**
SHPR				IAmb	IAmb	02 10 53.9	
	comp=Z,12nm,1.3s						
PLCA	**Paso Flores**	**45.85**	**140**	P	**P**	**02 10 35.2**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=286,slow=9.6,SNR=3.3						
PLCA				LR	LR	02 25 15.7	
	comp=Z,1µm,18.7s,baz=310,slow=30						
	comp=Z,3.6nm,0.9s						
PLCA	**Paso Flores**	**45.85**	**140**	P	**P**	**02 10 32.6**	**-1.8**
PLCA				IAmb	IAmb	02 10 37.9	
	comp=Z,16nm,1.2s						
MVCO	**Mesa Verde**	**45.97**	**360**		**P**	**02 10 34.9**	**-0.6**
W39A	**Magazine**	**45.98**	**16**	P	**P**	**02 10 36.0**	**+0.7**
W39A				IAmb	IAmb	02 11 00.2	
	comp=Z,11nm,1.1s						
PKCU	**Pink Cliffs**	**46.37**	**355**	P	**P**	**02 10 39.9**	**+1.1**
W41B	**Gary Mavity, V**	**46.40**	**18**	P	**P**	**02 10 39.4**	**+0.7**
LL02	**Futaleuf**	**46.45**	**143**	P	**P**	**02 10 39.8**	**+0.7**
WHAR	**Wooly Hollow**	**46.50**	**18**	P	**P**	**02 10 41.0**	**+1.6**
S22A	**4UR Ranch, Cre**	**46.51**	**1**	P	**P**	**02 10 40.1**	**+0.2**
S22A				IAmb	IAmb	02 10 52.7	
	comp=Z,7.7nm,1.0s						
SDCO	**Great Sand Dun**	**46.56**	**3**		**P**	**02 10 40.8**	**+0.6**
CCUT	**Cedar City**	**46.57**	**354**		**P**	**02 10 41.6**	**+1.3**
CCUT				IAmb	IAmb	02 10 48.2	
	comp=Z,8.2nm,1.2s						
PRN	**Pahroc Range**	**46.62**	**352**		**P**	**02 10 41.1**	**+0.6**
PRN				IAmb	IAmb	02 11 01.5	
	comp=Z,13nm,1.2s						
AY01	**Puyuhuapi**	**46.74**	**145**	P	**P**	**02 10 41.7**	**+0.4**
AY01				IAmb	IAmb	02 10 44.2	
	comp=Z,6.6nm,0.9s						
PV13	**Radium Mtn., P**	**46.92**	**359**	P	**P**	**02 10 43.8**	**+0.8**
PV13				IAmb	IAmb	02 10 58.6	
	comp=Z,11nm,1.2s						
T35A	**Sooner Cattle**	**46.94**	**13**	P	**P**	**02 10 43.1**	**+0.3**
T35A				IAmb	IAmb	02 10 56.9	
	comp=Z,8.9nm,0.9s						
MTPU	**Mount Pierson**	**46.95**	**356**	P	**P**	**02 10 44.6**	**+1.2**
MTPU				IAmb	IAmb	02 11 11.2	
	comp=Z,12nm,1.6s						
HHAR	**Hobbs**	**46.96**	**16**	P	**P**	**02 10 45.0**	**+2.0**
HHAR				IAmb	IAmb	02 10 50.2	
	comp=Z,14nm,1.4s						
PV15	**Paradox Valley**	**47.09**	**360**	P	**P**	**02 10 44.9**	**+0.6**
PV15				IAmb	IAmb	02 10 56.0	
	comp=Z,8.5nm,0.8s						
U40A	**Yellville**	**47.33**	**17**	P	**P**	**02 10 45.7**	**-0.2**
U40A				IAmb	IAmb	02 11 05.6	
	comp=Z,9.6nm,1.0s						
PSUT	**Pine Spring**	**47.59**	**354**	P	**P**	**02 10 48.8**	**+0.6**
TPH	**Tonopah**	**47.60**	**350**	P	**P**	**02 10 48.9**	**+0.6**
PLAL	**Pickwick Lake**	**47.65**	**22**	P	**P**	**02 10 49.1**	**+0.7**
PLAL				IAmb	IAmb	02 10 59.5	
	comp=Z,10nm,1.0s						
SRU	**San Rafael Swe**	**47.92**	**357**	P	**P**	**02 10 50.3**	**-0.3**
SRU				IAmb	IAmb	02 11 06.4	
	comp=Z,6.5nm,0.9s						
SMCO	**Snowmass**	**47.94**	**1**	P	**P**	**02 10 51.1**	**0.0**
SMCO				IAmb	IAmb	02 11 07.1	
	comp=Z,13nm,1.4s						
NVAR	**Mina Array Bea**	**48.14**	**349**	P	**P**	**02 10 51.5**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=174,slow=13,SNR=5.6						
NVAR				LR	LR	02 27 09.6	
	comp=Z,671nm,18.2s,baz=179,slow=31						
	comp=Z,0.9nm,0.7s						
NVAR	**Mina Array Bea**	**48.14**	**349**	P	**P**	**02 10 50.8**	**-1.7**
MGMO	**Mountain Grove**	**48.24**	**17**	P	**P**	**02 10 52.6**	**-0.4**
MGMO				IAmb	IAmb	02 11 03.3	
	comp=Z,9.7nm,1.0s						
P17A	**Butcher Ranch,**	**48.29**	**357**	P	**P**	**02 10 54.0**	**+0.5**
P18A	**Preston Nutter**	**48.42**	**358**	P	**P**	**02 10 54.8**	**+0.1**
S39A	**Bolivar**	**48.45**	**16**	P	**P**	**02 10 54.3**	**-0.3**
NLU	**North Lily Min**	**48.85**	**356**	P	**P**	**02 10 57.6**	**-0.3**
YERR	**Yerington**	**48.86**	**348**	P	**P**	**02 10 58.1**	**+0.2**
YERR				IAmb	IAmb	02 11 05.6	
	comp=Z,12nm,1.2s						
MPU	**Maple Canyon**	**48.88**	**356**	P	**P**	**02 10 58.3**	**+0.3**
MPU				IAmb	IAmb	02 11 14.2	
	comp=Z,11nm,1.1s						
O20A	**White River Ci**	**48.88**	**360**	P	**P**	**02 10 59.4**	**+1.3**
O20A				IAmb	IAmb	02 11 05.6	
	comp=Z,13nm,0.9s						
PNTR	**Pine Nut**	**49.03**	**348**	P	**P**	**02 10 59.9**	**+0.6**
PNTR				IAmb	IAmb	02 11 07.0	
	comp=Z,14nm,1.0s						
R40A	**Maddies Statio**	**49.30**	**16**	P	**P**	**02 11 02.0**	**+0.9**
SJG	**San Juan**	**49.36**	**57**	LR	LR	02 28 16.8	
	comp=Z,502nm,21.9s,baz=228,slow=32						
CCM	**Cathedral Cave**	**49.37**	**18**	P	**P**	**02 11 01.5**	**-0.2**
CCM				IAmb	IAmb	02 11 21.0	
	comp=Z,8.2nm,0.9s						
CPCT	**Cooper Cave**	**49.48**	**25**	P	**P**	**02 11 02.6**	**+0.1**
CPCT				IAmb	IAmb	02 11 13.2	
	comp=Z,9.0nm,1.1s						
N23A	**Red Feather La**	**49.68**	**2**	P	**P**	**02 11 05.0**	**+0.7**
V51A	**Loudon**	**49.85**	**25**	P	**P**	**02 11 06.3**	**+0.9**
V51A				IAmb	IAmb	02 11 10.0	
	comp=Z,12nm,1.1s						
BGU	**Big Grassy Mou**	**49.88**	**355**	P	**P**	**02 11 06.2**	**+0.5**
ELK	**Elko**	**49.94**	**353**		**P**	**02 11 06.3**	**+0.1**
TKL	**Tuckaleechee C**	**49.97**	**26**	LR	LR	02 32 14.7	
	comp=Z,216nm,18.1s,baz=219,slow=36						
V53A	**Saluda**	**50.40**	**27**	P	**P**	**02 11 09.8**	**+0.2**
V53A				IAmb	IAmb	02 11 31.9	
	comp=Z,13nm,1.1s						
HWUT	**Hardware Ranch**	**50.46**	**357**		**P**	**02 11 09.1**	**-1.0**
HWUT				IAmb	IAmb	02 11 16.9	
	comp=Z,10.0nm,0.9s						
P40A	**Paris**	**50.51**	**16**	P	**P**	**02 11 09.7**	**-0.6**
P40A				IAmb	IAmb	02 11 19.8	
	comp=Z,13nm,1.1s						
CPUP	**Villa Florida**	**50.97**	**117**	P	**P**	**02 11 14.7**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=277,slow=9.5,SNR=6.6						
CPUP				LR	LR	02 28 54.2	
	comp=Z,855nm,21.7s,baz=280,slow=31						
	comp=Z,3.6nm,0.8s						
CPUP	**Villa Florida**	**50.97**	**117**	P	**P**	**02 11 14.2**	**+0.2**
RAR	**Rarotonga**	**51.18**	**250**	LR	LR	02 27 23.4	
	comp=Z,169nm,18.3s,baz=78,slow=30						
GO09	**Cerro Castillo**	**51.34**	**152**	P	**P**	**02 11 16.3**	**-0.1**
K22A	**Casper**	**51.42**	**1**	P	**P**	**02 11 17.1**	**-0.2**
BW06	**Boulder Array**	**51.53**	**359**	P	**P**	**02 11 17.3**	**-0.9**
PD31	**Pinedale Array**	**51.53**	**359**	P	**P**	**02 11 16.9**	**-1.3**
PDAR	**Pinedale Array**	**51.53**	**359**	P	**P**	**02 11 15.6**	**-2.6**
	comp=Z,1.1nm,0.5s,baz=165,slow=8.8,SNR=10						
	comp=Z,1.1nm,0.5s						
PDAR	**Pinedale Array**	**51.53**	**359**	P	**P**	**02 11 17.3**	**-0.9**
MOD	**Modoc Plateau**	**51.88**	**348**	P	**P**	**02 11 21.9**	**+1.2**
WVOR	**Wild Horse Val**	**52.09**	**350**	P	**P**	**02 11 22.5**	**+0.3**
REDW	**Red Top Meadow**	**52.17**	**357**	P	**P**	**02 11 23.3**	**+0.4**
REDW				IAmb	IAmb	02 11 45.8	
	comp=Z,9.5nm,1.1s						
YBH	**Yreka Blue Hor**	**52.24**	**346**	LR	LR	02 28 34.8	
	comp=Z,761nm,20.2s,baz=170,slow=30						
SNOW	**Snow King Moun**	**52.27**	**358**	P	**P**	**02 11 23.0**	**-0.7**
TPAW	**Teton Pass**	**52.30**	**357**	P	**P**	**02 11 23.2**	**-0.8**
TPAW				IAmb	IAmb	02 11 39.5	
	comp=Z,17nm,1.2s						
LOHW	**Long Hollow**	**52.41**	**358**	P	**P**	**02 11 23.6**	**-1.1**
LOHW				IAmb	IAmb	02 11 40.0	
	comp=Z,9.7nm,1.0s						
MOOW	**Moose Ponds**	**52.55**	**358**	P	**P**	**02 11 25.2**	**-0.6**
HLID	**Hailey**	**52.63**	**354**	P	**P**	**02 11 26.3**	**0.0**
MFID	**Camas Ranch**	**52.64**	**353**	P	**P**	**02 11 26.2**	**-0.1**
K05A	**Summer Lake**	**52.79**	**348**	P	**P**	**02 11 27.1**	**-0.4**
FLWY	**Flagg Ranch**	**52.88**	**358**	P	**P**	**02 11 27.9**	**-0.3**
J08A	**Circle Bar Ran**	**52.96**	**350**	P	**P**	**02 11 29.1**	**+0.5**
J08A				IAmb	IAmb	02 11 36.1	
	comp=Z,10nm,1.1s						
RSSD	**Black Hills**	**52.99**	**4**	P	**P**	**02 11 28.6**	**-0.5**
RSSD				IAmb	IAmb	02 11 44.8	
	comp=Z,12nm,1.1s						
QLMT	**Earthquake Lak**	**53.66**	**357**	P	**P**	**02 11 34.3**	**+0.4**
YHL	**Hebgen Lake**	**53.67**	**357**	P	**P**	**02 11 34.4**	**+0.3**
MCMT	**McKenzie Canyo**	**53.75**	**356**	P	**P**	**02 11 34.3**	**-0.3**
I07A	**Izee**	**53.84**	**350**	P	**P**	**02 11 35.7**	**+0.5**
I07A				IAmb	IAmb	02 11 42.6	
	comp=Z,10nm,1.1s						
I37A	**Lemond, Waseca**	**54.41**	**13**	P	**P**	**02 11 39.7**	**+0.5**
G08A	**Pilot Rock**	**54.92**	**351**	P	**P**	**02 11 43.4**	**+0.4**
G08A				IAmb	IAmb	02 11 50.1	
	comp=Z,8.8nm,1.0s						
O53A	**New Philadelph**	**54.93**	**25**	P	**P**	**02 11 43.3**	**+0.3**
H04A	**Detroit Lake**	**54.94**	**348**	P	**P**	**02 11 42.8**	**-0.2**
F10A	**Beach Ranch, E**	**55.34**	**352**	P	**P**	**02 11 45.5**	**-0.4**
F10A				IAmb	IAmb	02 12 13.8	
	comp=Z,17nm,1.4s						
USHA	**Ushuaia**	**55.46**	**153**	LR	LR	02 30 02.5	
	comp=Z,726nm,18.9s,baz=252,slow=30						
HRY	**Holter Researc**	**55.56**	**357**	P	**P**	**02 11 46.9**	**-0.7**
F36A	**Milaca**	**56.15**	**12**	P	**P**	**02 11 50.0**	**-1.6**
F36A				IAmb	IAmb	02 12 05.3	
	comp=Z,8.5nm,0.9s						
JTMT	**Jette**	**56.76**	**355**	P	**P**	**02 11 54.9**	**-1.3**
JTMT				IAmb	IAmb	02 12 02.1	
	comp=Z,10nm,0.9s						
E04D	**Cinebar**	**56.80**	**348**	P	**P**	**02 11 57.8**	**+1.5**
MDP	**Montagnes des**	**56.98**	**78**	LR	LR	02 34 17.4	
	comp=Z,404nm,18.9s,baz=263,slow=34						
D05A	**Enumclaw**	**57.30**	**349**	P	**P**	**02 12 00.6**	**+0.8**
NEW	**Newport**	**57.57**	**353**	LR	LR	02 33 01.8	
	comp=Z,389nm,18.4s,baz=188,slow=32						
WALA	**Waterton Lakes**	**58.04**	**355**	P	**P**	**02 12 04.7**	**-0.4**
WALA				IAmb	IAmb	02 12 11.5	
	comp=Z,10nm,0.9s						
BDFB	**Brasilia**	**58.87**	**103**	P	**P**	**02 12 12.1**	**+0.4**
	comp=Z,4.7nm,0.9s,baz=244,slow=10,SNR=4.1						
BDFB				LR	LR	02 35 39.6	
	comp=Z,143nm,18.4s,baz=315,slow=34						
	comp=Z,4.7nm,0.9s						
BDFB	**Brasilia**	**58.87**	**103**	P	**P**	**02 12 11.1**	**-0.6**
SADO	**Sadowa**	**59.54**	**24**	LR	LR	02 37 32.0	
	comp=Z,263nm,18.7s,baz=234,slow=36						
AFI	**Afiamalu**	**62.50**	**259**	LR	LR	02 33 30.1	
	comp=Z,308nm,18.6s,baz=92,slow=30						
BBB	**Bella Bella**	**63.33**	**346**	LR	LR	02 35 17.0	
	comp=Z,224nm,20.9s,baz=162,slow=32						
PMSA	**Palmer Station**	**63.58**	**161**	LR	LR	02 34 48.4	
	comp=Z,228nm,18.5s,baz=294,slow=31						
RAO	**Raoul Island**	**68.12**	**242**	LR	LR	02 35 00.9	
	comp=Z,446nm,19.8s,baz=17,slow=29						
DLBC	**Dease Lake**	**69.53**	**348**	LR	LR	02 40 34.5	
	comp=Z,471nm,18.6s,baz=168,slow=33						
DLBC	**Dease Lake**	**69.53**	**348**	P	**P**	**02 13 21.4**	**+0.8**
DLBC				IAmb	IAmb	02 13 27.7	
	comp=Z,8.1nm,0.9s						
YKA	**Yellowknife Ar**	**71.45**	**357**	P	**P**	**02 13 29.8**	**-2.4**
	comp=Z,2.4nm,0.9s,baz=169,slow=6.1,SNR=15						
YKA				LR	LR	02 41 49.1	
	comp=Z,152nm,18.5s,baz=209,slow=33						
	comp=Z,2.4nm,0.9s						
YKA	**Yellowknife Ar**	**71.45**	**357**	P	**P**	**02 13 31.1**	**-1.1**
URZ	**Urewera**	**72.59**	**233**	LR	LR	02 37 30.8	
	comp=Z,460nm,20.8s,baz=32,slow=29						
M30M	**Minto, Yukon**	**74.73**	**347**	P	**P**	**02 13 51.6**	**-0.1**
KDAK	**Kodiak Island**	**75.76**	**337**	LR	LR	02 39 22.8	
	comp=Z,904nm,19.7s,baz=138,slow=30						
M27K	**Edge Creek, AK**	**75.80**	**344**	P	**P**	**02 13 57.0**	**-1.0**
M27K				IAmb	IAmb	02 14 04.8	
	comp=Z,6.6nm,0.8s						
L27K	**Beaver Creek,**	**76.37**	**345**	P	**P**	**02 14 02.4**	**+1.3**
L27K				IAmb	IAmb	02 14 07.5	
	comp=Z,10nm,0.9s						
K27K	**Chicken**	**77.23**	**345**	P	**P**	**02 14 05.0**	**-0.9**
K27K				IAmb	IAmb	02 14 12.7	
	comp=Z,11nm,0.9s						
RPZ	**Rata Peaks**	**77.27**	**227**	LR	LR	02 42 55.3	
	comp=Z,572nm,18.5s,baz=71,slow=32						
PAX	**Paxson**	**77.28**	**343**	P	**P**	**02 14 05.3**	**-1.0**
PAX				IAmb	IAmb	02 14 11.9	
	comp=Z,6.3nm,1.0s						
PMR	**Palmer**	**77.31**	**341**	P	**P**	**02 14 07.3**	**+1.0**
EGAK	**Eagle**	**77.63**	**346**	P	**P**	**02 14 08.0**	**-0.1**
EGAK				IAmb	IAmb	02 14 23.8	
	comp=Z,11nm,1.0s						
SCRK	**Sand Creek**	**77.68**	**345**	P	**P**	**02 14 07.6**	**-1.0**
SCRK				IAmb	IAmb	02 14 14.7	
	comp=Z,7.6nm,1.0s						
RIDG	**Independent Ri**	**77.72**	**344**	P	**P**	**02 14 06.6**	**-2.1**
FRB	**Frobisher Bay**	**78.47**	**17**	LR	LR	02 47 41.5	
	comp=Z,274nm,18.6s,baz=214,slow=35						
J25K	**Salcha River,**	**78.55**	**345**	P	**P**	**02 14 12.5**	**-0.8**
J25K				IAmb	IAmb	02 14 23.4	
	comp=Z,6.9nm,0.9s						
RND	**Reindeer**	**78.59**	**343**	P	**P**	**02 14 14.2**	**+0.7**
MCK	**McKinley**	**78.86**	**343**	P	**P**	**02 14 15.1**	**+0.2**
MCK				IAmb	IAmb	02 14 21.0	
	comp=Z,15nm,1.1s						
IL31		**79.08**	**344**		**P**	**02 14 16.8**	**+0.8**
ILAR	**Eielson Array**	**79.08**	**344**	P	**P**	**02 14 15.0**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=160,slow=5.2,SNR=8.2						
ILAR				LR	LR	02 42 10.0	
	comp=Z,261nm,19.9s,baz=126,slow=30						
	comp=Z,1.3nm,0.9s						
ILAR	**Eielson Array**	**79.08**	**344**	P	**P**	**02 14 16.9**	**+0.8**
SVW2	**Sparrevohn**	**79.15**	**339**	P	**P**	**02 14 16.1**	**-0.5**
SVW2				IAmb	IAmb	02 14 22.1	
	comp=Z,9.8nm,1.0s						
INK	**Inuvik**	**79.20**	**351**	LR	LR	02 45 44.1	
	comp=Z,431nm,20.7s,baz=144,slow=33						
INK	**Inuvik**	**79.20**	**351**	P	**P**	**02 14 16.4**	**-0.3**
INK				IAmb	IAmb	02 14 31.9	
	comp=Z,11nm,1.1s						
CCB	**Clear Creek Bu**	**79.24**	**344**	P	**P**	**02 14 16.8**	**-0.2**
M19K	**Big River Lodg**	**79.28**	**340**	P	**P**	**02 14 17.8**	**+0.5**
M19K				IAmb	IAmb	02 14 22.8	
	comp=Z,14nm,1.1s						
BWN	**Browne**	**79.35**	**343**	P	**P**	**02 14 17.9**	**+0.3**
NEA2	**Nenana**	**79.55**	**343**	P	**P**	**02 14 19.1**	**+0.4**
NEA2				IAmb	IAmb	02 14 24.7	
	comp=Z,11nm,0.9s						
CAST	**Castle Rocks**	**79.59**	**341**	P	**P**	**02 14 19.4**	**+0.5**
MDM	**Murphy Dome**	**79.59**	**344**	P	**P**	**02 14 19.7**	**+0.8**
MDM				IAmb	IAmb	02 14 28.9	
	comp=Z,7.3nm,1.0s						
BPAW	**Bear Paw Mtn.**	**79.74**	**342**	P	**P**	**02 14 20.1**	**+0.3**
BPAW				IAmb	IAmb	02 14 25.6	
	comp=Z,12nm,1.2s						
I23K	**Minto, Yukon-K**	**80.05**	**344**	P	**P**	**02 14 21.9**	**+0.5**
I23K				IAmb	IAmb	02 14 31.7	
	comp=Z,12nm,1.1s						
H24K	**Noodor Dome**	**80.17**	**344**	P	**P**	**02 14 21.4**	**-0.7**
SBA	**Scott Base**	**80.25**	**192**	P	**P**	**02 14 23.1**	**+0.7**
J20K	**Nowinta River**	**80.77**	**341**	P	**P**	**02 14 25.9**	**+0.6**
J20K				IAmb	IAmb	02 14 31.1	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**81.08**	**180**	P	**P**	**02 14 28.2**	**+1.0**
	comp=Z,7.7nm,0.8s,baz=128,slow=2.2,SNR=20						
QSPA				LR	LR	02 43 34.6	
	comp=Z,306nm,20.8s,baz=92,slow=31						
	comp=Z,7.7nm,0.8s						
QSPA	**South Pole Qui**	**81.08**	**180**	P	**P**	**02 14 27.4**	**+0.1**
VNDA	**Vanda**	**81.30**	**193**	P	**P**	**02 14 28.6**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=96,slow=3.9,SNR=3.8						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**81.30**	**193**	P	**P**	**02 14 29.3**	**+1.3**
VNDA				IAmb	IAmb	02 14 33.7	
	comp=Z,15nm,1.9s						
H21K	**Melozitna Rive**	**81.41**	**343**	P	**P**	**02 14 27.9**	**-0.8**
H21K				IAmb	IAmb	02 14 34.7	
	comp=Z,12nm,1.1s						
IMAR	**Indian Mountai**	**81.92**	**343**	P	**P**	**02 14 30.3**	**-1.0**
DZM	**Mont Dzumac**	**82.54**	**249**	LR	LR	02 43 29.3	
	comp=Z,56nm,21.9s,baz=138,slow=30						
RES	**Resolute Bay**	**83.92**	**3**	LR	LR	02 49 49.1	
	comp=Z,317nm,20.0s,baz=228,slow=34						
VNA3	**Neumayer Olymp**	**84.24**	**161**	P	**P**	**02 14 42.7**	**-0.7**
SFJD	**Kangerlussuaq**	**86.21**	**19**	LR	LR	02 52 19.9	
	comp=Z,305nm,20.4s,baz=256,slow=35						
SNAA	**Sanae**	**86.25**	**162**	LR	LR	02 47 46.4	
	comp=Z,269nm,18.2s,baz=279,slow=32						
H11S2	**WAKE ISLAND Hy**	**88.35**	**289**	T	T	03 52 36.6	
	baz=100,slow=75,SNR=2568						
H11S1	**WAKE ISLAND Hy**	**88.36**	**289**	T	T	03 52 33.9	
	baz=100,slow=75,SNR=949						
H11S3	**WAKE ISLAND Hy**	**88.37**	**289**	T	T	03 52 34.6	
	baz=100,slow=75,SNR=864						
H11N3	**WAKE ISLAND Hy**	**88.37**	**290**	T	T	03 52 38.4	
	baz=101,slow=75,SNR=98						
H11N2	**WAKE ISLAND Hy**	**88.39**	**290**	T	T	03 52 38.3	
	baz=101,slow=75,SNR=125						
H11N1	**WAKE ISLAND Hy**	**88.39**	**290**	T	T	03 52 39.3	
	baz=101,slow=75,SNR=72						
SHEM	**Shemya Is, Ala**	**89.82**	**324**	LR	LR	02 47 03.7	
	comp=Z,473nm,21.3s,baz=118,slow=30						
HNR	**Honiara**	**90.50**	**260**	LR	LR	02 48 01.2	
	comp=Z,172nm,19.5s,baz=86,slow=30						
BORG	**Borgarnes**	**96.67**	**26**	LR	LR	02 59 07.0	
	comp=Z,118nm,18.4s,baz=266,slow=35						
KRVT	**Keravat (AS076**	**99.10**	**264**	LR	LR	02 54 25.7	
	comp=Z,153nm,18.4s,baz=226,slow=32						
PETK	**Petropavlovsk-**	**99.68**	**322**	LR	LR	02 51 35.8	
	comp=Z,410nm,21.7s,baz=100,slow=30						
ZALV	**Zalesovo Beam**	**133.99**	**349**	PKP	**PKiKP**	**02 21 30.8**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=321,slow=1.8,SNR=2.5						
BRTR	**Keskin Array B**	**134.16**	**42**	PKP	**PKPdf**	**02 21 29.2**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=353,slow=3.6,SNR=2.8						
MKAR	**Makanchi Array**	**141.31**	**349**	PKP	**PKPdf**	**02 21 44.0**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=64,slow=2.8,SNR=6.3						
KMBO	**Kilima Mbogo**	**144.00**	**104**	PKP	**PKPdf**	**02 21 49.6**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=242,slow=11,SNR=4.3						
KMBO	**Kilima Mbogo**	**144.00**	**104**	PKPdf	**PKPdf**	**02 21 48.0**	**-1.2**
GOMU	**GeErMu**	**145.85**	**326**	PKPbc	**PKPab**	**02 21 52.8**	**-0.1**
GEYT	**Alibeck**	**148.61**	**21**	PKPbc	**PKPab**	**02 22 02.6**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=56,slow=5.9,SNR=2.8						
CMAR	**Chiang Mai Arr**	**152.18**	**293**	PKPbc	**PKPbc**	**02 22 08.0**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=58,slow=0.4,SNR=12						
CMAR	**Chiang Mai Arr**	**152.18**	**293**		**PKPbc**	**02 22 07.6**	**-1.2**
PSI	**Prapat**	**152.48**	**259**	PKPbc	**PKPbc**	**02 22 09.4**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=142,slow=4.7,SNR=4.0						

NEIC ***17*** *02:24:20.5±1.4, 52°.18N±0°.10×174°.0W±0°.2, h177^{km}±6^{km}, mb3.9/19, ML3.0/17(AEIC), Error ellipse: s-maj=19.0km s-min=6.4km az=136.0*

AEIC ***17*** *02:24:23.2±4.9, 52°.2N±0°.2×174°.2W±0°.2, h165^{km}±5^{km}, Error ellipse: s-maj=31.4km s-min=9.7km az=161.0*

ISC 17 02:24:20.0±1.1**, 52°.2N**±0°.2×**174°.07W**±0°.09**, h181**^{km}±8^{km}**, n39, σ0^s.78**/43**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.07**	**272**		**Pn**	**02 24 44.0**	**+0.3**
ATKA					**Sn**	**02 25 01.6**	**-0.5**
KOFP	**Korovin Flat P**	**0.08**	**349**		**Pn**	**02 24 44.5**	**+0.6**
KOKL	**Mount Kliuchef**	**0.15**	**328**		**Pn**	**02 24 44.8**	**+0.9**
KOKL					**Sn**	**02 25 02.9**	**+0.4**
GSSP	**Great Sitkin S**	**1.30**	**266**		**Pn**	**02 24 50.5**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GSCK	Great Sitkin C	1.30	262		Pn	02 24 50.6	+0.5
GSCK					Sn	02 25 11.8	-1.7
ADK	Adak	1.64	260		Pn	02 24 53.9	+0.5
ADK					Sn	02 25 18.0	-1.2
KIKV	Kanaga Island	1.94	262		Pn	02 24 57.4	+0.9
KIMD	Kanaga Island	2.00	259		Pn	02 24 58.1	+1.0
TAPA	Tanaga Point A	2.34	262		Pn	02 25 01.5	+0.6
TAFP	Tanaga Falls P	2.43	264		Pn	02 25 02.5	+0.5
TASE	Tanaga Southea	2.48	263		Pn	02 25 03.4	+1.0
GALAA	Gareloi Lava P	2.94	263		Pn	02 25 08.3	+0.5
GANO	Gareloi North	2.95	264		Pn	02 25 08.6	+0.6
UNV	Unalaska Valle	4.86	67	Pn	Pn	02 25 32.5	+0.6
CNBA	Chernabura Isl	9.02	67	Pn	Pn	02 26 26.0	-0.5
KDAK	Kodiak Island	13.51	57		P	02 27 26.9	-0.4
M19K	Big River Lodg	14.40	40	P	P	02 27 38.9	+1.8
TTA	Tatalina	14.41	35		P	02 27 37.1	-0.2
CNPM	China Poot	14.71	51	Pn	Pn	02 27 39.7	+0.4
BPAW	Bear Paw Mtn.	16.91	36	P	Pn	02 28 06.4	+0.5
FID	Port Fidalgo	17.36	50	P	P	02 28 09.6	-0.2
RND	Reindeer	17.37	40	P	P	02 28 09.8	-0.1
RND				IAmb	IAmb	02 28 11.3	
	comp=Z,3.7nm,0.5s						
DHY	Denali Highway	17.81	42	P	P	02 28 15.1	+0.2
NEA2	Nenana	17.89	36	P	Pn	02 28 16.5	-0.8
NEA2				IAmb	IAmb	02 28 26.0	
	comp=Z,2.5nm,0.6s						
CCB	Clear Creek Bu	18.38	37	P	Pn	02 28 22.8	-0.2
MDM	Murphy Dome	18.38	36	P	P	02 28 21.7	+0.8
MDM				IAmb	IAmb	02 28 37.2	
	comp=Z,5.7nm,1.4s						
HDA	Harding Lake	18.59	38	P	Pn	02 28 24.3	-1.2
HDA				IAmb	IAmb	02 28 25.1	
	comp=Z,5.7nm,0.6s						
IL31		18.78	37	P	Pn	02 28 26.9	-0.9
IL31				IAmb	IAmb	02 28 30.0	
	comp=Z,4.0nm,1.3s						
ILAR	Eielson Array	18.78	37	P	Pn	02 28 27.0	-0.8
H24K	Noodor Dome	18.98	34	P	P	02 28 26.9	-0.6
RIDG	Independent Ri	19.12	42	P	P	02 28 29.1	+0.1
RIDG				IAmb	IAmb	02 28 42.9	
	comp=Z,3.4nm,0.6s						
J25K	Salcha River,	19.29	39	P	P	02 28 29.7	-1.1
J25K				IAmb	IAmb	02 28 32.4	
	comp=Z,2.9nm,0.6s						
SCRK	Sand Creek	19.57	41	P	P	02 28 33.6	-0.2
SCRK				IAmb	IAmb	02 28 34.9	
	comp=Z,5.7nm,0.7s						
BCAR	Beaver Creek A	20.18	45	P	P	02 28 41.4	+1.1
TOLK	Toolik Lake Re	20.19	26	P	P	02 28 41.2	+0.8
K27K	Chicken	20.37	42	P	P	02 28 42.9	+0.6
K27K				IAmb	IAmb	02 29 15.2	
	comp=Z,5.6nm,1.4s						
EGAK	Eagle	21.01	41	P	P	02 28 49.8	+0.8
INK	Inuvik	25.10	35	P	P	02 29 27.7	+0.2
INK				IAmb	IAmb	02 29 51.4	
	comp=Z,2.8nm,1.1s						
KSXB	Camp Six Broad	35.10	87	P	P	02 30 55.9	0.0

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*ISK **17** 02:26:01.9, 37°.88N×26°.74E, h9^{km}, ML2.5/17*

*DDA **17** 02:26:01.9±0.0, 37°.87N×26°.72E, h6^{km}±1^{km}, ML2.5*

ISC 17 02:26:02.3±1.0**, 37°.88N**±0°.02×**26°.74E**±0°.03**, h11**^{km}±8^{km}**,**
n40, σ0^{s}66/68**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.21	34	P	Pg	02 26 06.8	+0.1
DGB				S	Sg	02 26 09.9	+0.1
ZEYE	Izmir, Urla-Ze	0.41	333	P	Pg	02 26 10.0	-0.3
ZEYE				S	Sg	02 26 16.3	+0.6
GCAM	G?zelcaml?	0.43	114	PG	Pg	02 26 10.8	0.0
GCAM				SG	Sb	02 26 17.9	-0.6
GCAM	G?zelcaml?	0.43	114	P	Pg	02 26 10.8	0.0
GCAM				S	Sb	02 26 17.6	-0.9
URLA	Izmir	0.49	347	PG	Pg	02 26 11.8	-0.2
URLA				SG	Sb	02 26 19.2	-1.2
URLA	Izmir	0.49	347	P	Pg	02 26 11.7	-0.3
URLA				S	Sg	02 26 19.0	+0.5
DDIM	Aydin, Didim	0.58	136	P	Pg	02 26 13.6	+0.1
DDIM				S	Sb	02 26 22.4	-0.4
DDIM				*i* AML	AML	02 26 25.0	
	comp=N,203nm,0.4s						
DDIM				*i* AML	AML	02 26 25.0	
	comp=E,219nm,0.5s						
KRBN	Karaburun	0.73	349	PG	Pb	02 26 16.5	-0.6
KRBN				SG	Sb	02 26 27.5	+0.4
CHOS	Chios island	0.74	314	PG	Pg	02 26 16.4	-0.2
CHOS				SG	Sb	02 26 27.4	-0.1
FOCM	Foa	0.83	360	PG	Pg	02 26 18.2	-0.2
FOCM				SG	Sb	02 26 30.4	+0.3
AYDB	Zeytinkoy-Aydi	0.92	85	PG	Pg	02 26 19.9	-0.1
AYDN	Tasoluk	0.93	103	P	Pg	02 26 19.8	-0.4
AYDN				S	Sg	02 26 32.1	-0.3
BODT	Bodrum	0.93	151	PG	Pb	02 26 20.3	-0.2
BODT				SG	Sb	02 26 33.8	+0.9
BDRM	Kayabasi	0.99	145	P	Pg	02 26 21.0	-0.3
BDRM				S	Sb	02 26 34.8	+0.3
BDRM				*i* AML	AML	02 26 35.0	
	comp=N,191nm,1.7s						
MLSB	Milas	1.01	125	PG	Pb	02 26 21.7	-0.2
CAND	Candarli	1.08	3	PG	Pb	02 26 22.9	-0.1
ZEDA	zmir-Bergama	1.12	14	P	Pg	02 26 23.0	-0.8
ZEDA				S	Sb	02 26 38.4	+0.1
KOSK	Kos Island	1.14	170	PN	Pn	02 26 24.3	+0.1
KOSK				SN	Sn	02 26 40.9	+1.1
DKL	Dikili	1.20	6	PN	Pg	02 26 24.3	-1.1
GOMA	Golmarmara-Man	1.25	48	PN	Pg	02 26 26.4	+0.2
GOMA				SN	Sn	02 26 43.7	+1.2
AKHS	Akhisar	1.31	40	P	Pg	02 26 27.0	-0.5
AKHS				S	Sn	02 26 44.7	+0.6
NIS1	Nisyros Isl.	1.32	164	PN	Pn	02 26 26.9	+0.2
DAT	Datca	1.33	149	P	Pn	02 26 25.6	-1.3
DAT				S	Sn	02 26 44.9	+0.2
MULA	Mugla, Merkez-	1.40	116	P	Pn	02 26 27.2	-0.7
MULA				S	Sb	02 26 46.3	-0.3
AYVA	Ayvalik	1.43	359	P	Pg	02 26 29.2	-0.5
AYVA				S	Sg	02 26 48.9	+0.6
YER	Yerkesik	1.44	121	PN	Pn	02 26 28.1	-0.3
TURN	Turunc	1.63	132	PN	Pn	02 26 31.5	+0.6
TURN	Turunc	1.63	132	P	Pn	02 26 30.0	-0.9
TURN				S	Sg	02 26 54.9	+0.2
KULA	Kula-Manisa	1.64	67	PN	Pn	02 26 31.7	+0.4
STEP	BALIKESIR_Sava	1.68	27	P	Pb	02 26 33.1	-0.2
STEP				S	Sg	02 26 55.8	-0.6
KOCA	Canakkale, Ayv	1.69	344	P	Pg	02 26 34.8	+0.1
KOCA				S	Sg	02 26 57.0	+0.4
KOCA				*i* AML	AML	02 27 06.0	
	comp=E,55nm,1.3s						
KOCA				*i* AML	AML	02 27 27.0	
	comp=N,64nm,1.6s						
KOCA				*i* AML	AML	02 27 32.0	
	comp=Z,42nm,1.4s						
DALY	Dalyan (Mula)	1.86	124	PN	Pn	02 26 34.9	+0.8
BAYC	CANAKKALE_Bayr	1.87	356	P	Pn	02 26 32.7	-1.5
BAYC				S	Sn	02 26 57.2	-0.7
DEMI	Demirci	1.94	53	P	Pg	02 26 39.1	-0.5
DEMI				S	Sb	02 27 01.5	-0.6
EZN	Ezine	1.97	351	PN	Pn	02 26 36.3	+0.6
USAK	Uak-Merkez	1.98	64	P	Pg	02 26 39.3	-0.9
USAK				S	Sb	02 27 04.3	+1.1
BALY	Balya	1.98	20	P	Pg	02 26 39.5	-0.8
BALY				S	Sb	02 27 04.4	+1.1
SIMA	Simav-Kutahya	2.13	55	PN	Pn	02 26 38.7	+0.7
DURS	Dursunbey	2.19	38	P	Pn	02 26 38.1	-0.8
DURS				S	Sb	02 27 10.6	+1.3
GELI	Tayfur-Gelibol	2.52	355	PN	Pn	02 26 44.2	+0.9

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*IDC **17** 03:11:51.2±2.5, 50°.48N×91°.24E, h0^{km}, mb3.5/3, mbtmp3.5/6, ML2.9/3, Error ellipse: s-maj=30.2km s-min=22.5km az=121.0*

*ASRS **17** 03:11:52.2±0.2, 50°N±1°×91°.0E±0°.9, h5^{km}, MLh4.0/16, Error ellipse: s-maj=3.1km s-min=1.9km az=163.3, confirmed*

*MOS **17** 03:11:55.7±1.7, 50°.14N×90°.90E, h20^{km}, mb3.8/2, Error ellipse: s-maj=9.1km s-min=6.9km az=102.2*

*NNC **17** 03:11:56.7±1.5, 50°.47N×90°.66E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=14.5km s-min=7.1km az=98.0*

ISC 17 03:11:53.9±1.1**, 50°.45N**±0°.03×**90°.96E**±0°.02**, h9**^{km}±8^{km}**,**
n63, σ1^{s}87/90**, mb3.5**/3**, MS3.5**/3**, 13C-7D,**
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	1.71	259	PN	Pb	03 12 25.7	+0.1
CUR						03 12 49.6	
CUR	Chagan-Uzun	1.71	259	Pg	Pb	03 12 25.7	+0.1
CUR				Sg	Sg	03 12 49.6	+0.7
ULGR	Ulagan, Altay	1.92	276	PN	Pg	03 12 30.8	0.0
ULGR						03 12 56.6	
ULGR	Ulagan, Altay	1.92	276	⇑Pg	Pg	03 12 30.8	0.0
ULGR				Sg	Sg	03 12 56.6	+0.9
AKAR	Aktash	2.14	268	PN	Pb	03 12 32.8	-0.1
AKAR						03 13 02.2	
AKAR	Aktash	2.14	268	⇑Pg	Pb	03 12 32.8	-0.1
AKAR				Sg	Sg	03 13 02.3	-0.5
CHBI	Chibit, Altay	2.22	268	PN	Pb	03 12 35.0	+0.8
CHBI						03 13 05.6	
CHBI	Chibit, Altay	2.22	268	⇓Pg	Pb	03 12 34.5	+0.3
CHBI				Sg	Sg	03 13 05.6	+0.5
DJO	Djoy, Khakassi	2.34	4	PN	Pg	03 12 37.8	-0.9
DJO						03 13 09.4	
DJO	Djoy, Khakassi	2.34	4	⇑Pg	Pg	03 12 37.8	-0.9
DJO				Sg	Sg	03 13 09.5	+0.5
DJOS	Djoyskaya Sosn	2.36	6	PN	Pg	03 12 39.1	0.0
DJOS						03 13 10.3	
DJOS	Djoyskaya Sosn	2.36	6	⇑Pg	Pg	03 12 39.4	+0.3
DJOS				Sg	Sg	03 13 10.3	+0.6
DGZ	Jazzator, Alta	2.40	253	Pn	Pb	03 12 36.0	-1.3
DGZ				Pg	Pg	03 12 39.5	-0.4
DGZ				Sg	Sg	03 13 10.3	-0.6
CERR	Cheremushki	2.42	7	PN	Pg	03 12 40.2	0.0
CERR						03 13 12.0	
CERR	Cheremushki	2.42	7	⇑Pg	Pg	03 12 40.3	0.0
CERR				Sg	Sg	03 13 12.1	+0.5
KZLR	Kyzyl	2.53	59	PN	Pb	03 12 39.5	0.0
KZLR						03 13 14.5	
KZLR	Kyzyl	2.53	59	Pg	Pb	03 12 39.6	0.0
KZLR				Sg	Sg	03 13 14.6	-0.7
ARDR	Aradan	2.63	35	Pg	Pg	03 12 42.7	-1.5
ARDR				Sg	Sg	03 13 16.3	-2.0
ARTR	Artybash	2.68	302	PN	Pb	03 12 41.3	-0.7
ARTR						03 13 19.3	
ARTR	Artybash	2.68	302	Pn	Pb	03 12 41.3	-0.7
ARTR				Pg	Pg	03 12 44.8	-0.4
ARTR				Sg	Sg	03 13 19.3	-0.7
ERNS	Erzin	2.69	92	Pg	Pb	03 12 40.6	-1.7
ERNS				Sg	Sb	03 13 15.6	+0.2
TASR	Tashtagol	3.00	321	PN	Pg	03 12 49.7	-1.7
TASR						03 13 27.6	
TASR	Tashtagol	3.00	321	Pg	Pg	03 12 49.8	-1.7
TASR				Sg	Sg	03 13 27.7	-2.7
ABNR	Abakan	3.29	5	PN	Pg	03 12 56.0	-0.9
ABNR						03 13 40.8	
ABNR	Abakan	3.29	5	Pg	Pg	03 12 56.1	-0.9
ABNR				Sg	Sg	03 13 40.8	+1.4
LUZB	Luzhba, Kemero	3.46	339	PN	Pg	03 12 58.2	-1.8
LUZB						03 13 42.3	
LUZB	Luzhba, Kemero	3.46	339	Pg	Pg	03 12 58.3	-1.8
LUZB				Sg	Sg	03 13 42.4	-2.4
GALT	Gorno-Altaysk,	3.50	297	PN	Pg	03 12 59.0	-1.8
GALT						03 13 44.1	
GALT	Gorno-Altaysk,	3.50	297	Pg	Pg	03 12 59.0	-1.8
GALT				Sg	Sg	03 13 44.2	-2.0
UKR	Ust'-Kan	3.96	279	PN	Pg	03 13 07.1	-2.7
UKR						03 13 59.0	
UKR	Ust'-Kan	3.96	279	Pg	Pg	03 13 07.1	-2.7
UKR				Sg	Sg	03 13 59.1	-2.1
ELT	Eltsovka	4.06	316	PN	Pn	03 12 58.7	+2.6
ELT						03 14 00.0	
ELT	Eltsovka	4.06	316	Pn	Pn	03 12 58.7	+2.6
ELT				Pg	Pg	03 13 08.5	-3.2
ELT				Sg	Sg	03 14 02.7	-1.5
KNGR	Kungurtug, Tuv	4.18	85	PN	Pn	03 13 00.5	+2.6
KNGR						03 13 13.0	
KNGR						03 14 06.4	
KNGR	Kungurtug, Tuv	4.18	85	Pn	Pn	03 13 00.6	+2.6
KNGR				Pg	Pg	03 13 13.0	-1.0
KNGR				Sg	Sg	03 14 06.5	-1.7
MINR	Mina	4.87	23	PN	Pb	03 13 13.5	-5.8
MINR						03 14 28.8	
MINR	Mina	4.87	23	Pn	Pn	03 13 10.4	+3.1
MINR				Pg	Pg	03 13 24.6	-2.5
MINR				Sg	Sg	03 14 28.8	-1.3
SALR	Pechorkino, Sa	5.11	323	PN	Pn	03 13 09.6	-0.9
SALR						03 14 33.6	
SALR	Pechorkino, Sa	5.11	323	Pn	Pn	03 13 09.7	-0.9
SALR				Pg	Pb	03 13 23.8	+0.4
SALR				Sg	Sg	03 14 33.7	-4.1
ZAA0	Zalesovo Array	5.15	315	⇓Pn	Pn	03 13 13.7	+2.6
	0.2nm,0.5s						
ZAA0				⇑Pg	Pb	03 13 27.4	+3.3
	0.8nm,0.5s						
ZAA0				⇓Lg	Lg	03 14 36.3	
	10.0nm,0.7s						
ZALV	Zalesovo Beam	5.15	315	Pn	Pn	03 13 12.7	+1.6
	0.5nm,0.3s,baz=135,slow=13,SNR=6.2						
ZALV				Pg	Pb	03 13 27.6	+3.5
	0.7nm,0.3s,baz=132,slow=13,SNR=12						
ZALV				Lg	Lg	03 14 32.4	
	5.0nm,0.3s,baz=121,slow=29,SNR=12						
	1.0nm,0.3s						
MK31	Makanchi Array	6.81	241	PN	Pn	03 13 35.6	+1.6
MK31				*e*		03 13 59.2	
MK31	Makanchi Array	6.81	241	⇓Pn	Pn	03 13 35.2	+1.2
	0.8nm,0.3s,baz=49,slow=16,SNR=43						
MK31				⇑Pg	Pg	03 13 59.7	-4.6
	2.7nm,0.5s,baz=58,slow=16,SNR=9.4						
MK31				⇓Lg	Lg	03 15 28.4	
	22nm,0.8s,baz=52,slow=30,SNR=5.7						
MKAR	Makanchi Array	6.81	241	Pn	Pn	03 13 35.6	+1.6
	0.9nm,0.3s,baz=48,slow=17,SNR=54						
MKAR				Lg	Lg	03 15 32.0	
	1.6nm,0.3s,baz=54,slow=20,SNR=3.2						
	1.1nm,0.2s						
MKAR	Makanchi Array	6.81	241	*i* PN	Pn	03 13 35.7	+1.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
MAKZ	Makanchi	6.98	242	PN	Pn	03 13 37.6	+1.3
MAKZ	Makanchi	6.98	242	⇑Pn	Pn	03 13 37.7	+1.3
	comp=Z,2.0nm,0.5s						
MAKZ				⇑Pg	Pg	03 14 02.4	-5.1
	comp=Z,5.4nm,0.7s						
MAKZ				⇑Lg	Lg	03 15 32.4	
	comp=Z,35nm,1.1s						
KURK	Kurchatov	7.86	277	P	Pn	03 13 49.9	+1.6
KURK						03 15 20.2	
KURK	Kurchatov	7.86	277	⇑Pn	Pn	03 13 49.2	+0.8
	comp=Z,1.9nm,0.9s						
KURK				⇓Lg	Lg	03 15 59.7	
	comp=Z,31nm,0.8s						
KURBB	Kurchatov Arra	7.93	276	Pn	Pn	03 13 49.9	+0.7
	comp=Z,0.2nm,0.3s,baz=92,slow=15,SNR=22						
KURBB				Sn	Sn	03 15 20.2	+1.3
	comp=Z,0.1nm,0.3s,baz=70,slow=14,SNR=2.0						
KURBB				Lg	Lg	03 16 00.9	
	comp=Z,0.2nm,0.3s,baz=81,slow=30,SNR=5.5						
	comp=Z,0.8nm,0.4s						
KURBB	Kurchatov Arra	7.93	276	⇓Pn	Pn	03 13 49.8	+0.6
	comp=Z,4.2nm,0.7s						
KURBB				⇑Lg	Lg	03 16 02.6	
	comp=Z,40nm,0.8s						
SONM	Songino Array	10.45	99	Lg	Lg	03 17 14.5	
	comp=Z,0.2nm,0.3s,baz=305,slow=28,SNR=2.6						
ULN	Ulaanbaatar	10.85	98	*i* P	Pn	03 14 34.7	+5.3
OTUK	Ortayu	12.35	267	⇑Lg	Lg	03 18 23.5	
	comp=Z,11nm,1.2s						
BRVK	Borovoye	13.07	289	*i* P	Pn	03 15 01.8	+2.3
AKTO	Aktyubinsk	20.89	283	P	P	03 16 37.1	+0.9
	comp=Z,1.0nm,0.5s,baz=108,slow=9.6,SNR=2.7						
	comp=Z,1.0nm,0.5s						
MAK	Makhachkala	30.36	273	*e*P	P	03 18 01.6	-4.2
MAK				*e*S	S	03 22 59.3	-6.8
MAK				MLR	MLR		
	comp=Z,118nm,17.0s						
OBN	Obninsk	32.52	300	*e*P	P	03 18 27.4	+2.8
OBN				*e*		03 19 34.7	
OBN				MLR	MLR		
	comp=Z,33nm,15.0s						
BILL	Bilibino	39.33	35	*e*P	P	03 19 25.0	+2.2
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,53nm,16.0s						
BRTR	Keskin Array B	40.91	278	P	P	03 19 37.9	+1.4
	comp=Z,0.7nm,0.8s,baz=93,slow=10.0,SNR=5.7						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	40.91	278	*i* P	P	03 19 38.2	+1.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	43.35	316	P	P	03 19 56.4	+0.4
	comp=Z,0.6nm,0.6s,baz=66,slow=7.9						
NOA	NORSAR Array B	43.35	316	P	P	03 19 53.5	-2.5
	comp=Z,0.3nm,0.4s,baz=67,slow=8.8,SNR=4.6						
	comp=Z,0.3nm,0.4s						

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*IDC **17** 03:52:06.2±1.8, 4°.28S×152°.91E, h42^{km}±14^{km}, mb4.2/14, mbtmp4.4/15, ML4.0/1, MS3.6/31, Error ellipse: s-maj=16.0km s-min=13.4km az=75.0*

*NEIC **17** 03:52:06.3±0.9, 4°.28S±0°.09×152°.94E±0°.07, h41^{km}±5^{km}, mb4.6/41, Error ellipse: s-maj=13.3km s-min=10.0km az=178.0*

*DJA **17** 03:52:07.1±1.2, 4°S±7°×15°3E±1°1, h63^{km}±6^{km}, M5.2/20, mB4.9/3, mb5.0/20, MLv5.4/3, Mw(mB)4.2/3*

ISC 17 03:52:07.6±0.4**, 4°.30S**±0°.06×**152°.88E**±0°.07**, h55**^{km}**, n174,**
σ0^{s}96/157**, mb4.6**/40**, MS3.7**/27**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.72	279	Pn	Pn	03 52 20.9	-1.0
RABL				Sn	Sn	03 52 32.1	-0.2
KRVT	Keravat (AS076	0.85	270	P	Pn	03 52 22.6	-1.0
	3µm,0.3s,baz=17,slow=5.1,SNR=438						
KRVT				S	Sn	03 52 34.6	-0.6
	32µm,0.4s,baz=150,slow=20,SNR=33						
PMG	Port Moresby	7.61	228	P	Pn	03 53 57.5	+1.5
	79nm,0.8s,baz=18,slow=11,SNR=13						
PMG				S	Sn	03 55 22.0	+1.1
	69nm,0.6s,baz=121,slow=20,SNR=11						
PMG				LR	LR	03 56 22.0	
	comp=Z,279nm,20.8s,baz=30,slow=33						
PMG	Port Moresby	7.61	228	Pn	Pn	03 53 55.4	-0.6
PMG	Port Moresby	7.61	228	P	Pn	03 53 58.8	+2.8
PMG	Port Moresby	7.61	228	P	Pn	03 53 58.6	+2.6
HNR	Honiara	8.67	126	LR	LR	03 57 40.9	
	comp=Z,682nm,20.8s,baz=300,slow=39						
COEN	Coen	13.55	224	P	Pn	03 55 19.0	+1.8
	baz=14,SNR=5.1						
COEN	Coen	13.55	224	Pn	Pn	03 55 16.1	-1.1
COEN	Coen	13.55	224	P	Pn	03 55 19.4	+2.2
MTSU	Mount Surprise	16.10	211	P	P	03 55 53.2	+0.2
	baz=16,SNR=32						
MTSU	Mount Surprise	16.10	211	P	P	03 55 53.4	+0.5
CTA	Charters Tower	16.97	202	P	Pn	03 56 01.2	-0.1
	0.3nm,0.3s,baz=21,slow=16,SNR=3.0						
CTA				LR	LR	04 01 51.4	
	comp=Z,188nm,21.4s,baz=49,slow=34						
	5.7nm,0.8s						
CTAO	Charters Tower	16.97	202		P	03 56 02.9	+0.4
GUMO	Guam	19.47	336	LR	LR	04 03 21.0	
	comp=Z,53nm,18.5s,baz=129,slow=35						
QIS	Mount Isa	20.69	218	P	P	03 56 43.7	+0.4
	baz=21,SNR=34						
QIS	Mount Isa	20.69	218	P	P	03 56 44.0	+0.7
EIDS	Eidsvold	21.02	185	P	P	03 56 47.9	+1.1
	baz=21,SNR=4.2						
EIDS	Eidsvold	21.02	185	P	P	03 56 46.3	-0.5
EIDS	Eidsvold	21.02	185	P	P	03 56 49.9	+3.1
KDU	Kakadu	21.82	246	P	P	03 56 54.3	-1.1
	baz=22,SNR=253						
KDU	Kakadu	21.82	246	P	P	03 56 55.0	-0.4
SIJI	Sorong	21.86	278	P	P	03 56 57.2	+1.4
	18nm,0.5s,baz=65,slow=6.6,SNR=10						
SIJI				LR	LR	04 04 27.8	
	comp=Z,251nm,21.8s,baz=22,slow=34						
	18nm,0.5s						
SWI	Sorong	21.86	278	P	P	03 56 58.1	+2.2
	45nm,0.7s						
DZM	Mont Dzumac	22.02	145	P	P	03 56 57.8	+0.1
	11nm,0.4s,baz=236,slow=9.0,SNR=38						
DZM				LR	LR	04 04 59.1	
	comp=Z,304nm,19.9s,baz=299,slow=35						
	11nm,0.4s						
DZM	Mont Dzumac	22.02	145	P	P	03 56 57.7	0.0
DZM				IAmb	IAmb	03 57 16.3	
	comp=Z,59nm,1.1s						
RMQ	Roma	22.41	190	P	P	03 57 02.3	+0.6
	baz=23,SNR=6.8						
RMQ	Roma	22.41	190	P	P	03 57 02.4	+0.6
OUENC	Ouen Island, N	22.52	144	P	P	03 57 02.3	-0.6
OUENC				IAmb	IAmb	03 57 24.9	
	comp=Z,16nm,0.7s						
MTN	Manton Dam	23.10	247	P	P	03 57 08.0	-1.0
	baz=23,SNR=20						
MTN	Manton Dam	23.10	247	P	P	03 57 07.9	-1.0
MTN	Manton Dam	23.10	247	P	P	03 57 08.3	-0.7
QLP	Quilpie	23.65	200	P	P	03 57 14.4	+0.3
	baz=24,SNR=5.8						
QLP	Quilpie	23.65	200	P	P	03 57 14.7	+0.6
WB0	Warramunga Arr	23.69	228	P	P	03 57 14.1	-0.4
WR0	Warramunga Arr	23.70	227	P	P	03 57 14.2	-0.4
WRAB	Tennant Creek	23.82	228	P	P	03 57 15.3	-0.5
WRAB	Tennant Creek	23.82	228	P	P	03 57 15.6	-0.2
WB2	Warramunga Arr	23.82	228	P	P	03 57 15.6	-0.2
WRA	Warramunga Arr	23.83	228	P	P	03 57 15.5	-0.4
	comp=Z,111nm,0.8s,baz=53,slow=10.0,SNR=391						
WRA				PcP	PcP	04 00 58.9	+0.8
	comp=Z,4.5nm,0.7s,baz=40,slow=2.2,SNR=4.8						
WRA				ScP	ScP	04 04 33.5	+1.5
	comp=Z,2.7nm,0.8s,baz=54,slow=3.0,SNR=9.4						
WRA				LR	LR	04 05 51.8	
	comp=Z,193nm,21.4s,baz=40,slow=35						
WRA	Warramunga Arr	23.83	228	P	P	03 57 14.4	-1.5
ARMA	Armidale	26.00	182	P	P	03 57 36.9	+1.3
	baz=26,SNR=5.0						
ARMA	Armidale	26.00	182	P	P	03 57 36.5	+0.9
ARMA				IAmb	IAmb	03 57 39.0	
	comp=Z,12nm,0.8s						
ARMA	Armidale	26.00	182	P	P	03 57 38.1	+2.5
INKA	Innaminka	26.02	205	P	P	03 57 35.4	-0.2
KNRA	Kununurra	26.27	243	P	P	03 57 37.1	-0.9
	baz=26,SNR=46						
KNRA	Kununurra	26.27	243	P	P	03 57 36.8	-1.2
KNRA	Kununurra	26.27	243	P	P	03 57 37.3	-0.7
AS31	Alice Springs	26.57	222	P	P	03 57 40.3	-0.4
AS31				IAmb	IAmb	03 57 45.4	
	comp=Z,8.4nm,0.6s						
ASAR	Alice Springs	26.57	222	P	P	03 57 40.2	-0.5
	comp=Z,22nm,0.5s,baz=55,slow=8.7,SNR=92						
ASAR				PcP	PcP	04 01 04.7	+0.5
	comp=Z,2.3nm,0.8s,baz=40,slow=4.1,SNR=4.6						
ASAR				ScP	ScP	04 04 41.7	+2.0
	comp=Z,2.7nm,0.8s,baz=55,slow=3.2,SNR=13						
ASAR				LR	LR	04 08 23.4	
	comp=Z,109nm,20.8s,baz=70,slow=37						
	comp=Z,22nm,0.5s						
ASAR	Alice Springs	26.57	222	P	P	03 57 40.4	-0.4
ASAR					ScP	04 04 41.6	+1.8
H11N1	WAKE ISLAND Hy	27.56	30	T	T	04 26 44.4	
	SNR=77						
H11N3	WAKE ISLAND Hy	27.57	30	T	T	04 28 00.4	
	SNR=50						
H11N2	WAKE ISLAND Hy	27.57	30	T	T	04 27 18.0	
	SNR=34						
CMSA	Cobar Meteorol	27.92	193	P	P	03 57 52.6	-0.1
	baz=28,SNR=9.2						
OOD	Oodnadatta	28.53	213	P	P	03 57 58.0	-0.2
STKA	Stephens Creek	29.41	200	P	P	03 58 05.4	-0.5
	comp=Z,8.0nm,0.6s,baz=14,slow=9.4,SNR=21						
STKA				LR	LR	04 10 13.8	
	comp=Z,137nm,18.7s,baz=19,slow=37						
	comp=Z,8.0nm,0.6s						
STKA	Stephens Creek	29.41	200	P	P	03 58 05.4	-0.5
	baz=30,SNR=6.7						
STKA	Stephens Creek	29.41	200	P	P	03 58 05.5	-0.5
STKA	Stephens Creek	29.41	200	P	P	03 58 05.9	0.0
LCRK	Leigh Creek	29.46	206	P	P	03 58 06.1	-0.3
GTOI	Gorontalo	30.24	279	P	P	03 58 14.1	+0.6
	comp=Z,7.1nm,0.6s						
EDFI	Ende, Flores	31.29	260	P	P	03 58 21.3	-1.6
	comp=Z,6.5nm,0.8s						
WRKA	Warakurna	31.36	226	P	P	03 58 22.2	-1.0
	baz=32,SNR=145						
WRKA	Warakurna	31.36	226	P	P	03 58 22.6	-0.7
MULG	Mulgathing	31.36	212	P	P	03 58 22.7	-0.5
HTT	Hallett	31.77	203	P	P	03 58 26.6	-0.3
	baz=32,SNR=4.5						
MPSI	Mapaga	33.27	277	P	P	03 58 39.6	-0.6

	comp=Z,14nm,1.0s						
FORT	Forrest	35.22	219	P	P	03 58 56.2	-0.7
	baz=36,SNR=25						
FORT	Forrest	35.22	219	P	P	03 58 56.4	-0.4
FORT	Forrest	35.22	219	P	P	03 58 56.3	-0.5
MBWA	Marble Bar	36.29	240	P	P	03 59 05.1	-1.0
MBWA	Marble Bar	36.29	240	P	P	03 59 05.2	-0.9
PSA00	Pilbara Seismi	36.35	239	P	P	03 59 05.7	-0.9
URZ	Urewera	40.38	150	LR	LR	04 14 53.1	
	comp=Z,107nm,19.7s,baz=20,slow=34						
GIRL	Giralia	41.58	240	P	P	03 59 48.1	-2.2
	baz=42,SNR=4.8						
RPZ	Rata Peaks	42.41	160	LR	LR	04 15 24.5	
	comp=Z,188nm,19.9s,baz=322,slow=33						
KLBR	Kellerberrin	42.70	226	P	P	03 59 58.0	-1.4
	baz=43,SNR=21						
KLBR	Kellerberrin	42.70	226	P	P	03 59 58.2	-1.2
MORW	Morawa	42.72	231	P	P	03 59 58.6	-1.0
	baz=43,SNR=14						
MORW	Morawa	42.72	231	P	P	03 59 58.9	-0.7
MJAR	Matsushiro Arr	42.88	343	LR	LR	04 17 44.5	
	comp=Z,46nm,18.6s,baz=174,slow=36						
BLDU	Ballidu	42.97	228	P	P	04 00 00.6	-0.9
	baz=43,SNR=34						
MUN	Mundaring	44.03	227	P	P	04 00 10.1	+0.1
	baz=44,SNR=4.1						
RKGY	Rocky Gully	44.90	223	P	P	04 00 17.1	+0.2
	baz=45,SNR=5.4						
KSRS	Korea Array	47.59	333	P	P	04 00 38.4	+0.4
	comp=Z,0.6nm,0.5s,baz=152,slow=8.2,SNR=4.1						
	comp=Z,0.6nm,0.5s						
RAR	Rarotonga	48.91	114	LR	LR	04 19 40.1	
	comp=Z,25nm,20.4s,baz=299,slow=34						
ASAJ	Asahikawa	49.08	350	LR	LR	04 19 10.8	
	comp=Z,32nm,20.1s,baz=122,slow=33						
PSI	Prapat	54.38	277	LR	LR	04 27 28.0	
	comp=Z,174nm,18.9s,baz=228,slow=39						
BNX	BinXian	54.74	338	⇓P	P	04 01 32.1	+0.6
BNX				pmax	pmax		
	comp=Z,15nm,0.9s						
BNX				pmax	pmax		
	comp=Z,340nm,3.5s						
PETK	Petropavlovsk-	57.34	3	P	P	04 01 50.6	+0.7
	comp=Z,3.3nm,0.5s,baz=152,slow=5.0,SNR=8.7						
PETK				LR	LR	04 21 55.4	
	comp=Z,46nm,21.6s,baz=213,slow=31						
	comp=Z,3.3nm,0.5s						
CMAR	Chiang Mai Arr	57.74	295	P	P	04 01 54.5	+1.2
	comp=Z,0.8nm,0.3s,baz=109,slow=5.5,SNR=4.9						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	57.74	295	P	P	04 01 53.2	-0.2
SHEM	Shemya Is, Ala	59.59	15	LR	LR	04 22 06.9	
	comp=Z,36nm,20.4s,baz=298,slow=30						
MA2	Magadan	63.70	359	LR	LR	04 29 18.3	
	comp=Z,29nm,19.5s,baz=133,slow=35						
SONM	Songino Array	65.95	328	P	P	04 02 52.1	+3.9
	comp=Z,0.8nm,0.5s,baz=133,slow=5.0,SNR=3.6						
BILL	Bilibino	72.79	5		P	04 03 30.4	+0.5
BILL				IAmb	IAmb	04 03 31.5	
	comp=Z,5.9nm,0.8s						
VNDA	Vanda	73.32	178	P	P	04 03 33.9	+1.0
	comp=Z,2.2nm,0.7s,baz=335,slow=5.9,SNR=15						
	comp=Z,2.2nm,0.7s						
VNDA	Vanda	73.32	178	P	P	04 03 33.6	+0.7
VNDA				IAmb	IAmb	04 03 47.9	
	comp=Z,5.9nm,0.8s						
SBA	Scott Base	73.87	177	P	P	04 03 36.6	+0.5
SBA				IAmb	IAmb	04 03 53.5	
	comp=Z,5.2nm,0.9s						
KDAK	Kodiak Island	75.70	27	LR	LR	04 30 00.3	
	comp=Z,48nm,21.7s,baz=251,slow=30						
L19K	White Mountain	77.26	22		P	04 03 55.8	0.0
L19K				IAmb	IAmb	04 03 57.7	
	comp=Z,5.1nm,0.9s						
IMAR	Indian Mountai	79.89	19	P	P	04 04 10.7	+0.5
MK31	Makanchi Array	80.00	319	P	P	04 04 11.4	+0.2
MKAR	Makanchi Array	80.00	319	P	P	04 04 11.3	+0.1
	comp=Z,0.5nm,0.4s,baz=92,slow=7.8,SNR=9.9						
	comp=Z,0.5nm,0.4s						
RND	Reindeer	80.24	23	IAmb	IAmb	04 04 12.4	
	comp=Z,7.0nm,0.8s						
RND				P	P	04 04 12.5	+0.3
MCK	McKinley	80.38	23		P	04 04 12.8	0.0
MCK				IAmb	IAmb	04 04 13.5	
	comp=Z,9.9nm,0.9s						
DHY	Denali Highway	80.65	23	P	P	04 04 14.8	+0.2
DHY				IAmb	IAmb	04 04 22.9	
	comp=Z,4.7nm,0.9s						
NEA2	Nenana	80.77	22	P	P	04 04 14.7	-0.2
NEA2				IAmb	IAmb	04 04 14.9	
	comp=Z,4.5nm,0.8s						
ZALV	Zalesovo Beam	80.78	326	P	P	04 04 14.4	-0.7
	comp=Z,0.9nm,0.4s,baz=76,slow=7.6,SNR=2.0						
	comp=Z,0.9nm,0.4s						
CCB	Clear Creek Bu	81.27	22	P	P	04 04 16.5	-1.0
IL31		81.67	22		P	04 04 18.9	-0.7
IL31				IAmb	IAmb	04 04 19.3	
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	81.67	22	P	P	04 04 18.7	-1.0
	comp=Z,2.9nm,0.7s,baz=251,slow=5.4,SNR=28						
ILAR				LR	LR	04 36 12.5	
	comp=Z,26nm,21.4s,baz=152,slow=32						
	comp=Z,2.9nm,0.7s						
ILAR	Eielson Array	81.67	22	P	P	04 04 19.0	-0.7
J25K	Salcha River,	82.17	23	P	P	04 04 22.2	-0.2
J25K				IAmb	IAmb	04 04 23.0	
	comp=Z,7.5nm,0.8s						
L26K	Log Cabin Wild	82.26	24	P	P	04 04 22.0	-0.9
M27K	Edge Creek, AK	82.59	25	P	P	04 04 24.3	-0.4
M27K				IAmb	IAmb	04 04 26.4	
	comp=Z,7.8nm,0.9s						
K27K	Chicken	83.20	24	P	P	04 04 27.6	-0.1
KURK	Kurchatov	83.43	322	P	P	04 04 28.0	-1.1
KURK				IAmb	IAmb	04 04 30.3	
	comp=Z,11nm,1.5s						
KURBB	Kurchatov Arra	83.46	322	P	P	04 04 28.5	-0.8
	comp=Z,1.4nm,0.8s,baz=106,slow=4.0,SNR=8.1						
	comp=Z,1.4nm,0.8s						
EGAK	Eagle	83.87	23	P	P	04 04 31.4	+0.3
EGAK				IAmb	IAmb	04 04 32.9	
	comp=Z,3.5nm,0.8s						
HYT	Haines Junctio	83.96	28	P	P	04 04 32.1	+0.3
HYT				IAmb	IAmb	04 04 34.5	
	comp=Z,5.3nm,0.8s						
H02S1	DAWSON INLET T	84.30	36	T	T	05 37 32.5	
	SNR=97						
AAK	Ala-Archa	84.38	313		P	04 04 34.5	+0.1
AAK				IAmb	IAmb	04 04 35.8	
	comp=Z,4.6nm,1.1s						
I29M	Ogilvie Camp,	85.21	23	P	P	04 04 38.0	+0.1
QSPA	South Pole Qui	85.66	180	P	P	04 04 40.4	+0.1
QSPA				IAmb	IAmb	04 04 55.0	
	comp=Z,10nm,1.0s						
MAW	Mawson	86.06	203	P	P	04 04 41.7	-0.3
	comp=Z,6.3nm,0.6s,baz=104,slow=6.1,SNR=21						
MAW				LR	LR	04 39 49.6	
	comp=Z,56nm,20.3s,baz=40,slow=33						
	comp=Z,6.3nm,0.6s						
MAW	Mawson	86.06	203	P	P	04 04 41.9	-0.2
	baz=86,SNR=12						
MAW	Mawson	86.06	203	P	P	04 04 41.4	-0.6
EPYK	Eagle Plains	86.18	22	P	P	04 04 42.8	+0.2
C36M	Paulatuk	91.54	21	P	P	04 05 07.4	-0.5
C36M				IAmb	IAmb	04 05 08.1	
	comp=Z,4.3nm,0.8s						
NVAR	Mina Array Bea	91.72	52	LR	LR	04 42 16.4	
	comp=Z,55nm,18.4s,baz=277,slow=33						
PFO	Pinyon Flats O	92.90	57	LR	LR	04 41 01.2	
	comp=Z,42nm,19.0s,baz=270,slow=32						
NEW	Newport	93.18	42	LR	LR	04 40 30.5	
	comp=Z,32nm,20.0s,baz=294,slow=31						
ELK	Elko	94.20	50	LR	LR	04 41 22.1	
	comp=Z,36nm,20.2s,baz=294,slow=31						
YKA	Yellowknife Ar	94.95	28	P	P	04 05 23.6	-0.1
	comp=Z,0.7nm,0.7s,baz=271,slow=4.5,SNR=9.4						
YKA				PKiKP	PKiKP	04 10 05.4	+0.1
	comp=Z,0.3nm,0.6s,baz=308,slow=1.9,SNR=4.4						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	94.95	28	P	P	04 05 23.4	-0.4
RPN	Rapa Nui	94.97	118	LR	LR	04 40 14.0	
	comp=Z,18nm,18.7s,baz=262,slow=30						
BCYI	Bear Canyon	95.64	46	P	P	04 05 26.8	-0.9
ARU	Arti	95.95	326	LR	LR	04 49 19.4	
	comp=Z,25nm,20.8s,baz=112,slow=36						
GEYT	Alibeck	96.38	308	LR	LR	04 48 48.4	
	comp=Z,28nm,21.6s,baz=232,slow=35						
LPIG	La Paz	97.95	66	LR	LR	04 47 11.4	
	comp=Z,34nm,18.1s,baz=209,slow=34						
PDAR	Pinedale Array	98.46	48	LR	LR	04 44 01.6	
	comp=Z,29nm,20.4s,baz=287,slow=32						
RES	Resolute Bay	99.91	14	LR	LR	04 45 47.7	
	comp=Z,16nm,21.8s,baz=66,slow=32						
AKASG	Malin Array Be	114.14	325	PKP	PKPdf	04 10 40.2	-0.6
	comp=Z,1.2nm,0.5s,baz=48,slow=3.4,SNR=7.2						
BRTR	Keskin Array B	115.03	312	PKP	PKiKP	04 10 42.5	-0.6
	comp=Z,0.3nm,0.5s,baz=48,slow=2.1,SNR=2.5						
NB2	NORSAR Subarra	116.47	340	PKPdf	PKPdf	04 10 44.2	-0.9
	comp=Z,0.5nm,0.7s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.47	340	PKP	PKPdf	04 10 43.8	-1.3
	comp=Z,1.1nm,0.8s,baz=80,slow=2.0,SNR=4.2						
BOSA	Boshof	119.98	234	PKP	PKPdf	04 10 52.0	-0.9
	comp=Z,2.0nm,0.7s,baz=62,slow=0.6,SNR=8.2						
BOSA	Boshof	119.98	234	PKPdf	PKPdf	04 10 51.8	-1.1
SCHQ	Schefferville	120.30	25	PKP	PKPdf	04 10 52.5	-0.1
	comp=Z,1.5nm,0.7s,baz=281,slow=5.2,SNR=6.5						
CONA	Conrad Observa	123.08	327	*e*P	PKPdf	04 10 58.2	0.0
	comp=Z,2.4nm,0.6s						
GERES	GERESS Array B	123.67	329	PKP	PKiKP	04 10 59.7	+0.1
	comp=Z,2.0nm,0.6s,baz=64,slow=3.1,SNR=17						
SOKA	Soboth	124.27	326	*e*P	PKPdf	04 11 00.2	-0.4
	comp=Z,1.3nm,0.6s						
OBKA	Obir	124.64	326	*e*P	PKPdf	04 11 00.3	-1.0
	comp=Z,1.1nm,0.5s						
KBA	Koelnbreinsper	124.95	327	*e*P	PKPdf	04 11 01.3	-0.7
	comp=Z,1.4nm,0.5s						
ABTA	Abfaltersbach	125.61	327	*e*P	PKPdf	04 11 02.2	-0.9
	comp=Z,1.9nm,0.6s						
WATA	Walderalm	125.73	328	*e*P	PKPdf	04 11 02.9	-0.5
	comp=Z,2.0nm,0.6s						
WTTA	Wattenberg	125.75	328	*e*P	PKPdf	04 11 03.5	0.0
	comp=Z,2.9nm,0.5s						
MOTA	Moosalm	125.97	329	*e*P	PKPdf	04 11 03.3	-0.7
	comp=Z,3.2nm,0.5s						
SQTA	Sankt Quirin	126.00	328	*e*P	PKiKP	04 11 04.3	-0.1
	comp=Z,6.5nm,0.9s						
RETA	Reutte	126.05	329	*e*P	PKPdf	04 11 03.7	-0.3
	comp=Z,0.8nm,0.5s						
FETA	Feichten	126.38	329	*e*P	PKiKP	04 11 05.1	0.0
	comp=Z,2.5nm,0.7s						
DAVA	Damuels	126.64	329	*e*P	PKPdf	04 11 04.8	-0.4
	comp=Z,3.8nm,0.8s						
DAVOX	Davos/Dischmat	126.97	329	PKP	PKPdf	04 11 06.1	+0.2
	comp=Z,3.7nm,0.7s,baz=130,slow=3.1,SNR=8.8						
LPAZ	La Paz	134.58	118	PKP	PKPdf	04 11 21.9	+0.3
	comp=Z,4.1nm,0.7s,baz=251,slow=2.4,SNR=19						
LPAZ	La Paz	134.58	118		PKPdf	04 11 19.9	-1.8
ESDC	Sonseca Array	139.03	332	PKP	PKPdf	04 11 29.1	+0.5
	comp=Z,0.4nm,0.7s,baz=24,slow=2.0,SNR=5.0						
ESDC	Sonseca Array	139.03	332	PKPdf	PKPdf	04 11 28.1	-0.5
TORD	Torodi Ar. Bea	150.22	289	PKPbc	PKPbc	04 11 53.6	0.0
	comp=Z,20nm,0.7s,baz=74,slow=2.5,SNR=271						
BDFB	Brasilia	151.36	134	PKPbc	PKiKP	04 11 57.0	+0.1
	comp=Z,18nm,0.7s,baz=252,slow=0.9,SNR=31						
BDFB	Brasilia	151.36	134	PKPbc	PKPbc	04 11 55.6	-0.8
DBIC	Dimbokro	157.71	277	PKPab	PKPab	04 12 31.7	0.0
	comp=Z,4.6nm,0.6s,baz=101,slow=4.0,SNR=7.6						
DBIC	Dimbokro	157.71	277		PKPab	04 12 30.7	-1.0

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*IDC **17** 04:05:58.7±14.0, 37°.03N×72°.61E, h204^{km}±131^{km}, mb3.0/1, mbtmp3.6/4, Error ellipse: s-maj=229.9km s-min=67.8km az=137.0*

*NNC **17** 04:06:04.8±8.3, 38°.01N×72°.24E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=63.8km s-min=47.8km az=171.0*

ISC 17 04:06:01.9±1.9**, 37°.7N**±0°.1×**72°.0E**±0°.2**, h200**^{km}**, n12, σ1^{s}.12**/15**, 3C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.62	16	P	Pn	04 07 12.6	+0.8
	SNR=18						
UCH	Uchtor	4.92	22	P	Pn	04 07 16.3	+0.7
	SNR=14						
EKS2	Erkin-Say	5.14	15	P	Pn	04 07 19.9	+1.7
	SNR=7.8						
AAK	Ala-Archa	5.29	20	P	Pn	04 07 21.6	+1.5
	SNR=5.5						
KK31	Karatay Array	5.53	348	Pn	Pn	04 07 24.4	+1.4
	2.2nm,0.5s,baz=156,slow=10,SNR=21						
KK31				⇑Sn	Sn	04 08 26.0	-1.2
	3.0nm,0.3s,baz=159,slow=20,SNR=4.9						
CHMS	Chumysh	5.70	21	⇓Pn	Pn	04 07 25.7	+0.5
	2.9nm,0.3s						
CHMS				⇑Sn	Sn	04 08 30.2	-0.9
	8.8nm,0.7s						
TKM2	Tokmak 2	5.90	26	P	Pn	04 07 28.9	+1.0
	SNR=8.0						
TKM2	Tokmak 2	5.90	26	⇑Pn	Pn	04 07 28.1	+0.2
	3.3nm,0.6s						
TKM2				⇓Sn	Sn	04 08 35.5	-0.5
	2.4nm,0.7s						
MKAR	Makanchi Array	11.85	37	P	Pn	04 08 44.8	0.0
	0.2nm,0.4s,baz=212,slow=9.8,SNR=2.5						
KURBB	Kurchatov Arra	13.74	18	P	P	04 09 11.2	+0.7
	1.0nm,0.5s,baz=200,slow=11,SNR=7.3						
ZALV	Zalesovo Beam	18.50	24	P	Pn	04 10 04.0	-1.5
	1.7nm,0.3s,baz=223,slow=9.6,SNR=16						
TORD	Torodi Ar. Bea	66.56	269	P	P	04 16 30.2	-0.5
	0.2nm,0.4s,baz=47,slow=5.4,SNR=5.9						
	0.2nm,0.4s						

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*IDC **17** 04:15:03.6±10.0, 18°.66N×146°.80E, h313^{km}±111^{km}, mb3.2/6, mbtmp3.9/6, Error ellipse: s-maj=108.9km s-min=16.9km az=87.0*

ISC 17 04:15:02.6±2.8**, 18°.7N**±0°.2×**146°.7E**±0°.9**, h300**^{km}**, n6, σ1^{s}.36**/6**, mb3.6**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	Kul'dur	32.80	342	P	P	04 21 09.1	+0.9
	1.6nm,0.6s,baz=135,slow=7.1,SNR=6.2						
	1.6nm,0.6s						
WRA	Warramunga Arr	40.25	198	P	P	04 22 10.8	-0.3
	0.8nm,0.3s,baz=21,slow=8.8,SNR=29						
	0.8nm,0.3s						
ASAR	Alice Springs	43.90	197	P	P	04 22 40.6	+0.3
	0.2nm,0.3s,baz=17,slow=7.0,SNR=5.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.20	314	P	P	04 24 32.7	0.0
	0.3nm,0.4s,baz=77,slow=7.4,SNR=5.3						
	0.3nm,0.4s						
NRIK	Noril'sk	61.98	340	P	P	04 24 49.0	-1.9
	1.5nm,0.4s,baz=90,slow=5.1,SNR=2.6						
	1.5nm,0.4s						
FINES	FINESS Array B	87.32	336	P	P	04 27 16.5	+1.0
	0.4nm,0.3s,baz=55,slow=4.4,SNR=4.8						
	0.4nm,0.3s						

WEL 17 04:20:50.8±1.3**, 36°S**±19°×**17°9W**±2°6**, h33**^{km}**, M3.8**/8**, ML4.0**/12**, MLv3.8**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.66	222	P	Pn	04 21 31.1	-0.3
WMGZ	Waiomatatini S	2.80	217	P	Pn	04 21 34.5	+1.2
PKGZ	Pakihiroa	3.02	220	P	Pn	04 21 36.5	+0.1
PKGZ				S	Sn	04 22 11.4	-0.1
PUZ	Puketiti	3.08	216	P	Pn	04 21 37.5	+0.4
PUZ				S	Sn	04 22 14.0	+1.2
HAZ	Te Kaha	3.09	225	P	Pn	04 21 37.6	+0.3
HAZ				S	Sn	04 22 14.6	+1.6
TWGZ	Tauwhareparae	3.29	218	P	Pn	04 21 40.3	+0.1
TWGZ				S	Sn	04 22 18.6	+0.5
RUGZ	Raukumara Rang	3.30	223	P	Pn	04 21 40.2	-0.1
CNGZ	Carnagh Statio	3.44	212	P	Pn	04 21 41.6	-0.4
CNGZ				S	Sn	04 22 22.4	+0.8
MWZ	Matawai	3.65	220	P	Pn	04 21 44.5	-0.5
MWZ				S	Sn	04 22 26.3	-0.5
RIGZ	Rimuhau	3.82	215	P	Pn	04 21 47.4	+0.1
RIGZ				S	Sn	04 22 30.9	-0.1
URZ	Urewera	3.82	225	P	Pn	04 21 45.8	-1.5
SNGZ	Shannon Statio	4.08	218	P	Pn	04 21 51.1	+0.2
SNGZ				S	Sn	04 22 39.2	+1.7
MTHZ	Maungataniwha	4.39	221	P	Pn	04 21 54.7	-0.5
ETVZ	East Tongariro	5.22	226	P	Pn	04 22 07.5	+0.8

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*BGS **17** 04:50:43.6±1.4, 45°.78N×0°.61W, h12^{km}±8^{km}, ML3.5, ML3.5*

*LDG **17** 04:50:45.4±0.1, 45°.85N×0°.59W, h10^{km}, Ml3.9/41, Error ellipse: s-maj=1.6km s-min=1.3km az=72.0*

*STR **17** 04:50:45.5±0.4, 46°N±1°×°±°, h7^{km}±3^{km}, MLv3.7/24, preliminary*

ISC 17 04:50:43.7±1.0**, 45°.80N**±0°.01×**0°.55W**±0°.02**, h14**^{km}±8^{km}**, n143, σ1^{s}.62**/232**, 4C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIF	Chize	0.35	16	⇑*i*P	Pb	04 50 51.8	+0.1
CHIF				*e*S	Sg	04 50 56.1	+0.6
CHIF				IAML		04 50 56.5	
	comp=N,5µm,0.1s						
CHIF				IAML		04 50 57.0	
	comp=E,5µm,0.1s						
CHIF	Chize	0.35	16	⇑Pg	Pb	04 50 51.8	+0.1
CHIF				Sg	Sg	04 50 56.2	+0.6
MFF	Saint Martin d	0.85	19	*e*Pg	Pg	04 51 00.7	+0.6
MFF	Saint Martin d	0.85	19	*e*Pn	Pn	04 51 01.4	+0.2
MFF				*e*Sg	Sg	04 51 11.1	-0.2
	comp=E,2µm,0.3s						
MFF				*e*Sn	Sb	04 51 12.8	+1.3
MFF	Saint Martin d	0.85	19	⇑Pg	Pg	04 51 00.8	+0.6
MFF				Sg	Sg	04 51 11.9	+0.6
LRVF	chteau la Riv	0.87	169	Pg	Pn	04 51 02.6	+1.2
LRVF				Sg	Sn	04 51 16.0	+2.1
LFF	La Frestale	1.25	133	*e*Pn	Pb	04 51 07.5	+0.5
LFF	La Frestale	1.25	133	*e*Pg	Pg	04 51 08.6	+0.9
LFF				*e*Sg	Sg	04 51 25.3	+1.3
	comp=E,540nm,0.3s						
RJF	Les Rejaudoux	1.53	108	*e*Pn	Pn	04 51 11.8	+1.2
RJF	Les Rejaudoux	1.53	108	*e*Pg	Pg	04 51 13.5	+0.4
RJF				*e*Sn	Sn	04 51 31.5	+1.2
RJF				*e*Sg	Sg	04 51 33.7	+0.7
	comp=E,2µm,0.3s						
MONQ	Montcuq	1.89	139	P	Pb	04 51 17.1	-0.8
MONQ				Pn	Pg	04 51 18.0	-1.9
MONQ				Sn	Sg	04 51 44.0	-0.4
TCF	Toulx Ste Croi	1.98	75	*e*Pn	Pn	04 51 17.9	+1.1
TCF	Toulx Ste Croi	1.98	75	*e*P	Pb	04 51 20.3	+0.8
TCF	Toulx Ste Croi	1.98	75	*e*Pg	Pg	04 51 21.9	+0.2
TCF				*e*Sn	Sn	04 51 41.5	+0.1
TCF				*e*Sg	Sb	04 51 46.5	+2.5
	comp=E,220nm,0.3s						
CAF	Calviac	2.04	114	*e*Pn	Pn	04 51 19.2	+1.6
CAF	Calviac	2.04	114	*e*Pg	Pg	04 51 22.5	-0.2
CAF				*e*Sn	Sn	04 51 44.8	+2.0
CAF				*e*Sg	Sg	04 51 49.2	+0.1
	comp=E,208nm,0.2s						
TERF	Tercis-les-Bai	2.16	191	Pn	Pb	04 51 21.6	-0.9
BGF	Bois d'Agland	2.48	71	*e*Pn	Pn	04 51 24.7	+1.1
BGF	Bois d'Agland	2.48	71	*e*Pg	Pg	04 51 31.2	+0.1
BGF				*e*Sn	Sn	04 51 52.4	-1.2
BGF				*e*Sg	Sg	04 52 02.9	-0.3
	comp=E,725nm,0.3s						
PYM	Petit Puy Mans	2.49	90	P	Pn	04 51 24.5	+0.7
PYM				Pn	Pb	04 51 24.9	-3.3
CFF	Clermont-Ferra	2.56	90	⇑Pn	Pn	04 51 25.9	+1.2
OSSF	Osses	2.59	192	P	Pn	04 51 25.8	+0.6
OSSF				Pn	Pb	04 51 26.5	-3.5
OSSF				Sn	Sb	04 52 01.4	-0.2
GRR	Gorron	2.60	355	*e*Pn	Pn	04 51 25.0	-0.3
GRR	Gorron	2.60	355	*e*Pg	Pb	04 51 30.8	+0.8
GRR				*e*Sn	Sn	04 51 55.1	-1.5
GRR				*e*Sg	Sb	04 52 03.9	+2.1
	comp=E,183nm,0.2s						
HYF	Humbligny	2.64	55	*e*Pn	Pn	04 51 27.0	+1.1
HYF	Humbligny	2.64	55	*e*Pg	Pg	04 51 34.6	+0.3
HYF				*e*Sn	Sn	04 51 57.7	-0.1
HYF				*e*Sg	Sg	04 52 08.5	-0.1
EALK	Alkurruntz	2.67	195	P	Pn	04 51 26.8	+0.5
EALK				Pn	Pb	04 51 28.3	-3.0
ATE	Arette	2.72	182	P	Pn	04 51 27.0	+0.1
ATE				Pn	Pn	04 51 28.0	+1.1
PYLO	Lourdes	2.73	172	Pn	Pn	04 51 28.9	+1.9
PYLO				Sn	Sb	04 52 05.2	-0.3
SJPF	Ste Jean	2.73	191	*e*Pn	Pn	04 51 27.3	+0.2
SJPF	Ste Jean	2.73	191	*e*Pg	Pg	04 51 35.7	-0.3
SJPF				*e*Sg	Sg	04 52 10.1	-1.2
	comp=E,94nm,0.3s						
QUIF	Quistinic	2.78	321	*e*Pn	Pn	04 51 27.4	-0.3
QUIF	Quistinic	2.78	321	*e*Pg	Pg	04 51 34.8	-2.1
QUIF				*e*Sn	Sn	04 51 58.2	-2.8
QUIF				*e*Sg	Sb	04 52 09.2	+2.3
	comp=E,165nm,0.2s						
LDF	La Druitiere	2.81	6	*e*Pn	Pn	04 51 27.9	-0.3
LDF	La Druitiere	2.81	6	*e*Pg	Pb	04 51 35.3	+1.7
LDF				*e*Sn	Sn	04 52 00.2	-1.6
LDF				*e*Sg	Sb	04 52 11.5	+3.6
	comp=E,269nm,0.4s						
SGMF	Saint Gilles	2.81	331	*e*Pn	Pn	04 51 28.0	-0.2
SGMF	Saint Gilles	2.81	331	*e*Pg	Pb	04 51 35.3	+1.6
SGMF				*e*Sn	Sn	04 51 59.2	-2.7
SGMF				*e*Sg	Sb	04 52 10.6	+2.6
	comp=E,71nm,0.2s						
EPF	Esparros	2.84	167	*e*Pn	Pn	04 51 29.1	+0.4
EPF	Esparros	2.84	167	*e*Pg	Pg	04 51 37.9	-0.2
EPF				*e*Sn	Sn	04 52 02.5	-0.2
EPF				*e*Sg	Sg	04 52 15.4	+0.5
	comp=E,101nm,0.3s						
AVF	Avril sur Loir	2.88	68	*e*Pn	Pn	04 51 29.8	+0.7
AVF	Avril sur Loir	2.88	68	*e*Pg	Pg	04 51 38.5	-0.3
AVF				*e*Sn	Sn	04 52 03.5	0.0
AVF				*e*Sg	Sg	04 52 15.2	-0.9
	comp=E,128nm,0.4s						
ETSF	Etsaut	2.90	180	*e*Pn	Pn	04 51 29.5	0.0
ETSF	Etsaut	2.90	180	*e*Pg	Pg	04 51 38.5	-0.8
ETSF				*e*Sn	Sn	04 52 03.8	-0.4
ETSF				*e*Sg	Sg	04 52 15.4	-1.4
	comp=E,64nm,0.4s						
VIEF	Viey	2.94	172	Pn	Pn	04 51 29.8	-0.3
VIEF				Pn	Pn	04 51 31.5	+1.3
FLN	La Foliniere	2.96	1	*e*Pn	Pn	04 51 29.9	-0.4
	baz=185						
FLN	La Foliniere	2.96	1	*e*Pg	Pg	04 51 39.1	-1.4
	baz=178						
FLN				*e*Sn	Sn	04 52 03.4	-2.2
FLN				*e*Sg	Sb	04 52 15.3	+3.0
	comp=E,152nm,0.3s						
CANF	Canfranc	3.04	180	Pn	Pn	04 51 33.4	+2.0
SSF	Saint Saulge	3.07	64	*e*Pn	Pn	04 51 32.3	+0.5
SSF	Saint Saulge	3.07	64	*e*P	Pn	04 51 35.7	+3.9
SSF	Saint Saulge	3.07	64	*e*Pg	Pg	04 51 41.4	-1.1
SSF				*e*Sn	Sn	04 52 07.2	-1.1
SSF				*e*Sg	Sg	04 52 21.5	-0.8
	comp=E,88nm,0.3s						
MLS	Moulis	3.08	157	Pn	Pn	04 51 33.8	+1.9
EARA	Aranguren	3.12	194	Pn	Pn	04 51 34.6	+2.2
ROSF	Rostrenen	3.15	325	*e*Pn	Pn	04 51 32.6	-0.2
ROSF	Rostrenen	3.15	325	*e*Pg	Pg	04 51 41.7	-2.3
ROSF				*e*Sn	Sn	04 52 06.5	-3.7
ROSF				*e*Sg	Sb	04 52 20.5	+2.9
	comp=E,97nm,0.3s						
ROSF	Rostrenen	3.15	325	*e*P	Pn	04 51 32.7	-0.1
ROSF				IAML		04 52 28.7	
	comp=E,84nm,0.3s						
ROSF				IAML		04 52 32.2	
	comp=N,57nm,0.5s						
ROSF	Rostrenen	3.15	325	Sn	Sn	04 52 12.5	+2.3
ROSF	Rostrenen	3.15	325	P	Pn	04 51 32.6	-0.2
ROSF				Pn	Pn	04 51 33.1	+0.3
MTLF	Montolieu	3.15	140	*e*Pn	Pn	04 51 34.1	+1.2
MTLF	Montolieu	3.15	140	*e*Pg	Pg	04 51 43.5	-0.6
MTLF				*e*Sn	Sn	04 52 11.1	+0.8
MTLF				*e*Sg	Sg	04 52 24.2	-0.7
	comp=N,62nm,0.2s						
MTLF	Montolieu	3.15	140	Sn	Sb	04 52 16.7	-1.1
MTLF	Montolieu	3.15	140	P	Pn	04 51 34.2	+1.2
MTLF	Montolieu	3.15	140	Pn	Pn	04 51 35.3	+2.4
SMF	Signal de Mont	3.16	73	*e*Pn	Pn	04 51 33.5	+0.5
SMF	Signal de Mont	3.16	73	*e*Pg	Pg	04 51 43.8	-0.4
SMF				*e*Sn	Sn	04 52 09.2	-1.3
SMF				*e*Sg	Sg	04 52 24.8	-0.3
	comp=N,196nm,0.6s						
ECHI	Chisagues Biel	3.18	170	Pn	Pn	04 51 35.1	+1.7
LOR	Lormes	3.38	63	*e*Pn	Pn	04 51 36.1	+0.1
	baz=245						
LOR	Lormes	3.38	63	*e*Pg	Pg	04 51 47.6	-0.7
	baz=245						
LOR				*e*Sn	Sn	04 52 14.5	-1.3
LOR				*e*Sg	Sg	04 52 31.3	-0.8
	comp=N,76nm,0.3s						
LOR	Lormes	3.38	63	Pn	Pn	04 51 36.4	+0.4

FNEB	Nbias	3.46	146	Pn	Pn	04 51 39.5	+2.3
JQE	Queens East	3.55	344	eP	Pn	04 51 38.3	0.0
JRS	Jersey	3.55	343	eP	Pn	04 51 38.1	-0.3
JRS				IAML		04 52 40.2	
	comp=E,54nm,0.4s						
JRS				IAML		04 52 44.8	
	comp=N,40nm,0.4s						
JSA	Saint Aubin	3.56	343	eP	Pn	04 51 38.3	-0.2
JSA				IAML		04 52 40.9	
	comp=E,58nm,0.3s						
JSA				IAML		04 52 41.3	
	comp=N,53nm,0.3s						
JSA	Saint Aubin	3.56	343	Pn	Pn	04 51 38.8	+0.3
LASF	Ste Croix	3.57	117	ePn	Pn	04 51 40.2	+1.6
LASF	Ste Croix	3.57	117	ePg	Pg	04 51 51.6	-0.4
LASF				eSn	Sn	04 52 21.1	+0.5
LASF				eSg	Sg	04 52 37.5	-0.8
	comp=N,133nm,0.5s						
JVM	Valle D.L. Mar	3.60	342	eP	Pn	04 51 38.9	-0.1
JLP	Les Platons	3.60	344	eP	Pn	04 51 39.3	+0.2
PAND	Andorre	3.61	155	Pn	Pn	04 51 40.7	+1.4
SSB	Saint Sauveur	3.61	96	Pn	Pn	04 51 40.8	+1.5
CAMF	Camaret-sur-Me	3.72	313	Pn	Pn	04 51 41.1	+0.4
VIVF	Saint-Julien-l	3.80	103	ePn	Pn	04 51 43.6	+1.8
VIVF	Saint-Julien-l	3.80	103	ePg	Pg	04 51 56.1	-0.3
VIVF				eSn	Sn	04 52 25.7	-0.6
VIVF				eSg	Sg	04 52 43.9	-1.7
	comp=N,82nm,0.3s						
FILF	Fillols	3.93	144	Pn	Pn	04 51 45.1	+1.4
SJAF	Saint Jean de	4.13	142	Pn	Pn	04 51 48.2	+1.8
OG35	Corcelles	4.28	85	Pn	Pn	04 51 49.8	+1.4
SAUF	chteau de Sau	4.43	113	Pn	Pn	04 51 52.1	+1.7
SFTF	Sexfontaines	4.51	56	ePn	Pn	04 51 51.8	+0.2
	baz=237						
SFTF	Sexfontaines	4.51	56	ePg	Pg	04 52 08.3	-1.8
	baz=235						
SFTF				eSn	Sn	04 52 42.5	-1.4
SFTF				eSg	Sg	04 53 06.4	-2.1
	comp=N,46nm,0.4s						
ORIF	Oris-en-Rattie	4.61	99	ePn	Pn	04 51 54.5	+1.4
ORIF	Oris-en-Rattie	4.61	99	ePg	Pg	04 52 11.1	-0.9
ORIF				eSn	Sn	04 52 46.3	-0.2
ORIF				eSg	Sg	04 53 10.7	-1.1
	comp=N,26nm,0.5s						
ORIF	Oris-en-Rattie	4.61	99	Pn	Pn	04 51 54.0	+0.9
CABF	La Chapelle	4.68	78	ePn	Pn	04 51 54.7	+0.8
CABF	La Chapelle	4.68	78	ePg	Pg	04 52 11.3	-1.9
CABF				eSn	Sn	04 52 45.0	-3.0
CABF				eSg	Sg	04 53 12.2	-1.5
	comp=N,50nm,0.6s						
MEZF	Maizieres J'vi	4.68	53	ePn	Pn	04 51 54.5	+0.7
	baz=231						
MEZF	Maizieres J'vi	4.68	53	ePg	Pg	04 52 11.6	-1.6
	baz=234						
MEZF				eSn	Sn	04 52 45.9	-2.0
MEZF				eSg	Sg	04 53 11.9	-1.9
	comp=N,36nm,0.3s						
SMRF	Simiane la Rot	4.72	111	ePn	Pn	04 51 55.6	+1.2
SMRF	Simiane la Rot	4.72	111	ePg	Pg	04 52 14.2	+0.2
SMRF				eSn	Sn	04 52 48.2	-0.7
SMRF				eSg	Sg	04 53 14.1	-0.9
	comp=N,24nm,0.5s						
BRANT	Les Verrieres	4.99	74	Pn	Pn	04 51 58.7	+0.5
BLAF	les Blancs	5.04	109	Pn	Pn	04 52 00.9	+2.1
ARTF	Artigues	5.04	114	Pn	Pn	04 52 00.5	+1.6
PAGF	Fort de Pagny	5.09	55	ePn	Pn	04 51 59.2	-0.3
	baz=236						
PAGF	Fort de Pagny	5.09	55	ePg	Pg	04 52 19.1	-1.9
	baz=237						
PAGF				eSn	Sn	04 52 55.4	-2.6
PAGF				eSg	Sg	04 53 24.8	-2.1
	comp=N,40nm,0.5s						
MENF	Mencas	5.09	20	Pn	Pn	04 51 59.7	+0.2
HMNX	Herstmonceux	5.11	6	eS	Sn	04 52 55.6	-2.7
HMNX				IAML		04 53 35.1	
	comp=E,105nm,0.5s						
HMNX				IAML		04 53 41.5	
	comp=N,100nm,0.7s						
LPL	La Plagne	5.11	91	ePn	Pn	04 52 01.1	+1.1
LPL	La Plagne	5.11	91	ePg	Pg	04 52 20.3	-1.2
LPL				eSn	Sn	04 52 57.4	-1.5
LPL				eSg	Sg	04 53 26.8	-0.9
	comp=N,34nm,0.7s						
OGMO	Fort Saint-Gob	5.12	94	Pn	Pn	04 52 01.6	+1.6
LPG	La Plagne	5.13	91	ePn	Pn	04 52 01.1	+0.8
LPG	La Plagne	5.13	91	ePg	Pg	04 52 20.6	-1.2
LPG				eSn	Sn	04 52 58.5	-0.9
LPG				eSg	Sg	04 53 26.6	-1.6
	comp=N,18nm,0.5s						
OGDI	Digne	5.14	107	Pn	Pn	04 52 01.7	+1.4
DYA	Yadsworthy	5.16	335	eP	Pn	04 51 59.8	-0.6
DYA				IAML		04 53 32.5	
	comp=E,17nm,0.4s						
DYA				IAML		04 53 36.0	
	comp=N,14nm,0.3s						
DYA	Yadsworthy	5.16	335	Pn	Pn	04 51 59.9	-0.6
CHMF	Charmoille	5.17	71	Pn	Pn	04 52 01.0	+0.3
MBDF	Montbardon	5.28	99	ePn	Pn	04 52 00.7	-1.5
MBDF	Montbardon	5.28	99	ePg	Pg	04 52 22.4	-2.3
MBDF				eSn	Sn	04 53 02.1	-0.8
MBDF				eSg	Sg	04 53 27.3	-5.7
	comp=N,19nm,0.7s						
BAIF	Baives	5.33	35	ePn	Pn	04 52 02.5	-0.2
BAIF	Baives	5.33	35	ePg	Pg	04 52 23.3	-2.3
BAIF				eSn	Sn	04 53 00.5	-3.3
BAIF				eSg	Sg	04 53 31.2	-3.3
	comp=N,44nm,0.8s						
TRIGF	Trigance	5.36	110	Pn	Pn	04 52 05.3	+2.1
CCA1	Carnmenellis	5.40	326	eP	Pn	04 52 03.3	-0.4
CCA1				IAML		04 53 48.7	
	comp=N,10nm,0.8s						
CCA1				IAML		04 53 53.7	
	comp=E,11nm,0.5s						
CCA1	Carnmenellis	5.40	326	Pn	Pn	04 52 03.5	-0.2
HINF	Hinteralfeld	5.46	66	ePn	Pn	04 52 05.1	+0.4
HINF	Hinteralfeld	5.46	66	ePg	Pg	04 52 26.5	-1.8
HINF				eSn	Sn	04 53 03.3	-4.1
HINF				eSg	Sg	04 53 35.5	-3.5
	comp=E,27nm,0.4s						
DOU	Dourbes	5.51	37	eP	Pn	04 52 05.5	+0.2
DOU	Dourbes	5.51	37	Pn	Pn	04 52 05.5	+0.2
LMR	La Mourre	5.61	114	ePn	Pn	04 52 07.4	+0.8
LMR				eSn	Sn	04 53 09.0	-1.9
LMR				eSg	Sg	04 53 41.3	-2.4
	comp=E,14nm,0.6s						
GIVF	Givet	5.62	38	ePn	Pn	04 52 06.7	0.0
GIVF	Givet	5.62	38	ePg	Pg	04 52 28.6	-2.5
GIVF				eSn	Sn	04 53 06.2	-4.8
GIVF				eSg	Sg	04 53 40.7	-3.1
	comp=E,22nm,0.4s						
CALF	Calern	5.70	108	Pn	Pn	04 52 09.6	+1.6
SWN1	Swindon	5.78	352	eP	Pn	04 52 09.4	+0.5
HTL	Hartland	5.82	335	eP	Pn	04 52 09.2	-0.3
HTL				IAML		04 53 58.3	
	comp=E,20nm,0.5s						
HTL				IAML		04 53 59.9	
	comp=N,18nm,0.4s						
CDF	Champ du Feu	5.94	61	ePn	Pn	04 52 11.3	0.0
CDF	Champ du Feu	5.94	61	ePg	Pg	04 52 35.2	-2.2
CDF				eSn	Sn	04 53 17.5	-1.7
CDF				eSg	Sg	04 53 52.0	-2.4
	comp=N,28nm,0.5s						
SBF	Sospel	6.00	106	ePn	Pn	04 52 12.1	+0.1
SBF				eSn	Sn	04 53 18.2	-2.3
SBF				eSg	Sg	04 53 54.6	-1.5
	comp=N,21nm,0.7s						
STRD	Stroud	6.08	350	eP	Pn	04 52 13.1	+0.1
STRD				IAML		04 54 04.5	
	comp=N,39nm,0.6s						
STRD				IAML		04 54 11.0	
	comp=E,31nm,0.5s						
MONM	Monmouth	6.23	347	eP	Pn	04 52 14.7	-0.3
MONM				IAML		04 54 09.7	
	comp=N,15nm,0.5s						
MONM				IAML		04 54 13.1	
	comp=E,8.5nm,0.4s						
MCH1	Michaelchurch	6.41	346	eP	Pn	04 52 17.1	-0.5
MCH1				IAML		04 54 17.1	
	comp=N,8.6nm,0.7s						
MCH1				IAML		04 54 19.6	
	comp=E,8.6nm,0.6s						
RSBS	Rosebush, Pemb	6.75	337	eP	Pn	04 52 21.6	-0.7
HLM1	Long Mynd	6.90	348	eP	Pn	04 52 23.8	-0.5
HLM1				IAML		04 53 40.7	
	comp=E,4.6nm,0.3s						
HLM1				IAML		04 53 42.7	
	comp=N,4.0nm,0.3s						
LLW	Llanuwychllyn	7.34	345	eP	Pn	04 52 29.6	-0.8
PGF	Pioggiola	7.59	112	ePn	Pn	04 52 35.1	+1.1
PGF	Pioggiola	7.59	112	eP	Pn	04 52 38.7	+4.7
PGF				eSn	Sn	04 53 56.0	-3.8
LBWR	Ladybower, Pea	7.65	355	eP	Pn	04 52 34.0	-0.6
KSH	Kashi	54.62	67	P	P	05 00 15.9	+4.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						

BJI **17** *04:55:55.4±0.0, 5°.48S×152°.23E, h69^{km}, mb4.9/62, mB5.0/32, Ms4.6/14, Ms7 4.2/20*

MOS **17** *04:55:58.4±1.0, 5°.11S×151°.72E, h61^{km}, mb5.3/21, Error ellipse: s-maj=10.0km s-min=6.8km az=92.1*

GCMT **17** *04:56:00.6±0.2, 5°.32S±0°.02×151°.85E±0°.02, h59^{km}±1^{km}, MW5.0/101, Moment Tensor Solution. s78,c101; s101,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.24±.15; $M_{\theta\theta}$-3.84±.11; $M_{\phi\phi}$-0.40±.12; $M_{r\theta}$-0.16±.09; $M_{\theta\phi}$-1.90±.10; $M_{\phi r}$-0.53±.09; Best double couple: $M_0$4.49800×10^{16} NP1:ϕ_s72.00000°, δ43.00000°, λ99.00000°. NP2:ϕ_s240.00000°, δ48.00000°, λ82.00000°. Principal axes: T 4.2990, Plg83.0000°, Azm86.0000°; N 0.3980, Plg6.0000°, Azm246.0000°; P -4.6970, Plg2.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **17** *04:56:00.6±1.4, 5°.23S±0°.06×151°.86E±0°.06, h63^{km}±4^{km}, mb5.1/164 Error ellipse: s-maj=9.6km s-min=7.2km az=137.0*

IDC **17** *04:56:00.6±0.6, 5°.14S×151°.78E, h70^{km}±5^{km}, mb4.6/24, mbtmp4.9/26, MS3.8/51, Error ellipse: s-maj=11.4km s-min=7.5km az=111.0*

DJA **17** *04:56:01.8±0.5, 5°S±3°×15°2E±°, h89^{km}±4^{km}, M5.3/35, mB5.5/10, mb5.3/35, MLv5.7/3, Mw(mB)5.0/10*

ISC 17 04:55:59.9±0.3, **5°.22S**±0°.03×**151°.83E**±0°.04, **h65**^{km}±2^{km}, **h65**^{km}**:pP-P, n698,** σ1^{s}08/693, **mb5.1**/148, **77C-15D, Fault plane solution: NP1:**ϕ_s82.75098°, δ32.08154°, λ85.41635°. **NP2:**ϕ_s268.15622°, δ58.03326°, λ92.86780°. **Principal axes:** T Plg76.7772°, Azm187.0536°; N Plg2.4326°, Azm86.6370°; P Plg12.9891°, Azm356.0755°;

New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.93	13	P	Pn	04 56 18.3	+1.0
	22μm,0.3s,baz=257,slow=1.1,SNR=1641						
KRVT				S	Sn	04 56 30.5	+0.4
	30μm,0.4s,baz=135,slow=1.4,SNR=10						
KRVT				LR	LR	04 56 48.4	
	comp=Z,79μm,18.6s,baz=116,slow=56						
RABL	Rabaul	1.07	18		Pn	04 56 20.0	+0.9
RABL				Sn	Sn	04 56 34.8	+1.4
RABL	Rabaul	1.07	18	P	Pn	04 56 20.3	+1.1
MANU	Manus Island	5.45	305	Pn	Pn	04 57 21.1	+2.4
PMG	Port Moresby	6.22	228	P	Pn	04 57 31.8	+2.5
	94nm,0.4s,baz=33,slow=6.5,SNR=28						
PMG				S	Sn	04 58 41.4	+2.4
	689nm,0.9s,baz=271,slow=22,SNR=16						
PMG	Port Moresby	6.22	228	Pn	Pn	04 57 30.0	+0.8
PMG	Port Moresby	6.22	228	ceP	Pn	04 57 29.6	+0.4
PMG				pmax	pmax		
	comp=Z,209nm,1.0s						
PMG	Port Moresby	6.22	228	P	Pn	04 57 31.7	+2.5
PMG	Port Moresby	6.22	228	P	Pn	04 57 31.2	+2.0
HNR	Honiara	9.08	118	LR	LR	05 01 33.9	
	comp=Z,695nm,21.9s,baz=299,slow=36						
GENI	Genyem	11.92	282	P	Pn	04 58 48.9	+1.8
	comp=Z,3μmcomp=Z,252nm,1.2s						
COEN	Coen	12.17	224	Pn	Pn	04 58 50.9	+0.4
COEN	Coen	12.17	224	P	Pn	04 58 51.7	+1.2
SMPI	Sarmi	13.47	283	P	Pn	04 59 09.2	+1.0
	comp=Z,74nm,1.4s						
PATS	Pohnpei	13.61	28	Pn	Pn	04 59 09.5	-0.6
MTSU	Mount Surprise	14.79	209	P	Pn	04 59 27.1	+1.6
CTA	Charters Tower	15.74	200	P	P	04 59 39.9	-0.7
	comp=Z,15nm,0.9s,baz=33,slow=12,SNR=8.4						
CTA				LR	LR	05 05 27.4	
	comp=Z,594nm,19.5s,baz=30,slow=36						
CTAO	Charters Tower	15.74	200	Pn	Pn	04 59 38.6	+0.8
CTAO	Charters Tower	15.74	200	P	Pn	04 59 38.6	+0.8
CTAO				pmax	pmax		
	comp=Z,37nm,1.2s						
SANVU	Saraoutou	18.21	125	P	Pn	05 00 08.5	+0.1
SANVU				IAmb	IAmb	05 00 34.4	
	comp=Z,124nm,0.8s						
SANVU	Saraoutou	18.21	125	P	Pn	05 00 12.0	+3.7
QIS	Mount Isa	19.33	217	P	P	05 00 20.5	+0.4
	baz=19,SNR=108						
QIS	Mount Isa	19.33	217	P	Pn	05 00 21.8	+0.1
GUMO	Guam	19.92	340	P	Pn	05 00 29.1	+0.5
	comp=Z,261nm,0.9s,baz=191,slow=9.4,SNR=10						
GUMO				LR	LR	05 08 44.0	
	comp=Z,88nm,19.0s,baz=150,slow=38						
GUMO	Guam	19.92	340	P	P	05 00 27.3	+0.9
GUMO	Guam	19.92	340	P	P	05 00 27.3	+0.9
GUMO				pmax	pmax		
	comp=Z,270nm,0.9s						
EIDS	Eidsvold	20.05	182	P	Pn	05 00 29.4	-0.8
	baz=20,SNR=18						
EIDS	Eidsvold	20.05	182	P	P	05 00 27.9	0.0
EIDS	Eidsvold	20.05	182	P	Pn	05 00 29.9	-0.3
KDU	Kakadu	20.50	247	P	P	05 00 31.7	-1.0
	baz=20,SNR=16						
KDU	Kakadu	20.50	247	P	P	05 00 32.8	+0.1
SIJI	Sorong	20.97	281	P	P	05 00 38.9	+0.9
	comp=Z,38nm,0.5s,baz=83,slow=7.4,SNR=16						
	comp=Z,38nm,0.5s						
RMQ	Roma	21.35	188	P	P	05 00 43.1	+1.2
	baz=22,SNR=9.5						
RMQ	Roma	21.35	188	P	P	05 00 43.8	+1.9
LIFNC	LIFOU	21.53	137	P	P	05 00 47.1	+3.4
MTN	Manton Dam	21.78	248	P	P	05 00 45.8	-0.8
	baz=22,SNR=29						
MTN	Manton Dam	21.78	248	P	P	05 00 45.8	-0.8
MTN				IAmb	IAmb	05 00 49.9	
	comp=Z,91nm,0.8s						
DZM	Mont Dzumac	21.93	141	P	P	05 00 50.2	+2.0
	comp=Z,14nm,0.7s,baz=268,slow=5.3,SNR=21						
DZM				LR	LR	05 08 04.5	
	comp=Z,1μm,21.7s,baz=308,slow=33						
	comp=Z,14nm,0.7s						
DZM	Mont Dzumac	21.93	141	eP	P	05 00 50.3	+2.1
	comp=Z,88nm,1.1s						
DZM				eS	S	05 04 51.9	+4.9
DZM				eLR	LR	05 06 19.9	
	comp=Z,2μm,24.3s						
DZM	Mont Dzumac	21.93	141	P	P	05 00 49.2	+1.0
DZM	Mont Dzumac	21.93	141	P	P	05 00 50.2	+2.0
YATNC	Mamie plateau,	22.20	140	P	P	05 00 53.9	+2.8
WB0	Warramunga Arr	22.30	228	P	P	05 00 52.1	0.0
WR0	Warramunga Arr	22.31	227	P	P	05 00 51.9	-0.3
WRAB	Tennant Creek	22.43	228	ceP	P	05 00 53.1	-0.5
WRAB				pmax	pmax		
	comp=Z,295nm,0.7s						
WRAB	Tennant Creek	22.43	228	P	P	05 00 53.5	-0.1
OUENC	Ouen Island, N	22.43	141	P	P	05 00 56.4	+2.9
WRA	Warramunga Arr	22.45	228	P	P	05 00 53.3	-0.4
	comp=Z,245nm,0.7s,baz=53,slow=9.8,SNR=177						
WRA				PcP	PcP	05 04 46.9	+0.7
	comp=Z,21nm,0.8s,baz=44,slow=2.0,SNR=10						
WRA				S	S	05 04 54.6	-1.3
	comp=Z,22nm,1.0s,baz=55,slow=18,SNR=14						
WRA				ScP	ScP	05 08 19.4	+1.1
	comp=Z,12nm,1.0s,baz=45,slow=2.6,SNR=11						
WRA				LR	LR	05 09 46.2	
	comp=Z,259nm,21.3s,baz=96,slow=37						
WRA				PKiKP	PKiKP	05 12 30.2	-1.6
	comp=Z,0.6nm,0.6s,baz=319,slow=1.1,SNR=8.5						
WRA	Warramunga Arr	22.45	228	P	P	05 00 53.3	-0.4
WRA				PcP	PcP	05 04 46.7	+0.4
WRA				ScP	ScP	05 08 18.7	+0.4
QLP	Quilpie	22.45	198	P	P	05 00 54.7	+1.1
	baz=23,SNR=12						
QLP	Quilpie	22.45	198	P	P	05 00 55.0	+1.3
INKA	Innaminka	24.76	204	P	P	05 01 17.0	+1.5
KNRA	Kununurra	24.92	244	P	P	05 01 17.1	-0.1
	baz=25,SNR=83						
KNRA	Kununurra	24.92	244	P	P	05 01 16.9	-0.2
KNRA	Kununurra	24.92	244	P	P	05 01 16.9	-0.2
ARMA	Armidale	25.07	180	P	P	05 01 20.5	+2.0
	baz=25,SNR=6.1						
ARMA	Armidale	25.07	180	P	P	05 01 20.1	+1.6
AS31	Alice Springs	25.19	222	P	P	05 01 19.9	+0.3
AS31				IAmb	IAmb	05 01 23.3	
	comp=Z,67nm,0.7s						
ASAR	Alice Springs	25.19	222	P	P	05 01 19.9	+0.2
	comp=Z,190nm,0.7s,baz=55,slow=8.0,SNR=267						
ASAR				PcP	PcP	05 04 53.0	+0.9
	comp=Z,6.9nm,0.8s,baz=52,slow=3.0,SNR=4.9						
ASAR				S	S	05 05 40.1	-0.3
	comp=Z,1.0nm,0.7s,baz=26,slow=26,SNR=1.5						
ASAR				ScP	ScP	05 08 26.9	+1.1
	comp=Z,9.4nm,0.8s,baz=48,slow=3.1,SNR=7.3						
ASAR				LR	LR	05 11 30.0	
	comp=Z,162nm,19.4s,baz=38,slow=37						
ASAR	Alice Springs	25.19	222	P	P	05 01 19.7	+0.1
ASAR					PcP	05 04 51.3	-0.8
CMSA	Cobar Meteorol	26.81	192	P	P	05 01 34.5	+0.4
	baz=27,SNR=52						
CMSA	Cobar Meteorol	26.81	192	P	P	05 01 34.9	+0.8
OOD	Oodnadatta	27.20	213	P	P	05 01 38.0	+0.4
SOEI	Soe	27.68	259	P	P	05 01 41.6	-0.7
LCRK	Leigh Creek	28.18	205	P	P	05 01 46.9	+0.5
STKA	Stephens Creek	28.20	199	P	P	05 01 46.9	+0.4
	comp=Z,9.3nm,0.8s,baz=350,slow=8.7,SNR=13						
STKA				LR	LR	05 12 36.6	
	comp=Z,284nm,21.3s,baz=16,slow=35						
	comp=Z,9.3nm,0.8s						
STKA	Stephens Creek	28.20	199	P	P	05 01 47.0	+0.4
	baz=28,SNR=10.0						
STKA	Stephens Creek	28.20	199	P	P	05 01 47.0	+0.4
STKA	Stephens Creek	28.20	199	P	P	05 01 47.0	+0.5
STKA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
STKA	Stephens Creek	28.20	199	P	P	05 01 47.3	+0.8
BATI	Baumata	28.33	258	P	P	05 01 48.6	+0.7
	comp=Z,166nm,0.7s,baz=124,slow=2.1,SNR=21						
BATI				LR	LR	05 15 06.3	
	comp=Z,428nm,21.3s,baz=104,slow=40						
BATI	Baumata	28.33	258	P	P	05 01 49.2	+1.2
	comp=Z,116nm,0.9s						
DAV	Davao City (W)	28.90	295	LR	LR	05 11 42.8	
	comp=Z,186nm,19.7s,baz=140,slow=33						
GTOI	Gorontalo	29.36	281	P	P	05 01 58.4	+1.4
	comp=Z,210nmcomp=Z,27nm,0.7s						
MMRI	Maumere	29.56	262	P	P	05 01 58.7	-0.1
WRKA	Warakurna	29.97	226	P	P	05 02 02.0	-0.3
	baz=30,SNR=231						
WRKA	Warakurna	29.97	226	P	P	05 02 02.2	-0.2
MULG	Mulgathing	30.04	212	P	P	05 02 02.5	-0.3
EDFI	Ende, Flores	30.11	262	P	P	05 02 02.0	-1.8
	comp=Z,31nm,0.9s						
APSI	Ampana	30.43	277	P	P	05 02 07.1	+0.6
	comp=Z,480nmcomp=Z,50nm,0.5s						
HTT	Hallett	30.54	202	P	P	05 02 07.8	+0.6
	baz=31,SNR=15						
HTT	Hallett	30.54	202	P	P	05 02 08.2	+0.9
NAPP	Napperby	30.61	203	P	P	05 02 08.1	+0.3
BBOO	Buckleboo	31.15	206	P	P	05 02 12.7	0.0
	baz=31,SNR=21						
BBOO	Buckleboo	31.15	206	P	P	05 02 12.6	-0.1
BBOO				PcP	PcP	05 05 06.8	+0.3
BBOO	Buckleboo	31.15	206	P	P	05 02 12.3	-0.3
TOLI2	Tolitoli	31.64	281	P	P	05 02 16.8	-0.4
TOLI2				IAmb	IAmb	05 02 19.2	
	comp=Z,20nm,0.7s						
TOLI2					PcP	05 05 07.6	-0.5
TOLI2	Tolitoli	31.64	281	P	P	05 02 16.2	-1.0
KAPI	Kappang	31.94	269	LR	LR	05 17 30.8	
	comp=Z,170nm,18.4s,baz=80,slow=40						
KAPI	Kappang	31.94	269	iP	P	05 02 18.0	-1.9
MPSI	Mapaga	32.36	279	P	P	05 02 23.2	-0.3
	comp=Z,26nm,0.9s						
ARPS	Mount Arapiles	32.71	195	P	P	05 02 27.4	+1.1
	baz=33,SNR=7.0						
ARPS	Mount Arapiles	32.71	195	P	P	05 02 26.9	+0.6
JCJ	Chichijima	33.45	344	P	P	05 02 32.5	-0.2
	comp=Z,30nm,0.5s,baz=277,slow=17,SNR=5.6						
JCJ				LR	LR	05 15 04.5	
	comp=Z,164nm,21.4s,baz=132,slow=34						
	comp=Z,30nm,0.5s						
JCJ	Chichijima	33.45	344	P	P	05 02 32.6	-0.2
JCJ	Chichijima	33.45	344	P	P	05 02 33.1	+0.3
FORT	Forrest	33.86	219	P	P	05 02 36.1	-0.2
	baz=34,SNR=47						
FORT	Forrest	33.86	219	P	P	05 02 36.0	-0.4
FORT	Forrest	33.86	219	P	P	05 02 36.4	+0.1
PLAI	Plampang	33.97	262	P	P	05 02 36.7	-0.9
	comp=Z,55nm,0.7s						
PLAI	Plampang	33.97	262	P	P	05 02 35.7	-1.9
MBWA	Marble Bar	34.92	240	P	P	05 02 45.4	-0.3
MBWA	Marble Bar	34.92	240	P	P	05 02 45.4	-0.3
MBWA	Marble Bar	34.92	240	P	P	05 02 45.3	-0.3
MBWA				pP	pP	05 03 00.1	-1.9
PSA00	Pilbara Seismi	34.98	239	P	P	05 02 45.6	-0.6
AFI	Afiamalu	36.87	106	LR	LR	05 15 18.6	
	comp=Z,212nm,19.7s,baz=265,slow=31						
RAO	Raoul Island	37.28	133	P	P	05 03 02.5	-3.3
RAO	Raoul Island	37.28	133	P	P	05 03 02.5	-3.3
RAO				pmax	pmax		
	comp=Z,762nm,0.3s						
JAGI	Jajag, Banyuwa	37.53	263	P	P	05 03 06.5	-1.6
JAGI	Jajag, Banyuwa	37.53	263	P	P	05 03 06.6	-1.5
TAU	Tasmania Unive	37.75	185	P	P	05 03 10.6	+1.1
JOW	Kunigami	39.17	326	LR	LR	05 16 50.6	
	comp=Z,154nm,19.8s,baz=66,slow=32						
JHJ	Hachijo jima 2	39.80	344	LR	LR	05 17 46.0	
	comp=Z,81nm,20.1s,baz=92,slow=33						
PWJI	Pagerwojo	39.84	264	P	P	05 03 27.1	-0.3
	comp=Z,62nm,0.6s						
URZ	Urewera	40.13	149	P	P	05 03 30.2	+0.8
	comp=Z,6.7nm,0.8s,baz=163,slow=3.9,SNR=7.9						
URZ				PcP	PcP	05 05 31.7	-1.2
	comp=Z,21nm,0.8s,baz=0.7,slow=2.6,SNR=7.2						
URZ				LR	LR	05 18 21.3	
	comp=Z,279nm,18.3s,baz=31,slow=33						
	comp=Z,6.7nm,0.8s						
URZ	Urewera	40.13	149	P	P	05 03 29.8	+0.3
URZ				IAmb	IAmb	05 03 37.1	
	comp=Z,56nm,1.5s						
URZ	Urewera	40.13	149	P	P	05 03 30.5	+1.1
GIRL	Giralia	40.22	241	P	P	05 03 30.3	-0.1
	baz=40,SNR=11						
GIRL	Giralia	40.22	241	P	P	05 03 30.5	+0.1
GIRL	Giralia	40.22	241	P	P	05 03 30.1	-0.3
PCJI	Pacitan	40.47	264	P	P	05 03 31.2	-1.4
	comp=Z,138nm,0.7s						
YULB	Yu-li	41.19	315	P	P	05 03 38.9	+0.5
YULB				IAmb	IAmb	05 03 56.0	
	comp=Z,22nm,0.8s						
KLBR	Kellerberrin	41.32	226	P	P	05 03 38.3	-1.1
	baz=41,SNR=17						
KLBR	Kellerberrin	41.32	226	P	P	05 03 38.8	-0.6
MORW	Morawa	41.33	231	P	P	05 03 38.9	-0.6
	baz=41,SNR=29						
MORW	Morawa	41.33	231	P	P	05 03 39.1	-0.4
MORW	Morawa	41.33	231	P	P	05 03 38.4	-1.1
BLDU	Ballidu	41.58	228	P	P	05 03 40.7	-0.8
	baz=42,SNR=24						
BLDU	Ballidu	41.58	228	P	P	05 03 40.1	-1.4
TPUB	Ta-pu	41.61	314	P	P	05 03 40.6	-1.2
SSLB	Suanglung	41.68	315	P	P	05 03 41.5	-1.0
RPZ	Rata Peaks	41.92	159	LR	LR	05 19 00.9	
	comp=Z,588nm,21.3s,baz=314,slow=33						
YHNB	Yeheng	41.96	316	P	P	05 03 46.1	+1.3
YHNB	Yeheng	41.96	316	P	P	05 03 44.3	-0.5
KSM	Kuching	42.00	278	P	P	05 03 45.2	0.0
NWAO	Narrogin (SRO)	42.41	225	P	P	05 03 47.3	-0.9
NWAO	Narrogin (SRO)	42.41	225	P	P	05 03 47.3	-0.9
NWAO				pmax	pmax		
	comp=Z,77nm,1.4s						
NWAO	Narrogin (SRO)	42.41	225	P	P	05 03 48.2	0.0
	comp=Z,47nm,1.5s						
NWAO	Narrogin (SRO)	42.41	225	P	P	05 03 47.1	-1.1
NWAO				pP	pP	05 04 02.5	-2.4
MUN	Mundaring	42.64	227	P	P	05 03 49.7	-0.5
	baz=43,SNR=9.8						
MUN	Mundaring	42.64	227	P	P	05 03 49.6	-0.5
KPJI	Karang Pucung	42.68	265	P	P	05 03 50.1	-0.6
	comp=Z,64nm,0.7s						
JNU	Nakatsue	42.99	334	P	P	05 03 52.4	-0.6
	comp=Z,18nm,0.6s,baz=74,slow=5.0,SNR=9.4						
	comp=Z,18nm,0.6s						

JNU	**Nakatsue**	**42.99**	**334**	P	**P**	**05 03 55.0**	**+2.0**
CMJI	**Cimerak**	**43.16**	**264**	P	**P**	**05 03 53.2**	**-1.4**
	comp=Z,82nm,0.7s						
MJAR	**Matsushiro Arr**	**43.45**	**344**	P	**P**	**05 03 54.1**	**-2.5**
	comp=Z,3.2nm,0.7s,baz=167,slow=8.6,SNR=7.4						
MJAR				LR	LR	05 20 06.0	
	comp=Z,108nm,21.1s,baz=175,slow=33						
	comp=Z,3.2nm,0.7s						
MJAR	**Matsushiro Arr**	**43.45**	**344**	P	**P**	**05 03 55.2**	**-1.4**
MJAR	**Matsushiro Arr**	**43.45**	**344**	P	**P**	**05 03 55.2**	**-1.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAJO	**Matsushiro**	**43.45**	**344**	P	**P**	**05 03 56.1**	**-0.4**
MAJO	**Matsushiro**	**43.45**	**344**	P	**P**	**05 03 56.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAJO	**Matsushiro**	**43.45**	**344**	P	**P**	**05 03 54.9**	**-1.7**
MJB9	**Matsu-Tunnel**	**43.46**	**344**	P	**P**	**05 03 57.0**	**+0.3**
JHS	**Saijyo**	**43.71**	**338**	P	**P**	**05 03 58.4**	**-0.3**
JHS				IAmb	IAmb	05 04 01.2	
	comp=Z,30nm,0.6s						
LEM	**Lembang**	**43.98**	**266**	LR	LR	05 25 44.3	
	comp=Z,144nm,18.4s,baz=136,slow=41						
LEM	**Lembang**	**43.98**	**266**	P	**P**	**05 04 00.9**	**-0.5**
	comp=Z,34nm,0.9s						
QZH	**Quanzhou**	**44.08**	**314**	*e*P	**P**	**05 04 03.5**	**+1.7**
QZH				*e*S	**S**	**05 10 32.8**	**+3.0**
NAWB	**Namwon**	**46.49**	**332**	P	**P**	**05 04 21.4**	**+0.7**
NAWB				IAmb	IAmb	05 04 31.4	
	comp=Z,19nm,1.0s						
TJN	**Taejon**	**47.29**	**333**	*ce*P	**P**	**05 04 28.8**	**+1.9**
DSRI	**Dabo**	**47.41**	**274**	P	**P**	**05 04 28.3**	**0.0**
	comp=Z,11nm,0.5s						
MDSI	**Maura Dua**	**47.47**	**269**	P	**P**	**05 04 27.0**	**-1.8**
	comp=Z,16nm,1.0s						
QIZ	**Qiongzhong**	**47.85**	**301**	P	**P**	**05 04 33.0**	**+1.4**
QIZ				S	**S**	**05 11 24.5**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,160nm,5.5s						
QIZ				LR	LR		
	comp=Z,280nm,28.0s						
QIZ	**Qiongzhong**	**47.85**	**301**	P	**P**	**05 04 33.4**	**+1.9**
QIZ				pP	**pP**	**05 04 48.1**	**-0.3**
QIZ				sP	**sP**	**05 04 56.3**	**+0.5**
KSRS	**Korea Array**	**47.94**	**334**	P	**P**	**05 04 32.5**	**+0.6**
	comp=Z,5.4nm,0.6s,baz=150,slow=8.3,SNR=24						
KSRS				LR	LR	05 23 42.9	
	comp=Z,29nm,19.6s,baz=145,slow=35						
	comp=Z,5.4nm,0.6s						
KSAR	**Wonju Array Be**	**47.95**	**334**		**P**	**05 04 31.5**	**-0.5**
KSAR	**Wonju Array Be**	**47.95**	**334**	P	**P**	**05 04 31.5**	**-0.5**
SEHB	**SEOHWA**	**48.49**	**335**	P	**P**	**05 04 37.1**	**+0.9**
INCN	**Inchon**	**48.53**	**333**	P	**P**	**05 04 36.9**	**+0.3**
INCN	**Inchon**	**48.53**	**333**	P	**P**	**05 04 36.9**	**+0.3**
INCN				pmax	pmax		
	comp=Z,35nm,0.7s						
NJ2	**Nanjing**	**48.56**	**322**	*e*P	**P**	**05 04 39.8**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
RAR	**Rarotonga**	**49.50**	**113**	P	**P**	**05 04 43.7**	**-0.5**
	comp=Z,25nm,0.7s,baz=251,slow=9.2,SNR=5.4						
RAR				LR	LR	05 24 39.5	
	comp=Z,31nm,18.1s,baz=281,slow=35						
	comp=Z,25nm,0.7s						
RAR	**Rarotonga**	**49.50**	**113**	P	**P**	**05 04 44.1**	**-0.1**
RAR	**Rarotonga**	**49.50**	**113**	P	**P**	**05 04 44.1**	**-0.1**
RAR				pmax	pmax		
	comp=Z,25nm,0.7s						
ASAJ	**Asahikawa**	**49.80**	**351**	LR	LR	05 23 48.3	
	comp=Z,88nm,21.7s,baz=150,slow=34						
WHN	**Wuhan**	**50.49**	**317**	⇓P	**P**	**05 04 53.0**	**+1.5**
WHN				LR	LR		
	comp=Z,740nm,26.7s						
IPM	**Ipoh**	**51.64**	**280**	P	**P**	**05 05 00.3**	**-0.2**
IPM				IAmb	IAmb	05 05 00.5	
	comp=Z,19nm,0.8s						
KULM	**Kulim**	**52.16**	**281**	P	**P**	**05 05 04.2**	**-0.2**
KULM				IAmb	IAmb	05 05 04.8	
	comp=Z,26nm,1.1s						
USRK	**Ussuriysk Ar.**	**52.33**	**342**	P	**P**	**05 05 04.4**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=181,slow=12,SNR=9.4						
USRK				LR	LR	05 24 11.4	
	comp=Z,78nm,21.6s,baz=164,slow=32						
	comp=Z,7.3nm,0.8s						
TIA	**Tai'an**	**52.48**	**325**	*e*P	**P**	**05 05 06.0**	**-0.3**
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
TIA				LR	LR		
	comp=Z,220nm,29.4s						
PSI	**Prapat**	**53.44**	**277**	LR	LR	05 33 30.6	
	comp=Z,151nm,19.2s,baz=76,slow=42						
ENH	**Enshi**	**53.73**	**314**	P	**P**	**05 05 16.8**	**+1.1**
ENH	**Enshi**	**53.73**	**314**	P	**P**	**05 05 16.5**	**+0.8**
ENH				pP	**pP**	**05 05 33.3**	**+0.7**
GYA	**Guiyang**	**53.88**	**308**	⇓P	**P**	**05 05 18.3**	**+1.3**
GYA				pmax	pmax		
	comp=Z,27nm,0.7s						
LYN	**LuoYang**	**54.22**	**320**	*e*P	**P**	**05 05 18.8**	**-0.4**
LYN				pP	pP	05 05 35.1	-1.0
LYN				sP	sP	05 05 42.3	-1.2
LYN				pmax	pmax		
	comp=Z,140nm,10.8s						
LYN				LR	LR		
	comp=Z,270nm,17.5s						
LYN				LR	LR		
	comp=Z,170nm,17.1s						
LYN				LR	LR		
	comp=Z,450nm,26.5s						
CN2	**Changchun**	**54.29**	**337**	*e*P	**P**	**05 05 22.0**	**+2.6**
CN2				*e*PP	**PP**	**05 07 26.6**	**+4.6**
CN2				*e*S	**S**	**05 12 55.3**	**+3.0**
CN2				*e*sS	sS	05 13 22.5	+2.2
CN2				LR	LR		
	comp=Z,150nm,19.0s						
CN2				LR	LR		
	comp=Z,110nm,19.0s						
CN2				LR	LR		
	comp=Z,190nm,20.0s						
KCSI	**Kotacane, Aceh**	**54.69**	**278**	P	**P**	**05 05 20.7**	**-2.2**
HNS	**HongShan**	**54.70**	**324**	⇑P	**P**	**05 05 22.8**	**+0.2**
HNS				pP	**pP**	**05 05 39.8**	**+0.2**
HNS				*e*S	**S**	**05 12 59.4**	**+1.3**
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
HNS				LR	LR		
	comp=Z,130nm,18.8s						
HNS				LR	LR		
	comp=Z,99nm,18.6s						
HNS				LR	LR		
	comp=Z,160nm,20.6s						
BNX	**BinXian**	**55.21**	**339**	⇓P	**P**	**05 05 26.6**	**+0.5**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,190nm,4.0s						
BJI	**Beijing**	**55.71**	**327**	P	**P**	**05 05 30.3**	**+0.6**
BJI				pP	**pP**	**05 05 47.1**	**+0.3**
BJI				sP	**sP**	**05 05 52.9**	**-1.3**
BJI				PcP	**PcP**	**05 06 28.3**	**-0.1**
BJI				PP	**PP**	**05 07 38.4**	**+3.6**
BJI				S	**S**	**05 13 14.6**	**+3.2**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,70nm,3.8s						
BJI				LR	LR		
	comp=Z,80nm,11.3s						
BJI				LR	LR		
	comp=Z,110nm,12.2s						
BJI				LR	LR		
	comp=Z,120nm,14.7s						
XAN	**Xi'an**	**56.26**	**317**	P	**P**	**05 05 33.4**	**-0.5**
XAN				pP	pP	05 05 50.4	-0.5
XAN				sP	sP	05 05 57.8	-0.5
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN	**Xi'an**	**56.26**	**317**	P	**P**	**05 05 34.1**	**+0.2**
XAN				pP	**pP**	**05 05 50.6**	**-0.3**
KMI	**Kunming**	**56.42**	**305**	⇓P	**P**	**05 05 37.0**	**+1.6**
KMI				pP	pP	05 05 53.4	+0.9
KMI				sP	sP	05 06 03.0	+3.1
KMI				pmax	pmax		
	comp=Z,35nm,0.9s						
KLR	**Kul'dur**	**56.98**	**344**	LR	LR	05 29 44.6	
	comp=Z,42nm,19.7s,baz=196,slow=36						
KLR	**Kul'dur**	**56.98**	**344**	*ce*P	**P**	**05 05 38.2**	**-0.4**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**57.18**	**296**	P	**P**	**05 05 41.5**	**+0.9**
	comp=Z,12nm,0.7s,baz=118,slow=5.2,SNR=55						
CMAR				LR	LR	05 31 23.9	
	comp=Z,40nm,18.4s,baz=135,slow=37						
CMAR				PKP2bc		05 35 43.9	
	comp=Z,3.9nm,0.8s,baz=286,slow=4.3,SNR=14						
CMAR				PKP2ab		05 36 00.7	
	comp=Z,1.3nm,0.3s,baz=287,slow=4.5,SNR=5.5						
	comp=Z,12nm,0.7s						
CMAR	**Chiang Mai Arr**	**57.18**	**296**	P	**P**	**05 05 40.7**	**+0.1**
CHTO	**Chiang Mai**	**57.29**	**296**	P	**P**	**05 05 41.9**	**+0.5**
CHTO				IAmb	IAmb	05 05 43.7	
	comp=Z,19nm,1.0s						
CHTO	**Chiang Mai**	**57.29**	**296**	P	**P**	**05 05 41.9**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,19nm,1.0s						
CHTO	**Chiang Mai**	**57.29**	**296**	P	**P**	**05 05 42.5**	**+1.0**
CHTO				pP	**pP**	**05 05 57.4**	**-1.2**
PZH	**PanZhiHua**	**57.82**	**306**	P	**P**	**05 05 45.6**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
PETK	**Petropavlovsk-**	**58.32**	**4**	P	**P**	**05 05 47.0**	**-1.0**
	comp=Z,2.5nm,0.5s,baz=172,slow=8.9,SNR=6.4						
PETK				LR	LR	05 27 05.1	
	comp=Z,84nm,21.4s,baz=188,slow=32						
	comp=Z,2.5nm,0.5s						
PETK	**Petropavlovsk-**	**58.32**	**4**	P	**P**	**05 05 47.0**	**-1.0**
PPT	**Papeete**	**58.53**	**107**	LR	LR	05 28 11.3	
	comp=Z,42nm,19.7s,baz=322,slow=33						
PPT2	**Papeete2**	**58.53**	**107**	*e*P	**P**	**05 05 52.9**	**+2.7**
	comp=Z,56nm,1.0s						
PPT2				*e*S	S	05 14 01.5	+12
PPT2				*e*LR	LR	05 23 56.9	
	comp=Z,112nm,24.2s						
XLT	**XiLinHaoTe**	**58.54**	**330**	*e*P	**P**	**05 05 48.1**	**-1.7**
XLT				pP	pP	05 06 04.0	-3.0
XLT				sP	sP	05 06 12.8	-1.6
XLT				pmax	pmax		
	comp=Z,17nm,1.0s						
XLT				pmax	pmax		
	comp=Z,160nm,4.9s						
HHC	**Hu-ho-hao-te**	**58.82**	**325**	*e*P	**P**	**05 05 54.4**	**+2.5**
HHC				pmax	pmax		
	comp=Z,50nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,4.5s						
HHC				LR	LR		
	comp=Z,320nm,16.5s						
HHC				LR	LR		
	comp=Z,320nm,14.3s						
PMOR	**Pomariorio Ree**	**59.98**	**104**	*e*P	**P**	**05 06 03.4**	**+3.3**
	comp=Z,177nm,1.0s						
VAH	**Vaihoa**	**60.25**	**104**	*e*P	**P**	**05 06 05.0**	**+3.0**
	comp=Z,76nm,1.0s						
SHEM	**Shemya Is, Ala**	**60.74**	**15**	LR	LR	05 27 24.0	
	comp=Z,184nm,21.9s,baz=162,slow=31						
LZH	**Lanzhou**	**60.85**	**316**	*e*P	**P**	**05 06 06.8**	**+0.8**
LZH				pP	pP	05 06 26.0	+2.4
LZH				sP	sP	05 06 35.0	+4.0
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
DRV	**Dumont d'Urvil**	**61.89**	**185**	⇑P	**P**	**05 06 13.5**	**+1.3**
DRV				x	x	05 06 23.6	
DRV				pP	**pP**	**05 06 28.7**	**-0.9**
GTA	**Gaotai**	**65.31**	**318**	*e*P	**P**	**05 06 36.0**	**+0.6**
GTA				pP	pP	05 06 51.9	-1.2
GTA				sP	sP	05 07 00.6	+0.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**65.84**	**329**	P	**P**	**05 06 39.1**	**+0.4**
ULN	**Ulaanbaatar**	**65.84**	**329**	*ce*P	**P**	**05 06 38.8**	**+0.1**
ULN				pmax	pmax		
	comp=Z,12nm,1.1s						
ULN	**Ulaanbaatar**	**65.84**	**329**	P	**P**	**05 06 39.5**	**+0.8**
ULN				pP	**pP**	**05 06 55.6**	**-0.6**
ULN				sP	**sP**	**05 07 06.0**	**+2.5**
SONM	**Songino Array**	**66.16**	**328**	P	**P**	**05 06 41.2**	**+0.5**
	comp=Z,8.8nm,0.5s,baz=143,slow=4.4,SNR=24						
SONM				LR	LR	05 34 03.6	
	comp=Z,61nm,21.4s,baz=147,slow=35						
	comp=Z,8.8nm,0.5s						
SONM	**Songino Array**	**66.16**	**328**	P	**P**	**05 06 41.1**	**+0.3**
SONM				IAmb	IAmb	05 06 44.4	
	comp=Z,9.7nm,0.5s						
GOMU	**GeErMu**	**67.32**	**313**	P	**P**	**05 06 49.1**	**+0.4**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,47nm,4.4s						
GOMU				LR	LR		
	comp=Z,100nm,13.9s						
GOMU				LR	LR		
	comp=Z,130nm,13.3s						
GOMU				LR	LR		
	comp=Z,180nm,13.4s						
LSA	**Lhasa**	**67.67**	**305**	P	**P**	**05 06 51.3**	**+0.2**
LSA	**Lhasa**	**67.67**	**305**	P	**P**	**05 06 51.3**	**+0.2**
LSA				pmax	pmax		
	comp=Z,27nm,0.7s						
LSA	**Lhasa**	**67.67**	**305**	P	**P**	**05 06 51.8**	**+0.7**
LSA				pmax	pmax		
	comp=Z,45nm,0.7s						
LSA	**Lhasa**	**67.67**	**305**	P	**P**	**05 06 51.6**	**+0.5**
SEY	**Seymchan**	**67.96**	**0**	LR	LR	05 31 29.5	
	comp=Z,87nm,21.7s,baz=184,slow=31						
YAK	**Yakutsk**	**69.19**	**349**	LR	LR	05 35 24.7	
	comp=Z,31nm,21.6s,baz=90,slow=34						
ZAK	**Zakamensk**	**69.34**	**329**	*e*P	**P**	**05 07 00.7**	**0.0**
ZAK				*e*		05 07 15.7	
ZAK				pmax	pmax		
	comp=Z,25nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
BOD	**Bodaibo**	**69.83**	**340**	*e*P	**P**	**05 07 03.6**	**+0.2**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MOY	**Mondy**	**71.27**	**329**	*e*P	**P**	**05 07 12.5**	**+0.1**
MOY				pmax	pmax		
	comp=Z,18nm,1.3s						
CCD	**Concordia, Ant**	**71.73**	**187**	P	**P**	**05 07 16.2**	**+1.1**
CCD				pP	**pP**	**05 07 33.1**	**+0.2**
PKI	**Pulchoki**	**71.81**	**301**	*e*P	**P**	**05 07 15.6**	**-0.9**
	comp=Z,34nm,0.8s						
PKIN	**Phulchoki**	**71.82**	**301**	*e*P	**P**	**05 07 15.7**	**-0.8**
	comp=Z,20nm,0.5s						
KKN	**Kakani**	**71.98**	**301**	*e*P	**P**	**05 07 16.8**	**-0.5**
	comp=Z,54nm,0.7s						
DMN	**Daman**	**72.08**	**301**	*e*P	**P**	**05 07 17.6**	**-0.4**
	comp=Z,80nm,0.7s						
VNDA	**Vanda**	**72.45**	**178**	P	**P**	**05 07 20.3**	**+1.4**
	comp=Z,18nm,0.8s,baz=332,slow=6.7,SNR=143						
	comp=Z,18nm,0.8s						
VNDA	**Vanda**	**72.45**	**178**	P	**P**	**05 07 19.5**	**+0.5**
VNDA				IAmb	IAmb	05 07 21.2	
	comp=Z,21nm,0.8s						
KNGR	**Kungurtug, Tuv**	**72.50**	**327**	⇓*i*P	**P**	**05 07 20.5**	**+0.7**
GKN	**Gorkha**	**72.59**	**301**	*e*P	**P**	**05 07 20.2**	**-0.7**
	comp=Z,69nm,0.8s						
SBA	**Scott Base**	**73.02**	**177**	P	**P**	**05 07 23.5**	**+1.2**
SBA				IAmb	IAmb	05 07 41.4	
	comp=Z,35nm,1.4s						
SBA	**Scott Base**	**73.02**	**177**	P	**P**	**05 07 23.5**	**+1.2**
SBA				pmax	pmax		
	comp=Z,35nm,1.4s						
BILL	**Bilibino**	**73.79**	**6**	P	**P**	**05 07 26.9**	**-0.1**
BILL	**Bilibino**	**73.79**	**6**	*e*P	**P**	**05 07 27.7**	**+0.8**
BILL				*e*		05 07 41.8	
BILL				*e*		05 10 09.9	
BILL				*e*PPP	PPP	05 12 01.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,51nm,18.0s						
WMQ	**Urumqi**	**75.39**	**318**	*e*P	**P**	**05 07 37.3**	**+0.5**
WMQ				pP	pP	05 07 53.1	-1.7
WMQ				sP	sP	05 07 59.0	-3.0
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,200nm,23.1s						
HYBB	**Hyderabad (bro**	**75.71**	**289**	*e*P	**P**	**05 07 38.3**	**-0.8**
KDAK	**Kodiak Island**	**76.98**	**27**	LR	LR	05 35 19.7	
	comp=Z,49nm,21.2s,baz=252,slow=31						
Q19K	**Cape Douglas,**	**77.14**	**26**	P	**P**	**05 07 46.6**	**+0.3**
Q19K	**Cape Douglas,**	**77.14**	**26**	P	**P**	**05 07 45.9**	**-0.4**
	baz=236						
N18K	**Kilae Creek**	**77.22**	**24**	P	**P**	**05 07 47.5**	**+0.8**
SVW2	**Sparrevohn**	**77.59**	**23**	P	**P**	**05 07 48.1**	**-0.6**
P19K	**Oil Pt**	**77.72**	**25**	P	**P**	**05 07 49.8**	**+0.2**
P19K				IAmb	IAmb	05 07 52.0	
	comp=Z,26nm,1.0s						
P19K	**Oil Pt**	**77.72**	**25**	P	**P**	**05 07 49.7**	**+0.2**
	baz=236						
TIXI	**Tiksi**	**78.18**	**353**	LR	LR	05 39 30.5	
	comp=Z,31nm,21.7s,baz=182,slow=33						
TIXI	**Tiksi**	**78.18**	**353**	P	**P**	**05 07 51.8**	**0.0**
TIXI	**Tiksi**	**78.18**	**353**	*ce*P	**P**	**05 07 50.2**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
O20K	**Slope Mountain**	**78.21**	**25**	P	**P**	**05 07 52.2**	**-0.1**
	baz=237						
L19K	**White Mountain**	**78.50**	**23**	P	**P**	**05 07 55.0**	**+1.2**
L19K				IAmb	IAmb	05 07 56.4	
	comp=Z,16nm,1.0s						
L19K	**White Mountain**	**78.50**	**23**	P	**P**	**05 07 54.6**	**+0.8**
	baz=235,SNR=14						
CNPM	**China Poot**	**78.51**	**26**	P	**P**	**05 07 54.6**	**+0.7**
TTA	**Tatalina**	**78.51**	**22**	P	**P**	**05 07 54.0**	**0.0**
	baz=233,SNR=12						
M19K	**Big River Lodg**	**78.52**	**23**	P	**P**	**05 07 55.2**	**+1.3**
M19K	**Big River Lodg**	**78.52**	**23**	P	**P**	**05 07 54.1**	**+0.2**
	baz=235						
DGAR	**Diego Garcia**	**78.83**	**263**	*ce*P	**P**	**05 07 53.6**	**-3.0**
DGAR				pmax	pmax		
	comp=Z,93nm,1.0s						
L20K	**Farewell, AK**	**79.05**	**23**	P	**P**	**05 07 57.3**	**+0.5**
	baz=235						
K20K	**Telida**	**79.48**	**22**	P	**P**	**05 08 00.1**	**+1.0**
K20K	**Telida**	**79.48**	**22**	P	**P**	**05 07 59.6**	**+0.4**
	baz=235,SNR=7.9						
SEW	**Seward**	**79.58**	**26**	P	**P**	**05 07 59.9**	**+0.2**
	baz=240						
RDOG	**Red Dog Mine**	**79.64**	**16**	P	**P**	**05 07 59.1**	**-0.8**
RDOG				IAmb	IAmb	05 07 59.2	
	comp=Z,14nm,0.5s						
J20K	**Nowinta River**	**79.92**	**21**	P	**P**	**05 08 02.7**	**+1.2**
J20K				IAmb	IAmb	05 08 05.9	
	comp=Z,10nm,0.7s						
J20K	**Nowinta River**	**79.92**	**21**	P	**P**	**05 08 01.8**	**+0.3**
	baz=235,SNR=14						
PPLA	**Purkeypile**	**79.93**	**23**	P	**P**	**05 08 01.5**	**-0.2**
	baz=237						
MK31	**Makanchi Array**	**80.00**	**319**	P	**P**	**05 08 02.2**	**-0.2**
MK31	**Makanchi Array**	**80.00**	**319**	⇓*i*P	**P**	**05 08 01.1**	**-1.2**
MKAR	**Makanchi Array**	**80.00**	**319**	P	**P**	**05 08 02.2**	**-0.1**
	comp=Z,7.4nm,0.9s,baz=96,slow=8.0,SNR=23						
MKAR				LR	LR	05 42 05.3	
	comp=Z,56nm,21.3s,baz=96,slow=35						
	comp=Z,7.4nm,0.9s						
MAKZ	**Makanchi**	**80.21**	**319**	P	**P**	**05 08 03.5**	**0.0**
MAKZ	**Makanchi**	**80.21**	**319**	P	**P**	**05 08 03.5**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CAST	**Castle Rocks**	**80.25**	**22**	P	**P**	**05 08 03.3**	**0.0**
CAST				IAmb	IAmb	05 08 06.4	
	comp=Z,8.1nm,0.5s						
CAST	**Castle Rocks**	**80.25**	**22**	P	**P**	**05 08 02.7**	**-0.6**
	baz=237,SNR=7.4						
CHUM	**Lake Minchumin**	**80.42**	**22**	P	**P**	**05 08 04.3**	**+0.1**
	baz=237						
PMR	**Palmer**	**80.46**	**25**	P	**P**	**05 08 04.6**	**+0.2**
	baz=240						
KNK	**Knik Glacier**	**80.66**	**25**	P	**P**	**05 08 06.2**	**+0.7**
	baz=241						
SML	**Sawmill**	**80.90**	**25**	P	**P**	**05 08 07.6**	**+0.7**
	baz=241						
TRF	**Thorofare Moun**	**80.95**	**23**	P	**P**	**05 08 07.3**	**+0.1**
TRF	**Thorofare Moun**	**80.95**	**23**	P	**P**	**05 08 07.2**	**-0.1**
	baz=239						
ZAA0	**Zalesovo Array**	**80.96**	**327**	P	**P**	**05 08 06.3**	**-1.0**
ZAA0				IAmb	IAmb	05 08 08.3	
	comp=Z,9.4nm,0.6s						
ZALV	**Zalesovo Beam**	**80.96**	**327**	P	**P**	**05 08 06.0**	**-1.3**
	comp=Z,7.9nm,0.4s,baz=110,slow=5.6,SNR=31						
ZALV				LR	LR	05 42 35.6	
	comp=Z,46nm,21.8s,baz=81,slow=35						
	comp=Z,7.9nm,0.4s						
ZALV	**Zalesovo Beam**	**80.96**	**327**	P	**P**	**05 08 06.1**	**-1.1**
ZALV	**Zalesovo Beam**	**80.96**	**327**	P	**P**	**05 08 06.1**	**-1.1**
GLI	**Glacier Island**	**80.98**	**26**	P	**P**	**05 08 07.5**	**+0.3**
	baz=242						
BPAW	**Bear Paw Mtn.**	**81.03**	**22**	P	**P**	**05 08 07.8**	**+0.4**
	baz=238						
IMAR	**Indian Mountai**	**81.10**	**20**	P	**P**	**05 08 08.1**	**+0.3**
M23K	**Glacier View**	**81.15**	**25**	P	**P**	**05 08 08.9**	**+0.8**
	baz=241						
H21K	**Melozitna Rive**	**81.23**	**20**	P	**P**	**05 08 09.3**	**+0.7**
	baz=236						
I21K	**Tanana**	**81.26**	**21**	P	**P**	**05 08 08.7**	**+0.1**
	baz=237						
SCM	**Sheep Creek Mo**	**81.33**	**25**	P	**P**	**05 08 09.9**	**+0.7**
	baz=242						
RND	**Reindeer**	**81.49**	**23**	P	**P**	**05 08 10.3**	**+0.3**
RND				IAmb	IAmb	05 08 12.8	
	comp=Z,14nm,0.6s						
RND	**Reindeer**	**81.49**	**23**	P	**P**	**05 08 10.3**	**+0.3**
RND				pmax	pmax		
	comp=Z,14nm,0.6s						
WAT6	**Susitna Watana**	**81.52**	**24**	P	**P**	**05 08 10.6**	**+0.3**
	baz=241						
MCK	**McKinley**	**81.62**	**23**	P	**P**	**05 08 10.4**	**-0.2**
MCK				IAmb	IAmb	05 08 13.4	
	comp=Z,18nm,0.7s						
MCK	**McKinley**	**81.62**	**23**	P	**P**	**05 08 10.4**	**-0.2**
MCK				pmax	pmax		
	comp=Z,18nm,0.7s						
MCK	**McKinley**	**81.62**	**23**	P	**P**	**05 08 09.6**	**-1.0**
	baz=240,SNR=11						
KLU	**Klutina**	**81.77**	**25**	P	**P**	**05 08 11.3**	**-0.2**
	baz=243						
DHY	**Denali Highway**	**81.91**	**24**	P	**P**	**05 08 13.1**	**+0.9**
DHY	**Denali Highway**	**81.91**	**24**	P	**P**	**05 08 12.5**	**+0.2**
	baz=241						
M24K	**Tolsona, Glenn**	**81.94**	**25**	P	**P**	**05 08 12.4**	**0.0**
	baz=243						
NEA2	**Nenana**	**82.00**	**22**	P	**P**	**05 08 12.0**	**-0.5**
NEA2				IAmb	IAmb	05 08 15.2	
	comp=Z,11nm,0.6s						
NEA2	**Nenana**	**82.00**	**22**	P	**P**	**05 08 11.0**	**-1.6**
	baz=240,SNR=11						
I23K	**Minto, Yukon-K**	**82.18**	**21**	P	**P**	**05 08 13.7**	**+0.3**
	baz=239						
KDJ	**Kajisay**	**82.19**	**314**	P	**P**	**05 08 14.3**	**0.0**
KDJ				IAmb	IAmb	05 08 16.4	
	comp=Z,28nm,0.9s						
KDJ	**Kajisay**	**82.19**	**314**	P	**P**	**05 08 14.3**	**0.0**
KDJ				pmax	pmax		
	comp=Z,28nm,0.9s						
WRH	**Wood River Hil**	**82.31**	**22**	P	**P**	**05 08 15.7**	**+1.6**
H23K	**Yukon River**	**82.46**	**21**	P	**P**	**05 08 15.6**	**+0.6**
H23K	**Yukon River**	**82.46**	**21**	P	**P**	**05 08 15.2**	**+0.2**
	baz=239						
KSH	**Kashi**	**82.47**	**311**	P	**P**	**05 08 17.4**	**+1.7**
KSH				pP	pP	05 08 34.3	+0.5
KSH				sP	sP	05 08 41.4	+0.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,72nm,4.5s						
MDM	**Murphy Dome**	**82.50**	**22**	P	**P**	**05 08 16.1**	**+0.9**
CCB	**Clear Creek Bu**	**82.50**	**22**	P	**P**	**05 08 14.1**	**-1.1**
CCB				IAmb	IAmb	05 08 17.5	
	comp=Z,9.4nm,0.6s						
TCOL	**CIGO, UAF Yank**	**82.59**	**22**	P	**P**	**05 08 15.9**	**+0.3**
TCOL				IAmb	IAmb	05 08 18.4	
	comp=Z,17nm,0.7s						
TCOL	**CIGO, UAF Yank**	**82.59**	**22**	P	**P**	**05 08 15.4**	**-0.2**
	baz=241						
COLA	**College**	**82.60**	**22**	P	**P**	**05 08 16.1**	**+0.5**
COLA				IAmb	IAmb	05 08 18.4	
	comp=Z,18nm,0.7s						
COLA	**College**	**82.60**	**22**	P	**P**	**05 08 16.1**	**+0.5**
COLA				pmax	pmax		
	comp=Z,17nm,0.7s						
COLA	**College**	**82.60**	**22**	P	**P**	**05 08 15.9**	**+0.3**
	baz=241						
PAX	**Paxson**	**82.63**	**24**	P	**P**	**05 08 16.0**	**+0.1**

	baz=243						
HDA	Harding Lake	82.71	23	P	P	05 08 16.3	0.0
HDA	Harding Lake	82.71	23	P	P	05 08 15.5	-0.7
	baz=242,SNR=5.8						
POKR	Poker Plat Res	82.87	22	P	P	05 08 16.9	-0.1
	baz=241						
K24K	Donnelly Dome	82.88	23	P	P	05 08 17.1	-0.1
	baz=243						
ULHL	Ulahol	82.90	314	P	P	05 08 18.2	+0.2
	SNR=8.7						
IL31		82.91	22	P	P	05 08 16.1	-1.1
IL31				IAmb	IAmb	05 08 19.8	
	comp=Z,8.5nm,0.7s						
ILAR	Eielson Array	82.91	22	P	P	05 08 15.3	-2.0
	comp=Z,7.9nm,0.6s,baz=250,slow=4.6,SNR=58						
ILAR				PKKPbc	PKKPbc	05 26 39.4	-3.8
	comp=Z,0.3nm,0.5s,baz=4.1,slow=1.4,SNR=6.9						
ILAR				LR	LR	05 41 57.5	
	comp=Z,87nm,19.3s,baz=252,slow=33						
	comp=Z,7.9nm,0.6s						
ILAR	Eielson Array	82.91	22	P	P	05 08 15.9	-1.4
ILAR	Eielson Array	82.91	22	P	P	05 08 15.9	-1.4
COLD	Coldfoot	82.97	19	P	P	05 08 18.5	+1.0
COLD	Coldfoot	82.97	19	P	P	05 08 18.0	+0.5
	baz=238						
MCARA	McCarthy VSAT	82.97	26	P	P	05 08 17.8	+0.1
	baz=246						
H24K	Noodor Dome	83.06	21	P	P	05 08 18.0	-0.1
H24K	Noodor Dome	83.06	21	P	P	05 08 18.2	0.0
	baz=241						
BOOM	Boomskoye usch	83.17	314	P	P	05 08 19.9	+0.5
BOOM				IAmb	IAmb	05 08 21.4	
	comp=Z,19nm,0.8s						
BOOM	Boomskoye usch	83.17	314	P	P	05 08 19.9	+0.5
BOOM				pmax	pmax		
	comp=Z,19nm,0.9s						
RIDG	Independent Ri	83.22	24	P	P	05 08 19.1	+0.1
	baz=244						
M26K	Nabesna, AK	83.41	25	P	P	05 08 19.8	-0.2
	baz=246						
J25K	Salcha River,	83.41	23	P	P	05 08 19.8	-0.1
J25K	Salcha River,	83.41	23	P	P	05 08 18.9	-1.1
	baz=243,SNR=35						
BARN	Barnard Glacie	83.45	27	P	P	05 08 21.1	+0.8
BARN				IAmb	IAmb	05 08 38.7	
	comp=Z,14nm,1.2s						
KURK	Kurchatov	83.50	322	P	P	05 08 20.0	-0.6
KURK				IAmb	IAmb	05 08 21.9	
	comp=Z,15nm,0.9s						
KURK	Kurchatov	83.50	322 *ce*	P	P	05 08 19.8	-0.8
KURK				pmax	pmax		
	comp=Z,15nm,0.9s						
TKM2	Tokmak 2	83.52	314	P	P	05 08 21.2	0.0
	SNR=22						
L26K	Log Cabin Wild	83.52	25	P	P	05 08 20.4	-0.1
L26K	Log Cabin Wild	83.52	25	P	P	05 08 20.5	0.0
	baz=245,SNR=5.2						
KURBB	Kurchatov Arra	83.53	322	P	P	05 08 19.9	-0.9
	comp=Z,6.3nm,0.8s,baz=110,slow=4.1,SNR=39						
KURBB				LR	LR	05 44 16.6	
	comp=Z,40nm,21.5s,baz=146,slow=35						
	comp=Z,6.3nm,0.8s						
CTG	Chitna Glacier	83.55	27	P	P	05 08 20.7	-0.1
	baz=247						
SCRK	Sand Creek	83.67	24	P	P	05 08 21.2	-0.2
SCRK	Sand Creek	83.67	24	P	P	05 08 20.9	-0.5
	baz=244						
M27K	Edge Creek, AK	83.87	25	P	P	05 08 23.1	+0.7
M27K				IAmb	IAmb	05 08 40.5	
	comp=Z,20nm,1.2s						
M27K	Edge Creek, AK	83.87	25	P	P	05 08 22.7	+0.3
	baz=246						
TOLK	Toolik Lake Re	83.91	18	P	P	05 08 22.9	+0.4
TOLK	Toolik Lake Re	83.91	18	P	P	05 08 22.6	+0.2
	baz=239						
KBK	Karagaybulak	83.92	314	P	P	05 08 23.4	+0.1
	SNR=10						
J26L	Joseph Creek	84.06	23	P	P	05 08 23.5	+0.2
	baz=245,SNR=7.0						
CHMS	Chumysh	84.14	314	P	P	05 08 24.2	0.0
	SNR=9.0						
UCH	Uchtor	84.14	313	P	P	05 08 24.8	0.0
	SNR=30						
L27K	Beaver Creek,	84.17	25	P	P	05 08 24.1	+0.3
L27K	Beaver Creek,	84.17	25	P	P	05 08 24.0	+0.2
	baz=246						
BCAR	Beaver Creek A	84.19	25	P	P	05 08 24.6	+0.7
AAK	Ala-Archa	84.25	314	P	P	05 08 24.7	-0.1
	SNR=13						
AAK	Ala-Archa	84.25	314	P	P	05 08 24.9	0.0
	comp=Z,12nm,0.8s,baz=134,slow=5.4,SNR=26						
AAK				LR	LR	05 45 44.5	
	comp=Z,66nm,21.7s,baz=104,slow=36						
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	84.25	314	P	P	05 08 24.9	0.0
AAK				IAmb	IAmb	05 08 26.0	
	comp=Z,17nm,0.9s						
AAK	Ala-Archa	84.25	314 *ce*	P	P	05 08 24.7	-0.1
AAK				pmax	pmax		
	comp=Z,19nm,1.0s						
YUK3	Moose Creek	84.26	26	P	P	05 08 24.8	+0.2
	baz=248						
BVCY	Beaver Creek	84.33	26	P	P	05 08 25.1	+0.5
	baz=247						
USP	Ospenovka	84.38	314	P	P	05 08 25.3	-0.1
	SNR=25						
K27K	Chicken	84.46	24	P	P	05 08 26.2	+1.0
K27K	Chicken	84.46	24	P	P	05 08 25.6	+0.3
	baz=246						
AML	Almayashu	84.72	313	P	P	05 08 27.8	+0.2
	SNR=64						
QSPA	South Pole Qui	84.75	180	P	P	05 08 27.6	+0.8
EKS2	Erkin-Say	84.77	314	P	P	05 08 27.9	+0.4
	SNR=23						
MAW	Mawson	84.81	203	P	P	05 08 27.7	+0.7
	comp=Z,16nm,0.5s,baz=94,slow=5.9,SNR=68						
MAW				LR	LR	05 42 32.5	
	comp=Z,144nm,21.5s,baz=82,slow=33						
	comp=Z,16nm,0.5s						
MAW	Mawson	84.81	203	P	P	05 08 27.7	+0.7
	baz=85,SNR=36						
MAW	Mawson	84.81	203	P	P	05 08 27.9	+0.9
MAW				IAmb	IAmb	05 08 28.5	
	comp=Z,17nm,1.4s						
YUK4	Talbot Arm	84.91	27	P	P	05 08 28.5	+0.7
	baz=250						
BMAR	Burnt Mountain	84.97	20	P	P	05 08 28.7	+0.9
EGAK	Eagle	85.12	23	P	P	05 08 28.6	+0.1
	baz=247						
HYT	Haines Junctio	85.25	28	IAmb	IAmb	05 08 34.0	
	comp=Z,12nm,0.7s						
HYT	Haines Junctio	85.25	28	P	P	05 08 29.6	+0.2
	baz=250						
DAWY	Dawson	85.56	24	IAmb	IAmb	05 08 49.0	
	comp=Z,19nm,1.5s						
DAWY	Dawson	85.56	24	P	P	05 08 30.6	-0.2
	baz=249,SNR=6.0						
N30M	Aishikik Lake	85.65	27	P	P	05 08 31.3	0.0
	baz=251						
SKAG	Skagway	85.85	29	P	P	05 08 32.4	+0.2
	baz=253						
CRAG	Craig	85.87	33	P	P	05 08 32.7	+0.3
	baz=255						
NRIK	Noril'sk	86.04	341	P	P	05 08 32.2	-0.8
	comp=Z,9.6nm,0.5s,baz=114,slow=4.4,SNR=14						
	comp=Z,9.6nm,0.5s						
NRIK	Noril'sk	86.04	341	IAmb	IAmb	05 08 35.7	
	comp=Z,11nm,0.7s						
NRIK	Noril'sk	86.04	341 *ce*	P	P	05 08 31.6	-1.4
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
M30M	Minto, Yukon	86.15	26	P	P	05 08 34.0	+0.3
	baz=251						
N31M	Braeburn, Yuko	86.26	27	P	P	05 08 34.3	0.0
	baz=252						
WHY	Whitehorse	86.42	28	P	P	05 08 35.2	0.0
	baz=253						
I29M	Ogilvie Camp,	86.46	23	P	P	05 08 35.1	-0.1
	baz=250,SNR=6.6						
BTK	Batken	86.47	311	IAmb	IAmb	05 08 36.5	
	comp=Z,14nm,1.2s						
WRAK	Wrangell Islan	86.54	33	P	P	05 08 35.5	-0.1
	baz=255						
GAR	Garm	86.67	309	IAmb	IAmb	05 08 37.3	
	comp=Z,8.5nm,0.8s						
M31M	Drury Creek, Y	87.10	27	P	P	05 08 38.2	-0.2
	baz=253						
KK31	Karatay Array	87.21	314	IAmb	IAmb	05 08 40.0	
	comp=Z,14nm,1.2s						
KKAR	Karatay Array	87.21	314	IAmb	IAmb	05 08 40.0	
	comp=Z,14nm,1.2s						
P33M	Teslin, Yukon	87.28	29	P	P	05 08 39.2	-0.1
	baz=255						
EPYK	Eagle Plains	87.42	22	IAmb	IAmb	05 08 44.1	
	comp=Z,8.2nm,0.6s						
EPYK	Eagle Plains	87.42	22	P	P	05 08 39.7	-0.1
	baz=251						
CHGR	Chuyangaron	87.52	309	IAmb	IAmb	05 08 41.6	
	comp=Z,13nm,0.7s						
S34M	Telegraph Cree	87.55	31	P	P	05 08 40.4	-0.2
	baz=256						
BBB	Bella Bella	88.01	37	LR	LR	05 40 18.5	
	comp=Z,92nm,21.4s,baz=283,slow=30						
DLBC	Dease Lake	88.24	31	LR	LR	05 41 24.8	
	comp=Z,151nm,21.3s,baz=266,slow=31						
BRVK	Borovoye	89.06	323	P	P	05 08 46.2	-1.6
BRVK				IAmb	IAmb	05 08 49.5	
	comp=Z,5.2nm,0.8s						
BRVK	Borovoye	89.06	323 *ce*	P	P	05 08 46.1	-1.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
INK	Inuvik	89.19	21	LR	LR	05 44 03.7	
	comp=Z,39nm,20.0s,baz=264,slow=32						
INK	Inuvik	89.19	21	IAmb	IAmb	05 08 51.9	
	comp=Z,9.0nm,1.3s						
INK	Inuvik	89.19	21	P	P	05 08 48.1	0.0
	baz=254						
J01E	Myrtle Point	89.34	47	P	P	05 08 49.1	-0.3
	baz=262						
K02D	Willamette Mer	89.47	47	P	P	05 08 49.9	-0.2
	baz=262						
I03D	Drain, OR	89.83	46	P	P	05 08 52.0	+0.4
	baz=263						
YBH	Yreka Blue Hor	90.05	48	LR	LR	05 41 27.8	
	comp=Z,64nm,21.9s,baz=287,slow=30						
G03D	McMinnville, O	90.08	45	P	P	05 08 53.2	+0.4
	baz=263						
F04D	Rainier, OR	90.37	44	P	P	05 08 54.3	+0.2
	baz=263						
H04D	Lebanon	90.37	45	P	P	05 08 54.3	+0.1
	baz=263						
L04D	Klamath Falls	90.41	48	P	P	05 08 54.6	0.0
	baz=263						
D03D	Eldon	90.49	42	P	P	05 08 55.0	+0.3
	baz=263						
I04A	Tendick Farm,	90.52	46	P	P	05 08 55.0	0.0
	baz=263						
J04D	Umpqua Nationa	90.67	47	P	P	05 08 56.1	+0.3
	baz=264						
K04D	Chiloquin, OR	90.86	47	P	P	05 08 56.2	-0.5
	baz=264						
B05A	Bryant	91.24	42	P	P	05 08 58.0	-0.1
	baz=264						
J05D	Fort Rock, OR	91.31	47	P	P	05 08 59.7	+0.9
	baz=264						
I05D	Terrebonne, OR	91.34	46	P	P	05 08 59.5	+0.7
	baz=264						
CMB	Columbia Colle	91.44	52	IAmb	IAmb	05 09 02.1	
	comp=Z,10nm,1.4s						
G05D	Wamic, OR	91.45	45	P	P	05 08 59.8	+0.5
	baz=264						
K05A	Summer Lake	91.50	47	P	P	05 09 00.3	+0.5
BEKR	Beckworth	91.63	50	IAmb	IAmb	05 09 18.7	
	comp=Z,10nm,1.3s						
SBC	Santa Barbara	91.65	56	P	P	05 09 00.9	+0.6
	baz=265						
VES	Vestal, Richgr	92.28	54	P	P	05 09 03.9	+0.6
	baz=265						
PAHR	Pah Rah Range	92.36	51	IAmb	IAmb	05 09 05.8	
	comp=Z,9.9nm,1.1s						
MDPB	Devils Postpil	92.43	53	IAmb	IAmb	05 09 06.5	
	comp=Z,11nm,1.0s						
OMMB	Old Mammoth Mi	92.49	53	IAmb	IAmb	05 09 06.9	
	comp=Z,12nm,1.2s						
I07A	Izee	92.63	46	IAmb	IAmb	05 09 06.9	
	comp=Z,11nm,1.1s						
CIS	Catalina Islan	92.64	57	P	P	05 09 05.3	+0.3
	baz=266						
C36M	Paulatuk	92.76	21	IAmb	IAmb	05 09 06.6	
	comp=Z,4.2nm,0.7s						
C36M	Paulatuk	92.76	21	P	P	05 09 05.2	+0.6
	baz=263						
ISA	Isabella, Lake	92.76	55	IAmb	IAmb	05 09 07.7	
	comp=Z,10nm,1.2s						
ISA	Isabella, Lake	92.76	55	P	P	05 09 06.0	+0.4
	baz=266						
LHV	Little Huntoon	92.93	52	P	P	05 09 06.7	+0.6
EDW2	Edwards Air Fo	93.10	55	P	P	05 09 07.8	+0.7
	baz=266						
NVAR	Mina Array Bea	93.10	52	P	P	05 09 08.5	+1.2
	comp=Z,7.9nm,0.9s,baz=258,slow=6.1,SNR=36						
NVAR				LR	LR	05 45 50.4	
	comp=Z,88nm,19.4s,baz=262,slow=32						
	comp=Z,7.9nm,0.9s						
G08A	Pilot Rock	93.11	45	IAmb	IAmb	05 09 25.1	
	comp=Z,11nm,1.2s						
CWC	Cottonwood Cre	93.14	54	P	P	05 09 07.7	+0.3
	baz=266						
KVN	Kaiserville	93.31	51	IAmb	IAmb	05 09 26.5	
	comp=Z,10nm,1.1s						
J08A	Circle Bar Ran	93.32	47	P	P	05 09 08.4	+0.4
J08A				IAmb	IAmb	05 09 09.9	
	comp=Z,6.6nm,0.9s						
BFSC	Mount Baldy Ra	93.33	56	P	P	05 09 09.0	+0.7
	baz=266						
LRMC	Laurel Mtn Rad	93.39	55	P	P	05 09 09.1	+0.5
	baz=266						
MURC	Murrieta	93.67	57	P	P	05 09 08.7	-1.0
	baz=266						
TPH	Tonopah	93.93	52	P	P	05 09 11.2	+0.1
TPH	Tonopah	93.93	52	P	P	05 09 11.2	+0.1
TPH				pmax	pmax		
	comp=Z,34nm,1.0s						
BMN	Battle Mountai	94.07	50	P	P	05 09 10.5	-1.1
BMN				IAmb	IAmb	05 09 14.5	
	comp=Z,7.6nm,1.2s						
BMN	Battle Mountai	94.07	50	P	P	05 09 10.5	-1.1
BMN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GSC	Goldstone, Bar	94.10	55	IAmb	IAmb	05 09 14.3	
	comp=Z,7.0nm,1.1s						
GSC	Goldstone, Bar	94.10	55	P	P	05 09 10.9	-0.8
	baz=266						
FURC	Furnace Creek,	94.12	54	P	P	05 09 11.3	-0.4
	baz=267,SNR=6.7						
BMO	Blue Mountains	94.26	45	IAmb	IAmb	05 09 29.4	
	comp=Z,9.4nm,1.2s						
GWY	Greenwater Val	94.26	54	IAmb	IAmb	05 09 14.6	
	comp=Z,14nm,1.5s						
MONP2	Monument Peak	94.27	57	P	P	05 09 13.0	+0.2
	baz=266						
PFO	Pinyon Flats O	94.28	57	LR	LR	05 43 31.8	
	comp=Z,80nm,21.4s,baz=265,slow=30						
PFO	Pinyon Flats O	94.28	57	P	P	05 09 12.7	0.0
PFO				IAmb	IAmb	05 09 15.8	
	comp=Z,8.8nm,1.1s						
PFO	Pinyon Flats O	94.28	57	P	P	05 09 12.7	0.0
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PFO	Pinyon Flats O	94.28	57	P	P	05 09 12.8	+0.1
	baz=267						
TPFO	Pinon Flats	94.28	57	P	P	05 09 12.8	+0.1
	baz=267						
F10A	Beach Ranch, E	94.37	44	IAmb	IAmb	05 09 29.8	
	comp=Z,6.5nm,1.0s						
HEC	Hector,Ludlow	94.45	56	P	P	05 09 13.5	+0.1
	baz=267						
NEW	Newport	94.56	42	LR	LR	05 44 50.2	
	comp=Z,88nm,21.7s,baz=276,slow=31						
NEW	Newport	94.56	42	IAmb	IAmb	05 09 32.7	
	comp=Z,9.4nm,1.2s						
NEW	Newport	94.56	42	P	P	05 09 13.3	-0.2
	baz=267						
TPNV	Topopah Spring	94.64	53	P	P	05 09 14.1	-0.2
	baz=267,SNR=10						
BELC	Belle Mtn. Jos	94.69	56	P	P	05 09 13.4	-1.2
	baz=267,SNR=5.3						
TUQ	Turquoise Moun	94.82	55	P	P	05 09 15.7	+0.6
	baz=267						
GMRC	Granite Mounta	95.01	56	P	P	05 09 15.9	-0.1
	baz=267,SNR=7.4						
BC3	Big Chuckawall	95.12	57	P	P	05 09 16.6	+0.1
	baz=267						
R11A	Troy Canyon, C	95.23	52	IAmb	IAmb	05 09 19.9	
	comp=Z,8.3nm,1.2s						
R11A	Troy Canyon, C	95.23	52	P	P	05 09 16.8	-0.2
	baz=268,SNR=12						
MFID	Camas Ranch	95.25	47	IAmb	IAmb	05 09 35.1	
	comp=Z,7.7nm,1.4s						
IRM	Iron Mountain	95.40	56	P	P	05 09 17.2	-0.5
	baz=267,SNR=6.8						
RPN	Rapa Nui	95.48	118	LR	LR	05 44 03.5	
	comp=Z,51nm,21.4s,baz=258,slow=30						
SHPR	Sheep Range	95.49	54	IAmb	IAmb	05 09 20.9	
	comp=Z,5.9nm,0.9s						
ELK	Elko	95.59	50	LR	LR	05 44 49.7	
	comp=Z,62nm,21.8s,baz=216,slow=31						
NEE2	Needles Airpor	95.86	56	P	P	05 09 20.6	+0.9
	baz=268						
PDMCI	Parker Dam,Lak	96.24	56	P	P	05 09 22.5	+1.1
	baz=268						
YKA	Yellowknife Ar	96.25	28	P	P	05 09 20.7	-0.1
	comp=Z,1.1nm,0.5s,baz=270,slow=4.6,SNR=16						
YKA				PKiKP	PKiKP	05 13 56.2	-2.4
	comp=Z,0.5nm,0.7s,baz=228,slow=1.0,SNR=3.3						
	comp=Z,1.1nm,0.5s						
HLID	Hailey	96.29	47	P	P	05 09 21.9	+0.2
	baz=269						
AKTO	Aktyubinsk	96.42	320	LR	LR	05 52 45.4	
	comp=Z,50nm,21.8s,baz=82,slow=35						
W13A	Hualapai Mount	96.47	55	IAmb	IAmb	05 09 41.8	
	comp=Z,8.1nm,1.3s						
PSUT	Pine Spring	96.60	52	IAmb	IAmb	05 09 25.5	
	comp=Z,6.9nm,1.2s						
BELA	Belgrano 2	96.95	179	IAmb	IAmb	05 09 25.0	
	comp=Z,6.4nm,0.9s						
CCUT	Cedar City	96.96	53	IAmb	IAmb	05 09 27.7	
	comp=Z,7.7nm,1.2s						
LCMT	Little Creek M	97.05	53	IAmb	IAmb	05 09 27.8	
	comp=Z,5.2nm,1.1s						
SZCU	Shurtz Canyon	97.18	53	IAmb	IAmb	05 09 28.5	
	comp=Z,8.2nm,1.3s						
214A	Organ Pipe Nat	97.28	59	P	Pdif	05 09 26.5	+0.2
	baz=268						
DUG	Dugway, Tooele	97.43	50	P	Pdif	05 09 27.2	+0.3
	baz=269						
HVU	Hansel Valley	97.47	49	IAmb	IAmb	05 09 28.8	
	comp=Z,6.3nm,1.0s						
U15A	North Rim	97.80	54	IAmb	IAmb	05 09 31.7	
	comp=Z,5.8nm,1.1s						
MTPU	Mount Pierson	97.90	52	IAmb	IAmb	05 09 31.9	
	comp=Z,3.9nm,0.9s						
BOZ	Bozeman (W)	98.28	45	P	P	05 09 30.5	-0.1
	baz=271						
WUAZ	Wupatki	98.54	55	IAmb	IAmb	05 09 35.1	
	comp=Z,6.9nm,1.1s						
WUAZ	Wupatki	98.54	55	P	Pdif	05 09 32.5	+0.4
	baz=270						
TMUT	Trail Mountain	98.67	51	IAmb	IAmb	05 09 34.8	
	comp=Z,5.7nm,0.9s						
LPIG	La Paz	99.28	67	LR	LR	05 46 53.5	
	comp=Z,24nm,20.2s,baz=221,slow=31						
P18A	Preston Nutter	99.41	51	IAmb	IAmb	05 09 38.8	
	comp=Z,4.6nm,1.2s						
EGMT	Eagleton	99.49	42	P	Pdif	05 09 36.2	+0.4
	baz=273						
BW06	Boulder Array	99.84	48	P	Pdif	05 09 36.8	-0.9
	baz=272,SNR=5.0						
PDAR	Pinedale Array	99.84	48	P	Pdif	05 09 37.4	-0.4
	comp=Z,1.6nm,0.7s,baz=242,slow=3.2,SNR=14						
PDAR				LR	LR	05 49 12.3	
	comp=Z,53nm,20.2s,baz=277,slow=32						
	comp=Z,1.6nm,0.7s						
RLMT	Red Lodge	99.96	45	P	Pdif	05 09 38.8	+0.6
	baz=273						
TROLL	Troll, Antarti	100.39	189	Pdiff	Pdif	05 09 39.6	+0.1
MVCO	Mesa Verde	100.84	53	P	Pdif	05 09 42.4	+0.1
	baz=272						
O20A	White River Ci	100.94	50	P	Pdif	05 09 42.9	+0.2
	baz=272						
SNAA	Sanae	101.48	188	Pdiff	Pdif	05 09 44.0	-0.2
K22A	Casper	102.08	48	P	Pdif	05 09 47.8	+0.2
	baz=274						
S22A	4UR Ranch, Cre	102.14	53	P	Pdif	05 09 48.9	+0.7
	baz=273						
ANMO	Albuquerque	102.57	56	P	Pdif	05 09 50.2	+0.2
	baz=272						
N23A	Red Feather La	102.64	49	P	Pdif	05 09 50.4	+0.1
	baz=274						
VNA3	Neumayer Olymp	102.71	186	Pdiff	Pdif	05 09 49.3	-0.3
MNTX	Cornudas Mount	103.60	59	P	Pdif	05 09 55.0	+0.6
	baz=272						
RSSD	Black Hills	103.76	46	P	Pdif	05 09 55.6	+0.5
	baz=276						
TXAR	Lajitas Array	105.18	61	PKiKP	PKiKP	05 14 16.4	+0.6
	comp=Z,0.7nm,0.7s,baz=146,slow=0.7,SNR=9.0						
TXAR				PKKPbc	PKKPbc	05 25 43.2	+0.4
	comp=Z,0.4nm,0.8s,baz=127,slow=6.0,SNR=3.9						
TXAR				PKKPab	PKKPab	05 25 59.7	-0.2
	comp=Z,1.2nm,0.7s,baz=121,slow=6.4,SNR=11						
APA	Apatity	105.38	340 ⇓*i*	P	Pdif	05 10 09.9	+8.4
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARCES	ARCESS Array B	106.98	343	PKiKP	PKiKP	05 14 17.6	-0.2
	comp=Z,3.3nm,0.9s,baz=117,slow=2.4,SNR=21						
ARCES				PKKPbc	PKKPbc	05 25 36.9	-1.6
	comp=Z,2.2nm,0.9s,baz=275,slow=3.3,SNR=3.8						
JCT	Junction City	108.46	60	P	PKiKP	05 14 22.2	+0.4
	baz=275						
ECSD	EROS Data Cent	109.12	46	P	PKiKP	05 14 22.6	0.0
	baz=281						
FINES	FINESS Array B	111.03	335	PKiKP	PKiKP	05 14 23.9	-1.7
	comp=Z,2.0nm,0.8s,baz=90,slow=1.7,SNR=7.8						
SPMN	Marine on St.	111.44	43	P	PKiKP	05 14 26.6	-0.3
	baz=285						
EYMN	Ely	111.56	40	P	PKiKP	05 14 27.1	0.0
	baz=287						
HHAR	Hobbs	112.55	53	P	PKiKP	05 14 28.8	-0.5
	baz=280						
S39A	Bolivar	112.77	51	P	PKiKP	05 14 29.7	+0.1
	baz=282						
W39A	Magazine	112.87	54	P	PKiKP	05 14 29.8	-0.1
	baz=280						
MIAR	Mount Ida	113.15	55	P	PKiKP	05 14 30.6	+0.1
	baz=280						
U40A	Yellville	113.40	53	P	PKiKP	05 14 31.0	+0.1
	baz=281						
U40A				P	PKiKP	05 14 31.0	+0.1
	baz=281						
U40A	Yellville	113.40	53	P	PKiKP	05 14 31.2	+0.2
	baz=281						
JFWS	Jewell Farm	113.82	45	P	PKiKP	05 14 31.2	-0.4
	baz=286						
Z41A	Richland Creek	114.01	56	P	PKPdf	05 14 31.7	-0.5
	baz=280						
W41B	Gary Mavity, V	114.11	54	P	PKPdf	05 14 32.1	-0.2
	baz=281						
AKASG	Malin Array Be	114.26	324	PKP	PKPdf	05 14 31.0	-1.1
	comp=Z,1.6nm,0.6s,baz=54,slow=3.2,SNR=8.1						
AKASG				PKKPbc	PKKPbc	05 25 12.2	-1.9
	comp=Z,0.9nm,0.5s,baz=271,slow=2.6,SNR=4.8						
CCM	Cathedral Cave	114.30	51	P	PKPdf	05 14 32.2	-0.4
	baz=283						
BRTR	Keskin Array B	114.85	311	PKP	PKiKP	05 14 32.5	-1.3
	comp=Z,0.9nm,0.5s,baz=128,slow=1.9,SNR=6.0						
BRTR				PKKPbc	PKKPbc	05 25 12.2	+0.2
	comp=Z,0.9nm,0.7s,baz=212,slow=4.4,SNR=5.3						
HDIL	Hopedale	115.15	47	P	PKiKP	05 14 33.9	-0.2
	baz=286						
P43A	Skaggs, Pawnee	115.22	49	P	PKPdf	05 14 34.5	+0.2
	baz=285						
MOPA	Mopani	115.29	241 *i*	P	PKPdf	05 14 35.2	+0.3
MOPA	Mopani	115.29	241 *i*	P	PKPdf	05 14 35.2	+0.3
E46A	Sault Ste Mari	116.71	40	P	PKiKP	05 14 37.1	+0.1
	baz=292						
SFIN	Lafayette	116.81	47	P	PKPdf	05 14 37.1	-0.2
	baz=287						
P46A	Rosedale	116.95	48	P	PKiKP	05 14 38.1	+0.5
	baz=287						
NB2	NORSAR Subarra	116.97	340	PKPdf	PKPdf	05 14 36.2	-0.9
	comp=Z,0.3nm,0.4s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.97	340	PKP	PKPdf	05 14 36.1	-0.9
	comp=Z,1.1nm,0.8s,baz=49,slow=2.0,SNR=4.6						
WVT	Waverly	117.41	52	P	PKPdf	05 14 37.7	-0.9
	baz=284						
WVT	Waverly	117.41	52	P	PKPdf	05 14 37.9	-0.7
	baz=284						
J47A	Sunmer	117.50	43	P	PKiKP	05 14 38.7	+0.1
	baz=290						
J47A				P	PKiKP	05 14 38.7	+0.1
	baz=290						
N47A	Urbana	117.67	46	P	PKiKP	05 14 39.1	+0.1
	baz=288						

N47A				P	PKiKP	05 14 39.1	+0.1
	baz=288						
T47A	Sharon Grove	117.75	51	P	PKiKP	05 14 39.4	+0.1
	baz=286						
L48A	N Adams	118.22	45	P	PKiKP	05 14 40.1	+0.1
	baz=290						
L48A				P	PKiKP	05 14 40.1	+0.1
	baz=290						
O48B	Farmland	118.26	47	P	PKiKP	05 14 40.2	0.0
	baz=289						
O48B	Farmland	118.26	47	P	PKPdf	05 14 40.0	-0.2
	baz=289						
P48A	Milroy	118.31	48	P	PKiKP	05 14 40.3	0.0
	baz=288						
P48A				P	PKiKP	05 14 40.3	0.0
	baz=288						
BOSA	Boshof	118.60	234	PKP	PKiKP	05 14 41.6	+0.2
	comp=Z,6.5nm,0.6s,baz=127,slow=2.2,SNR=32						
BOSA				PKKPab	PKKPbc	05 24 59.4	+0.9
	comp=Z,3.3nm,0.8s,baz=336,slow=5.9,SNR=5.6						
BOSA	Boshof	118.60	234	PKPdf	PKPdf	05 14 41.1	-0.3
BOSA	Boshof	118.60	234	PKIKP	PKPdf	05 14 41.1	-0.3
BOSA	Boshof	118.60	234	*i* P	PKPdf	05 14 41.2	-0.1
BOSA	Boshof	118.60	234	*i* P	PKPdf	05 14 41.2	-0.1
AAM	Ann Arbor	118.64	44	P	PKiKP	05 14 41.0	+0.2
	baz=291						
N49A	Columbus Grove	118.74	46	P	PKiKP	05 14 41.1	0.0
	baz=290						
N49A				P	PKiKP	05 14 41.1	0.0
	baz=290						
MATP	Matopo	118.81	243	*i* P	PKiKP	05 14 42.1	+0.1
MATP	Matopo	118.81	243	*i* P	PKiKP	05 14 42.1	+0.1
P49A	Miami Univ. Ec	118.81	47	P	PKPdf	05 14 41.2	-0.1
	baz=289						
P49A	Miami Univ. Ec	118.81	47	P	PKPdf	05 14 40.8	-0.4
	baz=289						
LRAL	Lakeview Retre	118.82	55	PKPdf	PKPdf	05 14 40.7	-0.7
LRAL	Lakeview Retre	118.82	55	P	PKPdf	05 14 41.4	-0.1
	baz=284						
LRAL	Lakeview Retre	118.82	55	P	PKPdf	05 14 41.3	-0.1
	baz=284						
O49A	Covington	118.88	47	P	PKPdf	05 14 41.2	-0.1
	baz=289						
O49A				P	PKPdf	05 14 41.2	-0.1
	baz=289						
U49A	Red Boiling Sp	118.91	51	P	PKPdf	05 14 41.3	-0.2
	baz=286						
KOLS	Kolonicke sedl	119.08	324	*e*PKIKP	PKiKP	05 14 42.9	+1.4
KOLS	Kolonicke sedl	119.08	324	*e*PKP	PKiKP	05 14 42.9	+1.4
T50A	Nancy	119.48	50	P	PKPdf	05 14 42.5	-0.1
	baz=287						
T50A				P	PKPdf	05 14 42.5	-0.1
	baz=287						
R50A	Paris	119.49	49	P	PKPdf	05 14 42.2	-0.4
	baz=288						
R50A				P	PKPdf	05 14 42.2	-0.4
	baz=288						
250A	Grady	119.67	56	P	PKPdf	05 14 42.8	-0.3
	baz=283						
LBTB	Lobatse	119.74	237	PKPdf	PKPdf	05 14 43.0	-0.6
LBTB	Lobatse	119.74	237	PKIKP	PKPdf	05 14 43.0	-0.6
LBTB	Lobatse	119.74	237	*i* P	PKiKP	05 14 43.9	+0.2
LBTB	Lobatse	119.74	237	*i* P	PKiKP	05 14 43.9	+0.2
PLCA	Paso Flores	120.03	144	PKP	PKiKP	05 14 44.2	+0.4
	comp=Z,1.5nm,0.6s,baz=270,slow=2.2,SNR=10						
PLCA	Paso Flores	120.03	144		PKiKP	05 14 43.9	+0.1
PLCA	Paso Flores	120.03	144	PKIKP	PKiKP	05 14 43.9	+0.1
P51A	Williamsport	120.04	47	P	PKPdf	05 14 43.2	-0.4
	baz=290						
P51A				P	PKPdf	05 14 43.2	-0.4
	baz=290						
VLDQ	Val d'Or	120.16	36	PKPdf	PKPdf	05 14 42.8	-0.8
V51A	Loudon	120.21	51	P	PKiKP	05 14 44.1	-0.1
	baz=287						
Z51A	Franklin	120.24	54	P	PKiKP	05 14 44.4	+0.1
	baz=285,SNR=5.7						
S51A	Beattyville	120.24	49	P	PKPdf	05 14 44.0	0.0
	baz=288						
S51A				P	PKPdf	05 14 44.0	0.0
	baz=288						
LANS	Liptovska Anna	120.58	326	*e*PKIKP	PKiKP	05 14 45.1	+0.6
LANS	Liptovska Anna	120.58	326	*e*PKP	PKiKP	05 14 45.1	+0.6
TZTN	Tazewell	120.61	50	P	PKPdf	05 14 44.3	-0.6
	baz=288						
P52A	Corning	120.66	47	P	PKPdf	05 14 44.3	-0.5
	baz=291						
TKL	Tuckaleechee C	120.71	51	P	PKiKP	05 14 45.4	+0.2
	baz=287						
152A	Waverly Hall	120.77	55	P	PKiKP	05 14 45.4	+0.1
	baz=285,SNR=7.0						
V52A	Sevierville	120.79	51	P	PKiKP	05 14 45.7	+0.4
	baz=287,SNR=7.8						
Y52A	Lilburn	120.99	53	P	PKiKP	05 14 45.9	+0.2
	baz=286,SNR=6.6						
Y52A				P	PKiKP	05 14 45.9	+0.2
	baz=286,SNR=6.6						
M53A	WI Miller and	121.02	44	P	PKPdf	05 14 44.9	-0.5
	baz=293						
O53A	New Philadelph	121.09	46	P	PKPdf	05 14 45.0	-0.6
	baz=292						
N53A	Lisbon	121.15	45	P	PKiKP	05 14 46.2	+0.3
	baz=292,SNR=14						
N53A				P	PKiKP	05 14 46.2	+0.3
	baz=292,SNR=14						
ERPA	Erie	121.23	43	P	PKPdf	05 14 45.7	-0.1
	baz=294						
P53A	Whipple	121.25	46	P	PKiKP	05 14 46.2	+0.2
	baz=291,SNR=10						
P53A				P	PKiKP	05 14 46.2	+0.2
	baz=291,SNR=10						
VTS	Vitosha	121.30	318	PKPdf	PKPdf	05 14 46.0	-0.1
VTS	Vitosha	121.30	318	PKIKP	PKPdf	05 14 46.0	-0.1
MAUC	Maruska	121.37	327	*e*PKPDF	PKPdf	05 14 45.9	0.0
V53A	Saluda	121.45	51	P	PKiKP	05 14 47.0	+0.4
	baz=288,SNR=5.9						
V53A				P	PKiKP	05 14 47.0	+0.4
	baz=288,SNR=5.9						
CASEE	Lake Jocassee	121.56	52	P	PKiKP	05 14 47.3	+0.4
	baz=287,SNR=5.1						
SCHQ	Schefferville	121.57	25	PKP	PKPdf	05 14 45.5	-0.7
	comp=Z,3.5nm,0.8s,baz=273,slow=2.6,SNR=4.9						
GOGA	Godfrey	121.59	54	P	PKiKP	05 14 47.0	+0.1
	baz=286						
GOGA	Godfrey	121.59	54	P	PKPdf	05 14 46.6	-0.2
	baz=286						
O54A	Avella	121.71	45	P	PKiKP	05 14 47.0	+0.1
	baz=292,SNR=8.1						
O54A				P	PKiKP	05 14 47.0	+0.1
	baz=292,SNR=8.1						
Q54A	Coxs Mills	121.83	47	P	PKiKP	05 14 47.3	+0.1
	baz=291,SNR=15						
Q54A				P	PKiKP	05 14 47.3	+0.1
	baz=291,SNR=15						
S54A	Dingess, Beckl	121.90	48	P	PKiKP	05 14 47.5	+0.1
	baz=290,SNR=5.4						
S54A				P	PKiKP	05 14 47.5	+0.1
	baz=290,SNR=5.4						
TIGA	Tifton	122.01	56	P	PKiKP	05 14 48.4	+0.6
	baz=285,SNR=5.4						
TIGA	Tifton	122.01	56	P	PKPdf	05 14 47.6	0.0
	baz=285						
MCWV	Mont Chateau	122.29	46	P	PKiKP	05 14 48.2	+0.1
	baz=292						
MCWV	Mont Chateau	122.29	46	P	PKiKP	05 14 48.0	-0.1
	baz=292						
HODGE	Hodges	122.32	53	P	PKiKP	05 14 48.7	+0.4
	baz=287,SNR=7.2						
PAULI	Pauline	122.49	52	P	PKiKP	05 14 48.9	+0.3
	baz=288						
R55A	Marlinton	122.61	47	P	PKiKP	05 14 48.9	+0.1
	baz=292,SNR=12						
R55A				P	PKiKP	05 14 48.9	+0.1
	baz=292,SNR=12						
CLL	Collm	122.74	331	*e*PKIKP	PKPdf	05 14 48.0	-0.4
CLL				*e*		05 15 05.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL	Collm	122.74	331	*e*PKPdf	PKPdf	05 14 48.0	-0.4
	comp=Z,8.0nm,1.1s						
CLL				*e*pPKPdf	pPKPdf	05 15 05.0	-2.6
CLL				Lm	MLR	06 06 00.0	
	comp=Z,100nm,21.5s						
KMSC	Kings Mountain	122.76	51	P	PKPdf	05 14 48.6	-0.4
	baz=289,SNR=6.7						
KMSC	Kings Mountain	122.76	51	P	PKiKP	05 14 49.0	-0.1
	baz=289						
BLA	Blacksburg	122.77	49	P	PKiKP	05 14 49.2	0.0
	baz=291,SNR=6.7						
BLA	Blacksburg	122.77	49	P	PKPdf	05 14 48.6	-0.4
	baz=291						
L56A	Greenwood	122.86	42	P	PKPdf	05 14 49.0	0.0
	baz=296						
L56A				P	PKPdf	05 14 49.0	0.0
	baz=296						
Q56A	Snyder Ridge,	123.00	46	P	PKiKP	05 14 49.6	+0.1
	baz=293						
Q56A				P	PKiKP	05 14 49.6	+0.1
	baz=293						
JSC	Jenkinsville	123.09	52	P	PKiKP	05 14 50.3	+0.5
	baz=288						
RONA	Rosalia, Austr	123.14	326	*e*P	PKPdf	05 14 48.9	-0.5
	comp=Z,1.5nm,0.4s						
CONA	Conrad Observa	123.25	326	*e*P	PKPdf	05 14 49.2	-0.5
	comp=Z,4.0nm,0.8s						
SSPA	Standing Stone	123.28	44		PKiKP	05 14 49.9	-0.1
SSPA	Standing Stone	123.28	44	P	PKiKP	05 14 49.9	-0.1
	baz=295						
SSPA	Standing Stone	123.28	44	P	PKiKP	05 14 49.9	-0.1
	baz=295						
FNA	Florina	123.33	316	PKPdf	PKPdf	05 14 49.2	-0.8
FNA	Florina	123.33	316	PKIKP	PKPdf	05 14 49.2	-0.8
CKRC	Cesky Krumlov	123.59	328	*e*PKPDF	PKPdf	05 14 50.2	0.0
LONY	Lake Ozonia	123.61	38	P	PKPdf	05 14 50.3	-0.1
	baz=300						
KHC	Kasperske Hory	123.79	328	*e*PKIKP	PKPdf	05 14 49.7	-0.9
KHC	Kasperske Hory	123.79	328	*e*PKPDF	PKPdf	05 14 49.7	-0.9
J58A	Remsen	123.79	40		PKPdf	05 14 50.4	-0.3
BINY	Binghamton	123.88	42	P	PKPdf	05 14 51.0	+0.1
	baz=297						
GERES	GERESS Array B	123.89	328	PKP	PKPdf	05 14 50.7	-0.2
	comp=Z,2.4nm,0.4s,baz=107,slow=1.4,SNR=28						
GERES	GERESS Array B	123.89	328		PKPdf	05 14 50.2	-0.7
GERES	GERESS Array B	123.89	328	PKIKP	PKPdf	05 14 50.2	-0.7
N58A	Sunbury	123.99	43	P	PKPdf	05 14 51.1	0.0
	baz=296						
N58A				P	PKPdf	05 14 51.1	0.0
	baz=296						
J59A	Piesco	124.24	40		PKPdf	05 14 51.6	0.0
R58B	Mineral	124.36	47	P	PKPdf	05 14 51.8	-0.2
	baz=293						
R58B				P	PKPdf	05 14 51.8	-0.2
	baz=293						
PERS	Pernice	124.40	325	*i* PKPdf	PKPdf	05 14 50.9	-1.0
SOKA	Soboth	124.42	325	*e*P	PKPdf	05 14 51.1	-0.8
	comp=Z,3.5nm,0.7s						
CBN	Corbin Frederi	124.63	46	P	PKiKP	05 14 52.7	-0.1
	baz=294						
DWPF	Disney Wildern	124.65	59	P	PKPdf	05 14 52.7	-0.1
	baz=284						
OBKA	Obir	124.79	325	*e*P	PKPdf	05 14 51.7	-0.9
	comp=Z,5.2nm,1.1s						
BOJS	Bojanci	124.95	324	*i* PKPdf	PKPdf	05 14 52.5	-0.3
BOJS				*i* pPKPdf	pPKPdf	05 15 09.4	-2.6
VISS	Visnje	125.02	324	*i* PKPdf	PKPdf	05 14 52.6	-0.4
KBA	Koelnbreinsper	125.14	326	*e*P	PKPdf	05 14 53.0	-0.4
	comp=Z,2.5nm,0.6s						
GEDE	Greenville	125.19	44	P	PKPdf	05 14 53.4	-0.1
	baz=296						
LBNH	Lisbon	125.44	38	P	PKiKP	05 14 54.6	+0.4
	baz=302						
ABTA	Abfaltersbach	125.79	326	*e*P	PKPdf	05 14 54.1	-0.4
	comp=Z,2.1nm,0.4s						
PAL	Palisades	125.81	42	P	PKiKP	05 14 54.9	-0.1
	baz=298						
WATA	Walderalm	125.94	328	*e*P	PKPdf	05 14 54.6	-0.3
	comp=Z,4.4nm,0.6s						
WTTA	Wattenberg	125.96	327	*e*P	PKPdf	05 14 54.7	-0.3
	comp=Z,4.7nm,0.5s						
MOTA	Moosalm	126.19	328	*e*P	PKPdf	05 14 55.0	-0.3
	comp=Z,8.4nm,0.8s						
SQTA	Sankt Quirin	126.21	328	*e*P	PKPdf	05 14 55.1	-0.2
	comp=Z,5.5nm,0.7s						
PKME	Peaks-Kenny Pk	126.43	35	P	PKiKP	05 14 56.4	+0.3
	baz=306						
FETA	Feichten	126.59	328	*e*P	PKPdf	05 14 56.0	-0.2
	comp=Z,11nm,1.0s						
SGRT	San Giovanni R	126.63	320	PKPdf	PKPdf	05 14 55.8	-0.5
DAVA	Damuels	126.87	328	*e*P	PKPdf	05 14 56.9	+0.2
	comp=Z,6.6nm,1.0s						
TUE	Stuetta	127.67	328	PKPdf	PKPdf	05 14 58.4	+0.1
TSUM	Tsumeb	128.84	240	PKPdf	PKPdf	05 15 00.8	-0.4
YOTC	Yotoco, Valle	131.98	89	*e*P	PKPdf	05 15 02.7	-4.6
PLMC	San Jos del P	132.09	88	*e*P	PKPdf	05 15 06.4	-1.1
MARP	Paez Belalcaza	132.29	91	*e*P	PKPdf	05 15 03.1	-5.0
ORTC	Ortega, Tolima	133.07	90	*e*P	PKPdf	05 15 04.8	-4.5
PRAC	Prado	133.41	90	*e*P	PKPdf	05 15 09.6	-0.3
NORC	Norcasia	133.52	87	*e*P	PKPdf	05 15 04.8	-5.4
ZARC	Zaragoza, Cauc	133.56	85	*e*P	PKPdf	05 15 07.0	-3.1
ROSC	El Rosal	134.04	88	PKP	PKiKP	05 15 12.7	-0.2
	comp=Z,20nm,0.7s,baz=223,slow=19,SNR=9.0						
KEST	Kesra	134.04	316	PKP	PKPdf	05 15 08.6	-2.0
	comp=Z,3.9nm,0.8s,baz=135,slow=2.9,SNR=4.1						
SPBC	San Pablo de B	134.32	87	*e*P	PKPpre	05 15 01.6	
LPAZ	La Paz	135.07	119	PKhKP	PKPpre	05 15 02.1	
	comp=Z,1.3nm,0.5s,baz=288,slow=2.6,SNR=14						
LPAZ				PKP	PKiKP	05 15 14.6	-0.5
	comp=Z,7.9nm,0.8s,baz=32,slow=2.3,SNR=11						
LPAZ	La Paz	135.07	119		PKPpre	05 15 01.6	
LPAZ	La Paz	135.07	119	PKHKP	PKPpre	05 15 01.6	
OCAC	Ocana	135.08	84	*e*P	PKPpre	05 15 01.5	
RUSC	La Rusia	135.31	87	*e*P	PKPpre	05 15 00.5	
SDV	Santo Domingo	137.72	83	*e*P	PKPpre	05 15 08.2	
CPUP	Villa Florida	137.79	139	PKP	PKiKP	05 15 19.2	-0.4
	comp=Z,2.4nm,0.8s,baz=333,slow=2.3,SNR=3.3						
ESDC	Sonseca Array	139.33	331	PKhKP	PKPpre	05 15 10.5	
	comp=Z,0.4nm,0.7s,baz=29,slow=1.8,SNR=2.2						
ESDC				PKP	PKPdf	05 15 20.7	+0.5
	comp=Z,0.3nm,0.6s,baz=10,slow=3.0,SNR=4.7						
ESDC				PP	PP	05 18 13.4	-0.2
	comp=Z,1.7nm,0.8s,baz=23,slow=6.9,SNR=10						
MLPR	Magueyes Islan	139.97	68	PKPdf	PKPdf	05 15 21.7	-0.1
AOPR	Arecibo Observ	140.15	68		PKPdf	05 15 22.0	-0.2
PDPR	Patillas Dam,	140.91	68		PKPdf	05 15 22.8	-0.7
MTP	Monte Pirata	141.32	67	PKPdf	PKPdf	05 15 24.2	-0.1
TORD	Torodi Ar. Bea	149.51	287	PKP	PKPdf	05 15 38.6	+0.2
	comp=Z,31nm,0.7s,baz=350,slow=1.9,SNR=74						
TORD				PKPbc	PKPbc	05 15 42.5	-0.4
	comp=Z,23nm,0.5s,baz=101,slow=2.6,SNR=121						
TORD				PP	PP	05 19 17.6	+1.6
	comp=Z,0.8nm,0.7s,baz=38,slow=2.3,SNR=2.3						
TORD				PKKP	PKKPdf	05 24 24.0	-4.5
	comp=Z,0.2nm,0.4s,baz=241,slow=11,SNR=3.8						
BDFB	Brasilia	151.44	137	PKPbc	PKiKP	05 15 48.1	0.0
	comp=Z,19nm,0.8s,baz=206,slow=2.6,SNR=29						
KIC	Kosan Boka	156.66	274	*e*P	PKPdf	05 15 47.9	-0.9
	comp=Z,11nm,0.9s						
DBIC	Dimbokro	156.76	275	PKP	PKPdf	05 15 48.2	-0.7
	comp=Z,4.8nm,0.9s,baz=311,slow=3.6,SNR=3.5						
DBIC				PKPab	sPKPdf	05 16 16.8	+1.3
	comp=Z,5.1nm,0.5s,baz=130,slow=1.9,SNR=6.6						
TIC	Toumodi	156.93	275	*e*P	PKPdf	05 15 48.1	-1.0
LIC	Lamto	156.95	274	*e*P	PKPdf	05 15 49.5	+0.4
	comp=Z,22nm,1.1s						

IDC ***17*** *05:20:53.0±2.2, 24°.22S×67°.09W, h159km±26km, mb3.8/2, mbtmp4.3/6, MS3.8/2 Error ellipse: s-maj=32.5km s-min=29.0km az=120.0*

VAO ***17*** *05:20:53.8±0.8, 24°.25S×67°.53W, h224km±9km, mb4.1*

NEIC ***17*** *05:20:54.1±2.0, 24°.26S±0°.06×67°.29W±0°.07, h177km±11km, mb4.2/7, Md3.9(SJA), Error ellipse: s-maj=11.1km s-min=7.4km az=48.0*

GUC ***17*** *05:20:55.2±0.6, 24°.24S×67°.49W, h187km±5km, ML4.0*

ISC 17 05:20:53.0±0.7**, 24°.19S**±0°.04×**67°.43W**±0°.08**, h200**km±9km**, n85, σ1s47**/98**, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.41	331		Pn	05 21 26.7	+0.4
AF01	San Pedro de A	1.41	331	*e*P	Pn	05 21 27.1	+0.9
AF01				*e*S	Sn	05 21 51.2	-0.8
AF01				IAML		05 21 54.5	
	comp=E,583nm,0.5s						
LVC	Limon Verde	2.08	319	P	Pn	05 21 33.9	+1.3
	comp=E,71nm,0.3s,baz=118,slow=7.8,SNR=297						
LVC				S	Sn	05 22 03.2	-0.4
	comp=E,156nm,0.4s,baz=19,slow=21,SNR=62						
LVC	Limon Verde	2.08	319		Pn	05 21 34.0	+1.3
LVC	Limon Verde	2.08	319	*e*P	Pn	05 21 33.8	+1.0
LVC				*i* S	Sn	05 22 03.0	-0.5
LVC	Limon Verde	2.08	319	*e*P	Pn	05 21 34.0	+1.3
PB15	IPOC Station P	2.11	297		Pn	05 21 34.5	+1.6
PB15	IPOC Station P	2.11	297	*e*P	Pn	05 21 34.1	+1.2
PB15				*e*S	Sn	05 22 03.2	-0.6
GO02	Mina Guanaco	2.19	243		Pn	05 21 35.2	+1.4
PB06	IPOC Station P	2.46	306		Pn	05 21 38.3	+1.7
PB06	IPOC Station P	2.46	306	*e*P	Pn	05 21 37.9	+1.3
PB06				*e*S	Sn	05 22 10.6	0.0
PB06				IAML		05 22 12.6	
	comp=N,696nm,0.3s						
PB14	IPOC Station P	2.75	260		Pn	05 21 41.3	+1.3
PB14	IPOC Station P	2.75	260	*e*P	Pn	05 21 41.1	+1.1
PB14				*e*S	Sn	05 22 16.1	-0.6
PB14				IAML		05 22 18.4	
	comp=E,231nm,0.4s						
PB09	IPOC Station P	2.91	325		Pn	05 21 43.9	+2.2
PB09	IPOC Station P	2.91	325	*e*P	Pn	05 21 43.5	+1.8
PB09				*e*S	Sn	05 22 20.4	+0.6
PB09				IAML		05 22 25.2	
	comp=E,413nm,0.4s						
PB10	IPOC Station P	2.94	283		Pn	05 21 44.0	+2.1
PB10	IPOC Station P	2.94	283	*e*P	Pn	05 21 43.4	+1.5
PB10				*e*S	Sn	05 22 19.9	-0.2
PB10				IAML		05 22 26.0	
	comp=E,288nm,0.3s						
AC02	Maricunga	3.05	210	Pn	Pn	05 21 45.0	+1.3
AC02	Maricunga	3.05	210	*e*P	Pn	05 21 44.7	+1.0
AC02				*e*S	Sn	05 22 22.3	-1.1
AC02				IAML		05 22 28.1	
	comp=E,171nm,0.2s						
PB04	IPOC Station P	3.11	306		Pn	05 21 45.9	+1.8
PB04	IPOC Station P	3.11	306	*e*P	Pn	05 21 45.6	+1.5
PB04				*e*S	Sn	05 22 23.5	-0.5
PB04				IAML		05 22 26.2	
	comp=N,444nm,0.2s						
PB07	IPOC Station P	3.34	317		Pn	05 21 48.2	+1.4
PB07	IPOC Station P	3.34	317	*e*P	Pn	05 21 48.1	+1.2
PB07				*e*S	Sn	05 22 27.9	-1.1
AC01	Pan de Azucar	3.47	235	Pn	Pn	05 21 48.9	+0.6
AC01	Pan de Azucar	3.47	235	*e*P	Pn	05 21 48.5	+0.2
AC01				*e*S	Sn	05 22 29.9	-1.7
PB02	IPOC Station P	3.65	321		Pn	05 21 51.8	+1.2
PB02	IPOC Station P	3.65	321	*e*P	Pn	05 21 51.4	+0.7
PB02				*e*S	Sn	05 22 34.7	-1.0
PB01	IPOC Station P	3.66	328		Pn	05 21 51.7	+0.9
PB01	IPOC Station P	3.66	328	*e*P	Pn	05 21 51.4	+0.6
PB01				*e*S	Sn	05 22 35.1	-0.9
AC06	Mina Casimiro	4.11	219		Pn	05 21 56.2	0.0
AC06	Mina Casimiro	4.11	219	*e*P	Pn	05 21 56.1	-0.1
AC06				*e*S	Sn	05 22 44.3	-1.6
PATCX	Punta Patache	4.19	323		Pn	05 21 59.0	+1.7
PATCX	Punta Patache	4.19	323	*e*P	Pn	05 21 57.6	+0.3
PATCX				*e*S	Sn	05 22 46.4	-1.4
PB08	IPOC Station P	4.33	338⥣	*e*P	Pn	05 22 00.7	+1.3
PB08				*e*S	Sn	05 22 51.1	-0.3
TA01	Diego Aracena	4.42	324	Pn	Pn	05 22 01.6	+1.6
PB11	IPOC Station P	4.87	334		Pn	05 22 05.9	0.0
AC04	Llanos de Chal	5.17	219	Pn	Pn	05 22 09.3	-0.2
LCO	Las Campanas	5.63	211	Pn	Pn	05 22 15.1	-0.5
PB16	IPOC Station P	6.14	341	Pn	Pn	05 22 24.3	+1.6
PB12	IPOC Station P	6.17	333	Pn	Pn	05 22 23.2	+0.6
CO01	Juntas del Tor	6.24	202	Pn	Pn	05 22 25.7	+2.2
GO04	Tololo Observa	6.67	206	Pn	Pn	05 22 28.6	-0.5
LPAZ	La Paz	7.89	355	P	Pn	05 22 47.3	+1.9
	comp=N,6.1nm,0.4s,baz=150,slow=6.0,SNR=94						
LPAZ				S	Sn	05 24 10.5	-4.3
	comp=N,0.7nm,0.5s,baz=65,slow=19,SNR=1.2						
LPAZ	La Paz	7.89	355	Pn	Pn	05 22 47.1	+1.7
LPAZ	La Paz	7.89	355	*e*P	Pn	05 22 47.3	+1.9
SALV	Santo Antonio	13.76	55	*e*P	P	05 24 03.1	+0.9
CPSB	Cacapava Do Su	13.89	120	*e*P	P	05 24 03.7	+0.1
PLTB	Pedras Altas	14.35	125	Pn	P	05 24 06.1	-2.6
TRQA	Tornquist	14.59	163	Pn	P	05 24 09.7	-1.6
NNA	Nana	15.07	322	LR	LR	05 29 21.5	
	comp=N,8.0nm,21.0s,baz=158,slow=33						
SAML	Samuel	15.69	16	Pn	P	05 24 23.9	+0.3
PDRB	Porto dos Gac	16.11	41	*e*P	P	05 24 28.1	-0.2
PLCA	Paso Flores	16.70	188	P	Pn	05 24 37.6	+1.9
	comp=N,2.0nm,0.8s,baz=4.4,slow=12,SNR=12						
PLCA	Paso Flores	16.70	188	IAmb	IAmb	05 24 38.5	
	comp=Z,3.6nm,0.9s						
LL04	Puerto Octay	17.19	193	P	Pn	05 24 42.6	+1.3
LL04				IAmb	IAmb	05 24 44.8	
	comp=Z,5.9nm,0.7s						
CLDB	Colider	17.25	42	*e*P	P	05 24 41.1	+0.3
BB19B	Bebedouro	17.72	84	*e*P	P	05 24 45.5	-0.4
VAO	Valinhos	18.79	91	*e*P	P	05 24 56.8	-0.8
IPMB	Ipameri, GO	18.95	75	*e*P	P	05 24 59.0	-0.3
LL02	Futaleuf	19.30	190		Pn	05 25 06.7	+0.5
LL02				IAmb	IAmb	05 25 09.9	
	comp=Z,11nm,0.8s						
SNDB	Serra Nova Dou	19.54	54	*e*P	P	05 25 05.1	-0.5
GO07	Milladeo Hill,	19.57	194	P	Pn	05 25 08.0	-1.4
BDFB	Brasilia	20.12	69	P	P	05 25 11.7	-0.2
	comp=Z,13nm,0.5s,baz=242,slow=11,SNR=31						
BDFB	Brasilia	20.12	69	P	P	05 25 11.8	-0.1
BDFB				IAmb	IAmb	05 25 12.8	
	comp=Z,17nm,0.6s						
BSCB	Bom Sucesso	21.15	86	*e*P	P	05 25 21.5	-1.3
MAN01	Angra dos Reis	21.55	91	*e*P	P	05 25 26.7	-0.2
PEXB	Peixe	21.75	60	*e*P	P	05 25 27.8	-1.2
ITTB	Itaituba	22.70	32	*e*P	P	05 25 37.9	+0.1
DIAM	Diamantina, MG	22.89	80	*e*P	P	05 25 39.8	+0.1
JANB	Januaria	23.56	72	*e*P	P	05 25 44.9	-0.7
SMTB	Santa Maria do	24.32	55	*e*P	P	05 25 52.2	-0.3
SDBA	SAO DESIDERIO	24.34	65	*e*P	P	05 25 51.5	-1.2
NAN01	Guarapari, ES	26.23	81	*e*P	P	05 26 09.3	-0.4
GDU01	Guandu, BA	28.27	73	*e*P	P	05 26 27.4	-0.5
NBPS	Pedro II - PI	31.84	56	*e*P	P	05 26 59.9	+0.5
NBMA	Muriti-CE	32.15	63	*e*P	P	05 27 02.5	+0.4
NBPB	Pedra_Branca-C	32.55	60	*e*P	P	05 27 06.0	+0.5
SNAA	Sanae	59.30	161	LR	LR	05 54 42.6	
	comp=Z,134nm,21.0s,baz=132,slow=34						
TKL	Tuckaleechee C	61.50	345	LR	LR	06 00 49.2	
	comp=Z,58nm,21.9s,baz=308,slow=39						
TORD	Torodi Ar. Bea	77.00	69	P	P	05 32 26.6	+2.4
	comp=Z,1.7nm,0.4s,baz=250,slow=4.8,SNR=6.9						
	comp=Z,1.7nm,0.4s						
BOSA	Boshof	80.99	117	P	P	05 32 48.9	+3.0
	comp=Z,0.8nm,0.4s,baz=279,slow=1.0,SNR=4.4						
	comp=Z,0.8nm,0.4s						
BOSA	Boshof	80.99	117	IAmb	IAmb	05 32 59.3	
	comp=Z,5.8nm,1.3s						
ZALV	Zalesovo Beam	143.74	28	PKP	PKiKP	05 40 06.2	-1.1
	comp=Z,1.0nm,0.5s,baz=325,slow=2.3,SNR=6.2						
KSH	Kashi	145.62	55	PKPbc	PKPdf	05 40 00.6	-7.1
KSH				pPKP	PKPbc	05 40 05.8	-2.6
MKAR	Makanchi Array	146.92	39	PKPbc	PKiKP	05 40 16.2	+2.0
	comp=Z,1.3nm,0.6s,baz=300,slow=3.3,SNR=15						

NEIC ***17*** *05:26:30.3±1.2, 52°.50N±0°.05×167°.95W±0°.07, h17km±11km, Error ellipse: s-maj=8.4km s-min=3.8km az=142.0*

AEIC ***17*** *05:26:30.9±1.3, 52°.54N±0°.04×167°.92W±0°.04, h19km±7km, ML3.0/19, ML3.5/6(NEIC), Error ellipse: s-maj=6.1km s-min=3.8km az=174.0*

ISC 17 05:26:31.7±2.5**, 52°.5N**±0°.1×**167°.95W**±0°.07**, h31**km**, n17, σ0s78**/21**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.72	311		Pn	05 26 44.5	-1.2
NIKH					Sn	05 26 55.6	-0.1
OKSO	Okmok South	0.86	352		Pn	05 26 46.7	-1.0
OKFG	Magazine Ridge	0.91	1		Pn	05 26 47.4	-0.9
OKFG					Sb	05 27 01.0	+0.4
MGOD	Makushin Gods	1.44	26		Pn	05 26 54.8	-0.9
MNAT	Makushin Natee	1.57	28		Pn	05 26 57.4	-0.1
MNAT					Sn	05 27 17.2	+0.4
MSW	Makushin Switc	1.57	26		Pn	05 26 57.4	-0.1
UNV	Unalaska Valle	1.60	32		Pn	05 26 57.6	-0.1
UNV					Sn	05 27 16.1	-1.2
MTBL	Makushin Table	1.65	27		Pn	05 26 58.5	-0.1
AKBBA	Akutan Broad B	2.00	36		Pn	05 27 03.9	+0.5
AHB	Akutan Harbor	2.06	38		Pn	05 27 04.6	+0.5
AKUT	Akutan	2.09	38	Pn	Pn	05 27 05.4	+0.9
AKUT				IAML		05 27 46.1	
	comp=E,124nm,1.1s						
SPIA	Saint Paul Isl	4.86	345	Pn	Pn	05 27 42.6	+0.1
SDPT	Sand Point	5.25	54	Pn	Pn	05 27 49.4	+1.5
SDPT				IAML		05 29 16.3	
	comp=E,39nm,2.3s						
ADK	Adak	5.41	267	Pn	Pn	05 27 51.1	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	5.48	62	Pn	Pn	05 27 50.6	-0.5
OHAK	Old Harbor	9.68	55	Pn	Pn	05 28 47.9	-0.6
KDAK	Kodiak Island	10.25	53	Pn	Pn	05 28 56.3	-0.1

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*IDC **17** 05:29:36.4±2.7, 30°.39N×69°.98E, h0km, mb3.5/4, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=74.4km s-min=30.1km az=76.0*

ISC 17 05:29:39.2±2.3**, 30°.4N**±0°.2×**69°.9E**±0°.4**, h19km, n6,** σ**0ˢ.92**/6**,** **mb3.6**/4**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	12.77	16	Pn	Pn	05 32 39.9	+0.1
	0.7nm,0.3s,baz=163,slow=14,SNR=5.2						
	1.9nm,0.4s						
MKAR	Makanchi Array	18.99	27	P	P	05 34 00.1	+0.5
	baz=203,slow=14,SNR=3.6						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	21.22	15	P	P	05 34 23.6	-0.2
	0.5nm,0.5s,baz=207,slow=10,SNR=4.7						
	0.5nm,0.5s						
AKTO	Aktyubinsk	21.92	339	P	P	05 34 31.6	+0.3
	1.4nm,0.7s,baz=166,slow=12,SNR=2.1						
	1.4nm,0.7s						
ZALV	Zalesovo Beam	25.91	20	P	P	05 35 08.4	-1.4
	0.7nm,0.4s,baz=202,slow=11,SNR=2.4						
	0.7nm,0.4s						
WRA	Warramunga Arr	79.63	120	P	P	05 41 45.8	+0.2
	1.0nm,1.1s,baz=320,slow=5.2,SNR=4.7						
	1.0nm,1.1s						

IDC 17 05:30:25.8±5.1**, 55°.65N×86°.29E, h0km, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=49.8km s-min=27.0km az=22.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.91	207	*i*		05 42 28.6	
	baz=24,slow=330,SNR=1.0						
ZALV	Zalesovo Beam	1.91	207	Pn	Pn	05 30 58.1	-1.5
	2.1nm,0.3s,baz=30,slow=16,SNR=19						
ZALV				Sn	Sn	05 31 24.5	+0.2
	2.2nm,0.3s,baz=22,slow=25,SNR=11						
KURBB	Kurchatov Arra	6.86	226	Pn	Pn	05 32 08.3	+0.7
	0.1nm,0.3s,baz=44,slow=14,SNR=5.0						
KURBB				Lg	Lg	05 34 04.9	
	baz=42,slow=29						
	0.3nm,0.3s						
MKAR	Makanchi Array	9.21	197	Pn	Pn	05 32 39.7	-0.2
	0.1nm,0.3s,baz=22,slow=15,SNR=3.3						
	0.3nm,0.6s						

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*TUL **17** 05:54:47.3±0.6, 36°.26N±0°.01×96°.68W±0°.02, h4km±5km, ML2.5, mb_Lg2.4/39(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=105.0*

NEIC 17 05:54:48.0±0.6**, 36°.27N**±0°.01×**96°.69W**±0°.01**, h1**km±5km**, Error ellipse: s-maj=1.7km s-min=1.6km az=140.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.66	12	Pg	Pg	05 55 00.1	-0.6
T35A				Sg	Sg	05 55 08.9	-0.4
TUL1	Leonard	0.81	116		Pg	05 55 02.9	-0.6
TUL1				Sg	Sg	05 55 13.5	-0.5
OKCFA	Oklahoma City	1.05	216	Pg	Pg	05 55 06.8	-1.4
OKCFA				Sg	Sg	05 55 21.2	-0.7
OKCSW	OKLAHOMA CITY	1.05	216	Pg	Pg	05 55 06.9	-1.4
FNO	Franklin	1.16	210	Pg	Pg	05 55 08.7	-1.6
U32A	Winter Ranch,	1.87	274	Pn	Pn	05 55 21.6	+0.4
X34A	Smith Ranch, M	1.91	210	Pn	Pn	05 55 21.8	+0.2
X34A				IAmb_Lg		05 55 53.2	
	comp=Z,25nm,0.8s						
X37A	Clayton	1.99	147	Pn	Pn	05 55 23.0	+0.2
HHAR	Hobbs	2.22	89		Pn	05 55 26.2	+0.2
WMOK	Wichita Mounta	2.29	229	Pn	Pn	05 55 26.7	-0.3
W39A	Magazine	2.59	114	Pn	Pn	05 55 30.7	-0.3
KSU1	Kansas State U	2.83	1	IAmb_Lg		05 56 23.2	
	comp=Z,15nm,0.9s						
S39A	Bolivar	3.04	61	Pn	Pn	05 55 38.2	+0.9
S39A				IAmb_Lg		05 56 29.9	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	3.07	123	Pn	Pn	05 55 37.3	-0.3
U40A	Yellville	3.10	87		Pn	05 55 37.7	-0.3
U40A				IAmb_Lg		05 56 27.2	
	comp=Z,13nm,0.7s						
Z38A	Mt. Pleasant	3.31	154	IAmb_Lg		05 56 38.4	
	comp=Z,13nm,0.9s						
X40A	Basin Creek Fa	3.62	118	Pn	Pn	05 55 44.8	-0.3
MGMO	Mountain Grove	3.66	75	IAmb_Lg		05 56 42.2	
	comp=Z,7.2nm,1.0s						
WHAR	Wooly Hollow	3.71	104	Pn	Pn	05 55 46.3	-0.1
WHAR				IAmb_Lg		05 56 53.6	
	comp=Z,7.5nm,0.8s						
FCAR	Ozark Folk Cen	3.71	94	Pn	Pn	05 55 45.6	-0.9
FCAR				IAmb_Lg		05 56 49.7	
	comp=Z,7.7nm,0.8s						
W41B	Gary Mavity, V	3.77	106	Pn	Pn	05 55 46.1	-1.2
UALR	University of	3.84	112	IAmb_Lg		05 56 58.3	
	comp=Z,7.3nm,0.8s						
R40A	Maddies Statio	4.06	59	Pn	Pn	05 55 51.1	-0.2
P38A	Dawn	4.18	36	IAmb_Lg		05 57 02.5	
	comp=Z,9.3nm,0.8s						
AMTX	Amarillo	4.30	253	IAmb_Lg		05 57 06.4	
	comp=Z,8.5nm,0.7s						
N35A	Tabor	4.66	10	IAmb_Lg		05 57 26.3	
	comp=Z,12nm,0.7s						
CCM	Cathedral Cave	4.70	66	IAmb_Lg		05 57 27.4	
	comp=Z,7.4nm,0.7s						
P40A	Paris	4.91	47	IAmb_Lg		05 57 30.6	
	comp=Z,9.0nm,0.8s						
PBMO	Poplar Bluff	5.07	82	IAmb_Lg		05 57 32.8	
	comp=Z,6.8nm,0.7s						
BGNE	Belgrade	5.26	348	IAmb_Lg		05 57 47.7	
	comp=Z,9.5nm,0.7s						
N38A	Joes South For	5.27	30	IAmb_Lg		05 57 43.7	
	comp=Z,8.0nm,0.8s						
FVM	French Village	5.29	69	IAmb_Lg		05 57 41.8	
	comp=Z,6.3nm,0.7s						
KSCO	Kaye Shedlock’	5.45	302	IAmb_Lg		05 57 49.3	
	comp=Z,5.4nm,0.9s						
T25A	Trinidad	6.27	280	IAmb_Lg		05 58 23.1	
	comp=Z,4.1nm,0.9s						

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*IDC **17** 06:45:28.6±1.5, 28°.25N×55°.21E, h0km, mb3.6/7, mbtmp3.6/8, ML3.6/1, MS3.2/2, Error ellipse: s-maj=30.2km s-min=27.5km az=69.0*

*DSN **17** 06:45:30.9±1.4, 28°.36N×55°.45E, h10km, ML3.3/5, Error ellipse: s-maj=33.0km s-min=9.9km az=60.0*

*TEH **17** 06:45:32.4, 28°.30N×55°.36E, h25km, ML3.6*

ISC 17 06:45:30.9±0.7**, 28°.28N**±0°.04×**55°.37E**±0°.04**, h10km, n45,** σ**1ˢ.72**/46**, mb3.6**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	1.07	235	*e*Pg	Pb	06 45 52.4	+0.9
LAR1				*e*		06 46 19.1	
	comp=Z,37μm,0.5s						
GENO	Geno	1.13	141	*e*Pg	Pg	06 45 53.3	+0.6
GENO				*e*Sg	Sn	06 46 09.8	+1.1
IBND	Bandar-abas	1.33	128	*e*Pg	Pn	06 45 56.2	+0.7
IBND				*e*		06 46 31.7	
	comp=Z,17μm,0.8s						
JHRM	Jahrom	1.59	278	*e*Pg	Pn	06 46 01.0	+1.8
NGRK	Negar Kerman	1.81	41	*e*Pg	Pn	06 46 04.2	+1.8
QIR1	Qir	2.05	276	*e*		06 46 53.6	
	comp=Z,8μm,0.3s						
QIR1				*e*Pn	Pn	06 46 07.6	+2.1
KRBR	Kerman	2.09	35	*e*Pg	Pn	06 46 07.9	+1.7
KHNJ	Kahnooj	2.09	99	*e*Pn	Pn	06 46 08.0	+2.0
LMD1	Lamerd	2.16	245	*e*Pn	Pn	06 46 07.7	+0.7
BANOM	Banah	2.49	160	P	Pn	06 46 12.7	+1.2
BANOM				S	Sn	06 46 44.5	+2.4
KBAM	BAM	2.84	72	*e*Pn	Pn	06 46 17.8	+1.4
KBAM				*e*		06 46 38.0	
	comp=Z,959nm,0.4s						
MSFE	Esma-Masafi	3.00	166	P	Pn	06 46 19.7	+1.2
IMEH	Mehriz	3.16	348	*e*Pn	Pn	06 46 23.1	+2.1
IMEH				*e*		06 46 32.8	
	comp=Z,733nm,0.6s						
JASK	Jask - Hormozg	3.28	137	*e*Pn	Pn	06 46 24.3	+2.0
JASK				*e*		06 47 46.8	
	comp=Z,1μm,0.8s						
IBAF	Bafgh	3.30	3	*e*Pn	Pn	06 46 24.6	+1.8
UOSS	Minazif	3.41	167	P	Pn	06 46 24.3	+0.2
HATD	Hatta, Dubai	3.51	169	P	Pn	06 46 27.3	+1.7
AHBU	AHRAM	3.63	280	*e*Pn	Pn	06 46 30.9	+3.8
ASHO	Ashiyiah	3.64	170	P	Pn	06 46 28.2	+0.9
ASUD	Al Ashush, Dub	3.64	181	P	Pn	06 46 28.8	+1.5
ISAD	Sadrabad	3.90	339	*e*Pn	Pn	06 46 34.3	+3.2
YZKH	Yazd	4.15	351	*e*Pn	Pn	06 46 36.4	+2.1
KLNJ	Kolanjah	4.26	311	*e*Pn	Pn	06 46 37.5	+1.4
IRAM	Ramesheh	4.36	324	*e*Pn	Pn	06 46 38.9	+1.5
TPRV	Parvadeh(Tabas	4.86	13	*e*Pn	Pn	06 46 45.9	+1.7
BSRN	Basiran	4.91	41	*e*Pn	Pn	06 46 46.2	+1.4
IGAR	Gharneh	5.01	326	*e*Pn	Pn	06 46 47.9	+1.6
NASN	Na'in	5.01	335	*e*Pn	Pn	06 46 48.7	+2.3
ANAR	Anarak	5.09	344	*e*Pn	Pn	06 46 48.7	+1.4
IZEF	Zefreh	5.29	331	*e*Pn	Pn	06 46 51.4	+1.2
TABS	Tabas	5.56	15	*e*Pn	Pn	06 46 55.3	+1.6
TNSJ	Nastanj	5.76	10	*e*Pn	Pn	06 46 57.7	+1.2
WSAR	Wadi Sarin	5.82	149	Pn	Pn	06 46 57.4	+0.1
	comp=Z,1.5nm,0.3s,baz=326,slow=6.4,SNR=18						
WSAR				LR	LR	06 49 55.0	
	comp=Z,40nm,18.5s,baz=63,slow=45						
	comp=Z,3.0nm,0.3s						
AFRZ	Afriz	6.01	31	*e*Pn	Pn	06 47 01.9	+1.9
SRVN	Saravan	6.29	96	*e*Pn	Pn	06 47 05.9	+2.1
KRSH	Karshahi	6.31	335	*e*Pn	Pn	06 47 05.9	+1.8
BRTR	Keskin Array B	21.27	308	P	P	06 50 15.6	-1.9
	comp=Z,1.8nm,0.7s,baz=131,slow=13,SNR=3.3						
	comp=Z,1.8nm,0.7s						
AKTO	Aktyubinsk	22.21	4	P	P	06 50 27.2	-0.2
	comp=Z,1.4nm,0.7s,baz=146,slow=11,SNR=5.4						
	comp=Z,1.4nm,0.7s						
MKAR	Makanchi Array	28.02	41	P	P	06 51 21.8	-0.3
	comp=Z,0.2nm,0.5s,baz=212,slow=5.1,SNR=2.1						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	29.86	326	P	P	06 51 37.6	-0.7
	comp=Z,0.2nm,0.3s,baz=102,slow=6.7,SNR=4.0						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	38.47	338	P	P	06 52 51.9	-0.8
	comp=Z,1.6nm,0.8s,baz=156,slow=14,SNR=1.7						
	comp=Z,1.6nm,0.8s						
NB2	NORSAR Subarra	43.97	331	P	P	06 53 36.2	-1.8
	comp=Z,0.5nm,0.6s,baz=114,slow=7.9						
NOA	NORSAR Array B	43.97	331	P	P	06 53 36.6	-1.3
	comp=Z,0.8nm,0.7s,baz=119,slow=8.1,SNR=4.4						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	52.01	265	P	P	06 54 38.8	-2.1
	comp=Z,1.0nm,0.6s,baz=58,slow=7.7,SNR=8.3						
	comp=Z,1.0nm,0.6s						
JMIC	Jan Mayen	55.07	339	LR	LR	07 18 50.3	
	comp=Z,99nm,20.1s,baz=256,slow=36						

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*MAN **17** 06:48:47.4, 9°.02N×126°.01E, h10km, mb4.5, ML3.3, MS3.1, Hypocentre not reviewed by the ISC*

ISC 17 06:48:48.1±1.3**, 9°.04N**±0°.03×**125°.99E**±0°.05**, h5**km±11km**, n8,** σ**1ˢ.43**/16**, 2C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.37	259⇓	*e*P	Pg	06 48 55.6	+0.3
BUTP				*e*S	Sg	06 49 01.5	+1.3
GLSP	General Luna,	0.75	10⇓	*e*P	Pg	06 49 03.1	+0.5
GLSP				*e*S	Sg	06 49 13.9	+1.5
SCPH	Surigao	0.89	326	*e*P	Pg	06 49 04.5	-0.7
SCPH				*e*S	Sg	06 49 15.5	-1.3
BIPH	Bislig	0.92	157⇑	*e*P	Pg	06 49 04.1	-1.8
BIPH				*e*S	Sg	06 49 19.0	+1.1
BUKP	Musuan	1.47	219⇓	*e*P	Pn	06 49 14.7	-0.6
BUKP				*e*S	Sg	06 49 36.1	+0.6
TBP	Tagbilaran	2.20	287	*e*P	Pn	06 49 24.2	-1.1
TBP				*i* S	Sn	06 49 53.1	+0.2
KCP	Kidapawan	2.20	204⇑	*e*P	Pn	06 49 25.5	+0.1
KCP				*i* S	Sn	06 49 52.2	-0.9
DDMP	Don Marcelino,	2.93	185⇓	*e*P	Pn	06 49 34.7	-0.6
DDMP				*e*S	Sn	06 50 14.1	+3.2

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*IDC **17** 06:58:02.6±79.0, 14°.49S×167°.09E, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=1329.0km s-min=120.8km az=64.0*

*NEIC **17** 06:58:19.9±0.8, 15°.0S±0°.4×167°.1E±0°.4, h143km±24km, mb4.2/9, Error ellipse: s-maj=76.3km s-min=18.1km az=137.0*

ISC 17 06:58:15.5±10.0**, 14°.5S**±1°.0×**167°.4E**±0°.9**, h150km, n11,** σ**0ˢ.96**/11**, mb4.3**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.98	192	Pn	Pn	06 58 40.3	+0.2
STKA	Stephens Creek	29.26	229	P	P	07 04 03.8	+0.2
	1.3nm,0.5s,baz=60,slow=11,SNR=3.2						
	1.3nm,0.5s						
WR0	Warramunga Arr	31.84	255	P	P	07 04 27.0	+0.6
WR0				IAmb	IAmb	07 04 39.3	
	comp=Z,7.4nm,1.2s						
WB0	Warramunga Arr	31.96	256	P	P	07 04 28.4	+0.9
WB0				IAmb	IAmb	07 04 50.6	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	32.01	256	P	P	07 04 28.6	+0.6
WB2				IAmb	IAmb	07 04 31.8	
	comp=Z,4.6nm,1.0s						
WRAB	Tennant Creek	32.01	256	P	P	07 04 28.8	+0.9
WRAB				IAmb	IAmb	07 04 43.3	
	comp=Z,9.9nm,1.4s						
WRA	Warramunga Arr	32.02	256	P	P	07 04 29.0	+0.9
	comp=Z,2.0nm,0.6s,baz=82,slow=7.1,SNR=31						
	comp=Z,2.0nm,0.6s						
AS31	Alice Springs	32.89	249	P	P	07 04 35.9	+0.3
AS31				IAmb	IAmb	07 04 36.4	
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	32.90	249	P	P	07 04 36.0	+0.3
	comp=Z,2.4nm,0.4s,baz=72,slow=9.7,SNR=69						
	comp=Z,2.4nm,0.4s						
BBOO	Buckleboo	33.84	232	P	P	07 04 42.2	-1.5
KNRA	Kununurra	37.31	263	P	P	07 05 12.2	-1.3

IDC 17 07:06:12.8±3.1**, 53°.79N×90°.57E, h0km, mbtmp3.4**/3**, ML2.5**/3**, Error ellipse: s-maj=26.3km s-min=21.5km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.41	275	*i*		07 28 39.3	
	0.2nm,1.0s,baz=90,slow=330,SNR=8.0						
ZALV	Zalesovo Beam	3.41	275	Pn	Pn	07 07 08.8	+1.7
	0.2nm,0.3s,baz=93,slow=12,SNR=4.8						
ZALV				Pg	Pb	07 07 13.6	-0.4
	1.4nm,0.3s,baz=94,slow=15,SNR=28						
ZALV				Lg	Lg	07 07 59.2	
	1.0nm,0.3s,baz=99,slow=15,SNR=5.5						
	6.7nm,0.8s						
KURBB	Kurchatov Arra	8.05	252	Pn	Pn	07 08 10.8	+0.1
	0.1nm,0.3s,baz=64,slow=14,SNR=14						
KURBB				Sn	Sn	07 09 41.4	-1.0
	0.1nm,0.3s,baz=69,slow=21,SNR=10						
KURBB				Lg	Lg	07 10 26.8	
	0.1nm,0.3s,baz=67,slow=32,SNR=2.3						
	2.4nm,0.5s						
MKAR	Makanchi Array	8.78	220	Pn	Pn	07 08 21.1	+0.2
	0.2nm,0.3s,baz=39,slow=13,SNR=12						
MKAR				Sn	Sn	07 10 01.1	+0.5
	0.1nm,0.3s,baz=31,slow=20,SNR=6.2						
MKAR				Lg	Lg	07 10 47.6	
	0.2nm,0.3s,baz=36,slow=31,SNR=6.1						
	0.9nm,0.6s						

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*SJA **17** 07:11:24.6±0.7, 31°.24S×72°.23W, h12km±3km, ML4.2, MW4.0*

*IDC **17** 07:11:27.0±1.3, 31°.25S×71°.74W, h0km, mb4.5/3, mbtmp4.1/7, ML3.8/4, MS3.1/7, Error ellipse: s-maj=36.6km s-min=30.3km az=95.0*

*NEIC **17** 07:11:30.6±1.4, 31°.30S±0°.03×71°.83W±0°.07, h19km±3km, mb4.4/15, ML4.1(GUC), Error ellipse: s-maj=9.0km s-min=3.6km az=100.0*

*GUC **17** 07:11:30.1±0.9, 31°.33S×71°.87W, h32km±3km, ML4.2*

ISC 17 07:11:29.3±1.0**, 31°.24S**±0°.02×**71°.88W**±0°.04**, h17**km±6km**, n106,** σ**1ˢ.41**/134**, mb4.5**/10**, MS3.2**/3**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.60	20		Pn	07 11 43.1	0.0
CO06	Fray Jorge	0.60	20	*e*P	Pn	07 11 42.9	-0.2
CO06				*i* S	Sn	07 11 52.5	0.0
CO02	Combarbal	0.75	87		Pb	07 11 44.5	+0.4
CO02	Combarbal	0.75	87	*e*P	Pb	07 11 44.4	+0.3
CO02				*e*S	Sb	07 11 54.5	+0.5
CO02				IAML		07 11 56.5	
	comp=N,20μm,0.3s						
CO02	Combarbal	0.75	87	*e*P	Pb	07 11 44.4	+0.4
CO02				*e*S	Sn	07 11 55.3	-1.1
CO02				IAML		07 11 59.4	
	comp=Z,6μm,0.3s						
VA06	Catapilco	1.41	160		Pn	07 11 53.9	-0.3
VA06	Catapilco	1.41	160	*e*P	Pn	07 11 53.7	-0.5
VA06				*e*S	Sn	07 12 10.5	-1.8
VA06				IAML		07 12 15.9	
	comp=E,8μm,0.5s						
GO04	Tololo Observa	1.41	41		Pb	07 11 55.9	+0.5
GO04	Tololo Observa	1.41	41	*e*P	Pb	07 11 55.6	+0.2
GO04				*e*S	Sg	07 12 15.0	0.0
GO04	Tololo Observa	1.41	41	*e*P	Pb	07 11 55.5	+0.1
GO04				*e*S	Sg	07 12 16.8	+1.9
CO05	La Serena	1.43	23	*e*P	Pb	07 11 55.8	+0.2
CO05				*e*S	Sg	07 12 15.4	0.0
CO05				IAML		07 12 20.0	
	comp=N,3μm,0.4s						
VA01	Torpederas	1.79	174	*e*P	Pn	07 11 58.4	-1.1
ROCH	El Roble	1.88	157	*e*P	Pn	07 11 58.3	-2.6
ROCH				*e*S	Sn	07 12 22.9	-1.5
ROCH				IAML		07 12 27.2	
	comp=N,3μm,0.3s						
ROC1	El Roble	1.88	157		Pn	07 11 58.8	-2.2
ROC1	El Roble	1.88	157	*e*P	Pn	07 11 58.4	-2.6
ROC1				*e*S	Sn	07 12 22.1	-2.3
VA03	San Esteban	1.89	144	*e*P	Pn	07 12 01.5	+0.5
VA03				*e*S	Sn	07 12 24.6	+0.1
VA03	San Esteban	1.89	144	*e*P	Pn	07 12 01.8	+0.8
VA03				*e*S	Sn	07 12 22.1	-2.4
VA03				*e*S	Sb	07 12 27.5	+0.6
VA03				IAML		07 12 30.9	
	comp=Z,3μm,1.0s						
CO01	Juntas del Tor	1.98	51	*e*P	Pb	07 12 05.0	-0.1
CO01				*e*S	Sb	07 12 30.6	+0.9
CO01				IAML		07 12 33.5	
	comp=N,2μm,0.6s						
CO01	Juntas del Tor	1.98	51	*e*P	Pb	07 12 04.0	-1.2
CO01				*e*S	Sg	07 12 32.1	-1.2
CO01				IAML		07 12 35.9	
	comp=Z,857nm,0.3s						
MT02	Curacav	2.11	163		Pn	07 12 04.4	+0.5
MT02	Curacav	2.11	163	*e*P	Pn	07 12 03.2	-0.7
MT02				*e*S	Sn	07 12 28.2	-1.5
MT02	Curacav	2.11	163	*e*P	Pn	07 12 03.4	-0.5
MT02				*e*S	Sb	07 12 34.2	+1.2
MT02				IAML		07 12 37.2	
	comp=Z,780nm,0.2s						
PEL	Peldehue	2.15	152		Pn	07 12 04.4	-0.1
PEL	Peldehue	2.15	152	*e*P	Pn	07 12 04.9	+0.4
PEL	Peldehue	2.15	152	*e*P	Pn	07 12 04.9	+0.4
PEL				*e*S	Sb	07 12 34.9	+0.6
RTLS	Leoncito	2.27	105	*e*P	Pb	07 12 10.0	-0.1
RTLS				*e*S	Sg	07 12 42.3	-0.2
RTLS				IAML		07 12 44.0	
	comp=Z,2μm,1.4s						
AROD	Rodeo	2.33	63	*e*P	Pb	07 12 11.0	-0.1
AROD				*e*S	Sg	07 12 42.8	-1.5
AUSP	Uspallata	2.33	115	*e*P	Pb	07 12 11.0	-0.2
AUSP				*e*S	Sg	07 12 43.4	-1.1
VA05	Santo Domingo	2.42	175	*e*P	Pn	07 12 07.2	-0.9
VA05				IAML		07 12 56.5	
	comp=E,2μm,0.5s						
LCO	Las Campanas	2.44	25		Pn	07 12 09.6	+0.9
LCO	Las Campanas	2.44	25	*e*P	Pn	07 12 09.9	+1.1
LCO				*e*S	Sb	07 12 42.4	-0.6
LCO	Las Campanas	2.44	25	*e*P	Pn	07 12 10.0	+1.3
FCH	Farellones	2.48	148	*e*P	Pn	07 12 09.9	+0.7
FCH				*e*S	Sn	07 12 40.4	+1.1
FCH				IAML		07 12 50.1	
	comp=E,1μm,0.3s						
ACCO	Cerro Coronel	2.50	76	*e*P	Pb	07 12 13.0	-1.0
ACCO				*e*S	Sb	07 12 45.1	+0.4
ACCO				*e*S	Sg	07 12 50.6	+0.8
MT03	Universidad Ad	2.53	153	*e*P	Pn	07 12 10.2	+0.5
MT03				IAML		07 12 50.3	
	comp=E,3μm,0.2s						
MT03	Universidad Ad	2.53	153	*e*P	Pn	07 12 10.0	+0.3
MT03				*e*P	Pb	07 12 10.6	-3.7
MT03				*e*S	Sb	07 12 46.1	+0.9
MT03				IAML		07 12 54.1	
	comp=Z,2μm,0.8s						
ACDV	Cuesta del Vie	2.60	67	*e*P	Pb	07 12 16.0	+0.3
ACDV				*e*S	Sb	07 12 47.6	+0.2
ACDV				IAML		07 12 57.7	
	comp=Z,586nm,0.5s						
MT09	Talagante	2.64	164	*e*P	Pn	07 12 11.7	+0.4
MT09				*e*S	Sn	07 12 42.3	-0.8
MT09				IAML		07 12 54.7	
	comp=E,1μm,0.3s						
MT01	Popeta	2.67	169	*e*P	Pn	07 12 11.2	-0.4
MT01				IAML		07 12 57.3	
	comp=E,797nm,0.3s						
MT01	Popeta	2.67	169	*e*P	Pn	07 12 11.0	-0.6
MT01				*e*P	Pb	07 12 11.1	-5.6
MT01				*e*S	Sn	07 12 45.1	+1.5
MT01				IAML		07 12 55.1	
	comp=Z,552nm,0.5s						
BO04	La Punta	2.94	159		Pn	07 12 15.8	+0.4
BO04	La Punta	2.94	159	*e*P	Pn	07 12 15.6	+0.2
BO04				IAML		07 13 02.9	
	comp=E,920nm,0.4s						
AC04	Llanos de Chal	3.10	13	Pn	Pn	07 12 17.9	+0.3
AC04	Llanos de Chal	3.10	13	*e*P	Pn	07 12 17.8	+0.3
AC04				IAML		07 13 13.5	
	comp=E,450nm,0.3s						
AC04	Llanos de Chal	3.10	13	*e*P	Pn	07 12 17.8	+0.3
AC04				*e*S	Sg	07 13 10.6	+1.5
AC04				IAML		07 13 11.6	
	comp=Z,334nm,1.1s						
BO01	Tunca	3.21	168	*e*P	Pn	07 12 18.6	-0.5
BO01	Tunca	3.21	168	*e*P	Pn	07 12 18.8	-0.3
BO01				*e*S	Sn	07 12 58.1	+1.1
BO01				IAML		07 13 11.0	
	comp=Z,349nm,0.4s						
BO03	Pichilemu	3.25	181	*e*P	Pn	07 12 18.1	-1.5
GO05	Huala	3.76	181	*e*P	Pn	07 12 25.0	-1.6
GO05	Huala	3.76	181	*e*P	Pn	07 12 25.4	-1.3
GO05				*e*S	Sb	07 13 23.6	+3.0
AVFE	Valle Fertil	3.84	82	*e*P	Pn	07 12 30.6	+2.8
AVFE				*e*S	Sb	07 13 25.2	+2.2
AVFE				IAML		07 13 26.6	
	comp=Z,496nm,0.5s						
AC06	Mina Casimiro	4.09	19	*e*P	Pn	07 12 31.3	+0.1
ACHE	Chepes	4.46	90	*e*P	Pn	07 12 36.6	+0.2
ACHE				*e*S	Sb	07 13 38.9	-2.2
ML02	Panimavida	4.53	175		Pn	07 12 36.5	-0.7
RFA	San Rafael	4.54	142	*e*P	Pn	07 12 39.4	+2.0
RFA				*e*S	Sb	07 13 45.6	+2.6
RFA				*e*S	Sb	07 13 47.6	+4.6
RFA				*e*S	Sb	07 13 48.1	+5.1
RFA				IAML		07 14 04.8	
	comp=Z,112nm,0.6s						
ACLC	CERRO LA CRUZ	4.62	68	*e*P	Pn	07 12 36.1	-2.5
ACLC				*e*S	Sb	07 13 48.1	+2.5
ACLC				IAML		07 13 48.8	
	comp=Z,721nm,0.5s						
APLL	PUNTA DE LOS L	4.68	81	*e*S	Sb	07 13 44.2	-2.8
AC02	Maricunga	5.00	29	*e*P	Pn	07 12 45.6	+1.5
AC02	Maricunga	5.00	29	*e*P	Pn	07 12 45.6	+1.5
AC02				*e*S	Sb	07 13 52.1	-4.8
AC02				IAML		07 14 10.1	
	comp=Z,208nm,0.9s						
AC01	Pan de Azucar	5.20	13	*e*P	Pn	07 12 46.0	-0.4
AC01				IAML		07 14 13.8	
	comp=Z,131nm,0.6s						
H03N1	Juan Fernandez	6.35	248	T	T	07 19 46.2	
	baz=77,slow=72,SNR=7211						
H03N3	Juan Fernandez	6.36	248	T	T	07 19 44.4	
	baz=77,slow=72,SNR=5711						
H03N2	Juan Fernandez	6.36	248	T	T	07 19 46.2	
	baz=77,slow=72,SNR=3065						

H03S3	**Juan Fernandez**	**6.48**	**245**	T	T	07 20 04.9	
	baz=84,SNR=15						
H03S1	**Juan Fernandez**	**6.48**	**245**	T	T	07 20 04.1	
	baz=84,SNR=15						
H03S2	**Juan Fernandez**	**6.49**	**245**	T	T	07 20 01.0	
	baz=84,SNR=14						
LVC	**Limon Verde**	**8.99**	**18**	Pn	**Pn**	**07 13 37.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=146,slow=3.6,SNR=1.4						
LVC				LR	LR	07 17 15.2	
	comp=Z,101nm,21.4s,baz=209,slow=39						
	comp=Z,1.6nm,0.5s						
LVC	**Limon Verde**	**8.99**	**18**		**Pn**	**07 13 39.7**	**+0.9**
PLCA	**Paso Flores**	**9.53**	**174**	Pn	**Pn**	**07 13 45.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=329,slow=11,SNR=18						
PLCA				LR	LR	07 17 34.0	
	comp=Z,99nm,21.2s,baz=348,slow=39						
	comp=Z,0.7nm,0.3s						
PLCA	**Paso Flores**	**9.53**	**174**	Pn	**Pn**	**07 13 45.5**	**-0.5**
LL04	**Puerto Octay**	**9.66**	**182**	Pn	**Pn**	**07 13 46.9**	**-0.7**
TRQA	**Tornquist**	**10.61**	**133**	Pn	**Pn**	**07 14 01.1**	**+0.5**
ITQB	**Itaqui**	**13.25**	**87**	Pn	**Pn**	**07 14 35.6**	**-1.1**
CPUP	**Villa Florida**	**13.66**	**73**	Pn	**Pn**	**07 14 40.9**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=241,slow=13,SNR=3.3						
CPUP				LR	LR	07 20 17.2	
	comp=Z,90nm,19.8s,baz=221,slow=39						
	comp=Z,3.8nm,1.1s						
CPUP	**Villa Florida**	**13.66**	**73**	Pn	**Pn**	**07 14 38.9**	**-3.4**
LPAZ	**La Paz**	**15.27**	**14**	Pn	**Pn**	**07 15 06.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=194,slow=7.3,SNR=8.4						
	comp=Z,1.5nm,0.7s						
LPAZ	**La Paz**	**15.27**	**14**		**Pn**	**07 15 06.3**	**+1.5**
NNA	**Nana**	**19.70**	**345**	LR	LR	07 22 20.5	
	comp=Z,36nm,18.0s,baz=172,slow=33						
SAML	**Samuel**	**23.61**	**22**	P	**P**	**07 16 40.5**	**+0.9**
ATAH	**Atahualpa**	**24.75**	**344**	LR	LR	07 24 25.4	
	comp=Z,30nm,19.5s,baz=253,slow=31						
BDFB	**Brasilia**	**26.75**	**60**	P	**P**	**07 17 07.5**	**-1.0**
	comp=Z,4.5nm,1.0s,baz=210,slow=13,SNR=5.4						
BDFB				LR	LR	07 28 32.3	
	comp=Z,86nm,20.2s,baz=173,slow=38						
	comp=Z,4.5nm,1.0s						
BDFB	**Brasilia**	**26.75**	**60**	P	**P**	**07 17 07.7**	**-0.8**
BDFB				IAmb	IAmb	07 17 20.3	
	comp=Z,10nm,1.2s						
OTAV	**Otavalo**	**31.92**	**347**	P	**P**	**07 17 54.8**	**0.0**
OTAV				IAmb	IAmb	07 18 17.3	
	comp=Z,6.0nm,1.1s						
BAUV	**El Baul**	**40.12**	**6**	P	**P**	**07 19 05.0**	**+0.6**
BAUV				IAmb	IAmb	07 19 09.2	
	comp=Z,10nm,1.1s						
MDP	**Montagnes des**	**40.54**	**30**	LR	LR	07 37 35.8	
	comp=Z,34nm,18.1s,baz=251,slow=39						
LGNH	**Logne**	**49.47**	**359**	P	**P**	**07 20 19.1**	**+0.3**
SNAA	**Sanae**	**54.09**	**159**	P	**P**	**07 20 52.7**	**-0.2**
SNAA				IAmb	IAmb	07 20 53.9	
	comp=Z,10nm,1.3s						
QSPA	**South Pole Qui**	**58.99**	**180**	P	**P**	**07 21 27.5**	**-0.4**
QSPA				IAmb	IAmb	07 21 29.1	
	comp=Z,2.3nm,0.9s						
553A	**Crawfordville**	**62.25**	**348**	P	**P**	**07 21 51.2**	**+1.0**
VNDA	**Vanda**	**66.83**	**191**	P	**P**	**07 22 20.1**	**+0.4**
VNDA				IAmb	IAmb	07 22 26.4	
	comp=Z,1.8nm,1.3s						
TXAR	**Lajitas Array**	**67.41**	**330**	P	**P**	**07 22 25.0**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=153,slow=10,SNR=1.9						
TXAR	**Lajitas Array**	**67.41**	**330**	P	**P**	**07 22 24.7**	**+0.6**
DBIC	**Dimbokro**	**74.18**	**72**	P	**P**	**07 23 05.8**	**+0.3**
	comp=Z,7.6nm,1.1s,baz=268,slow=8.4,SNR=3.1						
	comp=Z,7.6nm,1.1s						
DBIC	**Dimbokro**	**74.18**	**72**	P	**P**	**07 23 04.5**	**-0.9**
TOA0	**Torodi Ar. Sit**	**83.14**	**70**	P	**P**	**07 23 55.0**	**+0.1**
TOA0				IAmb	IAmb	07 23 55.5	
	comp=Z,3.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.14**	**70**	P	**P**	**07 23 54.6**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=256,slow=4.7,SNR=16						
	comp=Z,3.1nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**125.91**	**271**	T	T	09 49 18.4	
	baz=116,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**125.92**	**271**	T	T	09 49 15.4	
	baz=116,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**125.92**	**271**	T	T	09 49 17.9	
	baz=116,slow=75,SNR=50						
H11N3	**WAKE ISLAND Hy**	**126.25**	**273**	T	T	09 49 44.8	
	baz=117,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**126.26**	**272**	T	T	09 49 40.0	
	baz=117,slow=76,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**126.27**	**273**	T	T	09 49 44.4	
	baz=117,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	**151.79**	**30**	PKPbc	**PKPbc**	**07 31 22.6**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=288,slow=2.7,SNR=17						
ZALV	**Zalesovo Beam**	**151.79**	**30**	PKPdf	**PKPdf**	**07 31 15.9**	**-0.3**
ZALV					**PKPbc**	**07 31 22.6**	**-0.1**
ZALV				PKPab	**PKPab**	**07 31 32.9**	**+1.2**
MKAR	**Makanchi Array**	**154.78**	**45**	PKPbc	**PKiKP**	**07 31 29.5**	**0.0**
	comp=Z,0.7nm,0.7s,baz=325,slow=1.5,SNR=5.5						
MKAR	**Makanchi Array**	**154.78**	**45**	PKPdf	**PKPdf**	**07 31 19.8**	**-1.1**
MKAR					**sPKPdf**	**07 31 28.6**	**+0.6**
MKAR				PKPab	**PKPab**	**07 31 46.1**	**+1.6**

NEIC ***17*** *07:12:25.5±0.4, 19°.9N±0°.2×68°.65W±0°.03, h40km±87km, Error ellipse: s-maj=22.5km s-min=4.7km az=181.0*

OSPL ***17*** *07:12:25.1±1.5, 20°.05N×68°.64W, h31km±188km, ML2.7*

RSPR ***17*** *07:12:26.1, 19°.90N×68°.63W, h28km±15km, MD3.3/10*

ISC 17 07:12:25.5±2.4**, 19°.9N**±0°.2×**68°.63W**±0°.05**, h35**km**, n35, σ0^{s}65**/36**, 9C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.29**	**214**	⇓eP	**Pn**	**07 12 46.7**	**-0.4**
DR12				eS	**Sn**	**07 13 03.0**	**-0.1**
IDE	**Isla Desecheo**	**1.83**	**143**	⇑eP	**Pn**	**07 12 54.5**	**0.0**
IDE	**Isla Desecheo**	**1.83**	**143**	eS	**Sn**	**07 13 14.4**	**-2.1**
SDD	**Santo Domingo**	**1.86**	**221**	Pn	**Pn**	**07 12 56.0**	**+1.3**
AGPR	**Aguadilla, PR**	**2.00**	**134**	⇑eP	**Pn**	**07 12 57.0**	**+0.2**
AGPR	**Aguadilla, PR**	**2.00**	**134**		**Pn**	**07 12 57.0**	**+0.2**
AGPR	**Aguadilla, PR**	**2.00**	**134**	IAML		07 13 30.9	
	comp=N,106nm,2.0s						
AGPR				IAML		07 13 36.8	
	comp=E,96nm,2.7s						
AGPR	**Aguadilla, PR**	**2.00**	**134**	*i* P	**Pn**	**07 12 56.3**	**-0.5**
AGPR				eS	**Sn**	**07 13 19.0**	**-1.6**
AGPR				IAML		07 13 19.2	
	comp=Z,60nm,1.4s						
PRSN	**Puerto Rico Se**	**2.16**	**139**		**Pn**	**07 12 59.7**	**+0.7**
LSP	**Las Mesas**	**2.23**	**139**	⇑eP	**Pn**	**07 13 00.5**	**+0.5**
LSP	**Las Mesas**	**2.23**	**139**	eS	**Sn**	**07 13 26.6**	**+0.3**
AOPR	**Arecibo Observ**	**2.33**	**130**	⇑eP	**Pn**	**07 13 01.3**	**-0.1**
AOPR	**Arecibo Observ**	**2.33**	**130**	eS	**Sn**	**07 13 28.6**	**-0.2**
AOPR	**Arecibo Observ**	**2.33**	**130**		**Pn**	**07 13 01.3**	**-0.1**
AOPR					**Sn**	**07 13 28.6**	**-0.2**
AOPR	**Arecibo Observ**	**2.33**	**130**	IAML		07 13 38.9	
	comp=N,63nm,0.2s						
CRPR	**Cabo Rojo, PR**	**2.34**	**142**	⇑eP	**Pn**	**07 13 01.9**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.34**	**142**		**Pn**	**07 13 01.9**	**+0.4**
CRPR					**Sn**	**07 13 29.5**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.34**	**142**	IAML		07 13 30.4	
	comp=N,49nm,0.5s						
CRPR	**Cabo Rojo, PR**	**2.34**	**142**	*i* P	**Pn**	**07 13 02.3**	**+0.8**
CRPR				eS	**Sn**	**07 13 29.2**	**+0.2**
CRPR				IAML		07 13 31.8	
	comp=Z,39nm,0.4s						
MLPR	**Magueyes Islan**	**2.41**	**141**	⇑eP	**Pn**	**07 13 02.8**	**+0.4**
MLPR	**Magueyes Islan**	**2.41**	**141**	eS	**Sn**	**07 13 31.0**	**+0.2**
MLPR	**Magueyes Islan**	**2.41**	**141**		**Pn**	**07 13 02.8**	**+0.4**
MLPR					**Sn**	**07 13 31.0**	**+0.2**
MLPR	**Magueyes Islan**	**2.41**	**141**	IAML		07 13 31.7	
	comp=E,37nm,0.8s						
MLPR				IAML		07 13 32.2	
	comp=N,38nm,0.3s						
CELP	**Cerrillos**	**2.63**	**132**	⇑eP	**Pn**	**07 13 05.7**	**+0.2**
CELP	**Cerrillos**	**2.63**	**132**		**Pn**	**07 13 05.7**	**+0.2**
OBIP	**Obispado Ponce**	**2.64**	**133**	⇑eP	**Pn**	**07 13 05.8**	**+0.3**
OBIP	**Obispado Ponce**	**2.64**	**133**		**Pn**	**07 13 05.8**	**+0.3**
OBIP	**Obispado Ponce**	**2.64**	**133**	IAML		07 13 35.0	
	comp=N,31nm,0.8s						
SDDR	**Presa de Saban**	**2.66**	**251**	Pn	**Pn**	**07 13 05.6**	**-0.3**
GCPR	**Guaynabo City**	**2.86**	**122**	Pn	**Pn**	**07 13 09.7**	**+1.0**
GCPR				IAML		07 14 36.3	
	comp=N,24nm,2.6s						
SJG	**San Juan**	**2.92**	**126**	Pn	**Pn**	**07 13 10.1**	**+0.6**
SJG				IAML		07 13 40.6	
	comp=N,26nm,1.9s						
SJG				IAML		07 13 54.7	
	comp=N,27nm,0.3s						
IGPR	**InterUniversit**	**3.05**	**128**	⇑eP	**Pn**	**07 13 11.2**	**0.0**
CBYP	**Canovanas**	**3.06**	**121**	Pn	**Pn**	**07 13 11.6**	**+0.1**
HUMP	**Col San Antoni**	**3.14**	**123**	Pn	**Pn**	**07 13 13.3**	**+0.8**
HUMP				IAML		07 13 55.9	
	comp=N,19nm,0.8s						
MTP	**Monte Pirata**	**3.40**	**121**	Pn	**Pn**	**07 13 16.4**	**+0.4**
MTP				IAML		07 14 07.1	
	comp=N,18nm,2.0s						
MTP				IAML		07 15 30.7	
	comp=E,24nm,2.5s						

REN ***17*** *07:27:41.8±2.0, 41°.90N±0°.03×119°.63W±0°.04, h10km±7km, Mwr3.5, ML3.2/106(NEIC), Error ellipse: s-maj=5.7km s-min=0.6km az=137.0*

ANF ***17*** *07:27:41.1±0.6, 41°.91N×119°.64W, h0km, ML3.4/14, Error ellipse: s-maj=5.4km s-min=4.6km az=71.0*

NEIC ***17*** *07:27:42.0±1.9, 41°.92N±0°.04×119°.64W±0°.04, h12km±7km, Error ellipse: s-maj=5.6km s-min=4.9km az=200.0*

NEIC ***17*** *07:27:44, 41°.90N×119°.63W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.40; $M_{\theta\theta}$0.31; $M_{\phi\phi}$1.10; $M_{r\theta}$-0.53; $M_{\theta\phi}$0.54; $M_{\phi r}$-1.09; Fault plane solution: $M_0$1.84000×10^{14} NP1:ϕ_s26.00000°, δ66.00000°, λ-91.00000°. NP2:ϕ_s208.00000°, δ24.00000°, λ-89.00000°. Principal axes: T 1.8256, Plg21.0000°, Azm117.0000°; N 0.0328, Plg0.0000°, Azm26.0000°; P -1.8584, Plg69.0000°, Azm295.0000°;*

ISC 17 07:27:41.5±1.3**, 41°.93N**±0°.03×**119°.64W**±0°.03**, h2**km±12km**, n83, σ1^{s}31**/91**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.49**	**268**	Pg	**Pg**	**07 27 51.9**	**+0.9**
MOD	**Modoc Plateau**	**0.49**	**268**		**Sb**	**07 27 59.3**	**-1.5**
MOD	**Modoc Plateau**	**0.49**	**268**	IAML		07 27 59.6	
	comp=E,6µm,0.5s						
MOD				IAML		07 27 59.8	
	comp=N,7µm,0.5s						
WVOR	**Wild Horse Val**	**0.91**	**55**	Pg	**Pg**	**07 27 59.1**	**+0.2**
WVOR				IAML		07 28 14.9	
	comp=N,859nm,0.7s						
WVOR				IAML		07 28 15.1	
	comp=N,1µm,0.5s						
WVOR	**Wild Horse Val**	**0.91**	**55**		**Sb**	**07 28 12.1**	**-0.6**
K05A	**Summer Lake**	**1.22**	**311**	Pn	**Pg**	**07 28 05.5**	**+0.5**
J08A	**Circle Bar Ran**	**1.67**	**31**		**Pn**	**07 28 11.3**	**-0.6**
J08A				IAML		07 28 41.7	
	comp=E,315nm,0.4s						
J08A				IAML		07 28 45.8	
	comp=N,344nm,0.6s						
K04D	**Chiloquin, OR**	**1.71**	**295**	P	**Pn**	**07 28 12.3**	**-0.3**
	baz=114,SNR=47						
K04D				Sb	**Sg**	**07 28 37.6**	**+1.0**
	baz=114						
J05D	**Fort Rock, OR**	**1.80**	**320**	Pb	**Pb**	**07 28 15.1**	**-0.1**
	baz=139,SNR=269						
J05D				Sb	**Sg**	**07 28 39.9**	**+0.7**
	baz=139						
L04D	**Klamath Falls**	**2.00**	**279**	Pn	**Pn**	**07 28 15.9**	**-0.6**
L04D				IAML		07 28 49.4	
	comp=N,212nm,0.3s						
L04D				IAML		07 28 54.5	
	comp=E,316nm,0.7s						
L04D	**Klamath Falls**	**2.00**	**279**	P	**Pn**	**07 28 15.9**	**-0.6**
	baz=98,SNR=40						
L04D				Sb	**Sg**	**07 28 46.1**	**+0.2**
	baz=98						
PINE	**Pine Mountain**	**2.10**	**333**		**Pb**	**07 28 21.0**	**+0.6**
PINE				IAML		07 28 53.9	
	comp=E,295nm,0.6s						
PINE				IAML		07 29 03.0	
	comp=N,178nm,0.8s						
BEKR	**Beckworth**	**2.13**	**195**		**Pb**	**07 28 20.3**	**-0.6**
BEKR				IAML		07 28 50.0	
	comp=N,199nm,0.3s						
BEKR				IAML		07 28 51.2	
	comp=E,202nm,0.6s						
I07A	**Izee**	**2.16**	**3**	Pn	**Pn**	**07 28 18.0**	**-0.6**
I07A				IAML		07 28 52.1	
	comp=N,159nm,0.6s						
I07A				IAML		07 28 59.8	
	comp=E,104nm,0.8s						
PAHR	**Pah Rah Range**	**2.23**	**175**		**Pn**	**07 28 18.9**	**-0.6**
J04D	**Umpqua Nationa**	**2.25**	**307**	Pn	**Pn**	**07 28 20.2**	**+0.2**
J04D	**Umpqua Nationa**	**2.25**	**307**	Pb	**Pb**	**07 28 22.8**	**-0.1**
	baz=126,SNR=82						
J04D				Sg	**Sg**	**07 28 55.7**	**+2.0**
	baz=126						
LCMM	**Colby Mountain**	**2.27**	**219**		**Pn**	**07 28 20.6**	**+0.4**
YBH	**Yreka Blue Hor**	**2.30**	**266**	Pn	**Pn**	**07 28 19.4**	**-1.1**
BMN	**Battle Mountai**	**2.36**	**128**		**Pn**	**07 28 20.9**	**-0.6**
BMN				IAML		07 29 02.1	
	comp=N,95nm,0.5s						
HUMO	**Hull Mountain**	**2.55**	**287**	Pn	**Pn**	**07 28 22.6**	**-1.3**
HUMO				IAML		07 29 02.8	
	comp=N,138nm,0.7s						
HUMO				IAML		07 29 03.5	
	comp=E,91nm,0.7s						
VCNR	**Virginia City**	**2.63**	**180**		**Pb**	**07 28 29.5**	**+0.1**
VCNR				IAML		07 29 07.1	
	comp=N,172nm,0.8s						
MPK	**Martis Peak**	**2.64**	**187**		**Pb**	**07 28 30.6**	**+0.8**
MPK				IAML		07 29 08.1	
	comp=N,90nm,0.8s						
MPK				IAML		07 29 12.2	
	comp=E,110nm,0.9s						
I05D	**Terrebonne, OR**	**2.71**	**333**	Pb	**Pb**	**07 28 30.4**	**-0.4**
	baz=152,SNR=31						
I05D				Sb	**Sg**	**07 29 07.8**	**-0.8**
	baz=152						
ORV	**Oroville**	**2.76**	**211**		**Pn**	**07 28 25.0**	**-1.7**
I04A	**Tendick Farm,**	**2.76**	**313**	Pb	**Pb**	**07 28 31.8**	**+0.1**
	baz=132,SNR=25						
I04A				Sb	**Sg**	**07 29 09.3**	**-1.0**
	baz=132						
DBO	**Dodson Butte**	**2.92**	**295**		**Pn**	**07 28 27.6**	**-1.5**
DBO				IAML		07 29 16.1	
	comp=N,90nm,0.7s						
L02F	**Cave Junction**	**2.93**	**275**	P	**Pn**	**07 28 29.2**	**0.0**
	baz=93						
L02F				Sb	**Sb**	**07 29 12.6**	**+1.8**
	baz=93						
YERR	**Yerington**	**2.95**	**174**		**Pn**	**07 28 27.8**	**-1.9**
YERR				IAML		07 29 16.9	
	comp=N,123nm,0.5s						
K02D	**Willamette Mer**	**3.08**	**286**	P	**Pn**	**07 28 31.5**	**+0.2**
	baz=104,SNR=5.6						
K02D				S	**Sn**	**07 29 09.8**	**+1.1**
	baz=104						
KVN	**Kaiserville**	**3.10**	**157**		**Pn**	**07 28 30.6**	**-1.1**
KVN				IAML		07 29 23.9	
	comp=E,50nm,0.7s						
MFID	**Camas Ranch**	**3.18**	**61**	Pn	**Pn**	**07 28 32.3**	**-0.4**
MFID				IAML		07 29 29.3	
	comp=E,115nm,0.8s						
KHMM	**Horse Mountain**	**3.25**	**253**		**Pn**	**07 28 31.6**	**-2.0**
KHMM				IAML		07 29 40.2	
	comp=N,52nm,1.8s						
KHMM				IAML		07 29 40.3	
	comp=E,62nm,1.8s						
I03D	**Drain, OR**	**3.25**	**304**	Pb	**Pb**	**07 28 39.5**	**-0.4**
	baz=122						
I03D				Sb	**Sg**	**07 29 23.2**	**-2.8**
	baz=122						
H04A	**Detroit Lake**	**3.32**	**327**		**Pn**	**07 28 33.5**	**-1.1**
BUCK	**Buck Mountain**	**3.34**	**314**		**Pn**	**07 28 35.2**	**+0.4**
BUCK				IAML		07 29 38.1	
	comp=N,37nm,2.3s						
BUCK				IAML		07 29 49.9	
	comp=E,45nm,2.1s						
BMO	**Blue Mountains**	**3.39**	**29**		**Pn**	**07 28 34.0**	**-1.5**
J01E	**Myrtle Point**	**3.40**	**293**		**Pn**	**07 28 33.8**	**-1.8**
J01E				IAML		07 29 30.2	
	comp=E,50nm,2.1s						
J01E				IAML		07 29 47.7	
	comp=N,51nm,1.3s						
J01E	**Myrtle Point**	**3.40**	**293**	P	**Pn**	**07 28 37.2**	**+1.6**
	baz=110,SNR=17						
G08A	**Pilot Rock**	**3.40**	**8**		**Pn**	**07 28 34.5**	**-1.3**
RYN	**Ryan**	**3.40**	**165**		**Pn**	**07 28 34.6**	**-1.2**
RYN				IAML		07 29 33.8	
	comp=E,61nm,0.8s						
RYN				IAML		07 29 36.6	
	comp=N,43nm,0.8s						
H04D	**Lebanon**	**3.44**	**320**		**Pn**	**07 28 35.7**	**-0.5**
H04D				IAML		07 29 36.6	
	comp=N,44nm,1.3s						
H04D	**Lebanon**	**3.44**	**320**	Pb	**Pb**	**07 28 44.2**	**+0.9**
	baz=138						
JCC	**Jacoby Creek,**	**3.48**	**253**	Pn	**Pn**	**07 28 36.9**	**+0.2**
JCC				IAML		07 29 09.8	
	comp=N,46nm,2.9s						
JCC				IAML		07 29 33.6	
	comp=E,69nm,3.5s						
KMRM	**Mail Ridge**	**3.51**	**242**	Pn	**Pn**	**07 28 36.3**	**-0.9**
KMRM				IAML		07 29 50.5	
	comp=N,59nm,2.1s						
KMRM				IAML		07 29 59.5	
	comp=E,49nm,2.6s						
ELK	**Elko**	**3.52**	**108**	Pn	**Pn**	**07 28 37.2**	**-0.3**
G05D	**Wamic, OR**	**3.53**	**340**	Sb	**Sg**	**07 29 32.0**	**-2.9**
	baz=159						
KEBM	**Edson Butte**	**3.60**	**287**		**Pn**	**07 28 39.0**	**+0.6**
KEBM				IAML		07 29 44.4	
	comp=N,82nm,1.8s						
KEBM				IAML		07 29 58.6	
	comp=E,70nm,2.0s						
Q09A	**Carvers**	**3.62**	**148**	Pn	**Pn**	**07 28 37.3**	**-1.4**
Q09A				IAML		07 29 48.0	
	comp=N,82nm,0.7s						
NVAR	**Mina Array Bea**	**3.64**	**163**		**Pn**	**07 28 37.8**	**-1.3**
HOOD	**Mount Hood Mea**	**3.69**	**337**		**Pn**	**07 28 39.0**	**-0.8**
HOOD				IAML		07 29 45.1	
	comp=N,46nm,0.3s						
COR	**Corvallis**	**3.77**	**316**		**Pn**	**07 28 40.7**	**0.0**
COR				IAML		07 30 09.3	
	comp=N,26nm,1.7s						
COR				IAML		07 30 31.3	
	comp=N,26nm,1.8s						
LHV	**Little Huntoon**	**3.77**	**166**		**Pn**	**07 28 40.6**	**-0.1**
I02E	**Swisshome, OR**	**3.78**	**307**		**Pn**	**07 28 39.1**	**-1.6**
I02E				IAML		07 29 17.3	
	comp=N,35nm,2.4s						
I02E				IAML		07 30 52.7	
	comp=E,30nm,2.2s						
CMB	**Columbia Colle**	**3.93**	**189**		**Pn**	**07 28 41.6**	**-1.2**
PLID	**Pearl Lake**	**4.12**	**39**		**Pn**	**07 28 43.9**	**-1.9**
HLID	**Hailey**	**4.18**	**65**		**Pn**	**07 28 46.8**	**+0.2**
HLID				IAML		07 29 54.8	
	comp=E,22nm,0.7s						
HLID				IAML		07 29 57.1	
	comp=E,37nm,0.8s						
HLID	**Hailey**	**4.18**	**65**	Sb	**Sb**	**07 29 49.9**	**+2.8**
	baz=248						
TPH	**Tonopah**	**4.27**	**153**		**Pn**	**07 28 46.3**	**-1.5**
OMMB	**Old Mammoth Mi**	**4.33**	**173**		**Pn**	**07 28 46.8**	**-2.0**
F10A	**Beach Ranch, E**	**4.41**	**22**		**Pn**	**07 28 48.4**	**-1.2**
F10A				IAML		07 29 54.0	
	comp=E,20nm,0.2s						
HEBO	**Mount Hebo**	**4.44**	**319**	Pn	**Pn**	**07 28 49.8**	**-0.1**
R11A	**Troy Canyon, C**	**4.74**	**138**	Pn	**Pn**	**07 28 55.2**	**+1.1**
R11A				IAML		07 30 15.1	
	comp=N,15nm,0.6s						
R11A	**Troy Canyon, C**	**4.74**	**138**	P	**Pn**	**07 28 56.3**	**+2.1**
	baz=320						
BGU	**Big Grassy Mou**	**5.07**	**99**		**Pn**	**07 28 58.1**	**-0.6**
BGU				IAML		07 30 31.1	
	comp=N,12nm,1.3s						
BGU				IAML		07 30 41.0	
	comp=E,16nm,0.8s						
HVU	**Hansel Valley**	**5.13**	**89**	Pn	**Pn**	**07 28 59.1**	**-0.4**
BCYI	**Bear Canyon**	**5.15**	**60**	Pn	**Pn**	**07 29 00.2**	**+0.3**
S11A	**Rachel**	**5.22**	**144**	Pn	**Pn**	**07 28 59.1**	**-1.6**
DUG	**Dugway, Tooele**	**5.45**	**106**		**Pn**	**07 29 03.5**	**-0.4**
DUG	**Dugway, Tooele**	**5.45**	**106**	P	**Pn**	**07 29 05.1**	**+1.3**
	baz=291						
PSUT	**Pine Spring**	**5.58**	**125**		**Pn**	**07 29 07.0**	**+1.2**
TPNV	**Topopah Spring**	**5.62**	**151**	Pn	**Pn**	**07 29 03.5**	**-2.8**
PRN	**Pahroc Range**	**5.74**	**140**		**Pn**	**07 29 07.2**	**-0.6**
MCMT	**McKenzie Canyo**	**5.74**	**57**		**Pn**	**07 29 08.3**	**+0.3**
NLU	**North Lily Min**	**6.06**	**106**	Pn	**Pn**	**07 29 10.6**	**-1.7**
DLMT	**Dillon**	**6.16**	**54**		**Pn**	**07 29 11.8**	**-1.8**
GWY	**Greenwater Val**	**6.18**	**157**		**Pn**	**07 29 12.4**	**-1.6**
ECR	**Eagle Creek**	**6.22**	**77**		**Pn**	**07 29 13.5**	**-1.1**
SHPR	**Sheep Range**	**6.43**	**146**		**Pn**	**07 29 15.6**	**-1.9**
ICU	**Indian Springs**	**6.50**	**135**		**Pn**	**07 29 21.1**	**+2.7**
CCUT	**Cedar City**	**6.52**	**130**		**Pn**	**07 29 17.3**	**-1.4**
TPAW	**Teton Pass**	**6.59**	**73**		**Pn**	**07 29 17.4**	**-2.3**
REDW	**Red Top Meadow**	**6.64**	**75**		**Pn**	**07 29 18.2**	**-2.1**

NNC 17 07:34:00.4±4.8**, 36°.70N**×**69°.81E, h0**km**, mb3.8, mpv3.5, 3C-2D, Error ellipse: s-maj=50.0km s-min=31.6km az=116.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.42**	**5**	⇑P	Pn	07 35 35.3	-0.9
	1.1nm,0.3s,baz=184,slow=11,SNR=4.6						
KK31				⇓S	Sn	07 36 51.8	+1.6
	5.4nm,0.6s,baz=190,slow=22,SNR=7.2						
AB31	**Akbulak array**	**14.46**	**333**	⇑P	Pn	07 37 26.9	+0.6
	0.5nm,0.3s,baz=154,slow=12,SNR=75						
AB31				⇓S	Sn	07 40 06.9	-0.4
	0.8nm,0.7s,baz=152,slow=23,SNR=4.5						
AKTO	**Aktyubinsk**	**16.15**	**332**	⇑P	P	07 37 50.6	-1.4
	1.9nm,0.7s						

NEIC ***17*** *07:38:28.9±1.8, 2°.39N±0°.06×97°.95E±0°.08, h65km±6km, mb4.7/32, Error ellipse: s-maj=12.0km s-min=8.2km az=105.0*

IDC ***17*** *07:38:30.7±1.3, 2°.47N×98°.12E, h86km±11km, mb3.9/17, mbtmp4.3/18, MS3.4/3, Error ellipse: s-maj=24.5km s-min=11.8km az=56.0*

DJA ***17*** *07:38:30.1±0.5, 2°N±3°×9°8E±°, h61km±13km, M4.5/8, MLv4.5/8*

ISC 17 07:38:28.5±0.4**, 2°.36N**±0°.04×**97°.97E**±0°.06**, h67**km**, n67, σ0^{s}91**/69**, mb4.5**/31**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.05**	**65**	P	**Pn**	**07 38 48.6**	**+1.0**
	182nm,0.3s,baz=310,slow=8.9,SNR=116						
PSI				LR	LR	07 38 57.2	
	comp=Z,105nm,20.7s,baz=282,slow=32						
PSI				S	**Sn**	**07 39 02.5**	**+0.6**
	738nm,0.6s,baz=90,slow=20,SNR=52						
GSI	**Gunungsitoli**	**1.12**	**201**	Pn	**Pn**	**07 38 49.7**	**+1.3**
GSI	**Gunungsitoli**	**1.12**	**201**	P	**Pn**	**07 38 49.7**	**+1.3**
KCSI	**Kotacane, Aceh**	**1.17**	**350**	P	**Pn**	**07 38 50.4**	**+1.3**
KCSI				S	**Sn**	**07 39 05.9**	**+1.4**
TSI	**Tuntungan**	**1.28**	**28**	P	**Pn**	**07 38 52.7**	**+2.2**
TSI				S	**Sn**	**07 39 08.9**	**+1.9**
LHMI	**Lhok Sumawe**	**3.03**	**340**		**Pn**	**07 39 14.4**	**+0.4**
LHMI	**Lhok Sumawe**	**3.03**	**340**	P	**Pn**	**07 39 15.1**	**+1.0**
IPM	**Ipoh**	**3.71**	**55**		**Pn**	**07 39 25.3**	**+1.9**
KULM	**Kulim**	**3.96**	**42**		**Pn**	**07 39 28.1**	**+1.3**
SRIT	**Nakonsritamara**	**6.41**	**15**		**Pn**	**07 40 00.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**16.03**	**3**	P	**Pn**	**07 42 09.9**	**+0.1**
	2.6nm,0.3s,baz=194,slow=12,SNR=9.8						
CMAR				LR	LR	07 49 09.0	
	comp=Z,36nm,20.3s,baz=200,slow=40						
PSA00	**Pilbara Seismi**	**32.00**	**139**	P	**P**	**07 44 48.0**	**-0.6**
PSA00				IAmb	IAmb	07 44 53.6	
	comp=Z,8.5nm,1.1s						
KNRA	**Kununurra**	**35.34**	**121**	P	**P**	**07 45 16.6**	**-1.1**
KNRA				IAmb	IAmb	07 45 17.3	
	comp=Z,6.5nm,1.0s						
MTN	**Manton Dam**	**36.22**	**115**	P	**P**	**07 45 25.3**	**-0.1**
MTN				IAmb	IAmb	07 45 32.1	
	comp=Z,18nm,1.2s						
WB0	**Warramunga Arr**	**41.98**	**123**	P	**P**	**07 46 12.4**	**-0.9**
WB0				IAmb	IAmb	07 46 13.0	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**42.01**	**124**	P	**P**	**07 46 12.8**	**-0.8**
	comp=Z,8.3nm,0.6s,baz=302,slow=9.2,SNR=100						
WRA				PcP	**PcP**	**07 48 07.9**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=314,slow=2.6,SNR=5.8						
	comp=Z,8.3nm,0.6s						
WRA	**Warramunga Arr**	**42.01**	**124**	P	**P**	**07 46 12.5**	**-1.2**
WRAB	**Tennant Creek**	**42.02**	**124**	P	**P**	**07 46 13.0**	**-0.7**
WRAB				IAmb	IAmb	07 46 13.9	
	comp=Z,12nm,0.7s						
WB2	**Warramunga Arr**	**42.02**	**124**	P	**P**	**07 46 13.0**	**-0.7**
WB2				IAmb	IAmb	07 46 13.9	
	comp=Z,12nm,0.7s						
WR0	**Warramunga Arr**	**42.19**	**123**	P	**P**	**07 46 14.5**	**-0.5**

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AS31  Alice Springs     43.49 129  P      P       07 46 25.1 -0.5
ASAR  Alice Springs     43.49 129  P      P       07 46 24.6 -1.0
      comp=Z,1.7nm,0.4s,baz=297,slow=7.5,SNR=41
ASAR                               PcP    PcP     07 48 13.1 +0.3
      comp=Z,1.5nm,0.9s,baz=302,slow=4.0,SNR=5.9
      comp=Z,1.7nm,0.4s
FORT  Forrest           43.68 141  P      P       07 46 26.7 -0.2
FORT                               IAmb   IAmb    07 46 28.5
      comp=Z,14nm,0.7s
KSRS  Korea Array       44.47  35  P      P       07 46 30.6 -2.5
      comp=Z,0.7nm,0.4s,baz=223,slow=8.7,SNR=2.1
      comp=Z,0.7nm,0.4s
SONM  Songino Array     45.88   8  P      P       07 46 43.8 -0.6
      comp=Z,1.1nm,0.4s,baz=186,slow=10,SNR=6.8
SONM                               PcP    PcP     07 48 20.4 -0.2
      comp=Z,1.0nm,0.5s,baz=186,slow=4.8,SNR=4.6
      comp=Z,1.1nm,0.4s
SONM  Songino Array     45.88   8  P      P       07 46 44.4 +0.1
MK31  Makanchi Array    46.32 345  P      P       07 46 47.5 -0.2
MKAR  Makanchi Array    46.32 345  P      P       07 46 47.5 -0.1
      comp=Z,2.9nm,0.4s,baz=156,slow=8.5,SNR=44
      comp=Z,2.9nm,0.4s
MAKZ  Makanchi          46.41 345  P      P       07 46 48.2 -0.2
MAKZ                               IAmb   IAmb    07 46 48.8
      comp=Z,4.4nm,0.6s
GUMO  Guam              47.67  74  LR     LR      08 09 14.1
      comp=Z,34nm,18.7s,baz=38,slow=39
BBOO  Buckleboo         50.20 137  P      P       07 47 17.3 -0.4
GEYT  Alibeck           50.83 319  P      P       07 47 22.2 -0.4
      comp=Z,3.1nm,0.7s,baz=77,slow=14,SNR=5.1
      comp=Z,3.1nm,0.7s
GEYT  Alibeck           50.83 319  P      P       07 47 22.7 +0.2
GEYT                               IAmb   IAmb    07 47 24.1
      comp=Z,4.0nm,0.9s
KURK  Kurchatov         50.89 344  P      P       07 47 22.6  0.0
KURK                               IAmb   IAmb    07 47 23.6
      comp=Z,4.3nm,0.7s
ZAA0  Zalesovo Array    52.55 350  P      P       07 47 34.9  0.0
ZAA0                               IAmb   IAmb    07 47 35.4
      comp=Z,6.9nm,0.8s
ZALV  Zalesovo Beam     52.55 350  P      P       07 47 34.8 -0.1
      comp=Z,6.7nm,0.3s,baz=166,slow=6.4,SNR=32
      comp=Z,6.7nm,0.3s
STKA  Stephens Creek    53.57 133  P      P       07 47 42.7 -0.2
      comp=Z,1.7nm,0.5s,baz=317,slow=7.3,SNR=6.2
      comp=Z,1.7nm,0.5s
STKA  Stephens Creek    53.57 133  P      P       07 47 42.4 -0.4
BRVK  Borovoye          55.48 340  P      P       07 47 56.3 -0.1
BRVK                               IAmb   IAmb    07 47 56.7
      comp=Z,4.0nm,0.7s
VOI   Vohitsoka         55.49 241  P      P       07 47 58.8 +1.7
ABKAR Akbulak array     56.87 331  P      P       07 48 06.2 -0.1
ABKAR                              IAmb   IAmb    07 48 07.4
      comp=Z,4.6nm,0.8s
ABKAR Akbulak array     56.87 331  P      P       07 48 06.0 -0.3
EIDS  Eidsvold          58.32 122  P      P       07 48 16.8 -0.1
EIDS                               IAmb   IAmb    07 48 20.5
      comp=Z,6.6nm,1.2s
PATS  Pohnpei           60.28  84  P      P       07 48 30.8 +0.1
KBZ   Khabaz            63.71 318  P      P       07 48 53.5 +0.4
      comp=Z,3.6nm,0.8s,baz=109,slow=8.6,SNR=11
      comp=Z,3.6nm,0.8s
BRTR  Keskin Array B    68.91 312  P      P       07 49 26.3 -0.4
      comp=Z,1.8nm,0.8s,baz=132,slow=6.8,SNR=8.4
      comp=Z,1.8nm,0.8s
DZM   Mont Dzumac       71.05 114  LR     LR      08 23 06.8
      comp=Z,101nm,18.0s,baz=153,slow=38
AKASG Malin Array Be    74.82 322  P      P       07 50 00.9 -0.7
      comp=Z,0.3nm,0.3s,baz=86,slow=5.0,SNR=6.1
      comp=Z,0.3nm,0.3s
BOSA  Boshof            76.02 240  P      P       07 50 10.6 +1.4
      comp=Z,1.8nm,0.5s,baz=86,slow=2.8,SNR=7.2
      comp=Z,1.8nm,0.5s
BOSA  Boshof            76.02 240  P      P       07 50 09.5 +0.3
BUR08 Bucovina Ar. S    76.69 318  P      P       07 50 13.4 +0.8
FINES FINESS Array B    79.33 332  P      P       07 50 26.8  0.0
      comp=Z,1.3nm,0.4s,baz=113,slow=4.3,SNR=13
      comp=Z,1.3nm,0.4s
FINES FINESS Array B    79.33 332  P      P       07 50 26.2 -0.5
ARCES ARCESS Array B    81.71 340  P      P       07 50 39.6 +0.2
      comp=Z,0.6nm,0.5s,baz=86,slow=4.1,SNR=14
      comp=Z,0.6nm,0.5s
ARCES ARCESS Array B    81.71 340  P      P       07 50 39.0 -0.4
GERES GERESS Array B    84.45 319  P      P       07 50 54.5 +0.4
      comp=Z,1.4nm,1.0s,baz=125,slow=2.1,SNR=5.5
      comp=Z,1.4nm,1.0s
NB2   NORSAR Subarra    86.37 331  P      P       07 51 03.3  0.0
      comp=Z,1.0nm,0.8s,baz=98,slow=4.4
NOA   NORSAR Array B    86.37 331  P      P       07 51 03.3  0.0
      comp=Z,1.2nm,0.8s,baz=95,slow=4.9,SNR=5.0
      comp=Z,1.2nm,0.8s
VNDA  Vanda             86.80 169  P      P       07 51 06.1 +1.1
      comp=Z,0.7nm,0.8s,baz=115,slow=20,SNR=6.6
      comp=Z,0.7nm,0.8s
VNDA  Vanda             86.80 169  P      P       07 51 05.4 +0.4
SBA   Scott Base        87.90 169  P      P       07 51 12.2 +1.9
SBA                                IAmb   IAmb    07 51 12.7
      comp=Z,2.9nm,1.0s
TOA0  Torodi Ar. Sit    95.57 283  P      P       07 51 45.2 -2.0
SNAA  Sanae             95.62 198  P      P       07 51 46.1 -0.2
TXAR  Lajitas Array    142.29  32  PKhKP  PKPpre  07 57 49.5
      comp=Z,0.3nm,0.6s,baz=233,slow=0.8,SNR=5.2
TXAR  Lajitas Array    142.29  32         PKPpre  07 57 50.9
CPUP  Villa Florida    146.37 223  PKPbc  PKPbc   07 58 02.2 -0.4
      comp=Z,2.8nm,0.7s,baz=138,slow=3.2,SNR=6.9
CPUP  Villa Florida    146.37 223         PKPbc   07 58 02.8 +0.2
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*IDC **17** 07:49:51.3±0.7, 31°.75N×141°.72E, h0km, mb4.0/11, mbtmp4.0/14, ML3.5/3, MS3.3/12, Error ellipse: s-maj=23.3km s-min=15.4km az=73.0*

*NEIC **17** 07:49:52.9±0.8, 31°.87N±0°.07×141°.8E±0°.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=18.7km s-min=11.1km az=74.0*

*JMA **17** 07:49:59.5±0.4, 32°N±1°×14°2E±°, h31km, MV3.6/29, E OFF HACHIJOJIMA ISLAND*

ISC 17 07:49:52.5±0.5**, 31°.86N**±0°.06×**141°.78E**±0°.07**, h10km, n66, σ1s.29**/61**, mb4.3**/19**, MS3.4**/10**, Southeast of Honshu**

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Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC      h  m  s    ISC
JAOM  Aogashimamukai     1.81 290  P      Pb      07 50 25.0 -0.8
JAOM                               eS     Sn      07 50 43.3 -3.5
JHCJ  Hachijojimakas     2.07 306  eP     Pn      07 50 27.8 +0.5
JHJ2  Mitsune            2.08 308  Pn     Pn      07 50 27.3 -0.1
JHJ2  Mitsune            2.08 308  P      Pn      07 50 27.6 +0.2
JHJ   Hachijo jima 2     2.10 307  Pn     Pn      07 50 27.8  0.0
      68nm,0.3s,baz=79,slow=21,SNR=22
JHJ                                Sn     Sn      07 50 53.1 -0.9
      41nm,0.3s,baz=230,slow=21,SNR=3.7
      118nm,0.3s
BSO1  Boso 1             2.87 347  P      Pn      07 50 38.3 +0.5
BSO3  Boso 3             3.12 340  eP     Pn      07 50 42.3 +0.7
BSO4  Boso 4             3.35 339  eP     Pn      07 50 45.6 +0.8
JHU   Hanno              4.49 333  eP     Pn      07 51 02.1 +1.4
JCJ   Chichijima         4.76 176  Pn     Pn      07 51 03.0 -1.3
      7.9nm,0.3s,baz=356,slow=20,SNR=43
JCJ                                Sn     Sn      07 51 56.2 -3.3
      15nm,0.3s,baz=300,slow=21,SNR=6.2
JCJ                                LR     LR      07 52 52.7
      comp=Z,194nm,18.8s,baz=60,slow=39
      14nm,0.3s
JCJ   Chichijima         4.76 176         Pn      07 51 04.3  0.0
JRY   Ryogami san        4.79 331  P      Pn      07 51 05.9 +1.2
JAG   Ashikaga           4.95 338  P      Pn      07 51 07.6 +0.7
JGF   Kuroka             5.25 317  Pn     Pn      07 51 11.0  0.0
MJAR  Matsushiro Arr     5.53 329  Pn     Pn      07 51 15.5 +0.6
      0.2nm,0.3s,baz=141,slow=12,SNR=7.8
      1.6nm,0.3s
MJAR  Matsushiro Arr     5.53 329         Pn      07 51 16.1 +1.2
JFT   Otama              5.77 349  P      Pn      07 51 18.6 +0.4
JMM   Marumori           6.05 353         Pn      07 51 21.7 -0.3
JMK   Ichinoseki         7.09 356  eP     Pn      07 51 36.6 +0.3
JMK                                eS     Sn      07 52 50.6 -6.4
JTM   Tenmabayashi       8.93 357  Pn     Pn      07 52 02.2 +0.7
ERM   Erimo             10.20   6  Pn     Pn      07 52 18.1 -0.8
KSRS  Korea Array       12.70 300  LR     LR      07 57 53.7
      comp=Z,181nm,18.2s,baz=110,slow=38
PETK  Petropavlovsk-    24.16  24  LR     LR      08 07 57.0
      comp=Z,62nm,18.2s,baz=200,slow=45
DAV   Davao City (W)    28.93 215  LR     LR      08 08 16.2
      comp=Z,30nm,18.8s,baz=338,slow=38
SONM  Songino Array     31.18 311  P      P       07 56 12.8 +1.0
      1.0nm,0.5s,baz=114,slow=9.5,SNR=5.3
SONM                               LR     LR      08 07 30.7
      comp=Z,50nm,20.6s,baz=144,slow=34
      1.0nm,0.5s
SIJI  Sorong            34.04 199  LR     LR      08 09 40.3
      comp=Z,50nm,19.2s,baz=133,slow=35
ZALV  Zalesovo Beam     45.74 316  P      P       07 58 14.2 +0.4
      0.6nm,0.3s,baz=112,slow=11,SNR=3.9
      0.6nm,0.3s
MK31  Makanchi Array    47.28 306  P      P       07 58 25.9 -0.1
MK31                               IAmb   IAmb    07 58 39.3
      comp=Z,2.6nm,1.0s
MKAR  Makanchi Array    47.28 306  P      P       07 58 26.6 +0.6
      comp=Z,1.3nm,0.8s,baz=90,slow=10,SNR=9.1
      comp=Z,1.3nm,0.8s
MKAR  Makanchi Array    47.28 306  P      P       07 58 25.9 -0.1
LEM   Lembang           50.42 226  LR     LR      08 19 47.1
      comp=Z,75nm,18.4s,baz=214,slow=36
KDAK  Kodiak Island     50.83  39  LR     LR      08 19 02.9
      comp=Z,40nm,20.9s,baz=249,slow=34
IMAR  Indian Mountai    51.00  28         P       07 58 54.6 +0.5
WB0   Warramunga Arr    51.82 189  P      P       07 58 59.9 -0.8
WB0                                IAmb   IAmb    07 59 06.0
      comp=Z,7.5nm,1.1s
WRAB  Tennant Creek     51.99 189  P      P       07 59 01.8 -0.2
WRAB                               IAmb   IAmb    07 59 04.8
      comp=Z,7.5nm,1.1s
WR0   Warramunga Arr    51.99 189  P      P       07 59 01.8 -0.2
WR0                                IAmb   IAmb    07 59 14.3
      comp=Z,7.5nm,1.2s
WB2   Warramunga Arr    51.99 189  P      P       07 59 02.1  0.0
WRA   Warramunga Arr    52.00 189  P      P       07 59 01.8 -0.3
      comp=Z,4.1nm,0.8s,baz=7.3,slow=7.8,SNR=34
      comp=Z,4.1nm,0.8s
WRA   Warramunga Arr    52.00 189  P      P       07 59 01.7 -0.4
ILAR  Eielson Array     53.75  30  P      P       07 59 15.6 +1.0
      comp=Z,2.3nm,1.0s,baz=259,slow=5.9,SNR=12
      comp=Z,2.3nm,1.0s
ILAR  Eielson Array     53.75  30  P      P       07 59 14.7 +0.1
AS31  Alice Springs     55.72 189  P      P       07 59 30.4 +1.1
ASAR  Alice Springs     55.72 189  P      P       07 59 29.1 -0.3
      comp=Z,1.1nm,0.8s,baz=16,slow=8.5,SNR=10
      comp=Z,1.1nm,0.8s
ASAR  Alice Springs     55.72 189  P      P       07 59 31.3 +2.0
KK31  Karatay Array     56.10 303  P      P       07 59 32.0 +0.1
KK31                               IAmb   IAmb    07 59 34.8
      comp=Z,4.0nm,1.1s
KKAR  Karatay Array     56.10 303  P      P       07 59 32.0 +0.1
INK   Inuvik            58.88  26  P      P       07 59 51.5 +0.4
INK                                IAmb   IAmb    08 00 02.6
      comp=Z,5.6nm,1.4s
ABKAR Akbulak array     61.58 312  P      P       08 00 09.8 -0.1
FORT  Forrest           63.64 193  P      P       08 00 23.9 +0.1
NWAO  Narrogin (SRO)    68.48 202  P      P       08 00 54.9 +0.1
YBH   Yreka Blue Hor    73.31  51  LR     LR      08 27 01.4
      comp=Z,19nm,20.8s,baz=254,slow=30
FINES FINESS Array B    73.54 333  P      P       08 01 25.2  0.0
SUMG  Summit            75.85   0  P      P       08 01 38.2 -0.8
SUMG                               IAmb   IAmb    08 02 05.5
      comp=Z,3.9nm,1.0s
LRM   Limekiln Ridge    77.66  44  P      P       08 01 50.7 +1.2
NVAR  Mina Array Bea    77.88  52  P      P       08 01 52.4 +1.5
      comp=Z,0.5nm,0.6s,baz=298,slow=6.0,SNR=4.0
      comp=Z,0.5nm,0.6s
FCC   Fort Churchill    78.50  26  P      P       08 01 53.6 +0.1
FCC                                IAmb   IAmb    08 02 18.8
      comp=Z,3.8nm,1.3s
AKASG Malin Array Be    78.59 323  P      P       08 01 55.0 +0.7
      comp=Z,0.5nm,0.4s,baz=55,slow=3.2,SNR=4.5
      comp=Z,0.5nm,0.4s
AKASG Malin Array Be    78.59 323  P      P       08 01 54.0 -0.2
NOA   NORSAR Array B    79.08 338  P      P       08 01 57.5 +0.7
      comp=Z,1.2nm,0.9s,baz=40,slow=5.6,SNR=4.2
      comp=Z,1.2nm,0.9s
PDAR  Pinedale Array    81.09  45  P      P       08 02 09.3 +1.0
      comp=Z,0.6nm,0.8s,baz=336,slow=3.3,SNR=4.0
      comp=Z,0.6nm,0.8s
PDAR  Pinedale Array    81.09  45  P      P       08 02 08.2 -0.1
ANMO  Albuquerque       87.69  50  LR     LR      08 40 19.9
      comp=Z,32nm,19.5s,baz=299,slow=34
SCHQ  Schefferville     90.22  16  LR     LR      08 51 52.9
      comp=Z,12nm,18.0s,baz=114,slow=41
TXAR  Lajitas Array     93.02  53  P      P       08 03 08.4 +1.7
      comp=Z,1.6nm,0.9s,baz=290,slow=3.7,SNR=18
TXAR                               LR     LR      08 39 14.2
      comp=Z,19nm,19.7s,baz=284,slow=32
      comp=Z,1.6nm,0.9s
TXAR  Lajitas Array     93.02  53  P      P       08 03 07.9 +1.1
PLCA  Paso Flores      152.60 118  PKPbc  PKPbc   08 09 48.5 -0.8
      comp=Z,0.6nm,0.8s,baz=276,slow=6.2,SNR=1.0
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*IDC **17** 07:53:35.1±1.1, 31°.76N×141°.69E, h0km, mb3.6/5, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=35.6km s-min=20.0km az=80.0*

ISC 17 07:53:36.5±0.9**, 31°.77N**±0°.09×**141°.6E**±0°.2**, h10km, n7, σ0s.65**/8**, mb3.8**/5**, Southeast of Honshu**

```
Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC      h  m  s    ISC
JHJ   Hachijo jima 2     2.06 311  Pn     Pn      07 54 11.2 +0.1
      23nm,0.3s,baz=266,slow=21,SNR=5.7
      59nm,0.3s
JCJ   Chichijima         4.68 174  Pn     Pn      07 54 48.0 +0.7
      4.7nm,0.3s,baz=278,slow=21,SNR=6.9
JCJ                                Sn     Sn      07 55 40.5 -1.1
      2.8nm,0.3s,baz=288,slow=20,SNR=1.3
      10.0nm,0.3s
MKAR  Makanchi Array    47.22 306  P      P       08 02 09.9 +0.3
      0.4nm,0.5s,baz=95,slow=9.3,SNR=4.6
      0.4nm,0.5s
WRA   Warramunga Arr    51.89 189  P      P       08 02 45.0 -0.3
      1.5nm,0.9s,baz=8.4,slow=7.9,SNR=8.5
      1.5nm,0.9s
ILAR  Eielson Array     53.90  30  P      P       08 02 59.4 -0.3
      0.3nm,0.8s,baz=255,slow=6.4,SNR=2.8
      0.3nm,0.8s
ASAR  Alice Springs     55.61 189  P      P       08 03 12.8 +0.3
      0.4nm,0.8s,baz=13,slow=12,SNR=4.2
      0.4nm,0.8s
TXAR  Lajitas Array     93.19  53  P      P       08 06 51.6 +0.1
      0.4nm,0.7s,baz=297,slow=4.0,SNR=6.1
      0.4nm,0.7s
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*IDC **17** 07:56:20.4±0.8, 27°.62N×140°.92E, h0km, mb3.8/9, mbtmp3.7/9, MS3.6/5, Error ellipse: s-maj=22.9km s-min=16.5km az=56.0*

*NEIC **17** 07:56:25.0±1.1, 27°.7N±0°.1×141°.1E±0°.1, h30km±5km, mb4.5/10, Error ellipse: s-maj=22.4km s-min=14.6km az=46.0*

ISC 17 07:56:25.2±0.6**, 27°.6N**±0°.1×**140°.9E**±0°.1**, h35km, n31, σ0s.93**/29**, mb4.1**/15**, MS3.6**/5**, Bonin Islands region**

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Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC      h  m  s    ISC
JCJ   Chichijima         1.22 115  Pn     Pn      07 56 45.6 -0.1
      37nm,0.3s,baz=32,slow=9.9,SNR=52
JCJ                                Sn     Sn      07 57 01.9 +0.8
      329nm,0.3s,baz=301,slow=19,SNR=16
JCJ   Chichijima         1.22 115         Pn      07 56 44.6 -1.1
KLR   Kul'dur           22.72 344  P      P       08 01 24.2 +0.4
      2.4nm,0.7s,baz=172,slow=6.0,SNR=6.1
      2.4nm,0.7s
CMAR  Chiang Mai Arr    39.55 266  LR     LR      08 18 46.2
      comp=Z,49nm,20.1s,baz=280,slow=34
PSI   Prapat            47.09 246  LR     LR      08 24 35.9
      comp=Z,144nm,18.6s,baz=150,slow=36
WB0   Warramunga Arr    47.52 188  P      P       08 04 57.5 +0.3
WB0                                IAmb   IAmb    08 04 58.3
      comp=Z,9.0nm,1.1s
WRAB  Tennant Creek     47.69 188  P      P       08 04 59.0 +0.6
WRAB                               IAmb   IAmb    08 04 59.7
      comp=Z,9.9nm,1.1s
WR0   Warramunga Arr    47.69 188  P      P       08 04 59.2 +0.8
WR0                                IAmb   IAmb    08 05 00.3
      comp=Z,7.1nm,1.1s
WB2   Warramunga Arr    47.70 188  P      P       08 04 59.1 +0.6
WRA   Warramunga Arr    47.70 188  P      P       08 04 59.0 +0.5
      comp=Z,3.1nm,0.6s,baz=11,slow=8.2,SNR=33
      comp=Z,3.1nm,0.6s
WRA   Warramunga Arr    47.70 188  P      P       08 04 58.4 -0.1
MKAR  Makanchi Array    49.29 309  P      P       08 05 10.6  0.0
      comp=Z,0.4nm,0.7s,baz=92,slow=7.0,SNR=2.3
      comp=Z,0.4nm,0.7s
ASAR  Alice Springs     51.43 188  P      P       08 05 26.8 -0.2
      comp=Z,0.5nm,0.8s,baz=1.2,slow=5.7,SNR=6.7
      comp=Z,0.5nm,0.8s
TOLK  Toolik Lake Re    57.12  24  P      P       08 06 07.5 -0.4
TOLK                               IAmb   IAmb    08 06 09.3
      comp=Z,2.2nm,1.1s
ILAR  Eielson Array     57.79  29  P      P       08 06 13.3 +0.7
      comp=Z,0.3nm,0.6s,baz=270,slow=5.5,SNR=4.6
      comp=Z,0.3nm,0.6s
KKAR  Karatay Array     57.88 305  P      P       08 06 14.0 +0.4
SCRK  Sand Creek        59.03  30  P      P       08 06 21.8 +0.4
SCRK                               IAmb   IAmb    08 06 35.6
      comp=Z,3.3nm,1.2s
FORT  Forrest           59.35 193  P      P       08 06 24.6 +0.9
INK   Inuvik            63.02  25  P      P       08 06 48.5 +0.4
      comp=Z,1.1nm,1.0s,baz=279,slow=2.7,SNR=1.6
      comp=Z,1.1nm,1.0s
ABKAR Akbulak array     63.94 314  P      P       08 06 53.5 -1.1
AKTO  Aktyubinsk        64.89 316  P      P       08 07 01.4 +0.6
      comp=Z,1.0nm,0.5s,baz=65,slow=12,SNR=3.7
      comp=Z,1.0nm,0.5s
DLBC  Dease Lake        66.42  35  LR     LR      08 38 09.8
      comp=Z,28nm,18.3s,baz=222,slow=38
EUNU  Eureka            69.54   8  P      P       08 07 30.5 +0.6
YKA   Yellowknife Ar    72.21  28  P      P       08 07 45.9 -0.4
      comp=Z,0.2nm,0.5s,baz=293,slow=5.8,SNR=3.3
      comp=Z,0.2nm,0.5s
ARCES ARCESS Array B    72.69 341  P      P       08 07 49.5 +0.4
ARCES                              IAmb   IAmb    08 08 11.5
      comp=Z,5.9nm,1.2s
FINES FINESS Array B    76.99 333  P      P       08 08 13.2 -0.8
JMIC  Jan Mayen         79.33 350  LR     LR      08 45 36.3
      comp=Z,54nm,19.3s,baz=256,slow=37
DAVOX Davos/Dischmat    93.77 329  LR     LR      08 53 43.2
      comp=Z,18nm,18.5s,baz=88,slow=37
TXAR  Lajitas Array     96.18  53  P      P       08 09 50.8 +0.8
      comp=Z,0.3nm,0.9s,baz=294,slow=2.5,SNR=3.8
      comp=Z,0.3nm,0.9s
LPAZ  La Paz           150.85  73  PKPbc  PKiKP   08 16 16.6 +0.6
      comp=Z,1.1nm,0.6s,baz=297,slow=3.9,SNR=7.0
LPAZ  La Paz           150.85  73  PKPdf  PKPdf   08 16 06.9 -2.9
LPAZ                                      PKPbc   08 16 13.8 -1.7
LPAZ                               PKPab  pPKPdf  08 16 21.5 +1.4
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*NEIC **17** 08:15:39.9±1.5, 12°.2S±0°.1×166°.9E±0°.2, h229km±6km, mb4.2/23, Error ellipse: s-maj=24.4km s-min=15.2km az=94.0*

*IDC **17** 08:15:44.5±4.1, 12°.23S×166°.75E, h277km±40km, mb3.4/13, mbtmp4.0/14, Error ellipse: s-maj=21.0km s-min=20.4km az=150.0*

ISC 17 08:15:38.4±0.5**, 12°.13S**±0°.06×**166°.9E**±0°.1**, h220km, n53, σ0s.79**/51**, mb4.1**/25**, Santa Cruz Islands**

```
Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC      h  m  s    ISC
SANVU Saraoutou          3.31 175  Pn     Pn      08 16 34.4 +1.8
SANVU                              Sn     S       08 17 15.5 +0.4
DZM   Mont Dzumac        9.89 183  P      P       08 18 01.4 -1.8
      6.8nm,1.1s,baz=342,slow=19,SNR=7.7
DZM                                S      S       08 19 48.1 +0.9
      1.8nm,0.5s,baz=235,slow=17,SNR=1.2
EIDS  Eidsvold          19.92 226  P      P       08 19 54.9 +1.3
EIDS                               IAmb   IAmb    08 19 56.0
      comp=Z,7.8nm,0.7s
CTA   Charters Tower    21.35 246  P      P       08 20 08.9 +0.2
      comp=Z,3.6nm,0.7s,baz=76,slow=13,SNR=2.5
      comp=Z,3.6nm,0.7s
CTAO  Charters Tower    21.35 246  P      P       08 20 09.8 +1.1
LTZ   Lake Taylor       30.89 172  P      P       08 21 34.3 -0.1
RPZ   Rata Peaks        31.67 174  P      P       08 21 41.1 -0.1
WR0   Warramunga Arr    32.02 252  P      P       08 21 43.8 -0.8
WR0                                IAmb   IAmb    08 22 01.0
      comp=Z,6.2nm,1.3s
WB0   Warramunga Arr    32.13 252  P      P       08 21 44.5 -1.0
WB0                                IAmb   IAmb    08 21 54.5
      comp=Z,8.0nm,1.3s
WRAB  Tennant Creek     32.20 252  P      P       08 21 45.2 -0.9
WRAB                               IAmb   IAmb    08 22 09.2
      comp=Z,10nm,1.4s
WB2   Warramunga Arr    32.20 252  P      P       08 21 45.5 -0.6
WB2                                IAmb   IAmb    08 22 01.7
      comp=Z,6.9nm,1.2s
WRA   Warramunga Arr    32.21 252  P      P       08 21 44.9 -1.3
      comp=Z,0.4nm,0.5s,baz=83,slow=8.5,SNR=14
      comp=Z,0.4nm,0.5s
WRA   Warramunga Arr    32.21 252  P      P       08 21 45.4 -0.8
ASAR  Alice Springs     33.35 245  P      P       08 21 54.7 -1.4
      comp=Z,0.6nm,0.7s,baz=72,slow=9.5,SNR=7.0
      comp=Z,0.6nm,0.7s
BBOO  Buckleboo         34.95 229  P      P       08 22 09.7  0.0
MJAR  Matsushiro Arr    55.46 332  P      P       08 24 50.5 +0.2
      comp=Z,1.1nm,0.5s,baz=162,slow=8.8,SNR=4.1
      comp=Z,1.1nm,0.5s
KSRS  Korea Array       61.41 325  P      P       08 25 32.6 +1.2
      comp=Z,0.7nm,0.6s,baz=135,slow=4.0,SNR=1.9
      comp=Z,0.7nm,0.6s
VNDA  Vanda             65.44 181  P      P       08 25 57.0 -0.1
      comp=Z,0.4nm,0.6s,baz=348,slow=4.3,SNR=6.9
      comp=Z,0.4nm,0.6s
VNDA  Vanda             65.44 181  P      P       08 25 57.1 -0.1
SBA   Scott Base        65.72 180  P      P       08 25 59.5 +0.5
KLR   Kul'dur           68.50 336  P      P       08 26 17.0 +0.2
      comp=Z,1.3nm,0.6s,baz=137,slow=9.7,SNR=4.1
      comp=Z,1.3nm,0.6s
CMAR  Chiang Mai Arr    73.59 293  P      P       08 26 49.2 +1.2
      comp=Z,0.9nm,0.4s,baz=114,slow=3.9,SNR=4.2
      comp=Z,0.9nm,0.4s
CMAR  Chiang Mai Arr    73.59 293  P      P       08 26 48.7 +0.6
Q19K  Cape Douglas,     77.69  20  P      P       08 27 11.1 +0.7
QSPA  South Pole Qui    77.88 180  P      P       08 27 11.2 -0.4
QSPA                               IAmb   IAmb    08 27 15.9
      comp=Z,5.1nm,1.4s
TRF   Thorofare Moun    82.19  18  P      P       08 27 34.1 -0.5
TRF                                IAmb   IAmb    08 27 46.8
      comp=Z,7.3nm,1.4s
DHY   Denali Highway    82.82  19  P      P       08 27 38.0 +0.2
IMAR  Indian Mountai    83.16  15  P      P       08 27 40.2 +0.9
HUMO  Hull Mountain     84.00  44  P      P       08 27 44.7 +0.6
HUMO                               IAmb   IAmb    08 27 57.4
      comp=Z,10nm,1.4s
IL31                    84.18  18  P      P       08 27 44.1 -0.4
IL31                               IAmb   IAmb    08 27 45.2
      comp=Z,4.4nm,0.7s
ILAR  Eielson Array     84.18  18  P      P       08 27 44.6 +0.1
      comp=Z,3.3nm,0.6s,baz=244,slow=5.1,SNR=48
      comp=Z,3.3nm,0.6s
ILAR  Eielson Array     84.18  18  P      P       08 27 44.3 -0.2
J25K  Salcha River,     84.54  19  P      P       08 27 47.1 +0.7
J25K                               IAmb   IAmb    08 27 47.7
      comp=Z,4.4nm,0.6s
BCAR  Beaver Creek A    84.69  21  P      P       08 27 48.1 +0.9
K27K  Chicken           85.21  20  P      P       08 27 50.7 +1.0
K27K                               IAmb   IAmb    08 27 57.6
      comp=Z,5.3nm,1.4s
NVAR  Mina Array Bea    85.85  49  P      P       08 27 54.4 +0.7
      comp=Z,0.7nm,0.7s,baz=226,slow=8.0,SNR=5.6
      comp=Z,0.7nm,0.7s
EGAK  Eagle             86.00  20  P      P       08 27 54.0 +0.4
EGAK                               IAmb   IAmb    08 27 55.4
      comp=Z,2.3nm,0.8s
TOLK  Toolik Lake Re    86.24  15  P      P       08 27 55.2 +0.4
TOLK                               IAmb   IAmb    08 28 00.9
      comp=Z,5.3nm,1.4s
BELA  Belgrano 2        89.33 176  P      P       08 28 08.1 -1.2
MKAR  Makanchi Array    95.09 317  P      P       08 28 36.2 -0.2
      comp=Z,1.0nm,0.6s,baz=82,slow=6.2,SNR=4.9
      comp=Z,1.0nm,0.6s
MKAR  Makanchi Array    95.09 317  P      P       08 28 36.7 +0.3
TXAR  Lajitas Array     95.34  61  P      P       08 28 38.2 +0.1
      comp=Z,0.2nm,0.7s,baz=254,slow=6.5,SNR=2.5
      comp=Z,0.2nm,0.7s
YKA   Yellowknife Ar    95.41  27  P      P       08 28 36.4 -1.1
      comp=Z,0.4nm,0.6s,baz=257,slow=4.9,SNR=5.7
      comp=Z,0.4nm,0.6s
H03S2 Juan Fernandez   102.56 129  T      T       10 21 48.9
      baz=242,SNR=32
H03S1 Juan Fernandez   102.57 129  T      T       10 21 49.4
      baz=242,SNR=28
H03S3 Juan Fernandez   102.58 129  T      T       10 21 48.4
      baz=242,SNR=31
H03N2 Juan Fernandez   102.72 129  T      T       10 21 55.1
      baz=248,slow=72,SNR=5.7
H03N3 Juan Fernandez   102.72 129  T      T       10 21 56.6
      baz=248,slow=72,SNR=6.8
H03N1 Juan Fernandez   102.73 129  T      T       10 21 57.6
      baz=248,slow=72,SNR=7.4
ARCES ARCESS Array B   117.66 346  PKP    PKPdf   08 33 57.6 -0.1
      comp=Z,1.5nm,0.6s,baz=84,slow=1.9,SNR=11
ARCES ARCESS Array B   117.66 346         PKPdf   08 33 57.2 -0.5
ESDC  Sonseca Array    151.40 345  PKPbc  PKPbc   08 35 06.1 -0.3
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.6nm,0.6s,baz=11,slow=3.3,SNR=5.3						
ESDC	Sonseca Array	151.40	345		PKPdf	08 34 59.8	-0.4
ESDC				PKPbc	PKiKP	08 35 07.1	+0.2
ESDC				PKPab	PKPab	08 35 14.4	-1.0

IDC 17 08:44:30.9±5.3, 53°.68N×87°.86E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=56.9km s-min=26.6km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.82	280	*i*		08 56 30.0	
	0.1nm,0.9s,baz=97,slow=337,SNR=3.4						
ZALV	Zalesovo Beam	1.82	280	Pg	Pn	08 45 04.0	+0.6
	0.9nm,0.3s,baz=99,slow=18,SNR=5.7						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	08 46 08.1	+0.4
	0.1nm,0.3s,baz=58,slow=14,SNR=2.1						
	0.5nm,0.4s						
MKAR	Makanchi Array	7.76	210	Pn	Pn	08 46 26.3	+1.3
	0.1nm,0.3s,baz=27,slow=14,SNR=2.3						
	0.3nm,0.7s						

IDC 17 08:45:05.0±3.5, 54°.26N×87°.34E, h0^{km}, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=30.3km s-min=21.0km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.52	259	*i*		08 54 39.3	
	baz=79,slow=328,SNR=2.8						
ZALV	Zalesovo Beam	1.52	259	Pg	Pn	08 45 31.7	-1.7
	2.8nm,0.3s,baz=82,slow=14,SNR=9.8						
ZALV				Lg	Lg	08 45 53.0	
	1.5nm,0.3s,baz=75,slow=24,SNR=4.8						
KURBB	Kurchatov Arra	6.50	240	Pn	Pn	08 46 42.7	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=3.2						
KURBB				Lg	Lg	08 48 33.4	
	baz=52,slow=32						
	0.5nm,0.3s						
MKAR	Makanchi Array	8.13	205	Pn	Pn	08 47 05.5	+1.2
	0.1nm,0.3s,baz=23,slow=12,SNR=2.0						
	0.1nm,0.3s						

OTT 17 09:03:01.3±0.6, 42°.07N×55°.25W, h18^{km}, ML3.6/3, Atlantic Ocean. 561km south from Grand Bank, NI, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBN	Guysborough	5.63	308	PN	Pn	09 04 23.3	-0.8
GBN				SN	Sn	09 05 25.4	-3.0
GBN				Trac		09 05 34.2	
	comp=Z,4.6nm,0.2s						
SJNN	Saint John's	5.82	17	PN	Pn	09 04 25.9	-0.7
SJNN				SN	Sn	09 05 28.9	-4.0
SJNN				Trac		09 05 38.7	
	comp=Z,4.1nm,0.2s						
DRLN	Deer Lake	7.36	348	PN	Pn	09 04 47.4	-0.4
DRLN				SN	Sn	09 06 04.5	-6.2
DRLN				Trac		09 06 13.5	
	comp=Z,239nm,2.2s						
LMN	Caledonia Moun	7.86	302	PN	Pn	09 04 53.5	-1.3
LMN				SN	Sn	09 06 16.5	-6.8
LMN				Trac		09 06 23.1	
	comp=Z,28nm,0.8s						
ELNB	Elgin, New Bru	8.08	301	PN	Pn	09 04 56.2	-1.5
ELNB				SN	Sn	09 06 22.6	-6.0
ELNB				Trac		09 06 23.0	
	comp=Z,1.2nm,0.2s						
PCAQ	Pointe Carleto	9.35	328	PN	Pn	09 05 16.9	+1.9
NATG	Natashquan Que	9.74	330	SN	Sn	09 07 02.8	-6.6

TAP 17 09:03:11.5, 23°.81N×120°.98E, h27^{km}, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSLB	Suanglung	0.03	232	P	Pb	09 03 16.3	+0.1
	baz=231						
SSLB				S	Sb	09 03 19.6	+0.3
	baz=231						
SMLT	Sun Moon Lake	0.11	316	*e*P	Pb	09 03 17.0	+0.4
	baz=319						
SMLT				*e*S	Sb	09 03 21.4	+1.3
	baz=319						
TYC	Yuchr	0.15	310	P	Pb	09 03 17.0	+0.1
	baz=315						
TYC				*e*S	Sb	09 03 21.9	+1.4
	baz=315						
VWDT	VWDT	0.16	110	*e*P	Pb	09 03 17.2	+0.3
	baz=110						
VWDT				*e*S	Sb	09 03 21.1	+0.5
	baz=110						
WHYT	Xinyi Township	0.16	227	*e*P	Pn	09 03 17.7	-0.4
	baz=227						
WHYT				*e*S	Sb	09 03 21.6	+0.9
	baz=227						
WUSB	Renai	0.22	34	*e*P	Pb	09 03 18.0	+0.2
	baz=34						
WUSB				*e*S	Sb	09 03 22.7	+0.6
	baz=34						
OWD	Renai	0.23	51	*e*P	Pb	09 03 17.7	-0.2
	baz=45						
OWD				*e*S	Sb	09 03 22.5	+0.2
	baz=45						

ISC 17 09:09:20.4±1.0, 48°.75N±0°.05×17°.80E±0°.04, h13^{km}±8^{km}, n7, σ0^{s}.69/12, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVC	Velka Javorina	0.14	324	*e*PG	Pg	09 09 23.4	-0.7
JAVC				*e*SG	Sg	09 09 26.8	+0.2
SMOL	Smolenice	0.34	227	*e*PG	Pg	09 09 27.0	-0.3
SMOL				*e*SG	Sg	09 09 32.7	+0.8
KOLL	Kolacno	0.44	112	*e*PG	Pg	09 09 29.1	0.0
KOLL				*e*SG	Sb	09 09 35.8	-0.5
MODS	Modra-Piesok	0.51	223	*e*PG	Pg	09 09 29.9	-0.5
MODS				*e*SG	Sb	09 09 38.1	-0.3
VYHS	Vyhne	0.73	110	*e*PG	Pb	09 09 35.2	+0.2
VYHS				*e*SG	Sn	09 09 46.5	-1.0
VRAC	Vranov	0.97	306	*e*PG	Pn	09 09 40.0	+0.3
MORC	Moravsky Berou	1.05	351	*e*PG	Pn	09 09 41.7	+0.9

MOS ***17*** *09:10:31.6±0.8, 52°.39N×153°.12E, h463^{km}, mb4.1/23, Error ellipse: s-maj=8.4km s-min=5.8km az=70.0*

KRSC ***17*** *09:10:31.5±1.7, 51°.74N×154°.86E, h515^{km}±20^{km}, ML4.4*

NEIC ***17*** *09:10:32.4±1.7, 52°.4N±0°.1×153°.04E±0°.09, h452^{km}±7^{km}, mb4.0/80, Error ellipse: s-maj=16.0km s-min=7.9km az=171.0*

IDC ***17*** *09:10:32.1±0.8, 52°.46N×152°.96E, h449^{km}±9^{km}, mb3.3/21, mbtmp4.2/27, Error ellipse: s-maj=11.7km s-min=8.7km az=141.0*

ISC 17 09:10:32.5±0.5, 52°.35N±0°.06×153°.24E±0°.05, h462^{km}±6^{km}, n241, σ1^{s}.43/279, mb4.0/63, 4C-16D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.16	91	PN	P	09 11 35.0	+0.1
MIPR				S	S	09 12 25.1	-0.6
MIPR	Malaya Ipel'ka	2.16	91	*e*P	P	09 11 35.0	+0.1
MIPR				*e*S	S	09 12 25.1	-0.6
PAU	Pauzhetka	2.38	110	PN	P	09 11 36.1	-0.1
PAU				S	S	09 12 27.4	-0.7
PAU	Pauzhetka	2.38	110	*e*P	P	09 11 36.1	-0.1
PAU				*e*S	S	09 12 27.4	-0.7
SKR	Severo-Kuril's	2.45	132	⇓*i*PN	P	09 11 35.8	-0.9
SKR				*e*S	S	09 12 25.8	-3.1
SKR				pmax	pmax		
	comp=Z,153nm,0.9s						
SKR				smax	smax		
	comp=N,85nm,0.7s						
SKR				smax	smax		
	comp=E,72nm,1.0s						
SKR	Severo-Kuril's	2.45	132	*e*P	P	09 11 35.9	-0.8
APC	Apacha	2.46	75	PN	P	09 11 37.0	+0.4
APC				S	S	09 12 28.4	-0.5
APC	Apacha	2.46	75	*e*P	P	09 11 37.0	+0.4
APC				*e*S	S	09 12 28.4	-0.5
PEA0B	Petropavlovsk-	2.82	73	P	P	09 11 39.7	+0.7
PEA0B	Petropavlovsk-	2.82	73	*c i*PN	P	09 11 37.1	-1.9
PETK	Petropavlovsk-	2.82	73	P	P	09 11 38.8	-0.2
	comp=E,14nm,0.5s,baz=243,slow=3.9,SNR=78						
PETK				S	S	09 12 32.0	-1.3
	comp=E,10nm,0.8s,baz=94,slow=21,SNR=2.3						
ASAK	Asacha	2.86	87	PN	P	09 11 39.8	+0.4
ASAK				S	S	09 12 33.5	-0.5
ASAK	Asacha	2.86	87	*e*P	P	09 11 39.8	+0.4
ASAK				*e*S	S	09 12 33.5	-0.5
GRL	Gorelyy	2.96	84	PN	P	09 11 41.2	+1.0
GRL	Gorelyy	2.96	84	*e*P	P	09 11 41.2	+1.0
KRMR	Karymshinskiy	3.02	79	PN	P	09 11 40.8	+0.4
KRMR				S	S	09 12 35.4	-0.5
KRMR	Karymshinskiy	3.02	79	*e*P	P	09 11 40.8	+0.4
KRMR				*e*S	S	09 12 35.4	-0.5
MTVR	Mutnovka	3.03	86	PN	P	09 11 41.3	+0.6
MTVR				S	S	09 12 35.8	-0.5
MTVR	Mutnovka	3.03	86	*e*P	P	09 11 41.3	+0.6
MTVR				*e*S	S	09 12 35.8	-0.5
KDTR	Khodutka, Kamc	3.03	98	PN	P	09 11 39.5	-1.1
KDTR				S	S	09 12 31.0	-5.0
KDTR	Khodutka, Kamc	3.03	98	*e*P	P	09 11 39.5	-1.1
KDTR				*e*S	S	09 12 31.0	-5.0
GNL	Ganaly	3.14	63	PN	P	09 11 41.2	-0.3
GNL	Ganaly	3.14	63	*e*P	P	09 11 41.2	-0.3
RUS	Russkaya	3.23	86	PN	P	09 11 41.7	-0.3
RUS				S	S	09 12 35.0	-3.7
RUS	Russkaya	3.23	86	*e*P	P	09 11 41.7	-0.3
RUS				*e*S	S	09 12 35.0	-3.7
PET	Petropavlovsk	3.36	76	P	P	09 11 43.0	0.0
PET	Petropavlovsk	3.36	76	⇓*i*PN	P	09 11 43.2	+0.3
PET				*e*S	S	09 12 39.5	-1.0
PET				pmax	pmax		
	comp=Z,93nm,1.1s						
PET				smax	smax		
	comp=N,186nm,0.8s						
PET				smax	smax		
	comp=E,125nm,0.7s						
PET	Petropavlovsk	3.36	76	*e*P	P	09 11 43.3	+0.3
PET				*e*S	S	09 12 37.5	-3.0
KOK	Koryaka	3.41	72	PN	P	09 11 44.2	+0.7
KOK	Koryaka	3.41	72	*e*P	P	09 11 44.2	+0.7
DALK	Dalny	3.42	76	PN	P	09 11 43.4	-0.1
DALK				S	S	09 12 39.3	-2.1
DALK	Dalny	3.42	76	*e*P	P	09 11 43.4	-0.1
DALK				*e*S	S	09 12 39.3	-2.1
KRX	Arik	3.43	71	PN	P	09 11 44.5	+0.8
KRX				S	S	09 12 41.7	-0.1
KRX	Arik	3.43	71	*e*P	P	09 11 44.5	+0.8
KRX				*e*S	S	09 12 41.7	-0.1
AVH	Avacha	3.46	72	PN	P	09 11 44.5	+0.6
AVH				S	S	09 12 41.7	-0.4
AVH	Avacha	3.46	72	*e*P	P	09 11 44.5	+0.6
AVH				*e*S	S	09 12 41.7	-0.4
KRER	Koryakskii	3.48	72	PN	P	09 11 45.2	+1.1
KRER	Koryakskii	3.48	72	*e*P	P	09 11 45.2	+1.1
SMAR	Somma	3.50	73	PN	P	09 11 45.0	+0.7
SMAR				S	S	09 12 41.9	-1.0
SMAR	Somma	3.50	73	*e*P	P	09 11 45.0	+0.7
SMAR				*e*S	S	09 12 41.9	-1.0
UGLR	Uglovaya	3.50	74	PN	P	09 11 45.0	+0.8
UGLR	Uglovaya	3.50	74	*e*P	P	09 11 45.0	+0.8
SDLR	Sedlovina	3.55	73	PN	P	09 11 44.8	+0.2
SDLR	Sedlovina	3.55	73	*e*P	P	09 11 44.8	+0.2
NLC	Nalytchevo	3.80	75	PN	P	09 11 47.6	+1.1
NLC	Nalytchevo	3.80	75	*e*P	P	09 11 47.6	+1.1
KII	Karymskiy	4.10	63	PN	P	09 11 49.9	+0.7
KII	Karymskiy	4.10	63	*e*P	P	09 11 49.9	+0.7
SPN	Mys Shipunski	4.19	77	PN	P	09 11 48.5	-1.4
SPN				S	S	09 12 47.2	-5.9
SPN	Mys Shipunski	4.19	77	*e*P	P	09 11 48.5	-1.4
SPN				*e*S	S	09 12 47.2	-5.9
ESO	Esso	4.81	40	PN	P	09 11 57.7	+2.2
ESO	Esso	4.81	40	*e*P	P	09 11 57.7	+2.2
TUMR	Tumrok	5.04	52	PN	P	09 11 58.9	+1.2
TUMR	Tumrok	5.04	52	*e*P	P	09 11 58.9	+1.2
TUMD	Tumrok D	5.12	53	*e*P	P	09 12 00.0	+1.6
KMNR	Kamenistaya	5.35	48	PN	P	09 12 03.6	+2.9
KMNR	Kamenistaya	5.35	48	*e*P	P	09 12 03.6	+2.9
MKZ	Mys Kozlova	5.53	63	PN	P	09 12 02.0	-0.4
MKZ	Mys Kozlova	5.53	63	*e*P	P	09 12 02.0	-0.4
MKZ				*e*S	S	09 13 08.5	-7.4
KLY	Klyuchi	5.88	45	PN	P	09 12 08.8	+3.0
KLY	Klyuchi	5.88	45	*e*P	P	09 12 08.8	+3.0
BDR	Baidarnaya	6.28	45	PN	P	09 12 11.6	+1.7
BDR	Baidarnaya	6.28	45	*e*P	P	09 12 11.6	+1.7
SRKR	Sorokina	6.32	44	PN	P	09 12 12.0	+1.7
SRKR	Sorokina	6.32	44	*e*P	P	09 12 12.0	+1.7
SMKR	Semkarok	6.40	45	PN	P	09 12 13.3	+2.1
SMKR	Semkarok	6.40	45	*e*P	P	09 12 13.3	+2.1
TYV	Tymovskoe	6.76	261	*e*PN	P	09 12 16.4	+1.6
TYV				*e*S	S	09 13 39.1	+0.3
TYV				pmax	pmax		
	comp=Z,60nm,0.6s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				smax	smax		
	comp=N,12nm,1.0s						
TYV				smax	smax		
	comp=E,12nm,1.0s						
TYV				smax	smax		
	comp=N,700nm,4.6s						
KBG	Krutoberegovo	6.78	51	PN	P	09 12 13.6	-1.3
KBG				S	S	09 13 34.4	-4.6
KBG	Krutoberegovo	6.78	51	*e*P	P	09 12 13.6	-1.3
KBG				*e*S	S	09 13 34.4	-4.6
KBTR	Krutoberegovo	6.81	52	PN	P	09 12 14.2	-1.0
KBTR				S	S	09 13 34.9	-4.7
KBTR	Krutoberegovo	6.81	52	*e*P	P	09 12 14.2	-1.0
KBTR				*e*S	S	09 13 34.9	-4.7
MA2	Magadan	7.38	350	P	P	09 12 20.3	-0.8
MA2	Magadan	7.38	350	PN	P	09 12 20.3	-0.8
UGL	Uglegorsk	7.81	250	*e*PN	P	09 12 26.0	+0.1
UGL				pmax	pmax		
	comp=Z,150nm,0.8s						
YSS	Yuzh-Sakhalins	8.68	236	P	P	09 12 36.1	+0.9
YSS	Yuzh-Sakhalins	8.68	236	*e*PN	P	09 12 35.1	-0.2
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YUK	Yuzh-Kuril'sk	9.66	213	*d i*PN	P	09 12 46.5	+0.6
SEY	Seymchan	10.62	358	⇑*i*PN	P	09 12 57.5	+1.6
JKA	Kamikawa-asahi	10.86	225	P	P	09 12 57.0	-1.8
ASAJ	Asahikawa	10.86	225	P	P	09 12 58.4	-0.5
	comp=Z,32nm,0.8s,baz=42,slow=6.2,SNR=10						
ERM	Erimo	12.39	217	P	P	09 13 14.2	-1.2
ERM	Erimo	12.39	217	⇑*i*PN	P	09 13 14.0	-1.4
SHEM	Shemya Is, Ala	12.70	80	P	P	09 13 19.7	+1.2
	comp=Z,56nm,0.8s,baz=1.1,slow=3.1,SNR=4.1						
SMY	Shemya	12.70	80	P	P	09 13 19.8	+1.3
SMY	Shemya	12.70	80	PN	P	09 13 19.8	+1.3
KLR	Kul'dur	13.94	266	P	P	09 13 31.9	+0.1
	comp=Z,2.1nm,0.6s,baz=64,slow=8.6,SNR=6.5						
KLR	Kul'dur	13.94	266	⇓*i*P	P	09 13 32.2	+0.3
JTM	Tenmabayashi	14.25	221	P	P	09 13 34.3	-1.1
YAK	Yakutsk	15.94	317	P	P	09 13 51.2	-1.6
YAK	Yakutsk	15.94	317	⇓*e*P	P	09 13 51.8	-1.0
USRK	Ussuriysk Ar.	16.28	248	P	P	09 13 57.3	+0.5
	comp=Z,3.8nm,0.8s,baz=64,slow=9.9,SNR=2.4						
JMM	Marumori	16.90	216	P	P	09 14 03.7	+0.4
BILL	Bilibino	16.95	17	P	P	09 14 03.3	-0.2
BILL				IAmb	IAmb	09 14 04.2	
	comp=Z,2.8nm,0.7s						
BILL	Bilibino	16.95	17	*e*P	P	09 14 02.5	-1.0
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JSD	Sado	17.73	222	P	P	09 14 09.8	-2.1
MJB9	Matsu-Tunnel	19.04	220	P	P	09 14 23.7	-0.6
MAJO	Matsushiro	19.04	220	P	P	09 14 23.8	-0.6
MAJO	Matsushiro	19.04	220	⇓*e*P	P	09 14 24.6	+0.2
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s						
MJAR	Matsushiro Arr	19.04	220	P	P	09 14 24.2	-0.2
	comp=Z,7.9nm,0.7s,baz=25,slow=11,SNR=23						
MJAR	Matsushiro Arr	19.04	220	P	P	09 14 23.4	-0.9
MJAR				IAmb	IAmb	09 14 27.2	
	comp=Z,5.2nm,1.1s						
JGF	Kuroka	20.20	220	P	P	09 14 34.1	-0.8
JGF				IAmb	IAmb	09 14 37.2	
	comp=Z,7.3nm,0.8s						
TIXI	Tiksi	22.17	340	⇓*i*P	P	09 14 52.5	+0.2
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSRS	Korea Array	23.14	240	P	P	09 15 02.0	+0.5
	comp=Z,1.3nm,0.5s,baz=37,slow=9.6,SNR=7.7						
	comp=Z,1.3nm,0.5s						
TTA	Tatalina	28.38	48	P	P	09 15 49.4	+1.8
TTA	Tatalina	28.38	48	P	P	09 15 49.4	+1.8
TTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
N18K	Kilae Creek	28.60	53	P	P	09 15 51.4	+1.9
N18K				IAmb	IAmb	09 15 59.1	
	comp=Z,14nm,1.5s						
SVW2	Sparrevohn	28.70	52	P	P	09 15 51.1	+0.8
SVW2				IAmb	IAmb	09 15 51.5	
	comp=Z,8.5nm,1.4s						
L19K	White Mountain	28.95	50	P	P	09 15 54.0	+1.4
IMAR	Indian Mountai	29.35	42	P	P	09 15 56.9	+1.0
SPU	Mount Spurr	30.39	51	P	P	09 16 04.5	-0.6
HHC	Hu-ho-hao-te	30.44	265	*e*P	P	09 16 03.5	-2.4
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.7s						
COLD	Coldfoot	30.79	39	P	P	09 16 09.2	+0.8
HOM	Homer	30.85	54	P	P	09 16 08.6	-0.4
CAPN	Captain Cook N	30.89	52	P	P	09 16 09.3	0.0
TRF	Thorofare Moun	30.93	47	P	P	09 16 10.7	+0.8
TRF				IAmb	IAmb	09 16 34.3	
	comp=Z,5.3nm,1.1s						
TOLK	Toolik Lake Re	31.06	37	P	P	09 16 11.0	+0.3
H23K	Yukon River	31.08	42	P	P	09 16 12.3	+1.4
CNPM	China Poot	31.08	54	P	P	09 16 11.2	+0.2
RC01	Rabbit Creek A	31.52	51	P	P	09 16 14.0	-0.7
JOW	Kunigami	31.63	226	P	P	09 16 16.7	+0.6
SML	Sawmill	32.05	50	P	P	09 16 19.0	-0.4
SML				IAmb	IAmb	09 16 40.1	
	comp=Z,14nm,1.3s						
IL31		32.27	44	P	P	09 16 23.1	+2.0
DHY	Denali Highway	32.29	47	P	P	09 16 21.0	-0.5
DHY				IAmb	IAmb	09 16 23.8	
	comp=Z,8.4nm,1.3s						
J25K	Salcha River,	32.94	44	P	P	09 16 27.9	+0.9
BMAR	Burnt Mountain	32.96	39	P	P	09 16 28.2	+1.1
RIDG	Independent Ri	33.30	46	P	P	09 16 30.7	+0.7
EYAK	Cordova Ski Ar	33.54	51	P	P	09 16 32.6	+0.7
SCRK	Sand Creek	33.64	45	P	P	09 16 33.8	+0.8
DOT	Dot Lake	33.66	46	P	P	09 16 33.5	+0.4
NRIK	Noril'sk	34.11	325	P	P	09 16 36.2	-0.4
	comp=Z,1.3nm,0.4s,baz=106,slow=12,SNR=4.1						
	comp=Z,1.3nm,0.4s						
NRIK	Noril'sk	34.11	325	IAmb	IAmb	09 16 40.5	
	comp=Z,4.2nm,1.2s						
NRIK	Noril'sk	34.11	325	⇑*i*P	P	09 16 36.9	+0.2
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
EGAK	Eagle	34.70	43	P	P	09 16 43.1	+1.4
EGAK				IAmb	IAmb	09 16 44.3	
	comp=Z,6.4nm,1.3s						
BCAR	Beaver Creek A	34.79	46	P	P	09 16 43.0	+0.5
M27K	Edge Creek, AK	34.91	48	P	P	09 16 44.6	+0.9
M27K				IAmb	IAmb	09 16 59.5	
	comp=Z,6.0nm,1.4s						
I29M	Ogilvie Camp,	35.76	42	P	P	09 16 52.5	+1.8
I29M				IAmb	IAmb	09 16 52.6	
	comp=Z,6.8nm,1.5s						
INK	Inuvik	36.97	36	P	P	09 17 01.9	+1.4
	comp=Z,2.2nm,0.3s,baz=290,slow=7.1,SNR=33						
	comp=Z,2.2nm,0.3s						
INK	Inuvik	36.97	36	P	P	09 17 01.6	+1.1
INK				IAmb	IAmb	09 17 02.3	
	comp=Z,3.0nm,0.3s						
INK	Inuvik	36.97	36	P	P	09 17 01.6	+1.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
LZH	Lanzhou	38.14	265	*e*P	P	09 17 08.3	-2.5
LZH				pP	pP	09 18 35.4	+0.9
LZH				sP	sP	09 19 24.3	-2.7
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
ZALV	Zalesovo Beam	39.61	300	P	P	09 17 21.4	-0.9
	comp=Z,0.5nm,0.4s,baz=49,slow=6.5,SNR=1.5						
ZALV				PcP	PcP	09 19 17.4	-0.7
	comp=Z,0.6nm,0.4s,baz=57,slow=5.3,SNR=2.3						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	39.61	300	P	P	09 17 21.3	-1.0
C36M	Paulatuk	40.00	33	P	P	09 17 24.6	-0.6
C36M				IAmb	IAmb	09 17 36.2	
	comp=Z,7.5nm,1.2s						
WMQ	Urumqi	43.22	286	*e*P	P	09 17 52.4	+1.1
EUNU	Eureka	43.63	13	P	P	09 17 54.5	+0.5
EUNU				IAmb	IAmb	09 17 55.8	
	comp=Z,4.4nm,0.7s						
KURK	Kurchatov	44.52	299	P	P	09 18 00.7	-0.5
KURK				IAmb	IAmb	09 18 02.8	
	comp=Z,6.3nm,0.9s						
KURK	Kurchatov	44.52	299	*d i*P	P	09 18 01.0	-0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MK31	Makanchi Array	44.65	292	P	P	09 18 02.0	-0.4
MK31	Makanchi Array	44.65	292	⇓*i*P	P	09 18 02.2	-0.2
MKAR	Makanchi Array	44.65	292	P	P	09 18 01.6	-0.8
	comp=Z,1.5nm,0.7s,baz=52,slow=7.9,SNR=9.8						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	44.65	292	P	P	09 18 02.3	-0.1
MKAR	Makanchi Array	44.65	292	P	P	09 18 02.3	-0.1
YKA	Yellowknife Ar	46.47	40	P	P	09 18 17.1	+1.1
	comp=Z,2.5nm,0.7s,baz=303,slow=6.9,SNR=20						
YKA				PcP	PcP	09 19 41.9	+0.5
	comp=Z,0.4nm,0.5s,baz=313,slow=3.6,SNR=8.0						
	comp=Z,2.5nm,0.7s						
YKA	Yellowknife Ar	46.47	40	P	P	09 18 16.4	+0.4
BRVK	Borovoye	47.54	306	P	P	09 18 24.3	0.0
BRVK				IAmb	IAmb	09 18 25.1	
	comp=Z,6.9nm,0.8s						
BRVK	Borovoye	47.54	306	*d i*P	P	09 18 24.2	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	51.03	315	*d i*P	P	09 18 50.1	-0.1
ARU						09 20 52.5	
ARU				S	S	09 25 33.8	+2.1
ARU				SS	SS	09 29 08.2	-5.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAK	Ala-Archa	51.59	293	P	P	09 18 54.9	+0.3
AAK	Ala-Archa	51.59	293	⇓*i*P	P	09 18 55.0	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LVZ	Lovozero	51.69	335	⇓*e*P	P	09 18 54.3	-0.5
LVZ				pmax	pmax		
	comp=Z,48nm,1.7s						
ARCES	ARCESS Array B	52.61	340	P	P	09 19 00.8	-0.6
	comp=Z,1.9nm,0.4s,baz=34,slow=7.6,SNR=32						
	comp=Z,1.9nm,0.4s						
ARCES	ARCESS Array B	52.61	340	P	P	09 19 01.1	-0.3
ARCES				IAmb	IAmb	09 19 17.6	
	comp=Z,12nm,1.3s						
ARCES	ARCESS Array B	52.61	340	P	P	09 19 01.1	-0.3
ARCES				pmax	pmax		
	comp=Z,12nm,1.3s						
KK31	Karatay Array	53.52	295	P	P	09 19 08.6	+0.2
KK31	Karatay Array	53.52	295	P	P	09 19 08.6	+0.2
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKAR	Karatay Array	53.52	295	P	P	09 19 08.4	+0.1
KKAR	Karatay Array	53.52	295	P	P	09 19 08.5	+0.1
ABKAR	Akbulak array	55.01	307	P	P	09 19 18.9	+0.1
ABKAR				IAmb	IAmb	09 19 19.4	
	comp=Z,7.7nm,0.7s						
SUMG	Summit	55.10	4	P	P	09 19 19.9	+0.4
SUMG	Summit	55.10	4	P	P	09 19 19.9	+0.4
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BTK	Batken	55.37	292	P	P	09 19 22.0	+0.5
BTK				IAmb	IAmb	09 19 22.6	
	comp=Z,5.9nm,0.8s						
BTK	Batken	55.37	292	P	P	09 19 22.0	+0.5
BTK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLMR	Klimovskoe	55.40	327	*e*P	P	09 19 20.0	-1.3
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLMR	Klimovskoe	55.40	327	*e*P	P	09 19 20.0	-1.3
KLMR				AMP		09 19 21.5	
	comp=Z,6.0nm,0.7s						
GAR	Garm	56.37	292	P	P	09 19 28.6	+0.1
FCC	Fort Churchill	56.58	35	P	P	09 19 29.8	+0.3

FCC				IAmb	IAmb	09 19 30.6	
	comp=Z,3.9nm,0.8s						
FCC	Fort Churchill	56.58	35	P	P	09 19 29.8	+0.3
FCC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHGR	Chuyangaron	57.26	292	P	P	09 19 35.0	+0.3
CHGR	Chuyangaron	57.26	292	P	P	09 19 35.0	+0.3
CHGR				pmax	pmax		
	comp=Z,20nm,0.8s						
HRY	Holter Researc	57.53	54	P	P	09 19 38.7	+2.2
FIA1	FINESS Array S	59.03	333	P	P	09 19 46.0	-0.2
FIA1				IAmb	IAmb	09 20 13.2	
	comp=Z,14nm,1.4s						
FINES	FINESS Array B	59.03	333	P	P	09 19 45.8	-0.4
	comp=Z,3.9nm,0.5s,baz=35,slow=8.1,SNR=25						
	comp=Z,3.9nm,0.5s						
FINES	FINESS Array B	59.03	333	*i* P	P	09 19 45.9	-0.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GCMT	Greycliff	59.25	54	P	P	09 19 49.0	+0.8
NVAR	Mina Array Bea	59.88	65	P	P	09 19 54.3	+1.7
	comp=Z,0.3nm,0.6s,baz=313,slow=4.6,SNR=2.6						
	comp=Z,0.3nm,0.6s						
KBL	Kabul	60.20	289	P	P	09 19 53.7	-1.1
KBL				IAmb	IAmb	09 19 54.3	
	comp=Z,4.7nm,0.7s						
KBL	Kabul	60.20	289	P	P	09 19 53.7	-1.1
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN	Obninsk	60.78	324	*e*P	P	09 19 56.0	-1.9
OBN				*e**PP	pP	09 21 34.1	+1.7
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VSU	Vasula	61.31	331	⇓*e*P	P	09 20 00.4	-1.0
VSU				pmax	pmax		
	comp=Z,62nm,1.3s						
BW06	Boulder Array	61.47	56	P	P	09 20 04.5	+1.4
PD31	Pinedale Array	61.47	56	P	P	09 20 04.9	+1.8
PDAR	Pinedale Array	61.47	56	P	P	09 20 04.7	+1.6
	comp=Z,1.2nm,0.7s,baz=344,slow=1.5,SNR=11						
	comp=Z,1.2nm,0.7s						
NC405	NORSAR Array S	62.79	340	P	P	09 20 11.6	+0.5
NC204	NORSAR Array S	62.84	341	P	P	09 20 11.4	-0.1
NB2	NORSAR Subarra	62.96	340	P	P	09 20 11.9	-0.4
	comp=Z,1.9nm,0.7s,baz=25,slow=6.5						
NOA	NORSAR Array B	62.96	340	P	P	09 20 11.8	-0.4
	comp=Z,2.9nm,0.7s,baz=26,slow=6.4,SNR=13						
	comp=Z,2.9nm,0.7s						
RSSD	Black Hills	63.22	52	P	P	09 20 15.9	+1.5
RSSD				IAmb	IAmb	09 20 16.5	
	comp=Z,3.6nm,1.0s						
RSSD	Black Hills	63.22	52	P	P	09 20 15.9	+1.5
RSSD				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	Hagfors	63.25	339	P	P	09 20 13.5	-0.5
	comp=Z,0.8nm,0.4s,baz=111,slow=28,SNR=11						
	comp=Z,0.8nm,0.4s						
HRA	Herat	64.20	293	P	P	09 20 20.8	0.0
HRA				IAmb	IAmb	09 20 21.9	
	comp=Z,3.3nm,0.8s						
AKASG	Malin Array Be	66.97	325	P	P	09 20 36.1	-1.5
	comp=Z,2.1nm,0.6s,baz=33,slow=6.7,SNR=9.6						
	comp=Z,2.1nm,0.6s						
AKASG	Malin Array Be	66.97	325	IAmb	IAmb	09 20 37.7	
	comp=Z,3.6nm,1.4s						
AKBB	Malin Array Si	66.97	325	P	P	09 20 36.6	-1.1
AKBB				IAmb	IAmb	09 20 37.6	
	comp=Z,5.5nm,0.9s						
AKBB	Malin Array Si	66.97	325	⇓*i*P	P	09 20 36.5	-1.2
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ECSD	EROS Data Cent	66.99	48	P	P	09 20 38.8	+0.8
SCHQ	Schefferville	68.12	24	P	P	09 20 44.4	-0.4
	comp=Z,3.6nm,0.8s,baz=330,slow=5.8,SNR=8.1						
	comp=Z,3.6nm,0.8s						
I37A	Lemond, Waseca	68.20	46	P	P	09 20 45.9	+0.5
EKA	Eskdalemuir Ar	70.92	346	P	P	09 21 00.8	-0.7
	comp=Z,0.8nm,0.5s,baz=18,slow=5.4,SNR=6.2						
	comp=Z,0.8nm,0.5s						
BUR08	Bucovina Ar. S	70.96	326	P	P	09 21 01.5	-0.6
BUR08				IAmb	IAmb	09 21 02.5	
	comp=Z,3.1nm,0.7s						
BURAR	Bucovina Array	70.98	326	P	P	09 21 02.0	-0.1
BURAR				IAmb	IAmb	09 21 02.5	
	comp=Z,3.0nm,0.8s						
CLL	Collm	71.41	335	P	P	09 21 03.7	-0.8
CLL				IAmb	IAmb	09 21 04.8	
	comp=Z,5.3nm,0.7s						
CLL	Collm	71.41	335	P	P	09 21 03.7	-0.8
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	Collm	71.41	335	*i* P	P	09 21 04.1	-0.4
	comp=Z,8.0nm,1.1s						
MORC	Moravsky Berou	71.54	331	P	P	09 21 05.4	+0.1
MORC				IAmb	IAmb	09 21 06.4	
	comp=Z,4.7nm,0.8s						
MORC	Moravsky Berou	71.54	331	P	P	09 21 05.4	+0.1
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
P40A	Paris	72.40	47	P	P	09 21 11.7	+1.2
KHC	Kasperske Hory	73.24	334	P	P	09 21 14.6	-0.6
KHC				IAmb	IAmb	09 21 16.4	
	comp=Z,3.9nm,0.8s						
KHC	Kasperske Hory	73.24	334	P	P	09 21 14.6	-0.6
KHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
R40A	Maddies Statio	73.31	48	P	P	09 21 16.3	+0.6
R40A				IAmb	IAmb	09 21 32.7	
	comp=Z,3.6nm,1.2s						
GEC2	GERESS Array S	73.47	333	P	P	09 21 16.3	-0.3
GEC2				IAmb	IAmb	09 21 17.2	
	comp=Z,2.8nm,1.0s						
GERES	GERESS Array B	73.47	333	P	P	09 21 16.1	-0.5
	comp=Z,0.9nm,0.4s,baz=13,slow=3.0,SNR=7.8						
	comp=Z,0.9nm,0.4s						
GERES	GERESS Array B	73.47	333	P	P	09 21 16.5	-0.1
GERES	GERESS Array B	73.47	333	P	P	09 21 16.5	-0.1
WRA	Warramunga Arr	73.85	198	P	P	09 21 19.5	+0.6
	comp=Z,0.4nm,0.6s,baz=10,slow=8.7,SNR=5.9						
	comp=Z,0.4nm,0.6s						
HHAR	Hobbs	74.15	51	P	P	09 21 21.3	+0.7
HHAR				IAmb	IAmb	09 21 21.6	
	comp=Z,2.4nm,0.6s						
BR131	Keskin Array S	74.39	316	P	P	09 21 20.7	-1.4
BR131				IAmb	IAmb	09 21 22.4	
	comp=Z,3.5nm,0.8s						
BR131	Keskin Array S	74.39	316	⇓*i*P	P	09 21 21.6	-0.5
BRTR	Keskin Array B	74.39	316	P	P	09 21 21.1	-0.9
	comp=Z,1.1nm,0.6s,baz=44,slow=3.3,SNR=6.8						
	comp=Z,1.1nm,0.6s						
BRTR	Keskin Array B	74.39	316	P	P	09 21 22.2	+0.1
BRTR	Keskin Array B	74.39	316	*i* P	P	09 21 22.2	+0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
U40A	Yellville	74.61	50	P	P	09 21 23.1	-0.1
TX31	Lajitas Ar. Si	74.72	62	P	P	09 21 26.1	+2.1
TX31				IAmb	IAmb	09 21 26.2	
	comp=Z,3.6nm,0.6s						
TX32	Lajitas Array	74.72	62	P	P	09 21 26.2	+2.2
TXAR	Lajitas Array	74.72	62	P	P	09 21 25.6	+1.6
	comp=Z,1.1nm,0.5s,baz=299,slow=4.8,SNR=26						
	comp=Z,1.1nm,0.5s						
UOSS	Minazif	74.75	291	P	P	09 21 23.6	-0.6
DIVS	Divibare	75.83	327	P	P	09 21 29.4	-0.6
DIVS				IAmb	IAmb	09 21 29.8	
	comp=Z,3.5nm,0.6s						
DAVOX	Davos/Dischmat	76.38	335	P	P	09 21 33.5	+0.3
	comp=Z,2.6nm,0.5s,baz=14,slow=8.3,SNR=2.9						
	comp=Z,2.6nm,0.5s						
TUE	Stuetta	76.81	335	P	P	09 21 36.5	+1.0
TUE				IAmb	IAmb	09 21 37.1	
	comp=Z,5.5nm,0.8s						
ASAR	Alice Springs	77.56	198	P	P	09 21 40.6	+1.1
	comp=Z,0.6nm,0.5s,baz=11,slow=5.2,SNR=12						
	comp=Z,0.6nm,0.5s						
PLCA	Paso Flores	148.20	86	PKPbc	PKPbc	09 29 25.9	+0.9
	comp=Z,1.0nm,0.7s,baz=264,slow=4.2,SNR=7.8						

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*SOME **17** 09:12:37.9, 44°.65N×82°.10E, h10^{km}*

*NNC **17** 09:12:40.0±0.7, 44°.70N×82°.05E, h0^{km}, mb3.4, mpv2.9, Error ellipse: s-maj=11.3km s-min=1.6km az=117.0*

ISC 17 09:12:37.7±3.2**, 44°.65N**±0°.07×**82°.2E**±0°.1**, h5**^{km}±21^{km}**, n7, σ0^{s}.76**/14**, 5C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.73	260	*e*P	Pb	09 13 10.2	+0.2
	3.0nm,0.2s						
DJR				*e*S	Sg	09 13 33.8	+0.5
	24nm,0.4s						
KAPS	Kapalarasan	2.09	289	*e*P	Pb	09 13 15.4	-0.8
	1.7nm,0.3s						
KAPS				*e*S	Sb	09 13 42.0	-0.5
	11nm,0.5s						
MK31	Makanchi Array	2.14	2	Pn	Pb	09 13 16.7	-0.3
	5.7nm,0.4s,baz=185,slow=14,SNR=131						
MK31				⇑Sn	Sb	09 13 44.5	+0.5
	2.5nm,0.3s,baz=182,slow=25,SNR=13						
MAKZ	Makanchi	2.16	357	⇑Pn	Pb	09 13 16.8	-0.6
	3.8nm,0.3s						
MAKZ				⇑Sn	Sb	09 13 44.5	+0.1
	3.2nm,0.3s						
PDGK	Podgornoye	2.34	237	⇑Pn	Pb	09 13 19.0	-1.5
	1.8nm,0.3s						
PDGK				⇑Sn	Sb	09 13 49.6	-0.1
	4.8nm,0.5s						
SHLS	Shalkode	2.46	234	*e*P	Pn	09 13 19.1	+0.5
	5.3nm,0.2s						
SHLS				*e*S	Sn	09 13 48.8	-0.3
	17nm,0.3s						
SATY	Saty	3.15	241	*e*P	Pb	09 13 33.9	-0.3
	0.7nm,0.1s						
SATY				*e*S	Sb	09 14 14.1	+1.1
	11nm,0.2s						

IDC 17 09:13:14.2±5.9**, 6°.92S**×**147°.84E, h124**^{km}±53^{km}**, mb2.7**/1**, mbtmp3.2**/3**, Error ellipse: s-maj=122.0km s-min=54.2km az=119.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.56	195	P	Pn	09 13 55.8	+1.0
	25nm,0.5s,baz=29,slow=5.5,SNR=10						
PMG				S	Sn	09 14 26.4	+0.2
	11nm,0.3s,baz=49,slow=24,SNR=1.9						
WRA	Warramunga Arr	18.41	224	P	P	09 17 19.4	-0.5
	0.4nm,0.6s,baz=48,slow=11,SNR=9.8						
ASAR	Alice Springs	21.36	217	P	P	09 17 52.3	+0.5
	0.3nm,0.4s,baz=53,slow=8.9,SNR=14						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	146.12	283	PKPbc	PKPdf	09 32 39.7	0.0
	0.4nm,0.7s,baz=69,slow=4.8,SNR=2.7						

DJA 17 09:37:10.6±1.7**, 2°N**±6°×**12°3E**±°**, h18**^{km}±15^{km}**, M3.6**/7**, mb3.7**/1**, MLv3.6**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	1.04	190	P	Pb	09 37 28.9	-1.3
GTOI				S	Sb	09 37 41.8	-1.7
KMSI	Cibinong	1.34	144	P	Pn	09 37 33.5	-0.9
MRSI	Marisa	1.73	227	P	Pn	09 37 40.2	+0.4
MRSI				S	Sn	09 38 01.3	-0.1
LUWI	Luwuk	2.73	189	P	Pn	09 37 55.2	+1.7
APSI	Ampana	3.00	211	P	Pn	09 37 58.1	+0.9
MPSI	Mapaga	3.56	248	P	Pn	09 38 05.2	+0.3

IDC 17 09:52:14.9±3.4**, 53°.56N**×**87°.70E, h0**^{km}**, mbtmp2.4**/2**, ML2.1**/2**, Error ellipse: s-maj=29.0km s-min=17.3km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	284	*i*		10 03 35.5	
	0.1nm,0.7s,baz=102,slow=326,SNR=2.4						
ZALV	Zalesovo Beam	1.75	284	Pg	Pn	09 52 46.4	-0.1
	0.4nm,0.3s,baz=104,slow=17,SNR=4.7						
ZALV				Lg	Lg	09 53 10.6	
	0.7nm,0.3s,baz=104,slow=27,SNR=5.3						
KURBB	Kurchatov Arra	6.37	246	Pn	Pn	09 53 49.6	-0.3
	baz=63,slow=15,SNR=2.0						
KURBB				Lg	Lg	09 55 38.7	
	baz=62,slow=32,SNR=4.2						
	0.2nm,0.6s						
MKAR	Makanchi Array	7.61	209	Pn	Pn	09 54 09.0	+2.0
	0.1nm,0.3s,baz=32,slow=15,SNR=1.7						
MKAR				Lg	Lg	09 56 16.0	
	0.1nm,0.3s,baz=30,slow=26,SNR=2.9						
	0.1nm,0.5s						

IDC 17 09:57:20.2±3.1**, 54°.23N**×**87°.27E, h0**^{km}**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=24.4km s-min=18.6km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	260	*i*		10 06 50.7	
	baz=79,slow=324,SNR=3.1						
ZALV	Zalesovo Beam	1.47	260	Pg	Pn	09 57 46.7	-1.3
	1.5nm,0.3s,baz=76,slow=16,SNR=15						
ZALV				Lg	Lg	09 58 06.7	
	2.2nm,0.3s,baz=81,slow=25,SNR=11						
KURBB	Kurchatov Arra	6.45	240	Pn	Pn	09 58 56.7	+0.4
	0.1nm,0.3s,baz=53,slow=14,SNR=2.4						
KURBB				Sn	Sn	10 00 10.1	-0.5
	baz=153,slow=21,SNR=1.7						
KURBB				Lg	Lg	10 00 45.9	
	baz=57,slow=31,SNR=2.9						
	0.4nm,0.3s						
MKAR	Makanchi Array	8.09	205	Pn	Pn	09 59 20.3	+1.4
	0.1nm,0.3s,baz=26,slow=14,SNR=1.7						
MKAR				Lg	Lg	10 01 39.3	
	baz=22,slow=36,SNR=2.4						
	0.1nm,0.3s						

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*IDC **17** 10:18:35.2±0.6, 52°.39N×168°.64W, h0^{km}, mb4.4/27, mbtmp4.4/28, ML3.4/1, MS3.9/36, Error ellipse: s-maj=19.8km s-min=11.1km az=167.0*

*MOS **17** 10:18:38.8±1.4, 52°.44N×168°.57W, h30^{km}, mb5.1/34, Error ellipse: s-maj=8.7km s-min=5.4km az=86.8*

*NEIC **17** 10:18:38.3±1.9, 52°.31N±0°.06×168°.53W±0°.06, h17^{km}±4^{km}, mb4.7/256, ML4.1/6, ML3.8/32(AEIC), Error ellipse: s-maj=8.9km s-min=4.7km az=167.0*

*AEIC **17** 10:18:39.9±1.9, 52°.36N±0°.05×168°.55W±0°.05, h21^{km}±4^{km}, Error ellipse: s-maj=8.1km s-min=4.3km az=166.0*

*BJI **17** 10:18:39.8±0.0, 52°.72N×169°.24W, h17^{km}, mb4.8/45, mB4.9/22, Ms4.5/16, Ms7 4.3/16*

ISC 17 10:18:39.4±0.8**, 52°.36N**±0°.06×**168°.55W**±0°.04**, h27**^{km}±4^{km}**, n709, σ1^{s}.32**/698**, mb4.7**/184**, MS3.9**/46**, 35C-20D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.64	343	Pg	Pn	10 18 53.1	+0.5
NIKH	Nikolski High	0.64	343		Sn	10 19 01.9	0.0
NIKH	Nikolski High	0.64	343	P	Pn	10 18 52.7	0.0
	baz=163						
OKSO	Okmok South	1.02	13		Pb	10 18 59.0	+0.5
OKSO					Sn	10 19 14.3	+2.9
OKFG	Magazine Ridge	1.12	20		Pb	10 19 00.5	+0.4
OKFG					Sb	10 19 15.6	+1.3
MGOD	Makushin Gods	1.75	35		Pn	10 19 08.8	+0.7
MSW	Makushin Switc	1.88	34		Pn	10 19 10.8	+1.0
MNAT	Makushin Natee	1.89	36		Pn	10 19 11.0	+1.1
UNV	Unalaska Valle	1.93	39	Pn	Pn	10 19 10.9	+0.6
UNV	Unalaska Valle	1.93	39		Sn	10 19 34.6	+0.9
UNV	Unalaska Valle	1.93	39	P	Pn	10 19 09.5	-0.9
	baz=220,SNR=53						
MTBL	Makushin Table	1.96	34		Pb	10 19 12.2	-2.3
AKBBA	Akutan Broad B	2.34	41		Pn	10 19 17.3	+1.2
AKUT	Akutan	2.44	42	Pn	Pn	10 19 18.3	+1.0
AKUT				IAML		10 20 03.2	
	comp=N,514nm,1.1s						
AKSA	Akutan Strait	2.47	43		Pn	10 19 19.1	+1.3
KOKL	Mount Kliuchef	3.47	272		Pn	10 19 33.3	+1.7
ATKA	Atka Island	3.47	270		Pn	10 19 32.4	+0.8
FALS	False Pass	3.95	49	Pn	Pn	10 19 39.4	+1.3
FALS	False Pass	3.95	49	P	Pn	10 19 41.8	+3.7
	baz=233						
GSCK	Great Sitkin C	4.70	269		Pn	10 19 49.7	+1.3
SPIA	Saint Paul Isl	4.92	349	Pn	Pn	10 19 53.2	+1.7
SPIA	Saint Paul Isl	4.92	349	P	Pn	10 19 54.2	+2.7
	baz=168						
ADK	Adak	5.04	268	Pn	Pn	10 19 53.8	+0.7
ADK				IAML		10 21 12.5	
	comp=N,162nm,1.4s						
ADK	Adak	5.04	268	P	Pn	10 19 53.8	+0.7
KIMD	Kanaga Island	5.39	267		Pn	10 19 58.9	+0.9
SDPT	Sand Point	5.63	55	Pn	Pn	10 20 00.7	-0.5
SDPT	Sand Point	5.63	55	P	Pn	10 20 01.0	-0.2
	baz=241						
TASE	Tanaga Southea	5.87	269		Pn	10 20 05.8	+1.2
CNBA	Chernabura Isl	5.88	62	Pn	Pn	10 20 04.9	+0.4
CHNA	Chernabura Isl	5.88	62	P	Pn	10 20 04.3	-0.3
	baz=249						
GANO	Gareloi North	6.34	269		Pn	10 20 12.6	+1.5
CHIR	Chirikof Islan	8.35	60	Pn	Pn	10 20 38.0	-0.5
SII	Sitkinak Islan	9.36	58	Pn	Pn	10 20 53.0	+0.6
SII	Sitkinak Islan	9.36	58	P	Pn	10 20 52.5	+0.2
	baz=249						
KABU	Katmai Buttres	9.59	47		Pn	10 20 57.2	+1.6
OHAK	Old Harbor	10.06	55	Pn	Pn	10 21 02.2	+0.3
OHAK	Old Harbor	10.06	55	P	Pn	10 21 01.5	-0.4
	baz=248						
P18K	Big Mountain,	10.26	41	Pn	Pn	10 21 07.2	+2.5
P18K	Big Mountain,	10.26	41	P	Pn	10 21 04.5	-0.2
	baz=232						
SHEM	Shemya Is, Ala	10.58	279	Pn	Pn	10 21 12.7	+3.7
	comp=N,1.9nm,0.3s,baz=141,slow=22,SNR=2.2						
SHEM				LR	LR	10 25 08.5	
	comp=N,761nm,20.9s,baz=106,slow=37						
SMY	Shemya	10.58	279	Pn	Pn	10 21 06.0	-3.0
SMY	Shemya	10.58	279	P	Pn	10 21 06.0	-3.0
KDAK	Kodiak Island	10.63	53	Pn	Pn	10 21 08.8	-0.9
	comp=N,2.8nm,0.3s,baz=202,slow=3.6,SNR=42						
KDAK				Sn	Sn	10 23 04.8	-2.8
	comp=N,0.2nm,0.3s,baz=211,slow=18,SNR=1.0						
KDAK	Kodiak Island	10.63	53	Pn	Pn	10 21 09.0	-0.7
KDAK	Kodiak Island	10.63	53	P	Pn	10 21 09.0	-0.7
KDAK	Kodiak Island	10.63	53	P	Pn	10 21 09.6	-0.1
	baz=246						
Q19K	Cape Douglas,	10.67	46	Pn	Pn	10 21 10.2	-0.1
Q19K	Cape Douglas,	10.67	46	P	Pn	10 21 11.4	+1.1
	baz=238						
N18K	Kilae Creek	10.86	35		Pn	10 21 11.3	-1.6
N18K	Kilae Creek	10.86	35	P	Pn	10 21 14.3	+1.5
	baz=225						
O19K	Port Alsworth	11.12	40		Pn	10 21 17.4	+1.0
O19K	Port Alsworth	11.12	40	P	Pn	10 21 18.7	+2.3
	baz=231						
SVW2	Sparrevohn	11.26	34		Pn	10 21 18.8	+0.4
N19K	Bonanza Creek	11.46	37	Pn	Pn	10 21 21.4	+0.4
N19K	Bonanza Creek	11.46	37	P	Pn	10 21 20.2	-0.9
	baz=229,SNR=10						
RSO	Redoubt South	11.90	41		Pn	10 21 28.9	+1.6
HOM	Homer	11.93	46	Pn	Pn	10 21 27.3	-0.1
CNPM	China Poot	12.04	47	Pn	Pn	10 21 29.5	+0.4
M19K	Big River Lodg	12.24	33	Pn	Pn	10 21 32.2	+0.5
M19K	Big River Lodg	12.24	33	P	Pn	10 21 33.8	+2.1
	baz=225						
L19K	White Mountain	12.29	31		Pn	10 21 34.0	+1.6
L19K	White Mountain	12.29	31	P	Pn	10 21 32.6	+0.2
	baz=223						
BRLK	Bradley Lake	12.31	46	Pn	Pn	10 21 32.1	-0.6
ANM	Nome	12.35	6	Pn	Pn	10 21 33.6	+0.4
ANM	Nome	12.35	6	P	Pn	10 21 33.6	+0.4
BRSE	Bradley Lake S	12.37	46	P	Pn	10 21 33.1	-0.4
	baz=241						
TTA	Tatalina	12.51	27		Pn	10 21 35.0	-0.5
TTA	Tatalina	12.51	27	P	Pn	10 21 35.0	-0.5
TTA	Tatalina	12.51	27	P	Pn	10 21 36.0	+0.5
	baz=218						
SPCR	Spurr Chakacha	12.56	39	P	Pn	10 21 35.7	-0.4
	baz=232						
SPU	Mount Spurr	12.61	39		Pn	10 21 36.7	0.0
L20K	Farewell, AK	12.82	32	P	Pn	10 21 39.8	+0.2
	baz=224						
SEW	Seward	13.11	46	Pn	Pn	10 21 42.8	-0.7
SEW	Seward	13.11	46	P	Pn	10 21 43.3	-0.2
	baz=242						
O22K	Cooper Landing	13.17	45		Pn	10 21 44.7	+0.3
O22K	Cooper Landing	13.17	45	P	Pn	10 21 44.5	+0.1
	baz=240						
K20K	Telida	13.40	29	Pn	Pn	10 21 48.6	+1.1
K20K	Telida	13.40	29	P	Pn	10 21 48.3	+0.7
	baz=221						
RC01	Rabbit Creek A	13.48	42	P	Pn	10 21 48.4	-0.3
	baz=238						
PPLA	Purkeypile	13.67	33	P	Pn	10 21 50.6	-0.7
	baz=227,SNR=5.4						
M22K	Willow	13.70	39	P	Pn	10 21 52.6	+1.1
	baz=235						
GCSA	Galena City Sc	13.79	21	P	P	10 21 56.6	-4.4
	baz=211						
PMR	Palmer	14.00	41	Pn	Pn	10 21 56.1	+0.4
PMR	Palmer	14.00	41	P	Pn	10 21 56.1	+0.4
PMR	Palmer	14.00	41	P	Pn	10 21 55.4	-0.3
	baz=237						
J20K	Nowinta River	14.01	27	Pn	Pn	10 21 55.8	0.0
J20K	Nowinta River	14.01	27	P	Pn	10 21 54.7	-1.1
	baz=219,SNR=6.1						
CUT	Chulitna	14.03	37	Pn	Pn	10 21 54.7	-1.4
CAST	Castle Rocks	14.06	32	Pn	Pn	10 21 54.8	-1.8
CAST	Castle Rocks	14.06	32	P	Pn	10 21 55.6	-1.0
	baz=226,SNR=5.2						
KNK	Knik Glacier	14.18	42		Pn	10 21 55.9	-2.3
KNK	Knik Glacier	14.18	42	P	Pn	10 21 57.4	-0.8
	baz=239						
GHO	Glory Hole Cre	14.18	41	Pn	Pn	10 21 56.3	-1.9
Q23K	Middleton Isla	14.27	52	Pn	Pn	10 21 58.8	-0.6
SML	Sawmill	14.43	41		Pn	10 22 00.1	-1.6
SML	Sawmill	14.43	41	P	Pn	10 22 01.5	-0.2
	baz=238						
GLI	Glacier Island	14.50	46	P	Pn	10 22 01.4	-1.2
	baz=244						
KTH	Kantishna Hill	14.54	33	Pn	Pn	10 22 01.4	-1.7
M23K	Glacier View	14.67	42	P	Pn	10 22 02.6	-2.3
	baz=239,SNR=9.4						
TRF	Thorofare Moun	14.68	34	Pn	Pn	10 22 05.4	+0.2
TRF	Thorofare Moun	14.68	34	P	Pn	10 22 03.0	-2.2
	baz=229						
FID	Port Fidalgo	14.72	47	Pn	Pn	10 22 02.4	-3.1
SCM	Sheep Creek Mo	14.86	42		Pn	10 22 06.1	-1.3
SCM	Sheep Creek Mo	14.86	42	P	Pn	10 22 06.1	-1.3
SCM	Sheep Creek Mo	14.86	42	P	Pn	10 22 05.9	-1.5
	baz=240,SNR=13						
BPAW	Bear Paw Mtn.	14.89	31	Pn	Pn	10 22 07.5	-0.4
BPAW	Bear Paw Mtn.	14.89	31	P	Pn	10 22 06.1	-1.7
	baz=226,SNR=9.7						
EYAK	Cordova Ski Ar	14.96	48	P	Pn	10 22 07.2	-1.5
	baz=247						
WAT6	Susitna Watana	15.09	39	P	Pn	10 22 08.6	-2.0
	baz=237						
RND	Reindeer	15.15	35	Pn	Pn	10 22 09.9	-1.5
RND	Reindeer	15.15	35	P	Pn	10 22 09.9	-1.5
DIV	Divide	15.19	46	Pn	Pn	10 22 10.6	-1.3
DIV				IAmb	IAmb	10 22 11.7	
	comp=Z,25nm,1.1s						
KLU	Klutina	15.29	44	Pn	Pn	10 22 11.7	-1.5
KLU				IAmb	IAmb	10 22 30.1	
	comp=Z,40nm,0.9s						
KLU	Klutina	15.29	44	P	Pn	10 22 10.7	-2.4
	baz=243,SNR=17						
MCK	McKinley	15.33	34	Pn	Pn	10 22 12.8	-0.8
MCK	McKinley	15.33	34	P	Pn	10 22 12.8	-0.8
MCK	McKinley	15.33	34	P	Pn	10 22 11.7	-1.9
	baz=231						
I21K	Tanana	15.38	27	Pn	Pn	10 22 13.1	-1.2
I21K				IAmb	IAmb	10 22 21.8	
	comp=Z,47nm,1.1s						
I21K	Tanana	15.38	27	P	Pn	10 22 12.1	-2.1
	baz=221,SNR=8.8						
M24K	Tolsona, Glenn	15.47	42	Pn	Pn	10 22 14.6	-0.9
M24K				IAmb	IAmb	10 22 26.8	
	comp=Z,58nm,0.8s						
M24K	Tolsona, Glenn	15.47	42	P	Pn	10 22 12.8	-2.7
	baz=241,SNR=12						
DHY	Denali Highway	15.50	38		Pn	10 22 16.3	+0.3
DHY	Denali Highway	15.50	38	P	Pn	10 22 13.2	-2.8
	baz=236,SNR=6.9						
H21K	Melozitna Rive	15.53	25	Pn	Pn	10 22 16.2	0.0
H21K				IAmb	IAmb	10 22 24.0	
	comp=Z,43nm,1.1s						
H21K	Melozitna Rive	15.53	25	P	Pn	10 22 13.8	-2.4
	baz=218,SNR=26						
IMAR	Indian Mountai	15.55	23	Pn	Pn	10 22 17.6	+1.1
HMT	Hamilton	15.57	50	Pn	Pn	10 22 16.2	-0.6
HMT				IAmb	IAmb	10 22 38.2	
	comp=Z,30nm,1.0s						

BMRM	Bremner River	15.65	47		Pn	10 22 17.2	-0.6
BMRM				IAmb	IAmb	10 22 42.1	
	comp=Z,66nm,1.3s						
BMRM	Bremner River	15.65	47	P	Pn	10 22 16.6	-1.2
	baz=247						
NEA2	Nenana	15.84	32	Pn	Pn	10 22 20.9	+0.6
NEA2	Nenana	15.84	32	P	Pn	10 22 19.3	-0.9
	baz=228						
N25K	Chitina, Valde	15.91	45	Pn	Pn	10 22 20.4	-0.8
N25K	Chitina, Valde	15.91	45	P	Pn	10 22 20.1	-1.1
	baz=245						
HARP	HAARP	16.02	42	P	Pn	10 22 21.8	-0.8
	baz=242						
WRH	Wood River Hil	16.08	33		Pn	10 22 22.7	-0.6
I23K	Minto, Yukon-K	16.12	30	Pn	Pn	10 22 23.2	-0.6
I23K	Minto, Yukon-K	16.12	30	P	Pn	10 22 22.4	-1.4
	baz=226,SNR=8.2						
PAX	Paxson	16.18	40		Pn	10 22 24.0	-0.7
PAX	Paxson	16.18	40	P	Pn	10 22 24.0	-0.7
PAX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PAX	Paxson	16.18	40	P	Pn	10 22 22.5	-2.1
	baz=240,SNR=6.7						
GLB	Gilahina Butte	16.18	46		Pn	10 22 23.8	-0.9
SNH	Sunshine Point	16.19	51	Pn	Pn	10 22 21.8	-3.0
SNH				IAmb	IAmb	10 22 33.5	
	comp=Z,80nm,0.9s						
VRDI	Verde Repeater	16.26	47		Pn	10 22 25.0	-0.9
CCB	Clear Creek Bu	16.29	33		Pn	10 22 25.6	-0.4
MDM	Murphy Dome	16.35	32		Pn	10 22 26.9	+0.1
TGL	Tana Glacier	16.38	49	Pn	Pn	10 22 26.8	-0.4
TGL				IAmb	IAmb	10 22 34.1	
	comp=Z,52nm,0.9s						
TCOL	CIGO, UAF Yank	16.42	32		Pn	10 22 26.3	-1.2
TCOL	CIGO, UAF Yank	16.42	32	P	Pn	10 22 25.8	-1.7
	baz=230,SNR=5.0						
COLA	College	16.42	32		Pn	10 22 26.6	-1.0
COLA	College	16.42	32	d *i*P	Pn	10 22 28.3	+0.7
COLA	College	16.42	32	P	Pn	10 22 26.7	-0.8
	baz=230						
HDA	Harding Lake	16.43	34		Pn	10 22 26.7	-1.1
HDA	Harding Lake	16.43	34	P	Pn	10 22 26.4	-1.4
	baz=233						
K24K	Donnelly Dome	16.50	37	P	Pn	10 22 27.5	-1.2
	baz=237						
MCARA	McCarthy VSAT	16.51	47	Pn	Pn	10 22 28.5	-0.3
MCARA				IAmb	IAmb	10 22 50.2	
	comp=Z,34nm,0.8s						
MCARA	McCarthy VSAT	16.51	47	P	Pn	10 22 28.3	-0.5
	baz=248						
H23K	Yukon River	16.55	28	Pn	Pn	10 22 29.1	-0.2
H23K	Yukon River	16.55	28	P	Pn	10 22 27.8	-1.4
	baz=224,SNR=21						
ISLE	Juniper Island	16.56	50	Pn	Pn	10 22 29.5	-0.1
ISLE				IAmb	IAmb	10 22 43.9	
	comp=Z,126nm,1.4s						
MESA	MESA	16.62	51	Pn	Pn	10 22 30.3	0.0
MESA				IAmb	IAmb	10 22 37.7	
	comp=Z,86nm,1.0s						
MESA	MESA	16.62	51	P	Pn	10 22 29.6	-0.7
	baz=254						
IL31		16.68	33	Pn	Pn	10 22 29.7	-1.1
ILAR	Eielson Array	16.68	33	Pn	Pn	10 22 29.1	-1.8
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=30						
	comp=Z,3.8nm,0.9s						
ILAR	Eielson Array	16.68	33		Pn	10 22 28.7	-2.2
POKR	Poker Plat Res	16.71	32	P	Pn	10 22 30.6	-0.7
POKR	Poker Plat Res	16.71	32	Pn	Pn	10 22 30.0	-1.3
POKR				IAmb	IAmb	10 22 32.9	
	comp=Z,11nm,1.0s						
POKR	Poker Plat Res	16.71	32	P	Pn	10 22 30.1	-1.2
	baz=230						
YAH	Yahtse	16.77	51	Pn	Pn	10 22 31.8	-0.5
YAH				IAmb	IAmb	10 22 39.2	
	comp=Z,75nm,0.9s						
RIDG	Independent Ri	16.82	38		P	10 22 33.6	-1.0
RIDG	Independent Ri	16.82	38	P	Pn	10 22 31.3	-1.4
	baz=238						
MENT	Mentasta	16.86	41	Pn	Pn	10 22 31.7	-1.6
GRNC	Granite Creek	16.87	50	Pn	Pn	10 22 32.4	-1.2
GRNC				IAmb	IAmb	10 22 39.6	
	comp=Z,56nm,0.9s						
M26K	Nabesna, AK	16.93	44	Pn	Pn	10 22 32.6	-1.5
M26K				IAmb	IAmb	10 22 37.5	
	comp=Z,39nm,1.1s						
M26K	Nabesna, AK	16.93	44	P	Pn	10 22 32.6	-1.5
	baz=245,SNR=19						
BARN	Barnard Glacie	17.02	49	Pn	Pn	10 22 33.2	-2.2
H24K	Noodor Dome	17.05	30		P	10 22 36.7	-0.5
H24K	Noodor Dome	17.05	30	P	Pn	10 22 33.8	-1.8
	baz=228,SNR=29						
L26K	Log Cabin Wild	17.05	41		Pn	10 22 35.2	-0.5
L26K	Log Cabin Wild	17.05	41	P	Pn	10 22 34.6	-1.0
	baz=243,SNR=11						
DOT	Dot Lake	17.07	39		Pn	10 22 35.8	-0.1
TABL	Table Mountain	17.08	51	Pn	Pn	10 22 34.8	-1.4
TABL				IAmb	IAmb	10 22 56.0	
	comp=Z,62nm,1.1s						
J25K	Salcha River,	17.11	35	Pn	Pn	10 22 35.0	-1.3
J25K	Salcha River,	17.11	35	P	Pn	10 22 33.9	-2.5
	baz=235,SNR=15						
CTG	Chitna Glacier	17.14	49	P	Pn	10 22 34.2	-2.6
	baz=252						
CTGM	Chitina Glacie	17.14	49	Pn	Pn	10 22 36.2	-0.7
LOGN	Logan Glacier	17.25	50	Pn	Pn	10 22 37.4	-0.9
LOGN				IAmb	IAmb	10 22 43.8	
	comp=Z,45nm,1.0s						
SCRK	Sand Creek	17.27	38	Pn	Pn	10 22 37.8	-0.6
SCRK	Sand Creek	17.27	38	P	Pn	10 22 35.7	-2.7
	baz=239,SNR=6.4						
M27K	Edge Creek, AK	17.39	44	Pn	Pn	10 22 39.1	-0.8
M27K	Edge Creek, AK	17.39	44	P	Pn	10 22 37.1	-2.8
	baz=247,SNR=18						
COLD	Coldfoot	17.41	24	Pn	Pn	10 22 39.4	-0.6
COLD	Coldfoot	17.41	24	P	Pn	10 22 37.4	-2.6
	baz=220,SNR=12						
BCPM	Bancas Point	17.69	53		Pn	10 22 43.3	-0.2
BCPM				IAmb	IAmb	10 23 11.9	
	comp=Z,42nm,1.2s						
L27K	Beaver Creek,	17.69	42		Pn	10 22 43.3	-0.3
L27K	Beaver Creek,	17.69	42	P	Pn	10 22 41.0	-2.6
	baz=245						
J26L	Joseph Creek	17.70	37	P	Pn	10 22 40.8	-2.9
	baz=238,SNR=36						
BCAR	Beaver Creek A	17.71	42		Pn	10 22 43.7	-0.2
PNL	Peninsula	17.75	54	P	Pn	10 22 41.8	-2.4
	baz=258						
YUK3	Moose Creek	17.80	47	P	Pn	10 22 42.8	-2.3
	baz=251,SNR=6.1						
BVCY	Beaver Creek	17.85	45	P	Pn	10 22 43.5	-2.0
	baz=248						
K27K	Chicken	18.03	39		P	10 22 47.9	-0.1
K27K	Chicken	18.03	39	P	Pn	10 22 46.6	-1.1
	baz=242						
YUK4	Talbot Arm	18.50	49	P	P	10 22 52.5	-0.9
	baz=254						
YUK6	Outpost Mounta	18.53	51	P	P	10 22 52.3	-1.4
	baz=256						
TOLK	Toolik Lake Re	18.66	22	P	Pn	10 22 56.2	+0.9
TOLK	Toolik Lake Re	18.66	22	P	P	10 22 52.7	-2.2
	baz=218						
EGAK	Eagle	18.73	38	P	P	10 22 55.2	-0.5
EGAK	Eagle	18.73	38	P	P	10 22 53.7	-2.0
	baz=241						
HYT	Haines Junctio	18.91	51		P	10 22 57.9	0.0
HYT				IAmb	IAmb	10 23 10.7	
	comp=Z,60nm,1.3s						
HYT	Haines Junctio	18.91	51	P	P	10 22 55.7	-2.1
	baz=257,SNR=8.4						
BMAR	Burnt Mountain	19.09	29	P	P	10 22 59.5	-0.2
DAWY	Dawson	19.10	41	P	P	10 22 59.9	+0.1
DAWY	Dawson	19.10	41	P	P	10 22 57.6	-2.2
	baz=246,SNR=12						
N30M	Aishikik Lake	19.25	49	P	P	10 22 60.0	-1.5
	baz=256,SNR=24						
M30M	Minto, Yukon	19.68	46	P	P	10 23 06.3	+0.1
M30M	Minto, Yukon	19.68	46	P	P	10 23 04.9	-1.2
	baz=253						
SKAG	Skagway	19.76	56	P	Pn	10 23 08.3	-0.2
SKAG				IAmb	IAmb	10 23 25.7	
	comp=Z,23nm,0.9s						
SKAG	Skagway	19.76	56	P	P	10 23 05.5	-1.4
	baz=264						
PET	Petropavlovsk	19.80	285	P	P	10 23 07.8	+0.5
PET				IAmb	IAmb	10 23 15.1	
	comp=Z,53nm,1.1s						
PET	Petropavlovsk	19.80	285	⇑*e*P	P	10 23 07.5	+0.1
PET				pmax	pmax		
	comp=Z,43nm,1.3s						
BILL	Bilibino	19.84	332	P	P	10 23 08.1	+0.3
BILL	Bilibino	19.84	332	*e*P	P	10 23 08.2	+0.5
BILL				pmax	pmax		
	comp=Z,24nm,1.1s						
BILL				MLR	MLR		
	comp=Z,221nm,14.0s						
N31M	Braeburn, Yuko	19.87	50	P	P	10 23 06.8	-1.4
	baz=258,SNR=17						
I29M	Ogilvie Camp,	20.08	38	P	P	10 23 10.4	+0.1
I29M				IAmb	IAmb	10 23 15.9	
	comp=Z,24nm,1.1s						
I29M	Ogilvie Camp,	20.08	38	P	P	10 23 08.3	-2.0
	baz=244						
WHY	Whitehorse	20.14	52	P	P	10 23 09.3	-2.0
	baz=261,SNR=9.3						
PEA0B	Petropavlovsk-	20.35	286	P	P	10 23 14.5	+1.1
PEA0B				IAmb	IAmb	10 23 15.3	
	comp=Z,86nm,1.3s						
PEA0B	Petropavlovsk-	20.35	286	⇑*e*P	P	10 23 13.8	+0.4
PETK	Petropavlovsk-	20.35	286	P	P	10 23 12.7	-0.7
	comp=Z,20nm,0.8s,baz=81,slow=14,SNR=48						
	comp=Z,20nm,0.8s						
PETK	Petropavlovsk-	20.35	286	P	P	10 23 13.5	+0.1
M31M	Drury Creek, Y	20.67	48	P	Pn	10 23 19.4	+0.1
M31M				IAmb	IAmb	10 23 33.0	
	comp=Z,35nm,1.1s						
M31M	Drury Creek, Y	20.67	48	P	P	10 23 15.4	-1.4
	baz=257,SNR=10						
P33M	Teslin, Yukon	21.10	54	P	P	10 23 23.4	+1.8
P33M				IAmb	IAmb	10 23 48.3	
	comp=Z,28nm,0.9s						
P33M	Teslin, Yukon	21.10	54	P	P	10 23 19.7	-1.8
	baz=264,SNR=7.2						
EPYK	Eagle Plains	21.11	36	P	P	10 23 20.9	-0.6
EPYK	Eagle Plains	21.11	36	P	P	10 23 20.0	-1.6
	baz=244,SNR=30						
DLBC	Dease Lake	22.46	59	P	P	10 23 34.5	-1.6
	comp=Z,6.1nm,1.2s,baz=237,slow=15,SNR=2.1						
	comp=Z,6.1nm,1.2s						
DLBC	Dease Lake	22.46	59	IAmb	IAmb	10 23 41.4	
	comp=Z,14nm,1.1s						
INK	Inuvik	23.07	33	P	P	10 23 41.0	-1.3
	comp=Z,9.5nm,0.8s,baz=228,slow=12,SNR=19						
	comp=Z,9.5nm,0.8s						
INK	Inuvik	23.07	33	P	P	10 23 42.1	-0.3
INK				IAmb	IAmb	10 23 45.7	
	comp=Z,14nm,0.9s						
INK	Inuvik	23.07	33	P	P	10 23 40.8	-1.5
	baz=244,SNR=13						
TGTN	Hyland Airport	23.43	51	P	P	10 23 46.4	+0.2
	baz=265						
C36M	Paulatuk	26.65	34	P	P	10 24 15.6	+0.2
C36M				IAmb	IAmb	10 24 20.1	
	comp=Z,12nm,1.1s						
C36M	Paulatuk	26.65	34	P	P	10 24 14.0	-1.3
	baz=253						
D03D	Eldon	29.26	81	P	P	10 24 38.4	-0.5
	baz=297						
B05A	Bryant	29.54	79	P	P	10 24 41.1	-0.2
	baz=296						
YKA	Yellowknife Ar	29.87	49	P	P	10 24 45.5	+1.4
	comp=Z,1.3nm,0.7s,baz=276,slow=7.8,SNR=14						
YKA				PcP	PcP	10 27 47.1	+0.7
	comp=Z,1.0nm,1.0s,baz=282,slow=1.8,SNR=6.2						
	comp=Z,1.3nm,0.7s						
E04D	Cinebar	30.03	83	P	P	10 24 46.0	+0.3
E04D				IAmb	IAmb	10 24 57.8	
	comp=Z,10nm,1.0s						
E04D	Cinebar	30.03	83	P	P	10 24 47.9	+2.2
	baz=298						
D05A	Enumclaw	30.09	81	P	P	10 24 47.4	+1.1
D05A				IAmb	IAmb	10 24 58.2	
	comp=Z,20nm,1.2s						
SHO	Shikotan	30.55	272	⇓*i*P	P	10 24 47.6	-2.7
SHO				*i* S	pP	10 24 55.9	-1.5
B08A	Colville Reser	31.16	77	P	P	10 24 55.5	-0.2
B08A				IAmb	IAmb	10 25 06.5	
	comp=Z,11nm,1.2s						
H04A	Detroit Lake	31.19	85	P	P	10 24 55.4	-0.6
H04A				IAmb	IAmb	10 25 06.5	
	comp=Z,26nm,1.5s						
I04A	Tendick Farm,	31.52	87	P	P	10 24 58.5	-0.5
	baz=302						
I05D	Terrebonne, OR	31.89	85	P	P	10 25 02.0	-0.2
	baz=302						
HAWA	Hanford	31.95	81	P	P	10 25 03.9	+1.3
HAWA				IAmb	IAmb	10 25 13.7	
	comp=Z,13nm,1.0s						
D08A	Wollman Farm,	32.00	79	P	P	10 25 04.1	+1.0
D08A				IAmb	IAmb	10 25 13.0	
	comp=Z,9.4nm,1.2s						
C09A	Chrisman Ranch	32.05	78	P	P	10 25 04.7	+1.2
C09A				IAmb	IAmb	10 25 14.0	
	comp=Z,10.0nm,1.1s						
YBH	Yreka Blue Hor	32.48	91	LR	LR	10 35 19.7	
	comp=Z,107nm,20.5s,baz=306,slow=31						
YBH	Yreka Blue Hor	32.48	91	P	P	10 25 09.3	+1.8
YBH				IAmb	IAmb	10 25 35.4	
	comp=Z,5.5nm,0.9s						
YBH	Yreka Blue Hor	32.48	91	P	P	10 25 09.3	+1.8
NEW	Newport	32.52	76	LR	LR	10 37 27.2	
	comp=Z,120nm,19.5s,baz=308,slow=35						
NEW	Newport	32.52	76	P	P	10 25 09.5	+1.8
NEW				IAmb	IAmb	10 25 18.1	
	comp=Z,9.8nm,1.1s						
NEW	Newport	32.52	76	P	P	10 25 09.5	+1.8
NEW	Newport	32.52	76	P	P	10 25 07.4	-0.3
	baz=297						
EDM	Edmonton	32.69	66	P	P	10 25 10.7	+1.6
EDM				IAmb	IAmb	10 25 30.1	
	comp=Z,13nm,0.8s						
EDM	Edmonton	32.69	66	P	P	10 25 10.7	+1.6
E09A	Wood Farm, Sta	32.73	80	P	P	10 25 10.2	+0.8
E09A				IAmb	IAmb	10 25 19.9	
	comp=Z,9.9nm,1.0s						
G08A	Pilot Rock	32.85	82	P	P	10 25 10.9	+0.3
TIXI	Tiksi	33.00	329	P	P	10 25 11.8	+0.2
TIXI				IAmb	IAmb	10 25 13.0	
	comp=Z,7.4nm,1.1s						
TIXI	Tiksi	33.00	329	⇓*i*P	P	10 25 12.2	+0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAJ	Asahikawa	33.01	275	LR	LR	10 38 01.3	
	comp=Z,243nm,20.9s,baz=136,slow=35						
K05A	Summer Lake	33.03	88	P	P	10 25 15.3	+2.9
I07A	Izee	33.14	85	P	P	10 25 14.5	+1.2
F10A	Beach Ranch, E	33.55	80	P	P	10 25 17.1	+0.3
F10A				IAmb	IAmb	10 25 42.4	
	comp=Z,15nm,1.4s						
YAK	Yakutsk	33.55	311	LR	LR	10 39 41.4	
	comp=Z,380nm,18.2s,baz=88,slow=38						
YAK	Yakutsk	33.55	311	⇑*e*P	P	10 25 16.1	-0.4
YAK				pmax	pmax		
	comp=Z,17nm,1.0s						
MOD	Modoc Plateau	33.86	88	P	P	10 25 21.2	+1.7
MOD				IAmb	IAmb	10 25 33.5	
	comp=Z,6.5nm,0.8s						
WALA	Waterton Lakes	34.06	73	P	P	10 25 22.0	+0.8
WALA				IAmb	IAmb	10 25 43.4	
	comp=Z,6.8nm,1.0s						
BMO	Blue Mountains	34.08	82	P	P	10 25 21.3	-0.1
BMO				IAmb	IAmb	10 25 32.9	
	comp=Z,7.5nm,1.4s						
BMO	Blue Mountains	34.08	82	P	P	10 25 21.3	-0.1
J08A	Circle Bar Ran	34.16	85	P	P	10 25 22.0	-0.2
J08A				IAmb	IAmb	10 25 32.0	
	comp=Z,9.6nm,1.2s						
JTMT	Jette	34.45	76	P	P	10 25 25.0	+0.4
JTMT				IAmb	IAmb	10 25 35.0	
	comp=Z,18nm,1.5s						
WVOR	Wild Horse Val	34.58	86	P	P	10 25 25.5	-0.2
WVOR				IAmb	IAmb	10 25 35.7	
	comp=Z,7.0nm,1.1s						
WVOR	Wild Horse Val	34.58	86	P	P	10 25 25.5	-0.2
BEKR	Beckworth	35.02	91	P	P	10 25 30.6	+1.0
BEKR				IAmb	IAmb	10 25 57.0	
	comp=Z,7.9nm,1.4s						
MSO	Missoula	35.10	77	P	P	10 25 30.5	+0.3
MSO				IAmb	IAmb	10 25 40.3	
	comp=Z,10nm,1.1s						
MSO	Missoula	35.10	77	P	P	10 25 31.3	+1.1
	baz=300						
PAHR	Pah Rah Range	35.71	91	P	P	10 25 35.5	-0.1
PAHR				IAmb	IAmb	10 25 45.8	
	comp=Z,11nm,1.2s						
VCNR	Virginia City	35.80	92	P	P	10 25 35.9	-0.5
VCNR				IAmb	IAmb	10 25 46.3	
	comp=Z,15nm,1.5s						
CMB	Columbia Colle	36.13	94	P	P	10 25 38.8	-0.3
CMB				IAmb	IAmb	10 25 53.1	
	comp=Z,10nm,1.5s						
CMB	Columbia Colle	36.13	94	P	P	10 25 38.8	-0.3
RES	Resolute Bay	36.16	26	LR	LR	10 42 38.6	
	comp=Z,182nm,20.3s,baz=283,slow=40						
YERR	Yerington	36.24	92	P	P	10 25 40.6	+0.4
YERR				IAmb	IAmb	10 25 49.9	
	comp=Z,10.0nm,1.1s						
HRY	Holter Researc	36.42	76	P	P	10 25 40.7	-0.8
LRM	Limekiln Ridge	36.50	77	P	P	10 25 41.5	-0.9
HLID	Hailey	36.52	82	P	P	10 25 42.5	-0.1
HLID	Hailey	36.52	82	P	P	10 25 41.9	-0.6
	baz=304						
BMN	Battle Mountai	36.60	88	P	P	10 25 43.5	+0.3
BMN	Battle Mountai	36.60	88	P	P	10 25 43.5	+0.3
DLMT	Dillon	36.65	78	P	P	10 25 44.5	+1.0
DLMT				IAmb	IAmb	10 25 56.0	
	comp=Z,9.8nm,1.3s						
BCYI	Bear Canyon	36.73	80	P	P	10 25 45.6	+1.3
MCMT	McKenzie Canyo	36.78	79	P	P	10 25 46.1	+1.3
KVN	Kaiserville	36.90	91	P	P	10 25 46.1	+0.3
KVN	Kaiserville	36.90	91	P	P	10 25 46.1	+0.3
KLR	Kul'dur	36.94	290	LR	LR	10 42 43.9	
	comp=Z,319nm,18.0s,baz=58,slow=39						
KLR	Kul'dur	36.94	290	⇓*i*P	P	10 25 45.1	-0.6
KLR				pmax	pmax		
	comp=Z,13nm,1.1s						
EGMT	Eagleton	36.99	73	P	P	10 25 47.4	+1.1
EGMT				IAmb	IAmb	10 26 05.7	
	comp=Z,15nm,0.9s						
EGMT	Eagleton	36.99	73	P	P	10 25 44.5	-1.8
	baz=299,SNR=7.5						
BOZ	Bozeman (W)	37.11	77	P	P	10 25 47.9	+0.5
BOZ				IAmb	IAmb	10 25 57.5	
	comp=Z,16nm,1.2s						
BOZ	Bozeman (W)	37.11	77	P	P	10 25 47.9	+0.5
BOZ	Bozeman (W)	37.11	77	P	P	10 25 45.5	-1.9
	baz=302,SNR=6.1						
NVAR	Mina Array Bea	37.16	92	P	P	10 25 47.2	-0.8
	comp=Z,0.6nm,0.8s,baz=289,slow=8.1,SNR=2.7						
	comp=Z,0.6nm,0.8s						
NVAR	Mina Array Bea	37.16	92	P	P	10 25 48.9	+0.8
OMMB	Old Mammoth Mi	37.25	93	P	P	10 25 48.1	-0.8
OMMB				IAmb	IAmb	10 25 58.8	
	comp=Z,8.7nm,1.2s						
ZEA	Zeya	37.44	298	*e*P	P	10 25 49.6	-0.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=N,100nm,14.0s						
ZEA				MLR	MLR		
	comp=E,100nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,18.0s						
ELK	Elko	37.63	86	LR	LR	10 39 13.4	
	comp=Z,150nm,20.0s,baz=302,slow=33						
ELK	Elko	37.63	86	P	P	10 25 52.1	+0.2
ELK	Elko	37.63	86	P	P	10 25 52.2	+0.2
H11N2	WAKE ISLAND Hy	37.77	220	T	T	11 06 35.3	
	baz=25						
YHL	Hebgen Lake	37.77	78	P	P	10 25 53.0	-0.3
YHL				IAmb	IAmb	10 26 03.4	
	comp=Z,16nm,1.2s						
H11N3	WAKE ISLAND Hy	37.77	220	T	T	11 06 22.1	
	baz=25						
H11N1	WAKE ISLAND Hy	37.78	220	T	T	11 06 32.5	
	baz=25						
YMR	Madison River	38.00	78	P	P	10 25 56.0	+0.9
YMR				IAmb	IAmb	10 26 05.3	
	comp=Z,14nm,1.0s						
YNR	Norris Junctio	38.15	78	P	P	10 25 57.5	+1.2
YNR				IAmb	IAmb	10 26 07.0	
	comp=Z,23nm,1.0s						
GCMT	Greycliff	38.18	76	P	P	10 25 56.3	-0.2
H17A	Grant Village	38.38	78	P	P	10 25 58.5	+0.2
H17A				IAmb	IAmb	10 26 09.9	
	comp=Z,20nm,1.1s						
H17A	Grant Village	38.38	78	P	P	10 26 00.4	+2.0
	baz=303						
FLWY	Flagg Ranch	38.48	79	P	P	10 25 57.5	-1.7
FLWY				IAmb	IAmb	10 26 09.3	
	comp=Z,9.9nm,1.1s						
HVU	Hansel Valley	38.53	83	P	P	10 25 59.4	-0.1
HVU	Hansel Valley	38.53	83	P	P	10 25 59.4	-0.1
MOOW	Moose Ponds	38.64	79	P	P	10 26 01.0	+0.5
RLMT	Red Lodge	38.77	76	P	P	10 26 02.5	+1.0
RLMT				IAmb	IAmb	10 26 12.0	
	comp=Z,21nm,1.1s						
RLMT	Red Lodge	38.77	76	P	P	10 26 01.2	-0.3
	baz=303,SNR=6.9						
REDW	Red Top Meadow	38.79	80	P	P	10 26 02.6	+0.9
REDW				IAmb	IAmb	10 26 13.1	
	comp=Z,20nm,1.4s						
LOHW	Long Hollow	38.80	79	P	P	10 26 01.6	-0.2
R11A	Troy Canyon, C	38.88	90	P	P	10 26 02.1	-0.3
R11A	Troy Canyon, C	38.88	90	P	P	10 26 02.8	+0.3
	baz=309						
H11S1	WAKE ISLAND Hy	38.95	219	T	T	11 07 60.0	
	baz=57,slow=74						
H11S3	WAKE ISLAND Hy	38.97	219	T	T	11 07 52.4	
	baz=29,slow=74,SNR=3.1						
AHID	Auburn Hatcher	38.98	81	P	P	10 26 02.0	-1.3
AHID				IAmb	IAmb	10 26 13.7	
	comp=Z,16nm,1.2s						
FURC	Furnace Creek,	39.29	93	P	P	10 26 05.4	-0.3
	baz=311						
TPNV	Topopah Spring	39.36	92	P	P	10 26 07.6	+1.1
TPNV	Topopah Spring	39.36	92	P	P	10 26 07.6	+1.1
TPNV	Topopah Spring	39.36	92	P	P	10 26 05.7	-0.8
	baz=310						
USRK	Ussuriysk Ar.	39.38	283	P	P	10 26 04.5	-1.8
	comp=Z,1.4nm,0.7s,baz=68,slow=8.7,SNR=5.2						
USRK				PcP	PcP	10 28 15.3	+1.1
	comp=Z,4.2nm,1.0s,baz=108,slow=0.6,SNR=6.2						
USRK				LR	LR	10 44 45.1	
	comp=Z,152nm,18.7s,baz=74,slow=40						
	comp=Z,1.4nm,0.7s						
DUG	Dugway, Tooele	39.44	85	P	P	10 26 06.0	-1.1
	baz=307						
LAO	LASA Array	39.73	72	P	P	10 26 08.4	-1.0
	baz=302						
PRN	Pahroc Range	39.80	90	P	P	10 26 10.9	+0.8
BW06	Boulder Array	39.91	80	P	P	10 26 11.0	-0.1
BW06				IAmb	IAmb	10 26 21.0	
	comp=Z,13nm,1.0s						
BW06	Boulder Array	39.91	80	P	P	10 26 09.6	-1.5
	baz=305,SNR=17						
PD31	Pinedale Array	39.91	80	P	P	10 26 09.2	-1.9
PD31				IAmb	IAmb	10 26 21.0	
	comp=Z,12nm,1.0s						
PDAR	Pinedale Array	39.91	80	P	P	10 26 12.0	+0.9
	comp=Z,4.3nm,0.8s,baz=307,slow=5.4,SNR=33						
PDAR				LR	LR	10 41 13.0	
	comp=Z,65nm,20.6s,baz=320,slow=34						
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	39.91	80	P	P	10 26 11.0	-0.1
GSC	Goldstone, Bar	40.09	94	P	P	10 26 11.5	-1.0
GSC	Goldstone, Bar	40.09	94	P	P	10 26 13.3	+0.8
	baz=312						
MAJO	Matsushiro	40.20	268	P	P	10 26 12.6	-0.7
MAJO				IAmb	IAmb	10 26 16.2	
	comp=Z,23nm,0.9s						
MAJO	Matsushiro	40.20	268	d*e*P	P	10 26 14.4	+1.1
MAJO				pmax	pmax		
	comp=Z,29nm,1.1s						
MJAR	Matsushiro Arr	40.20	268	P	P	10 26 12.8	-0.4
	comp=Z,6.4nm,1.0s,baz=54,slow=7.9,SNR=12						
MJAR				PcP	PcP	10 28 17.1	+0.2
	comp=Z,0.5nm,0.5s,baz=51,slow=12,SNR=2.6						
	comp=Z,6.4nm,1.0s						
MJAR	Matsushiro Arr	40.20	268	P	P	10 26 13.0	-0.3
MJAR	Matsushiro Arr	40.20	268	P	P	10 26 13.0	-0.3
MJB9	Matsu-Tunnel	40.20	268	P	P	10 26 12.6	-0.7
MJB9				IAmb	IAmb	10 26 16.2	
	comp=Z,25nm,1.0s						
FCC	Fort Churchill	40.55	51	P	P	10 26 17.4	+1.5
FCC				IAmb	IAmb	10 26 18.5	
	comp=Z,17nm,1.0s						
CCUT	Cedar City	40.74	89	P	P	10 26 19.9	+1.8

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TMUT  Trail Mountain     40.97  85    P      P      10 26 20.3 +0.3
GMRC  Granite Mounta     41.14  94    P      P      10 26 21.3 +0.1
      baz=312
RDMU  Red Mountain       41.19  82    P      P      10 26 20.5 -1.2
RDMU                                  IAmb   IAmb   10 26 31.8
      comp=Z,16nm,1.1s
P18A  Preston Nutter     41.35  84    P      P      10 26 24.4 +1.2
P18A                                  IAmb   IAmb   10 26 33.5
      comp=Z,11nm,1.0s
PFO   Pinyon Flats O     41.44  96    LR     LR     10 39 44.0
      comp=Z,93nm,22.0s,baz=294,slow=31
SRU   San Rafael Swe     41.50  85    P      P      10 26 24.0 -0.3
K22A  Casper             41.80  78    P      P      10 26 26.2 -0.4
K22A                                  IAmb   IAmb   10 26 35.9
      comp=Z,15nm,1.1s
K22A  Casper             41.80  78    P      P      10 26 24.8 -1.8
      baz=306,SNR=5.2
O20A  White River Ci     42.26  82    P      P      10 26 31.8 +1.3
O20A                                  IAmb   IAmb   10 26 43.7
      comp=Z,23nm,0.9s
O20A  White River Ci     42.26  82    P      P      10 26 29.0 -1.4
      baz=308,SNR=13
BOD   Bodaibo            42.39 309   eP      P      10 26 30.3 -0.7
BOD                                  pmax   pmax
      comp=Z,16nm,1.0s
RSSD  Black Hills        42.43  74    P      P      10 26 32.0 +0.2
RSSD  Black Hills        42.43  74    P      P      10 26 30.7 -1.1
      baz=305
PV23  Carpenter Ridg     42.84  84    P      P      10 26 34.3 -0.9
PV23                                  IAmb   IAmb   10 27 01.1
      comp=Z,7.3nm,0.9s
MDND  Maddock            42.93  67    P      P      10 26 34.4 -1.1
MDND  Maddock            42.93  67    P      P      10 26 33.4 -2.1
      baz=303
PV20  West Nyswonger     42.93  85    P      P      10 26 35.2 -0.7
PV11  David Mesa, Pa     43.02  85    P      P      10 26 36.3 -0.3
PV11                                  IAmb   IAmb   10 26 52.7
      comp=Z,10.0nm,1.0s
N23A  Red Feather La     43.19  80    P      P      10 26 36.4 -1.6
      baz=307
PV15  Paradox Valley     43.23  84    P      P      10 26 38.9 +0.5
PV15                                  IAmb   IAmb   10 27 04.0
      comp=Z,11nm,1.0s
SMCO  Snowmass           43.62  82    P      P      10 26 40.7 -1.0
HIA   Hailar             43.70 296    P      P      10 26 42.0 +0.3
HIA                                   IAmb   IAmb   10 26 43.2
      comp=Z,16nm,1.2s
ULM   Lac du Bonnet      43.71  62    P      P      10 26 42.6 +0.9
      comp=Z,2.7nm,0.7s,baz=314,slow=6.4,SNR=3.3
ULM                                   LR     LR     10 46 09.1
      comp=Z,145nm,18.0s,baz=298,slow=38
      comp=Z,2.7nm,0.7s
ULM   Lac du Bonnet      43.71  62    IAmb   IAmb   10 26 43.3
      comp=Z,8.9nm,1.1s
MVCO  Mesa Verde         43.94  86    P      P      10 26 41.9 -2.2
      baz=310
S22A  4UR Ranch, Cre     44.62  84    P      P      10 26 48.5 -1.1
      baz=310
AGMN  Agassiz Nation     44.78  65    P      P      10 26 50.7 +0.3
AGMN                                  IAmb   IAmb   10 27 10.0
      comp=Z,7.4nm,0.9s
AGMN  Agassiz Nation     44.78  65    P      P      10 26 49.6 -0.7
      baz=304
SEHB  SEOHWA             45.18 278    P      P      10 26 53.9 +0.2
SUSD  Miller             45.22  71    P      P      10 26 53.8 -0.1
      baz=306
TUC   Tucson             45.80  92    P      P      10 26 58.0 -0.7
      baz=314
KSRS  Korea Array        45.90 277    P      P      10 26 58.8 -0.6
      comp=Z,14nm,0.9s,baz=54,slow=4.4,SNR=36
KSRS                                  PcP    PcP    10 28 37.8 +1.8
      comp=Z,0.4nm,0.5s,baz=47,slow=6.0,SNR=3.0
      comp=Z,14nm,0.9s
KS19  Wonju Array Si     45.91 277    P      P      10 26 59.0 -0.4
B35A  Bob, Littlefor     45.92  64    P      P      10 26 59.0 -0.3
B35A                                  IAmb   IAmb   10 27 18.4
      comp=Z,6.8nm,1.1s
KSAR  Wonju Array Be     45.94 277    P      P      10 26 59.0 -0.6
KSCO  Kaye Shedlock'     46.36  79    P      P      10 27 02.8 -0.4
KSCO  Kaye Shedlock'     46.36  79    P      P      10 27 02.0 -1.1
      baz=309
T25A  Trinidad           46.48  83    P      P      10 27 03.6 -0.5
T25A                                  IAmb   IAmb   10 27 14.3
      comp=Z,17nm,1.1s
T25A  Trinidad           46.48  83    P      P      10 27 02.5 -1.7
      baz=311,SNR=7.5
NRIK  Noril'sk           46.67 332    P      P      10 27 04.3 -0.6
      comp=Z,4.9nm,0.8s,baz=67,slow=9.0,SNR=5.9
      comp=Z,4.9nm,0.8s
NRIK  Noril'sk           46.67 332    P      P      10 27 04.4 -0.6
NRIK                                  IAmb   IAmb   10 27 08.0
      comp=Z,4.9nm,0.8s
NRIK  Noril'sk           46.67 332d iP      P      10 27 05.8 +0.8
NRIK                                  pmax   pmax
      comp=Z,6.0nm,0.9s
ANMO  Albuquerque        46.67  86    LR     LR     10 44 57.3
      comp=Z,68nm,21.3s,baz=318,slow=34
ANMO  Albuquerque        46.67  86⇑eP      P      10 27 07.2 +1.5
ANMO                                  pmax   pmax
      comp=Z,2.0nm,1.3s
TJN   Taejon             46.94 277    P      P      10 27 07.5 -0.1
TJN   Taejon             46.94 277d iP      P      10 27 08.8 +1.3
ECSD  EROS Data Cent     47.00  70    P      P      10 27 07.6 -0.3
ECSD                                  IAmb   IAmb   10 27 19.9
      comp=Z,9.4nm,1.2s
ECSD  EROS Data Cent     47.00  70    P      P      10 27 06.5 -1.4
      baz=307,SNR=6.6
EYMN  Ely                47.38  63    P      P      10 27 11.2 +0.4
EYMN                                  IAmb   IAmb   10 27 12.1
      comp=Z,8.1nm,1.1s
EYMN  Ely                47.38  63    P      P      10 27 09.9 -0.9
      baz=306
E38A  The Farm, Brul     48.14  64    IAmb   IAmb   10 27 38.0
      comp=Z,9.7nm,0.9s
CBKS  Cedar Bluff        48.22  78    P      P      10 27 17.8 +0.3
      baz=310
SPMN  Marine on St.      48.27  67    P      P      10 27 17.7 -0.1
      baz=307
FRB   Frobisher Bay      48.69  36    LR     LR     10 49 36.0
      comp=Z,230nm,19.0s,baz=334,slow=38
XLT   XiLinHaoTe         48.87 292   eP      P      10 27 22.6 +0.1
XLT                                   pP     pP     10 27 27.3 -2.5
XLT                                   sP     sP     10 27 29.6 -3.0
XLT                                   pmax   pmax
      comp=Z,13nm,0.9s
XLT                                   pmax   pmax
      comp=Z,120nm,5.2s
XLT                                   LR     LR
      comp=Z,27nm,17.3s
XLT                                   LR     LR
      comp=Z,260nm,23.2s
XLT                                   LR     LR
      comp=Z,310nm,19.0s
MNTX  Cornudas Mount     49.53  89    P      P      10 27 27.6  0.0
MNTX  Cornudas Mount     49.53  89    P      P      10 27 28.4 +0.7
      baz=314
MSTX  Muleshoe           49.58  85    P      P      10 27 27.2 -0.8
      baz=313
AMTX  Amarillo           49.63  83    P      P      10 27 28.0 -0.4
      baz=312
SPITS Spitsbergen Ar     49.69 359    LR     LR     10 49 25.7
      comp=Z,120nm,19.1s,baz=300,slow=37
DAG   Danmarks Havn      49.72   9  i P      P      10 27 26.7 -1.7
DAG                                   IAmb   IAmb   10 27 29.6
      comp=Z,3.8nm,0.8s
SUMG  Summit             50.64  17    P      P      10 27 36.5 +0.6
SUMG  Summit             50.64  17  i P      P      10 27 36.0 +0.1
SUMG                                  IAmb   IAmb   10 27 38.6
      comp=Z,8.5nm,0.9s
ULN   Ulaanbaatar        51.37 301    P      P      10 27 41.3 -0.1
ULN                                   IAmb   IAmb   10 27 43.4
      comp=Z,8.6nm,0.9s
ULN   Ulaanbaatar        51.37 301deP      P      10 27 42.3 +0.8
ULN                                   pmax   pmax
      comp=Z,11nm,1.0s
P38A  Dawn               51.38  73    P      P      10 27 41.2 -0.3
P38A                                  IAmb   IAmb   10 27 49.7
      comp=Z,10nm,0.9s
WMOK  Wichita Mounta     51.48  81    P      P      10 27 43.1 +0.8
WMOK                                  IAmb   IAmb   10 27 54.7
      comp=Z,5.0nm,0.8s
WMOK  Wichita Mounta     51.48  81    P      P      10 27 42.8 +0.4
      baz=313
ZAK   Zakamensk          51.73 305   eP      P      10 27 41.5 -2.6
ZAK                                  e              10 28 53.1
ZAK                                   pmax   pmax
      comp=Z,10.0nm,1.4s
ZAK                                   pmax   pmax
      comp=Z,6.0nm,1.4s
SONM  Songino Array      51.73 301    P      P      10 27 44.4 +0.2
      comp=Z,5.5nm,0.9s,baz=54,slow=7.1,SNR=25
SONM                                  PcP    PcP    10 28 59.3 +2.1
      comp=Z,0.4nm,0.4s,baz=42,slow=4.5,SNR=2.1
SONM                                  LR     LR     10 52 40.7
      comp=Z,178nm,18.6s,baz=75,slow=40
      comp=Z,5.5nm,0.9s
SONM  Songino Array      51.73 301    P      P      10 27 44.6 +0.4
SONM                                  IAmb   IAmb   10 27 45.9
      comp=Z,11nm,1.2s
DBG   Daneborg           51.83  10  i P      P      10 27 43.2 -1.1
DBG                                   IAmb   IAmb   10 27 45.3
      comp=Z,3.7nm,0.8s
SFJD  Kangerlussuaq      52.16  26    LR     LR     10 54 17.1
      comp=Z,106nm,18.5s,baz=320,slow=41
TX31  Lajitas Ar. Si     52.24  90    P      P      10 27 47.9 -0.3
TX31                                  IAmb   IAmb   10 27 56.8
      comp=Z,17nm,1.1s
TX32  Lajitas Array      52.24  90    P      P      10 27 47.9 -0.3
TX32                                  IAmb   IAmb   10 27 56.8
      comp=Z,5.8nm,1.1s
TXAR  Lajitas Array      52.24  90    P      P      10 27 48.8 +0.7
      comp=Z,1.3nm,0.8s,baz=299,slow=5.9,SNR=15
TXAR                                  LR     LR     10 47 39.5
      comp=Z,58nm,20.3s,baz=330,slow=33
      comp=Z,1.3nm,0.8s
TXAR  Lajitas Array      52.24  90    P      P      10 27 48.4 +0.3
P40A  Paris              52.30  72    P      P      10 27 48.2 -0.2
ABTX  Abilene, Hawle     52.41  84    P      P      10 27 50.0 +0.8
      baz=314
TUL1  Leonard            52.49  78    P      P      10 27 50.9 +1.1
      baz=312
L44A  Lake County Fo     52.95  67    P      P      10 27 52.7 -0.4
      baz=311
JOW   Kunigami           52.99 267    LR     LR     10 50 56.1
      comp=Z,106nm,18.6s,baz=203,slow=37
R40A  Maddies Statio     52.99  73    P      P      10 27 52.2 -1.2
R40A                                  IAmb   IAmb   10 28 04.5
      comp=Z,5.0nm,0.6s
ICESG Greenland Ices     53.20  20  i P      P      10 27 53.6 -1.3
ICESG                                 IAmb   IAmb   10 27 57.2
      comp=Z,5.3nm,0.8s
HDIL  Hopedale           53.22  69    P      P      10 27 54.0 -1.1
HDIL  Hopedale           53.22  69    P      P      10 27 54.2 -0.9
      baz=311
TIA   Tai'an             53.23 284   eP      P      10 27 55.8 +0.6
TIA                                   pmax   pmax
      comp=Z,15nm,1.1s
TIA                                   LR     LR
      comp=Z,210nm,21.1s
TIA                                   LR     LR
      comp=Z,200nm,24.5s
TIA                                   LR     LR
      comp=Z,230nm,18.6s
HHC   Hu-ho-hao-te       53.39 292   eP      P      10 27 52.3 -4.2
HHC                                   S      S      10 35 21.6 -5.2
HHC                                   pmax   pmax
      comp=Z,21nm,1.0s
HHC                                   pmax   pmax
      comp=Z,130nm,5.0s
HHC                                   LR     LR
      comp=N,220nm,19.6s
HHC                                   LR     LR
      comp=E,370nm,17.7s
HHC                                   LR     LR
      comp=Z,460nm,21.2s
X37A  Clayton            53.64  79    P      P      10 27 58.6 +0.3
X37A                                  IAmb   IAmb   10 28 10.6
      comp=Z,12nm,0.8s
DY2G  Dye2               53.70  25  i P      P      10 27 59.7 +1.2
DY2G                                  IAmb   IAmb   10 28 01.7
      comp=Z,2.4nm,0.5s
CCM   Cathedral Cave     53.75  73    P      P      10 27 57.7 -1.3
      baz=312
MGMO  Mountain Grove     53.76  74    P      P      10 27 57.9 -1.2
MGMO                                  IAmb   IAmb   10 28 09.9
      comp=Z,8.8nm,0.9s
JCT   Junction City      53.80  86    P      P      10 27 58.9 -0.7
JCT                                   IAmb   IAmb   10 28 24.6
      comp=Z,9.8nm,1.2s
JCT   Junction City      53.80  86    P      P      10 27 59.1 -0.4
      baz=315
HNS   HongShan           53.86 286   ⇑P      P      10 28 01.1 +1.3
HNS                                  eS      S      10 35 33.4 +0.4
HNS                                   pmax   pmax
      comp=Z,39nm,1.0s
HNS                                   LR     LR
      comp=Z,240nm,19.6s
HNS                                   LR     LR
      comp=Z,140nm,17.1s
HNS                                   LR     LR
      comp=Z,220nm,18.4s
U40A  Yellville          53.95  75    P      P      10 27 59.6 -0.9
U40A                                  IAmb   IAmb   10 28 12.4
      comp=Z,6.4nm,0.9s
U40A  Yellville          53.95  75    P      P      10 27 59.2 -1.3
      baz=313
WHTX  Lake Whitney,      54.17  83    P      P      10 28 02.2  0.0
WHTX                                  IAmb   IAmb   10 28 16.5
      comp=Z,11nm,0.8s
WHTX  Lake Whitney,      54.17  83    P      P      10 28 02.9 +0.8
      baz=314
W39A  Magazine           54.18  77    P      P      10 28 02.0 -0.2
W39A                                  IAmb   IAmb   10 28 10.3
      comp=Z,12nm,1.1s
W39A  Magazine           54.18  77    P      P      10 28 00.7 -1.5
      baz=313
FVM   French Village     54.28  72    P      P      10 28 02.8 -0.1
FVM                                   IAmb   IAmb   10 28 14.6
      comp=Z,6.4nm,0.8s
KNGR  Kungurtug, Tuv     54.41 309⇑iP      P      10 28 05.9 +2.1
FCAR  Ozark Folk Cen     54.70  75    P      P      10 28 04.7 -1.2
FCAR                                  IAmb   IAmb   10 28 13.5
      comp=Z,7.2nm,0.9s
MIAR  Mount Ida          54.75  77    P      P      10 28 06.5 +0.2
MIAR                                  IAmb   IAmb   10 28 19.5
      comp=Z,15nm,1.2s
MIAR  Mount Ida          54.75  77    P      P      10 28 06.3 -0.1
      baz=314
NJ2   Nanjing            55.05 279   eP      P      10 28 09.4 +0.9
NJ2                                   pmax   pmax
      comp=Z,12nm,0.7s
PBMO  Poplar Bluff       55.09  73    P      P      10 28 08.1 -0.7
PBMO                                  IAmb   IAmb   10 28 20.6
      comp=Z,5.9nm,1.0s
SCHQ  Schefferville      55.09  44    P      P      10 28 07.7 -0.9
      comp=Z,7.4nm,1.0s,baz=306,slow=8.6,SNR=5.4
SCHQ                                  LR     LR     10 54 12.2
      comp=Z,164nm,18.3s,baz=28,slow=39
      comp=Z,7.4nm,1.0s
W41B  Gary Mavity, V     55.11  76    P      P      10 28 08.4 -0.6
      baz=314
OLIL  Olney              55.12  70    P      P      10 28 07.7 -1.3
OLIL                                  IAmb   IAmb   10 28 17.7
      comp=Z,13nm,1.0s
X40A  Basin Creek Fa     55.23  77    P      P      10 28 09.9  0.0
      baz=314
PARMO Parma              55.57  73    P      P      10 28 11.4 -0.8
833A  Chaparral WMA,     55.58  87    P      P      10 28 12.6 +0.2
      baz=316
WLAR  White Oak Lake     55.62  78    P      P      10 28 12.5 -0.1
O48B  Farmland           55.77  67    P      P      10 28 13.1 -0.6
      baz=313
CCAR  Cane Creek         56.26  77    P      P      10 28 16.6 -0.6
T47A  Sharon Grove       56.89  71    P      P      10 28 21.4 -0.2
T47A                                  IAmb   IAmb   10 28 33.8
      comp=Z,14nm,1.1s
WVT   Waverly            57.06  72    P      P      10 28 22.4 -0.4
WVT                                   IAmb   IAmb   10 28 31.7
      comp=Z,8.9nm,0.9s
WVT   Waverly            57.06  72    P      P      10 28 21.9 -0.9
      baz=314
IVI   Ivigtut            57.25  30  i P      P      10 28 22.2 -1.5
OXF   Oxford             57.25  75    P      P      10 28 24.5 +0.3
OXF   Oxford             57.25  75    P      P      10 28 23.9 -0.4
      baz=314
TRQ   Mont Tremblant     57.39  55    P      P      10 28 25.4 +0.3
M53A  WI Miller and      57.46  63    P      P      10 28 24.9 -0.7
      baz=314
Q51A  Peebles            57.63  67    P      P      10 28 26.6 -0.3
Q51A                                  IAmb   IAmb   10 28 45.7
      comp=Z,10nm,0.8s
PLAL  Pickwick Lake      57.71  73    P      P      10 28 27.3 -0.2
PLAL                                  IAmb   IAmb   10 28 38.8
      comp=Z,7.1nm,0.9s
ZAA0  Zalesovo Array     57.77 318    P      P      10 28 27.1 -0.4
ZALV  Zalesovo Beam      57.77 318    P      P      10 28 26.6 -1.0
      comp=Z,2.5nm,0.9s,baz=44,slow=4.5,SNR=7.9
ZALV                                  LR     LR     10 54 53.8
      comp=Z,118nm,19.0s,baz=68,slow=38
      comp=Z,2.5nm,0.9s
ZALV  Zalesovo Beam      57.77 318    P      P      10 28 26.4 -1.2
ZALV  Zalesovo Beam      57.77 318  i P      P      10 28 28.3 +0.7
ZALV                                  pmax   pmax
      comp=Z,3.0nm,0.9s
ARCES ARCESS Array B     57.98 354    P      P      10 28 27.8 -1.1
      comp=Z,7.4nm,1.0s,baz=20,slow=9.0,SNR=6.5
ARCES                                 LR     LR     10 55 16.8
      comp=Z,104nm,19.3s,baz=310,slow=38
      comp=Z,7.4nm,1.0s
ARCES ARCESS Array B     57.98 354    P      P      10 28 28.9 +0.1
O53A  New Philadelph     57.98  64    P      P      10 28 28.6 -0.7
      baz=314
VBMS  Vicksburg          58.20  77    P      P      10 28 30.8 -0.1
      baz=315
LONY  Lake Ozonia        58.49  57    P      P      10 28 31.0 -1.8
      baz=314
LVZ   Lovozero           58.81 350    P      P      10 28 35.0 +0.3
LVZ   Lovozero           58.81 350deP      P      10 28 35.0 +0.3
LVZ                                   pmax   pmax
      comp=Z,68nm,2.5s
W50A  Signal Mountai     59.17  71    P      P      10 28 37.3 -0.5
TZTN  Tazewell           59.25  69    P      P      10 28 36.8 -1.4
      baz=315
BINY  Binghamton         59.45  60    P      P      10 28 39.6 +0.1
      baz=315
FPAL  Fort Paine         59.46  72    P      P      10 28 39.8  0.0
SSPA  Standing Stone     59.53  62    P      P      10 28 40.6 +0.5
SSPA  Standing Stone     59.53  62    P      P      10 28 40.1  0.0
      baz=315
XAN   Xi'an              59.58 287   ⇑P      P      10 28 41.3 +0.7
XAN                                   PcP    PcP    10 29 28.4 +0.7
XAN                                   pmax   pmax
      comp=Z,20nm,1.4s
XAN                                   LR     LR
      comp=Z,260nm,24.7s
XAN                                   LR     LR
      comp=Z,270nm,20.6s
XAN                                   LR     LR
      comp=Z,390nm,24.0s
BORG  Borgarnes          60.50  15    LR     LR     10 55 47.5
      comp=Z,41nm,21.0s,baz=338,slow=37
BLA   Blacksburg         60.55  66    P      P      10 28 48.3 +1.2
BLA   Blacksburg         60.55  66    P      P      10 28 47.4 +0.2
      baz=315
GTA   Gaotai             60.93 298    P      P      10 28 50.3 +0.5
GTA                                   pP     pP     10 28 55.9 -1.4
GTA                                   sP     sP     10 28 59.6 -0.5
GTA                                   pmax   pmax
      comp=Z,8.0nm,0.9s
GTA                                   pmax   pmax
      comp=Z,48nm,6.4s
GTA                                   LR     LR
      comp=Z,180nm,17.1s
GTA                                   LR     LR
      comp=Z,240nm,17.5s
GTA                                   LR     LR
      comp=Z,260nm,16.7s
LZH   Lanzhou            61.06 292   eP      P      10 28 51.8 +1.0
LZH                                   pP     pP     10 28 58.3 +0.1
LZH                                   pmax   pmax
      comp=Z,26nm,1.3s
LZH                                   LR     LR
      comp=Z,300nm,14.1s
LZH                                   LR     LR
      comp=Z,290nm,13.6s
LZH                                   LR     LR
      comp=Z,430nm,17.3s
KMSC  Kings Mountain     61.51  69    P      P      10 28 53.4 -0.2
      baz=316
GOGA  Godfrey            61.52  71    P      P      10 28 53.3 -0.4
      baz=316
V58A  Windy Hill, Pi     62.30  67    P      P      10 28 59.3 +0.4
T59A  Double "B" Far     62.32  65    P      P      10 28 59.4 +0.4
KURK  Kurchatov          62.71 319    P      P      10 29 01.8 +0.3
KURK  Kurchatov          62.71 319c iP      P      10 29 01.3 -0.1
KURK                                  pmax   pmax
      comp=Z,9.0nm,0.8s
KURBB Kurchatov Arra     62.82 319    LR     LR     10 58 06.0
      comp=Z,133nm,18.7s,baz=41,slow=38
PRGR  Permogore          63.14 343   eP      P      10 29 02.4 -1.7
PRGR                                 e              10 29 42.4
WMQ   Urumqi             63.93 308   eP      P      10 29 11.5 +1.8
WMQ                                   pmax   pmax
      comp=Z,21nm,1.1s
WMQ                                   LR     LR
      comp=Z,150nm,18.7s
WMQ                                   LR     LR
      comp=Z,180nm,24.7s
WMQ                                   LR     LR
      comp=Z,120nm,16.7s
BRVK  Borovoye           64.01 325    P      P      10 29 10.6 +0.6
BRVK  Borovoye           64.01 325c iP      P      10 29 10.5 +0.5
BRVK                                  pmax   pmax
      comp=Z,14nm,1.0s
MK31  Makanchi Array     64.17 314    P      P      10 29 10.8 -0.5
MK31                                  IAmb   IAmb   10 29 12.0
      comp=Z,5.5nm,1.0s
MK31  Makanchi Array     64.17 314d iP      P      10 29 11.4 +0.2
MKAR  Makanchi Array     64.17 314    P      P      10 29 10.4 -0.8
      comp=Z,5.5nm,0.8s,baz=52,slow=6.3,SNR=32
MKAR                                  LR     LR     10 58 17.6
      comp=Z,183nm,18.4s,baz=42,slow=37
      comp=Z,5.5nm,0.8s
MKAR  Makanchi Array     64.17 314    P      P      10 29 11.3 +0.1
MKAR  Makanchi Array     64.17 314  i P      P      10 29 11.3 +0.1
MKAR                                  pmax   pmax
      comp=Z,6.0nm,0.8s
ARU   Arti               64.85 333    LR     LR     11 00 56.7
      comp=Z,60nm,18.3s,baz=50,slow=39
ARU   Arti               64.85 333    P      P      10 29 15.8 +0.4
ARU   Arti               64.85 333c iP      P      10 29 16.0 +0.6
ARU                                                 10 31 38.5
ARU                                   S      S      10 37 55.7 +1.3
ARU                                   SS     SS     10 42 00.3 -4.7
ARU                                   pmax   pmax
      comp=Z,19nm,1.1s
KLMR  Klimovskoe         64.92 345   eP      P      10 29 15.3 -0.5
KLMR                                  pmax   pmax
      comp=Z,21nm,1.2s
KLMR  Klimovskoe         64.92 345   eP      P      10 29 15.3 -0.5
KLMR                                  AMP           10 29 16.9
      comp=Z,21nm,1.2s
KIRV  Kirov              65.19 339⇑eP      P      10 29 17.8 +0.3
FIA1  FINESS Array S     65.94 352    P      P      10 29 22.8 +0.4
FIA0  FINESS Array S     65.94 352    P      P      10 29 22.4  0.0
FINES FINESS Array B     65.94 352    P      P      10 29 22.2 -0.2
      comp=Z,15nm,0.9s,baz=22,slow=6.0,SNR=23
FINES                                 LR     LR     11 00 06.4
      comp=Z,96nm,19.9s,baz=28,slow=38
      comp=Z,15nm,0.9s
FINES FINESS Array B     65.94 352    P      P      10 29 22.7 +0.3
FINES FINESS Array B     65.94 352  i P      P      10 29 22.7 +0.3
FINES                                 pmax   pmax
      comp=Z,15nm,0.9s
GYA   Guiyang            66.42 283   ⇓P      P      10 29 27.4 +1.2
GYA                                   pmax   pmax
      comp=Z,18nm,1.0s
NC204 NORSAR Array S     66.71   0    P      P      10 29 26.6 -0.8
NB201 NORSAR Array S     66.94   0    P      P      10 29 29.6 +0.8
NB2   NORSAR Subarra     66.95   0    P      P      10 29 29.5 +0.6
      comp=Z,15nm,1.2s,baz=1.5,slow=6.9
NOA   NORSAR Array B     66.95   0    P      P      10 29 28.1 -0.8
      comp=Z,5.1nm,0.9s,baz=0.4,slow=6.3,SNR=9.8
NOA                                   LR     LR     11 00 34.1
      comp=Z,36nm,18.7s,baz=335,slow=38
      comp=Z,5.1nm,0.9s
HFS   Hagfors            67.84 359    LR     LR     11 00 58.3
      comp=Z,51nm,18.1s,baz=2.5,slow=38
VSU   Vasula             68.83 351c iP      P      10 29 41.3 +0.6
PZH   PanZhiHua          69.31 287    P      P      10 29 45.9 +1.6
PZH                                   pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                   pmax   pmax
      comp=Z,110nm,5.5s
KMI   Kunming            69.75 285   ⇓P      P      10 29 48.8 +1.5
KMI                                   pmax   pmax
      comp=Z,17nm,1.6s
KDJ   Kajisay            70.10 314    P      P      10 29 49.9 +0.8
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KDJ                                    IAmb    IAmb    10 29 51.1
      comp=Z,10nm,1.0s
TARG  Taragay, Kyrgy     70.14 313     P       P       10 29 49.5 -0.1
TARG                                   IAmb    IAmb    10 30 12.5
      comp=Z,4.6nm,0.8s
TKM2  Tokmak 2           70.15 315     P       P       10 29 50.8 +1.3
      SNR=8.7
USP   Ospenovka          70.34 316     P       P       10 29 51.7 +1.3
      SNR=7.2
KBK   Karagaybulak       70.64 316     P       P       10 29 53.8 +1.4
      SNR=6.2
ABKAR Akbulak array      70.70 329     P       P       10 29 53.0 +0.6
AAK   Ala-Archa          70.85 316     P       P       10 29 54.9 +1.2
      SNR=7.4
AAK   Ala-Archa          70.85 316     P       P       10 29 54.7 +1.0
AAK                                    IAmb    IAmb    10 29 55.8
      comp=Z,10nm,0.9s
AAK   Ala-Archa          70.85 316c iP         P       10 29 54.2 +0.5
AAK                                    pmax    pmax
      comp=Z,17nm,1.3s
OBN   Obninsk            70.88 345    eP       P       10 29 52.5 -0.8
OBN                                   e                10 30 16.0
OBN                                   e                10 32 31.2
OBN                                   ePPP     PPP     10 34 11.2
OBN                                    pmax    pmax
      comp=Z,33nm,1.3s
OBN                                    MLR     MLR
      comp=Z,30nm,16.0s
BELG  Belogornoye        71.28 338ceP          P       10 29 56.7 +0.9
BELG                                   pmax    pmax
      comp=Z,3.0nm,0.8s
AML   Almayashu          71.61 316     P       P       10 30 00.0 +1.5
      SNR=7.6
KK31  Karatay Array      72.13 319     P       P       10 30 01.6 +0.4
KK31                                   IAmb    IAmb    10 30 02.8
      comp=Z,9.7nm,0.9s
KKAR  Karatay Array      72.13 319     P       P       10 30 02.0 +0.9
KKAR                                   IAmb    IAmb    10 30 02.8
      comp=Z,9.7nm,0.9s
KKAR  Karatay Array      72.13 319     P       P       10 30 01.5 +0.4
MNK   Minsk              72.63 350   i P       P       10 30 04.0 +0.1
MNK                                  i                 10 30 21.2
MNK                                  i                 10 32 48.9
MNK                                  i PPP     PPP     10 34 33.0
MNK                                  i S       S       10 39 25.3 -1.3
MNK                                  i                 10 40 08.3
MNK                                  i SS      SS      10 44 05.5 +0.8
MNK                                    pmax    pmax
      comp=E,3.0nm,0.7s
MNK                                    pmax    pmax
      comp=Z,23nm,0.8s
MNK                                    pmax    pmax
      comp=N,17nm,0.7s
MNK                                    MLR     MLR
      comp=Z,50nm,14.0s
MNK                                    MLR     MLR
      comp=E,8.0nm,13.0s
MNK                                    MLR     MLR
      comp=N,36nm,12.0s
MNK   Minsk              72.63 350   i P       P       10 30 04.0 +0.1
      comp=E,3.0nm,0.7s
MNK                                  i P       P       10 30 04.0 +0.1
      comp=N,17nm,0.7s
MNK                                  i P       P       10 30 04.0 +0.1
      comp=Z,23nm,0.8s,baz=190
MNK                                  i PcP     PcP     10 30 21.2  0.0
MNK                                  i PP      PP      10 32 49.0 +4.2
MNK                                  i PPP     PPP     10 34 33.1
MNK                                  i S       S       10 39 25.4 -1.3
MNK                                  i SS      SS      10 44 05.5 +0.8
MNK                                  i SSS     SSS     10 47 28.0
MNK                                  i LQ      LQ      10 57 05.9
MNK                                  i LR      LR      11 02 37.5
MNK                                  i LRM     MLR     11 04 29.8
      comp=Z,50nm,14.1s
MNK                                  i LRM     MLR     11 04 33.4
      comp=E,8.0nm,13.4s
MNK                                  i LRM     MLR     11 04 42.4
      comp=N,36nm,12.1s
KSH   Kashi              72.75 313     P       P       10 30 09.9 +4.8
KSH                                    pP      sP      10 30 15.3 -0.1
KSH                                    sP      PcP     10 30 21.8 -0.5
KSH                                    pmax    pmax
      comp=N,23nm,1.0s
KSH                                    pmax    pmax
      comp=N,100nm,4.7s
LPSR  Galich'ya Gora     72.89 343    eP       P       10 30 04.9 -0.6
LPSR                                   pmax    pmax
      comp=Z,10.0nm,1.1s
VRH   Novokhopyorsk      73.69 341    eP       P       10 30 10.2  0.0
VRH                                    pmax    pmax
      comp=Z,20nm,1.2s
VORR  Voronezh           73.73 342    eP       P       10 30 17.7 +7.3
VORR                                   pmax    pmax
      comp=Z,40nm,0.3s
VSR   Storozhevoye       74.17 342    eP       P       10 30 13.2 +0.1
VSR                                    pmax    pmax
      comp=Z,20nm,1.3s
VORD  Divnogorie         74.39 342    eP       P       10 30 13.9 -0.4
VORD                                   pmax    pmax
      comp=Z,10.0nm,0.6s
BTK   Batken             74.54 317     P       P       10 30 16.3 +0.8
GAR   Garm               75.64 316     P       P       10 30 22.8 +0.9
AKASG Malin Array Be     76.21 348     P       P       10 30 24.7 -0.1
      comp=Z,2.2nm,0.4s,baz=15,slow=5.7,SNR=24
      comp=Z,2.2nm,0.4s
AKASG Malin Array Be     76.21 348     IAmb    IAmb    10 30 26.0
      comp=Z,7.7nm,1.3s
AKBB  Malin Array Si     76.21 348     P       P       10 30 24.6 -0.2
AKBB                                   IAmb    IAmb    10 30 25.8
      comp=Z,12nm,0.9s
AKBB  Malin Array Si     76.21 348⇓iP          P       10 30 25.1 +0.3
AKBB                                   pmax    pmax
      comp=Z,15nm,1.0s
CHGR  Chuyangaron        76.41 317     P       P       10 30 27.2 +0.9
CLL   Collm              76.69 359   i P       P       10 30 29.2 +1.7
CLL                                    pmax    pmax
      comp=Z,10.0nm,1.1s
CLL   Collm              76.69 359   i P       P       10 30 29.2 +1.7
      comp=Z,10.0nm,1.1s
CMAR  Chiang Mai Arr     77.11 283     P       P       10 30 30.9 +0.6
      comp=Z,14nm,1.0s,baz=26,slow=6.3,SNR=48
CMAR                                   LR      LR      11 08 00.8
      comp=Z,91nm,18.9s,baz=115,slow=38
      comp=Z,14nm,1.0s
CMAR  Chiang Mai Arr     77.11 283     P       P       10 30 30.6 +0.3
CMAR  Chiang Mai Arr     77.11 283   i P       P       10 30 31.8 +1.4
CMAR                                   pmax    pmax
      comp=Z,14nm,1.0s
BRG   Berggiesshubel     77.12 358    eP       P       10 30 31.5 +1.5
BRG                                    Amp             10 30 33.0
      comp=Z,13nm,1.3s
BRG   Berggiesshubel     77.12 358    eP       P       10 30 31.4 +1.5
BRG                                    pmax    pmax
      comp=Z,13nm,1.3s
DZM   Mont Dzumac        77.27 204     LR      LR      11 00 25.8
      comp=Z,105nm,18.5s,baz=342,slow=32
MEM   Membach            77.30   4    dP       P       10 30 33.2 +2.3
BTNL  Ternell            77.33   3    dP       P       10 30 33.1 +2.0
CHVC  Chvalec            77.35 357    eP       P       10 30 33.2 +1.9
OSTC  Ostas              77.38 357    eP       P       10 30 33.6 +2.2
OJC   Ojcow              77.55 355     P       P       10 30 33.5 +1.1
BMRD  Maredsous          77.55   4    dP       P       10 30 34.5 +2.1
BHOU  Houvegnez          77.55   4    dP       P       10 30 34.1 +1.7
DPC   Dobruska-Polom     77.58 357    eP       P       10 30 33.9 +1.3
DPC   Dobruska-Polom     77.58 357    eP       P       10 30 33.9 +1.3
RCHB  Rochefort          77.72   4    dP       P       10 30 34.8 +1.6
DOU   Dourbes            77.75   5    dP       P       10 30 35.0 +1.6
KWP   Kalwaria Pacla     77.93 353     P       P       10 30 35.2 +0.7
PRU   Pruhonice          77.99 358    eP       P       10 30 36.9 +2.1
PRU   Pruhonice          77.99 358    eP       P       10 30 36.9 +2.1
MORC  Moravsky Berou     78.10 356    ⇑P       P       10 30 36.6 +1.1
MORC  Moravsky Berou     78.10 356     P       P       10 30 36.6 +1.1
MORC                                   IAmb    IAmb    10 30 38.1
      comp=Z,14nm,1.2s
MORC  Moravsky Berou     78.10 356    eP       P       10 30 36.4 +0.9
MAUC  Maruska            78.50 356    eP       P       10 30 40.1 +2.4
VRAC  Vranov             78.61 357    ⇑P       P       10 30 39.8 +1.6
VRAC  Vranov             78.61 357    eP       P       10 30 39.5 +1.2
LANS  Liptovska Anna     78.63 355    eP       P       10 30 41.0 +2.6
LANS                                   pmax    pmax
      comp=Z,13nm,1.2s
LANS  Liptovska Anna     78.63 355    eP       P       10 30 41.0 +2.6
SORM  Soroca             78.84 349    ⇑P       P       10 30 40.4 +0.9
KRUC  Moravsky           78.86 357    eP       P       10 30 41.2 +1.6
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KHC   Kasperske Hory     78.87 359     P       P       10 30 40.6 +0.9
KHC   Kasperske Hory     78.87 359c iP         P       10 30 41.3 +1.6
KHC                                    pmax    pmax
      comp=Z,38nm,1.3s
KHC   Kasperske Hory     78.87 359    eP       P       10 30 41.6 +1.9
JAVC  Velka Javorina     79.02 356    eP       P       10 30 42.8 +2.2
GEC2  GERESS Array S     79.15 358     P       P       10 30 43.0 +1.7
GEC2                                   IAmb    IAmb    10 30 43.9
      comp=Z,7.8nm,1.0s
GERES GERESS Array B     79.15 358     P       P       10 30 41.6 +0.2
      comp=Z,2.9nm,0.9s,baz=336,slow=2.9,SNR=17
      comp=Z,2.9nm,0.9s
GERES GERESS Array B     79.15 358     P       P       10 30 42.3 +1.0
CKRC  Cesky Krumlov      79.16 358    eP       P       10 30 43.5 +2.2
GOF   Gofitskoye         79.22 338⇑eP          P       10 30 43.8 +2.1
VYHS  Vyhne              79.32 355    eP       P       10 30 44.3 +2.1
VYHS                                   pmax    pmax
      comp=Z,10.0nm,1.1s
VYHS  Vyhne              79.32 355    eP       P       10 30 44.3 +2.1
SMOL  Smolenice          79.37 356    eP       P       10 30 44.9 +2.5
SMOL                                   pmax    pmax
      comp=Z,11nm,1.2s
SMOL  Smolenice          79.37 356    eP       P       10 30 44.9 +2.5
MODS  Modra-Piesok       79.52 356    eP       P       10 30 46.1 +2.8
MODS  Modra-Piesok       79.52 356    eP       P       10 30 46.1 +2.8
BUR08 Bucovina Ar. S     79.68 351     P       P       10 30 44.9 +0.6
BUR08                                  IAmb    IAmb    10 30 47.3
      comp=Z,5.4nm,1.1s
CLF   Chambon-Foret      79.68   6     P       P       10 30 44.6 +0.6
ZST   Bratislava         79.70 356    eP       P       10 30 46.5 +2.3
ZST                                    pmax    pmax
      comp=Z,48nm,1.0s
ZST   Bratislava         79.70 356    eP       P       10 30 46.5 +2.3
BURAR Bucovina Array     79.71 351    ⇑P       P       10 30 46.0 +1.6
BURAR Bucovina Array     79.71 351     P       P       10 30 45.0 +0.6
BURAR                                  IAmb    IAmb    10 30 46.7
      comp=Z,4.6nm,0.9s
ECH   Echery             79.73   3     P       P       10 30 44.9 +0.5
ECH                                    IAmb    IAmb    10 30 47.5
      comp=Z,12nm,1.0s
PSZ   Piszkesteto        79.83 354     P       P       10 30 45.9 +0.8
PSZ   Piszkesteto        79.83 354     P       P       10 30 45.9 +0.8
KBL   Kabul              79.95 315     P       P       10 30 46.4 +0.3
KBL                                    IAmb    IAmb    10 30 47.7
      comp=Z,14nm,0.9s
CONA  Conrad Observa     80.01 357   i P       P       10 30 48.1 +2.1
      comp=Z,22nm,1.1s,SNR=13
MOA   Molln              80.14 358    eP       P       10 30 48.5 +1.9
      comp=Z,8.4nm,1.4s
RONA  Rosalia, Austr     80.23 357    eP       P       10 30 49.4 +2.3
BIZ   Bicaz              80.28 350    ⇑P       P       10 30 49.3 +1.9
BIOA  Bad Ischl, Aus     80.31 359    eP       P       10 30 50.0 +2.5
KIV   Kislovodsk         80.35 338    ⇑P       P       10 30 48.4 +0.4
KIV   Kislovodsk         80.35 338     P       P       10 30 49.2 +1.3
KIV   Kislovodsk         80.35 338    eP       P       10 30 49.9 +2.0
KIV                                    pmax    pmax
      comp=Z,17nm,1.1s
CSKK  Cskako             80.48 355     P       P       10 30 50.2 +1.7
RETA  Reutte             80.53   0    eP       P       10 30 51.0 +2.2
      comp=Z,6.9nm,0.9s
NCK   Nalchik            80.56 337⇑eP          P       10 30 50.9 +1.9
NCK                                    pmax    pmax
      comp=Z,45nm,0.6s
ANN   Anapa              80.66 342    eP       P       10 30 46.7 -2.7
ANN                                   e*PP     sP      10 30 58.7 -1.1
ANN                                   eS       S       10 40 50.2 -4.5
ANN                                    pmax    pmax
      comp=Z,110nm,1.7s
MOTA  Moosalm            80.67   0   i P       P       10 30 51.7 +2.0
      comp=Z,21nm,1.1s,SNR=9.3
WATA  Walderalm          80.68 360    eP       P       10 30 52.2 +2.5
      comp=Z,24nm,1.3s
ARSA  Arzberg            80.70 357   i P       P       10 30 52.1 +2.4
      comp=Z,14nm,1.1s,SNR=6.0
MPLH  Magyarpolny        80.71 356     P       P       10 30 49.6 -0.1
DAVA  Damuels            80.72   1    eP       P       10 30 52.4 +2.4
      comp=Z,0.1nm,0.2s
WTTA  Wattenberg         80.75 360   i P       P       10 30 52.2 +2.1
      comp=Z,19nm,1.1s,SNR=6.6
DRGR                     80.75 352    ⇓P       P       10 30 51.4 +1.4
DR12  Loma Pena Alta     80.78  71     P       P       10 30 52.5 +1.9
SQTA  Sankt Quirin       80.79   0   i P       P       10 30 52.6 +2.3
      comp=Z,24nm,1.1s,SNR=7.4
KBA   Koelnbreinsper     80.92 359   i P       P       10 30 53.7 +2.7
      comp=Z,40nm,1.1s,SNR=23
FETA  Feichten           80.99   0   i P       P       10 30 53.8 +2.4
      comp=Z,22nm,1.0s,SNR=12
ZEI   Tsey               81.16 336    eP       P       10 30 53.1 +0.7
ZEI                                    pmax    pmax
      comp=Z,10.0nm,1.4s
DAVOX Davos/Dischmat     81.22   1     LR      LR      11 06 28.8
      comp=Z,34nm,21.2s,baz=76,slow=35
ABTA  Abfaltersbach      81.26 359   i P       P       10 30 54.8 +2.0
      comp=Z,20nm,1.2s,SNR=9.1
SOKA  Soboth             81.29 358   i P       P       10 30 54.6 +1.7
      comp=Z,29nm,1.2s,SNR=22
GEYT  Alibeck            81.33 324     P       P       10 30 53.4 +0.2
      comp=Z,12nm,0.9s,baz=299,slow=3.1,SNR=15
      comp=Z,12nm,0.9s
GEYT  Alibeck            81.33 324     P       P       10 30 54.6 +1.4
GYA0B ALIBECK ARRAY      81.33 324     P       P       10 30 54.6 +1.4
COVR  Voineasa-Covas     81.35 350    ⇑P       P       10 30 55.3 +2.1
MYKA  Terra Mystica      81.37 358    eP       P       10 30 55.2 +1.9
      comp=Z,0.9nm,0.5s
OBKA  Obir               81.47 358   i P       P       10 30 56.0 +2.1
      comp=Z,8.9nm,1.0s,SNR=5.7
TUE   Stuetta            81.53   1     P       P       10 30 56.3 +2.0
MLR   Muntele Rosu       81.73 350    ⇑P       P       10 30 57.1 +1.8
MLR   Muntele Rosu       81.73 350     LR      LR      11 09 52.4
      comp=Z,90nm,20.5s,baz=52,slow=38
MLR   Muntele Rosu       81.73 350     P       P       10 30 56.6 +1.3
MLR                                    IAmb    IAmb    10 30 58.5
      comp=Z,9.9nm,1.1s
KOVH  Kovagotottos       81.76 355     P       P       10 30 54.7 -0.6
CFR   Carcaliu           81.78 348    ⇑P       P       10 30 56.4 +1.0
VOIR                     81.88 350    ⇑P       P       10 30 57.9 +1.8
CTI   Castel Tesino      81.97 360     P       P       10 30 57.5 +1.0
CTI                                    IAmb    IAmb    10 30 58.7
      comp=Z,12nm,1.2s
BZS   Buzias             82.01 353    ⇑P       P       10 30 58.1 +1.5
TPGR  Topolog            82.06 348    ⇑P       P       10 30 57.9 +1.0
GZR   Gura Zlata         82.14 352    ⇑P       P       10 30 58.9 +1.6
TIRR  Tirgusor           82.45 348    ⇑P       P       10 30 59.5 +0.6
SSB   Saint Sauveur      82.55   5     P       P       10 31 00.3 +0.8
SSB                                    IAmb    IAmb    10 31 02.5
      comp=Z,8.5nm,1.0s
TEOL  Teolo              82.65 360     P       P       10 31 01.3 +1.3
HERR  Herculane          82.67 352    ⇑P       P       10 31 01.4 +1.3
BNI   Bardonecchia       82.88   3     P       P       10 31 02.8 +1.5
HRA   Herat              82.91 320     P       P       10 31 02.3 +0.6
HRA                                    IAmb    IAmb    10 31 03.6
      comp=Z,9.8nm,1.1s
GNI   Garni              83.43 335     LR      LR      11 12 53.9
      comp=Z,53nm,20.9s,baz=12,slow=39
DIVS  Divibare           83.63 354     P       P       10 31 06.4 +1.3
DIVS                                   IAmb    IAmb    10 31 07.2
      comp=Z,6.9nm,1.1s
KTUT  Trabzon            83.83 339    ⇑P       P       10 31 08.8 +2.7
DIKM  Dikmen             84.11 342    ⇑P       P       10 31 09.9 +2.3
OSSC  Osservatorio P     84.49   0     P       P       10 31 10.3 +0.8
MURB  Monte Urbino       84.75 359     P       P       10 31 12.0 +1.1
NRCA  Norcia             85.17 359     P       P       10 31 14.5 +1.5
PDG   Podgorica          85.34 354    ⇑P       P       10 31 15.4 +1.7
PDG   Podgorica          85.34 354     P       P       10 31 14.4 +0.7
RDO   Rodhopi            86.07 349     P       P       10 31 19.0 +1.6
BR131 Keskin Array S     86.28 343     P       P       10 31 20.4 +1.8
BRTR  Keskin Array B     86.28 343     P       P       10 31 18.9 +0.3
      comp=Z,5.4nm,0.9s,baz=46,slow=3.8,SNR=17
      comp=Z,5.4nm,0.9s
BRTR  Keskin Array B     86.28 343   i P       P       10 31 21.0 +2.4
BRTR                                   pmax    pmax
      comp=Z,6.0nm,0.9s
BORA  Eskisehir          86.66 345     P       P       10 31 21.3 +0.9
ESBB  Sonseca Array      87.36  12     P       P       10 31 24.5 +0.7
ESBB                                   IAmb    IAmb    10 31 25.9
      comp=Z,4.7nm,1.0s
ESDC  Sonseca Array      87.36  12     P       P       10 31 22.3 -1.5
      comp=Z,3.5nm,0.9s,baz=346,slow=4.6,SNR=20
ESDC                                   LR      LR      11 13 21.8
      comp=Z,45nm,18.9s,baz=337,slow=38
      comp=Z,3.5nm,0.9s
WRA   Warramunga Arr     87.40 232     P       P       10 31 22.4 -1.6
      comp=Z,1.0nm,0.8s,baz=36,slow=5.9,SNR=9.0
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr     87.40 232   i P       P       10 31 23.6 -0.4
```

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WRA                                    pmax    pmax
      comp=Z,1.0nm,0.8s
ASAR  Alice Springs      90.78 231     P       P       10 31 38.1 -1.7
      comp=Z,2.3nm,0.8s,baz=34,slow=5.3,SNR=23
      comp=Z,2.3nm,0.8s
ASAR  Alice Springs      90.78 231     P       P       10 31 39.7 -0.2
MMAI  Mount Meron Ar     92.44 340     LR      LR      11 17 52.0
      comp=Z,41nm,18.0s,baz=228,slow=38
TORD  Torodi Ar. Bea    114.22  10     PKP     PKPdf   10 37 16.7 +0.2
      comp=Z,0.6nm,0.9s,baz=318,slow=1.9,SNR=2.4
```

BJI ***17*** *10:34:17.3±0.0, 11°.83N×144°.06E, h27km, mb4.4/23, mB4.9/15, Ms4.3/5, Ms7 4.1/5*

IDC ***17*** *10:34:17.9±0.4, 12°.09N×143°.45E, h0km, mb4.4/26, mbtmp4.4/29, ML4.6/3, MS3.7/31, Error ellipse: s-maj=17.2km s-min=10.3km az=83.0*

NEIC ***17*** *10:34:21.1±1.3, 12°.04N±0°.06×143°.48E±0°.07, h10km±1km, mb4.8/140, Error ellipse: s-maj=15.7km s-min=3.9km az=313.0*

GCMT ***17*** *10:34:22.1±0.3, 12°.12N±0°.03×143°.39E±0°.01, h17km±1km, MW4.9/96, Moment Tensor Solution. s22,c26; s96,c129; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.47±.17; Mθθ-0.06±.09; Mφφ2.53±.11; Mrθ1.41±.31; Mθφ-0.39±.06; Mφr0.12±.21; Best double couple: M0 2.86000×10¹⁶ NP1:φs194.00000°, δ49.00000°, λ-56.00000°. NP2: φs328.00000°, δ51.00000°, λ-123.00000°. Principal axes: T 2.5880, Plg1.0000°, Azm81.0000°; N 0.5480, Plg25.0000°, Azm351.0000°; P -3.1320, Plg65.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***17*** *10:34:24.7±0.9, 12°N±5°×14°4E±°, h44km±11km, M4.9/24, mB5.4/5, mb5.0/24, MLv4.8/1, Mw(mB)4.8/5*

ISC 17 10:34:22.4±0.3**, 12°.05N**±0°.05×**143°.47E**±0°.06**, h25**km**, n342,** σ1ˢ**05**/319**, mb4.8**/102**, MS3.9**/30**, 9C-25D, Fault plane solution: NP1:**φs342.03574°**,**δ48.07863°**,**λ-91.39278°. **NP2:**φs164.11990°**,**δ41.94022°**,**λ-88.44941°. **Principal axes:** T Plg3.0697°, Azm73.0220°**;** N Plg1.0363°, Azm342.9664°**;** P Plg86.7598°, Azm234.3330°**; South of Mariana Islands**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                       Op      ISC     h  m  s     ISC
GUMO  Guam                2.05  41     Pn      Pn      10 34 55.4 +0.1
      665nm,0.3s,baz=222,slow=2.0,SNR=402
GUMO                                   Sn      Sn      10 35 20.3 +0.2
      712nm,0.3s,baz=159,slow=22,SNR=27
      2µm,0.3s
GUMO  Guam                2.05  41             Pn      10 34 55.8 +0.5
GUMO  Guam                2.05  41     P       Pn      10 34 56.2 +0.9
PATS  Pohnpei            15.52 108     Pn      Pn      10 37 58.4 -1.4
SIJI  Sorong             17.65 224     P       Pn      10 38 24.3 -2.5
      0.9nm,0.3s,baz=358,slow=24,SNR=1.8
SIJI                                   LR      LR      10 43 51.4
      comp=Z,408nm,19.1s,baz=58,slow=32
      3.7nm,0.3s
RABL  Rabaul             18.30 151     P       Pn      10 38 35.9 +1.1
DAV   Davao City (W)     18.32 256     LR      LR      10 45 55.9
      comp=Z,111nm,18.9s,baz=90,slow=38
KRVT  Keravat (AS076     18.34 152     P       P       10 38 34.3 -0.9
      1.1nm,0.3s,baz=290,slow=20,SNR=2.3
      7.7nm,0.6s
LBMI  Labuha             20.26 233     P       P       10 38 55.8 -0.4
      688nm36nm,2.5s
JOW   Kunigami           20.50 318     P       P       10 38 57.4 -1.4
      11nm,0.7s,baz=135,slow=15,SNR=2.3
      11nm,0.7s
JOW   Kunigami           20.50 318     P       Pn      10 39 00.2 -0.7
MSAI  Masohi             21.05 224     P       P       10 39 09.2 +4.5
      7.4nm,0.9s
PMG   Port Moresby       21.63 170     P       P       10 39 08.7 -2.2
      17nm,0.7s,baz=28,slow=9.6,SNR=5.2
PMG                                    LR      LR      10 47 49.6
      comp=Z,114nm,18.4s,baz=178,slow=37
      17nm,0.7s
PMG   Port Moresby       21.63 170     P       P       10 39 09.7 -1.2
PMG                                    IAmb    IAmb    10 39 22.4
      comp=Z,31nm,1.0s
AAI   Ambon              21.80 225     P       P       10 39 15.1 +2.3
      comp=Z,82nm,0.8s
JSU   Suzuyama           22.79 330     P       P       10 39 24.1 +0.9
JSU                                    IAmb    IAmb    10 39 27.0
      comp=Z,40nm,1.4s
GTOI  Gorontalo          23.25 242     P       P       10 39 27.4 -0.8
      comp=Z,227nmcomp=Z,22nm,1.1s
WAKE  Wake Island        23.43  69     P       P       10 39 31.9 +2.0
H11N1 WAKE ISLAND Hy     23.76  68     T       T       11 04 19.6
      baz=255,slow=75,SNR=104
H11N2 WAKE ISLAND Hy     23.77  68     T       T       11 04 20.9
      baz=255,slow=75,SNR=108
H11N3 WAKE ISLAND Hy     23.78  68     T       T       11 04 25.1
      baz=255,slow=75,SNR=73
MRSI  Marisa             24.26 243     P       P       10 39 39.7 +1.9
      comp=Z,3µmcomp=Z,77nm,0.7s
LUWI  Luwuk              24.33 239     P       P       10 39 38.3 -0.2
LUWI  Luwuk              24.33 239     P       P       10 39 36.4 -2.0
      comp=Z,2µmcomp=Z,69nm,0.8s
LUWI  Luwuk              24.33 239     P       P       10 39 38.2 -0.2
SSLB  Suanglung          24.36 302     P       P       10 39 39.5 +0.8
SSLB                                   IAmb    IAmb    10 39 43.5
      comp=Z,24nm,0.8s
JHS   Saijyo             24.71 339     P       P       10 39 42.9 +1.2
MJAR  Matsushiro Arr     24.84 350     P       P       10 39 39.7 -3.2
      comp=Z,1.9nm,0.9s,baz=126,slow=7.7,SNR=6.3
MJAR                                   PcP     PcP     10 43 19.8 +1.1
      comp=Z,0.8nm,0.3s,baz=144,slow=4.7,SNR=3.1
      comp=Z,1.9nm,0.9s
MJAR  Matsushiro Arr     24.84 350     P       P       10 39 41.2 -1.7
MAJO  Matsushiro         24.85 350     P       P       10 39 42.5 -0.4
MJB9  Matsu-Tunnel       24.85 350     P       P       10 39 42.8 -0.2
TOLI2 Tolitoli           24.99 246     P       P       10 39 42.8 -1.7
MYLDM Lahad Datu         25.60 257     P       P       10 39 50.0  0.0
JMM   Marumori           25.82 355     P       P       10 39 50.5 -1.2
JMM                                    IAmb    IAmb    10 39 52.0
      comp=Z,41nm,1.3s
COEN  Coen               25.84 181     P       P       10 39 51.2 -0.8
COEN                                   IAmb    IAmb    10 39 54.5
      comp=Z,13nm,0.8s
KDU   Kakadu             26.89 204     P       P       10 40 01.6 +0.1
MTN   Manton Dam         27.59 207     P       P       10 40 07.8 -0.1
MTN                                    IAmb    IAmb    10 40 08.8
      comp=Z,20nm,0.9s
KSRS  Korea Array        28.89 334     P       P       10 40 16.1 -3.0
      comp=Z,0.5nm,0.7s,baz=149,slow=9.9,SNR=4.4
KSRS                                   PcP     PcP     10 43 29.5 +1.3
      comp=Z,0.6nm,0.5s,baz=143,slow=2.5,SNR=5.5
      comp=Z,0.5nm,0.7s
HKPS  Hong Kong Po S     29.76 294     P       P       10 40 27.1 -0.1
NJ2   Nanjing            30.15 315    eP       P       10 40 28.0 -2.5
NJ2                                    pmax    pmax
      comp=Z,10.0nm,0.6s
KNRA  Kununurra          31.16 208     P       P       10 40 38.7 -0.8
KNRA  Kununurra          31.16 208     P       P       10 40 39.4 -0.1
ASAJ  Asahikawa          31.96 359     LR      LR      10 55 08.2
      comp=Z,70nm,20.3s,baz=161,slow=39
CTA   Charters Tower     32.05 175     P       P       10 40 46.1 -1.3
      comp=Z,10nm,0.8s,baz=322,slow=10,SNR=7.1
      comp=Z,10nm,0.8s
CTAO  Charters Tower     32.05 175     P       P       10 40 47.1 -0.2
CTAO                                   IAmb    IAmb    10 40 49.2
      comp=Z,14nm,1.0s
SBUM  Sibu               32.40 255     P       P       10 40 47.9 -2.6
QIS   Mount Isa          32.62 187     P       P       10 40 53.3 +0.9
WB0   Warramunga Arr     32.85 196     P       P       10 40 54.2 -0.2
WR0   Warramunga Arr     33.00 196     P       P       10 40 56.0 +0.3
WR0                                    IAmb    IAmb    10 40 56.8
      comp=Z,16nm,0.8s
WRAB  Tennant Creek      33.02 196     P       P       10 40 56.2 +0.3
WRAB  Tennant Creek      33.02 196     P       P       10 40 56.8 +0.9
WB2   Warramunga Arr     33.03 196     P       P       10 40 56.2 +0.3
WRA   Warramunga Arr     33.04 196     P       P       10 40 55.8 -0.2
      comp=Z,22nm,0.8s,baz=20,slow=9.8,SNR=75
WRA                                    LR      LR      10 54 38.9
      comp=Z,221nm,18.7s,baz=166,slow=37
      comp=Z,22nm,0.8s
WRA   Warramunga Arr     33.04 196     P       P       10 40 56.0  0.0
USRK  Ussuriysk Ar.      33.53 345     P       P       10 40 58.6 -1.4
      comp=Z,1.1nm,0.6s,baz=118,slow=25,SNR=2.9
      comp=Z,1.1nm,0.6s
RK1H  Rockhampton Ha     35.88 169     P       P       10 41 21.4 +0.9
      comp=Z,20nm,0.9s
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HNS   HongShan         36.06 319 ⇑P     P      10 41 22.9 +0.9
AS31  Alice Springs    36.71 195  P     P      10 41 27.9 +0.2
ASAR  Alice Springs    36.71 195  P     P      10 41 27.6  -0.1
      comp=Z,4.6nm,0.7s,baz=17,slow=12,SNR=111
      comp=Z,4.6nm,0.7s
ASAR  Alice Springs    36.71 195  P     P      10 41 27.9 +0.2
EIDS  Eidsvold         37.92 169  P     P      10 41 37.1  -0.7
EIDS                              IAmb  IAmb   10 41 38.6
      comp=Z,12nm,0.7s
EIDS  Eidsvold         37.92 169  P     P      10 41 39.5 +1.6
QLP   Quilpie          38.41 179  P     P      10 41 43.3 +1.4
XLT   XiLinHaoTe       39.54 329 eP     P      10 41 53.8 +2.4
XLT                               pP    sP     10 41 59.1  -1.5
XLT                               pmax  pmax
      comp=Z,10.0nm,1.1s
XLT                               pmax  pmax
      comp=Z,130nm,4.1s
INKA  Innaminka        39.64 184  P     P      10 41 53.1 +0.8
      comp=Z,17nm,1.9s
WRKA  Warakurna        39.72 202  P     P      10 41 53.6 +0.5
      comp=Z,27nm,1.0s
HHC   Hu-ho-hao-te     40.09 321 eP     P      10 41 58.0 +2.0
HHC                               S     S      10 48 04.4 +3.5
HHC                               pmax  pmax
      comp=Z,13nm,1.0s
HHC                               pmax  pmax
      comp=Z,120nm,5.5s
HHC                               LR    LR
      comp=Z,280nm,12.7s
HHC                               LR    LR
      comp=Z,380nm,15.2s
LEM   Lembang          40.28 244  LR    LR     11 02 16.7
      comp=Z,103nm,18.1s,baz=20,slow=42
OOD   Oodnadatta       40.32 191  P     P      10 41 58.0 +0.1
PSA00 Pilbara Seismi   40.67 215  P     P      10 42 01.3 +0.3
PSA00 Pilbara Seismi   40.67 215  P     P      10 42 01.2 +0.2
PSA00                             IAmb  IAmb   10 42 02.3
      comp=Z,6.9nm,1.0s
PSA00 Pilbara Seismi   40.67 215  P     P      10 42 01.8 +0.8
DZM   Mont Dzumac      40.71 146  P     P      10 42 01.7 +0.3
      comp=Z,22nm,0.6s,baz=295,slow=4.4,SNR=39
      comp=Z,22nm,0.6s
DZM   Mont Dzumac      40.71 146 eP     P      10 42 01.7 +0.3
      comp=Z,49nm,0.9s
DZM   Mont Dzumac      40.71 146  P     P      10 42 02.0 +0.7
DZM                               IAmb  IAmb   10 42 03.7
      comp=Z,24nm,0.7s
DZM   Mont Dzumac      40.71 146  P     P      10 42 03.0 +1.6
      comp=Z,33nm,1.0s
OUENC Ouen Island, N   41.21 146  P     P      10 42 05.2  -0.1
OUENC                             IAmb  IAmb   10 42 13.9
      comp=Z,35nm,1.4s
PINNC Pines Island,    41.70 146  P     P      10 42 09.2  -0.1
PZH   PanZhiHua        41.73 296  P     P      10 42 12.6 +2.7
PZH                               pmax  pmax
      comp=Z,8.0nm,0.7s
PZH                               pmax  pmax
      comp=Z,100nm,4.7s
PETK  Petropavlovsk-   42.51  13  P     P      10 42 14.8  -0.8
      comp=Z,1.5nm,0.8s,baz=187,slow=5.9,SNR=1.1
PETK                              LR    LR     10 57 09.8
      comp=Z,94nm,21.1s,baz=187,slow=32
      comp=Z,1.5nm,0.8s
IPM   Ipoh             42.63 263  P     P      10 42 17.5 +0.3
KULM  Kulim            42.82 265  P     P      10 42 19.8 +1.1
ARMA  Armidale         42.94 170  P     P      10 42 20.2 +0.7
ARMA                              IAmb  IAmb   10 42 20.7
      comp=Z,21nm,1.1s
ARMA  Armidale         42.94 170  P     P      10 42 20.4 +0.9
SRIT  Nakonsritamara   43.26 270  P     P      10 42 22.3   0.0
SRIT                              IAmb  IAmb   10 42 30.9
      comp=Z,15nm,0.7s
CMAR  Chiang Mai Arr   43.35 284  P     P      10 42 22.5  -0.4
      comp=Z,0.9nm,0.4s,baz=3.2,slow=12,SNR=1.7
CMAR                              LR    LR     10 59 33.7
      comp=Z,61nm,20.0s,baz=110,slow=35
      comp=Z,0.9nm,0.4s
STKA  Stephens Creek   43.71 182  P     P      10 42 25.4  -0.1
      comp=Z,5.2nm,0.6s,baz=353,slow=7.4,SNR=15
      comp=Z,5.2nm,0.6s
STKA  Stephens Creek   43.71 182  P     P      10 42 25.2  -0.4
PSI   Prapat           45.06 262  LR    LR     11 02 53.1
      comp=Z,62nm,20.0s,baz=65,slow=38
FORT  Forrest          45.09 199  P     P      10 42 37.5 +0.9
BBOO  Buckleboo        45.16 189  P     P      10 42 37.4 +0.2
ULN   Ulaanbaatar      46.89 327  P     P      10 42 51.2 +0.4
SONM  Songino Array    47.23 326  P     P      10 42 53.3  -0.1
      comp=Z,0.9nm,0.6s,baz=149,slow=8.6,SNR=5.5
      comp=Z,0.9nm,0.6s
SONM  Songino Array    47.23 326  P     P      10 42 52.6  -0.8
SHEM  Shemya Is, Ala   47.42  25  LR    LR     11 00 15.3
      comp=Z,106nm,21.9s,baz=306,slow=33
MA2   Magadan          47.75   5  LR    LR     11 01 21.4
      comp=Z,67nm,21.8s,baz=109,slow=34
MORW  Morawa           48.71 212  P     P      10 43 05.5 +0.5
TOO   Toolangi         49.39 178  P     P      10 43 10.4 +0.4
YAK   Yakutsk          50.89 352  LR    LR     11 03 20.5
      comp=Z,53nm,20.6s,baz=88,slow=34
ADK   Adak             51.08  31  P     P      10 43 22.7   0.0
AFI   Afiamalu         51.31 119  P     P      10 43 23.7  -1.4
      comp=Z,28nm,1.0s,baz=352,slow=10,SNR=2.8
AFI                               LR    LR     11 02 22.1
      comp=Z,90nm,18.9s,baz=204,slow=33
      comp=Z,28nm,1.0s
TAU   Tasmania Unive   54.80 177  P     P      10 43 51.0 +0.8
RAO   Raoul Island     55.45 139  LR    LR     11 05 05.0
      comp=Z,130nm,18.8s,baz=334,slow=33
WMQ   Urumqi           57.23 315 eP     P      10 44 11.4 +3.6
UNV   Unalaska Valle   57.35  33  P     P      10 44 08.5 +0.1
LTZ   Lake Taylor      60.61 156  P     P      10 44 32.4 +1.3
RPZ   Rata Peaks       60.93 157  P     P      10 44 34.5 +1.3
SDPT  Sand Point       61.17  33  P     P      10 44 35.2 +0.5
MLZ   Mavora Lakes     61.33 160  P     P      10 44 36.9 +0.9
MK31  Makanchi Array   61.66 317  P     P      10 44 38.0  -0.3
MKAR  Makanchi Array   61.66 317  P     P      10 44 38.3   0.0
      comp=Z,2.3nm,0.9s,baz=99,slow=7.7,SNR=11
MKAR                              PcP   PcP    10 45 17.1  -2.5
      comp=Z,1.9nm,0.9s,baz=116,slow=7.3,SNR=4.3
      comp=Z,2.3nm,0.9s
MKAR  Makanchi Array   61.66 317  P     P      10 44 39.0 +0.6
ZAA0  Zalesovo Array   62.09 325  P     P      10 44 40.7  -0.3
ZALV  Zalesovo Beam    62.09 325  P     P      10 44 40.0  -1.0
      comp=Z,1.3nm,0.3s,baz=98,slow=8.1,SNR=5.0
      comp=Z,1.3nm,0.3s
ZALV  Zalesovo Beam    62.09 325  P     P      10 44 40.9  -0.1
RAR   Rarotonga        64.80 120  LR    LR     11 08 16.7
      comp=Z,76nm,21.0s,baz=302,slow=31
KURK  Kurchatov        64.89 321  P     P      10 44 60.0 +0.4
N18K  Kilae Creek      65.38  28  P     P      10 45 03.2 +0.6
      baz=250
SVW2  Sparrevohn       65.67  28  P     P      10 45 06.2 +1.8
Q19K  Cape Douglas,    65.88  30  P     P      10 45 06.0 +0.1
      baz=252
N19K  Bonanza Creek    66.07  28  P     P      10 45 08.4 +1.3
N19K                              IAmb  IAmb   10 45 17.5
      comp=Z,5.4nm,1.0s
N19K  Bonanza Creek    66.07  28  P     P      10 45 07.2   0.0
      baz=251
KDAK  Kodiak Island    66.09  32  LR    LR     11 10 10.5
      comp=Z,46nm,21.9s,baz=264,slow=33
KDAK  Kodiak Island    66.09  32  P     P      10 45 08.0 +0.8
TTA   Tatalina         66.13  26  P     P      10 45 08.3 +0.8
TTA   Tatalina         66.13  26  P     P      10 45 06.9  -0.5
      baz=248
P19K  Oil Pt           66.30  30  P     P      10 45 09.2 +0.6
P19K  Oil Pt           66.30  30  P     P      10 45 08.1  -0.4
      baz=252
L19K  White Mountain   66.36  27  P     P      10 45 10.3 +1.4
L19K                              IAmb  IAmb   10 45 12.8
      comp=Z,10nm,1.4s
L19K  White Mountain   66.36  27  P     P      10 45 09.4 +0.4
      baz=250
M19K  Big River Lodg   66.48  27  P     P      10 45 11.5 +1.8
L20K  Farewell, AK     66.89  27  P     P      10 45 13.2 +0.9
      baz=251
HOM   Homer            67.08  30  P     P      10 45 14.6 +1.1
K20K  Telida           67.10  26  P     P      10 45 13.5  -0.1
K20K                              IAmb  IAmb   10 45 17.1
      comp=Z,7.2nm,1.1s
K20K  Telida           67.10  26  P     P      10 45 14.5 +0.9
      baz=250
NRIK  Noril'sk         67.14 341  P     P      10 45 12.4  -1.3
      comp=Z,1.5nm,0.4s,baz=123,slow=8.5,SNR=1.9
      comp=Z,1.5nm,0.4s
NRIK  Noril'sk         67.14 341  P     P      10 45 14.6 +0.9
NRIK                              IAmb  IAmb   10 45 43.4
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      comp=Z,5.1nm,0.8s
CNPM  China Poot       67.24  30  P     P      10 45 15.2 +0.6
J20K  Nowinta River    67.35  25  P     P      10 45 16.7 +1.5
J20K                              IAmb  IAmb   10 45 18.5
      comp=Z,6.2nm,1.0s
J20K  Nowinta River    67.35  25  P     P      10 45 16.0 +0.9
      baz=250
BRLK  Bradley Lake     67.48  30  P     P      10 45 15.4  -0.7
PPLA  Purkeypile       67.77  26  P     P      10 45 19.0 +1.0
PPLA                              IAmb  IAmb   10 45 45.9
      comp=Z,14nm,1.2s
PPLA  Purkeypile       67.77  26  P     P      10 45 18.7 +0.7
      baz=252
CAST  Castle Rocks     67.97  26  P     P      10 45 19.8 +0.7
CAST                              IAmb  IAmb   10 45 20.8
      comp=Z,6.0nm,0.9s
CAST  Castle Rocks     67.97  26  P     P      10 45 19.4 +0.3
      baz=252
IMAR  Indian Mountai   68.14  23  P     P      10 45 20.5 +0.4
O22K  Cooper Landing   68.22  29  P     P      10 45 21.6 +0.9
SEW   Seward           68.26  30  P     P      10 45 21.9 +1.0
RC01  Rabbit Creek A   68.37  29  P     P      10 45 21.8 +0.2
H21K  Melozitna Rive   68.39  24  P     P      10 45 23.2 +1.5
H21K  Melozitna Rive   68.39  24  P     P      10 45 22.7 +1.0
      baz=250
I21K  Tanana           68.56  24  P     P      10 45 23.3 +0.5
I21K                              IAmb  IAmb   10 45 28.4
      comp=Z,15nm,1.4s
I21K  Tanana           68.56  24  P     P      10 45 23.3 +0.5
      baz=252
BPAW  Bear Paw Mtn.    68.64  25  P     P      10 45 24.0 +0.7
BPAW                              IAmb  IAmb   10 45 24.9
      comp=Z,5.9nm,0.8s
BPAW  Bear Paw Mtn.    68.64  25  P     P      10 45 23.9 +0.6
      baz=253
TRF   Thorofare Moun   68.75  26  P     P      10 45 24.6 +0.4
      baz=254
PMR   Palmer           68.78  28  P     P      10 45 24.2 +0.1
PMR                               IAmb  IAmb   10 45 50.9
      comp=Z,5.4nm,0.8s
PMR   Palmer           68.78  28  P     P      10 45 24.0  -0.1
      baz=256
SML   Sawmill          69.20  28  P     P      10 45 27.4 +0.5
SML   Sawmill          69.20  28  P     P      10 45 26.7  -0.1
      baz=256
WAT1  Susitna Watana   69.35  27  P     P      10 45 27.9 +0.1
      baz=256
RND   Reindeer         69.36  26  P     P      10 45 28.4 +0.5
MCK   McKinley         69.41  26  P     P      10 45 27.7  -0.4
      baz=255
KK31  Karatay Array    69.44 312  P     P      10 45 29.4 +0.7
KKAR  Karatay Array    69.44 312  P     P      10 45 29.5 +0.8
GAR   Garm             69.46 307  P     P      10 45 30.1 +1.1
GAR                               IAmb  IAmb   10 45 38.6
      comp=Z,6.0nm,0.7s
M23K  Glacier View     69.48  28  P     P      10 45 28.8 +0.3
      baz=257
NEA2  Nenana           69.58  25  P     P      10 45 29.7 +0.6
      baz=254
I23K  Minto, Yukon-K   69.61  25  P     P      10 45 28.8  -0.4
I23K                              IAmb  IAmb   10 45 40.1
      comp=Z,7.1nm,0.8s
I23K  Minto, Yukon-K   69.61  25  P     P      10 45 29.9 +0.6
      baz=254
WAT6  Susitna Watana   69.65  27  P     P      10 45 29.7   0.0
      baz=256
SCM   Sheep Creek Mo   69.67  28  P     P      10 45 30.6 +0.8
      baz=257
H23K  Yukon River      69.73  24  P     P      10 45 31.1 +1.1
H23K                              IAmb  IAmb   10 45 32.2
      comp=Z,5.8nm,0.8s
H23K  Yukon River      69.73  24  P     P      10 45 30.8 +0.8
      baz=254
COLD  Coldfoot         69.88  22  P     P      10 45 32.4 +1.5
COLD                              IAmb  IAmb   10 45 33.3
      comp=Z,10nm,0.8s
COLD  Coldfoot         69.88  22  P     P      10 45 31.7 +0.8
      baz=252,SNR=14
DHY   Denali Highway   69.93  27  P     P      10 45 32.3 +0.8
DHY                               IAmb  IAmb   10 45 32.9
      comp=Z,12nm,1.4s
DHY   Denali Highway   69.93  27  P     P      10 45 31.6 +0.1
      baz=257
WRH   Wood River Hil   69.96  25  P     P      10 45 31.6 +0.2
WRH                               IAmb  IAmb   10 45 32.2
      comp=Z,6.1nm,0.8s
MDM   Murphy Dome      70.02  25  P     P      10 45 32.2 +0.4
MDM                               IAmb  IAmb   10 45 34.1
      comp=Z,4.6nm,0.7s
CCB   Clear Creek Bu   70.12  25  P     P      10 45 32.4   0.0
CCB                               IAmb  IAmb   10 45 36.5
      comp=Z,13nm,1.5s
KLU   Klutina          70.26  29  P     P      10 45 34.1 +0.7
      baz=258
BRVK  Borovoye         70.36 322  P     P      10 45 35.0 +0.9
BRVK                              IAmb  IAmb   10 45 42.9
      comp=Z,9.2nm,1.2s
H24K  Noodor Dome      70.39  24  P     P      10 45 35.3 +1.2
H24K                              IAmb  IAmb   10 45 36.2
      comp=Z,10.0nm,1.1s
H24K  Noodor Dome      70.39  24  P     P      10 45 35.0 +0.9
      baz=255,SNR=7.3
POKR  Poker Plat Res   70.39  25  P     P      10 45 34.7 +0.7
HDA   Harding Lake     70.42  26  P     P      10 45 34.1  -0.2
HDA                               IAmb  IAmb   10 45 34.7
      comp=Z,6.0nm,0.9s
HDA   Harding Lake     70.42  26  P     P      10 45 33.9  -0.3
      baz=257
TOLK  Toolik Lake Re   70.53  21  P     P      10 45 36.6 +1.7
TOLK                              IAmb  IAmb   10 45 37.3
      comp=Z,7.6nm,0.7s
TOLK  Toolik Lake Re   70.53  21  P     P      10 45 35.4 +0.5
      baz=253,SNR=11
IL31                   70.53  25  P     P      10 45 34.8  -0.1
IL31                              IAmb  IAmb   10 45 35.1
      comp=Z,6.5nm,0.8s
ILAR  Eielson Array    70.53  25  P     P      10 45 33.8  -1.2
      comp=Z,4.3nm,0.6s,baz=250,slow=6.0,SNR=61
ILAR                              LR    LR     11 14 11.7
      comp=Z,62nm,20.7s,baz=270,slow=34
      comp=Z,4.3nm,0.6s
ILAR  Eielson Array    70.53  25  P     P      10 45 34.4  -0.6
PAX   Paxson           70.76  27  P     P      10 45 37.0 +0.5
PAX                               IAmb  IAmb   10 45 37.5
      comp=Z,5.1nm,0.8s
PAX   Paxson           70.76  27  P     P      10 45 36.5 +0.1
      baz=258,SNR=5.9
HARP  HAARP            70.79  28  P     P      10 45 36.5   0.0
      baz=259
K24K  Donnelly Dome    70.79  26  P     P      10 45 36.6   0.0
      baz=258,SNR=5.0
J25K  Salcha River,    71.14  26  P     P      10 45 38.7   0.0
J25K                              IAmb  IAmb   10 45 39.3
      comp=Z,9.1nm,1.4s
J25K  Salcha River,    71.14  26  P     P      10 45 38.4  -0.3
      baz=258
RIDG  Independent Ri   71.19  26  P     P      10 45 39.8 +0.8
RIDG                              IAmb  IAmb   10 45 49.4
      comp=Z,7.0nm,0.9s
RIDG  Independent Ri   71.19  26  P     P      10 45 38.8  -0.1
      baz=259,SNR=6.3
GLB   Gilahina Butte   71.24  29  P     P      10 45 40.9 +1.5
GLB                               IAmb  IAmb   10 45 51.9
      comp=Z,17nm,1.4s
VRDI  Verde Repeater   71.38  29  P     P      10 45 41.6 +1.3
VRDI                              IAmb  IAmb   10 45 44.2
      comp=Z,12nm,1.3s
DOT   Dot Lake         71.51  27  P     P      10 45 41.9 +1.0
SCRK  Sand Creek       71.60  26  P     P      10 45 42.6 +1.0
SCRK  Sand Creek       71.60  26  P     P      10 45 41.8 +0.2
      baz=259,SNR=6.4
MCARA McCarthy VSAT    71.61  29  P     P      10 45 42.2 +0.7
MCARA                             IAmb  IAmb   10 45 43.4
      comp=Z,12nm,0.9s
MCARA McCarthy VSAT    71.61  29  P     P      10 45 41.6 +0.1
      baz=261
L26K  Log Cabin Wild   71.72  27  P     P      10 45 43.5 +1.3
L26K                              IAmb  IAmb   10 45 44.0
      comp=Z,5.8nm,0.8s
L26K  Log Cabin Wild   71.72  27  P     P      10 45 42.5 +0.3
      baz=260,SNR=5.6
ISLE  Juniper Island   71.83  30  P     P      10 45 44.7 +1.7
J26L  Joseph Creek     71.88  26  P     P      10 45 43.4 +0.2
      baz=260,SNR=14
BMAR  Burnt Mountain   72.04  23  P     P      10 45 45.7 +1.6
GRNC  Granite Creek    72.13  30  P     P      10 45 45.8 +0.8
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M27K  Edge Creek, AK   72.29  28  P     P      10 45 46.5 +0.8
M27K                              IAmb  IAmb   10 45 51.7
      comp=Z,16nm,1.5s
M27K  Edge Creek, AK   72.29  28  P     P      10 45 46.0 +0.3
      baz=262
PPT   Papeete          72.35 113  LR    LR     11 11 08.8
      comp=Z,98nm,21.9s,baz=320,slow=30
CTG   Chitna Glacier   72.36  30  P     P      10 45 46.2   0.0
      baz=263
L27K  Beaver Creek,    72.41  27  P     P      10 45 47.6 +1.3
L27K  Beaver Creek,    72.41  27  P     P      10 45 46.7 +0.4
      baz=262
BCAR  Beaver Creek A   72.43  27  P     P      10 45 47.8 +1.4
K27K  Chicken          72.44  26  P     P      10 45 47.9 +1.5
K27K  Chicken          72.44  26  P     P      10 45 47.3 +0.8
      baz=261
BVCY  Beaver Creek     72.77  28  P     P      10 45 49.6 +1.1
      baz=263
YUK3  Moose Creek      72.88  29  P     P      10 45 50.1 +0.7
      baz=263
EGAK  Eagle            72.95  26  P     P      10 45 50.5 +1.1
EGAK                              IAmb  IAmb   10 45 54.7
      comp=Z,8.4nm,1.2s
EGAK  Eagle            72.95  26  P     P      10 45 50.7 +1.3
      baz=262
DAWY  Dawson           73.62  27  P     P      10 45 54.9 +1.4
DAWY                              IAmb  IAmb   10 45 55.8
      comp=Z,8.4nm,0.9s
DAWY  Dawson           73.62  27  P     P      10 45 54.3 +0.8
      baz=264,SNR=7.1
YUK4  Talbot Arm       73.70  29  P     P      10 45 55.5 +1.4
      baz=265
YUK6  Outpost Mounta   73.80  30  P     P      10 45 55.6 +0.7
      baz=266
HYT   Haines Junctio   74.21  30  P     P      10 45 58.0 +0.8
HYT                               IAmb  IAmb   10 46 03.7
      comp=Z,13nm,1.0s
HYT   Haines Junctio   74.21  30  P     P      10 45 57.3 +0.2
      baz=266
I29M  Ogilvie Camp,    74.22  25  P     P      10 45 58.2 +1.4
I29M                              IAmb  IAmb   10 45 59.0
      comp=Z,11nm,1.1s
I29M  Ogilvie Camp,    74.22  25  P     P      10 45 58.3 +1.4
      baz=264
N30M  Aishikik Lake    74.45  29  P     P      10 45 58.7 +0.3
      baz=266
M30M  Minto, Yukon     74.66  28  P     P      10 45 59.7 +0.1
M30M                              IAmb  IAmb   10 46 05.4
      comp=Z,8.2nm,1.0s
M30M  Minto, Yukon     74.66  28  P     P      10 46 00.3 +0.7
      baz=266
EPYK  Eagle Plains     74.95  24  P     P      10 46 02.1 +0.9
EPYK                              IAmb  IAmb   10 46 06.8
      comp=Z,11nm,0.8s
EPYK  Eagle Plains     74.95  24  P     P      10 46 01.8 +0.6
      baz=266
N31M  Braeburn, Yuko   75.08  29  P     P      10 46 03.7 +1.7
      baz=268
WHY   Whitehorse       75.49  30  P     P      10 46 04.9 +0.4
      baz=269
M31M  Drury Creek, Y   75.76  29  P     P      10 46 06.5 +0.6
M31M                              IAmb  IAmb   10 46 11.8
      comp=Z,13nm,1.4s
M31M  Drury Creek, Y   75.76  29  P     P      10 46 06.8 +0.9
      baz=269
INK   Inuvik           76.30  22  P     P      10 46 09.7 +1.0
INK                               IAmb  IAmb   10 46 13.7
      comp=Z,11nm,0.9s
INK   Inuvik           76.30  22  P     P      10 46 09.1 +0.3
      baz=268
P33M  Teslin, Yukon    76.51  31  P     P      10 46 10.5 +0.2
      baz=270
ABKAR Akbulak array    76.77 318  P     P      10 46 12.1 +0.2
WRAK  Wrangell Islan   76.85  35  P     P      10 46 12.1   0.0
      baz=272
S34M  Telegraph Cree   77.45  33  P     P      10 46 16.4 +0.9
      baz=272
DLBC  Dease Lake       78.01  32  LR    LR     11 14 42.4
      comp=Z,46nm,21.1s,baz=266,slow=31
A36M  Sachs Harbour    79.03  18  P     P      10 46 23.8  -0.1
      baz=275
GEYT  Alibeck          79.07 307  P     P      10 46 25.1 +0.2
      comp=Z,2.2nm,0.7s,baz=185,slow=11,SNR=2.6
      comp=Z,2.2nm,0.7s
BBB   Bella Bella      79.62  39  LR    LR     11 15 42.5
      comp=Z,57nm,20.6s,baz=262,slow=31
C36M  Paulatuk         79.69  21  P     P      10 46 27.5  -0.1
      baz=276
WSAR  Wadi Sarin       80.66 292  LR    LR     11 26 04.5
      comp=Z,57nm,18.0s,baz=83,slow=38
D03D  Eldon            83.53  43  P     P      10 46 48.5 +0.2
      baz=281
I04A  Tendick Farm,    84.71  46  P     P      10 46 54.6 +0.1
      baz=282
YKA   Yellowknife Ar   84.84  27  P     P      10 46 54.6  -0.1
      comp=Z,2.0nm,0.4s,baz=286,slow=5.0,SNR=35
      comp=Z,2.0nm,0.4s
YBH   Yreka Blue Hor   84.91  49  LR    LR     11 18 16.5
      comp=Z,67nm,19.7s,baz=272,slow=31
J04D  Umpqua Nationa   85.04  47  P     P      10 46 56.2  -0.2
      baz=282
L04D  Klamath Falls    85.10  48  P     P      10 46 56.6  -0.1
      baz=282
G05D  Wamic, OR        85.18  45  P     P      10 46 57.3 +0.5
      baz=282
J05D  Fort Rock, OR    85.65  47  P     P      10 46 59.9 +0.5
      baz=282
PINE  Pine Mountain    85.75  46  P     P      10 47 00.4 +0.5
PINE                              IAmb  IAmb   10 47 10.5
      comp=Z,6.4nm,0.8s
B08A  Colville Reser   85.82  42  P     P      10 47 01.6 +1.6
B08A                              IAmb  IAmb   10 47 07.8
      comp=Z,11nm,1.1s
KLMR  Klimovskoe       86.25 332 eP     P      10 47 00.8  -0.9
KLMR                              AMP          10 47 03.8
      comp=Z,8.0nm,1.4s
BEKR  Beckworth        87.05  50  P     P      10 47 06.5 +0.1
BEKR                              IAmb  IAmb   10 47 14.2
      comp=Z,4.8nm,0.9s
J08A  Circle Bar Ran   87.60  46  P     P      10 47 09.2 +0.3
J08A                              IAmb  IAmb   10 47 19.1
      comp=Z,4.8nm,1.1s
WVOR  Wild Horse Val   87.71  47  P     P      10 47 10.1 +0.7
PAHR  Pah Rah Range    87.81  50  P     P      10 47 11.3 +1.3
PAHR                              IAmb  IAmb   10 47 13.3
      comp=Z,3.7nm,0.9s
BMO   Blue Mountains   88.04  45  P     P      10 47 11.3 +0.4
BMO                               IAmb  IAmb   10 47 20.9
      comp=Z,5.2nm,0.8s
YERR  Yerington        88.09  51  P     P      10 47 11.9 +0.5
YERR                              IAmb  IAmb   10 47 14.4
      comp=Z,4.2nm,1.0s
ARCES ARCESS Array B   88.12 342  P     P      10 47 10.5  -0.2
      comp=Z,3.9nm,0.7s,baz=80,slow=7.2,SNR=40
      comp=Z,3.9nm,0.7s
PKM   Mcpherson Peak   88.62  55  P     P      10 47 14.3 +0.3
      baz=284
SBC   Santa Barbara    88.81  55  P     P      10 47 14.4  -0.2
      baz=284
PLID  Pearl Lake       88.87  44  P     P      10 47 15.2 +0.2
KVN   Kaiserville      88.94  50  P     P      10 47 15.7 +0.2
KVN                               IAmb  IAmb   10 47 18.4
      comp=Z,5.6nm,0.9s
NVAR  Mina Array Bea   88.94  51  P     P      10 47 16.1 +0.6
      comp=Z,5.1nm,0.7s,baz=262,slow=5.9,SNR=43
      comp=Z,5.1nm,0.7s
NVAR  Mina Array Bea   88.94  51  P     P      10 47 16.6 +1.2
VES   Vestal, Richgr   88.97  54  P     P      10 47 15.5 +0.1
      baz=284
NV11  Mina Array Sit   89.05  51  P     P      10 47 15.2  -0.7
NV11                              IAmb  IAmb   10 47 25.9
      comp=Z,5.7nm,0.9s
SNCC  San Nicolas Is   89.24  56  P     P      10 47 16.9 +0.2
      baz=284
ARVC  Arvin            89.35  54  P     P      10 47 17.0  -0.2
      baz=284
MFID  Camas Ranch      89.44  46  P     P      10 47 18.5 +0.9
MFID                              IAmb  IAmb   10 47 25.1
      comp=Z,6.5nm,0.8s
CWC   Cottonwood Cre   89.61  53  P     P      10 47 18.7 +0.1
      baz=285
VNDA  Vanda            90.03 176  P     P      10 47 19.4 +0.1
      comp=Z,1.8nm,1.0s,baz=312,slow=5.4,SNR=7.0
      comp=Z,1.8nm,1.0s
VNDA  Vanda            90.03 176  IAmb  IAmb   10 47 21.3
      comp=Z,3.4nm,1.1s
EDW2  Edwards Air Fo   90.07  54  P     P      10 47 20.4  -0.3
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	baz=285						
HLID	Hailey	90.39	45	P	P	10 47 21.8	-0.3
HLID	Hailey	90.39	45	P	P	10 47 22.2	+0.1
	baz=287						
BFSC	Mount Baldy Ra	90.50	55	P	P	10 47 21.1	-1.6
	baz=285						
FURC	Furnace Creek,	90.55	53	P	P	10 47 21.8	-0.9
	baz=285						
ELK	Elko	90.61	48	LR	LR	11 24 08.2	
	comp=Z,47nm,18.2s,baz=278,slow=33						
ELK	Elko	90.61	48	P	P	10 47 23.1	-0.2
GWY	Greenwater Val	90.78	53	P	P	10 47 23.7	-0.3
GWY				IAmb	IAmb	10 47 27.0	
	comp=Z,7.0nm,1.1s						
TPNV	Topopah Spring	90.90	52	P	P	10 47 26.2	+1.6
TPNV				IAmb	IAmb	10 47 27.6	
	comp=Z,4.8nm,0.9s						
TPNV	Topopah Spring	90.90	52	P	P	10 47 25.3	+0.8
	baz=286						
GSC	Goldstone, Bar	90.91	54	P	P	10 47 24.7	+0.2
GSC				IAmb	IAmb	10 47 27.7	
	comp=Z,9.7nm,1.1s						
GSC	Goldstone, Bar	90.91	54	P	P	10 47 24.9	+0.4
	baz=285						
R11A	Troy Canyon, C	91.02	51	P	P	10 47 25.3	+0.1
R11A				IAmb	IAmb	10 47 31.3	
	comp=Z,5.9nm,1.4s						
R11A	Troy Canyon, C	91.02	51	P	P	10 47 24.7	-0.5
	baz=286						
HEC	Hector,Ludlow	91.40	54	P	P	10 47 27.7	+0.8
	baz=286						
PFO	Pinyon Flats O	91.63	55	LR	LR	11 29 43.9	
	comp=Z,42nm,18.4s,baz=282,slow=36						
PFO	Pinyon Flats O	91.63	55	P	P	10 47 28.4	+0.4
	baz=286						
TPFO	Pinon Flats	91.64	55	P	P	10 47 28.4	+0.4
	baz=286						
BOZ	Bozeman (W)	91.66	43	P	P	10 47 28.5	+0.6
	baz=289						
MONP2	Monument Peak	91.85	56	P	P	10 47 29.2	+0.1
	baz=286						
SHPR	Sheep Range	91.86	52	P	P	10 47 29.2	+0.1
SHPR				IAmb	IAmb	10 47 43.3	
	comp=Z,7.0nm,1.3s						
BELC	Belle Mtn. Jos	91.89	55	P	P	10 47 30.3	+1.1
	baz=286						
GMRC	Granite Mounta	91.95	54	P	P	10 47 30.3	+0.9
	baz=286						
FINES	FINESS Array B	91.97	335	P	P	10 47 27.5	-1.2
	comp=Z,2.5nm,0.5s,baz=67,slow=4.4,SNR=18						
FINES				LR	LR	11 31 55.0	
	comp=Z,62nm,18.1s,baz=68,slow=38						
	comp=Z,2.5nm,0.5s						
EGMT	Eagleton	92.05	40	P	P	10 47 30.7	+1.2
	baz=290						
IKP	In-Ko-Pah, Jac	92.17	56	P	P	10 47 31.2	+0.8
	baz=286						
PSUT	Pine Spring	92.27	50	P	P	10 47 31.1	+0.1
BC3	Big Chuckawall	92.42	55	P	P	10 47 32.4	+0.7
	baz=286						
IRM	Iron Mountain	92.53	54	P	P	10 47 32.9	+0.8
	baz=286						
DUG	Dugway, Tooele	92.54	48	P	P	10 47 32.7	+0.6
	baz=288						
GLA	Glamis	93.10	55	P	P	10 47 35.5	+0.8
	baz=286						
W13A	Hualapai Mount	93.26	53	P	P	10 47 35.0	-0.6
W13A				IAmb	IAmb	10 47 38.7	
	comp=Z,3.7nm,0.8s						
PDMCI	Parker Dam,Lak	93.29	54	P	P	10 47 36.5	+1.0
	baz=287						
RLMT	Red Lodge	93.38	43	P	P	10 47 36.3	+0.3
	baz=291						
PDAR	Pinedale Array	94.01	45	P	P	10 47 37.4	-1.5
	comp=Z,0.4nm,0.9s,baz=357,slow=1.8,SNR=2.6						
PDAR				LR	LR	11 26 31.4	
	comp=Z,40nm,19.1s,baz=298,slow=33						
	comp=Z,0.4nm,0.9s						
Y14A	Wickenburg	94.30	54	P	P	10 47 39.7	-0.5
Y14A				IAmb	IAmb	10 47 43.1	
	comp=Z,4.4nm,0.8s						
LAO	LASA Array	94.78	40	P	P	10 47 42.9	+0.7
	baz=293						
214A	Organ Pipe Nat	95.05	56	P	P	10 47 44.0	+0.4
	baz=287						
WUAZ	Wupatki	95.09	52	P	P	10 47 43.5	-0.4
	baz=289						
AKASG	Malin Array Be	95.48	324	LR	LR	11 32 26.1	
	comp=Z,57nm,21.1s,baz=86,slow=37						
O20A	White River Ci	95.86	47	P	P	10 47 47.5	+0.1
	baz=291						
TUC	Tucson	96.57	55	P	P	10 47 51.5	+0.9
	baz=289						
S22A	4UR Ranch, Cre	97.76	49	P	Pdif	10 47 56.9	+0.7
	baz=292						
NOA	NORSAR Array B	97.99	339	P	P	10 47 54.5	-1.8
	comp=Z,0.8nm,0.8s,baz=45,slow=4.9,SNR=3.1						
NOA				LR	LR	11 36 27.3	
	comp=Z,26nm,18.7s,baz=50,slow=38						
	comp=Z,0.8nm,0.8s						
121A	Cookes Peak, D	98.89	54	P	Pdif	10 48 01.7	+0.5
	baz=290						
ANMO	Albuquerque	99.06	51	LR	LR	11 27 50.6	
	comp=Z,36nm,18.6s,baz=268,slow=32						
ANMO	Albuquerque	99.06	51	P	Pdif	10 48 02.4	+0.4
	baz=292						
LPIG	La Paz	99.53	63	LR	LR	11 24 53.1	
	comp=Z,41nm,20.3s,baz=188,slow=30						
MLR	Muntele Rosu	99.82	321	LR	LR	11 36 12.5	
	comp=Z,42nm,20.5s,baz=87,slow=37						
CLL	Collm	103.72	331	*e*PP	PKiKP	10 52 35.0	-5.1
TORD	Torodi Ar. Bea	134.57	302	PKP	PKPdf	10 53 40.1	+0.4
	comp=Z,0.9nm,0.9s,baz=52,slow=1.7,SNR=4.6						
PLCA	Paso Flores	138.67	140	PKP	PKPdf	10 53 44.6	-2.0
	comp=Z,2.1nm,1.1s,baz=281,slow=10,SNR=3.1						
LPAZ	La Paz	149.09	102	PKPbc	PKPbc	10 54 08.4	-1.9
	comp=Z,13nm,0.8s,baz=298,slow=2.8,SNR=24						
LPAZ	La Paz	149.09	102		PKiKP	10 54 12.2	+0.7

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*JMA **17** 10:54:36.5±0.1, 24°0N±0°4×121°7E±0°6, h17^{km}, MV2.9/10,*
TAIWAN REGION
*TAP **17** 10:54:38.7, 24°18N×121°76E, h14^{km}, ML3.6, B*
ISC 17 10:54:37.5±0.9**, 24°17N**±0°02×**121°85E**±0°02**, h13**^{km}±6^{km}**,**
n133, σ0^{s}75/186**, 5C-26D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.17	325	⇓*i*P	Pb	10 54 42.3	-0.2
	baz=356						
EHP				*i* S	Sb	10 54 45.1	-0.8
	baz=356						
ETL	Fush Village	0.21	267	*i* P	Pg	10 54 42.3	+0.3
	baz=262						
ETL				*i* S	Sg	10 54 45.0	-0.2
	baz=262						
NACB	Ninganchiao	0.23	271	⇓*i*P	Pg	10 54 42.5	+0.1
	baz=269						
NACB				*i* S	Sg	10 54 45.4	-0.4
	baz=269						
TWD	Chiawan	0.25	249	⇓*i*P	Pg	10 54 43.0	+0.3
	baz=243						
TWD				*i* S	Sg	10 54 46.0	-0.2
	baz=243						
ENA	Nanau	0.28	339	⇓*i*P	Pb	10 54 44.2	-0.2
	baz=357						
ENA				*i* S	Sb	10 54 48.2	-0.8
	baz=357						
EWUT	Wuta	0.28	347	⇓*i*P	Pb	10 54 44.5	+0.1
	baz=4.0						
EWUT				*i* S	Sb	10 54 48.8	-0.4
	baz=4.0						
HWA	Hwalien	0.29	229	*e*P	Pg	10 54 44.8	+1.2
	baz=224						
ETLH	Xiulin Townshi	0.34	276	⇓*i*P	Pg	10 54 44.4	+0.1
	baz=277						
ETLH				*i* S	Sg	10 54 48.6	-0.4
	baz=277						
TEYL	Yanliau Villag	0.38	217	P	Pg	10 54 46.4	+1.4
	baz=217						
ETM	Tongmen	0.38	238	P	Pg	10 54 45.5	+0.3
	baz=230						
TWC	Suao	0.44	0	⇓*i*P	Pb	10 54 47.6	+0.5
	baz=5.0						
TWC				*i* S	Sb	10 54 53.7	+0.1
	baz=5.0						
LATG	Datong	0.47	321	⇓*i*P	Pb	10 54 47.3	-0.4
	baz=329						
LATG				*i* S	Sb	10 54 53.6	-1.0
	baz=329						
NDS	Dongshan	0.48	345	⇓*i*P	Pb	10 54 48.1	+0.3
	baz=354						
NDS				*i* S	Sb	10 54 54.7	-0.1
	baz=354						
NNSB	Datong	0.50	301	⇓*i*P	Pg	10 54 47.5	+0.2
	baz=306						
NNSB				*i* S	Sg	10 54 53.6	-0.4
	baz=306						
NNS	Nan Shan	0.51	302	⇓*i*P	Pg	10 54 47.8	+0.2
	baz=307						
NNS				*i* S	Sg	10 54 54.0	-0.4
	baz=307						
ESL	Shilin	0.52	227	⇑P	Pg	10 54 48.1	+0.4
	baz=229						
NDT	Datong Townshi	0.53	325	⇓P	Pb	10 54 48.4	-0.3
	baz=331						
NDT				S	Sg	10 54 55.1	+0.2
	baz=331						
WHF	Hehuan Shan	0.53	268	⇓*i*P	Pg	10 54 48.0	-0.1
	baz=267						
WHF				S	Sg	10 54 54.5	-0.7
	baz=267						
ENTT	Nioudou	0.53	331	⇓*i*P	Pb	10 54 48.8	0.0
	baz=339						
ENTT				S	Sb	10 54 55.8	-0.7
	baz=339						
TEGC	Jichi Village	0.54	212	*e*P	Pb	10 54 49.7	+0.9
	baz=196						
FUSS	Fushou	0.56	278	⇓*i*P	Pg	10 54 48.7	+0.3
	baz=279						
FUSS				*i* S	Sg	10 54 55.5	-0.4
	baz=279						
TWE	Neicheng	0.57	343	⇓*i*P	Pb	10 54 49.7	+0.3
	baz=352						
TWE				*i* S	Sb	10 54 57.2	-0.3
	baz=352						
ILA	Ilan	0.60	351	⇓P	Pn	10 54 50.7	-1.1
	baz=354						
ILA				*e*S	Sb	10 54 58.9	+0.6
	baz=354						
TWT	Tachien	0.62	278	⇓*i*P	Pg	10 54 50.2	+0.6
	baz=278						
TWT				*i* S	Sg	10 54 57.5	-0.4
	baz=278						
CHGB	Renai	0.63	260	⇓P	Pg	10 54 49.9	+0.1
	baz=254						
CHGB				S	Sg	10 54 56.9	-1.2
	baz=254						
EGFH	Guangfu	0.63	218	*e*P	Pg	10 54 50.2	+0.4
	baz=226						
EGFH				*e*S	Sb	10 54 60.0	+0.9
	baz=226						
FUSB	Fushanzhiwuyua	0.63	338	⇓*i*P	Pb	10 54 50.6	+0.1
	baz=344						
FUSB				S	Sb	10 54 58.9	-0.5
	baz=344						
TDCB	Techi	0.64	278	⇓*i*P	Pg	10 54 50.2	+0.3
	baz=279						
TDCB				*i* S	Sg	10 54 57.6	-0.8
	baz=279						
OWD	Renai	0.65	251	P	Pg	10 54 50.3	+0.1
	baz=248						
OWD				S	Sg	10 54 58.7	-0.2
	baz=248						
YHNB	Yeheng	0.66	319	⇓*i*P	Pb	10 54 50.9	0.0
	baz=324						
YHNB				S	Sg	10 54 59.1	0.0
	baz=324						
NSK	Sanguang	0.67	319	⇓*i*P	Pb	10 54 51.1	-0.1
	baz=324						
NSK				S	Sg	10 54 59.4	-0.2
	baz=324						
EGS		0.68	6	*e*P	Pn	10 54 52.6	-0.2
	baz=20						
NTC	Toucheng	0.68	359	*e*P	Pn	10 54 52.1	-0.8
	baz=5.0						
NWLT	Wulai	0.68	333	⇓P	Pb	10 54 51.7	+0.3
	baz=338						
NWLT				*i* S	Sb	10 55 00.0	-0.7
	baz=338						
WUSB	Renai	0.69	255	*i* P	Pg	10 54 51.2	+0.2
	baz=248						
WUSB				S	Sg	10 54 59.2	-0.8
	baz=248						
VWDT	VWDT	0.77	238	⇑*i*P	Pb	10 54 52.8	0.0
	baz=241						
VWDT				S	Sb	10 55 03.0	-0.1
	baz=241						
HGSD	Ruisui	0.78	210	P	Pg	10 54 53.7	+1.1
	baz=194						
HGSD				*e*S	Sn	10 55 06.2	+0.4
	baz=194						
TIPB	Shuangxi	0.80	359	⇓*i*P	Pn	10 54 54.0	-0.6
	baz=3.0						
TIPB				*i* S	Sg	10 55 04.2	+0.7
	baz=3.0						
NFF	Wufeng Townshi	0.81	305	*e*P	Pg	10 54 53.5	+0.3
	baz=308						
NFF				*e*S	Sb	10 55 03.2	-1.1
	baz=308						
EHY	Hungye	0.82	216	*e*P	Pb	10 54 52.7	-0.9
	baz=223						
WPL	Puli Township	0.83	259	P	Pb	10 54 53.5	-0.3
	baz=258						
WPL				S	Sb	10 55 03.9	-0.9
	baz=258						
WHP	Taichung City	0.83	278	*e*P	Pb	10 54 53.8	-0.1
	baz=278						
WHP				S	Sb	10 55 04.0	-1.1
	baz=278						
TWA	Mucha	0.84	343	⇑P	Pn	10 54 55.1	0.0
	baz=348						
TWA				S	Sn	10 55 06.6	-0.8
	baz=348						
NHDH	Xindian Distri	0.84	340	*e*P	Pn	10 54 54.5	-0.6
	baz=344						
TWB1	Santiao Chiao	0.84	9	*e*P	Pn	10 54 54.6	-0.5
	baz=4.0						
TWB1				*e*S	Sn	10 55 06.2	-1.2
	baz=4.0						
DPDB	Guoxing	0.85	261	*e*P	Pb	10 54 53.8	-0.4
	baz=260						
TATO	Taipei	0.87	338	P	Pn	10 54 55.3	-0.1
	baz=342						
TATO				S	Sg	10 55 06.2	+0.6
	baz=342						
LIOB	Emei	0.90	302	*e*P	Pg	10 54 55.3	+0.5
	baz=305						
LIOB				S	Sg	10 55 06.9	+0.4
	baz=305						
NSTT	Nanjuang	0.90	301	P	Pg	10 54 55.1	+0.3
	baz=303						
NSTT				*i* S	Sb	10 55 06.1	-0.8
	baz=303						
NWF	Wu-fen Shan	0.90	356	*i* P	Pn	10 54 56.4	+0.4
	baz=353						
NWF				S	Sn	10 55 07.8	-1.2
	baz=353						
WFSB	Wu-fen Shan	0.90	356	P	Pn	10 54 56.2	+0.4
	baz=353						
WFSB				S	Sn	10 55 07.6	-1.1
	baz=353						
SSLB	Suanglung	0.90	245	⇑P	Pb	10 54 54.7	-0.4
	baz=252						
SSLB				S	Sb	10 55 05.5	-1.5
	baz=252						
SMLT	Sun Moon Lake	0.91	252	P	Pb	10 54 55.0	-0.3
	baz=250						
SMLT				S	Sb	10 55 06.7	-0.7
	baz=250						
TAP	Taipei	0.92	340	*e*P	Pn	10 54 56.5	+0.4
	baz=336						
SXI1	Grass Mountain	0.92	2	P	Pn	10 54 56.6	+0.3
	baz=352						
ECBN	Changbin	0.92	203	*e*P	Pb	10 54 55.1	-0.3
	baz=188						
YULB	Yu-li	0.92	213	*e*P	Pb	10 54 54.3	-1.1
	baz=218						
TYC	Yuchr	0.94	254	*e*P	Pb	10 54 55.6	-0.1
	baz=253						
EYUL	Yuli	0.95	211	*e*P	Pb	10 54 56.5	+0.6
	baz=222						
TWF1	Yuli	0.96	212	*e*P	Pb	10 54 55.6	-0.4
	baz=223						
TNOU	National Taiwa	0.98	356	*e*P	Pn	10 54 57.4	+0.4
	baz=349						
TWQ1	Liyutan	1.00	280	*e*P	Pg	10 54 57.6	+0.9
	baz=281						
NCUH	Zhongli	1.00	323	*e*P	Pn	10 54 58.0	+0.8
	baz=325						
NCU	National Centr	1.00	323	*e*P	Pn	10 54 58.5	+1.3
	baz=326						
NCU				*e*S	Sn	10 55 12.2	+1.0
	baz=326						
SBCB	Hsinchu	1.00	308	P	Pg	10 54 58.2	+1.3
	baz=311						
YM01	YM01	1.00	345	P	Pn	10 54 58.5	+1.1
	baz=334						
TWS1	Kuangyinshan	1.01	337	*e*P	Pn	10 54 58.2	+0.9
	baz=348						
TWS1				*e*S	Sn	10 55 12.3	+0.9
	baz=348						
HSN	Hsinchu	1.02	308	*e*P	Pg	10 54 57.9	+0.7
	baz=314						
NSY	Sanyi	1.02	284	P	Pg	10 54 58.1	+0.9
	baz=285						
NSY				*e*S	Sn	10 55 11.6	-0.3
	baz=285						
NMLH	Miaoli	1.03	291	*e*P	Pg	10 54 58.2	+0.9
	baz=292						
YM08	YM08	1.04	347	*e*P	Pg	10 54 58.1	+0.6
	baz=336						
NTST	Danshui	1.05	340	*e*P	Pg	10 54 58.9	+1.1
	baz=342						
ANP	Anpu	1.06	344	*e*P	Pg	10 54 58.9	+1.0
	baz=346						
WWF	Wufeng	1.06	263	*e*P	Pg	10 54 58.7	+0.8
	baz=259						
YUS	Yu-Shan	1.06	231	*e*P	Pb	10 54 57.4	-0.7
	baz=228						
TCU	Taichung	1.07	269	*e*P	Pg	10 54 59.1	+1.0
	baz=269						
WJS	Zhushan	1.08	252	*e*P	Pg	10 54 59.0	+0.7
	baz=245						
FULB	Fuli	1.09	208	*e*P	Pb	10 54 58.0	-0.2
	baz=219						
WNT1	Nantou City	1.10	256	*e*P	Pg	10 54 59.4	+0.7
	baz=256						
YOJ	Yonaguni jima	1.10	74	*e*P	Pg	10 54 60.0	+1.3
	baz=75						
YOJ	Yonaguni jima	1.10	74	P	Pg	10 55 00.4	+1.7
WNT	Mingjian	1.10	255	P	Pg	10 54 59.4	+0.6
	baz=251						
WNT				*e*S	Sg	10 55 14.8	+1.7
	baz=251						
NHW	Xinwu Township	1.11	319	*e*P	Pg	10 55 00.7	+1.8
	baz=321						
WDJ	Dajia District	1.12	279	P	Pg	10 54 59.7	+0.7
	baz=280						
TWY	Chenhua	1.12	348	*e*P	Pg	10 55 01.6	+2.4
	baz=336						
CHKT	Chengkung	1.15	203	*e*P	Pn	10 54 58.3	-1.1
	baz=187						
ALS	Alishan	1.16	236	⇑P	Pn	10 54 59.5	-0.2
	baz=234						
WCHH	Zhanghua	1.18	266	*e*P	Pg	10 55 01.0	+0.7
	baz=266						
CHN5	Tsauling	1.21	242	*e*P	Pb	10 55 01.0	+0.6
	baz=241						
ELDTW	Lidau	1.24	218	*e*P	Pn	10 54 59.3	-1.3
	baz=201						
WGK	Gukeng	1.27	248	*e*P	Pn	10 55 01.2	+0.2
	baz=247						
WDLH	Douliu	1.29	249	*e*P	Pb	10 55 02.1	+0.5
	baz=231						
EDH	Donghe	1.29	203	*e*P	Pn	10 55 00.2	-1.1
	baz=188						
WRL	Guolierlin Hig	1.37	259	*e*P	Pb	10 55 03.3	+0.2
	baz=259						
STYH	Taoyuan	1.40	225	*e*P	Pn	10 55 02.9	+0.2
	baz=224						
CHN4	Tsaushan	1.41	235	P	Pb	10 55 04.5	+0.8
	baz=234						
TPUB	Ta-pu	1.41	232	P	Pn	10 55 03.8	+0.8
	baz=220						
TPUB				*e*S	Sb	10 55 23.4	+1.6
	baz=220						
STYT	Tauyuan	1.42	225	*e*P	Pn	10 55 03.0	0.0
	baz=224						
LONT	Longtian	1.42	208	*e*P	Pn	10 55 03.3	+0.2
	baz=206						
WTP	Ta-pu	1.46	231	P	Pb	10 55 04.9	+0.3
	baz=230						
CHY	Chiayi	1.47	243	*e*P	Pb	10 55 04.8	+0.2
	baz=243						
PCYT	Pengchaiyu	1.47	8	*e*P	Pg	10 55 05.2	-0.5
	baz=7.0						
TWGBT	Beinan	1.52	208	*e*P	Pn	10 55 03.8	-0.6
	baz=190						
TWG	Pinlang	1.52	208	*e*P	Pn	10 55 04.3	-0.1
	baz=190						
TWK	Hsinying	1.54	234	P	Pb	10 55 05.8	-0.1
	baz=233						
CHN1	Nanshi	1.56	231	*e*P	Pb	10 55 06.6	+0.3
	baz=230						
SNST	Tainan City	1.56	233	*e*P	Pb	10 55 06.8	+0.6
	baz=232						
SGST	Jiashian	1.59	227	*e*P	Pn	10 55 06.5	+1.1
	baz=226						
SLGT	Liugui	1.61	224	*e*P	Pb	10 55 08.0	+1.0
	baz=222						
SLGT				*e*S	Sg	10 55 29.8	+0.5
	baz=222						
WSL	Shuilin Townsh	1.62	247	*e*P	Pb	10 55 07.5	+0.3
	baz=247						
ICHU	Yijhu	1.65	241	*e*P	Pb	10 55 07.6	-0.1
	baz=241						
IRIF	Iriomote-Funau	1.73	84	*e*P	Pb	10 55 09.1	0.0
IRIF				*e*S	Sg	10 55 32.4	-0.6
ECL	Taimali	1.77	208	*e*P	Pb	10 55 09.9	+0.1
	baz=193						
SSD	Sandimen	1.80	218	*e*P	Pn	10 55 09.7	+1.3
	baz=201						
TSMG	Majia	1.83	217	*e*P	Pb	10 55 10.7	-0.2
	baz=200						
MASBT	Mashibuluo	1.91	216	*e*P	Pn	10 55 10.2	+0.4
	baz=214						
JKRS	Kuro-shima	1.97	88	*e*P	Pb	10 55 13.0	-0.3
JKRS				*e*S	Sg	10 55 39.7	-1.4
EAST	Anshuo	2.00	208	*e*P	Pb	10 55 13.8	0.0
	baz=195						
SSPT	Xinbi	2.05	215	*e*P	Pb	10 55 14.8	+0.2
	baz=197						
JIJ	Ishigaki jima	2.10	84	P	Pb	10 55 14.6	-0.9
JIJ				*e*S	Sb	10 55 40.6	-1.0
SCZT	Fangliau	2.12	213	*e*P	Pn	10 55 12.8	+0.2
	baz=195						
LYUB	Lan-yu	2.17	186	*e*P	Pn	10 55 11.6	-1.8
	baz=187						
PNG	Penghu	2.18	255	*e*P	Pn	10 55 13.9	+0.3
	baz=256						
PHUB	P'eng-hu	2.18	253	*e*P	Pn	10 55 13.7	+0.2
	baz=256						
PHUB				*e*S	Sn	10 55 40.9	+0.4
	baz=256						
WDGT	Dungji	2.20	246	*e*P	Pn	10 55 14.2	+0.4
	baz=247						
JISG	Ishigakijimahi	2.28	79	*e*P	Pn	10 55 16.6	+1.7
VWUC	VWUC	2.33	291	⇓*e*P	Pn	10 55 15.1	-0.5
	baz=291						
VCHM	Qimei	2.42	247	*e*P	Pn	10 55 15.6	-1.2
	baz=232						
MATB	Ma-tsu	2.62	319	*e*P	Pn	10 55 19.7	+0.2
	baz=318						
PTMZ	Houxiangcun	2.63	290	*e*P	Pn	10 55 18.9	-0.8
	baz=290						
JTJ	Tarama	2.64	79	P	Pb	10 55 22.9	-1.8
KNMB	Chin-men Tao	3.17	276	*e*P	Pn	10 55 27.0	-0.1
	baz=276						
AXDP	Jialang	3.61	282	*e*P	Pn	10 55 33.4	+0.3
	baz=282						

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*JMA **17** 10:55:19.1±0.2, 24°0N±0°9×12°2E±°, h20^{km}±1^{km},*
MV3.4/12, TAIWAN REGION
*TAP **17** 10:55:20.1, 24°18N×121°77E, h13^{km}, ML4.0, B*
*IDC **17** 10:55:25.6±4.7, 24°23N×122°04E, h65^{km}±45^{km}, mb3.3/8,*
mbtmp3.6/10, ML3.2/2, Error ellipse: s-maj=40.1km
s-min=19.3km az=69.0
ISC 17 10:55:20.0±0.8**, 24°18N**±0°01×**121°77E**±0°02**, h16**^{km}±5^{km}**,**
n153, σ0^{s}85/215**, mb3.5**/8**, 18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=352	**0.14**	**348**	*i* P	**Pb**	**10 55 23.6**	**-0.6**
EHP	baz=352			*i* S	**Sg**	**10 55 26.4**	**-0.1**
ETL	**Fush Village** baz=262	**0.14**	**263**	*i* P	**Pb**	**10 55 23.6**	**-0.7**
ETL	baz=262			*i* S	**Sg**	**10 55 26.4**	**-0.1**
NACB	**Ninganchiao** baz=262	**0.16**	**270**	⇓*i*P	**Pb**	**10 55 23.9**	**-0.7**
NACB	baz=262			*i* S	**Sb**	**10 55 26.8**	**-1.0**
TWD	**Chiawan** baz=244	**0.19**	**240**	*i* P	**Pb**	**10 55 24.4**	**-0.6**
TWD	baz=244			*i* S	**Sb**	**10 55 27.7**	**-0.8**
HWA	**Hwalien** baz=226	**0.25**	**218**	*e*P	**Pg**	**10 55 26.6**	**+1.1**
ENA	**Nanau** baz=355	**0.25**	**354**	⇓*i*P	**Pb**	**10 55 25.5**	**-0.8**
ENA	baz=355			*i* S	**Sb**	**10 55 29.4**	**-1.0**
ETLH	**Xiulin Townshi** baz=276	**0.27**	**277**	⇓*i*P	**Pb**	**10 55 25.8**	**-0.7**
ETLH	baz=276			S	**Sb**	**10 55 29.9**	**-1.0**
EWUT	**Wuta** baz=2.0	**0.27**	**1**	⇓*i*P	**Pb**	**10 55 25.9**	**-0.6**
EWUT	baz=2.0			S	**Sb**	**10 55 30.1**	**-0.8**
ETM	**Tongmen** baz=231	**0.33**	**231**	P	**Pg**	**10 55 26.8**	**-0.1**
ETM	baz=231			*e*S	**Sg**	**10 55 31.8**	**+0.1**
TEYL	**Yanliau Villag** baz=219	**0.34**	**208**	*e*P	**Pb**	**10 55 28.0**	**+0.2**
TEYL	baz=219			*e*S	**Sb**	**10 55 34.4**	**+1.4**
LATG	**Datong** baz=328	**0.42**	**328**	⇓*i*P	**Pg**	**10 55 28.7**	**0.0**
LATG	baz=328			*i* S	**Sg**	**10 55 34.8**	**+0.2**
NNSB	**Datong** baz=305	**0.44**	**305**	⇓*i*P	**Pg**	**10 55 28.9**	**0.0**
NNSB	baz=305			*i* S	**Sg**	**10 55 35.0**	**+0.1**
TWC	**Suao** baz=4.0	**0.44**	**9**	⇓*i*P	**Pg**	**10 55 29.0**	**+0.1**
TWC	baz=4.0			*i* S	**Sg**	**10 55 35.1**	**+0.2**
NNS	**Nan Shan** baz=306	**0.45**	**306**	⇓*i*P	**Pg**	**10 55 29.1**	**0.0**
NNS	baz=306			*i* S	**Sg**	**10 55 35.4**	**+0.1**
NDS	**Dongshan** baz=353	**0.46**	**354**	⇓*i*P	**Pb**	**10 55 29.5**	**-0.3**
NDS	baz=353			*i* S	**Sb**	**10 55 36.2**	**-0.2**
WHF	**Hehuan Shan** baz=267	**0.46**	**266**	⇓*i*P	**Pg**	**10 55 29.6**	**+0.1**
WHF	baz=267			S	**Sg**	**10 55 36.0**	**+0.1**
ESL	**Shilin** baz=230	**0.47**	**221**	P	**Pb**	**10 55 29.7**	**-0.3**
NDT	**Datong Townshi** baz=331	**0.49**	**331**	⇓P	**Pb**	**10 55 29.8**	**-0.5**
NDT	baz=331			*i* S	**Sb**	**10 55 37.1**	**-0.1**
FUSS	**Fushou** baz=279	**0.49**	**279**	⇓*i*P	**Pb**	**10 55 30.1**	**-0.3**
FUSS	baz=279			*i* S	**Sb**	**10 55 37.2**	**-0.2**
ENTT	**Nioudou** baz=338	**0.50**	**338**	⇓*i*P	**Pg**	**10 55 30.2**	**+0.2**
ENTT	baz=338			*i* S	**Sb**	**10 55 37.3**	**-0.2**
TEGC	**Jichi Village** baz=197	**0.51**	**205**	*e*P	**Pg**	**10 55 31.0**	**+0.8**
TWT	**Tachien** baz=278	**0.55**	**278**	P	**Pg**	**10 55 31.6**	**+0.6**
TWT	baz=278			S	**Sg**	**10 55 39.3**	**+0.8**
TWE	**Neicheng** baz=351	**0.55**	**350**	⇓*i*P	**Pg**	**10 55 31.2**	**+0.2**
TWE	baz=351			S	**Sg**	**10 55 38.8**	**+0.3**
CHGB	**Renai** baz=255	**0.56**	**258**	P	**Pg**	**10 55 31.4**	**+0.2**
CHGB	baz=255			S	**Sb**	**10 55 38.7**	**-0.7**
TDCB	**Techi** baz=278	**0.57**	**278**	⇓*i*P	**Pg**	**10 55 31.7**	**+0.4**
TDCB	baz=278			*i* S	**Sg**	**10 55 39.0**	**+0.1**
ILA	**Ilan** baz=353	**0.59**	**358**	P	**Pg**	**10 55 32.0**	**+0.3**
ILA	baz=353			S	**Sg**	**10 55 40.4**	**+0.9**
OWD	**Renai** baz=249	**0.59**	**248**	P	**Pg**	**10 55 32.1**	**+0.3**
EGFH	**Guangfu** baz=220	**0.59**	**212**	*e*P	**Pg**	**10 55 32.1**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=344	**0.61**	**344**	*i* P	**Pg**	**10 55 32.2**	**+0.2**
FUSB	baz=344			*i* S	**Sg**	**10 55 40.2**	**+0.1**
YHNB	**Yeheng** baz=323	**0.61**	**324**	⇓*i*P	**Pg**	**10 55 32.3**	**+0.2**
YHNB	baz=323			*i* S	**Sg**	**10 55 40.5**	**+0.2**
NSK	**Sanguang** baz=323	**0.63**	**323**	⇓*i*P	**Pg**	**10 55 32.5**	**+0.1**
NSK	baz=323			*i* S	**Sg**	**10 55 40.8**	**0.0**
WUSB	**Renai** baz=254	**0.63**	**253**	*i* P	**Pg**	**10 55 32.7**	**+0.3**
WUSB	baz=254			S	**Sb**	**10 55 40.6**	**-0.7**
NWLT	**Wulai** baz=337	**0.65**	**338**	*e*P	**Pg**	**10 55 33.0**	**+0.2**
NWLT	baz=337			S	**Sg**	**10 55 41.5**	**+0.1**
NTC	**Toucheng** baz=4.0	**0.68**	**4**	⇓P	**Pg**	**10 55 33.4**	**0.0**
NTC	baz=4.0			*e*S	**Sg**	**10 55 42.5**	**+0.2**
EGS	baz=20	**0.68**	**12**	*e*P	**Pg**	**10 55 33.6**	**+0.1**
VWDT	**VWDT** baz=241	**0.71**	**234**	P	**Pg**	**10 55 34.0**	**0.0**
VWDT	baz=241			S	**Sn**	**10 55 44.7**	**-1.4**
HGSD	**Ruisui** baz=196	**0.75**	**205**	*e*P	**Pn**	**10 55 35.5**	**-0.5**
NFF	**Wufeng Townshi** baz=307	**0.75**	**307**	*e*P	**Pg**	**10 55 34.8**	**+0.1**
NFF	baz=307			S	**Sg**	**10 55 45.3**	**+0.7**
WHP	**Taichung City** baz=278	**0.76**	**278**	P	**Pn**	**10 55 35.5**	**-0.7**
WHP	baz=278			S	**Sg**	**10 55 45.8**	**+0.8**
WPL	**Puli Township** baz=258	**0.76**	**258**	P	**Pg**	**10 55 35.3**	**+0.4**
EHY	**Hungye** baz=224	**0.78**	**212**	*e*P	**Pb**	**10 55 34.4**	**-0.9**
DPDB	**Guoxing** baz=261	**0.79**	**260**	*e*P	**Pg**	**10 55 35.3**	**-0.1**
TIPB	**Shuangxi** baz=3.0	**0.80**	**3**	*i* P	**Pg**	**10 55 35.5**	**0.0**
TIPB	baz=3.0			*i* S	**Sb**	**10 55 45.7**	**-0.3**
NHDH	**Xindian Distri** baz=344	**0.82**	**344**	*e*P	**Pn**	**10 55 37.1**	**+0.3**
TWA	**Mucha** baz=339	**0.82**	**348**	*e*P	**Pn**	**10 55 36.5**	**-0.5**
LIOB	**Emei** baz=304	**0.83**	**304**	*e*P	**Pn**	**10 55 36.8**	**-0.3**
LIOB	baz=304			S	**Sn**	**10 55 48.0**	**-1.1**
NJD	**Zhudong** baz=318	**0.84**	**312**	*e*P	**Pn**	**10 55 37.3**	**+0.2**
NSTT	**Nanjuang** baz=303	**0.84**	**303**	*e*P	**Pn**	**10 55 36.6**	**-0.5**
NSTT	baz=303			S	**Sg**	**10 55 47.4**	**0.0**
TATO	**Taipei** baz=341	**0.84**	**342**	P	**Pn**	**10 55 36.9**	**-0.3**
TATO	baz=341			S	**Sg**	**10 55 47.8**	**+0.4**
SSLB	**Suanglung** baz=253	**0.84**	**243**	P	**Pb**	**10 55 35.9**	**-0.4**
SSLB	baz=253			S	**Sb**	**10 55 47.1**	**-0.3**
SMLT	**Sun Moon Lake** baz=251	**0.85**	**250**	*e*P	**Pg**	**10 55 36.8**	**+0.2**
SMLT	baz=251			S	**Sg**	**10 55 48.2**	**+0.4**
TWB1	**Santiao Chiao** baz=13	**0.85**	**13**	*e*P	**Pg**	**10 55 36.5**	**-0.2**
TWB1	baz=13			*e*S	**Sb**	**10 55 47.4**	**-0.3**
TYC	**Yuchr** baz=253	**0.88**	**252**	*e*P	**Pb**	**10 55 36.5**	**-0.4**
TAP1	**Taipei** baz=336	**0.89**	**345**	*e*P	**Pb**	**10 55 37.0**	**-0.1**
NWF	**Wu-fen Shan** baz=353	**0.89**	**0**	*e*P	**Pn**	**10 55 37.8**	**-0.2**
NWF	baz=353			S	**Sg**	**10 55 49.0**	**-0.2**
WFSB	**Wu-fen Shan** baz=353	**0.89**	**0**	P	**Pn**	**10 55 37.8**	**-0.1**
WFSB	baz=353			S	**Sg**	**10 55 49.1**	**-0.1**
YULB	**Yu-li** baz=221	**0.89**	**209**	*e*P	**Pb**	**10 55 36.4**	**-0.7**
YULB	baz=221			S	**Sg**	**10 55 49.1**	**0.0**
TAP	**Taipei** baz=336	**0.89**	**344**	*e*P	**Pn**	**10 55 38.6**	**+0.7**
ECBN	**Changbin** baz=200	**0.90**	**199**	*e*P	**Pb**	**10 55 36.6**	**-0.8**
HSN1	**Hsinchu** baz=311	**0.91**	**311**	P	**Pg**	**10 55 39.0**	**+1.3**
HSN1	baz=311			*e*S	**Sn**	**10 55 52.4**	**+1.4**
SXI1	**Grass Mountain** baz=352	**0.92**	**6**	P	**Pg**	**10 55 38.3**	**+0.3**
EYUL	**Yuli** baz=224	**0.92**	**207**	*e*P	**Pg**	**10 55 39.0**	**+1.0**
NTY	**Taoyuan** baz=332	**0.93**	**332**	*e*P	**Pg**	**10 55 38.9**	**+0.8**
TWF1	**Yuli** baz=223	**0.93**	**208**	*e*P	**Pb**	**10 55 36.4**	**-1.4**
TWQ1	**Liyutan** baz=281	**0.93**	**281**	*e*P	**Pg**	**10 55 39.3**	**+1.3**
TWQ1	baz=281			*e*S	**Sn**	**10 55 51.7**	**+0.3**
SBCB	**Hsinchu** baz=310	**0.94**	**311**	P	**Pg**	**10 55 39.8**	**+1.4**
SBCB	baz=310			S	**Sn**	**10 55 52.9**	**+1.0**
NCU	**National Centr** baz=326	**0.95**	**326**	P	**Pg**	**10 55 39.6**	**+1.0**
NCU	baz=326			S	**Sn**	**10 55 53.1**	**+1.1**
NCUH	**Zhongli** baz=321	**0.95**	**326**	*e*P	**Pg**	**10 55 39.1**	**+0.6**
NSY	**Sanyi** baz=285	**0.95**	**285**	P	**Pg**	**10 55 39.9**	**+1.3**
HSN	**Hsinchu** baz=305	**0.96**	**311**	*e*P	**Pg**	**10 55 39.5**	**+0.8**
HSN	baz=305			*e*S	**Sn**	**10 55 53.0**	**+0.8**
NMLH	**Miaoli** baz=292	**0.96**	**292**	*e*P	**Pg**	**10 55 39.5**	**+0.7**
TNOU	**National Taiwa** baz=359	**0.97**	**0**	P	**Pg**	**10 55 39.1**	**+0.3**
TNOU	baz=359			*e*S	**Sg**	**10 55 51.6**	**0.0**
TWS1	**Kuangyinshan** baz=340	**0.98**	**341**	*e*P	**Pg**	**10 55 39.7**	**+0.7**
TWS1	baz=340			*e*S	**Sg**	**10 55 53.4**	**+1.6**
YM01	**YM01** baz=348	**0.98**	**349**	P	**Pg**	**10 55 39.8**	**+0.6**
YM01	baz=348			*e*S	**Sg**	**10 55 52.7**	**+0.6**
WWF	**Wufeng** baz=259	**0.99**	**263**	P	**Pg**	**10 55 40.4**	**+1.2**
WWF	baz=259			*e*S	**Sg**	**10 55 55.6**	**+3.3**
TCU	**Taichung** baz=270	**1.00**	**269**	*e*P	**Pg**	**10 55 40.9**	**+1.4**
YUS	**Yu-Shan** baz=218	**1.01**	**228**	P	**Pb**	**10 55 39.3**	**-0.2**
YUS	baz=218			S	**Sn**	**10 55 53.8**	**-0.4**
WJS	**Zhushan** baz=247	**1.02**	**250**	*e*P	**Pg**	**10 55 40.4**	**+0.6**
WJS	baz=247			*e*S	**Sg**	**10 55 55.2**	**+2.1**
YM08	**YM08** baz=350	**1.02**	**351**	*e*P	**Pg**	**10 55 39.9**	**0.0**
NTST	**Danshui** baz=343	**1.03**	**343**	*e*P	**Pn**	**10 55 39.4**	**-0.4**
ANP	**Anpu** baz=347	**1.03**	**347**	*e*P	**Pg**	**10 55 40.4**	**+0.3**
WNT1	**Nantou City** baz=257	**1.03**	**255**	*e*P	**Pg**	**10 55 41.2**	**+1.1**
WNT	**Mingjian** baz=247	**1.04**	**254**	*e*P	**Pg**	**10 55 41.1**	**+1.0**
WDJ	**Dajia District** baz=280	**1.05**	**280**	*e*P	**Pg**	**10 55 41.5**	**+1.2**
NHW	**Xinwu Township** baz=321	**1.06**	**322**	*e*P	**Pg**	**10 55 40.9**	**+0.3**
FULB	**Fuli** baz=221	**1.07**	**204**	*e*P	**Pn**	**10 55 40.3**	**0.0**
ALS	**Alishan** baz=235	**1.11**	**233**	*e*P	**Pn**	**10 55 41.0**	**-0.1**
TWY	**Chenhua** baz=344	**1.11**	**352**	*e*P	**Pg**	**10 55 42.3**	**+0.9**
TWY	baz=344			*e*S	**Sg**	**10 55 56.9**	**+0.9**
WYL	**Yuanlin Townsh** baz=260	**1.11**	**259**	*e*P	**Pg**	**10 55 42.2**	**+0.7**
WCHH	**Zhanghua** baz=266	**1.11**	**265**	*e*P	**Pg**	**10 55 42.1**	**+0.6**
CHKT	**Chengkung** baz=201	**1.13**	**199**	*e*P	**Pn**	**10 55 40.7**	**-0.6**
CHN5	**Tsauling** baz=242	**1.16**	**240**	*e*P	**Pg**	**10 55 42.6**	**+0.2**
CHN5	baz=242			S	**Sg**	**10 56 00.4**	**+2.9**
YOJ	**Yonaguni jima** baz=64	**1.17**	**76**	*e*P	**Pb**	**10 55 41.6**	**-0.1**
YOJ	**Yonaguni jima**	**1.17**	**76**	*e*P	**Pb**	**10 55 41.7**	**-0.1**
YOJ				*e*S	**Sg**	**10 55 58.5**	**+0.7**
ECS	**Chishang** baz=207	**1.19**	**205**	*e*P	**Pg**	**10 55 42.9**	**-0.2**
ELDTW	**Lidau** baz=202	**1.20**	**215**	*e*P	**Pn**	**10 55 42.1**	**-0.2**
WGK	**Gukeng** baz=248	**1.21**	**247**	*e*P	**Pg**	**10 55 43.8**	**+0.4**
WDLH	**Douliu** baz=249	**1.23**	**247**	*e*P	**Pg**	**10 55 43.2**	**-0.5**
EDH	**Donghe** baz=188	**1.27**	**200**	*e*P	**Pn**	**10 55 42.2**	**-0.9**
WRL	**Guolierlin Hig** baz=260	**1.30**	**258**	*e*P	**Pg**	**10 55 44.5**	**-0.6**
CHN2	**Minshiung** baz=244	**1.35**	**242**	*e*P	**Pg**	**10 55 46.6**	**+0.5**
STYH	**Taoyuan** baz=224	**1.35**	**223**	*e*P	**Pb**	**10 55 44.6**	**-0.4**
WTK	**Tuku** baz=237	**1.36**	**249**	*e*P	**Pg**	**10 55 46.0**	**-0.1**
CHN4	**Tsaushan** baz=235	**1.36**	**233**	*e*P	**Pg**	**10 55 46.1**	**-0.1**
CHN4	baz=235			*e*S	**Sg**	**10 56 07.2**	**+3.3**
TPUB	**Ta-pu** baz=221	**1.36**	**230**	*e*P	**Pg**	**10 55 45.8**	**-0.5**
TPUB	baz=221			*e*S	**Sg**	**10 56 04.2**	**+0.2**
STYT	**Tauyuan** baz=224	**1.37**	**223**	*e*P	**Pn**	**10 55 44.1**	**-0.5**
LONT	**Longtian** baz=207	**1.39**	**205**	*e*P	**Pn**	**10 55 43.8**	**-1.0**
CHY	**Chiayi** baz=243	**1.41**	**242**	*e*P	**Pg**	**10 55 47.1**	**0.0**
WTP	**Ta-pu** baz=230	**1.41**	**229**	*e*P	**Pg**	**10 55 46.8**	**-0.3**
PCYT	**Pengchaiyu** baz=8.0	**1.47**	**11**	*e*P	**Pb**	**10 55 46.7**	**-0.4**
TWK	**Hsinying** baz=234	**1.48**	**233**	*e*P	**Pb**	**10 55 47.7**	**+0.4**
TWGBT	**Beinan** baz=192	**1.49**	**205**	*e*P	**Pn**	**10 55 45.5**	**-0.7**
TWG	**Pinlang** baz=192	**1.49**	**206**	*e*P	**Pn**	**10 55 46.3**	**+0.1**
SNST	**Tainan City** baz=233	**1.51**	**231**	*e*P	**Pb**	**10 55 48.2**	**+0.6**
CHN1	**Nanshi** baz=231	**1.51**	**229**	*e*P	**Pg**	**10 55 48.5**	**-0.6**
SGST	**Jiashian** baz=227	**1.54**	**225**	*e*P	**Pb**	**10 55 47.8**	**-0.4**
WSL	**Shuilin Townsh** baz=248	**1.56**	**246**	*e*P	**Pb**	**10 55 47.8**	**-0.7**
ICHU	**Yijhu** baz=241	**1.59**	**240**	*e*P	**Pb**	**10 55 49.1**	**+0.1**
CHN8	**Yiju** baz=242	**1.65**	**240**	*e*P	**Pn**	**10 55 48.6**	**+0.2**
SCST	**Cishan** baz=224	**1.74**	**223**	*e*P	**Pb**	**10 55 51.0**	**-0.6**
SHHT	**Tainan City** baz=229	**1.74**	**229**	*e*P	**Pb**	**10 55 51.1**	**-0.5**
ECL	**Taimali** baz=193	**1.74**	**206**	*e*P	**Pn**	**10 55 50.1**	**+0.5**
SSD	**Sandimen** baz=231	**1.77**	**217**	*e*P	**Pb**	**10 55 51.3**	**-0.8**
TSMG	**Majia** baz=230	**1.79**	**216**	*e*P	**Pb**	**10 55 52.0**	**-0.5**
IRIF	**Iriomote-Funau**	**1.79**	**85**	P	**Pn**	**10 55 50.7**	**+0.4**
IRIF				*e*S	**Sb**	**10 56 14.2**	**-0.5**
HATJ	**Hateruma jima**	**1.86**	**93**	*e*S	**Sb**	**10 56 15.5**	**-1.2**
MASBT	**Mashibuluo** baz=206	**1.88**	**214**	*e*P	**Pb**	**10 55 53.5**	**-0.4**
SSPT	**Xinbi** baz=213	**2.02**	**214**	*e*P	**Pb**	**10 55 54.7**	**-1.6**
JKRS	**Kuro-shima**	**2.04**	**88**	P	**Pn**	**10 55 54.8**	**+1.1**
JKRS				*e*S	**Sb**	**10 56 21.1**	**-0.9**
SCZT	**Fangliau** baz=196	**2.08**	**211**	*e*P	**Pn**	**10 55 54.9**	**+0.5**
PNG	**Penghu** baz=256	**2.12**	**254**	*e*P	**Pb**	**10 55 57.1**	**-1.0**
PHUB	**P'eng-hu** baz=254	**2.12**	**252**	*e*P	**Pn**	**10 55 55.1**	**+0.3**
WDGT	**Dungji** baz=247	**2.14**	**245**	*e*P	**Pn**	**10 55 56.2**	**+1.2**
SLIU	**Shizi** baz=195	**2.15**	**205**	*e*P	**Pb**	**10 55 57.0**	**-1.5**
JIJ	**Ishigaki jima**	**2.17**	**85**	*e*P	**Pn**	**10 55 55.9**	**+0.3**
JIJ				S	**Sn**	**10 56 22.5**	**+0.4**
JISG	**Ishigakijimahi**	**2.35**	**79**	*e*P	**Pn**	**10 55 58.5**	**+0.6**
JISG				*e*S	**Sn**	**10 56 27.0**	**+0.5**
VCHM	**Qimei** baz=232	**2.35**	**246**	*e*P	**Pn**	**10 55 59.3**	**+1.3**
TWKBT	**Hengchun** baz=192	**2.39**	**202**	*e*P	**Pb**	**10 56 00.5**	**-2.3**
JTJ	**Tarama**	**2.71**	**80**	*e*P	**Pn**	**10 56 04.6**	**+1.7**
KNM	**Kinmen** baz=276	**3.06**	**275**	*e*P	**Pb**	**10 56 10.6**	**-3.4**
JIRB	**Irabujima**	**3.17**	**77**	P	**Pn**	**10 56 10.6**	**+1.4**
AXDP	**Jialang** baz=283	**3.54**	**283**	*e*P	**Pn**	**10 56 15.1**	**+0.8**
SXFK	**Yanhouchang** baz=300	**4.34**	**302**	*e*P	**Pn**	**10 56 26.6**	**+1.1**
JOW	**Kunigami** 1.0nm,0.3s,baz=282,slow=22,SNR=1.3 3.6nm,0.3s	**6.44**	**64**	P	**Pn**	**10 56 54.3**	**+0.1**
KSRS	**Korea Array** 0.2nm,0.3s,baz=201,slow=12,SNR=1.5 0.3nm,0.3s	**14.25**	**20**	P	**Pn**	**10 58 42.8**	**+1.7**
SONM	**Songino Array** 0.4nm,0.4s,baz=132,slow=6.0,SNR=2.8 0.4nm,0.4s	**26.59**	**336**	P	**P**	**11 00 57.6**	**0.0**
MKAR	**Makanchi Array** 0.8nm,0.8s,baz=102,slow=11,SNR=3.6 0.8nm,0.8s	**38.72**	**316**	P	**P**	**11 02 43.3**	**0.0**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=128,slow=9.3,SNR=2.0 0.5nm,0.4s	**40.55**	**327**	P	**P**	**11 03 00.6**	**+2.2**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=345,slow=8.8,SNR=5.9 0.5nm,0.7s	**45.53**	**163**	P	**P**	**11 03 38.5**	**-0.6**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=339,slow=7.9,SNR=2.3 0.3nm,0.7s	**48.99**	**165**	P	**P**	**11 04 06.0**	**-0.1**
ILAR	**Eielson Array** 0.1nm,0.5s,baz=299,slow=15,SNR=1.6 0.1nm,0.5s	**68.97**	**27**	P	**P**	**11 06 22.2**	**-2.0**
ARCES	**ARCESS Array B** 2.8nm,0.9s,baz=23,slow=7.1,SNR=2.2 2.8nm,0.9s	**69.75**	**338**	P	**P**	**11 06 28.9**	**0.0**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=319,slow=4.4,SNR=3.5 0.3nm,0.6s	**82.77**	**23**	P	**P**	**11 07 41.8**	**-1.2**

STR ***17*** *10:56:32.0±0.3, 43°N±3°×°±°, h11^{km}±3^{km}, MLv2.4/9, preliminary*
LDG ***17*** *10:56:31.8±0.1, 43°.11N×0°.66W, h10^{km}, Md2.9/2, Ml2.7/28, Error ellipse: s-maj=1.3km s-min=1.2km az=85.0*
MDD ***17*** *10:56:33.5±0.3, 43°.09N×0°.66W, h11^{km}, mb_Lg2.9/8, Error ellipse: s-maj=2.8km s-min=2.6km az=144.0*
ISC 17 10:56:30.7±0.9, **43°.20N**±0°.02×**0°.63W**±0°.02, **h11**^{km}±7^{km}, **n58, σ1^{s}58**/110, **3C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.12**	**204**	Pg	**Pg**	**10 56 34.0**	**+0.2**
ATE				Sg	**Sg**	**10 56 35.8**	**-0.3**
ETSF	**Etsaut**	**0.31**	**170**	*e*Pg	**Pg**	**10 56 36.3**	**-0.6**
ETSF	738nm,0.2s			*e*Sg	**Sg**	**10 56 39.2**	**-1.9**
PYLO	**Lourdes**	**0.44**	**103**	Pg	**Pb**	**10 56 40.9**	**+0.4**
PYLO				Sg	**Sb**	**10 56 47.5**	**+0.5**
SJPF	**Ste Jean**	**0.44**	**259**	*e*Pg	**Pg**	**10 56 40.1**	**+0.7**
SJPF	178nm,0.3s			*e*Sg	**Sg**	**10 56 45.4**	**+0.1**
CANF	**Canfranc**	**0.44**	**169**	⇑Pg	**Pg**	**10 56 38.6**	**-0.9**
CANF				Sg	**Sg**	**10 56 43.0**	**-2.4**
OSSF	**Osses**	**0.46**	**277**	Pg	**Pg**	**10 56 40.4**	**+0.6**
VIEF	**Viey**	**0.57**	**123**	⇑Pg	**Pg**	**10 56 42.1**	**+0.2**
VIEF				Sg	**Sg**	**10 56 49.2**	**-0.3**
EORO	**Oroz-Betelu**	**0.58**	**239**	Pg	**Pg**	**10 56 42.0**	**0.0**
EORO				Sg	**Sg**	**10 56 49.3**	**-0.5**
EORO				*i* Vmb_Lg		10 56 52.0	
EALK	**Alkurruntz**	**0.64**	**272**	Pg	**Pg**	**10 56 43.5**	**+0.3**
EALK				Sg	**Sg**	**10 56 51.9**	**+0.3**
EALK	**Alkurruntz**	**0.64**	**272**	Pg	**Pg**	**10 56 43.5**	**+0.3**
EPF	**Esparros**	**0.73**	**103**	*e*Pg	**Pb**	**10 56 46.0**	**+0.6**
EPF	68nm,0.2s			*e*Sg	**Sb**	**10 56 55.8**	**+0.3**
ECHI	**Chisagues Biel**	**0.81**	**131**	Pg	**Pg**	**10 56 46.1**	**-0.2**
ECHI				Sg	**Sg**	**10 56 56.1**	**-0.8**
ECHI				*i* Vmb_Lg		10 56 58.6	
ECHI	**Chisagues Biel**	**0.81**	**131**	⇑Pg	**Pg**	**10 56 46.0**	**-0.3**
ECHI				Sg	**Sg**	**10 56 55.7**	**-1.2**
MLS	**Moulis**	**1.29**	**100**	Pn	**Pg**	**10 56 56.1**	**+0.7**
ESAC	**San Caprasio**	**1.48**	**175**	Pg	**Pn**	**10 56 58.3**	**+1.0**
ESAC				Sg	**Sn**	**10 57 16.8**	**+0.2**
PAND	**Andorre**	**1.74**	**112**	Pn	**Pg**	**10 57 05.3**	**+1.3**
LFF	**La Frestale**	**2.00**	**29**	*e*Pn	**Pn**	**10 57 04.9**	**+0.5**
LFF	**La Frestale**	**2.00**	**29**	*e*Pg	**Pg**	**10 57 10.4**	**+1.4**
LFF	29nm,0.4s			*e*Sg	**Sg**	**10 57 37.4**	**+2.4**
MTLF	**Montolieu**	**2.09**	**85**	*e*Pn	**Pn**	**10 57 05.2**	**-0.3**
MTLF	**Montolieu**	**2.09**	**85**	*e*Pg	**Pg**	**10 57 10.6**	**-0.1**
MTLF				*e*Sn	**Sn**	**10 57 30.1**	**-1.4**
MTLF	15nm,0.3s			*e*Sg	**Sg**	**10 57 38.2**	**+0.5**
MTLF	**Montolieu**	**2.09**	**85**	Pn	**Pn**	**10 57 07.0**	**+1.4**
MTLF				Pg	**Pg**	**10 57 10.2**	**-0.4**
ERTA	**Horta de San J**	**2.35**	**162**	Pg	**Pb**	**10 57 13.6**	**+0.6**
ERTA				Sn	**Sn**	**10 57 36.6**	**-1.5**
ERTA				Sg	**Sb**	**10 57 42.8**	**+0.7**
ERTA				*i* Vmb_Lg		10 57 49.1	
FILF	**Fillols**	**2.43**	**104**	Pn	**Pb**	**10 57 14.0**	**-0.4**
CAF	**Calviac**	**2.60**	**47**	*e*Pn	**Pn**	**10 57 13.0**	**+0.4**
CAF	**Calviac**	**2.60**	**47**	*e*P	**Pb**	**10 57 16.3**	**-1.0**
CAF	**Calviac**	**2.60**	**47**	*e*Pg	**Pg**	**10 57 21.7**	**+1.2**
CAF	3.8nm,0.2s			*e*Sn	**Sn**	**10 57 43.0**	**-1.2**
CAF	12nm,0.3s			*e*Sg	**Sg**	**10 57 55.7**	**+1.5**
ETOR	**Torete**	**2.60**	**205**	Pn	**Pn**	**10 57 13.6**	**+0.8**
ETOR				Sn	**Sn**	**10 57 43.7**	**-0.7**
ETOR				*i* Vmb_Lg		10 57 58.8	

RJF	Les Rejaudoux	2.61	36	*e*Pn	Pn	10 57 13.6	+0.8
RJF	Les Rejaudoux	2.61	36	*e*Pg	Pg	10 57 21.7	+1.0
RJF				*e*Sn	Sn	10 57 43.3	-1.1
	4.5nm,0.2s						
RJF				*e*Sg	Sg	10 57 55.8	+1.3
	15nm,0.2s						
EMOS	Mosqueruela	2.84	178	Pn	Pn	10 57 18.8	+2.8
EMOS				Sn	Sn	10 57 48.0	-2.2
EMOS				Sg	Sb	10 57 56.1	0.0
EMOS				*i* Vmb_Lg		10 58 04.3	
LASF	Ste Croix	3.37	73	*e*Pn	Pn	10 57 23.6	+0.3
LASF	Ste Croix	3.37	73	*e*P	Pn	10 57 26.5	+3.2
LASF				*e*Sn	Sn	10 58 01.7	-1.6
	2.3nm,0.3s						
LASF				*e*Sg	Sg	10 58 18.2	-0.8
	3.6nm,0.3s						
MFF	Saint Martin d	3.42	6	*e*Pn	Pn	10 57 23.8	-0.1
MFF	Saint Martin d	3.42	6	*e*Pg	Pg	10 57 36.5	+0.3
MFF				*e*Sn	Sn	10 58 03.1	-1.3
MFF				*e*Sg	Sg	10 58 21.7	+1.2
	4.7nm,0.2s						
TCF	Toulx Ste Croi	3.69	32	*e*Pn	Pn	10 57 28.1	+0.5
TCF	Toulx Ste Croi	3.69	32	*e*Pg	Pg	10 57 41.6	+0.2
TCF				*e*Sn	Sn	10 58 09.8	-1.3
TCF				*e*Sg	Sg	10 58 29.9	+0.7
	10nm,0.4s						
VIVF	Saint-Julien-l	4.17	65	*e*P	Pn	10 57 38.7	+4.5
VIVF				*e*Sn	Sn	10 58 20.6	-2.3
VIVF				*e*Sg	Sg	10 58 43.5	-1.0
	2.2nm,0.3s						
BGF	Bois d'Agland	4.17	35	*e*Pn	Pn	10 57 34.9	+0.7
BGF				*e*Sn	Sn	10 58 21.7	-1.2
BGF				*e*Sg	Sg	10 58 43.6	-0.9
	20nm,0.3s						
AVF	Avril sur Loir	4.57	37	*e*Pn	Pn	10 57 40.3	+0.7
AVF				*e*Sn	Sn	10 58 30.2	-2.5
AVF				*e*Sg	Sg	10 58 56.6	-0.7
	6.4nm,0.6s						
SMRF	Simiane la Rot	4.58	78	*e*Pn	Pn	10 57 39.4	-0.4
SMRF	Simiane la Rot	4.58	78	*e*P	Pn	10 57 43.8	+4.0
SMRF				*e*Sg	Sg	10 58 55.7	-1.8
	1.2nm,0.4s						
PAB	San Pablo	4.60	219	Pn	Pn	10 57 40.9	+0.7
PAB				Sn	Sn	10 58 31.5	-2.0
PAB				Sg	Sb	10 58 50.1	+3.3
SMF	Signal de Mont	4.69	41	*e*Pn	Pn	10 57 41.6	+0.3
SMF	Signal de Mont	4.69	41	*e*Pg	Pg	10 57 59.1	-1.3
SMF				*e*Sg	Sg	10 59 00.2	-0.8
	1.7nm,0.3s						
SSF	Saint Saulge	4.84	36	*e*Pn	Pn	10 57 42.9	-0.6
SSF				*e*Sn	Sn	10 58 37.8	-1.7
SSF				*e*Sg	Sg	10 59 05.3	-0.9
	3.7nm,0.4s						
ORIF	Oris-en-Rattie	5.00	68	*e*Pn	Pn	10 57 46.7	+1.1
ORIF	Oris-en-Rattie	5.00	68	*e*P	Pn	10 57 50.4	+4.8
QUIF	Quistinic	5.04	340	*e*Pn	Pn	10 57 46.4	+0.3
QUIF	Quistinic	5.04	340	*e*P	Pn	10 57 51.2	+5.1
QUIF				*e*Sn	Sn	10 58 43.2	-1.1
	1.6nm,0.3s						
QUIF				*e*Sg	Sg	10 59 10.5	-1.9
	2.0nm,0.4s						
LOR	Lormes	5.16	36	*e*Pn	Pn	10 57 48.2	+0.4
LOR	Lormes	5.16	36	*e*P	Pn	10 57 52.2	+4.4
LOR				*e*Sg	Sg	10 59 14.7	-1.5
	2.5nm,0.3s						
LMR	La Mourre	5.22	86	*e*Pn	Pn	10 57 48.5	0.0
LMR	La Mourre	5.22	86	*e*P	Pn	10 57 53.3	+4.8
SGMF	Saint Gilles	5.23	346	*e*Pn	Pn	10 57 49.9	+1.2
SGMF				*e*Sn	Sn	10 58 48.1	-0.9
SGMF				*e*Sg	Sg	10 59 16.7	-1.8
	2.2nm,0.4s						
LDF	La Druitiere	5.41	4	*e*Pn	Pn	10 57 52.1	+0.9
LDF				*e*Sn	Sn	10 58 50.2	-3.1
	2.4nm,0.4s						
LDF				*e*Sg	Sg	10 59 22.8	-1.3
	2.0nm,0.3s						
ROSF	Rostrenen	5.46	341	*e*Pn	Pn	10 57 51.9	0.0
ROSF				*e*Sn	Sn	10 58 52.0	-2.6
	1.5nm,0.4s						
FLN	La Foliniere	5.56	1	*e*Pn	Pn	10 57 53.9	+0.6
FLN				*e*Sn	Sn	10 58 54.5	-2.7
FLN				*e*Sg	Sg	10 59 27.8	-1.4
	2.4nm,0.3s						
MEZF	Maizieres J'vi	6.62	35	*e*Pn	Pn	10 58 07.6	-0.2

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*AZER **17** 10:56:57.1±1.5, 37°.33N×41°.93E, h7^{km}, Error ellipse: s-maj=22.7km s-min=9.1km az=115.0*

*ISK **17** 10:57:04.9, 38°.27N×42°.48E, h8^{km}, ML3.8/18*

*DDA **17** 10:57:05.4±0.0, 38°.30N×42°.46E, h21^{km}±2^{km}, MW3.8*

ISC 17 10:57:05.2±1.1, **38°.27N**±0°.02×**42°.45E**±0°.02, **h7**^{km}±9^{km}, **n56, σ1^{s}28**/89, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PERV	Siirt/Pervari-	0.33	167	P	Pb	10 57 13.2	-0.3
PERV				S	Sb	10 57 19.6	+0.6
PERV				*i* AML	AML	10 57 22.0	
	comp=E,6µm,0.3s						
AKDM	Akdamar-Van	0.42	82	PG	Pg	10 57 13.3	-0.1
AKDM				SG	Sg	10 57 19.2	+0.2
GURO	Guroymak-BITLI	0.43	311	PG	Pg	10 57 13.9	+0.3
GURO				SG	Sg	10 57 20.3	+1.1
GEVA	Gevas	0.48	85	P	Pg	10 57 14.5	-0.1
GEVA				S	Sb	10 57 22.1	-1.3
ADCV	BITLIS_Adilcev	0.58	22	P	Pg	10 57 16.5	+0.1
ADCV				S	Sb	10 57 25.0	-1.2
TVAN	Van	0.80	71	P	Pg	10 57 19.9	-0.6
TVAN				S	Sg	10 57 30.0	-0.9
TVAN				*i* AML	AML	10 57 35.0	
	comp=N,1µm,0.5s						
TVAN				*i* AML	AML	10 57 35.0	
	comp=E,2µm,0.4s						
VANB	Van	0.81	66	PG	Pg	10 57 19.7	-1.0
MUSM	Mu-Merkez	0.86	302	P	Pg	10 57 21.5	-0.2
MUSM				S	Sg	10 57 33.6	+0.6
MUSM				*i* AML	AML	10 57 36.0	
	comp=N,848nm,0.9s						
MUSM				*i* AML	AML	10 57 38.0	
	comp=E,746nm,0.9s						
MLAZ	Malazgirt-MUS	0.87	5	PG	Pg	10 57 21.7	-0.3
MLAZ				SG	Sb	10 57 34.8	+0.1
SVAN	Silvan-Diyarba	0.99	263	PG	Pn	10 57 25.3	-0.2
SVAN				SG	Sn	10 57 39.3	-0.5
SVAN	Silvan-Diyarba	0.99	263	P	Pn	10 57 25.1	-0.4
SVAN				S	Sn	10 57 38.8	-0.9
SVAN				*i* AML	AML	10 57 41.0	
	comp=N,558nm,0.7s						
SVAN				*i* AML	AML	10 57 42.0	
	comp=E,397nm,0.5s						
BTMN	Batman	1.00	248	P	Pn	10 57 25.9	+0.2
BTMN				S	Sn	10 57 40.4	+0.2
EKAR	Karacoban	1.03	343	P	Pb	10 57 25.3	-0.2
EKAR				S	Sn	10 57 41.2	+0.2
EKAR				*i* AML	AML	10 57 47.0	
	comp=N,2µm,1.1s						
VRTB	Varto-Mus	1.18	319	PN	Pn	10 57 28.7	+0.5
VRTB				SN	Sn	10 57 45.2	+0.6
VRTB	Varto-Mus	1.18	319	P	Pn	10 57 28.3	+0.1
VRTB				*i* AML	AML	10 57 50.0	
	comp=E,723nm,0.6s						
VRTB				*i* AML	AML	10 57 53.0	
	comp=N,998nm,0.8s						
MIDY	Mardin/Midyat-	1.20	224	P	Pn	10 57 29.2	+0.8
MIDY				S	Sn	10 57 46.2	+1.3
MIDY				*i* AML	AML	10 57 47.0	
	comp=N,2µm,0.5s						
MIDY				*i* AML	AML	10 57 48.0	
	comp=E,2µm,0.5s						
HAKT	HAKKARI	1.23	125	P	Pn	10 57 28.9	0.0
HAKT				S	Sn	10 57 46.9	+1.1
HAKT				*i* AML	AML	10 57 51.0	
	comp=E,501nm,0.4s						
HAKT				*i* AML	AML	10 57 52.0	
	comp=N,999nm,1.1s						
OZAP	Van, Ozalp-Mer	1.27	72	P	Pg	10 57 30.6	+1.0
OZAP				S	Sn	10 57 48.2	+1.2
OZAP				*i* AML	AML	10 57 55.0	
	comp=N,409nm,1.0s						
OZAP				*i* AML	AML	10 57 57.0	
	comp=E,328nm,0.7s						
SLHN	Bingol, Solhan	1.31	302	P	Pg	10 57 30.4	+0.1
SLHN				S	Sn	10 57 49.0	+1.2
SLHN				*i* AML	AML	10 57 52.0	
	comp=N,1µm,0.6s						
AGRB	Hanur-Agry	1.37	18	PN	Pb	10 57 30.8	-0.4
AGRB				SN	Sn	10 57 49.5	+0.1
CUKT	Cukurca	1.38	138	PN	Pb	10 57 30.8	-0.5
CLDR	Caldiran	1.44	52	PN	Pn	10 57 31.6	-0.3
CLDR	Caldiran	1.44	52	P	Pg	10 57 32.8	-0.1
CLDR				*i* AML	AML	10 57 58.0	
	comp=E,899nm,0.5s						
BNGB	Bingl	1.56	298	PN	Pg	10 57 34.7	-0.4
EATA	Eleskirt	1.59	1	P	Pb	10 57 34.3	-0.7
EATA				S	Sg	10 57 55.9	-0.4
EATA				*i* AML	AML	10 58 03.0	
	comp=E,417nm,0.7s						
HANI	Diyarbakir_Han	1.62	276	P	Pb	10 57 34.8	-0.5
HANI				S	Sg	10 57 57.5	+0.4
HANI				*i* AML	AML	10 57 58.0	
	comp=E,545nm,0.9s						
HANI				*i* AML	AML	10 57 58.0	
	comp=N,482nm,0.9s						
KOTA	Agri, Merkez-K	1.64	21	P	Pn	10 57 34.3	-0.2
KOTA				S	Sb	10 57 56.4	-0.4
KOTA				*i* AML	AML	10 57 58.0	
	comp=E,205nm,0.7s						
KOTA				*i* AML	AML	10 58 02.0	
	comp=N,199nm,0.8s						
ECAT	Cat-ERZURUM	1.76	320	P	Pb	10 57 37.2	-0.7
ECAT				S	Sg	10 58 02.5	+0.8
ECAT				*i* AML	AML	10 58 03.0	
	comp=N,231nm,0.5s						
ECAT				*i* AML	AML	10 58 10.0	
	comp=E,308nm,0.6s						
KOPR	Koprukoy-ERZUR	1.78	345	PN	Pb	10 57 37.7	-0.5
MAZI	Mazidag	1.78	244	PN	Pn	10 57 36.5	+0.1
HOMI	Horasan	1.82	347	P	Pb	10 57 39.1	+0.2
HOMI				S	Sg	10 58 05.2	+1.4
HOMI				*i* AML	AML	10 58 09.0	
	comp=E,492nm,0.5s						
HOMI				*i* AML	AML	10 58 09.0	
	comp=N,190nm,0.6s						
DYBB	Diyarbakir	1.85	261	PN	Pn	10 57 37.8	+0.5
DIYA	Diyarbakir	1.87	260	P	Pn	10 57 37.1	-0.5
DIYA				S	Sn	10 57 59.4	-2.1
DIYA				*i* AML	AML	10 58 06.0	
	comp=N,151nm,0.6s						
YEDI	Yedisu-Bingol	1.89	309	PN	Pb	10 57 38.9	-1.1
IGDI	IGDIR	2.04	38	P	Pb	10 57 41.9	-0.6
IGDI				S	Sg	10 58 11.3	+0.6
IGDI				*i* AML	AML	10 58 17.0	
	comp=Z,70nm,0.9s						
KOVA	Elazig, Kovanc	2.11	283	P	Pb	10 57 43.1	-0.7
KOVA				S	Sg	10 58 13.5	+0.4
KOVA				*i* AML	AML	10 58 21.0	
	comp=E,158nm,0.7s						
KOVA				*i* AML	AML	10 58 31.0	
	comp=N,282nm,1.1s						
SENK	Senkaya-Erzuru	2.29	358	PN	Pn	10 57 44.3	+0.8
KOPT	Kop Dagi	2.31	320	P	Pb	10 57 47.9	+0.6
KOPT				*i* AML	AML	10 58 31.0	
	comp=N,97nm,0.6s						
KOPT				*i* AML	AML	10 58 31.0	
	comp=E,100nm,0.8s						
HYR	Heyderabad	2.37	52	P	Pg	10 57 50.6	+0.1
	SNR=26						
HYR				S	Sg	10 58 29.8	+8.6
KRIK	Erzurum-spir	2.38	331	P	Pn	10 57 44.7	0.0
KARS	Kars	2.40	12	PN	Pn	10 57 45.7	+0.7
TNCL	Tunceli-Merkez	2.42	291	P	Pb	10 57 49.0	-0.1
TNCL				S	Sg	10 58 22.7	-0.4
TNCL				*i* AML	AML	10 58 27.0	
	comp=N,196nm,0.8s						
TNCL				*i* AML	AML	10 58 30.0	
	comp=E,293nm,0.7s						
SVRC	Sivrice-ELAZID	2.47	273	PN	Pn	10 57 46.3	+0.3
ERZN	Erzincan	2.50	303	PN	Pn	10 57 47.5	+1.2
NAX	Nakhchivan	2.55	68	P	Pb	10 57 50.8	-0.4
	SNR=10						
NAX				S	Sg	10 58 31.5	+4.4
GNI	Garni	2.59	43	PN	Pn	10 57 48.4	+0.8
SBZ	Shahbuz	2.67	64	P	Pb	10 57 52.9	-0.5
	SNR=10						
SBZ				S	Sg	10 58 35.0	+4.0
DAGI	Agillar	2.83	352	P	Pb	10 57 56.9	+0.8
ORD	Ordubad	2.85	76	P	Pn	10 57 53.0	+1.8
	SNR=20						
ORD				S	Sg	10 58 37.4	+0.5
MALT	Malatya	3.16	272	PN	Pn	10 57 57.1	+1.7
GDB	GEDABAY	3.54	45	P	Pb	10 58 06.7	-1.5
	SNR=6.7						
GDB				S	Sg	10 58 60.0	+1.1
QZX	Qazax, Azerbai	3.58	38	P	Pb	10 58 06.9	-2.0
	SNR=8.1						
QZX				S	Sg	10 59 02.1	+1.8
GANJ	Ganja	3.82	50	P	Pb	10 58 08.3	-4.6
	SNR=4.2						
GANJ				S	Sg	10 59 05.4	-2.5
GZT	Gaziantep	3.97	258	P	Pg	10 58 20.4	-0.9
AGDM	Agdam	4.06	62	S	Sg	10 59 11.0	-4.5
YRD	Yardimli	4.58	80	P	Pn	10 58 16.9	+1.8
	SNR=6.0						

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*TUL **17** 11:05:53.4±1.2, 35°.84N±0°.01×97°.26W±0°.02, h5^{km}±6^{km}, ML2.8, mb_Lg2.5/43(NEIC), Error ellipse: s-maj=2.4km s-min=0.8km az=132.0*

NEIC 17 11:05:53.5±0.9, **35°.86N**±0°.01×**97°.27W**±0°.01, **h8**^{km}±6^{km}, **Error ellipse: s-maj=2.4km s-min=0.6km az=152.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.22	202	Pg	Pg	11 05 57.8	-0.2
ADOK				Sg	Sg	11 06 01.3	+0.3
OKCFA	Oklahoma City	0.47	199	Sg	Sg	11 06 08.8	+0.1
OKCSW	OKLAHOMA CITY	0.47	197	Pg	Pg	11 06 02.5	-0.2
FNO	Franklin	0.61	190	Pg	Pg	11 06 04.2	-1.1
TUL1	Leonard	1.20	87	Pn	Pb	11 06 14.8	-1.8
TUL1				Sn	Sg	11 06 31.6	-0.6
T35A	Sooner Cattle	1.22	30	Pn	Pb	11 06 15.7	-1.2
X34A	Smith Ranch, M	1.33	200	Pn	Pn	11 06 18.1	-0.4
U32A	Winter Ranch,	1.50	291	Pn	Pb	11 06 21.7	+0.1
WMOK	Wichita Mounta	1.67	228	Pn	Pn	11 06 23.4	+0.3
X37A	Clayton	2.00	129	IAmb_Lg		11 06 59.9	
	comp=Z,27nm,0.7s						
W39A	Magazine	2.92	102		Pn	11 06 41.1	+0.9
W39A				IAmb_Lg		11 07 27.3	
	comp=Z,18nm,0.7s						
S39A	Bolivar	3.66	59	IAmb_Lg		11 07 53.5	
	comp=Z,9.1nm,0.9s						
AMTX	Amarillo	3.73	256	IAmb_Lg		11 07 54.9	
	comp=Z,13nm,0.8s						
ABTX	Abilene, Hawle	3.78	212	IAmb_Lg		11 07 50.2	
	comp=Z,8.4nm,0.8s						
X40A	Basin Creek Fa	3.88	109	IAmb_Lg		11 07 57.8	
	comp=Z,18nm,0.9s						
WLAR	White Oak Lake	4.05	121	IAmb_Lg		11 08 02.8	
	comp=Z,7.7nm,0.8s						
WHAR	Wooly Hollow	4.10	96	IAmb_Lg		11 08 03.3	
	comp=Z,10.0nm,0.9s						
W41B	Gary Mavity, V	4.15	98	IAmb_Lg		11 08 15.1	
	comp=Z,12nm,0.7s						
UALR	University of	4.17	104	IAmb_Lg		11 08 12.5	
	comp=Z,12nm,0.7s						
FCAR	Ozark Folk Cen	4.18	88	IAmb_Lg		11 08 09.4	
	comp=Z,7.4nm,0.8s						
Z41A	Richland Creek	4.50	124	IAmb_Lg		11 08 22.3	
	comp=Z,14nm,0.9s						
P38A	Dawn	4.79	37	IAmb_Lg		11 08 32.5	
	comp=Z,7.9nm,0.7s						
MSTX	Muleshoe	4.90	249	IAmb_Lg		11 08 30.1	
	comp=Z,7.6nm,1.2s						
435B	Jarrell	5.07	183	IAmb_Lg		11 08 46.8	
	comp=Z,8.9nm,0.8s						
CCM	Cathedral Cave	5.30	64	IAmb_Lg		11 08 48.7	
	comp=Z,6.2nm,0.8s						
KSCO	Kaye Shedlock'	5.30	308	IAmb_Lg		11 08 42.7	
	comp=Z,8.4nm,0.7s						
P40A	Paris	5.53	47	IAmb_Lg		11 08 52.2	
	comp=Z,10nm,0.8s						
PBMO	Poplar Bluff	5.60	79	IAmb_Lg		11 08 52.5	
	comp=Z,13nm,0.8s						
JCT	Junction City	5.77	202	IAmb_Lg		11 09 11.8	
	comp=Z,13nm,0.8s						
T25A	Trinidad	5.89	285	IAmb_Lg		11 09 06.7	
	comp=Z,8.0nm,0.7s						
N23A	Red Feather La	8.47	309	IAmb_Lg		11 10 29.7	
	comp=Z,5.8nm,0.9s						

TAP 17 11:14:17.9, 24°.24N×121°.73E, h10^{km}, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.08	11	*e*S	Sg	11 14 22.9	+0.9
	baz=16						
ETL	Fush Village	0.12	231	P	Pb	11 14 21.8	-0.5
	baz=230						
ETL				S	Sg	11 14 24.1	+1.1
	baz=230						
NACB	Ninganchiao	0.13	243	P	Pb	11 14 21.9	-0.6
	baz=242						
NACB				S	Sg	11 14 24.3	+1.1
	baz=242						
ENA	Nanau	0.19	4	*i* P	Pb	11 14 22.9	-0.6
	baz=6.0						
ENA				*i* S	Sg	11 14 26.3	+1.5
	baz=6.0						
TWD	Chiawan	0.19	217	*i* P	Pg	11 14 22.7	+0.7
	baz=215						
TWD				*i* S	Sg	11 14 25.9	+1.0
	baz=215						
EWUT	Wuta	0.21	13	P	Pg	11 14 23.1	+0.7
	baz=13						
EWUT				S	Sg	11 14 27.0	+1.5
	baz=13						
ETLH	Xiulin Townshi	0.22	263	P	Pb	11 14 23.6	-0.5
	baz=262						
ETLH				S	Sg	11 14 27.4	+1.6
	baz=262						
HWA	Hwalien	0.28	203	*e*S	Sb	11 14 29.4	-0.3
	baz=201						
ETM	Tongmen	0.34	218	P	Pb	11 14 25.8	-0.2
	baz=218						
ETM				S	Sb	11 14 31.9	+0.4
	baz=218						
LATG	Datong	0.35	329	P	Pb	11 14 26.1	-0.1
	baz=328						
LATG				S	Sb	11 14 31.6	-0.3
	baz=328						
NNSB	Datong	0.37	302	P	Pb	11 14 26.5	-0.1
	baz=301						
NNSB				S	Sb	11 14 31.9	-0.5
	baz=301						
NNS	Nan Shan	0.38	303	*i* P	Pb	11 14 26.6	-0.2
	baz=302						
NNS				*i* S	Sb	11 14 32.8	-0.1
	baz=302						
TEYL	Yanliau Villag	0.38	198	*e*S	Sg	11 14 31.1	+0.6
	baz=198						
TWC	Suao	0.39	17	*i* S	Sb	11 14 32.7	-0.2
	baz=18						
NDS	Dongshan	0.40	359	P	Pb	11 14 26.8	-0.2
	baz=358						
NDS				S	Sb	11 14 32.9	-0.3
	baz=358						
ENTT	Nioudou	0.43	340	*i* P	Pb	11 14 27.8	+0.2
	baz=341						
ENTT				*i* S	Sb	11 14 33.8	-0.3
	baz=341						
WHF	Hehuan Shan	0.43	258	*i* P	Pb	11 14 27.2	-0.6
	baz=257						
WHF				*i* S	Sb	11 14 33.6	-0.9
	baz=257						
FUSS	Fushou	0.44	272	P	Pb	11 14 27.8	0.0
	baz=271						
FUSS				*i* S	Sb	11 14 34.6	0.0
	baz=271						
TWE	Neicheng	0.49	354	*i* P	Pb	11 14 28.7	+0.1
	baz=355						
TWE				*i* S	Sb	11 14 36.1	+0.4
	baz=355						
ESL	Shilin	0.50	213	P	Pg	11 14 28.1	+0.5
	baz=211						
ESL				S	Sb	11 14 36.3	+0.3
	baz=211						
TDCB	Techi	0.52	272	*e*S	Sb	11 14 36.5	-0.3
	baz=271						
ILA	Ilan	0.53	2	P	Pb	11 14 28.9	-0.3
	baz=3.0						
ILA				S	Sb	11 14 36.9	0.0
	baz=3.0						
CHGB	Renai	0.53	251	P	Pb	11 14 29.1	-0.3
	baz=250						
CHGB				S	Sb	11 14 36.7	-0.6
	baz=250						
FUSB	Fushanzhiwuyua	0.54	347	P	Pb	11 14 29.8	+0.3
	baz=346						
FUSB				S	Sb	11 14 37.1	-0.2
	baz=346						
YHNB	Yeheng	0.54	324	P	Pb	11 14 29.8	+0.3
	baz=323						
YHNB				S	Sb	11 14 37.5	+0.2
	baz=323						
NSK	Sanguang	0.55	323	P	Pb	11 14 29.5	-0.3
	baz=323						
NSK				S	Sb	11 14 37.5	-0.2
	baz=323						
OWD	Renai	0.57	241	*e*P	Pb	11 14 30.1	-0.1
	baz=240						
OWD				*e*S	Sb	11 14 38.5	+0.1
	baz=240						
NWLT	Wulai	0.58	339	*e*P	Pb	11 14 30.5	+0.4
	baz=339						
NWLT				*e*S	Sb	11 14 38.1	-0.2
	baz=339						
WUSB	Renai	0.61	247	P	Pb	11 14 30.6	0.0
	baz=246						
WUSB				*e*S	Sb	11 14 39.1	-0.1
	baz=246						
EGFH	Guangfu	0.63	206	*e*P	Pb	11 14 30.9	0.0
	baz=205						
EGFH				*e*S	Sb	11 14 40.4	+0.6
	baz=205						
WHP	Taichung City	0.71	274	*e*S	Sb	11 14 42.8	+0.5
	baz=273						
VWDT	VWDT	0.72	228	P	Pb	11 14 32.5	+0.1
	baz=228						
VWDT				*e*S	Sb	11 14 42.1	-0.2
	baz=228						
TIPB	Shuangxi	0.74	7	*e*P	Pb	11 14 32.8	0.0
	baz=7.0						
TIPB				*e*S	Sb	11 14 43.2	+0.2
	baz=7.0						
LIOB	Emei	0.77	302	*e*P	Pb	11 14 33.8	+0.5
	baz=302						
LIOB				*e*S	Sb	11 14 44.3	+0.5
	baz=302						
SSLB	Suanglung	0.83	238	*e*P	Pb	11 14 34.3	-0.2
	baz=237						
SSLB				*e*S	Sb	11 14 45.9	+0.2
	baz=237						

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*SJA **17** 11:20:53.6±0.6, 33°.67S×68°.34W, h8^{km}, ML4.5, MW4.1*

*IDC **17** 11:20:54.4±3.6, 33°.59S×68°.46W, h12^{km}±22^{km}, mb4.3/11, mbtmp4.2/15, ML4.1/4, MS3.3/10, Error ellipse: s-maj=24.6km s-min=12.4km az=100.0*

*GUC **17** 11:20:55.6±1.1, 33°.64S×68°.45W, h14^{km}±8^{km}, ML4.5*

*NEIC **17** 11:20:57.6±2.1, 33°.68S±0°.04×68°.32W±0°.07, h26^{km}±4^{km}, mb4.5/25, Mwr4.2/44, Md4.5(SJA), Error ellipse: s-maj=8.7km s-min=5.5km az=119.0*

*NEIC **17** 11:20:58.8, 33°.67S×68°.45W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.29; M$_{\theta\theta}$0.85; M$_{\phi\phi}$-2.14; M$_{r\theta}$-0.88; M$_{\theta\phi}$0.60; M$_{\phi r}$-0.45; Fault plane solution: M$_0$2.20000×10^{15} NP1:ϕ_s316.09000°, δ53.06000°, λ37.18000°. NP2:ϕ_s201.58000°, δ61.11000°, λ136.66000°. Principal axes: T 2.1043, Plg50.0000°, Azm165.0000°; N 0.1731, Plg40.0000°, Azm354.0000°; P -2.2774, Plg5.0000°, Azm261.0000°;*

ISC 17 11:20:55.4±0.7, **33°.66S**±0°.02×**68°.44W**±0°.02, **h16**^{km}±4^{km}, **n148, σ1^{s}62**/183, **mb4.5**/15, **MS3.5**/6, **5C, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RFA	San Rafael	1.11	181	*e*P	Pb	11 21 12.6	-3.6
RFA				*e*P	Pg	11 21 17.7	+0.9
RFA				*e*S	Sn	11 21 33.4	+2.1
RFA				IAML		11 21 35.2	
	comp=Z,44µm,0.4s						
FCH	Farellones	1.58	282	*e*P	Pg	11 21 25.5	-0.3

FCH				*e*S	Sg	11 21 47.0	+0.5
FCH				IAML		11 21 49.1	
	comp=N,5µm,0.6s						
AUSP	Uspallata	1.64	331	*e*P	Pg	11 21 26.1	-0.8
COIS	El Sosneado	1.73	213	*e*P	Pb	11 21 26.8	0.0
COIS				*e*S	Sg	11 21 50.7	-0.4
MT03	Universidad Ad	1.74	275		Pb	11 21 27.7	+0.7
MT03	Universidad Ad	1.74	275⇑	*e*P	Pb	11 21 27.3	+0.4
MT03				*e*S	Sg	11 21 51.0	-0.4
MT03				IAML		11 21 53.0	
	comp=E,13µm,0.3s						
MT03				IAML		11 21 54.2	
	comp=N,12µm,0.4s						
MT03	Universidad Ad	1.74	275	*e*P	Pb	11 21 27.8	+0.9
MT03				*e*S	Sg	11 21 52.4	+1.0
MT03				IAML		11 21 54.3	
	comp=Z,5µm,0.3s						
RTCV	Cerro Valdivia	1.80	357	*e*P	Pb	11 21 28.7	+0.8
RTCV				*e*S	Sn	11 21 47.6	-0.6
RTCV				IAML		11 21 54.4	
	comp=Z,48nm,1.1s						
BO04	La Punta	1.84	259		Pb	11 21 29.4	+0.8
BO04	La Punta	1.84	259⇑	*e*P	Pb	11 21 29.2	+0.6
BO04				*e*S	Sg	11 21 53.6	-0.9
BO04				IAML		11 21 58.2	
	comp=E,3µm,0.4s						
PEL	Peldehue	1.95	285		Pb	11 21 30.8	+0.3
PEL	Peldehue	1.95	285	*e*P	Pb	11 21 30.8	+0.3
PEL				*e*S	Sg	11 21 56.8	-1.3
PEL				IAML		11 21 59.3	
	comp=N,3µm,0.6s						
PEL	Peldehue	1.95	285	*e*P	Pb	11 21 30.9	+0.3
PEL				*e*S	Sg	11 21 58.8	+0.7
VA03	San Esteban	1.98	296		Pb	11 21 31.8	+0.7
VA03	San Esteban	1.98	296⇑	*e*P	Pb	11 21 31.1	0.0
VA03				*e*S	Sg	11 21 58.0	-1.2
VA03	San Esteban	1.98	296	*e*P	Pb	11 21 31.9	+0.7
VA03				*e*S	Sg	11 21 58.3	-0.9
VA03				IAML		11 22 00.1	
	comp=Z,14µm,0.3s						
RTLS	Leoncito	1.99	338	*e*P	Pb	11 21 31.0	-0.4
RTLS				IAML		11 22 00.8	
	comp=Z,2µm,0.6s						
ZON	Zonda	2.12	354	Pn	Pn	11 21 31.9	+1.8
MT09	Talagante	2.13	266	Pn	Pb	11 21 32.9	-0.8
MT09	Talagante	2.13	266	*e*P	Pb	11 21 32.9	-0.8
MT09				*e*S	Sg	11 22 02.3	-1.6
MT09				IAML		11 22 05.3	
	comp=N,3µm,0.3s						
EDS3	Malargue	2.25	200	*e*P	Pn	11 21 33.5	+1.4
EDS3				*e*S	Sb	11 22 04.1	+0.7
EDS3				*e*S	Sg	11 22 08.9	+1.2
ROCH	El Roble	2.26	287	*e*P	Pn	11 21 32.6	+0.3
ROCH				*e*S	Sb	11 22 03.2	-0.6
ROCH				IAML		11 22 06.7	
	comp=N,7µm,0.3s						
ROC1	El Roble	2.26	287		Pn	11 21 32.7	+0.3
ROC1	El Roble	2.26	287	*e*P	Pn	11 21 27.1	-5.3
ROC1				*e*P	Pn	11 21 32.6	+0.3
ROC1				*e*S	Sb	11 22 04.8	+0.9
MT02	Curacav	2.29	279		Pb	11 21 35.1	-1.2
MT02	Curacav	2.29	279	*e*P	Pb	11 21 35.1	-1.2
MT02				*e*S	Sb	11 22 06.3	+1.9
MT02				IAML		11 22 08.7	
	comp=N,3µm,0.3s						
MT02	Curacav	2.29	279	*e*P	Pb	11 21 35.1	-1.2
MT02				*e*S	Sg	11 22 07.5	-1.5
MT02				IAML		11 22 09.3	
	comp=Z,2µm,0.3s						
BO01	Tunca	2.31	251	Pn	Pb	11 21 35.4	-1.3
BO01	Tunca	2.31	251	*e*P	Pb	11 21 35.5	-1.2
BO01				*e*S	Sb	11 22 06.9	+1.8
BO01				IAML		11 22 10.2	
	comp=E,2µm,0.5s						
BO01	Tunca	2.31	251	*e*P	Pb	11 21 35.6	-1.2
BO01				*e*S	Sb	11 22 04.1	-1.0
BO01				*e*S	Sg	11 22 08.9	-0.9
BO01				IAML		11 22 11.3	
	comp=Z,1µm,0.5s						
MT01	Popeta	2.35	264		Pb	11 21 35.8	-1.5
MT01	Popeta	2.35	264	*e*P	Pb	11 21 35.9	-1.5
MT01				*e*S	Sb	11 22 07.4	+1.2
MT01				IAML		11 22 11.0	
	comp=N,6µm,0.2s						
MT01	Popeta	2.35	264	*e*P	Pb	11 21 35.9	-1.4
MT01				*e*S	Sg	11 22 09.8	-1.1
MT01				IAML		11 22 13.1	
	comp=Z,1µm,0.9s						
MRA	San Martin	2.60	62	*e*P	Pn	11 21 38.6	+1.7
MRA				*e*S	Sb	11 22 12.6	-0.8
MRA				IAML		11 22 19.7	
	comp=Z,2µm,0.3s						
VA06	Catapilco	2.64	294		Pn	11 21 39.7	+2.4
VA06	Catapilco	2.64	294	*e*P	Pn	11 21 39.4	+2.2
VA06				*e*S	Sb	11 22 14.3	-0.1
VA05	Santo Domingo	2.65	269		Pn	11 21 39.2	+1.8
VA05	Santo Domingo	2.65	269⇑	*e*P	Pn	11 21 39.7	+2.3
VA05				*e*S	Sb	11 22 15.4	+0.7
VA05				IAML		11 22 22.6	
	comp=E,6µm,0.4s						
VA01	Torpederas	2.76	282	Pn	Pn	11 21 41.2	+2.3
VA01	Torpederas	2.76	282⇑	*e*P	Pn	11 21 41.4	+2.4
VA01				*e*S	Sb	11 22 16.9	-1.0
VA01				IAML		11 22 23.5	
	comp=E,2µm,0.4s						
VA01	Torpederas	2.76	282	*e*P	Pn	11 21 41.2	+2.3
VA01				*e*S	Sg	11 22 23.5	-0.6
VA01				IAML		11 22 33.5	
	comp=Z,946nm,0.7s						
ACHE	Chepes	2.91	32	*e*P	Pn	11 21 42.6	+1.4
BO03	Pichilemu	3.04	253	*e*P	Pn	11 21 44.9	+2.2
AVFE	Valle Fertil	3.11	16	*e*P	Pn	11 21 45.8	+2.0
AVFE				*e*S	Sb	11 22 27.1	-0.9
AVFE				IAML		11 22 34.7	
	comp=Z,3µm,0.6s						
ACCO	Cerro Coronel	3.11	350	*e*P	Pn	11 21 46.9	+2.8
ACCO				*e*S	Sg	11 22 34.8	-0.6
ACCO				IAML		11 22 37.4	
	comp=Z,1µm,0.5s						
GO05	Huala	3.19	244		Pn	11 21 47.0	+2.2
GO05	Huala	3.19	244	*e*P	Pn	11 21 47.3	+2.4
GO05				IAML		11 22 37.6	
	comp=N,2µm,0.3s						
ML02	Panimavida	3.23	229		Pn	11 21 47.1	+1.7
ML02	Panimavida	3.23	229	*e*P	Pb	11 21 49.9	-2.4
CO02	Combarbal	3.27	318		Pn	11 21 48.8	+2.8
CO02	Combarbal	3.27	318	*e*P	Pn	11 21 48.8	+2.8
CO02				*e*S	Sb	11 22 30.5	-2.2
CO02	Combarbal	3.27	318	*e*P	Pn	11 21 48.9	+2.8
CO02				*e*S	Sb	11 22 33.1	+0.4
CO02				IAML		11 22 39.6	
	comp=Z,5µm,0.6s						
ACDV	Cuesta del Vie	3.53	350	*e*P	Pn	11 21 47.6	-2.1
ACDV				*e*P	Pn	11 21 52.9	+3.2
ACDV				*e*S	Sb	11 22 42.1	+1.9
ACDV				IAML		11 22 54.0	
	comp=Z,1µm,1.3s						
AROD	Rodeo	3.59	346	*e*P	Pn	11 21 53.3	+2.6
AROD				*e*S	Sg	11 22 49.6	-1.2
APLL	PUNTA DE LOS L	3.64	27	*e*P	Pn	11 21 52.9	+1.8
CO01	Juntas del Tor	3.93	339		Pn	11 21 59.7	+4.3
CO01	Juntas del Tor	3.93	339	*e*P	Pn	11 21 59.8	+4.5
CO01	Juntas del Tor	3.93	339	*e*P	Pn	11 22 00.0	+4.7
CO01				*e*S	Sg	11 23 01.3	-0.5
CO01				IAML		11 23 11.6	
	comp=Z,421nm,0.6s						
TCA	Tanti	3.99	56	*e*P	Pn	11 21 57.4	+1.4
TCA				*e*S	Sb	11 22 53.6	+0.2
GO04	Tololo Observa	4.01	329	Pn	Pn	11 21 59.3	+2.9
GO04	Tololo Observa	4.01	329	*e*P	Pn	11 21 59.2	+2.8
CO06	Fray Jorge	4.03	317		Pn	11 21 57.7	+1.3
CO06	Fray Jorge	4.03	317	*e*P	Pn	11 21 57.5	+1.1
ACLC	CERRO LA CRUZ	4.41	17	*e*P	Pn	11 22 04.2	+2.4
ACLC				*e*S	Sb	11 23 09.6	+4.0
ACLC				IAML		11 23 22.4	
	comp=Z,2µm,0.6s						
CO05	La Serena	4.43	327	Pn	Pn	11 22 04.4	+2.5
CO05	La Serena	4.43	327	*e*P	Pn	11 22 04.2	+2.4
BI05	Punta Hualpn	4.96	230		Pn	11 22 11.4	+2.2
LCO	Las Campanas	5.02	337		Pn	11 22 11.8	+1.5
LCO	Las Campanas	5.02	337	*e*P	Pn	11 22 11.8	+1.5
LCO	Las Campanas	5.02	337	*e*P	Pn	11 22 12.0	+1.7
LCO				IAML		11 23 36.1	
	comp=Z,3µm,0.5s						
AC04	Llanos de Chal	5.89	337	Pn	Pn	11 22 24.3	+2.3
GO03	Copiap	6.24	345	Pn	Pn	11 22 29.0	+2.1
AC06	Mina Casimiro	6.50	345		Pn	11 22 32.6	+2.2
LR03	Panguipulli	6.74	207	Pn	Pn	11 22 36.5	+2.9
AC02	Maricunga	6.83	355	Pn	Pn	11 22 38.6	+3.2
TRQA	Tornquist	6.84	132	Pn	Pn	11 22 35.4	+0.4
PLCA	Paso Flores	7.26	193	Pn	Pn	11 22 42.9	+2.1
	comp=Z,0.4nm,0.3s,baz=14,slow=10,SNR=22						
PLCA				Pg	Pg	11 23 08.8	-5.4
	comp=Z,0.9nm,0.3s,baz=16,slow=17,SNR=10						
PLCA				Lg	Lg	11 24 43.1	
	comp=Z,8.2nm,0.3s,baz=96,slow=22,SNR=6.7						
PLCA				LR	LR	11 25 07.5	
	comp=Z,47nm,21.3s,baz=14,slow=35						
	comp=Z,1.9nm,0.5s						
PLCA	Paso Flores	7.26	193		Pn	11 22 43.4	+2.6
LR04	Corral	7.38	211	Pn	Pn	11 22 44.9	+2.5
AC01	Pan de Azucar	7.72	345		Pn	11 22 46.7	-0.4
LL04	Puerto Octay	7.90	202	Pn	Pn	11 22 52.3	+2.8
LL03	Petrohue	8.10	202		Pn	11 22 54.7	+2.4
GO02	Mina Guanaco	8.53	353	Pn	Pn	11 23 04.3	+5.9
PB14	IPOC Station P	9.16	349		Pn	11 23 07.6	+0.3
LL01	San Ignacio de	9.25	199	Pn	Pn	11 23 07.6	-0.4
LL02	Futaleuf	9.88	195	Pn	Pn	11 23 16.9	+0.2
PB10	IPOC Station P	10.28	349	Pn	Pn	11 23 24.0	+1.7
PB15	IPOC Station P	10.45	355		Pn	11 23 24.9	+0.1
ITQB	Itaqui	10.82	72	Pn	Pn	11 23 29.6	0.0
PB06	IPOC Station P	10.96	354		Pn	11 23 32.8	+1.1
LVC	Limon Verde	11.02	358	Pn	Pn	11 23 31.8	-0.8
	comp=Z,0.5nm,0.3s,baz=257,slow=11,SNR=1.8						
LVC				Lg	Lg	11 26 41.4	
	comp=Z,1.0nm,0.3s,baz=82,slow=14,SNR=2.3						
LVC				LR	LR	11 28 41.6	
	comp=Z,92nm,21.1s,baz=184,slow=43						
	comp=Z,1.9nm,0.3s						
LVC	Limon Verde	11.02	358		Pn	11 23 32.5	-0.2
AY01	Puyuhuapi	11.23	196	Pn	Pn	11 23 34.0	-1.2
PB04	IPOC Station P	11.38	352	Pn	Pn	11 23 39.4	+1.9
PB09	IPOC Station P	11.84	356	Pn	Pn	11 23 43.3	-0.5
PB07	IPOC Station P	11.96	353	Pn	Pn	11 23 44.3	-1.1
CPUP	Villa Florida	12.08	56	Pn	Pn	11 23 46.0	-0.9
	comp=Z,1.0nm,0.3s,baz=216,slow=8.2,SNR=5.7						
CPUP				Lg	Lg	11 27 17.8	
	comp=Z,1.7nm,0.3s,baz=150,slow=20,SNR=3.2						
CPUP				LR	LR	11 29 24.0	
	comp=Z,134nm,19.4s,baz=238,slow=42						
	comp=Z,2.8nm,0.5s						
PB02	IPOC Station P	12.36	354	Pn	Pn	11 23 49.7	-1.1
PB01	IPOC Station P	12.60	356	Pn	Pn	11 23 53.0	-1.1
PLTB	Pedras Altas	12.64	85	Pn	Pn	11 23 53.9	-0.6
GO08	Villa O'Higgin	15.11	191	Pn	Pn	11 24 28.9	+0.8
LPAZ	La Paz	17.30	1	P	Pn	11 24 54.1	-2.7
	comp=Z,0.2nm,0.3s,baz=150,slow=8.6,SNR=1.8						
LPAZ				LR	LR	11 32 51.5	
	comp=Z,100nm,19.6s,baz=212,slow=42						
	comp=Z,0.7nm,0.4s						
LPAZ	La Paz	17.30	1	Pn	Pn	11 24 55.7	-1.2
TRCB	Terra Rica	17.62	56		P	11 25 01.7	+0.5
TRCB				IAmb	IAmb	11 25 16.4	
	comp=Z,36nm,1.4s						
GO09	Cerro Castillo	17.83	188	Pn	Pn	11 25 02.1	-0.5
GO09				IAmb	IAmb	11 25 16.4	
	comp=Z,21nm,1.1s						
MG05	Puerto Natales	18.25	188	Pn	Pn	11 25 05.9	-1.8
EFI	East Falkland	19.52	160	P	P	11 25 22.7	+0.9
EFI				IAmb	IAmb	11 25 23.6	
	comp=Z,35nm,0.8s						
GO10	Punta Arenas	19.58	185	P	P	11 25 21.8	-0.7
GO10				IAmb	IAmb	11 25 25.8	
	comp=Z,36nm,1.2s						
MG03	Isla Dawson	20.23	183	P	P	11 25 29.3	-0.3
MG03				IAmb	IAmb	11 25 50.7	
	comp=Z,13nm,1.1s						
DSPA	Despedida	20.29	180	P	P	11 25 30.9	+0.8
USHA	Ushuaia	21.17	180	P	P	11 25 40.1	+0.5
	comp=Z,4.7nm,0.8s,baz=282,slow=11,SNR=2.3						
	comp=Z,4.7nm,0.8s						
BDFB	Brasilia	25.73	51	P	P	11 26 25.7	+0.4
	comp=Z,1.8nm,0.4s,baz=218,slow=12,SNR=2.2						
	comp=Z,1.8nm,0.4s						
PMSA	Palmer Station	31.26	176	P	P	11 27 14.9	+0.9
	comp=Z,19nm,1.0s,baz=308,slow=12,SNR=1.7						
PMSA				LR	LR	11 37 37.1	
	comp=Z,44nm,21.2s,baz=330,slow=32						
	comp=Z,19nm,1.0s						
RPN	Rapa Nui	35.70	269	LR	LR	11 39 00.4	
	comp=Z,122nm,19.7s,baz=96,slow=30						
ROSC	El Rosal	38.69	351	LR	LR	11 45 53.5	
	comp=Z,79nm,19.4s,baz=338,slow=39						
MDP	Montagnes des	41.35	24	LR	LR	11 47 56.8	
	comp=Z,72nm,20.0s,baz=94,slow=39						
ZARC	Zaragoza, Cauc	41.38	350	P	P	11 28 41.4	+0.5
ZARC				IAmb	IAmb	11 28 48.8	
	comp=Z,6.7nm,1.1s						
SJCC	San Jacinto, C	43.79	350	P	P	11 28 59.2	-1.3
SJCC				IAmb	IAmb	11 29 09.6	
	comp=Z,22nm,1.0s						
BELA	Belgrano 2	46.71	171	P	P	11 29 23.9	+0.9
VNA3	Neumayer Olymp	48.55	158	P	P	11 29 37.8	+0.4
SNAA	Sanae	50.77	158	P	P	11 29 54.6	+0.2
SNAA	Sanae	50.77	158	P	P	11 29 54.5	+0.2
	comp=Z,2.0nm,0.5s,baz=273,slow=8.6,SNR=19						
SNAA				LR	LR	11 50 56.7	
	comp=Z,49nm,18.3s,baz=342,slow=35						
	comp=Z,2.0nm,0.5s						
SNAA	Sanae	50.77	158	IAmb	IAmb	11 30 07.1	
	comp=Z,7.0nm,1.3s						
PDPR	Patillas Dam,	51.44	3	P	P	11 30 00.7	+0.9
TROLL	Troll, Antarti	52.49	158	P	P	11 30 07.9	+0.6
QSPA	South Pole Qui	56.58	180	P	P	11 30 37.3	+0.3
	comp=Z,6.4nm,0.9s,baz=155,slow=1.5,SNR=28						
	comp=Z,6.4nm,0.9s						
QSPA	South Pole Qui	56.58	180	P	P	11 30 37.4	+0.4
QSPA				IAmb	IAmb	11 30 38.7	
	comp=Z,12nm,1.1s						
VNDA	Vanda	65.00	191	P	P	11 31 34.6	+0.6
	comp=Z,0.7nm,0.8s,baz=141,slow=5.7,SNR=5.4						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	65.00	191	P	P	11 31 35.0	+1.0
TXAR	Lajitas Array	70.97	328	P	P	11 32 13.3	+1.1
	comp=Z,0.1nm,0.7s,baz=114,slow=13,SNR=2.0						
WVT	Waverly	71.76	344	P	P	11 32 17.1	+0.4
WVT				IAmb	IAmb	11 32 25.4	
	comp=Z,6.9nm,0.7s						
SUR	Sutherland	72.35	117	P	P	11 32 20.6	-0.2
	comp=Z,7.4nm,0.8s,baz=225,slow=7.9,SNR=9.2						
	comp=Z,7.4nm,0.8s						
SUR	Sutherland	72.35	117	IAmb	IAmb	11 32 22.9	
	comp=Z,27nm,1.2s						
MAW	Mawson	72.63	162	P	P	11 32 21.5	0.0
	comp=Z,3.5nm,0.8s,baz=224,slow=6.8,SNR=4.2						
	comp=Z,3.5nm,0.8s						
MAW	Mawson	72.63	162	IAmb	IAmb	11 32 22.7	
	comp=Z,1.5nm,1.1s						
BOSA	Boshof	77.55	116	P	P	11 32 50.6	-0.2
	comp=Z,7.1nm,0.6s,baz=257,slow=4.4,SNR=26						
	comp=Z,7.1nm,0.6s						
BOSA	Boshof	77.55	116	P	P	11 32 49.9	-1.0
BOSA				IAmb	IAmb	11 32 51.1	
	comp=Z,6.6nm,0.6s						
LBTB	Lobatse	79.70	113	LR	LR	12 05 34.9	
	comp=Z,32nm,21.4s,baz=96,slow=34						
TORD	Torodi Ar. Bea	81.29	68	P	P	11 33 11.1	-0.1
	comp=Z,3.8nm,0.7s,baz=278,slow=7.0,SNR=28						
	comp=Z,3.8nm,0.7s						
PDAR	Pinedale Array	84.87	331	P	P	11 33 27.0	-2.3
	comp=Z,0.2nm,0.4s,baz=111,slow=12,SNR=1.3						
	comp=Z,0.2nm,0.4s						
AKASG	Malin Array Be	119.77	47	PKP	PKPdf	11 39 43.0	-1.2
	comp=Z,0.3nm,0.4s,baz=331,slow=15,SNR=2.0						
WRA	Warramunga Arr	122.44	206	PKP	PKPdf	11 39 49.0	-1.4
	comp=Z,0.9nm,0.6s,baz=157,slow=1.8,SNR=20						
KSH	Kashi	150.96	68	PKPbc	PKPbc	11 40 47.1	-0.4
KSH				pPKP	PKPab	11 40 57.6	+2.6
ZALV	Zalesovo Beam	152.28	35	PKPbc	PKPbc	11 40 50.1	+0.3
	comp=Z,4.6nm,0.4s,baz=300,slow=3.3,SNR=20						
ZALV				PKPab	sPKPbc	11 40 57.8	+0.1
	comp=Z,5.6nm,0.8s,baz=312,slow=4.2,SNR=12						
ZALV	Zalesovo Beam	152.28	35		PKPbc	11 40 50.0	+0.2
ZALV				PKPab	PKPab	11 40 58.8	-0.9
MKAR	Makanchi Array	154.25	51	PKPbc	PKPbc	11 40 53.2	-1.2
	comp=Z,0.7nm,0.7s,baz=286,slow=2.3,SNR=6.7						
MKAR	Makanchi Array	154.25	51	PKPdf	PKPdf	11 40 42.9	-3.3
MKAR					sPKPdf	11 40 54.1	+0.1
MKAR				PKPab	PKPab	11 41 07.8	-0.6
PZH	PanZhiHua	168.91	127	PKP	PKPdf	11 41 02.8	+0.7

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*IDC **17** 11:28:30.8±1.6, 63°.85N×28°.65E, h0^{km}, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=23.8km s-min=7.3km az=102.0*

*HEL **17** 11:28:31.1±0.1, 63°.97N×28°.17E, h0^{km}, ML1.9, Explosion*

ISC 17 11:28:31.2±0.9, **63°.99N**±0°.02×**28°.09E**±0°.05, **h0**^{km}**, n26,** σ**1°.29**/44, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	Oulu	1.45	320	PG	Pn	11 28 58.1	-0.6
OUL				SG	Sg	11 29 16.9	-0.9
OUF	Merijarvi	1.52	286	PG	Pn	11 28 58.8	-0.8
	baz=103						
OUF				MSG		11 29 17.8	
	comp=Z,11nm,0.2s						
OUF				SG	Sg	11 29 18.6	-1.2
SUF	Sumiainen	1.55	215	PG	Pn	11 28 59.0	-1.0
SUF				MSG		11 29 17.8	
	comp=Z,5.8nm,0.2s						
SUF				SN	Sg	11 29 21.2	+0.4
OBF0	Syolatti, Pyha	1.76	289	PG	Pn	11 29 03.6	+0.7
OBF0				SN	Sg	11 29 29.1	+1.5
JOF	Joensuu	1.81	125	PG	Pn	11 29 03.2	-0.4
JOF				SN	Sn	11 29 26.3	-0.8
MSF	Maaselka	1.97	11	PG	Pn	11 29 06.5	+0.6
	baz=195						
MSF				SG	Sb	11 29 34.2	+1.2
KAF	Kangasniemi	2.05	204	PG	Pn	11 29 07.5	+0.6
	baz=24						
KAF				SG	Sb	11 29 35.8	+0.5
KU6	Riekki	2.18	20	PG	Pn	11 29 09.8	+1.1
	baz=198						
KU6				MSG		11 29 35.9	
	comp=Z,4.1nm,0.2s						
KU6				SG	Sb	11 29 39.3	+0.2
KEF	Keuruu	2.34	220	PG	Pn	11 29 12.6	+1.7
KEF				MSG		11 29 40.8	
	comp=Z,7.2nm,0.2s						
KEF				SG	Sb	11 29 42.7	-1.0
OLKF	Oulanka, Finla	2.41	13	PG	Pn	11 29 13.8	+2.0
	baz=190						
OLKF				SG	Sb	11 29 46.1	+0.7
VAF	Ylistaro	2.61	251	PB	Pn	11 29 16.7	+2.1
VAF				MSG		11 29 48.8	
	comp=Z,7.0nm,0.2s						
TOF	Tornio	2.63	324	PB	Pn	11 29 16.5	+1.6
TOF				MSG		11 29 49.6	
	comp=Z,4.2nm,0.2s						
TOF				SG	Sb	11 29 53.4	+1.3
FIA0	FINESS Array S	2.72	201	PG	Pb	11 29 21.1	+0.4
FIA0				SG	Sb	11 29 53.0	-1.5
FINES	FINESS Array B	2.72	201	Pn	Pn	11 29 17.8	+1.7
	comp=Z,0.7nm,0.3s,baz=26,slow=15,SNR=16						
FINES				Lg	Lg	11 29 53.4	
	comp=Z,0.9nm,0.3s,baz=28,slow=25,SNR=10						
	comp=Z,1.4nm,0.3s						
KALU	Kalix	2.75	315	SN	Sn	11 29 50.9	+0.5
RNF	Rovaniemi	2.77	343	PG	Pb	11 29 20.3	-1.2
RNF				SB	Sb	11 29 54.8	-1.2
UMAU	Umeaa	3.27	271	PB	Pn	11 29 25.5	+1.9
	baz=90						
ERTU	Ertsjaerv	3.57	319	PN	Pn	11 29 29.2	+1.4
ERTU				SG	Sg	11 30 25.4	-0.5
KLF	Kolari	3.68	334	PN	Pn	11 29 30.3	+1.0
KLF				SN	Sn	11 30 12.7	-0.6
PAJU	Pajala	3.68	328	PN	Pn	11 29 30.4	+1.1
PAJU				SN	Sn	11 30 13.6	+0.2
RAF	Rauma	4.18	227	SG	Sg	11 30 43.0	-2.3
ARBE	Arbavere	4.68	193	SG	Sb	11 30 53.4	+2.6
HEMU	Hemsoen	4.72	258	PN	Pn	11 29 45.1	+1.6
ARCES	ARCESS Array B	5.66	351	Pn	Pn	11 29 58.0	+1.5
	comp=Z,0.1nm,0.3s,baz=165,slow=13,SNR=10						
ARCES				Sn	Sn	11 31 00.2	-1.9
	comp=Z,0.2nm,0.3s,baz=170,slow=26,SNR=5.8						
ARCES				Lg	Lg	11 31 31.2	
	comp=Z,0.1nm,0.3s,baz=167,slow=24,SNR=5.5						
	comp=Z,3.1nm,1.0s						
HFS	Hagfors	7.78	247	Pn	Pn	11 30 25.1	-0.5
	comp=Z,0.1nm,0.3s,baz=48,slow=43,SNR=1.3						
HFS				Sn	Sn	11 31 53.3	-0.9
	comp=Z,0.1nm,0.3s,baz=61,slow=38,SNR=1.5						
	comp=Z,0.3nm,0.4s						
NOA	NORSAR Array B	8.34	257	Pn	Pn	11 30 34.0	+0.8
	baz=64,slow=11,SNR=2.5						
	comp=Z,0.5nm,0.9s						

TAP 17 11:30:48.7, 24°.18N×121°.77E, h13^{km}, ML3.1, 1C-10D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.13	349	P	Pg	11 30 52.3	+0.2
	baz=352						
EHP				S	Sg	11 30 55.1	+0.6
	baz=352						
ETL	Fush Village	0.13	260	P	Pg	11 30 52.3	+0.1
	baz=261						
ETL				S	Sg	11 30 54.9	+0.4
	baz=261						
NACB	Ninganchiao	0.16	267	⇓P	Pg	11 30 52.5	0.0
	baz=262						
NACB				S	Sg	11 30 55.4	+0.3
	baz=262						
TWD	Chiawan	0.19	237	⇓*i*P	Pg	11 30 52.9	0.0
	baz=244						
TWD				*i* S	Sg	11 30 56.3	+0.5
	baz=244						
ENA	Nanau	0.25	354	⇓*i*P	Pg	11 30 54.1	+0.1
	baz=355						
ENA				*i* S	Sg	11 30 58.0	+0.5
	baz=355						
HWA	Hwalien	0.25	216	P	Pb	11 30 55.3	+0.2
	baz=226						
HWA				S	Sb	11 31 00.4	+1.1
	baz=226						
ETLH	Xiulin Townshi	0.26	275	P	Pg	11 30 54.5	+0.2
	baz=276						
ETLH				S	Sg	11 30 58.5	+0.5
	baz=276						
EWUT	Wuta	0.26	2	P	Pg	11 30 54.5	+0.2
	baz=2.0						
EWUT				S	Sg	11 30 58.7	+0.7
	baz=2.0						
ETM	Tongmen	0.33	229	*e*P	Pg	11 30 55.6	+0.1
	baz=231						
ETM				*e*S	Sb	11 31 00.9	-0.8
	baz=231						
TEYL	Yanliau Villag	0.35	206	P	Pb	11 30 56.5	-0.2
	baz=218						
TEYL				*e*S	Sg	11 31 01.2	+0.7
	baz=218						
LATG	Datong	0.41	328	⇓P	Pg	11 30 57.2	+0.2
	baz=328						
LATG				S	Sb	11 31 03.5	-0.7
	baz=328						
NNSB	Datong	0.43	305	⇓P	Pg	11 30 57.5	+0.2
	baz=305						
NNSB				S	Sg	11 31 03.5	+0.5
	baz=305						
TWC	Suao	0.43	10	*i* P	Pg	11 30 57.6	+0.3
	baz=4.0						
TWC				*i* S	Sg	11 31 03.7	+0.6
	baz=4.0						
NNS	Nan Shan	0.44	306	⇓*i*P	Pg	11 30 57.7	+0.2
	baz=306						
NNS				*i* S	Sg	11 31 04.1	+0.6
	baz=306						
NDS	Dongshan	0.45	354	P	Pg	11 30 58.1	+0.4
	baz=353						
NDS				S	Sb	11 31 04.7	-0.4
	baz=353						
WHF	Hehuan Shan	0.46	266	*i* P	Pg	11 30 58.1	+0.2
	baz=267						
WHF				*i* S	Sg	11 31 04.5	+0.3
	baz=267						
ESL	Shilin	0.48	220	*i* P	Pg	11 30 58.3	+0.2
	baz=227						
ESL				S	Sb	11 31 05.6	-0.2
	baz=227						
FUSS	Fushou	0.48	278	*i* P	Pb	11 30 58.8	-0.4
	baz=279						

FUSS				*i*S	Sb	11 31 05.6	-0.6
	baz=279						
ENTT	**Nioudou**	0.49	338	⇓*i*P	Pg	11 30 58.7	+0.3
	baz=338						
ENTT				*i*S	Sb	11 31 05.8	-0.5
	baz=338						
TWE	**Neicheng**	0.54	350	⇓*i*P	Pb	11 30 59.8	-0.3
	baz=351						
TWE				*i*S	Sb	11 31 07.6	-0.2
	baz=351						
TWT	**Tachien**	0.54	278	*i*P	Pb	11 31 00.2	+0.1
	baz=278						
TWT				*i*S	Sb	11 31 07.8	-0.1
	baz=278						
CHGB	**Renai**	0.56	258	P	Pg	11 30 59.9	+0.3
	baz=254						
CHGB				S	Sg	11 31 06.4	-0.6
	baz=254						
TDCB	**Techi**	0.56	277	P	Pb	11 31 00.2	-0.2
	baz=278						
TDCB				S	Sg	11 31 07.7	+0.5
	baz=278						
ILA	**Ilan**	0.58	358	*i*P	Pb	11 31 00.4	-0.3
	baz=353						
ILA				*i*S	Sb	11 31 09.7	+0.9
	baz=353						
OWD	**Renai**	0.59	247	P	Pg	11 31 00.4	+0.3
	baz=248						
OWD				S	Sb	11 31 08.9	-0.2
	baz=248						
EGFH	**Guangfu**	0.60	211	*e*P	Pg	11 31 00.5	+0.1
	baz=220						
EGFH				*e*S	Sb	11 31 09.7	+0.4
	baz=220						
FUSB	**Fushanzhiwuyua**	0.60	344	⇓P	Pb	11 31 00.8	-0.3
	baz=344						
FUSB				S	Sb	11 31 08.9	-0.5
	baz=344						
YHNB	**Yeheng**	0.60	324	⇓P	Pb	11 31 00.9	-0.2
	baz=323						
YHNB				S	Sb	11 31 09.2	-0.4
	baz=323						
NSK	**Sanguang**	0.62	323	*i*P	Pb	11 31 01.1	-0.2
	baz=323						
NSK				*i*S	Sb	11 31 09.5	-0.5
	baz=323						
WUSB	**Renai**	0.62	252	P	Pb	11 31 01.3	-0.2
	baz=254						
WUSB				S	Sb	11 31 09.8	-0.4
	baz=254						
NWLT	**Wulai**	0.64	338	*i*P	Pb	11 31 01.6	-0.1
	baz=337						
NWLT				*i*S	Sb	11 31 10.2	-0.4
	baz=337						
NTC	**Toucheng**	0.67	5	*e*P	Pb	11 31 02.2	-0.1
	baz=4.0						
NTC				*e*S	Sg	11 31 11.0	+0.4
	baz=4.0						
VWDT	**VWDT**	0.71	233	⇑P	Pg	11 31 02.6	+0.1
	baz=241						
VWDT				S	Sb	11 31 13.6	+0.9
	baz=241						
NFF	**Wufeng Townshi**	0.74	307	P	Pb	11 31 03.9	+0.4
	baz=307						
NFF				S	Sb	11 31 14.0	+0.5
	baz=307						
HGSD	**Ruisui**	0.76	205	P	Pb	11 31 03.7	+0.1
	baz=194						
HGSD				*e*S	Sb	11 31 14.8	+0.9
	baz=194						
WHP	**Taichung City**	0.76	277	*i*P	Pb	11 31 04.3	+0.6
	baz=278						
WHP				*i*S	Sb	11 31 14.3	+0.4
	baz=278						
EHY	**Hungye**	0.79	211	*i*P	Pg	11 31 03.4	-0.6
	baz=224						
EHY				*i*S	Sn	11 31 16.7	-0.3
	baz=224						
TIPB	**Shuangxi**	0.79	4	*i*P	Pg	11 31 04.0	0.0
	baz=3.0						
TIPB				*i*S	Sg	11 31 14.3	-0.1
	baz=3.0						
NHDH	**Xindian Distri**	0.81	344	*e*P	Pn	11 31 05.2	-0.6
	baz=343						
NHDH				*e*S	Sb	11 31 15.5	+0.1
	baz=343						
TWA	**Mucha**	0.81	348	P	Pb	11 31 05.2	+0.5
	baz=338						
TWA				S	Sb	11 31 15.9	+0.4
	baz=338						
LIOB	**Emei**	0.83	304	P	Pn	11 31 05.5	-0.5
	baz=304						
NSTT	**Nanjuang**	0.83	303	*i*P	Pb	11 31 05.3	+0.4
	baz=303						
NSTT				*i*S	Sb	11 31 16.7	+0.7
	baz=303						
SSLB	**Suanglung**	0.84	242	P	Pg	11 31 05.0	+0.1
	baz=253						
SSLB				S	Sb	11 31 16.9	+0.5
	baz=253						
SMLT	**Sun Moon Lake**	0.85	250	*i*P	Pg	11 31 04.9	-0.2
	baz=251						
SMLT				*i*S	Sb	11 31 16.7	+0.1
	baz=251						
TWB1	**Santiao Chiao**	0.85	14	P	Pg	11 31 04.8	-0.3
	baz=13						
TWB1				S	Sb	11 31 17.1	+0.6
	baz=13						
TYC	**Yuchr**	0.88	252	*e*P	Pn	11 31 07.3	+0.7
	baz=253						
TYC				*e*S	Sb	11 31 17.9	+0.5
	baz=253						
NWF	**Wu-fen Shan**	0.89	1	P	Pg	11 31 05.7	-0.2
	baz=353						
NWF				S	Sb	11 31 18.0	+0.3
	baz=353						
YULB	**Yu-li**	0.90	209	P	Pg	11 31 04.5	-1.5
	baz=221						
SXI1	**Grass Mountain**	0.91	6	P	Pn	11 31 06.8	-0.4
	baz=10.0						
SXI1				S	Sb	11 31 18.9	+0.4
	baz=10.0						
TWQ1	**Liyutan**	0.92	281	*i*P	Pn	11 31 08.2	+0.9
	baz=281						
TWQ1				S	Sn	11 31 20.7	+0.3
	baz=281						
EYUL	**Yuli**	0.93	206	*e*P	Pg	11 31 07.0	+0.4
	baz=224						
SBCB	**Hsinchu**	0.94	311	P	Pn	11 31 08.1	+0.5
	baz=310						
SBCB				S	Sn	11 31 21.3	+0.6
	baz=310						
NCUH	**Zhongli**	0.94	326	*e*P	Pn	11 31 08.2	+0.5
	baz=321						
NMLH	**Miaoli**	0.96	292	*e*P	Pn	11 31 08.2	+0.4
	baz=292						
NMLH				S	Sn	11 31 21.0	-0.3
	baz=292						
WHYT	**Xinyi Township**	0.97	240	*e*P	Pg	11 31 07.6	+0.2
	baz=248						
TWS1	**Kuangyinshan**	0.97	341	*e*P	Pn	11 31 08.6	+0.7
	baz=340						
TWS1				S	Sn	11 31 22.2	+0.6
	baz=340						
YM01	**YM01**	0.98	349	P	Pn	11 31 08.5	+0.4
	baz=348						
YM01				*e*S	Sn	11 31 21.3	-0.5
	baz=348						
TCU	**Taichung**	1.00	268	P	Pn	11 31 09.5	+1.2
	baz=269						
TCU				S	Sn	11 31 25.3	+3.0
	baz=269						
WJS	**Zhushan**	1.02	250	*e*P	Pn	11 31 08.9	+0.3
	baz=245						
YUS	**Yu-Shan**	1.02	227	P	Pg	11 31 08.0	-0.3
	baz=217						
NTST	**Danshui**	1.02	344	*e*P	Pn	11 31 10.8	+2.2
	baz=342						
NTST				*e*S	Sn	11 31 24.6	+1.7
	baz=342						
ANP	**Anpu**	1.02	347	*e*P	Pn	11 31 08.8	-0.1
	baz=347						
ANP				*e*S	Sn	11 31 23.1	0.0
	baz=347						
WNT	**Mingjian**	1.03	253	P	Pn	11 31 09.7	+0.9
	baz=252						
WNT				S	Sn	11 31 25.5	+2.3
	baz=252						
WDJ	**Dajia District**	1.04	279	P	Pn	11 31 10.1	+1.1
	baz=280						
FULB	**Fuli**	1.07	204	P	Pn	11 31 09.7	+0.3
	baz=221						
ALS	**Alishan**	1.11	233	*i*P	Pb	11 31 09.8	0.0
	baz=235						
WCHH	**Zhanghua**	1.11	265	*e*P	Pg	11 31 10.9	+0.9
	baz=266						
CHKT	**Chengkung**	1.14	199	*e*P	Pb	11 31 09.6	-0.6
	baz=201						
CHN5	**Tsauling**	1.15	240	*e*P	Pg	11 31 10.9	0.0
	baz=242						
WDLH	**Douliu**	1.23	247	*e*P	Pg	11 31 12.0	-0.3
	baz=248						
EDH	**Donghe**	1.28	200	*e*P	Pn	11 31 10.4	-1.7
	baz=188						

GUC 17 11:34:03.2±0.8**, 18°.93S×69°.38W, h18**$^{km}\pm5^{km}$**, ML4.1, 4C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	0.60	348	⇑*i*P	Pg	11 34 14.8	-0.5
PB16				*i*S	Sg	11 34 22.9	-0.6
PB11	**IPOC Station P**	0.87	197	⇑*i*P	Pb	11 34 19.4	-0.5
PB11				*i*S	Sb	11 34 31.2	-0.1
PB11				IAML		11 34 31.7	
	comp=E,8μm,0.2s						
PB12	**IPOC Station P**	0.95	289	*e*P	Pb	11 34 20.7	-0.5
PB12				*i*S	Sb	11 34 33.8	+0.2
AP01	**Chacalluta**	1.07	301	⇑*i*P	Pb	11 34 23.0	-0.1
AP01				*i*S	Sg	11 34 38.1	+0.2
PB08	**IPOC Station P**	1.23	170	⇑*i*P	Pn	11 34 25.6	-0.2
PB08				*i*S	Sb	11 34 41.4	-0.4
TA01	**Diego Aracena**	1.79	205	*e*P	Pb	11 34 34.7	-0.9
TA01				*e*S	Sb	11 34 58.9	+1.1
PATCX	**Punta Patache**	2.02	201	*e*P	Pb	11 34 38.3	-1.2
PATCX				*i*S	Sb	11 35 05.0	+0.7
PATCX				IAML		11 35 06.6	
	comp=E,13μm,0.0s						
PB01	**IPOC Station P**	2.11	183	*e*P	Pb	11 34 40.4	-0.6
PB01				*i*S	Sb	11 35 08.5	+1.7
PB01				IAML		11 35 09.7	
	comp=E,1μm,0.4s						
PB02	**IPOC Station P**	2.43	191	*e*P	Pb	11 34 45.4	-1.1
PB02				*i*S	Sb	11 35 17.1	+1.0
PB02				IAML		11 35 18.8	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	2.82	190	*e*P	Pb	11 34 51.1	-2.2
PB07				IAML		11 35 34.3	
	comp=E,480nm,0.3s						
PB09	**IPOC Station P**	2.86	177	*e*P	Pb	11 34 52.7	-1.1
PB09				IAML		11 35 34.3	
	comp=E,588nm,0.3s						
PB04	**IPOC Station P**	3.46	192	*e*P	Pn	11 35 00.3	+3.8
PB06	**IPOC Station P**	3.76	183	*e*P	Pn	11 35 04.3	+3.7
PB15	**IPOC Station P**	4.26	181	*e*P	Pn	11 35 11.9	+4.5

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*BJI **17** 11:36:54.0±0.0, 30°.80N×142°.20E, h10*^{km}*, mb4.5/33, mB4.7/22, Ms4.1/12, Ms7 3.9/12*

*IDC **17** 11:36:55.1±0.5, 30°.77N×141°.74E, h0*^{km}*, mb4.2/23, mbtmp4.2/28, ML3.9/5, MS3.5/32, Error ellipse: s-maj=17.8km s-min=12.6km az=73.0*

*NEIC **17** 11:36:56.8±1.3, 30°.77N±0°.07×142°.2E±0°.1, h10*$^{km}\pm1^{km}$*, mb4.7/26, Error ellipse: s-maj=20.7km s-min=10.3km az=74.0*

*NIED **17** 11:36:58.5, 30°.75N×141°.94E, h63*^{km}*, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{15}*Nm;* $M_{rr}2.55$; $M_{\theta\theta}{-0.04}$; $M_{\phi\phi}{-2.51}$; $M_{r\theta}{-1.16}$; $M_{\theta\phi}0.46$; $M_{\phi r}6.53$; *Fault plane solution:* $M_0 7.12000\times10^{15}$ *NP1:* $\phi_s 170.00000°, \delta 11.00000°, \lambda 90.00000°$. *NP2:* $\phi_s 350.00000°, \delta 79.00000°, \lambda 90.00000°$.

*JMA **17** 11:36:58.5±0.2, 30°.8N±0°.9×14°2E±°, h63*^{km}*, MV4.4/22, NEAR TORISHIMA IS*

ISC 17 11:36:56.3±0.5**, 30°.73N**±0°.05×**141°.91E**±0°.08**, h10**^{km}**, n121,** $\sigma 1^{s}64$/115**, mb4.5**/41**, MS3.7**/29**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	2.95	323	*e*P	Pn	11 37 43.5	+0.4
JHCJ				*e*S	Sn	11 38 17.6	-1.0
JHJ2	**Mitsune**	2.97	324	Pn	Pn	11 37 44.9	+1.5
JHJ2	**Mitsune**	2.97	324	*e*P	Pn	11 37 44.4	+1.0
JHJ2				*e*S	Sn	11 38 17.1	-1.9
JHJ	**Hachijo jima 2**	2.99	323	Pn	Pn	11 37 41.9	-1.9
	46nm,0.3s,baz=84,slow=18,SNR=4.1						
JHJ				Sn	Sn	11 38 17.2	-2.5
	77nm,0.3s,baz=84,slow=22,SNR=9.0						
JHJ				LR	LR	11 38 56.7	
	comp=Z,809nm,18.4s,baz=100,slow=43						
	96nm,0.3s						
CBIJ	**Chichi jima**	3.63	176	*e*P	Pn	11 37 53.2	+0.7
CBIJ				*e*S	Sn	11 38 32.2	-3.3
JCJ	**Chichijima**	3.63	176	Pn	Pn	11 37 52.9	+0.4
	13nm,0.3s,baz=88,slow=23,SNR=22						
JCJ				Sn	Sn	11 38 30.8	-4.7
	67nm,0.3s,baz=18,slow=20,SNR=11						
	32nm,0.3s						
JCJ	**Chichijima**	3.63	176		Pn	11 37 53.4	+0.8
JMKN	**Mikurajimanish**	3.71	329	*e*P	Pn	11 37 54.4	+0.7
JMKN				*e*S	Sn	11 38 36.7	-0.8
BSO1	**Boso 1**	3.99	349	*e*P	Pn	11 37 59.2	+2.3
JKO	**Kozu shima**	4.17	326	*e*P	Pn	11 38 01.3	+1.3
JKO				*e*S	Sn	11 38 48.4	-0.3
JTHY	**Toshimahigashi**	4.38	330	*e*P	Pn	11 38 04.2	+1.3
JTHY				*e*S	Sn	11 38 54.5	+0.5
JIM2	**Oshima 3**	4.49	333	P	Pn	11 38 05.2	+0.8
JIM2				*e*S	Sn	11 38 56.5	-0.2
JIZS	**Izushimoda**	4.73	328	*e*P	Pn	11 38 09.3	+1.8
JHTM	**Izuhatsuma**	4.87	331	*e*S	Sn	11 39 06.0	0.0
JOD2	**Odawara 2**	5.10	333	*e*P	Pn	11 38 14.1	+1.2
JOD2				*e*S	Sn	11 39 09.5	-2.4
JSGW	**Sagamiharawaka**	5.36	336	*e*P	Pn	11 38 17.3	+1.0
JSGW				*e*S	Sn	11 39 18.2	+0.1
JYT	**Yasato**	5.67	346	Pn	Pn	11 38 22.2	+1.7
JHYU	**Hitachinakayam**	5.70	349	*e*S	Sn	11 39 25.4	-1.1
JRY	**Ryogami san**	5.84	335	*e*P	Pn	11 38 25.4	+2.4
JRY				*e*S	Sn	11 39 31.0	+1.0
INU	**Inuyama**	6.17	320	Pn	Pn	11 38 29.3	+1.9
JGF	**Kuroka**	6.18	323	Pn	Pn	11 38 31.1	+3.5
JFFD	**Fukushimafurud**	6.44	350	P	Pn	11 38 31.8	+0.7
JFFD				*e*S	Sn	11 39 40.6	-4.2
MJAR	**Matsushiro Arr**	6.57	333	Pn	Pn	11 38 33.9	+1.0
	1.1nm,0.3s,baz=149,slow=11,SNR=48						
MJAR				LR	LR	11 41 10.2	
	comp=Z,284nm,19.5s,baz=138,slow=39						
MJAR	**Matsushiro Arr**	6.57	333	Pn	Pn	11 38 34.3	+1.4
MAJO	**Matsushiro**	6.57	333		Pn	11 38 32.8	-0.1
MJB9	**Matsu-Tunnel**	6.57	333		Pn	11 38 34.4	+1.4
JMM	**Marumori**	7.18	353		Pn	11 38 42.6	+1.4
JSD	**Sado**	7.89	339	Pn	Pn	11 38 52.3	+1.3
JMK	**Ichinoseki**	8.22	356	*e*P	Pn	11 38 56.3	+0.7
JMK				*e*S	Sn	11 40 22.0	-6.5
JTM	**Tenmabayashi**	10.06	356	Pn	Pn	11 39 21.4	+0.7
JOW	**Kunigami**	12.57	255	LR	LR	11 44 29.7	
	comp=Z,368nm,19.5s,baz=63,slow=37						
JKA	**Kamikawa-asahi**	13.37	2	Pn	Pn	11 40 06.6	+0.6
ASAJ	**Asahikawa**	13.37	2	Pn	Pn	11 40 04.5	-1.5
	1.4nm,0.3s,baz=206,slow=8.6,SNR=11						
	3.6nm,0.3s						
KSRS	**Korea Array**	13.38	304	Pn	Pn	11 40 04.0	-2.3
	0.2nm,0.3s,baz=114,slow=12,SNR=2.5						
KSRS				LR	LR	11 45 15.4	
	comp=Z,235nm,18.3s,baz=115,slow=38						
USRK	**Ussuriysk Ar.**	15.56	332	Pn	Pn	11 40 33.5	-2.2
	2.2nm,0.8s,baz=147,slow=13,SNR=2.9						
USRK				LR	LR	11 46 23.8	
	comp=Z,115nm,20.3s,baz=144,slow=37						
GUMO	**Guam**	17.28	170	LR	LR	11 46 16.4	
	comp=Z,106nm,20.9s,baz=6.5,slow=32						
NJ2	**Nanjing**	19.73	280	*e*P	P	11 41 24.5	-1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KLR	**Kul'dur**	20.02	340	P	P	11 41 27.5	-1.6
	comp=Z,0.5nm,0.3s,baz=155,slow=9.3,SNR=9.8						
KLR				LR	LR	11 48 52.7	
	comp=Z,69nm,20.2s,baz=151,slow=36						
	comp=Z,2.1nm,0.5s						
HNS	**HongShan**	23.45	294	*e*P	P	11 42 04.5	-1.3
HNS				S	S	11 46 18.3	-0.9
HNS				LR	LR		
	comp=Z,120nm,17.3s						
HNS				LR	LR		
	comp=Z,260nm,15.7s						
HNS				LR	LR		
	comp=Z,250nm,15.9s						
XLT	**XiLinHaoTe**	24.27	310	*e*P	P	11 42 10.9	-2.8
XLT				pP	pP	11 42 15.6	+0.5
XLT				sP	sP	11 42 18.0	+2.3
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,110nm,4.4s						
PETK	**Petropavlovsk-**	25.15	23	P	P	11 42 21.6	+0.2
	comp=Z,6.0nm,0.9s,baz=203,slow=3.1,SNR=3.6						
	comp=Z,6.0nm,0.9s						
H11S3	**WAKE ISLAND Hy**	25.54	113	T	T	12 09 04.9	
	baz=304,slow=75,SNR=33						
H11S1	**WAKE ISLAND Hy**	25.55	113	T	T	12 09 04.5	
	baz=304,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	25.56	113	T	T	12 09 02.4	
	baz=304,slow=75,SNR=26						
HHC	**Hu-ho-hao-te**	26.49	301	*e*P	P	11 42 35.3	+1.4
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
HHC				LR	LR		
	comp=Z,230nm,14.5s						
HHC				LR	LR		
	comp=Z,500nm,15.2s						
HHC				LR	LR		
	comp=Z,690nm,14.8s						
XAN	**Xi'an**	27.99	286	P	P	11 42 46.6	-0.7
XAN				sP	pwP	11 43 01.5	+5.4
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				LR	LR		
	comp=Z,150nm,11.7s						
XAN				LR	LR		
	comp=Z,170nm,14.4s						
XAN				LR	LR		
	comp=Z,180nm,17.2s						
DAV	**Davao City (W)**	28.08	216	LR	LR	11 55 58.9	
	comp=Z,65nm,18.1s,baz=62,slow=41						
MA2	**Magadan**	29.46	9	LR	LR	11 55 39.7	
	comp=Z,45nm,21.1s,baz=92,slow=38						
SONM	**Songino Array**	32.01	312	P	P	11 43 21.3	-1.6
	comp=Z,2.0nm,0.7s,baz=122,slow=8.5,SNR=12						
SONM				LR	LR	11 56 56.0	
	comp=Z,102nm,19.1s,baz=111,slow=38						
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	32.01	312	P	P	11 43 24.8	+1.9
SHEM	**Shemya Is, Ala**	32.13	38	LR	LR	11 59 04.6	
	comp=Z,23nm,18.6s,baz=342,slow=41						
PZH	**PanZhiHua**	35.38	273	P	P	11 43 55.0	+2.6
PZH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
CMAR	**Chiang Mai Arr**	40.71	263	P	P	11 44 36.4	-0.9
	comp=Z,2.0nm,0.3s,baz=58,slow=6.9,SNR=5.5						
CMAR				LR	LR	12 02 06.3	
	comp=Z,84nm,19.6s,baz=65,slow=37						
	comp=Z,2.0nm,0.3s						
TIXI	**Tiksi**	41.58	354	P	P	11 44 45.3	+1.5
HNR	**Honiara**	43.53	154	P	P	11 44 58.7	-1.5
WMQ	**Urumqi**	44.33	303	*e*P	P	11 45 10.4	+3.8
MTN	**Manton Dam**	44.55	195	P	P	11 45 08.8	+0.5
MTN				IAmb	IAmb	11 45 11.3	
	comp=Z,22nm,1.4s						
ZALV	**Zalesovo Beam**	46.63	317	P	P	11 45 24.8	+0.2
	comp=Z,1.4nm,0.5s,baz=90,slow=9.3,SNR=4.8						
ZALV				LR	LR	12 05 43.8	
	comp=Z,92nm,18.2s,baz=91,slow=37						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	46.63	317	P	P	11 45 24.5	-0.1
MK31	**Makanchi Array**	48.04	307	P	P	11 45 36.4	+0.7
MK31				IAmb	IAmb	11 45 37.2	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	48.04	307	P	P	11 45 36.0	+0.3
	comp=Z,2.1nm,0.5s,baz=90,slow=9.3,SNR=25						
MKAR				LR	LR	12 06 36.3	
	comp=Z,70nm,18.9s,baz=76,slow=37						
	comp=Z,2.1nm,0.5s						
MKAR	**Makanchi Array**	48.04	307	P	P	11 45 36.5	+0.8
MAKZ	**Makanchi**	48.25	307		P	11 45 37.9	+0.5
MAKZ				IAmb	IAmb	11 46 05.7	
	comp=Z,3.4nm,0.7s						
KURK	**Kurchatov**	50.32	312	P	P	11 45 53.5	+0.5
KURK				IAmb	IAmb	11 45 54.5	
	comp=Z,10nm,1.0s						
KURBB	**Kurchatov Arra**	50.38	312	P	P	11 45 53.3	-0.2
	comp=Z,6.2nm,0.9s,baz=90,slow=7.4,SNR=33						
	comp=Z,6.2nm,0.9s						
CTA	**Charters Tower**	50.70	175	LR	LR	12 09 24.4	
	comp=Z,90nm,18.3s,baz=161,slow=38						
WB0	**Warramunga Arr**	50.73	189	P	P	11 45 56.2	-0.1
WB0				IAmb	IAmb	11 45 57.8	
	comp=Z,8.6nm,0.6s						
WR0	**Warramunga Arr**	50.90	189	P	P	11 45 58.3	+0.7
WR0				IAmb	IAmb	11 45 58.9	
	comp=Z,6.1nm,0.6s						
WRAB	**Tennant Creek**	50.90	189	P	P	11 45 58.6	+1.0
WRAB				IAmb	IAmb	11 46 12.1	
	comp=Z,6.1nm,0.8s						
WB2	**Warramunga Arr**	50.90	189	P	P	11 45 58.5	+0.8
WB2				IAmb	IAmb	11 45 59.3	
	comp=Z,5.4nm,0.8s						
WRA	**Warramunga Arr**	50.91	189	P	P	11 45 57.6	-0.1
	comp=Z,4.9nm,0.6s,baz=6.5,slow=7.7,SNR=91						
	comp=Z,4.9nm,0.6s						
WRA	**Warramunga Arr**	50.91	189	P	P	11 45 58.4	+0.7
Q19K	**Cape Douglas,**	51.14	37	P	P	11 45 56.5	-2.7
Q19K				IAmb	IAmb	11 46 01.6	
	comp=Z,18nm,1.2s						
KDAK	**Kodiak Island**	51.64	38	LR	LR	12 06 41.1	
	comp=Z,48nm,21.0s,baz=247,slow=34						
KSH	**Kashi**	53.57	299	P	P	11 46 22.4	+4.8
KSH				pP	pwP	11 46 27.0	+0.7
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AAK	**Ala-Archa**	54.04	303	LR	LR	12 10 14.9	
	comp=Z,76nm,19.2s,baz=92,slow=37						
AS31	**Alice Springs**	54.63	189	P	P	11 46 25.6	+0.4
ASAR	**Alice Springs**	54.63	189	P	P	11 46 25.7	+0.5
	comp=Z,1.9nm,0.5s,baz=5.4,slow=6.3,SNR=36						
ASAR				LR	LR	12 10 16.4	
	comp=Z,98nm,18.6s,baz=198,slow=37						
	comp=Z,1.9nm,0.5s						
ASAR	**Alice Springs**	54.63	189	P	P	11 46 25.6	+0.3
ILAR	**Eielson Array**	54.67	30	P	P	11 46 26.3	+1.2
	comp=Z,0.5nm,0.7s,baz=262,slow=6.9,SNR=5.6						
	comp=Z,0.5nm,0.7s						
BRVK	**Borovoye**	55.30	316	P	P	11 46 31.0	+1.2
KK31	**Karatay Array**	56.81	304	P	P	11 46 42.4	+1.6
KK31				IAmb	IAmb	11 46 42.5	
	comp=Z,3.9nm,0.6s						
KKAR	**Karatay Array**	56.81	304	P	P	11 46 42.2	+1.4
GAR	**Garm**	57.96	299	P	P	11 46 50.1	+1.0
EPYK	**Eagle Plains**	58.84	28	P	P	11 46 53.2	-1.5
EPYK				IAmb	IAmb	11 47 00.1	
	comp=Z,6.0nm,1.1s						
CHGR	**Chuyangaron**	58.92	299	P	P	11 46 56.4	+0.6
INK	**Inuvik**	59.84	25	P	P	11 47 02.5	+1.0
	comp=Z,0.5nm,0.4s,baz=249,slow=3.9,SNR=4.3						
	comp=Z,0.5nm,0.4s						
KBL	**Kabul**	60.24	295	P	P	11 47 05.3	+0.2
KBL				IAmb	IAmb	11 47 06.3	
	comp=Z,9.7nm,1.0s						
BESE	**Bessie Mountai**	60.90	37	P	P	11 47 07.8	-1.2
ARU	**Arti**	61.43	321	P	P	11 47 13.5	+0.9
	comp=Z,3.1nm,0.4s,baz=62,slow=3.5,SNR=14						
	comp=Z,3.1nm,0.4s						
ARU	**Arti**	61.43	321	P	P	11 47 13.8	+1.2
STKA	**Stephens Creek**	62.27	180	P	P	11 47 19.9	+1.6
	comp=Z,3.1nm,1.0s,baz=311,slow=9.3,SNR=2.5						
	comp=Z,3.1nm,1.0s						
ABKAR	**Akbulak array**	62.42	313	P	P	11 47 20.1	+0.7
AKTO	**Aktyubinsk**	63.29	315	P	P	11 47 24.2	-1.0
	comp=Z,1.3nm,0.3s,baz=42,slow=5.6,SNR=1.5						
	comp=Z,1.3nm,0.3s						
DLBC	**Dease Lake**	63.40	36	LR	LR	12 16 02.0	
	comp=Z,33nm,18.7s,baz=215,slow=37						
SPITS	**Spitsbergen Ar**	66.78	349	P	P	11 47 47.0	-0.4
	comp=Z,9.4nm,1.1s,baz=109,slow=6.4,SNR=0.9						
	comp=Z,9.4nm,1.1s						

KLMR	Klimovskoe	69.33	329	eP	P	11 48 04.0	+0.3
KLMR				AMP		11 48 05.7	
	comp=Z,7.0nm,0.7s						
ARCES	ARCESS Array B	70.04	340	P	P	11 48 07.9	0.0
	comp=Z,2.6nm,0.7s,baz=61,slow=9.4,SNR=3.9						
	comp=Z,2.6nm,0.7s						
YBH	Yreka Blue Hor	73.93	51	LR	LR	12 12 05.6	
	comp=Z,37nm,21.6s,baz=271,slow=28						
FIA1	FINESS Array S	74.59	333	P	P	11 48 35.5	+0.3
FIA1				IAmb	IAmb	11 48 37.1	
	comp=Z,6.6nm,0.7s						
FINES	FINESS Array B	74.60	333	P	P	11 48 34.9	-0.3
	comp=Z,4.3nm,0.6s,baz=60,slow=5.5,SNR=20						
FINES				LR	LR	12 23 51.3	
	comp=Z,29nm,18.4s,baz=82,slow=38						
	comp=Z,4.3nm,0.6s						
FINES	FINESS Array B	74.60	333	P	P	11 48 36.1	+0.9
KBZ	Khabaz	75.38	312	P	P	11 48 40.0	0.0
	comp=Z,4.0nm,0.8s,baz=69,slow=2.8,SNR=12						
	comp=Z,4.0nm,0.8s						
GNI	Garni	75.87	308	LR	LR	12 23 56.6	
	comp=Z,24nm,19.9s,baz=146,slow=37						
RAR	Rarotonga	76.17	125	LR	LR	12 16 25.6	
	comp=Z,25nm,19.9s,baz=298,slow=31						
NVAR	Mina Array Bea	78.47	52	P	P	11 48 58.9	+0.9
	comp=Z,0.6nm,0.6s,baz=284,slow=6.4,SNR=7.3						
	comp=Z,0.6nm,0.6s						
ELK	Elko	79.33	49	LR	LR	12 21 28.1	
	comp=Z,28nm,20.1s,baz=290,slow=34						
AKASG	Malin Array Be	79.56	323	P	P	11 49 02.1	-1.2
	comp=Z,0.7nm,0.3s,baz=51,slow=5.9,SNR=5.8						
AKASG				LR	LR	12 26 34.6	
	comp=Z,51nm,19.9s,baz=52,slow=38						
	comp=Z,0.7nm,0.3s						
HFS	Hagfors	80.00	336	LR	LR	12 28 01.4	
	comp=Z,40nm,18.1s,baz=16,slow=38						
NB2	NORSAR Subarra	80.16	338	P	P	11 49 07.4	+0.9
	comp=Z,2.7nm,0.8s,baz=42,slow=5.3						
NOA	NORSAR Array B	80.16	338	P	P	11 49 06.0	-0.4
	comp=Z,1.7nm,0.7s,baz=41,slow=5.3,SNR=10						
NOA				LR	LR	12 27 51.6	
	comp=Z,37nm,20.1s,baz=25,slow=38						
	comp=Z,1.7nm,0.7s						
PDAR	Pinedale Array	81.81	45	P	P	11 49 17.4	+1.5
	comp=Z,0.2nm,0.4s,baz=313,slow=12,SNR=2.3						
PDAR				LR	LR	12 26 19.8	
	comp=Z,13nm,18.3s,baz=282,slow=36						
	comp=Z,0.2nm,0.4s						
PFO	Pinyon Flats O	82.22	56	LR	LR	12 26 23.7	
	comp=Z,39nm,18.1s,baz=241,slow=36						
BRTR	Keskin Array B	83.37	313	P	P	11 49 23.8	-0.2
	comp=Z,2.4nm,0.8s,baz=79,slow=6.4,SNR=7.6						
	comp=Z,2.4nm,0.8s						
MLR	Muntele Rosu	84.48	321	LR	LR	12 30 06.8	
	comp=Z,39nm,18.0s,baz=276,slow=38						
ANMO	Albuquerque	88.33	50	LR	LR	12 27 46.4	
	comp=Z,36nm,18.2s,baz=305,slow=34						
LPIG	La Paz	91.94	61	LR	LR	12 27 16.6	
	comp=Z,38nm,18.6s,baz=218,slow=33						
TXAR	Lajitas Array	93.61	53	P	P	11 50 15.2	+1.9
	comp=Z,0.4nm,0.8s,baz=299,slow=2.6,SNR=6.5						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	121.98	313	PKP	PKPdf	11 55 51.1	-0.6
	comp=Z,0.6nm,0.8s,baz=321,slow=3.1,SNR=3.0						
LPAZ	La Paz	149.05	69	PKPbc	PKPbc	11 56 47.2	+1.2
	comp=Z,1.1nm,0.7s,baz=19,slow=6.3,SNR=3.9						
PLCA	Paso Flores	151.96	120	PKPbc	PKPbc	11 56 50.2	-1.4
	comp=Z,0.6nm,0.7s,baz=233,slow=10,SNR=1.9						

BEO 17 11:39:31.4±1.5, 42°.67N×24°.04E, h0^{km}, ML1.4/3, 2C,
Mining explosion., Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.60	266	ePg	Pg	11 39 42.0	-0.8
VTS				eSg	Sg	11 39 50.6	0.0
BOSS	Bosilegrad	1.17	262	ePg	Pg	11 39 52.7	-1.0
BOSS				eSg	Sb	11 40 09.7	-0.4
BLKB	Belogradchik	1.38	314	⇑S	Sg	11 40 11.3	-4.6
BARS	Barje	1.65	276	ePg	Pn	11 40 01.4	-0.2
BARS				eSg	Sn	11 40 23.6	+0.1
BOVS	Bovan	1.96	300	⇑S	Pn	11 40 06.9	+1.0

BEO 17 11:39:57.4±0.9, 44°.08N×22°.13E, h0^{km}, ML1.4/5, 5C-1D,
Mining explosion., Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAGS	Zajecar	0.28	164	ePg	Pg	11 40 02.5	-0.2
ZAGS				eSg	Sg	11 40 06.5	+0.3
BOVS	Bovan	0.54	215	ePg	Pg	11 40 06.1	-1.6
BOVS				eSg	Sg	11 40 14.7	0.0
MDVR	Moldovita	0.77	337	⇑P	Pg	11 40 09.0	-3.1
MDVR				⇑S	Sg	11 40 19.7	-2.2
HERR	Herculane	0.83	14	⇓P	Pg	11 40 10.4	-2.8
SELS	Selova	1.13	221	eSg	Sg	11 40 33.8	+0.1
TRUS	Trudelj	1.25	277	ePg	Pg	11 40 19.7	-1.6
TRUS				eSg	Sg	11 40 38.0	+0.5
GZR	Gura Zlata	1.39	19	⇑S	Sg	11 40 40.8	-1.4
IVAS	Ivanjica	1.52	251	ePg	Pn	11 40 24.7	-1.2
IVAS				eSg	Sg	11 40 44.8	-1.3
BZS	Buzias	1.58	347	⇑P	Pn	11 40 22.9	-3.8
BZS				⇑S	Sn	11 40 44.9	-2.9

JMA ***17*** *11:41:13.4±0.2, 24°N±1°×12°2E±°, h22^{km}±1^{km}, MV2.8/9,*
TAIWAN REGION
TAP ***17*** *11:41:15.6, 24°.19N×121°.76E, h14^{km}, ML3.2, B*
ISC 17 11:41:15.1±0.9, **24°.19N**±0°.01×**121°.81E**±0°.02, **h13**^{km}±6^{km},
n135, σ0.^{s}58/191, **1C-24D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.14	332	iP	Pb	11 41 19.1	-0.5
	baz=356						
EHP				iS	Sb	11 41 22.0	-0.5
	baz=356						
ETL	Fush Village	0.17	261	⇓iP	Pg	11 41 19.2	0.0
	baz=259						
ETL				iS	Sg	11 41 21.9	-0.1
	baz=259						
NACB	Ninganchiao	0.20	266	⇓iP	Pg	11 41 19.4	-0.1
	baz=267						
NACB				iS	Sg	11 41 22.3	-0.3
	baz=267						
TWD	Chiawan	0.22	242	⇓iP	Pg	11 41 19.9	-0.1
	baz=241						
TWD				iS	Sg	11 41 23.2	-0.1
	baz=241						
ENA	Nanau	0.25	345	⇓iP	Pb	11 41 21.0	-0.4
	baz=357						
ENA				iS	Sb	11 41 24.7	-1.0
	baz=357						
EWUT	Wuta	0.26	353	⇓iP	Pb	11 41 21.3	-0.2
	baz=3.0						
EWUT				iS	Sb	11 41 25.4	-0.6
	baz=3.0						
HWA	Hwalien	0.28	222	eP	Pb	11 41 22.0	+0.1
	baz=223						
ETLH	Xiulin Townshi	0.30	274	⇓iP	Pg	11 41 21.3	0.0
	baz=276						
ETLH				iS	Sg	11 41 25.5	-0.1
	baz=276						
ETM	Tongmen	0.36	233	P	Pg	11 41 22.3	-0.2
	baz=229						
TEYL	Yanliau Villag	0.37	212	P	Pg	11 41 23.2	+0.6
	baz=216						
TWC	Suao	0.42	5	⇓iP	Pb	11 41 24.4	0.0
	baz=5.0						
TWC				iS	Sb	11 41 30.5	-0.1
	baz=5.0						
LATG	Datong	0.43	323	⇓iP	Pb	11 41 24.1	-0.5
	baz=328						
LATG				iS	Sb	11 41 30.1	-1.0
	baz=328						
NDS	Dongshan	0.45	349	⇓iP	Pb	11 41 24.9	0.0
	baz=354						
NDS				iS	Sb	11 41 31.4	-0.2
	baz=354						
NNSB	Datong	0.46	302	⇓iP	Pg	11 41 24.3	+0.1
	baz=305						
NNSB				iS	Sg	11 41 30.3	-0.1
	baz=305						
NNS	Nan Shan	0.47	302	⇓iP	Pg	11 41 24.6	+0.1
	baz=306						
NNS				iS	Sg	11 41 30.7	-0.2
	baz=306						
NDT	Datong Townshi	0.50	327	⇓iP	Pb	11 41 25.2	-0.4
	baz=331						
NDT				S	Sb	11 41 32.2	-0.6
	baz=331						
WHF	Hehuan Shan	0.50	265	⇓P	Pg	11 41 24.9	-0.2
	baz=266						
WHF				iS	Sg	11 41 31.6	-0.2
	baz=266						
ENTT	Nioudou	0.50	334	⇓iP	Pb	11 41 25.6	-0.1
	baz=339						
ENTT				S	Sb	11 41 32.6	-0.4
	baz=339						
ESL	Shilin	0.51	223	⇓P	Pg	11 41 25.1	+0.1
	baz=226						
ESL				eS	Sb	11 41 33.2	+0.1
	baz=226						
FUSS	Fushou	0.52	277	⇓iP	Pb	11 41 25.6	-0.6
	baz=278						
FUSS				iS	Sg	11 41 32.4	0.0
	baz=278						
TEGC	Jichi Village	0.54	208	eP	Pb	11 41 27.0	+0.7
	baz=196						
TWE	Neicheng	0.55	346	⇓iP	Pb	11 41 26.7	+0.2
	baz=352						
TWE				iS	Sb	11 41 34.2	0.0
	baz=352						
ILA	Ilan	0.58	354	P	Pb	11 41 27.4	+0.4
	baz=352						
TWT	Tachien	0.58	277	⇓P	Pb	11 41 27.1	-0.1
	baz=278						
TWT				S	Sb	11 41 34.7	-0.7
	baz=278						
CHGB	Renai	0.60	258	⇓iP	Pg	11 41 26.8	0.0
	baz=253						
CHGB				S	Sg	11 41 34.5	-0.2
	baz=253						
TDCB	Techi	0.60	276	⇓iP	Pb	11 41 27.2	-0.3
	baz=278						
TDCB				S	Sg	11 41 34.6	-0.3
	baz=278						
FUSB	Fushanzhiwuyua	0.61	340	⇓P	Pb	11 41 27.7	+0.2
	baz=344						
FUSB				S	Sb	11 41 35.3	-0.7
	baz=344						
EGFH	Guangfu	0.62	214	eP	Pg	11 41 27.5	+0.2
	baz=219						
YHNB	Yeheng	0.62	321	⇓iP	Pb	11 41 27.7	-0.1
	baz=324						
YHNB				iS	Sb	11 41 35.8	-0.8
	baz=324						
OWD	Renai	0.62	248	eP	Pg	11 41 27.3	-0.1
	baz=248						
OWD				eS	Sb	11 41 36.2	-0.4
	baz=248						
NSK	Sanguang	0.64	320	⇓iP	Pb	11 41 27.8	-0.3
	baz=323						
NSK				iS	Sb	11 41 36.3	-0.7
	baz=323						
NWLT	Wulai	0.65	334	⇓eP	Pb	11 41 28.4	0.0
	baz=338						
NWLT				eS	Sb	11 41 36.9	-0.4
	baz=338						
WUSB	Renai	0.66	253	eP	Pg	11 41 28.0	0.0
	baz=248						
WUSB				S	Sg	11 41 36.5	-0.3
	baz=248						
EGS		0.67	9	eP	Pb	11 41 28.9	+0.4
	baz=20						
NTC	Toucheng	0.67	1	eP	Pn	11 41 29.1	-1.0
	baz=5.0						
VWDT	VWDT	0.75	235	⇑P	Pg	11 41 29.6	0.0
	baz=234						
VWDT				S	Sb	11 41 40.0	-0.1
	baz=234						
NFF	Wufeng Townshi	0.77	305	eP	Pb	11 41 30.5	+0.1
	baz=308						
HGSD	Ruisui	0.78	207	eP	Pb	11 41 30.5	+0.1
	baz=195						
TIPB	Shuangxi	0.78	1	P	Pn	11 41 31.1	-0.7
	baz=3.0						
TIPB				eS	Sb	11 41 40.8	-0.2
	baz=3.0						
WHP	Taichung City	0.80	277	eP	Pb	11 41 30.4	-0.3
	baz=278						
WHP				eS	Sb	11 41 40.9	-0.5
	baz=278						
WPL	Puli Township	0.80	258	P	Pb	11 41 30.7	-0.1
	baz=258						
WPL				S	Sb	11 41 41.2	-0.3
	baz=258						
EHY	Hungye	0.81	214	eP	Pg	11 41 29.5	-1.3
	baz=223						
NHDH	Xindian Distri	0.82	341	eP	Pn	11 41 32.1	-0.1
	baz=344						
TWA	Mucha	0.82	345	eP	Pn	11 41 31.8	-0.5
	baz=348						
TWA				eS	Sb	11 41 42.2	+0.1
	baz=348						
DPDB	Guoxing	0.82	260	eP	Pb	11 41 31.1	-0.1
	baz=260						
TWB1	Santiao Chiao	0.83	11	eP	Pn	11 41 31.7	-0.8
	baz=13						
TWB1				eS	Sn	11 41 43.4	-1.2
	baz=13						
TATO	Taipei	0.84	340	eP	Pn	11 41 32.0	-0.5
	baz=342						
TATO				eS	Sb	11 41 42.8	+0.2
	baz=342						
LIOB	Emei	0.86	302	eP	Pn	11 41 32.0	-0.8
	baz=304						
LIOB				eS	Sb	11 41 43.4	+0.2
	baz=304						
NSTT	Nanjuang	0.86	301	eP	Pg	11 41 31.9	+0.2
	baz=303						
NSTT				eS	Sb	11 41 43.0	-0.3
	baz=303						
SSLB	Suanglung	0.88	243	P	Pb	11 41 31.4	-0.8
	baz=252						
SSLB				eS	Sg	11 41 43.7	+0.1
	baz=252						
NWF	Wu-fen Shan	0.88	358	eP	Pn	11 41 33.0	-0.2
	baz=353						
NWF				eS	Sn	11 41 44.4	-1.5
	baz=353						
WFSB	Wu-fen Shan	0.88	358	P	Pn	11 41 33.2	+0.1
	baz=353						
WFSB				S	Sn	11 41 44.6	-1.2
	baz=353						
SMLT	Sun Moon Lake	0.89	250	eP	Pg	11 41 32.4	+0.1
	baz=250						
SMLT				eS	Sg	11 41 44.3	+0.4
	baz=250						
SXI1	Grass Mountain	0.91	4	P	Pn	11 41 33.6	+0.1
	baz=11						
SXI1				eS	Sn	11 41 45.5	-1.0
	baz=11						
TYC	Yuchr	0.92	252	eP	Pb	11 41 32.6	-0.2
	baz=252						
YULB	Yu-li	0.92	211	eP	Pb	11 41 31.2	-1.6
	baz=220						
HSN1	Hsinchu	0.93	309	eP	Pn	11 41 34.4	+0.5
	baz=311						
NTY	Taoyuan	0.94	330	eP	Pn	11 41 33.9	0.0
	baz=333						
EYUL	Yuli	0.95	208	eP	Pn	11 41 34.3	+0.3
	baz=222						
TWF1	Yuli	0.95	210	eP	Pb	11 41 32.9	-0.6
	baz=222						
TNOU	National Taiwa	0.96	358	eP	Pn	11 41 34.4	+0.2
	baz=360						
TWQ1	Liyutan	0.96	280	eP	Pn	11 41 34.6	+0.4
	baz=281						
NCU	National Centr	0.96	324	eP	Pn	11 41 35.0	+0.7
	baz=322						
NCUH	Zhongli	0.96	324	eP	Pn	11 41 34.5	+0.2
	baz=321						
SBCB	Hsinchu	0.96	309	eP	Pn	11 41 35.1	+0.8
	baz=311						
TWS1	Kuangyinshan	0.98	339	eP	Pn	11 41 35.1	+0.7
	baz=348						
TWS1				eS	Sn	11 41 49.1	+0.9
	baz=348						
YM01	YM01	0.98	347	eP	Pn	11 41 35.0	+0.4
	baz=349						
NSY	Sanyi	0.99	284	eP	Pn	11 41 35.1	+0.5
	baz=285						
NMLH	Miaoli	0.99	291	eP	Pn	11 41 34.9	+0.2
	baz=292						
YM08	YM08	1.02	349	eP	Pn	11 41 35.0	-0.1
	baz=350						
WWF	Wufeng	1.03	262	eP	Pn	11 41 35.9	+0.8
	baz=258						
ANP	Anpu	1.03	345	eP	Pn	11 41 35.4	+0.2
	baz=347						
TCU	Taichung	1.04	268	eP	Pn	11 41 36.0	+0.8
	baz=269						
YUS	Yu-Shan	1.05	229	eP	Pb	11 41 34.8	-0.5
	baz=217						
YUS				eS	Sg	11 41 49.3	+0.2
	baz=217						
WJS	Zhushan	1.05	250	eP	Pg	11 41 35.8	+0.4
	baz=245						
WNT1	Nantou City	1.07	255	eP	Pg	11 41 35.9	+0.2
	baz=256						
NHW	Xinwu Township	1.07	320	eP	Pg	11 41 36.8	+1.0
	baz=321						
WNT	Mingjian	1.08	254	eP	Pg	11 41 36.5	+0.7
	baz=251						
WNT				eS	Sn	11 41 51.5	+0.9
	baz=251						
WDJ	Dajia District	1.08	279	eP	Pg	11 41 36.9	+1.0
	baz=280						
FULB	Fuli	1.09	206	eP	Pg	11 41 36.7	+0.5
	baz=195						
TWY	Chenhua	1.10	350	eP	Pg	11 41 37.8	+1.5
	baz=352						
YOJ	Yonaguni jima	1.13	76	eP	Pg	11 41 37.2	+0.4
	baz=65						
YOJ	Yonaguni jima	1.13	76	P	Pg	11 41 37.3	+0.5
ALS	Alishan	1.14	234	eP	Pb	11 41 36.5	-0.3
	baz=234						
WCHH	Zhanghua	1.15	265	eP	Pg	11 41 38.0	+0.7
	baz=266						
CHKT	Chengkung	1.16	201	eP	Pn	11 41 36.3	-0.6
	baz=192						
CHN5	Tsauling	1.19	241	eP	Pb	11 41 37.8	+0.2
	baz=236						
ECS	Chishang	1.21	207	eP	Pg	11 41 39.2	+0.7
	baz=206						
ELDTW	Lidau	1.23	216	eP	Pn	11 41 37.7	-0.3
	baz=205						
ELDTW				eS	Sb	11 41 54.0	0.0
	baz=205						
WGK	Gukeng	1.25	247	eP	Pg	11 41 38.8	-0.3
	baz=247						
WDLH	Douliu	1.27	247	eP	Pb	11 41 38.9	+0.2
	baz=248						
EDH	Donghe	1.29	201	eP	Pn	11 41 38.0	-0.7
	baz=188						
WRL	Guolierlin Hig	1.34	258	eP	Pb	11 41 39.8	-0.2
	baz=259						
STYH	Taoyuan	1.39	223	eP	Pn	11 41 40.3	+0.2
	baz=224						
CHN4	Tsaushan	1.39	234	eP	Pg	11 41 41.4	-0.4
	baz=234						
CHN4				eS	Sg	11 42 00.8	+0.9
	baz=234						
WTK	Tuku	1.39	249	eP	Pb	11 41 41.1	+0.2
	baz=236						
TPUB	Ta-pu	1.40	231	eP	Pb	11 41 40.6	-0.4
	baz=225						
TPUB				eS	Sg	11 42 00.7	+0.6
	baz=225						
STYT	Tauyuan	1.41	224	eP	Pn	11 41 40.6	+0.3
	baz=224						
STYT				eS	Sg	11 41 59.9	-0.5
	baz=224						
LONT	Longtian	1.42	206	eP	Pg	11 41 43.0	+0.7
	baz=206						
WTP	Ta-pu	1.44	230	eP	Pb	11 41 41.9	+0.1
	baz=219						
WTP				eS	Sb	11 42 00.6	+0.5
	baz=219						
CHY	Chiayi	1.44	242	eP	Pb	11 41 41.6	-0.1
	baz=243						
TWGBT	Beinan	1.52	206	eP	Pn	11 41 41.0	-0.9
	baz=191						
TWG	Pinlang	1.52	207	eP	Pn	11 41 41.1	-0.8
	baz=191						
TWK	Hsinying	1.52	233	eP	Pb	11 41 43.3	+0.2
	baz=233						
TWK				eS	Sb	11 42 03.1	+0.8
	baz=233						
LDUT	Ludao	1.54	192	eP	Pb	11 41 43.2	-0.2
	baz=180						
CHN1	Nanshi	1.54	230	eP	Pb	11 41 43.6	+0.2
	baz=226						
CHN1				eS	Sb	11 42 03.6	+0.7
	baz=226						
SNST	Tainan City	1.54	232	eP	Pn	11 41 41.9	-0.3
	baz=232						
SGST	Jiashian	1.57	226	eP	Pn	11 41 43.1	+0.4
	baz=227						
WSL	Shuilin Townsh	1.59	246	eP	Pb	11 41 44.1	-0.3
	baz=247						
SLGT	Liugui	1.60	222	eP	Pb	11 41 44.6	+0.2
	baz=223						
ICHU	Yijhu	1.63	240	eP	Pb	11 41 44.9	0.0
	baz=241						
CHN8	Yiju	1.69	241	eP	Pn	11 41 43.1	-1.1
	baz=242						
IRIF	Iriomote-Funau	1.76	85	P	Pn	11 41 45.7	+0.6
ECL	Taimali	1.77	207	eP	Pb	11 41 46.7	-0.6
	baz=194						
SCST	Cishan	1.77	223	eP	Pb	11 41 46.8	-0.6
	baz=223						
SSD	Sandimen	1.80	217	eP	Pb	11 41 47.2	-0.6
	baz=230						
TSMG	Majia	1.82	216	eP	Pb	11 41 47.5	-0.7
	baz=229						
MASBT	Mashibuluo	1.91	215	eP	Pb	11 41 48.6	-1.1
	baz=213						
MASBT				eS	Sb	11 42 12.8	-0.6
	baz=213						
EAST	Anshuo	2.00	206	eP	Pb	11 41 50.4	-0.9
	baz=194						
JKRS	Kuro-shima	2.01	88	eP	Pb	11 41 50.2	-1.2
JKRS				eS	Sb	11 42 15.8	-0.5
TAWH	Dawu Township	2.02	205	eP	Pb	11 41 51.5	-0.1
	baz=193						
SCZT	Fangliau	2.11	211	eP	Pb	11 41 52.1	-1.1
	baz=195						
JIJ	Ishigaki jima	2.13	85	P	Pn	11 41 51.1	+0.8
JIJ				eS	Sn	11 42 17.2	+0.5
PHUB	P'eng-hu	2.16	252	eP	Pn	11 41 50.6	0.0
	baz=256						
PHUB				S	Sn	11 42 18.1	+0.8
	baz=256						
WDGT	Dungji	2.18	245	eP	Pn	11 41 51.3	+0.4
	baz=247						
VWUC	VWUC	2.29	291	eP	Pn	11 41 52.1	-0.4
	baz=280						
JISG	Ishigakijimahi	2.31	80	eP	Pn	11 41 53.5	+0.7
JISG				eS	Sn	11 42 22.2	+1.1
VCHM	Qimei	2.39	246	eP	Pn	11 41 54.1	+0.2
	baz=232						
MATB	Ma-tsu	2.59	320	eP	Pn	11 41 55.7	-0.9
	baz=318						
PTMZ	Houxiangcun	2.59	290	eP	Pn	11 41 56.6	-0.1
	baz=290						
KNM	Kinmen	3.09	275	eP	Pn	11 42 05.8	+2.4
	baz=275						
XPSS	Dashiqiu	3.10	332	eP	Pn	11 42 03.2	-0.4
	baz=329						
KNMB	Chin-men Tao	3.13	276	eP	Pn	11 42 03.8	-0.3
	baz=276						
MHZQ	Yeshan	3.16	308	eP	Pn	11 42 05.1	+0.7
	baz=307						
AXDP	Jialang	3.57	282	eP	Pn	11 42 10.2	+0.1
	baz=282						

NEIC ***17*** *11:41:48.4±1.7, 36°.67N±0°.08×71°.4E±0°.1, h156^{km}±9^{km},*
mb4.4/4, Error ellipse: s-maj=13.6km s-min=11.0km
az=98.0
IDC ***17*** *11:41:51.0±8.9, 36°.90N×71°.54E, h152^{km}±63^{km}, mb3.4/5,*
mbtmp3.8/10, Error ellipse: s-maj=74.5km s-min=27.3km
az=5.0
NNC ***17*** *11:41:53.3±6.2, 37°.17N×71°.34E, h146^{km}±102^{km}, mb3.2,*
mpv4.0, Error ellipse: s-maj=54.3km s-min=34.5km az=4.0
ISC 17 11:41:47.9±0.7, **36°.71N**±0°.05×**71°.61E**±0°.07, **h150**^{km}, **n45,**
σ1.^{s}64/52, **mb3.9**/7, **3C-5D, Afghanistan-Tajikistan border**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.50	336	Pn	Pn	11 42 29.3	+0.2
CHGR	Chuyangaron	2.75	316	Pn	Pn	11 42 31.2	-0.9
DRK	Karamyk	2.77	3	Pn	Pn	11 42 34.4	+1.8
KBL	Kabul	3.01	225		Pn	11 42 34.8	-0.7
NIL	Nilore	3.34	156		Pn	11 42 40.6	+1.0
BTK	Batken	3.40	350	Pn	Pn	11 42 41.7	+1.3
JMU	Jammu	4.82	145	*e*P	Pn	11 42 59.9	+1.0
JMU				*e*S	Sn	11 43 52.4	-1.9
THN	Thein Dam	5.45	140	*e*P	Pn	11 43 08.9	+1.6
THN				*e*S	Sn	11 44 08.0	-1.2
AAK	Ala-Archa	6.33	20	P	Pn	11 43 20.5	+1.5
	7.4nm,0.4s,baz=178,slow=6.0,SNR=5.0						
AAK				S	Sn	11 44 29.0	-1.3
	19nm,0.8s,baz=142,slow=19,SNR=20						
KK31	Karatay Array	6.44	353	Pn	Pn	11 43 20.5	+0.1
KK31	Karatay Array	6.44	353	⇓P	Pn	11 43 20.5	+0.1
	12nm,0.3s,baz=180,slow=14,SNR=208						
KK31				⇓S	Sn	11 44 28.4	-4.5
	2.9nm,0.3s,baz=177,slow=23,SNR=14						
KKAR	Karatay Array	6.44	353	Pn	Pn	11 43 20.5	+0.1
BOOM	Boomskoye usch	6.67	29	Pn	Pn	11 43 24.7	+1.1
CHMS	Chumysh	6.73	20	⇓P	Pn	11 43 24.7	+0.4
	6.4nm,0.5s						
CHMS				⇑S	Sn	11 44 36.4	-3.4
	7.5nm,0.6s						
KDJ	Kajisay	6.92	37		Pn	11 43 28.8	+1.8
TKM2	Tokmak 2	6.92	25	⇓P	Pn	11 43 28.3	+1.3
	2.0nm,0.5s						
TKM2				⇑S	Sn	11 44 42.1	-2.6
	8.3nm,0.8s						
SMLA	Simla	7.24	139	*e*P	Pn	11 43 31.4	+0.3
SMLA				*e*S	Sn	11 44 48.0	-4.0
SMLA				IAML		11 44 51.4	
	comp=E,74nm,0.3s						
SMLA				IAML		11 44 51.5	
	comp=N,67nm,0.3s						
SMLA				IAML		11 44 53.6	
	comp=E,76nm,0.4s						
KUDL	Kundal	9.48	153	*e*P	Pn	11 43 59.2	-1.9
MK31	Makanchi Array	12.84	35	Pn	Pn	11 44 45.6	+0.7
MKAR	Makanchi Array	12.84	35	P	Pn	11 44 46.2	+1.3
	comp=E,0.3nm,0.6s,baz=216,slow=12,SNR=2.1						
MKAR	Makanchi Array	12.84	35	Pn	Pn	11 44 46.5	+1.6
GKN	Gorkha	14.01	125	*e*P	Pn	11 44 59.7	-0.4
	comp=E,9.9nm,0.3s						
BHPL	Bhopal	14.33	158	*i* x	Pn	11 45 08.2	+4.1
KKN	Kakani	14.58	124	*e*P	Pn	11 45 07.1	-0.2
	comp=E,11nm,0.5s						
DMN	Daman	14.58	125	*e*P	Pn	11 45 05.9	-1.5
	comp=E,8.8nm,0.3s						
KURBB	Kurchatov Arra	14.77	18	P	P	11 45 11.8	+0.5
	comp=E,1.1nm,0.7s,baz=203,slow=11,SNR=5.5						
PKIN	Phulchoki	14.80	124	*e*P	Pn	11 45 10.1	0.0
	comp=E,7.6nm,0.3s						
PKI	Pulchoki	14.81	124	*e*P	Pn	11 45 10.2	-0.1
	comp=E,8.0nm,0.4s						
KURK	Kurchatov	14.88	18		Pn	11 45 09.9	-0.7
AB31	Akbulak array	15.14	330	⇓P	Pn	11 45 13.0	-0.8
	comp=E,0.7nm,0.3s,baz=147,slow=13,SNR=5.0						
ABKAR	Akbulak array	15.14	330	Pn	Pn	11 45 12.6	-1.3
AKTO	Aktyubinsk	16.85	329	P	Pn	11 45 35.4	+0.7
	comp=E,3.8nm,0.5s,baz=137,slow=11,SNR=8.3						
AKTO	Aktyubinsk	16.85	329	⇑P	P	11 45 34.4	+0.1
	comp=E,2.3nm,0.5s						
ZAA0	Zalesovo Array	19.52	24	P	P	11 46 04.7	+1.2
ZALV	Zalesovo Beam	19.52	24	P	P	11 46 05.3	+1.9
	comp=E,1.7nm,0.3s,baz=225,slow=9.6,SNR=9.4						
ZALV	Zalesovo Beam	19.52	24	P	P	11 46 04.4	+0.9
BELG	Belogornoye	23.03	320	P	P	11 46 41.9	+2.2
	comp=E,8.6nm,0.5s,baz=100,slow=6.1,SNR=2.3						
	comp=E,8.6nm,0.5s						
SONM	Songino Array	27.82	55	P	P	11 47 25.2	+2.2
	comp=E,0.2nm,0.4s,baz=252,slow=8.9,SNR=1.9						
	comp=E,0.2nm,0.4s						
FINES	FINESS Array B	37.58	326	P	P	11 48 49.2	+1.7
	comp=E,1.2nm,0.5s,baz=69,slow=7.6,SNR=4.5						
	comp=E,1.2nm,0.5s						
HFS	Hagfors	43.20	322	P	P	11 49 34.2	+0.6
	comp=E,0.3nm,0.3s,baz=93,slow=8.5,SNR=2.0						
	comp=E,0.3nm,0.3s						
NC303	NORSAR Array S	44.45	323	P	P	11 49 44.6	+1.0
NC303				IAmb	IAmb	11 49 51.3	
	comp=Z,11nm,1.3s						
NB201	NORSAR Array S	44.47	323	P	P	11 49 43.8	0.0
NB201				IAmb	IAmb	11 50 01.5	
	comp=Z,11nm,1.1s						
NB2	NORSAR Subarra	44.51	323	P	P	11 49 44.2	+0.1
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.51	323	P	P	11 49 44.6	+0.5
	comp=Z,0.4nm,0.4s,baz=103,slow=7.2,SNR=4.3						
	comp=Z,0.4nm,0.4s						
NBO00	NORSAR Array S	44.72	323	P	P	11 49 45.7	0.0

BEO 17 11:41:52.2±0.8**, 44°.15N×22°.20E, $h0^{km}\pm4^{km}$, ML1.5**/6**, 5C-5D, Mining explosion., Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAGS	Zajecar	0.34	176	*e*Pg	Pg	11 41 57.8	-0.9
ZAGS				*e*Sg	Sg	11 42 03.7	+0.7
KUBS	Kucevo	0.46	305	*e*Pg	Pg	11 42 00.1	-0.9
KUBS				*e*Sg	Sg	11 42 06.6	-0.4
BOVS	Bovan	0.63	215	⇓P	Pg	11 42 03.5	-0.7
BOVS				⇑S	Sg	11 42 11.8	-0.5
BOVS	Bovan	0.63	215	*e*Pg	Pg	11 42 03.3	-0.9
BOVS				*e*Sg	Sg	11 42 11.4	-0.9
BLKB	Belogradchik	0.63	147	⇑S	Sg	11 42 14.5	+2.1
MDVR	Moldovita	0.72	331	⇑P	Pg	11 42 06.3	+0.3
MDVR				⇓S	Sg	11 42 16.0	+0.6
HERR	Herculane	0.75	12	⇑P	Pb	11 42 07.6	-0.5
SELS	Selova	1.22	221	*e*Pg	Pg	11 42 14.6	-0.9
SELS				*e*Sg	Sg	11 42 31.2	-0.1
TRUS	Trudelj	1.29	274	*e*Pg	Pg	11 42 15.6	-1.4
TRUS				*e*Sg	Sb	11 42 34.6	0.0
GZR	Gura Zlata	1.31	18	⇓P	Pn	11 42 17.9	0.0
GZR				⇓S	Sn	11 42 37.2	+1.2
BZS	Buzias	1.52	344	⇑P	Pn	11 42 20.6	-0.1
BZS				⇓S	Sn	11 42 42.6	+1.3
IVAS	Ivanjica	1.59	250	*e*Pg	Pn	11 42 21.0	-0.7
IVAS				*e*Sg	Sn	11 42 41.7	-1.2

UCR 17 11:52:43.9±1.6**, 3°.29N×82°.01W, $h19^{km}$, MW4.0, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDPN	Palmar Norte	5.82	346	*e*P	Pn	11 54 09.8	+0.6
SRBA	San Rafael, Bu	6.05	347	*e*P	Pn	11 54 13.5	+0.8
RIMA	Rio Macho	6.69	344	*e*P	Pn	11 54 21.6	+0.1
LCR2	La Lucha 2	6.71	343	*e*P	Pn	11 54 21.9	+0.2
JACO	JACO, Garabito	6.86	338	*e*P	Pn	11 54 22.6	-0.9
HDC	Heredia	6.99	343	*e*P	Pn	11 54 26.3	+0.8
LAFE	Finca La Fe, P	7.09	336	*e*P	Pn	11 54 26.0	-0.7
JTS	Las Juntas de	7.54	337	*e*P	Pn	11 54 32.8	-0.2
ARE1	Arenal 1	7.62	339	*e*P	Pn	11 54 35.2	+1.2
CEDE	Laguna Cedeo	7.63	340	*e*P	Pn	11 54 35.9	+1.6
SAJU	San Juanillo,	7.67	332	*e*P	Pn	11 54 34.4	-0.4
GUAI	GUAI	7.76	334	*e*P	Pn	11 54 36.2	+0.3
ACAL	Aguas Claras	7.89	338	*e*P	Pn	11 54 39.2	+1.4
PTEN	Parque Tenorio	7.95	338	*e*P	Pn	11 54 40.2	+1.7
CUI	Cuipilapa	7.96	337	*e*P	Pn	11 54 40.0	+1.3
COLC	Colonia	7.98	337	*e*P	Pn	11 54 41.4	+2.3
HORNC	Hornillas	8.02	337	*e*P	Pn	11 54 41.4	+1.8
GPS2	Hotel Rincn d	8.12	336	*e*P	Pn	11 54 43.4	+2.4
BUEV	Buena Vista	8.19	336	*e*P	Pn	11 54 43.7	+1.8
HZTE	Horizontes, Gu	8.19	334	*e*P	Pn	11 54 42.7	+0.8
GBS3	Finca Las Img	8.19	336	*e*P	Pn	11 54 43.0	+1.1
GB1A	Borinquen Arri	8.20	336	*e*P	Pn	11 54 44.1	+2.0

CRAAG ***17*** *12:11:29.8, 36°.36N×3°.41E, Ml3.2*

MDD ***17*** *12:11:30.9±0.8, 36°.39N×3°.58E, $h0^{km}$, Mb3.9/7, M_mb3.2/7, Error ellipse: s-maj=7.6km s-min=4.4km az=155.0*

ISC 17 12:11:30.3±1.1**, 36°.37N**±0°.05×**3°.56E**±0°.05**, $h18^{km}$, n11, $\sigma 2.^{s}26$**/18**, 5C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.23	204	P	Pg	12 11 35.0	-0.8
ABMS	Boumerdes	0.38	351	P	Pg	12 11 39.7	+1.4
AKET	Djebel Ketaf	0.42	141	P	Pg	12 11 39.9	+0.9
EMHD	Djebel Mahouad	0.52	251	P	Pg	12 11 39.7	-1.0
EIBI	Ibiza	3.18	327	P	Pn	12 12 21.5	+2.1
EIBI				⇑*i*Vmb_V		12 12 25.6	
	280nm,SNR=2.6						
EIBI				S	Sn	12 12 56.0	-0.8
ETOS	Mallorca	3.44	350	P	Pn	12 12 24.0	+1.0
ETOS				⇑*i*Vmb_V		12 12 29.2	
	140nm,SNR=1.5						
ETOS				S	Sn	12 13 00.3	-3.1
ECOL	Islas Columbre	4.19	328	P	Pn	12 12 33.3	0.0
ECOL				S	Sn	12 13 18.3	-3.4
ETOB	Tobarra	4.65	301	P	Pn	12 12 40.5	+0.8
ETOB				⇑*i*Vmb_V		12 12 44.9	
	76nm,SNR=2.1						
ETOB				S	Sn	12 13 35.1	+1.8
EMOS	Mosqueruela	5.09	323	P	Pn	12 12 47.0	+1.2
EMOS				⇑*i*Vmb_V		12 12 52.9	
	63nm,SNR=1.0						
EMOS				S	Sn	12 13 39.6	-4.7
EQES	Quesada	5.49	287	P	Pn	12 12 53.0	+1.8
EQES				⇑*i*Vmb_V		12 12 59.4	
	62nm,SNR=1.7						
EQES				S	Sn	12 13 56.4	+2.4
VSL	Villasalto	5.56	54	P	Pn	12 12 52.5	+0.4
VSL				S	Sn	12 13 52.6	-3.0

TUL ***17*** *12:19:59.7±0.9, 36°.49N±0°.01×98°.73W±0°.01, $h7^{km}\pm2^{km}$, ML2.5, mb_Lg2.3/12(NEIC), Error ellipse: s-maj=1.5km s-min=1.4km az=160.0*

NEIC 17 12:19:59.9±0.7**, 36°.48N**±0°.01×**98°.70W**±0°.01**, $h7^{km}\pm1^{km}$, Error ellipse: s-maj=2.1km s-min=1.2km az=151.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.26	248	Pg	Pg	12 20 04.8	-0.3
U32A				Sg	Sg	12 20 08.9	+0.4
FNO	Franklin	1.61	139	Pn	Pn	12 20 28.9	+0.1
WMOK	Wichita Mounta	1.74	182	Pn	Pn	12 20 30.3	-0.2
T35A	Sooner Cattle	1.81	75	Pn	Pn	12 20 31.2	-0.4
R32A	Long Quarter,	1.94	360	Pn	Pn	12 20 34.0	+0.7
AMTX	Amarillo	2.90	238	IAmb_Lg		12 21 36.1	
	comp=Z,6.2nm,0.9s						
KSCO	Kaye Shedlock'	4.01	310	IAmb_Lg		12 22 14.3	
	comp=Z,6.3nm,0.8s						
MGMO	Mountain Grove	5.21	81	IAmb_Lg		12 22 53.6	
	comp=Z,5.6nm,1.2s						
Q24A	Divide	5.68	298	IAmb_Lg		12 23 14.4	
	comp=Z,4.6nm,0.8s						
CCM	Cathedral Cave	6.15	73	IAmb_Lg		12 23 16.1	
	comp=Z,5.7nm,1.1s						
FVM	French Village	6.77	75	IAmb_Lg		12 23 36.8	
	comp=Z,3.1nm,0.8s						

IDC ***17*** *12:30:35.9±0.6, 56°.18S×25°.99W, $h0^{km}$, mb4.4/9, mbtmp4.3/10, ML3.3/1, MS3.5/10, Error ellipse: s-maj=27.4km s-min=18.0km az=76.0*

NEIC ***17*** *12:30:38.3±1.4, 56°.27S±0°.10×26°.0W±0°.1, $h10^{km}\pm1^{km}$, mb4.7/40, Error ellipse: s-maj=20.3km s-min=6.5km az=39.0*

ISC 17 12:30:37.7±0.5**, 56°.17S**±0°.09×**26°.0W**±0°.1**, $h10^{km}$, n71, $\sigma 1.^{s}20$**/61**, mb4.6**/25**, MS3.4**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.29	283	Pn	Pn	12 32 11.9	+1.5
VNA1	Neumayer--Stat	16.44	159	P	P	12 34 31.0	+0.2
VNA3	Neumayer Olymp	16.66	162	P	P	12 34 33.8	+0.4
SNAA	Sanae	18.36	157	P	P	12 34 54.9	+2.7
SNAA	Sanae	18.36	157	Pn	Pn	12 34 49.5	-2.7
	0.1nm,0.3s,baz=295,slow=8.7,SNR=3.6						
	2.9nm,0.9s						
SNAA	Sanae	18.36	157		P	12 34 52.1	-0.1
TROLL	Troll, Antarti	19.84	154	P	Pn	12 35 15.0	+5.0
PMSA	Palmer Station	20.32	229	LR	LR	12 42 14.2	
	comp=Z,156nm,18.1s,baz=90,slow=34						
BELA	Belgrano 2	22.01	185	P	P	12 35 30.3	-1.3
BELA				IAmb	IAmb	12 35 36.5	
	comp=Z,27nm,1.1s						
SMAI	San Martin Ant	22.11	221	P	P	12 35 32.3	-0.4
SMAI				IAmb	IAmb	12 35 42.6	
	comp=Z,29nm,1.2s						
MG03	Isla Dawson	25.27	256	P	P	12 36 03.4	-0.3
MG03				IAmb	IAmb	12 36 31.3	
	comp=Z,17nm,1.2s						
GO09	Cerro Castillo	27.43	261	P	P	12 36 24.8	+1.4
GO09				IAmb	IAmb	12 36 52.4	
	comp=Z,17nm,1.1s						
TRQA	Tornquist	29.98	292	P	P	12 36 47.8	+1.6
TRQA				IAmb	IAmb	12 36 56.7	
	comp=Z,14nm,1.3s						
PLCA	Paso Flores	32.68	279	P	P	12 37 08.1	-1.8
	comp=Z,0.8nm,0.9s,baz=93,slow=9.2,SNR=1.7						
PLCA				LR	LR	12 51 06.5	
	comp=Z,55nm,18.8s,baz=164,slow=38						
	comp=Z,0.8nm,0.9s						
QSPA	South Pole Qui	34.08	180	P	P	12 37 22.0	0.0
	comp=Z,13nm,0.6s,baz=194,slow=3.0,SNR=117						
	comp=Z,13nm,0.6s						
QSPA	South Pole Qui	34.08	180	P	P	12 37 22.0	0.0
QSPA				IAmb	IAmb	12 37 22.8	
	comp=Z,14nm,0.8s						
CPUP	Villa Florida	37.40	310	P	P	12 37 49.9	-0.7
	comp=Z,2.9nm,0.8s,baz=166,slow=8.0,SNR=4.9						
CPUP				PcP	PcP	12 40 09.2	-0.1
	comp=Z,4.0nm,1.1s,baz=105,slow=5.2,SNR=3.1						
	comp=Z,2.9nm,0.8s						
CPUP	Villa Florida	37.40	310	P	P	12 37 50.0	-0.7
MT09	Talagante	37.98	287	P	P	12 37 53.6	-2.1
MT09				IAmb	IAmb	12 37 54.6	
	comp=Z,20nm,1.5s						
MT01	Popeta	38.05	287	P	P	12 37 55.5	-0.6
MT02	Curacav	38.46	287	P	P	12 37 57.8	-1.7
MT02				IAmb	IAmb	12 38 08.8	
	comp=Z,26nm,1.4s						
MAW	Mawson	39.66	143	P	P	12 38 09.2	+0.1
CO02	Combarbal	39.98	289	P	P	12 38 10.5	-1.9
CO02				IAmb	IAmb	12 38 18.7	
	comp=Z,16nm,1.1s						
SUR	Sutherland	40.03	74	LR	LR	12 51 35.4	
	comp=Z,127nm,19.2s,baz=192,slow=32						
CO01	Juntas del Tor	40.48	292	P	P	12 38 16.9	+0.2
GO04	Tololo Observa	40.69	291	P	P	12 38 17.3	-1.1
GO04				IAmb	IAmb	12 38 43.5	
	comp=Z,23nm,1.4s						
AC04	Llanos de Chal	42.41	292	P	P	12 38 32.7	+0.5
AC02	Maricunga	42.53	295	P	P	12 38 33.8	0.0
AC02				IAmb	IAmb	12 38 35.3	
	comp=Z,14nm,0.9s						
AC06	Mina Casimiro	42.72	294	P	P	12 38 34.8	0.0
AC06				IAmb	IAmb	12 38 35.5	
	comp=Z,16nm,1.2s						
GO02	Mina Guanaco	44.14	296	P	P	12 38 46.9	+0.3
GO02				IAmb	IAmb	12 38 49.1	
	comp=Z,17nm,0.7s						
PB14	IPOC Station P	44.99	296	P	P	12 38 53.4	-0.1
PB14				IAmb	IAmb	12 38 56.8	
	comp=Z,14nm,1.1s						
BOSA	Boshof	45.36	75	LR	LR	12 54 21.3	
	comp=Z,143nm,18.9s,baz=188,slow=31						
LVC	Limon Verde	45.94	299	LR	LR	13 01 23.4	
	comp=Z,16nm,18.9s,baz=179,slow=40						
LVC	Limon Verde	45.94	299	P	P	12 39 01.7	+0.7
LVC				IAmb	IAmb	12 39 09.7	
	comp=Z,6.4nm,0.9s						
SBA	Scott Base	46.01	184	P	P	12 39 01.3	+0.9
VNDA	Vanda	46.48	182	P	P	12 39 04.1	-0.2
	comp=Z,3.9nm,0.7s,baz=187,slow=6.8,SNR=32						
	comp=Z,3.9nm,0.7s						
VNDA	Vanda	46.48	182	P	P	12 39 04.4	+0.1
VNDA				IAmb	IAmb	12 39 08.1	
	comp=Z,4.1nm,0.7s						
PB09	IPOC Station P	46.79	299	P	P	12 39 09.2	+1.7
PB07	IPOC Station P	47.16	298	P	P	12 39 11.3	+0.9
PB01	IPOC Station P	47.55	299	P	P	12 39 13.0	-0.3
PB08	IPOC Station P	48.15	300	P	P	12 39 19.1	+0.8
LBTB	Lobatse	48.41	72	LR	LR	12 56 50.5	
	comp=Z,62nm,18.4s,baz=190,slow=32						
PB11	IPOC Station P	48.72	300	P	P	12 39 23.2	+0.7
H10N1	ASCENSION HYDR	49.05	15	T	T	13 32 53.3	
	baz=197,slow=75						
H10N3	ASCENSION HYDR	49.05	15	T	T	13 32 24.8	
	baz=197,slow=75						
H10N2	ASCENSION HYDR	49.07	15	T	T	13 32 32.1	
	baz=197,slow=75						
TSUM	Tsumeb	49.16	59	LR	LR	12 57 53.6	
	comp=Z,38nm,18.5s,baz=152,slow=33						
PB16	IPOC Station P	49.87	301	P	P	12 39 32.5	+0.7
PB16				IAmb	IAmb	12 39 47.1	
	comp=Z,10nm,1.4s						
RCBR	Riachuelo	50.82	347	LR	LR	12 55 45.1	
	comp=Z,41nm,21.2s,baz=312,slow=30						
LPAZ	La Paz	50.99	304	P	P	12 39 41.0	+0.7
	comp=Z,4.5nm,0.7s,baz=149,slow=7.4,SNR=10						
LPAZ				LR	LR	13 00 13.8	
	comp=Z,28nm,21.3s,baz=92,slow=35						
	comp=Z,4.5nm,0.7s						
LPAZ	La Paz	50.99	304	P	P	12 39 41.4	+1.1
SAML	Samuel	55.36	313	P	P	12 40 11.7	0.0
NNA	Nana	58.89	298	LR	LR	13 05 32.5	
	comp=Z,24nm,21.7s,baz=160,slow=36						
DBIC	Dimbokro	65.01	23	P	P	12 41 17.6	-0.2
	comp=Z,4.3nm,0.9s,baz=222,slow=7.3,SNR=4.5						
	comp=Z,4.3nm,0.9s						
DBIC	Dimbokro	65.01	23	P	P	12 41 18.3	+0.6
TOA0	Torodi Ar. Sit	72.84	28	P	P	12 42 07.1	+0.6
TOA0				IAmb	IAmb	12 42 07.6	
	comp=Z,5.6nm,0.7s						
TORD	Torodi Ar. Bea	72.84	28	P	P	12 42 06.2	-0.2
	comp=Z,6.4nm,0.7s,baz=202,slow=6.8,SNR=30						
	comp=Z,6.4nm,0.7s						
BAUV	El Baul	73.60	316	P	P	12 42 11.3	+0.4
STKA	Stephens Creek	91.67	169	P	P	12 43 45.0	0.0
	comp=Z,2.6nm,1.0s,baz=221,slow=11,SNR=2.3						
	comp=Z,2.6nm,1.0s						
ASAR	Alice Springs	98.67	161	P	P	12 44 16.2	-1.0
	comp=Z,0.4nm,0.7s,baz=222,slow=1.2,SNR=2.2						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	122.06	292	PKP	PKiKP	12 49 32.4	+0.2
	comp=Z,0.2nm,0.7s,baz=141,slow=4.4,SNR=3.6						
NVAR	Mina Array Bea	122.06	292		PKPdf	12 49 31.9	-0.1
ARCES	ARCESS Array B	130.81	21	PKP	PKPdf	12 49 47.3	-0.1
	comp=Z,1.2nm,0.8s,baz=197,slow=2.7,SNR=4.2						
YKA	Yellowknife Ar	136.71	317	PKP	PKPdf	12 49 56.2	-2.4
	comp=Z,0.5nm,0.8s,baz=116,slow=2.3,SNR=4.7						
INK	Inuvik	146.32	320	PKPbc	PKPbc	12 50 16.6	-0.3
	comp=Z,8.6nm,1.0s,baz=90,slow=3.8,SNR=15						
INK	Inuvik	146.32	320	PKPdf	PKPbc	12 50 16.8	-0.1
SONM	Songino Array	150.07	86	PKPbc	PKPbc	12 50 26.8	-0.9
	comp=Z,0.8nm,0.5s,baz=249,slow=3.3,SNR=4.8						
SONM	Songino Array	150.07	86		PKPbc	12 50 27.8	+0.1
ILAR	Eielson Array	150.69	311	PKPbc	PKPbc	12 50 28.3	-0.2
	comp=Z,5.7nm,1.0s,baz=126,slow=1.5,SNR=28						
ILAR	Eielson Array	150.69	311		PKPbc	12 50 28.4	0.0
KDAK	Kodiak Island	151.47	296	PKPbc	PKPbc	12 50 29.7	-0.7
	comp=Z,6.7nm,1.0s,baz=94,slow=1.4,SNR=5.1						

IDC ***17*** *12:43:46.5±1.6, 4°.97S×144°.43E, $h44^{km}\pm15^{km}$, mb4.2/20, mbtmp4.5/25, ML3.2/4, MS3.7/29, Error ellipse: s-maj=12.8km s-min=9.1km az=95.0*

NEIC ***17*** *12:43:46.4±1.9, 4°.87S±0°.07×144°.56E±0°.07, $h37^{km}\pm5^{km}$, mb4.8/66, Error ellipse: s-maj=10.4km s-min=9.8km az=88.0*

BJI ***17*** *12:43:50.9±0.0, 5°.56S×144°.25E, $h103^{km}$, mb4.4/19, mB5.0/13*

DJA ***17*** *12:43:51.3±0.4, 5°S±3°×14°4E±°, $h69^{km}\pm5^{km}$, M4.8/32, mB5.2/9, mb4.7/32, MLv5.0/4, Mw(mB)4.6/9*

ISC 17 12:43:45.9±0.3**, 4°.88S**±0°.04×**144°.52E**±0°.05**, $h35^{km}$, n187, $\sigma 1.^{s}48$**/181**, mb4.8**/65**, MS3.9**/27**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	4.00	45		Pn	12 44 44.7	-0.1
PMG	Port Moresby	5.21	150	P	Pn	12 45 01.1	-0.2
	21nm,0.3s,baz=338,slow=4.8,SNR=45						
PMG				S	Sn	12 46 00.2	+0.1
	215nm,0.5s,baz=287,slow=20,SNR=12						
PMG				LR	LR	12 47 34.6	
	comp=Z,984nm,19.9s,baz=323,slow=44						
	63nm,0.3s						
PMG	Port Moresby	5.21	150	Pn	Pn	12 45 01.9	+0.6
PMG	Port Moresby	5.21	150	P	Pn	12 45 03.8	+2.5
MMPI	Merauke	5.44	229	P	Pn	12 45 06.7	+2.2
	2.5nm235nm,0.4s						
KRVT	Keravat (AS076	7.50	86	P	Pn	12 45 33.2	+0.3
	0.7nm,0.3s,baz=203,slow=21,SNR=1.2						
	4.9nm,0.6s						
COEN	Coen	9.12	188	Pn	Pn	12 45 58.1	+3.0
COEN	Coen	9.12	188	P	Pn	12 45 58.1	+3.0
MTSU	Mount Surprise	13.18	181	P	Pn	12 46 53.5	+2.9
SAUI	Saumlaki	13.49	256	Pn	Pn	12 46 55.7	+0.7
SIJI	Sorong	13.82	286	P	Pn	12 46 57.7	-1.8
	0.3nm,0.3s,baz=121,slow=24,SNR=1.5						
SIJI				LR	LR	12 53 05.5	
	comp=Z,258nm,20.5s,baz=62,slow=41						
	5.9nm,0.8s						
SWI	Sorong	13.83	286	P	P	12 47 04.3	-3.1
	38nm,0.8s						
CTA	Charters Tower	15.21	174	P	Pn	12 47 16.2	-2.0
	0.1nm,0.3s,baz=354,slow=21,SNR=3.7						
CTA				LR	LR	12 53 11.3	
	comp=Z,161nm,21.9s,baz=7.5,slow=37						
	10nm,1.1s						
CTA	Charters Tower	15.21	174	P	Pn	12 47 20.8	+2.6
CTAO	Charters Tower	15.21	174	Pn	Pn	12 47 18.8	+0.6
CTAO	Charters Tower	15.21	174	P	Pn	12 47 20.9	+2.7
MTN	Manton Dam	15.40	238	Pn	Pn	12 47 20.7	-0.1
MTN	Manton Dam	15.40	238	P	Pn	12 47 20.6	-0.1
MSAI	Masohi	15.62	275	P	P	12 47 26.7	-0.7
	6.7nm,0.5s						
QIS	Mount Isa	16.30	197	P	P	12 47 35.0	+0.1
AAI	Ambon	16.32	274	P	P	12 47 37.4	+2.2
	40nm,0.9s						
LBMI	Labuha	17.51	283	P	P	12 47 52.1	+3.8
	15nm,0.9s						
WB0	Warramunga Arr	17.79	213	P	Pn	12 47 50.9	+0.1
WB0				IAmb	IAmb	12 47 54.6	
	comp=Z,56nm,0.8s						
WR0	Warramunga Arr	17.86	212	P	Pn	12 47 51.3	-0.5
WR0				IAmb	IAmb	12 47 55.6	
	comp=Z,36nm,0.8s						
WRAB	Tennant Creek	17.94	213	P	Pn	12 47 52.3	-0.5
WRAB				IAmb	IAmb	12 47 56.5	
	comp=Z,51nm,0.8s						
WRAB	Tennant Creek	17.94	213	P	Pn	12 47 53.0	+0.2
WB2	Warramunga Arr	17.95	213	P	Pn	12 47 52.5	-0.3
WB2				IAmb	IAmb	12 47 56.6	
	comp=Z,42nm,0.7s						
WRA	Warramunga Arr	17.96	213	P	Pn	12 47 51.5	-1.5
	comp=Z,32nm,0.8s,baz=36,slow=12,SNR=64						
WRA				S	Sn	12 51 11.1	-1.2
	comp=Z,2.1nm,1.1s,baz=19,slow=21,SNR=3.6						
WRA				PcP	PcP	12 52 27.2	-0.4
	comp=Z,1.6nm,0.6s,baz=360,slow=1.6,SNR=5.1						
WRA				LR	LR	12 55 15.3	
	comp=Z,291nm,19.4s,baz=30,slow=39						
WRA				ScP	ScP	12 55 59.0	-1.5
	comp=Z,0.9nm,1.0s,baz=14,slow=14,SNR=5.4						
WRA	Warramunga Arr	17.96	213	P	Pn	12 47 51.2	-1.8
SANI	Sanana	18.71	278	P	Pn	12 48 02.3	+0.2
	comp=Z,25nm,0.6s						
SANI	Sanana	18.71	278	P	P	12 48 01.1	-0.4
KNRA	Kununurra	18.84	234		P	12 48 02.8	-0.1
KNRA				IAmb	IAmb	12 48 06.6	
	comp=Z,44nm,0.8s						
KNRA	Kununurra	18.84	234	P	Pn	12 48 03.7	+0.1
SOEI	Soe	20.66	255	P	P	12 48 22.3	-0.6
SOEI				IAmb	IAmb	12 48 40.1	
	comp=Z,51nm,0.8s						
SOEI	Soe	20.66	255	P	P	12 48 21.9	-1.1
	comp=Z,67nm,0.7s						
SOEI	Soe	20.66	255	P	P	12 48 22.4	-0.6
KMSI	Cibinong	21.22	284	P	P	12 48 30.8	+1.9
AS31	Alice Springs	21.30	208	P	P	12 48 30.3	+0.6
ASAR	Alice Springs	21.30	208	P	P	12 48 29.8	+0.1
	comp=Z,24nm,1.1s,baz=37,slow=9.0,SNR=111						
ASAR				S	S	12 52 18.9	-5.7
	comp=Z,5.0nm,0.9s,baz=26,slow=19,SNR=10.0						
ASAR				LR	LR	12 57 00.2	
	comp=Z,377nm,19.3s,baz=5.5,slow=38						
	comp=Z,24nm,1.1s						

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ASAR  Alice Springs    21.30 208   P      P        12 48 29.6 -0.1
EIDS  Eidsvold         21.32 163   P      P        12 48 28.0 -1.9
EIDS  Eidsvold         21.32 163   P      P        12 48 32.2 +2.3
BATI  Baumata          21.34 254   P      P        12 48 28.6 -1.5
      comp=Z,12nm,0.4s,baz=104,slow=22,SNR=2.2
BATI                               LR     LR       12 56 58.4
      comp=Z,535nm,20.1s,baz=84,slow=37
      comp=Z,12nm,0.4s
BATI  Baumata          21.34 254   P      P        12 48 32.7 +2.5
      comp=Z,46nm,0.9s
QLP   Quilpie          21.58 181   P      P        12 48 34.2 +1.5
RMQ   Roma             21.86 170   P      P        12 48 38.7 +3.0
BBSI  Bau Bau          21.87 267   P      P        12 48 38.1 +2.2
      comp=Z,5.3nm,0.7s
LUWI  Luwuk            22.05 279   P      P        12 48 37.0 -0.8
LUWI  Luwuk            22.05 279   P      P        12 48 40.2 +2.4
      comp=Z,5µmcomp=Z,70nm,0.7s
GTOI  Gorontalo        22.17 284   P      P        12 48 42.4 +3.3
      comp=Z,220nmcomp=Z,26nm,0.8s
MMRI  Maumere          22.44 259   P      P        12 48 41.4 -0.6
EDFI  Ende, Flores     22.99 259   P      P        12 48 47.4 -0.5
      comp=Z,21nm,0.7s
INKA  Innaminka        23.02 189   P      P        12 48 49.3 +1.4
MRSI  Marisa           23.17 283   P      P        12 48 52.8 +3.2
      comp=Z,24nm,1.1s
APSI  Ampana           23.18 279   P      P        12 48 50.6 +0.9
      comp=Z,571nmcomp=Z,50nm,0.8s
OOD   Oodnadatta       24.29 199   P      P        12 49 00.6 +0.5
BNSI  Bone             24.34 270   P      P        12 49 01.5 +0.8
      comp=Z,16nm,0.9s
TOLI2 Tolitoli         24.45 283   P      P        12 49 01.4 -0.3
TOLI2                              IAmb   IAmb     12 49 05.1
      comp=Z,31nm,0.8s
TOLI2 Tolitoli         24.45 283   P      P        12 49 02.5 +0.8
SANVU Saraoutou        24.64 117   P      P        12 49 01.8 -1.7
SANVU                              IAmb   IAmb     12 49 05.3
      comp=Z,28nm,0.7s
KAPI  Kappang          24.68 269   LR     LR       12 59 56.7
      comp=Z,98nm,21.8s,baz=94,slow=40
TTSI  Tana Toraja      24.71 273   P      P        12 49 06.1 +2.0
      comp=Z,19nm,0.7s
TTSI                               pP     pP       12 49 12.3 -1.8
      comp=Z,19nm,0.7s
MPSI  Mapaga           25.13 281   P      P        12 49 07.3 -0.6
      comp=Z,11nm,1.5s
WRKA  Warakurna        25.39 216   P      P        12 49 09.9 -0.3
LCRK  Leigh Creek      26.12 192   P      P        12 49 17.5 +0.8
CMSA  Cobar Meteorol   26.54 178   P      P        12 49 22.9 +2.4
STKA  Stephens Creek   27.00 185   P      P        12 49 23.7 -0.9
      comp=Z,1.9nm,0.5s,baz=13,slow=11,SNR=7.5
STKA                               LR     LR       13 01 11.3
      comp=Z,307nm,18.9s,baz=6.7,slow=39
      comp=Z,1.9nm,0.5s
STKA  Stephens Creek   27.00 185   P      P        12 49 22.6 -2.0
STKA  Stephens Creek   27.00 185   P      P        12 49 25.5 +0.9
MULG  Mulgathing       27.13 200   P      P        12 49 26.3 +0.5
DZM   Mont Dzumac      27.25 131   P      P        12 49 26.4 -0.8
      comp=Z,2.9nm,0.7s,baz=297,slow=6.8,SNR=2.1
DZM                                LR     LR       12 58 41.4
      comp=Z,260nm,20.9s,baz=358,slow=33
      comp=Z,2.9nm,0.7s
DZM   Mont Dzumac      27.25 131   P      P        12 49 26.6 -0.6
DZM                                IAmb   IAmb     12 49 49.8
      comp=Z,19nm,1.3s
NAPP  Napperby         28.78 191   P      P        12 49 42.3 +1.8
      comp=Z,17nm,0.7s
HTT   Hallett          28.88 190   P      P        12 49 42.9 +1.4
PSA00 Pilbara Seismi   29.11 233   P      P        12 49 43.7 +0.1
FORT  Forrest          30.07 209   P      P        12 49 50.8 -1.1
FORT                               IAmb   IAmb     12 49 53.2
      comp=Z,20nm,0.9s
FORT  Forrest          30.07 209   P      P        12 49 52.0 +0.1
CAN   Canberra         30.57 173   P      P        12 49 54.4 -2.0
ARPS  Mount Arapiles   31.84 184   P      P        12 50 09.3 +1.8
      comp=Z,17nm,1.0s
JCJ   Chichijima       31.87 356   P      P        12 50 06.7 -1.1
      comp=Z,8.8nm,0.4s,baz=239,slow=19,SNR=5.0
      comp=Z,8.8nm,0.4s
JCJ   Chichijima       31.87 356   P      P        12 50 07.6 -0.2
JOW   Kunigami         35.23 334   LR     LR       13 02 13.5
      comp=Z,96nm,20.4s,baz=50,slow=31
YULB  Yu-li            36.10 322   P      P        12 50 44.1 -0.6
MORW  Morawa           36.14 225   P      P        12 50 43.5 -1.5
MORW  Morawa           36.14 225   P      P        12 50 44.7 -0.3
TPUB  Ta-pu            36.45 321   P      P        12 50 47.4 -0.3
KLBR  Kellerberrin     36.56 220   P      P        12 50 48.3 -0.2
BLDU  Ballidu          36.62 222   P      P        12 50 49.2 +0.1
LEM   Lembang          36.75 265   LR     LR       13 07 52.7
      comp=Z,32nm,21.6s,baz=54,slow=40
NWAO  Narrogin (SRO)   37.77 219   P      P        12 50 58.8  0.0
NWAO  Narrogin (SRO)   37.77 219   P      P        12 50 59.3 +0.5
MUN   Mundaring        37.81 221   P      P        12 50 59.6 +0.5
JHJ   Hachijo jima 2   38.05 354   LR     LR       13 06 26.9
      comp=Z,52nm,20.8s,baz=124,slow=36
QIZ   Qiongzhong       41.60 306   P      P        12 51 33.3 +2.5
QIZ                                S      S        12 57 41.0 -4.0
QIZ                                LR     LR
      comp=Z,230nm,12.7s
QIZ                                LR     LR
      comp=Z,150nm,20.7s
QIZ                                LR     LR
      comp=Z,110nm,12.7s
JMM   Marumori         42.67 356   P      P        12 51 37.8 -1.4
JMM                                IAmb   IAmb     12 51 39.6
      comp=Z,39nm,1.5s
AFI   Afiamalu         43.97 105   P      P        12 51 47.7 -2.6
NJ2   Nanjing          44.11 328  eP      P        12 51 54.3 +3.4
NJ2                                pmax   pmax
      comp=Z,12nm,0.6s
IPM   Ipoh             44.43 281   P      P        12 51 51.1 -2.8
IPM                                IAmb   IAmb     12 51 56.6
      comp=Z,18nm,1.5s
URZ   Urewera          44.52 143   P      P        12 51 54.5 +0.4
      comp=Z,3.9nm,0.5s,baz=256,slow=8.5,SNR=6.2
      comp=Z,3.9nm,0.5s
URZ   Urewera          44.52 143   P      P        12 51 53.3 -0.9
URZ                                IAmb   IAmb     12 52 06.5
      comp=Z,23nm,1.2s
KSRS  Korea Array      44.87 341   P      P        12 51 56.9  0.0
      comp=Z,1.5nm,0.9s,baz=159,slow=9.4,SNR=6.7
KSRS                               LR     LR       13 07 50.5
      comp=Z,90nm,21.7s,baz=145,slow=32
      comp=Z,1.5nm,0.9s
KULM  Kulim            44.96 282   P      P        12 51 57.1 -1.0
KULM                               IAmb   IAmb     12 51 59.9
      comp=Z,6.1nm,0.8s
BSWZ  Blackbirch Sta   45.07 149   P      P        12 51 58.9 +0.3
RPZ   Rata Peaks       45.20 153   P      P        12 52 00.4 +0.8
      comp=Z,14nm,0.8s,baz=343,slow=14,SNR=2.8
      comp=Z,14nm,0.8s
RPSI  Rantau Prapat    46.17 278   P      P        12 52 07.8 +0.2
PSI   Prapat           46.19 279   P      P        12 52 07.8 -0.1
      comp=Z,10nm,0.6s,baz=142,slow=2.0,SNR=13
PSI                                LR     LR       13 17 19.1
      comp=Z,126nm,19.0s,baz=136,slow=44
      comp=Z,10nm,0.6s
GSI   Gunungsitoli     47.30 276   P      P        12 52 16.8 +0.3
CM31  Chiang Mai Arr   50.55 299   P      P        12 52 40.9 -0.5
CM31                               IAmb   IAmb     12 52 44.1
      comp=Z,11nm,1.1s
CMAR  Chiang Mai Arr   50.55 299   P      P        12 52 41.1 -0.3
      comp=Z,6.2nm,0.7s,baz=123,slow=5.8,SNR=28
CMAR                               LR     LR       13 15 34.2
      comp=Z,42nm,18.6s,baz=165,slow=38
      comp=Z,6.2nm,0.7s
CMAR  Chiang Mai Arr   50.55 299   P      P        12 52 42.7 +1.4
CHTO  Chiang Mai       50.69 299          P        12 52 41.9 -0.5
CHTO                               IAmb   IAmb     12 52 45.8
      comp=Z,7.8nm,1.0s
PZH   PanZhiHua        51.84 309   P      P        12 52 54.1 +3.1
PZH                                pmax   pmax
      comp=Z,7.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,100nm,4.7s
HHC   Hu-ho-hao-te     54.60 330  eP      P        12 53 16.0 +4.9
HHC                                pmax   pmax
      comp=Z,41nm,0.9s
HHC                                pmax   pmax
      comp=Z,160nm,5.0s
XLT   XiLinHaoTe       54.90 335  eP      P        12 53 18.3 +5.1
XLT                                pP     sP       12 53 38.3  +10
XLT                                PcP    PcP      12 54 19.1 +4.1
XLT                                pmax   pmax
      comp=Z,11nm,0.9s
XLT                                pmax   pmax
      comp=Z,89nm,4.1s
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KLR   Kul'dur          55.02 350   LR     LR       13 16 32.3
      comp=Z,38nm,18.2s,baz=165,slow=36
LZH   Lanzhou          55.77 320  eP      P        12 53 22.4 +2.7
LZH                                pmax   pmax
      comp=Z,13nm,1.0s
LZH                                LR     LR
      comp=Z,150nm,15.5s
LZH                                LR     LR
      comp=Z,380nm,15.7s
LZH                                LR     LR
      comp=Z,360nm,16.3s
HIA   Hailar           58.08 341   P      P        12 53 35.6  0.0
HIA                                IAmb   IAmb     12 54 01.1
      comp=Z,7.2nm,1.0s
PETK  Petropavlovsk-   58.84   9   LR     LR       13 15 01.8
      comp=Z,52nm,21.6s,baz=205,slow=32
SONM  Songino Array    62.24 332   P      P        12 54 04.2 -0.2
      comp=Z,0.3nm,0.4s,baz=164,slow=6.6,SNR=2.4
      comp=Z,0.3nm,0.4s
SONM  Songino Array    62.24 332   P      P        12 54 05.4 +1.1
SHEM  Shemya Is, Ala   62.62  20   LR     LR       13 15 39.1
      comp=Z,76nm,21.7s,baz=293,slow=30
MA2   Magadan          64.44   4   LR     LR       13 22 12.5
      comp=Z,24nm,19.5s,baz=250,slow=36
PKI   Pulchoki         65.47 303  eP      P        12 54 27.0 +0.8
      comp=Z,6.5nm,0.5s
PKIN  Phulchoki        65.48 303  eP      P        12 54 26.9 +0.7
      comp=Z,7.1nm,0.5s
KKN   Kakani           65.65 303  eP      P        12 54 27.1 -0.2
      comp=Z,30nm,0.8s
DMN   Daman            65.73 303  eP      P        12 54 28.5 +0.6
      comp=Z,18nm,0.5s
GKN   Gorkha           66.26 303  eP      P        12 54 31.8 +0.7
      comp=Z,13nm,0.4s
DANN  Dangsing         67.10 303  eP      P        12 54 37.0 +0.3
WMQ   Urumqi           70.34 320  eP      P        12 54 58.4 +2.1
UNV   Unalaska Valle   71.37  28   P      P        12 55 03.1 +1.0
VNDA  Vanda            73.18 176   P      P        12 55 12.6 -0.1
      comp=Z,1.7nm,0.6s,baz=329,slow=7.4,SNR=16
VNDA                               LR     LR       13 27 15.1
      comp=Z,65nm,18.1s,baz=330,slow=36
      comp=Z,1.7nm,0.6s
VNDA  Vanda            73.18 176   P      P        12 55 12.9 +0.3
SBA   Scott Base       73.86 175   P      P        12 55 18.4 +1.8
MK31  Makanchi Array   75.07 321   P      P        12 55 24.8 +0.5
MKAR  Makanchi Array   75.07 321   P      P        12 55 24.1 -0.1
      comp=Z,2.4nm,0.5s,baz=97,slow=8.3,SNR=22
      comp=Z,2.4nm,0.5s
MKAR  Makanchi Array   75.07 321   P      P        12 55 24.6 +0.4
MAKZ  Makanchi         75.27 321   P      P        12 55 26.1 +0.7
MAKZ                               IAmb   IAmb     12 55 26.1
      comp=Z,4.4nm,0.5s
ZALV  Zalesovo Beam    76.76 328   P      P        12 55 32.9 -0.7
      comp=Z,1.7nm,0.5s,baz=111,slow=5.2,SNR=8.6
      comp=Z,1.7nm,0.5s
ZALV  Zalesovo Beam    76.76 328   P      P        12 55 33.2 -0.4
KDAK  Kodiak Island    80.11  29   P      P        12 55 52.0  0.0
      comp=Z,3.2nm,0.5s,baz=230,slow=0.2,SNR=5.2
KDAK                               LR     LR       13 27 51.1
      comp=Z,53nm,19.6s,baz=261,slow=33
      comp=Z,3.2nm,0.5s
KDAK  Kodiak Island    80.11  29   P      P        12 55 52.1 +0.1
SVW2  Sparrevohn       80.27  25   P      P        12 55 54.4 +1.5
L19K  White Mountain   81.10  24   P      P        12 55 58.8 +1.4
KKAR  Karatay Array    81.75 315   P      P        12 56 01.1 -0.1
K20K  Telida           81.98  24   P      P        12 56 03.2 +1.3
K20K                               IAmb   IAmb     12 56 03.9
      comp=Z,3.9nm,0.7s
MAW   Mawson           82.33 202   P      P        12 56 03.1 -0.5
      comp=Z,2.8nm,0.8s,baz=67,slow=2.8,SNR=5.7
      comp=Z,2.8nm,0.8s
MAW   Mawson           82.33 202   IAmb   IAmb     12 56 04.7
      comp=Z,1.3nm,1.0s
J20K  Nowinta River    82.33  23   P      P        12 56 05.0 +1.2
J20K                               IAmb   IAmb     12 56 05.3
      comp=Z,4.6nm,0.8s
NRIK  Noril'sk         83.47 343   P      P        12 56 09.2 -0.3
      comp=Z,1.2nm,0.3s,baz=116,slow=4.0,SNR=5.4
NRIK                               LR     LR       13 32 24.9
      comp=Z,60nm,20.3s,baz=136,slow=35
      comp=Z,1.2nm,0.3s
NRIK  Noril'sk         83.47 343   P      P        12 56 09.1 -0.5
RND   Reindeer         84.12  25   P      P        12 56 12.8 -0.3
MCK   McKinley         84.21  24   P      P        12 56 12.9 -0.6
MCK                                IAmb   IAmb     12 56 13.8
      comp=Z,11nm,1.0s
BRVK  Borovoye         84.49 324   P      P        12 56 14.9 -0.2
DHY   Denali Highway   84.61  25   P      P        12 56 15.8 +0.2
WRH   Wood River Hil   84.84  24   P      P        12 56 16.1 -0.6
WRH                                IAmb   IAmb     12 56 16.7
      comp=Z,5.4nm,0.7s
CCB   Clear Creek Bu   85.03  24   P      P        12 56 16.6 -1.0
QSPA  South Pole Qui   85.08 180   LR     LR       13 34 45.5
      comp=Z,115nm,18.4s,baz=353,slow=36
COLD  Coldfoot         85.16  21   P      P        12 56 19.1 +0.9
COLD                               IAmb   IAmb     12 56 19.9
      comp=Z,3.1nm,0.8s
HDA   Harding Lake     85.28  24   P      P        12 56 18.1 -0.7
HDA                                IAmb   IAmb     12 56 19.9
      comp=Z,4.4nm,0.6s
IL31                   85.44  24   P      P        12 56 18.4 -1.1
IL31                               IAmb   IAmb     12 56 19.5
      comp=Z,5.8nm,0.7s
ILAR  Eielson Array    85.44  24   P      P        12 56 18.1 -1.5
      comp=Z,5.4nm,0.7s,baz=253,slow=4.9,SNR=56
ILAR                               LR     LR       13 29 03.5
      comp=Z,60nm,20.8s,baz=242,slow=32
      comp=Z,5.4nm,0.7s
ILAR  Eielson Array    85.44  24   P      P        12 56 18.5 -1.1
RIDG  Independent Ri   85.91  25   P      P        12 56 21.6 -0.5
TOLK  Toolik Lake Re   85.96  20   P      P        12 56 22.8 +0.6
TOLK                               IAmb   IAmb     12 56 23.5
      comp=Z,7.3nm,1.2s
J25K  Salcha River,    85.99  24   P      P        12 56 22.3 -0.2
J25K                               IAmb   IAmb     12 56 23.3
      comp=Z,6.5nm,0.8s
DOT   Dot Lake         86.21  25   P      P        12 56 23.9 +0.4
DOT                                IAmb   IAmb     12 56 24.4
      comp=Z,6.6nm,0.8s
L26K  Log Cabin Wild   86.32  26   P      P        12 56 24.6 +0.6
L26K                               IAmb   IAmb     12 56 25.1
      comp=Z,3.7nm,0.7s
M27K  Edge Creek, AK   86.76  27   P      P        12 56 26.6 +0.2
M27K                               IAmb   IAmb     12 56 27.9
      comp=Z,5.9nm,0.8s
EGAK  Eagle            87.76  24   P      P        12 56 31.7 +0.7
EGAK                               IAmb   IAmb     12 56 33.8
      comp=Z,3.2nm,0.8s
DAWY  Dawson           88.31  25   P      P        12 56 33.7  0.0
DAWY                               IAmb   IAmb     12 56 35.3
      comp=Z,4.7nm,0.9s
ABKAR Akbulak array    90.12 319   P      P        12 56 41.0 -1.4
ABKAR Akbulak array    90.12 319   P      P        12 56 41.2 -1.2
ABKAR                              IAmb   IAmb     12 56 43.1
      comp=Z,3.9nm,1.2s
INK   Inuvik           91.52  22   P      P        12 56 47.6 -0.9
      comp=Z,1.4nm,0.7s,baz=270,slow=6.6,SNR=6.0
INK                                LR     LR       13 36 33.3
      comp=Z,64nm,19.1s,baz=236,slow=35
      comp=Z,1.4nm,0.7s
BBB   Bella Bella      92.20  38   LR     LR       13 29 58.9
      comp=Z,48nm,20.6s,baz=300,slow=30
NVAR  Mina Array Bea   98.63  52   LR     LR       13 34 56.7
      comp=Z,52nm,19.6s,baz=271,slow=31
NEW   Newport          99.19  42   LR     LR       13 35 21.4
      comp=Z,31nm,20.5s,baz=332,slow=31
YKA   Yellowknife Ar   99.33  28   P      Pdif     12 57 23.9 -0.3
      comp=Z,0.2nm,0.4s,baz=276,slow=5.1,SNR=7.6
YKA                                LR     LR       13 35 12.1
      comp=Z,37nm,21.9s,baz=329,slow=31
      comp=Z,0.2nm,0.4s
GERES GERESS Array B 119.58 325    PKP    PKPdf    13 02 31.8 -0.5
      comp=Z,0.3nm,0.5s,baz=91,slow=6.8,SNR=3.6
SCHQ  Schefferville   124.14  21   PKP    PKPdf    13 02 40.2 -0.6
      comp=Z,2.8nm,0.6s,baz=271,slow=2.2,SNR=12
PLCA  Paso Flores     124.39 148   PKP    PKPdf    13 02 41.1 -0.7
      comp=Z,1.8nm,0.7s,baz=257,slow=2.2,SNR=11
LPAZ  La Paz          141.46 124   PKhKP  PKPpre   13 03 11.0
      comp=Z,1.5nm,0.5s,baz=310,slow=2.7,SNR=5.6
LPAZ                               PKP    PKPdf    13 03 14.2 -0.9
      comp=Z,1.5nm,0.5s,baz=236,slow=3.1,SNR=4.5
TORD  Torodi Ar. Bea  142.42 285   PKhKP  PKPpre   13 03 10.2
      comp=Z,0.4nm,0.3s,baz=63,slow=3.5,SNR=6.2
TORD                               PKP    PKPdf    13 03 15.3 -0.8
      comp=Z,1.5nm,0.8s,baz=40,slow=2.0,SNR=5.8
TORD                               PP     PP       13 06 20.3 -3.2
      comp=Z,1.8nm,1.1s,baz=127,slow=12,SNR=2.5
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CPUP  Villa Florida   142.44 147   PKP    PKPdf    13 03 15.9 +0.1
      comp=Z,3.4nm,0.8s,baz=231,slow=2.2,SNR=3.8
KIC   Kosan Boka      149.38 274  ePKP1   PKPbc    13 03 31.0 -1.3
      comp=Z,6.4nm,0.5s
DBIC  Dimbokro        149.48 275   PKPbc  PKPbc    13 03 31.8 -0.8
      comp=Z,2.6nm,0.6s,baz=87,slow=3.1,SNR=7.7
TIC   Toumodi         149.65 275  ePKP1   PKPbc    13 03 31.3 -1.7
LIC   Lamto           149.66 274  ePKP1   PKPbc    13 03 31.7 -1.3
      comp=Z,26nm,1.2s
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NIED ***17*** *12:51:14.9, 29°.36N×130°.64E, h27^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.43; M$_{\theta\theta}$0.72; M$_{\phi\phi}$0.70; M$_{r\theta}$5.71; M$_{\theta\phi}$-0.72; M$_{\phi r}$0.72; Fault plane solution: M$_0$5.88000×10^{15} NP1: ϕ_s140.00000°, δ9.00000°, λ-35.00000°. NP2: ϕ_s265.00000°, δ85.00000°, λ-97.00000°.*

JMA ***17*** *12:51:14.9±0.3, 29°.4N±0°.5×130°.6E±0°.7, h27^{km}±3^{km}, MV3.9/26, NEAR AMAMI-OSHIMA ISLAND*

IDC ***17*** *12:51:16.4±1.4, 29°.40N×130°.60E, h49^{km}±14^{km}, mb3.5/13, mbtmp3.8/19, ML3.4/6, MS3.8/13, Error ellipse: s-maj=18.1km s-min=11.0km az=108.0*

NEIC ***17*** *12:51:16.1±2.1, 29°.35N±0°.04×130°.56E±0°.08, h31^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=10.3km s-min=5.1km az=69.0*

ISC 17 12:51:15.7±0.7**, 29°.34N**±0°.03×**130°.69E**±0°.05**, h38**^{km}±2^{km}**, n78,** σ1^{s}**34**/83**, mb4.0**/21**, MS4.0**/10**, Ryukyu Islands**

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Code  Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC        h  m  s    ISC
JNN   Nakanoshima       0.86 305   P      Pn       12 51 29.9 -1.5
JNN                               eS      Sn       12 51 41.5 -1.3
JYAK  Yakushimahirau    0.90 350  eP      Pn       12 51 31.2 -0.7
JYAK                              eS      Sn       12 51 43.3 -0.5
JMTN  Minamitane        1.07  10  eP      Pn       12 51 34.2 +0.1
JKC   Kuchinoerabu      1.19 339   P      Pn       12 51 35.3 -0.6
JKC                               eS      Sn       12 51 50.0 -0.9
JTAJ  Takarajima        1.31 262  eP      Pn       12 51 37.7 +0.2
JAM   Amami Oshima      1.33 226  eP      Pn       12 51 37.8 +0.1
JTN   Tanegashima 3     1.33  11  eP      Pn       12 51 38.2 +0.4
JTN                               eS      Sn       12 51 55.4 +1.1
JAMN  Amaminishikomi    1.72 231  eP      Pn       12 51 43.6 +0.4
JAMN                              eS      Sn       12 52 04.6 +0.7
JTSR  Tashiro 2         1.83   6   P      Pn       12 51 45.5 +0.8
JTSR                              eS      Sn       12 52 07.8 +1.3
JSU   Suzuyama          2.16 355          Pn       12 51 49.4 +0.1
JTK   Tokunoshima       2.18 225  eP      Pn       12 51 50.3 +0.9
JTK                               eS      Sn       12 52 16.3 +1.1
JOKE  Okinoerabujima    2.72 224   P      Pn       12 51 57.0 +0.1
JYRO  Yoronjima         3.04 221  eP      Pn       12 52 01.0 -0.3
JOW   Kunigami          3.29 221   P      Pn       12 52 03.5 -1.2
      5.8nm,0.3s,baz=121,slow=24,SNR=24
JOW                                S      Sn       12 52 44.5 +2.0
      104nm,0.6s,baz=8.3,slow=21,SNR=3.6
      15nm,0.2s
JOW   Kunigami          3.29 221   Pn     Pn       12 52 04.0 -0.7
JOW   Kunigami          3.29 221  eP      Pn       12 52 04.6 -0.1
JOW                               eS      Sn       12 52 42.0 -0.5
JIH   Iheya             3.33 227  eP      Pn       12 52 06.0 +0.9
JKDJ  Kitadaitoujima    3.42 171  eP      Pn       12 52 06.0 -0.6
JKDJ                               S      Sn       12 52 43.9 -2.0
JMZ   Minamidaito 2     3.54 172  eP      Pn       12 52 07.8 -0.4
JMZ                               eS      Sn       12 52 46.1 -2.8
JNTH  Nagotoyohara      3.67 221   P      Pn       12 52 09.9  0.0
JNTH                              eS      Sn       12 52 51.1 -0.9
JNU   Nakatsue          3.77   2   P      Pn       12 52 11.0 -0.3
      5.0nm,0.3s,baz=185,slow=6.2,SNR=12
JNU                                S      Sn       12 52 49.6 -4.8
      88nm,0.9s,baz=207,slow=15,SNR=2.5
      48nm,0.7s
JNU   Nakatsue          3.77   2          Pn       12 52 11.3 -0.1
JKE   Kume jima 2       4.58 230   P      Pn       12 52 21.8 -0.6
JTU   Tsushima          5.28 348   Pn     Pn       12 52 33.6 +1.6
JHS   Saijyo            6.00  19          Pn       12 52 43.4 +1.4
NAWB  Namwon            6.67 336          Pn       12 52 52.4 +1.3
INU   Inuyama           8.03  40          Pn       12 53 11.8 +2.0
INU   Inuyama           8.03  40   x      Pn       12 53 12.1 +2.3
KSRS  Korea Array       8.41 345   P      Pn       12 53 15.8 +0.8
      0.1nm,0.3s,baz=158,slow=14,SNR=2.9
KSRS                               LR     LR       12 56 48.5
      comp=Z,503nm,18.2s,baz=170,slow=40
      0.6nm,0.5s
JHJ   Hachijo jima 2    8.65  62   P      Pn       12 53 19.4 +1.1
      7.9nm,0.3s,baz=270,slow=20,SNR=2.1
JHJ                                LR     LR       12 56 21.5
      comp=Z,121nm,21.8s,baz=336,slow=35
      52nm,0.5s
MAJO  Matsushiro        9.56  39   Pn     Pn       12 53 33.5 +2.7
MJAR  Matsushiro Arr    9.56  39   P      Pn       12 53 31.4 +0.6
      0.1nm,0.3s,baz=210,slow=7.0,SNR=5.3
      1.3nm,0.5s
MJAR  Matsushiro Arr    9.56  39          Pn       12 53 32.1 +1.3
MJB9  Matsu-Tunnel      9.56  39   Pn     Pn       12 53 33.5 +2.7
TPUB  Ta-pu            10.84 239   Pn     Pn       12 53 48.5 +0.1
USRK  Ussuriysk Ar.    14.86   4   LR     LR       13 00 25.0
      comp=Z,141nm,18.3s,baz=173,slow=37
KLR   Kul'dur          19.88   2   P      P        12 55 42.2 -1.3
      0.2nm,0.3s,baz=210,slow=5.0,SNR=6.3
      2.5nm,0.7s
ULN   Ulaanbaatar      25.97 322   P      P        12 56 45.5 +0.7
ULN                                IAmb   IAmb     12 56 48.6
      comp=Z,6.1nm,0.6s
SONM  Songino Array    26.31 321   P      P        12 56 47.0 -0.8
      comp=Z,5.6nm,0.6s,baz=138,slow=9.9,SNR=27
SONM                               LR     LR       13 08 25.5
      comp=Z,191nm,20.6s,baz=124,slow=39
      comp=Z,5.6nm,0.6s
SONM  Songino Array    26.31 321   P      P        12 56 49.1 +1.3
SONM                               IAmb   IAmb     12 56 51.4
      comp=Z,3.6nm,0.7s
SIJI  Sorong           30.05 179   LR     LR       13 07 11.3
      comp=Z,101nm,21.4s,baz=42,slow=32
PEA0B Petropavlovsk-   30.91  32   P      P        12 57 29.4 +0.8
PETK  Petropavlovsk-   30.91  32   P      P        12 57 30.0 +1.4
ZAA0  Zalesovo Array   41.18 320   P      P        12 58 55.8 -0.6
ZALV  Zalesovo Beam    41.18 320   P      P        12 58 54.5 -1.9
      comp=Z,1.3nm,0.7s,baz=112,slow=8.6,SNR=5.1
      comp=Z,1.3nm,0.7s
ZALV  Zalesovo Beam    41.18 320   P      P        12 58 56.5 +0.1
MKAR  Makanchi Array   41.19 309   P      P        12 58 56.2 -0.3
      comp=Z,0.5nm,0.6s,baz=94,slow=9.3,SNR=4.0
      comp=Z,0.5nm,0.6s
MKAR  Makanchi Array   41.19 309   P      P        12 58 56.5  0.0
PMG   Port Moresby     41.67 155   P      P        12 58 59.2 -1.4
      comp=Z,20nm,1.0s,baz=293,slow=11,SNR=2.2
PMG                                LR     LR       13 13 58.7
      comp=Z,64nm,21.6s,baz=288,slow=33
PMG   Port Moresby     41.67 155   P      P        12 59 00.6 -0.1
KURK  Kurchatov        44.15 314   P      P        12 59 20.4  0.0
KURK                               IAmb   IAmb     12 59 24.0
      comp=Z,4.5nm,1.0s
KURBB Kurchatov Arra   44.19 314   LR     LR       13 19 23.5
      comp=Z,225nm,18.4s,baz=71,slow=38
WRA   Warramunga Arr   49.13 175   P      P        12 59 59.6 -0.1
      comp=Z,0.9nm,0.9s,baz=353,slow=8.3,SNR=4.2
      comp=Z,0.9nm,0.9s
WRA   Warramunga Arr   49.13 175   IAmb   IAmb     13 00 05.0
      comp=Z,0.6nm,1.5s
WB2   Warramunga Arr   49.13 175   P      P        13 00 01.0 +1.3
WB2                                IAmb   IAmb     13 00 18.7
      comp=Z,9.3nm,1.2s
WR0   Warramunga Arr   49.16 175   P      P        13 00 01.1 +1.2
WR0                                IAmb   IAmb     13 00 19.1
      comp=Z,8.4nm,1.1s
KK31  Karatay Array    49.46 303   P      P        13 00 03.0 +0.9
KKAR  Karatay Array    49.46 303   P      P        13 00 02.4 +0.3
BRVK  Borovoye         49.53 316   P      P        13 00 01.8 -0.8
BRVK                               IAmb   IAmb     13 00 03.7
      comp=Z,5.9nm,1.2s
ASAR  Alice Springs    52.80 176   P      P        13 00 27.6 +0.4
      comp=Z,0.5nm,0.7s,baz=8.3,slow=13,SNR=7.0
      comp=Z,0.5nm,0.7s
ABKAR Akbulak array    56.15 312   P      P        13 00 50.9 -0.5
ARU   Arti             56.34 321   LR     LR       13 27 03.6
      comp=Z,85nm,18.8s,baz=74,slow=38
AKTO  Aktyubinsk       57.24 313   LR     LR       13 27 38.1
      comp=Z,182nm,18.1s,baz=81,slow=38
J20K  Nowinta River    57.57  30   P      P        13 01 03.4 +2.1
J20K                               IAmb   IAmb     13 01 14.6
      comp=Z,5.2nm,1.0s
MDM   Murphy Dome      60.08  29   P      P        13 01 20.2 +1.6
ILAR  Eielson Array    60.67  29   P      P        13 01 21.8 -0.9
      comp=Z,0.4nm,0.8s,baz=233,slow=5.5,SNR=3.4
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	comp=Z,0.4nm,0.8s						
STKA	Stephens Creek	61.76	169	LR	LR	13 29 52.2	
	comp=Z,66nm,18.9s,baz=219,slow=38						
SCRK	Sand Creek	62.03	30	P	P	13 01 32.2	+0.1
SCRK				IAmb	IAmb	13 01 44.1	
	comp=Z,4.7nm,1.2s						
FINES	FINESS Array B	71.23	331	P	P	13 02 29.2	-1.4
	comp=Z,2.0nm,0.7s,baz=46,slow=6.0,SNR=3.2						
FINES				LR	LR	13 37 04.7	
	comp=Z,98nm,18.3s,baz=47,slow=39						
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	71.23	331	P	P	13 02 31.1	+0.5
AKASG	Malin Array Be	74.58	320	P	P	13 02 49.3	-1.3
	comp=Z,0.4nm,0.4s,baz=67,slow=3.6,SNR=2.1						
AKASG				LR	LR	13 38 43.9	
	comp=Z,88nm,18.8s,baz=30,slow=38						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	74.79	26	P	P	13 02 52.0	+0.4
	comp=Z,0.4nm,0.9s,baz=297,slow=4.8,SNR=3.6						
	comp=Z,0.4nm,0.9s						
BRTR	Keskin Array B	76.84	308	P	P	13 03 01.6	-2.4
	comp=Z,0.9nm,0.7s,baz=76,slow=6.1,SNR=2.5						
	comp=Z,0.9nm,0.7s						
NB2	NORSAR Subarra	77.48	334	P	P	13 03 10.2	+3.2
	comp=Z,1.8nm,0.8s,baz=48,slow=5.6						
NOA	NORSAR Array B	77.48	334	P	P	13 03 05.0	-2.0
	comp=Z,0.3nm,0.6s,baz=49,slow=5.5,SNR=2.9						
	comp=Z,0.3nm,0.6s						
MLR	Muntele Rosu	79.03	316	LR	LR	13 41 23.5	
	comp=Z,101nm,18.1s,baz=78,slow=38						
NVAR	Mina Array Bea	86.79	47	P	P	13 03 57.5	+1.0
	comp=Z,0.9nm,0.9s,baz=309,slow=4.7,SNR=6.0						
	comp=Z,0.9nm,0.9s						
PDAR	Pinedale Array	89.38	40	P	P	13 04 08.5	-0.3
	comp=Z,0.2nm,0.4s,baz=329,slow=3.4,SNR=2.3						
	comp=Z,0.2nm,0.4s						

IDC 17 12:59:20.1±3.9, 5°.05S×152°.67E, h46^{km}±33^{km}, mb3.6/3, mbtmp3.9/4, ML1.6/1, Error ellipse: s-maj=44.8km s-min=14.5km az=105.0

ISC 17 12:59:20.8±1.5, 5°.03S±0°.08×152°.7E±0°.2, h55^{km}, n6, $\sigma 0^{s}.32$/8, mb3.5/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.95	319	P	Pn	12 59 38.0	+0.1
	1μm,0.4s,baz=290,slow=1.6,SNR=270						
KRVT				S	Sn	12 59 50.5	-0.1
	1μm,0.4s,baz=185,slow=22,SNR=12						
PMG	Port Moresby	6.97	231	P	Pn	13 01 00.1	-0.2
	0.7nm,0.3s,baz=5.6,slow=23,SNR=2.2						
PMG				S	Sn	13 02 18.4	+0.2
	22nm,0.5s,baz=172,slow=23,SNR=6.8						
	17nm,0.8s						
WRA	Warramunga Arr	23.18	229	P	P	13 04 22.6	-0.3
	2.6nm,0.5s,baz=54,slow=10,SNR=40						
	2.6nm,0.5s						
ASAR	Alice Springs	25.88	222	P	P	13 04 48.2	+0.6
	0.7nm,0.5s,baz=56,slow=8.8,SNR=20						
	0.7nm,0.5s						
ILAR	Eielson Array	82.43	22	P	P	13 11 36.8	0.0
	0.4nm,0.7s,baz=247,slow=5.9,SNR=5.9						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	150.23	288	PKPbc	PKPbc	13 19 06.7	-0.1
	0.6nm,0.7s,baz=83,slow=2.1,SNR=3.6						

IDC 17 13:03:05.6±2.3, 6°.82S×129°.27E, h0^{km}, mb3.4/1, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=56.7km s-min=34.0km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.49	238	Pn	Pn	13 04 42.1	-0.3
	6.3nm,0.3s,baz=108,slow=7.5,SNR=2.9						
BATI				Sn	Sn	13 05 46.8	-10
	3.3nm,0.3s,baz=106,slow=18,SNR=3.5						
	18nm,0.4s						
WRA	Warramunga Arr	13.94	160	Pn	Pn	13 06 24.4	-0.2
	0.1nm,0.3s,baz=343,slow=13,SNR=2.8						
WRA				Sn	Sn	13 08 43.3	-17
	0.5nm,0.3s,baz=340,slow=22,SNR=11						
	0.2nm,0.3s						
ASAR	Alice Springs	17.33	166	P	Pn	13 07 09.4	+0.3
	0.1nm,0.3s,baz=343,slow=12,SNR=2.9						
ASAR				S	Sn	13 10 04.7	-18
	0.2nm,0.5s,baz=346,slow=25,SNR=2.4						
	0.5nm,1.0s						
MKAR	Makanchi Array	67.68	327	P	P	13 14 04.7	+0.1
	0.3nm,0.7s,baz=120,slow=6.8,SNR=2.0						
	0.3nm,0.7s						

NIED 17 13:32:54.9, 31°.08N×129°.05E, h12^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.39; $M_{\theta\theta}$2.57; $M_{\phi\phi}$-2.18; $M_{r\theta}$-0.60; $M_{\theta\phi}$1.76; $M_{\phi r}$2.39; Fault plane solution: $M_0$3.74000×10^{14} NP1: ϕ_s111.00000°, δ65.00000°, λ-21.00000°. NP2: ϕ_s211.00000°, δ71.00000°, λ-153.00000°.

JMA 17 13:32:54.9±0.3, 31°.1N±0°.5×129°.1E±1°.0, h12^{km}±2^{km}, MV3.8/35, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.83	44	eP	Pg	13 33 10.2	-0.7
JSJ				eS	Sg	13 33 21.2	-0.5
JKC	Kuchinoerabu	1.17	122	eP	Pb	13 33 16.7	-0.3
JKC				eS	Sb	13 33 31.9	-0.2
JSU	Suzuyama	1.28	70	P	Pn	13 33 18.4	-0.3
JSU				eS	Sb	13 33 35.4	-0.1
JNN	Nakanoshima	1.43	150	P	Pn	13 33 20.3	-0.3
JYAK	Yakushimahirau	1.52	123	P	Pn	13 33 21.4	-0.5
JYAK				eS	Sn	13 33 39.3	-2.2
JFU	Fukue jima 2	1.59	351	P	Pn	13 33 23.4	+0.5
JTN	Tanegashima 3	1.72	104	P	Pn	13 33 24.6	-0.1
JMTN	Minamitane	1.74	113	P	Pn	13 33 24.7	-0.2
JMTN				eS	Sn	13 33 45.8	-1.2
JTZ	Takazaki	1.93	64	P	Pn	13 33 28.0	+0.5
JIU3	Izumi3	2.10	45	P	Pn	13 33 30.8	+0.8

KOLA 17 13:35:20.7, 67°.07N×20°.38E, h0^{km}, ML2.2

HEL 17 13:35:22.7±0.0, 67°.18N×20°.66E, h0^{km}, ML2.2, ML2.5(UPP), Confirmed Induced event

IDC 17 13:35:22.5±1.1, 67°.16N×20°.81E, h0^{km}, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=16.7km s-min=8.3km az=111.0

BER 17 13:35:25.4±1.6, 67°.28N×20°.50E, h0^{km}, ML2.0, Confirmed Induced event

ISC 17 13:35:21.6±0.8, 67°.18N±0°.02×20°.67E±0°.03, h0^{km}, n32, $\sigma 0^{s}.92$/47, 1D, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	214	i P	Pg	13 35 23.9	+0.9
DUNU				i S	Sg	13 35 24.9	+1.1
MASU	Masugnsbyn	0.58	61	i P	Pg	13 35 33.5	+0.7
MASU				i S	Sg	13 35 41.4	+1.1
RATU	Laukkuluspa	0.77	328	i P	Pg	13 35 36.4	+0.2
KUA	Kurravaara	0.79	351	i P	Pg	13 35 36.7	+0.1
SALU	Saltoluokta	0.86	284	⇓iP	Pg	13 35 38.3	+0.2
SALU	Saltoluokta	0.86	284	i P	Pg	13 35 38.3	+0.2
ERTU	Ertsjaerv	0.87	136	eP	Pg	13 35 38.2	0.0
ERTU				eS	Sg	13 35 49.4	-0.1
NIKU	Nikkaluokta	0.93	318	eP	Pg	13 35 39.4	0.0
PAJU	Pajala	0.97	98	eP	Pg	13 35 40.0	0.0
PAJU				eS	Sg	13 35 53.3	+0.7
LANU	Lannavaara	1.01	29	eP	Pg	13 35 40.8	-0.1
LANU				eS	Sg	13 35 53.9	+0.1
HARU	Harads	1.03	173	eP	Pg	13 35 41.0	-0.2
KOVU	Salmi	1.06	350	eP	Pg	13 35 41.7	-0.2
KLF	Kolari	1.28	86	eP	Pg	13 35 45.7	-0.4
KLF				eS	Sg	13 36 03.0	+0.3
HEF	Hetta	1.68	41	eP	Pn	13 35 52.3	+0.1
HEF	Hetta	1.68	41	eP	Pn	13 35 52.4	+0.3
HEF				eS	Sn	13 36 14.2	-0.1
KALU	Kalix	1.71	140	eP	Pn	13 35 53.1	+0.6
KALU				eS	Sn	13 36 15.7	+0.7
SJUU	Sjulsmark	1.72	167	eP	Pn	13 35 53.2	+0.5
TOF	Tornio	1.83	126	eP	Pn	13 35 55.2	+1.0
TOF				eS	Sn	13 36 18.6	+0.6
TOF				MSG		13 36 21.2	
	comp=Z,20nm,0.2s						
KIF	Kilpisjarvi	1.83	1	eP	Pb	13 35 55.5	-0.4
KIF	Kilpisjarvi	1.83	1	eP	Pb	13 35 55.7	-0.2
KIF				eSG	Sg	13 36 21.1	+0.7
KTK1	Kautokeino	2.08	26	eP	Pb	13 35 59.2	-0.8
KTK1				eS	Sn	13 36 23.7	-0.4
KTK1				IAML		13 36 30.0	
	comp=Z,22nm,0.5s						
FAUS	Fauske	2.10	278	eP	Pn	13 35 59.0	+1.1
FAUS				IAML		13 36 32.0	
	comp=Z,34nm,0.5s						
RNF	Rovaniemi	2.18	103	MSG		13 36 31.9	
	comp=Z,11nm,0.2s						
MOR8	Moi Rana	2.68	251	eP	Pn	13 36 06.1	+0.2
MOR8				IAML		13 36 41.9	
	comp=Z,18nm,0.6s						
ARCES	ARCESS Array B	2.96	35	Pn	Pn	13 36 10.9	+1.0
	comp=Z,0.3nm,0.3s,baz=215,slow=14,SNR=40						
ARCES				Sn	Sn	13 36 46.7	+0.6
	comp=Z,1.1nm,0.3s,baz=219,slow=20,SNR=16						
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	2.96	35	P	Pn	13 36 11.2	+1.3
ARCES				S	Sn	13 36 48.2	+2.1
ARA0	ARCESS Array S	2.97	35	eP	Pn	13 36 11.1	+1.2
ARA0				IAML		13 37 03.3	
	comp=Z,5.3nm,0.4s						
OUL	Oulu	2.99	132	MSG		13 37 03.4	
	comp=Z,5.9nm,0.2s						
APA0	Apatity Array	4.77	79	P	Pn	13 36 35.2	+0.6
APA0				S	Sn	13 37 29.9	-0.7
PRVG	Vayda Guba	4.96	54	P	Pn	13 36 35.5	-1.6
PRVG				S	Sn	13 37 34.4	-0.7
FINES	FINESS Array B	6.22	155	Pn	Pn	13 36 55.9	+1.4
	comp=Z,0.2nm,0.3s,baz=346,slow=14,SNR=5.8						
FINES				Sn	Sn	13 38 04.3	-1.9
	comp=Z,0.3nm,0.3s,baz=346,slow=27,SNR=2.2						
FINES				Lg	Lg	13 38 36.2	
	comp=Z,0.5nm,0.3s,baz=339,slow=30,SNR=8.0						
	comp=Z,1.3nm,0.6s						
NOA	NORSAR Array B	7.42	218	Pn	Pn	13 37 11.4	+0.5
	baz=38,slow=13,SNR=2.0						
NOA				Sn	Sn	13 38 32.7	-3.0
	baz=44,slow=21,SNR=1.9						
NOA				Lg	Lg	13 39 12.6	
	baz=139,slow=24,SNR=4.6						
	comp=Z,0.3nm,0.7s						

IDC 17 13:39:57.0±13.0, 31°.05S×179°.97W, h250^{km}±144^{km}, mb3.3/3, mbtmp3.9/4, MS3.3/1, Error ellipse: s-maj=157.4km s-min=42.6km az=178.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.58	198	P	Pn	13 41 44.3	-0.5
	3.4nm,0.3s,baz=0.0,slow=18,SNR=2.1						
URZ				S	S	13 43 01.5	-10
	12nm,0.5s,baz=238,slow=23,SNR=11						
STKA	Stephens Creek	32.68	258	P	P	13 46 06.4	+0.4
	0.7nm,0.4s,baz=102,slow=16,SNR=5.3						
	0.7nm,0.4s						
ASAR	Alice Springs	41.38	269	P	P	13 47 18.7	-0.5
	0.7nm,0.5s,baz=107,slow=7.2,SNR=23						
	0.7nm,0.5s						
WRA	Warramunga Arr	42.43	274	P	P	13 47 27.6	-0.1
	0.7nm,0.3s,baz=112,slow=7.7,SNR=25						
	0.7nm,0.3s						
GUMO	Guam	55.78	317	LR	LR	14 09 26.8	
	comp=Z,32nm,22.0s,baz=260,slow=32						
FINES	FINESS Array B	145.15	338	PKPbc	PKPdf	13 59 03.4	-0.5
	3.3nm,1.1s,baz=23,slow=4.5,SNR=4.9						

TUL 17 13:44:35.3±1.1, 36°.071N±0°.008×97°.37W±0°.01, h6^{km}±7^{km}, ML2.8, mb_Lg2.6/49(NEIC), Error ellipse: s-maj=1.5km s-min=0.9km az=125.0

NEIC 17 13:44:35.0±0.7, 36°.09N±0°.01×97°.38W±0°.01, h7^{km}±7^{km}, Error ellipse: s-maj=2.1km s-min=1.6km az=200.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.67	185	Pg	Pg	13 44 47.9	-0.1
FNO	Franklin	0.83	181		Pg	13 44 50.6	-0.3
T35A	Sooner Cattle	1.08	40		Pg	13 44 55.6	-0.3
TUL1	Leonard	1.30	97		Pn	13 44 58.5	-1.1
TUL1				IAmb_Lg		13 45 18.1	
	comp=Z,31nm,0.8s						
U32A	Winter Ranch,	1.34	283		Pn	13 44 59.9	-0.3
X34A	Smith Ranch, M	1.53	194	Pn	Pb	13 45 03.2	-0.4
WMOK	Wichita Mounta	1.77	221		Pn	13 45 06.3	+0.3
X37A	Clayton	2.22	132	Pn	Pn	13 45 12.1	-0.1
HHAR	Hobbs	2.79	85	Pn	Pn	13 45 20.3	+0.2
KSU1	Kansas State U	3.07	11	IAmb_Lg		13 46 15.8	
	comp=Z,25nm,0.7s						
Z38A	Mt. Pleasant	3.44	144	IAmb_Lg		13 46 32.7	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.63	63	Pn	Pn	13 45 32.6	+1.0
U40A	Yellville	3.67	84	Pn	Pn	13 45 32.6	+0.4
U40A				IAmb_Lg		13 46 37.1	
	comp=Z,12nm,0.7s						
AMTX	Amarillo	3.71	252	Pn	Pn	13 45 33.3	+0.5
ABTX	Abilene, Hawle	3.93	209	IAmb_Lg		13 46 44.8	
	comp=Z,11nm,0.7s						
X40A	Basin Creek Fa	4.05	112	Pn	Pn	13 45 38.1	+0.8
X40A				IAmb_Lg		13 46 48.6	
	comp=Z,18nm,0.8s						
WHAR	Wooly Hollow	4.22	99	IAmb_Lg		13 46 56.5	
	comp=Z,16nm,1.0s						
MGMO	Mountain Grove	4.25	74	IAmb_Lg		13 46 52.0	
	comp=Z,14nm,0.7s						
FCAR	Ozark Folk Cen	4.27	91	IAmb_Lg		13 46 51.9	
	comp=Z,10nm,0.8s						
W41B	Gary Mavity, V	4.28	101	IAmb_Lg		13 46 51.1	
	comp=Z,13nm,1.0s						
UALR	University of	4.32	106	IAmb_Lg		13 46 54.9	
	comp=Z,14nm,0.7s						
R40A	Maddies Statio	4.64	60	IAmb_Lg		13 47 05.4	
	comp=Z,8.5nm,0.8s						
P38A	Dawn	4.66	40	IAmb_Lg		13 47 12.0	
	comp=Z,10nm,0.7s						
LCAR	Lake Charles	5.04	88	IAmb_Lg		13 47 17.9	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	5.29	66	IAmb_Lg		13 47 22.8	
	comp=Z,7.0nm,0.7s						
P40A	Paris	5.44	49	IAmb_Lg		13 47 35.5	
	comp=Z,10nm,0.8s						
PBMO	Poplar Bluff	5.65	81	IAmb_Lg		13 47 38.1	
	comp=Z,14nm,1.0s						
N38A	Joes South For	5.72	33	IAmb_Lg		13 47 40.7	
	comp=Z,14nm,0.8s						
T25A	Trinidad	5.75	283	IAmb_Lg		13 47 46.7	
	comp=Z,12nm,1.0s						
FVM	French Village	5.88	69	IAmb_Lg		13 47 47.2	
	comp=Z,8.3nm,0.9s						
Q24A	Divide	6.81	297	IAmb_Lg		13 48 23.6	
	comp=Z,6.1nm,0.7s						
ECSD	EROS Data Cent	7.66	4	IAmb_Lg		13 48 37.2	
	comp=Z,4.6nm,0.9s						

BJI 17 13:58:12.7±0.0, 5°.47N×126°.23E, h122^{km}, mb4.7/56, mB4.8/27

MAN 17 13:58:18.6, 6°.07N×126°.24E, h131^{km}, mb5.5, ML4.4, MS4.7, Hypocentre not reviewed by the ISC

DJA 17 13:58:19.5±0.3, 6°N±2°×12°6E±°, h125^{km}±2^{km}, M4.9/68, mB5.3/34, mb5.2/68, MLv5.5/11, Mw(mB)4.8/34, MwMwp6.3/1, Mwp6.3/1

GCMT 17 13:58:19.9±0.4, 6°.05N±0°.03×126°.22E±0°.03, h150^{km}±4^{km}, MW4.8/70, Moment Tensor Solution. s10,c11; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.33±.10; $M_{\theta\theta}$0.62±.10; $M_{\phi\phi}$-1.95±.12; $M_{r\theta}$-1.02±.07; $M_{\theta\phi}$-1.34±.13; $M_{\phi r}$-0.41±.10; Best double couple: $M_0$2.39700×10^{16} NP1: ϕ_s348.00000°, δ48.00000°, λ33.00000°. NP2: ϕ_s235.00000°, δ67.00000°, λ133.00000°. Principal axes: T 2.1170, Plg49.0000°, Azm192.0000°; N 0.5650, Plg38.0000°, Azm35.0000°; P -2.6770, Plg11.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC 17 13:58:19.7±0.5, 5°.98N×126°.04E, h130^{km}±4^{km}, mb4.3/29, mbtmp4.7/32, MS3.2/16 Error ellipse: s-maj=13.8km s-min=6.8km az=75.0

NEIC 17 13:58:19.9±1.5, 6°.03N±0°.06×126°.08E±0°.09, h130^{km}±1^{km}, mb4.7/156, Error ellipse: s-maj=13.2km s-min=8.0km az=77.0

ISC 17 13:58:19.7±0.5, 6°.01N±0°.03×126°.16E±0°.04, h132^{km}±4^{km}, n397, $\sigma 1^{s}.18$/420, mb4.7/115, 56C-50D, Fault plane solution: NP1: ϕ_s320.71677°, δ58.88088°, λ8.26634°. NP2: ϕ_s226.42271°, δ82.92983°, λ148.61548°. Principal axes: T Plg26.9029°, Azm179.0254°; N Plg57.9084°, Azm35.0154°; P Plg16.1655°, Azm277.4831°; Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.45	282	⇓eP	Pn	13 58 37.9	-0.9
DDMP				eS	Sn	13 58 51.7	-1.6
MATI	Mati	0.94	6	⇓eP	Pn	13 58 41.2	-1.1
MATI				eS	Sn	13 58 58.9	-0.6
DAV	Davao City (W)	1.20	331	P	Pn	13 58 45.1	+0.3
	5μm,0.5s,baz=194,slow=4.5,SNR=129						
DAV				S	Sn	13 59 03.0	-0.9
	26μm,0.8s,baz=91,slow=6.2,SNR=32						
GSPH	General Santos	1.20	274	⇓eP	Pn	13 58 43.5	-1.5
GSPH				i S	Sn	13 59 02.3	-1.8
KCP	Kidapawan	1.45	313	⇓iP	Pn	13 58 47.7	+0.2
KCP				i S	Sn	13 59 09.2	+0.4
BIPH	Bislig	2.17	5	⇑eP	Pn	13 58 54.4	-1.6
BIPH				i S	Sn	13 59 21.0	-2.7
CTBH	Cotabato--PC H	2.25	302	⇓iP	Pn	13 58 56.5	-0.4
CTBH				i S	Sn	13 59 26.7	+1.4
SGSI	Sangihe	2.39	195	P	Pn	13 58 59.5	+0.8
SGSI				S	Sn	13 59 28.7	0.0
BUTP	Butuan	2.99	350	⇓eP	Pn	13 59 06.5	+0.2
BUTP				eS	Sn	13 59 45.7	+3.5
PAGZ	Pagadian	3.30	304	⇓eP	Pn	13 59 10.7	+0.3
GLSP	General Luna,	3.75	360	⇓eP	Pn	13 59 16.0	-0.3
GLSP				eS	Sn	13 59 58.6	-1.5
DCPH	Dipolog City	3.78	313	⇓eP	Pn	13 59 18.5	+1.9
SCPH	Surigao	3.81	350	eP	Pn	13 59 16.9	-0.1
ZCP	Zamboanga City	4.16	283	⇓iP	Pn	13 59 22.0	+0.3
ZCP				i S	Sn	14 00 09.7	0.0
MSLP	Maasin	4.29	343	⇑eP	Pn	13 59 22.7	-0.8
TBP	Tagbilaran	4.31	328	⇑iP	Pn	13 59 23.4	-0.2
TBP				i S	Sn	14 00 12.9	-0.4
SNPH	Sibulan	4.40	319	⇓eP	Pn	13 59 25.7	+0.8
SNPH				eS	Sn	14 00 01.8	-14
LLP	Lapu-Lapu	4.80	333	⇓eP	Pn	13 59 30.1	0.0
LLP				eS	Sn	14 00 25.7	+0.7
CNOP	Candoni, Negro	5.15	318	⇓eP	Pn	13 59 35.9	+1.0
TNTI	Ternate	5.34	167	Pn	Pn	13 59 36.5	-1.0
TNTI	Ternate	5.34	167	P	Pn	13 59 36.2	-1.3
	3.9nm5μm451nm,0.9s						
GUIM	Jordan	5.79	323	⇓eP	Pn	13 59 43.0	-0.5
KMSI	Cibinong	5.82	202	P	Pn	13 59 44.9	+1.0
	2.6nm7μm853nm,0.6s						
GTOI	Gorontalo	6.19	211	P	Pn	13 59 48.6	-0.3
	1.3nm3μm360nm,0.8s						
RCP	Roxas	6.46	329	⇑eP	Pn	13 59 53.7	+1.2
LBMI	Labuha	6.74	168	P	Pn	13 59 55.5	-0.8
	3.1nm3μm202nm,0.6s						
MRSI	Marisa	6.92	218	P	Pn	14 00 00.1	+1.4
	1.4nm4μm392nm,0.6s						
CUYO	Cuyo Island	7.00	314	⇓eP	Pn	13 59 59.7	-0.1
TOLI2	Tolitoli	7.24	228	Pn	Pn	14 00 02.5	-0.5
TOLI2	Tolitoli	7.24	228	P	Pn	14 00 03.7	+0.7
MYLDM	Lahad Datu	7.66	264	Pn	Pn	14 00 10.9	+2.2
LUWI	Luwuk	7.78	206	Pn	Pn	14 00 11.9	+1.7
LUWI	Luwuk	7.78	206	P	Pn	14 00 12.3	+2.1
	1.8nm5μm567nm,0.9s						
PVCP	Virac	7.79	345	⇓eP	Pn	14 00 13.1	+2.7
SANI	Sanana	8.01	181	P	Pn	14 00 10.0	-3.4
	2.8nm11μm791nm,0.7s						
APSI	Ampana	8.22	213	P	Pn	14 00 18.2	+2.0
	2μm170nm,0.8s						
MPSI	Mapaga	8.41	228	P	Pn	14 00 20.6	+1.8
	864nm30nm,0.8s						
SWI	Sorong	8.52	143	P	Pn	14 00 18.6	-1.6
	2μm117nm,0.6s						
SIJI	Sorong	8.53	143	P	Pn	14 00 19.2	-1.1
	76nm,0.5s,baz=336,slow=10.0,SNR=43						
SIJI				S	Sn	14 01 49.8	-5.3
	36nm,0.5s,baz=206,slow=22,SNR=9.9						
BATP	Bataraza	8.73	289	⇓eP	Pn	14 00 23.7	+0.6
TGY	Tagaytay City	9.54	328	P	Pn	14 00 33.8	-0.2
	141nm,0.3s,baz=113,slow=7.7,SNR=4.7						
LUBP	Lubang	9.63	323	⇓eP	Pn	14 00 36.9	+1.8
AAI	Ambon	9.85	168	P	Pn	14 00 35.8	-2.2
	2μm121nm,0.8s						
TTSI	Tana Toraja	11.00	215	P	Pn	14 00 55.9	+2.5
	4μm309nm,1.2s						
SMPP	San Manuel, Pa	11.42	332	⇓eP	P	14 01 08.6	+1.2
SPSI	Sidrap Palu	11.78	213	P	Pn	14 01 05.0	+1.2
	916nm84nm,0.6s						
BBSI	Bau Bau	11.97	197	P	Pn	14 01 07.1	+0.9
	130nm13nm,0.9s						
BNSI	Bone	11.98	210	P	Pn	14 01 07.5	+1.2
	2μm192nm,0.9s						
BAKI	Biak	12.24	125	P	Pn	14 01 08.4	-1.4
	160nm,0.8s						
KAPI	Kappang	12.68	210	P	Pn	14 01 16.0	+0.5
	47nm,0.6s,baz=18,slow=5.9,SNR=16						
KAPI	Kappang	12.68	210	Pn	Pn	14 01 15.7	+0.2
KAPI	Kappang	12.68	210	P	Pn	14 01 16.6	+1.1
APYP	Conner	12.72	338	⇓eP	Pn	14 01 17.1	+1.1
SRPI	Serui, Papua	12.75	128	P	Pn	14 01 17.3	+0.8
	170nm,0.9s						
BKSI	Bulukumba	12.77	208	P	Pn	14 01 16.1	-0.5
	803nm60nm,0.9s						
MTKI	Muara Teweh, K	13.19	239	P	Pn	14 01 24.7	+2.5
SBUM	Sibu	14.34	256		Pn	14 01 38.9	+2.1
BBKI	Banjar Baru	14.70	230	P	P	14 01 44.0	0.0
	3μm110nm,1.2s						
SAUI	Saumlaki	14.82	160	P	P	14 01 46.0	+0.8
MMRI	Maumere	15.06	195	Pn	Pn	14 01 46.0	+0.1
MMRI	Maumere	15.06	195	P	P	14 01 48.7	+0.7
	3μm205nm,0.7s						
MMRI	Maumere	15.06	195	P	Pn	14 01 46.8	+0.9
EDFI	Ende, Flores	15.32	197	P	Pn	14 01 47.8	-1.4
	78nm,0.7s						
SOEI	Soe	15.77	187		P	14 01 55.7	-0.2
SOEI	Soe	15.77	187	P	P	14 01 56.4	+0.4
	2μm304nm,0.8s						
SOEI	Soe	15.77	187	P	P	14 01 55.8	-0.2
STKI	Sintang	15.80	249	P	P	14 02 06.1	+10
BATI	Baumata	16.30	189	P	P	14 02 02.5	+0.8
	407nm,0.6s,baz=354,slow=1.7,SNR=32						
BATI				S	S	14 05 06.4	+2.2
	36nm,0.9s,baz=94,slow=14,SNR=2.1						
BATI	Baumata	16.30	189	P	P	14 02 02.3	+0.6
	2μm319nm,0.6s						
KSM	Kuching	16.44	255		Pn	14 02 02.6	-0.3
KSM	Kuching	16.44	255	P	P	14 02 05.5	+2.2
PBKI	Pangkalan Bun	16.86	239	P	Pn	14 02 09.7	+1.7
	216nm,0.8s						
PLAI	Plampang	16.94	210	P	Pn	14 02 09.7	+0.7
	2μm281nm,0.9s						
PLAI	Plampang	16.94	210	P	Pn	14 02 09.7	+0.7
WBSI	Waikabubak, Su	16.95	203	P	Pn	14 02 09.6	+0.5
	166nm,0.7s						
TWG	Pinlang	17.42	344	P	P	14 02 12.2	-1.7
SRBI	Singaraja	17.75	218	P	P	14 02 17.6	-0.1
	98nm,0.8s						
KMMI	Kalianget	17.78	223	P	Pn	14 02 19.4	+0.3
	146nm,0.8s						
YULB	Yu-li	17.91	345	P	P	14 02 17.4	-1.9
YULB				IAmb	IAmb	14 02 37.9	
	comp=Z,18nm,0.6s						
TPUB	Ta-pu	18.00	343	P	P	14 02 18.5	-1.8
TPUB				IAmb	IAmb	14 02 39.5	
	comp=Z,128nm,1.5s						
ABJI	Asem Bagus	18.15	221	P	Pn	14 02 23.8	+0.3
	comp=Z,64nm,1.0s						
IGBI	Denpasar	18.37	217	P	P	14 02 23.7	-0.7
	comp=Z,4μmcomp=Z,204nm,0.6s						
SSLB	Suanglung	18.37	345	P	P	14 02 22.9	-1.5
SSLB				IAmb	IAmb	14 02 25.2	
	comp=Z,25nm,0.8s						
BLJI	Banyuglugur	18.54	223	P	P	14 02 27.9	+1.6
	comp=Z,78nm,0.6s						
NACB	Ninganchiao	18.59	347	P	P	14 02 25.7	-1.0
NACB				IAmb	IAmb	14 02 28.7	
	comp=Z,22nm,0.8s						
JAGI	Jajag, Banyuwa	18.71	220		P	14 02 28.1	-0.1
JAGI	Jajag, Banyuwa	18.71	220	P	Pn	14 02 30.2	+0.1
	comp=Z,97nm,0.4s						

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JAGI  Jajag, Banyuwa 18.71 220  P       P       14 02 29.7 +1.5
GRJI  Gresik         18.74 227  P       Pn      14 02 31.0 +0.6
      comp=Z,2µmcomp=Z,118nm,0.6s
GMJI  Gumukmas       19.03 222  P       P       14 02 33.1 +1.5
      comp=Z,76nm,1.1s
YHNB  Yeheng         19.11 347  P       P       14 02 32.3 -0.2
YHNB                            IAmb    IAmb    14 02 40.2
      comp=Z,48nm,1.2s
MTN   Manton Dam     19.37 165  P       P       14 02 36.1 +0.8
      baz=20,SNR=78
MTN   Manton Dam     19.37 165  P       P       14 02 35.0 -0.4
MTN   Manton Dam     19.37 165  P       P       14 02 36.4 +1.1
UWJI  Ujung Watu     19.57 231  P       P       14 02 39.5 +2.0
      comp=Z,121nm,0.6s
KNMB  Chin-men Tao   19.81 339  P       P       14 02 40.4 +0.5
HKPS  Hong Kong Po S 19.91 326  P       P       14 02 40.4 -0.7
HKPS                            IAmb    IAmb    14 02 46.9
      comp=Z,54nm,1.0s
PWJI  Pagerwojo      19.98 226  P       P       14 02 43.1 +1.2
      comp=Z,69nm,0.8s
TPI   Tanjungpandan  20.43 245  P       P       14 02 47.6 +0.9
      comp=Z,507nmcomp=Z,41nm,0.7s
QIZ   Qiongzhong     20.49 311  P       P       14 02 47.0 -0.3
QIZ                             IAmb    IAmb    14 02 49.9
      comp=Z,31nm,0.8s
QIZ   Qiongzhong     20.49 311  P       P       14 02 48.5 +1.1
QIZ                             S       S       14 06 25.4 -4.3
QIZ                             pmax    pmax
      comp=Z,36nm,0.9s
WOJI  Wonogiri, Jawa 20.50 228  P       P       14 02 48.0 +0.5
      comp=Z,41nm,0.8s
JOW   Kunigami       20.81   5  P       Pn      14 02 52.8 -1.8
      comp=Z,20nm,0.7s,baz=214,slow=10,SNR=5.6
      comp=Z,20nm,0.7s
JOW   Kunigami       20.81   5  P       P       14 02 51.4 +0.7
JOW                             IAmb    IAmb    14 03 02.0
      comp=Z,62nm,1.4s
UGM   Wanagama       20.84 229  P       P       14 02 51.0 -0.3
KNRA  Kununurra      21.70 173  P       P       14 03 00.6 +0.3
      baz=22,SNR=85
KNRA  Kununurra      21.70 173  P       P       14 03 00.6 +0.3
KNRA  Kununurra      21.70 173  P       P       14 03 01.0 +0.7
KPJI  Karang Pucung  21.70 233  P       P       14 03 00.3 -0.1
      comp=Z,89nm,0.7s
LEM   Lembang        22.47 236  P       P       14 03 08.5 +0.1
      comp=Z,129nm,0.9s,baz=49,slow=11,SNR=22
      comp=Z,129nm,0.9s
DSRI  Dabo           22.48 254  P       P       14 03 09.5 +1.1
      comp=Z,22nm,0.9s
MYKOM Kota Tinggi    22.64 260  P       P       14 03 10.7 +0.8
MYKOM                           IAmb    IAmb    14 03 12.6
      comp=Z,20nm,0.7s
CBJI  Citeko         22.89 238  P       P       14 03 14.5 +2.3
      comp=Z,7µmcomp=Z,161nm,0.8s
DBJI  Dramaga        23.04 238  P       P       14 03 15.2 +1.5
      comp=Z,74nm,0.7s
KLI   Kotabumi       23.85 244  P       P       14 03 23.8 +2.7
      comp=Z,6µmcomp=Z,156nm,0.8s
KULM  Kulim          25.39 270  P       P       14 03 35.6 +0.5
JSU   Suzuyama       25.68   8  P       P       14 03 37.6  0.0
JSU                             IAmb    IAmb    14 03 43.1
      comp=Z,37nm,1.3s
JCJ   Chichijima     25.93  34  P       P       14 03 37.5 -2.4
      comp=Z,15nm,0.4s,baz=119,slow=22,SNR=6.0
JCJ                             LR      LR      14 14 14.6
      comp=Z,21nm,20.6s,baz=137,slow=37
JCJ   Chichijima     25.93  34  P       P       14 03 37.8 -2.0
PMG   Port Moresby   25.93 126  P       P       14 03 39.7 -0.2
      comp=Z,21nm,0.8s,baz=126,slow=7.9,SNR=3.6
      comp=Z,21nm,0.8s
PMG   Port Moresby   25.93 126  P       P       14 03 39.9 -0.1
PMG                             IAmb    IAmb    14 03 40.6
      comp=Z,35nm,1.1s
COEN  Coen           26.05 140  P       P       14 03 39.7 -1.3
      baz=26,SNR=17
COEN  Coen           26.05 140  P       P       14 03 40.9 -0.1
COEN                            IAmb    IAmb    14 03 43.0
      comp=Z,15nm,0.8s
NJ2   Nanjing        26.79 346 ⇑P       P       14 03 51.8 +4.4
NJ2                             pmax    pmax
      comp=Z,16nm,0.5s
WB0   Warramunga Arr 26.87 163  P       P       14 03 47.8 -0.4
WRAB  Tennant Creek  27.01 163  P       P       14 03 48.5 -1.0
WRAB                            IAmb    IAmb    14 04 13.8
      comp=Z,23nm,0.8s
WRAB  Tennant Creek  27.01 163  P       P       14 03 49.6  0.0
WRA   Warramunga Arr 27.02 163  P       P       14 03 49.0 -0.6
      comp=Z,8.5nm,0.5s,baz=340,slow=10,SNR=109
WRA                             S       S       14 08 13.8 -3.8
      comp=Z,1.0nm,0.6s,baz=337,slow=15,SNR=2.7
WRA                             ScP     ScP     14 10 36.0 -0.1
      comp=Z,1.4nm,0.5s,baz=348,slow=3.0,SNR=5.6
      comp=Z,8.5nm,0.5s
WRA   Warramunga Arr 27.02 163  P       P       14 03 48.0 -1.6
WB2   Warramunga Arr 27.02 163  P       P       14 03 49.1 -0.5
WR0   Warramunga Arr 27.09 162  P       P       14 03 49.4 -0.9
WR0                             IAmb    IAmb    14 03 55.5
      comp=Z,21nm,0.9s
PSI   Prapat         27.33 264  P       P       14 03 53.3 +0.6
      comp=Z,5.7nm,0.7s,baz=84,slow=6.9,SNR=7.1
PSI                             PcP     PcP     14 07 09.1 +0.1
      comp=Z,2.9nm,0.3s,baz=94,slow=2.4,SNR=4.4
PSI                             LR      LR      14 14 57.9
      comp=Z,126nm,19.9s,baz=95,slow=37
      comp=Z,5.7nm,0.7s
RPSI  Rantau Prapat  27.35 264          PcP     14 07 09.1 +0.2
MBWA  Marble Bar     27.73 193  P       P       14 03 55.5 -0.4
MBWA  Marble Bar     27.73 193  P       P       14 03 56.0 +0.1
SISI  Saibi          27.99 256  P       P       14 03 59.8 +1.4
      comp=Z,56nm,0.5s
PSA00 Pilbara Seismi 28.10 193  P       P       14 03 58.4 -0.8
PSA00                                   PcP     14 07 10.4 -0.1
PSA00 Pilbara Seismi 28.10 193  P       P       14 03 59.1 -0.1
PSA00                           IAmb    IAmb    14 04 00.1
      comp=Z,88nm,0.7s
PSA00 Pilbara Seismi 28.10 193  P       P       14 03 59.5 +0.3
GSI   Gunungsitoli   28.89 262  P       P       14 04 04.9 -1.5
CMAR  Chiang Mai Arr 29.27 297  P       P       14 04 07.4 -2.4
      comp=Z,2.6nm,0.7s,baz=116,slow=8.5,SNR=12
CMAR                            PcP     PcP     14 07 14.4 +0.9
      comp=Z,2.0nm,0.8s,baz=123,slow=0.8,SNR=7.0
CMAR                            ScP     ScP     14 10 45.0 +1.8
      comp=Z,11nm,0.9s,baz=121,slow=1.4,SNR=40
CMAR                            LR      LR      14 16 27.6
      comp=Z,42nm,18.1s,baz=280,slow=37
      comp=Z,2.6nm,0.7s
CMAR  Chiang Mai Arr 29.27 297  P       P       14 04 06.2 -3.5
NAWB  Namwon         29.29   2  P       P       14 04 10.2 +0.5
NAWB                            IAmb    IAmb    14 04 12.1
      comp=Z,23nm,1.1s
KMI   Kunming        29.40 313 ⇑P       P       14 04 11.9 +0.9
KMI                             pmax    pmax
      comp=Z,16nm,0.6s
CHTO  Chiang Mai     29.41 298  P       P       14 04 09.7 -1.2
QIS   Mount Isa      29.52 154  P       P       14 04 11.6 -0.3
      baz=30,SNR=93
QIS   Mount Isa      29.52 154  P       P       14 04 12.5 +0.6
JHJ   Hachijo jima 2 29.80  23  LR      LR      14 14 37.3
      comp=Z,27nm,21.9s,baz=163,slow=33
MTSU  Mount Surprise 29.95 144  P       P       14 04 15.0 -0.6
      baz=30,SNR=17
AS31  Alice Springs  30.45 166  P       P       14 04 19.9 -0.1
AS31                            IAmb    IAmb    14 04 21.7
      comp=Z,9.6nm,0.7s
ASAR  Alice Springs  30.45 166  P       P       14 04 20.1 +0.1
      comp=Z,28nm,0.5s,baz=342,slow=7.0,SNR=722
ASAR                            PcP     PcP     14 07 16.9 +0.4
      comp=Z,6.8nm,0.5s,baz=345,slow=3.1,SNR=8.1
ASAR                            S       S       14 09 10.3 -1.2
      comp=Z,2.4nm,0.8s,baz=348,slow=21,SNR=5.2
ASAR                            ScP     ScP     14 10 47.5 +0.7
      comp=Z,1.8nm,0.8s,baz=342,slow=2.8,SNR=5.6
      comp=Z,28nm,0.5s
KSCHJ Chungju        30.76   3  P       P       14 04 21.8 -0.8
KSCHJ                           IAmb    IAmb    14 04 25.2
      comp=Z,10nm,0.7s
GIRL  Giralia        30.77 202  P       P       14 04 23.6 +0.8
      baz=31,SNR=4.7
GIRL  Giralia        30.77 202  P       P       14 04 23.6 +0.8
INU   Inuyama        30.86  17  P       P       14 04 23.0 -0.6
INU                             IAmb    IAmb    14 04 31.9
      comp=Z,35nm,1.5s
WRKA  Warakurna      30.93 176  P       P       14 04 24.7 +0.5
      baz=31,SNR=432
WRKA  Warakurna      30.93 176  P       P       14 04 25.0 +0.7
PZH   PanZhiHua      30.94 314  P       P       14 04 24.0 -0.5
PZH                             pmax    pmax
      comp=Z,10.0nm,0.7s
PZH                             pmax    pmax
      comp=Z,110nm,5.3s
TIA   Tai'an         31.18 346 eP       P       14 04 22.4 -3.9
TIA                             pmax    pmax
      comp=Z,8.0nm,0.9s
KSAR  Wonju Array Be 31.33   3  P       P       14 04 27.3 -0.3
KSRS  Korea Array    31.34   3  P       P       14 04 28.7 +1.1
      comp=Z,6.1nm,0.8s,baz=187,slow=9.4,SNR=29
KSRS                            PcP     PcP     14 07 19.6 +1.1
      comp=Z,1.7nm,0.6s,baz=180,slow=2.3,SNR=8.4
KSRS                            ScP     ScP     14 10 51.8 +2.3
      comp=Z,1.7nm,0.8s,baz=193,slow=3.8,SNR=8.0
KSRS                            LR      LR      14 20 00.7
      comp=Z,13nm,18.6s,baz=185,slow=42
      comp=Z,6.1nm,0.8s
KS19  Wonju Array Si 31.39   3  P       P       14 04 28.3 +0.2
KS19                            IAmb    IAmb    14 04 31.2
      comp=Z,9.7nm,0.9s
XAN   Xi'an          32.14 332 ⇓P       P       14 04 33.6 -1.2
XAN                             pP      pP      14 05 01.1 -2.3
XAN                             sP      sP      14 05 14.5 -4.1
XAN                             ScP     ScP     14 10 53.4 +1.0
XAN                             pmax    pmax
      comp=Z,32nm,0.8s
MJAR  Matsushiro Arr 32.33  18  P       P       14 04 38.1 +1.7
      comp=Z,2.0nm,0.9s,baz=186,slow=10,SNR=3.6
MJAR                            PcP     PcP     14 07 22.0 +0.7
      comp=Z,1.7nm,0.8s,baz=110,slow=7.8,SNR=4.1
MJAR                            LR      LR      14 17 04.4
      comp=Z,30nm,20.0s,baz=229,slow=35
      comp=Z,2.0nm,0.9s
MJAR  Matsushiro Arr 32.33  18  IAmb    IAmb    14 04 39.1
      comp=Z,3.5nm,1.4s
CTA   Charters Tower 32.61 143  P       P       14 04 40.4 +1.4
      comp=Z,5.1nm,0.6s,baz=318,slow=9.6,SNR=7.7
CTA                             PcP     PcP     14 07 23.9 +1.5
      comp=Z,6.5nm,0.9s,baz=350,slow=6.1,SNR=3.1
      comp=Z,5.1nm,0.6s
CTAO  Charters Tower 32.61 143  P       P       14 04 38.3 -0.7
CTAO                            IAmb    IAmb    14 04 58.1
      comp=Z,14nm,1.1s
HNS   HongShan       32.94 343 ⇑P       P       14 04 41.8 +0.1
HNS                             pmax    pmax
      comp=Z,17nm,0.8s
JMM   Marumori       34.39  21  P       P       14 04 53.8 -0.4
OOD   Oodnadatta     34.84 165  P       P       14 04 58.9 +0.7
BJT   Baijiatuau     35.03 347  P       P       14 04 59.7  0.0
BJI   Beijing        35.05 347  P       P       14 05 00.0 +0.2
BJI                             sP      sP      14 05 46.1 +2.4
BJI                             pmax    pmax
      comp=Z,34nm,0.6s
MORW  Morawa         36.21 195  P       P       14 05 10.1 +0.2
      baz=36,SNR=38
MORW  Morawa         36.21 195  P       P       14 05 09.8 -0.1
MORW  Morawa         36.21 195  P       P       14 05 10.1 +0.2
LZH   Lanzhou        36.27 329 eP       P       14 05 11.3 +0.8
LZH                             pP      pP      14 05 41.3 +2.0
LZH                             pmax    pmax
      comp=Z,20nm,1.1s
INKA  Innaminka      36.39 158  P       P       14 05 12.4 +0.9
FORT  Forrest        36.62 177  P       P       14 05 14.1 +0.7
      baz=37,SNR=392
FORT  Forrest        36.62 177  P       P       14 05 14.0 +0.7
FORT  Forrest        36.62 177  P       P       14 05 14.1 +0.7
QLP   Quilpie        36.83 152  P       P       14 05 15.2  0.0
      baz=37,SNR=13
QLP   Quilpie        36.83 152  P       P       14 05 15.3  0.0
MULG  Mulgathing     36.87 169  P       P       14 05 16.5 +1.0
HHC   Hu-ho-hao-te   37.07 342 eP       P       14 05 18.6 +1.4
HHC                             pmax    pmax
      comp=Z,18nm,0.9s
HHC                             pmax    pmax
      comp=Z,110nm,6.3s
BLDU  Ballidu        37.52 193  P       P       14 05 21.2 +0.2
      baz=38,SNR=130
BLDU  Ballidu        37.52 193  P       P       14 05 21.3 +0.3
RK1H  Rockhampton Ha 37.67 142  P       P       14 05 23.3 +1.0
LCRK  Leigh Creek    38.05 163  P       P       14 05 26.3 +0.9
KLBR  Kellerberrin   38.24 192  P       P       14 05 27.4 +0.4
      baz=38,SNR=57
KLBR  Kellerberrin   38.24 192  P       P       14 05 27.5 +0.5
USRK  Ussuriysk Ar.  38.38   7  P       P       14 05 27.6 -0.5
      comp=Z,8.2nm,0.8s,baz=211,slow=9.4,SNR=8.7
      comp=Z,8.2nm,0.8s
MDJ   Mudanjiang     38.57   4  P       P       14 05 29.7 +0.1
MDJ                             IAmb    IAmb    14 05 32.0
      comp=Z,11nm,0.7s
MDJ   Mudanjiang     38.57   4  P       P       14 05 31.3 +1.7
MDJ                             pmax    pmax
      comp=Z,17nm,0.9s
MDJ                             pmax    pmax
      comp=Z,110nm,5.0s
MDJ   Mudanjiang     38.57   4  P       P       14 05 34.2 +4.6
XLT   XiLinHaoTe     38.76 348 eP       P       14 05 32.1 +0.8
XLT                             pmax    pmax
      comp=Z,17nm,0.9s
XLT                             pmax    pmax
      comp=Z,88nm,5.6s
MUN   Mundaring      38.95 194  P       P       14 05 33.3 +0.4
      baz=39,SNR=39
MUN   Mundaring      38.95 194  P       P       14 05 33.6 +0.7
RMQ   Roma           39.03 147  P       P       14 05 33.5 -0.2
      baz=39,SNR=7.2
RMQ   Roma           39.03 147  P       P       14 05 34.0 +0.3
EIDS  Eidsvold       39.50 143  P       P       14 05 37.6  0.0
      baz=40,SNR=17
EIDS  Eidsvold       39.50 143  P       P       14 05 36.9 -0.7
EIDS  Eidsvold       39.50 143  P       P       14 05 37.7 +0.1
NWAO  Narrogin (SRO) 39.64 192  P       P       14 05 39.0 +0.4
NWAO  Narrogin (SRO) 39.64 192  P       P       14 05 39.6 +1.0
BBOO  Buckleboo      39.74 167  P       P       14 05 40.3 +0.9
      baz=40,SNR=210
BBOO  Buckleboo      39.74 167  P       P       14 05 40.0 +0.5
BBOO  Buckleboo      39.74 167  P       P       14 05 40.4 +0.9
WHYH  Whyalla        40.31 165  P       P       14 05 45.2 +1.0
STKA  Stephens Creek 40.45 160  P       P       14 05 46.1 +0.8
      comp=Z,43nm,0.7s,baz=335,slow=8.5,SNR=101
STKA                            PcP     PcP     14 07 46.0 +0.3
      comp=Z,9.2nm,0.6s,baz=315,slow=6.3,SNR=3.4
      comp=Z,43nm,0.7s
STKA  Stephens Creek 40.45 160  P       P       14 05 46.1 +0.8
      baz=41,SNR=71
STKA  Stephens Creek 40.45 160  P       P       14 05 45.8 +0.5
STKA                            IAmb    IAmb    14 05 47.0
      comp=Z,11nm,0.8s
STKA  Stephens Creek 40.45 160  P       P       14 05 45.7 +0.3
ASAJ  Asahikawa      40.60  18  LR      LR      14 21 05.6
      comp=Z,26nm,21.5s,baz=188,slow=34
NAPP  Napperby       40.61 164  P       P       14 05 47.9 +1.3
GTA   Gaotai         40.86 328 eP       P       14 05 48.3 -0.6
GTA                             pmax    pmax
      comp=Z,10.0nm,0.9s
HTT   Hallett        41.05 164  P       P       14 05 51.5 +1.2
      baz=41,SNR=16
HTT   Hallett        41.05 164  P       P       14 05 51.6 +1.2
RKGY  Rocky Gully    41.32 191  P       P       14 05 54.3 +1.8
      baz=42,SNR=34
RKGY  Rocky Gully    41.32 191  P       P       14 05 54.2 +1.8
H11S3 WAKE ISLAND Hy 41.40  69  T       T       14 50 05.0
      baz=258,slow=75,SNR=27
H11S1 WAKE ISLAND Hy 41.41  69  T       T       14 50 09.9
      baz=258,slow=75,SNR=17
H11S2 WAKE ISLAND Hy 41.41  69  T       T       14 50 12.5
      baz=258,slow=75,SNR=20
GOMU  GeErMu         41.56 321⇓iP       P       14 05 54.8 -0.1
GOMU                            PP      PP      14 07 34.8 +1.2
GOMU                            pmax    pmax
      comp=Z,5.0nm,1.2s
GOMU                            pmax    pmax
      comp=Z,52nm,7.7s
CMSA  Cobar Meteorol 41.74 155  P       P       14 05 56.6 +0.7
      baz=42,SNR=23
CMSA  Cobar Meteorol 41.74 155  P       P       14 05 56.7 +0.8
H11N1 WAKE ISLAND Hy 41.85  67  T       T       14 50 48.9
      baz=265,slow=75,SNR=26
H11N2 WAKE ISLAND Hy 41.86  67  T       T       14 50 50.1
      baz=265,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 41.87  67  T       T       14 50 47.9
      baz=265,slow=75,SNR=19
TWOA  Tennyson Woods 42.47 165  P       P       14 06 03.4 +1.6
KLR   Kul'dur        43.33   5  LR      LR      14 26 37.5
      comp=Z,26nm,18.0s,baz=220,slow=39
HIA   Hailar         43.45 354  P       P       14 06 09.3 -0.2
HIA                             IAmb    IAmb    14 06 10.7
      comp=Z,7.2nm,0.6s
ARMA  Armidale       43.68 147  P       P       14 06 11.7  0.0
      baz=44,SNR=21
ARMA  Armidale       43.68 147  P       P       14 06 11.7  0.0
ARMA                            IAmb    IAmb    14 06 13.6
      comp=Z,21nm,0.8s
ARMA  Armidale       43.68 147  P       P       14 06 12.8 +1.1
PKI   Pulchoki       44.21 304 eP       P       14 06 15.5 -0.8
      comp=Z,7.5nm,0.4s
PKIN  Phulchoki      44.22 304 eP       P       14 06 15.6 -0.8
      comp=Z,10nm,0.4s
KKN   Kakani         44.40 304 eP       P       14 06 18.0 +0.3
      comp=Z,10nm,0.3s
ULN   Ulaanbaatar    44.79 342  P       P       14 06 19.7 -0.7
ULN                             IAmb    IAmb    14 06 21.7
      comp=Z,10nm,0.9s
SONM  Songino Array  44.97 341  P       P       14 06 21.4 -0.4
      comp=Z,1.6nm,0.4s,baz=158,slow=8.6,SNR=14
SONM                            PcP     PcP     14 08 01.4 +0.6
      comp=Z,0.5nm,0.5s,baz=160,slow=4.0,SNR=2.0
SONM                            ScP     ScP     14 11 41.0 -0.1
      comp=Z,1.8nm,0.8s,baz=148,slow=3.4,SNR=6.4
SONM                            LR      LR      14 28 37.1
      comp=Z,35nm,19.3s,baz=267,slow=40
      comp=Z,1.6nm,0.4s
SONM  Songino Array  44.97 341  P       P       14 06 20.9 -0.9
GKN   Gorkha         45.01 304 eP       P       14 06 22.1 -0.3
      comp=Z,5.7nm,0.2s
ARPS  Mount Arapiles 45.02 162  P       P       14 06 23.6 +1.4
      baz=45,SNR=22
ARPS  Mount Arapiles 45.02 162  P       P       14 06 23.5 +1.4
PALK  Pallekele      45.15 274  LR      LR      14 27 29.9
      comp=Z,56nm,18.7s,baz=221,slow=39
DANN  Dangsing       45.85 304 eP       P       14 06 28.6 -0.7
      comp=Z,5.0nm,0.3s
CAN   Canberra       46.40 154  P       P       14 06 34.5 +1.5
CAN                             IAmb    IAmb    14 06 35.8
      comp=Z,28nm,1.0s
BRAT  Ballarat       46.40 160  P       P       14 06 35.1 +2.2
CNB   Canberra Magne 46.55 154  P       P       14 06 34.7 +0.4
      baz=47,SNR=18
TOO   Toolangi       46.96 159  P       P       14 06 38.3 +0.9
      baz=47,SNR=7.4
TOO   Toolangi       46.96 159  P       P       14 06 38.3 +0.9
TOO                             IAmb    IAmb    14 06 41.1
      comp=Z,17nm,0.9s
DZM   Mont Dzumac    48.33 127  P       P       14 06 48.7 +0.4
DZM                             IAmb    IAmb    14 07 00.8
      comp=Z,11nm,0.8s
LIFNC LIFOU          48.33 125  P       P       14 06 48.8 +0.6
WMQ   Urumqi         50.55 324 eP       P       14 07 05.5 +0.7
WMQ                             pmax    pmax
      comp=Z,17nm,0.7s
PETK  Petropavlovsk- 53.56  23  P       P       14 07 28.9 +2.1
      comp=Z,2.0nm,0.6s,baz=200,slow=4.6,SNR=9.5
      comp=Z,2.0nm,0.6s
MK31  Makanchi Array 55.37 325  P       P       14 07 39.1 -0.9
MKAR  Makanchi Array 55.37 325  P       P       14 07 39.1 -0.9
      comp=Z,5.0nm,0.7s,baz=128,slow=7.7,SNR=46
MKAR                            ScP     ScP     14 12 22.6 -3.0
      comp=Z,1.8nm,0.8s,baz=118,slow=4.6,SNR=5.1
      comp=Z,5.0nm,0.7s
MKAR  Makanchi Array 55.37 325  P       P       14 07 39.2 -0.9
MKAR                            ScP     ScP     14 12 24.2 -1.4
MAKZ  Makanchi       55.56 325  P       P       14 07 40.4 -1.0
MAKZ                            IAmb    IAmb    14 07 42.0
      comp=Z,6.9nm,0.8s
YAK   Yakutsk        55.96   2  LR      LR      14 34 33.8
      comp=Z,18nm,18.1s,baz=92,slow=39
YAK   Yakutsk        55.96   2  P       P       14 07 43.4 -0.6
KSH   Kashi          56.04 314  P       P       14 07 46.3 +1.2
KSH                             pP      pP      14 08 18.8 +2.4
KSH                             pmax    pmax
      comp=Z,6.0nm,0.7s
KDJ   Kajisay        56.28 318  P       P       14 07 46.2 -0.7
KDJ                             IAmb    IAmb    14 07 47.3
      comp=Z,7.8nm,0.5s
BOOM  Boomskoye usch 57.27 317  P       P       14 07 53.1 -0.7
BOOM                            IAmb    IAmb    14 07 57.4
      comp=Z,11nm,1.1s
TKM2  Tokmak 2       57.68 318  P       P       14 07 56.1 -0.6
      SNR=8.6
UCH   Uchtor         58.13 317  P       P       14 07 60.0 -0.2
      SNR=13
AAK   Ala-Archa      58.30 317  P       P       14 08 00.6 -0.4
ZAA0  Zalesovo Array 58.31 333  P       P       14 07 59.3 -1.3
ZALV  Zalesovo Beam  58.31 333  P       P       14 07 59.2 -1.4
      comp=Z,1.4nm,0.3s,baz=121,slow=6.2,SNR=11
      comp=Z,1.4nm,0.3s
USP   Ospenovka      58.55 318  P       P       14 08 01.9 -0.6
      SNR=16
AML   Almayashu      58.65 316  P       P       14 08 03.6 -0.1
      SNR=8.4
EKS2  Erkin-Say      58.80 317  P       P       14 08 04.5 +0.1
      SNR=5.1
KURK  Kurchatov      59.53 327  P       P       14 08 07.7 -1.3
KBL   Kabul          59.70 307  P       P       14 08 09.6 -1.3
BTK   Batken         59.95 313  P       P       14 08 11.3 -1.0
BTK                             IAmb    IAmb    14 08 18.8
      comp=Z,7.3nm,0.6s
GAR   Garm           59.98 312  P       P       14 08 11.6 -0.9
CHGR  Chuyangaron    60.74 311  P       P       14 08 16.5 -1.2
CHGR                            IAmb    IAmb    14 08 18.6
      comp=Z,13nm,0.8s
KK31  Karatay Array  61.19 316  P       P       14 08 19.4 -1.2
KK31                            IAmb    IAmb    14 08 20.4
      comp=Z,7.3nm,0.7s
KKAR  Karatay Array  61.19 316  P       P       14 08 19.1 -1.5
KKAR                            IAmb    IAmb    14 08 20.5
      comp=Z,7.3nm,0.7s
DCZ   Deep Cove      62.98 149  P       P       14 08 33.1 +0.7
QRZ   Quartz Range   63.06 142  P       P       14 08 34.0 +1.0
NNZ   Nelson         63.81 142  P       P       14 08 37.6 -0.4
THZ   Tophouse       63.84 143  P       P       14 08 38.2  0.0
LBZ   Lake Benmore   63.88 146  P       P       14 08 39.0 +0.6
RPZ   Rata Peaks     63.95 145  P       P       14 08 38.6 -0.2
LTZ   Lake Taylor    64.08 144  P       P       14 08 40.3 +0.6
OXZ   Oxford         64.27 144  P       P       14 08 40.8 -0.1
KHZ   Kahutara       64.61 143  P       P       14 08 43.0 -0.1
HRA   Herat          65.15 305  P       P       14 08 45.7 -1.5
HRA                             IAmb    IAmb    14 08 47.1
      comp=Z,6.8nm,0.7s
PLWZ  Palliser       65.17 141  P       P       14 08 46.1 -0.7
BRVK  Borovoye       65.18 327  P       P       14 08 45.6 -1.0
BRVK                            IAmb    IAmb    14 08 46.6
      comp=Z,11nm,0.6s
TIXI  Tiksi          65.59   1  P       P       14 08 48.3 -0.6
NRIK  Noril'sk       68.09 346  P       P       14 09 05.0 +0.2
      comp=Z,13nm,0.5s,baz=137,slow=6.6,SNR=18
      comp=Z,13nm,0.5s
NRIK  Noril'sk       68.09 346  P       P       14 09 04.5 -0.3
GEYT  Alibeck        69.03 308  P       P       14 09 11.4  0.0
      comp=Z,4.5nm,0.8s,baz=104,slow=6.3,SNR=6.7
      comp=Z,4.5nm,0.8s
ABKAR Akbulak array  70.04 320  P       P       14 09 16.0 -1.3
ABKAR Akbulak array  70.04 320  P       P       14 09 15.9 -1.3
SOCY  Socotra        71.36 281  P       P       14 09 24.3 -1.7
SOCY                            IAmb    IAmb    14 09 43.0
      comp=Z,24nm,1.2s
AKTO  Aktyubinsk     71.53 321  LR      LR      14 42 11.7
      comp=Z,35nm,20.6s,baz=97,slow=37
UNV   Unalaska Valle 71.89  35  P       P       14 09 28.5 +0.2
UNV                             IAmb    IAmb    14 09 39.9
      comp=Z,42nm,1.4s
ARU   Arti           72.72 327  P       P       14 09 31.6 -1.6
ARU                             IAmb    IAmb    14 09 32.5
      comp=Z,6.8nm,0.6s
CASY  Casey          73.00 187  P       P       14 09 34.8 +0.2
CASY                            IAmb    IAmb    14 09 36.2
      comp=Z,18nm,0.8s
P18K  Big Mountain,  79.06  31  P       P       14 10 09.0 -0.2
SVW2  Sparrevohn     79.09  29  P       P       14 10 09.2 -0.1
TTA   Tatalina       79.14  27  P       P       14 10 09.5 -0.1
L19K  White Mountain 79.57  28  P       P       14 10 12.6 +0.6
N19K  Bonanza Creek  79.59  29  P       P       14 10 12.8 +0.6
N19K                            IAmb    IAmb    14 10 23.3
      comp=Z,14nm,1.4s
M19K  Big River Lodg 79.76  28  P       P       14 10 13.7 +0.7
Q19K  Cape Douglas,  79.82  31  P       P       14 10 13.3 -0.1
Q19K                            IAmb    IAmb    14 10 13.6
      comp=Z,18nm,0.8s
OHAK  Old Harbor     79.86  33  P       P       14 10 12.9 -0.5
OHAK                            IAmb    IAmb    14 10 33.4
      comp=Z,31nm,1.3s
K20K  Telida         80.07  27  P       P       14 10 14.4 -0.1
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J20K	**Nowinta River**	**80.13**	**26**	P	**P**	**14 10 15.4**	**+0.6**
KDAK	**Kodiak Island**	**80.28**	**32**	P	**P**	**14 10 15.9**	**+0.1**
KDAK				IAmb	IAmb	14 10 25.1	
	comp=Z,20nm,1.1s						
RSO	**Redoubt South**	**80.41**	**30**	P	**P**	**14 10 16.9**	**+0.3**
IMAR	**Indian Mountai**	**80.51**	**24**	P	**P**	**14 10 17.4**	**+0.6**
H21K	**Melozitna Rive**	**80.86**	**25**	P	**P**	**14 10 19.4**	**+0.7**
PPLA	**Purkeypile**	**80.88**	**27**	P	**P**	**14 10 19.7**	**+0.6**
KBZ	**Khabaz**	**81.01**	**313**	P	**P**	**14 10 19.6**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=35,slow=9.1,SNR=2.8						
	comp=Z,0.8nm,0.5s						
CNPM	**China Poot**	**81.10**	**31**	P	**P**	**14 10 20.1**	**-0.1**
CNPM				IAmb	IAmb	14 10 46.0	
	comp=Z,20nm,1.1s						
I21K	**Tanana**	**81.16**	**25**	P	**P**	**14 10 20.9**	**+0.6**
BRLK	**Bradley Lake**	**81.29**	**31**	P	**P**	**14 10 20.3**	**-0.9**
BRLK				IAmb	IAmb	14 10 25.2	
	comp=Z,34nm,1.4s						
BPAW	**Bear Paw Mtn.**	**81.50**	**26**	P	**P**	**14 10 22.7**	**+0.6**
BPAW				IAmb	IAmb	14 10 23.9	
	comp=Z,9.9nm,1.0s						
TRF	**Thorofare Moun**	**81.77**	**27**	P	**P**	**14 10 23.3**	**-0.5**
RC01	**Rabbit Creek A**	**81.92**	**29**	P	**P**	**14 10 24.4**	**0.0**
RC01				IAmb	IAmb	14 10 25.8	
	comp=Z,9.5nm,0.6s						
SEW	**Seward**	**82.03**	**30**	P	**P**	**14 10 24.6**	**-0.4**
SEW				IAmb	IAmb	14 10 42.8	
	comp=Z,30nm,1.3s						
H23K	**Yukon River**	**82.22**	**24**	P	**P**	**14 10 27.1**	**+1.2**
H23K				IAmb	IAmb	14 10 28.2	
	comp=Z,6.6nm,0.7s						
I23K	**Minto, Yukon-K**	**82.26**	**25**	P	**P**	**14 10 26.3**	**+0.2**
TOLK	**Toolik Lake Re**	**82.35**	**22**	P	**P**	**14 10 27.9**	**+1.3**
TOLK				IAmb	IAmb	14 10 28.8	
	comp=Z,6.9nm,0.8s						
NEA2	**Nenana**	**82.36**	**26**	P	**P**	**14 10 27.2**	**+0.5**
MCK	**McKinley**	**82.39**	**27**	P	**P**	**14 10 27.0**	**+0.2**
MCK				IAmb	IAmb	14 10 27.9	
	comp=Z,10.0nm,0.7s						
RND	**Reindeer**	**82.42**	**27**	P	**P**	**14 10 26.8**	**-0.2**
VOI	**Vohitsoka**	**82.42**	**247**	P	**P**	**14 10 26.6**	**-1.3**
VOI				IAmb	IAmb	14 10 29.5	
	comp=Z,7.2nm,0.7s						
KNK	**Knik Glacier**	**82.55**	**29**	P	**P**	**14 10 28.2**	**+0.5**
KNK				IAmb	IAmb	14 10 36.8	
	comp=Z,9.1nm,1.0s						
SML	**Sawmill**	**82.62**	**29**	P	**P**	**14 10 28.4**	**+0.3**
SML				IAmb	IAmb	14 10 57.5	
	comp=Z,14nm,1.2s						
MARD	**Mardin**	**82.72**	**307**	P	**P**	**14 10 29.7**	**+0.5**
MARD				IAmb	IAmb	14 10 30.5	
	comp=Z,12nm,0.7s						
MDM	**Murphy Dome**	**82.73**	**25**	P	**P**	**14 10 28.9**	**+0.4**
H24K	**Noodor Dome**	**82.90**	**24**	P	**P**	**14 10 30.3**	**+0.8**
H24K				IAmb	IAmb	14 10 32.3	
	comp=Z,8.8nm,0.8s						
CCB	**Clear Creek Bu**	**82.91**	**26**	P	**P**	**14 10 29.2**	**-0.2**
KLMR	**Klimovskoe**	**83.15**	**331**	*e*P	**P**	**14 10 29.4**	**-1.3**
KLMR				AMP		14 10 31.4	
	comp=Z,11nm,0.8s						
HDA	**Harding Lake**	**83.28**	**26**	P	**P**	**14 10 30.9**	**-0.5**
HDA				IAmb	IAmb	14 10 31.6	
	comp=Z,7.2nm,0.7s						
IL31		**83.31**	**26**	P	**P**	**14 10 31.1**	**-0.3**
ILAR	**Eielson Array**	**83.31**	**26**	P	**P**	**14 10 30.6**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=240,slow=5.0,SNR=36						
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**83.31**	**26**	P	**P**	**14 10 30.5**	**-1.0**
M24K	**Tolsona, Glenn**	**83.64**	**28**	P	**P**	**14 10 34.2**	**+0.9**
M24K				IAmb	IAmb	14 10 35.4	
	comp=Z,22nm,0.9s						
KLU	**Klutina**	**83.77**	**29**	P	**P**	**14 10 34.7**	**+0.6**
KLU				IAmb	IAmb	14 10 34.8	
	comp=Z,8.5nm,1.1s						
DIV	**Divide**	**83.85**	**29**	P	**P**	**14 10 35.3**	**+0.9**
DIV				IAmb	IAmb	14 10 36.2	
	comp=Z,10nm,0.8s						
J25K	**Salcha River,**	**83.96**	**26**	P	**P**	**14 10 34.2**	**-0.7**
BMAR	**Burnt Mountain**	**84.21**	**23**	P	**P**	**14 10 37.7**	**+1.6**
RIDG	**Independent Ri**	**84.21**	**27**	P	**P**	**14 10 36.3**	**+0.1**
RIDG				IAmb	IAmb	14 10 37.3	
	comp=Z,15nm,1.2s						
BMRM	**Bremner River**	**84.42**	**29**	P	**P**	**14 10 37.2**	**-0.1**
BMRM				IAmb	IAmb	14 10 39.4	
	comp=Z,17nm,1.0s						
DOT	**Dot Lake**	**84.56**	**27**	P	**P**	**14 10 38.0**	**+0.1**
SCRK	**Sand Creek**	**84.58**	**26**	P	**P**	**14 10 38.5**	**+0.4**
GLB	**Gilahina Butte**	**84.78**	**29**	P	**P**	**14 10 39.7**	**+0.6**
GLB				IAmb	IAmb	14 10 40.9	
	comp=Z,9.1nm,1.0s						
VRDI	**Verde Repeater**	**84.97**	**29**	P	**P**	**14 10 40.8**	**+0.6**
VRDI				IAmb	IAmb	14 10 59.8	
	comp=Z,16nm,1.4s						
ISLE	**Juniper Island**	**85.55**	**30**	P	**P**	**14 10 44.0**	**+1.0**
ISLE				IAmb	IAmb	14 11 00.4	
	comp=Z,15nm,0.9s						
L27K	**Beaver Creek,**	**85.60**	**27**	P	**P**	**14 10 44.1**	**+1.0**
BCAR	**Beaver Creek A**	**85.62**	**27**	P	**P**	**14 10 44.4**	**+1.1**
M27K	**Edge Creek, AK**	**85.64**	**28**	P	**P**	**14 10 44.4**	**+0.9**
M27K				IAmb	IAmb	14 11 01.5	
	comp=Z,13nm,1.5s						
MAW	**Mawson**	**85.68**	**200**	P	**P**	**14 10 43.6**	**+0.4**
	comp=Z,7.2nm,0.8s,baz=70,slow=5.2,SNR=15						
	comp=Z,7.2nm,0.8s						
MAW	**Mawson**	**85.68**	**200**	P	**P**	**14 10 43.9**	**+0.6**
	baz=86,SNR=9.7						
MAW	**Mawson**	**85.68**	**200**	P	**P**	**14 10 43.7**	**+0.4**
VNDA	**Vanda**	**85.75**	**173**	P	**P**	**14 10 43.8**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=318,slow=6.5,SNR=59						
VNDA				LR	LR	14 50 31.3	
	comp=Z,27nm,18.1s,baz=314,slow=36						
	comp=Z,2.9nm,0.5s						
VNDA	**Vanda**	**85.75**	**173**	P	**P**	**14 10 43.7**	**+0.3**
VNDA				IAmb	IAmb	14 10 44.3	
	comp=Z,4.4nm,0.6s						
EGAK	**Eagle**	**85.76**	**25**	P	**P**	**14 10 43.8**	**0.0**
BARN	**Barnard Glacie**	**85.85**	**29**	P	**P**	**14 10 45.4**	**+0.8**
BARN				IAmb	IAmb	14 11 08.3	
	comp=Z,6.4nm,0.8s						
CTGM	**Chitina Glacie**	**86.01**	**29**	P	**P**	**14 10 45.0**	**-0.4**
CTGM				IAmb	IAmb	14 10 47.7	
	comp=Z,8.9nm,0.8s						
DAWY	**Dawson**	**86.59**	**26**	P	**P**	**14 10 48.0**	**0.0**
SBA	**Scott Base**	**86.66**	**172**	P	**P**	**14 10 48.7**	**+0.8**
SBA				IAmb	IAmb	14 10 50.7	
	comp=Z,8.8nm,1.2s						
M30M	**Minto, Yukon**	**87.96**	**27**	P	**P**	**14 10 55.3**	**+0.7**
M30M				IAmb	IAmb	14 11 20.1	
	comp=Z,7.3nm,1.4s						
ARCES	**ARCESS Array B**	**88.12**	**340**	P	**P**	**14 10 54.6**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=88,slow=5.9,SNR=21						
ARCES				PKKPbc	**PKKPdf**	**14 28 39.0**	**+3.4**
	comp=Z,1.6nm,0.8s,baz=245,slow=4.6,SNR=5.9						
	comp=Z,1.8nm,0.5s						
ARCES	**ARCESS Array B**	**88.12**	**340**	P	**P**	**14 10 54.7**	**-0.5**
ARCES				IAmb	IAmb	14 11 23.0	
	comp=Z,24nm,1.4s						
BRTR	**Keskin Array B**	**88.14**	**310**	P	**P**	**14 10 55.6**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=99,slow=3.9,SNR=7.1						
	comp=Z,2.5nm,0.7s						
BRTR	**Keskin Array B**	**88.14**	**310**	P	**P**	**14 10 54.9**	**-1.2**
SPB2	**Spitsbergen Ar**	**88.14**	**349**	P	**P**	**14 10 55.3**	**+0.2**
INK	**Inuvik**	**88.26**	**21**	P	**P**	**14 10 55.1**	**-0.7**
FIA1	**FINESS Array S**	**89.56**	**332**	P	**P**	**14 11 01.7**	**-0.4**
FIA1				IAmb	IAmb	14 11 07.3	
	comp=Z,9.0nm,1.1s						
FINES	**FINESS Array B**	**89.57**	**332**	P	**P**	**14 11 01.9**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=55,slow=4.8,SNR=21						
	comp=Z,3.2nm,0.6s						
FINES	**FINESS Array B**	**89.57**	**332**	P	**P**	**14 11 01.5**	**-0.5**
AKASG	**Malin Array Be**	**89.77**	**321**	P	**P**	**14 11 02.2**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=71,slow=4.7,SNR=5.9						
AKASG				LR	LR	14 54 00.6	
	comp=Z,16nm,19.2s,baz=355,slow=37						
	comp=Z,2.6nm,0.7s						
AKASG	**Malin Array Be**	**89.77**	**321**	IAmb	IAmb	14 11 07.0	
	comp=Z,3.5nm,1.2s						
MBAR	**Mbarara**	**95.45**	**270**	LR	LR	14 55 52.8	
	comp=Z,12nm,19.5s,baz=99,slow=36						
NB2	**NORSAR Subarra**	**96.50**	**334**	P	**P**	**14 11 32.8**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=65,slow=4.6						
NOA	**NORSAR Array B**	**96.50**	**334**	P	**P**	**14 11 33.2**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=66,slow=4.5,SNR=6.7						
NOA				LR	LR	15 00 27.6	
	comp=Z,14nm,18.5s,baz=65,slow=39						
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**97.67**	**24**	P	**P**	**14 11 39.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=300,slow=4.4,SNR=12						
YKA				PKKPbc	**PKKPbc**	**14 28 13.6**	**-3.6**
	comp=Z,1.4nm,0.6s,baz=120,slow=3.2,SNR=15						
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**99.95**	**322**	P	**Pdif**	**14 11 50.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=52,slow=2.2,SNR=3.6						
	comp=Z,0.2nm,0.3s						
PDAR	**Pinedale Array**	**110.01**	**40**	PKKPab	PKKPab	14 27 48.9	-2.6
	comp=Z,1.5nm,0.6s,baz=119,slow=6.0,SNR=14						
SCHQ	**Schefferville**	**118.42**	**9**	PKP	**PKPdf**	**14 16 51.8**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=284,slow=4.2,SNR=5.1						
TXAR	**Lajitas Array**	**120.64**	**51**	PKP	**PKiKP**	**14 16 57.5**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=236,slow=1.4,SNR=6.9						
TXAR	**Lajitas Array**	**120.64**	**51**		**PKPdf**	**14 16 56.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**121.65**	**289**	PKP	**PKPdf**	**14 16 58.7**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=59,slow=1.6,SNR=25						
TORD				PKKPbc	**PKKPab**	**14 26 59.8**	**+0.1**
	comp=Z,1.3nm,1.2s,baz=232,slow=7.3,SNR=3.7						
DBIC	**Dimbokro**	**129.52**	**284**	PKP	**PKiKP**	**14 17 15.2**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=18,slow=3.2,SNR=3.1						
DBIC				SKPbc	SKPab	14 20 24.1	+0.8
	comp=Z,22nm,0.7s,baz=79,slow=3.5,SNR=19						
DBIC	**Dimbokro**	**129.52**	**284**		**PKPdf**	**14 17 13.2**	**-0.9**
PLCA	**Paso Flores**	**142.33**	**159**	PKhKP	PKPpre	14 17 33.2	
	comp=Z,3.6nm,0.7s,baz=216,slow=2.7,SNR=20						
PLCA				SKPbc	**SKiKP**	**14 21 04.4**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=119,slow=4.1,SNR=2.8						
PLCA	**Paso Flores**	**142.33**	**159**	*e*P	**PKPdf**	**14 17 34.8**	**-2.3**
CPUP	**Villa Florida**	**159.52**	**171**	PKPab	**PKPab**	**14 18 43.0**	**+1.2**
	comp=Z,3.8nm,0.7s,baz=195,slow=5.1,SNR=7.3						
CPUP	**Villa Florida**	**159.52**	**171**		**PKPab**	**14 18 42.4**	**+0.6**
LPAZ	**La Paz**	**162.67**	**127**	PKP	**PKPdf**	**14 18 08.8**	**+1.0**
	comp=Z,2.6nm,1.0s,baz=300,slow=2.1,SNR=6.2						
LPAZ				PKPab	**PKPab**	**14 18 59.4**	**+2.5**
	comp=Z,3.0nm,0.8s,baz=210,slow=2.6,SNR=8.4						
LPAZ	**La Paz**	**162.67**	**127**		**PKPdf**	**14 18 05.5**	**-2.3**

CNRM ***17*** *14:02:41.1, 35°.57N×3°.75W, h4^{km}, ml2.5*

MDD ***17*** *14:02:43.8±0.5, 35°.29N×3°.74W, h13^{km}±5^{km}, mb_Lg2.5/15, Error ellipse: s-maj=6.0km s-min=2.5km az=169.0*

SFS ***17*** *14:02:43.0, 35°.28N×3°.74W, h13^{km}, ML2.5, ALHUCEMAS (MARRUECOS)*

INMG ***17*** *14:02:44.3±1.1, 35°.39N×3°.76W, h8^{km}±6^{km}, ML2.0, Error ellipse: s-maj=5.1km s-min=3.5km az=145.0*

ISC 17 14:02:43.6±1.0**, 35°.39N**±0°.03×**3°.77W**±0°.02**, h15**^{km}±8^{km}**,**
n34,σ**1**^{s}**.26**/63**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.23**	**219**	P	**Pg**	**14 02 48.1**	**-0.5**
PALE				S	**Sb**	**14 02 53.3**	**0.0**
PVLZ	**Peæn de**	**0.49**	**244**	P	**Pg**	**14 02 53.3**	**0.0**
PVLZ				S	**Sg**	**14 02 59.6**	**-0.2**
GOG	**Mont Gurugu**	**0.65**	**105**	P	**Pg**	**14 02 54.8**	**-1.5**
GOG				S	**Sb**	**14 03 06.0**	**+0.4**
EMEL	**Melilla**	**0.67**	**98**	Pg	**Pg**	**14 02 56.1**	**-0.5**
EMEL				Sg	**Sb**	**14 03 05.8**	**-0.2**
WMELI	**Melilla**	**0.67**	**96**	P	**Pb**	**14 02 56.9**	**-0.1**
WMELI				S	**Sb**	**14 03 05.6**	**-0.5**
EALB	**Alboran**	**0.81**	**47**	Pg	**Pg**	**14 02 58.9**	**-0.3**
EALB				Sg	**Sb**	**14 03 10.2**	**+0.1**
EALB				*i* Vmb_Lg		14 03 12.3	
CHAS	**Isla Isabel II**	**1.11**	**100**	P	**Pb**	**14 03 04.2**	**-0.3**
CHAS				S	**Sn**	**14 03 19.6**	**-0.1**
TAF	**Taforalt**	**1.25**	**117**	P	**Pn**	**14 03 06.8**	**+0.3**
TAF				S	**Sg**	**14 03 23.7**	**-0.3**
CHEFC	**Chefchaouen**	**1.32**	**258**	P	**Pn**	**14 03 07.0**	**-0.5**
CHEFC				S	**Sg**	**14 03 27.1**	**+0.9**
SMIR	**Smir Dam**	**1.35**	**283**	P	**Pn**	**14 03 07.9**	**0.0**
SMIR				S	**Sn**	**14 03 25.2**	**-0.3**
CEU	**Ceuta**	**1.40**	**292**	P	**Pn**	**14 03 07.3**	**-1.3**
CEU				S	**Sn**	**14 03 22.0**	**-4.9**
ECEU	**Ceuta**	**1.41**	**291**	Pn	**Pn**	**14 03 07.7**	**-0.9**
ECEU				Sn	**Sn**	**14 03 27.1**	**+0.1**
ECEU				*i* Vmb_Lg		14 03 33.1	
EMIJ	**Mijas**	**1.43**	**325**	Pn	**Pn**	**14 03 09.0**	**0.0**
EMIJ				Sn	**Sn**	**14 03 26.7**	**-0.8**
EMIJ				*i* Vmb_Lg		14 03 32.5	
JBK	**JBK**	**1.44**	**137**	P	**Pn**	**14 03 08.3**	**-1.1**
JBK				S	**Sg**	**14 03 31.1**	**+0.9**
ELGU	**Los Guajares,**	**1.48**	**4**	Pn	**Pn**	**14 03 08.7**	**-1.0**
ELGU				Sn	**Sn**	**14 03 28.8**	**0.0**
ELGU				*i* Vmb_Lg		14 03 33.3	
EBER	**Berja**	**1.66**	**25**	Pn	**Pn**	**14 03 11.1**	**-1.3**
EBER				Sn	**Sn**	**14 03 33.4**	**-0.1**
EBER				*i* Vmb_Lg		14 03 39.9	
EGOR	**Sierra Gorda,**	**1.74**	**351**	Pn	**Pb**	**14 03 14.9**	**-0.4**
EGOR				Sn	**Sb**	**14 03 36.8**	**-0.1**
EGOR				*i* Vmb_Lg		14 03 44.8	
EQUE	**Quentar**	**1.83**	**8**	Pn	**Pn**	**14 03 14.5**	**-0.1**
EQUE				Sn	**Sn**	**14 03 38.9**	**+1.4**
EQUE				*i* Vmb_Lg		14 03 44.2	
LCRM	**LCR**	**1.93**	**208**	P	**Pg**	**14 03 21.1**	**+0.5**
LCRM				S	**Sg**	**14 03 48.0**	**+2.5**
EQES	**Quesada**	**2.47**	**13**	Pn	**Pn**	**14 03 25.5**	**+2.1**
EQES				Sn	**Sn**	**14 03 55.0**	**+1.6**
EQES				*i* Vmb_Lg		14 03 58.3	
MD31	**MD31**	**2.65**	**198**	P	**Pn**	**14 03 27.5**	**+1.6**
MD31				S	**Sb**	**14 04 03.0**	**-0.2**
EADA	**Adamuz**	**2.84**	**347**	Pn	**Pn**	**14 03 29.1**	**+0.6**
EADA				Sn	**Sn**	**14 04 04.1**	**+1.6**
EADA				*i* Vmb_Lg		14 04 15.3	
ECAB	**El Cabril**	**2.99**	**334**	Pn	**Pn**	**14 03 30.6**	**+0.1**
ECAB				Sn	**Sn**	**14 04 07.7**	**+1.6**
ECAB				*i* Vmb_Lg		14 04 19.4	
EMIN	**Mina Concepcio**	**3.33**	**316**	Pn	**Pn**	**14 03 36.5**	**+1.4**
EMIN				Sn	**Sn**	**14 04 14.7**	**+0.3**
EMIN				*i* Vmb_Lg		14 04 30.2	
EGRO	**El Granado**	**3.68**	**307**	Pn	**Pn**	**14 03 41.4**	**+1.5**
EGRO				*i* Vmb_Lg		14 04 19.2	
EGRO				Sn	**Sn**	**14 04 22.6**	**-0.5**
ETOB	**Tobarra**	**3.70**	**28**	Pn	**Pn**	**14 03 41.2**	**+0.9**
ETOB				Sn	**Sn**	**14 04 23.2**	**-0.5**
ETOB				*i* Vmb_Lg		14 04 40.4	
PVAQ	**Vaqueiros**	**3.77**	**303**	*e*Pn	**Pn**	**14 03 41.6**	**+0.5**
PVAQ				*e*Sn	**Sn**	**14 04 24.4**	**-0.8**
PVAQ				A	A	14 04 25.7	
	3.5nm,0.9s						
PVAQ	**Vaqueiros**	**3.77**	**303**	P	**Pn**	**14 03 40.3**	**-0.9**
PVAQ				S	**Sn**	**14 04 21.7**	**-3.5**
PBAR	**Barrancos**	**3.82**	**318**	*e*Sn	**Sn**	**14 04 26.4**	**-0.2**
PBDV	**Barranco-do-Ve**	**3.84**	**300**	*e*Pn	**Pn**	**14 03 42.6**	**+0.5**
PCVE	**Castro Verde**	**4.10**	**304**	*e*Pn	**Pn**	**14 03 47.6**	**+1.8**
EBAD	**Badajoz**	**4.24**	**323**	Pn	**Pn**	**14 03 48.5**	**+0.8**
EBAD				Sn	**Sn**	**14 04 34.5**	**-2.5**
EBAD				*i* Vmb_Lg		14 04 42.6	
MESJ	**Messejana**	**4.34**	**306**	*e*Pn	**Pn**	**14 03 50.2**	**+1.2**
PNCL	**Nicolau / Gran**	**4.69**	**307**	*e*Pn	**Pn**	**14 03 55.0**	**+1.2**

IDC ***17*** *14:17:21.7±0.9, 14°.40S×166°.53E, h0^{km}, mb4.0/9, mbtmp4.1/10, ML4.3/1, MS3.6/23, Error ellipse: s-maj=33.9km s-min=20.3km az=122.0*

NEIC ***17*** *14:17:25.6±1.7, 14°.52S±0°.07×166°.71E±0°.07, h30^{km}±6^{km}, mb4.5/18, Error ellipse: s-maj=13.8km s-min=4.9km az=222.0*

ISC 17 14:17:25.4±0.6**, 14°.56S**±0°.07×**166°.68E**±0°.09**, h28**^{km}**, n60,**
σ**1**^{s}**.12**/39**, mb4.4**/17**, MS3.6**/22**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.02**	**150**	Pn	**Pn**	**14 17 42.1**	**-1.8**
LIFNC	**LIFOU**	**6.21**	**175**	Pn	**Pn**	**14 18 55.0**	**-0.2**
MARNC	**Mare, Loyalty**	**7.01**	**170**	Pn	**Pn**	**14 19 08.3**	**+2.1**
DZM	**Mont Dzumac**	**7.48**	**182**	Pn	**Pn**	**14 19 12.6**	**-0.1**
	4.9nm,0.3s,baz=317,slow=23,SNR=111						
DZM				Sn	**Sn**	**14 20 36.2**	**-0.5**
	2.3nm,0.3s,baz=133,slow=23,SNR=2.3						
DZM				LR	LR	14 21 48.4	
	comp=Z,488nm,19.5s,baz=10,slow=35						
	10nm,0.3s						
DZM	**Mont Dzumac**	**7.48**	**182**		**Pn**	**14 19 12.5**	**-0.3**
ONTNC	**Ouen Toro**	**7.71**	**182**		**Pn**	**14 19 16.0**	**+0.1**
OUENC	**Ouen Island, N**	**7.82**	**179**		**Pn**	**14 19 18.0**	**+0.6**
PINNC	**Pines Island,**	**8.05**	**175**	Pn	**Pn**	**14 19 20.9**	**+0.5**
HNR	**Honiara**	**8.32**	**307**	Pn	**Pn**	**14 19 25.3**	**+1.0**
	8.1nm,0.3s,baz=191,slow=13,SNR=2.0						
HNR	**Honiara**	**8.32**	**307**	Pn	**Pn**	**14 19 24.7**	**+0.4**
FUNA	**Funafuti**	**13.65**	**65**	Pn	**Pn**	**14 20 36.7**	**-0.5**
EIDS	**Eidsvold**	**18.16**	**231**	P	**Pn**	**14 21 35.3**	**-0.4**
CTA	**Charters Tower**	**20.25**	**251**	P	Pn	14 21 59.2	-1.6
	7.8nm,0.7s,baz=93,slow=7.7,SNR=10						
CTA				LR	LR	14 28 32.4	
	comp=Z,160nm,18.1s,baz=76,slow=33						
	7.8nm,0.7s						
CTAO	**Charters Tower**	**20.25**	**251**	P	Pn	14 21 59.4	-1.4
URZ	**Urewera**	**25.35**	**161**	LR	LR	14 31 37.1	
	comp=Z,173nm,18.3s,baz=31,slow=34						
BKZ	**Black Stump Fm**	**25.99**	**162**	P	**P**	**14 22 56.5**	**+0.6**
STKA	**Stephens Creek**	**28.67**	**229**	P	**P**	**14 23 20.8**	**+0.7**
	1.2nm,0.6s,baz=59,slow=13,SNR=4.1						
STKA				LR	LR	14 34 54.0	
	comp=Z,250nm,18.1s,baz=50,slow=37						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**31.31**	**256**	P	**P**	**14 23 41.8**	**-1.8**
	0.9nm,0.9s,baz=84,slow=8.1,SNR=3.7						
WRA				LR	LR	14 35 26.6	
	comp=Z,157nm,18.8s,baz=40,slow=35						
	0.9nm,0.9s						
AS31	**Alice Springs**	**32.20**	**249**	P	**P**	**14 23 49.3**	**-2.1**
ASAR	**Alice Springs**	**32.20**	**249**	P	**P**	**14 23 50.1**	**-1.2**
	0.9nm,0.8s,baz=74,slow=9.4,SNR=15						
ASAR				LR	LR	14 35 29.6	
	comp=Z,84nm,18.5s,baz=1.0,slow=34						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**32.20**	**249**	P	**P**	**14 23 49.2**	**-2.1**
RAR	**Rarotonga**	**32.56**	**107**	LR	LR	14 35 41.5	
	comp=Z,60nm,18.4s,baz=306,slow=34						
H11S2	**WAKE ISLAND Hy**	**32.84**	**0**	T	T	14 58 53.6	
	baz=182,slow=74,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**32.84**	**0**	T	T	14 58 55.2	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**32.85**	**0**	T	T	14 58 52.1	
	baz=182,slow=74,SNR=5.4						
BBOO	**Buckleboo**	**33.23**	**231**	P	**P**	**14 23 60.0**	**-0.3**
GUMO	**Guam**	**35.33**	**321**	LR	LR	14 39 11.5	
	comp=Z,47nm,18.1s,baz=144,slow=37						
KNRA	**Kununurra**	**36.59**	**263**	P	**P**	**14 24 27.9**	**-1.5**
KNRA				IAmb	IAmb	14 24 36.9	
	comp=Z,9.2nm,1.1s						
SIJI	**Sorong**	**37.55**	**288**	LR	LR	14 39 48.1	
	comp=Z,39nm,18.1s,baz=128,slow=36						
FORT	**Forrest**	**38.90**	**239**	P	**P**	**14 24 48.3**	**-0.4**
MORW	**Morawa**	**48.83**	**244**	P	**P**	**14 26 07.9**	**-0.7**
ASAJ	**Asahikawa**	**62.39**	**341**	LR	LR	14 48 52.3	
	comp=Z,27nm,20.8s,baz=132,slow=30						
VNDA	**Vanda**	**63.02**	**181**	P	**P**	**14 27 51.8**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=27,slow=6.8,SNR=5.9						
	comp=Z,0.5nm,0.7s						
SHEM	**Shemya Is, Ala**	**67.31**	**5**	LR	LR	14 53 50.2	
	comp=Z,24nm,21.7s,baz=18,slow=33						
PETK	**Petropavlovsk-**	**67.83**	**354**	P	**P**	**14 28 20.8**	**0.0**
	comp=Z,8.3nm,1.2s,baz=140,slow=11,SNR=1.2						
PETK				LR	LR	14 51 45.1	
	comp=Z,26nm,20.9s,baz=178,slow=30						
	comp=Z,8.3nm,1.2s						
KLR	**Kul'dur**	**70.62**	**337**	LR	LR	15 01 06.4	
	comp=Z,21nm,18.1s,baz=168,slow=37						
MA2	**Magadan**	**74.99**	**352**	LR	LR	14 57 59.1	
	comp=Z,32nm,19.1s,baz=145,slow=33						
QSPA	**South Pole Qui**	**75.47**	**180**	P	**P**	**14 29 07.5**	**+0.7**
QSPA				IAmb	IAmb	14 29 35.6	
	comp=Z,7.8nm,1.4s						
KDAK	**Kodiak Island**	**79.51**	**21**	LR	LR	14 57 56.1	
	comp=Z,37nm,19.8s,baz=223,slow=31						
BILL	**Bilibino**	**82.37**	**360**	P	**P**	**14 29 44.1**	**-0.1**
BILL				IAmb	IAmb	14 29 51.2	
	comp=Z,2.6nm,0.8s						
J20K	**Nowinta River**	**84.02**	**16**	P	**P**	**14 29 52.3**	**-0.6**
J20K				IAmb	IAmb	14 29 52.5	
	comp=Z,4.1nm,1.3s						
IMAR	**Indian Mountai**	**85.55**	**15**	P	**P**	**14 30 01.0**	**+0.4**
WRH	**Wood River Hil**	**85.96**	**18**	P	**P**	**14 30 01.2**	**-1.4**
WRH				IAmb	IAmb	14 30 26.9	
	comp=Z,4.2nm,1.1s						
HDA	**Harding Lake**	**86.26**	**18**	P	**P**	**14 30 03.8**	**-0.3**
HDA				IAmb	IAmb	14 30 13.1	
	comp=Z,2.5nm,0.8s						
MDM	**Murphy Dome**	**86.28**	**18**	P	**P**	**14 30 03.6**	**-0.6**
MDM				IAmb	IAmb	14 30 05.5	
	comp=Z,2.9nm,0.9s						
IL31		**86.54**	**18**	P	**P**	**14 30 04.6**	**-0.8**
IL31				IAmb	IAmb	14 30 12.5	
	comp=Z,2.1nm,0.8s						
ILAR	**Eielson Array**	**86.54**	**18**	P	**P**	**14 30 04.5**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=238,slow=5.1,SNR=12						
ILAR				LR	LR	15 03 40.1	
	comp=Z,24nm,19.4s,baz=200,slow=32						
	comp=Z,1.0nm,0.7s						
J25K	**Salcha River,**	**86.89**	**19**	P	**P**	**14 30 07.4**	**+0.1**
J25K				IAmb	IAmb	14 30 16.7	
	comp=Z,1.6nm,0.7s						
BELA	**Belgrano 2**	**86.94**	**176**	P	**P**	**14 30 06.4**	**-1.0**
BELA				IAmb	IAmb	14 30 12.8	
	comp=Z,3.4nm,1.3s						
BBB	**Bella Bella**	**86.95**	**34**	LR	LR	15 03 26.5	
	comp=Z,33nm,19.1s,baz=347,slow=32						
PFO	**Pinyon Flats O**	**87.36**	**54**	LR	LR	15 08 41.2	
	comp=Z,43nm,18.1s,baz=292,slow=35						
NVAR	**Mina Array Bea**	**87.59**	**49**	LR	LR	15 02 47.9	
	comp=Z,60nm,19.6s,baz=242,slow=31						
ELK	**Elko**	**90.60**	**48**	LR	LR	15 05 46.8	
	comp=Z,34nm,18.4s,baz=212,slow=32						
PMSA	**Palmer Station**	**92.12**	**161**	LR	LR	15 06 37.4	
	comp=Z,15nm,18.5s,baz=84,slow=32						
INK	**Inuvik**	**92.91**	**19**	LR	LR	15 06 04.1	
	comp=Z,28nm,21.6s,baz=200,slow=32						
PDAR	**Pinedale Array**	**95.25**	**47**	LR	LR	15 10 51.1	
	comp=Z,20nm,18.5s,baz=304,slow=34						
MKAR	**Makanchi Array**	**96.68**	**316**	P	**P**	**14 30 54.2**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=66,slow=2.9,SNR=2.9						
	comp=Z,0.6nm,0.9s						
YKA	**Yellowknife Ar**	**97.66**	**27**	P	Pdif	14 30 56.8	-0.3
	comp=Z,0.2nm,0.6s,baz=250,slow=4.8,SNR=2.3						
	comp=Z,0.2nm,0.6s						
ARCES	**ARCESS Array B**	**119.94**	**345**	PKP	**PKiKP**	**14 36 12.9**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=56,slow=4.5,SNR=5.2						
FINES	**FINESS Array B**	**125.35**	**338**	PKP	**PKiKP**	**14 36 25.7**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=78,slow=9.0,SNR=1.8						

IDC 17 14:59:25.7±3.1**, 22°.94N**×**143°.53E, h0**^{km}**, mb3.5**/4**,**
mbtmp3.5/4**, Error ellipse: s-maj=144.4km**
s-min=28.1km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.56**	**193**	P	P	15 07 31.4	-0.1
	0.3nm,0.4s,baz=13,slow=8.1,SNR=8.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**47.27**	**192**	P	P	15 08 00.6	-0.3
	0.2nm,0.9s,baz=12,slow=7.5,SNR=1.5						
	0.2nm,0.9s						
MKAR	**Makanchi Array**	**54.10**	**312**	P	P	15 08 52.4	+0.1
	0.3nm,0.7s,baz=103,slow=6.4,SNR=2.3						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**82.20**	**335**	P	P	15 11 48.4	0.0
	2.0nm,0.9s,baz=70,slow=6.3,SNR=6.4						
	2.0nm,0.9s						

IDC ***17*** *15:03:53.5±3.0, 5°.01S×69°.01E, h0^{km}, mb3.8/4, mbtmp3.8/4, MS3.4/10, Error ellipse: s-maj=109.4km s-min=34.0km az=53.0*

NEIC ***17*** *15:03:56.6±1.4, 4°.8S±0°.1×69°.16E±0°.08, h10^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=22.6km s-min=13.6km az=171.0*

ISC 17 15:03:55.7±1.5**, 4°.9S**±0°.3×**69°.3E**±0°.3**, h10**^{km}**, n24,**
σ**0**^{s}**.85**/11**, mb4.2**/8**, MS3.4**/9**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.06**	**129**	Pn	**Pn**	**15 04 57.7**	**-0.2**
H08S3	**Diego Garcia H**	**4.22**	**131**	T	T	15 09 37.1	
	baz=317,slow=75,SNR=5.0						
H08S1	**Diego Carcia H**	**4.22**	**131**	T	T	15 09 35.4	
	baz=317,slow=75,SNR=4.3						
H08S2	**Diego Garcia H**	**4.24**	**131**	T	T	15 09 36.5	
	baz=317,slow=75,SNR=5.7						
PALK	**Pallekele**	**16.60**	**44**	LR	LR	15 12 52.8	
	comp=Z,208nm,21.1s,baz=322,slow=32						
GSI	**Gunungsitoli**	**28.93**	**78**	P	**P**	**15 09 54.4**	**-1.1**
WSAR	**Wadi Sarin**	**29.80**	**340**	LR	LR	15 20 19.7	
	comp=Z,45nm,18.9s,baz=140,slow=33						
PSI	**Prapat**	**30.59**	**76**	LR	LR	15 21 50.8	
	comp=Z,142nm,18.4s,baz=264,slow=35						

CMAR	**Chiang Mai Arr**	**37.32**	**51**	LR	LR	15 24 32.2	
	comp=Z,43nm,19.9s,baz=200,slow=33						
GEYT	**Alibeck**	**43.82**	**347**	LR	LR	15 29 10.7	
	comp=Z,43nm,19.4s,baz=148,slow=35						
LBTB	**Lobatse**	**46.42**	**240**	LR	LR	15 30 02.5	
	comp=Z,56nm,18.0s,baz=80,slow=34						
BOSA	**Boshof**	**47.92**	**235**	LR	LR	15 29 29.8	
	comp=Z,36nm,20.2s,baz=19,slow=32						
GNI	**Garni**	**50.15**	**336**	LR	LR	15 34 09.6	
	comp=Z,24nm,19.1s,baz=342,slow=36						
MKAR	**Makanchi Array**	**52.71**	**11**	P	**P**	**15 13 11.7**	**+1.2**
	0.6nm,0.9s,baz=194,slow=8.8,SNR=2.2						
	0.6nm,0.9s						
SUR	**Sutherland**	**52.84**	**233**	LR	LR	15 33 59.8	
	comp=Z,42nm,18.1s,baz=124,slow=34						
KBZ	**Khabaz**	**53.90**	**337**	P	**P**	**15 13 18.9**	**-0.4**
	1.9nm,0.8s,baz=169,slow=4.6,SNR=4.6						
	1.9nm,0.8s						
ZAA0	**Zalesovo Array**	**60.03**	**11**	P	**P**	**15 14 03.0**	**+0.5**
ZAA0				IAmb	IAmb	15 14 12.8	
	comp=Z,2.0nm,1.0s						
ZALV	**Zalesovo Beam**	**60.03**	**11**	P	**P**	**15 14 02.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=205,slow=6.6,SNR=5.7						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**64.93**	**110**	P	**P**	**15 14 36.7**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=279,slow=6.7,SNR=5.4						
	comp=Z,0.5nm,0.7s						
WB2	**Warramunga Arr**	**64.95**	**110**	P	**P**	**15 14 37.2**	**+1.0**
WB2				IAmb	IAmb	15 14 38.0	
	comp=Z,6.4nm,1.2s						
WR0	**Warramunga Arr**	**65.12**	**110**	P	**P**	**15 14 38.4**	**+1.0**
WR0				IAmb	IAmb	15 14 54.9	
	comp=Z,8.7nm,1.4s						
GEC2	**GERESS Array S**	**72.00**	**325**	P	**P**	**15 15 19.3**	**-0.5**
GEC2				IAmb	IAmb	15 15 21.5	
	comp=Z,1.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**74.33**	**42**	LR	LR	15 49 57.7	
	comp=Z,30nm,19.3s,baz=273,slow=37						
NVAR	**Mina Array Bea**	**145.88**	**11**	PKPbc	**PKPdf**	**15 23 35.5**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=317,slow=1.9,SNR=4.0						

GUC 17 15:24:06.9±0.5**, 21°.53S**×**68°.38W, h137**^{km}±3^{km}**, ML3.5, 9C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.84**	**251**	⇑*i*P	Pn	15 24 29.2	0.0
PB09				*e*S	Sn	15 24 46.2	0.0
PB09				IAML		15 24 48.0	
	comp=N,393nm,0.2s						
PB01	**IPOC Station P**	**1.14**	**295**	⇑*i*P	Pn	15 24 31.1	-0.8
PB01				*e*S	Sn	15 24 49.5	-1.3
PB01				IAML		15 24 51.4	
	comp=E,1μm,0.2s						
LVC	**Limon Verde**	**1.18**	**204**	*e*P	Pn	15 24 32.2	-0.4
LVC				*e*S	Sn	15 24 51.9	-0.2
PB07	**IPOC Station P**	**1.41**	**262**	⇑*i*P	Pn	15 24 34.2	-0.5
PB07				*e*S	Sn	15 24 54.8	-1.1
PB07				IAML		15 24 55.4	
	comp=N,722nm,0.1s						
PB02	**IPOC Station P**	**1.43**	**278**	⇑*i*P	Pn	15 24 34.1	-0.6
PB02				*e*S	Sn	15 24 54.9	-1.2
PB02				IAML		15 24 55.5	
	comp=N,1μm,0.4s						
PB08	**IPOC Station P**	**1.56**	**332**	⇑*i*P	Pn	15 24 36.5	-0.1
PB08				*e*S	Sn	15 24 58.8	-0.4
PB08				IAML		15 25 00.2	
	comp=N,278nm,0.2s						
PB06	**IPOC Station P**	**1.61**	**223**	*i* P	Pn	15 24 36.7	-0.2
PB06				*e*S	Sn	15 24 59.4	-0.4
PB06				IAML		15 25 00.9	
	comp=N,422nm,0.2s						
PATCX	**Punta Patache**	**1.80**	**293**	⇑*e*P	Pn	15 24 38.1	-0.8
PATCX				*e*S	Sn	15 25 02.0	-1.5
PATCX				IAML		15 25 04.1	
	comp=N,721nm,0.2s						
PB04	**IPOC Station P**	**1.83**	**244**	⇑*e*P	Pn	15 24 38.7	-0.7
PB04				*e*S	Sn	15 25 02.3	-1.9
PB04				IAML		15 25 05.5	
	comp=N,452nm,0.1s						
HMBC	**Humberstone**	**1.88**	**311**	⇑*i*P	Pn	15 24 38.7	-1.2
HMBC				*e*S	Sn	15 25 03.3	-2.0
HMBC				IAML		15 25 05.1	
	comp=N,790nm,0.2s						
TA01	**Diego Aracena**	**1.94**	**299**	⇑*i*P	Pn	15 24 39.3	-1.2
TA01				*e*S	Sn	15 25 04.4	-1.8
TA01				IAML		15 25 05.5	
	comp=E,538nm,0.2s						
PB15	**IPOC Station P**	**1.95**	**211**	*e*P	Pn	15 24 40.8	-0.1
PB15				*e*S	Sn	15 25 06.7	-0.2
PB10	**IPOC Station P**	**2.82**	**225**	*e*P	Pn	15 24 50.4	-1.0
PB10				*e*S	Sn	15 25 23.1	-2.6
PB16	**IPOC Station P**	**3.35**	**341**	*e*P	Pn	15 24 58.9	0.0
PB16				*e*S	Sn	15 25 37.7	-1.2
PB12	**IPOC Station P**	**3.43**	**327**	*e*P	Pn	15 24 57.3	-2.2
PB12				*e*S	Sn	15 25 35.3	-4.8
GO02	**Mina Guanaco**	**3.78**	**197**	*e*P	Pn	15 25 03.4	-0.8
GO02				*e*S	Sn	15 25 46.9	-1.8
AC01	**Pan de Azucar**	**5.03**	**203**	*e*P	Pn	15 25 18.0	-2.4

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*IDC **17** 15:38:03.7±1.6, 32°.49N×130°.75E, h0^{km}, mb3.3/1, mbtmp3.2/4, ML2.8/3, Error ellipse: s-maj=39.5km s-min=11.2km az=99.0*

*NIED **17** 15:38:06.1, 32°.58N×130°.67E, h10^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.65; M$_{\theta\theta}$3.04; M$_{\phi\phi}$-1.39; M$_{r\theta}$1.03; M$_{\theta\phi}$2.08; M$_{\phi r}$-2.04; Fault plane solution: M$_0$4.05000×10^{14} NP1:φ$_s$32.00000°, δ60.00000°, λ-150.00000°. NP2:φ$_s$285.00000°, δ64.00000°, λ-34.00000°.*

*JMA **17** 15:38:06.1±0.1, 32°.6N±0°.2×130°.7E±0°.2, h10^{km}±1^{km}, MV3.6/20, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

ISC 17 15:38:05.7±0.8**, 32°.48N**±0°.04×**130°.65E**±0°.06**, h11**^{km}**, n10, σ1^{s}60**/15**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.15**	**63**	⇓*e*P	**Pg**	**15 38 09.0**	**-0.2**
JIU3				⇓*e*S	**Sg**	**15 38 11.2**	**-0.5**
JZO	**Okuchi**	**0.34**	**187**	*e*P	**Pn**	**15 38 14.3**	**-2.4**
JZO				*e*S	**Sb**	**15 38 20.6**	**+1.4**
JTA	**Tamana**	**0.49**	**349**	*e*P	**Pg**	**15 38 14.1**	**-1.3**
JTA				*e*S	**Sg**	**15 38 19.6**	**-2.3**
JNU	**Nakatsue**	**0.67**	**17**	Pg	**Pg**	**15 38 16.6**	**-2.1**
	166nm,0.3s,baz=189,slow=11,SNR=239						
JNU				Lg	Lg	15 38 24.4	
	baz=276,slow=18						
JNU				LR	LR	15 38 47.8	
	comp=Z,302nm,18.1s,baz=100,slow=69						
JTZ	**Takazaki**	**0.69**	**147**	*i* P	**Pn**	**15 38 21.3**	**-0.1**
JTZ				S	**Sn**	**15 38 31.4**	**-0.6**
KSRS	**Korea Array**	**5.45**	**336**	Pn	**Pn**	**15 39 26.4**	**-0.3**
	0.2nm,0.3s,baz=152,slow=14,SNR=3.0						
KSRS				Pg	**Pb**	**15 39 42.8**	**+2.0**
	0.9nm,0.3s,baz=153,slow=17,SNR=17						
KSRS				Lg	Lg	15 40 52.5	
	1.0nm,0.3s,baz=157,slow=30,SNR=8.2						
	0.4nm,0.5s						
JOW	**Kunigami**	**5.99**	**201**	Pn	**Pn**	**15 39 35.0**	**+0.6**
	1.2nm,0.3s,baz=83,slow=19,SNR=1.8						
	5.2nm,0.5s						
MJAR	**Matsushiro Arr**	**7.44**	**55**	Pn	**Pn**	**15 39 53.3**	**-0.9**
	0.1nm,0.3s,baz=242,slow=13,SNR=2.6						
	1.1nm,0.5s						
KLR	**Kul'dur**	**16.75**	**3**	Pn	**P**	**15 42 04.5**	**+2.0**
	0.1nm,0.3s,baz=182,slow=6.0,SNR=2.7						
WRA	**Warramunga Arr**	**52.24**	**176**	P	**P**	**15 47 15.8**	**-1.2**
	0.4nm,1.0s,baz=355,slow=7.9,SNR=1.9						
	0.4nm,1.0s						

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*IDC **17** 15:42:32.6±0.9, 27°.62N×128°.78E, h0^{km}, mb3.7/11, mbtmp3.7/11, MS3.2/1, Error ellipse: s-maj=28.8km s-min=15.8km az=97.0*

*NIED **17** 15:42:39.5, 27°.44N×128°.67E, h42^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.83; M$_{\theta\theta}$-1.00; M$_{\phi\phi}$-4.83; M$_{r\theta}$4.49; M$_{\theta\phi}$-3.44; M$_{\phi r}$1.81; Fault plane solution: M$_0$8.03000×10^{14} NP1: φ$_s$189.00000°, δ33.00000°, λ52.00000°. NP2:φ$_s$52.00000°, δ64.00000°, λ112.00000°.*

*JMA **17** 15:42:39.5±0.1, 27°.4N±0°.5×128°.7E±0°.9, h42^{km}, MD3.9/23, MV4.0/23, NEAR OKINAWAJIMA ISLAND*

JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .

ISC 17 15:42:38.6±0.8**, 27°.38N**±0°.03×**128°.76E**±0°.04**, h45**^{km}±7^{km}**, n45, σ1^{s}16**/50**, mb3.6**/11**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOKE	**Okinoerabujima**	**0.17**	**263**	*e*P	**Pn**	**15 42 46.4**	**+0.2**
JOKE				*e*S	**Sn**	**15 42 51.2**	**-0.4**
JOKE	**Okinoerabujima**	**0.17**	**263**	A	A	15 42 46.4	
	comp=E,85nm,0.2s,comp=E,38nm,0.2s						
JTK	**Tokunoshima**	**0.43**	**23**	*e*P	**Pn**	**15 42 49.2**	**+0.4**
JTK				*e*S	**Sn**	**15 42 55.8**	**-0.2**
JTK	**Tokunoshima**	**0.43**	**23**	A	A	15 42 49.2	
	comp=E,8.0nm,0.7s,comp=E,14nm,0.7s						
JYRO	**Yoronjima**	**0.45**	**218**	*e*P	**Pn**	**15 42 49.8**	**+0.8**
JYRO				*e*S	**Sn**	**15 42 56.7**	**+0.3**
JOW	**Kunigami**	**0.70**	**218**	Pn	**Pn**	**15 42 53.1**	**+0.9**
	336nm,0.3s,baz=86,slow=22,SNR=2847						
JOW				Sn	**Sn**	**15 43 02.9**	**+0.9**
	1μm,0.3s,baz=117,slow=27,SNR=22						
JOW				LR	LR	15 43 20.0	
	comp=Z,137nm,18.9s,baz=97,slow=52						
JOW	**Kunigami**	**0.70**	**218**	*e*P	**Pn**	**15 42 53.0**	**+0.9**
JOW				*e*S	**Sn**	**15 43 02.3**	**+0.4**
JOW	**Kunigami**	**0.70**	**218**	A	A	15 42 53.0	
	comp=E,11nm,0.3s,comp=E,9.0nm,0.2s						
JIH	**Iheya**	**0.79**	**244**	*e*P	**Pn**	**15 42 53.6**	**+0.3**
JIH				*e*S	**Sn**	**15 43 03.6**	**-0.4**
JIH	**Iheya**	**0.79**	**244**	A	A	15 42 53.6	
	comp=E,9.0nm,0.4s,comp=E,4.0nm,0.3s						
JAMN	**Amaminishikomi**	**0.93**	**23**	*e*P	**Pn**	**15 42 55.8**	**+0.5**
JAMN				*e*S	**Sn**	**15 43 07.7**	**+0.2**
JNTH	**Nagotoyohara**	**1.08**	**218**	*e*P	**Pn**	**15 42 58.5**	**+1.2**
JNTH				*e*S	**Sn**	**15 43 12.1**	**+0.9**
JAM	**Amami Oshima**	**1.27**	**36**	*e*P	**Pn**	**15 43 01.3**	**+1.5**
JAM				*e*S	**Sn**	**15 43 17.2**	**+1.5**
JZK	**Kikaishima**	**1.42**	**49**	*e*P	**Pn**	**15 43 04.2**	**+2.3**
JJT3	**Tamagusuku3**	**1.51**	**216**	*e*P	**Pn**	**15 43 05.2**	**+1.9**
JAGN	**Aguni-jima**	**1.57**	**240**	*e*P	**Pn**	**15 43 04.9**	**+0.9**
JAGN				*e*S	**Sn**	**15 43 23.0**	**-0.1**
JTAJ	**Takarajima**	**1.81**	**12**	P	**Pn**	**15 43 07.4**	**+0.2**
JTAJ				*e*S	**Sn**	**15 43 28.3**	**-0.6**
JKE	**Kume jima 2**	**2.06**	**240**	*e*P	**Pn**	**15 43 11.4**	**+0.7**
JNN	**Nakanoshima**	**2.64**	**22**	*e*P	**Pn**	**15 43 19.3**	**+0.7**
JNN				*e*S	**Sn**	**15 43 49.5**	**0.0**
JKDJ	**Kitadaitoujima**	**2.68**	**122**	P	**Pn**	**15 43 19.7**	**+0.5**
JKDJ				*e*S	**Sn**	**15 43 49.8**	**-0.6**
JMZ	**Minamidaito 2**	**2.70**	**125**	P	**Pn**	**15 43 19.7**	**+0.3**
JMZ				*e*S	**Sn**	**15 43 48.9**	**-1.9**
JYAK	**Yakushimahirau**	**3.23**	**28**	*e*P	**Pn**	**15 43 27.8**	**+1.0**
JYAK				*e*S	**Sn**	**15 44 03.9**	**-0.2**
JKC	**Kuchinoerabu**	**3.31**	**22**	*e*P	**Pn**	**15 43 28.8**	**+0.8**
JKC				*e*S	**Sn**	**15 44 07.4**	**+1.3**
JMTN	**Minamitane**	**3.54**	**31**	*e*P	**Pn**	**15 43 33.4**	**+2.3**
JNU	**Nakatsue**	**6.00**	**17**	Pn	**Pn**	**15 44 04.4**	**-0.5**
	baz=141,slow=22						
KSRS	**Korea Array**	**10.07**	**356**	Pn	**Pn**	**15 45 03.8**	**+3.2**
	0.1nm,0.3s,baz=171,slow=13,SNR=7.8						
CMAR	**Chiang Mai Arr**	**28.81**	**258**	P	**P**	**15 48 33.5**	**+1.0**
	0.5nm,0.6s,baz=52,slow=8.6,SNR=4.7						
	0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**35.67**	**94**	T	T	16 27 14.8	
	baz=290,slow=74,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**35.67**	**94**	T	T	16 27 14.8	
	baz=290,slow=74,SNR=7.8						
H11N3	**WAKE ISLAND Hy**	**35.69**	**94**	T	T	16 27 16.5	
	baz=290,slow=74,SNR=8.5						
H11S3	**WAKE ISLAND Hy**	**35.91**	**96**	T	T	16 27 37.7	
	baz=292,slow=75,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**35.92**	**96**	T	T	16 27 41.2	
	baz=292,slow=75,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**35.93**	**96**	T	T	16 27 41.9	
	baz=292,slow=75,SNR=5.0						
MKAR	**Makanchi Array**	**41.13**	**311**	P	**P**	**15 50 16.6**	**-1.6**
	0.2nm,0.4s,baz=81,slow=10,SNR=7.5						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**41.63**	**322**	P	**P**	**15 50 19.5**	**-2.7**
	0.6nm,0.4s,baz=109,slow=10.0,SNR=3.7						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**47.35**	**173**	P	**P**	**15 51 09.4**	**+1.2**
	0.4nm,0.7s,baz=353,slow=8.3,SNR=2.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**50.99**	**174**	P	**P**	**15 51 37.5**	**+1.5**
	0.2nm,0.6s,baz=8.0,slow=13,SNR=6.6						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**63.20**	**29**	P	**P**	**15 53 00.9**	**-0.9**
	0.3nm,0.6s,baz=308,slow=4.4,SNR=2.1						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**69.11**	**339**	P	**P**	**15 53 39.1**	**-0.6**
	1.7nm,0.8s,baz=73,slow=7.6,SNR=3.8						
	1.7nm,0.8s						
FINES	**FINESS Array B**	**72.10**	**330**	P	**P**	**15 53 57.7**	**-0.2**
	0.8nm,0.3s,baz=66,slow=5.3,SNR=16						
	0.8nm,0.3s						
AKASG	**Malin Array Be**	**74.97**	**320**	LR	LR	16 27 36.5	
	comp=Z,14nm,19.1s,baz=347,slow=36						
YKA	**Yellowknife Ar**	**77.28**	**25**	P	**P**	**15 54 27.8**	**-0.1**
	0.5nm,0.7s,baz=294,slow=4.9,SNR=5.5						
	0.5nm,0.7s						
NB2	**NORSAR Subarra**	**78.49**	**334**	P	**P**	**15 54 34.4**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=52,slow=5.6						
NOA	**NORSAR Array B**	**78.49**	**334**	P	**P**	**15 54 34.5**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=52,slow=5.6,SNR=6.8						
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**84.57**	**323**	P	**P**	**15 55 07.1**	**-0.1**
	comp=Z,0.2nm,0.2s,baz=69,slow=5.6,SNR=2.3						
	comp=Z,0.2nm,0.2s						

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*JMA **17** 15:50:49.2±0.3, 37°.1N±0°.6×14°2E±°, h11^{km}±3^{km}, MV3.8/28, E OFF FUKUSHIMA PREF*

*IDC **17** 15:50:51.5±1.8, 37°.12N×142°.41E, h0^{km}, mb3.2/3, mbtmp3.6/7, ML3.3/4, Error ellipse: s-maj=35.8km s-min=23.3km az=79.0*

ISC 17 15:50:51.8±2.6**, 37°.10N**±0°.06×**142°.23E**±0°.07**, h4**^{km}±16^{km}**, n22, σ1^{s}21**/23**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.11**	**284**	P	**Pb**	**15 51 13.0**	**-0.7**
JFK				*e*S	**Sn**	**15 51 30.1**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.15**	**270**	*e*P	**Pn**	**15 51 13.9**	**-0.7**
ONAJ				*e*S	**Sn**	**15 51 31.4**	**+0.6**
JMST	**Minamisoumatoc**	**1.24**	**300**	P	**Pn**	**15 51 14.4**	**-1.4**
JMST				*e*S	**Sg**	**15 51 32.8**	**+1.3**
JMM	**Marumori**	**1.37**	**304**	P	**Pn**	**15 51 16.5**	**-1.2**
JMM				*e*S	**Sb**	**15 51 36.1**	**+0.2**
JFT	**Otama**	**1.57**	**286**	P	**Pb**	**15 51 20.6**	**-0.8**
JFT				*e*S	**Sg**	**15 51 42.8**	**+0.7**
JOU	**Okura**	**1.77**	**316**	*e*P	**Pn**	**15 51 22.8**	**-0.4**
JFY	**Yanaizu**	**2.04**	**279**	*e*S	**Sb**	**15 51 55.0**	**-0.1**
JAG	**Ashikaga**	**2.33**	**254**	*e*P	**Pn**	**15 51 31.0**	**+0.1**
JYK	**Kaneyama**	**2.34**	**321**	*e*P	**Pn**	**15 51 31.0**	**0.0**
MJAR	**Matsushiro Arr**	**3.28**	**261**	Pn	**Pn**	**15 51 45.8**	**+1.8**
	0.5nm,0.3s,baz=82,slow=14,SNR=24						
MJAR				Sn	**Sb**	**15 52 27.6**	**-3.2**
	0.2nm,0.3s,baz=75,slow=33,SNR=4.5						
	4.1nm,0.4s						
JHJ	**Hachijo jima 2**	**4.45**	**207**	Pn	**Pn**	**15 52 00.8**	**+0.7**
	7.7nm,0.3s,baz=330,slow=21,SNR=15						
JHJ				Sn	**Sn**	**15 52 51.0**	**-1.3**
	10nm,0.3s,baz=226,slow=22,SNR=1.3						
	24nm,0.3s						
ASAJ	**Asahikawa**	**7.01**	**2**	Pn	**Pn**	**15 52 34.4**	**-0.8**
	0.5nm,0.3s,baz=256,slow=12,SNR=5.2						
	9.7nm,1.0s						
JCJ	**Chichijima**	**9.98**	**180**	Pn	**Pn**	**15 53 15.6**	**-0.4**
	0.6nm,0.3s,baz=281,slow=21,SNR=2.1						
JCJ				Sn	Sn	15 54 56.5	-12
	0.5nm,0.3s,baz=293,slow=23,SNR=1.2						
	30nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.63**	**122**	T	T	16 25 33.3	
	baz=314						
H11N1	**WAKE ISLAND Hy**	**27.63**	**122**	T	T	16 25 34.8	
	baz=314						
H11N3	**WAKE ISLAND Hy**	**27.64**	**122**	T	T	16 25 32.5	
	baz=314						
H11S1	**WAKE ISLAND Hy**	**28.35**	**124**	T	T	16 26 30.7	
	baz=317,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**28.35**	**124**	T	T	16 26 31.2	
	baz=317,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.37**	**124**	T	T	16 26 28.7	
	baz=317,slow=76,SNR=9.7						
MKAR	**Makanchi Array**	**44.63**	**302**	P	**P**	**15 59 06.8**	**+1.5**
	0.3nm,0.6s,baz=76,slow=6.1,SNR=4.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**57.23**	**189**	P	**P**	**16 00 40.3**	**0.0**
	0.2nm,0.6s,baz=4.7,slow=7.1,SNR=1.6						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**60.95**	**189**	P	**P**	**16 01 07.3**	**+1.2**
	0.1nm,0.6s,baz=13,slow=13,SNR=1.1						
	0.1nm,0.6s						

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*MAN **17** 15:58:33.8, 5°.01N×126°.95E, h6^{km}, mb4.7, ML3.6, MS3.4, Hypocentre not reviewed by the ISC*

*IDC **17** 15:58:36.1±1.3, 5°.84N×127°.45E, h0^{km}, mb3.4/4, mbtmp3.5/5, ML3.9/1, MS2.9/2, Error ellipse: s-maj=65.2km s-min=19.3km az=58.0*

*NEIC **17** 15:58:40.6±1.5, 5°.87N±0°.07×126°.67E±0°.09, h35^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=17.6km s-min=7.7km az=123.0*

ISC 17 15:58:41.0±0.9**, 5°.41N**±0°.06×**126°.90E**±0°.10**, h35**^{km}**, n19, σ3^{s}33**/23**, mb3.8**/8**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.37**	**301**	⇓*e*P	**Pn**	**15 59 02.1**	**-1.5**
DDMP				*e*S	**Sn**	**15 59 21.5**	**+0.9**
MATI	**Mati**	**1.66**	**337**	⇓*e*P	**Pn**	**15 59 09.4**	**+1.8**
MATI				*e*S	Sn	15 59 35.7	+8.1
GSPH	**General Santos**	**2.05**	**289**	⇑*i*P	**Pn**	**15 59 09.6**	**-3.5**
DAV	**Davao City (W)**	**2.11**	**322**	Pn	**Pn**	**15 59 15.0**	**+1.2**
	36nm,0.3s,baz=117,slow=8.4,SNR=5.7						
DAV				Sn	**Sn**	**15 59 43.8**	**+4.9**
	69nm,0.3s,baz=125,slow=9.5,SNR=2.7						
DAV				LR	LR	16 00 23.3	
	comp=Z,86nm,21.1s,baz=193,slow=48						
	110nm,0.4s						
DAV	**Davao City (W)**	**2.11**	**322**		Pn	15 59 06.8	-7.0
KCP	**Kidapawan**	**2.40**	**312**	⇑*e*P	Pn	15 59 22.4	+4.5
KCP				*i* S	**Sn**	**15 59 52.7**	**+6.6**
BIPH	**Bislig**	**2.81**	**349**	⇑*e*P	**Pn**	**15 59 24.9**	**+1.4**
BIPH				*e*S	**Sn**	**15 59 59.7**	**+3.6**
TOLI2	**Tolitoli**	**7.45**	**235**	Pn	**Pn**	**16 00 26.5**	**-0.7**
LUWI	**Luwuk**	**7.62**	**213**	Pn	**Pn**	**16 00 34.0**	**+4.5**
WB0	**Warramunga Arr**	**26.08**	**164**	P	**P**	**16 04 14.1**	**+2.5**
WB0				IAmb	IAmb	16 04 23.6	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**26.23**	**164**	P	**P**	**16 04 15.6**	**+2.7**
	comp=Z,0.3nm,0.5s,baz=342,slow=10,SNR=5.5						
WRA				LR	LR	16 15 55.2	
	comp=Z,82nm,18.1s,baz=152,slow=39						
	comp=Z,0.3nm,0.5s						
WB2	**Warramunga Arr**	**26.23**	**164**	P	**P**	**16 04 15.8**	**+2.9**
WB2				IAmb	IAmb	16 04 24.2	
	comp=Z,5.6nm,1.2s						
WR0	**Warramunga Arr**	**26.30**	**164**	P	**P**	**16 04 16.8**	**+3.3**
WR0				IAmb	IAmb	16 04 24.8	
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**29.69**	**167**	P	**P**	**16 04 47.5**	**+3.7**
	comp=Z,0.2nm,0.8s,baz=348,slow=8.5,SNR=2.1						
ASAR				PcP	**PcP**	**16 07 47.4**	**-0.2**
	comp=Z,0.4nm,1.0s,baz=3.9,slow=2.4,SNR=2.8						
	comp=Z,0.2nm,0.8s						
JGF	**Kuroka**	**31.56**	**16**	P	**P**	**16 04 55.6**	**-4.6**
KSAR	**Wonju Array Be**	**31.90**	**1**	P	**P**	**16 04 59.2**	**-3.9**
MKAR	**Makanchi Array**	**56.29**	**325**	P	**P**	**16 08 17.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=113,slow=7.3,SNR=6.8						
MKAR				PcP	**PcP**	**16 09 15.7**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=133,slow=4.6,SNR=4.3						
	comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**59.18**	**333**	P	**P**	**16 08 38.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=116,slow=3.4,SNR=1.5						
	comp=Z,0.3nm,0.5s						
KBL	**Kabul**	**60.65**	**307**	P	**P**	**16 08 45.2**	**-3.9**
KBL				IAmb	IAmb	16 08 45.7	
	comp=Z,3.4nm,0.5s						

PGC 17 16:05:32.5±1.9**, 51°.23N**×**131°.06W, h10**^{km}**, MLSn3.0**/23**, Mw3.6**/23**, 227km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**1.07**	**355**	P	Pg	16 05 51.1	-2.0
HG4B				S	Sg	16 06 03.8	-3.2
BNB	**Barry Inlet**	**1.42**	**343**	Pn	Pn	16 05 56.1	-2.3
BNB				Sn	Sn	16 06 13.1	-4.1
HOLB	**Holberg**	**1.94**	**107**	Pn	Pn	16 06 03.8	-1.8
HOLB				Sn	Sn	16 06 25.9	-4.1
BBB	**Bella Bella**	**2.07**	**61**	Pn	Pn	16 06 06.1	-1.2
BBB				Sn	Sn	16 06 29.0	-4.0
DIB	**Dawson Inlet,**	**2.16**	**337**	Pn	Pn	16 06 06.3	-2.3
DIB				Sn	Sn	16 06 30.3	-5.1
BNKB	**Banks Island**	**2.22**	**18**	Pn	Pn	16 06 08.0	-1.4
BNAB	**Bonilla**	**2.28**	**6**	Pn	Pn	16 06 09.4	-0.8
BPBC	**Brooks Peninsu**	**2.35**	**116**	Pn	Pn	16 06 09.1	-2.1
BPBC				Sn	Sn	16 06 36.6	-3.5
PHC	**Port Hardy**	**2.35**	**101**	Pn	Pn	16 06 08.9	-2.3
PHC				Sn	Sn	16 06 36.0	-4.1
PACB	**Port Alice, BC**	**2.40**	**108**	Pn	Pn	16 06 09.9	-1.8
PACB				Sn	Sn	16 06 37.9	-3.2
BUTB	**Butedale**	**2.44**	**40**	Pn	Pn	16 06 11.9	-0.5
BUTB				Sn	Sn	16 06 40.6	-1.7
MAYB	**Maynard**	**2.60**	**107**	Pn	Pn	16 06 12.9	-1.8
HWKB	**Hawksbury Isla**	**2.64**	**25**	Pn	Pn	16 06 14.4	-0.8
HWKB				Sn	Sn	16 06 44.5	-2.9
GRNB	**Grenville Isla**	**2.71**	**14**	Pn	Pn	16 06 15.3	-0.8
EDB	**Eliza Dome**	**2.85**	**117**	Pn	Pn	16 06 16.7	-1.4
WOSB	**Woss**	**3.05**	**109**	Pn	Pn	16 06 19.7	-1.1
RUBB	**Prince Rupert**	**3.14**	**9**	Pn	Pn	16 06 21.6	-0.4
KITB	**Kitimat**	**3.21**	**26**	Pn	Pn	16 06 22.7	-0.3
NCRB	**Newcastle Ridg**	**3.28**	**103**	Pn	Pn	16 06 23.2	-0.8
ETB	**Estevan Point**	**3.44**	**121**	Pn	Pn	16 06 24.7	-1.4
GDR	**Gold River**	**3.52**	**112**	Pn	Pn	16 06 26.1	-1.1
BTB	**Buttle Lake**	**3.96**	**114**	Pn	Pn	16 06 32.3	-1.1
OZB	**Mount Ozzard**	**4.24**	**120**	Pn	Pn	16 06 36.1	-1.1
UBRB	**Upper Baezaeko**	**4.61**	**66**	Pn	Pn	16 06 43.6	+1.2
UBRB				Sn	Sn	16 07 34.6	-1.4
MGB	**Mount Grey**	**4.66**	**116**	Pn	Pn	16 06 43.5	+0.4
SHB	**Sechelt**	**4.87**	**107**	Pn	Pn	16 06 46.3	+0.4
PFB	**Port Renfrew**	**5.04**	**119**	Pn	Pn	16 06 47.9	-0.2
FSB	**Fort Saint Jam**	**5.21**	**49**	Pn	Pn	16 06 51.4	+0.8
FSJB	**Fort St James**	**5.22**	**49**	Pn	Pn	16 06 51.3	+0.7

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*IDC **17** 16:06:57.4±3.4, 85°.49N×13°.89E, h0^{km}, mb3.9/2, mbtmp3.9/5, ML3.8/3, MS3.0/4, Error ellipse: s-maj=61.7km s-min=42.7km az=135.0*

*NEIC **17** 16:07:00.9±2.3, 85°.10N±0°.08×°±°, h10^{km}±2^{km}, mb4.5/5, Error ellipse: s-maj=26.9km s-min=13.2km az=259.0*

*IEPN **17** 16:07:03.0, 85°.24N×14°.13E, h10^{km}*

ISC 17 16:06:59.7±0.9**, 85°.10N**±0°.07×**13°.10E**±0°.07**, h10**^{km}**, n23, σ2^{s}17**/22**, mb4.3**/4**, MS2.9**/3**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.89**	**117**	*e*P	**Pn**	**16 08 28.2**	**+1.4**
ZFI2				*e*S	**Sn**	**16 09 31.2**	**-3.0**
	26nm,1.9s						
ZFI	**Zemlya Franca-**	**5.89**	**117**	*e*P	**Pn**	**16 08 28.3**	**+1.4**
ZFI				*e*S	**Sn**	**16 09 31.2**	**-3.1**
	27nm,1.2s						
KBS	**Kingsbay**	**6.22**	**182**	Pn	**Pn**	**16 08 32.7**	**+1.4**
KBS	**Kingsbay**	**6.22**	**182**	*e*P	**Pn**	**16 08 32.7**	**+1.4**
KBS				*e*S	**Sn**	**16 09 40.0**	**-2.3**
SPA0	**Spitsbergen Ar**	**6.98**	**174**	*e*P	**Pn**	**16 08 44.2**	**+2.4**
SPA0				*e*S	**Sn**	**16 09 58.4**	**-2.7**
SPITS	**Spitsbergen Ar**	**6.98**	**174**	Pn	**Pn**	**16 08 44.5**	**+2.7**
	baz=360,slow=16						
SPITS				Sn	**Sn**	**16 09 59.0**	**-2.1**
	baz=18,slow=14						
	4.9nm,0.3s						
SPB2	**Spitsbergen Ar**	**6.99**	**174**	Pn	**Pn**	**16 08 42.2**	**+0.3**
HOPEN	**Hopen**	**8.81**	**162**	*e*P	**Pn**	**16 09 09.3**	**+2.5**
HOPEN				*e*S	**Sn**	**16 10 43.3**	**-2.6**
EUNU	**Eureka**	**11.86**	**303**	Pn	Pn	16 09 43.4	-5.1
TULEG	**Thule**	**13.74**	**282**	Pn	**Pn**	**16 10 11.3**	**-2.7**
ARCES	**ARCESS Array B**	**15.81**	**164**	Pn	**Pn**	**16 10 43.3**	**+1.4**
	0.1nm,0.3s,baz=1.6,slow=11,SNR=8.6						
	2.7nm,0.8s						
ARCES	**ARCESS Array B**	**15.81**	**164**	IAmb	IAmb	16 10 58.2	
	comp=Z,18nm,1.4s						
RES	**Resolute Bay**	**17.56**	**303**	LR	LR	16 18 04.3	
	comp=Z,40nm,19.5s,baz=283,slow=38						

NRIK	Noril'sk	20.01	92	P	P	16 11 30.9	-1.1
	comp=Z,0.2nm,0.3s,baz=4.1,slow=14,SNR=2.2						
	comp=Z,0.8nm,0.3s						
NRIK	Noril'sk	20.01	92	IAmb	IAmb	16 11 38.8	
	comp=Z,3.7nm,1.1s						
FINES	FINESS Array B	23.94	165	P	P	16 12 15.1	+1.8
	comp=Z,1.6nm,0.7s,baz=353,slow=11,SNR=5.0						
	comp=Z,1.6nm,0.7s						
KONO	Kongsberg	25.60	184	P	P	16 12 29.7	+1.2
KONO				IAmb	IAmb	16 12 42.4	
	comp=Z,17nm,1.3s						
NRS	Narsarsuaq	26.73	247	P	P	16 12 37.8	-0.9
I21K	Tanana	29.76	347	P	P	16 13 06.6	+1.0
I21K				IAmb	IAmb	16 13 07.3	
	comp=Z,8.0nm,0.6s						
ZALV	Zalesovo Beam	34.96	102	LR	LR	16 31 22.1	
	comp=Z,20nm,18.3s,baz=34,slow=42						
DAVOX	Davos/Dischmat	38.49	184	LR	LR	16 29 59.9	
	comp=Z,11nm,19.1s,baz=314,slow=36						
PDAR	Pinedale Array	50.22	306	LR	LR	16 36 10.6	
	comp=Z,24nm,19.7s,baz=340,slow=35						
TORD	Torodi Ar. Bea	72.11	192	P	P	16 18 25.6	+1.8
	comp=Z,1.3nm,0.8s,baz=360,slow=6.2,SNR=6.7						
	comp=Z,1.3nm,0.8s						

ANF ***17*** *16:12:23.3±0.3, 31°99N×104°86W, h5^{km}, ML4.2/8, Error ellipse: s-maj=4.1km s-min=2.9km az=171.0*

NEIC ***17*** *16:12:23.1±0.9, 31°98N±0°05×104°85W±0°05, h5^{km}±2^{km}, mb_Lg3.1/72, Error ellipse: s-maj=10.0km s-min=4.8km az=142.0*

ISC 17 16:12:23.7±0.8**, 31°98N**±0°04×**104°83W**±0°04**, h10**^{km}**, n62, σ1^{s}14**/56**, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNTX	Cornudas Mount	0.54	239		Pg	16 12 33.3	-0.9
MNTX	Cornudas Mount	0.54	239	P	Pg	16 12 33.4	-0.9
	baz=58,SNR=144						
MNTX	Cornudas Mount	0.54	239	P	Pg	16 12 33.4	-0.9
	baz=58						
MNTX				S	Sb	16 12 42.0	-1.2
	baz=58						
KIDD	KIDD Seismic O	1.44	262	S	Sg	16 13 10.2	+0.2
	baz=81						
121A	Cookes Peak, D	2.56	283	Pn	Pn	16 13 04.9	-0.6
121A	Cookes Peak, D	2.56	283	P	Pn	16 13 05.2	-0.3
	baz=102,SNR=33						
121A				S	Sn	16 13 37.6	+0.9
	baz=102						
121A	Cookes Peak, D	2.56	283	P	Pn	16 13 05.1	-0.3
	baz=102						
121A				S	Sn	16 13 37.6	+0.9
	baz=102						
MSTX	Muleshoe	2.63	41		Pn	16 13 06.7	+0.3
MSTX				IAmb_Lg		16 13 51.7	
	comp=Z,57nm,0.8s						
MSTX	Muleshoe	2.63	41	P	Pn	16 13 07.2	+0.8
	baz=222,SNR=41						
MSTX				S	Sb	16 13 41.7	-1.8
	baz=222						
MSTX	Muleshoe	2.63	41	P	Pn	16 13 07.2	+0.8
	baz=222						
MSTX				S	Sb	16 13 41.7	-1.8
	baz=222						
BNM	Barren Site	2.64	326	Pn	Pn	16 13 06.9	+0.3
Y22A	Socorro	2.65	318	P	Pn	16 13 06.7	+0.1
	baz=137,SNR=34						
Y22D	IRIS PASSCAL I	2.73	321		Pn	16 13 07.5	-0.2
Y22D	IRIS PASSCAL I	2.73	321	Sb	Sb	16 13 48.0	+1.7
	baz=140						
Y22D	IRIS PASSCAL I	2.73	321	Sb	Sb	16 13 48.2	+2.0
	baz=140						
TX31	Lajitas Ar. Si	2.82	159		Pn	16 13 09.3	+0.4
TX31	Lajitas Ar. Si	2.82	159	Sb	Sg	16 13 53.6	-0.8
	baz=339						
TX32	Lajitas Array	2.82	159		Pn	16 13 08.8	-0.1
TXAR	Lajitas Array	2.82	159		Pn	16 13 09.6	+0.6
LENM	Lemitar	2.83	321		Pn	16 13 08.6	-0.5
ANMO	Albuquerque	3.26	336	Pn	Pn	16 13 14.8	-0.2
ANMO				IAmb_Lg		16 14 13.4	
	comp=Z,36nm,0.9s						
ANMO	Albuquerque	3.26	336	Pb	Pb	16 13 20.4	-1.3
	baz=155						
319A	Douglas	3.84	262	Pn	Pn	16 13 23.0	+0.1
319A				IAmb_Lg		16 14 31.1	
	comp=Z,30nm,0.8s						
AMTX	Amarillo	3.92	41	Pn	Pn	16 13 22.8	-1.2
AMTX	Amarillo	3.92	41	P	Pn	16 13 23.1	-0.9
	baz=223						
ABTX	Abilene, Hawle	4.44	80	Pn	Pn	16 13 30.8	-0.4
ABTX				IAmb_Lg		16 14 55.9	
	comp=Z,48nm,0.7s						
ABTX	Abilene, Hawle	4.44	80	P	Pn	16 13 31.0	-0.2
	baz=263,SNR=6.2						
ABTX				Sb	Sb	16 14 39.2	+3.7
	baz=263						
ABTX	Abilene, Hawle	4.44	80	P	Pn	16 13 31.0	-0.2
	baz=263						
JCT	Junction City	4.56	108	Pn	Pn	16 13 32.8	0.0
JCT	Junction City	4.56	108	P	Pn	16 13 33.4	+0.6
	baz=290,SNR=12						
JCT	Junction City	4.56	108	P	Pn	16 13 33.4	+0.6
	baz=290						
X18A	Snowflake	4.98	302		Pn	16 13 38.9	+0.1
X18A				IAmb_Lg		16 15 14.6	
	comp=E,25nm,1.2s						
HPIG		5.08	188	IAmb_Lg		16 15 16.7	
	comp=Z,27nm,1.2s						
T25A	Trinidad	5.16	4	Sb	Sb	16 14 57.7	+1.4
	baz=184						
WMOK	Wichita Mounta	5.76	60	Pn	Pn	16 13 49.0	-0.3
WMOK				IAmb_Lg		16 15 25.8	
	comp=Z,22nm,0.7s						
WMOK	Wichita Mounta	5.76	60	P	Pn	16 13 49.2	-0.1
	baz=243						
833A	Chaparral WMA,	5.95	126	Pn	Pn	16 13 50.1	-1.8
WHTX	Lake Whitney,	6.27	88	IAmb_Lg		16 15 53.8	
	comp=Z,30nm,0.8s						
435B	Jarrell	6.31	99	Pn	Pn	16 13 58.2	+1.4
X34A	Smith Ranch, M	6.42	64	Pn	Pn	16 13 56.4	-1.9
X34A				IAmb_Lg		16 15 56.7	
	comp=Z,35nm,1.1s						
WUAZ	Wupatki	6.49	305	IAmb_Lg		16 15 55.2	
	comp=Z,21nm,1.1s						
U32A	Winter Ranch,	6.53	46	Pn	Pn	16 14 00.1	+0.3
U32A				IAmb_Lg		16 15 52.0	
	comp=Z,30nm,0.7s						
Z35A	Perchaven, San	6.53	76	IAmb_Lg		16 16 03.5	
	comp=Z,27nm,0.7s						
214A	Organ Pipe Nat	6.78	272	Pn	Pn	16 14 03.5	+0.2
FNO	Franklin	7.01	60	IAmb_Lg		16 16 17.4	
	comp=Z,23nm,0.7s						
PV11	David Mesa, Pa	7.12	333	Pn	Pn	16 14 09.7	+1.6
PV11				IAmb_Lg		16 16 20.1	
	comp=Z,20nm,0.9s						
Y14A	Wickenburg	7.14	288		Pn	16 14 08.8	+0.5
KSCO	Kaye Shedlock'	7.24	14	IAmb_Lg		16 16 34.1	
	comp=Z,30nm,0.9s						
PV10	Paradox Valley	7.25	333	IAmb_Lg		16 16 15.3	
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	7.99	30	IAmb_Lg		16 16 51.0	
	comp=Z,18nm,0.8s						
R32A	Long Quarter,	8.15	36	IAmb_Lg		16 17 01.5	
	comp=Z,17nm,0.9s						
X37A	Clayton	8.34	69	Pn	Pn	16 14 25.4	+0.7
T35A	Sooner Cattle	8.45	52	IAmb_Lg		16 17 03.6	
	comp=Z,22nm,1.1s						
TUL1	Leonard	8.47	60	IAmb_Lg		16 17 00.7	
	comp=Z,17nm,0.9s						
OGNE	Ogallala	9.23	13	IAmb_Lg		16 17 19.8	
	comp=Z,15nm,0.8s						
W39A	Magazine	9.76	68	Pn	Pn	16 14 43.9	-0.2
MIAR	Mount Ida	9.77	72	Pn	Pn	16 14 44.0	-0.2
QSM	Queen of Sheba	10.75	295	Pn	Pn	16 14 59.4	+1.7
WHAR	Wooly Hollow	10.97	69	Pn	Pn	16 14 59.4	-1.3
W41B	Gary Mavity, V	10.97	70	Pn	Pn	16 14 59.0	-1.7
S39A	Bolivar	11.04	56	Pn	Pn	16 14 59.8	-1.9
FCAR	Ozark Folk Cen	11.25	66	Pn	Pn	16 15 03.1	-1.4

NOU ***17*** *16:31:24.6, 13°37S×166°22E, h0^{km}, MLv5.5/15, Vanuatu Islands*

IDC ***17*** *16:31:38.1±0.8, 14°45S×166°62E, h0^{km}, mb4.1/16, mbtmp4.1/18, ML4.5/2, MS3.8/13, Error ellipse: s-maj=25.0km s-min=17.6km az=115.0*

NEIC ***17*** *16:31:43.8±1.6, 14°49S±0°06×166°67E±0°09, h35^{km}±2^{km}, mb4.6/30, Error ellipse: s-maj=15.8km s-min=9.4km az=67.0*

ISC 17 16:31:42.6±0.5**, 14°48S**±0°06×**166°61E**±0°08**, h28**^{km}**, n85, σ0^{s}92**/74**, mb4.4**/32**, MS3.7**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.12	149		Pn	16 31 59.8	-2.7
SANVU					Sn	16 32 16.8	-0.1
SANVU	Saraoutou	1.12	149	P	Pn	16 32 01.5	-0.9
DVP	Devils Point	3.56	155	P	Pn	16 32 37.3	+1.2
RTV	Rentapao	3.73	152	P	Pn	16 32 40.4	+2.1
LIFNC	LIFOU	6.29	175	Pn	Pn	16 33 13.2	-0.4
LIFNC	LIFOU	6.29	175	P	Pn	16 33 13.6	+0.1
MARNC	Mare, Loyalty	7.09	169	Pn	Pn	16 33 24.4	-0.1
MARNC	Mare, Loyalty	7.09	169	P	Pn	16 33 25.6	+1.1
YATNC	Mamie plateau,	7.54	178	P	Pn	16 33 30.3	-0.5
DZM	Mont Dzumac	7.55	181	Pn	Pn	16 33 30.9	-0.1
	6.4nm,0.3s,baz=4.6,slow=9.4,SNR=132						
DZM				Sn	Sn	16 34 52.9	-2.8
	2.6nm,0.3s,baz=318,slow=23,SNR=6.2						
DZM				LR	LR	16 36 07.0	
	comp=Z,826nm,19.9s,baz=24,slow=36						
	12nm,0.3s						
DZM	Mont Dzumac	7.55	181		Pn	16 33 30.3	-0.6
NOUC	Port Laguerre	7.58	182	P	Pn	16 33 31.9	+0.6
ONTNC	Ouen Toro	7.78	181		Pn	16 33 33.9	-0.2
ONTNC	Ouen Toro	7.78	181	P	Pn	16 33 34.4	+0.3
OUENC	Ouen Island, N	7.90	178		Pn	16 33 35.9	+0.3
OUENC	Ouen Island, N	7.90	178	P	Pn	16 33 36.3	+0.7
PINNC	Pines Island,	8.12	175		Pn	16 33 38.7	0.0
PINNC	Pines Island,	8.12	175	P	Pn	16 33 40.0	+1.2
HNR	Honiara	8.23	307	Pn	Pn	16 33 39.3	-0.9
	7.8nm,0.3s,baz=209,slow=6.7,SNR=3.0						
HNR				LR	LR	16 36 48.8	
	comp=Z,434nm,18.4s,baz=87,slow=38						
	37nm,0.6s						
EIDS	Eidsvold	18.16	231	P	P	16 35 53.0	0.0
PMG	Port Moresby	19.68	283	LR	LR	16 42 21.6	
	comp=Z,158nm,18.8s,baz=13,slow=33						
CTA	Charters Tower	20.21	251	P	P	16 36 14.9	-0.6
	26nm,0.9s,baz=79,slow=12,SNR=16						
CTA				LR	LR	16 42 31.3	
	comp=Z,295nm,18.7s,baz=74,slow=32						
	26nm,0.9s						
CTAO	Charters Tower	20.21	251		Pn	16 36 17.1	-0.5
CTAO				IAmb	IAmb	16 36 18.0	
	comp=Z,31nm,0.9s						
RAO	Raoul Island	20.51	138	LR	LR	16 42 49.9	
	comp=Z,336nm,21.9s,baz=296,slow=33						
AFI	Afiamalu	20.96	91	LR	LR	16 42 49.3	
	comp=Z,124nm,18.9s,baz=208,slow=32						
COEN	Coen	22.72	268	P	P	16 36 42.2	-0.3
COEN				IAmb	IAmb	16 36 51.2	
	comp=Z,22nm,0.9s						
URZ	Urewera	25.44	160	LR	LR	16 45 54.9	
	comp=Z,221nm,19.7s,baz=31,slow=34						
URZ	Urewera	25.44	160	P	P	16 37 08.2	+0.2
URZ				IAmb	IAmb	16 37 32.0	
	comp=Z,24nm,1.1s						
BKZ	Black Stump Fm	26.08	162	P	P	16 37 14.8	+0.8
STKA	Stephens Creek	28.67	229	P	P	16 37 37.8	+0.5
	comp=Z,2.4nm,0.7s,baz=36,slow=12,SNR=4.0						
STKA				LR	LR	16 49 12.3	
	comp=Z,426nm,18.1s,baz=54,slow=37						
	comp=Z,2.4nm,0.7s						
STKA	Stephens Creek	28.67	229	IAmb	IAmb	16 37 46.1	
	comp=Z,1.5nm,1.1s						
RPZ	Rata Peaks	29.38	173	LR	LR	16 49 29.8	
	comp=Z,276nm,18.1s,baz=9.0,slow=36						
WR0	Warramunga Arr	31.08	255	P	P	16 37 58.1	-0.6
WB0	Warramunga Arr	31.20	256	P	P	16 37 58.6	-1.2
WB0				IAmb	IAmb	16 38 04.9	
	comp=Z,8.4nm,0.9s						
WB2	Warramunga Arr	31.25	255	P	P	16 37 59.5	-0.8
WB2				IAmb	IAmb	16 38 05.9	
	comp=Z,7.9nm,1.1s						
WRAB	Tennant Creek	31.25	255	P	P	16 37 59.4	-0.9
WRAB				IAmb	IAmb	16 38 05.3	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	31.27	255	P	P	16 37 59.1	-1.3
	comp=Z,3.0nm,1.0s,baz=85,slow=8.2,SNR=11						
WRA				PcP	PcP	16 40 54.1	-0.4
	comp=Z,0.9nm,1.0s,baz=80,slow=4.7,SNR=3.3						
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	31.27	255	IAmb	IAmb	16 38 05.2	
	comp=Z,0.6nm,1.4s						
AS31	Alice Springs	32.16	249	P	P	16 38 07.6	-0.6
ASAR	Alice Springs	32.16	249	P	P	16 38 07.5	-0.7
	comp=Z,4.0nm,1.1s,baz=77,slow=9.3,SNR=21						
ASAR				PcP	PcP	16 40 56.3	-0.7
	comp=Z,0.8nm,1.0s,baz=72,slow=4.2,SNR=3.1						
ASAR				LR	LR	16 49 37.1	
	comp=Z,235nm,19.2s,baz=110,slow=34						
	comp=Z,4.0nm,1.1s						
RAR	Rarotonga	32.65	107	LR	LR	16 50 28.6	
	comp=Z,39nm,18.0s,baz=285,slow=35						
H11S2	WAKE ISLAND Hy	32.77	0	T	T	17 13 11.6	
	baz=183,slow=76,SNR=5.5						
H11S3	WAKE ISLAND Hy	32.77	0	T	T	17 13 12.4	
	baz=183,slow=76,SNR=4.9						
H11S1	WAKE ISLAND Hy	32.78	0	T	T	17 13 10.1	
	baz=183,slow=76,SNR=4.5						
BBOO	Buckleboo	33.23	231	P	P	16 38 17.8	+0.3
GUMO	Guam	35.23	321	LR	LR	16 52 19.2	
	comp=Z,88nm,18.1s,baz=142,slow=35						
KNRA	Kununurra	36.53	263	P	P	16 38 45.5	-0.6
KNRA				IAmb	IAmb	16 38 51.8	
	comp=Z,13nm,0.9s						
FORT	Forrest	38.88	239	P	P	16 39 06.2	+0.4
LBMI	Labuha	41.03	286	P	P	16 39 37.1	+13
SANI	Sanana	41.96	283	P	P	16 39 33.6	+2.1
	comp=Z,9.5nm,0.6s						
NWAO	Narrogin (SRO)	48.33	239	P	P	16 40 22.4	+0.5
MPSI	Mapaga	48.49	284	P	P	16 40 24.9	+1.5
	comp=Z,12nm,1.3s						
MORW	Morawa	48.80	244	P	P	16 40 26.0	+0.4
STKI	Sintang	56.39	280	P	P	16 41 22.2	+0.2
	comp=Z,3.7nm,1.5s						
SBUM	Sibu	56.43	283	P	P	16 41 22.3	0.0
SBUM				IAmb	IAmb	16 41 25.1	
	comp=Z,8.8nm,1.2s						
MJAR	Matsushiro Arr	57.40	333	P	P	16 41 28.3	-0.4
	comp=Z,1.4nm,0.9s,baz=158,slow=9.3,SNR=3.5						
	comp=Z,1.4nm,0.9s						
KSM	Kuching	57.93	281	P	P	16 41 33.4	+0.5
VNDA	Vanda	63.09	181	P	P	16 42 07.6	+0.5
	comp=Z,0.9nm,0.9s,baz=355,slow=5.1,SNR=3.9						
VNDA				LR	LR	17 06 31.4	
	comp=Z,79nm,19.2s,baz=346,slow=33						
	comp=Z,0.9nm,0.9s						
VNDA	Vanda	63.09	181	P	P	16 42 08.5	+1.4
VNDA				IAmb	IAmb	16 42 26.6	
	comp=Z,4.0nm,1.4s						
KSRS	Korea Array	63.18	326	P	P	16 42 08.5	+0.3
	comp=Z,0.6nm,0.9s,baz=141,slow=7.8,SNR=3.0						
	comp=Z,0.6nm,0.9s						
RGRI	Rengat	65.04	276	P	P	16 42 33.5	+13
USRK	Ussuriysk Ar.	66.38	334	P	P	16 42 29.0	0.0
	comp=Z,1.8nm,0.8s,baz=134,slow=10,SNR=4.8						
	comp=Z,1.8nm,0.8s						
PETK	Petropavlovsk-	67.75	354	P	P	16 42 37.5	0.0
	comp=Z,3.1nm,1.0s,baz=148,slow=8.5,SNR=1.3						
	comp=Z,3.1nm,1.0s						
CM31	Chiang Mai Arr	74.27	294	P	P	16 43 17.7	0.0
CMAR	Chiang Mai Arr	74.27	294	P	P	16 43 18.2	+0.4
	comp=Z,1.9nm,1.0s,baz=122,slow=4.3,SNR=10						
	comp=Z,1.9nm,1.0s						
CMAR	Chiang Mai Arr	74.27	294	P	P	16 43 17.2	-0.5
CHTO	Chiang Mai	74.39	295	P	P	16 43 18.5	0.0
CHTO				IAmb	IAmb	16 43 27.3	
	comp=Z,6.2nm,1.2s						
QSPA	South Pole Qui	75.54	180	P	P	16 43 25.2	+0.7
QSPA				IAmb	IAmb	16 43 38.8	
	comp=Z,7.4nm,1.0s						
SONM	Songino Array	81.92	324	P	P	16 43 59.0	-0.7
	comp=Z,0.5nm,0.5s,baz=126,slow=7.3,SNR=1.1						
	comp=Z,0.5nm,0.5s						
BILL	Bilibino	82.30	360	P	P	16 44 01.8	+0.7
BILL				IAmb	IAmb	16 44 07.3	
	comp=Z,6.8nm,1.0s						
BMRM	Bremner River	84.58	22	P	P	16 44 14.8	+1.7
RND	Reindeer	84.91	18	P	P	16 44 14.8	+0.1
RND				IAmb	IAmb	16 44 24.3	
	comp=Z,8.9nm,1.1s						
IMAR	Indian Mountai	85.50	15	P	P	16 44 17.8	+0.3
M27K	Edge Creek, AK	86.48	21	P	P	16 44 21.8	-0.9
M27K				IAmb	IAmb	16 44 26.6	
	comp=Z,6.7nm,1.0s						
IL31		86.49	18	P	P	16 44 20.9	-1.4
IL31				IAmb	IAmb	16 44 35.5	
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	86.49	18	P	P	16 44 21.9	-0.6
	comp=Z,1.5nm,0.7s,baz=242,slow=5.5,SNR=14						
	comp=Z,1.5nm,0.7s						
ILAR	Eielson Array	86.49	18	P	P	16 44 20.6	-1.8
J25K	Salcha River,	86.84	19	P	P	16 44 25.3	+1.0
J25K				IAmb	IAmb	16 44 34.1	
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	96.59	317	P	P	16 45 09.5	-0.4
	comp=Z,1.5nm,1.1s,baz=101,slow=6.3,SNR=5.2						
	comp=Z,1.5nm,1.1s						
TXAR	Lajitas Array	96.72	62	P	P	16 45 10.2	-0.9
	comp=Z,0.1nm,0.6s,baz=234,slow=4.3,SNR=1.6						
	comp=Z,0.1nm,0.6s						
ZALV	Zalesovo Beam	96.82	324	P	P	16 45 10.7	0.0
	comp=Z,0.2nm,0.3s,baz=111,slow=6.3,SNR=1.7						
	comp=Z,0.2nm,0.3s						
YKA	Yellowknife Ar	97.62	27	P	P	16 45 13.6	-0.6
	comp=Z,0.1nm,0.4s,baz=255,slow=4.9,SNR=2.7						
	comp=Z,0.1nm,0.4s						
ARCES	ARCESS Array B	119.85	345	PKP	PKPdf	16 50 29.7	0.0
	comp=Z,0.7nm,0.4s,baz=81,slow=3.2,SNR=9.2						
FINES	FINESS Array B	125.26	338	PKP	PKPdf	16 50 39.9	-0.4
	comp=Z,1.0nm,0.8s,baz=88,slow=7.6,SNR=1.6						
TORD	Torodi Ar. Bea	165.29	267	PKPab	PKPab	16 52 43.4	+0.3
	comp=Z,1.0nm,1.0s,baz=123,slow=11,SNR=4.4						

SJA ***17*** *16:43:13.9±0.6, 21°50S×68°85W, h133^{km}±2^{km}, ML4.2, MW4.0*

IDC ***17*** *16:43:15.8±0.9, 21°55S×68°66W, h118^{km}±9^{km}, mb3.6/7, mbtmp3.9/9, Error ellipse: s-maj=27.0km s-min=16.2km az=89.0*

NEIC ***17*** *16:43:15.4±1.8, 21°53S±0°04×68°85W±0°09, h123^{km}±6^{km}, Error ellipse: s-maj=11.6km s-min=6.3km az=84.0*

GUC ***17*** *16:43:15.5±0.7, 21°52S×68°74W, h120^{km}±4^{km}, ML4.2*

VAO ***17*** *16:43:16.0±0.7, 21°37S×68°59W, h96^{km}±9^{km}, mb4.2*

ISC 17 16:43:15.4±0.5**, 21°50S**±0°03×**68°84W**±0°04**, h122**^{km}±5^{km}**, n105, σ1^{s}21**/141**, mb4.2**/11**, 4C-12D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.47	232		Pn	16 43 33.5	-0.3
PB09				Sn	Sn	16 43 47.2	-0.3
PB09	IPOC Station P	0.47	232	⇓*i*P	Pn	16 43 34.1	+0.4
PB09				*e*S	Sn	16 43 47.8	+0.2
PB09				IAML		16 43 48.6	
	comp=N,6µm,0.3s						
PB09	IPOC Station P	0.47	232	*e*P	Pn	16 43 32.5	-1.2
PB09				*e*P		16 43 34.1	
PB09				*e*S	Sn	16 43 48.6	+1.1
PB09				IAML		16 43 48.7	
	comp=Z,3µm,0.5s						
PB01	IPOC Station P	0.76	307		Pn	16 43 35.0	-0.6
PB01				Sn	Sn	16 43 50.6	-0.2
PB01	IPOC Station P	0.76	307	⇓*i*P	Pn	16 43 35.6	0.0
PB01				*i* S	Sn	16 43 50.9	+0.1
PB01				IAML		16 43 51.3	
	comp=N,6µm,0.2s						
PB01	IPOC Station P	0.76	307	*e*P	Pn	16 43 32.5	-3.1
PB01				*e*P		16 43 35.7	
PB01				*e*S	Sn	16 43 51.2	+0.4
PB01				IAML		16 43 52.2	
	comp=Z,3µm,0.2s						
PB07	IPOC Station P	1.00	257		Pn	16 43 38.0	+0.1
PB07				Sn	Sn	16 43 54.8	0.0
PB07	IPOC Station P	1.00	257	⇓*i*P	Pn	16 43 38.3	+0.5
PB07				*i* S	Sn	16 43 55.2	+0.4
PB07				IAML		16 43 57.4	
	comp=E,7µm,0.2s						
PB07	IPOC Station P	1.00	257	*e*P	Pn	16 43 32.5	-5.3
PB07				*e*P		16 43 38.0	
PB07				*e*S	Sn	16 43 55.6	+0.8
PB07				IAML		16 43 56.2	
	comp=Z,4µm,0.4s						
PB02	IPOC Station P	1.00	280		Pn	16 43 38.1	+0.3
PB02				Sn	Sn	16 43 54.8	+0.2
PB02	IPOC Station P	1.00	280	⇓*i*P	Pn	16 43 38.1	+0.3
PB02				*i* S	Sn	16 43 55.2	+0.5
PB02				IAML		16 43 56.9	
	comp=E,9µm,0.2s						
PB02	IPOC Station P	1.00	280	*e*P	Pn	16 43 32.5	-5.3
PB02				*e*P		16 43 38.0	
PB02				*e*P		16 43 38.0	
PB02				*e*S	Sn	16 43 55.6	+0.9
PB02				IAML		16 43 56.8	
	comp=Z,8µm,0.2s						
LVC	Limon Verde	1.11	183	P	Pn	16 43 39.1	-0.1
	comp=Z,430nm,0.3s,baz=355,slow=6.1,SNR=1296						
LVC				S	Sn	16 43 56.3	-0.8
	comp=Z,1µm,0.6s,baz=80,slow=2.0,SNR=203						
LVC	Limon Verde	1.11	183		Pn	16 43 38.9	-0.2
LVC	Limon Verde	1.11	183	⇓*e*P	Pn	16 43 38.6	-0.6
LVC				*e*S	Sn	16 43 56.1	-1.0
LVC	Limon Verde	1.11	183	*e*P	Pn	16 43 39.2	+0.1
LVC				*e*S	Sn	16 43 57.8	+0.7
LVC	Limon Verde	1.11	183	*e*P	Pn	16 43 39.2	+0.1
PB06	IPOC Station P	1.38	209		Pn	16 43 41.9	+0.1
PB06	IPOC Station P	1.38	209	⇑*i*P	Pn	16 43 42.1	+0.2
PB06				*e*S	Sn	16 44 02.0	+0.1
PB06				IAML		16 44 03.5	
	comp=E,2µm,0.5s						
PB06	IPOC Station P	1.38	209	*e*P	Pn	16 43 42.0	+0.2
PB06				*e*S	Sn	16 44 02.6	+0.8
PB06				IAML		16 44 04.0	
	comp=Z,1µm,0.5s						
PB08	IPOC Station P	1.38	348		Pn	16 43 42.5	+0.3
PB08	IPOC Station P	1.38	348	⇓*i*P	Pn	16 43 42.6	+0.5
PB08				*e*S	Sn	16 44 02.7	+0.4
PB08				IAML		16 44 04.0	
	comp=E,3µm,0.6s						
PB08	IPOC Station P	1.38	348	*e*P	Pn	16 43 42.0	-0.1
PB08				*e*S	Sn	16 44 03.2	+0.8
PB08				IAML		16 44 04.0	
	comp=Z,2µm,0.5s						
PATCX	Punta Patache	1.40	299		Pn	16 43 42.2	+0.2
PATCX	Punta Patache	1.40	299	⇓*i*P	Pn	16 43 42.3	+0.3
PATCX				*e*S	Sn	16 44 02.9	+0.8
PATCX				IAML		16 44 05.4	
	comp=N,2µm,0.4s						
PATCX	Punta Patache	1.40	299	*e*P	Pn	16 43 42.0	0.0
PATCX				*e*P	P	16 43 42.5	+0.5
PATCX				*e*P	P	16 43 42.5	+0.5
PATCX				*e*S	Sn	16 44 03.0	+0.9
PATCX				IAML		16 44 06.3	
	comp=Z,1µm,0.4s						
PB04	IPOC Station P	1.47	235		Pn	16 43 43.0	+0.1
PB04	IPOC Station P	1.47	235	⇑*i*P	Pn	16 43 43.1	+0.2
PB04				*e*S	Sn	16 44 03.8	+0.1
PB04				IAML		16 44 06.5	
	comp=N,1µm,0.2s						
PB04	IPOC Station P	1.47	235	*e*P	Pn	16 43 43.0	+0.1
PB04				*e*P		16 43 43.5	
PB04				*e*S	Sn	16 44 04.3	+0.6
PB04				IAML		16 44 06.7	
	comp=Z,1µm,0.2s						
TA01	Diego Aracena	1.56	306		Pn	16 43 43.5	-0.2
TA01	Diego Aracena	1.56	306	⇓*i*P	Pn	16 43 43.7	0.0
TA01				*e*S	Sn	16 44 05.5	+0.3
TA01				IAML		16 44 07.1	
	comp=E,2µm,0.2s						
TA01	Diego Aracena	1.56	306	*e*P	Pn	16 43 43.0	-0.7
TA01				*e*P		16 43 43.7	
TA01				*e*S	Sn	16 44 05.9	+0.7
TA01				IAML		16 44 07.2	
	comp=Z,902nm,0.2s						
HMBC	Humberstone	1.56	321	⇓*i*P	Pn	16 43 43.6	-0.3
HMBC				*e*S	Sn	16 44 05.4	-0.1
HMBC				IAML		16 44 07.5	
	comp=E,6µm,0.4s						
AF01	San Pedro de A	1.57	157		Pn	16 43 44.4	+0.2
AF01	San Pedro de A	1.57	157	⇓*i*P	Pn	16 43 44.6	+0.4
AF01				*i* S	Sn	16 44 06.9	+0.9
PB15	IPOC Station P	1.80	199		Pn	16 43 46.4	-0.4
PB15	IPOC Station P	1.80	199	⇑*i*P	Pn	16 43 46.9	+0.2

PB15				*e*S	**Sn**	**16 44 11.0**	**+0.3**
PB15				IAML		16 44 20.2	
	comp=E,4μm,0.3s						
PB15	**IPOC Station P**	**1.80**	**199**	*e*P	**Pn**	**16 43 47.0**	**+0.2**
PB15				*e*P		16 43 47.3	
PB15				*e*S	**Sn**	**16 44 12.2**	**+1.5**
PB15				IAML		16 44 15.5	
	comp=Z,2μm,0.4s						
PB11	**IPOC Station P**	**1.89**	**336**		**Pn**	**16 43 47.4**	**-0.5**
PB11	**IPOC Station P**	**1.89**	**336**	⇓*i*P	**Pn**	**16 43 47.6**	**-0.3**
PB11				*e*S	**Sn**	**16 44 12.4**	**-0.2**
PB11				IAML		16 44 14.6	
	comp=N,4μm,0.5s						
PB11	**IPOC Station P**	**1.89**	**336**	*e*P	**Pn**	**16 43 47.0**	**-0.9**
PB11				*e*P		16 43 47.8	
PB11				*e*S	**Sn**	**16 44 12.9**	**+0.3**
PB11				IAML		16 44 16.1	
	comp=Z,2μm,0.4s						
PB10	**IPOC Station P**	**2.55**	**218**	Pn	**Pn**	**16 43 55.6**	**-0.4**
PB10	**IPOC Station P**	**2.55**	**218**	*e*P	**Pn**	**16 43 55.6**	**-0.4**
PB10				*e*S	**Sn**	**16 44 24.2**	**-3.1**
PB10	**IPOC Station P**	**2.55**	**218**	*e*P	**Pn**	**16 43 55.8**	**-0.2**
PB10				*e*S	**Sn**	**16 44 26.8**	**-0.5**
YJA	**Yavi**	**3.16**	**103**	*e*P	**Pn**	**16 44 05.0**	**+0.6**
YJA				*e*P		16 44 05.3	
YJA				*e*S	**Sn**	**16 44 43.6**	**+1.5**
PB12	**IPOC Station P**	**3.19**	**334**	Pn	**Pn**	**16 44 03.0**	**-1.5**
PB12	**IPOC Station P**	**3.19**	**334**	⇓*e*P	**Pn**	**16 44 03.0**	**-1.5**
PB12				*e*S	**Sn**	**16 44 39.8**	**-2.5**
PB12				IAML		16 44 47.3	
	comp=E,465nm,0.3s						
PB12	**IPOC Station P**	**3.19**	**334**	*e*P	**Pn**	**16 44 03.2**	**-1.3**
PB12				*e*P		16 44 03.2	
PB12				*e*S	**Sn**	**16 44 41.2**	**-1.1**
PB16	**IPOC Station P**	**3.21**	**349**	Pn	**Pn**	**16 44 05.3**	**+0.1**
PB16	**IPOC Station P**	**3.21**	**349**	⇑*i*P	**Pn**	**16 44 05.6**	**+0.4**
PB16				*e*S	**Sn**	**16 44 39.4**	**-4.1**
PB16				IAML		16 44 48.1	
	comp=E,194nm,0.5s						
PB16	**IPOC Station P**	**3.21**	**349**	*e*P	**Pn**	**16 44 05.0**	**-0.2**
PB16				*e*P		16 44 05.9	
PB16				*e*P		16 44 06.0	
PB16				*e*S	Sn	16 44 32.5	-11
AP01	**Chacalluta**	**3.42**	**335**	Pn	**Pn**	**16 44 07.8**	**+0.4**
PB14	**IPOC Station P**	**3.43**	**205**	Pn	**Pn**	**16 44 06.8**	**-0.9**
PB14	**IPOC Station P**	**3.43**	**205**	*e*P	**Pn**	**16 44 07.4**	**-0.3**
PB14				*e*S	**Sn**	**16 44 47.3**	**-0.8**
HJA	**Humahuaca**	**3.60**	**119**	*e*P	**Pn**	**16 44 10.9**	**+0.8**
GO02	**Mina Guanaco**	**3.71**	**191**	Pn	**Pn**	**16 44 10.2**	**-1.2**
GO02	**Mina Guanaco**	**3.71**	**191**	*e*P	**Pn**	**16 44 10.5**	**-1.0**
GO02				*e*S	**Sn**	**16 44 53.8**	**-1.0**
SLA	**San Lorenzo**	**4.44**	**137**	*e*P	**Pn**	**16 44 22.0**	**+0.9**
AC01	**Pan de Azucar**	**4.90**	**199**		**Pn**	**16 44 24.7**	**-2.4**
AC01	**Pan de Azucar**	**4.90**	**199**	*e*P	**Pn**	**16 44 24.6**	**-2.4**
AC01	**Pan de Azucar**	**4.90**	**199**	*e*P	**Pn**	**16 44 25.0**	**-2.1**
AC01				*e*S	**Sn**	**16 45 20.7**	**-2.1**
LPAZ	**La Paz**	**5.23**	**8**	P	**Pn**	**16 44 33.6**	**+1.5**
	comp=E,16nm,0.4s,baz=194,slow=5.9,SNR=80						
LPAZ	**La Paz**	**5.23**	**8**	Pn	**Pn**	**16 44 32.7**	**+0.6**
AC02	**Maricunga**	**5.32**	**183**	Pn	**Pn**	**16 44 31.9**	**-1.3**
AC02	**Maricunga**	**5.32**	**183**	*e*P	**Pn**	**16 44 32.6**	**-0.5**
AC06	**Mina Casimiro**	**5.99**	**193**		**Pn**	**16 44 38.5**	**-3.3**
GO03	**Copiap**	**6.20**	**192**		**Pn**	**16 44 41.6**	**-3.0**
AC04	**Llanos de Chal**	**6.98**	**196**	Pn	Pn	16 44 50.2	-4.8
LCO	**Las Campanas**	**7.67**	**192**		**Pn**	**16 45 00.1**	**-4.6**
CO01	**Juntas del Tor**	**8.52**	**187**		**Pn**	**16 45 13.1**	**-3.0**
GO04	**Tololo Observa**	**8.81**	**191**	Pn	Pn	16 45 14.9	-5.2
CO06	**Fray Jorge**	**9.47**	**195**	Pn	Pn	16 45 22.9	-5.9
CO02	**Combarbal**	**9.86**	**191**	Pn	Pn	16 45 28.5	-5.5
PTLB	**Pontes e Lacer**	**11.00**	**58**	*e*P	**Pn**	**16 45 45.6**	**-3.8**
VILB	**Vilhena**	**11.84**	**46**	*e*P	**Pn**	**16 45 57.8**	**-2.8**
MT02	**Curacav**	**11.89**	**189**	Pn	**Pn**	**16 46 00.2**	**-0.9**
MT01	**Popeta**	**12.50**	**189**		**Pn**	**16 46 08.1**	**-1.0**
BO01	**Tunca**	**12.99**	**188**	Pn	**Pn**	**16 46 14.8**	**-0.7**
SAML	**Samuel**	**13.62**	**24**	Pn	**Pn**	**16 46 21.5**	**-2.2**
SALV	**Santo Antonio**	**13.64**	**68**	*e*P	**Pn**	**16 46 22.7**	**-1.3**
ITAB	**Concordia**	**16.25**	**114**	P	**Pn**	**16 46 55.4**	**-1.4**
ITAB				IAmb	IAmb	16 47 04.5	
	comp=Z,17nm,1.2s						
CLDB	**Colider**	**16.38**	**52**	*e*P	**Pn**	**16 46 57.6**	**-0.7**
FRTB	**Fartura**	**17.92**	**100**	*e*P	**P**	**16 47 15.2**	**-0.7**
PLCA	**Paso Flores**	**19.23**	**184**	P	**P**	**16 47 30.1**	**0.0**
	comp=Z,0.9nm,0.6s,baz=351,slow=10.0,SNR=10						
PLCA	**Paso Flores**	**19.23**	**184**	P	**P**	**16 47 29.7**	**-0.4**
LL04	**Puerto Octay**	**19.59**	**188**	Pn	**P**	**16 47 34.6**	**+0.7**
LL04				IAmb	IAmb	16 47 35.3	
	comp=Z,11nm,0.8s						
MACA	**Manacapuru-AM**	**19.88**	**25**	*e*P	**P**	**16 47 38.0**	**+0.8**
BDFB	**Brasilia**	**20.58**	**77**	P	**P**	**16 47 44.6**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=216,slow=5.5,SNR=3.3						
	comp=Z,2.6nm,0.5s						
BDFB	**Brasilia**	**20.58**	**77**	IAmb	IAmb	16 47 52.2	
	comp=Z,11nm,1.2s						
JANB	**Januaria**	**24.14**	**79**	*e*P	**P**	**16 48 19.9**	**-0.4**
WVT	**Waverly**	**60.07**	**342**	P	**P**	**16 53 09.8**	**+0.2**
WVT				IAmb	IAmb	16 53 10.2	
	comp=Z,3.1nm,0.7s						
MIAR	**Mount Ida**	**60.50**	**337**	P	**P**	**16 53 13.2**	**+0.6**
MIAR				IAmb	IAmb	16 53 14.0	
	comp=Z,3.2nm,0.8s						
TXAR	**Lajitas Array**	**60.66**	**325**	P	**P**	**16 53 15.6**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=152,slow=10,SNR=2.1						
	comp=Z,0.3nm,0.5s						
SNAA	**Sanae**	**62.26**	**161**	P	**P**	**16 53 24.8**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=354,slow=23,SNR=6.4						
	comp=Z,0.7nm,0.5s						
SNAA	**Sanae**	**62.26**	**161**	P	**P**	**16 53 24.5**	**+0.4**
SNAA				IAmb	IAmb	16 53 34.5	
	comp=Z,5.1nm,1.4s						
CCM	**Cathedral Cave**	**62.87**	**340**	P	**P**	**16 53 29.1**	**+0.8**
CCM				IAmb	IAmb	16 53 29.8	
	comp=Z,3.8nm,0.8s						
S39A	**Bolivar**	**63.22**	**338**	P	**P**	**16 53 31.1**	**+0.4**
R40A	**Maddies Statio**	**63.41**	**340**	P	**P**	**16 53 32.2**	**+0.3**
PDAR	**Pinedale Array**	**74.14**	**330**	P	**P**	**16 54 40.3**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=155,slow=5.0,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TOA0	**Torodi Ar. Sit**	**77.30**	**70**	P	**P**	**16 54 56.0**	**-1.0**
TOA0				IAmb	IAmb	16 55 10.1	
	comp=Z,7.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P	**P**	**16 54 56.1**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=256,slow=6.0,SNR=16						
	comp=Z,2.8nm,0.8s						
FCC	**Fort Churchill**	**82.65**	**347**	P	**P**	**16 55 24.2**	**-0.4**
FCC				IAmb	IAmb	16 55 52.3	
	comp=Z,4.4nm,1.3s						
MAW	**Mawson**	**84.31**	**163**	P	**P**	**16 55 34.1**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=270,slow=7.1,SNR=2.5						
	comp=Z,1.1nm,0.5s						
YKA	**Yellowknife Ar**	**91.21**	**341**	P	**P**	**16 56 07.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=132,slow=4.5,SNR=17						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**145.60**	**36**	PKPbc	**PKPab**	**17 02 40.6**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=322,slow=3.9,SNR=20						
MKAR				pPKPbc	**pPKPdf**	**17 03 13.9**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=329,slow=5.0,SNR=3.6						

TAP ***17*** *16:45:50.0, 24.°49N×121.°82E, h72^{km}, ML2.6, D*
JMA ***17*** *16:45:50.5±0.1, 24.°5N±0.°3×121.°9E±0.°4, h64^{km}±1^{km},*
TAIWAN REGION
ISC 17 16:45:50.5±1.4**, 24.°49N**±0.°03×**121.°85E**±0.°03**, h70**^{km}±7^{km}**,**
n65, σ0.^{s}**69**/112**, 12C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.08**	**234**	*i* P	**Pn**	**16 46 00.6**	**-0.1**
	baz=216						
EWUT				*i* S	**Sn**	**16 46 08.6**	**+0.4**
	baz=216						
TWC	**Suao**	**0.12**	**359**	⇑*i*P	**Pn**	**16 46 00.9**	**+0.1**
	baz=18						
TWC				S	**Sn**	**16 46 08.6**	**+0.3**
	baz=18						
ENA	**Nanau**	**0.12**	**237**	⇑*i*P	**Pn**	**16 46 00.8**	**0.0**
	baz=223						
ENA				*e*S	**Sn**	**16 46 09.0**	**+0.7**
	baz=223						
NDS	**Dongshan**	**0.19**	**319**	*i* P	**Pn**	**16 46 01.1**	**0.0**
	baz=327						
NDS				S	**Sn**	**16 46 09.2**	**+0.3**
	baz=327						
TWE	**Neicheng**	**0.28**	**324**	P	**Pn**	**16 46 01.7**	**+0.1**
	baz=331						
TWE				*e*S	**Sn**	**16 46 10.2**	**+0.6**
	baz=331						
ILA	**Ilan**	**0.29**	**341**	*e*P	**Pn**	**16 46 02.2**	**+0.6**
	baz=348						
ILA				*e*S	**Sn**	**16 46 10.7**	**+1.0**
	baz=348						
ENTT	**Nioudou**	**0.30**	**299**	⇑*i*P	**Pn**	**16 46 01.6**	**-0.1**
	baz=303						
ENTT				*e*S	**Sn**	**16 46 09.9**	**0.0**
	baz=303						
LATG	**Datong**	**0.30**	**278**	⇑*i*P	**Pn**	**16 46 01.6**	**-0.2**
	baz=279						
LATG				*e*S	**Sn**	**16 46 10.1**	**-0.1**
	baz=279						
NDT	**Datong Townshi**	**0.33**	**289**	⇑*i*P	**Pn**	**16 46 01.9**	**0.0**
	baz=291						
NDT				*e*S	**Sn**	**16 46 10.0**	**-0.3**
	baz=291						
EGS		**0.36**	**12**	*e*P	**Pn**	**16 46 03.6**	**+1.5**
	baz=18						
FUSB	**Fushanzhiwuyua**	**0.36**	**318**	⇑*i*P	**Pn**	**16 46 02.0**	**-0.2**
	baz=321						
FUSB				*e*S	**Sn**	**16 46 10.4**	**-0.4**
	baz=321						
NTC	**Toucheng**	**0.36**	**357**	*e*P	**Pn**	**16 46 02.7**	**+0.5**
	baz=1.0						
NTC				*e*S	**Sn**	**16 46 11.9**	**+1.3**
	baz=1.0						
ETL	**Fush Village**	**0.39**	**212**	*e*P	**Pn**	**16 46 01.9**	**-0.5**
	baz=208						
NACB	**Ninganchiao**	**0.40**	**216**	⇑*i*P	**Pn**	**16 46 01.9**	**-0.5**
	baz=212						
NACB				*e*S	**Sn**	**16 46 10.6**	**-0.5**
	baz=212						
NWLT	**Wulai**	**0.42**	**312**	⇓*i*P	**Pn**	**16 46 02.3**	**-0.4**
	baz=314						
NWLT				*e*S	**Sn**	**16 46 10.7**	**-0.9**
	baz=314						
NNSB	**Datong**	**0.43**	**261**	⇑P	**Pn**	**16 46 02.8**	**0.0**
	baz=260						
NNSB				*e*S	**Sn**	**16 46 11.4**	**-0.5**
	baz=260						
NNS	**Nan Shan**	**0.44**	**263**	⇑*i*P	**Pn**	**16 46 02.9**	**0.0**
	baz=262						
NNS				*e*S	**Sn**	**16 46 11.8**	**-0.3**
	baz=262						
ETLH	**Xiulin Townshi**	**0.44**	**230**	⇑*i*P	**Pn**	**16 46 02.5**	**-0.4**
	baz=227						
ETLH				*e*S	**Sn**	**16 46 11.5**	**-0.5**
	baz=227						
TWD	**Chiawan**	**0.47**	**209**	⇓P	**Pn**	**16 46 02.7**	**-0.4**
	baz=205						
TWD				*e*S	**Sn**	**16 46 12.1**	**-0.2**
	baz=205						
TIPB	**Shuangxi**	**0.48**	**357**	P	**Pn**	**16 46 03.2**	**0.0**
TIPB				*e*S	**Sn**	**16 46 12.3**	**-0.2**
NSK	**Sanguang**	**0.48**	**292**	⇑*i*P	**Pn**	**16 46 02.8**	**-0.4**
	baz=293						
NSK				*e*S	**Sn**	**16 46 11.5**	**-1.1**
	baz=293						
TWB1	**Santiao Chiao**	**0.53**	**14**	*e*P	**Pn**	**16 46 03.3**	**-0.3**
	baz=17						
TWA	**Mucha**	**0.54**	**333**	*e*P	**Pn**	**16 46 03.4**	**-0.3**
	baz=337						
TWA				*e*S	**Sn**	**16 46 12.9**	**-0.7**
	baz=337						
NHDH	**Xindian Distri**	**0.55**	**328**	*e*P	**Pn**	**16 46 03.3**	**-0.6**
	baz=330						
NHDH				*e*S	**Sn**	**16 46 12.7**	**-1.0**
	baz=330						
HWA	**Hwalien**	**0.56**	**204**	*e*P	**Pn**	**16 46 04.1**	**+0.1**
	baz=199						
NWF	**Wu-fen Shan**	**0.58**	**354**	*e*P	**Pn**	**16 46 03.9**	**-0.3**
	baz=356						
NWF				*e*S	**Sn**	**16 46 14.2**	**0.0**
	baz=356						
WFSB	**Wu-fen Shan**	**0.58**	**354**	*e*P	**Pn**	**16 46 04.3**	**+0.2**
	baz=356						
TATO	**Taipei**	**0.58**	**326**	*e*P	**Pn**	**16 46 03.6**	**-0.5**
	baz=328						
SXI1	**Grass Mountain**	**0.60**	**2**	*e*P	**Pn**	**16 46 04.2**	**-0.2**
	baz=5.0						
FUSS	**Fushou**	**0.60**	**246**	⇑*e*P	**Pn**	**16 46 04.8**	**+0.2**
	baz=245						
FUSS				*e*S	**Sn**	**16 46 15.1**	**+0.1**
	baz=245						
ETM	**Tongmen**	**0.62**	**212**	P	**Pn**	**16 46 03.9**	**-0.7**
	baz=209						
ETM				*e*S	**Sn**	**16 46 14.4**	**-0.4**
	baz=209						
WHF	**Hehuan Shan**	**0.64**	**237**	*e*P	**Pn**	**16 46 05.1**	**-0.1**
	baz=235						
WHF				*e*S	**Sn**	**16 46 16.1**	**+0.1**
	baz=235						
TNOU	**National Taiwa**	**0.66**	**354**	*e*P	**Pn**	**16 46 05.0**	**0.0**
	baz=356						
TNOU				*e*S	**Sn**	**16 46 18.5**	**+2.9**
	baz=356						
TWT	**Tachien**	**0.66**	**249**	*e*P	**Pn**	**16 46 05.8**	**+0.6**
	baz=247						
TWT				*e*S	**Sn**	**16 46 16.4**	**+0.4**
	baz=247						
TDCB	**Techi**	**0.68**	**249**	*e*P	**Pn**	**16 46 05.7**	**+0.4**
	baz=248						
TDCB				*e*S	**Sn**	**16 46 16.2**	**0.0**
	baz=248						
NFF	**Wufeng Townshi**	**0.68**	**282**	*e*P	**Pn**	**16 46 05.0**	**-0.2**
	baz=282						
NFF				*e*S	**Sn**	**16 46 15.5**	**-0.6**
	baz=282						
YM01	**YM01**	**0.70**	**339**	*e*P	**Pn**	**16 46 05.0**	**-0.5**
	baz=340						
YM01				*e*S	**Sn**	**16 46 15.7**	**-0.7**
	baz=340						
TWS1	**Kuangyinshan**	**0.72**	**327**	*e*P	**Pn**	**16 46 05.3**	**-0.4**
	baz=329						
TWS1				*e*S	**Sn**	**16 46 16.6**	**-0.2**
	baz=329						
YM08	**YM08**	**0.73**	**341**	*e*P	**Pn**	**16 46 05.2**	**-0.7**
	baz=343						
ANP	**Anpu**	**0.75**	**337**	*e*P	**Pn**	**16 46 05.4**	**-0.7**
	baz=339						
CHGB	**Renai**	**0.75**	**235**	*e*P	**Pn**	**16 46 06.7**	**+0.4**
	baz=233						
CHGB				*e*S	**Sn**	**16 46 18.2**	**+0.4**
	baz=233						
LIOB	**Emei**	**0.78**	**281**	*e*P	**Pn**	**16 46 06.1**	**-0.2**
	baz=281						
LIOB				*e*S	**Sn**	**16 46 17.6**	**-0.4**
	baz=281						
ESL	**Shilin**	**0.78**	**210**	*e*P	**Pn**	**16 46 05.4**	**-0.9**
	baz=206						
ESL				*e*S	**Sn**	**16 46 17.3**	**-0.7**
	baz=206						
NSTT	**Nanjuang**	**0.79**	**280**	*e*P	**Pn**	**16 46 06.1**	**-0.3**
	baz=280						
NSTT				*e*S	**Sn**	**16 46 17.6**	**-0.6**
	baz=280						
OWD	**Renai**	**0.82**	**229**	*e*P	**Pn**	**16 46 07.1**	**+0.2**
	baz=227						
OWD				*e*S	**Sn**	**16 46 19.5**	**+0.4**
	baz=227						
WUSB	**Renai**	**0.83**	**233**	*e*P	**Pn**	**16 46 07.5**	**+0.4**
	baz=232						
WUSB				*e*S	**Sn**	**16 46 20.1**	**+0.7**
	baz=232						
WHP	**Taichung City**	**0.85**	**256**	*e*P	**Pn**	**16 46 08.0**	**+0.7**
	baz=254						
NHW	**Xinwu Township**	**0.89**	**305**	*e*P	**Pn**	**16 46 07.1**	**-0.6**
	baz=306						
NHW				*e*S	**Sn**	**16 46 19.8**	**-0.6**
	baz=306						
EGFH	**Guangfu**	**0.91**	**205**	*e*P	**Pn**	**16 46 06.9**	**-1.0**
	baz=203						
EGFH				*e*S	**Sn**	**16 46 19.7**	**-1.0**
	baz=203						
DPDB	**Guoxing**	**0.96**	**242**	*e*P	**Pn**	**16 46 10.1**	**+1.5**
	baz=240						
NMLH	**Miaoli**	**0.97**	**273**	*e*P	**Pn**	**16 46 08.6**	**0.0**
	baz=272						
NMLH				*e*S	**Sn**	**16 46 21.7**	**-0.3**
	baz=272						
VWDT	**VWDT**	**0.98**	**221**	*e*P	**Pn**	**16 46 09.3**	**+0.5**
	baz=220						
VWDT				*e*S	**Sn**	**16 46 23.1**	**+0.8**
	baz=220						
TWQ1	**Liyutan**	**0.99**	**262**	*e*P	**Pn**	**16 46 09.0**	**+0.1**
	baz=261						
TWQ1				*e*S	**Sn**	**16 46 22.5**	**-0.1**
	baz=261						
JYNG	**Yonagunijimaku**	**1.00**	**92**	P	**Pn**	**16 46 08.7**	**-0.3**
JYNG				S	**Sn**	**16 46 22.1**	**-0.6**
SMLT	**Sun Moon Lake**	**1.06**	**235**	*e*P	**Pn**	**16 46 10.8**	**+1.0**
	baz=233						
SMLT				*e*S	**Sn**	**16 46 26.6**	**+2.3**
	baz=233						
HGSD	**Ruisui**	**1.07**	**201**	*e*P	**Pn**	**16 46 09.8**	**-0.1**
	baz=199						
SSLB	**Suanglung**	**1.08**	**230**	*e*P	**Pn**	**16 46 11.1**	**+1.1**
	baz=228						
TYC	**Yuchr**	**1.08**	**237**	*e*P	**Pn**	**16 46 11.4**	**+1.4**
	baz=235						
TYC				*e*S	**Sn**	**16 46 26.3**	**+1.8**
	baz=235						
EHY	**Hungye**	**1.10**	**206**	*e*P	**Pn**	**16 46 10.2**	**0.0**
	baz=204						
EHY				*e*S	**Sn**	**16 46 24.1**	**-0.8**
	baz=204						
WDJ	**Dajia District**	**1.11**	**263**	*e*P	**Pn**	**16 46 10.6**	**+0.2**
	baz=262						
YULB	**Yu-li**	**1.21**	**205**	*e*P	**Pn**	**16 46 10.5**	**-1.2**
	baz=203						
TWF1	**Yuli**	**1.24**	**204**	*e*P	**Pn**	**16 46 11.1**	**-1.0**
	baz=202						
IRIF	**Iriomote-Funau**	**1.72**	**95**	P	**Pn**	**16 46 18.3**	**-0.1**
IRIF				*e*S	**Sn**	**16 46 39.2**	**-0.3**
JKRS	**Kuro-shima**	**1.98**	**97**	P	**Pn**	**16 46 22.6**	**+0.6**
JIJ	**Ishigaki jima**	**2.09**	**93**	P	**Pn**	**16 46 23.6**	**+0.3**

IDC ***17*** *16:48:48.8±0.4, 26.°09N×99.°69E, h0^{km}, mb4.5/43,*
mbtmp4.5/44, ML4.9/1, MS4.1/62, Error ellipse:
s-maj=12.5km s-min=10.1km az=35.0
BJI ***17*** *16:48:51.2±0.0, 26.°13N×99.°56E, h20^{km}, mb4.7/51,*
mB4.9/31, ML4.9/10, Ms5.0/66, Ms7 4.6/63
GCMT ***17*** *16:48:51.9±0.2, 26.°07N±0.°01×99.°64E±0.°01, h19^{km}±1^{km},*
MW5.0/116, Moment Tensor Solution. s45,c54;
s116,c187; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M$_{rr}$-0.73±.12; M$_{\theta\theta}$-2.72±.09; M$_{\phi\phi}$3.44±.10; M$_{r\theta}$-0.16±.20;
M$_{\theta\phi}$-3.00±.10; M$_{\phi r}$0.45±.20; Best double couple:
M$_0$4.32000×10^{16} NP1:φ$_s$293.00000°, δ86.00000°,
λ177.00000°. NP2:φ$_s$23.00000°, δ87.00000°, λ4.00000°.
Principal axes: T 4.7010, Plg5.0000°, Azm248.0000°; N
-0.7700, Plg85.0000°, Azm64.0000°; P -3.9400,
Plg0.0000°, Azm158.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
MOS ***17*** *16:48:53.8±1.1, 26.°05N×99.°60E, h53^{km}, mb5.1/37,*
MS4.3/11 Error ellipse: s-maj=7.4km s-min=3.8km
az=120.0
NEIC ***17*** *16:48:55.9±1.6, 26.°05N±0.°08×99.°5E±0.°1, h54^{km}±5^{km},*
mb4.9/120, Error ellipse: s-maj=14.0km s-min=10.1km
az=58.0
ISC 17 16:48:52.9±0.3**, 26.°09N**±0.°03×**99.°57E**±0.°03**, h28**^{km}±1^{km}**,**
h28^{km}**:pP-P, n527, σ1.**^{s}**99**/562**, mb4.9**/166**, MS4.2**/86**,**
34C-33D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**1.99**	**78**	Pg	**Pn**	**16 49 25.4**	**+0.5**
PZH				Sg	**Sb**	**16 49 54.1**	**+1.1**
PZH				smax	smax		
	comp=N,8μm,1.0s						
PZH				smax	smax		
	comp=E,8μm,1.2s						
KMI	**Kunming**	**3.02**	**108**	⇑Pn	**Pn**	**16 49 39.8**	**+0.6**
KMI				Pg	**Pb**	**16 49 45.8**	**-0.4**
KMI				Sg	**Sb**	**16 50 25.5**	**+2.8**
KMI				smax	smax		
	comp=N,11μm,1.5s						
KMI				smax	smax		
	comp=E,9μm,1.2s						
KMI				LR	LR		
	comp=N,80μm,3.8s						
KMI				LR	LR		
	comp=E,35μm,3.8s						
KMI				LR	LR		
	comp=Z,9μm,5.1s						
KMI	**Kunming**	**3.02**	**108**	⇑Pn	**Pn**	**16 49 39.7**	**+0.6**
KMI				Pg	**Pb**	**16 49 45.7**	**-0.4**
KMI				Sg	**Sb**	**16 50 25.5**	**+2.8**
KMI				smax	smax		
	comp=Z,11μm,1.5s						
KMI				smax	smax		
	comp=Z,9μm,1.2s						
KMI				LR	LR		
	comp=Z,80μm,3.8s						
KMI				LR	LR		
	comp=Z,35μm,3.8s						
KMI				LR	LR		
	comp=Z,9μm,5.1s						
CD2	**Chengdu**	**6.05**	**37**	Pn	**Pn**	**16 50 21.8**	**+1.1**
CD2				Pg	Pb	16 50 42.3	+4.6
CD2				Sg	Sb	16 52 00.5	+11
CD2				smax	smax		
	comp=Z,2μm,1.8s						
CD2				LR	LR		
	comp=Z,3μm,8.8s						
CD2				LR	LR		
	comp=Z,33μm,8.8s						
CD2				LR	LR		
	comp=Z,9μm,6.6s						
GYA	**Guiyang**	**6.38**	**85**	⇑Pn	**Pn**	**16 50 26.4**	**+1.2**
GYA				Pg	Pb	16 50 48.8	+5.5
GYA				Sn	**Sn**	**16 51 44.3**	**+7.1**
GYA				LR	LR		
	comp=Z,3μm,4.6s						
GYA				LR	LR		
	comp=Z,5μm,5.0s						
GYA				LR	LR		
	comp=Z,5μm,7.3s						
SHL	**Shillong**	**6.95**	**267**	*e*P	**Pn**	**16 50 33.1**	**+0.1**
CHTO	**Chiang Mai**	**7.26**	**185**	Pn	**Pn**	**16 50 37.9**	**+0.6**
CHTO	**Chiang Mai**	**7.26**	**185**	P	**Pn**	**16 50 37.9**	**+0.6**
CM31	**Chiang Mai Arr**	**7.62**	**184**		**Pn**	**16 50 42.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.62**	**184**	Pn	**Pn**	**16 50 43.0**	**+0.8**
	comp=Z,4.9nm,0.3s,baz=0.1,slow=13,SNR=274						
CMAR				Pg	Pb	16 51 12.1	+7.7
	comp=Z,6.6nm,0.3s,baz=359,slow=17,SNR=21						
CMAR				Lg	Lg	16 52 45.7	
	comp=Z,4.2nm,0.3s,baz=345,slow=16,SNR=4.4						
CMAR				LR	LR	16 53 56.2	
	comp=Z,1μm,20.1s,baz=340,slow=40						
	comp=Z,15nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.62**	**184**	Pn	**Pn**	**16 50 42.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.62**	**184**	P	**Pn**	**16 50 43.0**	**+0.8**
LSA	**Lhasa**	**8.27**	**298**	Pn	**Pn**	**16 50 52.4**	**+0.9**
LSA	**Lhasa**	**8.27**	**298**	P	**Pn**	**16 50 52.4**	**+0.9**
LSA	**Lhasa**	**8.27**	**298**	P	**Pn**	**16 50 52.4**	**+0.9**
LSA				S	**Sn**	**16 52 22.8**	**-1.5**
LSA				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA				LR	LR		
	comp=N,6μm,16.7s						
LSA				LR	LR		
	comp=E,2μm,10.7s						
LSA				LR	LR		
	comp=Z,2μm,9.6s						
ENH	**Enshi**	**9.69**	**62**	Pn	**Pn**	**16 51 08.8**	**-1.8**
GULI	**GuiLin**	**9.77**	**92**	⇑P	**Pn**	**16 51 09.1**	**-2.6**
LZH	**Lanzhou**	**10.62**	**19**	⇓*i*P	**Pn**	**16 51 26.6**	**+3.3**
LZH				S	**Sn**	**16 53 25.6**	**+4.2**
LZH				SS	**SnSn**	**16 53 32.7**	**-0.9**
LZH				pmax	pmax		
	comp=Z,66nm,1.0s						
LZH				pmax	pmax		
	comp=Z,350nm,4.9s						
LZH				LR	LR		
	comp=Z,4μm,8.1s						
LZH				LR	LR		
	comp=Z,8μm,10.6s						
LZH				LR	LR		
	comp=Z,3μm,11.7s						
GOMU	**GeErMu**	**10.87**	**339**	⇑*i*P	**Pn**	**16 51 26.0**	**-1.0**
GOMU				pP		16 51 30.0	
GOMU				S	**Sn**	**16 53 30.8**	**+3.0**
GOMU				pmax	pmax		
	comp=Z,19nm,1.2s						
GOMU				LR	LR		
	comp=Z,2μm,8.1s						

GOMU				LR	LR		
	comp=Z,2µm,7.8s						
GOMU				LR	LR		
	comp=Z,2µm,7.9s						
XAN	**Xi'an**	**11.32**	**43**	P	**Pn**	**16 51 29.3**	**-3.6**
XAN				pP		16 51 35.3	
XAN				sP		16 51 38.1	
XAN				S	**Sn**	**16 53 33.3**	**-5.3**
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
XAN				pmax	pmax		
	comp=Z,120nm,4.3s						
XAN				smax	smax		
	comp=N,190nm,1.7s						
XAN				smax	smax		
	comp=E,260nm,1.9s						
XAN				LR	LR		
	comp=N,12µm,12.6s						
XAN				LR	LR		
	comp=E,7µm,13.4s						
XAN				LR	LR		
	comp=Z,4µm,12.7s						
RAMN	**Ramite**	**11.65**	**277**	*e*P	**Pn**	**16 51 36.4**	**-1.2**
	comp=Z,117nm,0.6s						
QIZ	**Qiongzhong**	**11.80**	**124**	Pn	**Pn**	**16 51 38.5**	**-1.0**
QIZ	**Qiongzhong**	**11.80**	**124**	P	**Pn**	**16 51 38.3**	**-1.2**
QIZ				S	**Sn**	**16 53 50.5**	**+0.1**
QIZ				LR	LR		
	comp=Z,5µm,12.8s						
QIZ				LR	LR		
	comp=Z,4µm,14.3s						
QIZ				LR	LR		
	comp=Z,2µm,7.1s						
UBPT	**Khong Chiam**	**12.09**	**152**		**Pn**	**16 51 45.2**	**+1.8**
BOK	**Bokaro**	**12.62**	**263**	*e*P	**Pn**	**16 51 50.3**	**-0.4**
PKI	**Pulchoki**	**12.73**	**280**	*e*P	**Pn**	**16 51 50.1**	**-2.4**
	comp=Z,90nm,0.7s						
PKIN	**Phulchoki**	**12.74**	**280**	*e*P	**Pn**	**16 51 50.0**	**-2.6**
	comp=Z,78nm,0.6s						
KKN	**Kakani**	**12.86**	**281**	*e*P	**Pn**	**16 51 52.0**	**-2.2**
	comp=Z,143nm,0.7s						
DMN	**Daman**	**13.00**	**280**	*e*P	**Pn**	**16 51 53.5**	**-2.6**
	comp=Z,100nm,0.8s						
GTA	**Gaotai**	**13.29**	**1**	*e*P	**Pn**	**16 52 00.3**	**+0.5**
GTA				pP	P	16 52 10.2	+0.9
GTA				S	**Sn**	**16 54 27.9**	**+1.3**
GTA				sS	S	16 54 43.5	-7.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,85nm,6.4s						
GTA				LR	LR		
	comp=Z,1µm,10.8s						
GTA				LR	LR		
	comp=Z,9µm,11.6s						
GTA				LR	LR		
	comp=Z,1µm,9.2s						
GKN	**Gorkha**	**13.45**	**281**	*e*P	**Pn**	**16 51 58.4**	**-3.7**
	comp=Z,172nm,1.1s						
WHN	**Wuhan**	**13.75**	**68**	⇓P	**Pn**	**16 52 03.4**	**-2.7**
WHN				LR	LR		
	comp=Z,4µm,11.1s						
WHN				LR	LR		
	comp=Z,7µm,10.0s						
WHN				LR	LR		
	comp=Z,5µm,9.9s						
BWNR	**Bhubaneshwar**	**13.90**	**248**	*e*P	**Pn**	**16 52 09.2**	**+1.0**
LYN	**LuoYang**	**13.96**	**50**	*e*P	**Pn**	**16 52 07.3**	**-1.7**
LYN				pP	P	16 52 17.3	+0.7
LYN				sP		16 52 21.6	
LYN				S	**S**	**16 55 09.3**	**+5.2**
LYN				pmax	pmax		
	comp=Z,40nm,0.7s						
LYN				LR	LR		
	comp=N,6µm,9.7s						
LYN				LR	LR		
	comp=E,5µm,8.7s						
LYN				LR	LR		
	comp=Z,5µm,16.1s						
LYN	**LuoYang**	**13.96**	**50**	*e*P	**Pn**	**16 52 07.2**	**-1.7**
LYN				pP	P	16 52 17.2	+0.6
LYN				sP		16 52 21.6	
LYN				pmax	pmax		
	comp=Z,40nm,0.7s						
LYN				LR	LR		
	comp=Z,6µm,9.7s						
LYN				LR	LR		
	comp=Z,5µm,8.7s						
LYN				LR	LR		
	comp=Z,5µm,16.1s						
DANN	**Dangsing**	**14.25**	**283**	*e*P	**Pn**	**16 52 08.8**	**-4.4**
JHSG	**JHARSUGUGA**	**15.07**	**257**	*e*P	**Pn**	**16 52 24.8**	**+0.8**
TIY	**Taiyuan**	**15.90**	**40**	*e*P	**P**	**16 52 37.9**	**-0.4**
TIY				pmax	pmax		
	comp=Z,33nm,0.6s						
TIY				LR	LR		
	comp=Z,3µm,9.8s						
TIY				LR	LR		
	comp=Z,980nm,7.5s						
TIY				LR	LR		
	comp=Z,930nm,9.5s						
BLSP	**Bilaspur**	**16.40**	**260**	*e*P	**Pn**	**16 52 39.6**	**-1.7**
BTO	**Baotou**	**16.89**	**28**	*e*P	**Pn**	**16 52 45.1**	**-2.2**
BTO				S	**Sn**	**16 55 57.1**	**+2.9**
BTO				LR	LR		
	comp=Z,13µm,15.6s						
BTO				LR	LR		
	comp=Z,22µm,12.4s						
HNS	**HongShan**	**17.09**	**45**	⇑P	**P**	**16 52 51.5**	**+0.2**
HNS				PP	**sP**	**16 53 02.3**	**-1.2**
HNS				pmax	pmax		
	comp=Z,51nm,1.5s						
HNS				LR	LR		
	comp=Z,4µm,8.8s						
HNS				LR	LR		
	comp=Z,2µm,9.2s						
HNS				LR	LR		
	comp=Z,2µm,11.3s						
LGTI	**Lohaghat**	**17.43**	**285**	*e*P	**Pn**	**16 52 53.7**	**-0.3**
PTH	**Pithoragarh**	**17.46**	**286**	*e*P	**Pn**	**16 52 53.5**	**-1.3**
HHC	**Hu-ho-hao-te**	**17.77**	**31**	*e*P	**P**	**16 52 59.6**	**+0.6**
HHC				pP	sP	16 53 10.4	-0.9
HHC				S	**S**	**16 56 20.4**	**-1.7**
HHC				SS	**SnSn**	**16 56 43.0**	**+14**
HHC				pmax	pmax		
	comp=Z,41nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,4µm,8.8s						
HHC				LR	LR		
	comp=E,4µm,8.8s						
HHC				LR	LR		
	comp=Z,4µm,9.3s						
NJ2	**Nanjing**	**17.86**	**66**	*e*P	**Pn**	**16 52 56.4**	**-3.1**
NJ2				pP	**P**	**16 53 00.6**	**+0.7**
NJ2				sP	**pP**	**16 53 03.1**	**-5.1**
NJ2				PP	**sP**	**16 53 11.8**	**-0.1**
NJ2				S	**Sn**	**16 56 11.8**	**-6.0**
NJ2				sS	**S**	**16 56 22.4**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,35nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,340nm,4.0s						
NJ2				LR	LR		
	comp=N,3µm,6.9s						
NJ2				LR	LR		
	comp=E,2µm,6.4s						
NJ2				LR	LR		
	comp=Z,1µm,7.4s						
TIA	**Tai'an**	**18.07**	**52**	⇓P	**Pn**	**16 53 01.3**	**-0.8**
TIA				S	**S**	**16 56 31.6**	**+3.5**
TIA				pmax	pmax		
	comp=Z,62nm,0.7s						
TIA				pmax	pmax		
	comp=Z,190nm,2.5s						
TIA				LR	LR		
	comp=N,2µm,9.0s						
TIA				LR	LR		
	comp=E,2µm,11.9s						
TIA				LR	LR		
	comp=Z,3µm,11.4s						
TIA	**Tai'an**	**18.07**	**52**	⇓P	**Pn**	**16 53 01.2**	**-0.8**
TIA				pmax	pmax		
	comp=Z,62nm,0.7s						
TIA				pmax	pmax		
	comp=Z,190nm,3.5s						
TIA				LR	LR		
	comp=Z,2µm,9.0s						
TIA				LR	LR		
	comp=Z,2µm,11.9s						
TIA				LR	LR		
	comp=Z,3µm,11.4s						
JHNI	**Jhansi**	**18.95**	**273**	*e*x	**Pn**	**16 53 13.2**	**+0.4**
SSLB	**Suanglung**	**19.52**	**92**	P	**P**	**16 53 18.9**	**+0.5**
SSLB				IAmb	IAmb	16 53 30.9	
	comp=Z,69nm,1.5s						
BJT	**Baijiatuau**	**19.61**	**41**	P	**P**	**16 53 19.5**	**+0.4**
BJT	**Baijiatuau**	**19.61**	**41**	P	**P**	**16 53 19.5**	**+0.4**
BJT				pmax	pmax		
	comp=Z,28nm,1.0s						
SSE	**Sheshan**	**19.62**	**70**	P	**P**	**16 53 19.3**	**+0.1**
SSE				S	**Sn**	**16 57 01.4**	**+1.2**
SSE				pmax	pmax		
	comp=Z,17nm,0.7s						
SSE				pmax	pmax		
	comp=Z,160nm,3.4s						
SSE				LR	LR		
	comp=Z,750nm,8.1s						
SSE				LR	LR		
	comp=Z,400nm,8.4s						
SSE				LR	LR		
	comp=Z,780nm,16.5s						
BJI	**Beijing**	**19.63**	**41**	P	**P**	**16 53 19.8**	**+0.5**
BJI				pP	**sP**	**16 53 30.9**	**-0.5**
BJI				S	**S**	**16 56 52.8**	**-6.5**
BJI				sS	**sS**	**16 57 06.2**	**-6.3**
BJI				PcP	**PcP**	**16 57 36.5**	**-1.6**
BJI				pmax	pmax		
	comp=Z,24nm,1.2s						
BJI				pmax	pmax		
	comp=Z,300nm,3.5s						
BJI				LR	LR		
	comp=Z,3µm,14.3s						
BJI				LR	LR		
	comp=Z,3µm,15.3s						
BJI				LR	LR		
	comp=Z,1µm,14.5s						
YHNB	**Yeheng**	**19.75**	**89**	P	**P**	**16 53 20.2**	**-0.7**
YHNB				IAmb	IAmb	16 53 46.8	
	comp=Z,50nm,1.1s						
VJD	**Vijayawada**	**20.02**	**245**	*e*P	Pn	16 53 25.4	-0.1
WMQ	**Urumqi**	**20.15**	**334**	*e*P	**P**	**16 53 23.1**	**-1.9**
WMQ				S	**S**	**16 57 06.2**	**-3.8**
WMQ				pmax	pmax		
	comp=Z,77nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,11.5s						
WMQ				LR	LR		
	comp=Z,830nm,12.5s						
WMQ				LR	LR		
	comp=Z,810nm,18.3s						
SMLA	**Simla**	**20.29**	**290**	*e*P	**P**	**16 53 24.7**	**-1.8**
SMLA				IAmb	IAmb	16 53 31.6	
	comp=Z,35nm,0.6s						
SMLA				*e*x	S	16 56 59.1	-14
BHPL	**Bhopal**	**20.32**	**267**	*e*P	**P**	**16 53 26.8**	**-0.2**
BHPL				IAmb	IAmb	16 53 31.4	
	comp=Z,75nm,0.7s						
KUDL	**Kundal**	**20.64**	**281**	*e*P	**P**	**16 53 28.9**	**-1.5**
HYBB	**Hyderabad (bro**	**21.32**	**250**	*e*P	**P**	**16 53 37.1**	**-0.7**
AKL	**Akola**	**21.37**	**260**	*e*P	**P**	**16 53 34.9**	**-3.4**
XLT	**XiLinHaoTe**	**22.26**	**33**	*e*P	**P**	**16 53 47.1**	**-0.6**
XLT				pP	sP	16 54 00.9	+0.8
XLT				PP	**PnPn**	**16 54 14.8**	**+4.1**
XLT				S	**S**	**16 57 45.6**	**-5.6**
XLT				sS	sS	16 58 04.5	-0.3
XLT				pmax	pmax		
	comp=Z,63nm,1.6s						
XLT				pmax	pmax		
	comp=Z,190nm,3.9s						
XLT				LR	LR		
	comp=Z,2µm,12.6s						
XLT				LR	LR		
	comp=Z,1µm,14.3s						
AJM	**Ajmer**	**22.35**	**277**	*e*P	**P**	**16 53 48.0**	**-0.8**
AJM				*e*P	**pP**	**16 53 50.2**	**-6.9**
SONM	**Songino Array**	**22.36**	**12**	P	**P**	**16 53 47.8**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=194,slow=11,SNR=12						
SONM				LR	LR	17 03 40.1	
	comp=Z,284nm,19.7s,baz=192,slow=40						
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**22.36**	**12**	P	**P**	**16 53 48.1**	**-0.7**
TSI	**Tuntungan**	**22.48**	**183**	P	**P**	**16 53 52.6**	**+2.4**
	comp=Z,7µmcomp=Z,158nm,0.8s						
DL2	**Dalian**	**22.50**	**50**	P	**P**	**16 53 51.0**	**+0.7**
DL2				S	**S**	**16 57 59.2**	**+3.7**
DL2				pmax	pmax		
	comp=Z,45nm,1.4s						
DL2				pmax	pmax		
	comp=Z,170nm,4.2s						
DL2				LR	LR		
	comp=Z,1µm,9.5s						
DL2				LR	LR		
	comp=Z,1µm,12.5s						
DL2				LR	LR		
	comp=Z,2µm,15.3s						
KCSI	**Kotacane, Aceh**	**22.51**	**185**	P	**P**	**16 53 48.8**	**-1.7**
	comp=Z,36nm,1.2s						
ULN	**Ulaanbaatar**	**22.52**	**13**	P	**P**	**16 53 50.9**	**+0.3**
ULN	**Ulaanbaatar**	**22.52**	**13**	*c i*P	**P**	**16 53 51.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
PSI	**Prapat**	**23.16**	**182**	P	**P**	**16 53 58.0**	**+0.5**
	comp=Z,22nm,0.7s,baz=348,slow=9.9,SNR=15						
	comp=Z,22nm,0.7s						
RPSI	**Rantau Prapat**	**23.27**	**182**	P	**P**	**16 53 58.0**	**-0.4**
SHLS	**Shalkode**	**23.64**	**321**	*e*P	**P**	**16 53 59.8**	**-2.2**
SHLS	**Shalkode**	**23.64**	**321**	*e*P	**P**	**16 53 59.8**	**-2.2**
	baz=322						
KSH	**Kashi**	**23.84**	**310**	P	**P**	**16 54 06.1**	**+2.1**
KSH				S	**S**	**16 58 22.7**	**+4.4**
KSH				pmax	pmax		
	comp=Z,22nm,1.1s						
KSH				LR	LR		
	comp=Z,570nm,10.6s						
KSH				LR	LR		
	comp=Z,1µm,16.1s						
KSH				LR	LR		
	comp=Z,1µm,15.5s						
PRZ	**Przheval'sk**	**23.84**	**319**	P	**P**	**16 54 03.6**	**-0.4**
PRZ				IAmb	IAmb	16 54 28.6	
	comp=Z,48nm,0.9s						
PRZ	**Przheval'sk**	**23.84**	**319**	P	**P**	**16 54 03.6**	**-0.4**
PRZ				pmax	pmax		
	comp=Z,48nm,0.9s						
UZB	**Uzynbulak**	**23.89**	**321**	*e*P	**P**	**16 54 04.7**	**+0.3**
UZB	**Uzynbulak**	**23.89**	**321**	*e*P	**P**	**16 54 04.8**	**+0.3**
	baz=321						
SATY	**Saty**	**24.19**	**320**	⇓*i*P	**P**	**16 54 08.0**	**+0.9**
	baz=320						
ZHN	**Zhinishke**	**24.24**	**320**	*e*P	**P**	**16 54 08.1**	**+0.5**
	baz=320						
ZSN	**Zaisan**	**24.28**	**335**	⇓*i*P	**P**	**16 54 08.7**	**+0.9**
	baz=335						
KDJ	**Kajisay**	**24.38**	**317**	P	**P**	**16 54 10.2**	**+1.2**
KDJ				IAmb	IAmb	16 54 23.1	
	comp=Z,54nm,1.1s						
KDJ	**Kajisay**	**24.38**	**317**	P	**P**	**16 54 10.2**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,55nm,1.2s						
ZAK	**Zakamensk**	**24.42**	**6**	*e*P	**P**	**16 54 09.8**	**+0.6**
ZAK				*e*		16 54 43.7	
ZAK				pmax	pmax		
	comp=Z,26nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,21nm,1.6s						
MYKOM	**Kota Tinggi**	**24.51**	**170**	P	**P**	**16 54 09.1**	**-1.0**
GSI	**Gunungsitoli**	**24.72**	**185**	P	**P**	**16 54 10.8**	**-1.2**
GSI				IAmb	IAmb	16 54 18.1	
	comp=Z,80nm,1.5s						
GSI	**Gunungsitoli**	**24.72**	**185**	P	**P**	**16 54 10.8**	**-1.2**
	comp=Z,28nm,1.0s						
MK31	**Makanchi Array**	**24.80**	**331**	P	**P**	**16 54 13.2**	**+0.6**
MK31				IAmb	IAmb	16 54 20.3	
	comp=Z,41nm,0.9s						
MK31	**Makanchi Array**	**24.80**	**331**	*d i*P	**P**	**16 54 13.0**	**+0.5**
MKAR	**Makanchi Array**	**24.80**	**331**	P	**P**	**16 54 13.2**	**+0.6**
	comp=Z,24nm,0.8s,baz=142,slow=9.2,SNR=140						
MKAR				LR	LR	17 03 51.2	
	comp=Z,132nm,20.8s,baz=156,slow=36						
	comp=Z,24nm,0.8s						
MKAR	**Makanchi Array**	**24.80**	**331**	P	**P**	**16 54 12.9**	**+0.4**
MKAR	**Makanchi Array**	**24.80**	**331**	P	**P**	**16 54 13.0**	**+0.4**
POO	**Poona**	**24.93**	**258**	*e*P	**P**	**16 54 12.0**	**-2.0**
MAKZ	**Makanchi**	**24.95**	**331**	P	**P**	**16 54 13.9**	**0.0**
MAKZ	**Makanchi**	**24.95**	**331**	P	**P**	**16 54 13.9**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,23nm,1.0s						
SUJ	**Sinuiju**	**25.02**	**50**	P	**P**	**16 54 13.9**	**-0.7**
SUJ				pP	**pP**	**16 54 16.9**	**-6.5**
SUJ				S	**S**	**16 58 39.0**	**+2.1**
SUJ				AmB			
	comp=Z,204nm,1.9s						
SUJ				AMS	AMS		
	comp=N,323nm,13.2s						
SUJ				AMS	AMS		
	comp=E,116nm,4.7s						
SUJ				AMS	AMS		
	comp=Z,30nm,1.2s						
ULHL	**Ulahol**	**25.03**	**316**	P	**P**	**16 54 16.8**	**+2.0**
	SNR=8.7						
TNSS	**Tian-Shan**	**25.04**	**318**	*e*P	**P**	**16 54 16.2**	**+1.0**
	baz=318						
MDOK	**Medeo**	**25.05**	**319**	*e*P	**P**	**16 54 16.3**	**+1.3**
MDOK	**Medeo**	**25.05**	**319**	*e*P	**P**	**16 54 16.3**	**+1.3**
	baz=319						
KAD	**Karad**	**25.12**	**255**	*e*P	**P**	**16 54 17.0**	**+1.3**
AAA	**Alma-Ata**	**25.15**	**319**	*e*P	**P**	**16 54 17.4**	**+1.6**
AAA	**Alma-Ata**	**25.15**	**319**	*e*P	**P**	**16 54 17.5**	**+1.6**
	baz=319						
SNY	**Shenyang**	**25.24**	**45**	⇑P	**P**	**16 54 15.5**	**-1.0**
SNY				S	**S**	**16 58 39.0**	**-1.3**
SNY				pmax	pmax		
	comp=Z,22nm,1.4s						
SNY				pmax	pmax		
	comp=Z,110nm,3.5s						
SNY				LR	LR		
	comp=N,2µm,17.9s						
SNY				LR	LR		
	comp=E,1µm,20.8s						
SNY				LR	LR		
	comp=Z,1µm,19.6s						
BOOM	**Boomskoye usch**	**25.35**	**316**	P	**P**	**16 54 18.9**	**+1.2**
BOOM				IAmb	IAmb	16 54 38.2	
	comp=Z,33nm,1.1s						
BOOM	**Boomskoye usch**	**25.35**	**316**	P	**P**	**16 54 18.9**	**+1.2**
BOOM				pmax	pmax		
	comp=Z,33nm,1.1s						
TDK	**Taldyqorghan**	**25.42**	**323**	*e*P	**P**	**16 54 18.9**	**+0.8**
TDK	**Taldyqorghan**	**25.42**	**323**	*e*P	**P**	**16 54 19.0**	**+0.8**
	baz=323						
PYAG	**Pyongyang**	**25.47**	**53**	P	**P**	**16 54 22.6**	**+4.0**
PYAG				pP	**sP**	**16 54 28.6**	**-2.7**
PYAG				S	**S**	**16 58 50.0**	**+5.9**
PYAG				AmB			
	comp=Z,239nm,2.1s						
PYAG				AMS	AMS		
	comp=N,232nm,4.2s						
PYAG				AMS	AMS		
	comp=E,88nm,1.6s						
PYAG				AMS	AMS		
	comp=Z,87nm,1.6s						
CHKK	**Chushkaly**	**25.49**	**320**	*e*P	**P**	**16 54 19.0**	**+0.2**
CHKK	**Chushkaly**	**25.49**	**320**	*e*P	**P**	**16 54 19.1**	**+0.2**
	baz=320						
MOY	**Mondy**	**25.56**	**2**	*e*P	**P**	**16 54 20.4**	**+0.9**
MOY				pmax	pmax		
	comp=Z,32nm,1.9s						
NAWB	**Namwon**	**25.59**	**62**	P	**P**	**16 54 19.5**	**-0.3**
NAWB				IAmb	IAmb	16 54 39.2	
	comp=Z,31nm,1.1s						
JOW	**Kunigami**	**25.69**	**82**	P	**P**	**16 54 18.9**	**-1.9**
	comp=Z,14nm,0.5s,baz=287,slow=6.6,SNR=6.1						
JOW				LR	LR	17 05 37.1	
	comp=Z,1µm,20.2s,baz=250,slow=39						
	comp=Z,14nm,0.5s						
JOW	**Kunigami**	**25.69**	**82**	P	**P**	**16 54 19.4**	**-1.4**
JOW				IAmb	IAmb	16 54 27.1	
	comp=Z,79nm,1.4s						
TKM2	**Tokmak 2**	**25.79**	**317**	P	**P**	**16 54 23.5**	**+1.7**
	SNR=12						
TJN	**Taejon**	**25.80**	**60**	P	**P**	**16 54 19.4**	**-2.2**
TJN	**Taejon**	**25.80**	**60**	*d i*P	**P**	**16 54 22.0**	**+0.3**
KUU	**Kurty**	**25.89**	**319**	*e*P	**P**	**16 54 23.0**	**+0.6**
KUU	**Kurty**	**25.89**	**319**	*e*P	**P**	**16 54 23.1**	**+0.6**
	baz=319						
PALK	**Pallekele**	**25.95**	**227**	LR	LR	17 05 09.9	
	comp=Z,471nm,20.8s,baz=140,slow=38						
KBK	**Karagaybulak**	**26.05**	**316**	P	**P**	**16 54 26.3**	**+2.1**
	SNR=20						
UCH	**Uchtor**	**26.11**	**314**	P	**P**	**16 54 26.5**	**+1.5**
	SNR=10						
AAK	**Ala-Archa**	**26.33**	**315**	P	**P**	**16 54 28.9**	**+2.2**
	SNR=14						
AAK	**Ala-Archa**	**26.33**	**315**	P	**P**	**16 54 28.9**	**+2.2**
	comp=Z,13nm,0.7s,baz=136,slow=5.8,SNR=25						
AAK				LR	LR	17 06 30.1	
	comp=Z,417nm,18.6s,baz=112,slow=40						
	comp=Z,13nm,0.7s						
AAK	**Ala-Archa**	**26.33**	**315**	P	**P**	**16 54 28.3**	**+1.6**
AAK				IAmb	IAmb	16 54 36.7	
	comp=Z,46nm,1.4s						
AAK	**Ala-Archa**	**26.33**	**315**	⇓*i*P	**P**	**16 54 28.2**	**+1.6**
AAK				pmax	pmax		
	comp=Z,19nm,1.0s						
FRU1	**Bishkek**	**26.34**	**316**	P	**P**	**16 54 26.9**	**+0.3**
FRU1				IAmb	IAmb	16 54 38.5	
	comp=Z,26nm,0.9s						
FRU1	**Bishkek**	**26.34**	**316**	P	**P**	**16 54 26.9**	**+0.3**
FRU1				pmax	pmax		
	comp=Z,26nm,0.9s						
IRK	**Irkutsk**	**26.36**	**7**	*e*P	**P**	**16 54 27.1**	**+0.5**
IRK				pmax	pmax		
	comp=Z,66nm,2.1s						
SBUM	**Sibu**	**26.46**	**151**	P	**P**	**16 54 26.2**	**-1.6**
KS19	**Wonju Array Si**	**26.51**	**58**	P	**P**	**16 54 27.7**	**-0.4**
KSRS	**Korea Array**	**26.53**	**58**	P	**P**	**16 54 27.7**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=251,slow=10,SNR=16						
	comp=Z,3.1nm,0.7s						
KSM	**Kuching**	**26.57**	**155**	P	**P**	**16 54 28.5**	**-0.3**
AML	**Almayashu**	**26.60**	**314**	P	**P**	**16 54 31.3**	**+2.0**
	SNR=22						
USP	**Ospenovka**	**26.66**	**316**	P	**P**	**16 54 31.0**	**+1.6**
	SNR=25						
SGDS	**Sogindy**	**26.67**	**317**	*e*P	**P**	**16 54 30.2**	**+0.6**
SGDS	**Sogindy**	**26.67**	**317**	*e*P	**P**	**16 54 30.2**	**+0.6**
	baz=317						
DRK	**Karamyk**	**26.77**	**307**	P	**P**	**16 54 30.6**	**-0.2**
DRK				IAmb	IAmb	16 54 37.9	
	comp=Z,76nm,1.4s						
EKS2	**Erkin-Say**	**26.80**	**315**	P	**P**	**16 54 33.0**	**+2.1**
	SNR=21						
DSRI	**Dabo**	**26.85**	**169**	P	**P**	**16 54 32.2**	**+0.9**
	comp=Z,666nmcomp=Z,12nm,0.9s						
PCHI	**Peechi**	**26.86**	**239**	*e*P	**P**	**16 54 27.7**	**-3.7**
PCHI				*e*S	S	16 59 24.8	+18
JTU	**Tsushima**	**27.01**	**65**	P	**P**	**16 54 31.6**	**-1.0**
JTU				IAmb	IAmb	16 54 45.8	
	comp=Z,32nm,1.3s						
SEHB	**SEOHWA**	**27.03**	**56**	P	**P**	**16 54 33.3**	**+0.5**
SEHB				IAmb	IAmb	16 54 43.0	
	comp=Z,31nm,1.1s						
SISI	**Saibi**	**27.26**	**181**	P	**P**	**16 54 34.8**	**-0.2**
	comp=Z,22nm,1.5s						
CN2	**Changchun**	**27.44**	**43**	*e*P	**P**	**16 54 31.1**	**-5.3**
CN2				*e*PP	**PnPn**	**16 55 18.8**	**-2.5**
CN2				*e*S	**S**	**16 59 05.0**	**-10**
CN2				*e*sS	pS	16 59 24.8	+0.1
CN2				LR	LR		
	comp=N,2µm,19.0s						
CN2				LR	LR		
	comp=E,1µm,19.0s						
CN2				LR	LR		
	comp=Z,930nm,20.0s						
JSU	**Suzuyama**	**27.54**	**71**	P	**P**	**16 54 37.8**	**+0.3**
JSU				IAmb	IAmb	16 54 57.9	
	comp=Z,42nm,1.5s						
MYLDM	**Lahad Datu**	**27.57**	**136**	P	**P**	**16 54 37.4**	**-0.4**
MYLDM				IAmb	IAmb	16 54 55.5	
	comp=Z,35nm,1.5s						
KBL	**Kabul**	**27.59**	**295**	P	**P**	**16 54 37.7**	**-0.4**
KBL				IAmb	IAmb	16 54 51.4	
	comp=Z,31nm,0.9s						
KBL	**Kabul**	**27.59**	**295**	P	**P**	**16 54 37.7**	**-0.4**
KBL				pmax	pmax		

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      comp=Z,31nm,0.9s
GAR   Garm              27.69 305 P        P      16 54 39.6 +0.8
BTK   Batken            27.69 307 P        P      16 54 38.8  0.0
BTK                               IAmb     IAmb   16 54 53.4
      comp=Z,21nm,0.8s
BTK   Batken            27.69 307 P        P      16 54 38.8  0.0
BTK                               pmax     pmax
      comp=Z,21nm,0.8s
JNU   Nakatsue          28.04  68 P        P      16 54 42.9 +1.0
      comp=Z,14nm,0.4s,baz=217,slow=5.9,SNR=4.9
JNU                               LR       LR     17 07 04.6
      comp=Z,820nm,21.0s,baz=273,slow=39
      comp=Z,14nm,0.4s
JNU   Nakatsue          28.04  68 IAmb     IAmb   16 54 47.1
      comp=Z,81nm,1.5s
CHGR  Chuyangaron       28.44 304 P        P      16 54 43.6 -1.9
CHGR                              IAmb     IAmb   16 55 05.9
      comp=Z,45nm,1.1s
CHGR  Chuyangaron       28.44 304 P        P      16 54 43.6 -1.9
CHGR                              pmax     pmax
      comp=Z,45nm,1.1s
SEM   Semipalatinsk     28.46 334 eP       P      16 54 45.2 -0.5
SEM   Semipalatinsk     28.46 334 eP       P      16 54 45.3 -0.5
      baz=334
DZA   Taraz             28.50 313 eP       P      16 54 46.8 +0.9
DZA   Taraz             28.50 313 eP       P      16 54 46.8 +0.9
      baz=313
IUG   Iuzhnay           29.04 311 eP       P      16 54 51.7 +0.8
IUG   Iuzhnay           29.04 311 eP       P      16 54 51.7 +0.8
      baz=311
KK31  Karatay Array     29.13 313 P        P      16 54 51.8 +0.3
KK31  Karatay Array     29.13 313 P        P      16 54 51.8 +0.3
KK31                              pmax     pmax
      comp=Z,6.0nm,0.9s
KKAR  Karatay Array     29.13 313 P        P      16 54 52.0 +0.5
KKAR  Karatay Array     29.13 313 P        P      16 54 52.0 +0.5
KURBB Kurchatov Arra    29.33 332 P        P      16 54 54.0 +0.8
      comp=Z,2.2nm,0.8s,baz=147,slow=9.1,SNR=13
KURBB                             PcP      PcP    16 57 59.8 +0.7
      comp=Z,0.5nm,0.7s,baz=140,slow=1.5,SNR=1.3
KURBB                             LR       LR     17 08 04.3
      comp=Z,756nm,21.6s,baz=111,slow=39
      comp=Z,2.2nm,0.8s
KURK  Kurchatov         29.36 332 P        P      16 54 53.1 -0.3
KURK  Kurchatov         29.36 332          PcP    16 57 59.8 +0.6
KURK  Kurchatov         29.36 332 ceP      P      16 54 53.6 +0.2
KURK                              pmax     pmax
      comp=Z,14nm,1.7s
KURK  Kurchatov         29.36 332 P        P      16 54 54.3 +0.8
BNX   BinXian           29.64  41 ⇓P       P      16 54 54.6 -1.4
BNX                               pP       sP     16 55 07.1 -1.6
BNX                               S        S      16 59 42.5 -7.2
BNX                               sS       pS     16 59 59.4  0.0
BNX                               pmax     pmax
      comp=Z,8.0nm,1.0s
BNX                               pmax     pmax
      comp=Z,210nm,4.9s
BNX                               LR       LR
      comp=Z,2µm,10.2s
BNX                               LR       LR
      comp=Z,2µm,11.2s
BNX                               LR       LR
      comp=Z,2µm,13.4s
ZAA0  Zalesovo Array    29.91 342 P        P      16 54 58.3 +0.1
ZALV  Zalesovo Beam     29.91 342 P        P      16 54 58.7 +0.5
      comp=Z,7.7nm,0.8s,baz=151,slow=9.4,SNR=26
ZALV                              PcP      PcP    16 58 00.8 +0.3
      comp=Z,0.7nm,0.5s,baz=153,slow=4.5,SNR=1.3
ZALV                              LR       LR     17 07 27.2
      comp=Z,302nm,20.9s,baz=152,slow=37
      comp=Z,7.7nm,0.8s
ZALV  Zalesovo Beam     29.91 342 P        P      16 54 58.0 -0.2
JHS   Saijyo            30.11  65 P        P      16 55 00.5 +0.1
DAV   Davao City (W)    31.17 123 LR       LR     17 07 04.3
      comp=Z,477nm,19.9s,baz=301,slow=35
VLA   Vladivostok       31.31  49 d iP     P      16 55 11.4 +0.7
VLA                               pmax     pmax
      comp=Z,40nm,1.5s
BRZS  Berezniki         31.59 326 eP       P      16 55 14.0 +0.9
BRZS  Berezniki         31.59 326 eP       P      16 55 14.1 +0.9
      baz=326
USRK  Ussuriysk Ar.     31.80  47 P        P      16 55 13.2 -1.9
      comp=Z,4.5nm,0.7s,baz=251,slow=5.8,SNR=9.0
USRK                              LR       LR     17 09 15.7
      comp=Z,616nm,20.3s,baz=243,slow=39
      comp=Z,4.5nm,0.7s
BOD   Bodaibo           33.33  14 eP       P      16 55 28.6 +0.4
BOD                               pmax     pmax
      comp=Z,16nm,1.2s
LEM   Lembang           33.64 165 LR       LR     17 09 52.3
      comp=Z,390nm,18.3s,baz=313,slow=38
KLR   Kul'dur           33.98  39 P        P      16 55 34.4 +0.4
      comp=Z,1.9nm,0.6s,baz=235,slow=6.3,SNR=7.0
      comp=Z,1.9nm,0.6s
KLR   Kul'dur           33.98  39 d iP     P      16 55 36.4 +2.4
KLR                               pmax     pmax
      comp=Z,16nm,1.8s
APSI  Ampana            34.28 138 P        P      16 55 41.5 +4.6
      comp=Z,30nm,1.0s
MJAR  Matsushiro Arr    34.41  63 P        P      16 55 38.4 +0.4
      comp=Z,2.9nm,0.9s,baz=268,slow=8.2,SNR=6.5
MJAR                              LR       LR     17 11 12.6
      comp=Z,375nm,20.6s,baz=244,slow=39
      comp=Z,2.9nm,0.9s
ZEA   Zeya              34.42  29 eP       P      16 55 37.8  0.0
ZEA                               pmax     pmax
      comp=E,10.0nm,0.6s
ZEA                               pmax     pmax
      comp=Z,10.0nm,0.9s
ZEA                               MLR      MLR
      comp=E,500nm,17.0s
ZEA                               MLR      MLR
      comp=N,600nm,11.0s
ZEA                               MLR      MLR
      comp=Z,600nm,11.0s
KMSI  Cibinong          34.59 133 P        P      16 55 40.5 +0.8
      comp=Z,51nm,0.9s
BRVK  Borovoye          34.70 329 P        P      16 55 40.8 +0.5
BRVK                              IAmb     IAmb   16 55 47.0
      comp=Z,15nm,1.1s
BRVK  Borovoye          34.70 329 d iP     P      16 55 40.7 +0.5
BRVK                              pmax     pmax
      comp=Z,16nm,1.3s
BRVK  Borovoye          34.70 329 P        P      16 55 41.1 +0.9
BRVK                              x        x      16 55 46.1
BRVK                              sP       sP     16 56 01.1 +8.1
TTSI  Tana Toraja       34.97 143 P        P      16 55 43.9 +1.0
      comp=Z,20nm,1.1s
LUWI  Luwuk             35.06 137 P        P      16 55 43.4 -0.4
LUWI  Luwuk             35.06 137 P        P      16 55 45.5 +1.8
      comp=Z,50nm,1.4s
JHJ   Hachijo jima 2    35.49  69 LR       LR     17 11 45.7
      comp=Z,308nm,18.2s,baz=277,slow=39
KAPI  Kappang           36.59 145 LR       LR     17 12 54.3
      comp=Z,204nm,18.5s,baz=322,slow=40
GEYT  Alibeck           36.80 299 P        P      16 55 59.5 +1.0
      comp=Z,5.8nm,0.8s,baz=142,slow=7.5,SNR=9.5
      comp=Z,5.8nm,0.8s
GEYT  Alibeck           36.80 299 P        P      16 55 56.3 -2.2
GEYT                              IAmb     IAmb   16 56 05.8
      comp=Z,13nm,1.1s
GYA0B ALIBECK ARRAY     36.80 299 P        P      16 55 56.4 -2.2
GYA0B                             IAmb     IAmb   16 56 11.0
      comp=Z,16nm,0.9s
JCJ   Chichijima        37.99  79 LR       LR     17 12 54.8
      comp=Z,177nm,18.0s,baz=278,slow=38
ABKAR Akbulak array     38.35 318 P        P      16 56 12.3 +0.9
ERM   Erimo             39.01  55 P        P      16 56 17.2 +0.2
ERM   Erimo             39.01  55 ⇑eP      P      16 56 19.2 +2.2
ERM   Erimo             39.01  55 P        P      16 56 20.8 +3.8
ASAJ  Asahikawa         39.02  51 LR       LR     17 12 57.8
      comp=Z,290nm,18.2s,baz=260,slow=37
UOSS  Minazif           39.02 278 P        P      16 56 13.2 -4.1
UOSS                              x        x      16 56 19.7
UOSS                              pP       pP     16 56 26.8 +0.4
UOSS                              sP       sP     16 56 33.1 +3.1
AKTO  Aktyubinsk        39.95 319 P        P      16 56 25.7 +0.9
      comp=Z,9.3nm,0.9s,baz=110,slow=7.6,SNR=25
AKTO                              LR       LR     17 14 56.9
      comp=Z,254nm,20.1s,baz=122,slow=39
      comp=Z,9.3nm,0.9s
EDFI  Ende, Flores      40.76 145 P        P      16 56 34.3 +2.4
      comp=Z,6.1nm,1.1s
YAK   Yakutsk           41.19  21 LR       LR     17 14 27.9
      comp=Z,414nm,20.5s,baz=222,slow=37
YAK   Yakutsk           41.19  21 d iP     P      16 56 34.2 -0.6
YAK                               pmax     pmax
      comp=Z,17nm,1.1s
SVE   Sverdlovsk        41.41 329 deP      P      16 56 38.2 +1.4
SVE                               pmax     pmax
      comp=Z,37nm,1.0s
ARU   Arti              42.21 327 P        P      16 56 43.6 +0.4
      comp=Z,5.0nm,0.8s,baz=123,slow=4.4,SNR=24
ARU                               LR       LR     17 16 39.6
      comp=Z,232nm,19.9s,baz=112,slow=40
      comp=Z,5.0nm,0.8s
ARU   Arti              42.21 327 P        P      16 56 42.4 -0.8
ARU                               IAmb     IAmb   16 56 44.8
      comp=Z,24nm,1.0s
ARU   Arti              42.21 327 d iP     P      16 56 43.7 +0.4
ARU                               *PP      sP     16 56 57.7 +1.6
ARU                                               16 58 22.5
ARU                                               16 58 36.6
ARU                               PPP      PPP    16 58 55.1
ARU                               S        S      17 03 02.7 +1.1
ARU                               SS       SS     17 06 07.5 -2.5
ARU                               pmax     pmax
      comp=Z,29nm,1.0s
ARU   Arti              42.21 327 P        P      16 56 44.0 +0.8
ARU                               x        x      16 56 53.1
ARU                               pP       sP     16 56 58.0 +1.9
SOEI  Soe               42.97 143 P        P      16 56 48.4 -1.6
SOEI  Soe               42.97 143 P        P      16 56 52.0 +2.0
      comp=Z,62nm,1.1s
NRIK  Noril'sk          43.85 354 P        P      16 56 56.8 +0.4
      comp=Z,6.9nm,0.7s,baz=165,slow=7.0,SNR=5.2
NRIK                              LR       LR     17 16 38.6
      comp=Z,292nm,20.1s,baz=164,slow=38
      comp=Z,6.9nm,0.7s
NRIK  Noril'sk          43.85 354 P        P      16 56 56.2 -0.2
NRIK  Noril'sk          43.85 354 ceP      P      16 56 55.9 -0.5
NRIK                              pmax     pmax
      comp=Z,19nm,1.4s
BELG  Belogornoye       46.74 318 P        P      16 57 20.6 +1.1
      comp=Z,34nm,0.8s,baz=86,slow=3.8,SNR=4.7
BELG                              LR       LR     17 20 26.5
      comp=Z,104nm,18.1s,baz=119,slow=40
      comp=Z,34nm,0.8s
BELG  Belogornoye       46.74 318 ⇑eP      P      16 57 20.3 +0.8
BELG                              pmax     pmax
      comp=Z,9.0nm,1.0s
GNI   Garni             47.31 302 P        P      16 57 25.4 +1.0
      comp=Z,1.7nm,0.3s,baz=213,slow=17,SNR=1.4
      comp=Z,1.7nm,0.3s
GNI   Garni             47.31 302 P        P      16 57 29.4 +5.0
KIRV  Kirov             47.59 327 P        P      16 57 26.9 +0.9
      comp=Z,16nm,0.6s,baz=73,slow=22,SNR=6.7
      comp=Z,16nm,0.6s
ZEI   Tsey              47.98 305 eP       P      16 57 30.0 +0.4
ZEI                               pmax     pmax
      comp=Z,21nm,1.4s
ONI   Oni               48.31 305 P        P      16 57 32.3 +0.4
ONI                               IAmb     IAmb   16 57 39.9
      comp=Z,21nm,1.0s
ONI   Oni               48.31 305 P        P      16 57 32.3 +0.4
ONI                               pmax     pmax
      comp=Z,21nm,1.0s
MA2   Magadan           48.45  32 LR       LR     17 18 07.3
      comp=Z,255nm,18.1s,baz=174,slow=36
TIXI  Tiksi             48.45  12 P        P      16 57 31.8 -0.6
TIXI                              IAmb     IAmb   16 57 41.0
      comp=Z,7.6nm,0.8s
TIXI  Tiksi             48.45  12 ⇓iP      P      16 57 31.7 -0.8
TIXI                              pmax     pmax
      comp=Z,17nm,1.7s
TIXI  Tiksi             48.45  12 P        P      16 57 31.9 -0.6
TIXI                              sP       sP     16 57 50.3 +4.9
GOF   Gofitskoye        48.69 308 ⇑eP      P      16 57 39.8 +5.0
GOF                               pmax     pmax
      comp=Z,64nm,0.9s
KBZ   Khabaz            48.74 306 P        P      16 57 35.5 +0.4
      comp=Z,1.2nm,0.6s,baz=111,slow=4.7,SNR=3.7
KBZ                               LR       LR     17 20 40.6
      comp=Z,257nm,18.9s,baz=95,slow=39
      comp=Z,1.2nm,0.6s
KBZ   Khabaz            48.74 306 ⇓eP      P      16 57 36.1 +1.0
KBZ                               pmax     pmax
      comp=Z,12nm,1.7s
RAYN  Ar Rayn           48.85 279 P        P      16 57 35.6 -0.8
KIV   Kislovodsk        48.90 307 P        P      16 57 35.4 -1.2
KIV   Kislovodsk        48.90 307 eP       P      16 57 37.6 +1.1
KIV                               eS       S      17 04 38.3 -0.4
KIV                               pmax     pmax
      comp=Z,18nm,1.0s
KIV                               MLR      MLR
      comp=Z,90nm,17.0s
KIV   Kislovodsk        48.90 307 P        P      16 57 36.2 -0.4
VRH   Novokhopyorsk     50.13 316 eP       P      16 57 45.1 -0.5
VRH                               pmax     pmax
      comp=Z,30nm,0.7s
KNRA  Kununurra         50.30 142 P        P      16 57 46.7 -0.6
KNRA                              IAmb     IAmb   16 57 50.3
      comp=Z,19nm,1.1s
PRGR  Permogore         50.43 330 eP       P      16 57 47.2 -0.5
PETK  Petropavlovsk-    50.56  42 P        P      16 57 49.1 +0.2
      comp=Z,5.1nm,1.0s,baz=243,slow=6.3,SNR=3.5
PETK                              LR       LR     17 19 10.9
      comp=Z,310nm,18.6s,baz=264,slow=36
      comp=Z,5.1nm,1.0s
MBWA  Marble Bar        50.88 156 P        P      16 57 50.8 -0.8
MBWA  Marble Bar        50.88 156 P        P      16 57 51.0 -0.5
MBWA                              x        x      16 57 53.8
MBWA                              pP       sP     16 58 06.4 +1.9
MBWA                              pwP      pP     16 58 10.5  +10
SOC   Sochi             51.05 306 eP       P      16 57 50.7 -2.0
SOC                               e               16 59 48.2
SOC                               ePPP     PPP    17 00 47.0
SOC                               eS       S      17 05 05.2 -3.2
SOC                               eSS      SS     17 08 41.5 -2.0
SOC                               MLR      MLR
      comp=Z,110nm,16.0s
PET   Petropavlovsk     51.12  42 P        P      16 57 52.8 -0.3
PET                               IAmb     IAmb   16 58 18.8
      comp=Z,24nm,1.2s
PSA00 Pilbara Seismi    51.30 156 P        P      16 57 53.4 -1.3
PSA00                             IAmb     IAmb   16 57 57.7
      comp=Z,8.4nm,1.0s
VORD  Divnogorie        51.63 316 eP       P      16 57 57.1 +0.2
VORD                              pmax     pmax
      comp=Z,10.0nm,0.8s
VSR   Storozhevoye      51.73 316 eP       P      16 57 56.7 -1.0
VSR                               pmax     pmax
      comp=Z,10.0nm,0.8s
VORR  Voronezh          51.74 316 eP       P      16 57 58.8 +1.0
VORR                              pmax     pmax
      comp=Z,50nm,0.4s
LPSR  Galich'ya Gora    52.01 318 eP       P      16 58 02.7 +3.0
LPSR                              pmax     pmax
      comp=Z,40nm,0.8s
ANN   Anapa             52.67 308 eP       P      16 58 02.5 -2.3
ANN                               e*PP     sP     16 58 15.7 -2.1
ANN                               e               16 59 11.7
ANN                               eS       S      17 05 26.8 -3.9
ANN                               pmax     pmax
      comp=Z,13nm,0.8s
KLMR  Klimovskoe        53.05 328 eP       P      16 58 06.6 -0.7
KLMR                              pmax     pmax
      comp=Z,37nm,1.4s
KLMR  Klimovskoe        53.05 328 eP       P      16 58 06.6 -0.7
KLMR                              AMP             16 58 22.4
      comp=Z,37nm,1.4s
MOS   Moscow            53.13 321 eP       P      16 58 07.6 -0.4
MOS                               pmax     pmax
      comp=Z,38nm,1.1s
OBN   Obninsk           53.66 321 LR       LR     17 22 07.0
      comp=Z,63nm,19.0s,baz=117,slow=37
OBN   Obninsk           53.66 321 eP       P      16 58 11.3 -0.6
OBN                               e*PP     sP     16 58 25.7 +0.8
OBN                               e               16 59 20.5
OBN                               e               17 00 11.3
OBN                               ePPP     PPP    17 01 26.5
OBN                               pmax     pmax
      comp=Z,28nm,1.4s
OBN                               MLR      MLR
      comp=Z,218nm,18.0s
ASF   Jabal al Asfar    54.42 292 P        P      16 58 18.6 +0.7
      comp=Z,0.9nm,0.4s,baz=262,slow=7.4,SNR=4.1
      comp=Z,0.9nm,0.4s
SIM   Simferopol'       55.02 308 eP       P      16 58 20.5 -1.5
SIM                               e               17 01 43.0
SIM                               pmax     pmax
      comp=Z,25nm,0.7s
ATD   Arta Tunnel       55.22 266 LR       LR     17 19 56.3
      comp=Z,93nm,21.0s,baz=108,slow=34
BR131 Keskin Array S    55.86 302 ⇓eP      P      16 58 30.1 +1.8
BRTR  Keskin Array B    55.86 302 P        P      16 58 29.6 +1.3
      comp=Z,2.1nm,0.9s,baz=96,slow=10,SNR=6.4
      comp=Z,2.1nm,0.9s
EIL   Elat              56.57 290 P        P      16 58 35.0 +1.7
      comp=Z,3.7nm,0.8s,baz=76,slow=6.9,SNR=4.1
EIL                               LR       LR     17 25 05.8
      comp=Z,239nm,19.5s,baz=84,slow=38
      comp=Z,3.7nm,0.8s
WB0   Warramunga Arr    56.76 140 P        P      16 58 33.7 -0.9
WB0                               IAmb     IAmb   16 58 38.2
      comp=Z,16nm,0.8s
WRAB  Tennant Creek     56.86 140 P        P      16 58 34.8 -0.6
WRAB  Tennant Creek     56.86 140 ⇑iP      P      16 58 35.0 -0.4
WRAB                              pmax     pmax
      comp=Z,21nm,0.9s
WRAB  Tennant Creek     56.86 140 P        P      16 58 34.8 -0.6
WRAB                              x        x      16 58 38.7
WRAB                              pP       sP     16 58 50.5 +2.1
WRAB                              sP       pP     16 58 58.6  +14
WRA   Warramunga Arr    56.86 140 P        P      16 58 34.8 -0.6
      comp=Z,13nm,0.8s,baz=329,slow=7.5,SNR=37
      comp=Z,13nm,0.8s
WRA   Warramunga Arr    56.86 140 P        P      16 58 34.7 -0.7
WRA   Warramunga Arr    56.86 140 i P      P      16 58 37.9 +2.5
WRA                               pmax     pmax
      comp=Z,10.0nm,0.6s
WB2   Warramunga Arr    56.87 140 P        P      16 58 34.9 -0.5
WR0   Warramunga Arr    56.99 140 P        P      16 58 35.5 -0.8
WR0                               IAmb     IAmb   16 58 40.0
      comp=Z,15nm,0.9s
MORW  Morawa            57.08 163 P        P      16 58 36.6 -0.1
BILL  Bilibino          57.38  24 P        P      16 58 37.8 -0.6
BILL  Bilibino          57.38  24 c iP     P      16 58 37.0 -1.4
BILL                              e*PP     sP     16 58 53.1 +1.6
BILL                              e*SP     pP     16 58 57.2 +9.2
BILL                              e               16 59 33.0
BILL                              e               17 00 43.9
BILL                              pmax     pmax
      comp=Z,23nm,0.8s
BILL                              MLR      MLR
      comp=Z,248nm,15.0s
BILL  Bilibino          57.38  24 P        P      16 58 37.8 -0.6
BILL                              x        x      16 58 40.9
BILL                              pP       sP     16 58 49.5 -2.0
BILL                              pwP      pP     16 58 54.0 +6.1
BILL                              sP       PcP    16 58 57.1  -35
AKASG Malin Array Be    58.00 315 P        P      16 58 42.8 -0.2
      comp=Z,22nm,0.9s,baz=74,slow=7.0,SNR=16
AKASG                             LR       LR     17 27 29.9
      comp=Z,263nm,21.9s,baz=95,slow=40
      comp=Z,22nm,0.9s
AKBB  Malin Array Si    58.00 315 P        P      16 58 42.5 -0.5
AKBB  Malin Array Si    58.00 315 ⇑iP      P      16 58 42.8 -0.3
AKBB                              pmax     pmax
      comp=Z,18nm,0.7s
PMG   Port Moresby      58.17 121 LR       LR     17 25 03.8
      comp=Z,65nm,18.6s,baz=312,slow=38
COEN  Coen              58.17 128 P        P      16 58 44.7  0.0
MNK   Minsk             58.66 320 i P      P      16 58 53.5 +5.9
MNK                               i *PP    sP     16 59 07.4 +6.7
MNK                               i               16 59 42.9
MNK                               i PPP    PPP    17 02 23.6
MNK                               i S      S      17 06 55.0 +4.8
MNK                               i SS     SS     17 10 50.0 +7.1
MNK                               pmax     pmax
      comp=E,3.0nm,0.8s
MNK                               pmax     pmax
      comp=Z,13nm,0.7s
MNK                               pmax     pmax
      comp=N,9.0nm,0.7s
MNK                               MLR      MLR
      comp=Z,118nm,19.0s
MNK                               MLR      MLR
      comp=N,176nm,19.0s
MNK                               MLR      MLR
      comp=E,16nm,23.0s
MNK   Minsk             58.66 320 i P      P      16 58 53.6 +6.0
      comp=E,3.0nm,0.8s
MNK                               i P      P      16 58 53.6 +6.0
      comp=N,9.0nm,0.7s
MNK                               i P      P      16 58 53.6 +6.0
      comp=Z,13nm,0.7s,baz=87
MNK                               i pP     sP     16 59 07.5 +6.7
MNK                               i PP     PP     17 01 08.2  +11
MNK                               i PPP    PPP    17 02 23.6
MNK                               i S      S      17 06 55.0 +4.8
MNK                               i sS     sS     17 07 19.0  +13
MNK                               i SS     SS     17 10 50.1 +7.1
MNK                               i SSS    SSS    17 13 27.3
MNK                               i LQ     LQ     17 20 15.3
MNK                               i LR     LR     17 22 13.6
MNK                               i LRM    MLR    17 26 43.0
      comp=Z,118nm,18.7s
MNK                               i LRM    MLR    17 26 46.0
      comp=N,176nm,19.3s
MNK                               i LRM    MLR    17 26 55.9
      comp=E,16nm,22.6s
KRVT  Keravat (AS076    59.08 113 LR       LR     17 22 02.8
      comp=E,99nm,20.6s,baz=100,slow=34
RABL  Rabaul            59.13 113 P        P      16 58 51.5 +0.1
CFR   Carcaliu          59.22 309 ⇑P       P      16 58 51.7 +0.1
VSU   Vasula            59.23 324 ⇑eP      P      16 58 51.9 +0.4
VSU                               pmax     pmax
      comp=Z,42nm,1.0s
VSU   Vasula            59.23 324 eP       P      16 58 51.9 +0.4
NACGM Naroch            59.28 320 ⇑eP      P      16 58 53.4 +1.4
      baz=88
IDID  Didziasalis       59.29 321 eP       P      16 58 52.5 +0.6
FIA1  FINESS Array S    59.58 328 P        P      16 58 54.0 +0.2
FINES FINESS Array B    59.58 328 P        P      16 58 54.2 +0.3
      comp=Z,3.1nm,0.7s,baz=99,slow=12,SNR=6.7
FINES                             LR       LR     17 26 48.7
      comp=Z,213nm,19.7s,baz=98,slow=38
      comp=Z,3.1nm,0.7s
FINES FINESS Array B    59.58 328 P        P      16 58 54.1 +0.2
AS31  Alice Springs     59.58 143 P        P      16 58 54.1 -0.3
ASAR  Alice Springs     59.58 143 P        P      16 58 54.0 -0.4
      comp=Z,4.5nm,0.8s,baz=325,slow=6.5,SNR=26
      comp=Z,4.5nm,0.8s
ASAR  Alice Springs     59.58 143 P        P      16 58 54.0 -0.4
IIGN  Ignalina          59.59 321 eP       P      16 58 54.2 +0.2
ODBI  Odobesti          59.90 309 ⇑P       P      16 58 57.5 +1.1
TESR  Tescani           60.08 310 ⇑P       P      16 58 56.5 -1.1
VRI   Vrincioaia        60.11 310 ⇓P       P      16 58 58.9 +1.1
PLOR  Plostina          60.17 310 ⇑P       P      16 58 59.5 +1.2
ARCES ARCESS Array B    60.24 337 P        P      16 58 59.1 +0.8
      comp=Z,3.5nm,1.0s,baz=95,slow=7.5,SNR=1.8
ARCES                             PcP      PcP    16 59 45.5 +2.1
      comp=Z,5.2nm,0.9s,baz=72,slow=4.0,SNR=3.6
ARCES                             LR       LR     17 28 00.6
      comp=Z,298nm,19.6s,baz=87,slow=39
      comp=Z,3.5nm,1.0s
BIZ   Bicaz             60.40 311 ⇑P       P      16 59 00.2 +0.4
MEF   Metsahovi         60.41 326 eP       P      16 59 00.9 +1.4
SHEM  Shemya Is, Ala    60.45  42 LR       LR     17 27 10.5
      comp=Z,124nm,18.9s,baz=276,slow=38
COVR  Voineasa-Covas    60.48 310 ⇑P       P      16 59 01.0 +0.6
MLR   Muntele Rosu      60.71 309 ⇓P       P      16 59 03.6 +1.5
MLR   Muntele Rosu      60.71 309 P        P      16 59 02.5 +0.4
      comp=Z,22nm,0.9s,baz=120,slow=0.8,SNR=13
MLR                               LR       LR     17 29 40.2
      comp=Z,272nm,20.8s,baz=66,slow=40
MLR   Muntele Rosu      60.71 309 P        P      16 59 02.3 +0.2
OZUR                    60.73 310 ⇑P       P      16 59 01.3 -0.8
MTSE  Matsula           60.75 325 eP       P      16 59 02.9 +1.0
PABE  Paberze           60.86 321 eP       P      16 59 03.0 +0.3
BURAR Bucovina Array    60.91 312 ⇓P       P      16 59 03.8 +0.5
BURAR Bucovina Array    60.91 312 P        P      16 59 03.2 -0.1
BURAR                             IAmb     IAmb   16 59 09.4
      comp=Z,7.2nm,0.8s
BUR08 Bucovina Ar. S    60.92 312 P        P      16 59 03.3 -0.1
BUR08                             IAmb     IAmb   16 59 09.9
      comp=Z,6.9nm,0.9s
DOPR  Dopca             61.03 310 ⇑P       P      16 59 05.0 +0.9
NWAO  Narrogin (SRO)    61.05 163 P        P      16 59 03.8 -0.4
NWAO  Narrogin (SRO)    61.05 163 P        P      16 59 03.8 -0.4
NWAO                              pmax     pmax
      comp=Z,20nm,0.9s
NWAO  Narrogin (SRO)    61.05 163 P        P      16 59 05.9 +1.7
NWAO                              pP       sP     16 59 17.8 +0.5
VOIR                    61.34 309 ⇓P       P      16 59 06.5 +0.2
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SUW   Suwalki          61.45 319 eP     P      16 59 06.8 +0.1
ARCR  ARCALIA          61.57 311 ⇓P     P      16 59 09.5 +1.8
RAF   Rauma            61.67 327 eP     P      16 59 08.1 +0.1
RDO   Rodhopi          61.74 304  P     P      16 59 08.4 -0.5
LOT   Lotru            62.23 310 ⇓P     P      16 59 13.0 +0.7
KWP   Kalwaria Pacla   62.28 314  P     P      16 59 12.6 +0.2
KWP   Kalwaria Pacla   62.28 314  P     P      16 59 12.6 +0.2
KWP                               pmax  pmax
      comp=Z,376nm,0.8s
KOLS  Kolonicke sedl   62.66 314 eP     P      16 59 18.4 +3.4
KOLS                              pmax  pmax
      comp=Z,9.0nm,0.8s
KOLS  Kolonicke sedl   62.66 314 eP     P      16 59 18.4 +3.4
UZH   Uzhgorod         62.70 313⇓iP     P      16 59 15.2  0.0
UZH                              i             16 59 32.3
UZH                              i             16 59 36.4
DRGR                   62.72 311 ⇑P     P      16 59 15.5 -0.1
GZR   Gura Zlata       62.93 310 ⇑P     P      16 59 18.0 +1.1
VTS   Vitosha          63.13 306 ⇑P     P      16 59 18.5 +0.1
VTS   Vitosha          63.13 306  P     P      16 59 18.1 -0.3
VTS   Vitosha          63.13 306  P     P      16 59 18.2 -0.3
VTS                               pmax  pmax
      comp=Z,22nm,1.0s
CRVS  Cervenica-Dubn   63.20 314 eP     P      16 59 20.1 +1.5
CRVS                              pmax  pmax
      comp=Z,21nm,1.0s
CRVS  Cervenica-Dubn   63.20 314 eP     P      16 59 20.1 +1.5
SPITS Spitsbergen Ar   63.26 347  LR    LR     17 30 16.1
      comp=Z,235nm,20.5s,baz=218,slow=39
HERR  Herculane        63.27 309 ⇓P     P      16 59 20.2 +1.1
IDI   Anoyia           63.52 298  LR    LR     17 32 51.6
      comp=Z,39nm,18.0s,baz=87,slow=42
SIRR  Siria            63.53 311 ⇑P     P      16 59 21.8 +0.9
BZS   Buzias           63.69 310 ⇓P     P      16 59 21.6 -0.3
MDVR  Moldovita        63.78 309 ⇑P     P      16 59 23.4 +0.9
UPP   Uppsala          63.82 326 eP     P      16 59 22.6 +0.1
BOVS  Bovan            64.02 308 ⇓P     P      16 59 24.5 +0.4
OJC   Ojcow            64.04 315 eP     P      16 59 24.4 +0.3
AGG   Agios Georgios   64.60 303  P     P      16 59 26.4 -1.6
AGG                               IAmb  IAmb   16 59 31.6
      comp=Z,25nm,1.2s
AGG   Agios Georgios   64.60 303  P     P      16 59 26.4 -1.6
AGG                               pmax  pmax
      comp=Z,25nm,1.2s
FNA   Florina          64.89 305  P     P      16 59 28.5 -1.4
FNA                               IAmb  IAmb   16 59 33.8
      comp=Z,11nm,0.8s
FNA   Florina          64.89 305  P     P      16 59 28.5 -1.4
FNA                               pmax  pmax
      comp=Z,11nm,0.8s
VYHS  Vyhne            64.98 314 eP     P      16 59 31.0 +0.7
VYHS                              pmax  pmax
      comp=Z,5.0nm,0.9s
VYHS  Vyhne            64.98 314 eP     P      16 59 31.0 +0.7
FRGS  Fruska Gora      65.03 310 ⇓P     P      16 59 31.3 +0.7
FRGS  Fruska Gora      65.03 310 eP     P      16 59 29.8 -0.9
DIVS  Divibare         65.13 309  P     P      16 59 31.3 -0.1
DIVS                              IAmb  IAmb   16 59 36.6
      comp=Z,12nm,0.9s
DIVS  Divibare         65.13 309 eP     P      16 59 30.4 -1.1
OKC   Ostrava-Krasne   65.16 315 eP     P      16 59 33.0 +1.6
OKC                               MLR   MLR
      comp=Z,200nm,19.9s
OKC   Ostrava-Krasne   65.16 315 eP     P      16 59 33.0 +1.6
OKC                               AMS   AMS    17 28 50.0
      comp=Z,200nm,19.9s
SJES  Sjenica          65.33 308 eP     P      16 59 32.6 -0.2
KBN   Korca            65.36 305  P     P      16 59 31.4 -1.6
KBN   Korca            65.36 305  P     P      16 59 31.4 -1.6
KBN                               pmax  pmax
      comp=Z,39nm,1.1s
MAUC  Maruska          65.45 315 eP     P      16 59 38.2 +4.8
MAUC                              AMS   AMS    17 29 20.0
      comp=Z,500nm,23.9s
MORC  Moravsky Berou   65.55 315 ⇓P     P      16 59 35.4 +1.4
MORC  Moravsky Berou   65.55 315  P     P      16 59 32.5 -1.5
MORC  Moravsky Berou   65.55 315  P     P      16 59 32.5 -1.5
MORC                              pmax  pmax
      comp=Z,9.0nm,1.1s
MORC  Moravsky Berou   65.55 315 eP     P      16 59 34.0  0.0
MORH  Mrgy, Hungar     65.59 311 ⇑P     P      16 59 34.5 +0.3
MORH  Mrgy, Hungar     65.59 311 eP     P      16 59 34.2 -0.1
MORH  Mrgy, Hungar     65.59 311  P     P      16 59 34.0 -0.3
BBLS  Lazi&#263;i      65.60 309 eP     P      16 59 33.9 -0.6
CSKK  Cskako           65.60 312  P     P      16 59 35.5 +1.3
JAVC  Velka Javorina   65.66 314 eP     P      16 59 35.9 +1.1
RUDO  Rudo             65.68 308 eP     P      16 59 34.5 -0.4
HFS   Hagfors          65.73 327  P     P      16 59 34.4 -0.5
      comp=Z,0.8nm,0.6s,baz=13,slow=14,SNR=2.2
HFS                               LR    LR     17 28 33.6
      comp=Z,162nm,20.9s,baz=80,slow=36
      comp=Z,0.8nm,0.6s
KMBO  Kilima Mbogo     65.85 256  P     P      16 59 38.9 +2.2
      comp=Z,2.4nm,0.8s,baz=47,slow=16,SNR=4.6
KMBO                              LR    LR     17 29 00.2
      comp=Z,114nm,19.4s,baz=92,slow=37
      comp=Z,2.4nm,0.8s
KMBO  Kilima Mbogo     65.85 256  P     P      16 59 41.1 +4.4
KRLC  Kraliky          65.97 316  AMS   AMS    17 30 30.0
      comp=Z,200nm,23.0s
KOVH  Kovagotottos     65.99 311  P     P      16 59 36.1 -0.8
PDG   Podgorica        66.04 307  P     P      16 59 36.7 -0.6
PDG   Podgorica        66.04 307 eP     P      16 59 36.9 -0.3
KSP   Ksiaz            66.11 316 eP     P      16 59 38.3 +0.8
MPLH  Magyarpolny      66.12 312  P     P      16 59 37.1 -0.5
DRME  Dracevica, Mon   66.16 307 eP     P      16 59 37.3 -0.7
ZST   Bratislava       66.17 314 eP     P      16 59 39.0 +1.0
ZST   Bratislava       66.17 314 eP     P      16 59 39.0 +1.0
DPC   Dobruska-Polom   66.20 316 eP     P      16 59 38.6 +0.4
DPC                               MLR   MLR
      comp=Z,200nm,16.2s
DPC   Dobruska-Polom   66.20 316 eP     P      16 59 38.6 +0.4
DPC                              ex     x      16 59 41.4
DPC                               AMS   AMS    17 29 30.0
      comp=Z,200nm,16.2s
OSTC  Ostas            66.22 316  AMS   AMS    17 30 30.0
      comp=Z,300nm,14.6s
VRAC  Vranov           66.25 315 ⇑P     P      16 59 38.8 +0.3
VRAC  Vranov           66.25 315  P     P      16 59 39.2 +0.7
      comp=Z,13nm,1.1s,baz=99,slow=8.6,SNR=5.9
VRAC                              LR    LR     17 32 14.4
      comp=Z,211nm,21.8s,baz=84,slow=39
      comp=Z,13nm,1.1s
VRAC  Vranov           66.25 315 eP     P      16 59 39.2 +0.7
CHVC  Chvalec          66.31 316 eP     P      16 59 43.0 +4.1
CHVC                              AMS   AMS    17 30 30.0
      comp=Z,300nm,20.5s
UPC   Upice            66.36 316 eP     P      16 59 43.7 +4.6
UPC                               MLR   MLR
      comp=Z,300nm,16.7s
UPC   Upice            66.36 316 eP     P      16 59 43.7 +4.6
UPC                               AMS   AMS    17 32 50.0
      comp=Z,300nm,16.7s
KRUC  Moravsky         66.44 315 eP     P      16 59 40.3 +0.6
BRY   Bratogost        66.44 308 eP     P      16 59 36.3 -3.7
NC405 NORSAR Array S   66.50 328  P     P      16 59 39.4 -0.5
NC405                             IAmb  IAmb   16 59 49.8
      comp=Z,15nm,0.8s
HCY   Herceg Novi      66.59 307 eP     P      16 59 39.3 -1.4
TREB  Trebinje         66.62 307 eP     P      16 59 45.5 +4.5
NC602 NORSAR Array S   66.66 328  P     P      16 59 40.2 -0.7
NC602                             IAmb  IAmb   17 00 07.8
      comp=Z,28nm,1.4s
NB201 NORSAR Array S   66.72 328  P     P      16 59 40.6 -0.7
NB2   NORSAR Subarra   66.75 328  P     P      16 59 40.6 -0.9
      comp=Z,1.7nm,0.7s,baz=78,slow=6.5
NOA   NORSAR Array B   66.75 328  P     P      16 59 40.9 -0.6
      comp=Z,2.1nm,0.7s,baz=78,slow=6.4,SNR=13
NOA                               LR    LR     17 30 58.4
      comp=Z,223nm,18.4s,baz=80,slow=38
      comp=Z,2.1nm,0.7s
RONA  Rosalia, Austr   66.82 313 eP     P      16 59 42.1 -0.1
NC204 NORSAR Array S   66.92 328  P     P      16 59 42.3 -0.3
TREC  Trest            66.96 315  AMS   AMS    17 30 00.0
      comp=Z,200nm,24.3s
CONA  Conrad Observa   67.05 313 i P    P      16 59 44.5 +0.8
      comp=Z,19nm,1.3s,SNR=6.1
MGRS  Mrkonjic Grad    67.09 310 eP     P      16 59 42.1 -1.8
PVCC  Panska Ves       67.25 316  AMS   AMS    17 31 20.0
      comp=Z,300nm,15.6s
PRU   Pruhonice        67.39 316 eP     P      16 59 50.5 +4.8
PRU                               MLR   MLR
      comp=Z,200nm,17.4s
PRU   Pruhonice        67.39 316 eP     P      16 59 50.5 +4.8
PRU                               AMS   AMS    17 31 20.0
      comp=Z,200nm,17.4s
ARSA  Arzberg          67.44 313 eP     P      16 59 45.3 -0.8
      comp=Z,4.7nm,0.7s
OPO   Ambohidratompo   67.53 234  P     P      16 59 46.3 -0.8
      comp=Z,5.1nm,0.8s,baz=85,slow=12,SNR=4.5
OPO                               LR    LR     17 28 03.9
      comp=Z,112nm,19.8s,baz=204,slow=35
      comp=Z,5.1nm,0.8s
BRG   Berggiesshubel   67.55 317 eP     P      16 59 49.6 +2.9
BRG                               Amp          16 59 51.9
      comp=Z,2.7nm,0.8s
BRG                              ex     x      16 59 59.0
BRG                               Amp          17 00 00.5
      comp=Z,3.5nm,0.8s
BRG                              ex     x      17 00 03.3
BRG                               Amp          17 00 04.5
      comp=Z,7.5nm,0.9s
BRG   Berggiesshubel   67.55 317 eP     P      16 59 49.6 +2.9
BRG                              e             17 00 03.3
BRG                               pmax  pmax
      comp=Z,3.0nm,0.8s
BRG                               pmax  pmax
      comp=Z,4.0nm,0.8s
BRG                               pmax  pmax
      comp=Z,8.0nm,0.9s
GROS  Grobnik          67.65 312 eP     P      16 59 47.3 -0.2
GROS                             i pP   pP     16 59 50.9 -6.1
CKRC  Cesky Krumlov    67.83 315 eP     P      16 59 49.2 +0.7
CKRC                             ex     x      16 59 53.5
CRES  Cresnjev         67.84 311 eP     P      16 59 49.2 +0.5
SOKA  Soboth           67.91 312 i P    P      16 59 49.1  0.0
      comp=Z,3.9nm,0.6s,SNR=6.4
CLL   Collm            68.02 317 eP     P      16 59 50.0 +0.4
CLL                              e*SP   sP     17 00 06.0 +3.1
CLL                              eSS    SS     17 13 06.0 -3.0
CLL   Collm            68.02 317 eP     P      16 59 50.0 +0.4
CLL                              epP    sP     17 00 06.0 +3.1
CLL                              ePP    PP     17 02 22.0 +2.5
CLL                              eSS    SS     17 13 06.0 -3.0
CLL                              eSSS   SSS    17 16 24.0
CLL                               LmV          17 33 00.0
      comp=Z,200nm,21.8s
CLL                               LmV          17 46 00.0
      comp=Z,100nm,21.1s
MOA   Molln            68.11 314 i P    P      16 59 50.0 -0.3
      comp=Z,6.7nm,0.5s,SNR=6.7
GEC2  GERESS Array S   68.21 315  P     P      16 59 50.6 -0.4
GERES GERESS Array B   68.21 315  P     P      16 59 51.6 +0.5
      comp=Z,1.2nm,0.6s,baz=76,slow=7.3,SNR=14
      comp=Z,1.2nm,0.6s
GERES GERESS Array B   68.21 315  P     P      16 59 50.8 -0.2
KHC   Kasperske Hory   68.22 315⇑eP     P      16 59 51.5 +0.5
KHC                               pmax  pmax
      comp=Z,18nm,1.5s
KHC   Kasperske Hory   68.22 315 eP     P      16 59 51.3 +0.3
KHC                              ex     x      16 59 55.7
KHC                               AMS   AMS    17 32 50.0
      comp=Z,300nm,24.0s
OBKA  Obir             68.27 312 eP     P      16 59 51.8 +0.4
      comp=Z,8.9nm,1.2s
LJU   Ljubljana        68.41 312 eP     P      16 59 56.8 +4.6
GBAS  Gorenja Brezov   68.50 312 i P    P      16 59 53.0 +0.2
BIOA  Bad Ischl, Aus   68.56 314 eP     P      16 59 55.5 +2.3
CEY   Cerknica         68.56 311 eP     P      16 59 53.5 +0.3
NKC   Novy Kostel      68.64 316 epP    pP     17 00 07.7 +4.5
NKC                               AMS   AMS    17 32 10.0
      comp=Z,300nm,16.8s
MYKA  Terra Mystica    68.84 313 eP     P      16 59 58.8 +3.8
      comp=Z,6.2nm,0.9s
SKDS  Skadanscina      68.89 311 eP     P      16 59 57.8 +2.6
KBA   Koelnbreinsper   68.91 313 eP     P      16 59 56.7 +1.1
      comp=Z,8.3nm,0.8s
ROBS  Robic            69.03 312 i P    P      16 59 55.4 -0.7
ABTA  Abfaltersbach    69.56 313 eP     P      16 59 59.0 -0.5
      comp=Z,8.2nm,0.9s
VOI   Vohitsoka        69.94 232  P     P      17 00 00.3 -1.8
VOI                               IAmb  IAmb   17 00 09.8
      comp=Z,29nm,1.5s
WTTA  Wattenberg       69.98 314 eP     P      17 00 01.8 -0.4
      comp=Z,10nm,0.8s
WATA  Walderalm        70.00 314 eP     P      17 00 03.7 +1.5
      comp=Z,8.2nm,0.9s
STKA  Stephens Creek   70.22 143  P     P      17 00 02.8 -0.6
      comp=Z,3.6nm,0.6s,baz=344,slow=9.2,SNR=3.2
STKA                              LR    LR     17 33 01.1
      comp=Z,133nm,18.3s,baz=314,slow=38
      comp=Z,3.6nm,0.6s
SQTA  Sankt Quirin     70.27 314 i P    P      17 00 03.6 -0.2
      comp=Z,12nm,0.8s,SNR=5.1
NRCA  Norcia           70.29 309  P     P      17 00 03.1 -0.9
NRCA                              IAmb  IAmb   17 00 08.8
      comp=Z,18nm,1.1s
MOTA  Moosalm          70.30 314 eP     P      17 00 04.0 -0.1
      comp=Z,15nm,0.8s
CTI   Castel Tesino    70.33 312  P     P      17 00 02.9 -1.3
CTI   Castel Tesino    70.33 312  P     P      17 00 02.9 -1.3
CTI                               pmax  pmax
      comp=Z,6.0nm,0.8s
RETA  Reutte           70.48 314 i P    P      17 00 05.2 +0.1
      comp=Z,10nm,0.8s,SNR=6.3
FETA  Feichten         70.64 314 eP     P      17 00 06.2 +0.1
      comp=Z,16nm,1.0s
DAVA  Damuels          71.11 314 eP     P      17 00 09.7 +0.7
      comp=Z,5.0nm,0.9s
ALE   Alert            71.26 358  P     P      17 00 09.4 +0.3
ALE                               x     x      17 00 13.5
DAVOX Davos/Dischmat   71.27 313  P     P      17 00 10.0  0.0
      comp=Z,5.1nm,0.5s,baz=96,slow=8.9,SNR=24
DAVOX                             LR    LR     17 34 44.2
      comp=Z,134nm,19.4s,baz=72,slow=39
      comp=Z,5.1nm,0.5s
MBAR  Mbarara          71.33 260  LR    LR     17 33 30.9
      comp=Z,57nm,18.2s,baz=44,slow=38
OSSC  Osservatorio P   71.38 310  P     P      17 00 08.5 -2.0
OSSC                              IAmb  IAmb   17 00 16.6
      comp=Z,20nm,1.0s
TUE   Stuetta          71.72 313  P     P      17 00 12.1 -0.7
TUE                               IAmb  IAmb   17 00 19.1
      comp=Z,10nm,0.8s
BFO   Black Forest     71.77 315  P     P      17 00 12.6 -0.2
BTNL  Ternell          72.39 318 dPcP   PcP    17 00 32.3 -2.0
WLF   Walferdange      72.68 317  P     P      17 00 19.1 +0.9
WLF                               IAmb  IAmb   17 00 36.7
      comp=Z,19nm,1.0s
WLF   Walferdange      72.68 317  P     P      17 00 19.1 +0.9
WLF                               pmax  pmax
      comp=Z,19nm,1.0s
WLF   Walferdange      72.68 317 dP     P      17 00 17.8 -0.4
IMAR  Indian Mountai   72.94  24  P     P      17 00 18.6 -0.8
SENIN Lac Senin/Sane   73.09 314  P     P      17 00 20.4 -0.5
TOLK  Toolik Lake Re   73.16  21  P     P      17 00 20.1 -0.7
TOLK                              IAmb  IAmb   17 00 26.0
      comp=Z,14nm,0.8s
H21K  Melozitna Rive   73.43  24  P     P      17 00 21.9 -0.4
H21K                              IAmb  IAmb   17 00 28.0
      comp=Z,13nm,1.0s
J20K  Nowinta River    73.57  26  P     P      17 00 23.0 -0.2
BNI   Bardonecchia     73.96 313  P     P      17 00 24.3 -1.7
BNI   Bardonecchia     73.96 313  P     P      17 00 24.3 -1.7
BNI                               pmax  pmax
      comp=Z,10.0nm,1.0s
K20K  Telida           73.96  27  P     P      17 00 23.8 -1.7
EUNU  Eureka           74.02   1  P     P      17 00 24.7 -1.0
EUNU                              IAmb  IAmb   17 00 33.6
      comp=Z,15nm,1.2s
L19K  White Mountain   74.16  28  P     P      17 00 26.3 -0.3
H23K  Yukon River      74.54  24  P     P      17 00 28.7 -0.2
CAST  Castle Rocks     74.73  26  P     P      17 00 30.1 +0.1
BPAW  Bear Paw Mtn.    74.84  25  P     P      17 00 30.1 -0.5
BPAW                              IAmb  IAmb   17 00 35.4
      comp=Z,11nm,0.8s
PPLA  Purkeypile       74.94  27  P     P      17 00 31.0 -0.4
PPLA                              IAmb  IAmb   17 00 47.4
      comp=Z,10nm,0.9s
BMAR  Burnt Mountain   75.39  21  P     P      17 00 34.0 +0.2
MDM   Murphy Dome      75.45  24  P     P      17 00 33.8 -0.3
MDM                               IAmb  IAmb   17 00 49.2
      comp=Z,14nm,0.8s
POKR  Poker Plat Res   75.66  24  P     P      17 00 34.5 -0.8
POKR                              IAmb  IAmb   17 00 40.6
      comp=Z,14nm,0.9s
EKA   Eskdalemuir Ar   75.77 325  P     P      17 00 37.1 +1.0
      comp=Z,2.9nm,1.0s,baz=65,slow=5.9,SNR=3.8
EKA                               LR    LR     17 36 58.3
      comp=Z,194nm,20.1s,baz=48,slow=38
      comp=Z,2.9nm,1.0s
RND   Reindeer         76.01  26  P     P      17 00 36.6 -0.8
RND   Reindeer         76.01  26  P     P      17 00 36.6 -0.8
RND                               pmax  pmax
      comp=Z,10.0nm,1.0s
ILAR  Eielson Array    76.04  24  P     P      17 00 36.5 -0.9
      comp=Z,0.7nm,0.8s,baz=281,slow=7.3,SNR=5.0
ILAR                              PP    PP     17 03 30.0 +2.2
      comp=Z,0.8nm,0.8s,baz=282,slow=5.7,SNR=3.2
ILAR                              LR    LR     17 35 01.6
      comp=Z,324nm,19.8s,baz=280,slow=36
      comp=Z,0.7nm,0.8s
BRLK  Bradley Lake     77.00  29  P     P      17 00 42.0 -1.0
BRLK                              IAmb  IAmb   17 00 56.4
      comp=Z,22nm,1.2s
KDAK  Kodiak Island    77.19  32  LR    LR     17 35 23.1
      comp=Z,198nm,21.9s,baz=7.9,slow=36
RIDG  Independent Ri   77.35  24  P     P      17 00 44.0 -0.9
RIDG                              IAmb  IAmb   17 00 59.6
      comp=Z,7.4nm,0.8s
TULEG Thule            77.36 357  P     P      17 00 44.1 -0.6
A36M  Sachs Harbour    77.45  13  P     P      17 00 45.5 +0.2
SCRK  Sand Creek       77.53  24  P     P      17 00 45.3 -0.8
SUMG  Summit           77.55 348  P     P      17 00 45.2 -1.1
SUMG                              IAmb  IAmb   17 00 51.1
      comp=Z,11nm,1.1s
SUMG  Summit           77.55 348  P     P      17 00 45.2 -1.1
SUMG                              pmax  pmax
      comp=Z,11nm,1.1s
INK   Inuvik           78.15  18  LR    LR     17 38 48.5
      comp=Z,235nm,20.9s,baz=334,slow=38
INK   Inuvik           78.15  18  P     P      17 00 48.8 -0.4
INK                               IAmb  IAmb   17 00 55.0
      comp=Z,12nm,0.9s
INK   Inuvik           78.15  18  P     P      17 00 48.8 -0.4
INK                               pmax  pmax
      comp=Z,12nm,0.9s
L27K  Beaver Creek,    78.85  24  P     P      17 00 53.3  0.0
L27K                              IAmb  IAmb   17 01 09.4
      comp=Z,7.8nm,0.8s
BCAR  Beaver Creek A   78.87  24  P     P      17 00 53.4  0.0
BMRM  Bremner River    79.00  27  P     P      17 00 53.8 -0.3
BMRM                              IAmb  IAmb   17 01 09.7
      comp=Z,19nm,0.8s
BARN  Barnard Glacie   80.11  26  P     P      17 01 00.7 +0.3
BARN                              IAmb  IAmb   17 01 08.2
      comp=Z,18nm,1.4s
LSZ   Lusaka           80.64 248  LR    LR     17 36 51.9
      comp=Z,156nm,18.9s,baz=76,slow=36
ESDC  Sonseca Array    83.36 311  P     P      17 01 17.6 -0.1
      comp=Z,2.4nm,1.0s,baz=39,slow=5.7,SNR=12
ESDC                              PP    PP     17 04 32.1 +2.8
      comp=Z,0.9nm,1.0s,baz=51,slow=7.4,SNR=4.1
ESDC                              LR    LR     17 44 42.5
      comp=Z,58nm,18.1s,baz=50,slow=40
      comp=Z,2.4nm,1.0s
SFJD  Kangerlussuaq    84.52 349  LR    LR     17 42 24.8
      comp=Z,203nm,21.7s,baz=20,slow=38
MVO   Moncorvo         84.67 313 ePcP   P      17 01 26.1 +1.7
MVO                              i LQ   LQ     17 01 29.7
MVO                              epP    sP     17 01 37.7 -0.1
MTE   Manteigas        85.39 313 ePcP   P      17 01 28.8 +0.7
MTE                              i LQ   LQ     17 01 33.3
MTE                              epP    sP     17 01 42.0 +0.5
PVIS  Viseu            85.47 313 i LQ   LQ     17 01 33.7
PVIS                             epP    pP     17 01 41.8 +3.6
PMRV  Marv??o          85.78 312 i LQ   LQ     17 01 34.9
PCAS  Casmilo, Conde   86.20 313 i LQ   LQ     17 01 36.5
DLBC  Dease Lake       86.25  24  LR    LR     17 44 58.2
      comp=Z,205nm,18.7s,baz=358,slow=39
EVO   Evora            86.66 312 i LQ   LQ     17 01 39.4
PBEJ  Beja             86.82 311 i LQ   LQ     17 01 40.2
MDT   Midelt           87.11 305  LR    LR     17 45 40.3
      comp=Z,29nm,18.8s,baz=16,slow=39
MESJ  Messejana        87.15 311 ePcP   PcP    17 01 38.3 -0.5
PNCL  Nicolau / Gran   87.22 311 ePcP   P      17 01 36.8 -0.2
PNCL                             i LQ   LQ     17 01 42.1
YKA   Yellowknife Ar   87.59  15  P     P      17 01 37.4 -0.9
      comp=Z,1.2nm,0.7s,baz=328,slow=4.6,SNR=12
YKA                               PP    PP     17 05 05.4 +2.7
      comp=Z,0.9nm,0.8s,baz=329,slow=7.5,SNR=5.3
YKA                               LR    LR     17 42 41.6
      comp=Z,114nm,21.9s,baz=336,slow=37
      comp=Z,1.2nm,0.7s
YKA   Yellowknife Ar   87.59  15 i P    P      17 01 39.5 +1.2
YKA                               pmax  pmax
      comp=Z,1.0nm,0.7s
LBTB  Lobatse          87.63 241  LR    LR     17 42 19.0
      comp=Z,73nm,18.1s,baz=56,slow=37
BOSA  Boshof           89.69 238  P     P      17 01 50.1 +1.3
      comp=Z,1.9nm,0.8s,baz=85,slow=8.5,SNR=3.9
BOSA                              LR    LR     17 39 28.4
      comp=Z,76nm,21.6s,baz=45,slow=34
      comp=Z,1.9nm,0.8s
BOSA  Boshof           89.69 238  P     P      17 01 47.8 -1.1
BOSA                              IAmb  IAmb   17 01 52.0
      comp=Z,11nm,1.2s
TORD  Torodi Ar. Bea   91.21 285  P     P      17 01 56.8 +0.6
      comp=Z,1.1nm,0.9s,baz=108,slow=4.7,SNR=3.4
      comp=Z,1.1nm,0.9s
TSUM  Tsumeb           91.41 249  LR    LR     17 41 34.7
      comp=Z,56nm,21.0s,baz=61,slow=35
AFI   Afiamalu         94.81 103  LR    LR     17 39 14.6
      comp=Z,48nm,20.7s,baz=194,slow=32
SUR   Sutherland       94.86 236  LR    LR     17 43 38.5
      comp=Z,143nm,19.2s,baz=76,slow=35
SCHQ  Schefferville    98.56 352  LR    LR     17 51 40.9
      comp=Z,63nm,18.3s,baz=17,slow=38
NEW   Newport          99.00  24  LR    LR     17 50 48.6
      comp=Z,156nm,18.2s,baz=332,slow=38
BDFB  Brasilia        148.06 283  PKPbc PKiKP  17 08 38.7 +0.1
      comp=Z,3.3nm,0.5s,baz=9.6,slow=3.9,SNR=5.4
ROSC  El Rosal        148.69 348  PKPbc PKPbc  17 08 39.6 +0.7
      comp=Z,25nm,0.6s,baz=292,slow=17,SNR=2.3
```

TAP 17 16:58:58.9, 23°.89N×121°.62E, h6km, ML3.0, 1C-12D, C, Taiwan

```
Code  Station Name       Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC      h  m  s    ISC
TEYL  Yanliau Villag   0.03 224⇓iP        Pg     16 59 00.2 +0.1
      baz=303
TEYL                             i S      Sg     16 59 01.4 +0.4
      baz=303
HWA   Hwalien          0.09 349⇓iP        Pg     16 59 01.4 +0.5
      baz=354
ETM   Tongmen          0.14 302 i P       Pg     16 59 02.2 +0.4
      baz=302
ETM                             i S       Sg     16 59 04.8 +1.1
      baz=302
TWD   Chiawan          0.19 352⇓iP        Pg     16 59 03.2 +0.5
      baz=355
TWD                               S       Sg     16 59 06.7 +1.5
      baz=355
ESL   Shilin           0.19 246⇓iP        Pg     16 59 03.0 +0.3
      baz=245
ESL                             i S       Sg     16 59 05.9 +0.7
      baz=245
TEGC  Jichi Village    0.20 203   P       Pg     16 59 04.0 +1.2
      baz=201
TEGC                             eS       Sg     16 59 08.3 +2.8
      baz=201
ETL   Fush Village     0.27   0   P       Pg     16 59 04.6 +0.4
ETL                              eS       Sg     16 59 09.2 +1.5
NACB  Ninganchiao      0.28 355⇓iP        Pg     16 59 04.8 +0.3
      baz=355
NACB                              S       Sg     16 59 09.3 +1.1
      baz=355
EGFH  Guangfu          0.28 219⇓iP        Pg     16 59 05.0 +0.6
      baz=219
EGFH                             eS       Sb     16 59 10.3 -1.1
      baz=219
ETLH  Xiulin Townshi   0.34 338⇓iP        Pg     16 59 05.9 +0.3
      baz=338
ETLH                             eS       Sg     16 59 10.8 +0.7
      baz=338
WHF   Hehuan Shan      0.41 308⇓iP        Pg     16 59 07.3 +0.3
      baz=308
WHF                              eS       Sb     16 59 14.3 -1.3
      baz=308
OWD   Renai            0.41 279 ⇓P        Pg     16 59 07.5 +0.5
      baz=279
OWD                              eS       Sg     16 59 13.2 +0.8
      baz=279
HGSD  Ruisui           0.44 205 eP        Pb     16 59 08.8 -0.2
```

	baz=205						
CHGB	**Renai**	**0.44**	**292**	⇓P	Pg	16 59 08.2	+0.7
	baz=292						
CHGB				*e*S	Sb	16 59 15.1	-1.2
	baz=292						
VWDT	**VWDT**	**0.46**	**253**	⇓P	Pb	16 59 08.7	-0.7
	baz=253						
VWDT				*e*S	Sb	16 59 15.7	-0.9
	baz=253						
EHY	**Hungye**	**0.47**	**216**	*e*P	Pg	16 59 08.4	+0.4
	baz=215						
EHY				*e*S	Sb	16 59 16.2	-0.7
	baz=215						
WUSB	**Renai**	**0.47**	**282**	*e*P	Pg	16 59 08.8	+0.8
	baz=282						
WUSB				*e*S	Sb	16 59 15.8	-1.2
	baz=282						
FUSS	**Fushou**	**0.49**	**316**	⇓*i*P	Pg	16 59 09.2	+0.6
	baz=316						
ENA	**Nanau**	**0.54**	**11**	*e*P	Pg	16 59 09.8	+0.4
	baz=12						
ENA				*e*S	Sb	16 59 19.7	+0.7
	baz=12						
TWT	**Tachien**	**0.54**	**311**	*e*P	Pb	16 59 10.7	-0.2
	baz=310						
TDCB	**Techi**	**0.56**	**310**	*e*P	Pb	16 59 11.2	0.0
	baz=310						
EWUT	**Wuta**	**0.57**	**14**	*e*P	Pg	16 59 10.3	+0.5
	baz=14						
EWUT				*e*S	Sb	16 59 20.1	+0.5
	baz=14						
NNSB	**Datong**	**0.58**	**338**	*e*P	Pg	16 59 10.7	+0.7
	baz=338						
YULB	**Yu-li**	**0.58**	**211**	*e*P	Pg	16 59 10.5	+0.4
	baz=211						
YULB				*e*S	Sb	16 59 19.5	-0.4
	baz=211						
NNS	**Nan Shan**	**0.59**	**337**	*e*P	Pg	16 59 11.0	+0.6
	baz=338						
EYUL	**Yuli**	**0.61**	**207**	*e*P	Pb	16 59 11.9	0.0
	baz=207						
TWF1	**Yuli**	**0.61**	**209**	*e*P	Pg	16 59 11.1	+0.3
	baz=208						
TWF1				*e*S	Sg	16 59 19.6	+0.9
	baz=208						
SSLB	**Suanglung**	**0.62**	**260**	⇑P	Pb	16 59 11.7	-0.5
	baz=260						
SSLB				*e*S	Sb	16 59 20.2	-0.9
	baz=260						
WPL	**Puli Township**	**0.62**	**281**	*e*P	Pb	16 59 11.9	-0.2
	baz=281						
WPL				*e*S	Sb	16 59 20.7	-0.4
	baz=281						
LATG	**Datong**	**0.65**	**352**	*e*P	Pg	16 59 11.9	+0.5
	baz=352						
LATG				*e*S	Sb	16 59 21.6	-0.4
	baz=352						
DPDB	**Guoxing**	**0.65**	**283**	*e*P	Pb	16 59 12.6	-0.1
	baz=283						
DPDB				*e*S	Sb	16 59 21.7	-0.4
	baz=283						
SMLT	**Sun Moon Lake**	**0.66**	**269**	*e*P	Pb	16 59 12.6	-0.3
	baz=269						
SMLT				*e*S	Sb	16 59 21.8	-0.6
	baz=269						
NDT	**Datong Townshi**	**0.71**	**352**	*e*P	Pb	16 59 13.4	-0.3
	baz=352						
YUS	**Yu-Shan**	**0.73**	**237**	*e*P	Pb	16 59 14.2	-0.2
	baz=237						
YUS				*e*S	Sb	16 59 24.6	-0.2
	baz=237						
NDS	**Dongshan**	**0.74**	**7**	*e*P	Pb	16 59 13.7	-0.5
	baz=7.0						
NDS				*e*S	Sb	16 59 24.9	+0.3
	baz=7.0						
TWC	**Suao**	**0.74**	**16**	*e*P	Pb	16 59 14.5	+0.2
	baz=17						
ENTT	**Nioudou**	**0.75**	**356**	*e*P	Pb	16 59 13.9	-0.4
	baz=357						
FULB	**Fuli**	**0.75**	**204**	*e*P	Pb	16 59 14.7	+0.3
	baz=204						
YHNB	**Yeheng**	**0.81**	**344**	*e*P	Pb	16 59 15.2	-0.2
	baz=344						
NSK	**Sanguang**	**0.82**	**343**	*e*P	Pb	16 59 15.5	0.0
	baz=343						
TWE	**Neicheng**	**0.83**	**3**	*e*P	Pb	16 59 15.5	-0.2
	baz=4.0						
ALS	**Alishan**	**0.84**	**243**	*e*P	Pb	16 59 16.2	+0.1
	baz=243						
WNT	**Mingjian**	**0.86**	**269**	*e*P	Pn	16 59 17.5	0.0
	baz=269						
NWLT	**Wulai**	**0.89**	**353**	*e*P	Pb	16 59 16.6	-0.1
	baz=353						
ELDTW	**Lidau**	**0.89**	**219**	*e*P	Pg	16 59 15.6	-0.5
	baz=218						

IDC 17 17:03:50.7±1.5**, 26°.17N×99°.88E, h0**^{km}**, mb3.4**/3**,**
mbtmp3.4/4**, ML3.7**/1**, MS3.9**/3**, Error ellipse:**
s-maj=56.5km s-min=25.0km az=69.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.72**	**187**	Pn	Pn	17 05 44.2	-0.2
	0.3nm,0.3s,baz=358,slow=13,SNR=6.7						
CMAR				Pg	Pg	17 06 13.4	-5.3
	0.6nm,0.3s,baz=358,slow=17,SNR=15						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**24.87**	**330**	P	P	17 09 15.2	+0.2
	0.7nm,0.8s,baz=142,slow=10,SNR=6.3						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**29.39**	**332**	LR	LR	17 23 03.2	
	comp=Z,201nm,18.2s,baz=99,slow=39						
GEYT	**Alibeck**	**37.01**	**299**	LR	LR	17 28 45.0	
	comp=Z,113nm,20.5s,baz=174,slow=40						
TIXI	**Tiksi**	**48.32**	**12**	LR	LR	17 33 43.8	
	comp=Z,169nm,18.0s,baz=180,slow=37						
WRA	**Warramunga Arr**	**56.74**	**140**	P	P	17 13 36.3	-0.2
	0.3nm,0.7s,baz=328,slow=7.7,SNR=2.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**59.48**	**143**	P	P	17 13 55.4	-0.3
	0.6nm,1.2s,baz=326,slow=6.4,SNR=1.7						
	0.6nm,1.2s						

IDC ***17*** *17:05:10.8±0.5, 26°.06N×99°.59E, h0*^{km}*, mb4.4/32,*
mbtmp4.4/33, ML4.8/1, MS3.8/8, Error ellipse:
s-maj=14.1km s-min=10.5km az=52.0

BJI ***17*** *17:05:11.8±0.0, 26°.08N×99°.58E, h10*^{km}*, mb4.6/54,*
mB4.9/33, ML4.7/9, Ms4.6/58, Ms7 4.2/52

GCMT ***17*** *17:05:13.5±0.4, 26°.10N±0°.04×99°.63E±0°.02, h25*^{km}*±1*^{km}*,*
MW4.8/63, Moment Tensor Solution. s13,c14; s63,c97;
Duration: 0 Moment tensor: Scale 10^{16}*Nm; M*$_{rr}$*-1.41±.21;*
M$_{\theta\theta}$*-0.53±.11; M*$_{\phi\phi}$*1.95±.12; M*$_{r\theta}$*-0.49±.28; M*$_{\theta\phi}$*-0.37±.07;*
M$_{\phi r}$*0.22±.19; Best double couple: M*$_0$*1.83100×10*^{16}
NP1:ϕ_s*14.00000°, δ45.00000°, λ-56.00000°. NP2:*
ϕ_s*150.00000°, δ54.00000°, λ-119.00000°. Principal axes:*
T 2.0300, Plg5.0000°, Azm261.0000°; N -0.3920,
Plg23.0000°, Azm169.0000°; P -1.6320, Plg66.0000°,
Azm2.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

MOS ***17*** *17:05:14.7±1.1, 26°.06N×99°.54E, h40*^{km}*, mb5.0/33 Error*
ellipse: s-maj=7.1km s-min=4.0km az=119.2

NEIC ***17*** *17:05:17.5±1.5, 26°.09N±0°.07×99°.58E±0°.08, h51*^{km}*±5*^{km}*,*
mb4.8/161, Error ellipse: s-maj=11.0km s-min=9.5km
az=76.0

ISC 17 17:05:14.6±0.4**, 26°.07N**±0°.04×**99°.54E**±0°.03**, h28**^{km}±2^{km}**,**
h28^{km}**:pP-P, n463, σ1**^{s}**.42**/494**, mb4.8**/162**, MS3.8**/16**,**
65C-72D, Fault plane solution: NP1:ϕ_s46.30537°**,**
δ57.25620°**,** λ-42.82081°. **NP2:**ϕ_s162.92671°**,** δ55.13111°**,**
λ-138.75789°. **Principal axes:** T Plg1.2486°**,**
Azm105.0553°**;** N Plg38.0924°**,** Azm196.0343°**;** P
Plg51.8796°**,** Azm13.4636°**; Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**2.02**	**77**	Pg	**Pn**	**17 05 47.5**	**+0.5**
PZH				Sg	**Sb**	**17 06 14.1**	**-1.6**
PZH				smax	smax		
	comp=N,4µm,1.2s						
PZH				smax	smax		
	comp=E,4µm,0.9s						
KMI	**Kunming**	**3.04**	**107**	⇑Pn	**Pn**	**17 06 02.1**	**+1.0**
KMI				Pg	**Pb**	**17 06 07.8**	**-0.4**
KMI				Sg	**Sb**	**17 06 48.4**	**+3.5**
KMI				smax	smax		
	comp=N,3µm,1.6s						
KMI				smax	smax		
	comp=E,2µm,0.8s						
CD2	**Chengdu**	**6.09**	**37**	Pn	**Pn**	**17 06 44.4**	**+1.6**
CD2				Sg	Sb	17 08 24.5	+12
CD2				smax	smax		
	comp=E,880nm,1.8s						
CD2				LR	LR		
	comp=E,10µm,8.6s						
CD2				LR	LR		
	comp=Z,3µm,8.9s						
GYA	**Guiyang**	**6.41**	**85**	⇑Pn	**Pn**	**17 06 49.1**	**+1.8**
GYA				Sn	Sn	17 08 07.8	+8.2
GYA				LR	LR		
	comp=N,1µm,5.2s						
GYA				LR	LR		
	comp=E,980nm,4.8s						
GYA				LR	LR		
	comp=Z,2µm,5.8s						
SHL	**Shillong**	**6.92**	**268**	*e*P	**Pn**	**17 06 55.6**	**+1.2**
CHTO	**Chiang Mai**	**7.24**	**184**	Pn	**Pn**	**17 07 00.8**	**+2.2**
CHTO	**Chiang Mai**	**7.24**	**184**	P	**Pn**	**17 07 00.8**	**+2.2**
CHTO						17 08 20.6	
CM31	**Chiang Mai Arr**	**7.59**	**184**		**Pn**	**17 07 05.6**	**+2.1**
CMAR	**Chiang Mai Arr**	**7.59**	**184**	Pn	**Pn**	**17 07 03.9**	**+0.4**
	3.9nm,0.3s,baz=360,slow=13,SNR=22						
CMAR				Pg	Pb	17 07 33.8	+8.2
	1.3nm,0.3s,baz=6.5,slow=17,SNR=5.1						
CMAR				Lg	Lg	17 09 11.9	
	4.0nm,0.3s,baz=1.9,slow=31,SNR=3.3						
CMAR				LR	LR	17 10 10.9	
	comp=Z,412nm,18.4s,baz=5.0,slow=40						
	9.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.59**	**184**	Pn	**Pn**	**17 07 05.8**	**+2.3**
CMAR	**Chiang Mai Arr**	**7.59**	**184**	*i* P	**Pn**	**17 07 06.0**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LSA	**Lhasa**	**8.26**	**298**	Pn	**Pn**	**17 07 14.4**	**+1.3**
LSA	**Lhasa**	**8.26**	**298**	P	**Pn**	**17 07 14.4**	**+1.3**
LSA	**Lhasa**	**8.26**	**298**	P	**Pn**	**17 07 14.8**	**+1.8**
LSA				S	Sn	17 08 57.4	+12
LSA				pmax	pmax		
	comp=Z,18nm,1.0s						
LSA				LR	LR		
	comp=Z,2µm,16.7s						
LSA				LR	LR		
	comp=Z,870nm,15.7s						
LSA				LR	LR		
	comp=Z,810nm,16.7s						
ENH	**Enshi**	**9.72**	**62**	Pn	**Pn**	**17 07 31.5**	**-1.2**
GULI	**GuiLin**	**9.80**	**92**	⇑P	**Pn**	**17 07 31.8**	**-1.9**
LZH	**Lanzhou**	**10.65**	**19**	*e*P	Pn	17 07 51.8	+6.3
LZH				pmax	pmax		
	comp=Z,52nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,8.7s						
LZH				LR	LR		
	comp=Z,2µm,8.1s						
LZH				LR	LR		
	comp=Z,1µm,9.2s						
GOMU	**GeErMu**	**10.88**	**339**	⇑*i*P	**Pn**	**17 07 48.6**	**-0.2**
GOMU				pP		17 07 52.0	
GOMU				sP		17 07 55.3	
GOMU				S	**Sn**	**17 09 52.4**	**+2.6**
GOMU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GOMU				LR	LR		
	comp=Z,1µm,11.9s						
GOMU				LR	LR		
	comp=Z,2µm,11.4s						
GOMU				LR	LR		
	comp=Z,650nm,9.3s						
XAN	**Xi'an**	**11.36**	**43**	P	**Pn**	**17 07 54.1**	**-1.0**
XAN				pP		17 08 00.8	
XAN				sP		17 08 04.5	
XAN				S	**Sn**	**17 10 02.8**	**+1.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				LR	LR		
	comp=Z,4µm,12.2s						
XAN				LR	LR		
	comp=Z,3µm,13.3s						
XAN				LR	LR		
	comp=Z,1µm,11.7s						
RAMN	**Ramite**	**11.62**	**277**	*e*P	**Pn**	**17 07 59.0**	**0.0**
	comp=Z,122nm,0.6s						
QIZ	**Qiongzhong**	**11.81**	**124**	P	**Pn**	**17 08 00.3**	**-1.1**
QIZ				S	**Sn**	**17 10 13.9**	**+1.6**
QIZ				LR	LR		
	comp=Z,2µm,13.5s						
QIZ				LR	LR		
	comp=Z,1µm,13.5s						
QIZ				LR	LR		
	comp=Z,1µm,9.3s						
UBPT	**Khong Chiam**	**12.08**	**152**	Pn	**Pn**	**17 08 05.6**	**+0.7**
BOK	**Bokaro**	**12.60**	**263**	*e*P	**Pn**	**17 08 13.2**	**+1.2**
BOK				IAmb	IAmb	17 08 28.3	
	comp=Z,34nm,0.4s						
PKI	**Pulchoki**	**12.71**	**280**	⇑*i*P	**Pn**	**17 08 12.8**	**-1.1**
	comp=Z,66nm,0.6s						
PKIN	**Phulchoki**	**12.72**	**280**	⇑*i*P	**Pn**	**17 08 12.8**	**-1.2**
	comp=Z,53nm,0.6s						
KKN	**Kakani**	**12.84**	**281**	⇑*i*P	**Pn**	**17 08 14.7**	**-0.9**
	comp=Z,107nm,0.7s						
DMN	**Daman**	**12.98**	**280**	*e*P	**Pn**	**17 08 15.9**	**-1.6**
GTA	**Gaotai**	**13.31**	**1**	*e*P	**Pn**	**17 08 24.8**	**+3.0**
GTA				pP	P	17 08 32.4	+1.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,190nm,8.8s						
GTA				LR	LR		
	comp=Z,440nm,9.6s						
GTA				LR	LR		
	comp=Z,2µm,13.1s						
GTA				LR	LR		
	comp=Z,350nm,9.6s						
GKN	**Gorkha**	**13.42**	**282**	*e*P	**Pn**	**17 08 21.5**	**-2.0**
WHN	**Wuhan**	**13.79**	**68**	⇓P	**Pn**	**17 08 26.1**	**-2.1**
WHN				S	**Sn**	**17 10 53.9**	**-6.5**
WHN				LR	LR		
	comp=Z,1µm,8.2s						
WHN				LR	LR		
	comp=Z,2µm,6.3s						
WHN				LR	LR		
	comp=Z,2µm,6.6s						
LYN	**LuoYang**	**14.00**	**50**	*e*P	**Pn**	**17 08 28.3**	**-2.8**
LYN				pP	P	17 08 37.5	-1.2
LYN				sP		17 08 45.1	
LYN				S	**Sn**	**17 11 11.3**	**+5.8**
LYN				SS	**S**	**17 11 25.5**	**-1.0**
LYN				pmax	pmax		
	comp=Z,20nm,0.5s						
LYN				pmax	pmax		
	comp=Z,290nm,7.1s						
LYN				LR	LR		
	comp=Z,2µm,10.0s						
LYN				LR	LR		
	comp=Z,2µm,8.3s						
LYN				LR	LR		
	comp=Z,2µm,10.6s						
DANN	**Dangsing**	**14.23**	**283**	*e*P	**Pn**	**17 08 31.9**	**-2.7**
JHSG	**JHARSUGUGA**	**15.04**	**257**	*e*P	**P**	**17 08 48.3**	**-2.1**
BLSP	**Bilaspur**	**16.37**	**260**	*e*P	**P**	**17 09 04.7**	**-0.5**
BTO	**Baotou**	**16.92**	**28**	*e*P	**Pn**	**17 09 07.9**	**-1.6**
BTO				S	**Sn**	**17 12 18.5**	**+1.8**
BTO				LR	LR		
	comp=Z,2µm,10.8s						
BTO				LR	LR		
	comp=Z,6µm,12.1s						
HNS	**HongShan**	**17.12**	**45**	⇑P	**P**	**17 09 14.1**	**+0.7**
HNS				*e*S	**S**	**17 12 30.3**	**-0.1**
HNS				pmax	pmax		
	comp=Z,21nm,1.2s						
HNS				LR	LR		
	comp=Z,1µm,10.8s						
HNS				LR	LR		
	comp=Z,460nm,10.8s						
HNS				LR	LR		
	comp=Z,570nm,12.8s						
LGTI	**Lohaghat**	**17.41**	**286**	*e*P	**Pn**	**17 09 15.1**	**-0.4**
PTH	**Pithoragarh**	**17.44**	**286**	*e*P	**Pn**	**17 09 15.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**17.80**	**31**	*e*P	**P**	**17 09 21.8**	**+0.7**
HHC				S	**S**	**17 12 44.3**	**-0.2**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.9s						
HHC				LR	LR		
	comp=Z,690nm,7.7s						
HHC				LR	LR		
	comp=Z,1µm,7.5s						
HHC				LR	LR		
	comp=Z,700nm,7.8s						
NJ2	**Nanjing**	**17.90**	**66**	*e*P	**Pn**	**17 09 20.5**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				LR	LR		
	comp=Z,900nm,6.6s						
NJ2				LR	LR		
	comp=Z,620nm,9.9s						
NJ2				LR	LR		
	comp=Z,680nm,9.6s						
TIA	**Tai'an**	**18.11**	**52**	⇓P	**Pn**	**17 09 23.8**	**-0.3**
TIA				pmax	pmax		
	comp=Z,25nm,1.2s						
TIA				LR	LR		
	comp=Z,470nm,14.7s						
TIA				LR	LR		
	comp=Z,580nm,12.8s						
TIA				LR	LR		
	comp=Z,1µm,14.7s						
JHNI	**Jhansi**	**18.93**	**273**	*e*P	**Pn**	**17 09 33.7**	**-0.5**
SSLB	**Suanglung**	**19.55**	**92**	P	**Pn**	**17 09 42.0**	**+0.3**
SSLB				IAmb	IAmb	17 09 59.0	
	comp=Z,46nm,1.4s						
BJT	**Baijiatuau**	**19.65**	**41**		**P**	**17 09 40.9**	**-0.3**
BJT	**Baijiatuau**	**19.65**	**41**	P	**P**	**17 09 40.9**	**-0.3**
BJT				pmax	pmax		
	comp=Z,14nm,0.9s						
BJI	**Beijing**	**19.67**	**41**	P	**Pn**	**17 09 42.9**	**0.0**
BJI				pmax	pmax		
	comp=Z,15nm,1.2s						
BJI				LR	LR		
	comp=Z,1µm,14.9s						
BJI				LR	LR		
	comp=Z,1µm,15.4s						
BJI				LR	LR		
	comp=Z,490nm,13.5s						
TWG	**Pinlang**	**19.86**	**95**	P	**P**	**17 09 43.6**	**-0.1**
TWG				IAmb	IAmb	17 09 56.1	
	comp=Z,45nm,1.0s						
YULB	**Yu-li**	**19.94**	**93**	P	**P**	**17 09 41.7**	**-2.9**
YULB				IAmb	IAmb	17 10 01.2	
	comp=Z,47nm,1.4s						
NDI	**New Delhi**	**19.99**	**283**	*e*P	**P**	**17 09 45.3**	**+0.3**
NACB	**Ninganchiao**	**20.06**	**91**	P	**P**	**17 09 43.5**	**-2.3**
NACB				IAmb	IAmb	17 10 00.6	
	comp=Z,36nm,1.1s						
WMQ	**Urumqi**	**20.16**	**334**	*e*P	**P**	**17 09 46.3**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.3s						
WMQ				LR	LR		
	comp=Z,580nm,9.9s						
WMQ				LR	LR		
	comp=Z,470nm,15.1s						
WMQ				LR	LR		
	comp=Z,150nm,15.5s						
SMLA	**Simla**	**20.27**	**290**	*e*P	Pn	17 09 49.0	-1.1
SMLA				IAmb	IAmb	17 09 54.8	
	comp=Z,73nm,1.2s						
BHPL	**Bhopal**	**20.29**	**267**	*e*P	Pn	17 09 49.2	-1.3
BHPL				IAmb	IAmb	17 09 57.7	
	comp=Z,75nm,1.2s						
KUDL	**Kundal**	**20.62**	**281**	*e*P	**P**	**17 09 51.9**	**0.0**
KULM	**Kulim**	**20.69**	**177**	P	**P**	**17 09 52.2**	**-0.4**
LHMI	**Lhok Sumawe**	**20.87**	**187**	P	Pn	17 09 55.5	-1.7
LHMI				IAmb	IAmb	17 10 18.2	
	comp=Z,75nm,1.1s						
BHK	**Bhakra**	**20.95**	**290**	*e*P	**P**	**17 09 56.1**	**+0.7**
YOJ	**Yonaguni jima**	**21.28**	**89**	P	**P**	**17 10 01.6**	**+2.6**
YOJ	**Yonaguni jima**	**21.28**	**89**	P	**P**	**17 10 01.6**	**+2.6**
YOJ				pmax	pmax		
	comp=Z,274nm,1.4s						
HYBB	**Hyderabad (bro**	**21.29**	**250**	*e*P	**P**	**17 10 00.3**	**+1.1**
THN	**Thein Dam**	**21.71**	**293**	*e*P	**P**	**17 10 01.7**	**-1.9**
XLT	**XiLinHaoTe**	**22.29**	**33**	*e*P	**P**	**17 10 11.8**	**+2.0**
XLT				pmax	pmax		
	comp=Z,27nm,1.1s						
XLT				pmax	pmax		
	comp=Z,150nm,4.5s						
AJM	**Ajmer**	**22.32**	**277**	*e*P	**P**	**17 10 11.0**	**+0.7**
SONM	**Songino Array**	**22.39**	**12**	P	**P**	**17 10 12.0**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=196,slow=9.8,SNR=14						
SONM				LR	LR	17 19 48.5	
	comp=Z,238nm,18.1s,baz=192,slow=39						
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**22.39**	**12**	P	**P**	**17 10 11.2**	**+0.3**
SONM	**Songino Array**	**22.39**	**12**	P	**P**	**17 10 12.0**	**+1.1**
TSI	**Tuntungan**	**22.46**	**183**	P	**P**	**17 10 14.7**	**+3.1**
	comp=Z,126nm,0.8s						
ULN	**Ulaanbaatar**	**22.55**	**13**	P	**P**	**17 10 12.4**	**-0.1**
ULN	**Ulaanbaatar**	**22.55**	**13**	⇑*e*P	**P**	**17 10 13.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PSI	**Prapat**	**23.14**	**182**	P	**P**	**17 10 20.7**	**+1.8**
	comp=Z,8.5nm,0.7s,baz=345,slow=9.7,SNR=9.0						
	comp=Z,8.5nm,0.7s						
KSH	**Kashi**	**23.84**	**310**	P	**P**	**17 10 28.5**	**+2.9**
KSH				pmax	pmax		
	comp=Z,32nm,1.1s						
KSH				pmax	pmax		
	comp=Z,330nm,7.0s						
KSH				LR	LR		
	comp=Z,720nm,13.2s						
KSH				LR	LR		
	comp=Z,710nm,11.0s						
KSH				LR	LR		
	comp=Z,470nm,11.2s						
PRZ	**Przheval'sk**	**23.84**	**319**	P	**P**	**17 10 25.1**	**-0.6**
PRZ				IAmb	IAmb	17 10 42.6	
	comp=Z,29nm,0.9s						
PRZ	**Przheval'sk**	**23.84**	**319**	P	**P**	**17 10 25.1**	**-0.6**
PRZ				pmax	pmax		
	comp=Z,29nm,0.9s						
ZAK	**Zakamensk**	**24.45**	**6**	*e*P	**P**	**17 10 31.9**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,14nm,1.6s						
MYKOM	**Kota Tinggi**	**24.49**	**170**	P	**P**	**17 10 31.1**	**-0.5**
KNGR	**Kungurtug, Tuv**	**24.55**	**357**	⇓*e*P	**P**	**17 10 34.4**	**+2.4**
GSI	**Gunungsitoli**	**24.69**	**185**	P	**P**	**17 10 32.9**	**-0.5**
GSI				IAmb	IAmb	17 10 48.0	
	comp=Z,58nm,1.4s						
MK31	**Makanchi Array**	**24.81**	**331**	P	**P**	**17 10 35.6**	**+1.4**
MK31				IAmb	IAmb	17 10 37.2	
	comp=Z,22nm,0.8s						
MK31	**Makanchi Array**	**24.81**	**331**	*d i*P	**P**	**17 10 35.4**	**+1.1**
MKAR	**Makanchi Array**	**24.81**	**331**	P	**P**	**17 10 35.8**	**+1.5**
	comp=Z,23nm,0.8s,baz=143,slow=9.5,SNR=113						
	comp=Z,23nm,0.8s						
MKAR	**Makanchi Array**	**24.81**	**331**	P	**P**	**17 10 35.1**	**+0.8**
MAKZ	**Makanchi**	**24.96**	**331**	P	**P**	**17 10 36.1**	**+0.4**
MAKZ	**Makanchi**	**24.96**	**331**	P	**P**	**17 10 36.1**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULHL	**Ulahol**	**25.02**	**316**	P	**P**	**17 10 39.3**	**+2.8**
	SNR=11						
SNY	**Shenyang**	**25.27**	**45**	⇑P	**P**	**17 10 44.8**	**+6.3**
SNY				S	**S**	**17 15 09.8**	**+7.3**
SNY				pmax	pmax		
	comp=Z,13nm,0.5s						
SNY				pmax	pmax		
	comp=Z,440nm,11.6s						
SNY				LR	LR		
	comp=Z,950nm,18.2s						
SNY				LR	LR		
	comp=Z,490nm,15.1s						
SNY				LR	LR		
	comp=Z,510nm,15.2s						
MOY	**Mondy**	**25.59**	**2**	*e*P	**P**	**17 10 42.7**	**+1.3**
MOY				pmax	pmax		
	comp=Z,32nm,1.9s						
INCN	**Inchon**	**25.60**	**57**	P	**P**	**17 10 42.4**	**+0.8**
INCN	**Inchon**	**25.60**	**57**	P	**P**	**17 10 42.4**	**+0.8**
INCN				pmax	pmax		
	comp=Z,18nm,1.0s						

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NAWB  Namwon           25.62  62   P      P      17 10 41.3  -0.5
JOW   Kunigami         25.72  82   P      P      17 10 43.8  +1.1
      comp=Z,21nm,0.7s,baz=247,slow=4.4,SNR=4.9
JOW                                LR     LR     17 22 00.1
      comp=Z,524nm,18.5s,baz=285,slow=39
      comp=Z,21nm,0.7s
JOW   Kunigami         25.72  82   P      P      17 10 41.6  -1.1
JOW                                IAmb   IAmb   17 10 46.3
      comp=Z,24nm,0.9s
TKM2  Tokmak 2         25.79 317   P      P      17 10 45.9  +2.4
      SNR=13
TJN   Taejon           25.84  60   P      P      17 10 43.8  +0.1
TJN                                IAmb   IAmb   17 11 11.7
      comp=Z,44nm,0.8s
KBK   Karagaybulak     26.05 316   P      P      17 10 48.5  +2.7
      SNR=25
UCH   Uchtor           26.11 314   P      P      17 10 48.7  +2.1
      SNR=8.9
AAK   Ala-Archa        26.33 315   P      P      17 10 50.9  +2.5
      SNR=14
AAK   Ala-Archa        26.33 315   P      P      17 10 50.2  +1.9
      comp=Z,12nm,0.7s,baz=136,slow=6.1,SNR=41
      comp=Z,12nm,0.7s
AAK   Ala-Archa        26.33 315   P      P      17 10 49.4  +1.1
AAK                                IAmb   IAmb   17 10 51.8
      comp=Z,16nm,0.8s
AAK   Ala-Archa        26.33 315⇓iP     P      17 10 50.7  +2.4
AAK                                pmax   pmax
      comp=Z,20nm,1.0s
CHMS  Chumysh          26.36 316   P      P      17 10 50.2  +1.9
      SNR=6.0
IRK   Irkutsk          26.39   7  eP      P      17 10 48.9  +0.4
IRK                                pmax   pmax
      comp=Z,24nm,1.4s
SBUM  Sibu             26.46 151   P      P      17 10 48.2  -1.2
KSAR  Wonju Array Be   26.54  58   P      P      17 10 49.7  -0.3
KSAR  Wonju Array Be   26.54  58   P      P      17 10 49.7  -0.3
KS19  Wonju Array Si   26.54  58   P      P      17 10 49.7  -0.4
KS19                               IAmb   IAmb   17 11 08.8
      comp=Z,30nm,1.6s
KSM   Kuching          26.56 155   P      P      17 10 51.2  +0.8
KSRS  Korea Array      26.57  58   P      P      17 10 50.5  +0.2
      comp=Z,1.5nm,0.7s,baz=243,slow=9.8,SNR=9.5
KSRS                               LR     LR     17 21 04.0
      comp=Z,231nm,18.1s,baz=260,slow=36
      comp=Z,1.5nm,0.7s
AML   Almayashu        26.59 314   P      P      17 10 53.2  +2.3
      SNR=33
USP   Ospenovka        26.65 316   P      P      17 10 53.0  +1.9
      SNR=29
EKS2  Erkin-Say        26.80 315   P      P      17 10 55.0  +2.5
      SNR=21
JTU   Tsushima         27.05  65   P      P      17 10 56.2  +1.6
JTU                                IAmb   IAmb   17 11 09.8
      comp=Z,36nm,1.5s
SEHB  SEOHWA           27.07  56   P      P      17 10 54.6  -0.2
CN2   Changchun        27.47  43  eP      P      17 10 54.6  -3.8
CN2                               eS      S      17 15 28.8  -8.5
CN2                                LR     LR
      comp=N,640nm,16.0s
CN2                                LR     LR
      comp=E,400nm,16.0s
CN2                                LR     LR
      comp=Z,200nm,18.0s
KBL   Kabul            27.57 295   P      P      17 11 00.1  +0.5
KBL                                IAmb   IAmb   17 11 16.6
      comp=Z,17nm,0.8s
KBL   Kabul            27.57 295   P      P      17 11 00.2  +0.5
KBL                                pmax   pmax
      comp=Z,17nm,0.8s
MYLDM Lahad Datu       27.57 136   P      P      17 10 58.2  -1.3
GAR   Garm             27.68 305   P      P      17 11 00.8  +0.3
GAR                                IAmb   IAmb   17 11 05.3
      comp=Z,36nm,1.1s
HIA   Hailar           27.98  29⇑eP     P      17 11 03.2  +0.4
HIA                                pmax   pmax
      comp=Z,3.0nm,0.5s
JNU   Nakatsue         28.07  68   P      P      17 11 03.1  -0.8
JNU                                IAmb   IAmb   17 11 36.9
      comp=Z,22nm,0.8s
CHGR  Chuyangaron      28.43 304   P      P      17 11 06.6  -0.5
CHGR                               IAmb   IAmb   17 11 20.5
      comp=Z,24nm,1.0s
CHGR  Chuyangaron      28.43 304   P      P      17 11 06.6  -0.5
CHGR                               pmax   pmax
      comp=Z,24nm,1.0s
KK31  Karatay Array    29.12 313   P      P      17 11 11.5  -1.7
KK31  Karatay Array    29.12 313   P      P      17 11 11.5  -1.7
KK31                               pmax   pmax
      comp=Z,4.0nm,0.8s
KKAR  Karatay Array    29.12 313   P      P      17 11 11.1  -2.1
KKAR  Karatay Array    29.12 313   P      P      17 11 10.8  -2.4
KKAR                               IAmb   IAmb   17 11 15.5
      comp=Z,3.9nm,0.8s
KKAR  Karatay Array    29.12 313   P      P      17 11 11.1  -2.1
KKAR                               pmax   pmax
      comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra   29.34 332   P      P      17 11 15.8  +0.9
      comp=Z,3.1nm,0.9s,baz=147,slow=8.8,SNR=18
KURBB                              PcP    PcP    17 14 20.3  -0.5
      comp=Z,2.0nm,0.9s,baz=147,slow=2.0,SNR=6.6
      comp=Z,3.1nm,0.9s
KURK  Kurchatov        29.37 332   P      P      17 11 14.6  -0.6
KURK  Kurchatov        29.37 332          PcP    17 14 20.3  -0.6
KURK  Kurchatov        29.37 332 ⇓P      P      17 11 16.1  +0.9
KURK                               pmax   pmax
      comp=Z,10.0nm,1.7s
KURK  Kurchatov        29.37 332   P      P      17 11 16.1  +0.9
KURK                               x      x      17 11 19.1
KURK                               pP     sP     17 11 26.2  -1.6
BNX   BinXian          29.68  41 ⇑P      P      17 11 20.3  +2.3
BNX                                pmax   pmax
      comp=Z,6.0nm,0.5s
BNX                                pmax   pmax
      comp=Z,350nm,6.6s
ZAA0  Zalesovo Array   29.92 342   P      P      17 11 19.6  -0.4
ZALV  Zalesovo Beam    29.92 342   P      P      17 11 20.4  +0.4
      comp=Z,5.7nm,0.8s,baz=152,slow=9.8,SNR=23
ZALV                               LR     LR     17 23 48.6
      comp=Z,96nm,18.4s,baz=170,slow=37
      comp=Z,5.7nm,0.8s
ZALV  Zalesovo Beam    29.92 342   P      P      17 11 19.7  -0.3
ZALV  Zalesovo Beam    29.92 342 i P      P      17 11 21.0  +1.0
ZALV                               pmax   pmax
      comp=Z,6.0nm,0.8s
USRK  Ussuriysk Ar.    31.84  47   P      P      17 11 37.2  +0.2
      comp=Z,6.7nm,0.9s,baz=251,slow=9.3,SNR=5.6
      comp=Z,6.7nm,0.9s
TOLI2 Tolitoli         32.16 137   P      P      17 11 38.7  -1.4
HRA   Herat            33.13 294   P      P      17 11 47.7  -1.0
HRA                                IAmb   IAmb   17 11 49.9
      comp=Z,8.3nm,0.8s
KLR   Kul'dur          34.01  39   P      P      17 11 55.9  -0.2
      comp=Z,2.0nm,0.9s,baz=269,slow=11,SNR=3.4
      comp=Z,2.0nm,0.9s
KLR   Kul'dur          34.01  39⇓eP     P      17 11 56.4  +0.4
KLR                                pmax   pmax
      comp=Z,4.0nm,1.1s
MJAR  Matsushiro Arr   34.45  63   P      P      17 12 00.3  +0.4
      comp=Z,1.4nm,0.8s,baz=272,slow=7.2,SNR=3.7
      comp=Z,1.4nm,0.8s
ZEA   Zeya             34.45  29  eP      P      17 12 02.7  +3.0
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.0s
ZEA                                MLR    MLR
      comp=N,200nm,10.0s
ZEA                                MLR    MLR
      comp=Z,200nm,15.0s
BRVK  Borovoye         34.71 329   P      P      17 12 01.6  -0.3
BRVK                               IAmb   IAmb   17 12 04.3
      comp=Z,14nm,1.1s
BRVK  Borovoye         34.71 329d iP     P      17 12 03.1  +1.1
BRVK                               pmax   pmax
      comp=Z,14nm,1.0s
BRVK  Borovoye         34.71 329   P      P      17 12 03.3  +1.4
JHJ   Hachijo jima 2   35.53  69   LR     LR     17 28 17.9
      comp=Z,140nm,18.8s,baz=257,slow=39
KAAM  Kaadhehdhoo      36.07 229   P      P      17 12 12.1  -1.9
GEYT  Alibeck          36.79 299   P      P      17 12 21.6  +1.5
      comp=Z,9.1nm,0.8s,baz=191,slow=12,SNR=17
      comp=Z,9.1nm,0.8s
GEYT  Alibeck          36.79 299   P      P      17 12 21.2  +1.1
GYA0B ALIBECK ARRAY    36.79 299   P      P      17 12 21.4  +1.3
GYA0B                              IAmb   IAmb   17 12 22.9
      comp=Z,20nm,0.9s
ABKAR Akbulak array    38.35 318   P      P      17 12 34.1  +1.0
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ABKAR Akbulak array    38.35 318   P      P      17 12 34.5  +1.5
ABKAR                              IAmb   IAmb   17 12 35.8
      comp=Z,24nm,0.8s
ERM   Erimo            39.04  55   P      P      17 12 38.9  -0.1
ERM   Erimo            39.04  55   P      P      17 12 38.9  -0.1
ERM                                pmax   pmax
      comp=Z,77nm,1.6s
ASAJ  Asahikawa        39.06  51   P      P      17 12 39.5  +0.5
      comp=Z,13nm,0.9s,baz=270,slow=18,SNR=3.7
      comp=Z,13nm,0.9s
JKA   Kamikawa-asahi   39.06  51   P      P      17 12 39.5  +0.4
JKA   Kamikawa-asahi   39.06  51   IAmb   IAmb   17 12 46.2
      comp=Z,49nm,1.3s
AKTO  Aktyubinsk       39.95 319   P      P      17 12 47.8  +1.4
      comp=Z,10nm,0.8s,baz=114,slow=8.0,SNR=30
      comp=Z,10nm,0.8s
YAK   Yakutsk          41.23  21   P      P      17 12 56.7   0.0
YAK   Yakutsk          41.23  21⇑eP     P      17 12 56.8   0.0
YAK                                pmax   pmax
      comp=Z,4.0nm,0.7s
SVE   Sverdlovsk       41.42 329ceP     P      17 13 00.1  +1.6
SVE                                pmax   pmax
      comp=Z,39nm,1.0s
ARU   Arti             42.22 327   P      P      17 13 06.0  +1.0
      comp=Z,8.6nm,0.9s,baz=135,slow=4.4,SNR=26
ARU                                LR     LR     17 33 31.2
      comp=Z,95nm,18.7s,baz=108,slow=40
      comp=Z,8.6nm,0.9s
ARU   Arti             42.22 327   P      P      17 13 04.8  -0.2
ARU                                IAmb   IAmb   17 13 07.2
      comp=Z,25nm,0.9s
ARU   Arti             42.22 327d iP     P      17 13 06.1  +1.2
ARU                                *PP    sP     17 13 18.8  +1.0
ARU                                              17 14 42.2
ARU                                PPP    PPP    17 15 17.6
ARU                                S      S      17 19 25.1  +1.7
ARU                                pmax   pmax
      comp=Z,34nm,1.0s
ARU   Arti             42.22 327   P      P      17 13 06.2  +1.2
ARU                                x      x      17 13 09.2
ARU                                pP     sP     17 13 17.4  -0.4
ARU                                pwP    pP     17 13 20.7  +6.5
SOEI  Soe              42.97 143   P      P      17 13 10.6  -1.1
SOEI                               IAmb   IAmb   17 13 23.3
      comp=Z,38nm,1.0s
SOEI  Soe              42.97 143   P      P      17 13 13.9  +2.2
      comp=Z,42nm,1.0s
NRIK  Noril'sk         43.88 354   P      P      17 13 19.1  +0.8
      comp=Z,2.4nm,0.4s,baz=166,slow=7.3,SNR=3.9
      comp=Z,2.4nm,0.4s
NRIK  Noril'sk         43.88 354   P      P      17 13 18.6  +0.4
NRIK  Noril'sk         43.88 354ceP     P      17 13 19.0  +0.8
NRIK                               pmax   pmax
      comp=Z,7.0nm,1.0s
BELG  Belogornoye      46.74 319   P      P      17 13 41.9  +0.7
      comp=Z,29nm,0.8s,baz=20,slow=1.3,SNR=10
      comp=Z,29nm,0.8s
GNI   Garni            47.30 302   P      P      17 13 45.6  -0.4
GNI                                IAmb   IAmb   17 13 54.5
      comp=Z,12nm,1.0s
GNI   Garni            47.30 302⇑iP     P      17 13 48.4  +2.4
GNI                                pmax   pmax
      comp=Z,12nm,1.0s
KIRV  Kirov            47.60 327d iP     P      17 13 48.8  +1.1
ZEI   Tsey             47.97 305  eP      P      17 13 43.4  -7.8
ZEI                                pmax   pmax
      comp=Z,12nm,1.4s
NCK   Nalchik          48.22 306⇓eP     P      17 13 54.4  +1.5
NCK                                pmax   pmax
      comp=Z,6.0nm,0.3s
TIXI  Tiksi            48.48  12   P      P      17 13 54.1  -0.3
TIXI                               IAmb   IAmb   17 14 03.3
      comp=Z,26nm,1.8s
TIXI  Tiksi            48.48  12⇑iP     P      17 13 56.5  +2.1
TIXI                               pmax   pmax
      comp=Z,12nm,1.7s
TIXI  Tiksi            48.48  12   P      P      17 13 54.3  -0.1
TIXI                               x      x      17 13 57.2
KARS  Kars             48.57 302   P      P      17 13 54.9  -0.9
KARS  Kars             48.57 302   P      P      17 13 54.9  -0.9
KARS                               pmax   pmax
      comp=Z,36nm,0.6s
KBZ   Khabaz           48.73 306   P      P      17 13 57.4  +0.6
      comp=Z,2.4nm,0.8s,baz=104,slow=6.2,SNR=5.4
      comp=Z,2.4nm,0.8s
KBZ   Khabaz           48.73 306⇓iP     P      17 13 58.7  +1.9
KBZ                                pmax   pmax
      comp=Z,6.0nm,1.1s
RAYN  Ar Rayn          48.83 279   P      P      17 13 58.0   0.0
KIV   Kislovodsk       48.89 307   P      P      17 13 57.3  -0.8
KIV   Kislovodsk       48.89 307  eP      P      17 13 59.2  +1.1
KIV                                pmax   pmax
      comp=Z,23nm,1.1s
KIV                                MLR    MLR
      comp=Z,135nm,17.0s
KIV   Kislovodsk       48.89 307   P      P      17 13 56.5  -1.7
MTN   Manton Dam       49.41 138   P      P      17 14 02.1  -0.1
MTN                                IAmb   IAmb   17 14 04.7
      comp=Z,15nm,1.1s
GURO  Guroymak-BITLI   49.45 299   P      P      17 14 02.7  +0.2
GURO                               IAmb   IAmb   17 14 06.2
      comp=Z,4.8nm,0.8s
KNRA  Kununurra        50.30 142   P      P      17 14 08.6  -0.4
PRGR  Permogore        50.43 330  eP      P      17 14 09.3  -0.1
PRGR                              e*PP    sP     17 14 19.2  -3.4
PETK  Petropavlovsk-   50.60  42   LR     LR     17 35 23.4
      comp=Z,113nm,18.0s,baz=252,slow=36
MBWA  Marble Bar       50.87 155   P      P      17 14 13.2   0.0
MBWA                               IAmb   IAmb   17 14 17.3
      comp=Z,12nm,0.8s
MBWA  Marble Bar       50.87 155   P      P      17 14 13.2   0.0
MBWA                               x      x      17 14 16.0
PSA00 Pilbara Seismi   51.29 156   P      P      17 14 16.2  -0.1
PSA00 Pilbara Seismi   51.29 156   P      P      17 14 16.3   0.0
PSA00                              IAmb   IAmb   17 14 19.9
      comp=Z,12nm,1.0s
VORD  Divnogorie       51.62 316  eP      P      17 14 18.8  +0.2
VORD                               pmax   pmax
      comp=Z,10.0nm,0.7s
VSR   Storozhevoye     51.73 316  eP      P      17 14 19.8  +0.5
VSR                                pmax   pmax
      comp=Z,9.0nm,0.5s
VORR  Voronezh         51.74 316  eP      P      17 14 19.6  +0.2
VORR                               pmax   pmax
      comp=Z,40nm,0.4s
ANN   Anapa            52.67 308  eP      P      17 14 25.7  -0.7
ANN                               e*PP    sP     17 14 39.0  -0.4
ANN                               eS      S      17 21 50.5  -1.7
ANN                               eSS     SS     17 25 29.5  -1.1
ANN                                pmax   pmax
      comp=Z,55nm,1.5s
KLMR  Klimovskoe       53.05 328  eP      P      17 14 27.7  -1.3
KLMR                              e              17 16 27.5
KLMR                               pmax   pmax
      comp=Z,30nm,1.2s
KLMR  Klimovskoe       53.05 328  eP      P      17 14 27.7  -1.3
KLMR                               AMP           17 14 30.6
      comp=Z,30nm,1.2s
KLMR                              ePP     PP     17 16 27.6  -1.1
MOS   Moscow           53.14 321  eP      P      17 14 28.4  -1.3
MOS                               e              17 14 39.2
MOS                                pmax   pmax
      comp=Z,32nm,0.8s
OBN   Obninsk          53.66 321   P      P      17 14 33.6  +0.1
OBN   Obninsk          53.66 321  eP      P      17 14 34.8  +1.3
OBN                               e*PP    sP     17 14 49.2  +2.7
OBN                               e              17 15 40.7
OBN                               e              17 16 31.6
OBN                                pmax   pmax
      comp=Z,36nm,1.7s
OBN                                MLR    MLR
      comp=Z,82nm,19.0s
BNN   Bunyan           54.25 300   P      P      17 14 38.9  +0.6
ATD   Arta Tunnel      55.19 266   P      P      17 14 44.9  -0.5
ATD                                IAmb   IAmb   17 15 16.3
      comp=Z,11nm,1.0s
BR131 Keskin Array S   55.84 302⇓eP     P      17 14 53.7  +3.8
BRTR  Keskin Array B   55.84 302   P      P      17 14 50.3  +0.4
      comp=Z,1.3nm,0.8s,baz=73,slow=9.2,SNR=4.7
      comp=Z,1.3nm,0.8s
BRTR  Keskin Array B   55.84 302   P      P      17 14 49.8   0.0
BRTR  Keskin Array B   55.84 302 i P      P      17 14 51.2  +1.3
BRTR                               pmax   pmax
      comp=Z,1.0nm,0.8s
ANTO  Ankara           56.47 302   P      P      17 14 53.3  -0.9
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ANTO                               IAmb   IAmb   17 14 57.0
      comp=Z,22nm,1.3s
ANTO  Ankara           56.47 302   P      P      17 14 53.3  -0.9
ANTO                               pmax   pmax
      comp=Z,22nm,1.3s
LVZ   Lovozero         56.70 336   P      P      17 14 56.0  +0.7
LVZ   Lovozero         56.70 336   P      P      17 14 56.1  +0.7
LVZ                                pmax   pmax
      comp=Z,90nm,1.8s
WB0   Warramunga Arr   56.76 140   P      P      17 14 56.0  -0.3
WB0                                IAmb   IAmb   17 14 60.0
      comp=Z,17nm,1.0s
WRAB  Tennant Creek    56.86 140   P      P      17 14 57.1   0.0
WRAB  Tennant Creek    56.86 140⇑iP     P      17 14 57.5  +0.4
WRAB                               pmax   pmax
      comp=Z,23nm,1.1s
WRAB  Tennant Creek    56.86 140   P      P      17 14 57.6  +0.6
WRAB                               x      x      17 15 00.1
WRAB                               pP     pP     17 15 04.9  -1.6
WRA   Warramunga Arr   56.86 140   P      P      17 14 57.3  +0.3
      comp=Z,9.4nm,0.9s,baz=328,slow=7.6,SNR=33
      comp=Z,9.4nm,0.9s
WRA   Warramunga Arr   56.86 140   P      P      17 14 57.1   0.0
WRA   Warramunga Arr   56.86 140 i P      P      17 14 57.2  +0.1
WRA                                pmax   pmax
      comp=Z,10.0nm,0.9s
WB2   Warramunga Arr   56.87 140   P      P      17 14 57.1   0.0
WR0   Warramunga Arr   56.99 140   P      P      17 14 57.0  -1.0
WR0                                IAmb   IAmb   17 15 01.8
      comp=Z,15nm,1.1s
MORW  Morawa           57.06 163   P      P      17 14 58.4  +0.1
BILL  Bilibino         57.41  24   P      P      17 14 60.0  -0.4
BILL                               IAmb   IAmb   17 15 03.8
      comp=Z,12nm,0.9s
BILL  Bilibino         57.41  24  eP      P      17 15 00.5  +0.2
BILL                              e*PP    sP     17 15 14.2  +0.7
BILL                              e*SP    pP     17 15 20.8   +11
BILL                              e              17 15 54.8
BILL                              e              17 17 09.0
BILL                               pmax   pmax
      comp=Z,14nm,1.0s
BILL                               MLR    MLR
      comp=Z,44nm,13.0s
BILL  Bilibino         57.41  24   P      P      17 15 00.5  +0.2
BILL                               x      x      17 15 03.0
MDUB  Mudurnu          57.60 303   P      P      17 15 02.3   0.0
AKASG Malin Array Be   58.00 315   P      P      17 15 04.8  +0.1
      comp=Z,8.9nm,0.9s,baz=74,slow=7.0,SNR=26
      comp=Z,8.9nm,0.9s
AKASG Malin Array Be   58.00 315   P      P      17 15 03.7  -1.0
AKASG Malin Array Be   58.00 315   P      P      17 15 03.7  -1.0
AKASG                              pmax   pmax
      comp=Z,4.0nm,0.9s
AKBB  Malin Array Si   58.00 315   P      P      17 15 04.2  -0.5
AKBB                               IAmb   IAmb   17 15 05.7
      comp=Z,14nm,0.9s
AKBB  Malin Array Si   58.00 315d iP     P      17 15 04.7   0.0
AKBB                               pmax   pmax
      comp=Z,15nm,0.9s
PMG   Port Moresby     58.18 121ceP     P      17 15 09.3  +2.9
PMG                                pmax   pmax
      comp=Z,31nm,1.7s
MNK   Minsk            58.66 320 i P      P      17 15 09.4  +0.2
MNK                              i *PP    sP     17 15 23.3  +1.0
MNK                              i               17 15 58.6
MNK                              i               17 17 19.7
MNK                              i PPP    PPP    17 18 39.6
MNK                              i S      S      17 23 10.7  -1.2
MNK                              i *SS    sS     17 23 35.0  +7.5
MNK                              i               17 24 51.3
MNK                              i SS     SS     17 27 06.2  +1.6
MNK                                pmax   pmax
      comp=Z,14nm,0.9s
MNK                                pmax   pmax
      comp=E,3.0nm,0.9s
MNK                                pmax   pmax
      comp=N,18nm,0.8s
MNK                                MLR    MLR
      comp=N,57nm,15.0s
MNK                                MLR    MLR
      comp=E,13nm,16.0s
MNK                                MLR    MLR
      comp=Z,78nm,17.0s
MNK   Minsk            58.66 320 i P      P      17 15 09.5  +0.2
      comp=E,3.0nm,0.9s
MNK                              i P      P      17 15 09.5  +0.2
      comp=N,18nm,0.8s
MNK                              i P      P      17 15 09.5  +0.2
      comp=Z,14nm,0.8s,baz=270
MNK                              i pP     sP     17 15 23.3  +1.0
MNK                              i PP     PP     17 17 19.8  +0.8
MNK                              i PPP    PPP    17 18 39.7
MNK                              i S      S      17 23 10.7  -1.2
MNK                              i sS     sS     17 23 35.1  +7.6
MNK                              i SS     SS     17 27 06.3  +1.6
MNK                              i SSS    SSS    17 29 43.7
MNK                              i LQ     LQ     17 36 22.7
MNK                              i LR     LR     17 39 18.2
MNK                              i LRM    MLR    17 42 31.9
      comp=N,57nm,15.5s
MNK                              i LRM    MLR    17 42 39.6
      comp=E,13nm,16.1s
MNK                              i LRM    MLR    17 43 05.4
      comp=Z,78nm,16.8s
TLCR                   58.74 309 ⇑P      P      17 15 09.7  -0.3
TLCR                   58.74 309 ⇑P      P      17 15 09.7  -0.3
SORM  Soroca           58.75 312 ⇓P      P      17 15 09.7  -0.3
SORM  Soroca           58.75 312 ⇓P      P      17 15 09.7  -0.3
TPGR  Topolog          59.06 308 ⇓P      P      17 15 12.9  +0.7
TIRR  Tirgusor         59.11 308 ⇓P      P      17 15 13.2  +0.6
TIRR  Tirgusor         59.11 308 ⇓P      P      17 15 13.2  +0.6
TIRR  Tirgusor         59.11 308   P      P      17 15 12.0  -0.6
TIRR  Tirgusor         59.11 308 ⇓P      P      17 15 13.2  +0.6
RABL  Rabaul           59.15 113   P      P      17 15 13.2  -0.1
VLDR  Vladesti         59.17 309 ⇑P      P      17 15 13.7  +0.7
CFR   Carcaliu         59.22 309 ⇑P      P      17 15 13.7  +0.4
CFR   Carcaliu         59.22 309 ⇑P      P      17 15 13.7  +0.4
VSU   Vasula           59.23 324⇑eP     P      17 15 13.9  +0.7
VSU                                pmax   pmax
      comp=Z,76nm,1.8s
VASR  Vaslui           59.28 310 ⇑P      P      17 15 11.0  -2.7
NACGM Naroch           59.29 320⇑eP     P      17 15 14.6  +1.0
      baz=88
HARR  Harsova          59.42 308 ⇑P      P      17 15 15.6  +0.9
HARR  Harsova          59.42 308 ⇑P      P      17 15 15.6  +0.9
AS31  Alice Springs    59.58 143   P      P      17 15 15.5  -0.6
ASAR  Alice Springs    59.58 143   P      P      17 15 16.6  +0.6
      comp=Z,3.4nm,0.9s,baz=327,slow=6.3,SNR=24
      comp=Z,3.4nm,0.9s
ASAR  Alice Springs    59.58 143   P      P      17 15 14.8  -1.3
FIA1  FINESS Array S   59.58 328   P      P      17 15 15.6  +0.1
FINES FINESS Array B   59.58 328   P      P      17 15 16.2  +0.7
      comp=Z,3.3nm,0.7s,baz=81,slow=12,SNR=8.8
      comp=Z,3.3nm,0.7s
FINES FINESS Array B   59.58 328   P      P      17 15 15.6  +0.1
ICOR  Ion Corvin       59.59 308 ⇓P      P      17 15 17.1  +1.2
PANC  Panciu           59.82 310 ⇑P      P      17 15 18.2  +0.8
ODBI  Odobesti         59.90 309 ⇓P      P      17 15 19.5  +1.5
VRI   Vrincioaia       60.11 310 ⇑P      P      17 15 21.2  +1.7
VRI   Vrincioaia       60.11 310 ⇑P      P      17 15 21.2  +1.7
BISRR Bisoca           60.16 309 ⇓P      P      17 15 21.9  +1.9
PLOR  Plostina         60.16 310 ⇓P      P      17 15 21.6  +1.7
PLOR  Plostina         60.16 310 ⇓P      P      17 15 21.6  +1.7
ARCES ARCESS Array B   60.26 337   P      P      17 15 21.2  +1.1
      comp=Z,3.3nm,1.1s,baz=82,slow=8.3,SNR=1.2
      comp=Z,3.3nm,1.1s
ISR   Istrita          60.34 309 ⇑P      P      17 15 23.6  +2.5
ISR   Istrita          60.34 309 ⇑P      P      17 15 23.6  +2.5
BIZ   Bicaz            60.40 311 ⇓P      P      17 15 22.2  +0.8
COVR  Voineasa-Covas   60.47 310 ⇑P      P      17 15 23.0  +1.0
RAZG  Razgrad          60.60 307 ⇑P      P      17 15 23.9  +1.0
MLR   Muntele Rosu     60.70 309 ⇓P      P      17 15 24.9  +1.2
MLR   Muntele Rosu     60.70 309   P      P      17 15 23.9  +0.2
MLR   Muntele Rosu     60.70 309 ⇓P      P      17 15 24.9  +1.2
PABE  Paberze          60.86 321   P      P      17 15 24.5  +0.1
PABE                               IAmb   IAmb   17 15 26.0
      comp=Z,13nm,0.9s
BURAR Bucovina Array   60.91 312 ⇑P      P      17 15 25.9  +0.9
BURAR Bucovina Array   60.91 312   P      P      17 15 24.6  -0.5
BURAR                              IAmb   IAmb   17 15 26.9
      comp=Z,5.2nm,0.9s
BURAR Bucovina Array   60.91 312 ⇑P      P      17 15 25.9  +0.9
BUR08 Bucovina Ar. S   60.91 312   P      P      17 15 24.8  -0.3
BUR08                              IAmb   IAmb   17 15 26.8
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	comp=Z,5.6nm,1.0s						
DOPR	Dopca	61.02	310	⇓P	P	17 15 26.6	+0.9
ALN	Alexandroupoli	61.40	304	P	P	17 15 27.5	-0.8
ALN	Alexandroupoli	61.40	304	P	P	17 15 27.5	-0.8
ALN				pmax	pmax		
	comp=Z,31nm,1.4s						
LVV	L'vov	61.40	314	*e*P	P	17 15 28.5	+0.3
LVV				*e*S	S	17 23 45.8	-1.4
SUW	Suwalki	61.45	319	P	P	17 15 28.1	-0.3
SUW	Suwalki	61.45	319	P	P	17 15 28.1	-0.3
SUW				pmax	pmax		
	comp=Z,24nm,1.0s						
ARCR	ARCALIA	61.56	311	⇑P	P	17 15 31.3	+2.0
RDO	Rodhopi	61.73	304	P	P	17 15 30.4	-0.1
RDO				IAmb	IAmb	17 15 32.1	
	comp=Z,22nm,1.5s						
BMR	Baia Mare	62.05	312	⇓P	P	17 15 35.0	+2.4
BMR	Baia Mare	62.05	312	⇓P	P	17 15 35.0	+2.4
LOT	Lotru	62.22	310	⇓P	P	17 15 29.5	-4.5
KWP	Kalwaria Pacla	62.27	314	P	P	17 15 34.2	+0.1
KWP	Kalwaria Pacla	62.27	314	P	P	17 15 34.2	+0.1
KWP				pmax	pmax		
	comp=Z,703nm,1.4s						
UZH	Uzhgorod	62.70	313	⇓*i*P	P	17 15 37.3	+0.4
UZH				*i*		17 15 47.6	
UZH				*i*		17 15 55.8	
DRGR		62.72	311	⇑P	P	17 15 38.6	+1.4
DRGR		62.72	311	⇑P	P	17 15 38.6	+1.4
DEV	Deva	62.75	310	⇑P	P	17 15 39.5	+2.2
DEV	Deva	62.75	310	⇑P	P	17 15 39.5	+2.2
FORT	Forrest	62.77	152	P	P	17 15 38.0	+0.6
GZR	Gura Zlata	62.92	310	⇓P	P	17 15 39.2	+0.6
GZR	Gura Zlata	62.92	310	⇓P	P	17 15 39.2	+0.6
VTS	Vitosha	63.13	306	P	P	17 15 39.9	-0.2
VTS	Vitosha	63.13	306	P	P	17 15 39.9	-0.2
VTS				pmax	pmax		
	comp=Z,20nm,0.9s						
CRVS	Cervenica-Dubn	63.19	314	*e*P	P	17 15 42.4	+2.2
CRVS				pmax	pmax		
	comp=Z,20nm,1.2s						
CRVS	Cervenica-Dubn	63.19	314	*e*P	P	17 15 42.4	+2.2
HERR	Herculane	63.27	309	⇓P	P	17 15 42.0	+1.2
SIRR	Siria	63.53	311	⇑P	P	17 15 43.0	+0.5
BZS	Buzias	63.68	310	⇓P	P	17 15 43.8	+0.3
BZS	Buzias	63.68	310	⇓P	P	17 15 43.8	+0.3
MDVR	Moldovita	63.78	309	⇑P	P	17 15 44.7	+0.5
BOVS	Bovan	64.02	308	⇑P	P	17 15 44.9	-0.8
AGG	Agios Georgios	64.59	303	P	P	17 15 49.0	-0.6
AGG				IAmb	IAmb	17 16 00.8	
	comp=Z,24nm,1.3s						
AGG	Agios Georgios	64.59	303	P	P	17 15 49.0	-0.6
AGG				pmax	pmax		
	comp=Z,24nm,1.3s						
FNA	Florina	64.88	305	P	P	17 15 51.6	0.0
FNA				IAmb	IAmb	17 15 51.7	
	comp=Z,12nm,0.8s						
FNA	Florina	64.88	305	P	P	17 15 51.6	0.0
FNA				pmax	pmax		
	comp=Z,12nm,0.8s						
VYHS	Vyhne	64.98	314	*e*P	P	17 15 53.2	+1.2
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
VYHS	Vyhne	64.98	314	*e*P	P	17 15 53.2	+1.2
FRGS	Fruska Gora	65.02	310	⇓P	P	17 15 53.0	+0.7
DIVS	Divibare	65.13	309	P	P	17 15 52.3	-0.8
DIVS				IAmb	IAmb	17 15 54.5	
	comp=Z,10nm,0.8s						
OKC	Ostrava-Krasne	65.15	315	*e*P	P	17 15 53.4	+0.4
OKC	Ostrava-Krasne	65.15	315	*e*P	P	17 15 53.4	+0.4
KBN	Korca	65.36	305	P	P	17 15 53.1	-1.5
KBN	Korca	65.36	305	P	P	17 15 53.1	-1.5
KBN				pmax	pmax		
	comp=Z,26nm,1.0s						
MORC	Moravsky Berou	65.55	315	⇓P	P	17 15 56.8	+1.1
MORC	Moravsky Berou	65.55	315	P	P	17 15 53.4	-2.3
MORC				IAmb	IAmb	17 15 57.8	
	comp=Z,6.6nm,1.0s						
MORC	Moravsky Berou	65.55	315	⇓P	P	17 15 56.8	+1.1
MORC	Moravsky Berou	65.55	315	*e*P	P	17 15 56.5	+0.8
MORH	Mrgy, Hungar	65.59	311	⇓P	P	17 15 56.3	+0.4
MORH	Mrgy, Hungar	65.59	311	P	P	17 15 55.6	-0.3
JAVC	Velka Javorina	65.66	314	*e*P	P	17 15 58.5	+2.1
TIR	Tirane	65.86	306	⇑P	P	17 16 00.0	+2.3
TIR	Tirane	65.86	306	P	P	17 15 56.1	-1.7
TIR	Tirane	65.86	306	⇑P	P	17 16 00.0	+2.3
KOVH	Kovagotottos	65.98	311	P	P	17 15 58.8	+0.3
PDG	Podgorica	66.04	307	⇑P	P	17 15 59.2	+0.3
PDG	Podgorica	66.04	307	P	P	17 15 57.1	-1.8
MPLH	Magyarpolny	66.11	312	P	P	17 16 00.0	+0.7
DPC	Dobruska-Polom	66.19	316	*e*P	P	17 16 01.3	+1.5
DPC	Dobruska-Polom	66.19	316	*e*P	P	17 16 01.3	+1.5
ADK	Adak	66.21	42	P	P	17 15 60.0	+0.2
ADK	Adak	66.21	42	P	P	17 16 00.0	+0.2
ADK				pmax	pmax		
	comp=Z,43nm,1.2s						
VRAC	Vranov	66.25	315	⇓P	P	17 16 02.0	+1.8
VRAC	Vranov	66.25	315	⇓P	P	17 16 02.0	+1.8
VRAC	Vranov	66.25	315	*e*P	P	17 16 01.6	+1.4
CHVC	Chvalec	66.31	316	*e*P	P	17 16 01.8	+1.3
KRUC	Moravsky	66.43	315	*e*P	P	17 16 02.6	+1.3
NC303	NORSAR Array S	66.65	328	P	P	17 16 02.4	0.0
NC303				IAmb	IAmb	17 16 14.8	
	comp=Z,6.7nm,0.8s						
NC602	NORSAR Array S	66.67	328	P	P	17 16 02.1	-0.5
NB2	NORSAR Subarra	66.76	328	P	P	17 16 02.9	-0.3
	comp=Z,1.1nm,0.6s,baz=78,slow=6.5						
NOA	NORSAR Array B	66.76	328	P	P	17 16 03.0	-0.3
	comp=Z,2.0nm,0.8s,baz=78,slow=6.4,SNR=9.8						
	comp=Z,2.0nm,0.8s						
RONA	Rosalia, Austr	66.81	313	*e*P	P	17 16 04.6	+0.7
CONA	Conrad Observa	67.04	313	*i* P	P	17 16 05.7	+0.3
	comp=Z,7.9nm,1.1s,SNR=6.9						
SCTE	Santa Cesarea	67.21	305	P	P	17 16 05.2	-1.2
ARSA	Arzberg	67.43	313	*e*P	P	17 16 07.2	-0.6
	comp=Z,2.5nm,1.0s						
BRG	Berggiesshubel	67.55	317	*e*P	P	17 16 09.6	+1.1
BRG				Amp		17 16 13.6	
	comp=Z,4.7nm,1.0s						
BRG	Berggiesshubel	67.55	317	*e*P	P	17 16 09.5	+1.1
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CKRC	Cesky Krumlov	67.83	315	*e*P	P	17 16 11.5	+1.3
KONO	Kongsberg	67.86	327	P	P	17 16 08.6	-1.5
KONO				IAmb	IAmb	17 16 13.9	
	comp=Z,20nm,1.2s						
KONO	Kongsberg	67.86	327	P	P	17 16 08.6	-1.5
KONO				pmax	pmax		
	comp=Z,20nm,1.2s						
SOKA	Soboth	67.90	312	*e*P	P	17 16 11.5	+0.7
	comp=Z,6.5nm,1.1s						
MOA	Molln	68.10	314	*e*P	P	17 16 12.5	+0.6
	comp=Z,3.6nm,0.7s						
GEC2	GERESS Array S	68.21	315	P	P	17 16 11.0	-1.7
GEC2				IAmb	IAmb	17 16 14.8	
	comp=Z,23nm,1.7s						
GERES	GERESS Array B	68.21	315	P	P	17 16 13.7	+1.0
	comp=Z,2.0nm,0.7s,baz=72,slow=5.7,SNR=16						
GERES				PP	PP	17 18 39.6	-3.4
	comp=Z,0.2nm,0.3s,baz=52,slow=10,SNR=2.5						
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	68.21	315	P	P	17 16 11.4	-1.2
GERES	GERESS Array B	68.21	315	P	P	17 16 11.5	-1.2
KHC	Kasperske Hory	68.21	315	P	P	17 16 11.9	-0.8
KHC	Kasperske Hory	68.21	315	⇑*e*P	P	17 16 14.0	+1.3
KHC				pmax	pmax		
	comp=Z,12nm,1.4s						
KHC	Kasperske Hory	68.21	315	*e*P	P	17 16 12.7	0.0
BIOA	Bad Ischl, Aus	68.55	314	*e*P	P	17 16 15.3	+0.5
TIP	Timpagrande	68.73	304	P	P	17 16 15.1	-1.0
TIP				IAmb	IAmb	17 16 17.8	
	comp=Z,24nm,1.3s						
SGRT	San Giovanni R	68.74	307	P	P	17 16 14.9	-1.2
SGRT				IAmb	IAmb	17 16 16.7	
	comp=Z,18nm,0.9s						
KBA	Koelnbreinsper	68.91	313	*e*P	P	17 16 17.7	+0.5
	comp=Z,5.8nm,1.2s						
CUC	Castrocucco	69.19	305	P	P	17 16 18.5	-0.4
CUC				IAmb	IAmb	17 16 20.5	
	comp=Z,12nm,0.7s						
ABTA	Abfaltersbach	69.55	313	*e*P	P	17 16 20.5	-0.6
	comp=Z,6.8nm,1.2s						
STAL	STALIGIAL	69.56	312	P	P	17 16 20.7	-0.4
STAL				IAmb	IAmb	17 16 22.5	
	comp=Z,17nm,1.1s						
CEL	Celeste	69.64	303	P	P	17 16 22.0	+0.3
WTTA	Wattenberg	69.98	314	*e*P	P	17 16 22.4	-1.4
	comp=Z,11nm,1.4s						
WATA	Walderalm	70.00	314	*e*P	P	17 16 22.9	-1.0
	comp=Z,6.1nm,1.0s						
STKA	Stephens Creek	70.21	143	P	P	17 16 25.6	+0.5
	comp=Z,1.8nm,0.6s,baz=304,slow=7.7,SNR=3.1						
	comp=Z,1.8nm,0.6s						
AQU	L'Aquila	70.23	308	P	P	17 16 24.8	-0.5
AQU				IAmb	IAmb	17 16 27.0	
	comp=Z,19nm,1.0s						
AQU	L'Aquila	70.23	308	P	P	17 16 24.8	-0.5
AQU				pmax	pmax		
	comp=Z,19nm,1.0s						
SQTA	Sankt Quirin	70.27	314	*e*P	P	17 16 25.7	+0.2
	comp=Z,6.2nm,0.7s						
NRCA	Norcia	70.29	309	P	P	17 16 24.3	-1.4
NRCA				IAmb	IAmb	17 16 28.6	
	comp=Z,9.0nm,0.8s						
MOTA	Moosalm	70.30	314	*e*P	P	17 16 26.0	+0.3
	comp=Z,12nm,1.0s						
CTI	Castel Tesino	70.33	312	P	P	17 16 25.4	-0.5
CTI	Castel Tesino	70.33	312	P	P	17 16 25.4	-0.5
CTI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RETA	Reutte	70.48	314	*e*P	P	17 16 27.0	+0.3
	comp=Z,4.7nm,0.9s						
TEOL	Teolo	70.52	312	P	P	17 16 27.2	+0.3
TEOL				IAmb	IAmb	17 16 29.0	
	comp=Z,20nm,0.9s						
NIKH	Nikolski High	70.56	40	P	P	17 16 26.9	-0.1
MURB	Monte Urbino	70.57	309	P	P	17 16 27.3	-0.1
FETA	Feichten	70.64	314	*i* P	P	17 16 28.5	+0.6
	comp=Z,12nm,1.1s,SNR=7.0						
STU	Stuttgart	71.09	316	P	P	17 16 29.6	-0.7
STU				IAmb	IAmb	17 16 48.6	
	comp=Z,11nm,0.6s						
STU	Stuttgart	71.09	316	P	P	17 16 29.6	-0.7
STU				pmax	pmax		
	comp=Z,11nm,0.6s						
DAVA	Damuels	71.11	314	*e*P	P	17 16 30.7	0.0
	comp=Z,7.7nm,1.3s						
SALO	Salr	71.21	312	P	P	17 16 30.7	-0.4
SALO				IAmb	IAmb	17 16 42.7	
	comp=Z,13nm,0.8s						
LATE	Laterza	71.27	309	P	P	17 16 30.3	-1.3
MBAR	Mbarara	71.30	260	P	P	17 16 31.5	-0.8
MBAR	Mbarara	71.30	260	P	P	17 16 31.5	-0.8
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OSSC	Osservatorio P	71.38	310	P	P	17 16 31.7	-0.4
OSSC				IAmb	IAmb	17 16 33.3	
	comp=Z,13nm,1.0s						
TUE	Stuetta	71.71	313	P	P	17 16 32.8	-1.6
TUE				IAmb	IAmb	17 16 46.8	
	comp=Z,20nm,1.5s						
BFO	Black Forest	71.77	315	P	P	17 16 33.9	-0.6
BFO	Black Forest	71.77	315	P	P	17 16 33.9	-0.6
BFO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WLF	Walferdange	72.68	317	P	P	17 16 40.3	+0.4
WLF				IAmb	IAmb	17 16 47.1	
	comp=Z,31nm,1.5s						
WLF	Walferdange	72.68	317	P	P	17 16 40.3	+0.4
WLF				pmax	pmax		
	comp=Z,31nm,1.5s						
IMAR	Indian Mountai	72.97	24	P	P	17 16 41.2	-0.1
SENIN	Lac Senin/Sane	73.09	314	P	P	17 16 42.0	-0.7
TOLK	Toolik Lake Re	73.19	21	P	P	17 16 42.1	-0.5
TOLK				IAmb	IAmb	17 16 47.1	
	comp=Z,6.7nm,0.8s						
H21K	Melozitna Rive	73.46	24	P	P	17 16 44.4	+0.1
H21K				IAmb	IAmb	17 16 48.6	
	comp=Z,8.2nm,1.1s						
J20K	Nowinta River	73.61	26	P	P	17 16 45.2	+0.2
J20K				IAmb	IAmb	17 16 49.6	
	comp=Z,7.1nm,0.9s						
COLD	Coldfoot	73.66	22	P	P	17 16 45.8	+0.5
COLD				IAmb	IAmb	17 17 11.2	
	comp=Z,4.4nm,0.5s						
BNI	Bardonecchia	73.95	313	P	P	17 16 47.8	+0.1
BNI				IAmb	IAmb	17 17 05.8	
	comp=Z,8.2nm,1.1s						
BNI	Bardonecchia	73.95	313	P	P	17 16 47.8	+0.1
BNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
K20K	Telida	74.00	27	P	P	17 16 47.4	0.0
EUNU	Eureka	74.05	1	P	P	17 16 47.5	0.0
EUNU				IAmb	IAmb	17 16 51.7	
	comp=Z,17nm,1.5s						
L19K	White Mountain	74.19	28	P	P	17 16 47.4	-1.2
L19K				IAmb	IAmb	17 16 53.0	
	comp=Z,7.3nm,1.0s						
SVW2	Sparrevohn	74.35	29	P	P	17 16 48.8	-0.7
SVW2				IAmb	IAmb	17 16 55.5	
	comp=Z,7.3nm,1.0s						
N18K	Kilae Creek	74.39	30	P	P	17 16 49.0	-0.8
N18K				IAmb	IAmb	17 17 21.5	
	comp=Z,19nm,1.8s						
BPAW	Bear Paw Mtn.	74.87	25	P	P	17 16 51.1	-1.4
BPAW				IAmb	IAmb	17 16 54.2	
	comp=Z,7.3nm,0.9s						
CNBA	Chernabura Isl	75.03	36	P	P	17 16 52.6	-0.9
SSB	Saint Sauveur	75.28	313	P	P	17 16 54.3	-0.9
SSB	Saint Sauveur	75.28	313	P	P	17 16 54.3	-0.9
SSB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SCO	Scoresbysund	75.30	343	P	P	17 16 53.9	-0.9
SCO				IAmb	IAmb	17 17 18.0	
	comp=Z,16nm,1.2s						
SCO	Scoresbysund	75.30	343	P	P	17 16 53.9	-0.9
SCO				pmax	pmax		
	comp=Z,16nm,1.2s						
NEA2	Nenana	75.36	25	P	P	17 16 54.4	-0.8
BMAR	Burnt Mountain	75.43	21	P	P	17 16 54.9	-0.7
MDM	Murphy Dome	75.48	24	P	P	17 16 55.5	-0.5
MDM				IAmb	IAmb	17 16 60.0	
	comp=Z,9.2nm,0.9s						
CLF	Chambon-Foret	75.67	317	P	P	17 16 56.2	-1.2
CLF				IAmb	IAmb	17 17 23.2	
	comp=Z,16nm,1.2s						
POKR	Poker Plat Res	75.69	24	P	P	17 16 56.2	-1.0
POKR				IAmb	IAmb	17 16 59.0	
	comp=Z,8.1nm,0.8s						
ESK	Eskdalemuir	75.81	325	P	P	17 16 58.0	+0.1
ESK				IAmb	IAmb	17 17 11.3	
	comp=Z,34nm,1.7s						
ESK	Eskdalemuir	75.81	325	P	P	17 16 58.0	+0.1
ESK				pmax	pmax		
	comp=Z,34nm,1.7s						
ILAR	Eielson Array	76.07	24	P	P	17 16 58.0	-1.3
	comp=Z,2.2nm,1.0s,baz=314,slow=6.7,SNR=7.7						
ILAR				PP	PP	17 19 49.8	+0.1
	comp=Z,0.3nm,0.7s,baz=305,slow=7.1,SNR=1.8						
	comp=Z,2.2nm,1.0s						
ILAR	Eielson Array	76.07	24	P	P	17 16 58.0	-1.3
KDAK	Kodiak Island	77.22	32	P	P	17 17 04.7	-1.2
KDAK	Kodiak Island	77.22	32	P	P	17 17 04.7	-1.2
KDAK				pmax	pmax		
	comp=Z,50nm,1.5s						
TULEG	Thule	77.38	357	P	P	17 17 06.1	-0.4
A36M	Sachs Harbour	77.48	13	P	P	17 17 07.1	0.0
A36M				IAmb	IAmb	17 17 11.1	
	comp=Z,12nm,0.7s						
SUMG	Summit	77.56	348	P	P	17 17 07.3	-0.8
SUMG				IAmb	IAmb	17 17 13.3	
	comp=Z,11nm,1.1s						
SUMG	Summit	77.56	348	P	P	17 17 07.3	-0.8
SUMG				pmax	pmax		
	comp=Z,11nm,1.1s						
SCRK	Sand Creek	77.56	24	P	P	17 17 07.6	-0.3
GLI	Glacier Island	78.07	27	P	P	17 17 10.4	-0.2
INK	Inuvik	78.18	18	P	P	17 17 10.5	-0.6
	comp=Z,6.3nm,0.9s,baz=311,slow=8.6,SNR=9.4						
	comp=Z,6.3nm,0.9s						
INK	Inuvik	78.18	18	P	P	17 17 09.8	-1.3
INK				IAmb	IAmb	17 17 15.1	
	comp=Z,11nm,1.1s						
INK	Inuvik	78.18	18	P	P	17 17 09.8	-1.3
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
I29M	Ogilvie Camp,	78.69	21	P	P	17 17 12.8	-1.2
L27K	Beaver Creek,	78.89	24	P	P	17 17 15.2	0.0
BCAR	Beaver Creek A	78.90	24	P	P	17 17 15.2	0.0
RES	Resolute Bay	79.06	4		P	17 17 16.4	+0.6
RES				IAmb	IAmb	17 17 19.9	
	comp=Z,22nm,1.6s						
RES	Resolute Bay	79.06	4	P	P	17 17 16.4	+0.6
RES				pmax	pmax		
	comp=Z,22nm,1.7s						
M27K	Edge Creek, AK	79.29	25	P	P	17 17 17.6	+0.2
M27K				IAmb	IAmb	17 17 22.6	
	comp=Z,7.5nm,1.0s						
C36M	Paulatuk	79.77	14	P	P	17 17 18.6	-1.2
C36M				IAmb	IAmb	17 17 26.5	
	comp=Z,8.2nm,0.8s						
ESDC	Sonseca Array	83.35	311	P	P	17 17 38.4	-1.0
	comp=Z,1.9nm,1.0s,baz=46,slow=5.2,SNR=8.7						
	comp=Z,1.9nm,1.0s						
ESDC	Sonseca Array	83.35	311	P	P	17 17 38.4	-1.0
YKA	Yellowknife Ar	87.62	15	P	P	17 17 59.4	-0.7
	comp=Z,1.0nm,0.7s,baz=329,slow=4.6,SNR=9.6						
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	91.19	285	P	P	17 18 17.2	-0.6
	comp=Z,1.1nm,0.8s,baz=85,slow=4.7,SNR=4.6						
	comp=Z,1.1nm,0.8s						
BDFB	Brasilia	148.04	282	PKPbc	PKPbc	17 24 58.4	0.0
	comp=Z,3.8nm,0.6s,baz=117,slow=4.5,SNR=2.7						
ROSC	El Rosal	148.71	348	PKPbc	PKPbc	17 25 01.2	+0.6
	comp=Z,32nm,0.7s,baz=145,slow=6.3,SNR=7.9						
ROSC	El Rosal	148.71	348		PKPdf	17 24 58.2	+1.4
PLCA	Paso Flores	163.21	207	PKPab	PKPab	17 26 04.6	-0.4
	comp=Z,1.2nm,0.8s,baz=168,slow=9.5,SNR=3.3						
PB16	IPOC Station P	167.28	305	PKPab	PKPab	17 26 22.7	-1.5

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*IDC **17** 17:14:55.6±1.4, 48°.89S×123°.43E, h0^{km}, mb3.9/6, mbtmp4.0/6, MS3.7/4 Error ellipse: s-maj=76.4km s-min=18.2km az=105.0*

*NEIC **17** 17:14:58.2±1.3, 48°.9S±0°.1×123°.7E±0°.3, h14^{km}±5^{km}, mb4.3/13, Error ellipse: s-maj=29.3km s-min=15.7km az=91.0*

ISC 17 17:14:57.6±0.8**, 48°.88S**±0°.09×**123°.9E**±0°.2**, h10^{km}, n27, σ1^{s}.20**/17**, mb4.2**/9**, MS3.7**/4**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	15.71	329	T	T	17 34 49.8	
	baz=154,slow=74,SNR=182						
H01W2	Cape Leeuwin H	15.71	329	T	T	17 34 49.6	
	baz=154,slow=74,SNR=168						
H01W3	Cape Leeuwin H	15.72	329	T	T	17 34 51.0	
	baz=154,slow=74,SNR=150						
NWAO	Narrogin (SRO)	16.69	340	Pn	Pn	17 18 51.3	-0.1
FORT	Forrest	18.36	12	P	Pn	17 19 11.2	-1.0
FORT				IAmb	IAmb	17 19 15.4	
	comp=Z,13nm,0.8s						
CASY	Casey	18.77	197	P	Pn	17 19 19.1	+2.1
TOO	Toolangi	19.33	62	P	Pn	17 19 23.4	-0.6
TOO				IAmb	IAmb	17 19 46.9	
	comp=Z,16nm,1.2s						
MORW	Morawa	20.67	340	P	P	17 19 37.4	-0.2
STKA	Stephens Creek	21.62	45	P	P	17 19 49.5	+1.8
	comp=Z,2.2nm,0.8s,baz=229,slow=11,SNR=3.8						
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	26.39	21	P	P	17 20 34.5	+0.4
	comp=Z,3.5nm,0.9s,baz=205,slow=8.7,SNR=37						
	comp=Z,3.5nm,0.9s						
ASAR	Alice Springs	26.39	21	P	P	17 20 32.6	-1.5
AS31	Alice Springs	26.39	21	P	P	17 20 34.7	+0.6
WRA	Warramunga Arr	30.08	20	P	P	17 21 07.2	+0.2
	comp=Z,1.2nm,1.1s,baz=198,slow=8.0,SNR=3.8						
	comp=Z,1.2nm,1.1s						
WB2	Warramunga Arr	30.08	20	P	P	17 21 09.4	+2.4
WB2				IAmb	IAmb	17 21 44.6	
	comp=Z,8.6nm,1.4s						
WR0	Warramunga Arr	30.11	20		P	17 21 08.3	+1.0
WR0				IAmb	IAmb	17 21 11.0	
	comp=Z,9.3nm,1.5s						
WB0	Warramunga Arr	30.26	20	P	P	17 21 08.2	-0.4
WB0				IAmb	IAmb	17 21 24.0	
	comp=Z,8.9nm,1.4s						
VNDA	Vanda	32.19	165	P	P	17 21 24.4	-0.7
	comp=Z,1.1nm,0.8s,baz=304,slow=9.1,SNR=7.0						
VNDA				LR	LR	17 33 27.8	
	comp=Z,120nm,18.3s,baz=321,slow=34						
	comp=Z,1.1nm,0.8s						
VNDA	Vanda	32.19	165	IAmb	IAmb	17 21 50.6	
	comp=Z,4.4nm,1.4s						
QSPA	South Pole Qui	41.24	180	P	P	17 22 41.8	-0.7
	comp=Z,2.9nm,1.0s,baz=347,slow=7.3,SNR=4.4						
QSPA				LR	LR	17 38 57.6	
	comp=Z,130nm,19.1s,baz=315,slow=35						
	comp=Z,2.9nm,1.0s						
QSPA	South Pole Qui	41.24	180	IAmb	IAmb	17 22 46.9	
	comp=Z,8.6nm,1.2s						
SIJI	Sorong	48.25	10	LR	LR	17 42 59.8	
	comp=Z,61nm,20.9s,baz=6.5,slow=35						
SNAA	Sanae	54.00	198	P	P	17 24 20.8	-0.5
	comp=Z,2.5nm,0.8s,baz=148,slow=9.4,SNR=7.2						
	comp=Z,2.5nm,0.8s						
H08S2	Diego Garcia H	59.48	296	T	T	18 29 24.9	
	baz=152						
H08S1	Diego Carcia H	59.49	296	T	T	18 29 25.6	
	baz=152						
H08S3	Diego Garcia H	59.50	296	T	T	18 29 26.1	
	baz=152						
PALK	Pallekele	67.46	313	LR	LR	17 48 19.5	
	comp=Z,64nm,21.9s,baz=200,slow=30						
YKA	Yellowknife Ar	145.65	45	PKPbc	PKPab	17 34 35.0	-0.5
	comp=Z,0.6nm,0.7s,baz=271,slow=2.6,SNR=6.3						

NNC 17 17:32:29.1±6.4**, 38°.56N**×**70°.56E, h0^{km}, mb3.7, mpv3.3, 1C-3D, Error ellipse: s-maj=47.8km s-min=33.2km az=7.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.54	360	Pn	Pn	17 33 38.2	-0.9
	1.5nm,0.3s,baz=178,slow=13,SNR=54						
KK31				⇓Sn	Sn	17 34 34.0	+1.4
	0.7nm,0.3s						
KK31				⇓Lg	Lg	17 34 51.6	
	4.5nm,0.5s,baz=176,slow=28,SNR=11						
TKM2	Tokmak 2	5.80	40	⇓Pn	Pn	17 33 58.4	+1.9
	2.8nm,0.7s						
TKM2				⇑Sn	Sn	17 35 05.7	+1.8
	0.8nm,0.6s						
AB31	Akbulak array	13.14	328	Pn	Pn	17 35 33.1	-3.7
	0.5nm,0.5s,baz=149,slow=12,SNR=23						

IDC 17 17:49:45.6±1.8**, 26°.13N**×**99°.66E, h0^{km}, mb3.2**/2**, mbtmp3.1**/3**, ML3.2**/1**, Error ellipse: s-maj=51.0km s-min=24.1km az=76.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.66	185	Pn	Pn	17 51 40.1	+1.5
	0.1nm,0.3s,baz=0.2,slow=13,SNR=1.8						
CMAR				Pg	Pg	17 52 09.6	-2.9
	0.2nm,0.3s,baz=358,slow=17,SNR=10						
CMAR				Lg	Lg	17 53 47.8	
	0.2nm,0.3s,baz=359,slow=30,SNR=8.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	24.80	331	P	P	17 55 09.4	0.0
	0.6nm,0.9s,baz=139,slow=9.5,SNR=4.5						
	0.6nm,0.9s						
WRA	Warramunga Arr	56.84	140	P	P	17 59 31.8	-0.4
	0.2nm,0.8s,baz=330,slow=7.4,SNR=1.8						
	0.2nm,0.8s						

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*JMA **17** 18:23:02.1±0.2, 24°N±1°×12°2E±°, h20^{km}±1^{km}, TAIWAN REGION*

*TAP **17** 18:23:03.9, 24°.20N×121°.73E, h13^{km}, ML3.0, C*

ISC 17 18:23:03.8±0.8**, 24°.22N**±0°.02×**121°.78E**±0°.02**, h15^{km}**±5^{km}**, n87, σ0^{s}.91**/145**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.09	339	*i* P	Pg	18 23 07.1	0.0
	baz=8.0						
EHP				*i* S	Sg	18 23 09.6	+0.4
	baz=8.0						
ETL	Fush Village	0.15	246	*i* P	Pg	18 23 07.1	-0.8
	baz=248						
ETL				*i* S	Sg	18 23 09.6	-0.9
	baz=248						

NACB	**Ninganchiao** baz=259	0.17	254	*i* P	Pg	18 23 07.4	-0.7
NACB	baz=259			*i* S	Sg	18 23 09.9	-1.0
ENA	**Nanau** baz=3.0	0.21	351	*i* P	Pg	18 23 08.9	+0.3
ENA	baz=3.0			*i* S	Sg	18 23 12.5	+0.6
TWD	**Chiawan** baz=225	0.22	229	*i* P	Pg	18 23 08.0	-0.8
TWD	baz=225			*i* S	Sg	18 23 10.9	-1.2
EWUT	**Wuta** baz=9.0	0.22	0	*i* P	Pg	18 23 09.3	+0.4
EWUT	baz=9.0			*i* S	Sg	18 23 13.5	+1.2
ETLH	**Xiulin Townshi** baz=272	0.27	267	*i* P	Pg	18 23 09.2	-0.5
ETLH	baz=272			S	Sg	18 23 13.2	-0.5
HWA	**Hwalien** baz=217	0.29	213	*e*P	Pg	18 23 09.5	-0.5
HWA	baz=217			*e*S	Sb	18 23 15.0	-0.3
LATG	**Datong** baz=330	0.39	324	*i* P	Pb	18 23 12.0	-0.5
LATG	baz=330			S	Sb	18 23 17.3	-1.0
TWC	**Suao** baz=9.0	0.39	10	P	Pb	18 23 12.3	-0.2
TWC	baz=9.0			*e*S	Sb	18 23 16.9	-1.3
NDS	**Dongshan** baz=357	0.41	352	*i* P	Pb	18 23 12.8	0.0
NDS	baz=357			S	Sb	18 23 19.2	+0.3
NNSB	**Datong** baz=305	0.41	300	*i* P	Pb	18 23 12.2	-0.7
NNSB	baz=305			S	Sg	18 23 17.2	-0.7
NNS	**Nan Shan** baz=306	0.43	300	*i* P	Pb	18 23 12.4	-0.7
NNS	baz=306			*e*S	Sg	18 23 17.7	-0.7
ENTT	**Nioudou** baz=341	0.46	335	*i* P	Pb	18 23 13.6	0.0
ENTT	baz=341			*i* S	Sb	18 23 20.3	+0.1
WHF	**Hehuan Shan** baz=263	0.47	261	*i* P	Pg	18 23 12.9	-0.5
WHF	baz=263			*i* S	Sg	18 23 19.0	-0.9
FUSS	**Fushou** baz=276	0.49	273	P	Pb	18 23 13.5	-0.8
FUSS	baz=276			S	Sg	18 23 19.6	-0.6
TWE	**Neicheng** baz=360	0.51	349	*i* P	Pb	18 23 14.5	+0.1
TWE	baz=360			*e*S	Sb	18 23 21.8	+0.2
ESL	**Shilin** baz=222	0.52	218	P	Pg	18 23 13.1	-0.9
ESL	baz=222			*e*S	Sg	18 23 19.5	-1.4
TWT	**Tachien** baz=276	0.55	273	P	Pb	18 23 15.0	-0.3
TWT	baz=276			*e*S	Sg	18 23 22.3	+0.2
FUSB	**Fushanzhiwuyua** baz=346	0.56	342	P	Pn	18 23 16.1	-1.2
FUSB	baz=346			*e*S	Sb	18 23 23.5	+0.2
TDCB	**Techi** baz=276	0.57	273	P	Pb	18 23 14.9	-0.6
TDCB	baz=276			*e*S	Sg	18 23 21.2	-1.5
CHGB	**Renai** baz=248	0.57	254	*i* P	Pg	18 23 14.9	-0.4
CHGB	baz=248			S	Sg	18 23 21.5	-1.5
YHNB	**Yeheng** baz=325	0.57	321	*i* P	Pb	18 23 15.7	0.0
YHNB	baz=325			S	Sb	18 23 23.8	+0.1
NSK	**Sanguang** baz=324	0.59	320	*i* P	Pb	18 23 15.7	-0.2
NSK	baz=324			*e*S	Sb	18 23 24.0	-0.1
NWLT	**Wulai** baz=339	0.60	336	P	Pb	18 23 16.3	+0.2
NWLT	baz=339			*e*S	Sb	18 23 25.4	+0.9
OWD	**Renai** baz=245	0.61	244	P	Pg	18 23 15.6	-0.3
OWD	baz=245			S	Sg	18 23 22.5	-1.6
NTC	**Toucheng** baz=7.0	0.63	4	*e*P	Pb	18 23 16.1	-0.5
NTC	baz=7.0			*e*S	Sb	18 23 25.5	+0.3
EGS	baz=23	0.64	13	*e*P	Pn	18 23 17.7	-0.6
EGFH	**Guangfu** baz=216	0.64	210	P	Pg	18 23 15.9	-0.5
EGFH	baz=216			*e*S	Sg	18 23 25.4	+0.6
WUSB	**Renai** baz=243	0.65	249	*i* P	Pg	18 23 16.1	-0.5
WUSB	baz=243			S	Sg	18 23 24.0	-1.2
NFF	**Wufeng Townshi** baz=308	0.73	304	*i* P	Pb	18 23 18.0	-0.2
TIPB	**Shuangxi** baz=5.0	0.75	3	P	Pn	18 23 18.9	-1.0
TIPB	baz=5.0			*e*S	Sb	18 23 28.6	0.0
VWDT	**VWDT** baz=232	0.75	231	*i* P	Pg	18 23 17.8	-0.6
VWDT	baz=232			*e*S	Sg	18 23 27.0	-1.3
WHP	**Taichung City** baz=276	0.76	274	P	Pb	18 23 18.7	-0.1
WHP	baz=276			*e*S	Sg	18 23 28.6	-0.2
TWA	**Mucha** baz=350	0.77	347	P	Pn	18 23 19.5	-0.8
TWA	baz=350			*e*S	Sn	18 23 30.3	-1.3
HGSD	**Ruisui** baz=217	0.80	204	P	Pg	18 23 18.8	-0.6
HGSD	baz=217			*e*S	Sg	18 23 29.4	-0.5
TWB1	**Santiao Chiao** baz=9.0	0.81	14	*e*P	Pn	18 23 20.4	-0.3
LIOB	**Emei** baz=304	0.81	301	*e*P	Pb	18 23 19.3	-0.4
NSTT	**Nanjuang** baz=303	0.82	300	*e*P	Pb	18 23 19.8	0.0
NSTT	baz=303			*e*S	Sb	18 23 30.7	+0.1
NWF	**Wu-fen Shan** baz=353	0.84	0	*e*P	Pn	18 23 21.2	0.0
NWF	baz=353			*e*S	Sn	18 23 33.1	-0.4
SSLB	**Suanglung** baz=250	0.87	240	P	Pg	18 23 20.0	-0.7
SSLB	baz=250			*e*S	Sg	18 23 28.7	-3.4
SMLT	**Sun Moon Lake** baz=241	0.87	247	P	Pb	18 23 20.6	-0.1
SMLT	baz=241			*e*S	Sg	18 23 30.8	-1.5
SXI1	**Grass Mountain** baz=354	0.87	6	P	Pn	18 23 21.0	-0.6
TYC	**Yuchr** baz=243	0.90	249	P	Pb	18 23 20.9	-0.2
TYC	baz=243			*e*S	Sg	18 23 29.8	-3.3
SBCB	**Hsinchu** baz=311	0.92	308	*e*P	Pn	18 23 23.4	+1.3
TWQ1	**Liyutan** baz=280	0.93	278	*e*P	Pn	18 23 23.4	+1.1
TWS1	**Kuangyinshan** baz=342	0.93	340	*e*P	Pn	18 23 23.3	+0.9
YULB	**Yu-li** baz=220	0.94	208	*e*P	Pg	18 23 19.8	-2.2
YM01	**YM01** baz=335	0.94	348	P	Pn	18 23 22.6	+0.1
NSY	**Sanyi** baz=284	0.95	282	P	Pn	18 23 22.3	-0.3
NSY	baz=284			*e*S	Sn	18 23 36.2	+0.4
NMLH	**Miaoli** baz=292	0.95	289	*e*P	Pn	18 23 23.1	+0.5
EYUL	**Yuli** baz=219	0.97	206	*e*P	Pg	18 23 22.0	-0.5
ANP	**Anpu** baz=349	0.99	346	*e*P	Pn	18 23 23.2	0.0
WHYT	**Xinyi Township** baz=246	0.99	238	*e*P	Pb	18 23 23.1	+0.3
WHYT	baz=246			*e*S	Sg	18 23 35.4	-0.7
TCU	**Taichung** baz=268	1.01	266	*e*P	Pn	18 23 24.8	+1.4
WJS	**Zhushan** baz=244	1.04	248	*e*P	Pb	18 23 23.6	+0.1
WJS	baz=244			*e*S	Sb	18 23 37.8	+0.9
WDJ	**Dajia District** baz=279	1.04	277	*e*P	Pn	18 23 25.0	+1.1
WDJ	baz=279			*e*S	Sn	18 23 39.3	+1.1
YUS	**Yu-Shan** baz=227	1.05	226	P	Pg	18 23 22.9	-1.3
YUS	baz=227			*e*S	Sb	18 23 38.4	+0.7
WNT	**Mingjian** baz=249	1.06	251	*e*P	Pn	18 23 24.9	+0.8
WNT	baz=249			*e*S	Sn	18 23 40.1	+1.6
FULB	**Fuli** baz=218	1.11	204	*e*P	Pg	18 23 24.8	-0.5
ALS	**Alishan** baz=233	1.14	232	*e*P	Pg	18 23 24.8	-1.1
ALS	baz=233			*e*S	Sg	18 23 40.8	0.0
CHKT	**Chengkung** baz=184	1.18	199	*e*P	Pn	18 23 26.7	+0.9
CHN5	**Tsauling** baz=240	1.18	238	*e*P	Pn	18 23 26.8	+0.9
CHN5	baz=240			*e*S	Sn	18 23 43.3	+1.5
ELDTW	**Lidau** baz=215	1.24	214	P	Pg	18 23 25.7	-2.1
WDLH	**Douliu** baz=247	1.25	245	*e*P	Pg	18 23 28.0	0.0
EDH	**Donghe** baz=186	1.32	199	*e*P	Pn	18 23 26.8	-0.9
WRL	**Guolierlin Hig** baz=258	1.32	256	*e*P	Pn	18 23 28.2	+0.5
WRL	baz=258			*e*S	Sn	18 23 47.1	+2.0
WTK	**Tuku** baz=250	1.38	248	*e*P	Pg	18 23 29.6	-0.8
WTK	baz=250			*e*S	Sg	18 23 48.9	+0.5
CHN4	**Tsaushan** baz=234	1.39	232	P	Pb	18 23 29.8	+0.3
CHN4	baz=234			*e*S	Sg	18 23 49.6	+0.9
STYH	**Taoyuan** baz=223	1.39	221	P	Pn	18 23 28.7	0.0
STYH	baz=223			*e*S	Sb	18 23 47.3	+0.1
WTP	**Ta-pu** baz=219	1.44	228	*e*P	Pb	18 23 30.4	-0.1
WTP	baz=219			*e*S	Sn	18 23 49.2	+1.1
TWK	**Hsinying** baz=235	1.52	231	*e*P	Pb	18 23 31.7	0.0
TWK	baz=235			*e*S	Sb	18 23 51.8	+1.0
TWG	**Pinlang** baz=190	1.54	205	*e*P	Pn	18 23 31.6	+0.8
SNST	**Tainan City** baz=232	1.54	230	*e*P	Pb	18 23 32.1	0.0
CHN1	**Nanshi** baz=232	1.54	228	*e*P	Pb	18 23 32.1	0.0
CHN1	baz=232			*e*S	Sb	18 23 52.6	+1.1
SGST	**Jiashian** baz=226	1.58	224	*e*P	Pg	18 23 33.8	-0.4
WSL	**Shuilin Townsh** baz=247	1.58	244	*e*P	Pb	18 23 32.7	-0.1
WSL	baz=247			*e*S	Sg	18 23 54.7	-0.1
SCST	**Cishan** baz=225	1.78	222	*e*P	Pb	18 23 35.5	-0.6
IRIF	**Iriomote-Funau**	1.79	86	*e*S	Sb	18 23 58.2	-0.2
ECL	**Taimali** baz=192	1.79	205	*e*P	Pn	18 23 34.5	+0.3
SSD	**Sandimen** baz=231	1.81	216	*e*P	Pn	18 23 35.6	+1.2
SSD	baz=231			*e*S	Sg	18 24 01.3	-0.8
TSMG	**Majia** baz=229	1.83	215	*e*P	Pn	18 23 36.1	+1.3
MASBT	**Mashibuluo** baz=214	1.92	213	*e*P	Pn	18 23 36.8	+0.9
MASBT	baz=214			*e*S	Sn	18 24 01.6	+1.8
JIJ	**Ishigaki jima**	2.16	86	*e*S	Sn	18 24 06.9	+1.1
VWUC	**VWUC** baz=279	2.25	290	*e*P	Pn	18 23 40.7	+0.2
JISG	**Ishigakijimahi**	2.34	81	*e*P	Pn	18 23 42.3	+0.6
JISG				*e*S	Sn	18 24 10.8	+0.7
PTMZ	**Houxiangcun** baz=289	2.55	289	*e*P	Pn	18 23 45.1	+0.4

IDC 17 18:24:16.2±7.2**, 26.°43N**×**92.°30E, h0**^{km}**, mb3.2**/3**,**
mbtmp3.3/3**, MS3.3**/1**, Error ellipse: s-maj=574.6km**
s-min=29.6km az=62.0, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=159,slow=9.1,SNR=6.7 0.4nm,0.6s	21.82	341	P	P	18 29 09.9	0.0
ASAJ	**Asahikawa** comp=Z,36nm,18.1s,baz=166,slow=38	43.97	53	LR	LR	18 51 43.8	
WRA	**Warramunga Arr** 0.2nm,0.7s,baz=324,slow=6.8,SNR=1.5 0.2nm,0.7s	61.55	134	P	P	18 34 35.7	+0.3
ASAR	**Alice Springs** 0.3nm,0.5s,baz=321,slow=6.7,SNR=9.3 0.3nm,0.5s	64.02	137	P	P	18 34 51.7	-0.2

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*IDC **17** 18:40:46.7±1.1, 29.°68N×141.°90E, h0^{km}, mb3.6/8,*
mbtmp3.7/10, ML3.2/3, MS3.5/1, Error ellipse:
s-maj=47.0km s-min=15.7km az=77.0
*JMA **17** 18:40:47.4±0.3, 30.°0N±0.°5×14.°3E±.°, h60^{km}, MV3.9/23,*
NEAR TORISHIMA IS
ISC 17 18:40:47.5±0.9**, 29.°80N**±0.°06×**142.°2E**±0.°2**, h10**^{km}**, n22,**
σ1^{s}.55/28**, mb3.8**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.70	181	*e*P	Pn	18 41 32.5	+1.5
JCJ	**Chichijima** 2.9nm,0.3s,baz=339,slow=19,SNR=11	2.70	181	Pn	Pn	18 41 30.7	-0.3
JCJ	11nm,0.3s,baz=119,slow=23,SNR=6.0			Sn	Sn	18 42 00.7	-3.0
JHJ	**Hachijo jima 2** 6.7nm,0.3s,baz=82,slow=21,SNR=7.2	3.91	329	Pn	Pn	18 41 47.8	+0.2
JHJ	7.9nm,0.3s,baz=56,slow=10,SNR=1.5 173nm,0.9s			Sn	Sn	18 42 31.7	-1.8
BSO1	**Boso 1**	4.95	348	*e*P	Pn	18 42 01.0	-0.4
BSO1				*e*S	Sn	18 42 56.2	-2.3
BSO3	**Boso 3**	5.19	344	*e*P	Pn	18 42 04.7	-0.3
JOD2	**Odawara 2**	6.05	335	*e*P	Pn	18 42 18.2	+1.1
JHU	**Hanno**	6.52	339	*e*P	Pn	18 42 23.9	+0.4
JHU				*e*S	Sn	18 43 35.3	-2.6
JYT	**Yasato**	6.63	346	*e*P	Pn	18 42 24.9	-0.1
JRY	**Ryogami san**	6.79	337	*e*P	Pn	18 42 28.3	+1.0
JRY				*e*S	Sn	18 43 43.6	-1.1
JHO	**Hitachi**	6.93	349	*e*P	Pn	18 42 27.9	-1.3
JAG	**Ashikaga**	7.00	341	P	Pn	18 42 29.7	-0.4
JAG				*e*S	Sn	18 43 46.2	-3.6
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=161,slow=11,SNR=16	7.51	335	Pn	Pn	18 42 37.4	+0.2
MJAR	0.1nm,0.3s,baz=313,slow=11,SNR=4.4 1.9nm,0.5s			Sn	Sn	18 44 01.9	-0.6
KSRS	**Korea Array** 0.1nm,0.3s,baz=113,slow=13,SNR=4.2	14.13	306	Pn	Pn	18 44 09.8	+2.1
KLR	**Kul'dur** 0.8nm,0.4s,baz=130,slow=13,SNR=4.5 0.8nm,0.4s	20.98	341	P	P	18 45 31.6	+0.8
SONM	**Songino Array** 1.1nm,0.8s,baz=97,slow=7.9,SNR=4.8 1.1nm,0.8s	32.83	313	P	P	18 47 21.8	+0.4
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=58,slow=47,SNR=2.4 0.4nm,0.5s	47.49	318	P	P	18 49 21.6	-1.0
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=88,slow=9.6,SNR=6.9 0.7nm,0.7s	48.81	308	P	P	18 49 33.0	+0.1
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=7.9,slow=7.9,SNR=17 0.5nm,0.4s	50.03	190	P	P	18 49 41.7	-0.7
KDAK	**Kodiak Island** comp=Z,43nm,20.6s,baz=242,slow=34	52.21	38	LR	LR	19 10 36.4	
ASAR	**Alice Springs** 0.2nm,0.5s,baz=3.3,slow=4.9,SNR=12 0.2nm,0.5s	53.76	189	P	P	18 50 09.4	-0.8
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=292,slow=6.6,SNR=3.3 0.3nm,0.8s	69.76	29	P	P	18 52 00.3	+2.7
FINES	**FINESS Array B** 1.2nm,0.9s,baz=72,slow=18,SNR=3.9 1.2nm,0.9s	75.54	334	P	P	18 52 31.9	-0.1

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*IDC **17** 18:41:50.5±0.8, 38.°03S×73.°50W, h0^{km}, mb4.5/5,*
mbtmp4.4/8, ML4.3/3, MS3.7/24, Error ellipse:
s-maj=29.5km s-min=17.9km az=78.0
*NEIC **17** 18:41:51.4, 38.°07S×73.°59W, h29^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.99;
$M_{\theta\theta}$-1.29; $M_{\phi\phi}$0.30; $M_{r\theta}$-0.72; $M_{\theta\phi}$-2.25; $M_{\phi r}$-4.30; Fault
plane solution: $M_0$5.04000×10^{15} NP1:ϕ_s92.83000°,
δ28.86000°, λ166.90000°. NP2:ϕ_s194.34000°, δ83.72000°,
λ61.78000°. Principal axes: T 5.1239, Plg44.0000°,
Azm77.0000°; N -0.1682, Plg28.0000°, Azm198.0000°; P
-4.9557, Plg33.0000°, Azm308.0000°;
*GUC **17** 18:41:52.1±0.6, 38.°25S×74.°09W, h33^{km}±3^{km}, ML5.0*
*NEIC **17** 18:41:52.0±2.4, 38.°07S±0.°03×73.°5W±0.°2, h14^{km}±4^{km},*
mb4.7/25, Mwr4.4/30, ML5.0(GUC), Error ellipse:
s-maj=17.3km s-min=4.8km az=91.0
*VAO **17** 18:41:59.8±1.2, 38.°06S×72.°90W, h42^{km}±11^{km}, mb4.7*
ISC 17 18:41:52.1±1.7**, 38.°13S**±0.°02×**73.°65W**±0.°08**, h15**^{km}±10^{km}**,**
n168, σ1^{s}.84/174**, mb4.7**/14**, MS3.8**/22**, 3C-1D, Near coast**
of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LC02	**Puerto Saavedr**	0.69	162		Pb	18 42 05.9	+0.1
LC02					Sb	18 42 16.2	+1.1
LC02	**Puerto Saavedr**	0.69	162	*e*P	Pb	18 42 05.6	-0.2
LC02				*i* S	Sb	18 42 16.2	+1.1
LC02	comp=N,136µm,0.7s			IAML		18 42 19.8	
CCSP	**San Pedro de C**	1.36	19	*e*P	Pg	18 42 18.7	+0.5
CCSP				*e*S	Sn	18 42 34.4	+0.3
CCSP	comp=E,33µm,0.3s			IAML		18 42 45.8	
BI05	**Punta Hualpn**	1.43	15		Pn	18 42 17.7	+0.3
BI05				Sn	Sn	18 42 34.3	-1.6
LR02	**Universidad Au**	1.70	170	*e*P	Pn	18 42 21.1	0.0
LR02				*i* S	Sn	18 42 38.3	-4.3
LR02	comp=E,28µm,0.5s			IAML		18 42 51.1	
LR04	**Corral**	1.75	174		Pn	18 42 20.6	-1.3
LR04				Sn	Sn	18 42 40.6	-3.3
LR04	**Corral**	1.75	174	⇑*i*P	Pn	18 42 20.9	-1.0
LR04				*e*S	Sn	18 42 41.4	-2.5
LR03	**Panguipulli**	1.81	146		Pn	18 42 23.3	+0.6
LR03				Sn	Sb	18 42 48.5	+1.1
LR03	**Panguipulli**	1.81	146	⇑*i*P	Pn	18 42 23.5	+0.8
LR03				*i* S	Sb	18 42 47.5	+0.2
LR03	comp=N,20µm,0.4s			IAML		18 42 58.0	
LL04	**Puerto Octay**	2.94	161		Pn	18 42 37.2	-0.9
LL04				Sn	Sn	18 43 11.3	-1.8
LL04	**Puerto Octay**	2.94	161	*e*P	Pn	18 42 37.6	-0.6
LL04				*e*S	Sn	18 43 11.2	-1.8
ML02	**Panimavida**	2.97	38		Pn	18 42 35.4	-3.2
ML02				Sn	Sn	18 43 14.9	+1.1
ML02	**Panimavida**	2.97	38	*e*P	Pn	18 42 39.4	+0.9
ML02				*e*S	Sn	18 43 15.4	+1.6
ML02	comp=N,5µm,0.6s			IAML		18 43 37.6	
LL03	**Petrohue**	3.15	163		Pn	18 42 41.3	+0.1
LL03	**Petrohue**	3.15	163	*e*P	Pn	18 42 40.3	-0.8
LL03				*e*S	Sn	18 43 17.0	-1.4
LL03	comp=N,3µm,0.5s			IAML		18 43 49.5	
LL05	**Los Muermos**	3.27	178		Pn	18 42 42.2	-0.6
LL05	**Los Muermos**	3.27	178	*e*P	Pn	18 42 40.7	-2.0
LL05				*e*S	Sn	18 43 17.5	-3.9
LL05	comp=N,1µm,0.7s			IAML		18 43 55.4	
GO05	**Huala**	3.41	25		Pn	18 42 44.7	+0.1
GO05	**Huala**	3.41	25	*e*P	Pn	18 42 45.3	+0.6
GO05				*e*S	Sn	18 43 27.2	+2.4
PLCA	**Paso Flores** comp=N,6.7nm,0.3s,baz=307,slow=10,SNR=247	3.54	138	Pn	Pn	18 42 47.7	+1.2
PLCA	comp=N,22nm,0.3s,baz=25,slow=19,SNR=6.3			Lg	Lg	18 43 41.4	
PLCA	comp=N,1µm,19.1s,baz=276,slow=45 comp=N,20nm,0.5s			LR	LR	18 44 30.6	
PLCA	**Paso Flores**	3.54	138		Pn	18 42 47.3	+0.8
PLCA	**Paso Flores**	3.54	138	*e*P	Pn	18 42 47.7	+1.2
PLCA				*e*S	Sn	18 43 28.5	+0.4
PLCA	**Paso Flores**	3.54	138	*e*P	Pn	18 42 47.8	+1.3
BO03	**Pichilemu**	3.88	21	*e*P	Pn	18 42 50.9	-0.2
BO03				*e*S	Sn	18 43 36.1	-0.2
BO01	**Tunca**	4.27	30		Pn	18 42 55.0	-1.5
BO01				Sn	Sn	18 43 41.1	-4.9
BO01	**Tunca**	4.27	30	⇑*e*P	Pn	18 42 56.4	-0.1
BO01				*e*S	Sn	18 43 45.9	-0.1
LL01	**San Ignacio de**	4.35	168		Pn	18 42 57.7	+0.2
MT01	**Popeta**	4.68	25		Pn	18 43 01.0	-1.2
MT01				Sn	Sn	18 43 54.2	-2.0
LL07	**Hotel Espejo d**	4.70	178		Pn	18 43 02.8	+0.5
LL07				Sn	Sn	18 43 53.3	-3.2
VA05	**Santo Domingo**	4.76	21		Pn	18 43 02.1	-1.1
BO04	**La Punta**	4.81	32		Pn	18 43 03.0	-1.0
BO04				Sn	Sn	18 43 55.5	-4.0
MT09	**Talagante**	4.85	27		Pn	18 43 03.6	-1.1
MT09				Sn	Sn	18 43 59.1	-1.5
GO07	**Milladeo Hill,**	4.98	180		Pn	18 43 05.2	-1.0
LL02	**Futaleuf**	5.24	165	Pn	Pn	18 43 09.4	-0.3
MT02	**Curacav**	5.28	24		Pn	18 43 08.0	-2.3
MT02				Sn	Sn	18 44 06.7	-4.1
MT03	**Universidad Ad**	5.29	30		Pn	18 43 08.1	-2.4
VA01	**Torpederas**	5.35	18		Pn	18 43 10.1	-1.2
VA01				Sn	Sn	18 44 07.0	-5.7
PEL	**Peldehue**	5.53	27		Pn	18 43 12.7	-1.2
PEL				Sn	Sn	18 44 16.4	-0.8
ROC1	**El Roble**	5.58	23		Pn	18 43 09.6	-5.1
ROC1				Sn	Sn	18 44 13.4	-5.2
VA06	**Catapilco**	5.88	20		Pn	18 43 16.3	-2.3
VA06				Sn	Sn	18 44 19.1	-6.6
VA03	**San Esteban**	5.92	26		Pn	18 43 17.7	-1.6
VA03				Sn	Sn	18 44 20.7	-6.3
H03S1	**Juan Fernandez** baz=134	6.04	314	T	T	18 49 22.5	
H03S3	**Juan Fernandez** baz=134	6.05	314	T	T	18 49 23.0	
H03S2	**Juan Fernandez** baz=134	6.05	313	T	T	18 49 21.0	
AY01	**Puyuhuapi**	6.33	173	Pn	Pn	18 43 26.3	+1.6
CO02	**Combarbal**	7.25	18		Pn	18 43 36.1	-1.4
COYC	**Coyhaique**	7.53	172	Pn	Pn	18 43 41.5	+0.4
CO06	**Fray Jorge**	7.62	13		Pn	18 43 40.3	-2.2
ZON	**Zonda**	7.74	33		Pn	18 43 41.6	-2.6
GO04	**Tololo Observa**	8.28	17	Pn	Pn	18 43 49.3	-2.5
CO05	**La Serena**	8.43	14	Pn	Pn	18 43 51.8	-1.8
CO01	**Juntas del Tor**	8.65	21		Pn	18 43 55.8	-1.1
LCO	**Las Campanas**	9.42	16		Pn	18 44 05.8	-1.7
AC04	**Llanos de Chal**	10.13	13	Pn	Pn	18 44 15.3	-1.7
GO08	**Villa O'Higgin**	10.36	176		Pn	18 44 20.7	+0.7

GO03	Copiap	10.89	16		Pn	18 44 24.0	-3.5
AC06	Mina Casimiro	11.10	15		Pn	18 44 27.2	-3.0
AC02	Maricunga	11.89	20	Pn	Pn	18 44 37.0	-4.5
AC01	Pan de Azucar	12.22	13	Pn	Pn	18 44 41.0	-4.7
MG03	Isla Dawson	15.87	173	P	P	18 45 39.4	+1.1
LVC	Limon Verde	16.00	16	LR	LR	18 51 34.0	
	comp=N,147nm,20.1s,baz=194,slow=37						
DSPA	Despedida	16.25	169	P	P	18 45 44.3	+1.7
USHA	Ushuaia	17.08	170	Pn	P	18 45 53.0	+1.3
	comp=N,0.4nm,0.3s,baz=341,slow=7.9,SNR=9.9						
	comp=N,16nm,0.9s						
EFI	East Falkland	17.42	146		Pn	18 45 54.5	+0.2
EFI				IAmb	IAmb	18 46 01.0	
	comp=Z,128nm,1.4s						
PLTB	Pedras Altas	17.61	75		Pn	18 45 53.8	-3.1
CPUP	Villa Florida	18.11	54	P	Pn	18 46 02.7	-0.3
	comp=Z,0.4nm,0.3s,baz=234,slow=7.1,SNR=6.0						
	comp=Z,4.1nm,0.8s						
CPUP	Villa Florida	18.11	54		Pn	18 46 01.0	-2.0
PB11	IPOC Station P	18.63	12		P	18 46 07.5	-1.7
PB11				IAmb	IAmb	18 46 22.7	
	comp=Z,40nm,1.0s						
CNLB	Canela	20.86	72	*e*P	P	18 46 30.7	-2.8
ITAB	Concordia	21.07	65	P	P	18 46 34.4	-1.3
ITAB	Concordia	21.07	65	*e*P	P	18 46 34.9	-0.8
MCR1	Marechal Candi	21.55	56	*e*P	P	18 46 40.6	-0.2
LPAZ	La Paz	22.30	14	P	P	18 46 52.5	+3.0
	comp=Z,5.0nm,0.8s,baz=183,slow=12,SNR=5.9						
LPAZ	La Paz	22.30	14	P	P	18 46 48.8	-0.7
LPAZ	La Paz	22.30	14	*e*P	P	18 46 52.5	+3.0
TER01	Tubaro-SC	22.56	72	*e*P	P	18 46 51.0	-0.7
PTGB	Pitanga	22.70	60	*e*P	P	18 46 52.0	-1.1
AQDB	Aquidauana	23.48	47	P	P	18 46 59.1	-2.0
AQDB				IAmb	IAmb	18 47 03.6	
	comp=Z,24nm,1.3s						
AQDB	Aquidauana	23.48	47	*e*P	P	18 47 00.0	-1.1
TRCB	Terra Rica	23.62	56	P	P	18 47 00.3	-2.3
TRCB	Terra Rica	23.62	56	*e*P	P	18 47 01.8	-0.8
FRTB	Fartura	25.32	61	*e*P	P	18 47 17.6	-0.5
PCMB	Pacaembu	25.36	56	*e*P	P	18 47 17.6	-0.9
PTLB	Pontes e Lacer	25.98	33	*e*P	P	18 47 24.3	+0.2
NNA	Nana	26.19	353	LR	LR	18 55 41.8	
	comp=Z,96nm,19.4s,baz=190,slow=32						
PP1B	Ponte de Pedra	26.24	44	*e*P	P	18 47 26.8	+0.2
PET01	Itanhaem-SP	26.33	66	*e*P	P	18 47 26.8	-0.6
SALV	Santo Antonio	27.22	40	*e*P	P	18 47 35.8	+0.4
PMSA	Palmer Station	27.28	171	LR	LR	18 57 23.8	
	comp=Z,108nm,19.8s,baz=338,slow=34						
RCLB	Rio Claro- Sao	27.33	63	*e*P	P	18 47 36.4	-0.1
BB19B	Bebedouro	27.55	59	*e*P	P	18 47 39.1	+0.7
ETMB	Extrema	28.98	15	*e*P	P	18 47 52.0	+1.0
ORCD	Orcadas	28.99	151	P	P	18 47 50.1	-0.6
ORCD				IAmb	IAmb	18 48 14.6	
	comp=Z,11nm,0.8s						
PDRB	Porto dos Gac	30.44	34	*e*P	P	18 48 06.5	+2.4
ATAH	Atahualpa	31.16	351	LR	LR	18 59 38.7	
	comp=Z,63nm,18.4s,baz=186,slow=34						
CLDB	Colider	31.51	35	*e*P	P	18 48 12.5	-1.0
RPN	Rapa Nui	31.81	280	LR	LR	18 57 23.6	
	comp=Z,188nm,20.3s,baz=51,slow=29						
BDFB	Brasilia	31.82	52	LR	LR	19 02 37.6	
	comp=Z,245nm,19.3s,baz=90,slow=39						
SNDB	Serra Nova Dou	32.82	43	*e*P	P	18 48 24.3	-0.7
PEXB	Peixe	34.40	48	*e*P	P	18 48 38.5	-0.2
JANB	Januaria	34.62	56	*e*P	P	18 48 39.4	-1.4
NAN01	Guarapari, ES	35.57	65	*e*P	P	18 48 49.4	+0.6
SDBA	SAO DESIDERIO	36.22	53	*e*P	P	18 48 53.8	-0.7
ITTB	Itaituba	37.37	30	*e*P	P	18 49 04.0	-0.2
SMTB	Santa Maria do	37.42	46	*e*P	P	18 49 04.8	+0.1
CMC01	Camacan, BA	37.66	62	*e*P	P	18 49 04.9	-1.8
GDU01	Guandu, BA	38.77	60	*e*P	P	18 49 17.1	+1.1
NBPN	Ponto Novo - B	40.42	57	*e*P	P	18 49 28.8	-1.0
NBLA	Lagarto - SE	41.92	59	*e*P	P	18 49 41.5	-0.7
BOAV	Boa Vista	42.12	20	*e*P	P	18 49 47.1	+3.5
MCPB	Macapa, AP	42.52	33	*e*P	P	18 49 49.8	+2.8
BELA	Belgrano 2	43.07	169	P	P	18 49 51.6	+0.9
NBMA	Muriti-CE	43.95	55	*e*P	P	18 49 59.1	+0.5
NBPS	Pedro II - PI	44.59	49	*e*P	P	18 50 03.4	-0.4
NBPB	Pedra_Branca-C	44.83	52	*e*P	P	18 50 06.2	+0.6
VNA3	Neumayer Olymp	46.07	156	pP	P	18 50 15.8	+0.9
RCBR	Riachuelo	46.97	56	LR	LR	19 11 33.4	
	comp=Z,592nm,18.1s,baz=356,slow=38						
BAUV	El Baul	47.12	8	P	P	18 50 23.9	+0.4
MDP	Montagnes des	47.24	29	LR	LR	19 12 01.4	
	comp=Z,106nm,19.6s,baz=234,slow=38						
SNAA	Sanae	48.29	156	pP	P	18 50 32.9	+0.7
SNAA	Sanae	48.29	156	LR	LR	19 10 43.4	
	comp=Z,58nm,18.3s,baz=100,slow=36						
SNAA	Sanae	48.29	156	P	P	18 50 31.9	-0.3
SNAA				IAmb	IAmb	18 50 34.3	
	comp=Z,8.7nm,0.9s						
TROLL	Troll, Antarti	49.98	157	pP	P	18 50 46.3	+1.0
QSPA	South Pole Qui	52.11	180	P	P	18 51 02.6	+1.3
	comp=Z,2.1nm,0.7s,baz=151,slow=2.0,SNR=12						
	comp=Z,2.1nm,0.7s						
QSPA	South Pole Qui	52.11	180	P	P	18 51 02.0	+0.7
QSPA				IAmb	IAmb	18 51 13.0	
	comp=Z,7.6nm,1.0s						
SJG	San Juan	56.39	9	LR	LR	19 17 17.9	
	comp=Z,25nm,18.6s,baz=192,slow=38						
CMIG	Matias Romero	58.44	336	LR	LR	19 10 56.3	
	comp=Z,29nm,20.2s,baz=188,slow=30						
VNDA	Vanda	59.80	192	P	P	18 51 58.7	+2.7
	comp=Z,1.4nm,1.2s,baz=134,slow=4.8,SNR=2.8						
	comp=Z,1.4nm,1.2s						
VNDA	Vanda	59.80	192	IAmb	IAmb	18 52 41.3	
	comp=Z,12nm,1.6s						
PPT	Papeete	68.44	264	LR	LR	19 16 31.4	
	comp=Z,47nm,18.3s,baz=156,slow=30						
LPIG	La Paz	70.83	325	LR	LR	19 17 24.9	
	comp=Z,94nm,18.0s,baz=204,slow=30						
TXAR	Lajitas Array	72.75	333	LR	LR	19 20 06.4	
	comp=Z,64nm,19.1s,baz=142,slow=32						
SUR	Sutherland	73.99	119	LR	LR	19 20 33.1	
	comp=Z,66nm,21.5s,baz=194,slow=31						
LIC	Lamto	77.32	72	*e*PKP1	P	18 53 47.6	+1.3
	comp=Z,27nm,0.9s						
TIC	Toumodi	77.60	71	*e*PKP1	P	18 53 48.2	+0.4
KIC	Kosan Boka	77.62	72	*e*PKP1	P	18 53 48.5	+0.5
	comp=Z,30nm,0.6s						
DBIC	Dimbokro	77.74	71	P	P	18 53 49.4	+0.8
	comp=Z,20nm,0.8s,baz=228,slow=5.6,SNR=20						
DBIC				LR	LR	19 24 34.4	
	comp=Z,42nm,19.8s,baz=190,slow=33						
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	77.74	71	P	P	18 53 48.7	+0.1
ANMO	Albuquerque	78.82	333	LR	LR	19 23 52.9	
	comp=Z,51nm,18.5s,baz=140,slow=32						
P40A	Paris	79.11	346	P	P	18 53 55.5	-0.1
P40A				IAmb	IAmb	18 54 04.1	
	comp=Z,7.5nm,0.7s						
BOSA	Boshof	79.30	118	P	P	18 53 57.6	+0.3
	comp=Z,5.7nm,0.9s,baz=249,slow=5.3,SNR=6.3						
BOSA				LR	LR	19 24 48.1	
	comp=Z,57nm,18.8s,baz=188,slow=32						
	comp=Z,5.7nm,0.9s						
BOSA	Boshof	79.30	118	P	P	18 53 56.6	-0.7
TSUM	Tsumeb	79.34	106	LR	LR	19 24 14.2	
	comp=Z,54nm,18.1s,baz=232,slow=32						
LBTB	Lobatse	81.75	115	LR	LR	19 30 12.4	
	comp=Z,37nm,18.1s,baz=198,slow=36						
KOWA	Kowa	83.52	66	P	P	18 54 20.5	+1.0
ECSD	EROS Data Cent	84.10	343	P	P	18 54 22.0	+0.1
ECSD				IAmb	IAmb	18 54 31.1	
	comp=Z,5.2nm,0.8s						
TOA0	Torodi Ar. Sit	86.83	71	P	P	18 54 35.7	-0.4
TOA0				IAmb	IAmb	18 54 47.0	
	comp=Z,6.9nm,1.0s						
TORD	Torodi Ar. Bea	86.83	71	P	P	18 54 36.4	+0.2
	comp=Z,3.2nm,0.7s,baz=220,slow=5.2,SNR=18						
	comp=Z,3.2nm,0.7s						
LSZ	Lusaka	89.72	109	LR	LR	19 30 31.4	
	comp=Z,52nm,19.4s,baz=205,slow=33						
NEW	Newport	94.31	333	LR	LR	19 34 07.8	
	comp=Z,23nm,18.4s,baz=140,slow=33						
MDT	Midelt	95.40	52	LR	LR	19 37 46.0	
	comp=Z,101nm,19.6s,baz=213,slow=35						
GERES	GERESS Array B	115.95	47	PKP	PKPdf	19 00 33.4	-0.3
	comp=Z,0.5nm,0.6s,baz=250,slow=2.9,SNR=5.4						
NOA	NORSAR Array B	120.19	34	PKP	PKiKP	19 00 41.8	+0.2
	comp=Z,0.6nm,0.8s,baz=254,slow=5.7,SNR=2.5						
NACGM	Naroch	125.77	44⇓	*e*PKP	PKPpre	19 00 37.4	
	baz=253						
AKASG	Malin Array Be	125.90	50	PKP	PKPdf	19 00 52.5	-0.2
	comp=Z,0.4nm,0.6s,baz=293,slow=0.7,SNR=4.8						
FINES	FINESS Array B	127.11	36	PKP	PKPdf	19 00 54.3	-0.3
	comp=Z,1.2nm,0.8s,baz=180,slow=1.9,SNR=4.4						
NRIK	Noril'sk	147.12	12	PKPbc	PKPbc	19 01 33.9	+0.7
	comp=Z,1.3nm,0.5s,baz=45,slow=5.7,SNR=3.6						
KSH	Kashi	156.34	77	PKP	PKPdf	19 01 47.4	+1.3
KSH				PP	PP	19 05 51.9	-0.9
KSH				AMB	AMB		
	comp=Z,77nm,5.7s						
ZALV	Zalesovo Beam	158.37	36	PKP	PKPdf	19 01 48.0	+0.1
	comp=Z,1.3nm,0.9s,baz=260,slow=0.9,SNR=4.9						
ZALV				PKPab	PKPab	19 02 22.6	+0.1
	comp=Z,1.7nm,0.7s,baz=292,slow=4.7,SNR=5.3						
ZALV	Zalesovo Beam	158.37	36		PKPdf	19 01 47.5	-0.4
GKN	Gorkha	159.23	113	*e*P	PKPab	19 02 26.3	-0.9
DMN	Daman	159.35	114	*e*P	PKPab	19 02 27.6	-0.3
PKIN	Phulchoki	159.54	115	*e*P	PKPab	19 02 28.0	-0.7
PKI	Pulchoki	159.54	115	*e*P	PKPab	19 02 28.1	-0.7
KKN	Kakani	159.58	114	*e*P	PKPab	19 02 28.4	-0.4
RAMN	Ramite	160.00	118	*e*P	PKPab	19 02 30.5	-0.2
MKAR	Makanchi Array	160.31	56	PKP	PKPdf	19 01 51.6	+1.2
	comp=Z,1.6nm,1.1s,baz=257,slow=4.9,SNR=4.4						
MKAR				PKPab	PKPab	19 02 31.2	-0.1
	comp=Z,1.0nm,0.7s,baz=275,slow=4.3,SNR=6.4						
SONM	Songino Array	170.30	360	PKPab	PKPab	19 03 15.2	0.0
	comp=Z,0.2nm,0.4s,baz=346,slow=3.6,SNR=2.0						

TAP **17** *18:47:28.9, 24°.84N×122°.07E, h102^{km}, ML3.0, C*
JMA **17** *18:47:29.2±0.2, 24°.8N±0°.9×122°.1E±0°.6, h98^{km}±2^{km},*
MV2.4/9, TAIWAN REGION
ISC 17 18:47:28.8±1.4**, 24°.83N**±0°.04×**122°.07E**±0°.03**, h104**^{km}±6^{km}**,**
n95, σ0^s.80/163**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.19	337	P	Pn	18 47 43.4	-0.1
	baz=331						
TWB1				*e*S	Sn	18 47 53.6	-0.7
	baz=331						
NTC	Toucheng	0.22	277	*e*P	Pn	18 47 43.6	+0.1
	baz=274						
TIPB	Shuangxi	0.26	303	P	Pn	18 47 43.7	0.0
	baz=291						
TIPB				S	Sn	18 47 53.6	-1.3
	baz=291						
TWC	Suao	0.30	223	*i* P	Pn	18 47 43.8	0.0
	baz=223						
TWC				S	Sn	18 47 54.4	-0.7
	baz=223						
ILA	Ilan	0.30	258	*i* P	Pn	18 47 44.0	+0.2
	baz=264						
ILA				*e*S	Sn	18 47 55.1	+0.1
	baz=264						
SXI1	Grass Mountain	0.32	326	P	Pn	18 47 43.5	-0.6
	baz=315						
SXI1				*e*S	Sn	18 47 54.2	-1.2
	baz=315						
NWF	Wu-fen Shan	0.36	312	P	Pn	18 47 44.3	+0.1
	baz=305						
NWF				*e*S	Sn	18 47 55.2	-0.6
	baz=305						
NDS	Dongshan	0.38	239	*i* P	Pn	18 47 44.7	+0.5
	baz=241						
NDS				*e*S	Sn	18 47 56.9	+1.1
	baz=241						
TWE	Neicheng	0.38	254	P	Pn	18 47 44.3	+0.1
	baz=253						
TWE				*e*S	Sn	18 47 55.6	-0.2
	baz=253						
FUSB	Fushanzhiwuyua	0.45	261	P	Pn	18 47 44.6	-0.1
	baz=265						
FUSB				*e*S	Sn	18 47 56.2	-0.4
	baz=265						
EWUT	Wuta	0.47	215	P	Pn	18 47 45.3	+0.5
	baz=209						
EWUT				*e*S	Sn	18 47 57.1	+0.4
	baz=209						
TWA	Mucha	0.47	289	P	Pn	18 47 44.6	-0.2
	baz=294						
TWA				*e*S	Sn	18 47 55.4	-1.4
	baz=294						
ENTT	Nioudou	0.50	248	P	Pn	18 47 45.5	+0.6
	baz=249						
ENTT				*e*S	Sn	18 47 57.8	+0.7
	baz=249						
ENA	Nanau	0.50	217	*i* P	Pn	18 47 45.5	+0.5
	baz=211						
ENA				*e*S	Sn	18 47 58.3	+1.2
	baz=211						
NHDH	Xindian Distri	0.51	285	P	Pn	18 47 45.2	+0.2
	baz=288						
NHDH				*e*S	Sn	18 47 58.0	+0.8
	baz=288						
NWLT	Wulai	0.52	264	*e*P	Pn	18 47 44.9	-0.2
	baz=270						
NWLT				*e*S	Sn	18 47 56.7	-0.7
	baz=270						
YM01	YM01	0.55	305	P	Pn	18 47 45.3	-0.1
	baz=301						
YM01				*e*S	Sn	18 47 56.8	-1.1
	baz=301						
TAP	Taipei	0.55	292	*e*S	Sn	18 47 58.6	+0.9
	baz=292						
LATG	Datong	0.58	240	P	Pn	18 47 46.3	+0.6
	baz=247						
LATG				*e*S	Sn	18 47 59.1	+0.8
	baz=247						
ANP	Anpu	0.61	306	*e*P	Pn	18 47 45.9	-0.1
	baz=305						
TWY	Chenhua	0.62	316	*e*P	Pn	18 47 46.3	+0.5
	baz=315						
TWY				*e*S	Sn	18 47 58.3	-0.3
	baz=315						
TWS1	Kuangyinshan	0.65	295	P	Pn	18 47 46.5	+0.4
	baz=297						
TWS1				*e*S	Sn	18 48 00.6	+1.4
	baz=297						
YHNB	Yeheng	0.65	256	P	Pn	18 47 46.3	+0.1
	baz=256						
YHNB				*e*S	Sn	18 47 58.5	-0.9
	baz=256						
NTST	Danshui	0.66	301	*e*P	Pn	18 47 46.8	+0.7
	baz=302						
NTST				*e*S	Sn	18 48 00.6	+1.4
	baz=302						
NSK	Sanguang	0.67	257	P	Pn	18 47 46.6	+0.2
	baz=257						
NSK				*e*S	Sn	18 47 58.8	-0.7
	baz=257						
NNSB	Datong	0.74	238	P	Pn	18 47 47.6	+0.5
	baz=244						
NNSB				*e*S	Sn	18 48 01.1	+0.3
	baz=244						
NNS	Nan Shan	0.74	239	P	Pn	18 47 47.7	+0.6
	baz=244						
NNS				*e*S	Sn	18 48 01.0	+0.2
	baz=244						
ETL	Fush Village	0.78	212	*e*P	Pn	18 47 47.2	-0.2
	baz=211						
NACB	Ninganchiao	0.78	214	P	Pn	18 47 47.0	-0.3
	baz=215						
NACB				*e*S	Sn	18 48 00.4	-0.9
	baz=215						
NCU	National Centr	0.81	280	*e*P	Pn	18 47 48.2	+0.6
	baz=272						
NCU				*e*S	Sn	18 48 02.2	+0.4
	baz=272						
NCUH	Zhongli	0.82	280	*e*P	Pn	18 47 48.2	+0.6
	baz=272						
NCUH				*e*S	Sn	18 48 02.1	+0.3
	baz=272						
ETLH	Xiulin Townshi	0.82	221	P	Pn	18 47 47.9	+0.1
	baz=231						
ETLH				*e*S	Sn	18 48 01.0	-1.1
	baz=231						
TWD	Chiawan	0.86	210	P	Pn	18 47 47.8	-0.3
	baz=221						
TWD				*e*S	Sn	18 48 02.2	-0.4
	baz=221						
NFF	Wufeng Townshi	0.89	257	P	Pn	18 47 48.4	0.0
	baz=258						
NFF				*e*S	Sn	18 48 02.8	-0.4
	baz=258						
YOJ	Yonaguni jima	0.93	113	P	Pn	18 47 49.2	+0.5
YOJ				S	Sn	18 48 04.1	+0.4
HWA	Hwalien	0.95	207	*e*P	Pn	18 47 49.3	+0.4
	baz=200						
HWA				*e*S	Sn	18 48 03.9	-0.2
	baz=200						
FUSS	Fushou	0.95	233	P	Pn	18 47 49.8	+0.5
	baz=227						
FUSS				*e*S	Sn	18 48 05.3	+0.6
	baz=227						
LIOB	Emei	0.98	259	P	Pn	18 47 49.8	+0.5
	baz=252						
LIOB				*e*S	Sn	18 48 04.5	-0.2
	baz=252						
SBCB	Hsinchu	0.99	268	*e*P	Pn	18 47 49.6	+0.3
	baz=261						
SBCB				*e*S	Sn	18 48 05.3	+0.4
	baz=261						
NSTT	Nanjuang	0.99	259	P	Pn	18 47 49.6	+0.2
	baz=252						
NSTT				*e*S	Sn	18 48 04.5	-0.5
	baz=252						
TWT	Tachien	1.00	235	P	Pn	18 47 50.8	+1.1
	baz=230						
TWT				*e*S	Sn	18 48 06.5	+1.1
	baz=230						
WHF	Hehuan Shan	1.00	227	P	Pn	18 47 50.3	+0.3
	baz=228						
WHF				*e*S	Sn	18 48 05.7	-0.2
	baz=228						
TDCB	Techi	1.01	236	P	Pn	18 47 50.3	+0.5
	baz=230						
TDCB				*e*S	Sn	18 48 05.8	+0.2
	baz=230						
CHGB	Renai	1.12	227	P	Pn	18 47 51.9	+0.8
	baz=228						
CHGB				*e*S	Sn	18 48 07.7	-0.1
	baz=228						
WHP	Taichung City	1.16	242	P	Pn	18 47 52.2	+0.9
	baz=243						
WHP				*e*S	Sn	18 48 08.4	0.0
	baz=243						
ESL	Shilin	1.17	210	P	Pn	18 47 50.7	-0.7
	baz=218						
ESL				*e*S	Sn	18 48 06.4	-2.0
	baz=218						
OWD	Renai	1.19	223	P	Pn	18 47 52.4	+0.6
	baz=225						
OWD				*e*S	Sn	18 48 08.4	-0.8
	baz=225						
NMLH	Miaoli	1.20	256	*e*P	Pn	18 47 51.1	-0.6
	baz=256						
WUSB	Renai	1.21	226	P	Pn	18 47 52.6	+0.7
	baz=228						
WUSB				*e*S	Sn	18 48 08.9	-0.5
	baz=228						
NSY	Sanyi	1.26	251	*e*P	Pn	18 47 52.9	+0.4
	baz=251						
TWQ1	Liyutan	1.27	248	P	Pn	18 47 53.3	+0.7
	baz=248						
TWQ1				*e*S	Sn	18 48 10.6	0.0
	baz=248						
EGFH	Guangfu	1.30	207	P	Pn	18 47 52.3	-0.5
	baz=216						
EGFH				*e*S	Sn	18 48 10.0	-1.0
	baz=216						
VWDT	VWDT	1.37	219	P	Pn	18 47 54.1	+0.5
	baz=216						
VWDT				*e*S	Sn	18 48 12.6	+0.2
	baz=216						
SMLT	Sun Moon Lake	1.42	229	P	Pn	18 47 55.2	+0.8
	baz=236						
SMLT				*e*S	Sn	18 48 15.1	+1.2
	baz=236						
TYC	Yuchr	1.44	230	*e*P	Pn	18 47 56.9	+2.4
	baz=238						
TYC				*e*S	Sn	18 48 14.4	+0.4
	baz=238						
SSLB	Suanglung	1.45	225	P	Pn	18 47 55.9	+1.2
	baz=227						
SSLB				*e*S	Sn	18 48 15.1	+0.7
	baz=227						
HGSD	Ruisui	1.46	204	P	Pn	18 47 54.8	+0.1
	baz=215						
HGSD				*e*S	Sn	18 48 14.3	-0.1
	baz=215						
EHY	Hungye	1.48	208	*e*P	Pn	18 47 54.1	-0.9
	baz=203						
WNT	Mingjian	1.58	233	*e*P	Pn	18 47 56.9	+0.7
	baz=234						
WHYT	Xinyi Township	1.58	225	*e*P	Pn	18 47 59.0	+2.7
	baz=234						
WHYT				*e*S	Sn	18 48 18.4	+1.1
	baz=234						
IRIF	Iriomote-Funau	1.59	108	P	Pn	18 47 56.7	+0.4
IRIF				*e*S	Sn	18 48 17.1	-0.1
YULB	Yu-li	1.60	206	*e*P	Pn	18 47 54.6	-1.8
	baz=207						
YULB				*e*S	Sn	18 48 16.1	-1.4
	baz=207						
EYUL	Yuli	1.63	205	*e*P	Pn	18 47 57.7	+0.9
	baz=206						
ALS	Alishan	1.75	222	*e*P	Pn	18 47 59.7	+1.1
	baz=231						
ALS				*e*S	Sn	18 48 22.1	+0.7
	baz=231						
CHN5	Tsauling	1.77	226	*e*P	Pn	18 47 59.6	+1.0
	baz=227						
FULB	Fuli	1.77	204	*e*P	Pn	18 47 58.6	0.0
	baz=215						
FULB				*e*S	Sn	18 48 22.1	+0.8
	baz=215						
WRL	Guolierlin Hig	1.80	239	*e*P	Pn	18 47 59.4	+0.5
	baz=247						
WRL				*e*S	Sn	18 48 21.6	-0.3
	baz=247						
CHKT	Chengkung	1.84	201	*e*P	Pn	18 47 59.6	+0.1
	baz=202						
JKRS	Kuro-shima	1.86	108	P	Pn	18 48 00.4	+0.7
JKRS				*e*S	Sn	18 48 23.9	+0.6
ELDTW	Lidau	1.90	211	*e*P	Pn	18 48 00.2	-0.1
	baz=206						
ELDTW				*e*S	Sn	18 48 23.3	-1.0
	baz=206						
WTK	Tuku	1.91	234	*e*P	Pn	18 48 00.6	+0.2
	baz=243						
JIJ	Ishigaki jima	1.94	103	P	Pn	18 48 01.3	+0.5
JIJ				*e*S	Sn	18 48 25.0	-0.2
EDH	Donghe	1.98	201	*e*P	Pn	18 48 01.0	-0.2
	baz=204						
EDH				*e*S	Sn	18 48 24.4	-1.6
	baz=204						
CHN4	Tsaushan	2.00	223	*e*P	Pn	18 48 02.2	+0.7
	baz=225						
CHN4				*e*S	Sn	18 48 27.3	+0.8
	baz=225						
CHY	Chiayi	2.00	229	*e*P	Pn	18 48 02.0	+0.4
	baz=229						
TPUB	Ta-pu	2.01	221	*e*P	Pn	18 48 01.5	-0.2
	baz=230						
STYH	Taoyuan	2.03	216	*e*P	Pn	18 48 02.8	+0.9
	baz=210						
WTP	Ta-pu	2.06	220	*e*P	Pn	18 48 04.1	+1.7
	baz=230						
TWK	Hsinying	2.12	223	*e*P	Pn	18 48 04.2	+1.0
	baz=225						
TWK				*e*S	Sn	18 48 30.6	+1.1
	baz=225						
WSL	Shuilin Townsh	2.13	233	*e*P	Pn	18 48 03.3	+0.1
	baz=240						
WSL				*e*S	Sn	18 48 29.2	-0.2
	baz=240						
SNST	Tainan City	2.15	222	*e*P	Pn	18 48 04.0	+0.5
	baz=224						
SNST				*e*S	Sn	18 48 30.0	-0.1
	baz=224						
CHN1	Nanshi	2.16	221	*e*P	Pn	18 48 05.5	+1.8
	baz=223						
CHN1				*e*S	Sn	18 48 30.3	0.0
	baz=223						
TWG	Pinlang	2.20	205	*e*P	Pn	18 48 03.9	-0.2
	baz=201						
TWG				*e*S	Sn	18 48 29.9	-1.2
	baz=201						
TWGBT	Beinan	2.20	205	*e*P	Pn	18 48 02.9	-1.2
	baz=201						
TWGBT				*e*S	Sn	18 48 30.3	-0.8
	baz=201						
LDUT	Ludao	2.22	195	*e*P	Pn	18 48 02.5	-1.8
	baz=196						
MATB	Ma-tsu	2.33	305	*e*P	Pn	18 48 04.7	-1.1
	baz=303						

VWUC	**VWUC**	2.39	274	*e*P	Pn	18 48 06.0	-0.5
	baz=274						
JTJ	**Tarama**	2.40	94	P	Pn	18 48 08.0	+1.4
SSD	**Sandimen**	2.46	213	*e*P	Pn	18 48 08.4	+1.0
	baz=225						
MASBT	**Mashibuluo**	2.57	211	*e*P	Pn	18 48 10.1	+1.2
	baz=224						
PTMZ	**Houxiangcun**	2.69	275	*e*P	Pn	18 48 10.3	-0.1
	baz=275						
XPSS	**Dashiqiu**	2.69	321	*e*P	Pn	18 48 10.1	-0.4
	baz=320						
LYJJ	**Jianjiangzhen**	2.70	310	*e*P	Pn	18 48 09.8	-0.8
	baz=308						
LAY	**Lan-yu**	2.82	190	*e*P	Pn	18 48 11.5	-0.7
	baz=192						
LYUB	**Lan-yu**	2.85	189	*e*P	Pn	18 48 11.3	-1.3
	baz=191						

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*IDC **17** 19:00:50.6±1.9, 52°.36N×168°.74W, h0^{km}, mb3.8/13, mbtmp3.7/14, ML3.1/1, MS3.6/3, Error ellipse: s-maj=49.7km s-min=20.6km az=151.0*

*AEIC **17** 19:00:53.3±2.7, 52°.17N±0°.09×168°.43W±0°.07, h27^{km}±5^{km}, Error ellipse: s-maj=12.5km s-min=5.9km az=170.0*

*NEIC **17** 19:00:53.7±2.3, 52°.18N±0°.04×168°.44W±0°.07, h31^{km}±5^{km}, mb3.9/40, ML3.6/6, ML3.2/24(AEIC), Error ellipse: s-maj=6.3km s-min=4.9km az=52.0*

ISC 17 19:00:53.1±0.8**, 52°.20N**±0°.08×**168°.40W**±0°.06**, h26^{km}, n98, σ1^{s}65**/90**, mb3.8**/12**, MS3.6**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	0.82	341		Pb	19 01 08.5	-0.3
NIKH					Sn	19 01 20.6	+0.2
OKFG	**Magazine Ridge**	1.25	14		Pn	19 01 15.5	+0.5
OKFG					Sb	19 01 33.0	+1.2
MSW	**Makushin Switc**	1.98	29		Pn	19 01 25.9	+1.0
MNAT	**Makushin Natee**	1.98	31		Pn	19 01 25.9	+0.8
MNAT					Sn	19 01 49.7	+0.7
UNV	**Unalaska Valle**	2.01	34		Pn	19 01 25.5	+0.2
UNV					Sn	19 01 50.7	+1.1
MTBL	**Makushin Table**	2.06	30		Pn	19 01 27.3	+1.2
AKBBA	**Akutan Broad B**	2.42	37		Pn	19 01 31.8	+0.9
AHB	**Akutan Harbor**	2.47	38		Pn	19 01 33.2	+1.4
AKUT	**Akutan**	2.50	38	Pn	Pn	19 01 32.5	+0.3
AKUT				IAML		19 02 26.6	
	comp=N,70nm,0.8s						
WECS	**Westdahl Cape**	3.19	41		Pn	19 01 43.5	+1.9
KOFP	**Korovin Flat P**	3.50	274		Pn	19 01 47.3	+1.4
ATKA	**Atka Island**	3.56	272		Pn	19 01 47.2	+0.5
GSCK	**Great Sitkin C**	4.79	271		Pn	19 02 04.1	+0.6
SPIA	**Saint Paul Isl**	5.10	349	Pn	Pn	19 02 10.1	+2.2
ADK	**Adak**	5.12	270		Pn	19 02 08.6	+0.5
ADK	**Adak**	5.12	270	IAML		19 03 09.4	
	comp=N,46nm,1.6s						
ADK				IAML		19 03 30.4	
	comp=N,45nm,2.2s						
SDPT	**Sand Point**	5.66	53	Pn	Pn	19 02 14.5	-1.0
CNBA	**Chernabura Isl**	5.88	60		Pn	19 02 18.9	+0.5
SII	**Sitkinak Islan**	9.37	57	Pn	Pn	19 03 08.2	+1.8
KDAK	**Kodiak Island**	10.66	52	Pn	Pn	19 03 24.2	+0.2
	comp=N,1.1nm,0.3s,baz=261,slow=8.2,SNR=21						
Q19K	**Cape Douglas,**	10.72	45	Pn	Pn	19 03 27.0	+2.1
SVW2	**Sparrevohn**	11.35	33	Pn	Pn	19 03 34.2	+0.7
CNPM	**China Poot**	12.09	46	Pn	Pn	19 03 43.8	+0.3
M19K	**Big River Lodg**	12.33	32	Pn	Pn	19 03 49.0	+2.2
L19K	**White Mountain**	12.38	31	Pn	Pn	19 03 47.9	+0.4
SEW	**Seward**	13.16	46	Pn	Pn	19 03 59.0	+0.9
RC01	**Rabbit Creek A**	13.54	42	Pn	Pn	19 04 03.3	-0.1
PPLA	**Purkeypile**	13.76	33	Pn	Pn	19 04 08.9	+2.5
SML	**Sawmill**	14.50	41	Pn	Pn	19 04 14.9	-1.6
GLI	**Glacier Island**	14.56	45	Pn	Pn	19 04 13.9	-3.2
HIN	**Hinchinbrook I**	14.61	47	Pn	Pn	19 04 15.8	-2.2
FID	**Port Fidalgo**	14.77	46	Pn	Pn	19 04 18.0	-2.0
SCM	**Sheep Creek Mo**	14.92	41	Pn	Pn	19 04 20.4	-1.8
BPAW	**Bear Paw Mtn.**	14.99	31	Pn	Pn	19 04 20.0	-3.0
DIV	**Divide**	15.24	45	Pn	Pn	19 04 24.0	-2.5
KLU	**Klutina**	15.34	44	Pn	Pn	19 04 25.4	-2.3
KLU				IAmb	IAmb	19 04 27.0	
	comp=Z,9.7nm,0.8s						
M24K	**Tolsona, Glenn**	15.53	42	Pn	Pn	19 04 29.3	-0.9
DHY	**Denali Highway**	15.58	37	Pn	Pn	19 04 30.0	-0.9
BMRM	**Bremner River**	15.69	47	Pn	Pn	19 04 29.4	-2.9
BMRM				IAmb	IAmb	19 05 06.1	
	comp=Z,22nm,1.4s						
N25K	**Chitina, Valde**	15.96	45	Pn	Pn	19 04 32.5	-3.2
N25K				IAmb	IAmb	19 04 35.6	
	comp=Z,16nm,1.4s						
WRH	**Wood River Hil**	16.17	33		Pn	19 04 36.0	-2.3
WRH				IAmb	IAmb	19 04 52.4	
	comp=Z,9.8nm,1.4s						
GLB	**Gilahina Butte**	16.24	46	P	Pn	19 04 36.5	-2.7
GLB				IAmb	IAmb	19 05 05.6	
	comp=Z,16nm,1.6s						
PAX	**Paxson**	16.25	40	P	Pn	19 04 37.0	-2.4
VRDI	**Verde Repeater**	16.31	47	P	Pn	19 04 39.8	-0.5
VRDI				IAmb	IAmb	19 05 04.3	
	comp=Z,14nm,1.3s						
HDA	**Harding Lake**	16.52	34	P	Pn	19 04 42.2	-0.6
HDA				IAmb	IAmb	19 04 43.0	
	comp=Z,12nm,1.6s						
MCARA	**McCarthy VSAT**	16.56	46	P	Pn	19 04 43.0	-0.3
MCARA				IAmb	IAmb	19 05 20.8	
	comp=Z,19nm,1.2s						
ISLE	**Juniper Island**	16.60	49	P	Pn	19 04 42.0	-2.0
H23K	**Yukon River**	16.65	28	P	Pn	19 04 43.2	-1.2
H23K				IAmb	IAmb	19 05 18.4	
	comp=Z,8.5nm,1.4s						
ILAR	**Eielson Array**	16.77	33	Pn	Pn	19 04 45.8	-0.1
	comp=Z,0.1nm,0.3s,baz=246,slow=13,SNR=5.7						
	comp=Z,0.9nm,1.0s						
YAH	**Yahtse**	16.80	50	P	Pn	19 04 45.7	-0.9
RIDG	**Independent Ri**	16.89	38	P	Pn	19 04 47.2	-0.4
RIDG				IAmb	IAmb	19 04 58.9	
	comp=Z,14nm,1.6s						
GRNC	**Granite Creek**	16.91	49	P	Pn	19 04 48.2	+0.3
M26K	**Nabesna, AK**	16.99	43	P	Pn	19 04 48.1	-0.6
BARN	**Barnard Glacie**	17.06	48	P	Pn	19 04 47.7	-2.1
BARN				IAmb	IAmb	19 05 11.6	
	comp=Z,15nm,1.3s						
TABL	**Table Mountain**	17.11	51	P	Pn	19 04 48.9	-1.6
TABL				IAmb	IAmb	19 05 11.1	
	comp=Z,18nm,1.0s						
H24K	**Noodor Dome**	17.15	29	P	Pn	19 04 49.2	-1.5
J25K	**Salcha River,**	17.19	35	P	Pn	19 04 49.4	-1.9
LOGN	**Logan Glacier**	17.29	49	P	Pn	19 04 49.9	-2.8
LOGN				IAmb	IAmb	19 04 50.3	
	comp=Z,30nm,1.4s						
SCRK	**Sand Creek**	17.34	38	P	Pn	19 04 51.0	-2.2
M27K	**Edge Creek, AK**	17.44	44	P	Pn	19 04 52.5	-2.0
M27K				IAmb	IAmb	19 05 22.6	
	comp=Z,16nm,1.5s						
L27K	**Beaver Creek,**	17.76	42	P	Pn	19 04 56.5	-1.8
L27K				IAmb	IAmb	19 05 22.4	
	comp=Z,7.8nm,1.4s						
BCAR	**Beaver Creek A**	17.78	42	P	Pn	19 04 57.9	-0.6
K27K	**Chicken**	18.10	39	P	Pn	19 05 01.9	-0.5
EGAK	**Eagle**	18.81	37	P	P	19 05 07.6	-2.8
HYT	**Haines Junctio**	18.95	51	P	Pn	19 05 14.9	+2.1
HYT				IAmb	IAmb	19 05 20.7	
	comp=Z,18nm,1.6s						
DAWY	**Dawson**	19.17	40	P	P	19 05 12.9	-1.5
DAWY				IAmb	IAmb	19 05 18.1	
	comp=Z,7.6nm,1.2s						
BMAR	**Burnt Mountain**	19.20	28	P	P	19 05 12.5	-2.2
PEA0B	**Petropavlovsk-**	20.48	286	P	P	19 05 24.5	-4.2
PETK	**Petropavlovsk-**	20.48	286	P	P	19 05 28.1	-0.7
	comp=Z,2.7nm,0.7s,baz=92,slow=13,SNR=8.4						
	comp=Z,2.7nm,0.7s						
PETK	**Petropavlovsk-**	20.48	286	P	P	19 05 24.9	-3.8
INK	**Inuvik**	23.17	33	P	P	19 05 57.5	+0.4
	comp=Z,2.1nm,0.8s,baz=233,slow=13,SNR=3.8						
	comp=Z,2.1nm,0.8s						
INK	**Inuvik**	23.17	33	IAmb	IAmb	19 06 00.4	
	comp=Z,5.7nm,1.3s						
YKA	**Yellowknife Ar**	29.91	49	P	P	19 07 00.5	+2.1
	comp=Z,0.2nm,0.3s,baz=273,slow=7.2,SNR=4.2						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	29.91	49	P	P	19 06 59.9	+1.5
H11N2	**WAKE ISLAND Hy**	37.70	220	T	T	19 48 53.8	
	baz=24,slow=75,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	37.70	220	T	T	19 48 49.9	
	baz=24,slow=75,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	37.72	220	T	T	19 48 44.2	
	baz=24,slow=75,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	38.88	220	T	T	19 50 09.1	
	baz=23,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	38.89	220	T	T	19 49 50.4	
	baz=23,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	38.90	220	T	T	19 50 06.4	
	baz=23,slow=76,SNR=9.1						
PFO	**Pinyon Flats O**	41.33	96	LR	LR	19 22 09.6	
	comp=Z,40nm,21.3s,baz=72,slow=31						
S54A	**Dingess, Beckl**	59.62	67	P	P	19 10 54.1	-0.6
KURK	**Kurchatov**	62.90	319	P	P	19 11 15.8	-0.7
KURBB	**Kurchatov Arra**	63.00	319	P	P	19 11 15.8	-1.5
	comp=Z,0.3nm,0.5s,baz=53,slow=7.3,SNR=4.2						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	64.35	314	P	P	19 11 24.8	-1.6
	comp=Z,0.6nm,0.7s,baz=46,slow=7.6,SNR=4.7						
	comp=Z,0.6nm,0.7s						
FINES	**FINESS Array B**	66.12	352	P	P	19 11 37.6	+0.2
	comp=Z,1.3nm,0.4s,baz=15,slow=7.1,SNR=19						
	comp=Z,1.3nm,0.4s						
FINES	**FINESS Array B**	66.12	352	P	P	19 11 37.3	-0.2
NOA	**NORSAR Array B**	67.11	0	P	P	19 11 44.1	+0.2
	comp=Z,0.4nm,0.6s,baz=1.3,slow=12,SNR=2.1						
	comp=Z,0.4nm,0.6s						
AKTO	**Aktyubinsk**	70.45	331	P	P	19 12 05.7	+0.9
	comp=Z,1.4nm,0.6s,baz=74,slow=7.4,SNR=5.3						
	comp=Z,1.4nm,0.6s						
AAK	**Ala-Archa**	71.04	316	P	P	19 12 10.0	+1.3
	comp=Z,0.6nm,0.4s,baz=225,slow=2.9,SNR=3.8						
	comp=Z,0.6nm,0.4s						
AAK	**Ala-Archa**	71.04	316	P	P	19 12 09.1	+0.4
AAK				IAmb	IAmb	19 12 10.3	
	comp=Z,1.9nm,1.1s						
AKASG	**Malin Array Be**	76.40	349	P	P	19 12 39.5	-0.2
	comp=Z,0.5nm,0.4s,baz=15,slow=6.2,SNR=4.2						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	76.40	349	IAmb	IAmb	19 12 48.9	
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	77.23	284	P	P	19 12 46.3	+1.3
	comp=Z,0.6nm,0.7s,baz=31,slow=7.1,SNR=7.3						
	comp=Z,0.6nm,0.7s						
GERES	**GERESS Array B**	79.32	359	P	P	19 12 57.0	+0.8
	comp=Z,0.4nm,0.9s,baz=354,slow=4.7,SNR=4.4						
	comp=Z,0.4nm,0.9s						
MLR	**Muntele Rosu**	81.91	350	LR	LR	19 55 06.2	
	comp=Z,22nm,18.4s,baz=268,slow=40						
ASAR	**Alice Springs**	90.74	231	P	P	19 13 54.2	+0.6
	comp=Z,0.3nm,0.8s,baz=24,slow=5.0,SNR=3.2						
	comp=Z,0.3nm,0.8s						
WSAR	**Wadi Sarin**	94.40	318	LR	LR	20 00 33.8	
	comp=Z,89nm,18.0s,baz=240,slow=38						

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*AEIC **17** 19:03:58.3±2.0, 52°.23N±0°.07×168°.52W±0°.05, h55^{km}±7^{km}, Error ellipse: s-maj=10.0km s-min=4.8km az=182.0*

*NEIC **17** 19:03:59.8±2.0, 52°.36N±0°.09×168°.62W±0°.04, h65^{km}±10^{km}, mb3.9/10, ML2.7/14(AEIC), Error ellipse: s-maj=12.6km s-min=2.9km az=172.0*

ISC 17 19:03:56.6±1.8**, 52°.1N**±0°.1×**168°.52W**±0°.09**, h35^{km}, n25, σ1^{s}49**/26**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	0.90	347		Pn	19 04 13.0	+0.3
NIKH	**Nikolski High**	0.90	347		Sn	19 04 25.1	+0.7
OKSO	**Okmok South**	1.28	10		Pn	19 04 18.8	+0.8
OKFG	**Magazine Ridge**	1.36	15		Pn	19 04 20.1	+1.1
OKFG					Sn	19 04 37.8	+1.9
MSW	**Makushin Switc**	2.10	29		Pn	19 04 30.4	+1.2
MNAT	**Makushin Natee**	2.10	31		Pn	19 04 30.7	+1.4
UNV	**Unalaska Valle**	2.13	34		Pn	19 04 30.3	+0.7
MTBL	**Makushin Table**	2.18	30		Pn	19 04 32.1	+1.7
AKUT	**Akutan**	2.62	38	Pn	Pn	19 04 37.6	+1.2
ADK	**Adak**	5.05	271	Pn	Pn	19 05 13.0	+3.3
SPIA	**Saint Paul Isl**	5.18	350	Pn	Pn	19 05 09.7	-1.8
CNBA	**Chernabura Isl**	5.99	59	Pn	Pn	19 05 24.0	+1.4
KDAK	**Kodiak Island**	10.78	52	Pn	Pn	19 06 28.8	+0.6
Q19K	**Cape Douglas,**	10.84	45	Pn	Pn	19 06 28.3	-0.8
GLB	**Gilahina Butte**	16.36	46	Pn	Pn	19 07 41.8	-1.4
GLB				IAmb	IAmb	19 07 52.4	
	comp=Z,11nm,1.2s						
PAX	**Paxson**	16.37	39	Pn	Pn	19 07 41.7	-1.7
VRDI	**Verde Repeater**	16.43	46	Pn	Pn	19 07 42.5	-1.9
VRDI				IAmb	IAmb	19 07 56.5	
	comp=Z,22nm,1.5s						
CCB	**Clear Creek Bu**	16.50	32	Pn	Pn	19 07 42.4	-2.6
RIDG	**Independent Ri**	17.01	38	Pn	Pn	19 07 49.6	-1.9
RIDG				IAmb	IAmb	19 07 55.3	
	comp=Z,11nm,1.4s						
GRNC	**Granite Creek**	17.03	49	Pn	Pn	19 07 51.2	-0.8
CTGM	**Chitina Glacie**	17.30	49	P	Pn	19 07 55.0	-0.2
CTGM				IAmb	IAmb	19 08 25.6	
	comp=Z,22nm,1.5s						
J25K	**Salcha River,**	17.31	35	P	P	19 07 55.6	-0.8
J25K				IAmb	IAmb	19 08 02.1	
	comp=Z,5.4nm,1.4s						
LOGN	**Logan Glacier**	17.41	49	P	Pn	19 07 56.4	-0.2
LOGN				IAmb	IAmb	19 08 31.9	
	comp=Z,12nm,1.0s						
PEA0B	**Petropavlovsk-**	20.44	286	P	P	19 08 30.8	+0.2
PETK	**Petropavlovsk-**	20.44	286	P	P	19 08 30.5	-0.1

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*MOS **17** 19:10:56.8±2.3, 51°.63N×93°.08E, h8^{km}, mb4.0/7, MS3.0/5, Error ellipse: s-maj=9.9km s-min=9.5km az=23.6*

*ASRS **17** 19:10:56.6±0.2, 52°N±1°×9°3E±°, h10^{km}, MLh4.2/14, Error ellipse: s-maj=2.8km s-min=2.1km az=20.6, confirmed*

*IDC **17** 19:10:57.4±0.8, 51°.84N×92°.99E, h0^{km}, mb3.7/14, mbtmp3.7/18, ML3.2/4, MS2.7/4, Error ellipse: s-maj=17.4km s-min=9.0km az=156.0*

*NNC **17** 19:11:04.4±1.3, 51°.63N×92°.26E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=12.1km s-min=6.5km az=102.0*

ISC 17 19:10:58.8±1.1**, 51°.77N**±0°.03×**93°.05E**±0°.03**, h7^{km}**±8^{km}**, n63, σ1^{s}69**/93**, mb3.8**/17**, MS3.0**/6**, 12C-14D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZLR	**Kyzyl**	0.88	94	*c i*PG	Pg	19 11 14.9	-0.7
KZLR	**Kyzyl**	0.88	94	Pg	Pg	19 11 15.0	-0.6
KZLR				Sg	Sg	19 11 27.1	+0.1
DJOS	**Djoyskaya Sosn**	1.44	316	Pg	Pn	19 11 25.8	+0.4
DJOS				Sg	Sn	19 11 44.1	-0.5
CERR	**Cheremushki**	1.48	318	Pg	Pn	19 11 26.1	+0.3
CERR				Sg	Sn	19 11 45.2	-0.2
DJO	**Djoy, Khakassi**	1.51	313	Pg	Pn	19 11 25.8	-0.6
DJO				Sg	Sn	19 11 45.1	-1.3
ERNS	**Erzin**	2.01	138	Pg	Pn	19 11 34.0	+0.7
ERNS				Sg	Sb	19 12 00.8	-0.3
ABNR	**Abakan**	2.19	334	⇑*e*PN	Pb	19 11 37.7	-1.0
ABNR	**Abakan**	2.19	334	Pg	Pb	19 11 38.0	-0.8
ABNR				Sg	Sb	19 12 06.4	+0.3
KNGR	**Kungurtug, Tuv**	3.04	111	*d i*PN	Pn	19 11 49.0	+1.5
KNGR	**Kungurtug, Tuv**	3.04	111	Pn	Pn	19 11 50.1	+2.6
KNGR				Pg	Pg	19 11 58.6	+1.5
KNGR				Sg	Sg	19 12 34.3	-2.3
LUZB	**Luzhba, Kemero**	3.15	309	Pg	Pb	19 11 52.9	-2.3
LUZB				Sg	Sb	19 12 35.7	+1.8
MINR	**Mina**	3.21	12	Pg	Pb	19 11 57.1	+0.9
MINR				Sg	Sg	19 12 40.3	-1.6
TASR	**Tashtagol**	3.33	289	Pn	Pn	19 11 52.8	+1.5
TASR				Pg	Pb	19 11 57.6	-0.5
TASR				Sg	Sb	19 12 42.0	+3.2
ULGR	**Ulagan, Altay**	3.40	252	Pn	Pn	19 11 53.7	+1.4
ULGR				Pg	Pb	19 12 00.3	+0.9
ULGR				Sg	Sb	19 12 44.2	+3.2
CUR	**Chagan-Uzun**	3.41	242	Pn	Pn	19 11 53.1	+0.5
CUR				Pg	Pb	19 11 59.3	-0.3
CUR				Sg	Sb	19 12 42.8	+1.5
ARTR	**Artybash**	3.58	273	Pn	Pn	19 11 54.8	+0.1
ARTR				Pg	Pb	19 12 04.9	+2.4
ARTR				Sg	Sb	19 12 47.6	+1.4
AKAR	**Aktash**	3.72	249	Pn	Pn	19 11 57.5	+0.7
AKAR				Pg	Pb	19 12 06.0	+1.1
AKAR				Sg	Sb	19 12 52.0	+1.7
CHBI	**Chibit, Altay**	3.79	250	Pn	Pn	19 11 59.6	+1.9
CHBI				Pg	Pg	19 12 11.9	+0.5
GALT	**Gorno-Altaysk,**	4.41	275	Pn	Pn	19 12 06.2	+0.1
GALT				Pg	Pb	19 12 19.5	+3.0
GALT				Sg	Sg	19 13 15.2	-5.0
ELT	**Eltsovka**	4.42	292	Pn	Pn	19 12 06.7	+0.5
ELT				Pg	Pb	19 12 17.9	+1.2
ELT				Sg	Sb	19 13 13.6	+3.4
MOY	**Mondy**	4.94	88	*e*PN	Pn	19 12 05.4	-8.2
MOY				*e*		19 12 24.3	
MOY				*e*		19 13 31.0	
MOY				*i*		19 13 43.8	
ZAA0	**Zalesovo Array**	5.44	297	⇓Pn	Pn	19 12 21.7	+1.4
	0.2nm,0.5s						
ZAA0				⇑Pg	Pb	19 12 35.8	+1.7
	1.0nm,0.5s						
ZAA0				⇓Lg	Lg	19 13 46.2	
	12nm,0.8s						
ZALV	**Zalesovo Beam**	5.44	297	Pn	Pn	19 12 20.3	0.0
	0.8nm,0.3s,baz=112,slow=13,SNR=10						
ZALV				Pg	Pb	19 12 35.9	+1.7
	2.6nm,0.3s,baz=108,slow=13,SNR=17						
ZALV				Lg	Lg	19 13 45.3	
	6.1nm,0.3s,baz=122,slow=26,SNR=11						
ZALV				LR	LR	19 14 19.4	
	comp=Z,42nm,19.2s,baz=168,slow=38						
	1.7nm,0.4s						
MK31	**Makanchi Array**	8.61	239	*c i*P	Pn	19 13 03.7	-0.2
MK31	**Makanchi Array**	8.61	239	⇓Pn	Pn	19 13 03.5	-0.4
	1.4nm,0.4s,baz=54,slow=14,SNR=34						
MK31				⇓Sn	Sn	19 14 37.0	-4.3
	6.4nm,0.8s						
MK31				⇓Lg	Lg	19 15 23.4	
	7.9nm,0.7s,baz=53,slow=29,SNR=3.7						
MKAR	**Makanchi Array**	8.61	239	Pn	Pn	19 13 03.8	-0.1
	0.9nm,0.3s,baz=50,slow=16,SNR=26						
MKAR				Sn	Sn	19 14 37.7	-3.5
	0.3nm,0.3s,baz=58,slow=19,SNR=2.2						
MKAR				Lg	Lg	19 15 28.5	
	0.8nm,0.3s,baz=40,slow=32,SNR=3.9						
	1.5nm,0.3s						
MAKZ	**Makanchi**	8.77	240	P	Pn	19 13 05.8	-0.2
MAKZ	**Makanchi**	8.77	240	⇓Pn	Pn	19 13 05.8	-0.2
	1.2nm,0.6s						
MAKZ				⇑Sn	Sn	19 14 40.4	-4.8
	2.8nm,0.6s						
MAKZ				⇓Lg	Lg	19 15 28.3	
	27nm,1.2s						
KURK	**Kurchatov**	9.12	269	P	Pn	19 13 11.7	+1.0
KURK						19 14 53.0	
KURK	**Kurchatov**	9.12	269	⇓Pn	Pn	19 13 11.1	+0.4
	1.1nm,0.7s						
KURK				⇓Lg	Lg	19 15 39.8	
	26nm,0.8s						
KURBB	**Kurchatov Arra**	9.19	269	Pn	Pn	19 13 11.7	0.0
	0.2nm,0.3s,baz=76,slow=16,SNR=8.3						
KURBB				Sn	Sn	19 14 53.0	-2.3
	baz=172,slow=17						
KURBB				Lg	Lg	19 15 43.3	
	0.2nm,0.3s,baz=82,slow=31,SNR=6.3						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	9.19	269	⇑Pn	Pn	19 13 11.9	+0.1
	2.0nm,0.5s						
KURBB				⇓Lg	Lg	19 15 41.9	
	32nm,0.8s						
SONM	**Songino Array**	9.48	109	Pg	Pg	19 13 49.4	
	0.3nm,0.3s,baz=293,slow=19,SNR=8.6						
SONM				Lg	Lg	19 15 55.3	
	0.7nm,0.3s,baz=297,slow=26,SNR=8.1						
SONM				LR	LR	19 17 22.3	
	comp=Z,30nm,18.7s,baz=246,slow=40						
ULN	**Ulaanbaatar**	9.86	108	⇑*e*P	Pn	19 13 21.8	+0.8
OTUK	**Ortayu**	13.77	263	⇑Lg	Lg	19 18 07.2	
	21nm,1.4s						
BRVK	**Borovoye**	13.94	284	⇓*e*P	Pn	19 14 18.0	+1.3
AAK	**Ala-Archa**	15.53	241	Pn	Pn	19 14 38.8	+0.5
	0.3nm,0.3s,baz=42,slow=8.4,SNR=1.9						
AAK				Lg	Lg	19 19 06.9	
	0.2nm,0.3s,baz=206,slow=23,SNR=2.0						
AAK				LR	LR	19 21 03.1	
	comp=Z,31nm,18.6s,baz=119,slow=39						
	0.6nm,0.3s						
GOMU	**GeErMu**	15.62	175	P	Pn	19 14 39.8	+0.1
GOMU				pP	P	19 14 42.8	-1.2
GOMU				sP	pP	19 14 43.8	-2.3
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,59nm,4.8s						
NRIK	**Noril'sk**	17.82	354	⇑*e*P	P	19 15 10.5	+2.8
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	**Aktyubinsk**	21.91	280	P	P	19 15 52.5	0.0
	comp=Z,1.0nm,0.5s,baz=75,slow=10,SNR=4.8						
	comp=Z,1.0nm,0.5s						
YAK	**Yakutsk**	22.17	48	P	P	19 15 54.9	-0.2
	comp=Z,1.0nm,0.3s,baz=19,slow=1.8,SNR=1.5						
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	22.17	48	⇓*e*P	P	19 15 58.1	+3.0
YAK				pmax	pmax		
	comp=Z,17nm,2.6s						
KLR	**Kul'dur**	24.55	81	P	P	19 16 19.1	+0.1
	comp=Z,1.3nm,0.5s,baz=299,slow=7.7,SNR=6.8						
	comp=Z,1.3nm,0.5s						
KLR	**Kul'dur**	24.55	81	⇓*e*P	P	19 16 18.9	-0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR				MLR	MLR		
	comp=Z,29nm,16.0s						
KIRV	**Kirov**	25.44	303	P	P	19 16 26.2	-0.6
	comp=Z,3.3nm,0.4s,baz=41,slow=2.4,SNR=2.5						
	comp=Z,3.3nm,0.4s						
KIRV	**Kirov**	25.44	303	⇑*e*P	P	19 16 29.9	+3.0
TIXI	**Tiksi**	25.48	26	P	P	19 16 26.1	-1.0
	comp=Z,2.2nm,0.6s,baz=313,slow=5.8,SNR=18						
	comp=Z,2.2nm,0.6s						
TIXI	**Tiksi**	25.48	26	⇑*e*P	P	19 16 27.2	+0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TIXI				MLR	MLR		
	comp=Z,46nm,15.0s						
BELG	**Belogornoye**	27.57	289	⇑*e*P	P	19 16 48.4	+2.2
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
OBN	**Obninsk**	33.02	298	*e*P	P	19 17 35.5	+1.2
OBN				*e*		19 18 41.5	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,14nm,15.0s						
SOC	**Sochi**	36.11	278	*e*P	P	19 18 01.7	+0.6
SOC				*e*		19 19 19.8	
SOC				*e*S	S	19 23 42.4	+1.7
SOC				*e*SS	SnSn	19 26 05.5	+0.2
SOC				MLR	MLR		
	comp=Z,27nm,14.0s						
FINES	**FINESS Array B**	36.49	312	P	P	19 18 03.4	-0.8
	comp=Z,1.3nm,0.6s,baz=55,slow=7.9,SNR=4.7						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	36.49	312	*i* P	P	19 18 05.3	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	37.49	36	*e*P	P	19 18 13.7	+1.0
BILL				*e*		19 19 38.1	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,43nm,15.0s						
AKASG	**Malin Array Be**	38.83	294	P	P	19 18 22.4	-1.8
	comp=Z,0.3nm,0.4s,baz=57,slow=9.4,SNR=2.3						
	comp=Z,0.3nm,0.4s						
BRTR	**Keskin Array B**	42.04	278	P	P	19 18 50.7	-0.3
	comp=Z,1.3nm,0.7s,baz=69,slow=6.8,SNR=3.9						
	comp=Z,1.3nm,0.7s						
NB2	**NORSAR Subarra**	43.33	315	P	P	19 18 59.3	-1.8
	comp=Z,0.6nm,0.6s,baz=62,slow=7.9						
NOA	**NORSAR Array B**	43.33	315	P	P	19 18 59.5	-1.6
	comp=Z,0.5nm,0.6s,baz=63,slow=7.9,SNR=4.0						
NOA				LR	LR	19 39 14.8	
	comp=Z,16nm,21.0s,baz=235,slow=39						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	54.94	27	P	P	19 20 28.9	-0.9
	comp=Z,0.6nm,0.7s,baz=328,slow=4.8,SNR=7.0						
	comp=Z,0.6nm,0.7s						
ESDC	**Sonseca Array**	63.92	301	P	P	19 21 31.2	-1.1
	comp=Z,0.9nm,0.6s,baz=38,slow=7.1,SNR=8.0						
	comp=Z,0.9nm,0.6s						
YKA	**Yellowknife Ar**	64.00	14	P	P	19 21 30.6	-1.7
	comp=Z,0.4nm,0.6s,baz=339,slow=6.9,SNR=3.8						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	80.00	141	P	P	19 23 09.6	+0.8
	comp=Z,0.6nm,1.0s,baz=343,slow=6.0,SNR=2.3						
	comp=Z,0.6nm,1.0s						
TORD	**Torodi Ar. Bea**	80.63	279	P	P	19 23 11.1	-1.3

comp=Z,0.3nm,0.7s,baz=30,slow=5.2,SNR=1.7
comp=Z,0.3nm,0.7s

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*GUC **17** 19:13:07.4±0.3, 45°.58S×77°.39W, h15^{km}±42^{km}, ML4.2*
*NEIC **17** 19:13:08.9±1.9, 45°.63S±0°.06×77°.4W±0°.2, h20^{km}±8^{km}, mb4.3/8, Mwr4.0/13, Mwr4.4(GUC), Error ellipse: s-maj=17.3km s-min=8.9km az=86.0*
*NEIC **17** 19:13:08.3, 45°.63S×77°.35W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.04; M$_{θθ}$0.57; M$_{φφ}$-0.61; M$_{rθ}$-0.35; M$_{θφ}$-1.13; M$_{φr}$0.49; Fault plane solution: M$_0$1.41000×10^{15} NP1:φ$_s$254.33000°, δ67.12000°, λ172.23000°. NP2:φ$_s$347.36000°, δ82.84000°, λ23.07000°. Principal axes: T 1.4730, Plg21.0000°, Azm213.0000°; N -0.1300, Plg66.0000°, Azm4.0000°; P -1.3429, Plg11.0000°, Azm119.0000°;*
ISC 17 19:13:07.8±1.2, **45°.61S**±0°.07×**77°.4W**±0°.1, **h10**^{km}, **n52**, σ**1^s.16**/56, **2C-1D, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AY01	Puyuhuapi	3.55	72	Pn	Pn	19 14 01.9	-1.0
AY01				Sn	Sn	19 14 45.4	+0.5
AY01	Puyuhuapi	3.55	72	eP	Pn	19 14 02.4	-0.6
AY01				eS	Sn	19 14 45.2	+0.3
AY01				IAML		19 14 48.6	
	comp=N,272nm,0.3s						
GO07	Milladeo Hill,	3.64	48		Pn	19 14 03.9	-0.2
GO07	Milladeo Hill,	3.64	48	eP	Pn	19 14 04.0	-0.2
GO07				eS	Sn	19 14 47.1	-0.1
LL07	Hotel Espejo d	3.94	47		Pn	19 14 08.5	+0.3
LL07	Hotel Espejo d	3.94	47	⇑eP	Pn	19 14 08.5	+0.3
LL07				eS	Sn	19 14 54.0	-0.4
GO08	Villa O'Higgin	4.36	133	Pn	Pn	19 14 13.7	-0.4
GO08	Villa O'Higgin	4.36	133	⇓iP	Pn	19 14 14.1	0.0
LL02	Futaleuf	4.63	61	Pn	Pn	19 14 17.1	-0.8
LL02	Futaleuf	4.63	61	eP	Pn	19 14 18.5	+0.7
LL01	San Ignacio de	4.81	50	Pn	Pn	19 14 19.8	-0.5
LL01	San Ignacio de	4.81	50	eP	Pn	19 14 18.1	-2.2
LL05	Los Muermos	5.06	35		Pn	19 14 23.7	-0.1
LL05	Los Muermos	5.06	35	eP	Pn	19 14 24.7	+1.0
LL03	Petrohue	5.75	41		Pn	19 14 32.3	-0.8
LL03	Petrohue	5.75	41	eP	Pn	19 14 34.4	+1.3
LL04	Puerto Octay	5.93	39	Pn	Pn	19 14 36.1	+0.5
LL04	Puerto Octay	5.93	39	⇑eP	Pn	19 14 36.5	+0.9
LR04	Corral	6.42	28		Pn	19 14 42.8	+0.5
GO09	Cerro Castillo	6.58	151		Pn	19 14 44.1	-0.5
MG05	Puerto Natales	6.88	154	Pn	Pn	19 14 48.3	-0.3
PLCA	Paso Flores	6.97	48	Pn	Pn	19 14 51.5	+1.5
PLCA	Paso Flores	6.97	48	eP	Pn	19 14 51.4	+1.5
LR03	Panguipulli	7.02	34		Pn	19 14 51.9	+1.3
LC02	Puerto Saavedr	7.42	25		Pn	19 14 57.5	+1.4
GO10	Punta Arenas	8.60	154		Pn	19 15 12.3	-0.1
MG02	Cerro Sombrero	8.94	146	Pn	Pn	19 15 14.7	-2.2
MG03	Isla Dawson	9.38	154	Pn	Pn	19 15 21.2	-1.7
BI05	Punta Hualpn	9.39	21		Pn	19 15 23.2	+0.1
DSPA	Despedida	10.21	148	Pn	Pn	19 15 31.7	-2.6
GO05	Huala	11.36	23		Pn	19 15 49.1	-1.1
BO01	Tunca	12.19	25	Pn	Pn	19 16 01.2	-0.2
MT01	Popeta	12.63	24		Pn	19 16 07.5	+0.1
BO04	La Punta	12.71	26		Pn	19 16 08.4	-0.2
VA05	Santo Domingo	12.72	22	Pn	Pn	19 16 08.2	-0.6
MT09	Talagante	12.79	25	Pn	Pn	19 16 08.9	-0.8
LMEL	Las Melosas	12.96	28		Pn	19 16 11.9	-0.3
MT03	Universidad Ad	13.20	26	Pn	Pn	19 16 14.3	-1.0
MT02	Curacav	13.23	23		Pn	19 16 15.0	-0.7
VA01	Torpederas	13.32	21	Pn	Pn	19 16 16.6	-0.2
PEL	Peldehue	13.47	25		Pn	19 16 17.7	-1.3
ROC1	El Roble	13.53	23		Pn	19 16 16.4	-3.6
TRQA	Tornquist	13.72	62	Pn	Pn	19 16 23.0	+0.7
VA06	Catapilco	13.85	22	Pn	Pn	19 16 24.2	+0.1
VA03	San Esteban	13.86	25		Pn	19 16 23.1	-1.3
CO02	Combarbal	15.21	21		Pn	19 16 42.4	-0.4
CO02				IAmb	IAmb	19 16 53.8	
	comp=Z,31nm,1.4s						
CO06	Fray Jorge	15.57	19	Pn	Pn	19 16 45.0	-2.3
CO06				IAmb	IAmb	19 16 53.0	
	comp=Z,47nm,1.6s						
CO01	Juntas del Tor	16.61	23	Pn	Pn	19 16 59.2	-1.8
LCO	Las Campanas	17.38	20	P	P	19 17 11.6	-0.4
LCO				IAmb	IAmb	19 17 13.0	
	comp=Z,8.3nm,0.7s						
CPUP	Villa Florida	25.04	47	P	P	19 18 33.8	+1.7
CPUP				IAmb	IAmb	19 18 41.1	
	comp=Z,5.8nm,0.8s						
PB01	IPOC Station P	25.34	17	P	P	19 18 36.0	+1.1
QSPA	South Pole Qui	44.64	180	P	P	19 21 21.8	+1.5
QSPA				IAmb	IAmb	19 21 43.4	
	comp=Z,5.1nm,1.5s						

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*NEIC **17** 19:17:54.9±1.9, 51°.04N±0°.08×179°.78W±0°.09, h22^{km}±11^{km}, mb4.1/13, ML2.9/17(AEIC), Error ellipse: s-maj=13.3km s-min=4.3km az=145.0*
*AEIC **17** 19:17:55.6±4.4, 51°.09N±0°.06×179°.46W±0°.07, h2^{km}±6^{km}, Error ellipse: s-maj=10.2km s-min=4.4km az=152.0*
ISC 17 19:17:53.0±1.7, **51°.0N**±0°.1×**179°.66W**±0°.07, **h10**^{km}, **n29**, σ**1^s.38**/32, **mb4.1**/5, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GASW	Gareloi Southw	0.95	32		Pb	19 18 12.1	+0.6
GASW					Sn	19 18 24.8	-1.1
GALAA	Gareloi Lava P	0.96	35		Pb	19 18 12.5	+0.7
GAEA	Gareloi East	0.99	35		Pb	19 18 12.9	+0.8
GAEA					Sn	19 18 26.8	-0.1
GANO	Gareloi North	1.00	32		Pg	19 18 12.7	+0.5
TASE	Tanaga Southea	1.33	49		Pn	19 18 18.5	+0.9
TAFP	Tanaga Falls P	1.40	48		Pn	19 18 19.0	+0.5
TAFP					Sg	19 18 38.3	+0.4
TAPA	Tanaga Point A	1.43	53		Pn	19 18 19.9	+1.0
KIMD	Kanaga Island	1.71	62		Pn	19 18 23.9	+1.2
KIKV	Kanaga Island	1.80	59		Pn	19 18 25.2	+1.2
ADK	Adak	2.07	63		Pn	19 18 29.2	+1.5
ADK	Adak	2.07	63		Sn	19 18 54.9	+1.3
GSCK	Great Sitkin C	2.42	63		Pn	19 18 34.5	+2.0
ATKA	Atka Island	3.62	68		Pn	19 18 50.8	+1.8
KOFP	Korovin Flat P	3.70	67		Pn	19 18 52.4	+2.2
SMY	Shemya	4.25	297	Pn	Pn	19 18 59.3	+1.6
CNBA	Chernabura Isl	12.70	65	Pn	Pn	19 20 50.9	-2.5
KDAK	Kodiak Island	17.09	56	Pn	Pn	19 21 49.0	-2.8
M19K	Big River Lodg	17.61	42	P	Pn	19 21 57.6	-0.6
PPLA	Purkeypile	18.97	41		P	19 22 14.8	+0.5
PPLA				IAmb	IAmb	19 22 25.1	
	comp=Z,14nm,1.5s						
TRF	Thorofare Moun	19.99	40	P	P	19 22 24.2	-1.3
TRF				IAmb	IAmb	19 22 46.5	
	comp=Z,11nm,1.4s						
BPAW	Bear Paw Mtn.	20.00	38	P	P	19 22 25.5	+0.2
DHY	Denali Highway	21.06	43	P	P	19 22 35.5	-1.5
DHY				IAmb	IAmb	19 23 06.4	
	comp=Z,10nm,1.3s						
M24K	Tolsona, Glenn	21.29	46	P	P	19 22 37.9	-1.5
GLB	Gilahina Butte	22.22	48	P	P	19 22 49.9	+0.5
GLB				IAmb	IAmb	19 22 50.8	
	comp=Z,7.3nm,1.0s						
VRDI	Verde Repeater	22.35	49	P	P	19 22 49.9	-1.0
VRDI				IAmb	IAmb	19 23 03.3	
	comp=Z,22nm,1.4s						
SCRK	Sand Creek	22.79	42	P	P	19 22 54.0	-1.5
SCRK				IAmb	IAmb	19 22 54.6	
	comp=Z,8.7nm,1.6s						
M27K	Edge Creek, AK	23.30	46	P	P	19 23 00.5	-0.3
M27K				IAmb	IAmb	19 23 36.9	
	comp=Z,10nm,1.4s						
TABL	Table Mountain	23.34	51	P	P	19 23 00.0	-1.3
EGAK	Eagle	24.20	41	P	P	19 23 07.6	-1.7

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*IDC **17** 19:33:01.0±1.8, 30°.69N×50°.19E, h0^{km}, mb3.6/8, mbtmp3.6/10, ML3.3/2, MS3.4/2, Error ellipse: s-maj=40.8km s-min=23.1km az=168.0*
*TEH **17** 19:33:02.9, 30°.56N×50°.37E, h15^{km}, ML3.6*
*SGS **17** 19:33:04.8, 30°.74N×50°.32E, h10^{km}, Ml3.8*
*DSN **17** 19:33:08.0±1.8, 30°.41N×50°.81E, h10^{km}, ML3.6/8, Error ellipse: s-maj=27.7km s-min=13.7km az=19.0*
ISC 17 19:33:02.3±0.6, **30°.54N**±0°.05×**50°.35E**±0°.04, **h10**^{km}, **n86**, σ**1^s.67**/90, **mb3.6**/8, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.10	305	ePg	Pg	19 33 06.2	+1.2
ABEH				eSg	Sg	19 33 09.4	+2.5
KLNJ	Kolanjah	1.17	66	ePg	Pb	19 33 23.8	-1.0
KLNJ				e		19 33 43.3	
	comp=Z,10µm,0.4s						
AMIS	Naft Sefid	1.45	321	ePg	Pn	19 33 29.3	+0.7
AMIS				eSg	Sg	19 33 49.9	+1.1
IBRJ	Brojen	1.57	30	ePg	Pn	19 33 30.9	+0.4
IBRJ				eSg	Sg	19 33 54.9	+2.0
IBRJ				e		19 33 58.7	
	comp=Z,9µm,0.5s						
AHWZ	Ahwaz	1.66	299	ePg	Pg	19 33 34.4	+0.2
AHWZ				eSg	Sg	19 33 58.5	+2.7
SHK1	Shahrekord	1.84	14	ePn	Pn	19 33 35.6	+1.4
SHK1				e		19 33 36.7	
	comp=Z,6µm,0.4s						
SHI	Shiraz	2.08	115	ePn	Pn	19 33 39.9	+2.5
SHI				e		19 34 24.6	
	comp=Z,3µm,0.4s						
IRAM	Ramesheh	2.15	53	ePn	Pn	19 33 40.6	+2.1
IRAM				e		19 33 42.1	
	comp=Z,3µm,0.4s						
IPIR	Pirpir	2.19	12	ePn	Pn	19 33 41.0	+2.0
IPIR				e		19 34 14.9	
	comp=Z,6µm,0.5s						
IGAR	Gharneh	2.35	37	ePn	Pn	19 33 43.2	+2.0
IGAR				e		19 33 45.2	
	comp=Z,3µm,0.2s						
IZEF	Zefreh	2.89	35	ePn	Pn	19 33 50.5	+1.8
IKLH	Kolahrood	2.96	20	ePn	Pn	19 33 51.9	+2.3
IKLH				e		19 34 55.9	
	comp=Z,1µm,0.5s						
ISAD	Sadrabad	3.17	64	ePn	Pn	19 33 54.9	+2.4
ISAD				e		19 34 02.4	
	comp=Z,1µm,0.3s						
QAMS	Qamsar	3.31	15	ePn	Pn	19 33 56.3	+1.9
QAMS				e		19 34 58.5	
	comp=Z,1µm,0.5s						
IKFM	Kafar-mosalman	3.66	325	ePn	Pn	19 34 01.6	+2.7
IKFM				e		19 35 06.6	
	comp=Z,2µm,0.4s						
IDOB	Doab	3.73	331	ePn	Pn	19 34 01.0	+0.9
KRSH	Karshahi	3.74	23	ePn	Pn	19 34 02.0	+1.8
IMEH	Mehriz	3.76	76	e		19 34 03.8	
	comp=Z,739nm,0.3s						
IMEH				ePn	Pn	19 34 02.8	+2.2
ICHK	Chekchek	3.86	63	ePn	Pn	19 34 03.7	+1.7
ICHK				e		19 34 52.0	
	comp=Z,2µm,0.5s						
ANAR	Anarak	3.90	47	ePn	Pn	19 34 04.0	+1.5
HSAM	Samen	3.95	338	ePn	Pn	19 34 04.1	+0.9
HSAM				e		19 34 53.1	
	comp=N,501nm,0.4s						
QYSM	Um Kedad	4.05	229	P	Pn	19 34 07.3	+2.9
ISFB	Sefidab	4.12	22	ePn	Pn	19 34 06.6	+1.2
IQOM	Qom	4.33	8	e		19 34 10.8	
	comp=Z,816nm,0.3s						
IQOM				ePn	Pn	19 34 08.5	0.0
HAGD	Aghdareh	4.39	347	ePn	Pn	19 34 10.4	+1.1
HAGD				e		19 35 05.9	
	comp=Z,520nm,0.4s						
IVRN	Varamin	4.59	14	ePn	Pn	19 34 13.3	+1.4
IBAF	Bafgh	4.60	76	ePn	Pn	19 34 13.3	+1.3
IRAZ	Razeghan	4.86	356	ePn	Pn	19 34 16.5	+0.8
IGHG	Ghaleghazi	4.95	321	ePn	Pn	19 34 18.1	+1.2
ILIN	Lien	5.22	328	ePn	Pn	19 34 20.6	0.0
IDMV	Damavand	5.22	15	ePn	Pn	19 34 21.7	+1.0
KHGB	Koh Gabri	5.29	90	ePn	Pn	19 34 23.4	+1.7
IDHR	Dehrash	5.33	322	ePn	Pn	19 34 22.8	+0.7
IDHR				e		19 35 27.1	
	comp=Z,536nm,0.3s						
IFIR	Firoozkooh	5.47	21	ePn	Pn	19 34 25.6	+1.4
NGRK	Negar Kerman	5.60	98	ePn	Pn	19 34 28.5	+2.5
NGRK				e		19 35 40.4	
	comp=Z,392nm,0.2s						
IANJ	Anjilo	5.75	30	ePn	Pn	19 34 29.1	+1.1
QALM	Alamut, Qazvin	5.88	2	ePn	Pn	19 34 30.5	+0.7
NHRD	Haradh	5.92	192	S	Sn	19 35 38.9	+0.9
NHRD	Haradh	5.92	192	P	Pn	19 34 32.6	+2.6
IPRN	Peran	5.92	16	ePn	Pn	19 34 32.4	+2.2
TPRV	Parvadeh(Tabas	5.94	64	ePn	Pn	19 34 32.1	+1.7
GENO	Geno	5.98	120	ePn	Pn	19 34 33.1	+2.0
JRN	Qarnain Island	6.00	158	ePn	Pn	19 34 33.3	+2.1
RMAH	Rumah	6.01	211	P	Pn	19 34 33.1	+1.7
ASYS		6.07	242	S	Sn	19 35 39.7	-2.0
ASYS		6.07	242	P	Pn	19 34 33.2	+1.1
TNSJ	Nastanj	6.30	56	ePn	Pn	19 34 36.7	+1.3
TKDS	Koohdasht(Taba	6.51	60	ePn	Pn	19 34 39.8	+1.5
SLWR	Sila	6.55	169	ePn	Pn	19 34 41.7	+2.9
IGLO	Ghaloghah	6.62	25	ePn	Pn	19 34 41.9	+2.1
SHME	Shamm	6.79	130	ePn	Pn	19 34 43.8	+1.8
SHME	Shamm	6.79	130	P	Pn	19 34 41.0	-1.0
BANOM	Banah	6.98	130	ePn	Pn	19 34 45.7	+1.1
BANOM	Banah	6.98	130	P	Pn	19 34 45.5	+0.9
BANOM				S	Sn	19 36 01.4	-2.7
HIL04	Ash Shaalaniya	7.19	249	P	Pn	19 34 48.3	+0.7
NAZ	Nazwa, Dubai	7.26	138	ePn	Pn	19 34 49.9	+1.4
MSFE	Esma-Masafi	7.28	134	ePn	Pn	19 34 49.7	+0.9
MSFE	Esma-Masafi	7.28	134	P	Pn	19 34 48.5	-0.3
ASUD	Al Ashush, Dub	7.36	142	ePn	Pn	19 34 52.2	+2.3
FAQ	Al Faqa, Dubai	7.41	140	ePn	Pn	19 34 52.9	+2.3
MZWR	Madinat Zayed	7.45	154	ePn	Pn	19 34 53.3	+2.2
UOSS	Minazif	7.61	136	ePn	Pn	19 34 54.9	+1.6
UOSS	Minazif	7.61	136	P	Pn	19 34 54.9	+1.6
HATD	Hatta, Dubai	7.66	137	ePn	Pn	19 34 55.0	+1.0
HATD	Hatta, Dubai	7.66	137	P	Pn	19 34 55.1	+1.0
ASHO	Ashiyiah	7.72	138	ePn	Pn	19 34 56.3	+1.4
ASHO	Ashiyiah	7.72	138	P	Pn	19 34 56.5	+1.6
HTM02	HTM02	7.72	244	P	Pn	19 34 54.6	-0.3
QSMS	Sumairaa	7.76	242	P	Pn	19 34 55.0	-0.5
MZR	Muzera	8.01	159	ePn	Pn	19 35 00.7	+1.9
MZR	Muzera	8.01	159	P	Pn	19 35 00.7	+1.9
ALNE	Al Ain	8.05	142	ePn	Pn	19 35 01.0	+1.7
ALNE	Al Ain	8.05	142	P	Pn	19 35 01.0	+1.7
UMZA	Um Al Zommool	8.90	150	ePn	Pn	19 35 12.6	+1.6
ISFR	Sfrayin	9.09	42	ePn	Pn	19 35 16.3	+2.4
GEYT	Alibeck	9.78	39	Pn	Pn	19 35 24.5	+1.5
	comp=Z,0.4nm,0.3s,baz=235,slow=6.8,SNR=2.2						
	comp=Z,0.7nm,0.3s						
BRTR	Keskin Array B	16.44	308	Pn	Pn	19 36 53.1	-0.1
	comp=Z,0.1nm,0.3s,baz=122,slow=11,SNR=2.1						
BRTR				LR	LR	19 44 53.1	
	comp=Z,28nm,19.6s,baz=131,slow=44						
	comp=Z,0.5nm,0.7s						
AKASG	Malin Array Be	25.58	328	P	P	19 38 29.6	-1.8
	comp=Z,0.2nm,0.3s,baz=144,slow=8.7,SNR=2.8						
	comp=Z,0.2nm,0.3s						
MKAR	Makanchi Array	29.49	48	P	P	19 39 07.2	+0.6
	comp=Z,0.4nm,0.6s,baz=234,slow=8.7,SNR=4.4						
	comp=Z,0.4nm,0.6s						
ZALV	Zalesovo Beam	34.08	37	P	P	19 39 46.7	0.0
	comp=Z,0.6nm,0.5s,baz=253,slow=12,SNR=2.7						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	34.78	340	P	P	19 39 50.9	-1.8
	comp=Z,0.3nm,0.3s,baz=142,slow=9.0,SNR=8.3						
	comp=Z,0.3nm,0.3s						
NOA	NORSAR Array B	39.88	331	P	P	19 40 33.9	-2.1
	comp=Z,0.2nm,0.5s,baz=128,slow=9.1,SNR=1.4						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	41.52	347	P	P	19 40 48.4	-1.0
	comp=Z,3.5nm,0.9s,baz=143,slow=9.1,SNR=2.5						
	comp=Z,3.5nm,0.9s						
TORD	Torodi Ar. Bea	47.98	260	P	P	19 41 41.3	-0.2
	comp=Z,0.2nm,0.4s,baz=58,slow=9.0,SNR=7.3						
	comp=Z,0.2nm,0.4s						
KSRS	Korea Array	63.00	61	P	P	19 43 29.0	-0.5
	comp=Z,0.5nm,0.3s,baz=279,slow=7.9,SNR=3.4						
	comp=Z,0.5nm,0.3s						
JHJ	Hachijo jima 2	73.61	61	LR	LR	20 20 23.1	
	comp=Z,102nm,21.6s,baz=118,slow=39						

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*IDC **17** 19:36:44.6±2.3, 15°.94S×177°.96W, h0^{km}, mb4.5/5, mbtmp4.5/5, Error ellipse: s-maj=53.8km s-min=36.9km az=95.0*
*NEIC **17** 19:37:41.8±1.8, 17°.4S±0°.1×178°.7W±0°.1, h518^{km}±11^{km}, mb4.4/31, Error ellipse: s-maj=19.1km s-min=16.9km az=124.0*
ISC 17 19:37:40.6±0.6, **17°.42S**±0°.10×**178°.76W**±0°.09, **h500**^{km}, **n45**, σ**1^s.36**/44, **mb4.4**/19, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.57	64	P	P	19 39 31.9	-0.8
NIUE	Niue	8.55	102	P	P	19 39 43.2	+0.5
MARNC	Mare, Loyalty	13.10	250	P	P	19 40 33.5	+2.7
SANVU	Saraoutou	13.61	276	P	P	19 40 38.4	+2.1
LIFNC	LIFOU	13.65	254	P	P	19 40 38.2	+1.6
PINNC	Pines Island,	13.96	246	P	P	19 40 42.2	+2.4
OUENC	Ouen Island, N	14.43	248	P	P	19 40 47.4	+2.6
DZM	Mont Dzumac	14.68	249	P	P	19 40 49.8	+2.3
MXZ	Matakaoa Point	20.23	187	P	P	19 41 41.1	-0.1
URZ	Urewera	21.07	189	P	P	19 41 47.9	-0.9
	4.3nm,0.3s,baz=25,slow=2.0,SNR=9.6						
	4.3nm,0.3s						
URZ	Urewera	21.07	189	P	P	19 41 46.2	-2.6
BKZ	Black Stump Fm	22.06	190	P	P	19 41 55.1	-2.6
LTZ	Lake Taylor	26.41	195	P	P	19 42 35.0	-1.4
ARMA	Armidale	29.90	239	P	P	19 43 07.9	+0.7
ARMA				IAmb	IAmb	19 43 42.3	
	comp=Z,23nm,1.6s						
MLZ	Mavora Lakes	29.95	199	P	P	19 43 08.0	+0.6
WHZ	Wether Hill Ro	30.47	198	P	P	19 43 12.4	+0.6
RABL	Rabaul	31.38	291	P	P	19 43 18.7	-1.4
CTAO	Charters Tower	33.20	260	P	P	19 43 34.4	-1.2
CTAO				IAmb	IAmb	19 43 37.9	
	comp=Z,15nm,1.1s						
PMG	Port Moresby	34.05	279	P	P	19 43 41.0	-1.8
COEN	Coen	36.77	270	P	P	19 44 06.0	+0.5
COEN				IAmb	IAmb	19 44 07.8	
	comp=Z,12nm,0.8s						
TOO	Toolangi	37.22	230	P	P	19 44 09.5	+0.6
TOO				IAmb	IAmb	19 44 40.5	
	comp=Z,18nm,1.3s						
STKA	Stephens Creek	38.58	241	P	P	19 44 20.9	+0.8
	comp=Z,3.3nm,0.5s,baz=88,slow=9.4,SNR=8.6						
	comp=Z,3.3nm,0.5s						
STKA	Stephens Creek	38.58	241	IAmb	IAmb	19 44 21.9	
	comp=Z,2.0nm,1.1s						
BBOO	Buckleboo	43.35	240	P	P	19 44 58.1	0.0
BBOO				IAmb	IAmb	19 44 59.3	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	44.21	259	P	P	19 45 04.1	-0.9
WB0	Warramunga Arr	44.36	259	P	P	19 45 05.5	-0.7
WB0				IAmb	IAmb	19 45 06.4	
	comp=Z,7.6nm,0.9s						
WRA	Warramunga Arr	44.40	259	P	P	19 45 05.6	-0.9
	comp=Z,3.8nm,0.6s,baz=95,slow=6.9,SNR=70						
	comp=Z,3.8nm,0.6s						
WRA	Warramunga Arr	44.40	259	P	P	19 45 05.5	-0.9
AS31	Alice Springs	44.61	254	P	P	19 45 08.0	0.0
AS31				IAmb	IAmb	19 45 08.7	
	comp=Z,8.8nm,0.6s						
ASAR	Alice Springs	44.61	254	P	P	19 45 08.1	0.0
	comp=Z,31nm,0.7s,baz=89,slow=7.8,SNR=628						
	comp=Z,31nm,0.7s						
MIDW	Midway	45.39	2	P	P	19 45 15.4	+1.7
MTN	Manton Dam	48.48	268	P	P	19 45 35.9	-1.6
MTN				IAmb	IAmb	19 45 37.8	
	comp=Z,7.3nm,0.8s						
FORT	Forrest	49.92	244	P	P	19 45 47.1	-0.8
FORT				IAmb	IAmb	19 46 05.4	
	comp=Z,22nm,0.9s						
KNRA	Kununurra	50.21	264	P	P	19 45 49.6	-0.7
KNRA				IAmb	IAmb	19 45 50.8	
	comp=Z,7.3nm,0.7s						
SOEI	Soe	55.74	270	P	P	19 46 28.3	-1.7
SOEI				IAmb	IAmb	19 46 32.2	
	comp=Z,28nm,1.0s						
PSA00	Pilbara Seismi	57.71	255	P	P	19 46 42.8	-0.6
PSA00	Pilbara Seismi	57.71	255	P	P	19 46 42.5	-0.9
PSA00				IAmb	IAmb	19 46 43.5	
	comp=Z,6.3nm,0.8s						
MBWA	Marble Bar	57.87	256	P	P	19 46 43.5	-1.0
NWAO	Narrogin (SRO)	59.15	242	P	P	19 46 52.4	-0.5
MORW	Morawa	60.38	246	P	P	19 47 00.2	-1.0
MORW				IAmb	IAmb	19 47 27.1	
	comp=Z,26nm,1.6s						
VNDA	Vanda	60.90	185	P	P	19 47 03.9	+0.1
QSPA	South Pole Qui	72.63	180	P	P	19 48 16.1	-0.5
QSPA				IAmb	IAmb	19 48 17.2	
	comp=Z,5.5nm,1.1s						
M19K	Big River Lodg	81.39	11	P	P	19 49 04.3	0.0
M19K				IAmb	IAmb	19 49 12.8	
	comp=Z,8.4nm,1.4s						
CMAR	Chiang Mai Arr	88.41	290	P	P	19 49 40.7	+1.3
	comp=Z,0.3nm,0.4s,baz=130,slow=1.9,SNR=4.8						
	comp=Z,0.3nm,0.4s						
GERES	GERESS Array B	147.06	345	PKPbc	PKPdf	19 56 24.8	+0.7
	comp=Z,0.3nm,0.5s,baz=41,slow=3.1,SNR=3.7						

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*IDC **17** 20:36:05.5±1.1, 9°.78N×138°.48E, h0^{km}, mb3.5/7, mbtmp3.5/7, MS3.0/1, Error ellipse: s-maj=37.5km s-min=23.9km az=88.0*
ISC 17 20:36:10.9±1.1, **9°.8N**±0°.2×**138°.4E**±0°.2, **h35**^{km}, **n14**, σ**1^s.09**/7, **mb3.5**/7, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	12.74	214	LR	LR	20 42 37.9	
	comp=Z,79nm,21.1s,baz=188,slow=31						
H11S3	WAKE ISLAND Hy	28.71	69	T	T	21 10 59.9	
	baz=253						
H11S1	WAKE ISLAND Hy	28.73	69	T	T	21 11 02.9	
	baz=253						
H11S2	WAKE ISLAND Hy	28.73	69	T	T	21 11 03.4	
	baz=253						
H11N1	WAKE ISLAND Hy	29.21	67	T	T	21 11 37.8	
	baz=253						
H11N2	WAKE ISLAND Hy	29.22	67	T	T	21 11 43.0	
	baz=253						
H11N3	WAKE ISLAND Hy	29.23	67	T	T	21 11 41.5	
	baz=253						
WRA	Warramunga Arr	29.79	188	P	P	20 42 15.8	+1.2
	0.5nm,0.9s,baz=7.9,slow=9.9,SNR=2.4						
	0.5nm,0.9s						
ASAR	Alice Springs	33.51	188	P	P	20 42 46.4	-0.9
	0.2nm,0.5s,baz=19,slow=12,SNR=4.1						
	0.2nm,0.5s						
CMAR	Chiang Mai Arr	39.19	287	P	P	20 43 35.1	-0.8
	0.6nm,0.7s,baz=96,slow=6.6,SNR=7.5						
	0.6nm,0.7s						
SONM	Songino Array	46.57	331	P	P	20 44 36.3	+0.8
	0.7nm,0.9s,baz=148,slow=7.9,SNR=4.3						
	0.7nm,0.9s						
MKAR	Makanchi Array	60.02	319	P	P	20 46 14.4	+0.2
	0.3nm,0.7s,baz=97,slow=7.4,SNR=2.8						
	0.3nm,0.7s						
ILAR	Eielson Array	74.71	25	P	P	20 47 45.9	-0.9
	0.5nm,0.6s,baz=254,slow=5.5,SNR=5.2						
	0.5nm,0.6s						
YKA	Yellowknife Ar	89.11	26	P	P	20 49 02.8	+0.4
	0.3nm,0.5s,baz=292,slow=5.1,SNR=4.8						
	0.3nm,0.5s						

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*NEIC **17** 20:36:34.1±1.4, 16°.40S±0°.03×167°.6E±0°.1, h29^{km}±5^{km}, mb4.9/39, Error ellipse: s-maj=15.1km s-min=3.3km az=75.0*
*NOU **17** 20:36:34.6, 16°.32S×167°.62E, h34^{km}, MLv5.3/28, Vanuatu Islands*
*IDC **17** 20:36:35.9±3.0, 16°.43S×167°.58E, h47^{km}±24^{km}, mb4.3/13, mbtmp4.6/15, ML4.6/2, MS3.7/24, Error ellipse: s-maj=27.4km s-min=15.2km az=64.0*
*GCMT **17** 20:36:38.1±0.5, 16°.35S±0°.04×167°.24E±0°.04, h33^{km}±1^{km}, MW5.0/63, Moment Tensor Solution. s25,c26; s63,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.07±.25; M$_{θθ}$-0.80±.16; M$_{φφ}$-2.27±.17; M$_{rθ}$0.65±.15; M$_{θφ}$-0.09±.08; M$_{φr}$1.95±.13; Best double couple: M$_0$3.36400×10^{16} NP1:φ$_s$181.00000°, δ27.00000°, λ80.00000°. NP2: φ$_s$12.00000°, δ64.00000°, λ95.00000°. Principal axes: T 3.7820, Plg71.0000°, Azm293.0000°; N -0.8350, Plg5.0000°, Azm190.0000°; P -2.9450, Plg19.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 20:36:32.7±0.4, **16°.39S**±0°.04×**167°.61E**±0°.06, **h20**^{km}, **n125**, σ**1^s.67**/118, **mb4.9**/36, **MS3.8**/22, **1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.02	337	Pn	Pb	20 36 51.9	+0.2
SANVU				Sn	Sb	20 37 05.0	+0.4

SANVU	Saraoutou	1.02	337	P	Pn	20 36 52.3	+0.5
DVP	Devils Point	1.43	158	P	Pb	20 37 00.1	+1.4
RTV	Rentapao	1.59	151	P	Pb	20 37 01.5	+0.1
LIFNC	LIFOU	4.38	185	Pn	Pn	20 37 38.3	+0.3
LIFNC				Sn	Sn	20 38 22.5	-6.0
LIFNC	LIFOU	4.38	185	P	Pn	20 37 38.8	+0.8
MARNC	Mare, Loyalty	5.08	176		Pn	20 37 46.5	-1.2
MARNC				Sn	Sn	20 38 39.5	-6.2
MARNC	Mare, Loyalty	5.08	176	P	Pn	20 37 48.4	+0.7
YATNC	Mamie plateau,	5.68	187	P	Pn	20 37 57.2	+1.3
DZM	Mont Dzumac	5.75	191	P	Pn	20 37 58.7	+1.6
	14nm,0.3s,baz=3.4,slow=19,SNR=98						
DZM				S	Sn	20 39 01.6	-1.0
	306nm,0.5s,baz=315,slow=22,SNR=12						
	55nm,0.4s						
DZM	Mont Dzumac	5.75	191	*e*Pn	Pn	20 37 59.9	+2.8
DZM				*e*Sn	Sn	20 39 03.0	+0.4
	1μm,24.6s						
DZM	Mont Dzumac	5.75	191	Pn	Pn	20 37 58.0	+0.9
DZM				Sn	Sn	20 39 01.3	-1.3
DZM	Mont Dzumac	5.75	191	P	Pn	20 37 59.0	+1.9
NOUC	Port Laguerre	5.81	192	P	Pn	20 38 00.1	+2.3
OUENC	Ouen Island, N	6.04	187	Pn	Pn	20 38 02.3	+1.4
OUENC				Sn	Sn	20 39 06.5	-2.9
OUENC	Ouen Island, N	6.04	187	P	Pn	20 38 03.8	+2.9
PINNC	Pines Island,	6.19	181		Pn	20 38 04.2	+1.2
PINNC				Sn	Sn	20 39 08.3	-4.9
HNR	Honiara	10.18	312	P	Pn	20 39 01.1	+3.4
	5.7nm,0.3s,baz=191,slow=5.2,SNR=2.1						
HNR				S	Sn	20 40 48.2	-3.3
	27nm,0.3s,baz=215,slow=16,SNR=1.5						
HNR				LR	LR	20 42 38.4	
	comp=Z,560nm,21.7s,baz=172,slow=36						
	25nm,0.3s						
HNR	Honiara	10.18	312	Pn	Pn	20 38 59.9	+2.1
FUNA	Funafuti	13.74	57	P	Pn	20 39 47.0	+0.5
EIDS	Eidsvold	17.83	237	P	P	20 40 41.5	+1.2
RAO	Raoul Island	18.46	136	LR	LR	20 45 35.0	
	comp=Z,180nm,21.0s,baz=285,slow=29						
RAO	Raoul Island	18.46	136	P	P	20 40 46.8	-0.4
OUZ	Omahuta	19.50	165	P	Pn	20 40 59.8	0.0
OUZ				IAmb	IAmb	20 41 23.1	
	comp=Z,74nm,1.5s						
AFI	Afiamalu	20.05	86	LR	LR	20 47 05.1	
	comp=Z,305nm,19.2s,baz=192,slow=31						
ARMA	Armidale	20.21	224	P	P	20 41 05.9	-0.7
ARMA				IAmb	IAmb	20 41 14.6	
	comp=Z,25nm,0.9s						
ARMA	Armidale	20.21	224	P	P	20 41 07.4	+0.8
CTA	Charters Tower	20.61	256	P	Pn	20 41 12.8	-0.4
	comp=Z,12nm,0.8s,baz=88,slow=13,SNR=10						
CTA				LR	LR	20 48 00.6	
	comp=Z,332nm,19.9s,baz=84,slow=33						
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	20.61	256	P	P	20 41 10.3	-0.6
NIUE	Niue	21.56	100	P	P	20 41 20.2	-0.8
URZ	Urewera	23.33	161	P	P	20 41 40.9	+1.3
	comp=Z,4.4nm,0.7s,baz=3.8,slow=15,SNR=1.8						
	comp=Z,4.4nm,0.7s						
URZ	Urewera	23.33	161	P	P	20 41 39.9	+0.3
URZ				IAmb	IAmb	20 42 20.1	
	comp=Z,46nm,1.4s						
COEN	Coen	23.71	273	P	P	20 41 43.0	-0.6
COEN				IAmb	IAmb	20 42 02.4	
	comp=Z,19nm,1.0s						
BKZ	Black Stump Fm	23.98	163	P	P	20 41 45.3	-0.6
BKZ				IAmb	IAmb	20 42 14.8	
	comp=Z,49nm,1.4s						
CMSA	Cobar Meteorol	25.00	229	P	P	20 41 56.6	+1.3
CAN	Canberra	25.14	218	P	P	20 41 56.2	-0.3
CAN				IAmb	IAmb	20 42 00.2	
	comp=Z,51nm,1.4s						
RPZ	Rata Peaks	27.39	175	LR	LR	20 52 19.2	
	comp=Z,161nm,19.8s,baz=333,slow=34						
STKA	Stephens Creek	28.20	232	P	P	20 42 24.4	+0.2
	comp=Z,13nm,1.0s,baz=55,slow=9.8,SNR=15						
STKA				LR	LR	20 52 29.2	
	comp=Z,187nm,20.6s,baz=40,slow=34						
	comp=Z,13nm,1.0s						
STKA	Stephens Creek	28.20	232	P	P	20 42 24.1	0.0
STKA	Stephens Creek	28.20	232	P	P	20 42 24.6	+0.4
BRAT	Ballarat	29.67	220	P	P	20 42 38.0	+0.9
	comp=Z,7.1nm,1.0s						
RAR	Rarotonga	31.21	104	LR	LR	20 53 26.1	
	comp=Z,73nm,21.8s,baz=308,slow=32						
OOD	Oodnadatta	31.59	243	P	P	20 42 54.6	+0.4
WR0	Warramunga Arr	31.59	258	P	P	20 42 53.3	-1.0
WB0	Warramunga Arr	31.73	259	P	P	20 42 54.2	-1.3
WB0				IAmb	IAmb	20 42 55.8	
	comp=Z,15nm,0.9s						
WB2	Warramunga Arr	31.77	259	P	P	20 42 54.8	-1.1
WB2				IAmb	IAmb	20 42 56.1	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	31.77	259	P	P	20 42 54.4	-1.5
WRAB				IAmb	IAmb	20 42 57.5	
	comp=Z,11nm,1.1s						
WRAB	Tennant Creek	31.77	259	P	P	20 42 55.9	0.0
WRAB	Tennant Creek	31.77	259	P	P	20 42 55.1	-0.8
WRAB				x	x	20 43 03.4	
WRA	Warramunga Arr	31.78	259	P	P	20 42 54.9	-1.2
	comp=Z,7.1nm,0.8s,baz=88,slow=8.4,SNR=52						
WRA				PcP	PcP	20 45 45.5	-1.6
	comp=Z,0.9nm,1.0s,baz=87,slow=3.3,SNR=2.6						
	comp=Z,7.1nm,0.8s						
WRA	Warramunga Arr	31.78	259	P	P	20 42 54.0	-2.0
AS31	Alice Springs	32.43	252	P	P	20 43 00.7	-1.0
AS31				IAmb	IAmb	20 43 02.9	
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	32.43	252	P	P	20 43 00.9	-0.8
	comp=Z,33nm,0.8s,baz=77,slow=8.9,SNR=4.3						
ASAR				PcP	PcP	20 45 47.3	-1.6
	comp=Z,0.6nm,0.7s,baz=101,slow=1.9,SNR=3.1						
	comp=Z,33nm,0.8s						
BBOO	Buckleboo	32.85	234	P	P	20 43 04.0	-1.2
BBOO	Buckleboo	32.85	234	P	P	20 43 05.5	+0.3
MULG	Mulgathing	33.63	240	P	P	20 43 11.5	-0.5
	comp=Z,16nm,2.5s						
MTN	Manton Dam	35.44	271	P	P	20 43 26.2	-1.7
MTN				IAmb	IAmb	20 43 50.1	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	37.31	266	P	P	20 43 43.1	-0.7
KNRA	Kununurra	37.31	266	P	P	20 43 43.4	-0.4
GUMO	Guam	37.32	322	LR	LR	20 57 51.7	
	comp=Z,103nm,20.1s,baz=132,slow=34						
WRKA	Warakurna	37.66	250	P	P	20 43 46.9	+0.1
FORT	Forrest	38.76	241	P	P	20 43 55.1	-0.8
FORT				IAmb	IAmb	20 43 56.7	
	comp=Z,18nm,0.8s						
FORT	Forrest	38.76	241	P	P	20 43 55.9	0.0
	comp=Z,26nm,0.9s						
SIJI	Sorong	38.99	290	P	P	20 43 57.3	-0.8
	comp=Z,9.5nm,0.7s,baz=84,slow=8.9,SNR=6.6						
SIJI				LR	LR	20 59 53.5	
	comp=Z,322nm,21.9s,baz=167,slow=36						
	comp=Z,9.5nm,0.7s						
SWI	Sorong	39.00	290	P	P	20 43 57.9	-0.2
	comp=Z,25nm,1.1s						
XMAS	Kiritimati	39.07	65	P	P	20 43 59.5	+0.9
PPT	Papeete	40.90	98	LR	LR	20 57 02.8	
	comp=Z,124nm,19.7s,baz=268,slow=30						
SOEI	Soe	42.67	273	P	P	20 44 27.6	-1.0
SOEI				IAmb	IAmb	20 44 41.4	
	comp=Z,43nm,1.2s						
BATI	Baumata	43.14	272	P	P	20 44 33.0	+0.7
	comp=Z,62nm,0.8s,baz=96,slow=7.2,SNR=9.6						
	comp=Z,62nm,0.8s						
BATI	Baumata	43.14	272	P	P	20 44 33.5	+1.2
	comp=Z,48nm,0.9s						
SANI	Sanana	43.36	285	P	P	20 44 34.1	+0.1
	comp=Z,596nmcomp=Z,23nm,1.0s						
MMRI	Maumere	44.88	274	P	P	20 44 45.0	-1.3
MMRI				IAmb	IAmb	20 44 46.1	
	comp=Z,34nm,1.0s						
PSA00	Pilbara Seismi	45.33	256	P	P	20 44 48.9	-0.8
PSA00				IAmb	IAmb	20 44 51.1	
	comp=Z,20nm,1.1s						
PSA00	Pilbara Seismi	45.33	256	P	P	20 44 49.2	-0.5
PSA00				IAmb	IAmb	20 44 51.2	
	comp=Z,15nm,1.2s						
EDFI	Ende, Flores	45.38	274	P	P	20 44 50.1	-0.2
	comp=Z,13nm,0.9s						
MBWA	Marble Bar	45.45	256	P	P	20 44 49.9	-0.8
MBWA				IAmb	IAmb	20 44 52.1	
	comp=Z,33nm,1.2s						
MBWA	Marble Bar	45.45	256	P	P	20 44 50.8	+0.2
MBWA				pP	sP	20 45 02.3	+2.7
MBWA				pwP	pP	20 45 06.3	+9.3
MBWA				sP	sP	20 45 10.7	+11
LUWI	Luwuk	46.72	284	P	P	20 44 59.6	-1.1
BNSI	Bone	48.10	279	P	P	20 45 12.3	+0.8
	comp=Z,31nm,1.2s						
NWAO	Narrogin (SRO)	48.20	240	P	P	20 45 11.1	-0.9
NWAO	Narrogin (SRO)	48.20	240	P	P	20 45 12.0	0.0
NWAO				pP	sP	20 45 24.2	+3.3
KAPI	Kappang	48.25	278	P	P	20 45 12.6	0.0
	comp=Z,26nm,0.9s,baz=117,slow=9.4,SNR=9.3						
	comp=Z,26nm,0.9s						
KAPI	Kappang	48.25	278	P	P	20 45 11.8	-0.9
KAPI	Kappang	48.25	278	P	P	20 45 13.2	+0.6
KAPI				x	x	20 45 17.5	
MORW	Morawa	48.87	246	P	P	20 45 16.1	-1.1
MORW				IAmb	IAmb	20 45 30.6	
	comp=Z,26nm,1.1s						
JCJ	Chichijima	49.78	330	LR	LR	21 05 37.3	
	comp=Z,46nm,20.9s,baz=168,slow=35						
MPSI	Mapaga	49.90	285	P	P	20 45 25.2	-0.1
	comp=Z,18nm,1.0s						
DRV	Dumont d'Urvil	53.41	193	P	P	20 45 51.0	+0.4
DRV				x	x	20 45 57.2	
DRV				pP	sP	20 46 02.7	+3.1
DRV				pwP	pP	20 46 07.1	+10
DRV				sP	PcP	20 46 10.8	-47
JHJ2	Mitsune	55.94	332	P	P	20 46 09.3	-0.1
LEM	Lembang	59.35	272	P	P	20 46 34.4	+0.2
	comp=Z,13nm,0.6s,baz=111,slow=3.8,SNR=4.5						
	comp=Z,13nm,0.6s						
VNDA	Vanda	61.22	181	P	P	20 46 45.2	-0.5
	comp=Z,1.4nm,0.9s,baz=5.9,slow=9.9,SNR=3.1						
VNDA				LR	LR	21 10 48.3	
	comp=Z,27nm,18.1s,baz=343,slow=34						
	comp=Z,1.4nm,0.9s						
VNDA	Vanda	61.22	181	P	P	20 46 47.0	+1.3
VNDA	Vanda	61.22	181	P	P	20 46 44.9	-0.8
VNDA				pP	sP	20 46 59.2	+4.6
VNDA				pwP	pP	20 47 03.2	+11
SBA	Scott Base	61.48	180	P	P	20 46 48.8	+1.3
SBA				IAmb	IAmb	20 47 01.9	
	comp=Z,7.9nm,1.1s						
SBA	Scott Base	61.48	180	P	P	20 46 49.2	+1.8
SBA				x	x	20 46 53.0	
SBA				pP	sP	20 47 00.9	+4.4
SBA				pwP	pP	20 47 04.7	+11
SBA				sP	PcP	20 47 09.5	-20
CASY	Casey	62.12	203	⇓P	P	20 46 52.4	+0.4
CCD	Concordia, Ant	63.35	192	P	P	20 47 00.9	+0.4
ASAJ	Asahikawa	64.41	340	LR	LR	21 10 17.7	
	comp=Z,54nm,21.3s,baz=44,slow=31						
QSPA	South Pole Qui	73.64	180	LR	LR	21 19 37.6	
	comp=Z,62nm,18.2s,baz=4.0,slow=35						
QSPA	South Pole Qui	73.64	180	P	P	20 48 04.8	+0.1
QSPA				IAmb	IAmb	20 48 18.0	
	comp=Z,13nm,0.8s						
CM31	Chiang Mai Arr	75.93	294	P	P	20 48 18.1	-0.5
CMAR	Chiang Mai Arr	75.93	294	P	P	20 48 18.4	-0.1
	comp=Z,0.7nm,0.7s,baz=129,slow=3.6,SNR=6.7						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	75.93	294	P	P	20 48 17.9	-0.6
ULN	Ulaanbaatar	83.67	324	P	P	20 48 59.3	-0.8
SONM	Songino Array	84.02	324	P	P	20 49 00.5	-1.4
	comp=Z,0.5nm,0.5s,baz=141,slow=5.0,SNR=5.3						
	comp=Z,0.5nm,0.5s						
BELA	Belgrano 2	85.05	175	P	P	20 49 04.1	-2.4
BELA				IAmb	IAmb	20 49 18.6	
	comp=Z,8.1nm,0.9s						
YBH	Yreka Blue Hor	86.36	45	LR	LR	21 21 17.8	
	comp=Z,33nm,18.9s,baz=249,slow=31						
PFO	Pinyon Flats O	87.69	54	LR	LR	21 20 13.3	
	comp=Z,96nm,20.5s,baz=324,slow=30						
ILAR	Eielson Array	88.00	18	P	P	20 49 21.7	+0.8
	comp=Z,0.3nm,0.5s,baz=234,slow=3.1,SNR=2.4						
ILAR				LR	LR	21 23 60.0	
	comp=Z,45nm,19.2s,baz=183,slow=32						
	comp=Z,0.3nm,0.5s						
NVAR	Mina Array Bea	88.10	49	LR	LR	21 21 02.7	
	comp=Z,36nm,20.1s,baz=273,slow=30						
LPIG	La Paz	89.60	65	LR	LR	21 22 26.2	
	comp=Z,57nm,18.5s,baz=208,slow=31						
ELK	Elko	91.16	48	LR	LR	21 26 57.1	
	comp=Z,33nm,18.0s,baz=246,slow=33						
INK	Inuvik	94.35	19	LR	LR	21 27 08.5	
	comp=Z,40nm,19.2s,baz=242,slow=32						
PDAR	Pinedale Array	95.83	47	LR	LR	21 29 58.3	
	comp=Z,22nm,18.1s,baz=221,slow=33						
ANMO	Albuquerque	95.97	55	LR	LR	21 24 41.9	
	comp=Z,38nm,21.8s,baz=240,slow=30						
TXAR	Lajitas Array	96.78	62	LR	LR	21 26 52.6	
	comp=Z,33nm,18.4s,baz=267,slow=31						
ARCES	ARCESS Array B	121.94	345	PKP	PKPdf	20 55 22.9	-2.1
	comp=Z,5.6nm,1.1s,baz=34,slow=3.4,SNR=2.2						
KBA	Koelnbreinsper	142.72	331	*e*P	PKPdf	20 56 03.9	-1.0
	comp=Z,2.7nm,1.1s						
ABTA	Abfaltersbach	143.35	331	*e*P	PKPab	20 56 02.4	+0.5
	comp=Z,5.0nm,1.6s						
WTTA	Wattenberg	143.37	332	*e*P	PKPdf	20 56 06.4	+0.4
	comp=Z,5.6nm,1.0s						
MOTA	Moosalm	143.54	333	*e*P	PKPbc	20 56 04.1	+0.5
	comp=Z,2.8nm,1.2s						
SQTA	Sankt Quirin	143.59	333	*e*P	PKPbc	20 56 03.9	+0.2
	comp=Z,2.5nm,0.8s						
FETA	Feichten	143.95	333	*e*P	PKPab	20 56 04.0	-0.2
	comp=Z,3.4nm,1.0s						
DAVA	Damuels	144.11	334	*e*P	PKPab	20 56 04.1	-0.7
	comp=Z,5.0nm,1.2s						
TORD	Torodi Ar. Bea	166.00	259	PKPab	PKPab	20 57 34.9	-2.6
	comp=Z,1.5nm,1.0s,baz=96,slow=2.9,SNR=4.7						

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*MAN **17** 20:43:14.9, 5°.53N×125°.91E, h106^{km}, mb5.4, ML4.3, MS4.5, Hypocentre not reviewed by the ISC*

*IDC **17** 20:43:14.4±4.7, 5°.46N×125°.21E, h90^{km}±50^{km}, mb3.3/4, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=95.3km s-min=15.6km az=70.0*

*NEIC **17** 20:43:16.4±2.8, 5°.71N±0°.07×126°.0E±0°.1, h116^{km}±8^{km}, mb4.2/20, Error ellipse: s-maj=17.1km s-min=9.2km az=77.0*

ISC 17 20:43:16.1±0.7**, 5°.63N**±0°.05×**125°.86E**±0°.07**, h111**^{km}±7^{km}**, n40, σ1^{s}.44**/48**, mb4.1**/11**, 2C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.49	343	⇓*e*P	Pn	20 43 33.1	+0.1
DDMP				*e*S	Sn	20 43 45.1	-0.7
GSPH	General Santos	1.01	297	⇓*i*P	Pn	20 43 36.9	-0.7
GSPH				*i* S	Sn	20 43 52.1	-1.7
MATI	Mati	1.36	17	⇓*e*P	Pn	20 43 41.2	-0.2
MATI				*e*S	Sn	20 43 58.2	-2.4
DAV	Davao City (W)	1.45	349	P	Pn	20 43 43.4	+1.0
	199nm,0.4s,baz=285,slow=22,SNR=1.8						
DAV				S	Sn	20 44 02.8	+0.4
	533nm,0.4s,baz=286,slow=23,SNR=12						
KCP	Kidapawan	1.56	331	⇓*i*P	Pn	20 43 44.7	+0.9
KCP				*i* S	Sn	20 44 06.9	+2.0
CTBH	Cotabato--PC H	2.25	315	⇑*i*P	Pn	20 43 52.4	+0.1
CTBH				*i* S	Sn	20 44 19.2	-0.9
BIPH	Bislig	2.58	11	⇑*e*P	Pn	20 43 58.4	+1.7
BIPH				*e*S	Sn	20 44 29.7	+1.9
PAGZ	Pagadian	3.30	312	⇓*e*P	Pn	20 44 06.9	+0.8
GLSP	General Luna,	4.13	4	⇓*e*P	Pn	20 44 19.3	+2.0
GLSP				*e*S	Sn	20 45 07.3	+2.5
TNTI	Ternate	5.06	163		Pn	20 44 30.8	+1.0
TOLI2	Tolitoli	6.77	229		Pn	20 44 53.8	+0.9
LUWI	Luwuk	7.31	205		Pn	20 45 01.5	+1.2
MYLDM	Lahad Datu	7.34	267		Pn	20 45 03.9	+3.2
SIJI	Sorong	8.42	140	P	Pn	20 45 17.3	+1.9
	1.1nm,0.3s,baz=327,slow=18,SNR=4.5						
	3.5nm,0.4s						
MTN	Manton Dam	19.09	164	P	P	20 47 29.0	-1.2
MTN				IAmb	IAmb	20 47 45.4	
	comp=Z,19nm,1.5s						
KNRA	Kununurra	21.37	172	P	P	20 47 55.9	+1.2
KNRA				IAmb	IAmb	20 47 58.1	
	comp=Z,12nm,0.8s						
COEN	Coen	25.97	139	P	P	20 48 36.4	-2.2
JCJ	Chichijima	26.41	34	P	P	20 48 41.0	-1.5
WB0	Warramunga Arr	26.60	162	P	P	20 48 44.3	+0.1
WRAB	Tennant Creek	26.75	162	P	P	20 48 43.9	-1.6
WRAB				IAmb	IAmb	20 48 49.6	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	26.75	162	P	P	20 48 45.9	+0.3
	comp=Z,0.3nm,0.6s,baz=336,slow=10,SNR=7.7						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	26.75	162	P	P	20 48 44.8	-0.7
WB2	Warramunga Arr	26.75	162	P	P	20 48 44.1	-1.5
WB2				IAmb	IAmb	20 49 05.9	
	comp=Z,9.5nm,1.3s						
WR0	Warramunga Arr	26.83	162	P	P	20 48 44.7	-1.6
WR0				IAmb	IAmb	20 49 18.6	
	comp=Z,11nm,1.4s						
PSA00	Pilbara Seismi	27.67	192	P	P	20 48 54.5	+0.7
PSA00				IAmb	IAmb	20 48 58.4	
	comp=Z,13nm,1.4s						
PSA00	Pilbara Seismi	27.67	192	P	P	20 48 52.9	-0.9
PSA00				IAmb	IAmb	20 48 55.5	
	comp=Z,4.7nm,1.4s						
ASAR	Alice Springs	30.16	165	P	P	20 49 16.6	+0.7
	comp=Z,0.3nm,0.5s,baz=344,slow=7.2,SNR=6.0						
ASAR				PcP	PcP	20 52 14.7	0.0
	comp=Z,0.2nm,0.4s,baz=342,slow=3.4,SNR=1.7						
	comp=Z,0.3nm,0.5s						
MORW	Morawa	35.77	195	P	P	20 50 04.6	+0.1
FORT	Forrest	36.27	177	P	P	20 50 09.6	+0.9
BBOO	Buckleboo	39.44	166	P	P	20 50 36.9	+1.4
STKA	Stephens Creek	40.21	159	P	P	20 50 43.1	+1.3
	comp=Z,1.3nm,0.6s,baz=343,slow=11,SNR=5.2						
	comp=Z,1.3nm,0.6s						
STKA	Stephens Creek	40.21	159	P	P	20 50 40.7	-1.1
MK31	Makanchi Array	55.51	325	P	P	20 52 38.6	-1.0
MK31				IAmb	IAmb	20 52 48.8	
	comp=Z,3.5nm,1.6s						
MKAR	Makanchi Array	55.51	325	P	P	20 52 38.5	-1.1
	comp=Z,0.3nm,0.3s,baz=114,slow=6.9,SNR=9.1						
	comp=Z,0.3nm,0.3s						
MIDW	Midway	58.19	60	P	P	20 52 58.7	-0.2
KURK	Kurchatov	59.68	327	P	P	20 53 07.3	-1.5
KURK				IAmb	IAmb	20 53 36.2	
	comp=Z,1.8nm,1.0s						
ABKAR	Akbulak array	70.14	321	P	P	20 54 15.0	-1.6
ABKAR	Akbulak array	70.14	321	P	P	20 54 14.7	-1.9
ABKAR				IAmb	IAmb	20 54 29.5	
	comp=Z,3.1nm,1.5s						
CASY	Casey	72.59	186	P	P	20 54 33.1	+2.2
PPT2	Papeete2	86.53	108	*e*LR	LR	20 55 56.0	
	comp=Z,417nm,30.0s						

IDC 17 20:50:02.3±7.7**, 3°.56N**×**124°.23E, h348**^{km}±83^{km}**, mb3.1**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=129.7km s-min=20.0km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.38	157	P	P	20 54 59.0	-0.2
	0.3nm,0.5s,baz=336,slow=10,SNR=5.9						
WRA				PcP	PcP	20 58 22.0	+0.7
	0.2nm,0.9s,baz=349,slow=2.2,SNR=1.3						
	0.3nm,0.5s						
SONM	Songino Array	46.71	344	P	P	20 57 57.6	+0.1
	0.5nm,0.6s,baz=156,slow=7.9,SNR=3.7						
	0.5nm,0.6s						
MKAR	Makanchi Array	56.30	326	P	P	20 59 08.0	+0.2
	0.5nm,0.3s,baz=121,slow=8.0,SNR=21						
	0.5nm,0.3s						
FINES	FINESS Array B	90.80	332	P	P	21 02 24.6	-1.8
	1.3nm,0.8s,baz=48,slow=4.1,SNR=4.7						
	1.3nm,0.8s						

DJA 17 21:05:25.3±0.6**, 0°N**±6°×**12°2E**±°**, h186**^{km}±5^{km}**, M3.1**/6**, mb3.6**/1**, MLv2.9**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MRSI	Marisa	0.38	302	P	Pn	21 05 50.9	+0.6
MRSI				S	Sn	21 06 09.8	+0.2
GTOI	Gorontalo	0.83	65	P	Pn	21 05 54.0	+1.5
GTOI				S	Sn	21 06 15.7	+2.3
APSI	Ampana	1.33	207	P	Pn	21 05 56.9	+0.6
LUWI	Luwuk	1.41	159	P	Pn	21 05 58.0	+1.0
LUWI				S	Sn	21 06 21.8	+0.2
MPSI	Mapaga	2.36	271	P	Pn	21 06 07.2	+0.4
SANI	Sanana	4.39	122	P	Pn	21 06 30.8	-0.8
LBMI	Labuha	5.32	100	P	Pn	21 06 41.5	-2.1

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*MAN **17** 21:06:32.3, 4°.75N×126°.85E, h8^{km}, mb5.3, ML4.2, MS4.4, Hypocentre not reviewed by the ISC*

*NEIC **17** 21:06:43.2±1.3, 5°.41N±0°.07×126°.6E±0°.1, h50^{km}±9^{km}, mb4.2/17, Error ellipse: s-maj=15.5km s-min=8.4km az=65.0*

*IDC **17** 21:06:44.4±2.2, 5°.57N×126°.87E, h66^{km}±18^{km}, mb3.6/9, mbtmp3.9/10, Error ellipse: s-maj=60.5km s-min=11.5km az=61.0*

ISC 17 21:06:44.4±0.5**, 5°.34N**±0°.04×**126°.55E**±0°.07**, h66**^{km}**, n49, σ2^{s}.14**/56**, mb4.1**/16**, 1C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.13	313	*e*S	Sn	21 07 17.2	-2.0
DDMP	Don Marcelino,	1.13	313	⇓*e*P	Pn	21 07 01.1	-3.3
MATI	Mati	1.62	350	⇓*e*P	Pn	21 07 08.8	-2.1
MATI				*e*S	Sn	21 07 39.2	+8.2
GSPH	General Santos	1.76	295	⇑*i*P	Pn	21 07 08.9	-3.9
DAV	Davao City (W)	1.97	331	P	Pn	21 07 14.5	-1.1
	146nm,0.3s,baz=126,slow=2.4,SNR=7.5						
DAV				S	Sn	21 07 40.1	+0.7
	287nm,0.5s,baz=114,slow=15,SNR=4.4						
DAV	Davao City (W)	1.97	331		Pn	21 07 13.0	-2.6
KCP	Kidapawan	2.20	319	⇓*i*P	Pn	21 07 18.3	-0.5
KCP				*i* S	Sn	21 07 50.5	+5.4
BIPH	Bislig	2.83	356	⇓*e*P	Pn	21 07 23.6	-3.7
BIPH				*e*S	Sn	21 07 57.7	-2.7
CTBH	Cotabato--PC H	2.96	309	⇓*i*P	Pn	21 07 29.1	+0.2
PAGZ	Pagadian	4.01	309	⇓*e*P	Pn	21 07 44.2	+0.7
GLSP	General Luna,	4.44	355	⇓*e*P	Pn	21 07 50.1	+0.8
GLSP				*e*S	Sn	21 08 44.0	+4.4
TNTI	Ternate	4.61	170	Pn	Pn	21 07 50.2	-1.3
TNTI				Sn	Sn	21 08 45.9	+2.0
TOLI2	Tolitoli	7.12	234		Pn	21 08 23.5	-2.5
SIJI	Sorong	7.76	142	P	Pn	21 08 34.0	-0.8
	2.0nm,0.3s,baz=336,slow=20,SNR=1.5						
MYLDM	Lahad Datu	8.02	269		Pn	21 08 38.4	+0.1
MTN	Manton Dam	18.63	166	P	P	21 10 56.0	-0.9
MTN				IAmb	IAmb	21 11 02.1	
	comp=Z,21nm,1.3s						
KNRA	Kununurra	20.99	174	P	P	21 11 23.0	+0.5
KNRA				IAmb	IAmb	21 11 50.5	
	comp=Z,13nm,1.1s						
WB0	Warramunga Arr	26.11	163	P	P	21 12 13.5	+1.1
WB0				IAmb	IAmb	21 12 22.6	
	comp=Z,7.6nm,0.7s						
WRA	Warramunga Arr	26.26	163	P	P	21 12 15.3	+1.6
	comp=Z,1.8nm,0.6s,baz=343,slow=10.0,SNR=14						
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	26.26	163	P	P	21 12 14.4	+0.7
RPSI	Rantau Prapat	27.68	266	P	P	21 12 26.6	+0.1
ASAR	Alice Springs	29.71	166	P	P	21 12 45.8	+1.3
	comp=Z,0.2nm,0.6s,baz=348,slow=7.5,SNR=6.2						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	29.71	166	P	P	21 12 45.4	+0.9
CMAR	Chiang Mai Arr	29.93	298	P	P	21 12 47.9	+1.4
	comp=Z,0.4nm,0.6s,baz=91,slow=7.3,SNR=4.1						
	comp=Z,0.4nm,0.6s						
CHTO	Chiang Mai	30.07	299	P	P	21 12 46.2	-1.5
CHTO				IAmb	IAmb	21 12 59.3	
	comp=Z,3.9nm,1.2s						
KSRS	Korea Array	31.99	2	ScP	ScP	21 19 26.3	-4.7
	comp=Z,1.6nm,0.8s,baz=199,slow=2.3,SNR=4.8						
BLDU	Ballidu	36.97	194	P	P	21 13 49.7	+2.3
STKA	Stephens Creek	39.69	160	P	P	21 14 11.3	+1.1
	comp=Z,0.5nm,0.3s,baz=329,slow=12,SNR=3.0						
	comp=Z,0.5nm,0.3s						
STKA	Stephens Creek	39.69	160	P	P	21 14 10.7	+0.4
SONM	Songino Array	45.73	341	P	P	21 14 59.6	+0.4
	comp=Z,0.4nm,0.6s,baz=158,slow=8.1,SNR=3.8						
	comp=Z,0.4nm,0.6s						
MK31	Makanchi Array	56.14	325	P	P	21 16 16.6	-0.7
MK31				IAmb	IAmb	21 16 28.9	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	56.14	325	P	P	21 16 16.9	-0.4
	comp=Z,1.4nm,0.6s,baz=117,slow=7.8,SNR=22						
MKAR				PcP	PcP	21 17 14.9	+0.4
	comp=Z,1.6nm,0.7s,baz=124,slow=4.4,SNR=7.1						
	comp=Z,1.4nm,0.6s						
MAKZ	Makanchi	56.33	325	P	P	21 16 18.2	-0.4

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MAKZ                                 IAmb    IAmb     21 16 35.2
       comp=Z,2.3nm,1.1s
KDJ    Kajisay            57.04 318  P       P        21 16 24.0   0.0
KDJ                                  IAmb    IAmb     21 16 24.2
       comp=Z,1.7nm,0.8s
ZALV   Zalesovo Beam      59.08 333  P       P        21 16 37.7   0.0
       comp=Z,0.4nm,0.3s,baz=142,slow=4.9,SNR=3.5
       comp=Z,0.4nm,0.3s
ZALV   Zalesovo Beam      59.08 333  P       P        21 16 37.5  -0.2
KURK   Kurchatov          60.30 327  P       P        21 16 45.2  -0.9
BTK    Batken             60.69 313  P       P        21 16 48.6  -0.5
BTK                                  IAmb    IAmb     21 17 00.3
       comp=Z,2.0nm,0.8s
GAR    Garm               60.71 312  P       P        21 16 48.7  -0.7
KKAR   Karatay Array      61.94 317  P       P        21 16 56.6  -0.9
KKAR   Karatay Array      61.94 317  P       P        21 16 57.1  -0.4
KKAR                                 IAmb    IAmb     21 16 59.8
       comp=Z,1.1nm,0.8s
BRVK   Borovoye           65.96 327  P       P        21 17 23.8  +0.1
TIXI   Tiksi              66.25   1  P       P        21 17 24.9  -0.2
ABKAR  Akbulak array      70.80 320  P       P        21 17 53.4  -0.6
ABKAR  Akbulak array      70.80 320  P       P        21 17 53.1  -0.8
ABKAR                                IAmb    IAmb     21 18 02.3
       comp=Z,1.4nm,0.8s
VNDA   Vanda              85.03 173  P       P        21 19 12.9  +0.6
ARCES  ARCESS Array B     88.89 340  P       P        21 19 29.9  -1.3
       comp=Z,3.5nm,0.8s,baz=90,slow=6.3,SNR=6.4
       comp=Z,3.5nm,0.8s
FINES  FINESS Array B     90.34 332  P       P        21 19 36.7  -1.4
       comp=Z,0.7nm,0.7s,baz=69,slow=6.3,SNR=7.4
       comp=Z,0.7nm,0.7s
TORD   Torodi Ar. Bea    122.24 289  PKP     PKPdf    21 25 32.6  -0.3
       comp=Z,0.6nm,1.0s,baz=55,slow=2.7,SNR=2.2
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IDC ***17*** *21:08:54.9±0.4, 9°.89S×107°.60E, h0^{km}, mb4.7/32, mbtmp4.7/33, ML4.0/1, MS4.0/59, Error ellipse: s-maj=14.5km s-min=11.2km az=46.0*

BJI ***17*** *21:08:55.0±0.0, 10°.10S×107°.60E, h10^{km}, mb4.8/67, mB5.1/42, Ms4.8/59, Ms7 4.6/58*

DJA ***17*** *21:08:56.0±0.1, 10°S±2°×10°8E±°, h10^{km}, M5.0/82, mb5.1/82, mB5.5/44, MLv5.5/24, Mw(mB)4.9/44*

NEIC ***17*** *21:08:56.3±1.7, 10°.07S±0°.06×107°.54E±0°.05, h10^{km}±1^{km}, mb5.2/118, Error ellipse: s-maj=10.6km s-min=8.0km az=157.0*

MOS ***17*** *21:08:57.2±0.9, 9°.98S×107°.68E, h32^{km}, mb5.2/50, MS4.3/5, Error ellipse: s-maj=9.1km s-min=4.8km az=114.9*

GCMT ***17*** *21:09:00.3±0.2, 10°.09S±0°.01×107°.68E±0°.01, h18^{km}, MW5.1/115, Moment Tensor Solution. s64,c90; s115,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.83±.12; $M_{\theta\theta}$5.29±.11; $M_{\phi\phi}$-4.46±.12; $M_{r\theta}$0.82±.22; $M_{\theta\phi}$-1.91±.09; $M_{\phi r}$-1.94±.28; Best double couple: $M_0$5.68100×10^{16} NP1:ϕ_s57.00000°,δ68.00000°, λ-172.00000°. NP2:ϕ_s324.00000°,δ83.00000°, λ-23.00000°. Principal axes: T 5.8640, Plg10.0000°, Azm12.0000°; N -0.3630, Plg66.0000°, Azm127.0000°; P -5.4970, Plg21.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 21:08:58.0±0.2**, 10°.09S**±0°.03×**107°.57E**±0°.04**, h23**^{km}**, n631, σ1**^{s}**45**/702**, mb5.1**/148**, MS4.3**/81**, 23C-46D, South of Jawa**

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Code   Station Name          Δ°  AZ°     Phase ID             Time   Res
                                     Op      ISC         h  m  s   ISC
XMI    Christmas Isla      1.88 259  P       Pn       21 09 27.9  -0.9
XMIS   Christmas Isla      1.93 258  Pn      Pn       21 09 28.1  -1.3
XMIS                                 Sn      Sn       21 09 48.7  -4.2
XMIS   Christmas Isla      1.93 258  P       Pn       21 09 28.2  -1.2
CMJI   Cimerak             2.45  21  P       Pn       21 09 34.2  -2.4
CNJI   Cibinong            2.80 351  P       Pn       21 09 39.3  -2.1
SKJI   Sukabumi            3.23 342  P       Pn       21 09 45.5  -1.7
LEM    Lembang             3.24   1  Pn      Pn       21 09 47.0  -0.6
       218nm,0.3s,baz=74,slow=15,SNR=95
LEM                                  Sn      Sn       21 10 26.6  +0.9
       565nm,0.3s,baz=334,slow=20,SNR=36
LEM                                  LR      LR       21 11 23.7
       comp=Z,9µm,20.7s,baz=204,slow=49
LEM    Lembang             3.24   1  P       Pn       21 09 47.2  -0.4
YOGI   Yogyakarta          3.52  50  P       Pn       21 09 49.7  -1.6
DBJI   Dramaga             3.61 347  P       Pn       21 09 50.9  -1.6
UGM    Wanagama            3.63  54  Pn      Pn       21 09 51.2  -1.6
UGM    Wanagama            3.63  54  P       Pn       21 09 51.5  -1.4
UGM    Wanagama            3.63  54  P       Pn       21 09 52.7  -0.2
WOJI   Wonogiri, Jawa      4.00  56  P       Pn       21 09 56.4  -1.5
PCJI   Pacitan             4.03  62  P       Pn       21 09 57.8  -0.5
SMRI   Semarang            4.15  43  Pn      Pn       21 10 00.1  +0.1
SMRI   Semarang            4.15  43  P       Pn       21 09 59.7  -0.3
SMRI   Semarang            4.15  43  P       Pn       21 10 00.7  +0.7
PWJI   Pagerwojo           4.66  64  P       Pn       21 10 06.2  -0.8
UWJI   Ujung Watu          4.95  43  P       Pn       21 10 10.2  -0.8
BLSI   Bandar Lampung      5.23 334  P       Pn       21 10 14.0  -0.8
       2.1nm6µm309nm,0.7s
BLSI                                 S       Sn       21 11 09.3  -5.1
       2.1nm6µm309nm,0.7s
TBJI   Tambak Boyo         5.34  53  P       Pn       21 10 16.5  +0.2
       1.5nm192nm,0.6s
KASI   Kota Agung          5.46 326  P       Pn       21 10 16.3  -1.7
       5.8nm12µm199nm,0.4s
GRJI   Gresik              5.79  57  P       Pn       21 10 16.8  -5.8
KLI    Kotabumi            5.85 332  P       Pn       21 10 19.9  -3.4
       3.3nm5µm263nm,0.7s
GMJI   Gumukmas            6.08  73  P       Pn       21 10 25.8  -0.7
       6µm475nm,0.7s
LWLI   Liwa                6.12 325  P       Pn       21 10 25.2  -2.0
       9.0nm12µm635nm,0.5s
BLJI   Banyuglugur         6.39  69  P       Pn       21 10 31.5  +0.7
       6µm296nm,0.6s
BWJI   Bawean              6.57  50  P       Pn       21 10 32.7  -0.5
       2.1nm352nm,1.0s
JAGI   Jajag, Banyuwa      6.70  77  Pn      Pn       21 10 33.6  -1.4
JAGI   Jajag, Banyuwa      6.70  77  P       Pn       21 10 33.2  -1.8
       5.2nm11µm574nm,0.5s
JAGI   Jajag, Banyuwa      6.70  77  P       Pn       21 10 34.5  -0.5
ABJI   Asem Bagus          6.97  71  P       Pn       21 10 39.9  +1.2
       9µm437nm,0.5s
KMMI   Kalianget           7.01  65  P       Pn       21 10 39.2  -0.1
       0.7nm148nm,0.9s
TPI    Tanjungpandan       7.29   1  P       Pn       21 10 42.4  -0.7
       0.3nm902nm50nm,1.0s
MNAI   Manna               7.30 321          Pn       21 10 41.6  -1.7
MNAI   Manna               7.30 321  P       Pn       21 10 41.2  -2.1
       3.8nm423nm,0.5s
IGBI   Denpasar            7.58  81  P       Pn       21 10 45.2  -1.9
       2.0nm8µm428nm,0.6s
PMBI   Palembang           7.64 339  Pn      Pn       21 10 47.4  -0.5
DNP    Denpasar            7.67  80  P       Pn       21 10 48.7  +0.3
       10nm23µm2µm,0.5s
SRBI   Singaraja           7.81  76  P       Pn       21 10 50.2  -0.1
       2.2nm5µm507nm,0.6s
PBKI   Pangkalan Bun       8.39  29  P       Pn       21 10 57.5  -0.8
       2µm200nm,1.1s
JMBI   JAMBI               9.26 335  P       Pn       21 11 08.3  -1.9
       110nm,0.4s
BBKI   Banjar Baru         9.77  48  P       Pn       21 11 16.9  -0.3
       34nm,1.0s
KRJI   Kerinci            10.00 322  P       Pn       21 11 20.3  -0.1
       288nm,0.9s
DSRI   Dabo               10.00 343  P       Pn       21 11 19.7  -0.7
       441nm19nm,1.0s
PLAI   Plampang           10.15  84  P       Pn       21 11 21.8  -0.6
       5µm723nm,0.8s
PLAI   Plampang           10.15  84  P       Pn       21 11 21.5  -0.9
PPSI   Pulau Pagai        10.46 314  P       Pn       21 11 25.0  -1.6
       220nm,0.8s
COCO   West Island        10.74 258          Pn       21 11 29.5  -0.9
COCO   West Island        10.74 258  P       Pn       21 11 29.5  -0.9
STKI   Sintang            10.81  21  P       Pn       21 11 29.9  -1.6
       9µm37nm,1.5s
MTKI   Muara Teweh, K     11.65  39  P       Pn       21 11 42.2  -0.8
       2µm26nm,0.7s
WBSI   Waikabubak, Su     11.66  89  P       Pn       21 11 40.1  -3.0
KSM    Kuching            11.81  14          Pn       21 11 43.8  -1.3
SISI   Saibi              12.12 315  P       Pn       21 11 45.0  -4.4
       58nm,0.7s
BKNI   Bangkinang         12.22 328  Pn      Pn       21 11 46.6  -4.1
MYKOM  Kota Tinggi        12.37 342  Pn      Pn       21 11 50.8  -2.0
KAPI   Kappang            13.09  68  Pn      Pn       21 12 01.5  -1.1
       0.8nm,0.3s,baz=246,slow=11,SNR=6.3
KAPI                                 LR      LR       21 17 44.8
       comp=Z,534nm,19.9s,baz=256,slow=41
       16nm,0.8s
KAPI   Kappang            13.09  68  Pn      Pn       21 11 59.8  -2.8
KAPI   Kappang            13.09  68  P       Pn       21 11 59.8  -2.8
KAPI   Kappang            13.09  68  P       Pn       21 12 03.2  +0.6
KAPI                                 S       Sn       21 14 28.7  +1.1
KAPI   Kappang            13.09  68  P       Pn       21 12 03.6  +1.0
       72nm,1.5s
SBUM   Sibu               13.29  21          Pn       21 12 04.5  -0.9
BKSI   Bulukumba          13.31  70  P       Pn       21 12 04.8  -0.9
       1µm75nm,1.3s
SPSI   Sidrap Palu        13.55  64  P       Pn       21 12 08.0  -0.9
       582nm34nm,1.1s
BNSI   Bone               13.66  66  P       Pn       21 12 10.7  +0.3
       1µm43nm,0.8s
EDFI   Ende, Flores       14.00  86  P       Pn       21 12 08.8  -6.3
       584nm32nm,0.7s
GIRL   Giralia            14.02 154  P       Pn       21 12 11.8  -3.5
       baz=14,SNR=37
GIRL   Giralia            14.02 154  Pn      Pn       21 12 11.3  -3.9
TTSI   Tana Toraja        14.03  61  P       Pn       21 12 13.8  -1.7
       1µm78nm,1.4s
MMRI   Maumere            14.55  86  Pn      Pn       21 12 16.9  -5.7
MMRI   Maumere            14.55  86  P       Pn       21 12 20.5  -2.1
       174nm,1.1s
MMRI   Maumere            14.55  86  P       Pn       21 12 20.5  -2.1
       172nm,1.1s
GSI    Gunungsitoli       15.07 318  Pn      Pn       21 12 22.1  -7.5
GSI                                  IAmb    IAmb     21 12 38.5
       comp=Z,104nm,1.1s
GSI    Gunungsitoli       15.07 318  P       Pn       21 12 25.2  -4.4
       comp=Z,93nm,1.0s
GSI    Gunungsitoli       15.07 318  P       P        21 12 32.9  -1.8
PSI    Prapat             15.43 326  Pn      Pn       21 12 26.6  -7.9
       baz=170,slow=11
PSI                                  Sn      Sn       21 15 10.0   -15
       comp=Z,0.4nm,0.3s,baz=80,slow=20,SNR=1.1
PSI                                  LR      LR       21 19 21.4
       comp=Z,2µm,21.8s,baz=141,slow=41
BBSI   Bau Bau            15.55  74  P       Pn       21 12 30.7  -5.2
       comp=Z,129nmcomp=Z,8.4nm,1.1s
BATI   Baumata            15.85  92  Pn      Pn       21 12 36.7  -3.1
       comp=Z,25nm,0.3s,baz=211,slow=0.7,SNR=18
BATI                                 Sn      Sn       21 15 20.2   -15
       comp=Z,3.9nm,0.3s,baz=250,slow=22,SNR=1.3
BATI   Baumata            15.85  92  P       Pn       21 12 35.6  -4.2
       comp=Z,1µmcomp=Z,74nm,1.0s
IPM    Ipoh               15.87 335          Pn       21 12 37.8  -2.4
MPSI   Mapaga             16.06  51  P       Pn       21 12 42.7  +0.2
       comp=Z,548nmcomp=Z,52nm,1.0s
MBWA   Marble Bar         16.06 135          Pn       21 12 37.3  -5.2
MBWA   Marble Bar         16.06 135  P       Pn       21 12 37.8  -4.7
MBWA   Marble Bar         16.06 135  P       Pn       21 12 38.7  -3.8
PSA00  Pilbara Seismi     16.41 136  P       Pn       21 12 43.6  -3.4
SOEI   Soe                16.45  90          Pn       21 12 43.6  -4.1
SOEI                                 IAmb    IAmb     21 13 20.6
       comp=Z,259nm,1.0s
SOEI   Soe                16.45  90  P       Pn       21 12 43.6  -4.1
       comp=Z,3µmcomp=Z,243nm,0.9s
KCSI   Kotacane, Aceh     16.68 324  P       Pn       21 12 50.6  +0.2
       comp=Z,72nm,1.0s
APSI   Ampana             16.71  58  P       P        21 12 51.7  -1.2
       comp=Z,880nmcomp=Z,94nm,1.0s
KULM   Kulim              16.76 335  Pn      Pn       21 12 47.0  -4.4
TOLI2  Tolitoli           17.23  50          Pn       21 12 53.5  -3.8
TOLI2  Tolitoli           17.23  50  P       P        21 12 59.1  +0.4
LUWI   Luwuk              17.59  60  Pn      Pn       21 12 59.0  -2.8
MRSI   Marisa             17.74  55  P       Pn       21 13 03.1  -0.6
       comp=Z,2µmcomp=Z,181nm,0.9s
LHMI   Lhok Sumawe        18.54 325  P       P        21 13 11.7  -1.4
LHMI                                 IAmb    IAmb     21 13 30.9
       comp=Z,129nm,0.9s
LHMI   Lhok Sumawe        18.54 325  P       Pn       21 13 13.9  +0.5
       comp=Z,3µmcomp=Z,176nm,1.0s
LHMI   Lhok Sumawe        18.54 325  P       Pn       21 13 15.9  +2.5
MYLDM  Lahad Datu         18.67  36          P        21 13 14.2  -0.4
MYLDM                                IAmb    IAmb     21 13 46.2
       comp=Z,173nm,1.2s
GTOI   Gorontalo          18.70  56  P       P        21 13 12.6  -2.3
       comp=Z,568nmcomp=Z,32nm,1.0s
SANI   Sanana             19.97  68  P       P        21 13 28.0  -0.9
       comp=Z,1µmcomp=Z,59nm,0.8s
SANI   Sanana             19.97  68  P       Pn       21 13 29.9  -0.7
SRIT   Nakonsritamara     20.19 337  P       P        21 13 29.6  -1.6
SRIT                                 IAmb    IAmb     21 13 45.6
       comp=Z,161nm,1.4s
MORW   Morawa             20.48 158  P       Pn       21 13 35.9  -0.6
       baz=21,SNR=9.1
MORW   Morawa             20.48 158  P       P        21 13 33.4  -0.9
KNRA   Kununurra          21.39 107  P       P        21 13 44.9  +0.7
       baz=22,SNR=9.5
KNRA   Kununurra          21.39 107  P       P        21 13 42.9  -1.2
KNRA   Kununurra          21.39 107  P       P        21 13 43.7  -0.5
AAI    Ambon              21.43  74  P       P        21 13 44.7   0.0
       comp=Z,1µmcomp=Z,128nm,0.8s
LBMI   Labuha             21.93  66  P       P        21 13 50.4  +0.3
       comp=Z,1µmcomp=Z,107nm,0.9s
BLDU   Ballidu            22.12 159  P       P        21 13 53.7  +1.7
       baz=22,SNR=5.0
TNTI   Ternate            22.46  62  P       P        21 13 54.1  -1.6
TNTI                                 IAmb    IAmb     21 14 07.8
       comp=Z,136nm,1.1s
TNTI   Ternate            22.46  62  P       P        21 13 56.5  +0.7
       comp=Z,1µmcomp=Z,102nm,0.7s
TNTI   Ternate            22.46  62  P       P        21 13 57.3  +1.5
MTN    Manton Dam         23.25  99  P       P        21 14 03.9  -0.1
       baz=23,SNR=9.5
MTN    Manton Dam         23.25  99  P       P        21 14 02.7  -1.3
MTN                                  IAmb    IAmb     21 14 25.3
       comp=Z,105nm,1.2s
MTN    Manton Dam         23.25  99  P       P        21 14 03.9  -0.1
KLBR   Kellerberrin       23.39 158  P       P        21 14 07.2  +2.1
       baz=24,SNR=6.8
KLBR   Kellerberrin       23.39 158  P       P        21 14 04.3  -0.9
NWAO   Narrogin (SRO)     24.41 160  P       P        21 14 12.5  -2.3
NWAO                                 IAmb    IAmb     21 15 11.4
       comp=Z,61nm,1.2s
NWAO   Narrogin (SRO)     24.41 160  P       P        21 14 12.5  -2.3
NWAO                                 pmax    pmax
       comp=Z,61nm,1.3s
NWAO   Narrogin (SRO)     24.41 160  P       P        21 14 16.8  +2.0
NWAO                                 S       S        21 18 39.7  +6.3
WRKA   Warakurna          24.67 130  P       P        21 14 19.0  +1.7
       baz=25,SNR=8.6
SWI    Sorong             25.28  70  P       P        21 14 21.3  -1.6
       comp=Z,55nm,0.9s
SIJI   Sorong             25.28  70  P       P        21 14 21.9  -1.0
       comp=Z,33nm,0.8s,baz=286,slow=7.8,SNR=16
       comp=Z,33nm,0.8s
UBPT   Khong Chiam        25.29 355  P       P        21 14 21.7  -1.2
WB0    Warramunga Arr     27.61 113  P       P        21 14 43.0  -0.9
WB0                                  IAmb    IAmb     21 14 47.6
       comp=Z,31nm,0.8s
WRA    Warramunga Arr     27.61 114  P       P        21 14 43.6  -0.4
       comp=Z,23nm,1.0s,baz=286,slow=11,SNR=35
WRA                                  S       S        21 19 49.0   +24
       comp=Z,1.3nm,1.0s,baz=288,slow=24,SNR=2.9
       comp=Z,23nm,1.0s
WRA    Warramunga Arr     27.61 114  P       P        21 14 43.2  -0.7
WRA    Warramunga Arr     27.61 114  P       P        21 14 43.2  -0.7
WRA                                  pmax    pmax
       comp=Z,2.0nm,0.9s
WRAB   Tennant Creek      27.62 114  P       P        21 14 43.6  -0.4
WRAB   Tennant Creek      27.62 114deP     P        21 14 43.5  -0.5
WRAB                                 pmax    pmax
       comp=Z,32nm,1.0s
WB2    Warramunga Arr     27.62 114  P       P        21 14 43.2  -0.8
FORT   Forrest            28.05 140  P       P        21 14 48.2  +0.4
FORT                                 IAmb    IAmb     21 15 44.2
       comp=Z,39nm,0.8s
AS31   Alice Springs      28.52 122  P       P        21 14 52.0  -0.1
ASAR   Alice Springs      28.52 122  P       P        21 14 52.5  +0.4
       comp=Z,4.1nm,0.6s,baz=302,slow=8.1,SNR=26
ASAR                                 S       S        21 20 07.8   +29
       comp=Z,1.1nm,0.8s,baz=294,slow=13,SNR=1.9
ASAR                                 LR      LR       21 26 41.2
       comp=Z,779nm,19.3s,baz=296,slow=37
       comp=Z,4.1nm,0.6s
ASAR   Alice Springs      28.52 122          P        21 14 50.5  -1.6
ASAR   Alice Springs      28.52 122  P       P        21 14 50.5  -1.6
QIZ    Qiongzhong         29.02   4  P       P        21 14 57.3  +0.9
QIZ                                  sP      sP       21 15 04.8  +1.5
QIZ                                  S       S        21 19 44.8  -1.8
QIZ                                  pmax    pmax
       comp=Z,13nm,1.6s
QIZ                                  LR      LR
       comp=Z,350nm,12.7s
QIZ                                  LR      LR
       comp=Z,730nm,15.1s
QIZ                                  LR      LR
       comp=Z,630nm,14.9s
CM31   Chiang Mai Arr     29.62 343  P       P        21 15 00.8  -0.9
CM31   Chiang Mai Arr     29.62 343  P       P        21 15 02.5  +0.8
       SNR=8.5
CM31                                 S       S        21 19 54.7  -1.2
CMAR   Chiang Mai Arr     29.62 343  P       P        21 15 01.8   0.0
       comp=Z,5.2nm,0.8s,baz=179,slow=8.1,SNR=23
CMAR                                 LR      LR       21 28 31.0
       comp=Z,430nm,18.4s,baz=180,slow=40
       comp=Z,5.2nm,0.8s
CMAR   Chiang Mai Arr     29.62 343  P       P        21 15 00.3  -1.4
CMAR   Chiang Mai Arr     29.62 343  P       P        21 15 00.3  -1.4
CHTO   Chiang Mai         29.95 343  P       P        21 15 03.6  -1.1
CHTO   Chiang Mai         29.95 343  P       P        21 15 03.6  -1.1
CHTO                                 pmax    pmax
       comp=Z,21nm,1.1s
CHTO   Chiang Mai         29.95 343  P       P        21 15 05.3  +0.6
CHTO                                 S       S        21 19 57.0  -4.2
PALK   Pallekele          31.83 302  P       P        21 15 23.3  +1.8
QIS    Mount Isa          32.54 112  P       P        21 15 28.7  +1.1
       baz=33,SNR=6.3
BBOO   Buckleboo          34.64 135  P       P        21 15 45.1  -0.6
BBOO                                 IAmb    IAmb     21 16 49.5
       comp=Z,78nm,1.8s
H08S2  Diego Garcia H     34.73 271  T       T        21 50 44.6
       baz=97,slow=75
H08S3  Diego Garcia H     34.74 271  T       T        21 50 45.4
       baz=97,slow=75
H08S1  Diego Carcia H     34.75 271  T       T        21 50 46.4
       baz=97,slow=75
COEN   Coen               35.02 100  P       P        21 15 49.5  +0.3
       baz=35,SNR=4.9
COEN   Coen               35.02 100  P       P        21 15 48.1  -1.1
COEN                                 IAmb    IAmb     21 15 53.1
       comp=Z,35nm,1.1s
KMI    Kunming            35.31 352 ⇑P       P        21 15 53.6  +1.8
KMI                                  pP      pP       21 15 56.4  -0.3
KMI                                  sP      sP       21 15 58.0  -0.7
KMI                                  pmax    pmax
       comp=Z,14nm,1.3s
KMI                                  LR      LR
       comp=Z,1µm,15.2s
KMI                                  LR      LR
       comp=Z,520nm,14.3s
KMI                                  LR      LR
       comp=Z,1µm,14.3s
GYA    Guiyang            36.34 359⇑iP       P        21 16 01.3  +0.9
GYA                                  sP      pwP      21 16 13.3  -0.9
GYA                                  S       S        21 21 37.5  -2.9
GYA                                  pmax    pmax
       comp=Z,25nm,0.7s
GYA                                  LR      LR
       comp=Z,470nm,13.2s
GYA                                  LR      LR
       comp=Z,800nm,18.1s
GYA                                  LR      LR
       comp=Z,780nm,16.2s
MTSU   Mount Surprise     36.47 107  P       P        21 16 02.8  +1.1
       baz=37,SNR=4.7
PZH    PanZhiHua          36.81 351  P       P        21 16 05.0  +0.5
PZH                                  pP      pP       21 16 08.1  -1.3
PZH                                  S       S        21 21 46.4  -1.3
PZH                                  pmax    pmax
       comp=Z,10.0nm,0.8s
PZH                                  pmax    pmax
       comp=Z,110nm,5.9s
PZH                                  LR      LR
       comp=Z,3µm,14.3s
PZH                                  LR      LR
       comp=Z,1µm,15.8s
PZH                                  LR      LR
       comp=Z,2µm,15.9s
HTT    Hallett            37.00 134  P       P        21 16 08.1  +2.2
       baz=37,SNR=7.2
PCHI   Peechi             37.20 303 eP       P        21 16 08.8  +1.0
STKA   Stephens Creek     38.20 130  P       P        21 16 17.1  +1.0
       comp=Z,17nm,0.5s,baz=306,slow=7.9,SNR=23
STKA                                 LR      LR       21 33 01.2
       comp=Z,652nm,18.7s,baz=295,slow=38
       comp=Z,17nm,0.5s
STKA   Stephens Creek     38.20 130  P       P        21 16 17.2  +1.0
       baz=38,SNR=33
STKA   Stephens Creek     38.20 130  P       P        21 16 16.3  +0.1
STKA   Stephens Creek     38.20 130  P       P        21 16 16.3  +0.1
STKA                                 pmax    pmax
       comp=Z,10.0nm,1.2s
QLP    Quilpie            38.30 120  P       P        21 16 18.1  +1.1
       baz=38,SNR=4.0
CNSH   ChangSha           38.40   8 ⇓P       P        21 16 19.1  +1.4
CNSH                                 S       S        21 22 17.6  +6.2
CNSH                                 pmax    pmax
       comp=Z,34nm,1.1s
CNSH                                 LR      LR
       comp=Z,620nm,14.7s
CNSH                                 LR      LR
       comp=Z,490nm,15.8s
CNSH                                 LR      LR
       comp=Z,770nm,15.4s
CTA    Charters Tower     38.56 110  P       P        21 16 21.1  +1.8
       comp=Z,5.0nm,0.7s,baz=260,slow=8.3,SNR=7.2
CTA                                  LR      LR       21 31 58.4
       comp=Z,682nm,20.4s,baz=276,slow=36
       comp=Z,5.0nm,0.7s
CTAO   Charters Tower     38.56 110  P       P        21 16 18.6  -0.8
CTAO                                 IAmb    IAmb     21 16 25.3
       comp=Z,89nm,2.0s
CTAO   Charters Tower     38.56 110  P       P        21 16 18.6  -0.8
CTAO                                 pmax    pmax
       comp=Z,89nm,2.0s
PMG    Port Moresby       39.01  93  P       P        21 16 24.7  +1.6
       comp=Z,39nm,1.0s,baz=294,slow=10.0,SNR=5.3
PMG                                  LR      LR       21 33 39.1
       comp=Z,273nm,20.3s,baz=258,slow=38
       comp=Z,39nm,1.0s
PMG    Port Moresby       39.01  93  P       P        21 16 23.4  +0.2
PMG                                  IAmb    IAmb     21 16 28.7
       comp=Z,44nm,1.0s
PMG    Port Moresby       39.01  93⇓eP       P        21 16 24.4  +1.3
PMG                                  pmax    pmax
       comp=Z,45nm,0.9s
HYBB   Hyderabad (bro     39.62 313 eP       P        21 16 27.9  -0.3
ENH    Enshi              40.17   3  P       P        21 16 31.6  -1.0
WHN    Wuhan              40.92   9 ⇓P       P        21 16 39.8  +1.1
WHN                                  S       S        21 22 52.4  +3.2
WHN                                  LR      LR
       comp=Z,1µm,14.2s
WHN                                  LR      LR
       comp=Z,430nm,14.7s
WHN                                  LR      LR
       comp=Z,1µm,21.4s
CD2    Chengdu            40.93 355  P       P        21 16 40.4  +1.6
CD2                                  S       S        21 22 56.6  +7.1
CD2                                  pmax    pmax
       comp=Z,30nm,1.0s
CD2                                  LR      LR
       comp=Z,610nm,14.7s
CD2                                  LR      LR
       comp=Z,910nm,15.2s
CMSA   Cobar Meteorol     41.23 127  P       P        21 16 43.0  +1.6
       baz=41,SNR=10.0
JOW    Kunigami           41.85  28  P       P        21 16 46.8  +0.4
       comp=Z,26nm,0.9s,baz=246,slow=5.0,SNR=4.3
JOW                                  LR      LR       21 37 14.8
       comp=Z,146nm,18.4s,baz=192,slow=41
       comp=Z,26nm,0.9s
JOW    Kunigami           41.85  28  P       P        21 16 45.9  -0.5
LSA    Lhasa              42.60 339  P       P        21 16 52.7  -0.4
LSA                                  IAmb    IAmb     21 17 10.5
       comp=Z,73nm,1.1s
LSA    Lhasa              42.60 339  P       P        21 16 52.7  -0.4
LSA                                  pmax    pmax
       comp=Z,73nm,1.1s
LSA    Lhasa              42.60 339  P       P        21 16 53.8  +0.7
LSA    Lhasa              42.60 339  P       P        21 16 53.7  +0.7
NJ2    Nanjing            43.27  14 eP       P        21 16 59.6  +1.7
NJ2                                  pP      pP       21 17 02.5  -0.4
NJ2                                  sP      sP       21 17 07.3  +2.4
NJ2                                  pmax    pmax
       comp=Z,35nm,0.7s
NJ2                                  LR      LR
       comp=Z,370nm,18.0s
NJ2                                  LR      LR
       comp=Z,290nm,18.9s
NJ2                                  LR      LR
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	comp=Z,420nm,17.1s						
GUMO	**Guam**	**43.86**	**58**	LR	LR	21 33 30.5	
	comp=Z,61nm,21.3s,baz=230,slow=34						
XAN	**Xi'an**	**43.91**	**2**	⇑P	**P**	**21 17 02.8**	**-0.2**
XAN				pP	pP	21 17 07.0	-1.0
XAN				sP	sP	21 17 09.9	-0.1
XAN				PcP	**PcP**	**21 18 50.4**	**+1.5**
XAN				S	**S**	**21 23 31.8**	**-1.4**
XAN				ScS	**ScS**	**21 27 03.9**	**+2.9**
XAN				pmax	pmax		
	comp=Z,30nm,0.8s						
XAN				pmax	pmax		
	comp=Z,260nm,3.9s						
XAN				LR	LR		
	comp=Z,750nm,16.5s						
XAN				LR	LR		
	comp=Z,830nm,16.5s						
XAN				LR	LR		
	comp=Z,1µm,17.3s						
EIDS	**Eidsvold**	**43.93**	**116**	P	**P**	**21 17 03.5**	**+0.1**
LYN	**LuoYang**	**44.64**	**6**	*e*P	**P**	**21 17 11.8**	**+3.0**
LYN				sP	pwP	21 17 18.9	-3.8
LYN				S	**S**	**21 23 47.3**	**+3.5**
LYN				pmax	pmax		
	comp=Z,40nm,0.6s						
LYN				pmax	pmax		
	comp=Z,290nm,5.5s						
LYN				LR	LR		
	comp=Z,540nm,15.4s						
LYN				LR	LR		
	comp=Z,330nm,13.2s						
LYN				LR	LR		
	comp=Z,770nm,16.0s						
CAN	**Canberra**	**45.26**	**130**	P	**P**	**21 17 14.4**	**+0.5**
CAN				IAmb	IAmb	21 17 34.2	
	comp=Z,39nm,1.3s						
CAN	**Canberra**	**45.26**	**130**	P	**P**	**21 17 14.4**	**+0.5**
CAN				pmax	pmax		
	comp=Z,39nm,1.3s						
LZH	**Lanzhou**	**46.06**	**356**	*e*P	**P**	**21 17 21.5**	**+1.2**
LZH				pP	sP	21 17 26.3	-1.0
LZH				PcP	**PcP**	**21 18 56.8**	**+0.3**
LZH				S	**S**	**21 24 05.1**	**+0.4**
LZH				sS	sS	21 24 14.8	+1.9
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.6s						
LZH				LR	LR		
	comp=Z,700nm,13.6s						
LZH				LR	LR		
	comp=Z,320nm,14.1s						
LZH				LR	LR		
	comp=Z,860nm,14.9s						
TIA	**Tai'an**	**46.93**	**11**	⇑P	**P**	**21 17 26.0**	**-0.9**
TIA				S	**S**	**21 24 19.4**	**+2.7**
TIA				pmax	pmax		
	comp=Z,34nm,0.9s						
TIA				LR	LR		
	comp=Z,210nm,17.6s						
TIA				LR	LR		
	comp=Z,300nm,14.7s						
TIA				LR	LR		
	comp=Z,340nm,15.1s						
GOMU	**GeErMu**	**47.58**	**346**	P	**P**	**21 17 33.3**	**+0.8**
GOMU				pP	pP	21 17 36.8	-0.7
GOMU				sP	sP	21 17 38.4	-1.1
GOMU				PcP	**PcP**	**21 19 03.1**	**+1.0**
GOMU				PP	**PP**	**21 19 24.4**	**+0.1**
GOMU				S	**S**	**21 24 27.6**	**+0.8**
GOMU				sS	sS	21 24 34.3	-0.8
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,78nm,4.7s						
GOMU				LR	LR		
	comp=Z,180nm,19.0s						
GOMU				LR	LR		
	comp=Z,250nm,19.2s						
GOMU				LR	LR		
	comp=Z,230nm,20.4s						
HNS	**HongShan**	**47.71**	**8**	⇑P	**P**	**21 17 35.5**	**+2.6**
HNS				S	**S**	**21 24 23.1**	**-4.7**
HNS				pmax	pmax		
	comp=Z,27nm,1.0s						
HNS				LR	LR		
	comp=Z,400nm,16.2s						
HNS				LR	LR		
	comp=Z,450nm,17.2s						
HNS				LR	LR		
	comp=Z,670nm,16.3s						
TIY	**Taiyuan**	**47.77**	**5**	*e*P	**P**	**21 17 36.4**	**+2.9**
TIY				pmax	pmax		
	comp=Z,42nm,0.5s						
TIY				LR	LR		
	comp=Z,510nm,17.1s						
TIY				LR	LR		
	comp=Z,210nm,16.7s						
TIY				LR	LR		
	comp=Z,350nm,18.6s						
JTU	**Tsushima**	**48.96**	**24**	P	**P**	**21 17 42.6**	**0.0**
GTA	**Gaotai**	**49.77**	**352**	⇑P	**P**	**21 17 50.1**	**+1.2**
GTA				pP	sP	21 17 55.0	-1.0
GTA				sP	pwP	21 17 58.3	-4.4
GTA				S	**S**	**21 25 01.8**	**+4.7**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,240nm,7.7s						
GTA				LR	LR		
	comp=Z,490nm,17.9s						
GTA				LR	LR		
	comp=Z,1µm,21.1s						
GTA				LR	LR		
	comp=Z,540nm,15.5s						
TJN	**Taejon**	**49.84**	**21**	⇓*e*P	**P**	**21 17 47.0**	**-2.3**
JCJ	**Chichijima**	**49.94**	**41**	LR	LR	21 39 01.4	
	comp=Z,72nm,21.8s,baz=226,slow=36						
BJT	**Baijiatuau**	**50.49**	**9**	P	**P**	**21 17 53.6**	**-0.6**
BJT				IAmb	IAmb	21 17 59.9	
	comp=Z,21nm,0.7s						
BJT	**Baijiatuau**	**50.49**	**9**	P	**P**	**21 17 53.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,21nm,0.7s						
BTO	**Baotou**	**50.49**	**2**	*e*P	**P**	**21 17 55.5**	**+1.2**
BJI	**Beijing**	**50.51**	**9**	P	**P**	**21 17 54.3**	**0.0**
BJI				S	**S**	**21 25 04.9**	**-2.2**
BJI				pmax	pmax		
	comp=Z,20nm,1.0s						
BJI				pmax	pmax		
	comp=Z,130nm,3.5s						
BJI				LR	LR		
	comp=Z,480nm,15.9s						
BJI				LR	LR		
	comp=Z,250nm,16.6s						
BJI				LR	LR		
	comp=Z,630nm,15.7s						
HHC	**Hu-ho-hao-te**	**50.82**	**4**	*e*P	**P**	**21 17 59.9**	**+3.1**
HHC				S	**S**	**21 25 19.8**	**+8.2**
HHC				ScS	**ScS**	**21 27 49.9**	**+3.5**
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,6.7s						
HHC				LR	LR		
	comp=Z,760nm,14.7s						
HHC				LR	LR		
	comp=Z,510nm,12.9s						
HHC				LR	LR		
	comp=Z,850nm,15.7s						
JHS	**Saijyo**	**50.95**	**27**	P	**P**	**21 17 56.1**	**-1.7**
JHS				IAmb	IAmb	21 18 09.7	
	comp=Z,30nm,0.8s						
KSRS	**Korea Array**	**51.00**	**21**	P	**P**	**21 17 57.1**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=200,slow=8.0,SNR=7.5						
KSRS				LR	LR	21 43 07.5	
	comp=Z,60nm,18.5s,baz=215,slow=40						
	comp=Z,1.5nm,0.7s						
HNR	**Honiara**	**51.58**	**94**	P	**P**	**21 18 02.3**	**-0.6**
HNR	**Honiara**	**51.58**	**94**	P	**P**	**21 18 02.3**	**-0.6**
HNR				pmax	pmax		
	comp=Z,73nm,0.9s						
JHJ	**Hachijo jima 2**	**52.81**	**34**	LR	LR	21 41 12.7	
	comp=Z,142nm,20.4s,baz=230,slow=37						
JGF	**Kuroka**	**53.45**	**30**	P	**P**	**21 18 14.9**	**-1.5**
JGF				IAmb	IAmb	21 18 28.9	
	comp=Z,35nm,1.3s						
XLT	**XiLinHaoTe**	**54.29**	**8**	*e*P	**P**	**21 18 25.0**	**+2.6**
XLT				pP	sP	21 18 29.0	-0.5
XLT				sP	pP	21 18 31.1	+3.5
XLT				pmax	pmax		
	comp=Z,18nm,1.3s						
XLT				pmax	pmax		
	comp=Z,150nm,4.6s						
NIL	**Nilore**	**54.38**	**325**	P	**P**	**21 18 21.3**	**-2.0**
NIL	**Nilore**	**54.38**	**325**	P	**P**	**21 18 21.3**	**-2.0**
NIL				pmax	pmax		
	comp=Z,40nm,1.1s						
MAJO	**Matsushiro**	**54.61**	**30**	P	**P**	**21 18 24.8**	**-0.1**
MAJO				IAmb	IAmb	21 18 31.2	
	comp=Z,13nm,0.9s						
MAJO	**Matsushiro**	**54.61**	**30**	⇓*e*P	**P**	**21 18 23.3**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**54.61**	**30**	P	**P**	**21 18 22.6**	**-2.3**
	comp=Z,11nm,0.9s,baz=197,slow=7.8,SNR=19						
MJAR				LR	LR	21 42 10.9	
	comp=Z,78nm,21.4s,baz=222,slow=37						
	comp=Z,11nm,0.9s						
MJAR	**Matsushiro Arr**	**54.61**	**30**	P	**P**	**21 18 24.3**	**-0.6**
MJAR	**Matsushiro Arr**	**54.61**	**30**	P	**P**	**21 18 24.3**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MJB9	**Matsu-Tunnel**	**54.61**	**30**	P	**P**	**21 18 24.7**	**-0.2**
JSD	**Sado**	**55.82**	**29**	P	**P**	**21 18 32.9**	**-0.6**
CN2	**Changchun**	**56.05**	**16**	*e*P	**P**	**21 18 34.3**	**-0.7**
CN2				*e*PP	**PP**	**21 20 41.0**	**+0.7**
CN2				*e*S	**S**	**21 26 21.5**	**-0.8**
CN2				*e*sS	sS	21 26 29.3	-1.4
CN2				*e*SS	**SS**	**21 30 08.3**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,230nm,15.0s						
CN2				LR	LR		
	comp=Z,240nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
WMQ	**Urumqi**	**56.62**	**343**	*e*P	**P**	**21 18 40.3**	**+1.1**
WMQ				pP	sP	21 18 45.6	-0.7
WMQ				sP	pwP	21 18 53.1	0.0
WMQ				PcP	**PcP**	**21 19 37.6**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,34nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.9s						
WMQ				LR	LR		
	comp=Z,340nm,15.7s						
WMQ				LR	LR		
	comp=Z,290nm,15.1s						
WMQ				LR	LR		
	comp=Z,230nm,20.3s						
JLN	**Jalan Bani Buh**	**57.06**	**305**	P	**P**	**21 18 43.9**	**+1.2**
KSH	**Kashi**	**57.42**	**331**	P	**P**	**21 18 43.8**	**-1.2**
KSH				sP	pwP	21 18 59.8	+0.9
KSH				PP	**PP**	**21 20 59.3**	**+6.5**
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,140nm,5.0s						
KBL	**Kabul**	**57.47**	**322**	P	**P**	**21 18 45.0**	**-0.6**
KBL				IAmb	IAmb	21 18 46.2	
	comp=Z,41nm,1.4s						
KBL	**Kabul**	**57.47**	**322**	P	**P**	**21 18 45.0**	**-0.6**
KBL				pmax	pmax		
	comp=Z,41nm,1.4s						
KBL	**Kabul**	**57.47**	**322**	P	**P**	**21 18 45.3**	**-0.3**
	SNR=13						
KBL				P	**P**	**21 18 45.3**	**-0.3**
	SNR=13						
DZM	**Mont Dzumac**	**57.51**	**110**	LR	LR	21 42 35.4	
	comp=Z,329nm,19.9s,baz=278,slow=35						
DZM	**Mont Dzumac**	**57.51**	**110**	P	**P**	**21 18 46.1**	**0.0**
DQM	**DQM**	**57.58**	**301**	P	**P**	**21 18 47.1**	**+0.8**
DQM				P	**P**	**21 18 47.1**	**+0.8**
DQM				S	**S**	**21 26 42.5**	**-0.8**
DQM				S	**S**	**21 26 42.5**	**-0.8**
WBK	**Wadi Bani Khal**	**57.64**	**305**	P	**P**	**21 18 47.6**	**+0.8**
WBK				P	**P**	**21 18 47.6**	**+0.8**
SOCY	**Socotra**	**57.65**	**291**	P	**P**	**21 18 47.3**	**+0.2**
SONM	**Songino Array**	**57.68**	**359**	P	**P**	**21 18 46.9**	**+0.2**
	comp=Z,12nm,0.8s,baz=174,slow=7.8,SNR=30						
SONM				LR	LR	21 45 07.0	
	comp=Z,442nm,21.8s,baz=174,slow=38						
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	**57.68**	**359**	P	**P**	**21 18 46.9**	**+0.2**
SONM				IAmb	IAmb	21 18 50.7	
	comp=Z,38nm,1.5s						
SONM	**Songino Array**	**57.68**	**359**	P	**P**	**21 18 46.9**	**+0.2**
SONM				pmax	pmax		
	comp=Z,38nm,1.5s						
MHTO	**MHTO**	**57.70**	**303**	P	**P**	**21 18 47.3**	**+0.1**
	SNR=5.1						
MHTO				P	**P**	**21 18 47.3**	**+0.1**
	SNR=5.1						
MHTO				S	**S**	**21 26 43.0**	**-1.8**
MHTO				S	**S**	**21 26 43.0**	**-1.8**
ULN	**Ulaanbaatar**	**57.70**	**360**	P	**P**	**21 18 46.9**	**0.0**
ULN				IAmb	IAmb	21 18 51.7	
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**57.70**	**360**	*d i*P	**P**	**21 18 46.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,20nm,1.0s						
ULN	**Ulaanbaatar**	**57.70**	**360**	P	**P**	**21 18 47.3**	**+0.4**
ULN				S	**S**	**21 26 41.8**	**-2.5**
WSAR	**Wadi Sarin**	**58.22**	**305**	P	**P**	**21 18 51.1**	**+0.3**
	comp=Z,14nm,0.9s,baz=122,slow=6.8,SNR=9.5						
WSAR				LR	LR	21 41 51.0	
	comp=Z,283nm,20.0s,baz=143,slow=34						
	comp=Z,14nm,0.9s						
WSAR	**Wadi Sarin**	**58.22**	**305**	P	**P**	**21 18 51.8**	**+1.0**
JMDO	**Jabal Madar**	**58.23**	**304**	P	**P**	**21 18 51.5**	**+0.5**
JMDO				P	**P**	**21 18 51.5**	**+0.5**
BNX	**BinXian**	**58.37**	**16**	⇓P	**P**	**21 18 49.8**	**-1.6**
BNX				pmax	pmax		
	comp=Z,20nm,1.0s						
BNX				pmax	pmax		
	comp=Z,260nm,5.8s						
TARG	**Taragay, Kyrgy**	**58.37**	**334**	P	**P**	**21 18 51.5**	**-0.6**
TARG				IAmb	IAmb	21 19 13.1	
	comp=Z,31nm,1.4s						
SHAO	**Shalim**	**58.39**	**298**	P	**P**	**21 18 52.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**58.40**	**20**	P	**P**	**21 18 50.8**	**-0.9**
	comp=Z,4.2nm,0.5s,baz=222,slow=5.8,SNR=11						
USRK				LR	LR	21 46 14.9	
	comp=Z,80nm,19.4s,baz=205,slow=38						
	comp=Z,4.2nm,0.5s						
SMDO	**Samad**	**58.60**	**305**	P	**P**	**21 18 54.5**	**+0.9**
	SNR=5.7						
SMDO				P	**P**	**21 18 54.5**	**+0.9**
	SNR=5.7						
PRZ	**Przheval'sk**	**58.74**	**335**	P	**P**	**21 18 54.1**	**-0.2**
PRZ				IAmb	IAmb	21 19 14.3	
	comp=Z,19nm,0.9s						
PRZ	**Przheval'sk**	**58.74**	**335**	P	**P**	**21 18 54.1**	**-0.2**
PRZ				pmax	pmax		
	comp=Z,19nm,1.0s						
BIDO	**Bidbid**	**58.76**	**305**	P	**P**	**21 18 55.5**	**+0.9**
	SNR=11						
BIDO				P	**P**	**21 18 55.5**	**+0.9**
	SNR=11						
ABPO	**Ambohimpanom**	**58.84**	**254**	P	**P**	**21 18 55.1**	**-0.4**
ABPO				IAmb	IAmb	21 18 58.0	
	comp=Z,14nm,1.0s						
ABPO	**Ambohimpanom**	**58.84**	**254**	P	**P**	**21 18 55.1**	**-0.4**
ABPO				pmax	pmax		
	comp=Z,14nm,1.0s						
DMTO	**DMTO**	**58.86**	**298**	P	**P**	**21 18 55.7**	**+0.4**
KDJ	**Kajisay**	**58.97**	**334**	P	**P**	**21 18 55.8**	**-0.1**
KDJ	**Kajisay**	**58.97**	**334**	P	**P**	**21 18 55.8**	**-0.1**
KDJ				pmax	pmax		
	comp=Z,37nm,1.2s						
UZB	**Uzynbulak**	**59.04**	**336**	*d i*P	**P**	**21 18 56.4**	**+0.1**
UZB				pmax	pmax		
	comp=Z,14nm,1.3s						
UZB	**Uzynbulak**	**59.04**	**336**	⇓*i*P	**P**	**21 18 56.4**	**+0.1**
	comp=Z,14nm,1.3s,baz=336						
BSY	**Bisya**	**59.14**	**304**	P	**P**	**21 18 58.1**	**+0.8**
	SNR=6.2						
SATY	**Saty**	**59.21**	**335**	*de*P	**P**	**21 18 57.5**	**0.0**
SATY				pmax	pmax		
	comp=Z,13nm,1.5s						
SATY	**Saty**	**59.21**	**335**	⇓*e*P	**P**	**21 18 57.5**	**0.0**
	comp=Z,13nm,1.5s,baz=335						
VOI	**Vohitsoka**	**59.27**	**251**	P	**P**	**21 18 58.9**	**+0.5**
VOI	**Vohitsoka**	**59.27**	**251**	P	**P**	**21 19 00.4**	**+2.1**
RBK	**Rabkut**	**59.42**	**297**	P	**P**	**21 19 00.5**	**+1.2**
RBK				P	**P**	**21 19 00.5**	**+1.2**
KPKS	**Kokpek**	**59.44**	**336**	*d i*P	**P**	**21 18 58.8**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KPKS	**Kokpek**	**59.44**	**336**	⇓*i*P	**P**	**21 18 58.9**	**-0.1**
	comp=Z,10nm,1.3s,baz=336						
HOQ	**Hoqain**	**59.44**	**305**	P	**P**	**21 19 00.3**	**+1.0**
	SNR=6.9						
HOQ				P	**P**	**21 19 00.3**	**+1.0**
	SNR=6.9						
BOOM	**Boomskoye usch**	**59.80**	**333**	P	**P**	**21 19 00.9**	**-0.8**
BOOM				IAmb	IAmb	21 19 43.0	
	comp=Z,28nm,1.6s						
BOOM	**Boomskoye usch**	**59.80**	**333**	P	**P**	**21 19 00.9**	**-0.8**
BOOM				pmax	pmax		
	comp=Z,28nm,1.6s						
TNSS	**Tian-Shan**	**59.80**	**334**	*e*P	**P**	**21 19 01.4**	**-0.5**
TNSS	**Tian-Shan**	**59.80**	**334**	*e*P	**P**	**21 19 01.4**	**-0.5**
	baz=334						
MDOK	**Medeo**	**59.86**	**335**	*e*P	**P**	**21 19 02.0**	**0.0**
MDOK	**Medeo**	**59.86**	**335**	*e*P	**P**	**21 19 02.1**	**0.0**
	baz=334						
GAR	**Garm**	**59.89**	**327**	P	**P**	**21 19 00.6**	**-1.7**
DOK	**Doka**	**59.93**	**298**	P	**P**	**21 19 03.0**	**+0.2**
DOK				P	**P**	**21 19 03.0**	**+0.2**
AAA	**Alma-Ata**	**59.96**	**334**	*e*P	**P**	**21 19 02.0**	**-0.5**
AAA	**Alma-Ata**	**59.96**	**334**	*e*P	**P**	**21 19 02.1**	**-0.5**
	baz=334						
WHFO	**Wadi Hawf**	**59.97**	**297**	P	**P**	**21 19 03.2**	**+0.2**
ARQ	**Araqi**	**59.97**	**304**	P	**P**	**21 19 03.6**	**+0.6**
ARQ				P	**P**	**21 19 03.6**	**+0.6**
HIA	**Hailar**	**60.06**	**9**	P	**P**	**21 19 02.2**	**-0.9**
HIA				IAmb	IAmb	21 19 17.5	
	comp=Z,15nm,1.2s						
HIA	**Hailar**	**60.06**	**9**	P	**P**	**21 19 02.3**	**-0.9**
HIA				pmax	pmax		
	comp=Z,15nm,1.2s						
ABTO	**Aybut**	**60.16**	**297**	P	**P**	**21 19 05.0**	**+0.6**
ABTO				P	**P**	**21 19 05.0**	**+0.6**
UCH	**Uchtor**	**60.23**	**332**	P	**P**	**21 19 05.2**	**+0.3**
	SNR=5.4						
CHGR	**Chuyangaron**	**60.27**	**326**	P	**P**	**21 19 03.1**	**-1.7**
CHGR	**Chuyangaron**	**60.27**	**326**	P	**P**	**21 19 03.2**	**-1.7**
CHGR				pmax	pmax		
	comp=Z,103nm,1.4s						
TKM2	**Tokmak 2**	**60.30**	**333**	P	**P**	**21 19 04.8**	**-0.3**
	SNR=15						
KBK	**Karagaybulak**	**60.38**	**333**	P	**P**	**21 19 05.9**	**+0.3**
	SNR=8.5						
BTK	**Batken**	**60.40**	**328**	P	**P**	**21 19 04.9**	**-0.8**
BTK				IAmb	IAmb	21 19 34.5	
	comp=Z,36nm,1.2s						
BTK	**Batken**	**60.40**	**328**	P	**P**	**21 19 04.9**	**-0.8**
BTK				pmax	pmax		
	comp=Z,36nm,1.3s						
CHKK	**Chushkaly**	**60.45**	**335**	*e*P	**P**	**21 19 04.8**	**-1.1**
CHKK	**Chushkaly**	**60.45**	**335**	*e*P	**P**	**21 19 04.8**	**-1.1**
	baz=335						
AML	**Almayashu**	**60.54**	**332**	P	**P**	**21 19 06.8**	**-0.1**
	SNR=7.2						
AML	**Almayashu**	**60.54**	**332**	P	**P**	**21 19 07.0**	**0.0**
AML	**Almayashu**	**60.54**	**332**	*i* P	**P**	**21 19 06.8**	**-0.1**
	SNR=7.3						
AAK	**Ala-Archa**	**60.56**	**332**	P	**P**	**21 19 06.6**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=159,slow=6.0,SNR=11						
AAK				LR	LR	21 49 32.5	
	comp=Z,89nm,18.2s,baz=145,slow=40						
	comp=Z,0.9nm,0.3s						
AAK	**Ala-Archa**	**60.56**	**332**	P	**P**	**21 19 06.4**	**-0.4**
AAK				IAmb	IAmb	21 19 27.4	
	comp=Z,16nm,1.3s						
AAK	**Ala-Archa**	**60.56**	**332**	⇑*e*P	**P**	**21 19 06.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	**Ala-Archa**	**60.56**	**332**	P	**P**	**21 19 07.3**	**+0.5**
AAK				P	**P**	**21 19 07.3**	**+0.5**
AAK	**Ala-Archa**	**60.56**	**332**	*i* P	**P**	**21 19 07.0**	**+0.2**
	SNR=6.4						
FRU1	**Bishkek**	**60.64**	**333**	P	**P**	**21 19 06.7**	**-0.6**
FRU1				IAmb	IAmb	21 19 25.3	
	comp=Z,16nm,0.7s						
FRU1	**Bishkek**	**60.64**	**333**	P	**P**	**21 19 06.7**	**-0.6**
FRU1				pmax	pmax		
	comp=Z,16nm,0.7s						
ZSN	**Zaisan**	**60.74**	**343**	*d i*P	**P**	**21 19 08.2**	**+0.4**
ZSN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZSN	**Zaisan**	**60.74**	**343**	⇓*i*P	**P**	**21 19 08.2**	**+0.4**
	comp=Z,10nm,1.4s,baz=342						
KUU	**Kurty**	**60.76**	**335**	*d i*P	**P**	**21 19 07.2**	**-0.7**
KUU				pmax	pmax		
	comp=Z,39nm,1.4s						
KUU	**Kurty**	**60.76**	**335**	⇓*i*P	**P**	**21 19 07.3**	**-0.7**
	comp=Z,39nm,1.4s,baz=334						
UMZA	**Um Al Zommool**	**60.80**	**303**	P	**P**	**21 19 09.0**	**+0.4**
UMZA				P	**P**	**21 19 09.0**	**+0.4**
TDK	**Taldyqorghan**	**60.83**	**337**	*e*P	**P**	**21 19 08.0**	**-0.4**
TDK				pmax	pmax		
	comp=Z,22nm,1.0s						
TDK	**Taldyqorghan**	**60.83**	**337**	*e*P	**P**	**21 19 08.1**	**-0.4**
	comp=Z,22nm,1.0s,baz=337						
EKS2	**Erkin-Say**	**60.91**	**332**	P	**P**	**21 19 09.4**	**+0.2**
	SNR=10						
ALNE	**Al Ain**	**60.93**	**305**	P	**P**	**21 19 10.0**	**+0.4**
	SNR=6.8						
ALNE				P	**P**	**21 19 10.0**	**+0.4**
	SNR=6.8						
MK31	**Makanchi Array**	**60.97**	**340**	P	**P**	**21 19 08.9**	**-0.4**
MK31				IAmb	IAmb	21 19 27.1	
	comp=Z,18nm,0.7s						
MK31	**Makanchi Array**	**60.97**	**340**	*d i*P	**P**	**21 19 09.1**	**-0.2**
MKAR	**Makanchi Array**	**60.97**	**340**	P	**P**	**21 19 09.3**	**-0.1**
	comp=Z,4.3nm,0.5s,baz=151,slow=6.9,SNR=37						
MKAR				LR	LR	21 49 51.3	
	comp=Z,272nm,18.3s,baz=146,slow=40						
	comp=Z,4.3nm,0.5s						
MKAR	**Makanchi Array**	**60.97**	**340**	P	**P**	**21 19 09.0**	**-0.4**
ASHO	**Ashiyiah**	**60.97**	**305**	P	**P**	**21 19 10.3**	**+0.5**
ASHO				P	**P**	**21 19 10.3**	**+0.5**
ASHO	**Ashiyiah**	**60.97**	**305**	*i* P	**P**	**21 19 10.0**	**+0.2**
	SNR=9.7						
UOSS	**Minazif**	**60.98**	**306**	P	**P**	**21 19 09.1**	**-0.8**
UOSS				IAmb	IAmb	21 19 10.6	
	comp=Z,18nm,1.1s						
UOSS	**Minazif**	**60.98**	**306**	P	**P**	**21 19 10.0**	**+0.2**
UOSS				P	**P**	**21 19 10.0**	**+0.2**
UOSS	**Minazif**	**60.98**	**306**	*i* P	**P**	**21 19 09.7**	**-0.2**
	SNR=7.2						
HATD	**Hatta, Dubai**	**60.98**	**306**	P	**P**	**21 19 10.5**	**+0.6**
	SNR=6.4						
HATD	**Hatta, Dubai**	**60.98**	**306**	*i* P	**P**	**21 19 10.1**	**+0.2**
	SNR=11						
USP	**Ospenovka**	**61.06**	**333**	P	**P**	**21 19 09.5**	**-0.6**
	SNR=9.8						
KNGR	**Kungurtug, Tuv**	**61.07**	**353**	⇓*e*P	**P**	**21 19 11.3**	**+1.2**
MAKZ	**Makanchi**	**61.08**	**340**	P	**P**	**21 19 09.9**	**-0.2**
MAKZ				IAmb	IAmb	21 19 26.4	
	comp=Z,20nm,1.2s						
MAKZ	**Makanchi**	**61.08**	**340**	P	**P**	**21 19 09.9**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,20nm,1.2s						
SGDS	**Sogindy**	**61.15**	**333**	*d i*P	**P**	**21 19 10.0**	**-0.7**
SGDS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SGDS	**Sogindy**	**61.15**	**333**	⇓*i*P	**P**	**21 19 10.0**	**-0.7**
	comp=Z,7.5nm,1.2s,baz=333						
MSFE	**Esma-Masafi**	**61.21**	**306**	P	**P**	**21 19 12.0**	**+0.6**
MASF	**Masafi**	**61.22**	**306**	P	**P**	**21 19 12.3**	**+0.8**
MASF				P	**P**	**21 19 12.3**	**+0.8**
BANOM	**Banah**	**61.37**	**307**	P	**P**	**21 19 13.3**	**+0.8**
BANOM				P	**P**	**21 19 13.3**	**+0.8**
FAQ	**Al Faqa, Dubai**	**61.38**	**305**	P	**P**	**21 19 13.0**	**+0.5**
	SNR=5.8						
FAQ				P	**P**	**21 19 13.0**	**+0.5**
	SNR=5.8						
FAQ	**Al Faqa, Dubai**	**61.38**	**305**	*i* P	**P**	**21 19 13.0**	**+0.5**
	SNR=11						
NAZ	**Nazwa, Dubai**	**61.43**	**306**	P	**P**	**21 19 13.2**	**+0.3**
NAZ				P	**P**	**21 19 13.2**	**+0.3**

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NAZ   Nazwa, Dubai     61.43 306    P      P      21 19 12.9  0.0
ASUD  Al Ashush, Dub   61.53 305    P      P      21 19 14.1 +0.5
ASUD                                P      P      21 19 14.1 +0.5
ASUD  Al Ashush, Dub   61.53 305    P      P      21 19 13.3 -0.2
SHME  Shamm            61.55 307    P      P      21 19 15.3 +1.6
SHME                                P      P      21 19 15.3 +1.6
HRA   Herat            61.66 318    P      P      21 19 13.6 -0.9
HRA                                 IAmb   IAmb   21 19 15.0
      comp=Z,22nm,1.4s
MOY   Mondy            61.77 355   eP      P      21 19 15.5 +0.7
MOY                                 pmax   pmax
      comp=Z,21nm,1.6s
TAS   Tashkent         62.11 328    P      P      21 19 17.0 -0.2
TAS   Tashkent         62.11 328    P      P      21 19 17.0 -0.2
TAS                                 pmax   pmax
      comp=Z,62nm,1.0s
IRK   Irkutsk          62.15 358   eP      P      21 19 16.8 -0.4
IRK                                 pmax   pmax
      comp=Z,38nm,2.0s
DZA   Taraz            62.25 331   eP      P      21 19 17.2 -0.9
DZA   Taraz            62.25 331   eP      P      21 19 17.2 -0.9
      baz=330
MZR   Muzera           62.32 303    P      P      21 19 19.7 +0.8
      SNR=8.5
MZR                                 P      P      21 19 19.7 +0.8
      SNR=8.5
MZR   Muzera           62.32 303  i P      P      21 19 19.5 +0.6
      SNR=18
MZWR  Madinat Zayed    62.32 304    P      P      21 19 19.4 +0.5
MZWR                                P      P      21 19 19.4 +0.5
ASAJ  Asahikawa        62.61  28    P      P      21 19 20.4 -0.1
      comp=Z,5.9nm,1.0s,baz=218,slow=19,SNR=1.5
ASAJ                                LR     LR     21 48 00.5
      comp=Z,42nm,19.4s,baz=159,slow=38
      comp=Z,5.9nm,1.0s
BTLS  Baital           62.66 334   eP      P      21 19 19.7 -1.0
BTLS                                pmax   pmax
      comp=Z,9.0nm,1.4s
BTLS  Baital           62.66 334   eP      P      21 19 19.7 -1.0
      comp=Z,9.2nm,1.4s,baz=334
KLR   Kul'dur          62.78  18    P      P      21 19 20.3 -1.2
      comp=Z,21nm,0.7s,baz=223,slow=5.0,SNR=20
KLR                                 LR     LR     21 47 46.9
      comp=Z,146nm,20.3s,baz=214,slow=37
      comp=Z,21nm,0.7s
KLR   Kul'dur          62.78  18d iP      P      21 19 19.8 -1.6
KLR                                 pmax   pmax
      comp=Z,27nm,0.9s
KK31  Karatay Array    62.80 330    P      P      21 19 20.6 -1.2
KK31  Karatay Array    62.80 330    P      P      21 19 20.6 -1.2
KK31                                pmax   pmax
      comp=Z,15nm,1.5s
KKAR  Karatay Array    62.80 330    P      P      21 19 20.3 -1.5
KKAR  Karatay Array    62.80 330    P      P      21 19 20.3 -1.5
GHWR  Ruwais           63.23 303    P      P      21 19 25.6 +0.6
GHWR                                P      P      21 19 25.6 +0.6
JRN   Qarnain Island   63.68 304    P      P      21 19 28.1 +0.2
JRN                                 P      P      21 19 28.1 +0.2
RPZ   Rata Peaks       63.98 134    LR     LR     21 47 01.9
      comp=Z,442nm,18.7s,baz=278,slow=36
SLWR  Sila             64.26 303    P      P      21 19 32.3 +0.6
SLWR                                P      P      21 19 32.3 +0.6
MAW   Mawson           64.59 197    P      P      21 19 34.3 +1.2
      comp=Z,2.5nm,0.5s,baz=45,slow=7.1,SNR=4.9
MAW                                 LR     LR     21 44 40.3
      comp=Z,44nm,18.9s,baz=36,slow=33
      comp=Z,2.5nm,0.5s
MAW   Mawson           64.59 197    P      P      21 19 33.4 +0.2
MAW   Mawson           64.59 197    P      P      21 19 33.4 +0.2
MAW                                 pmax   pmax
      comp=Z,6.0nm,1.6s
SEM   Semipalatinsk    64.78 341deP    P      21 19 34.6 -0.3
SEM                                 pmax   pmax
      comp=Z,16nm,1.3s
SEM   Semipalatinsk    64.78 341⇓eP    P      21 19 34.6 -0.3
      comp=Z,16nm,1.3s,baz=341
YSS   Yuzh-Sakhalins   64.88  26   eP      P      21 19 31.8 -3.5
YSS                                 pmax   pmax
      comp=Z,40nm,1.1s
YSS                                 MLR    MLR
      comp=Z,300nm,15.0s
TRNA  Turayna          64.93 303    P      P      21 19 36.6 +0.5
KHOR  Al-Khor Airpor   65.07 304    P      P      21 19 37.3 +0.3
SMRA  Abu-Samra        65.26 303    P      P      21 19 38.6 +0.4
KURBB Kurchatov Arra   65.53 340    LR     LR     21 51 33.2
      comp=Z,221nm,19.3s,baz=130,slow=39
KURK  Kurchatov        65.58 340    P      P      21 19 39.5 -0.3
KURK  Kurchatov        65.58 340d iP      P      21 19 39.8  0.0
KURK                                pmax   pmax
      comp=Z,38nm,1.3s
KURK  Kurchatov        65.58 340    P      P      21 19 40.2 +0.5
KURK                                P      P      21 19 40.2 +0.5
SHMA  Al-Shehemyia     65.61 304    P      P      21 19 40.9 +0.4
ZEA   Zeya             65.75  13   eP      P      21 19 41.2 +0.4
ZEA                                 pmax   pmax
      comp=Z,100nm,6.3s
ZEA                                 pmax   pmax
      comp=E,10.0nm,1.3s
ZEA                                 pmax   pmax
      comp=N,10.0nm,1.0s
ZEA                                 pmax   pmax
      comp=Z,20nm,1.2s
ZEA                                 MLR    MLR
      comp=Z,200nm,16.0s
SAKB  Bahrain          66.01 304    P      P      21 19 43.4 +0.3
GEYT  Alibeck          66.44 319    P      P      21 19 45.3 -0.4
      comp=Z,9.4nm,0.9s,baz=209,slow=13,SNR=12
GEYT                                LR     LR     21 50 37.4
      comp=Z,192nm,20.5s,baz=142,slow=38
      comp=Z,9.4nm,0.9s
GEYT  Alibeck          66.44 319    P      P      21 19 45.1 -0.6
GEYT                                IAmb   IAmb   21 19 59.5
      comp=Z,14nm,1.1s
GYA0B ALIBECK ARRAY    66.44 319    P      P      21 19 45.5 -0.2
GYA0B                               IAmb   IAmb   21 19 49.2
      comp=Z,20nm,1.1s
ZAA0  Zalesovo Array   66.65 346    P      P      21 19 45.9 -0.7
ZAA0                                IAmb   IAmb   21 20 04.5
      comp=Z,17nm,1.1s
ZALV  Zalesovo Beam    66.65 346    P      P      21 19 45.1 -1.5
      comp=Z,3.2nm,0.9s,baz=138,slow=7.5,SNR=16
ZALV                                LR     LR     21 51 55.2
      comp=Z,172nm,19.4s,baz=147,slow=39
      comp=Z,3.2nm,0.9s
ZALV  Zalesovo Beam    66.65 346    P      P      21 19 45.8 -0.7
ZALV  Zalesovo Beam    66.65 346  i P      P      21 19 46.2 -0.4
ZALV                                pmax   pmax
      comp=Z,3.0nm,0.9s
BRZS  Berezniki        67.14 336d iP      P      21 19 50.0 +0.2
BRZS                                pmax   pmax
      comp=Z,17nm,1.2s
BRZS  Berezniki        67.14 336⇓ iP      P      21 19 50.1 +0.2
      comp=Z,17nm,1.2s,baz=336
BKZ   Black Stump Fm   67.37 128    P      P      21 19 52.5 +0.8
URZ   Urewera          67.77 127    LR     LR     21 51 35.5
      comp=Z,311nm,18.8s,baz=211,slow=38
ATD   Arta Tunnel      67.82 287    LR     LR     21 43 25.5
      comp=Z,70nm,21.9s,baz=100,slow=30
BOD   Bodaibo          67.88   4   eP      P      21 19 53.8 -0.5
BOD                                 pmax   pmax
      comp=Z,94nm,1.0s
RAYN  Ar Rayn          69.25 300    P      P      21 20 02.8 -0.8
RAYN                                IAmb   IAmb   21 20 04.8
      comp=Z,20nm,1.1s
RAYN  Ar Rayn          69.25 300    P      P      21 20 02.8 -0.8
RAYN                                pmax   pmax
      comp=Z,20nm,1.1s
KIBK  Kibwezi          69.43 271    P      P      21 20 04.8 -0.3
KIBK                                IAmb   IAmb   21 20 07.8
      comp=Z,12nm,0.9s
KIBK  Kibwezi          69.43 271    P      P      21 20 06.3 +1.2
KMBO  Kilima Mbogo     70.42 272    P      P      21 20 12.5 +1.1
      comp=Z,8.0nm,1.0s,baz=40,slow=7.8,SNR=12
KMBO                                LR     LR     21 50 33.9
      comp=Z,157nm,18.1s,baz=93,slow=36
      comp=Z,8.0nm,1.0s
KMBO  Kilima Mbogo     70.42 272  i P      P      21 20 13.6 +2.2
KMBO                                pmax   pmax
      comp=Z,7.0nm,0.9s
KMBO  Kilima Mbogo     70.42 272    P      P      21 20 12.2 +0.8
KMBO                                P      P      21 20 12.2 +0.8
KMBO  Kilima Mbogo     70.42 272    P      P      21 20 13.3 +1.9
BRVK  Borovoye         70.48 337    P      P      21 20 10.0 -0.6
BRVK                                IAmb   IAmb   21 20 11.9
      comp=Z,28nm,1.1s
BRVK  Borovoye         70.48 337d iP      P      21 20 10.0 -0.6
BRVK                                pmax   pmax
      comp=Z,34nm,1.3s
BRVK  Borovoye         70.48 337    P      P      21 20 11.1 +0.5
BRVK                                P      P      21 20 11.1 +0.5
RAO   Raoul Island     71.68 117    LR     LR     21 51 10.7
      comp=Z,271nm,20.5s,baz=247,slow=35
ABKAR Akbulak array    72.34 329    P      P      21 20 21.5 -0.4
ABKAR Akbulak array    72.34 329    P      P      21 20 21.7 -0.2
ABKAR                               IAmb   IAmb   21 20 23.2
      comp=Z,66nm,1.0s
VNDA  Vanda            72.84 169    P      P      21 20 27.6 +3.1
      comp=Z,0.9nm,0.6s,baz=310,slow=6.0,SNR=6.3
VNDA                                LR     LR     21 48 26.2
      comp=Z,57nm,18.3s,baz=318,slow=32
      comp=Z,0.9nm,0.6s
VNDA  Vanda            72.84 169    P      P      21 20 25.3 +0.8
VNDA                                IAmb   IAmb   21 21 05.6
      comp=Z,28nm,1.9s
VNDA  Vanda            72.84 169    P      P      21 20 25.3 +0.8
VNDA                                pmax   pmax
      comp=Z,28nm,1.9s
LODK  Lodwar           73.14 277    P      P      21 20 27.1 -0.4
LODK  Lodwar           73.14 277    P      P      21 20 29.9 +2.4
YAK   Yakutsk          73.94  11    P      P      21 20 29.9 -1.1
      comp=Z,4.4nm,0.4s,baz=13,slow=0.9,SNR=2.3
YAK                                 LR     LR     21 55 45.4
      comp=Z,52nm,18.9s,baz=265,slow=38
      comp=Z,4.4nm,0.4s
YAK   Yakutsk          73.94  11    P      P      21 20 29.8 -1.2
YAK   Yakutsk          73.94  11d iP      P      21 20 30.1 -0.9
YAK                                 pmax   pmax
      comp=Z,27nm,1.0s
AKTO  Aktyubinsk       74.05 330    LR     LR     21 56 16.9
      comp=Z,103nm,20.5s,baz=127,slow=38
PEA0B Petropavlovsk-   76.01  28    P      P      21 20 42.7 -0.5
PEA0B Petropavlovsk-   76.01  28    P      P      21 20 42.7 -0.5
PEA0B                               pmax   pmax
      comp=Z,75nm,1.4s
PETK  Petropavlovsk-   76.01  28    P      P      21 20 41.9 -1.3
      comp=Z,4.6nm,0.9s,baz=243,slow=1.0,SNR=4.0
PETK                                LR     LR     21 55 11.5
      comp=Z,58nm,21.8s,baz=231,slow=37
      comp=Z,4.6nm,0.9s
GNI   Garni            76.53 315    LR     LR     21 56 28.3
      comp=Z,50nm,21.9s,baz=104,slow=37
GNI   Garni            76.53 315    P      P      21 20 45.9 -0.8
GNI   Garni            76.53 315deP    P      21 20 47.0 +0.3
GNI                                 pmax   pmax
      comp=Z,22nm,2.5s
GNI   Garni            76.53 315    P      P      21 20 47.4 +0.7
GNI                                 P      P      21 20 47.4 +0.7
GNI   Garni            76.53 315    P      P      21 20 46.6 -0.1
MBAR  Mbarara          76.93 272    LR     LR     21 51 04.1
      comp=Z,194nm,19.4s,baz=85,slow=33
MBAR  Mbarara          76.93 272    P      P      21 20 49.5  0.0
MBAR                                IAmb   IAmb   21 20 52.5
      comp=Z,19nm,1.1s
MBAR  Mbarara          76.93 272ceP    P      21 20 51.7 +2.2
MBAR                                pmax   pmax
      comp=Z,19nm,1.0s
MBAR  Mbarara          76.93 272    P      P      21 20 51.7 +2.2
MBAR                                P      P      21 20 51.7 +2.2
GEVA  Gevas            76.94 313    P      P      21 20 46.2 -2.8
SVE   Sverdlovsk       77.04 336ceP    P      21 20 49.6 +0.7
SVE                                 pmax   pmax
      comp=Z,67nm,1.1s
GROC  Groznyy          77.18 319   eP      P      21 20 50.0 -0.1
GROC                               e              21 20 59.6
GROC                               e              21 23 44.3
GROC                                pmax   pmax
      comp=Z,39nm,1.0s
LSZ   Lusaka           77.25 257    LR     LR     21 49 12.9
      comp=Z,208nm,21.7s,baz=111,slow=31
LSZ   Lusaka           77.25 257    P      P      21 20 51.2  0.0
LSZ                                 IAmb   IAmb   21 20 53.8
      comp=Z,12nm,0.9s
LSZ   Lusaka           77.25 257    P      P      21 20 51.2  0.0
LSZ                                 pmax   pmax
      comp=Z,12nm,0.9s
MA2   Magadan          77.56  21    LR     LR     21 57 05.0
      comp=Z,60nm,19.1s,baz=140,slow=37
ARU   Arti             77.64 335    P      P      21 20 52.1 -0.2
ARU   Arti             77.64 335c iP      P      21 20 52.4 +0.1
ARU                                               21 21 02.2
ARU                                               21 23 47.6
ARU                                 S      S      21 30 48.1 +5.5
ARU                                 SS     SS     21 35 47.4 +4.6
ARU                                 pmax   pmax
      comp=Z,56nm,1.1s
GURO  Guroymak-BITLI   77.78 313    P      P      21 20 54.1 +0.4
GURO                                IAmb   IAmb   21 20 55.4
      comp=Z,17nm,1.1s
KARS  Kars             77.88 315    P      P      21 20 54.5 +0.2
KARS  Kars             77.88 315    P      P      21 20 54.5 +0.2
KARS                                pmax   pmax
      comp=Z,92nm,0.8s
ZEI   Tsey             78.24 318   eP      P      21 20 56.4 +0.1
ZEI                                 pmax   pmax
      comp=Z,13nm,1.2s
BOSA  Boshof           78.54 243    P      P      21 20 59.4 +1.2
      comp=Z,9.3nm,1.1s,baz=108,slow=6.5,SNR=6.5
      comp=Z,9.3nm,1.1s
BOSA  Boshof           78.54 243    P      P      21 20 57.0 -1.2
BOSA                                IAmb   IAmb   21 21 01.4
      comp=Z,21nm,1.2s
BOSA  Boshof           78.54 243    P      P      21 20 57.0 -1.2
BOSA                                pmax   pmax
      comp=Z,21nm,1.3s
LBTB  Lobatse          78.58 246    LR     LR     21 49 50.7
      comp=Z,115nm,20.0s,baz=102,slow=31
LBTB  Lobatse          78.58 246    P      P      21 20 58.7 +0.3
LBTB  Lobatse          78.58 246    P      P      21 20 58.7 +0.3
LBTB                                pmax   pmax
      comp=Z,14nm,1.1s
NCK   Nalchik          78.75 318⇑ iP      P      21 20 59.6 +0.8
NCK                                 pmax   pmax
      comp=Z,20nm,1.0s
KBZ   Khabaz           79.31 318    P      P      21 21 02.2 +0.4
      comp=Z,12nm,0.9s,baz=134,slow=3.8,SNR=25
KBZ                                 LR     LR     22 00 09.7
      comp=Z,77nm,20.8s,baz=118,slow=39
      comp=Z,12nm,0.9s
KBZ   Khabaz           79.31 318d iP      P      21 21 02.1 +0.3
KBZ                                 pmax   pmax
      comp=Z,20nm,1.0s
KVAR  Kislovodsk Arr   79.54 318    LR     LR     21 59 17.9
      comp=Z,37nm,20.3s,baz=158,slow=38
KIV   Kislovodsk       79.54 318    P      P      21 21 02.8 -0.4
KIV   Kislovodsk       79.54 318   eP      P      21 21 03.4 +0.2
KIV                                 pmax   pmax
      comp=Z,8.0nm,1.0s
KIV                                 MLR    MLR
      comp=Z,63nm,19.0s
KIV   Kislovodsk       79.54 318    P      P      21 21 04.7 +1.5
KIV                                 P      P      21 21 04.7 +1.5
KIV   Kislovodsk       79.54 318    P      P      21 21 03.8 +0.6
GOF   Gofitskoye       79.78 319⇑eP    P      21 21 04.6 +0.2
QSPA  South Pole Qui   79.92 180    LR     LR     21 51 28.3
      comp=Z,221nm,21.8s,baz=306,slow=32
QSPA  South Pole Qui   79.92 180    P      P      21 21 05.7 +0.8
QSPA                                IAmb   IAmb   21 21 46.6
      comp=Z,38nm,1.7s
GHAJ  Ghor Haditha     80.19 304    P      P      21 21 06.8  0.0
GHAJ                                IAmb   IAmb   21 21 09.1
      comp=Z,29nm,0.9s
EIL   Elat             80.19 303    LR     LR     21 58 11.7
      comp=Z,81nm,18.3s,baz=84,slow=37
NRIK  Noril'sk         80.47 353    P      P      21 21 06.7 -0.8
      comp=Z,13nm,0.8s,baz=161,slow=4.9,SNR=21
NRIK                                LR     LR     21 59 06.2
      comp=Z,211nm,21.1s,baz=164,slow=38
      comp=Z,13nm,0.8s
NRIK  Noril'sk         80.47 353    P      P      21 21 07.3 -0.2
NRIK                                IAmb   IAmb   21 21 22.9
      comp=Z,32nm,1.1s
NRIK  Noril'sk         80.47 353d iP      P      21 21 07.1 -0.4
NRIK                                pmax   pmax
      comp=Z,30nm,1.1s
BELG  Belogornoye      80.52 327    LR     LR     22 02 29.2
      comp=Z,66nm,18.3s,baz=146,slow=40
BELG  Belogornoye      80.52 327d iP      P      21 21 08.1  0.0
BELG                                pmax   pmax
      comp=Z,7.0nm,1.3s
MMAI  Mount Meron Ar   80.85 306    LR     LR     21 54 34.8
      comp=Z,103nm,22.0s,baz=256,slow=34
SUR   Sutherland       81.96 239    P      P      21 21 16.1 -0.6
SUR   Sutherland       81.96 239    P      P      21 21 16.6  0.0
SUR                                 P      P      21 21 16.6  0.0
BNN   Bunyan           82.39 312    P      P      21 21 18.2 -0.4
BNN                                 IAmb   IAmb   21 21 20.2
      comp=Z,34nm,1.2s
TOKA  Tokat            82.43 313    P      P      21 21 18.8 +0.2
TOKA                                IAmb   IAmb   21 21 36.0
      comp=Z,34nm,1.5s
NVL   N'lazarevskaya   82.44 199   eP      P      21 21 22.7 +4.6
NVL                                 pmax   pmax
      comp=Z,13nm,1.0s
TIXI  Tiksi            82.79   7    P      P      21 21 19.0 -0.8
      comp=Z,18nm,0.9s,baz=88,slow=23,SNR=66
TIXI                                LR     LR     22 00 29.4
      comp=Z,61nm,19.2s,baz=180,slow=38
      comp=Z,18nm,0.9s
TIXI  Tiksi            82.79   7    P      P      21 21 19.1 -0.6
TIXI                                IAmb   IAmb   21 21 34.1
      comp=Z,20nm,0.8s
TIXI  Tiksi            82.79   7d iP      P      21 21 19.3 -0.4
TIXI                                pmax   pmax
      comp=Z,23nm,1.0s
KIRV  Kirov            82.88 333d iP      P      21 21 20.7 +0.2
CSS   Mathiatis        83.08 307    P      P      21 21 22.3 +0.1
VRH   Novokhopyorsk    83.21 325   eP      P      21 21 21.6 -0.8
VRH                                 pmax   pmax
      comp=Z,30nm,0.9s
ANN   Anapa            83.34 318   eP      P      21 21 20.0 -3.2
ANN                                e              21 21 26.3
ANN                                eS      S      21 31 40.4 -2.4
ANN                                eSS     SS     21 37 09.5 +1.0
ANN                                eSSS    SSS    21 40 33.8
ANN                                 pmax   pmax
      comp=Z,27nm,1.7s
BRTR  Keskin Array B   84.29 312    P      P      21 21 28.4  0.0
      comp=Z,6.4nm,0.9s,baz=126,slow=6.3,SNR=31
BRTR                                LR     LR     22 00 41.6
      comp=Z,78nm,20.0s,baz=112,slow=37
      comp=Z,6.4nm,0.9s
BRTR  Keskin Array B   84.29 312  i P      P      21 21 28.7 +0.3
BRTR                                pmax   pmax
      comp=Z,6.0nm,0.9s
BR131 Keskin Array S   84.29 312    P      P      21 21 28.0 -0.4
BR131                               IAmb   IAmb   21 21 29.6
      comp=Z,23nm,1.1s
BR131 Keskin Array S   84.29 312    P      P      21 21 28.0 -0.4
BR131                               pmax   pmax
      comp=Z,23nm,1.2s
BR131 Keskin Array S   84.29 312    P      P      21 21 28.7 +0.3
      SNR=5.8
BR131                               P      P      21 21 28.7 +0.3
      SNR=5.8
VSR   Storozhevoye     84.68 324   eP      P      21 21 29.1 -0.8
VSR                                 pmax   pmax
      comp=Z,30nm,1.0s
VORR  Voronezh         84.84 324   eP      P      21 21 30.4 -0.3
VORR                                pmax   pmax
      comp=Z,10.0nm,0.4s
ANTO  Ankara           84.96 312    P      P      21 21 30.9 -0.8
ANTO                                IAmb   IAmb   21 21 33.3
      comp=Z,11nm,0.8s
ANTO  Ankara           84.96 312    P      P      21 21 30.9 -0.8
ANTO                                pmax   pmax
      comp=Z,11nm,0.9s
BR231 Keskin MP Arra   84.96 312    P      P      21 21 31.7  0.0
BR231                               IAmb   IAmb   21 21 33.5
      comp=Z,18nm,1.1s
TROLL Troll, Antarti   85.06 198    P      P      21 21 36.4 +4.7
LPSR  Galich'ya Gora   85.36 325   eP      P      21 21 32.8 -0.5
LPSR                                pmax   pmax
      comp=Z,20nm,1.1s
SIM   Simferopol'      85.61 317   eP      P      21 21 33.7 -1.0
SIM                                 pmax   pmax
      comp=Z,14nm,0.7s
PRGR  Permogore        86.09 335   eP      P      21 21 34.2 -2.4
PRGR                               e              21 24 55.2
MDUB  Mudurnu          86.30 312    P      P      21 21 38.1 -0.2
BORA  Eskisehir        86.69 311    P      P      21 21 40.2 -0.1
TSUM  Tsumeb           86.72 251    P      P      21 21 41.1 +0.1
TSUM                                IAmb   IAmb   21 21 43.8
      comp=Z,18nm,1.6s
SNAA  Sanae            86.76 197    P      P      21 21 42.9 +2.8
SNAA  Sanae            86.76 197⇑eP    P      21 21 45.3 +5.3
SNAA                                pmax   pmax
      comp=Z,11nm,1.3s
OBN   Obninsk          87.61 327    LR     LR     22 08 54.3
      comp=Z,22nm,18.0s,baz=96,slow=41
OBN   Obninsk          87.61 327    P      P      21 21 43.9 -0.3
OBN   Obninsk          87.61 327d iP      P      21 21 43.9 -0.3
OBN                                e              21 25 05.4
OBN                                 pmax   pmax
      comp=Z,52nm,1.7s
OBN                                 MLR    MLR
      comp=Z,140nm,25.0s
KARP  Karpathos        88.10 306    P      P      21 21 47.3 +0.1
BILL  Bilibino         88.22  19    P      P      21 21 46.7 -0.2
BILL                                IAmb   IAmb   21 21 51.1
      comp=Z,7.1nm,0.8s
BILL  Bilibino         88.22  19   eP      P      21 21 46.2 -0.7
BILL                               e              21 25 11.0
BILL                               ePPP    PPP    21 27 10.5
BILL                                pmax   pmax
      comp=Z,8.0nm,0.8s
BILL                                MLR    MLR
      comp=Z,44nm,19.0s
KLMR  Klimovskoe       88.37 333   eP      P      21 21 44.9 -2.8
KLMR                                pmax   pmax
      comp=Z,34nm,1.1s
KLMR  Klimovskoe       88.37 333   eP      P      21 21 44.9 -2.8
KLMR                                AMP           21 21 49.1
      comp=Z,34nm,1.1s
RAR   Rarotonga        88.86 111    LR     LR     21 59 17.5
      comp=Z,56nm,21.7s,baz=264,slow=34
VNA3  Neumayer Olymp   88.92 197    P      P      21 21 49.4 -0.9
JURR  Jurilovca        89.12 316  ⇓P      P      21 21 51.6  0.0
TIRR  Tirgusor         89.36 315  ⇓P      P      21 21 52.8 +0.1
TIRR  Tirgusor         89.36 315    P      P      21 21 52.1 -0.6
TIRR  Tirgusor         89.36 315    P      P      21 21 52.1 -0.6
TIRR                                pmax   pmax
      comp=Z,33nm,1.1s
BELA  Belgrano 2       89.68 187    P      P      21 21 54.2 +0.5
CFR   Carcaliu         89.73 316  ⇓P      P      21 21 55.0 +0.5
HARR  Harsova          89.75 315  ⇑P      P      21 21 55.7 +1.1
IDI   Anoyia           89.85 306    LR     LR     22 02 21.4
      comp=Z,39nm,20.6s,baz=86,slow=36
SORM  Soroca           90.33 319  ⇑P      P      21 21 57.3 +0.1
GHRR                   90.44 317  ⇑P      P      21 21 58.7 +0.9
AKASG Malin Array Be   90.45 321    P      P      21 21 56.6 -1.1
      comp=Z,0.3nm,0.3s,baz=86,slow=2.6,SNR=9.3
AKASG                               PP     PP     21 25 29.9 -2.5
      comp=Z,0.2nm,0.3s,baz=95,slow=6.3,SNR=6.5
AKASG                               LR     LR     22 09 57.5
      comp=Z,29nm,18.8s,baz=121,slow=41
      comp=Z,0.3nm,0.3s
AKASG Malin Array Be   90.45 321    P      P      21 21 56.8 -0.9
AKASG Malin Array Be   90.45 321  i P      P      21 21 57.2 -0.5
AKASG                               pmax   pmax
      comp=Z,2.0nm,0.8s
AKBB  Malin Array Si   90.45 321⇑eP    P      21 21 57.2 -0.5
AKBB                                pmax   pmax
      comp=Z,4.0nm,0.9s
VRI   Vrincioaia       90.86 316  ⇓P      P      21 22 00.9 +1.1
PLOR  Plostina         90.91 316  ⇓P      P      21 22 01.5 +1.4
NEHR  Nehoiu           91.05 316  ⇑P      P      21 22 02.2 +1.5
TESR  Tescani          91.06 317  ⇑P      P      21 22 01.3 +0.6
MLR   Muntele Rosu     91.31 316  ⇑P      P      21 22 03.1 +1.0
MLR   Muntele Rosu     91.31 316    LR     LR     22 07 44.1
      comp=Z,60nm,22.0s,baz=86,slow=39
MLR   Muntele Rosu     91.31 316    P      P      21 22 02.5 +0.5
MLR   Muntele Rosu     91.31 316    P      P      21 22 02.5 +0.5
MLR                                 pmax   pmax
      comp=Z,27nm,1.5s
DOPR  Dopca            91.79 316  ⇓P      P      21 22 04.6 +0.5
VOIR                   91.91 316  ⇓P      P      21 22 05.2 +0.5
MNK   Minsk            92.21 325  i P      P      21 22 05.6 -0.2
MNK                               i               21 25 46.2
MNK                               i PPP    PPP    21 27 44.6
MNK                               i S      SKSac  21 32 38.5 +1.0
MNK                               i PS     PS     21 34 20.8 +0.2
MNK                               i SS     SS     21 39 19.9 +2.4
MNK                                 pmax   pmax
      comp=E,2.0nm,1.0s
MNK                                 pmax   pmax
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	comp=Z,16nm,1.0s						
MNK				pmax	pmax		
	comp=N,12nm,1.2s						
MNK				MLR	MLR		
	comp=Z,253nm,21.0s						
MNK				MLR	MLR		
	comp=N,75nm,20.0s						
MNK				MLR	MLR		
	comp=E,8.0nm,22.0s						
MNK	Minsk	92.21	325	*i*P	P	21 22 05.6	-0.2
	comp=E,2.0nm,1.0s						
MNK				*i*P	P	21 22 05.6	-0.2
	comp=N,12nm,1.2s						
MNK				*i*P	P	21 22 05.6	-0.2
	comp=Z,16nm,1.0s,baz=102						
MNK				*i*PP	PP	21 25 46.2	-0.1
MNK				*i*PPP	PPP	21 27 44.7	
MNK				*i*S	SKSac	21 32 38.5	+1.0
MNK				*i*PS	PnS	21 34 20.8	-0.9
MNK				*i*SS	SS	21 39 20.0	+2.4
MNK				*i*SSS	SSS	21 43 05.9	
MNK				*i*LR	LR	22 03 01.6	
	comp=Z,253nm,21.0s						
MNK				*i*LRM	MLR	22 04 23.1	
	comp=N,75nm,19.7s						
MNK				*i*LRM	MLR	22 04 47.5	
	comp=E,8.0nm,22.4s						
MNK				*i*LRM	MLR	22 05 07.8	
BURAR	Bucovina Array	92.26	318	⇑P	P	21 22 07.9	+1.5
BUR08	Bucovina Ar. S	92.28	318	P	P	21 22 06.7	+0.2
BUR08				IAmb	IAmb	21 23 21.7	
	comp=Z,20nm,1.9s						
VTS	Vitosha	92.62	313	⇓P	P	21 22 08.4	+0.3
VTS	Vitosha	92.62	313	P	P	21 22 07.0	-1.2
VTS	Vitosha	92.62	313	P	P	21 22 07.0	-1.2
VTS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NACGM	Naroch	92.92	325	⇓*e*P	P	21 22 09.9	+0.8
	baz=104						
IDID	Didziasalis	93.04	326	*e*P	P	21 22 10.5	+0.9
IIGN	Ignalina	93.34	326	*e*P	P	21 22 12.1	+1.1
ISAL	Salakas	93.44	326	*e*P	P	21 22 12.3	+0.8
HERR	Herculane	93.63	315	⇑P	P	21 22 13.0	+0.5
VSU	Vasula	93.76	329	⇑*e*P	P	21 22 13.2	+0.4
VSU				pmax	pmax		
	comp=Z,31nm,1.0s						
FINES	FINESS Array B	94.74	332	P	P	21 22 16.8	-0.5
	comp=Z,1.9nm,0.9s,baz=108,slow=4.5,SNR=5.0						
FINES				LR	LR	22 09 41.0	
	comp=Z,87nm,21.8s,baz=102,slow=38						
	comp=Z,1.9nm,0.9s						
ARCES	ARCESS Array B	96.61	339	P	P	21 22 25.3	-0.4
	comp=Z,2.5nm,0.8s,baz=108,slow=6.6,SNR=4.7						
ARCES				LR	LR	22 11 38.4	
	comp=Z,140nm,19.0s,baz=108,slow=39						
	comp=Z,2.5nm,0.8s						
VRAC	Vranov	98.20	319	LR	LR	22 16 09.4	
	comp=Z,34nm,18.1s,baz=78,slow=41						
PPT	Papeete	99.02	110	LR	LR	22 06 13.3	
	comp=Z,34nm,19.9s,baz=189,slow=35						
SPITS	Spitsbergen Ar	100.05	348	LR	LR	22 14 59.7	
	comp=Z,207nm,19.8s,baz=204,slow=40						
CLL	Collm	100.64	320	*e*SS	SS	21 41 19.0	+2.0
CLL				*e*SSS	SSS	21 45 18.0	
CLL				LmV		22 14 00.0	
	comp=Z,100nm,19.7s						
YKA	Yellowknife Ar	119.54	21	PKP	PKiKP	21 27 45.5	-0.1
	comp=Z,1.6nm,0.7s,baz=318,slow=1.8,SNR=18						
NVAR	Mina Array Bea	130.26	48	PKP	PKiKP	21 28 09.4	+1.5
	comp=Z,0.3nm,0.2s,baz=212,slow=3.2,SNR=4.9						
NVAR	Mina Array Bea	130.26	48		PKiKP	21 28 08.2	+0.3
PDAR	Pinedale Array	134.10	38	PKP	PKiKP	21 28 15.8	+0.3
	comp=Z,0.2nm,0.3s,baz=254,slow=2.3,SNR=2.3						
L40A	Anamosa	144.13	24	PKPdf	PKPbc	21 28 30.2	0.0
SDBA	SAO DESIDERIO	144.68	231	*e*P	PKPab	21 28 32.3	-0.4
L42A	Oliver, Polo	144.79	23	P	PKPbc	21 28 32.5	+0.2
	baz=330						
BDFB	Brasilia	144.81	224	PKP	PKPdf	21 28 34.5	+0.2
	comp=Z,8.1nm,0.9s,baz=141,slow=5.1,SNR=7.9						
BDFB	Brasilia	144.81	224	PKPdf	PKPab	21 28 33.1	0.0
BDFB	Brasilia	144.81	224	PKIKP	PKPab	21 28 33.1	0.0
G62A	West of Eustis	144.96	358	P	PKPdf	21 28 33.4	-0.2
	baz=3.3						
G62A				P	PKPdf	21 28 33.4	-0.2
	baz=3.3						
SADO	Sadowa	144.97	8	PKP	PKPbc	21 28 32.8	0.0
	comp=Z,6.1nm,0.7s,baz=334,slow=5.4,SNR=5.3						
TX31	Lajitas Ar. Si	145.09	52	P	PKPdf	21 28 34.8	+0.4
	baz=297						
TXAR	Lajitas Array	145.09	52	PKP	PKPdf	21 28 35.0	+0.6
	comp=Z,6.1nm,0.8s,baz=274,slow=2.5,SNR=38						
P38A	Dawn	145.10	29	P	PKPdf	21 28 33.7	-0.3
	baz=322						
NBMO	Morrinhos-CE	145.10	249	*e*P	PKPbc	21 28 31.4	-2.7
BMNY	Brushton-Moira	145.33	3	P	PKPdf	21 28 34.4	+0.2
	baz=356,SNR=13						
LONY	Lake Ozonia	145.55	3	PKPdf	PKPdf	21 28 34.4	-0.2
H62A	Milan	145.62	358	P	PKPdf	21 28 34.4	-0.3
	baz=2.3,SNR=5.5						
H62A				P	PKPdf	21 28 34.4	-0.3
	baz=2.3,SNR=5.5						
WMOK	Wichita Mounta	145.64	40	P	PKPab	21 28 36.2	+0.6
	baz=309,SNR=8.9						
NCB	Newcomb	146.21	2	P	PKPbc	21 28 36.9	+0.1
	baz=357,SNR=8.0						
L48A	N Adams	146.56	16	P	PKPab	21 28 38.4	-0.4
	baz=338						
L48A				P	PKPab	21 28 38.4	-0.4
	baz=338						
J57A	Williamstown	146.66	5	P	PKPab	21 28 38.5	-0.6
	baz=354						
J57A				P	PKPab	21 28 38.5	-0.6
	baz=354						
S39A	Bolivar	146.70	31	PKPdf	PKPdf	21 28 36.3	-0.5
S39A	Bolivar	146.70	31	P	PKPbc	21 28 37.6	-0.8
	baz=320						
J59A	Piesco	146.70	3	P	PKPab	21 28 38.7	-0.7
	baz=356,SNR=7.7						
J59A				P	PKPab	21 28 38.7	-0.7
	baz=356,SNR=7.7						
R40A	Maddies Statio	146.75	29	P	PKPbc	21 28 38.6	+0.1
	baz=323						
J58A	Remsen	146.76	4	P	PKPbc	21 28 38.5	+0.1
	baz=355,SNR=7.0						
J58A				P	PKPbc	21 28 38.5	+0.1
	baz=355,SNR=7.0						
J61A	Chester	146.87	0	P	PKPbc	21 28 39.1	+0.5
	baz=360						
J61A				P	PKPbc	21 28 39.1	+0.5
	baz=360						
K57A	Scipio Center	147.29	6		PKPbc	21 28 39.1	-0.8
K57A	Scipio Center	147.29	6	P	PKPbc	21 28 40.3	+0.4
	baz=353,SNR=5.1						
CCM	Cathedral Cave	147.43	28		PKPdf	21 28 37.8	-0.2
CCM	Cathedral Cave	147.43	28	PKP2	PKPdf	21 28 37.8	-0.2
CCM	Cathedral Cave	147.43	28	P	PKPbc	21 28 40.6	+0.2
	baz=324						
HCNY	Howe Caverns	147.47	3	P	PKPbc	21 28 40.4	0.0
	baz=356,SNR=5.7						
L56A	Greenwood	147.76	7	P	PKPbc	21 28 41.6	+0.3
	baz=351						
L56A				P	PKPbc	21 28 41.6	+0.3
	baz=351						
FVM	French Village	147.86	27		PKPbc	21 28 41.3	-0.3
FVM	French Village	147.86	27	PKP2	PKPbc	21 28 41.3	-0.3
BINY	Binghamton	147.87	5		PKPbc	21 28 41.2	-0.3
BINY	Binghamton	147.87	5	P	PKPbc	21 28 42.1	+0.6
	baz=354,SNR=7.5						
M53A	WI Miller and	147.94	12		PKPbc	21 28 40.9	-0.8
L59A	Walton	147.94	4		PKPbc	21 28 41.9	+0.2
U40A	Yellville	147.96	32		PKPbc	21 28 41.6	-0.3
U40A	Yellville	147.96	32	P	PKPbc	21 28 42.0	0.0
	baz=320,SNR=11						
U40A				P	PKPbc	21 28 42.0	0.0
	baz=320,SNR=11						
OLIL	Olney	148.21	24		PKPbc	21 28 41.9	-0.6
OLIL	Olney	148.21	24	P	PKPbc	21 28 42.7	+0.2
	baz=330						
O49A	Covington	148.22	17	P	PKPbc	21 28 42.7	+0.2
	baz=338						
O49A				P	PKPbc	21 28 42.7	+0.2
	baz=338						
M55A	Ridgway	148.25	9	P	PKPbc	21 28 42.8	+0.3
	baz=348,SNR=7.2						
M55A				P	PKPbc	21 28 42.8	+0.3
	baz=348,SNR=7.2						
W39A	Magazine	148.32	35	P	PKPbc	21 28 43.3	+0.4
	baz=317						
N53A	Lisbon	148.52	12	P	PKiKP	21 28 43.9	-0.9
	baz=344,SNR=5.9						
N53A				P	PKiKP	21 28 43.9	-0.9
	baz=344,SNR=5.9						
KSPA	Keystone Colle	148.52	5		PKPbc	21 28 43.2	-0.1
KSPA	Keystone Colle	148.52	5	P	PKPbc	21 28 43.6	+0.3
	baz=354,SNR=8.9						
ACSO	Alum Creek Sta	148.55	16		PKPbc	21 28 42.8	-0.5
M57A	Sunshine Farm,	148.60	7	P	PKPbc	21 28 43.6	+0.2
	baz=351,SNR=11						
M57A				P	PKPbc	21 28 43.6	+0.2
	baz=351,SNR=11						
PBMO	Poplar Bluff	148.84	29	P	PKPbc	21 28 44.3	+0.1
	baz=324						
MIAR	Mount Ida	148.91	35		PKPbc	21 28 44.4	0.0
MIAR	Mount Ida	148.91	35	PKP2	PKPbc	21 28 44.4	0.0
MIAR	Mount Ida	148.91	35	P	PKPbc	21 28 44.7	+0.3
	baz=317,SNR=9.7						
O52A	Adamsville	148.95	14	P	PKPbc	21 28 44.7	+0.3
	baz=342						
O52A				P	PKPbc	21 28 44.7	+0.3
	baz=342						
LCAR	Lake Charles	149.05	30	P	PKPbc	21 28 45.1	+0.3
	baz=322,SNR=12						
ODNJ	Ogdensburg	149.07	3	P	PKiKP	21 28 45.2	-0.8
	baz=356						
N58A	Sunbury	149.14	6	P	PKiKP	21 28 45.5	-0.6
	baz=352,SNR=8.0						
N58A				P	PKiKP	21 28 45.5	-0.6
	baz=352,SNR=8.0						
SSPA	Standing Stone	149.20	8		PKPbc	21 28 45.4	+0.4
SSPA	Standing Stone	149.20	8	P	PKiKP	21 28 45.6	-0.7
	baz=350,SNR=7.8						
O54A	Avella	149.21	12	P	PKiKP	21 28 45.9	-0.4
	baz=345,SNR=6.6						
O54A				P	PKiKP	21 28 45.9	-0.4
	baz=345,SNR=6.6						
SNDB	Serra Nova Dou	149.64	224	*e*P	PKPdf	21 28 41.2	-1.0
R49A	Shelbyville	149.68	20	P	PKiKP	21 28 46.8	-0.5
	baz=335						
R49A				P	PKiKP	21 28 46.8	-0.5
	baz=335						
PB08	IPOC Station P	149.78	186		PKPbc	21 28 47.1	-0.5
GEDE	Greenville	150.26	5	P	PKiKP	21 28 48.0	-0.4
	baz=354						
P57A	Homestead Farm	150.31	9	P	PKiKP	21 28 48.4	-0.1
	baz=349						
P57A				P	PKiKP	21 28 48.4	-0.1
	baz=349						
WVT	Waverly	150.55	26	P	PKiKP	21 28 49.0	-0.2
	baz=328,SNR=21						
R53A	Hurricane	150.61	15	P	PKiKP	21 28 48.9	-0.3
	baz=341						
R53A				P	PKiKP	21 28 48.9	-0.3
	baz=341						
S51A	Beattyville	150.79	18	P	PKiKP	21 28 49.2	-0.4
	baz=337,SNR=9.5						
S51A				P	PKiKP	21 28 49.2	-0.4
	baz=337,SNR=9.5						
U49A	Red Boiling Sp	151.05	23	P	PKPbc	21 28 48.8	-0.8
	baz=332,SNR=7.0						
OXF	Oxford	151.15	30	P	PKiKP	21 28 50.2	-0.2
	baz=324						
V48A	Smith Brothers	151.31	25	P	PKPbc	21 28 49.9	-0.3
	baz=330						
PTLB	Pontes e Lacer	151.41	208	*e*P	PKPdf	21 28 43.3	-1.6
TZTN	Tazewell	151.80	19	P	PKiKP	21 28 51.9	+0.2
	baz=336						
R58B	Mineral	151.82	9	P	PKiKP	21 28 51.6	-0.1
	baz=349						
R58B				P	PKiKP	21 28 51.6	-0.1
	baz=349						
PRPB	Parauapebas	152.28	235	*e*P	PKPdf	21 28 46.1	-0.2
X48A	Hartselle	152.31	27	P	PKPbc	21 28 52.5	0.0
	baz=328						
TKL	Tuckaleechee C	152.53	20	PKPbc	PKiKP	21 28 53.2	-0.1
	comp=Z,6.7nm,0.8s,baz=140,slow=2.6,SNR=7.8						
LPAZ	La Paz	153.45	189	PKPbc	PKiKP	21 28 57.6	+1.1
	comp=Z,1.8nm,0.6s,baz=218,slow=3.2,SNR=5.8						
LPAZ	La Paz	153.45	189	*e*P	PKPdf	21 28 48.0	-0.7

KRSC ***17*** *21:16:05.1±1.1, 53°.44N×161°.27E, h48^{km}±18^{km}, ML4.3*

NEIC ***17*** *21:16:07.2±1.8, 53°.59N±0°.06×161°.2E±0°.1, h35^{km}±2^{km}, mb4.4/6, Error ellipse: s-maj=14.1km s-min=9.9km az=101.0*

MOS ***17*** *21:16:07.3±0.8, 53°.47N×161°.16E, h48^{km}, mb4.3/5, Error ellipse: s-maj=7.6km s-min=4.6km az=77.0*

IDC ***17*** *21:16:11.4±2.2, 53°.55N×160°.91E, h73^{km}±19^{km}, mb3.5/14, mbtmp3.8/14, Error ellipse: s-maj=21.8km s-min=14.6km az=147.0*

ISC 17 21:16:07.5±1.0**, 53°.49N**±0°.04×**161°.18E**±0°.04**, h43**^{km}±9^{km}**, n122,** σ1^{s}**34**/156**, mb4.0**/20**, 1C-2D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.80	241	PN	Pn	21 16 21.8	-0.5
SPN				S	Sn	21 16 32.3	-0.7
SPN	Mys Shipunski	0.80	241	*e*P	Pn	21 16 21.8	-0.5
SPN				*e*S	Sn	21 16 32.3	-0.7
MKZ	Mys Kozlova	1.12	17	PN	Pn	21 16 26.8	+0.2
MKZ				S	Sn	21 16 40.9	+0.1
MKZ	Mys Kozlova	1.12	17	*e*P	Pn	21 16 26.8	+0.2
MKZ				*e*S	Sn	21 16 40.9	+0.1
NLC	Nalytchevo	1.14	255	PN	Pn	21 16 26.8	-0.2
NLC				S	Sn	21 16 41.0	-0.4
NLC	Nalytchevo	1.14	255	*e*P	Pn	21 16 26.8	-0.2
NLC				*e*S	Sn	21 16 41.0	-0.4
KII	Karymskiy	1.16	299	PN	Pn	21 16 27.2	-0.2
KII				S	Sn	21 16 41.8	-0.3
KII	Karymskiy	1.16	299	*e*P	Pn	21 16 27.2	-0.2
KII				*e*S	Sn	21 16 41.8	-0.3
SDLR	Sedlovina	1.39	262	PN	Pn	21 16 30.7	+0.2
SDLR				S	Sn	21 16 48.6	+0.9
SDLR	Sedlovina	1.39	262	*e*P	Pn	21 16 30.7	+0.2
SDLR				*e*S	Sn	21 16 48.6	+0.9
UGLR	Uglovaya	1.44	260	PN	Pn	21 16 31.7	+0.6
UGLR				S	Sn	21 16 49.7	+0.8
UGLR	Uglovaya	1.44	260	*e*P	Pn	21 16 31.7	+0.6
UGLR				*e*S	Sn	21 16 49.7	+0.8
SMAR	Somma	1.44	262	PN	Pn	21 16 31.7	+0.4
SMAR	Somma	1.44	262	*e*P	Pn	21 16 31.7	+0.4
KRER	Koryakskii	1.47	264	PN	Pn	21 16 32.2	+0.6
KRER				S	Sn	21 16 50.3	+0.6
KRER	Koryakskii	1.47	264	*e*P	Pn	21 16 32.2	+0.6
KRER				*e*S	Sn	21 16 50.3	+0.6
AVH	Avacha	1.48	262	PN	Pn	21 16 32.3	+0.6
AVH				S	Sn	21 16 51.5	+1.7
AVH	Avacha	1.48	262	*e*P	Pn	21 16 32.3	+0.6
AVH				*e*S	Sn	21 16 51.5	+1.7
KRX	Arik	1.52	266	PN	Pn	21 16 32.6	+0.3
KRX				S	Sn	21 16 51.2	+0.3
KRX	Arik	1.52	266	*e*P	Pn	21 16 32.6	+0.3
KRX				*e*S	Sn	21 16 51.2	+0.3
DALK	Dalny	1.53	253	PN	Pn	21 16 32.3	+0.1
DALK				S	Sn	21 16 51.1	+0.3
DALK	Dalny	1.53	253	*e*P	Pn	21 16 32.3	+0.1
DALK				*e*S	Sn	21 16 51.1	+0.3
KOK	Koryaka	1.53	264	PN	Pn	21 16 32.9	+0.4
KOK	Koryaka	1.53	264	*e*P	Pn	21 16 32.9	+0.4
PET	Petropavlovsk	1.59	254		Pn	21 16 32.9	-0.1
PET				Sn	Sn	21 16 52.8	+0.5
PET	Petropavlovsk	1.59	254	PN	Pn	21 16 33.2	+0.2
PET				S	Sn	21 16 52.5	+0.2
PET	Petropavlovsk	1.59	254	*e*P	Pn	21 16 33.2	+0.2
PET				*e*S	Sn	21 16 52.5	+0.2
TUMD	Tumrok D	1.78	345	*e*P	Pn	21 16 36.4	+0.7
TUMD				*e*S	Sn	21 16 58.5	+1.4
TUMR	Tumrok	1.90	342	PN	Pn	21 16 36.4	-1.0
TUMR				S	Sn	21 16 58.5	-1.6
TUMR	Tumrok	1.90	342	*e*P	Pn	21 16 38.9	+1.5
RUS	Russkaya	1.93	238	PN	Pn	21 16 38.2	+0.5
RUS				S	Sn	21 17 00.8	+0.1
RUS	Russkaya	1.93	238	*e*P	Pn	21 16 38.2	+0.5
RUS				*e*S	Sn	21 17 00.8	+0.1
GNL	Ganaly	1.94	277	PN	Pn	21 16 39.4	+1.4
GNL	Ganaly	1.94	277	*e*P	Pn	21 16 39.4	+1.4
KRMR	Karymshinskiy	1.95	251	PN	Pn	21 16 38.4	+0.4
KRMR				S	Sn	21 17 01.4	+0.1
KRMR	Karymshinskiy	1.95	251	*e*P	Pn	21 16 38.4	+0.4
KRMR				*e*S	Sn	21 17 01.4	+0.1
MTVR	Mutnovka	2.07	242	PN	Pn	21 16 40.2	+0.3
MTVR				S	Sn	21 17 05.2	+0.7
MTVR	Mutnovka	2.07	242	*e*P	Pn	21 16 40.2	+0.3
MTVR				*e*S	Sn	21 17 05.2	+0.7
GRL	Gorelyy	2.10	245	PN	Pn	21 16 41.1	+0.9
GRL				S	Sn	21 17 06.8	+1.7
GRL	Gorelyy	2.10	245	*e*P	Pn	21 16 41.1	+0.9
GRL				*e*S	Sn	21 17 06.8	+1.7
PEA0B	Petropavlovsk-	2.12	261		Pn	21 16 41.9	+1.5
PEA0B				Sn	Sn	21 17 08.3	+2.7
PEA0B	Petropavlovsk-	2.12	261	*d i*PN	Pn	21 16 42.1	+1.7
PETK	Petropavlovsk-	2.12	261	P	Pn	21 16 41.8	+1.3
	20nm,0.4s,baz=66,slow=15,SNR=23						
PETK				S	Sn	21 17 07.5	+2.0
	65nm,0.6s,baz=27,slow=17,SNR=3.7						
PETK				LR	LR	21 17 45.9	
	comp=Z,140nm,19.9s,baz=124,slow=48						
PETK	Petropavlovsk-	2.12	261		Pn	21 16 40.5	+0.1
ASAK	Asacha	2.27	242	PN	Pn	21 16 43.9	+1.3
ASAK				S	Sn	21 17 11.2	+1.9
ASAK	Asacha	2.27	242	*e*P	Pn	21 16 43.9	+1.3
ASAK				*e*S	Sn	21 17 11.2	+1.9
KMNR	Kamenistaya	2.34	347	PN	Pn	21 16 45.7	+2.2
KMNR	Kamenistaya	2.34	347	*e*P	Pn	21 16 45.7	+2.2
BZGR	Bezymyannyi-Gr	2.47	354	PN	Pn	21 16 47.3	+2.0
BZGR	Bezymyannyi-Gr	2.47	354	*e*P	Pn	21 16 47.3	+2.0
KIRR	Kirishev	2.52	349	PN	Pn	21 16 48.4	+2.4
KIRR	Kirishev	2.52	349	*e*P	Pn	21 16 48.4	+2.4
KDTR	Khodutka, Kamc	2.53	230	PN	Pn	21 16 46.5	+0.5
KDTR				S	Sn	21 17 15.2	-0.3
KDTR	Khodutka, Kamc	2.53	230	*e*P	Pn	21 16 46.5	+0.5
KDTR				*e*S	Sn	21 17 15.2	-0.3
ZLN	Zelenaya	2.54	355	PN	Pn	21 16 48.5	+2.2
ZLN	Zelenaya	2.54	355	*e*P	Pn	21 16 48.5	+2.2
KPT	Kopyto	2.54	348	PN	Pn	21 16 48.4	+2.1
KPT	Kopyto	2.54	348	*e*P	Pn	21 16 48.4	+2.1
KRSR	Krestovskiy	2.76	353	PN	Pn	21 16 51.0	+1.8
KRSR	Krestovskiy	2.76	353	*e*P	Pn	21 16 51.0	+1.8
ESO	Esso	2.83	331	PN	Pn	21 16 52.1	+1.9
ESO	Esso	2.83	331	*e*P	Pn	21 16 52.1	+1.9
KLY	Klyuchi	2.85	354	PN	Pn	21 16 51.5	+1.2
KLY	Klyuchi	2.85	354	*e*P	Pn	21 16 51.5	+1.2
KBTR	Krutoberegovo	2.88	19	PN	Pn	21 16 51.8	+0.9
KBTR	Krutoberegovo	2.88	19	*e*P	Pn	21 16 51.8	+0.9
KBG	Krutoberegovo	2.91	17	PN	Pn	21 16 53.5	+2.3
KBG	Krutoberegovo	2.91	17	*e*P	Pn	21 16 53.5	+2.3
MIPR	Malaya Ipel'ka	2.94	247	PN	Pn	21 16 53.6	+1.9
MIPR	Malaya Ipel'ka	2.94	247	*e*P	Pn	21 16 53.6	+1.9
BDR	Baidarnaya	3.08	0	PN	Pn	21 16 55.8	+2.1
BDR	Baidarnaya	3.08	0	*e*P	Pn	21 16 55.8	+2.1
SMKR	Semkarok	3.10	3	PN	Pn	21 16 55.6	+1.6
SMKR	Semkarok	3.10	3	*e*P	Pn	21 16 55.6	+1.6
SRKR	Sorokina	3.17	360	PN	Pn	21 16 56.8	+1.9
SRKR	Sorokina	3.17	360	*e*P	Pn	21 16 56.8	+1.9
BKI	Bering	3.29	57	PN	Pn	21 16 57.0	+0.6
BKI	Bering	3.29	57	*e*P	Pn	21 16 57.0	+0.6
BKI				*e*S	Sn	21 17 31.1	-3.2
PAU	Pauzhetka	3.35	235	PN	Pn	21 16 59.0	+1.7
PAU	Pauzhetka	3.35	235	*e*P	Pn	21 16 59.0	+1.7
MA2	Magadan	8.38	321	Pn	Pn	21 18 05.5	-0.7
MA2	Magadan	8.38	321	⇑*e*PN	Pn	21 18 06.2	0.0
BILL	Bilibino	14.80	8	*e*P	Pn	21 19 33.2	-0.4
BILL				MLR	MLR		
	comp=Z,44nm,10.0s						
ERM	Erimo	16.64	234	Pn	P	21 19 57.6	-1.6
ERM				IAmb	IAmb	21 20 12.1	
	comp=Z,33nm,1.1s						
ERM	Erimo	16.64	234	P	P	21 19 57.6	-1.6
ERM				pmax	pmax		
	comp=Z,33nm,1.1s						
TIXI	Tiksi	23.00	334	P	P	21 21 05.6	-2.4
TIXI	Tiksi	23.00	334	P	P	21 21 05.6	-2.4
TIXI				pmax	pmax		
	comp=Z,20nm,0.8s						
MJAR	Matsushiro Arr	23.30	233	P	P	21 21 11.6	+0.2
	comp=Z,1.1nm,0.5s,baz=36,slow=8.9,SNR=3.3						
	comp=Z,1.1nm,0.5s						
TTA	Tatalina	24.00	50	P	P	21 21 19.4	+1.7
TTA	Tatalina	24.00	50	P	P	21 21 19.5	+1.7
TTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	WAKE ISLAND Hy	33.98	170	T	T	21 59 29.3	
	baz=354,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	34.00	170	T	T	21 59 40.8	
	baz=354,slow=76,SNR=68						
H11N1	WAKE ISLAND Hy	34.00	170	T	T	21 59 42.4	
	baz=354,slow=76,SNR=82						
H11S1	WAKE ISLAND Hy	35.17	171	T	T	22 01 07.4	
	baz=352,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	35.19	171	T	T	22 00 43.3	
	baz=352,slow=76,SNR=4.3						
H11S2	WAKE ISLAND Hy	35.19	171	T	T	22 00 45.1	
	baz=352,slow=76,SNR=3.3						
EUNU	Eureka	41.41	14	P	P	21 23 49.7	+0.7
EUNU				IAmb	IAmb	21 23 54.9	
	comp=Z,3.6nm,1.0s						
YKA	Yellowknife Ar	42.43	43	P	P	21 23 57.7	+0.3
	comp=Z,0.1nm,0.4s,baz=296,slow=7.8,SNR=2.3						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	48.57	296	P	P	21 24 44.5	-1.7
	comp=Z,0.3nm,0.6s,baz=54,slow=10,SNR=2.5						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	53.11	342	P	P	21 25 20.7	+0.7
	comp=Z,4.5nm,1.0s,baz=25,slow=7.5,SNR=2.0						
	comp=Z,4.5nm,1.0s						
ARU	Arti	53.54	318	*d i*P	P	21 25 21.0	-2.3
ARU						21 27 22.1	
ARU				S	S	21 32 50.0	-2.9
ARU				SS	SS	21 36 28.3	-4.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NVAR	Mina Array Bea	55.00	71	P	P	21 25 36.7	+2.3
	comp=Z,0.5nm,0.2s,baz=304,slow=7.4,SNR=5.9						
	comp=Z,0.5nm,0.2s						
ELK	Elko	55.11	67	P	P	21 25 37.5	+2.3
	comp=Z,0.7nm,0.5s,baz=304,slow=3.6,SNR=3.8						
	comp=Z,0.7nm,0.5s						
PDAR	Pinedale Array	56.76	62	P	P	21 25 48.5	+1.5
	comp=Z,0.5nm,0.6s,baz=294,slow=6.5,SNR=4.7						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	56.76	62	P	P	21 25 47.5	+0.5
KKAR	Karatay Array	57.26	299	P	P	21 25 50.0	-0.3
KKAR	Karatay Array	57.26	299	P	P	21 25 50.0	-0.3
CM31	Chiang Mai Arr	58.90	259	P	P	21 26 02.6	+0.6
CM31				IAmb	IAmb	21 26 03.9	
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	58.90	259	P	P	21 26 03.0	+1.0
	comp=Z,1.4nm,0.7s,baz=23,slow=6.8,SNR=13						
	comp=Z,1.4nm,0.7s						
CMAR	Chiang Mai Arr	58.90	259	P	P	21 26 02.8	+0.8
CMAR	Chiang Mai Arr	58.90	259	*e*P	P	21 26 03.3	+1.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	60.01	337	P	P	21 26 08.9	-0.2
	comp=Z,2.0nm,0.9s,baz=38,slow=7.0,SNR=5.4						
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	60.01	337	P	P	21 26 08.3	-0.7
NC405	NORSAR Array S	63.19	344	P	P	21 26 30.4	-0.1
NC405				IAmb	IAmb	21 26 58.7	
	comp=Z,5.2nm,1.0s						
NB2	NORSAR Subarra	63.34	344	P	P	21 26 31.3	-0.3
	comp=Z,0.5nm,0.5s,baz=20,slow=6.9						
NOA	NORSAR Array B	63.34	344	P	P	21 26 31.2	-0.4
	comp=Z,0.9nm,0.6s,baz=21,slow=6.7,SNR=5.8						
	comp=Z,0.9nm,0.6s						
MAK	Makhachkala	68.39	314	*e*P	P	21 27 05.6	+1.4
MAK				*e*S	S	21 36 05.5	+3.4
TXAR	Lajitas Array	69.89	68	P	P	21 27 15.4	+1.6
	comp=Z,0.5nm,0.7s,baz=297,slow=4.5,SNR=5.7						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	76.72	206	P	P	21 27 53.8	-0.1
	comp=Z,0.5nm,0.3s,baz=14,slow=5.8,SNR=34						
	comp=Z,0.5nm,0.3s						
WRA	Warramunga Arr	76.72	206	*i*P	P	21 27 56.5	+2.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	Keskin Array B	76.72	321	P	P	21 27 53.4	-0.7
	comp=Z,0.4nm,0.7s,baz=61,slow=3.6,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	80.39	205	P	P	21 28 14.5	+0.4
	comp=Z,0.6nm,0.5s,baz=15,slow=5.4,SNR=7.5						
	comp=Z,0.6nm,0.5s						

IDC 17 21:51:04.3±2.0**, 6°.72S**×**128°.79E, h0**^{km}**, mb3.5**/1**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=121.0km s-min=32.1km az=67.0, Banda Sea**

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Code   Station Name       Δ°    AZ°  Phase ID          Time        Res
                                     Op       ISC      h  m  s     ISC
WRA    Warramunga Arr    14.20 158   Pn       Pn       21 54 26.1  -0.8
       0.1nm,0.3s,baz=337,slow=13,SNR=1.8
WRA                                  Sn       Sn       21 56 50.3  -15
       0.5nm,0.3s,baz=326,slow=24,SNR=7.3
       0.2nm,0.4s
ASAR   Alice Springs     17.55 164   P        P        21 55 11.2  -0.5
       0.1nm,0.3s,baz=342,slow=14,SNR=4.2
ASAR                                 S        Sn       21 58 13.3  -13
       0.4nm,0.6s,baz=344,slow=23,SNR=2.5
       0.4nm,0.9s
MKAR   Makanchi Array    67.34 327   P        P        22 02 01.2   0.0
       0.2nm,0.3s,baz=116,slow=8.3,SNR=7.2
       0.2nm,0.3s
```

IDC ***17*** *21:59:01.1±0.8, 14°.78S×167°.32E, h144^{km}±5^{km}, mb4.2/12, mbtmp4.7/14, MS3.1/4, Error ellipse: s-maj=16.8km s-min=12.2km az=81.0*

NEIC ***17*** *21:59:01.3±1.8, 14°.77S±0°.10×167°.4E±0°.1, h147^{km}±5^{km}, mb4.6/27, Error ellipse: s-maj=16.9km s-min=13.6km az=81.0*

NOU ***17*** *21:59:01.1, 14°.69S×167°.32E, h137^{km}, mb4.7/45, Vanuatu Islands*

ISC 17 21:59:01.7±0.5**, 14°.76S**±0°.06×**167°.33E**±0°.07**, h150**^{km}**, n125, σ1^s.02**/129**, mb4.5**/32**, Vanuatu Islands**

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Code   Station Name       Δ°    AZ°  Phase ID          Time        Res
                                     Op       ISC      h  m  s     ISC
SANVU  Saraoutou          0.69 190            Pn       21 59 23.3  -0.9
SANVU                                Sn       Sn       21 59 39.6  -1.7
SANVU  Saraoutou          0.69 190   P        Pn       21 59 23.5  -0.6
DVP    Devils Point       3.06 164   P        Pn       21 59 49.3  -0.5
RTV    Rentapao           3.20 161   P        Pn       21 59 51.1  -0.4
LIFNC  LIFOU              5.99 181   Pn       Pn       22 00 26.7  -1.4
LIFNC  LIFOU              5.99 181   P        Pn       22 00 26.8  -1.4
MARNC  Mare, Loyalty      6.72 174            Pn       22 00 36.3  -1.7
MARNC  Mare, Loyalty      6.72 174   P        Pn       22 00 36.8  -1.2
YATNC  Mamie plateau,     7.27 183   P        Pn       22 00 44.4  -1.0
DZM    Mont Dzumac        7.32 186   P        Pn       22 00 46.0  -0.1
       37nm,0.3s,baz=39,slow=17,SNR=99
DZM                                  S        Sn       22 02 07.0  -1.0
       54nm,0.6s,baz=155,slow=22,SNR=6.1
DZM                                  LR       LR       22 03 18.0
       comp=Z,66nm,20.2s,baz=262,slow=35
DZM    Mont Dzumac        7.32 186   Pn       Pn       22 00 45.3  -0.8
DZM    Mont Dzumac        7.32 186   P        Pn       22 00 46.7  +0.6
NOUC   Port Laguerre      7.37 187   P        Pn       22 00 47.0  +0.4
ONTNC  Ouen Toro          7.55 186   Pn       Pn       22 00 47.7  -1.4
ONTNC  Ouen Toro          7.55 186   P        Pn       22 00 50.6  +1.5
OUENC  Ouen Island, N     7.63 183   Pn       Pn       22 00 49.4  -0.7
OUENC  Ouen Island, N     7.63 183   P        Pn       22 00 50.6  +0.4
PINNC  Pines Island,      7.81 179   Pn       Pn       22 00 52.2  -0.4
HNR    Honiara            8.95 305   P        Pn       22 01 08.2  +0.4
       196nm,0.5s,baz=185,slow=3.8,SNR=5.8
HNR                                  S        Sn       22 02 44.8  -2.4
       69nm,0.5s,baz=200,slow=16,SNR=1.5
HNR    Honiara            8.95 305   Pn       Pn       22 01 07.3  -0.4
HNR    Honiara            8.95 305   P        Pn       22 01 06.7  -1.1
EIDS   Eidsvold          18.53 233   P        P        22 03 07.1  +0.3
EIDS                                 IAmb     IAmb     22 03 10.0
       comp=Z,36nm,0.7s
EIDS   Eidsvold          18.53 233   P        Pn       22 03 09.2  +0.4
PMG    Port Moresby      20.42 283   P        P        22 03 27.9  +0.7
       comp=Z,29nm,0.8s,baz=49,slow=6.5,SNR=5.6
       comp=Z,29nm,0.8s
PMG    Port Moresby      20.42 283   P        P        22 03 27.5  +0.2
PMG                                  IAmb     IAmb     22 03 29.2
       comp=Z,39nm,1.0s
CTA    Charters Tower    20.79 252   P        P        22 03 31.7  +0.6
       comp=Z,23nm,0.7s,baz=84,slow=10.0,SNR=17
       comp=Z,23nm,0.7s
CTAO   Charters Tower    20.79 252   P        P        22 03 31.8  +0.7
CTAO                                 IAmb     IAmb     22 03 33.2
       comp=Z,33nm,0.9s
RMQ    Roma              20.90 233   P        P        22 03 34.2  +1.9
OUZ    Omahuta           21.14 166   P        P        22 03 37.3  +2.5
ARMA   Armidale          21.24 220   P        P        22 03 37.2  +1.1
ARMA                                 IAmb     IAmb     22 04 00.7
       comp=Z,17nm,1.2s
NIUE   Niue              22.18 104   P        P        22 03 45.7  -0.1
NIUE   Niue              22.18 104   P        P        22 03 46.7  +0.9
MTSU   Mount Surprise    22.32 258   P        P        22 03 48.0  +0.8
COEN   Coen              23.41 269   P        P        22 03 56.8  -0.6
COEN                                 IAmb     IAmb     22 03 59.6
       comp=Z,42nm,1.4s
COEN   Coen              23.41 269   P        P        22 03 58.2  +0.8
MGCD   Mangrove Creek    23.54 216   P        P        22 04 00.4  +2.0
TOZ    Tahuroa Road      24.00 164   P        P        22 04 01.4  -1.1
HAZ    Te Kaha           24.71 160   P        P        22 04 08.8  -0.1
MXZ    Matakaoa Point    24.72 159   P        P        22 04 08.4  -0.6
RUGZ   Raukumara Rang    24.87 160   P        P        22 04 14.4  +3.9
PKGZ   Pakihiroa         24.93 160   P        P        22 04 11.5  +0.5
TWGZ   Tauwhareparae     25.16 160   P        P        22 04 13.5  +0.4
BKZ    Black Stump Fm    25.62 163   P        P        22 04 18.1  +0.9
BHHZ   Black Hill Sta    25.80 164   P        P        22 04 19.5  +0.6
CMSA   Cobar Meteorol    25.89 226   P        P        22 04 21.1  +1.4
TSZ    Takapari Road     26.32 165   P        P        22 04 23.8  +0.3
BFZ    Birch Farm        26.98 165   P        P        22 04 30.3  +1.0
QIS    Mount Isa         27.02 254   P        P        22 04 29.8  -0.1
SNZO   South Karori      27.22 168   P        P        22 04 32.8  +1.3
STKA   Stephens Creek    29.02 230   P        P        22 04 48.5  +0.9
       comp=Z,7.4nm,0.5s,baz=47,slow=8.9,SNR=22
STKA                                 PcP      PcP      22 07 52.3  -0.1
       comp=Z,0.4nm,0.4s,baz=52,slow=2.2,SNR=4.5
STKA                                 LR       LR       22 15 04.3
       comp=Z,63nm,19.3s,baz=149,slow=33
       comp=Z,7.4nm,0.5s
STKA   Stephens Creek    29.02 230   P        P        22 04 47.8  +0.2
STKA   Stephens Creek    29.02 230   P        P        22 04 49.2  +1.6
RPZ    Rata Peaks        29.03 174   P        P        22 04 48.0  +0.5
       comp=Z,18nm,0.8s,baz=8.1,slow=7.1,SNR=4.1
RPZ                                  LR       LR       22 14 36.3
       comp=Z,90nm,18.3s,baz=286,slow=32
       comp=Z,18nm,0.8s
TOO    Toolangi          29.86 216   P        P        22 04 55.5  +0.5
TOO                                  IAmb     IAmb     22 05 11.5
       comp=Z,24nm,1.4s
LCRK   Leigh Creek       30.96 235   P        P        22 05 05.5  +0.8
GLAD   Gladstone         31.07 209   P        P        22 05 06.5  +1.0
WR0    Warramunga Arr    31.68 256   P        P        22 05 09.9  -1.3
WR0                                  IAmb     IAmb     22 05 10.9
       comp=Z,11nm,1.2s
HTT    Hallett           31.74 229   P        P        22 05 12.9  +1.3
WB2    Warramunga Arr    31.86 256   P        P        22 05 11.6  -1.2
WB2                                  IAmb     IAmb     22 05 12.4
       comp=Z,16nm,1.2s
WRAB   Tennant Creek     31.86 256   P        P        22 05 12.4  -0.4
WRA    Warramunga Arr    31.87 256   P        P        22 05 11.4  -1.4
       comp=Z,3.9nm,0.5s,baz=85,slow=9.0,SNR=41
WRA                                  ScP      ScP      22 11 30.1  +0.4
       comp=Z,0.8nm,0.9s,baz=87,slow=3.5,SNR=3.1
       comp=Z,3.9nm,0.5s
WRA    Warramunga Arr    31.87 256   P        P        22 05 11.3  -1.6
OOD    Oodnadatta        32.10 241   P        P        22 05 15.3  +0.5
AS31   Alice Springs     32.71 249   P        P        22 05 19.3  -1.0
ASAR   Alice Springs     32.71 249   P        P        22 05 19.2  -1.0
       comp=Z,7.3nm,0.4s,baz=75,slow=9.3,SNR=146
ASAR                                 ScP      ScP      22 11 33.5  +0.9
       comp=Z,1.1nm,0.8s,baz=75,slow=3.2,SNR=8.3
       comp=Z,7.3nm,0.4s
ASAR   Alice Springs     32.71 249   P        P        22 05 19.1  -1.1
BBOO   Buckleboo         33.60 232   P        P        22 05 28.4  +0.6
BBOO                                 IAmb     IAmb     22 05 31.2
       comp=Z,12nm,1.0s
BBOO   Buckleboo         33.60 232   P        P        22 05 29.1  +1.3
MULG   Mulgathing        34.24 238   P        P        22 05 33.4  +0.1
GUMO   Guam              35.88 321   LR       LR       22 22 16.7
       comp=Z,19nm,18.4s,baz=95,slow=39
KNRA   Kununurra         37.19 263   P        P        22 05 57.8  -0.8
KNRA   Kununurra         37.19 263   P        P        22 05 59.0  +0.4
WRKA   Warakurna         37.98 248   P        P        22 06 04.7  -0.5
SWI    Sorong            38.21 288   P        P        22 06 07.7  +0.4
       comp=Z,29nm,1.0s
FORT   Forrest           39.33 239   P        P        22 06 16.4   0.0
FORT   Forrest           39.33 239   P        P        22 06 16.9  +0.5
SANI   Sanana            42.70 283   P        P        22 06 44.6  +0.5
       comp=Z,18nm,0.7s
BATI   Baumata           42.82 271   P        P        22 06 46.3  +1.2
       comp=Z,34nm,0.8s
EDFI   Ende, Flores      45.01 272   P        P        22 07 01.7  -1.1
       comp=Z,18nm,1.4s
PSA00  Pilbara Seismi    45.48 254   P        P        22 07 05.7  -0.5
PSA00                                IAmb     IAmb     22 07 07.1
       comp=Z,8.8nm,0.8s
PSA00  Pilbara Seismi    45.48 254   P        P        22 07 05.1  -1.1
PSA00                                IAmb     IAmb     22 07 07.2
       comp=Z,5.6nm,0.9s
PSA00  Pilbara Seismi    45.48 254   P        P        22 07 06.4  +0.2
MBWA   Marble Bar        45.59 255   P        P        22 07 06.8  -0.2
MBWA                                 IAmb     IAmb     22 07 07.7
       comp=Z,13nm,0.7s
MBWA   Marble Bar        45.59 255   P        P        22 07 06.9  -0.2
BNSI   Bone              47.59 278   P        P        22 07 23.0  +0.3
TOLI2  Tolitoli          48.67 285   P        P        22 07 29.5  -1.5
TOLI2                                IAmb     IAmb     22 07 31.5
       comp=Z,6.6nm,0.9s
TOLI2  Tolitoli          48.67 285   P        P        22 07 30.8  -0.2
MORW   Morawa            49.30 244   P        P        22 07 34.1  -1.6
MORW                                 IAmb     IAmb     22 07 45.2
       comp=Z,17nm,1.2s
MORW   Morawa            49.30 244   P        P        22 07 36.1  +0.4
MJAR   Matsushiro Arr    57.96 332   pP       pP       22 09 10.5  -2.5
       comp=Z,0.5nm,0.3s,baz=285,slow=38,SNR=1.9
VNDA   Vanda             62.83 181   P        P        22 09 10.7  -0.2
       comp=Z,7.4nm,0.6s,baz=355,slow=7.8,SNR=96
       comp=Z,7.4nm,0.6s
VNDA   Vanda             62.83 181   P        P        22 09 11.0   0.0
VNDA                                 IAmb     IAmb     22 09 13.1
       comp=Z,8.0nm,0.8s
SBA    Scott Base        63.11 180   P        P        22 09 13.7  +1.0
CASY   Casey             63.52 202   P        P        22 09 15.8  +0.2
KSRS   Korea Array       63.79 326   pP       pP       22 09 51.4  -1.5
       comp=Z,1.3nm,0.7s,baz=138,slow=7.2,SNR=3.1
USRK   Ussuriysk Ar.     66.94 333   pP       pP       22 10 13.0  -0.4
       comp=Z,2.8nm,0.8s,baz=122,slow=7.5,SNR=2.0
XLT    XiLinHaoTe        74.76 324   eP       P        22 10 27.3  +2.0
XLT                                  pP       pP       22 11 01.5  -0.2
XLT                                  pmax     pmax
       comp=Z,10.0nm,0.9s
XLT                                  pmax     pmax
       comp=Z,99nm,4.6s
CMAR   Chiang Mai Arr    75.01 294   P        P        22 10 28.4  +1.2
       comp=Z,0.7nm,0.3s,baz=178,slow=40,SNR=1.5
CMAR                                 pP       pP       22 11 03.9  +0.4
       comp=Z,1.9nm,0.9s,baz=129,slow=4.6,SNR=2.3
       comp=Z,0.7nm,0.3s
QSPA   South Pole Qui    75.27 180   P        P        22 10 27.9  -0.1
       comp=Z,11nm,0.7s,baz=1.4,slow=2.1,SNR=6.9
       comp=Z,11nm,0.7s
QSPA   South Pole Qui    75.27 180   P        P        22 10 27.6  -0.4
HHC    Hu-ho-hao-te      75.64 320   eP       P        22 10 32.1  +1.7
HHC                                  pmax     pmax
       comp=Z,27nm,1.0s
HHC                                  pmax     pmax
       comp=Z,120nm,6.5s
PZH    PanZhiHua         75.76 303   P        P        22 10 33.6  +2.2
PZH                                  pmax     pmax
       comp=Z,7.0nm,0.8s
PZH                                  pmax     pmax
       comp=Z,100nm,4.6s
MAW    Mawson            81.88 202   P        P        22 11 02.4  -1.5
       comp=Z,3.1nm,0.7s,baz=160,slow=4.1,SNR=3.2
       comp=Z,3.1nm,0.7s
MAW    Mawson            81.88 202   P        P        22 11 04.1  +0.2
SONM   Songino Array     82.55 324   P        P        22 11 07.7  -0.2
       comp=Z,0.3nm,0.4s,baz=132,slow=2.9,SNR=3.0
SONM                                 pP       pP       22 11 43.8  -1.0
       comp=Z,0.9nm,0.9s,baz=132,slow=6.0,SNR=3.8
SONM   Songino Array     82.55 324   P        P        22 11 07.6  -0.3
IMAR   Indian Mountai    85.58  15            P        22 11 22.1  -0.5
ILAR   Eielson Array     86.54  18   P        P        22 11 26.6  -0.8
       comp=Z,0.8nm,0.8s,baz=226,slow=6.0,SNR=6.6
ILAR                                 pP       pP       22 12 04.5  -0.6
       comp=Z,0.9nm,0.9s,baz=225,slow=6.8,SNR=3.3
       comp=Z,0.8nm,0.8s
BELA   Belgrano 2        86.69 175   P        P        22 11 26.8  -1.3
BELA                                 IAmb     IAmb     22 11 27.8
       comp=Z,8.8nm,1.3s
WMQ    Urumqi            92.79 315   eP       P        22 11 58.0  +0.8
TROLL  Troll, Antarti    92.84 185   P        P        22 11 56.6  -0.5
SNAA   Sanae             93.52 183   P        P        22 11 58.8  -1.3
VNA3   Neumayer Olymp    94.19 181   P        P        22 12 02.0  -1.1
MKAR   Makanchi Array    97.26 316   P        Pdif     22 12 17.9  +0.4
       comp=Z,0.3nm,0.6s,baz=90,slow=6.0,SNR=3.6
MKAR                                 pP       pP       22 12 53.8  -1.4
       comp=Z,0.8nm,0.8s,baz=95,slow=5.9,SNR=3.2
       comp=Z,0.3nm,0.6s
MKAR   Makanchi Array    97.26 316   P        P        22 12 17.6  +0.1
ARCES  ARCESS Array B   120.29 345   PKP      PKPdf    22 17 34.0  -0.4
       comp=Z,0.8nm,0.4s,baz=67,slow=1.6,SNR=20
ARCES  ARCESS Array B   120.29 345            PKPdf    22 17 34.0  -0.4
FINES  FINESS Array B   125.77 338   PKP      PKPdf    22 17 45.0  -0.1
       comp=Z,0.4nm,0.3s,baz=70,slow=2.2,SNR=9.3
FINES  FINESS Array B   125.77 338            PKPdf    22 17 44.8  -0.3
NB2    NORSAR Subarra   130.67 345   SKPb              22 21 05.9
       comp=Z,6.1nm,1.0s,baz=32,slow=3.3
NB2    NORSAR Subarra   130.67 345   SKPb              22 21 05.9
       baz=32,slow=3.3
NOA    NORSAR Array B   130.67 345   PKP      PKPdf    22 17 54.6   0.0
       comp=Z,0.5nm,0.7s,baz=30,slow=1.9,SNR=2.7
NOA                                  SKPbc    SKPab    22 21 06.0  +1.3
       comp=Z,1.8nm,0.7s,baz=30,slow=3.1,SNR=7.5
MODS   Modra-Piesok     138.38 330   ePKP     PKPdf    22 18 09.5  +0.2
GERES  GERESS Array B   139.69 333   PKP      PKPdf    22 18 12.6  +0.8
       comp=Z,0.2nm,0.5s,baz=64,slow=2.3,SNR=2.3
TORD   Torodi Ar. Bea   165.96 265   PKP      PKPdf    22 18 49.3  -0.3
       comp=Z,0.7nm,0.9s,baz=40,slow=1.4,SNR=2.3
TORD                                 PKPab    PKPab    22 19 50.5  -0.1
       comp=Z,0.7nm,0.8s,baz=83,slow=4.5,SNR=3.5
```

IDC ***17*** *22:01:51.8±0.6, 55°.69S×26°.24W, h0^{km}, mb4.4/8, mbtmp4.4/9, ML4.1/1, MS4.3/27, Error ellipse: s-maj=24.3km s-min=18.8km az=47.0*

NEIC ***17*** *22:01:53.6±1.7, 55°.66S±0°.10×26°.25W±0°.08, h10^{km}±1^{km}, mb4.9/39, Error ellipse: s-maj=17.4km s-min=6.0km az=164.0*

GCMT ***17*** *22:02:00.6±0.3, 55°.50S±0°.03×26°.16W±0°.04, h20^{km}±1^{km}, MW5.0/80, Moment Tensor Solution. s20,c22; s80,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.71±.21; $M_{\theta\theta}$-1.02±.14; $M_{\phi\phi}$-1.69±.12; $M_{r\theta}$-1.83±.30; $M_{\theta\phi}$1.44±.08; $M_{\phi r}$0.17±.20; Best double couple: $M_0$3.31300×10^{16} NP1:ϕ_s160.00000°, δ36.00000°, λ125.00000°. NP2: ϕ_s300.00000°, δ61.00000°, λ68.00000°. Principal axes: T 3.4890, Plg66.0000°, Azm169.0000°; N -0.3510, Plg19.0000°, Azm311.0000°; P -3.1380, Plg13.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 22:01:53.1±0.4**, 55°.67S**±0°.08×**26°.25W**±0°.08**, h10**^{km}**, n93, σ0^s.84**/73**, mb4.8**/23**, MS4.3**/27**, South Sandwich Islands region**

```
Code   Station Name       Δ°    AZ°  Phase ID          Time        Res
                                     Op       ISC      h  m  s     ISC
HOPE   Hope Point         6.06 279   Pn       Pn       22 03 23.0  +0.3
ORCD   Orcadas           10.97 235   Pn       Pn       22 04 30.8  +0.8
VNA1   Neumayer--Stat    16.95 159   P        P        22 05 51.7  -0.3
VNA3   Neumayer Olymp    17.18 162   P        P        22 05 54.8  +0.3
SNAA   Sanae             18.88 157   P        Pn       22 06 14.9  +1.1
SNAA   Sanae             18.88 157   Pn       Pn       22 06 14.2  +0.4
       0.5nm,0.3s,baz=329,slow=9.5,SNR=21
SNAA                                 LR       LR       22 13 43.2
       comp=Z,800nm,18.4s,baz=320,slow=38
       7.0nm,0.8s
SNAA   Sanae             18.88 157   P        P        22 06 13.3   0.0
TROLL  Troll, Antarti    20.35 155   P        P        22 06 29.8  +0.3
PMSA   Palmer Station    20.55 228   P        Pn       22 06 36.5  +3.0
       80nm,1.2s,baz=74,slow=6.8,SNR=4.8
PMSA                                 LR       LR       22 13 50.6
       comp=Z,879nm,18.8s,baz=86,slow=35
PMSA   Palmer Station    20.55 228   P        Pn       22 06 34.2  +0.6
PMSA                                 IAmb     IAmb     22 06 58.7
       comp=Z,81nm,1.2s
SMAI   San Martin Ant    22.39 220   P        P        22 06 50.4  -0.8
SMAI                                 IAmb     IAmb     22 07 19.1
       comp=Z,86nm,1.6s
BELA   Belgrano 2        22.49 185   P        P        22 06 50.6  -1.7
BELA                                 IAmb     IAmb     22 07 06.5
       comp=Z,63nm,1.4s
USHA   Ushuaia           23.79 254   P        P        22 07 05.8  +0.2
       comp=Z,5.1nm,0.8s,baz=90,slow=6.6,SNR=3.9
USHA                                 LR       LR       22 14 56.8
       comp=Z,787nm,18.6s,baz=122,slow=33
       comp=Z,5.1nm,0.8s
DSPA   Despedida         24.01 256   P        P        22 07 06.4  -1.2
MG02   Cerro Sombrero    24.99 259   P        P        22 07 15.9  -0.7
MG03   Isla Dawson       25.25 256   P        P        22 07 19.1  +0.1
MG03                                 IAmb     IAmb     22 07 27.5
       comp=Z,52nm,1.8s
GO09   Cerro Castillo    27.38 260   P        P        22 07 36.4  -1.8
GO09                                 IAmb     IAmb     22 08 06.1
       comp=Z,22nm,1.4s
GO08   Villa O'Higgin    28.90 265   P        P        22 07 51.3  -0.6
TRQA   Tornquist         29.67 291   P        P        22 07 59.1  +0.3
QSPA   South Pole Qui    34.58 180   LR       LR       22 22 41.6
       comp=Z,572nm,18.9s,baz=189,slow=36
QSPA   South Pole Qui    34.58 180   P        P        22 08 42.0  +0.3
CPUP   Villa Florida     36.97 310   P        P        22 09 02.0  -0.4
       comp=Z,3.9nm,1.0s,baz=173,slow=9.0,SNR=3.7
CPUP                                 LR       LR       22 24 33.7
       comp=Z,583nm,20.0s,baz=164,slow=37
       comp=Z,3.9nm,1.0s
CPUP   Villa Florida     36.97 310   P        P        22 09 03.0  +0.7
CPUP                                 IAmb     IAmb     22 09 14.0
       comp=Z,39nm,1.8s
MT09   Talagante         37.70 287   P        P        22 09 08.9  +0.1
MT09                                 IAmb     IAmb     22 09 24.4
       comp=Z,33nm,1.7s
MT02   Curacav           38.18 287   P        P        22 09 13.2  +0.6
MT02                                 IAmb     IAmb     22 09 31.6
       comp=Z,41nm,1.7s
VA03   San Esteban       38.24 288   P        P        22 09 12.4  -0.8
ROC1   El Roble          38.33 287   P        P        22 09 14.1   0.0
ROC1                                 IAmb     IAmb     22 09 35.6
       comp=Z,23nm,1.3s
SUR    Sutherland        40.03  74   LR       LR       22 23 06.1
       comp=Z,886nm,18.0s,baz=214,slow=32
MAW    Mawson            40.14 144   P        P        22 09 28.5   0.0
       comp=Z,5.4nm,0.9s,baz=233,slow=3.6,SNR=8.5
MAW                                  LR       LR       22 25 04.8
       comp=Z,284nm,18.4s,baz=252,slow=35
       comp=Z,5.4nm,0.9s
MAW    Mawson            40.14 144   P        P        22 09 29.8  +1.3
CO01   Juntas del Tor    40.16 291   P        P        22 09 30.6  +1.1
LCO    Las Campanas      41.25 292   P        P        22 09 38.5   0.0
LCO                                  IAmb     IAmb     22 09 59.7
       comp=Z,42nm,1.4s
AC04   Llanos de Chal    42.09 292   P        P        22 09 46.0  +1.0
GO03   Copiap            42.14 293   P        P        22 09 46.1  +0.5
AC02   Maricunga         42.19 295   P        P        22 09 46.9  +0.5
AC06   Mina Casimiro     42.40 293   P        P        22 09 48.3  +0.7
AC06                                 IAmb     IAmb     22 09 49.7
       comp=Z,23nm,1.3s
GO02   Mina Guanaco      43.80 296   P        P        22 09 58.6  -0.6
GO02                                 IAmb     IAmb     22 10 27.8
       comp=Z,21nm,1.1s
BOSA   Boshof            45.36  75   P        P        22 10 11.8  +0.2
       comp=Z,7.2nm,1.1s,baz=199,slow=7.2,SNR=4.8
BOSA                                 LR       LR       22 26 12.6
       comp=Z,1μm,18.2s,baz=190,slow=32
       comp=Z,7.2nm,1.1s
BOSA   Boshof            45.36  75   P        P        22 10 10.7  -0.9
BOSA                                 IAmb     IAmb     22 10 46.5
       comp=Z,24nm,1.4s
LVC    Limon Verde       45.58 299   LR       LR       22 32 50.7
       comp=Z,176nm,18.1s,baz=164,slow=41
LVC    Limon Verde       45.58 299   P        P        22 10 13.3  -0.2
LVC                                  IAmb     IAmb     22 10 21.2
       comp=Z,12nm,1.0s
SBA    Scott Base        46.49 184   P        P        22 10 21.4  +1.7
VNDA   Vanda             46.97 182   P        P        22 10 23.8  +0.3
       comp=Z,5.5nm,0.8s,baz=187,slow=6.3,SNR=7.9
VNDA                                 LR       LR       22 31 08.4
       comp=Z,223nm,18.4s,baz=156,slow=37
       comp=Z,5.5nm,0.8s
VNDA   Vanda             46.97 182   P        P        22 10 24.0  +0.5
VNDA                                 IAmb     IAmb     22 10 25.9
       comp=Z,5.6nm,0.8s
PB01   IPOC Station P    47.18 299   P        P        22 10 26.7  +0.8
PB08   IPOC Station P    47.78 300   P        P        22 10 31.1  +0.2
PB08                                 IAmb     IAmb     22 10 37.8
       comp=Z,14nm,1.1s
LBTB   Lobatse           48.39  73   LR       LR       22 28 47.5
       comp=Z,258nm,18.1s,baz=219,slow=33
LBTB   Lobatse           48.39  73   P        P        22 10 35.0  -0.2
LBTB                                 IAmb     IAmb     22 10 53.3
       comp=Z,22nm,1.5s
TSUM   Tsumeb            49.03  60   LR       LR       22 28 13.8
       comp=Z,334nm,18.4s,baz=195,slow=32
PB16   IPOC Station P    49.49 301   P        P        22 10 43.6  -0.7
RCBR   Riachuelo         50.30 347   LR       LR       22 29 36.8
       comp=Z,312nm,18.2s,baz=305,slow=33
LPAZ   La Paz            50.60 304   P        P        22 10 53.7  +0.9
       comp=Z,4.7nm,0.7s,baz=143,slow=6.1,SNR=18
LPAZ                                 LR       LR       22 32 12.3
       comp=Z,145nm,21.1s,baz=195,slow=36
       comp=Z,4.7nm,0.7s
LPAZ   La Paz            50.60 304   P        P        22 10 53.5  +0.8
SAML   Samuel            54.92 313   P        P        22 11 23.9  -0.1
SAML                                 IAmb     IAmb     22 11 41.0
       comp=Z,17nm,1.6s
LSZ    Lusaka            57.74  68   LR       LR       22 34 10.2
       comp=Z,531nm,18.1s,baz=195,slow=34
DBIC   Dimbokro          64.61  24   LR       LR       22 35 12.0
       comp=Z,374nm,18.1s,baz=208,slow=31
OPO    Ambohidratompo    65.54  87   LR       LR       22 37 11.2
       comp=Z,403nm,18.2s,baz=328,slow=32
MBAR   Mbarara           71.51  62   LR       LR       22 41 54.8
       comp=Z,126nm,18.5s,baz=186,slow=34
KOWA   Kowa              72.37  23   P        P        22 13 20.8  +1.8
KOWA                                 IAmb     IAmb     22 13 32.2
       comp=Z,17nm,1.5s
TOA0   Torodi Ar. Sit    72.47  29            P        22 13 19.6   0.0
TOA0                                 IAmb     IAmb     22 13 23.5
       comp=Z,7.8nm,0.9s
TORD   Torodi Ar. Bea    72.47  29   P        P        22 13 20.0  +0.3
       comp=Z,4.6nm,0.8s,baz=196,slow=7.1,SNR=15
       comp=Z,4.6nm,0.8s
SDV    Santo Domingo     74.12 314   LR       LR       22 48 24.1
       comp=Z,350nm,19.1s,baz=144,slow=38
RPZ    Rata Peaks        79.90 193   LR       LR       22 47 57.2
       comp=Z,132nm,18.4s,baz=130,slow=35
SC01   Santiago de lo    83.74 318   P        P        22 14 21.8  -0.3
MDT    Midelt            90.06  18   LR       LR       22 51 16.9
       comp=Z,360nm,18.5s,baz=208,slow=33
STKA   Stephens Creek    92.18 170   LR       LR       22 56 00.0
       comp=Z,315nm,18.6s,baz=204,slow=35
PPT    Papeete           92.85 233   LR       LR       22 49 22.9
       comp=Z,51nm,18.5s,baz=176,slow=31
RAR    Rarotonga         93.87 223   LR       LR       22 51 37.2
       comp=Z,56nm,18.3s,baz=202,slow=32
KEST   Kesra             95.99  28   LR       LR       22 54 22.3
       comp=Z,160nm,19.0s,baz=244,slow=33
ESDC   Sonseca Array     96.86  17   LR       LR       22 55 33.3
       comp=Z,92nm,18.0s,baz=186,slow=33
ASAR   Alice Springs     99.19 162   P        Pdif     22 15 34.9   0.0
       comp=Z,0.4nm,0.8s,baz=183,slow=4.8,SNR=2.2
ASAR                                 LR       LR       22 58 50.0
       comp=Z,83nm,19.7s,baz=182,slow=34
       comp=Z,0.4nm,0.8s
FINES  FINESS Array B   123.80  27   PKP      PKiKP    22 20 49.8  -0.1
       comp=Z,3.0nm,1.1s,baz=250,slow=7.3,SNR=2.2
KSH    Kashi            127.95  73   PKP      PKiKP    22 20 59.9  +0.8
KSH                                  LR       LR
       comp=N,1μm,17.2s
KSH                                  LR       LR
       comp=E,590nm,18.9s
PZH    PanZhiHua        132.71 106   PKP      PKiKP    22 21 08.8  -0.3
YKA    Yellowknife Ar   136.25 318   PKP      PKPdf    22 21 12.9  -0.4
       comp=E,1.0nm,0.8s,baz=125,slow=2.3,SNR=8.4
YKA    Yellowknife Ar   136.25 318            PKPdf    22 21 12.5  -0.7
WMQ    Urumqi           137.31  77   eP       PKiKP    22 21 18.0  +0.2
ZALV   Zalesovo Beam    141.73  63   PKP      PKPdf    22 21 24.1  +0.6
       comp=E,0.2nm,0.4s,baz=228,slow=1.7,SNR=1.6
NRIK   Noril'sk         148.38  38   PKPbc    PKPbc    22 21 38.6  +0.5
       comp=E,1.7nm,0.5s,baz=126,slow=4.4,SNR=4.3
NRIK   Noril'sk         148.38  38            PKPbc    22 21 37.3  -0.7
TIA    Tai'an           148.47 113   eP       PKPbc    22 21 39.3   0.0
TIA                                  pmax     pmax
       comp=Z,10.0nm,1.2s
HHC    Hu-ho-hao-te     148.80 100   eP       PKPdf    22 21 33.4  -2.9
SONM   Songino Array    150.17  85   PKPbc    PKPbc    22 21 43.7  +0.3
       comp=Z,1.4nm,0.9s,baz=226,slow=3.7,SNR=9.0
SONM   Songino Array    150.17  85            PKPbc    22 21 43.3  -0.1
ILAR   Eielson Array    150.26 312   PKPbc    PKPbc    22 21 42.6  -0.3
       comp=Z,8.6nm,1.0s,baz=117,slow=1.3,SNR=44
```

ILAR	**Eielson Array**	**150.26**	**312**		**PKPbc**	**22 21 42.8**	**0.0**
TOLK	**Toolik Lake Re**	**151.74**	**320**	PKPbc	**PKPbc**	**22 21 46.4**	**+0.1**
BPAW	**Bear Paw Mtn.**	**151.90**	**310**	PKPbc	**PKiKP**	**22 21 47.1**	**0.0**
PPLA	**Purkeypile**	**152.23**	**307**	PKPbc	**PKPbc**	**22 21 46.9**	**-0.7**
IMAR	**Indian Mountai**	**153.26**	**314**	PKPbc	**PKiKP**	**22 21 49.8**	**0.0**
XLT	**XiLinHaoTe**	**153.32**	**100**	*e*P	**PKPdf**	**22 21 41.6**	**-1.5**
XLT				pmax	pmax		
	comp=Z,13nm,1.0s						
XLT				pmax	pmax		
	comp=Z,120nm,4.6s						
KSRS	**Korea Array**	**154.80**	**125**	PKPab	**PKPab**	**22 22 09.7**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=215,slow=6.1,SNR=4.5						
MJAR	**Matsushiro Arr**	**158.13**	**145**	PKPab	**PKPab**	**22 22 20.9**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=240,slow=2.4,SNR=1.9						

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*RSNC **17** 22:35:31.0±1.1, 6°.71N×72°.98W, h185^{km}±4^{km}, ML3.3, Mw3.6, Fault plane solution: NP1:ϕ$_s$38.00000°, δ38.00000°, λ-102.00000°.*

*IDC **17** 22:35:31.1±3.3, 7°.27N×73°.74W, h148^{km}±37^{km}, mb2.9/3, mbtmp3.4/4, Error ellipse: s-maj=48.2km s-min=31.7km az=48.0*

ISC 17 22:35:30.6±1.0**, 6°.72N**±0°.03×**72°.97W**±0°.04**, h186**^{km}±6^{km}**, n40, σ1^{s}31**/72**, mb3.2**/3**, 1C-6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**239**	⇓*i*P	**Pn**	**22 35 55.4**	**-0.2**
BARC				*e*S	**Sn**	**22 36 13.9**	**-0.9**
BARC				*i*		22 36 16.0	
	comp=Z,328nm,0.5s						
PAMC	**Pamplona, Colo**	**0.67**	**23**	⇓*e*P	**Pn**	**22 35 58.0**	**+0.6**
PAMC				*e*S	**Sn**	**22 36 17.9**	**-0.3**
PAMC				*i*		22 36 20.6	
	comp=Z,133nm,0.6s						
RUSC	**La Rusia**	**0.83**	**188**	⇓*i*P	**Pn**	**22 35 58.3**	**-0.1**
RUSC				*e*S	**Sn**	**22 36 18.9**	**-0.9**
RUSC				*i*		22 36 19.7	
	comp=Z,423nm,0.3s						
BRRC	**Barranca, Sant**	**0.83**	**298**	⇓*i*P	**Pn**	**22 35 58.0**	**+0.3**
BRRC				*e*S	**Sn**	**22 36 18.8**	**0.0**
BRRC				*i*		22 36 21.7	
	comp=Z,329nm,0.2s						
TAMC	**Tame, Arauca**	**1.20**	**104**	⇓*i*P	**Pn**	**22 36 01.1**	**+0.5**
TAMC				*e*S	**Sn**	**22 36 23.4**	**-0.2**
TAMC				*i*		22 36 24.1	
	comp=Z,183nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.49**	**263**	⇓*i*P	**Pn**	**22 36 02.3**	**-0.7**
PTBC				*e*S	**Sn**	**22 36 26.0**	**-2.1**
PTBC				*i*		22 36 28.4	
	comp=Z,276nm,0.2s						
SPBC	**San Pablo de B**	**1.53**	**226**	*e*P	**Pn**	**22 36 03.5**	**+0.1**
SPBC				*e*S	**Sn**	**22 36 28.6**	**-0.3**
SPBC				*i*		22 36 31.3	
	comp=Z,334nm,0.1s						
OCAC	**Ocana**	**1.55**	**347**	*e*P	**Pn**	**22 36 04.5**	**+0.8**
OCAC				*e*S	**Sn**	**22 36 29.7**	**+0.2**
OCAC				*i*		22 36 37.5	
	comp=Z,490nm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.03**	**292**	*e*P	**Pn**	**22 36 08.1**	**-0.3**
ZARC				*e*S	**Sn**	**22 36 37.4**	**-0.3**
ZARC				*i*		22 36 44.8	
	comp=Z,279nm,0.4s						
CHIC	**Chingaza**	**2.21**	**200**	*e*P	**Pn**	**22 36 11.0**	**+0.2**
CHIC				*e*S	**Sn**	**22 36 42.0**	**-0.2**
CHIC				*i*		22 36 48.2	
	comp=Z,39nm,0.5s						
NORC	**Norcasia**	**2.21**	**239**	*e*P	**Pn**	**22 36 10.1**	**-0.4**
NORC				*e*S	**Sn**	**22 36 39.9**	**-1.5**
NORC				*i*		22 36 47.4	
	comp=Z,188nm,0.1s						
ROSC	**El Rosal**	**2.30**	**216**	P	**Pn**	**22 36 12.7**	**+0.8**
	comp=Z,21nm,0.3s,baz=233,slow=18,SNR=11						
ROSC				S	**Sn**	**22 36 44.5**	**+0.6**
	comp=Z,61nm,0.3s,baz=138,slow=23,SNR=15						
ROSC	**El Rosal**	**2.30**	**216**	*e*P	**Pn**	**22 36 13.2**	**+1.4**
ROSC				*e*S	**Sn**	**22 36 45.7**	**+1.8**
ROSC				*i*		22 36 52.4	
	comp=Z,68nm,0.4s						
HELC	**Santa Helena**	**2.60**	**258**	*e*P	**Pn**	**22 36 15.0**	**-0.1**
HELC				*e*S	**Sn**	**22 36 50.5**	**+0.7**
HELC				*i*		22 36 57.5	
	comp=Z,122nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.64**	**162**	⇑*i*P	**Pn**	**22 36 14.5**	**-0.8**
PTGC				*e*S	**Sn**	**22 36 46.9**	**-3.3**
PTGC				*i*		22 36 49.9	
	comp=Z,97nm,0.5s						
VILC	**Villavicencio,**	**2.69**	**196**	*e*P	**Pn**	**22 36 15.8**	**-0.3**
VILC				*e*S	**Sn**	**22 36 50.3**	**-1.2**
UREC	**San Jos de Ur**	**2.74**	**292**	*e*P	**Pn**	**22 36 15.5**	**-1.0**
UREC				*e*S	**Sn**	**22 36 49.6**	**-2.6**
UREC				*i*		22 36 51.8	
	comp=Z,187nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.86**	**348**	*e*P	**Pn**	**22 36 16.9**	**-1.0**
LL1C				*e*S	**Sn**	**22 36 57.2**	**+2.3**
LL6C	**La Loma 6 Bece**	**3.01**	**354**	*e*P	**Pn**	**22 36 19.7**	**0.0**
LL6C				*e*S	**Sn**	**22 36 57.7**	**-0.4**
CBOC	**Ciudad Bolivar**	**3.14**	**254**	*e*P	**Pn**	**22 36 22.4**	**+0.9**
CBOC				*e*S	**Sn**	**22 37 00.0**	**-1.1**
CBOC				*i*		22 37 06.2	
	comp=Z,58nm,0.6s						
SDV	**Santo Domingo**	**3.16**	**47**	*e*P	**Pn**	**22 36 23.3**	**+1.6**
SDV				*e*S	**Sn**	**22 37 01.4**	**-0.2**
SDV				*i*		22 37 02.4	
	comp=Z,34nm,0.4s						
DBBC	**Dabeiba**	**3.23**	**275**	*e*P	**Pn**	**22 36 22.6**	**+0.2**
DBBC				*e*S	**Sn**	**22 37 01.2**	**-1.7**
DBBC				*i*		22 37 05.8	
	comp=Z,294nm,0.6s						
ANIL	**Santa Ana**	**3.28**	**228**	*e*P	**Pn**	**22 36 24.1**	**+0.8**
ANIL				*e*S	**Sn**	**22 37 04.3**	**-0.1**
ANIL				*i*		22 37 11.8	
	comp=Z,123nm,0.4s						
ARGC	**Ariguani, Magd**	**3.36**	**338**	*e*P	**Pn**	**22 36 24.1**	**+0.1**
ARGC				*e*S	**Sn**	**22 37 06.0**	**+0.2**
ARGC				*i*		22 37 09.9	
	comp=Z,32nm,0.2s						
PRAC	**Prado**	**3.54**	**213**	*e*P	**Pn**	**22 36 25.6**	**-0.7**
PRAC				*e*S	**Sn**	**22 37 07.8**	**-2.1**
PRAC				*i*		22 37 10.7	
	comp=Z,50nm,0.3s						
ORTC	**Ortega, Tolima**	**3.60**	**219**	*e*P	**Pn**	**22 36 27.0**	**0.0**
ORTC				*e*S	**Sn**	**22 37 09.7**	**-1.3**
ORTC				*i*		22 37 13.8	
	comp=Z,35nm,0.2s						
PLMC	**San Jos del P**	**3.76**	**242**	*e*P	**Pn**	**22 36 29.7**	**+0.7**
PLMC				*e*S	**Sn**	**22 37 14.2**	**-0.5**
PLMC				*i*		22 37 21.1	
	comp=Z,42nm,0.6s						
CVALL	**Valledupar, Ce**	**3.77**	**356**	*e*P	**Pn**	**22 36 28.9**	**-0.3**
CVALL				*e*S	**Sn**	**22 37 14.3**	**-0.7**
CVALL				*i*		22 37 21.9	
	comp=Z,47nm,0.4s						
SJCC	**San Jacinto, C**	**3.84**	**325**	*e*P	**Pn**	**22 36 28.9**	**-1.0**
SJCC				*e*S	**Sn**	**22 37 15.2**	**-1.3**
LCBC	**Los crdobas,**	**3.98**	**302**	*e*P	**Pn**	**22 36 31.5**	**-0.2**
LCBC				*e*S	**Sn**	**22 37 20.8**	**+1.2**
LCBC				*i*		22 37 31.3	
	comp=Z,46nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.27**	**1**	*e*P	**Pn**	**22 36 35.0**	**-0.5**
CRJC				*e*S	**Sn**	**22 37 25.0**	**-1.5**
CRJC				*i*		22 37 28.9	
	comp=Z,33nm,0.4s						
YOTC	**Yotoco, Valle**	**4.32**	**231**	*e*P	**Pn**	**22 36 35.4**	**-0.8**
YOTC				*e*S	**Sn**	**22 37 27.5**	**-0.1**
YOTC				*i*		22 37 32.9	
	comp=Z,6.5nm,0.3s						
SMRC	**Santa Marta, M**	**4.59**	**344**	*e*P	**Pn**	**22 36 39.9**	**+0.5**
SMRC				*e*S	**Sn**	**22 37 29.7**	**-3.8**
SMRC				*i*		22 37 33.1	
	comp=Z,23nm,0.2s						
MACC	**Macarena, Meta**	**4.63**	**191**	*e*P	**Pn**	**22 36 38.0**	**-2.0**
MACC				*e*S	Sn	22 37 27.6	-7.0
URIC	**Uribia, Colomb**	**5.04**	**11**	*e*P	**Pn**	**22 36 41.7**	**-3.6**
URIC				*e*S	**Sn**	**22 37 41.4**	**-2.7**
MALC	**Bahia Malaga**	**5.11**	**238**	*e*P	**Pn**	**22 36 47.4**	**+1.2**
TXAR	**Lajitas Array**	**36.64**	**312**	P	P	22 42 14.6	-5.0
	comp=Z,0.1nm,0.4s,baz=134,slow=7.7,SNR=1.8						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**63.41**	**340**	P	**P**	**22 45 40.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=130,slow=7.2,SNR=6.7						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.61**	**78**	P	P	22 46 52.2	+8.0
	comp=Z,0.2nm,0.4s,baz=254,slow=4.7,SNR=1.0						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKiKP**	**22 55 01.9**	**+2.8**
	comp=Z,0.4nm,0.5s,baz=113,slow=3.3,SNR=2.7						

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*IDC **17** 22:48:23.5±1.7, 6°.79S×129°.04E, h161^{km}±18^{km}, mb3.3/1, mbtmp4.4/5, Error ellipse: s-maj=26.9km s-min=13.8km az=120.0*

*NEIC **17** 22:48:24.9±2.7, 6°.80S±0°.09×129°.02E±0°.08, h184^{km}±8^{km}, mb4.1/7, Error ellipse: s-maj=13.9km s-min=10.6km az=151.0*

ISC 17 22:48:26.4±0.9**, 7°.05S**±0°.09×**129°.08E**±0°.06**, h200**^{km}**, n28, σ1^{s}97**/31**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.39**	**113**	Pn	**Pn**	**22 49 08.7**	**-0.4**
SAUI				Sn	**Sn**	**22 49 40.6**	**-1.8**
SOEI	**Soe**	**5.46**	**240**	Pn	**Pn**	**22 49 46.9**	**0.0**
SOEI				Sn	**Sn**	**22 50 48.1**	**-2.3**
MTN	**Manton Dam**	**6.10**	**161**	Pn	**Pn**	**22 49 56.0**	**+1.0**
MTN	**Manton Dam**	**6.10**	**161**	P	**Pn**	**22 49 56.2**	**+1.2**
BATI	**Baumata**	**6.20**	**239**	P	**Pn**	**22 49 54.9**	**-1.4**
	38nm,0.5s,baz=93,slow=3.0,SNR=7.9						
BATI				S	**Sn**	**22 51 05.9**	**-1.7**
	33nm,0.3s,baz=188,slow=20,SNR=12						
SIJI	**Sorong**	**6.52**	**20**	P	Pn	22 49 55.4	-5.0
	20nm,0.3s,baz=226,slow=23,SNR=10						
SIJI				S	Sn	22 51 05.0	-10
	6.2nm,0.3s,baz=248,slow=23,SNR=1.7						
KNRA	**Kununurra**	**8.58**	**182**		**Pn**	**22 50 27.4**	**+0.2**
KNRA	**Kununurra**	**8.58**	**182**	P	**Pn**	**22 50 27.8**	**+0.6**
KAPI	**Kappang**	**9.49**	**282**	P	Pn	22 50 28.5	-11
WB0	**Warramunga Arr**	**13.65**	**158**		**Pn**	**22 51 31.4**	**-0.7**
WRAB	**Tennant Creek**	**13.79**	**159**	P	**Pn**	**22 51 34.2**	**+0.4**
WRA	**Warramunga Arr**	**13.79**	**159**	P	**Pn**	**22 51 33.9**	**0.0**
	1.1nm,0.3s,baz=340,slow=12,SNR=24						
WRA				S	**S**	**22 54 02.6**	**-5.0**
	3.9nm,0.5s,baz=337,slow=23,SNR=10						
COEN	**Coen**	**15.46**	**117**	Pn	**Pn**	**22 51 50.9**	**-3.5**
COEN				IAmb	IAmb	22 52 08.5	
	comp=Z,16nm,1.2s						
MBWA	**Marble Bar**	**16.69**	**212**	P	**P**	**22 52 07.6**	**-0.4**
MBWA				IAmb	IAmb	22 52 09.4	
	comp=Z,14nm,1.4s						
QIS	**Mount Isa**	**16.86**	**144**	P	**Pn**	**22 52 12.1**	**+0.9**
PSA00	**Pilbara Seismi**	**16.97**	**211**	P	**Pn**	**22 52 12.4**	**0.0**
PSA00				IAmb	IAmb	22 52 34.9	
	comp=Z,10nm,1.1s						
PSA00	**Pilbara Seismi**	**16.97**	**211**	P	**Pn**	**22 52 12.2**	**-0.2**
PSA00				IAmb	IAmb	22 52 34.8	
	comp=Z,5.4nm,1.4s						
PSA00	**Pilbara Seismi**	**16.97**	**211**	P	**Pn**	**22 52 15.9**	**+3.5**
AS31	**Alice Springs**	**17.16**	**165**	P	**Pn**	**22 52 16.0**	**+1.3**
ASAR	**Alice Springs**	**17.16**	**165**	P	**Pn**	**22 52 16.4**	**+1.8**
	comp=Z,14nm,0.4s,baz=338,slow=9.6,SNR=180						
ASAR				S	**S**	**22 55 25.8**	**+4.1**
	comp=Z,0.6nm,0.4s,baz=317,slow=16,SNR=5.7						
ASAR	**Alice Springs**	**17.16**	**165**	P	**Pn**	**22 52 16.0**	**+1.4**
WRKA	**Warakurna**	**17.90**	**182**	P	**Pn**	**22 52 24.4**	**+1.0**
OOD	**Oodnadatta**	**21.56**	**164**	P	**P**	**22 53 02.1**	**+1.8**
MK31	**Makanchi Array**	**67.77**	**327**	P	**P**	**22 59 00.7**	**-1.9**
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**22 59 02.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=116,slow=7.8,SNR=12						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**22 59 01.4**	**-1.2**
VNDA	**Vanda**	**72.51**	**173**	P	**P**	**22 59 33.7**	**+2.8**
VNDA				IAmb	IAmb	22 59 47.6	
	comp=Z,4.3nm,1.5s						
ABKAR	**Akbulak array**	**81.98**	**322**	P	**P**	**23 00 23.9**	**0.0**

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*NEIC **17** 22:48:59.8±2.2, 38°.16S±0°.04×73°.9W±0°.1, h28^{km}±5^{km}, mb4.4/3, Mwr3.9/29, ML4.2(GUC), Error ellipse: s-maj=13.7km s-min=5.2km az=98.0*

*NEIC **17** 22:49:00.8, 38°.16S×73°.81W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.87; M$_{\theta\theta}$0.92; M$_{\phi\phi}$-2.79; M$_{r\theta}$0.27; M$_{\theta\phi}$0.21; M$_{\phi r}$-7.42; Fault plane solution: M$_0$7.83000×10^{14} NP1:ϕ$_s$354.30000°, δ8.74000°, λ86.44000°. NP2:ϕ$_s$177.90000°, δ81.28000°, λ90.55000°. Principal axes: T 7.3177, Plg54.0000°, Azm89.0000°; N 0.9354, Plg1.0000°, Azm358.0000°; P -8.2531, Plg36.0000°, Azm267.0000°;*

*IDC **17** 22:49:02.0±8.6, 38°.42S×73°.89W, h0^{km}, mb3.7/2, mbtmp3.6/3, ML3.7/1 Error ellipse: s-maj=214.4km s-min=29.6km az=65.0*

*GUC **17** 22:49:02.1±0.6, 38°.15S×73°.68W, h31^{km}±3^{km}, ML4.2*

ISC 17 22:49:00.2±1.1**, 38°.12S**±0°.02×**73°.76W**±0°.05**, h29**^{km}±10^{km}**, n56, σ1^{s}62**/73**, mb4.0**/5**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LC02	**Puerto Saavedr**	**0.73**	**156**		**Pb**	**22 49 14.1**	**-0.3**
LC02				Sn	**Sb**	**22 49 23.3**	**-0.9**
LC02	**Puerto Saavedr**	**0.73**	**156**	⇓*i*P	**Pb**	**22 49 14.1**	**-0.3**
LC02				*i* S	**Sb**	**22 49 23.5**	**-0.6**
LC02				IAML		22 49 29.1	
	comp=N,31μm,0.4s						
CCSP	**San Pedro de C**	**1.37**	**22**	*e*P	**Pb**	**22 49 25.1**	**-0.1**
CCSP				*e*S	**Sb**	**22 49 43.1**	**+0.7**
CCSP				IAML		22 49 49.9	
	comp=E,6μm,0.3s						
BI05	**Punta Hualpn**	**1.44**	**19**		**Pb**	**22 49 26.0**	**-0.4**
BI05	**Punta Hualpn**	**1.44**	**19**	*e*P	**Pb**	**22 49 26.0**	**-0.4**
BI05				*e*S	**Sb**	**22 49 44.8**	**+0.5**
BI05				IAML		22 49 49.8	
	comp=E,3μm,0.5s						
LR02	**Universidad Au**	**1.73**	**167**	*e*P	**Pn**	**22 49 28.8**	**+0.6**
LR02				*e*S	**Sn**	**22 49 51.4**	**+2.0**
LR02				IAML		22 49 58.6	
	comp=E,8μm,0.5s						
LR04	**Corral**	**1.78**	**172**		**Pn**	**22 49 29.1**	**+0.1**
LR04	**Corral**	**1.78**	**172**	⇑*e*P	**Pn**	**22 49 29.3**	**+0.4**
LR04				*e*S	**Sn**	**22 49 52.8**	**+2.2**
LR04				IAML		22 50 01.4	
	comp=N,3μm,0.3s						
LR03	**Panguipulli**	**1.87**	**144**		**Pn**	**22 49 31.3**	**+1.0**
LR03	**Panguipulli**	**1.87**	**144**	*e*P	**Pn**	**22 49 31.6**	**+1.4**
LR03				*e*S	**Sn**	**22 49 54.7**	**+1.8**
LR03				IAML		22 50 03.0	
	comp=E,5μm,0.6s						
LL04	**Puerto Octay**	**2.98**	**160**		**Pn**	**22 49 46.1**	**+0.7**
LL04	**Puerto Octay**	**2.98**	**160**	*e*P	**Pn**	**22 49 47.3**	**+1.9**
LL04				*e*S	**Sb**	**22 50 27.9**	**-0.5**
LL04				IAML		22 50 36.8	
	comp=E,223nm,0.6s						
ML02	**Panimavida**	**3.01**	**39**		**Pn**	**22 49 46.7**	**+0.9**
ML02	**Panimavida**	**3.01**	**39**	*e*P	**Pn**	**22 49 47.2**	**+1.3**
ML02				*e*S	**Sn**	**22 50 22.9**	**+2.0**
ML02				IAML		22 50 41.0	
	comp=E,874nm,0.5s						
LL03	**Petrohue**	**3.19**	**161**		**Pn**	**22 49 49.2**	**+0.8**
LL03	**Petrohue**	**3.19**	**161**	*e*P	**Pn**	**22 49 51.9**	**+3.5**
LL03				*e*S	**Sn**	**22 50 27.2**	**+1.8**
LL03				IAML		22 50 45.9	
	comp=N,619nm,0.6s						
LL05	**Los Muermos**	**3.29**	**176**		**Pn**	**22 49 49.6**	**-0.1**
LL05	**Los Muermos**	**3.29**	**176**	*e*S	**Sb**	**22 50 37.0**	**-0.4**
LL05				IAML		22 51 09.9	
	comp=E,318nm,0.7s						
GO05	**Huala**	**3.43**	**26**		**Pn**	**22 49 53.5**	**+1.7**
GO05	**Huala**	**3.43**	**26**	*e*P	**Pn**	**22 49 53.0**	**+1.3**
GO05				*e*S	**Sn**	**22 50 33.2**	**+1.7**
PLCA	**Paso Flores**	**3.60**	**137**	Pn	**Pn**	**22 49 56.4**	**+2.3**
	comp=E,1.8nm,0.3s,baz=319,slow=14,SNR=7.4						
PLCA				Sn	**Sn**	**22 50 41.4**	**+5.7**
	comp=E,2.8nm,0.3s,baz=284,slow=13,SNR=4.7						
	comp=E,3.4nm,0.3s						
PLCA	**Paso Flores**	**3.60**	**137**		**Pn**	**22 49 55.4**	**+1.3**
BO01	**Tunca**	**4.30**	**31**		**Pn**	**22 50 04.2**	**+0.6**
BO01	**Tunca**	**4.30**	**31**	*e*P	**Pn**	**22 50 04.5**	**+0.9**
BO01				*e*S	**Sn**	**22 50 54.8**	**+2.0**
MT01	**Popeta**	**4.71**	**26**		**Pn**	**22 50 09.9**	**+0.7**
VA05	**Santo Domingo**	**4.78**	**22**		**Pn**	**22 50 11.6**	**+1.4**
BO04	**La Punta**	**4.85**	**33**		**Pn**	**22 50 11.3**	**+0.1**
MT09	**Talagante**	**4.88**	**28**		**Pn**	**22 50 12.4**	**+0.7**
GO07	**Milladeo Hill,**	**4.99**	**179**		**Pn**	**22 50 13.4**	**+0.3**
LMEL	**Las Melosas**	**5.14**	**35**		**Pn**	**22 50 16.6**	**+1.2**
LL02	**Futaleuf**	**5.27**	**165**	Pn	**Pn**	**22 50 16.1**	**-0.9**
MT02	**Curacav**	**5.30**	**25**		**Pn**	**22 50 17.3**	**0.0**
MT03	**Universidad Ad**	**5.32**	**31**	Pn	**Pn**	**22 50 18.9**	**+1.2**
VA01	**Torpederas**	**5.37**	**19**	Pn	**Pn**	**22 50 18.0**	**-0.3**
PEL	**Peldehue**	**5.56**	**28**		**Pn**	**22 50 21.4**	**+0.4**
ROC1	**El Roble**	**5.60**	**24**		**Pn**	**22 50 20.1**	**-1.6**
VA06	**Catapilco**	**5.90**	**21**		**Pn**	**22 50 25.4**	**-0.2**
VA03	**San Esteban**	**5.95**	**27**		**Pn**	**22 50 27.1**	**+0.7**
H03S1	**Juan Fernandez**	**5.97**	**314**	Pn	**Pn**	**22 50 29.2**	**+3.0**
	baz=119						
H03S1				Sn	**Sn**	**22 51 33.8**	**+0.3**
	baz=241						
H03S1				T	T	22 56 42.0	
	SNR=572						
H03S3	**Juan Fernandez**	**5.98**	**314**	Pn	**Pn**	**22 50 28.9**	**+2.4**
	baz=119						
H03S3				Sn	**Sn**	**22 51 32.4**	**-1.4**
	baz=241						
H03S3				T	T	22 56 44.9	
	SNR=488						
H03S2	**Juan Fernandez**	**5.98**	**314**	Pn	**Pn**	**22 50 28.8**	**+2.4**
	baz=119						
H03S2				Sn	**Sn**	**22 51 36.7**	**+2.9**
	baz=241						
H03S2				T	T	22 56 45.8	
	SNR=608						
H03N3	**Juan Fernandez**	**6.26**	**316**	Pn	**Pn**	**22 50 33.4**	**+3.0**
	baz=147,slow=28						
H03N3				Sn	**Sn**	**22 51 41.0**	**+0.1**
	baz=38						
H03N1	**Juan Fernandez**	**6.27**	**317**	Pn	**Pn**	**22 50 33.1**	**+2.7**
	baz=147,slow=28						
H03N1				Sn	**Sn**	**22 51 39.7**	**-1.2**
	baz=38						
H03N2	**Juan Fernandez**	**6.28**	**316**	Pn	**Pn**	**22 50 33.9**	**+3.4**
	baz=147,slow=28						
H03N2				Sn	**Sn**	**22 51 40.0**	**-1.1**
	baz=38						
CO02	**Combarbal**	**7.26**	**19**		**Pn**	**22 50 45.0**	**+0.6**
CO06	**Fray Jorge**	**7.63**	**14**	Pn	**Pn**	**22 50 48.9**	**-0.5**
GO04	**Tololo Observa**	**8.30**	**18**	Pn	**Pn**	**22 50 58.8**	**+0.1**
CO01	**Juntas del Tor**	**8.67**	**22**		**Pn**	**22 51 05.1**	**+1.3**
LCO	**Las Campanas**	**9.43**	**17**		**Pn**	**22 51 14.3**	**-0.1**
AC02	**Maricunga**	**11.91**	**20**	Pn	**Pn**	**22 51 48.0**	**-0.4**
LPAZ	**La Paz**	**22.30**	**14**	P	P	22 54 04.9	+9.0
	comp=E,0.9nm,0.7s,baz=184,slow=4.1,SNR=5.4						
	comp=E,0.9nm,0.7s						
QSPA	**South Pole Qui**	**52.12**	**180**	P	**P**	**22 58 07.4**	**-0.1**
QSPA				IAmb	IAmb	22 58 14.3	
	comp=Z,7.9nm,1.4s						
TX32	**Lajitas Array**	**72.70**	**333**	P	**P**	**23 00 23.6**	**-1.7**
TX32				IAmb	IAmb	23 00 42.0	
	comp=Z,2.6nm,1.4s						
TXAR	**Lajitas Array**	**72.70**	**333**	P	**P**	**23 00 23.6**	**-1.7**
TOA0	**Torodi Ar. Sit**	**86.90**	**71**	P	**P**	**23 01 40.4**	**-2.1**
TOA0				IAmb	IAmb	23 01 54.9	
	comp=Z,5.8nm,1.3s						
TORD	**Torodi Ar. Bea**	**86.90**	**71**	P	P	23 01 50.3	+7.9
	comp=Z,0.8nm,0.8s,baz=221,slow=6.3,SNR=5.1						
	comp=Z,0.8nm,0.8s						

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*ANF **17** 22:58:05.5±0.6, 35°.99N×120°.53W, h13^{km}±2^{km}, ML3.6/28, ML3.6/28, Error ellipse: s-maj=5.0km s-min=2.5km az=109.0*

*NEIC **17** 22:58:06.2±1.3, 35°.94N±0°.03×120°.64W±0°.01, h15^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=1.5km az=190.0*

*NEIC **17** 22:58:06, 35°.97N×120°.53W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.29; M$_{\theta\theta}$-2.29; M$_{\phi\phi}$2.00; M$_{r\theta}$0.10; M$_{\theta\phi}$0.51; M$_{\phi r}$-0.36; Fault plane solution: M$_0$2.25000×10^{14} NP1:ϕ$_s$141.12000°, δ84.67000°, λ170.07000°. NP2:ϕ$_s$232.05000°, δ80.11000°, λ5.41000°. Principal axes: T 2.1252, Plg11.0000°, Azm96.0000°; N 0.2309, Plg79.0000°, Azm293.0000°; P -2.3561, Plg3.0000°, Azm187.0000°;*

*NCEDC **17** 22:58:06±2.0, 35°.97N±0°.03×120°.53W±0°.06, h8^{km}±6^{km}, Mwr3.5/4, ML3.3/78(NEIC) Error ellipse: s-maj=7.7km s-min=2.2km az=61.0*

ISC 17 22:58:06.1±1.0**, 35°.96N**±0°.02×**120°.56W**±0°.02**, h15**^{km}±7^{km}**, n100, σ0^{s}86**/116**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKD	**Bear Valley Ra**	**0.02**	**135**		**Pg**	**22 58 08.9**	**+0.1**
TCHL	**Shandon**	**0.30**	**155**		**Pb**	**22 58 12.8**	**-0.4**
PMPB	**Monarch Peak**	**0.32**	**323**		**Pg**	**22 58 13.1**	**+0.2**
PMPB				IAML		22 58 23.2	
	comp=N,5μm,0.9s						
PAGB	**Antelope Grade**	**0.34**	**132**		**Pg**	**22 58 12.9**	**-0.2**
PAGB				Sg	**Sb**	**22 58 18.3**	**-0.7**
THIS	**South End of C**	**0.35**	**131**		**Pg**	**22 58 13.2**	**-0.2**
TRAM	**Private Proper**	**0.36**	**140**		**Pg**	**22 58 13.5**	**0.0**
PDRM	**Domengine Ranc**	**0.41**	**22**		**Pb**	**22 58 15.2**	**+0.2**
RAMR	**Ramage Ranch**	**0.41**	**218**		**Pg**	**22 58 14.8**	**+0.4**
TSCN	**Private Proper**	**0.45**	**158**		**Pb**	**22 58 15.3**	**-0.3**
PAPM	**Alder Peak**	**0.65**	**266**		**Pg**	**22 58 18.9**	**0.0**
BBGB	**Big Mountain B**	**0.73**	**328**		**Pb**	**22 58 20.9**	**+0.3**
SMMC	**Simmler**	**0.79**	**144**	P	**Pg**	**22 58 21.1**	**-0.3**
	baz=327,SNR=280						
SMMC				S	**Sb**	**22 58 32.0**	**0.0**
	baz=327						
BSMM	**Soledad Missio**	**0.82**	**301**		**Pg**	**22 58 21.7**	**-0.4**
BJCM	**Johnson Can.**	**0.90**	**311**		**Pg**	**22 58 22.8**	**-0.6**
HAST	**Hastings Reser**	**0.91**	**298**		**Pg**	**22 58 23.2**	**-0.6**
BLRM	**Lewis Ranch**	**0.91**	**321**		**Pg**	**22 58 23.6**	**-0.2**
SCZ	**Santa Cruz**	**0.94**	**313**		**Pb**	**22 58 23.4**	**-0.5**
VOG	**Valley Oaks Go**	**1.02**	**69**	P	**Pb**	**22 58 24.6**	**-0.8**
	baz=250,SNR=14						
VOG				S	**Sn**	**22 58 38.9**	**-0.9**
	baz=250						
PMLM	**Mount Lospe**	**1.06**	**182**		**Pb**	**22 58 26.0**	**-0.1**
SAO	**San Andreas Ge**	**1.08**	**319**		**Pb**	**22 58 25.6**	**-0.8**
HSFM	**Saint Francis**	**1.14**	**319**		**Pb**	**22 58 27.2**	**-0.4**
PACP	**Pacheco Peak**	**1.20**	**331**		**Pb**	**22 58 28.7**	**+0.2**
VES	**Vestal, Richgr**	**1.20**	**95**	P	**Pn**	**22 58 26.8**	**-1.5**
	baz=277						
VES				S	**Sb**	**22 58 42.5**	**-1.3**
	baz=277						
HFEM	**San Felipe**	**1.23**	**327**		**Pn**	**22 58 29.0**	**+0.3**
PKM	**Mcpherson Peak**	**1.23**	**150**	P	**Pn**	**22 58 28.6**	**-0.3**
	baz=332,SNR=148						
PKM				S	**Sg**	**22 58 45.9**	**+0.1**
	baz=332						
HCOM	**Corn Cob Canyo**	**1.31**	**315**		**Pn**	**22 58 29.0**	**-0.9**
GHS	**Gilroy Hot Spr**	**1.34**	**328**		**Pn**	**22 58 30.2**	**-0.1**
BCW	**Bitter Crk WRg**	**1.38**	**137**		**Pn**	**22 58 30.7**	**-0.2**
HELL	**Mitchell Peak,**	**1.43**	**59**		**Pn**	**22 58 30.8**	**-0.8**
MOBB	**Monterey Bay O**	**1.49**	**300**		**Pn**	**22 58 31.4**	**-0.8**
CMPM	**Mikes Peak**	**1.52**	**337**		**Pn**	**22 58 33.4**	**+0.6**
MHC	**Mount Hamilton**	**1.63**	**328**		**Pn**	**22 58 34.1**	**-0.3**
ARVC	**Arvin**	**1.64**	**120**	P	**Pn**	**22 58 33.8**	**-0.5**
	baz=302,SNR=22						
ARVC				S	**Sn**	**22 58 55.5**	**+0.4**
	baz=302						
SBC	**Santa Barbara**	**1.66**	**155**	P	**Pn**	**22 58 34.6**	**-0.1**
	baz=337,SNR=10.0						
COSM	**Mount Oso**	**1.68**	**337**		**Pn**	**22 58 35.4**	**+0.4**
KCC	**Kaiser Creek**	**1.69**	**36**		**Pn**	**22 58 35.1**	**0.0**
ISA	**Isabella, Lake**	**1.72**	**99**	Pn	**Pn**	**22 58 34.9**	**-0.6**
ISA				IAML		22 59 00.8	
	comp=N,382nm,0.4s						
ISA				IAML		22 59 01.1	
	comp=E,441nm,0.3s						
ISA	**Isabella, Lake**	**1.72**	**99**	P	**Pn**	**22 58 34.7**	**-0.8**
	baz=281,SNR=171						
ISA				S	**Sn**	**22 58 57.0**	**-0.2**
	baz=281						
JRSC	**Jasper Ridge**	**1.98**	**317**		**Pn**	**22 58 38.4**	**-0.6**
JRSC					**Pg**	**22 58 43.9**	**-0.1**
OSI	**Osito Audit: C**	**2.01**	**131**	Pb	**Pb**	**22 58 41.8**	**-0.6**
	baz=313						
OSI				S	**Sn**	**22 59 05.4**	**+1.0**
	baz=313						
MRDM	**Red Cones**	**2.03**	**36**		**Pn**	**22 58 40.8**	**+0.7**
MDPB	**Devils Postpil**	**2.05**	**35**		**Pn**	**22 58 41.1**	**+0.8**
MDPB				IAML		22 59 12.6	
	comp=N,385nm,0.6s						
MDPB				IAML		22 59 15.1	
	comp=E,366nm,0.9s						
CWC	**Cottonwood Cre**	**2.06**	**76**	Pb	**Pb**	**22 58 41.5**	**-1.8**
	baz=257						
CWC				S	**Sn**	**22 59 05.7**	**-0.1**
	baz=257						
OMMB	**Old Mammoth Mi**	**2.07**	**37**	Pn	**Pn**	**22 58 41.3**	**+0.7**

OMMB				IAML		22 59 16.6	
	comp=E,363nm,0.8s						
CMB	Columbia Colle	2.08	4		Pn	22 58 40.1	-0.4
SCZ2	Santa Cruz Isl	2.10	159	P	Pn	22 58 40.0	-0.7
	baz=340						
SCZ2				Sb	Sb	22 59 11.6	+1.9
	baz=340						
MTUM	Tungsten Hills	2.12	48		Pn	22 58 42.3	+1.1
MDCM	Deadman Creek	2.13	34		Pn	22 58 42.4	+1.0
MLAC	Mammoth, Mammo	2.17	39	Pb	Pb	22 58 43.7	-1.4
	baz=220,SNR=12						
MLAC				Sb	Sb	22 59 12.1	+0.2
	baz=220						
TIN	Tinemaha, Big	2.17	59	P	Pn	22 58 41.3	-0.5
	baz=240,SNR=12						
TIN				Sb	Sb	22 59 11.2	-0.7
	baz=240						
MDRNC	Doe Ridge	2.17	39		Pn	22 58 42.9	+0.9
CCAC	Calif City Air	2.22	110		Pn	22 58 43.2	+0.7
CCAC				IAML		22 59 20.7	
	comp=N,272nm,1.1s						
CCAC				IAML		22 59 25.2	
	comp=E,288nm,1.1s						
BKS	Berkeley--Byer	2.34	325		Pn	22 58 43.8	-0.2
EDW2	Edwards Air Fo	2.35	116	P	Pn	22 58 43.9	-0.4
	baz=298,SNR=41						
EDW2				S	Sn	22 59 13.6	+0.7
	baz=298						
LRMC	Laurel Mtn Rad	2.39	101	P	Pn	22 58 44.4	-0.4
	baz=283,SNR=11						
LRMC				Sb	Sb	22 59 19.1	+1.0
	baz=283						
DECC	Green Verdugo	2.49	132	P	Pn	22 58 46.8	+0.7
	baz=314						
DECC				S	Sn	22 59 17.9	+1.6
	baz=314						
FARB	Farallon Islan	2.62	312		Pn	22 58 46.5	-1.3
PASC	Pasadena Art C	2.64	132		Pn	22 58 47.8	-0.3
LCH	Last Change Ra	2.67	61		Pn	22 58 49.2	+0.6
LCH				IAML		22 59 32.6	
	comp=E,179nm,0.4s						
LCH				IAML		22 59 38.9	
	comp=N,125nm,0.7s						
GRAC	Grapevine Rang	2.77	67		Pn	22 58 50.8	+0.8
GRAC	Grapevine Rang	2.77	67	Pb	Pb	22 58 54.5	-0.9
	baz=249,SNR=18						
LHV	Little Huntoon	2.82	35		Pn	22 58 52.7	+2.2
LHV				IAML		22 59 49.9	
	comp=N,138nm,0.8s						
MCCM	Marconi Confer	2.87	320	Pn	Pn	22 58 50.2	-1.0
MCCM				IAML		22 59 42.6	
	comp=E,65nm,2.6s						
MCCM				IAML		22 59 50.6	
	comp=N,69nm,1.9s						
BFSC	Mount Baldy Ra	2.93	125	P	Pn	22 58 52.2	0.0
	baz=307,SNR=14						
QSM	Queen of Sheba	2.99	89		Pn	22 58 52.9	-0.1
QSM				IAML		22 59 48.9	
	comp=E,56nm,1.0s						
QSM				IAML		22 59 48.9	
	comp=N,63nm,0.8s						
NVAR	Mina Array Bea	3.05	35		Pn	22 58 55.6	+1.6
RRX	Edison Barstow	3.10	109	P	Pn	22 58 54.6	+0.1
	baz=292						
GSC	Goldstone, Bar	3.13	101	Pn	Pn	22 58 54.6	-0.3
GSC				IAML		22 59 47.1	
	comp=E,106nm,0.6s						
GSC				IAML		22 59 54.5	
	comp=N,54nm,1.2s						
GSC	Goldstone, Bar	3.13	101	P	Pn	22 58 54.4	-0.5
	baz=284,SNR=25						
GWY	Greenwater Val	3.16	85		Pn	22 58 54.8	-0.6
GWY				IAML		22 59 51.6	
	comp=E,82nm,0.6s						
GWY				IAML		23 00 03.7	
	comp=N,61nm,1.1s						
YERR	Yerington	3.20	19		Pn	22 58 57.5	+1.5
YERR				IAML		23 00 03.7	
	comp=N,75nm,0.6s						
PNTR	Pine Nut	3.22	13		Pn	22 58 58.0	+1.8
MPK	Martis Peak	3.36	7		Pn	22 58 59.1	+0.8
TPH	Tonopah	3.40	51		Pn	22 59 00.2	+1.4
ELS	Elsinore Mount	3.46	131		Pn	22 58 58.9	-0.5
TPNV	Topopah Spring	3.61	73		Pn	22 59 02.8	+1.1
TPNV				IAML		23 00 05.1	
	comp=N,96nm,1.2s						
TPNV				IAML		23 00 11.2	
	comp=N,60nm,1.6s						
TPNV	Topopah Spring	3.61	73	P	Pn	22 59 02.7	+1.1
	baz=255,SNR=20						
HEC	Hector,Ludlow	3.63	107	P	Pn	22 59 01.0	-0.8
	baz=290						
HOPS	Hopland Field	3.63	327	Pn	Pn	22 59 01.6	-0.1
HOPS				IAML		22 59 41.6	
	comp=E,41nm,3.3s						
HOPS				IAML		23 01 02.7	
	comp=N,50nm,2.4s						
MURC	Murrieta	3.63	129	P	Pn	22 59 01.7	-0.1
	baz=312						
KVN	Kaiserville	3.65	32	Pn	Pn	22 59 03.3	+1.1
KVN				IAML		23 00 04.0	
	comp=E,32nm,0.8s						
KVN				IAML		23 00 04.4	
	comp=N,42nm,0.7s						
ORV	Oroville	3.67	349		Pn	22 59 03.6	+1.4
TUQ	Turquoise Moun	3.81	97	P	Pn	22 59 04.5	+0.3
	baz=279,SNR=12						
BEKR	Beckworth	3.91	2	Pn	Pn	22 59 05.4	-0.2
BEKR				IAML		23 00 10.9	
	comp=E,71nm,0.7s						
BEKR				IAML		23 00 12.1	
	comp=N,27nm,0.9s						
PFO	Pinyon Flats O	4.11	124	Pn	Pn	22 59 08.9	+0.5
PFO				IAML		22 59 59.4	
	comp=N,21nm,0.9s						
PFO	Pinyon Flats O	4.11	124	P	Pn	22 59 08.4	+0.1
	baz=306,SNR=7.2						
GMRC	Granite Mounta	4.17	105	P	Pn	22 59 08.3	-1.0
	baz=288						
109C	Camp Elliot, M	4.18	136	P	Pn	22 59 09.2	-0.2
	baz=318						
BELC	Belle Mtn. Jos	4.22	116	P	Pn	22 59 09.3	-0.7
	baz=299						
SHPR	Sheep Range	4.40	81	Pn	Pn	22 59 13.4	+1.0
BAR	Barrett	4.59	134	Pn	Pn	22 59 14.2	-0.7
MONP2	Monument Peak	4.59	131	P	Pn	22 59 15.0	-0.1
	baz=313						
R11A	Troy Canyon, C	4.63	58		Pn	22 59 17.5	+1.8
PRN	Pahroc Range	4.66	70		Pn	22 59 16.9	+0.9
PRN				IAML		23 00 47.1	
	comp=E,41nm,0.9s						
CBX	Cerro Bola	4.86	137		Pn	22 59 19.0	+0.2
IKP	In-Ko-Pah, Jac	4.94	131	P	Pn	22 59 20.0	+0.2
	baz=314						
RMX	La Rumorosa	5.00	131	Pn	Pn	22 59 22.5	+1.9
RMX				IAML		23 00 15.5	
	comp=E,13nm,0.1s						
RMX				IAML		23 00 30.3	
	comp=N,13nm,0.8s						
YUH	Yuha Desert	5.06	129	Pn	Pn	22 59 24.2	+2.8
LCMT	Little Creek M	5.99	78		Pn	22 59 35.1	+0.9
U15A	North Rim	6.70	84	Pn	Pn	22 59 45.4	+1.2

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*ANF **17** 23:13:33.1±0.3, 36°.85N×89°.13W, h6^{km}, ML3.4/18, Error ellipse: s-maj=3.3km s-min=2.7km az=130.0*

*SLM **17** 23:13:33.4±1.0, 36°.87N±0°.01×89°.12W±0°.02, h6^{km}±5^{km}, Md2.7/9, mb_Lg2.8/88(NEIC), Error ellipse: s-maj=2.4km s-min=2.1km az=98.0*

*NEIC **17** 23:13:33.3±1.2, 36°.86N±0°.01×89°.14W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=2.3km s-min=2.0km az=95.0*

ISC 17 23:13:33.4±1.0, **36°.85N**±0°.02×**89°.14W**±0°.02, **h8**^{km}±9^{km}, **n137, σ0^s.74**/139, **New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHRM	Charleston	0.18	269		Pg	23 13 36.9	-0.3
EPRM	East Prairie	0.22	233		Pg	23 13 37.8	-0.2
EPRM					Sg	23 13 41.4	+0.4
FMKY	Fulgham	0.26	136		Pg	23 13 38.2	-0.5
DWDM	Dogwood	0.29	259		Pg	23 13 39.1	-0.2
HENM	Henderson Moun	0.30	243		Pg	23 13 39.3	-0.2
HICK	Hickman	0.32	193	Pg	Pg	23 13 39.4	-0.4
HICK				Sg	Sg	23 13 44.1	0.0
SJMO	Saint John's B	0.35	231		Pg	23 13 40.2	-0.2
SJMO					Sg	23 13 45.4	+0.3
MATM	Matthews	0.38	258		Pg	23 13 40.8	-0.2
KEWM	Kewanee	0.40	247		Pg	23 13 41.0	-0.2
KEWM					Sg	23 13 46.8	+0.3
T45B	Paducah	0.42	67	P	Pg	23 13 41.2	-0.5
	baz=248,SNR=70						
T45B				S	Sg	23 13 47.5	+0.1
	baz=248						
NMMO	New Madrid	0.43	232		Pg	23 13 41.6	-0.2
NMMO					Sg	23 13 47.7	+0.4
T45A	Paducah	0.43	67	Pg	Pg	23 13 41.2	-0.6
T45A				Sg	Sg	23 13 47.2	-0.2
WALK	Watson Lake	0.45	226		Pg	23 13 42.0	-0.2
WALK					Sg	23 13 48.5	+0.3
FLPT	Flippin	0.47	199		Pg	23 13 42.3	-0.3
CATM	Catron	0.48	240		Pg	23 13 42.5	-0.2
CATM					Sg	23 13 49.3	+0.4
COKM	Charter Oak	0.49	253		Pg	23 13 42.7	-0.3
COKM					Sg	23 13 49.8	+0.2
PARMO	Parma	0.53	249		Pg	23 13 43.3	-0.4
PARMO				Sg	Sg	23 13 50.6	0.0
MARMO	Marston	0.54	233		Pg	23 13 43.5	-0.3
MARMO					Sg	23 13 51.2	+0.3
UTMT	University of	0.56	157	Pg	Pg	23 13 43.4	-0.7
UTMT				Sg	Sg	23 13 51.5	0.0
PENMO	Penman	0.56	225		Pg	23 13 44.1	-0.3
GUAMO	Guam	0.56	274		Pg	23 13 44.1	-0.3
PPLM	Point Pleasant	0.57	219		Pg	23 13 44.3	-0.3
WYBT	Wynnburg	0.58	210		Pg	23 13 44.4	-0.3
GLAT	Glass	0.60	192	Pg	Pg	23 13 44.2	-0.7
GLAT				Sg	Sg	23 13 52.4	-0.3
GLST	Glass	0.60	192		Pg	23 13 44.6	-0.4
POBM	Portage Bay	0.61	224		Pg	23 13 45.0	-0.3
PGVM	Portageville	0.62	231		Pg	23 13 45.0	-0.4
PVMO	Portageville	0.63	226	Pg	Pg	23 13 45.2	-0.4
PVMO				Sg	Sg	23 13 53.6	-0.2
TOPM	Tallapoosa	0.69	242		Pg	23 13 46.2	-0.5
BRNM	Bernie	0.70	260		Pg	23 13 46.3	-0.7
WADM	Wardell	0.72	228		Pg	23 13 46.9	-0.4
MIST	Miston	0.74	204		Pg	23 13 47.3	-0.5
LNXT	Lenox	0.80	201	Pg	Pg	23 13 48.1	-0.8
LNXT	Lenox	0.80	201	P	Pg	23 13 48.5	-0.4
	baz=21,SNR=16						
S44A	Carbondale	0.84	354		Pg	23 13 48.7	-1.0
S44A	Carbondale	0.84	354	P	Pg	23 13 48.7	-1.0
	baz=173,SNR=64						
SIUC	Southern Illin	0.86	356	Pg	Pg	23 13 49.1	-0.9
PEBM	Pemiscott Bayo	0.94	219	Pg	Pg	23 13 51.1	-0.5
HALT	Halls	0.95	190	Pg	Pg	23 13 51.0	-0.8
HALT				Sg	Sg	23 14 04.3	+0.1
PBMO	Poplar Bluff	1.04	266		Pg	23 13 51.9	-1.5
PBMO				Sg	Sg	23 14 05.6	-1.3
PBMO	Poplar Bluff	1.04	266	P	Pg	23 13 52.2	-1.3
	baz=85,SNR=40						
PBMO				S	Sg	23 14 06.0	-1.0
	baz=85						
GNAR	Gosnell	1.14	219	Pg	Pg	23 13 54.7	-0.6
WVT	Waverly	1.28	124	Pn	Pn	23 13 55.8	-1.8
FVM	French Village	1.53	318		Pn	23 14 00.4	-0.6
FVM	French Village	1.53	318	P	Pn	23 14 00.7	-0.3
	baz=137,SNR=115						
T47A	Sharon Grove	1.63	85		Pn	23 14 02.2	-0.3
T47A	Sharon Grove	1.63	85	P	Pn	23 14 02.2	-0.3
	baz=266,SNR=94						
W45A	Hickory Valley	1.69	181	Pn	Pn	23 14 02.4	-0.9
W45A	Hickory Valley	1.69	181	P	Pn	23 14 02.5	-0.8
	baz=1.7,SNR=11						
LCAR	Lake Charles	1.81	245		Pn	23 14 05.1	+0.3
LCAR	Lake Charles	1.81	245	P	Pn	23 14 05.2	+0.4
	baz=64,SNR=31						
SLM	Saint Louis	1.98	334	Pn	Pn	23 14 06.9	-0.3
SLM	Saint Louis	1.98	334	S	Sb	23 14 34.5	-0.1
	baz=153						
Q44A	Meyer Farm, Va	2.05	3	Pn	Pn	23 14 08.6	+0.5
Q44A	Meyer Farm, Va	2.05	3	Sb	Sb	23 14 37.3	+0.8
	baz=182						
OLIL	Olney	2.05	23	Pn	Pn	23 14 09.1	+0.9
OLIL	Olney	2.05	23	Sb	Sb	23 14 37.2	+0.7
	baz=204						
PLAL	Pickwick Lake	2.06	155		Pn	23 14 07.6	-0.6
CCM	Cathedral Cave	2.06	306	Pn	Pn	23 14 09.3	+1.0
CCM	Cathedral Cave	2.06	306	P	Pn	23 14 09.5	+1.1
	baz=125,SNR=37						
V48A	Smith Brothers	2.17	120	Pn	Pn	23 14 10.0	+0.1
OXF	Oxford	2.35	186	Pn	Pn	23 14 11.8	-0.5
OXF	Oxford	2.35	186	P	Pn	23 14 12.1	-0.2
	baz=5.6,SNR=21						
CLTN	Cedars of Leba	2.38	108	Pn	Pn	23 14 13.2	+0.5
MGMO	Mountain Grove	2.52	278	Pn	Pn	23 14 15.7	+0.9
MGMO				IAmb_Lg		23 14 59.1	
	comp=Z,27nm,0.7s						
FCAR	Ozark Folk Cen	2.60	249	Pn	Pn	23 14 16.6	+0.9
U49A	Red Boiling Sp	2.72	96	Pn	Pn	23 14 18.9	+1.5
P43A	Skaggs, Pawnee	2.80	354	Pn	Pn	23 14 18.3	-0.2
R40A	Maddies Statio	2.87	301	Pn	Pn	23 14 20.2	+0.7
R40A	Maddies Statio	2.87	301	P	Pn	23 14 20.5	+1.0
	baz=119						
X48A	Hartselle	2.94	144	Pn	Pn	23 14 20.4	0.0
X48A				IAmb_Lg		23 15 06.0	
	comp=Z,23nm,0.9s						
WHAR	Wooly Hollow	2.99	240	Pn	Pn	23 14 21.5	+0.4
WHAR				IAmb_Lg		23 15 11.7	
	comp=Z,39nm,1.1s						
Y45A	Yeager Farm, C	3.00	186	Pn	Pn	23 14 21.6	+0.4
W41B	Gary Mavity, V	3.03	237	Pn	Pn	23 14 21.8	+0.2
W41B				IAmb_Lg		23 15 12.7	
	comp=Z,25nm,0.7s						
W41B	Gary Mavity, V	3.03	237	P	Pn	23 14 22.5	+0.9
	baz=55,SNR=45						
W41B				Sb	Sb	23 15 05.7	+1.0
	baz=55						
U40A	Yellville	3.03	262	Pn	Pn	23 14 23.0	+1.3
U40A	Yellville	3.03	262	P	Pn	23 14 23.4	+1.7
	baz=79,SNR=58						
U40A				P	Pn	23 14 23.4	+1.7
	baz=79,SNR=58						
SWET	Sewanee	3.07	121	Pn	Pn	23 14 23.3	+1.1
UALR	University of	3.33	232	Pn	Pn	23 14 26.8	+1.0
O44A	Mansfield	3.33	9	Pn	Pn	23 14 25.9	+0.1
S39A	Bolivar	3.44	285		Pn	23 14 28.1	+0.8
S39A				IAmb_Lg		23 15 28.8	
	comp=Z,20nm,0.8s						
T50A	Nancy	3.45	86	Pn	Pn	23 14 27.7	+0.3
R49A	Shelbyville	3.46	64	Pn	Pn	23 14 28.3	+0.7
W50A	Signal Mountai	3.51	117	Pn	Pn	23 14 29.1	+0.8
W50A				IAmb_Lg		23 15 34.0	
	comp=Z,27nm,0.8s						
P40A	Paris	3.52	320	IAmb_Lg		23 15 24.6	
	comp=Z,25nm,0.9s						
CCAR	Cane Creek	3.64	217	IAmb_Lg		23 15 30.1	
	comp=Z,22nm,0.8s						
FPAL	Fort Paine	3.68	128	Pn	Pn	23 14 30.8	+0.1
Y49A	Blount Mountai	3.73	143	Pn	Pn	23 14 30.5	-0.8
Y49A				IAmb_Lg		23 15 29.8	
	comp=Z,30nm,0.8s						
Y49A	Blount Mountai	3.73	143	P	Pn	23 14 31.0	-0.3
	baz=324,SNR=9.5						
Z47A	Carrollton	3.75	166	Pn	Pn	23 14 30.6	-1.0
Z47A				IAmb_Lg		23 15 42.5	
	comp=Z,19nm,0.8s						
Z47A	Carrollton	3.75	166	P	Pn	23 14 31.5	0.0
	baz=347,SNR=10.0						
X40A	Basin Creek Fa	3.83	233	Pn	Pn	23 14 33.1	+0.5
SFIN	Lafayette	3.87	24	IAmb_Lg		23 15 38.4	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	3.91	263	Pn	Pn	23 14 34.4	+0.7
CPCT	Cooper Cave	3.99	109	Pn	Pn	23 14 35.5	+0.7
V51A	Loudon	4.00	104	Pn	Pn	23 14 35.0	0.0
V51A				IAmb_Lg		23 15 47.4	
	comp=Z,17nm,0.8s						
N41A	Harden Midland	4.08	341	IAmb_Lg		23 15 44.4	
	comp=Z,19nm,0.7s						
R50A	Paris	4.08	68	IAmb_Lg		23 15 45.0	
	comp=Z,24nm,0.8s						
W39A	Magazine	4.11	248	Pn	Pn	23 14 36.3	-0.2
W39A				IAmb_Lg		23 15 47.0	
	comp=Z,20nm,0.8s						
X51A	Calhoun	4.16	122	Pn	Pn	23 14 38.0	+0.8
X51A				IAmb_Lg		23 15 42.1	
	comp=Z,28nm,1.0s						
LRAL	Lakeview Retre	4.20	155	Pn	Pn	23 14 36.7	-1.0
LRAL				IAmb_Lg		23 15 47.2	
	comp=Z,17nm,0.9s						
LRAL	Lakeview Retre	4.20	155	P	Pn	23 14 36.8	-0.9
	baz=336,SNR=11						
MIAR	Mount Ida	4.29	239	Pn	Pn	23 14 39.6	+0.7
MIAR				IAmb_Lg		23 15 53.7	
	comp=Z,20nm,0.8s						
P49A	Miami Univ. Ec	4.39	51	Pn	Pn	23 14 40.0	-0.4
P49A				IAmb_Lg		23 15 51.4	
	comp=Z,22nm,0.8s						
P38A	Dawn	4.43	310	Pn	Pn	23 14 41.0	+0.1
P38A	Dawn	4.43	310	P	Pn	23 14 41.3	+0.4
	baz=127,SNR=12						
S51A	Beattyville	4.49	78	Pn	Pn	23 14 42.1	+0.4
TKL	Tuckaleechee C	4.50	104	Pn	Pn	23 14 42.3	+0.5
TZTN	Tazewell	4.50	92	IAmb_Lg		23 15 56.3	
	comp=Z,24nm,0.8s						
W52A	Murphy	4.58	111	IAmb_Lg		23 16 06.9	
	comp=Z,18nm,0.7s						
V52A	Sevierville	4.58	101	Pn	Pn	23 14 43.7	+0.6
Z51A	Franklin	4.80	136	Pn	Pn	23 14 46.7	+0.7
Q51A	Peebles	5.07	63	IAmb_Lg		23 16 17.3	
	comp=Z,16nm,0.8s						
N38A	Joes South For	5.07	322	Pn	Pn	23 14 47.8	-1.9
Y52A	Lilburn	5.11	124	Pn	Pn	23 14 50.7	+0.5
Y52A				IAmb_Lg		23 16 13.6	
	comp=Z,18nm,0.9s						
V53A	Saluda	5.25	101	Pn	Pn	23 14 53.5	+1.4
V53A				IAmb_Lg		23 16 24.8	
	comp=Z,18nm,0.7s						
BG3	Lake Jocassee	5.37	108	Pn	Pn	23 14 53.9	+0.1
BG3				IAmb_Lg		23 16 21.7	
	comp=Z,16nm,0.8s						
TUL1	Leonard	5.45	262	Pn	Pn	23 14 53.4	-1.6
P51A	Williamsport	5.46	59	IAmb_Lg		23 16 34.4	
	comp=Z,13nm,0.8s						
152A	Waverly Hall	5.54	138	IAmb_Lg		23 16 28.5	
	comp=Z,13nm,0.8s						
X37A	Clayton	5.55	248	Pn	Pn	23 14 56.6	+0.3
X37A				IAmb_Lg		23 16 38.1	
	comp=Z,13nm,0.8s						
GOGA	Godfrey	5.78	125	IAmb_Lg		23 16 36.8	
	comp=Z,13nm,0.9s						
Q52A	Bidwell	5.83	67	IAmb_Lg		23 16 48.3	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	5.89	53	IAmb_Lg		23 16 46.3	
	comp=Z,17nm,0.9s						
U54A	Nelsons Funny	5.89	91	Pn	Pn	23 14 59.5	-1.5
T35A	Sooner Cattle	5.91	273	IAmb_Lg		23 16 53.6	
	comp=Z,14nm,0.8s						
SCIA	State Center	5.95	329	IAmb_Lg		23 16 40.3	
	comp=Z,17nm,1.1s						
JFWS	Jewell Farm	6.11	352	Pn	Pn	23 15 04.9	+0.9
HODGE	Hodges	6.19	113	Pn	Pn	23 15 04.5	-0.5
HODGE				IAmb_Lg		23 16 50.2	
	comp=Z,11nm,0.9s						
L48A	N Adams	6.25	34	IAmb_Lg		23 16 57.9	
	comp=Z,14nm,0.8s						
PAULI	Pauline	6.28	107	Pn	Pn	23 15 07.2	+0.8
PAULI				IAmb_Lg		23 16 55.0	
	comp=Z,13nm,0.7s						
KSU1	Kansas State U	6.32	293	Pn	Pn	23 15 06.5	-0.3
V55A	Taylorsville	6.47	97	Pn	Pn	23 15 09.7	+0.7
V55A				IAmb_Lg		23 17 04.5	
	comp=Z,14nm,0.8s						
KMSC	Kings Mountain	6.55	103	Pn	Pn	23 15 12.6	+2.5
KMSC				IAmb_Lg		23 17 06.0	
	comp=Z,10nm,0.8s						
JSC	Jenkinsville	6.91	109	IAmb_Lg		23 17 12.5	
	comp=Z,13nm,0.8s						
R55A	Marlinton	7.30	76	IAmb_Lg		23 17 24.1	
	comp=Z,11nm,0.9s						
W57A	Gilead	7.60	100	Pn	Pn	23 15 24.8	+0.3

IDC 17 23:14:57.9±8.2, **15°.46S**×**173°.29W**, **h0**^{km}, **mb4.0**/2, **mbtmp4.0**/3, **ML3.7**/1, **Error ellipse: s-maj=435.5km s-min=26.5km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AFI	Afiamalu	2.12	44	Pn	Pn	23 15 34.1	-0.6
	23nm,0.3s,baz=172,slow=0.6,SNR=10						
AFI				Sn	Sn	23 15 52.8	-9.0
	69nm,0.3s,baz=22,slow=22,SNR=17						
	66nm,0.3s						
H11S2	WAKE ISLAND Hy	39.07	329	T	T	00 03 02.6	
	baz=149,slow=75,SNR=5.1						
H11S3	WAKE ISLAND Hy	39.08	329	T	T	00 03 01.9	
	baz=149,slow=75,SNR=4.3						
H11S1	WAKE ISLAND Hy	39.08	329	T	T	00 03 16.4	
	baz=149,slow=75,SNR=4.0						
H11N3	WAKE ISLAND Hy	40.01	330	T	T	00 04 30.3	
	baz=149,slow=76,SNR=6.6						
H11N1	WAKE ISLAND Hy	40.02	330	T	T	00 04 15.8	
	baz=149,slow=76,SNR=6.7						
H11N2	WAKE ISLAND Hy	40.03	330	T	T	00 04 31.7	
	baz=149,slow=76,SNR=6.6						
WRA	Warramunga Arr	49.94	257	P	P	23 23 53.2	-0.7
	0.3nm,0.5s,baz=90,slow=7.1,SNR=10						
	0.3nm,0.5s						
ASAR	Alice Springs	50.20	252	P	P	23 23 55.9	0.0
	3.3nm,0.5s,baz=86,slow=7.9,SNR=57						
	3.3nm,0.5s						
BRTR	Keskin Array B	146.27	321	PKPbc	PKPbc	23 34 40.9	0.0
	0.9nm,0.7s,baz=63,slow=2.8,SNR=6.6						

NIC 17 23:34:54.4±0.0, **34°.00N**×**33°.01E**, **h19**^{km}, **Ml1.8**/3, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SZAC	Souni	0.76	352	P	Pb	23 35 08.8	-0.3
SZAC				S	Sn	23 35 20.4	-0.8
SZAC				AML	AML	23 35 20.8	
	0.1nm,0.1s						
SZAC				AML	AML	23 35 20.8	
	0.1nm,0.1s						
SZAC				AML	AML	23 35 21.0	
	0.2nm,0.5s						
SZAC				AML	AML	23 35 21.0	
	0.2nm,0.5s						
ASGA	Asgata	0.81	14	P	Pb	23 35 09.9	+0.1
ASGA				AML	AML	23 35 21.7	
	0.1nm,0.3s						
ASGA				AML	AML	23 35 21.7	
	0.1nm,0.3s						
ASGA				AML	AML	23 35 21.9	
	0.2nm,0.2s						
ASGA				AML	AML	23 35 21.9	
	0.2nm,0.2s						
ASGA				S	Sn	23 35 22.0	-0.3
NATA	Nata	0.86	335	P	Pb	23 35 10.8	+0.1
NATA				AML	AML	23 35 12.0	
	0.4nm,0.7s						
NATA				AML	AML	23 35 12.0	
	0.4nm,0.7s						
NATA				S	Sn	23 35 24.0	+0.4
NATA				AML	AML	23 35 24.4	
	0.5nm,1.0s						
NATA				AML	AML	23 35 24.4	
	0.5nm,1.0s						
CSS	Mathiatis	0.99	15	P	Pb	23 35 12.7	-0.3
CSS				S	Sn	23 35 27.5	+0.6
OSC2	CSNet OBS 4	1.11	214	P	Pb	23 35 15.2	+0.1
OSC2				S	Sg	23 35 30.4	-0.1
MVOU	Mavrovouni	1.14	27	P	Pb	23 35 15.5	+0.1
MVOU				S	Sg	23 35 31.5	+0.2
AKMS	Akamas	1.16	331	S	Sg	23 35 31.8	-0.2

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*JMA **17** 23:35:02.5±0.4, 23°N±1°×12°1E±°, h13^{km}, MV3.2/9, TAIWAN REGION*

*TAP **17** 23:35:08.1, 23°.12N×121°.37E, h21^{km}, ML3.8, B*

ISC 17 23:35:07.6±0.9, **23°.10N**±0°.02×**121°.42E**±0°.02, **h21**^{km}±1^{km}, **n120, σ0^s.89**/192, **6C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHKT	Chengkung	0.05	265	⇓*i*P	Pb	23 35 12.1	+0.8
	baz=166						
CHKT				*i* S	Sb	23 35 14.9	+1.0
	baz=166						
FULB	Fuli	0.15	309	⇑*i*P	Pb	23 35 12.5	-1.0
	baz=318						
FULB				*e*S	Sb	23 35 16.5	-1.0
	baz=318						

EDH	**Donghe** baz=201	**0.17**	**220**	⇓*i*P	**Pb**	**23 35 13.0**	**-0.3**
EDH	baz=201			S	**Sb**	**23 35 16.6**	**-0.7**
ECS	**Chishang** baz=258	**0.19**	**267**	*e*P	**Pb**	**23 35 13.5**	**+0.2**
ECS	baz=258			*e*S	**Sb**	**23 35 18.3**	**+1.0**
ECBN	**Changbin** baz=22	**0.21**	**7**	*e*P	**Pb**	**23 35 13.9**	**+0.4**
ECBN	baz=22			*e*S	**Sb**	**23 35 18.2**	**+0.7**
EYUL	**Yuli** baz=349	**0.26**	**339**	⇑*i*P	**Pb**	**23 35 14.3**	**+0.5**
EYUL	baz=349			*e*S	**Sb**	**23 35 18.9**	**+0.8**
TWF1	**Yuli** baz=346	**0.27**	**335**	⇑*i*P	**Pb**	**23 35 14.3**	**+0.3**
TWF1	baz=346			*e*S	**Sb**	**23 35 18.8**	**+0.5**
YULB	**Yu-li** baz=347	**0.31**	**338**	⇑*i*P	**Pb**	**23 35 14.7**	**+0.2**
YULB	baz=347			S	**Sb**	**23 35 19.3**	**+0.1**
LONT	**Longtian** baz=225	**0.33**	**234**	⇓*i*P	**Pb**	**23 35 15.1**	**+0.3**
LONT	baz=225			S	**Sb**	**23 35 20.5**	**+0.8**
ELDTW	**Lidau** baz=281	**0.38**	**283**	*i* P	**Pb**	**23 35 15.1**	**-0.5**
ELDTW	baz=281			*i* S	**Sb**	**23 35 20.0**	**-1.2**
HGSD	**Ruisui** baz=8.0	**0.39**	**0**	⇓P	**Pb**	**23 35 16.0**	**+0.4**
HGSD	baz=8.0			*e*S	**Sn**	**23 35 24.2**	**-0.6**
EHY	**Hungye** baz=355	**0.41**	**347**	*i* P	**Pb**	**23 35 16.1**	**0.0**
EHY	baz=355			*e*S	**Sb**	**23 35 22.0**	**+0.1**
TWGBT	**Beinan** baz=221	**0.42**	**228**	⇓*i*P	**Pb**	**23 35 16.3**	**-0.1**
TWGBT	baz=221			*e*S	**Sb**	**23 35 22.3**	**0.0**
TWG	**Pinlang** baz=221	**0.43**	**229**	⇓*i*P	**Pb**	**23 35 16.3**	**-0.1**
TWG	baz=221			S	**Sb**	**23 35 22.5**	**+0.1**
LDUT	**Ludao** baz=168	**0.43**	**174**	⇓*i*P	**Pb**	**23 35 16.9**	**+0.4**
LDUT	baz=168			*e*S	**Sb**	**23 35 23.6**	**+1.2**
TTN	**Taitung** baz=208	**0.43**	**216**	*i* P	**Pb**	**23 35 17.2**	**+0.7**
TTN	baz=208			*e*S	**Sn**	**23 35 24.9**	**-1.0**
EGFH	**Guangfu** baz=6.0	**0.56**	**0**	*e*P	**Pb**	**23 35 18.2**	**-0.7**
EGFH	baz=6.0			*e*S	**Sb**	**23 35 27.7**	**+1.2**
YUS	**Yu-Shan** baz=314	**0.58**	**312**	⇑*i*P	**Pb**	**23 35 19.0**	**-0.5**
YUS	baz=314			*e*S	**Sb**	**23 35 26.2**	**-1.3**
STYH	**Taoyuan** baz=276	**0.60**	**276**	⇓*i*P	**Pb**	**23 35 18.9**	**-0.6**
STYH	baz=276			*e*S	**Sb**	**23 35 26.5**	**-1.1**
TEGC	**Jichi Village** baz=16	**0.61**	**10**	*e*P	**Pb**	**23 35 20.3**	**+0.6**
TEGC	baz=16			*e*S	**Sn**	**23 35 30.2**	**-0.1**
STYT	**Tauyuan** baz=274	**0.61**	**276**	⇓P	**Pb**	**23 35 19.2**	**-0.6**
STYT	baz=274			*e*S	**Sb**	**23 35 27.1**	**-1.0**
ECL	**Taimali** baz=215	**0.66**	**221**	⇓P	**Pb**	**23 35 19.4**	**-1.2**
ECL	baz=215			*e*S	**Sb**	**23 35 28.6**	**-0.8**
VWDT	**VWDT** baz=342	**0.70**	**338**	⇓P	**Pb**	**23 35 20.9**	**-0.2**
VWDT	baz=342			*e*S	**Sb**	**23 35 30.2**	**0.0**
ALS	**Alishan** baz=307	**0.70**	**306**	⇑P	**Pb**	**23 35 21.3**	**0.0**
ALS	baz=307			*e*S	**Sb**	**23 35 30.2**	**-0.4**
ESL	**Shilin** baz=6.0	**0.71**	**1**	*e*P	**Pb**	**23 35 20.2**	**-1.1**
ESL	baz=6.0			*e*S	**Sb**	**23 35 29.8**	**-0.8**
SLGT	**Liugui** baz=259	**0.72**	**261**	⇓*e*P	**Pb**	**23 35 21.8**	**+0.2**
SLGT	baz=259			*e*S	**Sb**	**23 35 30.6**	**-0.4**
TPUB	**Ta-pu**	**0.76**	**285**	P	**Pn**	**23 35 22.5**	**-0.6**
TPUB	**Ta-pu** baz=285	**0.76**	**285**	⇓*e*P	**Pb**	**23 35 22.2**	**+0.1**
TPUB	baz=285			*e*S	**Sn**	**23 35 32.4**	**-1.5**
WTP	**Ta-pu** baz=280	**0.76**	**281**	⇓*e*P	**Pb**	**23 35 22.2**	**+0.1**
WTP	baz=280			*e*S	**Sn**	**23 35 32.7**	**-1.4**
SGST	**Jiashian** baz=266	**0.77**	**269**	*e*P	**Pb**	**23 35 21.6**	**-0.8**
SGST	baz=266			*e*S	**Sb**	**23 35 31.9**	**-0.5**
TEYL	**Yanliau Villag** baz=16	**0.78**	**12**	*e*P	**Pn**	**23 35 23.4**	**0.0**
WHYT	**Xinyi Township** baz=320	**0.79**	**319**	*e*P	**Pn**	**23 35 22.9**	**-0.7**
WHYT	baz=320			*e*S	**Sb**	**23 35 32.5**	**-0.4**
CHN4	**Tsaushan** baz=288	**0.80**	**288**	⇓*e*P	**Pn**	**23 35 23.2**	**-0.5**
CHN4	baz=288			*e*S	**Sn**	**23 35 34.5**	**-0.5**
SSLB	**Suanglung**	**0.81**	**328**	P	**Pb**	**23 35 23.1**	**+0.1**
SSLB	**Suanglung** baz=330	**0.81**	**328**	*e*P	**Pb**	**23 35 22.6**	**-0.3**
SSLB	baz=330			*e*S	**Sb**	**23 35 31.5**	**-1.9**
SSD	**Sandimen** baz=241	**0.81**	**244**	*e*P	**Pb**	**23 35 22.1**	**-0.9**
SSD	baz=241			*e*S	**Sb**	**23 35 32.0**	**-1.6**
TSMG	**Majia** baz=238	**0.82**	**241**	P	**Pb**	**23 35 22.3**	**-0.9**
TSMG	baz=238			*e*S	**Sb**	**23 35 32.4**	**-1.4**
CHN1	**Nanshi** baz=274	**0.83**	**276**	⇓*e*P	**Pn**	**23 35 23.8**	**-0.3**
CHN1	baz=274			*e*S	**Sn**	**23 35 35.8**	**+0.1**
CHN5	**Tsauling** baz=307	**0.84**	**306**	⇓*e*P	**Pn**	**23 35 24.1**	**-0.3**
CHN5	baz=307			*e*S	**Sn**	**23 35 35.2**	**-0.9**
SNST	**Tainan City** baz=277	**0.86**	**278**	⇓*e*P	**Pn**	**23 35 24.1**	**-0.4**
SNST	baz=277			*e*S	**Sn**	**23 35 35.9**	**-0.6**
ETM	**Tongmen** baz=8.0	**0.86**	**4**	*e*P	**Pb**	**23 35 23.0**	**-0.8**
TWK	**Hsinying** baz=280	**0.88**	**281**	⇓*e*P	**Pn**	**23 35 24.4**	**-0.4**
TWK	baz=280			*e*S	**Sn**	**23 35 36.9**	**-0.1**
OWD	**Renai** baz=348	**0.88**	**345**	P	**Pb**	**23 35 23.3**	**-1.0**
OWD	baz=348			*e*S	**Sb**	**23 35 34.5**	**-1.0**
MASBT	**Mashibuluo** baz=233	**0.88**	**236**	⇓*e*P	**Pb**	**23 35 23.4**	**-0.8**
MASBT	baz=233			*e*S	**Sb**	**23 35 34.9**	**-0.6**
SCST	**Cishan** baz=254	**0.88**	**256**	*e*P	**Pn**	**23 35 24.9**	**0.0**
SCST	baz=254			*e*S	**Sn**	**23 35 37.5**	**+0.5**
TAW	**Tawu** baz=209	**0.89**	**213**	*e*P	**Pb**	**23 35 23.5**	**-0.8**
TAW	baz=209			*e*S	**Sb**	**23 35 34.6**	**-1.2**
EAST	**Anshuo** baz=212	**0.89**	**217**	⇓*e*P	**Pb**	**23 35 23.2**	**-1.2**
EAST	baz=212			*e*S	**Sb**	**23 35 35.0**	**-1.0**
TAWH	**Dawu Township** baz=209	**0.91**	**213**	*e*P	**Pb**	**23 35 23.3**	**-1.3**
TAWH	baz=209			*e*S	**Sb**	**23 35 35.3**	**-1.0**
SMLT	**Sun Moon Lake** baz=331	**0.91**	**328**	⇓*e*P	**Pb**	**23 35 24.7**	**-0.1**
SMLT	baz=331			*e*S	**Sn**	**23 35 37.3**	**-0.6**
WUSB	**Renai** baz=345	**0.93**	**343**	*e*P	**Pb**	**23 35 24.1**	**-1.0**
WUSB	baz=345			*e*S	**Sb**	**23 35 36.6**	**-0.4**
SGLT	**Jiouru** baz=243	**0.94**	**246**	*e*P	**Pn**	**23 35 27.5**	**+1.9**
TYC	**Yuchr** baz=330	**0.95**	**327**	*e*P	**Pn**	**23 35 25.6**	**-0.1**
TYC	baz=330			*e*S	**Sn**	**23 35 39.2**	**+0.5**
WJS	**Zhushan** baz=320	**0.96**	**318**	*e*P	**Pn**	**23 35 26.4**	**+0.5**
WJS	baz=320			*e*S	**Sn**	**23 35 39.4**	**+0.5**
TWM1	**Shoushan** baz=251	**0.96**	**253**	*e*P	**Pn**	**23 35 27.0**	**+1.0**
CHN2	**Minshiung** baz=296	**0.97**	**296**	*e*P	**Pn**	**23 35 26.6**	**+0.5**
CHN2	baz=296			*e*S	**Sn**	**23 35 40.8**	**+1.6**
CHN3	**Shinhua** baz=267	**0.97**	**269**	*e*P	**Pn**	**23 35 27.6**	**+1.5**
CHGB	**Renai** baz=349	**0.98**	**347**	*e*P	**Pb**	**23 35 25.4**	**-0.6**
CHGB	baz=349			*e*S	**Sb**	**23 35 38.4**	**-0.1**
WGK	**Gukeng** baz=307	**0.98**	**306**	*e*P	**Pn**	**23 35 26.8**	**+0.6**
TWD	**Chiawan** baz=13	**0.98**	**9**	*e*P	**Pb**	**23 35 25.6**	**-0.4**
SHHT	**Tainan City** baz=264	**0.99**	**265**	*e*P	**Pn**	**23 35 27.9**	**+1.6**
SHHT	baz=264			*e*S	**Sn**	**23 35 42.7**	**+2.9**
CHY	**Chiayi** baz=293	**1.00**	**293**	*e*P	**Pn**	**23 35 26.9**	**+0.5**
CHY	baz=293			*e*S	**Sn**	**23 35 40.9**	**+1.0**
WDLH	**Douliu** baz=306	**1.00**	**306**	*e*P	**Pn**	**23 35 27.2**	**+0.7**
WDLH	baz=306			*e*S	**Sn**	**23 35 41.6**	**+1.7**
SSPT	**Xinbi** baz=229	**1.00**	**232**	*e*P	**Pb**	**23 35 25.9**	**-0.4**
WNT	**Mingjian** baz=320	**1.03**	**319**	*e*P	**Pn**	**23 35 27.6**	**+0.7**
WNT	baz=320			*e*S	**Sn**	**23 35 41.7**	**+1.1**
DPDB	**Guoxing** baz=336	**1.03**	**334**	*e*P	**Pn**	**23 35 27.0**	**+0.1**
DPDB	baz=336			*e*S	**Sn**	**23 35 40.1**	**-0.7**
SCZT	**Fangliau** baz=222	**1.04**	**226**	*e*P	**Pb**	**23 35 25.9**	**-0.9**
WHF	**Hehuan Shan** baz=355	**1.05**	**352**	*e*P	**Pb**	**23 35 26.2**	**-1.1**
WNT1	**Nantou City** baz=321	**1.05**	**320**	*e*P	**Pn**	**23 35 28.2**	**+1.0**
SLIU	**Shizi** baz=210	**1.05**	**213**	*e*P	**Pb**	**23 35 25.6**	**-1.6**
SLIU	baz=210			*e*S	**Sb**	**23 35 39.9**	**-0.7**
LAY	**Lan-yu** baz=171	**1.07**	**174**	P	**Pn**	**23 35 25.8**	**-1.6**
LAY	baz=171			*e*S	**Sb**	**23 35 40.5**	**-0.5**
NACB	**Ninganchiao** baz=11	**1.08**	**8**	*e*P	**Pn**	**23 35 25.9**	**-1.7**
NACB	baz=11			*e*S	**Sn**	**23 35 42.9**	**+1.0**
ICHU	**Yijhu** baz=283	**1.08**	**284**	*e*P	**Pn**	**23 35 28.2**	**+0.6**
ICHU	baz=283			*e*S	**Sn**	**23 35 43.2**	**+1.2**
ETLH	**Xiulin Townshi** baz=6.0	**1.10**	**3**	*e*P	**Pn**	**23 35 26.2**	**-1.7**
WTK	**Tuku** baz=302	**1.11**	**302**	*e*P	**Pb**	**23 35 28.7**	**+0.5**
WTK	baz=302			*e*S	**Sn**	**23 35 43.6**	**+0.8**
CHN8	**Yiju** baz=282	**1.14**	**282**	*e*P	**Pb**	**23 35 29.1**	**+0.5**
FUSS	**Fushou** baz=354	**1.15**	**352**	*e*P	**Pn**	**23 35 28.1**	**-0.7**
FUSS	baz=354			*e*S	**Sb**	**23 35 42.2**	**-1.3**
WSSB	**Gushan** baz=245	**1.17**	**247**	*e*P	**Pb**	**23 35 30.6**	**+1.5**
TDCB	**Techi** baz=350	**1.17**	**348**	*e*P	**Pn**	**23 35 28.8**	**-0.1**
WSL	**Shuilin Townsh** baz=291	**1.17**	**291**	*e*P	**Pb**	**23 35 29.6**	**+0.4**
WSL	baz=291			*e*S	**Sn**	**23 35 45.2**	**+1.0**
SMST	**Manzhou Townsh** baz=204	**1.21**	**207**	*e*P	**Pn**	**23 35 29.1**	**-0.2**
WLCH	**Liuqiu** baz=230	**1.22**	**232**	*e*P	**Pb**	**23 35 32.6**	**+2.6**
TWP	**Hsiaoliuchiu** baz=230	**1.24**	**233**	*e*P	**Pb**	**23 35 32.7**	**+2.5**
TCU	**Taichung** baz=328	**1.24**	**327**	*e*P	**Pb**	**23 35 29.9**	**-0.5**
WRL	**Guolierlin Hig** baz=311	**1.25**	**310**	*e*P	**Pb**	**23 35 30.4**	**-0.1**
WHP	**Taichung City** baz=341	**1.25**	**340**	*e*P	**Pb**	**23 35 31.2**	**+0.7**
WCHH	**Zhanghua** baz=322	**1.25**	**321**	*e*P	**Pb**	**23 35 31.3**	**+0.8**
HEN	**Hengchun** baz=207	**1.26**	**210**	*e*P	**Pn**	**23 35 30.7**	**+0.6**
HEN	baz=207			*e*S	**Sb**	**23 35 47.3**	**+0.7**
TWKBT	**Hengchun** baz=203	**1.29**	**206**	*e*P	**Pn**	**23 35 30.1**	**-0.3**
TSEB	**Hengchuen, Pin** baz=201	**1.29**	**202**	*e*P	**Pb**	**23 35 31.9**	**+0.6**
NNSB	**Datong** baz=1.0	**1.32**	**358**	*e*P	**Pn**	**23 35 30.4**	**-0.6**
NNSB	baz=1.0			*e*S	**Sn**	**23 35 47.1**	**-0.9**
EWUT	**Wuta** baz=16	**1.37**	**14**	*e*P	**Pn**	**23 35 31.0**	**-0.7**
TWQ1	**Liyutan** baz=336	**1.37**	**334**	*e*P	**Pb**	**23 35 32.2**	**-0.5**
TWQ1	baz=336			*e*S	**Sb**	**23 35 51.4**	**+1.7**
LATG	**Datong** baz=6.0	**1.43**	**4**	*e*P	**Pn**	**23 35 31.7**	**-0.8**
WDJ	**Dajia District** baz=331	**1.43**	**330**	*e*P	**Pb**	**23 35 34.0**	**+0.4**
NSY	**Sanyi** baz=337	**1.44**	**335**	*e*P	**Pb**	**23 35 34.5**	**+0.8**
NSY	baz=337			*e*S	**Sb**	**23 35 53.7**	**+2.0**
NDT	**Datong Townshi** baz=5.0	**1.49**	**3**	*e*P	**Pb**	**23 35 34.3**	**-0.4**
ENTT	**Nioudou** baz=7.0	**1.54**	**5**	*e*P	**Pn**	**23 35 33.6**	**-0.3**
NMLH	**Miaoli** baz=339	**1.54**	**338**	*e*P	**Pb**	**23 35 35.6**	**+0.1**
NDS	**Dongshan** baz=12	**1.55**	**10**	*e*P	**Pb**	**23 35 35.3**	**-0.3**
NFF	**Wufeng Townshi** baz=351	**1.55**	**350**	*e*P	**Pb**	**23 35 35.6**	**0.0**
TWC	**Suao** baz=17	**1.55**	**15**	*e*P	**Pn**	**23 35 34.0**	**0.0**
YHNB	**Yeheng**	**1.56**	**358**	P	**Pn**	**23 35 34.9**	**+0.6**
YHNB	**Yeheng**	**1.56**	**358**	*e*P	**Pn**	**23 35 34.7**	**+0.4**
NSK	**Sanguang**	**1.57**	**358**	*e*P	**Pn**	**23 35 34.8**	**+0.4**
WDGT	**Dungji** baz=275	**1.63**	**276**	*e*P	**Pn**	**23 35 34.1**	**-1.0**
FUSB	**Fushanzhiwuyua** baz=7.0	**1.66**	**5**	*e*P	**Pn**	**23 35 35.1**	**-0.4**
NWLT	**Wulai** baz=4.0	**1.67**	**3**	*e*P	**Pn**	**23 35 36.1**	**+0.4**
PHUB	**P'eng-hu** baz=283	**1.75**	**284**	*e*P	**Pn**	**23 35 36.7**	**-0.1**
PHUB	baz=283			*e*S	**Sn**	**23 35 57.6**	**-0.8**
PNG	**Penghu** baz=285	**1.78**	**285**	*e*P	**Pn**	**23 35 37.5**	**+0.3**
JYNG	**Yonagunijimaku**	**1.94**	**46**	*e*S	**Sn**	**23 36 03.5**	**+0.5**
YOJ	**Yonaguni jima**	**1.99**	**47**	P	**Pb**	**23 35 44.0**	**+0.9**
YOJ	**Yonaguni jima** baz=48	**1.99**	**47**	P	**Pn**	**23 35 40.6**	**+0.6**
YOJ	baz=48			*e*S	**Sn**	**23 36 04.3**	**+0.1**
YOJ	**Yonaguni jima**	**1.99**	**47**	*e*S	**Sn**	**23 36 04.5**	**+0.2**
HATJ	**Hateruma jima**	**2.38**	**66**	*e*S	**Sn**	**23 36 13.3**	**-0.8**
IRIF	**Iriomote-Funau**	**2.44**	**59**	*e*S	**Sn**	**23 36 15.4**	**-0.2**
VWUC	**VWUC** baz=317	**2.60**	**317**	*e*P	**Pn**	**23 35 48.5**	**0.0**
VWUC	baz=317			*e*S	**Sn**	**23 36 18.1**	**-1.4**
JKRS	**Kuro-shima**	**2.63**	**64**	*e*P	**Pn**	**23 35 49.5**	**+0.7**
JKRS				*e*S	**Sn**	**23 36 21.7**	**+1.6**
JIJ	**Ishigaki jima**	**2.79**	**63**	*e*S	**Sn**	**23 36 22.7**	**-1.5**
PTMZ	**Houxiangcun** baz=313	**2.85**	**313**	*e*P	**Pn**	**23 35 51.8**	**-0.2**
PTMZ	baz=313			*e*S	**Sn**	**23 36 24.2**	**-1.5**
JTJ	**Tarama**	**3.37**	**62**	*e*P	**Pn**	**23 35 59.2**	**+0.1**
JTJ				*e*S	**Sn**	**23 36 39.7**	**+1.2**

GII 17 23:35:42.4±0.0**, 33°.33N**×**35°.02E, h4^{km}, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.28**	**152**	Pg	Pg	23 35 46.9	-0.8
MMC7	**Mount Meron ar**	**0.44**	**134**	Pg	Pb	23 35 52.3	-0.4
MMC7				Sg	Sb	23 35 58.9	-0.7
MMA0B	**Mount Meron ar**	**0.45**	**134**	Pg	Pb	23 35 52.7	-0.2
MMA0B				Sg	Sb	23 35 59.8	-0.1
GEM	**Giv'at Ha'Em**	**0.55**	**102**	Pg	Pb	23 35 54.4	-0.2
GEM				Sg	Sb	23 36 02.3	-0.6
NATI	**Neve Ativ**	**0.60**	**96**	Pg	Pb	23 35 55.3	-0.2
NATI				Sg	Sb	23 36 04.2	-0.2

IDC 17 23:36:51.2±1.5**, 31°.86N**×**91°.84E, h0^{km}, mb3.5**/3**, mbtmp3.4**/4**, ML3.3**/1**, MS3.7**/2**, Error ellipse: s-maj=104.0km s-min=32.2km az=42.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=155,slow=13,SNR=5.8 0.4nm,0.6s	**16.62**	**337**	Pn	Pn	23 40 42.7	-2.9
DAV	**Davao City (W)** comp=Z,180nm,22.0s,baz=168,slow=37	**39.96**	**121**	LR	LR	00 01 29.5	
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=313,slow=8.3,SNR=2.7 0.4nm,0.8s	**65.66**	**136**	P	P	23 47 39.2	+1.7
ASAR	**Alice Springs** 0.1nm,0.3s,baz=328,slow=6.6,SNR=1.7 0.1nm,0.3s	**68.31**	**139**	P	P	23 47 52.6	-1.7
ILAR	**Eielson Array** comp=Z,36nm,19.3s,baz=96,slow=38	**73.42**	**22**	LR	LR	00 23 55.5	
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=51,slow=4.6,SNR=7.2 0.2nm,0.5s	**83.30**	**281**	P	P	23 49 20.5	+0.1

RSNC 17 23:41:24.9±0.9**, 8°.48N**×**73°.82W, h21^{km}**±5^{km}**, ML2.3, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	**Ocana**	**0.55**	**116**	*e*S	Sb	23 41 43.1	-0.3
OCAC	comp=Z,360nm,0.2s			*i*		23 41 44.3	
LL6C	**La Loma 6 Bece**	**1.36**	**23**	*e*S	Sn	23 42 05.2	-0.9
BRRC	**Barranca, Sant**	**1.36**	**176**	*e*S	Sn	23 42 04.9	-1.3
BRRC	comp=Z,21nm,0.3s			*i*		23 42 08.6	
ZARC	**Zaragoza, Cauc**	**1.42**	**227**	*e*P	Pn	23 41 48.8	-0.8
ZARC				*e*S	Sn	23 42 06.9	-0.8
PAMC	**Pamplona, Colo**	**1.58**	**136**	*e*S	Sn	23 42 12.7	+0.5
PAMC	comp=Z,58nm,0.2s			*i*		23 42 13.4	
PTBC	**PUERTO BERRIO,**	**2.03**	**198**	*e*P	Pn	23 41 58.0	+0.1
SPBC	**San Pablo de B**	**2.82**	**185**	*e*S	Sn	23 42 41.1	-1.1

IDC ***17*** *23:46:32.6±1.4, 29°.40N×130°.53E, h0^{km}, mb3.6/7, mbtmp3.5/8, ML3.2/1, MS3.3/3, Error ellipse: s-maj=52.4km s-min=27.9km az=67.0*

JMA ***17*** *23:46:38.6±0.2, 29°.4N±0°.7×130°.6E±0°.9, h33^{km}±4^{km}, MV3.3/23, NEAR AMAMI-OSHIMA ISLAND*

ISC 17 23:46:37.6±0.8**, 29°.33N**±0°.04×**130°.68E**±0°.07**, h35^{km}, n26, **σ1^{s}.**44**/27**, mb3.5**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.87**	**306**	P	**Pn**	**23 46 53.3**	**-0.1**
JNN				*e*S	**Sn**	**23 47 04.3**	**-0.5**
JYAK	**Yakushimahirau**	**0.92**	**351**	*i* P	**Pn**	**23 46 54.5**	**+0.5**
JMTN	**Minamitane**	**1.08**	**10**	P	**Pn**	**23 46 57.7**	**+1.4**
JKC	**Kuchinoerabu**	**1.20**	**340**	P	**Pn**	**23 46 58.8**	**+0.9**
JTAJ	**Takarajima**	**1.30**	**263**	P	**Pn**	**23 47 00.7**	**+1.4**
JAM	**Amami Oshima**	**1.32**	**226**	*e*P	**Pn**	**23 47 01.1**	**+1.7**
JTN	**Tanegashima 3**	**1.34**	**11**	*e*P	**Pn**	**23 47 01.2**	**+1.3**
JAMN	**Amaminishikomi**	**1.71**	**231**	*e*P	**Pn**	**23 47 06.2**	**+1.3**
JTSR	**Tashiro 2**	**1.84**	**6**	P	**Pn**	**23 47 08.6**	**+1.9**
JTSR				*e*S	**Sn**	**23 47 30.5**	**+1.7**
JTK	**Tokunoshima**	**2.17**	**225**	P	**Pn**	**23 47 13.5**	**+2.4**
JOKE	**Okinoerabujima**	**2.71**	**224**	*e*P	**Pn**	**23 47 20.3**	**+1.7**
JOKE				*e*S	**Sn**	**23 47 51.6**	**+1.5**
JYRO	**Yoronjima**	**3.03**	**221**	P	**Pn**	**23 47 24.4**	**+1.5**
JYRO				*e*S	**Sn**	**23 47 58.1**	**+0.1**
JKDJ	**Kitadaitoujima**	**3.41**	**171**	*e*S	**Sn**	**23 48 05.6**	**-2.0**
JMZ	**Minamidaito 2**	**3.53**	**172**	*e*S	**Sn**	**23 48 08.7**	**-1.7**
JAGN	**Aguni-jima**	**4.09**	**229**	*e*P	**Pn**	**23 47 39.5**	**+1.9**
KSRS	**Korea Array** 0.3nm,0.3s,baz=164,slow=14,SNR=2.4 0.5nm,0.4s	**8.42**	**345**	Pn	**Pn**	**23 48 36.5**	**-0.5**
MJAR	**Matsushiro Arr** comp=Z,47nm,19.1s,baz=14,slow=36	**9.57**	**39**	LR	LR	23 52 23.9	
SONM	**Songino Array** 0.5nm,0.6s,baz=140,slow=10,SNR=3.7 0.5nm,0.6s	**26.31**	**321**	P	**P**	**23 52 10.0**	**-0.1**
ZALV	**Zalesovo Beam** 0.6nm,0.5s,baz=90,slow=8.6,SNR=2.7 0.6nm,0.5s	**41.19**	**320**	P	**P**	**23 54 16.5**	**-2.1**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=90,slow=9.4,SNR=7.6 0.4nm,0.5s	**41.19**	**309**	P	**P**	**23 54 17.6**	**-1.2**
KURBB	**Kurchatov Arra** comp=Z,47nm,19.2s,baz=183,slow=38	**44.20**	**314**	LR	LR	00 14 06.4	
WRA	**Warramunga Arr** 0.4nm,0.9s,baz=354,slow=8.4,SNR=2.4 0.4nm,0.9s	**49.11**	**175**	P	**P**	**23 55 23.0**	**+1.2**
FINES	**FINESS Array B** 1.0nm,0.8s,baz=50,slow=9.2,SNR=1.8 1.0nm,0.8s	**71.24**	**331**	P	**P**	**23 57 51.8**	**-1.1**
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=304,slow=6.4,SNR=3.0 0.2nm,0.5s	**74.80**	**26**	P	**P**	**23 58 14.3**	**+0.4**
BRTR	**Keskin Array B** 0.6nm,0.8s,baz=80,slow=3.2,SNR=3.9 0.6nm,0.8s	**76.84**	**308**	P	**P**	**23 58 26.0**	**-0.2**
HFS	**Hagfors** comp=Z,37nm,21.3s,baz=318,slow=37	**77.08**	**333**	LR	LR	00 33 51.6	

IDC ***17*** *23:46:44.9±4.1, 13°.79N×90°.99W, h33^{km}±24^{km}, mb3.8/9, mbtmp4.0/11, ML4.3/2, MS3.4/30, Error ellipse: s-maj=38.2km s-min=27.4km az=28.0*

SNET ***17*** *23:46:49.6±0.8, 13°.95N×91°.28W, h15^{km}±3^{km}, ML4.5*

UCR ***17*** *23:46:49.7±0.9, 13°.96N×91°.27W, h15^{km}±4^{km}, ML4.4, mb4.3(NEIC)*

GCG ***17*** *23:46:50.9±0.7, 13°.98N×91°.41W, h33^{km}, MD4.4*

NEIC ***17*** *23:46:52.0±2.1, 14°.03N±0°.09×91°.33W±0°.08, h68^{km}±3^{km}, mb4.3/82, Error ellipse: s-maj=15.7km s-min=7.6km az=215.0*

ISC 17 23:46:48.9±1.1**, 13°.84N**±0°.08×**91°.45W**±0°.06**, h58^{km}**±9^{km}**, n194, **σ1^{s}.**02**/153**, mb4.3**/43**, MS3.4**/28**, 4D, Near coast of Guatemala**

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Code  Station Name     Δ°   AZ°    Phase ID         Time      Res
                              Op      ISC         h  m  s    ISC
RTAL  Retalhuleu      0.72 341   Pn      Pn       23 47 02.7 -0.7
RTAL  Retalhuleu      0.72 341  i P      Pn       23 47 02.8 -0.7
FUG   Fuego 3         0.85  44⇓iP      Pn       23 47 05.2 +0.1
STG3  Santiaguito 3,  0.88 353⇓iP      Pn       23 47 05.2 -0.3
PCG   Pacaya          0.99  56  eP      Pn       23 47 07.5 +0.5
NBG   Las Nubes       1.31  55⇓eP      Pn       23 47 12.9 +1.6
HUEH  Huehuetenango   1.47 358          Pn       23 47 14.6 +1.1
HUEH  Huehuetenango   1.47 358  eP      Pn       23 47 14.6 +1.1
HUEH                            eS      Sn       23 47 33.5 +1.7
HUEH  Huehuetenango   1.47 358  eP      Pn       23 47 14.6 +1.1
HUEH                            eS      Sn       23 47 33.5 +1.7
NUBE  Las Nubes       1.63  88  eP      Pn       23 47 14.7 -0.8
NUBE                            eS      Sn       23 47 34.4 -1.1
NUBE  Las Nubes       1.63  88  eP      Pn       23 47 14.7 -0.8
NUBE                            eS      Sn       23 47 34.4 -1.1
SLOZ  Alcaldia de Sa  1.63  83  eP      Pn       23 47 15.3 -0.1
SLOZ                            eS      Sn       23 47 35.2 -0.2
SLOZ                             IAML            23 47 39.9
      comp=Z,3μm,0.2s
RTR   El Retiro       1.76  88  eP      Pn       23 47 17.7 +0.5
RTR   El Retiro       1.76  88  eP      Pn       23 47 17.7 +0.5
CEVE  Cerro Verde     1.78  90  eP      Pn       23 47 17.9 +0.4
CEVE                            eS      Sn       23 47 40.3 +1.1
CEVE                            eS      Sn       23 47 40.3 +1.1
CEVE                             IAML            23 47 46.4
      comp=Z,14μm,0.3s
CEVE  Cerro Verde     1.78  90  eP      Pn       23 47 17.9 +0.4
CEVE                            eS      Sn       23 47 40.3 +1.1
CEVE                            eS      Sn       23 47 40.3 +1.1
CEVE                             IAML            23 47 46.4
      comp=Z,14μm,0.3s
JAYA  Jayaque - finc  1.96  95  eP      Pn       23 47 18.9 -1.1
JAYA                            eS      Sn       23 47 43.4 -0.1
JAYA  Jayaque - finc  1.96  95  eP      Pn       23 47 18.9 -1.1
JAYA                            eS      Sn       23 47 43.4 -0.1
CEDA  San Andres      2.00  91  eS      Sn       23 47 44.5 +0.1
CEDA                             IAML            23 47 57.6
      comp=Z,5μm,0.4s
CEDA  San Andres      2.00  91  eS      Sn       23 47 44.5 +0.1
CEDA                             IAML            23 47 57.6
      comp=Z,5μm,0.4s
LALI  Alcalda de L    2.10  99  eP      Pn       23 47 22.2 +0.4
LALI  Alcalda de L    2.10  99  eP      Pn       23 47 22.2 +0.4
MTO3  Montecristo     2.10  74   Pn     Pn       23 47 22.0 -0.1
MTO3  Montecristo     2.10  74  eP      Pn       23 47 22.0 -0.1
MTO3  Montecristo     2.10  74  eP      Pn       23 47 22.0 -0.1
MRL   Marmol          2.11  54⇓eP      Pn       23 47 23.4 +1.3
BOQS  Boqueron        2.11  93  i P     Pn       23 47 22.7 +0.6
BOQS  Boqueron        2.11  93  i P     Pn       23 47 22.7 +0.6
UEES  Universidad Ev  2.15  93  eP      Pn       23 47 23.1 +0.5
UEES  Universidad Ev  2.15  93  eP      Pn       23 47 23.1 +0.5
SNET  Serv Nac Est T  2.16  94   Pn     Pn       23 47 23.4 +0.6
SNET  Serv Nac Est T  2.16  94   IAML            23 47 54.5
      comp=Z,4μm,0.2s
SNET  Serv Nac Est T  2.16  94   IAML            23 47 54.5
      comp=Z,4μm,0.2s
ESQI  Esquipulas      2.17  70   Pn     Pn       23 47 23.1 +0.3
ESQI  Esquipulas      2.17  70  eP      Pn       23 47 23.1 +0.3
LFRS  El Faro         2.33  95  eP      Pn       23 47 25.3 +0.2
LFRS  El Faro         2.33  95  eP      Pn       23 47 25.3 +0.2
SJTE  Alcalda de S    2.39  95  eP      Pn       23 47 26.0 +0.2
SJTE  Alcalda de S    2.39  95  eP      Pn       23 47 26.0 +0.2
PAVA  Las Pavas       2.45  93  eP      Pn       23 47 26.7 +0.1
PAVA  Las Pavas       2.45  93  eP      Pn       23 47 26.7 +0.1
CCIG  Comitan         2.52 345   Pn     Pn       23 47 29.1 +1.4
SCLA  Alcaldia de Sa  2.65  93  eP      Pn       23 47 29.7 +0.4
SCLA  Alcaldia de Sa  2.65  93  eP      Pn       23 47 29.7 +0.4
ALJI  Alcalda de J    2.85 100  eS      Sn       23 48 05.4 +0.3
ALJI  Alcalda de J    2.85 100  eS      Sn       23 48 05.4 +0.3
PETF  Flores          3.42  26   Pn     Pn       23 47 40.7 +0.8
TGUH  Tegucigalpa,Un  4.06  86   Pn     Pn       23 47 48.6 -0.2
CRIN  San Cristobal   4.43 104   Pn     Pn       23 47 54.7 +0.9
CMIG  Matias Romero   4.63 315   Pn     Pn       23 47 56.8 +0.5
      comp=Z,10nm,0.3s,baz=141,slow=13,SNR=46
CMIG                             Sn     Sn       23 48 47.7 -1.1
      comp=Z,83nm,0.3s,baz=83,slow=20,SNR=7.8
CMIG                             LR     LR       23 50 10.4
      comp=Z,480nm,21.0s,baz=156,slow=41
      comp=Z,36nm,0.3s
CNGN  Cerro Negro     4.82 105          Pn       23 48 00.2 +1.1
MATN  Matagalpa       5.46  99   Pn     Pn       23 48 07.8  0.0
BOAB  BOACO BROADBAN6.80 103   Pn     Pn       23 48 11.7 -0.8
ACON  Acoyapa         6.40 106   Pn     Pn       23 48 22.0 +1.3
HZTE  Horizontes, Gu  6.51 118   Pn     Pn       23 48 24.6 +2.4
ORTG  Ortega, Santa   6.80 120   Pn     Pn       23 48 28.3 +2.0
DUNO  Dulce Nombre,   6.92 122   Pn     Pn       23 48 30.0 +2.2
ESPN  Las Esperanzas  7.16 102   Pn     Pn       23 48 32.4 +1.4
JTS   Las Juntas de   7.27 118   Pn     Pn       23 48 34.6 +2.0
CAO2  Cobano, Puntar  7.46 123   Pn     Pn       23 48 37.8 +2.6
TLIG  Tlapa           7.79 299   Pn     Pn       23 48 40.2 +0.5
JACO  JACO, Garabito  7.84 121   Pn     Pn       23 48 42.5 +2.1
HDC   Heredia         8.13 117   Pn     Pn       23 48 46.3 +1.8
RIMA  Rio Macho       8.46 118   Pn     Pn       23 48 51.8 +2.7
PEZE  Perez Zeledon,  8.81 119   Pn     Pn       23 48 56.3 +2.5
SRBA  San Rafael, Bu  9.16 119   Pn     Pn       23 49 01.1 +2.6
DRK0  Durika          9.24 119   Pn     Pn       23 49 02.6 +2.9
BRU2  Volcan          9.95 119   Pn     Pn       23 49 10.2 +0.8
SOR   Soroa          11.98  41   Pn     Pn       23 49 36.7 -0.3
MTDJ  Mount Denham   14.07  70   P      P        23 50 11.3 -0.3
SJCC  San Jacinto, C 16.40 102          Pn       23 50 36.8 +1.3
344A  Westbrook Farm 17.55   2          Pn       23 50 49.5  0.0
344A                             IAmb   IAmb     23 50 57.0
      comp=Z,21nm,0.8s
TX32  Lajitas Array  19.13 326   P      Pn       23 51 08.0 -0.8
TXAR  Lajitas Array  19.13 326   P      Pn       23 51 09.2 +0.4
      comp=Z,0.3nm,0.3s,baz=152,slow=12,SNR=35
TXAR                             PcP    PcP      23 55 28.6 -1.1
      comp=Z,0.5nm,0.9s,baz=143,slow=3.2,SNR=3.0
TXAR                             ScP    ScP      23 59 03.8 +3.0
      comp=Z,0.7nm,0.8s,baz=134,slow=5.4,SNR=5.6
TXAR                             LR     LR       23 59 21.2
      comp=Z,30nm,19.7s,baz=140,slow=39
      comp=Z,2.6nm,0.8s
TXAR  Lajitas Array  19.13 326   P      Pn       23 51 08.9 +0.1
TX31  Lajitas Ar. Si 19.13 326   P      Pn       23 51 09.4 +0.6
TX31                             IAmb   IAmb     23 51 30.0
      comp=Z,21nm,1.2s
H06E1 SOCORRO T-PHAS19.32 287   T      T        00 11 06.1
Z47A  Carrollton     19.52   9   P      P        23 51 10.7 -0.9
Z47A                             IAmb   IAmb     23 51 33.8
      comp=Z,22nm,0.8s
LRAL  Lakeview Retre 19.54  11   P      P        23 51 12.3 +0.5
ABTX  Abilene, Hawle 20.14 340   P      Pn       23 51 19.5 -1.1
Y49A  Blount Mountai 20.45  12   P      P        23 51 22.6 +0.9
LPIG  La Paz         20.52 303   LR     LR       23 58 52.5
      comp=Z,55nm,18.2s,baz=18,slow=35
GOGA  Godfrey        20.80  19   P      P        23 51 24.6 -0.8
GOGA                             IAmb   IAmb     23 51 41.9
      comp=Z,22nm,0.9s
UALR  University of  20.86 358   P      P        23 51 26.4 +0.3
UALR                             IAmb   IAmb     23 51 52.4
      comp=Z,10.0nm,0.7s
X37A  Clayton        20.96 351   P      P        23 51 27.9 +0.7
SDV   Santo Domingo  20.99 101   LR     LR       00 00 19.8
      comp=Z,53nm,21.6s,baz=282,slow=40
SDV   Santo Domingo  20.99 101   P      P        23 51 28.6 +0.7
Y52A  Lilburn        21.04  17   P      P        23 51 28.3 +0.3
PLAL  Pickwick Lake  21.27   8   P      P        23 51 31.6 +1.1
FPAL  Fort Paine     21.28  13   P      P        23 51 30.1 -0.5
FPAL                             IAmb   IAmb     23 51 47.5
      comp=Z,19nm,1.1s
WHAR  Wooly Hollow   21.37 358   P      P        23 51 32.2 +0.6
MNTX  Cornudas Mount 21.89 327   P      P        23 51 37.3 +0.1
MNTX                             IAmb   IAmb     23 51 40.5
      comp=Z,13nm,1.0s
FCAR  Ozark Folk Cen 21.97 359   P      P        23 51 37.8 -0.2
LCAR  Lake Charles   22.14   1   P      P        23 51 40.3 +0.5
LCAR                             IAmb   IAmb     23 51 55.0
      comp=Z,7.9nm,0.7s
U40A  Yellville      22.46 357   P      P        23 51 41.7 -1.5
MSTX  Muleshoe       22.52 335   P      P        23 51 43.5 -0.5
MSTX                             IAmb   IAmb     23 51 47.0
      comp=Z,8.2nm,0.7s
TKL   Tuckaleechee C 22.80  16   P      P        23 51 45.3 -1.6
      comp=Z,3.0nm,0.6s,baz=185,slow=13,SNR=6.8
TKL                              LR     LR       00 01 29.0
      comp=Z,134nm,21.0s,baz=206,slow=39
      comp=Z,3.0nm,0.6s
PBMO  Poplar Bluff   22.86   2   P      P        23 51 47.1 -0.3
PBMO                             IAmb   IAmb     23 52 02.7
      comp=Z,12nm,0.8s
AMTX  Amarillo       22.90 338   P      P        23 51 46.6 -1.4
AMTX                             IAmb   IAmb     23 51 50.2
      comp=Z,14nm,0.8s
U49A  Red Boiling Sp 23.14  12   P      P        23 51 49.0 -1.3
U49A                             IAmb   IAmb     23 52 08.3
      comp=Z,15nm,1.1s
MGMO  Mountain Grove 23.23 358   P      P        23 51 50.8 -0.3
MGMO                             IAmb   IAmb     23 52 11.5
      comp=Z,14nm,1.2s
TZTN  Tazewell       23.69  16   P      P        23 51 54.3 -1.2
TZTN                             IAmb   IAmb     23 52 14.2
      comp=Z,21nm,1.1s
V55A  Taylorsville   23.77  21   P      P        23 51 55.2 -1.0
V55A                             IAmb   IAmb     23 52 18.2
      comp=Z,8.3nm,0.8s
S39A  Bolivar        23.81 356   P      P        23 51 55.6 -0.9
S39A                             IAmb   IAmb     23 51 56.7
      comp=Z,6.5nm,0.8s
121A  Cookes Peak, D 23.85 324   P      P        23 51 59.1 +1.9
121A                             IAmb   IAmb     23 52 14.8
      comp=Z,21nm,1.1s
319A  Douglas        23.93 320   P      P        23 51 59.8 +2.0
CCM   Cathedral Cave 24.12   0   P      P        23 51 57.8 -1.5
CCM                              IAmb   IAmb     23 51 59.1
      comp=Z,11nm,0.9s
U54A  Nelsons Funny  24.18  19   P      P        23 51 59.8 -0.2
U54A                             IAmb   IAmb     23 52 18.2
      comp=Z,18nm,1.1s
R40A  Maddies Statio 24.37 358   P      P        23 52 00.6 -0.9
R40A                             IAmb   IAmb     23 52 02.7
      comp=Z,9.5nm,1.0s
BNM   Barren Site    24.46 328   P      P        23 52 04.1 +1.3
V58A  Windy Hill, Pi 24.52  25   P      P        23 52 01.4 -1.6
V58A                             IAmb   IAmb     23 52 18.6
      comp=Z,9.5nm,0.8s
LENM  Lemitar        24.65 328   P      P        23 52 06.0 +1.6
SJG   San Juan       24.68  77   LR     LR       00 02 00.3
      comp=Z,79nm,21.7s,baz=254,slow=38
SLM   Saint Louis    24.72   2   P      P        23 52 04.1 -0.7
ANMO  Albuquerque    25.00 330   P      P        23 52 08.0 +0.3
      comp=Z,1.5nm,0.7s,baz=160,slow=13,SNR=6.9
      comp=Z,1.5nm,0.7s
ANMO  Albuquerque    25.00 330   P      P        23 52 08.9 +1.2
TUC   Tucson         25.50 319   P      P        23 52 13.4 +1.4
T25A  Trinidad       25.93 336   P      P        23 52 17.3 +1.3
T25A                             IAmb   IAmb     23 52 43.8
      comp=Z,12nm,1.5s
W18A  Petrified Fore 26.85 325   P      P        23 52 26.5 +2.2
W18A                             IAmb   IAmb     23 52 28.4
      comp=Z,8.7nm,1.1s
WUAZ  Wupatki        28.06 324   P      P        23 52 37.0 +1.8
PV13  Radium Mtn., P 28.71 331   P      P        23 52 43.0 +2.0
W13A  Hualapai Mount 29.28 320   P      P        23 52 46.8 +0.8
NNA   Nana           29.46 150   LR     LR       00 04 04.4
      comp=Z,33nm,18.6s,baz=328,slow=36
PFO   Pinyon Flats O 30.05 315   LR     LR       00 04 43.2
      comp=Z,111nm,19.2s,baz=102,slow=36
LCMT  Little Creek M 30.18 324   P      P        23 52 54.7 +0.8
MTPU  Mount Pierson  30.33 326   P      P        23 52 57.2 +1.7
MTPU                             IAmb   IAmb     23 53 00.2
      comp=Z,4.8nm,0.8s
SZCU  Shurtz Canyon  30.50 325   P      P        23 52 58.9 +2.0
SZCU                             IAmb   IAmb     23 53 14.1
      comp=Z,6.5nm,1.1s
CCUT  Cedar City     30.63 324   IAmb   IAmb     23 53 16.4
      comp=Z,5.2nm,1.0s
PSUT  Pine Spring    31.60 325   IAmb   IAmb     23 53 09.7
      comp=Z,4.5nm,1.0s
SADO  Sadowa         32.56  16   LR     LR       00 07 24.2
      comp=Z,83nm,21.4s,baz=199,slow=38
HWUT  Hardware Ranch 32.73 332   IAmb   IAmb     23 53 19.0
      comp=Z,3.9nm,0.9s
PDAR  Pinedale Array 32.79 335   P      P        23 53 17.1 +0.2
      comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=2.3
PDAR                             PcP    PcP      23 56 01.0  0.0
      comp=Z,0.3nm,0.5s,baz=148,slow=5.3,SNR=2.3
PDAR                             LR     LR       00 09 55.3
      comp=Z,29nm,18.7s,baz=144,slow=42
      comp=Z,0.2nm,0.3s
BGU   Big Grassy Mou 32.91 329   IAmb   IAmb     23 53 20.3
      comp=Z,4.3nm,1.0s
REDW  Red Top Meadow 33.82 334   IAmb   IAmb     23 53 27.7
      comp=Z,4.5nm,1.0s
ELK   Elko           33.92 327   LR     LR       00 08 39.6
      comp=Z,65nm,20.5s,baz=150,slow=38
ELK   Elko           33.92 327   P      P        23 53 26.9 +0.1
ELK                              IAmb   IAmb     23 53 30.8
      comp=Z,2.8nm,0.8s
NV11  Mina Array Sit 34.04 321   P      P        23 53 29.8 +2.0
NVAR  Mina Array Bea 34.13 321   P      P        23 53 30.9 +2.2
      comp=Z,2.7nm,0.9s,baz=127,slow=9.1,SNR=13
NVAR                             PcP    PcP      23 56 05.8 +1.0
      comp=Z,0.7nm,0.7s,baz=153,slow=3.1,SNR=4.0
NVAR                             ScP    ScP      23 59 46.2 +1.2
      comp=Z,0.6nm,0.7s,baz=100,slow=7.7,SNR=4.9
NVAR                             LR     LR       00 08 51.5
      comp=Z,84nm,20.9s,baz=92,slow=39
      comp=Z,2.7nm,0.9s
NVAR  Mina Array Bea 34.13 321   P      P        23 53 30.4 +1.8
LHV   Little Huntoon 34.14 320   P      P        23 53 30.0 +1.6
RYN   Ryan           34.39 321   P      P        23 53 32.6 +1.9
RYN                              IAmb   IAmb     23 53 48.8
      comp=Z,4.7nm,1.1s
HLID  Hailey         35.57 331   IAmb   IAmb     23 53 44.9
      comp=Z,2.6nm,0.8s
BCYI  Bear Canyon    35.69 333   P      P        23 53 43.1 +1.1
MCMT  McKenzie Canyo 35.85 334   P      P        23 53 44.7 +1.4
SAML  Samuel         36.05 127   P      P        23 53 44.0 -1.1
SAML                             IAmb   IAmb     23 53 46.5
      comp=Z,3.2nm,0.8s
MFID  Camas Ranch    36.15 329   IAmb   IAmb     23 53 51.5
      comp=Z,4.0nm,0.9s
ULM   Lac du Bonnet  36.49 355   LR     LR       00 10 53.4
      comp=Z,55nm,19.4s,baz=144,slow=40
WVOR  Wild Horse Val 36.92 326   IAmb   IAmb     23 53 54.9
      comp=Z,4.0nm,0.9s
J08A  Circle Bar Ran 37.46 327   P      P        23 53 58.2 +1.2
PLID  Pearl Lake     37.47 331   IAmb   IAmb     23 53 58.6
      comp=Z,4.9nm,0.9s
LPAZ  La Paz         37.78 142   LR     LR       00 09 23.3
      comp=Z,49nm,21.2s,baz=295,slow=36
I07A  Izee           38.50 327   IAmb   IAmb     23 54 07.4
      comp=Z,6.2nm,1.2s
YBH   Yreka Blue Hor 38.82 322   LR     LR       00 11 28.2
      comp=Z,61nm,19.6s,baz=152,slow=38
MDP   Montagnes des  39.20  99   LR     LR       00 12 15.3
      comp=Z,32nm,18.9s,baz=47,slow=40
NEW   Newport        40.38 333   LR     LR       00 13 52.8
      comp=Z,46nm,18.6s,baz=163,slow=40
HOOD  Mount Hood Mea 40.47 327   P      P        23 54 23.6 +1.5
C09A  Chrisman Ranch 40.54 332   P      P        23 54 23.1 +0.6
RPN   Rapa Nui       44.27 203   LR     LR       00 08 22.9
      comp=Z,75nm,21.7s,baz=44,slow=29
SCHQ  Schefferville  45.19  20   P      P        23 54 57.3 -2.7
      comp=Z,3.8nm,0.7s,baz=207,slow=8.2,SNR=6.8
SCHQ                             LR     LR       00 15 03.2
      comp=Z,135nm,18.2s,baz=210,slow=38
      comp=Z,3.8nm,0.7s
BBB   Bella Bella    48.16 330   LR     LR       00 17 57.7
      comp=Z,33nm,19.2s,baz=328,slow=39
H03N2 Juan Fernandez 48.51 166   T      T        00 47 41.5
      baz=347
H03N1 Juan Fernandez 48.51 166   T      T        00 47 32.3
      baz=347
H03N3 Juan Fernandez 48.52 166   T      T        00 47 29.6
      baz=347
YKA   Yellowknife Ar 51.30 346   P      P        23 55 46.0 -0.9
      comp=Z,1.2nm,0.6s,baz=148,slow=7.7,SNR=19
YKA                              PcP    PcP      23 57 00.3 -0.9
      comp=Z,0.7nm,0.8s,baz=151,slow=3.8,SNR=5.3
      comp=Z,1.2nm,0.6s
CPUP  Villa Florida  51.92 140   LR     LR       00 17 18.4
      comp=Z,40nm,19.9s,baz=340,slow=36
FRB   Frobisher Bay  52.35  13   LR     LR       00 18 02.2
      comp=Z,54nm,20.9s,baz=234,slow=36
PLCA  Paso Flores    57.65 161   LR     LR       00 15 59.2
      comp=Z,35nm,21.4s,baz=356,slow=30
RCBR  Riachuelo      58.49 106   LR     LR       00 23 29.1
      comp=Z,18nm,18.4s,baz=92,slow=38
SFJD  Kangerlussuaq  59.51  17   LR     LR       00 23 13.7
      comp=Z,94nm,19.8s,baz=222,slow=37
M27K  Edge Creek, AK 60.08 335   P      P        23 56 51.2 +1.2
BCAR  Beaver Creek A 60.40 336   P      P        23 56 52.1  0.0
GLB   Gilahina Butte 60.43 334   P      P        23 56 52.2 -0.1
RES   Resolute Bay   60.87 359   LR     LR       00 26 13.4
      comp=Z,54nm,18.8s,baz=134,slow=39
SCM   Sheep Creek Mo 62.11 334   P      P        23 57 04.0 +0.3
CNPM  China Poot     63.02 330   P      P        23 57 10.2 +0.4
KDAK  Kodiak Island  63.13 328   P      P        23 57 10.9 +0.4
      comp=Z,8.5nm,1.0s,baz=205,slow=2.4,SNR=5.4
      comp=Z,8.5nm,1.0s
KDAK  Kodiak Island  63.13 328   P      P        23 57 10.2 -0.3
ILAR  Eielson Array  63.20 337   P      P        23 57 10.2 -0.7
      comp=Z,1.3nm,0.9s,baz=155,slow=4.5,SNR=9.5
      comp=Z,1.3nm,0.9s
ILAR  Eielson Array  63.20 337   P      P        23 57 11.4 +0.6
BMAR  Burnt Mountain 63.62 340   P      P        23 57 13.9 +0.2
P19K  Oil Pt         64.03 330   P      P        23 57 16.7 +0.3
PPT   Papeete        65.29 243   LR     LR       00 17 47.1
      comp=Z,68nm,18.6s,baz=70,slow=28
TOLK  Toolik Lake Re 65.85 340   P      P        23 57 28.5 +0.3
TOLK                             IAmb   IAmb     23 57 45.3
      comp=Z,4.6nm,1.4s
BORG  Borgarnes      69.12  26   LR     LR       00 27 18.6
      comp=Z,20nm,18.0s,baz=281,slow=35
NOA   NORSAR Array B 84.03  29   LR     LR       00 34 37.4
      comp=Z,16nm,21.8s,baz=290,slow=34
ARCES ARCESS Array B 86.12  18   LR     LR       00 36 42.8
      comp=Z,32nm,21.8s,baz=253,slow=35
TORD  Torodi Ar. Bea 89.90  77   P      P        23 59 39.2 -3.2
      comp=Z,0.3nm,0.7s,baz=281,slow=3.5,SNR=5.6
      comp=Z,0.3nm,0.7s
MKAR  Makanchi Array 119.39   5  PKP    PKPdf    00 05 29.9 -2.2
      comp=Z,0.4nm,0.8s,baz=297,slow=5.3,SNR=4.6
MKAR  Makanchi Array 119.39   5         PKPdf    00 05 30.9 -1.2
WRA   Warramunga Arr 135.87 256  PKP    PKPdf    00 06 03.5 -0.6
      comp=Z,0.5nm,0.7s,baz=101,slow=1.8,SNR=2.8
ASAR  Alice Springs  136.11 250  PKP    PKPdf    00 06 03.4 -1.1
      comp=Z,0.2nm,0.3s,baz=70,slow=1.1,SNR=4.1
ASAR  Alice Springs  136.11 250  PKPdf  PKPdf    00 06 05.1 +0.6
PZH   PanZhiHua      137.90 342  PKP    PKPdf    00 06 07.3 -0.6
CMAR  Chiang Mai Arr 146.31 342  PKPbc  PKPdf    00 06 23.9 +1.0
      comp=Z,3.3nm,0.5s,baz=333,slow=3.7,SNR=19
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VAO ***17*** *23:57:43.0±0.6, 24°.57S×69°.32W, h371^{km}±6^{km}, mb4.0*

IDC ***17*** *23:57:53.7±1.2, 24°.15S×66°.95W, h178^{km}±10^{km}, mb3.5/7, mbtmp4.0/11, Error ellipse: s-maj=23.5km s-min=14.9km az=29.0*

NEIC ***17*** *23:57:53.8±2.1, 24°.30S±0°.07×67°.13W±0°.10, h181^{km}±6^{km}, mb4.5/30, Md3.6(SJA), ML4.4(GUC), Error ellipse: s-maj=13.3km s-min=9.1km az=72.0*

GUC ***17*** *23:57:54.8±0.6, 24°.32S×67°.21W, h170^{km}±6^{km}, ML4.4*

ISC 17 23:57:53.5±0.7**, 24°.23S**±0°.05×**67°.12W**±0°.05**, h184**^{km}±6^{km}**, n103,** σ1^{s}.**27**/115**, mb4.3**/21**, Chile-Argentina border region**

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Code  Station Name     Δ°   AZ°    Phase ID         Time      Res
                              Op      ISC         h  m  s    ISC
SLA   San Lorenzo     1.55 109  eP      Pn       23 58 27.7 +1.3
SLA                             i S     Sn       23 58 53.0 +1.0
AF01  San Pedro de A  1.60 322          Pn       23 58 29.5 +2.3
LVC   Limon Verde     2.31 314   P      Pn       23 58 36.4 +1.8
      340nm,0.4s,baz=131,slow=7.5,SNR=1607
LVC                              S      Sn       23 59 06.9 +0.3
      303nm,0.2s,baz=325,slow=19,SNR=21
LVC   Limon Verde     2.31 314  eP      Pn       23 58 36.0 +1.3
LVC                             i S     Sn       23 59 07.5 +0.9
LVC   Limon Verde     2.31 314  eP      Pn       23 58 36.6 +1.9
PB15  IPOC Station P  2.39 295   Pn     Pn       23 58 37.0 +1.6
PB15  IPOC Station P  2.39 295  eP      Pn       23 58 36.4 +1.0
PB15                            i S     Sn       23 59 08.2 +0.3
GO02  Mina Guanaco    2.44 247   Pn     Pn       23 58 37.1 +1.1
PB06  IPOC Station P  2.72 303          Pn       23 58 40.7 +1.5
PB06  IPOC Station P  2.72 303  eP      Pn       23 58 40.3 +1.1
PB06                            i S     Sn       23 59 15.2 +0.5
PB06                             IAML            23 59 16.2
      comp=N,1μm,0.1s
PB14  IPOC Station P  3.02 262   Pn     Pn       23 58 43.5 +0.5
PB14  IPOC Station P  3.02 262  eP      Pn       23 58 43.6 +0.6
PB14                            i S     Sn       23 59 20.4 -1.0
PB09  IPOC Station P  3.12 321          Pn       23 58 45.8 +1.8
PB09  IPOC Station P  3.12 321  eP      Pn       23 58 45.8 +1.8
PB09                            i S     Sn       23 59 24.6 +1.2
PB09                             IAML            23 59 29.5
      comp=N,389nm,0.2s
AC02  Maricunga       3.17 215   Pn     Pn       23 58 45.7 +0.9
AC02  Maricunga       3.17 215  eP      Pn       23 58 45.8 +0.9
AC02                            i S     Sn       23 59 24.9 -0.1
PB10  IPOC Station P  3.23 282   Pn     Pn       23 58 45.8 +0.6
PB10  IPOC Station P  3.23 282  eP      Pn       23 58 45.7 +0.6
PB10                            i S     Sn       23 59 24.8 -0.6
PB04  IPOC Station P  3.37 303   Pn     Pn       23 58 48.1 +1.0
PB04  IPOC Station P  3.37 303  eP      Pn       23 58 47.9 +0.9
PB04                            i S     Sn       23 59 28.1 -0.7
PB07  IPOC Station P  3.57 314          Pn       23 58 50.4 +0.8
PB07  IPOC Station P  3.57 314  eP      Pn       23 58 50.4 +0.8
PB07                            i S     Sn       23 59 32.3 -1.0
AC01  Pan de Azucar   3.69 238   Pn     Pn       23 58 50.5 -0.4
AC01  Pan de Azucar   3.69 238  eP      Pn       23 58 50.5 -0.4
AC01                            i S     Sn       23 59 33.8 -2.0
PB01  IPOC Station P  3.85 325          Pn       23 58 53.5 +0.4
PB01  IPOC Station P  3.85 325  eP      Pn       23 58 53.5 +0.4
PB01                            i S     Sn       23 59 38.7 -0.9
PB02  IPOC Station P  3.87 318          Pn       23 58 53.8 +0.5
AC06  Mina Casimiro   4.27 222   Pn     Pn       23 58 57.6 -0.6
GO03  Copiap          4.37 219   Pn     Pn       23 58 58.7 -0.8
PATCX Punta Patache   4.40 320   Pn     Pn       23 59 00.3 +0.3
PB08  IPOC Station P  4.49 335   Pn     Pn       23 59 02.3 +0.9
TA01  Diego Aracena   4.62 322   Pn     Pn       23 59 02.7  0.0
HMBC  Humberstone     4.70 326  eP      Pn       23 59 03.0 -0.9
AC04  Llanos de Chal  5.32 221   Pn     Pn       23 59 10.4 -1.3
LCO   Las Campanas    5.74 213   Pn     Pn       23 59 15.9 -1.6
PB16  IPOC Station P  6.28 339   Pn     Pn       23 59 24.0 -0.8
CO01  Juntas del Tor  6.31 204   Pn     Pn       23 59 25.2 +0.3
PB12  IPOC Station P  6.34 331   Pn     Pn       23 59 23.1 -2.1
GO04  Tololo Observa  6.77 208   Pn     Pn       23 59 28.8 -2.0
CO06  Fray Jorge      7.57 211   Pn     Pn       23 59 39.6 -1.6
CO02  Combarbal       7.75 205   Pn     Pn       23 59 42.2 -1.4
LPAZ  La Paz          7.96 353   P      Pn       23 59 47.9 +0.9
      comp=N,4.6nm,0.4s,baz=154,slow=6.4,SNR=36
LPAZ                             S      Sn       00 01 13.2 -3.5
      comp=N,3.0nm,0.6s,baz=9.5,slow=24,SNR=2.0
LPAZ  La Paz          7.96 353          Pn       23 59 47.8 +0.8
VA06  Catapilco       9.08 203   Pn     Pn       23 59 58.3 -2.6
CPUP  Villa Florida   9.10 105   P      Pn       23 59 59.6 -1.7
      comp=N,2.6nm,0.8s,baz=270,slow=11,SNR=4.2
CPUP  Villa Florida   9.10 105   Pn     Pn       00 00 00.9 -0.4
MT02  Curacav         9.66 200   Pn     Pn       00 00 04.7 -3.9
TRCB  Terra Rica     13.36  87   P      P        00 00 59.5 +0.1
TRCB  Terra Rica     13.36  87  eP      P        00 00 60.0 +0.6
CPSB  Cacapava Do Su 13.62 120  eP      Pn       00 00 58.5 -0.8
PTGB  Pitanga        13.71  95  eP      P        00 01 03.7 +0.4
PLTB  Pedras Altas   14.09 125   P      Pn       00 01 05.9 +0.7
SAML  Samuel         15.65  15   P      Pn       00 01 23.2 -1.3
CLDB  Colider        17.10  41  eP      P        00 01 36.9 -3.8
VAO   Valinhos       18.51  90  eP      P        00 01 55.5 -0.6
IPMB  Ipameri, GO    18.69  74  eP      P        00 01 56.1 -2.0
BDFB  Brasilia       19.87  68   P      P        00 02 09.2 -1.6
      comp=N,2.8nm,0.5s,baz=238,slow=8.1,SNR=5.2
BDFB  Brasilia       19.87  68   P      P        00 02 09.9 -0.9
SDBA  SAO DESIDERIO  24.10  65  eP      P        00 02 44.1 -8.4
SMTB  Santa Maria do 24.11  54  eP      P        00 02 43.4 -9.2
USHA  Ushuaia        30.58 181   P      P        00 03 52.0 +2.3
      comp=N,0.8nm,0.4s,baz=352,slow=14,SNR=0.9
      comp=N,0.8nm,0.4s
ZARC  Zaragoza, Cauc 32.42 346   P      P        00 04 04.7 -1.6
ZARC                             IAmb   IAmb     00 04 06.7
      comp=Z,2.9nm,0.5s
CELP  Cerrillos      42.05   1   P      P        00 05 25.8 -1.4
CELP                             IAmb   IAmb     00 05 35.8
      comp=Z,27nm,1.3s
SOR   Soroa          49.22 341   P      P        00 06 24.6 +1.2
SOR                              IAmb   IAmb     00 06 50.6
      comp=Z,21nm,1.1s
JSC   Jenkinsville   59.72 346   P      P        00 07 39.6 +0.9
V55A  Taylorsville   61.23 347   P      P        00 07 50.1 +1.1
TKL   Tuckaleechee C 61.61 345   P      P        00 07 52.1 +0.5
V52A  Sevierville    61.75 345   P      P        00 07 52.3 -0.1
V52A                             IAmb   IAmb     00 08 20.5
      comp=Z,13nm,1.4s
SWET  Sewanee        61.75 343   P      P        00 07 52.8 +0.3
SWET                             IAmb   IAmb     00 07 53.8
      comp=Z,5.9nm,0.8s
U49A  Red Boiling Sp 62.93 343   P      P        00 07 59.9 -0.4
U49A                             IAmb   IAmb     00 08 10.2
      comp=Z,11nm,1.4s
WVT   Waverly        63.15 341   P      P        00 08 01.9 +0.2
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WVT				IAmb	IAmb	00 08 02.6	
	comp=Z,6.3nm,0.6s						
T50A	Nancy	63.17	344	P	P	00 08 02.4	+0.6
T50A				IAmb	IAmb	00 08 02.8	
	comp=Z,3.3nm,0.7s						
TXAR	Lajitas Array	63.80	325	P	P	00 08 07.6	+1.4
	comp=Z,0.3nm,0.7s,baz=160,slow=8.3,SNR=4.7						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	63.80	325	P	P	00 08 08.0	+1.7
P49A	Miami Univ. Ec	65.53	345	P	P	00 08 17.2	+0.1
P49A				IAmb	IAmb	00 08 44.8	
	comp=Z,16nm,1.5s						
CCM	Cathedral Cave	65.97	339	P	P	00 08 20.2	+0.3
CCM				IAmb	IAmb	00 08 21.4	
	comp=Z,5.3nm,0.9s						
S39A	Bolivar	66.34	338	P	P	00 08 22.9	+0.6
S39A				IAmb	IAmb	00 08 24.1	
	comp=Z,7.8nm,1.1s						
P38A	Dawn	68.15	338	P	P	00 08 33.4	-0.3
K43A	Burlington	69.42	343	P	P	00 08 42.1	+0.8
I42A	Draeger Farm,	70.68	343	P	P	00 08 49.7	+0.6
KOWA	Kowa	72.63	65	P	P	00 09 01.2	-0.1
KOWA				IAmb	IAmb	00 09 02.2	
	comp=Z,9.4nm,1.2s						
F36A	Milaca	73.77	341	P	P	00 09 08.4	+1.0
F36A				IAmb	IAmb	00 09 08.7	
	comp=Z,3.2nm,0.7s						
EYMN	Ely	75.11	343	P	P	00 09 15.5	+0.5
RWWY	Rawlins	75.36	330	P	P	00 09 16.0	-1.0
B35A	Bob, Littlefor	76.10	342	P	P	00 09 21.5	+0.9
B35A				IAmb	IAmb	00 09 22.2	
	comp=Z,4.1nm,0.7s						
TOA0	Torodi Ar. Sit	76.75	69	P	P	00 09 24.8	-0.3
TORD	Torodi Ar. Bea	76.75	69	P	P	00 09 25.0	-0.1
	comp=Z,1.4nm,0.5s,baz=259,slow=5.4,SNR=19						
	comp=Z,1.4nm,0.5s						
PDAR	Pinedale Array	77.29	329	P	P	00 09 29.5	+1.7
	comp=Z,0.5nm,0.7s,baz=183,slow=5.6,SNR=3.9						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	77.29	329	P	P	00 09 28.5	+0.7
LOHW	Long Hollow	78.43	329	P	P	00 09 36.4	+2.4
NVAR	Mina Array Bea	78.65	321	P	P	00 09 36.1	+0.7
	comp=Z,0.5nm,0.7s,baz=159,slow=7.7,SNR=1.3						
	comp=Z,0.5nm,0.7s						
KVN	Kaiserville	78.96	322	P	P	00 09 39.0	+2.0
BOSA	Boshof	80.72	117	P	P	00 09 47.3	+0.6
	comp=Z,3.2nm,1.1s,baz=256,slow=4.2,SNR=1.9						
	comp=Z,3.2nm,1.1s						
YKA	Yellowknife Ar	94.30	340	P	P	00 10 52.1	+0.7
	comp=Z,0.9nm,0.6s,baz=127,slow=4.9,SNR=12						
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	128.20	205	PKP	PKPdf	00 16 38.8	+0.1
	comp=Z,0.4nm,0.6s,baz=132,slow=1.9,SNR=4.1						
ASAR	Alice Springs	128.20	205		PKiKP	00 16 39.6	+0.4
WRA	Warramunga Arr	131.38	207	PKP	PKiKP	00 16 45.2	-0.4
	comp=Z,0.3nm,0.5s,baz=161,slow=1.4,SNR=8.8						
WRA	Warramunga Arr	131.38	207	PKPdf	PKPdf	00 16 45.1	+0.4
ZALV	Zalesovo Beam	143.64	28	PKP	PKPbc	00 17 05.0	+1.0
	comp=Z,1.8nm,0.5s,baz=298,slow=5.8,SNR=9.0						
KSH	Kashi	145.41	55	PKPbc	PKPab	00 17 11.4	+0.8
KSH				pPKP	pPKPbc	00 17 58.8	-0.1
MKAR	Makanchi Array	146.77	40	PKPbc	PKPbc	00 17 13.1	-0.7
	comp=Z,2.8nm,0.6s,baz=327,slow=2.6,SNR=24						
MKAR	Makanchi Array	146.77	40	PKPdf	PKPdf	00 17 11.8	+0.1
MKAR				PKPbc	PKPab	00 17 15.0	-0.4
PZH	PanZhiHua	169.67	75	PKP	PKPdf	00 17 37.4	-2.2

IDC 18 00:05:45.8±3.3**, 18.°65S**×**176.°33W, h0^{km}, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=363.6km s-min=36.4km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.45	260	P	P	00 14 14.3	-0.5
	0.2nm,0.3s,baz=97,slow=8.1,SNR=6.6						
	0.2nm,0.3s						
ASAR	Alice Springs	46.50	255	P	P	00 14 15.5	+0.3
	0.2nm,0.4s,baz=86,slow=8.2,SNR=4.8						
	0.2nm,0.4s						
TXAR	Lajitas Array	84.73	57	P	P	00 18 22.3	0.0
	0.2nm,0.6s,baz=233,slow=5.2,SNR=2.2						
	0.2nm,0.6s						

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*IDC **18** 00:13:18.3±2.3, 25.°03S×71.°29W, h0^{km}, mb3.6/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=52.3km s-min=46.6km az=60.0*

*SCB **18** 00:14:08.9±3.2, 21.°97S×67.°52W, h48^{km}±74^{km}, ML2.0/1, Error ellipse: s-maj=18.6km s-min=13.8km az=0.0*

ISC 18 00:14:07.9±1.6**, 22.°1S**±0.°1×**67.°44W**±0.°07**, h150^{km}, n19,** σ**0.^{s}84**/12**, 1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.44	250	P	Pn	00 14 37.2	-0.1
PB09	IPOC Station P	1.70	281	P	Pn	00 14 40.5	+0.7
MOCB	Mochara	1.89	63	P	Pn	00 14 41.7	-0.5
MOCB				S	Sn	00 15 09.2	+0.7
MOCB				IAML		00 15 10.0	
	13nm,0.3s						
PB06	IPOC Station P	2.05	253	P	Pn	00 14 43.5	-0.3
PB01	IPOC Station P	2.18	299	⇓P	Pn	00 14 46.0	+0.7
PB07	IPOC Station P	2.30	279	P	Pn	00 14 46.6	-0.2
PB02	IPOC Station P	2.42	289	P	Pn	00 14 47.4	-0.7
PB08	IPOC Station P	2.54	321	P	Pn	00 14 50.9	+1.0
HMBC	Humberstone	2.93	308	P	Pn	00 14 53.1	-1.4
PB11	IPOC Station P	3.13	318	P	Pn	00 14 56.1	-1.0
LPAZ	La Paz	5.84	353	Pn	Pn	00 15 32.9	-0.2
	0.3nm,0.3s,baz=189,slow=3.5,SNR=3.6						
LPAZ				Sn	Sn	00 17 18.6	+39
	baz=308,slow=18						
	0.6nm,0.3s						
TXAR	Lajitas Array	61.92	324	P	P	00 23 43.0	-29
	0.2nm,0.5s,baz=133,slow=11,SNR=3.8						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	76.29	70	P	P	00 25 33.3	-7.3
	0.3nm,0.3s,baz=261,slow=6.5,SNR=8.9						
	0.3nm,0.3s						
H11S2	WAKE ISLAND Hy	129.30	276	T	T	02 52 27.0	
	baz=106,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	129.31	276	T	T	02 52 27.5	
	baz=106,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	129.32	276	T	T	02 52 40.3	
	baz=106,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	129.40	278	T	T	02 52 46.3	
	baz=107						
H11N2	WAKE ISLAND Hy	129.41	278	T	T	02 52 45.3	
	baz=107						
H11N1	WAKE ISLAND Hy	129.41	278	T	T	02 52 50.9	
	baz=107						

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*IDC **18** 00:22:38.6±0.4, 23.°24N×121.°61E, h0^{km}, mb4.5/33, mbtmp4.5/35, ML4.3/2, MS3.7/33, Error ellipse: s-maj=14.2km s-min=10.6km az=81.0*

*BJI **18** 00:22:43.0±0.0, 23.°13N×121.°68E, h47^{km}, mb4.5/50, mB4.4/22, ML4.4/7, Ms4.1/40, Ms7 3.9/39*

*JMA **18** 00:22:44.5±0.3, 23°N±1°×12°2E±°, h18^{km}, MD4.7/15, MV5.3/15, TAIWAN REGION*

*NIED **18** 00:22:44.5, 23.°23N×121.°67E, h18^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.59; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$0.32; $M_{r\theta}$0.55; $M_{\theta\phi}$-0.81; $M_{\phi r}$0.78; Fault plane solution: $M_0$1.45000×10^{16} NP1: ϕ_s283.00000°, δ39.00000°, λ155.00000°. NP2: ϕ_s33.00000°, δ75.00000°, λ54.00000°.*

*MOS **18** 00:22:44.4±0.9, 23.°09N×121.°65E, h63^{km}, mb5.0/47 Error ellipse: s-maj=10.9km s-min=5.3km az=120.8*

*ASIES **18** 00:22:44.9, 23.°19N×121.°74E, h31^{km}, MW4.3*

*NEIC **18** 00:22:45.4±2.0, 23.°19N±0.°04×121.°62E±0.°05, h44^{km}±5^{km}, mb4.7/83, ML5.3(TAP), ML4.7(BJI), Error ellipse: s-maj=7.8km s-min=4.7km az=131.0*

*TAP **18** 00:22:45.8, 23.°22N×121.°57E, h46^{km}, ML5.2, B*

ISC 18 00:22:45.9±0.4**, 23.°18N**±0.°02×**121.°66E**±0.°02**, h51^{km}**±3^{km}**, n497,** σ**1.^{s}52**/667**, mb4.6**/103**, MS3.7**/38**, 54C-102D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	Changbin	0.23	305	⇑iP	Pn	00 22 53.5	-1.1
	baz=312						
ECBN				S	Sn	00 22 58.9	-1.8
	baz=312						
CHKT	Chengkung	0.28	253	⇑iP	Pn	00 22 53.7	-1.3
	baz=237						
CHKT				iS	Sn	00 22 59.5	-1.9
	baz=237						
FULB	Fuli	0.34	273	⇑iP	Pn	00 22 54.1	-1.4
	baz=266						
FULB				eS	Sn	00 23 02.4	+0.1
	baz=266						
EYUL	Yuli	0.35	298	⇓iP	Pn	00 22 54.5	-1.1
	baz=299						
EYUL				eS	Sn	00 23 02.6	0.0
	baz=299						
TWF1	Yuli	0.37	297	⇓iP	Pn	00 22 54.5	-1.3
	baz=299						
TWF1				eS	Sn	00 23 01.1	-1.8
	baz=299						
HGSD	Ruisui	0.38	325	⇑iP	Pn	00 22 54.3	-1.6
	baz=333						
HGSD				eS	Sn	00 23 03.6	+0.6
	baz=333						
EDH	Donghe	0.39	237	⇑iP	Pn	00 22 54.9	-1.0
	baz=226						
EDH				S	Sn	00 23 01.8	-1.4
	baz=226						
YULB	Yu-li	0.39	302		Pn	00 22 54.4	-1.6
YULB					Sn	00 23 00.5	-2.8
YULB	Yu-li	0.39	302	⇓iP	Pn	00 22 54.6	-1.5
	baz=305						
YULB				eS	Sn	00 23 01.0	-2.3
	baz=305						
ECS	Chishang	0.41	258	⇓P	Pn	00 22 55.7	-0.6
	baz=250						
ECS				eS	Sn	00 23 03.0	-0.7
	baz=250						
EHY	Hungye	0.45	316	⇓iP	Pn	00 22 55.1	-1.5
	baz=322						
EHY				iS	Sn	00 23 01.6	-2.7
	baz=322						
EGFH	Guangfu	0.53	336	⇓iP	Pn	00 22 56.3	-1.3
	baz=343						
EGFH				eS	Sn	00 23 03.8	-2.2
	baz=343						
TEGC	Jichi Village	0.54	348	P	Pn	00 22 56.5	-1.1
	baz=357						
TEGC				eS	Sn	00 23 04.8	-1.2
	baz=357						
LDUT	Ludao	0.54	199	⇑iP	Pn	00 22 56.9	-0.7
	baz=190						
LDUT				iS	Sn	00 23 05.1	-0.9
	baz=190						
LONT	Longtian	0.56	241	⇓iP	Pn	00 22 56.9	-1.0
	baz=233						
LONT				eS	Sn	00 23 05.6	-1.0
	baz=233						
ELDTW	Lidau	0.59	271	⇓iP	Pn	00 22 56.9	-1.5
	baz=267						
ELDTW				eS	Sn	00 23 04.6	-2.8
	baz=267						
TTN	Taitung	0.64	228	⇑P	Pn	00 22 58.5	-0.3
	baz=220						
TTN				eS	Sn	00 23 09.1	+0.9
	baz=220						
TWGBT	Beinan	0.65	236	⇓P	Pn	00 22 57.8	-1.2
	baz=229						
TWGBT				eS	Sn	00 23 07.1	-1.4
	baz=229						
TWG	Pinlang	0.65	236		Pn	00 22 57.5	-1.6
TWG					Sn	00 23 06.2	-2.3
TWG	Pinlang	0.65	236	⇓iP	Pn	00 22 57.8	-1.2
	baz=229						
TWG				eS	Sn	00 23 06.9	-1.7
	baz=229						
ESL	Shilin	0.66	342	⇑iP	Pn	00 22 57.6	-1.6
	baz=348						
ESL				eS	Sn	00 23 05.9	-3.0
	baz=348						
TEYL	Yanliau Villag	0.68	355	⇑iP	Pn	00 22 58.9	-0.6
	baz=2.0						
TEYL				iS	Sn	00 23 09.0	-0.4
	baz=2.0						
YUS	Yu-Shan	0.72	295	⇓iP	Pn	00 22 59.3	-1.1
	baz=296						
YUS				eS	Sn	00 23 08.8	-2.0
	baz=296						
VWDT	VWDT	0.74	320	⇓iP	Pn	00 22 59.3	-0.9
	baz=323						
VWDT				eS	Sn	00 23 09.0	-1.6
	baz=323						
HWA	Hwalien	0.79	356	⇑iP	Pn	00 22 59.9	-1.0
	baz=3.0						
HWA				eS	Sn	00 23 10.5	-1.3
	baz=3.0						
ETM	Tongmen	0.79	349	P	Pn	00 22 59.5	-1.4
	baz=354						
ETM				eS	Sn	00 23 09.6	-2.3
	baz=354						
STYH	Taoyuan	0.81	269	⇓iP	Pn	00 23 00.5	-0.6
	baz=267						
STYH				eS	Sn	00 23 10.7	-1.6
	baz=267						
STYT	Tauyuan	0.83	269	⇓iP	Pn	00 23 00.8	-0.6
	baz=266						
STYT				eS	Sn	00 23 11.5	-1.3
	baz=266						
ALS	Alishan	0.85	293	⇓iP	Pn	00 23 01.5	-0.4
	baz=293						
ALS				eS	Sn	00 23 13.0	-0.6
	baz=293						
ECL	Taimali	0.87	228	P	Pn	00 23 00.4	-1.6
	baz=222						
ECL				eS	Sn	00 23 11.4	-2.3
	baz=222						
SSLB	Suanglung	0.88	313		Pn	00 23 01.2	-0.9
SSLB					Sn	00 23 11.5	-2.6
SSLB	Suanglung	0.88	313	⇓iP	Pn	00 23 01.2	-0.9
	baz=315						
SSLB				eS	Sn	00 23 11.7	-2.4
	baz=315						
OWD	Renai	0.89	330	⇑iP	Pn	00 23 01.1	-1.2
	baz=334						
OWD				eS	Sn	00 23 11.4	-2.9
	baz=334						
TWD	Chiawan	0.90	356	⇑iP	Pn	00 23 01.1	-1.2
	baz=2.0						
TWD				eS	Sn	00 23 12.7	-1.6
	baz=2.0						
WHYT	Xinyi Township	0.90	305	eP	Pn	00 23 02.0	-0.3
	baz=306						
WHYT				eS	Sn	00 23 13.2	-1.2
	baz=306						
WUSB	Renai	0.95	328	⇓iP	Pn	00 23 02.3	-0.7
	baz=332						
WUSB				eS	Sn	00 23 13.5	-2.1
	baz=332						
SLGT	Liugui	0.95	259	⇓eP	Pn	00 23 03.4	+0.4
	baz=255						
SLGT				eS	Sn	00 23 15.8	+0.2
	baz=255						
TPUB	Ta-pu	0.95	277		Pn	00 23 02.8	-0.3
TPUB					Sn	00 23 17.0	+1.3
TPUB	Ta-pu	0.95	277	⇓P	Pn	00 23 03.0	-0.1
	baz=276						
TPUB				eS	Sn	00 23 16.3	+0.6
	baz=276						
WTP	Ta-pu	0.96	274	⇓eP	Pn	00 23 03.1	-0.1
	baz=272						
WTP				eS	Sn	00 23 16.3	+0.4
	baz=272						
ETL	Fush Village	0.97	358	eP	Pn	00 23 02.4	-1.0
	baz=3.0						
ETL				eS	Sn	00 23 14.8	-1.4
	baz=3.0						
CHGB	Renai	0.98	333	⇑P	Pn	00 23 02.8	-0.8
	baz=336						
CHGB				eS	Sn	00 23 14.3	-2.2
	baz=336						
SMLT	Sun Moon Lake	0.98	315	⇓P	Pn	00 23 03.2	-0.4
	baz=317						
SMLT				eS	Sn	00 23 15.5	-1.0
	baz=317						
NACB	Ninganchiao	0.99	357		Pn	00 23 02.5	-1.0
NACB					Sn	00 23 14.2	-2.3
NACB	Ninganchiao	0.99	357	⇑P	Pn	00 23 02.2	-1.3
	baz=1.0						
NACB				eS	Sn	00 23 14.3	-2.1
	baz=1.0						
CHN4	Tsaushan	0.99	280	⇓P	Pn	00 23 03.7	+0.1
	baz=278						
CHN4				eS	Sn	00 23 17.2	+0.6
	baz=278						
SGST	Jiashian	0.99	264	⇓eP	Pn	00 23 03.0	-0.6
	baz=261						
SGST				eS	Sn	00 23 16.5	-0.1
	baz=261						
WHF	Hehuan Shan	1.02	339	⇑P	Pn	00 23 03.0	-1.3
	baz=343						
WHF				eS	Sn	00 23 15.7	-2.3
	baz=343						
TYC	Yuchr	1.03	314	eP	Pn	00 23 03.9	-0.1
	baz=317						
TYC				eS	Sn	00 23 17.0	-0.4
	baz=317						
ETLH	Xiulin Townshi	1.03	351	⇑eP	Pn	00 23 02.6	-1.6
	baz=355						
ETLH				eS	Sn	00 23 14.9	-2.7
	baz=355						
CHN1	Nanshi	1.04	270	⇓eP	Pn	00 23 04.6	+0.3
	baz=268						
CHN1				eS	Sn	00 23 19.0	+1.3
	baz=268						
SSD	Sandimen	1.04	246	eP	Pn	00 23 03.5	-0.7
	baz=241						
SSD				eS	Sn	00 23 18.4	+0.7
	baz=241						
WPL	Puli Township	1.05	322	⇓eP	Pn	00 23 03.9	-0.4
	baz=324						
WPL				eS	Sn	00 23 17.1	-0.7
	baz=324						
TSMG	Majia	1.05	243	⇓eP	Pn	00 23 03.8	-0.5
	baz=239						
TSMG				eS	Sn	00 23 17.8	-0.1
	baz=239						
WJS	Zhushan	1.06	307	⇓P	Pn	00 23 04.6	+0.1
	baz=308						
WJS				eS	Sn	00 23 19.1	+0.8
	baz=308						
SNST	Tainan City	1.07	272	⇓eP	Pn	00 23 04.7	+0.1
	baz=270						
SNST				eS	Sn	00 23 19.3	+0.9
	baz=270						
DPDB	Guoxing	1.08	322	⇓eP	Pn	00 23 04.7	-0.1
	baz=324						
DPDB				eS	Sn	00 23 18.3	-0.5
	baz=324						
TWK	Hsinying	1.08	275	⇓eP	Pn	00 23 04.8	0.0
	baz=273						
TWK				eS	Sn	00 23 19.9	+1.1
	baz=273						
TAW	Tawu	1.08	221	eP	Pn	00 23 03.8	-1.0
	baz=216						
TAW				eS	Sn	00 23 17.1	-1.6
	baz=216						
EAST	Anshuo	1.09	223	eP	Pn	00 23 04.0	-0.9
	baz=219						
EAST				eS	Sn	00 23 17.8	-1.2
	baz=219						
TAWH	Dawu Township	1.10	220	⇑P	Pn	00 23 04.0	-1.0
	baz=216						
TAWH				S	Sn	00 23 17.4	-1.7
	baz=216						
MASBT	Mashibuluo	1.10	239	⇓eP	Pn	00 23 04.7	-0.4
	baz=235						
MASBT				eS	Sn	00 23 20.0	+0.8
	baz=235						
SCST	Cishan	1.11	255	⇓eP	Pn	00 23 06.2	+1.0
	baz=252						
SCST				eS	Sn	00 23 20.8	+1.4
	baz=252						
EHP	Heping Village	1.12	4	eP	Pn	00 23 04.7	-0.7
	baz=8.0						
EHP				eS	Sn	00 23 18.6	-1.1
	baz=8.0						
WGK	Gukeng	1.12	297	⇓eP	Pn	00 23 05.6	+0.2
	baz=297						
WGK				eS	Sn	00 23 20.6	+0.9
	baz=297						
FUSS	Fushou	1.13	340	⇑P	Pn	00 23 04.8	-0.8
	baz=344						
FUSS				eS	Sn	00 23 18.1	-2.1
	baz=344						
WNT	Mingjian	1.13	308	⇓eP	Pn	00 23 05.7	+0.3
	baz=309						
WNT				eS	Sn	00 23 20.9	+1.0
	baz=309						
CHN2	Minshiung	1.14	288	eP	Pn	00 23 06.2	+0.7
	baz=287						
CHN2				eS	Sn	00 23 21.6	+1.5
	baz=287						
LAY	Lan-yu	1.14	185	⇓iP	Pn	00 23 05.1	-0.6
	baz=181						
LAY				S	Sn	00 23 19.0	-1.2
	baz=181						
WDLH	Douliu	1.15	296	⇓eP	Pn	00 23 05.9	+0.3
	baz=296						
WDLH				eS	Sn	00 23 20.8	+0.6
	baz=296						
WNT1	Nantou City	1.15	309	eP	Pn	00 23 06.1	+0.4
	baz=310						
WNT1				eS	Sn	00 23 21.7	+1.3
	baz=310						
TWT	Tachien	1.15	338	P	Pn	00 23 05.6	-0.3
	baz=340						
TWT				eS	Sn	00 23 19.0	-1.7
	baz=340						
TDCB	Techi	1.16	337	⇑eP	Pn	00 23 05.7	-0.3
	baz=340						
TDCB				eS	Sn	00 23 18.7	-2.1
	baz=340						
SGLT	Jiouru	1.17	247	eP	Pn	00 23 07.4	+1.5
	baz=244						
SGLT				eS	Sn	00 23 25.5	+4.7
	baz=244						
CHY	Chiayi	1.18	286	⇓eP	Pn	00 23 06.2	+0.2
	baz=285						
CHY				eS	Sn	00 23 20.2	-0.8
	baz=285						
LYUB	Lan-yu	1.18	183	⇓P	Pn	00 23 04.9	-1.1
	baz=180						
LYUB				eS	Sn	00 23 18.2	-2.8
	baz=180						
TWM1	Shoushan	1.19	253	⇓eP	Pn	00 23 08.1	+1.8
	baz=250						
TWM1				eS	Sn	00 23 25.4	+4.0
	baz=250						
CHN3	Shinhua	1.20	265	eP	Pn	00 23 07.8	+1.5
	baz=263						
CHN3				eS	Sn	00 23 24.9	+3.5
	baz=263						
SHHT	Tainan City	1.22	263	⇓eP	Pn	00 23 08.2	+1.6
	baz=260						
SHHT				eS	Sn	00 23 25.1	+3.1
	baz=260						
SSPT	Xinbi	1.22	236	eP	Pn	00 23 07.3	+0.7
	baz=232						
SSPT				eS	Sn	00 23 22.7	+0.6
	baz=232						
WWF	Wufeng	1.23	314	⇓eP	Pn	00 23 07.4	+0.7
	baz=316						
WWF				eS	Sn	00 23 23.9	+1.6
	baz=316						
ENA	Nanau	1.24	3	⇑P	Pn	00 23 06.2	-0.8
	baz=8.0						
ENA				eS	Sn	00 23 21.2	-1.4
	baz=8.0						
SLIU	Shizi	1.25	220	⇑eP	Pn	00 23 06.1	-0.9
	baz=216						
SLIU				eS	Sn	00 23 20.9	-1.8
	baz=216						
SCZT	Fangliau	1.25	230	eP	Pn	00 23 07.1	0.0
	baz=226						
SCZT				eS	Sn	00 23 23.6	+0.8
	baz=226						
WYL	Yuanlin Townsh	1.26	308	eP	Pn	00 23 07.8	+0.6
	baz=309						
WYL				eS	Sn	00 23 24.6	+1.7
	baz=309						
EWUT	Wuta	1.26	5	⇑eP	Pn	00 23 06.4	-0.8
	baz=9.0						
EWUT				eS	Sn	00 23 21.5	-1.6
	baz=9.0						
NNSB	Datong	1.27	349	eP	Pn	00 23 06.6	-0.8
	baz=352						
WHP	Taichung City	1.27	329	eP	Pn	00 23 07.5	+0.1
	baz=331						
WHP				eS	Sn	00 23 23.9	+0.5
	baz=331						
WTK	Tuku	1.27	294	⇓eP	Pn	00 23 07.2	-0.1
	baz=293						

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WTK                               eS      Sn        00 23 23.0  -0.2
          baz=293
NNS       Nan Shan      1.28 348  eP      Pn        00 23 06.6  -1.0
          baz=352
NNS                               eS      Sn        00 23 22.5  -1.1
          baz=352
ICHU      Yijhu         1.28 278⇓eP      Pn        00 23 07.6  +0.2
          baz=277
ICHU                              eS      Sn        00 23 23.2  -0.3
          baz=277
TCU       Taichung      1.32 317⇓eP      Pn        00 23 08.7  +0.7
          baz=319
TCU                               eS      Sn        00 23 25.8  +1.4
          baz=319
TAI1      Yung-k'ang    1.32 264  eP      Pn        00 23 07.5  -0.5
          baz=262
TAI1                              eS      Sn        00 23 26.4  +1.9
          baz=262
CHN8      Yiju          1.34 277⇓eP      Pn        00 23 08.4  +0.2
          baz=276
CHN8                              eS      Sn        00 23 25.5  +0.5
          baz=276
SCLT      Jiali         1.35 270  eP      Pn        00 23 08.8  +0.5
          baz=268
SCLT                              eS      Sn        00 23 26.3  +1.2
          baz=268
WCHH      Zhanghua      1.35 312⇓eP      Pn        00 23 08.8  +0.4
          baz=313
WCHH                              eS      Sn        00 23 26.6  +1.5
          baz=313
LATG      Datong        1.35 355  eP      Pn        00 23 07.5  -1.0
          baz=358
WSL       Shuilin Townsh 1.36 285⇓eP     Pn        00 23 08.4  -0.1
          baz=284
WSL                               eS      Sn        00 23 25.0  -0.4
          baz=284
WRL       Guolierlin Hig 1.38 302⇓eP     Pn        00 23 08.6  -0.1
          baz=302
WRL                               eS      Sn        00 23 25.5  -0.4
          baz=302
WSF       Szhu          1.40 289⇓eP      Pn        00 23 08.7  -0.2
          baz=289
WSF                               eS      Sn        00 23 25.9  -0.4
          baz=289
WSSB      Gushan        1.40 248  eP      Pn        00 23 10.9  +1.8
          baz=245
TWQ1      Liyutan       1.42 325  eP      Pn        00 23 10.0  +0.7
          baz=327
TWQ1                              eS      Sn        00 23 27.6  +0.8
          baz=327
NDT       Datong Townshi 1.42 355 eP      Pn        00 23 08.7  -0.7
          baz=358
NDT                               eS      Sn        00 23 25.2  -1.7
          baz=358
TWC       Suao          1.43   7⇑eP      Pn        00 23 09.2  -0.2
          baz=11
TWC                               eS      Sn        00 23 26.7  -0.4
          baz=11
WTCT      Ta-ch'eng     1.43 298⇓eP      Pn        00 23 09.4  -0.1
          baz=299
WTCT                              eS      Sn        00 23 27.3  +0.1
          baz=299
WLCH      Liuqiu        1.44 235  eP      Pn        00 23 12.5  +2.9
          baz=232
NDS       Dongshan      1.45   2  eP      Pn        00 23 08.9  -0.8
          baz=5.0
NDS                               eS      Sn        00 23 27.3  -0.3
          baz=5.0
HEN       Hengchun      1.45 216  eP      Pn        00 23 10.0  +0.3
          baz=212
ENTT      Nioudou       1.45 357  eP      Pn        00 23 09.0  -0.8
ENTT                              eS      Sn        00 23 27.5  -0.2
WMLT      Mailiao       1.46 295  eP      Pn        00 23 09.7  -0.1
          baz=295
WMLT                              eS      Sn        00 23 27.4  -0.3
          baz=295
TSEB      Hengchuen, Pin 1.46 209 eP      Pn        00 23 09.7  -0.1
          baz=207
TSEB                              eS      Sn        00 23 29.2  +1.4
          baz=207
TWP       Hsiaoliuchiu  1.46 235  eP      Pn        00 23 12.6  +2.7
          baz=232
TWKBT     Hengchun      1.46 212  eP      Pn        00 23 09.8  -0.1
          baz=209
TWKBT                             eS      Sn        00 23 27.5  -0.4
          baz=209
NSY       Sanyi         1.48 326  eP      Pn        00 23 11.0  +0.8
          baz=328
NSY                               eS      Sn        00 23 30.9  +2.5
          baz=328
WDJ       Dajia District 1.49 321⇓eP     Pn        00 23 10.8  +0.6
          baz=323
WDJ                               eS      Sn        00 23 30.0  +1.5
          baz=323
YHNB      Yeheng        1.50 350          Pn        00 23 10.3  -0.3
YHNB      Yeheng        1.50 350  eP      Pn        00 23 10.1  -0.5
          baz=353
YHNB                              eS      Sn        00 23 28.0  -1.0
          baz=353
NSK       Sanguang      1.51 350  eP      Pn        00 23 10.6  -0.1
          baz=353
NSK                               eS      Sn        00 23 28.1  -1.1
          baz=353
NFF       Wufeng Townshi 1.52 341 eP      Pn        00 23 11.3  +0.5
          baz=344
NFF                               eS      Sn        00 23 29.5  -0.1
          baz=344
TWE       Neicheng      1.53   0  eP      Pn        00 23 10.2  -0.7
          baz=4.0
TWE                               eS      Sn        00 23 28.9  -0.7
          baz=4.0
NSTT      Nanjuang      1.56 337⇓eP      Pn        00 23 11.8  +0.5
          baz=340
NSTT                              eS      Sn        00 23 30.3  -0.1
          baz=340
NMLH      Miaoli        1.56 330⇓eP      Pn        00 23 11.8  +0.5
          baz=331
NMLH                              eS      Sn        00 23 31.2  +0.8
          baz=331
LIOB      Emei          1.57 338⇓eP      Pn        00 23 12.1  +0.7
          baz=340
LIOB                              eS      Sn        00 23 31.1  +0.5
          baz=340
FUSB      Fushanzhiwuyua 1.57 358 eP      Pn        00 23 11.1  -0.4
FUSB                              eS      Sn        00 23 29.5  -1.2
ILA       Ilan          1.58   3  eP      Pn        00 23 11.7  +0.3
          baz=6.0
NWLT      Wulai         1.59 355  eP      Pn        00 23 11.4  -0.3
          baz=358
NWLT                              eS      Sn        00 23 30.3  -0.9
          baz=358
NJN       Zhunan        1.66 334  eP      Pn        00 23 13.2  +0.6
          baz=336
NJN                               eS      Sn        00 23 33.7  +1.0
          baz=336
NTC       Toucheng      1.67   5  eP      Pn        00 23 12.8  +0.1
          baz=8.0
NTC                               eS      Sn        00 23 32.3  -0.7
          baz=8.0
EGS                     1.67   9  eP      Pn        00 23 13.9  +1.1
          baz=12
HSN1      Hsinchu       1.69 340  eP      Pn        00 23 14.0  +0.9
          baz=342
SBCB      Hsinchu       1.72 339  eP      Pn        00 23 14.0  +0.7
          baz=341
SBCB                              eS      Sn        00 23 35.9  +1.7
          baz=341
JYNG      Yonagunijimaku 1.73  43  P      Pn        00 23 14.4  +0.8
JYNG                              eS      Sn        00 23 35.0  +0.6
JYNG      Yonagunijimaku 1.73  43  A      A         00 23 14.4
          comp=E,33nm,1.1s,comp=E,35nm,0.6s
HSN       Hsinchu       1.73 339  eP      Pn        00 23 14.2  +0.7
          baz=342
HSN                               eS      Sn        00 23 34.6  +0.1
          baz=342
NHDH      Xindian Distri 1.78 356 eP      Pn        00 23 14.6  +0.4
          baz=359
NHDH                              eS      Sn        00 23 35.7   0.0
          baz=359
YOJ       Yonaguni jima 1.78  44   Pn     Pn        00 23 14.8  +0.7
YOJ       Yonaguni jima 1.78  44   P      Pn        00 23 14.9  +0.7
YOJ       Yonaguni jima 1.78  44  i P     Pn        00 23 14.9  +0.7
          baz=46
YOJ                                S      Sn        00 23 35.9  +0.2
          baz=46
YOJ       Yonaguni jima 1.78  44   P      Pn        00 23 15.0  +0.8
YOJ                                S      Sn        00 23 36.5  +0.8
YOJ       Yonaguni jima 1.78  44   A      A         00 23 15.0
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          comp=E,15nm,0.9s,comp=E,14nm,0.8s
TIPB      Shuangxi      1.79   5  eP      Pn        00 23 14.7  +0.3
          baz=8.0
TIPB                              eS      Sn        00 23 36.0  +0.1
          baz=8.0
TATO      Taipei        1.79 355          Pn        00 23 14.7  +0.3
TATO      Taipei        1.79 355  eP      Pn        00 23 13.8  -0.6
          baz=358
TATO                              eS      Sn        00 23 35.5  -0.4
          baz=358
TWA       Mucha         1.79 358  eP      Pn        00 23 14.9  +0.5
          baz=1.0
TWA                               eS      Sn        00 23 35.7  -0.3
          baz=1.0
NCUH      Zhongli       1.83 346  eP      Pn        00 23 15.6  +0.7
          baz=348
NCU       National Centr 1.83 346 eP      Pn        00 23 15.6  +0.6
          baz=349
NCU                               eS      Sn        00 23 38.3  +1.4
          baz=349
WDGT      Dungji        1.84 273⇓eP      Pn        00 23 14.5  -0.6
          baz=271
WDGT                              eS      Sn        00 23 34.9  -2.3
          baz=271
TWB1      Santiao Chiao 1.84   9⇑eP      Pn        00 23 15.6  +0.5
          baz=12
TWB1                              eS      Sn        00 23 36.7  -0.5
          baz=12
NWF       Wu-fen Shan   1.88   3  eP      Pn        00 23 16.2  +0.5
          baz=6.0
WFSB      Wu-fen Shan   1.88   3  eP      Pn        00 23 16.3  +0.6
          baz=6.0
NHW       Xinwu Township 1.90 343 eP      Pn        00 23 16.3  +0.4
          baz=345
SXI1      Grass Mountain 1.91  6⇑eP      Pn        00 23 17.0  +0.8
          baz=8.0
SXI1                              eS      Sn        00 23 39.8  +0.7
          baz=8.0
TWS1      Kuangyinshan  1.92 353  eP      Pn        00 23 16.6  +0.4
          baz=356
TWS1                              eS      Sn        00 23 40.2  +1.0
          baz=356
PHUB      P'eng-hu      1.94 280⇓eP      Pn        00 23 15.8  -0.7
          baz=279
PHUB                              eS      Sn        00 23 37.3  -2.4
          baz=279
YM01      YM01          1.96 358  eP      Pn        00 23 15.7  -1.0
          baz=360
TNOU      National Taiwa 1.96   3 eP      Pn        00 23 17.0  +0.3
          baz=5.0
TNOU                              eS      Sn        00 23 39.5  -0.7
          baz=5.0
PNG       Penghu        1.97 282⇓eP      Pn        00 23 16.2  -0.6
          baz=281
PNG                               eS      Sn        00 23 38.0  -2.3
          baz=281
NTST      Danshui       1.98 355  eP      Pn        00 23 16.6  -0.4
          baz=357
NTST                              eS      Sn        00 23 39.7  -1.0
          baz=357
YM08      YM08          2.00 358  eP      Pn        00 23 16.8  -0.4
ANP       Anpu          2.00 356  eP      Pn        00 23 16.7  -0.7
          baz=359
VCHM      Qimei         2.05 271⇓eP      Pn        00 23 17.3  -0.6
          baz=270
VCHM                              eS      Sn        00 23 39.7  -2.7
          baz=270
TWY       Chenhua       2.08 359  eP      Pn        00 23 18.8  +0.4
          baz=1.0
HATJ      Hateruma jima 2.15  66   P      Pn        00 23 20.0  +0.7
HATJ                               S      Sn        00 23 45.2  +0.4
HATJ      Hateruma jima 2.15  66   A      A         00 23 20.0
          comp=E,20nm,1.8s,comp=E,18nm,1.1s
IRIF      Iriomote-Funau 2.22  58  P      Pn        00 23 21.1  +0.8
IRIF                               S      Sn        00 23 46.9  +0.4
IRIF      Iriomote-Funau 2.22  58  A      A         00 23 21.1
          comp=E,14nm,1.9s,comp=E,23nm,1.4s
JKRS      Kuro-shima    2.40  64   P      Pn        00 23 23.6  +0.9
JKRS                               S      Sn        00 23 51.2  +0.4
JKRS      Kuro-shima    2.40  64   A      A         00 23 23.6
          comp=E,11nm,1.4s,comp=E,12nm,1.9s
PCYT      Pengchaiyu    2.46   9  eP      Pn        00 23 23.8  +0.2
          baz=11
PCYT                              eS      Sn        00 23 51.9  -0.6
          baz=11
JIJ       Ishigaki jima 2.56  62   P      Pn        00 23 25.3  +0.3
JIJ                                S      Sn        00 23 54.2  -0.7
JIJ       Ishigaki jima 2.56  62   A      A         00 23 25.3
          comp=E,3.0nm,0.4s,comp=E,6.0nm,1.2s
VWUC      VWUC          2.71 312⇓eP      Pn        00 23 25.7  -1.2
          baz=312
VWUC                              eS      Sn        00 23 55.3  -3.1
          baz=312
JISG      Ishigakijimahi 2.80  60  P      Pn        00 23 28.3  +0.1
JISG                              eS      Sn        00 23 59.8  -1.0
PTMZ      Houxiangcun   2.97 309⇓eP      Pn        00 23 29.4  -1.1
          baz=309
PTMZ                              eS      Sn        00 24 01.7  -3.1
          baz=309
JTJ       Tarama        3.14  62   P      Pn        00 23 33.3  +0.4
JTJ                                S      Sn        00 24 08.9  -0.2
KNM       Kinmen        3.20 293⇓eP      Pn        00 23 33.9  +0.2
          baz=292
KNM                               eS      Sn        00 24 09.9  -0.7
          baz=292
KNMB      Chin-men Tao  3.25 294   Pn     Pn        00 23 32.9  -1.5
KNMB      Chin-men Tao  3.25 294⇓eP      Pn        00 23 33.1  -1.4
          baz=293
KNMB                              eS      Sn        00 24 08.2  -3.7
          baz=293
QZH       Quanzhou      3.31 303 ⇓iP     Pn        00 23 33.6  -1.5
QZH                                S      Sn        00 24 09.8  -3.4
QZH                                smax   smax
          comp=N,2μm,0.3s
QZH                                smax   smax
          comp=E,960nm,0.2s
QZH                                LR     LR
          comp=N,2μm,8.0s
QZH                                LR     LR
          comp=E,1μm,9.7s
QZH                                LR     LR
          comp=Z,2μm,11.2s
MATB      Ma-tsu        3.34 333⇓eP      Pn        00 23 34.4  -1.3
          baz=333
MATB                              eS      Sn        00 24 10.9  -3.2
          baz=333
MSUT      Lienchiang    3.37 332  eP      Pn        00 23 35.1  -0.9
          baz=333
MSUT                              eS      Sn        00 24 12.4  -2.3
          baz=333
JIRB      Irabujima     3.61  62  eP      Pn        00 23 40.2  +0.9
JIRB                              eS      Sn        00 24 20.5  -0.1
ZPLA      Ao Xicun      3.66 282⇓eP      Pn        00 23 39.1  -1.0
          baz=281
ZPLA                              eS      Sn        00 24 18.4  -3.6
          baz=281
JMJ2      Miyako jima3  3.70  64   P      Pn        00 23 41.4  +0.9
JMJ2                              eS      Sn        00 24 22.8   0.0
JMJ       Miyako jima 2 3.70  63  eP      Pn        00 23 41.0  +0.4
          baz=65
JMJ                               eS      Sn        00 24 22.4  -0.5
          baz=65
JIKM      Ikemajima     3.71  61  eP      Pn        00 23 40.9  +0.2
JIKM                               S      Sn        00 24 22.6  -0.5
MHZQ      Yeshan        3.76 321⇓eP      Pn        00 23 40.2  -1.2
          baz=321
MHZQ                              eS      Sn        00 24 21.2  -3.2
          baz=321
LYJJ      Jianjiangzhen 3.77 333⇓eP      Pn        00 23 40.3  -1.2
          baz=334
LYJJ                              eS      Sn        00 24 21.7  -2.9
          baz=334
JOGS      Gusukube      3.77  65   P      Pn        00 23 42.3  +0.7
JOGS                               S      Sn        00 24 25.4  +0.7
AXDP      Jialang       3.78 298⇓eP      Pn        00 23 40.4  -1.2
          baz=297
AXDP                              eS      Sn        00 24 21.4  -3.5
          baz=297
DSXP      Dongshan      3.92 278  eP      Pn        00 23 42.8  -0.8
          baz=277
DSXP                              eS      Sn        00 24 24.4  -4.0
          baz=277
XPSS      Dashiqiu      3.96 341  eP      Pn        00 23 42.9  -1.2
          baz=341
XPSS                              eS      Sn        00 24 26.4  -3.0
          baz=341
HKPS      Hong Kong Po S 7.00 264  Pn     Pn        00 24 25.7  -0.1
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JOW       Kunigami      7.01  57   Pn     Pn        00 24 23.1  -3.0
          43nm,0.3s,baz=332,slow=13,SNR=12
JOW                                Sn     Sn        00 25 40.9  -3.6
          4.6nm,0.3s,baz=298,slow=11,SNR=1.3
          95nm,0.3s
SSE       Sheshan       7.89 357   P      Pn        00 24 40.4  +2.4
SSE                                S      Sn        00 26 11.0  +5.0
SSE                                smax   smax
          comp=N,29nm,0.7s
SSE                                smax   smax
          comp=E,59nm,0.8s
SSE                                LR     LR
          comp=N,170nm,15.8s
SSE                                LR     LR
          comp=E,230nm,15.5s
NJ2       Nanjing       9.18 345  eP      Pn        00 24 53.5  -2.1
NJ2                                S      Sn        00 26 33.9  -3.6
NJ2                                pmax   pmax
          comp=Z,34nm,0.5s
NJ2                                smax   smax
          comp=N,150nm,0.8s
NJ2                                smax   smax
          comp=E,74nm,0.9s
NJ2                                LR     LR
          comp=N,290nm,4.6s
NJ2                                LR     LR
          comp=E,720nm,4.0s
NJ2                                LR     LR
          comp=Z,390nm,6.5s
CNSH      ChangSha      9.31 304 ⇓P      Pn        00 24 50.8  -6.7
CNSH                               S      Sn        00 26 30.3   -11
CNSH                               smax   smax
          comp=N,280nm,0.7s
CNSH                               smax   smax
          comp=E,430nm,0.8s
WHN       Wuhan         9.81 320 ⇑P      Pn        00 25 02.8  -1.5
WHN                                S      Sn        00 26 48.8  -4.2
WHN                                LR     LR
          comp=E,1μm,7.0s
WHN                                LR     LR
          comp=E,1μm,6.7s
WHN                                LR     LR
          comp=E,2μm,7.5s
QIZ       Qiongzhong   11.78 252   P      Pn        00 25 34.0  +2.7
QIZ                                S      Sn        00 27 42.6  +1.3
QIZ                                LR     LR
          comp=E,480nm,18.1s
QIZ                                LR     LR
          comp=E,390nm,22.6s
QIZ                                LR     LR
          comp=E,340nm,15.1s
JNU       Nakatsue     12.81  37   Pn     Pn        00 25 42.4  -2.9
          comp=E,0.3nm,0.3s,baz=138,slow=12,SNR=1.4
          comp=E,7.2nm,1.0s
JNU       Nakatsue     12.81  37          Pn        00 25 43.8  -1.5
TIA       Tai'an       13.56 344  eP      Pn        00 25 58.1  +2.5
TIA                                pmax   pmax
          comp=E,3.0nm,0.5s
TIA                                pmax   pmax
          comp=E,44nm,2.7s
TIA                                LR     LR
          comp=E,160nm,5.1s
TIA                                LR     LR
          comp=E,390nm,5.8s
TIA                                LR     LR
          comp=E,120nm,7.5s
LYN       LuoYang      13.89 327  eP      Pn        00 26 02.3  +2.3
LYN                                pP     P         00 26 07.4  +0.6
LYN                                PP     PnPn      00 26 13.1  +4.9
LYN                                S      Sn        00 28 41.5  +8.9
LYN                                pmax   pmax
          comp=E,10.0nm,0.6s
LYN                                LR     LR
          comp=E,630nm,10.8s
LYN                                LR     LR
          comp=E,500nm,10.4s
LYN                                LR     LR
          comp=E,560nm,14.1s
KSCHJ     Chungju      14.69  20          P         00 26 14.1  -1.6
KSRS      Korea Array  15.21  19   Pn     Pn        00 26 18.9  +1.6
          comp=E,0.3nm,0.3s,baz=197,slow=11,SNR=4.5
KSRS                               LR     LR        00 32 40.5
          comp=E,103nm,18.7s,baz=200,slow=40
HNS       HongShan     15.38 339 ⇓P      P         00 26 21.9  -1.4
HNS                                S      Sn        00 29 13.1  +4.3
HNS                                pmax   pmax
          comp=E,16nm,1.3s
HNS                                LR     LR
          comp=E,300nm,14.1s
HNS                                LR     LR
          comp=E,230nm,10.4s
HNS                                LR     LR
          comp=E,290nm,13.5s
JHS       Saijyo       15.44  38          P         00 26 24.4  +0.3
XAN       Xi'an        15.54 317 ⇓P      Pn        00 26 21.1  -0.7
XAN                                pP     P         00 26 30.8  +5.5
XAN                                sP     sP        00 26 40.0  -4.1
XAN                                S      S         00 29 21.5  -4.8
XAN                                pmax   pmax
          comp=E,17nm,1.0s
XAN                                LR     LR
          comp=E,350nm,12.4s
XAN                                LR     LR
          comp=E,650nm,15.1s
XAN                                LR     LR
          comp=E,1μm,17.9s
KMI       Kunming      17.38 280   SS     S         00 30 03.9  -0.2
KMI                                AMB    AMB
          comp=Z,4μm,19.2s
KMI                                LR     LR
          comp=N,15μm,22.4s
KMI                                LR     LR
          comp=E,12μm,23.8s
KMI                                LR     LR
          comp=Z,29μm,22.4s
KMI       Kunming      17.38 280 ⇑P      P         00 26 49.1  +3.3
KMI                                pmax   pmax
          comp=Z,7.0nm,0.9s
KMI                                LR     LR
          comp=Z,330nm,26.2s
KMI                                LR     LR
          comp=Z,350nm,21.3s
KMI                                LR     LR
          comp=Z,320nm,22.6s
PZH       PanZhiHua    18.37 284   P      Pn        00 26 58.8  +1.6
PZH                                S      Sn        00 30 16.3  -5.4
PZH                                pmax   pmax
          comp=Z,10.0nm,0.9s
PZH                                pmax   pmax
          comp=Z,100nm,5.4s
PZH                                LR     LR
          comp=Z,380nm,21.7s
PZH                                LR     LR
          comp=Z,360nm,20.3s
PZH                                LR     LR
          comp=Z,420nm,21.2s
JHJ       Hachijo jima 2 18.77 54  LR     LR        00 34 45.3
          comp=Z,82nm,18.4s,baz=208,slow=39
JCJ       Chichijima   18.98  74   P      Pn        00 27 04.8  +0.4
          comp=Z,17nm,0.7s,baz=280,slow=13,SNR=4.4
JCJ                                LR     LR        00 33 42.9
          comp=Z,47nm,19.6s,baz=293,slow=35
JCJ       Chichijima   18.98  74   P      Pn        00 27 05.3  +0.9
JCJ                                IAmb   IAmb      00 27 20.8
          comp=Z,104nm,1.3s
MAJO      Matsushiro   19.54  43   P      Pn        00 27 13.9  +3.0
MAJO      Matsushiro   19.54  43   P      Pn        00 27 13.9  +3.0
MAJO                               pmax   pmax
          comp=Z,15nm,1.2s
MJAR      Matsushiro Arr 19.54 43  P      Pn        00 27 12.7  +1.7
          comp=Z,8.4nm,0.9s,baz=227,slow=8.6,SNR=13
MJAR                               LR     LR        00 35 00.1
          comp=Z,113nm,20.1s,baz=221,slow=38
MJAR      Matsushiro Arr 19.54 43  P      Pn        00 27 15.0  +4.1
MJAR      Matsushiro Arr 19.54 43  P      Pn        00 27 15.0  +4.1
MJAR                               pmax   pmax
          comp=Z,7.0nm,1.1s
HHC       Hu-ho-hao-te 19.56 337  eP      Pn        00 27 11.3  +0.1
HHC                                pmax   pmax
          comp=Z,50nm,0.9s
HHC                                pmax   pmax
          comp=Z,110nm,5.0s
HHC                                LR     LR
          comp=Z,210nm,8.3s
HHC                                LR     LR
          comp=Z,210nm,8.9s
HHC                                LR     LR
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      comp=Z,300nm,8.2s
BTO   Baotou             19.95 333  eP    Pn     00 27 16.3 +0.5
BTO                                 S     Sn     00 30 59.9 +0.4
BTO                                 LR    LR
      comp=Z,1µm,14.7s
BTO                                 LR    LR
      comp=Z,790nm,10.8s
LZH   Lanzhou            20.09 314  eP    P      00 27 15.9 +0.5
LZH                                 PP    sP     00 27 35.6 +1.6
LZH                                 S     S      00 30 58.0 -0.4
LZH                                 sS    sS     00 31 13.0 -3.6
LZH                                 SS    SnSn   00 31 25.4 +7.4
LZH                                 pmax  pmax
      comp=Z,13nm,1.0s
LZH                                 pmax  pmax
      comp=Z,58nm,4.9s
LZH                                 LR    LR
      comp=Z,390nm,10.3s
LZH                                 LR    LR
      comp=Z,470nm,10.6s
LZH                                 LR    LR
      comp=Z,630nm,14.9s
CN2   Changchun          20.80   8  eP    P      00 27 24.3 +1.4
CN2                                 pmax  pmax
      comp=Z,10.0nm,0.5s
CN2                                 LR    LR
      comp=Z,200nm,16.0s
CN2                                 LR    LR
      comp=Z,100nm,16.0s
CN2                                 LR    LR
      comp=Z,200nm,18.0s
CHTO  Chiang Mai         21.64 263  P     P      00 27 34.0 +1.9
CHTO                                IAmb  IAmb   00 27 36.3
      comp=Z,24nm,0.8s
CHTO  Chiang Mai         21.64 263  P     P      00 27 34.0 +1.9
CHTO                                pmax  pmax
      comp=Z,24nm,0.9s
CM31  Chiang Mai Arr     21.74 262  P     P      00 27 35.4 +2.3
CM31                                IAmb  IAmb   00 27 37.5
      comp=Z,23nm,1.1s
CMAR  Chiang Mai Arr     21.74 262  P     P      00 27 33.2 +0.1
      comp=Z,8.9nm,0.8s,baz=62,slow=8.3,SNR=53
CMAR                                PcP   PcP    00 31 32.2 -0.2
      comp=Z,1.1nm,0.3s,baz=19,slow=1.4,SNR=5.3
CMAR                                LR    LR     00 36 31.4
      comp=Z,239nm,20.4s,baz=85,slow=38
      comp=Z,8.9nm,0.8s
CMAR  Chiang Mai Arr     21.74 262 i P    P      00 27 35.5 +2.4
CMAR                                pmax  pmax
      comp=Z,12nm,0.9s
TOLI2 Tolitoli           21.96 182  P     P      00 27 34.8 -0.6
MDJ   Mudanjiang         22.35  15  P     P      00 27 40.6 +1.2
USRK  Ussuriysk Ar.      22.62  20  P     P      00 27 42.4 +0.1
      comp=Z,3.1nm,0.6s,baz=195,slow=10,SNR=2.7
      comp=Z,3.1nm,0.6s
KSM   Kuching            24.23 209  P     P      00 27 58.1  0.0
KSM                                 IAmb  IAmb   00 27 59.6
      comp=Z,62nm,1.4s
GTA   Gaotai             24.60 316  eP    P      00 28 01.8 +0.3
GTA                                 pP    pP     00 28 12.8 -1.7
GTA                                 sP    sP     00 28 15.8 -4.7
GTA                                 pmax  pmax
      comp=Z,10.0nm,1.1s
GTA                                 LR    LR
      comp=Z,200nm,13.5s
GTA                                 LR    LR
      comp=Z,310nm,13.5s
GTA                                 LR    LR
      comp=Z,360nm,15.1s
BKB   Balikpapan         24.73 191  P     P      00 28 01.9 -0.7
GOMU  GeErMu             26.58 305  P     P      00 28 20.0 +0.2
GOMU                                S     S      00 32 47.8 -3.4
GOMU                                pmax  pmax
      comp=Z,3.0nm,0.9s
GOMU                                pmax  pmax
      comp=Z,52nm,4.8s
GOMU                                LR    LR
      comp=Z,100nm,13.2s
GOMU                                LR    LR
      comp=Z,250nm,13.1s
GOMU                                LR    LR
      comp=Z,280nm,13.8s
ASAJ  Asahikawa          27.06  34  LR    LR     00 39 45.0
      comp=Z,108nm,20.9s,baz=184,slow=38
KLR   Kul'dur            27.19  15  P     P      00 28 23.9 -0.7
      comp=Z,4.7nm,0.6s,baz=220,slow=6.0,SNR=15
KLR                                 LR    LR     00 40 17.1
      comp=Z,111nm,18.7s,baz=203,slow=39
      comp=Z,4.7nm,0.6s
KLR   Kul'dur            27.19  15⇓iP     P      00 28 25.7 +1.1
KLR                                 pmax  pmax
      comp=Z,9.0nm,1.3s
ULN   Ulaanbaatar        27.25 338  P     P      00 28 23.9 -1.5
ULN   Ulaanbaatar        27.25 338⇓iP     P      00 28 24.6 -0.8
ULN                                 pmax  pmax
      comp=Z,5.0nm,0.6s
SONM  Songino Array      27.45 337  P     P      00 28 25.9 -1.2
      comp=Z,4.2nm,0.7s,baz=154,slow=9.7,SNR=18
SONM                                LR    LR     00 40 36.1
      comp=Z,230nm,18.2s,baz=128,slow=39
      comp=Z,4.2nm,0.7s
SONM  Songino Array      27.45 337  P     P      00 28 25.6 -1.5
SONM  Songino Array      27.45 337  P     P      00 28 25.6 -1.5
SONM                                pmax  pmax
      comp=Z,3.0nm,0.8s
LSA   Lhasa              28.02 290  P     P      00 28 34.0 +1.1
KAPI  Kappang            28.09 184  P     P      00 28 34.5 +1.7
      comp=Z,4.3nm,0.5s,baz=11,slow=14,SNR=2.4
KAPI                                LR    LR     00 40 57.2
      comp=Z,115nm,20.9s,baz=28,slow=39
      comp=Z,4.3nm,0.5s
PSI   Prapat             29.92 231  P     P      00 28 49.4  0.0
      comp=Z,7.6nm,0.7s,baz=1.0,slow=5.8,SNR=5.8
      comp=Z,7.6nm,0.7s
RPSI  Rantau Prapat      30.00 231  P     P      00 28 49.4 -0.5
LEM   Lembang            32.83 206  P     P      00 29 15.6 +0.6
      comp=Z,17nm,0.6s,baz=352,slow=19,SNR=2.1
LEM                                 LR    LR     00 42 46.7
      comp=Z,132nm,18.1s,baz=328,slow=37
      comp=Z,17nm,0.6s
KNGR  Kungurtug, Tuv     33.20 332⇓eP     P      00 29 19.4 +1.5
WMQ   Urumqi             34.66 315  eP    P      00 29 33.8 +3.2
WMQ                                 LR    LR
      comp=Z,110nm,14.3s
YAK   Yakutsk            39.21   6  LR    LR     00 48 07.6
      comp=Z,81nm,19.1s,baz=178,slow=39
YAK   Yakutsk            39.21   6⇓eP     P      00 30 06.0 -2.8
YAK                                 pmax  pmax
      comp=Z,11nm,0.5s
MK31  Makanchi Array     39.36 317  P     P      00 30 10.4  0.0
MK31                                IAmb  IAmb   00 30 11.5
      comp=Z,16nm,0.8s
MK31  Makanchi Array     39.36 317c iP    P      00 30 10.5 +0.1
MKAR  Makanchi Array     39.36 317  P     P      00 30 10.6 +0.2
      comp=Z,19nm,0.7s,baz=110,slow=9.9,SNR=144
MKAR                                PcP   PcP    00 32 17.0 -0.9
      comp=Z,1.6nm,0.8s,baz=85,slow=5.4,SNR=3.9
      comp=Z,19nm,0.7s
MKAR  Makanchi Array     39.36 317  P     P      00 30 10.4  0.0
MAKZ  Makanchi           39.56 316  P     P      00 30 11.9 -0.1
MAKZ  Makanchi           39.56 316  P     P      00 30 11.9 -0.1
MAKZ                                pmax  pmax
      comp=Z,23nm,0.9s
PETK  Petropavlovsk-     40.46  33  P     P      00 30 20.0 +0.6
      comp=Z,5.8nm,0.8s,baz=199,slow=4.1,SNR=3.6
PETK                                LR    LR     00 48 15.1
      comp=Z,74nm,19.3s,baz=250,slow=38
      comp=Z,5.8nm,0.8s
PETK  Petropavlovsk-     40.46  33  P     P      00 30 19.8 +0.4
PETK  Petropavlovsk-     40.46  33  P     P      00 30 19.8 +0.4
ZAA0  Zalesovo Array     41.32 328  P     P      00 30 25.2 -1.2
ZAA0                                IAmb  IAmb   00 30 26.7
      comp=Z,16nm,0.7s
ZALV  Zalesovo Beam      41.32 328  P     P      00 30 25.6 -0.8
      comp=Z,15nm,0.4s,baz=116,slow=8.3,SNR=66
ZALV                                LR    LR     00 48 56.1
      comp=Z,116nm,18.3s,baz=89,slow=38
      comp=Z,15nm,0.4s
ZALV  Zalesovo Beam      41.32 328  P     P      00 30 25.2 -1.2
MA2   Magadan            41.74  22  LR    LR     00 48 12.2
      comp=Z,82nm,21.0s,baz=136,slow=37
KSH   Kashi              41.81 304  P     P      00 30 34.8 +4.0
KSH                                 pP    pP     00 30 44.8 +0.3
KSH                                 S     S      00 36 51.8 +6.8
KSH                                 pmax  pmax
      comp=Z,8.0nm,0.7s
H11N1 WAKE ISLAND Hy     42.12  86  T     T      01 15 43.9
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      baz=283,slow=74,SNR=124
H11N2 WAKE ISLAND Hy     42.12  86  T     T      01 15 46.4
      baz=283,slow=74,SNR=114
H11N3 WAKE ISLAND Hy     42.13  86  T     T      01 15 45.1
      baz=283,slow=74,SNR=90
H11S3 WAKE ISLAND Hy     42.22  88  T     T      01 15 54.6
      baz=285,slow=75,SNR=100
H11S1 WAKE ISLAND Hy     42.23  88  T     T      01 15 55.3
      baz=285,slow=75,SNR=67
H11S2 WAKE ISLAND Hy     42.23  88  T     T      01 15 56.1
      baz=285,slow=75,SNR=69
PALK  Pallekele          42.38 255  LR    LR     00 50 04.2
      comp=Z,99nm,18.7s,baz=182,slow=39
TKM2  Tokmak 2           42.72 309  P     P      00 30 39.4 +1.1
      SNR=17
TKM2  Tokmak 2           42.72 309 i P    P      00 30 39.0 +0.7
TKM2                                pmax  pmax
      comp=Z,15nm,0.9s
KBK   Karagaybulak       43.14 308  P     P      00 30 42.9 +1.3
      SNR=9.2
KURK  Kurchatov          43.14 321  P     P      00 30 40.4 -0.9
KURK                                IAmb  IAmb   00 30 42.4
      comp=Z,17nm,0.7s
KURK  Kurchatov          43.14 321⇑iP     P      00 30 40.9 -0.3
KURK                                pmax  pmax
      comp=Z,16nm,0.7s
KURBB Kurchatov Arra     43.15 320  P     P      00 30 40.9 -0.5
      comp=Z,11nm,0.6s,baz=111,slow=8.6,SNR=84
      comp=Z,11nm,0.6s
CHMS  Chumysh            43.35 309  P     P      00 30 44.2 +1.1
      SNR=6.4
UCH   Uchtor             43.37 308  P     P      00 30 45.4 +1.5
      SNR=16
AAK   Ala-Archa          43.46 308  LR    LR     00 51 32.1
      comp=Z,90nm,20.0s,baz=86,slow=40
AAK   Ala-Archa          43.46 308  P     P      00 30 43.5 -0.7
AAK   Ala-Archa          43.46 308⇑eP     P      00 30 43.9 -0.3
AAK                                 pmax  pmax
      comp=Z,5.0nm,0.9s
NIL   Nilore             43.49 295  P     P      00 30 42.8 -1.7
NIL                                 IAmb  IAmb   00 30 45.0
      comp=Z,13nm,0.9s
NIL   Nilore             43.49 295  P     P      00 30 42.8 -1.7
NIL                                 pmax  pmax
      comp=Z,13nm,0.9s
USP   Ospenovka          43.58 309  P     P      00 30 45.8 +0.7
      SNR=6.1
AML   Almayashu          43.95 307  P     P      00 30 49.8 +1.4
      SNR=8.8
EKS2  Erkin-Say          43.98 308  P     P      00 30 49.6 +1.2
      SNR=5.6
PSA00 Pilbara Seismi     44.52 182  P     P      00 30 50.7 -1.9
PSA00                               IAmb  IAmb   00 30 52.5
      comp=Z,15nm,0.8s
WRAB  Tennant Creek      44.61 163⇑eP     P      00 30 51.2 -2.1
WRAB                                pmax  pmax
      comp=Z,6.0nm,0.8s
WRA   Warramunga Arr     44.61 163  P     P      00 30 52.2 -1.2
      comp=Z,3.2nm,0.6s,baz=345,slow=8.7,SNR=14
      comp=Z,3.2nm,0.6s
WRA   Warramunga Arr     44.61 163  P     P      00 30 52.0 -1.4
WRA   Warramunga Arr     44.61 163 i P    P      00 30 52.5 -0.9
WRA                                 pmax  pmax
      comp=Z,4.0nm,0.6s
WB2   Warramunga Arr     44.62 163  P     P      00 30 52.2 -1.2
WB2                                 IAmb  IAmb   00 30 53.2
      comp=Z,5.5nm,0.7s
WR0   Warramunga Arr     44.69 163  P     P      00 30 53.3 -0.7
WR0                                 IAmb  IAmb   00 30 53.7
      comp=Z,6.6nm,0.8s
GAR   Garm               46.11 302  P     P      00 31 04.9 -0.4
KK31  Karatay Array      46.42 308  P     P      00 31 07.5 -0.1
KK31                                IAmb  IAmb   00 31 09.0
      comp=Z,7.8nm,1.0s
KK31  Karatay Array      46.42 308  P     P      00 31 07.5 -0.1
KK31                                pmax  pmax
      comp=Z,8.0nm,1.0s
KKAR  Karatay Array      46.42 308  P     P      00 31 07.5 -0.1
KKAR                                IAmb  IAmb   00 31 09.0
      comp=Z,7.8nm,1.0s
KKAR  Karatay Array      46.42 308  P     P      00 31 07.5 -0.1
KBL   Kabul              46.99 296  P     P      00 31 12.4 +0.1
KBL   Kabul              46.99 296  P     P      00 31 12.4 +0.1
KBL                                 pmax  pmax
      comp=Z,21nm,0.8s
CHGR  Chuyangaron        46.99 302  P     P      00 31 11.7 -0.5
CHGR  Chuyangaron        46.99 302  P     P      00 31 11.7 -0.5
CHGR                                pmax  pmax
      comp=Z,25nm,1.0s
ASAR  Alice Springs      48.06 165  P     P      00 31 19.8 -0.7
      comp=Z,1.9nm,0.6s,baz=346,slow=6.4,SNR=6.6
ASAR                                PcP   PcP    00 32 46.5 -1.2
      comp=Z,1.5nm,0.8s,baz=330,slow=3.4,SNR=4.0
      comp=Z,1.9nm,0.6s
ASAR  Alice Springs      48.06 165  P     P      00 31 18.0 -2.5
ASAR  Alice Springs      48.06 165  P     P      00 31 18.0 -2.5
TIXI  Tiksi              48.67   3  LR    LR     00 53 35.9
      comp=Z,101nm,19.5s,baz=181,slow=38
TIXI  Tiksi              48.67   3⇑iP     P      00 31 23.1 -1.4
TIXI                                pmax  pmax
      comp=Z,5.0nm,1.3s
BRVK  Borovoye           48.79 321  P     P      00 31 25.1 -0.7
BRVK  Borovoye           48.79 321c iP    P      00 31 25.6 -0.1
BRVK                                pmax  pmax
      comp=Z,18nm,0.9s
CTA   Charters Tower     49.25 149  P     P      00 31 31.4 +1.8
      comp=Z,4.8nm,0.9s,baz=318,slow=15,SNR=2.1
CTA                                 LR    LR     00 50 55.5
      comp=Z,69nm,21.1s,baz=284,slow=34
      comp=Z,4.8nm,0.9s
NRIK  Noril'sk           50.48 345  P     P      00 31 37.5 -0.8
      comp=Z,1.7nm,0.5s,baz=137,slow=6.5,SNR=5.9
      comp=Z,1.7nm,0.5s
NRIK  Noril'sk           50.48 345  P     P      00 31 36.6 -1.7
NRIK  Noril'sk           50.48 345⇓eP     P      00 31 38.5 +0.2
NRIK                                pmax  pmax
      comp=Z,13nm,3.3s
BILL  Bilibino           52.48  19  P     P      00 31 52.0 -1.2
BILL                                IAmb  IAmb   00 31 56.7
      comp=Z,13nm,1.3s
BILL  Bilibino           52.48  19⇓eP     P      00 31 53.7 +0.4
BILL                               e             00 33 58.9
BILL                                pmax  pmax
      comp=Z,13nm,1.7s
BILL                                MLR   MLR
      comp=Z,55nm,18.0s
HRA   Herat              52.61 296  P     P      00 31 54.5 -0.6
HRA                                 IAmb  IAmb   00 31 56.4
      comp=Z,5.1nm,1.0s
FORT  Forrest            54.00 173  P     P      00 32 03.6 -1.3
AB31  Akbulak array      54.45 315 i P    P      00 32 07.6 -0.4
ABKAR Akbulak array      54.45 315  P     P      00 32 07.7 -0.3
SVE   Sverdlovsk         55.10 324  eP    P      00 32 12.5 -0.2
SVE                                 pmax  pmax
      comp=Z,37nm,0.9s
GEYT  Alibeck            55.68 301  P     P      00 32 16.8 -0.3
      comp=Z,7.2nm,0.9s,baz=88,slow=11,SNR=7.1
GEYT                                LR    LR     01 00 16.3
      comp=Z,136nm,18.6s,baz=108,slow=41
      comp=Z,7.2nm,0.9s
GEYT  Alibeck            55.68 301  P     P      00 32 17.8 +0.6
GEYT                                IAmb  IAmb   00 32 19.3
      comp=Z,8.2nm,1.1s
GYA0B ALIBECK ARRAY      55.68 301  P     P      00 32 17.8 +0.6
GYA0B                               IAmb  IAmb   00 32 19.2
      comp=Z,11nm,1.0s
AKTO  Aktyubinsk         55.79 316  LR    LR     00 57 56.2
      comp=Z,125nm,19.0s,baz=58,slow=38
AKTO  Aktyubinsk         55.79 316  P     P      00 32 16.2 -1.5
ARU   Arti               56.17 323  P     P      00 32 19.3 -1.0
ARU   Arti               56.17 323c iP    P      00 32 19.6 -0.7
ARU                                              00 33 12.6
ARU                                              00 34 23.0
ARU                                 S     S      00 40 08.3 +2.6
ARU                                 SS    SS     00 43 49.1 -3.3
ARU                                 pmax  pmax
      comp=Z,28nm,0.6s
BBOO  Buckleboo          57.35 166  P     P      00 32 27.8 -1.1
STKA  Stephens Creek     57.98 160  P     P      00 32 33.1 -0.1
      comp=Z,7.8nm,0.6s,baz=335,slow=8.1,SNR=18
      comp=Z,7.8nm,0.6s
STKA  Stephens Creek     57.98 160  P     P      00 32 32.5 -0.8
STKA  Stephens Creek     57.98 160  P     P      00 32 32.5 -0.8
STKA                                pmax  pmax
      comp=Z,2.0nm,0.7s
KIRV  Kirov              61.28 325c iP    P      00 32 54.6 -1.1
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BELG  Belogornoye        62.33 318ceP     P      00 33 02.0 -0.9
BELG                                pmax  pmax
      comp=Z,4.0nm,0.9s
DZM   Mont Dzumac        62.64 133  P     P      00 33 06.2 +0.7
      comp=Z,2.6nm,0.9s,baz=299,slow=19,SNR=1.9
      comp=Z,2.6nm,0.9s
PRGR  Permogore          63.26 329  eP    P      00 33 02.5 -6.4
GROC  Groznyy            64.45 308  eP    P      00 33 14.9 -2.2
GROC                                e*PP  pP     00 33 32.5 +1.2
GROC                                e            00 33 49.8
GROC                                pmax  pmax
      comp=Z,10.0nm,0.7s
GNI   Garni              65.73 305  LR    LR     01 05 37.4
      comp=Z,36nm,21.3s,baz=73,slow=39
ZEI   Tsey               65.88 308  eP    P      00 33 25.8 -0.9
ZEI                                 pmax  pmax
      comp=Z,12nm,0.9s
NCK   Nalchik            65.98 309⇓eP     P      00 33 26.0 -1.1
NCK                                 pmax  pmax
      comp=Z,6.0nm,0.8s
VRH   Novokhopyorsk      66.08 317  eP    P      00 33 26.4 -1.1
VRH                                 pmax  pmax
      comp=Z,20nm,0.7s
TTA   Tatalina           66.16  30  P     P      00 33 28.6 +0.7
TTA                                 IAmb  IAmb   00 33 41.1
      comp=Z,3.5nm,0.8s
TTA   Tatalina           66.16  30  P     P      00 33 28.6 +0.7
TTA                                 pmax  pmax
      comp=Z,3.0nm,0.8s
KLMR  Klimovskoe         66.24 328  eP    P      00 33 25.9 -2.4
KLMR                                pmax  pmax
      comp=Z,21nm,1.1s
KLMR  Klimovskoe         66.24 328  eP    P      00 33 25.9 -2.4
KLMR                                AMP          00 33 28.0
      comp=Z,21nm,1.1s
KBZ   Khabaz             66.44 309  P     P      00 33 29.6 -0.3
      comp=Z,8.9nm,0.8s,baz=110,slow=3.6,SNR=27
KBZ                                 LR    LR     01 07 07.9
      comp=Z,63nm,18.4s,baz=48,slow=40
      comp=Z,8.9nm,0.8s
KBZ   Khabaz             66.44 309⇑eP     P      00 33 29.9 -0.1
KBZ                                 pmax  pmax
      comp=Z,11nm,0.9s
KIV   Kislovodsk         66.56 309  P     P      00 33 30.2 -0.6
KIV   Kislovodsk         66.56 309  eP    P      00 33 30.6 -0.2
KIV                                 pmax  pmax
      comp=Z,19nm,1.0s
KIV                                 MLR   MLR
      comp=Z,39nm,17.0s
L19K  White Mountain     66.76  30  P     P      00 33 32.7 +1.0
L19K                                IAmb  IAmb   00 33 45.4
      comp=Z,6.4nm,1.1s
IMAR  Indian Mountai     66.88  26  P     P      00 33 32.2 -0.2
KARS  Kars               66.89 306  P     P      00 33 33.2 +0.1
KARS  Kars               66.89 306  P     P      00 33 33.2 +0.1
KARS                                pmax  pmax
      comp=Z,24nm,0.9s
VORR  Voronezh           67.57 318  eP    P      00 33 36.1 -0.9
VORR                                pmax  pmax
      comp=Z,20nm,0.4s
LPSR  Galich'ya Gora     67.59 319  eP    P      00 33 35.9 -1.2
LPSR                                pmax  pmax
      comp=Z,20nm,0.8s
VORD  Divnogorie         67.63 317  eP    P      00 33 36.1 -1.3
VORD                                pmax  pmax
      comp=Z,10.0nm,1.2s
VSR   Storozhevoye       67.67 318  eP    P      00 33 36.0 -1.6
VSR                                 pmax  pmax
      comp=Z,10.0nm,1.1s
MOS   Moscow             67.86 323  eP    P      00 33 37.1 -1.6
TOLK  Toolik Lake Re     68.19  23  P     P      00 33 41.2 +0.5
TOLK                                IAmb  IAmb   00 33 54.6
      comp=Z,6.4nm,0.8s
KDAK  Kodiak Island      68.47  35  P     P      00 33 42.6 +0.1
      comp=Z,9.4nm,0.6s,baz=260,slow=3.6,SNR=9.0
      comp=Z,9.4nm,0.6s
KDAK  Kodiak Island      68.47  35  P     P      00 33 42.3 -0.2
KDAK                                IAmb  IAmb   00 33 43.1
      comp=Z,12nm,0.8s
KDAK  Kodiak Island      68.47  35  P     P      00 33 42.3 -0.2
KDAK                                pmax  pmax
      comp=Z,12nm,0.8s
OBN   Obninsk            68.55 322  P     P      00 33 42.3 -0.8
OBN                                 IAmb  IAmb   00 33 43.5
      comp=Z,12nm,0.9s
OBN   Obninsk            68.55 322⇓eP     P      00 33 42.1 -0.9
OBN                                 e            00 34 07.2
OBN                                 e            00 36 18.0
OBN                                 eS    S      00 42 34.3 -7.1
OBN                                 pmax  pmax
      comp=Z,9.0nm,0.7s
OBN                                 MLR   MLR
      comp=Z,30nm,16.0s
H23K  Yukon River        68.61  26  P     P      00 33 44.6 +1.3
H23K                                IAmb  IAmb   00 33 57.4
      comp=Z,6.0nm,0.8s
NEA2  Nenana             69.01  28  P     P      00 33 45.9 +0.1
NEA2                                IAmb  IAmb   00 33 59.0
      comp=Z,7.0nm,0.8s
MDM   Murphy Dome        69.30  27  P     P      00 33 48.2 +0.6
MDM                                 IAmb  IAmb   00 33 49.7
      comp=Z,6.8nm,0.8s
MARD  Mardin             69.36 303  P     P      00 33 48.5 -0.1
ILAR  Eielson Array      69.90  27  P     P      00 33 50.6 -0.7
      comp=Z,0.9nm,0.7s,baz=289,slow=8.0,SNR=10
ILAR                                LR    LR     01 09 20.9
      comp=Z,24nm,18.6s,baz=194,slow=40
      comp=Z,0.9nm,0.7s
ILAR  Eielson Array      69.90  27  P     P      00 33 50.1 -1.2
ILAR  Eielson Array      69.90  27  P     P      00 33 50.1 -1.2
BMAR  Burnt Mountain     70.26  24  P     P      00 33 54.1 +0.6
SPITS Spitsbergen Ar     70.55 348  LR    LR     01 09 19.6
      comp=Z,67nm,18.1s,baz=242,slow=40
ARCES ARCESS Array B     70.62 338  P     P      00 33 54.5 -1.2
      comp=Z,3.7nm,0.7s,baz=72,slow=4.0,SNR=14
      comp=Z,3.7nm,0.7s
SCRK  Sand Creek         71.31  28  P     P      00 34 00.9 +0.9
K27K  Chicken            72.11  27  P     P      00 34 04.6 -0.1
K27K                                IAmb  IAmb   00 34 05.8
      comp=Z,8.9nm,1.2s
M26K  Nabesna, AK        72.15  29  P     P      00 34 05.7 +0.6
M26K                                IAmb  IAmb   00 34 18.2
      comp=Z,7.4nm,1.0s
VRDI  Verde Repeater     72.26  30  P     P      00 34 07.5 +1.6
VRDI                                IAmb  IAmb   00 34 11.8
      comp=Z,8.5nm,1.1s
BCAR  Beaver Creek A     72.50  28  P     P      00 34 07.7 +0.6
FIA1  FINESS Array S     72.52 330  P     P      00 34 06.2 -0.9
FIA1                                IAmb  IAmb   00 34 27.1
      comp=Z,6.6nm,1.1s
FINES FINESS Array B     72.53 330  P     P      00 34 06.0 -1.2
      comp=Z,1.5nm,0.4s,baz=50,slow=6.0,SNR=21
FINES                               LR    LR     01 09 05.1
      comp=Z,66nm,18.4s,baz=76,slow=38
      comp=Z,1.5nm,0.4s
M27K  Edge Creek, AK     72.67  29  P     P      00 34 08.4 +0.2
M27K                                IAmb  IAmb   00 34 36.0
      comp=Z,11nm,1.5s
VSU   Vasula             73.05 327⇓eP     P      00 34 09.9 -0.4
VSU                                 pmax  pmax
      comp=Z,48nm,1.1s
VSU   Vasula             73.05 327  eP    P      00 34 10.7 +0.3
MNK   Minsk              73.58 323 i P    P      00 34 13.3 -0.2
MNK                                i *PP  pP     00 34 27.5 -0.1
MNK                                i             00 36 56.1
MNK                                i PPP  PPP    00 38 40.5
MNK                                i S    S      00 43 42.7 +3.0
MNK                                i *SS  sS     00 44 07.7 +3.4
MNK                                i SS   SS     00 48 26.4 +3.5
MNK                                 pmax  pmax
      comp=Z,15nm,1.0s
MNK                                 pmax  pmax
      comp=E,2.0nm,1.0s
MNK                                 pmax  pmax
      comp=N,3.0nm,1.0s
MNK                                 MLR   MLR
      comp=Z,70nm,12.0s
MNK                                 MLR   MLR
      comp=N,50nm,18.0s
MNK                                 MLR   MLR
      comp=E,8.0nm,18.0s
MNK   Minsk              73.58 323 i P    P      00 34 13.3 -0.2
      comp=E,2.0nm,1.0s
MNK                                i P    P      00 34 13.3 -0.2
      comp=N,3.0nm,1.0s
MNK                                i P    P      00 34 13.3 -0.2
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,15nm,1.0s,baz=73						
MNK				*i* pP	**pP**	**00 34 27.6**	**-0.1**
MNK				*i* PP	**PP**	**00 36 56.2**	**-1.5**
MNK				*i* PPP	PPP	00 38 40.5	
MNK				*i* S	**S**	**00 43 42.8**	**+3.0**
MNK				*i* sS	**sS**	**00 44 07.7**	**+3.4**
MNK				*i* SS	**SS**	**00 48 26.4**	**+3.5**
MNK				*i* SSS	SSS	00 51 49.4	
MNK				*i* LQ	LQ	01 02 04.2	
MNK				*i* LR	LR	01 06 54.3	
MNK				*i* LRM	MLR	01 09 26.9	
	comp=Z,70nm,12.1s						
MNK				*i* LRM	MLR	01 10 00.0	
	comp=N,50nm,17.8s						
MNK				*i* LRM	MLR	01 10 11.4	
	comp=E,8.0nm,17.8s						
AKASG	**Malin Array Be**	**73.90**	**319**	P	**P**	**00 34 13.3**	**-2.1**
	comp=E,0.8nm,0.4s,baz=59,slow=7.6,SNR=9.2						
	comp=E,0.8nm,0.4s						
AKASG	**Malin Array Be**	**73.90**	**319**	P	**P**	**00 34 13.7**	**-1.8**
AKASG	**Malin Array Be**	**73.90**	**319**	*ce*P	**P**	**00 34 13.8**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**73.90**	**319**	⇓*e*P	**P**	**00 34 14.1**	**-1.4**
IDID	**Didziasalis**	**73.97**	**324**	*e*P	**P**	**00 34 15.8**	**0.0**
INK	**Inuvik**	**73.98**	**22**	P	**P**	**00 34 14.7**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=267,slow=12,SNR=2.3						
INK				LR	LR	01 10 22.2	
	comp=Z,40nm,18.3s,baz=290,slow=39						
	comp=Z,1.5nm,0.9s						
INK	**Inuvik**	**73.98**	**22**	P	**P**	**00 34 13.7**	**-1.9**
INK				IAmb	IAmb	00 34 28.9	
	comp=Z,7.9nm,1.2s						
INK	**Inuvik**	**73.98**	**22**	P	**P**	**00 34 13.7**	**-1.9**
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NACGM	**Naroch**	**74.07**	**323**	⇑*e*P	**P**	**00 34 16.4**	**0.0**
	baz=73						
BR131	**Keskin Array S**	**74.11**	**307**	P	**P**	**00 34 16.6**	**-0.6**
BR131				IAmb	IAmb	00 34 17.6	
	comp=Z,6.4nm,0.8s						
BR131	**Keskin Array S**	**74.11**	**307**	*d i*P	**P**	**00 34 17.0**	**-0.2**
BRTR	**Keskin Array B**	**74.11**	**307**	P	**P**	**00 34 16.8**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=104,slow=5.1,SNR=19						
BRTR				LR	LR	01 11 38.2	
	comp=Z,24nm,19.6s,baz=110,slow=40						
	comp=Z,2.7nm,0.6s						
IIGN	**Ignalina**	**74.25**	**324**	*e*P	**P**	**00 34 17.2**	**-0.2**
MTSE	**Matsula**	**74.43**	**328**	*e*P	**P**	**00 34 18.2**	**-0.1**
MMAI	**Mount Meron Ar**	**74.77**	**300**	LR	LR	01 13 38.6	
	comp=Z,50nm,19.0s,baz=222,slow=41						
SORM	**Soroca**	**75.22**	**316**	⇓P	**P**	**00 34 22.2**	**-1.0**
SORM	**Soroca**	**75.22**	**316**	⇓P	**P**	**00 34 22.2**	**-1.0**
PABE	**Paberze**	**75.41**	**324**	*e*P	**P**	**00 34 24.1**	**0.0**
CSS	**Mathiatis**	**75.80**	**302**	P	**P**	**00 34 26.2**	**-0.5**
TLCR		**75.85**	**313**	⇓P	**P**	**00 34 26.6**	**-0.2**
TLCR		**75.85**	**313**	⇓P	**P**	**00 34 26.6**	**-0.2**
JURR	**Jurilovca**	**75.94**	**313**	⇑P	**P**	**00 34 27.3**	**-0.1**
M31M	**Drury Creek, Y**	**76.01**	**28**	P	**P**	**00 34 28.0**	**+0.5**
VASR	**Vaslui**	**76.06**	**315**	⇑P	**P**	**00 34 27.8**	**-0.2**
VLDR	**Vladesti**	**76.13**	**314**	⇑P	**P**	**00 34 27.9**	**-0.5**
TPGR	**Topolog**	**76.22**	**313**	⇑P	**P**	**00 34 28.7**	**-0.3**
SCTR	**Scanteiesti**	**76.24**	**314**	⇑P	**P**	**00 34 29.3**	**+0.2**
CFR	**Carcaliu**	**76.31**	**313**	⇑P	**P**	**00 34 28.7**	**-0.7**
CFR	**Carcaliu**	**76.31**	**313**	⇑P	**P**	**00 34 28.7**	**-0.7**
SUW	**Suwalki**	**76.35**	**323**	*e*P	**P**	**00 34 28.4**	**-1.1**
SUW	**Suwalki**	**76.35**	**323**	P	**P**	**00 34 28.7**	**-0.8**
SUW	**Suwalki**	**76.35**	**323**	P	**P**	**00 34 28.7**	**-0.8**
SUW				pmax	pmax		
	comp=Z,23nm,1.0s						
SUW	**Suwalki**	**76.35**	**323**	*e*P	**P**	**00 34 28.8**	**-0.8**
TIRR	**Tirgusor**	**76.36**	**313**	P	**P**	**00 34 29.4**	**-0.3**
TIRR				IAmb	IAmb	00 34 29.9	
	comp=Z,8.2nm,0.8s						
TIRR	**Tirgusor**	**76.36**	**313**	P	**P**	**00 34 29.4**	**-0.3**
TIRR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TLBR	**Topalu**	**76.57**	**313**	⇓P	**P**	**00 34 30.7**	**-0.2**
C36M	**Paulatuk**	**76.60**	**19**	P	**P**	**00 34 29.6**	**-1.1**
C36M				IAmb	IAmb	00 34 43.5	
	comp=Z,9.9nm,1.2s						
HARR	**Harsova**	**76.60**	**313**	⇓P	**P**	**00 34 30.6**	**-0.5**
HARR	**Harsova**	**76.60**	**313**	⇓P	**P**	**00 34 30.6**	**-0.5**
TESR	**Tescani**	**76.84**	**315**	⇓P	**P**	**00 34 32.0**	**-0.5**
VRI	**Vrincioaia**	**77.01**	**314**	⇑P	**P**	**00 34 34.1**	**+0.7**
VRI	**Vrincioaia**	**77.01**	**314**	⇑P	**P**	**00 34 34.1**	**+0.7**
BIZ	**Bicaz**	**77.05**	**316**	⇓P	**P**	**00 34 33.4**	**-0.3**
PLOR	**Plostina**	**77.07**	**314**	⇑P	**P**	**00 34 33.3**	**-0.5**
PLOR	**Plostina**	**77.07**	**314**	⇑P	**P**	**00 34 33.3**	**-0.5**
BURAR	**Bucovina Array**	**77.39**	**316**	⇓P	**P**	**00 34 35.1**	**-0.6**
BURAR	**Bucovina Array**	**77.39**	**316**	P	**P**	**00 34 34.8**	**-0.8**
BURAR	**Bucovina Array**	**77.39**	**316**	⇓P	**P**	**00 34 35.1**	**-0.6**
BUR08	**Bucovina Ar. S**	**77.39**	**316**	P	**P**	**00 34 34.8**	**-0.8**
P33M	**Teslin, Yukon**	**77.52**	**30**	P	**P**	**00 34 36.3**	**+0.2**
MLR	**Muntele Rosu**	**77.66**	**314**	⇑P	**P**	**00 34 37.5**	**+0.3**
MLR	**Muntele Rosu**	**77.66**	**314**	P	**P**	**00 34 36.7**	**-0.5**
MLR				IAmb	IAmb	00 34 37.7	
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**77.66**	**314**	⇑P	**P**	**00 34 37.5**	**+0.3**
SECR		**77.73**	**314**	⇓P	**P**	**00 34 38.2**	**+0.7**
ELL	**Elmali**	**77.84**	**305**	P	**P**	**00 34 37.9**	**-0.5**
ELL	**Elmali**	**77.84**	**305**	P	**P**	**00 34 37.9**	**-0.5**
ELL				pmax	pmax		
	comp=Z,26nm,0.7s						
DOPR	**Dopca**	**77.85**	**315**	⇓P	**P**	**00 34 38.5**	**+0.4**
KWP	**Kalwaria Pacla**	**78.21**	**319**	*e*P	**P**	**00 34 39.6**	**-0.5**
HUMR	**Humele**	**78.64**	**314**	⇓P	**P**	**00 34 41.8**	**-0.7**
HFS	**Hagfors**	**78.65**	**331**	LR	LR	01 12 53.2	
	comp=Z,135nm,18.1s,baz=62,slow=38						
NC405	**NORSAR Array S**	**79.06**	**332**	P	**P**	**00 34 43.0**	**-1.5**
DRGR		**79.28**	**316**	⇓P	**P**	**00 34 45.8**	**-0.2**
DRGR		**79.28**	**316**	⇓P	**P**	**00 34 45.8**	**-0.2**
NB2	**NORSAR Subarra**	**79.31**	**332**	P	**P**	**00 34 44.2**	**-1.7**
	comp=Z,12nm,1.7s,baz=59,slow=5.3						
NOA	**NORSAR Array B**	**79.31**	**332**	P	**P**	**00 34 44.0**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=61,slow=5.4,SNR=9.0						
NOA				LR	LR	01 12 51.7	
	comp=Z,72nm,20.4s,baz=60,slow=38						
	comp=Z,1.5nm,0.8s						
RES	**Resolute Bay**	**79.58**	**9**	P	**P**	**00 34 48.1**	**+1.1**
	comp=Z,4.3nm,1.1s,baz=353,slow=17,SNR=2.3						
	comp=Z,4.3nm,1.1s						
DLBC	**Dease Lake**	**79.58**	**31**	P	**P**	**00 34 49.4**	**+1.9**
	comp=Z,1.3nm,0.3s,baz=342,slow=20,SNR=4.7						
	comp=Z,1.3nm,0.3s						
DLBC	**Dease Lake**	**79.58**	**31**	P	**P**	**00 34 47.7**	**+0.2**
DLBC				IAmb	IAmb	00 34 56.4	
	comp=Z,5.0nm,0.8s						
OJC	**Ojcow**	**79.72**	**320**	*e*P	**P**	**00 34 47.5**	**-0.8**
OJC	**Ojcow**	**79.72**	**320**	P	**P**	**00 34 47.9**	**-0.4**
OJC				IAmb	IAmb	00 34 48.1	
	comp=Z,6.7nm,0.7s						
OJC	**Ojcow**	**79.72**	**320**	P	**P**	**00 34 47.9**	**-0.4**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HERR	**Herculane**	**80.20**	**315**	⇑P	**P**	**00 34 50.2**	**-0.7**
LANS	**Liptovska Anna**	**80.35**	**319**	*e*P	**P**	**00 34 52.5**	**+0.7**
LANS				pmax	pmax		
	comp=Z,5.0nm,1.6s						
LANS	**Liptovska Anna**	**80.35**	**319**	*e*P	**P**	**00 34 52.5**	**+0.7**
VTS	**Vitosha**	**80.53**	**312**	⇓P	**P**	**00 34 52.6**	**-0.4**
VTS	**Vitosha**	**80.53**	**312**	P	**P**	**00 34 52.9**	**-0.2**
VTS				IAmb	IAmb	00 34 53.9	
	comp=Z,9.1nm,0.9s						
VTS	**Vitosha**	**80.53**	**312**	⇓P	**P**	**00 34 52.6**	**-0.4**
MDVR	**Moldovita**	**80.70**	**315**	⇑P	**P**	**00 34 52.8**	**-1.0**
VYHS	**Vyhne**	**81.00**	**319**	*e*P	**P**	**00 34 55.4**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	**Vyhne**	**81.00**	**319**	*e*P	**P**	**00 34 55.4**	**+0.2**
KSP	**Ksiaz**	**81.48**	**322**	*e*P	**P**	**00 34 57.3**	**-0.5**
KRLC	**Kraliky**	**81.54**	**321**	*e*P	**P**	**00 34 56.8**	**-1.3**
KRLC	**Kraliky**	**81.54**	**321**	*e*P	**P**	**00 34 56.8**	**-1.3**
DPC	**Dobruska-Polom**	**81.68**	**321**	*e*P	**P**	**00 34 58.5**	**-0.4**
DPC	**Dobruska-Polom**	**81.68**	**321**	*e*P	**P**	**00 34 58.5**	**-0.4**
FRGS	**Fruska Gora**	**81.78**	**316**	⇓P	**P**	**00 34 59.1**	**-0.4**
LIT	**Litokhoron**	**82.03**	**310**	P	**P**	**00 34 59.2**	**-1.7**
LIT				IAmb	IAmb	00 35 25.9	
	comp=Z,6.0nm,0.8s						
LIT	**Litokhoron**	**82.03**	**310**	P	**P**	**00 34 59.2**	**-1.7**
LIT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FNA	**Florina**	**82.53**	**311**	P	**P**	**00 35 01.1**	**-2.4**
FNA				IAmb	IAmb	00 35 02.0	
	comp=Z,3.5nm,0.7s						
FNA	**Florina**	**82.53**	**311**	P	**P**	**00 35 01.1**	**-2.4**
FNA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CLL	**Collm**	**83.11**	**323**	*i* P	**P**	**00 35 05.3**	**-0.9**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**83.11**	**323**	*i* P	**P**	**00 35 05.3**	**-0.9**
	comp=Z,4.0nm,0.9s						
CLL				*e*PP	**PP**	**00 38 18.0**	**+0.7**
CLL				LmV		01 16 00.0	
	comp=Z,100nm,18.9s						
SUMG	**Summit**	**83.54**	**354**	P	**P**	**00 35 07.8**	**-0.7**
SUMG	**Summit**	**83.54**	**354**	P	**P**	**00 35 07.8**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CKRC	**Cesky Krumlov**	**83.55**	**321**	*e*P	**P**	**00 35 05.7**	**-2.9**
ITM	**Ithomi**	**83.61**	**308**	P	**P**	**00 35 07.0**	**-2.1**
YKA	**Yellowknife Ar**	**83.72**	**23**	P	**P**	**00 35 08.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=315,slow=4.8,SNR=16						
	comp=Z,1.1nm,0.6s						
KHC	**Kasperske Hory**	**83.83**	**321**	⇓*e*P	**P**	**00 35 08.9**	**-1.1**
KHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KHC	**Kasperske Hory**	**83.83**	**321**	*e*P	**P**	**00 35 09.2**	**-0.8**
ABPO	**Ambohimpanom**	**83.86**	**246**	P	**P**	**00 35 11.5**	**+0.7**
ABPO	**Ambohimpanom**	**83.86**	**246**	P	**P**	**00 35 11.5**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,12nm,0.8s						
GEC2	**GERESS Array S**	**83.89**	**321**	P	**P**	**00 35 09.4**	**-1.0**
GERES	**GERESS Array B**	**83.89**	**321**	P	**P**	**00 35 09.6**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=64,slow=6.1,SNR=17						
	comp=Z,1.7nm,0.8s						
LODK	**Lodwar**	**85.27**	**272**	P	**P**	**00 35 18.7**	**+0.8**
KMBO	**Kilima Mbogo**	**85.29**	**267**	P	**P**	**00 35 18.7**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=55,slow=7.9,SNR=9.0						
	comp=Z,3.8nm,0.8s						
BORG	**Borgarnes**	**87.80**	**345**	LR	LR	01 18 05.7	
	comp=Z,34nm,19.6s,baz=34,slow=38						
EKA	**Eskdalemuir Ar**	**88.80**	**332**	LR	LR	01 19 46.0	
	comp=Z,105nm,18.9s,baz=17,slow=39						
FRB	**Frobisher Bay**	**92.99**	**5**	LR	LR	01 21 24.7	
	comp=Z,30nm,20.5s,baz=343,slow=38						
NVAR	**Mina Array Bea**	**96.86**	**43**	P	**P**	**00 36 11.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=302,slow=10,SNR=1.7						
	comp=Z,0.1nm,0.3s						

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*IDC **18** 00:22:57.2±1.2, 2°.40N×126°.12E, h0^{km}, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=141.6km s-min=21.6km az=68.0*

*DJA **18** 00:23:03.8±0.4, 2°N±2°×12°6E±°, h10^{km}, M4.1/9, mb4.3/4, mB4.7/2, MLv4.0/9, Mw(mB)4.0/2*

*NEIC **18** 00:23:06.0±1.4, 2°.45N±0°.10×126°.4E±0°.1, h61^{km}±12^{km}, mb4.0/8, Error ellipse: s-maj=20.6km s-min=5.2km az=49.0*

ISC 18 00:23:04.7±0.8**, 2°.36N**±0°.05×**126°.35E**±0°.10**, h50**^{km}**, n27,** σ1^{s}.**32**/29**, mb4.0**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.56**	**328**	P	**Pn**	**00 23 31.5**	**+1.5**
SGSI				S	**Sn**	**00 23 49.7**	**+0.7**
TNTI	**Ternate**	**1.87**	**147**	Pn	**Pn**	**00 23 36.6**	**+2.3**
KMSI	**Cibinong**	**2.96**	**233**	P	**Pn**	**00 23 49.9**	**+0.7**
GTOI	**Gorontalo**	**3.75**	**243**	P	**Pn**	**00 24 00.6**	**+0.5**
SANI	**Sanana**	**4.39**	**185**	P	**Pn**	**00 24 10.4**	**+1.5**
SANI				S	**Sn**	**00 24 57.2**	**-1.6**
MRSI	**Marisa**	**4.79**	**247**	P	**Pn**	**00 24 15.6**	**+1.3**
LUWI	**Luwuk**	**4.92**	**227**	Pn	**Pn**	**00 24 18.8**	**+2.6**
LUWI	**Luwuk**	**4.92**	**227**	P	**Pn**	**00 24 16.3**	**+0.2**
APSI	**Ampana**	**5.71**	**235**	P	**Pn**	**00 24 26.7**	**-0.3**
	0.1nm615nm33nm,0.6s						
MPSI	**Mapaga**	**6.76**	**253**	P	**Pn**	**00 24 43.4**	**+2.1**
	0.2nm622nm9.2nm,0.8s						
MYLDM	**Lahad Datu**	**8.32**	**290**	Pn	**Pn**	**00 25 04.0**	**+1.2**
TTSI	**Tana Toraja**	**8.45**	**231**	P	**Pn**	**00 25 06.6**	**+2.0**
KSM	**Kuching**	**16.06**	**267**	P	**Pn**	**00 26 48.3**	**+1.0**
WB0	**Warramunga Arr**	**23.36**	**161**	P	**P**	**00 28 09.1**	**+0.1**
WRA	**Warramunga Arr**	**23.51**	**161**	P	**P**	**00 28 10.2**	**-0.1**
	0.7nm,0.5s,baz=340,slow=10,SNR=6.8						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**23.51**	**161**	P	**P**	**00 28 10.7**	**+0.3**
WB2	**Warramunga Arr**	**23.51**	**161**	P	**P**	**00 28 10.0**	**-0.4**
WB2				IAmb	IAmb	00 28 12.4	
	comp=Z,3.5nm,0.9s						
WR0	**Warramunga Arr**	**23.59**	**160**	P	**P**	**00 28 11.8**	**+0.7**
WR0				IAmb	IAmb	00 28 40.1	
	comp=Z,4.5nm,1.1s						
ASAR	**Alice Springs**	**26.89**	**165**	P	**P**	**00 28 41.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=344,slow=8.0,SNR=4.4						
	comp=Z,0.4nm,0.5s						
BBOO	**Buckleboo**	**36.16**	**166**	P	**P**	**00 30 03.2**	**+0.8**
MK31	**Makanchi Array**	**58.47**	**326**	P	**P**	**00 32 54.1**	**-1.6**
MK31				IAmb	IAmb	00 33 05.0	
	comp=Z,2.1nm,1.1s						
MKAR	**Makanchi Array**	**58.47**	**326**	P	**P**	**00 32 53.7**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=124,slow=7.2,SNR=2.1						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**62.69**	**328**	P	**P**	**00 33 22.5**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=128,slow=6.7,SNR=2.0						
	comp=Z,0.6nm,0.5s						
NRIK	**Noril'sk**	**71.67**	**346**	P	**P**	**00 34 20.6**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=127,slow=5.1,SNR=2.0						
	comp=Z,2.2nm,0.6s						
NRIK	**Noril'sk**	**71.67**	**346**	P	**P**	**00 34 20.9**	**+0.1**
NRIK				IAmb	IAmb	00 34 21.7	
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**72.97**	**321**	P	**P**	**00 34 28.7**	**-0.3**
FINES	**FINESS Array B**	**92.86**	**332**	P	**P**	**00 36 10.9**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=65,slow=8.0,SNR=1.6						
	comp=Z,1.3nm,0.9s						

IDC 18 00:26:08.7±2.0**, 4°.40S**×**133°.51E, h0**^{km}**, mb3.3**/1**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=94.1km s-min=29.3km az=68.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.47**	**177**	Pn	Pn	00 29 46.6	-1.9
	0.3nm,0.3s,baz=355,slow=13,SNR=7.5						
WRA				Sn	Sn	00 32 33.1	-7.6
	0.1nm,0.3s,baz=355,slow=23,SNR=2.7						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**19.16**	**179**	P	Pn	00 30 34.5	-0.2
	0.4nm,0.3s,baz=5.8,slow=9.9,SNR=36						
ASAR				S	Sn	00 34 02.1	-8.0
	0.6nm,0.8s,baz=358,slow=27,SNR=2.7						
	3.6nm,0.7s						
CTA	**Charters Tower**	**19.93**	**143**	P	P	00 30 42.2	-0.1
	0.2nm,0.3s,baz=324,slow=8.7,SNR=2.3						
	3.7nm,0.8s						
MKAR	**Makanchi Array**	**68.05**	**325**	P	P	00 37 10.3	+0.1
	0.2nm,0.5s,baz=134,slow=6.2,SNR=1.7						
	0.2nm,0.5s						

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*MAN **18** 00:28:05.7, 4°.70N×126°.77E, h37^{km}, mb5.2, ML4.2, MS4.4, Hypocentre not reviewed by the ISC*

*IDC **18** 00:28:07.4±0.7, 5°.70N×127°.19E, h0^{km}, mb4.1/15, mbtmp4.1/16, ML4.0/1, MS3.3/4, Error ellipse: s-maj=32.6km s-min=14.6km az=64.0*

*DJA **18** 00:28:14.4±0.7, 5°N±4°×12°7E±°, h10^{km}, M4.6/10, mb4.5/7, mB5.5/4, MLv4.6/10, Mw(mB)5.0/4*

*NEIC **18** 00:28:17.9±1.9, 5°.53N±0°.07×126°.51E±0°.07, h74^{km}±8^{km}, mb4.5/23, Error ellipse: s-maj=13.2km s-min=5.0km az=224.0*

ISC 18 00:28:16.8±0.4**, 5°.43N**±0°.04×**126°.62E**±0°.07**, h66**^{km}**, n73,** σ1^{s}.**94**/76**, mb4.4**/30**, 3C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.12**	**307**	⇓*e*P	**Pn**	**00 28 33.8**	**-3.0**
DDMP				*e*S	**Sn**	**00 28 53.3**	**+1.7**
MATI	**Mati**	**1.55**	**347**	⇓*e*P	**Pn**	**00 28 42.0**	**-0.4**
MATI				*e*S	**Sn**	**00 29 09.0**	**+7.4**
GSPH	**General Santos**	**1.79**	**292**	⇑*i*P	**Pn**	**00 28 41.4**	**-4.3**
DAV	**Davao City (W)**	**1.93**	**328**	Pn	**Pn**	**00 28 44.7**	**-2.8**
	50nm,0.3s,baz=125,slow=3.5,SNR=14						
DAV				Sn	**Sn**	**00 29 11.4**	**+0.6**
	86nm,0.3s,baz=151,slow=19,SNR=4.9						
DAV				LR	LR	00 29 46.2	
	comp=Z,809nm,18.7s,baz=157,slow=47						
	287nm,0.5s						
DAV	**Davao City (W)**	**1.93**	**328**		**Pn**	**00 28 46.6**	**-0.9**
SGSI	**Sangihe**	**2.04**	**212**	P	**Pn**	**00 28 46.5**	**-2.5**
KCP	**Kidapawan**	**2.19**	**316**	⇑*e*P	**Pn**	**00 28 49.5**	**-1.5**
KCP				*e*S	**Sn**	**00 29 23.4**	**+6.3**
BIPH	**Bislig**	**2.75**	**355**	⇓*e*P	**Pn**	**00 28 56.3**	**-2.3**
BIPH				*e*S	**Sn**	**00 29 36.0**	**+5.3**
CTBH	**Cotabato--PC H**	**2.96**	**307**	⇑*i*P	**Pn**	**00 29 01.8**	**+0.4**
BUTP	**Butuan**	**3.66**	**344**	⇓*e*P	**Pn**	**00 29 12.4**	**+1.4**
BUTP				*e*S	Sn	00 30 02.3	+9.4
GLSP	**General Luna,**	**4.36**	**354**	⇓*e*P	**Pn**	**00 29 21.4**	**+0.9**
GLSP				*e*S	Sn	00 30 19.5	+9.4
TNTI	**Ternate**	**4.68**	**171**		**Pn**	**00 29 27.1**	**+2.1**
TBP	**Tagbilaran**	**5.04**	**327**	*e*P	**Pn**	**00 29 30.5**	**+0.5**
KMSI	**Cibinong**	**5.49**	**209**	P	**Pn**	**00 29 36.1**	**0.0**
	0.9nm106nm,0.6s						
GTOI	**Gorontalo**	**5.97**	**217**	P	**Pn**	**00 29 41.5**	**-1.1**
	0.1nm236nm16nm,0.7s						
MRSI	**Marisa**	**6.78**	**224**	P	**Pn**	**00 29 52.5**	**-1.2**
	0.2nm745nm51nm,0.7s						
TOLI2	**Tolitoli**	**7.23**	**234**	Pn	**Pn**	**00 29 57.5**	**-2.5**
SANI	**Sanana**	**7.45**	**185**	P	**Pn**	**00 30 02.5**	**-0.5**
	0.1nm12nm,0.7s						
LUWI	**Luwuk**	**7.49**	**211**	Pn	**Pn**	**00 30 04.5**	**+1.1**
LUWI	**Luwuk**	**7.49**	**211**	P	**Pn**	**00 30 05.1**	**+1.7**
	0.4nm10µm85nm,0.9s						
APSI	**Ampana**	**8.02**	**218**	P	**Pn**	**00 30 11.8**	**+1.1**
	0.1nm34nm,1.2s						
MYLDM	**Lahad Datu**	**8.09**	**269**	Pn	**Pn**	**00 30 14.0**	**+2.4**
MPSI	**Mapaga**	**8.40**	**233**	P	**Pn**	**00 30 16.3**	**+0.4**
	11nm,0.7s						
MTN	**Manton Dam**	**18.70**	**166**	Pn	**Pn**	**00 32 32.4**	**+1.4**
KNRA	**Kununurra**	**21.07**	**174**		**P**	**00 32 56.7**	**+0.9**
KNRA				IAmb	IAmb	00 33 02.6	
	comp=Z,20nm,1.1s						
JCJ	**Chichijima**	**26.16**	**33**	P	P	00 33 37.2	-7.9
	comp=Z,22nm,0.8s,baz=266,slow=9.1,SNR=2.4						
	comp=Z,22nm,0.8s						
JCJ	**Chichijima**	**26.16**	**33**	P	**P**	**00 33 42.2**	**-2.9**
WB0	**Warramunga Arr**	**26.18**	**163**	P	**P**	**00 33 46.2**	**+0.8**
WB0				IAmb	IAmb	00 33 59.6	
	comp=Z,8.1nm,0.6s						
WRA	**Warramunga Arr**	**26.33**	**163**	P	**P**	**00 33 47.7**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=340,slow=10,SNR=5.6						
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**26.33**	**163**	P	**P**	**00 33 47.2**	**+0.5**
WB2	**Warramunga Arr**	**26.33**	**163**	P	**P**	**00 33 48.0**	**+1.2**
WB2				IAmb	IAmb	00 34 07.9	
	comp=Z,9.2nm,0.9s						
WR0	**Warramunga Arr**	**26.40**	**163**	P	**P**	**00 33 47.4**	**0.0**
NJ2	**Nanjing**	**27.47**	**346**	*e*P	**P**	**00 33 57.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAR	**Alice Springs**	**29.78**	**166**	P	**P**	**00 34 16.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=345,slow=6.7,SNR=1.9						
ASAR				PcP	**PcP**	**00 37 19.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=349,slow=2.1,SNR=1.5						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**29.78**	**166**	P	**P**	**00 34 18.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**29.95**	**298**	P	**P**	**00 34 20.4**	**+1.3**
	comp=Z,1.7nm,0.3s,baz=104,slow=7.5,SNR=2.8						
CMAR				LR	LR	00 46 52.6	
	comp=Z,37nm,18.7s,baz=220,slow=37						
	comp=Z,1.7nm,0.3s						
PATS	**Pohnpei**	**31.54**	**86**	P	**P**	**00 34 35.9**	**+2.8**
PZH	**PanZhiHua**	**31.67**	**314**	P	**P**	**00 34 35.1**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
KSRS	**Korea Array**	**31.90**	**2**	LR	LR	00 47 50.2	
	comp=Z,29nm,21.3s,baz=125,slow=37						
XAN	**Xi'an**	**32.87**	**332**	P	P	00 34 50.6	+6.0
XAN				pP	sP	00 35 06.0	-1.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MORW	**Morawa**	**35.77**	**196**	P	**P**	**00 35 08.5**	**-1.2**
FORT	**Forrest**	**36.03**	**178**	P	**P**	**00 35 13.5**	**+1.6**
FORT				IAmb	IAmb	00 35 29.1	
	comp=Z,17nm,1.1s						
HHC	**Hu-ho-hao-te**	**37.76**	**341**	*e*P	**P**	**00 35 27.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,47nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,4.1s						
BBOO	**Buckleboo**	**39.07**	**167**	P	**P**	**00 35 37.7**	**+0.2**
STKA	**Stephens Creek**	**39.75**	**160**	P	**P**	**00 35 42.9**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=334,slow=9.4,SNR=3.8						
	comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**39.75**	**160**	P	**P**	**00 35 43.4**	**+0.2**
SONM	**Songino Array**	**45.67**	**341**	P	**P**	**00 36 30.1**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=164,slow=7.6,SNR=4.2						
	comp=Z,1.1nm,0.9s						
WMQ	**Urumqi**	**51.28**	**324**	*e*P	**P**	**00 37 15.4**	**+1.1**
PETK	**Petropavlovsk-**	**53.91**	**23**	P	**P**	**00 37 32.2**	**-1.3**
MK31	**Makanchi Array**	**56.11**	**325**	P	**P**	**00 37 48.8**	**-0.7**
MK31				IAmb	IAmb	00 37 55.4	
	comp=Z,4.6nm,1.3s						
MKAR	**Makanchi Array**	**56.11**	**325**	P	**P**	**00 37 49.3**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=117,slow=7.5,SNR=22						
MKAR				PcP	**PcP**	**00 38 47.3**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=118,slow=4.5,SNR=7.4						
	comp=Z,1.9nm,0.5s						
MAKZ	**Makanchi**	**56.30**	**325**	P	**P**	**00 37 48.3**	**-2.5**
MAKZ				IAmb	IAmb	00 38 07.7	
	comp=Z,4.8nm,1.1s						
NIL	**Nilore**	**56.81**	**307**	P	**P**	**00 37 54.7**	**-0.1**
NIL				IAmb	IAmb	00 38 04.3	
	comp=Z,8.1nm,1.0s						
ZALV	**Zalesovo Beam**	**59.04**	**333**	P	**P**	**00 38 08.7**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=116,slow=6.8,SNR=5.2						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**59.04**	**333**	P	**P**	**00 38 09.6**	**-0.2**
KURK	**Kurchatov**	**60.26**	**327**	P	**P**	**00 38 17.4**	**-0.9**
KURK				IAmb	IAmb	00 38 22.9	
	comp=Z,6.3nm,0.6s						
GAR	**Garm**	**60.70**	**312**	P	**P**	**00 38 21.1**	**-0.6**
KK31	**Karatay Array**	**61.93**	**316**	P	**P**	**00 38 26.9**	**-2.9**
KKAR	**Karatay Array**	**61.93**	**316**	P	**P**	**00 38 27.9**	**-1.9**
RPZ	**Rata Peaks**	**63.21**	**145**	LR	LR	01 05 19.8	
	comp=Z,38nm,18.9s,baz=279,slow=35						
BRVK	**Borovoye**	**65.92**	**327**	P	**P**	**00 38 53.8**	**-2.0**
BRVK				IAmb	IAmb	00 39 07.4	
	comp=Z,7.5nm,1.1s						
NRIK	**Noril'sk**	**68.77**	**346**	P	**P**	**00 39 13.2**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=41,slow=3.5,SNR=1.6						
	comp=Z,0.5nm,0.3s						
ABKAR	**Akbulak array**	**70.78**	**320**	P	**P**	**00 39 25.1**	**-1.1**
ARU	**Arti**	**73.45**	**327**	P	**P**	**00 39 41.3**	**-0.7**
ARU				IAmb	IAmb	00 39 56.9	
	comp=Z,3.1nm,0.6s						
VOI	**Vohitsoka**	**82.62**	**247**	P	**P**	**00 40 34.2**	**+0.5**
VOI				IAmb	IAmb	00 40 46.4	
	comp=Z,17nm,1.2s						
ILAR	**Eielson Array**	**83.63**	**25**	P	**P**	**00 40 36.4**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=260,slow=5.4,SNR=2.6						
	comp=Z,0.3nm,0.7s						
VNDA	**Vanda**	**85.11**	**173**	P	**P**	**00 40 44.2**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=290,slow=7.4,SNR=2.7						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**85.11**	**173**	P	**P**	**00 40 45.8**	**+0.7**
VNDA				IAmb	IAmb	00 41 01.2	
	comp=Z,5.2nm,1.5s						
ARCES	**ARCESS Array B**	**88.83**	**340**	P	**P**	**00 41 02.9**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=76,slow=5.1,SNR=8.7						
	comp=Z,4.0nm,0.9s						
BRTR	**Keskin Array B**	**88.86**	**310**	P	**P**	**00 41 05.7**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=150,slow=7.4,SNR=3.1						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**90.29**	**332**	P	**P**	**00 41 10.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=58,slow=7.2,SNR=10						
	comp=Z,0.9nm,0.6s						
NOA	**NORSAR Array B**	**97.23**	**334**	P	**P**	**00 41 40.8**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=67,slow=4.6,SNR=3.9						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**122.27**	**289**	PKP	**PKPdf**	**00 47 04.5**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=75,slow=2.5,SNR=6.4						

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*IDC **18** 00:32:22.1±1.7, 5°.67N×127°.06E, h0^{km}, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=172.0km s-min=31.4km az=68.0*

*NEIC **18** 00:32:23.2±1.9, 5°.95N±0°.06×127°.6E±0°.1, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=19.0km s-min=8.1km az=112.0*

ISC 18 00:32:31.3±0.9, 5°.25N±0°.09×126°.6E±0°.1, h71^{km}, n27, σ2^{s}12/25, mb4.1/8, 2C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.22	315	⇓eP	Pn	00 32 49.8	-2.8
MATI	Mati	1.72	349	⇓eP	Pn	00 32 58.2	-1.0
DAV	Davao City (W)	2.07	331	Sn	Sn	00 33 30.6	+1.9
	54nm,0.3s,baz=197,slow=19,SNR=2.1						
DAV	Davao City (W)	2.07	331	Pn	Pn	00 33 01.3	-2.6
KCP	Kidapawan	2.30	320	⇑eP	Sn	00 33 39.5	+5.1
BIPH	Bislig	2.93	356	⇓eP	Pn	00 33 11.7	-3.8
BIPH				eS	Sn	00 33 51.9	+2.3
BUKP	Musuan	3.02	330	⇑iP	Pn	00 33 33.4	+17
BUTP	Butuan	3.82	346	⇓eP	Pn	00 33 28.0	+0.3
GLSP	General Luna,	4.53	354	⇓eP	Pn	00 33 37.6	+0.2
TOLI2	Tolitoli	7.10	235	Pn	Pn	00 34 24.3	+12
LUWI	Luwuk	7.32	211	Pn	Pn	00 34 24.6	+9.1
WB0	Warramunga Arr	26.02	163	P	P	00 37 59.9	+2.0
WB0				IAmb	IAmb	00 38 08.1	
	comp=Z,9.8nm,1.2s						
WRA	Warramunga Arr	26.17	163	P	P	00 38 01.3	+2.1
	comp=Z,0.3nm,0.6s,baz=342,slow=10,SNR=2.3						
	comp=Z,0.3nm,0.6s						
WRA	Warramunga Arr	26.17	163	P	P	00 38 00.9	+1.7
WB2	Warramunga Arr	26.17	163	P	P	00 38 00.9	+1.7
WB2				IAmb	IAmb	00 38 18.8	
	comp=Z,6.4nm,1.2s						
WR0	Warramunga Arr	26.24	163	P	P	00 38 02.5	+2.6
WR0				IAmb	IAmb	00 38 27.8	
	comp=Z,9.9nm,1.4s						
MK31	Makanchi Array	56.24	325	P	P	00 42 02.4	-1.9
MKAR	Makanchi Array	56.24	325	P	P	00 42 04.6	+0.3
	comp=Z,0.4nm,0.4s,baz=119,slow=6.4,SNR=7.9						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	56.24	325	P	P	00 42 03.8	-0.5
MAKZ	Makanchi	56.43	325	P	P	00 42 05.3	-0.3
MAKZ				IAmb	IAmb	00 42 08.8	
	comp=Z,5.7nm,1.4s						
BOOM	Boomskoye usch	58.12	318	P	P	00 42 16.6	-1.2
KURK	Kurchatov	60.40	327	P	P	00 42 31.3	-1.8
KKAR	Karatay Array	62.03	317	P	P	00 42 44.0	-0.5
ABKAR	Akbulak array	70.89	320	P	P	00 43 40.4	-0.4
ARCES	ARCESS Array B	88.98	340	P	P	00 45 16.3	-1.6
	comp=Z,5.9nm,1.0s,baz=71,slow=6.8,SNR=1.8						
	comp=Z,5.9nm,1.0s						
FINES	FINESS Array B	90.44	332	P	P	00 45 24.4	-0.4
	comp=Z,0.5nm,0.7s,baz=64,slow=8.7,SNR=4.0						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	122.30	289	PKP	PKiKP	00 51 20.0	+0.6
	comp=Z,0.2nm,0.6s,baz=81,slow=2.4,SNR=1.4						

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*IDC **18** 00:33:10.7±0.7, 5°.77N×127°.18E, h0^{km}, mb4.1/10, mbtmp4.1/11, ML3.8/1, Error ellipse: s-maj=39.9km s-min=16.9km az=70.0*

*NEIC **18** 00:33:12.6±1.4, 5°.71N±0°.06×127°.1E±0°.1, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=22.0km s-min=8.2km az=71.0*

ISC 18 00:33:21.1±0.6, 5°.50N±0°.09×127°.0E±0°.1, h84^{km}, n41, σ1^{s}71/34, mb4.2/16, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.40	295	eS	Sn	00 33 56.3	-7.2
MATI	Mati	1.60	333	eS	Sn	00 34 11.7	+3.4
DAV	Davao City (W)	2.09	318	Pn	Pn	00 33 46.4	-7.9
	34nm,0.3s,baz=284,slow=23,SNR=1.5						
DAV				Sn	Sn	00 34 18.5	-1.1
	59nm,0.3s,baz=85,slow=23,SNR=1.8						
	130nm,0.4s						
DAV	Davao City (W)	2.09	318		Pn	00 33 46.2	-8.1
GSPH	General Santos	2.10	286	⇑iP	Pn	00 33 44.8	-10
KCP	Kidapawan	2.40	309	i S	Sn	00 34 27.8	+0.6
GLSP	General Luna,	4.34	349	eS	Sn	00 35 19.3	+5.3
TNTI	Ternate	4.72	175	Pn	Pn	00 34 24.9	-5.0
LUWI	Luwuk	7.74	213		Pn	00 35 08.8	-2.4
MYLDM	Lahad Datu	8.45	268	Pn	Pn	00 35 17.6	-3.2
MTN	Manton Dam	18.69	167	P	P	00 37 32.6	-0.2
JCJ	Chichijima	25.90	32	P	P	00 38 41.7	-3.6
	32nm,1.1s,baz=267,slow=20,SNR=1.6						
	32nm,1.1s						
JCJ	Chichijima	25.90	32	P	P	00 38 42.1	-3.2
WB0	Warramunga Arr	26.15	164	P	P	00 38 47.9	+0.2
WB0				IAmb	IAmb	00 39 01.7	
	comp=Z,5.2nm,0.8s						
WRA	Warramunga Arr	26.30	164	P	P	00 38 50.4	+1.4
	comp=Z,1.7nm,0.8s,baz=342,slow=10,SNR=10						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	26.30	164	P	P	00 38 47.9	-1.1
WB2	Warramunga Arr	26.30	164	P	P	00 38 49.4	+0.4
WB2				IAmb	IAmb	00 39 03.0	
	comp=Z,3.0nm,0.7s						
WR0	Warramunga Arr	26.37	164	P	P	00 38 49.1	-0.6
WR0				IAmb	IAmb	00 38 56.0	
	comp=Z,8.6nm,1.2s						
ASAR	Alice Springs	29.77	167	P	P	00 39 21.6	+1.7
	comp=Z,0.3nm,0.5s,baz=347,slow=7.6,SNR=1.9						
ASAR				PcP	PcP	00 42 23.0	+1.1
	comp=Z,0.2nm,0.3s,baz=341,slow=2.7,SNR=1.8						
	comp=Z,0.3nm,0.5s						
STKA	Stephens Creek	39.70	160	P	P	00 40 46.3	+1.1
	comp=Z,0.6nm,0.3s,baz=328,slow=17,SNR=1.7						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	39.70	160	P	P	00 40 47.2	+2.0
H11S3	WAKE ISLAND Hy	40.82	68	T	T	01 25 50.3	
	baz=250						
H11S1	WAKE ISLAND Hy	40.83	68	T	T	01 25 51.6	
	baz=250						
H11S2	WAKE ISLAND Hy	40.83	68	T	T	01 25 51.3	
	baz=250						
MK31	Makanchi Array	56.26	324	P	P	00 42 53.0	+0.2
MK31				IAmb	IAmb	00 43 13.2	
	comp=Z,4.3nm,1.2s						
MKAR	Makanchi Array	56.26	324	P	P	00 42 52.4	-0.5
	comp=Z,1.1nm,0.5s,baz=123,slow=8.5,SNR=8.9						
MKAR				PcP	PcP	00 43 50.0	+0.5
	comp=Z,1.2nm,0.7s,baz=102,slow=5.1,SNR=4.8						
	comp=Z,1.1nm,0.5s						
MKAR	Makanchi Array	56.26	324	P	P	00 42 51.7	-1.2
MAKZ	Makanchi	56.45	324	P	P	00 42 53.0	-1.3
MAKZ				IAmb	IAmb	00 42 58.3	
	comp=Z,2.0nm,0.8s						
BOOM	Boomskoye usch	58.19	317	P	P	00 43 05.2	-1.6
ZALV	Zalesovo Beam	59.14	332	P	P	00 43 11.9	-0.9
	comp=Z,0.6nm,0.3s,baz=125,slow=9.3,SNR=3.0						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	59.14	332	P	P	00 43 11.5	-1.3
KURK	Kurchatov	60.40	327	P	P	00 43 20.9	-0.6
KKAR	Karatay Array	62.12	316	P	P	00 43 32.6	-0.8
BRVK	Borovoye	66.06	326	P	P	00 43 59.5	+0.5
BRVK				IAmb	IAmb	00 44 01.7	
	comp=Z,3.4nm,0.8s						
NRIK	Noril'sk	68.78	346	P	P	00 44 16.4	+0.6
	comp=Z,0.9nm,0.3s,baz=131,slow=3.9,SNR=1.0						
	comp=Z,0.9nm,0.3s						
ABKAR	Akbulak array	70.95	320	P	P	00 44 29.1	-0.4
ILAR	Eielson Array	83.40	25	P	P	00 45 37.4	-1.6
	comp=Z,0.4nm,1.0s,baz=263,slow=7.2,SNR=2.2						
	comp=Z,0.4nm,1.0s						
ARCES	ARCESS Array B	88.88	340	P	P	00 46 05.5	-0.2
	comp=Z,1.6nm,0.7s,baz=78,slow=5.6,SNR=6.3						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	90.40	332	P	P	00 46 12.6	-0.3
	comp=Z,0.7nm,0.5s,baz=44,slow=5.8,SNR=7.4						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	90.40	332	P	P	00 46 13.2	+0.3
TORD	Torodi Ar. Bea	122.59	289	PKP	PKiKP	00 52 08.4	+0.2
	comp=Z,0.2nm,0.5s,baz=81,slow=1.8,SNR=6.0						

KRSC 18 00:57:29.2±2.1, 49°.60N×157°.99E, h47^{km}±25^{km}, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.62	313	eP	Pn	00 57 56.3	+1.1
SKR				eS	Sn	00 58 14.9	0.0
PAU	Pauzhetka	2.01	339	eP	Pn	00 58 03.4	+2.8
PAU				eS	Sn	00 58 26.6	+2.1
KDTR	Khodutka, Kamc	2.21	1	eP	Pn	00 58 05.4	+2.1
ASAK	Asacha	2.78	359	eP	Pn	00 58 14.9	+3.6
MIPR	Malaya Ipel'ka	2.79	344	eP	Pn	00 58 14.7	+3.4
RUS	Russkaya	2.85	6	eP	Pn	00 58 15.5	+3.3
MTVR	Mutnovka	2.89	2	eP	Pn	00 58 15.4	+2.6
MTVR				eS	Sn	00 58 51.3	+5.0
GRL	Gorelyy	2.95	1	eP	Pn	00 58 16.3	+2.6
KRMR	Karymshinskiy	3.23	2	eP	Pn	00 58 21.6	+4.2
UGLR	Uglovaya	3.65	8	eP	Pn	00 58 26.6	+3.4
AVH	Avacha	3.70	7	eP	Pn	00 58 28.4	+4.6
KOK	Koryaka	3.72	6	eP	Pn	00 58 28.3	+4.2
SDLR	Sedlovina	3.72	8	eP	Pn	00 58 28.0	+3.8
KRX	Arik	3.78	6	eP	Pn	00 58 29.3	+4.2
GNL	Ganaly	4.10	360	eP	Pn	00 58 34.0	+4.6
TUMR	Tumrok	5.84	12	eP	Pn	00 58 58.4	+5.1
KBTR	Krutoberegovo	7.23	22	eP	Pn	00 59 15.9	+3.7

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*NIED **18** 01:06:28.2, 32°.74N×130°.60E, h13^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.91; M$_{\theta\theta}$1.98; M$_{\phi\phi}$-0.08; M$_{r\theta}$1.41; M$_{\theta\phi}$-0.02; M$_{\phi r}$0.20; Fault plane solution: M$_{0}$2.41000×10^{14} NP1:ϕ_s96.00000°, δ27.00000°, λ-81.00000°. NP2:ϕ_s265.00000°, δ63.00000°, λ-95.00000°.*

JMA 18 01:06:28.2±0.0, 32°.74N±0°.08×130°.6E±0°.1, h13^{km}, MV3.5/20, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.23	346	P	Pg	01 06 33.4	+0.2
JTA				S	Sg	01 06 36.8	+0.2
JIU3	Izumi3	0.26	136	P	Pg	01 06 33.6	0.0
JIU3				S	Sg	01 06 37.5	+0.2
JZO	Okuchi	0.59	180	i P	Pg	01 06 39.7	-0.1
JZO				S	Sg	01 06 47.8	+0.1

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*IDC **18** 01:17:45.8±1.2, 14°.26S×166°.41E, h0^{km}, mb3.7/5, mbtmp3.8/6, ML4.1/1, MS3.4/7, Error ellipse: s-maj=39.1km s-min=27.9km az=115.0*

*NOU **18** 01:17:49.7, 14°.57S×166°.80E, h0^{km}, MLv4.9/13, Vanuatu Islands*

*NEIC **18** 01:17:50.9±2.4, 14°.39S±0°.08×166°.8E±0°.2, h36^{km}±5^{km}, mb4.4/7, Error ellipse: s-maj=24.9km s-min=10.7km az=76.0*

ISC 18 01:17:53.8±0.8, 14°.51S±0°.08×166°.8E±0°.1, h67^{km}, n39, σ2^{s}01/34, mb3.9/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.01	157	Pn	Pn	01 18 07.1	-5.2
SANVU				Sn	Sn	01 18 23.6	-2.4
SANVU	Saraoutou	1.01	157	P	Pn	01 18 07.9	-4.4
DVP	Devils Point	3.46	157	P	Pn	01 18 44.7	-0.6
RTV	Rentapao	3.62	155	P	Pn	01 18 46.2	-1.2
LIFNC	LIFOU	6.25	176	Pn	Pn	01 19 24.7	+1.3
MARNC	Mare, Loyalty	7.03	171	Pn	Pn	01 19 33.4	-0.7
YATNC	Mamie plateau,	7.51	179	P	Pn	01 19 39.2	-1.5
DZM	Mont Dzumac	7.53	182	Pn	Pn	01 19 39.2	-1.8
	2.5nm,0.3s,baz=13,slow=21,SNR=21						
DZM				Sn	Sn	01 21 04.2	-0.7
	0.4nm,0.3s,baz=328,slow=23,SNR=1.4						
	7.3nm,0.4s						
DZM	Mont Dzumac	7.53	182		Pn	01 19 38.8	-2.2
DZM	Mont Dzumac	7.53	182	P	Pn	01 19 39.0	-2.0
NOUC	Port Laguerre	7.56	183	P	Pn	01 19 41.1	-0.3
ONTNC	Ouen Toro	7.76	182	Pn	Pn	01 19 42.8	-1.3
ONTNC	Ouen Toro	7.76	182	P	Pn	01 19 43.1	-1.0
OUENC	Ouen Island, N	7.86	180	Pn	Pn	01 19 44.2	-1.4
OUENC	Ouen Island, N	7.86	180	P	Pn	01 19 44.3	-1.2
PINNC	Pines Island,	8.08	176	Pn	Pn	01 19 47.5	-1.0
PMG	Port Moresby	19.86	283	LR	LR	01 28 41.2	
	comp=Z,120nm,19.5s,baz=14,slow=34						
BKZ	Black Stump Fm	26.00	163	P	P	01 23 23.5	+3.0
BKZ				IAmb	IAmb	01 23 50.9	
	comp=Z,42nm,1.5s						
STKA	Stephens Creek	28.79	229	LR	LR	01 34 49.1	
	comp=Z,76nm,18.1s,baz=57,slow=36						
WB0	Warramunga Arr	31.37	256	P	P	01 24 06.0	-2.5
WB0				IAmb	IAmb	01 24 17.7	
	comp=Z,4.2nm,1.1s						
WB2	Warramunga Arr	31.42	255	P	P	01 24 06.5	-2.4
WB2				IAmb	IAmb	01 24 27.2	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	31.43	255	P	P	01 24 05.7	-3.3
	comp=Z,0.5nm,0.6s,baz=87,slow=9.8,SNR=7.2						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	31.43	255	P	P	01 24 07.0	-2.0
ASAR	Alice Springs	32.32	249	P	P	01 24 14.4	-2.4
	comp=Z,0.3nm,0.5s,baz=76,slow=9.3,SNR=7.4						
	comp=Z,0.3nm,0.5s						
BBOO	Buckleboo	33.35	232	P	P	01 24 26.2	+0.6
GUMO	Guam	35.36	321	LR	LR	01 38 14.9	
	comp=Z,53nm,19.4s,baz=92,slow=35						
VNDA	Vanda	63.07	181	P	P	01 28 16.7	+3.1
	comp=Z,0.6nm,1.0s,baz=350,slow=7.1,SNR=1.8						
	comp=Z,0.6nm,1.0s						
VNDA	Vanda	63.07	181	P	P	01 28 16.4	+2.8
VNDA				IAmb	IAmb	01 28 24.8	
	comp=Z,2.8nm,1.4s						
PETK	Petropavlovsk-	67.80	354	P	P	01 28 43.7	-0.7
QSPA	South Pole Qui	75.51	180	P	P	01 29 32.6	+1.8
QSPA				IAmb	IAmb	01 30 00.7	
	comp=Z,4.4nm,1.2s						
ILAR	Eielson Array	86.46	18	P	P	01 30 27.6	-1.2
	comp=Z,0.6nm,0.7s,baz=243,slow=4.9,SNR=7.4						
ILAR				LR	LR	02 07 18.8	
	comp=Z,23nm,18.3s,baz=260,slow=34						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	86.46	18	P	P	01 30 27.0	-1.7
ELK	Elko	90.49	48	LR	LR	02 05 10.9	
	comp=Z,17nm,18.5s,baz=176,slow=31						
PMSA	Palmer Station	92.13	161	LR	LR	02 07 46.1	
	comp=Z,19nm,19.4s,baz=206,slow=32						
INK	Inuvik	92.83	19	LR	LR	02 10 17.2	
	comp=Z,21nm,18.9s,baz=323,slow=34						
MKAR	Makanchi Array	96.73	316	P	P	01 31 17.9	+1.0
	comp=Z,0.3nm,0.7s,baz=90,slow=5.4,SNR=2.3						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	96.73	316	P	P	01 31 17.2	+0.2
ARCES	ARCESS Array B	119.93	345	PKP	PKiKP	01 36 38.5	+2.4
	comp=Z,3.3nm,1.0s,baz=52,slow=1.5,SNR=1.6						
FINES	FINESS Array B	125.35	338	PKP	PKiKP	01 36 48.0	+1.0
	comp=Z,0.9nm,0.9s,baz=50,slow=4.3,SNR=1.4						

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*IDC **18** 01:48:50.0±2.0, 2°.19N×126°.97E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=157.1km s-min=26.9km az=65.0*

*DJA **18** 01:49:10.7±0.5, 0°N±5°×12°4E±°, h146^{km}±6^{km}, M3.6/8, MLv3.6/8*

ISC 18 01:49:10.5±1.0, 0°.47N±0°.09×124°.20E±0°.06, h150^{km}, n10, σ1^{s}47/13, mb3.5/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.25	296	P	Pn	01 49 31.9	+1.1
KMSI				S	Sn	01 49 48.8	+2.5
APSI	Ampana	2.90	242	P	Pn	01 49 57.5	+0.9
SANI	Sanana	3.07	144	P	Pn	01 49 58.9	+0.1
SANI				S	Sn	01 50 34.1	-2.0
TNTI	Ternate	3.18	85	P	Pn	01 50 00.2	+0.1
TNTI				S	Sn	01 50 38.7	+0.2
LBMI	Labuha	3.48	108	P	Pn	01 50 04.6	+0.7
MPSI	Mapaga	4.31	268	P	Pn	01 50 13.9	-0.9
WRA	Warramunga Arr	22.59	154	P	P	01 53 58.9	+0.3
	1.3nm,0.4s,baz=343,slow=12,SNR=36						
	1.3nm,0.4s						
ASAR	Alice Springs	25.77	159	P	P	01 54 28.8	+1.2
	0.3nm,0.3s,baz=346,slow=10,SNR=6.6						
	0.3nm,0.3s						
STKA	Stephens Creek	36.14	154	P	P	01 55 59.2	+0.8
	0.7nm,0.3s,baz=350,slow=6.1,SNR=2.1						
	0.7nm,0.3s						
MKAR	Makanchi Array	58.86	328	P	P	01 58 51.1	-2.4
	0.2nm,0.6s,baz=134,slow=8.4,SNR=1.7						
	0.2nm,0.6s						

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*KRNET **18** 02:11:30.8±0.1, 40°.83N×69°.72E, h13^{km}, mb3.7*

*SOME **18** 02:11:30.3, 40°.87N×69°.73E, h5^{km}*

*ISU **18** 02:11:31, 40°.76N×69°.31E, h28^{km}*

*NNC **18** 02:11:31.6±1.3, 40°.60N×70°.00E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=9.3km s-min=5.9km az=34.0*

ISC 18 02:11:30.9±1.1, 40°.88N±0°.02×69°.86E±0°.02, h6^{km}±10^{km}, n47, σ2^{s}28/76, 23C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGS	TashGRES	0.60	335	P	Pg	02 11 42.9	+0.4
TGS				S	Sb	02 11 52.0	-0.7
TAS	Tashkent	0.62	317	⇑iP	Pg	02 11 42.4	-0.4
	baz=27						
TAS				⇑iS	Sg	02 11 50.9	0.0
	baz=27						
TAS	Tashkent	0.62	317	P	Pg	02 11 42.3	-0.5
TAS				S	Sg	02 11 51.3	+0.4
YNGY	Yangiyul	0.66	291	P	Pn	02 11 50.3	+3.4
BTK	Batken	1.10	138	⇑iP	Pn	02 11 52.6	-0.4
	baz=32						
BTK				⇑iS	Sn	02 12 08.5	0.0
	baz=32						
BTK	Batken	1.10	138	P	Pn	02 11 52.1	-0.9
TRKS	Terek-Say	1.17	56	⇑iP	Pn	02 11 55.0	+1.0
	baz=60						
TRKS				⇑iS	Sn	02 12 12.5	+2.1
	baz=60						
CHMI	Chimion	1.41	115	P	Pg	02 12 01.4	+3.5
CHMI				S	Sn	02 12 23.6	+7.5
CHM	Chimkent	1.46	353	eP	Pg	02 12 00.0	+1.2
	4.0nm,0.1s						
CHM				eS	Sg	02 12 21.8	+4.2
	1µm,0.2s						
FRG	Fergana	1.55	108	P	Pg	02 12 05.2	+4.6
FRG				S	Sg	02 12 27.3	+6.6
DZI	Dzhizak	1.73	245	P	Pn	02 12 00.5	-1.1
ARK	Arkit	1.83	59	⇑iP	Pg	02 12 07.3	+1.2
	baz=60						
ARK				⇑iS	Sg	02 12 33.7	+3.9
	baz=60						
GAR	Garm	1.91	169	⇑iP	Pb	02 12 06.1	-0.1
	baz=66						
GAR				⇑iS	Sg	02 12 32.0	-0.2
	baz=66						
DRK	Karamyk	2.04	133	⇑iP	Pg	02 12 09.5	-0.5
	baz=30						
DRK				⇑iS	Sg	02 12 37.6	+1.2
	baz=30						
BRLS	Borolday	2.15	360	eP	Pn	02 12 08.0	+0.5
	13nm,0.0s						
BRLS				eS	Sn	02 12 34.8	+0.3
	280nm,0.1s						
BRLS	Borolday	2.15	360	Pg	Pn	02 12 07.2	-0.2
	13nm,0.2s						
BRLS				Lg	Lg	02 12 34.3	
	281nm,0.3s						
OHH	Osh	2.25	98	⇓iP	Pg	02 12 12.8	-1.3
	baz=97						
OHH				⇓iS	Sg	02 12 43.5	+0.2
	baz=97						
OHH	Osh	2.25	98	P	Pb	02 12 12.3	+0.2
KK31	Karatay Array	2.28	12	⇑Pn	Pg	02 12 13.5	-1.1
	5.5nm,0.3s,baz=192,slow=14,SNR=516						
KK31				Sn	Sg	02 12 46.9	+2.8
	62nm,0.3s,baz=209,slow=28,SNR=28						
KKAR	Karatay Array	2.28	12	⇑iP	Pb	02 12 12.8	+0.3
	baz=14						
KKAR				⇑iS	Sg	02 12 43.3	-0.8
	baz=14						
CHGR	Chuyangaron	2.28	194	⇓iP	Pb	02 12 11.0	-1.6
	baz=91						
CHGR				⇓iS	Sb	02 12 40.4	-0.7
	baz=91						
DZA	Taraz	2.29	28	eP	Pg	02 12 15.9	+1.0
	41nm,0.0s						
DZA				eS	Sg	02 12 49.0	+4.3
	932nm,0.1s						
DZA	Taraz	2.29	28	Pg	Pg	02 12 15.9	+1.0
	46nm,0.1s						
DZA				Lg	Lg	02 12 49.0	
	934nm,0.3s						
AGL	Agalyk	2.65	240	P	Pn	02 12 13.2	-1.2
MRKS	Merke	3.13	52	eP	Pg	02 12 30.0	-1.0
	3.4nm,0.1s						
MRKS				eS	Sg	02 13 12.6	+1.0
	16nm,0.2s						
MRKS	Merke	3.13	52	Pg	Pg	02 12 30.0	-1.0
	3.3nm,0.6s						
MRKS				Lg	Lg	02 13 12.6	
	25nm,0.4s						
EKS2	Erkin-Say	3.43	57	⇑eP	Pb	02 12 29.4	-2.8
	baz=58						
EKS2				⇑iS	Sb	02 13 12.3	-1.9
	baz=58						
ARLS	Aral	3.50	72	⇑eP	Pb	02 12 30.5	-2.9
	baz=72						
ARLS				⇑eS	Sb	02 13 13.9	-2.4
	baz=72						
UCH	Uchtor	3.75	67	⇑eP	Pb	02 12 34.0	-3.8
	baz=67						
UCH				⇑eS	Sb	02 13 20.3	-3.3
	baz=67						
CHMS	Chumysh	4.22	58	⇑Pg	Pg	02 12 50.3	-1.5
	4.7nm,0.6s						
CHMS				⇓Lg	Lg	02 13 47.5	
	8.4nm,0.4s						
SGDS	Sogindy	4.38	52	eP	Pg	02 12 52.7	-2.1
	1.5nm,0.0s						
SGDS				eS	Sg	02 13 52.0	+0.4
	10nm,0.1s						
SGDS	Sogindy	4.38	52	Pg	Pg	02 12 52.7	-2.1
	1.6nm,1.0s						
SGDS				Lg	Lg	02 13 52.0	
	13nm,0.7s						
TKM2	Tokmak 2	4.75	63	Pn	Pn	02 12 45.5	+2.3
TKM2				⇓Pg	Pg	02 12 59.2	-2.6
	3.1nm,0.5s						
TKM2				⇓Lg	Lg	02 14 03.3	
	17nm,0.6s						
KST	Kastek	5.04	63	eP	Pg	02 13 04.9	-2.5
	1.6nm,0.1s						
KST				eS	Sg	02 14 13.2	+0.5
	16nm,0.2s						
KST	Kastek	5.04	63	Pg	Pg	02 13 04.9	-2.5
	1.6nm,0.8s						
KST				Lg	Lg	02 14 13.2	
	16nm,0.5s						
KRBS	Karabastau	5.15	55	eP	Pg	02 13 06.9	-2.7
	4.1nm,0.2s						
KRBS				eS	Sg	02 14 16.5	+0.1
	5.2nm,0.1s						
KRBS	Karabastau	5.15	55	Pg	Pg	02 13 06.9	-2.7
	3.9nm,0.5s						
KRBS				Lg	Lg	02 14 16.5	
	4.8nm,0.6s						
BTLS	Baital	5.17	35	eP	Pg	02 13 08.7	-1.3
	1.7nm,0.0s						
BTLS				eS	Sg	02 14 18.9	+1.9
	11nm,0.1s						
MTBS	Maitube	5.39	63	eP	Pg	02 13 12.2	-1.9
	3.1nm,0.0s						
MTBS				eS	Sg	02 14 25.2	+1.3
	9.9nm,0.1s						
MTBS	Maitube	5.39	63	Pg	Pg	02 13 12.2	-1.9
	3.1nm,0.2s						
MTBS				Lg	Lg	02 14 25.2	
	9.9nm,0.8s						
TNSS	Tian-Shan	5.71	65	eP	Pg	02 13 18.4	-1.9
	1.5nm,0.1s						
TNSS				eS	Sg	02 14 36.3	+2.1
	3.5nm,0.1s						
TNSS	Tian-Shan	5.71	65	Pg	Pg	02 13 18.4	-1.9
	1.7nm,0.6s						
TNSS				Lg	Lg	02 14 36.3	
	3.5nm,0.9s						
KTBS	Karatobe	5.80	59	eP	Pg	02 13 20.5	-1.5
	0.8nm,0.0s						
KTBS				eS	Sg	02 14 39.2	+2.1
	12nm,0.2s						
KTBS	Karatobe	5.80	59	Pg	Pg	02 13 17.9	-4.0
	0.8nm,0.3s						
KTBS				Lg	Lg	02 14 35.4	
	11nm,0.5s						
MDOK	Medeo	5.82	65	eP	Pg	02 13 19.8	-2.6
	2.2nm,0.1s						
MDOK				eS	Sg	02 14 38.7	+0.9
	9.1nm,0.4s						
MDOK	Medeo	5.82	65	Pn	Pn	02 12 58.5	+0.5
	3.0nm,0.7s						
MDOK				⇑Lg	Lg	02 14 37.2	
	13nm,0.9s						
MDOK	Medeo	5.82	65	Pg	Pg	02 13 19.8	-2.6
	2.2nm,0.7s						
MDOK				Lg	Lg	02 14 38.7	
	9.1nm,1.5s						

*IDC **18** 02:29:44.2±3.6, 35°.89N×71°.65E, h81^{km}±29^{km}, mb3.4/10, mbtmp3.7/15, MS3.0/1, Error ellipse: s-maj=30.7km s-min=20.8km az=166.0*

*NNC **18** 02:29:54.6±2.0, 36°.87N×70°.95E, h114^{km}±51^{km}, mb3.6, mpv4.2, Error ellipse: s-maj=18.4km s-min=11.6km az=154.0*

ISC 18 02:29:52.0±1.1**, 36°.71N**±0°.10×**71°.07E**±0°.07**, h100**^{km}**, n32,** σ**1**^{s}**91**/39**, mb3.6**/9**, 4C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.78	20	P	Pn	02 31 17.2	+1.5
	SNR=223						
UCH	Uchtor	6.12	25	P	Pn	02 31 21.6	+1.3
	SNR=44						
EKS2	Erkin-Say	6.30	19	P	Pn	02 31 24.4	+2.0
	SNR=34						
KK31	Karatay Array	6.40	356	⇓P	Pn	02 31 26.2	+2.5
	21nm,0.3s,baz=183,slow=13,SNR=540						
KK31				⇓S	Sn	02 32 35.1	-0.1
	8.0nm,0.3s,baz=184,slow=19,SNR=7.9						
AAK	Ala-Archa	6.48	23	P	Pn	02 31 26.5	+1.6
	SNR=20						
AAK	Ala-Archa	6.48	23	P	Pn	02 31 26.8	+1.9
	9.5nm,0.3s,baz=167,slow=6.3,SNR=35						
AAK				S	Sn	02 32 37.9	+0.5
	11nm,0.5s,baz=141,slow=22,SNR=9.3						
KBK	Karagaybulak	6.65	26	P	Pn	02 31 28.9	+1.7
	SNR=6.0						
CHMS	Chumysh	6.89	23	P	Pn	02 31 31.8	+1.4
	SNR=14						
CHMS	Chumysh	6.89	23	⇓P	Pn	02 31 31.5	+1.2
	7.7nm,0.3s						
CHMS				⇓S	Sn	02 32 47.8	+0.6
	13nm,0.8s						
USP	Ospenovka	7.06	21	P	Pn	02 31 34.1	+1.4
	SNR=24						
TKM2	Tokmak 2	7.12	28	P	Pn	02 31 34.7	+1.1
	SNR=8.1						
TKM2	Tokmak 2	7.12	28	⇓P	Pn	02 31 34.2	+0.7
	6.2nm,0.6s						
TKM2				⇑S	Sn	02 32 53.2	+0.3
	5.9nm,0.8s						
MDOK	Medeo	7.91	34	⇑P	Pn	02 31 45.2	+0.8
	2.8nm,0.5s						
GEYT	Alibeck	10.39	281	P	Pn	02 32 17.7	-0.2
	1.7nm,0.3s,baz=117,slow=12,SNR=9.8						
GEYT				S	Sn	02 34 12.6	+0.3
	2.8nm,0.3s,baz=270,slow=31,SNR=7.7						
GYA0B	ALIBECK ARRAY	10.39	281	⇑P	Pn	02 32 18.3	+0.4
GYA0B				⇓S	Sn	02 34 11.9	-0.4
MKAR	Makanchi Array	13.09	36	P	Pn	02 32 51.5	-2.4
	0.3nm,0.6s,baz=220,slow=11,SNR=2.3						
KURBB	Kurchatov Arra	14.91	19	P	P	02 33 19.9	-0.5
	0.6nm,0.6s,baz=205,slow=10,SNR=5.1						
AB31	Akbulak array	14.93	331	P	Pn	02 33 18.2	+0.6
	0.5nm,0.2s,baz=140,slow=12,SNR=87						
AB31				S	Sn	02 35 58.8	-3.3
	1.7nm,0.5s,baz=147,slow=23,SNR=7.0						
AKTO	Aktyubinsk	16.63	330	P	P	02 33 41.9	+2.4
	2.5nm,0.5s,baz=144,slow=12,SNR=12						
AKTO				S	Sn	02 36 37.6	-5.5
	0.9nm,0.5s,baz=152,slow=20,SNR=2.3						
AKTO	Aktyubinsk	16.63	330	⇑P	Pn	02 33 40.0	+1.2
	4.1nm,0.8s						
AKTO				⇓S	Sn	02 36 39.2	-3.9
	4.5nm,1.0s						
ZALV	Zalesovo Beam	19.70	25	P	P	02 34 12.8	-0.4
	1.4nm,0.3s,baz=212,slow=10,SNR=7.6						
	1.4nm,0.3s						
BRTR	Keskin Array B	29.42	287	LR	LR	02 52 30.3	
	comp=Z,26nm,18.1s,baz=122,slow=45						
AKASG	Malin Array Be	32.86	309	P	P	02 36 17.7	+1.7
	1.0nm,0.6s,baz=81,slow=7.0,SNR=6.7						
	1.0nm,0.6s						
FINES	FINESS Array B	37.34	326	P	P	02 36 56.3	+2.0
	1.2nm,0.5s,baz=121,slow=9.8,SNR=10						
	1.2nm,0.5s						
ARCES	ARCESS Array B	40.97	337	P	P	02 37 26.5	+2.0
	2.4nm,0.9s,baz=110,slow=7.8,SNR=6.2						
	2.4nm,0.9s						
NB2	NORSAR Subarra	44.25	323	P	P	02 37 52.2	+1.1
	comp=Z,1.8nm,0.4s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.25	323	P	P	02 37 52.5	+1.4
	comp=Z,1.7nm,0.5s,baz=96,slow=7.7,SNR=18						
	comp=Z,1.7nm,0.5s						
ESDC	Sonseca Array	57.41	298	P	P	02 39 30.4	+0.2
	comp=Z,0.2nm,0.7s,baz=49,slow=7.9,SNR=1.3						
	comp=Z,0.2nm,0.7s						
TORD	Torodi Ar. Bea	65.78	269	P	P	02 40 24.3	-2.3
	comp=Z,0.4nm,0.5s,baz=54,slow=6.5,SNR=9.0						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	74.56	16	P	P	02 41 16.9	-2.5
	comp=Z,0.3nm,1.0s,baz=300,slow=2.0,SNR=2.5						
	comp=Z,0.3nm,1.0s						
YKA	Yellowknife Ar	81.03	3	P	P	02 41 53.8	-1.5
	comp=Z,0.2nm,0.5s,baz=353,slow=5.3,SNR=4.2						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	82.06	122	P	P	02 41 51.3	-10
	comp=Z,0.2nm,0.7s,baz=328,slow=4.8,SNR=1.1						
	comp=Z,0.2nm,0.7s						

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*NIED **18** 02:52:54.2, 32°.76N×130°.55E, h10^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.10; $M_{\theta\theta}$1.78; $M_{\phi\phi}$0.32; $M_{r\theta}$0.02; $M_{\theta\phi}$-1.53; $M_{\phi r}$-1.51; Fault plane solution: $M_0$2.91000×10^{14} NP1:ϕ_s96.00000°, δ42.00000°, λ-134.00000°. NP2:ϕ_s328.00000°, δ61.00000°, λ-58.00000°.*

JMA 18 02:52:54.2±0.0**, 32°.76N**±0°.08×**130°.6E**±0°.1**, h10**^{km}**, MV3.6**/20**, 2D, NW KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTA	Tamana	0.20	356	P	Pg	02 52 58.5	+0.1
JTA				S	Sg	02 53 01.6	+0.3
JIU3	Izumi3	0.31	133	⇓P	Pg	02 53 00.3	-0.1
JIU3				⇓*e*S	Sg	02 53 04.8	+0.4

NOU 18 03:04:30.4, 15°.03S×167°.20E, h11^{km}**, MLv4.5**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.41	180	P	Pb	03 04 39.4	-0.4
YATNC	Mamie plateau,	7.00	182	P	Pn	03 06 12.7	-0.2
	15nm,1.4s						
DZM	Mont Dzumac	7.04	186	P	Pn	03 06 12.9	-0.7
	11nm,0.7s						
ONTNC	Ouen Toro	7.27	185	P	Pn	03 06 16.9	+0.2
	24nm,1.7s						
OUENC	Ouen Island, N	7.36	183	P	Pn	03 06 18.3	+0.5

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*ANF **18** 03:25:47.9±0.3, 65°.28N×151°.06W, h14^{km}±2^{km}, ML4.9/63, ML4.9/62, Error ellipse: s-maj=2.6km s-min=1.5km az=165.0*

*IDC **18** 03:25:48.5±0.6, 65°.49N×150°.97W, h0^{km}, mb4.0/19, mbtmp4.0/23, ML3.9/4, MS3.3/25, Error ellipse: s-maj=15.1km s-min=8.9km az=40.0*

*AEIC **18** 03:25:48±1.9, 65°.25N±0°.03×151°.07W±0°.05, h15^{km}±3^{km}, ML4.4, mb4.3/8(NEIC), ML4.6/130(NEIC), Mwr4.2/107(NEIC), Error ellipse: s-maj=4.8km s-min=3.1km az=181.0*

*NEIC **18** 03:25:48, 65°.27N×151°.10W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.69; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.56; $M_{r\theta}$-1.23; $M_{\theta\phi}$-2.00; $M_{\phi r}$0.17; Fault plane solution: $M_0$2.44000×10^{15} NP1:ϕ_s261.98000°, δ76.87000°, λ145.64000°. NP2:ϕ_s0.80000°, δ56.65000°, λ15.78000°. Principal axes: T 2.3465, Plg33.0000°, Azm216.0000°; N 0.1715, Plg54.0000°, Azm64.0000°; P -2.5180, Plg13.0000°, Azm315.0000°;*

*NEIC **18** 03:25:48.4±1.9, 65°.26N±0°.04×151°.04W±0°.04, h14^{km}±4^{km} Error ellipse: s-maj=5.2km s-min=2.4km az=179.0*

ISC 18 03:25:48.4±1.0**, 65°.28N**±0°.02×**151°.04W**±0°.02**, h11**^{km}±6^{km}**, n332,** σ**1**^{s}**22**/309**, mb4.2**/29**, MS3.3**/22**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I21K	Tanana	0.41	257		Pg	03 25 56.4	-0.1
I21K					Sg	03 26 01.9	0.0
I21K	Tanana	0.41	257	IAML		03 26 03.7	
	comp=N,20µm,0.7s						
I21K	Tanana	0.41	257	P	Pg	03 25 56.4	-0.1
	baz=80,SNR=1000						
I21K				S	Sg	03 26 01.5	-0.4
	baz=80						
I23K	Minto, Yukon-K	0.72	100		Pg	03 26 02.0	-0.2
I23K					Sg	03 26 11.3	-0.3
I23K	Minto, Yukon-K	0.72	100	P	Pg	03 26 02.0	-0.2
	baz=279,SNR=1000						
I23K				S	Sg	03 26 11.3	-0.3
	baz=279						
PS06	TAPS Pump Stn6	0.79	42		Pg	03 26 03.7	0.0
H23K	Yukon River	0.83	48		Pb	03 26 04.6	-0.3
H23K					Sb	03 26 16.1	0.0
H23K	Yukon River	0.83	48	IAML		03 26 18.8	
	comp=N,16µm,0.6s						
H23K	Yukon River	0.83	48	P	Pb	03 26 04.5	-0.3
	baz=228,SNR=1000						
H23K				S	Sb	03 26 15.7	-0.3
	baz=228						
H21K	Melozitna Rive	0.83	298		Pb	03 26 04.5	-0.3
H21K					Sb	03 26 15.6	-0.4
H21K	Melozitna Rive	0.83	298	IAML		03 26 18.7	
	comp=N,29µm,0.7s						
H21K	Melozitna Rive	0.83	298	P	Pb	03 26 04.5	-0.3
	baz=119,SNR=1000						
H21K				S	Sg	03 26 15.4	+0.1
	baz=119						
NEA2	Nenana	1.08	128		Pb	03 26 08.0	-1.0
NEA2	Nenana	1.08	128	P	Pb	03 26 08.1	-1.0
	baz=309,SNR=1000						
NEA2				S	Sb	03 26 22.4	-0.9
	baz=309						
PS07	TAPS Pump Stn7	1.16	87		Pn	03 26 09.4	-1.1
PS07					Sg	03 26 25.9	+0.2
BPAW	Bear Paw Mtn.	1.18	179		Pn	03 26 09.1	-1.7
BPAW	Bear Paw Mtn.	1.18	179	IAML		03 26 25.0	
	comp=N,10µm,0.5s						
BPAW				IAML		03 26 25.6	
	comp=E,18µm,0.4s						
BPAW	Bear Paw Mtn.	1.18	179	P	Pn	03 26 09.2	-1.7
	baz=358,SNR=1000						
BPAW				S	Sb	03 26 24.2	-1.9
	baz=358						
MDM	Murphy Dome	1.23	104		Pn	03 26 10.3	-1.2
BWN	Browne	1.30	148		Pb	03 26 12.5	-0.3
IM03		1.33	303		Pn	03 26 12.2	-0.7
IMAR	Indian Mountai	1.33	303	Pn	Pn	03 26 12.3	-0.5
TCOL	CIGO, UAF Yank	1.40	105		Pn	03 26 13.3	-0.5
TCOL	CIGO, UAF Yank	1.40	105	P	Pn	03 26 12.5	-1.4
	baz=287,SNR=191						
TCOL				S	Sn	03 26 31.8	-0.5
	baz=287						
COLA	College	1.41	105		Pn	03 26 13.1	-0.8
COLA	College	1.41	105	IAML		03 26 35.1	
	comp=E,6µm,0.5s						
COLA	College	1.41	105	P	Pn	03 26 12.4	-1.5
	baz=287						
COLA				S	Sn	03 26 31.9	-0.5
	baz=287						
H24K	Noodor Dome	1.43	65		Pn	03 26 13.3	-0.9
H24K	Noodor Dome	1.43	65	IAML		03 26 36.0	
	comp=N,8µm,0.7s						
H24K				IAML		03 26 36.5	
	comp=E,7µm,0.4s						
H24K	Noodor Dome	1.43	65	P	Pn	03 26 13.4	-0.9
	baz=247,SNR=1000						
H24K				Sg	Sg	03 26 35.2	+0.9
	baz=247						
WRH	Wood River Hil	1.50	121		Pn	03 26 13.7	-1.4
CHUM	Lake Minchumin	1.50	202		Pn	03 26 14.1	-1.1
CHUM	Lake Minchumin	1.50	202	P	Pn	03 26 14.2	-1.1
	baz=21,SNR=1000						
CHUM				S	Sn	03 26 34.5	-0.3
	baz=21						
CCB	Clear Creek Bu	1.51	113		Pn	03 26 13.8	-1.5
POKR	Poker Plat Res	1.53	94		Pn	03 26 14.3	-1.3
POKR	Poker Plat Res	1.53	94	IAML		03 26 38.1	
	comp=N,10µm,0.7s						
POKR				IAML		03 26 38.2	
	comp=E,6µm,0.6s						
POKR	Poker Plat Res	1.53	94	P	Pn	03 26 14.3	-1.3
	baz=276,SNR=1000						
POKR				Sb	Sb	03 26 36.6	+0.5
	baz=276						
PS05	TAPS Pump Stn5	1.55	5		Pb	03 26 16.4	-0.7
KTH	Kantishna Hill	1.73	178		Pn	03 26 17.0	-1.5
J20K	Nowinta River	1.73	232		Pn	03 26 16.7	-1.7
J20K	Nowinta River	1.73	232	P	Pn	03 26 16.8	-1.6
	baz=50,SNR=1000						
J20K				S	Sn	03 26 39.9	-0.6
	baz=50						
MCK	McKinley	1.80	149		Pn	03 26 18.1	-1.2
MCK	McKinley	1.80	149	IAML		03 26 43.9	
	comp=N,5µm,0.7s						
MCK	McKinley	1.80	149	P	Pn	03 26 18.1	-1.2
	baz=330,SNR=444						
MCK				S	Sn	03 26 42.4	+0.2
	baz=330						
IL31		1.83	104		Pn	03 26 18.2	-1.5
ILAR	Eielson Array	1.83	104	Pn	Pn	03 26 18.2	-1.5
	comp=N,10nm,0.3s,baz=285,slow=13,SNR=749						
ILAR				Sn	Sb	03 26 45.1	+0.3
	comp=N,538nm,0.3s,baz=293,slow=29,SNR=8.3						
ILAR				LR	LR	03 27 19.8	
	comp=N,1µm,20.9s,baz=182,slow=49						
ILAR	Eielson Array	1.83	104	Pn	Pn	03 26 18.4	-1.4
TRF	Thorofare Moun	1.86	170		Pn	03 26 19.1	-1.3
TRF	Thorofare Moun	1.86	170	P	Pn	03 26 19.1	-1.3
	baz=350,SNR=377						
TRF				Sb	Sb	03 26 45.4	-0.4
	baz=350						
CAST	Castle Rocks	1.92	194	Pn	Pn	03 26 19.4	-1.6
CAST				IAML		03 26 47.8	
	comp=N,5µm,0.4s						
CAST				IAML		03 26 48.7	
	comp=E,5µm,0.5s						
CAST	Castle Rocks	1.92	194	P	Pn	03 26 19.4	-1.6
	baz=13,SNR=1000						
CAST				Sb	Sb	03 26 47.0	-0.3
	baz=13						
PS08	TAPS Pump Stn8	1.94	110		Pn	03 26 19.9	-1.4
HDA	Harding Lake	1.95	115		Pn	03 26 19.8	-1.6
HDA	Harding Lake	1.95	115	IAML		03 26 48.9	
	comp=N,3µm,0.8s						
HDA				IAML		03 26 49.6	
	comp=E,4µm,0.5s						
HDA	Harding Lake	1.95	115	P	Pn	03 26 19.8	-1.6
	baz=297,SNR=918						
COLD	Coldfoot	1.99	9		Pn	03 26 22.1	+0.2
COLD	Coldfoot	1.99	9	P	Pn	03 26 22.1	+0.2
	baz=190,SNR=1000						
RND	Reindeer	2.10	152		Pn	03 26 22.6	-0.9
K20K	Telida	2.34	216		Pn	03 26 25.2	-1.6
K20K	Telida	2.34	216	IAML		03 27 03.5	
	comp=N,4µm,0.8s						
K20K				IAML		03 27 07.9	
	comp=E,4µm,0.5s						
K20K	Telida	2.34	216	P	Pn	03 26 25.1	-1.6
	baz=33,SNR=652						
PPLA	Purkeypile	2.44	193		Pn	03 26 26.9	-1.4
PPLA	Purkeypile	2.44	193	P	Pn	03 26 26.9	-1.4
	baz=11,SNR=96						
PPLA				Sb	Sb	03 27 03.0	+0.5
	baz=11						
J25K	Salcha River,	2.50	103		Pn	03 26 28.1	-0.9
J25K	Salcha River,	2.50	103	P	Pn	03 26 27.6	-1.4
	baz=287,SNR=177						
GCSA	Galena City Sc	2.54	261		Pn	03 26 28.0	-1.4
GCSA	Galena City Sc	2.54	261	P	Pn	03 26 27.7	-1.8
	baz=76,SNR=34						
WAT1	Susitna Watana	2.69	155		Pn	03 26 31.1	-0.5
WAT1	Susitna Watana	2.69	155	P	Pn	03 26 31.1	-0.5
	baz=337						
WAT1				Sb	Sb	03 27 10.5	+1.1
	baz=337						
K24K	Donnelly Dome	2.71	121	P	Pn	03 26 30.8	-1.1
	baz=305,SNR=164						
K24K				Sb	Sb	03 27 12.3	+2.3
	baz=305						
DHY	Denali Highway	2.73	142		Pn	03 26 31.8	-0.4
DHY	Denali Highway	2.73	142	IAML		03 27 19.0	
	comp=E,2µm,0.8s						
DHY				IAML		03 27 19.4	
	comp=N,2µm,0.7s						
DHY	Denali Highway	2.73	142	P	Pn	03 26 31.9	-0.4
	baz=325,SNR=149						
DHY				Sb	Sb	03 27 11.8	+1.1
	baz=325						
CUT	Chulitna	2.90	173		Pn	03 26 34.3	-0.2
CUT	Chulitna	2.90	173	P	Pn	03 26 34.3	-0.2
	baz=353,SNR=41						
CUT				Sb	Sb	03 27 17.1	+1.6
	baz=353						
WAT6	Susitna Watana	3.07	150		Pn	03 26 36.4	-0.6
WAT6	Susitna Watana	3.07	150	P	Pn	03 26 36.4	-0.6
	baz=333,SNR=122						
WAT6				Sb	Sb	03 27 22.0	+1.3
	baz=333						
L20K	Farewell, AK	3.08	205		Pn	03 26 35.2	-1.7
L20K	Farewell, AK	3.08	205	P	Pn	03 26 35.2	-1.7
	baz=23,SNR=182						
L20K				Sb	Sb	03 27 20.9	+0.3
	baz=23						
RIDG	Independent Ri	3.09	117		Pn	03 26 36.7	-0.4
RIDG	Independent Ri	3.09	117	IAML		03 27 26.7	
	comp=E,1µm,1.0s						
RIDG				IAML		03 27 33.1	
	comp=N,1µm,0.6s						
RIDG	Independent Ri	3.09	117	P	Pn	03 26 35.2	-1.9
	baz=302,SNR=46						
RIDG				Sb	Sb	03 27 22.8	+1.8
	baz=302						
TTA	Tatalina	3.21	225		Pn	03 26 36.9	-1.9
TTA	Tatalina	3.21	225	IAML		03 27 33.2	
	comp=N,2µm,0.8s						
TTA					Lg	03 27 34.7	
TTA	Tatalina	3.21	225	P	Pn	03 26 36.9	-1.9
	baz=41,SNR=182						
TT01	Tatalina	3.23	225		Pn	03 26 37.1	-1.9
J26L	Joseph Creek	3.28	100	P	Pn	03 26 38.6	-1.1
	baz=287,SNR=80						
SCRK	Sand Creek	3.30	110		Pn	03 26 38.2	-1.9
SCRK	Sand Creek	3.30	110	P	Pn	03 26 38.1	-2.0
	baz=296,SNR=27						
PAX	Paxson	3.36	131		Pn	03 26 40.7	-0.2
PAX	Paxson	3.36	131	P	Pn	03 26 40.7	-0.2
	baz=315,SNR=344						
BM03	Burnt Mountain	3.37	47		Pn	03 26 40.1	-0.8
BMAR	Burnt Mountain	3.38	47	Pn	Pn	03 26 40.7	-0.4
TOLK	Toolik Lake Re	3.43	9		Pn	03 26 43.3	+1.6
TOLK	Toolik Lake Re	3.43	9	IAML		03 27 40.0	
	comp=E,1µm,1.8s						
TOLK				IAML		03 27 43.6	
	comp=N,2µm,0.9s						
TOLK	Toolik Lake Re	3.43	9	P	Pn	03 26 43.3	+1.6
	baz=190,SNR=378						
DOT	Dot Lake	3.43	115		Pn	03 26 41.7	-0.1
M20K	Styx River	3.53	196		Pn	03 26 42.0	-1.3
M20K	Styx River	3.53	196	IAML		03 27 46.5	
	comp=E,2µm,0.7s						
M20K				IAML		03 27 48.5	
	comp=N,1µm,0.9s						
L19K	White Mountain	3.54	210		Pn	03 26 41.4	-1.9
L19K	White Mountain	3.54	210	IAML		03 27 48.6	
	comp=N,2µm,0.8s						
L19K				IAML		03 27 48.8	
	comp=E,2µm,0.8s						
L19K	White Mountain	3.54	210	P	Pn	03 26 41.5	-1.8
	baz=27,SNR=198						
M22K	Willow	3.56	173		Pn	03 26 42.9	-0.6
M22K	Willow	3.56	173	P	Pn	03 26 42.4	-1.1
	baz=354,SNR=47						
GHO	Glory Hole Cre	3.64	164		Pn	03 26 43.8	-0.9
GHO	Glory Hole Cre	3.64	164	IAML		03 27 40.4	
	comp=N,1µm,0.6s						
GHO				IAML		03 27 44.8	
	comp=E,2µm,0.8s						
SML	Sawmill	3.69	160		Pn	03 26 44.5	-0.8
SML	Sawmill	3.69	160		LR	03 27 44.1	
SML				IAML		03 27 47.6	
	comp=N,1µm,1.0s						
SML	Sawmill	3.69	160	P	Pn	03 26 44.5	-0.8
	baz=342,SNR=112						
M19K	Big River Lodg	3.70	205		Pn	03 26 44.0	-1.4
M19K	Big River Lodg	3.70	205	IAML		03 27 42.8	
	comp=N,1µm,0.6s						
M19K				IAML		03 27 44.1	
	comp=E,1µm,0.5s						
M19K	Big River Lodg	3.70	205	P	Pn	03 26 43.9	-1.5
	baz=22						
PMR	Palmer	3.80	166		Pn	03 26 46.3	-0.5
PMR	Palmer	3.80	166	IAML		03 27 50.3	
	comp=E,950nm,1.0s						
PMR				IAML		03 27 53.2	
	comp=N,701nm,1.0s						
PMR	Palmer	3.80	166	P	Pn	03 26 46.2	-0.5
	baz=348,SNR=70						
M23K	Glacier View	3.80	156	P	Pn	03 26 45.8	-1.0
	baz=338,SNR=106						
STLK	Strandline Lak	3.81	186		Pn	03 26 46.3	-0.7
SCM	Sheep Creek Mo	3.83	153		Pn	03 26 46.8	-0.6
SCM	Sheep Creek Mo	3.83	153	IAML		03 27 52.1	
	comp=N,1µm,1.4s						
SCM	Sheep Creek Mo	3.83	153	P	Pn	03 26 46.8	-0.6
	baz=336,SNR=97						
M24K	Tolsona, Glenn	3.85	144		Pn	03 26 48.1	+0.5
M24K	Tolsona, Glenn	3.85	144	IAML		03 28 05.1	
	comp=N,981nm,1.2s						
M24K	Tolsona, Glenn	3.85	144	P	Pn	03 26 48.0	+0.5
	baz=328,SNR=89						
HARP	HAARP	3.89	135		Pn	03 26 48.9	+0.9
HARP	HAARP	3.89	135	P	Pn	03 26 48.4	+0.4
	baz=320,SNR=42						
MENT	Mentasta	3.98	123		Pn	03 26 48.4	-0.9
MENT				IAML		03 28 00.8	
	comp=E,935nm,0.9s						
MENT				IAML		03 28 00.8	
	comp=N,674nm,0.7s						
SPCG	Spurr Capps Gl	4.03	187		Pn	03 26 49.4	-0.6
KNK	Knik Glacier	4.05	162		Pn	03 26 50.2	-0.1
KNK	Knik Glacier	4.05	162		Sn	03 27 38.6	+1.0
KNK				IAML		03 27 40.0	
	comp=E,864nm,0.6s						
KNK				IAML		03 27 41.0	
	comp=N,638nm,1.0s						
KNK	Knik Glacier	4.05	162	P	Pn	03 26 50.1	-0.1
	baz=344,SNR=50						
K27K	Chicken	4.05	104		Pn	03 26 49.5	-0.8
K27K	Chicken	4.05	104	IAML		03 27 58.9	
	comp=N,741nm,1.3s						
K27K	Chicken	4.05	104	P	Pn	03 26 49.2	-1.1
	baz=292						
PS11	TAPS Pump St11	4.05	140		Pn	03 26 51.9	+1.6
L26K	Log Cabin Wild	4.05	120		Pn	03 26 49.6	-0.8
L26K	Log Cabin Wild	4.05	120	IAML		03 27 58.5	
	comp=E,943nm,0.5s						
L26K	Log Cabin Wild	4.05	120	P	Pn	03 26 49.5	-0.8
	baz=307,SNR=32						
SPWE	Spurr West	4.08	190		Pn	03 26 50.7	0.0
SPBG	Spurr Blockage	4.08	189		Pn	03 26 50.7	0.0
CKN	Chakachatna No	4.10	188		Pn	03 26 51.0	0.0
SPCR	Spurr Chakacha	4.13	188		Pn	03 26 51.0	-0.4
SPCR	Spurr Chakacha	4.13	188	P	Pn	03 26 51.0	-0.4
	baz=6.7,SNR=40						
FIS	Fire Island	4.17	175		Pn	03 26 52.0	+0.2
EGAK	Eagle	4.22	92		Pn	03 26 52.1	-0.4
EGAK	Eagle	4.22	92	P	Pn	03 26 51.8	-0.8
	baz=281,SNR=26						
RC01	Rabbit Creek A	4.25	171		Pn	03 26 53.2	+0.3
RC01	Rabbit Creek A	4.25	171	IAML		03 28 08.0	
	comp=E,522nm,0.8s						
RC01	Rabbit Creek A	4.25	171	P	Pn	03 26 53.0	+0.1
	baz=352,SNR=24						
KLU	Klutina	4.44	146		Pn	03 26 56.6	+1.0
KLU	Klutina	4.44	146	IAML		03 28 12.7	
	comp=N,598nm,0.9s						
KLU	Klutina	4.44	146	P	Pn	03 26 56.3	+0.6
	baz=331,SNR=47						
CAPN	Captain Cook N	4.53	181		Pn	03 26 57.1	+0.4
M26K	Nabesna, AK	4.58	125	Pn	Pn	03 26 57.1	-0.5
M26K				IAML		03 28 14.7	
	comp=E,380nm,0.8s						
M26K	Nabesna, AK	4.58	125	P	Pn	03 26 57.9	+0.3
	baz=312						
BC03		4.61	115		Pn	03 26 56.0	-2.0
BCAR	Beaver Creek A	4.61	115	Pn	Pn	03 26 54.9	-3.1
SVW2	Sparrevohn	4.67	208		Pn	03 26 57.1	-1.7
SVW2	Sparrevohn	4.67	208	IAML		03 28 20.9	
	comp=N,521nm,0.6s						
SVW2				IAML		03 28 21.8	

	comp=E,776nm,0.6s						
N25K	Chitina, Valde	4.68	139		Pn	03 27 00.0	+1.0
N25K	Chitina, Valde	4.68	139	P	Pn	03 26 58.3	-0.7
	baz=324,SNR=27						
JPK	Jack Peak	4.69	153		Pn	03 26 59.6	+0.6
N19K	Bonanza Creek	4.75	201		Pn	03 26 57.9	-2.0
N19K	Bonanza Creek	4.75	201	IAML		03 28 14.8	
	comp=N,674nm,0.9s						
N19K	Bonanza Creek	4.75	201	P	Pn	03 26 57.9	-2.0
	baz=18,SNR=19						
DFR	Drift River	4.76	190		Pn	03 27 00.1	0.0
GLI	Glacier Island	4.76	156		Pn	03 27 00.1	+0.1
GLI	Glacier Island	4.76	156	IAML		03 28 17.9	
	comp=N,542nm,0.7s						
GLI				IAML		03 28 19.5	
	comp=E,582nm,0.9s						
GLI	Glacier Island	4.76	156	P	Pn	03 27 00.1	+0.1
	baz=339,SNR=43						
RDJH	Redoubt Jeurge	4.77	191		Pn	03 27 00.1	-0.2
DIV	Divide	4.79	148		Pn	03 27 00.7	+0.1
SLKM	Skilak Lake	4.80	175		Pn	03 27 01.2	+0.6
NCT	North Crescent	4.81	191		Pn	03 27 00.3	-0.5
O22K	Cooper Landing	4.85	172		Pn	03 27 01.7	+0.5
O22K	Cooper Landing	4.85	172	P	Pn	03 27 00.5	-0.7
	baz=353						
RDWB	Redoubt West	4.88	191		Pn	03 27 01.5	-0.3
RSO	Redoubt South	4.90	190		Pn	03 27 01.5	-0.6
RED	Redoubt Volcan	4.94	190		Pn	03 27 02.6	+0.1
FID	Port Fidalgo	4.99	153		Pn	03 27 04.0	+0.8
FID	Port Fidalgo	4.99	153	IAML		03 28 36.6	
	comp=E,397nm,1.2s						
FID				IAML		03 28 42.0	
	comp=N,295nm,1.0s						
M27K	Edge Creek, AK	5.00	122		Pn	03 27 03.5	+0.1
M27K	Edge Creek, AK	5.00	122	IAML		03 28 39.8	
	comp=N,418nm,0.8s						
M27K				IAML		03 28 43.8	
	comp=E,301nm,1.4s						
M27K	Edge Creek, AK	5.00	122	P	Pn	03 27 02.5	-0.9
	baz=310,SNR=12						
GLB	Gilahina Butte	5.04	137		Pn	03 27 04.4	+0.5
PS01	TAPS Pump Stn	5.09	9		Pn	03 27 05.5	+1.1
N18K	Kilae Creek	5.12	208		Pn	03 27 02.8	-2.1
N18K	Kilae Creek	5.12	208	IAML		03 28 34.7	
	comp=E,534nm,0.7s						
N18K				IAML		03 28 37.4	
	comp=N,550nm,0.8s						
N18K	Kilae Creek	5.12	208	P	Pn	03 27 03.0	-1.9
	baz=24,SNR=31						
DAWY	Dawson	5.15	98		Pn	03 27 04.3	-1.0
DAWY	Dawson	5.15	98	P	Pn	03 27 04.3	-1.0
	baz=288,SNR=23						
BMRM	Bremner River	5.21	143		Pn	03 27 06.1	-0.2
BMRM	Bremner River	5.21	143	IAML		03 28 38.0	
	comp=E,393nm,1.2s						
BMRM	Bremner River	5.21	143	P	Pn	03 27 06.0	-0.3
	baz=328,SNR=32						
SEW	Seward	5.24	171		Pn	03 27 07.0	+0.3
SEW	Seward	5.24	171	P	Pn	03 27 06.9	+0.3
	baz=352,SNR=6.2						
O20K	Slope Mountain	5.27	189		Pn	03 27 07.2	+0.2
O20K	Slope Mountain	5.27	189	P	Pn	03 27 07.1	+0.1
	baz=7.2,SNR=7.1						
VRDI	Verde Repeater	5.31	136		Pn	03 27 08.3	+0.6
MCARA	McCarthy VSAT	5.32	134		Pn	03 27 08.4	+0.8
MCARA	McCarthy VSAT	5.32	134	IAML		03 28 47.7	
	comp=N,304nm,1.2s						
MCARA				IAML		03 28 53.3	
	comp=E,294nm,0.9s						
MCARA	McCarthy VSAT	5.32	134	P	Pn	03 27 09.2	+1.6
	baz=320,SNR=13						
HIN	Hinchinbrook I	5.32	155		Pn	03 27 07.3	-0.4
HIN	Hinchinbrook I	5.32	155	IAML		03 28 42.0	
	comp=N,395nm,0.9s						
O19K	Port Alsworth	5.32	198		Pn	03 27 06.2	-1.4
O19K	Port Alsworth	5.32	198	P	Pn	03 27 06.4	-1.2
	baz=15						
EYAK	Cordova Ski Ar	5.32	151		Pn	03 27 08.1	+0.5
EYAK	Cordova Ski Ar	5.32	151	P	Pn	03 27 07.9	+0.2
	baz=335,SNR=15						
I29M	Ogilvie Camp,	5.34	83		Pn	03 27 07.2	-0.7
I29M				IAML		03 28 43.5	
	comp=E,325nm,0.8s						
I29M				IAML		03 28 45.6	
	comp=N,297nm,0.6s						
I29M	Ogilvie Camp,	5.34	83	P	Pn	03 27 06.7	-1.2
	baz=275						
BVCY	Beaver Creek	5.34	118		Pn	03 27 07.3	-0.6
BVCY	Beaver Creek	5.34	118	P	Pn	03 27 07.0	-0.9
	baz=307,SNR=19						
RDOG	Red Dog Mine	5.48	306		Pn	03 27 08.1	-1.7
RDOG	Red Dog Mine	5.48	306	P	Pn	03 27 07.8	-2.0
	baz=115						
J29M	Klondike Camp	5.53	93	P	Pn	03 27 11.4	+0.8
	baz=284						
BRLK	Bradley Lake	5.53	179		Pn	03 27 11.2	+0.6
BRSE	Bradley Lake S	5.56	178		Pn	03 27 11.6	+0.7
BRSE	Bradley Lake S	5.56	178	P	Pn	03 27 11.8	+0.8
	baz=359						
PTPK	Patty Peak	5.64	133		Pn	03 27 13.7	+1.5
HOM	Homer	5.65	183		Pn	03 27 11.1	-1.0
HOM	Homer	5.65	183	P	Pn	03 27 13.6	+1.5
	baz=2.5						
P19K	Oil Pt	5.74	191		Pn	03 27 13.8	+0.4
P19K	Oil Pt	5.74	191	P	Pn	03 27 13.5	+0.1
	baz=9.2						
CNPM	China Poot	5.77	181		Pn	03 27 14.4	+0.5
BALM	Baldy	5.79	133		Pn	03 27 14.7	+0.4
HMT	Hamilton	5.85	145		Pn	03 27 15.3	+0.4
TGL	Tana Glacier	5.87	137		Pn	03 27 14.6	-0.8
KIAG	Kiagna River	5.88	134		Pn	03 27 15.7	+0.2
YUK3	Moose Creek	5.89	122		Pn	03 27 15.6	-0.1
YUK3	Moose Creek	5.89	122	P	Pn	03 27 14.9	-0.8
	baz=311						
BARN	Barnard Glacie	5.99	131		Pn	03 27 17.4	+0.3
KHIT	Khitrov Hills	6.01	140		Pn	03 27 17.8	+0.5
AUCH	Augustine Cone	6.04	192		Pn	03 27 17.7	0.0
ANM	Nome	6.14	270		Pn	03 27 17.8	-1.1
ANM	Nome	6.14	270	P	Pn	03 27 17.5	-1.4
	baz=77						
CTG	Chitna Glacier	6.17	130	P	Pn	03 27 18.9	-0.5
	baz=318,SNR=6.8						
CTGM	Chitina Glacie	6.17	130		Pn	03 27 19.5	+0.1
GRNC	Granite Creek	6.21	133		Pn	03 27 19.9	-0.2
P18K	Big Mountain,	6.22	200		Pn	03 27 18.9	-1.1
P18K	Big Mountain,	6.22	200	P	Pn	03 27 18.6	-1.5
	baz=16						
SNH	Sunshine Point	6.35	140		Pn	03 27 22.7	+0.9
LOGN	Logan Glacier	6.38	130		Pn	03 27 23.2	+0.9
A21K	Barrow	6.41	344		Pn	03 27 23.2	+0.6
Q19K	Cape Douglas,	6.49	192		Pn	03 27 23.8	0.0
Q19K	Cape Douglas,	6.49	192	P	Pn	03 27 23.5	-0.2
	baz=9.7,SNR=14						
YAH	Yahtse	6.51	135		Pn	03 27 24.6	+0.4
YUK4	Talbot Arm	6.83	120	P	Pn	03 27 26.4	-2.1
	baz=310						
M30M	Minto, Yukon	6.83	107		Pn	03 27 27.8	-0.7
M30M	Minto, Yukon	6.83	107	P	Pn	03 27 27.2	-1.2
	baz=299,SNR=7.7						
TNA	Tin City	7.05	280		Pn	03 27 31.3	0.0
KABU	Katmai Buttres	7.31	198		Pn	03 27 35.1	0.0
N30M	Aishikik Lake	7.34	115	P	Pn	03 27 35.0	-0.4
	baz=307,SNR=6.5						
INK	Inuvik	7.54	58	Pn	Pn	03 27 38.2	+0.1
	comp=N,2.4nm,0.3s,baz=255,slow=16,SNR=47						
INK				Sn	Sn	03 29 01.3	-2.2
	comp=N,2.0nm,0.3s,baz=194,slow=29,SNR=2.0						
INK				Lg	Lg	03 29 41.5	
	comp=N,1.0nm,0.3s,baz=246,slow=21,SNR=1.3						
INK				LR	LR	03 30 23.8	
	comp=N,170nm,20.1s,baz=276,slow=37						
	comp=N,7.3nm,0.4s						
INK	Inuvik	7.54	58		Pn	03 27 37.8	-0.4
INK	Inuvik	7.54	58	P	Pn	03 27 37.7	-0.4
	baz=254,SNR=19						
KDAK	Kodiak Island	7.56	186	Pn	Pn	03 27 38.1	-0.2
	comp=N,1.9nm,0.3s,baz=38,slow=11,SNR=22						
KDAK				Lg	Lg	03 29 41.2	
	comp=N,2.1nm,0.3s,baz=281,slow=14,SNR=3.2						
KDAK				LR	LR	03 30 19.2	
	comp=N,204nm,19.8s,baz=34,slow=35						
	comp=N,13nm,0.6s						
KDAK	Kodiak Island	7.56	186		Pn	03 27 37.4	-0.9
KDAK	Kodiak Island	7.56	186	P	Pn	03 27 37.1	-1.3
	baz=4.9						
HYT	Haines Junctio	7.59	120		Pn	03 27 38.7	-0.2
N31M	Braeburn, Yuko	7.83	112	Pn	Pn	03 27 41.2	-0.9
M31M	Drury Creek, Y	7.99	105	Pn	Pn	03 27 43.6	-0.7
OHAK	Old Harbor	8.15	189		Pn	03 27 45.1	-1.4
WHY	Whitehorse	8.68	115		Pn	03 27 52.2	-1.6
WHY	Whitehorse	8.68	115	P	Pn	03 27 53.3	-0.5
	baz=309						
P33M	Teslin, Yukon	9.76	113		Pn	03 28 07.0	-1.5
C36M	Paulatuk	11.12	57		Pn	03 28 25.3	-1.7
C36M	Paulatuk	11.12	57	P	Pn	03 28 25.1	-1.9
	baz=261						
A36M	Sachs Harbour	11.46	43	Pn	Pn	03 28 31.2	-0.5
A36M	Sachs Harbour	11.46	43	P	Pn	03 28 30.8	-0.9
	baz=247,SNR=13						
DLBC	Dease Lake	12.01	115	Pn	Pn	03 28 41.4	+2.1
	comp=N,0.5nm,0.3s,baz=307,slow=10,SNR=1.4						
DLBC				Lg	Lg	03 32 02.5	
	comp=N,0.4nm,0.3s,baz=228,slow=26,SNR=6.4						
DLBC				LR	LR	03 33 32.8	
	comp=N,171nm,19.4s,baz=322,slow=38						
	comp=N,1.2nm,0.3s						
DLBC	Dease Lake	12.01	115		Pn	03 28 37.7	-1.6
YKA	Yellowknife Ar	16.13	83	Pn	Pn	03 29 31.2	-3.4
	comp=N,0.2nm,0.3s,baz=295,slow=13,SNR=8.3						
YKA				Lg	Lg	03 34 19.2	
	baz=303,slow=28						
	comp=N,0.6nm,0.6s						
YKA	Yellowknife Ar	16.13	83		Pn	03 29 34.3	-0.4
BILL	Bilibino	16.88	299	Pn	Pn	03 29 42.8	-1.4
BBB	Bella Bella	17.56	127	LR	LR	03 36 13.5	
	comp=N,101nm,19.3s,baz=316,slow=35						
RES	Resolute Bay	20.46	39	P	Pn	03 30 26.7	-0.8
	comp=N,2.7nm,0.7s,baz=254,slow=15,SNR=2.5						
RES				S	S	03 34 06.7	-7.2
	comp=N,1.2nm,0.6s,baz=187,slow=13,SNR=1.3						
RES				LR	LR	03 41 02.2	
	comp=N,57nm,19.1s,baz=174,slow=45						
	comp=N,2.7nm,0.7s						
RES	Resolute Bay	20.46	39	P	P	03 30 25.2	-0.2
EUNU	Eureka	22.36	24	P	P	03 30 45.9	0.0
EUNU				IAmb	IAmb	03 30 54.1	
	comp=Z,18nm,1.4s						
NEW	Newport	24.74	117	P	P	03 31 14.0	+4.4
	comp=Z,3.6nm,1.0s,baz=309,slow=7.8,SNR=5.1						
NEW				LR	LR	03 40 33.0	
	comp=Z,57nm,18.6s,baz=316,slow=36						
	comp=Z,3.6nm,1.0s						
F10A	Beach Ranch, E	26.63	120	P	P	03 31 22.6	-4.1
MA2	Magadan	26.65	285	LR	LR	03 44 10.9	
	comp=Z,43nm,18.6s,baz=108,slow=41						
YBH	Yreka Blue Hor	28.51	132	P	P	03 31 46.2	+2.6
	comp=Z,1.3nm,0.6s,baz=7.1,slow=8.1,SNR=2.0						
YBH				LR	LR	03 43 14.8	
	comp=Z,58nm,18.3s,baz=310,slow=36						
	comp=Z,1.3nm,0.6s						
ULM	Lac du Bonnet	31.80	91	P	P	03 32 15.5	+3.0
	comp=Z,2.2nm,0.4s,baz=342,slow=7.0,SNR=3.9						
	comp=Z,2.2nm,0.4s						
ULM	Lac du Bonnet	31.80	91	P	P	03 32 11.7	-0.8
ULM				IAmb	IAmb	03 32 18.0	
	comp=Z,3.6nm,0.8s						
ELK	Elko	31.89	123	LR	LR	03 44 52.1	
	comp=Z,58nm,21.0s,baz=336,slow=36						
PDAR	Pinedale Array	32.24	114	P	P	03 32 19.0	+2.3
	comp=Z,2.7nm,1.0s,baz=331,slow=5.4,SNR=4.0						
PDAR				LR	LR	03 46 39.9	
	comp=Z,62nm,18.2s,baz=341,slow=39						
	comp=Z,2.7nm,1.0s						
PDAR	Pinedale Array	32.24	114	P	P	03 32 15.6	-1.0
NVAR	Mina Array Bea	32.92	129	P	P	03 32 25.1	+2.5
	comp=Z,3.3nm,0.6s,baz=311,slow=7.7,SNR=5.5						
	comp=Z,3.3nm,0.6s						
EYMN	Ely	35.42	90	P	P	03 32 43.8	-0.2
	baz=321,SNR=14						
E43A	Lone Tree Farm	38.55	87	P	P	03 33 10.1	-0.4
NRIK	Noril'sk	39.61	332	P	P	03 33 20.2	+1.1
	comp=Z,4.3nm,0.7s,baz=28,slow=4.7,SNR=7.6						
	comp=Z,4.3nm,0.7s						
SCHQ	Schefferville	40.13	63	P	P	03 33 25.1	+1.5
	comp=Z,1.8nm,0.6s,baz=312,slow=12,SNR=1.8						
SCHQ				LR	LR	03 51 49.7	
	comp=Z,22nm,18.2s,baz=103,slow=39						
	comp=Z,1.8nm,0.6s						
SCHQ	Schefferville	40.13	63	P	P	03 33 22.6	-1.0
SCHQ				IAmb	IAmb	03 34 04.2	
	comp=Z,12nm,1.5s						
ANMO	Albuquerque	40.23	117	LR	LR	03 50 52.0	
	comp=Z,42nm,19.4s,baz=66,slow=37						
ASAJ	Asahikawa	41.34	273	LR	LR	03 51 53.4	
	comp=Z,34nm,19.1s,baz=208,slow=38						
KLR	Kul'dur	41.74	286	LR	LR	03 52 59.8	
	comp=Z,51nm,18.6s,baz=46,slow=39						
SADO	Sadowa	43.12	82	LR	LR	03 53 39.4	
	comp=Z,22nm,18.4s,baz=339,slow=39						
WMOK	Wichita Mounta	43.39	109	P	P	03 33 50.0	-0.6
	baz=331,SNR=5.2						
BORG	Borgarnes	45.23	28	LR	LR	03 55 56.0	
	comp=Z,19nm,18.8s,baz=333,slow=40						
ARCES	ARCESS Array B	45.44	2	LR	LR	03 54 37.0	
	comp=Z,29nm,21.9s,baz=1.0,slow=38						
TXAR	Lajitas Array	46.30	117	P	P	03 34 16.8	+2.9
	comp=Z,2.2nm,0.8s,baz=328,slow=6.4,SNR=8.1						
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	46.30	117	P	P	03 34 12.5	-1.4
TKL	Tuckaleechee C	48.78	93	LR	LR	03 54 45.3	
	comp=Z,41nm,21.7s,baz=328,slow=36						
SONM	Songino Array	52.50	304	P	P	03 35 02.3	+1.2
	comp=Z,1.3nm,0.7s,baz=12,slow=7.6,SNR=3.7						
	comp=Z,1.3nm,0.7s						
NOA	NORSAR Array B	53.30	11	P	P	03 35 08.2	+1.5
	comp=Z,0.3nm,0.7s,baz=353,slow=7.4,SNR=1.5						
	comp=Z,0.3nm,0.7s						
FINES	FINESS Array B	53.57	2	P	P	03 35 08.7	+0.2
	comp=Z,1.5nm,0.7s,baz=12,slow=9.8,SNR=4.9						
	comp=Z,1.5nm,0.7s						
FINES	FINESS Array B	53.57	2	P	P	03 35 08.3	-0.3
ZALV	Zalesovo Beam	53.68	323	P	P	03 35 09.5	0.0
	comp=Z,0.9nm,0.4s,baz=22,slow=4.8,SNR=5.4						
ZALV				LR	LR	04 00 16.6	
	comp=Z,38nm,20.4s,baz=106,slow=39						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	53.68	323	P	P	03 35 08.8	-0.7
ARU	Arti	56.55	341	LR	LR	04 01 00.2	
	comp=Z,52nm,19.2s,baz=344,slow=38						
HHC	Hu-ho-hao-te	56.63	296	*e*P	P	03 35 30.3	-0.8
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
HHC				LR	LR		
	comp=N,280nm,14.0s						
HHC				LR	LR		
	comp=E,150nm,14.6s						
HHC				LR	LR		
	comp=Z,160nm,14.6s						
MKAR	Makanchi Array	60.88	321	P	P	03 35 59.6	-0.9
	comp=Z,0.9nm,0.8s,baz=45,slow=7.6,SNR=5.4						
	comp=Z,0.9nm,0.8s						
NJ2	Nanjing	61.41	285	*e*P	P	03 36 02.5	-1.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	Urumqi	62.10	316	*e*P	P	03 36 11.1	+2.3
XAN	Xi'an	63.60	294	P	P	03 36 26.3	+7.4
XAN				pP	sP	03 36 35.0	+11
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LZH	Lanzhou	63.69	299	*e*P	P	03 36 20.4	+0.7
LZH				pP	pP	03 36 22.8	-0.5
LZH				sP	sP	03 36 24.5	-0.1
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
AKASG	Malin Array Be	64.36	360	P	P	03 36 24.1	+0.6
	comp=Z,2.1nm,0.6s,baz=358,slow=6.1,SNR=12						
	comp=Z,2.1nm,0.6s						
AKASG	Malin Array Be	64.36	360	P	P	03 36 23.0	-0.5
AKASG				IAmb	IAmb	03 36 40.4	
	comp=Z,2.8nm,1.3s						
VRAC	Vranov	65.35	9	LR	LR	04 07 46.2	
	comp=Z,17nm,18.1s,baz=352,slow=39						
GERES	GERESS Array B	65.60	11	P	P	03 36 33.0	+1.2
	comp=Z,0.7nm,0.8s,baz=2.9,slow=5.3,SNR=5.4						
	comp=Z,0.7nm,0.8s						
MOA	Molln	66.64	11	*e*P	P	03 36 54.7	+16
	comp=Z,2.3nm,1.2s						
ARSA	Arzberg	67.33	10	*e*P	P	03 36 41.8	-1.0
	comp=Z,1.2nm,0.8s						
KBA	Koelnbreinsper	67.33	12	*e*P	P	03 36 44.5	+1.5
	comp=Z,4.1nm,1.0s						
SOKA	Soboth	67.86	10	*e*P	P	03 37 08.4	+22
	comp=Z,3.1nm,1.9s						
OBKA	Obir	67.99	11	*e*P	P	03 36 48.3	+1.2
	comp=Z,5.1nm,0.8s						
KVAR	Kislovodsk Arr	70.58	350	LR	LR	04 11 02.9	
	comp=Z,19nm,19.0s,baz=285,slow=39						
KBZ	Khabaz	70.79	349	P	P	03 37 04.0	-0.3
	comp=Z,1.5nm,0.9s,baz=1.8,slow=4.0,SNR=3.9						
KBZ				LR	LR	04 10 52.2	
	comp=Z,19nm,18.4s,baz=41,slow=38						
	comp=Z,1.5nm,0.9s						
SJG	San Juan	71.58	87	LR	LR	04 10 53.9	
	comp=Z,14nm,18.5s,baz=99,slow=38						
ESDC	Sonseca Array	72.27	26	P	P	03 37 13.6	+0.2
	comp=Z,0.8nm,0.8s,baz=350,slow=5.5,SNR=6.6						
	comp=Z,0.8nm,0.8s						
PZH	PanZhiHua	73.08	297	P	P	03 37 18.6	+0.2
PZH	PanZhiHua	73.08	297	P	P	03 37 18.9	+0.5
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
BRTR	Keskin Array B	75.27	356	P	P	03 37 31.6	+0.5
	comp=Z,1.3nm,1.0s,baz=345,slow=4.2,SNR=4.4						
	comp=Z,1.3nm,1.0s						
BRTR	Keskin Array B	75.27	356	P	P	03 37 30.4	-0.7
MDT	Midelt	78.80	28	LR	LR	04 16 32.3	
	comp=Z,17nm,18.2s,baz=332,slow=39						

IDC ***18*** *04:01:15.4±0.7, 34.°59S×72.°74E, h0km, mb4.1/9, mbtmp4.1/9, MS3.5/7, Error ellipse: s-maj=28.5km s-min=21.2km az=57.0*

NEIC ***18*** *04:01:18.0±1.1, 34.°6S±0.°1×72.°9E±0.°2, h15km±4km, mb4.6/14, Error ellipse: s-maj=22.2km s-min=17.5km az=208.0*

ISC 18 04:01:16.7±0.6**, 34.°6S**±0.°1×**72.°9E**±0.°1**, h10km, n42, σ0.s91**/29**, mb4.4**/14**, MS3.5**/7**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VOI	Vohitsoka	26.18	292	P	P	04 06 52.5	+0.9
VOI				IAmb	IAmb	04 07 02.7	
	comp=Z,37nm,1.5s						
H08S2	Diego Garcia H	26.83	359	T	T	04 34 53.5	
	baz=180,slow=76,SNR=14						
H08S1	Diego Carcia H	26.83	359	T	T	04 34 53.5	
	baz=180,slow=76,SNR=9.7						
H08S3	Diego Garcia H	26.85	359	T	T	04 34 54.8	
	baz=180,slow=76,SNR=17						
H01W2	Cape Leeuwin H	33.69	103	T	T	04 43 30.7	
	baz=258,slow=74,SNR=5.0						
H01W3	Cape Leeuwin H	33.69	102	T	T	04 43 32.2	
	baz=258,slow=74,SNR=5.1						
H01W1	Cape Leeuwin H	33.71	103	T	T	04 43 33.6	
	baz=258,slow=74,SNR=6.4						
BOSA	Boshof	40.74	265	LR	LR	04 21 57.3	
	comp=Z,60nm,19.3s,baz=181,slow=31						
BOSA	Boshof	40.74	265	P	P	04 08 57.6	-0.4
BOSA				IAmb	IAmb	04 09 12.9	
	comp=Z,18nm,1.6s						
LBTB	Lobatse	41.84	270	LR	LR	04 24 15.9	
	comp=Z,25nm,18.8s,baz=138,slow=33						
LEM	Lembang	42.25	57	LR	LR	04 24 01.7	
	comp=Z,131nm,18.6s,baz=182,slow=32						
SUR	Sutherland	43.12	258	LR	LR	04 23 15.2	
	comp=Z,43nm,20.3s,baz=149,slow=31						
LSZ	Lusaka	44.48	284	LR	LR	04 25 23.4	
	comp=Z,38nm,18.7s,baz=143,slow=33						
TSUM	Tsumeb	51.09	273	LR	LR	04 29 04.7	
	comp=Z,46nm,18.8s,baz=100,slow=33						
ASAR	Alice Springs	53.66	96	P	P	04 10 40.2	+1.5
	comp=Z,2.5nm,0.8s,baz=235,slow=6.7,SNR=22						
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	53.66	96	P	P	04 10 37.7	-1.0
AS31	Alice Springs	53.66	96	P	P	04 10 38.9	0.0
QSPA	South Pole Qui	55.55	180	P	P	04 10 52.3	+0.3
	comp=Z,5.7nm,0.8s,baz=266,slow=1.9,SNR=20						
	comp=Z,5.7nm,0.8s						
QSPA	South Pole Qui	55.55	180	P	P	04 10 52.0	-0.1
QSPA				IAmb	IAmb	04 10 55.1	
	comp=Z,7.3nm,0.8s						
WRA	Warramunga Arr	55.74	92	P	P	04 10 55.3	+1.4
	comp=Z,1.6nm,0.8s,baz=242,slow=7.5,SNR=7.6						
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	55.74	92	P	P	04 10 55.4	+1.6
WB0	Warramunga Arr	55.87	92	P	P	04 10 54.5	-0.3
WB0				IAmb	IAmb	04 11 06.7	
	comp=Z,3.6nm,1.0s						
WR0	Warramunga Arr	55.90	92	P	P	04 10 55.5	+0.5
WR0				IAmb	IAmb	04 11 06.2	
	comp=Z,5.9nm,1.1s						
VNDA	Vanda	56.28	165	P	P	04 10 57.5	+0.6
	comp=Z,1.8nm,0.9s,baz=264,slow=9.3,SNR=7.8						
	comp=Z,1.8nm,0.9s						
VNDA	Vanda	56.28	165	P	P	04 10 57.3	+0.4
VNDA				IAmb	IAmb	04 11 10.3	
	comp=Z,16nm,2.0s						
STKA	Stephens Creek	56.47	108	P	P	04 11 00.4	+1.4
	comp=Z,2.3nm,0.8s,baz=176,slow=7.0,SNR=1.4						
	comp=Z,2.3nm,0.8s						
STKA	Stephens Creek	56.47	108	P	P	04 10 58.7	-0.2
TOO	Toolangi	57.34	116	P	P	04 11 03.9	-1.2
RAYN	Ar Rayn	63.40	332	P	P	04 11 46.8	+0.3
RAYN				IAmb	IAmb	04 11 49.3	
	comp=Z,3.3nm,0.7s						
RABL	Rabaul	78.77	87	P	P	04 13 19.5	-0.5
MKAR	Makanchi Array	81.46	6	P	P	04 13 33.9	+0.2
	comp=Z,1.5nm,0.7s,baz=186,slow=7.3,SNR=12						
	comp=Z,1.5nm,0.7s						
BRTR	Keskin Array B	82.39	330	P	P	04 13 39.0	+0.1
	comp=Z,0.8nm,0.8s,baz=171,slow=8.8,SNR=4.8						
	comp=Z,0.8nm,0.8s						
BRTR	Keskin Array B	82.39	330	P	P	04 13 39.4	+0.5
TORD	Torodi Ar. Bea	82.49	292	P	P	04 13 39.5	-0.4
	comp=Z,0.7nm,0.9s,baz=107,slow=6.1,SNR=5.0						
	comp=Z,0.7nm,0.9s						
SONM	Songino Array	87.37	22	P	P	04 14 04.5	+0.7
	comp=Z,1.8nm,0.6s,baz=202,slow=6.4,SNR=4.3						
	comp=Z,1.8nm,0.6s						
SONM	Songino Array	87.37	22	P	P	04 14 04.3	+0.5
SONM				IAmb	IAmb	04 14 06.1	
	comp=Z,1.8nm,0.7s						
JTM	Tenmabayashi	97.74	45	P	P	04 14 50.6	-1.2
MDT	Midelt	98.91	304	LR	LR	05 00 14.9	
	comp=Z,26nm,18.1s,baz=143,slow=36						
INK	Inuvik	143.07	16	PKP	PKPdf	04 20 47.9	-1.9
	comp=Z,1.2nm,0.8s,baz=88,slow=12,SNR=3.0						
SCHQ	Schefferville	145.63	319	PKPbc	PKPab	04 20 54.9	-0.4
	comp=Z,5.3nm,0.8s,baz=59,slow=5.6,SNR=7.7						
YKA	Yellowknife Ar	151.69	7	PKPbc	PKiKP	04 21 10.4	-0.6
	comp=Z,1.6nm,0.7s,baz=335,slow=2.8,SNR=17						
YKA	Yellowknife Ar	151.69	7	PKPdf	PKPdf	04 21 05.4	+1.2

UPA ***18*** *04:03:18.9±1.0, 9.°48N×84.°04W, h10km±21km, MW4.1*

UCR ***18*** *04:03:19.8±1.4, 9.°54N×84.°04W, h56km±2km, MW3.7*

ISC 18 04:03:19.8±1.1**, 9.°50N**±0.°04×**84.°06W**±0.°04**, h32**km±11km**, n29, σ1.s34**/38**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.24	13	*e*P	Pb	04 03 28.5	+1.5
EDDO	Dominical	0.32	141	*e*P	Pn	04 03 29.9	+1.7
EDDO				*e*S	Sn	04 03 38.4	+4.7
RIMA	Rio Macho	0.33	37	*e*P	Pn	04 03 28.9	+0.3
PEZE	Perez Zeledon,	0.40	107	*e*P	Pn	04 03 30.4	+0.9
HDC	Heredia	0.50	354	*e*P	Pn	04 03 31.0	+0.1
JACO	JACO, Garabito	0.61	285	*e*P	Pb	04 03 32.4	+0.3
SRA1	San Ramn	0.71	325	*e*P	Pb	04 03 33.5	-0.4
SRBA	San Rafael, Bu	0.74	111	*e*P	Pb	04 03 34.2	-0.2
EDBA	Buenos Aires	0.85	113	*e*P	Pb	04 03 35.4	-0.7
EDBA				*e*S	Sb	04 03 47.5	+0.3
BATAN	Batan	0.90	49	*e*P	Pb	04 03 36.3	-0.6
BATAN				*e*S	Sb	04 03 48.3	-0.3
ARE1	Arenal 1	1.15	326	*e*P	Pn	04 03 39.9	+0.2
MLIR3	Monte Lirio, C	1.41	120	*e*P	Pn	04 03 42.9	-0.5
MLIR3				*e*S	Sb	04 04 01.9	-1.3
ACAL	Aguas Claras	1.48	320	*i* P	Pn	04 03 44.4	+0.1
CDITO	Canoas	1.49	128	*e*P	Pn	04 03 43.9	-0.5
CDITO				*e*S	Sb	04 04 03.5	-2.0
PTEN	Parque Tenorio	1.51	323	*i* P	Pn	04 03 44.9	+0.2

BRU2	Volcan	1.53	117	*e*P	Pn	04 03 45.4	+0.4
BRU2				*e*S	Sb	04 04 04.8	-1.8
CNI2	El Empalme, Bo	1.57	93	*e*S	Sn	04 04 05.0	+0.2
CUI	Cuipilapa	1.58	317	*i* P	Pn	04 03 45.5	-0.2
BC3P	Paso Ancho	1.59	115	*e*P	Pn	04 03 46.2	+0.3
BC3P				*e*S	Sb	04 04 06.4	-2.1
HORNC	Hornillas	1.63	318	*i* P	Pn	04 03 46.1	-0.3
VMAR	Armenia, Volca	1.67	321	*e*P	Pn	04 03 46.7	-0.2
BCO2	Palmira	1.70	117	*e*P	Pn	04 03 47.8	+0.3
BCO2				*e*S	Sb	04 04 09.5	-2.2
SAJU	San Juanillo,	1.72	289	*e*P	Pn	04 03 46.4	-1.2
PTPM	Petroterminale	1.74	138	*e*P	Pb	04 03 50.4	-0.7
PTPM				*e*S	Sb	04 04 10.7	-1.9
LNBQ3	Los Naranjos,	1.75	114	*e*S	Sb	04 04 10.5	-2.5
BUEV	Buena Vista	1.85	314	*i* P	Pn	04 03 49.0	-0.3
PSOM3	Paja de Sombre	1.90	115	*e*P	Pn	04 03 50.7	+0.7
HZTE	Horizontes, Gu	1.93	309	*e*P	Pn	04 03 51.3	+0.8
GMAL	Guarumal, Vera	3.29	121	*e*P	Pn	04 04 09.3	+0.1

IDC 18 05:28:23.0±1.7**, 0°.71N×128°.81E, h0^{km}, mb3.7**/3**, mbtmp3.7**/4**, ML3.6**/1**, MS3.4**/1**, Error ellipse: s-maj=61.7km s-min=26.7km az=59.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.92	122	Pn	Pn	05 29 09.1	-1.6
	7.9nm,0.3s,baz=155,slow=22,SNR=7.4						
SIJI				Sn	Sn	05 29 40.6	-5.9
	5.0nm,0.3s,baz=182,slow=21,SNR=6.1						
	22nm,0.5s						
WRA	Warramunga Arr	21.23	165	P	P	05 33 10.4	-0.3
	1.6nm,0.8s,baz=343,slow=11,SNR=13						
	1.6nm,0.8s						
ASAR	Alice Springs	24.73	169	P	P	05 33 47.0	+0.7
	4.7nm,0.6s,baz=346,slow=11,SNR=61						
	4.7nm,0.6s						
H11S3	WAKE ISLAND Hy	41.16	62	T	T	06 19 40.0	
	baz=249,slow=75,SNR=73						
H11S2	WAKE ISLAND Hy	41.18	62	T	T	06 19 41.2	
	baz=249,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	41.18	62	T	T	06 19 41.2	
	baz=249,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	41.79	61	T	T	06 20 23.9	
	baz=247,slow=75,SNR=126						
H11N2	WAKE ISLAND Hy	41.80	61	T	T	06 20 24.2	
	baz=247,slow=75,SNR=100						
H11N3	WAKE ISLAND Hy	41.81	61	T	T	06 20 25.3	
	baz=247,slow=75,SNR=99						
DZM	Mont Dzumac	43.12	124	LR	LR	05 55 00.1	
	comp=Z,42nm,18.4s,baz=113,slow=37						
MKAR	Makanchi Array	61.20	325	P	P	05 38 39.7	0.0
	0.3nm,0.6s,baz=115,slow=6.5,SNR=2.4						
	0.3nm,0.6s						

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*IDC **18** 05:46:15.8±1.1, 23°.82S×179°.77W, h495^{km}±11^{km}, mb3.9/22, mbtmp4.8/24, Error ellipse: s-maj=12.0km s-min=10.8km az=54.0*

*NOU **18** 05:46:16.1, 23°.83S×179°.20W, h556^{km}, mb4.7/29, South of Fiji Islands*

*NEIC **18** 05:46:17.8±1.7, 23°.9S±0°.1×179°.8W±0°.1, h514^{km}±6^{km}, mb4.6/56, Error ellipse: s-maj=15.9km s-min=14.1km az=137.0*

ISC 18 05:46:16.3±0.3**, 23°.95S**±0°.05×**179°.81W**±0°.06**, h500**^{km}**, n174, σ1^{s}53**/180**, mb4.6**/60**, 9C-51D, Fault plane solution: NP1:**φs267.25855°**,** δ47.75446°**,** λ-65.59116°. **NP2:** φs53.23934°**,** δ47.61531°**,** λ-114.46640°. **Principal axes:** T Plg0.0728°, Azm340.2683°**;** N Plg17.8131°, Azm70.2917°**;** P Plg72.1867°, Azm250.0419°**; South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.55	163	P	P	05 47 47.7	-0.5
	200nm,0.4s,baz=236,slow=22,SNR=2.3						
RAO				S	S	05 49 01.5	-1.9
	160nm,0.3s,baz=350,slow=23,SNR=1.6						
RAO	Raoul Island	5.55	163	P	P	05 47 49.4	+1.2
GLKZ	Green Lake	5.56	163	P	P	05 47 48.6	+0.3
GLKZ				S	S	05 49 02.4	-1.1
DGTI	Dogotuki	7.62	357	P	P	05 48 10.1	+1.1
NIUE	Niue	10.40	64	P	P	05 48 38.8	+0.9
NIUE	Niue	10.40	64	P	P	05 48 31.4	-6.6
MARNC	Mare, Loyalty	11.49	280	P	P	05 48 50.9	+1.4
PINNC	Pines Island,	11.79	274	P	P	05 48 54.6	+1.9
OUENC	Ouen Island, N	12.37	274	P	P	05 48 59.8	+0.9
OUENC	Ouen Island, N	12.37	274	P	P	05 49 03.5	+4.7
LIFNC	LIFOU	12.39	282	P	P	05 48 59.9	+0.8
YATNC	Mamie plateau,	12.39	276	P	P	05 49 04.9	+5.8
AFI	Afiamalu	12.54	39	P	P	05 48 55.6	-5.3
	52nm,0.6s,baz=46,slow=11,SNR=6.9						
AFI				S	S	05 51 03.3	-13
	39nm,0.7s,baz=18,slow=17,SNR=3.2						
AFI	Afiamalu	12.54	39	P	P	05 48 57.6	-3.3
AFI	Afiamalu	12.54	39	P	P	05 48 56.2	-4.7
OUZ	Omahuta	12.61	206	P	P	05 49 04.0	+2.9
OUZ	Omahuta	12.61	206	P	P	05 49 03.5	+2.3
OUZ	Omahuta	12.61	206	P	P	05 49 04.7	+3.6
DZM	Mont Dzumac	12.79	276	P	P	05 49 02.2	-1.3
	3.2nm,0.7s,baz=250,slow=11,SNR=2.1						
DZM	Mont Dzumac	12.79	276	P	P	05 49 05.5	+2.1
DZM	Mont Dzumac	12.79	276	P	P	05 49 08.7	+5.2
WCZ	Waipu Caves	12.97	202	P	P	05 49 07.8	+2.8
KUZ	Kuaotunu	13.32	196	P	P	05 49 10.5	+1.8
WMGZ	Waiomatatini S	13.91	186	P	P	05 49 17.2	+2.3
WMGZ				S	S	05 51 38.4	-3.8
HAZ	Te Kaha	13.92	188	P	P	05 49 16.5	+1.6
HAZ				S	S	05 51 41.0	-1.3
PKGZ	Pakihiroa	14.01	187	P	P	05 49 18.5	+2.4
PKGZ				S	S	05 51 40.8	-3.5
RUGZ	Raukumara Rang	14.14	188	P	P	05 49 19.5	+2.1
RUGZ				S	S	05 51 44.5	-2.3
PUZ	Puketiti	14.18	186	P	P	05 49 18.1	+0.4
PUZ				S	S	05 51 41.5	-5.8
TWGZ	Tauwhareparae	14.31	187	P	P	05 49 17.6	-1.6
TWGZ				S	S	05 51 52.6	+2.7
OMRZ	Omania	14.49	192	P	P	05 49 24.8	+3.8
URZ	Urewera	14.51	190	P	P	05 49 17.9	-3.2
	21nm,0.4s,baz=65,slow=2.3,SNR=15						
URZ				S	S	05 51 50.3	-3.3
	21nm,0.5s,baz=190,slow=23,SNR=13						
URZ	Urewera	14.51	190	P	P	05 49 21.1	-0.1
URZ	Urewera	14.51	190	P	P	05 49 20.9	-0.2
URZ				S	S	05 51 50.2	-3.4
URZ	Urewera	14.51	190	P	P	05 49 21.5	+0.4
MWZ	Matawai	14.52	188	P	P	05 49 22.6	+1.2
MWZ				S	S	05 51 51.3	-2.7
PRGZ	Paritu Road	15.06	187	P	P	05 49 29.5	+2.5
PRGZ				S	S	05 52 04.5	+0.3
BKZ	Black Stump Fm	15.49	191	P	P	05 49 31.6	+0.1
MCHZ	McNeill Hill	15.73	190	P	P	05 49 39.3	+5.4
MCHZ				S	S	05 52 14.9	-2.1
QRZ	Quartz Range	18.02	199	P	P	05 49 56.6	0.0
QRZ	Quartz Range	18.02	199	P	P	05 49 56.7	0.0
KHZ	Kahutara	19.23	195	P	P	05 50 06.6	-1.1
RPZ	Rata Peaks	21.10	199	P	P	05 50 25.7	+0.9
	8.2nm,0.4s,baz=316,slow=3.3,SNR=7.1						
RPZ				S	S	05 53 37.7	-8.4
	14nm,0.9s,baz=139,slow=20,SNR=2.0						
	8.2nm,0.4s						
RPZ	Rata Peaks	21.10	199	IAmb	IAmb	05 50 33.2	
	comp=Z,71nm,1.5s						
RPZ	Rata Peaks	21.10	199	P	P	05 50 25.2	+0.5
ARMA	Armidale	26.16	249	P	P	05 51 11.8	+1.6
ARMA				IAmb	IAmb	05 51 12.8	
	comp=Z,15nm,0.7s						
ARMA	Armidale	26.16	249	P	P	05 51 12.0	+1.7
EIDS	Eidsvold	26.47	261	P	P	05 51 13.6	+0.7
EIDS				IAmb	IAmb	05 51 14.4	
	comp=Z,20nm,0.6s						
EIDS	Eidsvold	26.47	261	P	P	05 51 13.8	+0.9
MGCD	Mangrove Creek	27.08	244	P	P	05 51 19.9	+1.8
RMQ	Roma	28.51	258	P	P	05 51 32.6	+1.8
PPT	Papeete	28.94	83	P	P	05 51 34.5	-0.1
	comp=Z,15nm,0.5s,baz=186,slow=1.8,SNR=5.4						
	comp=Z,15nm,0.5s						
PPTF	Pamatai, Papee	28.94	83	P	P	05 51 34.5	-0.2
CNB	Canberra Magne	28.98	240	P	P	05 51 36.5	+1.7
CAN	Canberra	29.27	240	P	P	05 51 38.4	+1.0
CAN				IAmb	IAmb	05 51 39.5	
	comp=Z,17nm,0.7s						
CAN	Canberra	29.27	240	P	P	05 51 38.7	+1.4
CMSA	Cobar Meteorol	31.36	248	P	P	05 51 56.1	+0.7
CTA	Charters Tower	31.65	270	P	P	05 51 58.5	+0.5
	comp=Z,57nm,0.5s,baz=95,slow=10.0,SNR=151						
	comp=Z,57nm,0.5s						
CTA	Charters Tower	31.65	270	P	P	05 51 58.9	+0.9
CTAO	Charters Tower	31.65	270	P	P	05 51 58.6	+0.6
QLP	Quilpie	32.55	258	P	P	05 52 06.3	+0.6
TOO	Toolangi	32.57	237	P	P	05 52 06.7	+1.0
TOO				IAmb	IAmb	05 52 07.4	
	comp=Z,14nm,0.6s						
TOO	Toolangi	32.57	237	P	P	05 52 06.7	+1.0
TAU	Tasmania Unive	33.03	227	P	P	05 52 10.7	+1.2
TAU				IAmb	IAmb	05 52 18.8	
	comp=Z,44nm,1.4s						
TAU	Tasmania Unive	33.03	227	P	P	05 52 10.6	+1.2
PMG	Port Moresby	34.67	289	P	P	05 52 23.8	+0.1
	comp=Z,38nm,0.6s,baz=101,slow=5.3,SNR=11						
	comp=Z,38nm,0.6s						
PMG	Port Moresby	34.67	289	P	P	05 52 23.6	-0.1
STKA	Stephens Creek	34.86	248	P	P	05 52 25.8	+0.6
	comp=Z,5.2nm,0.4s,baz=90,slow=11,SNR=17						
STKA				PcP	PcP	05 54 44.5	+0.2
	comp=Z,1.6nm,0.4s,baz=112,slow=5.3,SNR=2.8						
	comp=Z,5.2nm,0.4s						
STKA	Stephens Creek	34.86	248	P	P	05 52 25.7	+0.6
STKA	Stephens Creek	34.86	248	P	P	05 52 25.6	+0.5
ARPS	Mount Arapiles	35.24	240	P	P	05 52 29.0	+0.8
COEN	Coen	36.29	279	P	P	05 52 37.6	+0.4
COEN				IAmb	IAmb	05 52 38.8	
	comp=Z,32nm,1.4s						
HTT	Hallett	37.21	246	P	P	05 52 44.9	+0.3
BBOO	Buckleboo	39.58	247	P	P	05 53 03.7	-0.2
BBOO				IAmb	IAmb	05 53 03.8	
	comp=Z,17nm,0.5s						
AS31	Alice Springs	42.20	261	P	P	05 53 24.8	-0.1
AS31				IAmb	IAmb	05 53 26.0	
	comp=Z,7.7nm,0.6s						
ASAR	Alice Springs	42.20	261	P	P	05 53 24.9	0.0
	comp=Z,24nm,0.7s,baz=96,slow=7.9,SNR=178						
ASAR				PcP	PcP	05 55 07.5	-0.3
	comp=Z,0.9nm,0.4s,baz=102,slow=5.4,SNR=2.2						
ASAR				ScP	ScP	05 58 12.2	+1.6
	comp=Z,2.8nm,0.9s,baz=107,slow=4.1,SNR=11						
ASAR				S	S	05 59 06.2	-2.5
	comp=Z,1.1nm,0.6s,baz=99,slow=15,SNR=7.1						
	comp=Z,24nm,0.7s						
WR0	Warramunga Arr	42.39	266	P	P	05 53 25.9	-0.6
WR0				IAmb	IAmb	05 53 26.5	
	comp=Z,22nm,0.8s						
WB2	Warramunga Arr	42.56	266	P	P	05 53 27.4	-0.4
WRAB	Tennant Creek	42.57	266	P	P	05 53 27.5	-0.4
WB0	Warramunga Arr	42.57	266	P	P	05 53 27.4	-0.5
WRA	Warramunga Arr	42.57	266	P	P	05 53 27.3	-0.6
	comp=Z,45nm,0.6s,baz=96,slow=8.3,SNR=1174						
WRA				PcP	PcP	05 55 08.4	-0.7
	comp=Z,2.4nm,0.8s,baz=99,slow=4.4,SNR=4.9						
WRA				ScP	ScP	05 58 13.9	+1.8
	comp=Z,1.6nm,0.6s,baz=98,slow=4.3,SNR=7.6						
WRA				S	S	05 59 08.8	-5.3
	comp=Z,0.9nm,0.6s,baz=99,slow=14,SNR=6.1						
	comp=Z,45nm,0.6s						
WRA	Warramunga Arr	42.57	266	P	P	05 53 26.3	-1.6
GENI	Genyem	44.10	293	P	P	05 53 36.1	-3.8
	comp=Z,75nm,0.8s						
FORT	Forrest	46.45	250	P	P	05 53 57.1	-0.6
MTN	Manton Dam	47.63	274	P	P	05 54 06.0	-0.8
MTN				IAmb	IAmb	05 54 06.4	
	comp=Z,16nm,0.7s						
KNRA	Kununurra	48.86	270	P	P	05 54 16.1	+0.1
SWI	Sorong	52.62	288	P	P	05 54 39.8	-3.7
	comp=Z,102nm,0.8s						
SBA	Scott Base	54.34	183	P	P	05 54 57.4	+2.6
VNDA	Vanda	54.35	185	P	P	05 54 56.2	+1.5
	comp=Z,1.7nm,0.6s,baz=11,slow=6.7,SNR=20						
VNDA				PcP	PcP	05 55 50.8	-0.3
	comp=Z,1.1nm,0.6s,baz=354,slow=5.7,SNR=6.3						
	comp=Z,1.7nm,0.6s						
VNDA	Vanda	54.35	185	P	P	05 54 56.3	+1.5
SOEI	Soe	55.02	275	P	P	05 55 00.3	-0.4
	comp=Z,63nm,0.8s						
PSA00	Pilbara Seismi	55.32	260	IAmb	IAmb	05 55 02.2	
	comp=Z,10nm,0.5s						
NWAO	Narrogin (SRO)	55.37	246	P	P	05 55 02.3	-0.4
NWAO				IAmb	IAmb	05 55 04.9	
	comp=Z,28nm,1.2s						
BATI	Baumata	55.40	274	P	P	05 55 03.6	+0.4
	comp=Z,40nm,0.5s,baz=167,slow=3.5,SNR=4.8						
	comp=Z,40nm,0.5s						
BATI	Baumata	55.40	274	P	P	05 54 56.6	-6.6
MBWA	Marble Bar	55.53	260	P	P	05 55 03.2	-0.8
MBWA				IAmb	IAmb	05 55 04.1	
	comp=Z,26nm,1.1s						
MORW	Morawa	57.02	250	IAmb	IAmb	05 55 14.5	
	comp=Z,20nm,0.5s						
EDFI	Ende, Flores	57.75	275	P	P	05 55 19.0	-0.5
	comp=Z,27nm,0.8s						
CASY	Casey	60.14	206	P	P	05 55 34.3	-0.3
CASY				IAmb	IAmb	05 55 34.5	
	comp=Z,28nm,1.4s						
BKSI	Bulukumba	60.54	278	P	P	05 55 36.7	-1.4
	comp=Z,34nm,0.7s						
JCJ	Chichijima	62.62	322	P	P	05 55 50.7	-0.8
	comp=Z,27nm,0.7s,baz=282,slow=23,SNR=2.3						
	comp=Z,27nm,0.7s						
JCJ	Chichijima	62.62	322	IAmb	IAmb	05 56 06.8	
	comp=Z,35nm,0.9s						
TOLI2	Tolitoli	62.76	285	P	P	05 55 51.4	-1.2
TOLI2				IAmb	IAmb	05 55 52.3	
	comp=Z,24nm,0.8s						
MPSI	Mapaga	63.19	283	P	P	05 55 54.5	-0.9
	comp=Z,35nm,0.9s						
JAGI	Jajag, Banyuwa	64.74	272	P	P	05 56 03.8	-1.6
QSPA	South Pole Qui	66.14	180	P	P	05 56 14.4	+1.0
	comp=Z,8.4nm,0.6s,baz=337,slow=0.5,SNR=45						
	comp=Z,8.4nm,0.6s						
QSPA	South Pole Qui	66.14	180	P	P	05 56 14.5	+1.2
QSPA				IAmb	IAmb	05 56 15.2	
	comp=Z,9.7nm,0.8s						
UGM	Wanagama	68.27	271	P	P	05 56 26.9	-0.4
MJAR	Matsushiro Arr	72.03	326	P	P	05 56 48.3	-0.9
	comp=Z,3.4nm,0.8s,baz=169,slow=5.3,SNR=6.5						
	comp=Z,3.4nm,0.8s						
KSM	Kuching	72.28	280	P	P	05 56 50.6	-0.5
KSM				IAmb	IAmb	05 56 51.6	
	comp=Z,23nm,0.8s						
MDSI	Maura Dua	75.41	272	P	P	05 57 07.3	-1.6
JKA	Kamikawa-asahi	75.98	333	P	P	05 57 11.2	-0.1
JKA	Kamikawa-asahi	75.98	333	IAmb	IAmb	05 57 12.3	
	comp=Z,25nm,1.5s						
ASAJ	Asahikawa	75.98	333	P	P	05 57 11.2	-0.1
	comp=Z,5.1nm,0.6s,baz=262,slow=4.1,SNR=3.6						
	comp=Z,5.1nm,0.6s						
BELA	Belgrano 2	76.37	173	P	P	05 57 13.0	-0.1
BELA				IAmb	IAmb	05 57 13.6	
	comp=Z,6.5nm,0.6s						
MAW	Mawson	77.77	200	P	P	05 57 21.5	+0.7
	comp=Z,5.7nm,0.6s,baz=153,slow=2.3						
	comp=Z,5.7nm,0.6s						
MAW	Mawson	77.77	200	IAmb	IAmb	05 57 22.3	
	comp=Z,1.4nm,0.8s						
KSRS	Korea Array	78.39	320	P	P	05 57 25.2	+0.5
	comp=Z,2.2nm,0.6s,baz=131,slow=5.8,SNR=6.0						
	comp=Z,2.2nm,0.6s						
PETK	Petropavlovsk-	79.19	346	P	P	05 57 27.6	-0.9
	comp=Z,3.7nm,0.7s,baz=110,slow=9.2,SNR=5.3						
	comp=Z,3.7nm,0.7s						
USRK	Ussuriysk Ar.	80.90	327	P	P	05 57 38.4	+0.7
	comp=Z,5.3nm,0.7s,baz=123,slow=5.3,SNR=3.1						
	comp=Z,5.3nm,0.7s						
CMB	Columbia Colle	83.12	43	P	P	05 57 48.8	-0.5
CN2	Changchun	84.03	324	*e*P	P	05 57 53.9	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TROLL	Troll, Antarti	84.29	181	P	P	05 57 54.4	-0.3
TROLL	Troll, Antarti	84.29	181	PcP	P	05 57 57.0	+2.3
TIA	Tai'an	84.39	314	⇓*i*P	P	05 57 56.0	+0.4
TIA				pmax	pmax		
	comp=Z,13nm,0.7s						
SNAA	Sanae	84.62	179	P	P	05 57 55.6	-0.7
SNAA	Sanae	84.62	179	PcP	P	05 57 58.2	+1.9
KLR	Kul'dur	84.66	330	P	P	05 57 57.0	+0.4
	comp=Z,1.0nm,0.6s,baz=143,slow=6.2,SNR=3.0						
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	84.67	44	P	P	05 57 56.7	-0.5
	comp=Z,0.4nm,0.4s,baz=225,slow=9.5,SNR=6.1						
	comp=Z,0.4nm,0.4s						
VNA3	Neumayer Olymp	84.82	177	P	P	05 57 56.5	-0.6
VNA3	Neumayer Olymp	84.82	177	PcP	P	05 57 58.9	+1.7
VNA1	Neumayer--Stat	85.47	177	P	P	05 57 59.5	-0.8
TUC	Tucson	86.41	52	P	P	05 58 05.5	-0.1
TUC				IAmb	IAmb	05 58 07.6	
	comp=Z,4.0nm,0.8s						
I07A	Izee	87.32	39	P	P	05 58 09.8	+0.2
J08A	Circle Bar Ran	87.48	40	P	P	05 58 09.9	-0.4
J08A				IAmb	IAmb	05 58 11.6	
	comp=Z,7.4nm,1.3s						
G08A	Pilot Rock	88.36	38	P	P	05 58 14.9	+0.5
G08A				IAmb	IAmb	05 58 16.2	
	comp=Z,5.3nm,1.3s						
XAN	Xi'an	88.90	308	⇓P	P	05 58 17.8	+0.7
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MFID	Camas Ranch	89.08	41	P	P	05 58 17.4	-0.4
KMI	Kunming	89.44	298	⇑P	P	05 58 16.3	-3.8
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR	Chiang Mai Arr	89.70	290	P	P	05 58 22.8	+1.6
	comp=Z,2.1nm,0.3s,baz=145,slow=3.4,SNR=24						
	comp=Z,2.1nm,0.3s						
CMAR	Chiang Mai Arr	89.70	290	P	P	05 58 21.4	+0.3
TMUT	Trail Mountain	89.75	46	P	P	05 58 20.3	-1.0
TMUT				IAmb	IAmb	05 58 22.7	
	comp=Z,4.8nm,0.8s						
HVU	Hansel Valley	90.06	44	IAmb	IAmb	05 58 23.4	
	comp=Z,2.0nm,0.6s						
SRU	San Rafael Swe	90.11	47	IAmb	IAmb	05 58 23.6	
	comp=Z,3.5nm,0.8s						
TX31	Lajitas Ar. Si	90.31	58	IAmb	IAmb	05 58 25.3	
	comp=Z,4.9nm,0.8s						
TXAR	Lajitas Array	90.31	58	P	P	05 58 24.0	+0.1
	comp=Z,1.5nm,0.7s,baz=221,slow=4.2,SNR=11						
	comp=Z,1.5nm,0.7s						
HHC	Hu-ho-hao-te	90.57	315	*e*P	P	05 58 26.0	+1.2
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH	PanZhiHua	90.86	299	P	P	05 58 28.6	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
PDAR	Pinedale Array	92.61	44	P	P	05 58 33.8	-0.5
	comp=Z,0.7nm,0.7s,baz=226,slow=2.4,SNR=5.1						
	comp=Z,0.7nm,0.7s						
MK31	Makanchi Array	112.31	313	⇓P	PKiKP	06 03 41.4	-13
	comp=Z,0.7nm,0.4s,baz=106,slow=16,SNR=53						
MKAR	Makanchi Array	112.31	313	PKiKP	PKiKP	06 03 53.1	-1.7
	comp=Z,0.3nm,0.4s,baz=195,slow=0.9,SNR=6.0						
MAKZ	Makanchi	112.53	313	⇓P	PKiKP	06 03 45.1	-10
	comp=Z,0.5nm,0.3s						
KURK	Kurchatov	115.35	316		PKPdf	06 03 58.4	-2.1
KURBB	Kurchatov Arra	115.40	316	PKP	PKPdf	06 03 58.4	-2.2
	comp=Z,0.7nm,0.5s,baz=84,slow=1.0,SNR=8.6						
ARCES	ARCESS Array B	131.97	348	PKP	PKPdf	06 04 30.4	-1.3
	comp=Z,6.2nm,1.1s,baz=29,slow=2.8,SNR=8.1						
FINES	FINESS Array B	138.54	342	PKhKP	PKPpre	06 04 35.5	
	comp=Z,0.4nm,0.3s,baz=64,slow=4.4,SNR=5.5						
FINES				PKP	PKPdf	06 04 44.4	+0.2
	comp=Z,0.5nm,0.3s,baz=64,slow=4.4,SNR=5.5						
FINES				SKPbc	SKPbc	06 07 30.6	-0.9
	comp=Z,2.7nm,0.7s,baz=54,slow=3.3,SNR=10						
GURO	Guroymak-BITLI	141.71	302		PKPdf	06 04 50.9	0.0
NOA	NORSAR Array B	142.15	351	PKhKP	PKPpre	06 04 46.2	
	comp=Z,0.5nm,0.7s,baz=16,slow=4.6,SNR=4.0						
AKASG	Malin Array Be	145.10	327	PKPbc	PKPdf	06 04 55.4	-0.7
	comp=Z,1.9nm,0.3s,baz=42,slow=4.7,SNR=16						
AKASG				SKPbc	SKPbc	06 07 47.5	-0.7
	comp=Z,1.2nm,0.4s,baz=45,slow=3.5,SNR=7.7						
AKASG	Malin Array Be	145.10	327		PKPdf	06 04 55.9	-0.3
AKBB	Malin Array Si	145.10	327	PKPdf	PKPdf	06 04 55.5	-0.6
BR131	Keskin Array S	147.74	307		PKPdf	06 05 03.7	+2.6
BRTR	Keskin Array B	147.74	307	PKPbc	PKPdf	06 05 03.8	+2.6
	comp=Z,2.7nm,0.7s,baz=138,slow=4.2,SNR=11						
BRTR				PKPab	PKiKP	06 05 08.2	+2.0
	comp=Z,4.5nm,0.6s,baz=75,slow=3.5,SNR=15						
KWP	Kalwaria Pacla	148.89	331		PKPbc	06 05 06.7	-0.4
CRVS	Cervenica-Dubn	149.98	331	*e*PKP	PKPbc	06 05 09.7	-0.1
CRVS				*e*		06 05 17.4	
OSTC	Ostas	150.66	339	⇑*e*PKP	PKPbc	06 05 11.1	-0.2
CHVC	Chvalec	150.69	339	⇑*e*PKP	PKPbc	06 05 11.2	-0.2
DPC	Dobruska-Polom	150.81	339	⇑*e*PKP	PKPbc	06 05 11.3	-0.4
DPC				*e*PKPAB	PKPab	06 05 21.1	+0.1
KRLC	Kraliky	150.88	338	⇑*e*PKP	PKPbc	06 05 11.5	-0.4
KRLC				*e*PKPAB	PKPab	06 05 21.3	-0.1
CLL	Collm	150.95	343	*i* PKPbc	PKPbc	06 05 11.6	-0.3
	comp=Z,10.0nm,0.8s						
CLL				*e*PKPab	PKPab	06 05 21.0	-0.5
BRG	Berggiesshubel	151.08	342	*i* PKP	PKPbc	06 05 12.0	-0.2
BRG				Amp		06 05 12.6	
	comp=Z,6.5nm,0.6s						
MAUC	Maruska	151.10	336	⇑*e*PKP	PKPbc	06 05 12.2	-0.1
MAUC				*e*PKPAB	PKPab	06 05 24.8	+2.5
KHC	Kasperske Hory	152.74	341	⇑*e*PKP	PKPbc	06 05 15.1	-0.9
GERES	GERESS Array B	152.96	340	PKPbc	PKPbc	06 05 15.2	-1.4
	comp=Z,0.4nm,0.2s,baz=52,slow=6.8,SNR=4.5						
TORD	Torodi Ar. Bea	169.16	188	PKP	PKPdf	06 05 25.0	-1.6
	comp=Z,0.9nm,0.9s,baz=217,slow=1.4,SNR=3.6						
TORD				PKPab	PKPab	06 06 41.1	-0.6
	comp=Z,2.0nm,0.8s,baz=142,slow=3.9,SNR=12						

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*NEIC **18** 06:11:04.7±2.5, 21°.74N±0°.07×143°.2E±0°.1, h282^{km}±6^{km}, mb4.2/30 Error ellipse: s-maj=16.1km s-min=10.3km az=77.0*

*IDC **18** 06:11:05.0±1.5, 21°.69N×143°.07E, h294^{km}±14^{km}, mb3.8/21, mbtmp4.5/25, Error ellipse: s-maj=14.9km s-min=9.6km az=79.0*

*JMA **18** 06:11:07.0±0.3, 22°N±2°×14°4E±°, h303^{km}, MV4.9/33, IOTO ISLANDS REGION*

ISC 18 06:11:05.5±0.5**, 21°.77N**±0°.06×**143°.13E**±0°.10**, h300**^{km}**, n85, σ1^{s}29**/89**, mb4.0**/29**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	4.92	350	*e*P	Pn	06 12 21.9	-0.1
JHH2				*e*S	S	06 13 20.6	-2.9
JHH2	Haha-jima-NKT2	4.92	350	A	A	06 12 21.9	
	comp=E,4.0nm,3.5s,comp=E,3.0nm,0.4s						
CBIJ	Chichi jima	5.37	351	P	Pn	06 12 26.7	-0.6
CBIJ				*e*S	S	06 13 29.4	-3.7
JCJ	Chichijima	5.37	351	P	Pn	06 12 26.5	-0.8
	146nm,0.4s,baz=289,slow=23,SNR=91						
JCJ				S	S	06 13 29.9	-3.1
	305nm,0.4s,baz=265,slow=22,SNR=12						
JCJ	Chichijima	5.37	351	Pn	Pn	06 12 26.4	-0.9
GUMO	Guam	8.30	168	P	Pn	06 13 02.8	-0.1
	48nm,0.3s,baz=191,slow=23,SNR=4.2						
BSO1	Boso 1	12.97	352	*e*P	P	06 13 59.9	+0.4
BSO3	Boso 3	13.19	351	P	P	06 14 02.1	0.0
BSO4	Boso 4	13.40	350	P	Pn	06 14 05.2	+0.5
JIE	Ise	13.79	337	*e*P	Pn	06 14 11.2	+1.8
JOD2	Odawara 2	13.90	346	P	Pn	06 14 11.4	+0.6
JTO	Tosashimizu	14.35	323	*e*P	Pn	06 14 18.7	+2.6
INU	Inuyama	14.55	340		P	06 14 16.3	-1.2
JRY	Ryogami san	14.67	346	*e*P	Pn	06 14 20.3	+0.3
JGF	Kuroka	14.68	341		Pn	06 14 20.8	+0.7
JAG	Ashikaga	14.95	348	P	Pn	06 14 22.7	-0.5
MJAR	Matsushiro Arr	15.33	345	P	Pn	06 14 26.9	-0.8
	1.5nm,0.3s,baz=148,slow=9.4,SNR=6.8						
MJAR				S	S	06 17 10.2	-2.5
	1.8nm,0.4s,baz=146,slow=16,SNR=4.4						
MJAR	Matsushiro Arr	15.33	345	IAmb	IAmb	06 14 35.6	
	comp=Z,3.5nm,1.2s						
MAJO	Matsushiro	15.33	345		P	06 14 26.6	+0.5
MAJO				IAmb	IAmb	06 14 45.0	
	comp=Z,6.2nm,0.7s						
JNU	Nakatsue	15.67	319	P	Pn	06 14 31.6	-0.2
	comp=Z,11nm,0.6s,baz=107,slow=4.9,SNR=4.7						
JNU	Nakatsue	15.67	319	IAmb	IAmb	06 14 33.1	
	comp=Z,14nm,0.8s						
JHS	Saijyo	15.84	328		Pn	06 14 33.9	+0.2
JHS				IAmb	IAmb	06 14 36.6	
	comp=Z,10nm,0.7s						
JMM	Marumori	16.17	353		Pn	06 14 38.0	+0.6
JMM					S	06 17 34.6	+5.3
JSD	Sado	16.75	347	P	P	06 14 42.3	+0.8
JMK	Ichinoseki	17.20	355	*e*P	Pn	06 14 48.6	-0.9
NACB	Ninganchiao	19.97	281	P	P	06 15 17.2	+1.1
ERM	Erimo	20.19	0	P	P	06 15 21.0	+2.9
YHNB	Yeheng	20.19	282	P	P	06 15 18.4	-0.2
YHNB				IAmb	IAmb	06 15 22.4	

	comp=Z,13nm,0.8s						
KSRS	Korea Array	20.42	323	P	P	06 15 21.9	+1.2
	comp=Z,7.9nm,0.7s,baz=149,slow=8.9,SNR=54						
KSRS				ScP	ScP	06 22 28.2	+1.4
	comp=Z,1.4nm,0.9s,baz=141,slow=3.0,SNR=6.4						
	comp=Z,7.9nm,0.7s						
KSAR	Wonju Array Be	20.44	323	P	P	06 15 22.1	+1.3
SSLB	Suanglung	20.54	280	P	P	06 15 22.6	+0.6
SSLB				IAmb	IAmb	06 15 23.9	
	comp=Z,16nm,0.8s						
SEHB	SEOHWA	20.84	325	P	P	06 15 25.5	+0.7
SEHB				IAmb	IAmb	06 15 26.5	
	comp=Z,12nm,1.0s						
USRK	Ussuriysk Ar.	24.20	340	P	P	06 15 56.4	+1.2
	comp=Z,1.5nm,0.5s,baz=142,slow=7.2,SNR=4.4						
	comp=Z,1.5nm,0.5s						
KLR	Kul'dur	28.86	344	P	P	06 16 37.5	+0.9
	comp=Z,16nm,0.6s,baz=161,slow=7.8,SNR=62						
KLR				PcP	PcP	06 19 38.8	+1.0
	comp=Z,2.2nm,0.5s,baz=248,slow=2.6,SNR=6.1						
	comp=Z,16nm,0.6s						
MYLDM	Lahad Datu	29.00	239	P	P	06 16 38.3	0.0
SBUM	Sibu	35.66	242	P	P	06 17 35.8	-0.2
SBUM				IAmb	IAmb	06 17 37.0	
	comp=Z,7.1nm,0.6s						
SONM	Songino Array	39.25	320	P	P	06 18 06.2	+0.5
	comp=Z,2.5nm,0.4s,baz=128,slow=7.8,SNR=8.4						
	comp=Z,2.5nm,0.4s						
CMAR	Chiang Mai Arr	41.52	274	P	P	06 18 24.8	+0.4
	comp=Z,2.0nm,0.5s,baz=57,slow=8.7,SNR=7.5						
	comp=Z,2.0nm,0.5s						
WB0	Warramunga Arr	42.16	192	P	P	06 18 28.1	-1.3
WR0	Warramunga Arr	42.31	192	P	P	06 18 29.2	-1.5
WRAB	Tennant Creek	42.33	192	P	P	06 18 29.3	-1.4
WRAB				IAmb	IAmb	06 18 29.8	
	comp=Z,7.6nm,0.5s						
WB2	Warramunga Arr	42.34	192	P	P	06 18 29.6	-1.2
WB2				IAmb	IAmb	06 18 29.9	
	comp=Z,7.1nm,0.4s						
WRA	Warramunga Arr	42.34	192	P	P	06 18 29.6	-1.3
	comp=Z,3.6nm,0.6s,baz=16,slow=9.7,SNR=100						
	comp=Z,3.6nm,0.6s						
WRA	Warramunga Arr	42.34	192	P	P	06 18 28.1	-2.7
KULM	Kulim	44.23	255	P	P	06 18 46.5	+0.5
AS31	Alice Springs	46.04	192	P	P	06 18 58.4	-1.6
ASAR	Alice Springs	46.05	192	P	P	06 18 58.5	-1.5
	comp=Z,0.8nm,0.4s,baz=15,slow=9.4,SNR=17						
	comp=Z,0.8nm,0.4s						
BILL	Bilibino	48.46	11	P	P	06 19 18.9	+1.0
BILL				IAmb	IAmb	06 19 19.9	
	comp=Z,5.2nm,0.7s						
TIXI	Tiksi	50.57	354	P	P	06 19 33.8	+0.1
RAMN	Ramite	51.40	288	*e*P	P	06 19 40.9	0.0
PKI	Pulchoki	52.37	289	*e*P	P	06 19 47.9	-0.2
PKIN	Phulchoki	52.38	289	*e*P	P	06 19 48.0	-0.1
KKN	Kakani	52.46	289	*e*P	P	06 19 48.2	-0.4
DMN	Daman	52.64	289	*e*P	P	06 19 50.3	+0.3
GKN	Gorkha	53.00	289	*e*P	P	06 19 52.9	+0.4
	comp=Z,11nm,0.4s						
DANN	Dangsing	53.72	290	*e*P	P	06 19 58.3	+0.4
ZAA0	Zalesovo Array	54.12	322	P	P	06 19 59.7	-0.2
ZAA0				IAmb	IAmb	06 20 00.8	
	comp=Z,5.5nm,0.8s						
ZALV	Zalesovo Beam	54.12	322	P	P	06 19 59.9	0.0
	comp=Z,2.1nm,0.4s,baz=102,slow=6.4,SNR=16						
ZALV				PcP	PcP	06 21 00.1	-0.3
	comp=Z,3.7nm,0.4s,baz=117,slow=4.0,SNR=10						
	comp=Z,2.1nm,0.4s						
ZALV	Zalesovo Beam	54.12	322	P	P	06 19 59.3	-0.6
MK31	Makanchi Array	54.61	313	P	P	06 20 03.7	+0.1
MKAR	Makanchi Array	54.61	313	P	P	06 20 04.0	+0.5
	comp=Z,2.2nm,0.3s,baz=90,slow=8.8,SNR=55						
MKAR				PcP	PcP	06 21 02.7	+0.2
	comp=Z,1.4nm,0.4s,baz=78,slow=4.7,SNR=9.5						
	comp=Z,2.2nm,0.3s						
MKAR	Makanchi Array	54.61	313	P	P	06 20 03.4	-0.1
MAKZ	Makanchi	54.82	313	P	P	06 20 05.6	+0.5
MAKZ				IAmb	IAmb	06 20 06.5	
	comp=Z,4.8nm,0.8s						
KURK	Kurchatov	57.38	317	P	P	06 20 22.8	-0.1
KURK				IAmb	IAmb	06 20 24.0	
	comp=Z,6.9nm,0.8s						
TARG	Taragay, Kyrgy	57.65	306	P	P	06 20 27.3	+1.7
TARG				IAmb	IAmb	06 20 45.4	
	comp=Z,8.7nm,1.2s						
NRIK	Noril'sk	57.91	340	P	P	06 20 26.4	+0.1
	comp=Z,2.8nm,0.4s,baz=97,slow=8.9,SNR=8.6						
	comp=Z,2.8nm,0.4s						
NRIK	Noril'sk	57.91	340	P	P	06 20 26.2	0.0
NRIK				IAmb	IAmb	06 20 27.5	
	comp=Z,5.7nm,0.7s						
ILAR	Eielson Array	62.00	27	P	P	06 20 54.0	-0.1
	comp=Z,2.3nm,0.8s,baz=258,slow=5.3,SNR=18						
	comp=Z,2.3nm,0.8s						
INK	Inuvik	67.52	24	P	P	06 21 30.1	+0.7
	comp=Z,1.8nm,0.6s,baz=272,slow=8.6,SNR=6.4						
	comp=Z,1.8nm,0.6s						
INK	Inuvik	67.52	24	IAmb	IAmb	06 21 31.4	
	comp=Z,2.8nm,1.1s						
YKA	Yellowknife Ar	76.42	28	P	P	06 22 22.7	+0.7
	comp=Z,2.9nm,0.4s,baz=292,slow=5.8,SNR=37						
	comp=Z,2.9nm,0.4s						
YKA	Yellowknife Ar	76.42	28	P	P	06 22 21.4	-0.6
ARCES	ARCESS Array B	78.84	341	P	P	06 22 35.8	+0.6
	comp=Z,11nm,0.5s,baz=73,slow=8.4,SNR=82						
	comp=Z,11nm,0.5s						
ARCES	ARCESS Array B	78.84	341	IAmb	IAmb	06 22 36.7	
	comp=Z,11nm,0.6s						
KBZ	Khabaz	82.28	314	P	P	06 22 54.7	+0.9
	comp=Z,11nm,0.9s,baz=86,slow=3.0,SNR=18						
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	83.09	334	P	P	06 22 57.1	-0.6
	comp=Z,6.8nm,0.5s,baz=68,slow=4.8,SNR=91						
	comp=Z,6.8nm,0.5s						
NVAR	Mina Array Bea	83.14	51	P	P	06 23 00.1	+1.4
	comp=Z,1.3nm,0.7s,baz=274,slow=5.3,SNR=11						
	comp=Z,1.3nm,0.7s						
AKASG	Malin Array Be	87.42	324	P	P	06 23 18.0	-1.1
	comp=Z,0.9nm,0.4s,baz=50,slow=5.3,SNR=12						
	comp=Z,0.9nm,0.4s						
NB2	NORSAR Subarra	88.86	339	P	P	06 23 24.5	-1.2
	comp=Z,0.4nm,0.4s,baz=42,slow=4.6						
NOA	NORSAR Array B	88.86	339	P	P	06 23 24.5	-1.2
	comp=Z,0.6nm,0.6s,baz=38,slow=5.0,SNR=4.9						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	90.25	313	P	P	06 23 32.1	-0.7
	comp=Z,0.7nm,0.6s,baz=72,slow=4.0,SNR=4.0						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	96.50	329	P	P	06 23 59.9	-1.3
	comp=Z,0.5nm,0.5s,baz=46,slow=3.9,SNR=3.7						
	comp=Z,0.5nm,0.5s						
TORD	Torodi Ar. Bea	128.65	309	PKP	PKiKP	06 29 37.9	-0.8
	comp=Z,0.4nm,0.4s,baz=4.7,slow=2.0,SNR=6.9						
PLCA	Paso Flores	145.84	131	PKPbc	PKPab	06 30 10.6	-0.4
	comp=Z,4.1nm,0.7s,baz=242,slow=3.7,SNR=16						
LPAZ	La Paz	149.99	85	PKPbc	PKiKP	06 30 23.4	+0.4
	comp=Z,2.4nm,0.6s,baz=300,slow=2.5,SNR=20						

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*IDC **18** 06:14:31.4±1.6,2°.07S×139°.94E,h0^{km},mb3.7/3, mbtmp3.8/3,Error ellipse: s-maj=74.3km s-min=31.3km az=98.0*

*DJA **18** 06:14:34.3±0.7,2°S±6°×13°9E±°,h40^{km}±15^{km},M3.9/5, MLv3.9/5*

ISC 18 06:14:35.5±1.0,**2°.02S**±0°.08×**139°.37E**±0°.05,**h27**^{km}**,n9,** σ**1^{s}.47**/13,**mb3.9**/3,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.66	272	P	Pb	06 14 48.3	-0.2
SMPI				S	Sb	06 14 58.7	+1.3
GENI	Genyem	0.98	126	P	Pn	06 14 52.8	-0.7
GENI				S	Sb	06 15 05.5	-0.9
WAMI	Wamena	1.97	200	P	Pb	06 15 10.0	-0.7
WAMI				S	Sb	06 15 36.6	+1.8
SRPI	Serui, Papua	3.13	273	P	Pn	06 15 20.9	-2.2
SRPI				S	Sn	06 15 57.8	-1.9
BAKI	Biak	3.37	284	P	Pn	06 15 25.6	-0.7
MSAI	Masohi	10.52	263	P	Pn	06 17 03.9	-0.7
ASAR	Alice Springs	22.16	193	P	P	06 19 30.1	+0.6
	1.1nm,0.6s,baz=26,slow=12,SNR=12						
	1.1nm,0.6s						
MKAR	Makanchi Array	69.65	322	P	P	06 25 44.9	+2.2
	0.8nm,0.7s,baz=120,slow=8.0,SNR=5.1						
	0.8nm,0.7s						
ILAR	Eielson Array	84.93	24	P	P	06 27 07.7	-0.3
	1.0nm,0.9s,baz=237,slow=4.6,SNR=7.5						
	1.0nm,0.9s						

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*JMA **18** 06:27:33.3±0.1,23°.9N±0°.6×121°.7E±0°.9,h17^{km}±1^{km}, MV3.1/10,TAIWAN REGION*

*TAP **18** 06:27:34.2,24°.11N×121°.81E,h6^{km},ML3.9,C*

ISC 18 06:27:33.7±1.1,**24°.07N**±0°.01×**121°.90E**±0°.02,**h2**^{km}±9^{km}**,** **n109,**σ**0^{s}.69**/191,**5C-25D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.27	289	⇓*i*P	Pg	06 27 38.6	-0.3
	baz=286						
ETL				*e*S	Sg	06 27 41.9	-0.5
	baz=286						
TWD	Chiawan	0.28	272	⇓*i*P	Pg	06 27 39.0	0.0
	baz=262						
TWD				*i* S	Sg	06 27 43.0	+0.3
	baz=262						
EHP	Heping Village	0.28	329	P	Pg	06 27 39.3	+0.2
	baz=343						
EHP				*e*S	Sg	06 27 43.7	+1.0
	baz=343						
HWA	Hwalien	0.29	251	*i* P	Pb	06 27 40.5	-0.9
	baz=234						
HWA				*e*S	Sb	06 27 46.0	-0.7
	baz=234						
NACB	Ninganchiao	0.30	290	⇓*i*P	Pg	06 27 39.0	-0.4
	baz=288						
NACB				*i* S	Sg	06 27 43.1	-0.2
	baz=288						
TEYL	Yanliau Villag	0.34	234	*e*P	Pb	06 27 41.6	-0.9
	baz=223						
TEYL				*e*S	Sb	06 27 48.0	-0.4
	baz=223						
ENA	Nanau	0.39	338	⇓*i*P	Pg	06 27 41.3	+0.2
	baz=349						
ENA				S	Sg	06 27 47.0	+0.9
	baz=349						
ETM	Tongmen	0.39	255	P	Pg	06 27 41.5	+0.3
	baz=244						
ETM				*e*S	Sg	06 27 46.9	+0.8
	baz=244						
EWUT	Wuta	0.39	343	⇓*i*P	Pg	06 27 41.5	+0.4
	baz=355						
EWUT				*e*S	Sg	06 27 46.9	+0.6
	baz=355						
ETLH	Xiulin Townshi	0.41	290	⇓*i*P	Pg	06 27 41.0	-0.5
	baz=288						
ETLH				*i* S	Sg	06 27 46.4	-0.4
	baz=288						
TEGC	Jichi Village	0.49	223	*e*P	Pb	06 27 45.2	+0.3
	baz=211						
TEGC				*e*S	Sb	06 27 54.3	+1.8
	baz=211						
ESL	Shilin	0.50	239	⇑*i*P	Pg	06 27 43.8	+0.6
	baz=229						
ESL				*e*S	Sg	06 27 51.6	+1.9
	baz=229						
TWC	Suao	0.54	355	⇓*i*P	Pb	06 27 44.7	-1.1
	baz=5.0						
TWC				*e*S	Sb	06 27 53.3	-0.7
	baz=5.0						
LATG	Datong	0.58	324	⇓*i*P	Pg	06 27 44.6	-0.2
	baz=328						
LATG				*e*S	Sg	06 27 52.7	+0.4
	baz=328						
NDS	Dongshan	0.59	343	⇓*i*P	Pg	06 27 45.3	+0.3
	baz=350						
NDS				*e*S	Sg	06 27 53.4	+0.8
	baz=350						
WHF	Hehuan Shan	0.59	277	⇓*i*P	Pg	06 27 44.6	-0.4
	baz=274						
WHF				*e*S	Sg	06 27 52.6	0.0
	baz=274						
EGFH	Guangfu	0.59	227	P	Pg	06 27 45.9	+0.9
	baz=219						
EGFH				*e*S	Sb	06 27 54.8	-0.6
	baz=219						
NNSB	Datong	0.59	307	⇓*i*P	Pg	06 27 44.8	-0.3
	baz=309						
NNSB				*e*S	Sg	06 27 52.4	-0.4
	baz=309						
NNS	Nan Shan	0.61	308	P	Pg	06 27 45.0	-0.4
	baz=310						
NNS				*e*S	Sg	06 27 53.0	-0.2
	baz=310						
FUSS	Fushou	0.63	287	⇓*i*P	Pg	06 27 45.5	-0.2
	baz=285						
FUSS				*e*S	Sg	06 27 53.5	-0.3
	baz=285						
NDT	Datong Townshi	0.64	326	⇓P	Pg	06 27 46.1	+0.2
	baz=331						
NDT				*e*S	Sg	06 27 54.7	+0.5
	baz=331						
ENTT	Nioudou	0.65	332	⇓P	Pg	06 27 46.2	+0.1
	baz=337						
ENTT				*e*S	Sg	06 27 55.5	+1.0
	baz=337						
CHGB	Renai	0.67	269	⇓P	Pg	06 27 46.4	-0.1
	baz=265						
CHGB				*e*S	Sg	06 27 55.1	+0.1
	baz=265						
OWD	Renai	0.67	260	⇓P	Pg	06 27 46.6	0.0
	baz=255						
OWD				*e*S	Sg	06 27 55.2	-0.1
	baz=255						
TWE	Neicheng	0.68	342	*e*P	Pg	06 27 47.0	+0.2
	baz=349						
TWE				*e*S	Sb	06 27 56.8	-1.3
	baz=349						
TWT	Tachien	0.69	286	⇓P	Pg	06 27 47.0	+0.2
	baz=283						
TWT				*e*S	Sg	06 27 56.0	+0.2
	baz=283						
TDCB	Techi	0.70	285	⇓*i*P	Pg	06 27 47.1	-0.1
	baz=283						
TDCB				*e*S	Sg	06 27 56.0	-0.2
	baz=283						
ILA	Ilan	0.71	349	*e*P	Pb	06 27 48.1	-0.5
	baz=355						
ILA				*e*S	Sb	06 27 58.8	-0.1
	baz=355						
WUSB	Renai	0.72	264	⇓*i*P	Pg	06 27 47.6	+0.1
	baz=260						
WUSB				*e*S	Sg	06 27 57.2	+0.4
	baz=260						
HGSD	Ruisui	0.72	217	*e*P	Pb	06 27 49.0	+0.1
	baz=210						
HGSD				*e*S	Sn	06 28 01.9	-0.5
	baz=210						
FUSB	Fushanzhiwuyua	0.74	337	⇓P	Pg	06 27 48.3	+0.4
	baz=342						
FUSB				*e*S	Sg	06 27 58.4	+0.8
	baz=342						
VWDT	VWDT	0.76	246	⇑P	Pg	06 27 48.7	+0.4
	baz=240						
VWDT				*e*S	Sg	06 27 59.7	+1.5
	baz=240						
YHNB	Yeheng	0.77	321	⇓*i*P	Pg	06 27 48.5	+0.1
	baz=324						
YHNB				*e*S	Sg	06 27 58.5	+0.2
	baz=324						
EGS		0.77	2	*e*P	Pn	06 27 50.7	-0.8
	baz=9.0						
EHY	Hungye	0.77	224	*e*P	Pg	06 27 48.8	+0.3
	baz=216						
EHY				*e*S	Sb	06 28 00.9	+0.2
	baz=216						
NSK	Sanguang	0.78	321	⇓*i*P	Pg	06 27 48.7	0.0
	baz=324						
NSK				*e*S	Sg	06 27 59.0	+0.2
	baz=324						
NTC	Toucheng	0.78	355	*e*P	Pb	06 27 49.5	-0.5
	baz=1.0						
NTC				*e*S	Sb	06 28 00.5	-0.6
	baz=1.0						
NWLT	Wulai	0.79	333	⇓P	Pg	06 27 49.1	+0.2
	baz=337						
NWLT				*e*S	Sg	06 27 59.1	0.0
	baz=337						
ECBN	Changbin	0.86	209	*e*P	Pb	06 27 51.2	0.0
	baz=203						
YULB	Yu-li	0.87	219	*e*P	Pg	06 27 50.6	+0.2
	baz=214						
YULB				*e*S	Sb	06 28 04.1	+0.5
	baz=214						
DPDB	Guoxing	0.89	268	⇑*e*P	Pg	06 27 50.9	+0.1
	baz=265						
DPDB				*e*S	Sg	06 28 02.3	-0.1
	baz=265						
EYUL	Yuli	0.90	217	*e*P	Pb	06 27 52.0	+0.1
	baz=211						
WHP	Taichung City	0.90	284	*e*P	Pg	06 27 50.9	0.0
	baz=282						
WHP				*e*S	Sg	06 28 02.1	-0.4
	baz=282						
TIPB	Shuangxi	0.90	356	⇓P	Pb	06 27 51.5	-0.5
	baz=1.0						
TIPB				*e*S	Sb	06 28 03.5	-0.9
	baz=1.0						
TWF1	Yuli	0.90	218	*e*P	Pg	06 27 50.8	-0.2
	baz=212						
WCS	Beigang Elemen	0.91	269	⇑*e*P	Pg	06 27 50.9	-0.1
	baz=266						
WCS				*e*S	Sg	06 28 02.4	-0.3
	baz=266						
NFF	Wufeng Townshi	0.91	308	⇓*e*P	Pg	06 27 50.9	-0.2
	baz=309						
NFF				*e*S	Sg	06 28 02.2	-0.7
	baz=309						
SSLB	Suanglung	0.91	252	⇑*e*P	Pg	06 27 50.9	-0.2
	baz=248						
SSLB				*e*S	Sg	06 28 02.4	-0.6
	baz=248						
SMLT	Sun Moon Lake	0.93	259	*e*P	Pg	06 27 51.5	-0.1
	baz=255						
SMLT				*e*S	Sg	06 28 03.9	+0.2
	baz=255						
TWB1	Santiao Chiao	0.94	5	*e*P	Pb	06 27 52.8	+0.2
	baz=11						
TWB1				*e*S	Sn	06 28 06.6	-1.2
	baz=11						
TWA	Mucha	0.95	342	*e*P	Pb	06 27 52.5	-0.4
	baz=347						
NHDH	Xindian Distri	0.95	339	*e*P	Pb	06 27 52.5	-0.4
	baz=343						
NHDH				*e*S	Sb	06 28 04.9	-1.0
	baz=343						
TYC	Yuchr	0.97	260	*e*P	Pg	06 27 52.1	-0.1
	baz=257						
TATO	Taipei	0.98	337	*e*P	Pg	06 27 52.1	-0.3
	baz=341						
TATO				*e*S	Sg	06 28 05.2	+0.1
	baz=341						
LIOB	Emei	0.99	306	*e*P	Pg	06 27 52.8	+0.1
	baz=306						
LIOB				*e*S	Sg	06 28 05.5	-0.1
	baz=306						
NSTT	Nanjuang	0.99	304	*e*P	Pg	06 27 52.8	+0.1
	baz=305						
NSTT				*e*S	Sg	06 28 05.2	-0.4
	baz=305						
NWF	Wu-fen Shan	1.00	354	*e*P	Pb	06 27 53.8	0.0
	baz=358						
NWF				*e*S	Sb	06 28 07.0	-0.5
	baz=358						
WFSB	Wu-fen Shan	1.00	354	*e*P	Pb	06 27 53.8	+0.1
	baz=358						
WFSB				*e*S	Sb	06 28 06.7	-0.7
	baz=358						
SXI1	Grass Mountain	1.02	359	*e*P	Pb	06 27 54.3	+0.2
	baz=3.0						
SXI1				*e*S	Sb	06 28 07.8	-0.1
	baz=3.0						
WHYT	Xinyi Township	1.03	249	*e*P	Pg	06 27 53.7	+0.3
	baz=245						
FULB	Fuli	1.03	213	*e*P	Pg	06 27 53.9	+0.4
	baz=208						
YUS	Yu-Shan	1.04	237	*e*P	Pg	06 27 53.7	0.0
	baz=232						
YUS				*e*S	Sb	06 28 08.6	-0.4
	baz=232						
TWQ1	Liyutan	1.07	285	*e*P	Pb	06 27 54.6	-0.2
	baz=284						
TWQ1				*e*S	Sb	06 28 09.5	+0.3
	baz=284						
HSN1	Hsinchu	1.07	311	*e*P	Pb	06 27 55.1	+0.2
	baz=313						
TNOU	National Taiwa	1.08	354	*e*P	Pn	06 27 55.3	-0.5
	baz=358						
YOJ	Yonaguni jima	1.08	69	P	Pn	06 27 56.6	+0.8
	baz=72						
YOJ				*e*S	Sn	06 28 13.4	+2.0
	baz=72						
YOJ	Yonaguni jima	1.08	69	P	Pn	06 27 56.7	+0.8
YOJ				S	Sn	06 28 13.8	+2.4
NSY	Sanyi	1.10	289	*e*P	Pb	06 27 55.6	+0.2
	baz=288						
NSY				*e*S	Sb	06 28 10.9	+0.8
	baz=288						
WJS	Zhushan	1.10	257	*e*P	Pg	06 27 55.1	+0.3
	baz=254						
WJS				*e*S	Sg	06 28 10.0	+0.9
	baz=254						
SBCB	Hsinchu	1.10	311	*e*P	Pb	06 27 55.6	+0.2
	baz=312						
NCU	National Centr	1.11	324	*e*P	Pb	06 27 55.5	0.0
	baz=327						
NCUH	Zhongli	1.11	324	*e*P	Pb	06 27 55.5	0.0
	baz=326						
YM01	YM01	1.11	344	*e*P	Pn	06 27 55.8	-0.5
	baz=348						
YM01				*e*S	Sb	06 28 10.9	+0.3
	baz=348						
NMLH	Miaoli	1.11	295	*e*P	Pb	06 27 55.9	+0.3
	baz=295						
NMLH				*e*S	Sb	06 28 10.3	-0.3
	baz=295						
TWS1	Kuangyinshan	1.12	337	*e*P	Pb	06 27 55.6	-0.1
	baz=340						
TWS1				*e*S	Sn	06 28 12.0	-0.2
	baz=340						
HSN	Hsinchu	1.12	311	*e*P	Pn	06 27 56.1	-0.2
	baz=315						
HSN				*e*S	Sn	06 28 11.8	-0.5
	baz=315						
TCU	Taichung	1.12	274	*e*P	Pb	06 27 56.0	+0.3
	baz=272						
TCU				*e*S	Sn	06 28 12.1	-0.2
	baz=272						
WNT	Mingjian	1.13	261	*e*P	Pb	06 27 55.8	-0.1
	baz=257						
ALS	Alishan	1.15	241	*e*P	Pg	06 27 55.4	-0.2
	baz=237						
ALS				*e*S	Sg	06 28 11.4	+0.8
	baz=237						
YM08	YM08	1.15	346	*e*P	Pb	06 27 55.8	-0.4
	baz=349						
ANP	Anpu	1.17	343	*e*P	Pb	06 27 56.3	-0.2
	baz=346						
WDJ	Dajia District	1.18	284	*e*P	Pb	06 27 56.9	+0.1
	baz=282						
WDJ				*e*S	Sb	06 28 13.4	+0.8
	baz=282						
ELDTW	Lidau	1.19	223	*e*P	Pg	06 27 55.1	-1.4
	baz=218						
ELDTW				*e*S	Sb	06 28 13.1	+0.1
	baz=218						
CHN5	Tsauling	1.22	247	*e*P	Pg	06 27 57.1	+0.2
	baz=244						
EDH	Donghe	1.22	207	*e*P	Pg	06 27 56.9	-0.2
	baz=202						
EDH				*e*S	Sb	06 28 13.9	+0.2
	baz=202						
TWY	Chenhua	1.23	347	*e*P	Pn	06 27 58.1	+0.3
	baz=351						
WDLH	Douliu	1.30	253	*e*P	Pg	06 27 58.8	+0.2
	baz=250						
WDLH				*e*S	Sn	06 28 17.2	+0.4
	baz=250						
LONT	Longtian	1.36	212	*e*P	Pg	06 27 58.7	-1.0
	baz=208						
STYH	Taoyuan	1.37	229	*e*P	Pn	06 27 59.0	-0.7
	baz=226						
STYH				*e*S	Sg	06 28 18.0	+0.4
	baz=226						
STYT	Tauyuan	1.38	230	*e*P	Pn	06 27 59.5	-0.5
	baz=225						
STYT				*e*S	Sg	06 28 17.8	-0.4
	baz=225						
TPUB	Ta-pu	1.40	237	*e*P	Pn	06 27 59.8	-0.3
	baz=233						
CHN4	Tsaushan	1.40	239	*e*P	Pn	06 28 00.1	0.0
	baz=236						
CHN4				*e*S	Sn	06 28 20.6	+1.5

	baz=236						
WRL	**Guolierlin Hig**	**1.40**	**263**	*e*P	**Pn**	**06 28 00.1**	**-0.2**
	baz=261						
WRL				*e*S	**Sb**	**06 28 19.5**	**+0.6**
	baz=261						
WTK	**Tuku**	**1.44**	**255**	*e*P	**Pn**	**06 28 00.9**	**+0.3**
	baz=252						
WTK				*e*S	**Sn**	**06 28 20.7**	**+0.7**
	baz=252						
WTP	**Ta-pu**	**1.44**	**235**	*e*P	**Pn**	**06 28 00.8**	**+0.1**
	baz=232						
LDUT	**Ludao**	**1.45**	**196**	*e*P	**Pn**	**06 27 58.4**	**-2.4**
	baz=192						
LDUT				*e*S	**Sg**	**06 28 17.6**	**-2.6**
	baz=192						
TWGBT	**Beinan**	**1.46**	**211**	*e*P	**Pn**	**06 27 59.5**	**-1.4**
	baz=208						
TWGBT				*e*S	**Sg**	**06 28 18.4**	**-2.1**
	baz=208						
CHY	**Chiayi**	**1.47**	**247**	*e*P	**Pn**	**06 28 00.6**	**-0.4**
	baz=244						
CHN1	**Nanshi**	**1.54**	**235**	*e*P	**Pb**	**06 28 03.0**	**+0.1**
	baz=232						
CHN1				*e*S	**Sg**	**06 28 24.8**	**+1.7**
	baz=232						
SNST	**Tainan City**	**1.54**	**237**	*e*P	**Pb**	**06 28 03.1**	**+0.2**
	baz=234						
WSL	**Shuilin Townsh**	**1.63**	**251**	*e*P	**Pn**	**06 28 02.9**	**-0.4**
	baz=248						
ICHU	**Yijhu**	**1.65**	**245**	*e*P	**Pn**	**06 28 04.3**	**+0.8**
	baz=242						
IRIF	**Iriomote-Funau**	**1.69**	**81**	P	**Pg**	**06 28 05.5**	**-0.6**
IRIF				S	**Sg**	**06 28 29.3**	**+1.3**
HATJ	**Hateruma jima**	**1.74**	**90**	P	**Pb**	**06 28 05.5**	**-0.8**
HATJ				S	**Sg**	**06 28 29.3**	**-0.3**
SSD	**Sandimen**	**1.76**	**222**	*e*P	**Pn**	**06 28 05.8**	**+0.7**
	baz=218						
MASBT	**Mashibuluo**	**1.86**	**219**	*e*P	**Pn**	**06 28 06.2**	**-0.3**
	baz=216						
MASBT				*e*S	**Sb**	**06 28 32.3**	**+0.3**
	baz=216						
JKRS	**Kuro-shima**	**1.93**	**85**	P	**Pb**	**06 28 09.2**	**-0.3**
JIJ	**Ishigaki jima**	**2.07**	**81**	P	**Pn**	**06 28 10.2**	**+0.9**
JIJ				S	**Sb**	**06 28 37.0**	**-1.1**
JISG	**Ishigakijimahi**	**2.26**	**76**	P	**Pn**	**06 28 12.9**	**+1.0**
JISG				S	**Sb**	**06 28 42.1**	**-1.3**

IDC 18 06:28:56.5±3.0,54°.13N×87°.18E,h0^{km},mbtmp2.9/2, ML2.5/2,Error ellipse: s-maj=26.1km s-min=16.8km az=66.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.41**	**263**	*i*		06 37 30.0	
	baz=80,slow=330,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.41**	**263**	Pg	Pn	06 29 21.0	-2.4
	0.7nm,0.3s,baz=80,slow=17,SNR=13						
ZALV				Lg	Lg	06 29 41.4	
	0.8nm,0.3s,baz=79,slow=27,SNR=4.4						
KURBB	**Kurchatov Arra**	**6.36**	**240**	Pn	Pn	06 30 32.9	+1.5
	0.1nm,0.3s,baz=54,slow=13,SNR=5.7						
KURBB				Lg	Lg	06 32 19.4	
	0.1nm,0.3s,baz=58,slow=33,SNR=4.6						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**7.98**	**205**	Pn	Pn	06 30 55.2	+1.6
	0.1nm,0.3s,baz=24,slow=12,SNR=4.9						
MKAR				Sn	Sn	06 32 22.6	-2.0
	0.1nm,0.3s,baz=21,slow=20,SNR=2.5						
MKAR				Lg	Lg	06 33 08.5	
	0.1nm,0.3s,baz=5.0,slow=35,SNR=2.7						
	0.3nm,0.4s						

IDC 18 06:47:48.7±2.9,54°.34N×86°.88E,h0^{km},mbtmp3.2/2, ML2.8/2,Error ellipse: s-maj=24.2km s-min=15.5km az=60.0

NNC 18 06:47:46.1±1.1,54°.45N×86°.95E,h0^{km},mb3.2,mpv3.0, 5C-4D,Error ellipse: s-maj=6.8km s-min=4.7km az=67.0, Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**249**	*i*		06 55 45.3	
	baz=73,slow=325,SNR=3.0						
ZAA0	**Zalesovo Array**	**1.35**	**249**	⇑P	Pg	06 48 11.2	-0.8
	0.3nm,0.3s,baz=67,slow=16						
ZAA0				⇓S	Sb	06 48 29.9	-0.1
	7.3nm,0.8s,baz=67,slow=25						
ZALV	**Zalesovo Beam**	**1.35**	**249**	Pg	Pg	06 48 11.2	-0.7
	2.0nm,0.3s,baz=70,slow=16,SNR=20						
ZALV				Lg	Lg	06 48 29.8	
	2.5nm,0.3s,baz=70,slow=28,SNR=13						
KURK	**Kurchatov**	**6.31**	**237**	⇓Pn	Pn	06 49 21.0	+0.7
	3.4nm,0.6s						
KURK				⇑Sn	Sn	06 50 34.0	+1.0
	2.2nm,0.8s						
KURK				⇓Lg	Lg	06 51 05.9	
	11nm,1.0s						
KURBB	**Kurchatov Arra**	**6.41**	**237**	Pn	Pn	06 49 24.2	+2.6
	0.2nm,0.3s,baz=53,slow=14,SNR=9.4						
KURBB				Sn	Sn	06 50 35.2	-0.3
	0.1nm,0.3s,baz=42,slow=14,SNR=1.6						
	2.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.41**	**237**	⇑Pn	Pn	06 49 21.0	-0.7
	4.2nm,0.8s						
KURBB				⇓Sn	Sn	06 50 35.9	+0.4
	3.2nm,0.6s						
KURBB				⇑Lg	Lg	06 51 10.3	
	7.5nm,0.7s						
MK31	**Makanchi Array**	**8.22**	**203**	⇑Pn	Pn	06 49 49.2	+2.7
	0.6nm,1.0s,baz=36,slow=14,SNR=3.7						
MK31				Lg	Lg	06 52 06.6	
	3.6nm,1.0s,baz=35,slow=31,SNR=4.4						
MKAR	**Makanchi Array**	**8.22**	**203**	Pn	Pn	06 49 48.6	+2.0
	0.2nm,0.3s,baz=26,slow=14,SNR=7.3						
MKAR				Sn	Sn	06 51 19.3	-0.7
	0.1nm,0.3s,baz=24,slow=25,SNR=5.5						
MKAR				Lg	Lg	06 52 05.9	
	0.1nm,0.3s,baz=32,slow=31,SNR=6.6						
	0.3nm,0.3s						

IDC 18 06:52:24.3±3.0,53°.72N×88°.03E,h0^{km},mbtmp3.2/2, ML2.9/2,Error ellipse: s-maj=24.2km s-min=15.9km az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**278**	*i*		07 05 18.2	
	0.2nm,0.8s,baz=92,slow=332,SNR=10						
ZALV	**Zalesovo Beam**	**1.92**	**278**	Pg	Pn	06 52 58.6	+0.5
	2.2nm,0.3s,baz=93,slow=14,SNR=24						
ZALV				Lg	Lg	06 53 26.1	
	5.5nm,0.3s,baz=96,slow=26,SNR=20						
KURBB	**Kurchatov Arra**	**6.61**	**246**	Pn	Pn	06 54 03.8	+1.1
	0.2nm,0.3s,baz=63,slow=15,SNR=4.5						
KURBB				Sn	Sn	06 55 16.4	-2.4
	0.1nm,0.3s,baz=133,slow=20,SNR=1.3						
KURBB				Lg	Lg	06 55 54.0	
	baz=63,slow=33,SNR=6.7						
	1.3nm,0.4s						
MKAR	**Makanchi Array**	**7.85**	**210**	Pn	Pn	06 54 20.8	+1.2
	0.2nm,0.3s,baz=31,slow=14,SNR=6.2						
MKAR				Sn	Sn	06 55 49.2	0.0
	0.1nm,0.3s,baz=28,slow=28,SNR=3.7						
MKAR				Lg	Lg	06 56 31.9	
	baz=25,slow=26						
	0.4nm,0.4s						

IDC 18 06:54:48.1±3.5,54°.23N×87°.39E,h0^{km},mbtmp3.1/2, ML2.7/2,Error ellipse: s-maj=32.2km s-min=19.3km az=51.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**260**	*i*		07 03 56.4	
	baz=81,slow=327,SNR=1.7						
ZALV	**Zalesovo Beam**	**1.54**	**260**	Pg	Pn	06 55 15.4	-1.4
	4.5nm,0.3s,baz=81,slow=16,SNR=16						
ZALV				Lg	Lg	06 55 37.5	
	2.2nm,0.3s,baz=74,slow=28,SNR=2.9						
KURBB	**Kurchatov Arra**	**6.51**	**240**	Pn	Pn	06 56 25.4	+0.3
	0.2nm,0.3s,baz=57,slow=14,SNR=4.1						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**8.12**	**206**	Pn	Pn	06 56 48.7	+1.5
	0.1nm,0.3s,baz=24,slow=14,SNR=5.1						
	0.2nm,0.3s						

IDC 18 06:55:06.8±0.7,37°.41S×51°.65E,h0^{km},mb4.1/8, mbtmp4.1/8,MS3.5/19,Error ellipse: s-maj=27.5km s-min=22.7km az=20.0

NEIC 18 06:55:09.3±1.2,37°.5S±0°.1×51°.5E±0°.1,h10^{km}±1^{km}, mb4.5/11,Error ellipse: s-maj=19.8km s-min=15.2km az=189.0

ISC 18 06:55:08.6±0.6,37°.4S±0°.1×51°.6E±0°.2,h10^{km},n44, $\sigma 1^{s}.03$/21,mb4.3/12,MS3.5/18,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOI	**Vohitsoka**	**15.99**	**344**	Pn	**Pn**	**06 58 53.9**	**0.0**
VOI				IAmb	IAmb	06 59 02.9	
	comp=Z,14nm,1.1s						
ABPO	**Ambohimpanom**	**18.71**	**347**	P	**Pn**	**06 59 29.2**	**+1.3**
OPO	**Ambohidratompo**	**19.16**	**347**	LR	LR	07 05 05.4	
	comp=Z,142nm,21.0s,baz=356,slow=31						
BOSA	**Boshof**	**23.71**	**284**	P	**P**	**07 00 20.6**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=142,slow=10,SNR=2.2						
BOSA				LR	LR	07 08 09.3	
	comp=Z,68nm,18.4s,baz=172,slow=33						
	comp=Z,3.1nm,0.9s						
LBTB	**Lobatse**	**25.35**	**292**	LR	LR	07 09 40.9	
	comp=Z,30nm,18.0s,baz=135,slow=34						
SUR	**Sutherland**	**25.69**	**272**	LR	LR	07 09 08.6	
	comp=Z,34nm,18.2s,baz=121,slow=33						
LSZ	**Lusaka**	**30.27**	**310**	LR	LR	07 11 55.8	
	comp=Z,119nm,20.1s,baz=164,slow=33						
MAW	**Mawson**	**30.91**	**172**	LR	LR	07 10 34.0	
	comp=Z,145nm,20.8s,baz=348,slow=30						
TSUM	**Tsumeb**	**34.77**	**292**	LR	LR	07 15 17.0	
	comp=Z,42nm,18.3s,baz=149,slow=35						
H08S1	**Diego Carcia H**	**35.16**	**38**	T	T	07 39 03.0	
	baz=209,slow=76,SNR=15						
H08S2	**Diego Garcia H**	**35.17**	**38**	T	T	07 39 05.5	
	baz=209,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**35.18**	**38**	T	T	07 39 04.5	
	baz=209,slow=76,SNR=21						
KMBO	**Kilima Mbogo**	**38.45**	**337**	LR	LR	07 16 12.7	
	comp=Z,145nm,21.7s,baz=102,slow=33						
MBAR	**Mbarara**	**41.38**	**327**	LR	LR	07 18 20.6	
	comp=Z,48nm,19.3s,baz=160,slow=34						
SNAA	**Sanae**	**43.92**	**202**	P	**P**	**07 03 15.6**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=66,slow=4.6,SNR=4.9						
SNAA				LR	LR	07 19 59.3	
	comp=Z,50nm,18.3s,baz=70,slow=34						
	comp=Z,2.9nm,0.8s						
SNAA	**Sanae**	**43.92**	**202**	IAmb	IAmb	07 03 16.4	
	comp=Z,5.7nm,1.0s						
ATD	**Arta Tunnel**	**49.36**	**349**	LR	LR	07 21 45.2	
	comp=Z,44nm,21.1s,baz=165,slow=32						
H01W2	**Cape Leeuwin H**	**49.73**	**107**	T	T	07 57 29.1	
	baz=247,slow=75,SNR=132						
H01W3	**Cape Leeuwin H**	**49.73**	**107**	T	T	07 57 28.9	
	baz=247,slow=75,SNR=154						
H01W1	**Cape Leeuwin H**	**49.74**	**107**	T	T	07 57 29.4	
	baz=247,slow=75,SNR=142						
QSPA	**South Pole Qui**	**52.79**	**180**	P	**P**	**07 04 22.8**	**-1.0**
	comp=Z,5.2nm,1.0s,baz=268,slow=3.9,SNR=7.1						
QSPA				LR	LR	07 24 28.0	
	comp=Z,202nm,21.4s,baz=263,slow=33						
	comp=Z,5.2nm,1.0s						
QSPA	**South Pole Qui**	**52.79**	**180**	P	**P**	**07 04 23.7**	**-0.1**
QSPA				IAmb	IAmb	07 04 24.5	
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**57.97**	**166**	LR	LR	07 28 09.0	
	comp=Z,74nm,18.4s,baz=229,slow=34						
SBA	**Scott Base**	**58.71**	**167**	P	**P**	**07 05 05.6**	**-0.2**
SBA				IAmb	IAmb	07 05 24.2	
	comp=Z,7.1nm,1.4s						
WSAR	**Wadi Sarin**	**60.68**	**7**	LR	LR	07 26 27.2	
	comp=Z,72nm,19.3s,baz=184,slow=31						
PMSA	**Palmer Station**	**66.50**	**205**	LR	LR	07 32 28.6	
	comp=Z,27nm,18.6s,baz=158,slow=34						
TORD	**Torodi Ar. Bea**	**68.72**	**307**	P	**P**	**07 06 12.6**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=110,slow=3.9,SNR=2.4						
	comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**70.17**	**105**	P	**P**	**07 06 22.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=232,slow=5.9,SNR=20						
	comp=Z,1.0nm,0.6s						
TOO	**Toolangi**	**71.07**	**123**	P	**P**	**07 06 30.3**	**+3.2**
CMAR	**Chiang Mai Arr**	**71.22**	**47**	P	**P**	**07 06 27.0**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=206,slow=6.0,SNR=1.4						
CMAR				LR	LR	07 32 04.3	
	comp=Z,26nm,20.5s,baz=200,slow=31						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**71.46**	**116**	P	**P**	**07 06 27.8**	**-1.7**
	comp=Z,2.0nm,0.7s,baz=121,slow=7.8,SNR=2.2						
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**72.55**	**102**	P	**P**	**07 06 36.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=231,slow=5.2,SNR=19						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**72.55**	**102**	IAmb	IAmb	07 06 45.5	
	comp=Z,0.6nm,1.5s						
WB2	**Warramunga Arr**	**72.56**	**102**	P	**P**	**07 06 35.4**	**-0.9**
WB2				IAmb	IAmb	07 06 37.0	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**72.69**	**102**	P	**P**	**07 06 37.1**	**0.0**
WB0				IAmb	IAmb	07 06 47.9	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**72.70**	**102**	P	**P**	**07 06 37.6**	**+0.6**
WR0				IAmb	IAmb	07 06 39.9	
	comp=Z,6.6nm,1.4s						
IDI	**Anoyia**	**76.46**	**338**	LR	LR	07 43 25.4	
	comp=Z,21nm,18.0s,baz=255,slow=38						
CHGR	**Chuyangaron**	**77.40**	**14**	P	**P**	**07 07 03.4**	**-0.3**
GNI	**Garni**	**77.43**	**355**	LR	LR	07 40 38.8	
	comp=Z,29nm,19.6s,baz=150,slow=35						
BRTR	**Keskin Array B**	**78.51**	**346**	LR	LR	07 38 45.3	
	comp=Z,16nm,21.7s,baz=150,slow=33						
KKAR	**Karatay Array**	**81.95**	**14**	P	**P**	**07 07 28.7**	**+0.4**
INK	**Inuvik**	**148.91**	**4**	PKPbc	**PKPbc**	**07 14 55.9**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=24,slow=9.4,SNR=3.0						
ILAR	**Eielson Array**	**150.47**	**16**	PKPbc	**PKPbc**	**07 14 59.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=312,slow=3.2,SNR=13						
YKA	**Yellowknife Ar**	**153.48**	**346**	PKPbc	**PKPbc**	**07 15 06.2**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=20,slow=2.6,SNR=4.1						

NOU 18 07:23:06.2,19°.81S×168°.73E,h0^{km},MLv3.9/15,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**1.70**	**235**	P	Pn	07 23 36.2	-0.9
MARNC	**Mare, Loyalty**	**1.79**	**201**	P	Pn	07 23 37.1	-1.2
RTV	**Rentapao**	**2.03**	**352**	P	Pn	07 23 41.6	0.0
DVP	**Devils Point**	**2.14**	**346**	P	Pn	07 23 42.5	-0.6
YATNC	**Mamie plateau,**	**2.82**	**217**	P	Pn	07 23 51.4	-1.2
PINNC	**Pines Island,**	**3.04**	**203**	P	Pn	07 23 56.0	+0.5
DZM	**Mont Dzumac**	**3.10**	**223**	P	Pn	07 23 56.2	-0.3
OUENC	**Ouen Island, N**	**3.14**	**214**	P	Pn	07 23 57.4	+0.5
NOUC	**Port Laguerre**	**3.22**	**224**	P	Pn	07 23 58.5	+0.5
ONTNC	**Ouen Toro**	**3.27**	**220**	P	Pn	07 23 59.2	+0.5
SANVU	**Saraoutou**	**4.58**	**341**	P	Pn	07 24 17.1	+0.4

IASPEI 18 07:38:54.3±0.9,45°.33N±0°.02×121°.75W±0°.03,h9^{km}±6^{km}, Error ellipse: s-maj=3.8km s-min=3.2km az=69.8,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009

ANF 18 07:38:54.1±0.3,45°.32N×121°.74W,h0^{km}±3^{km},ML2.5/9, Error ellipse: s-maj=2.5km s-min=1.7km az=63.0

NEIC 18 07:38:54.8±1.6,45°.33N±0°.02×121°.73W±0°.02,h9^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=181.0

SEA 18 07:38:54.8±1.8,45°.32N±0°.02×121°.70W±0°.02,h3^{km}±6^{km}, ML2.5/92,ML2.4/36(NEIC),Error ellipse: s-maj=2.6km s-min=2.0km az=161.0

ISC 18 07:38:54.6±0.9,45°.33N±0°.02×121°.74W±0°.02,h7^{km}±6^{km}, n68,$\sigma 0^{s}.58$/78,Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIMB	**Timberline**	**0.03**	**66**		**Pg**	**07 38 56.0**	**-0.2**
TDH	**Tom, Dick, Har**	**0.05**	**223**		**Pg**	**07 38 56.6**	**+0.3**
HOOD	**Mount Hood Mea**	**0.06**	**93**		**Pg**	**07 38 56.0**	**-0.5**
HOOD	**Mount Hood Mea**	**0.06**	**93**	IAML		07 38 56.1	
	comp=E,2μm,0.1s						
HOOD				IAML		07 38 56.5	
	comp=N,2μm,0.3s						
VBEM	**Beaver Butte**	**0.29**	**157**		**Pg**	**07 39 00.7**	**+0.5**
G05D	**Wamic, OR**	**0.31**	**105**		**Pg**	**07 39 00.9**	**+0.2**
G05D					**Sg**	**07 39 05.1**	**+0.2**
G05D	**Wamic, OR**	**0.31**	**105**	P	**Pg**	**07 39 00.9**	**+0.2**
	baz=286,SNR=291						
G05D				S	**Sg**	**07 39 04.8**	**0.0**
	baz=286						
BULL	**Bull Run Dam**	**0.32**	**293**		**Pg**	**07 39 01.8**	**+1.1**
G04A	**Mulino**	**0.53**	**257**		**Pg**	**07 39 05.6**	**+0.8**
G04A					**Sb**	**07 39 13.9**	**-0.3**
F05D	**White Salmon**	**0.59**	**19**		**Pg**	**07 39 06.3**	**+0.2**
F05D	**White Salmon**	**0.59**	**19**	IAML		07 39 20.4	
	comp=N,195nm,0.3s						
F05D				IAML		07 39 22.1	
	comp=E,269nm,0.5s						
F05D	**White Salmon**	**0.59**	**19**	P	**Pg**	**07 39 06.2**	**+0.1**
	baz=197,SNR=21						
CROR	**Criterion Ridg**	**0.63**	**122**		**Pg**	**07 39 06.2**	**-0.6**
H04A	**Detroit Lake**	**0.71**	**206**		**Pg**	**07 39 08.2**	**-0.1**
H04A					**Sg**	**07 39 18.0**	**+0.4**
H04A	**Detroit Lake**	**0.71**	**206**	IAML		07 39 19.1	
	comp=E,132nm,0.3s						
F04A	**Amboy**	**0.77**	**322**		**Pg**	**07 39 09.3**	**0.0**
F04A					**Sg**	**07 39 20.3**	**+0.9**
F04A	**Amboy**	**0.77**	**322**	IAML		07 39 20.4	
	comp=E,143nm,0.2s						
MTMW	**Mount Mitchell**	**0.77**	**335**		**Pg**	**07 39 09.3**	**-0.2**
MTMW					**Sg**	**07 39 20.1**	**+0.6**
WPO	**West Portland**	**0.78**	**289**		**Pg**	**07 39 10.1**	**+0.5**
CDFW	**Cedar Flats**	**0.82**	**345**		**Pg**	**07 39 10.4**	**+0.1**
VTHM	**Trough**	**0.85**	**99**		**Pg**	**07 39 10.0**	**-0.8**
HSR	**South Ridge**	**0.90**	**340**		**Pg**	**07 39 12.1**	**+0.1**
SEPW	**September Lobe**	**0.93**	**340**		**Pg**	**07 39 12.4**	**0.0**
I05D	**Terrebonne, OR**	**1.03**	**164**		**Pg**	**07 39 14.6**	**+0.3**
I05D	**Terrebonne, OR**	**1.03**	**164**	P	**Pg**	**07 39 13.5**	**-0.7**
	baz=345,SNR=14						
I05D				S	**Sg**	**07 39 27.5**	**-0.1**
	baz=345						
H04D	**Lebanon**	**1.07**	**222**	Pg	**Pg**	**07 39 14.4**	**-0.6**
H04D	**Lebanon**	**1.07**	**222**	P	**Pg**	**07 39 14.4**	**-0.6**
	baz=42,SNR=21						
H04D				S	**Sg**	**07 39 29.1**	**+0.2**
	baz=42						
G03D	**McMinnville, O**	**1.08**	**264**		**Pg**	**07 39 15.0**	**-0.3**
G03D				IAML		07 39 32.7	
	comp=E,117nm,0.5s						
G03D	**McMinnville, O**	**1.08**	**264**	P	**Pg**	**07 39 14.9**	**-0.4**
	baz=84,SNR=6.7						
G03D				S	**Sb**	**07 39 30.7**	**+0.9**
	baz=84						
RVW	**Rose Valley**	**1.08**	**320**		**Pg**	**07 39 14.5**	**-0.8**
F04D	**Rainier, OR**	**1.17**	**311**	P	**Pb**	**07 39 16.3**	**-0.8**
	baz=129						
F04D				S	**Sb**	**07 39 33.0**	**+0.6**
	baz=129						
HUOR	**Husband**	**1.21**	**184**		**Pb**	**07 39 17.4**	**-0.4**
B023	**Clatskanie**	**1.22**	**310**		**Pn**	**07 39 17.1**	**-1.0**
KMOR	**Kings Mountain**	**1.27**	**285**		**Pn**	**07 39 18.0**	**-0.8**
COR	**Corvallis**	**1.33**	**237**	Pn	**Pn**	**07 39 19.1**	**-0.5**
COR				IAML		07 39 39.0	
	comp=E,50nm,0.7s						
E04D	**Cinebar**	**1.36**	**335**		**Pn**	**07 39 18.4**	**-1.6**
E04D				IAML		07 39 39.4	
	comp=N,56nm,0.3s						
E04D				IAML		07 39 41.2	
	comp=E,63nm,0.6s						
E04D	**Cinebar**	**1.36**	**335**	P	**Pn**	**07 39 19.5**	**-0.5**
	baz=154						
E04D				S	**Sn**	**07 39 38.2**	**0.0**
	baz=154						
F07A	**Phinny Hill Vi**	**1.40**	**65**		**Pb**	**07 39 20.7**	**-0.3**
HEBO	**Mount Hebo**	**1.43**	**266**	Pn	**Pn**	**07 39 20.7**	**-0.2**
HEBO				IAML		07 39 49.6	
	comp=E,85nm,1.8s						
HEBO				IAML		07 40 10.5	
	comp=N,73nm,2.3s						
BUCK	**Buck Mountain**	**1.43**	**219**	Pn	**Pn**	**07 39 20.9**	**-0.2**
BMW	**Boistfort Moun**	**1.55**	**318**		**Pn**	**07 39 22.4**	**-0.2**
OBSR	**Observation Ro**	**1.58**	**358**		**Pb**	**07 39 24.3**	**+0.1**
I04A	**Tendick Farm,**	**1.60**	**198**		**Pn**	**07 39 23.7**	**+0.3**
I04A	**Tendick Farm,**	**1.60**	**198**	P	**Pn**	**07 39 23.5**	**+0.1**
	baz=18,SNR=15						
I04A				S	**Sb**	**07 39 45.7**	**+0.7**
	baz=18						
MXC	**Moxie City**	**1.61**	**38**		**Pb**	**07 39 24.4**	**-0.2**
RVC	**Mount Rainier-**	**1.63**	**354**		**Pb**	**07 39 24.7**	**-0.3**
PINE	**Pine Mountain**	**1.64**	**159**		**Pn**	**07 39 24.2**	**+0.3**
E03A	**Lebam**	**1.76**	**315**		**Pn**	**07 39 25.1**	**-0.3**
E03A				IAML		07 39 56.4	
	comp=N,54nm,0.6s						
EBG	**Ellensburg**	**1.78**	**27**		**Pb**	**07 39 26.9**	**-0.7**
E07A	**Sunnyside**	**1.81**	**46**	Pn	**Pn**	**07 39 26.2**	**+0.1**
E07A				IAML		07 39 53.0	
	comp=E,59nm,0.3s						
HAWA	**Hanford**	**1.88**	**55**	Pn	**Pn**	**07 39 26.9**	**-0.2**
HAWA				IAML		07 39 53.7	
	comp=E,34nm,0.2s						
HAWA				IAML		07 39 53.7	
	comp=E,30nm,0.3s						
I02E	**Swisshome, OR**	**1.93**	**232**	P	**Pn**	**07 39 28.7**	**+0.9**
	baz=51,SNR=69						
I02E				S	**Sb**	**07 39 54.8**	**+0.5**
	baz=51						
G08A	**Pilot Rock**	**1.96**	**90**	Pn	**Pn**	**07 39 28.0**	**-0.4**
D04E	**Lakebay**	**1.99**	**339**	Sb	**Sg**	**07 39 58.2**	**-0.2**
	baz=158						
I03D	**Drain, OR**	**1.99**	**216**		**Pn**	**07 39 29.6**	**+1.0**
I03D	**Drain, OR**	**1.99**	**216**	P	**Pn**	**07 39 29.4**	**+0.7**
	baz=35,SNR=30						
I03D				S	**Sb**	**07 39 55.9**	**-0.2**
	baz=35						
I07A	**Izee**	**2.02**	**127**	Pn	**Pn**	**07 39 29.8**	**+0.6**
GBL	**Gable Mountain**	**2.04**	**51**		**Pn**	**07 39 30.3**	**+1.0**
LTY	**Liberty**	**2.07**	**21**		**Pn**	**07 39 30.3**	**+0.5**
B017	**Montesano**	**2.09**	**324**		**Pb**	**07 39 31.7**	**-1.1**
LOCW	**Locke Island**	**2.13**	**48**		**Pn**	**07 39 31.6**	**+1.1**
E08A	**Dider Farm, El**	**2.21**	**57**	Pn	**Pn**	**07 39 32.0**	**+0.4**
EPH	**Ephrata**	**2.52**	**35**		**Pn**	**07 39 37.0**	**+1.1**
D08A	**Wollman Farm,**	**2.62**	**48**	Pn	**Pn**	**07 39 37.4**	**+0.1**
SAW	**Saint Andrews**	**2.88**	**33**		**Pn**	**07 39 41.7**	**+0.9**
J08A	**Circle Bar Ran**	**3.06**	**129**	Pn	**Pn**	**07 39 43.2**	**-0.2**
C09A	**Chrisman Ranch**	**3.44**	**43**		**Pn**	**07 39 49.2**	**+0.6**
B08A	**Colville Reser**	**3.46**	**28**	Pn	**Pn**	**07 39 48.8**	**0.0**
B08A				IAML		07 40 41.3	
	comp=E,7.6nm,4.5s						
B08A				IAML		07 41 14.5	
	comp=N,6.7nm,4.8s						

ANF 18 07:39:59.8±0.3,45°.31N×121°.77W,h0^{km}±4^{km},ML2.5/7, Error ellipse: s-maj=2.6km s-min=2.4km az=93.0

SEA 18 07:40:00.0±2.0,45°.322N±0°.009×121°.70W±0°.02, h4^{km}±5^{km},ML2.4/64,ML2.3/22(NEIC),Error ellipse: s-maj=2.5km s-min=1.2km az=106.0

PNSN 18 07:40:00.0,45°.32N×121°.70W,h4^{km},MD2.3,Fault plane solution: NP1:ϕ_s345.00000°,δ15.00000°,λ-150.00000°.

NEIC 18 07:40:00.1±1.4,45°.34N±0°.02×121°.72W±0°.02,h12^{km}±5^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=162.0

ISC 18 07:39:59.8±0.9,45°.34N±0°.02×121°.74W±0°.02,h11^{km}±6^{km}, n52,$\sigma 0^{s}.72$/59,Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIMB	**Timberline**	**0.02**	**92**		**Pg**	**07 40 02.4**	**+0.3**
TDH	**Tom, Dick, Har**	**0.06**	**220**		**Pg**	**07 40 01.9**	**-0.4**
VBEM	**Beaver Butte**	**0.29**	**159**		**Pg**	**07 40 06.0**	**+0.1**
G05D	**Wamic, OR**	**0.31**	**108**		**Pg**	**07 40 06.2**	**+0.1**
G05D					**Sg**	**07 40 10.6**	**+0.4**
G05D	**Wamic, OR**	**0.31**	**108**	P	**Pg**	**07 40 06.2**	**+0.1**
	baz=287,SNR=9.9						
G05D				S	**Sg**	**07 40 10.7**	**+0.5**
	baz=287						
PGO	**Gresham**	**0.52**	**285**		**Pb**	**07 40 11.0**	**0.0**
G04A	**Mulino**	**0.54**	**256**		**Pg**	**07 40 10.8**	**+0.5**
G04A					**Sb**	**07 40 19.2**	**+0.1**
F05D	**White Salmon**	**0.58**	**19**		**Pb**	**07 40 12.9**	**+0.8**
F05D	**White Salmon**	**0.58**	**19**	IAML		07 40 27.4	
	comp=E,192nm,0.5s						
F05D				IAML		07 40 27.7	
	comp=N,126nm,0.3s						
F05D	**White Salmon**	**0.58**	**19**	P	**Pb**	**07 40 12.4**	**+0.3**
	baz=197						

CROR	Criterion Ridg	0.64	123		Pg	07 40 11.4	-0.8
H04A	Detroit Lake	0.73	206		Pg	07 40 13.5	-0.4
H04A					Sg	07 40 23.2	-0.2
H04A	Detroit Lake	0.73	206	IAML		07 40 23.8	
	comp=E,142nm,0.3s						
H04A				IAML		07 40 24.7	
	comp=N,111nm,0.2s						
F04A	Amboy	0.77	321		Pg	07 40 14.6	0.0
F04A					Pn	07 40 25.6	+8.9
F04A	Amboy	0.77	321	IAML		07 40 25.7	
	comp=E,100nm,0.2s						
F04A				IAML		07 40 25.7	
	comp=N,98nm,0.5s						
MTMW	Mount Mitchell	0.77	334		Pg	07 40 14.6	0.0
WPO	West Portland	0.78	288		Pg	07 40 15.3	+0.5
CDFW	Cedar Flats	0.81	344		Pg	07 40 15.6	+0.1
SEPW	September Lobe	0.92	340		Pn	07 40 18.7	-0.3
B203	Quarry, Mount	0.93	334		Pg	07 40 17.6	-0.2
VALT	Mount Saint He	0.93	340		Pg	07 40 18.0	+0.2
FL2	Flat Top 2	0.96	334		Pg	07 40 18.4	0.0
STD	Studebaker Rid	0.96	339		Pg	07 40 18.3	-0.1
JRO	Jston Ridge Ob	1.00	340		Pg	07 40 18.8	-0.3
B201	Coldwater, Mou	1.04	339		Pb	07 40 19.5	-0.4
I05D	Terrebonne, OR	1.04	164	S	Sg	07 40 32.8	-0.4
	baz=346						
ERK	Elk Rock	1.06	337		Pb	07 40 19.7	-0.6
TDL	Tradedollar La	1.07	342		Pb	07 40 20.2	-0.2
RVW	Rose Valley	1.08	319		Pb	07 40 19.9	-0.6
H04D	Lebanon	1.08	222		Pb	07 40 19.7	-0.8
H04D	Lebanon	1.08	222	P	Pb	07 40 19.7	-0.8
	baz=42,SNR=11						
H04D				S	Sb	07 40 34.3	-0.3
	baz=42						
G03D	McMinnville, O	1.09	264		Pb	07 40 20.4	-0.2
G03D	McMinnville, O	1.09	264	IAML		07 40 36.5	
	comp=N,86nm,0.5s						
G03D				IAML		07 40 38.0	
	comp=E,67nm,0.5s						
G03D	McMinnville, O	1.09	264	P	Pb	07 40 20.2	-0.5
	baz=84,SNR=15						
G03D				S	Sg	07 40 35.9	+1.0
	baz=84						
F04D	Rainier, OR	1.16	310	P	Pb	07 40 21.8	-0.1
	baz=129						
F04D				S	Sn	07 40 38.3	+0.3
	baz=129						
BLTW	Bickleton	1.24	62		Pb	07 40 23.3	+0.1
KMOR	Kings Mountain	1.27	284		Pn	07 40 23.4	-0.3
COR	Corvallis	1.34	237	Pn	Pb	07 40 25.3	+0.3
COR				IAML		07 40 44.2	
	comp=E,35nm,0.7s						
E04D	Cinebar	1.35	335	Pn	Pg	07 40 27.0	+1.2
E04D				IAML		07 40 44.6	
	comp=N,34nm,0.2s						
E04D				IAML		07 40 46.1	
	comp=E,42nm,0.6s						
E04D	Cinebar	1.35	335	P	Pb	07 40 25.3	+0.2
	baz=154						
E04D				S	Sg	07 40 43.2	-0.1
	baz=154						
HEBO	Mount Hebo	1.43	266	Pn	Pn	07 40 26.2	+0.4
BUCK	Buck Mountain	1.45	218	Pn	Pn	07 40 26.4	+0.4
BMW	Boistfort Moun	1.54	318		Pn	07 40 27.7	+0.3
MXC	Moxie City	1.60	39		Pb	07 40 29.5	+0.1
I04A	Tendick Farm,	1.62	198		Pn	07 40 28.9	+0.5
I04A	Tendick Farm,	1.62	198	P	Pn	07 40 28.7	+0.3
	baz=18						
I04A				S	Sb	07 40 50.2	+0.1
	baz=18						
BENWA	Benson Ranch	1.84	49		Pb	07 40 33.1	-0.4
I02E	Swisshome, OR	1.94	232	P	Pn	07 40 33.8	+1.0
	baz=51,SNR=33						
I02E				S	Sb	07 40 60.0	+0.5
	baz=51						
D04E	Lakebay	1.98	339	Sb	Sg	07 41 03.4	+0.1
	baz=158						
I03D	Drain, OR	2.00	216	P	Pn	07 40 34.6	+1.0
	baz=35,SNR=12						
I03D				S	Sb	07 41 01.2	-0.1
	baz=35						
GBL	Gable Mountain	2.03	51		Pb	07 40 36.0	-0.7
B926	Mesachie Lake	3.85	336		Pb	07 41 03.7	-4.0

IDC ***18*** *07:56:58.2±0.3, 0°.54N×79°.74W, h0^{km}, mb5.6/40, mbtmp5.6/41, ML4.2/2, MS6.5/53, Error ellipse: s-maj=9.2km s-min=8.0km az=62.0*

VAO ***18*** *07:56:59.5±0.4, 0°.37N×79°.82W, h0^{km}, mb6.2*

IGQ ***18*** *07:57:00±0.4, 0°N±3°×8°0W±°, h17^{km}*

UCR ***18*** *07:57:01.9±2.3, 0°.43N×79°.99W, h6^{km}±84^{km}, mb6.7(NEIC)*

MOS ***18*** *07:57:02.2±1.1, 0°.40N×79°.91W, h31^{km}, mb6.4/33, MS6.4/29, Error ellipse: s-maj=8.0km s-min=5.8km az=85.5*

NEIC ***18*** *07:57:02.6±2.3, 0°.43N±0°.06×79°.79W±0°.06, h16^{km}±1^{km}, mb6.1/882, Ms_20 6.5/424, Mwb6.6/90, Mww6.7, Error ellipse: s-maj=10.1km s-min=9.6km az=255.0*

NEIC ***18*** *07:57:02.7, 0°.41N×79°.81W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}5.50; $M_{\theta\theta}$3.68; $M_{\phi\phi}$-9.17; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.57; $M_{\phi r}$-5.08; Fault plane solution: $M_0$9.49000×10^{18} NP1:ϕ_s177.50000°, δ62.53000°, λ83.78000°. NP2:ϕ_s10.78000°, δ28.11000°, λ101.76000°. Principal axes: T 7.1134, Plg72.0000°, Azm73.0000°; N 3.6651, Plg6.0000°, Azm180.0000°; P -10.7785, Plg17.0000°, Azm272.0000°;*

BJI ***18*** *07:57:02.5±0.0, 0°.49N×79°.79W, h32^{km}, mB6.5/61, Ms6.8/82, Ms7 6.8/77*

UPA ***18*** *07:57:06.2±3.4, 0°.48N×79°.86W, h34^{km}, MS5.6, MW6.5*

RSNC ***18*** *07:57:07.9, 0°.42N×79°.76W, h32^{km}*

GCMT ***18*** *07:57:07.7±0.0, 0°.43N×80°.04W, h28^{km}, MW6.7/166, Moment Tensor Solution. s166,c405; s161,c715; Duration: 5^{s}5 Moment tensor: Scale 10^{19}Nm; M_{rr}0.68±.00; $M_{\theta\theta}$0.04±.00; $M_{\phi\phi}$-0.72±.00; $M_{r\theta}$0.20±.01; $M_{\theta\phi}$-0.15±.00; $M_{\phi r}$-1.20±.01; Best double couple: $M_0$1.41300×10^{19} NP1:ϕ_s28.00000°, δ18.00000°, λ123.00000°. NP2:ϕ_s174.00000°, δ75.00000°, λ80.00000°. Principal axes: T 1.4140, Plg59.0000°, Azm70.0000°; N -0.0010, Plg9.0000°, Azm176.0000°; P -1.4130, Plg30.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *07:57:10, 0°.43N×79°.77W, h36^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}0.58; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.59; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.12; $M_{\phi r}$-1.14; Fault plane solution: $M_0$1.33000×10^{19} NP1:ϕ_s29.00000°, δ16.00000°, λ130.00000°. NP2:ϕ_s168.00000°, δ77.00000°, λ79.00000°. Principal axes: T 1.3621, Plg56.0000°, Azm64.0000°; N -0.0731, Plg10.0000°, Azm170.0000°; P -1.2890, Plg32.0000°, Azm267.0000°;*

ISC 18 07:57:02.8±0.3, **0°.42N**±0°.02×**79°.89W**±0°.02, **h30**^{km}±1^{km}, **h30**^{km}**:pP-P, n2677,** σ**2^{s}15**/3089, **mb6.1**/587, **MS6.5**/349, **686C-111D, Fault plane solution: NP1:**ϕ_s182.46452°, δ65.13165°, λ94.02982°. **NP2:**ϕ_s352.95438°, δ25.17222°, λ81.37874°. **Principal axes:** T Plg69.6059°, Azm100.6628°; N Plg3.6556°, Azm0.7675°; P Plg20.0349°, Azm269.4326°; **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AV21	Acelerografo,	0.41	55	P	Pb	07 57 11.0	-0.9
AV21				S	Sn	07 57 19.0	-0.5
AV18	Acelerografo,	0.42	105	P	Pb	07 57 12.0	-0.1
MAG1	Magdalena	0.50	167	P	Pb	07 57 12.0	-1.4
AMA1	Acelerografo,	0.54	18	P	Pb	07 57 12.0	-1.9
AMA1				S	Sn	07 57 22.0	-0.5
JAMA	Jama	0.75	205	P	Pb	07 57 14.0	-3.5
FLF1	Flavio Alfaro-	0.78	177	P	Pn	07 57 17.0	-0.8
CAB1	Cabo Pasado-Ma	0.97	214	P	Pb	07 57 22.0	+0.9
CABP	Cabo Pasado	0.97	214	P	Pn	07 57 18.0	-2.4
APR2	Miler	0.98	110	P	Pn	07 57 20.0	-0.7
ASDO	Santo Domingo	1.02	132	P	Pn	07 57 19.0	-2.2
APR1	Acelerografo,	1.35	110	P	Pn	07 57 25.0	-1.1
GGPT	Toaza - Volcan	1.42	117	P	Pn	07 57 26.0	-1.0
GGPC	Guagua Pichinc	1.42	115	P	Pn	07 57 27.0	-0.2
OTAV	Otavalo	1.45	97		Pn	07 57 27.8	+0.4
OTAV	Otavalo	1.45	97	P	Pn	07 57 27.8	+0.4
OTAV	Otavalo	1.45	97	⇓eP	Pn	07 57 27.9	+0.4
OTAV				eS	Sb	07 57 47.8	+0.1
OTAV	Otavalo	1.45	97	eP	Pn	07 57 27.9	+0.4
OTAV	Otavalo	1.45	97	⇑P	Pn	07 57 26.9	-0.6
OTAV	Otavalo	1.45	97	P	Pn	07 57 27.0	-0.4
CUSE	Cuicocha Este	1.49	94	P	Pn	07 57 28.0	0.0
SADP	Ecuador-Quito-	1.50	106	P	Pn	07 57 28.0	0.0
CRPG	Carapungo - Pi	1.52	110	P	Pn	07 57 29.0	+0.6
CUIC	Cuicocha-Domo	1.53	94	P	Pn	07 57 29.0	+0.5
EPNL	EPN Laboratori	1.53	114	P	Pn	07 57 28.0	-0.5
CIVI	Edificio de In	1.53	114	P	Pn	07 57 29.0	+0.5
CUSW	Cuicocha Oeste	1.54	95	P	Pn	07 57 29.0	+0.3
ALIT	Ecuador-Imbabu	1.57	76	P	Pn	07 57 28.0	-0.8
LITE1	Lita	1.57	76	P	Pn	07 57 28.0	-0.8
AV11	Acelerografo,	1.59	108	P	Pb	07 57 31.0	-0.8
AMNT	Manta-Manabi	1.60	212	P	Pn	07 57 26.0	-3.1
ILLI	Illinizas Sur	1.62	134	P	Pn	07 57 29.0	-0.8
URCU	Urcuqui	1.63	89	P	Pn	07 57 30.0	+0.1
AOTA	Otavalo	1.64	96	P	Pn	07 57 31.0	+1.0
AAT1	Ecuador-Atunta	1.68	93	P	Pb	07 57 32.0	-1.2
CHIS	Cerro-Chispas-	1.68	210	P	Pn	07 57 28.0	-2.3
SUCR	Mariscal Sucre	1.75	127	P	Pn	07 57 32.0	+0.4
PITA	Cotopaxi Volc	1.75	124	P	Pb	07 57 35.0	+0.4
SRAM	San Ramn-Vol	1.76	131	P	Pn	07 57 32.0	+0.3
AIB1	Ecuador-Imbabu	1.76	92	P	Pn	07 57 33.0	+1.4
BNAS	Cotopaxi Volca	1.78	128	P	Pn	07 57 33.0	+1.0
AIB2	Ibarra (Univer	1.78	92	P	Pn	07 57 33.0	+1.1
SLOR	San Lorenzo -	1.80	129	P	Pn	07 57 33.0	+0.7
BREF	Cotopaxi Volca	1.81	127	P	Pn	07 57 33.0	+0.5
CTUM2	Tumaco	1.81	40	eP	Pn	07 57 32.0	-0.1
TUMC	Tumaco	1.81	40		Pn	07 57 33.1	+1.1
TUMC	Tumaco	1.81	40	P	Pn	07 57 32.0	0.0
YAHU	Yahuarcocha	1.82	92	P	Pn	07 57 34.0	+1.6
BVC2	Cotopaxi Volca	1.82	126	P	Pn	07 57 34.0	+1.3
BMOR	Cotopaxi Volca	1.83	129	P	Pn	07 57 33.0	+0.2
ALAT	Latacunga	1.84	137	P	Pn	07 57 34.0	+1.2
BTAM	Cotopaxi Volca	1.84	126	P	Pn	07 57 34.0	+1.0
BRRN	Barrancas-Volc	1.85	130	P	Pn	07 57 34.0	+1.0
ANTG	Antisana-Guama	1.87	119	P	Pn	07 57 34.0	+0.6
CHMA	Chilma	1.88	76	P	Pn	07 57 32.0	-1.2
TAMB	Tambo	1.88	126	P	Pn	07 57 34.0	+0.5
LNGL	El Angel-Carch	1.91	80	P	Pn	07 57 34.0	+0.1
ANGU	Angureal	1.92	101	P	Pb	07 57 37.0	-0.5
ANTM	Antisana-La Mi	1.92	120	P	Pn	07 57 35.0	+1.0
CAYR	Refugio Cayamb	1.92	102	P	Pn	07 57 35.0	+0.9
VCES	Cotopaxi	1.92	129	P	Pn	07 57 35.0	+1.0
CAYA	Cayambe	1.93	100	P	Pb	07 57 36.0	-1.7
ANTI	Antisana	1.93	117	P	Pn	07 57 35.0	+0.8
ANTS	Antisana-Sarah	1.94	118	P	Pn	07 57 35.0	+0.6
APS4	Papallacta	1.95	114	P	Pn	07 57 36.0	+1.8
ECEN	Cerro Negro	1.96	78	P	Pn	07 57 35.0	+0.5
CHL1	Volc¡n Chiles	1.98	79	P	Pn	07 57 35.0	+0.2
CHL2	Volc¡n Chiles	2.00	79	P	Pn	07 57 36.0	+0.8
AAM1	Ambato 1 (Muni	2.08	143	P	Pn	07 57 34.0	-2.0
TULM	Tulcn-Chalpat	2.12	82	P	Pn	07 57 38.0	+1.3
CMBC	Cumbal	2.12	76	eP	Pn	07 57 37.5	+0.8
CMBC	Cumbal	2.12	76	P	Pn	07 57 37.0	+0.3
PPLP	Puerto Lpez	2.15	204	P	Pn	07 57 34.0	-2.7
PPLP	Puerto Lpez	2.15	204	P	Pn	07 57 38.0	+1.3
PIAT	Ana Tenorio	2.15	131	P	Pn	07 57 38.0	+0.9
CHSH	Refugio Sur-Vo	2.16	152	P	Pn	07 57 38.0	+0.7
PORT	Chimborazo Vol	2.18	149	P	Pn	07 57 38.0	+0.4
ATUL	Tulcn	2.19	81	P	Pb	07 57 40.0	-2.0
TAMH	Tambohuasha Ch	2.24	150	P	Pn	07 57 39.0	+0.6
IGUA	Igualata	2.27	147	P	Pn	07 57 40.0	+1.1
AV05	Acelerografo,	2.29	106	P	Pb	07 57 42.0	-1.5
JUI6	Juive	2.32	142	P	Pn	07 57 41.0	+1.7
BIL2	Estacion Bilba	2.32	143	P	Pn	07 57 41.0	+1.7
POND	Pondoa	2.33	142	P	Pn	07 57 41.0	+1.6
BBIL	Ulba Tungurahu	2.33	143	P	Pn	07 57 41.0	+1.6
BRUN	Tungurahua Vol	2.35	141	P	Pn	07 57 41.0	+1.2
RETU	Refugio	2.35	142	P	Pn	07 57 42.0	+2.0
BONI	La Bonita	2.36	89	P	Pn	07 57 42.0	+2.2
BMAS	Trigal station	2.37	144	P	Pn	07 57 41.0	+0.9
ARRY	Arrayan	2.39	143	P	Pn	07 57 41.0	+0.7
BPAT	Tungurahua Vol	2.40	143	P	Pn	07 57 42.0	+1.4
AGUAY	Guayaquil	2.46	182	P	Pb	07 57 44.0	-2.4
AMIL	Milagro (Trans	2.56	173	P	Pn	07 57 43.0	+0.7
GYE3	Ecuador-Guayaq	2.56	180	P	Pn	07 57 42.0	-0.3
AV03	Acelerografo,	2.59	98	P	Pb	07 57 47.0	-1.7
PUYO	Puyo, Santa Ro	2.66	136	P	Pb	07 57 47.0	-2.9
CCUFI	Cufio, Nario	2.66	72	⇑eP	Pn	07 57 47.1	+2.9
CCUFI				eS	Sb	07 58 19.2	-3.4
GCUF	Volcan Galeras	2.66	73	eP	Pn	07 57 46.4	+2.2
GCUF				eS	Sb	07 58 22.7	+0.1
GCUF				i		07 58 26.1	
	comp=Z,23μm,0.5s						
CPAS2	Pasto	2.75	73	eP	Pb	07 57 48.7	-2.9
CPAS2				eS	Sb	07 58 22.2	-2.9
APS1	Acelerografo,	2.98	96	P	Pb	07 57 52.0	-3.4
BBAC	Balboa, Cauca	3.08	59	eP	Pb	07 57 54.3	-2.8
BBAC	Balboa, Cauca	3.08	59	P	Pb	07 57 54.0	-3.1
GR1C	Gorgona, Isla	3.09	34	eP	Pn	07 57 47.1	-2.5
GR1C				eS	Sb	07 58 38.5	+4.1
GR1C				i		07 58 47.3	
	comp=Z,788μm,0.7s						
CRUC	La Cruz	3.15	69	eP	Pn	07 57 53.8	+3.0
ACUE	Ecuador-Cuenca	3.44	164	P	Pn	07 57 56.0	+1.3
ACH2	Ecuador-Machal	3.66	179	P	Pn	07 58 01.0	+3.5
ACH1	Ecuador-Univer	3.68	180	P	Pn	07 57 59.0	+1.2
SOTA	Rioblanco	3.69	63	⇑iP	Pn	07 57 59.8	+1.5
SOTA				eS	Sb	07 58 48.0	-4.3
SOTA				i		07 58 59.5	
	comp=Z,51μm,0.6s						
BOSC	San Juan Bosco	3.81	159	P	Pn	07 58 03.0	+3.3
ARNL	Arenillas	3.95	183	P	Pn	07 58 02.0	+0.6
PCON	Cinco Dias	3.97	61	⇑iP	Pn	07 58 04.0	+1.7
PCON				eS	Sn	07 58 52.2	+4.1
PCON				i		07 59 06.0	
	comp=Z,17μm,0.5s						
MALC	Bahia Malaga	4.38	36	eP	Pn	07 58 06.0	-1.5
MALC				eS	Sb	07 59 08.9	-2.8
MALC				i		07 59 34.2	
	comp=Z,14μm,0.5s						
MALC	Bahia Malaga	4.38	36	P	Pn	07 58 06.0	-1.5
RAC02	Cali,SGC	4.46	49	eS	Sn	07 59 03.0	+3.5
MARP	Paez Belalcaza	4.61	58	⇑iP	Pn	07 58 12.1	+1.3
MARP				eS	Sn	07 59 06.5	+3.1
MARP				i		07 59 19.1	
	comp=Z,2μm,0.6s						
LOJ1	Universidad t	4.64	161	P	Pn	07 58 09.0	-2.1
GONZ	Gonzanam	4.65	174	P	Pn	07 58 13.0	+1.5
GARC	Garzon, Huila	4.73	68	eP	Pn	07 58 14.8	+2.4
GARC				eS	Sn	07 59 13.7	+7.2
GARC				i		07 59 32.3	
	comp=Z,5μm,0.6s						
BETC	Betania	4.98	63	⇑eP	Pn	07 58 17.9	+2.3
BETC				eS	Sb	07 59 23.2	-5.6
BETC				i		07 59 32.2	
	comp=Z,4μm,0.5s						
YOTC	Yotoco, Valle	5.00	45	eP	Pn	07 58 17.9	+1.8
PIZC	Pizarro, Choco	5.17	29	eP	Pb	07 58 31.6	-1.0
PIZC				eS	Sb	07 59 45.3	+11
PIZC				i		08 00 31.8	
	comp=Z,2μm,0.8s						
ZUMB	Zumba	5.30	172	P	Pn	07 58 22.0	+1.8
PLMC	San Jos del P	5.73	39	⇑iP	Pn	07 58 22.0	-4.0
PLMC				eS	Sn	07 59 36.0	+5.3
PLMC				i		07 59 55.6	
	comp=Z,7μm,0.5s						
ORTC	Ortega, Tolima	5.79	53	⇑iP	Pn	07 58 26.2	-0.6
ORTC				eS	Sn	07 59 36.9	+4.6
ORTC				i		07 59 55.8	
	comp=Z,5μm,0.6s						
PRAC	Prado	5.97	57	eP	Pn	07 58 29.7	+0.4
PRAC				eS	Sn	07 59 42.3	+5.5
PRAC				i		07 59 56.5	
	comp=Z,6μm,0.7s						
ANIL	Santa Ana	6.03	48	eP	Pn	07 58 28.6	-1.8
SOLC	Bahia Solano	6.28	23	eP	Pn	07 58 35.2	+1.8
MACC	Macarena, Meta	6.28	74	eP	Pn	07 58 36.2	+2.8
MACC	Macarena, Meta	6.28	74	⇑iP	Pn	07 58 36.5	+3.0
MACC				eS	Sn	07 59 47.4	+3.2
MACC				i		08 00 27.8	
	comp=Z,1432μm,1.7s						
CMAN1	Manizales, Cal	6.35	43	eP	Pn	07 58 42.2	+7.5
CMAN1				eS	Sn	07 59 49.8	+3.3
NIZA	Niza - Manizal	6.38	44	eP	Pn	07 58 38.3	+3.2
CBOC	Ciudad Bolivar	6.65	36	⇑eP	Pn	07 58 35.7	-3.1
CBOC				eS	Sn	08 00 02.7	+9.1
CBOC				i		08 00 27.3	
	comp=Z,5μm,0.8s						
CACAO	El Cacao, Vera	6.95	352	eP	Pn	07 58 39.5	-3.2
CACAO				eS	Sn	07 59 54.5	-6.2
CACAO				i		08 00 02.5	
	comp=Z,1μm,0.6s						
CACAO	El Cacao, Vera	6.95	352	eP	Pn	07 58 39.6	-3.0
ACHO3	Achotines, Los	6.95	358	eP	Pn	07 58 47.9	+5.2
PEDA3	Pedasi	7.06	359	eP	Pn	07 58 45.6	+1.4
ROSC	El Rosal	7.08	52	Pn	Pn	07 58 43.4	-1.5
	comp=Z,28nm,0.3s,baz=167,slow=4.4,SNR=68						
ROSC				Sn	Sn	08 00 01.0	-3.7
	comp=Z,65nm,0.3s,baz=87,slow=16,SNR=4.0						
ROSC				LR	LR	08 01 39.9	
	comp=Z,1047μm,19.2s,baz=224,slow=41						
ROSC	El Rosal	7.08	52	Pn	Pn	07 58 45.5	+0.7
ROSC	El Rosal	7.08	52	P	Pn	07 58 45.6	+0.7
ROSC	El Rosal	7.08	52	eS	Sn	08 00 14.4	+10
REAC	Reactor, Bogot	7.14	54	eS	Sn	07 59 59.1	-7.0
CNOCA	NORCASIA, CALD	7.15	44	eP	Pn	07 58 48.5	+3.0
NORC	Norcasia	7.15	44	⇑iP	Pn	07 58 43.7	-1.9
NORC				eS	Sn	08 00 09.8	+3.9
NORC				i		08 00 35.4	
	comp=Z,1μm,0.7s						
HELC	Santa Helena	7.20	37	eP	Pn	07 58 52.0	+5.6
HELC				eS	Sn	08 00 18.2	+11
HELC				i		08 00 36.3	
	comp=Z,1μm,0.6s						
PCRI3	Pocri, Los San	7.20	358	i P	Pn	07 58 49.0	+2.9
PCRI3	Pocri, Los San	7.20	358	i P	Pn	07 58 49.0	+2.9
MARI3	Mariato, Verag	7.26	351	⇓eP	Pn	07 58 46.9	-0.1
MARI3				eS	Sn	08 00 04.8	-3.7
AZU	Azuero	7.33	357	eP	Pn	07 58 46.1	-1.9
AZU				eS	Sn	08 00 07.9	-2.3
AZU				i		08 00 17.0	
	comp=Z,2μm,0.6s						
AZU	Azuero	7.33	357	eP	Pn	07 58 50.0	+2.1
AZU				i S	Sn	08 00 17.6	+7.4
AZU				AMP		08 01 08.1	
	comp=Z,102μm,15.8s						
AZU				IVMsBB		08 01 08.1	
	comp=Z,103μm,15.2s						
AZU	Azuero	7.33	357	i P	Pn	07 58 46.4	-1.6
AZU				i S	Sn	08 00 17.6	+7.4
AZU				IVMsBB		08 01 08.1	
	comp=Z,103μm,15.2s						
AZU				AMP		08 01 08.1	
	comp=Z,102μm,15.8s						
GMAL	Guarumal, Vera	7.42	350	eP	Pn	07 58 49.7	+0.6
GMAL	Guarumal, Vera	7.42	350	eP	Pn	07 58 49.7	+0.6
CHIC	Chingaza	7.43	56	⇑eP	Pn	07 58 49.1	-0.6
CHIC				eS	Sn	08 00 15.7	+2.3
CHIC				i		08 00 30.4	
	comp=Z,6μm,1.0s						
PESE3	Pese, Herrera	7.47	354	eP	Pn	07 58 50.1	+0.2
PESE3	Pese, Herrera	7.47	354	eP	Pn	07 58 50.1	+0.2
CHIT3	Chitre	7.50	356	i P	Pn	07 58 48.9	-1.4
CHIT3				i S	Sn	08 00 13.6	-0.9
CHIT3	Chitre	7.50	356	i P	Pn	07 58 48.9	-1.4
CHIT3				i S	Sn	08 00 13.6	-0.9
DBBC	Dabeiba	7.51	29	eP	Pn	07 58 53.7	+3.3
DBBC				i		08 00 49.3	
	comp=Z,7μm,0.7s						
GUVC	San Jose del G	7.56	74	eP	Pn	07 58 54.6	+3.6
GUVC				eS	Sb	08 00 50.7	+7.7
GUVC				i		08 01 07.6	
	comp=Z,1μm,0.5s						
RSUS3	Rio de Jesus,	7.62	350	eP	Pn	07 58 53.6	+1.7
RSUS3	Rio de Jesus,	7.62	350	eP	Pn	07 58 53.6	+1.7
ATAH	Atahualpa	7.65	169	Pn	Pn	07 58 55.5	+2.8
	comp=Z,13nm,0.3s,baz=9.4,slow=11,SNR=92						
ATAH				Sn	Sn	08 00 20.0	+1.3
	comp=Z,60nm,0.3s,baz=12,slow=18,SNR=3.8						
ATAH				LR	LR	08 01 56.0	
	comp=Z,404μm,19.6s,baz=344,slow=38						
STIA3	Santiago, Vera	7.70	352	eP	Pn	07 58 53.5	+0.4
STIA3	Santiago, Vera	7.70	352	eP	Pn	07 58 53.5	+0.4
CALO3	Calobre, Verag	7.91	353	eP	Pn	07 58 55.9	+0.1
CALO3	Calobre, Verag	7.91	353	eP	Pn	07 58 55.9	+0.1
PNME	Penonome	8.02	357	eP	Pn	07 59 00.6	+3.1
PNME				i P	Pn	07 59 00.9	+3.4
PNME	Penonome	8.02	357	i P	Pn	07 59 00.9	+3.4
VTON	El Valle, Cocl	8.14	358	eP	Pn	07 59 00.5	+1.3
VTON	El Valle, Cocl	8.14	358	eP	Pn	07 59 00.5	+1.3
CHIR3	Chiriqui UPA,	8.29	343	eP	Pn	07 59 03.5	+2.4
CHIR3	Chiriqui UPA,	8.29	343	eP	Pn	07 59 03.5	+2.4
PTPM	Petroterminale	8.29	339	⇓eP	Pn	07 59 03.7	+2.6
PTPM				eP	Pn	07 59 03.9	+2.8
PTPM	Petroterminale	8.29	339	⇓eP	Pn	07 59 03.7	+2.6
TABO3	Taboga, Panama	8.32	2	eP	Pn	07 59 05.4	+3.8
TABO3	Taboga, Panama	8.32	2	eP	Pn	07 59 05.4	+3.8
DVD	David	8.36	342	⇓iP	Pn	07 59 05.9	+3.8
DVD	David	8.36	342	⇓iP	Pn	07 59 05.9	+3.8
UREC	San Jos de Ur	8.48	31	eP	Pn	07 59 04.0	+0.3
UREC				eP	Pn	07 59 04.7	+1.0
UREC	San Jos de Ur	8.48	31	eP	Pn	07 59 04.0	+0.3
ZANG	Zanguenga, Cho	8.48	0	eP	Pn	07 59 05.9	+2.2
ZANG	Zanguenga, Cho	8.48	0	eP	Pn	07 59 05.9	+2.2
UPA	Univ. de Panam	8.51	2	⇑eP	Pn	07 59 06.7	+2.5
UPA				⇑iP	Pn	07 59 07.4	+3.2
UPA				eS	Sn	08 00 35.6	-3.6
UPA				eS		08 00 35.8	
UPA	Univ. de Panam	8.51	2	⇑iP	Pn	07 59 07.4	+3.2
UPA				eS	Sn	08 00 35.8	-3.5
MFS3	Miraflores	8.53	2	eP	Pn	07 59 08.2	+3.9
MFS3	Miraflores	8.53	2	eP	Pn	07 59 08.2	+3.9
PSOM3	Paja de Sombre	8.56	344	eP	Pn	07 59 07.9	+3.0
PSOM3	Paja de Sombre	8.56	344	eP	Pn	07 59 07.9	+3.0
CDITO	Canoas	8.63	340		Pn	07 59 07.1	+1.3
CDITO	Canoas	8.63	340	⇓iP	Pn	07 59 07.7	+2.0
CDITO	Canoas	8.63	340	⇓iP	Pn	07 59 07.7	+2.0
ZARC	Zaragoza, Cauc	8.63	35		Pn	07 59 06.5	+0.7
GAMB1	Gamboa	8.64	1	eP	Pn	07 59 08.7	+2.8
GAMB1	Gamboa	8.64	1	eP	Pn	07 59 08.7	+2.8
BCO2	Palmira	8.65	342	i P	Pn	07 59 06.7	+0.5
BCO2	Palmira	8.65	342	i P	Pn	07 59 06.7	+0.5
BCIP	Isla Barro Col	8.69	0	Pn	Pn	07 59 09.4	+2.8
BCIP	Isla Barro Col	8.69	0	P	Pn	07 59 09.4	+2.8
BCIP	Isla Barro Col	8.69	0	⇑eP	Pn	07 59 09.5	+2.9
BCIP				eS	Sn	08 00 49.5	+5.9
BCIP	Isla Barro Col	8.69	0	⇑iP	Pn	07 59 09.8	+3.2
BCIP				eP	Pn	07 59 09.8	+3.2
BCIP	Isla Barro Col	8.69	0	⇑iP	Pn	07 59 09.8	+3.2
BCIP	Isla Barro Col	8.69	0	⇑P	Pn	07 59 07.4	+0.8
LNBQ3	Los Naranjos,	8.70	343	eP	Pn	07 59 08.2	+1.4
LNBQ3	Los Naranjos,	8.70	343	eP	Pn	07 59 08.2	+1.4
RUSC	La Rusia	8.70	51	eS	Sn	08 00 57.0	+12
CHPO	Chepo, Panama	8.72	5	eP	Pn	07 59 09.9	+2.8
CHPO				⇓eP	Pn	07 59 10.5	+3.5
CHPO	Chepo, Panama	8.72	5	⇓eP	Pn	07 59 10.5	+3.5
MAD3	Madden Dam	8.74	2	eP	Pn	07 59 11.2	+3.9
MAD3	Madden Dam	8.74	2	eP	Pn	07 59 11.2	+3.9
FRIJ	El Hiral	8.74	1	eP	Pn	07 59 11.2	+3.9
FRIJ	El Hiral	8.74	1	eP	Pn	07 59 11.2	+3.9
CHGR2	Aguacate	8.75	345	eP	Pn	07 59 06.1	-1.4
CHGR2				eS	Sn	08 00 43.1	-2.2
CHGR2	Aguacate	8.75	345	eP	Pn	07 59 06.1	-1.4
CHGR2				eS	Sn	08 00 43.1	-2.2
MLIR	Monte Lirio	8.76	0	⇓eP	Pn	07 59 11.2	+3.6
MLIR	Monte Lirio	8.76	0	⇓eP	Pn	07 59 11.2	+3.6
BC3P	Paso Ancho	8.77	342	i P	Pn	07 59 11.1	+3.2
BC3P	Paso Ancho	8.77	342	i P	Pn	07 59 11.1	+3.2
BRU2	Volcan	8.77	342		Pn	07 59 10.9	+2.9
BRU2	Volcan	8.77	342	eP	Pn	07 59 09.4	+1.5
BRU2	Volcan	8.77	342	eP	Pn	07 59 09.7	+1.7
BRU2				⇓eP	Pn	07 59 09.9	+2.0
BRU2				IVMs_BB	IVMs_BB	08 02 06.5	
	comp=Z,38μm,13.2s						
BRU2	Volcan	8.77	342	⇓eP	Pn	07 59 09.9	+2.0
BRU2				IVMs_BB	IVMs_BB	08 02 06.5	
	comp=Z,38μm,13.2s						
MLIR3	Monte Lirio, C	8.82	341	i P	Pn	07 59 12.0	+3.5
MLIR3	Monte Lirio, C	8.82	341	i P	Pn	07 59 12.0	+3.5
SABA3	Sabanitas, Col	8.87	1	eP	Pn	07 59 11.4	+2.3
SABA3	Sabanitas, Col	8.87	1	eP	Pn	07 59 11.4	+2.3
EDSV	San Vito	8.89	340	eP	Pn	07 59 13.5	+4.0
BRRC	Barranca, Sant	9.06	43	⇑iP	Pn	07 59 08.6	-3.1
BRRC				eS	Sn	08 00 52.4	-0.4
BRRC				i		08 01 38.1	
	comp=Z,509nm,0.7s						
BARC	Barichara	9.07	47	eP	Pn	07 59 10.8	-1.3
LCBC	Los crdobas,	9.08	23	eP	Pn	07 59 12.7	+0.7
LCBC				i		08 02 46.0	
	comp=Z,233nm,0.7s						

LCBC	Los crdobas,	9.08	23	eP	Pn	07 59 14.9	+2.9
LCBC	Los crdobas,	9.08	23	eP	Pn	07 59 14.9	+2.9
EDPN	Palmar Norte	9.20	337	eP	Pn	07 59 16.5	+2.9
CNI2	El Empalme, Bo	9.31	344	eP	Pn	07 59 18.1	+3.1
CNI2				eP	Pn	07 59 18.2	+3.1
CNI2	El Empalme, Bo	9.31	344	eP	Pn	07 59 18.1	+3.1
EDBA	Buenos Aires	9.32	339	⇓eP	Pn	07 59 18.4	+3.1
DRK0	Durika	9.40	339		Pn	07 59 19.6	+3.0
DRK0	Durika	9.40	339	eP	Pn	07 59 18.3	+1.8
DRK0				⇓eP	Pn	07 59 19.2	+2.7
DRK0	Durika	9.40	339	⇓eP	Pn	07 59 19.2	+2.7
SRBA	San Rafael, Bu	9.41	339		Pn	07 59 19.1	+2.5
SRBA	San Rafael, Bu	9.41	339	eP	Pn	07 59 17.0	+0.4
RGM0	Gandoca	9.50	344	eP	Pn	07 59 20.3	+2.5
RGM0				⇓eP	Pn	07 59 21.0	+3.3
RGM0	Gandoca	9.50	344	⇓eP	Pn	07 59 21.0	+3.3
EDDO	Dominical	9.63	336	eP	Pn	07 59 21.4	+1.9
PEZE	Perez Zeledon,	9.67	337		Pn	07 59 21.6	+1.4
PEZE	Perez Zeledon,	9.67	337	eP	Pn	07 59 20.7	+0.5
PAMC	Pamplona, Colo	9.93	46	eP	Pn	07 59 26.8	+2.8
PAMC				eS	Sn	08 01 25.1	+10
PAMC				i		08 01 45.7	
	comp=Z,256nm,0.7s						
TAMC	Tame, Arauca	10.05	53	eP	Pn	07 59 31.0	+5.7
RIMA	Rio Macho	10.09	337	Pn	Pn	07 59 27.3	+1.3
RIMA	Rio Macho	10.09	337	eP	Pn	07 59 26.4	+0.4
LCR2	La Lucha 2	10.13	336	eP	Pn	07 59 27.9	+1.4
OCAC	Ocana	10.16	40		Pn	07 59 26.8	-0.1
BATAN	Batan	10.22	340		Pn	07 59 30.8	+3.2
BATAN	Batan	10.22	340	⇓eP	Pn	07 59 29.5	+1.9
BATAN				⇓eP	Pn	07 59 30.2	+2.6
BATAN	Batan	10.22	340	⇓eP	Pn	07 59 30.2	+2.6
CVTR	Volcan Turrial	10.29	338		Pn	07 59 31.9	+3.0
JACO	JACO, Garabito	10.34	333		Pn	07 59 30.6	+1.4
HDC	Heredia	10.40	336		Pn	07 59 31.4	+1.1
HDC	Heredia	10.40	336	eP	Pn	07 59 30.9	+0.7
HDC	Heredia	10.40	336	⇓iP	Pn	07 59 32.4	+2.2
HDC	Heredia	10.40	336	⇓iP	Pn	07 59 32.4	+2.2
PAYG	Puerto Ayora	10.46	264	Pn	Pn	07 59 30.6	-0.3
PAYG	Puerto Ayora	10.46	264	⇓P	Pn	07 59 30.4	-0.5
SJCC	San Jacinto, C	10.51	26	Pn	Pn	07 59 32.3	+0.7
CAO2	Cobano, Puntar	10.57	331		Pn	07 59 33.7	+1.3
LAFE	Finca La Fe, P	10.58	332	eP	Pn	07 59 34.3	+1.8
CZSB	Cruzeiro do Su	10.81	139	eP	Pn	07 59 36.0	+0.3
ARGC	Ariguani, Magd	10.93	31	⇑iP	Pn	07 59 36.9	-0.3
ARGC				eS	Sn	08 02 09.6	+31
ARGC				i		08 02 44.1	
	comp=Z,5µm,1.3s						
JTS	Las Juntas de	11.02	333	LR	LR	08 03 07.3	
	comp=Z,298µm,20.8s,baz=222,slow=34						
JTS	Las Juntas de	11.02	333	Pn	Pn	07 59 40.1	+1.5
JTS	Las Juntas de	11.02	333	d iP	Pn	07 59 40.1	+1.5
JTS				MLR	MLR		
	comp=Z,224µm,14.0s						
JTS	Las Juntas de	11.02	333	eP	Pn	07 59 39.1	+0.4
JTS	Las Juntas de	11.02	333	⇓iP	Pn	07 59 40.7	+2.1
JTS	Las Juntas de	11.02	333	⇓iP	Pn	07 59 40.7	+2.1
JTS	Las Juntas de	11.02	333	⇓P	Pn	07 59 38.7	0.0
LL1C	La Loma 1 Cana	11.04	35	eP	Pn	07 59 41.4	+2.7
LL1C				eS	Sn	08 01 54.5	+13
LL1C				i		08 02 50.6	
	comp=Z,722nm,0.7s						
CASO	Castillo	11.05	334	⇓eP	Pn	07 59 41.1	+2.0
FORC	Fortuna	11.05	335	⇓eP	Pn	07 59 41.7	+2.6
ARE1	Arenal 1	11.07	334	eP	Pn	07 59 40.1	+0.8
LL5C	La Loma 5 El P	11.11	33	⇑eP	Pn	07 59 38.4	-1.4
LL5C				eS	Sn	08 01 51.5	+8.3
LL5C				i		08 02 24.9	
	comp=Z,7612µm,2.9s						
GUAI	GUAI	11.27	330	⇓eP	Pn	07 59 43.5	+1.5
LL6C	La Loma 6 Bece	11.36	35	eP	Pn	07 59 41.1	-2.1
LL6C				eS	Sn	08 01 52.1	+3.0
LL6C				i		08 02 38.4	
	comp=Z,3µm,1.1s						
ACAL	Aguas Claras	11.36	333	eP	Pn	07 59 45.1	+1.8
PTEN	Parque Tenorio	11.41	334	⇓iP	Pn	07 59 46.2	+2.2
CUI	Cuipilapa	11.44	333	⇓eP	Pn	07 59 46.6	+2.2
COLC	Colonia	11.47	333	eP	Pn	07 59 48.3	+3.5
HORNC	Hornillas	11.50	333	⇓eP	Pn	07 59 47.6	+2.5
GUAB	Guayabo de Bag	11.52	333	⇓eP	Pn	07 59 48.2	+2.7
LIM1	Limonal	11.52	333	⇓eP	Pn	07 59 47.5	+2.1
GPS2	Hotel Rincn d	11.61	332	⇓eP	Pn	07 59 49.1	+2.4
BUEV	Buena Vista	11.68	332	eP	Pn	07 59 50.3	+2.7
GBS3	Finca Las Img	11.69	332	⇓eP	Pn	07 59 50.0	+2.3
GB1A	Borinquen Arri	11.69	332	⇓eP	Pn	07 59 50.2	+2.4
HZTE	Horizontes, Gu	11.69	331	Pn	Pn	07 59 50.7	+2.9
HZTE	Horizontes, Gu	11.69	331	eP	Pn	07 59 48.7	+0.9
BUAI	Buenos Aires	11.71	333	⇓iP	Pn	07 59 50.5	+2.4
CVALL	Valledupar, Ce	11.99	33	eP	Pn	07 59 58.8	+6.9
CVALL				eS	Sn	08 02 13.2	+8.4
CVALL				i		08 02 25.0	
	comp=Z,100nm,0.3s						
SMRC	Santa Marta, M	12.06	28	eP	P	08 00 08.2	+2.8
SDV	Santo Domingo	12.47	47	Pn	Pn	07 59 55.1	-3.5
	comp=Z,1.5nm,0.3s,baz=223,slow=12,SNR=18						
SDV				Sn	Sn	08 02 11.6	-5.2
	comp=Z,5.1nm,0.3s,baz=337,slow=19,SNR=1.6						
SDV				LR	LR	08 05 56.2	
	comp=Z,212µm,18.8s,baz=220,slow=44						
SDV	Santo Domingo	12.47	47	Pn	Pn	07 59 59.1	+0.4
SDV	Santo Domingo	12.47	47	eP	Pn	07 59 59.0	+0.4
CRJC	Cerrejon, Guaj	12.62	33	⇑eP	Pn	07 59 57.5	-3.1
CRJC				eS	Sn	08 02 43.1	+23
CRJC				i		08 02 58.7	
	comp=Z,138nm,0.6s						
NNA	Nana	12.69	166	Pn	Pn	08 00 00.9	-0.6
	comp=Z,14nm,0.3s,baz=345,slow=12,SNR=49						
NNA				Sn	Sn	08 02 19.9	-2.0
	comp=Z,16nm,0.3s,baz=45,slow=13,SNR=4.8						
	comp=Z,195nm,0.8s						
NNA	Nana	12.69	166	Pn	Pn	08 00 01.8	+0.3
NNA	Nana	12.69	166	eP	Pn	08 00 02.0	+0.5
NNA	Nana	12.69	166	⇑P	Pn	07 59 59.9	-1.6
PRVC	Isla de Provid	12.95	354	Pn	Pn	08 00 06.6	+1.5
PRVC	Isla de Provid	12.95	354	eP	Pn	08 00 06.5	+1.5
BOAB	BOACO BROADBAN	13.25	335	Pn	Pn	08 00 10.5	+1.4
BOAB	BOACO BROADBAN	13.25	335	⇓P	Pn	08 00 10.4	+1.3
URIC	Uribia, Colomb	13.68	35	eP	Pn	08 00 18.3	+3.4
LCND	La Caada	15.06	329	eP	Pn	08 00 35.1	+1.4
LCND	La Caada	15.06	329	eP	Pn	08 00 35.1	+1.4
TGUH	Tegucigalpa,Un	15.39	332	IAmb	IAmb	08 00 51.3	
	comp=Z,2µm,1.2s						
TGUH	Tegucigalpa,Un	15.39	332	⇓P	Pn	08 00 40.1	+1.9
COEG	Centro de Oper	15.85	326	eP	Pn	08 00 44.7	+0.6
COEG	Centro de Oper	15.85	326	eP	Pn	08 00 44.7	+0.6
HATO	Hato, Curacao	15.94	42	P	P	08 00 46.8	-1.6
LALI	Alcalda de L	16.00	325	eP	Pn	08 00 46.5	+0.7
LALI	Alcalda de L	16.00	325	eP	Pn	08 00 46.5	+0.7
SNET	Serv Nac Est T	16.10	325	IAmb	IAmb	08 00 58.8	
	comp=Z,3µm,1.3s						
JAYA	Jayaque - finc	16.20	325	i P	Pn	08 00 48.7	+0.1
JAYA	Jayaque - finc	16.20	325	i P	Pn	08 00 48.7	+0.1
MTO3	Montecristo	16.75	326	IAmb	IAmb	08 01 03.4	
	comp=Z,2µm,1.8s						
BIRV	Birongo	16.82	53	P	P	08 00 58.1	-0.2
BIRV				IAmb	IAmb	08 01 04.8	
	comp=Z,4µm,1.6s						
ETMB	Extrema	16.99	127	eP	Pn	08 00 55.0	-3.5
HOJ	Hope	17.74	10	i P	P	08 01 10.2	+1.8
STH	Stony Hill	17.80	10	i P	P	08 01 10.2	+1.1
GWJ	Greenwich	17.82	10	i P	P	08 01 12.5	+3.2
MTDJ	Mount Denham	17.84	7	P	P	08 01 10.8	+1.1
MTDJ	Mount Denham	17.84	7	eP	P	08 01 09.9	+0.3
MTDJ				eS	S	08 04 31.2	-2.2
MTDJ	Mount Denham	17.84	7	⇑P	P	08 01 10.3	+0.7
CMJ	Castle Mountai	17.94	11	i P	P	08 01 11.8	+1.2
FSCY	Frank Sound, G	18.82	356	eP	P	08 01 10.2	-10
SAML	Samuel	19.07	120	P	P	08 01 21.6	-1.4
SAML				IAmb	IAmb	08 01 29.3	
	comp=Z,1µm,0.7s						
SAML	Samuel	19.07	120	P	P	08 01 21.6	-1.4
SAML				pmax	pmax		
	comp=Z,1µm,0.7s						
LGNH	Logne	19.35	21	eP	Pn	08 01 27.8	+0.5
BOAV	Boa Vista	19.46	84	eP	P	08 01 27.6	+0.3
MACA	Manacapuru-AM	19.52	101	eP	P	08 01 26.9	-1.2
LMGC	Las Mercedes	19.73	8	eP	P	08 01 30.3	+0.2
LMGC				eS	S	08 05 10.2	-0.8
LMGC				IAMs_20	IAMs_20	08 11 01.3	
	comp=E,77µm,19.6s						
LMGC				IAMs_20	IAMs_20	08 11 14.8	
	comp=N,131µm,20.2s						
CCIG	Comitan	19.86	323	IAmb	IAmb	08 02 21.2	
	comp=Z,2µm,1.8s						
CCIG	Comitan	19.86	323	⇓P	P	08 01 32.5	+0.7
RCC	Rio Carpintero	19.88	12	eP	P	08 01 31.9	0.0
GTBY	Guantanamo Bay	19.94	13	eP	Pn	08 01 34.2	-0.1
GTBY				eS	Sn	08 05 18.0	+0.1
GTBY	Guantanamo Bay	19.94	13	⇑P	Pn	08 01 34.1	-0.1
I08BO	LAS PENAS INFR	20.02	146	i		09 56 20.0	
	baz=327,slow=327,SNR=1.9						
LPAZ	La Paz	20.25	146	P	P	08 01 37.0	+0.3
	comp=Z,137nm,0.7s,baz=330,slow=11,SNR=74						
LPAZ				S	S	08 05 22.5	-0.4
	comp=Z,48nm,1.1s,baz=158,slow=22,SNR=1.0						
LPAZ				Lg	Lg	08 07 53.5	
	comp=Z,0.9nm,0.3s,baz=276,slow=21,SNR=2.2						
LPAZ				LR	LR	08 11 13.1	
	comp=Z,554µm,18.4s,baz=323,slow=42						
	comp=Z,137nm,0.7s						
LPAZ	La Paz	20.25	146	P	P	08 01 37.3	+0.7
LPAZ	La Paz	20.25	146	P	P	08 01 37.3	+0.7
LPAZ				S	S	08 05 22.5	-0.4
LPAZ				pmax	pmax		
	comp=Z,575nm,0.9s						
LPAZ	La Paz	20.25	146	⇑iP	P	08 01 37.0	+0.3
LPAZ	La Paz	20.25	146	eP	P	08 01 37.3	+0.7
LPAZ	La Paz	20.25	146	⇑P	P	08 01 37.0	+0.3
SDDR	Presa de Saban	20.28	24	IAMs_20	IAMs_20	08 10 28.9	
	comp=Z,255µm,22.0s						
SDDR	Presa de Saban	20.28	24	eP	Pn	08 01 38.0	-0.4
SDDR	Presa de Saban	20.28	24	⇑P	Pn	08 01 38.1	-0.3
MASC	Masc	20.40	15	eP	P	08 01 38.6	+1.1
MASC				eS	S	08 05 26.0	+1.4
SDD	Santo Domingo	20.43	28	P	Pn	08 01 39.1	-0.9
MOAC	Moa	20.68	13	eP	P	08 01 41.1	+0.6
HLGC	Holguin	20.68	10	eP	P	08 01 41.7	+1.1
CCCC	Cccc	20.76	6	eP	P	08 01 42.0	+0.7
CCCC				eS	S	08 05 34.2	+2.6
AP01	Chacalluta	20.90	154	⇑iP	P	08 01 42.5	-0.4
TRN	Trinidad (W)	21.00	60	eP	P	08 01 39.6	-4.4
PB12	IPOC Station P	21.12	154	P	P	08 01 45.4	0.0
PB12				IAmb	IAmb	08 01 57.2	
	comp=Z,2µm,1.2s						
PB12	IPOC Station P	21.12	154	⇑iP	P	08 01 44.7	-0.8
PB16	IPOC Station P	21.25	152	⇑iP	P	08 01 48.1	+0.8
GRFF	Grenada Fort F	21.40	57	eP	P	08 01 42.9	-5.4
GRGR	Grenville	21.51	57	P	P	08 01 50.4	+0.9
GRGR				IAMs_20	IAMs_20	08 10 58.7	
	comp=Z,297µm,22.0s						
GRGR	Grenville	21.51	57	eP	P	08 01 41.8	-7.8
GRGR	Grenville	21.51	57	⇑P	P	08 01 46.8	-2.8
CRPR	Cabo Rojo, PR	21.52	35	P	P	08 01 49.7	+0.1
GCMP	Grenada, Carri	21.88	56	eP	P	08 01 46.4	-7.2
TOSP	Speyside	22.05	60	P	P	08 01 54.3	-1.0
TOSP	Speyside	22.05	60	eP	P	08 01 49.9	-5.4
SJG	San Juan	22.17	37	P	P	08 01 55.5	-1.1
	comp=Z,548nm,1.0s,baz=217,slow=9.7,SNR=104						
SJG				S	S	08 05 58.0	-1.3
	comp=Z,36nm,0.8s,baz=278,slow=13,SNR=1.8						
SJG				LR	LR	08 11 46.8	
	comp=Z,145µm,21.1s,baz=203,slow=40						
	comp=Z,548nm,1.0s						
SJG	San Juan	22.17	37	P	P	08 01 56.8	+0.2
SJG	San Juan	22.17	37	P	P	08 01 56.8	+0.2
SJG				pmax	pmax		
	comp=Z,5µm,1.4s						
SJG				MLR	MLR		
	comp=Z,140µm,21.0s						
CMIG	Matias Romero	22.19	319	P	P	08 01 57.0	+0.1
	comp=Z,86nm,1.0s,baz=132,slow=8.7,SNR=52						
CMIG				S	S	08 05 59.7	-0.1
	comp=Z,11nm,0.9s,baz=4.9,slow=6.6,SNR=1.9						
CMIG				LR	LR	08 08 57.8	
	comp=Z,94µm,21.0s,baz=164,slow=32						
	comp=Z,86nm,1.0s						
SVOC	Richmond Hill,	22.41	55	eP	P	08 01 57.2	-2.0
PB11	IPOC Station P	22.43	154	⇑iP	P	08 01 59.2	-0.3
SOR	Soroa	22.44	352	IAmb	IAmb	08 02 55.0	
	comp=Z,2µm,1.8s						
SOR	Soroa	22.44	352	eP	P	08 01 58.5	-1.0
SVB	Belmont	22.45	55	P	P	08 01 58.2	-1.5
SVB	Belmont	22.45	55	eP	P	08 01 57.0	-2.6
SVV	Soufriere Volc	22.50	55	eP	P	08 01 59.8	-0.5
SSV	Crater Summit	22.52	55	eP	P	08 01 59.9	-0.7
GRTK	Grand Turk	22.64	22	IAMs_20	IAMs_20	08 12 05.9	
	comp=Z,160µm,21.0s						
GRTK	Grand Turk	22.64	22	eP	P	08 02 00.9	-0.6
GRTK	Grand Turk	22.64	22	⇑P	P	08 02 01.2	-0.3
TA01	Diego Aracena	22.92	156	P	P	08 02 05.2	+0.7
TA01				IAmb	IAmb	08 02 37.0	
	comp=Z,992nm,1.1s						
TA01	Diego Aracena	22.92	156	⇑iP	P	08 02 04.8	+0.3
MCLT	Moule a Chique	22.94	54	eP	P	08 02 00.1	-4.7
PB08	IPOC Station P	22.98	153	IAmb	IAmb	08 02 31.4	
	comp=Z,613nm,1.0s						
PB08	IPOC Station P	22.98	153	⇑iP	P	08 02 06.0	+0.4
SLBI	Saint Lucia, B	23.09	53	eP	P	08 02 03.0	-3.3
PATCX	Punta Patache	23.16	156	⇑iP	P	08 02 07.7	+0.6
BIM	Bigot	23.29	52	eP	P	08 02 05.7	-2.7
FDF	Fort de France	23.35	52	IAMs_20	IAMs_20	08 12 17.7	
	comp=Z,124µm,18.0s						
FDF	Fort de France	23.35	52	eP	P	08 02 07.1	-1.9
FDF	Fort de France	23.35	52	⇑P	P	08 02 07.5	-1.6
MPOM	Morne Pois Mar	23.42	53	IAMs_20	IAMs_20	08 12 26.3	
	comp=Z,128µm,19.0s						
MPOM	Morne Pois Mar	23.42	53	eP	P	08 02 06.3	-3.3
MDN	Morne-Daniel	23.51	50	eP	P	08 02 07.7	-2.8
DSLB	Salisbury	23.56	50	eP	P	08 02 10.3	-0.7
ILAM	Ilet Lapin Mar	23.59	52	IAMs_20	IAMs_20	08 12 32.0	
	comp=Z,144µm,19.0s						
ILAM	Ilet Lapin Mar	23.59	52	eP	P	08 02 08.8	-2.5
VILB	Vilhena	23.62	125	eP	P	08 02 11.5	-0.1
DLPL	La Plaine	23.63	50	eP	P	08 02 08.8	-2.9
PB01	IPOC Station P	23.63	155	IAmb	IAmb	08 02 45.2	
	comp=Z,1µm,1.4s						
PB01	IPOC Station P	23.63	155	⇑iP	P	08 02 12.2	+0.4
TBG	Guadaloupe-3	23.65	49	eP	P	08 02 07.1	-4.7
TDBA	Terre de Bas,	23.65	49	IAMs_20	IAMs_20	08 11 59.8	
	comp=Z,217µm,22.0s						
TDBA	Terre de Bas,	23.65	49	eP	P	08 02 08.6	-3.3
PB02	IPOC Station P	23.71	156	IAmb	IAmb	08 02 43.9	
	comp=Z,623nm,0.8s						
PB02	IPOC Station P	23.71	156	⇑iP	P	08 02 13.5	+1.0
BCHC	Barbados, Cave	23.72	57	eP	P	08 02 04.8	-7.7
SEUS	St. Eustatius	23.76	44	eP	P	08 02 08.8	-4.0
BBGH	Gun Hill	23.78	57	eP	P	08 02 08.3	-4.8
BBGH	Gun Hill	23.78	57	⇑P	P	08 02 11.3	-1.9
SKOC	St. Kitts, UWI	23.80	44	eP	P	08 02 10.7	-2.6
MLYT	Lee's Yard	23.80	46	eP	P	08 02 12.7	-0.6
MBFL	Flemmings, Mon	23.80	46	eP	P	08 02 13.5	+0.2
CBE	Ff, Capester	23.81	48	IAMs_20	IAMs_20	08 12 15.8	
	comp=Z,186µm,22.0s						
CBE	Ff, Capester	23.81	48	eP	P	08 02 09.6	-3.8
GDHS	Morne Mazeau,	23.82	48	IAMs_20	IAMs_20	08 12 27.2	
	comp=Z,146µm,22.0s						
MAGL	Barre de l'ile	23.98	49	IAMs_20	IAMs_20	08 12 21.3	
	comp=Z,187µm,22.0s						
MAGL	Barre de l'ile	23.98	49	eP	P	08 02 11.7	-3.3
PB07	IPOC Station P	24.08	157	IAmb	IAmb	08 02 52.8	
	comp=Z,1µm,1.3s						
PB07	IPOC Station P	24.08	157	⇑iP	P	08 02 16.7	+0.6
SMRT	St. Maarten	24.08	42	eP	P	08 02 11.5	-4.4
ABD	La Joyeuse, An	24.15	48	IAMs_20	IAMs_20	08 12 36.0	
	comp=Z,168µm,22.0s						
ABD	La Joyeuse, An	24.15	48	eP	P	08 02 14.4	-2.1
BPA	Boggy Peak	24.25	46	eP	P	08 02 16.6	-0.9
ANDO	Antigua, Disas	24.32	46	eP	P	08 02 15.2	-2.9
ANBD	Bethesda, Anti	24.32	46	eP	P	08 02 16.2	-1.9
GDSD	La Dsirade Is	24.37	49	IAMs_20	IAMs_20	08 12 44.6	
	comp=Z,137µm,22.0s						
PB09	IPOC Station P	24.40	155	IAmb	IAmb	08 02 47.9	
	comp=Z,815nm,1.1s						
PB09	IPOC Station P	24.40	155	⇑iP	P	08 02 20.1	+1.0
PB04	IPOC Station P	24.53	158	⇑iP	P	08 02 21.1	+1.0
ITTB	Itaituba	24.60	101	eP	P	08 02 19.9	-0.8
ANWB	Willy Bob	24.71	45	eP	P	08 02 18.2	-3.5
ANWB	Willy Bob	24.71	45	⇑P	P	08 02 19.8	-1.8
TLIG	Tlapa	25.06	314	P	P	08 02 25.9	+0.9
TLIG	Tlapa	25.06	314	⇓P	P	08 02 26.1	+1.2
PB06	IPOC Station P	25.09	157	⇑iP	P	08 02 26.0	+0.8
LVC	Limon Verde	25.27	156	P	P	08 02 27.8	+0.8
	comp=Z,132nm,0.9s,baz=328,slow=6.3,SNR=57						
LVC				S	S	08 06 52.8	+1.5
	comp=Z,40nm,1.3s,baz=58,slow=4.6,SNR=1.4						
	comp=Z,132nm,0.9s						
LVC	Limon Verde	25.27	156	P	P	08 02 28.6	+1.5
LVC	Limon Verde	25.27	156	eP	P	08 02 28.4	+1.3
LVC	Limon Verde	25.27	156	eP	P	08 02 28.6	+1.5
061Z	Ochoppi	25.32	358	P	P	08 02 28.4	+1.4
	baz=177						
061Z				S	S	08 06 54.3	+3.0
	baz=177						
PB10	IPOC Station P	25.46	160	IAmb	IAmb	08 03 00.3	
	comp=Z,576nm,1.1s						
PB10	IPOC Station P	25.46	160	⇑iP	P	08 02 29.5	+1.1
PB15	IPOC Station P	25.58	157	IAmb	IAmb	08 02 59.5	
	comp=Z,496nm,0.7s						
PB15	IPOC Station P	25.58	157	⇑iP	P	08 02 30.8	+1.1
MALB	Monte Alegre	25.72	95	eP	P	08 02 30.7	-0.2
PTLB	Pontes e Lacer	25.87	128	eP	P	08 02 32.6	+0.5
AF01	San Pedro de A	25.88	155	eP	P	08 02 34.3	+1.8
PDRB	Porto dos Gac	25.93	118	eP	P	08 02 32.4	-0.4
CLDB	Colider	26.45	116	eP	P	08 02 36.9	-0.6
060A	Indiantown	26.47	359	IAmb	IAmb	08 02 57.5	
	comp=Z,675nm,1.0s						
060A	Indiantown	26.47	359	P	P	08 02 38.7	+1.3
	baz=179						
060A				S	S	08 07 11.6	+2.1
	baz=179						
PB14	IPOC Station P	26.54	160	IAmb	IAmb	08 02 55.5	
	comp=Z,812nm,1.2s						
PB14	IPOC Station P	26.54	160	⇑iP	P	08 02 39.4	+0.8
UNM	Universidad Na	26.66	316	IAmb	IAmb	08 03 23.4	
	comp=Z,966nm,1.4s						
UNM				IAMs_20	IAMs_20	08 11 03.6	
	comp=Z,110µm,20.0s						
GO02	Mina Guanaco	27.32	159	⇑iP	P	08 02 46.9	+1.4
HJA	Humahuaca	27.39	150	i P	P	08 02 48.1	+1.9
DWPF	Disney Wildern	27.57	357	P	P	08 02 47.2	-0.2
DWPF				IAmb	IAmb	08 03 15.0	
	comp=Z,496nm,1.1s						
DWPF	Disney Wildern	27.57	357	P	P	08 02 48.1	+0.8
	baz=176,SNR=9.7						
DWPF				S	S	08 07 28.7	+1.7
	baz=176						
DWPF	Disney Wildern	27.57	357	P	P	08 02 47.9	+0.5
	baz=176						
DWPF				S	S	08 07 29.4	+2.4
	baz=176						
DWPF	Disney Wildern	27.57	357	eP	P	08 02 46.3	-1.1
DWPF	Disney Wildern	27.57	357	⇑P	P	08 02 47.9	+0.5
MPGF	Montagnes des	27.60	80	⇑P	P	08 02 48.1	+0.3
MDP	Montagnes des	27.60	80	P	P	08 02 46.8	-1.1
	comp=Z,205nm,0.9s,baz=253,slow=8.8,SNR=31						
MDP				S	S	08 07 27.7	-0.1
	comp=Z,72nm,1.1s,baz=349,slow=23,SNR=1.8						
MDP				LR	LR	08 14 09.3	
	comp=Z,566µm,19.2s,baz=260,slow=38						
	comp=Z,205nm,0.9s						
MCPB	Macapa, AP	27.84	92	eP	P	08 02 49.5	-0.5
AC01	Pan de Azucar	27.89	162	IAmb	IAmb	08 03 05.5	
	comp=Z,444nm,1.4s						
AC01	Pan de Azucar	27.89	162	⇑iP	P	08 02 51.1	+0.8
MOIG	Morelia	28.32	314	P	P	08 02 56.3	+1.9
MOIG				IAmb	IAmb	08 03 05.6	
	comp=Z,825nm,1.9s						
SLA	San Lorenzo	28.61	152	i P	P	08 02 59.6	+2.6
SALV	Santo Antonio	28.87	125	eP	P	08 02 59.3	+0.1
656A	Willston	28.90	355	IAmb	IAmb	08 03 08.8	
	comp=Z,707nm,1.7s						
656A	Willston	28.90	355	P	P	08 02 59.5	+0.4
	baz=174,SNR=8.0						
656A				S	S	08 07 49.0	+1.2
	baz=174						
AC02	Maricunga	29.01	160	IAmb	IAmb	08 03 17.1	
	comp=Z,774nm,1.5s						
AC02	Maricunga	29.01	160	⇑iP	P	08 03 02.6	+1.8
AC06	Mina Casimiro	29.10	162	⇑iP	P	08 03 02.0	+0.9
GO03	Copiap	29.36	162	IAmb	IAmb	08 03 49.3	
	comp=Z,1µm,1.9s						
GO03	Copiap	29.36	162	⇑iP	P	08 03 04.5	+1.1
GO03	Copiap	29.36	162	i P	P	08 03 05.2	+1.8
FSA	Cafayete	29.60	154	i P	P	08 03 07.1	+1.4
AC04	Llanos de Chal	29.69	164	P	P	08 03 06.8	+0.5
AC04	Llanos de Chal	29.69	164	⇑iP	P	08 03 07.0	+0.8
553A	Crawfordville	29.92	352	IAmb	IAmb	08 03 33.6	
	comp=Z,537nm,1.3s						
553A	Crawfordville	29.92	352	P	P	08 03 09.0	+0.7
	baz=171,SNR=6.8						
553A				S	S	08 08 05.0	+1.1
	baz=171						
456A	Hilliard	30.21	356	P	P	08 03 11.0	+0.3
	baz=176,SNR=6.7						
456A				S	S	08 08 10.4	+2.0
	baz=176						
PP1B	Ponte de Pedra	30.44	127	eP	P	08 03 13.5	+0.4
451A	Vernon	30.54	350	P	P	08 03 13.6	-0.1
	baz=168						
451A				S	S	08 08 13.1	-0.5
	baz=168						
LCO	Las Campanas	30.56	164	P	P	08 03 15.5	+1.3
LCO				IAmb	IAmb	08 04 02.5	
	comp=Z,660nm,1.6s						
LCO	Las Campanas	30.56	164	P	P	08 03 15.5	+1.3
LCO				pmax	pmax		
	comp=Z,660nm,1.7s						
LCO				MLR	MLR		
	comp=Z,40µm,22.0s						
LCO	Las Campanas	30.56	164	⇑iP	P	08 03 15.1	+0.9
LCO	Las Campanas	30.56	164	⇑P	P	08 03 15.1	+0.9
PRPB	Parauapebas	30.72	103	eP	P	08 03 14.1	-1.5
SNDB	Serra Nova Dou	30.95	114	eP	P	08 03 17.2	-0.4
TIGA	Tifton	31.05	354	IAmb	IAmb	08 03 21.5	
	comp=Z,180nm,0.8s						
TIGA	Tifton	31.05	354	P	P	08 03 18.2	0.0
	baz=173,SNR=17						
TIGA				S	S	08 08 22.1	+0.5
	baz=173						
TIGA	Tifton	31.05	354	P	P	08 03 18.4	+0.2
	baz=173,SNR=17						
TIGA				S	S	08 08 21.8	+0.3
	baz=173						
545B	Wilberts Farm,	31.14	342	P	P	08 03 20.2	+1.1
	baz=159						
545B				S	S	08 08 27.2	+4.2
	baz=159						
352A	Blakely	31.26	352	IAmb	IAmb	08 03 49.1	
	comp=Z,464nm,1.6s						
352A	Blakely	31.26	352	P	P	08 03 20.2	+0.1
	baz=170,SNR=12						
352A				S	S	08 08 24.2	-0.6
	baz=170						
ZAIG	Zacatecas	31.31	317	⇓P	P	08 03 22.4	+1.4
BRAL	Brewton	31.33	348	P	P	08 03 21.2	+0.5
	baz=166,SNR=9.5						
BRAL				S	S	08 08 26.9	+1.0
	baz=166						
BRAL	Brewton	31.33	348	P	P	08 03 20.9	+0.2
	baz=166,SNR=9.5						
BRAL				S	S	08 08 27.2	+1.3
	baz=166						
BRAL	Brewton	31.33	348	⇑P	P	08 03 21.2	+0.5
257A	Skidaway Islan	31.40	358	P	P	08 03 21.0	-0.3
	baz=178						
257A				S	S	08 08 25.9	-1.2
	baz=178						
255A	Hazlehurst	31.43	356	P	P	08 03 21.6	0.0
	baz=175,SNR=13						
255A				S	S	08 08 28.3	+0.8
	baz=175						
AQDB	Aquidauana	31.49	133	IAmb	IAmb	08 03 30.0	
	comp=Z,349nm,0.9s						
AQDB	Aquidauana	31.49	133	eP	P	08 03 22.3	0.0
GO04	Tololo Observa	31.63	165	IAmb	IAmb	08 03 43.8	
	comp=Z,334nm,1.0s						
GO04	Tololo Observa	31.63	165	⇑iP	P	08 03 24.6	+0.9
CO01	Juntas del Tor	31.64	164	⇑iP	P	08 03 25.1	+1.4
CO06	Fray Jorge	31.90	166	⇑iP	P	08 03 26.8	+1.1
TMAB	Tom-Au,PA,Br	31.90	95	eP	P	08 03 25.9	-0.1
250A	Grady	31.96	350	P	P	08 03 26.1	-0.1
	baz=168,SNR=27						
250A				S	S	08 08 34.6	-1.2
	baz=168						
AROD	Rodeo	32.00	163	i P	P	08 03 29.8	+2.8
KVTX	Kingsville	32.03	329	P	P	08 03 30.2	+3.3
	baz=144						
KVTX				S	S	08 08 41.6	+4.5
	baz=144						
KVTX	Kingsville	32.03	329	⇓p	P	08 03 31.3	+4.4
ACDV	Cuesta del Vie	32.10	162	i P	P	08 03 30.3	+2.5
346A	Big Creek Wild	32.11	344	P	P	08 03 28.1	+0.6

	baz=162,SNR=36						
346A				S	S	08 08 39.1	+1.0
	baz=162						
ACLC	CERRO LA CRUZ	32.15	158	i P	P	08 03 30.0	+1.9
154A	Montrose	32.16	355	P	P	08 03 27.9	-0.1
	baz=174,SNR=34						
154A				S	S	08 08 39.2	+0.3
	baz=174						
152A	Waverly Hall	32.40	352	IAmb	IAmb	08 03 39.0	
	comp=Z,394nm,1.2s						
152A	Waverly Hall	32.40	352	P	P	08 03 29.7	-0.4
	baz=171,SNR=62						
152A				S	S	08 08 41.6	-1.1
	baz=171						
ACCO	Cerro Coronel	32.51	162	i P	P	08 03 33.7	+2.2
NHSC	New Hope	32.51	360	IAMs_20	IAMs_20	08 18 54.6	
	comp=Z,106µm,21.0s						
NHSC	New Hope	32.51	360	P	P	08 03 31.6	+0.5
	baz=179,SNR=16						
NHSC				S	S	08 08 46.4	+2.1
	baz=179						
NHSC	New Hope	32.51	360	P	P	08 03 31.5	+0.5
	baz=179,SNR=16						
NHSC				S	S	08 08 47.4	+3.0
	baz=179						
344A	Westbrook Farm	32.53	343	P	P	08 03 31.6	+0.4
	baz=159,SNR=28						
344A				S	S	08 08 46.2	+1.5
	baz=159						
CO02	Combarbal	32.56	166	⇑iP	P	08 03 32.8	+1.1
441A	DeRidder	32.70	338	P	P	08 03 33.5	+0.8
	baz=155						
441A				S	S	08 08 49.3	+1.9
	baz=155						
HAW	Hawthorne Fire	32.80	357	S	S	08 08 49.5	+0.6
	baz=177						
342B	Flagon Creek P	32.96	340	P	P	08 03 35.4	+0.4
	baz=157,SNR=21						
342B				S	S	08 08 48.2	-3.3
	baz=157						
GOGA	Godfrey	32.99	354	IAmb	IAmb	08 03 44.2	
	comp=Z,273nm,1.4s						
GOGA	Godfrey	32.99	354	IAMs_20	IAMs_20	08 15 40.4	
	comp=Z,103µm,21.0s						
GOGA	Godfrey	32.99	354	P	P	08 03 35.2	0.0
	baz=173,SNR=33						
GOGA				S	S	08 08 51.5	-0.3
	baz=173						
GOGA	Godfrey	32.99	354	P	P	08 03 35.0	-0.3
	baz=173,SNR=33						
GOGA				S	S	08 08 51.2	-0.5
	baz=173						
735A	Kenedy	33.06	330	IAmb	IAmb	08 03 50.2	
	comp=Z,324nm,1.1s						
735A	Kenedy	33.06	330	P	P	08 03 37.0	+1.1
	baz=146,SNR=13						
735A				S	S	08 08 55.5	+2.6
	baz=146						
HKT	Hockley	33.06	334	P	P	08 03 36.3	+0.4
HKT				IAmb	IAmb	08 03 45.8	
	comp=Z,373nm,1.5s						
HKT	Hockley	33.06	334c	iP	P	08 03 35.5	-0.3
HKT				pmax	pmax		
	comp=Z,440nm,2.2s						
HKT				MLR	MLR		
	comp=Z,33µm,20.0s						
HKT	Hockley	33.06	334	P	P	08 03 36.3	+0.4
	baz=150						
HKT				S	S	08 08 53.3	+0.5
	baz=150						
HKT	Hockley	33.06	334	⇑P	P	08 03 36.1	+0.3
AVFE	Valle Fertil	33.09	160	i P	P	08 03 38.0	+1.7
Z51A	Franklin	33.10	352	IAmb	IAmb	08 03 45.2	
	comp=Z,382nm,1.2s						
Z51A	Franklin	33.10	352	P	P	08 03 36.0	-0.2
	baz=170,SNR=41						
Z51A				S	S	08 08 53.5	0.0
	baz=170						
LRAL	Lakeview Retre	33.12	349	IAmb	IAmb	08 03 44.6	
	comp=Z,184nm,1.0s						
LRAL	Lakeview Retre	33.12	349	P	P	08 03 36.1	-0.3
	baz=167,SNR=73						
LRAL				S	S	08 08 52.5	-1.4
	baz=167						
LRAL	Lakeview Retre	33.12	349	P	P	08 03 36.0	-0.4
	baz=167,SNR=73						
LRAL				S	S	08 08 51.8	-2.1
	baz=167						
APLL	PUNTA DE LOS L	33.18	159	i P	P	08 03 38.3	+1.2
VBMS	Vicksburg	33.18	343	P	P	08 03 36.7	-0.2
	baz=160,SNR=6.7						
VBMS				S	S	08 08 53.5	-1.3
	baz=160						
VBMS	Vicksburg	33.18	343	P	P	08 03 36.6	-0.2
	baz=160,SNR=6.7						
VBMS				S	S	08 08 54.3	-0.5
	baz=160						
146A	Union	33.19	346	P	P	08 03 36.8	-0.2
	baz=163,SNR=18						
146A				S	S	08 08 54.6	-0.4
	baz=163						
Y58A	Scranton	33.31	0	IAmb	IAmb	08 04 01.0	
	comp=Z,343nm,1.1s						
Y58A	Scranton	33.31	0	P	P	08 03 37.8	-0.2
	baz=180,SNR=7.8						
Y58A				P	P	08 03 37.8	-0.2
	baz=180,SNR=7.8						
Y58A				S	S	08 08 57.1	+0.3
	baz=180						
Y58A				S	S	08 08 57.1	+0.3
	baz=180						
Y59A	Loris	33.41	2	P	P	08 03 39.0	+0.2
	baz=182,SNR=32						
Y59A				P	P	08 03 39.0	+0.2
	baz=182,SNR=32						
Y59A				S	S	08 08 60.0	+1.7
	baz=182						
Y59A				S	S	08 08 60.0	+1.7
	baz=182						
Y57A	Sumter	33.42	359	IAmb	IAmb	08 03 48.2	
	comp=Z,593nm,1.6s						
Y57A	Sumter	33.42	359	P	P	08 03 38.8	-0.2
	baz=179,SNR=22						
Y57A				P	P	08 03 38.8	-0.2
	baz=179,SNR=22						
Y57A				S	S	08 08 58.3	-0.2
	baz=179						
Y57A				S	S	08 08 58.3	-0.2
	baz=179						
833A	Chaparral WMA,	33.44	328	P	P	08 03 40.8	+1.5
	baz=143,SNR=38						
833A				S	S	08 08 58.9	-0.1
	baz=143						
833A	Chaparral WMA,	33.44	328	P	P	08 03 40.3	+1.0
	baz=143,SNR=38						
833A				S	S	08 09 00.7	+1.6
	baz=143						
Y60A	Bolivia	33.45	3	P	P	08 03 39.5	+0.3
	baz=183,SNR=12						
Y60A				P	P	08 03 39.5	+0.3
	baz=183,SNR=12						
Y60A				S	S	08 08 59.8	+0.9
	baz=183						
Y60A				S	S	08 08 59.8	+0.9
	baz=183						
SMTB	Santa Maria do	33.47	107	eP	P	08 03 39.2	-0.5
Y52A	Lilburn	33.50	354	P	P	08 03 39.5	-0.2
	baz=172,SNR=26						
Y52A				P	P	08 03 39.5	-0.2
	baz=172,SNR=26						
Y52A				S	S	08 08 58.8	-0.9
	baz=172						
Y52A				S	S	08 08 58.8	-0.9
	baz=172						
Z47A	Carrollton	33.50	348	IAmb	IAmb	08 03 47.8	
	comp=Z,208nm,1.0s						
Z47A	Carrollton	33.50	348	P	P	08 03 39.0	-0.7
	baz=165,SNR=33						
Z47A				S	S	08 08 57.8	-1.9
	baz=165						
RTLS	Leoncito	33.58	164	i P	P	08 03 43.3	+2.5
HODGE	Hodges	33.71	356	IAmb	IAmb	08 03 50.6	
	comp=Z,348nm,1.3s						
HODGE	Hodges	33.71	356	S	S	08 09 02.7	-0.2
	baz=176						
JSC	Jenkinsville	33.71	358	IAmb	IAmb	08 03 50.7	
	comp=Z,317nm,1.2s						
JSC	Jenkinsville	33.71	358	S	S	08 09 03.5	+0.5
	baz=177						
PEXB	Peixe	33.73	113	eP	P	08 03 41.5	-0.5
VA06	Catapilco	33.79	167	IAmb	IAmb	08 04 00.8	
	comp=Z,350nm,1.1s						
Y49A	Blount Mountai	33.82	350	IAmb	IAmb	08 04 16.5	
	comp=Z,392nm,1.6s						
Y49A	Blount Mountai	33.82	350	P	P	08 03 41.7	-0.8
	baz=168,SNR=24						
Y49A				S	S	08 09 03.0	-1.8
	baz=168						
ACHE	Chepes	33.83	159	i P	P	08 03 44.2	+1.4
143A	Socs Landing,	33.90	342	IAmb	IAmb	08 03 56.6	
	comp=Z,416nm,1.4s						
143A	Socs Landing,	33.90	342	P	P	08 03 42.3	-0.8
	baz=159						
143A				S	S	08 09 04.2	-1.7
	baz=159						
X58A	Rowland	33.96	1	IAmb	IAmb	08 03 46.1	
	comp=Z,380nm,1.4s						
X58A	Rowland	33.96	1	P	P	08 03 43.6	-0.1
	baz=181,SNR=13						
X58A				P	P	08 03 43.6	-0.1
	baz=181,SNR=13						
X58A				S	S	08 09 07.4	+0.6
	baz=181						
X58A				S	S	08 09 07.4	+0.6
	baz=181						
BIRD	Birdtown, Kers	34.05	359	S	S	08 09 07.7	-0.5
	baz=179						
NATX	Nacogdoches	34.16	337	P	P	08 03 45.6	+0.2
	baz=153,SNR=11						
NATX				S	S	08 09 09.9	-0.1
	baz=153						
NATX	Nacogdoches	34.16	337	P	P	08 03 45.7	+0.2
	baz=153,SNR=11						
NATX				S	S	08 09 09.5	-0.6
	baz=153						
VA01	Torpederas	34.16	168	⇑iP	P	08 03 46.5	+1.0
VA03	San Esteban	34.16	166	⇑iP	P	08 03 46.7	+1.1
ROC1	El Roble	34.26	167	i P	P	08 03 45.6	-1.0
PAULI	Pauline	34.27	357	IAmb	IAmb	08 03 47.5	
	comp=Z,423nm,1.5s						
PAULI	Pauline	34.27	357	S	S	08 09 09.1	-2.5
	baz=176						
X51A	Calhoun	34.28	353	P	P	08 03 45.9	-0.6
	baz=171,SNR=33						
X51A				P	P	08 03 45.9	-0.6
	baz=171,SNR=33						
X51A				S	S	08 09 09.3	-2.6
	baz=171						
X51A				S	S	08 09 09.3	-2.6
	baz=171						
CPUP	Villa Florida	34.36	142	P	P	08 03 46.6	-0.7
	comp=Z,33nm,0.8s,baz=324,slow=9.0,SNR=50						
CPUP				S	S	08 09 09.6	-3.6
	comp=Z,8.4nm,1.0s,baz=213,slow=8.4,SNR=1.3						
CPUP				LR	LR	08 19 50.7	
	comp=Z,261µm,18.6s,baz=326,slow=40						
	comp=Z,33nm,0.8s						
CPUP	Villa Florida	34.36	142	⇑P	P	08 03 46.2	-1.1
FPAL	Fort Paine	34.36	352	IAmb	IAmb	08 03 55.7	
	comp=Z,376nm,1.1s						
Y45A	Yeager Farm, C	34.48	346	P	P	08 03 48.3	+0.1
	baz=163,SNR=38						
Y45A				S	S	08 09 14.2	-0.7
	baz=163						
PEL	Peldehue	34.49	166	⇑iP	P	08 03 49.3	+0.9
PEL	Peldehue	34.49	166	⇑P	P	08 03 49.2	+0.9
MT02	Curacav	34.50	167	IAmb	IAmb	08 04 05.6	
	comp=Z,249nm,1.1s						
MT02	Curacav	34.50	167	⇑iP	P	08 03 49.0	+0.6
BG3	Lake Jocassee	34.51	356	IAmb	IAmb	08 03 57.7	
	comp=Z,342nm,1.1s						
CASEE	Lake Jocassee	34.51	356	S	S	08 09 14.7	-0.7
	baz=174						
X48A	Hartselle	34.51	350	IAmb	IAmb	08 04 22.4	
	comp=Z,636nm,1.8s						
X48A	Hartselle	34.51	350	P	P	08 03 47.5	-0.9
	baz=167,SNR=58						
X48A				S	S	08 09 13.4	-1.9
	baz=167						
W57A	Gilead	34.55	360	IAmb	IAmb	08 03 49.6	
	comp=Z,343nm,1.4s						
W57A	Gilead	34.55	360	P	P	08 03 48.5	-0.3
	baz=180,SNR=20						
W57A				P	P	08 03 48.5	-0.3
	baz=180,SNR=20						
W57A				S	S	08 09 18.4	+2.4
	baz=180						
W57A				S	S	08 09 18.4	+2.4
	baz=180						
435B	Jarrell	34.55	333	IAmb	IAmb	08 04 04.4	
	comp=Z,391nm,1.2s						
435B	Jarrell	34.55	333	P	P	08 03 49.4	+0.4
	baz=148						
435B				S	S	08 09 15.9	-0.2
	baz=148						
435B	Jarrell	34.55	333	P	P	08 03 49.3	+0.3
	baz=148						
435B				S	S	08 09 15.4	-0.7
	baz=148						
KMSC	Kings Mountain	34.57	358	IAmb	IAmb	08 03 58.2	
	comp=Z,473nm,1.4s						
KMSC	Kings Mountain	34.57	358	P	P	08 03 48.9	-0.1
	baz=177,SNR=54						
KMSC				S	S	08 09 16.4	+0.2
	baz=177						
KMSC	Kings Mountain	34.57	358	P	P	08 03 49.0	+0.1
	baz=177,SNR=54						
KMSC				S	S	08 09 16.5	+0.2
	baz=177						
CNNC	Cliffs of the	34.69	3	IAMs_20	IAMs_20	08 17 56.0	
	comp=Z,68µm,20.0s						
CNNC	Cliffs of the	34.69	3	P	P	08 03 50.2	+0.2
	baz=183,SNR=6.1						
CNNC				S	S	08 09 19.8	+1.7
	baz=183						
CNNC	Cliffs of the	34.69	3	P	P	08 03 50.1	+0.1
	baz=183,SNR=6.1						
CNNC				S	S	08 09 20.2	+2.1
	baz=183						
W52A	Murphy	34.70	354	P	P	08 03 50.0	-0.2
	baz=173,SNR=42						
W52A				S	S	08 09 17.6	-0.7
	baz=173						
TCA	Tanti	34.76	157	i P	P	08 03 51.5	+0.7
FCH	Farellones	34.77	166	eP	P	08 03 49.8	-1.3
VA05	Santo Domingo	34.78	168	IAmb	IAmb	08 04 07.3	
	comp=Z,241nm,1.2s						
VA05	Santo Domingo	34.78	168	⇑iP	P	08 03 51.5	+0.7
237A	Washetta, Mont	34.83	336	IAmb	IAmb	08 04 02.9	
	comp=Z,417nm,1.0s						
237A	Washetta, Mont	34.83	336	P	P	08 03 51.4	+0.2
	baz=151,SNR=5.8						
237A				S	S	08 09 17.8	-2.6
	baz=151						
Z41A	Richland Creek	34.85	341	IAmb	IAmb	08 04 00.4	
	comp=Z,431nm,1.4s						
Z41A	Richland Creek	34.85	341	P	P	08 03 51.8	+0.4
	baz=157,SNR=17						
Z41A				P	P	08 03 51.8	+0.4
	baz=157,SNR=17						
Z41A				S	S	08 09 19.5	-1.1
	baz=157						
Z41A				S	S	08 09 19.5	-1.1
	baz=157						
Z41A	Richland Creek	34.85	341	P	P	08 03 51.2	-0.2
	baz=157,SNR=17						
Z41A				S	S	08 09 20.5	-0.1
	baz=157						
BBSR	BB Station	34.86	23	P	P	08 03 51.1	-0.4
BBSR	BB Station	34.86	23	IAMs_20	IAMs_20	08 18 16.7	
	comp=Z,99µm,22.0s						
BBSR	BB Station	34.86	23	P	P	08 03 52.2	+0.7
	baz=207,SNR=15						
BBSR	BB Station	34.86	23	⇑P	P	08 03 52.1	+0.6
MT03	Universidad Ad	34.87	166	IAmb	IAmb	08 04 11.6	
	comp=Z,370nm,1.0s						
MT03	Universidad Ad	34.87	166	⇑iP	P	08 03 53.0	+1.3
W50A	Signal Mountai	34.97	352	IAmb	IAmb	08 04 01.2	
	comp=Z,285nm,0.9s						
W50A	Signal Mountai	34.97	352	P	P	08 03 52.0	-0.5
	baz=170,SNR=73						
W50A				S	S	08 09 22.1	-0.4
	baz=170						
MT09	Talagante	35.03	167	⇑iP	P	08 03 53.9	+0.8
MT01	Popeta	35.06	167	⇑iP	P	08 03 53.5	+0.3
OXF	Oxford	35.06	346	IAmb	IAmb	08 05 02.0	
	comp=Z,307nm,1.1s						
OXF	Oxford	35.06	346	P	P	08 03 51.9	-1.4
	baz=163,SNR=11						
OXF				S	S	08 09 21.4	-2.5
	baz=163						
OXF	Oxford	35.06	346	P	P	08 03 51.9	-1.4
	baz=163,SNR=11						
OXF				S	S	08 09 22.2	-1.7
	baz=163						
SWET	Sewanee	35.07	351	IAmb	IAmb	08 04 01.1	
	comp=Z,231nm,1.0s						
CCAR	Cane Creek	35.14	343	S	S	08 09 24.4	-0.6
	baz=159						
TRCB	Terra Rica	35.16	133	eP	P	08 03 53.5	-0.8
V53A	Saluda	35.17	356	P	P	08 03 54.0	-0.2
	baz=175,SNR=45						
V53A				P	P	08 03 54.0	-0.2
	baz=175,SNR=45						
V53A				S	S	08 09 24.6	-1.1
	baz=175						
V53A				S	S	08 09 24.6	-1.1
	baz=175						
ITRB	Iturama	35.18	126	eP	P	08 03 54.5	0.0
V58A	Windy Hill, Pi	35.20	1	IAmb	IAmb	08 04 30.9	
	comp=Z,180nm,0.9s						
V58A	Windy Hill, Pi	35.20	1	P	P	08 03 54.2	-0.1
	baz=181,SNR=37						
V58A				P	P	08 03 54.2	-0.1
	baz=181,SNR=37						
V58A				S	S	08 09 25.5	-0.4
	baz=181						
V58A				S	S	08 09 25.5	-0.4
	baz=181						
PLAL	Pickwick Lake	35.22	348	IAmb	IAmb	08 04 54.3	
	comp=Z,349nm,1.4s						
TKL	Tuckaleechee C	35.24	355	P	P	08 03 54.3	-0.5
	comp=Z,63nm,0.8s,baz=172,slow=8.0,SNR=41						
TKL				S	S	08 09 25.3	-1.3
	comp=Z,6.6nm,0.9s,baz=273,slow=23,SNR=1.2						
TKL				LR	LR	08 17 32.5	
	comp=Z,87µm,20.3s,baz=168,slow=35						
	comp=Z,63nm,0.8s						
TKL	Tuckaleechee C	35.24	355	IAmb	IAmb	08 04 02.7	
	comp=Z,213nm,1.0s						
TKL	Tuckaleechee C	35.24	355	P	P	08 03 54.3	-0.5
	baz=173,SNR=32						
TKL				S	S	08 09 25.2	-1.5
	baz=173						
V55A	Taylorsville	35.27	358	IAmb	IAmb	08 03 56.2	
	comp=Z,453nm,1.6s						
V55A	Taylorsville	35.27	358	P	P	08 03 55.1	+0.1
	baz=178,SNR=24						
V55A				P	P	08 03 55.1	+0.1
	baz=178,SNR=24						
V55A				S	S	08 09 27.5	+0.4
	baz=178						
V55A				S	S	08 09 27.5	+0.4
	baz=178						
LMEL	Las Melosas	35.28	166	⇑iP	P	08 03 57.1	+1.7
BDFB	Brasilia	35.29	118	P	P	08 03 55.5	-0.2
	comp=Z,229nm,0.8s,baz=284,slow=10,SNR=158						
BDFB				S	S	08 09 25.8	-2.3
	comp=Z,25nm,0.8s,baz=52,slow=3.8,SNR=1.5						
BDFB				LR	LR	08 19 12.6	
	comp=Z,345µm,19.9s,baz=295,slow=38						
	comp=Z,229nm,0.8s						
BDFB	Brasilia	35.29	118	P	P	08 03 55.2	-0.4
BDFB				IAmb	IAmb	08 03 57.7	
	comp=Z,395nm,1.0s						
BDFB	Brasilia	35.29	118	P	P	08 03 55.2	-0.4
BDFB				pmax	pmax		
	comp=Z,395nm,1.0s						
MRA	San Martin	35.30	159	i P	P	08 03 56.6	+1.1
BO04	La Punta	35.32	167	IAmb	IAmb	08 04 13.6	
	comp=Z,489nm,1.1s						
BO04	La Punta	35.32	167	⇑iP	P	08 03 56.4	+0.8
V61A	Roper	35.33	5	P	P	08 03 55.9	+0.5
	baz=186,SNR=9.5						
V61A				P	P	08 03 55.9	+0.5
	baz=186,SNR=9.5						
V61A				S	S	08 09 30.2	+2.4
	baz=186						
V61A				S	S	08 09 30.2	+2.4
	baz=186						
JCT	Junction City	35.38	329	P	P	08 03 56.8	+0.8
	baz=144,SNR=167						
JCT				S	S	08 09 30.4	+1.4
	baz=144						
JCT	Junction City	35.38	329	P	P	08 03 57.0	+0.9
	baz=144,SNR=167						
JCT				S	S	08 09 31.3	+2.3
	baz=144						
JCT	Junction City	35.38	329	⇑P	P	08 03 56.9	+0.8
V52A	Sevierville	35.41	355	IAmb	IAmb	08 04 05.1	
	comp=Z,652nm,1.5s						
V52A	Sevierville	35.41	355	P	P	08 03 55.8	-0.4
	baz=173,SNR=54						
V52A				S	S	08 09 28.2	-1.0
	baz=173						
V51A	Loudon	35.45	354	IAmb	IAmb	08 04 00.1	
	comp=Z,285nm,1.1s						
V51A	Loudon	35.45	354	P	P	08 03 56.3	-0.2
	baz=172,SNR=61						
V51A				S	S	08 09 28.8	-0.9
	baz=172						
H06E1	SOCORRO T-PHAS	35.50	303	T	T	08 41 12.1	
	SNR=88						
WHTX	Lake Whitney,	35.52	334	P	P	08 03 57.3	+0.1
	baz=149,SNR=18						
WHTX				S	S	08 09 29.8	-1.2
	baz=149						
WHTX	Lake Whitney,	35.52	334	P	P	08 03 57.5	+0.3
	baz=149,SNR=18						
WHTX				S	S	08 09 30.3	-0.7
	baz=149						
BO03	Pichilemu	35.52	169	i P	P	08 03 56.9	-0.2
BO01	Tunca	35.60	167	P	P	08 03 58.3	+0.4
BO01				IAmb	IAmb	08 04 15.3	
	comp=Z,347nm,1.2s						
BO01	Tunca	35.60	167	⇑iP	P	08 03 58.5	+0.6
Z38A	Mt. Pleasant	35.62	338	P	P	08 03 57.8	-0.2
	baz=153,SNR=26						
Z38A				S	S	08 09 31.2	-1.3
	baz=153						
W45A	Hickory Valley	35.63	347	P	P	08 03 56.8	-1.3
	baz=164,SNR=46						
W45A				S	S	08 09 30.4	-2.1
	baz=164						
V48A	Smith Brothers	35.73	350	P	P	08 03 58.2	-0.8
	baz=168,SNR=226						
V48A				S	S	08 09 31.3	-2.8
	baz=168						
U56A	King	35.75	359	IAmb	IAmb	08 04 00.5	
	comp=Z,615nm,1.5s						
U56A	King	35.75	359	P	P	08 03 59.5	+0.4
	baz=179,SNR=39						
U56A				P	P	08 03 59.5	+0.4
	baz=179,SNR=39						
U56A				S	S	08 09 34.7	+0.3
	baz=179						
U56A				S	S	08 09 34.7	+0.3
	baz=179						
U59A	Littleton	35.80	3	IAmb	IAmb	08 04 08.9	
	comp=Z,281nm,1.2s						
U59A	Littleton	35.80	3	P	P	08 03 59.8	+0.3
	baz=183,SNR=37						
U59A				P	P	08 03 59.8	+0.3
	baz=183,SNR=37						
U59A				S	S	08 09 36.5	+1.3
	baz=183						
U59A				S	S	08 09 36.5	+1.3
	baz=183						
U54A	Nelsons Funny	35.96	357	P	P	08 04 00.9	-0.1
	baz=176,SNR=34						
U54A				P	P	08 04 00.9	-0.1
	baz=176,SNR=34						
U54A				S	S	08 09 37.4	-0.4
	baz=176						
U54A				S	S	08 09 37.4	-0.4
	baz=176						
X40A	Basin Creek Fa	35.99	342	P	P	08 04 00.3	-0.9
	baz=158,SNR=36						
X40A				P	P	08 04 00.3	-0.9
	baz=158,SNR=36						
X40A				S	S	08 09 36.4	-1.7
	baz=158						
X40A				S	S	08 09 36.4	-1.7
	baz=158						

X40A	Basin Creek Fa baz=158,SNR=36	35.99	342	P	P	08 04 00.2	-0.9
X40A	baz=158			S	S	08 09 36.8	-1.3
CLTN	Cedars of Leba comp=Z,170nm,0.9s	35.99	351	IAmb	IAmb	08 04 07.9	
GO05	Huala comp=Z,478nm,1.2s	36.02	169	IAmb	IAmb	08 04 18.5	
GO05	Huala	36.02	169	⇑iP	P	08 04 01.9	+0.4
TZTN	Tazewell comp=Z,568nm,1.2s	36.10	355	IAmb	IAmb	08 04 10.8	
TZTN	comp=Z,90µm,20.0s			IAMs_20	IAMs_20	08 21 04.8	
TZTN	Tazewell baz=174,SNR=68	36.10	355	P	P	08 04 01.7	-0.4
TZTN	baz=174			S	S	08 09 39.4	-0.4
TZTN	Tazewell baz=174,SNR=68	36.10	355	P	P	08 04 01.8	-0.4
TZTN	baz=174			S	S	08 09 39.1	-0.7
UALR	University of comp=Z,253nm,1.1s	36.11	342	IAmb	IAmb	08 04 10.8	
HPIG		36.18	319	⇑P	P	08 04 03.9	+0.7
MIAR	Mount Ida comp=Z,366nm,1.5s	36.28	341	IAmb	IAmb	08 04 39.1	
MIAR	Mount Ida baz=156,SNR=44	36.28	341	P	P	08 04 02.9	-0.8
MIAR	baz=156			S	S	08 09 40.8	-1.8
MIAR	Mount Ida baz=156,SNR=44	36.28	341	P	P	08 04 02.9	-0.8
MIAR	baz=156			S	S	08 09 40.8	-1.8
MIAR	Mount Ida	36.28	341	⇑P	P	08 04 02.7	-1.0
WVT	Waverly	36.29	349	P	P	08 04 01.6	-2.1
WVT	Waverly	36.29	349	P	P	08 04 01.6	-2.1
WVT	comp=Z,143nm,1.0s			pmax	pmax		
WVT	comp=Z,65µm,21.0s			MLR	MLR		
WVT	Waverly baz=166,SNR=78	36.29	349	P	P	08 04 02.0	-1.7
WVT	baz=166			S	S	08 09 38.4	-4.2
WVT	Waverly baz=166	36.29	349	P	P	08 04 01.8	-1.9
WVT	baz=166			S	S	08 09 38.9	-3.7
WVT	Waverly	36.29	349	⇑P	P	08 04 01.9	-1.8
U49A	Red Boiling Sp baz=170,SNR=69	36.33	352	P	P	08 04 03.2	-0.9
U49A	baz=170			S	S	08 09 41.1	-2.1
HBAR	Harrisburg baz=162	36.37	345	S	S	08 09 41.5	-2.3
T57A	Hurt comp=Z,496nm,1.4s	36.40	1	IAmb	IAmb	08 04 27.0	
T57A	Hurt baz=181,SNR=58	36.40	1	P	P	08 04 04.5	-0.1
T57A	baz=181,SNR=58			P	P	08 04 04.5	-0.1
T57A	baz=181			S	S	08 09 44.8	+0.4
T57A	baz=181			S	S	08 09 44.8	+0.4
T59A	Double "B" Far comp=Z,618nm,1.6s	36.43	3	IAmb	IAmb	08 04 27.4	
T59A	Double "B" Far baz=184,SNR=42	36.43	3	P	P	08 04 05.2	+0.2
T59A	baz=184,SNR=42			P	P	08 04 05.2	+0.2
T59A	baz=184			S	S	08 09 45.8	+1.0
T59A	baz=184			S	S	08 09 45.8	+1.0
W41B	Gary Mavity, V comp=Z,460nm,1.4s	36.45	343	IAmb	IAmb	08 04 13.7	
W41B	Gary Mavity, V baz=159,SNR=45	36.45	343	P	P	08 04 04.2	-0.9
W41B	baz=159			S	S	08 09 43.5	-1.6
W41B	Gary Mavity, V baz=159,SNR=45	36.45	343	P	P	08 04 04.2	-0.9
W41B	baz=159			S	S	08 09 42.8	-2.3
WHAR	Wooly Hollow comp=Z,414nm,1.3s	36.57	343	IAmb	IAmb	08 04 41.0	
Z35A	Perchaven, San baz=150,SNR=29	36.58	335	P	P	08 04 06.3	0.0
Z35A	baz=150			S	S	08 09 46.0	-1.3
LNXT	Lenox comp=Z,701nm,1.4s	36.60	347	IAmb	IAmb	08 05 07.2	
LNXT	Lenox baz=164	36.60	347	S	S	08 09 44.3	-3.2
BLA	Blacksburg comp=Z,310nm,1.1s	36.61	359	IAmb	IAmb	08 04 32.4	
BLA	comp=Z,81µm,21.0s			IAMs_20	IAMs_20	08 21 17.1	
BLA	Blacksburg baz=179,SNR=36	36.61	359	P	P	08 04 06.8	+0.3
BLA	baz=179			S	S	08 09 46.8	-0.8
BLA	Blacksburg baz=179,SNR=36	36.61	359	P	P	08 04 06.6	0.0
BLA	baz=179			S	S	08 09 48.8	+1.1
TXAR	Lajitas Array comp=Z,15nm,1.0s,baz=145,slow=8.9,SNR=38	36.62	324	P	P	08 04 08.0	+1.2
TXAR	comp=Z,38nm,0.9s,baz=160,slow=4.9,SNR=7.3			PcP	PcP	08 06 30.8	+1.2
TXAR	comp=Z,0.6nm,0.7s,baz=129,slow=37,SNR=1.2			S	S	08 09 48.9	+0.7
TXAR	comp=Z,18µm,18.7s,baz=134,slow=35 comp=Z,15nm,1.0s			LR	LR	08 18 36.0	
TX31	Lajitas Ar. Si comp=Z,639nm,1.5s	36.62	324	IAmb	IAmb	08 04 17.3	
TX31	Lajitas Ar. Si baz=137,SNR=39	36.62	324	P	P	08 04 07.3	+0.4
TX31	baz=137			S	S	08 09 50.7	+2.5
T60A	Surry comp=Z,263nm,0.9s	36.65	4	IAmb	IAmb	08 04 10.7	
T60A	Surry baz=185,SNR=11	36.65	4	P	P	08 04 07.2	+0.4
T60A	baz=185,SNR=11			P	P	08 04 07.2	+0.4
T60A	baz=185			S	S	08 09 47.6	-0.5
T60A	baz=185			S	S	08 09 47.6	-0.5
UTMT	University of comp=Z,477nm,1.1s	36.70	348	IAmb	IAmb	08 04 45.2	
PEBM	Pemiscott Bayo comp=Z,368nm,1.0s	36.70	346	IAmb	IAmb	08 04 10.2	
T50A	Nancy baz=172	36.70	353	P	P	08 04 06.4	-0.9
T50A	baz=172			P	P	08 04 06.4	-0.9
T50A	baz=172			S	S	08 09 44.8	-4.2
T50A	baz=172			S	S	08 09 44.8	-4.2
GLAT	Glass comp=Z,578nm,1.1s	36.72	347	IAmb	IAmb	08 04 10.2	
ML02	Panimavida comp=Z,451nm,1.0s	36.85	168	IAmb	IAmb	08 04 26.8	
ML02	Panimavida	36.85	168	⇑iP	P	08 04 09.2	+0.7
W39A	Magazine baz=156,SNR=72	36.95	341	P	P	08 04 09.0	-0.4
W39A	baz=156			S	S	08 09 50.4	-2.3
W39A	Magazine baz=156,SNR=72	36.95	341	P	P	08 04 09.1	-0.2
W39A	baz=156			S	S	08 09 52.9	+0.2
X37A	Clayton comp=Z,832nm,2.0s	36.95	339	IAmb	IAmb	08 04 46.0	
X37A	Clayton baz=154,SNR=52	36.95	339	P	P	08 04 09.0	-0.4
X37A	baz=154			S	S	08 09 50.9	-1.8
LCAR	Lake Charles comp=Z,344nm,1.1s	36.98	345	IAmb	IAmb	08 04 12.5	
LCAR	Lake Charles baz=161	36.98	345	S	S	08 09 49.9	-3.3
T47A	Sharon Grove comp=Z,918nm,1.8s	36.99	350	IAmb	IAmb	08 04 17.7	
T47A	Sharon Grove baz=168,SNR=70	36.99	350	P	P	08 04 08.2	-1.5
T47A	baz=168			S	S	08 09 49.7	-3.7
ABTX	Abilene, Hawle baz=146,SNR=35	37.05	332	P	P	08 04 10.9	+0.5
ABTX	baz=146			S	S	08 09 54.4	-0.1
ABTX	Abilene, Hawle baz=146,SNR=35	37.05	332	P	P	08 04 10.9	+0.5
ABTX	baz=146			S	S	08 09 55.1	+0.6
FCAR	Ozark Folk Cen comp=Z,460nm,1.5s	37.08	343	IAmb	IAmb	08 04 18.7	
S57A	Dark Hollow, R comp=Z,842nm,2.0s	37.17	1	IAmb	IAmb	08 04 13.3	
S57A	Dark Hollow, R baz=181,SNR=21	37.17	1	P	P	08 04 10.7	-0.5
S57A	baz=181,SNR=21			P	P	08 04 10.7	-0.5
S57A	baz=181			S	S	08 09 57.6	+1.6
S57A	baz=181			S	S	08 09 57.6	+1.6
S51A	Beattyville comp=Z,491nm,1.3s	37.19	355	IAmb	IAmb	08 04 14.6	
S51A	Beattyville baz=174,SNR=80	37.19	355	P	P	08 04 10.8	-0.6
S51A	baz=174,SNR=80			P	P	08 04 10.8	-0.6
S51A	baz=174			S	S	08 09 55.0	-1.4
S51A	baz=174			S	S	08 09 55.0	-1.4
SLBS	Sierra La Lagu	37.22	311	P	P	08 04 13.6	+1.6
SLBS	comp=Z,339nm,1.2s			IAmb	IAmb	08 04 30.1	
SLBS	Sierra La Lagu	37.22	311	⇓P	P	08 04 12.9	+1.0
S54A	Dingess, Beckl comp=Z,609nm,1.6s	37.22	358	IAmb	IAmb	08 04 12.4	
S54A	Dingess, Beckl baz=177,SNR=41	37.22	358	P	P	08 04 11.2	-0.5
S54A	baz=177,SNR=41			P	P	08 04 11.2	-0.5
S54A	baz=177			S	S	08 09 56.0	-0.9
S54A	baz=177			S	S	08 09 56.0	-0.9
S61A	Accomac baz=187	37.28	6	P	P	08 04 13.3	+1.2
S61A	baz=187			P	P	08 04 13.3	+1.2
S61A	baz=187			S	S	08 09 59.5	+1.8
S61A	baz=187			S	S	08 09 59.5	+1.8
T45B	Paducah baz=165,SNR=35	37.30	348	P	P	08 04 10.7	-1.7
T45B	baz=165			S	S	08 09 54.7	-3.4
EDS3	Malargue	37.31	166	i P	P	08 04 14.3	+1.7
R58B	Mineral comp=Z,972nm,1.9s	37.41	3	IAmb	IAmb	08 04 15.5	
R58B	Mineral baz=183,SNR=41	37.41	3	P	P	08 04 13.5	+0.3
R58B	baz=183,SNR=41			P	P	08 04 13.5	+0.3
R58B	baz=183			S	S	08 09 59.3	-0.3
R58B	baz=183			S	S	08 09 59.3	-0.3
PBMO	Poplar Bluff comp=Z,384nm,1.3s	37.47	346	IAmb	IAmb	08 04 21.9	
PBMO	Poplar Bluff baz=162,SNR=96	37.47	346	P	P	08 04 12.5	-1.3
PBMO	baz=162			S	S	08 09 57.7	-2.9
BI05	Punta Hualpn	37.50	171	i P	P	08 04 14.3	+0.3
CBN	Corbin Frederi comp=Z,388nm,1.3s	37.67	3	IAmb	IAmb	08 04 38.1	
CBN	Corbin Frederi baz=184,SNR=17	37.67	3	P	P	08 04 15.8	+0.4
CBN	baz=184			S	S	08 10 04.7	+1.1
CBN	Corbin Frederi baz=184,SNR=17	37.67	3	P	P	08 04 15.7	+0.2
CBN	baz=184			S	S	08 10 05.7	+2.1
R55A	Marlinton comp=Z,389nm,1.4s	37.68	360	IAmb	IAmb	08 04 37.5	
R55A	Marlinton baz=179,SNR=42	37.68	360	P	P	08 04 15.6	0.0
R55A	baz=179,SNR=42			P	P	08 04 15.6	0.0
R55A	baz=179			S	S	08 10 03.5	-0.4
R55A	baz=179			S	S	08 10 03.5	-0.4
LPIG	La Paz comp=Z,74nm,1.1s,baz=346,slow=6.1,SNR=1.4	37.72	311	P	P	08 04 16.3	+0.2
LPIG	comp=Z,110nm,1.2s,baz=79,slow=2.8,SNR=2.5			S	S	08 10 04.8	0.0
LPIG	comp=Z,43µm,21.8s,baz=101,slow=31 comp=Z,74nm,1.1s			LR	LR	08 16 15.0	
U40A	Yellville comp=Z,802nm,1.5s	37.73	343	IAmb	IAmb	08 04 24.7	
U40A	Yellville baz=158,SNR=160	37.73	343	P	P	08 04 15.2	-0.8
U40A	baz=158,SNR=160			P	P	08 04 15.2	-0.8
U40A	baz=158			S	S	08 10 03.0	-1.5
U40A	baz=158			S	S	08 10 03.0	-1.5
U40A	Yellville baz=158,SNR=160	37.73	343	P	P	08 04 15.2	-0.8
U40A	baz=158			S	S	08 10 02.8	-1.8
R53A	Hurricane comp=Z,332nm,1.2s	37.77	357	IAmb	IAmb	08 04 17.6	
R53A	Hurricane baz=176,SNR=51	37.77	357	P	P	08 04 15.8	-0.6
R53A	baz=176,SNR=51			P	P	08 04 15.8	-0.6
R53A	baz=176			S	S	08 10 03.6	-1.6
R53A	baz=176			S	S	08 10 03.6	-1.6
R50A	Paris comp=Z,396nm,1.4s	37.90	354	IAmb	IAmb	08 04 17.6	
R50A	Paris baz=173,SNR=86	37.90	354	P	P	08 04 16.6	-0.8
R50A	baz=173,SNR=86			P	P	08 04 16.6	-0.8
R50A	baz=173			S	S	08 10 05.5	-1.6
R50A	baz=173			S	S	08 10 05.5	-1.6
X34A	Smith Ranch, M comp=Z,586nm,1.7s	37.92	336	IAmb	IAmb	08 04 26.4	
R61A	Willards baz=187,SNR=6.7	37.96	6	P	P	08 04 18.7	+0.9
R61A	baz=187,SNR=6.7			P	P	08 04 18.7	+0.9
R61A	baz=187			S	S	08 10 09.2	+1.2
R61A	baz=187			S	S	08 10 09.2	+1.2
HHAR	Hobbs comp=Z,858nm,2.0s	37.99	341	IAmb	IAmb	08 04 48.0	
HHAR	Hobbs baz=157	37.99	341	S	S	08 10 06.6	-2.0
R49A	Shelbyville comp=Z,231nm,0.9s	38.00	353	IAmb	IAmb	08 04 20.4	
R49A	Shelbyville baz=171,SNR=72	38.00	353	P	P	08 04 16.9	-1.4
R49A	baz=171,SNR=72			P	P	08 04 16.9	-1.4
R49A	baz=171			S	S	08 10 05.8	-2.8
R49A	baz=171			S	S	08 10 05.8	-2.8
S44A	Carbondale comp=Z,518nm,1.2s	38.08	348	IAmb	IAmb	08 04 26.9	
S44A	Carbondale baz=165,SNR=84	38.08	348	P	P	08 04 17.4	-1.5
S44A	baz=165			S	S	08 10 06.0	-3.9
SIUC	Southern Illin comp=Z,491nm,1.2s	38.10	348	IAmb	IAmb	08 04 21.7	
TUL1	Leonard comp=Z,674nm,1.8s	38.28	339	IAmb	IAmb	08 04 29.6	
TUL1	Leonard baz=154,SNR=32	38.28	339	P	P	08 04 20.3	-0.4
TUL1	baz=154			S	S	08 10 11.9	-1.1
TUL1	Leonard baz=154,SNR=32	38.28	339	P	P	08 04 20.2	-0.4
TUL1	baz=154			S	S	08 10 12.7	-0.3
FNO	Franklin comp=Z,365nm,1.3s	38.31	337	IAmb	IAmb	08 04 58.0	
Q54A	Coxs Mills baz=178,SNR=37	38.39	359	P	P	08 04 21.0	-0.5
Q54A	baz=178,SNR=37			P	P	08 04 21.0	-0.5
Q54A	baz=178			S	S	08 10 12.9	-1.5
Q54A	baz=178			S	S	08 10 12.9	-1.5
Q52A	Bidwell comp=Z,487nm,1.2s	38.42	357	IAmb	IAmb	08 04 23.0	
Q52A	Bidwell baz=176,SNR=48	38.42	357	P	P	08 04 21.2	-0.6
Q52A	baz=176,SNR=48			P	P	08 04 21.2	-0.6
Q52A	baz=176			S	S	08 10 13.2	-1.7
Q52A	baz=176			S	S	08 10 13.2	-1.7
WMOK	Wichita Mounta baz=148,SNR=31	38.44	335	P	P	08 04 21.7	-0.3
WMOK	baz=148			S	S	08 10 15.6	+0.2
WMOK	Wichita Mounta baz=148,SNR=31	38.44	335	P	P	08 04 21.7	-0.3
WMOK	baz=148			S	S	08 10 15.4	0.0
WMOK	Wichita Mounta	38.44	335	⇑P	P	08 04 21.6	-0.5
Q56A	Snyder Ridge, comp=Z,433nm,1.5s	38.44	1	IAmb	IAmb	08 04 23.5	
Q56A	Snyder Ridge, baz=181,SNR=30	38.44	1	P	P	08 04 22.4	+0.4
Q56A	baz=181,SNR=30			P	P	08 04 22.4	+0.4
Q56A	baz=181			S	S	08 10 17.3	+2.0
Q56A	baz=181			S	S	08 10 17.3	+2.0
OKCFA	Oklahoma City baz=151	38.47	337	S	S	08 10 14.6	-1.3
MIDE	Milford baz=187,SNR=12	38.50	6	P	P	08 04 23.5	+1.1
MIDE	baz=187			S	S	08 10 20.6	+4.5
Q51A	Peebles baz=174,SNR=61	38.55	356	P	P	08 04 21.9	-0.9
Q51A	baz=174,SNR=61			P	P	08 04 21.9	-0.9
Q51A	baz=174			S	S	08 10 15.4	-1.6
Q51A	baz=174			S	S	08 10 15.4	-1.6
FVM	French Village comp=Z,400nm,0.9s	38.62	347	IAmb	IAmb	08 04 26.2	
FVM	French Village baz=163,SNR=199	38.62	347	P	P	08 04 22.0	-1.5
FVM	baz=163			S	S	08 10 14.2	-3.8
OLIL	Olney comp=Z,482nm,0.9s	38.87	350	IAmb	IAmb	08 04 27.8	
OLIL	Olney baz=167,SNR=92	38.87	350	P	P	08 04 24.0	-1.6
OLIL	baz=167			S	S	08 10 17.3	-4.4
CCM	Cathedral Cave	38.88	346	P	P	08 04 24.2	-1.5
CCM	comp=Z,295nm,0.9s			IAmb	IAmb	08 04 35.5	
CCM	Cathedral Cave	38.88	346	P	P	08 04 24.2	-1.5
CCM	comp=Z,295nm,0.9s			pmax	pmax		
CCM	comp=Z,42µm,20.0s			MLR	MLR		
CCM	Cathedral Cave baz=162,SNR=168	38.88	346	P	P	08 04 24.2	-1.5
CCM	baz=162			S	S	08 10 17.8	-4.2
CCM	Cathedral Cave baz=162	38.88	346	P	P	08 04 24.0	-1.7
CCM	baz=162			S	S	08 10 18.8	-3.2
CCM	Cathedral Cave	38.88	346	⇑P	P	08 04 24.0	-1.7
P53A	Whipple comp=Z,552nm,1.4s	38.90	358	IAmb	IAmb	08 04 26.4	
P53A	Whipple baz=177,SNR=64	38.90	358	P	P	08 04 25.3	-0.5
P53A	baz=177,SNR=64			P	P	08 04 25.3	-0.5
P53A	baz=177			S	S	08 10 20.4	-1.8
P53A	baz=177			S	S	08 10 20.4	-1.8
P57A	Homestead Farm baz=183,SNR=27	38.91	2	P	P	08 04 26.6	+0.7
P57A	baz=183,SNR=27			P	P	08 04 26.6	+0.7
P57A	baz=183			S	S	08 10 24.4	+2.0
P57A	baz=183			S	S	08 10 24.4	+2.0
P51A	Williamsport baz=175,SNR=28	38.98	356	P	P	08 04 25.5	-1.0
P51A	baz=175,SNR=28			P	P	08 04 25.5	-1.0
P51A	baz=175			S	S	08 10 20.3	-3.1
P51A	baz=175			S	S	08 10 20.3	-3.1
BLO	Bloomington comp=Z,222nm,0.7s	39.04	352	IAmb	IAmb	08 04 32.4	
MCWV	Mont Chateau comp=Z,699nm,1.8s	39.05	0	IAmb	IAmb	08 04 29.1	
MCWV	comp=Z,62µm,20.0s			IAMs_20	IAMs_20	08 22 48.6	
MCWV	Mont Chateau baz=180,SNR=23	39.05	0	P	P	08 04 27.1	0.0
MCWV	baz=180			S	S	08 10 24.8	+0.3
MCWV	Mont Chateau baz=180,SNR=23	39.05	0	P	P	08 04 26.8	-0.2
MCWV	baz=180			S	S	08 10 25.6	+1.1
P52A	Corning comp=Z,68µm,19.0s	39.08	357	IAMs_20	IAMs_20	08 20 36.5	
P52A	Corning baz=176,SNR=53	39.08	357	P	P	08 04 26.2	-1.1
P52A	baz=176			S	S	08 10 23.5	-1.5
S39A	Bolivar baz=158,SNR=147	39.10	343	P	P	08 04 26.4	-1.2
S39A	baz=158			S	S	08 10 22.2	-3.1
P49A	Miami Univ. Ec baz=172,SNR=57	39.18	354	P	P	08 04 26.3	-1.8
P49A	baz=172			S	S	08 10 23.0	-3.3
P49A	Miami Univ. Ec baz=172,SNR=57	39.18	354	P	P	08 04 26.2	-1.9
P49A	baz=172			S	S	08 10 23.4	-3.0
P48A	Milroy baz=171,SNR=70	39.18	353	P	P	08 04 26.3	-1.9
P48A	baz=171,SNR=70			P	P	08 04 26.3	-1.9
P48A	baz=171			S	S	08 10 22.8	-3.6
P48A	baz=171			S	S	08 10 22.8	-3.6
SLM	Saint Louis comp=Z,254nm,0.8s	39.20	347	IAmb	IAmb	08 04 38.2	
SLM	Saint Louis baz=163,SNR=20	39.20	347	P	P	08 04 27.0	-1.3
SLM				S	S	08 10 23.3	-3.4

	baz=163						
Q44A	**Meyer Farm, Va**	**39.20**	**349**	IAmb	IAmb	08 04 30.5	
	comp=Z,434nm,0.9s						
Q44A	**Meyer Farm, Va**	**39.20**	**349**	P	**P**	**08 04 26.7**	**-1.6**
	baz=165,SNR=102						
Q44A				S	**S**	**08 10 22.0**	**-4.8**
	baz=165						
P61A	**Hammonton**	**39.34**	**6**	IAmb	IAmb	08 05 14.9	
	comp=Z,845nm,1.2s						
P61A	**Hammonton**	**39.34**	**6**	P	**P**	**08 04 30.1**	**+0.6**
	baz=188,SNR=16						
P61A				P	**P**	**08 04 30.1**	**+0.6**
	baz=188,SNR=16						
P61A				S	**S**	**08 10 29.7**	**+0.9**
	baz=188						
P61A				S	**S**	**08 10 29.7**	**+0.9**
	baz=188						
MNTX	**Cornudas Mount**	**39.36**	**325**	IAmb	IAmb	08 04 38.7	
	comp=Z,506nm,1.5s						
MNTX	**Cornudas Mount**	**39.36**	**325**	P	**P**	**08 04 30.1**	**+0.3**
	baz=137,SNR=157						
MNTX				S	**S**	**08 10 33.0**	**+3.6**
	baz=137						
MNTX	**Cornudas Mount**	**39.36**	**325**	P	**P**	**08 04 30.3**	**+0.5**
	baz=137,SNR=157						
MNTX				S	**S**	**08 10 32.3**	**+2.9**
	baz=137						
R40A	**Maddies Statio**	**39.37**	**345**	P	**P**	**08 04 28.2**	**-1.5**
	baz=160,SNR=107						
R40A				S	**S**	**08 10 26.3**	**-3.0**
	baz=160						
GEDE	**Greenville**	**39.40**	**5**	P	**P**	**08 04 30.3**	**+0.4**
	baz=186,SNR=34						
GEDE				S	**S**	**08 10 31.0**	**+1.4**
	baz=186						
RPN	**Rapa Nui**	**39.40**	**224**	P	**P**	**08 04 30.7**	**+0.6**
	comp=Z,127nm,1.2s,baz=351,slow=6.0,SNR=1.9						
RPN				S	**S**	**08 10 34.0**	**+4.0**
	comp=Z,43nm,0.8s,baz=238,slow=20,SNR=1.6						
RPN				LR	LR	08 16 26.6	
	comp=Z,66µm,21.8s,baz=54,slow=30						
	comp=Z,127nm,1.2s						
T35A	**Sooner Cattle**	**39.44**	**339**	IAmb	IAmb	08 04 39.6	
	comp=Z,782nm,1.8s						
T35B	**Sooner Cattle**	**39.44**	**339**	P	**P**	**08 04 29.9**	**-0.5**
	baz=153,SNR=41						
T35B				S	**S**	**08 10 29.3**	**-1.2**
	baz=153						
LC02	**Puerto Saavedr**	**39.48**	**172**	*e*P	**P**	**08 04 30.5**	**-0.1**
MVL	**Millersville**	**39.52**	**4**	IAmb	IAmb	08 04 43.1	
	comp=Z,470nm,1.3s						
O52A	**Adamsville**	**39.55**	**358**	P	**P**	**08 04 30.4**	**-0.8**
	baz=177,SNR=59						
O52A				P	**P**	**08 04 30.4**	**-0.8**
	baz=177,SNR=59						
O52A				S	**S**	**08 10 28.7**	**-3.2**
	baz=177						
O52A				S	**S**	**08 10 28.7**	**-3.2**
	baz=177						
O54A	**Avella**	**39.58**	**359**	P	**P**	**08 04 30.8**	**-0.7**
	baz=179,SNR=44						
O54A				P	**P**	**08 04 30.8**	**-0.7**
	baz=179,SNR=44						
O54A				S	**S**	**08 10 31.6**	**-0.8**
	baz=179						
O54A				S	**S**	**08 10 31.6**	**-0.8**
	baz=179						
P46A	**Rosedale**	**39.58**	**351**	P	**P**	**08 04 29.5**	**-2.0**
	baz=168,SNR=19						
P46A				S	**S**	**08 10 26.2**	**-6.2**
	baz=168						
O53A	**New Philadelph**	**39.66**	**358**	IAmb	IAmb	08 04 33.3	
	comp=Z,536nm,1.4s						
O53A				IAMs_20	IAMs_20	08 23 13.8	
	comp=Z,70µm,22.0s						
O53A	**New Philadelph**	**39.66**	**358**	P	**P**	**08 04 31.5**	**-0.7**
	baz=178,SNR=50						
O53A				S	**S**	**08 10 31.6**	**-2.1**
	baz=178						
MSTX	**Muleshoe**	**39.67**	**330**	IAmb	IAmb	08 05 12.7	
	comp=Z,489nm,1.1s						
MSTX	**Muleshoe**	**39.67**	**330**	P	**P**	**08 04 33.1**	**+0.6**
	baz=142,SNR=81						
MSTX				S	**S**	**08 10 35.4**	**+1.1**
	baz=142						
MSTX	**Muleshoe**	**39.67**	**330**	P	**P**	**08 04 33.1**	**+0.6**
	baz=142,SNR=81						
MSTX				S	**S**	**08 10 36.9**	**+2.6**
	baz=142						
ACSO	**Alum Creek Sta**	**39.72**	**356**	IAmb	IAmb	08 04 35.5	
	comp=Z,371nm,0.9s						
ACSO				IAMs_20	IAMs_20	08 23 36.6	
	comp=Z,61µm,19.0s						
ACSO	**Alum Creek Sta**	**39.72**	**356**	P	**P**	**08 04 31.7**	**-0.9**
	baz=175,SNR=62						
ACSO				S	**S**	**08 10 31.8**	**-2.8**
	baz=175						
ACSO	**Alum Creek Sta**	**39.72**	**356**	P	**P**	**08 04 31.5**	**-1.1**
	baz=175,SNR=62						
ACSO				S	**S**	**08 10 32.1**	**-2.5**
	baz=175						
PAGS	**Pennsylvania G**	**39.73**	**4**	IAmb	IAmb	08 04 55.4	
	comp=Z,626nm,1.3s						
O49A	**Covington**	**39.79**	**355**	P	**P**	**08 04 31.6**	**-1.6**
	baz=173,SNR=41						
O49A				P	**P**	**08 04 31.6**	**-1.6**
	baz=173,SNR=41						
O49A				S	**S**	**08 10 30.7**	**-4.8**
	baz=173						
O49A				S	**S**	**08 10 30.7**	**-4.8**
	baz=173						
TUPA	**Temple Univers**	**39.79**	**6**	S	**S**	**08 10 37.2**	**+1.6**
	baz=187						
AMTX	**Amarillo**	**39.87**	**332**	IAmb	IAmb	08 04 49.8	
	comp=Z,1µm,1.6s						
AMTX	**Amarillo**	**39.87**	**332**	P	**P**	**08 04 34.8**	**+0.7**
	baz=145,SNR=65						
AMTX				S	**S**	**08 10 38.6**	**+1.5**
	baz=145						
AMTX	**Amarillo**	**39.87**	**332**	P	**P**	**08 04 34.3**	**+0.2**
	baz=145						
AMTX				S	**S**	**08 10 38.8**	**+1.7**
	baz=145						
U32A	**Winter Ranch,**	**39.93**	**336**	IAmb	IAmb	08 04 45.9	
	comp=Z,447nm,0.9s						
U32A	**Winter Ranch,**	**39.93**	**336**	P	**P**	**08 04 34.3**	**-0.2**
	baz=149,SNR=20						
U32A				S	**S**	**08 10 34.9**	**-3.0**
	baz=149						
O48B	**Farmland**	**39.94**	**354**	P	**P**	**08 04 32.6**	**-1.8**
	baz=172,SNR=46						
O48B				S	**S**	**08 10 33.9**	**-3.9**
	baz=172						
O48B	**Farmland**	**39.94**	**354**	P	**P**	**08 04 32.7**	**-1.7**
	baz=172,SNR=46						
O48B				S	**S**	**08 10 33.8**	**-3.9**
	baz=172						
P43A	**Skaggs, Pawnee**	**40.01**	**348**	IAmb	IAmb	08 04 37.5	
	comp=Z,569nm,1.2s						
P43A	**Skaggs, Pawnee**	**40.01**	**348**	P	**P**	**08 04 33.6**	**-1.5**
	baz=165,SNR=56						
P43A				S	**S**	**08 10 33.5**	**-5.4**
	baz=165						
PANJ	**Princeton**	**40.05**	**6**	P	**P**	**08 04 36.1**	**+0.8**
	baz=188,SNR=46						
PANJ				S	**S**	**08 10 39.6**	**+0.2**
	baz=188						
SSPA	**Standing Stone**	**40.07**	**2**	P	**P**	**08 04 35.3**	**-0.2**
SSPA	**Standing Stone**	**40.07**	**2**	IAMs_20	IAMs_20	08 22 57.4	
	comp=Z,61µm,20.0s						
SSPA	**Standing Stone**	**40.07**	**2**	P	**P**	**08 04 35.6**	**+0.1**
	baz=183,SNR=68						
SSPA				S	**S**	**08 10 39.8**	**+0.1**
	baz=183						
SSPA	**Standing Stone**	**40.07**	**2**	P	**P**	**08 04 35.4**	**-0.1**
	baz=183						
SSPA				S	**S**	**08 10 40.8**	**+1.1**
	baz=183						
SSPA	**Standing Stone**	**40.07**	**2**	⇑P	**P**	**08 04 35.4**	**-0.1**
EPT	**El Paso**	**40.07**	**324**	IAMs_20	IAMs_20	08 20 37.1	
	comp=Z,52µm,18.0s						
KIDD	**KIDD Seismic O**	**40.07**	**324**	S	**S**	**08 10 42.0**	**+1.8**
	baz=136						
LUPA	**Lehigh Univers**	**40.20**	**5**	IAmb	IAmb	08 04 41.2	
	comp=Z,280nm,0.8s						
N53A	**Lisbon**	**40.21**	**359**	P	**P**	**08 04 35.8**	**-0.9**
	baz=178,SNR=46						
N53A				P	**P**	**08 04 35.8**	**-0.9**
	baz=178,SNR=46						
N53A				S	**S**	**08 10 39.7**	**-2.1**
	baz=178						
N53A				S	**S**	**08 10 39.7**	**-2.1**
	baz=178						
SFIN	**Lafayette**	**40.31**	**351**	P	**P**	**08 04 35.1**	**-2.4**
	baz=169,SNR=36						
SFIN				S	**S**	**08 10 36.2**	**-7.1**
	baz=169						
SFIN	**Lafayette**	**40.31**	**351**	P	**P**	**08 04 35.1**	**-2.4**
	baz=169,SNR=36						
SFIN				S	**S**	**08 10 37.2**	**-6.1**
	baz=169						
O44A	**Mansfield**	**40.31**	**350**	IAmb	IAmb	08 04 44.9	
	comp=Z,468nm,1.2s						
O44A	**Mansfield**	**40.31**	**350**	P	**P**	**08 04 35.5**	**-2.0**
	baz=166,SNR=45						
O44A				S	**S**	**08 10 36.5**	**-6.9**
	baz=166						
N58A	**Sunbury**	**40.33**	**4**	P	**P**	**08 04 38.0**	**+0.2**
	baz=185,SNR=61						
N58A				P	**P**	**08 04 38.0**	**+0.2**
	baz=185,SNR=61						
N58A				S	**S**	**08 10 43.8**	**+0.1**
	baz=185						
N58A				S	**S**	**08 10 43.8**	**+0.1**
	baz=185						
BRNJ	**Basking Ridge**	**40.37**	**6**	IAmb	IAmb	08 04 41.0	
	comp=Z,1µm,2.0s						
BRNJ	**Basking Ridge**	**40.37**	**6**	P	**P**	**08 04 38.6**	**+0.6**
	baz=188,SNR=15						
BRNJ				S	**S**	**08 10 45.9**	**+1.8**
	baz=188						
N51A	**Ashland**	**40.37**	**357**	P	**P**	**08 04 36.5**	**-1.6**
	baz=176,SNR=38						
N51A				P	**P**	**08 04 36.5**	**-1.6**
	baz=176,SNR=38						
N51A				S	**S**	**08 10 41.1**	**-3.2**
	baz=176						
N51A				S	**S**	**08 10 41.1**	**-3.2**
	baz=176						
LR03	**Panguipulli**	**40.45**	**171**	*e*P	**P**	**08 04 38.8**	**0.0**
P40A	**Paris**	**40.48**	**345**	P	**P**	**08 04 37.1**	**-1.8**
	baz=161,SNR=68						
P40A				S	**S**	**08 10 40.2**	**-5.7**
	baz=161						
N49A	**Columbus Grove**	**40.50**	**355**	P	**P**	**08 04 37.4**	**-1.7**
	baz=173,SNR=28						
N49A				P	**P**	**08 04 37.4**	**-1.7**
	baz=173,SNR=28						
N49A				S	**S**	**08 10 41.1**	**-5.0**
	baz=173						
N49A				S	**S**	**08 10 41.1**	**-5.0**
	baz=173						
LR04	**Corral**	**40.54**	**172**	*e*P	**P**	**08 04 40.2**	**+0.8**
PLTB	**Pedras Altas**	**40.55**	**145**	P	**P**	**08 04 38.8**	**-0.8**
PLTB				IAmb	IAmb	08 04 47.4	
	comp=Z,377nm,1.1s						
N47A	**Urbana**	**40.62**	**353**	IAmb	IAmb	08 04 41.8	
	comp=Z,326nm,1.1s						
N47A	**Urbana**	**40.62**	**353**	P	**P**	**08 04 37.8**	**-2.3**
	baz=171,SNR=52						
N47A				P	**P**	**08 04 37.8**	**-2.3**
	baz=171,SNR=52						
N47A				S	**S**	**08 10 41.3**	**-6.6**
	baz=171						
N47A				S	**S**	**08 10 41.3**	**-6.6**
	baz=171						
FOR	**Fordham**	**40.62**	**7**	P	**P**	**08 04 40.2**	**+0.2**
	baz=189,SNR=8.9						
FOR				S	**S**	**08 10 49.0**	**+1.1**
	baz=189						
LPA	**La Plata**	**40.70**	**152**	*i* P	P	08 04 35.1	-5.8
LPA				pP	pP	08 04 47.6	-2.3
LPA				PP	**PnPn**	**08 06 25.4**	**+6.2**
LPA				pPP		08 06 34.5	
LPA				PCP	**PcP**	**08 06 48.1**	**+6.0**
LPA				S	**S**	**08 10 57.8**	**+8.5**
LPA				PPS	PPS	08 11 05.6	
LPA				PKIKP	**PKiKP**	**08 13 46.1**	**-5.4**
LPA				SS	**SS**	**08 13 52.0**	**+1.3**
LPA				SSS	SSS	08 14 15.1	
LPA				SCS	**ScS**	**08 14 41.4**	**-3.0**
LPA				SKIKP		08 17 23.9	
LPA				PKIKS		08 17 29.5	
LPA				SKIKS		08 21 05.7	
N62A	**Caumsett State**	**40.74**	**7**	IAmb	IAmb	08 04 42.3	
	comp=Z,524nm,1.6s						
N62A	**Caumsett State**	**40.74**	**7**	P	**P**	**08 04 41.1**	**+0.1**
	baz=190,SNR=16						
N62A				P	**P**	**08 04 41.1**	**+0.1**
	baz=190,SNR=16						
N62A				S	**S**	**08 10 49.5**	**-0.2**
	baz=190						
N62A				S	**S**	**08 10 49.5**	**-0.2**
	baz=190						
ODNJ	**Ogdensburg**	**40.76**	**6**	P	**P**	**08 04 41.3**	**+0.1**
	baz=188,SNR=36						
ODNJ				S	**S**	**08 10 49.9**	**-0.1**
	baz=188						
PAL	**Palisades**	**40.76**	**7**	IAmb	IAmb	08 04 43.7	
	comp=Z,834nm,2.0s						
PAL	**Palisades**	**40.76**	**7**	P	**P**	**08 04 41.4**	**+0.2**
	baz=189,SNR=19						
PAL				S	**S**	**08 10 50.9**	**+1.0**
	baz=189						
PAL	**Palisades**	**40.76**	**7**	P	**P**	**08 04 41.5**	**+0.2**
	baz=189,SNR=19						
PAL				S	**S**	**08 10 52.1**	**+2.2**
	baz=189						
M57A	**Sunshine Farm,**	**40.80**	**3**	IAmb	IAmb	08 04 45.3	
	comp=Z,315nm,0.8s						
M57A	**Sunshine Farm,**	**40.80**	**3**	P	**P**	**08 04 42.1**	**+0.5**
	baz=184,SNR=131						
M57A				P	**P**	**08 04 42.1**	**+0.5**
	baz=184,SNR=131						
M57A				S	**S**	**08 10 49.3**	**-1.4**
	baz=184						
M57A				S	**S**	**08 10 49.3**	**-1.4**
	baz=184						
M53A	**WI Miller and**	**40.84**	**359**	IAMs_20	IAMs_20	08 24 08.2	
	comp=Z,68µm,20.0s						
M53A	**WI Miller and**	**40.84**	**359**	P	**P**	**08 04 41.0**	**-0.9**
	baz=179,SNR=30						
M53A				S	**S**	**08 10 49.3**	**-1.9**
	baz=179						
HDIL	**Hopedale**	**40.85**	**349**	IAmb	IAmb	08 04 51.1	
	comp=Z,373nm,0.7s						
HDIL	**Hopedale**	**40.85**	**349**	P	**P**	**08 04 40.0**	**-2.0**
	baz=165,SNR=98						
HDIL				S	**S**	**08 10 44.9**	**-6.5**
	baz=165						
HDIL	**Hopedale**	**40.85**	**349**	P	**P**	**08 04 40.1**	**-1.9**
	baz=165,SNR=98						
HDIL				S	**S**	**08 10 45.5**	**-5.9**
	baz=165						
TRNY	**Table Rock, Ra**	**40.86**	**7**	IAmb	IAmb	08 04 45.6	
	comp=Z,218nm,0.8s						
M55A	**Ridgway**	**40.87**	**1**	IAmb	IAmb	08 04 42.9	
	comp=Z,554nm,1.6s						
M55A	**Ridgway**	**40.87**	**1**	P	**P**	**08 04 41.6**	**-0.6**
	baz=182,SNR=46						
M55A				P	**P**	**08 04 41.6**	**-0.6**
	baz=182,SNR=46						
M55A				S	**S**	**08 10 50.9**	**-0.8**
	baz=182						
M55A				S	**S**	**08 10 50.9**	**-0.8**
	baz=182						
M50A	**Fremont**	**40.89**	**356**	IAmb	IAmb	08 04 44.8	
	comp=Z,440nm,0.8s						
M50A	**Fremont**	**40.89**	**356**	P	**P**	**08 04 41.0**	**-1.3**
	baz=175,SNR=49						
M50A				P	**P**	**08 04 41.0**	**-1.3**
	baz=175,SNR=49						
M50A				S	**S**	**08 10 48.6**	**-3.4**
	baz=175						
M50A				S	**S**	**08 10 48.6**	**-3.4**
	baz=175						
M52A	**Chesterland**	**40.95**	**358**	P	**P**	**08 04 41.5**	**-1.4**
	baz=178,SNR=13						
M52A				P	**P**	**08 04 41.5**	**-1.4**
	baz=178,SNR=13						
M52A				S	**S**	**08 10 49.5**	**-3.4**
	baz=178						
M52A				S	**S**	**08 10 49.5**	**-3.4**
	baz=178						
P38A	**Dawn**	**40.96**	**344**	IAmb	IAmb	08 05 16.9	
	comp=Z,879nm,1.9s						
P38A	**Dawn**	**40.96**	**344**	P	**P**	**08 04 41.4**	**-1.5**
	baz=159,SNR=34						
P38A				S	**S**	**08 10 49.0**	**-4.1**
	baz=159						
WSPT	**Westport, CT**	**40.99**	**8**	IAMs_20	IAMs_20	08 22 49.3	
	comp=Z,54µm,20.0s						
ALLY	**Alegheny Colle**	**41.04**	**360**	P	**P**	**08 04 42.6**	**-1.0**
	baz=179,SNR=29						
ALLY				S	**S**	**08 10 51.3**	**-2.9**
	baz=179						
HSIG		**41.08**	**317**	⇓P	**P**	**08 04 44.5**	**+0.4**
KSPA	**Keystone Colle**	**41.12**	**5**	IAmb	IAmb	08 04 56.1	
	comp=Z,490nm,1.2s						
KSPA	**Keystone Colle**	**41.12**	**5**	P	**P**	**08 04 44.7**	**+0.5**
	baz=186,SNR=58						
KSPA				S	**S**	**08 10 53.7**	**-1.7**
	baz=186						
BRNY	**Black Rk. Fore**	**41.15**	**7**	P	**P**	**08 04 44.9**	**+0.4**
	baz=189,SNR=32						
BRNY				S	**S**	**08 10 56.8**	**+1.0**
	baz=189						
YLE	**Yale**	**41.19**	**8**	IAMs_20	IAMs_20	08 23 05.7	
	comp=Z,61µm,21.0s						
N41A	**Harden Midland**	**41.32**	**347**	IAmb	IAmb	08 04 53.1	
	comp=Z,997nm,1.8s						
N41A	**Harden Midland**	**41.32**	**347**	P	**P**	**08 04 43.7**	**-2.1**
	baz=163,SNR=26						
N41A				S	**S**	**08 10 52.4**	**-5.9**
	baz=163						
121A	**Cookes Peak, D**	**41.37**	**323**	IAmb	IAmb	08 05 04.9	
	comp=Z,685nm,1.2s						
121A	**Cookes Peak, D**	**41.37**	**323**	P	**P**	**08 04 48.7**	**+2.0**
	baz=135,SNR=81						
121A				S	**S**	**08 11 00.4**	**+0.6**
	baz=135						
121A	**Cookes Peak, D**	**41.37**	**323**	P	**P**	**08 04 47.4**	**+0.8**
	baz=135,SNR=81						
121A				S	**S**	**08 11 05.5**	**+5.7**
	baz=135						
M63A	**Gales Ferry**	**41.41**	**9**	IAmb	IAmb	08 04 51.1	
	comp=Z,337nm,0.8s						
M63A	**Gales Ferry**	**41.41**	**9**	P	**P**	**08 04 47.6**	**+1.1**
	baz=192,SNR=61						
M63A				P	**P**	**08 04 47.6**	**+1.1**
	baz=192,SNR=61						
M63A				S	**S**	**08 11 01.0**	**+1.4**
	baz=192						
M63A				S	**S**	**08 11 01.0**	**+1.4**
	baz=192						
KSU1	**Kansas State U**	**41.43**	**340**	IAmb	IAmb	08 04 57.5	
	comp=Z,280nm,0.8s						
KSU1	**Kansas State U**	**41.43**	**340**	P	**P**	**08 04 46.3**	**-0.5**
	baz=154,SNR=39						
KSU1				S	**S**	**08 10 57.8**	**-2.3**
	baz=154						
KSU1	**Kansas State U**	**41.43**	**340**	P	**P**	**08 04 46.1**	**-0.7**
	baz=154,SNR=39						
KSU1				S	**S**	**08 10 59.3**	**-0.8**
	baz=154						
KSU1	**Kansas State U**	**41.43**	**340**	⇑P	**P**	**08 04 46.1**	**-0.7**
M44A	**Midewin, Midew**	**41.44**	**351**	P	**P**	**08 04 43.9**	**-2.9**
	baz=168,SNR=15						
M44A				S	S	08 10 51.0	-9.1
	baz=168						
NPNY	**Mohonk Preserv**	**41.47**	**6**	S	**S**	**08 11 00.7**	**+0.2**
	baz=188						
319A	**Douglas**	**41.50**	**321**	IAmb	IAmb	08 05 20.4	
	comp=Z,426nm,1.2s						
ERPA	**Erie**	**41.51**	**360**	P	**P**	**08 04 46.5**	**-1.0**
	baz=180,SNR=22						
ERPA				S	**S**	**08 10 58.3**	**-2.8**
	baz=180						
ERPA	**Erie**	**41.51**	**360**	P	**P**	**08 04 46.4**	**-1.0**
	baz=180,SNR=22						
ERPA				S	**S**	**08 10 59.5**	**-1.6**
	baz=180						
L48A	**N Adams**	**41.54**	**355**	P	**P**	**08 04 45.8**	**-1.9**
	baz=173,SNR=36						
L48A				P	**P**	**08 04 45.8**	**-1.9**
	baz=173,SNR=36						
L48A				S	**S**	**08 10 57.5**	**-4.0**
	baz=173						
L48A				S	**S**	**08 10 57.5**	**-4.0**
	baz=173						
L56A	**Greenwood**	**41.58**	**3**	P	**P**	**08 04 47.7**	**-0.4**
	baz=183,SNR=45						
L56A				P	**P**	**08 04 47.7**	**-0.4**
	baz=183,SNR=45						
L56A				S	**S**	**08 11 01.5**	**-0.8**
	baz=183						
L56A				S	**S**	**08 11 01.5**	**-0.8**
	baz=183						
R32A	**Long Quarter,**	**41.59**	**338**	IAmb	IAmb	08 04 60.0	
	comp=Z,481nm,1.1s						
R32A	**Long Quarter,**	**41.59**	**338**	P	**P**	**08 04 48.5**	**+0.4**
	baz=151,SNR=111						
R32A				S	**S**	**08 11 00.1**	**-2.3**
	baz=151						
LL04	**Puerto Octay**	**41.70**	**171**	IAmb	IAmb	08 04 53.8	
	comp=Z,296nm,0.9s						
LL04	**Puerto Octay**	**41.70**	**171**	⇑*i*P	**P**	**08 04 48.9**	**-0.1**
TRQA	**Tornquist**	**41.70**	**159**	P	**P**	**08 04 48.3**	**-0.7**
TRQA				IAMs_20	IAMs_20	08 25 22.2	
	comp=Z,58µm,22.0s						
TRQA	**Tornquist**	**41.70**	**159**	P	**P**	**08 04 48.3**	**-0.7**
TRQA				pmax	pmax		
	comp=Z,216nm,1.1s						
TRQA				MLR	MLR		
	comp=Z,58µm,22.0s						
BINY	**Binghamton**	**41.74**	**4**	IAmb	IAmb	08 04 53.4	
	comp=Z,348nm,0.9s						
BINY	**Binghamton**	**41.74**	**4**	P	**P**	**08 04 49.6**	**+0.4**
	baz=186,SNR=92						
BINY				S	**S**	**08 11 02.7**	**-1.9**
	baz=186						
BINY	**Binghamton**	**41.74**	**4**	P	**P**	**08 04 49.5**	**+0.2**
	baz=186,SNR=92						
BINY				S	**S**	**08 11 05.8**	**+1.2**
	baz=186						
M65A	**Busby, Falmout**	**41.80**	**10**	P	**P**	**08 04 50.3**	**+0.6**
	baz=194						
M65A				S	**S**	**08 11 08.3**	**+2.9**
	baz=194						
L46A	**Eue Claire**	**41.80**	**353**	P	**P**	**08 04 47.1**	**-2.7**
	baz=170,SNR=20						
L46A				P	**P**	**08 04 47.1**	**-2.7**
	baz=170,SNR=20						
L46A				S	**S**	**08 10 59.5**	**-6.0**
	baz=170						
L46A				S	**S**	**08 10 59.5**	**-6.0**
	baz=170						
L59A	**Walton**	**41.81**	**5**	IAmb	IAmb	08 04 51.4	
	comp=Z,698nm,1.6s						
L59A	**Walton**	**41.81**	**5**	P	**P**	**08 04 50.4**	**+0.4**
	baz=187,SNR=44						
L59A				P	**P**	**08 04 50.4**	**+0.4**
	baz=187,SNR=44						
L59A				S	**S**	**08 11 04.9**	**-0.8**
	baz=187						
L59A				S	**S**	**08 11 04.9**	**-0.8**
	baz=187						
AAM	**Ann Arbor**	**41.83**	**356**	IAmb	IAmb	08 05 00.3	
	comp=Z,552nm,1.6s						
AAM				IAMs_20	IAMs_20	08 20 55.4	
	comp=Z,96µm,22.0s						
AAM	**Ann Arbor**	**41.83**	**356**	P	**P**	**08 04 48.7**	**-1.3**
	baz=174,SNR=11						
AAM				S	**S**	**08 11 01.0**	**-4.9**
	baz=174						
AAM	**Ann Arbor**	**41.83**	**356**	P	**P**	**08 04 48.8**	**-1.3**
	baz=174,SNR=11						
AAM				S	**S**	**08 11 02.4**	**-3.4**
	baz=174						
PLCA	**Paso Flores**	**41.83**	**169**	P	**P**	**08 04 50.5**	**+0.3**
	comp=Z,165nm,1.0s,baz=345,slow=9.2,SNR=204						
PLCA				S	**S**	**08 11 07.0**	**+0.8**
	comp=Z,2.6nm,1.0s,baz=84,slow=22,SNR=1.0						
	comp=Z,165nm,1.0s						
PLCA	**Paso Flores**	**41.83**	**169**	P	**P**	**08 04 50.4**	**+0.2**
PLCA				IAmb	IAmb	08 05 07.2	
	comp=Z,272nm,0.9s						
PLCA	**Paso Flores**	**41.83**	**169**	P	**P**	**08 04 50.4**	**+0.2**
PLCA				pmax	pmax		
	comp=Z,272nm,1.0s						
PLCA	**Paso Flores**	**41.83**	**169**	⇑*i*P	**P**	**08 04 50.1**	**-0.1**
PLCA	**Paso Flores**	**41.83**	**169**	⇑P	**P**	**08 04 50.6**	**+0.5**
Y22A	**Socorro**	**41.90**	**325**	P	**P**	**08 04 53.1**	**+2.1**
	baz=137,SNR=99						

Y22A				S	**S**	**08 11 07.4**	**-0.2**
	baz=137						
LL03	**Petrohue**	**41.92**	**172**	IAmb	IAmb	08 05 08.7	
	comp=Z,332nm,0.9s						
LL03	**Petrohue**	**41.92**	**172**	*e*P	**P**	**08 04 50.2**	**-0.6**
N38A	**Joes South For**	**41.97**	**345**	IAmb	IAmb	08 05 01.0	
	comp=Z,345nm,0.8s						
N38A	**Joes South For**	**41.97**	**345**	P	**P**	**08 04 49.5**	**-1.7**
	baz=160,SNR=95						
N38A				S	**S**	**08 11 03.8**	**-4.2**
	baz=160						
Y22D	**IRIS PASSCAL I**	**41.98**	**326**	IAmb	IAmb	08 05 09.5	
	comp=Z,456nm,1.1s						
Y22D	**IRIS PASSCAL I**	**41.98**	**326**	S	**S**	**08 11 13.5**	**+4.9**
	baz=137						
Y22D	**IRIS PASSCAL I**	**41.98**	**326**	P	**P**	**08 04 52.5**	**+1.0**
	baz=137						
Y22D				S	**S**	**08 11 14.0**	**+5.4**
	baz=137						
LL05	**Los Muermos**	**42.04**	**173**	*e*P	**P**	**08 04 51.8**	**+0.1**
L64A	**Middleborough**	**42.12**	**10**	IAmb	IAmb	08 04 55.2	
	comp=Z,819nm,1.9s						
L64A	**Middleborough**	**42.12**	**10**	P	**P**	**08 04 52.9**	**+0.5**
	baz=193,SNR=8.1						
L64A				P	**P**	**08 04 52.9**	**+0.5**
	baz=193,SNR=8.1						
L64A				S	**S**	**08 11 13.1**	**+2.9**
	baz=193						
L64A				S	**S**	**08 11 13.1**	**+2.9**
	baz=193						
MMNY	**Mt. Morris Dam**	**42.16**	**2**	IAmb	IAmb	08 05 14.6	
	comp=Z,378nm,1.3s						
L44A	**Lake County Fo**	**42.19**	**351**	P	**P**	**08 04 50.2**	**-2.8**
	baz=168,SNR=8.3						
L44A				S	**S**	**08 11 04.8**	**-6.5**
	baz=168						
L44A	**Lake County Fo**	**42.19**	**351**	P	**P**	**08 04 50.3**	**-2.6**
	baz=168,SNR=8.3						
L44A				S	**S**	**08 11 05.0**	**-6.2**
	baz=168						
K57A	**Scipio Center**	**42.23**	**4**	P	**P**	**08 04 53.0**	**-0.3**
	baz=185,SNR=81						
K57A				S	**S**	**08 11 11.2**	**-0.6**
	baz=185						
K50A	**Casco**	**42.24**	**357**	IAmb	IAmb	08 05 00.8	
	comp=Z,439nm,1.1s						
K50A	**Casco**	**42.24**	**357**	P	**P**	**08 04 51.6**	**-1.7**
	baz=176,SNR=20						
K50A				P	**P**	**08 04 51.6**	**-1.7**
	baz=176,SNR=20						
K50A				S	**S**	**08 11 07.2**	**-4.7**
	baz=176						
K50A				S	**S**	**08 11 07.2**	**-4.7**
	baz=176						
CBKS	**Cedar Bluff**	**42.32**	**337**	IAmb	IAmb	08 05 06.4	
	comp=Z,564nm,1.2s						
CBKS	**Cedar Bluff**	**42.32**	**337**	P	**P**	**08 04 54.9**	**+0.8**
	baz=150,SNR=80						
CBKS				S	**S**	**08 11 14.3**	**+0.9**
	baz=150						
CBKS	**Cedar Bluff**	**42.32**	**337**	P	**P**	**08 04 54.9**	**+0.8**
	baz=150,SNR=80						
CBKS				S	**S**	**08 11 15.3**	**+1.9**
	baz=150						
CBKS	**Cedar Bluff**	**42.32**	**337**	⇑P	**P**	**08 04 54.6**	**+0.5**
L42A	**Oliver, Polo**	**42.32**	**349**	IAmb	IAmb	08 04 55.7	
	comp=Z,333nm,1.1s						
L42A	**Oliver, Polo**	**42.32**	**349**	P	**P**	**08 04 51.8**	**-2.3**
	baz=165,SNR=40						
L42A				S	**S**	**08 11 05.6**	**-7.6**
	baz=165						
L61B	**Northampton**	**42.34**	**8**	P	**P**	**08 04 54.2**	**0.0**
	baz=190,SNR=20						
L61B	**Northampton**	**42.34**	**8**	P	**P**	**08 04 54.2**	**0.0**
	baz=190,SNR=20						
L61B				S	**S**	**08 11 15.4**	**+2.0**
	baz=190						
ANMO	**Albuquerque**	**42.36**	**327**	P	**P**	**08 04 55.3**	**+0.5**
	comp=Z,92nm,0.8s,baz=144,slow=9.2,SNR=166						
ANMO				S	**S**	**08 11 15.3**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=45,slow=19,SNR=0.9						
	comp=Z,92nm,0.8s						
ANMO	**Albuquerque**	**42.36**	**327**	P	**P**	**08 04 56.5**	**+1.8**
ANMO				IAmb	IAmb	08 05 07.7	
	comp=Z,364nm,0.8s						
ANMO	**Albuquerque**	**42.36**	**327**	*c* *i*P	**P**	**08 04 55.7**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,392nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,36µm,16.0s						
ANMO	**Albuquerque**	**42.36**	**327**	P	**P**	**08 04 56.0**	**+1.2**
	baz=138,SNR=221						
ANMO				S	**S**	**08 11 18.0**	**+3.6**
	baz=138						
ANMO	**Albuquerque**	**42.36**	**327**	P	**P**	**08 04 55.5**	**+0.8**
	baz=138						
ANMO				S	**S**	**08 11 17.2**	**+2.8**
	baz=138						
ANMO	**Albuquerque**	**42.36**	**327**	⇑P	**P**	**08 04 55.9**	**+1.2**
HCNY	**Howe Caverns**	**42.38**	**6**	P	**P**	**08 04 54.9**	**+0.5**
	baz=188,SNR=58						
HCNY				S	**S**	**08 11 13.4**	**-0.5**
	baz=188						
WES	**Weston**	**42.48**	**9**	IAMs_20	IAMs_20	08 23 24.6	
	comp=Z,54µm,20.0s						
WES	**Weston**	**42.48**	**9**	S	**S**	**08 11 17.3**	**+1.9**
	baz=192						
TRY	**Troy**	**42.49**	**7**	S	**S**	**08 11 18.3**	**+2.7**
	baz=189						
HRV	**Adam Dziewonsk**	**42.56**	**9**	P	**P**	**08 04 56.1**	**+0.2**
HRV	**Adam Dziewonsk**	**42.56**	**9**	IAMs_20	IAMs_20	08 23 27.7	
	comp=Z,53µm,21.0s						
HRV	**Adam Dziewonsk**	**42.56**	**9**	P	**P**	**08 04 56.1**	**+0.2**
HRV				pmax	pmax		
	comp=Z,1µm,2.0s						
HRV				MLR	MLR		
	comp=Z,53µm,21.0s						
HRV	**Adam Dziewonsk**	**42.56**	**9**	P	**P**	**08 04 56.6**	**+0.6**
	baz=192						
HRV				S	**S**	**08 11 17.7**	**+1.1**
	baz=192						
HRV	**Adam Dziewonsk**	**42.56**	**9**	P	**P**	**08 04 56.5**	**+0.6**
	baz=192						
HRV				S	**S**	**08 11 19.2**	**+2.6**
	baz=192						
MEDO	**Medina**	**42.57**	**2**	IAmb	IAmb	08 05 37.8	
	comp=Z,639nm,1.7s						
K62A	**Royalston**	**42.61**	**8**	P	**P**	**08 04 56.9**	**+0.5**
	baz=191,SNR=30						
K62A				P	**P**	**08 04 56.9**	**+0.5**
	baz=191,SNR=30						
K62A				S	**S**	**08 11 19.5**	**+2.1**
	baz=191						
K62A				S	**S**	**08 11 19.5**	**+2.1**
	baz=191						
J54A	**Appleton**	**42.68**	**1**	P	**P**	**08 04 55.7**	**-1.1**
	baz=182,SNR=19						
J54A				P	**P**	**08 04 55.7**	**-1.1**
	baz=182,SNR=19						
J54A				S	**S**	**08 11 15.4**	**-2.9**
	baz=182						
J54A				S	**S**	**08 11 15.4**	**-2.9**
	baz=182						
L40A	**Anamosa**	**42.70**	**348**	IAmb	IAmb	08 04 59.1	
	comp=Z,366nm,1.1s						
L40A	**Anamosa**	**42.70**	**348**	P	**P**	**08 04 55.0**	**-2.0**
	baz=163,SNR=99						
L40A				S	**S**	**08 11 13.1**	**-5.5**
	baz=163						
J55A	**Hilton**	**42.70**	**2**	IAmb	IAmb	08 05 37.8	
	comp=Z,548nm,1.6s						
J55A	**Hilton**	**42.70**	**2**	P	**P**	**08 04 56.2**	**-0.8**
	baz=183,SNR=18						
J55A				P	**P**	**08 04 56.2**	**-0.8**
	baz=183,SNR=18						
J55A				S	**S**	**08 11 16.3**	**-2.2**
	baz=183						
J55A				S	**S**	**08 11 16.3**	**-2.2**
	baz=183						
N35A	**Tabor**	**42.72**	**342**	P	**P**	**08 04 55.9**	**-1.4**
	baz=156,SNR=34						
N35A				S	**S**	**08 11 14.9**	**-4.2**
	baz=156						
J56A	**Wolcott**	**42.75**	**3**	IAmb	IAmb	08 05 00.1	
	comp=Z,271nm,0.8s						
J56A	**Wolcott**	**42.75**	**3**	P	**P**	**08 04 57.1**	**-0.4**
	baz=184,SNR=53						
J56A				P	**P**	**08 04 57.1**	**-0.4**
	baz=184,SNR=53						
J56A				S	**S**	**08 11 17.0**	**-2.4**
	baz=184						
J56A				S	**S**	**08 11 17.0**	**-2.4**
	baz=184						
K43A	**Burlington**	**42.77**	**351**	P	**P**	**08 04 55.2**	**-2.5**
	baz=167,SNR=20						
K43A				S	**S**	**08 11 13.4**	**-6.3**
	baz=167						
J47A	**Sunmer**	**42.86**	**355**	IAmb	IAmb	08 05 00.5	
	comp=Z,318nm,0.9s						
J47A	**Sunmer**	**42.86**	**355**	P	**P**	**08 04 56.5**	**-1.8**
	baz=173,SNR=59						
J47A				P	**P**	**08 04 56.5**	**-1.8**
	baz=173,SNR=59						
J47A				S	**S**	**08 11 14.9**	**-6.1**
	baz=173						
J47A				S	**S**	**08 11 14.9**	**-6.1**
	baz=173						
J58A	**Remsen**	**42.95**	**5**	P	**P**	**08 04 59.0**	**-0.1**
	baz=187,SNR=59						
J58A				P	**P**	**08 04 59.0**	**-0.1**
	baz=187,SNR=59						
J58A				S	**S**	**08 11 21.5**	**-0.9**
	baz=187						
J58A				S	**S**	**08 11 21.5**	**-0.9**
	baz=187						
T25A	**Trinidad**	**43.00**	**331**	IAmb	IAmb	08 05 09.8	
	comp=Z,756nm,1.8s						
T25A	**Trinidad**	**43.00**	**331**	P	**P**	**08 05 01.0**	**+1.1**
	baz=142,SNR=116						
T25A				S	**S**	**08 11 29.5**	**+5.8**
	baz=142						
SCIA	**State Center**	**43.01**	**345**	IAmb	IAmb	08 05 09.4	
	comp=Z,394nm,0.8s						
SCIA	**State Center**	**43.01**	**345**	P	**P**	**08 04 58.1**	**-1.6**
	baz=160,SNR=104						
SCIA				S	**S**	**08 11 18.8**	**-4.5**
	baz=160						
SCIA	**State Center**	**43.01**	**345**	P	**P**	**08 04 58.1**	**-1.6**
	baz=160,SNR=104						
SCIA				S	**S**	**08 11 19.0**	**-4.3**
	baz=160						
TUC	**Tucson**	**43.07**	**320**	P	**P**	**08 05 01.0**	**+0.6**
TUC	**Tucson**	**43.07**	**320**	P	**P**	**08 05 01.0**	**+0.6**
TUC				pmax	pmax		
	comp=Z,236nm,1.4s						
TUC				MLR	MLR		
	comp=Z,104µm,18.0s						
TUC	**Tucson**	**43.07**	**320**	P	**P**	**08 05 01.3**	**+0.9**
	baz=131						
TUC				S	**S**	**08 11 28.1**	**+3.4**
	baz=131						
TUC	**Tucson**	**43.07**	**320**	⇓P	**P**	**08 05 01.1**	**+0.6**
J59A	**Piesco**	**43.12**	**6**	P	**P**	**08 05 00.5**	**-0.1**
	baz=188,SNR=82						
J59A				P	**P**	**08 05 00.5**	**-0.1**
	baz=188,SNR=82						
J59A				S	**S**	**08 11 21.8**	**-3.1**
	baz=188						
J59A				S	**S**	**08 11 21.8**	**-3.1**
	baz=188						
ACCN	**Adirondack Com**	**43.13**	**7**	IAmb	IAmb	08 05 02.2	
	comp=Z,501nm,1.5s						
ACCN	**Adirondack Com**	**43.13**	**7**	P	**P**	**08 05 00.8**	**+0.2**
	baz=189,SNR=53						
ACCN				S	**S**	**08 11 25.6**	**+0.5**
	baz=189						
LL01	**San Ignacio de**	**43.14**	**172**	*e*P	**P**	**08 04 58.6**	**-2.0**
N33B	**J Bar K, Exete**	**43.18**	**340**	P	**P**	**08 05 00.4**	**-0.6**
	baz=154,SNR=64						
N33B				S	**S**	**08 11 23.1**	**-2.8**
	baz=154						
N33A	**J Bar K, Exete**	**43.18**	**340**	IAmb	IAmb	08 05 04.6	
	comp=Z,534nm,1.0s						
J61A	**Chester**	**43.24**	**8**	IAmb	IAmb	08 05 03.3	
	comp=Z,413nm,1.5s						
J61A	**Chester**	**43.24**	**8**	P	**P**	**08 05 02.2**	**+0.8**
	baz=190,SNR=27						
J61A				P	**P**	**08 05 02.2**	**+0.8**
	baz=190,SNR=27						
J61A				S	**S**	**08 11 24.0**	**-2.5**
	baz=190						
J61A				S	**S**	**08 11 24.0**	**-2.5**
	baz=190						
UNH	**University of**	**43.25**	**10**	P	**P**	**08 05 01.9**	**+0.4**
	baz=193,SNR=32						
UNH				S	**S**	**08 11 27.2**	**+0.6**
	baz=193						
JFWS	**Jewell Farm**	**43.31**	**349**	IAmb	IAmb	08 05 07.0	
	comp=Z,205nm,0.8s						
JFWS	**Jewell Farm**	**43.31**	**349**	P	**P**	**08 05 00.1**	**-2.0**
	baz=165,SNR=83						
JFWS				S	**S**	**08 11 22.6**	**-5.1**
	baz=165						
JFWS	**Jewell Farm**	**43.31**	**349**	P	**P**	**08 04 60.0**	**-2.1**
	baz=165,SNR=83						
JFWS				S	**S**	**08 11 22.7**	**-5.1**
	baz=165						
I49A	**Point Hope**	**43.41**	**357**	IAmb	IAmb	08 05 04.8	
	comp=Z,406nm,0.8s						
I49A	**Point Hope**	**43.41**	**357**	P	**P**	**08 05 01.1**	**-1.6**
	baz=176,SNR=90						
I49A				P	**P**	**08 05 01.1**	**-1.6**
	baz=176,SNR=90						
I49A				S	**S**	**08 11 23.8**	**-5.3**
	baz=176						
I49A				S	**S**	**08 11 23.8**	**-5.3**
	baz=176						
LL07	**Hotel Espejo d**	**43.44**	**173**	*e*P	**P**	**08 05 03.1**	**+0.1**
FFD	**Franklin Falls**	**43.49**	**9**	S	**S**	**08 11 33.7**	**+3.5**
	baz=192						
WCNY	**West Carthage**	**43.53**	**4**	P	**P**	**08 05 03.4**	**-0.4**
	baz=186,SNR=49						
WCNY				S	**S**	**08 11 29.9**	**-1.0**
	baz=186						
K38A	**Parkersburg**	**43.60**	**346**	IAmb	IAmb	08 05 13.8	
	comp=Z,366nm,1.0s						
K38A	**Parkersburg**	**43.60**	**346**	P	**P**	**08 05 02.5**	**-2.0**
	baz=161,SNR=101						
K38A				S	**S**	**08 11 26.8**	**-5.2**
	baz=161						
HNH	**Hanover**	**43.63**	**8**	S	**S**	**08 11 35.1**	**+2.8**
	baz=191						
NCB	**Newcomb**	**43.65**	**6**	IAmb	IAmb	08 05 27.2	
	comp=Z,919nm,2.0s						
NCB	**Newcomb**	**43.65**	**6**	P	**P**	**08 05 04.7**	**-0.1**
	baz=188,SNR=34						
NCB				S	**S**	**08 11 33.5**	**+0.8**
	baz=188						
KSCO	**Kaye Shedlock’**	**43.69**	**334**	IAmb	IAmb	08 05 20.8	
	comp=Z,468nm,1.2s						
KSCO	**Kaye Shedlock’**	**43.69**	**334**	P	**P**	**08 05 06.2**	**+0.9**
	baz=146,SNR=50						
KSCO				S	**S**	**08 11 35.3**	**+1.7**
	baz=146						
KSCO	**Kaye Shedlock’**	**43.69**	**334**	P	**P**	**08 05 06.4**	**+1.1**
	baz=146,SNR=50						
KSCO				S	**S**	**08 11 36.9**	**+3.3**
	baz=146						
GO07	**Milladeo Hill,**	**43.70**	**173**	IAmb	IAmb	08 05 10.3	
	comp=Z,274nm,0.7s						
GO07	**Milladeo Hill,**	**43.70**	**173**	⇑*i*P	**P**	**08 05 05.4**	**+0.2**
MCVT	**Middlebury Col**	**43.78**	**7**	P	**P**	**08 05 06.3**	**+0.5**
	baz=190,SNR=51						
MCVT				S	**S**	**08 11 36.5**	**+2.0**
	baz=190						
I45A	**Fountain**	**43.79**	**353**	IAmb	IAmb	08 05 07.5	
	comp=Z,314nm,0.9s						
I45A	**Fountain**	**43.79**	**353**	P	**P**	**08 05 03.5**	**-2.4**
	baz=171,SNR=14						
I45A				P	**P**	**08 05 03.5**	**-2.4**
	baz=171,SNR=14						
I45A				S	**S**	**08 11 28.5**	**-6.2**
	baz=171						
I45A				S	**S**	**08 11 28.5**	**-6.2**
	baz=171						
I62A	**Tamworth**	**43.93**	**9**	IAmb	IAmb	08 05 08.8	
	comp=Z,481nm,1.7s						
I62A	**Tamworth**	**43.93**	**9**	P	**P**	**08 05 07.8**	**+0.8**
	baz=192,SNR=19						
I62A				P	**P**	**08 05 07.8**	**+0.8**
	baz=192,SNR=19						
I62A				S	**S**	**08 11 37.5**	**+0.8**
	baz=192						
I62A				S	**S**	**08 11 37.5**	**+0.8**
	baz=192						
L34A	**Svendsen Farm,**	**43.95**	**342**	IAmb	IAmb	08 05 16.9	
	comp=Z,198nm,0.8s						
L34A	**Svendsen Farm,**	**43.95**	**342**	P	**P**	**08 05 05.6**	**-1.6**
	baz=156,SNR=33						
L34A				S	**S**	**08 11 31.1**	**-6.0**
	baz=156						
SDCO	**Great Sand Dun**	**44.01**	**330**	IAmb	IAmb	08 05 17.8	
	comp=Z,410nm,1.3s						
SDCO	**Great Sand Dun**	**44.01**	**330**	P	**P**	**08 05 09.4**	**+1.3**
	baz=142,SNR=127						
SDCO				S	**S**	**08 11 40.0**	**+1.3**
	baz=142						
SDCO	**Great Sand Dun**	**44.01**	**330**	P	**P**	**08 05 09.1**	**+1.0**
	baz=142,SNR=127						
SDCO				S	**S**	**08 11 43.2**	**+4.6**
	baz=142						
LL02	**Futaleuf**	**44.01**	**172**	⇑*i*P	**P**	**08 05 07.8**	**+0.1**
BGNE	**Belgrade**	**44.02**	**340**	IAmb	IAmb	08 05 20.7	
	comp=Z,411nm,1.1s						
BGNE	**Belgrade**	**44.02**	**340**	P	**P**	**08 05 07.2**	**-0.6**
	baz=153,SNR=17						
BGNE				S	**S**	**08 11 35.6**	**-2.5**
	baz=153						
BGNE	**Belgrade**	**44.02**	**340**	P	**P**	**08 05 07.2**	**-0.6**
	baz=153,SNR=17						
BGNE				S	**S**	**08 11 36.5**	**-1.7**
	baz=153						
I42A	**Draeger Farm,**	**44.02**	**351**	IAmb	IAmb	08 05 09.9	
	comp=Z,448nm,1.1s						
I42A	**Draeger Farm,**	**44.02**	**351**	P	**P**	**08 05 05.9**	**-1.8**
	baz=167,SNR=125						
I42A				S	**S**	**08 11 31.9**	**-6.1**
	baz=167						
214A	**Organ Pipe Nat**	**44.16**	**318**	IAmb	IAmb	08 05 53.7	
	comp=Z,278nm,1.2s						
214A	**Organ Pipe Nat**	**44.16**	**318**	P	**P**	**08 05 10.2**	**+1.0**
	baz=129,SNR=57						
214A				S	**S**	**08 11 42.4**	**+1.8**
	baz=129						
SADO	**Sadowa**	**44.16**	**1**	P	**P**	**08 05 07.3**	**-1.5**
	comp=Z,89nm,0.9s,baz=203,slow=7.4,SNR=56						
SADO				S	**S**	**08 11 36.1**	**-4.0**
	comp=Z,4.4nm,0.6s,baz=281,slow=19,SNR=1.5						
SADO				LR	LR	08 24 41.5	
	comp=Z,49µm,19.8s,baz=192,slow=38						
	comp=Z,89nm,0.9s						
SADO	**Sadowa**	**44.16**	**1**	IAmb	IAmb	08 05 50.0	
	comp=Z,391nm,1.5s						
SADO	**Sadowa**	**44.16**	**1**	⇑P	**P**	**08 05 07.1**	**-1.8**
VT1	**Waterbury**	**44.18**	**7**	S	**S**	**08 11 42.3**	**+2.0**
	baz=190						
LBNH	**Lisbon**	**44.20**	**8**	IAmb	IAmb	08 05 13.6	
	comp=Z,217nm,0.9s						
LBNH	**Lisbon**	**44.20**	**8**	P	**P**	**08 05 09.9**	**+0.8**
	baz=191,SNR=49						
LBNH				S	**S**	**08 11 41.8**	**+1.1**
	baz=191						
LBNH	**Lisbon**	**44.20**	**8**	P	**P**	**08 05 10.0**	**+0.8**
	baz=191,SNR=49						
LBNH				S	**S**	**08 11 44.3**	**+3.6**
	baz=191						
I63A	**Otisfield**	**44.23**	**10**	IAmb	IAmb	08 05 11.2	
	comp=Z,428nm,1.5s						
I63A	**Otisfield**	**44.23**	**10**	P	**P**	**08 05 10.2**	**+0.9**
	baz=193,SNR=24						
I63A				P	**P**	**08 05 10.2**	**+0.9**
	baz=193,SNR=24						
I63A				S	**S**	**08 11 44.0**	**+3.1**
	baz=193						
I63A				S	**S**	**08 11 44.0**	**+3.1**
	baz=193						
LONY	**Lake Ozonia**	**44.26**	**5**	IAmb	IAmb	08 05 11.3	
	comp=Z,863nm,1.9s						
LONY				IAMs_20	IAMs_20	08 24 58.2	
	comp=Z,47µm,20.0s						
LONY	**Lake Ozonia**	**44.26**	**5**	P	**P**	**08 05 09.3**	**-0.3**
	baz=187,SNR=41						
LONY				S	**S**	**08 11 40.3**	**-1.2**
	baz=187						
I40A	**Norwalk**	**44.33**	**349**	IAmb	IAmb	08 05 19.5	
	comp=Z,184nm,0.8s						
I40A	**Norwalk**	**44.33**	**349**	P	**P**	**08 05 08.0**	**-2.2**
	baz=164,SNR=88						
I40A				S	**S**	**08 11 35.4**	**-7.1**
	baz=164						
W18A	**Petrified Fore**	**44.34**	**324**	P	**P**	**08 05 13.2**	**+2.5**
	baz=135,SNR=51						
W18A				S	**S**	**08 11 49.0**	**+5.6**
	baz=135						
RCBR	**Riachuelo**	**44.35**	**99**	LR	LR	08 24 14.4	
	comp=Z,237µm,20.7s,baz=60,slow=37						
RCBR	**Riachuelo**	**44.35**	**99**	P	**P**	**08 05 09.8**	**-1.0**
RCBR	**Riachuelo**	**44.35**	**99**	P	**P**	**08 05 09.9**	**-1.0**
RCBR				pmax	pmax		
	comp=Z,337nm,1.9s						
RCBR				MLR	MLR		
	comp=Z,218µm,19.0s						
RCBR	**Riachuelo**	**44.35**	**99**	⇑P	**P**	**08 05 09.7**	**-1.2**
GLMI	**Grayling**	**44.41**	**355**	IAmb	IAmb	08 05 51.4	
	comp=Z,383nm,0.9s						
GLMI	**Grayling**	**44.41**	**355**	P	**P**	**08 05 09.3**	**-1.6**
	baz=173,SNR=32						
GLMI				S	**S**	**08 11 39.2**	**-4.5**
	baz=173						
GLMI	**Grayling**	**44.41**	**355**	P	**P**	**08 05 09.3**	**-1.6**
	baz=173,SNR=32						
GLMI				S	**S**	**08 11 39.5**	**-4.2**
	baz=173						
H43A	**Windswept, Lux**	**44.42**	**352**	IAmb	IAmb	08 05 12.4	
	comp=Z,373nm,0.9s						
H43A	**Windswept, Lux**	**44.42**	**352**	P	**P**	**08 05 09.1**	**-1.8**
	baz=169,SNR=120						
H43A				S	**S**	**08 11 36.9**	**-6.8**
	baz=169						
BMNY	**Brushton-Moira**	**44.49**	**5**	P	**P**	**08 05 11.0**	**-0.4**
	baz=188,SNR=52						
BMNY				S	**S**	**08 11 44.6**	**-0.1**
	baz=188						
FRNY	**Flat Rock**	**44.58**	**6**	IAmb	IAmb	08 05 13.2	
	comp=Z,501nm,1.6s						
FRNY	**Flat Rock**	**44.58**	**6**	P	**P**	**08 05 12.0**	**-0.2**
	baz=189,SNR=40						
FRNY				S	**S**	**08 11 46.4**	**+0.3**
	baz=189						
H62A	**Milan**	**44.64**	**9**	P	**P**	**08 05 13.6**	**+0.9**
	baz=192,SNR=34						
H62A				P	**P**	**08 05 13.6**	**+0.9**
	baz=192,SNR=34						
H62A				S	**S**	**08 11 48.2**	**+1.1**
	baz=192						
H62A				S	**S**	**08 11 48.2**	**+1.1**
	baz=192						
S22A	**4UR Ranch, Cre**	**44.67**	**329**	P	**P**	**08 05 14.4**	**+0.9**
	baz=140,SNR=76						
S22A				S	**S**	**08 11 52.7**	**+4.3**
	baz=140						
G45A	**Suttons Bay**	**44.72**	**354**	P	**P**	**08 05 11.6**	**-1.8**
	baz=172,SNR=129						
G45A				P	**P**	**08 05 11.6**	**-1.8**
	baz=172,SNR=129						
G45A				S	**S**	**08 11 42.2**	**-6.0**
	baz=172						
G45A				S	**S**	**08 11 42.2**	**-6.0**
	baz=172						
Q24A	**Divide**	**44.80**	**332**	IAmb	IAmb	08 05 23.7	
	comp=Z,383nm,1.5s						
Q24A	**Divide**	**44.80**	**332**	P	**P**	**08 05 14.9**	**+0.4**
	baz=143,SNR=48						
Q24A				S	**S**	**08 11 54.6**	**+4.5**
	baz=143						
WVL	**Waterville**	**44.88**	**10**	S	**S**	**08 11 54.5**	**+4.0**
	baz=194						
I37A	**Lemond, Waseca**	**45.05**	**346**	IAmb	IAmb	08 05 17.6	
	comp=Z,201nm,1.0s						
I37B	**Waseca**	**45.05**	**346**	P	**P**	**08 05 13.7**	**-2.3**
	baz=161,SNR=97						
I37B				S	**S**	**08 11 47.2**	**-5.7**
	baz=161						
OGNE	**Ogallala**	**45.06**	**336**	P	**P**	**08 05 16.6**	**+0.4**
	baz=148,SNR=66						
OGNE				S	**S**	**08 11 56.3**	**+2.9**
	baz=148						
OGNE	**Ogallala**	**45.06**	**336**	P	**P**	**08 05 16.9**	**+0.7**
	baz=148,SNR=66						
OGNE				S	**S**	**08 11 56.5**	**+3.1**
	baz=148						
AY01	**Puyuhuapi**	**45.11**	**173**	IAmb	IAmb	08 05 20.7	
	comp=Z,174nm,0.8s						
AY01	**Puyuhuapi**	**45.11**	**173**	⇑*i*P	**P**	**08 05 15.6**	**-0.8**

MVCO	Mesa Verde	45.15	327	P	P	08 05 17.6	+0.4
	baz=138,SNR=55						
MVCO				S	S	08 11 58.4	+3.2
	baz=138						
MNTQ	Montreal, Queb	45.23	6	IAmb	IAmb	08 06 15.1	
	comp=Z,393nm,1.4s						
MNTQ	Montreal, Queb	45.23	6	⇑P	P	08 05 17.1	-0.2
113A	Mohawk Valley,	45.30	319	IAmb	IAmb	08 05 28.7	
	comp=Z,248nm,1.4s						
K31A	O'Neill	45.30	340	P	P	08 05 17.7	-0.4
	baz=153,SNR=105						
K31A				S	S	08 11 54.8	-2.0
	baz=153						
G62A	West of Eustis	45.37	9	P	P	08 05 19.4	+0.9
G62A	West of Eustis	45.37	9	P	P	08 05 19.6	+1.1
	baz=193,SNR=82						
G62A				P	P	08 05 19.6	+1.1
	baz=193,SNR=82						
G62A				S	S	08 12 01.0	+3.4
	baz=193						
G62A				S	S	08 12 01.0	+3.4
	baz=193						
EMMW	East Machias	45.46	12	IAMs_20	IAMs_20	08 26 34.2	
	comp=Z,68µm,20.0s						
EMMW	East Machias	45.46	12	S	S	08 12 01.1	+2.4
	baz=197						
G40A	Rib Lake	45.58	350	IAmb	IAmb	08 05 22.4	
	comp=Z,190nm,1.1s						
G40A	Rib Lake	45.58	350	P	P	08 05 18.5	-1.6
	baz=165,SNR=146						
G40A				S	S	08 11 54.9	-5.8
	baz=165						
WUAZ	Wupatki	45.58	323	IAMs_20	IAMs_20	08 23 20.0	
	comp=Z,50µm,19.0s						
WUAZ	Wupatki	45.58	323	P	P	08 05 21.8	+1.2
	baz=133,SNR=127						
WUAZ				S	S	08 12 06.5	+5.2
	baz=133						
WUAZ	Wupatki	45.58	323	⇓P	P	08 05 22.1	+1.5
PKME	Peaks-Kenny Pk	45.63	10	IAMs_20	IAMs_20	08 26 06.1	
	comp=Z,43µm,19.0s						
PKME	Peaks-Kenny Pk	45.63	10	P	P	08 05 21.3	+0.8
	baz=195,SNR=19						
PKME				S	S	08 12 02.2	+1.0
	baz=195						
PKME	Peaks-Kenny Pk	45.63	10	P	P	08 05 21.1	+0.6
	baz=195,SNR=19						
PKME				S	S	08 12 03.8	+2.6
	baz=195						
ECSD	EROS Data Cent	45.64	343	P	P	08 05 18.8	-1.8
	baz=156,SNR=118						
ECSD				S	S	08 11 56.6	-4.9
	baz=156						
ECSD	EROS Data Cent	45.64	343	P	P	08 05 18.5	-2.1
	baz=156,SNR=118						
ECSD				S	S	08 11 57.0	-4.5
	baz=156						
F42A	Maple Grove Fa	45.73	352	IAmb	IAmb	08 05 28.9	
	comp=Z,271nm,0.9s						
F42A	Maple Grove Fa	45.73	352	P	P	08 05 19.6	-1.8
	baz=168,SNR=37						
F42A				S	S	08 11 57.3	-5.4
	baz=168						
SMCO	Snowmass	45.85	330	IAmb	IAmb	08 05 39.3	
	comp=Z,687nm,1.9s						
SMCO				IAMs_20	IAMs_20	08 27 10.8	
	comp=Z,40µm,18.0s						
SMCO	Snowmass	45.85	330	⇑P	P	08 05 23.7	+0.8
TRQ	Mont Tremblant	45.85	5	IAmb	IAmb	08 06 02.8	
	comp=Z,216nm,1.2s						
G65A	Princeton	45.90	12	P	P	08 05 23.4	+0.7
	baz=197,SNR=27						
G65A				P	P	08 05 23.4	+0.7
	baz=197,SNR=27						
G65A				S	S	08 12 08.6	+3.4
	baz=197						
G65A				S	S	08 12 08.6	+3.4
	baz=197						
E46A	Sault Ste Mari	45.92	356	IAmb	IAmb	08 05 24.8	
	comp=Z,251nm,0.9s						
E46A	Sault Ste Mari	45.92	356	P	P	08 05 20.9	-1.9
	baz=174,SNR=131						
E46A				S	S	08 12 01.4	-4.0
	baz=174						
PV15	Paradox Valley	45.98	328	IAmb	IAmb	08 05 33.3	
	comp=Z,557nm,1.6s						
SPMN	Marine on St.	46.05	347	IAmb	IAmb	08 05 33.1	
	comp=Z,188nm,0.9s						
SPMN	Marine on St.	46.05	347	P	P	08 05 21.6	-2.3
	baz=162,SNR=87						
SPMN				S	S	08 12 02.6	-4.9
	baz=162						
SPMN	Marine on St.	46.05	347	P	P	08 05 21.9	-2.0
	baz=162,SNR=87						
SPMN				S	S	08 12 01.6	-5.9
	baz=162						
F63A	Nahmakanta, Br	46.09	10	IAmb	IAmb	08 05 25.8	
	comp=Z,323nm,1.6s						
F63A	Nahmakanta, Br	46.09	10	P	P	08 05 24.5	+0.4
	baz=195,SNR=21						
F63A				P	P	08 05 24.5	+0.4
	baz=195,SNR=21						
F63A				S	S	08 12 09.3	+1.4
	baz=195						
F63A				S	S	08 12 09.3	+1.4
	baz=195						
PV11	David Mesa, Pa	46.15	328	IAmb	IAmb	08 05 39.7	
	comp=Z,245nm,0.8s						
GLA	Glamis	46.18	318	IAmb	IAmb	08 05 39.3	
	comp=Z,583nm,1.9s						
GLA	Glamis	46.18	318	P	P	08 05 26.0	+0.9
	baz=128						
GLA				S	S	08 12 14.6	+4.9
	baz=128						
E43A	Lone Tree Farm	46.19	353	IAmb	IAmb	08 05 27.1	
	comp=Z,218nm,0.8s						
E43A	Lone Tree Farm	46.19	353	P	P	08 05 23.2	-1.7
	baz=170,SNR=224						
E43A				S	S	08 12 04.6	-4.7
	baz=170						
COWI	Conover	46.21	351	P	P	08 05 23.3	-1.9
	baz=167						
COWI				S	S	08 12 05.1	-4.6
	baz=167						
PV10	Paradox Valley	46.30	328	IAmb	IAmb	08 05 38.0	
	comp=Z,198nm,0.9s						
COYC	Coyhaique	46.32	172	IAmb	IAmb	08 05 30.5	
	comp=Z,199nm,0.9s						
COYC	Coyhaique	46.32	172	*e*P	P	08 05 25.6	-0.3
COYC	Coyhaique	46.32	172	⇑P	P	08 05 26.2	+0.3
HAL	Halifax	46.34	16	IAmb	IAmb	08 05 28.0	
	comp=Z,530nm,1.7s						
F64A	Sherman	46.38	11	P	P	08 05 26.9	+0.5
F64A	Sherman	46.38	11	P	P	08 05 27.1	+0.7
	baz=196,SNR=44						
F64A				P	P	08 05 27.1	+0.7
	baz=196,SNR=44						
F64A				S	S	08 12 14.5	+2.4
	baz=196						
F64A				S	S	08 12 14.5	+2.4
	baz=196						
PDMCI	Parker Dam,Lak	46.50	320	P	P	08 05 28.2	+0.6
	baz=129,SNR=14						
PDMCI				S	S	08 12 18.7	+4.5
	baz=129						
N23A	Red Feather La	46.70	333	IAmb	IAmb	08 05 53.9	
	comp=Z,448nm,1.9s						
N23A	Red Feather La	46.70	333	P	P	08 05 29.9	+0.5
	baz=143,SNR=48						
N23A				S	S	08 12 21.5	+4.0
	baz=143						
SWSC	Sam W. Stewart	46.77	317	P	P	08 05 30.5	+0.8
	baz=126,SNR=26						
SWSC				S	S	08 12 23.9	+5.9
	baz=126						
IKP	In-Ko-Pah, Jac	46.81	317	P	P	08 05 30.9	+0.8
	baz=126,SNR=20						
IKP				S	S	08 12 23.9	+5.1
	baz=126						
PHWY	Pilot Hill	46.81	334	IAmb	IAmb	08 06 16.3	
	comp=Z,376nm,1.7s						
F36A	Milaca	46.82	347	IAmb	IAmb	08 05 39.1	
	comp=Z,146nm,1.0s						
F36A	Milaca	46.82	347	P	P	08 05 27.7	-2.2
	baz=161,SNR=95						
F36A				S	S	08 12 09.3	-9.0
	baz=161						
W13A	Hualapai Mount	46.85	321	IAmb	IAmb	08 05 48.5	
	comp=Z,126nm,0.9s						
E63A	Oxbow	46.90	11	P	P	08 05 31.4	+0.8
	baz=196,SNR=56						
E63A				P	P	08 05 31.4	+0.8
	baz=196,SNR=56						
E63A				S	S	08 12 21.2	+1.6
	baz=196						
E63A				S	S	08 12 21.2	+1.6
	baz=196						
BC3	Big Chuckawall	46.96	318	P	P	08 05 32.6	+1.2
	baz=127,SNR=38						
BC3				S	S	08 12 26.1	+5.0
	baz=127						
SUSD	Miller	46.99	341	P	P	08 05 29.9	-1.5
	baz=153,SNR=27						
SUSD				S	S	08 12 17.6	-3.4
	baz=153						
SUSD	Miller	46.99	341	P	P	08 05 29.9	-1.5
	baz=153,SNR=27						
SUSD				S	S	08 12 18.0	-3.0
	baz=153						
IRM	Iron Mountain	47.06	319	P	P	08 05 32.7	+0.7
	baz=128,SNR=51						
IRM				S	S	08 12 26.6	+4.3
	baz=128						
D41A	Chassel	47.07	352	P	P	08 05 30.7	-1.1
	baz=168,SNR=199						
D41A				S	S	08 12 19.1	-2.7
	baz=168						
NEE2	Needles Airpor	47.10	320	P	P	08 05 32.8	+0.5
	baz=129						
NEE2				S	S	08 12 27.5	+4.7
	baz=129						
E38A	The Farm, Brul	47.12	349	IAmb	IAmb	08 05 34.2	
	comp=Z,142nm,1.1s						
E38A	The Farm, Brul	47.12	349	P	P	08 05 30.3	-1.9
	baz=164,SNR=48						
E38A				S	S	08 12 15.6	-7.0
	baz=164						
MONP2	Monument Peak	47.16	317	P	P	08 05 32.6	-0.4
	baz=126,SNR=20						
MONP2				S	S	08 12 28.2	+4.1
	baz=126						
LATQ	La Tuque	47.18	7	IAmb	IAmb	08 05 35.7	
	comp=Z,179nm,0.7s						
O20A	White River Ci	47.21	330	P	P	08 05 33.7	+0.4
	baz=140,SNR=44						
O20A				S	S	08 12 28.3	+3.7
	baz=140						
D62A	Allapoint, All	47.43	10	P	P	08 05 35.4	+0.8
	baz=195,SNR=108						
D62A				P	P	08 05 35.4	+0.8
	baz=195,SNR=108						
D62A				S	S	08 12 27.4	+0.4
	baz=195						
D62A				S	S	08 12 27.4	+0.4
	baz=195						
F33A	5 Mile Ranch,	47.48	344	IAmb	IAmb	08 05 44.5	
	comp=Z,216nm,1.2s						
F33A	5 Mile Ranch,	47.48	344	P	P	08 05 33.1	-2.0
	baz=157,SNR=72						
F33A				S	S	08 12 20.8	-7.0
	baz=157						
BELC	Belle Mtn. Jos	47.53	318	P	P	08 05 36.8	+1.0
	baz=127,SNR=35						
BELC				S	S	08 12 32.9	+3.6
	baz=127						
TPFO	Pinon Flats	47.60	318	P	P	08 05 36.8	+0.4
	baz=126,SNR=25						
TPFO				S	S	08 12 36.3	+6.1
	baz=126						
PFO	Pinyon Flats O	47.61	318	P	P	08 05 36.3	-0.1
	comp=Z,34nm,1.2s,baz=128,slow=8.6,SNR=18						
PFO				LR	LR	08 24 02.9	
	comp=Z,55µm,18.8s,baz=125,slow=34						
	comp=Z,34nm,1.2s						
PFO	Pinyon Flats O	47.61	318	P	P	08 05 37.9	+1.4
PFO	Pinyon Flats O	47.61	318	IAMs_20	IAMs_20	08 23 58.7	
	comp=Z,56µm,18.0s						
PFO	Pinyon Flats O	47.61	318	*ce*P	P	08 05 38.7	+2.3
PFO	Pinyon Flats O	47.61	318	P	P	08 05 36.8	+0.4
	baz=126,SNR=19						
PFO				S	S	08 12 35.8	+5.5
	baz=126						
SRU	San Rafael Swe	47.63	328	IAmb	IAmb	08 05 48.9	
	comp=Z,191nm,1.0s						
109C	Camp Elliot, M	47.63	316	IAmb	IAmb	08 06 03.3	
	comp=Z,174nm,1.2s						
109C				IAMs_20	IAMs_20	08 23 32.4	
	comp=Z,42µm,19.0s						
109C	Camp Elliot, M	47.63	316	P	P	08 05 36.6	+0.2
	baz=125,SNR=17						
109C				S	S	08 12 34.7	+4.4
	baz=125						
GBN	Guysborough	47.65	17	IAmb	IAmb	08 05 44.4	
	comp=Z,203nm,1.1s						
LMQ	La Malbaie	47.67	9	IAmb	IAmb	08 05 45.0	
	comp=Z,247nm,1.1s						
LCMT	Little Creek M	47.70	323	IAmb	IAmb	08 05 48.0	
	comp=Z,280nm,1.6s						
GMRC	Granite Mounta	47.78	319	P	P	08 05 38.5	+0.7
	baz=128,SNR=30						
GMRC				S	S	08 12 37.5	+4.7
	baz=128						
MTPU	Mount Pierson	47.79	325	IAmb	IAmb	08 05 48.8	
	comp=Z,324nm,1.9s						
RWWY	Rawlins	47.91	332	IAmb	IAmb	08 06 23.1	
	comp=Z,383nm,1.3s						
RWWY				IAMs_20	IAMs_20	08 27 06.4	
	comp=Z,52µm,22.0s						
SZCU	Shurtz Canyon	48.01	324	IAmb	IAmb	08 05 54.5	
	comp=Z,202nm,1.3s						
MURC	Murrieta	48.10	317	P	P	08 05 40.6	+0.5
	baz=126,SNR=18						
MURC				S	S	08 12 42.2	+5.2
	baz=126						
RDMU	Red Mountain	48.20	330	IAmb	IAmb	08 05 55.2	
	comp=Z,186nm,1.2s						
HEC	Hector,Ludlow	48.25	319	P	P	08 05 42.5	+1.2
	baz=127,SNR=33						
HEC				S	S	08 12 43.5	+4.2
	baz=127						
ELS	Elsinore Mount	48.28	317	P	P	08 05 42.4	+0.8
BBRC	Big Bear Solar	48.30	318	P	P	08 05 43.1	+1.2
	baz=126,SNR=22						
BBRC				S	S	08 12 43.8	+3.5
	baz=126						
TCRU	Three Creeks R	48.33	326	IAmb	IAmb	08 06 06.2	
	comp=Z,144nm,1.0s						
TUQ	Turquoise Moun	48.35	320	P	P	08 05 42.8	+0.6
	baz=128,SNR=10						
TUQ				S	S	08 12 44.2	+3.4
	baz=128						
K22A	Casper	48.37	334	P	P	08 05 42.6	+0.4
	baz=143,SNR=49						
K22A				S	S	08 12 43.4	+2.6
	baz=143						
K22A	Casper	48.37	334	P	P	08 05 42.2	0.0
	baz=143,SNR=49						
K22A				S	S	08 12 43.5	+2.6
	baz=143						
EYMN	Ely	48.40	350	P	P	08 05 40.1	-2.1
	baz=164,SNR=66						
EYMN				S	S	08 12 33.4	-7.4
	baz=164						
EYMN	Ely	48.40	350	P	P	08 05 40.1	-2.1
	baz=164,SNR=66						
EYMN				S	S	08 12 35.8	-5.0
	baz=164						
RSSD	Black Hills	48.53	337	P	P	08 05 44.0	+0.5
RSSD	Black Hills	48.53	337	P	P	08 05 44.0	+0.5
RSSD				pmax	pmax		
	comp=Z,431nm,1.3s						
RSSD	Black Hills	48.53	337	P	P	08 05 44.1	+0.6
	baz=147,SNR=60						
RSSD				S	S	08 12 46.5	+3.3
	baz=147						
RSSD	Black Hills	48.53	337	P	P	08 05 44.4	+0.9
	baz=147						
RSSD				S	S	08 12 47.8	+4.6
	baz=147						
RSSD	Black Hills	48.53	337	⇑P	P	08 05 44.0	+0.5
SHPR	Sheep Range	48.54	322	IAmb	IAmb	08 05 54.5	
	comp=Z,306nm,1.6s						
SCI2	San Clemente I	48.68	316	P	P	08 05 44.9	+0.4
	baz=124						
SCI2				S	S	08 12 50.5	+5.3
	baz=124						
RRX	Edison Barstow	48.71	319	P	P	08 05 45.3	+0.5
	baz=127						
RRX				S	S	08 12 50.0	+4.3
	baz=127						
BFSC	Mount Baldy Ra	48.78	318	P	P	08 05 45.4	-0.1
	baz=126,SNR=21						
BFSC				S	S	08 12 51.6	+4.7
	baz=126						
CIS	Catalina Islan	48.82	316	P	P	08 05 46.0	+0.4
	baz=124,SNR=10						
CIS				S	S	08 12 51.9	+4.6
	baz=124						
GSC	Goldstone, Bar	48.84	319	P	P	08 05 46.6	+0.7
	baz=127,SNR=44						
GSC				S	S	08 12 50.1	+2.4
	baz=127						
SHOC	Shoshone, Teco	48.86	320	P	P	08 05 46.5	+0.5
	baz=128,SNR=34						
SHOC				S	S	08 12 51.7	+4.0
	baz=128						
D32A	Dogwood Acres,	48.87	345	IAmb	IAmb	08 06 19.1	
	comp=Z,367nm,1.6s						
D32B	Dogwood Acres,	48.87	345	P	P	08 05 44.0	-1.7
	baz=157						
D32B				S	S	08 12 41.5	-5.9
	baz=157						
FMP	Fort Macarthur	48.91	317	P	P	08 05 47.0	+0.7
	baz=124						
FMP				S	S	08 12 52.0	+3.6
	baz=124						
PRN	Pahroc Range	49.05	323	⇑P	P	08 05 50.0	+2.5
PASC	Pasadena Art C	49.10	317	IAmb	IAmb	08 06 21.9	
	comp=Z,354nm,1.7s						
PASC	Pasadena Art C	49.10	317	IAMs_20	IAMs_20	08 24 37.3	
	comp=Z,37µm,19.0s						
GO08	Villa O'Higgin	49.11	174	*e*P	P	08 05 48.2	+0.7
JLU	Jordanelle	49.20	328	IAmb	IAmb	08 05 57.0	
	comp=Z,279nm,1.5s						
B35A	Bob, Littlefor	49.23	348	IAmb	IAmb	08 06 22.9	
	comp=Z,502nm,1.9s						
B35A	Bob, Littlefor	49.23	348	P	P	08 05 46.4	-2.1
	baz=162,SNR=53						
B35A				S	S	08 12 46.4	-6.1
	baz=162						
DECC	Green Verdugo	49.25	317	P	P	08 05 49.6	+0.6
	baz=125						
DECC				S	S	08 12 54.6	+1.4
	baz=125						
QSM	Queen of Sheba	49.28	320	IAmb	IAmb	08 06 15.9	
	comp=Z,236nm,1.4s						
EDW2	Edwards Air Fo	49.38	318	P	P	08 05 50.8	+0.8
	baz=126,SNR=49						
EDW2				S	S	08 12 58.9	+3.7
	baz=126						
E28A	Huff	49.45	341	P	P	08 05 50.0	-0.2
	baz=152,SNR=93						
E28A				S	S	08 12 53.6	-2.1
	baz=152						
TPNV	Topopah Spring	49.50	321	IAmb	IAmb	08 06 05.5	
	comp=Z,541nm,1.8s						
TPNV	Topopah Spring	49.50	321	P	P	08 05 51.5	+0.5
	baz=129,SNR=41						
TPNV				S	S	08 13 01.9	+5.0
	baz=129						
TPNV	Topopah Spring	49.50	321	⇑P	P	08 05 53.6	+2.6
SNCC	San Nicolas Is	49.51	315	P	P	08 05 50.6	-0.3
	baz=123						
SNCC				S	S	08 13 01.0	+4.1
	baz=123						
LRMC	Laurel Mtn Rad	49.52	319	P	P	08 05 51.8	+0.7
	baz=126,SNR=101						
LRMC				S	S	08 13 02.1	+4.8
	baz=126						
CCAC	Calif City Air	49.55	318	IAmb	IAmb	08 06 18.2	
	comp=Z,356nm,1.4s						
FURC	Furnace Creek,	49.59	320	P	P	08 05 52.4	+0.9
	baz=128,SNR=64						
FURC				S	S	08 13 03.5	+5.7
	baz=128						
DUG	Dugway, Tooele	49.64	327	IAmb	IAmb	08 06 02.6	
	comp=Z,369nm,1.7s						
DUG	Dugway, Tooele	49.64	327	P	P	08 05 52.3	+0.4
	baz=134,SNR=90						
DUG				S	S	08 13 02.8	+4.1
	baz=134						
AGMN	Agassiz Nation	49.66	346	IAMs_20	IAMs_20	08 27 53.0	
	comp=Z,61µm,21.0s						
AGMN	Agassiz Nation	49.66	346	P	P	08 05 50.0	-1.8
	baz=159,SNR=95						
AGMN				S	S	08 12 52.8	-5.6
	baz=159						
AGMN	Agassiz Nation	49.66	346	P	P	08 05 50.2	-1.5
	baz=159,SNR=95						
AGMN				S	S	08 12 53.3	-5.1
	baz=159						
OSI	Osito Audit: C	49.72	317	P	P	08 05 52.9	+0.4
	baz=125						
OSI				S	S	08 13 03.8	+3.9
	baz=125						
BW06	Boulder Array	49.85	332	P	P	08 05 53.1	-0.5
	baz=140,SNR=52						
BW06				S	S	08 13 04.3	+2.4
	baz=140						
PD31	Pinedale Array	49.85	332	⇑P	P	08 05 53.2	-0.4
PDAR	Pinedale Array	49.85	332	P	P	08 05 53.0	-0.7
	comp=Z,12nm,0.8s,baz=134,slow=8.5,SNR=60						
PDAR				S	S	08 13 03.4	+1.6
	comp=Z,1.5nm,0.9s,baz=99,slow=9.3,SNR=1.7						
PDAR				LR	LR	08 28 23.5	
	comp=Z,55µm,19.1s,baz=140,slow=38						
PDAR				PKPPKP	P'P'df	08 36 47.7	+0.3
	comp=Z,0.5nm,0.8s,baz=5.7,slow=3.0,SNR=5.0						
PDAR				P4KPbc		08 43 25.4	
	comp=Z,0.3nm,0.6s,baz=132,slow=2.2,SNR=4.5						
	comp=Z,12nm,0.8s						
R11A	Troy Canyon, C	49.98	323	P	P	08 05 55.0	+0.3
	baz=130,SNR=77						
R11A				S	S	08 13 07.4	+3.7
	baz=130						
HWUT	Hardware Ranch	49.98	329	IAmb	IAmb	08 06 04.4	
	comp=Z,308nm,1.4s						
HWUT				IAMs_20	IAMs_20	08 28 17.3	
	comp=Z,57µm,19.0s						
SCZ2	Santa Cruz Isl	50.00	316	P	P	08 05 53.5	-1.1
	baz=123						
SCZ2				S	S	08 13 07.4	+3.6
	baz=123						
ARVC	Arvin	50.08	318	P	P	08 05 55.9	+0.7
	baz=125,SNR=28						
ARVC				S	S	08 13 09.2	+4.4
	baz=125						
ISA	Isabella, Lake	50.15	319	P	P	08 05 56.6	+0.7
	baz=126,SNR=42						
ISA				S	S	08 13 11.0	+5.0
	baz=126						
GRAC	Grapevine Rang	50.23	321	IAmb	IAmb	08 06 07.5	
	comp=Z,386nm,1.4s						
GRAC	Grapevine Rang	50.23	321	P	P	08 05 57.5	+1.1
	baz=128,SNR=48						
GRAC				S	S	08 13 11.6	+4.7
	baz=128						
MDND	Maddock	50.25	343	P	P	08 05 55.8	-0.5
	baz=154,SNR=65						
MDND				S	S	08 13 03.1	-3.7
	baz=154						
MDND	Maddock	50.25	343	P	P	08 05 55.8	-0.5
	baz=154,SNR=65						
MDND				S	S	08 13 03.6	-3.1
	baz=154						
BGU	Big Grassy Mou	50.27	327	IAmb	IAmb	08 06 05.8	
	comp=Z,515nm,1.7s						
SBC	Santa Barbara	50.30	317	P	P	08 05 56.6	-0.2
	baz=124						
SBC				S	S	08 13 11.4	+3.6
	baz=124						
CWC	Cottonwood Cre	50.35	320	P	P	08 05 58.0	+0.5
	baz=127						
CWC				S	S	08 13 14.3	+5.4
	baz=127						
BCW	Bitter Crk WRg	50.37	317	IAmb	IAmb	08 06 33.9	
	comp=Z,401nm,1.2s						
AHID	Auburn Hatcher	50.60	330	IAmb	IAmb	08 07 37.6	
	comp=Z,336nm,1.8s						
AHID				IAMs_20	IAMs_20	08 27 39.6	
	comp=Z,63µm,22.0s						
PKM	Mcpherson Peak	50.61	317	P	P	08 06 00.4	+0.9
	baz=124,SNR=21						
PKM				S	S	08 13 16.5	+3.9

	baz=124						
VES	**Vestal, Richgr**	**50.66**	**318**	P	**P**	**08 06 00.5**	**+1.0**
	baz=125,SNR=47						
VES				S	**S**	**08 13 16.6**	**+3.7**
	baz=125						
HVU	**Hansel Valley**	**50.74**	**328**	IAmb	IAmb	08 06 10.3	
	comp=Z,489nm,1.9s						
TIN	**Tinemaha, Big**	**50.82**	**320**	P	**P**	**08 06 00.8**	**-0.1**
	baz=127						
TIN				S	**S**	**08 13 20.1**	**+4.9**
	baz=127						
REDW	**Red Top Meadow**	**50.92**	**331**	IAmb	IAmb	08 06 10.6	
	comp=Z,615nm,1.6s						
REDW				IAMs_20	IAMs_20	08 28 59.0	
	comp=Z,62µm,20.0s						
SNOW	**Snow King Moun**	**50.95**	**331**	IAmb	IAmb	08 06 59.1	
	comp=Z,544nm,1.9s						
SNOW				IAMs_20	IAMs_20	08 29 00.8	
	comp=Z,59µm,20.0s						
SMMC	**Simmler**	**50.97**	**317**	P	**P**	**08 06 02.4**	**+0.4**
	baz=124,SNR=17						
SMMC				S	**S**	**08 13 22.1**	**+4.8**
	baz=124						
LOHW	**Long Hollow**	**50.99**	**331**	IAMs_20	IAMs_20	08 29 12.9	
	comp=Z,52µm,18.0s						
TPAW	**Teton Pass**	**51.07**	**331**	IAMs_20	IAMs_20	08 29 03.8	
	comp=Z,59µm,20.0s						
VOG	**Valley Oaks Go**	**51.13**	**319**	P	**P**	**08 06 03.2**	**+0.1**
	baz=125						
VOG				S	**S**	**08 13 22.5**	**+3.1**
	baz=125						
MOOW	**Moose Ponds**	**51.16**	**331**	IAMs_20	IAMs_20	08 29 18.3	
	comp=Z,49µm,19.0s						
Q09A	**Carvers**	**51.25**	**323**	IAmb	IAmb	08 06 49.8	
	comp=Z,290nm,1.1s						
ELK	**Elko**	**51.36**	**326**	P	**P**	**08 06 04.8**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=130,slow=6.1,SNR=19						
ELK				S	**S**	**08 13 25.9**	**+3.0**
	comp=Z,0.5nm,0.7s,baz=133,slow=15,SNR=0.9						
ELK				LR	LR	08 27 52.7	
	comp=Z,30µm,18.9s,baz=130,slow=36						
ELK	**Elko**	**51.36**	**326**	IAmb	IAmb	08 06 15.5	
	comp=Z,436nm,1.8s						
ELK				IAMs_20	IAMs_20	08 26 18.9	
	comp=Z,41µm,20.0s						
PAGB	**Antelope Grade**	**51.38**	**318**	IAmb	IAmb	08 06 39.9	
	comp=Z,356nm,1.6s						
FLWY	**Flagg Ranch**	**51.39**	**332**	IAMs_20	IAMs_20	08 28 59.4	
	comp=Z,50µm,19.0s						
ULM	**Lac du Bonnet**	**51.48**	**347**	P	**P**	**08 06 03.5**	**-2.0**
	comp=Z,210nm,1.0s,baz=160,slow=7.3,SNR=74						
ULM				S	**S**	**08 13 16.4**	**-7.4**
	comp=Z,2.8nm,0.7s,baz=122,slow=3.7,SNR=1.0						
	comp=Z,210nm,1.0s						
ULM	**Lac du Bonnet**	**51.48**	**347**	IAmb	IAmb	08 06 07.7	
	comp=Z,256nm,1.0s						
ULM	**Lac du Bonnet**	**51.48**	**347**	⇑P	**P**	**08 06 03.5**	**-2.0**
LAO	**LASA Array**	**51.52**	**337**	IAmb	IAmb	08 06 43.7	
	comp=Z,386nm,1.5s						
LAO	**LASA Array**	**51.52**	**337**	P	**P**	**08 06 05.9**	**-0.1**
	baz=145,SNR=33						
LAO				S	**S**	**08 13 20.8**	**-3.8**
	baz=145						
LAO	**LASA Array**	**51.52**	**337**	P	**P**	**08 06 06.1**	**+0.1**
	baz=145,SNR=33						
LAO				S	**S**	**08 13 24.3**	**-0.2**
	baz=145						
RLMT	**Red Lodge**	**51.53**	**334**	P	**P**	**08 06 06.2**	**-0.1**
	baz=141,SNR=50						
RLMT				S	**S**	**08 13 26.1**	**+1.1**
	baz=141						
MLAC	**Mammoth, Mammo**	**51.55**	**320**	P	**P**	**08 06 06.9**	**+0.4**
	baz=127,SNR=26						
MLAC				S	**S**	**08 13 28.9**	**+3.3**
	baz=127						
H17A	**Grant Village**	**51.57**	**332**	P	**P**	**08 06 07.6**	**+1.0**
	baz=139,SNR=42						
H17A				S	**S**	**08 13 29.9**	**+4.2**
	baz=139						
NV11	**Mina Array Sit**	**51.60**	**322**	IAmb	IAmb	08 06 17.7	
	comp=Z,276nm,1.1s						
LKWY	**Lake**	**51.62**	**332**	IAMs_20	IAMs_20	08 29 07.4	
	comp=Z,64µm,21.0s						
NVAR	**Mina Array Bea**	**51.69**	**322**	P	**P**	**08 06 08.4**	**+0.8**
	comp=Z,21nm,0.7s,baz=132,slow=6.6,SNR=83						
NVAR				S	**S**	**08 13 31.1**	**+3.6**
	comp=Z,0.2nm,0.4s,baz=298,slow=37,SNR=1.8						
NVAR				LR	LR	08 27 25.6	
	comp=Z,38µm,19.6s,baz=124,slow=35						
NVAR				PKPPKP	**P'P'df**	**08 36 43.6**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=45,slow=2.3,SNR=4.5						
	comp=Z,21nm,0.7s						
LHV	**Little Huntoon**	**51.71**	**321**	IAmb	IAmb	08 06 26.3	
	comp=Z,423nm,1.2s						
GO09	**Cerro Castillo**	**51.90**	**174**	IAmb	IAmb	08 06 14.5	
	comp=Z,258nm,1.1s						
GO09	**Cerro Castillo**	**51.90**	**174**	*e*P	**P**	**08 06 09.4**	**+0.8**
PMPB	**Monarch Peak**	**52.02**	**318**	IAmb	IAmb	08 06 45.1	
	comp=Z,454nm,1.5s						
DGMT	**Dagmar**	**52.27**	**340**	IAmb	IAmb	08 06 26.3	
	comp=Z,278nm,1.2s						
DGMT	**Dagmar**	**52.27**	**340**	P	**P**	**08 06 11.6**	**+0.1**
	baz=149,SNR=30						
DGMT				S	**S**	**08 13 36.1**	**+1.4**
	baz=149						
DGMT	**Dagmar**	**52.27**	**340**	P	**P**	**08 06 11.8**	**+0.3**
	baz=149,SNR=30						
DGMT				S	**S**	**08 13 37.0**	**+2.3**
	baz=149						
MG05	**Puerto Natales**	**52.28**	**174**	IAmb	IAmb	08 06 29.1	
	comp=Z,228nm,1.2s						
MG05	**Puerto Natales**	**52.28**	**174**	*i* P	**P**	**08 06 11.8**	**+0.4**
BMN	**Battle Mountai**	**52.29**	**324**	IAmb	IAmb	08 06 29.2	
	comp=Z,257nm,1.3s						
DRLN	**Deer Lake**	**52.31**	**18**	IAmb	IAmb	08 06 15.3	
	comp=Z,227nm,0.8s						
DRLN	**Deer Lake**	**52.31**	**18**	⇑P	**P**	**08 06 11.4**	**-0.3**
BBGB	**Big Mountain B**	**52.38**	**318**	IAmb	IAmb	08 06 48.0	
	comp=Z,290nm,1.3s						
YERR	**Yerington**	**52.61**	**322**	IAmb	IAmb	08 06 25.1	
	comp=Z,299nm,1.6s						
SAO	**San Andreas Ge**	**52.76**	**318**	IAMs_20	IAMs_20	08 27 13.1	
	comp=Z,42µm,19.0s						
SAO	**San Andreas Ge**	**52.76**	**318**	⇓p	P	08 06 20.8	+5.6
HLID	**Hailey**	**52.85**	**329**	P	**P**	**08 06 16.8**	**+0.7**
	baz=135,SNR=115						
HLID				S	**S**	**08 13 47.0**	**+3.9**
	baz=135						
BOZ	**Bozeman (W)**	**52.97**	**332**	IAmb	IAmb	08 06 25.8	
	comp=Z,416nm,1.6s						
BOZ	**Bozeman (W)**	**52.97**	**332**	P	**P**	**08 06 17.1**	**+0.3**
	baz=139,SNR=205						
BOZ				S	**S**	**08 13 46.8**	**+2.2**
	baz=139						
PAHR	**Pah Rah Range**	**53.14**	**322**	IAmb	IAmb	08 07 13.9	
	comp=Z,328nm,1.5s						
MFID	**Camas Ranch**	**53.49**	**328**	IAmb	IAmb	08 06 30.0	
	comp=Z,417nm,1.4s						
MFID				IAMs_20	IAMs_20	08 30 32.1	
	comp=Z,39µm,18.0s						
MG04	**Isla Riesco**	**53.55**	**174**	IAmb	IAmb	08 06 27.3	
	comp=Z,290nm,0.9s						
MG04	**Isla Riesco**	**53.55**	**174**	⇑*i*P	**P**	**08 06 22.1**	**+1.5**
MG02	**Cerro Sombrero**	**53.76**	**172**	P	**P**	**08 06 24.1**	**+1.8**
MG02	**Cerro Sombrero**	**53.76**	**172**	*e*P	**P**	**08 06 22.1**	**-0.2**
GO10	**Punta Arenas**	**53.90**	**173**	IAmb	IAmb	08 06 29.8	
	comp=Z,279nm,1.0s						
GO10	**Punta Arenas**	**53.90**	**173**	*e*P	**P**	**08 06 22.2**	**-1.1**
GO10	**Punta Arenas**	**53.90**	**173**	⇑P	**P**	**08 06 25.3**	**+2.0**
EGMT	**Eagleton**	**54.02**	**336**	IAmb	IAmb	08 07 29.6	
	comp=Z,298nm,1.4s						
EGMT	**Eagleton**	**54.02**	**336**	P	**P**	**08 06 24.4**	**0.0**
	baz=142,SNR=47						
EGMT				S	**S**	**08 14 00.7**	**+2.1**
	baz=142						
ORV	**Oroville**	**54.36**	**321**	IAmb	IAmb	08 07 17.9	
	comp=Z,416nm,1.5s						
WVOR	**Wild Horse Val**	**54.39**	**325**	IAmb	IAmb	08 06 44.2	
	comp=Z,200nm,1.1s						
WVOR	**Wild Horse Val**	**54.39**	**325**	⇑P	**P**	**08 06 27.6**	**+0.3**
MCCM	**Marconi Confer**	**54.47**	**319**	IAMs_20	IAMs_20	08 28 05.3	
	comp=Z,33µm,19.0s						
MCCM	**Marconi Confer**	**54.47**	**319**	⇑P	P	08 06 33.5	+5.8
MG03	**Isla Dawson**	**54.65**	**173**	IAmb	IAmb	08 06 47.2	
	comp=Z,260nm,1.1s						
MG03	**Isla Dawson**	**54.65**	**173**	*i* P	**P**	**08 06 28.9**	**+0.2**
PLID	**Pearl Lake**	**54.73**	**329**	IAMs_20	IAMs_20	08 30 18.9	
	comp=Z,45µm,20.0s						
J08A	**Circle Bar Ran**	**54.89**	**326**	IAmb	IAmb	08 07 34.2	
	comp=Z,393nm,1.8s						
MSO	**Missoula**	**54.96**	**332**	IAmb	IAmb	08 06 46.9	
	comp=Z,216nm,1.3s						
MSO				IAMs_20	IAMs_20	08 30 31.8	
	comp=Z,50µm,20.0s						
MSO	**Missoula**	**54.96**	**332**	P	**P**	**08 06 31.4**	**+0.1**
	baz=137,SNR=72						
MSO				S	**S**	**08 14 13.6**	**+2.3**
	baz=137						
MOD	**Modoc Plateau**	**55.03**	**324**	IAMs_20	IAMs_20	08 29 36.9	
	comp=Z,48µm,20.0s						
HOPS	**Hopland Field**	**55.06**	**319**	IAMs_20	IAMs_20	08 28 48.9	
	comp=Z,46µm,20.0s						
EFI	**East Falkland**	**55.09**	**164**	P	**P**	**08 06 32.7**	**+0.8**
EFI				IAmb	IAmb	08 06 33.7	
	comp=Z,257nm,1.1s						
EFI	**East Falkland**	**55.09**	**164**	*c i*P	**P**	**08 06 32.7**	**+0.8**
EFI				pmax	pmax		
	comp=Z,134nm,1.0s						
EFI				MLR	MLR		
	comp=Z,73µm,19.0s						
EFI	**East Falkland**	**55.09**	**164**	⇑P	**P**	**08 06 32.4**	**+0.4**
BMO	**Blue Mountains**	**55.25**	**328**	IAMs_20	IAMs_20	08 30 53.6	
	comp=Z,45µm,19.0s						
SCHQ	**Schefferville**	**55.28**	**9**	P	**P**	**08 06 32.2**	**-1.2**
	comp=Z,99nm,1.0s,baz=209,slow=6.3,SNR=54						
SCHQ				S	**S**	**08 14 12.2**	**-2.9**
	comp=Z,5.4nm,0.9s,baz=298,slow=18,SNR=7.4						
SCHQ				LR	LR	08 32 07.1	
	comp=Z,33µm,19.2s,baz=200,slow=38						
SCHQ				PKPPKP	**P'P'df**	**08 36 39.2**	**+0.6**
	comp=Z,3.4nm,0.9s,baz=313,slow=8.0,SNR=3.3						
	comp=Z,99nm,1.0s						
SCHQ	**Schefferville**	**55.28**	**9**	⇑P	**P**	**08 06 32.1**	**-1.2**
KCPM	**Cahto Peak**	**55.77**	**320**	IAmb	IAmb	08 07 19.8	
	comp=Z,283nm,1.3s						
JTMT	**Jette**	**55.79**	**333**	IAmb	IAmb	08 06 49.5	
	comp=Z,372nm,1.8s						
USHA	**Ushuaia**	**55.87**	**172**	*i* P	**P**	**08 06 37.7**	**+0.2**
K05A	**Summer Lake**	**55.88**	**324**	IAmb	IAmb	08 07 17.0	
	comp=Z,482nm,1.7s						
F10A	**Beach Ranch, E**	**55.97**	**329**	IAmb	IAmb	08 06 51.9	
	comp=Z,361nm,1.4s						
F10A	**Beach Ranch, E**	**55.97**	**329**	⇑P	**P**	**08 06 38.4**	**-0.2**
MG01	**Puerto William**	**56.08**	**172**	*e*P	**P**	**08 06 36.4**	**-2.6**
KMRM	**Mail Ridge**	**56.14**	**320**	IAmb	IAmb	08 07 20.3	
	comp=Z,445nm,1.6s						
K04D	**Chiloquin, OR**	**56.32**	**324**	P	**P**	**08 06 41.4**	**+0.2**
	baz=127						
K04D				S	**S**	**08 14 30.9**	**+1.2**
	baz=127						
YBH	**Yreka Blue Hor**	**56.37**	**322**	P	**P**	**08 06 41.2**	**-0.3**
	comp=Z,8.0nm,0.7s,baz=123,slow=2.8,SNR=27						
YBH				S	**S**	**08 14 30.0**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=177,slow=23,SNR=1.3						
YBH				LR	LR	08 30 21.5	
	comp=Z,27µm,19.2s,baz=134,slow=36						
	comp=Z,8.0nm,0.7s						
L04D	**Klamath Falls**	**56.41**	**323**	IAmb	IAmb	08 07 46.4	
	comp=Z,273nm,1.2s						
L04D				IAMs_20	IAMs_20	08 30 20.6	
	comp=Z,43µm,20.0s						
L04D	**Klamath Falls**	**56.41**	**323**	P	**P**	**08 06 41.7**	**-0.1**
	baz=126,SNR=18						
L04D				S	**S**	**08 14 32.1**	**+1.2**
	baz=126						
J05D	**Fort Rock, OR**	**56.41**	**325**	P	**P**	**08 06 42.5**	**+0.6**
	baz=128,SNR=42						
J05D				S	**S**	**08 14 33.9**	**+2.9**
	baz=128						
KMPM	**Mount Pierce**	**56.51**	**320**	IAmb	IAmb	08 06 51.2	
	comp=Z,398nm,1.6s						
KHMM	**Horse Mountain**	**56.52**	**321**	IAmb	IAmb	08 07 24.1	
	comp=Z,250nm,1.1s						
PINE	**Pine Mountain**	**56.56**	**325**	IAmb	IAmb	08 07 22.0	
	comp=Z,214nm,1.1s						
WALA	**Waterton Lakes**	**56.59**	**334**	⇑P	**P**	**08 06 43.2**	**+0.2**
E09A	**Wood Farm, Sta**	**56.80**	**329**	IAmb	IAmb	08 07 30.5	
	comp=Z,240nm,1.3s						
J04D	**Umpqua Nationa**	**56.90**	**324**	IAmb	IAmb	08 07 03.2	
	comp=Z,224nm,0.8s						
J04D				IAMs_20	IAMs_20	08 31 24.4	
	comp=Z,41µm,18.0s						
J04D	**Umpqua Nationa**	**56.90**	**324**	P	**P**	**08 06 45.7**	**+0.3**
	baz=127,SNR=42						
J04D				S	**S**	**08 14 40.6**	**+3.1**
	baz=127						
HUMO	**Hull Mountain**	**57.03**	**323**	IAMs_20	IAMs_20	08 33 22.9	
	comp=Z,34µm,19.0s						
HUMO	**Hull Mountain**	**57.03**	**323**	⇓P	**P**	**08 06 49.1**	**+3.0**
I05D	**Terrebonne, OR**	**57.12**	**326**	P	**P**	**08 06 47.5**	**+0.8**
	baz=128,SNR=56						
I05D				S	**S**	**08 14 44.0**	**+3.9**
	baz=128						
L02F	**Cave Junction**	**57.12**	**322**	P	**P**	**08 06 46.5**	**-0.2**
	baz=125						
L02F				S	**S**	**08 14 42.1**	**+2.1**
	baz=125						
KSXB	**Camp Six Broad**	**57.15**	**322**	IAmb	IAmb	08 06 59.0	
	comp=Z,283nm,1.1s						
I04A	**Tendick Farm,**	**57.40**	**324**	P	**P**	**08 06 48.6**	**-0.2**
	baz=127						
I04A				S	**S**	**08 14 45.1**	**+1.2**
	baz=127						
SACV	**Santiago Islan**	**57.42**	**73**	P	**P**	**08 06 49.9**	**+0.6**
HAWA	**Hanford**	**57.44**	**328**	IAMs_20	IAMs_20	08 31 56.6	
	comp=Z,45µm,21.0s						
HAWA	**Hanford**	**57.44**	**328**	⇑P	**P**	**08 06 48.9**	**0.0**
NEW	**Newport**	**57.49**	**331**	P	**P**	**08 06 49.0**	**-0.3**
	comp=Z,23nm,1.1s,baz=134,slow=6.8,SNR=28						
NEW				LR	LR	08 32 02.1	
	comp=Z,32µm,20.3s,baz=132,slow=37						
	comp=Z,23nm,1.1s						
NEW	**Newport**	**57.49**	**331**	P	**P**	**08 06 49.5**	**+0.2**
	baz=134,SNR=26						
NEW				S	**S**	**08 14 47.6**	**+2.8**
	baz=134						
K02D	**Willamette Mer**	**57.51**	**323**	P	**P**	**08 06 49.8**	**+0.3**
	baz=125,SNR=23						
K02D				S	**S**	**08 14 46.6**	**+1.4**
	baz=125						
D08A	**Wollman Farm,**	**57.56**	**329**	IAmb	IAmb	08 07 49.4	
	comp=Z,398nm,2.0s						
G05D	**Wamic, OR**	**57.67**	**326**	P	**P**	**08 06 51.4**	**+0.8**
	baz=128,SNR=21						
G05D				S	**S**	**08 14 53.4**	**+6.3**
	baz=128						
H04A	**Detroit Lake**	**57.81**	**325**	IAmb	IAmb	08 07 00.1	
	comp=Z,221nm,1.4s						
I03D	**Drain, OR**	**57.90**	**324**	P	**P**	**08 06 52.6**	**+0.5**
	baz=126,SNR=13						
I03D				S	**S**	**08 14 51.2**	**+1.0**
	baz=126						
J01E	**Myrtle Point**	**57.93**	**323**	IAMs_20	IAMs_20	08 31 29.9	
	comp=Z,36µm,20.0s						
J01E	**Myrtle Point**	**57.93**	**323**	P	**P**	**08 06 53.1**	**+0.7**
	baz=125,SNR=24						
J01E				S	**S**	**08 14 53.8**	**+3.1**
	baz=125						
BUCK	**Buck Mountain**	**57.98**	**325**	IAmb	IAmb	08 07 04.5	
	comp=Z,191nm,1.1s						
KEBM	**Edson Butte**	**58.01**	**323**	IAmb	IAmb	08 07 06.0	
	comp=Z,336nm,1.1s						
H04D	**Lebanon**	**58.03**	**325**	IAmb	IAmb	08 07 23.5	
	comp=Z,213nm,1.4s						
H04D				IAMs_20	IAMs_20	08 33 12.3	
	comp=Z,47µm,18.0s						
H04D	**Lebanon**	**58.03**	**325**	P	**P**	**08 06 52.1**	**-1.0**
	baz=127,SNR=6.1						
H04D				S	**S**	**08 14 51.8**	**0.0**
	baz=127						
F05D	**White Salmon**	**58.15**	**327**	P	**P**	**08 06 55.0**	**+1.1**
	baz=129,SNR=15						
F05D				S	**S**	**08 14 58.9**	**+5.5**
	baz=129						
COR	**Corvallis**	**58.39**	**325**	P	**P**	**08 06 57.2**	**+1.6**
COR	**Corvallis**	**58.39**	**325**	P	**P**	**08 06 57.2**	**+1.6**
COR				pmax	pmax		
	comp=Z,739nm,1.6s						
COR				MLR	MLR		
	comp=Z,27µm,19.0s						
COR	**Corvallis**	**58.39**	**325**	⇑P	**P**	**08 06 56.6**	**+1.1**
I02E	**Swisshome, OR**	**58.43**	**324**	IAMs_20	IAMs_20	08 33 43.9	
	comp=Z,35µm,18.0s						
I02E	**Swisshome, OR**	**58.43**	**324**	P	**P**	**08 06 56.3**	**+0.5**
	baz=125						
I02E				S	**S**	**08 15 00.2**	**+3.1**
	baz=125						
LTY	**Liberty**	**58.59**	**329**	IAmb	IAmb	08 07 22.6	
	comp=Z,148nm,1.2s						
B08A	**Colville Reser**	**58.64**	**330**	IAmb	IAmb	08 07 58.1	
	comp=Z,196nm,1.5s						
F04A	**Amboy**	**58.70**	**326**	IAmb	IAmb	08 07 07.5	
	comp=Z,138nm,1.1s						
G03D	**McMinnville, O**	**58.74**	**325**	IAmb	IAmb	08 08 03.4	
	comp=Z,210nm,1.1s						
G03D				IAMs_20	IAMs_20	08 33 52.1	
	comp=Z,39µm,18.0s						
G03D	**McMinnville, O**	**58.74**	**325**	P	**P**	**08 06 59.1**	**+1.1**
	baz=126,SNR=6.2						
G03D				S	**S**	**08 15 04.2**	**+3.1**
	baz=126						
H07S1	**FLORES T-PHASE**	**58.91**	**43**	*e*P	**P**	**08 06 59.1**	**-0.3**
F04D	**Rainier, OR**	**59.12**	**326**	P	**P**	**08 07 01.2**	**+0.5**
	baz=127						
F04D				S	**S**	**08 15 09.2**	**+3.2**
	baz=127						
E04D	**Cinebar**	**59.16**	**327**	IAmb	IAmb	08 08 14.3	
	comp=Z,258nm,1.4s						
E04D	**Cinebar**	**59.16**	**327**	P	**P**	**08 07 00.9**	**0.0**
	baz=128,SNR=12						
E04D				S	**S**	**08 15 08.9**	**+2.3**
	baz=128						
FCC	**Fort Churchill**	**59.24**	**351**	IAmb	IAmb	08 07 03.5	
	comp=Z,183nm,1.1s						
PNT	**Penticton**	**59.42**	**331**	⇑P	**P**	**08 07 03.5**	**+0.9**
D04E	**Lakebay**	**59.66**	**327**	P	**P**	**08 07 04.9**	**+0.6**
	baz=128,SNR=13						
D04E				S	**S**	**08 15 16.4**	**+3.6**
	baz=128						
B05A	**Bryant**	**59.98**	**329**	P	**P**	**08 07 06.4**	**0.0**
	baz=129,SNR=25						
B05A				S	**S**	**08 15 18.1**	**+1.1**
	baz=129						
D03D	**Eldon**	**60.05**	**328**	P	**P**	**08 07 07.7**	**+0.7**
	baz=128,SNR=27						
D03D				S	**S**	**08 15 20.0**	**+2.1**
	baz=128						
WISH	**Wishkah**	**60.16**	**327**	P	**P**	**08 07 09.1**	**+1.4**
CALA	**Caldeira**	**60.28**	**45**	*e*P	**P**	**08 07 08.6**	**-0.3**
	comp=Z,753nm,2.3s						
PCED	**Cedros**	**60.30**	**45**	*e*P	**P**	**08 07 08.6**	**-0.3**
	comp=Z,537nm,2.3s						
HOR	**Horta**	**60.30**	**45**	*e*P	**P**	**08 07 09.3**	**+0.4**
	comp=Z,761nm,1.9s						
PCAN	**Candelaria**	**60.38**	**45**	*e*P	**P**	**08 07 09.0**	**-0.5**
	comp=Z,517nm,1.2s						
NLWA	**Neilton Lookou**	**60.38**	**327**	IAmb	IAmb	08 07 53.1	
	comp=Z,149nm,1.1s						
PICO	**Pico**	**60.44**	**45**	*e*P	**P**	**08 07 08.3**	**-1.6**
	comp=Z,803nm,1.6s						
PPNO	**Prainha do Nor**	**60.54**	**45**	*e*P	**P**	**08 07 09.3**	**-1.3**
	comp=Z,483nm,2.5s						
B04A	**Port Angeles**	**60.59**	**328**	IAmb	IAmb	08 07 21.5	
	comp=Z,152nm,1.0s						
PID	**Ribeirinha**	**60.63**	**45**	*e*P	**P**	**08 07 11.3**	**+0.1**
	comp=Z,663nm,1.9s						
ROSA	**Rosais**	**60.66**	**45**	*e*P	**P**	**08 07 10.0**	**-1.4**
	comp=Z,1µm,1.9s						
ROSA	**Rosais**	**60.66**	**45**	⇑P	**P**	**08 07 12.4**	**+1.0**
TAOE	**Nuku Hiva Isla**	**60.72**	**260**	*e*P	**P**	**08 07 09.5**	**-2.8**
	comp=Z,939nm,1.5s						
TAOE				*e*S	**S**	**08 15 19.5**	**-8.3**
	comp=Z,14µm,32.7s						
TAOE				*e*LR	LR	08 25 04.3	
	comp=Z,49µm,24.0s,baz=90						
TAOE	**Nuku Hiva Isla**	**60.72**	**260**	P	**P**	**08 07 15.5**	**+3.2**
PMAN	**Manadas**	**60.73**	**45**	*e*P	**P**	**08 07 12.0**	**+0.1**
	comp=Z,858nm,2.1s						
SRBC	**Serra Branca**	**60.94**	**44**	*e*P	**P**	**08 07 12.7**	**-0.6**
	comp=Z,1µm,1.6s						
PGRA	**Graciosa**	**60.98**	**45**	*e*P	**P**	**08 07 12.0**	**-1.5**
	comp=Z,955nm,2.1s						
C03A	**Quillayute Air**	**61.09**	**327**	IAmb	IAmb	08 07 57.9	
	comp=Z,287nm,1.2s						
ADH	**Angra Heroismo**	**61.35**	**45**	*e*P	**P**	**08 07 15.7**	**-0.3**
	comp=Z,835nm,2.1s						
LLLB	**Lillooet**	**61.37**	**331**	IAmb	IAmb	08 07 25.4	
	comp=Z,351nm,1.4s						
PAGU	**Agualva, Azore**	**61.43**	**45**	*e*P	**P**	**08 07 16.4**	**-0.2**
	comp=Z,615nm,2.5s						
PSET	**Sete Cidades**	**62.09**	**47**	*e*P	**P**	**08 07 19.1**	**-2.0**
	comp=Z,1µm,1.9s						
PDA	**Ponta Delgada**	**62.10**	**47**	*e*P	**P**	**08 07 21.5**	**+0.4**
	comp=Z,1µm,0.9s						
OZB	**Mount Ozzard**	**62.19**	**328**	IAmb	IAmb	08 07 30.6	
	comp=Z,144nm,1.1s						
PSMA	**Santa Maria**	**62.20**	**48**	*e*P	**P**	**08 07 19.4**	**-2.4**
	comp=Z,409nm,2.3s						
GRON	**Grota Negra**	**62.21**	**47**	*e*P	**P**	**08 07 22.8**	**+0.9**
	comp=Z,889nm,1.2s						
CMLA	**Cha da Macela**	**62.21**	**47**	*e*P	**P**	**08 07 20.1**	**-1.8**
	comp=Z,1µm,1.9s						
CMLA	**Cha da Macela**	**62.21**	**47**	P	**P**	**08 07 22.2**	**+0.3**
CMLA	**Cha da Macela**	**62.21**	**47**	P	**P**	**08 07 22.2**	**+0.3**
CMLA				pmax	pmax		
	comp=Z,2µm,1.8s						
CMLA	**Cha da Macela**	**62.21**	**47**	⇑P	**P**	**08 07 22.5**	**+0.6**
PCALD	**Caldeiras da R**	**62.25**	**47**	*e*P	**P**	**08 07 21.5**	**-0.7**
	comp=Z,1µm,2.8s						
PSMN	**Pico do Norte,**	**62.25**	**48**	*e*P	**P**	**08 07 20.8**	**-1.4**
	comp=Z,506nm,2.1s						
BART	**Pico Bartolome**	**62.48**	**47**	*e*P	**P**	**08 07 22.5**	**-1.3**
	comp=Z,888nm,1.9s						
MBO	**M'Bour**	**63.72**	**74**	IAMs_20	IAMs_20	08 32 44.7	
	comp=Z,49µm,22.0s						
MBO	**M'Bour**	**63.72**	**74**	⇑P	**P**	**08 07 33.0**	**+0.7**
FRB	**Frobisher Bay**	**63.73**	**6**	P	**P**	**08 07 29.4**	**-2.0**
	comp=Z,81nm,0.9s,baz=178,slow=6.7,SNR=47						
FRB				LR	LR	08 39 07.9	
	comp=Z,37µm,18.4s,baz=185,slow=40						
	comp=Z,81nm,0.9s						
FRB	**Frobisher Bay**	**63.73**	**6**	⇑P	**P**	**08 07 29.2**	**-2.2**
HOPE	**Hope Point**	**65.16**	**154**	P	**P**	**08 07 40.7**	**-0.2**
HOPE	**Hope Point**	**65.16**	**154**	P	**P**	**08 07 40.7**	**-0.2**
HOPE				pmax	pmax		
	comp=Z,228nm,0.9s						
HOPE				MLR	MLR		
	comp=Z,69µm,22.0s						
HOPE	**Hope Point**	**65.16**	**154**	⇑P	**P**	**08 07 41.8**	**+0.9**
HOPE				⇓P	pP	08 07 42.2	-8.0
IVI	**Ivigtut**	**65.28**	**16**	IAmb	IAmb	08 07 41.9	
	comp=Z,327nm,1.6s						
IVI	**Ivigtut**	**65.28**	**16**	*i* P	**P**	**08 07 40.5**	**-1.0**
IVI				IAmb	IAmb	08 07 43.5	
	comp=Z,30nm,0.8s						
BBB	**Bella Bella**	**65.42**	**330**	P	**P**	**08 07 43.1**	**+0.4**
	comp=Z,32nm,0.9s,baz=107,slow=7.5,SNR=7.8						
BBB				S	**S**	**08 16 29.4**	**+4.2**
	comp=Z,12nm,1.1s,baz=85,slow=22,SNR=1.2						
BBB				LR	LR	08 37 19.5	
	comp=Z,14µm,19.6s,baz=130,slow=37						
	comp=Z,32nm,0.9s						
BBB	**Bella Bella**	**65.42**	**330**	IAmb	IAmb	08 08 05.0	
	comp=Z,306nm,1.4s						
BBB	**Bella Bella**	**65.42**	**330**	⇑P	**P**	**08 07 45.4**	**+2.7**
BBB				⇑s		08 07 51.0	
H10N3	**ASCENSION HYDR**	**65.69**	**99**	P	**P**	**08 07 46.0**	**+1.1**
	baz=273,slow=7.7,SNR=9.2						
H10N2	**ASCENSION HYDR**	**65.70**	**99**	P	**P**	**08 07 46.0**	**+1.1**
	baz=273,slow=7.7,SNR=7.5						
H10N1	**ASCENSION HYDR**	**65.71**	**99**	P	**P**	**08 07 46.1**	**+1.1**
	baz=273,slow=7.7,SNR=10						
ASCN	**Ascension**	**65.84**	**99**	P	**P**	**08 07 47.0**	**+0.9**
NRS	**Narsarsuaq**	**66.04**	**17**	IAMs_20	IAMs_20	08 37 20.1	
	comp=Z,31µm,20.0s						
NRS	**Narsarsuaq**	**66.04**	**17**	*i* P	**P**	**08 07 44.7**	**-1.8**
NRS				IAmb	IAmb	08 08 05.0	
	comp=Z,37nm,0.8s						
NRS	**Narsarsuaq**	**66.04**	**17**	⇑P	**P**	**08 07 45.8**	**-0.7**
NRS				⇓P	pP	08 07 46.3	-10
PMSA	**Palmer Station**	**66.07**	**173**	P	**P**	**08 07 48.4**	**+1.8**
PMSA				IAmb	IAmb	08 07 52.0	
	comp=Z,147nm,1.1s						
PMSA	**Palmer Station**	**66.07**	**173**	⇑P	**P**	**08 07 47.8**	**+1.2**
MACI	**Morro de la Ar**	**66.50**	**59**	P	**P**	**08 07 51.4**	**+1.0**
ORCD	**Orcadas**	**66.71**	**162**	P	**P**	**08 07 50.4**	**-0.4**
ORCD				IAmb	IAmb	08 07 54.3	
	comp=Z,160nm,0.9s						
NUUK	**Nuuk**	**66.88**	**13**	*i* P	**P**	**08 07 51.0**	**-0.8**
PMOZ	**Porto Moniz, M**	**67.03**	**54**	*e*P	**P**	**08 07 54.2**	**+0.6**
	comp=Z,730nm,1.5s						
PMOZ	**Porto Moniz, M**	**67.03**	**54**	*e*PP	PP	08 10 21.1	-0.5
PMOZ				*e*S	**S**	**08 16 49.5**	**+3.8**

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PMOZ                               eLQ      LQ       08 25 53.0
PMOZ                               eLR      LR       08 28 19.3
         comp=Z,25µm,22.0s
PMOZ  Porto Moniz, M    67.03  54   P       P        08 07 54.5 +0.9
PMOZ  Porto Moniz, M    67.03  54  ⇑P       P        08 07 54.0 +0.4
PMOZ                               ⇓p       pP       08 07 58.0 -5.0
HG4B  Hotspring         67.06 329   IAmb    IAmb     08 08 02.1
         comp=Z,193nm,1.3s
YKA   Yellowknife Ar    67.16 343   P       P        08 07 52.7 -1.0
         comp=Z,106nm,0.9s,baz=136,slow=6.1,SNR=227
YKA                                 PKP2bc           08 36 25.0
         comp=Z,0.7nm,0.8s,baz=303,slow=2.9,SNR=4.2
         comp=Z,106nm,0.9s
YKA   Yellowknife Ar    67.16 343   P       P        08 07 52.8 -0.9
YKA   Yellowknife Ar    67.16 343   P       P        08 07 52.8 -0.9
PMAR  Madeira           67.23  55  eP       P        08 07 55.0  0.0
         comp=Z,410nm,1.4s
PMAR  Madeira           67.23  55  ePP      PP       08 10 23.4  0.0
GRNB  Grenville Isla    67.28 330   IAmb    IAmb     08 08 04.5
         comp=Z,430nm,1.8s
PMPS  Porto Santo       67.79  54  eP       P        08 07 58.0 -0.3
         comp=Z,1µm,1.9s
PMPS  Porto Santo       67.79  54  ePP      PP       08 10 27.8 -0.2
PMPST Porto Santo, M    67.80  54  eP       P        08 07 58.6 +0.3
         comp=Z,1µm,2.0s
PMPST Porto Santo, M    67.80  54  ePP      PP       08 10 27.9 -0.2
DIB   Dawson Inlet,     68.20 329   IAmb    IAmb     08 08 24.1
         comp=Z,200nm,1.4s
VAH   Vaihoa            68.67 254  eP       P        08 08 04.7 +0.7
         comp=Z,502nm,1.3s
PMOR  Pomariorio Ree    68.90 254  eP       P        08 08 04.8 -0.7
         comp=Z,779nm,1.4s
SMAI  San Martin Ant    68.99 175   IAmb    IAmb     08 08 10.6
         comp=Z,234nm,1.2s
SFJD  Kangerlussuaq     69.54  12   P       P        08 08 06.8 -1.6
         comp=Z,63nm,0.8s,baz=219,slow=6.4,SNR=38
SFJD                                LR      LR       08 41 23.4
         comp=Z,21µm,18.4s,baz=206,slow=38
         comp=Z,63nm,0.8s
SFJD  Kangerlussuaq     69.54  12   P       P        08 08 07.6 -0.8
SFJD                                IAmb    IAmb     08 08 08.0
         comp=Z,315nm,1.6s
SFJD  Kangerlussuaq     69.54  12   IAMs_20 IAMs_20  08 37 39.8
         comp=Z,27µm,22.0s
SFJD  Kangerlussuaq     69.54  12   P       P        08 08 07.6 -0.8
SFJD                                pmax    pmax
         comp=Z,315nm,1.6s
SFJD  Kangerlussuaq     69.54  12 i P       P        08 08 05.5 -3.0
SFJD                                IAmb    IAmb     08 08 09.3
         comp=Z,41nm,0.8s
CRAG  Craig             69.71 331   P       P        08 08 10.6 +0.9
         baz=121
CRAG                                S       S        08 17 21.4 +5.0
         baz=121
WRAK  Wrangell Islan    69.84 332   IAMs_20 IAMs_20  08 44 37.4
         comp=Z,29µm,21.0s
WRAK  Wrangell Islan    69.84 332   P       P        08 08 11.0 +0.6
         baz=122
WRAK                                S       S        08 17 24.0 +6.1
         baz=122
DLBC  Dease Lake        69.92 335   IAmb    IAmb     08 08 25.9
         comp=Z,276nm,1.1s
DY2G  Dye2              70.07  14 i P       P        08 08 11.1 -0.9
DY2G                                IAmb    IAmb     08 08 14.2
         comp=Z,62nm,0.7s
S34M  Telegraph Cree    70.10 334   P       P        08 08 12.3 +0.2
         baz=124,SNR=30
S34M                                S       S        08 17 25.7 +4.6
         baz=124
PPTF  Pamatai, Papee    70.79 251   P       P        08 08 18.7 +1.5
PPTF                                IAMs_20 IAMs_20  08 31 59.4
         comp=Z,33µm,18.0s
PPTF  Pamatai, Papee    70.79 251  ⇓P       P        08 08 19.9 +2.7
PPTF                               ⇓s                08 08 25.3
PPTF                               ⇑s                08 08 26.2
PPT   Papeete           70.80 251   P       P        08 08 18.3 +1.1
         comp=Z,86nm,1.2s,baz=87,slow=7.2,SNR=7.3
PPT                                 S       S        08 17 36.8 +6.1
         comp=Z,16nm,1.0s,baz=51,slow=20,SNR=1.7
PPT                                 LR      LR       08 32 10.8
         comp=Z,34µm,18.2s,baz=69,slow=30
         comp=Z,86nm,1.2s
PPT2  Papeete2          70.80 251  eP       P        08 08 16.6 -0.7
         comp=Z,417nm,1.5s
PPT2                               eS       S        08 17 29.8 -1.0
         comp=Z,22µm,26.0s
PPT2  Papeete2          70.80 251  eLR      LR       08 29 58.8
         comp=Z,62µm,25.0s,baz=78
PAE   Paea              70.81 251  eP       P        08 08 17.9 +0.7
         comp=Z,191nm,1.3s
TGTN  Hyland Airport    71.06 338   P       P        08 08 18.6 +0.7
         baz=128,SNR=26
TGTN                                S       S        08 17 35.9 +3.7
         baz=128
ISOG  Isortoq, Green    71.27  17 i P       P        08 08 18.4 -0.6
ISOG                                IAmb    IAmb     08 08 40.2
         comp=Z,90nm,0.8s
ILULI Ilulissat         71.36  10   IAmb    IAmb     08 08 22.3
         comp=Z,246nm,1.1s
ILULI                               IAMs_20 IAMs_20  08 38 33.8
         comp=Z,27µm,22.0s
ILULI Ilulissat         71.36  10 i P       P        08 08 18.4 -1.1
ILULI                               IAmb    IAmb     08 08 21.7
         comp=Z,62nm,0.9s
SIT   Sitka             71.58 332   P       P        08 08 22.1 +1.1
         baz=120
SIT                                 S       S        08 17 43.1 +5.0
         baz=120
ANGG  Ammassalik, Gr    71.70  17 i P       P        08 08 20.0 -1.6
ANGG                                IAmb    IAmb     08 08 39.3
         comp=Z,47nm,0.8s
JIS   Juneau Island     71.76 333   IAmb    IAmb     08 08 34.8
         comp=Z,206nm,1.1s
JIS                                 IAMs_20 IAMs_20  08 43 05.0
         comp=Z,31µm,18.0s
P33M  Teslin, Yukon     72.10 335   IAmb    IAmb     08 08 36.7
         comp=Z,206nm,1.1s
P33M  Teslin, Yukon     72.10 335   P       P        08 08 24.4 +0.1
         baz=123,SNR=60
P33M                                S       S        08 17 48.9 +4.6
         baz=123
BESE  Bessie Mountai    72.13 333   IAmb    IAmb     08 08 37.2
         comp=Z,180nm,1.0s
SFNM  Sidi Ifni         72.17  59   P       P        08 08 28.0 +2.7
TRIS  Tristan da Cun    72.50 129   P       P        08 08 28.2 +1.2
TRIS                                IAmb    IAmb     08 08 42.9
         comp=Z,202nm,0.8s
SKAG  Skagway           72.79 334   P       P        08 08 28.9 +0.7
         baz=120,SNR=14
SKAG                                S       SKiKP    08 17 57.1 -2.9
         baz=120
NUUG  Nuugaatsiaq       73.05   9 i P       P        08 08 28.5 -1.1
NUUG                                IAmb    IAmb     08 08 39.5
         comp=Z,44nm,0.8s
WHY   Whitehorse        73.21 335   P       P        08 08 31.1 +0.2
         baz=121,SNR=11
WHY                                 S       SKiKP    08 17 59.9 -0.9
         baz=121
ICESG Greenland Ices    73.69  14 i P       P        08 08 32.5 -1.4
ICESG                               IAmb    IAmb     08 08 47.4
         comp=Z,126nm,0.8s
M31M  Drury Creek, Y    73.82 337   IAmb    IAmb     08 09 00.8
         comp=Z,459nm,1.6s
M31M                                IAMs_20 IAMs_20  08 46 02.4
         comp=Z,22µm,18.0s
M31M  Drury Creek, Y    73.82 337   P       P        08 08 35.0 +0.6
         baz=122,SNR=41
M31M                                S       S        08 18 06.7 +3.0
         baz=122
TTIG  Tnine Tigouga,    73.85  58   P       P        08 08 37.0 +1.6
N31M  Braeburn, Yuko    74.01 336   IAmb    IAmb     08 08 50.0
         comp=Z,195nm,1.1s
N31M                                IAMs_20 IAMs_20  08 44 37.4
         comp=Z,25µm,18.0s
N31M  Braeburn, Yuko    74.01 336   P       P        08 08 36.0 +0.5
         baz=120,SNR=21
N31M                                S       S        08 18 09.6 +3.7
         baz=120
HYT   Haines Junctio    74.41 335   IAmb    IAmb     08 08 55.6
         comp=Z,508nm,2.0s
HYT   Haines Junctio    74.41 335   P       P        08 08 38.9 +0.9
         baz=119,SNR=10
HYT                                 S       S        08 18 14.9 +4.3
         baz=119
OUK   Oukaimeden        74.44  58   P       P        08 08 41.0 +1.9
N30M  Aishikik Lake     74.54 335   P       P        08 08 39.9 +1.2
         baz=119,SNR=29
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N30M                                S       S        08 18 16.8 +4.9
         baz=119
SRHM  Skhour des Reh    74.62  56   P       P        08 08 42.0 +2.3
PNL   Peninsula         74.70 333   P       P        08 08 40.6 +1.0
         baz=117,SNR=11
PNL                                 S       S        08 18 18.3 +4.6
         baz=117
PFVI  Vila Bisbo        74.71  52  eP       P        08 08 41.2 +1.2
         comp=Z,1µm,2.2s
PFVI  Vila Bisbo        74.71  52   P       P        08 08 41.2 +1.2
RES   Resolute Bay      74.71 356   P       P        08 08 38.0 -1.3
         comp=Z,32nm,1.0s,baz=173,slow=5.8,SNR=20
RES                                 LR      LR       08 41 06.2
         comp=Z,37µm,21.7s,baz=164,slow=36
         comp=Z,32nm,1.0s
PMAFR Mafra             74.72  50  eP       P        08 08 40.6 +0.5
         comp=Z,525nm,2.1s
PMST  Lisbon--Monsan    74.75  50  eP       P        08 08 41.0 +0.7
         comp=Z,760nm,2.2s
LIS   Lisbon            74.78  50  eP       P        08 08 41.2 +0.8
LIS                                eS       S        08 18 15.8 +0.6
LIS                                 IAMs_20 IAMs_20  08 36 20.5
         comp=Z,39µm,27.6s
LIS   Lisbon            74.78  50  eP       P        08 08 41.2 +0.8
LIS                                eS       S        08 18 15.8 +0.6
YUK6  Outpost Mounta    74.83 334   P       P        08 08 41.7 +1.1
         baz=118,SNR=19
YUK6                                S       S        08 18 20.0 +4.4
         baz=118
C36M  Paulatuk          74.86 345   P       P        08 08 38.9 -1.3
         baz=134,SNR=6.2
C36M                                S       S        08 18 10.4 -4.5
         baz=134
PTEO  Sao Teotonio      74.87  51  eP       P        08 08 41.5 +0.6
         comp=Z,544nm,2.3s
MORF  Marmelete         74.88  51  eP       P        08 08 41.9 +0.8
MORF                               eS       S        08 18 17.1 +0.4
MORF                                IAMs_20 IAMs_20  08 34 28.1
         comp=E,35µm,26.4s
MORF  Marmelete         74.88  51  eP       P        08 08 42.4 +1.3
         comp=E,1µm,2.0s
MORF  Marmelete         74.88  51  eP       P        08 08 41.9 +0.8
MORF                               eS       S        08 18 17.0 +0.4
SHEL  Horse Pasture     74.88 107   P       P        08 08 43.3 +1.8
SHEL  Horse Pasture     74.88 107   P       P        08 08 43.3 +1.8
SHEL                                pmax    pmax
         comp=Z,1µm,2.0s
LIC   Lamto             74.90  84  ePKP1    P        08 08 40.8 -0.8
         comp=Z,971nm,1.9s
TIC   Toumodi           74.92  83  ePKP1    P        08 08 41.6 -0.1
BCPM  Bancas Point      74.94 333   IAmb    IAmb     08 08 53.7
         comp=Z,239nm,1.1s
M30M  Minto, Yukon      74.97 336   IAMs_20 IAMs_20  08 43 46.9
         comp=Z,23µm,20.0s
M30M  Minto, Yukon      74.97 336   P       P        08 08 41.6 +0.5
         baz=120,SNR=68
M30M                                S       S        08 18 19.3 +2.6
         baz=120
PACT  Alcochete         75.03  50  eP       P        08 08 42.9 +1.1
         comp=Z,2µm,1.9s
DBIC  Dimbokro          75.08  83  eP       P        08 08 42.7  0.0
DBIC                                IAMs_20 IAMs_20  08 44 01.9
         comp=Z,347nm,16.1s
DBIC  Dimbokro          75.08  83   P       P        08 08 41.7 -0.9
         comp=Z,200nm,1.1s,baz=277,slow=6.1,SNR=54
DBIC                                S       S        08 18 14.1 -5.5
         comp=Z,6.5nm,1.0s,baz=142,slow=9.3,SNR=2.0
DBIC                                LR      LR       08 39 14.2
         comp=Z,77µm,20.2s,baz=269,slow=34
         comp=Z,200nm,1.1s
DBIC  Dimbokro          75.08  83   P       P        08 08 41.6 -1.1
DBIC  Dimbokro          75.08  83   P       P        08 08 41.6 -1.1
DBIC                                pmax    pmax
         comp=Z,700nm,1.3s
PNCL  Nicolau / Gran    75.13  51  eP       P        08 08 43.2 +0.8
         comp=Z,621nm,2.1s
YUK4  Talbot Arm        75.14 335   P       P        08 08 43.2 +0.9
         baz=118,SNR=14
YUK4                                S       S        08 18 24.8 +5.8
         baz=118
AVE   Averroes          75.16  56   P       P        08 08 44.5 +1.8
AVE   Averroes          75.16  56  ⇑P       P        08 08 44.1 +1.4
AVE                                ⇑P       P        08 08 44.5 +1.8
KIC   Kosan Boka        75.19  84  ePKP1    P        08 08 41.9 -1.4
         comp=Z,1µm,1.4s
PSBE  So Bento          75.21  49  eP       P        08 08 43.7 +0.8
         comp=Z,762nm,2.1s
SOEG  Soedalen          75.28  17 i P       P        08 08 41.8 -0.9
SOEG                                IAmb    IAmb     08 08 55.6
         comp=Z,17nm,0.8s
PINM  Pinnacle          75.28 333   P       P        08 08 43.8 +0.8
         baz=116,SNR=7.9
PINM                                S       S        08 18 26.4 +6.1
         baz=116
PCA   Pinnacle          75.28 333   IAmb    IAmb     08 08 55.8
         comp=Z,224nm,1.3s
MESJ  Messejana         75.32  51  eP       P        08 08 44.3 +0.8
MESJ                               eS       S        08 18 21.8 +0.5
MESJ                                IAMs_20 IAMs_20  08 35 02.0
         comp=Z,46µm,37.9s
MESJ  Messejana         75.32  51  eP       P        08 08 44.5 +1.0
         comp=Z,425nm,2.2s
MESJ  Messejana         75.32  51  eP       P        08 08 44.3 +0.8
MESJ                               eS       S        08 18 21.8 +0.5
OUZM  OUZ               75.33  58   P       P        08 08 46.0 +2.0
PCVE  Castro Verde      75.42  51  eP       P        08 08 44.8 +0.7
         comp=Z,563nm,2.0s
PBDV  Barranco-do-Ve    75.43  52  eP       P        08 08 45.1 +0.9
         comp=Z,674nm,2.1s
PCAS  Casmilo, Conde    75.54  49  eP       P        08 08 45.7 +0.9
         comp=Z,1µm,2.1s
PMTG  Montargil         75.55  50  eP       P        08 08 45.3 +0.4
         comp=Z,646nm,2.1s
EVO   Evora             75.61  50  eP       P        08 08 45.3 +0.1
         comp=Z,507nm,2.0s
PBEJ  Beja              75.63  51  eP       P        08 08 46.1 +0.8
         comp=Z,560nm,2.0s
PBEJ  Beja              75.63  51  ePP      PP       08 11 28.9 -6.2
PVAQ  Vaqueiros         75.63  51  eP       P        08 08 46.1 +0.8
         comp=Z,447nm,2.2s
PVAQ                               eS       S        08 18 26.7 +1.9
PVAQ  Vaqueiros         75.63  51  eLR      LR       08 32 45.7
         comp=Z,24µm,20.0s
PVAQ  Vaqueiros         75.63  51   P       P        08 08 46.5 +1.2
COI   Coimbra           75.64  49  eP       P        08 08 46.3 +1.0
         comp=Z,1µm,1.9s
COI   Coimbra           75.64  49   IAMs_20 IAMs_20  08 41 30.2
         comp=Z,26µm,21.0s
ZHG   ZHG               75.82  56   P       P        08 08 48.0 +1.4
TABL  Table Mountain    75.83 333   IAmb    IAmb     08 08 59.5
         comp=Z,142nm,0.8s
LOGN  Logan Glacier     75.93 334   IAmb    IAmb     08 09 02.4
         comp=Z,213nm,1.3s
LOGN                                IAMs_20 IAMs_20  08 44 51.4
         comp=Z,30µm,18.0s
PESTR Estremoz          76.00  50  eP       P        08 08 47.9 +0.4
         comp=Z,981nm,2.1s
PESTR Estremoz          76.00  50  ePP      PP       08 11 28.9 -9.4
PESTR Estremoz          76.00  50   P       P        08 08 48.1 +0.7
PUH   Pauahi            76.03 290           pP       08 08 54.2 -3.3
YAH   Yahtse            76.07 333   IAmb    IAmb     08 09 09.6
         comp=Z,230nm,1.2s
YAH                                 IAMs_20 IAMs_20  08 46 31.0
         comp=Z,26µm,20.0s
MESA  MESA              76.08 333   IAmb    IAmb     08 09 02.7
         comp=Z,315nm,1.2s
MESA  MESA              76.08 333   P       P        08 08 48.7 +1.0
         baz=114
MESA                                S       S        08 18 34.2 +4.8
         baz=114
PGAV  Gavieira, Arco    76.11  47  eP       P        08 08 48.7 +0.6
         comp=Z,597nm,2.0s
PGAV  Gavieira, Arco    76.11  47  ePP      PP       08 11 38.5 -0.8
PGAV                               eS       S        08 18 30.3 +0.1
PGAV  Gavieira, Arco    76.11  47  eLQ      LQ       08 29 36.0
PGAV                               eLR      LR       08 32 58.1
         comp=Z,28µm,22.0s
YUK3  Moose Creek       76.11 335   P       P        08 08 48.4 +0.5
         baz=116,SNR=37
YUK3                                S       S        08 18 32.6 +2.9
         baz=116
PVIS  Viseu             76.13  48  eP       P        08 08 48.9 +0.7
         comp=Z,689nm,2.1s
PVIS  Viseu             76.13  48  ePP      PP       08 11 39.2 -0.2
CTGM  Chitina Glacie    76.14 334   IAmb    IAmb     08 09 14.7
         comp=Z,324nm,1.5s
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CTGM                                IAMs_20 IAMs_20  08 43 40.9
         comp=Z,29µm,22.0s
CTG   Chitna Glacier    76.14 334   P       P        08 08 49.0 +1.1
         baz=115,SNR=18
CTG                                 S       S        08 18 33.6 +3.8
         baz=115
ZGR   Zagora            76.20  59   P       P        08 08 51.0 +2.1
KOWA  Kowa              76.22  75   P       P        08 08 48.9 -0.2
KOWA  Kowa              76.22  75  ⇑P       P        08 08 49.1  0.0
KOWA                               ⇑P       pP       08 08 49.2 -9.5
GRNC  Granite Creek     76.23 334   IAmb    IAmb     08 09 03.1
         comp=Z,274nm,1.2s
GRNC                                IAMs_20 IAMs_20  08 43 18.2
         comp=Z,32µm,20.0s
PMRV  Marv??o           76.26  50  eP       P        08 08 49.3 +0.4
         comp=Z,516nm,1.9s
PMRV  Marv??o           76.26  50  ePP      PP       08 11 40.9 +0.4
PMRV                               eS       S        08 18 32.8 +1.1
PMRV  Marv??o           76.26  50  eLQ      LQ       08 29 22.1
PMRV                               eLR      LR       08 32 51.2
         comp=Z,18µm,22.0s
PCBR  Castelo Branco    76.27  49  eP       P        08 08 49.5 +0.6
         comp=Z,681nm,2.1s
PCBR  Castelo Branco    76.27  49  ePP      PP       08 11 39.5 -1.0
TULEG Thule             76.29   3   IAmb    IAmb     08 09 21.3
         comp=Z,162nm,1.2s
TULEG Thule             76.29   3 i P       P        08 08 46.6 -1.7
TULEG                               IAmb    IAmb     08 08 58.4
         comp=Z,30nm,0.9s
PBAR  Barrancos         76.30  51  eP       P        08 08 50.0 +0.9
         comp=Z,426nm,2.1s
PBAR                               epP      pP       08 08 59.6 +0.9
BARN  Barnard Glacie    76.33 334   IAmb    IAmb     08 09 03.9
         comp=Z,148nm,1.1s
BARN                                IAMs_20 IAMs_20  08 45 12.8
         comp=Z,27µm,20.0s
MTE   Manteigas         76.33  48  eP       P        08 08 49.8 +0.4
         comp=Z,608nm,1.9s
MTE   Manteigas         76.33  48  ePP      PP       08 11 41.0 -0.1
MTE                                eS       S        08 18 33.3 +0.7
MTE   Manteigas         76.33  48  eLQ      LQ       08 29 29.0
MTE                                eLR      LR       08 32 56.8
         comp=Z,28µm,24.0s
MTE   Manteigas         76.33  48   IAMs_20 IAMs_20  08 42 02.4
         comp=Z,23µm,21.0s
TZRR  Tazzarine         76.33  59   P       P        08 08 51.3 +1.7
POLO  Lamas de Olo      76.34  47 i Pg      P        08 08 49.0 -0.4
POLO  Lamas de Olo      76.34  47  eP       P        08 08 50.1 +0.7
         comp=Z,334nm,2.0s
POLO  Lamas de Olo      76.34  47  ePP      PP       08 11 40.9 -0.3
POHA  Pohakuloa         76.35 290   IAMs_20 IAMs_20  08 37 43.1
         comp=Z,17µm,18.0s
PVRL  Vila Real         76.38  48  eP       P        08 08 50.1 +0.5
         comp=Z,21nm,0.6s
PVRL  Vila Real         76.38  48  ePP      PP       08 11 40.9 -0.5
ISLE  Juniper Island    76.44 333   IAmb    IAmb     08 09 10.2
         comp=Z,169nm,1.0s
ISLE                                IAMs_20 IAMs_20  08 47 03.7
         comp=Z,29µm,21.0s
J29M  Klondike Camp     76.45 338   P       P        08 08 50.1 +0.5
         baz=119
J29M                                S       S        08 18 35.7 +2.7
         baz=119
SNH   Sunshine Point    76.49 333   IAmb    IAmb     08 09 05.0
         comp=Z,249nm,1.1s
SUMG  Summit            76.54  12 i P       P        08 08 49.2 -1.1
SUMG                                IAmb    IAmb     08 09 06.3
         comp=Z,87nm,0.9s
BVCY  Beaver Creek      76.57 335   P       P        08 08 50.6 +0.4
         baz=116,SNR=33
BVCY                                S       S        08 18 38.1 +3.9
         baz=116
SFS   San Fernando      76.66  53   P       P        08 08 51.5 +0.3
SFS                                 S       S        08 18 40.4 +4.4
BGLC  Bering Glacier    76.67 333   P       P        08 08 52.1 +1.4
         baz=113
BGLC                                S       S        08 18 40.1 +4.8
         baz=113
BORG  Borgarnes         76.68  22   P       P        08 08 51.2 +0.5
         comp=Z,73nm,0.8s,baz=251,slow=5.7,SNR=29
BORG                                LR      LR       08 40 16.5
         comp=Z,26µm,21.9s,baz=242,slow=34
         comp=Z,73nm,0.8s
BORG  Borgarnes         76.68  22   P       P        08 08 52.1 +1.4
BORG  Borgarnes         76.68  22   IAMs_20 IAMs_20  08 41 39.5
         comp=Z,36µm,22.0s
BORG  Borgarnes         76.68  22   P       P        08 08 52.1 +1.4
BORG                                pmax    pmax
         comp=Z,2µm,1.9s
TGL   Tana Glacier      76.72 333   IAmb    IAmb     08 09 08.3
         comp=Z,194nm,1.0s
TGL                                 IAMs_20 IAMs_20  08 47 22.2
         comp=Z,29µm,20.0s
DAWY  Dawson            76.72 337   P       P        08 08 51.2 +0.1
         baz=118,SNR=90
DAWY                                S       S        08 18 38.7 +2.8
         baz=118
CNIL  Conil             76.76  53   P       P        08 08 56.0 +4.2
MVO   Moncorvo          76.86  48  eP       P        08 08 53.1 +0.7
         comp=Z,735nm,1.8s
MVO   Moncorvo          76.86  48  ePP      PP       08 11 45.8 +0.2
MVO                                eS       S        08 18 39.6 +1.2
MVO   Moncorvo          76.86  48  eLQ      LQ       08 29 47.2
MVO                                eLR      LR       08 33 33.0
         comp=Z,28µm,26.0s
INK   Inuvik            76.87 342   P       P        08 08 51.7  0.0
         comp=Z,168nm,1.0s,baz=114,slow=7.3,SNR=111
INK                                 LR      LR       08 45 52.2
         comp=Z,40µm,18.2s,baz=110,slow=38
         comp=Z,168nm,1.0s
INK   Inuvik            76.87 342   IAmb    IAmb     08 09 03.7
         comp=Z,214nm,1.0s
INK   Inuvik            76.87 342   P       P        08 08 51.9 +0.2
         baz=124,SNR=151
INK                                 S       S        08 18 38.9 +1.8
         baz=124
I29M  Ogilvie Camp,     76.93 338   IAmb    IAmb     08 09 23.5
         comp=Z,190nm,1.1s
I29M                                IAMs_20 IAMs_20  08 47 37.4
         comp=Z,24µm,19.0s
I29M  Ogilvie Camp,     76.93 338   P       P        08 08 52.4 +0.3
         baz=119,SNR=104
I29M                                S       S        08 18 41.0 +3.0
         baz=119
A36M  Sachs Harbour     76.97 347   IAmb    IAmb     08 09 21.4
         comp=Z,187nm,0.8s
A36M  Sachs Harbour     76.97 347   P       P        08 08 51.0 -1.2
         baz=133,SNR=34
A36M                                S       S        08 18 34.8 -3.3
         baz=133
M27K  Edge Creek, AK    76.97 335   IAmb    IAmb     08 09 05.2
         comp=Z,179nm,1.0s
M27K                                IAMs_20 IAMs_20  08 44 33.7
         comp=Z,28µm,19.0s
M27K  Edge Creek, AK    76.97 335   P       P        08 08 53.3 +0.7
         baz=115,SNR=38
M27K                                S       S        08 18 43.0 +4.1
         baz=115
GOLM  Goulmima          76.98  58   P       P        08 08 56.0 +2.7
MCARA McCarthy VSAT     77.06 334   IAMs_20 IAMs_20  08 48 26.8
         comp=Z,28µm,20.0s
MCARA McCarthy VSAT     77.06 334   P       P        08 08 53.7 +0.8
         baz=114,SNR=31
MCARA                               S       S        08 18 43.2 +3.6
         baz=114
CZD   Col de Zad        77.08  56   P       P        08 08 56.0 +2.0
CHEFC Chefchaouen       77.14  54   P       P        08 08 56.0 +2.0
VRDI  Verde Repeater    77.19 334   IAmb    IAmb     08 09 06.2
         comp=Z,170nm,1.0s
VRDI                                IAMs_20 IAMs_20  08 48 19.6
         comp=Z,24µm,21.0s
SMIR  Smir Dam          77.19  54   P       P        08 08 56.0 +1.8
PBRG  Braganca          77.20  47  eP       P        08 08 54.7 +0.5
         comp=Z,662nm,2.0s
PBRG  Braganca          77.20  47  ePP      PP       08 11 47.6 -0.7
HMT   Hamilton          77.20 333   IAmb    IAmb     08 09 06.5
         comp=Z,296nm,1.0s
CEU   Ceuta             77.23  53   P       P        08 08 52.8 -1.7
CEU                                 S       S        08 18 44.1 +1.7
LCRM  LCR               77.33  56   P       P        08 08 57.0 +1.7
LIJA  Lijar             77.36  52   P       P        08 08 53.5 -1.8
MDT   Midelt            77.41  57   LR      LR       08 40 15.5
         comp=Z,22µm,21.9s,baz=273,slow=34
MDT   Midelt            77.41  57   P       P        08 08 57.1 +1.5
GLB   Gilahina Butte    77.43 334   IAmb    IAmb     08 09 07.5
         comp=Z,145nm,1.0s
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GLB				IAMs_20	IAMs_20	08 48 38.0	
	comp=Z,25µm,21.0s						
M26K	**Nabesna, AK**	77.46	335	IAmb	IAmb	08 09 07.4	
	comp=Z,187nm,1.2s						
M26K				IAMs_20	IAMs_20	08 46 45.7	
	comp=Z,30µm,19.0s						
M26K	**Nabesna, AK**	77.46	335	P	P	08 08 55.6	+0.4
	baz=114,SNR=40						
M26K				S	S	08 18 46.9	+2.9
	baz=114						
XMAS	**Kiritimati**	77.55	272	IAMs_20	IAMs_20	08 36 11.2	
	comp=Z,21µm,18.0s						
BMRM	**Bremner River**	77.60	333	IAmb	IAmb	08 09 10.5	
	comp=Z,322nm,1.1s						
BMRM	**Bremner River**	77.60	333	P	P	08 08 56.5	+0.4
	baz=112,SNR=40						
BMRM				S	S	08 18 48.3	+2.7
	baz=112						
EGAK	**Eagle**	77.73	337	IAmb	IAmb	08 09 10.7	
	comp=Z,286nm,1.1s						
EGAK				IAMs_20	IAMs_20	08 48 59.6	
	comp=Z,27µm,20.0s						
EGAK	**Eagle**	77.73	337	P	P	08 08 56.7	+0.1
	baz=116,SNR=92						
EGAK				S	S	08 18 50.8	+4.1
	baz=116						
K27K	**Chicken**	77.76	337	IAmb	IAmb	08 09 09.7	
	comp=Z,176nm,1.0s						
K27K				IAMs_20	IAMs_20	08 49 14.4	
	comp=Z,24µm,18.0s						
K27K	**Chicken**	77.76	337	P	P	08 08 57.8	+0.9
	baz=115						
K27K				S	S	08 18 51.6	+4.5
	baz=115						
N25K	**Chitina, Valde**	77.84	334	IAmb	IAmb	08 09 11.1	
	comp=Z,402nm,1.8s						
N25K				IAMs_20	IAMs_20	08 48 38.9	
	comp=Z,20µm,21.0s						
N25K	**Chitina, Valde**	77.84	334	P	P	08 08 58.0	+0.5
	baz=112,SNR=16						
N25K				S	S	08 18 49.9	+1.7
	baz=112						
Q23K	**Middleton Isla**	77.86	331	P	P	08 08 58.1	+0.7
	baz=110						
Q23K				S	S	08 18 51.7	+3.5
	baz=110						
L26K	**Log Cabin Wild**	77.86	335	P	P	08 08 57.5	+0.1
	baz=114,SNR=52						
L26K				S	S	08 18 51.8	+3.5
	baz=114						
EYAK	**Cordova Ski Ar**	77.97	333	IAmb	IAmb	08 09 22.5	
	comp=Z,228nm,1.4s						
EYAK	**Cordova Ski Ar**	77.97	333	P	P	08 08 58.4	+0.4
	baz=111,SNR=8.1						
EYAK				S	S	08 18 50.6	+1.2
	baz=111						
PVLZ	**Peæn de**	77.99	54	P	P	08 08 58.1	-0.6
PVLZ				S	S	08 18 52.7	+2.1
IGLA	**Glengowla, Co**	78.14	35	⇑*e*P	P	08 08 59.4	+0.3
HIN	**Hinchinbrook I**	78.26	332	IAMs_20	IAMs_20	08 47 31.1	
	comp=Z,27µm,19.0s						
PALE	**Palemas**	78.29	54	P	P	08 09 02.0	+1.6
HARP	**HAARP**	78.39	334	P	P	08 09 00.9	+0.5
	baz=112,SNR=9.5						
HARP				S	S	08 18 55.9	+1.9
	baz=112						
KLU	**Klutina**	78.39	333	IAmb	IAmb	08 09 14.3	
	comp=Z,136nm,1.0s						
KLU				IAMs_20	IAMs_20	08 48 23.3	
	comp=Z,22µm,20.0s						
KLU	**Klutina**	78.39	333	P	P	08 09 00.7	+0.3
	baz=111,SNR=30						
KLU				S	S	08 18 55.6	+1.5
	baz=111						
DOT	**Dot Lake**	78.41	336	IAmb	IAmb	08 09 14.6	
	comp=Z,168nm,1.0s						
SCRK	**Sand Creek**	78.51	336	IAMs_20	IAMs_20	08 49 39.3	
	comp=Z,25µm,18.0s						
SCRK	**Sand Creek**	78.51	336	P	P	08 09 01.3	+0.2
	baz=113,SNR=71						
SCRK				S	S	08 18 58.0	+2.6
	baz=113						
J26L	**Joseph Creek**	78.55	337	P	P	08 09 01.6	+0.3
	baz=114,SNR=87						
J26L				S	S	08 18 58.8	+3.1
	baz=114						
PAB	**San Pablo**	78.60	50	P	P	08 09 02.6	+0.5
PAB	**San Pablo**	78.60	50	IAMs_20	IAMs_20	08 41 54.4	
	comp=Z,21µm,21.0s						
PAB	**San Pablo**	78.60	50	P	P	08 09 02.6	+0.5
PAB				pmax	pmax		
	comp=Z,967nm,1.8s						
PAB	**San Pablo**	78.60	50	P	P	08 09 02.8	+0.7
GLI	**Glacier Island**	78.71	333	IAMs_20	IAMs_20	08 48 16.8	
	comp=Z,26µm,20.0s						
GLI	**Glacier Island**	78.71	333	P	P	08 09 01.7	-0.4
	baz=110,SNR=9.9						
GLI				S	S	08 18 57.9	+0.5
	baz=110						
M24K	**Tolsona, Glenn**	78.72	334	IAmb	IAmb	08 09 16.6	
	comp=Z,291nm,1.1s						
M24K	**Tolsona, Glenn**	78.72	334	P	P	08 09 02.6	+0.3
	baz=111,SNR=15						
M24K				S	S	08 18 59.2	+1.6
	baz=111						
PAX	**Paxson**	78.73	335	IAmb	IAmb	08 09 16.0	
	comp=Z,193nm,1.2s						
PAX	**Paxson**	78.73	335	P	P	08 09 02.1	-0.3
	baz=112,SNR=52						
PAX				S	S	08 18 59.3	+1.5
	baz=112						
RIDG	**Independent Ri**	78.77	336	IAmb	IAmb	08 09 15.9	
	comp=Z,220nm,1.1s						
RIDG	**Independent Ri**	78.77	336	P	P	08 09 02.6	+0.1
	baz=112,SNR=73						
RIDG				S	S	08 19 00.0	+2.0
	baz=112						
KIP	**Kipapa**	78.79	292	*i* P	P	08 09 06.0	+2.6
KIP				pmax	pmax		
	comp=Z,446nm,1.5s						
KIP				MLR	MLR		
	comp=Z,11µm,15.0s						
ESDC	**Sonseca Array**	78.91	50	P	P	08 09 03.9	+0.1
	comp=Z,146nm,1.2s,baz=271,slow=4.6,SNR=254						
ESDC				PP	PP	08 11 53.1	-10
	comp=Z,5.3nm,1.1s,baz=246,slow=1.7,SNR=1.5						
ESDC				PKPPKP	P'P'df	08 36 01.7	+0.3
	comp=Z,0.7nm,1.0s,baz=52,slow=2.3,SNR=4.0						
ESDC				LR	LR	08 42 43.7	
	comp=Z,12µm,19.2s,baz=250,slow=35						
	comp=Z,146nm,1.2s						
GOG	**Mont Gurugu**	79.05	54	P	P	08 09 06.0	+1.3
SCM	**Sheep Creek Mo**	79.14	334	IAmb	IAmb	08 09 16.4	
	comp=Z,238nm,0.9s						
SCM				IAMs_20	IAMs_20	08 48 57.1	
	comp=Z,21µm,20.0s						
SCM	**Sheep Creek Mo**	79.14	334	P	P	08 09 04.5	-0.1
	baz=110,SNR=26						
SCM				S	S	08 19 02.6	+0.5
	baz=110						
K24K	**Donnelly Dome**	79.17	336	P	P	08 09 04.7	0.0
	baz=112,SNR=32						
K24K				S	S	08 19 04.0	+1.7
	baz=112						
JBK	**JBK**	79.30	55	P	P	08 09 07.2	+1.0
M23K	**Glacier View**	79.30	333	P	P	08 09 05.0	-0.4
	baz=109,SNR=18						
M23K				S	S	08 19 04.7	+1.0
	baz=109						
J25K	**Salcha River,**	79.31	336	IAMs_20	IAMs_20	08 49 43.5	
	comp=Z,27µm,18.0s						
J25K	**Salcha River,**	79.31	336	P	P	08 09 05.3	-0.1
	baz=112,SNR=50						
J25K				S	S	08 19 05.7	+1.8
	baz=112						
SCO	**Scoresbysund**	79.32	17	P	P	08 09 05.0	-0.2
SCO				IAmb	IAmb	08 09 39.0	
	comp=Z,298nm,1.7s						
SCO				IAMs_20	IAMs_20	08 43 00.2	
	comp=Z,29µm,22.0s						
SCO	**Scoresbysund**	79.32	17	P	P	08 09 05.0	-0.2
SCO				pmax	pmax		
	comp=Z,298nm,1.7s						
SCO	**Scoresbysund**	79.32	17	*i* P	P	08 09 05.1	-0.2
SCO				IAmb	IAmb	08 09 23.4	
	comp=Z,16nm,0.9s						
IWEX	**Carrickbyrne,**	79.41	37	⇑*e*P	P	08 09 06.2	+0.1
TAF	**Taforalt**	79.48	55	P	P	08 09 09.0	+2.0
KNK	**Knik Glacier**	79.51	333	IAmb	IAmb	08 09 20.5	
	comp=Z,253nm,1.1s						
KNK				IAMs_20	IAMs_20	08 49 36.9	
	comp=Z,30µm,20.0s						
KNK	**Knik Glacier**	79.51	333	P	P	08 09 06.5	0.0
	baz=109,SNR=17						
KNK				S	S	08 19 06.7	+0.8
	baz=109						
CHAS	**Isla Isabel II**	79.51	54	P	P	08 09 06.8	-0.2
CHAS				S	S	08 19 13.5	+6.6
SEW	**Seward**	79.56	331	P	P	08 09 06.3	-0.5
SEW	**Seward**	79.56	331	P	P	08 09 06.4	-0.3
	baz=108,SNR=6.9						
SEW				S	S	08 19 06.7	+0.3
	baz=108						
WAT6	**Susitna Watana**	79.57	334	P	P	08 09 06.9	-0.2
	baz=110,SNR=56						
WAT6				S	S	08 19 06.8	-0.1
	baz=110						
SML	**Sawmill**	79.58	333	IAmb	IAmb	08 09 20.8	
	comp=Z,325nm,1.2s						
SML				IAMs_20	IAMs_20	08 48 09.8	
	comp=Z,27µm,21.0s						
SML	**Sawmill**	79.58	333	P	P	08 09 06.7	-0.3
	baz=109,SNR=22						
SML				S	S	08 19 07.4	+0.6
	baz=109						
DHY	**Denali Highway**	79.58	335	IAMs_20	IAMs_20	08 45 30.8	
	comp=Z,25µm,21.0s						
DHY	**Denali Highway**	79.58	335	P	P	08 09 06.8	-0.3
	baz=110,SNR=11						
DHY				S	S	08 19 07.1	+0.2
	baz=110						
TDRA	**Tendrara**	79.59	57	P	P	08 09 10.0	+2.1
EUNU	**Eureka**	79.64	359	IAmb	IAmb	08 09 48.8	
	comp=Z,283nm,1.7s						
O22K	**Cooper Landing**	79.80	332	IAmb	IAmb	08 09 45.6	
	comp=Z,343nm,1.2s						
O22K				IAMs_20	IAMs_20	08 49 09.8	
	comp=Z,31µm,21.0s						
O22K	**Cooper Landing**	79.80	332	P	P	08 09 07.7	-0.3
	baz=107						
O22K				S	S	08 19 09.5	+0.5
	baz=107						
GHO	**Glory Hole Cre**	79.83	333	IAmb	IAmb	08 09 20.0	
	comp=Z,159nm,0.8s						
PMR	**Palmer**	79.87	333	P	P	08 09 08.3	-0.1
	baz=108,SNR=9.9						
PMR				S	S	08 19 09.8	+0.2
	baz=108						
HDA	**Harding Lake**	79.87	336	IAMs_20	IAMs_20	08 46 54.4	
	comp=Z,27µm,19.0s						
HDA	**Harding Lake**	79.87	336	P	P	08 09 08.1	-0.3
	baz=111,SNR=48						
HDA				S	S	08 19 09.0	-0.7
	baz=111						
HDA				S	S	08 19 09.0	-0.7
	baz=111						
CCA1	**Carnmenellis**	79.88	39	⇑*e*P	P	08 09 09.1	+0.3
ILAR	**Eielson Array**	79.98	336	P	P	08 09 08.7	-0.3
	comp=Z,33nm,1.0s,baz=122,slow=3.6,SNR=90						
ILAR				S	S	08 19 10.2	-0.6
	comp=Z,0.3nm,0.8s,baz=329,slow=30,SNR=0.8						
ILAR				PKKP	PKKPdf	08 27 46.3	+0.5
	comp=Z,0.3nm,0.8s,baz=204,slow=2.0,SNR=3.2						
ILAR				LR	LR	08 46 38.3	
	comp=Z,26µm,18.6s,baz=98,slow=37						
	comp=Z,33nm,1.0s						
RC01	**Rabbit Creek A**	79.99	332	IAmb	IAmb	08 09 16.8	
	comp=Z,175nm,1.1s						
RC01				IAMs_20	IAMs_20	08 48 57.8	
	comp=Z,24µm,21.0s						
RC01	**Rabbit Creek A**	79.99	332	P	P	08 09 09.1	0.0
	baz=108,SNR=22						
RC01				S	S	08 19 11.1	+0.1
	baz=108						
WAT1	**Susitna Watana**	80.01	334	P	P	08 09 08.7	-0.5
	baz=109						
WAT1				S	S	08 19 11.8	+0.6
	baz=109						
ILTH	**Belurgan, Co L**	80.04	35	⇑*e*P	P	08 09 09.5	0.0
BRSE	**Bradley Lake S**	80.07	331	P	P	08 09 09.3	-0.3
	baz=106,SNR=18						
BRSE				S	S	08 19 13.0	+1.0
	baz=106						
FIGM	**Figuig**	80.14	58	P	P	08 09 12.4	+1.7
BRLK	**Bradley Lake**	80.15	331	IAmb	IAmb	08 09 21.6	
	comp=Z,163nm,0.8s						
BRLK				IAMs_20	IAMs_20	08 49 52.2	
	comp=Z,19µm,20.0s						
FIS	**Fire Island**	80.23	332	IAMs_20	IAMs_20	08 48 43.1	
	comp=Z,21µm,21.0s						
CCB	**Clear Creek Bu**	80.30	336	IAMs_20	IAMs_20	08 46 32.7	
	comp=Z,23µm,20.0s						
POKR	**Poker Plat Res**	80.32	337	P	P	08 09 10.8	-0.1
	baz=110,SNR=8.2						
POKR				S	S	08 19 14.3	0.0
	baz=110						
RND	**Reindeer**	80.33	335	IAmb	IAmb	08 09 25.2	
	comp=Z,328nm,1.3s						
RND				IAMs_20	IAMs_20	08 46 03.5	
	comp=Z,28µm,20.0s						
OLHC	**Oulhaca**	80.34	54	P	P	08 09 13.2	+1.6
M22K	**Willow**	80.37	333	IAMs_20	IAMs_20	08 48 34.7	
	comp=Z,31µm,21.0s						
M22K	**Willow**	80.37	333	P	P	08 09 10.9	-0.2
	baz=107						
M22K				S	S	08 19 15.5	+0.6
	baz=107						
COLA	**College**	80.40	336	P	P	08 09 11.0	-0.2
COLA	**College**	80.40	336	IAMs_20	IAMs_20	08 46 49.4	
	comp=Z,23µm,19.0s						
COLA	**College**	80.40	336	*c* *i*P	P	08 09 10.5	-0.7
COLA				pmax	pmax		
	comp=Z,125nm,1.2s						
COLA				MLR	MLR		
	comp=Z,22µm,18.0s						
COLA	**College**	80.40	336	P	P	08 09 10.9	-0.3
	baz=110						
COLA				S	S	08 19 15.1	0.0
	baz=110						
TCOL	**CIGO, UAF Yank**	80.40	336	IAMs_20	IAMs_20	08 46 49.4	
	comp=Z,25µm,19.0s						
TCOL	**CIGO, UAF Yank**	80.40	336	P	P	08 09 10.9	-0.4
	baz=110,SNR=16						
TCOL				S	S	08 19 15.1	-0.1
	baz=110						
CLGH	**Cloghs, Cushen**	80.41	34	⇑*e*P	P	08 09 10.5	-1.0
CLGH				IAMs_20	IAMs_20	08 41 56.7	
	comp=Z,21µm,20.8s						
KDAK	**Kodiak Island**	80.47	329	P	P	08 09 11.4	-0.4
KDAK	**Kodiak Island**	80.47	329	IAMs_20	IAMs_20	08 50 21.8	
	comp=Z,28µm,21.0s						
KDAK	**Kodiak Island**	80.47	329	P	P	08 09 11.4	-0.4
KDAK				pmax	pmax		
	comp=Z,144nm,1.4s						
KDAK	**Kodiak Island**	80.47	329	P	P	08 09 11.6	-0.2
	baz=104						
KDAK				S	S	08 19 17.2	+1.0
	baz=104						
HOM	**Homer**	80.49	331	P	P	08 09 12.1	+0.3
	baz=106						
HOM				S	S	08 19 17.0	+0.8
	baz=106						
HTL	**Hartland**	80.51	38	⇑*e*P	P	08 09 12.3	+0.3
HTL				IAmb	IAmb	08 09 14.5	
	comp=Z,7µm,3.1s						
HTL				IAMs_20	IAMs_20	08 36 33.1	
	comp=Z,33µm,28.7s						
RSBS	**Rosebush, Pemb**	80.54	37	⇑*e*P	P	08 09 11.8	-0.5
RSBS				IAmb	IAmb	08 09 15.0	
	comp=Z,1µm,1.8s						
CAPN	**Captain Cook N**	80.56	332	IAMs_20	IAMs_20	08 49 41.9	
	comp=Z,26µm,20.0s						
CAPN	**Captain Cook N**	80.56	332	P	P	08 09 13.4	+1.3
	baz=106						
CAPN				S	S	08 19 20.3	+3.4
	baz=106						
MDM	**Murphy Dome**	80.58	336	IAmb	IAmb	08 09 25.9	
	comp=Z,181nm,1.2s						
MDM				IAMs_20	IAMs_20	08 46 54.1	
	comp=Z,27µm,19.0s						
CUT	**Chulitna**	80.63	334	IAmb	IAmb	08 09 24.1	
	comp=Z,223nm,1.0s						
CUT	**Chulitna**	80.63	334	P	P	08 09 12.2	-0.3
	baz=107,SNR=12						
CUT				S	S	08 19 18.3	+0.7
	baz=107						
OHAK	**Old Harbor**	80.70	328	P	P	08 09 13.2	+0.2
	baz=104						
OHAK				S	S	08 19 20.2	+1.6
	baz=104						
RAR	**Rarotonga**	80.72	249	LR	LR	08 36 01.2	
	comp=Z,18µm,21.1s,baz=87,slow=29						
RAR	**Rarotonga**	80.72	249	IAMs_20	IAMs_20	08 35 38.9	
	comp=Z,18µm,21.0s						
LEWI	**Lewis, Hebride**	80.73	31	⇑*e*P	P	08 09 12.3	-0.9
LEWI				IAMs_20	IAMs_20	08 41 23.3	
	comp=Z,26µm,21.5s						
H24K	**Noodor Dome**	80.74	337	IAmb	IAmb	08 09 29.6	
	comp=Z,192nm,1.3s						
H24K	**Noodor Dome**	80.74	337	P	P	08 09 13.0	-0.1
	baz=110,SNR=83						
H24K				S	S	08 19 20.4	+1.6
	baz=110						
DYA	**Yadsworthy**	80.75	39	⇑*e*P	P	08 09 13.6	+0.1
DYA				IAMs_20	IAMs_20	08 36 55.4	
	comp=Z,31µm,31.6s						
ROSF	**Rostrenen**	80.80	41	⇑*e*P	P	08 09 14.1	+0.3
NEA2	**Nenana**	80.80	336	IAMs_20	IAMs_20	08 47 20.9	
	comp=Z,20µm,18.0s						
NEA2	**Nenana**	80.80	336	P	P	08 09 12.9	-0.6
	baz=109,SNR=74						
NEA2				S	S	08 19 17.2	-2.2
	baz=109						
BWN	**Browne**	80.83	335	IAmb	IAmb	08 09 26.4	
	comp=Z,291nm,1.0s						
BWN				IAMs_20	IAMs_20	08 50 25.8	
	comp=Z,22µm,21.0s						
OTSS	**Djebel Tessala**	80.85	54	P	P	08 09 16.5	+2.0
YRC	**Rhoscolyn**	80.90	36	⇑*e*P	P	08 09 14.1	0.0
CART	**Cartagena**	80.93	52	IAmb	IAmb	08 09 15.1	
	comp=Z,287nm,1.7s						
CART	**Cartagena**	80.93	52	P	P	08 09 15.1	+0.4
TRF	**Thorofare Moun**	80.95	335	IAmb	IAmb	08 09 31.6	
	comp=Z,393nm,1.6s						
TRF				IAMs_20	IAMs_20	08 44 31.0	
	comp=Z,23µm,22.0s						
TRF	**Thorofare Moun**	80.95	335	P	P	08 09 14.2	-0.2
	baz=107						
TRF				S	S	08 19 20.9	-0.4
	baz=107						
WPS	**Cemaes, Angles**	80.97	36	⇑*e*P	P	08 09 14.5	0.0
WPS				IAmb	IAmb	08 09 16.2	
	comp=Z,814nm,1.8s						
WLF1	**Llynfaes**	81.01	36	*e*P	P	08 09 14.6	-0.1
WLF1				IAmb	IAmb	08 09 16.6	
	comp=Z,6µm,2.7s						
WIM	**Isle of Man**	81.02	35	⇑*e*P	P	08 09 14.1	-0.7
SII	**Sitkinak Islan**	81.03	327	IAMs_20	IAMs_20	08 50 46.6	
	comp=Z,18µm,20.0s						
SII	**Sitkinak Islan**	81.03	327	P	P	08 09 14.7	-0.1
	baz=103						
SII				S	S	08 19 24.0	+1.9
	baz=103						
LAWE	**Loch Awe, Argy**	81.07	33	⇑*e*P	P	08 09 14.7	-0.3
LAWE				IAmb	IAmb	08 09 15.6	
	comp=Z,917nm,2.0s						
O20K	**Slope Mountain**	81.08	331	P	P	08 09 15.1	0.0
	baz=105,SNR=19						
O20K				S	S	08 19 22.5	-0.1
	baz=105						
WME	**Myndd Eilian**	81.09	36	⇑*e*P	P	08 09 14.4	-0.7
I23K	**Minto, Yukon-K**	81.09	336	IAmb	IAmb	08 09 28.3	
	comp=Z,151nm,1.1s						
I23K				IAMs_20	IAMs_20	08 47 08.7	
	comp=Z,24µm,21.0s						
I23K	**Minto, Yukon-K**	81.09	336	P	P	08 09 15.0	+0.1
	baz=108,SNR=49						
I23K				S	S	08 19 23.5	+1.1
	baz=108						
USTO	**Oran**	81.10	54	P	P	08 09 17.4	+1.8
IOMK	**Kirk Michael**	81.11	35	⇑*e*P	P	08 09 15.6	+0.3
IOMK				IAmb	IAmb	08 09 17.2	
	comp=Z,4µm,2.0s						
YLL	**Llanberis**	81.11	36	⇑*e*P	P	08 09 15.1	-0.2
KPL	**Plockton**	81.17	32	⇑*e*P	P	08 09 14.6	-0.9
KPL				IAmb	IAmb	08 09 16.9	
	comp=Z,1µm,2.0s						
SPCR	**Spurr Chakacha**	81.17	332	P	P	08 09 15.3	-0.3
	baz=105,SNR=18						
SPCR				S	S	08 19 22.7	-0.9
	baz=105						
P19K	**Oil Pt**	81.27	331	P	P	08 09 15.7	-0.4
	baz=104						
P19K				S	S	08 19 24.6	+0.2
	baz=104						
Q19K	**Cape Douglas,**	81.30	330	IAmb	IAmb	08 09 59.7	
	comp=Z,193nm,0.9s						
Q19K				IAMs_20	IAMs_20	08 52 09.5	
	comp=Z,17µm,20.0s						
Q19K	**Cape Douglas,**	81.30	330	P	P	08 09 16.0	-0.2
	baz=104,SNR=16						
Q19K				S	S	08 19 25.1	+0.3
	baz=104						
LLW	**Llanuwychllyn**	81.36	37	⇑*e*P	P	08 09 16.4	-0.2
ODJA	**Bouhanifia**	81.38	54	P	P	08 09 19.0	+1.8
H23K	**Yukon River**	81.38	337	IAMs_20	IAMs_20	08 49 36.2	
	comp=Z,23µm,19.0s						
H23K	**Yukon River**	81.38	337	P	P	08 09 16.3	-0.2
	baz=108,SNR=32						
H23K				S	S	08 19 24.1	-1.4
	baz=108						
KAC	**Achnashellach**	81.40	32	⇑*e*P	P	08 09 15.7	-1.0
BPAW	**Bear Paw Mtn.**	81.44	335	IAmb	IAmb	08 09 30.4	
	comp=Z,191nm,1.2s						
BPAW	**Bear Paw Mtn.**	81.44	335	P	P	08 09 16.5	-0.4
	baz=107,SNR=64						
BPAW				S	S	08 19 25.3	-0.8
	baz=107						
NEWG	**New Galloway**	81.47	34	⇑*e*P	P	08 09 17.3	+0.2
NEWG				IAmb	IAmb	08 09 18.1	
	comp=Z,776nm,1.6s						
NEWG				IAMs_20	IAMs_20	08 42 48.0	
	comp=Z,19µm,22.3s						
PGBU	**Glenifferbraes**	81.47	34	⇑*e*P	P	08 09 16.6	-0.5
PGBU				IAmb	IAmb	08 09 18.8	
	comp=Z,1µm,1.8s						
LINV	**Loch Inver, As**	81.59	31	⇑*e*P	P	08 09 17.1	-0.6
LINV				IAMs_20	IAMs_20	08 41 48.1	
	comp=Z,25µm,22.9s						
MCH1	**Michaelchurch**	81.61	37	⇑*e*P	P	08 09 17.6	-0.3
MCH1				IAmb	IAmb	08 09 19.6	
	comp=Z,1µm,1.9s						
MCH1				IAMs_20	IAMs_20	08 41 03.5	
	comp=Z,29µm,23.4s						
PPLA	**Purkeypile**	81.62	334	P	P	08 09 17.8	-0.2
	baz=106,SNR=37						
PPLA				S	S	08 19 26.8	-1.5
	baz=106						
EAB	**Aberfoyle**	81.63	33	⇑*e*P	P	08 09 16.9	-1.0
JVM	**Valle D.L. Mar**	81.64	40	⇑*e*P	P	08 09 17.9	-0.2
FOEL	**Foel Wylfa**	81.64	37	⇑*e*P	P	08 09 18.1	0.0
FOEL				IAMs_20	IAMs_20	08 41 43.7	
	comp=Z,25µm,20.4s						
JSA	**Saint Aubin**	81.66	40	⇑*e*P	P	08 09 17.7	-0.6
JSA				IAmb	IAmb	08 09 20.5	
	comp=Z,6µm,3.2s						
JSA				IAMs_20	IAMs_20	08 38 45.1	
	comp=Z,29µm,23.9s						
CHIR	**Chirikof Islan**	81.66	326	IAMs_20	IAMs_20	08 50 49.3	
	comp=Z,21µm,21.0s						
CHIR	**Chirikof Islan**	81.66	326	P	P	08 09 18.6	+0.5
	baz=102						
CHIR				S	S	08 19 30.2	+1.7
	baz=102						
DBG	**Daneborg**	81.69	14	*i* P	P	08 09 17.6	-0.3
DBG				IAmb	IAmb	08 09 46.4	
	comp=Z,11nm,0.8s						
MONM	**Monmouth**	81.70	38	⇑*e*P	P	08 09 18.5	+0.1
MONM				IAmb	IAmb	08 09 20.3	
	comp=Z,1µm,1.7s						
TOA0	**Torodi Ar. Sit**	81.71	77	P	P	08 09 19.8	+0.6
	SNR=76						
TOA0				P	P	08 09 19.8	+0.6
	SNR=76						
TORD	**Torodi Ar. Bea**	81.71	77	P	P	08 09 18.6	-0.6
	comp=Z,79nm,0.7s,baz=282,slow=2.9,SNR=186						
TORD				PP	PP	08 12 22.7	-3.7
	comp=Z,23nm,1.1s,baz=240,slow=2.2,SNR=3.8						
TORD				S	S	08 19 24.9	-5.7
	comp=Z,0.6nm,0.6s,baz=311,slow=31,SNR=1.5						
TORD				PKKPbc	PKKPbc	08 27 51.7	+0.6
	comp=Z,1.5nm,1.0s,baz=29,slow=1.7,SNR=4.5						
TORD				PKPPKP	P'P'df	08 35 55.0	-2.5

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       comp=Z,1.3nm,0.9s,baz=84,slow=5.3,SNR=4.8
TORD                                LR        LR        08 44 27.4
       comp=Z,50µm,19.4s,baz=250,slow=35
       comp=Z,79nm,0.7s
CAST   Castle Rocks      81.72 334  IAmb      IAmb      08 09 34.0
       comp=Z,201nm,1.2s
CAST   Castle Rocks      81.72 334  P         P         08 09 17.8 -0.5
       baz=106,SNR=54
CAST                                S         S         08 19 27.1 -1.9
       baz=106
JQE    Queens East       81.75  40⇑eP         P         08 09 18.9 +0.2
HLM1   Long Mynd         81.77  37⇑eP         P         08 09 18.9 +0.1
HLM1                                IAMs_20   IAMs_20   08 41 45.6
       comp=Z,23µm,22.0s
M20K   Styx River        81.78 333  IAMs_20   IAMs_20   08 49 40.3
       comp=Z,20µm,20.0s
M20K   Styx River        81.78 333  P         P         08 09 18.3 -0.4
       baz=105
M20K                                S         S         08 19 28.7 -1.1
       baz=105
OJBR   Djebel Berber     81.81  54  P         P         08 09 21.0 +1.5
OLDB   Oldbury-Upon-S    81.82  38⇑eP         P         08 09 19.1 +0.1
OLDB                                IAmb      IAmb      08 09 20.9
       comp=Z,939nm,1.7s
INVG   Invergeldie, C    81.84  33⇑eP         P         08 09 18.6 -0.5
MDO    Dochfour          81.88  32⇑eP         P         08 09 18.4 -0.9
O19K   Port Alsworth     81.93 331  IAMs_20   IAMs_20   08 44 41.8
       comp=Z,19µm,21.0s
O19K   Port Alsworth     81.93 331  P         P         08 09 18.2 -1.2
       baz=103
O19K                                S         S         08 19 30.5 -0.7
       baz=103
CHUM   Lake Minchumin    81.94 335  P         P         08 09 19.0 -0.5
       baz=106,SNR=15
CHUM                                S         S         08 19 30.6 -0.6
       baz=106
KESW   Keswick, Cumbr    82.01  35⇑eP         P         08 09 20.0  0.0
KESW                                IAmb      IAmb      08 09 21.7
       comp=Z,997nm,1.8s
COLD   Coldfoot          82.08 338  P         P         08 09 20.6 +0.5
       baz=108,SNR=51
COLD                                S         S         08 19 35.1 +2.6
       baz=108
STRD   Stroud            82.08  38⇑eP         P         08 09 20.5 +0.1
STRD                                IAmb      IAmb      08 09 23.9
       comp=Z,460nm,0.8s
ESK    Eskdalemuir       82.09  34⇑eP         P         08 09 20.3 -0.1
ESK                                 IAmb      IAmb      08 09 22.0
       comp=Z,856nm,1.7s
ESK                                 IAMs_20   IAMs_20   08 44 56.9
       comp=Z,22µm,19.7s
ESK    Eskdalemuir       82.09  34  P         P         08 09 20.3 -0.1
ESK    Eskdalemuir       82.09  34  IAMs_20   IAMs_20   08 45 02.5
       comp=Z,21µm,19.0s
ESK    Eskdalemuir       82.09  34  P         P         08 09 20.3 -0.1
ESK                                 pmax      pmax
       comp=Z,671nm,1.7s
ESK                                 MLR       MLR
       comp=Z,21µm,19.0s
OKGL   Djebel Kef Gue    82.09  54  P         P         08 09 22.5 +1.6
EKA    Eskdalemuir Ar    82.12  34  LR        LR        08 43 55.8
       comp=Z,19µm,20.5s,baz=252,slow=34
OJGS   Djebel Guires     82.13  54  P         P         08 09 23.5 +2.3
N19K   Bonanza Creek     82.15 332  IAmb      IAmb      08 09 45.8
       comp=Z,371nm,1.9s
N19K                                IAMs_20   IAMs_20   08 51 34.9
       comp=Z,31µm,22.0s
N19K   Bonanza Creek     82.15 332  P         P         08 09 20.0 -0.8
       baz=103,SNR=15
N19K                                S         S         08 19 32.5 -1.2
       baz=103
I21K   Tanana            82.16 336  IAMs_20   IAMs_20   08 49 09.9
       comp=Z,25µm,18.0s
I21K   Tanana            82.16 336  P         P         08 09 19.9 -0.7
       baz=106,SNR=8.7
I21K                                S         S         08 19 32.0 -1.4
       baz=106
P18K   Big Mountain,     82.20 330  IAmb      IAmb      08 09 46.6
       comp=Z,215nm,1.7s
P18K   Big Mountain,     82.20 330  P         P         08 09 20.2 -0.8
       baz=102
P18K                                S         S         08 19 33.3 -0.8
       baz=102
EDI    Edinburgh         82.21  34⇑eP         P         08 09 20.7 -0.3
EDI                                 IAMs_20   IAMs_20   08 43 31.4
       comp=Z,16µm,21.7s
SWN1   Swindon           82.26  38⇑eP         P         08 09 21.6 +0.2
SWN1                                IAmb      IAmb      08 09 23.3
       comp=Z,1µm,1.6s
EBL    Broad Law         82.26  34⇑eP         P         08 09 20.7 -0.6
L20K   Farewell, AK      82.27 333  P         P         08 09 20.3 -0.9
       baz=104,SNR=31
L20K                                S         S         08 19 32.8 -1.9
       baz=104
STNC   Stoke             82.27  36⇑eP         P         08 09 21.9 +0.5
STNC                                IAmb      IAmb      08 09 23.6
       comp=Z,2µm,1.9s
TOLK   Toolik Lake Re    82.30 340  IAMs_20   IAMs_20   08 50 47.3
       comp=Z,22µm,20.0s
TOLK   Toolik Lake Re    82.30 340  P         P         08 09 21.3  0.0
       baz=109,SNR=32
TOLK                                S         S         08 19 35.7 +0.8
       baz=109
BIGH   Upper Bighouse    82.33  31⇑eP         P         08 09 21.4 -0.2
BIGH                                IAMs_20   IAMs_20   08 41 04.0
       comp=Z,25µm,21.9s
M19K   Big River Lodg    82.36 333  IAmb      IAmb      08 09 38.9
       comp=Z,459nm,2.0s
M19K                                IAMs_20   IAMs_20   08 49 48.7
       comp=Z,18µm,20.0s
M19K   Big River Lodg    82.36 333  P         P         08 09 21.2 -0.5
       baz=103
M19K                                S         S         08 19 34.6 -1.0
       baz=103
ALE    Alert             82.39   2  IAMs_20   IAMs_20   08 46 41.5
       comp=Z,23µm,21.0s
EDU    Dundee            82.42  33⇑eP         P         08 09 22.0 -0.1
EANR   'Ain N'Sour       82.45  54  P         P         08 09 25.0 +2.2
MCD    Coleburn Disti    82.49  32⇑eP         P         08 09 21.9 -0.5
ESY    Stoneypath        82.53  34⇑eP         P         08 09 22.3 -0.4
K20K   Telida            82.56 334  IAmb      IAmb      08 09 36.2
       comp=Z,131nm,1.1s
K20K                                IAMs_20   IAMs_20   08 45 11.7
       comp=Z,26µm,22.0s
K20K   Telida            82.56 334  P         P         08 09 22.1 -0.7
       baz=104,SNR=44
K20K                                S         S         08 19 36.1 -1.5
       baz=104
MLA1   Latheron          82.58  31⇑eP         P         08 09 22.6 -0.3
LBWR   Ladybower, Pea    82.61  36⇑eP         P         08 09 23.6 +0.4
LBWR                                IAmb      IAmb      08 09 27.0
       comp=Z,495nm,1.1s
H21K   Melozitna Rive    82.62 336  IAMs_20   IAMs_20   08 45 29.0
       comp=Z,25µm,22.0s
H21K   Melozitna Rive    82.62 336  P         P         08 09 22.1 -0.9
       baz=105,SNR=17
H21K                                S         S         08 19 37.3 -0.8
       baz=105
L19K   White Mountain    82.64 333  IAmb      IAmb      08 09 48.2
       comp=Z,173nm,1.4s
L19K                                IAMs_20   IAMs_20   08 50 05.7
       comp=Z,20µm,20.0s
L19K   White Mountain    82.64 333  P         P         08 09 22.4 -0.8
       baz=103,SNR=24
L19K                                S         S         08 19 37.1 -1.4
       baz=103
ECHA   Ech Chlef         82.68  54  P         P         08 09 25.5 +1.6
EDMD   Edmundbyers       82.70  35⇑eP         P         08 09 23.6  0.0
EDMD                                IAMs_20   IAMs_20   08 43 56.5
       comp=Z,22µm,20.9s
SVW2   Sparrevohn        82.74 332  IAmb      IAmb      08 09 46.8
       comp=Z,120nm,1.1s
CWF    Charnwood Fore    82.75  37⇑eP         P         08 09 23.7 -0.2
CWF                                 IAMs_20   IAMs_20   08 41 28.5
       comp=Z,23µm,23.8s
HPK    Haverah Park      82.76  36⇑eP         P         08 09 24.1 +0.2
N18K   Kilae Creek       82.80 331  IAmb      IAmb      08 09 50.0
       comp=Z,152nm,1.0s
N18K                                IAMs_20   IAMs_20   08 52 49.0
       comp=Z,24µm,20.0s
N18K   Kilae Creek       82.80 331  P         P         08 09 23.1 -1.0
       baz=102,SNR=29
N18K                                S         S         08 19 38.8 -1.3
       baz=102
J20K   Nowinta River     82.80 335  IAMs_20   IAMs_20   08 52 03.8
       comp=Z,17µm,20.0s
J20K   Nowinta River     82.80 335  P         P         08 09 23.3 -0.6
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       baz=104,SNR=34
J20K                                S         S         08 19 38.5 -1.4
       baz=104
EBNR   Beni Rached       82.83  54  P         P         08 09 26.0 +1.2
DAG    Danmarks Havn     83.23  12 iP         P         08 09 24.9 -1.1
DAG                                 IAmb      IAmb      08 09 27.8
       comp=Z,40nm,0.8s
CHGN   Chignik           83.28 327  IAmb      IAmb      08 10 04.2
       comp=Z,174nm,1.2s
CHGN   Chignik           83.28 327  P         P         08 09 26.2 -0.3
       baz=99
CHGN                                S         S         08 19 45.1  0.0
       baz=99
GDLE   Glaisdale, N Y    83.30  35⇑eP         P         08 09 27.1 +0.4
TTA    Tatalina          83.33 333  P         P         08 09 26.0 -0.8
       baz=102,SNR=16
TTA                                 S         S         08 19 43.6 -2.0
       baz=102
LMK    Market Rasen      83.44  36⇑eP         P         08 09 27.7 +0.3
HMNX   Herstmonceux      83.50  39⇑eP         P         08 09 28.3 +0.5
JMIC   Jan Mayen         83.60  18  P         P         08 09 25.7 -2.2
       comp=Z,125nm,0.3s,baz=151,slow=9.4,SNR=1.9
JMIC                                LR        LR        08 44 04.3
       comp=Z,13µm,21.9s,baz=250,slow=34
       comp=Z,125nm,0.3s
JMIC   Jan Mayen         83.60  18 eP         P         08 09 28.3 +0.4
JMIC                               ePP        PP        08 12 40.3 -0.2
JMIC                               eSKSac     S         08 19 45.8 -2.0
JMIC                                IVMs_BB   IVMs_BB   08 44 25.0
       comp=Z,6µm,22.6s
CHNA   Chernabura Isl    83.72 325  P         P         08 09 28.2 -0.6
       baz=98
CHNA                                S         S         08 19 50.0 +0.4
       baz=98
WACR   West Acre         83.91  37⇑eP         P         08 09 29.5 -0.4
WACR                                IAmb      IAmb      08 09 33.4
       comp=Z,459nm,0.8s
WACR                                IAMs_20   IAMs_20   08 46 16.0
       comp=Z,27µm,18.9s
EMHD   Djebel Mahouad    83.97  54  P         P         08 09 32.0 +1.3
ELSH   Elham, Standar    84.03  39⇑eP         P         08 09 30.7 +0.2
ELSH                                IAmb      IAmb      08 09 32.7
       comp=Z,2µm,2.0s
ELSH                                IAMs_20   IAMs_20   08 39 00.2
       comp=Z,37µm,26.4s
ELMS   Elmsett, Ipswi    84.06  38⇑eP         P         08 09 30.5 -0.1
ELMS                                IAMs_20   IAMs_20   08 38 13.3
       comp=Z,34µm,33.1s
ABA    Alger-Bouzarea    84.07  53  P         P         08 09 31.5 +0.4
GCSA   Galena City Sc    84.08 335  P         P         08 09 30.4  0.0
       baz=102,SNR=7.1
GCSA                                S         S         08 19 53.0 +0.2
       baz=102
VNA3   Neumayer Olymp    84.11 162  P         P         08 09 31.1 +0.5
VNA3   Neumayer Olymp    84.11 162  PP        PP        08 12 43.5 -1.4
SDPT   Sand Point        84.30 326  P         P         08 09 31.6 -0.2
       baz=97
SDPT                                S         S         08 19 55.9 +0.5
       baz=97
ADJB   Djebel Djouab     84.36  54  P         P         08 09 33.6 +0.9
VNA1   Neumayer--Stat    84.36 161  P         P         08 09 32.7 +0.9
ABMS   Boumerdes         84.43  53  P         P         08 09 33.2 +0.3
CLF    Chambon-Foret     84.43  42  IAMs_20   IAMs_20   08 44 48.5
       comp=Z,23µm,21.0s
AKET   Djebel Ketaf      84.71  54  P         P         08 09 36.1 +1.6
ATAF   Djebel Tarf       85.02  54  P         P         08 09 37.2 +1.2
A21K   Barrow            85.36 342  P         P         08 09 36.7 -0.1
       baz=102
A21K                                S         S         08 20 06.0 +0.6
       baz=102
SSB    Saint Sauveur     85.77  45  IAMs_20   IAMs_20   08 48 22.2
       comp=Z,16µm,20.0s
NOR    Nord              85.78   8 iP         P         08 09 38.4 -0.4
NOR                                 IAmb      IAmb      08 10 04.4
       comp=Z,13nm,0.9s
FALS   False Pass        85.92 325  P         P         08 09 39.0 -0.9
       baz=95
FALS                                S         S         08 20 11.0 -0.4
       baz=95
SNF    Seneffe           85.96  40 dP         P         08 09 40.7 +0.5
       comp=Z,72nm,1.6s
CKHR   Kef el Ahmar      86.03  54  P         P         08 09 42.6 +1.5
UCC    Uccle             86.03  39  IAmb      IAmb      08 09 43.0
       comp=Z,406nm,1.9s
UCC    Uccle             86.03  39 dP         P         08 09 41.0 +0.4
DOU    Dourbes           86.13  40 bP         P         08 09 41.5 +0.4
       comp=Z,125nm,1.4s
BMRD   Maredsous         86.25  40 dP         P         08 09 42.0 +0.3
       comp=Z,103nm,1.6s
SNAA   Sanae             86.33 162  P         P         08 09 41.6 -0.2
SNAA   Sanae             86.33 162⇑iP         P         08 09 40.6 -1.1
SNAA   Sanae             86.33 162  LR        LR        08 48 23.4
       comp=Z,29µm,21.8s,baz=296,slow=36
SNAA   Sanae             86.33 162  IAmb      IAmb      08 09 49.9
       comp=Z,140nm,1.3s
SNAA   Sanae             86.33 162c iP        P         08 09 40.7 -1.1
SNAA                                pmax      pmax
       comp=Z,133nm,1.3s
SNAA                                MLR       MLR
       comp=Z,35µm,20.0s
DFRA   Djebel Bou Aff    86.34  54  P         P         08 09 43.6 +1.0
BGES   Gesves            86.46  40 bP         P         08 09 43.0 +0.2
RCHB   Rochefort         86.54  40 dP         P         08 09 43.4 +0.3
       comp=Z,135nm,1.0s
BCLA   Clavier           86.60  40 bP         P         08 09 43.8 +0.4
       comp=Z,112nm,1.6s
CTEI   Djebel Teioual    86.75  54  P         P         08 09 45.2 +0.5
BSTI   Sart Tilman       86.78  40 dP         P         08 09 45.1 +0.9
BEBN   Eben Emael        86.86  39 bP         P         08 09 44.9 +0.3
       comp=Z,124nm,0.9s
RDOG   Red Dog Mine      86.99 338  IAMs_20   IAMs_20   08 54 59.5
       comp=Z,25µm,20.0s
RDOG   Red Dog Mine      86.99 338  P         P         08 09 42.6 -2.4
       baz=96,SNR=9.1
RDOG                                S         S         08 20 19.8 -1.7
       baz=96
CKFL   Kef-Lekhel        87.02  54  P         P         08 09 46.6 +0.7
SUE    Sulen             87.03  29 eP         P         08 09 45.8 +0.5
SUE                                 IVmB_BB             08 09 46.7
       comp=Z,9µm,3.9s
SUE                                ePP        PP        08 13 08.0 -0.7
SUE                                eScS       S         08 20 27.9 +5.8
SUE                                eSS        SS        08 26 06.5 +1.2
SUE                                 IVMs_BB   IVMs_BB   08 43 29.9
       comp=Z,6µm,23.1s
BHOU   Houvegnez         87.05  40 dP         P         08 09 46.4 +0.8
       comp=Z,112nm,0.0s
MEM    Membach           87.06  40 dP         P         08 09 45.6  0.0
       comp=Z,117nm,1.1s
WLF    Walferdange       87.11  40  IAMs_20   IAMs_20   08 52 54.5
       comp=Z,25µm,19.0s
WLF    Walferdange       87.11  40 dP         P         08 09 46.7 +0.8
       comp=Z,159nm,0.8s
BTNL   Ternell           87.14  40 dP         P         08 09 46.5 +0.4
       comp=Z,90nm,1.6s
KMY    Karmoy            87.14  31 eP         P         08 09 46.1 +0.3
KMY                                 IVmB_BB             08 09 46.7
       comp=Z,6µm,2.6s
KMY                                eSKSac     SKSac     08 20 09.4 -1.5
ASK    Askoy             87.20  30 eP         P         08 09 46.5 +0.4
ASK                                 IVmB_BB             08 09 47.4
       comp=Z,14µm,3.8s
ASK                                eSKSac     SKSac     08 20 05.9 -5.3
FOO    Floro             87.21  28 eP         P         08 09 46.3 +0.2
FOO                                 IVmB_BB             08 09 47.5
       comp=Z,8µm,3.8s
FOO                                eSKSac     SKSac     08 20 09.3 -2.0
FOO                                eSS        SS        08 26 08.9 +1.1
FOO                                 IVMs_BB   IVMs_BB   08 46 31.3
       comp=Z,5µm,16.2s
BER    Bergen            87.27  30 eP         P         08 09 46.9 +0.6
BER                                 IVmB_BB             08 09 47.6
       comp=Z,7µm,3.9s
BER                                eSKSac     SKSac     08 20 09.5 -2.1
BER                                eSS        SS        08 26 07.8 -0.9
BER                                 IVMsBB              08 45 08.5
       comp=Z,5µm,18.2s
CMAH   Djebel Manchou    87.58  54  P         P         08 09 48.5 -0.1
ABSA   Djebel Ababsia    87.62  54  P         P         08 09 50.0 +1.2
UNV    Unalaska Valle    87.66 324  IAmb      IAmb      08 10 01.7
       comp=Z,116nm,1.0s
UNV    Unalaska Valle    87.66 324  P         P         08 09 48.5  0.0
       baz=92,SNR=6.6
UNV                                 S         S         08 20 29.8 +1.4
       baz=92
ANM    Nome              87.67 334  IAmb      IAmb      08 10 12.9
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       comp=Z,124nm,1.4s
ANM                                 IAMs_20   IAMs_20   08 54 11.7
       comp=Z,18µm,19.0s
ANM    Nome              87.67 334  P         P         08 09 48.9 +0.6
       baz=94,SNR=5.8
ANM                                 S         S         08 20 31.0 +2.9
       baz=94
SENIN  Lac Senin/Sane    87.75  44  IAMs_20   IAMs_20   08 45 18.5
       comp=Z,25µm,22.0s
BLS5   Blasjo            87.77  31 eP         P         08 09 49.1 +0.2
BLS5                                IVmBBB              08 09 50.2
       comp=Z,8µm,3.8s
BLS5                               ePP        PP        08 13 13.4 -1.3
BLS5                               eSKSac     SKSac     08 20 12.8 -2.1
BLS5                                IVMsBB              08 42 33.0
       comp=Z,7µm,27.0s
ODD1   Odda              87.88  30 eP         P         08 09 49.8 +0.3
ODD1                                IAmb      IAmb      08 09 50.8
       comp=Z,442nm,1.6s
ODD1                               ePP        PP        08 13 14.7 -0.9
ODD1                               eScS       S         08 20 35.1 +4.7
ODD1                                IVMs_BB   IVMs_BB   08 44 42.1
       comp=Z,8µm,19.5s
TROLL  Troll, Antarti    88.05 162  P         P         08 09 50.9 +0.7
SNART  Snartemo          88.11  32 eP         P         08 09 51.2 +0.7
SNART                               IVmB_BB             08 09 51.8
       comp=Z,17µm,3.8s
SNART                              eScS       S         08 20 37.2 +4.7
SNART                               IVMs_BB   IVMs_BB   08 49 40.6
       comp=Z,17µm,16.7s
AKN    Aaknes            88.17  28 eP         P         08 09 50.8  0.0
AKN                                 IVmB_BB             08 09 52.2
       comp=Z,5µm,3.4s
AKN                                eSKSac     SKSac     08 20 16.2 -1.0
AKN                                eSS        SS        08 26 24.4 +2.6
AKN                                 IVMs_BB   IVMs_BB   08 48 05.5
       comp=Z,5µm,21.2s
MOL    Molde             88.44  28 eP         P         08 09 53.2 +1.3
MOL                                 IVmB_BB             08 09 53.5
       comp=Z,4µm,3.6s
MOL                                eSKSac     SKSac     08 20 19.8 +1.1
MOL                                 IVMsBB              08 49 13.9
       comp=Z,5µm,17.1s
BFO    Black Forest      88.50  42  P         P         08 09 52.6  0.0
BFO                                 IAmb      IAmb      08 09 56.6
       comp=Z,130nm,1.3s
BFO    Black Forest      88.50  42  P         P         08 09 52.6  0.0
SKAR   Skarslia          88.75  29 eP         P         08 09 54.0 +0.4
SKAR                                IVmB_BB             08 10 04.9
       comp=Z,3µm,4.6s
SKAR                              ⇑ePP        PP        08 13 22.3 -0.2
SKAR                               eScS       S         08 20 43.0 +4.4
SKAR                               eSS        SS        08 26 31.3 +0.9
SKAR                                IVMs_BB   IVMs_BB   08 43 53.0
       comp=Z,5µm,30.7s
HOMB   Homborsund        88.80  32 eP         P         08 09 54.2 +0.5
HOMB                                IVmB_BB             08 09 55.3
       comp=Z,6µm,3.9s
HOMB                               eSKSac     SKSac     08 20 17.4 -3.6
HOMB                               eSS        SS        08 26 30.1 -0.9
HOMB                                IVMsBB              08 50 18.2
       comp=Z,6µm,16.8s
TNA    Tin City          88.80 335  IAmb      IAmb      08 10 11.7
       comp=Z,256nm,1.6s
TNA    Tin City          88.80 335  P         P         08 09 54.3 +0.7
       baz=92,SNR=6.0
TNA                                 S         S         08 20 41.7 +2.9
       baz=92
NIKH   Nikolski High     89.04 323  P         P         08 09 54.7 -0.3
       baz=90
NIKH                                S         S         08 20 43.1 +1.5
       baz=90
STU    Stuttgart         89.08  41  IAmb      IAmb      08 09 59.5
       comp=Z,221nm,1.3s
STU                                 IAMs_20   IAMs_20   08 50 32.6
       comp=Z,15µm,19.0s
MUD    Monsted U'grnd    89.13  34 iP         P         08 09 54.4 -0.9
MUD                                 IAmb      IAmb      08 10 03.0
       comp=Z,19nm,0.7s
KEST   Kesra             89.13  54  P         P         08 09 55.6 -0.4
       comp=Z,48nm,0.7s,baz=170,slow=3.5,SNR=30
KEST                                PP        PP        08 13 27.3 +0.9
       comp=Z,3.8nm,0.8s,baz=206,slow=4.2,SNR=1.1
KEST                                S         SKSac     08 20 24.0 -0.2
       comp=Z,1.8nm,0.8s,baz=26,slow=14,SNR=1.4
       comp=Z,48nm,0.7s
KEST   Kesra             89.13  54  P         P         08 09 55.9 -0.1
       SNR=21
KEST                                P         P         08 09 55.9 -0.1
       SNR=21
DOMB   Dombas            89.14  28⇑iP         P         08 09 55.0 -0.3
DOMB                                IVmB_BB             08 09 56.4
       comp=Z,4µm,3.8s
DOMB                               eSKSac     SKSac     08 20 21.6 -1.4
DOMB                               eSS        SS        08 26 35.4 -0.5
DOMB                                IVMs_BB   IVMs_BB   08 47 21.6
       comp=Z,5µm,18.9s
GOET   G??ttrup          89.16  33 iP         P         08 09 53.1 -2.4
GOET                                IAmb      IAmb      08 09 59.4
       comp=Z,72nm,0.7s
VSL    Villasalto        89.17  51  IAmb      IAmb      08 10 03.7
       comp=Z,111nm,0.9s
EKNA   AfricaArray -     89.19  86⇑eP         P         08 09 57.9 +1.2
MSSA   Maissana          89.28  46  IAmb      IAmb      08 09 57.0
       comp=Z,305nm,1.8s
KONO   Kongsberg         89.38  31  P         P         08 09 55.3 -1.1
KONO   Kongsberg         89.38  31  IAMs_20   IAMs_20   08 45 47.2
       comp=Z,23µm,22.0s
KONO   Kongsberg         89.38  31 ⇑P         P         08 09 57.7 +1.3
KONO   Kongsberg         89.38  31 eP         P         08 09 56.8 +0.4
KONO                                IVmB_BB             08 09 57.5
       comp=Z,3µm,4.8s
KONO                               eSKSac     SKSac     08 20 23.4 -1.0
KONO                               eSS        SS        08 26 38.2 -1.2
KONO                                IVMsBB              08 45 34.6
       comp=Z,7µm,24.0s
DAVA   Damuels           89.53  43 iP         P         08 09 58.6 +0.9
       comp=Z,310nm,1.8s,SNR=60
DAVA                               eS         S         08 20 52.4 +5.6
       comp=Z,14nm,1.7s
DAVA                               eP         P'P'df    08 35 41.1 -0.5
       comp=Z,8.3nm,1.1s
DAVOX  Davos/Dischmat    89.54  43  LR        LR        08 46 18.1
       comp=Z,18µm,21.4s,baz=264,slow=33
JOHN   Johnston Islan    89.54 287  IAMs_20   IAMs_20   08 40 06.6
       comp=Z,26µm,22.0s
TBLU   Trondheim         89.69  27⇑iP         P         08 09 58.3 +0.5
TBLU                                IVmB_BB             08 09 59.5
       comp=Z,4µm,4.1s
TBLU                               ePP        PP        08 13 30.9 +0.9
TBLU                               eScS       S         08 20 51.8 +4.6
TBLU                               eSS        SS        08 26 45.6 +1.8
TBLU                                IVMs_BB   IVMs_BB   08 40 46.7
       comp=Z,4µm,30.0s
OVD    Ostervraa, Den    89.70  33 iP         P         08 09 58.5 +0.5
OVD                                 IAmb      IAmb      08 10 14.7
       comp=Z,74nm,0.5s
SPIA   Saint Paul Isl    89.85 327  P         P         08 09 59.6 +1.0
       baz=89
SPIA                                S         S         08 20 51.2 +2.4
       baz=89
KBS    Kingsbay          89.94  11 iP         P         08 10 00.6 +1.8
KBS                                 pmax      pmax
       comp=Z,146nm,1.7s
KBS                                 MLR       MLR
       comp=Z,21µm,19.0s
KBS    Kingsbay          89.94  11 eP         P         08 09 58.6 -0.2
KBS                                eSKSac     SKSac     08 20 28.2 +1.2
KBS                                 IVMs_BB   IVMs_BB   08 48 48.8
       comp=Z,10µm,22.2s
NC204  NORSAR Array S    89.95  29  IAmb      IAmb      08 11 27.6
       comp=Z,345nm,1.9s
NBO00  NORSAR Array S    89.96  29  IAmb      IAmb      08 10 47.9
       comp=Z,263nm,1.5s
FETA   Feichten          90.12  43 iP         P         08 10 01.1 +0.6
       comp=Z,210nm,1.7s,SNR=70
FETA                               eS         SKSac     08 20 30.9 +1.2
       comp=Z,5.8nm,1.5s
FETA                               eP         P'P'df    08 35 40.0 -0.5
       comp=Z,9.1nm,1.0s
RETA   Reutte            90.13  43 iP         P         08 10 01.1 +0.7
       comp=Z,158nm,1.7s,SNR=43
RETA                               eS         SKSac     08 20 31.9 +2.4
       comp=Z,2.6nm,0.5s
NB2    NORSAR Subarra    90.17  29  P         P         08 10 00.0 -0.2
       comp=Z,2µm,3.3s,baz=272,slow=4.8
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NB2	**NORSAR Subarra**	**90.17**	**29**	P	**P**	**08 10 00.0**	**-0.2**
	baz=272,slow=4.8						
NOA	**NORSAR Array B**	**90.17**	**29**	P	**P**	**08 10 00.0**	**-0.2**
	comp=Z,11nm,0.9s,baz=270,slow=4.7,SNR=20						
NOA				LR	LR	08 47 32.6	
	comp=Z,12µm,21.1s,baz=270,slow=34						
	comp=Z,11nm,0.9s						
NB201	**NORSAR Array S**	**90.21**	**29**	IAmb	IAmb	08 11 32.3	
	comp=Z,182nm,1.3s						
NC303	**NORSAR Array S**	**90.24**	**29**	IAmb	IAmb	08 10 01.6	
	comp=Z,225nm,2.0s						
CASP	**Castiglione de**	**90.27**	**47**	IAmb	IAmb	08 10 03.0	
	comp=Z,308nm,1.6s						
NC602	**NORSAR Array S**	**90.34**	**29**	IAmb	IAmb	08 10 41.5	
	comp=Z,307nm,1.8s						
NC602	**NORSAR Array S**	**90.34**	**29**	*e*P	**P**	**08 10 01.4**	**+0.5**
NC602				IVmBBB		08 10 02.2	
	comp=Z,4µm,4.5s						
NC602				*e*SKSac	**SKSac**	**08 20 28.9**	**-1.1**
NC602				*e*SS	**SS**	**08 26 51.5**	**-1.8**
NC602				IVMsBB		08 46 29.6	
	comp=Z,5µm,19.6s						
MOTA	**Moosalm**	**90.37**	**43**	*i* P	**P**	**08 10 02.0**	**+0.4**
	comp=Z,175nm,1.7s,SNR=53						
MOTA				*e*S	**SKSac**	**08 20 29.6**	**-1.5**
	comp=Z,8.2nm,1.7s						
MOTA				*e*P	**P'P'df**	**08 35 43.0**	**+2.9**
	comp=Z,11nm,1.4s						
GRFO	**Grafenberg**	**90.40**	**40**	P	**P**	**08 10 02.9**	**+1.4**
GRFO				IAMs_20	IAMs_20	08 48 26.5	
	comp=Z,18µm,20.0s						
GRFO	**Grafenberg**	**90.40**	**40**	P	**P**	**08 10 02.9**	**+1.4**
GRFO				pmax	pmax		
	comp=Z,417nm,1.9s						
GRA1	**Grafenberg Arr**	**90.40**	**40**	IAMs_20	IAMs_20	08 51 39.5	
	comp=Z,18µm,19.0s						
NSS	**Namsos**	**90.42**	**26**	*e*P	**P**	**08 10 01.7**	**+0.5**
NSS				IVmB_BB		08 10 02.4	
	comp=Z,4µm,3.5s						
NSS				*e*SKSac	**SKSac**	**08 20 32.0**	**+1.7**
NSS				IVMsBB		08 42 45.2	
	comp=Z,5µm,26.1s						
GAMB	**Gambell**	**90.43**	**334**	IAmb	IAmb	08 10 19.3	
	comp=Z,263nm,1.6s						
GAMB				IAMs_20	IAMs_20	08 55 46.7	
	comp=Z,21µm,20.0s						
GAMB	**Gambell**	**90.43**	**334**	P	**P**	**08 10 01.9**	**+0.6**
	baz=88						
GAMB				S	**S**	**08 20 55.7**	**+1.8**
	baz=88						
SQTA	**Sankt Quirin**	**90.44**	**43**	*i* P	**P**	**08 10 02.4**	**+0.5**
	comp=Z,214nm,1.8s,SNR=47						
SQTA				*e*S	**S**	**08 20 54.0**	**-1.0**
	comp=Z,1.2nm,0.4s						
QSPA	**South Pole Qui**	**90.47**	**180**	P	**P**	**08 10 02.3**	**+0.7**
QSPA				IAmb	IAmb	08 10 26.1	
	comp=Z,231nm,1.2s						
WATA	**Walderalm**	**90.69**	**43**	*i* P	**P**	**08 10 03.5**	**+0.5**
	comp=Z,121nm,1.7s,SNR=31						
WATA				*e*S	**SKSac**	**08 20 39.2**	**+6.3**
	comp=Z,3.8nm,0.5s						
WATA				*e*P	**P'P'df**	**08 35 41.7**	**+2.2**
	comp=Z,7.0nm,1.1s						
WTTA	**Wattenberg**	**90.73**	**43**	*i* P	**P**	**08 10 04.0**	**+0.7**
	comp=Z,231nm,1.7s,SNR=60						
WTTA				*e*S	**S**	**08 20 50.1**	**-7.8**
	comp=Z,9.4nm,1.8s						
WTTA				*e*P	**P'P'df**	**08 35 42.3**	**+2.9**
	comp=Z,11nm,1.0s						
STOK	**Stokkvaagen**	**90.79**	**24**	*e*P	**P**	**08 10 03.7**	**+0.8**
TEOL	**Teolo**	**90.80**	**45**	IAmb	IAmb	08 10 07.4	
	comp=Z,157nm,1.0s						
HSPB	**Hornsund (broa**	**90.82**	**13**	*i* P	**P**	**08 10 03.8**	**+1.0**
HSPB				*e*PP	**PP**	**08 13 39.0**	**+0.5**
HSPB				*e*SKSac	**SKSac**	**08 20 34.7**	**+2.6**
HSPB				*e*S	**ScS**	**08 21 00.8**	**+0.3**
HSPB				*e*L	L	08 48 40.8	
	comp=Z,23µm,22.1s						
HSPB	**Hornsund (broa**	**90.82**	**13**	*e*P	**P**	**08 10 03.5**	**+0.6**
KONS	**Konsvik**	**90.82**	**24**	*e*P	**P**	**08 10 03.9**	**+0.9**
KONS				IVmB_BB		08 10 04.9	
	comp=Z,4µm,4.0s						
KONS				*e*SKSac	**SKSac**	**08 20 34.1**	**+1.6**
LLD	**Lille Linde**	**90.86**	**35**	*i* P	**P**	**08 10 02.7**	**-0.7**
LLD				IAmb	IAmb	08 10 07.0	
	comp=Z,46nm,0.7s						
SPA0	**Spitsbergen Ar**	**90.88**	**12**	⇑*i*P	**P**	**08 10 03.1**	**-0.1**
SPITS	**Spitsbergen Ar**	**90.88**	**12**	PKKP		08 27 27.2	
	comp=Z,13nm,1.0s,baz=98,slow=2.5,SNR=5.2						
SPITS				LR	LR	08 52 24.4	
	comp=Z,10µm,18.9s,baz=24,slow=37						
LOF	**Lofoten**	**90.90**	**22**	*e*P	**P**	**08 10 04.3**	**+1.0**
LOF				IVmB_BB		08 10 04.4	
	comp=Z,5µm,3.8s						
LOF				*e*SKSac	**SKSac**	**08 20 33.0**	**+0.1**
LOF				IVMs_BB	IVMs_BB	08 43 21.8	
	comp=Z,8µm,23.0s						
NVL	**N'lazarevskaya**	**90.97**	**161**	⇓*i*P	**P**	**08 10 03.2**	**-0.4**
NVL				*e**PP	**pP**	**08 10 13.9**	**+0.6**
NVL				*e*		08 13 39.1	
NVL				*e*PPP	PPP	08 15 35.7	
NVL				*e*S	**SKSac**	**08 20 30.3**	**-2.9**
NVL				*e*		08 20 58.6	
NVL				*e*SS	**SS**	**08 27 11.1**	**+9.2**
NVL				pmax	pmax		
	comp=Z,72nm,1.2s						
NVL				MLR	MLR		
	comp=Z,30µm,20.0s						
COP	**Copenhagen**	**90.97**	**34**	*i* P	**P**	**08 10 02.3**	**-1.6**
COP				IAmb	IAmb	08 10 23.0	
	comp=Z,64nm,0.4s						
NKC	**Novy Kostel**	**91.18**	**40**	*e*P	**P**	**08 10 06.2**	**+1.1**
NKC				*e*SKS	**SKSac**	**08 20 32.5**	**-2.8**
NKC				AMS	AMS	08 42 00.0	
	comp=Z,29µm,30.1s						
ABTA	**Abfaltersbach**	**91.35**	**43**	*i* P	**P**	**08 10 06.7**	**+0.6**
	comp=Z,115nm,1.5s,SNR=56						
ABTA				*e*S	**S**	**08 21 03.8**	**+0.5**
	comp=Z,18nm,1.6s						
MOR8	**Moi Rana**	**91.38**	**24**	*e*P	**P**	**08 10 06.5**	**+0.9**
MOR8				IVmB_BB		08 10 07.1	
	comp=Z,3µm,5.8s						
MOR8				*e*SKSac	**SKSac**	**08 20 35.7**	**-0.1**
MOR8				IVMsBB		08 45 04.6	
	comp=Z,8µm,23.9s						
HFS	**Hagfors**	**91.43**	**30**	LR	LR	08 47 34.8	
	comp=Z,19µm,22.0s,baz=266,slow=33						
CLL	**Collm**	**91.49**	**39**	IAmb	IAmb	08 10 16.7	
	comp=Z,143nm,1.9s						
CLL				IAMs_20	IAMs_20	08 51 40.2	
	comp=Z,16µm,20.0s						
CLL	**Collm**	**91.49**	**39**	⇑*i*P	**P**	**08 10 07.0**	**+0.5**
CLL				*e*		08 10 16.0	
CLL				*e*		08 13 42.0	
CLL				*e*		08 20 38.0	
CLL				*e*S	**ScS**	**08 21 07.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,786nm,2.5s						
CLL				MLR	MLR		
	comp=Z,16µm,20.9s						
CLL	**Collm**	**91.49**	**39**	⇑*i*P	**P**	**08 10 07.0**	**+0.5**
	comp=Z,786nm,2.5s						
CLL				*e*Pmax		08 10 13.0	
CLL				*e*sP	**pP**	**08 10 16.0**	**-0.1**
CLL				*e*PP	**PP**	**08 13 42.0**	**-2.5**
CLL				*e*x	x	08 19 53.0	
CLL				*e*SKSac	**SKSac**	**08 20 38.0**	**+1.1**
CLL				*e*S	**ScS**	**08 21 07.0**	**0.0**
CLL				*e*sS	**sS**	**08 21 24.0**	**+3.7**
CLL				*e*PS	**PS**	**08 22 16.0**	**-0.8**
CLL				*e*PPS	PPS	08 22 48.0	
CLL				*e*SS	SS	08 27 24.0	+14
CLL				*e*SSSS		08 33 42.0	
CLL				*e*PKPPKPdf	**P'P'df**	**08 35 38.0**	**+0.5**
CLL				LmV		08 51 00.0	
	comp=Z,16µm,20.9s						
CLL				Lmax		08 54 00.0	
RGN	**Rugen**	**91.53**	**36**	IAMs_20	IAMs_20	08 51 05.2	
	comp=Z,22µm,20.0s						
STEI	**Steigen**	**91.55**	**22**	⇑*i*P	**P**	**08 10 06.5**	**+0.2**
STEI				IVmB_BB		08 10 07.5	
	comp=Z,4µm,6.0s						
STEI				*e*PP	**PP**	**08 13 45.1**	**+0.7**
STEI				*e*ScS	**S**	**08 21 06.3**	**+2.3**
STEI				*e*SS	**SS**	**08 27 12.2**	**+1.9**
STEI				IVMs_BB	IVMs_BB	08 43 53.9	
	comp=Z,10µm,24.5s						
FAUS	**Fauske**	**91.61**	**23**	*e*P	**P**	**08 10 07.1**	**+0.4**
FAUS				IVmB_BB		08 10 08.0	
	comp=Z,4µm,3.7s						
FAUS				*e*PP	**PP**	**08 13 43.3**	**-1.7**
FAUS				*e*SKSac	**SKSac**	**08 20 37.8**	**+0.8**
FAUS				*e*SS	**SS**	**08 27 12.1**	**+0.8**
FAUS				IVMs_BB	IVMs_BB	08 43 41.9	
	comp=Z,12µm,23.8s						
DEL	**Delary**	**91.74**	**34**	*e*P	**P**	**08 10 07.0**	**-0.5**
KBA	**Koelnbreinsper**	**91.90**	**43**	*i* P	**P**	**08 10 09.2**	**+0.5**
	comp=Z,128nm,1.6s,SNR=69						
KBA				*e*S	**S**	**08 21 05.2**	**-3.3**
	comp=Z,13nm,1.9s						
KBA				*e*P	**P'P'df**	**08 35 36.8**	**-0.4**
	comp=Z,1.4nm,0.7s						
RUE	**Ruedersdorf**	**91.91**	**38**	*e*P	**P**	**08 10 09.0**	**+0.7**
NRCA	**Norcia**	**91.92**	**47**	IAmb	IAmb	08 10 19.6	
	comp=Z,121nm,1.5s						
AFI	**Afiamalu**	**91.94**	**256**	LR	LR	08 40 51.7	
	comp=Z,8µm,21.1s,baz=84,slow=29						
KHC	**Kasperske Hory**	**91.96**	**41**	*i* P	**P**	**08 10 09.1**	**+0.3**
KHC				pmax	pmax		
	comp=Z,412nm,1.9s						
KHC				MLR	MLR		
	comp=Z,32µm,18.0s						
KHC	**Kasperske Hory**	**91.96**	**41**	*e*P	**P**	**08 10 09.7**	**+0.9**
KHC				*e*SKS	**SKSac**	**08 20 41.7**	**+1.9**
KHC				AMS	AMS	08 43 20.0	
	comp=Z,29µm,26.5s						
BJO1	**Bjornoya**	**91.98**	**15**	*e*P	**P**	**08 10 08.5**	**+0.3**
BJO1				IVmBBB		08 10 14.8	
	comp=Z,5µm,2.9s						
BJO1				*e*SKSac	**SKSac**	**08 20 38.9**	**+0.1**
BJO1				IVMs_BB	IVMs_BB	08 50 36.7	
	comp=Z,6µm,4.1s						
GERES	**GERESS Array B**	**92.06**	**41**	P	**P**	**08 10 08.8**	**-0.5**
	comp=Z,13nm,0.9s,baz=251,slow=4.1,SNR=40						
GERES				PKKP	**PKKPdf**	**08 27 25.0**	**+0.2**
	comp=Z,0.4nm,0.2s,baz=169,slow=1.4,SNR=4.5						
GERES				PKPPKP	**P'P'df**	**08 35 35.3**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=90,slow=0.1,SNR=3.8						
GERES				LR	LR	08 50 19.7	
	comp=Z,12µm,20.4s,baz=260,slow=35						
	comp=Z,13nm,0.9s						
ROBS	**Robic**	**92.06**	**44**	*e*P	**P**	**08 10 09.6**	**+0.3**
ROBS				*e*SKSac	**SKSac**	**08 20 42.4**	**+2.0**
BIOA	**Bad Ischl, Aus**	**92.07**	**42**	*i* P	**P**	**08 10 10.0**	**+0.6**
	SNR=38						
BIOA				*e*S	**SKSac**	**08 20 42.3**	**+1.8**
BRG	**Berggiesshubel**	**92.10**	**39**	*i* P	**P**	**08 10 10.1**	**+0.8**
BRG				Amp		08 10 12.5	
	comp=Z,612nm,2.3s						
BRG				*e*x	x	08 10 23.2	
BRG				Amp		08 10 25.2	
	comp=Z,274nm,1.8s						
BRG				*e*x	x	08 10 50.1	
BRG				Amp		08 10 53.7	
	comp=Z,61nm,1.3s						
BRG	**Berggiesshubel**	**92.10**	**39**	PP	PP	08 13 48.0	-1.3
BRG				Amp		08 14 10.0	
	comp=Z,533nm,2.9s						
BRG	**Berggiesshubel**	**92.10**	**39**	PS	PS	08 22 27.0	+3.4
BRG				PKPPKP	**P'P'df**	**08 35 36.5**	**+0.1**
BRG				Amp		08 35 39.4	
	comp=Z,8.0nm,1.2s						
BRG				Amp		08 44 47.0	
	comp=Z,23nm,23.9s						
BRG				Amp		08 44 53.0	
	comp=E,16nm,25.4s						
BRG				Amp		08 45 03.0	
	comp=N,6.8nm,24.1s						
BRG	**Berggiesshubel**	**92.10**	**39**	*i* P	**P**	**08 10 10.1**	**+0.8**
BRG				*e*		08 10 23.1	
BRG						08 13 48.0	
BRG				S	**SKSac**	**08 20 44.0**	**+3.6**
BRG				PS	PnS	08 22 27.0	+2.4
BRG				pmax	pmax		
	comp=Z,612nm,2.3s						
BRG				pmax	pmax		
	comp=Z,274nm,1.8s						
BRG				pmax	pmax		
	comp=Z,61nm,1.3s						
BRG				pmax	pmax		
	comp=Z,533nm,2.9s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MYKA	**Terra Mystica**	**92.13**	**43**	*i* P	**P**	**08 10 10.1**	**+0.4**
	comp=Z,94nm,1.7s,SNR=25						
MYKA				*e*S	**S**	**08 21 10.5**	**+0.2**
	comp=Z,1.2nm,0.3s						
AQU	**L'Aquila**	**92.16**	**48**	IAmb	IAmb	08 10 49.0	
	comp=Z,114nm,1.2s						
AQU				IAMs_20	IAMs_20	08 46 33.3	
	comp=Z,17µm,22.0s						
CADS	**Cadrg**	**92.21**	**44**	*e*P	**P**	**08 10 10.3**	**+0.3**
GORS	**Gorjuse**	**92.39**	**44**	*e*P	**P**	**08 10 11.0**	**+0.1**
BSD	**Bornholm Skovb**	**92.41**	**35**	*e*P	**P**	**08 10 10.6**	**-0.1**
BSD	**Bornholm Skovb**	**92.41**	**35**	*i* P	**P**	**08 10 10.4**	**-0.3**
BSD				IAmb	IAmb	08 10 13.5	
	comp=Z,6.2nm,0.8s						
SKDS	**Skadanscina**	**92.44**	**45**	*e*P	**P**	**08 10 11.0**	**-0.1**
CKRC	**Cesky Krumlov**	**92.46**	**41**	*e*P	**P**	**08 10 11.7**	**+0.6**
CKRC				*e*SKS	**SKSac**	**08 20 45.0**	**+2.4**
MOA	**Molln**	**92.49**	**42**	*i* P	**P**	**08 10 11.6**	**+0.3**
	comp=Z,158nm,1.6s,SNR=59						
MOA				*e*S	**SKSac**	**08 20 46.8**	**+4.0**
	comp=Z,14nm,1.9s						
PVCC	**Panska Ves**	**92.52**	**40**	*e*P	**P**	**08 10 12.3**	**+1.0**
PVCC				*e*SKS	**SKSac**	**08 20 44.2**	**+1.4**
PVCC				AMS	AMS	08 42 30.0	
	comp=Z,22µm,29.0s						
PRU	**Pruhonice**	**92.54**	**40**	*e*P	**P**	**08 10 12.1**	**+0.7**
PRU				*e*SKS	**SKSac**	**08 20 39.6**	**-3.3**
PRU				AMS	AMS	08 42 30.0	
	comp=Z,30µm,27.3s						
CRNS	**Crni Vrh**	**92.58**	**44**	*e*P	**P**	**08 10 12.2**	**+0.5**
TRO	**Tromso**	**92.68**	**20**	⇑*i*P	**P**	**08 10 11.9**	**+0.3**
TRO				IVmB_BB		08 10 12.6	
	comp=Z,3µm,3.9s						
TRO				*e*sP	**sP**	**08 10 29.1**	**+4.4**
TRO				*e*ScS	**S**	**08 21 16.6**	**+2.4**
TRO				*e*SS	**SS**	**08 27 28.4**	**+1.9**
TRO				IVMs_BB	IVMs_BB	08 47 15.2	
	comp=Z,5µm,25.2s						
CEY	**Cerknica**	**92.72**	**44**	*e*P	**P**	**08 10 12.7**	**+0.3**
OBKA	**Obir**	**92.76**	**44**	*i* P	**P**	**08 10 13.1**	**+0.4**
	comp=Z,91nm,1.7s,SNR=39						
OBKA				*e*S	**SKSac**	**08 20 46.3**	**+1.8**
	comp=Z,16nm,2.2s						
OBKA				*e*P	**P'P'df**	**08 35 38.6**	**+3.0**
	comp=Z,3.4nm,1.2s						
LJU	**Ljubljana**	**92.77**	**44**	*e*P	**P**	**08 10 13.5**	**+0.9**
LJU	**Ljubljana**	**92.77**	**44**	*e*P	**P**	**08 10 13.5**	**+0.9**
LJU				*e*SKSac	**SKSac**	**08 20 46.5**	**+2.1**
LJU				*e*S	**ScS**	**08 21 17.8**	**-0.1**
LJU				*e*		08 27 00.1	
LJU				*e*		08 38 06.9	
LJU				*e*		08 42 21.7	
HOPEN	**Hopen**	**93.05**	**13**	*e*P	**P**	**08 10 13.0**	**-0.2**
HOPEN				*e*SKSac	**SKSac**	**08 20 44.2**	**-0.5**
HOPEN				IVMs_BB	IVMs_BB	08 51 20.9	
	comp=Z,7µm,22.3s						
SOKA	**Soboth**	**93.08**	**43**	*i* P	**P**	**08 10 14.1**	**0.0**
	comp=Z,62nm,1.6s,SNR=43						
SOKA				*e*S	**S**	**08 21 19.3**	**+0.4**
	comp=Z,1.1nm,0.7s						
SOKA				*e*P	**P'P'df**	**08 35 34.1**	**-0.9**
	comp=Z,4.0nm,1.3s						
VIKU	**Vikbolandet**	**93.10**	**31**	*e*P	**P**	**08 10 14.5**	**+0.8**
VAE	**Valguarnera**	**93.17**	**53**	LR	LR	08 50 09.1	
	comp=Z,19µm,21.4s,baz=255,slow=34						
TREC	**Trest**	**93.20**	**41**	*e*P	**P**	**08 10 15.7**	**+1.2**
TREC				AMS	AMS	08 44 20.0	
	comp=Z,26µm,26.8s						
JETT	**Jettan, Norway**	**93.21**	**20**	*e*P	**P**	**08 10 14.9**	**+0.8**
JETT				*e*PP	**PP**	**08 13 56.2**	**-1.3**
JETT				*e*SKSac	**SKSac**	**08 20 45.8**	**-0.2**
ARSA	**Arzberg**	**93.38**	**43**	*i* P	**P**	**08 10 15.8**	**+0.5**
	comp=Z,149nm,1.7s,SNR=46						
ARSA				*e*S	**SKSac**	**08 20 47.4**	**-0.4**
	comp=Z,2.0nm,0.5s						
UPP	**Uppsala**	**93.42**	**30**	*e*P	**P**	**08 10 16.1**	**+0.9**
CRES	**Cresnjev**	**93.43**	**44**	*e*P	**P**	**08 10 15.9**	**+0.3**
UPC	**Upice**	**93.44**	**40**	*e*P	**P**	**08 10 16.6**	**+1.1**
UPC				*e*SKS	**SKSac**	**08 20 52.7**	**+4.8**
UPC				AMS	AMS	08 42 20.0	
	comp=Z,26µm,31.5s						
CHVC	**Chvalec**	**93.46**	**39**	*e*P	**P**	**08 10 16.6**	**+0.9**
CHVC				*e*SKS	SKSac	08 20 36.3	-12
CHVC				AMS	AMS	08 42 30.0	
	comp=Z,23µm,32.2s						
CONA	**Conrad Observa**	**93.55**	**42**	*i* P	**P**	**08 10 16.9**	**+0.7**
	comp=Z,208nm,1.8s,SNR=88						
CONA				*e*S	**SKSac**	**08 20 48.9**	**+0.1**
	comp=Z,9.2nm,1.5s						
OSTC	**Ostas**	**93.56**	**39**	*e*P	**P**	**08 10 16.8**	**+0.7**
OSTC				*e*SKS	**SKSac**	**08 20 47.4**	**-1.2**
OSTC				AMS	AMS	08 42 40.0	
	comp=Z,24µm,33.8s						
KSP	**Ksiaz**	**93.59**	**39**	*i* P	**P**	**08 10 17.2**	**+1.0**
KSP				*e*PP	**PP**	**08 13 58.7**	**-2.3**
KSP				*e*SKSac	**SKSac**	**08 20 50.8**	**+2.1**
KSP				*e*S	**ScS**	**08 21 24.4**	**-0.1**
KSP				*e*L	L	08 53 31.8	
	comp=Z,17µm,21.9s						
DPC	**Dobruska-Polom**	**93.65**	**40**	*e*P	**P**	**08 10 17.9**	**+1.3**
DPC				*e*SKS	**SKSac**	**08 20 50.4**	**+1.2**
DPC				AMS	AMS	08 42 40.0	
	comp=Z,23µm,31.0s						
KRUC	**Moravsky**	**93.81**	**41**	⇑*i*P	**P**	**08 10 18.1**	**+0.8**
KRUC				*e*SKS	**SKSac**	**08 20 52.3**	**+2.3**
RONA	**Rosalia, Austr**	**93.86**	**42**	*i* P	**P**	**08 10 18.2**	**+0.6**
	SNR=48						
RONA				*e*S	**SKSac**	**08 20 49.4**	**-1.1**
VRAC	**Vranov**	**93.92**	**41**	⇑P	**P**	**08 10 18.9**	**+1.1**
VRAC	**Vranov**	**93.92**	**41**	LR	LR	08 54 07.6	
	comp=Z,11µm,18.4s,baz=264,slow=37						
VRAC	**Vranov**	**93.92**	**41**	⇑P	**P**	**08 10 18.9**	**+1.1**
VRAC	**Vranov**	**93.92**	**41**	⇑*i*P	**P**	**08 10 18.7**	**+0.9**
VRAC				*e*SKS	**SKSac**	**08 20 53.4**	**+2.8**
GKP	**Gorka Klasztor**	**93.94**	**37**	*i* P	**P**	**08 10 18.4**	**+0.7**
GKP				*e*pP	**sP**	**08 10 31.9**	**+1.1**
GKP				*e*PP	**PP**	**08 14 01.9**	**-1.7**
GKP				*e*SKSac	**SKSac**	**08 20 51.2**	**+0.8**
GKP				*e*S	**ScS**	**08 21 26.8**	**-0.4**
GKP				*e*L	L	08 52 00.8	
	comp=Z,19µm,20.2s						
KRLC	**Kraliky**	**93.97**	**40**	*e*P	**P**	**08 10 19.0**	**+1.0**
KRLC				*e*SKS	**SKSac**	**08 20 45.0**	**-5.9**
KRLC				AMS	AMS	08 53 10.0	
	comp=Z,16µm,19.9s						
SOP	**Sopron**	**94.04**	**42**	P	**P**	**08 10 18.8**	**+0.5**
HAMF	**Hammerfest**	**94.09**	**19**	*e*P	**P**	**08 10 18.4**	**+0.4**
HAMF				*e*SKSac	**SKSac**	**08 20 48.6**	**-2.0**
HAMF				IVMs_BB	IVMs_BB	08 48 43.7	
	comp=Z,5µm,29.2s						
CUC	**Castrocucco**	**94.11**	**50**	IAmb	IAmb	08 10 20.5	
	comp=Z,148nm,1.6s						
CEL	**Celeste**	**94.29**	**52**	IAMs_20	IAMs_20	08 53 07.9	
	comp=Z,17µm,21.0s						
KTK1	**Kautokeino**	**94.30**	**21**	IVmB_BB		08 10 19.7	
	comp=Z,2µm,6.2s						
KTK1				*e*P	**P**	**08 10 19.8**	**+0.7**
KTK1				*e*SKSac	**SKSac**	**08 20 53.0**	**+1.1**
KTK1				IVMsBB		08 42 49.7	
	comp=Z,4µm,45.4s						
ZST	**Bratislava**	**94.36**	**42**	*e*P	**P**	**08 10 21.2**	**+1.4**
ZST				*e*S	**S**	**08 21 30.2**	**+0.4**
ZST				pmax	pmax		
	comp=Z,2µm,1.9s						
ZST	**Bratislava**	**94.36**	**42**	*e*P	**P**	**08 10 21.2**	**+1.4**
ZST				*e*PP	**PP**	**08 14 08.4**	**+1.3**
ZST				*e*		08 20 33.0	
ZST				*e*S	**S**	**08 21 30.2**	**+0.4**
MODS	**Modra-Piesok**	**94.46**	**42**	*e*P	**P**	**08 10 21.4**	**+1.1**
MODS				*e*		08 20 50.7	
MODS				*e*S	**S**	**08 21 31.6**	**+0.9**
MODS				pmax	pmax		
	comp=Z,828nm,1.8s						
MODS	**Modra-Piesok**	**94.46**	**42**	*e*P	**P**	**08 10 21.4**	**+1.1**
MODS				*e*PP	**PP**	**08 14 08.0**	**+0.1**
MODS				*e*		08 20 50.7	
MODS				*e*S	**S**	**08 21 31.6**	**+0.9**
MODS				*e*L	L	08 46 12.2	
MORC	**Moravsky Berou**	**94.49**	**40**	⇑P	**P**	**08 10 21.8**	**+1.4**
MORC	**Moravsky Berou**	**94.49**	**40**	⇑P	**P**	**08 10 21.8**	**+1.4**
MORC	**Moravsky Berou**	**94.49**	**40**	⇑*i*P	**P**	**08 10 21.5**	**+1.1**
MORC				*e*SKS	**SKSac**	**08 20 56.5**	**+2.7**
SMOL	**Smolenice**	**94.54**	**41**	*e*P	**P**	**08 10 22.0**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,575nm,3.1s						
SMOL	**Smolenice**	**94.54**	**41**	*e*P	**P**	**08 10 22.0**	**+1.3**
EGYH	**Egyhazaskeszo**	**94.59**	**43**	P	**P**	**08 10 21.2**	**+0.4**
JAVC	**Velka Javorina**	**94.67**	**41**	⇑*i*P	**P**	**08 10 23.2**	**+1.9**
JAVC				*e*SKS	**SKSac**	**08 20 59.6**	**+4.8**
MGRS	**Mrkonjic Grad**	**94.70**	**46**	*e*P	**P**	**08 10 23.9**	**+2.4**
MAUC	**Maruska**	**94.72**	**41**	*e*P	**P**	**08 10 22.8**	**+1.3**
MAUC				*e*SKS	**SKSac**	**08 20 54.2**	**-0.8**
MAUC				AMS	AMS	08 44 50.0	
	comp=Z,36µm,25.8s						
BLY	**Banja Luka**	**94.74**	**45**	*e*P	**P**	**08 10 22.6**	**+1.0**
MATE	**Matera**	**94.74**	**49**	⇑P	**P**	**08 10 21.5**	**-0.2**
MPLH	**Magyarpolny**	**94.75**	**43**	P	**P**	**08 10 22.3**	**+0.7**
OKC	**Ostrava-Krasne**	**94.87**	**40**	*e*P	**P**	**08 10 23.5**	**+1.4**
OKC				*e*SKS	**SKSac**	**08 20 56.3**	**+0.6**
OKC				AMS	AMS	08 49 30.0	
	comp=Z,16µm,22.5s						
TIP	**Timpagrande**	**94.90**	**51**	⇑P	**P**	**08 10 20.8**	**-1.8**
TIP	**Timpagrande**	**94.90**	**51**	IAmb	IAmb	08 10 22.5	
	comp=Z,154nm,1.8s						
TIP				IAMs_20	IAMs_20	08 53 25.9	
	comp=Z,22µm,21.0s						
ARA0	**ARCESS Array S**	**94.96**	**20**	*e*P	**P**	**08 10 22.3**	**+0.1**
ARA0				IVmB_BB		08 10 32.3	
	comp=Z,1µm,2.6s						
ARA0				*e*SKSac	**SKSac**	**08 20 54.1**	**-1.3**
ARA0				IVMs_BB	IVMs_BB	08 48 31.9	
	comp=Z,5µm,29.1s						
ARCES	**ARCESS Array B**	**94.96**	**20**	P	**P**	**08 10 21.4**	**-0.7**
	comp=Z,18nm,0.8s,baz=276,slow=3.5,SNR=18						
ARCES				PP	**PP**	**08 14 12.2**	**+1.0**
	comp=Z,5.0nm,0.7s,baz=289,slow=3.7,SNR=2.7						
ARCES				SKKPbc	SKKPbc	08 30 58.4	-0.2
	comp=Z,3.1nm,0.9s,baz=355,slow=8.8,SNR=3.6						
ARCES				LR	LR	08 51 25.1	
	comp=Z,10µm,19.7s,baz=276,slow=34						
	comp=Z,18nm,0.8s						
ARCES	**ARCESS Array B**	**94.96**	**20**	IAmb	IAmb	08 11 42.4	
	comp=Z,192nm,1.9s						
TIH	**Tihany**	**95.02**	**43**	P	**P**	**08 10 23.8**	**+1.0**
KOLL	**Kolacno**	**95.18**	**41**	*e*P	**P**	**08 10 24.9**	**+1.3**
SRO	**Srobarova**	**95.21**	**42**	*e*P	**P**	**08 10 25.1**	**+1.4**
SRO	**Srobarova**	**95.21**	**42**	*e*P	**P**	**08 10 25.1**	**+1.4**
CSKK	**Cskako**	**95.22**	**43**	P	**P**	**08 10 23.9**	**+0.2**
SBA	**Scott Base**	**95.23**	**191**	P	**P**	**08 10 23.6**	**+0.4**
SBA				IAmb	IAmb	08 11 04.7	
	comp=Z,115nm,1.9s						
SBA	**Scott Base**	**95.23**	**191**	P	**P**	**08 10 23.6**	**+0.4**
SBA				pmax	pmax		
	comp=Z,115nm,1.9s						
KOVH	**Kovagotottos**	**95.25**	**44**	P	**P**	**08 10 25.1**	**+1.2**
SRO2	**Moca**	**95.27**	**42**	*e*P	**P**	**08 10 24.4**	**+0.5**
SRO2	**Moca**	**95.27**	**42**	*e*P	**P**	**08 10 24.4**	**+0.5**
RAF	**Rauma**	**95.28**	**29**	*e*P	**P**	**08 10 23.4**	**-0.2**
STON	**Ston**	**95.28**	**47**	*e*P	**P**	**08 10 24.1**	**0.0**
VYHS	**Vyhne**	**95.48**	**41**	*e*P	**P**	**08 10 26.2**	**+1.3**
VYHS				pmax	pmax		
	comp=Z,153nm,1.9s						
VYHS	**Vyhne**	**95.48**	**41**	*e*P	**P**	**08 10 26.2**	**+1.3**
MORH	**Mrgy, Hungar**	**95.61**	**44**	*e*P	**P**	**08 10 26.5**	**+1.0**
MORH	**Mrgy, Hungar**	**95.61**	**44**	P	**P**	**08 10 26.1**	**+0.6**
BUD	**Budapest**	**95.72**	**42**	P	**P**	**08 10 26.5**	**+0.5**
LANS	**Liptovska Anna**	**95.81**	**41**	*e*P	**P**	**08 10 28.8**	**+2.3**
LANS				pmax	pmax		
	comp=Z,90nm,1.7s						
LANS	**Liptovska Anna**	**95.81**	**41**	*e*P	**P**	**08 10 28.8**	**+2.3**
OJC	**Ojcow**	**95.88**	**40**	*i* P	**P**	**08 10 27.5**	**+0.8**
OJC				*e*pP	**sP**	**08 10 40.9**	**+1.0**
OJC				*e*PP	**PP**	**08 14 14.3**	**-4.5**
OJC				*e*SKSac	**SKSac**	**08 21 02.8**	**+1.8**
OJC				*e*S	**ScS**	**08 21 46.4**	**+2.7**
OJC				*e*PS	PS	08 23 36.6	+31
OJC				*e*L	L	08 55 14.1	
	comp=Z,18µm,19.2s						
OJC	**Ojcow**	**95.88**	**40**	IAMs_20	IAMs_20	08 55 06.9	
	comp=Z,18µm,19.0s						

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BRY   Bratogost          95.89  47 eP       P        08 10 26.9 -0.2
HCY   Herceg Novi        95.91  47 eP       P        08 10 28.4 +1.4
UPM   Unac-Piva          96.13  47 eP       P        08 10 28.7 +0.4
SLIT  Slitere, Latvi     96.16  32 eP       P        08 10 25.9 -1.8
PSZ   Piszkesteto        96.25  42 ⇑P       P        08 10 29.8 +1.2
PSZ   Piszkesteto        96.25  42  IAMs_20 IAMs_20  08 51 07.3
      comp=Z,14µm,21.0s
PSZ   Piszkesteto        96.25  42 ⇑P       P        08 10 29.8 +1.2
PSZ   Piszkesteto        96.25  42  P       P        08 10 29.6 +1.0
PBUR  Paburge            96.25  34 eP       P        08 10 27.5 -0.7
BEL   Belsk              96.27  38 i P      P        08 10 29.3 +0.9
BEL                                epP      sP       08 10 42.5 +1.0
BEL                                ePP      PP       08 14 20.6 -1.2
BEL                                eSKSac   SKSac    08 21 04.2 +1.2
BEL                                ePS      PS       08 23 20.7  +11
BEL                                eL       L        08 48 55.6
      comp=Z,21µm,24.6s
NIE   Niedzica           96.31  40 i P      P        08 10 31.3 +2.5
NIE                                epP      sP       08 10 43.6 +1.7
NIE                                ePP      PP       08 14 18.7 -3.6
NIE                                eSKSac   SKSac    08 21 06.3 +2.8
NIE                                eS       ScS      08 21 49.8 +2.5
NIE                                eL       L        08 54 57.0
      comp=Z,15µm,21.0s
VNDA  Vanda              96.32 191  P       P        08 10 29.4 +1.3
      comp=Z,3.7nm,0.8s,baz=121,slow=3.7,SNR=16
VNDA                                PKKP    PKKPbc   08 27 12.9 -4.0
      comp=Z,1.7nm,0.8s,baz=321,slow=4.8,SNR=7.4
VNDA                                LR      LR       08 46 35.4
      comp=Z,10µm,19.7s,baz=122,slow=31
      comp=Z,3.7nm,0.8s
BBLS  Lazi&#263;i        96.42  46 eP       P        08 10 30.3 +0.9
TEKS  Tekeris            96.42  45 eP       P        08 10 28.6 -0.8
DRME  Dracevica, Mon     96.45  48 eP       P        08 10 30.3 +0.8
PDG   Podgorica          96.47  47 ⇑P       P        08 10 30.3 +0.7
PDG   Podgorica          96.47  47 eP       P        08 10 27.4 -2.2
FRGS  Fruska Gora        96.55  45 ⇑P       P        08 10 32.2 +2.3
FRGS  Fruska Gora        96.55  45 eP       P        08 10 30.7 +0.8
KECS  Kecovo             96.56  41 eP       P        08 10 31.1 +1.2
KECS  Kecovo             96.56  41 eP       P        08 10 31.1 +1.2
MEF   Metsahovi          96.71  29 eP       P        08 10 29.9 -0.4
MTSE  Matsula            96.74  31 eP       P        08 10 29.5 -0.8
DIVS  Divibare           96.81  46  IAmb    IAmb     08 10 33.3
      comp=Z,151nm,1.8s
DIVS                                IAMs_20 IAMs_20  08 50 20.3
      comp=Z,20µm,22.0s
DIVS  Divibare           96.81  46 eP       P        08 10 31.7 +0.5
VLO   Vlora              96.87  49  P       P        08 10 32.3 +0.9
SJES  Sjenica            96.90  46 eP       P        08 10 32.5 +0.8
TIR   Tirane             97.05  48  P       Pdif     08 10 33.3 +1.0
TIR   Tirane             97.05  48  IAMs_20 IAMs_20  08 51 47.7
      comp=Z,14µm,22.0s
CRVS  Cervenica-Dubn     97.14  41 eP       Pdif     08 10 34.1 +1.5
CRVS                               e                 08 21 05.2
CRVS                               eS       S        08 21 58.3 +4.4
CRVS                                pmax    pmax
      comp=Z,385nm,1.8s
CRVS  Cervenica-Dubn     97.14  41 eP       Pdif     08 10 34.1 +1.5
CRVS                               ePP      PP       08 14 29.9 +1.2
CRVS                               ePP      PP       08 14 34.0 +5.3
CRVS                               e                 08 21 05.2
CRVS                               eS       S        08 21 58.3 +4.4
CRVS                               eL       L        08 47 28.2
KEK   Kerkira            97.19  50  P       Pdif     08 10 33.1 +0.1
TSUM  Tsumeb             97.20 109 eP       P        08 10 32.9 -0.6
TSUM                                IAMs_20 IAMs_20  08 50 34.0
      comp=Z,735µm,20.5s
TSUM  Tsumeb             97.20 109  LR      LR       08 51 05.1
      comp=Z,89µm,20.7s,baz=267,slow=33
TSUM  Tsumeb             97.20 109  P       Pdif     08 10 33.8 +0.1
TSUM                                IAmb    IAmb     08 10 36.2
      comp=Z,66nm,1.2s
RAO   Raoul Island       97.22 241  LR      LR       08 44 18.4
      comp=Z,9µm,19.4s,baz=100,slow=29
RAO   Raoul Island       97.22 241  IAMs_20 IAMs_20  08 43 11.5
      comp=Z,14µm,22.0s
FINES FINESS Array B     97.22  28  P       P        08 10 31.8 -0.7
      comp=Z,15nm,0.8s,baz=299,slow=3.9,SNR=40
FINES                               PKKP    PKKPbc   08 27 12.0 -2.1
      comp=Z,4.6nm,0.8s,baz=98,slow=7.9,SNR=9.5
FINES                               LR      LR       08 51 44.3
      comp=Z,18µm,21.4s,baz=278,slow=34
      comp=Z,15nm,0.8s
SRN   Sarande            97.32  50  P       Pdif     08 10 34.0 +0.4
SUW   Suwalki            97.33  35 i P      P        08 10 32.7 -0.5
SUW                                eSKSac   SKSac    08 21 08.0 -0.4
SUW                                eL       L        08 51 16.0
      comp=Z,20µm,22.0s
SUW   Suwalki            97.33  35  IAMs_20 IAMs_20  08 51 17.5
      comp=Z,19µm,21.0s
SUW   Suwalki            97.33  35 eP       P        08 10 33.1  0.0
PHP   Peshkopia          97.44  48  P       Pdif     08 10 35.0 +0.9
PABE  Paberze            97.48  34  IAMs_20 IAMs_20  08 52 51.6
      comp=Z,22µm,21.0s
PABE  Paberze            97.48  34 eP       P        08 10 32.0 -1.8
IGT   Igoumenitsa        97.62  50  P       Pdif     08 10 35.0 +0.1
KOLS  Kolonicke sedl     97.67  41 eP       Pdif     08 10 36.2 +1.3
KOLS  Kolonicke sedl     97.67  41 eP       Pdif     08 10 36.2 +1.3
LTVH  Ltavrtes, Hu       97.67  42  P       Pdif     08 10 36.0 +1.1
SIRR  Siria              97.68  43 ⇑P       Pdif     08 10 36.6 +1.6
UZH   Uzhgorod           97.73  41 eP       P        08 10 35.0 -0.1
UZH                                i                 08 10 42.4
UZH                                i                 08 10 47.7
UZH                                e                 08 21 10.0
UZH                                i S      S        08 21 53.0 -5.9
UZH                                i SP     SP       08 23 26.4 +5.2
UZH                                 pmax    pmax
      comp=Z,6.0nm,1.1s
UZH                                 pmax    pmax
      comp=N,110nm,14.0s
UZH                                 pmax    pmax
      comp=E,170nm,14.0s
UZH                                 pmax    pmax
      comp=Z,300nm,14.0s
BZS   Buzias             97.75  44 ⇑P       Pdif     08 10 36.4 +1.1
BZS   Buzias             97.75  44 ⇑P       Pdif     08 10 36.4 +1.1
LSK   Leskovik           97.75  50  P       Pdif     08 10 35.9 +0.3
OHR   Ohrid              97.78  49 i P      Pdif     08 10 37.5 +1.9
OHR                                ePP      PP       08 14 29.7 -4.2
OHR                                i S      SKSac    08 21 13.4 +2.0
KEF3  Kipouria, Keph     97.79  51  P       P        08 10 35.0 -0.6
KWP   Kalwaria Pacla     97.83  40 i P      Pdif     08 10 37.2 +1.6
KWP                                ePP      PP       08 14 33.4 -0.5
KWP                                eSKSac   SKSac    08 21 12.1 +0.9
KWP                                eS       S        08 21 56.0 -3.8
KWP                                eL       L        08 55 46.5
      comp=Z,13µm,20.8s
KBN   Korca              97.83  49  P       Pdif     08 10 36.4 +0.5
KBN   Korca              97.83  49  IAmb    IAmb     08 11 16.2
      comp=Z,92nm,1.2s
KEF4  Livadi, Kephal     97.84  51  P       P        08 10 35.7 -0.1
CER   Ceres              97.90 123 eP       P        08 10 34.4 -1.9
CER                                 IAMs_20 IAMs_20  09 06 30.1
      comp=Z,567nm,3.8s
FSK   Fiskardo           97.92  51  P       Pdif     08 10 36.5 +0.2
MDVR  Moldovita          97.94  45 ⇑P       Pdif     08 10 36.9 +0.6
LKD2  Lefkada island     97.96  51  P       Pdif     08 10 36.7 +0.2
EVGI  Lefkada island     97.98  51  P       P        08 10 36.5  0.0
VLS   Valsamata          97.98  51  P       P        08 10 36.0 -0.5
PSDA  Pessada-Kefalo     97.98  52  P       P        08 10 35.9 -0.6
JAN   Janina             98.00  50  P       P        08 10 36.1 -0.5
NEST  Nestorio           98.06  49  P       Pdif     08 10 37.7 +0.7
BOVS  Bovan              98.10  46 ⇑P       Pdif     08 10 38.4 +1.5
SKO   Skopje             98.14  48 i P      Pdif     08 10 37.8 +0.6
SKO                                ePP      PP       08 14 34.7 -1.9
SKO                                i S      SKSac    08 21 13.9 +0.8
PENT  Pentalofos         98.15  49  P       Pdif     08 10 38.1 +0.7
FNA   Florina            98.25  49  P       Pdif     08 10 38.0 +0.2
FNA   Florina            98.25  49  IAmb    IAmb     08 10 39.4
      comp=Z,128nm,1.8s
VSU   Vasula             98.29  31 i P      P        08 10 37.0 -0.4
VSU                                 pmax    pmax
      comp=Z,126nm,1.6s
VSU                                 MLR     MLR
      comp=Z,22µm,18.0s
VSU   Vasula             98.29  31 eP       Pdif     08 10 38.1 +0.8
DRGR                     98.31  43 ⇑P       Pdif     08 10 38.6 +0.6
DRGR                     98.31  43 ⇑P       Pdif     08 10 38.6 +0.7
APA   Apatity            98.34  21⇓iP       Pdif     08 10 38.5 +1.1
APA                                i                 08 14 36.0
APA                                i                 08 21 09.0
APA                                i S      S        08 22 00.0 -3.2
APA                                i PS     PS       08 23 37.0 +5.7
APA                                i SS     SS       08 28 51.0 +4.2
APA                                 pmax    pmax
      comp=Z,8.0nm,1.0s
BILL  Bilibino           98.35 340  P       Pdif     08 10 37.7 +0.2
BILL  Bilibino           98.35 340c iP      P        08 10 37.1 -0.4
BILL                               e                 08 14 37.6
BILL                               ePPP     PPP      08 16 44.7
BILL                               i SS     SS       08 28 44.9 -2.1
BILL                                pmax    pmax
      comp=Z,38nm,1.5s
BILL                                MLR     MLR
      comp=Z,11µm,19.0s
KPRO  Kipourio           98.35  50  P       Pdif     08 10 38.9 +0.6
CVNA  Calvinia           98.45 122⇓eP       Pdif     08 10 39.6 +0.6
CVNA                                IAMs_20 IAMs_20  08 59 37.3
      comp=Z,457nm,15.6s
GZR   Gura Zlata         98.59  44 ⇑P       P        08 10 38.8 -0.4
GZR   Gura Zlata         98.59  44 ⇑P       P        08 10 38.8 -0.4
KZN   Kozani             98.62  49  P       Pdif     08 10 39.6 +0.2
LVV   L'vov              98.64  39 eP       P        08 10 38.3 -0.9
LVV                                e                 08 14 38.0
LVV                                eS       S        08 21 59.4 -7.2
LVZ   Lovozero           98.65  20  IAMs_20 IAMs_20  08 56 39.0
      comp=Z,14µm,20.0s
LVZ   Lovozero           98.65  20c iP      P        08 10 38.6 -0.3
LVZ                                 pmax    pmax
      comp=Z,55nm,1.4s
LVZ                                 MLR     MLR
      comp=Z,14µm,20.0s
RLS   Riolos of Patr     98.68  52  P       Pdif     08 10 40.1 +0.5
EVR   Evrytania          98.83  51  P       Pdif     08 10 41.5 +1.0
DRO   Drossia            98.89  52  P       Pdif     08 10 40.8 +0.2
THL   Klokotos Trika     98.90  50  P       P        08 10 40.5 -0.1
ANX   Ano Chora          98.96  51  P       Pdif     08 10 41.9 +0.9
EFP   Efpalio            98.97  51  P       Pdif     08 10 41.9 +1.0
GRG   Griva              99.00  49  P       Pdif     08 10 41.3 +0.2
PYL   PYLOS              99.05  53  P       Pdif     08 10 41.3  0.0
TYRN  Tyrnavos           99.05  50  P       Pdif     08 10 49.0 +7.7
LAKA  Lakka              99.06  51  P       Pdif     08 10 41.6 +0.2
MAKR  Makrakomi, Fth     99.07  51  P       Pdif     08 10 41.9 +0.5
VAY   Valandovo          99.07  48 i P      Pdif     08 10 42.0 +0.7
VAY                                ePP      PP       08 14 40.6 -3.0
VAY                                i S      SKSac    08 21 17.6 -0.2
ITM   Ithomi             99.16  52  P       Pdif     08 10 41.5 -0.3
ITM   Ithomi             99.16  52  IAmb    IAmb     08 14 43.3
      comp=Z,112nm,1.5s
AUGR  Augrabies          99.18 119 eP       Pdif     08 10 40.6 -1.5
AUGR                                IAMs_20 IAMs_20  08 53 29.4
      comp=Z,60µm,19.4s
NACGM Naroch             99.19  34⇓eP       Pdif     08 10 41.9 +0.4
      baz=284
LIT   Litokhoron         99.19  49  P       Pdif     08 10 41.4 -0.5
KLV   Kalavryta, Ach     99.22  51  P       Pdif     08 10 42.8 +0.7
AGG   Agios Georgios     99.22  50  P       Pdif     08 10 41.9 -0.2
AGG   Agios Georgios     99.22  50  IAmb    IAmb     08 10 43.7
      comp=Z,154nm,1.8s
SUR   Sutherland         99.26 123  LR      LR       08 51 35.2
      comp=Z,88µm,21.4s,baz=260,slow=33
KNT   Kendrikon          99.34  48  P       Pdif     08 10 42.5  0.0
VTS   Vitosha            99.36  47 ⇑P       Pdif     08 10 43.4 +0.6
VTS   Vitosha            99.36  47 ⇑P       Pdif     08 10 43.4 +0.6
VTS   Vitosha            99.36  47 i P      Pdif     08 10 43.4 +0.6
ARCR  ARCALIA            99.37  42 ⇑P       Pdif     08 10 44.8 +2.2
KKB   Krupnik            99.37  48 i P      Pdif     08 10 43.4 +0.7
THE   Thessaloniki       99.47  49  P       Pdif     08 10 43.5 +0.4
HORT  Hortiatis          99.58  49  P       Pdif     08 10 42.9 -0.8
MXZ   Matakaoa Point     99.61 232  IAMs_20 IAMs_20  08 56 08.9
      comp=Z,12µm,18.0s
THAL  Thalero            99.62  51  P       Pdif     08 10 43.2 -0.6
PUL   Pulkovo            99.70  29 i P      Pdif     08 10 42.7 -0.9
PUL                                 pmax    pmax
      comp=Z,60nm,0.6s
PUL                                 MLR     MLR
      comp=Z,11µm,22.0s
SOH   Sokhos             99.73  49  P       Pdif     08 10 44.6 +0.2
LKR   Lokris             99.79  51  P       Pdif     08 10 43.4 -1.2
ATAL  Atalanti           99.80  51  P       Pdif     08 10 43.9 -0.8
XOR   Xorichti           99.83  50  P       Pdif     08 10 44.7 -0.1
BURAR Bucovina Array     99.84  42 ⇑P       Pdif     08 10 46.9 +2.2
BURAR Bucovina Array     99.84  42 ⇑P       Pdif     08 10 46.9 +2.2
LTK   Loutraki           99.86  51  P       Pdif     08 10 39.8 -5.1
SRS   Serrai             99.86  48  P       Pdif     08 10 45.1 +0.2
PLG   Polygyros          99.87  49  P       Pdif     08 10 45.5 +0.5
MMB   Musomiste          99.89  48 i P      Pdif     08 10 45.6 +0.6
MNK   Minsk              99.91  34 i P      Pdif     08 10 41.7 -2.9
MNK                                i                 08 21 19.9
MNK                                i PS     PS       08 23 51.4 +2.7
MNK                                i SS     SS       08 29 07.3 -2.1
MNK                                i SSS    SSS      08 32 56.5
MNK                                 pmax    pmax
      comp=N,24nm,0.8s
MNK                                 pmax    pmax
      comp=E,5.0nm,0.8s
MNK                                 pmax    pmax
      comp=Z,17nm,0.8s
MNK                                 MLR     MLR
      comp=Z,27µm,23.0s
MNK                                 MLR     MLR
      comp=E,4µm,25.0s
MNK                                 MLR     MLR
      comp=N,5µm,24.0s
MNK   Minsk              99.91  34 i P      Pdif     08 10 41.8 -2.9
      comp=E,5.0nm,0.8s
MNK                                i P      Pdif     08 10 41.8 -2.9
      comp=N,24nm,0.8s
MNK                                i P      Pdif     08 10 41.8 -2.9
      comp=Z,17nm,0.8s,baz=285
MNK                                i PPP    PPP      08 16 52.7
MNK                                i S      SKSac    08 21 18.6 -2.7
MNK                                i PS     PS       08 23 51.5 +2.7
MNK                                i SS     SS       08 29 07.3 -2.1
MNK                                i SSS    SSS      08 32 56.6
MNK                                i LQ     LQ       08 48 60.0
MNK                                i LR     LR       08 51 59.1
MNK                                i LRM    MLR      08 54 37.7
      comp=Z,27µm,22.6s
MNK                                i LRM    MLR      08 54 42.8
      comp=E,4µm,25.1s
MNK                                i LRM    MLR      08 55 36.3
      comp=N,5µm,24.5s
VLI   Veliai            100.02  53  P       Pdif     08 10 45.7  0.0
NVR   Nevrokopi         100.03  48  P       Pdif     08 10 45.8 +0.2
EPID  Epidavros         100.04  52  P       Pdif     08 10 44.9 -0.8
PGB   Panagyurishte     100.05  47 i P      Pdif     08 10 46.1 +0.4
KRND  KRANIDI           100.09  52  P       Pdif     08 10 45.7 -0.3
VILL  Villia            100.11  51  P       Pdif     08 10 45.8 -0.3
PAIG  Paliouri          100.12  49  P       Pdif     08 10 46.2 +0.2
KTHR  Kythira           100.14  53  P       Pdif     08 10 46.5 +0.3
DID   Didima            100.14  52  P       Pdif     08 10 44.8 -1.4
VOIR                    100.15  44 ⇑P       Pdif     08 10 47.6 +1.5
VOIR                    100.15  44 ⇑P       Pdif     08 10 47.6 +1.5
KTHA  Kythira Island    100.18  53  P       Pdif     08 10 46.4  0.0
KOKK  Kokkinochori,     100.22  48  P       Pdif     08 10 46.3 -0.1
OUR   Ouranopolis       100.28  49  P       Pdif     08 10 47.1 +0.4
DOPR  Dopca             100.28  43 ⇑P       Pdif     08 10 47.6 +0.9
ATH   Athens Observa    100.45  51  P       Pdif     08 10 47.6 +0.1
URZ   Urewera           100.46 231  IAMs_20 IAMs_20  08 48 21.3
      comp=Z,12µm,20.0s
ATHU  Athens Univers    100.50  51  P       Pdif     08 10 47.3 -0.5
VLY   Voula,Athens      100.53  51  P       Pdif     08 10 47.5 -0.4
PTL   Penteli           100.56  51  P       Pdif     08 10 48.2 +0.2
BIZ   Bicaz             100.57  42 ⇑P       Pdif     08 10 48.9 +1.0
KAVA  Kavala            100.57  48  P       Pdif     08 10 47.2 -0.8
RZN   Rozhen            100.60  48 i P      Pdif     08 10 48.9 +0.5
DION  Dionisos Attik    100.60  51  P       Pdif     08 10 48.1 -0.2
KYMI  Kymi, Euboea I    100.65  51  P       Pdif     08 10 48.3 -0.1
MLR   Muntele Rosu      100.76  44 ⇑P       Pdif     08 10 51.1 +2.2
MLR   Muntele Rosu      100.76  44  IAMs_20 IAMs_20  08 57 26.7
      comp=Z,13µm,21.0s
MLR   Muntele Rosu      100.76  44 ⇑P       Pdif     08 10 51.1 +2.2
BFZ   Birch Farm        100.78 229  IAMs_20 IAMs_20  08 45 50.3
      comp=Z,14µm,21.0s
THAS  Thassos island    100.79  49  P       Pdif     08 10 49.5 +0.5
BKZ   Black Stump Fm    100.82 230  IAMs_20 IAMs_20  08 46 04.5
      comp=Z,20µm,22.0s
COVR  Voineasa-Covas    100.87  43 ⇑P       Pdif     08 10 53.0 +3.7
SKY   Skiros Island     100.95  50  P       Pdif     08 10 50.4 +0.6
TESR  Tescani           101.03  42 ⇑P       Pdif     08 10 51.1 +1.2
IMMV  Iera Moni Meta    101.04  54  P       Pdif     08 10 49.6 -0.6
KDZ   Kurdzhali         101.13  47 i P      Pdif     08 10 50.4 -0.1
SZH   Strazhica         101.19  46 i P      Pdif     08 10 51.5 +0.8
GVD   Gavdhos           101.21  54  P       Pdif     08 10 50.8 -0.2
GVDS  Gavdos            101.22  54  P       Pdif     08 10 49.8 -1.2
VRI   Vrincioaia        101.22  43 ⇑P       Pdif     08 10 52.9 +2.1
VRI   Vrincioaia        101.22  43 ⇑P       Pdif     08 10 52.9 +2.1
LIA   Limnos Island     101.27  49  P       Pdif     08 10 50.8 -0.3
RDO   Rodhopi           101.31  48  P       Pdif     08 10 51.2  0.0
SMTH  Samothraki Isl    101.42  49  P       Pdif     08 10 51.7 -0.1
PRNS  Prines Rethymn    101.47  54  P       Pdif     08 10 52.5 +0.4
AKASG Malin Array Be    101.69  38  P       Pdif     08 10 51.8 -0.9
      comp=Z,3.4nm,1.1s,baz=278,slow=4.2,SNR=14
AKASG                               PP      PP       08 14 57.5 -5.6
      comp=Z,0.2nm,0.3s,baz=294,slow=3.7,SNR=4.6
AKASG Malin Array Be    101.69  38 i P      Pdif     08 10 52.2 -0.5
AKASG                               pmax    pmax
      comp=Z,3.0nm,1.1s
ALN   Alexandroupoli    101.73  48  P       Pdif     08 10 52.8 -0.3
SORM  Soroca            101.78  41 ⇑P       Pdif     08 10 54.7 +1.5
SORM  Soroca            101.78  41 ⇑P       Pdif     08 10 54.7 +1.5
IDI   Anoyia            101.80  54  P       Pdif     08 10 53.5 -0.2
IDI   Anoyia            101.80  54  IAMs_20 IAMs_20  08 59 10.8
      comp=Z,22µm,22.0s
JMB   Yambol            101.82  46 i P      Pdif     08 10 53.9 +0.4
SNZO  South Karori      101.83 228  IAMs_20 IAMs_20  08 46 45.0
      comp=Z,19µm,21.0s
ENEZ  Enez              101.84  48  P       Pdif     08 10 53.8 +0.2
SIGR  SIGRI             101.90  50  P       Pdif     08 10 53.2 -0.7
EDRB  Edirne            102.06  47  P       Pdif     08 10 54.0 -0.6
CHOS  Chios island      102.20  51  P       Pdif     08 10 54.7 -0.7
PRK   Paraskevi         102.21  50  P       Pdif     08 10 56.2 +0.9
PRD   Provadia          102.26  46 i P      Pdif     08 10 56.3 +0.9
KIS   Kishinev          102.37  42⇑iP       Pdif     08 10 55.0 -0.8
      comp=Z,360nm,2.7s
KIS   Kishinev          102.37  42 ePP      PKiKP    08 15 08.0 -9.5
KIS                                eSKS              08 21 29.0
KIS                                eL       L        08 46 23.0
KIS                                 LQM              08 50 39.0
      comp=Z,4µm,26.5s
KIS                                 LRM     MLR      08 53 00.0
      comp=Z,4µm,23.0s
KIS   Kishinev          102.37  42c iP      Pdif     08 10 55.0 -0.8
KIS                                e                 08 15 08.0
KIS                                e                 08 21 29.0
KIS                                e                 08 22 40.0
KIS                                e                 08 24 19.0
KIS                                 pmax    pmax
      comp=Z,400nm,2.7s
MILM  Milestii Mici     102.38  42⇑iP       Pdif     08 10 56.0 +0.1
      comp=Z,1µm,2.6s
MILM                               eL       L        08 45 56.0
MILM                                LQM              08 50 30.0
      comp=Z,10µm,26.0s
MILM                                LRM     MLR      08 52 58.0
      comp=Z,9µm,23.5s
MILM  Milestii Mici     102.38  42c iP      Pdif     08 10 56.0 +0.1
MILM                                pmax    pmax
      comp=Z,1µm,2.6s
TPGR  Topolog           102.61  44 ⇑P       Pdif     08 10 58.2 +1.2
TIRR  Tirgusor          102.69  44 ⇑P       Pdif     08 10 58.5 +1.2
TIRR  Tirgusor          102.69  44 ⇑P       Pdif     08 10 58.5 +1.2
NNZ   Nelson            102.83 228  IAMs_20 IAMs_20  08 49 31.4
      comp=Z,13µm,20.0s
MQZ   McQueen’s Vall    102.86 225  IAMs_20 IAMs_20  08 50 52.0
      comp=Z,15µm,19.0s
SMG   Samos             102.93  51  P       Pdif     08 10 58.5 -0.1
BLCB  Balcova           102.96  50  P       Pdif     08 10 56.9 -1.8
OXZ   Oxford            103.38 225  IAMs_20 IAMs_20  08 47 02.8
      comp=Z,18µm,22.0s
BODT  Bodrum            103.42  52  P       Pdif     08 10 59.5 -1.3
HVD   Gariep Dam        103.44 121 eP       Pdif     08 11 01.3 +0.1
HVD                                 IAMs_20 IAMs_20  08 54 52.0
      comp=Z,171µm,19.2s
BOSA  Boshof            103.48 119 eP       Pdif     08 11 00.1 -1.3
BOSA                                IAML             08 57 46.7
      comp=Z,4.8nm,1.0s
BOSA  Boshof            103.48 119  Pdiff   Pdif     08 10 59.8 -1.6
      comp=Z,5.6nm,1.1s,baz=207,slow=2.3,SNR=2.3
BOSA                                PP      PP       08 15 13.4 -4.1
      comp=Z,16nm,1.0s,baz=264,slow=6.7,SNR=5.5
KLMR  Klimovskoe        103.53  26 eP       Pdif     08 10 58.5 -2.2
KLMR                               e                 08 15 14.9
KLMR                               e                 08 21 35.9
KLMR                               ePS      PS       08 24 26.7 -0.2
KLMR                               eSS      SS       08 30 02.8 +3.7
KLMR                                pmax    pmax
      comp=Z,14nm,1.0s
KLMR                                MLR     MLR
      comp=Z,15µm,19.0s
KLMR  Klimovskoe        103.53  26 ePdif    Pdif     08 10 58.5 -2.2
KLMR                                AMP              08 11 01.2
      comp=Z,14nm,1.0s
KLMR                               ePP      PP       08 15 15.0 -1.5
KLMR                               eSKSac   SKSac    08 21 36.0 -2.4
KLMR                               eSKSac   SKSac    08 21 36.0 -2.4
KLMR                               ePS      PS       08 24 26.8 -0.2
KLMR                               ePS      PS       08 24 26.8 -0.2
KLMR                               ePKKP    PKKPbc   08 26 55.0 -1.0
KLMR                               eSS      SS       08 30 02.9 +3.8
KLMR                               eSS      SS       08 30 02.9 +3.8
KLMR                                LQ      LQ       08 46 42.9
KLMR                                LQ      LQ       08 46 42.9
KLMR                                LR      LR       08 50 33.1
KLMR                                AMP              08 58 28.7
      comp=Z,15µm,19.4s
QRZ   Quartz Range      103.53 228  IAMs_20 IAMs_20  08 52 34.1
      comp=Z,15µm,18.0s
KARP  Karpathos         103.58  53  IAMs_20 IAMs_20  09 02 38.0
      comp=Z,14µm,21.0s
DAT   Datca             103.69  52  P       Pdif     08 11 01.0 -1.1
SWZ   Schweizer         103.72 118 eP       Pdif     08 11 01.9 -0.6
SWZ                                 IAmb    IAmb     08 11 38.5
      comp=Z,367nm,3.1s
ISK   Istanbul-Kandi    103.93  47  P       Pdif     08 11 02.5 -0.4
ODZ   Otahua Downs      103.97 224  IAMs_20 IAMs_20  08 49 21.2
      comp=Z,14µm,20.0s
YER   Yerkesik          104.17  52  P       Pdif     08 11 03.4 -0.8
KULA  Kula-Manisa       104.18  50  P       Pdif     08 11 03.4 -0.8
LBTB  Lobatse           104.20 116⇑iP       Pdif     08 11 04.9 +0.3
LBTB                                IAMs_20 IAMs_20  08 57 13.7
      comp=Z,72µm,18.9s
LBZ   Lake Benmore      104.45 224  IAMs_20 IAMs_20  08 47 26.8
      comp=Z,21µm,22.0s
OBN   Obninsk           104.48  32  IAMs_20 IAMs_20  08 55 50.4
      comp=Z,15µm,21.0s
OBN   Obninsk           104.48  32⇓iP       Pdif     08 11 04.7 -0.3
OBN                                e                 08 15 32.1
OBN                                ePPP     PPP      08 17 37.8
OBN                                i                 08 21 48.9
OBN                                 pmax    pmax
      comp=Z,18nm,1.4s
OBN                                 MLR     MLR
      comp=Z,16µm,21.0s
MOS   Moscow            104.79  31 i P      Pdif     08 11 04.3 -2.1
MOS                                ePPP     PPP      08 17 38.7
MOS                                e                 08 21 42.0
MOS                                eS                08 22 51.2
MOS                                ePS      PS       08 24 33.8 -6.5
MOS                                eSS      SS       08 30 15.6 -1.0
MOS                                eSSS     SSS      08 34 14.2
WKZ   Wanaka            105.14 223  IAMs_20 IAMs_20  08 52 19.2
      comp=Z,12µm,18.0s
KSR   Koster            105.27 117 eP       PKiKP    08 15 22.0 -1.6
KSR                                 IAMs_20 IAMs_20  08 57 41.7
      comp=Z,43µm,21.0s
MLZ   Mavora Lakes      105.62 223  IAMs_20 IAMs_20  08 49 33.6
      comp=Z,17µm,20.0s
TIXI  Tiksi             105.71 351  PP      PP       08 15 36.3 +4.0
      comp=Z,4.5nm,0.9s,baz=91,slow=23,SNR=3.8
TIXI  Tiksi             105.71 351 ⇑P       Pdif     08 11 09.6 -0.6
PRGR  Permogore         105.72  24 eP       Pdif     08 11 09.9 -0.5
PRGR                               e                 08 15 35.9
PRGR                               e                 08 30 38.1
SEY   Seymchan          105.87 338  PP      PP       08 15 34.8 +1.1
      baz=72,slow=13
DCZ   Deep Cove         106.24 222  IAMs_20 IAMs_20  08 50 46.1
      comp=Z,17µm,20.0s
SLR   Silverton         106.52 117 eP       Pdif     08 11 15.3 +0.3
SLR                                 IAMs_20 IAMs_20  08 59 59.6
      comp=Z,69µm,18.1s
KSTD  Kokstad           106.69 122 eP       Pdif     08 11 16.6 +0.9
KSTD                                IAMs_20 IAMs_20  08 58 02.1
      comp=Z,264µm,18.3s
TARA  Tarawa            107.17 272  IAMs_20 IAMs_20  08 51 41.4
      comp=Z,16µm,19.0s
VORR  Voronezh          107.28  35 eP       Pdif     08 11 20.6 +3.0
VORR                                pmax    pmax
      comp=Z,100nm,0.4s
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BLWY	**Bulawayo**	**107.49**	**111**⇑	*i*P	**Pdif**	**08 11 16.3**	**-3.1**
BLWY				IAMs_20	IAMs_20	08 59 07.5	
	comp=Z,291µm,19.3s						
BRTR	**Keskin Array B**	**107.65**	**48**	Pdiff	**Pdif**	**08 11 19.8**	**+0.1**
	comp=Z,1.7nm,1.1s,baz=265,slow=5.1,SNR=1.8						
BRTR				PP	**PP**	**08 15 47.4**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=292,slow=3.9,SNR=4.3						
BRTR				PKKPab	**PKKPab**	**08 26 57.9**	**+1.3**
	comp=Z,3.3nm,0.9s,baz=123,slow=4.6,SNR=6.5						
NWCL	**Newcastle**	**107.66**	**119**	*e*P	**Pdif**	**08 11 20.0**	**0.0**
PET	**Petropavlovsk**	**108.03**	**327**	*e*P	**Pdif**	**08 11 21.5**	**+0.7**
PET				*e*		08 15 54.0	
PET				*e*PS	**PS**	**08 25 14.1**	**+0.3**
PET				*e*PPS	PPS	08 26 15.4	
PET				*e*SS	SS	08 31 09.6	+8.9
PET				pmax	pmax		
	comp=Z,2µm,12.2s						
PET				pmax	pmax		
	comp=Z,1µm,11.2s						
CRLN	**Carolina, Mapu**	**108.04**	**117**	*e*P	**Pdif**	**08 11 19.4**	**-2.4**
CRLN				IAMs_20	IAMs_20	08 55 53.1	
	comp=Z,2µm,1.9s						
MAW	**Mawson**	**108.17**	**166**	PKKPbc	PKKPbc	08 26 39.2	-2.7
	comp=Z,2.3nm,0.8s,baz=300,slow=20,SNR=4.5						
ANN	**Anapa**	**108.76**	**42**	*i* P	**Pdif**	**08 11 21.5**	**-2.8**
ANN				pmax	pmax		
	comp=Z,1µm,9.8s						
KIRV	**Kirov**	**109.00**	**25**	PKKPbc	PKKPbc	08 26 38.8	-0.2
	comp=Z,9.1nm,0.5s,baz=58,slow=7.9,SNR=3.6						
POGA	**Pongola**	**109.31**	**119**	*e*P	**Pdif**	**08 11 25.1**	**-2.0**
POGA				IAMs_20	IAMs_20	09 00 17.6	
	comp=Z,198µm,18.5s						
NRIK	**Noril'sk**	**109.85**	**5**	PP	**PP**	**08 15 58.0**	**-4.6**
	comp=Z,1.5nm,0.3s,baz=0.4,slow=7.7,SNR=7.1						
NRIK				PKKPbc	**PKKPbc**	**08 26 36.0**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=164,slow=11,SNR=1.3						
MBAR	**Mbarara**	**110.63**	**90**⇑	*e*P	**Pdif**	**08 11 35.7**	**+2.2**
MBAR				*e*S		08 22 18.9	
MBAR	**Mbarara**	**110.63**	**90**	*e*P	**Pdif**	**08 11 29.7**	**-3.8**
MBAR				*e*S		08 15 59.7	
MBAR				IAMs_20	IAMs_20	08 25 53.4	
	comp=Z,6µm,16.2s						
SOC	**Sochi**	**110.73**	**42**	*i* PKIKP	**PKiKP**	**08 15 30.8**	**-2.3**
SOC				*e*PPP	PPP	08 18 27.7	
SOC				*e*		08 22 07.7	
SOC				*e*PS	**PS**	**08 25 40.9**	**-0.1**
SOC				*e*SS	SS	08 31 40.3	+2.5
SOC				*e*SSS	SSS	08 35 43.5	
SOC				pmax	pmax		
	comp=Z,11nm,0.6s						
SOC				MLR	MLR		
	comp=Z,3µm,14.0s						
MMAI	**Mount Meron Ar**	**110.79**	**54**	PP	**PP**	**08 16 09.7**	**-1.2**
	comp=Z,3.1nm,0.3s,baz=9.8,slow=9.4,SNR=3.5						
EIL	**Elat**	**111.22**	**58**	PP	**PP**	**08 16 17.2**	**+3.2**
	comp=Z,5.6nm,0.8s,baz=204,slow=6.1,SNR=3.7						
BELG	**Belogornoye**	**111.55**	**32**	PP	**PP**	**08 16 16.6**	**+1.2**
	comp=Z,13nm,1.0s,baz=253,slow=11,SNR=3.6						
BELG				PKKPab	**PKKPab**	**08 26 40.7**	**+1.8**
	comp=Z,20nm,0.7s,baz=144,slow=8.7,SNR=5.0						
WAKE	**Wake Island**	**111.94**	**291**	IAMs_20	IAMs_20	08 56 04.0	
	comp=Z,10µm,19.0s						
DZM	**Mont Dzumac**	**112.03**	**246**	*e*LR	LR	08 49 06.5	
	comp=Z,19µm,27.5s						
KWAJ	**Kwajalein Atol**	**112.16**	**280**	IAMs_20	IAMs_20	09 04 18.3	
	comp=Z,11µm,18.0s						
ASF	**Jabal al Asfar**	**112.23**	**55**	PP	**PP**	**08 16 20.9**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=272,slow=4.1,SNR=4.1						
KIV	**Kislovodsk**	**112.57**	**41**	*e*P	**Pdif**	**08 11 42.3**	**+0.9**
KIV				*i*		08 15 37.5	
KIV				*e*		08 16 23.0	
KIV				*e*		08 22 18.5	
KIV				*e*PS	**PS**	**08 25 58.4**	**+0.3**
KIV				*e*SS	SS	08 32 03.6	+1.2
KIV				*e*SSS	SSS	08 36 11.3	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,6µm,21.0s						
KBZ	**Khabaz**	**112.80**	**41**	PKiKP	**PKiKP**	**08 15 35.0**	**-1.9**
	comp=Z,4.8nm,0.8s,baz=225,slow=2.9,SNR=3.0						
KBZ				PP	**PP**	**08 16 25.4**	**+0.8**
	comp=Z,5.0nm,0.9s,baz=301,slow=10,SNR=7.6						
KBZ				PKKPbc	**PKKPbc**	**08 26 25.8**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=238,slow=4.5,SNR=6.0						
YAK	**Yakutsk**	**113.80**	**345**	PP	**PP**	**08 16 30.9**	**0.0**
	comp=Z,8.7nm,0.3s,baz=98,slow=1.0,SNR=1.6						
ZEI	**Tsey**	**113.86**	**42**	*i* PKIKP	**PKiKP**	**08 15 44.8**	**+5.4**
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARU	**Arti**	**114.18**	**24**	PP	**PP**	**08 16 29.8**	**-4.1**
	comp=Z,4.2nm,0.2s,baz=289,slow=5.7,SNR=3.7						
ARU	**Arti**	**114.18**	**24**	*i* PKIKP	**PKiKP**	**08 15 36.5**	**-2.8**
ARU						08 16 32.1	
ARU						08 22 23.0	
ARU				SP	SP	08 26 03.5	-4.0
LODK	**Lodwar**	**115.17**	**86**	*e*P	**Pdif**	**08 12 05.6**	**+12**
LODK				*e*S		08 22 49.5	
LODK				IAMs_20	IAMs_20	08 22 54.5	
	comp=E,3µm,30.2s						
LODK	**Lodwar**	**115.17**	**86**	*e*P	**PKPdf**	**08 15 38.6**	**-3.9**
LODK				*e*S		08 26 21.4	
LODK	**Lodwar**	**115.17**	**86**	*e*P	PKPdf	08 15 32.8	-10
LODK				*e*S		08 26 26.1	
LODK	**Lodwar**	**115.17**	**86**	*e*P	**Pdif**	**08 11 53.6**	**+0.1**
LODK				*e*S		08 16 33.6	
LODK				IAMs_20	IAMs_20	08 26 50.7	
	comp=N,3µm,29.8s						
GNI	**Garni**	**115.52**	**44**	PP	PP	08 16 44.3	0.0
	comp=N,5.5nm,0.4s,baz=359,slow=8.0,SNR=5.0						
MAK	**Makhachkala**	**116.16**	**41**	*e*P	**Pdif**	**08 11 58.6**	**+1.4**
MAK				*i*		08 15 44.4	
MAK				*e*		08 16 47.5	
MAK				*e*PPP	PPP	08 19 16.3	
MAK				*e*		08 22 32.9	
MAK				*e*PS	**PS**	**08 26 31.6**	**+0.9**
MAK				*e*SS	SS	08 32 50.3	+1.0
MAK				*e*SSS	SSS	08 37 09.9	
MAK				pmax	pmax		
	comp=Z,59nm,0.5s						
NKL	**Nikolayevsk**	**116.85**	**334**	*e*P	**Pdif**	**08 12 02.9**	**+2.8**
NKL				*e*		08 16 50.1	
NKL				*e*PPP	PPP	08 19 21.2	
NKL				*e*SS	SS	08 33 04.6	+7.1
KMBO	**Kilima Mbogo**	**117.14**	**91**	PKP	**PKPdf**	**08 15 46.5**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=290,slow=1.5,SNR=7.0						
KMBO				PP	**PP**	**08 16 56.2**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=262,slow=6.0,SNR=4.3						
KMBO	**Kilima Mbogo**	**117.14**	**91**	PKPdf	**PKPdf**	**08 15 46.0**	**-0.5**
KMBO	**Kilima Mbogo**	**117.14**	**91**	PKIKP	**PKPdf**	**08 15 46.0**	**-0.5**
KMBO				MLR	MLR		
	comp=Z,52µm,20.0s						
KMBO	**Kilima Mbogo**	**117.14**	**91**⇓	*e*P	**Pdif**	**08 12 15.6**	**+13**
KMBO	**Kilima Mbogo**	**117.14**	**91**	*e*P	**PKPdf**	**08 15 42.5**	**-4.1**
KMBO				*e*S		08 26 42.7	
KMBO	**Kilima Mbogo**	**117.14**	**91**	*e*P	PKPdf	08 15 34.0	-13
KMBO				IAMs		08 21 31.7	
	comp=Z,5µm,71.7s						
KMBO				*e*S		08 26 33.8	
KMBO	**Kilima Mbogo**	**117.14**	**91**	*e*P	**Pdif**	**08 12 15.0**	**+12**
AKTO	**Aktyubinsk**	**117.96**	**29**	PKP	**PKiKP**	**08 15 46.8**	**0.0**
	comp=Z,2.0nm,0.7s,baz=282,slow=1.0,SNR=3.9						
AKTO				PP	**PP**	**08 16 58.9**	**-1.7**
	comp=Z,9.6nm,1.1s,baz=317,slow=5.5,SNR=7.2						
AKTO				PKKPbc	**PKKPbc**	**08 26 07.3**	**-1.2**
	comp=Z,9.4nm,0.9s,baz=110,slow=4.9,SNR=6.2						
AKTO	**Aktyubinsk**	**117.96**	**29**	PKIKP	**PKPdf**	**08 15 46.6**	**-0.2**
KUR	**Kuril'sk**	**118.03**	**324**	*i* P	**Pdif**	**08 12 09.8**	**+4.3**
KUR				*e*		08 15 47.6	
KUR				*e*		08 17 06.8	
KUR				*e*PPP	PPP	08 19 36.8	
KUR				*e*		08 26 40.8	
KUR				*e*PS	**PS**	**08 26 52.2**	**+4.7**
KUR				*e*SS	SS	08 33 19.4	+6.0
KUR				pmax	pmax		
	comp=Z,1µm,9.7s						
FURI	**Furi**	**118.12**	**80**⇓	*e*P	**Pdif**	**08 12 17.6**	**+11**
FURI				*e*S		08 22 53.5	
FURI				IAMs_20	IAMs_20	08 24 11.8	
	comp=Z,920nm,31.2s						
FURI	**Furi**	**118.12**	**80**	*e*P	**PKPdf**	**08 15 48.5**	**0.0**
FURI				*e*S		08 26 56.0	
FURI	**Furi**	**118.12**	**80**	*e*P	PKPdf	08 15 37.5	-11
FURI				IAMs		08 19 44.0	
	comp=Z,2µm,8.0s						
FURI				IAMs		08 24 11.6	
	comp=Z,920nm,31.2s						
FURI	**Furi**	**118.12**	**80**	*e*P	**Pdif**	**08 12 03.0**	**-4.0**
FURI				*e*S		08 16 52.2	
FURI				IAMs_20	IAMs_20	08 29 05.6	
	comp=Z,2µm,12.5s						
AAE	**Adis Abeba**	**118.19**	**80**⇑	*e*P	**Pdif**	**08 12 19.6**	**+12**
AAE				IVMs_BB	IVMs_BB	08 17 16.4	
AAE				IAMs_20	IAMs_20	08 23 07.5	
	comp=N,5µm,27.8s						
AAE				IAMs_20	IAMs_20	08 24 19.3	
	comp=E,2µm,22.8s						
AAE	**Adis Abeba**	**118.19**	**80**	*e*P	**Pdif**	**08 12 01.6**	**-5.7**
AAE				*e*S		08 16 56.2	
AAE				IAMs_20	IAMs_20	08 29 05.2	
	comp=E,9µm,22.0s						
AB31	**Akbulak array**	**119.68**	**29**	*i* PKIKP	**PKPdf**	**08 15 49.9**	**-0.2**
HNR	**Honiara**	**119.80**	**259**	IAMs_20	IAMs_20	08 55 25.6	
	comp=Z,14µm,22.0s						
YUK	**Yuzh-Kuril'sk**	**119.88**	**323**	*i* PKIKP	**PKiKP**	**08 15 51.3**	**+0.6**
YUK				*i*		08 17 15.9	
YUK				*e*PPP	PPP	08 19 48.2	
YUK				*e*SS	SS	08 33 41.4	+4.0
YUK				*e*SSS	SSS	08 38 06.3	
YUK				pmax	pmax		
	comp=N,3µm,20.0s						
YUK				pmax	pmax		
	comp=E,7µm,19.0s						
YSS	**Yuzh-Sakhalins**	**119.91**	**328**	IAMs_20	IAMs_20	09 16 48.5	
	comp=Z,15µm,20.0s						
TAU	**Tasmania Unive**	**120.27**	**219**	IAMs_20	IAMs_20	08 57 55.8	
	comp=Z,12µm,20.0s						
GRNR	**Gornyy**	**120.40**	**334**	*e*PKIKP	**PKPdf**	**08 15 46.0**	**-5.5**
BOD	**Bodaibo**	**120.89**	**351**	*e*PKIKP	**PKPdf**	**08 15 50.7**	**-1.4**
BOD				pmax	pmax		
	comp=Z,68nm,2.0s						
BRVK	**Borovoye**	**121.18**	**21**	PKPdf	**PKiKP**	**08 15 53.2**	**+0.2**
BRVK	**Borovoye**	**121.18**	**21**	IAMs_20	IAMs_20	09 15 15.7	
	comp=Z,12µm,19.0s						
BRVK	**Borovoye**	**121.18**	**21**	*i* PKIKP	**PKPdf**	**08 15 52.8**	**-0.1**
ZEA	**Zeya**	**121.52**	**341**	*e*PKIKP	**PKPdf**	**08 15 53.5**	**0.0**
ZEA				*e*		08 17 22.3	
ZEA				*e*		08 27 24.1	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=E,500nm,14.2s						
ZEA				pmax	pmax		
	comp=N,400nm,14.4s						
ZEA				pmax	pmax		
	comp=Z,2µm,12.9s						
ASAJ	**Asahikawa**	**121.74**	**325**	PKP	**PKPdf**	**08 15 53.8**	**-0.4**
ASAJ				PP	**PP**	**08 17 23.9**	**-2.8**
	comp=Z,2.0nm,0.4s,baz=106,slow=9.0,SNR=0.8						
ATD	**Arta Tunnel**	**121.90**	**76**⇑	*e*P	**Pdif**	**08 12 31.5**	**+8.1**
ATD				*e*S		08 23 13.4	
ATD	**Arta Tunnel**	**121.90**	**76**	*e*P	**PKPdf**	**08 15 48.9**	**-6.5**
ATD				*e*S		08 26 56.0	
ATD	**Arta Tunnel**	**121.90**	**76**	*e*P	PKPdf	08 15 45.8	-10
ATD				IAMs		08 23 18.3	
	comp=N,6µm,5.6s						
ATD				*e*S		08 26 50.7	
ATD	**Arta Tunnel**	**121.90**	**76**	*e*P	**Pdif**	**08 12 25.9**	**+2.4**
ATD				*e*S		08 17 33.6	
ATD				IAMs_20	IAMs_20	08 29 10.7	
	comp=E,42µm,0.2s						
RAYN	**Ar Rayn**	**121.92**	**62**		**PKiKP**	**08 15 55.8**	**+0.5**
RAYN	**Ar Rayn**	**121.92**	**62**	PKIKP	**PKiKP**	**08 15 55.8**	**+0.5**
RAYN				MLR	MLR		
	comp=Z,38µm,21.0s						
ERM	**Erimo**	**122.67**	**323**	IAMs_20	IAMs_20	09 14 14.3	
	comp=Z,11µm,22.0s						
CAN	**Canberra**	**122.81**	**227**	IAMs_20	IAMs_20	08 57 19.5	
	comp=Z,13µm,22.0s						
KLR	**Kul'dur**	**123.55**	**336**	PP	PP	08 17 37.4	-1.2
	comp=Z,4.4nm,1.0s,baz=45,slow=5.7,SNR=1.6						
KLR	**Kul'dur**	**123.55**	**336**	*i* PKIKP	**PKPdf**	**08 15 55.6**	**-1.9**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VOI	**Vohitsoka**	**123.88**	**116**	PKPdf	**PKPdf**	**08 15 56.1**	**-3.0**
VOI	**Vohitsoka**	**123.88**	**116**	PKP	**PKiKP**	**08 16 02.2**	**+2.9**
ZALV	**Zalesovo Beam**	**124.35**	**11**	PKhKP	PKPpre	08 15 48.4	
	comp=Z,2.1nm,0.3s,baz=97,slow=13,SNR=9.7						
ZALV				PKP	**PKPdf**	**08 15 58.3**	**-0.6**
	comp=Z,52nm,1.0s,baz=330,slow=2.1,SNR=40						
ZALV				PP	**PP**	**08 17 40.3**	**-3.3**
	comp=Z,0.9nm,0.3s,baz=323,slow=2.2,SNR=0.9						
TEY	**Ternei**	**124.39**	**329***c*	*e*PKIKP	**PKPdf**	**08 15 55.7**	**-3.5**
TEY				pmax	pmax		
	comp=Z,30nm,15.1s						
BRZS	**Berezniki**	**124.57**	**21**	*i* PKIKP	**PKPdf**	**08 15 58.3**	**-1.2**
BRZS	**Berezniki**	**124.57**	**21**	*e*PKiKP	**PKPdf**	**08 15 58.3**	**-1.2**
	baz=21						
ABPO	**Ambohimpanom**	**124.98**	**113**	PKPdf	**PKiKP**	**08 16 02.6**	**+0.9**
ABPO	**Ambohimpanom**	**124.98**	**113**	PKIKP	**PKiKP**	**08 16 02.6**	**+0.9**
ABPO				MLR	MLR		
	comp=Z,69µm,19.0s						
OPO	**Ambohidratompo**	**125.04**	**112**	PKP	**PKPdf**	**08 16 01.5**	**+0.1**
	comp=Z,13nm,0.9s,baz=266,slow=2.5,SNR=8.4						
GEYT	**Alibeck**	**125.68**	**41**	PKP	**PKPdf**	**08 16 01.6**	**-0.4**
	comp=Z,16nm,0.8s,baz=20,slow=6.6,SNR=17						
GEYT				PP	**PP**	**08 17 53.6**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=58,slow=15,SNR=1.3						
GYA0	**ALIBECK ARRAY**	**125.68**	**41**	PKIKP	**PKPdf**	**08 16 01.7**	**-0.3**
KURK	**Kurchatov**	**125.86**	**17**	PKPdf	**PKPdf**	**08 16 01.6**	**-0.3**
KURK	**Kurchatov**	**125.86**	**17**	PKIKP	**PKPdf**	**08 16 01.6**	**-0.3**
KURK	**Kurchatov**	**125.86**	**17**	P	**PKiKP**	**08 16 02.4**	**+0.1**
SHMA	**Al-Shehemyia**	**125.89**	**57**	P	**PKPdf**	**08 16 02.2**	**-0.4**
KURBB	**Kurchatov Arra**	**125.92**	**17**	PKP	**PKPdf**	**08 16 02.1**	**+0.1**
	comp=Z,37nm,0.8s,baz=325,slow=2.5,SNR=62						
KURBB				PP	**PP**	**08 17 52.1**	**-2.1**
	comp=Z,4.6nm,0.9s,baz=347,slow=3.9,SNR=4.2						
KURBB	**Kurchatov Arra**	**125.92**	**17**	PKIKP	**PKPdf**	**08 16 01.0**	**-1.0**
TRNA	**Turayna**	**126.49**	**58**	P	**PKPdf**	**08 16 03.3**	**-0.6**
SEM	**Semipalatinsk**	**126.60**	**16***c*	*i*PKIKP	**PKPdf**	**08 16 02.7**	**-0.9**
SEM	**Semipalatinsk**	**126.60**	**16**⇑	*e*PKiKP	**PKPdf**	**08 16 02.8**	**-0.9**
	baz=16						
SEM				LR	LR	09 11 08.3	
	comp=Z,4µm,18.5s,baz=16						
USRK	**Ussuriysk Ar.**	**127.28**	**331**	PKP	**PKPdf**	**08 16 04.6**	**-0.2**
	comp=Z,19nm,0.8s,baz=31,slow=1.1,SNR=21						
IRK	**Irkutsk**	**127.41**	**357**	*e*PKIKP	**PKPdf**	**08 16 03.5**	**-1.4**
IRK				pmax	pmax		
	comp=Z,144nm,1.6s						
JRN	**Qarnain Island**	**127.81**	**58**	P	**PKiKP**	**08 16 06.7**	**-0.3**
	SNR=10						
MDJ	**Mudanjiang**	**128.07**	**333**	PKP	**PKPdf**	**08 16 05.0**	**-1.3**
MDJ				PP	**PP**	**08 18 09.4**	**+0.7**
MDJ				SS	SS	08 35 24.3	+4.1
MDJ				AMB	AMB		
	comp=Z,3µm,12.3s						
MDJ				LR	LR		
	comp=Z,7µm,22.6s						
MDJ				LR	LR		
	comp=Z,5µm,18.3s						
MOY	**Mondy**	**128.10**	**359**	*e*PKIKP	**PKPdf**	**08 16 05.8**	**-0.5**
MOY				pmax	pmax		
	comp=Z,100nm,3.1s						
BNX	**BinXian**	**128.11**	**336** ⇓	PKP	**PKPdf**	**08 16 05.3**	**-1.1**
BNX				sPKP		08 16 20.9	
BNX				PP	**PP**	**08 18 10.1**	**+1.2**
BNX				AMB	AMB		
	comp=Z,2µm,12.8s						
BNX				LR	LR		
	comp=Z,6µm,12.0s						
BNX				LR	LR		
	comp=Z,4µm,10.9s						
BNX				LR	LR		
	comp=Z,6µm,17.8s						
MSHR	**Mys Shultsa**	**128.89**	**331**	*i* PKIKP	**PKPdf**	**08 16 07.9**	**0.0**
MSHR				pmax	pmax		
	comp=Z,20nm,1.2s						
MJAR	**Matsushiro Arr**	**129.01**	**320**	PKP	**PKPdf**	**08 16 07.4**	**-1.0**
	comp=Z,15nm,0.9s,baz=86,slow=1.5,SNR=23						
MAJO	**Matsushiro**	**129.01**	**320**	PKPdf	**PKPdf**	**08 16 07.7**	**-0.7**
MAJO	**Matsushiro**	**129.01**	**320**	PKIKP	**PKPdf**	**08 16 07.7**	**-0.7**
MZR	**Muzera**	**129.04**	**60**	P	**PKiKP**	**08 16 09.3**	**-0.1**
	SNR=20						
MZR	**Muzera**	**129.04**	**60**	*i* PKiKP	**PKiKP**	**08 16 10.1**	**+0.6**
	SNR=16						
BTLS	**Baital**	**129.18**	**24***c*	*i*PKIKP	**PKPdf**	**08 16 08.4**	**0.0**
BTLS	**Baital**	**129.18**	**24**⇑	*i*PKiKP	**PKPdf**	**08 16 08.5**	**0.0**
	baz=24						
KK31	**Karatay Array**	**129.19**	**28**	*i* PKIKP	**PKPdf**	**08 16 08.7**	**+0.2**
ZAK	**Zakamensk**	**129.32**	**357**	*e*PKIKP	**PKPdf**	**08 16 04.9**	**-3.8**
ZAK				pmax	pmax		
	comp=Z,42nm,1.4s						
CHM	**Chimkent**	**129.35**	**29**	PKIKP	**PKiKP**	**08 16 12.0**	**+2.4**
IUG	**Iuzhnay**	**129.69**	**29***c*	*i*PKIKP	**PKPdf**	**08 16 09.6**	**0.0**
IUG	**Iuzhnay**	**129.69**	**29**⇑	*i*PKiKP	**PKPdf**	**08 16 09.7**	**0.0**
	baz=29						
DZA	**Taraz**	**129.73**	**27**	*i* PKIKP	**PKPdf**	**08 16 09.7**	**+0.1**
DZA	**Taraz**	**129.73**	**27**	*i* PKiKP	**PKPdf**	**08 16 09.8**	**+0.1**
	baz=28						
AJN	**Ajban**	**129.75**	**57**	P	**PKPdf**	**08 16 10.3**	**+0.2**
	SNR=11						
AJN	**Ajban**	**129.75**	**57**	*i* PKiKP	**PKiKP**	**08 16 11.3**	**+0.4**
	SNR=18						
STKA	**Stephens Creek**	**129.88**	**227**	PKP	**PKPdf**	**08 16 10.2**	**+0.1**
	comp=Z,23nm,0.9s,baz=105,slow=2.6,SNR=22						
UMQ	**Umm Al-Quwin**	**129.93**	**56**	*i* PKiKP	**PKiKP**	**08 16 12.2**	**+1.0**
	SNR=6.0						
ASUD	**Al Ashush, Dub**	**130.01**	**57**	P	**PKPdf**	**08 16 10.8**	**+0.2**
	SNR=16						
ASUD	**Al Ashush, Dub**	**130.01**	**57**	*i* PKiKP	**PKiKP**	**08 16 12.0**	**+0.6**
	SNR=21						
SHME	**Shamm**	**130.11**	**55**	P	**PKPdf**	**08 16 10.8**	**+0.1**
	SNR=6.7						
SHME	**Shamm**	**130.11**	**55**	*i* PKPdf	**PKPdf**	**08 16 09.5**	**-1.2**
	SNR=16						
JGF	**Kuroka**	**130.13**	**320**	PKPdf	**PKPdf**	**08 16 10.5**	**-0.1**
NAZ	**Nazwa, Dubai**	**130.14**	**56**	P	**PKPdf**	**08 16 10.9**	**+0.1**
	SNR=11						
NAZ	**Nazwa, Dubai**	**130.14**	**56**	*i* PKiKP	**PKiKP**	**08 16 12.0**	**+0.3**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**130.18**	**57**	P	**PKPdf**	**08 16 11.1**	**+0.2**
	SNR=15						
FAQ	**Al Faqa, Dubai**	**130.18**	**57**	*i* PKiKP	**PKPdf**	**08 16 10.8**	**-0.1**
	SNR=17						
BANOM	**Banah**	**130.29**	**55**	P	**PKPdf**	**08 16 11.0**	**-0.1**
	SNR=5.1						
BANOM	**Banah**	**130.29**	**55**	*i* PKiKP	**PKiKP**	**08 16 12.1**	**+0.1**
	SNR=10						
MAKZ	**Makanchi**	**130.35**	**16**		**PKPdf**	**08 16 08.7**	**-1.9**
MAKZ	**Makanchi**	**130.35**	**16**	PKIKP	**PKPdf**	**08 16 09.2**	**-1.4**
MASF	**Masafi**	**130.40**	**56**	P	**PKPdf**	**08 16 11.4**	**0.0**
	SNR=23						
MSFE	**Esma-Masafi**	**130.41**	**56**	*i* PKiKP	**PKiKP**	**08 16 11.8**	**-0.4**
	SNR=15						
MK31	**Makanchi Array**	**130.45**	**16**	*i* PKIKP	**PKPdf**	**08 16 09.5**	**-1.3**
MKAR	**Makanchi Array**	**130.45**	**16**	PKP	**PKPdf**	**08 16 10.6**	**-0.2**
	comp=Z,28nm,0.8s,baz=338,slow=1.7,SNR=57						
MKAR				PP	**PP**	**08 18 21.4**	**-2.7**
	comp=Z,4.8nm,0.9s,baz=347,slow=5.9,SNR=2.0						
CN2	**Changchun**	**130.49**	**336**	PKP	**PKPdf**	**08 16 09.3**	**-1.7**
CN2				PP	**PP**	**08 18 24.3**	**-0.2**
CN2				SKKS		08 25 15.3	
CN2				AMB	AMB		
	comp=Z,700nm,6.0s						
CN2				LR	LR		
	comp=Z,17µm,19.0s						
CN2				LR	LR		
	comp=Z,5µm,19.0s						
CN2				LR	LR		
	comp=Z,13µm,23.0s						
ZSN	**Zaisan**	**130.50**	**14***c*	*i*PKIKP	**PKPdf**	**08 16 10.7**	**-0.2**
ZSN	**Zaisan**	**130.50**	**14**⇑	*i*PKiKP	**PKPdf**	**08 16 10.7**	**-0.2**
	baz=14						
INU	**Inuyama**	**130.50**	**320**	IAMs_20	IAMs_20	09 18 17.9	
	comp=Z,8µm,21.0s						
ALNE	**Al Ain**	**130.59**	**57**	P	**PKPdf**	**08 16 11.9**	**+0.2**
	SNR=22						
ALNE	**Al Ain**	**130.59**	**57**	*i* PKiKP	**PKPdf**	**08 16 11.8**	**+0.2**
	SNR=18						
ASHO	**Ashiyiah**	**130.60**	**56**	P	**PKPdf**	**08 16 11.5**	**-0.2**
	SNR=15						
ASHO	**Ashiyiah**	**130.60**	**56**	*i* PKiKP	**PKPdf**	**08 16 11.4**	**-0.4**
	SNR=16						
HATD	**Hatta, Dubai**	**130.60**	**56**	P	**PKPdf**	**08 16 11.7**	**-0.1**
	SNR=22						
HATD	**Hatta, Dubai**	**130.60**	**56**	*i* PKPdf	**PKPdf**	**08 16 11.2**	**-0.5**
	SNR=15						
UOSS	**Minazif**	**130.61**	**56**	PKPdf	**PKPdf**	**08 16 11.5**	**-0.2**
UOSS	**Minazif**	**130.61**	**56**	*i* PKPdf	**PKPdf**	**08 16 11.1**	**-0.7**
	SNR=10						
ABTO	**Aybut**	**130.65**	**67**	P	**PKPdf**	**08 16 12.0**	**0.0**
	SNR=6.0						
SGDS	**Sogindy**	**130.72**	**24**	*i* PKIKP	**PKPdf**	**08 16 11.6**	**+0.1**
SGDS				*i*		08 18 24.9	
SGDS	**Sogindy**	**130.72**	**24**	*i* PKiKP	**PKPdf**	**08 16 11.7**	**+0.1**
	baz=24						
SGDS				*i* PP	**PP**	**08 18 24.9**	**-1.1**
	baz=24						
USP	**Ospenovka**	**130.82**	**25**	P	**PKiKP**	**08 16 12.3**	**-0.3**
	SNR=29						
CTAO	**Charters Tower**	**130.82**	**244**	PKPdf	**PKPdf**	**08 16 12.3**	**0.0**
CTAO	**Charters Tower**	**130.82**	**244**	IAMs_20	IAMs_20	09 01 33.7	
	comp=Z,12µm,22.0s						
CTAO	**Charters Tower**	**130.82**	**244**	PKIKP	**PKPdf**	**08 16 12.3**	**0.0**
TDK	**Taldyqorghan**	**130.84**	**20**	*i* PKIKP	**PKPdf**	**08 16 11.6**	**0.0**
TDK	**Taldyqorghan**	**130.84**	**20**	*e*PKiKP	**PKPdf**	**08 16 11.7**	**0.0**
	baz=20						
TDK				LR	LR	09 12 30.4	
	comp=Z,8µm,19.7s,baz=20						
WHFO	**Wadi Hawf**	**130.92**	**66**	P	**PKPdf**	**08 16 12.9**	**+0.3**
	SNR=6.7						
EKS2	**Erkin-Say**	**131.00**	**26**	P	**PKiKP**	**08 16 13.3**	**+0.3**
	SNR=21						
CHMS	**Chumysh**	**131.15**	**25**	P	**PKiKP**	**08 16 13.6**	**+0.3**
	SNR=11						
JCJ	**Chichijima**	**131.18**	**307**	PKP	**PKPdf**	**08 16 11.9**	**-0.9**
	comp=Z,29nm,1.0s,baz=28,slow=4.8,SNR=4.6						
SOHO	**SOHO**	**131.21**	**57**	*i* PKPdf	**PKPdf**	**08 16 12.0**	**-0.9**
	SNR=7.3						
CHKK	**Chushkaly**	**131.32**	**22**	*i* PKIKP	**PKPdf**	**08 16 11.9**	**-0.6**
CHKK	**Chushkaly**	**131.32**	**22**	*e*PKiKP	**PKPdf**	**08 16 12.0**	**-0.6**
	baz=22						
AAK	**Ala-Archa**	**131.33**	**25**	P	**PKiKP**	**08 16 14.4**	**+0.6**
	SNR=20						
AAK	**Ala-Archa**	**131.33**	**25**	PKP	**PKPdf**	**08 16 10.9**	**-1.9**
	comp=Z,30nm,1.0s,baz=218,slow=1.2,SNR=48						
AAK				PP	**PP**	**08 18 32.6**	**+2.4**
	comp=Z,3.4nm,0.8s,baz=335,slow=4.2,SNR=4.2						
AAK	**Ala-Archa**	**131.33**	**25**	PKPdf	**PKPdf**	**08 16 12.7**	**-0.1**
AAK	**Ala-Archa**	**131.33**	**25**	IAMs_20	IAMs_20	09 19 16.5	
	comp=Z,12µm,21.0s						
AAK	**Ala-Archa**	**131.33**	**25**	*i* PKIKP	**PKPdf**	**08 16 13.3**	**+0.5**
AAK	**Ala-Archa**	**131.33**	**25**	*i* PKiKP	**PKiKP**	**08 16 13.6**	**-0.2**
	SNR=27						
AML	**Almayashu**	**131.40**	**26**	P	**PKiKP**	**08 16 14.0**	**-0.2**
	SNR=14						
AML	**Almayashu**	**131.40**	**26**	*i* PKiKP	**PKiKP**	**08 16 14.4**	**+0.2**
	SNR=22						
KBK	**Karagaybulak**	**131.51**	**25**	P	**PKiKP**	**08 16 13.9**	**-0.2**
	SNR=13						
ARQ	**Araqi**	**131.52**	**58**	P	**PKPdf**	**08 16 12.6**	**-0.9**
	SNR=10.0						
TKM2	**Tokmak 2**	**131.56**	**24**	P	**PKiKP**	**08 16 14.5**	**+0.2**
	SNR=24						
TKM2	**Tokmak 2**	**131.56**	**24**	PKIKP	**PKPdf**	**08 16 13.6**	**+0.3**
SONM	**Songino Array**	**131.63**	**354**	PKP	**PKPdf**	**08 16 12.3**	**-0.8**
	comp=Z,9.3nm,0.8s,baz=43,slow=2.6,SNR=34						
UCH	**Uchtor**	**131.68**	**25**	P	**PKiKP**	**08 16 15.1**	**+0.3**
	SNR=24						
AAA	**Alma-Ata**	**131.84**	**23**	*i* PKIKP	**PKiKP**	**08 16 14.5**	**-0.1**
AAA	**Alma-Ata**	**131.84**	**23**	*i* PKiKP	**PKiKP**	**08 16 14.5**	**-0.1**
	baz=23						
KNDC	**Almaty**	**131.85**	**23**	PKIKP	**PKiKP**	**08 16 14.9**	**+0.2**
MDOK	**Medeo**	**131.93**	**23**	*i* PKIKP	**PKPdf**	**08 16 14.2**	**+0.3**
MDOK				*e*		08 18 33.7	
MDOK	**Medeo**	**131.93**	**23**	*i* PKiKP	**PKPdf**	**08 16 14.3**	**+0.3**
	baz=23						
MDOK				*e*PP	**PP**	**08 18 33.7**	**-0.2**
	baz=23						
MDOK				LR	LR	09 14 22.1	
	comp=Z,8µm,22.4s,baz=23						
TNSS	**Tian-Shan**	**132.00**	**23**	*i* PKIKP	**PKPdf**	**08 16 14.9**	**+0.5**
TNSS	**Tian-Shan**	**132.00**	**23**	*e*PKiKP	**PKPdf**	**08 16 14.9**	**+0.5**
	baz=23						
HOQ	**Hoqain**	**132.08**	**57**	P	**PKPdf**	**08 16 15.0**	**+0.5**
	SNR=12						
BSY	**Bisya**	**132.32**	**58**	P	**PKPdf**	**08 16 15.0**	**-0.1**
	SNR=12						
PMG	**Port Moresby**	**132.34**	**258**	IAMs_20	IAMs_20	09 03 00.9	
	comp=Z,13µm,21.0s						
ULHL	**Ulahol**	**132.38**	**24**	P	**PKiKP**	**08 16 16.6**	**+0.6**
	SNR=8.3						
ZHN	**Zhinishke**	**132.45**	**21**	*i* PKIKP	**PKPdf**	**08 16 15.0**	**+0.2**
ZHN	**Zhinishke**	**132.45**	**21**	*e*PKiKP	**PKPdf**	**08 16 15.1**	**+0.2**
	baz=22						
SATY	**Saty**	**132.53**	**22***c*	*i*PKIKP	**PKPdf**	**08 16 15.2**	**+0.2**

SATY				*e*		08 18 37.9	
SATY	**Saty**	**132.53**	**22**	⇑*i*PKiKP	**PKPdf**	**08 16 15.2**	**+0.2**
	baz=22						
SATY				*e*PP	**PP**	**08 18 38.0**	**+0.2**
	baz=22						
UZB	**Uzynbulak**	**132.68**	**21**	*c* *i*PKIKP	**PKPdf**	**08 16 15.4**	**+0.1**
UZB	**Uzynbulak**	**132.68**	**21**	⇑*i*PKiKP	**PKPdf**	**08 16 15.5**	**+0.1**
	baz=21						
BIDO	**Bidbid**	**132.79**	**57**	P	**PKPdf**	**08 16 15.7**	**-0.2**
	SNR=17						
SHLS	**Shalkode**	**132.82**	**21**	*c* *i*PKIKP	**PKiKP**	**08 16 16.3**	**-0.4**
SHLS	**Shalkode**	**132.82**	**21**	⇑*i*PKiKP	**PKiKP**	**08 16 16.4**	**-0.4**
	baz=20						
SNY	**Shenyang**	**132.90**	**336**	⇑PKP	**PKPdf**	**08 16 15.0**	**-0.5**
SNY				SS	SS	08 36 24.3	+5.1
SNY				AMB	AMB		
	comp=Z,3µm,10.2s						
SNY				LR	LR		
	comp=Z,12µm,21.4s						
SNY				LR	LR		
	comp=Z,10µm,18.9s						
SNY				LR	LR		
	comp=Z,18µm,24.7s						
SMDO	**Samad**	**132.92**	**57**	P	**PKPdf**	**08 16 15.9**	**-0.3**
	SNR=28						
JMDO	**Jabal Madar**	**133.24**	**58**	P	**PKPdf**	**08 16 17.0**	**+0.3**
	SNR=7.2						
WSAR	**Wadi Sarin**	**133.33**	**57**	PKP	**PKPdf**	**08 16 16.4**	**-0.5**
	comp=Z,16nm,0.7s,baz=288,slow=2.9,SNR=19						
WSAR	**Wadi Sarin**	**133.33**	**57**	P	**PKPdf**	**08 16 17.2**	**+0.3**
	SNR=13						
GUMO	**Guam**	**133.53**	**289**	IAMs_20	IAMs_20	09 02 13.2	
	comp=Z,9µm,21.0s						
XLT	**XiLinHaoTe**	**133.62**	**344**	⇑*i*PKP	**PKPdf**	**08 16 15.8**	**-1.2**
XLT				sPKP		08 16 29.6	
XLT				PP	**PP**	**08 18 43.5**	**-1.0**
XLT				SS	SS	08 36 24.9	-3.0
XLT				AMB	AMB		
	comp=Z,2µm,11.0s						
XLT				LR	LR		
	comp=Z,1µm,23.5s						
XLT				LR	LR		
	comp=Z,8µm,21.5s						
XLT				LR	LR		
	comp=Z,14µm,24.5s						
MHTO	**MHTO**	**133.65**	**60**	P	**PKPdf**	**08 16 17.5**	**-0.1**
	SNR=13						
DQM	**DQM**	**133.66**	**62**	P	**PKPdf**	**08 16 17.8**	**+0.2**
	SNR=6.2						
WBK	**Wadi Bani Khal**	**133.87**	**57**	P	**PKPdf**	**08 16 18.1**	**+0.1**
	SNR=11						
KSRS	**Korea Array**	**134.38**	**329**	PKhKP	PKPpre	08 16 06.8	
	comp=Z,5.3nm,0.8s,baz=40,slow=1.5,SNR=13						
KSRS				PKP	**PKiKP**	**08 16 19.2**	**-0.7**
	comp=Z,17nm,0.8s,baz=41,slow=1.5,SNR=9.3						
KSH	**Kashi**	**134.53**	**26**	PKP	**PKiKP**	**08 16 20.4**	**+0.1**
KSH				sPKP		08 16 32.5	
KSH				PKS	**PKSdf**	**08 19 50.9**	**-4.5**
KSH				SS	SS	08 36 45.4	+6.0
KSH				AMB	AMB		
	comp=Z,6µm,9.6s						
KSH				LR	LR		
	comp=Z,9µm,24.1s						
KSH				LR	LR		
	comp=Z,12µm,21.3s						
KSH				LR	LR		
	comp=Z,15µm,22.0s						
WMQ	**Urumqi**	**134.57**	**13**	PKP	**PKPdf**	**08 16 18.6**	**-0.2**
WMQ				PP	**PP**	**08 18 51.4**	**+1.0**
WMQ				PKS	**PKSdf**	**08 19 48.8**	**-6.3**
WMQ				SS	SS	08 36 39.3	+0.1
WMQ				AMB	AMB		
	comp=Z,4µm,5.7s						
WMQ				LR	LR		
	comp=Z,16µm,19.7s						
WMQ				LR	LR		
	comp=Z,9µm,18.1s						
WMQ				LR	LR		
	comp=Z,14µm,17.3s						
KBL	**Kabul**	**134.66**	**37**	PKPdf	**PKPdf**	**08 16 20.1**	**+0.7**
KBL	**Kabul**	**134.66**	**37**	PKIKP	**PKPdf**	**08 16 20.1**	**+0.7**
KBL	**Kabul**	**134.66**	**37**	P	**PKPdf**	**08 16 19.6**	**+0.2**
	SNR=9.7						
INCN	**Inchon**	**135.02**	**330**	P	**PKPdf**	**08 16 18.3**	**-1.4**
DL2	**Dalian**	**136.16**	**336**	Pdif	**Pdif**	**08 13 33.4**	**+7.1**
DL2				PKP	**PKPdf**	**08 16 20.3**	**-1.4**
DL2				PP	**PP**	**08 18 57.1**	**-3.5**
DL2				PKS	**PKSdf**	**08 19 58.9**	**+0.9**
DL2	**Dalian**	**136.16**	**336**	PKP	**PKPdf**	**08 16 20.3**	**-1.4**
DL2				PKS	**PKSdf**	**08 19 58.9**	**+0.9**
DL2				SS	SS	08 36 55.4	-3.1
DL2				AMB	AMB		
	comp=Z,2µm,10.2s						
DL2				LR	LR		
	comp=Z,13µm,21.2s						
DL2				LR	LR		
	comp=Z,5µm,21.0s						
DL2				LR	LR		
	comp=Z,12µm,20.8s						
HHC	**Hu-ho-hao-te**	**137.62**	**347**	*e*PKP	**PKPdf**	**08 16 24.8**	**+0.2**
HHC				LR	LR		
	comp=Z,21µm,17.8s						
HHC				LR	LR		
	comp=Z,8µm,18.4s						
HHC				LR	LR		
	comp=Z,29µm,18.0s						
NIL	**Nilore**	**137.74**	**34**	PKPdf	**PKPdf**	**08 16 24.2**	**-0.7**
NIL	**Nilore**	**137.74**	**34**	PKIKP	**PKPdf**	**08 16 24.2**	**-0.7**
BTO	**Baotou**	**138.18**	**349**	*e*PKP	**PKiKP**	**08 16 34.8**	**+7.1**
BTO				PP	**PP**	**08 19 08.0**	**-5.1**
JMU	**Jammu**	**139.35**	**33**	*e*P	**PKPdf**	**08 16 26.0**	**-1.8**
JMU				*i* PP	**PP**	**08 19 18.5**	**-2.3**
FORT	**Forrest**	**139.82**	**219**	PKPdf	**PKPdf**	**08 16 23.7**	**-5.1**
ASAR	**Alice Springs**	**139.90**	**232**	PKhKP	PKPpre	08 16 20.9	
	comp=Z,1.5nm,0.5s,baz=121,slow=3.3,SNR=18						
THN	**Thein Dam**	**140.01**	**33**	*e*P	**PKPdf**	**08 16 21.3**	**-7.7**
THN				*i* x	**PP**	**08 19 21.3**	**-3.6**
HNS	**HongShan**	**140.02**	**342**	⇑PKP	PKPpre	08 16 16.3	
HNS				PP	**PP**	**08 19 18.9**	**-5.5**
HNS				PKS	**PKSdf**	**08 20 05.9**	**+1.0**
GTA	**Gaotai**	**140.36**	**0**	PKPbc	PKPpre	08 16 21.1	
GTA				pPKP	PKPdf	08 16 30.3	+0.6
GTA				sPKP		08 16 36.3	
GTA				PP	**PP**	**08 19 21.5**	**-5.0**
GTA				PKS	**PKSdf**	**08 20 06.6**	**+0.8**
TIY	**Taiyuan**	**140.38**	**345**	⇓PKP	PKPpre	08 16 20.1	
TIY				PP	**PP**	**08 19 23.8**	**-2.9**
BHK	**Bhakra**	**141.18**	**33**	*e*x	PKPpre	08 16 23.2	
BHK				*i* x	**PP**	**08 19 27.5**	**-4.5**
WRA	**Warramunga Arr**	**141.29**	**238**	PKhKP	PKPpre	08 16 25.2	
	comp=Z,18nm,0.9s,baz=111,slow=2.2,SNR=25						
JOW	**Kunigami**	**141.67**	**317**	PKhKP	PKPpre	08 16 25.4	
	comp=Z,17nm,0.8s,baz=83,slow=6.8,SNR=2.7						
SMLA	**Simla**	**141.81**	**33**	*e*P	**PKPdf**	**08 16 25.8**	**-6.5**
SMLA				*i* x	x	08 19 29.7	
SSE	**Sheshan**	**142.81**	**329**	PKP	PKPpre	08 16 23.4	
SSE				PP	**PP**	**08 19 49.5**	**+7.6**
DDI	**Dehra Dun**	**142.91**	**33**	⇑*i*P	**PKPdf**	**08 16 30.3**	**-4.1**
DDI				*i* x	x	08 19 38.7	
NJ2	**Nanjing**	**143.16**	**333**	⇑PKP	PKPab	08 16 27.3	-2.9
NJ2				pPKP	**PKiKP**	**08 16 39.8**	**+1.9**
NJ2				sPKP		08 16 44.8	
NJ2				PP	**PP**	**08 19 46.0**	**+2.2**
NJ2				PKS	**PKSdf**	**08 20 05.9**	**-4.6**
NJ2				SS	SS	08 38 26.9	+6.0
NJ2				AMB	AMB		
	comp=Z,3µm,9.2s						
NJ2				LR	LR		
	comp=Z,10µm,18.9s						
NJ2				LR	LR		
	comp=Z,10µm,18.0s						
NJ2				LR	LR		
	comp=Z,12µm,24.5s						
GOMU	**GeErMu**	**143.23**	**7**	PKP	PKPab	08 16 29.9	-1.0
GOMU				PP	**PP**	**08 19 44.3**	**0.0**
GOMU				AMB	AMB		
	comp=Z,3µm,5.6s						
GOMU				LR	LR		
	comp=Z,6µm,22.4s						
GOMU				LR	LR		
	comp=Z,10µm,22.9s						
GOMU				LR	LR		
	comp=Z,12µm,22.9s						
LYN	**LuoYang**	**143.34**	**343**	⇑PKP	PKPab	08 16 29.0	-1.8
LYN				SKKS		08 26 29.0	
LYN				AMB	AMB		
	comp=Z,4µm,9.2s						
LYN				LR	LR		
	comp=Z,10µm,21.6s						
LYN				LR	LR		
	comp=Z,11µm,20.1s						
LYN				LR	LR		
	comp=Z,16µm,21.6s						
LZH	**Lanzhou**	**143.51**	**355**	PKP	PKPab	08 16 31.8	+0.1
LZH				pPKP	pPKPdf	08 16 42.5	-2.9
LZH				sPKP		08 16 48.9	
LZH				PP	**PP**	**08 19 44.8**	**-0.9**
LZH				AMB	AMB		
	comp=Z,4µm,6.5s						
LZH				LR	LR		
	comp=Z,16µm,15.5s						
LZH				LR	LR		
	comp=Z,7µm,16.8s						
LZH				LR	LR		
	comp=Z,19µm,17.9s						
KUDL	**Kundal**	**143.67**	**37**	*e*P	PKPab	08 16 32.1	-0.2
NDI	**New Delhi**	**143.70**	**35**	⇑*i*P	PKPab	08 16 31.9	-0.5
NDI				*i* x	x	08 19 46.2	
AJM	**Ajmer**	**143.70**	**41**	⇑*i*P	PKPab	08 16 31.3	-1.2
AJM				*i* x	**PP**	**08 19 43.6**	**-4.1**
AYAN	**Aya Nagar**	**143.80**	**36**	*e*P	PKPab	08 16 33.0	+0.2
NWAO	**Narrogin (SRO)**	**143.87**	**205**	PKPdf	PKPbc	08 16 33.6	0.0
NWAO	**Narrogin (SRO)**	**143.87**	**205**	PKIKP	PKPbc	08 16 33.6	0.0
NWAO	**Narrogin (SRO)**	**143.87**	**205**	P	PKPbc	08 16 33.7	+0.1
PTH	**Pithoragarh**	**144.66**	**31**	⇑*i*P	**PKPab**	**08 16 35.8**	**-0.5**
XAN	**Xi'an**	**144.74**	**347**	⇓*i*PKP	**PKPab**	**08 16 35.1**	**-1.1**
XAN				pPKP	PKiKP	08 16 44.3	+3.1
XAN				sPKP		08 16 49.9	
XAN				PKS	**PKSdf**	**08 20 08.5**	**-4.7**
XAN				SKKS		08 26 40.6	
XAN				AMB	AMB		
	comp=Z,3µm,10.2s						
XAN				LR	LR		
	comp=Z,16µm,24.0s						
XAN				LR	LR		
	comp=Z,8µm,22.1s						
XAN				LR	LR		
	comp=Z,22µm,24.5s						
LGTI	**Lohaghat**	**144.75**	**31**	⇑*i*P	**PKPab**	**08 16 35.9**	**-0.4**
WHN	**Wuhan**	**146.36**	**337**	⇑PKPbc	**PKPdf**	**08 16 39.4**	**-0.8**
WHN				pPKP	**pPKPdf**	**08 16 48.4**	**-1.8**
WHN				PP	**PP**	**08 20 08.0**	**+5.2**
WHN				SS	SS	08 38 53.0	-4.3
WHN				AMB	AMB		
	comp=Z,4µm,9.3s						
WHN				LR	LR		
	comp=Z,42µm,20.9s						
WHN				LR	LR		
	comp=Z,12µm,18.2s						
WHN				LR	LR		
	comp=Z,47µm,18.3s						
BRCI	**Bahraich**	**146.97**	**31**	*e*P	**PKPbc**	**08 16 43.2**	**-0.1**
TATO	**Taipei**	**147.36**	**322**	IAMs_20	IAMs_20	09 27 15.1	
	comp=Z,9µm,21.0s						
DANN	**Dangsing**	**147.38**	**27**	*e*P	**PKPdf**	**08 16 43.4**	**+1.0**
YHNB	**Yeheng**	**147.65**	**322**	IAMs_20	IAMs_20	09 24 35.0	
	comp=Z,10µm,21.0s						
BHPL	**Bhopal**	**147.75**	**42**	⇑*i*P	**PKPdf**	**08 16 43.2**	**+0.3**
BHPL				*i* x	x	08 20 07.8	
KNRA	**Kununurra**	**147.92**	**240**		**PKPbc**	**08 16 46.0**	**-0.2**
SAUI	**Saumlaki**	**148.03**	**256**	IAMs_20	IAMs_20	09 14 38.8	
	comp=Z,10µm,20.0s						
POO	**Poona**	**148.05**	**53**	*e*P	**PKPdf**	**08 16 43.6**	**+0.1**
POO				IAmb	IAmb	08 16 47.5	
	comp=Z,171nm,0.7s						
GKN	**Gorkha**	**148.07**	**26**	*e*P	**PKPdf**	**08 16 43.0**	**-0.4**
	comp=Z,1µm,1.3s						
VLK	**Valmikinagar**	**148.30**	**28**	*e*P	**PKPdf**	**08 16 44.1**	**+0.5**
KKN	**Kakani**	**148.54**	**26**	*e*P	**PKPdf**	**08 16 42.9**	**-1.4**
	comp=Z,729nm,1.1s						
KKN	**Kakani**	**148.54**	**26**	*e*P	**PKPdf**	**08 16 43.7**	**-0.6**
	comp=Z,587nm,1.0s						
DMN	**Daman**	**148.62**	**26**	*e*P	**PKPdf**	**08 16 44.2**	**-0.3**
	comp=Z,2µm,1.6s						
YULB	**Yu-li**	**148.62**	**320**	IAMs_20	IAMs_20	09 38 51.0	
	comp=Z,10µm,21.0s						
CD2	**Chengdu**	**148.65**	**354**	PKPbc	**PKPdf**	**08 16 44.1**	**0.0**
CD2				PP	**PP**	**08 20 16.8**	**+0.9**
CD2				SKKS		08 27 07.3	
CD2				SS	**SS**	**08 39 24.5**	**+1.8**
CD2				AMB	AMB		
	comp=Z,4µm,9.5s						
CD2				LR	LR		
	comp=Z,1µm,19.9s						
CD2				LR	LR		
	comp=Z,7µm,20.8s						
CD2				LR	LR		
	comp=Z,16µm,21.8s						
PKIN	**Phulchoki**	**148.78**	**26**	*e*P	**PKPdf**	**08 16 44.3**	**-0.4**
	comp=Z,376nm,0.8s						
PKI	**Pulchoki**	**148.79**	**26**	*e*P	**PKPdf**	**08 16 44.0**	**-0.8**
	comp=Z,353nm,0.9s						
SIJI	**Sorong**	**148.85**	**269**	PKP	**PKPdf**	**08 16 43.0**	**-1.8**
	comp=Z,4.2nm,0.4s,baz=154,slow=23,SNR=0.6						
SIJI				PKPbc	**PKPbc**	**08 16 48.5**	**-0.3**
	comp=Z,11nm,0.3s,baz=58,slow=2.9,SNR=15						
LSA	**Lhasa**	**148.85**	**15**	PKPbc	**PKPdf**	**08 16 45.5**	**+0.5**
LSA				PP	**PP**	**08 20 16.8**	**-1.0**
LSA				LR	LR		
	comp=Z,10µm,18.5s						
LSA				LR	LR		
	comp=Z,5µm,17.8s						
LSA				LR	LR		
	comp=Z,10µm,17.1s						
LSA	**Lhasa**	**148.85**	**15**	P	**PKPdf**	**08 16 45.7**	**+0.7**
KAD	**Karad**	**148.97**	**54**	*e*P	**PKPdf**	**08 16 44.7**	**-0.3**
CNSH	**ChangSha**	**149.02**	**338**	⇑PKPbc	**PKPdf**	**08 16 43.5**	**-1.2**
CNSH				LR	LR		
	comp=Z,8µm,21.3s						
CNSH				LR	LR		
	comp=Z,8µm,20.4s						
CNSH				LR	LR		
	comp=Z,10µm,23.0s						
QZH	**Quanzhou**	**149.08**	**326**	*i* PKPbc	**PKPdf**	**08 16 44.4**	**-0.5**
QZH				PP	**PP**	**08 20 24.4**	**+5.2**
QZH				SS	SS	08 39 28.6	-0.2
QZH				AMB	AMB		
	comp=Z,3µm,7.0s						
QZH				LR	LR		
	comp=Z,6µm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,21.3s						
QZH				LR	LR		
	comp=Z,12µm,19.0s						
AKL	**Akola**	**149.16**	**46**	*e*P	**PKPdf**	**08 16 45.0**	**-0.1**
TWG	**Pinlang**	**149.18**	**320**	IAMs_20	IAMs_20	09 29 10.7	
	comp=Z,9µm,22.0s						
VAR	**Varanasi**	**149.55**	**32**	*e*P	**PKPdf**	**08 16 46.0**	**+0.3**
GOA	**Goa**	**149.59**	**58**	*e*P	**PKPdf**	**08 16 45.4**	**-0.6**
GOA				IAmb	IAmb	08 16 51.4	
	comp=Z,469nm,1.5s						
GOA				*i* x	x	08 20 22.4	
RAMN	**Ramite**	**149.84**	**25**	*e*P	**PKPdf**	**08 16 46.0**	**-0.4**
	comp=Z,601nm,1.0s						
GTK	**Tadong**	**150.28**	**21**	⇑*i*P	**PKPdf**	**08 16 48.2**	**+1.3**
SLGI	**Shiliguri**	**150.78**	**22**	*e*P	**PKPdf**	**08 16 48.2**	**+0.6**
BLSP	**Bilaspur**	**151.54**	**37**	⇑*i*P	**PKPdf**	**08 16 49.2**	**+0.3**
MNCY	**Minicoy**	**151.66**	**72**	*e*P	**PKPdf**	**08 16 49.3**	**+0.1**
MNCY				*i* x	x	08 20 33.6	
DIBR	**DIBRUGARH**	**151.82**	**10**	*i* P	**PKPdf**	**08 16 49.5**	**+0.4**
MBWA	**Marble Bar**	**151.86**	**222**	PKPdf	**PKPdf**	**08 16 48.0**	**-1.3**
ITAN	**ITANAGAR**	**151.91**	**12**	*i* P	**PKPdf**	**08 16 49.0**	**-0.2**
DHUB	**DHUBRI**	**151.96**	**20**	*i* P	**PKPdf**	**08 16 48.8**	**-0.6**
LKP	**Lekhapani**	**152.10**	**8**	*i* P	**PKPdf**	**08 16 49.3**	**-0.3**
BOK	**Bokaro**	**152.25**	**29**	*e*P	**PKPdf**	**08 16 50.4**	**+0.5**
BOK				IAmb	IAmb	08 16 57.5	
	comp=Z,341nm,1.3s						
BOK				*i* x	x	08 20 41.5	
GUWA	**GUWAHATI**	**152.32**	**16**	*i* P	**PKPdf**	**08 16 49.1**	**-0.8**
GUWA				IAmb	IAmb	08 16 58.9	
	comp=Z,244nm,1.2s						
GUWA				*i* PP	**PP**	**08 20 35.5**	**-1.7**
HYBB	**Hyderabad (bro**	**152.34**	**49**	*e*PKPdf	**PKPdf**	**08 16 50.1**	**-0.1**
HYBB				*e*PKSdf	**PKSdf**	**08 20 24.9**	**-0.1**
HYBB				*e*PP	**PP**	**08 20 41.7**	**+3.0**
HYBB				*e*SKSdf	**SKSdf**	**08 23 58.6**	**+2.7**
HYBB				*e*		08 31 06.2	
HYBB				IVMs_BB	IVMs_BB	09 36 47.4	
	comp=Z,5µm,18.2s						
JORH	**JORHAT**	**152.41**	**11**	*i* P	**PKPdf**	**08 16 50.1**	**+0.1**
GYA	**Guiyang**	**152.54**	**347**	⇓PKPbc	**PKPdf**	**08 16 50.8**	**+0.4**
GYA				pPKP	pPKPdf	08 17 02.0	+1.6
GYA				PP	**PP**	**08 20 40.3**	**+1.8**
GYA				SKKS		08 27 20.8	
GYA				SS	**SS**	**08 40 07.0**	**+0.8**
GYA				AMB	AMB		
	comp=Z,3µm,10.0s						
GYA				LR	LR		
	comp=Z,6µm,24.6s						
GYA				LR	LR		
	comp=Z,6µm,22.7s						
GYA				LR	LR		
	comp=Z,15µm,24.8s						
GULI	**GuiLin**	**152.58**	**340**	PKPbc	**PKPdf**	**08 16 49.1**	**-1.2**
GULI				LR	LR		
	comp=Z,6µm,17.3s						
GULI				LR	LR		
	comp=Z,5µm,18.4s						
GULI				LR	LR		
	comp=Z,11µm,18.4s						
JHSG	**JHARSUGUGA**	**152.79**	**35**	⇑*i*P	**PKPdf**	**08 16 50.9**	**+0.2**
MOKO	**MOKOCHONG**	**152.87**	**11**	*i* P	**PKPdf**	**08 16 50.8**	**-0.1**
MOKO				IAmb	IAmb	08 17 01.8	
	comp=Z,310nm,0.8s						
MOKO				*i* x	x	08 20 42.3	
SHL	**Shillong**	**152.97**	**17**	*e*P	**PKPdf**	**08 16 50.5**	**-0.6**
SHL				IAmb	IAmb	08 16 57.8	
	comp=Z,335nm,1.7s						
SHL	**Shillong**	**152.97**	**17**	P	**PKPdf**	**08 16 51.0**	**-0.2**
	SNR=40						
PZH	**PanZhiHua**	**153.19**	**357**	PKPbc	**PKPdf**	**08 16 50.3**	**-1.0**
PZH				pPKP	**sPKPdf**	**08 17 03.9**	**-0.8**
PZH				PKPab	**sPKPbc**	**08 17 13.1**	**+1.0**
PZH				PP	**PP**	**08 20 47.9**	**+5.8**
PZH				SKKS		08 27 30.9	
PZH				SS	**SS**	**08 40 12.6**	**-0.5**
PZH				AMB	AMB		
	comp=Z,2µm,7.9s						
PZH				LR	LR		
	comp=Z,7µm,22.6s						
PZH				LR	LR		
	comp=Z,8µm,21.6s						
PZH				LR	LR		
	comp=Z,8µm,22.1s						
GZH	**Guangzhou**	**153.32**	**332**	PKPbc	**PKPdf**	**08 16 51.1**	**-0.3**
GZH				PP	**PP**	**08 20 46.9**	**+3.7**
GZH				LR	LR		
	comp=Z,8µm,21.1s						
GZH				LR	LR		
	comp=Z,6µm,19.2s						
KOHI	**KOHIMA**	**153.37**	**12**	⇑*i*P	**PKPdf**	**08 16 52.3**	**+0.7**
KOHI				IAmb	IAmb	08 17 14.5	
	comp=Z,373nm,0.5s						
KOHI				*i* x	x	08 20 43.4	
DAV	**Davao City (W)**	**153.53**	**287**	IAMs_20	IAMs_20	09 37 31.3	
	comp=Z,7µm,22.0s						
IMP	**Imphal**	**154.20**	**13**	⇑*i*P	**PKPdf**	**08 16 53.4**	**+0.6**
IMP				IAmb	IAmb	08 17 04.7	
	comp=Z,135nm,1.0s						
IMP				*i* x	x	08 20 46.8	
AGT	**Agartala**	**154.35**	**19**	⇑*i*P	**PKPdf**	**08 16 54.1**	**+1.2**
AGT				*i* x	x	08 20 48.0	
VJD	**Vijayawada**	**154.47**	**48**	*e*P	**PKPdf**	**08 16 52.9**	**-0.2**
KMI	**Kunming**	**154.48**	**354**	⇑PKPbc	**PKPdf**	**08 16 53.4**	**0.0**
KMI				pPKP	PKPbc	08 17 01.3	-0.4
KMI				sPKP		08 17 05.9	
KMI				PP	**PP**	**08 20 51.0**	**+1.5**
KMI				SKKS		08 27 33.3	
KMI				SS	**SS**	**08 40 30.0**	**+2.6**
KMI				LR	LR		
	comp=Z,10µm,22.6s						
KMI				LR	LR		
	comp=Z,11µm,20.7s						
KMI				LR	LR		
	comp=Z,18µm,23.5s						
RAGD	**RAYAGADA**	**154.52**	**39**	⇑*i*P	**PKPdf**	**08 16 53.2**	**0.0**
AZL	**Aizawl**	**154.93**	**16**	⇑*i*P	**PKPdf**	**08 16 53.6**	**-0.2**
AZL				*i* x	x	08 20 52.5	
BWNR	**Bhubaneshwar**	**155.10**	**33**	⇑*i*P	**PKPdf**	**08 16 54.0**	**0.0**
KOD	**Kodaikanal**	**155.11**	**64**	*e*P	**PKPdf**	**08 16 54.2**	**-0.4**
SALM	**Salem**	**155.15**	**60**	*e*P	**PKPdf**	**08 16 55.1**	**+0.9**
MMRI	**Maumere**	**156.50**	**249**	IAMs_20	IAMs_20	09 43 16.4	
	comp=Z,9µm,21.0s						
LUWI	**Luwuk**	**157.34**	**268**	IAMs_20	IAMs_20	09 44 34.8	
	comp=Z,6µm,21.0s						
QIZ	**Qiongzhong**	**158.44**	**334**	⇑*i*PKP	**PKPdf**	**08 16 58.3**	**0.0**
QIZ				PP	**PP**	**08 21 11.9**	**+0.3**
QIZ				SS	SS	08 41 15.5	+5.1
QIZ				AMB	AMB		
	comp=Z,3µm,10.4s						
QIZ				LR	LR		
	comp=Z,14µm,16.7s						
QIZ				LR	LR		
	comp=Z,13µm,17.7s						
QIZ				LR	LR		
	comp=Z,20µm,16.7s						
KAPI	**Kappang**	**159.87**	**257**	PKPab	**PKPab**	**08 17 41.2**	**+1.8**
	comp=Z,15nm,0.9s,baz=70,slow=7.3,SNR=2.1						
CHTO	**Chiang Mai**	**160.85**	**3**	PKPdf	**PKPdf**	**08 17 00.7**	**-0.5**
CHTO					**PKPab**	**08 17 42.1**	**-1.1**
CHTO	**Chiang Mai**	**160.85**	**3**	PKP2	**PKPab**	**08 17 42.1**	**-1.1**
CHTO						09 17 00.7	
CHTO	**Chiang Mai**	**160.85**	**3**	P	**PKPdf**	**08 17 00.6**	**-0.5**
CM31	**Chiang Mai Arr**	**161.20**	**3**	P	**PKPdf**	**08 17 02.0**	**+0.5**
	SNR=11						
CMAR	**Chiang Mai Arr**	**161.20**	**3**	PKP	**PKPdf**	**08 17 01.4**	**-0.1**
	comp=Z,5.7nm,0.7s,baz=298,slow=2.2,SNR=33						
CMAR				PKPab	**PKPab**	**08 17 44.6**	**-0.1**
	comp=Z,56nm,0.8s,baz=336,slow=4.8,SNR=29						
CMAR				PP	**PP**	**08 21 26.5**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=340,slow=4.1,SNR=1.5						
SPMM	**Sapulut**	**162.89**	**288**	P	**PKPdf**	**08 17 03.0**	**-0.4**
DGPR	**DIGLIPUR**	**164.73**	**28**	⇑*i*P	**PKPdf**	**08 17 04.6**	**-0.3**
DGPR				*i* PP	**PP**	**08 21 46.5**	**+1.2**
PBA	**Port Blair**	**165.94**	**31**	*i* x	**PP**	**08 21 52.1**	**+0.3**
SBUM	**Sibu**	**167.56**	**283**	P	**PKPdf**	**08 17 08.0**	**+0.7**
KSM	**Kuching**	**169.63**	**280**		**PKPdf**	**08 17 07.7**	**-0.9**
KSM	**Kuching**	**169.63**	**280**	P	**PKPdf**	**08 17 08.0**	**-0.7**
LEM	**Lembang**	**170.18**	**229**	PKPab	**PKPab**	**08 18 27.2**	**+2.4**
	baz=194,slow=4.2						
LEM				PP	**PP**	**08 22 18.3**	**+3.9**
	comp=Z,11nm,0.3s,baz=218,slow=5.4,SNR=4.8						
KULM	**Kulim**	**174.30**	**355**	P	**PKPdf**	**08 17 10.0**	**-0.8**
IPM	**Ipoh**	**175.05**	**349**		**PKPdf**	**08 17 09.3**	**-1.8**
IPM	**Ipoh**	**175.05**	**349**	P	**PKPdf**	**08 17 11.0**	**-0.1**
JRMM	**Jerantut**	**175.11**	**331**	P	**PKPdf**	**08 17 11.0**	**-0.1**
MYKOM	**Kota Tinggi**	**175.67**	**300**	P	**PKPdf**	**08 17 11.0**	**-0.2**
PSI	**Prapat**	**176.59**	**20**	PKP	**PKPdf**	**08 17 09.8**	**-1.7**
	comp=Z,24nm,1.0s,baz=75,slow=2.3,SNR=2.9						
PSI				PKPab	**PKPab**	**08 18 52.0**	**-1.0**
	comp=Z,76nm,0.9s,baz=294,slow=3.8,SNR=12						
PSI				PP	**PP**	**08 22 45.5**	**+1.1**
	comp=Z,4.2nm,0.6s,baz=317,slow=4.5,SNR=5.3						
GSI	**Gunungsitoli**	**176.94**	**56**		**PKPdf**	**08 17 10.7**	**-0.8**

AEIC ***18*** *08:01:49.4±1.6, 61°.85N±0°.02×148°.11W±0°.06, h29^{km}±7^{km}, ML3.3/169, ML3.5/168(NEIC) Error ellipse: s-maj=3.8km s-min=2.7km az=90.0*

NEIC ***18*** *08:01:49.2±1.6, 61°.84N±0°.03×148°.11W±0°.05, h35^{km}±8^{km}, Error ellipse: s-maj=4.7km s-min=3.0km az=143.0*

ISC 18 08:01:48.9±1.0**, 61°.83N**±0°.02×**148°.13W**±0°.02**, h34**^{km}±2^{km}**,**
n278, σ**0^{s}62**/248**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SML	**Sawmill**	**0.10**	**255**		**Pb**	**08 01 54.7**	**-0.2**
SML	**Sawmill**	**0.10**	**255**		**Sb**	**08 01 60.0**	**+1.0**
SML	**Sawmill**	**0.10**	**255**	IAML		08 01 55.1	
	comp=E,1µm,0.3s						
SML				IAML		08 01 55.3	
	comp=N,2µm,0.3s						
SML	**Sawmill**	**0.10**	**255**	P	**Pb**	**08 01 54.7**	**-0.2**
	baz=70,SNR=927						
SML				S	**Sb**	**08 01 59.7**	**+0.8**
	baz=70						
M23K	**Glacier View**	**0.20**	**101**	P	**Pb**	**08 01 55.1**	**-0.5**
	baz=286,SNR=712						
M23K				S	**Sb**	**08 02 00.5**	**+0.4**
	baz=286						
GHO	**Glory Hole Cre**	**0.38**	**261**		**Pb**	**08 01 57.1**	**-0.8**
GHO					**Sb**	**08 02 04.2**	**+0.3**
GHO	**Glory Hole Cre**	**0.38**	**261**	IAML		08 02 04.6	
	comp=E,6µm,0.3s						

GHO				IAML		08 02 04.8	
	comp=N,9µm,0.5s						
SCM	Sheep Creek Mo	0.38	89		Pb	08 01 57.2	-0.7
SCM				IAML		08 02 04.9	
	comp=N,5µm,0.4s						
SCM	Sheep Creek Mo	0.38	89		Sb	08 02 04.3	+0.3
SCM	Sheep Creek Mo	0.38	89	P	Pb	08 01 57.2	-0.7
	baz=272,SNR=340						
SCM				S	Sb	08 02 04.3	+0.3
	baz=272						
KNK	Knik Glacier	0.45	200		Pb	08 01 58.0	-0.7
KNK					Sb	08 02 05.7	+0.2
KNK	Knik Glacier	0.45	200	IAML		08 02 06.1	
	comp=E,10µm,0.4s						
KNK				IAML		08 02 06.1	
	comp=N,8µm,0.4s						
KNK	Knik Glacier	0.45	200	P	Pb	08 01 58.1	-0.7
	baz=21,SNR=165						
KNK				S	Sb	08 02 05.5	-0.1
	baz=21						
PMR	Palmer	0.53	244		Pb	08 01 58.8	-1.2
PMR					Sb	08 02 07.2	-0.5
PMR	Palmer	0.53	244	IAML		08 02 07.5	
	comp=N,1µm,0.5s						
PMR				IAML		08 02 08.1	
	comp=E,902nm,0.4s						
PMR	Palmer	0.53	244	P	Pb	08 01 58.8	-1.2
	baz=62,SNR=90						
PMR				S	Sb	08 02 06.8	-0.8
	baz=62						
WAT6	Susitna Watana	0.77	14		Pn	08 02 02.4	-1.2
WAT6					Sn	08 02 12.8	-1.2
WAT6	Susitna Watana	0.77	14	P	Pn	08 02 02.3	-1.2
	baz=193,SNR=194						
WAT6				S	Sn	08 02 12.9	-1.2
	baz=193						
M22K	Willow	0.95	266		Pn	08 02 05.2	-0.6
M22K	Willow	0.95	266	P	Pn	08 02 05.2	-0.6
	baz=84,SNR=26						
M22K				S	Sn	08 02 18.1	0.0
	baz=84						
M24K	Tolsona, Glenn	0.96	73		Pn	08 02 05.9	-0.2
M24K	Tolsona, Glenn	0.96	73	IAML		08 02 20.3	
	comp=N,1µm,0.9s						
M24K	Tolsona, Glenn	0.96	73	P	Pn	08 02 05.9	-0.2
	baz=255,SNR=180						
M24K				S	Sn	08 02 19.6	+1.0
	baz=255						
WAT1	Susitna Watana	1.02	349		Pn	08 02 06.0	-0.9
WAT1					Sn	08 02 19.4	-0.6
WAT1	Susitna Watana	1.02	349	P	Pn	08 02 06.0	-0.9
	baz=168						
WAT1				S	Sn	08 02 19.7	-0.3
	baz=168						
RC01	Rabbit Creek A	1.07	227		Pn	08 02 07.2	-0.3
RC01	Rabbit Creek A	1.07	227	IAML		08 02 24.0	
	comp=N,2µm,0.5s						
RC01	Rabbit Creek A	1.07	227	P	Pn	08 02 07.2	-0.3
	baz=45,SNR=163						
JPK	Jack Peak	1.07	136		Pn	08 02 06.3	-1.3
GLI	Glacier Island	1.08	152		Pn	08 02 06.5	-1.1
GLI					Sn	08 02 22.0	+0.6
GLI	Glacier Island	1.08	152	P	Pn	08 02 06.7	-1.0
	baz=334,SNR=109						
GLI				S	Sn	08 02 21.9	+0.5
	baz=334						
KLU	Klutina	1.11	107		Pn	08 02 07.0	-1.1
KLU	Klutina	1.11	107	IAML		08 02 26.4	
	comp=E,1µm,0.4s						
KLU	Klutina	1.11	107	P	Pn	08 02 07.0	-1.1
	baz=290,SNR=107						
VMT	TAPS Tl Valdez	1.13	131		Pn	08 02 06.8	-1.5
VMT					Sn	08 02 22.7	0.0
CUT	Chulitna	1.16	301		Pn	08 02 08.3	-0.3
CUT	Chulitna	1.16	301	P	Pn	08 02 08.4	-0.3
	baz=118,SNR=75						
CUT				S	Sn	08 02 23.9	+0.6
	baz=118						
FIS	Fire Island	1.22	236		Pn	08 02 10.7	+1.2
FIS	Fire Island	1.22	236	IAML		08 02 37.8	
	comp=E,868nm,0.5s						
FIS				IAML		08 02 38.6	
	comp=N,913nm,0.4s						
PS11	TAPS Pump St11	1.28	78		Pn	08 02 10.8	+0.5
DHY	Denali Highway	1.30	15		Pn	08 02 10.3	-0.4
DHY					Sn	08 02 27.2	+0.3
DHY	Denali Highway	1.30	15	IAML		08 02 27.5	
	comp=E,1µm,0.4s						
DHY				IAML		08 02 31.2	
	comp=N,652nm,0.4s						
DHY	Denali Highway	1.30	15	P	Pn	08 02 10.4	-0.4
	baz=196,SNR=97						
DHY				S	Sn	08 02 27.0	0.0
	baz=196						
DIV	Divide	1.33	121		Pn	08 02 09.8	-1.4
FID	Port Fidalgo	1.35	143		Pn	08 02 10.6	-0.7
FID					Sn	08 02 28.9	+0.9
PS12	TAPS Pump St12	1.47	103		Pn	08 02 12.3	-0.7
HARP	HAARP	1.51	67		Pn	08 02 14.1	+0.5
HARP	HAARP	1.51	67	P	Pn	08 02 13.9	+0.4
	baz=249,SNR=32						
O22K	Cooper Landing	1.56	210		Pn	08 02 14.8	+0.6
O22K	Cooper Landing	1.56	210	P	Pn	08 02 14.0	-0.2
	baz=29						
O22K				S	Sn	08 02 34.2	+1.1
	baz=29						
RND	Reindeer	1.61	348		Pn	08 02 15.1	0.0
RND	Reindeer	1.61	348	IAML		08 02 39.5	
	comp=N,518nm,0.4s						
RND				IAML		08 02 39.6	
	comp=E,398nm,0.4s						
HIN	Hinchinbrook I	1.64	150		Pn	08 02 15.5	+0.1
SLKM	Skilak Lake	1.67	218		Pn	08 02 15.8	+0.1
PAX	Paxson	1.69	46		Pn	08 02 16.2	+0.2
PAX	Paxson	1.69	46	P	Pn	08 02 16.2	+0.2
	baz=228,SNR=56						
PAX				S	Sn	08 02 37.9	+1.4
	baz=228						
N25K	Chitina, Valde	1.70	96		Pn	08 02 16.0	-0.2
N25K	Chitina, Valde	1.70	96	IAML		08 02 42.3	
	comp=E,500nm,0.5s						
N25K				IAML		08 02 42.8	
	comp=N,670nm,0.4s						
N25K	Chitina, Valde	1.70	96	P	Pn	08 02 15.9	-0.2
	baz=280,SNR=75						
EYAK	Cordova Ski Ar	1.73	137		Pn	08 02 16.9	+0.3
EYAK	Cordova Ski Ar	1.73	137	P	Pn	08 02 16.4	-0.1
	baz=320,SNR=38						
STLK	Strandline Lak	1.80	261		Pn	08 02 18.4	+0.9
CAPN	Captain Cook N	1.81	235		Pn	08 02 18.4	+0.9
CAPN	Captain Cook N	1.81	235	IAML		08 03 10.1	
	comp=E,700nm,1.4s						
SEW	Seward	1.85	201		Pn	08 02 18.6	+0.4
SEW	Seward	1.85	201	P	Pn	08 02 18.1	-0.1
	baz=20						
TRF	Thorofare Moun	1.91	329		Pn	08 02 19.4	+0.2
TRF	Thorofare Moun	1.91	329	IAML		08 02 46.5	
	comp=E,539nm,0.6s						
TRF	Thorofare Moun	1.91	329	P	Pn	08 02 19.2	+0.1
	baz=147						
BMRM	Bremner River	1.91	116		Pn	08 02 18.5	-0.5
BMRM	Bremner River	1.91	116	IAML		08 02 47.8	
	comp=E,559nm,0.4s						
BMRM				IAML		08 02 50.4	
	comp=N,602nm,0.4s						
BMRM	Bremner River	1.91	116	P	Pn	08 02 18.6	-0.5
	baz=299,SNR=86						
PS10	TAPS Pump St10	1.94	33		Pn	08 02 20.3	+0.9
SPCG	Spurr Capps Gl	1.94	255		Pn	08 02 20.3	+0.8
SPU	Mount Spurr	1.99	253		Pn	08 02 20.7	+0.5
CKN	Chakachatna No	2.03	254		Pn	08 02 21.9	+1.2
SPCR	Spurr Chakacha	2.05	254		Pn	08 02 21.9	+0.8
SPCR	Spurr Chakacha	2.05	254	P	Pn	08 02 21.2	+0.1
	baz=70,SNR=19						
GLB	Gilahina Butte	2.10	99		Pn	08 02 21.6	0.0
GLB	Gilahina Butte	2.10	99	IAML		08 02 53.1	
	comp=N,310nm,0.6s						
GLB				IAML		08 02 55.1	
	comp=E,270nm,0.4s						
SPBG	Spurr Blockage	2.11	256		Pn	08 02 22.5	+0.7
KTH	Kantishna Hill	2.15	325		Pn	08 02 22.8	+0.4
PPLA	Purkeypile	2.17	301		Pn	08 02 23.5	+0.8
PPLA	Purkeypile	2.17	301	P	Pn	08 02 23.3	+0.5
	baz=117,SNR=30						
SPWE	Spurr West	2.19	257		Pn	08 02 23.8	+0.8
K24K	Donnelly Dome	2.25	28	P	Pn	08 02 25.0	+1.2
	baz=210,SNR=70						
VRDI	Verde Repeater	2.32	103		Pn	08 02 24.5	-0.4
VRDI	Verde Repeater	2.32	103	IAML		08 02 58.6	
	comp=N,192nm,0.8s						
MENT	Mentasta	2.34	60		Pn	08 02 26.8	+1.9
MENT				IAML		08 03 07.1	
	comp=N,384nm,0.6s						
M20K	Styx River	2.37	273		Pn	08 02 26.3	+0.8
M20K	Styx River	2.37	273	IAML		08 03 03.8	
	comp=N,170nm,0.5s						
HMT	Hamilton	2.41	127		Pn	08 02 26.0	+0.1
CAST	Castle Rocks	2.42	313		Pn	08 02 26.7	+0.6
CAST	Castle Rocks	2.42	313	IAML		08 02 58.0	
	comp=E,194nm,0.6s						
CAST				IAML		08 03 08.2	
	comp=N,211nm,1.0s						
CAST	Castle Rocks	2.42	313	P	Pn	08 02 26.4	+0.3
	baz=129,SNR=53						
BWN	Browne	2.43	346		Pn	08 02 26.5	+0.4
RIDG	Independent Ri	2.44	37		Pn	08 02 27.0	+0.7
RIDG	Independent Ri	2.44	37	IAML		08 03 00.4	
	comp=E,191nm,0.6s						
RIDG				IAML		08 03 14.3	
	comp=N,192nm,0.8s						
RIDG	Independent Ri	2.44	37	P	Pn	08 02 27.2	+0.9
	baz=220,SNR=51						
BRSE	Bradley Lake S	2.46	213		Pn	08 02 27.1	+0.5
BRSE	Bradley Lake S	2.46	213	P	Pn	08 02 27.0	+0.5
	baz=30						
BRLK	Bradley Lake	2.48	214		Pn	08 02 27.5	+0.7
BRLK	Bradley Lake	2.48	214	IAML		08 03 03.6	
	comp=E,150nm,0.7s						
BRLK				IAML		08 03 04.0	
	comp=N,160nm,0.4s						
M26K	Nabesna, AK	2.48	74		Pn	08 02 27.5	+0.6
M26K	Nabesna, AK	2.48	74	P	Pn	08 02 27.1	+0.1
	baz=259						
MCARA	McCarthy VSAT	2.48	98		Pn	08 02 27.1	+0.2
MCARA	McCarthy VSAT	2.48	98	P	Pn	08 02 27.1	+0.2
	baz=283,SNR=27						
L26K	Log Cabin Wild	2.53	60		Pn	08 02 27.9	+0.4
L26K	Log Cabin Wild	2.53	60	IAML		08 03 12.5	
	comp=E,244nm,0.5s						
L26K				IAML		08 03 18.7	
	comp=N,202nm,0.4s						
L26K	Log Cabin Wild	2.53	60	P	Pn	08 02 28.1	+0.6
	baz=244						
DFR	Drift River	2.53	243		Pn	08 02 28.0	+0.4
Q23K	Middleton Isla	2.57	159		Pn	08 02 29.1	+1.2
Q23K	Middleton Isla	2.57	159	IAML		08 03 19.3	
	comp=E,279nm,1.3s						
Q23K				IAML		08 03 20.8	
	comp=N,268nm,1.8s						
MID	Middleton Isla	2.57	159		Pn	08 02 28.7	+0.6
MID	Middleton Isla	2.57	159	IAML		08 03 19.3	
	comp=E,312nm,1.3s						
MID				IAML		08 03 20.7	
	comp=N,295nm,1.9s						
RDJH	Redoubt Jeurge	2.58	243		Pn	08 02 29.0	+0.6
NICHA	Nichawak Mount	2.58	126		Pn	08 02 28.2	-0.1
DOT	Dot Lake	2.62	44		Pn	08 02 30.3	+1.5
BPAW	Bear Paw Mtn.	2.62	331		Pn	08 02 28.5	-0.3
BPAW	Bear Paw Mtn.	2.62	331	P	Pn	08 02 28.8	0.0
	baz=149,SNR=69						
RSO	Redoubt South	2.63	241		Pn	08 02 29.3	+0.2
HDA	Harding Lake	2.64	11		Pn	08 02 30.0	+0.9
HDA	Harding Lake	2.64	11	IAML		08 03 04.4	
	comp=E,219nm,0.3s						
HDA				IAML		08 03 07.1	
	comp=N,239nm,0.3s						
HDA	Harding Lake	2.64	11	P	Pn	08 02 30.0	+0.9
	baz=192,SNR=90						
NCT	North Crescent	2.65	243		Pn	08 02 29.7	+0.4
RDWB	Redoubt West	2.65	241		Pn	08 02 29.6	+0.3
WRH	Wood River Hil	2.65	0		Pn	08 02 29.5	+0.4
RED	Redoubt Volcan	2.66	240		Pn	08 02 29.6	+0.2
KHIT	Khitrov Hills	2.75	118		Pn	08 02 30.6	0.0
SUCK	Suckling Hills	2.76	128		Pn	08 02 30.6	-0.1
SUCK	Suckling Hills	2.76	128	IAML		08 03 14.8	
	comp=E,194nm,0.4s						
CNPM	China Poot	2.77	215		Pn	08 02 31.3	+0.4
CNPM	China Poot	2.77	215	IAML		08 03 12.4	
	comp=N,127nm,0.4s						
L20K	Farewell, AK	2.77	286		Pn	08 02 30.8	-0.1
L20K	Farewell, AK	2.77	286	P	Pn	08 02 30.7	-0.1
	baz=101,SNR=64						
HOM	Homer	2.78	220		Pn	08 02 31.6	+0.6
HOM	Homer	2.78	220	P	Pn	08 02 31.5	+0.6
	baz=37						
PS08	TAPS Pump Stn8	2.79	12		Pn	08 02 31.7	+0.6
PTPK	Patty Peak	2.79	101		Pn	08 02 31.6	+0.3
NEA2	Nenana	2.80	352		Pn	08 02 31.2	-0.1
NEA2	Nenana	2.80	352	IAML		08 03 06.4	
	comp=E,201nm,0.6s						
NEA2				IAML		08 03 19.4	
	comp=N,150nm,0.7s						
NEA2	Nenana	2.80	352	P	Pn	08 02 31.3	0.0
	baz=171,SNR=59						
O20K	Slope Mountain	2.81	233		Pn	08 02 31.8	+0.4
O20K	Slope Mountain	2.81	233	P	Pn	08 02 31.6	+0.2
	baz=49						
CHUM	Lake Minchumin	2.81	319		Pn	08 02 31.8	+0.4
CHUM	Lake Minchumin	2.81	319	P	Pn	08 02 31.8	+0.4
	baz=135,SNR=43						
CCB	Clear Creek Bu	2.83	3		Pn	08 02 32.2	+0.6
SCRK	Sand Creek	2.87	40		Pn	08 02 32.4	+0.1
SCRK	Sand Creek	2.87	40	IAML		08 03 20.5	
	comp=N,124nm,0.7s						
SCRK				IAML		08 03 20.5	
	comp=E,122nm,0.7s						
SCRK	Sand Creek	2.87	40	P	Pn	08 02 32.4	+0.1
	baz=223,SNR=14						
BALM	Baldy	2.89	103		Pn	08 02 32.1	-0.5
KIAG	Kiagna River	2.92	106		Pn	08 02 32.6	-0.5
M19K	Big River Lodg	2.97	274		Pn	08 02 33.8	+0.3
M19K	Big River Lodg	2.97	274	IAML		08 03 28.9	
	comp=E,118nm,0.8s						
M19K				IAML		08 03 30.7	
	comp=N,128nm,0.5s						
M27K	Edge Creek, AK	2.99	77		Pn	08 02 34.2	+0.3
IL31		3.00	10		Pn	08 02 34.7	+0.7
ILAR	Eielson Array	3.00	10	Pn	Pn	08 02 34.5	+0.5
TCOL	CIGO, UAF Yank	3.06	2		Pn	08 02 35.2	+0.5
TCOL	CIGO, UAF Yank	3.06	2	P	Pn	08 02 34.8	+0.1
	baz=182,SNR=37						
COLA	College	3.06	2		Pn	08 02 35.0	+0.2
COLA	College	3.06	2	P	Pn	08 02 34.8	+0.1
	baz=182						
J25K	Salcha River,	3.06	23		Pn	08 02 35.3	+0.4
J25K	Salcha River,	3.06	23	IAML		08 03 14.6	
	comp=E,130nm,0.6s						
J25K				IAML		08 03 20.6	
	comp=N,96nm,0.4s						
J25K	Salcha River,	3.06	23	P	Pn	08 02 35.1	+0.2
	baz=205,SNR=32						
ISLE	Juniper Island	3.06	111		Pn	08 02 34.4	-0.6
SNH	Sunshine Point	3.06	120		Pn	08 02 35.4	+0.4
SNH	Sunshine Point	3.06	120	IAML		08 03 22.3	
	comp=E,143nm,0.7s						
SNH				IAML		08 03 27.2	
	comp=N,167nm,1.9s						
MDM	Murphy Dome	3.14	359		Pn	08 02 36.5	+0.6
MDM	Murphy Dome	3.14	359	IAML		08 03 35.4	
	comp=E,124nm,0.8s						
K20K	Telida	3.14	302		Pn	08 02 35.9	-0.1
K20K	Telida	3.14	302	IAML		08 03 29.6	
	comp=E,97nm,0.9s						
K20K	Telida	3.14	302	P	Pn	08 02 35.9	-0.1
	baz=116,SNR=50						
L19K	White Mountain	3.19	279		Pn	08 02 36.8	+0.1
L19K	White Mountain	3.19	279	IAML		08 03 17.3	
	comp=E,85nm,0.6s						
L19K	White Mountain	3.19	279	P	Pn	08 02 36.7	+0.1
	baz=93,SNR=25						
BARN	Barnard Glacie	3.20	101		Pn	08 02 36.8	-0.2
BARN	Barnard Glacie	3.20	101	IAML		08 03 27.2	
	comp=E,146nm,0.7s						
BARN				IAML		08 03 28.0	
	comp=N,178nm,0.8s						
BAGL	Bagley Icefiel	3.22	112		Pn	08 02 36.8	-0.2
N19K	Bonanza Creek	3.23	254		Pn	08 02 37.2	0.0
N19K	Bonanza Creek	3.23	254	P	Pn	08 02 37.0	-0.2
	baz=69						
GRNC	Granite Creek	3.27	107		Pn	08 02 37.5	-0.4
GRNC	Granite Creek	3.27	107	IAML		08 03 25.9	
	comp=N,175nm,0.7s						
GRNC				IAML		08 03 29.8	
	comp=E,89nm,0.6s						
POKR	Poker Plat Res	3.31	5		Pn	08 02 39.0	+0.7
POKR	Poker Plat Res	3.31	5	IAML		08 03 22.8	
	comp=N,108nm,0.6s						
POKR				IAML		08 03 37.1	
	comp=E,80nm,0.6s						
POKR	Poker Plat Res	3.31	5	P	Pn	08 02 38.7	+0.4
	baz=186,SNR=8.7						
OPT	Oil Point	3.32	231		Pn	08 02 39.2	+0.8
P19K	Oil Pt	3.32	231		Pn	08 02 38.8	+0.3
P19K	Oil Pt	3.32	231	IAML		08 03 19.5	
	comp=E,158nm,0.6s						
P19K				IAML		08 03 42.2	
	comp=N,139nm,0.6s						
P19K	Oil Pt	3.32	231	P	Pn	08 02 38.7	+0.2
	baz=47						
I23K	Minto, Yukon-K	3.37	351		Pn	08 02 39.6	+0.5
I23K	Minto, Yukon-K	3.37	351	IAML		08 03 38.3	
	comp=N,99nm,0.6s						
I23K				IAML		08 03 43.9	
	comp=E,73nm,0.9s						
I23K	Minto, Yukon-K	3.37	351	P	Pn	08 02 39.5	+0.5
	baz=170,SNR=20						
CTG	Chitna Glacier	3.38	102	P	Pn	08 02 39.4	0.0
	baz=288,SNR=8.0						
CTGM	Chitina Glacie	3.38	102		Pn	08 02 39.5	+0.1
CTGM	Chitina Glacie	3.38	102	IAML		08 03 32.0	
	comp=N,126nm,0.6s						
J26L	Joseph Creek	3.39	36	P	Pn	08 02 39.7	+0.4
	baz=220,SNR=35						
O19K	Port Alsworth	3.43	244		Pn	08 02 39.7	-0.2
O19K	Port Alsworth	3.43	244	IAML		08 03 31.4	
	comp=N,121nm,0.4s						
O19K				IAML		08 03 41.6	
	comp=E,138nm,0.5s						
O19K	Port Alsworth	3.43	244	P	Pn	08 02 39.5	-0.3
	baz=59						
YAH	Yahtse	3.43	113		Pn	08 02 40.3	+0.1
YAH	Yahtse	3.43	113	IAML		08 03 32.3	
	comp=E,131nm,0.7s						
YAH				IAML		08 03 34.2	
	comp=N,147nm,0.6s						
MESA	MESA	3.44	116		Pn	08 02 40.0	-0.2
MESA	MESA	3.44	116	P	Pn	08 02 40.4	+0.2
	baz=302						
YUK2	White River	3.46	88		Pn	08 02 40.9	+0.4
PS07	TAPS Pump Stn7	3.49	359		Pn	08 02 41.8	+1.0
AU22	Augustine Moun	3.57	229		Pn	08 02 42.5	+0.7
LOGN	Logan Glacier	3.58	103		Pn	08 02 42.0	-0.1
LOGN	Logan Glacier	3.58	103	IAML		08 03 38.3	
	comp=E,89nm,1.1s						
LOGN				IAML		08 03 40.2	
	comp=N,142nm,1.0s						
AUL	Augustine Lava	3.59	229		Pn	08 02 42.7	+0.7
AUQ	Augustine Qik’	3.60	229		Pn	08 02 43.0	+0.7
AUH	Augustine H	3.60	229		Pn	08 02 43.3	+0.9
AUCH	Augustine Cone	3.60	229		Pn	08 02 43.0	+0.7
J20K	Nowinta River	3.61	313		Pn	08 02 42.6	+0.3
J20K	Nowinta River	3.61	313	IAML		08 03 27.2	
	comp=N,85nm,0.5s						
J20K				IAML		08 03 29.0	
	comp=E,106nm,0.5s						
J20K	Nowinta River	3.61	313	P	Pn	08 02 42.6	+0.3
	baz=128,SNR=58						
YUK3	Moose Creek	3.64	88		Pn	08 02 43.3	+0.3
YUK3	Moose Creek	3.64	88	P	Pn	08 02 43.1	0.0
	baz=274						
SVW2	Sparrevohn	3.65	262		Pn	08 02 42.7	-0.3
TABL	Table Mountain	3.67	109		Pn	08 02 43.1	-0.2
TABL	Table Mountain	3.67	109	IAML		08 03 39.0	
	comp=N,87nm,0.8s						
TABL				IAML		08 03 43.5	
	comp=E,84nm,0.9s						
I21K	Tanana	3.78	335		Pn	08 02 45.1	+0.5
I21K	Tanana	3.78	335	P	Pn	08 02 45.1	+0.5
	baz=151,SNR=9.5						
TT01	Tatalina	3.83	290		Pn	08 02 44.9	-0.5
TTA	Tatalina	3.83	290		Pn	08 02 44.9	-0.6
TTA	Tatalina	3.83	290	IAML		08 03 59.0	
	comp=E,62nm,1.1s						
TTA	Tatalina	3.83	290	P	Pn	08 02 44.8	-0.6
	baz=103,SNR=11						
CHX	Chaix Hills	3.85	114		Pn	08 02 45.9	+0.1
N18K	Kilae Creek	3.92	256		Pn	08 02 46.3	-0.4
N18K	Kilae Creek	3.92	256	P	Pn	08 02 46.1	-0.5
	baz=69						
SAMH	Samovar Hills	3.97	112		Pn	08 02 47.3	0.0
Q19K	Cape Douglas,	4.00	226		Pn	08 02 47.7	0.0
Q19K	Cape Douglas,	4.00	226	IAML		08 03 54.9	
	comp=N,90nm,1.0s						
Q19K	Cape Douglas,	4.00	226	P	Pn	08 02 47.5	-0.2
	baz=41,SNR=6.6						
H24K	Noodor Dome	4.02	1		Pn	08 02 47.9	-0.2
H24K	Noodor Dome	4.02	1	IAML		08 04 05.0	
	comp=E,44nm,1.3s						
H24K	Noodor Dome	4.02	1	P	Pn	08 02 48.7	+0.6
	baz=182,SNR=12						
H23K	Yukon River	4.06	352		Pn	08 02 49.1	+0.6
H23K	Yukon River	4.06	352	IAML		08 03 41.9	
	comp=N,46nm,0.8s						
H23K	Yukon River	4.06	352	P	Pn	08 02 48.9	+0.4
	baz=170,SNR=14						
PCA	Pinnacle	4.21	111		Pn	08 02 50.5	-0.2
PINM	Pinnacle	4.22	111	P	Pn	08 02 50.6	-0.2
	baz=298						
P18K	Big Mountain,	4.27	238		Pn	08 02 51.4	0.0
P18K	Big Mountain,	4.27	238	P	Pn	08 02 51.0	-0.5
	baz=52						
EGAK	Eagle	4.32	44		Pn	08 02 52.2	+0.2
EGAK				IAML		08 04 09.3	
	comp=N,58nm,0.8s						
EGAK				IAML		08 04 10.2	
	comp=N,56nm,1.0s						
H21K	Melozitna Rive	4.36	334		Pn	08 02 53.0	+0.3
H21K	Melozitna Rive	4.36	334	IAML		08 04 10.0	
	comp=E,36nm,1.0s						
H21K	Melozitna Rive	4.36	334	P	Pn	08 02 53.0	+0.3
	baz=149,SNR=108						
BCPM	Bancas Point	4.56	111		Pn	08 02 55.0	-0.4
BCPM	Bancas Point	4.56	111	IAML		08 04 06.5	
	comp=E,58nm,0.9s						
BCPM				IAML		08 04 14.5	
	comp=N,72nm,0.9s						
YUK4	Talbot Arm	4.56	92	P	Pn	08 02 55.8	+0.2
	baz=279						
DAWY	Dawson	4.58	57		Pn	08 02 57.1	+1.4
DAWY	Dawson	4.58	57	P	Pn	08 02 56.2	+0.5
	baz=245						
KDAK	Kodiak Island	4.64	211	Pn	Pn	08 02 55.6	-0.9
KDAK				IAML		08 03 37.9	
	comp=N,30nm,3.1s						
KDAK				IAML		08 04 22.3	
	comp=N,29nm,3.0s						
KDAK	Kodiak Island	4.64	211	P	Pn	08 02 55.3	-1.2
	baz=27						
YUK6	Outpost Mounta	4.78	96		Pn	08 02 59.4	+0.7
YUK6	Outpost Mounta	4.78	96	P	Pn	08 02 59.2	+0.6
	baz=285						
PNL	Peninsula	4.80	113		Pn	08 02 58.9	+0.1
PNL	Peninsula	4.80	113	P	Pn	08 02 58.9	+0.1
	baz=301						
IM03		4.85	332		Pn	08 02 59.8	+0.5
IMAR	Indian Mountai	4.85	332	Pn	Pn	08 02 59.8	+0.5
GCSA	Galena City Sc	4.91	310		Pn	08 03 00.0	-0.1
GCSA	Galena City Sc	4.91	310	P	Pn	08 03 00.8	+0.7
	baz=122						
KELA	Mount Kelaz	5.10	232		Pn	08 03 02.6	-0.3
HYT	Haines Junctio	5.22	96		Pn	08 03 05.1	+0.5
HYT	Haines Junctio	5.22	96	P	Pn	08 03 05.0	+0.4
	baz=286						
N30M	Aishikik Lake	5.28	89	P	Pn	08 03 04.6	-0.7
	baz=279						
OHAK	Old Harbor	5.32	212		Pn	08 03 04.2	-1.6
OHAK	Old Harbor	5.32	212	P	Pn	08 03 04.1	-1.6
	baz=27						
COLD	Coldfoot	5.49	352		Pn	08 03 08.3	+0.2
COLD	Coldfoot	5.49	352	P	Pn	08 03 08.7	+0.5
	baz=170						
I29M	Ogilvie Camp,	5.63	47		Pn	08 03 11.2	+1.0
BM03	Burnt Mountain	5.81	14		Pn	08 03 13.0	+0.4
BMAR	Burnt Mountain	5.82	14	Pn	Pn	08 03 14.7	+1.9
WHY	Whitehorse	6.50	95		Pn	08 03 22.2	0.0
WHY	Whitehorse	6.50	95	P	Pn	08 03 22.0	-0.2

	baz=286						
TOLK	Toolik Lake Re	6.87	356		Pn	08 03 28.1	+1.0
TOLK	Toolik Lake Re	6.87	356	P	Pn	08 03 27.6	+0.6
	baz=174						
ANM	Nome	8.25	297		Pn	08 03 46.8	+0.8

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*IDC **18** 08:06:14.3±0.6, 0°.60N×79°.69W, h0^{km}, mb4.3/17, mbtmp4.4/19, ML4.4/2, Error ellipse: s-maj=27.9km s-min=13.1km az=61.0*

*NEIC **18** 08:06:17.7±2.4, 0°.43N±0°.06×79°.83W±0°.07, h10^{km}±1^{km}, mb4.8/38, Error ellipse: s-maj=11.9km s-min=9.5km az=241.0*

*IGQ **18** 08:06:17±0.1, 0°.4N±0°.8×79°.9W±1°.0, h11^{km}*

ISC 18 08:06:17.3±0.8**, 0°.40N**±0°.02×**79°.85W**±0°.02**, h19**^{km}±5^{km}**, n248, σ1^{s}34**/275**, mb4.7**/35**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EC12	NORTH OF DAULE	0.13	274	P	Pg	08 06 21.0	-0.4
EC12				S	Sb	08 06 25.0	+4.2
EC13	SOUTH OF SALIM	0.14	227	P	Pb	08 06 22.0	+2.4
EC13				S	Sb	08 06 26.0	+5.0
AMOM	Mompiche	0.22	295	P	Pg	08 06 22.0	-0.6
AMOM				S	Sg	08 06 26.0	-0.1
EC04	EL BOTADO, WES	0.26	115	P	Pn	08 06 25.0	-1.2
LGCB	Laguna Cube	0.28	94	P	Pb	08 06 25.0	+1.4
LGCB				S	Sb	08 06 30.0	+2.2
EC15	JUST BEFORE CU	0.28	51	P	Pb	08 06 25.0	+1.2
EC15				S	Sn	08 06 31.0	-1.3
EC03	NORTH OF SAN F	0.33	321	P	Pg	08 06 24.0	-0.5
EC03				S	Sg	08 06 29.0	-0.4
EC06	EAST OF PEDERN	0.37	203	P	Pb	08 06 25.0	-0.4
EC06				S	Sb	08 06 31.0	+0.2
AV18	Acelerografo,	0.38	103	P	Pn	08 06 27.0	-0.9
APED	Ecuador-Perden	0.39	212	P	Pb	08 06 26.0	+0.3
APED				S	Sb	08 06 32.0	+0.6
AV21	Acelerografo,	0.40	50	P	Pb	08 06 26.0	+0.1
AV21				S	Sn	08 06 34.0	-1.1
EC14	SOUTH OF TABIA	0.41	22	P	Pb	08 06 26.0	0.0
EC11	LA UNION	0.41	358	P	Pg	08 06 25.0	-0.8
EC11				S	Sb	08 06 32.0	0.0
EC17	SOUTH OF ESTER	0.42	180	P	Pb	08 06 27.0	+0.6
EC17				S	Sb	08 06 33.0	+0.5
ASAM	Ecuador-Same-C	0.44	352	P	Pg	08 06 25.0	-1.4
AATC	Ecuador-Atacam	0.46	358	P	Pg	08 06 26.0	-0.7
AATC				S	Sg	08 06 32.0	-1.0
MAG1	Magdalena	0.48	171	P	Pb	08 06 28.0	+0.8
ATON	Ecuador-Tonsup	0.48	4	P	Pg	08 06 27.0	-0.2
ATON				S	Sg	08 06 34.0	+0.2
EC05	EAST OF QUINDE	0.49	100	P	Pn	08 06 29.0	-0.4
CHIB	CHIBUNGA	0.50	176	P	Pb	08 06 28.0	+0.5
EC01	ESMERALDAS	0.56	19	P	Pg	08 06 28.0	-0.6
EC01				S	Sb	08 06 37.0	+0.9
AES1	Ecuador-Esmera	0.58	16	P	Pg	08 06 28.0	-0.9
AES1				S	Sb	08 06 37.0	+0.4
NOVI	SAN FRANCISCO	0.59	181	P	Pn	08 06 30.0	-0.7
NOVI				S	Sn	08 06 41.0	+1.2
EC16	SOUTHWEST OF T	0.61	214	P	Pg	08 06 29.0	-0.5
EC16				S	Sb	08 06 38.0	+0.4
AES2	Ecuador-Puerto	0.62	19	P	Pg	08 06 29.0	-0.7
AES2				S	Sb	08 06 39.0	+1.2
EC02	VENTE CASAS, S	0.64	26	P	Pb	08 06 30.0	+0.1
EC02				S	Sb	08 06 40.0	+1.5
EC07	SOUTH OF LIMON	0.66	152	P	Pn	08 06 32.0	+0.3
BV15	Puerto Quito-O	0.67	111	P	Pb	08 06 31.0	+0.6
BV15				S	Sn	08 06 42.0	+0.1
EC18	SOUTHEAST OF B	0.69	208	P	Pg	08 06 30.0	-1.0
WILF	WILFRIDO LOOR	0.74	159	P	Pn	08 06 33.0	+0.2
JAMA	Jama	0.75	208	P	Pg	08 06 31.0	-1.0
JAMA				S	Sg	08 06 41.0	-1.0
FLF1	Flavio Alfaro-	0.75	179	P	Pn	08 06 33.0	0.0
FLF1				S	Sn	08 06 46.0	+2.0
EC08	CAMARONES	0.85	187	P	Pn	08 06 34.0	-0.3
SESM	LA ISLA	0.91	190	P	Pn	08 06 35.0	-0.2
SESM				S	Sn	08 06 50.0	+2.2
APR2	Miler	0.94	110	P	Pb	08 06 35.0	-0.1
APR2				S	Sn	08 06 49.0	+0.4
CABP	Cabo Pasado	0.97	216	P	Pb	08 06 35.0	-0.6
CABP				S	Sg	08 06 49.0	-0.1
ASDO	Santo Domingo	0.98	132	P	Pb	08 06 35.0	-0.8
ACHN	Ecuador-Chone-	1.12	192	P	Pn	08 06 38.0	0.0
SALS	SAN ANTONIO -	1.12	202	P	Pb	08 06 37.0	-1.1
CHON	CHONE	1.14	192	P	Pb	08 06 38.0	-0.4
ABH2	Ecuador-Univer	1.19	207	P	Pn	08 06 39.0	+0.1
MUTR	MUTRE	1.23	200	P	Pb	08 06 40.0	+0.1
APR1	Acelerografo,	1.31	110	P	Pn	08 06 41.0	0.0
LORE	San Lorenzo	1.34	49	P	Pg	08 06 49.0	+5.8
BUFE	BUENA FE, CENT	1.35	165	P	Pn	08 06 40.0	-1.1
HPAL	Hacienda Las P	1.35	117	P	Pn	08 06 41.0	-0.5
PINO	Pino	1.36	114	P	Pn	08 06 40.0	-1.9
TERV	Terraza Guagua	1.37	115	P	Pn	08 06 42.0	0.0
GGPT	Toaza - Volcan	1.38	117	P	Pn	08 06 42.0	+0.1
YANA	Yana	1.38	112	P	Pn	08 06 42.0	0.0
GGPC	Guagua Pichinc	1.38	115	P	Pn	08 06 42.0	-0.1
JUA2	San Juan 2	1.39	116	P	Pn	08 06 42.0	-0.1
EC09	EL TABLON	1.40	195	P	Pn	08 06 42.0	+0.1
OTAV	Otavalo	1.41	97	Pn	Pb	08 06 43.5	+0.2
ROCA	ROCAFUERTE 2	1.45	204	P	Pn	08 06 42.0	-0.5
DELA	Administracion	1.45	111	P	Pn	08 06 43.0	+0.1
ROQE	Tereno de la P	1.45	115	P	Pn	08 06 43.0	0.0
CUSE	Cuicocha Este	1.45	94	P	Pb	08 06 44.0	-0.1
SADP	Ecuador-Quito-	1.46	106	P	Pn	08 06 43.0	+0.1
PRAM	Casa Patricio	1.46	112	P	Pb	08 06 44.0	-0.1
SANF	Convento San F	1.47	115	P	Pn	08 06 43.0	-0.2
QUIB	Administracin	1.48	118	P	Pb	08 06 44.0	-0.4
CRPG	Carapungo - Pi	1.48	110	P	Pb	08 06 44.0	-0.5
CIRC	Crculo Milita	1.49	114	P	Pn	08 06 44.0	+0.6
EPNL	EPN Laboratori	1.49	114	P	Pn	08 06 44.0	+0.6
CUIC	Cuicocha-Domo	1.49	94	P	Pn	08 06 44.0	+0.5
CUSW	Cuicocha Oeste	1.50	94	P	Pb	08 06 45.0	+0.1
COTA	Cotacachi	1.51	92	P	Pb	08 06 45.0	-0.1
BIMJ	BASE NAVAL BIM	1.52	209	P	Pn	08 06 44.0	+0.5
ALIT	Ecuador-Imbabu	1.54	75	P	Pn	08 06 43.0	-0.9
LITE1	Lita	1.54	75	P	Pn	08 06 44.0	+0.1
AV11	Acelerografo,	1.55	108	P	Pb	08 06 46.0	+0.4
APO1	Ecuador-Portov	1.55	203	P	Pb	08 06 45.0	-0.5
TING	Casa Alexandra	1.56	116	P	Pn	08 06 45.0	+0.7
ILLI	Illinizas Sur	1.58	135	P	Pn	08 06 45.0	+0.2
URCU	Urcuqui	1.59	89	P	Pb	08 06 46.0	-0.5
AMNT	Manta-Manabi	1.60	214	P	Pn	08 06 44.0	-0.6
AOTA	Otavalo	1.60	96	P	Pb	08 06 46.0	-0.5
PAST	Pastocalle	1.63	132	P	Pn	08 06 46.0	+0.6
AAT1	Ecuador-Atunta	1.64	92	P	Pb	08 06 47.0	-0.1
VMON	MONTECRISTI 3	1.66	209	P	Pn	08 06 46.0	+0.5
EC19	TOALLA CHICA	1.67	209	P	Pn	08 06 46.0	+0.3
LAPI	LA PILA	1.69	206	P	Pn	08 06 45.0	-0.9
SUCR	Mariscal Sucre	1.71	127	P	Pb	08 06 48.0	-0.4
SRAM	San Ramn-Vol	1.72	132	P	Pb	08 06 48.0	-0.6
CAMI	Rancho Maria	1.72	129	P	Pb	08 06 48.0	-0.6
AIB1	Ecuador-Imbabu	1.73	92	P	Pb	08 06 48.0	-0.6
NAS2	Nasa	1.73	127	P	Pb	08 06 48.0	-0.8
BNAS	Cotopaxi Volca	1.73	128	P	Pb	08 06 48.0	-0.9
AIB2	Ibarra (Univer	1.75	92	P	Pb	08 06 49.0	0.0
SLOR	San Lorenzo -	1.76	130	P	Pb	08 06 49.0	-0.3
EC20	SOUTH OF MONTE	1.76	199	P	Pn	08 06 47.0	+0.1
BREF	Cotopaxi Volca	1.77	127	P	Pb	08 06 49.0	-0.5
YAHU	Yahuarcocha	1.78	91	P	Pb	08 06 49.0	-0.6
VC1	Cotopaxi 1	1.78	126	P	Pb	08 06 49.0	-0.7
BVC2	Cotopaxi Volca	1.78	126	P	Pb	08 06 49.0	-0.7
BMOR	Cotopaxi Volca	1.79	129	P	Pb	08 06 49.0	-0.9
BTAM	Cotopaxi Volca	1.80	126	P	Pb	08 06 50.0	-0.1
ALAT	Latacunga	1.81	137	P	Pb	08 06 49.0	-1.0
CTUM2	Tumaco	1.81	39	*e*P	Pn	08 06 45.3	-2.2
TUMC	Tumaco	1.81	38	Pn	Pn	08 06 48.1	+0.6
BRRN	Barrancas-Volc	1.81	131	P	Pn	08 06 49.0	+1.1
AOLM	OLMEDO, CENTRO	1.82	191	P	Pb	08 06 49.0	-1.1
ANTG	Antisana-Guama	1.83	119	P	Pb	08 06 50.0	-0.6
TAMB	Tambo	1.84	126	P	Pb	08 06 50.0	-0.7
CHMA	Chilma	1.84	76	P	Pn	08 06 47.0	-1.3
ANGU	Angureal	1.88	101	P	Pb	08 06 52.0	+0.6
ANTM	Antisana-La Mi	1.88	120	P	Pn	08 06 50.0	+1.1
JOSE	SAN JOSE	1.88	210	P	Pb	08 06 50.0	-1.0
LNGL	El Angel-Carch	1.88	80	P	Pn	08 06 50.0	+1.1
VCES	Cotopaxi	1.88	129	P	Pn	08 06 50.0	+1.0
CAYR	Refugio Cayamb	1.88	102	P	Pb	08 06 51.0	-0.5
ANTI	Antisana	1.89	117	P	Pn	08 06 50.0	+0.9
CAYA	Cayambe	1.89	100	P	Pb	08 06 51.0	-0.5
JIPI	JIPIJAPA	1.89	202	P	Pb	08 06 50.0	-1.3
ANTS	Antisana-Sarah	1.90	118	P	Pb	08 06 51.0	-0.8
APS4	Papallacta	1.91	114	P	Pb	08 06 51.0	-0.7
ECEN	Cerro Negro	1.93	77	P	Pn	08 06 50.0	+0.4
CHL1	Volc¡n Chiles	1.94	78	P	Pn	08 06 50.0	+0.1
CHL2	Volc¡n Chiles	1.97	78	P	Pn	08 06 51.0	+0.8
PAJA	PAJAN 2	2.04	197	P	Pn	08 06 50.0	-0.7
ISPT	Isla de la Pla	2.06	217	P	Pb	08 06 53.0	-1.1
TULM	Tulcn-Chalpat	2.09	81	P	Pb	08 06 54.0	-0.9
CMBC	Cumbal	2.10	75	*e*P	Pn	08 06 53.2	+1.3
CMBC	Cumbal	2.10	75	P	Pn	08 06 52.0	+0.2
PIAT	Ana Tenorio	2.11	131	P	Pb	08 06 54.0	-1.2
CHSH	Refugio Sur-Vo	2.12	152	P	Pb	08 06 54.0	-1.6
PORT	Chimborazo Vol	2.14	150	P	Pn	08 06 54.0	+1.4
PPLP	Puerto Lpez	2.14	206	P	Pb	08 06 55.0	-0.6
ATUL	Tulcn	2.16	80	P	Pb	08 06 55.0	-1.0
TAMH	Tambohuasha Ch	2.21	151	P	Pn	08 06 55.0	+1.6
ABAB	Ecuador-Univer	2.21	171	P	Pn	08 06 54.0	+0.9
IGUA	Igualata	2.23	147	P	Pn	08 06 55.0	+1.1
JUI6	Juive	2.28	143	P	Pb	08 06 57.0	-1.1
BIL2	Estacion Bilba	2.28	144	P	Pb	08 06 57.0	-1.2
POND	Pondoa	2.29	142	P	Pb	08 06 57.0	-1.2
BBIL	Ulba Tungurahu	2.29	143	P	Pb	08 06 57.0	-1.3
BRUN	Tungurahua Vol	2.31	142	P	Pb	08 06 57.0	-1.7
RETU	Refugio	2.31	143	P	Pb	08 06 58.0	-0.8
BONI	La Bonita	2.32	89	P	Pb	08 06 58.0	-0.8
BMAS	Trigal station	2.34	144	P	Pn	08 06 57.0	+1.9
ARRY	Arrayan	2.35	144	P	Pn	08 06 57.0	+1.7
BPAT	Tungurahua Vol	2.36	143	P	Pb	08 06 58.0	-1.6
AMIL	Milagro (Trans	2.53	174	P	Pn	08 06 58.0	+0.5
GYE3	Ecuador-Guayaq	2.54	181	P	Pn	08 06 59.0	+1.4
AV03	Acelerografo,	2.56	98	P	Pb	08 07 02.0	-0.6
GYE2	Ecuador-Guayaq	2.58	181	P	Pn	08 06 57.0	-1.2
APUY	Puyo	2.62	135	P	Pb	08 07 03.0	-0.7
CCUFI	Cufio, Nario	2.63	72	*e*P	Pn	08 07 00.5	+1.2
CPAS2	Pasto	2.72	73	*e*P	Pb	08 07 03.4	-2.3
COHC	Cochancay	2.91	168	P	Pn	08 07 02.0	-0.7
CRUC	La Cruz	3.12	68	*e*P	Pn	08 07 07.8	+1.9
BOSC	San Juan Bosco	3.78	159	P	Pn	08 07 19.0	+4.2
ARNL	Arenillas	3.93	183	P	Pn	08 07 19.0	+2.3
BETC	Betania	4.96	63	*e*P	Pn	08 07 34.6	+3.7
ANIL	Santa Ana	6.02	47	*e*P	Pn	08 07 48.4	+2.7
MACC	Macarena, Meta	6.25	74	*e*P	Pn	08 07 52.3	+3.7
CMAN1	Manizales, Cal	6.34	43	*e*P	Pn	08 07 53.7	+3.6
CBOC	Ciudad Bolivar	6.64	35	*e*P	Pn	08 07 56.4	+2.2
CACAO	El Cacao, Vera	6.97	352	*e*P	Pn	08 07 59.0	+0.5
ROSC	El Rosal	7.07	51	Pn	Pn	08 08 04.3	+4.1
	30nm,0.3s,baz=6.7,slow=5.7,SNR=16						
ROSC	El Rosal	7.07	51	Pn	Pn	08 08 02.2	+2.0
CNOCA	NORCASIA, CALD	7.14	44	*e*P	Pn	08 08 05.0	+4.1
AZU	Azuero	7.35	357	*e*P	Pn	08 08 07.5	+3.7
CHIC	Chingaza	7.42	55	*e*P	Pn	08 08 07.8	+2.8
ATAH	Atahualpa	7.63	169	Pn	Pn	08 08 10.9	+3.0
	3.7nm,0.3s,baz=15,slow=7.2,SNR=19						
ATAH				Sn	Sn	08 09 35.1	+1.0
	1.0nm,0.3s,baz=290,slow=20,SNR=0.9						
	34nm,0.6s						
ZARC	Zaragoza, Cauc	8.62	35	Pn	Pn	08 08 23.9	+2.6
BCIP	Isla Barro Col	8.71	0	Pn	Pn	08 08 24.6	+2.3
BCIP	Isla Barro Col	8.71	0	*e*P	Pn	08 08 25.8	+3.4
BRU2	Volcan	8.80	341		Pn	08 08 26.6	+2.7
BRU2	Volcan	8.80	341	*e*P	Pn	08 08 24.9	+1.1
BRRC	Barranca, Sant	9.05	42	*e*P	Pn	08 08 28.7	+1.6
DRK0	Durika	9.43	339		Pn	08 08 34.1	+1.7
SRBA	San Rafael, Bu	9.44	338		Pn	08 08 33.5	+0.9
PEZE	Perez Zeledon,	9.70	337		Pn	08 08 38.5	+2.3
RIMA	Rio Macho	10.12	337	Pn	Pn	08 08 43.4	+1.4
JACO	JACO, Garabito	10.37	333	Pn	Pn	08 08 44.9	-0.3
HDC	Heredia	10.44	336		Pn	08 08 48.3	+2.1
PAYG	Puerto Ayora	10.49	264	Pn	Pn	08 08 48.2	+1.4
JTS	Las Juntas de	11.06	333	Pn	Pn	08 08 56.4	+1.8
HZTE	Horizontes, Gu	11.73	331	Pn	Pn	08 09 06.6	+2.8
NNA	Nana	12.66	166	Pn	Pn	08 09 17.1	+0.4
	3.7nm,0.3s,baz=329,slow=14,SNR=7.0						
NNA				Sn	Sn	08 11 36.8	-0.6
	2.5nm,0.3s,baz=96,slow=16,SNR=2.2						
	20nm,0.7s						
NNA	Nana	12.66	166	Pn	Pn	08 09 17.4	+0.7
MTO3	Montecristo	16.79	326		P	08 10 14.4	+0.4
BIRV	Birongo	16.81	53	Pn	Pn	08 10 11.5	-0.3
SAML	Samuel	19.02	120	P	P	08 10 37.0	-1.3
LPAZ	La Paz	20.22	146	P	Pn	08 10 53.7	-0.3
	57nm,1.1s,baz=167,slow=0.9,SNR=9.0						
	57nm,1.1s						
SDDR	Presa de Saban	20.29	24	P	Pn	08 10 53.5	-0.7
SDDR				IAmb	IAmb	08 11 16.5	
	comp=Z,60nm,1.3s						
DR12	Loma Pena Alta	20.96	29	P	P	08 11 00.9	+1.4
PB16	IPOC Station P	21.21	152	P	P	08 11 04.9	+2.1
PB16				IAmb	IAmb	08 11 10.8	
	comp=Z,38nm,1.1s						
TOSP	Speyside	22.03	60	P	P	08 11 10.4	-0.5
SJG	San Juan	22.16	37	P	P	08 11 14.8	+2.5
	comp=Z,20nm,0.7s,baz=205,slow=5.5,SNR=6.0						
CMIG	Matias Romero	22.23	319	P	P	08 11 13.5	+0.4
	comp=Z,3.9nm,0.9s,baz=237,slow=7.6,SNR=2.9						
	comp=Z,3.9nm,0.9s						
PB11	IPOC Station P	22.39	154	P	P	08 11 18.1	+3.2
PB11				IAmb	IAmb	08 11 37.7	
	comp=Z,53nm,1.0s						
CBYP	Canovanas	22.46	37	P	P	08 11 16.6	+1.0
CBYP				IAmb	IAmb	08 11 18.6	
	comp=Z,46nm,0.8s						
CUPR	Culebra, Puert	22.84	38	P	P	08 11 19.9	+0.4
CUPR				IAmb	IAmb	08 11 31.2	
	comp=Z,20nm,0.8s						
STVI	Saint Thomas	23.07	39	P	P	08 11 22.6	+0.6
STVI				IAmb	IAmb	08 11 37.5	
	comp=Z,48nm,1.1s						
PB01	IPOC Station P	23.60	155	P	P	08 11 28.9	+1.6
PB01				IAmb	IAmb	08 11 40.8	
	comp=Z,44nm,1.4s						
PB02	IPOC Station P	23.68	156	P	P	08 11 28.9	+0.7
PB02				IAmb	IAmb	08 11 56.4	
	comp=Z,21nm,1.0s						
LVC	Limon Verde	25.23	156	P	P	08 11 43.5	+0.8
	comp=Z,4.1nm,0.5s,baz=335,slow=7.0,SNR=5.3						
	comp=Z,4.1nm,0.5s						
LVC	Limon Verde	25.23	156	P	P	08 11 42.2	-0.5
AC02	Maricunga	28.98	160	P	P	08 12 18.7	+2.2
AC02				IAmb	IAmb	08 12 32.7	
	comp=Z,14nm,1.1s						
CO01	Juntas del Tor	31.61	164	P	P	08 12 40.6	+1.2
CO02	Combarbal	32.54	166	P	P	08 12 48.2	+0.8
MT02	Curacav	34.47	167	P	P	08 13 05.3	+1.1
MT02				IAmb	IAmb	08 13 15.6	
	comp=Z,12nm,1.2s						
MT09	Talagante	35.00	167	P	P	08 13 10.0	+1.1
MT09				IAmb	IAmb	08 13 10.5	
	comp=Z,13nm,1.1s						
MT01	Popeta	35.03	167	P	P	08 13 08.3	-0.6
CPCT	Cooper Cave	35.14	353	P	P	08 13 09.8	-0.1
V55A	Taylorsville	35.29	358	P	P	08 13 11.1	-0.1
TZTN	Tazewell	36.12	355	P	P	08 13 17.8	-0.5
TZTN				IAmb	IAmb	08 13 23.6	
	comp=Z,29nm,1.2s						
WVT	Waverly	36.31	349	P	P	08 13 18.6	-1.3
U49A	Red Boiling Sp	36.35	352	P	P	08 13 19.4	-0.8
TXAR	Lajitas Array	36.66	324	P	P	08 13 23.1	0.0
	comp=Z,1.3nm,0.9s,baz=139,slow=12,SNR=4.5						
TXAR				PcP	PcP	08 15 46.2	+0.2
	comp=Z,2.3nm,0.8s,baz=134,slow=7.2,SNR=7.6						
	comp=Z,1.3nm,0.9s						
S51A	Beattyville	37.22	355	P	P	08 13 27.2	-0.4
S51A				IAmb	IAmb	08 13 27.3	
	comp=Z,12nm,0.8s						
R55A	Marlinton	37.70	360	P	P	08 13 31.4	-0.3
R55A				IAmb	IAmb	08 13 41.7	
	comp=Z,35nm,1.4s						
SSPA	Standing Stone	40.09	2	P	P	08 13 52.0	+0.3
SSPA				IAmb	IAmb	08 14 07.8	
	comp=Z,18nm,1.1s						
BINY	Binghamton	41.76	4	P	P	08 14 05.8	+0.4
BINY				IAmb	IAmb	08 14 06.5	
	comp=Z,19nm,0.9s						
PLCA	Paso Flores	41.81	169	P	P	08 14 06.9	+0.9
	comp=Z,8.2nm,0.7s,baz=345,slow=11,SNR=15						
	comp=Z,8.2nm,0.7s						
ANMO	Albuquerque	42.40	327	P	P	08 14 11.5	+0.4
	comp=Z,3.9nm,0.9s,baz=145,slow=16,SNR=5.0						
	comp=Z,3.9nm,0.9s						
ANMO	Albuquerque	42.40	327	P	P	08 14 12.6	+1.6
ANMO				IAmb	IAmb	08 14 19.3	
	comp=Z,20nm,0.9s						
HRV	Adam Dziewonsk	42.58	9	P	P	08 14 12.2	+0.1
HRV				IAmb	IAmb	08 14 37.1	
	comp=Z,42nm,1.4s						
GO07	Milladeo Hill,	43.68	173	P	P	08 14 22.0	+1.0
WUAZ	Wupatki	45.62	323	P	P	08 14 38.4	+1.6
LMN	Caledonia Moun	47.16	14	P	P	08 14 48.7	+0.1
D62A	Allapoint, All	47.44	10	P	P	08 14 51.6	+0.8
PDAR	Pinedale Array	49.89	331	P	P	08 15 07.5	-2.4
	comp=Z,0.5nm,0.7s,baz=243,slow=6.5,SNR=1.9						
PDAR				PcP	PcP	08 16 29.3	-1.0
	comp=Z,1.4nm,0.9s,baz=150,slow=3.8,SNR=2.3						
	comp=Z,0.5nm,0.7s						
ULM	Lac du Bonnet	51.51	347	P	P	08 15 19.8	-2.0
	comp=Z,5.3nm,0.7s,baz=221,slow=22,SNR=2.8						
	comp=Z,5.3nm,0.7s						
NVAR	Mina Array Bea	51.73	322	P	P	08 15 23.9	0.0
	comp=Z,2.2nm,0.8s,baz=140,slow=4.2,SNR=4.5						
NVAR				PcP	PcP	08 16 37.1	-0.1
	comp=Z,1.5nm,0.8s,baz=120,slow=5.3,SNR=1.4						
	comp=Z,2.2nm,0.8s						
HLID	Hailey	52.89	329	P	P	08 15 32.9	+0.6
MCMT	McKenzie Canyo	53.01	331	P	P	08 15 35.2	+1.8
YBH	Yreka Blue Hor	56.41	322	P	P	08 15 57.9	0.0
	comp=Z,1.8nm,0.8s,baz=227,slow=15,SNR=2.1						
	comp=Z,1.8nm,0.8s						
YKA	Yellowknife Ar	67.19	343	P	P	08 17 08.9	-1.1
	comp=Z,2.7nm,0.7s,baz=136,slow=6.0,SNR=9.8						
	comp=Z,2.7nm,0.7s						
LIC	Lamto	74.87	84	*e*P	P	08 17 56.3	-1.2
	comp=Z,28nm,1.1s						
TIC	Toumodi	74.89	83	*e*P	P	08 17 55.5	-2.2
DBIC	Dimbokro	75.05	83	P	P	08 17 57.9	-0.7
	comp=Z,4.1nm,0.6s,baz=298,slow=4.5,SNR=3.6						
	comp=Z,4.1nm,0.6s						
KIC	Kosan Boka	75.16	84	*e*P	P	08 17 58.0	-1.2
	comp=Z,27nm,0.8s						
ESDC	Sonseca Array	78.89	50	P	P	08 18 20.0	+0.1
	comp=Z,7.1nm,1.0s,baz=265,slow=5.8,SNR=18						
	comp=Z,7.1nm,1.0s						
ILAR	Eielson Array	80.01	336	P	P	08 18 24.8	-0.5
	comp=Z,1.6nm,0.9s,baz=79,slow=3.5,SNR=4.2						
	comp=Z,1.6nm,0.9s						
TORD	Torodi Ar. Bea	81.67	77	P	P	08 18 34.1	-1.1
	comp=Z,3.8nm,0.6s,baz=281,slow=6.3,SNR=35						
	comp=Z,3.8nm,0.6s						
GERES	GERESS Array B	92.05	41	P	P	08 19 22.6	-2.8
	comp=Z,0.6nm,0.7s,baz=297,slow=5.0,SNR=2.2						
	comp=Z,0.6nm,0.7s						
FINES	FINESS Array B	97.22	28	P	P	08 19 47.8	-0.9
	comp=Z,1.7nm,0.8s,baz=235,slow=4.9,SNR=2.7						
	comp=Z,1.7nm,0.8s						
ZALV	Zalesovo Beam	124.36	11	PKP	PKPdf	08 25 12.9	-2.2
	comp=Z,2.0nm,0.8s,baz=256,slow=3.1,SNR=3.7						
KURBB	Kurchatov Arra	125.93	17	PKP	PKPdf	08 25 17.4	-0.8
	comp=Z,2.1nm,0.6s,baz=331,slow=2.2,SNR=8.8						
MKAR	Makanchi Array	130.46	16	PKP	PKPdf	08 25 26.2	-0.8
	comp=Z,1.5nm,0.9s,baz=347,slow=3.2,SNR=4.9						
KSRS	Korea Array	134.42	329	PKP	PKPdf	08 25 34.1	-0.7
	comp=Z,1.5nm,0.7s,baz=351,slow=1.7,SNR=5.6						
ASAR	Alice Springs	139.91	232	PKP	PKPdf	08 25 44.4	-1.0
	comp=Z,0.9nm,0.8s,baz=128,slow=2.5,SNR=2.6						
WRA	Warramunga Arr	141.31	238	PKP	PKPdf	08 25 47.1	-0.8
	comp=Z,1.1nm,0.7s,baz=112,slow=2.4,SNR=7.0						
CMAR	Chiang Mai Arr	161.22	4	PKPab	PKPab	08 26 59.8	-1.2
	comp=Z,1.1nm,0.3s,baz=330,slow=3.7,SNR=4.7						

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*SOME **18** 08:25:32.6, 42°.58N×86°.07E, h5^{km}*

*IDC **18** 08:25:47.8±0.9, 42°.45N×85°.28E, h0^{km}, mb3.8/8, mbtmp3.8/13, ML3.4/5, MS4.5/1, Error ellipse: s-maj=25.1km s-min=14.0km az=51.0*

*BJI **18** 08:25:51.2±0.0, 42°.52N×85°.32E, h7^{km}, ML3.7/10*

*NEIC **18** 08:25:52.3±2.5, 42°.59N±0°.09×85°.6E±0°.1, h27^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=15.5km s-min=13.2km az=104.0*

*NNC **18** 08:25:54.1±1.6, 42°.88N×85°.20E, h3^{km}±6^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=9.5km s-min=6.9km az=126.0*

ISC 18 08:25:51.3±0.8**, 42°.66N**±0°.06×**85°.29E**±0°.04**, h10**^{km}**, n60, σ1^{s}99**/67**, mb3.9**/12**, 9C-10D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.10	56	⇓*i*Pg	Pn	08 26 29.5	+2.9
WMQ				Sg	Sb	08 26 56.8	+1.0
WMQ				smax	smax		
	comp=N,770nm,0.5s						
WMQ				smax	smax		
	comp=E,1µm,0.7s						
PDGK	Podgornoye	4.31	281	Pg	Pn	08 27 03.1	+6.2
	2.4nm,0.4s						
PDGK				Lg	Lg	08 28 07.5	
	29nm,0.6s						
PDGK	Podgornoye	4.31	281	⇑Pn	Pn	08 26 59.1	+2.2
	1.9nm,0.3s						
PDGK				⇑Pg	Pb	08 27 09.8	+2.7
	32nm,0.8s						
PDGK				⇑Lg	Lg	08 28 06.2	
	84nm,0.6s						
SHLS	Shalkode	4.31	279	*e*P	Pn	08 26 57.9	+0.9
	6.5nm,0.2s						
SHLS				*e*S	Sb	08 27 58.7	-0.5
	94nm,0.8s						
SHLS	Shalkode	4.31	279	Pg	Pn	08 26 58.3	+1.3
	6.3nm,0.5s						
SHLS				Lg	Lg	08 27 58.6	
	94nm,0.8s						
DJR	Jarkent	4.33	294	*e*P	Pn	08 27 00.1	+2.8
	11nm,0.1s						
DJR				*e*S	Sb	08 28 02.2	+2.3
	34nm,0.3s						
DJR	Jarkent	4.33	294	Pg	Pn	08 27 01.6	+4.3
	11nm,0.1s						
DJR				Lg	Lg	08 28 04.9	
	30nm,0.6s						
UZB	Uzynbulak	4.63	278	*e*P	Pb	08 27 09.2	-3.4
	5.3nm,0.4s						
UZB				*e*S	Sg	08 28 17.9	-2.0
	51nm,0.7s						
UZB	Uzynbulak	4.63	278	Pg	Pb	08 27 09.2	-3.4
	5.3nm,0.4s						
UZB				Lg	Lg	08 28 17.9	
	51nm,0.7s						
MK31	Makanchi Array	4.65	334		Pn	08 27 04.2	+2.6
MK31	Makanchi Array	4.65	334	Pn	Pn	08 27 03.4	+1.8
	5.6nm,0.4s,baz=90,slow=23,SNR=293						
MK31				⇑Sn	Sn	08 27 55.0	-0.6
	23nm,0.7s,baz=143,slow=19,SNR=4.8						
MK31				⇓Lg	Lg	08 28 14.9	
	38nm,0.5s,baz=151,slow=29,SNR=8.3						
MKAR	Makanchi Array	4.65	334	Pn	Pn	08 27 04.8	+3.2
	6.2nm,0.3s,baz=152,slow=14,SNR=186						
MKAR				Sn	Sn	08 27 54.3	-1.3
	8.8nm,0.3s,baz=151,slow=18,SNR=4.2						
MKAR				Lg	Lg	08 28 15.8	
	23nm,0.3s,baz=148,slow=28,SNR=11						
	11nm,0.3s						
MKAR	Makanchi Array	4.65	334		Pn	08 27 04.0	+2.5
MAKZ	Makanchi	4.77	331		Pn	08 27 06.2	+3.0
MAKZ	Makanchi	4.77	331	⇑Pn	Pn	08 27 04.9	+1.7
	4.8nm,0.3s						
MAKZ				⇓Sn	Sn	08 27 58.2	-0.3
	16nm,0.7s						
MAKZ				⇓Lg	Lg	08 28 18.4	
	22nm,0.5s						
ZSN	Zaisan	4.80	357	*e*P	Pn	08 27 07.2	+3.6
	8.3nm,0.1s						
ZSN				*e*S	Sb	08 28 14.1	+1.0
	40nm,0.4s						
ZSN	Zaisan	4.80	357	Pg	Pb	08 27 08.9	-6.4
	5.9nm,0.5s						
ZSN				Lg	Lg	08 28 17.5	
	72nm,0.8s						
KPKS	Kokpek	4.91	282	*e*P	Pb	08 27 15.3	-2.0
KPKS				*e*S	Sg	08 28 28.5	-0.2
KAPS	Kapalarasan	5.02	303	*e*P	Pb	08 27 16.6	-2.6
	4.8nm,0.4s						
KAPS				*e*S	Sg	08 28 30.8	-1.6
	26nm,0.5s						
KAPS	Kapalarasan	5.02	303	Pg	Pb	08 27 16.6	-2.6
	4.8nm,0.4s						
KAPS				Lg	Lg	08 28 30.8	
	26nm,0.5s						
ZHN	Zhinishke	5.06	278	*e*P	Pb	08 27 18.2	-1.7
	14nm,0.1s						
ZHN				*e*S	Sg	08 28 33.5	-0.1
	107nm,0.3s						
ZHN	Zhinishke	5.06	278	Pg	Pb	08 27 19.6	-0.3

	15nm,0.3s						
ZHN				Lg	Lg	08 28 35.7	
	107nm,0.3s						
SATY	**Saty**	**5.08**	**277**	*e*P	**Pb**	**08 27 18.4**	**-1.9**
	3.8nm,0.2s						
SATY				*e*S	**Sg**	**08 28 33.6**	**-0.5**
	55nm,0.4s						
SATY	**Saty**	**5.08**	**277**	Pg	**Pb**	**08 27 18.4**	**-1.9**
	3.8nm,0.2s						
SATY				Lg	Lg	08 28 33.6	
	55nm,0.4s						
KURS	**Kuram**	**5.28**	**281**	*e*P	**Pb**	**08 27 22.2**	**-1.5**
	4.2nm,0.4s						
KURS				*e*S	**Sg**	**08 28 40.0**	**-0.7**
	55nm,0.9s						
KURS	**Kuram**	**5.28**	**281**	Pg	**Pb**	**08 27 22.2**	**-1.5**
	4.2nm,0.4s						
KURS				Lg	Lg	08 28 40.0	
	55nm,0.9s						
TDK	**Taldyqorghan**	**5.50**	**297**	*e*P	**Pb**	**08 27 27.4**	**0.0**
	42nm,0.4s						
TDK				*e*S	**Sg**	**08 28 48.6**	**+0.8**
	76nm,0.5s						
TDK	**Taldyqorghan**	**5.50**	**297**	Pg	**Pb**	**08 27 27.4**	**0.0**
	42nm,0.4s						
TDK				Lg	Lg	08 28 48.6	
	76nm,0.5s						
TARG	**Taragay, Kyrgy**	**5.64**	**263**		**Pn**	**08 27 16.7**	**+1.2**
KDJ	**Kajisay**	**6.03**	**268**	Pn	**Pn**	**08 27 22.5**	**+1.9**
MDOK	**Medeo**	**6.07**	**278**	⇓Pg	Pb	08 27 42.9	+5.7
	8.9nm,0.8s						
MDOK				⇓Lg	Lg	08 29 02.5	
	33nm,0.8s						
TNSS	**Tian-Shan**	**6.14**	**276**	Pg	**Pb**	**08 27 39.0**	**+0.5**
	3.9nm,0.3s						
TNSS				Lg	Lg	08 29 08.8	
	9.5nm,0.5s						
BOOM	**Boomskoye usch**	**6.90**	**272**	Pn	**Pn**	**08 27 34.6**	**+1.9**
TKM2	**Tokmak 2**	**7.13**	**275**	⇑Pn	**Pn**	**08 27 37.7**	**+1.8**
	2.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**08 29 00.2**	**+3.1**
	13nm,0.7s						
TKM2				⇑Lg	Lg	08 29 36.1	
	9.6nm,0.6s						
AAK	**Ala-Archa**	**7.96**	**273**	Pn	**Pn**	**08 27 47.4**	**+0.3**
	0.2nm,0.3s,baz=242,slow=10,SNR=1.5						
AAK				Pg	Pg	08 28 19.4	-4.2
	0.4nm,0.3s,baz=162,slow=1.1,SNR=1.9						
AAK				Lg	Lg	08 29 59.9	
	0.5nm,0.3s,baz=179,slow=23,SNR=1.6						
AAK				LR	LR	08 31 00.1	
	comp=Z,4μm,21.2s,baz=39,slow=39						
	1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**9.21**	**332**	Pn	**Pn**	**08 28 04.8**	**+0.6**
	0.4nm,0.3s,baz=146,slow=12,SNR=17						
KURBB				Sn	**Sn**	**08 29 47.4**	**-0.4**
	0.3nm,0.3s,baz=170,slow=24,SNR=4.3						
KURBB				Lg	Lg	08 30 45.1	
	0.4nm,0.3s,baz=128,slow=33,SNR=6.4						
	2.5nm,0.5s						
KURBB	**Kurchatov Arra**	**9.21**	**332**	⇑Pn	**Pn**	**08 28 04.9**	**+0.8**
	5.6nm,0.5s						
KURBB				⇑Sn	**Sn**	**08 29 47.9**	**+0.1**
	6.6nm,0.5s						
KURBB				⇓Lg	Lg	08 30 39.2	
	72nm,0.7s						
KURK	**Kurchatov**	**9.26**	**333**		LR	08 30 50.1	
KURK	**Kurchatov**	**9.26**	**333**		**Pn**	**08 28 04.8**	**0.0**
OTUK	**Ortayu**	**10.67**	**306**	⇓Lg	Lg	08 31 29.0	
	9.7nm,0.9s						
ZAA0	**Zalesovo Array**	**11.30**	**359**	Pn	**Pn**	**08 28 32.6**	**0.0**
ZAA0	**Zalesovo Array**	**11.30**	**359**	⇓Pn	**Pn**	**08 28 32.1**	**-0.5**
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**11.30**	**359**	Pn	**Pn**	**08 28 32.4**	**-0.2**
	1.0nm,0.3s,baz=178,slow=14,SNR=8.8						
ZALV				Sn	**Sn**	**08 30 34.5**	**-4.3**
	0.9nm,0.3s,baz=180,slow=22,SNR=4.6						
	2.4nm,0.4s						
ZALV	**Zalesovo Beam**	**11.30**	**359**	Pn	**Pn**	**08 28 32.6**	**0.0**
SONM	**Songino Array**	**15.72**	**64**	Pn	**Pn**	**08 29 32.2**	**-0.6**
	0.1nm,0.3s,baz=251,slow=4.4,SNR=2.1						
	1.2nm,0.8s						
ARU	**Arti**	**21.96**	**318**	P	**P**	**08 30 45.6**	**+0.6**
	2.2nm,0.2s,baz=97,slow=23,SNR=4.7						
	2.2nm,0.2s						
KLR	**Kul'dur**	**32.54**	**62**	P	P	08 32 28.1	+5.9
	0.8nm,0.5s,baz=284,slow=6.8,SNR=3.8						
AKBB	**Malin Array Si**	**38.47**	**302**	P	**P**	**08 33 17.8**	**+4.7**
FINES	**FINESS Array B**	**39.32**	**319**	P	**P**	**08 33 19.8**	**-0.4**
	1.4nm,0.9s,baz=96,slow=12,SNR=4.1						
	1.4nm,0.9s						
ARCES	**ARCESS Array B**	**40.30**	**332**	P	**P**	**08 33 27.7**	**-0.5**
	3.7nm,0.9s,baz=83,slow=7.4,SNR=7.3						
	3.7nm,0.9s						
ARCES	**ARCESS Array B**	**40.30**	**332**	IAmb	IAmb	08 33 32.4	
	comp=Z,26nm,1.4s						
NOA	**NORSAR Array B**	**46.50**	**320**	P	**P**	**08 34 17.1**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=80,slow=7.7,SNR=2.4						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**73.98**	**9**	P	**P**	**08 37 25.1**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=336,slow=5.3,SNR=1.7						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.54**	**276**	P	**P**	**08 37 40.1**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=46,slow=4.6,SNR=6.3						
	comp=Z,0.5nm,0.5s						
WB0	**Warramunga Arr**	**76.83**	**133**	P	P	08 37 39.1	-4.3
WB0				IAmb	IAmb	08 37 49.1	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**76.95**	**133**	P	P	08 37 41.6	-2.4
	comp=Z,0.7nm,0.6s,baz=336,slow=6.0,SNR=11						
	comp=Z,0.7nm,0.6s						
WB2	**Warramunga Arr**	**76.95**	**133**	P	P	08 37 41.7	-2.4
WB2				IAmb	IAmb	08 37 42.5	
	comp=Z,2.7nm,0.9s						
WR0	**Warramunga Arr**	**77.07**	**133**	P	P	08 37 42.1	-2.6
WR0				IAmb	IAmb	08 37 48.7	
	comp=Z,7.4nm,1.4s						
ASAR	**Alice Springs**	**79.77**	**136**	P	P	08 37 57.0	-2.5
	comp=Z,0.4nm,0.8s,baz=328,slow=6.5,SNR=3.1						
	comp=Z,0.4nm,0.8s						
LPAZ	**La Paz**	**145.26**	**311**	PKPbc	**PKPbc**	**08 45 27.6**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=77,slow=2.4,SNR=5.7						

IDC 18 08:34:22.5±3.7**,54°.60N**×**87°.14E,h0^{km},mbtmp2.8**/2**, ML2.4**/2**,Error ellipse: s-maj=32.7km s-min=22.2km az=41.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**245**	*i*		08 42 35.5	
	baz=67,slow=328,SNR=7.7						
ZALV	**Zalesovo Beam**	**1.51**	**245**	Pg	Pn	08 34 48.5	-2.3
	0.6nm,0.3s,baz=61,slow=18,SNR=5.3						
ZALV				Lg	Lg	08 35 11.4	
	1.0nm,0.3s,baz=62,slow=22,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.58**	**236**	Pn	Pn	08 36 00.4	-0.1
	baz=53,slow=14,SNR=4.8						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**8.40**	**203**	Pn	Pn	08 36 27.5	+2.1
	0.1nm,0.3s,baz=24,slow=14,SNR=2.0						
	0.3nm,0.7s						

MDD 18 09:25:29.6±0.8,35°.39N×3°.82W,h1^{km}±4^{km},mb_Lg2.3/11, Error ellipse: s-maj=5.5km s-min=3.6km az=10.0

CNRM 18 09:25:29.2,35°.36N×3°.88W,h23^{km},ml2.7

SFS 18 09:25:29.0,35°.39N×3°.81W,h1^{km},ML2.3,ALBORAN SUR

IGIL 18 09:25:30.3,35°.39N×3°.82W,h1^{km},ML2.0

INMG 18 09:25:30.2±1.4,35°.41N×3°.79W,h6^{km}±5^{km},ML2.1,Error ellipse: s-maj=3.7km s-min=2.7km az=20.0

ISC 18 09:25:29.6±1.1**,35°.38N**±0°.02×**3°.81W**±0°.02**,h18^{km}**±3^{km}**, n39,**σ**1^{s}.25**/74**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.19**	**214**	P	**Pb**	**09 25 33.9**	**-0.2**
PALE				S	**Sb**	**09 25 37.4**	**+0.4**
PVLZ	**Peæn de**	**0.45**	**243**	P	**Pg**	**09 25 38.9**	**+0.1**
PVLZ				S	**Sg**	**09 25 45.5**	**+0.5**
GOG	**Mont Gurugu**	**0.68**	**103**	P	**Pb**	**09 25 41.5**	**-1.4**
GOG				S	**Sb**	**09 25 51.9**	**-0.1**
EMEL	**Melilla**	**0.70**	**96**	Pg	**Pb**	**09 25 42.8**	**-0.4**
EMEL				Sg	**Sb**	**09 25 52.6**	**+0.2**
EALB	**Alboran**	**0.84**	**48**	Pg	**Pb**	**09 25 44.4**	**-1.2**
EALB				Sg	**Sb**	**09 25 56.0**	**-0.6**
CHAS	**Isla Isabel II**	**1.14**	**99**	P	**Pn**	**09 25 48.5**	**-2.1**
CHAS				S	**Sb**	**09 26 05.3**	**+0.1**
TAF	**Taforalt**	**1.27**	**116**	P	**Pn**	**09 25 52.9**	**+0.4**
TAF				S	**Sb**	**09 26 09.8**	**+0.7**
CHEFC	**Chefchaouen**	**1.28**	**258**	P	**Pn**	**09 25 52.4**	**-0.2**
CHEFC				S	**Sb**	**09 26 07.3**	**-2.2**
SMIR	**Smir Dam**	**1.32**	**284**	P	**Pn**	**09 25 51.7**	**-1.4**
SMIR				S	**Sn**	**09 26 08.5**	**-1.7**
CEU	**Ceuta**	**1.38**	**293**	P	**Pn**	**09 25 52.6**	**-1.2**
CEU				S	**Sn**	**09 26 08.0**	**-3.6**
ECEU	**Ceuta**	**1.38**	**293**	Pn	**Pn**	**09 25 53.3**	**-0.6**
ECEU				*i* Vmb_Lg		09 25 56.7	
ECEU				Sn	**Sn**	**09 26 12.0**	**+0.3**
EMIJ	**Mijas**	**1.42**	**327**	Pg	**Pb**	**09 25 56.1**	**+0.6**
EMIJ				Sg	**Sb**	**09 26 14.8**	**+1.5**
EMIJ				*i* Vmb_Lg		09 26 15.7	
JBK	**JBK**	**1.46**	**135**	P	**Pn**	**09 25 54.6**	**-0.6**
JBK				S	**Sn**	**09 26 12.8**	**-1.0**
ELGU	**Los Guajares,**	**1.49**	**6**	Pn	**Pn**	**09 25 55.0**	**-0.5**
ELGU				*i* Vmb_Lg		09 26 16.2	
ELGU				Sg	**Sb**	**09 26 16.4**	**+0.9**
EBER	**Berja**	**1.69**	**26**	Pn	**Pn**	**09 25 57.3**	**-1.1**
EBER				Sn	**Sn**	**09 26 19.8**	**+0.2**
EBER				*i* Vmb_Lg		09 26 20.8	
EGOR	**Sierra Gorda,**	**1.75**	**352**	Pg	**Pb**	**09 26 01.0**	**-0.1**
EGOR				Sg	**Sb**	**09 26 24.6**	**+1.8**
EGOR				*i* Vmb_Lg		09 26 27.9	
LCRM	**LCR**	**1.90**	**208**	P	**Pn**	**09 26 02.5**	**+1.4**
LCRM				S	**Sn**	**09 26 26.0**	**+1.3**
EQES	**Quesada**	**2.49**	**14**	Pn	**Pn**	**09 26 10.2**	**+0.9**
EQES				Sn	**Sn**	**09 26 40.8**	**+1.5**
EQES				*i* Vmb_Lg		09 26 43.6	
MD31	**MD31**	**2.63**	**198**	P	**Pn**	**09 26 12.2**	**+1.1**
MD31				S	**Sn**	**09 26 43.1**	**+0.6**
MDT	**Midelt**	**2.64**	**195**	P	**Pn**	**09 26 13.2**	**+1.8**
MDT				S	**Sn**	**09 26 41.7**	**-1.3**
TDRA	**Tendrara**	**2.76**	**147**	P	**Pn**	**09 26 14.5**	**+1.5**
TDRA				S	**Sn**	**09 26 46.0**	**0.0**
EADA	**Adamuz**	**2.85**	**348**	Pn	**Pn**	**09 26 15.1**	**+0.9**
EADA				Sn	**Sn**	**09 26 48.9**	**+0.9**
EADA				*i* Vmb_Lg		09 27 02.6	
ECAB	**El Cabril**	**2.99**	**335**	Pn	**Pn**	**09 26 17.3**	**+1.3**
ECAB				Sn	**Sn**	**09 26 51.0**	**-0.4**
ECAB				*i* Vmb_Lg		09 27 10.1	
ZHG	**ZHG**	**3.04**	**231**	P	**Pn**	**09 26 17.9**	**+1.2**
ZHG				S	**Sn**	**09 26 52.7**	**+0.1**
EMIN	**Mina Concepcio**	**3.32**	**317**	Pn	**Pn**	**09 26 21.9**	**+1.4**
EMIN				Sn	**Sn**	**09 26 58.6**	**-0.9**
EGRO	**El Granado**	**3.66**	**307**	Pn	**Pn**	**09 26 25.5**	**+0.2**
EGRO				Sn	**Sn**	**09 27 06.9**	**-1.1**
EGRO				*i* Vmb_Lg		09 28 10.8	
ETOB	**Tobarra**	**3.73**	**28**	Pn	**Pn**	**09 26 27.1**	**+0.9**
ETOB				Sn	**Sn**	**09 27 09.4**	**-0.3**
ETOB				*i* Vmb_Lg		09 27 23.0	
PVAQ	**Vaqueiros**	**3.75**	**304**	*e*Pn	**Pn**	**09 26 27.3**	**+0.9**
PVAQ				*e*Sn	**Sn**	**09 27 08.3**	**-1.8**
PVAQ				A	A	09 27 09.7	
	3.9nm,0.5s						
PVAQ	**Vaqueiros**	**3.75**	**304**	P	**Pn**	**09 26 26.0**	**-0.5**
PVAQ				S	**Sn**	**09 27 07.5**	**-2.6**
PBAR	**Barrancos**	**3.81**	**318**	*e*Pn	**Pn**	**09 26 28.7**	**+1.4**
PBAR				*e*Sn	**Sn**	**09 27 10.8**	**-0.9**
PBAR				A	A	09 27 26.2	
	1.9nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.82**	**300**	*e*Pn	**Pn**	**09 26 28.5**	**+1.1**
PCVE	**Castro Verde**	**4.08**	**305**	*e*Pn	**Pn**	**09 26 32.1**	**+1.0**
EBAD	**Badajoz**	**4.24**	**324**	Pn	**Pn**	**09 26 33.9**	**+0.8**
EBAD				Sn	**Sn**	**09 27 21.5**	**-0.6**
EBAD				*i* Vmb_Lg		09 27 29.4	
MESJ	**Messejana**	**4.32**	**306**	*e*P	**Pn**	**09 26 35.0**	**+0.7**
MESJ				*e*S	**Sn**	**09 27 22.2**	**-2.0**
MESJ				IAML		09 27 26.5	
	comp=E,3.0nm,0.4s						
MESJ	**Messejana**	**4.32**	**306**	*e*Sn	**Sn**	**09 27 22.7**	**-1.4**
PNCL	**Nicolau / Gran**	**4.67**	**307**	*e*Pn	**Pn**	**09 26 40.8**	**+1.7**
PNCL				*e*Sn	**Sn**	**09 27 30.6**	**-2.3**
PNCL				A	A	09 27 39.5	
	comp=E,2.3nm,0.7s						
OUZM	**OUZ**	**5.10**	**210**	P	**Pn**	**09 26 46.1**	**+0.9**
OUZM				S	**Sn**	**09 27 43.3**	**-0.3**
PMTG	**Montargil**	**5.10**	**318**	*e*Pn	**Pn**	**09 26 46.4**	**+1.4**
OUK	**Oukaimeden**	**5.37**	**220**	P	**Pn**	**09 26 48.4**	**-0.7**
OUK				S	**Sn**	**09 27 48.0**	**-2.7**

IDC 18 09:26:39.8±1.2**,28°.22N**×**143°.52E,h0^{km},mb3.5**/3**, mbtmp3.9**/4**,ML4.7**/1**,Error ellipse: s-maj=41.5km s-min=19.2km az=124.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.63**	**227**	Pn	Pg	09 27 11.9	+0.9
	35nm,0.3s,baz=60,slow=20,SNR=66						
JCJ				Sn	Sg	09 27 32.7	+0.5
	74nm,0.3s,baz=286,slow=23,SNR=11						
JHJ	**Hachijo jima 2**	**5.85**	**328**	Pn	Pn	09 28 06.2	-1.5
	60nm,0.3s,baz=206,slow=22,SNR=6.9						
JHJ				Sn	Sn	09 29 06.9	-8.6
	110nm,0.3s,baz=81,slow=23,SNR=9.9						
	238nm,0.5s						
WRA	**Warramunga Arr**	**48.70**	**192**	P	P	09 35 24.2	-1.8
	0.5nm,0.5s,baz=6.8,slow=7.7,SNR=14						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**56.16**	**29**	P	P	09 36 20.5	-0.4
	0.3nm,0.6s,baz=257,slow=5.0,SNR=4.1						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**78.89**	**52**	P	P	09 38 46.9	+1.5
	0.2nm,0.5s,baz=298,slow=4.0,SNR=3.7						
	0.2nm,0.5s						

NNC 18 09:41:19.9±2.1,54°.23N×87°.91E,h0^{km},mb2.4,mpv2.5, Error ellipse: s-maj=16.8km s-min=5.7km az=81.0, Suspected Mining explosion.

IDC 18 09:41:30.6±3.5,54°.19N×87°.00E,h0^{km},mbtmp2.9/1, ML2.7/1,Error ellipse: s-maj=29.2km s-min=16.5km az=65.0

ISC 18 09:41:15.7±4.9**,54°.5N**±0°.2×**88°.1E**±0°.2**,h0^{km},n6,**σ**0^{s}.88**/7**, 3C-3D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.02**	**256**	*i*		09 50 00.0	
	baz=79,slow=331,SNR=5.4						
ZAA0	**Zalesovo Array**	**2.02**	**256**	⇑P	**Pb**	**09 41 52.5**	**-0.8**
	1.2nm,0.7s,baz=78,slow=15						
ZAA0				⇓S	**Sn**	**09 42 16.8**	**-0.2**
	7.0nm,0.8s,baz=81,slow=29						
ZALV	**Zalesovo Beam**	**2.02**	**256**	Pg	**Pg**	**09 41 54.9**	**+0.5**
	0.7nm,0.3s,baz=77,slow=14,SNR=11						
ZALV				Lg	Lg	09 42 12.8	
	0.6nm,0.3s,baz=78,slow=28,SNR=4.5						
KURK	**Kurchatov**	**6.91**	**241**	⇑Sn	**Sn**	**09 44 17.9**	**+0.5**
	2.4nm,0.7s						
KURK				⇑Lg	Lg	09 44 50.9	
	10.0nm,1.0s						
MK31	**Makanchi Array**	**8.53**	**208**	Pn	**Pn**	**09 43 20.8**	**+0.4**
	0.1nm,0.2s,baz=53,slow=6.7,SNR=3.4						
MK31				⇓Sn	**Sn**	**09 44 56.2**	**-1.2**
	0.5nm,0.5s,baz=25,slow=27,SNR=2.5						
MK31				⇓Lg	Lg	09 45 43.6	
	8.4nm,1.1s,baz=26,slow=32,SNR=4.0						
MKAR	**Makanchi Array**	**8.53**	**208**	Pn	Pn	09 43 29.5	+9.0
	0.1nm,0.3s,baz=18,slow=12,SNR=3.8						
MKAR				Sn	**Sn**	**09 44 58.0**	**+0.6**
	0.1nm,0.3s,baz=22,slow=24,SNR=4.4						
MKAR				Lg	Lg	09 45 44.0	
	baz=23,slow=33,SNR=6.2						
	0.3nm,0.5s						

IDC 18 09:44:34.5±3.1**,54°.26N**×**87°.07E,h0^{km},mbtmp2.8**/2**, ML2.5**/2**,Error ellipse: s-maj=27.0km s-min=18.7km az=56.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**258**	*i*		09 52 59.0	
	baz=78,slow=327,SNR=5.7						
ZALV	**Zalesovo Beam**	**1.36**	**258**	Pg	Pg	09 44 59.1	-1.5
	0.7nm,0.3s,baz=72,slow=17,SNR=4.1						
ZALV				Lg	Lg	09 45 17.5	
	0.9nm,0.3s,baz=75,slow=27,SNR=4.5						
ZALV				Rg	Rg	09 45 26.4	
	2.8nm,0.4s,baz=69,slow=40,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.36**	**239**	Pn	Pn	09 46 11.0	+1.6
	baz=57,slow=14,SNR=2.4						
KURBB				Lg	Lg	09 47 57.7	
	baz=50,slow=31,SNR=1.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.07**	**204**	Pn	Pn	09 46 33.7	+0.8
	0.1nm,0.3s,baz=24,slow=12,SNR=5.2						
MKAR				Lg	Lg	09 48 51.9	
	baz=19,slow=28,SNR=2.8						
	0.3nm,0.4s						

IDC 18 09:45:53.3±1.6,14°.86S×165°.23E,h0^{km},mb3.7/4, mbtmp3.9/6,ML4.1/2,Error ellipse: s-maj=34.4km s-min=24.6km az=81.0

NOU 18 09:45:57.3,14°.82S×167°.65E,h0^{km},MLv4.6/11,Vanuatu Islands

ISC 18 09:45:57.4±1.3**,14°.8S**±0°.1×**165°.4E**±0°.2**,h35^{km},n13,** σ**2^{s}.45**/13**,mb3.6**/4**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.94**	**138**	P	Pn	09 46 45.1	-10
RTV	**Rentapao**	**4.14**	**137**	P	Pn	09 46 46.5	-12
LIFNC	**LIFOU**	**6.20**	**164**	P	**Pn**	**09 47 26.6**	**0.0**
MARNC	**Mare, Loyalty**	**7.10**	**160**	P	**Pn**	**09 47 35.9**	**-3.0**
DZM	**Mont Dzumac**	**7.31**	**173**	Pn	**Pn**	**09 47 40.3**	**-1.6**
	2.0nm,0.3s,baz=13,slow=18,SNR=13						
DZM				Sn	**Sn**	**09 49 03.7**	**-0.1**
	baz=130,slow=21						
	4.8nm,0.3s						
DZM	**Mont Dzumac**	**7.31**	**173**	P	**Pn**	**09 47 44.8**	**+2.9**
ONTNC	**Ouen Toro**	**7.55**	**173**	P	**Pn**	**09 47 48.6**	**+3.6**
HNR	**Honiara**	**7.56**	**314**	Pn	**Pn**	**09 47 43.1**	**-2.1**
	4.8nm,0.3s,baz=217,slow=2.2,SNR=2.6						
HNR				Sn	**Sn**	**09 49 12.1**	**+2.3**
	2.8nm,0.3s,baz=360,slow=5.7,SNR=1.5						
	39nm,0.5s						
OUENC	**Ouen Island, N**	**7.71**	**170**	P	**Pn**	**09 47 49.6**	**+2.3**
STKA	**Stephens Creek**	**27.63**	**228**	P	**P**	**09 51 42.5**	**+0.6**
	1.0nm,0.6s,baz=43,slow=9.9,SNR=1.5						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**30.10**	**256**	P	**P**	**09 52 02.6**	**-1.4**
	0.3nm,0.5s,baz=86,slow=9.7,SNR=6.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**31.01**	**249**	P	**P**	**09 52 09.8**	**-2.2**
	0.4nm,0.5s,baz=73,slow=9.8,SNR=2.5						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**87.13**	**18**	P	**P**	**09 58 41.4**	**+2.1**
	0.7nm,0.7s,baz=236,slow=5.3,SNR=7.6						
	0.7nm,0.7s						

PRE 18 09:50:32.7±1.0,25°.44S×29°.71E,h5^{km},ML2.7

BUL 18 09:50:37.5±1.0,25°.91S×29°.38E,h10^{km},MD3.2

EAF 18 09:50:37.6±1.5,25°.86S×29°.41E,h10^{km},MD3.2

ISC 18 09:50:31.4±0.8**,25°.35S**±0°.05×**29°.72E**±0°.04**,h10^{km},n12,** σ**1^{s}.57**/20**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAGI	**HAGI**	**1.53**	**120**	*e*P	**Pg**	**09 51 01.1**	**+0.2**
HAGI				*e*S	**Sg**	**09 51 20.5**	**-0.3**
HAGI				IAML		09 51 23.9	
	comp=Z,61nm,0.7s						
MOPA	**Mopani**	**2.38**	**40**	*i* P	Pg	09 51 23.2	+6.1
MOPA				*i* S	Sg	09 51 57.5	+10
MOPA	**Mopani**	**2.38**	**40**	*i* P	Pg	09 51 23.2	+6.1
MOPA				*i* S	Sg	09 51 57.5	+10
CNG	**Changalane**	**2.42**	**113**	*i* P	**Pg**	**09 51 18.0**	**+0.2**
CNG				*i* S	**Sg**	**09 51 49.5**	**+0.4**
CNG	**Changalane**	**2.42**	**113**	*i* P	**Pg**	**09 51 18.0**	**+0.2**
CNG				*i* S	**Sg**	**09 51 49.5**	**+0.4**
KSR	**Koster**	**2.59**	**258**	*e*P	**Pb**	**09 51 15.8**	**-2.4**
KSR				*e*S	**Sn**	**09 51 46.8**	**+1.5**
KSR				IAML		09 51 47.5	
	comp=Z,112nm,1.0s						
POGA	**Pongola**	**2.67**	**139**	*e*P	**Pb**	**09 51 16.8**	**-2.6**
POGA				*e*S	**Sn**	**09 51 47.9**	**+0.9**
POGA				IAML		09 52 06.2	
	comp=Z,24nm,0.9s						
LBTB	**Lobatse**	**3.75**	**274**	*i* P	**Pn**	**09 51 31.9**	**+2.5**
LBTB				*i* S	**Sn**	**09 52 12.6**	**-1.1**
LBTB	**Lobatse**	**3.75**	**274**	*i* P	**Pn**	**09 51 31.9**	**+2.5**
LBTB				*i* S	**Sn**	**09 52 12.6**	**-1.1**
MATP	**Matopo**	**5.03**	**347**	*i* P	**Pb**	**09 51 58.8**	**-0.9**
MATP				*i* S	**Sb**	**09 52 58.9**	**-1.3**
MATP	**Matopo**	**5.03**	**347**	*i* P	**Pb**	**09 51 58.8**	**-0.9**
MATP				*i* S	**Sb**	**09 52 58.9**	**-1.3**
BOSA	**Boshof**	**5.14**	**230**	*e*P	**Pn**	**09 51 51.1**	**+2.5**
BOSA				*e*S	**Sn**	**09 52 47.3**	**-0.7**
BOSA				IAML		09 52 55.1	
	comp=Z,25nm,2.2s						

NNC 18 09:54:40.6±1.4,53°.45N×87°.76E,h0^{km},mb3.3,mpv3.0, Error ellipse: s-maj=12.7km s-min=5.7km az=71.0, Suspected Mining explosion.

IDC 18 09:54:41.8±2.6,53°.50N×87°.62E,h0^{km},mbtmp3.2/2, ML2.9/2,Error ellipse: s-maj=22.0km s-min=13.6km az=64.0

ISC 18 09:54:41.6±3.6**,53°.5N**±0°.1×**87°.7E**±0°.2**,h0^{km},n9,**σ**0^{s}.97**/12**, 7C-3D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**286**	*i*		10 05 40.1	
	0.3nm,0.9s,baz=101,slow=329,SNR=9.3						
ZAA0	**Zalesovo Array**	**1.73**	**286**	⇑Pn	**Pn**	**09 55 12.7**	**-0.3**
	1.5nm,0.8s						
ZAA0				⇑Sn	**Sg**	**09 55 38.2**	**+0.9**
	11nm,0.9s						
ZALV	**Zalesovo Beam**	**1.73**	**286**	Pg	**Pn**	**09 55 12.8**	**-0.2**
	1.2nm,0.3s,baz=100,slow=18,SNR=4.3						
ZALV				Lg	Lg	09 55 36.0	
	1.9nm,0.3s,baz=106,slow=30,SNR=9.3						
KURK	**Kurchatov**	**6.22**	**247**	⇑Pn	**Pn**	**09 56 13.9**	**-0.7**
	1.1nm,0.6s						
KURK				⇑Lg	Lg	09 57 57.8	
	22nm,1.2s						
KURBB	**Kurchatov Arra**	**6.32**	**246**	Pn	**Pn**	**09 56 17.7**	**+1.7**
	0.1nm,0.3s,baz=61,slow=14,SNR=6.3						
KURBB				Sn	**Sn**	**09 57 27.3**	**-1.5**
	baz=66,slow=20,SNR=1.6						
KURBB				Lg	Lg	09 57 59.5	
	baz=63,slow=32,SNR=5.5						
	1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**6.32**	**246**	⇑Pn	**Pn**	**09 56 16.5**	**+0.5**
	1.3nm,0.4s						
KURBB				⇓Lg	Lg	09 58 01.9	
	23nm,0.9s						
MK31	**Makanchi Array**	**7.55**	**209**	Pn	**Pn**	**09 56 32.7**	**-0.2**
	1.0nm,0.7s,baz=28,slow=13,SNR=13						
MK31				⇑Sn	**Sn**	**09 57 58.9**	**-0.3**
	6.5nm,1.4s,baz=25,slow=14,SNR=6.8						
MK31				⇓Lg	Lg	09 58 38.9	
	7.0nm,1.1s,baz=36,slow=30,SNR=6.2						
MKAR	**Makanchi Array**	**7.55**	**209**	Pn	**Pn**	**09 56 33.3**	**+0.4**
	0.4nm,0.3s,baz=30,slow=14,SNR=14						
MKAR				Sn	**Sn**	**09 57 59.8**	**+0.6**
	0.1nm,0.3s,baz=31,slow=21,SNR=11						
MKAR				Lg	Lg	09 58 39.7	
	0.1nm,0.3s,baz=22,slow=31,SNR=9.2						
	0.7nm,0.3s						
MAKZ	**Makanchi**	**7.63**	**211**	⇑Sn	**Sn**	**09 58 00.2**	**-1.0**
	3.7nm,0.9s						
MAKZ				⇓Lg	Lg	09 58 40.8	
	7.9nm,1.2s						

HEL 18 09:57:30.8±0.1,64°.73N×30°.68E,h0^{km},ML1.8,Explosion

IDC 18 09:57:32.5±2.1,64°.75N×30°.72E,h0^{km},mbtmp2.9/2, ML1.7/2,Error ellipse: s-maj=33.0km s-min=10.7km az=103.0

ISC 18 09:57:29.6±1.2**,64°.83N**±0°.03×**31°.09E**±0°.06**,h0^{km},n22,** σ**1^{s}.44**/33**,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.30**	**338**	PG	**Pg**	**09 57 54.7**	**+0.2**
	baz=166						
KU6				MSG		09 58 11.2	
	comp=Z,4.1nm,0.2s						

KU6				SB	Sb	09 58 12.2	+0.1
MSF	Maaselka	1.38	323	PG	Pg	09 57 55.6	-0.5
MSF				SG	Sg	09 58 13.1	-0.9
OLKF	Oulanka, Finla	1.65	336	PG	Pg	09 58 01.3	0.0
OLKF				SN	Sg	09 58 23.2	+0.5
JOF	Joensuu	1.92	177	PG	Pn	09 58 03.9	+0.4
JOF				SN	Sn	09 58 28.3	-0.1
OUL	Oulu	2.22	279	PG	Pn	09 58 07.9	+0.2
	baz=93						
OUL				SG	Sn	09 58 34.2	-1.6
RNF	Rovaniemi	2.75	313	PB	Pb	09 58 18.0	-1.6
	baz=129						
RNF				SB	Sb	09 58 52.2	-1.7
OUF	Merijarvi	2.78	263	PB	Pn	09 58 15.1	-0.2
OUF				MSG		09 58 47.2	
	comp=Z,8.7nm,0.2s						
OUF				SG	Sn	09 58 49.9	+0.4
OBF0	Syolatti, Pyha	2.97	267	PB	Pn	09 58 17.6	-0.3
OBF0				SG	Sn	09 58 56.6	+2.5
VRF	Varrio	2.99	349	MSG		09 59 00.7	
	comp=Z,1.6nm,0.2s						
VRF				SG	Sg	09 59 04.4	-1.2
SUF	Sumiainen	3.05	228	PB	Pn	09 58 20.2	+1.2
SUF				MSG		09 58 54.8	
	comp=Z,2.3nm,0.2s						
SUF				SG	Sn	09 58 56.6	+0.5
TOF	Tornio	3.09	297	MSG		09 58 58.4	
	comp=Z,2.9nm,0.2s						
TOF				SG	Sb	09 59 02.1	-1.4
KLF	Kolari	3.78	313	SG	Sb	09 59 24.6	+1.2
KEF	Keuruu	3.86	229	PB	Pn	09 58 31.6	+1.4
PAJU	Pajala	3.94	308	PB	Pn	09 58 34.1	+2.9
ERTU	Ertsjaerv	4.07	299	PN	Pn	09 58 35.2	+2.2
FIA0	FINESS Array S	4.09	216	PB	Pn	09 58 35.1	+1.8
FINES	FINESS Array B	4.09	216	Pn	Pn	09 58 31.9	-1.4
	comp=Z,0.1nm,0.3s,baz=49,slow=13,SNR=2.1						
FINES				Pg	Pb	09 58 42.0	-0.4
	comp=Z,0.1nm,0.3s,baz=26,slow=15,SNR=4.7						
FINES				Lg	Lg	09 59 32.3	
	comp=Z,0.5nm,0.3s,baz=34,slow=28,SNR=8.6						
	comp=Z,2.2nm,1.0s						
VAF	Ylistaro	4.12	248	PG	Pb	09 58 42.0	-1.0
VAF				SG	Sb	09 59 33.0	-0.3
UMAU	Umeaa	4.62	263	SG	Sb	09 59 49.1	+1.5
HEF	Hetta	4.65	324	SG	Sb	09 59 51.8	+3.3
ARCES	ARCESS Array B	5.20	338	Pn	Pn	09 58 50.0	+1.5
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=11						
ARCES				Sn	Sn	09 59 47.4	-1.8
	comp=Z,0.1nm,0.3s,baz=156,slow=25,SNR=1.8						
ARCES				Lg	Lg	10 00 09.7	
	comp=Z,0.4nm,0.3s,baz=157,slow=28,SNR=10						
	comp=Z,3.3nm,1.0s						
I37NO	I37NO	6.49	317	*i*		10 34 30.0	
	baz=126,slow=324,SNR=1.8						

IDC ***18*** *10:31:54.8±2.1, 1°.09S×126°.80E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=162.2km s-min=27.3km az=66.0*

DJA ***18*** *10:31:57.0±0.4, 1°S±2°×12°8E±°, h11^{km}±2^{km}, M3.4/10, MLv3.4/10*

ISC 18 10:31:56.2±0.9, **0°.55S**±0°.05×**127°.71E**±0°.06, **h10**^{km}, **n10**, σ**1^{s}.78**/15, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.23	246	P	Pg	10 32 01.8	+0.9
LBMI				S	Sg	10 32 05.8	+1.8
TNTI	Ternate	1.35	345	P	Pn	10 32 22.6	+1.4
TNTI				S	Sg	10 32 42.2	+2.3
SANI	Sanana	2.28	229	P	Pb	10 32 36.0	-1.4
SANI				S	Sn	10 33 01.5	-0.5
MSAI	Masohi	3.04	156	P	Pn	10 32 45.6	+1.2
MSAI				S	Sn	10 33 21.1	+0.3
AAI	Ambon	3.16	171	P	Pn	10 32 48.8	+2.8
AAI				S	Sn	10 33 25.0	+1.2
SWI	Sorong	3.57	95	P	Pn	10 32 51.5	-0.2
KMSI	Cibinong	3.89	287	P	Pn	10 32 55.4	-0.7
WRA	Warramunga Arr	20.34	162	P	P	10 36 30.1	-2.8
	1.0nm,1.0s,baz=337,slow=12,SNR=7.2						
	1.0nm,1.0s						
ASAR	Alice Springs	23.76	166	P	P	10 37 06.8	-2.2
	1.2nm,0.8s,baz=346,slow=12,SNR=15						
	1.2nm,0.8s						
MKAR	Makanchi Array	61.62	326	P	P	10 42 13.9	-0.3
	0.4nm,0.7s,baz=125,slow=7.6,SNR=3.8						
	0.4nm,0.7s						

SNET ***18*** *10:54:42.8±1.2, 12°.38N×87°.47W, h27^{km}±6^{km}, ML3.6*

UCR ***18*** *10:54:42.8±1.3, 12°.37N×87°.47W, h28^{km}±7^{km}, ML3.6*

INET ***18*** *10:54:43.4±1.7, 12°.28N×87°.55W, h28^{km}±17^{km}, MW3.5*

ISC 18 10:54:40.6±1.5, **12°.35N**±0°.06×**87°.50W**±0°.03, **h9**^{km}±10^{km}, **n52**, σ**0^{s}.68**/77, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.56	52	*e*P	Pn	10 54 56.1	+1.2
CRIN				*e*S	Sn	10 55 06.7	+2.4
CNGN	Cerro Negro	0.80	79	*e*P	Pn	10 54 58.5	+0.5
CNGN				*e*S	Sn	10 55 11.3	+1.2
COPN	Copaltepe	0.90	101	*e*P	Pn	10 55 00.0	+0.5
COPN				*e*S	Sn	10 55 12.5	-0.1
CNCH	Conchagua	0.98	341	*e*P	Pn	10 55 00.6	0.0
CNCH				*e*S	Sn	10 55 14.6	-0.1
CNCH	Conchagua	0.98	341	*e*P	Pn	10 55 00.6	0.0
CNCH				*e*S	Sn	10 55 14.6	-0.1
CNCH	Conchagua	0.98	341	*e*P	Pn	10 55 00.6	0.0
CNCH				*e*S	Sn	10 55 14.2	-0.4
LCND	La Caada	1.03	338	*e*P	Pn	10 55 01.2	0.0
LCND				*e*S	Sn	10 55 15.3	-0.4
LCND				IAML		10 55 18.5	
	comp=Z,3µm,0.3s						
LCND	La Caada	1.03	338	*e*P	Pn	10 55 01.2	0.0
LCND				*e*S	Sn	10 55 15.3	-0.4
LCND				IAML		10 55 18.5	
	comp=Z,3µm,0.3s						
APYN	Apoyeque	1.13	96	*e*P	Pb	10 55 02.2	-0.2
APYN				*e*S	Sb	10 55 17.5	+0.3
BRAN	Las Pilas	1.18	72	*e*P	Pb	10 55 03.3	+0.1
BRAN				*e*S	Sb	10 55 18.5	-0.1
CRUN	El Crucero	1.23	107	*e*P	Pn	10 55 03.9	-0.2
VSM	San Miguel	1.31	325	*e*P	Pg	10 55 06.5	+0.7
VSM	San Miguel	1.31	325	*e*P	Pg	10 55 06.5	+0.7
LCY	Lacayo	1.32	324	*e*P	Pg	10 55 06.0	0.0
LCY	Lacayo	1.32	324	*e*P	Pg	10 55 06.0	0.0
PACA	Pacayal	1.37	324	*e*P	Pb	10 55 06.7	+0.2
PACA				*e*S	Sg	10 55 25.2	+0.4
PACA	Pacayal	1.37	324	*e*P	Pb	10 55 06.7	+0.2
PACA				*e*S	Sg	10 55 25.2	+0.4
COEB	Comit de Eme	1.52	319	*e*P	Pb	10 55 09.3	+0.3
COEB				*e*S	Sb	10 55 28.4	-0.1
COEB				IAML		10 55 36.3	
	comp=Z,798nm,0.4s						
COEB	Comit de Eme	1.52	319	*e*P	Pb	10 55 09.3	+0.3
COEB				*e*S	Sb	10 55 28.4	-0.1
COEB				IAML		10 55 36.3	
	comp=Z,798nm,0.4s						
COEB	Comit de Eme	1.52	319	*e*P	Pg	10 55 09.6	-0.2
COEB				*e*S	Sb	10 55 28.6	+0.1
CAHU	Cacacuatique	1.57	334	*e*P	Pn	10 55 08.8	-0.1
CAHU				*e*S	Sg	10 55 30.4	-0.8
CAHU	Cacacuatique	1.57	334	*e*P	Pn	10 55 08.8	-0.1
CAHU				*e*S	Sg	10 55 30.4	-0.8
PQSS	Presa 15 de Se	1.63	321	*e*P	Pn	10 55 09.5	0.0
PQSS	Presa 15 de Se	1.63	321	*e*P	Pn	10 55 09.5	0.0
TGUH	Tegucigalpa,Un	1.71	7	*e*P	Pn	10 55 10.0	-0.7
TGUH	Tegucigalpa,Un	1.71	7	*e*P	Pn	10 55 10.0	-0.7
BOAB	BOACO BROADBAN	1.79	87	*e*P	Pn	10 55 10.4	-1.4
BOAB				*e*S	Sn	10 55 32.5	-2.1
SCLA	Alcaldia de Sa	1.80	318	*e*P	Pn	10 55 12.7	+0.9
SCLA				*e*S	Sb	10 55 36.0	-0.5
SCLA	Alcaldia de Sa	1.80	318	*e*P	Pn	10 55 12.7	+0.9
SCLA				*e*S	Sb	10 55 36.0	-0.5
COEG	Centro de Oper	1.84	313	*e*P	Pn	10 55 12.6	0.0
COEG				*e*S	Sn	10 55 35.8	-0.2
COEG				IAML		10 55 46.1	
	comp=Z,541nm,0.4s						
COEG	Centro de Oper	1.84	313	*e*P	Pn	10 55 12.6	0.0
COEG				*e*S	Sn	10 55 35.8	-0.2
COEG				IAML		10 55 46.1	
	comp=Z,541nm,0.4s						
SJTE	Alcalda de S	1.93	311	*e*P	Pn	10 55 14.7	+1.0
SJTE				*e*S	Sn	10 55 38.8	+0.5
SJTE	Alcalda de S	1.93	311	*e*P	Pn	10 55 14.7	+1.0
SJTE				*e*S	Sn	10 55 38.8	+0.5
PAVA	Las Pavas	1.95	314	*e*P	Pb	10 55 15.3	-1.1
PAVA	Las Pavas	1.95	314	*e*P	Pb	10 55 15.3	-1.1
LFRS	El Faro	1.98	310	*e*P	Pn	10 55 15.1	+0.7
LFRS	El Faro	1.98	310	*e*P	Pn	10 55 15.1	+0.7
CONN	Concepcion	1.99	113	*e*P	Pn	10 55 14.3	-0.2
CONN				*e*S	Sn	10 55 39.6	0.0
UEES	Universidad Ev	2.17	309	IAML		10 55 50.4	
	comp=Z,295nm,0.2s						
UEES	Universidad Ev	2.17	309	IAML		10 55 50.4	
	comp=Z,295nm,0.2s						
BOQS	Boqueron	2.21	309	*e*P	Pn	10 55 18.7	+0.9
BOQS	Boqueron	2.21	309	*e*P	Pn	10 55 18.7	+0.9
JAYA	Jayaque - finc	2.30	304	*e*P	Pn	10 55 18.4	-0.5
JAYA				*e*S	Sn	10 55 47.6	+0.2
JAYA	Jayaque - finc	2.30	304	*e*P	Pn	10 55 18.4	-0.5
JAYA				*e*S	Sn	10 55 47.6	+0.2
CEVE	Cerro Verde	2.54	306	*e*P	Pn	10 55 22.8	+0.5
CEVE	Cerro Verde	2.54	306	*e*P	Pn	10 55 22.8	+0.5
SBLS	San Blas	2.54	306	*e*P	Pn	10 55 22.8	+0.5
SBLS	San Blas	2.54	306	*e*P	Pn	10 55 22.8	+0.5
NUBE	Las Nubes	2.70	305	*e*P	Pn	10 55 25.4	+1.0
NUBE	Las Nubes	2.70	305	*e*P	Pn	10 55 25.4	+1.0
MTO3	Montecristo	2.73	319	*e*P	Pn	10 55 24.9	+0.1
MTO3	Montecristo	2.73	319	*e*P	Pn	10 55 24.9	+0.1

RSNC 18 11:18:44.6±1.1, **6°.65N**×**73°.11W**, **h134**^{km}±8^{km}, **ML1.5**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.09	235	*e*P	Pn	11 19 03.4	+0.4
BARC				*e*S	Sn	11 19 18.3	+1.4
BARC				*i*		11 19 27.6	
	comp=Z,5.0nm,0.2s						
BARC	Barichara	0.09	235	*e*P	Pn	11 19 03.4	+0.4
BARC				*e*S	Sn	11 19 16.1	-0.8
BARC				*i*		11 19 27.6	
	comp=Z,5.0nm,0.2s						
RUSC	La Rusia	0.75	178	*e*P	Pn	11 19 07.5	+1.2
RUSC				*e*S	Sn	11 19 27.2	+4.5
RUSC				*i*		11 19 30.2	
	comp=Z,1.9nm,0.4s						
BRRC	Barranca, Sant	0.76	307	*e*P	Pn	11 19 04.8	-1.0
BRRC				*e*S	Sn	11 19 21.6	-0.2
BRRC				*i*		11 19 24.0	
	comp=Z,10nm,0.1s						
BRRC	Barranca, Sant	0.76	307	*e*P	Pn	11 19 04.9	-0.9
BRRC				*e*S	Sn	11 19 21.6	-0.3
PTBC	PUERTO BERRIO,	1.34	266	*e*P	Pn	11 19 10.2	-1.1
PTBC				*e*S	Sn	11 19 31.6	0.0
PTBC				*i*		11 19 38.0	
	comp=Z,5.5nm,0.4s						
PTBC	PUERTO BERRIO,	1.34	266	*e*P	Pn	11 19 10.4	-0.9
PTBC				*e*S	Sn	11 19 31.5	-0.1
PTBC				*i*		11 19 38.0	
	comp=Z,5.5nm,0.4s						
ZARC	Zaragoza, Cauc	1.93	296	*e*P	Pn	11 19 16.1	-1.9
ZARC				*e*S	Sn	11 19 41.7	-1.8
ZARC	Zaragoza, Cauc	1.93	296	*e*P	Pn	11 19 17.3	-0.6
ZARC				*e*S	Sn	11 19 41.7	-1.8
NORC	Norcasia	2.06	239	*e*P	Pn	11 19 18.9	-0.6
NORC				*e*S	Sn	11 19 48.2	+1.9
NORC				*i*		11 19 54.1	
	comp=Z,3.5nm,0.2s						
NORC	Norcasia	2.06	239	*e*P	Pn	11 19 18.9	-0.7
NORC				*e*S	Sn	11 19 47.9	+1.6
NORC				*i*		11 19 54.1	
	comp=Z,3.5nm,0.2s						

AZER ***18*** *11:36:59.5±1.3, 41°.42N×42°.76E, h30^{km}±145^{km}, Error ellipse: s-maj=284.3km s-min=6.3km az=275.0*

TIF ***18*** *11:37:00.9, 41°.76N×43°.13E, h20^{km}*

DDA ***18*** *11:37:00.8±0.0, 41°.75N×43°.13E, h24^{km}±1^{km}, MW3.3*

ISK ***18*** *11:37:01.1, 41°.75N×43°.07E, h5^{km}, ML3.2/10*

NORS ***18*** *11:37:01.1±0.0, 41°.74N×43°.13E, h1^{km}, MPVA3.9*

MOS ***18*** *11:37:01.3±0.0, 41°.88N×43°.17E, h1^{km}, MPVA4.0*

NSSP ***18*** *11:37:01.3, 41°.68N×43°.13E, h5^{km}, Ms2.9*

ISC 18 11:37:01.6±0.9, **41°.74N**±0°.01×**43°.12E**±0°.01, **h11**^{km}±7^{km}, **n135**, σ**1^{s}.25**/240, **10C-4D**, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABS	Abastumani	0.23	273	P	Pg	11 37 06.8	+0.2
ABS				S	Sg	11 37 10.8	+0.9
ABS	Abastumani	0.23	273	PG	Pg	11 37 06.7	+0.2
ABS				S	Sg	11 37 10.8	+0.9
BKRG	Bakuriani	0.30	87	P	Pg	11 37 07.7	0.0
BKRG				S	Sb	11 37 12.8	-1.3
BKRG	Bakuriani	0.30	87	PG	Pg	11 37 07.7	0.0
BKRG				S	Sb	11 37 12.7	-1.3
EPOS	Posof	0.38	231	P	Pb	11 37 09.7	-0.7
EPOS				S	Sb	11 37 16.0	-0.4
AKH	Akhalkalaki	0.43	140	P	Pb	11 37 10.7	-0.7
AKH				S	Sb	11 37 17.4	-0.5
AKH	Akhalkalaki	0.43	140	PG	Pb	11 37 10.7	-0.7
AKH				SG	Sb	11 37 17.5	-0.4
AKH	Akhalkalaki	0.43	140	PG	Pb	11 37 10.6	-0.7
AKH				S	Sb	11 37 17.3	-0.5
BRNG	Burnasheti	0.54	103	P	Pb	11 37 12.4	-0.7
BRNG				S	Sb	11 37 21.0	0.0
BGD	Bogdanovka	0.60	143	P	Pb	11 37 13.6	-0.6
BGD				S	Sb	11 37 22.4	-0.3
BGD	Bogdanovka	0.60	143	PG	Pb	11 37 13.5	-0.6
BGD				S	Sb	11 37 22.3	-0.3
TKB	Tkibuli	0.61	351	P	Pg	11 37 13.0	-0.5
TKB				S	Sg	11 37 21.6	-0.1
TKB	Tkibuli	0.61	351	PG	Pg	11 37 13.0	-0.5
TKB				S	Sg	11 37 21.6	-0.1
TRLG	Trialeti	0.76	105	P	Pg	11 37 16.1	-0.2
TRLG				S	Sb	11 37 27.0	-0.3
TRLG	Trialeti	0.76	105	PG	Pg	11 37 16.1	-0.2
TRLG				S	Sb	11 37 27.0	-0.3
DMNI	Dmanisi	0.90	117	P	Pg	11 37 18.3	-0.7
DMNI				S	Sg	11 37 30.6	-0.2
DMNI	Dmanisi	0.90	117	PG	Pg	11 37 18.3	-0.7
DMNI				S	Sg	11 37 30.6	-0.2
KZRT	Kazreti	1.02	110	P	Pg	11 37 20.1	-1.1
KZRT				S	Sg	11 37 34.2	-0.3
KZRT	Kazreti	1.02	110	PG	Pg	11 37 20.1	-1.1
KZRT				S	Sg	11 37 34.2	-0.3
KZRT	Kazreti	1.02	110	P	Pg	11 37 19.9	-1.3
KZRT				S	Sg	11 37 33.8	-0.7
BATM	Batumi	1.08	263	P	Pg	11 37 21.3	-1.0
BATM				S	Sg	11 37 36.4	-0.1
BATM	Batumi	1.08	263	PG	Pg	11 37 21.4	-1.0
BATM				SG	Sg	11 37 35.6	-0.8
BATM	Batumi	1.08	263	PG	Pg	11 37 21.3	-1.0
BATM				S	Sg	11 37 36.3	-0.1
KARS	Kars	1.11	182	PN	Pn	11 37 23.5	+0.3
KARS				SN	Sn	11 37 39.4	+0.8
KARS	Kars	1.11	182	PG	Pn	11 37 23.5	+0.3
EAK	Akyaka	1.12	161	P	Pg	11 37 22.2	-0.9
EAK				S	Sg	11 37 37.5	-0.1
DAGI	Agillar	1.13	234	P	Pg	11 37 22.9	-0.4
DAGI				S	Sb	11 37 38.1	+0.3
DBOC	Borcka	1.16	251	P	Pg	11 37 23.5	-0.4
DBOC				S	Sg	11 37 38.3	-0.8
ZEI	Tsey	1.19	29	*i* PG	Pg	11 37 23.8	-0.8
ZEI				pmax	pmax		
	comp=Z,71nm,0.3s						
ZEI	Tsey	1.19	29	*i* Pg	Pg	11 37 23.8	-0.8
ZEI				*e*Sg	Sn	11 37 40.5	-0.2
STE	Stepanavan	1.20	128	⇓*i*P	Pb	11 37 24.3	0.0
STE				⇓*i*S	Sb	11 37 40.7	+0.9
STE	Stepanavan	1.20	128	⇑*i*P	Pg	11 37 24.1	-0.5
STE				⇑*i*S	Sb	11 37 40.1	+0.3
DIGR	Digorskoe uzhe	1.20	16	*e*PG	Pg	11 37 23.7	-1.1
DIGR				*e*S	Sb	11 37 40.6	+0.5
DIGR	Digorskoe uzhe	1.20	16	*i* Pg	Pg	11 37 23.6	-1.1
DIGR				*e*Sg	Sb	11 37 40.7	+0.5
STEZ	Stepenevan	1.21	127	⇓*i*P	Pn	11 37 24.8	+0.2
STEZ				⇑*i*S	Sb	11 37 41.0	+0.7
GUDG	Gudauri	1.24	54	P	Pg	11 37 24.3	-1.1
GUDG				S	Sb	11 37 41.2	+0.1
GUDG	Gudauri	1.24	54	PG	Pg	11 37 24.3	-1.1
GUDG				S	Sb	11 37 41.2	+0.1
CHVG	Ch'k'valeri	1.24	322	P	Pb	11 37 24.9	-0.1
CHVG				S	Sn	11 37 42.2	+0.6
CHVG	Ch'k'valeri	1.24	322	PG	Pb	11 37 24.9	-0.1
CHVG				S	Sn	11 37 42.2	+0.6
BTNK	Botanikuri	1.26	92	P	Pg	11 37 19.3	-6.4
BTNK				S	Sg	11 37 36.7	-5.4
BTNK	Botanikuri	1.26	92	PG	Pg	11 37 19.3	-6.4
BTNK	Botanikuri	1.26	92	P	Pg	11 37 19.0	-6.7
SEAG	Tbilisi Sea	1.26	88	P	Pg	11 37 24.7	-1.0
SEAG				S	Sn	11 37 42.1	+0.1
SEAG	Tbilisi Sea	1.26	88	PG	Pg	11 37 24.7	-1.0
SEAG				S	Sn	11 37 42.1	+0.1
DBAD	Bademkaya	1.30	237	P	Pn	11 37 25.7	0.0
DBAD				S	Sg	11 37 43.1	-0.3
HOPA	Hopa-Artvin	1.31	255	PN	Pn	11 37 26.1	+0.4
SENK	Senkaya-Erzuru	1.32	207	PN	Pb	11 37 26.6	+0.2
SENK				SN	Sn	11 37 45.2	+1.5
DDEM	Demirkent	1.34	231	P	Pn	11 37 26.6	+0.3
DDEM				S	Sb	11 37 44.5	+0.6
DIGO	Kars	1.34	172	P	Pn	11 37 26.4	0.0
DIGO				S	Sg	11 37 44.3	-0.5
LACR	Lac	1.39	38	*e*PG	Pn	11 37 27.2	+0.2
LACR				*e*S	Sn	11 37 46.6	+1.2
LACR	Lac	1.39	38	*e*Pg	Pg	11 37 27.6	-0.7
LACR				*e*Sg	Sn	11 37 47.4	+2.0
MTEO	Meteo	1.41	48	P	Pn	11 37 27.3	-0.2
MTEO				S	Sg	11 37 46.0	-0.9
KORR	Kora	1.51	27	*e*PG	Pg	11 37 30.2	-0.5
KORR				*e*S	Sg	11 37 51.6	+1.3
KORR	Kora	1.51	27	*e*Pg	Pg	11 37 30.2	-0.5
KORR				*e*Sg	Sg	11 37 51.5	+1.3
LSNR	Lesken	1.62	18	*i* PN	Pg	11 37 32.1	-0.5
LSNR				pmax	pmax		
	comp=Z,70nm,0.4s						
LSNR	Lesken	1.62	18	*i* Pg	Pg	11 37 32.1	-0.5
LSNR				*e*Sg	Sg	11 37 54.4	+0.7
ARNR	Ardon	1.67	30	*e*PN	Pb	11 37 32.0	-0.4
ARNR				*e*S	Sg	11 37 56.3	+0.9
ARNR	Ardon	1.67	30	*e*Pg	Pb	11 37 32.0	-0.4
ARNR				*e*Sg	Sg	11 37 56.3	+0.9
DGRG	David-gareji	1.71	99	P	Pb	11 37 32.8	-0.2
DGRG				S	Sb	11 37 55.4	+0.7
DGRG	David-gareji	1.71	99	PN	Pb	11 37 32.8	-0.2
DGRG				S	Sb	11 37 55.3	+0.7
VLKR	Vladikavkaz	1.74	41	*e*PN	Pb	11 37 33.4	-0.1
VLKR				*e*S	Sg	11 37 58.7	+1.2
VLKR	Vladikavkaz	1.74	41	*e*Pg	Pb	11 37 33.4	-0.1
VLKR				*e*Sg	Sg	11 37 58.7	+1.2
METS	Metsamor	1.75	155	⇑*i*P	Pg	11 37 34.9	-0.3
METS				⇓*i*S	Sg	11 37 59.0	+1.2
STDR	Stavd-Durt	1.77	23	*e*PN	Pg	11 37 35.9	+0.4
STDR				*e*S	Sg	11 38 00.4	+2.0
STDR	Stavd-Durt	1.77	23	*i* Pg	Pg	11 37 35.9	+0.4
STDR				*e*Sg	Sg	11 38 01.2	+2.8
NCK	Nalchik	1.79	11	*i* PN	Pg	11 37 35.0	-0.8
NCK				pmax	pmax		
	comp=Z,144nm,0.3s						
QZX	Qazax, Azerbai	1.82	111	P	Pn	11 37 33.8	+0.9
	SNR=25						
QZX				S	Sb	11 37 58.4	+0.6
KMGR	Komgaron	1.84	44	*e*PN	Pg	11 37 37.7	+0.8
KMGR				*e*S	Sg	11 38 01.9	+1.1
KMGR	Komgaron	1.84	44	*e*Pg	Pg	11 37 37.7	+0.8
KMGR				*e*Sg	Sg	11 38 01.9	+1.1
KAPZ	Kaputan	1.85	139	⇑*i*P	Pg	11 37 36.9	-0.2
KAPZ				⇑S	Sg	11 38 01.8	+0.6
CHOM	Cayeli-Rize	1.89	251	PN	Pn	11 37 34.4	+0.6
BTKR	Batakoyurt	1.94	32	*i* PN	Pg	11 37 38.3	-0.4
BTKR				*e*S	Sg	11 38 04.5	+0.7
BTKR	Batakoyurt	1.94	32	*i* Pg	Pg	11 37 38.3	-0.4
BTKR				*e*Sg	Sg	11 38 04.5	+0.7
KBZ	Khabaz	1.99	355	*e*PN	Pb	11 37 37.1	-0.7
KBZ	Khabaz	1.99	355	*e*Pg	Pb	11 37 38.0	+0.3
KBZ				*e*Sg	Sg	11 38 04.3	-1.3
KOPR	Koprukoy-ERZUR	2.00	209	PN	Pn	11 37 36.2	+0.8
GNI	Garni	2.01	142	⇑*i*P	Pg	11 37 40.4	+0.3
GNI				⇑*i*S	Sg	11 38 08.2	+2.0
GNI	Garni	2.01	142	PN	Pb	11 37 37.1	-1.1
GNI				SN	Sb	11 38 03.1	-0.1
GNI	Garni	2.01	142	*i* PN	Pb	11 37 38.3	+0.1
GNI				pmax	pmax		
	comp=Z,28nm,0.7s						
SHA1	Shidzhatmaz	2.02	350	*e*PN	Pb	11 37 38.2	-0.3
SHA1				*e*S	Sg	11 38 06.6	-0.1
SHA1	Shidzhatmaz	2.02	350	*e*Pg	Pb	11 37 38.2	-0.3
SHA1				*e*Sg	Sg	11 38 06.6	-0.1
NRKZ	NAREK	2.10	146	⇑*i*P	Pg	11 37 41.1	-0.6
NRKZ				⇑*i*S	Sg	11 38 08.5	-0.5
AGRB	Hanur-Agry	2.17	183	PN	Pn	11 37 39.1	+1.4
KRIK	Erzurum-spir	2.17	231	P	Pn	11 37 37.7	-0.2
KRIK				S	Sn	11 38 06.6	+1.7
GDB	GEDABAY	2.23	116	P	Pb	11 37 40.5	-1.4
	SNR=22						
GDB				S	Sb	11 38 10.0	+0.3
KIV	Kislovodsk	2.23	352	*e*PN	Pg	11 37 43.4	-1.0
KIV				*e*S	Sg	11 38 12.8	-0.6
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV	Kislovodsk	2.23	352	*i* Pg	Pg	11 37 43.5	-0.9
KIV				*e*Sg	Sg	11 38 13.1	-0.2
KIV0	Kislovodsk Arr	2.23	352	*e*Pg	Pb	11 37 41.9	-0.1
KIV0				*e*Sg	Sg	11 38 12.6	-0.8
DDFL	Dedoflistskaro	2.27	97	P	Pb	11 37 43.3	+0.8
DDFL	Dedoflistskaro	2.27	97	PN	Pb	11 37 43.3	+0.8
DDFL	Dedoflistskaro	2.27	97	P	Pb	11 37 43.2	+0.8
ARXR	Arkhyz	2.27	324	*e*PN	Pg	11 37 44.7	-0.5
ARXR				*e*S	Sg	11 38 12.9	-1.7
ARXR	Arkhyz	2.27	324	*e*Pg	Pg	11 37 44.7	-0.5
ARXR				*e*Sg	Sg	11 38 12.9	-1.7
BEYR	Belyy Ugol+	2.28	354	*e*PN	Pb	11 37 42.0	-0.7
BEYR				*e*S	Sb	11 38 11.4	+0.5
BEYR	Belyy Ugol+	2.28	354	*e*Pg	Pb	11 37 43.4	+0.7
BEYR				*e*Sg	Sg	11 38 13.0	-1.8
PYA1	Pyatigorsk	2.32	360	*i* PN	Pb	11 37 43.5	+0.1
LGD	Lagodekhi	2.33	87	P	Pb	11 37 42.1	-1.6
LGD				S	Sg	11 38 14.7	-1.9
LGD	Lagodekhi	2.33	87	PN	Pb	11 37 42.0	-1.6
LGD				S	Sg	11 38 14.6	-1.9
BTLR	Botlikh	2.48	67	*i* PN	Pb	11 37 45.2	-0.9
BTLR	Botlikh	2.48	67	*e*Pn	Pb	11 37 45.4	-0.8
BTLR				*e*Sn	Sb	11 38 17.5	+0.8
ZKTA	Zakatala	2.62	91	P	Pb	11 37 46.5	-2.0
	SNR=9.2						
ZKTA				S	Sb	11 38 22.4	+1.7
BAYT	Aydıntepe-Bayb	2.63	240	PN	Pn	11 37 44.9	+0.9
BAYB	BAYBURT	2.63	237	P	Pb	11 37 49.7	+0.9
BAYB				S	Sg	11 38 24.0	-2.0
GANJ	Ganja	2.65	113	PN	Pn	11 37 45.8	+1.6
GANJ	Ganja	2.65	113	P	Pn	11 37 45.8	+1.6
GANJ				S	Sb	11 38 21.0	-0.6
XNZR	Khunzakh	2.78	72	*e*PN	Pb	11 37 50.2	-1.1
XNZR				*e*S	Sb	11 38 26.0	+0.6
XNZR	Khunzakh	2.78	72	*e*Pn	Pb	11 37 50.2	-1.1
XNZR				*e*Sn	Sb	11 38 26.0	+0.6
AHMR	Akhmetovskaya	2.85	328	*e*PN	Pb	11 37 50.6	-1.9
AHMR	Akhmetovskaya	2.85	328	*e*Pn	Pb	11 37 50.6	-1.9
VSLR	Vesyoloye	2.86	308	*e*PN	Pn	11 37 48.0	+1.0
VSLR				*e*S	Sb	11 38 29.4	+2.0
VSLR	Vesyoloye	2.86	308	*e*Sn	Sb	11 38 29.4	+2.0
RPOR	Krasnaya Polya	2.87	314	*e*PN	Pg	11 37 55.0	-1.6
RPOR				*e*S	Sn	11 38 22.4	+0.6
UNCR	Uncukul	2.89	69	*e*PN	Pb	11 37 53.0	-0.2
UNCR				*e*S	Sg	11 38 31.6	-2.9
UNCR	Uncukul	2.89	69	*e*Pn	Pb	11 37 53.0	-0.2
DLMR	Dylym	2.92	62	*e*PN	Pn	11 37 50.3	+2.4
DLMR				*e*S	Sb	11 38 27.2	-2.0
DLMR	Dylym	2.92	62	*e*Pn	Pn	11 37 50.3	+2.4
DLMR				*e*Sn	Sb	11 38 27.2	-2.0
GNBR	Gunib	2.93	76	*e*PN	Pb	11 37 52.5	-1.3
GNBR				*e*S	Sb	11 38 31.0	+1.3
GNBR	Gunib	2.93	76	*e*Pn	Pb	11 37 52.5	-1.3
GNBR				*e*Sn	Sb	11 38 31.0	+1.3
KMKR	Kumukh	2.99	81	*e*PN	Pb	11 37 52.7	-2.3
KMKR				*e*S	Sb	11 38 32.5	+1.0
KMKR	Kumukh	2.99	81	*e*Pn	Pb	11 37 52.7	-2.3
KMKR				*e*Sn	Sb	11 38 32.5	+1.0
ARKR	Arakani	3.00	72	*e*PN	Pg	11 37 57.8	-1.3

ARKR				*e*S	Sb	11 38 34.0	+2.3
KRNR	**Karanay**	3.01	68	*e*PN	Pb	11 37 54.2	-1.0
KRNR				*e*S	Sb	11 38 33.2	+1.2
KRNR	**Karanay**	3.01	68	*e*Pn	Pb	11 37 54.2	-1.0
KRNR				*e*Sn	Sb	11 38 33.2	+1.2
ALER	**Alexandrovskoy**	3.02	357	*e*PN	Pb	11 37 53.1	-2.3
ALER				*e*S	Sg	11 38 36.5	-2.1
ALER	**Alexandrovskoy**	3.02	357	*e*Pn	Pb	11 37 53.1	-2.3
DBC	**Dubki**	3.03	64	*e*PN	Pb	11 37 53.2	-2.3
DBC				*e*S	Sb	11 38 30.0	-2.5
DBC	**Dubki**	3.03	64	*e*Pn	Pb	11 37 53.1	-2.3
DBC				*e*Sn	Sb	11 38 30.0	-2.5
GUZR	**Guzeripl'**	3.15	317	*e*PN	Pb	11 37 56.3	-1.3
GUZR				*e*S	Sb	11 38 34.3	-1.8
GUZR	**Guzeripl'**	3.15	317	*e*Pn	Pb	11 37 56.4	-1.3
GUZR				*e*Sn	Sb	11 38 34.3	-1.8
AKT	**Akhty**	3.46	93	*i* PN	Pn	11 37 57.9	+2.4
AKT	**Akhty**	3.46	93	*e*Sn	Sb	11 38 42.0	-3.1
LZRR	**Lazarevskoye**	3.52	310	*e*PN	Pb	11 38 01.5	-2.3
LZRR				*e*S	Sb	11 38 46.2	-0.3
LZRR	**Lazarevskoye**	3.52	310	*e*Pn	Pb	11 38 01.5	-2.3
GOYR	**Goytkh**	3.72	314	*e*PN	Pn	11 38 02.9	+4.0
GOYR				*e*S	Sb	11 38 49.5	-2.7
GOYR	**Goytkh**	3.72	314	*e*Pn	Pn	11 38 02.9	+4.0
GOYR				*e*Sn	Sb	11 38 49.5	-2.7

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*MAN **18** 11:40:30.3, 9°.23N×125°.61E, h8^{km}, mb4.3, ML3.1, MS2.8,*
Hypocentre not reviewed by the ISC
ISC 18 11:40:31.0±1.0, **9°.26N**±0°.03×**125°.61E**±0°.06, **h17**^{km}±9^{km},
n12, σ**0^{s}.98**/21, **3C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	0.29	178⇓	*e*P	Pg	11 40 36.6	-0.7
BUTP				*e*S	Sg	11 40 42.5	+0.9
SCPH	**Surigao**	0.53	347⇑	*i*P	Pg	11 40 41.5	-0.1
SCPH				*i* S	Sb	11 40 49.6	+0.3
GLSP	**General Luna,**	0.73	44⇓	*e*P	Pg	11 40 44.5	-0.7
GLSP				*e*S	Sg	11 40 56.0	+1.0
MSLP	**Maasin**	1.14	320⇓	*e*P	Pb	11 40 51.5	-0.9
MSLP				*e*S	Sg	11 41 08.6	+0.6
TBP	**Tagbilaran**	1.78	284⇓	*e*P	Pn	11 41 00.1	-1.0
TBP				*i* S	Sn	11 41 22.3	-1.0
LLP	**Lapu-Lapu**	1.93	303	*e*P	Pn	11 41 01.9	-1.2
LLP				*e*S	Sb	11 41 29.9	+0.3
OCLP	**Ormoc**	2.03	331⇓	*e*P	Pn	11 41 05.6	+1.0
OCLP				*e*S	Sb	11 41 31.9	-0.7
KCP	**Kidapawan**	2.30	193⇑	*i*P	Pn	11 41 08.3	+0.1
DCPH	**Dipolog City**	2.33	253⇓	*e*P	Pn	11 41 09.6	+1.0
DCPH				*e*S	Sn	11 41 36.7	-0.3
SNPH	**Sibulan**	2.34	272⇓	*i*P	Pn	11 41 09.4	+0.5
SNPH				*i* S	Sn	11 41 39.2	+1.8
PAGZ	**Pagadian**	2.61	238⇓	*e*P	Pn	11 41 13.2	+0.6
RCP	**Roxas**	3.63	309⇑	*e*P	Pn	11 41 28.1	+1.6

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*ISK **18** 12:00:18.9, 39°.83N×25°.40E, h5^{km}, ML3.4/30*
*DDA **18** 12:00:20.3±0.0, 39°.79N×25°.47E, h12^{km}±3^{km}, MW3.5*
*THE **18** 12:00:20.5, 39°.82N×25°.45E, h9^{km}, ML3.1/9, Error ellipse: s-maj=0.9km s-min=0.4km az=77.0*
*ATH **18** 12:00:20.6, 39°.81N×25°.39E, h21^{km}±3^{km}, ML3.1/19, Error ellipse: s-maj=3.3km s-min=0.9km az=269.0*
ISC 18 12:00:20.4±0.8, **39°.81N**±0°.02×**25°.41E**±0°.02, **h15**^{km}±7^{km},
n94, σ**0^{s}.75**/127, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	0.20	298	P	Pg	12 00 25.2	+0.1
LIA				S	Sg	12 00 28.9	+0.7
LIA				AML	AML	12 00 33.3	
	comp=N,26911µm,0.4s						
LIA				AML	AML	12 00 33.4	
	comp=E,13561µm,0.4s						
LIA	**Limnos Island**	0.20	298	P	Pg	12 00 25.1	+0.1
LIA				S	Sg	12 00 28.9	+0.7
	comp=E,10µm,0.4s						
EFSA	**Agios Efstrati**	0.42	231	P	Pb	12 00 29.6	0.0
EFSA				S	Sb	12 00 35.6	-0.1
EFSA				AML	AML	12 00 37.6	
	comp=N,12533µm,0.3s						
EFSA				AML	AML	12 00 39.7	
	comp=E,16766µm,0.4s						
BOZC	**Bozcaada**	0.49	86	PG	Pg	12 00 29.2	-1.0
BOZC	**Bozcaada**	0.49	86	P	Pg	12 00 29.2	-1.0
GADA	**Gvkgeada**	0.54	44	PG	Pg	12 00 30.4	-0.6
GADA				SG	Sg	12 00 37.6	-0.6
GOKA	**anakkale-Gk**	0.54	44	P	Pg	12 00 31.1	+0.1
GOKA				S	Sg	12 00 38.2	-0.1
ECEA	**Canakkale, Ece**	0.63	68	P	Pg	12 00 31.4	-1.4
ECEA				S	Sg	12 00 41.2	+0.1
KOCA	**Canakkale, Ayv**	0.64	118	P	Pg	12 00 32.3	-0.6
KOCA				S	Sg	12 00 41.0	-0.3
GPNR	**Gulpinar-Canak**	0.66	122	PG	Pg	12 00 32.5	-0.7
SMTH	**Samothraki Isl**	0.67	8	P	Pg	12 00 33.0	-0.5
SMTH				AML	AML	12 00 45.2	
	comp=N,1296µm,0.3s						
SMTH				AML	AML	12 00 54.2	
	comp=E,810µm,0.5s						
SMTH	**Samothraki Isl**	0.67	8	P	Pg	12 00 33.0	-0.5
SIGR	**SIGRI**	0.68	150	P	Pg	12 00 33.2	-0.6
SIGR				S	Sb	12 00 43.3	0.0
SIGR				AML	AML	12 00 43.8	
	comp=N,7986µm,0.5s						
SIGR				AML	AML	12 00 43.9	
	comp=E,5822µm,0.8s						
SIGR	**SIGRI**	0.68	150	P	Pg	12 00 33.1	-0.6
SIGR				S	Sb	12 00 43.0	-0.3
	comp=E,3µm,0.7s						
EZN	**Ezine**	0.70	88	P	Pg	12 00 33.0	-1.1
EZN	**Ezine**	0.70	88	PG	Pg	12 00 32.8	-1.3
PRK	**Paraskevi**	0.87	130	P	Pb	12 00 37.6	+0.4
PRK				S	Sb	12 00 48.8	+0.2
PRK				AML	AML	12 00 52.9	
	comp=E,7665µm,0.4s						
PRK				AML	AML	12 00 58.4	
	comp=N,8212µm,0.8s						
PRK	**Paraskevi**	0.87	130	P	Pb	12 00 37.5	+0.4
PRK				S	Sb	12 00 49.0	+0.4
	comp=N,3µm,0.8s						
BAYC	**CANAKKALE_Bayr**	0.88	94	P	Pg	12 00 36.3	-1.1
BAYC				S	Sg	12 00 47.9	-1.0
THAS	**Thassos island**	0.96	327	P	Pb	12 00 38.6	-0.2
THAS				S	Sg	12 00 50.7	-0.9
THAS				AML	AML	12 00 53.1	
	comp=N,2846µm,0.3s						
THAS				AML	AML	12 00 53.8	
	comp=E,2627µm,0.3s						
THAS	**Thassos island**	0.96	327	P	Pb	12 00 38.5	-0.2
THAS				S	Sb	12 00 52.0	+0.7
	comp=E,1µm,0.3s						
GELI	**Tayfur-Gelibol**	1.01	54	PG	Pg	12 00 38.5	-1.4
GELI				SG	Sg	12 00 52.7	-0.3
ENEZ	**Enez**	1.09	31	P	Pg	12 00 40.5	-0.9
ENEZ				S	Sb	12 00 55.8	+0.8
	comp=E,4µm,0.6s						
ENEZ	**Enez**	1.09	31	PG	Pg	12 00 40.0	-1.4
ENEZ				SG	Sg	12 00 55.2	-0.4
AYVA	**Ayvalik**	1.10	116	P	Pg	12 00 40.7	-1.0
AYVA				S	Sg	12 00 55.8	-0.3
SKY	**Skiros Island**	1.14	216	P	Pb	12 00 41.4	-0.5
SKY				S	Sb	12 00 56.3	-0.2
SKY				AML	AML	12 00 60.0	
	comp=N,3818µm,0.2s						
SKY				AML	AML	12 01 01.1	
	comp=E,3188µm,0.2s						
SKY	**Skiros Island**	1.14	216	P	Pn	12 00 41.8	-0.1
ALN	**Alexandroupoli**	1.19	24	P	Pg	12 00 41.9	-1.5
ALN				S	Sg	12 00 58.4	-0.5
ALN				AML	AML	12 00 59.1	
	comp=N,1065µm,0.5s						
ALN				AML	AML	12 00 59.5	
	comp=E,1347µm,0.5s						
ALN	**Alexandroupoli**	1.19	24	P	Pg	12 00 41.9	-1.5
ALN				S	Sg	12 00 58.5	-0.5
	comp=E,605nm,0.5s						
ALN	**Alexandroupoli**	1.19	24	PN	Pg	12 00 41.9	-1.5
ALN				SN	Sg	12 00 58.7	-0.3
ERIK	**Erikli-Kesan**	1.21	44	PN	Pg	12 00 42.1	-1.6
ERIK				SN	Sg	12 00 59.1	-0.3
PSRA	**Psara**	1.27	175	P	Pg	12 00 44.2	-0.6
PSRA				AML	AML	12 01 03.8	
	comp=N,2024µm,0.3s						
PSRA				AML	AML	12 01 04.7	
	comp=E,2856µm,0.3s						
BUHA	**Balikesir, Bur**	1.32	103	P	Pn	12 00 43.9	-0.5
BUHA				S	Sg	12 01 02.6	-0.4
PAIG	**Paliouri**	1.34	276	P	Pb	12 00 44.7	-0.6
PAIG				S	Sb	12 01 01.6	-0.6
PAIG				AML	AML	12 01 07.7	
	comp=E,497µm,0.5s						
PAIG				AML	AML	12 01 07.9	
	comp=N,559µm,0.6s						
PAIG	**Paliouri**	1.34	276	P	Pb	12 00 44.6	-0.6
PAIG				S	Sn	12 01 04.2	+2.0
	comp=N,262nm,0.5s						
RDO	**Rodhopi**	1.34	4	P	Pn	12 00 44.3	-0.3
RDO	**Rodhopi**	1.34	4	P	Pn	12 00 44.4	-0.3
RDO	**Rodhopi**	1.34	4	PN	Pn	12 00 43.7	-0.9
ALNA	**Alonissos**	1.36	242	P	Pb	12 00 45.0	-0.7
ALNA				AML	AML	12 01 11.3	
	comp=N,1353µm,0.8s						
ALNA				AML	AML	12 01 14.1	
	comp=E,1343µm,0.7s						
DKL	**Dikili**	1.37	122	PN	Pn	12 00 45.3	+0.3
CAND	**Candarli**	1.37	128	PN	Pb	12 00 45.6	-0.2
KAVA	**Kavala**	1.37	330	P	Pn	12 00 45.0	-0.1
KAVA				S	Sb	12 01 02.2	-1.0
KAVA				AML	AML	12 01 02.9	
	comp=N,866µm,0.3s						
KAVA				AML	AML	12 01 05.5	
	comp=E,1132µm,0.5s						
KAVA	**Kavala**	1.37	330	P	Pn	12 00 45.0	-0.1
KVLA	**Kavala**	1.38	326	P	Pn	12 00 45.1	0.0
KVLA				AML	AML	12 01 06.4	
	comp=E,892µm,0.4s						
KVLA				AML	AML	12 01 07.7	
	comp=N,1005µm,0.4s						
KOKK	**Kokkinochori,**	1.48	314	P	Pn	12 00 46.5	0.0
KOKK	**Kokkinochori,**	1.48	314	P	Pn	12 00 46.5	0.0
KOKK				S	Sg	12 01 07.0	-1.1
	comp=N,395nm,0.5s						
FOCM	**Foa**	1.50	136	PN	Pn	12 00 47.4	+0.7
CHOS	**Chios island**	1.50	160	P	Pn	12 00 46.8	-0.1
CHOS				AML	AML	12 01 15.9	
	comp=N,1455µm,0.7s						
CHOS				AML	AML	12 01 18.6	
	comp=E,1754µm,0.7s						
CHOS	**Chios island**	1.50	160	P	Pn	12 00 46.8	-0.1
CHOS	**Chios island**	1.50	160	PN	Pn	12 00 46.7	-0.1
ZEDA	**zmir-Bergama**	1.54	122	P	Pb	12 00 48.7	+0.1
ZEDA				S	Sg	12 01 09.8	-0.1
KYMI	**Kymi, Euboea I**	1.55	221	P	Pn	12 00 47.0	-0.5
KYMI				AML	AML	12 01 13.6	
	comp=N,1056µm,0.5s						
KYMI				AML	AML	12 01 15.1	
	comp=E,556µm,0.5s						
KYMI	**Kymi, Euboea I**	1.55	221	P	Pn	12 00 47.3	-0.2
KYMI				S	Sg	12 01 09.2	-1.2
	comp=E,405nm,0.4s						
KRBG	**Karabiga-Canak**	1.56	67	PN	Pn	12 00 47.9	+0.3
RKY	**Sarkoy-Tekirda**	1.61	56	PN	Pn	12 00 48.6	+0.2
PLG	**Polygyros**	1.61	291	P	Pn	12 00 48.5	+0.1
PLG				AML	AML	12 01 15.5	
	comp=E,391µm,0.5s						
PLG				AML	AML	12 01 15.6	
	comp=N,556µm,0.4s						
PLG	**Polygyros**	1.61	291	P	Pn	12 00 48.9	+0.5
UKOP	**Uzunkopru-Edir**	1.62	35	PN	Pn	12 00 48.5	+0.1
URLA	**Izmir**	1.71	147	PN	Pn	12 00 49.6	-0.1
GONE	**Gonen-Balikesi**	1.76	81	PN	Pn	12 00 50.9	+0.5
XOR	**Xorichti**	1.77	256	P	Pn	12 00 50.4	-0.2
XOR	**Xorichti**	1.77	256	P	Pn	12 00 50.2	-0.4
STEP	**BALIKESIR_Sava**	1.83	103	P	Pn	12 00 51.7	+0.3
STEP				S	Sn	12 01 16.3	+2.0
MRMT	**Marmara Adasi**	1.85	64	PN	Pn	12 00 51.9	+0.2
SOH	**Sokhos**	1.87	303	P	Pn	12 00 52.8	+0.8
BLCB	**Balcova**	1.90	138	PN	Pn	12 00 53.0	+0.7
HORT	**Hortiatis**	1.94	295	P	Pn	12 00 53.5	+0.5
HORT				AML	AML	12 01 27.0	
	comp=E,236µm,0.8s						
HORT				AML	AML	12 01 30.4	
	comp=N,188µm,0.6s						
HORT	**Hortiatis**	1.94	295	P	Pn	12 00 53.6	+0.6
HORT	**Hortiatis**	1.94	295	PN	Pn	12 00 52.9	-0.1
NVR	**Nevrokopi**	1.94	323	P	Pn	12 00 53.4	+0.5
NVR				AML	AML	12 01 28.0	
	comp=E,323µm,0.4s						
NVR				AML	AML	12 01 32.0	
	comp=N,309µm,0.6s						
NVR	**Nevrokopi**	1.94	323	P	Pn	12 00 53.2	+0.2
EDC	**Edincik**	1.96	73	PN	Pn	12 00 53.7	+0.6
DION	**Dionisos Attik**	2.08	214	P	Pn	12 00 54.8	+0.1
AKHS	**Akhisar**	2.08	116	P	Pn	12 00 55.9	+1.1
AKHS				S	Sg	12 01 26.4	-0.9
AKS	**Akhisar**	2.08	116	PN	Pn	12 00 55.5	+0.7
ATAL	**Atalanti**	2.16	240	P	Pb	12 00 58.1	-1.2
ATAL				AML	AML	12 01 36.4	
	comp=N,222µm,0.9s						
ATAL				AML	AML	12 01 38.1	
	comp=E,200µm,0.7s						
EDRB	**Edirne**	2.28	26	PN	Pn	12 00 57.9	+0.4
VLY	**Voula,Athens**	2.32	213	P	Pn	12 00 58.1	0.0
PLD	**Plovdiv**	2.36	347	PN	Pn	12 00 58.7	+0.1
SMG	**Samos**	2.37	152	P	Pn	12 00 58.4	-0.4
GCAM	**G?zelcaml?**	2.54	145	PN	Pn	12 01 02.1	+1.0
SLVT	**Silivri**	2.56	55	PN	Pn	12 01 02.2	+0.8
VAY	**Valandovo**	2.64	306	*e*Pn	Pg	12 01 11.5	+0.4
VAY				*e*Sn	Sg	12 01 45.6	+0.3
AYDB	**Zeytinkoy-Aydi**	2.68	133	PN	Pn	12 01 04.1	+1.0
ARMT	**Armutlu**	2.75	73	PN	Pn	12 01 05.1	+1.1
CTYL	**Yalikoy Yolu**	2.75	52	PN	Pn	12 01 04.8	+0.8
KULA	**Kula-Manisa**	2.83	116	PN	Pn	12 01 06.4	+1.2
SIMA	**Simav-Kutahya**	2.86	103	PN	Pn	12 01 06.7	+1.2
BGKT	**Bogazkoy**	2.91	61	PN	Pn	12 01 07.1	+1.0
TRML	**Termal-Yalova**	2.99	73	PN	Pn	12 01 08.3	+1.0
ISK	**Istanbul-Kandi**	3.05	64	PN	Pn	12 01 09.1	+0.9
KAVV	**Kandilli-Istan**	3.05	65	PN	Pn	12 01 08.6	+0.4
YLV	**Yalova**	3.13	75	PN	Pn	12 01 10.4	+1.2
TVSB	**Tavsanli**	3.15	95	PN	Pn	12 01 10.6	+1.1

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*TAP **18** 12:35:36.2, 22°.39N×122°.26E, h15^{km}, ML3.7, D*
*JMA **18** 12:35:37.2±0.5, 22°N±2°×122°.5E±0°.9, h49^{km}, MV3.6/15, FAR S OFF ISHIGAKIJIMA*
ISC 18 12:35:33.3±1.3, **22°.31N**±0°.03×**122°.42E**±0°.03, **h13**^{km}±10^{km},
n131, σ**1^{s}.03**/229, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	0.83	248	P	Pn	12 35 51.1	+0.4
	baz=238						
LYUB				S	Sb	12 36 01.3	+0.6
	baz=238						
LAY	**Lan-yu**	0.85	251	P	Pn	12 35 50.6	-0.3
	baz=241						
LAY				S	Sb	12 36 01.1	0.0
	baz=241						
LDUT	**Ludao**	0.95	292	P	Pb	12 35 51.8	+0.3
	baz=291						
LDUT				S	Sg	12 36 03.5	-0.5
	baz=291						
EDH	**Donghe**	1.22	303	P	Pb	12 35 56.3	+0.1
	baz=303						
EDH				*e*S	Sb	12 36 11.0	-0.8
	baz=303						
CHKT	**Chengkung**	1.25	309	*e*P	Pn	12 35 56.2	-0.1
	baz=310						
TTN	**Taitung**	1.25	291	*e*P	Pg	12 35 57.5	+0.1
	baz=289						
TTN				*e*S	Sb	12 36 12.8	+0.1
	baz=289						
LONT	**Longtian**	1.33	297	P	Pb	12 35 58.1	+0.1
	baz=296						
LONT				*e*S	Sb	12 36 14.2	-0.7
	baz=296						
TWGBT	**Beinan**	1.33	292	P	Pb	12 35 58.2	+0.1
	baz=291						
TWGBT				S	Sb	12 36 14.2	-0.9
	baz=291						
TWG	**Pinlang**	1.34	292	P	Pb	12 35 58.4	+0.1
	baz=291						
TWG				S	Sb	12 36 14.4	-0.9
	baz=291						
FULB	**Fuli**	1.36	311	P	Pn	12 35 58.3	+0.4
	baz=312						
FULB				S	Sb	12 36 15.2	-0.7
	baz=312						
ECL	**Taimali**	1.38	282	P	Pb	12 35 59.1	+0.2
	baz=279						
ECL				S	Sb	12 36 15.5	-1.0
	baz=279						
TAW	**Tawu**	1.41	272	*e*P	Pb	12 35 59.3	-0.1
	baz=268						
TAW				*e*S	Sn	12 36 16.5	-0.5
	baz=268						
TAWH	**Dawu Township**	1.42	271	P	Pb	12 35 59.4	-0.1
	baz=267						
TAWH				S	Sn	12 36 16.8	-0.3
	baz=267						
EYUL	**Yuli**	1.44	316	P	Pb	12 35 59.9	-0.1
	baz=317						
EYUL				S	Sn	12 36 17.1	-0.7
	baz=317						
EAST	**Anshuo**	1.45	273	P	Pb	12 36 00.5	+0.3
	baz=269						
EAST				*e*S	Sn	12 36 17.2	-1.0
	baz=269						
TSEB	**Hengchuen, Pin**	1.47	254	*e*P	Pg	12 36 01.8	+0.3
	baz=249						
TSEB				*e*S	Sg	12 36 20.2	-0.3
	baz=249						
HGSD	**Ruisui**	1.49	322	*e*P	Pn	12 35 59.7	0.0
	baz=324						
HGSD				*e*S	Sn	12 36 17.4	-1.6
	baz=324						
YULB	**Yu-li**	1.49	316	P	Pb	12 36 00.5	-0.3
	baz=318						
YULB				S	Sn	12 36 18.5	-0.5
	baz=318						
SMST	**Manzhou Townsh**	1.49	259	*e*P	Pb	12 36 01.1	+0.2
	baz=254						
SMST				*e*S	Sn	12 36 19.1	0.0
	baz=254						
SLIU	**Shizi**	1.50	267	P	Pb	12 36 00.9	-0.1
	baz=262						
SLIU				*e*S	Sn	12 36 19.0	-0.3
	baz=262						
TWKBT	**Hengchun**	1.53	256	*e*P	Pb	12 36 01.7	+0.1
	baz=251						
TWKBT				*e*S	Sn	12 36 19.9	-0.1
	baz=251						
TWK1	**Hengchun**	1.54	256	P	Pb	12 36 01.8	+0.2
	baz=251						
TWK1				*e*S	Sn	12 36 19.6	-0.6
	baz=251						
EHY	**Hungye**	1.56	320	*e*P	Pb	12 36 01.6	-0.4
	baz=322						
EHY				*e*S	Sn	12 36 19.9	-0.8
	baz=322						
ELDTW	**Lidau**	1.56	304	P	Pn	12 36 01.4	+0.6
	baz=304						
ELDTW				S	Sn	12 36 20.0	-0.9
	baz=304						
HEN	**Hengchun**	1.59	259	*e*P	Pb	12 36 02.2	-0.2
	baz=254						
HEN				*e*S	Sn	12 36 21.8	+0.4
	baz=254						
EGFH	**Guangfu**	1.63	326	*e*P	Pb	12 36 02.5	-0.6
	baz=328						
EGFH				*e*S	Sn	12 36 22.5	+0.1
	baz=328						
SCZT	**Fangliau**	1.66	272	P	Pb	12 36 03.1	-0.7
	baz=269						
SCZT				*e*S	Sn	12 36 22.8	-0.6
	baz=269						
MASBT	**Mashibuluo**	1.68	281	P	Pb	12 36 04.0	0.0
	baz=278						
MASBT				*e*S	Sn	12 36 23.4	-0.3
	baz=278						
TSMG	**Majia**	1.68	284	*e*P	Pb	12 36 04.0	-0.1
	baz=281						
TSMG				*e*S	Sn	12 36 23.2	-0.6
	baz=281						
SSD	**Sandimen**	1.71	285	*e*P	Pn	12 36 03.6	+0.9
	baz=283						
SSD				*e*S	Sn	12 36 24.3	0.0
	baz=283						
SSPT	**Xinbi**	1.72	276	*e*S	Sn	12 36 24.1	-0.6
	baz=273						
STYH	**Taoyuan**	1.74	300	*e*P	Pb	12 36 04.5	-0.5
	baz=299						
STYH				*e*S	Sn	12 36 24.5	-0.7
	baz=299						
ESL	**Shilin**	1.75	329	*e*S	Sn	12 36 24.5	-0.8
	baz=331						
YUS	**Yu-Shan**	1.79	311	*e*P	Pn	12 36 04.3	+0.1
	baz=312						
YUS				*e*S	Sn	12 36 25.2	-1.8
	baz=312						
HWA	**Hwalien**	1.82	336	*e*S	Sn	12 36 27.7	+0.6
	baz=339						
VWDT	**VWDT**	1.85	321	*e*P	Pn	12 36 05.0	+0.3
	baz=322						
VWDT				*e*S	Sn	12 36 27.5	-0.5
	baz=322						
SGST	**Jiashian**	1.86	295	*e*P	Pn	12 36 06.0	+1.2
	baz=294						
SGST				*e*S	Sn	12 36 26.9	-1.3
	baz=294						
SCST	**Cishan**	1.86	288	*e*P	Pn	12 36 06.1	+1.2
	baz=286						
SCST				*e*S	Sn	12 36 27.8	-0.5
	baz=286						
WLCH	**Liuqiu**	1.89	271	*e*S	Sn	12 36 27.9	-0.9
	baz=268						
ALS	**Alishan**	1.90	309	*e*P	Pn	12 36 06.7	+1.0
	baz=309						
ALS				*e*S	Sn	12 36 28.6	-1.1
	baz=309						
WTP	**Ta-pu**	1.90	299	*e*P	Pn	12 36 06.0	+0.5
	baz=299						
WTP				*e*S	Sn	12 36 28.4	-1.0
	baz=299						
TWM1	**Shoushan**	1.91	286	*e*P	Pn	12 36 06.6	+1.1
	baz=284						
TWM1				*e*S	Sn	12 36 28.2	-1.3
	baz=284						
TWD	**Chiawan**	1.91	337	*e*S	Sn	12 36 29.2	-0.2
	baz=340						
TPUB	**Ta-pu**	1.92	301	*e*P	Pn	12 36 06.7	+1.0
	baz=301						
TPUB				*e*S	Sn	12 36 28.7	-1.0
	baz=301						
CHN1	**Nanshi**	1.95	297	*e*P	Pb	12 36 07.5	-1.2
	baz=296						
CHN1				*e*S	Sn	12 36 29.7	-0.7
	baz=296						
CHN4	**Tsaushan**	1.97	302	*e*S	Sn	12 36 30.7	-0.3
	baz=301						
ETL	**Fush Village**	1.98	338	*e*S	Sn	12 36 31.2	+0.2
	baz=341						
SNST	**Tainan City**	1.99	297	*e*P	Pn	12 36 07.5	+0.9
	baz=296						
SNST				*e*S	Sn	12 36 30.8	-0.5
	baz=296						
SSLB	**Suanglung**	1.99	318	*e*P	Pn	12 36 08.0	+1.3
	baz=319						
SSLB				*e*S	Sn	12 36 30.6	-0.8
	baz=319						
WHYT	**Xinyi Township**	1.99	314	*e*P	Pn	12 36 07.9	+1.2
	baz=315						
WHYT				*e*S	Sn	12 36 30.9	-0.6
	baz=315						
OWD	**Renai**	1.99	325	*e*P	Pn	12 36 07.9	+1.1
	baz=327						
OWD				*e*S	Sn	12 36 31.0	-0.6
	baz=327						
NACB	**Ninganchiao**	2.00	338	*e*S	Sn	12 36 31.0	-0.6
	baz=340						
TWK	**Hsinying**	2.02	298	*e*P	Pb	12 36 09.6	-0.3
	baz=298						
TWK				*e*S	Sn	12 36 32.1	0.0
	baz=298						
WSSB	**Gushan**	2.02	280	*e*P	Pb	12 36 08.7	-1.1
	baz=277						
WSSB				*e*S	Sn	12 36 32.0	-0.1
	baz=277						
SHHT	**Tainan City**	2.04	291	*e*P	Pb	12 36 11.1	+1.0
	baz=289						
SHHT				*e*S	Sb	12 36 36.2	+0.8
	baz=289						
CHN3	**Shinhua**	2.04	292	*e*P	Pn	12 36 08.6	+1.3
	baz=291						

CHN5	**Tsauling** baz=309	2.05	309	eP	Pb	12 36 09.9	-0.4
CHN5	baz=309			eS	Sn	12 36 33.8	+0.8
WUSB	**Renai** baz=326	2.05	325	eP	Pn	12 36 09.1	+1.5
WUSB	baz=326			eS	Sn	12 36 32.6	-0.5
ETLH	**Xiulin Townshi** baz=338	2.07	336	eP	Pb	12 36 09.4	-1.4
ETLH	baz=338			eS	Sn	12 36 33.1	-0.4
CHGB	**Renai** baz=329	2.08	327	eP	Pn	12 36 08.9	+0.9
CHGB	baz=329			eS	Sn	12 36 33.8	-0.2
SMLT	**Sun Moon Lake** baz=320	2.10	318	eP	Pn	12 36 09.2	+1.1
SMLT	baz=320			eS	Sn	12 36 33.0	-1.1
WHF	**Hehuan Shan** baz=332	2.11	330	eS	Sn	12 36 33.8	-1.1
TYC	**Yuchr** baz=319	2.14	318	eP	Pn	12 36 10.1	+1.5
TYC	baz=319			eS	Sn	12 36 35.0	0.0
HATJ	**Hateruma jima**	2.15	36	P	Pn	12 36 10.3	+1.5
HATJ				S	Sn	12 36 34.9	-0.5
WJS	**Zhushan** baz=315	2.16	314	eP	Pn	12 36 10.3	+1.3
WJS	baz=315			eS	Sn	12 36 35.4	-0.2
CHY	**Chiayi** baz=303	2.18	303	eP	Pn	12 36 10.7	+1.4
CHY	baz=303			eS	Sn	12 36 35.8	-0.3
JYNG	**Yonagunijimaku**	2.18	13	P	Pn	12 36 10.7	+1.4
ENA	**Nanau** baz=346	2.19	344	eP	Pn	12 36 11.1	+1.7
ENA	baz=346			eS	Sn	12 36 36.8	+0.4
EWUT	**Wuta** baz=347	2.20	345	eP	Pb	12 36 11.8	-1.2
EWUT	baz=347			eS	Sn	12 36 36.9	+0.3
FUSS	**Fushou** baz=333	2.21	331	eP	Pn	12 36 11.5	+1.7
FUSS	baz=333			eS	Sn	12 36 35.9	-1.1
WDLH	**Douliu** baz=309	2.21	309	eP	Pn	12 36 11.1	+1.5
WDLH	baz=309			eS	Sn	12 36 35.7	-1.0
YOJ	**Yonaguni jima** baz=18	2.21	14	eP	Pb	12 36 13.0	0.0
YOJ	baz=18			eS	Sb	12 36 39.3	-1.0
WCS	**Beigang Elemen** baz=323	2.22	322	eS	Sn	12 36 37.0	-0.1
WNT	**Mingjian** baz=315	2.23	315	eP	Pb	12 36 12.9	-0.5
WNT	baz=315			eS	Sn	12 36 38.0	+0.8
ICHU	**Yijhu** baz=297	2.23	298	eP	Pn	12 36 10.7	+0.8
ICHU	baz=297			eS	Sn	12 36 36.6	-0.6
TDCB	**Techi** baz=331	2.25	329	eS	Sn	12 36 37.0	-1.1
CHN8	**Yiju** baz=296	2.28	297	eS	Sn	12 36 39.2	+0.7
NNSB	**Datong** baz=338	2.31	336	eP	Pn	12 36 12.4	+1.3
NNSB	baz=338			eS	Sn	12 36 39.5	+0.1
WTK	**Tuku** baz=306	2.31	307	eP	Pn	12 36 12.3	+1.2
WTK	baz=306			eS	Sn	12 36 38.4	-1.0
NNS	**Nan Shan** baz=338	2.32	336	eP	Pn	12 36 13.1	+1.8
NNS	baz=338			eS	Sn	12 36 39.6	-0.2
TWC	**Suao** baz=350	2.34	347	eS	Sn	12 36 40.6	+0.5
IRIF	**Iriomote-Funau**	2.35	31	P	Pn	12 36 12.9	+1.4
IRIF				eS	Sn	12 36 39.9	-0.2
WSL	**Shuilin Townsh** baz=301	2.35	301	eP	Pn	12 36 12.8	+1.2
WSL	baz=301			eS	Sn	12 36 40.1	-0.1
LATG	**Datong** baz=342	2.36	340	eP	Pn	12 36 13.3	+1.5
LATG	baz=342			eS	Sn	12 36 40.9	+0.3
WHP	**Taichung City** baz=327	2.38	326	eP	Pn	12 36 13.5	+1.4
WHP	baz=327			eS	Sn	12 36 40.2	-0.8
NDS	**Dongshan** baz=347	2.40	345	eS	Sn	12 36 41.9	+0.4
JKRS	**Kuro-shima**	2.41	37	P	Pn	12 36 14.1	+1.7
JKRS				S	Sn	12 36 41.5	-0.2
WSF	**Szhu** baz=303	2.41	304	eS	Sn	12 36 41.2	-0.7
TCU	**Taichung** baz=320	2.43	319	eP	Pn	12 36 14.4	+1.8
TCU	baz=320			eS	Sn	12 36 42.5	+0.3
ENTT	**Nioudou** baz=344	2.44	342	eS	Sn	12 36 42.9	+0.3
WCHH	**Zhanghua** baz=317	2.45	316	eS	Sn	12 36 42.3	-0.4
WRL	**Guolierlin Hig** baz=311	2.45	310	eP	Pn	12 36 14.5	+1.5
WRL	baz=311			eS	Sn	12 36 41.9	-0.9
TWE	**Neicheng** baz=347	2.49	344	eP	Pb	12 36 16.3	-1.6
TWE	baz=347			eS	Sn	12 36 44.3	+0.5
TWQ1	**Liyutan** baz=324	2.53	324	eP	Pb	12 36 16.4	-2.1
TWQ1	baz=324			eS	Sn	12 36 44.3	-0.4
YHNB	**Yeheng** baz=340	2.53	338	eP	Pn	12 36 16.2	+2.0
YHNB	baz=340			eS	Sn	12 36 45.3	+0.4
NSK	**Sanguang** baz=340	2.54	338	eP	Pn	12 36 16.1	+1.8
NSK	baz=340			eS	Sn	12 36 45.5	+0.3
FUSB	**Fushanzhiwuyua** baz=345	2.55	343	eP	Pn	12 36 16.4	+2.0
FUSB	baz=345			eS	Sn	12 36 45.6	+0.3
JIJ	**Ishigaki jima**	2.58	38	P	Pn	12 36 15.9	+1.1
JIJ				S	Sn	12 36 44.7	-1.3
NTC	**Toucheng** baz=350	2.58	348	eP	Pn	12 36 17.2	+2.4
NTC	baz=350			eS	Sn	12 36 46.8	+0.7
NSY	**Sanyi** baz=325	2.59	324	eS	Sn	12 36 45.7	-0.5
NWLT	**Wulai** baz=343	2.59	341	eS	Sn	12 36 46.9	+0.7
NFF	**Wufeng Townshi** baz=334	2.60	333	eP	Pn	12 36 17.1	+2.0
NFF	baz=334			eS	Sn	12 36 45.3	-1.2
WDJ	**Dajia District** baz=322	2.60	321	eS	Sn	12 36 46.3	-0.1
NSTT	**Nanjuang** baz=332	2.65	331	eP	Pn	12 36 17.1	+1.5
NSTT	baz=332			eS	Sn	12 36 47.0	-0.6
LIOB	**Emei** baz=333	2.65	331	eP	Pn	12 36 17.7	+1.9
LIOB	baz=333			eS	Sn	12 36 48.3	+0.5
NMLH	**Miaoli** baz=327	2.67	326	eS	Sn	12 36 48.3	+0.1
TIPB	**Shuangxi** baz=351	2.70	349	eP	Pn	12 36 18.9	+2.4
TIPB	baz=351			eS	Sn	12 36 49.5	+0.5
TWB1	**Santiao Chiao** baz=354	2.71	352	eP	Pb	12 36 19.2	-2.4
TWB1	baz=354			eS	Sn	12 36 50.6	+1.5
WDGT	**Dungji** baz=289	2.71	291	eP	Pn	12 36 18.5	+1.9
WDGT	baz=289			eS	Sn	12 36 48.8	-0.4
NHDH	**Xindian Distri** baz=345	2.76	343	eS	Sn	12 36 50.9	+0.5
TWA	**Mucha** baz=346	2.76	344	eP	Pn	12 36 19.3	+2.1
TWA	baz=346			eS	Sn	12 36 50.8	+0.3
NWF	**Wu-fen Shan** baz=350	2.81	348	eP	Pn	12 36 20.0	+2.1
NWF	baz=350			eS	Sn	12 36 52.2	+0.6
SXI1	**Grass Mountain** baz=352	2.81	350	eP	Pn	12 36 20.3	+2.3
SXI1	baz=352			eS	Sn	12 36 52.2	+0.5
JISG	**Ishigakijimahi**	2.85	37	P	Pn	12 36 19.6	+1.2
JISG				eS	Sn	12 36 51.8	-0.8
PHUB	**P'eng-hu** baz=294	2.88	295	eP	Pn	12 36 20.0	+1.2
PHUB	baz=294			eS	Sn	12 36 52.2	-1.2
VCHM	**Qimei** baz=287	2.90	288	eP	Pn	12 36 20.6	+1.6
VCHM	baz=287			eS	Sn	12 36 53.1	-0.7
PNG	**Penghu** baz=295	2.92	296	eP	Pn	12 36 21.2	+1.8
PNG	baz=295			eS	Sn	12 36 53.6	-0.6
TWS1	**Kuangyinshan** baz=344	2.92	342	eS	Sn	12 36 54.8	+0.5
YM01	**YM01** baz=347	2.92	345	eP	Pn	12 36 21.9	+2.4
YM01	baz=347			eS	Sn	12 36 55.4	+0.9
ANP	**Anpu** baz=346	2.98	344	eP	Pn	12 36 22.5	+2.3
ANP	baz=346			eS	Sn	12 36 55.7	-0.2
JTJ	**Tarama**	3.12	42	P	Pn	12 36 23.8	+1.6
JTJ				eS	Sn	12 36 58.6	-0.8
JIRB	**Irabujima**	3.56	45	P	Pn	12 36 29.1	+0.9
JIRB				eS	Sn	12 37 09.1	-1.0
JMJ2	**Miyako jima3**	3.60	47	S	Sn	12 37 10.3	-0.8
JOGS	**Gusukube**	3.67	48	S	Sn	12 37 11.3	-1.5
JIKM	**Ikemajima**	3.67	44	S	Sn	12 37 12.4	-0.5
VWUC	**VWUC** baz=315	3.81	315	eP	Pn	12 36 33.4	+1.8
VWUC	baz=315			eS	Sn	12 37 14.8	-1.5
PTMZ	**Houxiangcun** baz=312	4.06	313	eS	Sn	12 37 20.9	-1.5
KNMB	**Chin-men Tao** baz=300	4.27	301	eS	Sn	12 37 26.5	-1.3
APYP	**Conner**	4.56	194	⇓eP	Pn	12 36 42.5	+0.5
APYP				eS	Sn	12 37 34.1	-0.8
ZPLA	**Ao Xicun** baz=290	4.59	291	eP	Pn	12 36 44.4	+2.1
XPSS	**Dashiqiu** baz=337	5.02	337	eP	Pn	12 36 50.4	+2.1

TAP 18 12:35:49.0,24°.21N×121°.72E,h10^{km},ML2.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=16	0.10	12	eP	Pg	12 35 52.2	+0.6
EHP	baz=16			eS	Sg	12 35 54.4	+1.0
ETL	**Fush Village** baz=237	0.10	238	P	Pg	12 35 52.4	+0.7
ETL	baz=237			S	Sg	12 35 54.6	+1.1
NACB	**Ninganchiao** baz=250	0.12	251	P	Pg	12 35 52.6	+0.7
NACB	baz=250			S	Sg	12 35 55.0	+1.2
TWD	**Chiawan** baz=218	0.17	220	P	Pg	12 35 53.4	+0.6
TWD	baz=218			S	Sg	12 35 56.0	+0.8
ENA	**Nanau** baz=7.0	0.21	6	P	Pg	12 35 54.4	+0.9
ENA	baz=7.0			S	Sg	12 35 58.1	+1.6
ETLH	**Xiulin Townshi** baz=268	0.22	268	P	Pg	12 35 54.5	+1.0
ETLH	baz=268			S	Sg	12 35 58.3	+1.7
EWUT	**Wuta** baz=13	0.24	13	P	Pg	12 35 54.6	+0.7
EWUT	baz=13			S	Sg	12 35 58.6	+1.4
HWA	**Hwalien** baz=201	0.26	204	eP	Pb	12 35 55.6	-0.1
HWA	baz=201			eS	Sb	12 35 59.7	-0.5
LATG	**Datong** baz=331	0.36	331	P	Pb	12 35 57.7	0.0
LATG	baz=331			S	Sb	12 36 03.0	-0.6
NNSB	**Datong** baz=304	0.37	305	P	Pb	12 35 57.8	0.0
NNSB	baz=304			S	Sb	12 36 03.4	-0.4
NNS	**Nan Shan** baz=305	0.39	306	eP	Pb	12 35 57.9	-0.1
NNS	baz=305			eS	Sb	12 36 04.0	-0.1
TWC	**Suao** baz=18	0.41	17	P	Pb	12 35 57.9	-0.5
TWC	baz=18			S	Sb	12 36 04.5	-0.3
NDS	**Dongshan** baz=359	0.42	360	P	Pb	12 35 58.3	-0.2
NDS	baz=359			S	Sb	12 36 04.7	-0.2
WHF	**Hehuan Shan** baz=260	0.42	261	P	Pb	12 35 58.3	-0.5
WHF	baz=260			S	Sb	12 36 04.3	-1.1
FUSS	**Fushou** baz=274	0.43	275	P	Pb	12 35 58.9	-0.1
FUSS	baz=274			S	Sb	12 36 05.4	-0.2
ENTT	**Nioudou** baz=342	0.45	342	P	Pb	12 35 59.2	+0.1
ENTT	baz=342			S	Sb	12 36 05.8	0.0
ESL	**Shilin** baz=212	0.47	213	P	Pb	12 35 58.9	-0.6
ESL	baz=212			S	Sb	12 36 06.6	0.0
TWE	**Neicheng** baz=356	0.51	355	P	Pb	12 36 00.2	+0.1
TWE	baz=356			S	Sb	12 36 07.6	+0.1
TDCB	**Techi** baz=274	0.51	275	P	Pb	12 35 60.0	-0.3
TDCB	baz=274			S	Sb	12 36 07.4	-0.3
CHGB	**Renai** baz=252	0.52	253	P	Pb	12 36 00.1	-0.3
CHGB	baz=252			S	Sb	12 36 07.9	-0.2
YHNB	**Yeheng** baz=325	0.55	326	P	Pb	12 36 01.2	+0.4
YHNB	baz=325			S	Sb	12 36 09.0	+0.1
FUSB	**Fushanzhiwuyua** baz=347	0.56	348	P	Pb	12 36 00.6	-0.3
FUSB	baz=347			S	Sb	12 36 09.2	+0.2
OWD	**Renai** baz=242	0.56	243	P	Pb	12 36 00.8	-0.1
OWD	baz=242			S	Sb	12 36 09.3	+0.2
NSK	**Sanguang** baz=325	0.57	325	P	Pb	12 36 01.4	+0.4
NSK	baz=325			S	Sb	12 36 09.6	+0.3
WUSB	**Renai** baz=248	0.59	248	P	Pb	12 36 01.5	0.0
WUSB	baz=248			eS	Sb	12 36 09.6	-0.4
NWLT	**Wulai** baz=340	0.59	341	eP	Pb	12 36 02.0	+0.5
NWLT	baz=340			S	Sb	12 36 10.2	+0.2
EGFH	**Guangfu** baz=206	0.60	206	eP	Pb	12 36 01.5	-0.2
EGFH	baz=206			eS	Sb	12 36 10.7	+0.4
NTC	**Toucheng** baz=9.0	0.65	9	eP	Pb	12 36 02.1	-0.3
NTC	baz=9.0			eS	Sb	12 36 11.5	0.0
NFF	**Wufeng Townshi** baz=307	0.69	307	eP	Pn	12 36 04.3	-0.6
NFF	baz=307			eS	Sb	12 36 13.5	+0.7
VWDT	**VWDT** baz=229	0.70	229	eP	Pb	12 36 03.7	+0.4
VWDT	baz=229			eS	Sb	12 36 13.8	+0.9
WHP	**Taichung City** baz=275	0.71	275	eP	Pb	12 36 03.4	-0.1
WHP	baz=275			eS	Sb	12 36 14.0	+0.6
WCS	**Beigang Elemen** baz=258	0.75	258	eP	Pb	12 36 04.1	-0.1
WCS	baz=258			eS	Sb	12 36 15.2	+0.7
TIPB	**Shuangxi** baz=7.0	0.76	7	eP	Pb	12 36 04.2	-0.2
TIPB	baz=7.0			eS	Sb	12 36 15.4	+0.5
HGSD	**Ruisui** baz=200	0.77	201	eS	Sb	12 36 15.7	+0.7
LIOB	**Emei** baz=304	0.77	304	eP	Pb	12 36 05.0	+0.5
LIOB	baz=304			eS	Sb	12 36 16.0	+0.9
TWA	**Mucha** baz=351	0.77	351	eP	Pg	12 36 04.2	+0.3
TWA	baz=351			eS	Sb	12 36 15.6	+0.4
NSTT	**Nanjuang** baz=302	0.78	303	eP	Pg	12 36 04.2	+0.2
NSTT	baz=302			eS	Sb	12 36 16.0	+0.8
SSLB	**Suanglung** baz=238	0.82	239	eP	Pg	12 36 04.8	0.0
SSLB	baz=238			eS	Sn	12 36 17.7	-1.1
NWF	**Wu-fen Shan** baz=3.0	0.86	4	eP	Pb	12 36 06.2	+0.2
NWF	baz=3.0			eS	Sn	12 36 18.9	-1.0
TWQ1	**Liyutan** baz=278	0.87	279	eS	Sb	12 36 18.9	+0.9
SXI1	**Grass Mountain** baz=9.0	0.89	9	eP	Pb	12 36 06.9	+0.3
SXI1	baz=9.0			eS	Sn	12 36 19.6	-1.0
YULB	**Yu-li** baz=205	0.90	205	eS	Sb	12 36 19.6	+0.7
ALS	**Alishan** baz=229	1.09	230	eP	Pg	12 36 08.8	-1.2
ALS	baz=229			eS	Sb	12 36 25.0	+0.5
CHN5	**Tsauling** baz=237	1.13	237	eP	Pn	12 36 11.0	0.0
CHN5	baz=237			eS	Sn	12 36 27.0	+0.4
CHKT	**Chengkung** baz=195	1.16	196	eP	Pg	12 36 11.2	0.0
CHKT	**Chengkung** baz=310	1.16	196	S	Pg	12 36 11.3	+0.1
YOJ	**Yonaguni jima** baz=77	1.21	78	eP	Pb	12 36 11.8	-0.2
YOJ	baz=77			eS	Sn	12 36 28.9	+0.6
YOJ	**Yonaguni jima**	1.21	78	P	Pb	12 36 11.6	-0.4

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*MAN **18** 13:05:13.4, 12°.83N×121°.07E, h1^{km}, mb4.1, ML2.9, MS2.6,*
Hypocentre not reviewed by the ISC

ISC 18 13:05:13.5±1.9**,12°.78N**±0°.07×**121°.07E**±0°.06**,h4**^{km}±12^{km}**,**
n10,σ**1**^{s}**54**/17**,2C-7D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.72	351	⇓eP	Pg	13 05 26.7	-0.7
PGP				i S	Sg	13 05 36.3	-0.5
BOAC	**Boac**	1.01	48	⇓eP	Pg	13 05 32.0	-0.9
BOAC				eS	Sn	13 05 48.6	-0.5
LUBP	**Lubang**	1.24	320	⇑iP	Pg	13 05 36.8	-0.4
LUBP				i S	Sb	13 05 53.6	-0.1
LQP	**Lukban**	1.40	19	⇓eP	Pn	13 05 39.0	-0.9
LQP				eS	Sb	13 05 58.6	0.0
MACP	**Maragondon, Ca**	1.51	347	⇓eP	Pn	13 05 41.0	-0.2
MACP				eS	Sn	13 06 00.9	-0.4
RCP	**Roxas**	2.04	126	⇑eP	Pn	13 05 49.7	+1.1
BALP	**Baler**	2.98	10	⇓eP	Pb	13 06 05.5	-1.6
BALP				eS	Sg	13 06 53.9	+4.6
SMPP	**San Manuel, Pa**	3.37	354	⇓eP	Pn	13 06 07.8	+1.0
SMPP				eS	Sn	13 06 47.9	+0.6
SAMP	**Sagada Mountai**	4.28	358	⇓eP	Pn	13 06 20.5	+1.2
SAMP	**Sagada Mountai**	4.28	358	eS	Sb	13 07 21.8	+0.6

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*IDC **18** 13:16:15.3±0.8, 11°.56N×85°.80W, h0^{km}, mb4.2/11,*
mbtmp4.2/11, MS3.9/39, Error ellipse: s-maj=39.2km
s-min=17.7km az=61.0

*NEIC **18** 13:16:18.8±1.6, 10°.99N±0°.04×86°.56W±0°.06, h21^{km}±6^{km},*
mb4.6/52, Error ellipse: s-maj=10.1km s-min=4.5km
az=58.0

*UCR **18** 13:16:19.2±2.3, 10°.93N×86°.71W, h44^{km}±11^{km}, MW5.1,*
mb4.6(NEIC)

*INET **18** 13:16:19.4±1.1, 10°.95N×86°.60W, h15^{km}±10^{km}, MW4.4*

ISC 18 13:16:20.0±0.6**,10°.99N**±0°.04×**86°.61W**±0°.04**,h38**^{km}±2^{km}**,**
n277,σ**1**^{s}**22**/265**,mb4.5**/31**,MS3.9**/36**,3C,Off coast of**
Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	1.03	106	Pn	Pn	13 16 38.1	+0.2
HZTE				Sn	Sn	13 16 51.6	+0.4
HZTE	**Horizontes, Gu**	1.03	106	eP	Pn	13 16 38.1	+0.2
HZTE				eS	Sn	13 16 52.8	+1.6
CONN	**Concepcion**	1.12	59	eP	Pn	13 16 39.0	-0.1
COPN	**Copaltepe**	1.18	1	eP	Pn	13 16 40.6	+0.6
BUEV	**Buena Vista**	1.19	99	⇑iP	Pn	13 16 40.5	+0.2
BUEV				i S	Sn	13 16 58.0	+2.7
GB1A	**Borinquen Arri**	1.20	98	⇑iP	Pn	13 16 40.6	+0.3
GB1A				i S	Sn	13 16 58.6	+3.2
GPS2	**Hotel Rincn d**	1.25	101	⇑iP	Pn	13 16 41.3	+0.2
GPS2				i S	Sn	13 16 59.0	+2.2
APYN	**Apoyeque**	1.26	12	eP	Pn	13 16 41.1	0.0
APYN				eS	Sn	13 16 58.5	+1.7
SAJU	**San Juanillo,**	1.27	136	eP	Pn	13 16 40.5	-0.8
SAJU				eS	Sn	13 16 55.4	-1.8
ORTG	**Ortega, Santa**	1.29	119		Pn	13 16 41.5	-0.1
COLC	**Colonia**	1.42	103	i P	Pn	13 16 43.6	+0.4
DUNO	**Dulce Nombre,**	1.42	130		Pn	13 16 42.9	-0.4
HORNC	**Hornillas**	1.43	101	i P	Pn	13 16 43.9	+0.4
CUI	**Cuipilapa**	1.46	103	i P	Pn	13 16 44.2	+0.4
VMAR	**Armenia, Volca**	1.47	97	eP	Pn	13 16 44.7	+0.7
CNGN	**Cerro Negro**	1.50	357		Pn	13 16 45.0	+0.5
CNGN	**Cerro Negro**	1.50	357	eP	Pn	13 16 44.7	+0.3
ACAL	**Aguas Claras**	1.58	103	i P	Pn	13 16 46.7	+1.0
PTEN	**Parque Tenorio**	1.61	100	i P	Pn	13 16 46.9	+0.8
BOAB	**BOACO BROADBAN**	1.71	32	Pn	Pn	13 16 47.5	+0.2
BOAB	**BOACO BROADBAN**	1.71	32	eP	Pn	13 16 47.5	+0.2
BOAB				eS	Sn	13 17 09.3	+1.3
BRAN	**Las Pilas**	1.73	8	eP	Pn	13 16 41.1	-6.5
CRIN	**San Cristobal**	1.75	346		Pn	13 16 48.5	+0.7
CRIN	**San Cristobal**	1.75	346	eP	Pn	13 16 48.6	+0.7
CRIN				eS	Sn	13 17 13.1	+4.1
JTS	**Las Juntas de**	1.77	113	Pn	Pn	13 16 47.9	-0.2
JTS	**Las Juntas de**	1.77	113	eP	Pn	13 16 48.5	+0.3
ARE1	**Arenal 1**	1.93	106	eP	Pn	13 16 51.0	+0.7
CAO2	**Cobano, Puntar**	1.96	131		Pn	13 16 50.2	-0.6

MATN	Matagalpa	2.04	19		Pn	13 16 52.1	+0.3
LAFE	Finca La Fe, P	2.04	125	eP	Pn	13 16 51.3	-0.6
CSGN	Cosiguina Volc	2.18	335	eP	Pn	13 16 54.6	+0.8
JACO	JACO, Garabito	2.33	124		Pn	13 16 54.4	-1.4
LCND	La Caada	2.62	332	eP	Pn	13 17 00.8	+0.9
LCND				eS	Sn	13 17 29.5	-0.9
LCND	La Caada	2.62	332	eP	Pn	13 17 00.8	+0.9
LCND				eS	Sn	13 17 29.5	-0.9
HDC	Heredia	2.64	112		Pn	13 16 57.5	-2.7
JUCU	Jucuar¡n	2.76	325	eP	Pn	13 17 02.3	+0.5
JUCU				eS	Sn	13 17 32.9	-1.1
JUCU	Jucuar¡n	2.76	325	eP	Pn	13 17 02.3	+0.5
JUCU				eS	Sn	13 17 32.9	-1.1
RIMA	Rio Macho	2.96	114	Pn	Pn	13 17 05.0	+0.3
RIMA	Rio Macho	2.96	114	eP	Pn	13 17 05.3	+0.6
FAGO	Alcalda de S	3.06	332	eP	Pn	13 17 04.0	-1.9
FAGO	Alcalda de S	3.06	332	eP	Pn	13 17 04.0	-1.9
FAGO				eS	Sn	13 17 36.9	-4.3
TGUH	Tegucigalpa,Un	3.11	348	Pn	Pn	13 17 06.4	-0.4
COEB	Comit de Eme	3.12	323	eS	Sn	13 17 42.4	-0.4
COEB	Comit de Eme	3.12	323	eS	Sn	13 17 42.4	-0.4
BATAN	Batan	3.30	105	Pn	Pn	13 17 08.7	-0.5
SCLA	Alcaldia de Sa	3.40	323	eP	Pn	13 17 12.3	+1.8
SCLA				eS	Sn	13 17 49.9	+0.2
SCLA	Alcaldia de Sa	3.40	323	eP	Pn	13 17 12.3	+1.8
SCLA				eS	Sn	13 17 49.9	+0.2
COEG	Centro de Oper	3.43	320	eP	Pn	13 17 11.7	+0.7
COEG				eS	Sn	13 17 49.5	-0.9
COEG	Centro de Oper	3.43	320	eP	Pn	13 17 11.7	+0.7
COEG				eS	Sn	13 17 49.5	-0.9
SJTE	Alcalda de S	3.50	318	eP	Pn	13 17 13.2	+1.1
SJTE				eS	Sn	13 17 51.3	-1.0
SJTE	Alcalda de S	3.50	318	eP	Pn	13 17 13.2	+1.1
SJTE				eS	Sn	13 17 51.3	-1.0
SRBA	San Rafael, Bu	3.65	118		Pn	13 17 13.5	-0.5
SRBA	San Rafael, Bu	3.65	118	eP	Pn	13 17 15.1	+1.1
DRK0	Durika	3.73	117		Pn	13 17 14.4	-0.8
JAYA	Jayaque - finc	3.83	314	eS	Sn	13 17 58.7	-1.9
JAYA	Jayaque - finc	3.83	314	eS	Sn	13 17 58.7	-1.9
CEVE	Cerro Verde	4.08	314	eP	Pn	13 17 22.8	+2.7
NUBE	Las Nubes	4.24	313	eP	Pn	13 17 24.4	+2.2
NUBE				eS	Sn	13 18 09.1	-1.4
MTO3	Montecristo	4.32	322		Pn	13 17 23.4	0.0
BRU2	Volcan	4.43	119		Pn	13 17 25.1	+0.2
BCIP	Isla Barro Col	6.91	105	Pn	Pn	13 17 58.5	-0.2
CCIG	Comitan	7.52	315	Pn	Pn	13 18 07.8	+0.6
CMIG	Matias Romero	10.06	308	Pn	Pn	13 18 40.8	-1.2
	0.1nm,0.3s,baz=55,slow=21,SNR=2.8						
CMIG				Sn	Sn	13 20 35.5	+1.9
	baz=21,slow=13						
TLIG	Tlapa	13.30	301	Pn	Pn	13 19 27.1	+0.6
ROSC	El Rosal	13.62	116	LR	LR	13 24 16.2	
	comp=Z,562nm,21.0s,baz=354,slow=36						
SDV	Santo Domingo	15.87	96	LR	LR	13 27 01.5	
	comp=Z,179nm,20.6s,baz=298,slow=43						
SDV	Santo Domingo	15.87	96		Pn	13 19 59.3	-1.7
SDDR	Presa de Saban	16.78	60	Pn	Pn	13 20 09.5	-2.9
SDDR				IAmb	IAmb	13 20 36.2	
	comp=Z,46nm,1.5s						
ATAH	Atahualpa	19.78	155	LR	LR	13 27 29.2	
	comp=Z,591nm,21.5s,baz=336,slow=34						
BIRV	Birongo	19.99	90	P	P	13 20 48.5	-0.9
BIRV				IAmb	IAmb	13 21 16.9	
	comp=Z,38nm,1.2s						
BRAL	Brewton	20.08	359	P	Pn	13 20 51.8	-0.5
	baz=179						
MLPR	Magueyes Islan	20.16	68	P	P	13 20 50.0	-1.2
TIGA	Tifton	20.54	7	P	Pn	13 20 56.8	-0.7
	baz=188						
344A	Westbrook Farm	20.71	350	P	P	13 20 58.3	+1.2
HKT	Hockley	20.73	337	P	P	13 20 58.2	+1.0
833A	Chaparral WMA,	21.00	327		P	13 21 01.0	+0.7
833A				IAmb	IAmb	13 21 17.3	
	comp=Z,16nm,0.9s						
833A	Chaparral WMA,	21.00	327	P	P	13 21 01.4	+1.2
	baz=143						
SJG	San Juan	21.01	68	LR	LR	13 28 06.6	
	comp=Z,192nm,21.1s,baz=259,slow=35						
LRAL	Lakeview Retre	21.94	359		P	13 21 10.3	0.0
LRAL	Lakeview Retre	21.94	359	P	P	13 21 11.4	+1.2
	baz=179						
NATX	Nacogdoches	21.97	341	P	P	13 21 11.6	+0.9
NATX	Nacogdoches	21.97	341	P	P	13 21 11.5	+0.9
	baz=158						
435B	Jarrell	22.17	334	P	P	13 21 13.1	+0.2
435B				IAmb	IAmb	13 21 14.0	
	comp=Z,18nm,0.7s						
435B	Jarrell	22.17	334	P	P	13 21 13.8	+0.9
	baz=150						
GOGA	Godfrey	22.50	7	P	P	13 21 17.1	+0.9
	baz=188						
Y49A	Blount Mountai	22.76	0		P	13 21 19.0	0.0
Y49A				IAmb	IAmb	13 21 20.4	
	comp=Z,17nm,0.7s						
Z41A	Richland Creek	22.88	347	P	P	13 21 21.3	+1.1
	baz=164						
Y45A	Yeager Farm, C	22.92	354	P	P	13 21 21.2	+0.5
JCT	Junction City	22.94	330		P	13 21 21.5	+0.4
JCT	Junction City	22.94	330	P	P	13 21 21.8	+0.8
	baz=145						
WHTX	Lake Whitney,	23.17	336	P	P	13 21 23.5	+0.2
WHTX				IAmb	IAmb	13 21 24.1	
	comp=Z,15nm,0.7s						
WHTX	Lake Whitney,	23.17	336	P	P	13 21 23.8	+0.5
	baz=152						
X48A	Hartselle	23.35	359	P	P	13 21 25.3	+0.3
X48A				IAmb	IAmb	13 21 26.6	
	comp=Z,26nm,1.5s						
OXF	Oxford	23.55	354	P	P	13 21 26.6	-0.3
	baz=173						
PLAL	Pickwick Lake	23.92	357	P	P	13 21 29.9	-0.4
PLAL				IAmb	IAmb	13 21 31.6	
	comp=Z,11nm,0.9s						
X40A	Basin Creek Fa	24.07	347	P	P	13 21 31.7	-0.1
	baz=165						
TX32	Lajitas Array	24.22	321	P	P	13 21 34.1	+0.7
TX32				IAmb	IAmb	13 21 36.0	
	comp=Z,8.2nm,0.7s						
TXAR	Lajitas Array	24.22	321	P	P	13 21 34.2	+0.8
	comp=Z,8.0nm,0.7s,baz=136,slow=9.7,SNR=4.1						
	comp=Z,8.0nm,0.7s						
UALR	University of	24.24	348		P	13 21 32.7	-0.7
UALR				IAmb	IAmb	13 21 33.7	
	comp=Z,18nm,0.7s						
MIAR	Mount Ida	24.29	346	P	P	13 21 32.4	-1.5
	baz=163,SNR=6.5						
CPCT	Cooper Cave	24.42	4	P	P	13 21 35.5	+0.5
CPCT				IAmb	IAmb	13 21 50.5	
	comp=Z,22nm,1.3s						
KMSC	Kings Mountain	24.51	10	P	P	13 21 35.4	-0.5
	baz=192						
W41B	Gary Mavity, V	24.61	349	P	P	13 21 36.1	-0.7
W41B				IAmb	IAmb	13 21 36.6	
	comp=Z,14nm,1.0s						
W41B	Gary Mavity, V	24.61	349	P	P	13 21 35.9	-0.8
	baz=167,SNR=6.2						
ABTX	Abilene, Hawle	24.65	333	P	P	13 21 36.5	-0.7
	baz=148						
TKL	Tuckaleechee C	24.69	6	P	P	13 21 33.2	-4.3
	comp=Z,5.3nm,1.1s,baz=14,slow=15,SNR=2.0						
TKL				LR	LR	13 31 00.2	
	comp=Z,246nm,21.2s,baz=198,slow=37						
	comp=Z,5.3nm,1.1s						
TDBA	Terre de Bas,	24.75	76	P	P	13 21 37.8	-0.4
W39A	Magazine	24.96	346	P	P	13 21 39.4	-0.6
	baz=163,SNR=7.7						
WVT	Waverly	25.05	358	P	P	13 21 39.7	-1.0
	baz=177						
X34A	Smith Ranch, M	25.64	338		P	13 21 46.0	-0.1
U40A	Yellville	25.88	348	P	P	13 21 47.3	-1.0
U40A				IAmb	IAmb	13 21 48.5	
	comp=Z,12nm,0.8s						
U40A	Yellville	25.88	348	P	P	13 21 47.4	-0.8
	baz=166,SNR=7.1						
LPIG	La Paz	26.03	303	LR	LR	13 33 12.7	
	comp=Z,129nm,18.9s,baz=196,slow=38						
WMOK	Wichita Mounta	26.11	337	P	P	13 21 49.4	-1.1
	baz=152,SNR=12						
TUL1	Leonard	26.17	343	P	P	13 21 48.9	-2.0
TUL1				IAmb	IAmb	13 21 50.8	
	comp=Z,17nm,0.8s						
TUL1	Leonard	26.17	343	P	P	13 21 50.1	-0.7
	baz=159						
BLA	Blacksburg	26.69	11	P	P	13 21 55.8	+0.2
	baz=194						
MNTX	Cornudas Mount	26.94	323	P	P	13 21 57.2	-0.8
	baz=136						
MSTX	Muleshoe	27.24	330	P	P	13 22 00.6	-0.1
	baz=143						
CCM	Cathedral Cave	27.27	352	P	P	13 21 59.7	-1.0
	baz=170						
AMTX	Amarillo	27.46	332	P	P	13 22 02.6	0.0
	baz=146						
P52A	Corning	28.80	7	P	P	13 22 14.2	-0.2
	baz=189						
O48B	Farmland	29.17	2	P	P	13 22 17.1	-0.6
	baz=183						
SFIN	Lafayette	29.27	359	P	P	13 22 17.5	-1.0
	baz=179						
ACSO	Alum Creek Sta	29.30	6	P	P	13 22 18.7	-0.1
	baz=187						
O53A	New Philadelph	29.53	8	P	P	13 22 20.4	-0.5
	baz=191						
HDIL	Hopedale	29.54	356	P	P	13 22 19.5	-1.5
	baz=175						
ANMO	Albuquerque	29.92	326	P	P	13 22 25.5	+0.8
	comp=Z,2.5nm,0.6s,baz=146,slow=7.1,SNR=8.5						
	comp=Z,2.5nm,0.6s						
ANMO	Albuquerque	29.92	326	P	P	13 22 25.5	+0.8
	baz=138						
CBKS	Cedar Bluff	30.08	339	P	P	13 22 27.0	+1.2
	baz=154						
SSPA	Standing Stone	30.51	13	P	P	13 22 29.3	-0.3
	baz=197						
T25A	Trinidad	30.57	331	P	P	13 22 30.6	+0.2
	baz=144						
SAML	Samuel	30.59	129	P	P	13 22 30.4	-0.1
SAML				IAmb	IAmb	13 22 52.3	
	comp=Z,12nm,1.1s						
M53A	WI Miller and	30.77	9	P	P	13 22 32.2	+0.3
	baz=191						
ERPA	Erie	31.54	9	P	P	13 22 40.8	+2.1
	baz=192						
SDCO	Great Sand Dun	31.58	331	P	P	13 22 40.8	+1.4
	baz=143						
W18A	Petrified Fore	31.93	322	P	P	13 22 44.9	+2.5
	baz=133						
214A	Organ Pipe Nat	31.93	315	P	P	13 22 43.8	+1.6
	baz=125						
JFWS	Jewell Farm	31.96	355	P	P	13 22 41.3	-1.0
	baz=173						
S22A	4UR Ranch, Cre	32.23	329	P	P	13 22 46.7	+1.5
	baz=140						
LPAZ	La Paz	32.70	146	LR	LR	13 36 48.3	
	comp=Z,155nm,19.8s,baz=321,slow=38						
LPAZ	La Paz	32.70	146	P	P	13 22 49.5	-0.2
MVCO	Mesa Verde	32.70	327	P	P	13 22 49.8	+0.6
	baz=137						
ECSD	EROS Data Cent	33.75	347	P	P	13 22 56.0	-2.0
	baz=162						
PV23	Carpenter Ridg	33.89	328	P	P	13 22 59.7	+0.1
PV23				IAmb	IAmb	13 23 12.4	
	comp=Z,6.5nm,0.7s						
G45A	Suttons Bay	33.94	1	P	P	13 22 58.1	-1.4
MDP	Montagnes des	34.12	97	LR	LR	13 38 16.3	
	comp=Z,322nm,18.8s,baz=279,slow=40						
SADO	Sadowa	34.26	9	LR	LR	13 36 26.1	
	comp=Z,248nm,21.4s,baz=206,slow=36						
SPMN	Marine on St.	34.52	352	P	P	13 23 02.9	-1.7
	baz=169						
O20A	White River Ci	34.77	330	P	P	13 23 06.5	-0.7
O20A				IAmb	IAmb	13 23 10.3	
	comp=Z,4.3nm,0.7s						
O20A	White River Ci	34.77	330	P	P	13 23 08.2	+1.0
	baz=141						
PB11	IPOC Station P	34.82	151	P	P	13 23 08.5	+0.8
PB11				IAmb	IAmb	13 23 19.8	
	comp=Z,11nm,1.0s						
MONP2	Monument Peak	35.00	313	P	P	13 23 09.7	+0.6
	baz=122						
LONY	Lake Ozonia	35.07	15	P	P	13 23 09.4	0.0
	baz=201						
SRU	San Rafael Swe	35.18	327	P	P	13 23 10.6	0.0
SRU				IAmb	IAmb	13 23 12.8	
	comp=Z,7.3nm,0.7s						
MTPU	Mount Pierson	35.36	324	P	P	13 23 11.9	-0.5
PB08	IPOC Station P	35.39	151	P	P	13 23 12.7	-0.1
PB08				IAmb	IAmb	13 23 38.4	
	comp=Z,6.5nm,1.2s						
P18A	Preston Nutter	35.41	328	P	P	13 23 13.4	+0.7
TMUT	Trail Mountain	35.68	326	P	P	13 23 14.9	-0.2
MURC	Murrieta	35.92	314	P	P	13 23 17.3	+0.4
	baz=122						
HEC	Hector,Ludlow	35.99	316	P	P	13 23 17.3	-0.2
	baz=124						
K22A	Casper	36.00	335	P	P	13 23 17.8	+0.2
	baz=145						
RSSD	Black Hills	36.28	339	P	P	13 23 21.2	+1.2
	baz=150						
RRX	Edison Barstow	36.46	316	P	P	13 23 22.4	+0.9
	baz=123						
EYMN	Ely	37.06	355	P	P	13 23 24.8	-1.5
	baz=172						
TPNV	Topopah Spring	37.15	319	P	P	13 23 29.1	+1.6
	baz=126						
DUG	Dugway, Tooele	37.19	326	P	P	13 23 30.5	+2.7
	baz=134						
PKME	Peaks-Kenny Pk	37.24	20	P	P	13 23 29.7	+1.9
	baz=209						
PD31	Pinedale Array	37.44	332	P	P	13 23 29.4	-0.6
PDAR	Pinedale Array	37.44	332	P	P	13 23 30.2	+0.3
	comp=Z,2.1nm,0.6s,baz=130,slow=9.7,SNR=24						
PDAR				PcP	PcP	13 25 48.5	+0.4
	comp=Z,0.6nm,0.7s,baz=142,slow=4.6,SNR=3.7						
PDAR				LR	LR	13 41 44.4	
	comp=Z,140nm,21.3s,baz=128,slow=41						
	comp=Z,2.1nm,0.6s						
PDAR	Pinedale Array	37.44	332	P	P	13 23 29.5	-0.4
BW06	Boulder Array	37.44	332	P	P	13 23 29.5	-0.4
	baz=141,SNR=5.2						
HWUT	Hardware Ranch	37.54	329	P	P	13 23 30.4	-0.3
HWUT				IAmb	IAmb	13 23 32.5	
	comp=Z,6.8nm,0.8s						
R11A	Troy Canyon, C	37.59	321	P	P	13 23 33.3	+2.1
	baz=129						
LVC	Limon Verde	37.63	153	LR	LR	13 39 10.9	
	comp=Z,115nm,18.7s,baz=320,slow=36						
SCZ2	Santa Cruz Isl	37.87	312	P	P	13 23 36.0	+2.6
	baz=119						
ISA	Isabella, Lake	37.91	316	P	P	13 23 31.5	-2.3
	baz=122						
AGMN	Agassiz Nation	37.99	350	P	P	13 23 32.4	-1.7
	baz=165						
CWC	Cottonwood Cre	38.06	317	P	P	13 23 32.6	-2.7
	baz=124						
TPAW	Teton Pass	38.65	331	P	P	13 23 40.1	0.0
MOOW	Moose Ponds	38.75	332	P	P	13 23 40.4	-0.5
ELK	Elko	38.92	325	LR	LR	13 41 30.0	
	comp=Z,94nm,18.4s,baz=145,slow=39						
FLWY	Flagg Ranch	38.98	332	P	P	13 23 43.1	+0.2
RLMT	Red Lodge	39.17	334	P	P	13 23 44.4	-0.1
	baz=143						
NVAR	Mina Array Bea	39.34	319	P	P	13 23 48.5	+2.5
	comp=Z,1.3nm,0.6s,baz=134,slow=7.8,SNR=20						
NVAR				PcP	PcP	13 25 56.1	+2.1
	comp=Z,1.0nm,0.6s,baz=128,slow=4.3,SNR=8.6						
	comp=Z,1.3nm,0.6s						
GCMT	Greycliff	39.87	335	P	P	13 23 49.3	-0.9
ULM	Lac du Bonnet	39.88	351	P	P	13 23 47.6	-2.4
	comp=Z,4.8nm,0.5s,baz=174,slow=9.2,SNR=5.7						
ULM				LR	LR	13 41 38.2	
	comp=Z,78nm,18.3s,baz=112,slow=39						
	comp=Z,4.8nm,0.5s						
HLID	Hailey	40.41	328	P	P	13 23 55.4	+0.7
	baz=135,SNR=9.1						
BCYI	Bear Canyon	40.44	330	P	P	13 23 56.1	+1.0
MCMT	McKenzie Canyo	40.55	331	P	P	13 23 57.2	+1.3
BOZ	Bozeman (W)	40.57	333	P	P	13 23 55.5	-0.5
BOZ				IAmb	IAmb	13 23 58.4	
	comp=Z,4.6nm,0.7s						
BOZ	Bozeman (W)	40.57	333	P	P	13 23 56.6	+0.5
	baz=140,SNR=12						
LRM	Limekiln Ridge	41.12	332	P	P	13 24 00.7	+0.1
AC02	Maricunga	41.26	156	P	P	13 24 02.5	+0.3
HRY	Holter Researc	41.52	334	P	P	13 24 03.2	-0.6
EGMT	Eagleton	41.71	337	P	P	13 24 05.1	-0.2
	baz=145						
MSO	Missoula	42.55	332	P	P	13 24 12.1	-0.1
	baz=138						
F10A	Beach Ranch, E	43.52	329	P	P	13 24 19.6	-0.5
RPN	Rapa Nui	43.85	210	P	P	13 24 24.5	+1.8
K04D	Chiloquin, OR	43.91	322	P	P	13 24 24.2	+1.0
	baz=126						
J05D	Fort Rock, OR	43.99	323	P	P	13 24 25.2	+1.3
	baz=127						
YBH	Yreka Blue Hor	43.99	321	LR	LR	13 46 17.8	
	comp=Z,77nm,19.9s,baz=148,slow=41						
J04D	Umpqua Nationa	44.48	323	P	P	13 24 28.5	+0.6
	baz=126						
I05D	Terrebonne, OR	44.68	324	P	P	13 24 30.8	+1.5
	baz=127						
I04A	Tendick Farm,	44.98	323	P	P	13 24 31.3	-0.4
	baz=126						
NEW	Newport	45.08	331	LR	LR	13 49 19.1	
	comp=Z,78nm,18.1s,baz=128,slow=44						
NEW	Newport	45.08	331	P	P	13 24 32.2	-0.1
	baz=135						
K02D	Willamette Mer	45.12	321	P	P	13 24 33.1	+0.3
	baz=123						
G05D	Wamic, OR	45.22	325	P	P	13 24 34.1	+0.6
	baz=128						
HOOD	Mount Hood Mea	45.46	325	P	P	13 24 35.5	-0.1
SCHQ	Schefferville	46.44	16	P	P	13 24 37.3	-5.6
	comp=Z,2.0nm,0.5s,baz=204,slow=6.3,SNR=7.1						
SCHQ				LR	LR	13 44 21.6	
	comp=Z,207nm,20.5s,baz=196,slow=37						
	comp=Z,2.0nm,0.5s						
BDFB	Brasilia	46.48	124	P	P	13 24 42.5	-1.4
	comp=Z,4.7nm,0.5s,baz=262,slow=4.6,SNR=6.3						
BDFB				LR	LR	13 45 11.7	
	comp=Z,148nm,20.6s,baz=319,slow=38						
	comp=Z,4.7nm,0.5s						
BDFB	Brasilia	46.48	124	P	P	13 24 42.5	-1.4
CPUP	Villa Florida	46.76	143	LR	LR	13 44 44.5	
	comp=Z,90nm,20.6s,baz=329,slow=37						
MT09	Talagante	46.94	162	P	P	13 24 48.5	+1.3
MT09				IAmb	IAmb	13 24 59.8	
	comp=Z,8.9nm,1.1s						
D04E	Lakebay	47.21	327	P	P	13 24 49.9	+0.9
	baz=128						
D03D	Eldon	47.60	327	P	P	13 24 52.4	+0.3
	baz=128						
BBB	Bella Bella	52.98	329	LR	LR	13 50 27.4	
	comp=Z,123nm,18.2s,baz=110,slow=39						
RCBR	Riachuelo	53.16	106	LR	LR	13 49 29.1	
	comp=Z,227nm,18.8s,baz=85,slow=38						
PLCA	Paso Flores	53.57	165	P	P	13 25 40.5	+3.3
	comp=Z,1.1nm,1.0s,baz=287,slow=19,SNR=1.9						
PLCA				LR	LR	13 43 31.7	
	comp=Z,39nm,20.6s,baz=357,slow=30						
	comp=Z,1.1nm,1.0s						
PLCA	Paso Flores	53.57	165	IAmb	IAmb	13 25 49.0	
	comp=Z,9.7nm,1.1s						
FRB	Frobisher Bay	54.21	10	LR	LR	13 48 41.7	
	comp=Z,259nm,20.6s,baz=197,slow=36						
YKA	Yellowknife Ar	55.23	345	P	P	13 25 46.2	-2.8
	comp=Z,1.3nm,0.7s,baz=143,slow=7.1,SNR=9.7						
	comp=Z,1.3nm,0.7s						
DLBC	Dease Lake	57.57	335	LR	LR	13 53 45.1	
	comp=Z,136nm,18.7s,baz=116,slow=39						
SFJD	Kangerlussuaq	60.89	15	LR	LR	13 52 32.2	
	comp=Z,225nm,21.3s,baz=218,slow=36						
EPYK	Eagle Plains	64.71	340	P	P	13 26 53.9	-0.1
	baz=124						
INK	Inuvik	64.83	343	LR	LR	13 56 53.2	
	comp=Z,56nm,18.6s,baz=84,slow=38						
INK	Inuvik	64.83	343	P	P	13 26 54.7	0.0
	baz=128						
L27K	Beaver Creek,	64.93	336	P	P	13 26 55.3	-0.2
	baz=117						
K27K	Chicken	65.47	337	P	P	13 26 59.0	+0.1
	baz=117						
EYAK	Cordova Ski Ar	65.57	332	P	P	13 26 59.0	-0.6
	baz=112						
HARP	HAARP	66.03	334	P	P	13 26 59.6	-3.0
	baz=114						
SCRK	Sand Creek	66.20	336	P	P	13 27 04.0	+0.2
	baz=115						
J26L	Joseph Creek	66.26	337	P	P	13 27 03.8	-0.4
	baz=116						
PAX	Paxson	66.39	335	P	P	13 27 02.3	-2.8
	baz=114						
RIDG	Independent Ri	66.45	336	P	P	13 27 03.7	-1.6
	baz=114						
K24K	Donnelly Dome	66.85	336	P	P	13 27 07.3	-0.6
	baz=114						
J25K	Salcha River,	67.02	336	P	P	13 27 08.6	-0.4
	baz=114						
WAT6	Susitna Watana	67.21	334	P	P	13 27 09.6	-0.8
	baz=111						
HDA	Harding Lake	67.56	336	P	P	13 27 11.6	-0.7
	baz=113						
RC01	Rabbit Creek A	67.59	332	P	P	13 27 10.5	-2.1
	baz=109						
ILAR	Eielson Array	67.68	336	P	P	13 27 11.4	-1.6
	comp=Z,1.0nm,0.6s,baz=130,slow=4.4,SNR=21						
ILAR				LR	LR	14 00 39.9	
	comp=Z,120nm,19.8s,baz=112,slow=40						
	comp=Z,1.0nm,0.6s						
KDAK	Kodiak Island	68.03	328	LR	LR	13 59 42.8	
	comp=Z,103nm,18.1s,baz=173,slow=38						
PPT	Papeete	68.36	246	LR	LR	13 51 17.7	
	comp=Z,91nm,18.4s,baz=4.0,slow=30						
H24K	Noodor Dome	68.47	337	P	P	13 27 16.6	-1.4
	baz=112						
TRF	Thorofare Moun	68.60	334	P	P	13 27 17.4	-1.6
	baz=109						
I23K	Minto, Yukon-K	68.80	336	P	P	13 27 20.5	+0.6
	baz=110						
BPAW	Bear Paw Mtn.	69.10	335	P	P	13 27 21.0	-1.0
	baz=109						
CHIR	Chirikof Islan	69.22	326	P	P	13 27 21.2	-1.5
	baz=101						
M20K	Styx River	69.38	332	P	P	13 27 23.1	-0.7
	baz=106						
CHUM	Lake Minchumin	69.59	335	P	P	13 27 25.5	+0.5
	baz=107						
BORG	Borgarnes	69.68	25	LR	LR	13 56 35.7	
	comp=Z,67nm,19.4s,baz=196,slow=35						
N19K	Bonanza Creek	69.73	331	P	P	13 27 25.7	-0.3
	baz=104						
P18K	Big Mountain,	69.76	329	P	P	13 27 26.5	+0.3
	baz=103						
I21K	Tanana	69.85	336	P	P	13 27 26.2	-0.3
	baz=108						
L20K	Farewell, AK	69.88	333	P	P	13 27 26.2	-0.7
	baz=105						
M19K	Big River Lodg	69.96	332	P	P	13 27 26.9	-0.4
	baz=105						
K20K	Telida	70.20	334	P	P	13 27 26.8	-1.9
	baz=105						
J20K	Nowinta River	70.45	335	P	P	13 27 29.9	-0.4
	baz=106						
ESDC	Sonseca Array	77.44	52	LR	LR	13 59 04.0	
	comp=Z,80nm,18.9s,baz=280,slow=34						
PMSA	Palmer Station	77.44	170	P	P	13 28 11.4	+0.5
MDT	Midelt	77.45	59	LR	LR	13 58 51.1	
	comp=Z,138nm,19.4s,baz=341,slow=33						
SPITS	Spitsbergen Ar	81.95	12	LR	LR	14 05 11.2	
	comp=Z,111nm,20.8s,baz=33,slow=36						
NOA	NORSAR Array B	84.23	29	LR	LR	14 05 04.3	
	comp=Z,45nm,19.2s,baz=265,slow=35						
HFS	Hagfors	85.63	30	LR	LR	14 01 55.8	
	comp=Z,63nm,19.7s,baz=334,slow=32						
DAVOX	Davos/Dischmat	86.48	43	LR	LR	14 02 32.5	
	comp=Z,99nm,19.4s,baz=263,slow=32						
KEST	Kesra	88.44	54	LR	LR	14 04 38.3	
	comp=Z,70nm,19.4s,baz=270,slow=33						
VRAC	Vranov	90.20	40	LR	LR	14 07 17.2	
	comp=Z,111nm,18.8s,baz=316,slow=34						
PETK	Petropavlovsk-	96.06	327	LR	LR	14 15 37.6	
	comp=Z,26nm,19.4s,baz=85,slow=37						
AKASG	Malin Array Be	97.23	35	LR	LR	14 12 56.4	
	comp=Z,41nm,18.4s,baz=258,slow=35						
SONM	Songino Array	120.30	350	PKP	PKPdf	13 35 07.5	0.0
	comp=Z,0.6nm,0.5s,baz=8.7,slow=1.9,SNR=2.1						
MKAR	Makanchi Array	121.62	9	PKP	PKPdf	13 35 08.8	-1.2
	comp=Z,0.2nm,0.3s,baz=354,slow=2.2,SNR=3.0						
KSRS	Korea Array	121.94	328	PKP	PKiKP	13 35 11.7	+0.8
	comp=Z,1.1nm,0.8s,baz=358,slow=0.9,SNR=7.6						
STKA	Stephens Creek	131.02	237	PKP	PKiKP	13 35 30.4	+1.2
	comp=Z,0.8nm,0.6s,baz=139,slow=7.5,SNR=1.0						
ASAR	Alice Springs	139.47	246	PKhKP	PKPpre	13 35 40.9	
	comp=Z,0.3nm,0.8s,baz=105,slow=3.4,SNR=2.5						
ASAR				PKP	PKiKP	13 35 45.8	-0.8
	comp=Z,1.4nm,0.8s,baz=117,slow=2.2,SNR=6.5						
WRA	Warramunga Arr	139.64	252	PKP	PKPdf	13 35 45.1	+0.5
	comp=Z,1.2nm,0.7s,baz=94,slow=2.7,SNR=13						
CMAR	Chiang Mai Arr	150.23	349	PKP	PKPdf	13 36 04.0	+1.1
	comp=Z,1.7nm,0.6s,baz=300,slow=2.4,SNR=5.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMAR				PKPbc	PKiKP	13 36 08.8	0.0
	comp=Z,2.0nm,0.6s,baz=348,slow=3.0,SNR=6.9						

NDI 18 13:23:23.6±1.8, 17°.47N×73°.81E, h10^{km}, ML3.7, 1C-1D, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.39	114	⇑iPG	Pg	13 23 30.9	-0.4
KAD				i SG	Sg	13 23 36.1	-0.4
POO	Poona	1.05	2	i P	Pg	13 23 43.0	-0.9
POO				i P	Pn	13 23 46.0	+1.4
POO				i S	Sn	13 23 59.0	-0.3
POO				eS	Sb	13 24 01.5	+3.6
POO				IAML		13 24 04.2	
	comp=N,759nm,0.1s						
POO				IAML		13 24 04.2	
	comp=E,2μm,0.1s						
BOM	Bombay	1.71	326	i P	Pg	13 23 56.6	+0.2
BOM				eS	Sg	13 24 20.0	+1.5
BOM				IAML		13 24 21.5	
	comp=N,38nm,0.3s						
BOM				IAML		13 24 21.7	
	comp=E,20nm,0.2s						
GOA	Goa	1.97	180	eP	Pn	13 23 56.5	-0.5
GOA				eS	Sn	13 24 21.6	-0.1
GOA				IAML		13 24 24.9	
	comp=N,2μm,0.3s						
PCHI	Peechi	7.32	160	eP	Pn	13 25 10.7	0.0
PCHI				eS	Sn	13 26 29.5	-4.4
JBP	Jabalpur	8.10	45	⇓eP	Pn	13 25 20.0	-1.4
JBP				ex	x	13 25 22.0	
JBP				eS	Sn	13 26 44.4	-8.6

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*IDC **18** 13:33:31.6±0.6, 37°.25N×142°.03E, h0^{km}, mb4.0/18, mbtmp4.0/26, ML3.1/6, MS3.4/14, Error ellipse: s-maj=16.3km s-min=12.1km az=113.0*

*JMA **18** 13:33:36.0±0.2, 37°.3N±0°.5×141°.8E±1°.0, h41^{km}±3^{km}, MD4.4/40, MV4.4/40, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

*NIED **18** 13:33:36.0, 37°.32N×141°.82E, h41^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.10; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$0.19; $M_{r\theta}$2.54; $M_{\theta\phi}$-1.93; $M_{\phi r}$-0.01; Fault plane solution: $M_0$3.20000×10^{15} NP1: ϕ_s183.00000°, δ37.00000°, λ2.00000°. NP2: ϕ_s92.00000°, δ89.00000°, λ127.00000°.*

*NEIC **18** 13:33:37.6±2.0, 37°.33N±0°.04×141°.76E±0°.08, h35^{km}±7^{km}, mb4.4/18, Mwr4.2/19 Error ellipse: s-maj=9.3km s-min=5.3km az=98.0*

*NEIC **18** 13:33:37.6, 37°.33N×141°.76E, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.25; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-0.00; $M_{r\theta}$2.60; $M_{\theta\phi}$-1.09; $M_{\phi r}$-0.10; Fault plane solution: $M_0$2.83000×10^{15} NP1: ϕ_s186.90000°, δ22.78000°, λ6.69000°. NP2: ϕ_s90.73000°, δ87.42000°, λ112.64000°. Principal axes: T 2.8496, Plg43.0000°, Azm23.0000°; N -0.0357, Plg23.0000°, Azm270.0000°; P -2.8140, Plg38.0000°, Azm160.0000°;*

ISC 18 13:33:33.5±1.6, 37°.28N±0°.04×141°.92E±0°.05, h13^{km}±10^{km}, n118, σ1^{s}27/98, mb4.3/32, MS3.5/9, 15D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.84	276	⇓iP	Pb	13 33 50.4	+0.4
JFK				⇓S	Sg	13 33 60.0	-0.9
JFK	Kawauchi	0.84	276	A	A	13 33 50.4	
	comp=E,21nm,0.8s,comp=E,17nm,1.1s						
ONAJ	Iwakimizuishiy	0.92	259	i P	Pg	13 33 51.6	+0.4
ONAJ				S	Sb	13 34 02.2	-1.2
ONAJ	Iwakimizuishiy	0.92	259	A	A	13 33 51.6	
	comp=E,47nm,0.2s,comp=E,35nm,0.9s						
JMST	Minamisoumatoc	0.94	299	⇓iP	Pb	13 33 51.6	0.0
JMST				⇓S	Sb	13 34 02.2	-1.8
JMST	Minamisoumatoc	0.94	299	A	A	13 33 51.6	
	comp=E,14nm,0.8s,comp=E,7.0nm,1.7s						
JMM	Marumori	1.07	304		Pb	13 33 53.5	-0.4
JMM				Sn	Sb	13 34 05.2	-2.6
JMM	Marumori	1.07	304	⇓iP	Pb	13 33 53.6	-0.3
JMM				⇓S	Sb	13 34 05.5	-2.4
JMM	Marumori	1.07	304	A	A	13 33 53.6	
	comp=E,8.0nm,0.4s,comp=E,10.0nm,0.5s						
JIKH	Ishinomakikobu	1.09	341	⇓iP	Pb	13 33 54.0	-0.3
JIKH				⇓S	Sb	13 34 06.5	-2.0
JIKH	Ishinomakikobu	1.09	341	A	A	13 33 54.0	
	comp=E,5.0nm,0.3s						
JFFD	Fukushimafurud	1.10	261	i P	Pb	13 33 54.2	-0.2
JFFD				S	Sb	13 34 07.0	-1.8
JFFD	Fukushimafurud	1.10	261	A	A	13 33 54.2	
	comp=E,8.0nm,5.7s,comp=E,14nm,0.7s						
JIO	Ouri	1.26	339	⇓iP	Pn	13 33 56.5	-0.3
JIO				⇓S	Sb	13 34 10.6	-2.7
JHO	Hitachi	1.27	239	P	Pn	13 33 56.3	-0.7
JHO				S	Sb	13 34 10.8	-2.8
JHO	Hitachi	1.27	239	A	A	13 33 56.3	
	comp=E,4.0nm,4.6s,comp=E,4.0nm,3.3s						
JFT	Otama	1.29	281	⇓iP	Pb	13 33 57.6	0.0
JFT				⇓S	Sb	13 34 12.5	-1.5
JFT	Otama	1.29	281	A	A	13 33 57.6	
	comp=E,17nm,0.9s,comp=E,24nm,0.7s						
JOU	Okura	1.48	318	⇓iP	Pn	13 33 59.9	+0.1
JOU				⇓S	Sn	13 34 17.9	-1.1
JOU	Okura	1.48	318	A	A	13 33 59.9	
	comp=E,8.0nm,0.9s,comp=E,13nm,1.1s						
JOFO	Osakifurukawao	1.55	329	A	A	13 34 00.7	
	comp=E,18nm,1.3s,comp=E,20nm,2.9s						
JYAR	Yonezawaarcadi	1.55	295	A	A	13 34 00.6	
	comp=E,29nm,0.9s,comp=E,25nm,1.2s						
JSB	Shiboa	1.63	260	A	A	13 34 02.1	
	comp=E,13nm,1.2s,comp=E,23nm,2.4s						
JYT	Yasato	1.74	234	Pn	Pn	13 34 03.0	-0.3
JYT				Sn	Sn	13 34 23.6	-1.8
JYT	Yasato	1.74	234	A	A	13 34 04.1	
	comp=E,4.0nm,2.0s,comp=E,4.0nm,0.9s						
JYS	Shirataka	1.75	303	P	Pn	13 34 04.0	+0.4
JYS				eS	Sn	13 34 25.2	-0.5
JYS	Shirataka	1.75	303	A	A	13 34 04.0	
	comp=E,10.0nm,1.1s,comp=E,15nm,1.3s						
JMK	Ichinoseki	1.76	342	⇓iP	Pn	13 34 04.0	+0.3
JMK	Ichinoseki	1.76	342	A	A	13 34 04.0	
	comp=E,5.0nm,2.5s,comp=E,3.0nm,3.1s						
JFY	Yanaizu	1.77	275	P	Pn	13 34 04.7	+0.8
JFY				eS	Sn	13 34 25.4	-0.8
CHOJ	Chosi	1.79	209	A	A	13 34 05.4	
	comp=E,4.0nm,2.5s,comp=E,5.0nm,1.6s						
JYA	Atsumi	2.19	308	A	A	13 34 09.8	
	comp=E,4.0nm,0.8s,comp=E,4.0nm,1.0s						
JOM	Ohasama	2.25	347	A	A	13 34 11.1	
	comp=E,4.0nm,0.7s,comp=E,3.0nm,1.0s						
JCN	Nagara	2.32	217	A	A	13 34 12.8	
	comp=E,11nm,1.9s,comp=E,10.0nm,2.2s						
JKEN	Kujiedanarisaw	2.93	357	A	A	13 34 20.9	
	comp=E,6.0nm,4.5s,comp=E,9.0nm,1.1s						
JSD	Sado	3.00	286	Pn	Pn	13 34 20.5	-0.3
MJAR	Matsushiro Arr	3.06	257	Pn	Pn	13 34 23.0	+1.3
	1.2nm,0.3s,baz=77,slow=16,SNR=48						
MJAR				Sn	Sn	13 35 00.8	+2.6
	2.1nm,0.3s,baz=97,slow=27,SNR=2.6						
MJAR				LR	LR	13 35 50.4	
	comp=Z,400nm,20.3s,baz=54,slow=44						
	9.9nm,0.5s						
MJAR	Matsushiro Arr	3.06	257		Pn	13 34 22.3	+0.7
MAJO	Matsushiro	3.07	257	Pn	Pn	13 34 22.6	+1.0
MJB9	Matsu-Tunnel	3.07	257		Pn	13 34 22.5	+0.8
JTM	Tenmabayashi	3.57	350	Pn	Pn	13 34 29.7	+1.2
JGF	Kuroka	4.04	247	Pn	Pn	13 34 37.2	+2.1
INU	Inuyama	4.40	246	Pn	Pn	13 34 41.7	+1.7
JHJ	Hachijo jima 2	4.50	204	Pn	Pn	13 34 41.1	-0.2
	216nm,0.3s,baz=325,slow=20,SNR=14						
JHJ				Sn	Sn	13 35 30.6	-3.0
	61nm,0.3s,baz=65,slow=23,SNR=2.2						
ERM	Erimo	4.83	11		Pn	13 34 46.2	+0.3
JKA	Kamikawa-asahi	6.85	4	Pn	Pn	13 35 13.9	+0.3
ASAJ	Asahikawa	6.85	4	Pn	Pn	13 35 14.0	+0.3
	2.2nm,0.3s,baz=221,slow=12,SNR=19						
ASAJ				Sn	Sn	13 36 29.3	-2.2
	0.8nm,0.3s,baz=177,slow=33,SNR=1.2						
	11nm,0.4s						
YSS	Yuzh-Sakhalins	9.69	3	Pn	Pn	13 35 52.8	+0.3
JCJ	Chichijima	10.15	179	Pn	Pn	13 35 57.6	-1.4
	17nm,0.3s,baz=270,slow=14,SNR=12						
JCJ				Sn	Sn	13 37 42.5	-10
	7.3nm,0.3s,baz=316,slow=23,SNR=2.5						
USRK	Ussuriysk Ar.	10.22	316	Pn	Pn	13 36 02.3	+2.4
	0.3nm,0.3s,baz=128,slow=12,SNR=6.8						
USRK				LR	LR	13 39 51.3	
	comp=Z,240nm,18.7s,baz=132,slow=37						
	3.5nm,0.7s						
KSRS	Korea Array	11.14	275	Pn	Pn	13 36 15.7	+3.2
	0.1nm,0.3s,baz=88,slow=14,SNR=2.0						
	0.5nm,0.6s						
KLR	Kul'dur	14.04	332	Pn	Pn	13 36 54.0	+1.9
	0.1nm,0.3s,baz=144,slow=14,SNR=2.2						
KLR				LR	LR	13 42 14.8	
	comp=Z,153nm,18.8s,baz=136,slow=37						
	0.9nm,0.8s						
JOW	Kunigami	15.55	232	LR	LR	13 43 33.1	
	comp=Z,70nm,18.4s,baz=160,slow=39						
PETK	Petropavlovsk-	19.27	30	P	P	13 37 57.8	+0.1
	0.1nm,0.3s,baz=214,slow=16,SNR=3.8						
PETK				LR	LR	13 45 23.7	
	comp=Z,42nm,21.4s,baz=215,slow=37						
	4.1nm,0.8s						
PETK	Petropavlovsk-	19.27	30	P	P	13 37 57.4	-0.3
MA2	Magadan	23.03	12	P	P	13 38 39.2	+1.1
	12nm,0.8s,baz=180,slow=20,SNR=2.8						
MA2				LR	LR	13 48 50.9	
	comp=Z,46nm,19.9s,baz=250,slow=40						
	12nm,0.8s						
MA2	Magadan	23.03	12	IAmb	IAmb	13 38 42.9	
	comp=Z,77nm,1.5s						
HHC	Hu-ho-hao-te	23.78	288	eP	P	13 38 44.6	-1.3
HHC				pmax	pmax		
	comp=Z,39nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
YAK	Yakutsk	25.93	347	LR	LR	13 49 32.1	
	comp=Z,112nm,19.4s,baz=252,slow=37						
SEY	Seymchan	26.48	11	P	P	13 39 11.4	+1.3
	comp=Z,3.8nm,0.6s,baz=261,slow=22,SNR=14						
SEY				LR	LR	13 49 21.4	
	comp=Z,62nm,20.7s,baz=169,slow=36						
	comp=Z,3.8nm,0.6s						
H11N2	WAKE ISLAND Hy	27.93	122	T	T	14 08 53.8	
	baz=314,slow=75,SNR=480						
H11N1	WAKE ISLAND Hy	27.93	122	T	T	14 08 54.1	
	baz=314,slow=75,SNR=443						
H11N3	WAKE ISLAND Hy	27.94	122	T	T	14 08 51.4	
	baz=314,slow=75,SNR=375						
SONM	Songino Array	27.99	303	P	P	13 39 24.3	+0.2
	comp=Z,0.8nm,0.5s,baz=118,slow=11,SNR=3.6						
SONM				LR	LR	13 51 57.2	
	comp=Z,36nm,19.3s,baz=132,slow=39						
	comp=Z,0.8nm,0.5s						
SONM	Songino Array	27.99	303	P	P	13 39 21.9	-2.2
H11S1	WAKE ISLAND Hy	28.65	124	T	T	14 09 48.8	
	baz=316,slow=76,SNR=400						
H11S3	WAKE ISLAND Hy	28.65	124	T	T	14 09 49.0	
	baz=316,slow=76,SNR=372						
H11S2	WAKE ISLAND Hy	28.67	124	T	T	14 09 50.1	
	baz=316,slow=76,SNR=271						
PZH	PanZhiHua	35.53	264	P	P	13 40 30.1	-0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
GOMU	GeErMu	37.46	283	P	P	13 40 53.8	+6.7
GOMU				pP	sP	13 40 54.9	+2.3
GOMU				sP	pP	13 40 58.9	+7.9
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,59nm,4.7s						
WMQ	Urumqi	41.09	297	eP	P	13 41 18.8	+1.8
WMQ				sP	sP	13 41 31.9	+9.4
WMQ				pmax	pmax		
	comp=Z,43nm,0.6s						
CMAR	Chiang Mai Arr	41.95	255	P	P	13 41 25.9	+1.7
	comp=Z,0.3nm,0.3s,baz=46,slow=7.7,SNR=1.1						
	comp=Z,0.3nm,0.3s						
ZAA0	Zalesovo Array	42.05	312	P	P	13 41 24.2	-0.4
ZAA0				IAmb	IAmb	13 41 35.7	
	comp=Z,6.9nm,0.8s						
ZALV	Zalesovo Beam	42.05	312	P	P	13 41 24.6	0.0
	comp=Z,1.3nm,0.7s,baz=81,slow=9.6,SNR=5.9						
ZALV				LR	LR	13 59 32.2	
	comp=Z,58nm,19.1s,baz=94,slow=37						
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	42.05	312	P	P	13 41 24.1	-0.5
SBUM	Sibu	44.12	225	P	P	13 41 41.3	-0.4
SBUM				IAmb	IAmb	13 41 55.6	
	comp=Z,6.0nm,1.4s						
MK31	Makanchi Array	44.34	302	P	P	13 41 42.2	-1.0
MK31				IAmb	IAmb	13 41 54.6	
	comp=Z,5.5nm,0.8s						
MKAR	Makanchi Array	44.34	302	P	P	13 41 43.2	0.0
	comp=Z,1.8nm,0.7s,baz=88,slow=9.9,SNR=19						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	44.34	302	P	P	13 41 42.9	-0.3
MAKZ	Makanchi	44.55	302	P	P	13 41 44.9	0.0
MAKZ				IAmb	IAmb	13 41 55.9	
	comp=Z,8.2nm,1.1s						
KURK	Kurchatov	46.10	308	P	P	13 41 56.6	-0.6
KDAK	Kodiak Island	46.65	42	P	P	13 42 00.1	-1.2
	comp=Z,4.5nm,0.7s,baz=307,slow=5.6,SNR=6.7						
	comp=Z,4.5nm,0.7s						
TOLK	Toolik Lake Re	48.07	27	P	P	13 42 14.1	+1.8
TOLK				IAmb	IAmb	13 42 42.6	
	comp=Z,8.6nm,1.4s						
GHO	Glory Hole Cre	48.28	37	P	P	13 42 15.2	+1.2
GHO				IAmb	IAmb	13 42 16.7	
	comp=Z,5.4nm,0.9s						
TCOL	CIGO, UAF Yank	48.65	32	P	P	13 42 18.6	+1.8
TCOL				IAmb	IAmb	13 42 42.9	
	comp=Z,3.5nm,0.8s						
IL31		49.07	32	P	P	13 42 21.1	+1.2
IL31				IAmb	IAmb	13 42 21.9	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	49.07	32	P	P	13 42 19.7	-0.4
	comp=Z,2.6nm,0.8s,baz=266,slow=6.5,SNR=33						
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	49.07	32	P	P	13 42 20.6	+0.6
SCRK	Sand Creek	50.38	33	P	P	13 42 31.2	+1.1
SCRK				IAmb	IAmb	13 42 32.2	
	comp=Z,4.9nm,1.0s						
BMRM	Bremner River	50.42	37	P	P	13 42 32.0	+1.6
BCAR	Beaver Creek A	51.47	34	P	P	13 42 40.8	+2.6
EPYK	Eagle Plains	53.11	30	P	P	13 42 52.2	+1.8
KKAR	Karatay Array	53.35	300	P	P	13 42 52.6	+0.1
INK	Inuvik	53.98	27	P	P	13 42 56.3	-0.3
	comp=Z,1.9nm,0.8s,baz=284,slow=6.2,SNR=4.0						
	comp=Z,1.9nm,0.8s						
WB2	Warramunga Arr	57.36	188	P	P	13 43 21.5	+0.1
WB2				IAmb	IAmb	13 43 22.2	
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	57.36	188	P	P	13 43 21.4	-0.1
	comp=Z,1.9nm,0.5s,baz=7.1,slow=7.4,SNR=47						
	comp=Z,1.9nm,0.5s						
WRA	Warramunga Arr	57.36	188	P	P	13 43 21.6	+0.2
ABKAR	Akbulak array	58.09	310	P	P	13 43 25.7	-0.7
AS31	Alice Springs	61.08	188	P	P	13 43 48.5	+1.3
ASAR	Alice Springs	61.09	188	P	P	13 43 47.5	+0.2
	comp=Z,1.4nm,0.8s,baz=14,slow=6.1,SNR=17						
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	61.09	188	P	P	13 43 47.3	+0.1
RES	Resolute Bay	62.27	15	P	P	13 43 54.7	+0.2
	comp=Z,2.7nm,1.0s,baz=322,slow=8.8,SNR=2.2						
	comp=Z,2.7nm,1.0s						
FINES	FINESS Array B	68.79	332	P	P	13 44 37.1	+0.2
	comp=Z,1.9nm,0.8s,baz=23,slow=10,SNR=5.3						
	comp=Z,1.9nm,0.8s						
STKA	Stephens Creek	68.80	180	P	P	13 44 37.0	-0.2
	comp=Z,1.5nm,0.8s,baz=292,slow=9.2,SNR=3.1						
	comp=Z,1.5nm,0.8s						
KBZ	Khabaz	71.05	311	LR	LR	14 17 42.2	
	comp=Z,44nm,20.9s,baz=324,slow=37						
GNI	Garni	71.89	307	LR	LR	14 20 25.6	
	comp=Z,35nm,19.1s,baz=7.0,slow=39						
NACGM	Naroch	72.75	327	eP	P	13 45 01.9	+0.8
	baz=49						
NB2	NORSAR Subarra	74.12	337	P	P	13 45 19.4	+10
	comp=Z,1.9nm,0.8s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.12	337	P	P	13 45 09.5	+0.3
	comp=Z,0.7nm,0.7s,baz=39,slow=5.8,SNR=2.6						
NOA				LR	LR	14 20 12.6	
	comp=Z,50nm,21.6s,baz=55,slow=38						
	comp=Z,0.7nm,0.7s						
AKASG	Malin Array Be	74.35	322	P	P	13 45 09.9	-0.7
	comp=Z,0.4nm,0.4s,baz=44,slow=6.4,SNR=2.1						
	comp=Z,0.4nm,0.4s						
NVAR	Mina Array Bea	74.52	53	P	P	13 45 12.8	+0.7
	comp=Z,0.5nm,0.7s,baz=292,slow=5.8,SNR=4.8						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	77.21	46	P	P	13 45 27.9	+0.5
	comp=Z,0.4nm,0.7s,baz=270,slow=0.5,SNR=2.3						
	comp=Z,0.4nm,0.7s						
CLL	Collm	81.09	330	eP	P	13 45 48.0	-0.2
EKA	Eskdalemuir Ar	83.04	341	LR	LR	14 26 38.3	
	comp=Z,36nm,18.8s,baz=356,slow=38						
LPAZ	La Paz	146.22	60	PKPbc	PKPbc	13 53 14.7	-0.1
	comp=Z,1.3nm,0.8s,baz=356,slow=4.5,SNR=5.0						
H03N2	Juan Fernandez	146.64	96	T	T	16 37 23.0	
	baz=291,slow=76,SNR=11						
H03N3	Juan Fernandez	146.66	96	T	T	16 37 22.0	
	baz=291,slow=76,SNR=14						
H03N1	Juan Fernandez	146.66	96	T	T	16 37 21.2	
	baz=291,slow=76,SNR=13						

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*IDC **18** 13:38:14.8±1.1, 14°.20N×146°.85E, h0^{km}, mb3.9/10, mbtmp3.9/11, ML4.2/1, MS3.8/2, Error ellipse: s-maj=29.0km s-min=17.5km az=113.0*

*NEIC **18** 13:38:19.9±1.4, 14°.12N±0°.07×147°.0E±0°.1, h35^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=14.4km s-min=10.7km az=78.0*

ISC 18 13:38:19.0±0.6, 14°.10N±0°.09×146°.97E±0°.08, h35^{km}, n31, σ0^{s}93/30, mb4.3/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.10	256	Pn	Pn	13 38 50.7	-1.1
	77nm,0.3s,baz=101,slow=5.5,SNR=48						
GUMO				Sn	Sn	13 39 15.3	-1.4
	41nm,0.3s,baz=23,slow=23,SNR=13						
	214nm,0.3s						
PATS	Pohnpei	13.28	122	Pn	Pn	13 41 22.6	-2.6
SIJI	Sorong	21.52	228	P	P	13 43 06.2	+0.9
	6.0nm,0.5s,baz=35,slow=10,SNR=8.2						
	6.0nm,0.5s						
INU	Inuyama	22.98	339	P	P	13 43 20.0	-0.6
JSU	Suzuyama	23.01	322	P	P	13 43 21.1	+0.1
PMG	Port Moresby	23.36	180	P	P	13 43 25.7	+1.1
PMG				IAmb	IAmb	13 43 35.7	
	comp=Z,13nm,1.1s						
MJAR	Matsushiro Arr	23.68	342	P	P	13 43 26.2	-1.3
	comp=Z,0.6nm,0.6s,baz=164,slow=9.5,SNR=2.3						
MJAR				LR	LR	13 52 15.8	
	comp=Z,20nm,18.5s,baz=126,slow=36						
	comp=Z,0.6nm,0.6s						
MAJO	Matsushiro	23.68	342	P	P	13 43 27.4	-0.2
MAJO				IAmb	IAmb	13 43 32.3	
	comp=Z,16nm,1.5s						
KSRS	Korea Array	28.78	327	P	P	13 44 12.5	-1.1
	comp=Z,1.3nm,0.6s,baz=141,slow=9.4,SNR=3.7						
	comp=Z,1.3nm,0.6s						
KSAR	Wonju Array Be	28.79	327	P	P	13 44 13.5	-0.3
WB2	Warramunga Arr	36.04	200	P	P	13 45 17.4	+0.1
WB2				IAmb	IAmb	13 45 20.0	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	36.04	200	P	P	13 45 17.9	+0.6
	comp=Z,1.6nm,0.7s,baz=23,slow=9.4,SNR=5.7						
	comp=Z,1.6nm,0.7s						
WRA	Warramunga Arr	36.04	200	IAmb	IAmb	13 45 20.0	
	comp=Z,0.4nm,1.4s						
JAGI	Jajag, Banyuwa	39.54	237	P	P	13 45 47.3	+0.3
ASAR	Alice Springs	39.65	199	P	P	13 45 48.9	+1.1
	comp=Z,0.3nm,0.6s,baz=30,slow=5.8,SNR=2.2						
	comp=Z,0.3nm,0.6s						
PINNC	Pines Island,	41.64	151	P	P	13 46 05.1	+1.0
CMAR	Chiang Mai Arr	46.20	282	P	P	13 46 41.1	+0.1
	comp=Z,0.7nm,0.5s,baz=86,slow=5.1,SNR=5.8						
	comp=Z,0.7nm,0.5s						
ZAA0	Zalesovo Array	62.41	324	P	P	13 48 38.3	-0.1
ZAA0				IAmb	IAmb	13 48 43.2	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	62.41	324	P	P	13 48 38.2	-0.1
	comp=Z,1.5nm,0.6s,baz=79,slow=7.9,SNR=6.2						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	62.41	324	P	P	13 48 37.9	-0.5
MK31	Makanchi Array	62.55	316	P	P	13 48 40.1	+0.6
MKAR	Makanchi Array	62.55	316	P	P	13 48 40.3	+0.8
	comp=Z,1.1nm,0.5s,baz=92,slow=8.6,SNR=20						
	comp=Z,1.1nm,0.5s						
MAKZ	Makanchi	62.76	316	P	P	13 48 41.8	+0.9
MAKZ				IAmb	IAmb	13 48 42.8	
	comp=Z,1.9nm,0.6s						
KURK	Kurchatov	65.52	320	P	P	13 48 59.2	+0.3
KURK				IAmb	IAmb	13 49 00.3	
	comp=Z,6.8nm,1.0s						
ILAR	Eielson Array	67.24	25	P	P	13 49 10.9	+1.3
	comp=Z,0.4nm,0.5s,baz=250,slow=6.1,SNR=8.2						
	comp=Z,0.4nm,0.5s						
KKAR	Karatay Array	70.66	311	P	P	13 49 31.1	-0.2
BRVK	Borovoye	70.86	322	P	P	13 49 33.0	+0.7
BRVK				IAmb	IAmb	13 49 34.0	
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	91.55	336	P	P	13 51 21.6	-0.4
	comp=Z,1.7nm,0.7s,baz=56,slow=4.8,SNR=9.9						
	comp=Z,1.7nm,0.7s						
ASF	Jabal al Asfar	98.87	306	LR	LR	14 42 50.4	
	comp=Z,346nm,18.5s,baz=288,slow=39						
DBIC	Dimbokro	145.25	305	PKPbc	PKPdf	13 57 54.6	+0.5
	comp=Z,5.4nm,0.9s,baz=41,slow=3.6,SNR=4.3						
DBIC	Dimbokro	145.25	305	PKPdf	PKPdf	13 57 53.9	-0.2

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*MAN **18** 13:54:15.3, 11°.25N×124°.57E, h3^{km}, mb4.5, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*

ISC 18 13:54:16.7±2.2, 11°.20N±0°.04×124°.60E±0°.05, h5^{km}±16^{km}, n12, σ1^{s}65/20, 2C-9D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	1.08	215	⇓eP	Pb	13 54 36.1	-1.7
LLP				eS	Sn	13 54 52.9	-0.9
MSLP	Maasin	1.09	166	⇓eP	Pb	13 54 37.4	-0.8
MSLP				eS	Sn	13 54 55.1	+0.9
TBP	Tagbilaran	1.67	206	eP	Pn	13 54 45.6	-1.0
TBP				i S	Sg	13 55 11.2	+0.8
RCP	Roxas	1.85	281	⇑eP	Pn	13 54 49.1	-0.1
RCP				eS	Sg	13 55 16.6	+0.3
GLSP	General Luna,	2.06	133	⇓eP	Pn	13 54 52.7	+0.7
GLSP				eS	Sb	13 55 20.1	-0.5
SNPH	Sibulan	2.28	216	⇓iP	Pn	13 54 54.9	-0.3
SNPH				i S	Sn	13 55 24.9	+1.2
CNOP	Candoni, Negro	2.36	235	⇓eP	Pn	13 54 56.1	-0.1
CNOP				eS	Sn	13 55 25.6	0.0
PVCP	Virac	2.42	350	⇓eP	Pn	13 54 55.9	-1.1
PVCP				eS	Sn	13 55 25.5	-1.5
BUTP	Butuan	2.44	155	⇓eP	Pn	13 54 56.5	-0.7
BIPH	Bislig	3.46	150	⇑eP	Pn	13 55 13.6	+2.2
PAGZ	Pagadian	3.54	200	⇓eP	Pn	13 55 14.5	+2.1
LQP	Lukban	4.16	314	⇓eP	Pn	13 55 25.7	+4.6

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*IDC **18** 13:54:14.6±1.7, 8°.47N×73°.36W, h0^{km}, mbtmp3.9/2, ML2.5/2, Error ellipse: s-maj=64.0km s-min=34.3km az=152.0*

*RSNC **18** 13:54:19.2±1.1, 7°.10N×72°.25W, h0^{km}±4^{km}, ML3.0, Mw3.2*

ISC 18 13:54:18.6±0.8, 7°.08N±0°.02×72°.28W±0°.03, h10^{km}, n27, σ1^{s}84/51, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.49	302	⇓ePg	Pg	13 54 27.8	-0.6
PAMC				eP	Pb	13 54 29.3	-0.4
PAMC				eSg	Sg	13 54 34.5	-0.5
PAMC				i		13 54 35.0	
	comp=Z,1μm,0.3s						
TAMC	Tame, Arauca	0.80	143	eP	Pg	13 54 33.8	-0.3
TAMC				eS	Sb	13 54 45.4	-0.3
TAMC				i		13 54 51.4	
	comp=Z,205nm,0.2s						
BARC	Barichara	1.02	242	i P	Pg	13 54 37.4	-1.0
BARC				eS	Sn	13 54 54.1	+0.3
BARC				i		13 54 58.5	
	comp=Z,262nm,0.3s						
BRRC	Barranca, Sant	1.43	271	eP	Pb	13 54 45.2	-0.1
BRRC				eS	Sg	13 55 04.6	0.0
BRRC				i		13 55 08.3	
	comp=Z,282nm,0.8s						
RUSC	La Rusia	1.43	214	eP	Pn	13 54 44.4	-0.7
RUSC				eS	Sb	13 55 02.3	-1.8
RUSC				i		13 55 07.7	

	comp=Z,78nm,0.3s						
OCAC	**Ocana**	**1.55**	**318**	*e*P	**Pb**	**13 54 47.0**	**-0.5**
OCAC				*e*S	**Sb**	**13 55 07.3**	**+0.1**
PTBC	**PUERTO BERRIO,**	**2.23**	**256**	*e*P	**Pn**	**13 54 56.5**	**+0.8**
PTBC				*e*S	**Sb**	**13 55 26.2**	**-0.6**
PTBC				*i*		13 55 29.0	
	comp=Z,221nm,0.4s						
SPBC	**San Pablo de B**	**2.28**	**232**	*e*P	**Pb**	**13 54 58.7**	**-1.3**
SPBC				*e*S	**Sb**	**13 55 27.4**	**-0.9**
SPBC				*i*		13 55 32.6	
	comp=Z,96nm,0.4s						
SDV	**Santo Domingo**	**2.42**	**42**	Pn	**Pn**	**13 54 59.8**	**+1.3**
	comp=Z,16nm,0.3s,baz=357,slow=0.9,SNR=17						
SDV				Sn	**Sn**	**13 55 28.7**	**+0.3**
	comp=Z,49nm,0.3s,baz=234,slow=8.7,SNR=20						
	comp=Z,33nm,0.3s						
SDV	**Santo Domingo**	**2.42**	**42**	*e*P	**Pn**	**13 54 59.5**	**+1.0**
SDV				*e*S	**Sn**	**13 55 29.8**	**+1.4**
SDV				*i*		13 55 35.7	
	comp=Z,225nm,0.3s						
ZARC	**Zaragoza, Cauc**	**2.59**	**279**	*e*P	**Pn**	**13 55 02.3**	**+1.6**
ZARC				*e*S	**Sn**	**13 55 34.6**	**+2.3**
ZARC				*i*		13 55 41.4	
	comp=Z,119nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.81**	**340**	*e*P	**Pn**	**13 55 05.3**	**+1.5**
LL6C				*e*S	**Sb**	**13 55 43.1**	**-0.6**
LL6C				*i*		13 55 51.3	
	comp=Z,44nm,0.4s						
CHIC	**Chingaza**	**2.83**	**211**	*e*P	**Pn**	**13 55 05.5**	**+1.1**
PTGC	**Puerto Gaitan,**	**2.87**	**177**	*e*P	**Pn**	**13 55 05.3**	**+0.8**
PTGC				*e*S	**Sn**	**13 55 38.9**	**-0.2**
PTGC				*i*		13 55 48.8	
	comp=Z,75nm,0.4s						
NORC	**Norcasia**	**2.98**	**240**	*e*P	**Pn**	**13 55 07.2**	**+1.1**
NORC				*e*S	**Sb**	**13 55 46.3**	**-2.2**
NORC				*i*		13 55 51.5	
	comp=Z,36nm,0.5s						
ROSC	**El Rosal**	**3.01**	**223**	Pn	**Pb**	**13 55 13.9**	**+1.2**
	comp=Z,5.8nm,0.3s,baz=300,slow=20,SNR=4.5						
ROSC				Sn	**Sg**	**13 55 53.3**	**-2.3**
	comp=Z,5.6nm,0.3s,baz=37,slow=20,SNR=1.9						
	comp=Z,19nm,0.4s						
ROSC	**El Rosal**	**3.01**	**223**	*e*P	**Pb**	**13 55 14.3**	**+1.6**
ROSC				*e*S	**Sb**	**13 55 51.1**	**+1.3**
ROSC				*i*		13 56 00.6	
	comp=Z,26nm,0.3s						
VILC	**Villavicencio,**	**3.27**	**206**	*e*P	**Pg**	**13 55 20.2**	**-1.2**
VILC				*e*S	**Sn**	**13 55 50.2**	**+1.0**
UREC	**San Jos de Ur**	**3.30**	**282**	*e*P	**Pn**	**13 55 12.8**	**+2.3**
CBOC	**Ciudad Bolivar**	**3.90**	**252**	*e*P	**Pn**	**13 55 22.5**	**+3.6**
CBOC				*e*S	**Sb**	**13 56 11.9**	**-3.2**
CBOC				*i*		13 56 34.2	
	comp=Z,10.0nm,0.5s						
CRJC	**Cerrejon, Guaj**	**3.96**	**351**	*e*P	**Pn**	**13 55 21.0**	**+1.4**
CRJC				*e*S	**Sn**	**13 56 07.5**	**+1.3**
CRJC				*i*		13 56 32.6	
	comp=Z,40nm,0.4s						
SJCC	**San Jacinto, C**	**4.01**	**314**	*e*P	**Pn**	**13 55 22.5**	**+2.3**
SJCC				*e*S	**Sb**	**13 56 13.1**	**-5.0**
ANIL	**Santa Ana**	**4.04**	**231**	*e*P	**Pn**	**13 55 22.9**	**+2.0**
ANIL				*e*S	**Sn**	**13 56 10.9**	**+2.6**
ANIL				*i*		13 56 22.1	
	comp=Z,29nm,0.3s						
PRAC	**Prado**	**4.24**	**218**	*e*P	**Pn**	**13 55 24.4**	**+1.1**
PRAC				*e*S	**Sn**	**13 56 15.0**	**+2.1**
PRAC				*i*		13 56 41.9	
	comp=Z,15nm,0.4s						
ORTC	**Ortega, Tolima**	**4.32**	**223**	*e*P	**Pn**	**13 55 26.1**	**+1.6**
ORTC				*e*S	**Sn**	**13 56 19.8**	**+4.8**
ORTC				*i*		13 56 37.0	
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**149.94**	**234**	PKPbc	**PKPdf**	**14 14 07.0**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=123,slow=2.5,SNR=4.6						
WRA	**Warramunga Arr**	**151.19**	**241**	PKPbc	**PKPbc**	**14 14 10.2**	**-3.1**
	comp=Z,0.6nm,0.9s,baz=107,slow=2.8,SNR=7.6						

*IDC **18** 13:59:07.8±1.5, 25°.73N×141°.26E, h134^{km}±13^{km}, mb3.6/7, mbtmp3.9/9, Error ellipse: s-maj=38.7km s-min=14.1km az=95.0*

*JMA **18** 13:59:08.3±0.2, 26°.0N±0°.2×140°.8E±0°.7, h5^{km}±2^{km}, MV5.0/18, IOTO ISLANDS REGION*

ISC 18 13:59:09.3±0.8**, 25°.76N**±0°.09×**141°.6E**±0°.2**, h150**^{km}**, n17,** σ**1^{s}40**/20**, mb3.9**/7**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.01**	**30**	P	**Pn**	**13 59 34.0**	**-0.1**
JHH2				S	**Sn**	**13 59 52.3**	**-0.8**
CBIJ	**Chichi jima**	**1.43**	**21**	P	**Pn**	**13 59 38.2**	**+0.1**
CBIJ				S	**Sn**	**13 59 59.9**	**-0.3**
JCJ	**Chichijima**	**1.43**	**21**	P	**Pn**	**13 59 38.4**	**+0.2**
	805nm,0.4s,baz=61,slow=4.3,SNR=361						
JCJ				S	**Sn**	**13 59 59.5**	**-0.7**
	802nm,0.4s,baz=311,slow=22,SNR=48						
BSO3	**Boso 3**	**9.06**	**354**	P	**Pn**	**14 01 14.8**	**-1.7**
JAO	**Obara**	**10.19**	**339**	*e*P	**Pn**	**14 01 31.9**	**+0.1**
JHO	**Hitachi**	**10.85**	**356**	P	**Pn**	**14 01 37.4**	**-3.1**
MJAR	**Matsushiro Arr**	**11.13**	**346**	P	**Pn**	**14 01 41.9**	**-2.2**
	2.2nm,0.8s,baz=131,slow=10,SNR=5.7						
KSRS	**Korea Array**	**16.46**	**318**	P	**P**	**14 02 53.1**	**+1.6**
	1.0nm,1.0s,baz=132,slow=12,SNR=5.7						
ASAJ	**Asahikawa**	**18.33**	**2**	P	**Pn**	**14 03 13.8**	**-0.1**
	3.7nm,0.7s,baz=168,slow=13,SNR=5.5						
KLR	**Kul'dur**	**24.65**	**344**	P	**P**	**14 04 15.9**	**0.0**
	1.0nm,0.7s,baz=121,slow=8.1,SNR=2.9						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**45.98**	**190**	P	**P**	**14 07 17.1**	**-0.5**
	4.9nm,0.8s,baz=11,slow=8.7,SNR=70						
	4.9nm,0.8s						
ASAR	**Alice Springs**	**49.70**	**189**	P	**P**	**14 07 45.7**	**-0.5**
	0.2nm,0.4s,baz=16,slow=9.1,SNR=5.4						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**57.32**	**180**	P	**P**	**14 08 41.5**	**0.0**
	1.4nm,0.5s,baz=5.7,slow=8.5,SNR=6.6						
	1.4nm,0.5s						
ILAR	**Eielson Array**	**59.13**	**28**	P	**P**	**14 08 55.3**	**+1.5**
	1.2nm,0.8s,baz=250,slow=5.7,SNR=13						
	1.2nm,0.8s						
INK	**Inuvik**	**64.45**	**24**	P	**P**	**14 09 31.7**	**+2.4**
	0.8nm,0.6s,baz=303,slow=7.3,SNR=2.1						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**78.91**	**334**	P	**P**	**14 10 54.4**	**-1.3**
	2.0nm,0.8s,baz=86,slow=7.8,SNR=5.9						
	2.0nm,0.8s						
PLCA	**Paso Flores**	**149.44**	**127**	PKPbc	**PKPbc**	**14 18 39.6**	**-1.2**
	1.5nm,1.0s,baz=255,slow=12,SNR=2.5						

*NEIC **18** 14:49:02.9±1.5, 24°.39S±0°.06×66°.93W±0°.09, h148^{km}±6^{km}, mb5.3/195, Mww5.2, Md4.7(SJA), Error ellipse: s-maj=12.4km s-min=8.5km az=90.0*

*MOS **18** 14:49:02.5±1.1, 24°.23S×67°.02W, h149^{km}, mb5.4/19, Error ellipse: s-maj=12.7km s-min=7.6km az=104.8*

*BJI **18** 14:49:02.4±0.0, 24°.67S×67°.32W, h146^{km}, mB5.1/10*

*SJA **18** 14:49:03.6±0.5, 24°.36S×67°.59W, h134^{km}±115^{km}, ML5.0, MW5.3*

*IDC **18** 14:49:04.1±0.7, 24°.33S×66°.98W, h157^{km}±5^{km}, mb4.7/32, mbtmp5.2/38, MS4.0/3, Error ellipse: s-maj=10.1km s-min=6.6km az=67.0*

*VAO **18** 14:49:05.2±0.4, 24°.34S×67°.01W, h176^{km}±3^{km}, mb5.3*

*GUC **18** 14:49:07.0±0.6, 24°.35S×67°.44W, h180^{km}±6^{km}, ML5.3*

*NEIC **18** 14:49:07, 24°.44S×67°.20W, h160^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-6.41; M$_{\theta\theta}$-0.35; M$_{\phi\phi}$6.75; M$_{r\theta}$2.97; M$_{\theta\phi}$-1.92; M$_{\phi r}$-3.75; Fault plane solution: M$_{0}$8.36000×10^{16} NP1: φ$_{s}$181.00000°, δ30.00000°, λ-64.00000°. NP2: φ$_{s}$332.00000°, δ63.00000°, λ-104.00000°. Principal axes: T 8.5469, Plg17.0000°, Azm72.0000°; N -0.3849, Plg13.0000°, Azm338.0000°; P -8.1620, Plg69.0000°, Azm212.0000°;*

*GCMT **18** 14:49:09.9±0.2, 24°.34S±0°.01×67°.20W±0°.02, h184^{km}±1^{km}, MW5.3/122, Moment Tensor Solution. s74,c89; s122,c183; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.90±.02; M$_{\theta\theta}$0.05±.02; M$_{\phi\phi}$0.85±.03; M$_{r\theta}$0.22±.02; M$_{\theta\phi}$-0.31±.02; M$_{\phi r}$-0.46±.02; Best double couple: M$_{0}$1.06500×10^{17} NP1: φ$_{s}$165.00000°, δ31.00000°, λ-84.00000°. NP2: φ$_{s}$338.00000°, δ59.00000°, λ-94.00000°. Principal axes: T 1.0930, Plg14.0000°, Azm70.0000°; N -0.0540, Plg3.0000°, Azm340.0000°; P -1.0380, Plg75.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 14:49:04.1±0.5**, 24°.41S**±0°.03×**67°.23W**±0°.03**, h162**^{km}±3^{km}**, n951,** σ**1^{s}36**/1050**, mb5.2**/130**, 91C-160D, Fault plane solution: NP1:** φ$_{s}$313.75891°**,** δ74.26205°**,** λ-116.27950°. **NP2:** φ$_{s}$194.97878°**,** δ30.34130°**,** λ-32.47598°. **Principal axes:** T Plg24.7375°**,** Azm63.9226°**;** N Plg25.2237°**,** Azm321.3873°**;** P Plg53.3263°**,** Azm192.1457°**;**

Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.60**	**102**	⇑*i*P	**Pn**	**14 49 38.2**	**+2.4**
SLA				*i* S	**Sn**	**14 50 02.9**	**+2.7**
SLA	**San Lorenzo**	**1.60**	**102**	*e*P	**Pn**	**14 49 38.4**	**+2.6**
SLA				*e*S	**Sn**	**14 50 03.9**	**+3.7**
SLA				IAML		14 50 04.0	
	comp=Z,9µm,0.9s						
AF01	**San Pedro de A**	**1.69**	**329**		**Pn**	**14 49 39.0**	**+2.1**
AF01	**San Pedro de A**	**1.69**	**329**	⇓*i*P	**Pn**	**14 49 39.5**	**+2.6**
AF01				*e*S	**Sn**	**14 50 03.9**	**+1.8**
AF01				IAML		14 50 09.5	
	comp=N,24µm,0.6s						
FSA	**Cafayete**	**2.04**	**147**	*e*P	**Pn**	**14 49 42.6**	**+2.1**
FSA				*e*S	**Sn**	**14 50 09.8**	**+1.0**
HJA	**Humahuaca**	**2.05**	**55**	*e*P	**Pn**	**14 49 43.5**	**+2.5**
HJA				*e*S	**Sn**	**14 50 13.0**	**+3.7**
GO02	**Mina Guanaco**	**2.27**	**250**		**Pn**	**14 49 44.6**	**+1.2**
GO02	**Mina Guanaco**	**2.27**	**250**	⇑*i*P	**Pn**	**14 49 45.2**	**+1.8**
GO02				*e*S	**Sn**	**14 50 15.3**	**+1.6**
GO02				IAML		14 50 18.6	
	comp=N,16µm,0.1s						
LVC	**Limon Verde**	**2.36**	**319**	P	**Pn**	**14 49 46.5**	**+1.9**
	comp=N,1µm,0.4s,baz=161,slow=7.5,SNR=1446						
LVC				S	**Sn**	**14 50 17.6**	**+1.9**
	comp=N,6µm,0.6s,baz=260,slow=22,SNR=96						
LVC	**Limon Verde**	**2.36**	**319**	Pn	**Pn**	**14 49 46.1**	**+1.5**
LVC	**Limon Verde**	**2.36**	**319**	*e*P	**Pn**	**14 49 46.5**	**+1.9**
PB15	**IPOC Station P**	**2.37**	**300**		**Pn**	**14 49 46.3**	**+1.7**
PB15	**IPOC Station P**	**2.37**	**300**	⇑*i*P	**Pn**	**14 49 46.6**	**+2.1**
PB15				*e*S	**Sn**	**14 50 16.4**	**+0.7**
YJA	**Yavi**	**2.73**	**36**	*e*P	**Pn**	**14 49 51.2**	**+2.2**
YJA				*e*S	**Sn**	**14 50 26.0**	**+2.3**
PB06	**IPOC Station P**	**2.74**	**308**		**Pn**	**14 49 50.4**	**+1.5**
PB06	**IPOC Station P**	**2.74**	**308**	⇑*i*P	**Pn**	**14 49 50.6**	**+1.7**
PB06				*i* S	**Sn**	**14 50 23.9**	**+0.4**
PB06				IAML		14 50 26.6	
	comp=E,13µm,0.4s						
PB14	**IPOC Station P**	**2.90**	**265**	Pn	**Pn**	**14 49 52.0**	**+1.0**
PB14	**IPOC Station P**	**2.90**	**265**	⇑*i*P	**Pn**	**14 49 51.9**	**+1.0**
PB14				*i* S	**Sn**	**14 50 26.7**	**-0.6**
PB14				IAML		14 50 33.3	
	comp=N,2µm,0.4s						
AC02	**Maricunga**	**2.96**	**215**		**Pn**	**14 49 53.2**	**+1.2**
AC02	**Maricunga**	**2.96**	**215**	⇑*i*P	**Pn**	**14 49 53.8**	**+1.8**
AC02				*i* S	**Sn**	**14 50 31.9**	**+2.8**
PB10	**IPOC Station P**	**3.17**	**286**	Pn	**Pn**	**14 49 55.1**	**+1.1**
PB10	**IPOC Station P**	**3.17**	**286**	⇑*i*P	**Pn**	**14 49 55.3**	**+1.3**
PB10				*i* S	**Sn**	**14 50 31.7**	**-1.1**
PB10				IAML		14 50 39.1	
	comp=N,4µm,0.4s						
PB09	**IPOC Station P**	**3.19**	**324**	Pn	**Pn**	**14 49 56.4**	**+1.9**
PB09	**IPOC Station P**	**3.19**	**324**	⇓*i*P	**Pn**	**14 49 56.5**	**+1.9**
PB09				*e*S	**Sn**	**14 50 34.6**	**+1.0**
PB09				IAML		14 50 40.1	
	comp=E,10µm,0.5s						
PB04	**IPOC Station P**	**3.38**	**307**		**Pn**	**14 49 57.3**	**+0.3**
PB04	**IPOC Station P**	**3.38**	**307**	⇑*i*P	**Pn**	**14 49 58.0**	**+1.0**
PB04				*e*S	**Sn**	**14 50 36.2**	**-1.8**
AC01	**Pan de Azucar**	**3.51**	**240**	Pn	**Pn**	**14 49 58.3**	**0.0**
AC01	**Pan de Azucar**	**3.51**	**240**	⇑*i*P	**Pn**	**14 49 58.4**	**+0.1**
AC01				*e*S	**Sn**	**14 50 38.7**	**-1.8**
PB07	**IPOC Station P**	**3.62**	**317**		**Pn**	**14 50 01.4**	**+1.5**
PB07	**IPOC Station P**	**3.62**	**317**	⇓*i*P	**Pn**	**14 50 00.9**	**+0.9**
PB07				*e*S	**Sn**	**14 50 41.7**	**-1.7**
PB02	**IPOC Station P**	**3.94**	**321**		**Pn**	**14 50 05.2**	**+1.2**
PB02	**IPOC Station P**	**3.94**	**321**	⇓*i*P	**Pn**	**14 50 04.4**	**+0.4**
PB02				*e*S	**Sn**	**14 50 47.5**	**-3.1**
PB01	**IPOC Station P**	**3.94**	**328**		**Pn**	**14 50 05.5**	**+1.4**
AC06	**Mina Casimiro**	**4.07**	**223**		**Pn**	**14 50 05.5**	**0.0**
AC06	**Mina Casimiro**	**4.07**	**223**	⇑*i*P	**Pn**	**14 50 05.2**	**-0.3**
AC06				*e*S	**Sn**	**14 50 51.5**	**-2.0**
GO03	**Copiap**	**4.17**	**220**	Pn	**Pn**	**14 50 06.9**	**0.0**
GO03	**Copiap**	**4.17**	**220**	⇑*i*P	**Pn**	**14 50 06.6**	**-0.3**
GO03				*e*S	**Sn**	**14 50 54.5**	**-1.4**
PATCX	**Punta Patache**	**4.48**	**322**	Pn	**Pn**	**14 50 11.3**	**+0.3**
PB08	**IPOC Station P**	**4.60**	**337**		**Pn**	**14 50 13.8**	**+0.9**
PB08	**IPOC Station P**	**4.60**	**337**	⇓*i*P	**Pn**	**14 50 13.9**	**+1.0**
PB08				*e*S	**Sn**	**14 51 05.7**	**-0.9**
ACLC	**CERRO LA CRUZ**	**5.00**	**177**	*e*P	**Pn**	**14 50 18.9**	**+1.0**
ACLC				*e*S	**Sn**	**14 51 09.7**	**-6.0**
AC04	**Llanos de Chal**	**5.12**	**222**	*e*P	**Pn**	**14 50 17.7**	**-1.5**
AC04				*e*S	**Sn**	**14 51 14.9**	**-3.2**
PB11	**IPOC Station P**	**5.14**	**334**		**Pn**	**14 50 19.2**	**-0.6**
CO01	**Juntas del Tor**	**6.11**	**204**		**Pn**	**14 50 32.0**	**-0.5**
PB16	**IPOC Station P**	**6.40**	**340**		**Pn**	**14 50 37.0**	**+0.1**
GO04	**Tololo Observa**	**6.56**	**208**	Pn	**Pn**	**14 50 36.1**	**-2.5**
CO06	**Fray Jorge**	**7.36**	**211**		**Pn**	**14 50 45.9**	**-3.1**
CO02	**Combarbal**	**7.55**	**205**		**Pn**	**14 50 48.9**	**-2.6**
LPAZ	**La Paz**	**8.12**	**354**	P	**Pn**	**14 51 00.0**	**+0.3**
	comp=E,149nm,0.4s,baz=155,slow=6.7,SNR=506						
LPAZ				S	**Sn**	**14 52 27.8**	**-3.0**
	comp=E,46nm,0.6s,baz=47,slow=4.0,SNR=2.2						
LPAZ				LR	LR	14 54 58.0	
	comp=E,517nm,20.2s,baz=208,slow=44						
LPAZ	**La Paz**	**8.12**	**354**	Pn	**Pn**	**14 51 00.1**	**+0.4**
LPAZ	**La Paz**	**8.12**	**354**	*e*P	**Pn**	**14 50 59.9**	**+0.2**
CPUP	**Villa Florida**	**9.16**	**104**	P	**Pn**	**14 51 09.5**	**-3.3**
	comp=E,94nm,0.9s,baz=285,slow=12,SNR=59						
CPUP	**Villa Florida**	**9.16**	**104**	*e*P	**Pn**	**14 51 11.5**	**-1.3**
ITQB	**Itaqui**	**10.81**	**121**	*e*P	**Pn**	**14 51 33.6**	**-0.9**
AQDB	**Aquidauana**	**11.36**	**72**		**Pn**	**14 51 37.8**	**-3.9**
AQDB	**Aquidauana**	**11.36**	**72**	*e*P	**Pn**	**14 51 39.3**	**-2.5**
PTLB	**Pontes e Lacer**	**11.71**	**42**	*e*P	**Pn**	**14 51 44.1**	**-2.3**
MCR1	**Marechal Candi**	**12.02**	**93**	*e*P	**Pn**	**14 51 48.2**	**-2.1**
VILB	**Vilhena**	**13.19**	**32**	*e*P	**Pn**	**14 52 04.2**	**-1.3**
PP1B	**Ponte de Pedra**	**13.37**	**62**	*e*P	**Pn**	**14 52 04.8**	**-2.9**
TRCB	**Terra Rica**	**13.48**	**86**	*e*P	**Pn**	**14 52 07.0**	**-2.0**
CPSB	**Cacapava Do Su**	**13.62**	**119**	*e*P	**Pn**	**14 52 09.7**	**-1.1**
SALV	**Santo Antonio**	**13.74**	**54**	*e*P	**Pn**	**14 52 09.9**	**-2.5**
PTGB	**Pitanga**	**13.80**	**94**	*e*P	**Pn**	**14 52 10.9**	**-2.3**
ITAB	**Concordia**	**13.89**	**105**	*e*P	**Pn**	**14 52 12.2**	**-2.0**
PLTB	**Pedras Altas**	**14.08**	**124**	*e*P	**Pn**	**14 52 13.3**	**-3.2**
C2SB	**Chapadao do Su**	**14.51**	**70**	*e*P	**Pn**	**14 52 20.4**	**-1.6**
ETMB	**Extrema**	**14.54**	**4**	*e*P	**Pn**	**14 52 20.0**	**-2.4**
NBRS	**Nobres**	**14.73**	**49**	*e*P	**Pn**	**14 52 23.1**	**-1.7**
PCMB	**Pacaembu**	**14.97**	**82**	*e*P	**Pn**	**14 52 25.0**	**-2.7**
NNA	**Nana**	**15.35**	**322**	P	**P**	**14 52 34.7**	**+1.2**
	comp=E,5.2nm,0.3s,baz=145,slow=8.9,SNR=4.9						
NNA				S	**Sn**	**14 55 20.3**	**-3.3**
	comp=E,9.4nm,0.6s,baz=231,slow=15,SNR=2.1						
NNA	**Nana**	**15.35**	**322**	*ce*P	**P**	**14 52 36.4**	**+2.9**
NNA				pmax	pmax		
	comp=Z,109nm,1.7s						
CNLB	**Canela**	**15.41**	**112**	*e*P	**Pn**	**14 52 30.9**	**-2.1**
SAML	**Samuel**	**15.85**	**15**	P	**Pn**	**14 52 36.2**	**-2.3**
SAML				IAmb	IAmb	14 52 38.8	
	comp=Z,233nm,1.4s						
SAML	**Samuel**	**15.85**	**15**	P	**Pn**	**14 52 36.3**	**-2.3**
SAML				pmax	pmax		
	comp=Z,233nm,1.4s						
DVLD	**Doverlandia**	**16.08**	**64**	*e*P	**Pn**	**14 52 39.3**	**-2.0**
PDRB	**Porto dos Gac**	**16.16**	**40**	*e*P	**Pn**	**14 52 40.2**	**-2.2**
FRTB	**Fartura**	**16.20**	**90**	*e*P	**Pn**	**14 52 41.2**	**-1.6**
ITRB	**Iturama**	**16.32**	**77**	*e*P	**P**	**14 52 42.2**	**-2.0**
PLCA	**Paso Flores**	**16.52**	**189**	P	**Pn**	**14 52 46.9**	**+0.4**
	comp=Z,52nm,0.8s,baz=12,slow=12,SNR=124						
PLCA				PcP	**PcP**	**14 57 27.4**	**-0.1**
	comp=Z,9.8nm,0.9s,baz=346,slow=4.2,SNR=3.3						
PLCA				ScP	**ScP**	**15 00 46.7**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=268,slow=5.0,SNR=3.5						
PLCA	**Paso Flores**	**16.52**	**189**	P	**Pn**	**14 52 46.5**	**0.0**
PLCA				IAmb	IAmb	14 52 55.9	
	comp=Z,143nm,0.8s						
PLCA	**Paso Flores**	**16.52**	**189**	*e*P	**P**	**14 52 45.3**	**-0.9**
TIJ01	**Guaruva-PR**	**16.57**	**97**	*e*P	**P**	**14 52 45.2**	**-1.8**
TER01	**Tubaro-SC**	**16.72**	**108**	*e*P	**P**	**14 52 47.2**	**-1.3**
ARAG	**Araguaiana, MT**	**16.86**	**62**	*e*P	**P**	**14 52 48.5**	**-1.7**
LL04	**Puerto Octay**	**17.02**	**194**	P	**P**	**14 52 51.8**	**+0.1**
LL04				IAmb	IAmb	14 52 53.2	
	comp=Z,138nm,0.8s						
LL03	**Petrohue**	**17.24**	**193**	P	**Pn**	**14 52 55.0**	**0.0**
CLDB	**Colider**	**17.30**	**41**	*e*P	**P**	**14 52 52.7**	**-2.3**
CZSB	**Cruzeiro do Su**	**17.39**	**342**	*e*P	**Pn**	**14 52 57.1**	**-0.1**
BB19B	**Bebedouro**	**17.57**	**83**	*e*P	**P**	**14 52 56.0**	**-2.0**
LL05	**Los Muermos**	**17.73**	**196**	P	**P**	**14 52 59.2**	**-0.3**
SPB	**Sao Paulo**	**18.11**	**91**	*e*P	**P**	**14 53 02.6**	**-1.2**
PET01	**Itanhaem-SP**	**18.18**	**94**	*e*P	**P**	**14 53 03.2**	**-1.4**
RCLB	**Rio Claro- Sao**	**18.19**	**88**	*e*P	**P**	**14 53 03.1**	**-1.6**
LL01	**San Ignacio de**	**18.43**	**192**	P	**P**	**14 53 07.5**	**+0.4**
VAO	**Valinhos**	**18.61**	**90**	*e*P	**P**	**14 53 07.7**	**-1.7**
IPMB	**Ipameri, GO**	**18.84**	**74**	*e*P	**P**	**14 53 09.9**	**-1.9**
LL07	**Hotel Espejo d**	**19.09**	**194**	P	**P**	**14 53 14.6**	**+0.4**
LL02	**Futaleuf**	**19.12**	**190**	P	**P**	**14 53 14.5**	**-0.1**
GO07	**Milladeo Hill,**	**19.40**	**194**	P	**P**	**14 53 17.6**	**+0.1**
SNDB	**Serra Nova Dou**	**19.52**	**54**	*e*P	**P**	**14 53 17.0**	**-2.2**
PARB	**Paraibuna**	**19.79**	**91**	*e*P	**P**	**14 53 20.4**	**-1.7**
BDFB	**Brasilia**	**20.03**	**68**	P	**P**	**14 53 23.5**	**-1.2**
	comp=Z,392nm,1.0s,baz=241,slow=11,SNR=197						
SLP01	**Ubatuba-SP**	**20.22**	**91**	*e*P	**P**	**14 53 23.8**	**-2.9**
ATAH	**Atahualpa**	**20.23**	**326**	P	Pn	14 53 29.6	-1.5
	comp=Z,14nm,0.9s,baz=171,slow=8.9,SNR=10						
ATAH				ScP	**ScP**	**15 00 57.4**	**+1.4**
	comp=Z,6.3nm,0.9s,baz=80,slow=12,SNR=2.8						
	comp=Z,14nm,0.9s						
TBTG	**Tabatinga, AM**	**20.27**	**352**	*e*P	**P**	**14 53 27.5**	**+0.4**
TBTG	**Tabatinga, AM**	**20.27**	**352**	*e*P	**P**	**14 53 28.5**	**+1.3**
AY01	**Puyuhuapi**	**20.45**	**191**	P	**P**	**14 53 28.7**	**-0.1**
AY01				IAmb	IAmb	14 53 30.9	
	comp=Z,180nm,0.9s						
BSCB	**Bom Sucesso**	**20.99**	**85**	*e*P	**P**	**14 53 33.2**	**-1.8**
MAN01	**Angra dos Reis**	**21.37**	**91**	*e*P	**P**	**14 53 37.1**	**-1.9**
COYC	**Coyhaique**	**21.48**	**189**	P	**P**	**14 53 39.5**	**-0.3**
COYC				IAmb	IAmb	14 53 43.6	
	comp=Z,227nm,1.2s						
PEXB	**Peixe**	**21.71**	**59**	*e*P	**P**	**14 53 40.2**	**-2.4**
VAS01	**Vassouras-RJ**	**21.94**	**89**	*e*P	**P**	**14 53 43.5**	**-1.4**
MACA	**Manacapuru-AM**	**22.05**	**18**	*e*P	**P**	**14 53 43.5**	**-2.4**
DIAM	**Diamantina, MG**	**22.75**	**79**	*e*P	**P**	**14 53 50.6**	**-2.2**
ITTB	**Itaituba**	**22.79**	**31**	*e*P	**P**	**14 53 50.6**	**-2.5**
DUB01	**Friburgo-RJ**	**22.95**	**89**	*e*P	**P**	**14 53 52.8**	**-1.7**
JANB	**Januaria**	**23.46**	**71**	*e*P	**P**	**14 53 56.8**	**-2.4**
CAM01	**Campos-RJ**	**23.65**	**89**	*e*P	**P**	**14 53 59.2**	**-1.6**
SDBA	**SAO DESIDERIO**	**24.27**	**65**	*e*P	**P**	**14 54 04.5**	**-2.1**
SMTB	**Santa Maria do**	**24.30**	**54**	*e*P	**P**	**14 54 05.0**	**-1.9**
PRPB	**Parauapebas**	**24.66**	**45**	*e*P	**P**	**14 54 07.0**	**-3.1**
ALF01	**Guarapari-ES**	**24.76**	**87**	*e*P	**P**	**14 54 09.0**	**-1.9**
SJMB	**Sao Joao De Ma**	**24.86**	**82**	*e*P	**P**	**14 54 09.9**	**-2.0**
BSFB	**Barra de Sao F**	**25.13**	**82**	*e*P	**P**	**14 54 12.2**	**-2.0**
RIB01	**Linhares ES**	**25.40**	**84**	*e*P	**P**	**14 54 14.7**	**-2.0**
MALB	**Monte Alegre**	**25.69**	**31**	*e*P	**P**	**14 54 16.8**	**-2.5**
GUA01	**Guaratinga, BA**	**26.81**	**78**	*e*P	**P**	**14 54 27.6**	**-1.8**
OTAV	**Otavalo**	**26.81**	**334**	*e*P	**P**	**14 54 30.5**	**+0.6**
GO09	**Cerro Castillo**	**27.11**	**187**	P	**P**	**14 54 31.8**	**+0.1**
GO09				IAmb	IAmb	14 54 33.4	
	comp=Z,57nm,0.8s						
BOAV	**Boa Vista**	**27.43**	**15**	*e*P	**P**	**14 54 34.1**	**-0.8**
CMC01	**Camacan, BA**	**27.52**	**76**	*e*P	**P**	**14 54 33.6**	**-2.2**
MG05	**Puerto Natales**	**27.53**	**187**	P	**P**	**14 54 35.3**	**-0.1**
GARC	**Garzon, Huila**	**27.63**	**342**	*e*P	**P**	**14 54 35.8**	**-1.2**
SOTA	**Rioblanco**	**27.91**	**340**	*e*P	**P**	**14 54 45.4**	**+5.6**
PCON	**Cinco Dias**	**28.03**	**340**	*e*P	**P**	**14 54 38.6**	**-2.2**
EFI	**East Falkland**	**28.12**	**168**	P	**P**	**14 54 39.8**	**-0.8**
EFI				IAmb	IAmb	14 54 41.4	
	comp=Z,94nm,1.1s						
EFI	**East Falkland**	**28.12**	**168**	*ce*P	**P**	**14 54 39.1**	**-1.5**
EFI				pmax	pmax		
	comp=Z,138nm,1.7s						
EFI	**East Falkland**	**28.12**	**168**	P	**P**	**14 54 40.5**	**-0.1**
EFI				sP	**pP**	**14 55 21.6**	**+5.8**
EFI				PP	**PnPn**	**14 55 36.8**	**-1.0**
GDU01	**Guandu, BA**	**28.16**	**73**	*e*P	**P**	**14 54 38.7**	**-2.8**
MG02	**Cerro Sombrero**	**28.37**	**183**	P	**P**	**14 54 43.5**	**+0.7**
MARP	**Paez Belalcaza**	**28.38**	**341**	*e*P	**P**	**14 54 47.3**	**+3.6**
MG04	**Isla Riesco**	**28.60**	**186**	P	**P**	**14 54 45.5**	**+0.7**
TMAB	**Tom-Au,PA,Br**	**28.66**	**43**	*e*P	**P**	**14 54 43.8**	**-2.1**
PRAC	**Prado**	**28.93**	**344**	*e*P	**P**	**14 54 49.2**	**+0.9**
NBPN	**Ponto Novo - B**	**29.00**	**67**	*e*P	**P**	**14 54 46.9**	**-2.1**
VILC	**Villavicencio,**	**29.04**	**347**	*e*P	**P**	**14 54 48.2**	**-1.1**
ORTC	**Ortega, Tolima**	**29.21**	**343**	*e*P	**P**	**14 54 53.0**	**+2.3**
GR1C	**Gorgona, Isla**	**29.25**	**337**	*e*P	**P**	**14 54 52.1**	**+1.1**
MG03	**Isla Dawson**	**29.50**	**184**	P	**P**	**14 54 53.2**	**+0.4**
DSPA	**Despedida**	**29.52**	**181**	P	**P**	**14 54 52.6**	**-0.3**
CHIC	**Chingaza**	**29.55**	**347**	*e*P	**P**	**14 54 53.0**	**-1.1**
YOTC	**Yotoco, Valle**	**29.58**	**341**	*e*P	**P**	**14 54 55.0**	**+0.8**
ROSC	**El Rosal**	**29.88**	**346**	P	**P**	**14 54 58.2**	**+1.2**
	comp=Z,10nm,0.5s,baz=104,slow=7.1,SNR=3.6						
ROSC				PcP	**PcP**	**14 57 56.6**	**+0.4**
	comp=Z,9.7nm,0.4s,baz=180,slow=4.0,SNR=3.7						
ROSC				LR	LR	15 09 05.3	
	comp=Z,341nm,18.6s,baz=210,slow=40						
	comp=Z,10nm,0.5s						
USHA	**Ushuaia**	**30.40**	**181**	P	**P**	**14 55 01.2**	**+0.5**
	comp=Z,17nm,0.5s,baz=11,slow=7.7,SNR=36						
USHA				PcP	**PcP**	**14 57 57.1**	**+0.7**
	comp=Z,6.6nm,0.8s,baz=354,slow=8.6,SNR=3.3						
	comp=Z,17nm,0.5s						
PLMC	**San Jos del P**	**30.44**	**342**	*e*P	**P**	**14 55 01.7**	**+0.1**
MG01	**Puerto William**	**30.49**	**180**	P	**P**	**14 55 01.2**	**-0.3**
RUSC	**La Rusia**	**30.65**	**349**	*e*P	**P**	**14 55 03.6**	**-0.3**
NORC	**Norcasia**	**30.71**	**345**	*e*P	**P**	**14 55 02.6**	**-1.3**
NBLA	**Lagarto - SE**	**30.97**	**70**	*e*P	**P**	**14 55 02.7**	**-3.6**
CBOC	**Ciudad Bolivar**	**31.28**	**343**	*e*P	**P**	**14 55 08.4**	**-0.7**
BARC	**Barichara**	**31.35**	**349**	⇓*e*P	**P**	**14 55 08.4**	**-1.4**
HELC	**Santa Helena**	**31.47**	**344**	*e*P	**P**	**14 55 10.3**	**-0.7**
PTBC	**PUERTO BERRIO,**	**31.56**	**346**	*e*P	**P**	**14 55 09.4**	**-2.0**
NBPS	**Pedro II - PI**	**31.81**	**55**	*e*P	**P**	**14 55 11.1**	**-2.6**
NBMA	**Muriti-CE**	**32.09**	**63**	*e*P	**P**	**14 55 13.8**	**-2.3**
DBBC	**Dabeiba**	**32.44**	**343**	*e*P	**P**	**14 55 19.0**	**-0.2**
NBPB	**Pedra_Branca-C**	**32.51**	**59**	*e*P	**P**	**14 55 17.7**	**-2.1**
ZARC	**Zaragoza, Cauc**	**32.57**	**346**	P	**P**	**14 55 18.5**	**-1.7**
ZARC	**Zaragoza, Cauc**	**32.57**	**346**	*e*P	**P**	**14 55 19.0**	**-1.2**
MDP	**Montagnes des**	**32.59**	**28**	P	**P**	**14 55 18.9**	**-1.5**
	comp=Z,32nm,0.4s,baz=202,slow=11,SNR=50						
	comp=Z,32nm,0.4s						
MPGF	**Montagnes des**	**32.60**	**28**	P	**P**	**14 55 19.0**	**-1.4**
NBAN	**Anadia - AL**	**32.92**	**69**	*e*P	**P**	**14 55 20.2**	**-3.1**
UREC	**San Jos de Ur**	**32.97**	**345**	*e*P	**P**	**14 55 24.7**	**+1.0**
BAUV	**El Baul**	**33.16**	**359**	P	**P**	**14 55 24.0**	**-1.3**
BAUV				IAmb	IAmb	14 55 25.4	
	comp=Z,66nm,0.7s						
SDV	**Santo Domingo**	**33.26**	**354**	P	**P**	**14 55 25.2**	**-1.2**
	comp=Z,28nm,0.8s,baz=219,slow=4.7,SNR=12						
SDV				ScP	**ScP**	**15 01 34.0**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=227,slow=1.7,SNR=3.6						
SDV				LR	LR	15 10 11.5	
	comp=Z,307nm,19.0s,baz=216,slow=38						
	comp=Z,28nm,0.8s						
SDV	**Santo Domingo**	**33.26**	**354**	P	**P**	**14 55 25.1**	**-1.2**
SDV				IAmb	IAmb	14 55 34.0	
	comp=Z,38nm,0.6s						
SDV	**Santo Domingo**	**33.26**	**354**	*e*P	**P**	**14 55 28.6**	**+2.2**
SDV	**Santo Domingo**	**33.26**	**354**	*e*P	**P**	**14 55 25.7**	**-0.7**
SDV	**Santo Domingo**	**33.26**	**354**	P	**P**	**14 55 25.7**	**-0.7**
NBMO	**Morrinhos-CE**	**33.57**	**56**	*e*P	**P**	**14 55 26.8**	**-2.2**
NBCA	**Caruaru-PE**	**33.88**	**67**	*e*P	**P**	**14 55 29.3**	**-2.4**
NBRF	**Rio Formoso -**	**34.40**	**68**	*e*P	**P**	**14 55 32.6**	**-3.5**
LL6C	**La Loma 6 Bece**	**34.44**	**349**	*e*P	**P**	**14 55 33.4**	**-3.0**
SJCC	**San Jacinto, C**	**34.97**	**346**	P	**P**	**14 55 39.8**	**-1.2**
SJCC				IAmb	IAmb	14 55 40.7	
	comp=Z,49nm,0.8s						
RCBR	**Riachuelo**	**35.29**	**64**	P	**P**	**14 55 40.9**	**-2.9**
RCBR				IAmb	IAmb	14 55 44.3	
	comp=Z,81nm,1.1s						
RCBR	**Riachuelo**	**35.29**	**64**	P	**P**	**14 55 40.9**	**-2.9**
RCBR				pmax	pmax		
	comp=Z,81nm,1.1s						
RCBR	**Riachuelo**	**35.29**	**64**	*e*P	**P**	**14 55 41.5**	**-2.3**
RCBR	**Riachuelo**	**35.29**	**64**	P	**P**	**14 55 42.9**	**-0.9**
RCBR				pP	pP	14 56 10.8	-8.5
RCBR				pwP	sP	14 56 18.0	-20
RCBR				sP	PP	14 56 23.6	-44
SMRC	**Santa Marta, M**	**36.01**	**348**	*e*P	**P**	**14 55 46.8**	**-2.9**
RIOS	**Rincon, Osa**	**36.54**	**332**	P	**P**	**14 55 55.3**	**+1.0**
RIOS				IAmb	IAmb	14 55 58.0	
	comp=Z,86nm,0.9s						
HOPE	**Hope Point**	**37.60**	**151**	*i* P	**P**	**14 56 00.0**	**-2.8**
JTS	**Las Juntas de**	**38.59**	**331**	*i* P	**P**	**14 56 12.8**	**+1.3**
JTS				pmax	pmax		
	comp=Z,27nm,1.1s						
JTS	**Las Juntas de**	**38.59**	**331**	P	**P**	**14 56 14.2**	**+2.7**
JTS				x	x	14 56 21.0	
JTS				pP	pP	14 56 39.4	-8.4

JTS				sP	sP	14 56 50.5	-16
FDF	Fort de France	39.35	9	P	P	14 56 16.9	-1.0
PMSA	Palmer Station	40.42	178	P	P	14 56 26.5	+0.4
	comp=Z,22nm,0.8s,baz=30,slow=9.9,SNR=18						
PMSA				PcP	PcP	14 58 26.3	+0.6
	comp=Z,3.1nm,0.5s,baz=270,slow=1.0,SNR=1.0						
	comp=Z,22nm,0.8s						
PMSA	Palmer Station	40.42	178	IAmb	IAmb	14 56 29.5	
	comp=Z,70nm,1.3s						
PMSA	Palmer Station	40.42	178	*e*P	P	14 56 26.7	+0.7
PMSA	Palmer Station	40.42	178	P	P	14 56 26.5	+0.4
PMSA				pP	pP	14 56 52.5	-10
MATN	Matagalpa	41.36	332	P	P	14 56 35.5	+1.0
MLPR	Magueyes Islan	42.12	0	P	P	14 56 38.7	-1.8
MLPR				IAmb	IAmb	14 56 40.9	
	comp=Z,55nm,0.5s						
CRPR	Cabo Rojo, PR	42.16	0	P	P	14 56 38.9	-1.8
CRPR				IAmb	IAmb	14 56 39.9	
	comp=Z,46nm,0.7s						
SJG	San Juan	42.27	2	P	P	14 56 39.7	-2.0
	comp=Z,52nm,0.7s,baz=147,slow=5.3,SNR=13						
	comp=Z,52nm,0.7s						
SJG	San Juan	42.27	2	P	P	14 56 40.0	-1.7
SJG				IAmb	IAmb	14 56 40.5	
	comp=Z,50nm,0.7s						
SJG	San Juan	42.27	2	P	P	14 56 40.0	-1.7
SJG				pmax	pmax		
	comp=Z,50nm,0.7s						
SJG	San Juan	42.27	2	P	P	14 56 40.0	-1.7
BANI	BANI	42.65	356	P	P	14 56 44.5	-0.4
DR12	Loma Pena Alta	42.98	357	P	P	14 56 45.2	-2.3
SDDR	Presa de Saban	43.31	354	P	P	14 56 50.6	+0.5
SMAI	San Martin Ant	43.73	180	P	P	14 56 53.5	+0.6
MTO3	Montecristo	44.21	328	P	P	14 56 58.0	+0.4
CMIG	Matias Romero	49.29	324	P	P	14 57 37.6	+0.9
	comp=Z,12nm,0.9s,baz=116,slow=5.2,SNR=19						
	comp=Z,12nm,0.9s						
SOR	Soroa	49.36	341	P	P	14 57 37.4	+0.2
SOR				IAmb	IAmb	14 57 38.7	
	comp=Z,49nm,0.9s						
SOR	Soroa	49.36	341	P	P	14 57 37.4	+0.2
SOR				pmax	pmax		
	comp=Z,49nm,0.9s						
DWPF	Disney Wildern	53.98	344	P	P	14 58 11.4	+0.1
	baz=164						
BELA	Belgrano 2	55.67	172	P	P	14 58 23.1	+0.2
553A	Crawfordville	56.74	342	P	P	14 58 31.5	+0.5
VNA3	Neumayer Olymp	56.84	161	P	P	14 58 31.9	+0.6
VNA3	Neumayer Olymp	56.84	161	PcP	PcP	14 59 25.4	+0.4
VNA1	Neumayer--Stat	57.04	160	P	P	14 58 33.4	+0.7
VNA1	Neumayer--Stat	57.04	160	PcP	PcP	14 59 26.3	+0.6
TIGA	Tifton	57.70	343	P	P	14 58 39.7	+2.0
	baz=162						
352A	Blakely	58.09	342	P	P	14 58 40.6	+0.1
	baz=161,SNR=7.8						
BRAL	Brewton	58.43	340	P	P	14 58 43.2	+0.4
	baz=158						
NHSC	New Hope	58.51	347	P	P	14 58 43.3	0.0
	baz=166						
154A	Montrose	58.69	344	P	P	14 58 45.0	+0.4
	baz=163						
250A	Grady	58.95	341	P	P	14 58 46.3	-0.1
	baz=160						
Y60A	Bolivia	59.02	349	P	P	14 58 47.3	+0.4
Y60A	Bolivia	59.02	349	P	P	14 58 47.9	+1.0
	baz=168						
Y60A				P	P	14 58 47.9	+1.0
	baz=168						
SNAA	Sanae	59.04	161	P	P	14 58 47.1	+0.5
SNAA	Sanae	59.04	161	PcP	PcP	14 59 34.2	+0.4
SNAA	Sanae	59.04	161	P	P	14 58 46.9	+0.2
	comp=Z,36nm,0.8s,baz=283,slow=8.0,SNR=95						
SNAA				PcP	PcP	14 59 34.2	+0.4
	comp=Z,11nm,0.5s,baz=251,slow=6.1,SNR=9.3						
	comp=Z,36nm,0.8s						
SNAA	Sanae	59.04	161	P	P	14 58 47.1	+0.5
SNAA	Sanae	59.04	161	P	P	14 58 47.1	+0.5
SNAA				pmax	pmax		
	comp=Z,154nm,1.5s						
HAW	Hawthorne Fire	59.06	346	P	P	14 58 47.8	+0.7
	baz=164,SNR=9.9						
152A	Waverly Hall	59.16	343	P	P	14 58 47.7	-0.2
	baz=161,SNR=9.4						
Y58A	Scranton	59.19	348	P	P	14 58 49.4	+1.4
	baz=166						
Y58A				P	P	14 58 49.4	+1.4
	baz=166						
346A	Big Creek Wild	59.42	338	P	P	14 58 50.1	+0.4
	baz=156						
GOGA	Godfrey	59.54	344	P	P	14 58 50.6	+0.2
	baz=163,SNR=6.4						
GOGA	Godfrey	59.54	344	P	P	14 58 50.1	-0.3
	baz=163,SNR=6.4						
X58A	Rowland	59.76	348	P	P	14 58 52.9	+1.1
X58A	Rowland	59.76	348	P	P	14 58 52.3	+0.4
	baz=167,SNR=6.4						
X58A				P	P	14 58 52.3	+0.4
	baz=167,SNR=6.4						
JSC	Jenkinsville	59.87	347	P	P	14 58 52.8	+0.1
JSC				IAmb	IAmb	14 58 54.2	
	comp=Z,51nm,0.8s						
JSC	Jenkinsville	59.87	347	P	P	14 58 52.8	+0.1
JSC				pmax	pmax		
	comp=Z,51nm,0.8s						
JSC	Jenkinsville	59.87	347	P	P	14 58 53.1	+0.4
	baz=165,SNR=6.6						
Z51A	Franklin	59.90	343	P	P	14 58 53.0	+0.1
	baz=161						
344A	Westbrook Farm	59.92	337	P	P	14 58 54.0	+0.9
	baz=155						
HODGE	Hodges	60.04	346	P	P	14 58 54.2	+0.4
	baz=164,SNR=7.0						
BIRD	Birdtown, Kers	60.06	347	P	P	14 58 54.4	+0.5
	baz=166,SNR=12						
Y52A	Lilburn	60.12	344	P	P	14 58 54.5	+0.1
	baz=162,SNR=7.1						
Y52A				P	P	14 58 54.5	+0.1
	baz=162,SNR=7.1						
LRAL	Lakeview Retre	60.15	341	P	P	14 58 54.2	-0.4
	baz=159,SNR=7.4						
LRAL	Lakeview Retre	60.15	341	P	P	14 58 54.2	-0.4
	baz=159,SNR=7.4						
CNNC	Cliffs of the	60.18	350	P	P	14 58 54.8	+0.1
	baz=168						
342B	Flagon Creek P	60.44	335	P	P	14 58 58.4	+1.8
	baz=153						
W57A	Gilead	60.46	348	P	P	14 58 57.1	+0.5
W57A				IAmb	IAmb	14 58 58.1	
	comp=Z,47nm,0.8s						
W57A	Gilead	60.46	348	P	P	14 58 57.1	+0.5
	baz=166,SNR=11						
W57A				P	P	14 58 57.1	+0.5
	baz=166,SNR=11						
PAULI	Pauline	60.51	346	P	P	14 58 57.3	+0.3
	baz=164						
VBMS	Vicksburg	60.54	337	P	P	14 58 57.3	0.0
	baz=155						
735A	Kenedy	60.58	329	P	P	14 58 58.7	+1.1
	baz=148						
HKT	Hockley	60.62	332	*i* P	P	14 58 58.8	+1.0
HKT				pmax	pmax		
	comp=Z,25nm,1.1s						
HKT	Hockley	60.62	332	P	P	14 58 59.2	+1.4
	baz=150						
HKT	Hockley	60.62	332	P	P	14 58 58.9	+1.1
KMSC	Kings Mountain	60.72	347	P	P	14 58 58.9	+0.5
	baz=165,SNR=8.1						
KMSC	Kings Mountain	60.72	347	P	P	14 58 58.9	+0.5
	baz=165,SNR=8.1						
Y49A	Blount Mountai	60.75	342	P	P	14 58 57.4	-1.2
	baz=160,SNR=6.1						
TROLL	Troll, Antarti	60.75	160	P	P	14 58 59.2	+0.8
833A	Chaparral WMA,	60.89	328	P	P	14 59 00.3	+0.6
833A	Chaparral WMA,	60.89	328	P	P	14 59 00.4	+0.7
	baz=146,SNR=31						
833A	Chaparral WMA,	60.89	328	P	P	14 59 00.8	+1.1
	baz=146,SNR=31						
V58A	Windy Hill, Pi	60.92	349	P	P	14 59 00.2	+0.4
	baz=167						
V58A				P	P	14 59 00.2	+0.4
	baz=167						
CASEE	Lake Jocassee	60.92	345	P	P	14 59 00.5	+0.7
	baz=163,SNR=9.9						
X51A	Calhoun	60.99	343	P	P	14 59 00.3	0.0
	baz=161,SNR=14						
X51A				P	P	14 59 00.3	0.0
	baz=161,SNR=14						
FPAL	Fort Paine	61.17	343	P	P	14 59 01.2	-0.4
FPAL				IAmb	IAmb	14 59 02.4	
	comp=Z,42nm,1.1s						
U59A	Littleton	61.25	350	P	P	14 59 02.4	+0.4
	baz=169						
U59A				P	P	14 59 02.4	+0.4
	baz=169						
W52A	Murphy	61.26	344	P	P	14 59 02.0	-0.1
W52A				IAmb	IAmb	14 59 03.4	
	comp=Z,30nm,0.9s						
W52A	Murphy	61.26	344	P	P	14 59 02.4	+0.3
	baz=162,SNR=6.6						
V55A	Taylorsville	61.38	347	P	P	14 59 03.3	+0.4
	baz=165,SNR=13						
V55A				P	P	14 59 03.3	+0.4
	baz=165,SNR=13						
X48A	Hartselle	61.49	341	P	P	14 59 03.6	+0.1
X48A	Hartselle	61.49	341	P	P	14 59 03.7	+0.1
	baz=159,SNR=17						
V53A	Saluda	61.54	346	P	P	14 59 03.7	-0.3
V53A				IAmb	IAmb	14 59 05.3	
	comp=Z,24nm,0.8s						
V53A	Saluda	61.54	346	P	P	14 59 04.4	+0.3
	baz=164,SNR=7.5						
V53A				P	P	14 59 04.4	+0.3
	baz=164,SNR=7.5						
U56A	King	61.69	348	P	P	14 59 05.5	+0.5
U56A				IAmb	IAmb	14 59 06.9	
	comp=Z,48nm,1.1s						
U56A	King	61.69	348	P	P	14 59 05.3	+0.3
	baz=166,SNR=5.2						
U56A				P	P	14 59 05.3	+0.3
	baz=166,SNR=5.2						
NATX	Nacogdoches	61.70	334	P	P	14 59 06.8	+1.7
	baz=151						
NATX	Nacogdoches	61.70	334	P	P	14 59 06.2	+1.1
	baz=151						
W50A	Signal Mountai	61.71	343	P	P	14 59 05.2	+0.1
W50A				IAmb	IAmb	14 59 06.3	
	comp=Z,57nm,1.0s						
W50A	Signal Mountai	61.71	343	P	P	14 59 05.3	+0.1
	baz=161,SNR=14						
CPCT	Cooper Cave	61.74	344	P	P	14 59 05.3	-0.1
CPCT				IAmb	IAmb	14 59 06.4	
	comp=Z,31nm,0.9s						
TKL	Tuckaleechee C	61.76	345	P	P	14 59 05.1	-0.4
	comp=Z,31nm,1.0s,baz=163,slow=9.1,SNR=20						
	comp=Z,31nm,1.0s						
TKL	Tuckaleechee C	61.76	345	P	P	14 59 05.3	-0.1
	baz=163,SNR=8.6						
T59A	Double "B" Far	61.82	351	P	P	14 59 06.3	+0.5
	baz=169						
T59A				P	P	14 59 06.3	+0.5
	baz=169						
V52A	Sevierville	61.89	345	P	P	14 59 06.2	-0.1
	baz=163,SNR=7.1						
SWET	Sewanee	61.89	343	P	P	14 59 06.0	-0.3
V51A	Loudon	62.04	344	P	P	14 59 07.1	-0.1
	baz=162						
435B	Jarrell	62.11	331	P	P	14 59 08.3	+0.4
	baz=148						
T57A	Hurt	62.12	349	P	P	14 59 08.5	+0.7
	baz=167						
T57A				P	P	14 59 08.5	+0.7
	baz=167						
U54A	Nelsons Funny	62.15	347	P	P	14 59 08.0	-0.1
U54A	Nelsons Funny	62.15	347	P	P	14 59 08.3	+0.2
	baz=165,SNR=10						
U54A				P	P	14 59 08.3	+0.2
	baz=165,SNR=10						
OXF	Oxford	62.27	339	P	P	14 59 08.5	-0.3
OXF				IAmb	IAmb	14 59 09.1	
	comp=Z,57nm,0.9s						
OXF	Oxford	62.27	339	P	P	14 59 08.5	-0.3
OXF				pmax	pmax		
	comp=Z,57nm,0.9s						
OXF	Oxford	62.27	339	P	P	14 59 08.2	-0.6
	baz=157						
OXF	Oxford	62.27	339	P	P	14 59 07.9	-0.8
	baz=157						
Z41A	Richland Creek	62.31	336	P	P	14 59 09.9	+0.8
	baz=153						
237A	Washetta, Mont	62.39	333	P	P	14 59 11.1	+1.4
237A	Washetta, Mont	62.39	333	P	P	14 59 10.5	+0.8
	baz=150						
BLA	Blacksburg	62.54	348	P	P	14 59 11.7	+1.1
	baz=166						
BLA	Blacksburg	62.54	348	P	P	14 59 10.9	+0.3
	baz=166						
TZTN	Tazewell	62.55	345	P	P	14 59 11.3	+0.6
	baz=163						
V48A	Smith Brothers	62.63	342	P	P	14 59 10.8	-0.4
V48A				IAmb	IAmb	14 59 12.2	
	comp=Z,59nm,1.1s						
V48A	Smith Brothers	62.63	342	P	P	14 59 11.2	0.0
	baz=160,SNR=13						
X43A	Marvell	62.76	338	P	P	14 59 13.4	+1.3
X43A	Marvell	62.76	338	P	P	14 59 14.4	+2.4
	baz=156						
WLAR	White Oak Lake	62.80	336	P	P	14 59 13.3	+1.0
JCT	Junction City	62.88	329	P	P	14 59 13.4	+0.3
JCT				IAmb	IAmb	14 59 14.9	
	comp=Z,48nm,0.9s						
JCT	Junction City	62.88	329	P	P	14 59 13.4	+0.3
JCT				pmax	pmax		
	comp=Z,48nm,0.9s						
JCT	Junction City	62.88	329	P	P	14 59 13.9	+0.9
	baz=146,SNR=15						
JCT	Junction City	62.88	329	P	P	14 59 13.7	+0.6
	baz=146,SNR=15						
CBN	Corbin Frederi	63.01	351	P	P	14 59 13.7	+0.1
	baz=169						
U49A	Red Boiling Sp	63.07	343	P	P	14 59 13.1	-1.0
	baz=161,SNR=6.4						
WHTX	Lake Whitney,	63.08	331	P	P	14 59 15.2	+0.9
	baz=149						
WHTX	Lake Whitney,	63.08	331	P	P	14 59 14.9	+0.6
	baz=149						
HPIG		63.10	322	P	P	14 59 16.1	+1.3
Z38A	Mt. Pleasant	63.15	334	P	P	14 59 16.1	+1.4
	baz=151						
S54A	Dingess, Beckl	63.28	348	P	P	14 59 15.5	0.0
	baz=165,SNR=9.7						
S54A				P	P	14 59 15.5	0.0
	baz=165,SNR=9.7						
WVT	Waverly	63.28	341	P	P	14 59 14.8	-0.7
WVT	Waverly	63.28	341	P	P	14 59 14.8	-0.7
WVT				pmax	pmax		
	comp=Z,82nm,1.1s						
WVT	Waverly	63.28	341	P	P	14 59 15.0	-0.5
	baz=159,SNR=25						
WVT	Waverly	63.28	341	P	P	14 59 15.0	-0.5
	baz=159						
WVT	Waverly	63.28	341	P	P	14 59 15.0	-0.5
WVT				x	x	14 59 51.5	
T50A	Nancy	63.31	344	P	P	14 59 14.7	-1.0
	baz=162						
T50A				P	P	14 59 14.7	-1.0
	baz=162						
X40A	Basin Creek Fa	63.42	336	P	P	14 59 16.2	-0.2
	baz=154						
R55A	Marlinton	63.52	349	P	P	14 59 17.6	+0.4
R55A				IAmb	IAmb	14 59 19.5	
	comp=Z,69nm,1.2s						
R55A	Marlinton	63.52	349	P	P	14 59 18.6	+1.5
	baz=167,SNR=7.3						
R55A				P	P	14 59 18.6	+1.5
	baz=167,SNR=7.3						
NVL	N'lazarevskaya	63.58	159	*e*P	P	14 59 16.7	-0.3
NVL				pmax	pmax		
	comp=Z,64nm,0.7s						
S51A	Beattyville	63.61	346	P	P	14 59 17.7	+0.1
	baz=163,SNR=5.5						
S51A				P	P	14 59 17.7	+0.1
	baz=163,SNR=5.5						
MIAR	Mount Ida	63.74	336	P	P	14 59 19.2	+0.6
MIAR				IAmb	IAmb	14 59 20.1	
	comp=Z,47nm,1.1s						
MIAR	Mount Ida	63.74	336	P	P	14 59 19.2	+0.6
MIAR				pmax	pmax		
	comp=Z,47nm,1.1s						
MIAR	Mount Ida	63.74	336	P	P	14 59 18.9	+0.4
	baz=153,SNR=20						
MIAR	Mount Ida	63.74	336	P	P	14 59 18.7	+0.1
	baz=153,SNR=20						
W41B	Gary Mavity, V	63.82	337	P	P	14 59 19.0	-0.1
W41B	Gary Mavity, V	63.82	337	P	P	14 59 19.2	+0.1
	baz=154,SNR=7.4						
W41B	Gary Mavity, V	63.82	337	P	P	14 59 19.0	-0.1
	baz=154,SNR=7.4						
T47A	Sharon Grove	63.88	342	P	P	14 59 18.9	-0.5
T47A	Sharon Grove	63.88	342	P	P	14 59 19.1	-0.3
	baz=160,SNR=16						
TX32	Lajitas Array	63.89	325	P	P	14 59 20.5	+0.8
TXAR	Lajitas Array	63.89	325	P	P	14 59 20.7	+0.9
	comp=Z,6.1nm,0.8s,baz=141,slow=8.1,SNR=28						
	comp=Z,6.1nm,0.8s						
TXAR	Lajitas Array	63.89	325	P	P	14 59 20.3	+0.5
TX31	Lajitas Ar. Si	63.89	325	P	P	14 59 21.1	+1.3
	baz=143						
R53A	Hurricane	63.92	347	P	P	14 59 19.6	0.0
	baz=165						
R53A				P	P	14 59 19.6	0.0
	baz=165						
HICK	Hickman	64.08	340	P	P	14 59 20.4	-0.3
Q56A	Snyder Ridge,	64.10	350	P	P	14 59 22.1	+1.3
	baz=168						
Q56A				P	P	14 59 22.1	+1.3
	baz=168						
Z35A	Perchaven, San	64.14	332	P	P	14 59 22.3	+1.1
	baz=149,SNR=7.9						
LCAR	Lake Charles	64.26	339	P	P	14 59 21.5	-0.4
LCAR	Lake Charles	64.26	339	P	P	14 59 21.8	-0.1
	baz=156,SNR=12						
Q54A	Coxs Mills	64.33	348	P	P	14 59 22.2	-0.1
Q54A				IAmb	IAmb	14 59 23.4	
	comp=Z,26nm,0.8s						
Q54A	Coxs Mills	64.33	348	P	P	14 59 22.8	+0.4
	baz=166,SNR=7.0						
Q54A				P	P	14 59 22.8	+0.4
	baz=166,SNR=7.0						
T45B	Paducah	64.34	341	P	P	14 59 22.5	+0.1
	baz=158						
T45A	Paducah	64.35	341	P	P	14 59 22.2	-0.2
P57A	Homestead Farm	64.35	351	P	P	14 59 23.7	+1.3
	baz=169,SNR=5.1						
P57A				P	P	14 59 23.7	+1.3
	baz=169,SNR=5.1						
R50A	Paris	64.39	345	P	P	14 59 22.2	-0.5
R50A	Paris	64.39	345	P	P	14 59 21.7	-1.0
	baz=162,SNR=5.4						
R50A				P	P	14 59 21.7	-1.0
	baz=162,SNR=5.4						
W39A	Magazine	64.40	336	P	P	14 59 23.9	+1.1
	baz=153,SNR=27						
W39A	Magazine	64.40	336	P	P	14 59 23.6	+0.8
	baz=153,SNR=27						
FCAR	Ozark Folk Cen	64.43	338	P	P	14 59 22.3	-0.7
X37A	Clayton	64.47	334		P	14 59 23.3	0.0
X37A				IAmb	IAmb	14 59 25.3	
	comp=Z,73nm,1.1s						
X37A	Clayton	64.47	334	P	P	14 59 24.2	+0.9
	baz=151,SNR=19						
Q52A	Bidwell	64.59	347	P	P	14 59 24.1	+0.2
	baz=165,SNR=5.9						
Q52A				P	P	14 59 24.1	+0.2
	baz=165,SNR=5.9						
ABTX	Abilene, Hawle	64.60	330	P	P	14 59 24.6	+0.4
ABTX				IAmb	IAmb	14 59 26.7	
	comp=Z,68nm,1.1s						
ABTX	Abilene, Hawle	64.60	330	P	P	14 59 24.9	+0.6
	baz=147,SNR=13						
ABTX	Abilene, Hawle	64.60	330	P	P	14 59 24.6	+0.4
	baz=147,SNR=13						
R49A	Shelbyville	64.60	344	P	P	14 59 23.6	-0.5
	baz=162,SNR=5.8						
R49A				P	P	14 59 23.6	-0.5
	baz=162,SNR=5.8						
PBMO	Poplar Bluff	64.67	340	P	P	14 59 24.1	-0.4
PBMO				IAmb	IAmb	14 59 25.6	
	comp=Z,61nm,1.1s						
PBMO	Poplar Bluff	64.67	340	P	P	14 59 24.5	-0.1
	baz=156,SNR=12						
MCWV	Mont Chateau	64.81	349	P	P	14 59 26.2	+0.8
	baz=167						
MCWV	Mont Chateau	64.81	349	P	P	14 59 26.0	+0.6
	baz=167						
Q51A	Peebles	64.88	346	P	P	14 59 25.5	-0.4
Q51A	Peebles	64.88	346	P	P	14 59 25.1	-0.7
	baz=164,SNR=6.2						
Q51A				P	P	14 59 25.1	-0.7
	baz=164,SNR=6.2						
P53A	Whipple	64.92	348	P	P	14 59 26.7	+0.5
	baz=166,SNR=15						
P53A				P	P	14 59 26.7	+0.5
	baz=166,SNR=15						
U40A	Yellville	65.10	337	P	P	14 59 27.4	0.0
U40A				IAmb	IAmb	14 59 28.6	
	comp=Z,38nm,0.9s						
U40A	Yellville	65.10	337	P	P	14 59 27.1	-0.3
	baz=154,SNR=24						
U40A				P	P	14 59 27.1	-0.3
	baz=154,SNR=24						
U40A	Yellville	65.10	337	P	P	14 59 27.2	-0.2
	baz=154,SNR=24						
S44A	Carbondale	65.15	341	P	P	14 59 27.2	-0.4
	baz=158,SNR=7.5						
P52A	Corning	65.21	347	P	P	14 59 27.6	-0.4
P52A				IAmb	IAmb	14 59 28.8	
	comp=Z,47nm,0.8s						
P52A	Corning	65.21	347	P	P	14 59 27.8	-0.2
	baz=165,SNR=10						
P51A	Williamsport	65.26	347	P	P	14 59 28.1	-0.2
	baz=164,SNR=6.6						
P51A				P	P	14 59 28.1	-0.2
	baz=164,SNR=6.6						
PAL	Palisades	65.37	354	P	P	14 59 29.0	0.0
	baz=173						
HHAR	Hobbs	65.42	336	P	P	14 59 29.7	+0.3
HHAR				IAmb	IAmb	14 59 30.8	
	comp=Z,51nm,1.0s						
HHAR	Hobbs	65.42	336	P	P	14 59 30.0	+0.5
	baz=153						
SSPA	Standing Stone	65.47	351	P	P	14 59 28.4	-1.2
	baz=169						
SSPA	Standing Stone	65.47	351	P	P	14 59 30.1	+0.5
X34A	Smith Ranch, M	65.48	333		P	14 59 30.3	+0.5
X34A				IAmb	IAmb	14 59 31.7	
	comp=Z,80nm,1.2s						
N58A	Sunbury	65.51	352	P	P	14 59 30.5	+0.6
N58A	Sunbury	65.51	352	P	P	14 59 30.8	+0.9
	baz=170						
N58A				P	P	14 59 30.8	+0.9
	baz=170						
O52A	Adamsville	65.62	348	P	P	14 59 30.5	-0.1
	baz=165,SNR=8.9						
O52A				P	P	14 59 30.5	-0.1
	baz=165,SNR=8.9						
O53A	New Philadelph	65.63	348	P	P	14 59 30.2	-0.5
	baz=166,SNR=5.3						
P49A	Miami Univ. Ec	65.67	345	P	P	14 59 30.5	-0.4
	baz=162,SNR=6.4						
P49A	Miami Univ. Ec	65.67	345	P	P	14 59 30.4	-0.6
	baz=162,SNR=6.4						
P48A	Milroy	65.77	345	P	P	14 59 30.3	-1.3
	baz=162						
P48A				P	P	14 59 30.3	-1.3
	baz=162						
FVM	French Village	65.78	340	P	P	14 59 31.6	0.0
	baz=157,SNR=21						
TUL1	Leonard	65.79	335		P	14 59 31.9	+0.1
TUL1				IAmb	IAmb	14 59 33.3	
	comp=Z,54nm,1.0s						
TUL1	Leonard	65.79	335	P	P	14 59 31.9	+0.1
	baz=151,SNR=7.8						
TUL1	Leonard	65.79	335	P	P	14 59 32.1	+0.3
	baz=151,SNR=7.8						
QSPA	South Pole Qui	65.80	180	P	P	14 59 32.7	+1.0
	baz=164,slow=3.8						
QSPA	South Pole Qui	65.80	180	P	P	14 59 32.2	+0.5
QSPA	South Pole Qui	65.80	180	⇓P	P	14 59 32.9	+1.2
QSPA				pP	PcP	15 00 03.6	+2.1
ACSO	Alum Creek Sta	65.96	347	P	P	14 59 32.4	-0.4
	baz=164,SNR=10						
ACSO	Alum Creek Sta	65.96	347	P	P	14 59 32.4	-0.4
	baz=164,SNR=10						
WMOK	Wichita Mounta	66.00	332	P	P	14 59 33.0	-0.2
	baz=148,SNR=6.8						
M57A	Sunshine Farm,	66.05	352	P	P	14 59 34.5	+1.1
	baz=170,SNR=6.0						
M57A				P	P	14 59 34.5	+1.1
	baz=170,SNR=6.0						
CCM	Cathedral Cave	66.10	339	P	P	14 59 33.5	-0.2
CCM				IAmb	IAmb	14 59 34.8	

	comp=Z,68nm,1.1s						
CCM	**Cathedral Cave**	66.10	339	P	P	14 59 33.5	-0.2
CCM				pmax	pmax		
	comp=Z,68nm,1.1s						
CCM	**Cathedral Cave**	66.10	339	P	P	14 59 33.7	-0.1
	baz=156,SNR=30						
CCM	**Cathedral Cave**	66.10	339	P	P	14 59 33.6	-0.1
	baz=156						
CCM	**Cathedral Cave**	66.10	339	⇓P	P	14 59 33.7	-0.1
CCM				pP	PcP	15 00 03.5	+0.7
KSPA	**Keystone Colle**	66.11	353	P	P	14 59 34.3	+0.6
KSPA				IAmb	IAmb	14 59 35.6	
	comp=Z,34nm,1.1s						
KSPA	**Keystone Colle**	66.11	353	P	P	14 59 34.8	+1.1
	baz=171,SNR=5.6						
NPNY	**Mohonk Preserv**	66.14	354	P	P	14 59 35.1	+1.3
	baz=173,SNR=5.1						
Q44A	**Meyer Farm, Va**	66.20	342	P	P	14 59 33.5	-0.9
	baz=158						
O49A	**Covington**	66.21	346	P	P	14 59 33.4	-1.0
O49A				IAmb	IAmb	14 59 35.0	
	comp=Z,56nm,0.9s						
O49A	**Covington**	66.21	346	P	P	14 59 33.4	-1.0
	baz=163,SNR=12						
O49A				P	P	14 59 33.4	-1.0
	baz=163,SNR=12						
P46A	**Rosedale**	66.37	343	P	P	14 59 34.8	-0.6
	baz=160,SNR=5.1						
M55A	**Ridgway**	66.41	351	P	P	14 59 35.7	+0.1
M55A				IAmb	IAmb	14 59 37.3	
	comp=Z,39nm,1.0s						
M55A	**Ridgway**	66.41	351	P	P	14 59 36.2	+0.5
	baz=168,SNR=10.0						
M55A				P	P	14 59 36.2	+0.5
	baz=168,SNR=10.0						
S39A	**Bolivar**	66.46	338	P	P	14 59 36.5	+0.4
	baz=154,SNR=64						
O48B	**Farmland**	66.47	345	P	P	14 59 35.5	-0.5
	baz=162,SNR=12						
O48B	**Farmland**	66.47	345	P	P	14 59 35.4	-0.6
	baz=162,SNR=12						
R40A	**Maddies Statio**	66.65	339	P	P	14 59 37.2	0.0
	baz=155,SNR=28						
L59A	**Walton**	66.66	354	P	P	14 59 38.4	+1.2
	baz=172,SNR=15						
L59A				P	P	14 59 38.4	+1.2
	baz=172,SNR=15						
MNTX	**Cornudas Mount**	66.66	325	P	P	14 59 37.6	+0.1
	baz=142,SNR=40						
MNTX	**Cornudas Mount**	66.66	325	P	P	14 59 37.6	+0.1
	baz=142,SNR=40						
M53A	**WI Miller and**	66.69	349	P	P	14 59 37.5	+0.1
	baz=166,SNR=6.7						
HRV	**Adam Dziewonsk**	66.70	357	P	P	14 59 37.4	0.0
	baz=175						
HRV	**Adam Dziewonsk**	66.70	357	P	P	14 59 38.3	+0.9
L61B	**Northampton**	66.71	356	P	P	14 59 38.0	+0.5
	baz=174						
BINY	**Binghamton**	66.76	353	P	P	14 59 38.7	+0.8
	baz=171,SNR=12						
BINY	**Binghamton**	66.76	353	P	P	14 59 38.9	+1.0
	baz=171,SNR=12						
ALLY	**Alegheny Colle**	66.80	350	P	P	14 59 38.7	+0.6
	baz=167						
N49A	**Columbus Grove**	66.88	346	P	P	14 59 38.5	-0.1
	baz=163,SNR=11						
N49A				P	P	14 59 38.5	-0.1
	baz=163,SNR=11						
L56A	**Greenwood**	66.89	352	P	P	14 59 39.1	+0.4
	baz=170,SNR=10						
L56A				P	P	14 59 39.1	+0.4
	baz=170,SNR=10						
T35B	**Sooner Cattle**	66.95	335	P	P	14 59 39.6	+0.5
	baz=151,SNR=15						
SFIN	**Lafayette**	67.06	344	P	P	14 59 38.6	-1.2
	baz=160,SNR=8.8						
SFIN	**Lafayette**	67.06	344	P	P	14 59 38.5	-1.3
	baz=160,SNR=8.8						
HCNY	**Howe Caverns**	67.09	354	P	P	14 59 41.4	+1.5
	baz=173						
M50A	**Fremont**	67.10	347	P	P	14 59 40.4	+0.4
	baz=164						
M50A				P	P	14 59 40.4	+0.4
	baz=164						
MSTX	**Muleshoe**	67.17	328	P	P	14 59 41.5	+0.7
	baz=145,SNR=59						
MSTX	**Muleshoe**	67.17	328	P	P	14 59 41.3	+0.6
	baz=145,SNR=59						
N47A	**Urbana**	67.18	345	P	P	14 59 39.7	-0.8
N47A				IAmb	IAmb	14 59 40.9	
	comp=Z,65nm,0.9s						
N47A	**Urbana**	67.18	345	P	P	14 59 40.0	-0.6
	baz=162,SNR=11						
N47A				P	P	14 59 40.0	-0.6
	baz=162,SNR=11						
ERPA	**Erie**	67.23	350	P	P	14 59 41.0	+0.2
	baz=167,SNR=8.2						
ERPA	**Erie**	67.23	350	P	P	14 59 41.3	+0.4
	baz=167,SNR=8.2						
WVNY	**West Valley, N**	67.30	351	P	P	14 59 42.1	+0.9
	baz=168,SNR=12						
K57A	**Scipio Center**	67.35	353	P	P	14 59 41.9	+0.3
K57A				IAmb	IAmb	14 59 43.0	
	comp=Z,54nm,1.1s						
K57A	**Scipio Center**	67.35	353	P	P	14 59 42.0	+0.5
	baz=171,SNR=6.8						
AMTX	**Amarillo**	67.41	330	P	P	14 59 42.9	+0.6
	baz=146,SNR=12						
AMTX	**Amarillo**	67.41	330	P	P	14 59 42.6	+0.4
	baz=146						
MMNY	**Mt. Morris Dam**	67.53	352	P	P	14 59 42.9	+0.3
MMNY				IAmb	IAmb	14 59 44.3	
	comp=Z,88nm,1.2s						
P40A	**Paris**	67.70	339	P	P	14 59 44.0	+0.2
P40A				IAmb	IAmb	14 59 44.9	
	comp=Z,65nm,1.1s						
P40A	**Paris**	67.70	339	P	P	14 59 43.9	0.0
	baz=155,SNR=25						
HSIG		67.74	319	P	P	14 59 45.9	+1.6
HSIG				IAmb	IAmb	14 59 47.4	
	comp=Z,77nm,1.2s						
LIC	**Lamto**	67.76	72	*e*P	P	14 59 43.5	-1.3
	comp=Z,31nm,0.7s						
HDIL	**Hopedale**	67.81	342	P	P	14 59 43.9	-0.6
	baz=158						
J58A	**Remsen**	67.84	354	P	P	14 59 45.3	+0.7
	baz=172						
J58A				P	P	14 59 45.3	+0.7
	baz=172						
J59A	**Piesco**	67.87	354	P	P	14 59 44.9	+0.1
J59A				IAmb	IAmb	14 59 46.8	
	comp=Z,54nm,0.9s						
J59A	**Piesco**	67.87	354	P	P	14 59 45.7	+0.9
	baz=173,SNR=19						
J59A				P	P	14 59 45.7	+0.9
	baz=173,SNR=19						
L48A	**N Adams**	67.91	346	P	P	14 59 44.7	-0.4
	baz=163,SNR=6.3						
L48A				P	P	14 59 44.7	-0.4
	baz=163,SNR=6.3						
J56A	**Wolcott**	67.93	352	P	P	14 59 45.6	+0.5
	baz=170,SNR=13						
J56A				P	P	14 59 45.6	+0.5
	baz=170,SNR=13						
J57A	**Williamstown**	67.96	353	P	P	14 59 45.5	+0.2
J57A				IAmb	IAmb	14 59 46.9	
	comp=Z,36nm,0.9s						
J57A	**Williamstown**	67.96	353	P	P	14 59 46.0	+0.7
	baz=171,SNR=8.8						
J57A				P	P	14 59 46.0	+0.7
	baz=171,SNR=8.8						
TIC	**Toumodi**	67.98	71	*e*P	P	14 59 44.4	-1.7
J55A	**Hilton**	68.04	352	P	P	14 59 45.7	-0.1
J55A				IAmb	IAmb	14 59 47.1	
	comp=Z,50nm,1.2s						
J55A	**Hilton**	68.04	352	P	P	14 59 45.5	-0.3
	baz=169,SNR=5.4						
J55A				P	P	14 59 45.5	-0.3
	baz=169,SNR=5.4						
KIC	**Kosan Boka**	68.08	72	*e*P	P	14 59 45.3	-1.5
	comp=Z,64nm,0.5s						
DBIC	**Dimbokro**	68.13	72	P	P	14 59 45.8	-1.3
	comp=Z,24nm,0.6s,baz=244,slow=6.4,SNR=48						
DBIC				PcP	PcP	15 00 12.6	+0.7
	comp=Z,7.3nm,0.5s,baz=263,slow=6.0,SNR=3.6						
	comp=Z,24nm,0.6s						
DBIC	**Dimbokro**	68.13	72	P	P	14 59 45.0	-2.0
DBIC				IAmb	IAmb	14 59 46.1	
	comp=Z,25nm,0.6s						
DBIC	**Dimbokro**	68.13	72	P	P	14 59 45.8	-1.3
DBIC				pP	PcP	15 00 12.8	+0.9
DBIC				sP	pP	15 00 22.7	-4.4
J54A	**Appleton**	68.16	351	P	P	14 59 47.2	+0.6
	baz=168						
J54A				P	P	14 59 47.2	+0.6
	baz=168						
M44A	**Midewin, Midew**	68.25	343	P	P	14 59 47.1	-0.1
	baz=159						
P38A	**Dawn**	68.27	338	P	P	14 59 47.1	-0.2
	baz=154,SNR=7.3						
K50A	**Casco**	68.34	348	P	P	14 59 47.1	-0.6
K50A	**Casco**	68.34	348	P	P	14 59 47.6	-0.1
	baz=165						
K50A				P	P	14 59 47.6	-0.1
	baz=165						
NCB	**Newcomb**	68.34	355	P	P	14 59 48.3	+0.5
	baz=173,SNR=5.2						
N41A	**Harden Midland**	68.41	341	P	P	14 59 47.6	-0.5
N41A				IAmb	IAmb	14 59 48.8	
	comp=Z,87nm,1.1s						
N41A	**Harden Midland**	68.41	341	P	P	14 59 48.0	-0.2
	baz=157,SNR=6.1						
WCNY	**West Carthage**	68.49	353	P	P	14 59 49.5	+0.9
	baz=172,SNR=9.8						
319A	**Douglas**	68.52	322	P	P	14 59 50.8	+1.5
319A				IAmb	IAmb	14 59 52.4	
	comp=Z,43nm,0.9s						
121A	**Cookes Peak, D**	68.58	324	P	P	14 59 51.4	+1.7
121A				IAmb	IAmb	14 59 53.1	
	comp=Z,67nm,1.1s						
121A	**Cookes Peak, D**	68.58	324	P	P	14 59 51.8	+2.1
	baz=140,SNR=24						
121A	**Cookes Peak, D**	68.58	324	P	P	14 59 51.8	+2.1
	baz=140,SNR=24						
PECO	**Prince Edward**	68.59	352	P	P	14 59 49.2	0.0
PECO				IAmb	IAmb	14 59 50.8	
	comp=Z,60nm,1.0s						
KSU1	**Kansas State U**	68.90	336	P	P	14 59 51.3	+0.1
	baz=151						
L44A	**Lake County Fo**	68.96	344	P	P	14 59 51.0	-0.5
	baz=160						
LONY	**Lake Ozonia**	69.02	354	P	P	14 59 52.4	+0.5
LONY	**Lake Ozonia**	69.02	354	P	P	14 59 52.4	+0.5
	baz=173,SNR=7.1						
R32A	**Long Quarter,**	69.12	334	P	P	14 59 53.2	+0.4
R32A	**Long Quarter,**	69.12	334	P	P	14 59 53.9	+1.2
	baz=149,SNR=15						
FRNY	**Flat Rock**	69.15	355	P	P	14 59 53.1	+0.5
	baz=174						
N38A	**Joes South For**	69.23	339	P	P	14 59 52.5	-0.8
	baz=154,SNR=6.8						
BNM	**Barren Site**	69.23	326	P	P	14 59 55.1	+1.3
BMNY	**Brushton-Moira**	69.23	354	P	P	14 59 54.0	+0.9
	baz=173,SNR=6.6						
J47A	**Sunmer**	69.23	346	P	P	14 59 53.0	-0.2
J47A				IAmb	IAmb	14 59 54.0	
	comp=Z,65nm,1.1s						
Y22A	**Socorro**	69.24	325	P	P	14 59 55.3	+1.6
	baz=141,SNR=9.6						
Y22D	**IRIS PASSCAL I**	69.32	325	P	P	14 59 56.2	+2.0
	baz=141						
G62A	**West of Eustis**	69.36	358	P	P	14 59 55.1	+1.1
	baz=176						
G62A				P	P	14 59 55.1	+1.1
	baz=176						
PKME	**Peaks-Kenny Pk**	69.36	358	P	P	14 59 54.3	+0.3
	baz=178						
LENM	**Lemitar**	69.42	326	P	P	14 59 56.4	+1.6
I49A	**Point Hope**	69.50	348	P	P	14 59 54.7	-0.1
	baz=165,SNR=5.4						
I49A				P	P	14 59 54.7	-0.1
	baz=165,SNR=5.4						
K43A	**Burlington**	69.56	344	P	P	14 59 54.9	-0.4
	baz=159,SNR=14						
L40A	**Anamosa**	69.76	341	P	P	14 59 56.3	-0.2
L40A	**Anamosa**	69.76	341	P	P	14 59 55.9	-0.6
	baz=156,SNR=20						
ANMO	**Albuquerque**	69.77	326	P	P	14 59 58.6	+1.7
	comp=Z,33nm,0.9s,baz=142,slow=7.7,SNR=64						
	comp=Z,33nm,0.9s						
ANMO	**Albuquerque**	69.77	326	P	P	14 59 58.5	+1.5
ANMO				IAmb	IAmb	14 59 59.9	
	comp=Z,49nm,1.0s						
ANMO	**Albuquerque**	69.77	326	P	P	14 59 58.8	+1.9
	baz=142,SNR=44						
ANMO	**Albuquerque**	69.77	326	P	P	14 59 58.7	+1.7
	baz=142						
ANMO	**Albuquerque**	69.77	326	P	P	14 59 58.9	+1.9
ANMO				x	x	15 00 22.7	
CBKS	**Cedar Bluff**	69.87	333	P	P	14 59 58.2	+0.9
CBKS	**Cedar Bluff**	69.87	333	P	P	14 59 58.2	+0.9
CBKS				pmax	pmax		
	comp=Z,122nm,1.0s						
CBKS	**Cedar Bluff**	69.87	333	P	P	14 59 58.7	+1.3
	baz=148,SNR=29						
CBKS	**Cedar Bluff**	69.87	333	P	P	14 59 58.4	+1.1
	baz=148,SNR=29						
F64A	**Sherman**	69.94	359	P	P	14 59 58.4	+0.9
	baz=179						
F64A				P	P	14 59 58.4	+0.9
	baz=179						
TUC	**Tucson**	70.07	322	P	P	15 00 00.5	+1.8
	baz=138						
TUC	**Tucson**	70.07	322	P	P	15 00 00.9	+2.2
TUC				x	x	15 00 22.2	
SCIA	**State Center**	70.23	340	P	P	14 59 59.4	0.0
	baz=155						
JFWS	**Jewell Farm**	70.27	342	P	P	14 59 59.5	-0.1
JFWS				IAmb	IAmb	15 00 00.7	
	comp=Z,65nm,1.0s						
JFWS	**Jewell Farm**	70.27	342	P	P	14 59 59.5	-0.1
JFWS				pmax	pmax		
	comp=Z,65nm,1.0s						
JFWS	**Jewell Farm**	70.27	342	P	P	14 59 59.0	-0.5
	baz=158,SNR=14						
JFWS	**Jewell Farm**	70.27	342	P	P	14 59 59.6	+0.1
	baz=158,SNR=14						
T25A	**Trinidad**	70.52	329	P	P	15 00 02.9	+1.3
T25A				IAmb	IAmb	15 00 04.5	
	comp=Z,42nm,1.0s						
T25A	**Trinidad**	70.52	329	P	P	15 00 03.2	+1.6
	baz=144,SNR=26						
TRQ	**Mont Tremblant**	70.61	355	P	P	15 00 01.7	+0.1
GLMI	**Grayling**	70.70	347	P	P	15 00 02.1	-0.1
GLMI	**Grayling**	70.70	347	P	P	15 00 02.3	+0.1
	baz=163						
K38A	**Parkersburg**	70.76	340	P	P	15 00 02.2	-0.3
	baz=155						
I42A	**Draeger Farm,**	70.82	344	P	P	15 00 02.9	0.0
I42A				IAmb	IAmb	15 00 04.0	
	comp=Z,72nm,1.1s						
I42A	**Draeger Farm,**	70.82	344	P	P	15 00 02.7	-0.2
	baz=159,SNR=16						
TAOE	**Nuku Hiva Isla**	70.88	269	*e*LR	LR	15 21 57.2	
	comp=Z,1μm,24.4s						
214A	**Organ Pipe Nat**	70.98	320	P	P	15 00 06.3	+2.1
	baz=136,SNR=25						
H43A	**Windswept, Lux**	71.07	345	P	P	15 00 03.7	-0.7
H43A				IAmb	IAmb	15 00 05.3	
	comp=Z,60nm,0.9s						
H43A	**Windswept, Lux**	71.07	345	P	P	15 00 04.5	0.0
	baz=160,SNR=12						
KSCO	**Kaye Shedlock’**	71.25	332	P	P	15 00 07.7	+1.9
	baz=146,SNR=6.2						
KSCO	**Kaye Shedlock’**	71.25	332	P	P	15 00 07.1	+1.2
	baz=146,SNR=6.2						
BGNE	**Belgrade**	71.49	336	P	P	15 00 08.0	+1.0
	baz=150,SNR=23						
BGNE	**Belgrade**	71.49	336	P	P	15 00 07.6	+0.6
	baz=150,SNR=23						
SDCO	**Great Sand Dun**	71.53	329	P	P	15 00 08.8	+1.2
SDCO	**Great Sand Dun**	71.53	329	P	P	15 00 09.5	+1.8
	baz=143,SNR=74						
SDCO	**Great Sand Dun**	71.53	329	P	P	15 00 09.4	+1.7
	baz=143,SNR=74						
W18A	**Petrified Fore**	71.60	324	P	P	15 00 09.7	+1.7
W18A				IAmb	IAmb	15 00 11.2	
	comp=Z,69nm,1.0s						
W18A	**Petrified Fore**	71.60	324	P	P	15 00 09.8	+1.8
	baz=139,SNR=8.1						
113A	**Mohawk Valley,**	72.12	320	P	P	15 00 12.4	+1.4
E46A	**Sault Ste Mari**	72.12	348	P	P	15 00 10.7	+0.1
	baz=163,SNR=26						
S22A	**4UR Ranch, Cre**	72.16	328	P	P	15 00 12.5	+1.0
S22A	**4UR Ranch, Cre**	72.16	328	P	P	15 00 13.0	+1.6
	baz=142,SNR=25						
I37B	**Waseca**	72.19	340	P	P	15 00 11.5	+0.3
	baz=155,SNR=10						
Q24A	**Divide**	72.34	330	P	P	15 00 14.1	+1.6
	baz=144,SNR=11						
G40A	**Rib Lake**	72.44	343	P	P	15 00 12.2	-0.4
	baz=158,SNR=9.8						
MVCO	**Mesa Verde**	72.56	326	P	P	15 00 15.2	+1.3
MVCO				IAmb	IAmb	15 00 16.8	
	comp=Z,70nm,1.1s						
MVCO	**Mesa Verde**	72.56	326	P	P	15 00 15.1	+1.3
	baz=141,SNR=19						
OGNE	**Ogallala**	72.61	333	P	P	15 00 15.4	+1.5
	baz=147						
OGNE	**Ogallala**	72.61	333	P	P	15 00 15.1	+1.2
	baz=147						
E43A	**Lone Tree Farm**	72.69	346	P	P	15 00 14.2	+0.2
	baz=161,SNR=28						
WUAZ	**Wupatki**	72.78	324	P	P	15 00 17.3	+2.3
	baz=138,SNR=44						
COWI	**Conover**	72.94	344	P	P	15 00 15.4	-0.1
GLA	**Glamis**	72.95	320	P	P	15 00 18.0	+2.1
	baz=135						
ECSD	**EROS Data Cent**	72.98	338	P	P	15 00 15.9	+0.1
ECSD				IAmb	IAmb	15 00 17.2	
	comp=Z,51nm,1.1s						
ECSD	**EROS Data Cent**	72.98	338	P	P	15 00 16.1	+0.3
	baz=152,SNR=24						
ECSD	**EROS Data Cent**	72.98	338	P	P	15 00 16.0	+0.1
	baz=152,SNR=24						
SPMN	**Marine on St.**	73.12	341	P	P	15 00 16.7	+0.1
	baz=156,SNR=7.3						
SPMN	**Marine on St.**	73.12	341	P	P	15 00 16.4	-0.2
	baz=156,SNR=7.3						
BLYC	**Blythe**	73.27	320	P	P	15 00 19.7	+2.0
BLYC				IAmb	IAmb	15 00 21.1	
	comp=Z,62nm,1.1s						
IKP	**In-Ko-Pah, Jac**	73.43	318	P	P	15 00 21.0	+2.2
	baz=134,SNR=12						
PDMCI	**Parker Dam,Lak**	73.44	321	P	P	15 00 20.5	+1.8
	baz=136						
SWSC	**Sam W. Stewart**	73.45	319	P	P	15 00 20.3	+1.5
	baz=134,SNR=6.6						
D41A	**Chassel**	73.70	345	P	P	15 00 20.4	+0.5
D41A	**Chassel**	73.70	345	P	P	15 00 20.7	+0.8
	baz=160,SNR=28						
PV10	**Paradox Valley**	73.74	327	P	P	15 00 21.4	+0.7
BC3	**Big Chuckawall**	73.74	320	P	P	15 00 22.4	+1.8
	baz=135,SNR=37						
PV23	**Carpenter Ridg**	73.78	327	P	P	15 00 22.4	+1.4
MONP2	**Monument Peak**	73.79	318	P	P	15 00 23.2	+2.1
	baz=134,SNR=15						
BAR	**Barrett**	73.79	318	P	P	15 00 22.1	+1.2
W13A	**Hualapai Mount**	73.87	322	P	P	15 00 23.1	+1.7
F36A	**Milaca**	73.91	341	P	P	15 00 21.2	+0.1
	baz=155,SNR=23						
IRM	**Iron Mountain**	73.92	320	P	P	15 00 23.6	+2.0
	baz=135,SNR=16						
E38A	**The Farm, Brul**	74.03	343	P	P	15 00 21.7	-0.1
	baz=157,SNR=5.4						
NEE2	**Needles Airpor**	74.05	321	P	P	15 00 24.1	+1.8
	baz=136						
109C	**Camp Elliot, M**	74.20	318	P	P	15 00 24.9	+1.7
	baz=134						
N23A	**Red Feather La**	74.26	330	P	P	15 00 25.3	+1.6
	baz=144,SNR=26						
VNDA	**Vanda**	74.27	190	P	P	15 00 24.9	+2.0
	comp=Z,25nm,0.9s,baz=133,slow=5.2,SNR=83						
	comp=Z,25nm,0.9s						
VNDA	**Vanda**	74.27	190	P	P	15 00 24.9	+2.0
TPFO	**Pinon Flats**	74.30	319	P	P	15 00 25.8	+1.9
	baz=134,SNR=12						
BELC	**Belle Mtn. Jos**	74.31	320	P	P	15 00 26.0	+2.0
	baz=134,SNR=14						
PFO	**Pinyon Flats O**	74.31	319	P	P	15 00 26.0	+2.0
	comp=Z,22nm,1.0s,baz=129,slow=5.8,SNR=20						
	comp=Z,22nm,1.0s						
PFO	**Pinyon Flats O**	74.31	319	P	P	15 00 25.8	+1.8
PFO	**Pinyon Flats O**	74.31	319	P	P	15 00 26.0	+2.0
PFO	**Pinyon Flats O**	74.31	319	P	P	15 00 26.1	+2.2
	baz=134,SNR=13						
PHWY	**Pilot Hill**	74.37	331	P	P	15 00 25.5	+1.2
SUSD	**Miller**	74.41	337	P	P	15 00 24.7	+0.6
	baz=150						
SUSD	**Miller**	74.41	337	P	P	15 00 24.4	+0.3
	baz=150						
GMRC	**Granite Mounta**	74.66	320	P	P	15 00 27.9	+2.0
	baz=135,SNR=64						
O20A	**White River Ci**	74.72	329	P	P	15 00 27.7	+1.5
O20A				IAmb	IAmb	15 00 29.3	
	comp=Z,79nm,0.9s						
O20A	**White River Ci**	74.72	329	P	P	15 00 28.1	+1.8
	baz=142,SNR=47						
F33A	**5 Mile Ranch,**	74.74	339	P	P	15 00 25.9	0.0
	baz=152,SNR=5.6						
MURC	**Murrieta**	74.75	319	P	P	15 00 28.2	+1.8
	baz=134,SNR=5.5						
LCMT	**Little Creek M**	74.90	323	P	P	15 00 29.1	+1.8
BBRC	**Big Bear Solar**	75.04	319	P	P	15 00 30.6	+2.3
	baz=134						
HEC	**Hector,Ludlow**	75.09	320	P	P	15 00 30.7	+2.3
	baz=134,SNR=43						
MTPU	**Mount Pierson**	75.09	325	P	P	15 00 29.7	+1.0
SCI2	**San Clemente I**	75.15	317	P	P	15 00 30.6	+2.0
	baz=132						
SZCU	**Shurtz Canyon**	75.25	324	P	P	15 00 31.0	+1.7
EYMN	**Ely**	75.25	343	P	P	15 00 28.8	-0.1
	baz=157,SNR=26						
EYMN	**Ely**	75.25	343	P	P	15 00 28.6	-0.3
	baz=157,SNR=26						
TUQ	**Turquoise Moun**	75.27	321	P	P	15 00 31.3	+1.9
	baz=135,SNR=18						
VAH	**Vaihoa**	75.28	260	*e*P	P	15 00 32.7	+2.9
	comp=Z,121nm,1.1s						
P18A	**Preston Nutter**	75.30	327	P	P	15 00 30.8	+1.1
P18A				IAmb	IAmb	15 00 32.9	
	comp=Z,47nm,0.9s						
CIS	**Catalina Islan**	75.35	318	P	P	15 00 31.7	+1.9
	baz=133,SNR=5.1						
BFSC	**Mount Baldy Ra**	75.46	319	P	P	15 00 32.2	+1.6
	baz=133,SNR=14						
RWWY	**Rawlins**	75.47	330	P	P	15 00 30.8	+0.2
RWWY				IAmb	IAmb	15 00 32.5	
	comp=Z,61nm,1.1s						
FMP	**Fort Macarthur**	75.49	318	P	P	15 00 32.5	+1.9
	baz=133						
RRX	**Edison Barstow**	75.51	320	P	P	15 00 33.0	+2.3
	baz=134						
TMUT	**Trail Mountain**	75.53	326	P	P	15 00 31.9	+0.8
SHPR	**Sheep Range**	75.60	322	P	P	15 00 32.3	+1.0
PMOR	**Pomariorio Ree**	75.60	260	*e*P	P	15 00 34.7	+3.1
	comp=Z,174nm,1.1s						
GSC	**Goldstone, Bar**	75.69	320	P	P	15 00 33.7	+1.9
	baz=134,SNR=22						
SHOC	**Shoshone, Teco**	75.80	321	P	P	15 00 34.0	+1.7
	baz=135						
DECC	**Green Verdugo**	75.88	318	P	P	15 00 34.7	+1.9
	baz=133						
K22A	**Casper**	75.93	331	P	P	15 00 34.6	+1.6
	baz=143,SNR=20						
K22A	**Casper**	75.93	331	P	P	15 00 34.6	+1.6
	baz=143,SNR=20						
SNCC	**San Nicolas Is**	75.94	317	P	P	15 00 34.8	+1.7
	baz=132						
RSSD	**Black Hills**	76.08	334	P	P	15 00 35.5	+1.5
	baz=146,SNR=19						
RSSD	**Black Hills**	76.08	334	P	P	15 00 35.1	+1.2
	baz=146						
EDW2	**Edwards Air Fo**	76.11	319	P	P	15 00 35.7	+1.6
	baz=133,SNR=18						
PAE	**Paea**	76.14	257	*e*P	P	15 00 37.4	+2.8
	comp=Z,16nm,1.1s						
PPT2	**Papeete2**	76.16	257	*e*P	P	15 00 37.8	+2.9
	comp=Z,58nm,1.2s						
PPT2	**Papeete2**	76.16	257	*e*LR	LR	15 24 11.8	
	comp=Z,861nm,23.2s						
PPT	**Papeete**	76.17	257	P	P	15 00 37.8	+3.0
	comp=Z,46nm,1.0s,baz=112,slow=3.0,SNR=7.1						
	comp=Z,46nm,1.0s						
PRN	**Pahroc Range**	76.18	323	P	P	15 00 35.9	+1.4
PRN				IAmb	IAmb	15 00 38.3	
	comp=Z,62nm,1.1s						
GWY	**Greenwater Val**	76.23	321	P	P	15 00 35.8	+0.9
GWY				IAmb	IAmb	15 00 37.9	
	comp=Z,48nm,1.0s						
B35A	**Bob, Littlefor**	76.23	342	P	P	15 00 34.3	-0.1
B35A				IAmb	IAmb	15 00 35.6	

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      comp=Z,59nm,1.0s
B35A  Bob, Littlefor     76.23 342   P        P        15 00 34.6 +0.2
      baz=155,SNR=32
CCAC  Calif City Air     76.30 319   P        P        15 00 36.7 +1.5
CCAC                                 IAmb     IAmb     15 00 38.4
      comp=Z,88nm,1.3s
LRMC  Laurel Mtn Rad     76.33 320   P        P        15 00 37.2 +1.8
      baz=134,SNR=12
OSI   Osito Audit: C     76.36 318   P        P        15 00 37.2 +1.7
      baz=133
SCZ2  Santa Cruz Isl     76.50 317   P        P        15 00 38.0 +1.7
      baz=132,SNR=15
TPNV  Topopah Spring     76.53 322   P        P        15 00 38.8 +2.2
      baz=135,SNR=46
FURC  Furnace Creek,     76.54 321   P        P        15 00 38.6 +2.2
      baz=134,SNR=25
ARVC  Arvin              76.77 319   P        P        15 00 39.6 +1.9
      baz=133
AGMN  Agassiz Nation     76.80 341   P        P        15 00 37.9 +0.3
      baz=153
AGMN  Agassiz Nation     76.80 341   P        P        15 00 37.7 +0.1
      baz=153
E28A  Huff               76.87 337   P        P        15 00 38.8 +0.7
E28A  Huff               76.87 337   P        P        15 00 39.1 +1.0
      baz=149,SNR=8.5
TOA0  Torodi Ar. Sit     76.91  69   P        P        15 00 37.9  -1.1
TORD  Torodi Ar. Bea     76.91  69   P        P        15 00 38.0  -1.0
      comp=Z,30nm,0.6s,baz=258,slow=5.8,SNR=160
      comp=Z,30nm,0.6s
ISA   Isabella, Lake     76.92 319   P        P        15 00 40.9 +2.1
      baz=133,SNR=34
BCW   Bitter Crk WRg     77.00 318   P        P        15 00 40.8 +1.6
BCW                                  IAmb     IAmb     15 00 42.6
      comp=Z,88nm,1.2s
DUG   Dugway, Tooele     77.02 326   P        P        15 00 40.5 +1.3
DUG   Dugway, Tooele     77.02 326   P        P        15 00 40.5 +1.3
DUG                                  pmax     pmax
      comp=Z,48nm,1.2s
DUG   Dugway, Tooele     77.02 326   P        P        15 00 41.1 +1.9
      baz=138,SNR=29
R11A  Troy Canyon, C     77.15 323   P        P        15 00 41.6 +1.6
R11A  Troy Canyon, C     77.15 323   P        P        15 00 42.3 +2.2
      baz=136,SNR=60
GRAC  Grapevine Rang     77.20 321   P        P        15 00 42.2 +2.1
GRAC  Grapevine Rang     77.20 321   P        P        15 00 42.4 +2.2
      baz=134,SNR=11
PKM   Mcpherson Peak     77.21 318   P        P        15 00 42.6 +2.1
      baz=132,SNR=36
CWC   Cottonwood Cre     77.22 320   P        P        15 00 42.5 +2.0
      baz=133
BW06  Boulder Array      77.39 329   P        P        15 00 42.3 +0.9
      baz=141,SNR=21
PDAR  Pinedale Array     77.39 329   P        P        15 00 42.4 +1.0
      comp=Z,8.9nm,0.8s,baz=139,slow=7.0,SNR=34
      comp=Z,8.9nm,0.8s
PDAR  Pinedale Array     77.39 329   P        P        15 00 42.1 +0.7
VES   Vestal, Richgr     77.41 319   P        P        15 00 43.2 +1.9
      baz=133,SNR=6.8
MDND  Maddock            77.59 338   P        P        15 00 43.1 +1.1
      baz=150,SNR=7.8
MDND  Maddock            77.59 338   P        P        15 00 43.4 +1.3
      baz=150,SNR=7.8
SMMC  Simmler            77.61 318   P        P        15 00 44.9 +2.4
      baz=132,SNR=10
TIN   Tinemaha, Big      77.73 320   P        P        15 00 45.4 +2.2
      baz=133
TSUM  Tsumeb             77.75 106   P        P        15 00 42.5  -1.3
MLAC  Mammoth, Mammo78.48 321        P        P        15 00 49.6 +2.1
      baz=133
ULM   Lac du Bonnet      78.55 342   P        P        15 00 47.4 +0.2
      comp=Z,31nm,0.9s,baz=154,slow=6.0,SNR=26
      comp=Z,31nm,0.9s
ELK   Elko               78.68 325   P        P        15 00 50.0 +1.5
      comp=Z,24nm,0.9s,baz=131,slow=4.0,SNR=71
      comp=Z,24nm,0.9s
ELK   Elko               78.68 325   P        P        15 00 50.0 +1.5
PMPB  Monarch Peak       78.69 318   P        P        15 00 49.4 +0.9
NVAR  Mina Array Bea     78.72 321   P        P        15 00 50.5 +1.7
      comp=Z,10nm,0.8s,baz=154,slow=6.2,SNR=69
      comp=Z,10nm,0.8s
SCHQ  Schefferville      78.91   0   P        P        15 00 49.2 +0.1
      comp=Z,10nm,0.8s,baz=171,slow=4.9,SNR=12
      comp=Z,10nm,0.8s
SCHQ  Schefferville      78.91   0   P        P        15 00 48.8  -0.4
RYN   Ryan               78.98 321   P        P        15 00 51.3 +1.2
LAO   LASA Array         79.06 334   P        P        15 00 51.0 +0.8
LAO                                  IAmb     IAmb     15 00 52.5
      comp=Z,67nm,0.9s
LAO   LASA Array         79.06 334   P        P        15 00 51.6 +1.4
      baz=144,SNR=6.6
LAO   LASA Array         79.06 334   P        P        15 00 51.3 +1.1
      baz=144,SNR=6.6
RLMT  Red Lodge          79.10 331   P        P        15 00 51.7 +1.0
RLMT  Red Lodge          79.10 331   P        P        15 00 52.1 +1.5
      baz=141,SNR=21
H17A  Grant Village      79.12 330   P        P        15 00 53.5 +2.6
      baz=140,SNR=10
BMN   Battle Mountai     79.52 324   P        P        15 00 53.7 +0.7
BMN   Battle Mountai     79.52 324   P        P        15 00 53.7 +0.7
BMN                                  pmax     pmax
      comp=Z,15nm,1.0s
CMB   Columbia Colle     79.66 320   P        P        15 00 54.1 +0.5
CMB   Columbia Colle     79.66 320   P        P        15 00 54.1 +0.5
CMB                                  pmax     pmax
      comp=Z,9.0nm,1.0s
DGMT  Dagmar             79.74 336   P        P        15 00 55.6 +1.8
      baz=146,SNR=13
DGMT  Dagmar             79.74 336   P        P        15 00 55.4 +1.5
      baz=146,SNR=13
HLID  Hailey             80.31 327   P        P        15 00 59.2 +2.0
      baz=137,SNR=101
BOZ   Bozeman (W)        80.52 330   P        P        15 00 59.3 +1.1
      baz=140,SNR=19
BOSA  Boshof             80.73 117   P        P        15 00 59.9  0.0
      comp=Z,20nm,0.5s,baz=258,slow=3.7,SNR=74
      comp=Z,20nm,0.5s
BOSA  Boshof             80.73 117   P        P        15 00 58.4  -1.5
BOSA                                 IAmb     IAmb     15 01 00.9
      comp=Z,62nm,1.1s
MAW   Mawson             81.11 163   P        P        15 01 01.8 +0.9
      comp=Z,40nm,0.8s,baz=211,slow=6.3,SNR=60
      comp=Z,40nm,0.8s
ORV   Oroville           81.32 321   P        P        15 01 03.5 +1.1
ORV                                  IAmb     IAmb     15 01 05.4
      comp=Z,62nm,1.2s
ORV   Oroville           81.32 321   P        P        15 01 03.5 +1.1
ORV                                  pmax     pmax
      comp=Z,62nm,1.2s
EGMT  Eagleton           81.58 333   P        P        15 01 04.4 +0.7
EGMT                                 IAmb     IAmb     15 01 05.6
      comp=Z,68nm,1.1s
EGMT  Eagleton           81.58 333   P        P        15 01 04.3 +0.7
      baz=141,SNR=34
WVOR  Wild Horse Val     81.68 324   P        P        15 01 05.5 +1.1
WVOR  Wild Horse Val     81.68 324   P        P        15 01 05.5 +1.1
WVOR                                 pmax     pmax
      comp=Z,15nm,1.2s
PLID  Pearl Lake         82.21 327   P        P        15 01 08.0 +0.8
PLID                                 IAmb     IAmb     15 01 09.8
      comp=Z,62nm,0.9s
MOD   Modoc Plateau      82.22 323   P        P        15 01 08.3 +1.1
PFVI  Vila Bisbo         82.26  43  eP        P        15 01 06.4  -0.9
LBTB  Lobatse            82.41 114  i P       P        15 01 09.0 +0.3
LBTB  Lobatse            82.41 114  i P       P        15 01 09.0 +0.3
MDT   Midelt             82.45  49   P        P        15 01 09.7 +1.1
      comp=Z,8.8nm,0.8s,baz=278,slow=7.2,SNR=15
      comp=Z,8.8nm,0.8s
MSO   Missoula           82.50 330   P        P        15 01 10.0 +1.5
      baz=138,SNR=11
PNCL  Nicolau / Gran     83.05  43  eP        P        15 01 12.6 +1.2
      comp=Z,31nm,1.7s
PCVE  Castro Verde       83.06  43  eP        P        15 01 12.6 +1.1
      comp=Z,64nm,1.9s
MESJ  Messejana          83.07  43  eP        P        15 01 11.4  -0.2
MESJ                                 IAmb     IAmb     15 01 12.6
      comp=Z,13nm,0.9s
MESJ                                eSKSac    S        15 11 17.5  -0.1
MESJ  Messejana          83.07  43  eP        P        15 01 12.8 +1.3
      comp=Z,41nm,1.8s
MESJ  Messejana          83.07  43  eP        P        15 01 11.3  -0.2
MESJ                                e                  15 11 17.4
K05A  Summer Lake        83.09 323   P        P        15 01 13.1 +1.3
PBEJ  Beja               83.41  43  eP        P        15 01 14.4 +1.1
      comp=Z,32nm,1.9s
F10A  Beach Ranch, E     83.44 327   P        P        15 01 14.3 +1.0
YBH   Yreka Blue Hor     83.44 322   P        P        15 01 13.3  -0.2
      comp=Z,7.6nm,0.8s,baz=107,slow=5.4,SNR=11
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      comp=Z,7.6nm,0.8s
K04D  Chiloquin, OR      83.50 323   P        P        15 01 15.1 +1.3
      baz=132
L04D  Klamath Falls      83.53 322   P        P        15 01 14.7 +0.7
      baz=131,SNR=5.8
J05D  Fort Rock, OR      83.65 324   P        P        15 01 15.9 +1.4
      baz=132,SNR=20
PSBE  So Bento           83.76  42  eP        P        15 01 16.6 +1.6
PMTG  Montargil          83.83  42  eP        P        15 01 17.4 +2.0
      comp=Z,42nm,1.8s
PINE  Pine Mountain      83.84 324   P        P        15 01 16.7 +1.1
PINE                                 IAmb     IAmb     15 01 18.5
      comp=Z,73nm,1.1s
PBAR  Barrancos          84.02  43  eP        P        15 01 17.3 +1.0
PESTR Estremoz           84.09  43  eP        P        15 01 18.9 +2.1
J04D  Umpqua Nationa     84.10 323   P        P        15 01 17.5 +0.6
J04D                                 IAmb     IAmb     15 01 19.3
      comp=Z,94nm,1.2s
J04D  Umpqua Nationa     84.10 323   P        P        15 01 18.0 +1.1
      baz=131,SNR=16
L02F  Cave Junction      84.18 322   P        P        15 01 18.6 +1.5
      baz=130
I05D  Terrebonne, OR     84.42 324   P        P        15 01 20.0 +1.7
      baz=132,SNR=16
PMRV  Marv??o            84.56  42  eP        P        15 01 20.1 +1.0
K02D  Willamette Mer     84.61 322   P        P        15 01 20.9 +1.5
      baz=130,SNR=10
I04A  Tendick Farm,      84.63 323   P        P        15 01 20.0 +0.6
      baz=131,SNR=8.4
PCBR  Castelo Branco     84.76  42  eP        P        15 01 20.9 +0.9
HAWA  Hanford            84.88 327   P        P        15 01 21.3 +0.8
HAWA                                 IAmb     IAmb     15 01 23.0
      comp=Z,49nm,1.1s
G05D  Wamic, OR          85.01 325   P        P        15 01 22.9 +1.7
      baz=132,SNR=7.8
NEW   Newport            85.03 329   P        P        15 01 21.3  0.0
      comp=Z,9.6nm,0.8s,baz=132,slow=4.8,SNR=11
      comp=Z,9.6nm,0.8s
NEW   Newport            85.03 329   P        P        15 01 21.6 +0.3
      baz=135
D08A  Wollman Farm,      85.04 327   P        P        15 01 22.5 +1.3
D08A                                 IAmb     IAmb     15 01 23.7
      comp=Z,45nm,1.2s
J01E  Myrtle Point       85.06 322   P        P        15 01 22.9 +1.4
      baz=130
MTE   Manteigas          85.06  41  eP        P        15 01 22.2 +0.6
      comp=Z,29nm,2.0s
I03D  Drain, OR          85.08 323   P        P        15 01 22.8 +1.3
      baz=130,SNR=7.2
HOOD  Mount Hood Mea     85.24 325   P        P        15 01 23.4 +0.9
HOOD                                 IAmb     IAmb     15 01 25.1
      comp=Z,50nm,1.2s
C09A  Chrisman Ranch     85.24 328   P        P        15 01 22.8 +0.5
H04D  Lebanon            85.29 324   P        P        15 01 23.1 +0.5
      baz=131
PVRL  Vila Real          85.49  41  eP        P        15 01 26.2 +2.5
F05D  White Salmon       85.52 325   P        P        15 01 24.2 +0.5
F05D  White Salmon       85.52 325   P        P        15 01 24.9 +1.2
      baz=132
PGAV  Gavieira, Arco     85.59  40  eP        P        15 01 23.0  -1.3
I02E  Swisshome, OR      85.62 323   P        P        15 01 25.8 +1.6
      baz=130,SNR=5.3
FCC   Fort Churchill     85.81 346   P        P        15 01 24.8 +0.1
FCC   Fort Churchill     85.81 346   P        P        15 01 24.8 +0.1
FCC                                  pmax     pmax
      comp=Z,90nm,0.9s
MVO   Moncorvo           85.84  41  eP        P        15 01 26.1 +0.6
      comp=Z,39nm,1.4s
G03D  McMinnville, O     86.02 324   P        P        15 01 27.1 +0.9
      baz=131
LTY   Liberty            86.04 327   P        P        15 01 26.4 +0.1
LTY                                  IAmb     IAmb     15 01 28.3
      comp=Z,54nm,1.3s
PBRG  Braganca           86.40  41  eP        P        15 01 30.0 +1.8
      comp=Z,26nm,1.4s
F04D  Rainier, OR        86.46 325   P        P        15 01 29.7 +1.5
      baz=131
E04D  Cinebar            86.54 325   P        P        15 01 29.4 +0.8
      baz=131
D05A  Enumclaw           86.66 326   P        P        15 01 29.5 +0.3
D05A                                 IAmb     IAmb     15 01 31.1
      comp=Z,52nm,1.0s
MATP  Matopo             86.72 111  i P       P        15 01 31.0 +0.6
MATP  Matopo             86.72 111  i P       P        15 01 31.0 +0.6
ESDC  Sonseca Array      86.83  44   P        P        15 01 30.7 +0.4
      comp=Z,7.6nm,1.0s,baz=233,slow=4.9,SNR=27
      comp=Z,7.6nm,1.0s
BLWY  Bulawayo           86.93 111  i P       P        15 01 32.0 +0.5
BLWY  Bulawayo           86.93 111  i P       P        15 01 32.0 +0.5
D04E  Lakebay            87.05 326   P        P        15 01 31.7 +0.6
      baz=131
B05A  Bryant             87.43 327   P        P        15 01 33.1 +0.2
      baz=132,SNR=11
D03D  Eldon              87.45 326   P        P        15 01 34.1 +1.1
      baz=131,SNR=13
MOPA  Mopani             87.85 115  i P       P        15 01 36.7 +1.0
MOPA  Mopani             87.85 115  i P       P        15 01 36.7 +1.0
CASY  Casey              89.58 179   P        P        15 01 43.7 +0.8
RPZ   Rata Peaks         93.70 218   P        P        15 02 04.1 +1.6
      comp=Z,13nm,0.9s,baz=49,slow=18,SNR=1.6
      comp=Z,13nm,0.9s
KEST  Kesra              93.83  52   P        P        15 02 02.1  -1.0
      comp=Z,1.7nm,0.5s,baz=42,slow=20,SNR=2.2
      comp=Z,1.7nm,0.5s
YKA   Yellowknife Ar     94.43 340   P        P        15 02 05.6 +0.5
      comp=Z,17nm,0.8s,baz=139,slow=4.6,SNR=76
      comp=Z,17nm,0.8s
DLBC  Dease Lake         97.49 332   P        Pdif     15 02 20.3 +1.1
      comp=Z,9.2nm,0.8s,baz=118,slow=3.9,SNR=15
      comp=Z,9.2nm,0.8s
TGTN  Hyland Airport     98.58 335   P        Pdif     15 02 25.7 +1.7
      baz=126
KIP   Kipapa             99.26 289ceP         Pdif     15 02 29.7 +1.8
KIP                                  pmax     pmax
      comp=Z,154nm,2.5s
P33M  Teslin, Yukon      99.67 333   P        Pdif     15 02 29.9 +1.0
      baz=122
M31M  Drury Creek, Y    101.37 334   P        Pdif     15 02 36.8 +0.5
      baz=121
N31M  Braeburn, Yuko    101.57 333   P        Pdif     15 02 38.0 +0.7
      baz=120
N30M  Aishikik Lake     102.10 333   P        Pdif     15 02 40.8 +1.1
      baz=119
M30M  Minto, Yukon      102.52 334   P        Pdif     15 02 42.8 +1.3
      baz=119
YUK4  Talbot Arm        102.71 332   P        Pdif     15 02 43.9 +1.3
      baz=118
CLL   Collm             102.87  39  eSKSac    SKSac    15 13 06.0  -1.3
CLL                                 eSP       SP       15 15 45.0  -5.8
CLL                                 eSS       SS       15 21 30.0 +1.9
JMIC  Jan Mayen         103.48  17   PKKP              15 18 54.0
      comp=Z,192nm,0.4s,baz=168,slow=9.4,SNR=9.2
BGLC  Bering Glacier    104.22 330   P        Pdif     15 02 48.6  -0.4
      baz=114
DAWY  Dawson            104.26 334   P        Pdif     15 02 49.9 +0.7
      baz=116
I29M  Ogilvie Camp,     104.43 336   P        Pdif     15 02 50.7 +0.8
      baz=117
M27K  Edge Creek, AK    104.53 332   P        Pdif     15 02 51.6 +1.0
      baz=114
NB2   NORSAR Subarra105.67  30       P        PKKPab   15 18 48.8 +1.3
      comp=Z,0.6nm,0.7s,baz=66,slow=4.6
NOA   NORSAR Array B 105.67  30      PKKP              15 18 48.5
      comp=Z,1.1nm,0.8s,baz=68,slow=4.5,SNR=4.1
J26L  Joseph Creek      106.09 334   P        PKiKP    15 07 09.3 +0.8
      baz=112
J25K  Salcha River,     106.86 334   P        PKiKP    15 07 10.4 +0.6
      baz=111
M23K  Glacier View      106.86 331   P        PKiKP    15 07 10.3 +0.5
      baz=110
WAT6  Susitna Watana    107.14 331   P        PKiKP    15 07 11.5 +1.0
      baz=110
DHY   Denali Highway    107.15 332   P        PKiKP    15 07 11.6 +1.1
      baz=110
ILAR  Eielson Array     107.53 334   Pdiff    Pdif     15 03 03.9 +0.3
      comp=Z,0.7nm,0.9s,baz=144,slow=3.1,SNR=7.0
ILAR                                 PKiKP    PKiKP    15 07 10.1  -0.8
      comp=Z,1.2nm,1.1s,baz=144,slow=0.3,SNR=5.2
ILAR                                 PKKPbc   PKKPbc   15 18 25.6  -2.8
      comp=Z,0.5nm,0.5s,baz=296,slow=3.3,SNR=5.2
BPAW  Bear Paw Mtn.     109.00 332   P        PKiKP    15 07 14.3 +0.5
      baz=106
TOLK  Toolik Lake Re    109.75 337   P        PKiKP    15 07 15.9 +0.8
      baz=106
K20K  Telida            110.13 331   P        PKiKP    15 07 16.4 +0.5
      baz=104
DZM   Mont Dzumac       110.33 233  eLR       LR       15 38 55.5
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      comp=Z,634nm,24.9s
SPITS Spitsbergen Ar    112.41  13   PKKPbc   PKKPbc   15 18 10.2  -2.7
      comp=Z,2.5nm,0.5s,baz=113,slow=7.4,SNR=7.8
AKASG Malin Array Be    112.48  43   PKiKP    PKiKP    15 07 19.8  -0.8
      comp=Z,1.6nm,0.6s,baz=271,slow=2.3,SNR=10.0
AKASG                                PKKPbc   PKKPbc   15 18 11.1  -0.8
      comp=Z,0.8nm,0.6s,baz=57,slow=3.4,SNR=1.5
AKBB  Malin Array Si    112.48  43c iPKIKP    PKiKP    15 07 20.5  -0.2
FINES FINESS Array B    112.68  31   PKiKP    PKiKP    15 07 20.2  -0.5
      comp=Z,1.9nm,0.9s,baz=177,slow=3.2,SNR=3.4
FINES                                PKKPbc   PKKPbc   15 18 09.6  -1.9
      comp=Z,0.7nm,0.4s,baz=48,slow=2.8,SNR=7.8
BRTR  Keskin Array B    113.21  55   PKiKP    PKiKP    15 07 22.1  -0.5
      comp=Z,2.0nm,0.8s,baz=200,slow=3.3,SNR=5.5
ARCES ARCESS Array B 113.58  23      PKiKP    PKiKP    15 07 21.4  -0.9
      comp=Z,1.5nm,0.8s,baz=269,slow=4.5,SNR=0.9
OBN   Obninsk           117.47  39d iPKIKP    PKPdf    15 07 29.9  -0.2
OBN                                 e                  15 08 47.5
OBN                                 ePPP      PPP      15 11 12.2
OBN                                 e                  15 14 10.8
OBN                                  pmax     pmax
      comp=Z,38nm,2.5s
STKA  Stephens Creek    117.62 208   PKP      PKPdf    15 07 29.6  -1.7
      comp=Z,1.9nm,0.8s,baz=79,slow=16,SNR=2.5
LPSR  Galich'ya Gora    118.71  42  ePKIKP    PKPdf    15 07 32.1  -0.5
LPSR                                 pmax     pmax
      comp=Z,20nm,0.8s
VSR   Storozhevoye      118.77  43  ePKIKP    PKPdf    15 07 31.1  -1.6
VSR                                  pmax     pmax
      comp=Z,10.0nm,1.1s
VORR  Voronezh          118.83  43  ePKIKP    PKPdf    15 07 31.7  -1.1
VORR                                 pmax     pmax
      comp=Z,40nm,0.4s
VORD  Divnogorie        118.84  44  ePKIKP    PKPdf    15 07 31.4  -1.5
VORD                                 pmax     pmax
      comp=Z,9.0nm,0.7s
KLMR  Klimovskoe        119.14  32  ePKIKP    PKPdf    15 07 32.6  -0.6
KLMR                                 pmax     pmax
      comp=Z,30nm,1.5s
KLMR  Klimovskoe        119.14  32  ePKPdf    PKPdf    15 07 32.7  -0.5
KLMR                                 AMP               15 07 34.9
      comp=Z,30nm,1.5s
VRH   Novokhopyorsk     120.38  44  ePKIKP    PKPdf    15 07 35.3  -0.5
VRH                                  pmax     pmax
      comp=Z,20nm,1.0s
KIV   Kislovodsk        120.56  52  ePKIKP    PKiKP    15 07 36.9 +0.2
KIV                                  pmax     pmax
      comp=Z,15nm,1.1s
KBZ   Khabaz            120.70  52   PKP      PKiKP    15 07 37.1 +0.3
      comp=Z,11nm,0.9s,baz=60,slow=0.7,SNR=19
KBZ   Khabaz            120.70  52c iPKIKP    PKiKP    15 07 37.4 +0.6
GNI   Garni             121.69  57c iPKIKP    PKPdf    15 07 38.6  -0.4
GNI                                  pmax     pmax
      comp=Z,5.0nm,0.7s
PRGR  Permogore         122.02  31  ePKIKP    PKiKP    15 07 39.0 +0.2
KIRV  Kirov             124.35  35c iPKIKP    PKiKP    15 07 44.1 +0.6
CTA   Charters Tower    125.06 219   PKP      PKiKP    15 07 46.2  0.0
      comp=Z,12nm,0.8s,baz=105,slow=3.4,SNR=10
BILL  Bilibino          125.78 338c iPKIKP    PKiKP    15 07 46.2  0.0
BILL                                e                  15 09 40.5
BILL                                 pmax     pmax
      comp=Z,19nm,1.3s
ASAR  Alice Springs     128.00 205   PKP      PKPdf    15 07 51.5  0.0
      comp=Z,20nm,0.9s,baz=151,slow=2.2,SNR=81
ASAR                                 PP       PP       15 09 57.4 +2.5
      comp=Z,4.9nm,1.3s,baz=164,slow=7.7,SNR=5.9
ASAR                                 SKPbc    SKiKP    15 10 55.8   -17
      comp=Z,0.8nm,0.8s,baz=149,slow=3.7,SNR=4.2
ASAR                                 PKKP     PKKPdf   15 17 59.1  -1.6
      comp=Z,0.2nm,0.7s,baz=353,slow=1.4,SNR=5.7
HATD  Hatta, Dubai      128.84  77   P        SKPbc    15 10 59.7
      SNR=6.2
UOSS  Minazif           128.93  77   P        SKPbc    15 10 58.8
SHME  Shamm             129.09  75   P        SKPbc    15 11 00.1 +0.4
BANOM Banah             129.21  76   P        SKPbc    15 10 59.9  -0.2
BSY   Bisya             129.33  80   P        SKPbc    15 11 00.6  0.0
      SNR=7.1
MHTO  MHTO              129.60  82   P        SKPbc    15 11 02.0 +0.5
      SNR=6.4
HOQ   Hoqain            129.62  79   P        SKPbc    15 11 01.0  -0.5
      SNR=9.7
ARU   Arti              129.63  36   PKP      PKPdf    15 07 53.7 +0.3
      comp=Z,2.7nm,0.4s,baz=111,slow=1.7,SNR=13
ARU                                  SKPbc    SKPbc    15 11 01.0 +0.5
      comp=Z,1.4nm,0.2s,baz=243,slow=2.3,SNR=9.0
ARU   Arti              129.63  36  i PKIKP   PKiKP    15 07 54.8 +0.6
ARU                                                    15 10 05.6
ARU                                  SS       SS       15 27 15.4  -0.6
JMDO  Jabal Madar       130.06  81   P        SKPbc    15 11 02.7  -0.4
      SNR=7.2
SMDO  Samad             130.17  80   P        SKPbc    15 11 04.0 +0.3
      SNR=8.4
BIDO  Bidbid            130.34  79   P        SKPbc    15 11 04.6 +0.5
      SNR=8.4
AKTO  Aktyubinsk        130.72  44   PKIKP    PKPdf    15 07 56.1 +0.4
WSAR  Wadi Sarin        130.73  80   PKP      PKiKP    15 07 57.0  -0.4
      comp=Z,17nm,0.9s,baz=200,slow=4.1,SNR=10
WSAR                                 SKPbc    SKPab    15 11 06.1 +0.4
      comp=Z,27nm,1.1s,baz=267,slow=4.8,SNR=12
WSAR  Wadi Sarin        130.73  80   P        SKPbc    15 11 05.8 +0.2
      SNR=7.2
WBK   Wadi Bani Khal    130.89  81   P        SKPbc    15 11 06.8 +0.6
      SNR=8.0
WRA   Warramunga Arr    131.17 207   PKP      PKPdf    15 07 58.0 +0.4
      comp=Z,10nm,0.5s,baz=153,slow=1.8,SNR=59
WRA                                  SKPbc    SKPbc    15 11 06.7  -0.6
      comp=Z,6.1nm,0.9s,baz=148,slow=3.8,SNR=15
WRA   Warramunga Arr    131.17 207   PKIKP    PKPdf    15 07 58.0 +0.4
WRAB  Tennant Creek     131.17 207c iPKIKP    PKiKP    15 07 58.3  -0.2
WRAB                                 pmax     pmax
      comp=Z,63nm,1.7s
JLN   Jalan Bani Buh    131.18  81   P        SKPbc    15 11 07.5 +0.3
      SNR=6.3
TIXI  Tiksi             131.85 353  i PKIKP   PKPdf    15 07 57.0  -0.2
TIXI                                 pmax     pmax
      comp=Z,14nm,1.1s
GEYT  Alibeck           131.96  60   SKPbc    SKPbc    15 11 10.0 +0.4
      comp=Z,4.7nm,0.8s,baz=266,slow=2.4,SNR=6.8
AB31  Akbulak array     132.17  45  i PKIKP   PKiKP    15 07 59.3  -0.2
KRVT  Keravat (AS076    132.32 239   PKP      PKiKP    15 08 00.5  -0.5
      comp=Z,15nm,0.9s,baz=191,slow=19,SNR=6.1
PMG   Port Moresby      132.50 229   PKP      PKiKP    15 08 01.3  0.0
      comp=Z,16nm,1.0s,baz=113,slow=3.2,SNR=3.4
NRIK  Noril'sk          132.60  12   PKP      PKiKP    15 07 59.4  -0.4
      comp=Z,1.5nm,0.3s,baz=289,slow=9.9,SNR=6.1
NRIK  Noril'sk          132.60  12c iPKIKP    PKiKP    15 07 59.8  0.0
NRIK                                 pmax     pmax
      comp=Z,14nm,1.4s
SEY   Seymchan          133.37 336c iPKIKP    PKPdf    15 08 00.7 +0.4
SEY                                  pmax     pmax
      comp=Z,33nm,1.3s
PETK  Petropavlovsk-    135.81 322   PKhKP    PKPpre   15 07 58.4
      comp=Z,2.4nm,0.8s,baz=29,slow=3.4,SNR=4.5
PETK                                 PKP      PKiKP    15 08 06.1  -0.7
      comp=Z,6.3nm,0.5s,baz=159,slow=1.5,SNR=21
PETK                                 SKPbc    SKPbc    15 11 21.6  0.0
      comp=Z,11nm,1.0s,baz=64,slow=13,SNR=5.3
BRVK  Borovoye          137.17  37c iPKIKP    PKiKP    15 08 09.0  -0.6
BRVK                                 pmax     pmax
      comp=Z,4.0nm,0.8s
OTUK  Ortayu            140.31  43   PKIKP    PKiKP    15 08 15.0  -1.2
YAK   Yakutsk           140.68 348  ePKHKP    PKPpre   15 08 04.8
YAK                                  pmax     pmax
      comp=Z,18nm,1.0s
YAK                                  pmax     pmax
      comp=N,2.0nm,0.9s
YAK                                  pmax     pmax
      comp=E,3.0nm,1.1s
KK31  Karatay Array     140.71  51  i PKIKP   PKPdf    15 08 14.2  -0.3
KURK  Kurchatov         142.83  36   PKIKP    PKPdf    15 08 15.5  -2.5
KURBB Kurchatov Arra    142.83  36   PKP      PKPdf    15 08 15.5  -2.5
      comp=E,5.5nm,0.7s,baz=304,slow=3.3,SNR=16
KURBB                                PP       PP       15 11 33.6 +5.1
      comp=E,1.8nm,0.2s,baz=283,slow=5.0,SNR=4.3
KURBB Kurchatov Arra    142.83  36   PKIKP    PKPdf    15 08 14.6  -3.4
AAK   Ala-Archa         143.65  50   P        PKPdf    15 08 20.9 +0.9
      SNR=6.6
AAK   Ala-Archa         143.65  50   PKP      PKPbc    15 08 18.6 +0.7
      comp=E,7.6nm,0.9s,baz=223,slow=4.3,SNR=12
AAK                                  SKPbc    SKiKP    15 11 44.2  -0.2
      comp=E,1.7nm,0.6s,baz=329,slow=1.9,SNR=3.8
UCH   Uchtor            143.79  51   P        PKPbc    15 08 19.5 +0.8
      SNR=10
ZALV  Zalesovo Beam     143.85  28   PKP      PKPbc    15 08 18.4 +0.6
      comp=E,26nm,0.7s,baz=297,slow=4.8,SNR=110
ZALV                                 SKPbc    SKPbc    15 11 43.4 +0.1
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       comp=E,16nm,0.8s,baz=298,slow=3.2,SNR=18
KBK    Karagaybulak      143.97  50   P       PKPdf    15 08 19.9  -0.6
       SNR=6.3
BATI   Baumata           143.99 198   PKP     PKPdf    15 08 20.8  -0.4
       comp=E,91nm,0.6s,baz=206,slow=0.1,SNR=24
BATI   Baumata           143.99 198   PKP     PKPbc    15 08 19.6  +0.1
SOEI   Soe               144.24 200   PKP     PKPdf    15 08 21.4  -0.4
TKM2   Tokmak 2          144.34  50   P       PKPbc    15 08 20.5  +0.5
       SNR=9.4
TKM2   Tokmak 2          144.34  50   PKIKP   PKPab    15 08 18.9  -0.8
PALK   Pallekele         144.90 114   PKP     PKPbc    15 08 21.8  -0.6
       comp=E,22nm,0.9s,baz=350,slow=4.6,SNR=5.6
ULHL   Ulahol            145.00  50   P       PKPbc    15 08 20.0  -2.1
       SNR=6.8
SRPI   Serui, Papua      145.33 224   PKP     PKPdf    15 08 19.9  -3.6
KMPI   Kaimana, Papua    145.46 219   PKP     PKPdf    15 08 21.1  -2.6
KSH    Kashi             145.60  55   PKPbc   PKPab    15 08 24.6  +0.1
KSH                                   AMB     AMB
       comp=E,94nm,4.1s
MMRI   Maumere           145.88 197   PKP     PKPdf    15 08 24.6  +0.1
EDFI   Ende, Flores      145.91 196   PKP     PKPdf    15 08 23.9  -0.7
SHO    Shikotan          146.10 313  ePKIKP   PKPbc    15 08 24.5  -0.6
BOD    Bodaibo           146.61 359  ePKIKP   PKPdf    15 08 24.4  +0.1
BOD                                   pmax    pmax
       comp=Z,73nm,1.2s
PLAI   Plampang          146.61 189   PKP     PKPdf    15 08 26.3  +0.6
MAKZ   Makanchi          146.78  40   PKIKP   PKPdf    15 08 25.1  +0.1
IGBI   Denpasar          146.90 184   PKP     PKPbc    15 08 27.4  -0.8
MK31   Makanchi Array    146.97  40  i PKIKP  PKPdf    15 08 25.8  +0.5
MKAR   Makanchi Array    146.97  40   PKPbc   PKPdf    15 08 26.3  +0.9
       comp=Z,54nm,0.8s,baz=306,slow=1.7,SNR=109
MKAR                                  SKPbc   SKiKP    15 11 51.0  +0.1
       comp=Z,3.0nm,0.8s,baz=336,slow=2.7,SNR=4.7
YSS    Yuzh-Sakhalins    147.17 321  ePKIKP   PKPbc    15 08 27.1  -0.9
YSS                                   pmax    pmax
       comp=Z,60nm,0.8s
JAGI   Jajag, Banyuwa    147.29 183   PKP     PKPdf    15 08 27.7  +0.9
GMJI   Gumukmas          147.51 181   PKP     PKPdf    15 08 25.8  -1.4
PCJI   Pacitan           147.56 177   PKP     PKPdf    15 08 27.3   0.0
SRBI   Singaraja         147.62 185   PKP     PKPdf    15 08 27.1  -0.3
PWJI   Pagerwojo         147.75 178   PKP     PKPbc    15 08 30.7  +0.1
PWJI                                  PKP     PKiKP    15 08 31.2  -1.3
UGM    Wanagama          147.80 176   PKP     PKPdf    15 08 29.1  +1.4
GUMO   Guam              147.88 256   PKPbc   PKPbc    15 08 31.0  +0.2
       comp=Z,306nm,0.9s,baz=90,slow=1.7,SNR=14
YOGI   Yogyakarta        147.88 175   PKP     PKPbc    15 08 30.0  -0.9
WOJI   Wonogiri, Jawa    147.90 177   PKP     PKPbc    15 08 30.4  -0.6
GRNR   Gornyy            147.97 331⇓iPKHKP   PKPpre   15 08 20.2
GRNR                                  pmax    pmax
       comp=E,3.0nm,0.3s
GRNR                                  pmax    pmax
       comp=N,2.0nm,0.4s
GRNR                                  pmax    pmax
       comp=Z,3.0nm,0.3s
CNJI   Cibinong          148.00 169   PKP     PKPdf    15 08 29.4  +1.4
BLJI   Banyuglugur       148.03 182   PKP     PKPdf    15 08 29.1  +1.1
SKJI   Sukabumi          148.19 168   PKP     PKPdf    15 08 26.4  -1.9
KPJI   Karang Pucung     148.23 173   PKP     PKPbc    15 08 30.6  -1.2
LEM    Lembang           148.55 170   PKPbc   PKiKP    15 08 34.2  -0.1
       comp=Z,227nm,0.7s,baz=150,slow=0.7,SNR=3.9
LEM    Lembang           148.55 170   PKP     PKPdf    15 08 29.7  +0.6
SMRI   Semarang          148.65 176   PKP     PKiKP    15 08 34.3  -0.1
KMMI   Kalianget         148.71 182   PKP     PKPbc    15 08 31.8  -1.3
ZEA    Zeya              148.75 343  i PKIKP  PKPdf    15 08 28.6  +0.6
ZEA                                  e                 15 09 19.0
ZEA                                   pmax    pmax
       comp=Z,200nm,2.2s
ZEA                                   pmax    pmax
       comp=Z,40nm,1.6s
ZEA                                   MLR     MLR
       comp=Z,100nm,15.0s
SIJI   Sorong            149.12 218   PKP     PKPdf    15 08 30.9  +1.1
       comp=Z,65nm,0.7s,baz=16,slow=2.9,SNR=7.2
SIJI                                  PKPbc   PKiKP    15 08 35.1  -0.3
       comp=Z,65nm,0.7s,baz=127,slow=20,SNR=36
SIJI                                  PP      PP       15 12 04.2  -1.5
       comp=Z,5.4nm,0.9s,baz=88,slow=4.9,SNR=5.6
SWI    Sorong            149.13 218   PKP     PKPdf    15 08 27.7  -2.1
BLSI   Bandar Lampung    149.51 165   PKP     PKiKP    15 08 36.2  +0.1
LWLI   Liwa              149.55 163   PKP     PKPdf    15 08 32.6  +1.9
MNAI   Manna             149.85 160   PKP     PKPdf    15 08 29.5  -1.5
KAPI   Kappang           149.98 194   PKPbc   PKiKP    15 08 37.0  -0.1
       comp=Z,43nm,0.5s,baz=179,slow=2.4,SNR=21
KAPI   Kappang           149.98 194   PKIKP   PKiKP    15 08 37.0  -0.1
BNSI   Bone              150.49 195   PKP     PKPdf    15 08 32.2  +0.2
SANI   Sanana            150.73 208   PKP     PKPdf    15 08 31.5  -0.9
SPSI   Sidrap Palu       150.99 195   PKP     PKPdf    15 08 33.1  +0.3
KLR    Kul'dur           151.10 334   PKP     PKPdf    15 08 32.1  +0.3
       comp=Z,5.8nm,0.9s,baz=20,slow=3.6,SNR=14
KLR                                   PKPbc   PKiKP    15 08 38.1  -0.2
       comp=Z,43nm,0.8s,baz=20,slow=3.2,SNR=69
MOY    Mondy             151.32  15  ePKIKP   PKPdf    15 08 33.8  +1.5
MOY                                   pmax    pmax
       comp=Z,89nm,1.5s
IRK    Irkutsk           151.46  11  ePKIKP   PKPdf    15 08 32.3   0.0
IRK                                  e                 15 09 24.6
IRK                                   pmax    pmax
       comp=Z,70nm,2.0s
TEY    Ternei            151.77 323⇓ePKIKP   PKiKP    15 08 39.7  -0.1
TEY                                   pmax    pmax
       comp=N,10.0nm,0.8s
TEY                                   pmax    pmax
       comp=Z,50nm,0.8s
TEY                                   pmax    pmax
       comp=N,10.0nm,0.8s
WMQ    Urumqi            151.79  40  ePKPbc   PKPdf    15 08 33.3  +0.1
TTSI   Tana Toraja       151.86 195   PKP     PKPdf    15 08 33.8  -0.3
GSI    Gunungsitoli      152.73 145   PKP     PKPdf    15 08 31.6  -3.8
ZAK    Zakamensk         153.04  13  ePKIKP   PKPdf    15 08 34.8   0.0
ZAK                                   pmax    pmax
       comp=Z,12nm,1.4s
JCJ    Chichijima        153.40 282   PKPbc   PKiKP    15 08 43.7  -0.1
       comp=Z,17nm,0.4s,baz=184,slow=19,SNR=8.4
DANN   Dangsing          153.75  75  eP       PKPdf    15 08 37.1  +0.3
GKN    Gorkha            154.53  76  eP       PKPdf    15 08 37.8  +0.1
RPSI   Rantau Prapat     154.61 146           PKPdf    15 08 38.2  +0.2
PSI    Prapat            154.70 146   PKP     PKPdf    15 08 38.2  -0.1
       comp=Z,1.4nm,0.4s,baz=216,slow=9.6,SNR=3.6
PSI                                   PKPbc   PKPbc    15 08 46.4  -0.6
       comp=Z,3.7nm,0.5s,baz=264,slow=4.1,SNR=5.6
PSI                                   PKPab   PKPab    15 09 02.6  +0.3
       comp=Z,19nm,0.8s,baz=226,slow=4.7,SNR=15
USRK   Ussuriysk Ar.     154.78 326   PKP     PKPdf    15 08 37.5  +0.2
       comp=Z,4.8nm,0.9s,baz=277,slow=1.5,SNR=14
USRK                                  PKPbc   PKiKP    15 08 46.6  +0.5
       comp=Z,12nm,1.0s,baz=24,slow=3.0,SNR=12
USRK                                  PKPab   PKPab    15 09 02.1  +0.4
       comp=Z,4.4nm,0.7s,baz=42,slow=2.1,SNR=4.6
MJAR   Matsushiro Arr    155.04 305   PKP     PKPdf    15 08 38.6  +0.6
       comp=Z,3.2nm,1.0s,baz=104,slow=2.0,SNR=9.2
MJAR                                  PKPbc   PKPdf    15 08 47.3  +9.3
       comp=Z,3.8nm,0.5s,baz=107,slow=1.7,SNR=11
MJAR                                  PKPab   PKPab    15 09 03.8  +0.6
       comp=Z,29nm,0.9s,baz=83,slow=3.1,SNR=27
MJAR                                  PP      PP       15 12 39.5  -0.5
       comp=Z,5.0nm,1.2s,baz=88,slow=4.0,SNR=5.6
KKN    Kakani            155.10  76  eP       PKPdf    15 08 38.8  +0.2
PKIN   Phulchoki         155.21  77  eP       PKPdf    15 08 38.4  -0.4
PKI    Pulchoki          155.22  77  eP       PKPdf    15 08 38.4  -0.5
MDJ    Mudanjiang        155.62 330   PKP     PKPdf    15 08 39.3  +0.8
BNX    BinXian           155.66 335 ⇑PKP     PKPdf    15 08 38.3  -0.2
SONM   Songino Array     156.08  11   PKP     PKPdf    15 08 40.1  +0.9
       comp=Z,4.4nm,0.9s,baz=297,slow=1.1,SNR=16
SONM                                  PKPab   PKPab    15 09 07.6  +0.3
       comp=Z,5.9nm,0.8s,baz=320,slow=4.3,SNR=9.0
RAMN   Ramite            156.29  78  eP       PKPdf    15 08 40.3  +0.1
       comp=Z,79nm,1.2s
TAPN   Taplejung         157.27  77  eP       PKPdf    15 08 41.6  +0.1
       comp=Z,49nm,1.4s
CN2    Changchun         158.04 335   PKP     PKPdf    15 08 41.6   0.0
CN2                                   PP      PP       15 12 59.5  +4.0
CN2                                   AMB     AMB
       comp=Z,200nm,5.0s
GOMU   GeErMu            160.58  49   PKP     PKPdf    15 08 46.0  +0.7
GOMU                                  pPKP    PKPab    15 09 18.3  -9.3
GOMU                                  sPKP             15 09 43.0
GOMU                                  AMB     AMB
       comp=Z,57nm,6.3s
GTA    Gaotai            161.47  33 ⇓PKP     PKPdf    15 08 46.5  +0.7
KSRS   Korea Array       161.65 319   PKP     PKPdf    15 08 46.1  +0.3
       comp=Z,8.5nm,1.0s,baz=82,slow=1.0,SNR=50
KSRS                                  PKPab   PKPab    15 09 33.0  +1.4
       comp=Z,6.0nm,0.9s,baz=48,slow=4.2,SNR=16
JNU    Nakatsue          161.92 303   PKP     PKPdf    15 08 48.4  +2.1
       comp=Z,10nm,0.8s,baz=86,slow=0.4,SNR=3.3
JNU                                   PKPab   PKPab    15 09 32.9  -0.3
       comp=Z,12nm,0.9s,baz=73,slow=7.3,SNR=3.8
HHC    Hu-ho-hao-te      163.57   3  ePKP     PKPdf    15 08 45.5  -2.3
HHC                                   LR      LR
       comp=Z,200nm,14.0s
HHC                                   LR      LR
       comp=Z,330nm,15.2s
HHC                                   LR      LR
       comp=Z,340nm,15.2s
CMAR   Chiang Mai Arr    165.83 112   PKP     PKPdf    15 08 50.8  +0.5
       comp=Z,3.5nm,1.0s,baz=248,slow=2.1,SNR=23
CMAR                                  PKPab   PKPab    15 09 50.5  -0.3
       comp=Z,3.2nm,0.9s,baz=249,slow=4.8,SNR=12
LZH    Lanzhou           166.05  31  ePKP     PKPdf    15 08 51.5  +1.4
HNS    HongShan          166.94 353 ⇑PKP     PKPdf    15 08 52.1  +1.6
CD2    Chengdu           169.72  49   PKP     PKPdf    15 08 52.8  +0.1
PZH    PanZhiHua         169.82  76   PKP     PKPdf    15 08 53.4  +0.4
XAN    Xi'an             169.83  18   PKP     PKPdf    15 08 53.4  +0.7
XAN                                   pPKP    pPKPdf   15 09 35.8  -1.2
XAN                                   PKPab   PKPab    15 10 07.5  -0.3
XAN                                   SKKS             15 20 27.8
XAN                                   SS      SS       15 34 51.0  +10
XAN                                   AMB     AMB
       comp=Z,210nm,6.2s
NJ2    Nanjing           170.69 326  ePKP     PKPdf    15 08 53.8  +0.7
GYA    Guiyang           174.11  68 ⇑PKP     PKPdf    15 08 55.4  +0.5
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IDC ***18*** *14:59:13.6±0.9, 28.°99N×102.°34E, h0^{km}, mb3.7/9, mbtmp3.7/11, ML3.5/2, MS3.1/1 Error ellipse: s-maj=21.9km s-min=16.9km az=59.0*

ISC 18 14:59:18.7±0.8**, 29.°0N**±0.°1×**102.°4E**±0.°1**, h35^{km}, n12, σ0.^{s}89**/12**, mb3.6**/10**, Sichuan**

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Code   Station Name         Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC       h  m  s    ISC
CMAR   Chiang Mai Arr     10.97 197   Pn      Pn       15 01 53.3  +0.1
       baz=11,slow=15,SNR=1.4
CMAR                                  Lg      Lg       15 04 59.8
       0.1nm,0.3s,baz=14,slow=31,SNR=2.7
       0.1nm,0.3s
SONM   Songino Array      19.05   8   P       Pn       15 03 39.2  +0.3
       0.5nm,0.3s,baz=192,slow=12,SNR=11
       2.5nm,0.7s
KSRS   Korea Array        22.92  62   P       P        15 04 19.9  +0.3
       3.3nm,0.8s,baz=249,slow=9.6,SNR=22
KSRS                                  LR      LR       15 14 16.8
       comp=Z,51nm,20.0s,baz=225,slow=39
       3.3nm,0.8s
JOW    Kunigami           22.98  89   P       P        15 04 20.3  -0.1
       14nm,0.4s,baz=275,slow=9.9,SNR=13
MKAR   Makanchi Array     23.68 324   P       P        15 04 27.6  +0.5
       0.5nm,0.4s,baz=128,slow=11,SNR=10
       0.5nm,0.4s
AAK    Ala-Archa          26.23 309   P       P        15 04 51.0  +0.5
       1.5nm,0.6s,baz=162,slow=6.4,SNR=2.3
       1.5nm,0.6s
ZALV   Zalesovo Beam      28.01 338   P       P        15 05 06.3  +0.2
       0.4nm,0.4s,baz=142,slow=12,SNR=2.2
       0.4nm,0.4s
KURBB  Kurchatov Arra     28.08 327   P       P        15 05 05.9  -0.9
       1.4nm,0.9s,baz=132,slow=9.9,SNR=12
       1.4nm,0.9s
KLR    Kul'dur            30.15  40   P       P        15 05 25.6  +0.4
       0.8nm,0.7s,baz=240,slow=8.9,SNR=3.8
       0.8nm,0.7s
WRA    Warramunga Arr     57.63 144   P       P        15 09 07.0  +1.5
       0.5nm,0.4s,baz=333,slow=8.1,SNR=2.4
       0.5nm,0.4s
ASAR   Alice Springs      60.54 147   P       P        15 09 24.1  -1.6
       0.2nm,0.4s,baz=327,slow=7.0,SNR=1.1
       0.2nm,0.4s
ILAR   Eielson Array      72.36  25   P       P        15 10 39.9  -0.9
       0.3nm,0.6s,baz=287,slow=4.0,SNR=4.5
       0.3nm,0.6s
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MOS ***18*** *15:07:45.6±1.1, 32.°74S×109.°08W, h10^{km}, mb5.2/25, Error ellipse: s-maj=12.5km s-min=9.9km az=75.9*

IDC ***18*** *15:07:45.5±0.4, 32.°77S×109.°27W, h0^{km}, mb4.8/18, mbtmp4.8/19, ML4.1/1, MS4.6/43, Error ellipse: s-maj=18.0km s-min=13.5km az=83.0*

NEIC ***18*** *15:07:47.5±1.3, 32.°80S±0.°09×109.°2W±0.°2, h10^{km}±1^{km}, mb5.3/400, Error ellipse: s-maj=21.8km s-min=14.6km az=268.0*

BJI ***18*** *15:07:52.0±0.0, 32.°80S×109.°20W, h30^{km}, mB5.5/3, Ms5.5/7, Ms7 5.1/7*

GCMT ***18*** *15:07:53.5±0.2, 32.°87S±0.°01×109.°14W±0.°01, h12^{km}, MW5.2/126, Moment Tensor Solution. s65,c99; s126,c216; Duration: 1.^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.53±.02; $M_{\theta\theta}$0.55±.01; $M_{\phi\phi}$-0.02±.02; $M_{r\theta}$0.36±.04; $M_{\theta\phi}$-0.56±.01; $M_{\phi r}$0.14±.05; Best double couple: $M_0$0.86300×10^{17} NP1:ϕ_s153.00000°, δ47.00000°, λ-38.00000°. NP2:ϕ_s272.00000°, δ63.00000°, λ-130.00000°. Principal axes: T 0.9330, Plg10.0000°, Azm29.0000°; N -0.1420, Plg35.0000°, Azm292.0000°; P -0.7920, Plg54.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 15:07:47.1±0.3**, 32.°76S**±0.°06×**109.°15W**±0.°07**, h10^{km}, n801, σ0.^{s}98**/672**, mb5.3**/210**, MS4.7**/46**, 6C-7D, Southern East Pacific Rise**

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Code   Station Name         Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC       h  m  s    ISC
VA02   Isla de Pascua      5.58 357   Pn      Pn       15 09 11.5  +1.3
RPN    Rapa Nui            5.61 358   Pn      Pn       15 09 10.9  +0.2
       5.5nm,0.3s,baz=124,slow=7.1,SNR=5.2
RPN                                   Sn      Sn       15 10 10.5  -4.7
       1.4nm,0.3s,baz=105,slow=8.5,SNR=1.5
RPN                                   LR      LR       15 10 55.1
       comp=Z,10µm,18.6s,baz=170,slow=34
       54nm,0.6s
H03S2  Juan Fernandez     25.24 101   T       T        15 39 36.7
       baz=264,SNR=2456
H03S3  Juan Fernandez     25.26 101   T       T        15 39 38.2
       baz=264,SNR=1553
H03S1  Juan Fernandez     25.26 101   T       T        15 39 37.0
       baz=264
H03N2  Juan Fernandez     25.28 100   T       T        15 39 34.3
       baz=267,slow=73
H03N3  Juan Fernandez     25.29 100   T       T        15 39 35.7
       baz=267,slow=73
H03N1  Juan Fernandez     25.30 100   T       T        15 39 35.3
       baz=267,slow=73
LR04   Corral             29.50 114   P       P        15 13 52.5  +1.0
LR04                                  IAmb    IAmb     15 13 53.1
       comp=Z,44nm,1.4s
LL05   Los Muermos        29.57 117   P       P        15 13 52.7  +0.6
GO07   Milladeo Hill,     29.64 121   P       P        15 13 53.6  +1.0
LR03   Panguipulli        30.33 114   P       P        15 13 58.9  +0.1
LR03                                  IAmb    IAmb     15 14 01.5
       comp=Z,65nm,1.1s
LL04   Puerto Octay       30.34 116   P       P        15 13 58.9  +0.1
LL04                                  IAmb    IAmb     15 14 02.6
       comp=Z,58nm,1.3s
LL03   Petrohue           30.35 117   P       P        15 13 58.6  -0.4
AY01   Puyuhuapi          30.57 123   P       P        15 13 59.7  -1.1
AY01                                  IAmb    IAmb     15 14 05.0
       comp=Z,33nm,1.2s
GO05   Huala              30.86 105   P       P        15 14 03.7  +0.1
GO05                                  IAmb    IAmb     15 14 04.7
       comp=Z,43nm,1.2s
LL02   Futaleuf           30.96 121   P       P        15 14 05.2  +0.8
LL02                                  IAmb    IAmb     15 14 07.2
       comp=Z,102nm,1.4s
COYC   Coyhaique          31.18 125   P       P        15 14 06.4  +0.2
COYC                                  IAmb    IAmb     15 14 08.2
       comp=Z,49nm,1.2s
ML02   Panimavida         31.20 106   P       P        15 14 06.5  -0.1
VA05   Santo Domingo      31.31 102   P       P        15 14 07.6  +0.1
VA05                                  IAmb    IAmb     15 14 08.6
       comp=Z,35nm,1.1s
BO01   Tunca              31.63 104   P       P        15 14 09.7  -0.6
BO01                                  IAmb    IAmb     15 14 12.5
       comp=Z,81nm,1.4s
PLCA   Paso Flores        31.73 116   P       P        15 14 12.6  +1.3
       comp=Z,28nm,1.0s,baz=272,slow=9.1,SNR=53
PLCA                                  LR      LR       15 23 45.3
       comp=Z,1µm,18.8s,baz=279,slow=30
       comp=Z,28nm,1.0s
PLCA   Paso Flores        31.73 116   P       P        15 14 11.3   0.0
PLCA                                  IAmb    IAmb     15 14 13.4
       comp=Z,40nm,1.0s
PLCA   Paso Flores        31.73 116   P       P        15 14 11.3   0.0
PLCA                                  pmax    pmax
       comp=Z,40nm,1.0s
PLCA   Paso Flores        31.73 116  eP       P        15 14 12.6  +1.3
VA06   Catapilco          31.75 100   P       P        15 14 11.1  -0.4
VA06                                  IAmb    IAmb     15 14 13.5
       comp=Z,72nm,1.4s
MT02   Curacav            31.76 101   P       P        15 14 11.2  -0.3
MT02                                  IAmb    IAmb     15 14 13.8
       comp=Z,36nm,1.4s
MT09   Talagante          31.80 102   P       P        15 14 11.3  -0.7
MT09                                  IAmb    IAmb     15 14 13.0
       comp=Z,26nm,1.1s
CO06   Fray Jorge         31.87  96   P       P        15 14 11.9  -0.6
BO04   La Punta           32.08 103   P       P        15 14 13.1  -1.3
BO04                                  IAmb    IAmb     15 14 16.2
       comp=Z,69nm,1.2s
PEL    Peldehue           32.16 101   P       P        15 14 14.9  -0.1
PEL    Peldehue           32.16 101   P       P        15 14 14.9  -0.1
PEL                                   pmax    pmax
       comp=Z,109nm,1.5s
VA03   San Esteban        32.34 101   IAmb    IAmb     15 14 18.8
       comp=Z,83nm,1.4s
LMEL   Las Melosas        32.44 103   P       P        15 14 17.8  +0.1
GO09   Cerro Castillo     32.56 136   P       P        15 14 18.4  +0.1
GO09                                  IAmb    IAmb     15 14 20.1
       comp=Z,47nm,1.1s
MG05   Puerto Natales     32.61 136   P       P        15 14 18.6  -0.1
MG05                                  IAmb    IAmb     15 14 20.3
       comp=Z,43nm,1.0s
GO04   Tololo Observa     32.69  96   P       P        15 14 19.7  -0.3
AC04   Llanos de Chal     33.00  92   P       P        15 14 22.2  -0.3
AC04                                  IAmb    IAmb     15 14 23.5
       comp=Z,41nm,1.1s
LCO    Las Campanas       33.08  94   P       P        15 14 23.1  -0.4
LCO    Las Campanas       33.08  94   P       P        15 14 23.1  -0.4
LCO                                   pmax    pmax
       comp=Z,107nm,1.3s
CO01   Juntas del Tor     33.33  96   P       P        15 14 25.7   0.0
CO01                                  IAmb    IAmb     15 14 27.2
       comp=Z,30nm,1.1s
AC06   Mina Casimiro      33.87  91   IAmb    IAmb     15 14 32.5
       comp=Z,101nm,1.5s
GO03   Copiap             33.90  92   IAmb    IAmb     15 14 32.4
       comp=Z,68nm,1.4s
AC01   Pan de Azucar      34.07  89   P       P        15 14 31.4  -0.4
AC01                                  IAmb    IAmb     15 14 33.4
       comp=Z,56nm,1.1s
ZON    Zonda              34.14  99   P       P        15 14 32.1  -0.3
ZON                                   IAmb    IAmb     15 14 34.2
       comp=Z,57nm,1.2s
ZON    Zonda              34.14  99   P       P        15 14 32.1  -0.3
ZON                                   pmax    pmax
       comp=Z,57nm,1.2s
AC02   Maricunga          35.07  91   P       P        15 14 40.8  -0.2
PB10   IPOC Station P     35.10  85   P       P        15 14 41.1  +0.4
PB10                                  IAmb    IAmb     15 14 44.0
       comp=Z,37nm,1.0s
GO02   Mina Guanaco       35.27  88   P       P        15 14 42.8  +0.2
PB04   IPOC Station P     35.92  83   IAmb    IAmb     15 14 50.1
       comp=Z,60nm,1.0s
USHA   Ushuaia            36.03 140   P       P        15 14 48.4  +0.2
       comp=Z,6.2nm,1.1s,baz=290,slow=8.9,SNR=5.0
USHA                                  LR      LR       15 26 26.8
       comp=Z,604nm,18.0s,baz=228,slow=31
       comp=Z,6.2nm,1.1s
NNA    Nana               36.10  63   LR      LR       15 25 33.7
       comp=Z,1µm,20.2s,baz=228,slow=30
NNA    Nana               36.10  63   P       P        15 14 49.0  -0.4
NNA                                   IAmb    IAmb     15 14 50.9
       comp=Z,40nm,1.1s
NNA    Nana               36.10  63ceP       P        15 14 50.4  +1.0
NNA                                   pmax    pmax
       comp=Z,71nm,1.3s
PB15   IPOC Station P     36.13  85   P       P        15 14 50.4  +0.6
PB06   IPOC Station P     36.25  84   P       P        15 14 51.3  +0.5
PB07   IPOC Station P     36.41  82   IAmb    IAmb     15 14 53.9
       comp=Z,35nm,1.1s
PB02   IPOC Station P     36.58  82   IAmb    IAmb     15 14 56.1
       comp=Z,114nm,1.3s
TA01   Diego Aracena      36.68  81   P       P        15 14 54.2  -0.1
TA01                                  IAmb    IAmb     15 14 56.5
       comp=Z,102nm,1.4s
LVC    Limon Verde        36.85  84   LR      LR       15 26 03.1
       comp=Z,764nm,18.9s,baz=250,slow=30
LVC    Limon Verde        36.85  84   P       P        15 14 56.6  +0.5
LVC    Limon Verde        36.85  84   P       P        15 14 56.6  +0.5
LVC                                   pmax    pmax
       comp=Z,118nm,1.2s
LVC    Limon Verde        36.85  84  eP       P        15 14 57.7  +1.6
PB09   IPOC Station P     36.91  83   P       P        15 14 57.2  +0.7
PB01   IPOC Station P     37.04  82   IAmb    IAmb     15 15 00.1
       comp=Z,106nm,1.3s
PB12   IPOC Station P     37.49  78   P       P        15 15 01.6  +0.3
PB12                                  IAmb    IAmb     15 15 03.2
       comp=Z,132nm,1.4s
PB11   IPOC Station P     37.49  80   IAmb    IAmb     15 15 03.4
       comp=Z,100nm,1.4s
PB08   IPOC Station P     37.73  81   P       P        15 15 04.4  +0.7
PB08                                  IAmb    IAmb     15 15 06.1
       comp=Z,63nm,1.1s
ATAH   Atahualpa          38.27  55   LR      LR       15 26 52.3
       comp=Z,1µm,19.0s,baz=230,slow=30
PB16   IPOC Station P     38.30  78   P       P        15 15 08.7   0.0
LPAZ   La Paz             40.48  76   P       P        15 15 28.3  +1.4
       comp=Z,15nm,0.8s,baz=247,slow=5.0,SNR=41
LPAZ                                  LR      LR       15 29 16.1
       comp=Z,443nm,18.1s,baz=235,slow=32
       comp=Z,15nm,0.8s
LPAZ   La Paz             40.48  76   P       P        15 15 27.5  +0.6
LPAZ   La Paz             40.48  76   P       P        15 15 27.5  +0.6
LPAZ                                  pmax    pmax
       comp=Z,26nm,0.9s
LPAZ   La Paz             40.48  76  eP       P        15 15 27.8  +0.9
LPAZ   La Paz             40.48  76  eP       P        15 15 28.4  +1.5
EFI    East Falkland      41.33 133  i P      P        15 15 33.1  +0.3
EFI                                   pmax    pmax
       comp=Z,29nm,1.0s
CZSB   Cruzeiro do Su     41.95  62  eP       P        15 15 38.8  +0.4
PMSA   Palmer Station     42.15 153   LR      LR       15 28 14.9
       comp=Z,158nm,19.0s,baz=296,slow=29
SMAI   San Martin Ant     42.80 158   P       P        15 15 45.7  +1.1
OTAV   Otavalo            43.75  48   P       P        15 15 53.6  +0.1
OTAV                                  IAmb    IAmb     15 15 56.4
       comp=Z,73nm,1.5s
OTAV   Otavalo            43.75  48   P       P        15 15 53.6  +0.1
OTAV                                  pmax    pmax
       comp=Z,73nm,1.5s
OTAV   Otavalo            43.75  48  eP       P        15 15 54.8  +1.3
OTAV   Otavalo            43.75  48  eP       P        15 15 55.5  +2.0
ITQB   Itaqui             44.65 101   P       P        15 15 59.6  -0.4
ITQB   Itaqui             44.65 101  eP       P        15 16 00.1  +0.1
CPUP   Villa Florida      45.17  96   P       P        15 16 03.8  -0.4
       comp=Z,27nm,1.1s,baz=260,slow=7.6,SNR=20
CPUP                                  LR      LR       15 31 38.3
       comp=Z,706nm,20.5s,baz=254,slow=32
       comp=Z,27nm,1.1s
CPUP   Villa Florida      45.17  96   P       P        15 16 03.5  -0.7
CPUP                                  IAmb    IAmb     15 16 05.3
       comp=Z,59nm,1.4s
CPUP   Villa Florida      45.17  96   P       P        15 16 03.5  -0.7
CPUP                                  pmax    pmax
       comp=Z,59nm,1.4s
CPUP   Villa Florida      45.17  96  eP       P        15 16 03.8  -0.4
GCUF   Volcan Galeras     45.21  48  eP       P        15 16 04.4  -0.8
ETMB   Extrema            45.63  70  eP       P        15 16 07.5  -0.5
GR1C   Gorgona, Isla      46.10  46  eP       P        15 16 10.1  -1.5
TBTG   Tabatinga, AM      46.37  61  eP       P        15 16 13.4  -0.4
SOTA   Rioblanco          46.37  48  eP       P        15 16 14.9  +0.6
PLTB   Pedras Altas       46.51 105   P       P        15 16 14.5  -0.3
PLTB   Pedras Altas       46.51 105  eP       P        15 16 14.4  -0.4
PCON   Cinco Dias         46.66  48  eP       P        15 16 16.9  +0.2
CPSB   Cacapava Do Su     47.05 103  eP       P        15 16 18.9  -0.1
GARC   Garzon, Huila      47.12  49⇓eP       P        15 16 18.8  -1.1
MARP   Paez Belalcaza     47.33  48  eP       P        15 16 20.7  -0.9
RIOS   Rincon, Osa        47.92  35   IAmb    IAmb     15 16 30.9
       comp=Z,41nm,1.1s
YOTC   Yotoco, Valle      47.98  47  eP       P        15 16 26.5   0.0
CACAO  El Cacao, Vera     48.12  39  eP       P        15 16 26.5  -0.9
MACC   Macarena, Meta     48.15  51  eP       P        15 16 29.4  +1.7
PTLB   Pontes e Lacer     48.34  81  eP       P        15 16 29.2  +0.1
BRU2   Volcan             48.41  36  eP       P        15 16 31.3  +1.5
SRBA   San Rafael, Bu     48.46  35   IAmb    IAmb     15 16 32.3
       comp=Z,24nm,1.2s
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ORTG  Ortega, Santa     48.47  32   IAmb   IAmb   15 16 33.0
            comp=Z,26nm,1.0s
SAML  Samuel            48.55  71   P      P      15 16 29.9  -0.9
SAML                                IAmb   IAmb   15 16 31.9
            comp=Z,28nm,1.1s
SAML  Samuel            48.55  71   P      P      15 16 29.9  -0.9
SAML                                pmax   pmax
            comp=Z,28nm,1.1s
ORTC  Ortega, Tolima    48.60  48  eP      P      15 16 31.3  +0.1
MCR1  Marechal Candi    48.63  95  eP      P      15 16 31.5  +0.2
JTS   Las Juntas de     48.64  33   LR     LR     15 31 56.6
            comp=Z,3μm,19.1s,baz=264,slow=30
JTS   Las Juntas de     48.64  33   P      P      15 16 33.1  +1.7
JTS                                 IAmb   IAmb   15 16 35.1
            comp=Z,51nm,1.2s
JTS   Las Juntas de     48.64  33  i P     P      15 16 31.5  +0.1
JTS                                 pmax   pmax
            comp=Z,22nm,1.0s
JTS   Las Juntas de     48.64  33  eP      P      15 16 33.2  +1.8
PRAC  Prado             48.67  48  eP      P      15 16 30.3  -1.4
PLMC  San Jos del P     48.74  46  eP      P      15 16 30.3  -1.9
VILB  Vilhena           48.74  78  eP      P      15 16 32.3   0.0
AZU   Azuero            48.80  39  eP      P      15 16 34.2  +1.5
AQDB  Aquidauana        48.87  89  eP      P      15 16 33.2   0.0
ITAB  Concordia         49.19  99  eP      P      15 16 34.4  -1.2
CNLB  Canela            49.53 102  eP      P      15 16 38.8  +0.6
CBOC  Ciudad Bolivar    49.66  46  eP      P      15 16 39.9  +0.5
VILC  Villavicencio,    49.74  49  eP      P      15 16 39.9   0.0
ROSC  El Rosal          49.90  48   P      P      15 16 43.9  +2.4
            comp=Z,47nm,0.8s,baz=233,slow=2.2,SNR=20
ROSC                                LR     LR     15 34 40.4
            comp=Z,917nm,18.2s,baz=234,slow=32
            comp=Z,47nm,0.8s
ROSC  El Rosal          49.90  48  eP      P      15 16 43.8  +2.3
CHIC  Chingaza          50.11  49  eP      P      15 16 44.8  +1.6
NORC  Norcasia          50.12  47  eP      P      15 16 41.9  -0.9
PTGB  Pitanga           50.18  96  eP      P      15 16 43.4  +0.1
BCIP  Isla Barro Col    50.19  39  eP      P      15 16 42.8  -0.4
HELC  Santa Helena      50.21  46  eP      P      15 16 44.8  +0.9
BOAB  BOACO BROADBAN50.24      30   P      P      15 16 43.8  +0.2
TRCB  Terra Rica        50.47  94   P      P      15 16 44.6  -0.8
TRCB  Terra Rica        50.47  94  eP      P      15 16 45.6  +0.1
MATN  Matagalpa         50.56  30   P      P      15 16 46.3  +0.2
MATN                                IAmb   IAmb   15 16 48.7
            comp=Z,25nm,1.1s
MTO3  Montecristo       50.56  25   IAmb   IAmb   15 16 49.4
            comp=Z,43nm,1.4s
SPBC  San Pablo de B    50.68  48  eP      P      15 16 45.7  -1.4
PTGC  Puerto Gaitan,    50.81  51  eP      P      15 16 48.6  +0.6
PP1B  Ponte de Pedra    50.86  87  eP      P      15 16 48.0  -0.4
SALV  Santo Antonio     50.99  84  eP      P      15 16 49.6  +0.2
TGUH  Tegucigalpa,Un    51.03  28  eP      P      15 16 50.5  +0.8
TLIG  Tlapa             51.05  13   P      P      15 16 51.1  +1.4
TLIG                                IAmb   IAmb   15 16 54.7
            comp=Z,57nm,1.3s
PTBC  PUERTO BERRIO,    51.14  47  eP      P      15 16 50.5  +0.1
TER01 Tubaro-SC         51.22 102  eP      P      15 16 50.9  -0.1
CMIG  Matias Romero     51.41  18   P      P      15 16 52.5  +0.2
            comp=Z,5.2nm,1.0s,baz=204,slow=7.6,SNR=5.8
CMIG                                LR     LR     15 33 35.7
            comp=Z,905nm,18.1s,baz=182,slow=30
            comp=Z,5.2nm,1.0s
UREC  San Jos de Ur     51.45  45  eP      P      15 16 52.4  -0.3
RUSC  La Rusia          51.49  48  eP      P      15 16 53.4  -0.2
ZARC  Zaragoza, Cauc    51.64  45   P      P      15 16 54.0  -0.2
ZARC  Zaragoza, Cauc    51.64  45  eP      P      15 16 53.4  -0.8
NBRS  Nobres            51.70  82  eP      P      15 16 54.9  +0.1
BARC  Barichara         51.97  48  eP      P      15 16 54.4  -2.5
BRRC  Barranca, Sant    52.04  47  eP      P      15 16 58.2  +1.1
C2SB  Chapadao do Su    52.04  89  eP      P      15 16 58.4  +1.2
PCMB  Pacaembu          52.12  93  eP      P      15 16 58.3  +0.5
PDRB  Porto dos Gac     52.32  79  eP      P      15 16 59.4   0.0
TIJ01 Guaruva-PR        52.50  98  eP      P      15 16 59.1  -1.6
PETF  Flores            52.72  23   IAmb   IAmb   15 17 04.7
            comp=Z,48nm,1.1s
FRTB  Fartura           52.82  96  eP      P      15 17 03.2  +0.2
SJCC  San Jacinto, C    53.37  43  eP      P      15 17 07.8  +0.8
CLDB  Colider           53.49  79  eP      P      15 17 07.4  -0.6
DVLD  Doverlandia       53.60  87  eP      P      15 17 09.1  +0.3
ITRB  Iturama           53.71  91  eP      P      15 17 10.1  +0.6
MACA  Manacapuru-AM     54.03  67  eP      P      15 17 11.4  -0.5
ARAG  Araguaiana, MT    54.34  86  eP      P      15 17 14.2  -0.1
PET01 Itanhaem-SP       54.35  98  eP      P      15 17 14.0  -0.2
SPB   Sao Paulo         54.51  97  eP      P      15 17 15.2  -0.1
BB19B Bebedouro         54.65  94  eP      P      15 17 16.9  +0.4
RCLB  Rio Claro- Sao    54.91  96  eP      P      15 17 18.1  -0.2
SMRC  Santa Marta, M    54.94  43  eP      P      15 17 18.4   0.0
BELA  Belgrano 2        54.98 166   P      P      15 17 17.2  -0.8
VAO   Valinhos          55.14  97  eP      P      15 17 20.0   0.0
SDV   Santo Domingo     55.33  48   LR     LR     15 37 20.1
            comp=Z,1μm,21.5s,baz=222,slow=32
SDV   Santo Domingo     55.33  48   P      P      15 17 20.5  -1.0
SDV                                 IAmb   IAmb   15 17 21.9
            comp=Z,50nm,1.1s
SDV   Santo Domingo     55.33  48  eP      P      15 17 20.3  -1.2
SDV   Santo Domingo     55.33  48  eP      P      15 17 20.9  -0.6
ZAIG  Zacatecas         55.57   7   P      P      15 17 25.1  +1.9
CRJC  Cerrejon, Guaj    55.61  45  eP      P      15 17 23.2  -0.2
PARB  Paraibuna         56.12  98  eP      P      15 17 27.1   0.0
IPMB  Ipameri, GO       56.30  91  eP      P      15 17 27.9  -0.5
SLP01 Ubatuba-SP        56.52  98  eP      P      15 17 30.4  +0.5
LPIG  La Paz            56.55 359   LR     LR     15 35 59.9
            comp=Z,474nm,19.0s,baz=196,slow=30
SNDB  Serra Nova Dou    56.65  83  eP      P      15 17 30.4  -0.4
SBA   Scott Base        57.00 195   P      P      15 17 32.6  +0.2
SBA   Scott Base        57.00 195   P      P      15 17 32.6  +0.2
SBA                                 pmax   pmax
            comp=Z,9.0nm,1.1s
BAUV  El Baul           57.03  51   P      P      15 17 32.5  -0.9
ITTB  Itaituba          57.21  72  eP      P      15 17 33.1  -1.7
QSPA  South Pole Qui    57.44 180   P      P      15 17 36.1  +0.3
            comp=Z,2.6nm,0.9s,baz=125,slow=2.8,SNR=14
QSPA                                LR     LR     15 38 58.3
            comp=Z,667nm,19.0s,baz=111,slow=33
            comp=Z,2.6nm,0.9s
QSPA  South Pole Qui    57.44 180   P      P      15 17 35.5  -0.3
QSPA                                IAmb   IAmb   15 18 02.4
            comp=Z,31nm,1.4s
BDFB  Brasilia          57.57  88   P      P      15 17 37.9  +0.4
            comp=Z,55nm,1.1s,baz=244,slow=6.2,SNR=28
BDFB                                LR     LR     15 40 20.1
            comp=Z,429nm,18.1s,baz=273,slow=34
            comp=Z,55nm,1.1s
BDFB  Brasilia          57.57  88   P      P      15 17 37.5   0.0
BDFB  Brasilia          57.57  88   P      P      15 17 37.5   0.0
BDFB                                pmax   pmax
            comp=Z,113nm,1.3s
MAN01 Angra dos Reis    57.71  98  eP      P      15 17 39.5  +1.2
BOAV  Boa Vista         57.72  62  eP      P      15 17 37.6  -0.7
BSCB  Bom Sucesso       57.83  96  eP      P      15 17 39.7  +0.5
VNDA  Vanda             58.08 195   P      P      15 17 40.5  +0.5
            comp=Z,1.3nm,0.7s,baz=93,slow=7.2,SNR=7.7
VNDA                                LR     LR     15 36 48.8
            comp=Z,928nm,21.5s,baz=92,slow=30
            comp=Z,1.3nm,0.7s
VNDA  Vanda             58.08 195   P      P      15 17 40.2  +0.2
VNDA  Vanda             58.08 195   P      P      15 17 40.2  +0.2
VNDA                                pmax   pmax
            comp=Z,11nm,1.5s
VAS01 Vassouras-RJ      58.39  98  eP      P      15 17 44.5  +1.4
PEXB  Peixe             59.09  85  eP      P      15 17 47.9  -0.1
BIRV  Birongo           59.33  51   P      P      15 17 48.0  -1.5
DUB01 Friburgo-RJ       59.37  98  eP      P      15 17 50.5  +0.6
MALB  Monte Alegre      59.88  71  eP      P      15 17 53.1  -0.3
DIAM  Diamantina, MG    59.98  93  eP      P      15 17 54.8  +0.6
CAM01 Campos-RJ         60.08  98  eP      P      15 17 55.8  +1.1
SOR   Soroa             60.62  28   P      P      15 17 59.5  +1.3
SOR   Soroa             60.62  28   P      P      15 17 59.5  +1.3
SOR                                 pmax   pmax
            comp=Z,91nm,1.1s
JANB  Januaria          60.98  90  eP      P      15 18 01.3  +0.3
PRPB  Parauapebas       61.00  78  eP      P      15 18 00.4  -0.6
SMTB  Santa Maria do    61.38  82  eP      P      15 18 04.2  +0.5
ALF01 Guarapari-ES      61.39  97  eP      P      15 18 04.3  +0.7
833A  Chaparral WMA,    61.45  10   IAmb   IAmb   15 18 06.3
            comp=Z,46nm,1.3s
833A  Chaparral WMA,    61.45  10   P      P      15 18 05.5  +1.9
            baz=189,SNR=7.8
833A  Chaparral WMA,    61.45  10   P      P      15 18 05.0  +1.4
            baz=189,SNR=7.8
SDBA  SAO DESIDERIO     61.79  87  eP      P      15 18 06.5   0.0
SJMB  Sao Joao De Ma    61.88  95  eP      P      15 18 07.3  +0.3
TXAR  Lajitas Array     61.97   5   P      P      15 18 08.4  +1.0
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            comp=Z,6.3nm,1.1s,baz=183,slow=9.5,SNR=18
TXAR                                LR     LR     15 40 55.2
            comp=Z,371nm,18.6s,baz=171,slow=32
            comp=Z,6.3nm,1.1s
TX31  Lajitas Ar. Si    61.97   5   P      P      15 18 08.9  +1.6
            baz=185,SNR=7.5
BSFB  Barra de Sao F    62.10  95  eP      P      15 18 08.8  +0.3
RIB01 Linhares ES       62.26  96  eP      P      15 18 09.9  +0.4
VNA3  Neumayer Olymp    62.31 159   P      P      15 18 08.9  -0.2
MCPB  Macapa, AP        62.54  71  eP      P      15 18 11.5  +0.1
SDDR  Presa de Saban    62.91  41   P      P      15 18 13.5  -0.3
VNA1  Neumayer--Stat    62.95 158   P      P      15 18 13.4  +0.1
NAN01 Guarapari, ES     63.17  95  eP      P      15 18 16.0  +0.3
JCT   Junction City     63.51   9   P      P      15 18 18.6  +1.0
            baz=189,SNR=10
JCT   Junction City     63.51   9   P      P      15 18 18.5  +0.9
            baz=189,SNR=10
HKT   Hockley           63.63  13   P      P      15 18 18.6  +0.4
HKT                                 IAmb   IAmb   15 18 24.0
            comp=Z,19nm,1.4s
HKT   Hockley           63.63  13   P      P      15 18 18.6  +0.4
HKT                                 pmax   pmax
            comp=Z,19nm,1.4s
319A  Douglas           63.79 360   P      P      15 18 20.3  +0.9
319A                                IAmb   IAmb   15 18 27.3
            comp=Z,31nm,1.5s
GUA01 Guaratinga, BA    64.03  94  eP      P      15 18 22.0  +0.6
435B  Jarrell           64.14  11   P      P      15 18 23.5  +1.9
            baz=191
435B  Jarrell           64.14  11   P      P      15 18 23.1  +1.5
            baz=191
SNAA  Sanae             64.15 160   P      P      15 18 20.9  -0.5
SNAA  Sanae             64.15 160   LR     LR     15 42 08.9
            comp=Z,163nm,19.0s,baz=268,slow=32
SNAA  Sanae             64.15 160   P      P      15 18 20.0  -1.4
SNAA                                IAmb   IAmb   15 18 36.9
            comp=Z,19nm,1.2s
SNAA  Sanae             64.15 160  i P     P      15 18 20.3  -1.1
SNAA                                pmax   pmax
            comp=Z,11nm,1.0s
MNTX  Cornudas Mount    64.21   4   P      P      15 18 22.4  +0.4
            baz=184,SNR=9.5
MNTX  Cornudas Mount    64.21   4   P      P      15 18 22.2  +0.1
            baz=184,SNR=9.5
ABR01 Abrolhos, BA      64.31  96  eP      P      15 18 23.9  +0.7
214A  Organ Pipe Nat    64.46 357   P      P      15 18 24.0  +0.3
214A  Organ Pipe Nat    64.46 357   P      P      15 18 24.9  +1.2
            baz=177
CRPR  Cabo Rojo, PR     64.53  45   P      P      15 18 24.2  -0.2
TMAB  Tom-Au,PA,Br      64.56  76  eP      P      15 18 25.7  +1.0
TUC   Tucson            64.74 358   P      P      15 18 24.5  -1.1
TUC   Tucson            64.74 358   P      P      15 18 24.5  -1.1
TUC                                 pmax   pmax
            comp=Z,9.0nm,1.3s
TUC   Tucson            64.74 358   P      P      15 18 26.7  +1.1
            baz=178
OBIP  Obispado Ponce    64.86  45   P      P      15 18 24.9  -1.7
CMC01 Camacan, BA       64.86  93  eP      P      15 18 27.5  +0.7
121A  Cookes Peak, D    64.95   1   P      P      15 18 28.2  +1.1
            baz=181
121A  Cookes Peak, D    64.95   1   P      P      15 18 27.9  +0.8
            baz=181
SJG   San Juan          65.18  46   LR     LR     15 44 48.0
            comp=Z,414nm,18.1s,baz=252,slow=34
SJG   San Juan          65.18  46   P      P      15 18 27.2  -1.4
SJG   San Juan          65.18  46   P      P      15 18 27.2  -1.4
SJG                                 pmax   pmax
            comp=Z,75nm,1.1s
WHTX  Lake Whitney,     65.34  11   P      P      15 18 31.0  +1.6
            baz=191
WHTX  Lake Whitney,     65.34  11   P      P      15 18 30.3  +0.9
            baz=191
IKP   In-Ko-Pah, Jac    65.39 354   P      P      15 18 30.3  +0.5
            baz=174
MDP   Montagnes des     65.44  66   LR     LR     15 46 00.1
            comp=Z,237nm,18.0s,baz=264,slow=35
TROLL Troll, Antarti    65.47 161   P      P      15 18 30.2  +0.2
MTP   Monte Pirata      65.53  46   P      P      15 18 29.5  -1.5
NATX  Nacogdoches       65.61  14   P      P      15 18 32.4  +1.3
            baz=193
GDU01 Guandu, BA        65.62  91  eP      P      15 18 31.3  -0.4
ABTX  Abilene, Hawle    65.65   9   IAmb   IAmb   15 18 33.4
            comp=Z,35nm,1.3s
ABTX  Abilene, Hawle    65.65   9   P      P      15 18 32.4  +1.0
            baz=189
ABTX  Abilene, Hawle    65.65   9   P      P      15 18 31.6  +0.2
            baz=189
SWSC  Sam W. Stewart    65.65 354   P      P      15 18 32.5  +1.1
            baz=174
MONP2 Monument Peak     65.66 353   P      P      15 18 32.5  +0.8
            baz=173
GLA   Glamis            65.68 355   P      P      15 18 33.0  +1.4
            baz=175
DWPF  Disney Wildern    66.01  27   P      P      15 18 35.0  +1.2
            baz=205
BC3   Big Chuckawall    66.33 354   P      P      15 18 36.9  +1.1
            baz=174,SNR=5.3
TPFO  Pinon Flats       66.37 353   P      P      15 18 37.6  +1.5
            baz=173
Y22A  Socorro           66.37   2   P      P      15 18 37.4  +1.2
            baz=182,SNR=6.1
PFO   Pinyon Flats O    66.38 353   LR     LR     15 40 38.5
            comp=Z,221nm,21.0s,baz=176,slow=30
PFO   Pinyon Flats O    66.38 353   P      P      15 18 36.5  +0.3
PFO   Pinyon Flats O    66.38 353   P      P      15 18 36.5  +0.3
PFO                                 pmax   pmax
            comp=Z,9.0nm,1.2s
PFO   Pinyon Flats O    66.38 353   P      P      15 18 37.7  +1.5
            baz=173
SNCC  San Nicolas Is    66.38 351   P      P      15 18 37.8  +1.7
            baz=171
CIS   Catalina Islan    66.38 352   P      P      15 18 37.1  +1.0
            baz=172
NBPN  Ponto Novo - B    66.54  88  eP      P      15 18 37.7   0.0
MSTX  Muleshoe          66.64   6   IAmb   IAmb   15 18 39.4
            comp=Z,18nm,1.1s
MSTX  Muleshoe          66.64   6   P      P      15 18 38.3  +0.4
            baz=186,SNR=8.2
MSTX  Muleshoe          66.64   6   P      P      15 18 38.0  +0.1
            baz=186,SNR=8.2
BELC  Belle Mtn. Jos    66.72 354   P      P      15 18 40.1  +1.7
            baz=174
IRM   Iron Mountain     66.80 355   P      P      15 18 40.3  +1.5
            baz=175
PDMCI Parker Dam,Lak    66.87 356   P      P      15 18 40.7  +1.5
            baz=176
X18A  Snowflake         66.94 359   IAmb   IAmb   15 18 44.5
            comp=Z,22nm,1.2s
VBMS  Vicksburg         66.98  17   P      P      15 18 41.3  +1.4
            baz=197
BFSC  Mount Baldy Ra    67.12 352   P      P      15 18 42.2  +1.3
            baz=172
DECC  Green Verdugo     67.22 352   P      P      15 18 42.6  +1.2
            baz=172
NEE2  Needles Airpor    67.37 355   P      P      15 18 43.6  +1.3
            baz=175
ANMO  Albuquerque       67.39   2   LR     LR     15 44 29.2
            comp=Z,363nm,18.7s,baz=166,slow=33
ANMO  Albuquerque       67.39   2   P      P      15 18 42.8   0.0
ANMO  Albuquerque       67.39   2  i P     P      15 18 43.0  +0.2
ANMO                                pmax   pmax
            comp=Z,5.0nm,1.2s
ANMO  Albuquerque       67.39   2   P      P      15 18 43.9  +1.1
            baz=182
ANMO  Albuquerque       67.39   2   P      P      15 18 43.6  +0.8
            baz=182
Z41A  Richland Creek    67.44  15   P      P      15 18 44.1  +1.3
            baz=195
GMRC  Granite Mounta    67.47 354   P      P      15 18 44.6  +1.5
            baz=174
ROSB  Rosrio            67.52  78  eP      P      15 18 43.8   0.0
W18A  Petrified Fore    67.52 359   P      P      15 18 44.7  +1.2
            baz=180
HEC   Hector,Ludlow     67.57 354   P      P      15 18 45.1  +1.3
            baz=174
SBC   Santa Barbara     67.58 351   P      P      15 18 44.8  +1.2
            baz=170
OSI   Osito Audit: C    67.62 351   P      P      15 18 44.9  +0.9
            baz=171
AMTX  Amarillo          67.65   7   IAmb   IAmb   15 18 46.3
            comp=Z,18nm,1.1s
AMTX  Amarillo          67.65   7   P      P      15 18 44.8  +0.5
            baz=187
RRX   Edison Barstow    67.68 353   P      P      15 18 45.6  +1.3
            baz=173
EDW2  Edwards Air Fo    67.79 352   P      P      15 18 45.7  +0.6
            baz=172
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WUAZ  Wupatki           67.95 358   P      P      15 18 46.8  +0.6
            baz=178,SNR=5.8
BCW   Bitter Crk WRg    68.03 351   IAmb   IAmb   15 18 56.9
            comp=Z,31nm,1.3s
PKM   Mcpherson Peak    68.03 351   P      P      15 18 47.6  +0.8
            baz=170
GSC   Goldstone, Bar    68.08 353   IAmb   IAmb   15 18 55.9
            comp=Z,18nm,1.4s
GSC   Goldstone, Bar    68.08 353   P      P      15 18 48.2  +1.3
            baz=173
TUQ   Turquoise Moun    68.13 354   P      P      15 18 49.0  +1.6
            baz=174
ARVC  Arvin             68.14 351   P      P      15 18 48.1  +0.9
            baz=171
X37A  Clayton           68.23  12   IAmb   IAmb   15 18 56.7
            comp=Z,17nm,1.1s
LRMC  Laurel Mtn Rad    68.35 353   P      P      15 18 49.8  +1.1
            baz=172
SMMC  Simmler           68.48 350   P      P      15 18 50.5  +1.1
            baz=170
NBLA  Lagarto - SE      68.50  89  eP      P      15 18 49.9  -0.2
MIAR  Mount Ida         68.53  14   IAmb   IAmb   15 18 53.5
            comp=Z,24nm,1.2s
MIAR  Mount Ida         68.53  14   P      P      15 18 50.4  +0.7
            baz=194,SNR=7.4
MIAR  Mount Ida         68.53  14   P      P      15 18 50.3  +0.6
            baz=194,SNR=7.4
Z47A  Carrollton        68.55  19   IAmb   IAmb   15 18 51.5
            comp=Z,30nm,0.9s
ISA   Isabella, Lake    68.62 352   P      P      15 18 51.1  +0.8
ISA   Isabella, Lake    68.62 352   P      P      15 18 51.1  +0.8
ISA                                 pmax   pmax
            comp=Z,11nm,1.3s
ISA   Isabella, Lake    68.62 352   P      P      15 18 51.6  +1.3
            baz=172
SHOC  Shoshone, Teco    68.62 354   P      P      15 18 51.5  +1.2
            baz=174
X40A  Basin Creek Fa    68.62  14   P      P      15 18 50.8  +0.6
            baz=195
LRAL  Lakeview Retre    68.69  20   IAmb   IAmb   15 18 52.3
            comp=Z,23nm,1.1s
LRAL  Lakeview Retre    68.69  20   P      P      15 18 51.8  +1.1
            baz=200,SNR=7.0
LRAL  Lakeview Retre    68.69  20   P      P      15 18 51.6  +0.9
            baz=200,SNR=7.0
VES   Vestal, Richgr    68.87 351   P      P      15 18 52.7  +0.9
            baz=171
U15A  North Rim         68.89 357   IAmb   IAmb   15 19 00.1
            comp=Z,19nm,1.3s
NBPS  Pedro II - PI     68.91  81  eP      P      15 18 52.2  -0.5
UALR  University of     69.01  15   IAmb   IAmb   15 18 56.7
            comp=Z,35nm,1.1s
152A  Waverly Hall      69.03  22   IAmb   IAmb   15 18 55.0
            comp=Z,44nm,1.2s
152A  Waverly Hall      69.03  22   P      P      15 18 54.1  +1.3
            baz=202,SNR=7.1
W39A  Magazine          69.12  13   IAmb   IAmb   15 18 57.4
            comp=Z,30nm,1.1s
W39A  Magazine          69.12  13   P      P      15 18 54.3  +1.0
            baz=194,SNR=8.6
W39A  Magazine          69.12  13   P      P      15 18 54.1  +0.8
            baz=194,SNR=8.6
SHPR  Sheep Range       69.13 355   P      P      15 18 53.7  +0.1
FURC  Furnace Creek,    69.24 353   P      P      15 18 55.5  +1.4
            baz=173
CWC   Cottonwood Cre    69.34 352   P      P      15 18 56.1  +1.2
            baz=172
W41B  Gary Mavity, V    69.41  15   P      P      15 18 56.3  +1.2
            baz=195,SNR=16
W41B  Gary Mavity, V    69.41  15   P      P      15 18 56.1  +1.0
            baz=195,SNR=16
OXF   Oxford            69.44  17   P      P      15 18 55.5  +0.3
            baz=198
TUL1  Leonard           69.45  12   IAmb   IAmb   15 18 57.0
            comp=Z,31nm,0.8s
TUL1  Leonard           69.45  12   P      P      15 18 56.2  +0.9
            baz=192
TUL1  Leonard           69.45  12   P      P      15 18 55.7  +0.3
            baz=192
WHAR  Wooly Hollow      69.51  15   IAmb   IAmb   15 18 59.1
            comp=Z,49nm,1.3s
NBMA  Muriti-CE         69.56  86  eP      P      15 18 57.2  +0.5
MVCO  Mesa Verde        69.61   1   IAmb   IAmb   15 18 59.6
            comp=Z,32nm,1.3s
MVCO  Mesa Verde        69.61   1   P      P      15 18 57.4  +0.7
            baz=181,SNR=11
TPNV  Topopah Spring    69.66 354   P      P      15 18 58.0  +1.1
            baz=174
T25A  Trinidad          69.68   4   IAmb   IAmb   15 18 59.5
            comp=Z,25nm,1.4s
T25A  Trinidad          69.68   4   P      P      15 18 57.8  +0.8
            baz=184,SNR=7.1
NBPB  Pedra_Branca-C    69.85  83  eP      P      15 18 58.5  +0.1
PKCU  Pink Cliffs       69.90 357   P      P      15 18 57.8  -0.8
TIN   Tinemaha, Big     69.97 352   P      P      15 19 00.1  +1.4
            baz=172
X48A  Hartselle         70.01  19   IAmb   IAmb   15 19 01.4
            comp=Z,23nm,1.3s
X48A  Hartselle         70.01  19   P      P      15 18 59.6  +0.8
            baz=200
SZCU  Shurtz Canyon     70.09 357   IAmb   IAmb   15 19 02.3
            comp=Z,21nm,1.4s
GOGA  Godfrey           70.12  23   IAmb   IAmb   15 19 02.8
            comp=Z,19nm,1.1s
GOGA  Godfrey           70.12  23   P      P      15 19 00.2  +0.7
            baz=203
FCAR  Ozark Folk Cen    70.13  15   P      P      15 18 59.5  -0.1
FCAR                                IAmb   IAmb   15 19 00.7
            comp=Z,20nm,1.1s
HHAR  Hobbs             70.14  13   IAmb   IAmb   15 19 01.5
            comp=Z,48nm,1.1s
HHAR  Hobbs             70.14  13   P      P      15 19 00.7  +1.1
            baz=194
S22A  4UR Ranch, Cre    70.18   2   IAmb   IAmb   15 19 04.7
            comp=Z,25nm,1.4s
S22A  4UR Ranch, Cre    70.18   2   P      P      15 19 01.1  +1.0
            baz=182,SNR=15
SDCO  Great Sand Dun    70.22   3   P      P      15 19 01.4  +0.9
            baz=183,SNR=16
SDCO  Great Sand Dun    70.22   3   P      P      15 19 01.4  +0.9
            baz=183,SNR=16
PLAL  Pickwick Lake     70.23  18   IAmb   IAmb   15 19 01.4
            comp=Z,24nm,1.2s
T35A  Sooner Cattle     70.31  11   IAmb   IAmb   15 19 02.1
            comp=Z,21nm,1.0s
T35B  Sooner Cattle     70.31  11   P      P      15 19 01.2  +0.6
            baz=191
Y52A  Lilburn           70.35  22   IAmb   IAmb   15 19 03.0
            comp=Z,45nm,1.4s
Y52A  Lilburn           70.35  22   P      P      15 19 02.0  +1.1
            baz=202
Y52A                                P      P      15 19 02.0  +1.1
            baz=202
U40A  Yellville         70.42  14   IAmb   IAmb   15 19 05.2
            comp=Z,26nm,1.0s
U40A  Yellville         70.42  14   P      P      15 19 02.2  +0.9
            baz=194,SNR=11
U40A                                P      P      15 19 02.2  +0.9
            baz=194,SNR=11
U40A  Yellville         70.42  14   P      P      15 19 02.0  +0.6
            baz=194,SNR=11
NBAN  Anadia - AL       70.45  89  eP      P      15 19 01.7  -0.5
FPAL  Fort Paine        70.50  20   P      P      15 19 02.1  +0.2
LCAR  Lake Charles      70.51  15   P      P      15 19 02.6  +0.7
            baz=196,SNR=6.1
MLAC  Mammoth, Mammo70.61      352  P      P      15 19 03.6  +0.9
            baz=171
NBMO  Morrinhos-CE      70.67  81  eP      P      15 19 02.7  -0.8
PV11  David Mesa, Pa    70.69   0   P      P      15 19 03.2   0.0
X51A  Calhoun           70.75  21   IAmb   IAmb   15 19 07.1
            comp=Z,33nm,1.1s
PV23  Carpenter Ridg    70.85   0   IAmb   IAmb   15 19 11.6
            comp=Z,24nm,1.2s
NHSC  New Hope          70.97  25   P      P      15 19 05.3  +0.6
            baz=206
R11A  Troy Canyon, C    71.00 355   P      P      15 19 06.5  +1.5
            baz=174,SNR=9.2
SWET  Sewanee           71.04  20   P      P      15 19 05.7  +0.5
SWET                                IAmb   IAmb   15 19 06.0
            comp=Z,23nm,1.0s
LHV   Little Huntoon    71.18 352   IAmb   IAmb   15 19 15.4
            comp=Z,44nm,1.5s
W50A  Signal Mountai    71.20  20   IAmb   IAmb   15 19 07.8
            comp=Z,41nm,1.4s
W50A  Signal Mountai    71.20  20   P      P      15 19 07.2  +1.0
            baz=201
V48A  Smith Brothers    71.28  19   IAmb   IAmb   15 19 08.0
            comp=Z,39nm,1.4s
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V48A	Smith Brothers	71.28	19	P	P	15 19 06.9	+0.3
	baz=200						
KIP	Kipapa	71.28	312	*i* P	P	15 19 05.8	-1.1
KIP				pmax	pmax		
	comp=Z,53nm,1.1s						
MGMO	Mountain Grove	71.31	14	IAmb	IAmb	15 19 09.7	
	comp=Z,35nm,1.1s						
NV11	Mina Array Sit	71.32	353	IAmb	IAmb	15 19 15.9	
	comp=Z,24nm,1.3s						
NVAR	Mina Array Bea	71.34	352	P	P	15 19 08.5	+1.4
	comp=Z,5.9nm,1.0s,baz=183,slow=8.4,SNR=34						
NVAR				LR	LR	15 43 23.6	
	comp=Z,250nm,21.1s,baz=176,slow=30						
	comp=Z,5.9nm,1.0s						
PBMO	Poplar Bluff	71.35	16	IAmb	IAmb	15 19 08.2	
	comp=Z,28nm,1.0s						
PBMO	Poplar Bluff	71.35	16	P	P	15 19 07.7	+0.8
	baz=196,SNR=5.8						
WVT	Waverly	71.38	18	P	P	15 19 06.5	-0.6
WVT				IAmb	IAmb	15 19 07.7	
	comp=Z,26nm,1.2s						
WVT	Waverly	71.38	18	P	P	15 19 06.5	-0.6
WVT				pmax	pmax		
	comp=Z,26nm,1.3s						
WVT	Waverly	71.38	18	P	P	15 19 06.9	-0.2
	baz=199,SNR=5.8						
WVT	Waverly	71.38	18	P	P	15 19 07.0	-0.2
	baz=199						
NBCA	Caruaru-PE	71.42	88	*e*P	P	15 19 08.4	+0.3
Q24A	Divide	71.45	3	P	P	15 19 08.6	+0.6
	baz=184,SNR=7.5						
SRU	San Rafael Swe	71.52	359	IAmb	IAmb	15 19 11.8	
	comp=Z,20nm,1.2s						
W52A	Murphy	71.52	22	IAmb	IAmb	15 19 10.3	
	comp=Z,57nm,1.4s						
W52A	Murphy	71.52	22	P	P	15 19 09.1	+1.0
	baz=202						
SMCO	Snowmass	71.60	2	P	P	15 19 09.6	+0.7
SMCO				IAmb	IAmb	15 19 13.2	
	comp=Z,24nm,1.2s						
S39A	Bolivar	71.62	13	IAmb	IAmb	15 19 09.9	
	comp=Z,18nm,1.1s						
S39A	Bolivar	71.62	13	P	P	15 19 09.5	+0.9
	baz=194,SNR=9.8						
JSC	Jenkinsville	71.65	24	P	P	15 19 10.5	+1.7
	baz=204						
KSCO	Kaye Shedlock’	71.66	5	IAmb	IAmb	15 19 11.6	
	comp=Z,46nm,1.1s						
KSCO	Kaye Shedlock’	71.66	5	P	P	15 19 10.2	+1.2
	baz=186						
CPCT	Cooper Cave	71.67	21	IAmb	IAmb	15 19 10.9	
	comp=Z,37nm,1.3s						
CBKS	Cedar Bluff	71.74	8	IAmb	IAmb	15 19 11.6	
	comp=Z,37nm,1.2s						
CBKS	Cedar Bluff	71.74	8	P	P	15 19 10.4	+1.1
	baz=188,SNR=5.3						
CBKS	Cedar Bluff	71.74	8	P	P	15 19 10.3	+0.9
	baz=188,SNR=5.3						
BG3	Lake Jocassee	71.75	22	IAmb	IAmb	15 19 13.1	
	comp=Z,41nm,1.2s						
CASEE	Lake Jocassee	71.75	22	P	P	15 19 10.8	+1.4
	baz=203,SNR=8.0						
KVN	Kaiserville	71.93	353	IAmb	IAmb	15 19 19.5	
	comp=Z,28nm,1.3s						
NBRF	Rio Formoso -	71.94	89	*e*P	P	15 19 10.4	-0.7
PAULI	Pauline	71.96	23	IAmb	IAmb	15 19 14.6	
	comp=Z,28nm,1.0s						
PAULI	Pauline	71.96	23	P	P	15 19 12.2	+1.5
	baz=204						
YERR	Yerington	71.99	352	P	P	15 19 12.0	+1.0
V51A	Loudon	72.05	21	IAmb	IAmb	15 19 13.2	
	comp=Z,53nm,1.4s						
V51A	Loudon	72.05	21	P	P	15 19 11.9	+0.7
	baz=202						
TKL	Tuckaleechee C	72.09	22	P	P	15 19 11.5	+0.1
	comp=Z,8.5nm,1.0s,baz=201,slow=9.3,SNR=4.2						
TKL				LR	LR	15 46 04.4	
	comp=Z,853nm,21.9s,baz=188,slow=32						
	comp=Z,8.5nm,1.0s						
TKL	Tuckaleechee C	72.09	22	IAmb	IAmb	15 19 13.1	
	comp=Z,25nm,1.2s						
BIRD	Birdtown, Kers	72.26	25	P	P	15 19 14.0	+1.5
	baz=205						
U49A	Red Boiling Sp	72.29	20	IAmb	IAmb	15 19 13.6	
	comp=Z,21nm,1.1s						
U49A	Red Boiling Sp	72.29	20	P	P	15 19 13.3	+0.6
	baz=200						
V52A	Sevierville	72.32	22	IAmb	IAmb	15 19 14.6	
	comp=Z,52nm,1.5s						
V52A	Sevierville	72.32	22	P	P	15 19 13.9	+1.1
	baz=202						
T47A	Sharon Grove	72.38	18	P	P	15 19 13.7	+0.6
	baz=199,SNR=5.6						
CCM	Cathedral Cave	72.40	15	P	P	15 19 12.3	-0.9
CCM				IAmb	IAmb	15 19 15.1	
	comp=Z,54nm,1.4s						
CCM	Cathedral Cave	72.40	15	P	P	15 19 12.3	-0.9
CCM				pmax	pmax		
	comp=Z,54nm,1.4s						
CCM	Cathedral Cave	72.40	15	P	P	15 19 12.8	-0.4
	baz=196,SNR=12						
CCM	Cathedral Cave	72.40	15	P	P	15 19 14.0	+0.8
	baz=196						
NLU	North Lily Min	72.40	358	P	P	15 19 12.7	-0.8
V53A	Saluda	72.41	22	IAmb	IAmb	15 19 15.7	
	comp=Z,63nm,1.3s						
V53A	Saluda	72.41	22	P	P	15 19 14.2	+0.8
	baz=203,SNR=9.9						
V53A				P	P	15 19 14.2	+0.8
	baz=203,SNR=9.9						
KMSC	Kings Mountain	72.41	24	IAmb	IAmb	15 19 15.0	
	comp=Z,28nm,1.1s						
KMSC	Kings Mountain	72.41	24	P	P	15 19 14.5	+1.1
	baz=204						
KMSC	Kings Mountain	72.41	24	P	P	15 19 14.5	+1.1
	baz=204						
R40A	Maddies Statio	72.41	14	P	P	15 19 13.8	+0.6
	baz=195,SNR=6.4						
KSU1	Kansas State U	72.44	10	P	P	15 19 14.5	+1.0
	baz=191						
S44A	Carbondale	72.50	16	IAmb	IAmb	15 19 15.7	
	comp=Z,55nm,1.2s						
S44A	Carbondale	72.50	16	P	P	15 19 14.7	+0.9
	baz=197,SNR=6.8						
FVM	French Village	72.51	15	IAmb	IAmb	15 19 15.2	
	comp=Z,21nm,1.1s						
FVM	French Village	72.51	15	P	P	15 19 14.5	+0.6
	baz=196						
SIUC	Southern Illin	72.53	16	P	P	15 19 14.0	0.0
SIUC				IAmb	IAmb	15 19 15.8	
	comp=Z,49nm,1.1s						
O20A	White River Ci	72.53	1	P	P	15 19 15.2	+0.9
	baz=181						
DUG	Dugway, Tooele	72.67	357	P	P	15 19 16.1	+1.1
	baz=177						
RCBR	Riachuelo	72.78	86	*e*P	P	15 19 16.6	+0.4
W57A	Gilead	72.88	25	IAmb	IAmb	15 19 18.4	
	comp=Z,52nm,1.2s						
W57A	Gilead	72.88	25	P	P	15 19 17.4	+1.2
	baz=205						
W57A				P	P	15 19 17.4	+1.2
	baz=205						
RDMU	Red Mountain	72.96	360	IAmb	IAmb	15 19 20.7	
	comp=Z,37nm,1.4s						
TZTN	Tazewell	72.98	21	P	P	15 19 18.2	+1.5
	baz=202,SNR=5.6						
TZTN	Tazewell	72.98	21	P	P	15 19 17.7	+0.9
	baz=202,SNR=5.6						
JLU	Jordanelle	73.03	358	IAmb	IAmb	15 19 19.5	
	comp=Z,28nm,1.3s						
T50A	Nancy	73.04	20	IAmb	IAmb	15 19 18.8	
	comp=Z,45nm,1.4s						
V55A	Taylorsville	73.09	23	IAmb	IAmb	15 19 19.8	
	comp=Z,47nm,1.3s						
V55A	Taylorsville	73.09	23	P	P	15 19 18.6	+1.1
	baz=204,SNR=5.5						
V55A				P	P	15 19 18.6	+1.1
	baz=204,SNR=5.5						
N23A	Red Feather La	73.35	3	IAmb	IAmb	15 19 23.7	
	comp=Z,33nm,1.3s						
N23A	Red Feather La	73.35	3	P	P	15 19 20.3	+1.1
	baz=183,SNR=11						
ELK	Elko	73.35	355	LR	LR	15 46 00.7	
	comp=Z,279nm,18.4s,baz=166,slow=31						
P38A	Dawn	73.46	13	IAmb	IAmb	15 19 20.5	
	comp=Z,19nm,0.9s						
P38A	Dawn	73.46	13	P	P	15 19 20.0	+0.5
	baz=194,SNR=7.9						
U54A	Nelsons Funny	73.50	23	IAmb	IAmb	15 19 22.7	
	comp=Z,41nm,1.3s						
OGNE	Ogallala	73.63	6	P	P	15 19 22.1	+1.5
	baz=186						
OGNE	Ogallala	73.63	6	P	P	15 19 21.9	+1.3
	baz=186						
P40A	Paris	73.65	14	P	P	15 19 21.5	+0.9
	baz=195						
Q44A	Meyer Farm, Va	73.71	16	P	P	15 19 22.1	+1.1
	baz=198,SNR=10						
CNNC	Cliffs of the	73.72	26	P	P	15 19 22.0	+0.9
	baz=207						
V58A	Windy Hill, Pi	73.77	25	IAmb	IAmb	15 19 23.3	
	comp=Z,61nm,1.3s						
OLIL	Olney	73.77	17	IAmb	IAmb	15 19 22.5	
	comp=Z,40nm,1.1s						
U56A	King	73.83	24	IAmb	IAmb	15 19 24.1	
	comp=Z,36nm,1.2s						
DZM	Mont Dzumac	73.90	254	LR	LR	15 48 24.6	
	comp=Z,98nm,18.2s,baz=144,slow=33						
S51A	Beattyville	73.98	21	IAmb	IAmb	15 19 26.5	
	comp=Z,47nm,1.4s						
S51A	Beattyville	73.98	21	P	P	15 19 23.9	+1.3
	baz=202						
S51A				P	P	15 19 23.9	+1.3
	baz=202						
RWWY	Rawlins	74.10	2	P	P	15 19 22.9	-0.6
R49A	Shelbyville	74.13	19	IAmb	IAmb	15 19 24.7	
	comp=Z,50nm,1.4s						
P43A	Skaggs, Pawnee	74.30	16	IAmb	IAmb	15 19 26.4	
	comp=Z,38nm,1.2s						
N35A	Tabor	74.31	11	P	P	15 19 25.6	+1.2
	baz=192,SNR=8.0						
R50A	Paris	74.36	20	IAmb	IAmb	15 19 26.1	
	comp=Z,37nm,1.4s						
R50A	Paris	74.36	20	P	P	15 19 24.6	-0.2
	baz=202,SNR=5.4						
R50A				P	P	15 19 24.6	-0.2
	baz=202,SNR=5.4						
BGNE	Belgrade	74.49	9	P	P	15 19 26.6	+1.1
	baz=190						
BLA	Blacksburg	74.59	23	P	P	15 19 27.3	+1.1
	baz=205,SNR=5.8						
BLA	Blacksburg	74.59	23	P	P	15 19 27.4	+1.1
	baz=205,SNR=5.8						
U59A	Littleton	74.75	26	P	P	15 19 28.2	+1.2
	baz=207,SNR=6.8						
U59A				P	P	15 19 28.2	+1.2
	baz=207,SNR=6.8						
T57A	Hurt	74.80	24	IAmb	IAmb	15 19 29.4	
	comp=Z,70nm,1.3s						
T57A	Hurt	74.80	24	P	P	15 19 28.4	+1.0
	baz=206,SNR=6.5						
T57A				P	P	15 19 28.4	+1.0
	baz=206,SNR=6.5						
K22A	Casper	75.08	2	IAmb	IAmb	15 19 31.5	
	comp=Z,49nm,1.4s						
K22A	Casper	75.08	2	P	P	15 19 30.1	+1.0
	baz=182,SNR=10						
K22A	Casper	75.08	2	P	P	15 19 30.0	+0.9
	baz=182,SNR=10						
R53A	Hurricane	75.12	22	IAmb	IAmb	15 19 31.5	
	comp=Z,35nm,1.1s						
BW06	Boulder Array	75.16	360	P	P	15 19 28.9	-0.7
BW06				IAmb	IAmb	15 19 33.0	
	comp=Z,33nm,1.4s						
BW06	Boulder Array	75.16	360	P	P	15 19 29.4	-0.2
	baz=180,SNR=21						
PD31	Pinedale Array	75.16	360	IAmb	IAmb	15 19 33.0	
	comp=Z,30nm,1.4s						
PDAR	Pinedale Array	75.16	360	P	P	15 19 29.9	+0.2
	comp=Z,16nm,1.2s,baz=172,slow=4.5,SNR=31						
PDAR				LR	LR	15 47 43.1	
	comp=Z,410nm,18.5s,baz=180,slow=32						
	comp=Z,16nm,1.2s						
YBH	Yreka Blue Hor	75.17	350	LR	LR	15 45 15.8	
	comp=Z,212nm,19.1s,baz=176,slow=30						
HDIL	Hopedale	75.22	16	P	P	15 19 30.3	+0.6
	baz=197						
Q51A	Peebles	75.33	21	IAmb	IAmb	15 19 32.3	
	comp=Z,52nm,1.0s						
Q51A	Peebles	75.33	21	P	P	15 19 31.3	+0.9
	baz=202,SNR=8.9						
Q51A				P	P	15 19 31.3	+0.9
	baz=202,SNR=8.9						
T59A	Double "B" Far	75.38	26	IAmb	IAmb	15 19 32.6	
	comp=Z,53nm,1.2s						
T59A	Double "B" Far	75.38	26	P	P	15 19 31.4	+0.7
	baz=207,SNR=6.9						
T59A				P	P	15 19 31.4	+0.7
	baz=207,SNR=6.9						
P49A	Miami Univ. Ec	75.41	19	IAmb	IAmb	15 19 31.9	
	comp=Z,40nm,1.1s						
P49A	Miami Univ. Ec	75.41	19	P	P	15 19 31.2	+0.4
	baz=201,SNR=6.4						
P49A	Miami Univ. Ec	75.41	19	P	P	15 19 30.6	-0.2
	baz=201,SNR=6.4						
SFIN	Lafayette	75.58	17	IAmb	IAmb	15 19 33.3	
	comp=Z,28nm,1.1s						
SFIN	Lafayette	75.58	17	P	P	15 19 32.6	+0.8
	baz=199						
SFIN	Lafayette	75.58	17	P	P	15 19 32.0	+0.2
	baz=199						
L04D	Klamath Falls	75.58	350	P	P	15 19 32.9	+0.9
	baz=169						
S57A	Dark Hollow, R	75.59	24	IAmb	IAmb	15 19 34.0	
	comp=Z,53nm,1.4s						
S57A	Dark Hollow, R	75.59	24	P	P	15 19 32.5	+0.6
	baz=206						
S57A				P	P	15 19 32.5	+0.6
	baz=206						
Q52A	Bidwell	75.60	21	IAmb	IAmb	15 19 34.0	
	comp=Z,40nm,1.2s						
Q52A	Bidwell	75.60	21	P	P	15 19 33.3	+1.4
	baz=203						
Q52A				P	P	15 19 33.3	+1.4
	baz=203						
R55A	Marlinton	75.67	23	IAmb	IAmb	15 19 35.0	
	comp=Z,59nm,1.4s						
SCIA	State Center	75.73	12	P	P	15 19 33.5	+0.9
	baz=194						
REDW	Red Top Meadow	75.77	359	P	P	15 19 33.2	+0.1
TPAW	Teton Pass	75.90	359	IAmb	IAmb	15 19 44.2	
	comp=Z,25nm,1.2s						
K04D	Chiloquin, OR	75.90	350	P	P	15 19 34.4	+0.6
	baz=169						
O48B	Farmland	75.97	19	P	P	15 19 33.8	-0.2
	baz=201						
Q54A	Coxs Mills	76.07	22	IAmb	IAmb	15 19 37.0	
	comp=Z,46nm,1.3s						
Q54A	Coxs Mills	76.07	22	P	P	15 19 35.8	+1.2
	baz=204						
Q54A				P	P	15 19 35.8	+1.2
	baz=204						
HLID	Hailey	76.11	356	IAmb	IAmb	15 19 39.5	
	comp=Z,31nm,1.2s						
HLID	Hailey	76.11	356	P	P	15 19 36.0	+1.0
	baz=176,SNR=34						
O49A	Covington	76.13	19	IAmb	IAmb	15 19 38.2	
	comp=Z,40nm,1.2s						
O49A	Covington	76.13	19	P	P	15 19 34.9	0.0
	baz=201						
O49A				P	P	15 19 34.9	0.0
	baz=201						
R58B	Mineral	76.15	25	P	P	15 19 36.0	+1.0
	baz=207,SNR=10						
R58B				P	P	15 19 36.0	+1.0
	baz=207,SNR=10						
MOOW	Moose Ponds	76.15	359	P	P	15 19 34.3	-1.0
L40A	Anamosa	76.26	14	P	P	15 19 36.4	+0.8
	baz=195,SNR=11						
P52A	Corning	76.26	21	P	P	15 19 36.3	+0.6
	baz=203,SNR=8.8						
K02D	Willamette Mer	76.26	349	P	P	15 19 37.0	+1.3
	baz=168						
M44A	Midewin, Midew	76.30	16	IAmb	IAmb	15 19 37.8	
	comp=Z,63nm,1.3s						
P53A	Whipple	76.35	22	P	P	15 19 37.1	+0.8
	baz=204,SNR=5.7						
P53A				P	P	15 19 37.1	+0.8
	baz=204,SNR=5.7						
N47A	Urbana	76.41	18	IAmb	IAmb	15 19 37.7	
	comp=Z,53nm,1.2s						
N47A	Urbana	76.41	18	P	P	15 19 36.5	0.0
	baz=200,SNR=6.3						
N47A				P	P	15 19 36.5	0.0
	baz=200,SNR=6.3						
J05D	Fort Rock, OR	76.48	351	P	P	15 19 37.6	+0.6
	baz=170,SNR=8.5						
FLWY	Flagg Ranch	76.49	359	IAmb	IAmb	15 19 45.3	
	comp=Z,32nm,1.4s						
L42A	Oliver, Polo	76.52	15	IAmb	IAmb	15 19 38.4	
	comp=Z,27nm,0.9s						
K38A	Parkersburg	76.53	12	IAmb	IAmb	15 19 38.5	
	comp=Z,28nm,0.9s						
CBN	Corbin Frederi	76.55	25	P	P	15 19 37.5	+0.2
	baz=207						
ACSO	Alum Creek Sta	76.55	20	IAmb	IAmb	15 19 39.3	
	comp=Z,31nm,1.1s						
ACSO	Alum Creek Sta	76.55	20	P	P	15 19 37.8	+0.4
	baz=202						
J04D	Umpqua Nationa	76.56	350	P	P	15 19 38.2	+0.6
	baz=169						
RSSD	Black Hills	76.65	4	P	P	15 19 38.7	+0.6
RSSD				IAmb	IAmb	15 19 40.3	
	comp=Z,30nm,1.4s						
RSSD	Black Hills	76.65	4	P	P	15 19 38.7	+0.6
RSSD				pmax	pmax		
	comp=Z,30nm,1.4s						
RSSD	Black Hills	76.65	4	P	P	15 19 39.2	+1.1
	baz=184,SNR=9.6						
RSSD	Black Hills	76.65	4	P	P	15 19 38.6	+0.4
	baz=184						
O52A	Adamsville	76.79	21	P	P	15 19 39.9	+1.2
	baz=203,SNR=8.7						
O52A				P	P	15 19 39.9	+1.2
	baz=203,SNR=8.7						
H17A	Grant Village	76.80	359	P	P	15 19 40.0	+1.0
	baz=179						
N49A	Columbus Grove	76.85	19	IAmb	IAmb	15 19 40.7	
	comp=Z,47nm,1.3s						
N49A	Columbus Grove	76.85	19	P	P	15 19 39.7	+0.7
	baz=201						
N49A				P	P	15 19 39.7	+0.7
	baz=201						
ECSD	EROS Data Cent	76.98	9	P	P	15 19 39.0	-0.7
ECSD				IAmb	IAmb	15 19 43.5	
	comp=Z,22nm,1.2s						
ECSD	EROS Data Cent	76.98	9	P	P	15 19 39.8	+0.1
	baz=191,SNR=6.4						
ECSD	EROS Data Cent	76.98	9	P	P	15 19 40.3	+0.6
	baz=191,SNR=6.4						
MCWV	Mont Chateau	77.00	23	P	P	15 19 41.4	+1.5
	baz=205,SNR=6.2						
MCWV	Mont Chateau	77.00	23	P	P	15 19 40.5	+0.6
	baz=205,SNR=6.2						
I07A	Izee	77.05	352	IAmb	IAmb	15 19 43.1	
	comp=Z,26nm,1.5s						
L44A	Lake County Fo	77.08	16	P	P	15 19 41.0	+0.7
	baz=198						
O53A	New Philadelph	77.10	22	P	P	15 19 41.8	+1.3
	baz=204,SNR=6.2						
I04A	Tendick Farm,	77.14	350	P	P	15 19 41.0	+0.4
	baz=169						
I03D	Drain, OR	77.19	349	P	P	15 19 41.3	+0.5
	baz=168						
JFWS	Jewell Farm	77.27	14	P	P	15 19 41.7	+0.4
	baz=196						
O54A	Avella	77.30	22	IAmb	IAmb	15 19 45.5	
	comp=Z,42nm,1.3s						
O54A	Avella	77.30	22	P	P	15 19 43.1	+1.5
	baz=204						
O54A				P	P	15 19 43.1	+1.5
	baz=204						
N51A	Ashland	77.36	20	P	P	15 19 43.1	+1.1
	baz=203,SNR=6.6						
N51A				P	P	15 19 43.1	+1.1
	baz=203,SNR=6.6						
SUSD	Miller	77.39	7	P	P	15 19 42.4	+0.3
	baz=189						
P57A	Homestead Farm	77.46	24	IAmb	IAmb	15 19 44.9	
	comp=Z,50nm,1.2s						
P57A	Homestead Farm	77.46	24	P	P	15 19 43.5	+1.0
	baz=206,SNR=5.5						
P57A				P	P	15 19 43.5	+1.0
	baz=206,SNR=5.5						
K43A	Burlington	77.49	16	P	P	15 19 43.7	+1.2
	baz=198						
RLMT	Red Lodge	77.51	360	P	P	15 19 43.6	+0.7
RLMT	Red Lodge	77.51	360	P	P	15 19 43.6	+0.7
	baz=180						
I05D	Terrebonne, OR	77.53	351	P	P	15 19 44.3	+1.4
	baz=170						
M50A	Fremont	77.62	20	P	P	15 19 45.1	+1.8
	baz=202						
M50A				P	P	15 19 45.1	+1.8
	baz=202						
I02E	Swisshome, OR	77.67	349	P	P	15 19 44.2	+0.7
	baz=167						
N53A	Lisbon	77.73	22	P	P	15 19 45.5	+1.5
	baz=204,SNR=11						
N53A				P	P	15 19 45.5	+1.5
	baz=204,SNR=11						
I37B	Waseca	77.75	12	P	P	15 19 45.5	+1.5
	baz=194,SNR=6.3						
H04D	Lebanon	77.90	350	P	P	15 19 45.6	+0.8
	baz=168						
BOZ	Bozeman (W)	78.02	358	P	P	15 19 46.7	+1.0
	baz=178,SNR=9.1						
I40A	Norwalk	78.14	14	P	P	15 19 47.0	+0.9
I40A				IAmb	IAmb	15 19 48.3	
	comp=Z,42nm,1.4s						
AAM	Ann Arbor	78.28	19	P	P	15 19 47.8	+0.8
	baz=202						
M53A	WI Miller and	78.36	21	P	P	15 19 48.7	+1.3
	baz=204,SNR=7.6						
G05D	Wamic, OR	78.42	351	P	P	15 19 48.6	+0.9
	baz=170						
I42A	Draeger Farm,	78.49	15	IAmb	IAmb	15 19 51.6	
	comp=Z,30nm,1.1s						
I42A	Draeger Farm,	78.49	15	P	P	15 19 49.4	+1.3
	baz=197,SNR=6.9						
MVL	Millersville	78.50	25	IAmb	IAmb	15 19 50.0	
	comp=Z,34nm,1.1s						
SSPA	Standing Stone	78.53	24	P	P	15 19 49.1	+0.7
SSPA				IAmb	IAmb	15 19 50.4	
	comp=Z,51nm,1.4s						
SSPA	Standing Stone	78.53	24	P	P	15 19 49.3	+0.9
	baz=206,SNR=6.1						
SSPA	Standing Stone	78.53	24	P	P	15 19 48.5	+0.1
	baz=206						
PAGS	Pennsylvania G	78.57	25	IAmb	IAmb	15 19 49.6	
	comp=Z,31nm,0.9s						
G03D	McMinnville, O	78.66	350	P	P	15 19 49.7	+0.7
	baz=168						
ALLY	Alegheny Colle	78.71	22	P	P	15 19 51.0	+1.6
	baz=205						
J47A	Sunmer	78.84	18	IAmb	IAmb	15 19 52.6	
	comp=Z,44nm,1.0s						
M55A	Ridgway	78.99	23	P	P	15 19 51.7	+0.8
	baz=206,SNR=9.5						
M55A				P	P	15 19 51.7	+0.8
	baz=206,SNR=9.5						
SPMN	Marine on St.	79.02	12	P	P	15 19 51.6	+0.6
SPMN				IAmb	IAmb	15 19 55.0	
	comp=Z,51nm,1.4s						
SPMN	Marine on St.	79.02	12	P	P	15 19 51.6	+0.6
	baz=194						
F05D	White Salmon	79.07	351	P	P	15 19 52.1	+0.8
	baz=170						
F33A	5 Mile Ranch,	79.09	9	IAmb	IAmb	15 19 53.2	
	comp=Z,26nm,1.1s						
LAO	LASA Array	79.12	2	P	P	15 19 52.0	+0.4
	baz=182						
ERPA	Erie	79.18	22	P	P	15 19 52.8	+0.9
	baz=205						
H43A	Windswept, Lux	79.29	15	IAmb	IAmb	15 19 54.6	
	comp=Z,61nm,1.1s						
H43A	Windswept, Lux	79.29	15	P	P	15 19 53.7	+1.2
	baz=198,SNR=8.5						
E28A	Huff	79.33	6	IAmb	IAmb	15 19 54.3	
	comp=Z,53nm,1.2s						
E28A	Huff	79.33	6	P	P	15 19 53.3	+0.6
	baz=187						
PANJ	Princeton	79.43	26	P	P	15 19 53.8	+0.5
	baz=209						
F04D	Rainier, OR	79.47	350	P	P	15 19 54.6	+1.2
	baz=168						
F36A	Milaca	79.52	11	IAmb	IAmb	15 19 55.9	
	comp=Z,44nm,1.0s						
F36A	Milaca	79.52	11	P	P	15 19 54.6	+0.9
	baz=193,SNR=26						
G40A	Rib Lake	79.54	13	IAmb	IAmb	15 19 56.2	
	comp=Z,51nm,1.2s						
G40A	Rib Lake	79.54	13	P	P	15 19 54.6	+0.8
	baz=196,SNR=19						

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MAW   Mawson           79.77 177  P        P        15 19 55.8 +0.9
      comp=Z,4.0nm,0.9s,baz=136,slow=2.0,SNR=4.1
MAW                               LR       LR       15 53 19.0
      comp=Z,215nm,18.4s,baz=190,slow=34
      comp=Z,4.0nm,0.9s
E04D  Cinebar          79.87 351  P        P        15 19 56.7 +1.1
      baz=169
WVNY  West Valley, N   79.88  22  P        P        15 19 56.8 +1.0
WVNY  West Valley, N   79.88  22  P        P        15 19 57.1 +1.3
      baz=206,SNR=10
L56A  Greenwood        79.98  23  IAmb     IAmb     15 19 57.8
      comp=Z,33nm,1.1s
L56A  Greenwood        79.98  23  P        P        15 19 57.1 +0.8
      baz=207
L56A                              P        P        15 19 57.1 +0.8
      baz=207
KSPA  Keystone Colle   80.08  25  IAmb     IAmb     15 19 58.5
      comp=Z,40nm,1.2s
KSPA  Keystone Colle   80.08  25  P        P        15 19 57.5 +0.7
      baz=208
ODNJ  Ogdensburg       80.09  26  P        P        15 19 57.3 +0.4
      baz=209
PAL   Palisades        80.28  26  IAmb     IAmb     15 19 59.3
      comp=Z,43nm,1.1s
PAL   Palisades        80.28  26  P        P        15 19 58.1 +0.2
      baz=210
TRNY  Table Rock, Ra   80.28  26  P        P        15 19 57.8 -0.2
TRNY                              IAmb     IAmb     15 20 00.2
      comp=Z,48nm,1.4s
G45A  Suttons Bay      80.32  17  P        P        15 19 59.6 +1.5
      baz=200,SNR=6.2
G45A                              P        P        15 19 59.6 +1.5
      baz=200,SNR=6.2
EGMT  Eagleton         80.42 360  P        P        15 20 00.1 +1.5
      baz=180,SNR=7.4
F42A  Maple Grove Fa   80.44  15  IAmb     IAmb     15 20 02.7
      comp=Z,31nm,1.1s
COWI  Conover          80.55  14  IAmb     IAmb     15 20 01.6
      comp=Z,38nm,1.2s
COWI  Conover          80.55  14  P        P        15 20 00.3 +1.0
      baz=197
BINY  Binghamton       80.58  24  P        P        15 19 59.6 +0.1
      baz=208
C09A  Chrisman Ranch   80.61 354  P        P        15 20 00.6 +1.0
MDND  Maddock          80.69   6  P        P        15 20 00.6 +0.6
      baz=188
L59A  Walton           80.90  25  P        P        15 20 01.9 +0.6
      baz=208
L59A                              P        P        15 20 01.9 +0.6
      baz=208
D03D  Eldon            80.90 350  P        P        15 20 02.2 +1.1
      baz=168
J55A  Hilton           80.91  23  IAmb     IAmb     15 20 03.3
      comp=Z,54nm,1.1s
J55A  Hilton           80.91  23  P        P        15 20 02.0 +0.8
      baz=206,SNR=7.0
J55A                              P        P        15 20 02.0 +0.8
      baz=206,SNR=7.0
NEW   Newport          80.97 355  LR       LR       15 50 12.1
      comp=Z,159nm,18.3s,baz=173,slow=31
NEW   Newport          80.97 355  IAmb     IAmb     15 20 04.0
      comp=Z,40nm,1.4s
NEW   Newport          80.97 355  P        P        15 20 02.6 +1.1
      baz=173,SNR=9.1
DGMT  Dagmar           80.98   3  IAmb     IAmb     15 20 04.2
      comp=Z,71nm,1.4s
DGMT  Dagmar           80.98   3  P        P        15 20 02.2 +0.6
      baz=184
KSCT  Kent School, K   81.06  26  P        P        15 20 01.8 -0.3
J56A  Wolcott          81.23  23  IAmb     IAmb     15 20 04.0
      comp=Z,40nm,1.2s
E43A  Lone Tree Farm   81.27  15  IAmb     IAmb     15 20 05.7
      comp=Z,43nm,1.1s
E43A  Lone Tree Farm   81.27  15  P        P        15 20 04.3 +1.2
      baz=199,SNR=19
B05A  Bryant           81.49 351  P        P        15 20 05.1 +0.9
      baz=169
AGMN  Agassiz Nation   81.56   9  P        P        15 20 05.2 +0.6
      baz=191
D41A  Chassel          81.59  14  P        P        15 20 05.7 +1.0
      baz=197,SNR=11
PECO  Prince Edward    81.78  23  P        P        15 20 06.3 +0.5
J58A  Remsen           81.84  24  IAmb     IAmb     15 20 08.1
      comp=Z,35nm,1.4s
J58A  Remsen           81.84  24  P        P        15 20 06.9 +0.6
      baz=208
J58A                              P        P        15 20 06.9 +0.6
      baz=208
SADO  Sadowa           81.85  21  P        P        15 20 06.2  0.0
      comp=Z,20nm,0.9s,baz=233,slow=5.5,SNR=13
SADO                              LR       LR       15 51 57.0
      comp=Z,568nm,21.8s,baz=194,slow=32
      comp=Z,20nm,0.9s
SADO  Sadowa           81.85  21  IAmb     IAmb     15 20 08.1
      comp=Z,43nm,1.1s
EYMN  Ely              81.88  12  IAmb     IAmb     15 20 07.8
      comp=Z,21nm,1.2s
EYMN  Ely              81.88  12  P        P        15 20 06.8 +0.5
      baz=195,SNR=9.3
EYMN  Ely              81.88  12  P        P        15 20 06.2 -0.1
      baz=195,SNR=9.3
E46A  Sault Ste Mari   81.89  17  P        P        15 20 07.8 +1.4
      baz=201,SNR=7.1
B35A  Bob, Littlefor   81.92  10  P        P        15 20 06.9 +0.4
      baz=193,SNR=7.3
L61B  Northampton      81.99  26  IAmb     IAmb     15 20 08.4
      comp=Z,40nm,1.4s
L61B  Northampton      81.99  26  P        P        15 20 06.6 -0.4
      baz=210
WCNY  West Carthage    82.26  24  P        P        15 20 09.2 +0.8
      baz=208,SNR=12
K62A  Royalston        82.34  27  P        P        15 20 09.1 +0.2
      baz=211,SNR=6.2
K62A                              P        P        15 20 09.1 +0.2
      baz=211,SNR=6.2
ACCN  Adirondack Com   82.43  25  IAmb     IAmb     15 20 14.0
      comp=Z,28nm,1.5s
HRV   Adam Dziewonsk   82.46  27  P        P        15 20 10.0 +0.6
HRV   Adam Dziewonsk   82.46  27  P        P        15 20 10.0 +0.6
HRV                               pmax     pmax
      comp=Z,59nm,1.3s
HRV   Adam Dziewonsk   82.46  27  P        P        15 20 10.2 +0.7
      baz=211
HRV   Adam Dziewonsk   82.46  27  P        P        15 20 09.7 +0.2
      baz=211
NCB   Newcomb          82.75  25  P        P        15 20 11.1 +0.2
      baz=209,SNR=8.8
J61A  Chester          82.81  26  IAmb     IAmb     15 20 12.5
      comp=Z,38nm,1.4s
MCVT  Middlebury Col   83.17  25  P        P        15 20 13.8 +0.7
      baz=210
LONY  Lake Ozonia      83.19  24  P        P        15 20 13.7 +0.5
      baz=209,SNR=14
BMNY  Brushton-Moira   83.41  24  P        P        15 20 15.0 +0.7
      baz=209,SNR=8.4
ULM   Lac du Bonnet    83.48   9  P        P        15 20 14.4 -0.1
      comp=Z,9.9nm,0.8s,baz=221,slow=4.2,SNR=12
ULM                               LR       LR       15 54 00.3
      comp=Z,389nm,18.6s,baz=206,slow=33
      comp=Z,9.9nm,0.8s
ULM   Lac du Bonnet    83.48   9  IAmb     IAmb     15 20 15.2
      comp=Z,19nm,1.0s
I62A  Tamworth         83.71  26  IAmb     IAmb     15 20 17.7
      comp=Z,36nm,1.1s
FRNY  Flat Rock        83.72  25  IAmb     IAmb     15 20 17.9
      comp=Z,40nm,1.4s
FRNY  Flat Rock        83.72  25  P        P        15 20 16.3 +0.3
      baz=210,SNR=6.4
LBNH  Lisbon           83.81  26  IAmb     IAmb     15 20 17.7
      comp=Z,36nm,1.4s
LBNH  Lisbon           83.81  26  P        P        15 20 17.0 +0.5
      baz=211
LBNH  Lisbon           83.81  26  P        P        15 20 16.9 +0.5
      baz=211
H62A  Milan            84.38  26  P        P        15 20 20.3 +1.0
      baz=211
H62A                              P        P        15 20 20.3 +1.0
      baz=211
G62A  West of Eustis   85.16  26  IAmb     IAmb     15 20 26.6
      comp=Z,26nm,1.2s
VLDQ  Val d'Or         85.37  21  IAmb     IAmb     15 20 25.0
      comp=Z,21nm,1.1s
PKME  Peaks-Kenny Pk   85.67  27  P        P        15 20 25.4 -0.3
      baz=213
F63A  Nahmakanta, Br   86.11  27  IAmb     IAmb     15 20 28.7
      comp=Z,25nm,1.1s
BBB   Bella Bella      86.20 348  LR       LR       15 51 09.2
      comp=Z,94nm,19.1s,baz=109,slow=30
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GGN   Saint George     86.51  29  IAmb     IAmb     15 20 30.1
      comp=Z,34nm,1.5s
STKA  Stephens Creek   87.33 234  P        P        15 20 34.1 -0.4
      comp=Z,10nm,1.3s,baz=103,slow=7.9,SNR=4.6
STKA                              LR       LR       15 54 13.6
      comp=Z,302nm,18.2s,baz=179,slow=32
      comp=Z,10nm,1.3s
STKA  Stephens Creek   87.33 234  P        P        15 20 33.7 -0.8
STKA  Stephens Creek   87.33 234  P        P        15 20 33.7 -0.8
STKA                              pmax     pmax
      comp=Z,1.0nm,1.2s
CRAG  Craig            90.24 347  P        P        15 20 48.0 +0.6
      baz=160
CTA   Charters Tower   90.90 245  LR       LR       15 57 37.5
      comp=Z,258nm,18.4s,baz=127,slow=33
FCC   Fort Churchill   92.04   8  IAmb     IAmb     15 20 57.0
      comp=Z,15nm,1.4s
SCHQ  Schefferville    94.52  23  LR       LR       15 59 11.0
      comp=Z,438nm,21.8s,baz=239,slow=33
YKA   Yellowknife Ar   95.02 357  P        P        15 21 08.5 -0.8
      comp=Z,2.3nm,0.9s,baz=167,slow=4.3,SNR=11
YKA                               LR       LR       15 59 34.9
      comp=Z,253nm,18.7s,baz=182,slow=33
      comp=Z,2.3nm,0.9s
KRVT  Keravat (AS076   95.09 262  LR       LR       15 55 51.8
      comp=Z,148nm,20.5s,baz=286,slow=30
PMG   Port Moresby     96.28 255  LR       LR       15 57 28.2
      comp=Z,115nm,20.2s,baz=138,slow=31
KDAK  Kodiak Island    97.29 338  LR       LR       15 57 50.2
      comp=Z,282nm,18.2s,baz=200,slow=31
ASAR  Alice Springs    97.77 236  LR       LR       16 04 29.3
      comp=Z,293nm,18.7s,baz=146,slow=35
BRSE  Bradley Lake S   98.35 340  P        Pdif     15 21 25.2 +0.6
      baz=146
SML   Sawmill          99.42 342  P        Pdif     15 21 29.7 +0.4
      baz=147
SUR   Sutherland       99.84 139  LR       LR       15 59 38.6
      comp=Z,73nm,20.1s,baz=162,slow=31
NIKH  Nikolski High    99.89 328  P        Pdif     15 21 31.8 +0.2
      baz=132
RIDG  Independent Ri  100.25 345  P        Pdif     15 21 34.2 +1.2
      baz=150
TRF   Thorofare Moun  101.30 342  P        Pdif     15 21 39.1 +1.4
      baz=146
H01W1 Cape Leeuwin H  101.39 215  T        T        17 15 07.4
      baz=140,slow=75,SNR=41
H01W2 Cape Leeuwin H  101.39 215  T        T        17 15 07.5
      baz=140,slow=75,SNR=34
H01W3 Cape Leeuwin H  101.40 215  T        T        17 15 08.0
      baz=140,slow=75,SNR=40
K20K  Telida          102.22 341  P        Pdif     15 21 43.1 +1.4
      baz=143
TORD  Torodi Ar. Bea  114.44  90  PP       PP       15 27 21.7 -2.6
      comp=Z,5.6nm,1.1s,baz=255,slow=4.1,SNR=8.0
BILL  Bilibino        117.97 335⇑ePKIKP    PKPdf    15 26 32.9 -0.2
BILL                             e                  15 27 47.3
BILL                             eSS       SS       15 44 08.8 +7.1
BILL                              pmax     pmax
      comp=Z,1.0nm,1.2s
ESDC  Sonseca Array   120.85  60  PKP      PKPdf    15 26 39.1 -0.5
      comp=Z,0.3nm,0.5s,baz=291,slow=3.4,SNR=6.3
ESDC                              PP       PP       15 28 08.1 -0.6
      comp=Z,1.1nm,1.0s,baz=256,slow=8.0,SNR=5.3
ESDC  Sonseca Array   120.85  60  PKPdf    PKPdf    15 26 38.9 -0.7
TIXI  Tiksi           130.71 339  PKP      PKPdf    15 26 56.2 -1.2
      comp=Z,2.9nm,0.9s,baz=269,slow=23,SNR=15
TIXI  Tiksi           130.71 339 i PKIKP   PKPdf    15 26 56.7 -0.6
TIXI                              pmax     pmax
      comp=Z,5.0nm,1.1s
DAVOX Davos/Dischmat  132.23  54  PKP      PKiKP    15 27 01.9 -0.4
      comp=Z,0.9nm,0.3s,baz=7.7,slow=1.4,SNR=6.5
KLR   Kul'dur         132.48 309 i PKIKP   PKPdf    15 27 01.2 -0.2
KLR                               pmax     pmax
      comp=Z,1.0nm,1.3s
KSRS  Korea Array     133.68 293  PKP      PKiKP    15 27 04.7 -0.5
      comp=Z,0.7nm,0.8s,baz=127,slow=3.3,SNR=4.7
GERES GERESS Array B  134.93  52  PKP      PKPdf    15 27 05.4 -0.7
      comp=Z,1.0nm,0.8s,baz=235,slow=4.7,SNR=5.9
BRG   Berggiesshubel  135.08  49 ePKP      PKiKP    15 27 09.3 +1.6
BRG                               Amp               15 27 16.0
      comp=Z,3.3nm,1.1s
BRG   Berggiesshubel  135.08  49 ePKIKP    PKiKP    15 27 09.3 +1.6
BRG                               pmax     pmax
      comp=Z,3.0nm,1.1s
FINES FINESS Array B  139.44  31  PKP      PKPdf    15 27 13.6 -0.3
      comp=Z,0.8nm,0.6s,baz=354,slow=1.9,SNR=3.4
FINES FINESS Array B  139.44  31           PKPdf    15 27 11.9 -2.0
FINES FINESS Array B  139.44  31  PKIKP    PKPdf    15 27 11.9 -2.0
NJ2   Nanjing         139.75 282 ePKP      PKiKP    15 27 19.3 +1.5
BOD   Bodaibo         141.62 324 ePKIKP    PKPdf    15 27 17.5 -0.5
BOD                               pmax     pmax
      comp=Z,10.0nm,1.6s
NACGM Naroch          142.12  41⇓ePKP      PKPdf    15 27 17.5 -1.4
      baz=287
NRIK  Noril'sk        142.18 350  PKP      PKPdf    15 27 17.4 -1.3
      comp=Z,1.7nm,0.4s,baz=68,slow=1.3,SNR=4.7
NRIK  Noril'sk        142.18 350  PKPdf    PKPdf    15 27 17.7 -0.9
NRIK  Noril'sk        142.18 350 i PKIKP   PKPdf    15 27 18.6 -0.1
NRIK                              pmax     pmax
      comp=Z,9.0nm,1.5s
BURAR Bucovina Array  142.67  53           PKPpre   15 27 16.0
MLR   Muntele Rosu    143.37  56  PKhKP    PKPpre   15 27 17.2
      comp=Z,13nm,1.2s,baz=357,slow=4.7,SNR=11
JMB   Yambol          143.97  61 i P       PKPab    15 27 20.1 +0.1
HNS   HongShan        144.06 290 ⇑PKP      PKiKP    15 27 26.8 +0.3
PRD   Provadia        144.55  60 i P       PKPab    15 27 21.5 -0.6
AKASG Malin Array Be  144.70  47  PKP      PKPab    15 27 21.4 -1.0
      comp=Z,28nm,1.0s,baz=286,slow=3.5,SNR=56
AKASG Malin Array Be  144.70  47c iPKIKP   PKiKP    15 27 29.5 +2.2
AKASG                             pmax     pmax
      comp=Z,4.0nm,0.8s
AKBB  Malin Array Si  144.70  47  PKPdf    PKPab    15 27 21.4 -0.9
AKBB  Malin Array Si  144.70  47  PKIKP    PKPab    15 27 21.5 -0.9
PSN   Preselentsi     145.09  59 i P       PKPbc    15 27 23.8 -0.2
KIS   Kishinev        145.18  53⇓iPKP      PKPbc    15 27 23.7 -0.5
      comp=Z,300nm,1.8s
KIS   Kishinev        145.18  53 i PKIKP   PKPbc    15 27 23.7 -0.5
KIS                              e                  15 27 29.0
KIS                               pmax     pmax
      comp=Z,300nm,1.8s
MILM  Milestii Mici   145.19  54⇓iPKP      PKPbc    15 27 23.5 -0.7
      comp=Z,700nm,0.5s
MILM  Milestii Mici   145.19  54 i PKIKP   PKPbc    15 27 23.5 -0.7
MILM                             e                  15 27 30.0
MILM                              pmax     pmax
      comp=Z,700nm,0.5s
KLMR  Klimovskoe      145.28  27 ePKP2     PKPbc    15 27 20.8 -3.3
KLMR                              pmax     pmax
      comp=Z,117nm,1.5s
KLMR  Klimovskoe      145.28  27 ePKPdf    PKPbc    15 27 20.9 -3.2
KLMR                              AMP               15 27 26.0
      comp=Z,117nm,1.5s
LYN   LuoYang         145.49 285 ⇑PKPbc    PKPab    15 27 26.8 +1.0
LYN                               LR       LR
      comp=Z,650nm,15.7s
LYN                               LR       LR
      comp=Z,290nm,15.7s
LYN                               LR       LR
      comp=Z,580nm,15.5s
TIY   Taiyuan         145.88 290 ⇓PKPbc    PKiKP    15 27 32.4 +2.0
HHC   Hu-ho-hao-te    146.66 296 ePKPbc    PKPdf    15 27 24.4 -3.1
HHC                               LR       LR
      comp=Z,170nm,15.2s
HHC                               LR       LR
      comp=Z,320nm,15.2s
HHC                               LR       LR
      comp=Z,340nm,15.2s
PRGR  Permogore       146.84  22 ePKIKP    PKPdf    15 27 25.9 -1.0
BORA  Eskisehir       146.90  66  PKPbc    PKPbc    15 27 29.0 -0.8
OBN   Obninsk         147.22  37  PKPbc    PKPbc    15 27 29.3 -0.7
      comp=Z,6.2nm,0.6s,baz=282,slow=3.4,SNR=14
OBN   Obninsk         147.22  37           PKPdf    15 27 26.6 -1.1
OBN   Obninsk         147.22  37d iPKP2    PKPbc    15 27 29.3 -0.7
OBN                              e                  15 30 58.8
OBN                              i PPP     PPP      15 34 10.9
OBN                               pmax     pmax
      comp=Z,116nm,1.7s
OBN                               MLR      MLR
      comp=Z,101nm,17.0s
MOS   Moscow          147.43  35 i PKP2    PKPdf    15 27 28.9 +0.8
BTO   Baotou          147.84 295 ePKPbc    PKPbc    15 27 32.3 -0.1
XAN   Xi'an           148.31 283  PKPbc    PKPdf    15 27 31.6 +1.2
XAN                               PKPab    sPKPab   15 27 40.9 +0.8
XAN                               pPKP     pPKPab   15 27 42.8 +3.5
XAN                               sPKP              15 27 46.3
XAN                               LR       LR
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      comp=Z,140nm,15.8s
XAN                               LR       LR
      comp=Z,200nm,20.6s
BR231 Keskin MP Arra  148.69  66           PKPdf    15 27 31.3 +0.4
ANTO  Ankara          148.70  66  PKPdf    PKPdf    15 27 29.4 -1.4
ANTO  Ankara          148.70  66  PKIKP    PKPdf    15 27 29.4 -1.4
ULN   Ulaanbaatar     148.87 310  PKPbc    PKPbc    15 27 33.9 -1.0
ULN   Ulaanbaatar     148.87 310d iPKP2    PKPbc    15 27 33.3 -1.6
ULN                               pmax     pmax
      comp=Z,22nm,2.5s
IRK   Irkutsk         149.00 319 ePKIKP    PKPdf    15 27 31.9 +1.1
IRK                               pmax     pmax
      comp=Z,84nm,2.5s
SONM  Songino Array   149.30 310  PKPbc    PKPbc    15 27 34.9 -1.1
      comp=Z,3.6nm,0.8s,baz=121,slow=3.1,SNR=12
SONM  Songino Array   149.30 310  PKPdf    PKPdf    15 27 30.2 -1.4
SONM  Songino Array   149.30 310  PKIKP    PKPdf    15 27 30.3 -1.4
BRTR  Keskin Array B  149.35  66  PKPbc    PKPbc    15 27 36.4  0.0
      comp=Z,11nm,1.1s,baz=204,slow=2.7,SNR=22
LPSR  Galich'ya Gora  149.65  40 ePKP2     PKPbc    15 27 35.4 -1.1
LPSR                              pmax     pmax
      comp=Z,60nm,1.6s
VORR  Voronezh        150.23  41 ePKIKP    PKPbc    15 27 37.1 -0.8
VORR                              pmax     pmax
      comp=Z,90nm,0.4s
ZAK   Zakamensk       150.34 316 ePKIKP    PKPbc    15 27 38.4  0.0
ZAK                               pmax     pmax
      comp=Z,16nm,1.4s
KIRV  Kirov           150.41  23  PKPbc    PKPbc    15 27 36.9 -1.1
      comp=Z,18nm,0.6s,baz=239,slow=2.5,SNR=14
KIRV                              PKPab    PKPab    15 27 44.0 -0.6
      comp=Z,14nm,0.6s,baz=318,slow=4.0,SNR=6.1
VSR   Storozhevoye    150.41  42 ePKIKP    PKPbc    15 27 37.1 -1.3
VSR                               pmax     pmax
      comp=Z,50nm,1.5s
CMAR  Chiang Mai Arr  151.05 247  PKPbc    PKPbc    15 27 41.1 +0.2
      comp=Z,3.8nm,0.9s,baz=189,slow=1.5,SNR=27
CMAR  Chiang Mai Arr  151.05 247  PKPbc    PKPbc    15 27 39.9 -1.0
CMAR  Chiang Mai Arr  151.05 247  PKIKP    PKPbc    15 27 39.9 -1.0
ANN   Anapa           151.50  55 ePKIKP    PKPdf    15 27 32.6 -2.4
ANN                              i                  15 27 40.0
ANN                              e                  15 34 40.0
ANN                               pmax     pmax
      comp=Z,51nm,1.1s
VRH   Novokhopyorsk   151.84  40 ePKIKP    PKPbc    15 27 40.5 -1.2
VRH                               pmax     pmax
      comp=Z,30nm,1.0s
CD2   Chengdu         152.04 275  PKPbc    PKPdf    15 27 35.3 -1.0
PZH   PanZhiHua       152.50 265  PKPbc    PKPdf    15 27 37.6 +0.4
LZH   Lanzhou         152.66 286 ePKPbc    PKiKP    15 27 46.8 +2.3
LZH                               pPKP     pPKPab   15 27 56.8 -0.5
SOC   Sochi           153.39  57 i PKIKP   PKPbc    15 27 45.2 -0.2
SOC                              e                  15 31 30.8
SOC                              ePPP      PPP      15 34 58.4
SOC                              eSS       SS       15 50 59.2 -7.5
BELG  Belogornoye     154.16  34  PKPbc    PKPbc    15 27 46.2 -0.6
      comp=Z,10nm,0.4s,baz=193,slow=4.5,SNR=4.7
BELG                              PKPab    PKPab    15 28 00.7 +0.2
      comp=Z,8.6nm,0.5s,baz=128,slow=4.8,SNR=5.6
ARU   Arti            154.84  16  PKP      PKPdf    15 27 38.7 -0.8
      comp=Z,0.6nm,0.4s,baz=349,slow=4.7,SNR=5.8
ARU                               PKPbc    PKPbc    15 27 47.9 -0.2
      comp=Z,0.5nm,0.3s,baz=319,slow=3.3,SNR=5.5
ARU                               PKPab    PKPab    15 28 03.1 -0.2
      comp=Z,0.5nm,0.3s,baz=352,slow=4.2,SNR=5.4
ARU   Arti            154.84  16 i PKIKP   PKPdf    15 27 39.3 -0.1
GOF   Gofitskoye      155.25  52⇑ePKP2     PKPab    15 28 05.8 +0.4
KBZ   Khabaz          155.57  55  PKP      PKPdf    15 27 41.7 +0.9
      comp=Z,2.3nm,0.9s,baz=284,slow=0.9,SNR=4.2
GTA   Gaotai          155.74 294 ePKP      PKPdf    15 27 40.9 -0.5
ZALV  Zalesovo Beam   156.59 339  PKP      PKPdf    15 27 40.3 -1.6
      comp=Z,1.1nm,0.6s,baz=354,slow=1.5,SNR=7.8
ZALV                              PKPab    PKPab    15 28 10.1 -0.8
      comp=Z,2.1nm,0.7s,baz=22,slow=3.6,SNR=5.4
ZALV  Zalesovo Beam   156.59 339  PKPdf    PKPdf    15 27 39.9 -1.9
ZALV                              PKPab    PKPab    15 28 10.9 +0.1
ZALV  Zalesovo Beam   156.59 339  PKP2     PKPab    15 28 10.9 +0.1
ZALV                                                16 27 39.9
AKTO  Aktyubinsk      159.95  24  PKP      PKPdf    15 27 45.6 -0.5
      comp=Z,2.3nm,0.8s,baz=19,slow=4.6,SNR=7.0
AKTO                              PKPab    PKPab    15 28 25.9 +0.4
      comp=Z,4.3nm,0.9s,baz=321,slow=4.2,SNR=7.1
AKTO                              PP       PP       15 32 08.4 +1.4
      comp=Z,0.7nm,0.4s,baz=322,slow=8.2,SNR=5.8
GOMU  GeErMu          159.96 287  PKP      PKPdf    15 27 50.6 +3.6
GOMU                              pPKP     sPKPdf   15 27 54.6 +4.3
GOMU                              AMB      AMB
      comp=Z,75nm,5.1s
KURK  Kurchatov       161.16 345           PKPdf    15 27 44.6 -2.8
KURK                                       PKPab    15 28 29.1 -1.5
KURK  Kurchatov       161.16 345  PKP2     PKPab    15 28 29.2 -1.5
KURK                                                16 27 44.6
KURBB Kurchatov Arra  161.27 345  PKP      PKPdf    15 27 45.9 -1.6
      comp=Z,0.5nm,0.6s,baz=19,slow=1.0,SNR=5.7
KURBB                             PKPab    PKPab    15 28 31.0 -0.2
      comp=Z,1.9nm,0.8s,baz=23,slow=4.0,SNR=7.3
ABKAR Akbulak array   161.61  23  PKPdf    PKPdf    15 27 47.8 -0.1
ABKAR                             PKPab    PKPab    15 28 33.0 +0.2
WMQ   Urumqi          162.81 315 ePKP      PKPdf    15 27 48.9 -0.5
WMQ                               LR       LR
      comp=Z,230nm,21.1s
WMQ                               LR       LR
      comp=Z,180nm,23.5s
MKAR  Makanchi Array  163.48 331  PKP      PKPdf    15 27 47.9 -2.0
      comp=Z,0.4nm,0.8s,baz=352,slow=2.5,SNR=4.0
MKAR                              PKPab    PKPab    15 28 41.3 +0.2
      comp=Z,0.9nm,0.9s,baz=18,slow=4.2,SNR=4.4
MKAR                              PP       PP       15 32 36.2  +10
      comp=Z,1.0nm,1.0s,baz=44,slow=8.8,SNR=4.7
MKAR  Makanchi Array  163.48 331           PKPab    15 28 40.3 -0.8
KSH   Kashi           172.09 330  PKP      PKPdf    15 27 58.8 +2.5
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*HEL **18** 15:17:11.7±0.4, 67.°92N×34.°43E, h0km, ML2.4, Explosion*
*KOLA **18** 15:17:14.6, 67.°69N×34.°06E, h0km, ML2.5*
*IDC **18** 15:17:16.3±1.7, 67.°66N×33.°69E, h0km, mbtmp3.8/3, ML2.8/3, Error ellipse: s-maj=18.0km s-min=8.6km az=87.0*

ISC 18 15:17:13.8±0.9**, 67.°69N**±0.°04×**34.°07E**±0.°04**, h0km, n27, σ1.s60**/41**, Baltic States-Belarus-Northwestern Russia**

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Code  Station Name      Δ°   AZ°   Phase ID         Time     Res
                                   Op       ISC     h  m  s  ISC
APA   Apatity          0.28 244   P        Pg       15 17 19.8 +0.6
APA                               S        Sg       15 17 23.6 +0.8
LVZ   Lovozero         0.30  47   P        Pg       15 17 19.8 +0.2
LVZ                               S        Sg       15 17 23.9 +0.4
APA0  Apatity Array    0.42 258   P        Pg       15 17 22.4 +0.5
APA0                              S        Sg       15 17 28.2 +0.9
TERR  Teriberka        1.56  14   P        Pn       15 17 42.6 -0.1
TERR                              S        Sn       15 18 03.0 -0.7
VRF   Varrio           1.70 274   PG       Pn       15 17 44.8 +0.1
      baz=80
VRF                               MSG               15 18 06.4
      comp=Z,42nm,0.2s
VRF                               SG       Sn       15 18 07.3 +0.2
PRVG  Vayda Guba       2.17 342   P        Pn       15 17 52.3 +1.1
PRVG                              S        Sn       15 18 19.7 +0.9
OLKF  Oulanka, Finla   2.29 235   PN       Pn       15 17 54.1 +1.3
      baz=43
OLKF                              SN       Sb       15 18 24.6 -0.2
KU6   Riekki           2.35 226   PN       Pn       15 17 54.4 +0.8
KU6                               SN       Sb       15 18 26.1 -0.3
KU6                               MSG               15 18 28.7
      comp=Z,12nm,0.2s
MSF   Maaselka         2.68 230   PN       Pn       15 17 59.3 +1.2
      baz=45
MSF                               SN       Sb       15 18 35.5 -0.3
KEV   Kevo             3.30 312  eP        Pn       15 18 07.8 +1.1
KEV   Kevo             3.30 312   PG       Pn       15 18 07.6 +1.0
      baz=118
RNF   Rovaniemi        3.33 255   PN       Pn       15 18 07.2 +0.3
      baz=73
RNF                               SN       Sn       15 18 48.7 +1.6
ARA0  ARCESS Array S   3.64 304  eP        Pn       15 18 12.0 +0.7
ARA0                              IAML              15 19 11.6
      comp=Z,14nm,0.5s
ARCES ARCESS Array B   3.64 304   Pn       Pn       15 18 12.1 +0.8
      comp=Z,1.4nm,0.3s,baz=120,slow=14,SNR=192
ARCES                             Pg       Pb       15 18 20.6 +1.7
      comp=Z,1.1nm,0.3s,baz=118,slow=14,SNR=15
ARCES                             Sn       Sn       15 18 54.2 -0.6
      comp=Z,1.6nm,0.3s,baz=122,slow=29,SNR=12
ARCES                             Lg       Lg       15 19 05.6
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	comp=Z,3.8nm,0.3s,baz=119,slow=29,SNR=16						
	comp=Z,6.0nm,0.2s						
ARCES	ARCESS Array B	3.64	304	P	Pn	15 18 12.0	+0.7
ARCES				S	Sn	15 18 52.4	-2.5
KLF	Kolari	3.92	268	PN	Pn	15 18 15.0	-0.1
HEF	Hetta	3.97	285	*e*P	Pn	15 18 15.7	-0.1
HEF	Hetta	3.97	285	SN	Sn	15 19 03.1	0.0
TOF	Tornio	4.17	252	PG	Pb	15 18 27.2	-0.7
OUL	Oulu	4.20	235	PG	Pb	15 18 30.7	+2.2
	baz=39						
KTK1	Kautokeino	4.22	293	*e*P	Pn	15 18 20.4	+1.0
KTK1				*e*S	Sn	15 19 04.4	-4.8
KTK1				IAML		15 19 27.0	
	comp=Z,22nm,0.6s						
PAJU	Pajala	4.29	266	PN	Pn	15 18 19.8	-0.4
	baz=75						
LANU	Lannavaara	4.58	280	PN	Pn	15 18 20.4	-3.8
HAMF	Hammerfest	4.74	313	*e*P	Pn	15 18 24.9	-1.4
HAMF				IAML		15 19 45.3	
	comp=Z,13nm,0.3s						
I37NO	I37NO	5.88	291	*i*		15 55 20.0	
	baz=98,slow=330,SNR=0.7						
FINES	FINESS Array B	7.15	212	Pn	Pn	15 18 58.7	-0.8
	comp=Z,0.2nm,0.3s,baz=29,slow=13,SNR=11						
FINES				Sn	Sn	15 20 17.0	-4.2
	comp=Z,0.2nm,0.3s,baz=29,slow=24,SNR=2.3						
FINES				Lg	Lg	15 20 53.6	
	comp=Z,0.4nm,0.3s,baz=22,slow=26,SNR=3.8						
	comp=Z,0.5nm,0.2s						
SPITS	Spitsbergen Ar	11.65	342	Pn	Pn	15 19 58.2	-2.8
	baz=140,slow=16						
	comp=Z,11nm,1.0s						

IDC 18 15:23:48.9±1.6**, 0°.15N×121°.45E, h0^{km}, mb3.7**/4**, mbtmp3.7**/4**, MS4.0**/7**, Error ellipse: s-maj=212.6km s-min=26.5km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.59	56	P	Pb	15 24 02.0	-0.2
	2µm29µm1µm,0.6s						
APSI	Ampana	1.07	169	P	Pn	15 24 23.4	+12
	3µm153nm,0.6s						
MPSI	Mapaga	1.56	277	P	Pg	15 24 18.9	-0.1
	6µm122nm,0.7s						
GTOI	Gorontalo	1.63	73	P	Pn	15 24 10.2	-8.8
	5µm381nm,0.6s						
LUWI	Luwuk	1.77	132	P	Pg	15 24 30.2	+7.3
KMSI	Cibinong	2.57	80	P	Pb	15 24 34.0	-1.9
WRA	Warramunga Arr	23.62	148	P	P	15 29 02.2	+0.3
	1.8nm,0.7s,baz=325,slow=11,SNR=20						
	1.8nm,0.7s						
ASAR	Alice Springs	26.58	154	P	P	15 29 29.5	+0.5
	0.7nm,0.8s,baz=331,slow=8.7,SNR=16						
	0.7nm,0.8s						
JOW	Kunigami	27.33	13	LR	LR	15 40 05.5	
	comp=Z,188nm,19.7s,baz=324,slow=36						
STKA	Stephens Creek	37.12	151	P	P	15 31 00.4	-1.0
	2.0nm,0.8s,baz=333,slow=12,SNR=3.4						
	2.0nm,0.8s						
MKAR	Makanchi Array	57.69	329	P	P	15 33 41.2	-0.1
	0.3nm,0.6s,baz=116,slow=6.6,SNR=2.5						
	0.3nm,0.6s						
WSAR	Wadi Sarin	65.09	296	LR	LR	16 04 36.7	
	comp=Z,27nm,18.7s,baz=302,slow=38						
MBAR	Mbarara	90.71	269	LR	LR	16 15 16.5	
	comp=Z,126nm,20.6s,baz=226,slow=34						
AKASG	Malin Array Be	91.30	321	LR	LR	16 25 10.5	
	comp=Z,71nm,18.7s,baz=298,slow=40						
FINES	FINESS Array B	92.45	331	LR	LR	16 20 44.5	
	comp=Z,111nm,21.9s,baz=280,slow=37						
SPITS	Spitsbergen Ar	92.93	349	LR	LR	16 19 52.8	
	comp=Z,246nm,21.9s,baz=10,slow=36						
IDI	Anoyia	95.28	305	LR	LR	16 27 06.2	
	comp=Z,87nm,22.0s,baz=264,slow=40						

*IDC **18** 15:47:34.9±0.8, 52°.26N×168°.62W, h0^{km}, mb4.0/24, mbtmp4.0/25, ML3.3/1, MS3.8/2, Error ellipse: s-maj=21.3km s-min=12.9km az=169.0*

*NEIC **18** 15:47:36.4±2.5, 52°.12N±0°.05×168°.39W±0°.08, h13^{km}±2^{km}, mb4.2/68, ML3.3/23(AEIC), Error ellipse: s-maj=7.3km s-min=6.7km az=151.0*

*AEIC **18** 15:47:39.5±3.8, 52°.28N±0°.06×168°.53W±0°.09, h61^{km}±5^{km}, Error ellipse: s-maj=9.3km s-min=7.8km az=170.0*

ISC 18 15:47:35.8±0.5**, 52°.11N**±0°.06×**168°.39W**±0°.05**, h10^{km}, n160, σ1^{s}.46**/155**, mb4.1**/33**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.91	342	Pg	Pb	15 47 54.2	+0.4
NIKH				Sg	Sb	15 48 06.9	+0.9
OKSO	Okmok South	1.26	6		Pn	15 47 59.6	0.0
OKSO					Sn	15 48 16.9	+0.3
OKFG	Magazine Ridge	1.34	12		Pn	15 48 01.0	+0.4
MSW	Makushin Switc	2.06	28		Pn	15 48 11.4	+0.9
MSW					Sn	15 48 35.3	-0.8
MNAT	Makushin Natee	2.06	29		Pn	15 48 11.1	+0.6
UNV	Unalaska Valle	2.08	32	Pn	Pn	15 48 10.9	+0.1
UNV	Unalaska Valle	2.08	32		Sn	15 48 36.1	-0.6
MTBL	Makushin Table	2.13	28		Pn	15 48 12.3	+0.8
AKBBA	Akutan Broad B	2.49	36		Pn	15 48 17.6	+1.3
AKUT	Akutan	2.57	37	Pn	Pn	15 48 18.0	+0.5
AKSA	Akutan Strait	2.60	38		Pn	15 48 18.8	+0.9
KOFP	Korovin Flat P	3.52	275		Pn	15 48 31.7	+1.2
ATKA	Atka Island	3.58	274		Pn	15 48 31.6	+0.3
ISLZ	Isanotski Laza	3.84	45		Pn	15 48 36.0	+1.1
FALS	False Pass	4.05	45	Pn	Pn	15 48 41.0	+3.1
GSCK	Great Sitkin C	4.80	272		Pn	15 48 49.0	+0.9
SPIA	Saint Paul Isl	5.20	349	Pn	Pn	15 48 55.1	+1.6
SDPT	Sand Point	5.71	52	Pn	Pn	15 49 01.6	+1.0
CNBA	Chernabura Isl	5.92	59	Pn	Pn	15 49 04.1	+0.7
CHGN	Chignik	7.20	50	Pn	Pn	15 49 23.8	+2.8
CHIR	Chirikof Islan	8.40	59	Pn	Pn	15 49 35.8	-1.7
SII	Sitkinak Islan	9.42	56	Pn	Pn	15 49 53.5	+2.1
KDAK	Kodiak Island	10.71	52	Pn	Pn	15 50 09.4	+0.3
	1.4nm,0.3s,baz=259,slow=5.7,SNR=18						
KDAK				Sn	Sn	15 52 01.3	-7.6
	0.2nm,0.3s,baz=142,slow=14,SNR=1.5						
KDAK	Kodiak Island	10.71	52	Pn	Pn	15 50 09.1	0.0
Q19K	Cape Douglas,	10.78	45	Pn	Pn	15 50 12.3	+2.2
N18K	Kilae Creek	11.02	34	Pn	Pn	15 50 11.8	-1.6
SVW2	Sparrevohn	11.42	33	Pn	Pn	15 50 21.5	+2.6
N19K	Bonanza Creek	11.61	36	Pn	Pn	15 50 25.1	+3.7
CNPM	China Poot	12.15	46	Pn	Pn	15 50 29.1	+0.3
M19K	Big River Lodg	12.40	32	Pn	Pn	15 50 35.9	+3.6
BRLK	Bradley Lake	12.42	45	Pn	Pn	15 50 33.0	+0.5
L19K	White Mountain	12.46	31	Pn	Pn	15 50 35.2	+2.2
SPU	Mount Spurr	12.75	38	Pn	Pn	15 50 39.1	+2.1
M20K	Styx River	12.81	34	Pn	Pn	15 50 39.6	+1.7
SEW	Seward	13.22	45	Pn	Pn	15 50 43.9	+0.5
O22K	Cooper Landing	13.29	44	Pn	Pn	15 50 45.6	+1.2
K20K	Telida	13.58	28	Pn	Pn	15 50 50.3	+1.9
PPLA	Purkeypile	13.83	32	Pn	Pn	15 50 53.6	+1.8
J20K	Nowinta River	14.20	26	Pn	Pn	15 50 58.9	+2.2
KNK	Knik Glacier	14.30	42	Pn	Pn	15 50 58.4	+0.2
SML	Sawmill	14.57	40	Pn	Pn	15 51 01.2	-0.6
GLI	Glacier Island	14.62	45	Pn	Pn	15 50 59.8	-2.6
HIN	Hinchinbrook I	14.67	47	Pn	Pn	15 51 02.1	-1.0
SCM	Sheep Creek Mo	14.98	41		Pn	15 51 05.1	-2.4
BPAW	Bear Paw Mtn.	15.06	30		Pn	15 51 10.6	+2.1
BPAW				IAmb	IAmb	15 51 14.2	
	comp=Z,5.1nm,0.7s						
KLU	Klutina	15.40	44	Pn	Pn	15 51 11.6	-1.5
KLU				IAmb	IAmb	15 51 12.3	
	comp=Z,12nm,0.7s						
M24K	Tolsona, Glenn	15.59	41		Pn	15 51 14.9	-0.7
DHY	Denali Highway	15.64	37	Pn	Pn	15 51 15.5	-0.8
HMT	Hamilton	15.67	49	Pn	Pn	15 51 15.4	-1.0
HMT				IAmb	IAmb	15 51 27.9	
	comp=Z,53nm,1.4s						
H21K	Melozitna Rive	15.72	24	P	P	15 51 20.8	-0.3
H21K				IAmb	IAmb	15 51 23.9	
	comp=Z,12nm,0.9s						
BMRM	Bremner River	15.75	46	Pn	Pn	15 51 16.5	-1.1
BMRM				IAmb	IAmb	15 51 38.3	
	comp=Z,24nm,1.4s						
IMAR	Indian Mountai	15.76	22	P	P	15 51 20.7	-0.7
NEA2	Nenana	16.01	31	P	Pn	15 51 22.4	+1.6
N25K	Chitina, Valde	16.02	44		Pn	15 51 20.2	-0.8
N25K				IAmb	IAmb	15 51 21.8	
	comp=Z,5.4nm,0.5s						
WRH	Wood River Hil	16.25	32	Pn	Pn	15 51 23.6	-0.3
GLB	Gilahina Butte	16.30	45	Pn	Pn	15 51 23.7	-0.8
I23K	Minto, Yukon-K	16.30	29		Pn	15 51 24.6	+0.1
PAX	Paxson	16.32	39	Pn	Pn	15 51 24.4	-0.4
VRDI	Verde Repeater	16.37	46	Pn	Pn	15 51 24.7	-1.0
CCB	Clear Creek Bu	16.45	32	Pn	Pn	15 51 25.4	-1.1
TGL	Tana Glacier	16.48	48	Pn	Pn	15 51 27.3	+0.4
TGL				IAmb	IAmb	15 51 45.5	
	comp=Z,21nm,0.9s						
MDM	Murphy Dome	16.52	31	Pn	Pn	15 51 25.0	-2.4
MCARA	McCarthy VSAT	16.62	46		P	15 51 30.7	-0.4
MCARA				IAmb	IAmb	15 51 35.6	
	comp=Z,28nm,1.4s						
ISLE	Juniper Island	16.65	49	Pn	Pn	15 51 29.5	+0.3
ISLE				IAmb	IAmb	15 51 43.7	
	comp=Z,37nm,1.4s						
H23K	Yukon River	16.73	28		Pn	15 51 31.4	+1.4
H23K				IAmb	IAmb	15 51 57.8	
	comp=Z,11nm,1.1s						
IL31		16.84	33	Pn	Pn	15 51 30.9	-0.4
ILAR	Eielson Array	16.84	33	Pn	Pn	15 51 29.8	-1.6
	comp=Z,0.1nm,0.3s,baz=238,slow=12,SNR=12						
ILAR				LR	LR	15 57 02.7	
	comp=Z,121nm,18.9s,baz=100,slow=34						
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	16.84	33	P	Pn	15 51 31.5	+0.1
YAH	Yahtse	16.86	50	Pn	Pn	15 51 31.8	-0.1
YAH				IAmb	IAmb	15 51 39.1	
	comp=Z,26nm,0.6s						
RIDG	Independent Ri	16.96	38	P	Pn	15 51 33.3	+0.3
GRNC	Granite Creek	16.97	49	P	Pn	15 51 33.5	+0.3
GRNC				IAmb	IAmb	15 51 51.7	
	comp=Z,17nm,0.8s						
M26K	Nabesna, AK	17.05	43	Pn	Pn	15 51 32.6	-1.4
M26K				IAmb	IAmb	15 51 37.5	
	comp=Z,7.6nm,0.7s						
BARN	Barnard Glacie	17.12	48	Pn	Pn	15 51 35.2	+0.1
BARN				IAmb	IAmb	15 51 40.3	
	comp=Z,18nm,1.4s						
TABL	Table Mountain	17.17	50		Pn	15 51 35.9	+0.2
TABL				IAmb	IAmb	15 52 01.2	
	comp=Z,17nm,0.9s						
L26K	Log Cabin Wild	17.19	41		Pn	15 51 36.2	+0.4
H24K	Noodor Dome	17.23	29		Pn	15 51 37.0	+0.7
CTGM	Chitina Glacie	17.24	48	Pn	Pn	15 51 35.7	-0.9
CTGM				IAmb	IAmb	15 51 50.8	
	comp=Z,20nm,1.4s						
J25K	Salcha River,	17.26	35	Pn	Pn	15 51 35.2	-1.5
SCRK	Sand Creek	17.41	38	Pn	Pn	15 51 37.1	-1.5
BCAR	Beaver Creek A	17.84	42	Pn	Pn	15 51 42.0	-2.0
TOLK	Toolik Lake Re	18.86	21		Pn	15 51 56.8	+0.4
HYT	Haines Junctio	19.00	51	P	Pn	15 52 00.9	+2.7
HYT				IAmb	IAmb	15 52 15.2	
	comp=Z,15nm,1.1s						
BMAR	Burnt Mountain	19.27	28	P	Pn	15 52 01.3	0.0
M30M	Minto, Yukon	19.79	46	P	P	15 52 05.7	-0.4
PET	Petropavlovsk	19.96	286	P	P	15 52 07.1	-0.7
N31M	Braeburn, Yuko	19.96	49	P	Pn	15 52 11.2	+1.6
I29M	Ogilvie Camp,	20.22	37	P	P	15 52 09.9	-0.7
I29M				IAmb	IAmb	15 52 17.3	
	comp=Z,5.7nm,0.7s						
WHY	Whitehorse	20.23	52	P	Pn	15 52 12.5	-0.3
WHY				IAmb	IAmb	15 52 17.1	
	comp=Z,15nm,1.1s						
PEA0B	Petropavlovsk-	20.51	286	P	P	15 52 13.4	-0.5
PEA0B				IAmb	IAmb	15 52 34.8	
	comp=Z,30nm,1.1s						
PETK	Petropavlovsk-	20.51	286	P	P	15 52 12.7	-1.2
	comp=Z,6.4nm,0.5s,baz=91,slow=13,SNR=54						
	comp=Z,6.4nm,0.5s						
PETK	Petropavlovsk-	20.51	286	P	P	15 52 13.1	-0.8
M31M	Drury Creek, Y	20.77	48		Pn	15 52 18.8	-0.2
M31M				IAmb	IAmb	15 52 45.4	
	comp=Z,17nm,1.4s						
P33M	Teslin, Yukon	21.17	54	P	P	15 52 24.3	+3.2
P33M				IAmb	IAmb	15 52 27.1	
	comp=Z,7.1nm,0.7s						
EPYK	Eagle Plains	21.26	36	P	P	15 52 20.9	-1.0
INK	Inuvik	23.24	33	P	P	15 52 41.8	-0.9
	comp=Z,3.1nm,0.5s,baz=241,slow=8.5,SNR=13						
	comp=Z,3.1nm,0.5s						
INK	Inuvik	23.24	33	P	P	15 52 42.0	-0.8
INK				IAmb	IAmb	15 52 45.2	
	comp=Z,3.7nm,0.8s						
SEY	Seymchan	23.29	313	P	P	15 52 42.4	-0.9
	comp=Z,2.0nm,0.6s,baz=66,slow=20						
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	29.96	49	P	P	15 53 44.4	+0.6
	comp=Z,0.5nm,0.5s,baz=282,slow=7.2,SNR=6.0						
	comp=Z,0.5nm,0.5s						
YKA	Yellowknife Ar	29.96	49	P	P	15 53 43.8	-0.1
E04D	Cinebar	29.97	82	P	P	15 53 44.0	-0.1
E04D				IAmb	IAmb	15 53 45.1	
	comp=Z,6.1nm,0.8s						
ASAJ	Asahikawa	33.13	276	P	P	15 54 11.6	-0.3
	comp=Z,5.3nm,1.0s,baz=68,slow=12,SNR=4.2						
	comp=Z,5.3nm,1.0s						
TIXI	Tiksi	33.27	329	P	P	15 54 11.2	-1.7
	comp=Z,1.1nm,0.6s,baz=90,slow=20,SNR=9.7						
	comp=Z,1.1nm,0.6s						
TIXI	Tiksi	33.27	329	P	P	15 54 11.4	-1.4
TIXI				IAmb	IAmb	15 54 13.2	
	comp=Z,1.4nm,0.8s						
MOD	Modoc Plateau	33.77	88	P	P	15 54 16.1	-1.6
MOD				IAmb	IAmb	15 54 44.2	
	comp=Z,4.6nm,1.2s						
RES	Resolute Bay	36.35	25	P	P	15 54 38.0	-1.3
	comp=Z,2.1nm,0.9s,baz=318,slow=14,SNR=1.9						
	comp=Z,2.1nm,0.9s						
MCMT	McKenzie Canyo	36.74	79	P	P	15 54 45.8	+2.4
NVAR	Mina Array Bea	37.06	91	P	P	15 54 47.4	+1.4
	comp=Z,0.2nm,0.5s,baz=312,slow=8.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
KLR	Kul'dur	37.12	290	P	P	15 54 43.2	-2.9
	comp=Z,0.6nm,0.3s,baz=59,slow=7.7,SNR=4.6						
	comp=Z,0.6nm,0.3s						
H11N2	WAKE ISLAND Hy	37.63	220	T	T	16 35 41.2	
	baz=23						
H11N3	WAKE ISLAND Hy	37.64	220	T	T	16 35 39.0	
	baz=23						
H11N1	WAKE ISLAND Hy	37.65	220	T	T	16 35 40.7	
	baz=23						
EUNU	Eureka	37.80	16	P	P	15 54 52.7	+1.0
EUNU				IAmb	IAmb	15 55 13.5	
	comp=Z,5.4nm,1.2s						
H11S1	WAKE ISLAND Hy	38.81	220	T	T	16 37 04.4	
	baz=22,slow=74						
H11S2	WAKE ISLAND Hy	38.83	220	T	T	16 37 05.5	
	baz=22						
H11S3	WAKE ISLAND Hy	38.83	220	T	T	16 37 07.2	
	baz=22,slow=74						
BW06	Boulder Array	39.86	79	P	P	15 55 12.1	+2.5
BW06				IAmb	IAmb	15 55 17.3	
	comp=Z,6.1nm,1.4s						
PD31	Pinedale Array	39.86	79	P	P	15 55 11.2	+1.6
PD31				IAmb	IAmb	15 55 17.3	
	comp=Z,5.3nm,1.4s						
PDAR	Pinedale Array	39.86	79	P	P	15 55 11.9	+2.3
	comp=Z,0.8nm,0.5s,baz=301,slow=3.8,SNR=12						
	comp=Z,0.8nm,0.5s						
FCC	Fort Churchill	40.65	50	P	P	15 55 17.3	+1.7
FCC				IAmb	IAmb	15 55 18.1	
	comp=Z,6.0nm,0.7s						
KSRS	Korea Array	46.03	278	P	P	15 55 59.6	+0.2
	comp=Z,1.6nm,0.8s,baz=54,slow=7.9,SNR=10						
	comp=Z,1.6nm,0.8s						
SPB2	Spitsbergen Ar	49.95	359	P	P	15 56 28.4	-0.8
SONM	Songino Array	51.95	302	P	P	15 56 44.3	-0.5
	comp=Z,0.9nm,0.6s,baz=61,slow=6.3,SNR=4.5						
	comp=Z,0.9nm,0.6s						
TXAR	Lajitas Array	52.15	89	P	P	15 56 48.6	+2.2
	comp=Z,0.3nm,0.5s,baz=310,slow=5.8,SNR=2.8						
	comp=Z,0.3nm,0.5s						
P40A	Paris	52.29	72	P	P	15 56 47.2	0.0
HHC	Hu-ho-hao-te	53.58	292	*e*P	P	15 56 56.1	-0.8
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,6.5s						
SCHQ	Schefferville	55.21	44	P	P	15 57 08.2	-0.3
SCHQ				IAmb	IAmb	15 57 08.7	
	comp=Z,6.1nm,1.3s						
SCO	Scoresbysund	55.35	13	P	P	15 57 08.2	-1.0
IVI	Ivigtut	57.42	30	P	P	15 57 25.3	+1.3
KEV	Kevo	57.93	354	P	P	15 57 27.0	-0.5
ZALV	Zalesovo Beam	58.02	318	P	P	15 57 28.0	-0.4
	comp=Z,0.6nm,0.4s,baz=64,slow=12,SNR=3.9						
	comp=Z,0.6nm,0.4s						
ZALV	Zalesovo Beam	58.02	318	P	P	15 57 27.1	-1.3
ARCES	ARCESS Array B	58.25	354	P	P	15 57 28.2	-1.6
	comp=Z,3.7nm,0.9s,baz=16,slow=9.2,SNR=6.6						
	comp=Z,3.7nm,0.9s						
ARCES	ARCESS Array B	58.25	354	P	P	15 57 28.9	-0.9
LVZ	Lovozero	59.08	350	P	P	15 57 35.4	-0.2
LMN	Caledonia Moun	62.50	50	P	P	15 57 59.4	+0.1
KURK	Kurchatov	62.97	319	P	P	15 58 01.7	-0.5
KURK				IAmb	IAmb	15 58 02.6	
	comp=Z,2.5nm,0.8s						
WMQ	Urumqi	64.17	309	*e*P	P	15 58 12.3	+1.9
MK31	Makanchi Array	64.42	314	P	P	15 58 10.4	-1.5
MK31				IAmb	IAmb	15 58 11.8	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	64.42	314	P	P	15 58 11.0	-0.9
	comp=Z,1.5nm,0.7s,baz=49,slow=6.8,SNR=19						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	64.42	314	P	P	15 58 11.2	-0.7
FIA1	FINESS Array S	66.21	352	P	P	15 58 22.9	-0.3
FINES	FINESS Array B	66.21	352	P	P	15 58 22.7	-0.5
	comp=Z,3.6nm,0.5s,baz=18,slow=8.0,SNR=32						
	comp=Z,3.6nm,0.5s						
FINES	FINESS Array B	66.21	352	P	P	15 58 22.9	-0.3
NC204	NORSAR Array S	66.97	0	P	P	15 58 28.4	+0.2
NB2	NORSAR Subarra	67.20	0	P	P	15 58 30.1	+0.5
	comp=Z,0.9nm,0.6s,baz=0.8,slow=6.9						
NOA	NORSAR Array B	67.20	0	P	P	15 58 29.6	0.0
	comp=Z,1.4nm,0.7s,baz=0.3,slow=6.3,SNR=7.1						
	comp=Z,1.4nm,0.7s						
BOOM	Boomskoye usch	70.60	315	P	P	15 58 51.8	+0.5
ABKAR	Akbulak array	70.97	329	P	P	15 58 53.1	-0.1
BELG	Belogornoye	71.56	338	LR	LR	16 31 11.5	
	comp=Z,210nm,21.4s,baz=325,slow=37						
KKAR	Karatay Array	72.39	319	P	P	15 59 02.1	+0.3
GAR	Garm	75.89	317	P	P	15 59 22.4	-0.1
AKASG	Malin Array Be	76.49	349	P	P	15 59 24.4	-1.1
	comp=Z,0.4nm,0.3s,baz=15,slow=5.6,SNR=4.9						
	comp=Z,0.4nm,0.3s						
CMAR	Chiang Mai Arr	77.26	284	P	P	15 59 30.7	+0.3
	comp=Z,1.3nm,0.7s,baz=25,slow=6.2,SNR=10.0						
	comp=Z,1.3nm,0.7s						
LANS	Liptovska Anna	78.90	355	*e*P	P	15 59 41.1	+2.1
GERES	GERESS Array B	79.41	359	P	P	15 59 42.7	+0.8
	comp=Z,0.3nm,0.3s,baz=29,slow=3.0,SNR=6.0						
	comp=Z,0.3nm,0.3s						
MODS	Modra-Piesok	79.78	356	*e*P	P	15 59 45.9	+2.1
KBZ	Khabaz	80.79	338	P	P	15 59 50.3	+1.1
	comp=Z,1.8nm,0.8s,baz=279,slow=1.6,SNR=4.4						
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	87.32	232	P	P	16 00 21.6	-1.1
	comp=Z,0.5nm,0.8s,baz=34,slow=5.6,SNR=5.1						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	90.69	231	P	P	16 00 38.7	+0.1
	comp=Z,0.5nm,0.7s,baz=24,slow=4.5,SNR=12						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	90.69	231	P	P	16 00 38.1	-0.5

*SKO **18** 15:47:45.1, 40°.81N×21°.60E, h15^{km}*

*THE **18** 15:47:46.7, 40°.82N×21°.63E, h3^{km}±14^{km}, ML2.3/10, Error ellipse: s-maj=14.4km s-min=0.6km az=322.0*

*TIR **18** 15:47:46.9, 40°.79N×21°.56E, h4^{km}±1^{km}, Md2.7, Ml2.5*

*ATH **18** 15:47:46.3, 40°.81N×21°.60E, h14^{km}±2^{km}, ML2.3/11, Error ellipse: s-maj=2.8km s-min=0.8km az=302.0*

*BEO **18** 15:47:47.0±0.4, 40°.77N×21°.62E, h3^{km}±2^{km}, ML2.0/8*

ISC 18 15:47:46.3±0.8**, 40°.81N**±0°.02×**21°.61E**±0°.02**, h11^{km}**±6^{km}**, n65, σ0^{s}.73**/102**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	Florina	0.18	262	*e*Pg	Pg	15 47 50.3	+0.1
FNA				*e*Sg	Sg	15 47 53.1	+0.2
FNA	Florina	0.18	262	P	Pg	15 47 50.4	+0.1
FNA				S	Sg	15 47 52.8	-0.1
FNA				AML	AML	15 47 53.3	
	comp=E,3606µm,0.2s						
FNA				AML	AML	15 47 53.5	
	comp=N,4242µm,0.3s						
FNA	Florina	0.18	262	P	Pg	15 47 50.3	+0.1
FNA				S	Sg	15 47 53.2	+0.2
	comp=N,2µm,0.2s						
FNA	Florina	0.18	262	⇓ *i*Pg	Pg	15 47 50.4	+0.1
FNA				*i* Sg	Sg	15 47 53.2	+0.2
FNA	Florina	0.18	262	P	Pg	15 47 50.4	+0.1
	baz=268						
FNA				S	Sg	15 47 53.1	+0.2
	baz=268						
KZN	Kozani	0.52	166	P	Pg	15 47 56.1	-0.3
KZN				S	Sb	15 48 04.3	-0.7
KZN				AML	AML	15 48 05.7	
	comp=N,893µm,0.4s						
KZN				AML	AML	15 48 07.1	
	comp=E,876µm,0.3s						
KZN	Kozani	0.52	166	P	Pg	15 47 56.3	-0.1
KTI	Kastanea	0.57	137	P	Pg	15 47 57.2	-0.2
NEST	Nestorio	0.58	227	P	Pg	15 47 57.4	-0.2
NEST				S	Sg	15 48 05.6	+0.3
NEST				AML	AML	15 48 09.6	
	comp=E,1054µm,0.3s						
NEST				AML	AML	15 48 11.8	
	comp=N,780µm,0.4s						
NEST	Nestorio	0.58	227	P	Pg	15 47 57.4	-0.2
NEST				S	Sg	15 48 05.9	+0.6
	comp=N,368nm,0.4s						
GRG	Griva	0.62	76	P	Pg	15 47 58.4	+0.1
GRG				AML	AML	15 48 10.7	
	comp=E,508µm,0.1s						
GRG				AML	AML	15 48 12.0	
	comp=N,485µm,0.3s						
GRG	Griva	0.62	76	P	Pb	15 47 58.5	-0.7
GRG				S	Sg	15 48 06.8	+0.3
	comp=N,228nm,0.3s						
GRG	Griva	0.62	76	⇓ *i*Pg	Pg	15 47 58.4	+0.1
GRG				*i* Sg	Sb	15 48 08.0	0.0
KBN	Korca	0.65	254	P	Pb	15 47 59.9	+0.1
KBN				S	Sb	15 48 09.6	+0.7
	comp=N,208nm,0.8s						
KBN	Korca	0.65	254	P	Pb	15 47 59.5	-0.3
	baz=255						
KBN				S	Sb	15 48 08.3	-0.6
	baz=255						
KBN				AMP			
	comp=N,1.0nm,0.4s,baz=255						
OHR	Ohrid	0.68	296	*e*Pg	Pb	15 48 00.4	+0.1
OHR				*e*Sg	Sb	15 48 09.9	+0.1
OHR	Ohrid	0.68	296	*i* Pg	Pb	15 48 00.6	+0.3
OHR				*i* Sg	Sn	15 48 11.5	-1.3
OHR				*e*Lg	Lg	15 48 12.2	
	comp=N,93nm,0.4s						
OHR				*e*Lg	Lg	15 48 12.9	
	comp=E,109nm,0.5s						
PENT	Pentalofos	0.71	211	P	Pg	15 47 59.7	-0.3
PENT				S	Sb	15 48 10.4	-0.2
PENT	Pentalofos	0.71	211	P	Pg	15 47 59.9	-0.2
PENT				S	Sn	15 48 12.2	-1.2
	comp=E,200nm,0.9s						
KPRO	Kipourio	0.87	192	P	Pg	15 48 02.7	-0.5
KPRO				AML	AML	15 48 20.3	
	comp=E,708µm,0.3s						
KPRO				AML	AML	15 48 21.8	
	comp=N,466µm,0.3s						
KPRO	Kipourio	0.87	192	P	Pg	15 48 02.8	-0.4
KPRO				S	Sb	15 48 16.4	+1.1
	comp=N,295nm,0.3s						
VAY	Valandovo	0.89	55	*e*Pg	Pg	15 48 03.3	-0.1
VAY				*e*Sg	Sb	15 48 15.6	0.0
VAY	Valandovo	0.89	55	*i* Pg	Pb	15 48 03.7	-0.1
VAY				*i* Sg	Sb	15 48 15.7	0.0
VAY				*e*Lg	Lg	15 48 19.7	
	comp=E,57nm,0.4s						
VAY				*e*Lg	Lg	15 48 20.0	
	comp=N,51nm,0.4s						
LIT	Litokhoron	0.98	136	P	Pg	15 48 04.2	-0.9
LIT				AML	AML	15 48 23.3	
	comp=E,564µm,0.4s						
LIT				AML	AML	15 48 23.8	
	comp=N,590µm,0.2s						
LIT	Litokhoron	0.98	136	P	Pg	15 48 03.9	-1.2
LIT				S	Sn	15 48 19.4	-0.5
	comp=N,290nm,0.3s						
LIT	Litokhoron	0.98	136	*i* Pg	Pg	15 48 04.9	-0.2
LIT				*i* Sg	Sb	15 48 18.9	+0.8
LSK	Leskovik	1.01	230	P	Pg	15 48 05.3	-0.5
LSK				S	Sn	15 48 21.6	+0.7

	comp=N,195nm,0.7s						
LSK	Leskovik	1.01	230	P	Pg	15 48 05.6	-0.2
	baz=230						
LSK				S	Sb	15 48 19.8	+0.5
	baz=230						
LSK				AMP			
	comp=E,0.7nm,0.5s,baz=230						
KNT	Kendrikon	1.04	70	P	Pb	15 48 06.1	-0.2
KNT				S	Sg	15 48 19.0	-0.8
KNT	Kendrikon	1.04	70	P	Pb	15 48 06.2	-0.2
KNT				S	Sb	15 48 19.9	-0.1
	comp=E,112nm,0.7s						
KNT	Kendrikon	1.04	70	i Pg	Pb	15 48 06.1	-0.2
KNT				i Sg	Sb	15 48 20.4	+0.4
THE	Thessaloniki	1.05	99	i Sg	Sn	15 48 23.3	+1.8
THE	Thessaloniki	1.05	99	P	Pn	15 48 07.5	+0.6
	baz=97						
THE				S	Sn	15 48 23.0	+1.5
	baz=97						
HORT	Hortiatis	1.15	100	P	Pg	15 48 07.7	-0.8
SKO	Skopje	1.17	354	i Pg	Pn	15 48 08.8	+0.2
SKO				i Sg	Sn	15 48 25.1	+0.4
TYRN	Tyrnavos	1.20	156	P	Pn	15 48 08.9	-0.1
PHP	Peshkopia	1.24	315	P	Pg	15 48 10.3	+0.1
	baz=318						
PHP				S	Sn	15 48 27.9	+1.4
	baz=318						
PHP				AMP			
	comp=N,0.2nm,0.5s,baz=318						
THL	Klokotos Trika	1.28	166	P	Pn	15 48 09.7	-0.5
THL				AML	AML	15 48 34.6	
	comp=E,161μm,0.7s						
THL				AML	AML	15 48 38.6	
	comp=N,170μm,0.6s						
THL	Klokotos Trika	1.28	166	P	Pn	15 48 10.0	-0.2
THL				S	Sn	15 48 28.6	+1.3
	comp=N,78nm,0.8s						
SOH	Sokhos	1.32	89	P	Pn	15 48 10.8	0.0
SOH				AML	AML	15 48 31.9	
	comp=N,127μm,0.3s						
SOH				AML	AML	15 48 32.3	
	comp=E,213μm,0.6s						
SOH	Sokhos	1.32	89	ePg	Pb	15 48 11.0	-0.2
SOH				i Sg	Sg	15 48 31.4	+2.4
PLG	Polygyros	1.47	107	P	Pb	15 48 13.2	-0.4
PLG				AML	AML	15 48 36.5	
	comp=N,85μm,0.4s						
PLG				AML	AML	15 48 38.5	
	comp=E,64μm,0.3s						
SRS	Serrai	1.53	78	ePn	Pb	15 48 14.9	+0.1
SRS				eSn	Sg	15 48 36.3	+0.7
SRS	Serrai	1.53	78	P	Pn	15 48 13.6	-0.1
SRS	Serrai	1.53	78	P	Pn	15 48 13.1	-0.6
SRS	Serrai	1.53	78	i Pn	Pb	15 48 14.8	+0.1
SRN	Sarande	1.54	233	P	Pg	15 48 15.4	-0.4
	baz=234						
SRN				S	Sg	15 48 36.2	+0.4
	baz=234						
SRN				AMP			
	comp=N,0.4nm,0.5s,baz=234						
IGT	Igoumenitsa	1.61	218	ePn	Pb	15 48 16.3	+0.3
IGT				eSn	Sb	15 48 36.7	+0.4
NVR	Nevrokopi	1.79	72	P	Pb	15 48 18.5	-0.7
BOSS	Bosilegrad	1.81	21	ePn	Pb	15 48 18.8	-0.7
BOSS				eSn	Sg	15 48 43.4	-1.0
PAIG	Paliouri	1.81	118	P	Pn	15 48 17.8	+0.4
MAKR	Makrakomi, Fth	1.84	167	P	Pn	15 48 18.7	+0.8
AGG	Agios Georgios	1.87	163	P	Pb	15 48 19.7	-0.8
AGG				AML	AML	15 48 60.0	
	comp=E,80μm,0.4s						
AGG				AML	AML	15 49 02.9	
	comp=N,66μm,0.4s						
AGG	Agios Georgios	1.87	163	P	Pb	15 48 19.8	-0.7
XOR	Xorichti	1.89	139	P	Pn	15 48 18.7	+0.2
EVR	Evrytania	1.90	175	P	Pn	15 48 19.0	+0.3
EVR				AML	AML	15 48 54.1	
	comp=N,104μm,0.5s						
EVR				AML	AML	15 48 56.4	
	comp=E,85μm,0.5s						
BARS	Barje	2.01	4	ePn	Pb	15 48 22.2	-0.7
BARS				eSn	Sb	15 48 48.6	+0.6
BARS	Barje	2.01	4	i Pn	Pb	15 48 22.2	-0.7
LKD2	Lefkada island	2.15	200	P	Pb	15 48 24.2	-1.0
VTS	Vitosha	2.18	33	ePn	Pb	15 48 24.2	-1.7
VTS				eSn	Sn	15 48 50.8	+1.0
VTS	Vitosha	2.18	33	i Pn	Pb	15 48 24.2	-1.7
PVO	Paravola	2.19	182	P	Pb	15 48 25.2	-0.8
ANX	Ano Chora	2.23	174	P	Pb	15 48 25.0	-1.6
EFP	Efpalio	2.39	174	P	Pb	15 48 28.4	-0.9
SELS	Selova	2.44	352	ePn	Pb	15 48 28.1	-2.1

IDC 18 16:24:12.6±5.5**,16°.94S×174°.95W,h0^{km},mb4.3**/3**, mbtmp4.3**/3**,MS2.6**/1**,Error ellipse: s-maj=168.2km s-min=107.2km az=153.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.30	46	LR	LR	16 26 37.8	
	comp=Z,78nm,20.9s,baz=138,slow=34						
STKA	Stephens Creek	41.98	241	P	P	16 32 06.2	+0.5
	2.4nm,0.7s,baz=80,slow=8.5,SNR=6.8						
	2.4nm,0.7s						
WRA	Warramunga Arr	48.05	258	P	P	16 32 53.9	-0.3
	2.0nm,0.4s,baz=97,slow=7.2,SNR=89						
	2.0nm,0.4s						
ASAR	Alice Springs	48.23	253	P	P	16 32 55.0	-0.5
	4.3nm,0.7s,baz=88,slow=7.9,SNR=37						
ASAR				PcP	PcP	16 34 22.6	-0.3
	0.3nm,0.5s,baz=105,slow=3.8,SNR=2.3						
	4.3nm,0.7s						

TRN 18 16:29:13.9,18°.06N×61°.88W,h27^{km},MD3.5,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.40	167	eP	Pn	16 29 24.3	+0.5
ANWB				eS	Sn	16 29 31.2	+0.8
ANDO	Antigua, Disas	0.94	177	eP	Pb	16 29 32.2	+0.7
ANDO				eS	Sn	16 29 45.9	+2.1
BPA	Boggy Peak	1.00	179	eP	Pb	16 29 32.9	+0.3
BPA				eS	Sb	16 29 46.7	+1.2
ANBD	Bethesda, Anti	1.01	174	eP	Pb	16 29 32.9	+0.2
ANBD				eS	Sb	16 29 47.0	+1.4
SKI	Saint Kitts	1.09	229	eP	Pb	16 29 35.2	+1.1
SKI				eS	Sb	16 29 49.8	+1.8
SKOC	St. Kitts, UWI	1.11	227	eP	Pb	16 29 35.3	+0.9
SKOC				eS	Sb	16 29 50.8	+2.2
SKOC				eS	Sn	16 29 51.9	+3.8
SMRT	St. Maarten	1.14	270	eP	Pb	16 29 35.0	+0.1
SMRT				eS	Sb	16 29 51.1	+1.8
SEUS	St. Eustatius	1.19	242	eP	Pb	16 29 37.1	+1.3
SEUS				eS	Sb	16 29 52.9	+2.1
MBFL	Flemmings, Mon	1.34	194	eP	Pb	16 29 39.0	+0.7
MBFL				eS	Sb	16 29 56.7	+1.6
MLYT	Lee's Yard	1.36	193	eP	Pb	16 29 38.8	+0.1
MLYT				eS	Sb	16 29 56.7	+1.0
ABD	La Joyeuse, An	1.62	167	eP	Pb	16 29 42.1	-1.0
ABD				eS	Sb	16 30 03.2	+0.1
CBE	Ff, Capester	1.99	172	eP	Pb	16 29 47.8	-1.6
CBE				eS	Sn	16 30 11.5	+1.6
MAGL	Barre de l'ile	2.17	165	eP	Pb	16 29 50.8	-1.7
MAGL				eS	Sn	16 30 16.0	+1.7
TBG	Guadaloupe-3	2.20	174	eP	Pb	16 29 51.3	-1.7
TDBA	Terre de Bas,	2.21	174	eP	Pn	16 29 50.3	+1.6
TDBA	Terre de Bas,	2.21	174	eP	Pn	16 29 50.6	+1.9
TDBA				eS	Sb	16 30 17.6	-2.4
DSLB	Salisbury	2.64	170	eP	Pn	16 29 56.6	+1.9
DSLB				eS	Sn	16 30 27.4	+1.5
MPOM	Morne Pois Mar	3.72	165	eP	Pn	16 30 11.1	+1.5
MPOM				eS	Sn	16 30 55.2	+2.7
AOPR	Arecibo Observ	4.64	274	eP	Pn	16 30 23.4	+1.1

IDC 18 16:34:55.0±1.6**,32°.04N×95°.38E,h0^{km},mb3.6**/4**, mbtmp3.5**/5**,ML3.1**/1**,Error ellipse: s-maj=89.8km s-min=23.0km az=62.0,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.83	329	P	P	16 39 05.2	0.0
	0.1nm,0.3s,baz=135,slow=14,SNR=3.1						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	22.37	331	P	P	16 39 54.3	-0.3
	1.9nm,0.8s,baz=135,slow=11,SNR=5.1						
	1.9nm,0.8s						
WRA	Warramunga Arr	63.75	139	P	P	16 45 28.9	+0.1
	0.7nm,1.1s,baz=324,slow=8.3,SNR=1.5						
	0.7nm,1.1s						
ASAR	Alice Springs	66.52	141	P	P	16 45 46.8	0.0
	0.3nm,0.5s,baz=324,slow=6.5,SNR=16						
	0.3nm,0.5s						
ILAR	Eielson Array	72.09	23	P	P	16 46 20.6	-0.1
	0.4nm,0.8s,baz=312,slow=5.4,SNR=5.1						
	0.4nm,0.8s						

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*VAO **18** 16:46:40.1±0.5, 0°.48N×79°.63W, h0^{km}, mb6.4*

*BJI **18** 16:46:41.3±0.0, 0°.49N×79°.68W, h30^{km}, mB6.6/45, Ms6.9/82, Ms7 6.9/78*

*IGQ **18** 16:46:42±0.4, 0°N±3°×8°0W±°, h21^{km}*

*NEIC **18** 16:46:43.9±2.2, 0°.50N±0°.06×79°.62W±0°.06, h30^{km}±3^{km}, mb6.3/896, Ms_20 6.6/416, Mwb6.7/94, Mwc6.8/116, Mww6.9, Error ellipse: s-maj=8.7km s-min=8.4km az=208.0*

*MOS **18** 16:46:44.2±1.1, 0°.52N×79°.74W, h48^{km}, mb6.3/27, MS6.5/41, Error ellipse: s-maj=7.4km s-min=5.4km az=88.9*

*NEIC **18** 16:46:44.1, 0°.46N×79°.63W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.91; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.88; Fault plane solution: $M_0$1.38000×10^{19} NP1:ϕ_s186.02000°, δ66.88000°, λ63.26000°. NP2:ϕ_s58.09000°, δ34.78000°, λ136.50000°. Principal axes: T 1.4208, Plg59.0000°, Azm58.0000°; N -0.0954, Plg24.0000°, Azm197.0000°; P -1.3254, Plg18.0000°, Azm296.0000°;*

*IDC **18** 16:46:45.0±1.7, 0°.56N×79°.64W, h47^{km}±16^{km}, mb5.5/36, mbtmp5.8/39, ML4.7/3, MS6.6/60 Error ellipse: s-maj=11.0km s-min=7.3km az=63.0*

*SNET **18** 16:46:46.8±22.0, 0°.47N×79°.64W, h31^{km}, mb6.8(NEIC)*

*GCMT **18** 16:46:48.9±0.0, 0°.30N×80°.02W, h34^{km}, MW6.9/164, Moment Tensor Solution. s164,c424; s163,c780; Duration: 6^{s}6 Moment tensor: Scale 10^{19}Nm; M_{rr}1.39±.01; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-1.48±.01; $M_{r\theta}$0.37±.01; $M_{\theta\phi}$-0.32±.00; $M_{\phi r}$-2.02±.02; Best double couple: $M_0$2.52700×10^{19} NP1:ϕ_s28.00000°, δ21.00000°, λ123.00000°. NP2:ϕ_s174.00000°, δ73.00000°, λ78.00000°. Principal axes: T 2.5260, Plg60.0000°, Azm67.0000°; N 0.0100, Plg11.0000°, Azm177.0000°; P -2.5280, Plg27.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **18** 16:46:51, 0°.36N×79°.74W, h36^{km}, Moment Tensor Solution. Duration: 15^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}1.24; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-1.29; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.31; $M_{\phi r}$-2.41; Fault plane solution: $M_0$2.74000×10^{19} NP1:ϕ_s23.00000°, δ15.00000°, λ110.00000°. NP2:ϕ_s183.00000°, δ76.00000°, λ85.00000°. Principal axes: T 2.7031, Plg59.0000°, Azm86.0000°; N 0.0760, Plg5.0000°, Azm184.0000°; P -2.7791, Plg31.0000°, Azm277.0000°;*

*UPA **18** 16:46:55.4±15.0, 0°.46N×79°.60W, h33^{km}, MW6.7*

*NEIC **18** 16:47:00.2, 0°.07N×79°.09W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.49; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-1.53; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.40; $M_{\phi r}$-0.96; Fault plane solution: $M_0$1.90000×10^{19} NP1:ϕ_s171.92000°, δ62.58000°, λ68.07000°. NP2:ϕ_s33.08000°, δ34.57000°, λ125.75000°. Principal axes: T 1.9673, Plg65.0000°, Azm43.0000°; N -0.1286, Plg19.0000°, Azm182.0000°; P -1.8387, Plg15.0000°, Azm278.0000°;*

ISC 18 16:46:42.8±0.2**,0°.46N**±0°.02×**79°.72W**±0°.03**,h30^{km}**±1^{km}**, h30^{km}:pP-P,n2712,**σ**2^{s}02**/3049**,mb6.3**/576**,MS6.6**/374**, 682C-109D,Fault plane solution: NP1:**ϕ_s159.49001°, δ57.65384°, λ76.78639°. **NP2:**ϕ_s3.18421°, δ34.66780°, λ109.84640°. **Principal axes:** T Plg73.7184°, Azm34.2840°**;** N Plg11.1345°, Azm166.6503°**;** P Plg11.7267°**,** Azm258.9917°**; Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AV21	Acelerografo,	0.26	41	P	Pb	16 46 49.0	-0.8
AV21				S	Sn	16 46 57.0	+1.4
AMA1	Acelerografo,	0.47	359	P	Pb	16 46 51.0	-1.8
AMA1				S	Sn	16 47 02.0	+1.2
APR2	Miler	0.84	117	P	Pn	16 46 58.0	-0.7
APR2				S	Pn	16 46 58.0	-0.7
JAMA	Jama	0.87	214	P	Pn	16 46 55.0	-4.1
PAC1	Pacto, Paraso	0.94	102	P	Pn	16 47 00.0	-0.2
APR1	Acelerografo,	1.21	115	P	Pn	16 47 04.0	-0.1
APR1				S	Sb	16 47 24.0	+3.1
OTAV	Otavalo	1.28	100		Pn	16 47 05.8	+0.7
OTAV	Otavalo	1.28	100	P	Pn	16 47 05.8	+0.7
OTAV	Otavalo	1.28	100	eP	Pb	16 47 06.4	-0.3
OTAV	Otavalo	1.28	100	eP	Pb	16 47 06.1	-0.5
OTAV	Otavalo	1.28	100	⇑P	Pn	16 47 05.5	+0.4
GGPC	Guagua Pichinc	1.29	120	P	Pn	16 47 05.0	-0.3
GGPT	Toaza - Volcan	1.29	122	P	Pn	16 47 05.0	-0.2
CUSE	Cuicocha Este	1.33	97	P	Pb	16 47 07.0	-0.3
CUIC	Cuicocha-Domo	1.36	97	P	Pn	16 47 07.0	+0.8
CUSW	Cuicocha Oeste	1.38	97	P	Pn	16 47 07.0	+0.7
LITE1	Lita	1.39	76	P	Pn	16 47 06.0	-0.3
ALIT	Ecuador-Imbabu	1.39	76	P	Pn	16 47 07.0	+0.7
ALIT				S	Sb	16 47 25.0	-0.8
AV11	Acelerografo,	1.45	112	P	Pb	16 47 09.0	-0.3
URCU	Urcuqui	1.46	91	P	Pb	16 47 09.0	-0.6
AAT1	Ecuador-Atunta	1.51	95	P	Pb	16 47 10.0	-0.3
ILLI	Illinizas Sur	1.53	140	P	Pn	16 47 08.0	-0.6
AIB2	Ibarra (Univer	1.61	94	P	Pb	16 47 12.0	-0.2
SUCR	Mariscal Sucre	1.64	132	P	Pn	16 47 11.0	+1.0
YAHU	Yahuarcocha	1.65	93	P	Pb	16 47 13.0	+0.2
SRAM	San Ramn-Vol	1.67	136	P	Pn	16 47 11.0	+0.7
BNAS	Cotopaxi Volca	1.67	132	P	Pb	16 47 12.0	-1.3
CTUM2	Tumaco	1.67	36	eP	Pn	16 47 09.6	-0.5
TUMC	Tumaco	1.67	36		Pn	16 47 11.0	+0.9
TUMC	Tumaco	1.67	36	eP	Pn	16 47 08.0	-2.1
TUMC	Tumaco	1.67	36	P	Pn	16 47 11.0	+0.9
CHMA	Chilma	1.70	77	P	Pn	16 47 11.0	+0.3
SLOR	San Lorenzo -	1.70	134	P	Pn	16 47 12.0	+1.1
BREF	Cotopaxi Volca	1.70	131	P	Pn	16 47 12.0	+1.0
BVC2	Cotopaxi Volca	1.71	131	P	Pn	16 47 12.0	+0.9
BMOR	Cotopaxi Volca	1.73	133	P	Pb	16 47 13.0	-1.3
LNGL	El Angel-Carch	1.73	81	P	Pb	16 47 13.0	-1.3
BTAM	Cotopaxi Volca	1.74	131	P	Pb	16 47 13.0	-1.4
ANTG	Antisana-Guama	1.75	123	P	Pn	16 47 13.0	+1.4
BRRN	Barrancas-Volc	1.75	135	P	Pn	16 47 13.0	+1.4
ANGU	Angureal	1.76	104	P	Pb	16 47 14.0	-0.8
ALAT	Latacunga	1.76	142	P	Pn	16 47 13.0	+1.4
ECEN	Cerro Negro	1.78	78	P	Pn	16 47 13.0	+1.0
ANTM	Antisana-La Mi	1.79	124	P	Pb	16 47 14.0	-1.3
CHL1	Volc¡n Chiles	1.80	80	P	Pb	16 47 14.0	-1.4
APS4	Papallacta	1.81	117	P	Pb	16 47 14.0	-1.5
CHIS	Cerro-Chispas-	1.81	214	P	Pn	16 47 12.0	0.0
ANTS	Antisana-Sarah	1.82	122	P	Pn	16 47 14.0	+1.4
VCES	Cotopaxi	1.82	134	P	Pn	16 47 14.0	+1.4
CHL2	Volc¡n Chiles	1.83	79	P	Pn	16 47 14.0	+1.3
TULM	Tulcn-Chalpat	1.94	83	P	Pb	16 47 16.0	-1.9
CMBC	Cumbal	1.95	76	eP	Pn	16 47 14.3	0.0
CMBC	Cumbal	1.95	76	P	Pb	16 47 16.0	-1.9
AAM1	Ambato 1 (Muni	2.01	147	P	Pn	16 47 14.0	-1.1
ATUL	Tulcn	2.02	81	P	Pb	16 47 18.0	-1.0
APSY	Ecuador-Napo A	2.04	135	P	Pn	16 47 17.0	+1.5
PIAT	Ana Tenorio	2.05	135	P	Pn	16 47 17.0	+1.3
CHSH	Refugio Sur-Vo	2.12	156	P	Pn	16 47 17.0	+0.2
AV05	Acelerografo,	2.13	108	P	Pb	16 47 21.0	+0.1
BONI	La Bonita	2.19	90	P	Pb	16 47 20.0	-1.9
JUI6	Juive	2.25	146	P	Pn	16 47 20.0	+1.7
POND	Pondoa	2.26	146	P	Pn	16 47 20.0	+1.6
BIL2	Estacion Bilba	2.26	148	P	Pb	16 47 22.0	-1.2
PPLP	Puerto Lpez	2.26	208	P	Pn	16 47 19.0	+0.8
PPLP	Puerto Lpez	2.26	208	P	Pn	16 47 16.0	-2.2
BBIL	Ulba Tungurahu	2.26	147	P	Pn	16 47 20.0	+1.5
BRUN	Tungurahua Vol	2.28	145	P	Pn	16 47 20.0	+1.3
BMAS	Trigal station	2.31	148	P	Pn	16 47 21.0	+1.8
BPAT	Tungurahua Vol	2.34	147	P	Pn	16 47 21.0	+1.4
AV03	Acelerografo,	2.43	100	P	Pb	16 47 26.0	+0.1
CCUFI	Cufio, Nario	2.49	72	eP	Pb	16 47 24.7	-2.4
GCUF	Volcan Galeras	2.49	72	eP	Pb	16 47 24.8	-2.4
PUYO	Puyo, Santa Ro	2.58	139	P	Pb	16 47 26.0	-2.4
AMIL	Milagro (Trans	2.58	177	P	Pn	16 47 23.0	+0.4
GYE3	Ecuador-Guayaq	2.61	184	P	Pn	16 47 22.0	-0.9
GYE3				S	Sn	16 47 52.0	-1.6
SANGA	Volcan Sangay	2.84	152	P	Pn	16 47 29.0	+2.5
BBAC	Balboa, Cauca	2.91	58	eP	Pb	16 47 32.8	-1.4
GR1C	Gorgona, Isla	2.96	32	eP	Pn	16 47 26.1	-1.7
CRUC	La Cruz	2.97	68	eP	Pb	16 47 31.9	-3.5
ACUE	Ecuador-Cuenca	3.44	167	P	Pn	16 47 36.0	+1.4
ISPG	Isla Puna-Puer	3.44	188	P	Pn	16 47 36.0	+1.6
SOTA	Rioblanco	3.52	62	eP	Pn	16 47 37.5	+1.6
ACH2	Ecuador-Machal	3.70	181	P	Pn	16 47 40.0	+2.0
ACH1	Ecuador-Univer	3.73	183	P	Pn	16 47 40.0	+1.6
BOSC	San Juan Bosco	3.79	161	P	Pn	16 47 42.0	+2.6
PCON	Cinco Dias	3.80	61	eP	Pn	16 47 40.4	+0.6
MALC	Bahia Malaga	4.25	34	eP	Pn	16 47 43.4	-2.2
RAC02	Cali,SGC	4.30	48	eP	Pn	16 47 50.8	+4.5
MARP	Paez Belalcaza	4.44	58	eP	Pn	16 47 50.1	+1.7
GARC	Garzon, Huila	4.55	68	eP	Pn	16 47 50.0	+0.1
BETC	Betania	4.81	63	eP	Pn	16 47 57.9	+4.6
YOTC	Yotoco, Valle	4.85	44	eP	Pn	16 47 51.6	-2.3
YOTC	Yotoco, Valle	4.85	44	eP	Pn	16 47 56.3	+2.4
PIZC	Pizarro, Choco	5.05	28	eP	Pb	16 48 09.5	-1.1
PLMC	San Jos del P	5.59	38	eP	Pn	16 48 03.0	-1.0
ORTC	Ortega, Tolima	5.63	52	eP	Pn	16 48 05.7	+1.2
PRAC	Prado	5.81	56	eP	Pn	16 48 05.0	-2.0
ANIL	Santa Ana	5.88	47	eP	Pn	16 48 11.5	+3.3
MACC	Macarena, Meta	6.10	74	eP	Pn	16 48 13.3	+2.3
MACC	Macarena, Meta	6.10	74	eP	Pn	16 48 15.0	+4.0
SOLC	Bahia Solano	6.17	22	eP	Pb	16 48 25.0	-4.6
CMAN1	Manizales, Cal	6.20	42	eP	Pb	16 48 22.0	-8.3
NIZA	Niza - Manizal	6.23	43	eP	Pn	16 48 17.9	+4.9
CBOC	Ciudad Bolivar	6.51	34	eP	Pn	16 48 22.5	+5.7
ROSC	El Rosal	6.92	51	P	Pn	16 48 26.2	+3.6
	5μm,0.7s,baz=185,slow=4.7,SNR=62						
ROSC				S	Sn	16 49 50.7	+10
	3μm,0.7s,baz=250,slow=23,SNR=0.9						
ROSC				LR	LR	16 51 45.9	
	comp=Z,817μm,21.9s,baz=230,slow=44						
ROSC	El Rosal	6.92	51	Pn	Pn	16 48 23.2	+0.6
ROSC	El Rosal	6.92	51	P	Pn	16 48 23.2	+0.6
ROSC	El Rosal	6.92	51	eP	Pn	16 48 24.0	+1.4
CACAO	El Cacao, Vera	6.93	351	eP	Pn	16 48 28.6	+6.2
CACAO	El Cacao, Vera	6.93	351	eP	Pn	16 48 27.6	+5.3
CACAO				eS	Sb	16 49 58.8	-6.1
CNOCA	NORCASIA, CALD	7.00	44	eP	Pn	16 48 29.8	+6.4
NORC	Norcasia	7.00	44	eP	Pn	16 48 25.2	+1.7
VILC	Villavicencio,	7.02	59	eP	Pn	16 48 25.9	+2.1
HELC	Santa Helena	7.06	36	eP	Pn	16 48 22.9	-1.6
CHIC	Chingaza	7.27	55	eP	Pn	16 48 23.8	-3.6
AZU	Azuero	7.30	356	eP	Pn	16 48 31.8	+4.3
AZU	Azuero	7.30	356	eP	Pn	16 48 32.5	+5.1
AZU				eS	Sb	16 50 07.3	-8.2
GUVC	San Jose del G	7.38	74	eP	Pn	16 48 32.2	+3.6
GMAL	Guarumal, Vera	7.41	348	eP	Pn	16 48 35.9	+7.0
GMAL	Guarumal, Vera	7.41	348	eP	Pn	16 48 34.3	+5.3
GMAL				eS	Sb	16 50 10.8	-7.8
SPBC	San Pablo de B	7.63	47	eP	Pn	16 48 33.9	+1.8
ATAH	Atahualpa	7.66	170	P	Pn	16 48 37.5	+4.6
	19nm,0.3s,baz=342,slow=7.5,SNR=80						
ATAH				S	Sn	16 50 02.1	+3.3
	2μm,0.6s,baz=349,slow=16,SNR=1.7						
ATAH				LR	LR	16 51 44.4	
	comp=Z,1592μm,20.4s,baz=342,slow=39						
	1μm,0.7s						
PNME	Penonome	7.99	356	eP	Pn	16 48 41.0	+4.0
PNME	Penonome	7.99	356	eP	Pn	16 48 41.6	+4.6
PNME				eS	Sb	16 50 24.1	-11
PTBC	PUERTO BERRIO,	8.00	41	eP	Pn	16 48 35.4	-1.6
PTPM	Petroterminale	8.31	338	eP	Pn	16 48 45.1	+3.8
PTPM				eS	Sb	16 50 29.6	-15
UREC	San Jos de Ur	8.35	30	eP	Pn	16 48 42.0	0.0
PTGC	Puerto Gaitan,	8.43	64	eP	Pn	16 48 43.7	+0.7
UPA	Univ. de Panam	8.46	1	eP	Pn	16 48 44.7	+1.2
UPA	Univ. de Panam	8.46	1	eP	Pn	16 48 48.2	+4.8
UPA				eS	Sb	16 50 35.3	-14
ZARC	Zaragoza, Cauc	8.50	35		Pn	16 48 42.9	-1.1
ZARC	Zaragoza, Cauc	8.50	35	eP	Pn	16 48 47.3	+3.4
RUSC	La Rusia	8.54	51	eP	Pn	16 48 40.8	-4.1
BCIP	Isla Barro Col	8.65	359	Pn	Pn	16 48 48.1	+2.1
BCIP	Isla Barro Col	8.65	359	P	Pn	16 48 48.1	+2.1
BCIP	Isla Barro Col	8.65	359	eP	Pn	16 48 49.7	+3.7
BCIP	Isla Barro Col	8.65	359	eP	Pn	16 48 50.3	+4.3
BCIP				⇓eS	Sn	16 50 38.3	+16
BCIP	Isla Barro Col	8.65	359	⇑P	Pn	16 48 47.0	+1.1
CDITO	Canoas	8.65	339		Pn	16 48 47.7	+1.8
BC3P	Paso Ancho	8.78	341	eP	Pn	16 48 51.9	+3.9
BRU2	Volcan	8.79	340		Pn	16 48 50.2	+2.1
BRU2	Volcan	8.79	340	eP	Pn	16 48 47.3	-0.8
BRU2	Volcan	8.79	340	eP	Pn	16 48 52.0	+3.9
BRU2				eS	Sn	16 50 42.2	+16
BRRC	Barranca, Sant	8.91	42	eP	Pn	16 48 52.9	+3.3
EDSV	San Vito	8.91	339	eP	Pn	16 48 53.7	+4.0
BARC	Barichara	8.92	47	eP	Pn	16 48 50.5	+0.5
LCBC	Los crdobas,	8.98	22	eP	Pn	16 48 54.4	+3.9
LCBC	Los crdobas,	8.98	22	eP	Pn	16 48 53.9	+3.3
LCBC				eS	Sn	16 50 44.1	+13
EDPN	Palmar Norte	9.23	336	eP	Pn	16 48 58.5	+4.5
EDBA	Buenos Aires	9.34	338	eP	Pn	16 49 00.2	+4.7
DRK0	Durika	9.42	338		Pn	16 48 58.6	+1.8
DRK0	Durika	9.42	338	eP	Pn	16 49 00.3	+3.5
DRK0				eS	Sn	16 50 57.1	+15
SRBA	San Rafael, Bu	9.44	337		Pn	16 48 58.4	+1.5
RGM0	Gandoca	9.51	342	eP	Pn	16 49 02.1	+4.3
RGM0				eS	Sn	16 50 59.3	+16
EDDO	Dominical	9.66	335	eP	Pn	16 49 02.2	+2.4
PEZE	Perez Zeledon,	9.70	336		Pn	16 49 01.8	+1.3
PAMC	Pamplona, Colo	9.78	46	eP	Pn	16 49 05.3	+3.4
TAMC	Tame, Arauca	9.88	53	eP	Pn	16 49 06.7	+3.7
TAMC	Tame, Arauca	9.88	53	eP	Pn	16 49 03.5	+0.5
OCAC	Ocana	10.01	39		Pn	16 49 02.3	-2.5
OCAC	Ocana	10.01	39	eP	Pn	16 49 04.5	-0.3
RIMA	Rio Macho	10.12	336	Pn	Pn	16 49 07.3	+0.9
BATAN	Batan	10.24	339		Pn	16 49 09.2	+1.4
CVTR	Volcan Turrial	10.31	337		Pn	16 49 10.0	+0.9
JACO	JACO, Garabito	10.38	332		Pn	16 49 09.2	-0.5
SJCC	San Jacinto, C	10.40	26	Pn	Pn	16 49 10.6	+0.5
SJCC	San Jacinto, C	10.40	26	eP	Pn	16 49 11.4	+1.3
HDC	Heredia	10.44	335		Pn	16 49 11.6	+0.9
HDC	Heredia	10.44	335	eP	Pn	16 49 14.3	+3.7
HDC				eS	Sn	16 51 21.2	+14
HDC	Heredia	10.44	335	⇓P	Pn	16 49 12.3	+1.7
PAYG	Puerto Ayora	10.63	264	Pn	Pn	16 49 12.7	-0.5
PAYG	Puerto Ayora	10.63	264	eP	Pn	16 49 10.3	-2.9
PAYG	Puerto Ayora	10.63	264	⇑P	Pn	16 49 12.5	-0.7
CZSB	Cruzeiro do Su	10.73	139	eP	Pn	16 49 14.9	+0.4
TBTG	Tabatinga, AM	10.83	115	eP	Pn	16 49 14.2	-1.7
TBTG	Tabatinga, AM	10.83	115	eP	Pn	16 49 17.2	+1.2
LL1C	La Loma 1 Cana	10.90	34	eP	Pn	16 49 20.2	+3.3
LL5C	La Loma 5 El P	10.98	33	eP	Pn	16 49 18.6	+0.6
JTS	Las Juntas de	11.06	332	Pn	Pn	16 49 19.9	+0.7
JTS	Las Juntas de	11.06	332	P	Pn	16 49 19.9	+0.7
JTS	Las Juntas de	11.06	332	eP	Pn	16 49 20.1	+1.0
JTS	Las Juntas de	11.06	332	eP	Pn	16 49 21.9	+2.8
JTS	Las Juntas de	11.06	332	eP	Pn	16 49 22.1	+2.9
JTS	Las Juntas de	11.06	332	⇓P	Pn	16 49 20.1	+1.0
GRZA	Playa Garza	11.08	328	eP	Pn	16 49 21.2	+1.9
ARE1	Arenal 1	11.11	334	eP	Pn	16 49 23.4	+3.7
CEDE	Laguna Cedeo	11.12	334	eP	Pn	16 49 23.6	+3.6
DUNO	Dulce Nombre,	11.15	329	eP	Pn	16 49 22.7	+2.5
LL6C	La Loma 6 Bece	11.22	35	eP	Pn	16 49 21.6	+0.4
SAJU	San Juanillo,	11.25	328	⇓eP	Pn	16 49 23.9	+2.2
PLVR	Palo Verde	11.31	330	eP	Pn	16 49 25.7	+3.1
GUAI	GUAI	11.32	330	eP	Pn	16 49 25.2	+2.6
ORTG	Ortega, Santa	11.37	330		Pn	16 49 24.6	+1.2
ORTG	Ortega, Santa	11.37	330	⇓eP	Pn	16 49 26.1	+2.7
ACAL	Aguas Claras	11.40	333	eP	Pn	16 49 26.8	+3.0
PTEN	Parque Tenorio	11.45	333	eP	Pn	16 49 28.1	+3.6
CUI	Cuipilapa	11.48	332	eP	Pn	16 49 27.9	+3.0
COLC	Colonia	11.51	332	eP	Pn	16 49 28.6	+3.3
HORNC	Hornillas	11.54	332	eP	Pn	16 49 29.3	+3.6
GUAB	Guayabo de Bag	11.56	332	eP	Pn	16 49 29.4	+3.5
LIM1	Limonal	11.56	332	eP	Pn	16 49 29.2	+3.2
VMAR	Armenia, Volca	11.60	333	⇓eP	Pn	16 49 29.7	+3.2
GPS2	Hotel Rincn d	11.66	331	eP	Pn	16 49 31.3	+4.0
VRLE	La Escondida,	11.69	331	⇓eP	Pn	16 49 30.4	+2.5
BUEV	Buena Vista	11.72	331	eP	Pn	16 49 31.5	+3.3
GBS3	Finca Las Img	11.73	331	eP	Pn	16 49 31.0	+2.7
GB1A	Borinquen Arri	11.74	331	eP	Pn	16 49 32.1	+3.7
HZTE	Horizontes, Gu	11.74	330	Pn	Pn	16 49 30.6	+2.2

HZTE	Horizontes, Gu	11.74	330	*e*P	Pn	16 49 30.5	+2.2
BUAI	Buenos Aires	11.76	332	*e*P	Pn	16 49 31.0	+2.4
CVALL	Valledupar, Ce	11.87	33	*e*P	Pn	16 49 36.9	+6.8
SMRC	Santa Marta, M	11.95	27	*e*P	Pn	16 49 33.3	+2.1
SDV	Santo Domingo	12.32	47	P	Pn	16 49 37.1	+0.6
	6.1nm,0.3s,baz=223,slow=12,SNR=39						
SDV				LR	LR	16 55 38.3	
	comp=Z,148µm,20.0s,baz=224,slow=44						
	240nm,0.9s						
SDV	Santo Domingo	12.32	47	*e*P	Pn	16 49 34.9	-1.6
SDV	Santo Domingo	12.32	47	*e*P	Pn	16 49 34.0	-2.5
CRJC	Cerrejon, Guaj	12.49	33	*e*P	Pn	16 49 39.1	+0.4
NNA	Nana	12.70	167	P	Pn	16 49 42.9	+1.4
	18nm,0.3s,baz=340,slow=11,SNR=55						
NNA				S	Sn	16 52 02.7	+0.8
	641nm,0.7s,baz=201,slow=17,SNR=2.8						
NNA				LR	LR	16 55 14.8	
	comp=Z,286µm,18.3s,baz=334,slow=40						
	713nm,0.8s						
NNA	Nana	12.70	167	Pn	Pn	16 49 40.6	-0.9
NNA	Nana	12.70	167	*ce*P	Pn	16 49 41.7	+0.2
NNA				pmax	pmax		
	comp=Z,2µm,1.7s						
NNA	Nana	12.70	167	⇑P	Pn	16 49 41.3	-0.1
NNA				⇓S	Sn	16 51 58.7	-3.2
PRVC	Isla de Provid	12.93	353	*e*P	Pn	16 49 48.1	+3.5
PRVC	Isla de Provid	12.93	353	*e*P	Pn	16 49 44.7	0.0
PRVC	Isla de Provid	12.93	353	*e*P	P	16 49 50.1	-4.8
BOAB	BOACO BROADBAN	13.29	334	⇓P	Pn	16 49 51.2	+1.7
URIC	Uribia, Colomb	13.54	34	*e*P	Pn	16 49 54.5	+1.5
CNGN	Cerro Negro	13.82	330		Pn	16 49 58.4	+1.5
CNCH	Conchagua	15.06	328	*i* P	Pn	16 50 15.6	+1.9
CNCH	Conchagua	15.06	328	*i* P	Pn	16 50 15.6	+1.9
TGUH	Tegucigalpa,Un	15.44	331	IAmb	IAmb	16 50 45.4	
	comp=Z,2µm,1.1s						
TGUH	Tegucigalpa,Un	15.44	331	*e*P	Pn	16 50 16.0	-2.8
TGUH	Tegucigalpa,Un	15.44	331	⇑P	Pn	16 50 19.9	+1.2
PACA	Pacayal	15.48	327	*i* P	Pn	16 50 20.8	+1.5
PACA	Pacayal	15.48	327	*i* P	Pn	16 50 20.8	+1.5
PAVA	Las Pavas	16.02	326	*i* P	P	16 50 28.5	-0.9
PAVA	Las Pavas	16.02	326	*i* P	P	16 50 28.5	-0.9
PAVA				*e*S	S	16 53 37.0	+0.8
SNET	Serv Nac Est T	16.17	325	IAmb	IAmb	16 50 40.4	
	comp=Z,4µm,1.4s						
SNET	Serv Nac Est T	16.17	325	*i* P	P	16 50 30.1	-0.9
SNET	Serv Nac Est T	16.17	325	*i* P	P	16 50 30.1	-0.9
SNET				*e*S	S	16 53 45.2	+6.1
JAYA	Jayaque - finc	16.27	324	*i* P	Pn	16 50 30.1	+0.7
JAYA	Jayaque - finc	16.27	324	*i* P	Pn	16 50 30.1	+0.7
JAYA				⇑*e*S	S	16 53 47.5	+6.2
CEDA	San Andres	16.36	325	*i* P	P	16 50 32.0	-1.0
CEDA	San Andres	16.36	325	*i* P	P	16 50 32.0	-1.0
CEDA				⇑*e*S	S	16 53 49.0	+6.1
NUBE	Las Nubes	16.66	324	*i* P	P	16 50 36.5	-0.1
NUBE	Las Nubes	16.66	324	*i* P	P	16 50 36.5	-0.1
NUBE				*e*S	S	16 53 45.3	-4.0
BIRV	Birongo	16.66	53		Pn	16 50 29.9	-4.4
MTO3	Montecristo	16.82	326	P	Pn	16 50 36.9	+0.5
MTO3				IAmb	IAmb	16 50 54.2	
	comp=Z,4µm,1.5s						
ESQI	Esquipulas	16.93	326	*i* P	P	16 50 40.6	+1.1
HOJ	Hope	17.67	9	*i* P	P	16 50 49.6	+2.1
STH	Stony Hill	17.73	9	*i* P	P	16 50 50.5	+2.3
GWJ	Greenwich	17.75	9	*i* P	P	16 50 54.8	+6.3
MTDJ	Mount Denham	17.78	7	P	P	16 50 49.2	+0.3
MTDJ				IAmb	IAmb	16 51 24.7	
	comp=Z,3µm,1.4s						
MTDJ	Mount Denham	17.78	7	*e*P	P	16 50 49.9	+1.0
MTDJ	Mount Denham	17.78	7	⇑P	P	16 50 50.1	+1.3
RTAL	Retalhuleu	18.32	320	P	Pn	16 50 55.8	+1.0
RTAL	Retalhuleu	18.32	320	*i* P	Pn	16 50 57.0	+2.2
RTAL				*e*S	Sn	16 53 52.0	-27
HUEH	Huehuetenango	18.80	322	*i* P	Pn	16 51 02.0	+1.2
HUEH	Huehuetenango	18.80	322	*i* P	Pn	16 51 02.0	+1.2
HUEH				*e*S	S	16 54 44.7	+12
SAML	Samuel	18.94	120	P	P	16 50 59.4	-2.2
SAML	Samuel	18.94	120	P	P	16 50 59.4	-2.2
SAML				pmax	pmax		
	comp=Z,784nm,0.8s						
SAML	Samuel	18.94	120	⇑P	P	16 50 59.9	-1.6
PETF	Flores	19.16	329	*i* P	Pn	16 51 06.2	+1.1
PETF	Flores	19.16	329	*i* P	Pn	16 51 06.2	+1.1
PETF				*e*S	S	16 54 46.2	+6.6
LGNH	Logne	19.25	21	IAmb	IAmb	16 51 36.7	
	comp=Z,4µm,1.6s						
BOAV	Boa Vista	19.28	84	*e*P	Pn	16 51 06.4	-0.1
MACA	Manacapuru-AM	19.36	101	*e*P	P	16 51 05.8	-0.4
GTBY	Guantanamo Bay	19.86	13	P	Pn	16 51 13.3	0.0
GTBY	Guantanamo Bay	19.86	13	*e*P	Pn	16 51 13.0	-0.3
GTBY	Guantanamo Bay	19.86	13	⇑P	Pn	16 51 14.2	+0.9
CCIG	Comitan	19.93	323	P	Pn	16 51 13.6	-0.8
CCIG				IAmb	IAmb	16 51 30.1	
	comp=Z,4µm,1.7s						
CCIG	Comitan	19.93	323	⇓P	Pn	16 51 13.6	-0.8
SDDR	Presa de Saban	20.18	24	P	Pn	16 51 17.2	+0.1
SDDR				IAmb	IAmb	16 51 36.5	
	comp=Z,3µm,1.4s						
SDDR				IAMs_20	IAMs_20	17 00 12.9	
	comp=Z,222µm,22.0s						
SDDR	Presa de Saban	20.18	24	*e*P	P	16 51 14.5	-0.6
SDDR	Presa de Saban	20.18	24	⇑P	Pn	16 51 17.5	+0.4
LPAZ	La Paz	20.19	146	P	Pn	16 51 17.1	-0.8
	comp=Z,379nm,1.0s,baz=328,slow=10,SNR=178						
LPAZ				S	S	16 55 02.9	+1.3
	comp=Z,58nm,0.9s,baz=7.1,slow=19,SNR=1.1						
LPAZ				LR	LR	17 00 51.3	
	comp=Z,918µm,18.9s,baz=323,slow=42						
	comp=Z,379nm,1.0s						
LPAZ	La Paz	20.19	146	P	P	16 51 16.2	+0.3
LPAZ	La Paz	20.19	146	*e*P	P	16 51 15.9	0.0
LPAZ	La Paz	20.19	146	⇑*i*P	P	16 51 16.0	+0.2
LPAZ	La Paz	20.19	146	*e*P	P	16 51 16.5	+0.6
LPAZ	La Paz	20.19	146	⇑P	P	16 51 16.1	+0.2
SC01	Santiago de lo	20.80	25	P	Pn	16 51 23.9	-0.5
TRN	Trinidad (W)	20.82	60	*e*P	P	16 51 21.1	-1.0
DR12	Loma Pena Alta	20.84	29	P	P	16 51 22.9	+0.6
AP01	Chacalluta	20.86	154	P	P	16 51 22.0	-0.5
AP01	Chacalluta	20.86	154	*e*P	P	16 51 22.8	+0.4
PB12	IPOC Station P	21.08	155	P	P	16 51 24.6	-0.4
PB12	IPOC Station P	21.08	155	⇑*i*P	P	16 51 24.9	-0.1
PB12				IAMs_20	IAMs_20	16 55 44.0	
	comp=E,208µm,20.8s						
PB16	IPOC Station P	21.21	152	IAmb	IAmb	16 51 43.0	
	comp=Z,2µm,0.8s						
PB16	IPOC Station P	21.21	152	⇑*i*P	P	16 51 27.5	+0.7
PB16				IAMs_20	IAMs_20	16 55 50.0	
	comp=E,275µm,21.7s						
GRFF	Grenada Fort F	21.23	56	*e*P	P	16 51 23.7	-2.8
GRGR	Grenville	21.34	56	IAMs_20	IAMs_20	17 00 53.0	
	comp=Z,236µm,22.0s						
GRGR	Grenville	21.34	56	*e*P	P	16 51 28.0	+0.3
GRGR	Grenville	21.34	56	⇑P	P	16 51 25.8	-1.9
CRPR	Cabo Rojo, PR	21.39	35	P	P	16 51 28.5	+0.4
MLPR	Magueyes Islan	21.40	35	IAmb	IAmb	16 51 50.4	
	comp=Z,1µm,1.1s						
GRHS	Sauteurs	21.40	56	*e*P	P	16 51 29.9	+1.6
GRSS	Sisters	21.46	56	*e*P	P	16 51 31.6	+2.6
GCMP	Grenada, Carri	21.72	56	*e*P	P	16 51 29.8	-1.9
CELP	Cerrillos	21.75	36	IAmb	IAmb	16 51 57.6	
	comp=Z,1µm,0.9s						
AOPR	Arecibo Observ	21.86	35	P	P	16 51 34.0	+0.7
AOPR	Arecibo Observ	21.86	35	*e*P	P	16 51 33.0	-0.3
TOSP	Speyside	21.88	60	P	P	16 51 32.0	-1.4
TOSP				IAmb	IAmb	16 51 38.6	
	comp=Z,1µm,1.1s						
TOSP	Speyside	21.88	60	*e*P	P	16 51 29.2	-4.2
SJG	San Juan	22.03	36	P	P	16 51 35.7	+0.7
	comp=Z,965nm,1.1s,baz=216,slow=8.5,SNR=70						
SJG				S	S	16 55 35.3	-1.3
	comp=Z,10nm,0.3s,baz=144,slow=23,SNR=0.9						
SJG				LR	LR	17 01 18.8	
	comp=Z,139µm,21.4s,baz=206,slow=40						
	comp=Z,965nm,1.1s						
SJG	San Juan	22.03	36	P	P	16 51 35.5	+0.5
SJG	San Juan	22.03	36	*e*P	P	16 51 32.1	-2.9
SJG	San Juan	22.03	36	*e*P	P	16 51 34.6	-0.4
SJG	San Juan	22.03	36	⇑P	P	16 51 35.6	+0.6
PDPR	Patillas Dam,	22.03	37	IAmb	IAmb	16 51 50.8	
	comp=Z,1µm,0.9s						
HUMP	Col San Antoni	22.23	37	IAmb	IAmb	16 51 58.4	
	comp=Z,2µm,0.9s						
CMIG	Matias Romero	22.27	319	P	P	16 51 37.7	+0.1
	comp=Z,68nm,1.0s,baz=128,slow=6.8,SNR=21						
CMIG				S	S	16 55 41.4	+0.2
	comp=Z,13nm,0.7s,baz=95,slow=12,SNR=1.9						
CMIG				LR	LR	16 58 45.1	
	comp=Z,133µm,20.6s,baz=175,slow=32						
	comp=Z,68nm,1.0s						
SVB	Belmont	22.28	54	*e*P	P	16 51 35.7	-2.1
CBYP	Canovanas	22.33	37	IAmb	IAmb	16 51 42.8	
	comp=Z,2µm,1.1s						
MTP	Monte Pirata	22.38	38	IAmb	IAmb	16 52 00.0	
	comp=Z,1µm,1.1s						
PB11	IPOC Station P	22.39	154	IAmb	IAmb	16 52 10.6	
	comp=Z,2µm,1.0s						
PB11	IPOC Station P	22.39	154	⇑*i*P	P	16 51 38.9	-0.2
GRTK	Grand Turk	22.53	21	IAmb	IAmb	16 52 06.8	
	comp=Z,1µm,1.1s						
GRTK	Grand Turk	22.53	21	⇑P	P	16 51 40.7	+0.3
CDVI	St. Croix	22.61	40	P	P	16 51 41.6	+0.3
CDVI	St. Croix	22.61	40	*e*P	P	16 51 39.0	-2.3
CUPR	Culebra, Puert	22.70	38	IAmb	IAmb	16 52 03.5	
	comp=Z,943nm,0.8s						
HMBC	Humberstone	22.75	156	⇑*i*P	P	16 51 42.4	-0.4
MCLT	Moule a Chique	22.78	54	*e*P	P	16 51 37.4	-5.7
TA01	Diego Aracena	22.89	156	IAmb	IAmb	16 51 56.9	
	comp=Z,1µm,1.0s						
TA01	Diego Aracena	22.89	156	⇑*i*P	P	16 51 44.3	+0.2
TA01				IAMs_20	IAMs_20	16 56 20.8	
	comp=E,337µm,22.0s						
SLBI	Saint Lucia, B	22.92	53	*e*P	P	16 51 39.6	-4.9
STVI	Saint Thomas	22.94	38	IAmb	IAmb	16 52 09.8	
	comp=Z,2µm,1.4s						
PB08	IPOC Station P	22.94	154	IAmb	IAmb	16 52 15.3	
	comp=Z,781nm,1.0s						
PB08	IPOC Station P	22.94	154	*i* P	P	16 51 45.5	+0.3
PB08				IAMs_20	IAMs_20	16 56 23.9	
	comp=E,337µm,22.9s						
BIM	Bigot	23.13	52	*e*P	P	16 51 44.0	-2.7
PATCX	Punta Patache	23.13	157	IAmb	IAmb	16 52 02.0	
	comp=Z,2µm,1.3s						
PATCX	Punta Patache	23.13	157	⇑*i*P	P	16 51 46.8	+0.1
FDF	Fort de France	23.19	51	*e*P	P	16 51 40.8	-6.5
FDF	Fort de France	23.19	51	⇑P	P	16 51 46.0	-1.3
MPOM	Morne Pois Mar	23.25	52	IAmb	IAmb	16 51 51.5	
	comp=Z,2µm,1.0s						
MPOM	Morne Pois Mar	23.25	52	*e*P	P	16 51 45.0	-2.9
MDN	Morne-Daniel	23.35	50	*e*P	P	16 51 45.9	-3.0
DSLB	Salisbury	23.40	50	*e*P	P	16 51 46.8	-2.6
ILAM	Ilet Lapin Mar	23.43	52	IAMs_20	IAMs_20	17 02 15.1	
	comp=Z,158µm,20.0s						
ILAM	Ilet Lapin Mar	23.43	52	*e*P	P	16 51 46.6	-3.0
DLPL	La Plaine	23.47	50	*e*P	P	16 51 46.4	-3.7
TBG	Guadaloupe-3	23.49	49	*e*P	P	16 51 50.0	-0.2
TDBA	Terre de Bas,	23.50	49	IAMs_20	IAMs_20	17 02 36.0	
	comp=Z,156µm,19.0s						
TDBA	Terre de Bas,	23.50	49	*e*P	P	16 51 48.0	-2.3
VILB	Vilhena	23.50	125	*e*P	P	16 51 50.4	0.0
MDVC	Dominica, Viel	23.52	49	*e*P	P	16 51 51.1	+0.6
PB01	IPOC Station P	23.60	156	IAmb	IAmb	16 52 21.8	
	comp=Z,1µm,1.2s						
PB01	IPOC Station P	23.60	156	*i* P	P	16 51 51.5	+0.2
SEUS	St. Eustatius	23.61	43	*e*P	P	16 51 46.9	-4.5
BBGH	Gun Hill	23.61	57	IAmb	IAmb	16 51 56.1	
	comp=Z,2µm,1.1s						
BBGH				IAMs_20	IAMs_20	17 02 30.2	
	comp=Z,367µm,22.0s						
BBGH	Gun Hill	23.61	57	*e*P	P	16 51 44.0	-7.5
BBGH	Gun Hill	23.61	57	⇑P	P	16 51 50.1	-1.3
SKOC	St. Kitts, UWI	23.64	44	*e*P	P	16 51 50.8	-0.9
MLYT	Lee's Yard	23.65	46	*e*P	P	16 51 51.3	-0.5
MBFL	Flemmings, Mon	23.65	46	*e*P	P	16 51 52.2	+0.4
CBE	Ff, Capester	23.65	48	IAMs_20	IAMs_20	17 02 40.0	
	comp=Z,147µm,19.0s						
CBE	Ff, Capester	23.65	48	*e*P	P	16 51 49.7	-2.1
GDHS	Morne Mazeau,	23.67	48	IAmb	IAmb	16 52 09.9	
	comp=Z,2µm,1.3s						
SKI	Saint Kitts	23.67	44	*e*P	P	16 51 49.0	-3.0
PB02	IPOC Station P	23.68	157	P	P	16 51 52.9	+0.7
PB02				IAmb	IAmb	16 52 07.0	
	comp=Z,1µm,1.0s						
PB02	IPOC Station P	23.68	157	⇑*i*P	P	16 51 52.7	+0.6
MAGL	Barre de l’ile	23.82	49	P	P	16 51 52.2	-1.2
MAGL	Barre de l’ile	23.82	49	*e*P	P	16 51 50.9	-2.5
SMRT	St. Maarten	23.94	42	*e*P	P	16 51 54.0	-0.5
ABD	La Joyeuse, An	24.00	48	*e*P	P	16 51 53.0	-2.1
PB07	IPOC Station P	24.05	157	IAmb	IAmb	16 52 19.3	
	comp=Z,2µm,1.3s						
PB07	IPOC Station P	24.05	157	*i* P	P	16 51 56.2	+0.5
BPA	Boggy Peak	24.10	46	*e*P	P	16 51 50.4	-5.7
ANDO	Antigua, Disas	24.16	46	*e*P	P	16 51 55.7	-0.9
ANBD	Bethesda, Anti	24.17	46	*e*P	P	16 51 51.5	-5.1
GDSD	La Dsirade Is	24.21	48	P	P	16 51 54.9	-2.1
GDSD				IAMs_20	IAMs_20	17 02 56.8	
	comp=Z,165µm,22.0s						
PB09	IPOC Station P	24.37	156	*i* P	P	16 51 59.7	+1.0
ITTB	Itaituba	24.44	102	*e*P	P	16 51 58.7	-0.5
PB04	IPOC Station P	24.50	158	*i* P	P	16 51 60.0	+0.1
ANWB	Willy Bob	24.56	45	*e*P	P	16 51 57.5	-2.7
ANWB	Willy Bob	24.56	45	⇑P	P	16 51 59.1	-1.1
SIV	San Ignacio	24.62	132	P	P	16 52 01.5	+0.7
	comp=Z,93nm,0.3s,baz=308,slow=9.5,SNR=211						
SIV				LR	LR	17 03 23.3	
	comp=Z,1125µm,18.1s,baz=326,slow=40						
	comp=Z,93nm,0.3s						
PB06	IPOC Station P	25.06	157	IAmb	IAmb	16 52 20.4	
	comp=Z,791nm,1.0s						
PB06	IPOC Station P	25.06	157	⇑*i*P	P	16 52 05.6	+0.7
TLIG	Tlapa	25.15	314	P	P	16 52 05.5	-0.2
TLIG				IAmb	IAmb	16 52 38.5	
	comp=Z,966nm,1.4s						
TLIG	Tlapa	25.15	314	⇓P	P	16 52 07.2	+1.4
LVC	Limon Verde	25.23	156	P	P	16 52 08.1	+1.4
	comp=Z,51nm,0.5s,baz=329,slow=6.6,SNR=60						
LVC				LR	LR	17 02 38.3	
	comp=Z,202µm,21.6s,baz=320,slow=38						
	comp=Z,51nm,0.5s						
LVC	Limon Verde	25.23	156	P	P	16 52 06.1	-0.6
LVC	Limon Verde	25.23	156	IAMs_20	IAMs_20	16 58 00.1	
	comp=Z,157µm,19.0s						
LVC	Limon Verde	25.23	156	⇑*i*P	P	16 52 07.7	+1.0
LVC	Limon Verde	25.23	156	*e*P	P	16 52 08.0	+1.4
LVC	Limon Verde	25.23	156	⇑P	P	16 52 07.7	+1.0
061Z	Ochoppi	25.28	357	IAmb	IAmb	16 52 11.8	
	comp=Z,1µm,1.1s						
061Z	Ochoppi	25.28	357	P	P	16 52 08.0	+1.4
	baz=177,SNR=27						
061Z				S	S	16 56 34.3	+3.6
	baz=177						
PB10	IPOC Station P	25.44	160	P	P	16 52 08.6	+0.4
PB10				IAmb	IAmb	16 52 46.3	
	comp=Z,779nm,1.2s						
PB10	IPOC Station P	25.44	160	*i* P	P	16 52 08.9	+0.8
MALB	Monte Alegre	25.55	95	*e*P	P	16 52 09.2	0.0
PB15	IPOC Station P	25.55	158	IAmb	IAmb	16 52 36.4	
	comp=Z,2µm,1.5s						
PB15	IPOC Station P	25.55	158	*i* P	P	16 52 10.4	+1.0
PTLB	Pontes e Lacer	25.76	129	*e*P	P	16 52 11.1	0.0
PDRB	Porto dos Gac	25.79	118	*e*P	P	16 52 11.2	-0.3
AF01	San Pedro de A	25.84	155	⇑*i*P	P	16 52 14.0	+1.9
CLDB	Colider	26.31	116	*e*P	P	16 52 15.8	-0.4
060A	Indiantown	26.43	359	P	P	16 52 18.0	+1.0
060A				IAmb	IAmb	16 52 27.8	
	comp=Z,922nm,0.9s						
060A	Indiantown	26.43	359	P	P	16 52 18.3	+1.3
	baz=178,SNR=11						
060A				S	S	16 56 51.6	+2.8
	baz=178						
PB14	IPOC Station P	26.52	161	IAmb	IAmb	16 52 51.4	
	comp=Z,1µm,1.5s						
PB14	IPOC Station P	26.52	161	⇑*i*P	P	16 52 19.0	+0.7
GO02	Mina Guanaco	27.30	160	IAmb	IAmb	16 53 01.1	
	comp=Z,802nm,0.9s						
GO02	Mina Guanaco	27.30	160	⇑*i*P	P	16 52 26.0	+0.8
HJA	Humahuaca	27.34	150	*i* P	P	16 52 29.9	+4.2
MDP	Montagnes des	27.42	80	P	P	16 52 26.5	+0.3
	comp=Z,309nm,1.1s,baz=255,slow=9.1,SNR=25						
MDP				LR	LR	17 03 41.9	
	comp=Z,930µm,19.4s,baz=260,slow=37						
	comp=Z,309nm,1.1s						
DWPF	Disney Wildern	27.54	357	P	P	16 52 26.8	-0.2
DWPF	Disney Wildern	27.54	357	P	P	16 52 27.9	+0.9
	baz=176,SNR=12						
DWPF				S	S	16 57 08.3	+1.9
	baz=176						
DWPF	Disney Wildern	27.54	357	P	P	16 52 27.3	+0.3
	baz=176						
DWPF				S	S	16 57 07.4	+1.1
	baz=176						
DWPF	Disney Wildern	27.54	357	⇑P	P	16 52 28.2	+1.2
MCPB	Macapa, AP	27.67	92	*e*P	P	16 52 28.2	-0.2
AC01	Pan de Azucar	27.88	162	⇑*i*P	P	16 52 30.6	+0.4
MOIG	Morelia	28.41	314	P	P	16 52 36.3	+1.1
SLA	San Lorenzo	28.57	152	⇑*i*P	P	16 52 37.7	+1.2
SLA	San Lorenzo	28.57	152	*i* P	P	16 52 39.0	+2.5
656A	Willston	28.87	355	P	P	16 52 38.8	-0.1
	baz=174,SNR=17						
656A				S	S	16 57 27.8	+0.5
	baz=174						
AC02	Maricunga	28.99	160	⇑*i*P	P	16 52 42.0	+1.4
AC06	Mina Casimiro	29.09	163	⇑*i*P	P	16 52 41.5	+0.7
GO03	Copiap	29.35	163	IAmb	IAmb	16 53 25.2	
	comp=Z,857nm,1.6s						
GO03	Copiap	29.35	163	⇑*i*P	P	16 52 44.0	+0.8
GO03	Copiap	29.35	163	⇑P	P	16 52 44.0	+0.8
FSA	Cafayete	29.56	154	*i* P	P	16 52 46.4	+1.2
AC04	Llanos de Chal	29.69	164	⇑*i*P	P	16 52 46.7	+0.6
553A	Crawfordville	29.90	352	IAmb	IAmb	16 52 53.3	
	comp=Z,533nm,1.3s						
553A	Crawfordville	29.90	352	P	P	16 52 48.7	+0.7
	baz=170,SNR=22						
553A				S	S	16 57 45.6	+2.2
	baz=170						
456A	Hilliard	30.18	356	P	P	16 52 51.5	+1.1
	baz=175,SNR=8.0						
456A				S	S	16 57 50.3	+2.6
	baz=175						
451A	Vernon	30.53	350	P	P	16 52 53.9	+0.4
	baz=168,SNR=8.2						
451A				S	S	16 57 49.2	-4.1
	baz=168						
LCO	Las Campanas	30.55	164	P	P	16 52 54.1	0.0
LCO				IAmb	IAmb	16 53 09.1	
	comp=Z,1µm,1.9s						
LCO	Las Campanas	30.55	164	IAMs_20	IAMs_20	17 03 54.7	
	comp=Z,120µm,20.0s						
LCO	Las Campanas	30.55	164	*e*P	P	16 52 54.1	0.0
LCO	Las Campanas	30.55	164	⇑*i*P	P	16 52 54.9	+0.8
LCO	Las Campanas	30.55	164	⇑P	P	16 52 54.6	+0.5
LCO	Las Campanas	30.55	164	P	P	16 52 55.1	+1.0
LCO				pP	sP	16 53 06.0	-0.7
LCO				sP	pP	16 53 09.4	+6.3
TIGA	Tifton	31.02	354	IAmb	IAmb	16 53 01.7	
	comp=Z,339nm,0.9s						
TIGA	Tifton	31.02	354	P	P	16 52 58.3	+0.4
	baz=172,SNR=19						
TIGA				S	S	16 58 02.0	+0.9
	baz=172						
TIGA	Tifton	31.02	354	P	P	16 52 58.4	+0.5
	baz=172,SNR=19						
TIGA				S	S	16 58 01.2	+0.1
	baz=172						
545B	Wilberts Farm,	31.15	342	S	S	16 58 09.2	+6.1
	baz=159						
352A	Blakely	31.24	351	P	P	16 53 00.2	+0.4
	baz=170						
352A				S	S	16 58 03.6	-0.8
	baz=170						
CO05	La Serena	31.28	166	IAmb	IAmb	16 53 18.8	
	comp=Z,534nm,1.1s						
CO05	La Serena	31.28	166	⇑*i*P	P	16 53 01.2	+1.0
BRAL	Brewton	31.32	348	IAmb	IAmb	16 53 13.2	
	comp=Z,1µm,1.5s						
BRAL	Brewton	31.32	348	P	P	16 53 01.1	+0.6
	baz=166,SNR=8.1						
BRAL				S	S	16 58 07.6	+2.0
	baz=166						
BRAL	Brewton	31.32	348	P	P	16 53 00.7	+0.2
	baz=166,SNR=8.1						
BRAL				S	S	16 58 07.7	+2.0
	baz=166						
257A	Skidaway Islan	31.37	358	IAmb	IAmb	16 53 05.3	
	comp=Z,561nm,1.0s						
257A	Skidaway Islan	31.37	358	P	P	16 53 01.3	+0.4
	baz=177,SNR=6.4						
257A				S	S	16 58 09.8	+3.4
	baz=177						
ZAIG	Zacatecas	31.39	317	IAmb	IAmb	16 53 13.2	
	comp=Z,665nm,1.6s						
ZAIG	Zacatecas	31.39	317	⇓P	P	16 53 03.6	+2.0
AQDB	Aquidauana	31.39	133	IAmb	IAmb	16 53 15.8	
	comp=Z,529nm,1.1s						
255A	Hazlehurst	31.40	355	IAmb	IAmb	16 53 05.4	
	comp=Z,572nm,1.3s						
255A	Hazlehurst	31.40	355	P	P	16 53 01.3	0.0
	baz=174,SNR=13						
255A				S	S	16 58 07.8	+0.9
	baz=174						
CO01	Juntas del Tor	31.63	164	P	P	16 53 03.5	-0.1
CO01	Juntas del Tor	31.63	164	⇑*i*P	P	16 53 05.0	+1.4
250A	Grady	31.95	349	P	P	16 53 06.4	+0.3
	baz=167,SNR=17						
250A				S	S	16 58 13.4	-2.1
	baz=167						
AROD	Rodeo	31.99	163	*i* P	P	16 53 08.6	+1.8
KVTX	Kingsville	32.08	329	P	P	16 53 09.6	+2.3
	baz=144,SNR=7.4						
KVTX				S	S	16 58 21.1	+3.4
	baz=144						
KVTX	Kingsville	32.08	329	⇑P	P	16 53 08.8	+1.5
ACDV	Cuesta del Vie	32.09	163	*i* P	P	16 53 09.8	+2.2
346A	Big Creek Wild	32.11	344	P	P	16 53 08.4	+0.9
	baz=161						
346A				S	S	16 58 18.7	+0.6
	baz=161						
ACLC	CERRO LA CRUZ	32.12	159	*i* P	P	16 53 09.2	+1.4
154A	Montrose	32.14	355	P	P	16 53 08.0	+0.4
	baz=173,SNR=38						
154A				S	S	16 58 18.6	+0.2
	baz=173						
152A	Waverly Hall	32.38	352	IAmb	IAmb	16 53 13.3	
	comp=Z,362nm,0.9s						
152A	Waverly Hall	32.38	352	P	P	16 53 09.9	0.0
	baz=170,SNR=118						
152A				S	S	16 58 22.8	+0.6
	baz=170						
NHSC	New Hope	32.47	359	P	P	16 53 11.6	+1.0
	baz=179,SNR=23						
NHSC				S	S	16 58 25.1	+1.4
	baz=179						
NHSC	New Hope	32.47	359	P	P	16 53 11.4	+0.8
	baz=179,SNR=23						
NHSC				S	S	16 58 25.3	+1.7
	baz=179						
ACCO	Cerro Coronel	32.50	163	*i* P	P	16 53 13.1	+1.8
344A	Westbrook Farm	32.54	342	P	P	16 53 12.1	+0.9
	baz=159,SNR=22						
344A				S	S	16 58 26.0	+1.2
	baz=159						
441A	DeRidder	32.73	338	IAmb	IAmb	16 53 26.7	
	comp=Z,670nm,1.5s						
441A	DeRidder	32.73	338	P	P	16 53 14.1	+1.2
	baz=154						
441A				S	S	16 58 29.1	+1.5
	baz=154						
HAW	Hawthorne Fire	32.77	357	P	P	16 53 14.0	+0.7
	baz=176						
HAW				S	S	16 58 29.0	+0.7
	baz=176						
GOGA	Godfrey	32.96	354	IAMs_20	IAMs_20	17 08 45.8	
	comp=Z,87µm,20.0s						
GOGA	Godfrey	32.96	354	P	P	16 53 14.9	0.0
	baz=173,SNR=57						
GOGA				S	S	16 58 30.4	-0.9
	baz=173						
GOGA	Godfrey	32.96	354	P	P	16 53 14.0	-0.9
	baz=173,SNR=57						
GOGA				S	S	16 58 30.6	-0.7
	baz=173						
342B	Flagon Creek P	32.98	340	P	P	16 53 15.7	+0.6
	baz=156,SNR=6.9						
342B				S	S	16 58 32.1	+0.5
	baz=156						
AVFE	Valle Fertil	33.08	160	*i* P	P	16 53 17.1	+1.0
Z51A	Franklin	33.08	352	P	P	16 53 15.8	-0.1
Z51A				IAmb	IAmb	16 53 19.6	
	comp=Z,334nm,0.9s						
Z51A	Franklin	33.08	352	P	P	16 53 16.1	+0.1
	baz=170,SNR=62						
Z51A				S	S	16 58 32.5	-0.7
	baz=170						
HKT	Hockley	33.10	334	P	P	16 53 15.3	-0.8
HKT				IAmb	IAmb	16 53 29.4	
	comp=Z,955nm,1.9s						
HKT	Hockley	33.10	334	*c i*P	P	16 53 16.5	+0.5

HKT				pmax	pmax		
	comp=Z,449nm,1.9s						
HKT				MLR	MLR		
	comp=Z,44μm,23.0s						
HKT	**Hockley**	**33.10**	**334**	P	**P**	**16 53 16.3**	**+0.3**
	baz=149						
HKT				S	**S**	**16 58 36.5**	**+3.2**
	baz=149						
HKT	**Hockley**	**33.10**	**334**	⇑P	**P**	**16 53 16.5**	**+0.5**
HKT	**Hockley**	**33.10**	**334**	P	**P**	**16 53 18.0**	**+1.9**
735A	**Kenedy**	**33.11**	**330**	IAmb	IAmb	16 53 27.2	
	comp=Z,764nm,1.3s						
735A	**Kenedy**	**33.11**	**330**	P	**P**	**16 53 16.7**	**+0.5**
	baz=145						
735A				S	**S**	**16 58 34.6**	**+1.0**
	baz=145						
LRAL	**Lakeview Retre**	**33.12**	**349**	IAmb	IAmb	16 53 20.6	
	comp=Z,1μm,1.9s						
LRAL	**Lakeview Retre**	**33.12**	**349**	P	**P**	**16 53 16.5**	**+0.2**
	baz=166,SNR=76						
LRAL				S	**S**	**16 58 32.3**	**-1.3**
	baz=166						
LRAL	**Lakeview Retre**	**33.12**	**349**	P	**P**	**16 53 15.8**	**-0.5**
	baz=166,SNR=76						
LRAL				S	**S**	**16 58 32.9**	**-0.8**
	baz=166						
APLL	**PUNTA DE LOS L**	**33.16**	**159**	*i* P	**P**	**16 53 17.6**	**+0.8**
VBMS	**Vicksburg**	**33.19**	**343**	IAmb	IAmb	16 53 30.1	
	comp=Z,1μm,1.7s						
VBMS	**Vicksburg**	**33.19**	**343**	P	**P**	**16 53 17.0**	**+0.1**
	baz=160						
VBMS				S	**S**	**16 58 34.0**	**-0.9**
	baz=160						
VBMS	**Vicksburg**	**33.19**	**343**	P	**P**	**16 53 16.9**	**0.0**
	baz=160						
VBMS				S	**S**	**16 58 34.1**	**-0.7**
	baz=160						
146A	**Union**	**33.19**	**346**	IAmb	IAmb	16 53 31.1	
	comp=Z,851nm,1.5s						
146A	**Union**	**33.19**	**346**	P	**P**	**16 53 17.4**	**+0.5**
	baz=163,SNR=7.0						
146A				S	**S**	**16 58 35.0**	**+0.1**
	baz=163						
Y58A	**Scranton**	**33.27**	**0**	IAmb	IAmb	16 53 21.6	
	comp=Z,456nm,1.1s						
Y58A	**Scranton**	**33.27**	**0**	P	**P**	**16 53 18.4**	**+0.9**
	baz=180,SNR=9.1						
Y58A				P	**P**	**16 53 18.4**	**+0.9**
	baz=180,SNR=9.1						
Y58A				S	**S**	**16 58 37.4**	**+1.4**
	baz=180						
Y58A				S	**S**	**16 58 37.4**	**+1.4**
	baz=180						
Y59A	**Loris**	**33.36**	**1**	P	**P**	**16 53 19.1**	**+0.8**
	baz=181,SNR=19						
Y59A				P	**P**	**16 53 19.1**	**+0.8**
	baz=181,SNR=19						
Y59A				S	**S**	**16 58 40.4**	**+3.0**
	baz=181						
Y59A				S	**S**	**16 58 40.4**	**+3.0**
	baz=181						
Y57A	**Sumter**	**33.38**	**359**	IAmb	IAmb	16 53 22.5	
	comp=Z,299nm,0.9s						
Y57A	**Sumter**	**33.38**	**359**	P	**P**	**16 53 18.8**	**+0.3**
	baz=179,SNR=13						
Y57A				P	**P**	**16 53 18.8**	**+0.3**
	baz=179,SNR=13						
Y57A				S	**S**	**16 58 39.4**	**+1.6**
	baz=179						
Y57A				S	**S**	**16 58 39.4**	**+1.6**
	baz=179						
Y60A	**Bolivia**	**33.40**	**2**	P	**P**	**16 53 19.8**	**+1.2**
	baz=182,SNR=17						
Y60A				P	**P**	**16 53 19.8**	**+1.2**
	baz=182,SNR=17						
Y60A				S	**S**	**16 58 37.9**	**0.0**
	baz=182						
Y60A				S	**S**	**16 58 37.9**	**0.0**
	baz=182						
Y52A	**Lilburn**	**33.48**	**353**	P	**P**	**16 53 19.4**	**-0.1**
	baz=172,SNR=39						
Y52A				P	**P**	**16 53 19.4**	**-0.1**
	baz=172,SNR=39						
Y52A				S	**S**	**16 58 38.5**	**-0.8**
	baz=172						
Y52A				S	**S**	**16 58 38.5**	**-0.8**
	baz=172						
Z47A	**Carrollton**	**33.50**	**347**	P	**P**	**16 53 19.5**	**-0.1**
	baz=165,SNR=23						
Z47A				S	**S**	**16 58 38.4**	**-1.2**
	baz=165						
833A	**Chaparral WMA,**	**33.50**	**327**	P	**P**	**16 53 20.9**	**+1.2**
	baz=142,SNR=56						
833A				S	**S**	**16 58 41.6**	**+1.8**
	baz=142						
833A	**Chaparral WMA,**	**33.50**	**327**	P	**P**	**16 53 18.8**	**-0.9**
	baz=142,SNR=56						
833A				S	**S**	**16 58 39.3**	**-0.5**
	baz=142						
RTLS	**Leoncito**	**33.57**	**164**	*i* P	**P**	**16 53 22.7**	**+2.1**
JSC	**Jenkinsville**	**33.67**	**358**	IAmb	IAmb	16 53 25.1	
	comp=Z,425nm,1.0s						
JSC	**Jenkinsville**	**33.67**	**358**	P	**P**	**16 53 21.8**	**+0.7**
	baz=177						
JSC				S	**S**	**16 58 43.0**	**+0.7**
	baz=177						
HODGE	**Hodges**	**33.68**	**356**	IAmb	IAmb	16 53 24.9	
	comp=Z,397nm,1.0s						
HODGE	**Hodges**	**33.68**	**356**	P	**P**	**16 53 21.5**	**+0.3**
	baz=175						
HODGE				S	**S**	**16 58 42.7**	**+0.4**
	baz=175						
VA06	**Catapilco**	**33.80**	**167**	IAmb	IAmb	16 53 41.0	
	comp=Z,792nm,1.4s						
ACHE	**Chepes**	**33.80**	**160**	*i* P	**P**	**16 53 23.5**	**+1.0**
Y49A	**Blount Mountai**	**33.81**	**350**	P	**P**	**16 53 21.3**	**-1.0**
	baz=168,SNR=59						
Y49A				S	**S**	**16 58 43.4**	**-1.0**
	baz=168						
143A	**Socs Landing,**	**33.91**	**342**	P	**P**	**16 53 22.2**	**-1.0**
143A	**Socs Landing,**	**33.91**	**342**	P	**P**	**16 53 22.8**	**-0.3**
	baz=159						
143A				S	**S**	**16 58 44.5**	**-1.4**
	baz=159						
X58A	**Rowland**	**33.92**	**1**	IAmb	IAmb	16 53 28.3	
	comp=Z,822nm,1.9s						
X58A	**Rowland**	**33.92**	**1**	P	**P**	**16 53 23.7**	**+0.5**
	baz=180						
X58A				P	**P**	**16 53 23.7**	**+0.5**
	baz=180						
X58A				S	**S**	**16 58 47.8**	**+1.8**
	baz=180						
X58A				S	**S**	**16 58 47.8**	**+1.8**
	baz=180						
AUSP	**Uspallata**	**33.95**	**164**	*i* P	**P**	**16 53 26.1**	**+2.2**
BIRD	**Birdtown, Kers**	**34.01**	**359**	IAmb	IAmb	16 53 36.1	
	comp=Z,676nm,1.7s						
BIRD	**Birdtown, Kers**	**34.01**	**359**	S	**S**	**16 58 47.9**	**+0.4**
	baz=178						
NATX	**Nacogdoches**	**34.19**	**337**	IAmb	IAmb	16 53 39.4	
	comp=Z,970nm,1.4s						
NATX	**Nacogdoches**	**34.19**	**337**	P	**P**	**16 53 25.7**	**+0.1**
	baz=153,SNR=5.4						
NATX				S	**S**	**16 58 50.0**	**-0.4**
	baz=153						
NATX	**Nacogdoches**	**34.19**	**337**	P	**P**	**16 53 25.5**	**-0.1**
	baz=153,SNR=5.4						
NATX				S	**S**	**16 58 49.1**	**-1.2**
	baz=153						
PAULI	**Pauline**	**34.24**	**357**	IAmb	IAmb	16 53 30.0	
	comp=Z,375nm,1.0s						
PAULI	**Pauline**	**34.24**	**357**	P	**P**	**16 53 26.5**	**+0.5**
	baz=176						
PAULI				S	**S**	**16 58 50.6**	**-0.3**
	baz=176						
X51A	**Calhoun**	**34.27**	**352**	IAmb	IAmb	16 53 29.6	
	comp=Z,324nm,0.9s						
X51A	**Calhoun**	**34.27**	**352**	P	**P**	**16 53 26.3**	**0.0**
	baz=171,SNR=51						
X51A				P	**P**	**16 53 26.3**	**0.0**
	baz=171,SNR=51						
X51A				S	**S**	**16 58 50.4**	**-1.0**
	baz=171						
X51A				S	**S**	**16 58 50.4**	**-1.0**
	baz=171						
CPUP	**Villa Florida**	**34.29**	**143**	P	**P**	**16 53 25.5**	**-1.0**
	comp=Z,57nm,0.9s,baz=324,slow=8.8,SNR=36						
CPUP				LR	LR	17 09 28.9	
	comp=Z,300μm,19.0s,baz=328,slow=40						
	comp=Z,57nm,0.9s						
CPUP	**Villa Florida**	**34.29**	**143**	⇑*i*P	**P**	**16 53 25.6**	**-1.0**
CPUP	**Villa Florida**	**34.29**	**143**	⇑P	**P**	**16 53 25.5**	**-1.0**
CPUP	**Villa Florida**	**34.29**	**143**	P	**P**	**16 53 25.6**	**-1.0**
CPUP				S	**S**	**16 58 48.5**	**-3.5**
FPAL	**Fort Paine**	**34.35**	**351**	IAmb	IAmb	16 53 30.1	
	comp=Z,635nm,1.0s						
BG3	**Lake Jocassee**	**34.48**	**355**	IAmb	IAmb	16 53 32.1	
	comp=Z,581nm,0.9s						
CASEE	**Lake Jocassee**	**34.48**	**355**	P	**P**	**16 53 28.7**	**+0.5**
	baz=174						
CASEE				S	**S**	**16 58 55.3**	**+0.5**
	baz=174						
Y45A	**Yeager Farm, C**	**34.48**	**345**	P	**P**	**16 53 28.4**	**+0.3**
Y45A	**Yeager Farm, C**	**34.48**	**345**	P	**P**	**16 53 28.4**	**+0.3**
	baz=162,SNR=45						
Y45A				S	**S**	**16 58 54.1**	**-0.7**
	baz=162						
PEL	**Peldehue**	**34.49**	**167**	IAMs_20	IAMs_20	17 05 32.4	
	comp=Z,101μm,21.0s						
PEL	**Peldehue**	**34.49**	**167**	⇑P	**P**	**16 53 29.0**	**+0.7**
PEL	**Peldehue**	**34.49**	**167**	P	**P**	**16 53 29.6**	**+1.2**
PEL				pP	**sP**	**16 53 39.8**	**-1.2**
PEL				sP	**pP**	**16 53 43.6**	**+6.3**
X48A	**Hartselle**	**34.50**	**349**	P	**P**	**16 53 27.8**	**-0.5**
	baz=167,SNR=90						
X48A				S	**S**	**16 58 53.0**	**-2.1**
	baz=167						
MT02	**Curacav**	**34.50**	**167**	IAmb	IAmb	16 53 43.5	
	comp=Z,494nm,1.4s						
W57A	**Gilead**	**34.51**	**360**	IAmb	IAmb	16 53 32.0	
	comp=Z,296nm,0.9s						
W57A	**Gilead**	**34.51**	**360**	P	**P**	**16 53 28.6**	**+0.3**
	baz=179,SNR=38						
W57A				P	**P**	**16 53 28.6**	**+0.3**
	baz=179,SNR=38						
W57A				S	**S**	**16 58 55.8**	**+0.6**
	baz=179						
W57A				S	**S**	**16 58 55.8**	**+0.6**
	baz=179						
KMSC	**Kings Mountain**	**34.53**	**358**	IAmb	IAmb	16 53 32.5	
	comp=Z,558nm,1.0s						
KMSC	**Kings Mountain**	**34.53**	**358**	P	**P**	**16 53 29.1**	**+0.5**
	baz=177,SNR=97						
KMSC				S	**S**	**16 58 56.0**	**+0.4**
	baz=177						
KMSC	**Kings Mountain**	**34.53**	**358**	P	**P**	**16 53 28.8**	**+0.3**
	baz=177,SNR=97						
KMSC				S	**S**	**16 58 55.6**	**0.0**
	baz=177						
435B	**Jarrell**	**34.60**	**332**	IAmb	IAmb	16 53 43.1	
	comp=Z,646nm,1.2s						
435B	**Jarrell**	**34.60**	**332**	P	**P**	**16 53 29.5**	**+0.3**
	baz=147,SNR=6.9						
435B				S	**S**	**16 58 57.0**	**+0.3**
	baz=147						
435B	**Jarrell**	**34.60**	**332**	P	**P**	**16 53 29.2**	**0.0**
	baz=147						
435B				S	**S**	**16 58 56.1**	**-0.6**
	baz=147						
CNNC	**Cliffs of the**	**34.64**	**3**	IAmb	IAmb	16 53 41.7	
	comp=Z,875nm,1.6s						
CNNC	**Cliffs of the**	**34.64**	**3**	P	**P**	**16 53 30.2**	**+0.7**
	baz=183						
CNNC				S	**S**	**16 58 59.7**	**+2.5**
	baz=183						
CNNC	**Cliffs of the**	**34.64**	**3**	P	**P**	**16 53 30.2**	**+0.7**
	baz=183						
CNNC				S	**S**	**16 58 59.1**	**+1.9**
	baz=183						
W52A	**Murphy**	**34.68**	**354**	IAmb	IAmb	16 53 33.5	
	comp=Z,415nm,0.9s						
W52A	**Murphy**	**34.68**	**354**	P	**P**	**16 53 30.0**	**+0.1**
	baz=172,SNR=46						
W52A				S	**S**	**16 58 58.8**	**+0.9**
	baz=172						
TCA	**Tanti**	**34.73**	**157**	*i* P	**P**	**16 53 31.0**	**+0.5**
BBSR	**BB Station**	**34.76**	**23**	P	**P**	**16 53 31.3**	**+0.7**
BBSR				IAmb	IAmb	16 53 49.3	
	comp=Z,353nm,0.9s						
BBSR	**BB Station**	**34.76**	**23**	P	**P**	**16 53 31.5**	**+1.0**
	baz=207,SNR=12						
BBSR	**BB Station**	**34.76**	**23**	⇑P	**P**	**16 53 31.7**	**+1.2**
BBSR	**BB Station**	**34.76**	**23**	P	**P**	**16 53 32.0**	**+1.5**
BBSR				pP	**pP**	**16 53 40.8**	**+1.3**
BBSR				sP	**sP**	**16 53 45.3**	**+2.1**
VA05	**Santo Domingo**	**34.78**	**168**	IAmb	IAmb	16 53 49.0	
	comp=Z,359nm,1.2s						
237A	**Washetta, Mont**	**34.86**	**336**	P	**P**	**16 53 32.0**	**+0.5**
	baz=151,SNR=15						
237A				S	**S**	**16 59 00.9**	**+0.1**
	baz=151						
Z41A	**Richland Creek**	**34.87**	**341**	P	**P**	**16 53 31.2**	**-0.2**
	baz=157						
Z41A				P	**P**	**16 53 31.2**	**-0.2**
	baz=157						
Z41A				S	**S**	**16 58 59.7**	**-1.1**
	baz=157						
Z41A				S	**S**	**16 58 59.7**	**-1.1**
	baz=157						
Z41A	**Richland Creek**	**34.87**	**341**	P	**P**	**16 53 31.2**	**-0.2**
	baz=157						
Z41A				S	**S**	**16 59 00.9**	**+0.2**
	baz=157						
MT03	**Universidad Ad**	**34.87**	**166**	IAmb	IAmb	16 53 51.6	
	comp=Z,837nm,1.3s						
W50A	**Signal Mountai**	**34.95**	**352**	P	**P**	**16 53 31.9**	**-0.3**
	baz=170,SNR=193						
W50A				S	**S**	**16 59 01.9**	**-0.2**
	baz=170						
MT09	**Talagante**	**35.03**	**167**	P	**P**	**16 53 32.9**	**-0.2**
MT09				IAmb	IAmb	16 53 51.8	
	comp=Z,827nm,1.4s						
SWET	**Sewanee**	**35.06**	**351**	IAmb	IAmb	16 53 36.1	
	comp=Z,428nm,0.9s						
TRCB	**Terra Rica**	**35.06**	**133**	IAmb	IAmb	16 53 47.5	
	comp=Z,268nm,0.9s						
OXF	**Oxford**	**35.06**	**346**	IAmb	IAmb	16 53 36.3	
	comp=Z,421nm,1.1s						
OXF	**Oxford**	**35.06**	**346**	P	**P**	**16 53 32.0**	**-1.2**
	baz=163,SNR=27						
OXF				S	**S**	**16 59 00.9**	**-2.9**
	baz=163						
OXF	**Oxford**	**35.06**	**346**	P	**P**	**16 53 31.4**	**-1.7**
	baz=163,SNR=27						
OXF				S	**S**	**16 59 01.8**	**-2.0**
	baz=163						
V53A	**Saluda**	**35.15**	**356**	IAmb	IAmb	16 53 37.5	
	comp=Z,309nm,0.9s						
V53A	**Saluda**	**35.15**	**356**	P	**P**	**16 53 33.9**	**0.0**
	baz=174,SNR=102						
V53A				P	**P**	**16 53 33.9**	**0.0**
	baz=174,SNR=102						
V53A				S	**S**	**16 59 05.1**	**0.0**
	baz=174						
V53A				S	**S**	**16 59 05.1**	**0.0**
	baz=174						
CCAR	**Cane Creek**	**35.15**	**342**	P	**P**	**16 53 33.6**	**-0.3**
CCAR	**Cane Creek**	**35.15**	**342**	P	**P**	**16 53 33.8**	**-0.1**
	baz=159						
CCAR				S	**S**	**16 59 04.4**	**-0.7**
	baz=159						
V58A	**Windy Hill, Pi**	**35.16**	**1**	IAmb	IAmb	16 53 37.7	
	comp=Z,321nm,0.9s						
V58A	**Windy Hill, Pi**	**35.16**	**1**	P	**P**	**16 53 34.3**	**+0.4**
	baz=181,SNR=50						
V58A				P	**P**	**16 53 34.3**	**+0.4**
	baz=181,SNR=50						
V58A				S	**S**	**16 59 06.2**	**+1.1**
	baz=181						
V58A				S	**S**	**16 59 06.2**	**+1.1**
	baz=181						
BDFB	**Brasilia**	**35.16**	**118**	P	**P**	**16 53 34.5**	**+0.1**
	comp=Z,296nm,1.0s,baz=288,slow=10,SNR=93						
BDFB				LR	LR	17 08 52.5	
	comp=Z,452μm,19.4s,baz=290,slow=38						
	comp=Z,296nm,1.0s						
BDFB	**Brasilia**	**35.16**	**118**	P	**P**	**16 53 33.9**	**-0.5**
BDFB				IAmb	IAmb	16 53 37.5	
	comp=Z,536nm,1.2s						
TKL	**Tuckaleechee C**	**35.22**	**354**	LR	LR	17 07 18.3	
	comp=Z,74μm,21.1s,baz=169,slow=35						
TKL	**Tuckaleechee C**	**35.22**	**354**	IAmb	IAmb	16 53 38.6	
	comp=Z,817nm,1.4s						
TKL	**Tuckaleechee C**	**35.22**	**354**	P	**P**	**16 53 34.5**	**0.0**
	baz=173,SNR=88						
TKL				S	**S**	**16 59 05.5**	**-0.6**
	baz=173						
V55A	**Taylorsville**	**35.24**	**358**	P	**P**	**16 53 35.1**	**+0.5**
	baz=177,SNR=47						
V55A				P	**P**	**16 53 35.1**	**+0.5**
	baz=177,SNR=47						
V55A				S	**S**	**16 59 06.9**	**+0.5**
	baz=177						
V55A				S	**S**	**16 59 06.9**	**+0.5**
	baz=177						
V61A	**Roper**	**35.27**	**4**	P	**P**	**16 53 36.5**	**+1.6**
	baz=185,SNR=13						
V61A				P	**P**	**16 53 36.5**	**+1.6**
	baz=185,SNR=13						
MRA	**San Martin**	**35.28**	**159**	*i* P	**P**	**16 53 36.0**	**+0.8**
LMEL	**Las Melosas**	**35.28**	**166**	IAmb	IAmb	16 53 53.9	
	comp=Z,652nm,1.1s						
BO04	**La Punta**	**35.32**	**167**	IAmb	IAmb	16 53 48.5	
	comp=Z,439nm,1.1s						
V52A	**Sevierville**	**35.38**	**355**	IAmb	IAmb	16 53 39.4	
	comp=Z,470nm,0.9s						
V52A	**Sevierville**	**35.38**	**355**	P	**P**	**16 53 35.7**	**-0.2**
	baz=173,SNR=122						
V52A				S	**S**	**16 59 08.7**	**0.0**
	baz=173						
V51A	**Loudon**	**35.42**	**353**	IAmb	IAmb	16 53 39.8	
	comp=Z,544nm,0.8s						
V51A	**Loudon**	**35.42**	**353**	P	**P**	**16 53 36.2**	**-0.1**
	baz=172,SNR=115						
V51A				S	**S**	**16 59 09.1**	**-0.2**
	baz=172						
JCT	**Junction City**	**35.43**	**329**	P	**P**	**16 53 36.7**	**+0.2**
JCT	**Junction City**	**35.43**	**329**	P	**P**	**16 53 36.7**	**+0.2**
JCT				pmax	pmax		
	comp=Z,2μm,1.5s						
JCT				MLR	MLR		
	comp=Z,22μm,20.0s						
JCT	**Junction City**	**35.43**	**329**	P	**P**	**16 53 37.9**	**+1.5**
	baz=144,SNR=66						
JCT				S	**S**	**16 59 12.1**	**+2.4**
	baz=144						
JCT	**Junction City**	**35.43**	**329**	P	**P**	**16 53 37.2**	**+0.8**
	baz=144,SNR=66						
JCT				S	**S**	**16 59 11.3**	**+1.7**
	baz=144						
JCT	**Junction City**	**35.43**	**329**	⇑P	**P**	**16 53 37.5**	**+1.1**
WHTX	**Lake Whitney,**	**35.56**	**334**	P	**P**	**16 53 37.7**	**+0.2**
	baz=148,SNR=30						
WHTX				S	**S**	**16 59 10.7**	**-0.8**
	baz=148						
WHTX	**Lake Whitney,**	**35.56**	**334**	P	**P**	**16 53 37.0**	**-0.5**
	baz=148,SNR=30						
WHTX				S	**S**	**16 59 10.3**	**-1.2**
	baz=148						
BO01	**Tunca**	**35.60**	**168**	IAmb	IAmb	16 53 55.7	
	comp=Z,862nm,1.4s						
W45A	**Hickory Valley**	**35.63**	**347**	P	**P**	**16 53 37.2**	**-0.8**
	baz=164,SNR=16						
W45A				S	**S**	**16 59 09.6**	**-2.9**
	baz=164						
Z38A	**Mt. Pleasant**	**35.64**	**338**	P	**P**	**16 53 38.4**	**+0.2**
	baz=153,SNR=9.7						
Z38A				S	**S**	**16 59 12.2**	**-0.5**
	baz=153						
U56A	**King**	**35.71**	**359**	IAmb	IAmb	16 53 43.0	
	comp=Z,363nm,0.9s						
U56A	**King**	**35.71**	**359**	P	**P**	**16 53 39.5**	**+0.8**
	baz=179,SNR=48						
U56A				P	**P**	**16 53 39.5**	**+0.8**
	baz=179,SNR=48						
U56A				S	**S**	**16 59 15.5**	**+1.9**
	baz=179						
U56A				S	**S**	**16 59 15.5**	**+1.9**
	baz=179						
V48A	**Smith Brothers**	**35.72**	**350**	P	**P**	**16 53 38.2**	**-0.6**
	baz=168,SNR=255						
V48A				S	**S**	**16 59 12.3**	**-1.4**
	baz=168						
U59A	**Littleton**	**35.75**	**3**	IAmb	IAmb	16 53 43.3	
	comp=Z,369nm,1.1s						
U59A	**Littleton**	**35.75**	**3**	P	**P**	**16 53 39.8**	**+0.7**
	baz=183,SNR=54						
U59A				P	**P**	**16 53 39.8**	**+0.7**
	baz=183,SNR=54						
U59A				S	**S**	**16 59 15.4**	**+1.1**
	baz=183						
U59A				S	**S**	**16 59 15.4**	**+1.1**
	baz=183						
U54A	**Nelsons Funny**	**35.93**	**357**	P	**P**	**16 53 40.4**	**-0.3**
U54A	**Nelsons Funny**	**35.93**	**357**	P	**P**	**16 53 40.6**	**-0.1**
	baz=176,SNR=50						
U54A				P	**P**	**16 53 40.6**	**-0.1**
	baz=176,SNR=50						
U54A				S	**S**	**16 59 17.2**	**0.0**
	baz=176						
U54A				S	**S**	**16 59 17.2**	**0.0**
	baz=176						
CLTN	**Cedars of Leba**	**35.98**	**351**	IAmb	IAmb	16 53 44.0	
	comp=Z,479nm,1.0s						
X40A	**Basin Creek Fa**	**36.01**	**341**	P	**P**	**16 53 40.1**	**-1.2**
	baz=157,SNR=16						
X40A				P	**P**	**16 53 40.1**	**-1.2**
	baz=157,SNR=16						
X40A				S	**S**	**16 59 16.8**	**-1.4**
	baz=157						
X40A				S	**S**	**16 59 16.8**	**-1.4**
	baz=157						
X40A	**Basin Creek Fa**	**36.01**	**341**	P	**P**	**16 53 40.4**	**-0.8**
	baz=157,SNR=16						
X40A				S	**S**	**16 59 16.6**	**-1.7**
	baz=157						
GO05	**Huala**	**36.03**	**169**	IAmb	IAmb	16 53 59.6	
	comp=Z,537nm,1.1s						
TZTN	**Tazewell**	**36.08**	**355**	IAmb	IAmb	16 53 45.2	
	comp=Z,632nm,0.9s						
TZTN				IAMs_20	IAMs_20	17 10 49.2	
	comp=Z,82μm,21.0s						
TZTN	**Tazewell**	**36.08**	**355**	P	**P**	**16 53 41.6**	**-0.2**
	baz=173,SNR=122						
TZTN				S	**S**	**16 59 19.0**	**-0.3**
	baz=173						
TZTN	**Tazewell**	**36.08**	**355**	P	**P**	**16 53 41.1**	**-0.7**
	baz=173,SNR=122						
TZTN				S	**S**	**16 59 18.9**	**-0.3**
	baz=173						
HPIG		**36.26**	**319**	IAmb	IAmb	16 53 54.6	
	comp=Z,600nm,1.7s						
HPIG		**36.26**	**319**	⇓P	**P**	**16 53 43.7**	**-0.1**
WVT	**Waverly**	**36.28**	**349**	P	**P**	**16 53 41.2**	**-2.4**
WVT	**Waverly**	**36.28**	**349**	P	**P**	**16 53 41.2**	**-2.4**
WVT				pmax	pmax		
	comp=Z,180nm,0.8s						
WVT	**Waverly**	**36.28**	**349**	P	**P**	**16 53 42.0**	**-1.6**
	baz=166,SNR=126						
WVT				S	**S**	**16 59 18.9**	**-3.4**
	baz=166						
WVT	**Waverly**	**36.28**	**349**	P	**P**	**16 53 42.2**	**-1.4**
	baz=166						
WVT				S	**S**	**16 59 18.7**	**-3.7**
	baz=166						
WVT	**Waverly**	**36.28**	**349**	⇑P	**P**	**16 53 41.6**	**-1.9**
WVT	**Waverly**	**36.28**	**349**	P	**P**	**16 53 42.0**	**-1.6**
MIAR	**Mount Ida**	**36.30**	**340**	P	**P**	**16 53 42.9**	**-0.9**
	baz=156,SNR=39						
MIAR				S	**S**	**16 59 20.9**	**-1.9**
	baz=156						
MIAR	**Mount Ida**	**36.30**	**340**	P	**P**	**16 53 43.2**	**-0.5**
	baz=156,SNR=39						
MIAR				S	**S**	**16 59 21.0**	**-1.7**
	baz=156						
MIAR	**Mount Ida**	**36.30**	**340**	⇑P	**P**	**16 53 43.1**	**-0.7**
U49A	**Red Boiling Sp**	**36.31**	**352**	IAmb	IAmb	16 53 46.7	
	comp=Z,287nm,0.9s						
U49A	**Red Boiling Sp**	**36.31**	**352**	P	**P**	**16 53 43.1**	**-0.7**
	baz=170,SNR=126						
U49A				S	**S**	**16 59 20.7**	**-2.1**
	baz=170						
T57A	**Hurt**	**36.35**	**1**	IAmb	IAmb	16 53 48.0	
	comp=Z,324nm,0.9s						
T57A	**Hurt**	**36.35**	**1**	P	**P**	**16 53 44.4**	**+0.1**
	baz=181,SNR=60						
T57A				P	**P**	**16 53 44.4**	**+0.1**
	baz=181,SNR=60						
T57A				S	**S**	**16 59 23.9**	**+0.3**
	baz=181						
T57A				S	**S**	**16 59 23.9**	**+0.3**
	baz=181						
HBAR	**Harrisburg**	**36.37**	**345**	P	**P**	**16 53 43.8**	**-0.5**
	baz=161						

HBAR				S	S	16 59 21.5	-2.2
	baz=161						
T59A	**Double "B" Far**	36.38	3	IAmb	IAmb	16 53 48.6	
	comp=Z,337nm,1.1s						
T59A	**Double "B" Far**	36.38	3	P	P	16 53 45.2	+0.8
	baz=184,SNR=56						
T59A				P	P	16 53 45.2	+0.8
	baz=184,SNR=56						
T59A				S	S	16 59 25.6	+1.7
	baz=184						
T59A				S	S	16 59 25.6	+1.7
	baz=184						
HALT	**Halls**	36.39	347	IAmb	IAmb	16 53 48.2	
	comp=Z,583nm,1.2s						
W41B	**Gary Mavity, V**	36.46	343	P	P	16 53 44.5	-0.6
	baz=158,SNR=59						
W41B				S	S	16 59 24.0	-1.1
	baz=158						
W41B	**Gary Mavity, V**	36.46	343	P	P	16 53 44.5	-0.6
	baz=158,SNR=59						
W41B				S	S	16 59 22.7	-2.4
	baz=158						
BLA	**Blacksburg**	36.57	359	IAMs_20	IAMs_20	17 11 01.1	
	comp=Z,78µm,21.0s						
BLA	**Blacksburg**	36.57	359	P	P	16 53 46.8	+0.6
	baz=179,SNR=39						
BLA				S	S	16 59 28.0	+1.1
	baz=179						
BLA	**Blacksburg**	36.57	359	P	P	16 53 46.7	+0.6
	baz=179,SNR=39						
BLA				S	S	16 59 28.4	+1.4
	baz=179						
WHAR	**Wooly Hollow**	36.58	343	IAmb	IAmb	16 53 58.5	
	comp=Z,1µm,1.8s						
GNAR	**Gosnell**	36.60	346	IAmb	IAmb	16 53 49.7	
	comp=Z,1µm,1.4s						
T60A	**Surry**	36.60	4	P	P	16 53 46.9	+0.6
T60A				IAmb	IAmb	16 53 51.0	
	comp=Z,614nm,0.9s						
T60A	**Surry**	36.60	4	P	P	16 53 46.8	+0.6
	baz=185,SNR=17						
T60A				P	P	16 53 46.8	+0.6
	baz=185,SNR=17						
T60A				S	S	16 59 29.4	+2.3
	baz=185						
T60A				S	S	16 59 29.4	+2.3
	baz=185						
RFA	**San Rafael**	36.60	164	*i* P	P	16 53 48.0	+1.6
LNXT	**Lenox**	36.60	347	IAmb	IAmb	16 53 52.3	
	comp=Z,442nm,1.1s						
LNXT	**Lenox**	36.60	347	P	P	16 53 45.8	-0.6
	baz=163						
LNXT				S	S	16 59 23.7	-3.6
	baz=163						
Z35A	**Perchaven, San**	36.62	335	IAmb	IAmb	16 54 01.1	
	comp=Z,618nm,1.2s						
Z35A	**Perchaven, San**	36.62	335	P	P	16 53 46.9	+0.4
	baz=150,SNR=26						
Z35A				S	S	16 59 28.1	+0.5
	baz=150						
T50A	**Nancy**	36.68	353	IAmb	IAmb	16 53 50.8	
	comp=Z,632nm,1.8s						
T50A	**Nancy**	36.68	353	P	P	16 53 45.9	-1.2
	baz=171						
T50A				P	P	16 53 45.9	-1.2
	baz=171						
T50A				S	S	16 59 25.9	-2.6
	baz=171						
T50A				S	S	16 59 25.9	-2.6
	baz=171						
TX32	**Lajitas Array**	36.69	324	P	P	16 53 48.1	+0.8
TXAR	**Lajitas Array**	36.69	324	P	P	16 53 48.4	+1.0
	comp=Z,50nm,1.1s,baz=152,slow=7.7,SNR=52						
TXAR				PcP	PcP	16 56 10.3	+0.5
	comp=Z,110nm,0.9s,baz=153,slow=6.1,SNR=19						
	comp=Z,50nm,1.1s						
TXAR	**Lajitas Array**	36.69	324	P	P	16 53 48.0	+0.6
TXAR					PcP	16 56 09.4	-0.4
TX31	**Lajitas Ar. Si**	36.69	324	P	P	16 53 49.1	+1.8
	baz=137,SNR=26						
TX31				S	S	16 59 32.2	+3.1
	baz=137						
ML02	**Panimavida**	36.86	169	IAmb	IAmb	16 54 04.4	
	comp=Z,592nm,0.9s						
W39A	**Magazine**	36.96	341	IAmb	IAmb	16 54 02.5	
	comp=Z,2µm,1.9s						
W39A	**Magazine**	36.96	341	P	P	16 53 49.6	+0.2
	baz=156,SNR=51						
W39A				S	S	16 59 32.1	-0.7
	baz=156						
W39A	**Magazine**	36.96	341	P	P	16 53 49.1	-0.3
	baz=156,SNR=51						
W39A				S	S	16 59 31.9	-1.0
	baz=156						
X37A	**Clayton**	36.97	338	IAmb	IAmb	16 54 02.7	
	comp=Z,763nm,1.6s						
X37A	**Clayton**	36.97	338	P	P	16 53 49.7	+0.2
	baz=153,SNR=29						
X37A				S	S	16 59 31.4	-1.6
	baz=153						
T47A	**Sharon Grove**	36.98	350	P	P	16 53 48.5	-1.0
	baz=168,SNR=86						
T47A				S	S	16 59 29.8	-3.3
	baz=168						
LCAR	**Lake Charles**	36.99	345	IAmb	IAmb	16 53 52.2	
	comp=Z,601nm,1.0s						
LCAR	**Lake Charles**	36.99	345	P	P	16 53 48.7	-0.9
	baz=161						
LCAR				S	S	16 59 31.1	-2.1
	baz=161						
FCAR	**Ozark Folk Cen**	37.09	343	IAmb	IAmb	16 54 02.5	
	comp=Z,764nm,1.7s						
ABTX	**Abilene, Hawle**	37.10	332	P	P	16 53 51.1	+0.5
	baz=146,SNR=31						
ABTX				S	S	16 59 34.2	-0.8
	baz=146						
ABTX	**Abilene, Hawle**	37.10	332	P	P	16 53 51.1	+0.5
	baz=146,SNR=31						
ABTX				S	S	16 59 35.4	+0.3
	baz=146						
S57A	**Dark Hollow, R**	37.12	1	P	P	16 53 50.8	+0.1
	baz=181,SNR=37						
S57A				P	P	16 53 50.8	+0.1
	baz=181,SNR=37						
S57A				S	S	16 59 36.2	+1.0
	baz=181						
S57A				S	S	16 59 36.2	+1.0
	baz=181						
S51A	**Beattyville**	37.16	355	IAmb	IAmb	16 53 54.3	
	comp=Z,610nm,0.9s						
S51A	**Beattyville**	37.16	355	P	P	16 53 50.4	-0.7
	baz=173,SNR=172						
S51A				P	P	16 53 50.4	-0.7
	baz=173,SNR=172						
S51A				S	S	16 59 35.1	-0.7
	baz=173						
S51A				S	S	16 59 35.1	-0.7
	baz=173						
S54A	**Dingess, Beckl**	37.18	358	P	P	16 53 51.0	-0.3
	baz=177,SNR=48						
S54A				P	P	16 53 51.0	-0.3
	baz=177,SNR=48						
S54A				S	S	16 59 36.8	+0.6
	baz=177						
S54A				S	S	16 59 36.8	+0.6
	baz=177						
ITQB	**Itaqui**	37.19	146	P	P	16 53 48.9	-2.5
S61A	**Accomac**	37.22	5	P	P	16 53 52.0	+0.5
	baz=186						
S61A				P	P	16 53 52.0	+0.5
	baz=186						
S61A				S	S	16 59 41.3	+4.7
	baz=186						
S61A				S	S	16 59 41.3	+4.7
	baz=186						
T45B	**Paducah**	37.30	348	P	P	16 53 50.7	-1.5
	baz=165,SNR=36						
T45B				S	S	16 59 34.2	-3.6
	baz=165						
EDS3	**Malargue**	37.31	166	*i* P	P	16 53 54.0	+1.4
SLBS	**Sierra La Lagu**	37.32	310	P	P	16 53 53.2	+0.4
SLBS	**Sierra La Lagu**	37.32	310	⇓P	P	16 53 54.0	+1.3
SLBS	**Sierra La Lagu**	37.32	310	P	P	16 53 56.6	+3.9
SLBS				pP	sP	16 54 04.6	-0.9
SLBS				sP	pP	16 54 08.7	+7.0
R58B	**Mineral**	37.35	2	P	P	16 53 53.5	+0.8
	baz=183,SNR=56						
R58B				P	P	16 53 53.5	+0.8
	baz=183,SNR=56						
R58B				S	S	16 59 41.0	+2.3
	baz=183						
R58B				S	S	16 59 41.0	+2.3
	baz=183						
PBMO	**Poplar Bluff**	37.47	346	P	P	16 53 52.8	-0.9
	baz=162,SNR=29						
PBMO				S	S	16 59 38.3	-2.3
	baz=162						
BI05	**Punta Hualpn**	37.52	171	IAmb	IAmb	16 54 08.3	
	comp=Z,526nm,1.2s						
CBN	**Corbin Frederi**	37.62	3	IAmb	IAmb	16 53 59.3	
	comp=Z,540nm,1.1s						
CBN	**Corbin Frederi**	37.62	3	P	P	16 53 55.6	+0.6
	baz=184,SNR=8.1						
CBN				S	S	16 59 45.8	+3.1
	baz=184						
CBN	**Corbin Frederi**	37.62	3	P	P	16 53 55.4	+0.5
	baz=184,SNR=8.1						
CBN				S	S	16 59 44.4	+1.7
	baz=184						
R55A	**Marlinton**	37.64	359	P	P	16 53 55.2	0.0
R55A	**Marlinton**	37.64	359	P	P	16 53 55.7	+0.5
	baz=179,SNR=59						
R55A				P	P	16 53 55.7	+0.5
	baz=179,SNR=59						
R55A				S	S	16 59 43.9	+0.8
	baz=179						
R55A				S	S	16 59 43.9	+0.8
	baz=179						
U40A	**Yellville**	37.74	343	IAmb	IAmb	16 53 58.9	
	comp=Z,570nm,1.2s						
U40A	**Yellville**	37.74	343	P	P	16 53 55.6	-0.4
	baz=158,SNR=199						
U40A				P	P	16 53 55.6	-0.4
	baz=158,SNR=199						
U40A				S	S	16 59 43.3	-1.3
	baz=158						
U40A				S	S	16 59 43.3	-1.3
	baz=158						
U40A	**Yellville**	37.74	343	P	P	16 53 55.4	-0.6
	baz=158,SNR=199						
U40A				S	S	16 59 43.0	-1.6
	baz=158						
R53A	**Hurricane**	37.74	357	IAmb	IAmb	16 53 59.2	
	comp=Z,378nm,0.9s						
R53A	**Hurricane**	37.74	357	P	P	16 53 55.7	-0.3
	baz=176,SNR=56						
R53A				P	P	16 53 55.7	-0.3
	baz=176,SNR=56						
R53A				S	S	16 59 43.5	-1.0
	baz=176						
R53A				S	S	16 59 43.5	-1.0
	baz=176						
LPIG	**La Paz**	37.83	311	LR	LR	17 07 46.9	
	comp=Z,50µm,18.0s,baz=97,slow=33						
R50A	**Paris**	37.87	354	IAmb	IAmb	16 54 00.1	
	comp=Z,421nm,0.9s						
R50A	**Paris**	37.87	354	P	P	16 53 56.4	-0.7
	baz=172,SNR=131						
R50A				P	P	16 53 56.4	-0.7
	baz=172,SNR=131						
R50A				S	S	16 59 46.0	-0.6
	baz=172						
R50A				S	S	16 59 46.0	-0.6
	baz=172						
R61A	**Willards**	37.90	6	P	P	16 53 57.9	+0.7
	baz=187,SNR=6.1						
R61A				P	P	16 53 57.9	+0.7
	baz=187,SNR=6.1						
R61A				S	S	16 59 50.6	+3.7
	baz=187						
R61A				S	S	16 59 50.6	+3.7
	baz=187						
X34A	**Smith Ranch, M**	37.95	335	IAmb	IAmb	16 54 11.3	
	comp=Z,725nm,1.4s						
R49A	**Shelbyville**	37.98	353	IAmb	IAmb	16 54 00.6	
	comp=Z,344nm,0.9s						
R49A	**Shelbyville**	37.98	353	P	P	16 53 56.6	-1.4
	baz=171,SNR=78						
R49A				P	P	16 53 56.6	-1.4
	baz=171,SNR=78						
R49A				S	S	16 59 46.1	-2.1
	baz=171						
R49A				S	S	16 59 46.1	-2.1
	baz=171						
HHAR	**Hobbs**	38.01	341	IAmb	IAmb	16 54 10.7	
	comp=Z,734nm,1.7s						
HHAR	**Hobbs**	38.01	341	P	P	16 53 57.9	-0.4
	baz=156						
HHAR				S	S	16 59 47.1	-1.6
	baz=156						
S44A	**Carbondale**	38.08	348	P	P	16 53 57.4	-1.4
S44A				IAmb	IAmb	16 54 01.3	
	comp=Z,498nm,0.9s						
S44A	**Carbondale**	38.08	348	P	P	16 53 57.6	-1.2
	baz=164,SNR=83						
S44A				S	S	16 59 46.4	-3.3
	baz=164						
SIUC	**Southern Illin**	38.09	348	IAmb	IAmb	16 54 01.4	
	comp=Z,614nm,1.0s						
TUL1	**Leonard**	38.30	339	IAmb	IAmb	16 54 13.3	
	comp=Z,996nm,1.6s						
TUL1	**Leonard**	38.30	339	P	P	16 54 00.4	-0.4
	baz=153,SNR=23						
TUL1				S	S	16 59 52.6	-0.6
	baz=153						
TUL1	**Leonard**	38.30	339	P	P	16 54 00.4	-0.4
	baz=153,SNR=23						
TUL1				S	S	16 59 51.9	-1.3
	baz=153						
MGMO	**Mountain Grove**	38.31	344	IAmb	IAmb	16 54 04.3	
	comp=Z,952nm,1.4s						
Q54A	**Coxs Mills**	38.35	359	P	P	16 54 00.8	-0.3
	baz=178,SNR=64						
Q54A				P	P	16 54 00.8	-0.3
	baz=178,SNR=64						
Q54A				S	S	16 59 53.5	-0.3
	baz=178						
Q54A				S	S	16 59 53.5	-0.3
	baz=178						
Q52A	**Bidwell**	38.38	357	IAmb	IAmb	16 54 04.7	
	comp=Z,578nm,1.1s						
Q52A	**Bidwell**	38.38	357	P	P	16 54 01.1	-0.3
	baz=176,SNR=78						
Q52A				P	P	16 54 01.1	-0.3
	baz=176,SNR=78						
Q52A				S	S	16 59 52.8	-1.5
	baz=176						
Q52A				S	S	16 59 52.8	-1.5
	baz=176						
Q56A	**Snyder Ridge,**	38.40	1	P	P	16 54 02.6	+1.1
	baz=181						
Q56A				P	P	16 54 02.6	+1.1
	baz=181						
Q56A				S	S	16 59 56.9	+2.4
	baz=181						
Q56A				S	S	16 59 56.9	+2.4
	baz=181						
MIDE	**Milford**	38.44	6	P	P	16 54 03.0	+1.1
	baz=187						
MIDE				S	S	16 59 59.3	+4.2
	baz=187						
WMOK	**Wichita Mounta**	38.47	334	P	P	16 54 01.7	-0.5
WMOK				IAmb	IAmb	16 54 15.1	
	comp=Z,707nm,1.6s						
WMOK	**Wichita Mounta**	38.47	334	P	P	16 54 01.7	-0.5
WMOK				pmax	pmax		
	comp=Z,707nm,1.6s						
WMOK	**Wichita Mounta**	38.47	334	P	P	16 54 02.1	-0.1
	baz=148,SNR=99						
WMOK				S	S	16 59 55.5	-0.3
	baz=148						
WMOK	**Wichita Mounta**	38.47	334	P	P	16 54 01.9	-0.4
	baz=148,SNR=99						
WMOK				S	S	16 59 55.2	-0.7
	baz=148						
WMOK	**Wichita Mounta**	38.47	334	⇑P	P	16 54 02.0	-0.3
OKCFA	**Oklahoma City**	38.50	336	P	P	16 54 02.1	-0.4
	baz=151						
OKCFA				S	S	16 59 56.3	+0.1
	baz=151						
Q51A	**Peebles**	38.52	355	IAmb	IAmb	16 54 05.6	
	comp=Z,634nm,1.0s						
Q51A	**Peebles**	38.52	355	P	P	16 54 02.3	-0.3
	baz=174,SNR=159						
Q51A				P	P	16 54 02.3	-0.3
	baz=174,SNR=159						
Q51A				S	S	16 59 55.0	-1.4
	baz=174						
Q51A				S	S	16 59 55.0	-1.4
	baz=174						
FVM	**French Village**	38.62	346	IAmb	IAmb	16 54 06.3	
	comp=Z,644nm,0.9s						
FVM	**French Village**	38.62	346	P	P	16 54 02.1	-1.3
	baz=163,SNR=238						
FVM				S	S	16 59 54.5	-3.4
	baz=163						
OLIL	**Olney**	38.85	350	IAmb	IAmb	16 54 07.5	
	comp=Z,788nm,0.9s						
OLIL	**Olney**	38.85	350	P	P	16 54 04.0	-1.3
	baz=166,SNR=70						
OLIL				S	S	16 59 57.3	-4.1
	baz=166						
P57A	**Homestead Farm**	38.87	2	P	P	16 54 06.0	+0.6
P57A	**Homestead Farm**	38.87	2	P	P	16 54 06.4	+1.0
	baz=182,SNR=38						
P57A				P	P	16 54 06.4	+1.0
	baz=182,SNR=38						
P57A				S	S	17 00 03.7	+2.1
	baz=182						
P57A				S	S	17 00 03.7	+2.1
	baz=182						
P53A	**Whipple**	38.87	358	IAmb	IAmb	16 54 08.9	
	comp=Z,436nm,0.9s						
P53A	**Whipple**	38.87	358	P	P	16 54 05.3	-0.2
	baz=177,SNR=80						
P53A				P	P	16 54 05.3	-0.2
	baz=177,SNR=80						
P53A				S	S	17 00 00.1	-1.5
	baz=177						
P53A				S	S	17 00 00.1	-1.5
	baz=177						
CCM	**Cathedral Cave**	38.89	345	P	P	16 54 03.8	-1.8
CCM				IAmb	IAmb	16 54 07.8	
	comp=Z,480nm,1.0s						
CCM	**Cathedral Cave**	38.89	345	P	P	16 54 03.8	-1.8
CCM				pmax	pmax		
	comp=Z,480nm,1.0s						
CCM	**Cathedral Cave**	38.89	345	P	P	16 54 04.4	-1.2
	baz=161,SNR=276						
CCM				S	S	16 59 57.3	-4.6
	baz=161						
CCM	**Cathedral Cave**	38.89	345	P	P	16 54 04.4	-1.2
	baz=161						
CCM				S	S	16 59 58.2	-3.7
	baz=161						
CCM	**Cathedral Cave**	38.89	345	⇑P	P	16 54 03.7	-1.8
CCM	**Cathedral Cave**	38.89	345	P	P	16 54 04.3	-1.2
CCM				pP	pP	16 54 14.5	-0.2
CCM				x	x	16 56 17.3	
P51A	**Williamsport**	38.95	356	P	P	16 54 05.5	-0.6
	baz=174,SNR=40						
P51A				P	P	16 54 05.5	-0.6
	baz=174,SNR=40						
P51A				S	S	17 00 01.4	-1.5
	baz=174						
P51A				S	S	17 00 01.4	-1.5
	baz=174						
MCWV	**Mont Chateau**	39.01	360	P	P	16 54 06.6	0.0
	baz=180,SNR=24						
MCWV				S	S	17 00 05.6	+1.9
	baz=180						
MCWV	**Mont Chateau**	39.01	360	P	P	16 54 06.4	-0.2
	baz=180,SNR=24						
MCWV				S	S	17 00 04.5	+0.8
	baz=180						
BLO	**Bloomington**	39.02	352	IAmb	IAmb	16 54 08.9	
	comp=Z,400nm,0.8s						
P52A	**Corning**	39.05	357	IAmb	IAmb	16 54 10.4	
	comp=Z,493nm,0.9s						
P52A	**Corning**	39.05	357	P	P	16 54 06.3	-0.7
	baz=176,SNR=73						
P52A				S	S	17 00 03.5	-0.8
	baz=176						
S39A	**Bolivar**	39.11	343	P	P	16 54 06.2	-1.4
	baz=158,SNR=232						
S39A				S	S	17 00 02.2	-3.1
	baz=158						
P49A	**Miami Univ. Ec**	39.15	354	IAmb	IAmb	16 54 09.8	
	comp=Z,444nm,0.9s						
P49A				IAMs_20	IAMs_20	17 09 19.6	
	comp=Z,100µm,21.0s						
P49A	**Miami Univ. Ec**	39.15	354	P	P	16 54 06.2	-1.6
	baz=172,SNR=88						
P49A				S	S	17 00 01.8	-4.1
	baz=172						
P49A	**Miami Univ. Ec**	39.15	354	P	P	16 54 06.3	-1.6
	baz=172,SNR=88						
P49A				S	S	17 00 03.8	-2.1
	baz=172						
P48A	**Milroy**	39.16	353	IAmb	IAmb	16 54 09.7	
	comp=Z,453nm,0.9s						
P48A	**Milroy**	39.16	353	P	P	16 54 06.2	-1.7
	baz=171,SNR=94						
P48A				P	P	16 54 06.2	-1.7
	baz=171,SNR=94						
P48A				S	S	17 00 01.4	-4.7
	baz=171						
P48A				S	S	17 00 01.4	-4.7
	baz=171						
Q44A	**Meyer Farm, Va**	39.19	348	IAmb	IAmb	16 54 10.2	
	comp=Z,835nm,0.9s						
Q44A	**Meyer Farm, Va**	39.19	348	P	P	16 54 06.7	-1.5
	baz=165,SNR=147						
Q44A				S	S	17 00 02.2	-4.4
	baz=165						
SLM	**Saint Louis**	39.20	347	IAmb	IAmb	16 54 10.5	
	comp=Z,493nm,0.9s						
SLM	**Saint Louis**	39.20	347	P	P	16 54 07.1	-1.1
	baz=163,SNR=20						
SLM				S	S	17 00 03.7	-2.9
	baz=163						
P61A	**Hammonton**	39.28	6	IAmb	IAmb	16 54 13.6	
	comp=Z,913nm,1.0s						
P61A	**Hammonton**	39.28	6	P	P	16 54 10.1	+1.2
	baz=188,SNR=9.1						
P61A				P	P	16 54 10.1	+1.2
	baz=188,SNR=9.1						
P61A				S	S	17 00 09.9	+2.1
	baz=188						
P61A				S	S	17 00 09.9	+2.1
	baz=188						
GEDE	**Greenville**	39.34	5	P	P	16 54 10.2	+0.9
	baz=186,SNR=23						
GEDE				S	S	17 00 11.1	+2.5
	baz=186						
R40A	**Maddies Statio**	39.37	344	P	P	16 54 08.5	-1.2
	baz=160,SNR=145						
R40A				S	S	17 00 05.9	-3.3
	baz=160						
MNTX	**Cornudas Mount**	39.42	324	IAmb	IAmb	16 54 20.9	
	comp=Z,1µm,1.4s						
MNTX	**Cornudas Mount**	39.42	324	P	P	16 54 10.3	0.0
	baz=137,SNR=230						
MNTX				S	S	17 00 13.5	+3.3
	baz=137						
MNTX	**Cornudas Mount**	39.42	324	P	P	16 54 10.1	-0.1
	baz=137,SNR=230						
MNTX				S	S	17 00 13.2	+2.9
	baz=137						
SPB	**Sao Paulo**	39.43	130	P	P	16 54 09.2	-1.2
SPB				x	x	16 54 18.1	
SPB				pP	pP	16 54 20.3	+0.9
SPB				PP	PnPn	16 55 44.9	+0.6
SPB				S	S	17 00 07.5	-3.0
T35A	**Sooner Cattle**	39.46	339	IAmb	IAmb	16 54 23.2	
	comp=Z,1µm,1.6s						
T35B	**Sooner Cattle**	39.46	339	P	P	16 54 10.3	-0.2
	baz=153,SNR=36						
T35B				S	S	17 00 09.7	-1.0
	baz=153						
MVL	**Millersville**	39.47	4	IAmb	IAmb	16 54 15.1	
	comp=Z,556nm,1.0s						
O52A	**Adamsville**	39.51	357	IAmb	IAmb	16 54 13.8	
	comp=Z,414nm,0.9s						
O52A	**Adamsville**	39.51	357	P	P	16 54 10.1	-0.8
	baz=176,SNR=72						
O52A				P	P	16 54 10.1	-0.8
	baz=176,SNR=72						
O52A				S	S	17 00 09.4	-1.9
	baz=176						
O52A				S	S	17 00 09.4	-1.9
	baz=176						
O54A	**Avella**	39.54	359	P	P	16 54 10.9	-0.2
	baz=179,SNR=102						

O54A				P	P	16 54 10.9	-0.2
	baz=179,SNR=102						
O54A				S	S	17 00 11.3	-0.3
	baz=179						
O54A				S	S	17 00 11.3	-0.3
	baz=179						
RPN	Rapa Nui	39.55	224	P	P	16 54 12.1	+0.8
	comp=Z,55nm,1.0s,baz=350,slow=6.8,SNR=2.3						
RPN				LR	LR	17 06 17.7	
	comp=Z,245µm,19.3s,baz=52,slow=30						
	comp=Z,55nm,1.0s						
RPN	Rapa Nui	39.55	224	P	P	16 54 20.8	+10
RPN				x	x	16 54 24.7	
P46A	Rosedale	39.56	351	P	P	16 54 09.8	-1.5
	baz=168,SNR=53						
P46A				S	S	17 00 05.8	-6.3
	baz=168						
O53A	New Philadelph	39.62	358	P	P	16 54 11.3	-0.4
O53A				IAmb	IAmb	16 54 15.5	
	comp=Z,573nm,1.0s						
O53A				IAMs_20	IAMs_20	17 12 45.9	
	comp=Z,68µm,21.0s						
O53A	New Philadelph	39.62	358	P	P	16 54 11.1	-0.7
	baz=178,SNR=103						
O53A				S	S	17 00 10.9	-2.0
	baz=178						
VA02	Isla de Pascua	39.64	224	*e*P	P	16 54 10.1	-1.9
VA02				*e*S	S	17 00 03.3	-10
VA02				IAMs_20	IAMs_20	17 04 02.1	
	comp=N,153µm,19.7s						
PAGS	Pennsylvania G	39.67	4	IAmb	IAmb	16 54 16.5	
	comp=Z,572nm,1.0s						
ACSO	Alum Creek Sta	39.69	356	IAmb	IAmb	16 54 15.6	
	comp=Z,581nm,0.9s						
ACSO	Alum Creek Sta	39.69	356	P	P	16 54 11.6	-0.8
	baz=175,SNR=115						
ACSO				S	S	17 00 10.6	-3.4
	baz=175						
ACSO	Alum Creek Sta	39.69	356	P	P	16 54 11.0	-1.4
	baz=175,SNR=115						
ACSO				S	S	17 00 11.2	-2.8
	baz=175						
MSTX	Muleshoe	39.73	329	P	P	16 54 13.6	+0.8
	baz=142,SNR=186						
MSTX				S	S	17 00 16.4	+1.5
	baz=142						
MSTX	Muleshoe	39.73	329	P	P	16 54 12.4	-0.5
	baz=142,SNR=186						
MSTX				S	S	17 00 16.9	+2.0
	baz=142						
TUPA	Temple Univers	39.73	5	P	P	16 54 13.3	+0.7
	baz=187						
TUPA				S	S	17 00 17.2	+2.7
	baz=187						
O49A	Covington	39.76	354	P	P	16 54 11.2	-1.7
O49A	Covington	39.76	354	P	P	16 54 11.4	-1.5
	baz=173,SNR=61						
O49A				P	P	16 54 11.4	-1.5
	baz=173,SNR=61						
O49A				S	S	17 00 10.2	-4.8
	baz=173						
O49A				S	S	17 00 10.2	-4.8
	baz=173						
AMTX	Amarillo	39.92	331	P	P	16 54 14.9	+0.5
AMTX				IAmb	IAmb	16 54 28.7	
	comp=Z,1µm,1.4s						
AMTX	Amarillo	39.92	331	P	P	16 54 14.5	+0.1
	baz=144,SNR=76						
AMTX				S	S	17 00 17.0	-0.7
	baz=144						
AMTX	Amarillo	39.92	331	P	P	16 54 14.6	+0.2
	baz=144						
AMTX				S	S	17 00 18.2	+0.5
	baz=144						
O48B	Farmland	39.92	354	P	P	16 54 12.6	-1.6
	baz=171,SNR=165						
O48B				S	S	17 00 13.2	-4.1
	baz=171						
O48B	Farmland	39.92	354	P	P	16 54 12.5	-1.7
	baz=171,SNR=165						
O48B				S	S	17 00 13.7	-3.7
	baz=171						
U32A	Winter Ranch,	39.97	335	P	P	16 54 14.9	+0.2
	baz=149,SNR=35						
U32A				S	S	17 00 15.1	-3.1
	baz=149						
PANJ	Princeton	39.99	6	P	P	16 54 15.9	+1.1
	baz=188,SNR=47						
PANJ				S	S	17 00 21.9	+3.5
	baz=188						
P43A	Skaggs, Pawnee	40.01	348	IAmb	IAmb	16 54 17.1	
	comp=Z,619nm,0.9s						
P43A	Skaggs, Pawnee	40.01	348	P	P	16 54 13.6	-1.3
	baz=164,SNR=98						
P43A				S	S	17 00 14.5	-4.2
	baz=164						
SSPA	Standing Stone	40.02	2	P	P	16 54 15.0	0.0
SSPA	Standing Stone	40.02	2	P	P	16 54 15.4	+0.4
	baz=183,SNR=150						
SSPA				S	S	17 00 21.4	+2.5
	baz=183						
SSPA	Standing Stone	40.02	2	P	P	16 54 15.4	+0.4
	baz=183						
SSPA				S	S	17 00 20.0	+1.2
	baz=183						
SSPA	Standing Stone	40.02	2	⇓P	P	16 54 15.2	+0.2
SSPA	Standing Stone	40.02	2	P	P	16 54 15.1	0.0
SSPA				x	x	16 54 25.6	
EPT	El Paso	40.14	323	IAMs_20	IAMs_20	17 10 22.6	
	comp=Z,60µm,18.0s						
KIDD	KIDD Seismic O	40.14	323	P	P	16 54 18.2	+1.9
	baz=136						
KIDD				S	S	17 00 21.0	-0.2
	baz=136						
LUPA	Lehigh Univers	40.14	5	P	P	16 54 16.4	+0.3
LUPA				IAmb	IAmb	16 54 20.9	
	comp=Z,532nm,1.0s						
N53A	Lisbon	40.17	359	P	P	16 54 15.6	-0.7
	baz=178,SNR=53						
N53A				P	P	16 54 15.6	-0.7
	baz=178,SNR=53						
N53A				S	S	17 00 17.8	-3.3
	baz=178						
N53A				S	S	17 00 17.8	-3.3
	baz=178						
N58A	Sunbury	40.28	4	P	P	16 54 17.5	+0.3
N58A	Sunbury	40.28	4	P	P	16 54 17.8	+0.6
	baz=184,SNR=98						
N58A				P	P	16 54 17.8	+0.6
	baz=184,SNR=98						
N58A				S	S	17 00 23.3	+0.6
	baz=184						
N58A				S	S	17 00 23.3	+0.6
	baz=184						
SFIN	Lafayette	40.29	351	P	P	16 54 15.3	-2.0
	baz=168,SNR=43						
SFIN				S	S	17 00 13.1	-10
	baz=168						
SFIN	Lafayette	40.29	351	P	P	16 54 15.3	-2.0
	baz=168,SNR=43						
SFIN				S	S	17 00 16.8	-6.2
	baz=168						
O44A	Mansfield	40.30	350	P	P	16 54 15.4	-2.0
O44A				IAmb	IAmb	16 54 19.1	
	comp=Z,409nm,0.9s						
O44A	Mansfield	40.30	350	P	P	16 54 15.6	-1.7
	baz=166,SNR=35						
O44A				S	S	17 00 17.2	-5.9
	baz=166						
BRNJ	Basking Ridge	40.30	6	P	P	16 54 18.1	+0.7
	baz=188,SNR=15						
BRNJ				S	S	17 00 25.5	+2.4
	baz=188						
N51A	Ashland	40.34	357	IAmb	IAmb	16 54 20.2	
	comp=Z,512nm,0.9s						
N51A	Ashland	40.34	357	P	P	16 54 16.9	-0.8
	baz=176,SNR=50						
N51A				P	P	16 54 16.9	-0.8
	baz=176,SNR=50						
N51A				S	S	17 00 21.3	-2.3
	baz=176						
N51A				S	S	17 00 21.3	-2.3
	baz=176						
N49A	Columbus Grove	40.48	355	P	P	16 54 17.6	-1.2
	baz=173,SNR=36						
N49A				P	P	16 54 17.6	-1.2
	baz=173,SNR=36						
N49A				S	S	17 00 21.7	-4.0
	baz=173						
N49A				S	S	17 00 21.7	-4.0
	baz=173						
PLTB	Pedras Altas	40.48	145	P	P	16 54 18.2	-0.9
PLTB				IAmb	IAmb	16 54 33.4	
	comp=Z,528nm,1.1s						
P40A	Paris	40.48	345	P	P	16 54 17.5	-1.4
	baz=161,SNR=75						
P40A				S	S	17 00 20.5	-5.3
	baz=161						
FOR	Fordham	40.56	7	P	P	16 54 20.0	+0.6
	baz=189,SNR=12						
FOR				S	S	17 00 28.8	+2.0
	baz=189						
N47A	Urbana	40.59	353	IAmb	IAmb	16 54 21.4	
	comp=Z,464nm,0.9s						
N47A	Urbana	40.59	353	P	P	16 54 18.0	-1.8
	baz=171						
N47A				P	P	16 54 18.0	-1.8
	baz=171						
N47A				S	S	17 00 21.4	-6.0
	baz=171						
N47A				S	S	17 00 21.4	-6.0
	baz=171						
LPA	La Plata	40.66	152	*i* P	P	16 54 15.5	-4.9
LPA				pP	pP	16 54 28.6	-0.9
LPA				sP	sP	16 54 37.4	+4.2
LPA				PP	PP	16 55 54.0	-0.5
LPA				pPP		16 56 07.0	
LPA				PCP	PcP	16 56 21.4	-0.5
LPA				S	S	17 00 19.9	-8.7
LPA				PS	S	17 00 30.4	+1.8
LPA				sS	pS	17 00 37.2	-1.8
LPA				PPS	PPS	17 00 49.7	
LPA				PKIKP	PKiKP	17 03 30.2	-1.1
LPA				SSS	SSS	17 03 51.4	
LPA				SCS	ScS	17 04 23.3	-0.7
LPA				SKIKP		17 07 06.2	
LPA				PKIKS		17 07 10.3	
LPA				SKIKS		17 10 25.3	
N62A	Caumsett State	40.68	7	P	P	16 54 21.0	+0.6
	baz=189,SNR=8.0						
N62A				P	P	16 54 21.0	+0.6
	baz=189,SNR=8.0						
N62A				S	S	17 00 32.1	+3.5
	baz=189						
N62A				S	S	17 00 32.1	+3.5
	baz=189						
ODNJ	Ogdensburg	40.70	6	P	P	16 54 21.4	+0.8
	baz=188,SNR=21						
ODNJ				S	S	17 00 31.8	+2.9
	baz=188						
PAL	Palisades	40.70	7	P	P	16 54 20.9	+0.2
	baz=189,SNR=28						
PAL				S	S	17 00 30.8	+1.8
	baz=189						
PAL	Palisades	40.70	7	P	P	16 54 19.2	-1.4
	baz=189,SNR=28						
PAL				S	S	17 00 31.4	+2.5
	baz=189						
M57A	Sunshine Farm,	40.75	3	IAmb	IAmb	16 54 25.5	
	comp=Z,575nm,0.8s						
M57A	Sunshine Farm,	40.75	3	P	P	16 54 21.5	+0.4
	baz=184,SNR=176						
M57A				P	P	16 54 21.5	+0.4
	baz=184,SNR=176						
M57A				S	S	17 00 30.0	+0.2
	baz=184						
M57A				S	S	17 00 30.0	+0.2
	baz=184						
M53A	WI Miller and	40.80	359	IAMs_20	IAMs_20	17 13 40.0	
	comp=Z,65µm,20.0s						
M53A	WI Miller and	40.80	359	P	P	16 54 20.7	-0.7
	baz=178,SNR=51						
M53A				S	S	17 00 29.4	-1.1
	baz=178						
TRNY	Table Rock, Ra	40.80	6	P	P	16 54 21.8	+0.3
M55A	Ridgway	40.83	1	P	P	16 54 21.3	-0.4
	baz=181,SNR=50						
M55A				P	P	16 54 21.3	-0.4
	baz=181,SNR=50						
M55A				S	S	17 00 30.1	-0.8
	baz=181						
M55A				S	S	17 00 30.1	-0.8
	baz=181						
HDIL	Hopedale	40.84	349	IAmb	IAmb	16 54 23.4	
	comp=Z,622nm,0.8s						
HDIL	Hopedale	40.84	349	P	P	16 54 19.9	-2.0
	baz=165,SNR=49						
HDIL				S	S	17 00 26.0	-5.2
	baz=165						
HDIL	Hopedale	40.84	349	P	P	16 54 20.1	-1.8
	baz=165,SNR=49						
HDIL				S	S	17 00 25.2	-6.0
	baz=165						
M50A	Fremont	40.86	356	IAmb	IAmb	16 54 25.0	
	comp=Z,675nm,0.8s						
M50A	Fremont	40.86	356	P	P	16 54 21.1	-0.9
	baz=175,SNR=75						
M50A				P	P	16 54 21.1	-0.9
	baz=175,SNR=75						
M50A				S	S	17 00 28.7	-2.7
	baz=175						
M50A				S	S	17 00 28.7	-2.7
	baz=175						
M52A	Chesterland	40.92	358	P	P	16 54 21.1	-1.4
M52A	Chesterland	40.92	358	P	P	16 54 21.6	-0.8
	baz=177,SNR=16						
M52A				P	P	16 54 21.6	-0.8
	baz=177,SNR=16						
M52A				S	S	17 00 28.9	-3.4
	baz=177						
M52A				S	S	17 00 28.9	-3.4
	baz=177						
P38A	Dawn	40.97	344	P	P	16 54 21.4	-1.5
	baz=159,SNR=28						
P38A				S	S	17 00 29.3	-3.7
	baz=159						
ALLY	Alegheny Colle	41.00	360	IAmb	IAmb	16 54 26.1	
	comp=Z,439nm,0.9s						
ALLY	Alegheny Colle	41.00	360	P	P	16 54 22.7	-0.4
	baz=179,SNR=37						
ALLY				S	S	17 00 31.1	-2.4
	baz=179						
KSPA	Keystone Colle	41.06	5	IAmb	IAmb	16 54 28.1	
	comp=Z,610nm,1.1s						
KSPA	Keystone Colle	41.06	5	P	P	16 54 24.4	+0.8
	baz=186,SNR=151						
KSPA				S	S	17 00 34.8	+0.4
	baz=186						
SRIG	Santa Rosalia	41.08	313	P	P	16 54 24.9	+0.9
SRIG				IAmb	IAmb	16 54 37.6	
	comp=Z,746nm,1.5s						
SRIG	Santa Rosalia	41.08	313	⇓P	P	16 54 25.3	+1.3
BRNY	Black Rk. Fore	41.09	7	P	P	16 54 25.0	+1.2
	baz=188,SNR=47						
BRNY				S	S	17 00 37.3	+2.5
	baz=188						
HSIG		41.17	316	⇓P	P	16 54 25.3	+0.6
N41A	Harden Midland	41.32	347	P	P	16 54 24.1	-1.6
	baz=163,SNR=37						
N41A				S	S	17 00 33.7	-4.5
	baz=163						
M63A	Gales Ferry	41.34	9	IAmb	IAmb	16 54 30.8	
	comp=Z,537nm,0.9s						
M63A	Gales Ferry	41.34	9	P	P	16 54 26.8	+0.9
	baz=192,SNR=66						
M63A				P	P	16 54 26.8	+0.9
	baz=192,SNR=66						
M63A				S	S	17 00 41.4	+2.9
	baz=192						
M63A				S	S	17 00 41.4	+2.9
	baz=192						
NPNY	Mohonk Preserv	41.41	6	P	P	16 54 27.4	+0.9
	baz=188						
NPNY				S	S	17 00 41.5	+1.9
	baz=188						
M44A	Midewin, Midew	41.43	351	P	P	16 54 24.4	-2.2
	baz=167,SNR=24						
M44A				S	S	17 00 32.3	-7.5
	baz=167						
121A	Cookes Peak, D	41.44	323	P	P	16 54 28.6	+1.5
121A	Cookes Peak, D	41.44	323	P	P	16 54 29.1	+2.0
	baz=135,SNR=131						
121A				S	S	17 00 45.7	+5.0
	baz=135						
121A	Cookes Peak, D	41.44	323	P	P	16 54 25.8	-1.4
	baz=135,SNR=131						
121A				S	S	17 00 41.2	+0.5
	baz=135						
KSU1	Kansas State U	41.45	340	IAmb	IAmb	16 54 29.8	
	comp=Z,458nm,0.9s						
KSU1	Kansas State U	41.45	340	P	P	16 54 26.6	-0.3
	baz=154,SNR=68						
KSU1				S	S	17 00 37.8	-2.4
	baz=154						
KSU1	Kansas State U	41.45	340	P	P	16 54 26.3	-0.6
	baz=154,SNR=68						
KSU1				S	S	17 00 39.2	-1.1
	baz=154						
KSU1	Kansas State U	41.45	340	⇑P	P	16 54 26.5	-0.3
ERPA	Erie	41.47	360	IAMs_20	IAMs_20	17 12 22.6	
	comp=Z,65µm,22.0s						
ERPA	Erie	41.47	360	P	P	16 54 26.3	-0.6
	baz=179,SNR=30						
ERPA				S	S	17 00 38.5	-1.9
	baz=179						
ERPA	Erie	41.47	360	P	P	16 54 26.4	-0.5
	baz=179,SNR=30						
ERPA				S	S	17 00 38.5	-1.9
	baz=179						
L48A	N Adams	41.51	355	P	P	16 54 26.1	-1.2
	baz=173,SNR=43						
L48A				P	P	16 54 26.1	-1.2
	baz=173,SNR=43						
L48A				S	S	17 00 36.3	-4.8
	baz=173						
L48A				S	S	17 00 36.3	-4.8
	baz=173						
L56A	Greenwood	41.53	2	P	P	16 54 27.8	+0.2
	baz=183,SNR=104						
L56A				P	P	16 54 27.8	+0.2
	baz=183,SNR=104						
L56A				S	S	17 00 41.2	-0.2
	baz=183						
L56A				S	S	17 00 41.2	-0.2
	baz=183						
319A	Douglas	41.58	321	IAmb	IAmb	16 54 39.6	
	comp=Z,2µm,1.6s						
R32A	Long Quarter,	41.61	337	IAmb	IAmb	16 54 42.5	
	comp=Z,835nm,1.1s						
R32A	Long Quarter,	41.61	337	P	P	16 54 29.0	+0.7
	baz=151,SNR=69						
R32A				S	S	17 00 43.5	+0.7
	baz=151						
TRQA	Tornquist	41.67	159	IAMs_20	IAMs_20	17 11 32.8	
	comp=Z,144µm,21.0s						
BINY	Binghamton	41.68	4	IAmb	IAmb	16 54 33.0	
	comp=Z,569nm,1.0s						
BINY	Binghamton	41.68	4	P	P	16 54 29.1	+0.4
	baz=185,SNR=118						
BINY				S	S	17 00 45.0	+1.4
	baz=185						
BINY	Binghamton	41.68	4	P	P	16 54 28.9	+0.2
	baz=185,SNR=118						
BINY				S	S	17 00 45.1	+1.4
	baz=185						
LL04	Puerto Octay	41.71	172	IAmb	IAmb	16 54 43.7	
	comp=Z,961nm,1.1s						
M65A	Busby, Falmout	41.72	10	P	P	16 54 29.9	+0.8
	baz=194						
M65A				S	S	17 00 46.0	+1.8
	baz=194						
L59A	Walton	41.75	5	P	P	16 54 29.8	+0.4
L59A				IAmb	IAmb	16 54 42.0	
	comp=Z,1µm,1.9s						
L59A	Walton	41.75	5	P	P	16 54 30.0	+0.7
	baz=187,SNR=63						
L59A				P	P	16 54 30.0	+0.7
	baz=187,SNR=63						
L59A				S	S	17 00 45.3	+0.6
	baz=187						
L59A				S	S	17 00 45.3	+0.6
	baz=187						
WVNY	West Valley, N	41.77	1	P	P	16 54 29.1	-0.4
	baz=182,SNR=55						
WVNY				S	S	17 00 45.0	+0.1
	baz=182						
L46A	Eue Claire	41.78	353	P	P	16 54 28.6	-0.9
	baz=170,SNR=11						
L46A				P	P	16 54 28.6	-0.9
	baz=170,SNR=11						
L46A				S	S	17 00 38.3	-6.8
	baz=170						
L46A				S	S	17 00 38.3	-6.8
	baz=170						
AAM	Ann Arbor	41.80	356	IAMs_20	IAMs_20	17 10 29.6	
	comp=Z,74µm,22.0s						
AAM	Ann Arbor	41.80	356	P	P	16 54 28.6	-1.1
	baz=174,SNR=7.8						
AAM				S	S	17 00 42.2	-3.1
	baz=174						
AAM	Ann Arbor	41.80	356	P	P	16 54 28.6	-1.1
	baz=174,SNR=7.8						
AAM				S	S	17 00 41.5	-3.8
	baz=174						
PLCA	Paso Flores	41.84	170	P	P	16 54 30.4	+0.2
	comp=Z,144nm,0.9s,baz=345,slow=9.0,SNR=137						
PLCA				LR	LR	17 09 16.9	
	comp=Z,107µm,21.2s,baz=12,slow=32						
	comp=Z,144nm,0.9s						
PLCA	Paso Flores	41.84	170	P	P	16 54 30.1	-0.1
PLCA				IAmb	IAmb	16 54 44.7	
	comp=Z,1µm,1.4s						
PLCA	Paso Flores	41.84	170	⇑P	P	16 54 30.2	+0.1
PLCA	Paso Flores	41.84	170	P	P	16 54 30.8	+0.6
PLCA				pP	pP	16 54 40.6	+1.3
PLCA				sP	sP	16 54 44.2	+1.2
PLCA				S	S	17 00 46.9	+0.7
Y22A	Socorro	41.97	325	P	P	16 54 30.5	-0.9
	baz=137,SNR=178						
Y22A				S	S	17 00 51.8	+3.4
	baz=137						
N38A	Joes South For	41.98	345	IAmb	IAmb	16 54 33.3	
	comp=Z,656nm,0.9s						
N38A	Joes South For	41.98	345	P	P	16 54 30.1	-1.0
	baz=159,SNR=83						
N38A				S	S	17 00 43.2	-4.8
	baz=159						
Y22D	IRIS PASSCAL I	42.04	325	IAmb	IAmb	16 55 16.0	
	comp=Z,1µm,1.4s						
Y22D	IRIS PASSCAL I	42.04	325	P	P	16 54 32.9	+0.9
	baz=137						
Y22D				S	S	17 00 52.4	+3.0
	baz=137						
Y22D	IRIS PASSCAL I	42.04	325	P	P	16 54 32.9	+0.9
	baz=137						
Y22D				S	S	17 00 50.7	+1.3
	baz=137						
L64A	Middleborough	42.05	10	P	P	16 54 32.3	+0.6
	baz=193,SNR=14						
L64A				P	P	16 54 32.3	+0.6
	baz=193,SNR=14						
L64A				S	S	17 00 52.5	+3.5
	baz=193						
L64A				S	S	17 00 52.5	+3.5
	baz=193						
LL05	Los Muermos	42.06	173	IAmb	IAmb	16 55 25.2	
	comp=Z,832nm,1.4s						
LENM	Lemitar	42.14	326	P	P	16 54 33.9	+1.1
QUA2	Belchertown	42.15	8	P	P	16 54 33.5	+1.0
	baz=191						
QUA2				S	S	17 00 52.3	+1.9
	baz=191						
K57A	Scipio Center	42.18	4	IAmb	IAmb	16 54 36.5	
	comp=Z,980nm,1.1s						
K57A	Scipio Center	42.18	4	P	P	16 54 32.8	0.0
	baz=185,SNR=200						
K57A				S	S	17 00 51.1	+0.2
	baz=185						
L44A	Lake County Fo	42.18	351	IAMs_20	IAMs_20	17 14 18.8	
	comp=Z,102µm,21.0s						
L44A	Lake County Fo	42.18	351	P	P	16 54 30.6	-2.2
	baz=168,SNR=11						
L44A				S	S	17 00 45.1	-5.8
	baz=168						
L44A	Lake County Fo	42.18	351	P	P	16 54 30.3	-2.5
	baz=168,SNR=11						
L44A				S	S	17 00 44.3	-6.6
	baz=168						
K50A	Casco	42.20	357	IAmb	IAmb	16 54 35.2	
	comp=Z,724nm,1.1s						
K50A	Casco	42.20	357	P	P	16 54 31.7	-1.3
	baz=176,SNR=36						
K50A				P	P	16 54 31.7	-1.3

	baz=176,SNR=36					
K50A				S	**S**	**17 00 48.1 -3.2**
	baz=176					
K50A				S	**S**	**17 00 48.1 -3.2**
	baz=176					
L61B	**Northampton**	**42.27**	**8**	P	**P**	**16 54 33.8 +0.3**
	baz=190,SNR=41					
L61B	**Northampton**	**42.27**	**8**	P	**P**	**16 54 33.7 +0.1**
	baz=190,SNR=41					
L61B				S	**S**	**17 00 46.5 -5.9**
	baz=190					
HCNY	**Howe Caverns**	**42.31**	**6**	P	**P**	**16 54 34.7 +0.8**
	baz=188,SNR=25					
HCNY				S	**S**	**17 00 55.5 +2.6**
	baz=188					
L42A	**Oliver, Polo**	**42.31**	**349**	P	**P**	**16 54 31.8 -2.1**
	baz=165,SNR=56					
L42A				S	**S**	**17 00 46.2 -6.7**
	baz=165					
CBKS	**Cedar Bluff**	**42.35**	**337**	P	**P**	**16 54 35.0 +0.8**
	baz=149,SNR=62					
CBKS				S	**S**	**17 00 55.9 +2.2**
	baz=149					
CBKS	**Cedar Bluff**	**42.35**	**337**	P	**P**	**16 54 35.1 +0.8**
	baz=149,SNR=62					
CBKS				S	**S**	**17 00 53.7 0.0**
	baz=149					
CBKS	**Cedar Bluff**	**42.35**	**337**	⇑P	**P**	**16 54 35.2 +0.9**
WES	**Weston**	**42.41**	**9**	P	**P**	**16 54 34.8 +0.1**
	baz=192					
WES				S	**S**	**17 00 55.7 +1.4**
	baz=192					
ANMO	**Albuquerque**	**42.42**	**327**	LR	LR	17 15 13.3
	comp=Z,33µm,18.1s,baz=140,slow=40					
ANMO	**Albuquerque**	**42.42**	**327**	P	**P**	**16 54 35.9 +0.8**
ANMO	**Albuquerque**	**42.42**	**327**	*ce*P	**P**	**16 54 36.4 +1.2**
ANMO				pmax	pmax	
	comp=Z,1µm,1.3s					
ANMO				MLR	MLR	
	comp=Z,33µm,16.0s					
ANMO	**Albuquerque**	**42.42**	**327**	P	**P**	**16 54 36.3 +1.2**
	baz=138,SNR=304					
ANMO				S	**S**	**17 00 57.8 +2.7**
	baz=138					
ANMO	**Albuquerque**	**42.42**	**327**	P	**P**	**16 54 36.3 +1.1**
	baz=138					
ANMO				S	**S**	**17 00 55.0 -0.2**
	baz=138					
ANMO	**Albuquerque**	**42.42**	**327**	⇓P	**P**	**16 54 36.2 +1.1**
ANMO	**Albuquerque**	**42.42**	**327**	P	**P**	**16 54 37.8 +2.7**
ANMO				x	x	16 54 42.7
ANMO				pP	**pP**	**16 54 45.2 +1.0**
TRY	**Troy**	**42.43**	**7**	P	**P**	**16 54 36.0 +1.2**
	baz=189					
TRY				S	**S**	**17 00 57.9 +3.4**
	baz=189					
HRV	**Adam Dziewonsk**	**42.49**	**9**	P	**P**	**16 54 35.9 +0.6**
HRV	**Adam Dziewonsk**	**42.49**	**9**	P	**P**	**16 54 35.9 +0.6**
HRV				pmax	pmax	
	comp=Z,158nm,0.8s					
HRV				MLR	MLR	
	comp=Z,38µm,21.0s					
HRV	**Adam Dziewonsk**	**42.49**	**9**	P	**P**	**16 54 36.2 +0.9**
	baz=192					
HRV				S	**S**	**17 00 58.7 +3.1**
	baz=192					
HRV	**Adam Dziewonsk**	**42.49**	**9**	P	**P**	**16 54 36.4 +1.1**
	baz=192					
HRV				S	**S**	**17 00 59.0 +3.5**
	baz=192					
HRV	**Adam Dziewonsk**	**42.49**	**9**	P	**P**	**16 54 36.4 +1.1**
HRV				pP	**pP**	**16 54 45.1 +0.6**
K62A	**Royalston**	**42.55**	**8**	P	**P**	**16 54 36.6 +0.8**
	baz=191,SNR=41					
K62A				P	**P**	**16 54 36.6 +0.8**
	baz=191,SNR=41					
K62A				S	**S**	**17 00 58.6 +2.3**
	baz=191					
K62A				S	**S**	**17 00 58.6 +2.3**
	baz=191					
J54A	**Appleton**	**42.63**	**1**	P	**P**	**16 54 35.9 -0.6**
	baz=181,SNR=41					
J54A				P	**P**	**16 54 35.9 -0.6**
	baz=181,SNR=41					
J54A				S	**S**	**17 00 54.8 -2.7**
	baz=181					
J54A				S	**S**	**17 00 54.8 -2.7**
	baz=181					
J55A	**Hilton**	**42.65**	**2**	P	**P**	**16 54 36.1 -0.4**
	baz=183,SNR=52					
J55A				P	**P**	**16 54 36.1 -0.4**
	baz=183,SNR=52					
J55A				S	**S**	**17 00 56.0 -1.8**
	baz=183					
J55A				S	**S**	**17 00 56.0 -1.8**
	baz=183					
L40A	**Anamosa**	**42.69**	**347**	P	**P**	**16 54 35.5 -1.4**
	baz=163,SNR=26					
L40A				S	**S**	**17 00 52.6 -5.9**
	baz=163					
J56A	**Wolcott**	**42.70**	**3**	IAmb	IAmb	16 54 40.3
	comp=Z,489nm,0.8s					
J56A	**Wolcott**	**42.70**	**3**	P	**P**	**16 54 36.5 -0.5**
	baz=184,SNR=116					
J56A				P	**P**	**16 54 36.5 -0.5**
	baz=184,SNR=116					
J56A				S	**S**	**17 00 57.4 -1.1**
	baz=184					
J56A				S	**S**	**17 00 57.4 -1.1**
	baz=184					
N35A	**Tabor**	**42.73**	**342**	P	**P**	**16 54 36.1 -1.2**
	baz=156,SNR=28					
N35A				S	**S**	**17 00 55.4 -3.7**
	baz=156					
K43A	**Burlington**	**42.76**	**351**	P	**P**	**16 54 35.5 -2.0**
	baz=167,SNR=34					
K43A				S	**S**	**17 00 51.3 -8.1**
	baz=167					
J47A	**Sunmer**	**42.83**	**355**	IAmb	IAmb	16 54 40.8
	comp=Z,562nm,1.1s					
J47A	**Sunmer**	**42.83**	**355**	P	**P**	**16 54 36.7 -1.3**
	baz=172,SNR=13					
J47A				P	**P**	**16 54 36.7 -1.3**
	baz=172,SNR=13					
J47A				S	**S**	**17 00 56.0 -4.5**
	baz=172					
J47A				S	**S**	**17 00 56.0 -4.5**
	baz=172					
J57A	**Williamstown**	**42.89**	**4**	P	**P**	**16 54 38.2 -0.3**
	baz=185,SNR=74					
J57A				P	**P**	**16 54 38.2 -0.3**
	baz=185,SNR=74					
J57A				S	**S**	**17 01 00.7 -0.6**
	baz=185					
J57A				S	**S**	**17 01 00.7 -0.6**
	baz=185					
J58A	**Remsen**	**42.89**	**5**	P	**P**	**16 54 37.4 -1.2**
J58A	**Remsen**	**42.89**	**5**	P	**P**	**16 54 38.8 +0.2**
	baz=186,SNR=86					
J58A				P	**P**	**16 54 38.8 +0.2**
	baz=186,SNR=86					
J58A				S	**S**	**17 01 02.7 +1.3**
	baz=186					
J58A				S	**S**	**17 01 02.7 +1.3**
	baz=186					
SCIA	**State Center**	**43.02**	**345**	IAmb	IAmb	16 54 41.6
	comp=Z,633nm,0.9s					
SCIA	**State Center**	**43.02**	**345**	P	**P**	**16 54 38.4 -1.2**
	baz=160,SNR=47					
SCIA				S	**S**	**17 00 58.5 -4.8**
	baz=160					
SCIA	**State Center**	**43.02**	**345**	P	**P**	**16 54 38.3 -1.3**
	baz=160,SNR=47					
SCIA				S	**S**	**17 00 58.2 -5.1**
	baz=160					
T25A	**Trinidad**	**43.04**	**331**	P	**P**	**16 54 41.5 +1.3**
T25A				IAmb	IAmb	16 54 52.1
	comp=Z,936nm,1.2s					
T25A	**Trinidad**	**43.04**	**331**	P	**P**	**16 54 41.4 +1.3**
	baz=142,SNR=71					
T25A				S	**S**	**17 01 07.4 +3.1**
	baz=142					
J59A	**Piesco**	**43.06**	**6**	P	**P**	**16 54 39.9 -0.1**
	baz=188,SNR=171					
J59A				P	**P**	**16 54 39.9 -0.1**
	baz=188,SNR=171					
J59A				S	**S**	**17 01 05.7 +1.7**
	baz=188					
J59A				S	**S**	**17 01 05.7 +1.7**
	baz=188					
ACCN	**Adirondack Com**	**43.07**	**6**	P	**P**	**16 54 40.8 +0.7**
	baz=189,SNR=90					
ACCN				S	**S**	**17 01 06.7 +2.7**
	baz=189					
TUC	**Tucson**	**43.15**	**320**	P	**P**	**16 54 42.4 +1.5**
TUC				IAmb	IAmb	16 54 52.0
	comp=Z,1µm,1.8s					
TUC	**Tucson**	**43.15**	**320**	P	**P**	**16 54 42.4 +1.5**
TUC				pmax	pmax	
	comp=Z,1µm,1.8s					
TUC				MLR	MLR	
	comp=Z,152µm,20.0s					
TUC	**Tucson**	**43.15**	**320**	P	**P**	**16 54 40.4 -0.5**
	baz=131					
TUC				S	**S**	**17 01 04.2 -1.5**
	baz=131					
TUC	**Tucson**	**43.15**	**320**	⇓P	**P**	**16 54 42.2 +1.3**
TUC	**Tucson**	**43.15**	**320**	P	**P**	**16 54 43.8 +2.8**
TUC				pP	**sP**	**16 54 51.8 -2.0**
TUC				sP	pP	16 54 58.1 +8.0
J61A	**Chester**	**43.17**	**8**	P	**P**	**16 54 42.1 +1.3**
	baz=190,SNR=53					
J61A				P	**P**	**16 54 42.1 +1.3**
	baz=190,SNR=53					
J61A				S	**S**	**17 01 08.5 +3.0**
	baz=190					
J61A				S	**S**	**17 01 08.5 +3.0**
	baz=190					
UNH	**University of**	**43.17**	**9**	P	**P**	**16 54 41.9 +1.1**
	baz=193,SNR=19					
UNH				S	**S**	**17 01 09.5 +4.0**
	baz=193					
N33B	**J Bar K, Exete**	**43.20**	**340**	P	**P**	**16 54 40.6 -0.6**
	baz=154,SNR=40					
N33B				S	**S**	**17 01 04.0 -2.0**
	baz=154					
N33A	**J Bar K, Exete**	**43.20**	**340**	IAmb	IAmb	16 54 54.4
	comp=Z,1µm,1.1s					
JFWS	**Jewell Farm**	**43.31**	**349**	P	**P**	**16 54 40.1 -1.8**
	baz=164,SNR=49					
JFWS				S	**S**	**17 01 02.4 -5.1**
	baz=164					
JFWS	**Jewell Farm**	**43.31**	**349**	P	**P**	**16 54 40.3 -1.6**
	baz=164,SNR=49					
JFWS				S	**S**	**17 01 01.6 -5.9**
	baz=164					
I49A	**Point Hope**	**43.38**	**357**	IAmb	IAmb	16 54 45.0
	comp=Z,519nm,0.8s					
I49A	**Point Hope**	**43.38**	**357**	P	**P**	**16 54 41.0 -1.4**
	baz=175,SNR=95					
I49A				P	**P**	**16 54 41.0 -1.4**
	baz=175,SNR=95					
I49A				S	**S**	**17 01 04.4 -4.0**
	baz=175					
I49A				S	**S**	**17 01 04.4 -4.0**
	baz=175					
LL07	**Hotel Espejo d**	**43.47**	**173**	P	**P**	**16 54 42.9 -0.3**
WCNY	**West Carthage**	**43.48**	**4**	P	**P**	**16 54 43.2 -0.1**
	baz=186,SNR=96					
WCNY				S	**S**	**17 01 10.0 +0.1**
	baz=186					
HNH	**Hanover**	**43.56**	**8**	P	**P**	**16 54 45.0 +1.0**
	baz=191					
HNH				S	**S**	**17 01 15.5 +4.3**
	baz=191					
NCB	**Newcomb**	**43.59**	**6**	P	**P**	**16 54 44.7 +0.4**
	baz=188,SNR=75					
NCB				S	**S**	**17 01 13.8 +2.0**
	baz=188					
K38A	**Parkersburg**	**43.60**	**346**	IAmb	IAmb	16 54 45.9
	comp=Z,547nm,0.9s					
K38A	**Parkersburg**	**43.60**	**346**	P	**P**	**16 54 42.2 -2.1**
	baz=161,SNR=68					
K38A				S	**S**	**17 01 06.8 -5.0**
	baz=161					
MCVT	**Middlebury Col**	**43.71**	**7**	P	**P**	**16 54 46.0 +0.8**
	baz=190,SNR=46					
MCVT				S	**S**	**17 01 17.2 +3.8**
	baz=190					
KSCO	**Kaye Shedlock’**	**43.73**	**334**	IAmb	IAmb	16 54 56.9
	comp=Z,634nm,1.2s					
KSCO	**Kaye Shedlock’**	**43.73**	**334**	P	**P**	**16 54 46.6 +1.0**
	baz=146,SNR=25					
KSCO				S	**S**	**17 01 17.1 +3.1**
	baz=146					
KSCO	**Kaye Shedlock’**	**43.73**	**334**	P	**P**	**16 54 46.3 +0.8**
	baz=146,SNR=25					
KSCO				S	**S**	**17 01 17.1 +3.1**
	baz=146					
I45A	**Fountain**	**43.77**	**353**	IAmb	IAmb	16 54 47.1
	comp=Z,573nm,1.2s					
I45A	**Fountain**	**43.77**	**353**	P	**P**	**16 54 43.5 -2.1**
	baz=170,SNR=6.4					
I45A				P	**P**	**16 54 43.5 -2.1**
	baz=170,SNR=6.4					
I45A				S	**S**	**17 01 08.1 -6.1**
	baz=170					
I45A				S	**S**	**17 01 08.1 -6.1**
	baz=170					
I62A	**Tamworth**	**43.86**	**9**	P	**P**	**16 54 47.7 +1.3**
	baz=192,SNR=21					
I62A				P	**P**	**16 54 47.7 +1.3**
	baz=192,SNR=21					
I62A				S	**S**	**17 01 19.7 +4.1**
	baz=192					
I62A				S	**S**	**17 01 19.7 +4.1**
	baz=192					
L34A	**Svendsen Farm,**	**43.96**	**342**	P	**P**	**16 54 45.7 -1.6**
	baz=156,SNR=8.7					
L34A				S	**S**	**17 01 12.5 -4.7**
	baz=156					
I42A	**Draeger Farm,**	**44.01**	**350**	IAmb	IAmb	16 54 49.5
	comp=Z,605nm,1.1s					
I42A	**Draeger Farm,**	**44.01**	**350**	P	**P**	**16 54 46.0 -1.6**
	baz=167,SNR=99					
I42A				S	**S**	**17 01 12.9 -4.9**
	baz=167					
LL02	**Futaleuf**	**44.03**	**172**	IAmb	IAmb	16 55 01.9
	comp=Z,657nm,1.2s					
BGNE	**Belgrade**	**44.04**	**340**	P	**P**	**16 54 47.3 -0.6**
	baz=153,SNR=10					
BGNE				S	**S**	**17 01 16.9 -1.4**
	baz=153					
BGNE	**Belgrade**	**44.04**	**340**	P	**P**	**16 54 47.1 -0.7**
	baz=153,SNR=10					
BGNE				S	**S**	**17 01 16.1 -2.2**
	baz=153					
SDCO	**Great Sand Dun**	**44.06**	**330**	IAmb	IAmb	16 54 60.0
	comp=Z,1µm,1.4s					
SDCO	**Great Sand Dun**	**44.06**	**330**	P	**P**	**16 54 49.3 +0.9**
	baz=141,SNR=319					
SDCO				S	**S**	**17 01 23.0 +3.8**
	baz=141					
SDCO	**Great Sand Dun**	**44.06**	**330**	P	**P**	**16 54 49.5 +1.1**
	baz=141,SNR=319					
SDCO				S	**S**	**17 01 16.0 -3.2**
	baz=141					
SADO	**Sadowa**	**44.12**	**1**	LR	LR	17 13 46.3
	comp=Z,53µm,22.0s,baz=194,slow=37					
SADO	**Sadowa**	**44.12**	**1**	⇑P	**P**	**16 54 46.2 -2.2**
X18A	**Snowflake**	**44.13**	**323**	IAmb	IAmb	16 55 00.5
	comp=Z,706nm,1.4s					
LBNH	**Lisbon**	**44.14**	**8**	P	**P**	**16 54 49.6 +1.0**
	baz=191,SNR=75					
LBNH				S	**S**	**17 01 23.4 +3.8**
	baz=191					
LBNH	**Lisbon**	**44.14**	**8**	P	**P**	**16 54 49.2 +0.6**
	baz=191,SNR=75					
LBNH				S	**S**	**17 01 23.1 +3.6**
	baz=191					
I63A	**Otisfield**	**44.16**	**9**	P	**P**	**16 54 50.1 +1.4**
	baz=193,SNR=43					
I63A				P	**P**	**16 54 50.1 +1.4**
	baz=193,SNR=43					
I63A				S	**S**	**17 01 22.5 +2.7**
	baz=193					
I63A				S	**S**	**17 01 22.5 +2.7**
	baz=193					
RCBR	**Riachuelo**	**44.19**	**99**	P	**P**	**16 54 48.4 -1.1**
RCBR	**Riachuelo**	**44.19**	**99**	P	**P**	**16 54 48.4 -1.1**
RCBR				pmax	pmax	
	comp=Z,196nm,1.5s					
LONY	**Lake Ozonia**	**44.20**	**5**	P	**P**	**16 54 49.1 0.0**
	baz=187,SNR=113					
LONY				S	**S**	**17 01 18.5 -2.0**
	baz=187					
214A	**Organ Pipe Nat**	**44.25**	**318**	P	**P**	**16 54 49.6 -0.1**
	baz=128,SNR=105					
214A				S	**S**	**17 01 23.3 +1.6**
	baz=128					
I40A	**Norwalk**	**44.32**	**349**	P	**P**	**16 54 48.5 -1.5**
	baz=164,SNR=37					
I40A				S	**S**	**17 01 16.4 -5.9**
	baz=164					
GLMI	**Grayling**	**44.38**	**355**	IAmb	IAmb	16 55 30.1
	comp=Z,792nm,1.1s					
GLMI				IAMs_20	IAMs_20	17 14 53.1
	comp=Z,77µm,20.0s					
GLMI	**Grayling**	**44.38**	**355**	P	**P**	**16 54 49.5 -1.1**
	baz=173					
GLMI				S	**S**	**17 01 19.6 -3.6**
	baz=173					
H43A	**Windswept, Lux**	**44.40**	**352**	IAmb	IAmb	16 54 52.5
	comp=Z,689nm,0.9s					
H43A	**Windswept, Lux**	**44.40**	**352**	P	**P**	**16 54 49.0 -1.6**
	baz=168,SNR=151					
H43A				S	**S**	**17 01 18.3 -5.1**
	baz=168					
W18A	**Petrified Fore**	**44.41**	**324**	P	**P**	**16 54 52.8 +1.6**
	baz=134,SNR=92					
W18A				S	**S**	**17 01 23.2 -1.0**
	baz=134					
BMNY	**Brushton-Moira**	**44.43**	**5**	P	**P**	**16 54 50.8 -0.1**
	baz=187,SNR=117					
BMNY				S	**S**	**17 01 24.2 +0.5**
	baz=187					
FRNY	**Flat Rock**	**44.52**	**6**	IAmb	IAmb	16 55 03.8
	comp=Z,573nm,1.6s					
FRNY	**Flat Rock**	**44.52**	**6**	P	**P**	**16 54 51.8 +0.2**
	baz=189,SNR=68					
FRNY				S	**S**	**17 01 26.2 +1.1**
	baz=189					
H62A	**Milan**	**44.58**	**9**	P	**P**	**16 54 53.1 +1.1**
	baz=192,SNR=70					
H62A				P	**P**	**16 54 53.1 +1.1**
	baz=192,SNR=70					
H62A				S	**S**	**17 01 29.7 +3.7**
	baz=192					
H62A				S	**S**	**17 01 29.7 +3.7**
	baz=192					
G45A	**Suttons Bay**	**44.70**	**354**	P	**P**	**16 54 51.6 -1.5**
	baz=171,SNR=74					
G45A				P	**P**	**16 54 51.6 -1.5**
	baz=171,SNR=74					
G45A				S	**S**	**17 01 21.9 -5.8**
	baz=171					
G45A				S	**S**	**17 01 21.9 -5.8**
	baz=171					
S22A	**4UR Ranch, Cre**	**44.73**	**329**	IAmb	IAmb	16 55 07.8
	comp=Z,1µm,1.6s					
S22A	**4UR Ranch, Cre**	**44.73**	**329**	P	**P**	**16 54 54.9 +1.1**
	baz=140,SNR=52					
S22A				S	**S**	**17 01 28.0 -1.0**
	baz=140					
Q24A	**Divide**	**44.84**	**332**	IAmb	IAmb	16 55 09.3
	comp=Z,427nm,1.2s					
Q24A	**Divide**	**44.84**	**332**	P	**P**	**16 54 55.6 +0.9**
	baz=142,SNR=28					
Q24A				S	**S**	**17 01 33.2 +2.5**
	baz=142					
I37A	**Lemond, Waseca**	**45.05**	**346**	IAmb	IAmb	16 54 57.2
	comp=Z,306nm,1.0s					
I37B	**Waseca**	**45.05**	**346**	P	**P**	**16 54 54.0 -1.8**
	baz=160,SNR=27					
SFX	**San Felipe**	**45.09**	**316**	IAmb	IAmb	16 55 07.2
	comp=Z,600nm,1.4s					
OGNE	**Ogallala**	**45.09**	**336**	P	**P**	**16 54 56.9 +0.5**
OGNE	**Ogallala**	**45.09**	**336**	P	**P**	**16 54 57.2 +0.8**
	baz=148,SNR=26					
OGNE				S	**S**	**17 01 36.2 +2.5**
	baz=148					
OGNE	**Ogallala**	**45.09**	**336**	P	**P**	**16 54 57.0 +0.6**
	baz=148,SNR=26					
OGNE				S	**S**	**17 01 36.8 +3.1**
	baz=148					
AY01	**Puyuhuapi**	**45.13**	**173**	IAmb	IAmb	16 55 11.1
	comp=Z,462nm,1.0s					
MNTQ	**Montreal, Queb**	**45.17**	**6**	IAmb	IAmb	16 55 00.5
	comp=Z,291nm,0.9s					
MVCO	**Mesa Verde**	**45.21**	**327**	IAMs_20	IAMs_20	17 13 43.6
	comp=Z,68µm,20.0s					
MVCO	**Mesa Verde**	**45.21**	**327**	P	**P**	**16 54 58.4 +0.8**
	baz=137,SNR=74					
MVCO				S	**S**	**17 01 37.9 +2.0**
	baz=137					
G62A	**West of Eustis**	**45.30**	**9**	IAmb	IAmb	16 55 03.0
	comp=Z,705nm,1.1s					
G62A	**West of Eustis**	**45.30**	**9**	P	**P**	**16 54 59.0 +1.1**
	baz=193,SNR=243					
G62A				P	**P**	**16 54 59.0 +1.1**
	baz=193,SNR=243					
G62A				S	**S**	**17 01 40.5 +4.1**
	baz=193					
G62A				S	**S**	**17 01 40.5 +4.1**
	baz=193					
K31A	**O'Neill**	**45.32**	**340**	P	**P**	**16 54 58.0 -0.1**
	baz=153,SNR=26					
K31A				S	**S**	**17 01 34.5 -2.4**
	baz=153					
EMMW	**East Machias**	**45.38**	**12**	IAMs_20	IAMs_20	17 16 18.4
	comp=Z,57µm,20.0s					
EMMW	**East Machias**	**45.38**	**12**	S	**S**	**17 01 40.8 +3.3**
	baz=197					
113A	**Mohawk Valley,**	**45.38**	**318**	IAmb	IAmb	16 55 09.7
	comp=Z,902nm,1.6s					
PKME	**Peaks-Kenny Pk**	**45.55**	**10**	P	**P**	**16 55 00.2 +0.3**
PKME				IAmb	IAmb	16 55 12.9
	comp=Z,796nm,1.6s					
PKME	**Peaks-Kenny Pk**	**45.55**	**10**	P	**P**	**16 55 01.1 +1.3**
	baz=194,SNR=67					
PKME				S	**S**	**17 01 43.3 +3.2**
	baz=194					
PKME	**Peaks-Kenny Pk**	**45.55**	**10**	P	**P**	**16 55 00.7 +0.9**
	baz=194,SNR=67					
PKME				S	**S**	**17 01 42.6 +2.6**
	baz=194					
G40A	**Rib Lake**	**45.57**	**350**	P	**P**	**16 54 58.6 -1.4**
	baz=165,SNR=156					
G40A				S	**S**	**17 01 32.4 -8.0**
	baz=165					
Y14A	**Wickenburg**	**45.62**	**320**	IAmb	IAmb	16 55 11.8
	comp=Z,1µm,1.8s					
ECSD	**EROS Data Cent**	**45.65**	**343**	IAmb	IAmb	16 55 12.3
	comp=Z,850nm,1.8s					
ECSD	**EROS Data Cent**	**45.65**	**343**	P	**P**	**16 54 59.4 -1.2**
	baz=156,SNR=65					
ECSD				S	**S**	**17 01 35.8 -5.7**
	baz=156					
ECSD	**EROS Data Cent**	**45.65**	**343**	P	**P**	**16 54 59.1 -1.5**
	baz=156,SNR=65					
ECSD				S	**S**	**17 01 36.2 -5.4**
	baz=156					
WUAZ	**Wupatki**	**45.65**	**323**	P	**P**	**16 55 02.3 +1.2**
WUAZ	**Wupatki**	**45.65**	**323**	P	**P**	**16 55 01.8 +0.8**
	baz=133,SNR=228					
WUAZ				S	**S**	**17 01 46.5 +4.3**
	baz=133					
WUAZ	**Wupatki**	**45.65**	**323**	⇑P	**P**	**16 55 02.5 +1.5**
F42A	**Maple Grove Fa**	**45.71**	**352**	IAmb	IAmb	16 55 03.2
	comp=Z,297nm,0.8s					
F42A	**Maple Grove Fa**	**45.71**	**352**	P	**P**	**16 54 59.9 -1.2**
	baz=168,SNR=27					
F42A				S	**S**	**17 01 38.4 -4.0**
	baz=168					
G65A	**Princeton**	**45.83**	**12**	P	**P**	**16 55 03.1 +1.2**
	baz=197,SNR=40					
G65A				P	**P**	**16 55 03.1 +1.2**
	baz=197,SNR=40					
G65A				S	**S**	**17 01 47.9 +4.0**
	baz=197					
G65A				S	**S**	**17 01 47.9 +4.0**
	baz=197					
E46A	**Sault Ste Mari**	**45.89**	**356**	IAmb	IAmb	16 55 04.4
	comp=Z,475nm,1.1s					
E46A	**Sault Ste Mari**	**45.89**	**356**	P	**P**	**16 55 00.8 -1.7**
	baz=174,SNR=164					
E46A				S	**S**	**17 01 38.7 -6.2**
	baz=174					
SMCO	**Snowmass**	**45.89**	**330**	P	**P**	**16 55 04.1 +1.0**
SMCO				IAmb	IAmb	16 55 14.6
	comp=Z,1µm,1.7s					
SMCO	**Snowmass**	**45.89**	**330**	⇑P	**P**	**16 55 04.3 +1.2**
GGN	**Saint George**	**45.90**	**13**	IAmb	IAmb	16 55 15.7
	comp=Z,970nm,1.9s					

F63A	Nahmakanta, Br	46.01	10	P	P	16 55 04.2	+0.7
	baz=195,SNR=32						
F63A				P	P	16 55 04.2	+0.7
	baz=195,SNR=32						
F63A				S	S	17 01 49.2	+2.5
	baz=195						
F63A				S	S	17 01 49.2	+2.5
	baz=195						
PV15	Paradox Valley	46.03	328	P	P	16 55 04.7	+0.6
SPMN	Marine on St.	46.05	347	P	P	16 55 01.7	-2.1
	baz=162,SNR=27						
SPMN				S	S	17 01 41.3	-6.0
	baz=162						
SPMN	Marine on St.	46.05	347	P	P	16 55 01.9	-1.9
	baz=162,SNR=27						
SPMN				S	S	17 01 40.9	-6.3
	baz=162						
E43A	Lone Tree Farm	46.17	353	IAmb	IAmb	16 55 06.7	
	comp=Z,428nm,0.9s						
E43A	Lone Tree Farm	46.17	353	P	P	16 55 02.9	-1.8
	baz=170,SNR=269						
E43A				S	S	17 01 44.0	-4.9
	baz=170						
COWI	Conover	46.20	351	IAMs_20	IAMs_20	17 16 59.2	
	comp=Z,84µm,20.0s						
COWI	Conover	46.20	351	P	P	16 55 03.2	-1.7
	baz=167						
COWI				S	S	17 01 44.5	-4.9
	baz=167						
PV11	David Mesa, Pa	46.21	328	P	P	16 55 06.1	+0.7
GLA	Glamis	46.26	318	IAmb	IAmb	16 55 16.7	
	comp=Z,993nm,1.6s						
GLA	Glamis	46.26	318	P	P	16 55 04.3	-1.5
	baz=127						
GLA				S	S	17 01 54.7	+3.9
	baz=127						
F64A	Sherman	46.31	11	P	P	16 55 05.5	-0.2
F64A				IAmb	IAmb	16 55 19.8	
	comp=Z,840nm,1.9s						
F64A	Sherman	46.31	11	P	P	16 55 07.0	+1.2
	baz=196,SNR=42						
F64A				P	P	16 55 07.0	+1.2
	baz=196,SNR=42						
F64A				S	S	17 01 53.3	+2.4
	baz=196						
F64A				S	S	17 01 53.3	+2.4
	baz=196						
COYC	Coyhaique	46.34	173	IAmb	IAmb	16 55 23.4	
	comp=Z,375nm,1.0s						
COYC	Coyhaique	46.34	173	IAMs_20	IAMs_20	17 11 03.8	
	comp=Z,77µm,21.0s						
COYC	Coyhaique	46.34	173	⇑P	P	16 55 06.0	0.0
COYC	Coyhaique	46.34	173	P	P	16 55 06.3	+0.3
COYC				sP	sP	16 55 19.8	+1.0
COYC				S	S	17 01 52.3	+1.0
PV23	Carpenter Ridg	46.39	328	IAmb	IAmb	16 55 17.8	
	comp=Z,656nm,1.3s						
BLYC	Blythe	46.49	319	P	P	16 55 07.9	+0.5
BLYC				IAmb	IAmb	16 55 18.5	
	comp=Z,814nm,1.8s						
PDMCI	Parker Dam,Lak	46.58	320	P	P	16 55 08.9	+0.8
	baz=129,SNR=24						
PDMCI				S	S	17 01 56.2	+1.0
	baz=129						
N23A	Red Feather La	46.74	333	P	P	16 55 10.7	+1.0
	baz=143,SNR=64						
N23A				S	S	17 02 02.1	+4.2
	baz=143						
YUH	Yuha Desert	46.76	317	IAmb	IAmb	16 55 20.8	
	comp=Z,868nm,1.7s						
F36A	Milaca	46.82	347	P	P	16 55 07.9	-1.9
	baz=161,SNR=118						
F36A				S	S	17 01 52.1	-6.1
	baz=161						
E63A	Oxbow	46.83	11	P	P	16 55 10.9	+1.0
	baz=195,SNR=80						
E63A				P	P	16 55 10.9	+1.0
	baz=195,SNR=80						
E63A				S	S	17 02 02.2	+3.8
	baz=195						
E63A				S	S	17 02 02.2	+3.8
	baz=195						
RMX	La Rumorosa	46.84	317	IAmb	IAmb	16 55 31.3	
	comp=Z,430nm,1.3s						
SWSC	Sam W. Stewart	46.85	317	P	P	16 55 11.5	+1.2
	baz=126,SNR=26						
SWSC				S	S	17 02 04.0	+4.8
	baz=126						
IKP	In-Ko-Pah, Jac	46.89	317	P	P	16 55 11.2	+0.5
	baz=126,SNR=94						
IKP				S	S	17 02 05.3	+5.4
	baz=126						
W13A	Hualapai Mount	46.92	321	IAmb	IAmb	16 55 32.8	
	comp=Z,646nm,1.7s						
SUSD	Miller	47.01	341	IAmb	IAmb	16 56 46.2	
	comp=Z,432nm,0.9s						
SUSD	Miller	47.01	341	P	P	16 55 10.2	-1.1
	baz=153,SNR=31						
SUSD				S	S	17 01 59.0	-2.1
	baz=153						
SUSD	Miller	47.01	341	P	P	16 55 10.0	-1.4
	baz=153,SNR=31						
SUSD				S	S	17 01 58.7	-2.4
	baz=153						
BC3	Big Chuckawall	47.04	318	P	P	16 55 12.6	+0.7
	baz=127,SNR=84						
BC3				S	S	17 02 07.0	+4.9
	baz=127						
D41A	Chassel	47.05	352	P	P	16 55 10.4	-1.2
	baz=168,SNR=184						
D41A				S	S	17 01 57.8	-3.7
	baz=168						
LMN	Caledonia Moun	47.07	14	IAmb	IAmb	16 55 16.2	
	comp=Z,278nm,1.1s						
E38A	The Farm, Brul	47.11	349	IAmb	IAmb	16 55 23.6	
	comp=Z,840nm,1.9s						
E38A	The Farm, Brul	47.11	349	P	P	16 55 10.5	-1.6
	baz=164,SNR=33						
E38A				S	S	17 01 58.0	-4.4
	baz=164						
LATQ	La Tuque	47.12	6	IAmb	IAmb	16 55 15.8	
	comp=Z,332nm,1.0s						
IRM	Iron Mountain	47.14	319	P	P	16 55 13.4	+0.8
	baz=128,SNR=58						
IRM				S	S	17 02 04.7	+1.4
	baz=128						
NEE2	Needles Airpor	47.18	320	P	P	16 55 14.1	+1.2
	baz=129						
NEE2				S	S	17 02 05.0	+1.3
	baz=129						
TKX	Tecate	47.19	316	IAmb	IAmb	16 55 23.9	
	comp=Z,347nm,1.3s						
MONP2	Monument Peak	47.25	317	P	P	16 55 14.3	+0.7
	baz=126,SNR=41						
MONP2				S	S	17 02 08.0	+2.8
	baz=126						
O20A	White River Ci	47.26	330	IAmb	IAmb	16 55 24.8	
	comp=Z,628nm,1.4s						
O20A	White River Ci	47.26	330	P	P	16 55 14.0	+0.4
	baz=139,SNR=42						
O20A				S	S	17 02 07.6	+2.5
	baz=139						
BAR	Barrett	47.30	316	IAmb	IAmb	16 55 26.3	
	comp=Z,593nm,1.8s						
D62A	Allapoint, All	47.36	10	P	P	16 55 14.3	+0.4
D62A	Allapoint, All	47.36	10	P	P	16 55 14.6	+0.6
	baz=194,SNR=279						
D62A				P	P	16 55 14.6	+0.6
	baz=194,SNR=279						
D62A				S	S	17 02 05.8	0.0
	baz=194						
D62A				S	S	17 02 05.8	0.0
	baz=194						
F33A	5 Mile Ranch,	47.49	344	P	P	16 55 13.4	-1.6
	baz=157,SNR=58						
F33A				S	S	17 02 02.4	-5.3
	baz=157						
GBN	Guysborough	47.55	17	IAmb	IAmb	16 55 34.9	
	comp=Z,352nm,1.3s						
LMQ	La Malbaie	47.60	9	IAmb	IAmb	16 55 19.9	
	comp=Z,414nm,1.1s						
BELC	Belle Mtn. Jos	47.61	318	P	P	16 55 18.0	+1.6
	baz=127,SNR=58						
BELC				S	S	17 02 14.5	+4.3
	baz=127						
TPFO	Pinon Flats	47.69	318	P	P	16 55 17.4	+0.5
	baz=126,SNR=54						
TPFO				S	S	17 02 17.1	+5.9
	baz=126						
PFO	Pinyon Flats O	47.69	318	LR	LR	17 13 49.1	
	comp=Z,67µm,19.2s,baz=128,slow=34						
PFO	Pinyon Flats O	47.69	318	P	P	16 55 18.6	+1.6
PFO				IAmb	IAmb	16 55 28.1	
	comp=Z,509nm,1.6s						
PFO	Pinyon Flats O	47.69	318	IAMs_20	IAMs_20	17 13 44.7	
	comp=Z,63µm,18.0s						
PFO	Pinyon Flats O	47.69	318	P	P	16 55 18.6	+1.6
PFO				pmax	pmax		
	comp=Z,509nm,1.6s						
PFO				MLR	MLR		
	comp=Z,63µm,18.0s						
PFO	Pinyon Flats O	47.69	318	P	P	16 55 17.7	+0.7
	baz=126,SNR=33						
PFO				S	S	17 02 18.2	+6.9
	baz=126						
PFO	Pinyon Flats O	47.69	318	P	P	16 55 19.6	+2.6
PFO				x	x	16 55 37.0	
109C	Camp Elliot, M	47.72	316	IAmb	IAmb	16 55 27.8	
	comp=Z,795nm,1.5s						
109C	Camp Elliot, M	47.72	316	P	P	16 55 18.2	+1.1
	baz=125,SNR=11						
109C				S	S	17 02 15.2	+3.8
	baz=125						
LCMT	Little Creek M	47.77	323	IAmb	IAmb	16 55 29.1	
	comp=Z,786nm,1.7s						
MTPU	Mount Pierson	47.85	325	IAmb	IAmb	16 55 29.7	
	comp=Z,588nm,1.6s						
GMRC	Granite Mounta	47.86	319	P	P	16 55 19.4	+1.1
	baz=128,SNR=71						
GMRC				S	S	17 02 17.5	+3.8
	baz=128						
RWWY	Rawlins	47.96	332	IAMs_20	IAMs_20	17 16 52.3	
	comp=Z,56µm,20.0s						
SZCU	Shurtz Canyon	48.07	324	IAmb	IAmb	16 55 31.3	
	comp=Z,607nm,1.6s						
BATG	Bathurst New B	48.12	12	IAmb	IAmb	16 55 24.5	
	comp=Z,261nm,1.0s						
MURC	Murrieta	48.18	317	P	P	16 55 21.8	+1.1
	baz=125,SNR=19						
MURC				S	S	17 02 23.0	+4.9
	baz=125						
TMUT	Trail Mountain	48.19	327	P	P	16 55 21.5	+0.5
TMUT				IAmb	IAmb	16 55 34.5	
	comp=Z,722nm,1.6s						
CCUT	Cedar City	48.20	324	IAmb	IAmb	16 55 32.8	
	comp=Z,687nm,1.5s						
HEC	Hector,Ludlow	48.33	319	P	P	16 55 22.7	+0.9
	baz=127,SNR=50						
HEC				S	S	17 02 25.3	+5.0
	baz=127						
ELS	Elsinore Mount	48.37	317	IAmb	IAmb	16 55 34.6	
	comp=Z,664nm,1.8s						
BBRC	Big Bear Solar	48.38	318	P	P	16 55 23.6	+1.1
	baz=126						
BBRC				S	S	17 02 25.6	+4.3
	baz=126						
EYMN	Ely	48.39	349	IAMs_20	IAMs_20	17 18 11.2	
	comp=Z,69µm,20.0s						
EYMN	Ely	48.39	349	P	P	16 55 20.1	-1.9
	baz=164,SNR=104						
EYMN				S	S	17 02 11.7	-8.8
	baz=164						
EYMN	Ely	48.39	349	P	P	16 55 20.2	-1.8
	baz=164,SNR=104						
EYMN				S	S	17 02 15.1	-5.4
	baz=164						
TCRU	Three Creeks R	48.39	325	IAmb	IAmb	16 55 36.1	
	comp=Z,630nm,1.4s						
K22A	Casper	48.40	334	IAmb	IAmb	16 55 33.3	
	comp=Z,746nm,1.6s						
K22A	Casper	48.40	334	P	P	16 55 22.7	+0.3
	baz=143,SNR=42						
K22A				S	S	17 02 23.4	+2.2
	baz=143						
K22A	Casper	48.40	334	P	P	16 55 22.3	-0.1
	baz=143,SNR=42						
K22A				S	S	17 02 23.7	+2.5
	baz=143						
TUQ	Turquoise Moun	48.43	320	P	P	16 55 23.2	+0.5
	baz=128,SNR=76						
TUQ				S	S	17 02 25.0	+3.2
	baz=128						
RSSD	Black Hills	48.56	337	P	P	16 55 24.2	+0.6
RSSD	Black Hills	48.56	337	P	P	16 55 24.2	+0.6
RSSD				pmax	pmax		
	comp=Z,1µm,1.8s						
RSSD	Black Hills	48.56	337	P	P	16 55 24.7	+1.2
	baz=147,SNR=103						
RSSD				S	S	17 02 25.2	+1.7
	baz=147						
RSSD	Black Hills	48.56	337	P	P	16 55 24.2	+0.6
	baz=147						
RSSD				S	S	17 02 27.1	+3.6
	baz=147						
RSSD	Black Hills	48.56	337	⇑P	P	16 55 24.6	+0.9
RSSD	Black Hills	48.56	337	P	P	16 55 24.8	+1.2
RSSD				pP	pP	16 55 33.4	+0.6
RSSD				x	x	16 55 36.8	
SHPR	Sheep Range	48.61	321	IAmb	IAmb	16 55 37.9	
	comp=Z,810nm,1.5s						
SCI2	San Clemente I	48.77	316	P	P	16 55 27.7	+2.5
	baz=124						
SCI2				S	S	17 02 31.1	+4.7
	baz=124						
RRX	Edison Barstow	48.80	319	P	P	16 55 27.9	+2.6
	baz=126						
RRX				S	S	17 02 30.9	+4.2
	baz=126						
BFSC	Mount Baldy Ra	48.87	317	P	P	16 55 27.6	+1.6
	baz=125,SNR=35						
BFSC				S	S	17 02 31.9	+3.9
	baz=125						
D32B	Dogwood Acres,	48.88	344	P	P	16 55 24.3	-1.4
	baz=157						
D32B				S	S	17 02 23.3	-4.0
	baz=157						
CIS	Catalina Islan	48.91	316	P	P	16 55 27.9	+1.6
	baz=124,SNR=29						
CIS				S	S	17 02 32.2	+3.8
	baz=124						
GSC	Goldstone, Bar	48.92	319	IAmb	IAmb	16 55 37.7	
	comp=Z,752nm,1.6s						
GSC	Goldstone, Bar	48.92	319	P	P	16 55 27.8	+1.4
	baz=127,SNR=56						
GSC				S	S	17 02 32.9	+4.3
	baz=127						
MPU	Maple Canyon	48.93	327	IAmb	IAmb	16 55 39.9	
	comp=Z,692nm,1.6s						
SHOC	Shoshone, Teco	48.94	320	P	P	16 55 27.1	+0.7
	baz=128,SNR=16						
SHOC				S	S	17 02 33.1	+4.3
	baz=128						
FMP	Fort Macarthur	49.00	316	P	P	16 55 28.4	+1.5
	baz=124						
FMP				S	S	17 02 35.5	+5.9
	baz=124						
PRN	Pahroc Range	49.12	322	IAmb	IAmb	16 55 41.0	
	comp=Z,618nm,1.7s						
PRN	Pahroc Range	49.12	322	⇑P	P	16 55 30.2	+2.3
NLU	North Lily Min	49.12	327	IAmb	IAmb	16 55 41.8	
	comp=Z,720nm,1.8s						
PSUT	Pine Spring	49.15	324	IAmb	IAmb	16 55 39.7	
	comp=Z,406nm,1.5s						
B35A	Bob, Littlefor	49.23	348	P	P	16 55 26.7	-1.7
	baz=161,SNR=49						
B35A				S	S	17 02 27.5	-4.7
	baz=161						
DECC	Green Verdugo	49.33	317	P	P	16 55 30.4	+0.8
	baz=125						
DECC				S	S	17 02 38.5	+4.2
	baz=125						
QSM	Queen of Sheba	49.36	320	IAmb	IAmb	16 55 40.6	
	comp=Z,763nm,1.8s						
GWY	Greenwater Val	49.37	320	P	P	16 55 30.3	+0.4
GWY				IAmb	IAmb	16 55 42.4	
	comp=Z,775nm,1.7s						
EDW2	Edwards Air Fo	49.46	318	P	P	16 55 31.0	+0.5
	baz=125,SNR=60						
EDW2				S	S	17 02 39.6	+3.4
	baz=125						
E28A	Huff	49.47	341	P	P	16 55 30.1	-0.2
	baz=152,SNR=60						
E28A				S	S	17 02 34.2	-1.6
	baz=152						
TPNV	Topopah Spring	49.57	321	IAMs_20	IAMs_20	17 15 46.5	
	comp=Z,54µm,20.0s						
TPNV	Topopah Spring	49.57	321	P	P	16 55 32.3	+0.8
	baz=128,SNR=78						
TPNV				S	S	17 02 42.6	+4.7
	baz=128						
TPNV	Topopah Spring	49.57	321	⇑P	P	16 55 33.8	+2.3
SNCC	San Nicolas Is	49.60	315	P	P	16 55 32.4	+0.9
	baz=123						
SNCC				S	S	17 02 41.0	+3.0
	baz=123						
LRMC	Laurel Mtn Rad	49.60	319	P	P	16 55 31.8	+0.1
	baz=126,SNR=27						
LRMC				S	S	17 02 39.6	+1.3
	baz=126						
AGMN	Agassiz Nation	49.66	346	P	P	16 55 30.1	-1.6
	baz=158,SNR=31						
AGMN				S	S	17 02 33.6	-4.7
	baz=158						
AGMN	Agassiz Nation	49.66	346	P	P	16 55 30.1	-1.6
	baz=158,SNR=31						
AGMN				S	S	17 02 32.0	-6.3
	baz=158						
FURC	Furnace Creek,	49.66	320	P	P	16 55 32.6	+0.7
	baz=128,SNR=47						
FURC				S	S	17 02 41.7	+3.0
	baz=128						
DUG	Dugway, Tooele	49.70	327	IAmb	IAmb	16 55 43.6	
	comp=Z,389nm,1.1s						
DUG	Dugway, Tooele	49.70	327	P	P	16 55 32.5	+0.2
	baz=134,SNR=29						
DUG				S	S	17 02 42.7	+3.2
	baz=134						
OSI	Osito Audit: C	49.80	317	P	P	16 55 33.5	+0.4
	baz=124						
OSI				S	S	17 02 43.7	+2.7
	baz=124						
BW06	Boulder Array	49.90	331	IAmb	IAmb	16 55 47.0	
	comp=Z,592nm,1.9s						
BW06				IAMs_20	IAMs_20	17 17 31.7	
	comp=Z,87µm,19.0s						
BW06	Boulder Array	49.90	331	P	P	16 55 33.0	-0.9
	baz=139,SNR=63						
BW06				S	S	17 02 42.8	+0.4
	baz=139						
PD31	Pinedale Array	49.90	331	IAmb	IAmb	16 55 47.0	
	comp=Z,534nm,1.9s						
PD31	Pinedale Array	49.90	331	⇑P	P	16 55 33.6	-0.2
PDAR	Pinedale Array	49.90	331	P	P	16 55 33.7	-0.2
	comp=Z,31nm,0.8s,baz=131,slow=6.9,SNR=127						
PDAR				PcP	PcP	16 56 53.5	-0.6
	comp=Z,27nm,0.9s,baz=148,slow=6.9,SNR=4.1						
PDAR				LR	LR	17 17 52.5	
	comp=Z,69µm,18.7s,baz=146,slow=38						
PDAR				PKPPKP	P'P'df	17 26 23.2	-4.1
	comp=Z,1.1nm,1.0s,baz=339,slow=3.3,SNR=4.1						
	comp=Z,31nm,0.8s						
HWUT	Hardware Ranch	50.04	329	P	P	16 55 34.5	-0.4
HWUT				IAmb	IAmb	16 55 48.9	
	comp=Z,418nm,1.4s						
R11A	Troy Canyon, C	50.05	323	P	P	16 55 35.4	+0.3
	baz=130,SNR=108						
R11A				S	S	17 02 48.4	+3.8
	baz=130						
SCZ2	Santa Cruz Isl	50.09	316	P	P	16 55 34.8	-0.5
	baz=123,SNR=19						
SCZ2				S	S	17 02 48.3	+3.5
	baz=123						
ARVC	Arvin	50.17	318	P	P	16 55 36.0	+0.2
	baz=125,SNR=24						
ARVC				S	S	17 02 49.0	+3.1
	baz=125						
ISA	Isabella, Lake	50.23	318	P	P	16 55 38.0	+1.6
ISA				IAmb	IAmb	16 55 47.6	
	comp=Z,684nm,1.7s						
ISA	Isabella, Lake	50.23	318	P	P	16 55 38.0	+1.6
ISA				pmax	pmax		
	comp=Z,684nm,1.7s						
ISA	Isabella, Lake	50.23	318	P	P	16 55 37.8	+1.3
	baz=126,SNR=56						
ISA				S	S	17 02 51.6	+4.7
	baz=126						
MDND	Maddock	50.26	343	P	P	16 55 36.1	-0.2
	baz=154,SNR=20						
MDND				S	S	17 02 43.8	-3.0
	baz=154						
MDND	Maddock	50.26	343	P	P	16 55 35.7	-0.6
	baz=154,SNR=20						
MDND				S	S	17 02 43.7	-3.0
	baz=154						
GRAC	Grapevine Rang	50.31	321	P	P	16 55 38.4	+1.5
	baz=127,SNR=59						
GRAC				S	S	17 02 51.2	+3.3
	baz=127						
SBC	Santa Barbara	50.38	316	P	P	16 55 37.8	+0.4
	baz=123						
SBC				S	S	17 02 51.6	+2.8
	baz=123						
CWC	Cottonwood Cre	50.43	320	P	P	16 55 38.4	+0.4
	baz=126						
CWC				S	S	17 02 54.7	+4.8
	baz=126						
LCH	Last Change Ra	50.63	321	IAmb	IAmb	16 55 50.6	
	comp=Z,1µm,2.0s						
AHID	Auburn Hatcher	50.65	330	IAmb	IAmb	16 55 49.9	
	comp=Z,923nm,1.9s						
AHID				IAMs_20	IAMs_20	17 17 36.6	
	comp=Z,96µm,21.0s						
PKM	Mcpherson Peak	50.70	317	P	P	16 55 41.2	+1.1
	baz=124,SNR=57						
PKM				S	S	17 02 56.6	+2.9
	baz=124						
VES	Vestal, Richgr	50.74	318	P	P	16 55 41.6	+1.4
	baz=125,SNR=17						
VES				S	S	17 02 58.5	+4.7
	baz=125						
TIN	Tinemaha, Big	50.89	320	P	P	16 55 42.8	+1.4
	baz=127						
TIN				S	S	17 02 59.2	+3.1
	baz=127						
REDW	Red Top Meadow	50.97	331	IAmb	IAmb	16 55 53.6	
	comp=Z,936nm,1.6s						
REDW				IAMs_20	IAMs_20	17 17 28.1	
	comp=Z,83µm,22.0s						
SNOW	Snow King Moun	51.00	331	IAmb	IAmb	16 55 55.6	
	comp=Z,993nm,1.8s						
SNOW				IAMs_20	IAMs_20	17 17 39.8	
	comp=Z,92µm,22.0s						
LOHW	Long Hollow	51.04	331	IAMs_20	IAMs_20	17 17 52.8	
	comp=Z,82µm,22.0s						
SMMC	Simmler	51.06	317	P	P	16 55 43.6	+1.0
	baz=124,SNR=63						
SMMC				S	S	17 03 01.9	+3.5
	baz=124						
TPAW	Teton Pass	51.11	331	IAMs_20	IAMs_20	17 17 43.8	
	comp=Z,64µm,20.0s						
MOOW	Moose Ponds	51.21	331	P	P	16 55 43.3	-0.4
MOOW				IAMs_20	IAMs_20	17 17 58.3	
	comp=Z,69µm,22.0s						
VOG	Valley Oaks Go	51.22	319	P	P	16 55 43.1	-0.5
	baz=125						
VOG				S	S	17 03 02.1	+1.7
	baz=125						
ELK	Elko	51.42	326	LR	LR	17 17 48.7	
	comp=Z,54µm,19.6s,baz=132,slow=36						
ELK	Elko	51.42	326	IAmb	IAmb	16 55 56.5	
	comp=Z,1µm,2.0s						
ELK				IAMs_20	IAMs_20	17 15 55.3	
	comp=Z,70µm,22.0s						
FLWY	Flagg Ranch	51.44	332	IAmb	IAmb	16 55 56.5	
	comp=Z,910nm,1.8s						
FLWY				IAMs_20	IAMs_20	17 18 18.6	
	comp=Z,68µm,19.0s						
ULM	Lac du Bonnet	51.48	347	P	P	16 55 43.6	-1.8
	comp=Z,334nm,1.0s,baz=157,slow=7.5,SNR=103						
	comp=Z,334nm,1.0s						
ULM	Lac du Bonnet	51.48	347	IAmb	IAmb	16 55 47.2	
	comp=Z,387nm,1.0s						
ULM	Lac du Bonnet	51.48	347	⇑P	P	16 55 43.3	-2.1
LAO	LASA Array	51.55	337	IAmb	IAmb	16 55 56.6	
	comp=Z,718nm,1.6s						
LAO				IAMs_20	IAMs_20	17 19 55.2	
	comp=Z,41µm,20.0s						
LAO	LASA Array	51.55	337	P	P	16 55 45.7	-0.4
	baz=145						
LAO				S	S	17 03 02.6	-2.2
	baz=145						
LAO	LASA Array	51.55	337	P	P	16 55 46.4	+0.3
	baz=145						
LAO				S	S	17 03 04.6	-0.2

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           baz=145
RLMT  Red Lodge          51.57 334   IAMs_20  IAMs_20  17 18 37.9
           comp=Z,52µm,22.0s
RLMT  Red Lodge          51.57 334   P        P        16 55 46.2  -0.3
           baz=141,SNR=32
RLMT                                 S        S        17 03 06.3 +0.8
           baz=141
H17A  Grant Village      51.61 332   IAmb     IAmb     16 56 00.0
           comp=Z,560nm,1.8s
H17A  Grant Village      51.61 332   P        P        16 55 47.1 +0.2
           baz=139,SNR=38
H17A                                 S        S        17 03 09.1 +3.0
           baz=139
MLAC  Mammoth, Mammo51.62 320        P        P        16 55 47.5 +0.4
           baz=126
MLAC                                 S        S        17 03 09.3 +2.9
           baz=126
YPP   Pitchstone Pla     51.63 332   IAmb     IAmb     16 56 00.6
           comp=Z,552nm,1.7s
LKWY  Lake               51.66 332   IAmb     IAmb     16 56 03.2
           comp=Z,614nm,2.0s
NV11  Mina Array Sit     51.68 322   IAmb     IAmb     16 56 01.1
           comp=Z,830nm,1.3s
NVAR  Mina Array Bea     51.77 321   P        P        16 55 48.5 +0.5
           comp=Z,81nm,0.8s,baz=129,slow=5.9,SNR=235
NVAR                                 LR       LR       17 17 11.9
           comp=Z,63µm,19.9s,baz=128,slow=35
NVAR                                 PKPPKP   P'P'df   17 26 22.3  -3.0
           comp=Z,1.4nm,1.0s,baz=266,slow=2.7,SNR=5.0
           comp=Z,81nm,0.8s
MDPB  Devils Postpil     51.78 320   IAmb     IAmb     16 55 59.2
           comp=Z,896nm,1.7s
LHV   Little Huntoon     51.78 321   P        P        16 55 48.8 +1.0
GO09  Cerro Castillo     51.92 174   IAmb     IAmb     16 56 07.1
           comp=Z,420nm,1.1s
YMR   Madison River      52.00 332   IAmb     IAmb     16 56 06.5
           comp=Z,748nm,1.8s
KVN   Kaiserville        52.02 322   P        P        16 55 50.3 +0.4
KVN                                  IAmb     IAmb     16 56 03.2
           comp=Z,809nm,1.7s
KVN   Kaiserville        52.02 322   P        P        16 55 50.3 +0.4
KVN                                  pmax     pmax
           comp=Z,809nm,1.7s
RYN   Ryan               52.02 321   IAmb     IAmb     16 56 03.4
           comp=Z,641nm,1.4s
DRLN  Deer Lake          52.22  18   P        P        16 55 50.1  -0.8
DRLN                                 IAmb     IAmb     16 56 03.2
           comp=Z,308nm,1.0s
DRLN  Deer Lake          52.22  18 ⇑P        P        16 55 50.8  -0.1
YHL   Hebgen Lake        52.24 332   IAmb     IAmb     16 56 03.3
           comp=Z,736nm,1.3s
DGMT  Dagmar             52.29 340   P        P        16 55 51.8 +0.3
           baz=148,SNR=19
DGMT                                 S        S        17 03 16.5 +1.7
           baz=148
DGMT  Dagmar             52.29 340   P        P        16 55 51.7 +0.1
           baz=148,SNR=19
DGMT                                 S        S        17 03 14.8   0.0
           baz=148
BBGB  Big Mountain B     52.46 318   IAmb     IAmb     16 56 21.4
           comp=Z,362nm,1.0s
YERR  Yerington          52.69 321   IAmb     IAmb     16 56 08.5
           comp=Z,654nm,1.5s
SAO   San Andreas Ge     52.84 318   IAmb     IAmb     16 56 24.7
           comp=Z,518nm,1.8s
SAO                                  IAMs_20  IAMs_20  17 14 53.1
           comp=Z,43µm,22.0s
SAO   San Andreas Ge     52.84 318 ⇑P        P        16 55 57.9 +2.1
CMB   Columbia Colle     52.86 320   IAmb     IAmb     16 56 06.6
           comp=Z,522nm,1.8s
CMB                                  IAMs_20  IAMs_20  17 17 26.4
           comp=Z,43µm,20.0s
HLID  Hailey             52.90 329   P        P        16 55 56.8 +0.4
           baz=134,SNR=161
HLID                                 S        S        17 03 27.9 +4.2
           baz=134
PNTR  Pine Nut           52.97 321   P        P        16 55 58.2 +1.2
PNTR                                 IAmb     IAmb     16 56 08.4
           comp=Z,512nm,1.4s
BOZ   Bozeman (W)        53.01 332   IAmb     IAmb     16 56 08.0
           comp=Z,463nm,1.2s
BOZ                                  IAMs_20  IAMs_20  17 19 12.0
           comp=Z,55µm,21.0s
BOZ   Bozeman (W)        53.01 332   P        P        16 55 55.9  -1.2
           baz=138,SNR=109
BOZ                                  S        S        17 03 27.2 +2.2
           baz=138
VCNR  Virginia City      53.13 321   P        P        16 55 58.8 +0.7
VCNR                                 IAmb     IAmb     16 56 09.3
           comp=Z,838nm,2.0s
PAHR  Pah Rah Range      53.21 322   IAmb     IAmb     16 56 09.9
           comp=Z,892nm,1.6s
EMB   Emerald Bay        53.22 321   IAmb     IAmb     16 56 10.3
           comp=Z,940nm,2.0s
DLMT  Dillon             53.29 331   IAMs_20  IAMs_20  17 18 48.5
           comp=Z,66µm,22.0s
MPK   Martis Peak        53.36 321   IAmb     IAmb     16 56 13.8
           comp=Z,581nm,1.3s
MFID  Camas Ranch        53.55 328   IAMs_20  IAMs_20  17 20 19.4
           comp=Z,46µm,19.0s
BEKR  Beckworth          53.91 322   IAmb     IAmb     16 56 14.8
           comp=Z,994nm,1.9s
GO10  Punta Arenas       53.92 174   P        P        16 56 04.1 +0.7
GO10                                 IAmb     IAmb     16 56 08.3
           comp=Z,435nm,1.0s
GO10  Punta Arenas       53.92 174 ⇑P        P        16 56 05.2 +1.7
EGMT  Eagleton           54.05 335   IAmb     IAmb     16 56 15.3
           comp=Z,775nm,1.6s
EGMT  Eagleton           54.05 335   P        P        16 56 04.7 +0.2
           baz=142,SNR=69
EGMT                                 S        S        17 03 40.6 +1.6
           baz=142
ORV   Oroville           54.44 321   IAMs_20  IAMs_20  17 18 02.3
           comp=Z,56µm,21.0s
WVOR  Wild Horse Val     54.45 325   IAMs_20  IAMs_20  17 19 16.5
           comp=Z,79µm,18.0s
WVOR  Wild Horse Val     54.45 325 ⇑P        P        16 56 07.8 +0.2
MCCM  Marconi Confer     54.55 319 ⇑P        P        16 56 14.2 +5.9
MG03  Isla Dawson        54.67 173   P        P        16 56 08.1  -0.7
PLID  Pearl Lake         54.78 329   IAmb     IAmb     16 56 20.2
           comp=Z,420nm,1.5s
PLID                                 IAMs_20  IAMs_20  17 20 05.0
           comp=Z,91µm,22.0s
MSO   Missoula           55.00 332   IAmb     IAmb     16 56 22.3
           comp=Z,593nm,1.4s
MSO                                  IAMs_20  IAMs_20  17 20 18.7
           comp=Z,84µm,20.0s
MSO   Missoula           55.00 332   P        P        16 56 10.9  -0.6
           baz=137,SNR=33
MSO                                  S        S        17 03 52.5 +0.7
           baz=137
EFI   East Falkland      55.08 164   P        P        16 56 12.1 +0.3
EFI   East Falkland      55.08 164ceP        P        16 56 12.4 +0.6
EFI                                  pmax     pmax
           comp=Z,637nm,1.7s
EFI                                  MLR      MLR
           comp=Z,115µm,22.0s
EFI   East Falkland      55.08 164 ⇑P        P        16 56 12.3 +0.6
EFI   East Falkland      55.08 164   P        P        16 56 12.4 +0.6
MOD   Modoc Plateau      55.09 324   IAmb     IAmb     16 56 25.3
           comp=Z,454nm,1.5s
MOD                                  IAMs_20  IAMs_20  17 19 33.5
           comp=Z,67µm,19.0s
HOPS  Hopland Field      55.14 319   IAMs_20  IAMs_20  17 18 34.8
           comp=Z,55µm,20.0s
SCHQ  Schefferville      55.21   9   P        P        16 56 12.2  -0.6
           comp=Z,251nm,1.0s,baz=191,slow=5.5,SNR=78
SCHQ                                 LR       LR       17 21 41.7
           comp=Z,27µm,19.4s,baz=200,slow=38
SCHQ                                 PKP2bc            17 26 32.0
           comp=Z,5.6nm,1.0s,baz=42,slow=4.3,SNR=4.0
           comp=Z,251nm,1.0s
SCHQ  Schefferville      55.21   9   IAmb     IAmb     16 56 24.0
           comp=Z,496nm,1.3s
SCHQ  Schefferville      55.21   9 ⇓P        P        16 56 11.8  -0.9
BMO   Blue Mountains     55.30 328   IAMs_20  IAMs_20  17 20 38.8
           comp=Z,80µm,20.0s
JTMT  Jette              55.83 332   IAmb     IAmb     16 56 28.5
           comp=Z,610nm,1.5s
USHA  Ushuaia            55.89 172   LR       LR       17 17 16.7
           comp=Z,110µm,19.7s,baz=3.0,slow=33
K05A  Summer Lake        55.94 324   IAmb     IAmb     16 56 33.2
           comp=Z,612nm,1.4s
I07A  Izee               55.99 326   IAmb     IAmb     16 56 39.1
           comp=Z,533nm,2.0s
F10A  Beach Ranch, E     56.02 329 ⇑P        P        16 56 19.0 +0.2
MG01  Puerto William     56.10 172   IAmb     IAmb     16 56 33.8
           comp=Z,358nm,1.1s
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K04D  Chiloquin, OR      56.39 324   P        P        16 56 21.7 +0.1
           baz=126
K04D                                 S        S        17 04 13.5 +3.0
           baz=126
YBH   Yreka Blue Hor     56.44 322   P        P        16 56 21.6  -0.4
           comp=Z,21nm,0.7s,baz=84,slow=6.8,SNR=40
YBH                                  LR       LR       17 19 25.9
           comp=Z,59µm,21.9s,baz=134,slow=35
           comp=Z,21nm,0.7s
YBH   Yreka Blue Hor     56.44 322   P        P        16 56 20.7  -1.2
YBH                                  IAmb     IAmb     16 56 31.3
           comp=Z,575nm,1.9s
YBH                                  IAMs_20  IAMs_20  17 19 47.3
           comp=Z,38µm,20.0s
L04D  Klamath Falls      56.48 323   IAMs_20  IAMs_20  17 20 07.2
           comp=Z,67µm,20.0s
L04D  Klamath Falls      56.48 323   P        P        16 56 22.1  -0.2
           baz=126,SNR=41
L04D                                 S        S        17 04 13.3 +1.6
           baz=126
J05D  Fort Rock, OR      56.48 325   P        P        16 56 22.4 +0.1
           baz=127,SNR=90
J05D                                 S        S        17 04 14.7 +3.0
           baz=127
WALA  Waterton Lakes     56.63 334 ⇑P        P        16 56 23.5 +0.3
JCC   Jacoby Creek,      56.75 321   P        P        16 56 25.4 +1.4
JCC                                  IAmb     IAmb     16 56 35.2
           comp=Z,841nm,1.6s
JCC                                  IAMs_20  IAMs_20  17 17 13.5
           comp=Z,39µm,20.0s
E09A  Wood Farm, Sta     56.85 329   IAmb     IAmb     16 56 37.7
           comp=Z,848nm,1.8s
J04D  Umpqua Nationa     56.96 324   IAmb     IAmb     16 56 36.2
           comp=Z,389nm,0.8s
J04D                                 IAMs_20  IAMs_20  17 21 11.0
           comp=Z,65µm,19.0s
J04D  Umpqua Nationa     56.96 324   P        P        16 56 25.8   0.0
           baz=126,SNR=101
J04D                                 S        S        17 04 19.2 +0.9
           baz=126
HUMO  Hull Mountain      57.10 323   IAMs_20  IAMs_20  17 20 36.6
           comp=Z,52µm,20.0s
HUMO  Hull Mountain      57.10 323 ⇑P        P        16 56 26.7 +0.2
I05D  Terrebonne, OR     57.18 325   P        P        16 56 27.1   0.0
           baz=128,SNR=23
I05D                                 S        S        17 04 24.4 +3.6
           baz=128
L02F  Cave Junction      57.19 322   P        P        16 56 25.9  -1.3
           baz=124,SNR=14
L02F                                 S        S        17 04 23.3 +2.4
           baz=124
SACV  Santiago Islan     57.25  73   P        P        16 56 27.4  -0.6
SACV                                 IAmb     IAmb     16 56 33.1
           comp=Z,372nm,1.4s
F07A  Phinny Hill Vi     57.38 328   IAmb     IAmb     16 56 39.7
           comp=Z,862nm,1.8s
I04A  Tendick Farm,      57.47 324   P        P        16 56 28.8  -0.4
           baz=126
I04A                                 S        S        17 04 25.2 +0.6
           baz=126
HAWA  Hanford            57.49 328   IAMs_20  IAMs_20  17 21 42.8
           comp=Z,70µm,22.0s
HAWA  Hanford            57.49 328 ⇑P        P        16 56 29.4 +0.2
NEW   Newport            57.54 331   P        P        16 56 29.6 +0.1
           comp=Z,28nm,0.9s,baz=149,slow=6.9,SNR=30
NEW                                  LR       LR       17 21 58.0
           comp=Z,49µm,19.7s,baz=134,slow=37
           comp=Z,28nm,0.9s
NEW   Newport            57.54 331   IAmb     IAmb     16 56 40.0
           comp=Z,770nm,1.9s
NEW   Newport            57.54 331   IAMs_20  IAMs_20  17 20 55.9
           comp=Z,51µm,21.0s
NEW   Newport            57.54 331   P        P        16 56 27.7  -1.8
           baz=134,SNR=29
NEW                                  S        S        17 04 26.5 +1.2
           baz=134
DBO   Dodson Butte       57.56 323   IAmb     IAmb     16 56 40.3
           comp=Z,716nm,1.8s
K02D  Willamette Mer     57.58 323   P        P        16 56 29.8  -0.2
           baz=125,SNR=32
K02D                                 S        S        17 04 27.4 +1.3
           baz=125
KBO   Bosley Butte       57.65 322   P        P        16 56 31.6 +1.1
G05D  Wamic, OR          57.73 326   P        P        16 56 31.8 +0.9
           baz=128,SNR=32
G05D                                 S        S        17 04 32.7 +4.9
           baz=128
E07A  Sunnyside          57.77 328   IAmb     IAmb     16 56 42.2
           comp=Z,884nm,1.7s
C09A  Chrisman Ranch     57.78 330   IAmb     IAmb     16 56 45.0
           comp=Z,548nm,1.8s
H04A  Detroit Lake       57.87 325   IAmb     IAmb     16 56 46.2
           comp=Z,265nm,1.2s
I03D  Drain, OR          57.96 324   P        P        16 56 32.5   0.0
           baz=126,SNR=20
I03D                                 S        S        17 04 30.4  -0.5
           baz=126
J01E  Myrtle Point       58.00 323   IAMs_20  IAMs_20  17 21 15.5
           comp=Z,54µm,20.0s
J01E  Myrtle Point       58.00 323   P        P        16 56 33.9 +1.1
           baz=125,SNR=25
J01E                                 S        S        17 04 33.5 +2.1
           baz=125
KEBM  Edson Butte        58.08 323   P        P        16 56 34.0 +0.6
H04D  Lebanon            58.09 325   IAMs_20  IAMs_20  17 20 42.8
           comp=Z,45µm,21.0s
H04D  Lebanon            58.09 325   P        P        16 56 32.8  -0.6
           baz=126,SNR=9.8
H04D                                 S        S        17 04 31.3  -1.3
           baz=126
F05D  White Salmon       58.20 327   IAmb     IAmb     16 56 45.5
           comp=Z,663nm,1.4s
F05D  White Salmon       58.20 327   P        P        16 56 34.0  -0.2
           baz=128,SNR=39
F05D                                 S        S        17 04 38.0 +4.0
           baz=128
COR   Corvallis          58.45 325   IAMs_20  IAMs_20  17 22 52.4
           comp=Z,43µm,19.0s
COR   Corvallis          58.45 325 ⇑P        P        16 56 36.1 +0.2
COR   Corvallis          58.45 325   P        P        16 56 37.8 +1.9
I02E  Swisshome, OR      58.49 324   P        P        16 56 37.2 +1.0
I02E                                 IAMs_20  IAMs_20  17 22 09.5
           comp=Z,39µm,18.0s
I02E  Swisshome, OR      58.49 324   P        P        16 56 36.5 +0.3
           baz=125,SNR=33
I02E                                 S        S        17 04 39.9 +2.1
           baz=125
H07S1 FLORES T-PHASE 58.77  43 eP       P        16 56 35.0  -3.3
G03D  McMinnville, O     58.80 325   IAmb     IAmb     16 56 49.4
           comp=Z,376nm,1.1s
G03D                                 IAMs_20  IAMs_20  17 22 41.6
           comp=Z,54µm,18.0s
G03D  McMinnville, O     58.80 325   P        P        16 56 38.7 +0.4
           baz=126
G03D                                 S        S        17 04 44.0 +2.3
           baz=126
H07N1 FLORES T-PHASE 58.98  42 eP       P        16 56 39.0  -0.7
F04D  Rainier, OR        59.18 326   P        P        16 56 41.3 +0.3
           baz=127,SNR=5.7
F04D                                 S        S        17 04 47.7 +1.0
           baz=127
E04D  Cinebar            59.22 327   P        P        16 56 41.9 +0.7
E04D  Cinebar            59.22 327   P        P        16 56 41.3 +0.1
           baz=128,SNR=11
E04D                                 S        S        17 04 48.0 +0.8
           baz=128
FCC   Fort Churchill     59.22 351   IAmb     IAmb     16 56 51.2
           comp=Z,353nm,1.2s
PNT   Penticton          59.46 331 ⇓P        P        16 56 43.9 +1.0
D04E  Lakebay            59.71 327   P        P        16 56 44.7 +0.1
           baz=128,SNR=11
D04E                                 S        S        17 04 55.2 +1.8
           baz=128
D03D  Eldon              60.10 328   P        P        16 56 47.6 +0.3
           baz=128,SNR=31
D03D                                 S        S        17 04 59.4 +0.9
           baz=128
CALA  Caldeira           60.13  45 eP        P        16 56 46.2  -1.6
           comp=Z,647nm,1.6s
PCED  Cedros             60.15  45 eP        P        16 56 46.4  -1.4
           comp=Z,442nm,1.6s
HOR   Horta              60.15  45 eP        P        16 56 45.2  -2.6
           comp=Z,536nm,1.8s
PCAN  Candelaria         60.23  45 eP        P        16 56 48.4   0.0
           comp=Z,619nm,1.2s
PICO  Pico               60.29  45 eP        P        16 56 51.1 +2.3
           comp=Z,807nm,1.8s
PPNO  Prainha do Nor     60.39  45 eP        P        16 56 48.1  -1.4
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           comp=Z,458nm,1.6s
NLWA  Neilton Lookou     60.44 327 ⇑P        P        16 56 50.8 +1.2
PID   Ribeirinha         60.48  45 eP        P        16 56 50.1   0.0
           comp=Z,516nm,1.8s
ROSA  Rosais             60.51  45 eP        P        16 56 51.1 +0.8
           comp=Z,934nm,1.8s
ROSA  Rosais             60.51  45 ⇑P        P        16 56 51.7 +1.4
PMAN  Manadas            60.58  45 eP        P        16 56 52.8 +2.1
           comp=Z,497nm,1.6s
B04A  Port Angeles       60.64 328   P        P        16 56 52.0 +1.0
SRBC  Serra Branca       60.79  44 eP        P        16 56 51.8  -0.4
           comp=Z,1µm,1.8s
PGRA  Graciosa           60.83  44 eP        P        16 56 53.4 +1.0
           comp=Z,617nm,2.0s
TAOE  Nuku Hiva Isla     60.90 260 eLR       LR       17 14 53.4
           comp=Z,184µm,24.4s
TAOE  Nuku Hiva Isla     60.90 260 ⇓P        P        16 56 53.8 +0.3
TAOE  Nuku Hiva Isla     60.90 260   P        P        16 56 56.2 +2.7
TAOE                                 x        x        16 57 03.6
TAOE                                 pP       sP       16 57 07.1 +0.6
ADH   Angra Heroismo     61.20  45 eP        P        16 56 52.1  -2.8
           comp=Z,568nm,1.6s
PAGU  Agualva, Azore     61.28  45 eP        P        16 56 56.4 +0.9
           comp=Z,424nm,1.6s
CLRS  Cowichan Lake      61.44 328   IAmb     IAmb     16 57 07.6
           comp=Z,372nm,1.4s
PSET  Sete Cidades       61.94  47 eP        P        16 57 00.7 +0.7
           comp=Z,668nm,2.2s
PDA   Ponta Delgada      61.95  47 eP        P        16 57 00.1 +0.1
           comp=Z,790nm,2.0s
PSMA  Santa Maria        62.05  48 eP        P        16 57 00.7   0.0
           comp=Z,237nm,2.2s
GRON  Grota Negra        62.05  47 eP        P        16 57 00.7  -0.1
           comp=Z,692nm,1.6s
CMLA  Cha da Macela      62.06  47 eP        P        16 57 01.1 +0.3
           comp=Z,660nm,2.4s
CMLA  Cha da Macela      62.06  47   P        P        16 57 01.1 +0.3
CMLA                                 IAmb     IAmb     16 57 05.8
           comp=Z,306nm,1.1s
CMLA  Cha da Macela      62.06  47   P        P        16 57 01.1 +0.3
CMLA                                 pmax     pmax
           comp=Z,306nm,1.1s
CMLA                                 MLR      MLR
           comp=Z,24µm,22.0s
CMLA  Cha da Macela      62.06  47 ⇑P        P        16 57 01.8 +1.1
CMLA  Cha da Macela      62.06  47   P        P        16 57 01.9 +1.1
PCALD Caldeiras da R     62.10  47 eP        P        16 57 01.1 +0.1
           comp=Z,1µm,2.6s
PSMN  Pico do Norte,     62.10  48 eP        P        16 57 02.7 +1.6
           comp=Z,353nm,2.0s
BART  Pico Bartolome     62.32  47 eP        P        16 57 02.7 +0.1
           comp=Z,869nm,1.6s
MBO   M'Bour             63.55  74   IAMs_20  IAMs_20  17 21 43.2
           comp=Z,66µm,22.0s
MBO   M'Bour             63.55  74 ⇑P        P        16 57 11.9 +0.9
MBO   M'Bour             63.55  74   P        P        16 57 12.3 +1.2
FRB   Frobisher Bay      63.67   6   P        P        16 57 09.3  -1.6
           comp=Z,84nm,0.9s,baz=203,slow=6.3,SNR=62
FRB                                  LR       LR       17 28 03.9
           comp=Z,19µm,19.2s,baz=188,slow=39
           comp=Z,84nm,0.9s
FRB   Frobisher Bay      63.67   6 ⇑P        P        16 57 08.8  -2.2
HOPE  Hope Point         65.12 154   P        P        16 57 20.6   0.0
HOPE                                 IAmb     IAmb     16 57 23.3
           comp=Z,235nm,0.9s
HOPE  Hope Point         65.12 154   P        P        16 57 20.6   0.0
HOPE                                 pmax     pmax
           comp=Z,235nm,0.9s
HOPE                                 MLR      MLR
           comp=Z,130µm,21.0s
HOPE  Hope Point         65.12 154 ⇑P        P        16 57 21.2 +0.6
HOPE  Hope Point         65.12 154   P        P        16 57 21.2 +0.6
HOPE                                 pP       pP       16 57 30.3 +0.2
HOPE                                 sP       sP       16 57 33.7   0.0
IVI   Ivigtut            65.19  16 i P        P        16 57 19.4  -1.5
IVI                                  IAmb     IAmb     16 57 36.8
           comp=Z,58nm,0.7s
IVI   Ivigtut            65.19  16 ⇑P        P        16 57 20.4  -0.5
IVI   Ivigtut            65.19  16   P        P        16 57 20.3  -0.6
IVI                                  pP       pP       16 57 30.0  -0.5
IVI                                  sP       sP       16 57 35.1 +1.1
IVI                                  PP       PP       16 59 44.2  -0.4
BBB   Bella Bella        65.47 330   P        P        16 57 23.9 +0.9
           comp=Z,114nm,0.9s,baz=148,slow=4.9,SNR=16
BBB                                  LR       LR       17 26 55.3
           comp=Z,30µm,21.5s,baz=132,slow=37
           comp=Z,114nm,0.9s
BBB   Bella Bella        65.47 330 ⇑P        P        16 57 25.5 +2.6
ASCN  Ascension          65.67  99   P        P        16 57 25.2 +0.2
NRS   Narsarsuaq         65.95  17 i P        P        16 57 24.8  -1.0
NRS                                  IAmb     IAmb     16 57 40.0
           comp=Z,52nm,0.7s
NRS   Narsarsuaq         65.95  17 ⇑P        P        16 57 25.2  -0.6
PMSA  Palmer Station     66.09 173   LR       LR       17 22 14.9
           comp=Z,42µm,20.9s,baz=345,slow=32
PMSA  Palmer Station     66.09 173   P        P        16 57 27.0 +0.3
PMSA                                 IAmb     IAmb     16 57 54.5
           comp=Z,342nm,1.2s
PMSA  Palmer Station     66.09 173   IAMs_20  IAMs_20  17 22 14.1
           comp=Z,42µm,20.0s
PMSA  Palmer Station     66.09 173 ⇑P        P        16 57 27.3 +0.7
PMSA  Palmer Station     66.09 173   P        P        16 57 27.1 +0.5
PMSA                                 pP       sP       16 57 38.1  -1.7
MACI  Morro de la Ar     66.33  59   P        P        16 57 30.0 +0.7
ORCD  Orcadas            66.70 162   P        P        16 57 29.3  -1.3
ORCD                                 IAmb     IAmb     16 57 34.6
           comp=Z,278nm,1.0s
NUUK  Nuuk               66.80  13 i P        P        16 57 30.8  -0.4
NUUK  Nuuk               66.80  13 ⇑P        P        16 57 30.9  -0.3
PMOZ  Porto Moniz, M     66.87  54 eP        P        16 57 32.8 +0.3
           comp=Z,567nm,2.1s
PMOZ                                 eS       S        17 06 34.6  +11
PMOZ                                 eLQ      LQ       17 14 15.3
PMOZ                                 eLR      LR       17 18 18.4
           comp=Z,23µm,24.0s
PMOZ  Porto Moniz, M     66.87  54 ⇑P        P        16 57 33.1 +0.7
YKA   Yellowknife Ar     67.17 343   P        P        16 57 32.6  -1.0
           comp=Z,175nm,0.9s,baz=135,slow=6.3,SNR=180
YKA                                  PKPPKP   P'P'df   17 25 57.8  -2.1
           comp=Z,0.4nm,0.7s,baz=319,slow=2.7,SNR=3.7
           comp=Z,175nm,0.9s
PMPST Porto Santo, M     67.63  54 eP        P        16 57 38.1 +0.9
           comp=Z,906nm,1.7s
RUBB  Prince Rupert      67.74 331   IAmb     IAmb     16 57 48.6
           comp=Z,545nm,1.7s
DIB   Dawson Inlet,      68.26 329   IAmb     IAmb     16 57 52.1
           comp=Z,531nm,1.6s
VAH   Vaihoa             68.85 254 eP        P        16 57 48.1 +3.0
           comp=Z,714nm,1.3s
PMOR  Pomariorio Ree     69.08 254 eP        P        16 57 49.8 +3.3
           comp=Z,1µm,1.4s
PMOR  Pomariorio Ree     69.08 254 eT        T        18 11 11.7
           comp=Z,1.6nm,0.2s
PMOR                                 eT       T        18 11 11.7
           comp=Z,1.6nm,0.2s
SFJD  Kangerlussuaq      69.46  12   P        P        16 57 46.6  -1.3
           comp=Z,60nm,0.8s,baz=214,slow=5.6,SNR=23
SFJD                                 LR       LR       17 27 23.8
           comp=Z,30µm,21.9s,baz=209,slow=35
           comp=Z,60nm,0.8s
SFJD  Kangerlussuaq      69.46  12   P        P        16 57 46.9  -1.0
SFJD  Kangerlussuaq      69.46  12   IAMs_20  IAMs_20  17 27 12.1
           comp=Z,34µm,22.0s
SFJD  Kangerlussuaq      69.46  12   P        P        16 57 46.9  -1.0
SFJD                                 pmax     pmax
           comp=Z,139nm,1.1s
SFJD                                 MLR      MLR
           comp=Z,34µm,22.0s
SFJD  Kangerlussuaq      69.46  12 i P        P        16 57 46.4  -1.5
SFJD                                 IAmb     IAmb     16 57 50.1
           comp=Z,46nm,0.8s
SFJD  Kangerlussuaq      69.46  12 ⇑P        P        16 57 46.6  -1.3
SFJD  Kangerlussuaq      69.46  12   P        P        16 57 46.9  -1.0
CRAG  Craig              69.75 331   IAmb     IAmb     16 58 01.1
           comp=Z,743nm,1.8s
CRAG  Craig              69.75 331   P        P        16 57 48.8  -1.1
           baz=121,SNR=6.6
CRAG                                 S        S        17 06 58.8 +1.9
           baz=121
WRAK  Wrangell Islan     69.88 332   IAmb     IAmb     16 58 02.9
           comp=Z,576nm,1.8s
WRAK  Wrangell Islan     69.88 332   P        P        16 57 51.0 +0.4
           baz=122
WRAK                                 S        S        17 06 59.6 +1.2
           baz=122
DLBC  Dease Lake         69.96 334   P        P        16 57 51.7 +0.5
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	comp=Z,246nm,0.9s,baz=128,slow=3.7,SNR=102						
DLBC				LR	LR	17 30 36.4	
	comp=Z,30μm,20.6s,baz=110,slow=38						
	comp=Z,246nm,0.9s						
DLBC	Dease Lake	69.96	334	IAmb	IAmb	16 57 55.5	
	comp=Z,262nm,0.9s						
DY2G	Dye2	69.98	14	*i* P	P	16 57 49.7	-1.7
DY2G				IAmb	IAmb	16 57 53.0	
	comp=Z,104nm,0.7s						
S34M	Telegraph Cree	70.14	334	P	P	16 57 52.7	+0.4
	baz=124,SNR=42						
S34M				S	S	17 07 05.8	+4.4
	baz=124						
PPTF	Pamatai, Papee	70.97	251	P	P	16 58 00.1	+1.9
PPTF	Pamatai, Papee	70.97	251	⇑P	P	16 58 01.4	+3.2
PPTF	Pamatai, Papee	70.97	251	P	P	16 58 01.2	+3.0
PPTF				pP	sP	16 58 12.0	+0.7
PPTF				sP	PcP	16 58 19.2	+0.7
PPTF				S	S	17 07 18.2	+5.6
PPT	Papeete	70.97	251	P	P	16 58 01.0	+2.9
	comp=Z,210nm,1.2s,baz=82,slow=8.4,SNR=21						
PPT				LR	LR	17 21 28.6	
	comp=Z,110μm,18.9s,baz=57,slow=29						
	comp=Z,210nm,1.2s						
PPT2	Papeete2	70.97	251	*e*P	P	16 58 01.7	+3.5
	comp=Z,1μm,1.5s						
PPT2	Papeete2	70.97	251	*e*LR	LR	17 19 27.8	
	comp=Z,238μm,25.0s						
PAE	Paea	70.99	251	*e*P	P	16 58 01.6	+3.4
	comp=Z,409nm,1.3s						
TGTN	Hyland Airport	71.08	338	P	P	16 57 59.0	+1.0
	baz=128,SNR=54						
TGTN				S	S	17 07 16.7	+4.3
	baz=128						
ILULI	Ilulissat	71.28	10	IAmb	IAmb	16 58 19.4	
	comp=Z,315nm,1.1s						
ILULI	Ilulissat	71.28	10	*i* P	P	16 57 58.0	-0.9
ILULI				IAmb	IAmb	16 58 01.1	
	comp=Z,96nm,1.0s						
ANGG	Ammassalik, Gr	71.61	17	*i* P	P	16 57 60.0	-1.1
ANGG				IAmb	IAmb	16 58 20.4	
	comp=Z,59nm,0.9s						
ANGG	Ammassalik, Gr	71.61	17	⇑P	P	16 57 59.9	-1.1
SIT	Sitka	71.62	332	P	P	16 58 00.7	-0.5
	baz=120						
SIT				S	S	17 07 23.7	+5.2
	baz=120						
JIS	Juneau Island	71.80	333	P	P	16 58 02.9	+0.6
JIS				IAmb	IAmb	16 58 22.1	
	comp=Z,356nm,1.2s						
JIS				IAMs_20	IAMs_20	17 32 58.7	
	comp=Z,36μm,22.0s						
SFNM	Sidi Ifni	72.00	59	P	P	16 58 07.0	+2.8
P33M	Teslin, Yukon	72.14	335	IAmb	IAmb	16 58 24.1	
	comp=Z,536nm,1.4s						
P33M				IAMs_20	IAMs_20	17 33 18.6	
	comp=Z,28μm,21.0s						
P33M	Teslin, Yukon	72.14	335	P	P	16 58 04.7	+0.2
	baz=123,SNR=128						
P33M				S	S	17 07 27.3	+2.7
	baz=123						
BESE	Bessie Mountai	72.17	333	IAmb	IAmb	16 58 16.8	
	comp=Z,683nm,1.4s						
TRIS	Tristan da Cun	72.39	129	P	P	16 58 05.2	-1.1
TRIS				IAmb	IAmb	16 58 10.7	
	comp=Z,455nm,1.1s						
SKAG	Skagway	72.82	334	P	P	16 58 07.6	-0.7
	baz=120,SNR=18						
SKAG				S	S	17 07 35.7	+3.5
	baz=120						
SKAG	Skagway	72.82	334	⇑P	P	16 58 08.5	+0.1
EAH	EAH	72.90	57	P	P	16 58 12.0	+2.5
NUUG	Nuugaatsiaq	72.98	9	*i* P	P	16 58 08.7	-0.4
NUUG				IAmb	IAmb	16 58 12.0	
	comp=Z,72nm,0.8s						
WHY	Whitehorse	73.24	335	IAmb	IAmb	16 58 21.6	
	comp=Z,577nm,1.9s						
WHY	Whitehorse	73.24	335	P	P	16 58 10.4	-0.7
	baz=121,SNR=19						
WHY				S	S	17 07 38.9	+1.6
	baz=121						
WHY	Whitehorse	73.24	335	⇑P	P	16 58 10.6	-0.5
ICESG	Greenland Ices	73.61	14	*i* P	P	16 58 11.9	-1.4
ICESG				IAmb	IAmb	16 58 15.3	
	comp=Z,180nm,0.7s						
TTIG	Tnine Tigouga,	73.68	58	P	P	16 58 16.0	+1.7
M31M	Drury Creek, Y	73.85	337	IAmb	IAmb	16 58 34.4	
	comp=Z,318nm,1.3s						
M31M				IAMs_20	IAMs_20	17 32 48.7	
	comp=Z,37μm,22.0s						
M31M	Drury Creek, Y	73.85	337	P	P	16 58 15.0	+0.6
	baz=122,SNR=78						
M31M				S	S	17 07 45.5	+1.6
	baz=122						
N31M	Braeburn, Yuko	74.04	336	IAmb	IAmb	16 58 35.4	
	comp=Z,319nm,1.1s						
N31M				IAMs_20	IAMs_20	17 34 45.9	
	comp=Z,27μm,21.0s						
N31M	Braeburn, Yuko	74.04	336	P	P	16 58 16.1	+0.5
	baz=120,SNR=30						
N31M				S	S	17 07 47.2	+1.0
	baz=120						
OUK	Oukaimeden	74.27	58	P	P	16 58 20.0	+2.0
HYT	Haines Junctio	74.44	335	P	P	16 58 17.3	-0.8
	baz=118,SNR=24						
HYT				S	S	17 07 54.9	+4.0
	baz=118						
SRHM	Skhour des Reh	74.45	56	P	P	16 58 21.0	+2.3
PFVI	Vila Bisbo	74.55	52	*e*P	P	16 58 20.1	+1.1
	comp=Z,1μm,1.9s						
PFVI	Vila Bisbo	74.55	52	P	P	16 58 20.5	+1.5
PMAFR	Mafra	74.56	50	*e*P	P	16 58 18.9	-0.2
	comp=Z,498nm,1.5s						
N30M	Aishikik Lake	74.58	335	P	P	16 58 20.1	+1.3
	baz=119,SNR=68						
N30M				S	S	17 07 56.0	+3.8
	baz=119						
PMST	Lisbon--Monsan	74.59	50	*e*P	P	16 58 19.9	+0.6
	comp=Z,801nm,1.8s						
LIS	Lisbon	74.62	50	*e*P	P	16 58 20.1	+0.8
LIS				*e*S	S	17 07 54.3	+0.9
LIS				IAMs_20	IAMs_20	17 23 49.3	
	comp=E,58μm,33.5s						
LIS	Lisbon	74.62	50	*e*P	P	16 58 20.2	+0.8
	comp=E,934nm,2.1s						
LIS	Lisbon	74.62	50	*e*P	P	16 58 20.1	+0.8
LIS				*e*S	S	17 07 54.2	+0.9
RES	Resolute Bay	74.68	356	P	P	16 58 17.7	-1.3
	comp=E,80nm,1.0s,baz=175,slow=8.7,SNR=33						
RES				LR	LR	17 34 03.7	
	comp=E,31μm,18.4s,baz=164,slow=38						
	comp=E,80nm,1.0s						
RES	Resolute Bay	74.68	356	⇑P	P	16 58 17.7	-1.3
PTEO	Sao Teotonio	74.71	51	*e*P	P	16 58 20.9	+1.0
	comp=E,744nm,1.6s						
PTEO	Sao Teotonio	74.71	51	*e*PP	PP	17 01 06.0	-1.3
MORF	Marmelete	74.72	51	*e*P	P	16 58 20.9	+0.8
MORF				*e*S	S	17 07 55.3	+0.6
MORF				IAMs_20	IAMs_20	17 24 48.4	
	comp=Z,77μm,33.1s						
MORF	Marmelete	74.72	51	*e*P	P	16 58 21.3	+1.2
	comp=Z,1μm,1.8s						
MORF	Marmelete	74.72	51	*e*P	P	16 58 20.8	+0.8
MORF				*e*S	S	17 07 55.3	+0.6
MORF	Marmelete	74.72	51	⇑P	P	16 58 21.5	+1.5
SHEL	Horse Pasture	74.73	107	⇑P	P	16 58 21.3	+0.8
LIC	Lamto	74.73	84	*e*P	P	16 58 21.0	+0.5
	comp=Z,746nm,1.5s						
PNL	Peninsula	74.75	333	P	P	16 58 19.3	-0.5
	baz=116,SNR=20						
PNL				S	S	17 07 58.8	+4.7
	baz=116						
TIC	Toumodi	74.75	83	*e*P	P	16 58 20.5	-0.1
C36M	Paulatuk	74.86	345	IAMs_20	IAMs_20	17 31 15.9	
	comp=Z,47μm,22.0s						
C36M	Paulatuk	74.86	345	P	P	16 58 18.4	-1.7
	baz=134						
C36M				S	S	17 07 50.5	-4.4
	baz=134						
PACT	Alcochete	74.87	50	*e*P	P	16 58 21.7	+0.9
	comp=Z,2μm,1.8s						
YUK6	Outpost Mounta	74.87	334	P	P	16 58 21.7	+1.1
	baz=118,SNR=25						
YUK6				S	S	17 08 00.3	+4.4
	baz=118						
DBIC	Dimbokro	74.91	83	⇑*i*P	P	16 58 21.4	-0.2
DBIC				IAMs_20	IAMs_20	17 33 57.0	
	comp=Z,285nm,20.3s						
DBIC	Dimbokro	74.91	83	P	P	16 58 20.9	-0.6
	comp=Z,246nm,1.1s,baz=279,slow=4.8,SNR=55						
DBIC				LR	LR	17 28 45.7	
	comp=Z,94μm,20.8s,baz=272,slow=34						
	comp=Z,246nm,1.1s						
DBIC	Dimbokro	74.91	83	P	P	16 58 21.2	-0.3
DBIC	Dimbokro	74.91	83	⇑P	P	16 58 21.9	+0.4
DBIC	Dimbokro	74.91	83	⇑P	P	16 58 21.0	-0.6
PNCL	Nicolau / Gran	74.97	51	*e*P	P	16 58 22.2	+0.8
	comp=Z,686nm,1.6s						
PNCL	Nicolau / Gran	74.97	51	*e*PP	PP	17 01 12.0	+2.5
BCPM	Bancas Point	74.98	333	IAmb	IAmb	16 58 25.4	
	comp=Z,260nm,1.0s						
BCPM				IAMs_20	IAMs_20	17 32 34.9	
	comp=Z,41μm,20.0s						
AVE	Averroes	74.99	56	P	P	16 58 20.9	-0.7
AVE				S	S	17 08 01.9	+4.1
AVE	Averroes	74.99	56	P	P	16 58 23.5	+1.8
AVE	Averroes	74.99	56	⇑P	P	16 58 22.8	+1.1
M30M	Minto, Yukon	75.00	336	IAmb	IAmb	16 58 41.5	
	comp=Z,499nm,1.3s						
M30M				IAMs_20	IAMs_20	17 33 24.3	
	comp=Z,42μm,20.0s						
M30M	Minto, Yukon	75.00	336	P	P	16 58 20.2	-1.0
	baz=120,SNR=112						
M30M				S	S	17 07 58.8	+1.9
	baz=120						
KIC	Kosan Boka	75.02	84	*e*P	P	16 58 22.2	0.0
	comp=Z,246nm,0.6s						
PSBE	So Bento	75.05	49	*e*P	P	16 58 22.8	+0.9
	comp=Z,785nm,1.8s						
PSBE	So Bento	75.05	49	*e*PP	PP	17 01 12.5	+2.3
MESJ	Messejana	75.16	51	*e*P	P	16 58 23.3	+0.8
MESJ				*e*S	S	17 08 00.2	+0.8
MESJ				IAMs_20	IAMs_20	17 24 44.0	
	comp=Z,64μm,29.8s						
MESJ	Messejana	75.16	51	*e*P	P	16 58 24.1	+1.6
	comp=Z,390nm,1.9s						
MESJ	Messejana	75.16	51	*e*P	P	16 58 23.3	+0.8
MESJ				*e*S	S	17 08 00.2	+0.8
OUZM	OUZ	75.17	58	P	P	16 58 25.0	+2.1
YUK4	Talbot Arm	75.18	335	P	P	16 58 21.8	-0.7
	baz=118,SNR=42						
YUK4				S	S	17 08 08.9	+10
	baz=118						
SOEG	Soedalen	75.19	17	*i* P	P	16 58 21.0	-1.0
SOEG				IAmb	IAmb	16 58 41.2	
	comp=Z,25nm,1.0s						
PCVE	Castro Verde	75.26	51	*e*P	P	16 58 24.2	+1.1
	comp=Z,530nm,1.8s						
PCVE	Castro Verde	75.26	51	*e*PP	PP	17 01 14.4	+2.5
PBDV	Barranco-do-Ve	75.27	52	*e*P	P	16 58 25.1	+1.9
	comp=Z,610nm,1.9s						
PINM	Pinnacle	75.32	333	P	P	16 58 23.1	0.0
	baz=116,SNR=9.7						
PINM				S	S	17 08 03.8	+3.3
	baz=116						
PCAS	Casmilo, Conde	75.39	49	*e*P	P	16 58 24.3	+0.5
	comp=Z,1μm,1.6s						
PCAS	Casmilo, Conde	75.39	49	*e*PP	PP	17 01 14.9	+1.9
PMTG	Montargil	75.39	50	*e*P	P	16 58 23.5	-0.4
	comp=Z,576nm,1.9s						
PMTG	Montargil	75.39	50	*e*PP	PP	17 01 15.1	+2.0
EVO	Evora	75.45	50	S	S	17 08 03.9	+1.2
EVO	Evora	75.45	50	*e*P	P	16 58 24.6	+0.4
	comp=Z,572nm,1.7s						
EVO	Evora	75.45	50	*e*PP	PP	17 01 15.7	+2.1
PVAQ	Vaqueiros	75.47	51	*e*P	P	16 58 25.1	+0.8
	comp=Z,450nm,1.9s						
PVAQ				*e*S	S	17 08 11.0	+8.1
PVAQ				*e*LQ	LQ	17 17 58.8	
PVAQ				*e*LR	LR	17 22 10.2	
	comp=Z,24μm,24.0s						
PVAQ	Vaqueiros	75.47	51	P	P	16 58 25.6	+1.3
PVAQ	Vaqueiros	75.47	51	⇑P	P	16 58 25.4	+1.1
PBEJ	Beja	75.47	51	*e*P	P	16 58 25.3	+1.0
	comp=Z,506nm,1.7s						
COI	Coimbra	75.48	49	*e*P	P	16 58 25.3	+1.0
	comp=Z,2μm,1.4s						
COI	Coimbra	75.48	49	*e*PP	PP	17 01 16.1	+2.3
COI	Coimbra	75.48	49	P	P	16 58 25.4	+1.0
COI				IAMs_20	IAMs_20	17 31 12.5	
	comp=Z,23μm,20.0s						
COI	Coimbra	75.48	49	P	P	16 58 25.4	+1.1
COI				pmax	pmax		
	comp=Z,823nm,1.0s						
COI				MLR	MLR		
	comp=Z,23μm,20.0s						
COI	Coimbra	75.48	49	⇑P	P	16 58 24.4	+0.1
ZHG	ZHG	75.65	56	P	P	16 58 27.0	+1.4
PESTR	Estremoz	75.84	50	*e*P	P	16 58 27.4	+0.9
	comp=Z,1μm,1.6s						
PESTR	Estremoz	75.84	50	IAmb	IAmb	16 58 32.3	
	comp=Z,463nm,1.3s						
PESTR	Estremoz	75.84	50	P	P	16 58 27.1	+0.6
PESTR	Estremoz	75.84	50	⇑P	P	16 58 26.8	+0.4
TABL	Table Mountain	75.87	333	IAmb	IAmb	16 58 50.5	
	comp=Z,298nm,1.0s						
PGAV	Gavieira, Arco	75.96	47	*e*P	P	16 58 27.4	+0.2
	comp=Z,562nm,1.9s						
PGAV	Gavieira, Arco	75.96	47	*e*PP	PP	17 01 17.4	-0.5
PGAV				*e*S	S	17 08 15.3	+7.0
PGAV	Gavieira, Arco	75.96	47	*e*LQ	LQ	17 18 22.8	
PGAV				*e*LR	LR	17 22 53.0	
	comp=Z,33μm,22.0s						
LOGN	Logan Glacier	75.97	334	IAmb	IAmb	16 58 47.6	
	comp=Z,313nm,1.3s						
LOGN				IAMs_20	IAMs_20	17 33 20.1	
	comp=Z,50μm,22.0s						
PVIS	Viseu	75.97	48	*e*P	P	16 58 27.7	+0.5
	comp=Z,720nm,1.7s						
ZGR	Zagora	76.03	59	P	P	16 58 30.0	+2.1
KOWA	Kowa	76.04	75	P	P	16 58 28.3	+0.3
KOWA				IAmb	IAmb	16 58 32.5	
	comp=Z,578nm,1.3s						
KOWA	Kowa	76.04	75	⇑P	P	16 58 28.1	+0.1
PCAB	Cabril	76.08	47	*e*P	P	16 58 28.5	+0.7
	comp=Z,590nm,1.6s						
PCAB	Cabril	76.08	47	*e*PP	PP	17 01 21.4	+2.6
PMRV	Marv??o	76.10	49	*e*P	P	16 58 28.4	+0.5
	comp=Z,460nm,1.7s						
PMRV	Marv??o	76.10	49	*e*PP	PP	17 01 20.8	+1.8
PMRV				*e*S	S	17 08 15.5	+5.7
PMRV	Marv??o	76.10	49	*e*LQ	LQ	17 18 30.5	
PMRV				*e*LR	LR	17 22 25.0	
	comp=Z,16μm,22.0s						
YAH	Yahtse	76.11	333	IAMs_20	IAMs_20	17 32 47.7	
	comp=Z,40μm,21.0s						
PCBR	Castelo Branco	76.11	49	*e*P	P	16 58 28.8	+0.8
	comp=Z,643nm,1.7s						
MESA	MESA	76.13	333	IAmb	IAmb	16 58 50.8	
	comp=Z,376nm,1.3s						
MESA				IAMs_20	IAMs_20	17 36 26.2	
	comp=Z,36μm,18.0s						
MESA	MESA	76.13	333	P	P	16 58 26.4	-1.5
	baz=114						
MESA				S	S	17 08 13.2	+3.6
	baz=114						
PBAR	Barrancos	76.14	51	*e*P	P	16 58 29.1	+1.0
	comp=Z,471nm,1.5s						
YUK3	Moose Creek	76.15	335	P	P	16 58 28.1	+0.1
	baz=116,SNR=84						
YUK3				S	S	17 08 14.4	+4.4
	baz=116						
TZRR	Tazzarine	76.16	58	P	P	16 58 30.6	+2.1
MTE	Manteigas	76.17	48	*e*P	P	16 58 28.4	0.0
	comp=Z,513nm,1.8s						
MTE	Manteigas	76.17	48	*e*PP	PP	17 01 19.6	-0.1
MTE				*e*S	S	17 08 16.9	+6.2
MTE	Manteigas	76.17	48	*e*LQ	LQ	17 18 26.8	
MTE				*e*LR	LR	17 22 37.0	
	comp=Z,31μm,24.0s						
MTE	Manteigas	76.17	48	IAMs_20	IAMs_20	17 32 27.7	
	comp=Z,23μm,19.0s						
MTE	Manteigas	76.17	48	⇑P	P	16 58 28.4	0.0
CTGM	Chitina Glacie	76.18	334	IAmb	IAmb	16 58 48.2	
	comp=Z,408nm,1.3s						
CTGM				IAMs_20	IAMs_20	17 33 26.6	
	comp=Z,53μm,22.0s						
CTG	Chitna Glacier	76.18	334	P	P	16 58 27.7	-0.4
	baz=115,SNR=49						
CTG				S	S	17 08 15.5	+5.4
	baz=115						
POLO	Lamas de Olo	76.18	47	*e*P	P	16 58 29.1	+0.6
	comp=Z,361nm,1.6s						
POLO	Lamas de Olo	76.18	47	*e*PP	PP	17 01 19.7	-0.1
PVRL	Vila Real	76.22	48	*e*P	P	16 58 29.1	+0.5
	comp=Z,646nm,1.9s						
TULEG	Thule	76.24	3	IAmb	IAmb	16 58 48.2	
	comp=Z,391nm,1.4s						
TULEG				IAMs_20	IAMs_20	17 33 07.4	
	comp=Z,29μm,20.0s						
TULEG	Thule	76.24	3	*i* P	P	16 58 25.0	-2.9
TULEG				IAmb	IAmb	16 58 37.4	
	comp=Z,43nm,0.8s						
TULEG	Thule	76.24	3	⇑P	P	16 58 27.2	-0.7
GRNC	Granite Creek	76.27	333	IAmb	IAmb	16 58 48.3	
	comp=Z,577nm,1.5s						
GRNC				IAMs_20	IAMs_20	17 33 04.9	
	comp=Z,52μm,21.0s						
MLH	Mauna Loa	76.34	290	P	P	16 58 29.6	-0.4
BARN	Barnard Glacie	76.36	334	IAmb	IAmb	16 58 49.3	
	comp=Z,439nm,1.4s						
BARN				IAMs_20	IAMs_20	17 33 32.4	
	comp=Z,52μm,22.0s						
SUMG	Summit	76.46	12	IAmb	IAmb	16 58 33.0	
	comp=Z,316nm,0.9s						
SUMG				IAMs_20	IAMs_20	17 34 60.0	
	comp=Z,23μm,21.0s						
SUMG	Summit	76.46	12	*i* P	P	16 58 28.1	-1.7
SUMG				IAmb	IAmb	16 58 32.6	
	comp=Z,194nm,0.9s						
SUMG	Summit	76.46	12	⇑P	P	16 58 29.1	-0.6
ISLE	Juniper Island	76.48	333	IAmb	IAmb	16 58 43.5	
	comp=Z,813nm,1.7s						
ISLE				IAMs_20	IAMs_20	17 33 09.4	
	comp=Z,40μm,20.0s						
J29M	Klondike Camp	76.48	338	P	P	16 58 29.2	-0.4
	baz=119						
J29M				S	S	17 08 16.4	+3.3
	baz=119						
SFS	San Fernando	76.49	53	P	P	16 58 30.9	+0.7
SFS				S	S	17 08 22.1	+8.0
SFS	San Fernando	76.49	53	IAMs_20	IAMs_20	17 32 18.3	
	comp=Z,29μm,21.0s						
POHA	Pohakuloa	76.50	290	P	P	16 58 32.1	+1.3
POHA	Pohakuloa	76.50	290	IAMs_20	IAMs_20	17 27 05.1	
	comp=Z,34μm,18.0s						
POHA	Pohakuloa	76.50	290	⇑P	P	16 58 33.8	+2.9
SNH	Sunshine Point	76.53	333	IAmb	IAmb	16 58 42.5	
	comp=Z,293nm,1.0s						
SNH				IAMs_20	IAMs_20	17 33 15.9	
	comp=Z,35μm,19.0s						
BORG	Borgarnes	76.58	22	LR	LR	17 30 33.0	
	comp=Z,15μm,21.2s,baz=246,slow=34						
BORG	Borgarnes	76.58	22	P	P	16 58 31.3	+1.2
BORG	Borgarnes	76.58	22	IAMs_20	IAMs_20	17 31 11.5	
	comp=Z,24μm,22.0s						
BORG	Borgarnes	76.58	22	P	P	16 58 31.3	+1.2
BORG				pmax	pmax		
	comp=Z,1μm,1.9s						
BORG				MLR	MLR		
	comp=Z,24μm,22.0s						
CNIL	Conil	76.60	53	P	P	16 58 33.0	+2.2
BVCY	Beaver Creek	76.60	335	P	P	16 58 30.1	-0.2
	baz=116,SNR=92						
BVCY				S	S	17 08 18.9	+4.4
	baz=116						
MVO	Moncorvo	76.71	48	*e*P	P	16 58 31.9	+0.5
	comp=Z,814nm,1.6s						
MVO	Moncorvo	76.71	48	*e*PP	PP	17 01 23.8	-0.4
MVO				*e*S	S	17 08 20.4	+3.9
MVO	Moncorvo	76.71	48	*e*LQ	LQ	17 18 45.5	
MVO				*e*LR	LR	17 23 15.8	
	comp=Z,33μm,24.0s						
BGLC	Bering Glacier	76.71	333	P	P	16 58 29.7	-1.2
	baz=113						
BGLC				S	S	17 08 19.5	+3.8
	baz=113						
DAWY	Dawson	76.75	337	IAmb	IAmb	16 58 51.0	
	comp=Z,335nm,1.2s						
DAWY	Dawson	76.75	337	P	P	16 58 30.6	-0.5
	baz=118,SNR=122						
DAWY				S	S	17 08 17.8	+1.7
	baz=118						
DAWY	Dawson	76.75	337	⇑P	P	16 58 31.2	+0.1
TGL	Tana Glacier	76.76	333	IAmb	IAmb	16 58 35.3	
	comp=Z,261nm,0.9s						
TGL				IAMs_20	IAMs_20	17 33 17.9	
	comp=Z,33μm,21.0s						
GOLM	Goulmima	76.81	58	P	P	16 58 35.0	+2.7
SICH	Sidi Chahed	76.84	55	P	P	16 58 35.0	+2.7
INK	Inuvik	76.88	342	P	P	16 58 32.0	+0.3
	comp=Z,302nm,1.0s,baz=110,slow=5.7,SNR=130						
INK				LR	LR	17 35 11.7	
	comp=Z,35μm,19.4s,baz=118,slow=38						
	comp=Z,302nm,1.0s						
INK	Inuvik	76.88	342	P	P	16 58 30.7	-1.0
INK				IAmb	IAmb	16 58 51.9	
	comp=Z,504nm,1.2s						
INK	Inuvik	76.88	342	P	P	16 58 32.0	+0.3
INK	Inuvik	76.88	342	P	P	16 58 30.8	-0.8
	baz=124,SNR=280						
INK				S	S	17 08 17.6	+0.4
	baz=124						
INK	Inuvik	76.88	342	⇑P	P	16 58 31.5	-0.2
EPYK	Eagle Plains	76.89	340	IAmb	IAmb	16 58 52.2	
	comp=Z,368nm,1.1s						
EPYK				IAMs_20	IAMs_20	17 36 50.8	
	comp=Z,21μm,18.0s						
EPYK	Eagle Plains	76.89	340	P	P	16 58 32.3	+0.5
	baz=120,SNR=78						
EPYK				S	S	17 08 18.7	+1.2
	baz=120						
CZD	Col de Zad	76.92	56	P	P	16 58 35.3	+2.3
SUCK	Suckling Hills	76.92	332	IAMs_20	IAMs_20	17 36 22.3	
	comp=Z,41μm,18.0s						
I29M	Ogilvie Camp,	76.95	338	IAmb	IAmb	16 58 53.2	
	comp=Z,516nm,1.2s						
I29M				IAMs_20	IAMs_20	17 35 39.6	
	comp=Z,25μm,20.0s						
I29M	Ogilvie Camp,	76.95	338	P	P	16 58 32.1	-0.1
	baz=119,SNR=126						
I29M				S	S	17 08 21.4	+3.2
	baz=119						
A36M	Sachs Harbour	76.96	347	IAmb	IAmb	16 58 34.4	
	comp=Z,303nm,1.0s						
A36M	Sachs Harbour	76.96	347	P	P	16 58 30.4	-1.6
	baz=133,SNR=62						
A36M				S	S	17 08 14.8	-3.2
	baz=133						
CHEFC	Chefchaouen	76.97	54	P	P	16 58 36.0	+2.9
M27K	Edge Creek, AK	77.00	335	IAMs_20	IAMs_20	17 34 21.3	
	comp=Z,46μm,19.0s						
M27K	Edge Creek, AK	77.00	335	P	P	16 58 32.8	+0.1
	baz=115						
M27K				S	S	17 08 22.2	+3.1
	baz=115						
SMIR	Smir Dam	77.03	54	P	P	16 58 35.2	+2.0
PBRG	Braganca	77.04	47	*e*P	P	16 58 34.0	+0.7
	comp=Z,631nm,1.7s						
CEU	Ceuta	77.07	53	P	P	16 58 34.0	+0.6
CEU				S	S	17 08 32.9	+12
VAL	Valentia	77.09	36	⇑P	P	16 58 33.9	+0.7
MCARA	McCarthy VSAT	77.10	334	IAmb	IAmb	16 58 58.0	
	comp=Z,332nm,0.9s						
MCARA				IAMs_20	IAMs_20	17 33 54.2	
	comp=Z,48μm,22.0s						
MCARA	McCarthy VSAT	77.10	334	P	P	16 58 33.1	0.0
	baz=114,SNR=96						
MCARA				S	S	17 08 22.6	+2.7
	baz=114						
LCRM	LCR	77.16	56	P	P	16 58 36.1	+1.9
LIJA	Lijar	77.20	52	P	P	16 58 35.2	+0.9
VRDI	Verde Repeater	77.23	334	IAmb	IAmb	16 58 54.3	
	comp=Z,421nm,1.2s						
VRDI				IAMs_20	IAMs_20	17 33 34.2	
	comp=Z,38μm,22.0s						
HLK	Haleakala	77.25	291	P	P	16 58 36.2	+1.1
HMT	Hamilton	77.25	333	IAmb	IAmb	16 58 54.0	
	comp=Z,732nm,1.4s						
HMT				IAMs_20	IAMs_20	17 32 00.8	
	comp=Z,36μm,22.0s						
MDT	Midelt	77.25	57	LR	LR	17 30 18.2	
	comp=Z,17μm,21.8s,baz=274,slow=34						
MDT	Midelt	77.25	57	P	P	16 58 36.4	+1.7
L27K	Beaver Creek,	77.28	336	IAMs_20	IAMs_20	17 32 54.6	
	comp=Z,22μm,21.0s						
L27K	Beaver Creek,	77.28	336	P	P	16 58 34.9	+0.8
	baz=115						
L27K				S	S	17 08 25.4	+3.5
	baz=115						

GLB	**Gilahina Butte**	**77.47**	**334**	IAmb	IAmb	16 58 55.6	
	comp=Z,347nm,1.1s						
GLB				IAMs_20	IAMs_20	17 33 52.6	
	comp=Z,38µm,22.0s						
M26K	**Nabesna, AK**	**77.50**	**335**	IAmb	IAmb	16 58 55.6	
	comp=Z,429nm,1.3s						
M26K				IAMs_20	IAMs_20	17 34 34.3	
	comp=Z,37µm,19.0s						
M26K	**Nabesna, AK**	**77.50**	**335**	P	**P**	**16 58 35.1**	**-0.3**
	baz=114,SNR=68						
M26K				S	**S**	**17 08 26.4**	**+2.1**
	baz=114						
BMRM	**Bremner River**	**77.64**	**333**	IAmb	IAmb	16 58 40.0	
	comp=Z,300nm,0.8s						
BMRM				IAMs_20	IAMs_20	17 37 23.2	
	comp=Z,29µm,20.0s						
BMRM	**Bremner River**	**77.64**	**333**	P	**P**	**16 58 35.8**	**-0.4**
	baz=112,SNR=118						
BMRM				S	**S**	**17 08 26.6**	**+0.7**
	baz=112						
XMAS	**Kiritimati**	**77.72**	**272**	P	**P**	**16 58 37.6**	**+0.1**
XMAS	**Kiritimati**	**77.72**	**272**	⇑P	P	16 58 44.8	+7.2
EGAK	**Eagle**	**77.75**	**337**	IAMs_20	IAMs_20	17 35 05.3	
	comp=Z,38µm,19.0s						
EGAK	**Eagle**	**77.75**	**337**	P	**P**	**16 58 37.0**	**+0.3**
	baz=116,SNR=189						
EGAK				S	**S**	**17 08 28.6**	**+1.8**
	baz=116						
K27K	**Chicken**	**77.79**	**336**	IAMs_20	IAMs_20	17 34 58.9	
	comp=Z,31µm,21.0s						
K27K	**Chicken**	**77.79**	**336**	P	**P**	**16 58 38.2**	**+1.2**
	baz=115						
K27K				S	**S**	**17 08 30.8**	**+3.5**
	baz=115						
PVLZ	**Peæn de**	**77.82**	**54**	P	**P**	**16 58 37.3**	**-0.4**
PVLZ				S	**S**	**17 08 32.0**	**+3.3**
N25K	**Chitina, Valde**	**77.88**	**334**	IAmb	IAmb	16 59 03.2	
	comp=Z,338nm,1.3s						
N25K				IAMs_20	IAMs_20	17 36 34.5	
	comp=Z,20µm,20.0s						
N25K	**Chitina, Valde**	**77.88**	**334**	P	**P**	**16 58 37.7**	**+0.2**
	baz=112,SNR=44						
N25K				S	**S**	**17 08 30.8**	**+2.3**
	baz=112						
MID	**Middleton Isla**	**77.89**	**331**	IAmb	IAmb	16 58 51.2	
	comp=Z,568nm,1.4s						
L26K	**Log Cabin Wild**	**77.90**	**335**	IAmb	IAmb	16 58 57.9	
	comp=Z,603nm,1.4s						
L26K	**Log Cabin Wild**	**77.90**	**335**	P	**P**	**16 58 37.9**	**+0.3**
	baz=114,SNR=98						
L26K				S	**S**	**17 08 31.4**	**+2.8**
	baz=114						
Q23K	**Middleton Isla**	**77.90**	**331**	IAmb	IAmb	16 58 51.2	
	comp=Z,600nm,1.4s						
Q23K	**Middleton Isla**	**77.90**	**331**	P	**P**	**16 58 38.3**	**+0.7**
	baz=110						
Q23K				S	**S**	**17 08 30.8**	**+2.3**
	baz=110						
IGLA	**Glengowla, Co**	**78.01**	**35**	*e*P	**P**	**16 58 38.6**	**+0.4**
EYAK	**Cordova Ski Ar**	**78.01**	**333**	IAmb	IAmb	16 59 03.8	
	comp=Z,401nm,1.6s						
EYAK	**Cordova Ski Ar**	**78.01**	**333**	P	**P**	**16 58 38.7**	**+0.6**
	baz=111,SNR=8.0						
EYAK				S	**S**	**17 08 29.6**	**-0.1**
	baz=111						
PALE	**Palemas**	**78.12**	**54**	P	**P**	**16 58 41.0**	**+1.6**
HIN	**Hinchinbrook I**	**78.31**	**332**	IAMs_20	IAMs_20	17 37 15.9	
	comp=Z,27µm,21.0s						
FID	**Port Fidalgo**	**78.42**	**333**	IAMs_20	IAMs_20	17 37 54.1	
	comp=Z,27µm,22.0s						
HARP	**HAARP**	**78.42**	**334**	P	**P**	**16 58 40.1**	**-0.3**
	baz=112,SNR=8.0						
HARP				S	**S**	**17 08 35.8**	**+1.6**
	baz=112						
KLU	**Klutina**	**78.43**	**333**	IAMs_20	IAMs_20	17 34 48.0	
	comp=Z,31µm,21.0s						
KLU	**Klutina**	**78.43**	**333**	P	**P**	**16 58 40.2**	**-0.4**
	baz=111,SNR=84						
KLU				S	**S**	**17 08 35.8**	**+1.3**
	baz=111						
PAB	**San Pablo**	**78.44**	**50**	P	**P**	**16 58 42.1**	**+1.0**
PAB				IAmb	IAmb	16 58 44.8	
	comp=Z,352nm,1.1s						
PAB	**San Pablo**	**78.44**	**50**	IAMs_20	IAMs_20	17 31 35.7	
	comp=Z,22µm,21.0s						
PAB	**San Pablo**	**78.44**	**50**	P	**P**	**16 58 42.5**	**+1.4**
PAB	**San Pablo**	**78.44**	**50**	P	**P**	**16 58 42.3**	**+1.2**
PAB	**San Pablo**	**78.44**	**50**	⇑P	**P**	**16 58 41.7**	**+0.5**
DOT	**Dot Lake**	**78.44**	**336**	IAmb	IAmb	16 59 00.7	
	comp=Z,454nm,1.2s						
SCRK	**Sand Creek**	**78.54**	**336**	IAMs_20	IAMs_20	17 36 21.8	
	comp=Z,28µm,20.0s						
SCRK	**Sand Creek**	**78.54**	**336**	P	**P**	**16 58 40.8**	**-0.4**
	baz=113,SNR=188						
SCRK				S	**S**	**17 08 36.4**	**+0.8**
	baz=113						
J26L	**Joseph Creek**	**78.58**	**337**	P	**P**	**16 58 40.7**	**-0.7**
	baz=114,SNR=190						
J26L				S	**S**	**17 08 38.5**	**+2.6**
	baz=114						
GLI	**Glacier Island**	**78.75**	**333**	IAMs_20	IAMs_20	17 38 01.5	
	comp=Z,32µm,21.0s						
GLI	**Glacier Island**	**78.75**	**333**	P	**P**	**16 58 41.6**	**-0.7**
	baz=110,SNR=35						
GLI				S	**S**	**17 08 36.5**	**-1.2**
	baz=110						
ESDC	**Sonseca Array**	**78.75**	**50**	P	**P**	**16 58 44.0**	**+1.1**
	comp=Z,257nm,1.1s,baz=267,slow=5.4,SNR=363						
ESDC				PKPPKP	**P'P'df**	**17 25 40.7**	**-0.9**
	comp=Z,2.9nm,1.1s,baz=60,slow=2.3,SNR=9.8						
ESDC				LR	LR	17 32 16.3	
	comp=Z,14µm,20.0s,baz=246,slow=35						
	comp=Z,257nm,1.1s						
M24K	**Tolsona, Glenn**	**78.76**	**334**	IAmb	IAmb	16 59 02.7	
	comp=Z,558nm,1.2s						
M24K				IAMs_20	IAMs_20	17 35 34.7	
	comp=Z,26µm,22.0s						
M24K	**Tolsona, Glenn**	**78.76**	**334**	P	**P**	**16 58 42.6**	**+0.2**
	baz=111,SNR=63						
M24K				S	**S**	**17 08 36.9**	**-1.0**
	baz=111						
PAX	**Paxson**	**78.77**	**335**	P	**P**	**16 58 42.4**	**-0.1**
PAX				IAmb	IAmb	16 59 02.2	
	comp=Z,502nm,1.4s						
PAX	**Paxson**	**78.77**	**335**	P	**P**	**16 58 42.4**	**-0.1**
PAX				pmax	pmax		
	comp=Z,502nm,1.4s						
PAX	**Paxson**	**78.77**	**335**	P	**P**	**16 58 41.2**	**-1.3**
	baz=112,SNR=116						
PAX				S	**S**	**17 08 38.6**	**+0.6**
	baz=112						
RIDG	**Independent Ri**	**78.80**	**336**	IAmb	IAmb	16 59 02.7	
	comp=Z,334nm,1.1s						
RIDG				IAMs_20	IAMs_20	17 35 56.6	
	comp=Z,33µm,19.0s						
RIDG	**Independent Ri**	**78.80**	**336**	P	**P**	**16 58 42.2**	**-0.4**
	baz=112,SNR=159						
RIDG				S	**S**	**17 08 39.8**	**+1.5**
	baz=112						
GOG	**Mont Gurugu**	**78.89**	**54**	P	**P**	**16 58 45.0**	**+1.3**
KIP	**Kipapa**	**78.94**	**292**	IAMs_20	IAMs_20	17 28 07.5	
	comp=Z,35µm,19.0s						
KIP	**Kipapa**	**78.94**	**292**	*i*P	**P**	**16 58 44.6**	**+0.5**
KIP				pmax	pmax		
	comp=Z,777nm,1.6s						
KIP				MLR	MLR		
	comp=Z,14µm,14.0s						
JBK	**JBK**	**79.13**	**55**	P	**P**	**16 58 46.2**	**+1.0**
SCM	**Sheep Creek Mo**	**79.18**	**333**	IAmb	IAmb	16 59 04.0	
	comp=Z,521nm,1.2s						
SCM				IAMs_20	IAMs_20	17 34 59.8	
	comp=Z,31µm,21.0s						
SCM	**Sheep Creek Mo**	**79.18**	**333**	P	**P**	**16 58 43.6**	**-1.1**
	baz=110,SNR=95						
SCM				S	**S**	**17 08 42.8**	**+0.4**
	baz=110						
K24K	**Donnelly Dome**	**79.21**	**336**	P	**P**	**16 58 44.1**	**-0.7**
	baz=111,SNR=66						
K24K				S	**S**	**17 08 43.5**	**+0.9**
	baz=111						
SCO	**Scoresbysund**	**79.23**	**17**	P	**P**	**16 58 44.3**	**-0.4**
SCO				IAMs_20	IAMs_20	17 32 32.2	
	comp=Z,24µm,22.0s						
SCO	**Scoresbysund**	**79.23**	**17**	P	**P**	**16 58 44.3**	**-0.4**
SCO				pmax	pmax		
	comp=Z,120nm,1.1s						
SCO	**Scoresbysund**	**79.23**	**17**	*i*P	**P**	**16 58 43.2**	**-1.5**
SCO				IAmb	IAmb	16 59 05.9	
	comp=Z,28nm,1.0s						
SCO	**Scoresbysund**	**79.23**	**17**	⇑P	**P**	**16 58 44.5**	**-0.2**
SCO				⇓P	**P**	**16 58 45.1**	**+0.5**
IWEX	**Carrickbyrne,**	**79.27**	**37**	*e*P	**P**	**16 58 45.6**	**+0.4**
IWEX				IAMs_20	IAMs_20	17 25 19.8	
	comp=Z,36µm,33.1s						
TAF	**Taforalt**	**79.31**	**55**	P	**P**	**16 58 48.0**	**+1.9**
J25K	**Salcha River,**	**79.34**	**336**	IAmb	IAmb	16 59 05.6	
	comp=Z,322nm,1.2s						
J25K				IAMs_20	IAMs_20	17 37 06.9	
	comp=Z,33µm,18.0s						
J25K	**Salcha River,**	**79.34**	**336**	P	**P**	**16 58 45.7**	**+0.2**
	baz=112,SNR=141						
J25K				S	**S**	**17 08 45.2**	**+1.1**
	baz=112						
M23K	**Glacier View**	**79.34**	**333**	P	**P**	**16 58 45.1**	**-0.4**
	baz=109,SNR=49						
M23K				S	**S**	**17 08 44.0**	**0.0**
	baz=109						
CHAS	**Isla Isabel II**	**79.34**	**54**	P	**P**	**16 58 46.0**	**-0.1**
CHAS				S	S	17 08 56.1	+11
UCM	**Universidad Co**	**79.39**	**49**	P	**P**	**16 58 46.0**	**-0.3**
UCM				S	**S**	**17 08 49.2**	**+3.8**
TDRA	**Tendrara**	**79.43**	**57**	P	**P**	**16 58 49.0**	**+2.1**
KNK	**Knik Glacier**	**79.55**	**333**	IAmb	IAmb	16 59 04.5	
	comp=Z,254nm,1.0s						
KNK				IAMs_20	IAMs_20	17 39 19.6	
	comp=Z,26µm,22.0s						
KNK	**Knik Glacier**	**79.55**	**333**	P	**P**	**16 58 46.2**	**-0.4**
	baz=108,SNR=62						
KNK				S	**S**	**17 08 46.7**	**+0.5**
	baz=108						
EUNU	**Eureka**	**79.60**	**359**	⇑P	**P**	**16 58 46.4**	**-0.2**
SEW	**Seward**	**79.61**	**331**	IAmb	IAmb	16 58 59.6	
	comp=Z,664nm,1.8s						
SEW	**Seward**	**79.61**	**331**	P	**P**	**16 58 46.5**	**-0.4**
	baz=107,SNR=19						
SEW				S	**S**	**17 08 46.7**	**0.0**
	baz=107						
WAT6	**Susitna Watana**	**79.61**	**334**	P	**P**	**16 58 46.3**	**-0.9**
	baz=109,SNR=154						
WAT6				S	**S**	**17 08 46.8**	**-0.4**
	baz=109						
SML	**Sawmill**	**79.62**	**333**	IAMs_20	IAMs_20	17 38 04.8	
	comp=Z,30µm,22.0s						
SML	**Sawmill**	**79.62**	**333**	P	**P**	**16 58 46.6**	**-0.5**
	baz=109,SNR=71						
SML				S	**S**	**17 08 47.2**	**+0.2**
	baz=109						
DHY	**Denali Highway**	**79.62**	**335**	IAMs_20	IAMs_20	17 35 16.4	
	comp=Z,36µm,20.0s						
DHY	**Denali Highway**	**79.62**	**335**	P	**P**	**16 58 46.9**	**-0.3**
	baz=110,SNR=16						
DHY				S	**S**	**17 08 46.8**	**-0.4**
	baz=110						
CCA1	**Carnmenellis**	**79.74**	**39**	⇑*e*P	**P**	**16 58 48.5**	**+0.6**
CCA1				IAMs_20	IAMs_20	17 26 45.5	
	comp=Z,42µm,25.0s						
O22K	**Cooper Landing**	**79.85**	**332**	IAMs_20	IAMs_20	17 38 52.6	
	comp=Z,34µm,22.0s						
O22K	**Cooper Landing**	**79.85**	**332**	P	**P**	**16 58 47.5**	**-0.7**
	baz=107,SNR=15						
O22K				S	**S**	**17 08 48.5**	**-0.8**
	baz=107						
GHO	**Glory Hole Cre**	**79.87**	**333**	IAmb	IAmb	16 58 51.6	
	comp=Z,216nm,0.9s						
GHO				IAMs_20	IAMs_20	17 38 13.2	
	comp=Z,32µm,22.0s						
HDA	**Harding Lake**	**79.90**	**336**	IAmb	IAmb	16 59 08.0	
	comp=Z,507nm,1.3s						
HDA				IAMs_20	IAMs_20	17 36 49.8	
	comp=Z,37µm,19.0s						
HDA	**Harding Lake**	**79.90**	**336**	P	**P**	**16 58 48.2**	**-0.4**
	baz=110,SNR=60						
HDA				S	**S**	**17 08 49.2**	**-0.7**
	baz=110						
HDA				S	**S**	**17 08 49.2**	**-0.7**
	baz=110						
ILTH	**Belurgan, Co L**	**79.91**	**35**	⇑*e*P	**P**	**16 58 48.5**	**-0.2**
PMR	**Palmer**	**79.91**	**333**	P	**P**	**16 58 48.3**	**-0.2**
PMR	**Palmer**	**79.91**	**333**	P	**P**	**16 58 48.3**	**-0.2**
PMR				pmax	pmax		
	comp=Z,161nm,1.2s						
PMR	**Palmer**	**79.91**	**333**	P	**P**	**16 58 47.4**	**-1.1**
	baz=108						
PMR				S	**S**	**17 08 49.6**	**-0.3**
	baz=108						
FIGM	**Figuig**	**79.97**	**58**	P	**P**	**16 58 52.0**	**+2.2**
ILAR	**Eielson Array**	**80.01**	**336**	P	**P**	**16 58 48.5**	**-0.5**
	comp=Z,58nm,0.9s,baz=120,slow=3.6,SNR=134						
ILAR				PP	**PP**	**17 01 50.5**	**-0.6**
	comp=Z,18nm,1.0s,baz=108,slow=6.2,SNR=4.2						
ILAR				PKKP	**PKKPdf**	**17 17 22.4**	**-3.3**
	comp=Z,1.2nm,1.0s,baz=313,slow=2.8,SNR=3.1						
ILAR				PKKPbc	**PKKPbc**	**17 17 33.2**	**-3.7**
	comp=Z,0.6nm,0.7s,baz=348,slow=4.6,SNR=4.5						
ILAR				LR	LR	17 36 25.3	
	comp=Z,30µm,18.9s,baz=104,slow=37						
	comp=Z,58nm,0.9s						
RC01	**Rabbit Creek A**	**80.03**	**332**	IAmb	IAmb	16 59 12.6	
	comp=Z,427nm,1.3s						
RC01				IAMs_20	IAMs_20	17 38 41.6	
	comp=Z,25µm,20.0s						
RC01	**Rabbit Creek A**	**80.03**	**332**	P	**P**	**16 58 48.8**	**-0.4**
	baz=107,SNR=29						
RC01				S	**S**	**17 08 51.1**	**-0.2**
	baz=107						
WAT1	**Susitna Watana**	**80.05**	**334**	P	**P**	**16 58 48.9**	**-0.5**
	baz=109						
WAT1				S	**S**	**17 08 50.7**	**-0.7**
	baz=109						
BRSE	**Bradley Lake S**	**80.12**	**331**	P	**P**	**16 58 49.3**	**-0.5**
	baz=106,SNR=58						
BRSE				S	**S**	**17 08 52.8**	**+0.5**
	baz=106						
BMAR	**Burnt Mountain**	**80.13**	**339**	P	**P**	**16 58 49.8**	**0.0**
GMM	**Mts of Mourne**	**80.18**	**35**	⇑*e*P	**P**	**16 58 50.6**	**+0.5**
BRLK	**Bradley Lake**	**80.20**	**331**	IAmb	IAmb	16 58 53.3	
	comp=Z,267nm,0.8s						
BRLK				IAMs_20	IAMs_20	17 33 10.1	
	comp=Z,25µm,21.0s						
FIS	**Fire Island**	**80.28**	**332**	IAMs_20	IAMs_20	17 38 49.9	
	comp=Z,23µm,21.0s						
CCB	**Clear Creek Bu**	**80.33**	**336**	IAMs_20	IAMs_20	17 37 12.2	
	comp=Z,32µm,18.0s						
POKR	**Poker Plat Res**	**80.35**	**337**	IAmb	IAmb	16 59 16.5	
	comp=Z,640nm,1.9s						
POKR				IAMs_20	IAMs_20	17 37 46.4	
	comp=Z,44µm,19.0s						
POKR	**Poker Plat Res**	**80.35**	**337**	P	**P**	**16 58 50.5**	**-0.4**
	baz=110,SNR=23						
POKR				S	**S**	**17 08 53.4**	**-1.1**
	baz=110						
RND	**Reindeer**	**80.36**	**335**	IAMs_20	IAMs_20	17 35 39.0	
	comp=Z,36µm,21.0s						
HTL	**Hartland**	**80.37**	**38**	⇑*e*P	**P**	**16 58 52.2**	**+0.9**
HTL				IAMs_20	IAMs_20	17 26 19.6	
	comp=Z,51µm,27.9s						
WRH	**Wood River Hil**	**80.39**	**336**	IAMs_20	IAMs_20	17 36 53.7	
	comp=Z,36µm,19.0s						
RSBS	**Rosebush, Pemb**	**80.40**	**37**	⇑*e*P	**P**	**16 58 51.3**	**-0.1**
RSBS				IAmb	IAmb	16 58 56.5	
	comp=Z,892nm,1.7s						
RSBS				IAMs_20	IAMs_20	17 26 18.9	
	comp=Z,42µm,27.6s						
M22K	**Willow**	**80.41**	**333**	P	**P**	**16 58 50.5**	**-0.8**
M22K				IAmb	IAmb	16 59 11.4	
	comp=Z,638nm,1.2s						
M22K				IAMs_20	IAMs_20	17 38 07.4	
	comp=Z,24µm,21.0s						
M22K	**Willow**	**80.41**	**333**	P	**P**	**16 58 50.2**	**-1.0**
	baz=107,SNR=21						
M22K				S	**S**	**17 08 53.4**	**-1.7**
	baz=107						
COLA	**College**	**80.43**	**336**	P	**P**	**16 58 51.1**	**-0.2**
COLA				IAmb	IAmb	16 59 15.4	
	comp=Z,595nm,1.9s						
COLA	**College**	**80.43**	**336**	IAMs_20	IAMs_20	17 36 24.8	
	comp=Z,27µm,19.0s						
COLA	**College**	**80.43**	**336**	*c* *i*P	**P**	**16 58 50.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,125nm,1.1s						
COLA				MLR	MLR		
	comp=Z,26µm,19.0s						
COLA	**College**	**80.43**	**336**	P	**P**	**16 58 51.0**	**-0.3**
	baz=110						
COLA				S	**S**	**17 08 59.1**	**+3.8**
	baz=110						
COLA	**College**	**80.43**	**336**	⇑P	**P**	**16 58 50.8**	**-0.5**
TCOL	**CIGO, UAF Yank**	**80.43**	**336**	IAmb	IAmb	16 59 15.4	
	comp=Z,553nm,1.8s						
TCOL				IAMs_20	IAMs_20	17 36 24.8	
	comp=Z,29µm,20.0s						
TCOL	**CIGO, UAF Yank**	**80.43**	**336**	P	**P**	**16 58 50.7**	**-0.6**
	baz=110,SNR=8.9						
TCOL				S	**S**	**17 08 52.9**	**-2.5**
	baz=110						
KDAK	**Kodiak Island**	**80.53**	**329**	P	**P**	**16 58 51.6**	**-0.3**
	comp=Z,36nm,0.9s,baz=131,slow=2.2,SNR=16						
KDAK				LR	LR	17 34 55.4	
	comp=Z,18µm,20.6s,baz=129,slow=36						
	comp=Z,36nm,0.9s						
KDAK	**Kodiak Island**	**80.53**	**329**	P	**P**	**16 58 51.9**	**0.0**
KDAK	**Kodiak Island**	**80.53**	**329**	IAMs_20	IAMs_20	17 33 41.3	
	comp=Z,25µm,20.0s						
KDAK	**Kodiak Island**	**80.53**	**329**	P	**P**	**16 58 50.6**	**-1.3**
	baz=104						
KDAK				S	**S**	**17 08 57.4**	**+0.8**
	baz=104						
HOM	**Homer**	**80.54**	**331**	P	**P**	**16 58 51.2**	**-0.7**
	baz=105						
HOM				S	**S**	**17 08 57.1**	**+0.5**
	baz=105						
CAPN	**Captain Cook N**	**80.61**	**332**	IAMs_20	IAMs_20	17 39 25.7	
	comp=Z,31µm,20.0s						
CAPN	**Captain Cook N**	**80.61**	**332**	P	**P**	**16 58 51.8**	**-0.5**
	baz=106						
CAPN				S	**S**	**17 08 58.7**	**+1.4**
	baz=106						
MDM	**Murphy Dome**	**80.61**	**336**	IAMs_20	IAMs_20	17 36 30.5	
	comp=Z,30µm,20.0s						
CUT	**Chulitna**	**80.67**	**334**	P	**P**	**16 58 51.6**	**-1.0**
	baz=107,SNR=33						
CUT				S	**S**	**17 08 56.5**	**-1.3**
	baz=107						
OTSS	**Djebel Tessala**	**80.69**	**54**	P	P	16 58 59.0	+5.5
OHAK	**Old Harbor**	**80.76**	**328**	P	**P**	**16 58 52.9**	**-0.3**
	baz=104,SNR=14						
OHAK				S	**S**	**17 08 58.6**	**-0.4**
	baz=104						
YRC	**Rhoscolyn**	**80.76**	**36**	⇑*e*P	**P**	**16 58 53.6**	**+0.3**
H24K	**Noodor Dome**	**80.77**	**337**	IAmb	IAmb	16 59 13.3	
	comp=Z,324nm,1.2s						
H24K				IAMs_20	IAMs_20	17 35 41.6	
	comp=Z,48µm,22.0s						
H24K	**Noodor Dome**	**80.77**	**337**	P	**P**	**16 58 53.0**	**-0.2**
	baz=110,SNR=150						
H24K				S	**S**	**17 09 00.6**	**+1.6**
	baz=110						
CART	**Cartagena**	**80.77**	**52**	P	**P**	**16 58 51.7**	**-2.0**
CART				S	**S**	**17 09 02.0**	**+2.0**
NEA2	**Nenana**	**80.83**	**336**	IAmb	IAmb	16 59 12.5	
	comp=Z,389nm,1.3s						
NEA2				IAMs_20	IAMs_20	17 38 06.3	
	comp=Z,23µm,20.0s						
NEA2	**Nenana**	**80.83**	**336**	P	**P**	**16 58 53.1**	**-0.4**
	baz=108,SNR=111						
NEA2				S	**S**	**17 08 59.9**	**+0.3**
	baz=108						
WPS	**Cemaes, Angles**	**80.84**	**36**	⇑*e*P	**P**	**16 58 54.0**	**+0.3**
BWN	**Browne**	**80.86**	**335**	IAmb	IAmb	16 59 18.6	
	comp=Z,731nm,1.4s						
BWN				IAMs_20	IAMs_20	17 36 59.3	
	comp=Z,31µm,20.0s						
WLF1	**Llynfaes**	**80.88**	**36**	⇑*e*P	**P**	**16 58 53.8**	**-0.1**
WLF1				IAmb	IAmb	16 58 59.0	
	comp=Z,2µm,1.8s						
WIM	**Isle of Man**	**80.89**	**35**	⇑*e*P	**P**	**16 58 54.2**	**+0.2**
RAR	**Rarotonga**	**80.90**	**249**	P	**P**	**16 58 59.0**	**+4.3**
	comp=Z,33nm,1.0s,baz=76,slow=5.9,SNR=6.5						
RAR				LR	LR	17 25 45.3	
	comp=Z,78µm,21.3s,baz=92,slow=29						
USTO	**Oran**	**80.93**	**54**	P	**P**	**16 58 59.0**	**+4.4**
LAWE	**Loch Awe, Argy**	**80.94**	**33**	⇑*e*P	**P**	**16 58 54.1**	**-0.1**
LAWE				IAmb	IAmb	16 58 60.0	
	comp=Z,554nm,1.9s						
WME	**Myndd Eilian**	**80.95**	**36**	⇑*e*P	**P**	**16 58 54.3**	**-0.1**
IOMK	**Kirk Michael**	**80.97**	**35**	⇑*e*P	**P**	**16 58 55.1**	**+0.7**
IOMK				IAmb	IAmb	16 59 00.6	
	comp=Z,2µm,1.6s						
IOMK				IAMs_20	IAMs_20	17 26 10.0	
	comp=Z,74µm,37.6s						
YLL	**Llanberis**	**80.98**	**36**	⇑*e*P	**P**	**16 58 54.9**	**+0.4**
TRF	**Thorofare Moun**	**80.99**	**335**	IAmb	IAmb	16 59 07.4	
	comp=Z,285nm,1.2s						
TRF				IAMs_20	IAMs_20	17 35 57.6	
	comp=Z,33µm,22.0s						
TRF	**Thorofare Moun**	**80.99**	**335**	P	**P**	**16 58 53.3**	**-1.3**
	baz=107,SNR=43						
TRF				S	**S**	**17 09 00.7**	**-0.9**
	baz=107						
GAL1	**Galloway**	**81.02**	**34**	⇑*e*P	**P**	**16 58 54.8**	**+0.2**
GAL1				IAMs_20	IAMs_20	17 26 08.7	
	comp=Z,28µm,33.1s						
KPL	**Plockton**	**81.05**	**32**	*e*P	**P**	**16 58 54.8**	**+0.1**
KPL				IAMs_20	IAMs_20	17 26 22.8	
	comp=Z,30µm,28.3s						
SII	**Sitkinak Islan**	**81.09**	**327**	IAmb	IAmb	16 59 08.1	
	comp=Z,440nm,1.5s						
SII	**Sitkinak Islan**	**81.09**	**327**	P	**P**	**16 58 54.3**	**-0.7**
	baz=103						
SII				S	**S**	**17 09 02.8**	**+0.3**
	baz=103						
I23K	**Minto, Yukon-K**	**81.12**	**336**	IAmb	IAmb	16 59 14.9	
	comp=Z,311nm,1.2s						
I23K				IAMs_20	IAMs_20	17 37 47.1	
	comp=Z,34µm,19.0s						
I23K	**Minto, Yukon-K**	**81.12**	**336**	P	**P**	**16 58 54.9**	**-0.1**
	baz=108,SNR=66						
I23K				S	**S**	**17 09 02.8**	**+0.3**
	baz=108						
O20K	**Slope Mountain**	**81.12**	**331**	P	**P**	**16 58 55.2**	**-0.1**
	baz=105,SNR=29						
O20K				S	**S**	**17 09 02.3**	**-0.7**
	baz=105						
SPCR	**Spurr Chakacha**	**81.22**	**332**	P	**P**	**16 58 55.1**	**-0.6**
	baz=105,SNR=46						
SPCR				S	**S**	**17 09 02.7**	**-1.1**
	baz=105						
LLW	**Llanuwychllyn**	**81.22**	**37**	⇑*e*P	**P**	**16 58 55.1**	**-0.7**
KAC	**Achnashellach**	**81.27**	**32**	⇑*e*P	**P**	**16 58 55.8**	**-0.1**
RSO	**Redoubt South**	**81.28**	**331**	P	**P**	**16 58 55.7**	**-0.5**
P19K	**Oil Pt**	**81.31**	**330**	P	**P**	**16 58 55.9**	**-0.3**
	baz=104						
P19K				S	**S**	**17 09 04.5**	**-0.4**
	baz=104						
NEWG	**New Galloway**	**81.34**	**34**	⇑*e*P	**P**	**16 58 56.1**	**-0.3**
NEWG				IAmb	IAmb	16 58 58.0	
	comp=Z,263nm,1.1s						
PGBU	**Gleniferbraes**	**81.34**	**34**	⇑*e*P	**P**	**16 58 56.5**	**+0.1**
Q19K	**Cape Douglas,**	**81.35**	**330**	IAmb	IAmb	16 59 09.2	
	comp=Z,265nm,0.8s						
Q19K				IAMs_20	IAMs_20	17 34 44.5	
	comp=Z,28µm,22.0s						
Q19K	**Cape Douglas,**	**81.35**	**330**	P	**P**	**16 58 55.1**	**-1.2**
	baz=104,SNR=19						
Q19K				S	**S**	**17 09 03.9**	**-1.3**
	baz=104						
H23K	**Yukon River**	**81.41**	**337**	IAmb	IAmb	16 59 21.9	
	comp=Z,590nm,1.9s						
H23K				IAMs_20	IAMs_20	17 37 12.6	
	comp=Z,32µm,20.0s						
H23K	**Yukon River**	**81.41**	**337**	P	**P**	**16 58 56.1**	**-0.5**
	baz=108,SNR=54						
H23K				S	**S**	**17 09 06.7**	**+1.1**
	baz=108						
MCH1	**Michaelchurch**	**81.47**	**37**	⇑*e*P	**P**	**16 58 57.0**	**-0.2**
MCH1				IAmb	IAmb	16 59 01.8	
	comp=Z,214nm,1.1s						
MCH1				IAMs_20	IAMs_20	17 26 49.3	
	comp=Z,43µm,27.7s						
MCH1	**Michaelchurch**	**81.47**	**37**	⇑P	**P**	**16 58 56.8**	**-0.3**
BPAW	**Bear Paw Mtn.**	**81.48**	**335**	IAmb	IAmb	16 59 16.4	
	comp=Z,667nm,1.5s						
BPAW				IAMs_20	IAMs_20	17 37 08.4	
	comp=Z,23µm,21.0s						
BPAW	**Bear Paw Mtn.**	**81.48**	**335**	P	**P**	**16 58 55.9**	**-1.1**
	baz=107,SNR=129						
BPAW				S	**S**	**17 09 05.8**	**-0.6**
	baz=107						
JVM	**Valle D.L. Mar**	**81.50**	**40**	⇑*e*P	**P**	**16 58 57.5**	**+0.3**
EAB	**Aberfoyle**	**81.50**	**33**	⇑*e*P	**P**	**16 58 57.2**	**0.0**
FOEL	**Foel Wylfa**	**81.51**	**37**	⇑*e*P	**P**	**16 58 56.8**	**-0.6**

FOEL				IAmb	IAmb	16 59 00.9	
	comp=Z,152nm,0.8s						
FOEL				IAMs_20	IAMs_20	17 26 30.3	
	comp=Z,39µm,36.5s						
JSA	**Saint Aubin**	**81.51**	**40**	⇑*e*P	**P**	**16 58 57.9**	**+0.5**
JSA				IAMs_20	IAMs_20	17 28 57.8	
	comp=Z,39µm,26.0s						
JSA	**Saint Aubin**	**81.51**	**40**	⇑P	**P**	**16 58 58.1**	**+0.8**
TOA0	**Torodi Ar. Sit**	**81.53**	**77**	P	**P**	**16 58 58.2**	**0.0**
TOA0				P	**P**	**16 58 58.2**	**0.0**
TORD	**Torodi Ar. Bea**	**81.53**	**77**	P	**P**	**16 58 57.5**	**-0.7**
	comp=Z,548nm,1.3s,baz=279,slow=4.1,SNR=230						
TORD				PKKPbc	**PKKPbc**	**17 17 30.8**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=74,slow=2.5,SNR=7.3						
TORD				LR	LR	17 32 40.1	
	comp=Z,78µm,21.8s,baz=252,slow=34						
	comp=Z,548nm,1.3s						
MONM	**Monmouth**	**81.56**	**38**	⇑*e*P	**P**	**16 58 58.1**	**+0.5**
MONM				IAmb	IAmb	16 59 02.0	
	comp=Z,324nm,1.0s						
MONM				IAMs_20	IAMs_20	17 26 51.6	
	comp=Z,48µm,30.5s						
JQE	**Queens East**	**81.60**	**40**	⇑*e*P	**P**	**16 58 58.5**	**+0.7**
DBG	**Daneborg**	**81.61**	**14**	*i* P	**P**	**16 58 56.2**	**-1.2**
DBG				IAmb	IAmb	16 59 20.2	
	comp=Z,17nm,1.0s						
HLM1	**Long Mynd**	**81.63**	**37**	⇑*e*P	**P**	**16 58 58.1**	**+0.1**
HLM1				IAMs_20	IAMs_20	17 30 40.6	
	comp=Z,35µm,23.7s						
OJBR	**Djebel Berber**	**81.64**	**54**	P	**P**	**16 59 02.0**	**+3.5**
PPLA	**Purkeypile**	**81.66**	**334**	P	**P**	**16 58 57.4**	**-0.7**
	baz=105,SNR=42						
PPLA				S	**S**	**17 09 07.1**	**-1.4**
	baz=105						
OLDB	**Oldbury-Upon-S**	**81.68**	**38**	⇑*e*P	**P**	**16 58 58.2**	**0.0**
OLDB				IAMs_20	IAMs_20	17 27 11.1	
	comp=Z,49µm,28.3s						
INVG	**Invergeldie, C**	**81.71**	**33**	*e*P	**P**	**16 58 58.1**	**-0.2**
INVG				IAMs_20	IAMs_20	17 33 43.6	
	comp=Z,21µm,21.9s						
CHIR	**Chirikof Islan**	**81.72**	**326**	IAMs_20	IAMs_20	17 40 33.6	
	comp=Z,24µm,21.0s						
CHIR	**Chirikof Islan**	**81.72**	**326**	P	**P**	**16 58 57.6**	**-0.7**
	baz=101						
CHIR				S	**S**	**17 09 10.3**	**+1.2**
	baz=101						
MDO	**Dochfour**	**81.75**	**32**	⇑*e*P	**P**	**16 58 58.4**	**-0.1**
CAST	**Castle Rocks**	**81.75**	**334**	P	**P**	**16 58 58.1**	**-0.3**
CAST				IAMs_20	IAMs_20	17 36 34.8	
	comp=Z,24µm,21.0s						
CAST	**Castle Rocks**	**81.75**	**334**	P	**P**	**16 58 57.9**	**-0.5**
	baz=106,SNR=6.6						
CAST				S	**S**	**17 09 06.8**	**-2.4**
	baz=106						
M20K	**Styx River**	**81.82**	**333**	IAMs_20	IAMs_20	17 34 59.7	
	comp=Z,23µm,20.0s						
M20K	**Styx River**	**81.82**	**333**	P	**P**	**16 58 58.5**	**-0.4**
	baz=104,SNR=66						
M20K				S	**S**	**17 09 08.3**	**-1.8**
	baz=104						
BELA	**Belgrano 2**	**81.87**	**171**	IAmb	IAmb	16 59 13.0	
	comp=Z,518nm,1.6s						
KESW	**Keswick, Cumbr**	**81.88**	**35**	⇑*e*P	**P**	**16 58 59.1**	**-0.1**
OKGL	**Djebel Kef Gue**	**81.93**	**54**	P	**P**	**16 59 03.0**	**+3.0**
STRD	**Stroud**	**81.94**	**38**	⇑*e*P	**P**	**16 59 00.1**	**+0.6**
STRD				IAmb	IAmb	16 59 06.3	
	comp=Z,457nm,0.8s						
STRD				IAMs_20	IAMs_20	17 27 03.4	
	comp=Z,49µm,28.9s						
ESK	**Eskdalemuir**	**81.96**	**34**	⇑*e*P	**P**	**16 58 59.5**	**-0.1**
ESK				IAMs_20	IAMs_20	17 26 37.1	
	comp=Z,92µm,32.0s						
ESK	**Eskdalemuir**	**81.96**	**34**	P	**P**	**16 58 59.3**	**-0.3**
ESK				IAmb	IAmb	16 59 10.2	
	comp=Z,401nm,1.3s						
ESK	**Eskdalemuir**	**81.96**	**34**	IAMs_20	IAMs_20	17 33 04.7	
	comp=Z,21µm,22.0s						
ESK	**Eskdalemuir**	**81.96**	**34**	P	**P**	**16 58 59.3**	**-0.3**
ESK				pmax	pmax		
	comp=Z,401nm,1.3s						
ESK				MLR	MLR		
	comp=Z,21µm,22.0s						
OJGS	**Djebel Guires**	**81.96**	**54**	P	**P**	**16 59 02.0**	**+1.8**
O19K	**Port Alsworth**	**81.98**	**331**	IAMs_20	IAMs_20	17 35 19.4	
	comp=Z,26µm,20.0s						
O19K	**Port Alsworth**	**81.98**	**331**	P	**P**	**16 58 58.4**	**-1.2**
	baz=103						
O19K				S	**S**	**17 09 10.0**	**-1.5**
	baz=103						
CHUM	**Lake Minchumin**	**81.98**	**335**	P	**P**	**16 58 59.1**	**-0.5**
	baz=105,SNR=28						
CHUM				S	**S**	**17 09 10.5**	**-1.0**
	baz=105						
EKA	**Eskdalemuir Ar**	**81.98**	**34**	LR	LR	17 33 39.5	
	comp=Z,18µm,20.6s,baz=253,slow=34						
COLD	**Coldfoot**	**82.10**	**338**	P	**P**	**16 59 00.0**	**-0.1**
	baz=108,SNR=72						
COLD				S	**S**	**17 09 15.3**	**+2.7**
	baz=108						
SWN1	**Swindon**	**82.12**	**38**	⇑*e*P	**P**	**16 59 01.2**	**+0.6**
SWN1				IAmb	IAmb	16 59 05.8	
	comp=Z,741nm,1.3s						
SWN1				IAMs_20	IAMs_20	17 27 24.7	
	comp=Z,49µm,27.2s						
EBL	**Broad Law**	**82.13**	**34**	⇑*e*P	**P**	**16 59 00.4**	**-0.1**
STNC	**Stoke**	**82.13**	**36**	⇑*e*P	**P**	**16 59 01.5**	**+0.9**
STNC				IAmb	IAmb	16 59 06.1	
	comp=Z,1µm,1.6s						
I21K	**Tanana**	**82.19**	**336**	IAMs_20	IAMs_20	17 39 05.3	
	comp=Z,28µm,19.0s						
I21K	**Tanana**	**82.19**	**336**	P	**P**	**16 58 59.9**	**-0.8**
	baz=106,SNR=12						
I21K				S	**S**	**17 09 12.7**	**-0.8**
	baz=106						
N19K	**Bonanza Creek**	**82.20**	**331**	IAMs_20	IAMs_20	17 41 39.8	
	comp=Z,26µm,22.0s						
N19K	**Bonanza Creek**	**82.20**	**331**	P	**P**	**16 59 00.2**	**-0.7**
	baz=103,SNR=34						
N19K				S	**S**	**17 09 11.6**	**-2.4**
	baz=103						
BIGH	**Upper Bighouse**	**82.21**	**31**	⇑*e*P	**P**	**16 59 00.7**	**-0.1**
BIGH				IAMs_20	IAMs_20	17 32 14.2	
	comp=Z,26µm,22.5s						
P18K	**Big Mountain,**	**82.25**	**330**	P	**P**	**16 59 00.0**	**-1.1**
	baz=102,SNR=14						
P18K				S	**S**	**17 09 12.2**	**-2.3**
	baz=102						
EANR	**'Ain N'Sour**	**82.29**	**54**	P	**P**	**16 59 03.4**	**+1.5**
EDU	**Dundee**	**82.29**	**33**	⇑*e*P	**P**	**16 59 01.7**	**+0.4**
L20K	**Farewell, AK**	**82.31**	**333**	P	**P**	**16 59 00.8**	**-0.6**
	baz=104,SNR=72						
L20K				S	**S**	**17 09 12.7**	**-2.2**
	baz=104						
TOLK	**Toolik Lake Re**	**82.32**	**340**	P	**P**	**16 59 00.9**	**-0.5**
	baz=109,SNR=33						
TOLK				S	**S**	**17 09 16.6**	**+1.7**
	baz=109						
ALE	**Alert**	**82.34**	**2**	IAMs_20	IAMs_20	17 36 26.0	
	comp=Z,24µm,22.0s						
MCD	**Coleburn Disti**	**82.36**	**32**	⇑*e*P	**P**	**16 59 01.8**	**+0.1**
ESY	**Stoneypath**	**82.40**	**34**	⇑*e*P	**P**	**16 59 02.1**	**+0.2**
M19K	**Big River Lodg**	**82.40**	**333**	IAmb	IAmb	16 59 25.8	
	comp=Z,798nm,1.9s						
M19K				IAMs_20	IAMs_20	17 35 26.5	
	comp=Z,24µm,22.0s						
M19K	**Big River Lodg**	**82.40**	**333**	P	**P**	**16 59 01.5**	**-0.3**
	baz=103						
M19K				S	**S**	**17 09 14.3**	**-1.7**
	baz=103						
MLA1	**Latheron**	**82.45**	**31**	⇑*e*P	**P**	**16 59 02.3**	**+0.1**
LBWR	**Ladybower, Pea**	**82.47**	**36**	⇑*e*P	**P**	**16 59 03.1**	**+0.7**
LBWR				IAmb	IAmb	16 59 05.4	
	comp=Z,632nm,1.3s						
LBWR				IAMs_20	IAMs_20	17 34 35.8	
	comp=Z,24µm,19.8s						
ECHA	**Ech Chlef**	**82.52**	**54**	P	**P**	**16 59 07.6**	**+4.6**
EDMD	**Edmundbyers**	**82.57**	**35**	⇑*e*P	**P**	**16 59 03.0**	**+0.2**
EDMD				IAMs_20	IAMs_20	17 26 54.5	
	comp=Z,29µm,30.0s						
K20K	**Telida**	**82.60**	**334**	IAMs_20	IAMs_20	17 38 40.3	
	comp=Z,24µm,20.0s						
K20K	**Telida**	**82.60**	**334**	P	**P**	**16 59 02.3**	**-0.6**
	baz=104,SNR=77						
K20K				S	**S**	**17 09 12.2**	**-5.7**
	baz=104						
CWF	**Charnwood Fore**	**82.61**	**37**	⇑*e*P	**P**	**16 59 02.7**	**-0.4**
CWF				IAMs_20	IAMs_20	17 31 10.4	
	comp=Z,32µm,22.9s						
HPK	**Haverah Park**	**82.62**	**36**	⇑*e*P	**P**	**16 59 03.4**	**+0.3**
HPK				IAMs_20	IAMs_20	17 26 57.5	
	comp=Z,37µm,33.9s						
H21K	**Melozitna Rive**	**82.65**	**336**	IAMs_20	IAMs_20	17 40 02.4	
	comp=Z,22µm,19.0s						
H21K	**Melozitna Rive**	**82.65**	**336**	P	**P**	**16 59 02.3**	**-0.8**
	baz=105,SNR=30						
H21K				S	**S**	**17 09 16.6**	**-1.8**
	baz=105						
EBNR	**Beni Rached**	**82.66**	**54**	P	**P**	**16 59 06.5**	**+2.7**
L19K	**White Mountain**	**82.68**	**333**	IAmb	IAmb	16 59 25.9	
	comp=Z,476nm,1.8s						
L19K				IAMs_20	IAMs_20	17 39 51.4	
	comp=Z,24µm,21.0s						
L19K	**White Mountain**	**82.68**	**333**	P	**P**	**16 59 02.1**	**-1.2**
	baz=103,SNR=60						
L19K				S	**S**	**17 09 17.2**	**-1.6**
	baz=103						
J20K	**Nowinta River**	**82.83**	**335**	IAmb	IAmb	16 59 11.1	
	comp=Z,564nm,1.9s						
J20K				IAMs_20	IAMs_20	17 38 23.7	
	comp=Z,24µm,20.0s						
J20K	**Nowinta River**	**82.83**	**335**	P	**P**	**16 59 03.2**	**-0.8**
	baz=104,SNR=70						
J20K				S	**S**	**17 09 18.8**	**-1.4**
	baz=104						
N18K	**Kilae Creek**	**82.84**	**331**	IAmb	IAmb	16 59 16.7	
	comp=Z,206nm,0.8s						
N18K				IAMs_20	IAMs_20	17 42 00.9	
	comp=Z,22µm,21.0s						
N18K	**Kilae Creek**	**82.84**	**331**	P	**P**	**16 59 02.9**	**-1.3**
	baz=102,SNR=63						
N18K				S	**S**	**17 09 18.8**	**-1.7**
	baz=102						
IMAR	**Indian Mountai**	**83.11**	**337**	P	**P**	**16 59 04.8**	**-0.6**
DAG	**Danmarks Havn**	**83.15**	**12**	*i* P	**P**	**16 59 04.3**	**-1.1**
DAG				IAmb	IAmb	16 59 07.7	
	comp=Z,45nm,0.9s						
DAG	**Danmarks Havn**	**83.15**	**12**	⇑P	**P**	**16 59 04.2**	**-1.3**
GDLE	**Glaisdale, N Y**	**83.16**	**35**	⇑*e*P	**P**	**16 59 06.6**	**+0.6**
LMK	**Market Rasen**	**83.31**	**36**	⇑*e*P	**P**	**16 59 07.3**	**+0.6**
CHGN	**Chignik**	**83.34**	**327**	IAmb	IAmb	16 59 20.1	
	comp=Z,337nm,1.2s						
CHGN	**Chignik**	**83.34**	**327**	P	**P**	**16 59 06.0**	**-0.8**
	baz=99,SNR=8.8						
CHGN				S	**S**	**17 09 24.0**	**-1.5**
	baz=99						
HMNX	**Herstmonceux**	**83.36**	**39**	⇑*e*P	**P**	**16 59 07.8**	**+0.8**
HMNX				IAmb	IAmb	16 59 12.5	
	comp=Z,2µm,1.8s						
HMNX				IAMs_20	IAMs_20	17 28 44.5	
	comp=Z,59µm,29.8s						
TTA	**Tatalina**	**83.37**	**333**	P	**P**	**16 59 05.6**	**-1.3**
TTA	**Tatalina**	**83.37**	**333**	P	**P**	**16 59 05.6**	**-1.3**
TTA				pmax	pmax		
	comp=Z,274nm,1.6s						
TTA	**Tatalina**	**83.37**	**333**	P	**P**	**16 59 05.9**	**-1.1**
	baz=102,SNR=35						
TTA				S	**S**	**17 09 23.4**	**-2.4**
	baz=102						
TTA	**Tatalina**	**83.37**	**333**	⇑P	**P**	**16 59 05.8**	**-1.1**
JMIC	**Jan Mayen**	**83.50**	**18**	LR	LR	17 33 57.5	
	comp=Z,10µm,22.0s,baz=254,slow=34						
JMIC	**Jan Mayen**	**83.50**	**18**	⇑*i*P	**P**	**16 59 08.4**	**+1.0**
JMIC				IVmB_BB		16 59 18.8	
	comp=Z,5µm,1.9s						
JMIC				*e*SKSac	**SKSac**	**17 09 28.0**	**+0.6**
JMIC				IVMs_BB	IVMs_BB	17 27 06.6	
	comp=Z,7µm,58.2s						
WACR	**West Acre**	**83.78**	**37**	⇑*e*P	**P**	**16 59 08.8**	**-0.3**
WACR				IAmb	IAmb	16 59 11.7	
	comp=Z,834nm,1.0s						
WACR				IAMs_20	IAMs_20	17 32 06.9	
	comp=Z,39µm,23.0s						
CHNA	**Chernabura Isl**	**83.78**	**325**	P	**P**	**16 59 08.0**	**-1.1**
	baz=98						
CHNA				S	**S**	**17 09 29.6**	**-0.5**
	baz=98						
LRW	**Lerwick**	**83.89**	**30**	⇑P	**P**	**16 59 10.6**	**+1.1**
LRW				⇑P	**P**	**16 59 10.7**	**+1.1**
ELSH	**Elham, Standar**	**83.89**	**39**	⇑*e*P	**P**	**16 59 09.9**	**+0.2**
ELSH				IAMs_20	IAMs_20	17 28 31.2	
	comp=Z,60µm,28.3s						
VNA3	**Neumayer Olymp**	**84.10**	**162**	P	**P**	**16 59 10.3**	**-0.1**
GCSA	**Galena City Sc**	**84.11**	**335**	P	**P**	**16 59 10.2**	**-0.3**
	baz=101						
GCSA				S	**S**	**17 09 31.7**	**-1.3**
	baz=101						
CLF	**Chambon-Foret**	**84.28**	**42**	⇑P	**P**	**16 59 12.8**	**+1.1**
VNA1	**Neumayer--Stat**	**84.35**	**161**	P	**P**	**16 59 11.9**	**+0.3**
SDPT	**Sand Point**	**84.36**	**325**	IAmb	IAmb	16 59 37.2	
	comp=Z,244nm,1.0s						
SDPT	**Sand Point**	**84.36**	**325**	P	**P**	**16 59 10.6**	**-1.4**
	baz=97						
SDPT				S	**S**	**17 09 31.6**	**-4.2**
	baz=97						
MAHO	**Mahon**	**85.08**	**50**	⇑P	**P**	**16 59 16.5**	**+0.5**
A21K	**Barrow**	**85.38**	**342**	IAMs_20	IAMs_20	17 41 26.0	
	comp=Z,39µm,21.0s						
A21K	**Barrow**	**85.38**	**342**	P	**P**	**16 59 16.4**	**-0.4**
	baz=102						
A21K				S	**S**	**17 09 44.7**	**-0.6**
	baz=102						
SSB	**Saint Sauveur**	**85.62**	**45**	⇑P	**P**	**16 59 19.8**	**+1.1**
NOR	**Nord**	**85.72**	**8**	*i* P	**P**	**16 59 17.3**	**-1.1**
NOR				IAmb	IAmb	16 59 23.6	
	comp=Z,13nm,0.8s						
SNF	**Seneffe**	**85.82**	**40**	*d*P	**P**	**16 59 20.1**	**+0.7**
	comp=Z,124nm,1.4s						
UCC	**Uccle**	**85.89**	**39**	IAmb	IAmb	16 59 25.2	
	comp=Z,274nm,1.8s						
UCC	**Uccle**	**85.89**	**39**	*d*P	**P**	**16 59 20.4**	**+0.7**
DOU	**Dourbes**	**85.99**	**40**	*d*P	**P**	**16 59 20.6**	**+0.3**
	comp=Z,183nm,1.1s						
FALS	**False Pass**	**85.99**	**325**	P	**P**	**16 59 19.4**	**-0.7**
	baz=95,SNR=7.2						
FALS				S	**S**	**17 09 48.4**	**-3.6**
	baz=95						
BMRD	**Maredsous**	**86.11**	**40**	*d*P	**P**	**16 59 21.6**	**+0.7**
	comp=Z,122nm,1.5s						
DFRA	**Djebel Bou Aff**	**86.18**	**54**	P	**P**	**16 59 20.0**	**-1.7**
RUSF	**Rustrel**	**86.22**	**46**	⇑P	**P**	**16 59 25.1**	**+3.4**
RUSF				⇑P	**P**	**16 59 25.1**	**+3.4**
SNAA	**Sanae**	**86.32**	**162**	P	**P**	**16 59 21.2**	**-0.4**
SNAA	**Sanae**	**86.32**	**162**	⇑*i*P	**P**	**16 59 21.2**	**-0.4**
SNAA				IAMs_20	IAMs_20	17 40 27.2	
	comp=Z,3536µm,20.1s						
SNAA	**Sanae**	**86.32**	**162**	LR	LR	17 38 12.5	
	comp=Z,56µm,21.7s,baz=293,slow=36						
SNAA	**Sanae**	**86.32**	**162**	P	**P**	**16 59 20.2**	**-1.4**
SNAA	**Sanae**	**86.32**	**162**	*ce*P	**P**	**16 59 21.3**	**-0.4**
SNAA				pmax	pmax		
	comp=Z,352nm,2.1s						
SNAA				MLR	MLR		
	comp=Z,62µm,20.0s						
SNAA	**Sanae**	**86.32**	**162**	⇑P	**P**	**16 59 21.1**	**-0.4**
BGES	**Gesves**	**86.32**	**40**	*d*P	**P**	**16 59 22.4**	**+0.4**
	comp=Z,136nm,1.1s						
RCHB	**Rochefort**	**86.40**	**40**	*d*P	**P**	**16 59 22.6**	**+0.2**
	comp=Z,172nm,1.1s						
BCLA	**Clavier**	**86.46**	**40**	*d*P	**P**	**16 59 22.9**	**+0.3**
	comp=Z,144nm,1.2s						
CTEI	**Djebel Teioual**	**86.59**	**54**	P	**P**	**16 59 25.5**	**+1.7**
BSTI	**Sart Tilman**	**86.64**	**40**	*d*P	**P**	**16 59 24.5**	**+1.0**
	comp=Z,54nm,1.1s						
CASM	**Ain Smara**	**86.66**	**54**	P	**P**	**16 59 26.9**	**+2.9**
BEBN	**Eben Emael**	**86.72**	**39**	*d*P	**P**	**16 59 24.2**	**+0.3**
	comp=Z,166nm,1.0s						
CKFL	**Kef-Lekhel**	**86.85**	**54**	P	**P**	**16 59 26.9**	**+1.8**
BHOU	**Houvegnez**	**86.91**	**40**	*d*P	**P**	**16 59 25.6**	**+0.7**
	comp=Z,153nm,1.1s						
SUE	**Sulen**	**86.91**	**29**	⇑*i*P	**P**	**16 59 25.3**	**+0.7**
SUE				*e*SKSac	**SKSac**	**17 09 51.4**	**+2.1**
SUE				IVMs_BB	IVMs_BB	17 28 48.3	
	comp=Z,6µm,36.6s						
MEM	**Membach**	**86.92**	**40**	*d*P	**P**	**16 59 25.6**	**+0.7**
	comp=Z,190nm,1.1s						
WLF	**Walferdange**	**86.97**	**40**	IAMs_20	IAMs_20	17 39 05.1	
	comp=Z,19µm,20.0s						
WLF	**Walferdange**	**86.97**	**40**	*d*P	**P**	**16 59 26.0**	**+0.8**
	comp=Z,263nm,1.1s						
WLF	**Walferdange**	**86.97**	**40**	⇑P	**P**	**16 59 25.8**	**+0.6**
BTNL	**Ternell**	**87.00**	**40**	*d*P	**P**	**16 59 26.0**	**+0.7**
	comp=Z,114nm,1.5s						
KMY	**Karmoy**	**87.02**	**31**	⇑*i*P	**P**	**16 59 25.5**	**+0.4**
KMY				*e*SKSac	**SKSac**	**17 09 49.9**	**-0.2**
KMY				IVMs_BB	IVMs_BB	17 31 57.8	
	comp=Z,7µm,27.7s						
RDOG	**Red Dog Mine**	**87.02**	**338**	IAMs_20	IAMs_20	17 44 53.7	
	comp=Z,23µm,20.0s						
RDOG	**Red Dog Mine**	**87.02**	**338**	P	**P**	**16 59 22.2**	**-2.8**
	baz=96,SNR=19						
RDOG				S	**S**	**17 09 59.3**	**-2.3**
	baz=96						
ASK	**Askoy**	**87.08**	**30**	⇑*i*P	**P**	**16 59 26.0**	**+0.6**
ASK				*e*SKSac	**SKSac**	**17 09 51.5**	**+1.1**
FOO	**Floro**	**87.09**	**28**	⇑*i*P	**P**	**16 59 26.1**	**+0.7**
FOO				*e*SKSac	**SKSac**	**17 09 52.1**	**+1.8**
FOO				IVMs_BB	IVMs_BB	17 30 04.9	
	comp=Z,6µm,32.5s						
BNI	**Bardonecchia**	**87.12**	**45**	IAmb	IAmb	16 59 31.5	
	comp=Z,283nm,1.6s						
BNI				IAMs_20	IAMs_20	17 37 02.3	
	comp=Z,30µm,21.0s						
BNI	**Bardonecchia**	**87.12**	**45**	⇑P	**P**	**16 59 26.9**	**+0.7**
BNI				⇑P	**PcP**	**16 59 27.3**	**-1.0**
BER	**Bergen**	**87.14**	**30**	⇑*i*P	**P**	**16 59 26.3**	**+0.6**
BER				IVmB_BB		16 59 35.0	
	comp=Z,4µm,2.7s						
BER				*e*SKSac	**SKSac**	**17 09 53.3**	**+2.5**
BER				IVMs_BB	IVMs_BB	17 33 38.5	
	comp=Z,6µm,24.8s						
AKUT	**Akutan**	**87.31**	**324**	IAmb	IAmb	16 59 53.5	
	comp=Z,198nm,1.1s						
CMAH	**Djebel Manchou**	**87.42**	**54**	P	**P**	**16 59 27.9**	**+0.2**
ABSA	**Djebel Ababsia**	**87.46**	**54**	P	**P**	**16 59 28.3**	**+0.3**
ECH	**Echery**	**87.57**	**42**	⇑P	**P**	**16 59 28.2**	**+0.1**
ECH				⇑P	**PcP**	**16 59 28.6**	**-1.4**
SENIN	**Lac Senin/Sane**	**87.60**	**44**	P	**P**	**16 59 29.3**	**+0.8**
SENIN				IAMs_20	IAMs_20	17 42 36.0	
	comp=Z,22µm,19.0s						
BLS5	**Blasjo**	**87.65**	**31**	⇑*i*P	**P**	**16 59 28.7**	**+0.5**
BLS5				IVmBBB		16 59 39.3	
	comp=Z,4µm,1.8s						
BLS5				*e*SKSac	**SKSac**	**17 09 56.6**	**+2.6**
BLS5				IVMs_BB	IVMs_BB	17 32 03.6	
	comp=Z,10µm,25.8s						
ANM	**Nome**	**87.71**	**334**	IAMs_20	IAMs_20	17 38 43.3	
	comp=Z,24µm,22.0s						
ANM	**Nome**	**87.71**	**334**	P	**P**	**16 59 28.4**	**0.0**
	baz=94,SNR=7.2						
ANM				S	**S**	**17 10 09.6**	**+1.3**
	baz=94						
UNV	**Unalaska Valle**	**87.73**	**324**	P	**P**	**16 59 28.4**	**-0.3**
	baz=92,SNR=18						
UNV				S	**S**	**17 10 08.0**	**-0.9**
	baz=92						
ODD1	**Odda**	**87.76**	**30**	⇑*i*P	**P**	**16 59 29.6**	**+0.8**
SNART	**Snartemo**	**87.99**	**32**	⇑*i*P	**P**	**16 59 30.2**	**+0.4**
SNART				*e*SKSac	**SKSac**	**17 09 56.2**	**+0.2**
MONC	**Moncucco Torin**	**88.00**	**45**	⇑P	**P**	**16 59 30.8**	**+0.6**
MONC				⇓P	**P**	**16 59 31.4**	**+1.2**
TROLL	**Troll, Antarti**	**88.03**	**162**	P	**P**	**16 59 30.0**	**0.0**
AKN	**Aaknes**	**88.05**	**28**	⇑*i*P	**P**	**16 59 30.9**	**+0.8**
AKN				*e*SKSac	**SKSac**	**17 09 59.6**	**+3.2**
IBBN	**Ibbenburen**	**88.08**	**38**	⇑P	**P**	**16 59 31.2**	**+0.8**
IBBN				⇓P	**P**	**16 59 31.9**	**+1.4**
IBBN				⇑P	**PcP**	**16 59 35.5**	**+3.3**
HLG	**Helgoland**	**88.22**	**36**	⇑P	**P**	**16 59 31.0**	**0.0**
HLG				⇑P	**PcP**	**16 59 33.2**	**+0.5**
MOL	**Molde**	**88.33**	**28**	⇑*i*P	**P**	**16 59 31.9**	**+0.6**
MOL				IVmB_BB		16 59 37.3	
	comp=Z,3µm,2.7s						
MOL				*e*SKSac	**SKSac**	**17 10 01.3**	**+3.4**
MOL				IVMs_BB	IVMs_BB	17 29 16.2	
	comp=Z,8µm,38.7s						
BFO	**Black Forest**	**88.35**	**42**	P	**P**	**16 59 31.6**	**-0.3**
BFO				IAmb	IAmb	16 59 37.0	
	comp=Z,261nm,1.5s						
BFO	**Black Forest**	**88.35**	**42**	P	**P**	**16 59 31.6**	**-0.3**
BFO				pmax	pmax		
	comp=Z,261nm,1.5s						
BFO				MLR	MLR		
	comp=Z,14µm,22.0s						
SKAR	**Skarslia**	**88.62**	**29**	⇑*i*P	**P**	**16 59 33.7**	**+0.8**
SKAR				IVmB_BB		16 59 44.3	
	comp=Z,2µm,3.8s						
SKAR				*e*SKSac	**SKSac**	**17 10 01.8**	**+1.8**
SKAR				IVMs_BB	IVMs_BB	17 29 34.3	
	comp=Z,6µm,40.2s						
HOMB	**Homborsund**	**88.67**	**32**	⇑*i*P	**P**	**16 59 33.8**	**+0.7**
HOMB				IVmB_BB		16 59 39.2	
	comp=Z,3µm,2.2s						
HOMB				*e*SKSac	**SKSac**	**17 10 04.5**	**+4.4**
HOMB				IVMs_BB	IVMs_BB	17 36 03.0	
	comp=Z,6µm,21.6s						
TAMR	**Tamra**	**88.78**	**53**	⇑P	**P**	**16 59 34.2**	**+0.1**
TAMR				⇑P	**P**	**16 59 34.9**	**+0.9**
TNA	**Tin City**	**88.84**	**335**	P	**P**	**16 59 33.9**	**+0.3**
	baz=91,SNR=13						
TNA				S	**S**	**17 10 20.3**	**+1.4**
	baz=91						
STU	**Stuttgart**	**88.93**	**41**	IAmb	IAmb	16 59 40.1	
	comp=Z,298nm,1.4s						
STU	**Stuttgart**	**88.93**	**41**	⇑P	**P**	**16 59 35.2**	**+0.7**
STU				⇓P	**P**	**16 59 35.9**	**+1.4**
KEST	**Kesra**	**88.97**	**54**	P	**P**	**16 59 35.5**	**+0.4**
	comp=Z,128nm,1.1s,baz=196,slow=2.8,SNR=34						
	comp=Z,128nm,1.1s						
KEST	**Kesra**	**88.97**	**54**	IAmb	IAmb	16 59 39.3	
	comp=Z,151nm,1.1s						
KEST	**Kesra**	**88.97**	**54**	P	**P**	**16 59 36.1**	**+1.0**
MUD	**Monsted U'grnd**	**89.00**	**34**	*i* P	**P**	**16 59 33.0**	**-1.6**
MUD				IAmb	IAmb	16 59 51.0	
	comp=Z,24nm,0.8s						
VSL	**Villasalto**	**89.01**	**51**	IAmb	IAmb	16 59 38.2	
	comp=Z,276nm,1.1s						
VSL	**Villasalto**	**89.01**	**51**	⇑P	**P**	**16 59 35.2**	**+0.1**
VSL				⇑P	**P**	**16 59 35.6**	**+0.5**
EKNA	**AfricaArray -**	**89.01**	**86**	⇑*e*P	**P**	**16 59 36.7**	**+1.0**
DOMB	**Dombas**	**89.02**	**28**	⇑*i*P	**P**	**16 59 35.3**	**+0.6**
DOMB				IVmB_BB		16 59 45.4	
	comp=Z,2µm,1.8s						
DOMB				*e*SKSac	**SKSac**	**17 10 04.5**	**+2.3**
DOMB				IVMs_BB	IVMs_BB	17 31 32.1	
	comp=Z,5µm,29.0s						
TUE	**Stuetta**	**89.02**	**44**	IAMs_20	IAMs_20	17 44 00.9	
	comp=Z,32µm,19.0s						
TUE	**Stuetta**	**89.02**	**44**	⇑P	**P**	**16 59 35.8**	**+0.5**
TUE				⇑P	**P**	**16 59 35.8**	**+0.5**
GOET	**G??ttrup**	**89.03**	**33**	*i* P	**P**	**16 59 34.6**	**-0.1**
GOET				IAmb	IAmb	16 59 41.1	
	comp=Z,44nm,0.6s						
BOB	**Bobbio (Coli)**	**89.08**	**45**	⇑P	**P**	**16 59 36.0**	**+0.6**
BOB				⇑P	**P**	**16 59 36.2**	**+0.8**
NIKH	**Nikolski High**	**89.11**	**323**	IAmb	IAmb	16 59 38.3	
	comp=Z,188nm,1.0s						
NIKH	**Nikolski High**	**89.11**	**323**	P	**P**	**16 59 35.1**	**-0.1**
	baz=90,SNR=11						
NIKH				S	**S**	**17 10 19.4**	**-2.6**
	baz=90						
KONO	**Kongsberg**	**89.25**	**31**	P	**P**	**16 59 35.1**	**-0.7**
KONO	**Kongsberg**	**89.25**	**31**	*ce*P	**P**	**16 59 34.4**	**-1.4**
KONO				pmax	pmax		
	comp=Z,64nm,1.4s						
KONO				MLR	MLR		
	comp=Z,12µm,21.0s						
KONO	**Kongsberg**	**89.25**	**31**	⇑*i*P	**P**	**16 59 36.4**	**+0.6**
KONO				*e*SKSac	**SKSac**	**17 10 07.2**	**+3.7**
KONO				IVMs_BB	IVMs_BB	17 33 02.7	
	comp=Z,8µm,26.4s						
KONO	**Kongsberg**	**89.25**	**31**	⇑P	**P**	**16 59 36.1**	**+0.3**
KONO				⇓P	**P**	**16 59 36.7**	**+0.9**
DAVA	**Damuels**	**89.39**	**43**	*i* P	**P**	**16 59 38.0**	**+1.0**
	comp=Z,192nm,1.0s,SNR=85						
DAVA				*e*P	**PKKPbc**	**17 17 13.3**	**-0.9**
	comp=Z,10nm,1.1s						
DAVOX	**Davos/Dischmat**	**89.39**	**43**	LR	LR	17 35 49.4	
	comp=Z,11µm,21.9s,baz=262,slow=33						
OVD	**Ostervraa, Den**	**89.57**	**33**	*i* P	**P**	**16 59 38.2**	**+0.9**
OVD				IAmb	IAmb	17 00 02.5	
	comp=Z,47nm,0.7s						
TBLU	**Trondheim**	**89.58**	**27**	⇑*i*P	**P**	**16 59 38.3**	**+1.1**
VLC	**Villacollemand**	**89.75**	**46**	IAmb	IAmb	16 59 40.6	
	comp=Z,164nm,1.2s						
VLC	**Villacollemand**	**89.75**	**46**	⇑P	**P**	**16 59 37.2**	**-1.3**
VLC				⇑P	**P**	**16 59 38.2**	**-0.3**
OSL	**Oslo**	**89.82**	**30**	⇑*i*P	**P**	**16 59 38.9**	**+0.5**
NC204	**NORSAR Array S**	**89.83**	**29**	IAmb	IAmb	16 59 48.3	
	comp=Z,475nm,1.9s						

NBO00	NORSAR Array S	89.84	29	IAmb	IAmb	16 59 58.8	
	comp=Z,322nm,1.4s						
SALO	Salr	89.84	45	⇑P	P	16 59 39.0	+0.1
SALO				⇑P	P	16 59 39.5	+0.6
KBS	Kingsbay	89.87	11	IAMs_20	IAMs_20	17 38 55.3	
	comp=Z,30µm,22.0s						
KBS	Kingsbay	89.87	11	c iP	P	16 59 39.3	+1.0
KBS				pmax	pmax		
	comp=Z,296nm,2.1s						
KBS				MLR	MLR		
	comp=Z,29µm,21.0s						
KBS	Kingsbay	89.87	11	⇑iP	P	16 59 39.4	+1.1
KBS				IVmB_BB		16 59 48.8	
	comp=Z,4µm,2.8s						
KBS				IVMs_BB	IVMs_BB	17 38 29.3	
	comp=Z,12µm,23.9s						
KBS	Kingsbay	89.87	11	⇑P	P	16 59 39.8	+1.5
NAO01	NORSAR Array S	89.89	29	IAmb	IAmb	16 59 58.9	
	comp=Z,284nm,1.4s						
SPIA	Saint Paul Isl	89.90	327	P	P	16 59 39.5	+0.6
	baz=89						
SPIA				S	S	17 10 28.5	-0.7
	baz=89						
TATN	Tataouine	89.96	58	⇑P	P	16 59 39.9	+0.1
TATN				⇑P	P	16 59 40.4	+0.6
FETA	Feichten	89.97	43	i P	P	16 59 40.8	+1.2
	comp=Z,196nm,1.1s,SNR=110						
RETA	Reutte	89.98	43	i P	P	16 59 40.4	+0.8
	comp=Z,196nm,1.7s,SNR=52						
NB2	NORSAR Subarra	90.05	29	P	P	16 59 39.6	+0.1
	comp=Z,1µm,3.3s,baz=277,slow=4.6						
NB2	NORSAR Subarra	90.05	29	P	P	16 59 39.6	+0.1
	baz=277,slow=4.6						
NOA	NORSAR Array B	90.05	29	P	P	16 59 39.6	+0.1
	comp=Z,13nm,1.0s,baz=271,slow=4.5,SNR=21						
NOA				PKKP	PKKPdf	17 17 06.8	-1.7
	comp=Z,2.2nm,0.9s,baz=250,slow=3.0,SNR=4.9						
NOA				PKPPKP	P'P'df	17 25 18.6	-1.1
	comp=Z,1.2nm,0.8s,baz=253,slow=3.1,SNR=3.7						
	comp=Z,13nm,1.0s						
CASP	Castiglione de	90.11	47	P	P	16 59 40.2	0.0
CASP				IAmb	IAmb	16 59 45.2	
	comp=Z,415nm,1.5s						
ZCCA	Zocca	90.17	46	IAmb	IAmb	16 59 45.3	
	comp=Z,254nm,0.9s						
NC602	NORSAR Array S	90.22	29	IAmb	IAmb	16 59 50.1	
	comp=Z,330nm,1.7s						
NC602	NORSAR Array S	90.22	29	⇑iP	P	16 59 40.5	+0.2
NC602				eSKSac	SKSac	17 10 10.1	+0.9
NC602				IVMs_BB	IVMs_BB	17 30 54.8	
	comp=Z,5µm,29.3s						
MOTA	Moosalm	90.22	43	i P	P	16 59 41.2	+0.4
	comp=Z,294nm,1.5s,SNR=94						
MOTA				eP	PKKPbc	17 17 11.1	-1.0
	comp=Z,9.1nm,1.0s						
FLTG	Flechtingen	90.22	38	⇑P	P	16 59 40.9	+0.4
FLTG				⇑P	P	16 59 41.2	+0.8
GRFO	Grafenberg	90.26	40	P	P	16 59 41.6	+0.9
GRFO				IAmb	IAmb	16 59 47.0	
	comp=Z,377nm,1.8s						
GRFO	Grafenberg	90.26	40	P	P	16 59 41.6	+0.9
GRFO				pmax	pmax		
	comp=Z,377nm,1.8s						
GRFO				MLR	MLR		
	comp=Z,12µm,20.0s						
GRA1	Grafenberg Arr	90.26	40	IAmb	IAmb	16 59 47.0	
	comp=Z,350nm,1.7s						
NC405	NORSAR Array S	90.29	29	IAmb	IAmb	16 59 51.4	
	comp=Z,382nm,1.7s						
SQTA	Sankt Quirin	90.29	43	i P	P	16 59 41.8	+0.7
	comp=Z,139nm,1.0s,SNR=69						
NSS	Namsos	90.31	26	⇑iP	P	16 59 41.0	+0.4
NSS				IVmBBB		16 59 52.0	
	comp=Z,3µm,3.8s						
NSS				eSKSac	SKSac	17 10 12.2	+2.8
NSS				IVMs_BB	IVMs_BB	17 32 29.2	
	comp=Z,5µm,27.4s						
GAMB	Gambell	90.47	334	IAmb	IAmb	16 59 51.9	
	comp=Z,266nm,1.4s						
GAMB				IAMs_20	IAMs_20	17 45 41.7	
	comp=Z,18µm,21.0s						
GAMB	Gambell	90.47	334	P	P	16 59 40.9	-0.4
	baz=88,SNR=5.7						
GAMB				S	S	17 10 34.1	-0.1
	baz=88						
QSPA	South Pole Qui	90.51	180	LR	LR	17 33 16.1	
	comp=Z,45µm,21.4s,baz=156,slow=31						
QSPA	South Pole Qui	90.51	180	P	P	16 59 41.1	-0.6
WATA	Walderalm	90.54	43	i P	P	16 59 43.0	+0.7
	comp=Z,97nm,1.3s,SNR=42						
WATA				eP	PKKPbc	17 17 10.0	-1.3
	comp=Z,6.9nm,1.0s						
WTTA	Wattenberg	90.58	43	i P	P	16 59 43.5	+1.0
	comp=Z,275nm,1.4s,SNR=93						
WTTA				eP	PKKPbc	17 17 09.8	-1.4
	comp=Z,5.9nm,0.8s						
CTI	Castel Tesino	90.62	44	IAmb	IAmb	16 59 47.3	
	comp=Z,202nm,1.0s						
TEOL	Teolo	90.65	45	IAmb	IAmb	16 59 45.5	
	comp=Z,263nm,1.0s						
STOK	Stokkvaagen	90.68	24	eP	P	16 59 43.2	+1.0
STOK				eSKSac	SKSac	17 10 14.4	+2.9
KONS	Konsvik	90.71	24	eP	P	16 59 43.4	+1.0
LLD	Lille Linde	90.72	35	i P	P	16 59 42.2	-0.5
LLD				IAmb	IAmb	17 00 02.7	
	comp=Z,34nm,0.8s						
HSPB	Hornsund (broa	90.74	13	eP	P	16 59 43.8	+1.4
HSPB				epP	pP	16 59 51.8	-0.4
HSPB				eS	S	17 10 40.5	+4.2
HSPB				eL	L	17 38 24.2	
	comp=Z,21µm,23.5s						
LOF	Lofoten	90.79	22	⇑iP	P	16 59 43.7	+1.0
LOF				IVmB_BB		16 59 47.7	
	comp=Z,3µm,3.4s						
LOF				eSKSac	SKSac	17 10 14.6	+2.4
LOF				IVMs_BB	IVMs_BB	17 30 36.4	
	comp=Z,11µm,42.1s						
SPA0	Spitsbergen Ar	90.80	12	eP	P	16 59 43.4	+0.6
SPA0				IVmBBB		16 59 53.4	
	comp=Z,3µm,2.5s						
SPA0				eSKSac	SKSac	17 10 13.8	+1.8
SPA0				IVMs_BB	IVMs_BB	17 33 30.4	
	comp=Z,7µm,25.0s						
SPITS	Spitsbergen Ar	90.80	12	LR	LR	17 39 59.5	
	comp=Z,13µm,21.0s,baz=19,slow=35						
SPB2	Spitsbergen Ar	90.81	12	IAmb	IAmb	17 00 03.2	
	comp=Z,158nm,1.2s						
COP	Copenhagen	90.84	34	i P	P	16 59 42.2	-1.0
COP				IAmb	IAmb	16 59 51.2	
	comp=Z,62nm,0.5s						
NVL	N'lazarevskaya	90.95	161	⇑iP	P	16 59 42.9	-0.5
NVL				e*PP	pP	16 59 54.6	+1.3
NVL				ePPP	PPP	17 05 17.9	
NVL				eS	SKSac	17 10 14.0	+1.1
NVL				e*SS	SKKSac	17 10 33.2	+5.4
NVL				ePS	PS	17 11 43.8	-6.2
NVL				e		17 16 55.9	
NVL				pmax	pmax		
	comp=Z,171nm,1.2s						
NVL				MLR	MLR		
	comp=Z,46µm,20.0s						
NKC	Novy Kostel	91.04	40	eP	P	16 59 45.5	+1.1
NKC				eSKS	SKSac	17 10 16.4	+2.0
NKC				AMS	AMS	17 31 50.0	
	comp=Z,39µm,30.4s						
ABTA	Abfaltersbach	91.20	43	i P	P	16 59 46.2	+0.9
	comp=Z,122nm,1.1s,SNR=84						
ABTA				eP	PKKPbc	17 17 08.3	-1.2
	comp=Z,1.6nm,0.5s						
MOR8	Moi Rana	91.27	24	⇑iP	P	16 59 46.0	+0.9
MOR8				IVmB_BB		17 00 04.8	
	comp=Z,2µm,6.5s						
MOR8				eSKSac	SKSac	17 10 17.9	+2.9
MOR8				IVMs_BB	IVMs_BB	17 34 47.9	
	comp=Z,10µm,26.1s						
HFS	Hagfors	91.31	30	LR	LR	17 37 28.0	
	comp=Z,15µm,22.0s,baz=268,slow=33						
MURB	Monte Urbino	91.32	47	P	P	16 59 44.9	-1.0
MURB				IAmb	IAmb	16 59 49.1	
	comp=Z,388nm,2.0s						
CLL	Collm	91.35	39	IAmb	IAmb	16 59 51.9	
	comp=Z,313nm,2.0s						
CLL				IAMs_20	IAMs_20	17 39 37.2	
	comp=Z,18µm,22.0s						
CLL	Collm	91.35	39	⇑iP	P	16 59 46.5	+0.8
CLL				i		17 00 03.5	
CLL				e		17 03 28.0	
CLL				eS	S	17 10 43.0	+0.2
CLL				pmax	pmax		
	comp=Z,1µm,2.9s						
CLL	Collm	91.35	39	⇑iP	P	16 59 46.5	+0.8
	comp=Z,1µm,2.9s						
CLL				ePmax		16 59 54.0	
CLL				i x	x	17 00 03.5	
CLL				ePP	PP	17 03 28.0	+4.7
CLL				ex	x	17 09 31.0	
CLL				eSKSac	SKSac	17 10 22.0	+6.0
CLL				eS	S	17 10 43.0	+0.2
CLL				ex	x	17 11 14.0	
CLL				ePS	PS	17 11 57.0	+1.9
CLL				ePPS	PPS	17 12 30.0	
CLL				eSS	SS	17 17 00.0	+12
CLL				ex	x	17 17 26.0	
CLL				eSSS	SSS	17 20 30.0	
CLL				eSSSS		17 23 30.0	
CLL				ePKPPKPdf		17 25 19.0	
	comp=Z,24nm,1.7s						
CLL				Lmax		17 35 00.0	
RGN	Rugen	91.39	36	IAmb	IAmb	16 59 57.3	
	comp=Z,201nm,1.4s						
RGN				IAMs_20	IAMs_20	17 38 45.4	
	comp=Z,21µm,22.0s						
STEI	Steigen	91.44	22	⇑iP	P	16 59 46.0	+0.2
FAUS	Fauske	91.51	23	⇑iP	P	16 59 46.7	+0.6
FAUS				IVmBBB		16 59 57.4	
	comp=Z,2µm,2.7s						
FAUS				eSKSac	SKSac	17 10 17.7	+1.5
FAUS				IVMs_BB	IVMs_BB	17 33 24.9	
	comp=Z,15µm,23.7s						
DEL	Delary	91.61	34	eP	P	16 59 47.1	+0.3
KBA	Koelnbreinsper	91.75	43	i P	P	16 59 48.2	+0.2
	comp=Z,223nm,1.4s,SNR=106						
NRCA	Norcia	91.77	47	P	P	16 59 47.2	-0.8
PTCC	Patocco-Chiusa	91.79	44	⇑P	P	16 59 48.6	+0.7
PTCC				⇑P	P	16 59 48.8	+0.7
KHC	Kasperske Hory	91.81	41	IAmb	IAmb	16 59 54.1	
	comp=Z,252nm,1.6s						
KHC	Kasperske Hory	91.81	41	c iP	P	16 59 48.2	+0.2
KHC				pmax	pmax		
	comp=Z,347nm,1.5s						
KHC				MLR	MLR		
	comp=Z,25µm,19.0s						
KHC	Kasperske Hory	91.81	41	eP	P	16 59 49.1	+1.1
KHC				epP	pP	16 59 56.5	-1.4
KHC				eSKS	SKSac	17 10 22.3	+3.4
KHC				AMS	AMS	17 33 00.0	
	comp=Z,40µm,26.5s						
BJO1	Bjornoya	91.89	15	⇑iP	P	16 59 48.3	+0.5
BJO1				eSKSac	SKSac	17 10 20.7	+2.5
BJO1				IVMs_BB	IVMs_BB	17 34 58.6	
	comp=Z,7µm,18.5s						
ROBS	Robic	91.91	44	eP	P	16 59 49.3	+0.9
ROBS				eSKSac	SKSac	17 10 21.0	+1.6
ROBS				e		17 17 15.7	
GEC2	GERESS Array S	91.91	41	IAmb	IAmb	17 00 01.5	
	comp=Z,176nm,1.7s						
GERES	GERESS Array B	91.91	41	P	P	16 59 49.2	+0.7
	comp=Z,30nm,1.0s,baz=246,slow=5.7,SNR=106						
GERES				PKKP	PKKPdf	17 17 02.3	-2.7
	comp=Z,1.9nm,0.9s,baz=124,slow=2.4,SNR=6.3						
GERES				PKPPKP		17 25 17.3	
	comp=Z,0.8nm,0.8s,baz=232,slow=1.5,SNR=5.2						
GERES				LR	LR	17 42 51.8	
	comp=Z,8µm,18.8s,baz=255,slow=37						
	comp=Z,30nm,1.0s						
BIOA	Bad Ischl, Aus	91.92	42	i P	P	16 59 49.1	+0.5
	SNR=85						
BRG	Berggiesshubel	91.96	39	i P	P	16 59 49.7	+1.0
BRG				Amp		16 59 51.5	
	comp=Z,113nm,1.7s						
BRG				ex	x	16 59 53.6	
BRG				Amp		16 59 54.9	
	comp=Z,236nm,1.6s						
BRG				ex	x	17 00 06.6	
BRG				Amp		17 00 08.2	
	comp=Z,102nm,1.3s						
BRG				ex	x	17 00 38.3	
BRG				Amp		17 00 46.3	
	comp=Z,99nm,1.7s						
BRG	Berggiesshubel	91.96	39	PP	PP	17 03 22.0	-6.1
BRG	Berggiesshubel	91.96	39	PS	PS	17 12 15.0	+13
BRG				PKPPKP		17 25 18.2	
BRG				Amp		17 25 19.9	
	comp=Z,33nm,1.8s						
BRG				Amp		17 34 58.0	
	comp=N,13nm,24.0s						
BRG				Amp		17 35 01.0	
	comp=Z,26nm,25.8s						
BRG				Amp		17 35 07.0	
	comp=E,16nm,26.0s						
BRG	Berggiesshubel	91.96	39	i P	P	16 59 49.6	+1.0
BRG				e		17 00 06.5	
BRG				pmax	pmax		
	comp=Z,113nm,1.7s						
BRG				MLR	MLR		
	comp=N,13µm,24.0s						
BRG				MLR	MLR		
	comp=Z,26µm,25.8s						
BRG				MLR	MLR		
	comp=E,16µm,26.0s						
MYKA	Terra Mystica	91.98	44	i P	P	16 59 49.7	+0.8
	comp=E,69nm,1.0s,SNR=35						
AQU	L'Aquila	92.00	48	IAmb	IAmb	17 00 07.8	
	comp=Z,116nm,1.2s						
CLTB	Caltabellotta	92.05	53	IAmb	IAmb	16 59 54.9	
	comp=Z,274nm,1.4s						
CLTB				IAMs_20	IAMs_20	17 40 41.1	
	comp=Z,33µm,22.0s						
CLTB	Caltabellotta	92.05	53	⇑P	P	16 59 48.8	-0.7
CLTB				⇓P	P	16 59 50.5	+1.1
AFI	Afiamalu	92.11	256	LR	LR	17 32 34.3	
	comp=Z,29µm,19.1s,baz=94,slow=30						
AFI	Afiamalu	92.11	256	IAMs_20	IAMs_20	17 32 04.2	
	comp=Z,29µm,20.0s						
BSD	Bornholm Skovb	92.28	35	eP	P	16 59 50.6	+0.6
BSD	Bornholm Skovb	92.28	35	i P	P	16 59 49.8	-0.2
BSD				IAmb	IAmb	16 59 52.2	
	comp=Z,7.4nm,0.7s						
SKDS	Skadanscina	92.29	45	⇑iP	P	16 59 50.9	+0.6
JAVS	Javornik	92.31	44	eP	P	16 59 51.3	+0.8
CKRC	Cesky Krumlov	92.31	41	eP	P	16 59 50.8	+0.5
CKRC				eSKS	SKSac	17 10 23.4	+1.7
MOA	Molln	92.34	42	i P	P	16 59 51.4	+0.9
	comp=Z,226nm,1.4s,SNR=52						
PVCC	Panska Ves	92.38	40	eP	P	16 59 52.1	+1.6
PVCC				eSKS	SKSac	17 10 20.0	-1.9
PVCC				AMS	AMS	17 32 10.0	
	comp=Z,34µm,29.8s						
PRU	Pruhonice	92.39	40	eP	P	16 59 51.5	+0.9
PRU				eSKS	SKSac	17 10 21.5	-0.5
PRU				AMS	AMS	17 33 20.0	
	comp=Z,47µm,28.6s						
CEY	Cerknica	92.57	44	⇑iP	P	16 59 52.5	+0.9
TRO	Tromso	92.58	20	⇑iP	P	16 59 51.4	+0.4
TRO				IVmB_BB		17 00 00.1	
	comp=Z,3µm,2.9s						
TRO				eSKSac	SKSac	17 10 24.6	+2.4
TRO				IVMs_BB	IVMs_BB	17 31 50.8	
	comp=Z,6µm,43.5s						
OBKA	Obir	92.61	44	i P	P	16 59 52.3	+0.5
	comp=Z,114nm,1.3s,SNR=51						
LJU	Ljubljana	92.62	44	⇑iP	P	16 59 52.7	+0.9
LJU	Ljubljana	92.62	44	eP	P	16 59 52.9	+1.1
LJU				ePP	PP	17 03 31.8	-1.8
LJU				eSKSac	SKSac	17 10 25.1	+1.7
LJU				e		17 24 27.8	
SOKA	Soboth	92.93	43	eP	P	16 59 53.3	0.0
	comp=Z,846nm,2.8s,SNR=66						
PAOL	Paolisi	92.94	49	IAmb	IAmb	17 00 02.3	
	comp=Z,179nm,1.8s						
VIKU	Vikbolandet	92.97	31	eP	P	16 59 53.5	+0.4
HOPEN	Hopen	92.97	13	⇑iP	P	16 59 55.4	+2.6
HOPEN				IVmB_BB		17 00 06.2	
	comp=Z,5µm,3.6s						
HOPEN				ePP	PP	17 03 39.9	+4.5
HOPEN				eSKSac	SKSac	17 10 28.9	+4.7
HOPEN				eSS	SS	17 17 14.9	+4.6
HOPEN				IVMs_BB	IVMs_BB	17 33 28.9	
	comp=Z,9µm,36.7s						
PERS	Pernice	92.99	43	eP	P	16 59 54.0	+0.4
VAE	Valguarnera	93.00	53	LR	LR	17 39 41.2	
	comp=Z,23µm,21.7s,baz=222,slow=34						
TREC	Trest	93.05	41	AMS	AMS	17 33 50.0	
	comp=Z,37µm,26.6s						
JETT	Jettan, Norway	93.11	20	⇑iP	P	16 59 53.8	+0.3
ARSA	Arzberg	93.23	43	i P	P	16 59 55.2	+0.6
	comp=Z,169nm,1.6s,SNR=67						
CRES	Cresnjev	93.28	44	⇑iP	P	16 59 55.5	+0.6
UPC	Upice	93.30	40	eP	P	16 59 55.9	+1.1
UPC				eSKS	SKSac	17 10 26.4	-0.6
UPC				AMS	AMS	17 32 20.0	
	comp=Z,39µm,31.9s						
UPP	Uppsala	93.30	30	eP	P	16 59 54.0	-0.5
CHVC	Chvalec	93.32	39	eP	P	16 59 56.0	+1.1
CHVC				eSKS	SKSac	17 10 32.2	+5.0
CHVC				AMS	AMS	17 32 10.0	
	comp=Z,35µm,32.0s						
CONA	Conrad Observa	93.41	42	i P	P	16 59 56.2	+0.7
	comp=Z,205nm,1.5s,SNR=112						
OSTC	Ostas	93.42	39	eP	P	16 59 56.5	+1.1
OSTC				eSKS	SKSac	17 10 29.3	+1.6
OSTC				AMS	AMS	17 32 10.0	
	comp=Z,38µm,34.6s						
KSP	Ksiaz	93.45	39	eP	P	16 59 56.9	+1.5
KSP				epP	pP	17 00 04.8	-0.6
KSP				ePP	PP	17 03 39.1	-0.8
KSP				eSKSac	SKSac	17 10 30.5	+2.7
KSP				eS	ScS	17 11 04.2	+1.0
KSP				eL	L	17 33 44.5	
	comp=Z,28µm,27.6s						
DPC	Dobruska-Polom	93.51	40	eP	P	16 59 57.1	+1.3
DPC				eSKS	SKSac	17 10 33.0	+4.7
DPC				AMS	AMS	17 32 20.0	
	comp=Z,33µm,30.6s						
KRUC	Moravsky	93.67	41	eP	P	16 59 57.6	+1.1
RONA	Rosalia, Austr	93.72	42	i P	P	16 59 57.7	+0.9
	SNR=69						
VRAC	Vranov	93.78	41	⇑P	P	16 59 58.1	+1.1
VRAC	Vranov	93.78	41	LR	LR	17 43 50.9	
	comp=Z,8µm,18.4s,baz=261,slow=37						
VRAC	Vranov	93.78	41	⇑P	P	16 59 58.1	+1.1
VRAC	Vranov	93.78	41	eP	P	16 59 58.2	+1.1
GKP	Gorka Klasztor	93.80	37	eP	P	16 59 58.0	+1.0
GKP				epP	pP	17 00 06.2	-0.7
GKP				ePP	PP	17 03 41.5	-0.9
GKP				eSKSac	SKSac	17 10 31.2	+1.6
GKP				eS	S	17 11 05.1	+0.6
GKP	Gorka Klasztor	93.80	37	eP	P	16 59 59.5	+2.5
KRLC	Kraliky	93.83	40	eP	P	16 59 58.8	+1.5
KRLC				eSKS	SKSac	17 10 32.2	+2.2
KRLC				AMS	AMS	17 36 00.0	
	comp=Z,24µm,26.6s						
SOP	Sopron	93.89	42	P	P	16 59 58.5	+0.9
HAMF	Hammerfest	94.00	19	eP	P	16 59 58.2	+0.7
HAMF				eSKSac	SKSac	17 10 32.5	+2.6
CEL	Celeste	94.13	52	IAMs_20	IAMs_20	17 42 26.4	
	comp=Z,22µm,22.0s						
KTK1	Kautokeino	94.20	21	⇑iP	P	16 59 58.4	-0.1
KTK1				IVmB_BB		17 00 08.6	
	comp=Z,1µm,1.8s						
KTK1				eSKSac	SKSac	17 10 33.8	+2.6
KTK1				IVMs_BB	IVMs_BB	17 32 34.0	
	comp=Z,7µm,39.8s						
ZST	Bratislava	94.21	42	eP	P	17 00 00.3	+1.3
ZST				pmax	pmax		
	comp=Z,1µm,1.9s						
ZST	Bratislava	94.21	42	eP	P	17 00 00.3	+1.3
ZST				ePP	PP	17 03 51.0	+5.1
ZST				e		17 10 11.7	
ZST				eS	S	17 11 13.7	+5.3
MODS	Modra-Piesok	94.31	42	eP	P	17 00 00.7	+1.2
MODS				pmax	pmax		
	comp=Z,834nm,1.8s						
MODS	Modra-Piesok	94.31	42	eP	P	17 00 00.7	+1.2
MODS				ePP	PP	17 03 47.0	+0.3
MODS				e		17 10 09.1	
MODS				eS	S	17 11 17.0	+7.7
MODS				eL	L	17 36 07.1	
MORC	Moravsky Berou	94.35	40	⇑P	P	17 00 01.4	+1.7
MORC	Moravsky Berou	94.35	40	⇑P	P	17 00 01.4	+1.7
MORC	Moravsky Berou	94.35	40	eP	P	17 00 00.8	+1.1
SMOL	Smolenice	94.40	41	eP	P	17 00 01.4	+1.5
SMOL				pmax	pmax		
	comp=Z,428nm,2.9s						
SMOL	Smolenice	94.40	41	eP	P	17 00 01.3	+1.4
SMOL				ePP	PP	17 04 01.0	+14
SMOL				e		17 10 37.5	
SMOL				eS	S	17 11 15.6	+5.6
AAL	Aland	94.44	30	eP	P	16 59 51.1	-8.6
EGYH	Egyhazaskeszo	94.44	43	P	P	17 00 00.9	+0.8
JAVC	Velka Javorina	94.52	41	eP	P	17 00 02.6	+2.1
MGRS	Mrkonjic Grad	94.54	46	eP	P	17 00 01.4	+0.7
MAUC	Maruska	94.57	41	eP	P	17 00 02.4	+1.7
MAUC				eSKS	SKSac	17 10 31.5	-2.6
MAUC				AMS	AMS	17 34 50.0	
	comp=Z,51µm,27.0s						
MATE	Matera	94.58	49	⇑P	P	17 00 00.5	-0.3
BLY	Banja Luka	94.59	45	⇑iP	P	17 00 01.7	+0.9
MPLH	Magyarpolny	94.61	43	P	P	17 00 01.9	+1.0
SRKY	Kupres RS	94.63	46	eP	P	17 00 01.8	+0.6
OKC	Ostrava-Krasne	94.73	40	eP	P	17 00 02.5	+1.1
OKC				eSKS	S	17 11 06.9	-5.9
OKC				AMS	AMS	17 34 50.0	
	comp=Z,28µm,28.0s						
TIP	Timpagrande	94.74	51	⇑P	P	17 00 00.7	-1.1
TIP	Timpagrande	94.74	51	IAMs_20	IAMs_20	17 42 54.5	
	comp=Z,17µm,21.0s						
NOCI	Noci	94.84	49	i P	P	17 00 00.2	-1.9
ARA0	ARCESS Array S	94.86	20	eP	P	17 00 02.0	+0.4
ARA0				IVmB_BB		17 00 05.7	
	comp=Z,2µm,3.4s						
ARA0				eSKSac	SKSac	17 10 37.6	+2.8
ARA0				IVMs_BB	IVMs_BB	17 38 28.9	
	comp=Z,6µm,23.8s						
ARCES	ARCESS Array B	94.86	20	P	P	17 00 00.7	-0.9
	comp=Z,26nm,0.8s,baz=302,slow=2.1,SNR=25						
ARCES				PP	PP	17 03 49.4	-1.0
	comp=Z,15nm,1.0s,baz=289,slow=5.6,SNR=3.7						
ARCES				PKKP	PKKPdf	17 16 57.9	-2.1
	comp=Z,2.2nm,0.8s,baz=101,slow=2.5,SNR=7.5						
ARCES				LR	LR	17 39 24.7	
	comp=Z,9µm,21.6s,baz=277,slow=33						
	comp=Z,26nm,0.8s						
TIH	Tihany	94.87	43	P	P	17 00 03.1	+1.0
KOLL	Kolacno	95.03	41	eP	P	17 00 04.2	+1.4
SRO	Srobarova	95.06	42	eP	P	17 00 04.5	+1.6
SRO				pmax	pmax		
	comp=Z,364nm,1.9s						
SRO	Srobarova	95.06	42	eP	P	17 00 04.5	+1.6
CSKK	Cskako	95.07	43	P	P	17 00 03.4	+0.4
KOVH	Kovagotottos	95.10	44	P	P	17 00 04.4	+1.2
STON	Ston	95.13	47	⇑iP	P	17 00 03.9	+0.6
RAF	Rauma	95.16	29	eP	P	17 00 02.4	-0.6
SBA	Scott Base	95.30	191	P	P	17 00 04.3	+0.9
SBA	Scott Base	95.30	191	P	P	17 00 04.3	+0.9
SBA				pmax	pmax		
	comp=Z,48nm,1.2s						
SBA				MLR	MLR		
	comp=Z,43µm,18.0s						
VYHS	Vyhne	95.33	41	eP	P	17 00 05.5	+1.3
VYHS				pmax	pmax		
	comp=Z,155nm,2.0s						
VYHS	Vyhne	95.33	41	eP	P	17 00 05.5	+1.3
MORH	Mrgy, Hungar	95.46	44	⇑P	P	17 00 05.9	+1.1
MORH	Mrgy, Hungar	95.46	44	⇑iP	P	17 00 05.4	+0.6
MORH	Mrgy, Hungar	95.46	44	P	P	17 00 05.9	+1.1
BUD	Budapest	95.58	42	P	P	17 00 06.3	+1.1
TREB	Trebinje	95.62	47	eP	P	17 00 06.4	+0.8
LANS	Liptovska Anna	95.67	41	eP	P	17 00 08.0	+2.3
LANS				pmax	pmax		
	comp=Z,113nm,1.6s						
LANS	Liptovska Anna	95.67	41	eP	P	17 00 08.0	+2.3
OJC	Ojcow	95.74	40	eP	P	17 00 07.3	+1.3
OJC				epP	pP	17 00 15.3	-0.5
OJC	Ojcow	95.74	40	IAmb	IAmb	17 00 25.4	
	comp=Z,140nm,1.2s						
OJC				IAMs_20	IAMs_20	17 46 36.5	
	comp=Z,15µm,21.0s						
BRY	Bratogost	95.74	47	eP	P	17 00 06.4	0.0
HCY	Herceg Novi	95.75	47	eP	P	17 00 06.6	+0.4
SCTE	Santa Cesarea	95.97	50	i P	P	17 00 08.2	+0.9
UPM	Unac-Piva	95.98	47	eP	P	17 00 07.6	+0.1
PSZ	Piszkesteto	96.10	42	⇑P	P	17 00 08.7	+0.9
PSZ	Piszkesteto	96.10	42	IAmb	IAmb	17 00 13.4	

	comp=Z,139nm,1.2s						
PSZ	Piszkesteto	96.10	42	⇑P	P	17 00 08.7	+0.9
PSZ	Piszkesteto	96.10	42	P	P	17 00 09.2	+1.4
BEL	Belsk	96.13	38	eP	P	17 00 09.2	+1.5
BEL				epP	pP	17 00 16.8	-0.7
BEL				eSKSac	SKSac	17 10 42.7	+0.6
BEL				eL	L	17 35 54.4	
	comp=Z,35µm,26.9s						
NIE	Niedzica	96.17	40	eP	P	17 00 10.6	+2.6
NIE				epP	pP	17 00 18.8	+0.9
BBLS	Lazići	96.26	46	⇑iP	P	17 00 09.7	+1.1
RUDO	Rudo	96.27	46	eP	P	17 00 07.1	-1.5
TEKS	Tekeris	96.27	45	eP	P	17 00 08.0	-0.6
DRME	Dracevica, Mon	96.29	48	⇑iP	P	17 00 09.7	+1.0
PDG	Podgorica	96.32	47	⇑P	P	17 00 09.7	+0.9
PDG	Podgorica	96.32	47	IAmb	IAmb	17 00 29.0	
	comp=Z,200nm,1.9s						
PDG	Podgorica	96.32	47	eP	P	17 00 09.4	+0.6
FRGS	Fruska Gora	96.40	45	⇑P	P	17 00 11.0	+1.9
FRGS	Fruska Gora	96.40	45	⇑iP	P	17 00 09.4	+0.3
VNDA	Vanda	96.40	191	P	P	17 00 09.6	+1.2
	comp=Z,4.0nm,0.8s,baz=125,slow=4.8,SNR=20						
VNDA				PKKP	PKKPbc	17 16 54.5	-2.1
	comp=Z,2.5nm,1.0s,baz=246,slow=3.1,SNR=5.7						
VNDA				LR	LR	17 37 11.3	
	comp=Z,40µm,18.2s,baz=117,slow=31						
	comp=Z,4.0nm,0.8s						
KECS	Kecovo	96.42	41	eP	P	17 00 11.3	+2.2
KECS				pmax	pmax		
	comp=Z,119nm,1.2s						
KECS	Kecovo	96.42	41	eP	P	17 00 11.3	+2.2
BSZH	Besenyszg	96.44	42	P	P	17 00 11.0	+1.8
MIDW	Midway	96.53	298	IAMs_20	IAMs_20	17 34 11.6	
	comp=Z,26µm,22.0s						
MEF	Metsahovi	96.59	29	eP	P	17 00 09.0	-0.5
MTSE	Matsula	96.62	31	eP	P	17 00 08.8	-0.9
DIVS	Divibare	96.66	46	IAMs_20	IAMs_20	17 39 41.0	
	comp=Z,20µm,22.0s						
DIVS	Divibare	96.66	46	⇑iP	P	17 00 11.5	+1.1
SJES	Sjenica	96.75	46	⇑iP	P	17 00 11.2	+0.3
TIR	Tirane	96.89	48	iP	P	17 00 11.5	+0.1
BCI	Bajram Curri	96.92	47	iP	P	17 00 17.4	+5.8
CRVS	Cervenica-Dubn	97.00	41	eP	P	17 00 13.3	+1.5
CRVS				pmax	pmax		
	comp=Z,355nm,1.6s						
CRVS	Cervenica-Dubn	97.00	41	ePP	PP	17 04 03.1	-4.4
CRVS				eP	P	17 00 13.3	+1.5
CRVS				e		17 10 35.5	
CRVS				eS	S	17 11 44.7	+12
CRVS				eL	L	17 37 31.6	
TSUM	Tsumeb	97.05	109	⇑iP	P	17 00 10.8	-2.0
TSUM				IAMs_20	IAMs_20	17 39 28.7	
	comp=Z,960µm,23.4s						
TSUM	Tsumeb	97.05	109	LR	LR	17 40 24.6	
	comp=Z,107µm,21.8s,baz=266,slow=33						
TSUM	Tsumeb	97.05	109	P	P	17 00 12.7	-0.1
FIA1	FINESS Array S	97.11	28	IAmb	IAmb	17 00 21.6	
	comp=Z,144nm,1.8s						
FINES	FINESS Array B	97.11	28	P	P	17 00 11.1	-0.8
	comp=Z,13nm,0.8s,baz=288,slow=1.8,SNR=27						
FINES				PKKP	PKKPbc	17 16 52.0	-2.3
	comp=Z,6.3nm,0.8s,baz=88,slow=4.6,SNR=12						
FINES				LR	LR	17 41 27.1	
	comp=Z,14µm,21.7s,baz=279,slow=34						
	comp=Z,13nm,0.8s						
SRN	Sarande	97.17	50	iP	Pdif	17 00 18.9	+6.1
SUW	Suwalki	97.19	35	eP	P	17 00 12.5	0.0
SUW				epP	pP	17 00 20.5	-1.8
SUW				ePP	PP	17 04 11.3	+2.6
SUW				eSKSac	SKSac	17 10 47.5	0.0
SUW				eS	S	17 11 33.2	-0.7
SUW				eL	L	17 40 59.5	
	comp=Z,17µm,23.3s						
SUW	Suwalki	97.19	35	eP	Pdif	17 00 12.7	+0.2
PHP	Peshkopia	97.28	48	P	Pdif	17 00 14.5	+1.2
PHP	Peshkopia	97.28	48	iP	Pdif	17 00 14.0	+0.7
PABE	Paberze	97.35	34	IAMs_20	IAMs_20	17 42 55.9	
	comp=Z,28µm,22.0s						
PABE	Paberze	97.35	34	eP	Pdif	17 00 13.3	+0.1
RAO	Raoul Island	97.39	241	LR	LR	17 34 00.6	
	comp=Z,48µm,20.7s,baz=86,slow=29						
IGT	Igoumenitsa	97.46	50	P	Pdif	17 00 14.8	+0.7
IGT	Igoumenitsa	97.46	50	iP	Pdif	17 00 15.0	+0.8
KOLS	Kolonicke sedl	97.52	41	eP	Pdif	17 00 15.8	+1.6
KOLS				pmax	pmax		
	comp=Z,34nm,1.3s						
KOLS	Kolonicke sedl	97.52	41	eP	Pdif	17 00 15.8	+1.6
LTVH	Ltavrtes, Hu	97.52	42	P	Pdif	17 00 15.8	+1.6
SIRR	Siria	97.53	43	⇓P	Pdif	17 00 15.6	+1.4
UZH	Uzhgorod	97.58	41	eP	P	17 00 14.0	-0.4
UZH				e		17 00 31.6	
UZH				eS	S	17 11 33.0	-4.5
UZH				eSP	SP	17 13 04.0	+4.5
LSK	Leskovik	97.59	50	P	Pdif	17 00 15.7	+0.9
LSK	Leskovik	97.59	50	iP	P	17 00 13.0	-1.7
BZS	Buzias	97.59	44	⇑P	Pdif	17 00 15.7	+1.2
BZS	Buzias	97.59	44	⇑P	Pdif	17 00 15.7	+1.1
OHR	Ohrid	97.62	49	iP	Pdif	17 00 16.5	+1.6
OHR				ePP	PP	17 04 11.2	-1.3
OHR				eS	SKSac	17 10 51.3	+0.9
KBN	Korca	97.67	49	IAmb	IAmb	17 00 19.7	
	comp=Z,89nm,1.2s						
KBN	Korca	97.67	49	iP	Pdif	17 00 17.9	+2.7
KWP	Kalwaria Pacla	97.69	40	eP	Pdif	17 00 16.4	+1.5
KWP				epP	pP	17 00 24.6	-0.1
KWP				ePP	PP	17 04 09.8	-2.9
KWP				eSKSac	SKSac	17 10 50.9	+0.5
KWP				eS	ScS	17 11 44.5	+5.9
KWP				eL	L	17 35 54.4	
	comp=Z,41µm,27.9s						
CER	Ceres	97.78	123	eP	P	17 00 13.3	-2.4
CER				IAMs_20	IAMs_20	17 43 06.5	
	comp=Z,56µm,17.7s						
MDVR	Moldovita	97.78	45	⇓P	Pdif	17 00 16.5	+1.0
LKD2	Lefkada island	97.80	51	P	Pdif	17 00 16.5	+0.8
JAN	Janina	97.84	50	P	P	17 00 15.8	0.0
BOVS	Bovan	97.95	46	⇓P	Pdif	17 00 17.3	+1.1
SKO	Skopje	97.98	48	iP	Pdif	17 00 17.0	+0.6
SKO				ePP	PP	17 04 21.4	+6.1
SKO				eS	SKSac	17 10 56.8	+4.7
FNA	Florina	98.10	49	P	Pdif	17 00 17.6	+0.6
FNA	Florina	98.10	49	iP	P	17 00 15.0	-2.0
DRGR		98.16	43	⇑P	Pdif	17 00 18.3	+1.1
DRGR		98.16	43	⇑P	Pdif	17 00 18.3	+1.1
VSU	Vasula	98.16	31	c iP	P	17 00 16.6	-0.1
VSU				pmax	pmax		
	comp=Z,86nm,0.9s						
VSU				MLR	MLR		
	comp=Z,26µm,19.0s						
VSU	Vasula	98.16	31	eP	P	17 00 16.7	-0.1
APA	Apatity	98.24	21	⇓iP	P	17 00 16.2	-0.7
APA				i		17 04 18.0	
APA				iS	S	17 11 38.0	-4.3
APA				iPS	PS	17 13 18.0	+7.9
APA				pmax	pmax		
	comp=Z,20nm,0.9s						
HERR	Herculane	98.27	45	⇑P	Pdif	17 00 18.6	+1.0
CVNA	Calvinia	98.33	122	eP	Pdif	17 00 18.7	+0.4
CVNA				IAMs_20	IAMs_20	17 43 47.8	
	comp=Z,1µm,4.6s						
BILL	Bilibino	98.37	340	P	P	17 00 16.4	-1.1
BILL	Bilibino	98.37	340	deP	P	17 00 17.1	-0.4
BILL				i		17 04 13.8	
BILL				pmax	pmax		
	comp=Z,92nm,1.9s						
KZN	Kozani	98.46	49	P	Pdif	17 00 19.4	+0.8
LVV	L'vov	98.50	40	eP	Pdif	17 00 19.1	+0.6
LVV				e		17 04 25.7	
LVV				eS	S	17 11 44.3	-0.9
ISAL	Salakas	98.53	34	eP	P	17 00 18.3	-0.2
BMR	Baia Mare	98.54	42	⇑P	Pdif	17 00 20.2	+1.4
BMR	Baia Mare	98.54	42	⇑P	Pdif	17 00 20.2	+1.5
LVZ	Lovozero	98.55	20	ceP	P	17 00 16.4	-1.9
LVZ				pmax	pmax		
	comp=Z,86nm,1.9s						
LVZ				MLR	MLR		
	comp=Z,11µm,19.0s						
IIGN	Ignalina	98.64	34	eP	Pdif	17 00 19.9	+0.9
BLKB	Belogradchik	98.64	46	⇑P	Pdif	17 00 20.1	+0.8
EVR	Evrytania	98.67	51	P	Pdif	17 00 21.1	+1.4
THL	Klokotos Trika	98.75	50	P	Pdif	17 00 20.2	+0.4
ANX	Ano Chora	98.80	51	P	Pdif	17 00 21.6	+1.4
GRG	Griva	98.84	49	P	Pdif	17 00 21.2	+0.9
VAY	Valandovo	98.92	48	iP	Pdif	17 00 21.0	+0.4
VAY				ePP	PP	17 04 20.0	-2.4
VAY				eS	SKSac	17 11 02.1	+5.2
IDID	Didziasalis	98.94	34	eP	Pdif	17 00 21.4	+1.2
ITM	Ithomi	98.99	52	P	Pdif	17 00 21.2	+0.2
AUGR	Augrabies	99.05	119	IAMs_20	IAMs_20	17 43 17.2	
	comp=Z,101µm,21.0s						
KLV	Kalavryta, Ach	99.06	51	P	Pdif	17 00 21.8	+0.5
NACGM	Naroch	99.06	34	eP	Pdif	17 00 19.2	-1.7
	baz=284						
AGG	Agios Georgios	99.06	50	P	Pdif	17 00 22.0	+0.7
SUR	Sutherland	99.14	123	LR	LR	17 41 24.7	
	comp=Z,128µm,21.4s,baz=258,slow=33						
KNT	Kendrikon	99.18	48	P	Pdif	17 00 22.4	+0.6
VTS	Vitosha	99.21	47	⇑P	Pdif	17 00 22.9	+0.8
VTS	Vitosha	99.21	47	⇑P	Pdif	17 00 22.9	+0.8
VTS	Vitosha	99.21	47	iP	Pdif	17 00 22.8	+0.8
KKB	Krupnik	99.21	48	iP	Pdif	17 00 22.8	+0.9
ARCR	ARCALIA	99.22	42	P	Pdif	17 00 24.3	+2.5
SHEM	Shemya Is, Ala	99.39	324	LR	LR	17 43 54.0	
	comp=Z,8µm,20.0s,baz=72,slow=34						
HORT	Hortiatis	99.42	49	P	Pdif	17 00 23.4	+0.5
PUL	Pulkovo	99.58	29	iP	Pdif	17 00 23.4	+0.4
PUL				MLR	MLR		
	comp=Z,10µm,20.0s						
LKR	Lokris	99.63	51	P	Pdif	17 00 22.9	-0.9
BURAR	Bucovina Array	99.69	42	⇓P	Pdif	17 00 25.8	+1.8
BURAR	Bucovina Array	99.69	42	⇓P	Pdif	17 00 25.8	+1.8
MMB	Musomiste	99.73	48	iP	Pdif	17 00 24.8	+0.6
MNK	Minsk	99.78	34	iP	Pdif	17 00 23.8	-0.2
MNK				i		17 04 29.3	
MNK				iPPP	PPP	17 06 34.7	
MNK				iS	SKSac	17 10 59.7	-0.8
MNK				iPS	PS	17 13 27.7	+0.5
MNK				iSS	SS	17 18 46.8	-0.6
MNK				iSSS	SSS	17 22 37.8	
MNK				pmax	pmax		
	comp=N,7.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,26nm,0.9s						
MNK				MLR	MLR		
	comp=E,2µm,22.0s						
MNK				MLR	MLR		
	comp=Z,16µm,24.0s						
MNK				MLR	MLR		
	comp=N,3µm,21.0s						
MNK	Minsk	99.78	34	iP	Pdif	17 00 23.9	-0.2
	comp=E,2.0nm,0.9s						
MNK				iP	Pdif	17 00 23.9	-0.2
	comp=N,7.0nm,0.7s						
MNK				iP	Pdif	17 00 23.9	-0.2
	comp=Z,26nm,0.9s,baz=285						
MNK				iPP	PP	17 04 29.4	+0.9
MNK				iPPP	PPP	17 06 34.8	
MNK				iS	SKSac	17 10 59.8	-0.8
MNK				iPS	PS	17 13 27.8	+0.5
MNK				iSS	SS	17 18 46.9	-0.6
MNK				iSSS	SSS	17 22 37.9	
MNK				iLQ	LQ	17 38 26.2	
MNK				iLR	LR	17 42 01.6	
MNK				iLRM	MLR	17 44 41.0	
	comp=E,2µm,22.3s						
MNK				iLRM	MLR	17 45 03.3	
	comp=Z,16µm,23.6s						
MNK				iLRM	MLR	17 46 20.0	
	comp=N,3µm,21.0s						
UPI	Upington	99.87	119	eP	Pdif	17 00 25.1	-0.1
UPI				IAMs_20	IAMs_20	17 45 36.3	
	comp=Z,69µm,18.3s						
PGB	Panagyurishte	99.90	47	iP	Pdif	17 00 24.8	-0.2
VOIR		100.00	44	⇑P	Pdif	17 00 27.5	+2.1
VOIR		100.00	44	⇑P	Pdif	17 00 27.5	+2.1
MTUR	Matau	100.05	44	⇓P	Pdif	17 00 28.7	+3.1
MTUR	Matau	100.05	44	⇓P	Pdif	17 00 28.7	+3.1
DOPR	Dopca	100.14	43	⇑P	Pdif	17 00 27.7	+1.8
ATH	Athens Observa	100.29	51	P	Pdif	17 00 27.0	+0.3
PLD	Plovdiv	100.36	47	iP	Pdif	17 00 26.9	-0.1
BIZ	Bicaz	100.42	42	⇑P	Pdif	17 00 29.0	+1.8
MLR	Muntele Rosu	100.61	44	⇓P	Pdif	17 00 29.7	+1.5
MLR	Muntele Rosu	100.61	44	⇓P	Pdif	17 00 29.7	+1.5
COVR	Voineasa-Covas	100.72	43	⇓P	Pdif	17 00 31.1	+2.6
KDZ	Kurdzhali	100.97	47	iP	Pdif	17 00 29.5	-0.2
SZH	Strazhica	101.04	46	iP	Pdif	17 00 30.2	+0.2
VRI	Vrincioaia	101.07	43	P	Pdif	17 00 35.7	+5.6
VRI	Vrincioaia	101.07	43	P	Pdif	17 00 35.7	+5.6
AKASG	Malin Array Be	101.55	38	P	Pdif	17 00 31.6	-0.4
	comp=Z,2.9nm,0.9s,baz=272,slow=4.0,SNR=11						
AKASG				PKKP	PKKPdf	17 16 46.5	-1.0
	comp=Z,0.5nm,0.3s,baz=84,slow=2.9,SNR=3.0						
ALN	Alexandroupoli	101.58	48	P	Pdif	17 00 32.5	+0.1
IDI	Anoyia	101.63	54	IAMs_20	IAMs_20	17 49 03.2	
	comp=Z,23µm,22.0s						
SORM	Soroca	101.64	41	⇑P	Pdif	17 00 33.0	+0.5
SORM	Soroca	101.64	41	⇑P	Pdif	17 00 33.0	+0.5
JMB	Yambol	101.67	46	iP	Pdif	17 00 33.4	+0.7
PRD	Provadia	102.11	46	iP	Pdif	17 00 34.9	+0.2
KIS	Kishinev	102.22	42	⇑iP	Pdif	17 00 35.7	+0.6
	comp=Z,170nm,2.7s						
KIS	Kishinev	102.22	42	ePP	PP	17 04 47.0	-0.2
KIS	Kishinev	102.22	42	ePS	PS	17 13 50.0	-3.7
KIS				eL	L	17 26 59.0	
KIS				LQM		17 40 23.0	
	comp=Z,4µm,27.5s						
KIS				LRM	MLR	17 42 29.0	
	comp=Z,4µm,25.0s						
KIS	Kishinev	102.22	42	c iP	Pdif	17 00 35.7	+0.6
KIS				e		17 04 47.0	
KIS				ePS	PS	17 13 50.0	-3.7
KIS				pmax	pmax		
	comp=Z,170nm,2.7s						
MILM	Milestii Mici	102.24	42	eP	Pdif	17 00 35.0	-0.2
	comp=Z,560nm,2.6s						
MILM	Milestii Mici	102.24	42	ePP	PKiKP	17 04 46.0	-11
MILM	Milestii Mici	102.24	42	ePS	PS	17 13 50.0	-3.8
MILM				eL	L	17 32 52.0	
MILM				LQM		17 40 14.0	
	comp=Z,12µm,28.0s						
MILM				LRM	MLR	17 42 33.0	
	comp=Z,12µm,25.0s						
MILM	Milestii Mici	102.24	42	⇑P	Pdif	17 00 36.8	+1.7
MILM	Milestii Mici	102.24	42	eP	Pdif	17 00 35.0	-0.2
MILM				e		17 04 46.0	
MILM				e		17 11 10.0	
MILM				ePS	PS	17 13 50.0	-3.8
MILM				pmax	pmax		
	comp=Z,560nm,2.6s						
TIRR	Tirgusor	102.54	44	IAMs_20	IAMs_20	17 49 39.8	
	comp=Z,30µm,22.0s						
PSN	Preselentsi	102.56	45	iP	Pdif	17 00 37.8	+1.1
SOE	Somerset East	103.09	123	eP	Pdif	17 00 46.5	+7.2
SOE				IAMs_20	IAMs_20	17 47 01.3	
	comp=Z,163µm,16.9s						
HVD	Gariep Dam	103.31	121	eP	Pdif	17 00 41.5	+0.9
HVD				IAMs_20	IAMs_20	17 44 07.4	
	comp=Z,226µm,20.5s						
BOSA	Boshof	103.35	119	⇑iP	Pdif	17 00 40.0	-0.7
BOSA				IAMs_20	IAMs_20	17 45 32.6	
	comp=Z,141µm,19.1s						
KLMR	Klimovskoe	103.42	26	eP	Pdif	17 00 38.9	-1.1
KLMR				e		17 04 54.1	
KLMR				ePS	PS	17 14 04.2	-1.5
KLMR				eSS	SS	17 19 35.6	-1.8
KLMR				pmax	pmax		
	comp=Z,31nm,1.3s						
KLMR	Klimovskoe	103.42	26	ePdif	Pdif	17 00 39.0	-1.1
KLMR				AMP		17 00 44.5	
	comp=Z,31nm,1.3s						
KLMR				ePP	PP	17 04 54.2	-1.4
KLMR				ePS	PS	17 14 04.2	-1.5
KLMR				ePS	PS	17 14 04.2	-1.5
KLMR				ePKKPbc	PKKPbc	17 16 32.2	-4.0
KLMR				eSS	SS	17 19 35.6	-1.8
KLMR				eSS	SS	17 19 35.6	-1.8
KLMR				LQ	LQ	17 36 41.4	
KLMR				LQ	LQ	17 36 41.4	
KLMR				LR	LR	17 40 14.4	
KLMR				AMP		17 44 18.0	
	comp=Z,18µm,24.2s						
KARP	Karpathos	103.42	53	IAMs_20	IAMs_20	17 47 24.5	
	comp=Z,17µm,22.0s						
SWZ	Schweizer	103.59	118	eP	Pdif	17 00 42.6	+0.8
SWZ				IAMs_20	IAMs_20	17 47 49.1	
	comp=Z,110µm,17.6s						
OUZ	Omahuta	103.87	234	IAMs_20	IAMs_20	17 36 11.5	
	comp=Z,31µm,22.0s						
LBTB	Lobatse	104.06	116	eP	Pdif	17 00 49.4	+5.5
LBTB				IAMs_20	IAMs_20	17 50 40.6	
	comp=Z,71µm,17.4s						
OBN	Obninsk	104.35	32	IAMs_20	IAMs_20	17 46 55.8	
	comp=Z,19µm,21.0s						
OBN	Obninsk	104.35	32	⇑iP	Pdif	17 00 43.9	-0.4
OBN				e		17 05 08.8	
OBN				ePPP	PPP	17 07 19.2	
OBN				i		17 11 20.2	
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
OBN				MLR	MLR		
	comp=Z,19µm,20.0s						
MOS	Moscow	104.66	31	iP	Pdif	17 00 38.3	-7.4
MOS				e		17 11 14.9	
MOS				MLR	MLR		
	comp=Z,11µm,21.0s						
KSR	Koster	105.14	117	eP	Pdif	17 00 46.3	-2.5
KSR				IAMs_20	IAMs_20	17 47 18.2	
	comp=Z,66µm,20.1s						
PRYS	Parys	105.41	118	eP	Pdif	17 00 48.7	-1.2
PRYS				IAMs_20	IAMs_20	17 46 49.9	
	comp=Z,113µm,20.2s						
WDLM	Western Deep L	105.53	117	eP	Pdif	17 00 51.0	+0.5
WDLM				IAMs_20	IAMs_20	17 46 03.1	
	comp=Z,53µm,21.1s						
SNKL	Senekal, Frees	105.59	119	⇑iP	Pdif	17 00 48.7	-2.1
SNKL				IAMs_20	IAMs_20	17 47 00.3	
	comp=Z,119µm,18.7s						
ISP	Isparta	105.61	50	IAMs_20	IAMs_20	17 51 47.8	
	comp=Z,17µm,22.0s						
PRGR	Permogore	105.61	24	eP	Pdif	17 00 50.4	+0.6
TIXI	Tiksi	105.69	351	PKKP		17 16 40.1	
	comp=Z,0.7nm,0.5s,baz=268,slow=21,SNR=3.5						
TIXI	Tiksi	105.69	351	IAMs_20	IAMs_20	17 52 56.9	
	comp=Z,17µm,21.0s						
SEY	Seymchan	105.89	338	PKiKP	PKiKP	17 05 04.1	+0.8
	comp=Z,5.3nm,0.9s,baz=70,slow=4.5,SNR=4.2						
SEY				PP	PP	17 05 13.1	-0.8
	comp=Z,10nm,0.9s,baz=36,slow=5.2,SNR=6.4						
SLR	Silverton	106.39	117	⇑iP	Pdif	17 00 56.6	+2.3
SLR				IAMs_20	IAMs_20	17 49 31.7	
	comp=Z,109µm,18.9s						
KSTD	Kokstad	106.56	122	eP	Pdif	17 00 56.8	+1.7
KSTD				IAMs_20	IAMs_20	17 47 51.8	
	comp=Z,379µm,18.5s						
VORR	Voronezh	107.15	35	eP	Pdif	17 00 58.4	+1.5
VORR				e		17 05 24.4	
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
BLWY	Bulawayo	107.35	111	⇑iP	Pdif	17 00 58.2	-0.5
BLWY				IAMs_20	IAMs_20	17 48 51.4	
	comp=Z,322µm,18.6s						
LSZ	Lusaka	107.39	106	PKKPab	PKKPab	17 16 37.9	+0.2
	comp=Z,1.4nm,0.4s,baz=141,slow=5.4,SNR=5.0						
BRTR	Keskin Array B	107.49	48	PKiKP	PKiKP	17 05 07.2	-0.1
	comp=Z,2.6nm,0.9s,baz=238,slow=4.0,SNR=3.7						
BRTR				PKKPbc	PKKPbc	17 16 21.2	-2.1
	comp=Z,1.5nm,0.8s,baz=96,slow=4.4,SNR=4.4						
BRTR				PKKPab	PKKPdf	17 16 35.1	-1.4
	comp=Z,5.6nm,1.1s,baz=161,slow=4.8,SNR=7.8						
NWCL	Newcastle	107.53	119	⇑iP	Pdif	17 00 58.3	-1.0
NWCL				IAMs_20	IAMs_20	17 48 25.4	
	comp=Z,186µm,19.1s						
CRLN	Carolina, Mapu	107.91	117	eP	Pdif	17 01 01.8	+0.7
CRLN				IAMs_20	IAMs_20	17 47 38.0	
	comp=Z,375nm,4.3s						
PET	Petropavlovsk	108.08	327	eP	Pdif	17 01 07.9	+6.9
PET				e		17 05 39.4	
PET				e		17 11 42.1	
PET				eSS	SS	17 20 46.2	+4.8
PET				eSSS	SSS	17 24 51.5	
PET				pmax	pmax		
	comp=Z,1µm,16.6s						
PET				pmax	pmax		
	comp=Z,1µm,12.3s						
PET				pmax	pmax		
	comp=Z,5µm,26.6s						
MAW	Mawson	108.17	166	PKKPbc	PKKPbc	17 16 17.5	-4.4
	comp=Z,4.5nm,0.8s,baz=358,slow=4.5,SNR=7.7						
MA2	Magadan	108.48	336	IAMs_20	IAMs_20	17 59 26.4	
	comp=Z,17µm,22.0s						
ANN	Anapa	108.61	42	iP	Pdif	17 01 01.7	-1.9
ANN				pmax	pmax		
	comp=Z,37nm,0.9s						
POGA	Pongola	109.18	119	eP	Pdif	17 01 07.7	+1.1
POGA				IAMs_20	IAMs_20	17 50 01.7	
	comp=Z,294µm,18.6s						
CNG	Changalane	109.78	118	eP	Pdif	17 01 09.7	+0.5
CNG				IAMs_20	IAMs_20	17 50 55.5	
	comp=Z,137nm,22.0s						
NRIK	Noril'sk	109.80	5	PKKPab	PKKPab	17 16 23.9	-2.7
	comp=Z,8.4nm,0.8s,baz=152,slow=3.6,SNR=11						
MBAR	Mbarara	110.46	90	eP	PKiKP	17 04 38.7	-35
MBAR	Mbarara	110.46	90	eP	Pdif	17 01 13.4	+0.7
MBAR				eS	PP	17 05 48.5	-0.8
SOC	Sochi	110.58	43	iPKIKP	PKiKP	17 05 10.9	-1.8
SOC				ePPP	PPP	17 08 09.7	
SOC				e		17 11 48.2	
SOC				ePS	PS	17 15 20.1	+0.5
SOC				eSS	SS	17 21 20.2	+4.5
EIL	Elat	111.05	58	PKKP		17 16 27.4	
	comp=Z,4.7nm,0.9s,baz=132,slow=4.6,SNR=5.9						
GHAJ	Ghor Haditha	111.19	56	IAMs_20	IAMs_20	18 00 03.3	
	comp=Z,23µm,19.0s						
JAWL	J.Aulia	111.27	74	iP	PKiKP	17 05 15.4	+0.6
JAWL				i		17 05 52.2	
	baz=264,slow=2.4						
JAWL				iS		17 15 15.1	
BELG	Belogornoye	111.43	32	PKKPbc	PKKPbc	17 16 07.7	-3.2
	comp=Z,12nm,0.9s,baz=128,slow=4.8,SNR=3.6						
BELG				PKKPab	PKKPab	17 16 18.2	-1.2
	comp=Z,32nm,0.9s,baz=285,slow=7.1,SNR=6.7						
ASF	Jabal al Asfar	112.06	55	PKKP		17 16 26.2	
	comp=Z,5.4nm,1.0s,baz=130,slow=3.5,SNR=5.8						
GOF	Gofitskoye	112.20	40	⇑ePKIKP	PKiKP	17 05 02.4	-13
DZM	Mont Dzumac	112.20	246	eLR	LR	17 39 00.0	
	comp=Z,70µm,27.6s						
KIV	Kislovodsk	112.42	41	eP	Pdif	17 01 19.9	-0.8
KIV				i		17 05 15.4	
KIV				e		17 06 00.9	
KIV				e		17 11 54.6	
KIV				eSS	SS	17 21 40.1	-0.2
KIV				eSSS	SSS	17 25 52.0	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	112.65	41	PKKPbc	PKKPbc	17 16 06.1	-0.5
	comp=Z,3.2nm,0.8s,baz=156,slow=3.7,SNR=5.2						
KBZ	Khabaz	112.65	41	c iPKIKP	PKiKP	17 05 17.0	+0.4
KBZ				pmax	pmax		
	comp=Z,13nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,8µm,23.0s						
NCK	Nalchik	113.21	41	iPKIKP	PKiKP	17 05 17.3	-0.5
NCK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZEI	Tsey	113.71	42	iPKIKP	PKiKP	17 05 09.9	-9.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	Yakutsk	113.81	345	IAMs_20	IAMs_20	18 00 36.4	
	comp=Z,20µm,20.0s						
YAK	Yakutsk	113.81	345	ePKIKP	PKiKP	17 05 15.3	-3.0
YAK				e		17 06 09.5	
YAK				ePS	PKKPbc	17 15 52.2	-11
YAK				eSS	SS	17 21 59.3	+2.4
YAK				pmax	pmax		
	comp=Z,20nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,314nm,2.5s						
YAK				pmax	pmax		
	comp=N,213nm,2.3s						
YAK				pmax	pmax		
	comp=E,121nm,2.3s						
YAK				MLR	MLR		
	comp=Z,9µm,20.0s						
ARU	Arti	114.08	24	PKKPab	PKKPab	17 16 07.7	+0.1
	comp=Z,3.1nm,0.9s,baz=216,slow=1.7,SNR=7.9						
ARU	Arti	114.08	24	IAMs_20	IAMs_20	17 55 10.6	
	comp=Z,13µm,20.0s						

ARU	**Arti**	**114.08**	**24**	P	**Pdif**	**17 01 28.2**	**+0.6**
ARU				*i*		17 05 18.1	
ARU						17 06 13.3	
ARU				PPP	PPP	17 08 35.3	
ARU						17 12 19.6	
ARU				SP	SP	17 15 46.1	-0.3
ARU				PS		17 17 04.9	
ARU				SSS	SSS	17 26 16.8	
SVE	**Sverdlovsk**	**114.62**	**23**	*e*PKIKP	PKPdf	17 05 20.1	+0.1
MQOL	**MQOL**	**114.77**	**67**	*i* P	PKiKP	17 05 56.9	+36
LODK	**Lodwar**	**115.00**	**86**	P	**PKiKP**	**17 05 23.2**	**+1.2**
LODK	**Lodwar**	**115.00**	**86**	*e*P	**PKiKP**	**17 05 28.5**	**+6.5**
LODK	**Lodwar**	**115.00**	**86**	*e*P	**Pdif**	**17 01 37.3**	**+4.6**
LODK				*e*S	**PP**	**17 06 20.4**	**-1.2**
MAK	**Makhachkala**	**116.01**	**41**	*e*P	**Pdif**	**17 01 34.8**	**-1.7**
MAK				*i*		17 05 22.0	
MAK				*e*		17 06 24.5	
MAK				*e*		17 12 09.6	
MAK				*e*PS	**PKKPab**	**17 16 03.5**	**+4.4**
MAK				pmax	pmax		
	comp=Z,154nm,1.2s						
NKL	**Nikolayevsk**	**116.89**	**334**	*e*P	**Pdif**	**17 01 40.3**	**+0.1**
NKL				*e*		17 06 35.6	
NKL				*e*SS	SS	17 22 32.1	-5.7
KMBO	**Kilima Mbogo**	**116.97**	**91**	PKP	**PKiKP**	**17 05 26.6**	**+0.4**
	comp=Z,6.0nm,0.9s,baz=68,slow=1.9,SNR=7.1						
KMBO	**Kilima Mbogo**	**116.97**	**91**	PKPdf	**PKiKP**	**17 05 26.8**	**+0.7**
KMBO	**Kilima Mbogo**	**116.97**	**91**	PKIKP	**PKiKP**	**17 05 26.8**	**+0.7**
KMBO				MLR	MLR		
	comp=Z,65μm,21.0s						
KMBO	**Kilima Mbogo**	**116.97**	**91**	P	**PKiKP**	**17 05 27.2**	**+1.1**
KMBO	**Kilima Mbogo**	**116.97**	**91**	*e*P	**PKPdf**	**17 05 24.6**	**-1.6**
KMBO	**Kilima Mbogo**	**116.97**	**91**	*e*P	**Pdif**	**17 01 55.5**	**+14**
KMBO	**Kilima Mbogo**	**116.97**	**91**	PKiKP	**PKiKP**	**17 05 27.4**	**+1.3**
DILA	**Dilla**	**117.75**	**83**	*e*P	**PKPdf**	**17 05 26.6**	**-1.0**
KIBK	**Kibwezi**	**117.76**	**92**	P	**PKiKP**	**17 05 28.0**	**+0.5**
AKTO	**Aktyubinsk**	**117.84**	**29**	PKP	**PKiKP**	**17 05 26.6**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=270,slow=2.2,SNR=10						
AKTO				PKKPbc	**PKKPbc**	**17 15 46.5**	**-2.3**
	comp=Z,15nm,0.9s,baz=110,slow=4.2,SNR=9.4						
FURI	**Furi**	**117.94**	**80**	*e*P	**PKPdf**	**17 05 22.6**	**-5.5**
FURI	**Furi**	**117.94**	**80**	*e*P	**Pdif**	**17 01 40.2**	**-5.9**
FURI				*e*S	**PP**	**17 06 38.3**	**-4.1**
AAE	**Adis Abeba**	**118.02**	**80**	*e*P	PKiKP	17 05 36.5	+8.3
AAE	**Adis Abeba**	**118.02**	**80**	*e*P	**Pdif**	**17 01 44.1**	**-2.3**
AAE				*e*S	**PP**	**17 06 44.3**	**+1.4**
KUR	**Kuril'sk**	**118.09**	**324**	*i* P	**Pdif**	**17 01 45.8**	**+0.1**
KUR				*i*		17 06 48.0	
KUR				*i*		17 12 17.3	
KUR				*i* SP	SP	17 16 23.3	-0.3
KUR				*i* PS	**PS**	**17 16 31.9**	**+3.8**
KUR				*i* SS	SS	17 23 06.8	+13
DESE	**Dese**	**118.65**	**77**	*e*P	**Pdif**	**17 01 47.2**	**-2.1**
DESE				*e*S	**PP**	**17 06 40.3**	**-7.0**
AB31	**Akbulak array**	**119.56**	**29**	*i* PKIKP	**PKiKP**	**17 05 30.0**	**+0.2**
ABKAR	**Akbulak array**	**119.56**	**29**	PKPdf	**PKPdf**	**17 05 29.4**	**-0.4**
TEND	**Ethiopian Broa**	**119.90**	**76**	*e*P	PKPdf	17 05 16.6	-15
YUK	**Yuzh-Kuril'sk**	**119.95**	**324**	*i* PKIKP	**PKiKP**	**17 05 31.6**	**+0.9**
YUK				*e*		17 06 56.2	
YUK				*e*PPP	PPP	17 09 28.3	
YUK				*e*		17 23 20.8	
YUK				*e*SSS	SSS	17 27 47.5	
YUK				MLR	MLR		
	comp=Z,8μm,22.0s						
YUK				MLR	MLR		
	comp=N,2μm,21.0s						
YUK				MLR	MLR		
	comp=E,12μm,21.0s						
YSS	**Yuzh-Sakhalins**	**119.96**	**328**	IAMs_20	IAMs_20	18 04 23.9	
	comp=Z,13μm,19.0s						
YSS	**Yuzh-Sakhalins**	**119.96**	**328**	*e*P	**Pdif**	**17 01 55.3**	**+1.3**
YSS				*i*		17 05 29.6	
YSS				*e*		17 06 53.8	
YSS				*e*		17 12 21.8	
YSS				*e*PS	PKKPdf	17 16 39.0	+26
YSS				*e*SS	SS	17 23 19.0	+1.0
YSS				pmax	pmax		
	comp=Z,4μm,5.7s						
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR	**Gornyy**	**120.44**	**334**	⇓*i*PKIKP	**PKPdf**	**17 05 31.2**	**-0.2**
BOD	**Bodaibo**	**120.87**	**351**	*e*PKIKP	**PKPdf**	**17 05 30.3**	**-1.7**
BOD				pmax	pmax		
	comp=Z,115nm,1.6s						
BRVK	**Borovoye**	**121.08**	**21**	PKPdf	**PKPdf**	**17 05 31.5**	**-1.1**
BRVK	**Borovoye**	**121.08**	**21**	IAMs_20	IAMs_20	18 00 37.9	
	comp=Z,12μm,21.0s						
BRVK	**Borovoye**	**121.08**	**21**	*c i*PKIKP	**PKPdf**	**17 05 32.3**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**121.08**	**21**	P	**PKPdf**	**17 05 32.0**	**-0.6**
ZEA	**Zeya**	**121.53**	**342**	*e*PKIKP	**PKPdf**	**17 05 32.9**	**-0.5**
ZEA				*e*		17 07 03.8	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=E,400nm,16.4s						
ZEA				pmax	pmax		
	comp=N,500nm,12.3s						
ZEA				pmax	pmax		
	comp=Z,1μm,13.5s						
ATD	**Arta Tunnel**	**121.73**	**76**	*e*P	**PKPdf**	**17 05 28.5**	**-6.4**
ATD	**Arta Tunnel**	**121.73**	**76**	*e*P	**Pdif**	**17 02 01.2**	**-1.4**
ATD				*e*S	PP	17 07 19.8	+12
ASAJ	**Asahikawa**	**121.81**	**325**	PKP	**PKPdf**	**17 05 33.5**	**-0.7**
	comp=Z,21nm,0.9s,baz=265,slow=7.6,SNR=14						
ASAJ	**Asahikawa**	**121.81**	**325**	P	**PKPdf**	**17 05 33.8**	**-0.5**
HARA	**HARA**	**122.42**	**79**	*e*P	PKiKP	17 05 52.5	+16
HARA	**HARA**	**122.42**	**79**	*e*P	**Pdif**	**17 02 12.1**	**+6.1**
ERM	**Erimo**	**122.73**	**323**	IAMs_20	IAMs_20	18 04 45.2	
	comp=Z,15μm,21.0s						
KLR	**Kul'dur**	**123.58**	**336**	PKP	**PKPdf**	**17 05 36.3**	**-1.2**
	comp=Z,13nm,0.8s,baz=37,slow=2.6,SNR=24						
KLR	**Kul'dur**	**123.58**	**336**	*c i*PKIKP	**PKPdf**	**17 05 36.1**	**-1.4**
KLR				pmax	pmax		
	comp=Z,15nm,0.8s						
KLR				MLR	MLR		
	comp=Z,22μm,25.0s						
VOI	**Vohitsoka**	**123.74**	**116**	PKPdf	**PKPdf**	**17 05 38.3**	**-0.4**
VOI	**Vohitsoka**	**123.74**	**116**	P	**PKPdf**	**17 05 38.5**	**-0.2**
ZALV	**Zalesovo Beam**	**124.28**	**11**	PKP	**PKPdf**	**17 05 37.5**	**-1.2**
	comp=Z,58nm,0.9s,baz=321,slow=1.9,SNR=73						
TOO	**Toolangi**	**124.38**	**223**	PKPdf	**PKPdf**	**17 05 39.3**	**-0.1**
TOO	**Toolangi**	**124.38**	**223**	PKIKP	**PKPdf**	**17 05 39.3**	**-0.1**
TEY	**Ternei**	**124.44**	**329**	*e*PKIKP	**PKPdf**	**17 05 38.1**	**-1.1**
TEY				*e*		17 17 24.1	
TEY				pmax	pmax		
	comp=Z,200nm,7.7s						
BRZS	**Berezniki**	**124.47**	**21**	*c i*PKIKP	**PKPdf**	**17 05 38.0**	**-1.2**
BRZS	**Berezniki**	**124.47**	**21**	⇑*i*PKiKP	**PKPdf**	**17 05 38.1**	**-1.2**
	baz=21						
SAKB	**Bahrain**	**125.32**	**57**	P	**PKiKP**	**17 05 41.9**	**+0.1**
JOM	**Ohasama**	**125.38**	**321**	*e*P	**PKPdf**	**17 05 40.5**	**-0.8**
GEYT	**Alibeck**	**125.53**	**41**	PKP	**PKPdf**	**17 05 41.1**	**-0.6**
	comp=Z,28nm,0.9s,baz=245,slow=6.4,SNR=32						
GYA0	**ALIBECK ARRAY**	**125.53**	**41**	PKIKP	**PKPdf**	**17 05 40.9**	**-0.8**
OTUK	**Ortayu**	**125.77**	**23**	PKIKP	**PKPdf**	**17 05 41.1**	**-0.7**
KURK	**Kurchatov**	**125.77**	**17**	PKPdf	**PKPdf**	**17 05 41.3**	**-0.3**
KURK	**Kurchatov**	**125.77**	**17**	IAMs_20	IAMs_20	18 03 59.8	
	comp=Z,21μm,22.0s						
KURK	**Kurchatov**	**125.77**	**17**	PKIKP	**PKPdf**	**17 05 41.3**	**-0.3**
KURK	**Kurchatov**	**125.77**	**17**	P	**PKPdf**	**17 05 41.2**	**-0.4**
KURBB	**Kurchatov Arra**	**125.83**	**17**	PKP	**PKPdf**	**17 05 41.3**	**-0.4**
	comp=Z,51nm,0.9s,baz=326,slow=2.6,SNR=70						
KURBB				SKKPbc	SKKPbc	17 18 56.0	-12
	comp=Z,3.8nm,1.1s,baz=137,slow=4.4,SNR=4.2						
KURBB	**Kurchatov Arra**	**125.83**	**17**	PKIKP	**PKPdf**	**17 05 41.1**	**-0.7**
GHRH	**Al-Ghuwayriyah**	**125.98**	**57**	P	**PKPdf**	**17 05 42.9**	**+0.2**
SMRA	**Abu-Samra**	**125.99**	**59**	P	**PKPdf**	**17 05 43.0**	**+0.2**
KHOR	**Al-Khor Airpor**	**126.26**	**57**	P	**PKiKP**	**17 05 43.8**	**+0.1**
TRNA	**Turayna**	**126.32**	**59**	P	**PKiKP**	**17 05 43.8**	**-0.1**
TRNA				P	**PKPdf**	**17 05 43.9**	**+0.5**
CIT	**Chita**	**126.52**	**350**	*e*PKIKP	**PKPdf**	**17 05 42.2**	**-0.9**
CIT				*e*		17 05 58.4	
CIT				pmax	pmax		
	comp=Z,114nm,2.0s						
JYA	**Atsumi**	**126.89**	**322**	P	**PKPdf**	**17 05 44.1**	**0.0**
SLWR	**Sila**	**126.96**	**59**	P	**PKPdf**	**17 05 44.3**	**-0.4**
SLWR				P	**PKiKP**	**17 05 44.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**127.32**	**332**	PKP	**PKPdf**	**17 05 44.4**	**-0.4**
	comp=Z,37nm,0.9s,baz=333,slow=0.8,SNR=36						
IRK	**Irkutsk**	**127.38**	**357**	*e*PKIKP	**PKPdf**	**17 05 43.0**	**-1.7**
IRK				*e*		17 07 42.9	
IRK				pmax	pmax		
	comp=Z,159nm,2.7s						
JRN	**Qarnain Island**	**127.64**	**58**	P	**PKPdf**	**17 05 46.1**	**+0.1**
	SNR=12						
HIA	**Hailar**	**127.70**	**344**	IAMs_20	IAMs_20	18 07 20.9	
	comp=Z,20μm,20.0s						
JYT	**Yasato**	**127.99**	**319**	P	**PKPdf**	**17 05 45.8**	**-0.5**
GHWR	**Ruwais**	**128.01**	**59**	P	**PKiKP**	**17 05 47.1**	**-0.1**
MOY	**Mondy**	**128.06**	**359**	*e*PKIKP	**PKPdf**	**17 05 45.8**	**-0.4**
MOY				pmax	pmax		
	comp=Z,136nm,2.5s						
MDJ	**Mudanjiang**	**128.11**	**334**	IAMs_20	IAMs_20	18 08 02.8	
	comp=Z,15μm,22.0s						
MDJ	**Mudanjiang**	**128.11**	**334**	PKP	**PKPdf**	**17 05 45.3**	**-1.0**
MDJ				PP	**PP**	**17 07 50.0**	**+1.1**
MDJ				SS	SS	17 25 05.3	+4.8
MDJ				LR	LR		
	comp=Z,8μm,21.8s						
MDJ				LR	LR		
	comp=Z,12μm,21.8s						
JSD	**Sado**	**128.13**	**322**	P	**PKPdf**	**17 05 45.4**	**-1.1**
BNX	**BinXian**	**128.14**	**336**	⇓PKP	**PKPdf**	**17 05 44.9**	**-1.4**
BNX				PP	**PP**	**17 07 49.9**	**+0.9**
BNX				SS	SS	17 24 59.6	-1.2
BNX				AMB	AMB		
	comp=Z,4μm,12.9s						
BNX				LR	LR		
	comp=Z,12μm,24.7s						
BNX				LR	LR		
	comp=Z,19μm,21.3s						
BNX				LR	LR		
	comp=Z,23μm,26.4s						
KRVT	**Keravat (AS076**	**128.18**	**265**	PKP	**PKPdf**	**17 05 46.3**	**-1.0**
	comp=Z,16nm,0.9s,baz=19,slow=9.6,SNR=4.2						
VLA	**Vladivostok**	**128.18**	**331**	*i* PKIKP	**PKPdf**	**17 05 46.1**	**-0.4**
VLA				pmax	pmax		
	comp=Z,23nm,1.0s						
VLA				MLR	MLR		
	comp=Z,9μm,21.0s						
SBV	**Sambava**	**128.50**	**107**	P	**PKiKP**	**17 05 48.7**	**+0.2**
MZR	**Muzera**	**128.87**	**60**	P	**PKiKP**	**17 05 49.1**	**0.0**
	SNR=28						
MZR	**Muzera**	**128.87**	**60**	*i* PKiKP	**PKiKP**	**17 05 49.0**	**-0.1**
	SNR=29						
MSHR	**Mys Shultsa**	**128.94**	**331**	*c i*PKIKP	**PKPdf**	**17 05 47.0**	**-0.9**
MSHR				pmax	pmax		
	comp=Z,33nm,1.0s						
MSHR				MLR	MLR		
	comp=Z,6μm,22.0s						
MZWR	**Madinat Zayed**	**128.94**	**59**	P	**PKiKP**	**17 05 49.1**	**-0.1**
JRY	**Ryogami san**	**128.96**	**319**	P	**PKPdf**	**17 05 47.9**	**-0.3**
BTLS	**Baital**	**129.07**	**24**	*c i*PKIKP	**PKPdf**	**17 05 48.3**	**+0.2**
BTLS				*e*		17 07 56.2	
BTLS	**Baital**	**129.07**	**24**	⇑*i*PKiKP	**PKPdf**	**17 05 48.4**	**+0.2**
	baz=24						
BTLS				*e*PP	**PP**	**17 07 56.3**	**+1.2**
	baz=24						
KK31	**Karatay Array**	**129.07**	**28**	*i* PKIKP	**PKPdf**	**17 05 48.3**	**+0.1**
KKAR	**Karatay Array**	**129.07**	**28**	PKPdf	**PKPdf**	**17 05 48.1**	**-0.1**
KKAR	**Karatay Array**	**129.07**	**28**	PKIKP	**PKPdf**	**17 05 48.1**	**-0.1**
MJAR	**Matsushiro Arr**	**129.09**	**320**	PKP	**PKPdf**	**17 05 47.1**	**-1.3**
	comp=Z,24nm,0.9s,baz=88,slow=2.2,SNR=36						
MAJO	**Matsushiro**	**129.09**	**320**	PKPdf	**PKPdf**	**17 05 47.2**	**-1.3**
MAJO	**Matsushiro**	**129.09**	**320**	PKIKP	**PKPdf**	**17 05 47.2**	**-1.3**
MAJO				MLR	MLR		
	comp=Z,26μm,21.0s						
MAT	**Matsushiro**	**129.09**	**320**	P	**PKPdf**	**17 05 47.1**	**-1.3**
CHM	**Chimkent**	**129.23**	**29**	PKIKP	**PKiKP**	**17 05 51.3**	**+2.0**
JOD2	**Odawara 2**	**129.28**	**319**	P	**PKPdf**	**17 05 48.2**	**-0.6**
ZAK	**Zakamensk**	**129.28**	**358**	*e*PKIKP	**PKPdf**	**17 05 48.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,56nm,1.6s						
IUG	**Iuzhnay**	**129.57**	**29**	*i* PKIKP	**PKPdf**	**17 05 49.7**	**+0.4**
IUG	**Iuzhnay**	**129.57**	**29**	*i* PKiKP	**PKPdf**	**17 05 49.7**	**+0.4**
	baz=29						
AJN	**Ajban**	**129.58**	**57**	P	**PKiKP**	**17 05 50.6**	**+0.2**
	SNR=9.3						
AJN	**Ajban**	**129.58**	**57**	*i* PKPdf	**PKPdf**	**17 05 49.2**	**-0.5**
	SNR=12						
DZA	**Taraz**	**129.61**	**28**	*i* PKIKP	**PKPdf**	**17 05 49.1**	**-0.2**
DZA	**Taraz**	**129.61**	**28**	*e*PKiKP	**PKPdf**	**17 05 49.1**	**-0.2**
	baz=28						
ASUD	**Al Ashush, Dub**	**129.84**	**57**	P	**PKiKP**	**17 05 51.0**	**+0.1**
	SNR=16						
ASUD	**Al Ashush, Dub**	**129.84**	**57**	*i* PKiKP	**PKPdf**	**17 05 50.4**	**+0.2**
	SNR=20						
JGN	**Niukaw**	**129.85**	**321**	P	**PKPdf**	**17 05 49.4**	**-0.6**
SHME	**Shamm**	**129.94**	**55**	P	**PKPdf**	**17 05 50.2**	**-0.2**
SHME	**Shamm**	**129.94**	**55**	*i* PKPdf	**PKPdf**	**17 05 48.6**	**-1.7**
	SNR=9.2						
NAZ	**Nazwa, Dubai**	**129.98**	**56**	P	**PKPdf**	**17 05 50.5**	**+0.1**
	SNR=9.7						
NAZ	**Nazwa, Dubai**	**129.98**	**56**	*i* PKPdf	**PKPdf**	**17 05 50.2**	**-0.2**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**130.02**	**57**	P	**PKPdf**	**17 05 50.9**	**+0.4**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**130.02**	**57**	*i* PKPdf	**PKPdf**	**17 05 49.2**	**-1.3**
	SNR=14						
STKA	**Stephens Creek**	**130.03**	**227**	PKP	**PKPdf**	**17 05 49.8**	**-0.6**
	comp=Z,39nm,0.9s,baz=93,slow=2.0,SNR=41						
BANOM	**Banah**	**130.12**	**55**	P	**PKPdf**	**17 05 50.5**	**-0.2**
BANOM	**Banah**	**130.12**	**55**	*i* PKPdf	**PKPdf**	**17 05 50.1**	**-0.7**
	SNR=7.4						
MASF	**Masafi**	**130.24**	**56**	P	**PKiKP**	**17 05 51.4**	**-0.4**
	SNR=20						
MSFE	**Esma-Masafi**	**130.24**	**56**	*i* PKPdf	**PKPdf**	**17 05 50.3**	**-0.6**
	SNR=18						
MAKZ	**Makanchi**	**130.26**	**16**		**PKPdf**	**17 05 49.2**	**-1.2**
MAKZ				IAMs_20	IAMs_20	18 09 58.4	
	comp=Z,19μm,21.0s						
MAKZ	**Makanchi**	**130.26**	**16**	PKIKP	**PKPdf**	**17 05 49.2**	**-1.2**
MAKZ				MLR	MLR		
	comp=Z,19μm,21.0s						
MK31	**Makanchi Array**	**130.36**	**16**	*i* PKIKP	**PKPdf**	**17 05 49.8**	**-0.8**
MKAR	**Makanchi Array**	**130.36**	**16**	PKP	**PKPdf**	**17 05 49.9**	**-0.7**
	comp=Z,52nm,0.9s,baz=338,slow=2.6,SNR=67						
ZSN	**Zaisan**	**130.42**	**14**	*i* PKIKP	**PKPdf**	**17 05 50.3**	**-0.3**
ZSN	**Zaisan**	**130.42**	**14**	*i* PKiKP	**PKPdf**	**17 05 50.3**	**-0.3**
	baz=14						
ALNE	**Al Ain**	**130.42**	**57**	P	**PKiKP**	**17 05 51.8**	**-0.4**
	SNR=21						
ALNE	**Al Ain**	**130.42**	**57**	*i* PKiKP	**PKPdf**	**17 05 51.5**	**+0.2**
	SNR=6.7						
UMZA	**Um Al Zommool**	**130.42**	**59**	P	**PKPdf**	**17 05 51.6**	**+0.3**
ASHO	**Ashiyiah**	**130.43**	**56**	P	**PKPdf**	**17 05 51.3**	**0.0**
	SNR=17						
ASHO	**Ashiyiah**	**130.43**	**56**	*i* PKPdf	**PKPdf**	**17 05 51.1**	**-0.2**
	SNR=15						
HATD	**Hatta, Dubai**	**130.43**	**56**	P	**PKPdf**	**17 05 51.6**	**+0.3**
	SNR=24						
HATD	**Hatta, Dubai**	**130.43**	**56**	*i* PKPdf	**PKPdf**	**17 05 50.9**	**-0.4**
	SNR=22						
UOSS	**Minazif**	**130.45**	**56**	PKPdf	**PKPdf**	**17 05 50.7**	**-0.7**
UOSS	**Minazif**	**130.45**	**56**	P	**PKPdf**	**17 05 50.9**	**-0.4**
UOSS	**Minazif**	**130.45**	**56**	*i* PKPdf	**PKPdf**	**17 05 50.2**	**-1.1**
	SNR=19						
ABTO	**Aybut**	**130.47**	**67**	P	**PKiKP**	**17 05 52.3**	**-0.1**
	SNR=8.6						
CN2	**Changchun**	**130.53**	**336**	PKP	**PKPdf**	**17 05 49.3**	**-1.6**
CN2				PP	**PP**	**17 08 05.3**	**+0.7**
CN2				SS	SS	17 25 27.4	-2.8
CN2				AMB	AMB		
	comp=Z,900nm,10.0s						
CN2				LR	LR		
	comp=Z,16μm,19.0s						
CN2				LR	LR		
	comp=Z,8μm,19.0s						
CN2				LR	LR		
	comp=Z,19μm,22.0s						
INU	**Inuyama**	**130.58**	**320**	IAMs_20	IAMs_20	17 54 18.0	
	comp=Z,16μm,21.0s						
SGDS	**Sogindy**	**130.61**	**25**	*i* PKIKP	**PKiKP**	**17 05 51.7**	**-0.3**
SGDS	**Sogindy**	**130.61**	**25**	*e*PKiKP	**PKiKP**	**17 05 51.8**	**-0.3**
	baz=25						
USP	**Ospenovka**	**130.71**	**25**	P	**PKiKP**	**17 05 52.1**	**-0.1**
	SNR=25						
TDK	**Taldyqorghan**	**130.74**	**20**	*i* PKIKP	**PKPdf**	**17 05 51.3**	**0.0**
TDK				MLR	MLR		
	comp=Z,11μm,22.0s						
TDK	**Taldyqorghan**	**130.74**	**20**	*e*PKiKP	**PKPdf**	**17 05 51.4**	**0.0**
	baz=20						
TDK				LR	LR	18 02 24.1	
	comp=Z,11μm,22.4s,baz=20						
WHFO	**Wadi Hawf**	**130.75**	**66**	P	**PKPdf**	**17 05 52.2**	**+0.1**
	SNR=6.1						
DOK	**Doka**	**130.87**	**65**	P	**PKPdf**	**17 05 51.8**	**-0.4**
EKS2	**Erkin-Say**	**130.89**	**26**	P	**PKiKP**	**17 05 53.1**	**+0.4**
	SNR=29						
KUU	**Kurty**	**130.93**	**23**	*c i*PKIKP	**PKPdf**	**17 05 51.5**	**-0.2**
KUU	**Kurty**	**130.93**	**23**	⇑*i*PKiKP	**PKPdf**	**17 05 51.6**	**-0.2**
	baz=23						
KUU				LR	LR	18 03 51.3	
	comp=Z,7μm,20.5s,baz=23						
CTAO	**Charters Tower**	**131.00**	**244**	PKPdf	**PKPdf**	**17 05 52.5**	**0.0**
CTAO	**Charters Tower**	**131.00**	**244**	PKIKP	**PKPdf**	**17 05 52.5**	**0.0**
CTAO				MLR	MLR		
	comp=Z,41μm,22.0s						
CHMS	**Chumysh**	**131.03**	**25**	P	**PKiKP**	**17 05 53.1**	**+0.2**
	SNR=14						
CHKK	**Chushkaly**	**131.21**	**22**	*i* PKIKP	**PKPdf**	**17 05 52.0**	**-0.3**
CHKK	**Chushkaly**	**131.21**	**22**	*e*PKiKP	**PKPdf**	**17 05 52.0**	**-0.3**
	baz=22						
AAK	**Ala-Archa**	**131.22**	**25**	P	**PKiKP**	**17 05 53.9**	**+0.4**
	SNR=26						
AAK	**Ala-Archa**	**131.22**	**25**	PKP	**PKPdf**	**17 05 52.8**	**+0.2**
	comp=Z,48nm,1.0s,baz=180,slow=0.6,SNR=33						
AAK	**Ala-Archa**	**131.22**	**25**	IAMs_20	IAMs_20	18 02 37.3	
	comp=Z,10μm,21.0s						
AAK	**Ala-Archa**	**131.22**	**25**	*i* PKIKP	**PKPdf**	**17 05 53.0**	**+0.5**
AAK	**Ala-Archa**	**131.22**	**25**	P	**PKPdf**	**17 05 52.7**	**+0.1**
AAK	**Ala-Archa**	**131.22**	**25**	*i* PKPdf	**PKPdf**	**17 05 52.4**	**-0.1**
	SNR=17						
RBK	**Rabkut**	**131.26**	**66**	P	**PKPdf**	**17 05 53.2**	**+0.1**
AML	**Almayashu**	**131.28**	**26**	P	**PKiKP**	**17 05 54.0**	**+0.1**
	SNR=18						
AML	**Almayashu**	**131.28**	**26**	P	**PKiKP**	**17 05 54.2**	**+0.2**
AML	**Almayashu**	**131.28**	**26**	*i* PKiKP	**PKPdf**	**17 05 53.1**	**+0.2**
	SNR=18						
JCJ	**Chichijima**	**131.29**	**308**	PKP	**PKPdf**	**17 05 53.1**	**+0.2**
	comp=Z,46nm,1.0s,baz=274,slow=18,SNR=3.3						
JCJ	**Chichijima**	**131.29**	**308**	PKPdf	**PKPdf**	**17 05 50.8**	**-2.1**
ARQ	**Araqi**	**131.35**	**58**	P	**PKiKP**	**17 05 54.1**	**0.0**
	SNR=7.6						
JIE	**Ise**	**131.37**	**319**	P	**PKPdf**	**17 05 53.1**	**+0.3**
KBK	**Karagaybulak**	**131.40**	**25**	P	**PKiKP**	**17 05 54.1**	**+0.3**
	SNR=14						
TKM2	**Tokmak 2**	**131.45**	**24**	P	**PKiKP**	**17 05 54.0**	**+0.1**
	SNR=24						
TKM2	**Tokmak 2**	**131.45**	**24**	PKIKP	**PKPdf**	**17 05 52.8**	**-0.2**
ULN	**Ulaanbaatar**	**131.51**	**354**		PKPpre	17 05 42.7	
ULN	**Ulaanbaatar**	**131.51**	**354**	*c i*PKIKP	**PKPdf**	**17 05 52.3**	**-0.6**
ULN				pmax	pmax		
	comp=Z,34nm,1.0s						
ULN	**Ulaanbaatar**	**131.51**	**354**	P	**PKiKP**	**17 05 53.7**	**-0.2**
UCH	**Uchtor**	**131.56**	**26**	P	**PKiKP**	**17 05 54.9**	**+0.3**
	SNR=32						
SONM	**Songino Array**	**131.60**	**354**	PKhKP	PKPpre	17 05 45.1	
	comp=Z,0.9nm,0.4s,baz=119,slow=42,SNR=2.6						
SONM				PKP	**PKPdf**	**17 05 53.1**	**+0.1**
	comp=Z,27nm,1.0s,baz=338,slow=0.4,SNR=28						
SONM				SKKPbc	SKKPbc	17 18 41.3	-6.7
	comp=Z,3.6nm,0.9s,baz=206,slow=1.7,SNR=4.2						
JWT	**Wachi**	**131.65**	**321**	P	**PKPdf**	**17 05 53.1**	**-0.2**
AAA	**Alma-Ata**	**131.73**	**23**	*i* PKIKP	**PKiKP**	**17 05 54.2**	**-0.1**
AAA	**Alma-Ata**	**131.73**	**23**	*e*PKiKP	**PKiKP**	**17 05 54.2**	**-0.1**
	baz=23						
KNDC	**Almaty**	**131.75**	**23**	PKIKP	**PKiKP**	**17 05 54.5**	**+0.1**
MDOK	**Medeo**	**131.82**	**23**	*i* PKIKP	**PKiKP**	**17 05 54.2**	**-0.4**
MDOK	**Medeo**	**131.82**	**23**	*i* PKiKP	**PKiKP**	**17 05 54.2**	**-0.4**
	baz=23						
MDOK				LR	LR	18 04 34.4	
	comp=Z,8μm,20.8s,baz=23						
DMTO	**DMTO**	**131.88**	**66**	P	**PKPdf**	**17 05 54.6**	**+0.4**
TNSS	**Tian-Shan**	**131.89**	**23**	*i* PKIKP	**PKPdf**	**17 05 54.6**	**+0.5**
TNSS	**Tian-Shan**	**131.89**	**23**	*e*PKiKP	**PKiKP**	**17 05 54.7**	**-0.4**
	baz=23						
HOQ	**Hoqain**	**131.92**	**57**	P	**PKPdf**	**17 05 53.6**	**-0.5**
	SNR=13						
RER	**Riviere de l'E**	**131.93**	**118**	P	**PKiKP**	**17 05 55.4**	**+0.1**
BSY	**Bisya**	**132.15**	**58**	P	**PKPdf**	**17 05 54.8**	**+0.1**
	SNR=16						
ULHL	**Ulahol**	**132.28**	**24**	P	**PKiKP**	**17 05 56.2**	**+0.5**
	SNR=7.1						
SATY	**Saty**	**132.43**	**22**	*c i*PKIKP	**PKPdf**	**17 05 54.8**	**+0.1**
SATY				*e*		17 08 17.0	
SATY	**Saty**	**132.43**	**22**	⇑*i*PKiKP	**PKPdf**	**17 05 54.9**	**+0.1**
	baz=22						
SATY				*e*PP	**PP**	**17 08 17.1**	**+0.1**
	baz=22						
PMG	**Port Moresby**	**132.52**	**258**	*i* PKIKP	**PKPdf**	**17 05 55.0**	**-0.5**
UZB	**Uzynbulak**	**132.58**	**21**	*c i*PKIKP	**PKPdf**	**17 05 55.2**	**+0.2**
UZB	**Uzynbulak**	**132.58**	**21**	⇑*i*PKiKP	**PKPdf**	**17 05 55.2**	**+0.2**
	baz=21						
BIDO	**Bidbid**	**132.63**	**57**	P	**PKPdf**	**17 05 56.0**	**+0.5**
	SNR=22						
SHLS	**Shalkode**	**132.72**	**21**	*i* PKIKP	**PKiKP**	**17 05 56.1**	**-0.3**
SHLS	**Shalkode**	**132.72**	**21**	*e*PKiKP	**PKiKP**	**17 05 56.1**	**-0.3**
	baz=20						
HHU	**Hamhung**	**132.73**	**331**	PKPbc	**PKPdf**	**17 05 51.8**	**-3.4**
HHU				PP	**PP**	**17 08 22.1**	**+3.2**
HHU				AmB			
	comp=Z,2.4nm,0.2s						
HHU				AMS	AMS		
	comp=N,6μm,24.6s						
HHU				AMS	AMS		
	comp=E,10μm,37.7s						
HHU				AMS	AMS		
	comp=Z,4μm,13.8s						
SMDO	**Samad**	**132.75**	**57**	P	**PKPdf**	**17 05 56.0**	**+0.1**
	SNR=31						
SNY	**Shenyang**	**132.93**	**336**	⇑PKP	**PKPdf**	**17 05 55.0**	**-0.5**
SNY				PP	**PP**	**17 08 19.8**	**-0.2**
SNY				SS	SS	17 26 03.8	+4.3
SNY				AMB	AMB		
	comp=Z,4μm,13.1s						
SNY				LR	LR		
	comp=Z,7μm,24.9s						
SNY				LR	LR		
	comp=Z,12μm,20.4s						
SNY				LR	LR		
	comp=Z,22μm,24.3s						
JMDO	**Jabal Madar**	**133.07**	**58**	P	**PKPdf**	**17 05 55.6**	**-0.8**
	SNR=6.0						
WSAR	**Wadi Sarin**	**133.16**	**57**	PKP	**PKPdf**	**17 05 56.5**	**0.0**
	comp=Z,15nm,0.7s,baz=253,slow=3.6,SNR=7.2						
WSAR	**Wadi Sarin**	**133.16**	**57**	P	**PKPdf**	**17 05 56.8**	**+0.3**
	SNR=12						
BBOO	**Buckleboo**	**133.44**	**223**	PKPdf	**PKPdf**	**17 05 55.7**	**-1.1**
MHTO	**MHTO**	**133.48**	**60**	P	**PKiKP**	**17 05 59.9**	**+1.6**
	SNR=9.2						
DQM	**DQM**	**133.49**	**62**	P	**PKPdf**	**17 05 57.0**	**-0.1**
	SNR=5.9						
JMN	**Monobe**	**133.61**	**320**	P	**PKPdf**	**17 05 57.7**	**+0.6**
XLT	**XiLinHaoTe**	**133.63**	**344**	*e*PKP	**PKPdf**	**17 05 55.9**	**-1.0**
XLT				sPKP		17 06 11.3	
XLT				PP	**PP**	**17 08 25.0**	**+0.6**
XLT				PKS		17 09 24.8	
XLT				SS	SS	17 26 06.0	-1.8
XLT				AMB	AMB		
	comp=Z,3μm,13.7s						
XLT				LR	LR		
	comp=Z,1μm,24.1s						
XLT				LR	LR		
	comp=Z,8μm,23.2s						
XLT				LR	LR		
	comp=Z,17μm,24.4s						
WBK	**Wadi Bani Khal**	**133.71**	**58**	P	**PKiKP**	**17 05 59.6**	**+0.7**
	SNR=9.4						
SUJ	**Sinuiju**	**133.98**	**334**	PKPbc	**PKPdf**	**17 05 56.4**	**-1.2**
SUJ				PP	**PP**	**17 08 32.6**	**+5.8**
SUJ				AmB			
	comp=Z,5.7nm,0.3s						
SUJ				AMS	AMS		
	comp=N,1μm,4.7s						
SUJ				AMS	AMS		
	comp=E,7μm,26.9s						
SUJ				AMS	AMS		
	comp=Z,5μm,20.2s						
PYAG	**Pyongyang**	**134.26**	**332**	PKPbc	**PKPdf**	**17 05 57.4**	**-0.7**
PYAG				PP	**PP**	**17 08 35.0**	**+6.4**
PYAG				AMS	AMS		
	comp=N,3μm,23.0s						
PYAG				AMS	AMS		
	comp=E,5μm,35.0s						
PYAG				AMS	AMS		
	comp=Z,1μm,7.4s						
JLN	**Jalan Bani Buh**	**134.26**	**58**	P	**PKPdf**	**17 05 56.5**	**-2.1**
	SNR=10						
KSH	**Kashi**	**134.41**	**26**	PKP	**PKPdf**	**17 05 59.3**	**+0.7**
KSH				sPKP		17 06 15.0	
KSH				PKS	**PKSdf**	**17 09 33.4**	**-1.7**
KSH				SS	SS	17 26 22.6	+4.7

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KSH                                     AMB       AMB
       comp=Z,1µm,4.7s
KSH                                     LR        LR
       comp=Z,12µm,22.3s
KSH                                     LR        LR
       comp=Z,9µm,23.4s
KSH                                     LR        LR
       comp=Z,20µm,23.4s
KSRS   Korea Array         134.44 329   PKhKP     PKPpre    17 05 47.2
       comp=Z,13nm,0.9s,baz=47,slow=3.2,SNR=12
KSRS                                    PKP       PKPdf     17 05 57.5  -1.0
       comp=Z,36nm,0.8s,baz=3.9,slow=2.4,SNR=26
WMQ    Urumqi              134.50  13   PKP       PKPdf     17 05 58.6 +0.1
WMQ                                     PP        PP        17 08 31.1 +1.2
WMQ                                     PKS                 17 09 34.8
WMQ                                     SS        SS        17 26 19.5 +1.4
WMQ                                     AMB       AMB
       comp=Z,5µm,7.9s
WMQ                                     LR        LR
       comp=Z,18µm,18.7s
WMQ                                     LR        LR
       comp=Z,9µm,18.7s
WMQ                                     LR        LR
       comp=Z,18µm,18.3s
KBL    Kabul               134.53  37   PKPdf     PKPdf     17 05 58.1  -0.9
KBL    Kabul               134.53  37   PKIKP     PKPdf     17 05 58.1  -0.9
INCN   Inchon              135.07 330   PKPdf     PKPdf     17 05 58.0  -1.7
INCN   Inchon              135.07 330   IAMs_20   IAMs_20   18 08 47.8
       comp=Z,20µm,22.0s
INCN   Inchon              135.07 330   PKIKP     PKPdf     17 05 58.0  -1.7
INCN                                    MLR       MLR
       comp=Z,20µm,22.0s
TJN    Taejon              135.54 328c iPKIKP     PKPdf     17 05 59.4  -1.2
JTU    Tsushima            135.79 325   P         PKPdf     17 06 01.8 +0.7
DL2    Dalian              136.19 336   Pdif      Pdif      17 03 17.5  +11
DL2                                     PKP       PKPpre    17 05 46.1
DL2                                     PP        PP        17 08 37.3  -3.4
DL2    Dalian              136.19 336   SS        SS        17 26 35.8  -3.0
DL2                                     AMB       AMB
       comp=Z,3µm,11.8s
DL2                                     LR        LR
       comp=N,10µm,18.4s
DL2                                     LR        LR
       comp=E,8µm,18.2s
DL2                                     LR        LR
       comp=Z,18µm,19.1s
BJI    Beijing             137.16 342   PKP       PKPdf     17 05 48.3   -15
BJI                                     sPKP                17 06 02.6
BJI                                     PP        PP        17 08 36.4   -10
BJI                                     PKS                 17 09 22.3
BJI    Beijing             137.16 342   SS        SS        17 26 40.4   -10
BJI                                     AMB       AMB
       comp=Z,2µm,15.2s
BJI                                     LR        LR
       comp=N,11µm,24.5s
BJI                                     LR        LR
       comp=E,9µm,22.6s
BJI                                     LR        LR
       comp=Z,18µm,24.1s
BJT    Baijiatuau          137.18 342   IAMs_20   IAMs_20   18 17 45.1
       comp=Z,12µm,21.0s
JSU    Suzuyama            137.24 321   P         PKPdf     17 06 01.8  -2.1
NIL    Nilore              137.61  34             PKPpre    17 05 55.6
NIL    Nilore              137.61  34   IAMs_20   IAMs_20   18 19 16.3
       comp=Z,15µm,21.0s
NIL    Nilore              137.61  34   PKHKP     PKPpre    17 05 55.6
NIL                                     MLR       MLR
       comp=Z,15µm,21.0s
HHC    Hu-ho-hao-te        137.62 347  ePKP       PKPpre    17 05 50.8
HHC                                     PP        PP        17 08 46.5  -3.0
HHC    Hu-ho-hao-te        137.62 347   SS        SS        17 26 42.1   -13
HHC                                     AMB       AMB
       comp=Z,8µm,8.4s
HHC                                     LR        LR
       comp=N,14µm,19.7s
HHC                                     LR        LR
       comp=E,11µm,19.0s
BTO    Baotou              138.17 349  ePKP       PKiKP     17 06 15.4 +7.9
BTO                                     PP        PP        17 08 45.8  -7.1
JMU    Jammu               139.22  34  ex         PKPpre    17 05 58.7
THN    Thein Dam           139.89  33   x         PKPpre    17 06 02.5
THN    Thein Dam           139.89  33  ex         PKPpre    17 06 00.8
HNS    HongShan            140.03 342 ⇑PKP        PKPpre    17 05 55.6
HNS                                     PP        PP        17 09 00.4  -4.0
HNS                                     PKS                 17 09 51.1
ASAR   Alice Springs       140.06 232   PKhKP     PKPpre    17 06 00.1
       comp=E,4.9nm,0.7s,baz=114,slow=3.7,SNR=39
ASAR   Alice Springs       140.06 232             PKPpre    17 06 00.6
ASAR   Alice Springs       140.06 232   PKHKP     PKPpre    17 06 00.6
TIA    Tai'an              140.29 338   PKP       PKPdf     17 05 52.8   -17
TIA                                     PP        PP        17 09 03.5  -2.6
TIA                                     SKS       SKSdf     17 12 31.8   -46
TIA                                     SKKS      SKKSac    17 15 48.3   -11
GTA    Gaotai              140.31   1   PKPbc     PKPpre    17 06 00.8
GTA                                     pPKP      PKPdf     17 06 09.8 +0.3
GTA                                     sPKP                17 06 14.3
GTA                                     PP        PP        17 09 05.6  -0.5
GTA                                     PKS                 17 09 46.8
TIY    Taiyuan             140.39 345 ⇑PKP        PKPdf     17 05 56.1   -13
TIY                                     PP        PP        17 09 11.4 +4.8
JASL   Jaisalmer           140.75  44  eP         PKPdf     17 06 10.9 +0.5
BHK    Bhakra              141.04  33  ex         PKPpre    17 06 03.3
BHK    Bhakra              141.04  33  ex         PKPpre    17 06 01.4
WRAB   Tennant Creek       141.45 238             PKPpre    17 06 03.3
WRAB   Tennant Creek       141.45 238  ePKIKP     PKPdf     17 06 09.5  -2.4
WRA    Warramunga Arr      141.46 238   PKhKP     PKPpre    17 06 05.0
       comp=E,12nm,0.8s,baz=107,slow=3.3,SNR=56
SMLA   Simla               141.68  33  ex         PKPpre    17 06 06.4
SMLA   Simla               141.68  33  i x        x         17 09 08.4
JOW    Kunigami            141.76 317   PKhKP     PKPpre    17 06 06.0
       comp=E,21nm,0.9s,baz=354,slow=4.6,SNR=3.7
DDI    Dehra Dun           142.78  33  ex         PKPpre    17 06 09.0
SSE    Sheshan             142.87 330   PKP       PKPdf     17 06 10.3  -3.8
SSE                                     PP        PP        17 09 29.3 +7.2
SSE                                     LR        LR
       comp=E,3µm,22.2s
SSE                                     LR        LR
       comp=E,5µm,25.1s
GOMU   GeErMu              143.17   7   PKP       PKPab     17 06 09.9  -0.6
GOMU                                    SKKS                17 16 16.3
GOMU                                    AMB       AMB
       comp=E,3µm,7.3s
GOMU                                    LR        LR
       comp=E,10µm,18.4s
GOMU                                    LR        LR
       comp=E,4µm,17.8s
GOMU                                    LR        LR
       comp=E,11µm,18.6s
KHET   Khetri              143.17  38  eP         PKPbc     17 06 11.4  -0.2
NJ2    Nanjing             143.20 333 ⇑PKP        PKPab     17 06 07.4  -2.9
NJ2                                     sPKP                17 06 24.1
NJ2                                     PP        PP        17 09 31.3 +7.4
NJ2                                     AMB       AMB
       comp=E,4µm,10.9s
NJ2                                     LR        LR
       comp=E,9µm,17.1s
NJ2                                     LR        LR
       comp=E,11µm,17.1s
NJ2                                     LR        LR
       comp=E,15µm,19.1s
LYN    LuoYang             143.34 343 ⇑PKP        PKPab     17 06 09.5  -1.3
LYN                                     PP        PP        17 09 27.8 +3.3
LYN                                     AMB       AMB
       comp=E,4µm,8.4s
LYN                                     LR        LR
       comp=E,18µm,25.5s
LYN                                     LR        LR
       comp=E,9µm,22.1s
LYN                                     LR        LR
       comp=E,23µm,25.0s
LZH    Lanzhou             143.49 355   PKP       PKPab     17 06 12.0 +0.5
LZH                                     pPKP      PKiKP     17 06 21.0 +2.4
LZH                                     PP        PP        17 09 29.8 +4.4
LZH                                     AMB       AMB
       comp=E,5µm,7.1s
LZH                                     LR        LR
       comp=E,22µm,16.5s
LZH                                     LR        LR
       comp=E,6µm,16.5s
LZH                                     LR        LR
       comp=E,30µm,19.5s
KUDL   Kundal              143.53  37  eP         PKPab     17 06 12.2 +0.5
KUDL   Kundal              143.53  37  eP         PKPbc     17 06 12.4  -0.3
AJM    Ajmer               143.56  41  ex         PKPbc     17 06 10.1  -2.7
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AJM    Ajmer               143.56  41  ex         PKPbc     17 06 07.2  -5.6
AYAN   Aya Nagar           143.66  36  ex         x         17 06 12.2
AYAN   Aya Nagar           143.66  36  eP         PKPab     17 06 12.2   0.0
SONA   Sohna               143.81  36  eP         PKPbc     17 06 14.4 +1.0
SONA   Sohna               143.81  36  eP         PKPab     17 06 12.7   0.0
NWAO   Narrogin (SRO)      143.98 205   PKPdf     PKPab     17 06 13.4 +0.1
NWAO   Narrogin (SRO)      143.98 205   PKIKP     PKPab     17 06 13.4 +0.1
NWAO                                    MLR       MLR
       comp=Z,29µm,19.0s
NWAO   Narrogin (SRO)      143.98 205   P         PKPab     17 06 12.6  -0.7
PTH    Pithoragarh         144.53  31  eP         PKPab     17 06 15.3  -0.4
PTH    Pithoragarh         144.53  31⇑iP          PKPab     17 06 15.2  -0.5
LGTI   Lohaghat            144.63  31  eP         PKPab     17 06 15.3  -0.5
LGTI   Lohaghat            144.63  31  eP         PKPab     17 06 14.5  -1.3
XAN    Xi'an               144.73 348   PKP       PKPab     17 06 14.6  -1.5
XAN                                     pPKP      pPKPdf    17 06 25.4  -2.1
XAN                                     sPKP                17 06 29.8
XAN                                     PP        PP        17 09 33.0 +0.2
XAN                                     PKS       PKSdf     17 09 45.8  -7.3
XAN                                     SKKS                17 16 19.6
XAN                                     AMB       AMB
       comp=Z,3µm,11.0s
XAN                                     LR        LR
       comp=Z,21µm,25.5s
XAN                                     LR        LR
       comp=Z,4µm,29.4s
XAN                                     LR        LR
       comp=Z,32µm,24.5s
BHV    Bhavnagar           144.76  49  eP         PKPab     17 06 16.0  -0.5
BHV    Bhavnagar           144.76  49  eP         PKPab     17 06 15.9  -0.5
WHN    Wuhan               146.38 338 ⇑PKPbc      PKPdf     17 06 19.8  -0.4
WHN                                     PKPab     PKiKP     17 06 23.6  -0.9
WHN                                     pPKP      pPKPdf    17 06 26.9  -3.4
WHN                                     PP        PP        17 09 44.8 +2.0
WHN                                     SS        SS        17 28 35.0  -2.4
WHN                                     AMB       AMB
       comp=Z,7µm,9.9s
WHN                                     LR        LR
       comp=Z,9µm,16.3s
WHN                                     LR        LR
       comp=Z,22µm,17.9s
WHN                                     LR        LR
       comp=Z,46µm,20.3s
JHNI   Jhansi              146.74  38⇑iP          PKPdf     17 06 21.8 +0.8
JHNI   Jhansi              146.74  38 i P         PKPdf     17 06 19.0  -2.0
BRCI   Bahraich            146.84  31  ex         x         17 06 23.1
BRCI   Bahraich            146.84  31  eP         PKPdf     17 06 20.9  -0.1
YOJ    Yonaguni jima       146.84 320   P         PKPdf     17 06 21.9 +0.7
BOM    Bombay              146.87  53  eP         PKPdf     17 06 20.9  -0.4
DANN   Dangsing            147.26  28  eP         PKPdf     17 06 22.3 +0.1
TATO   Taipei              147.43 322   IAMs_20   IAMs_20   18 09 22.0
       comp=Z,15µm,21.0s
BHPL   Bhopal              147.61  42  ex         PKPdf     17 06 17.3  -5.2
BHPL   Bhopal              147.61  42  eP         PKPdf     17 06 22.6 +0.1
POO    Poona               147.89  53  eP         PKPdf     17 06 23.9 +0.8
POO    Poona               147.89  53  eP         PKPbc     17 06 25.7  -0.4
GKN    Gorkha              147.96  27  eP         PKPdf     17 06 23.0  -0.2
KNRA   Kununurra           148.09 240   PKPdf     PKPdf     17 06 21.1  -2.3
VLK    Valmikinagar        148.19  28  ex         x         17 06 27.2
VLK                                    i x        x         17 09 59.1
VLK    Valmikinagar        148.19  28  eP         PKPdf     17 06 22.8  -0.5
KKN    Kakani              148.43  26  eP         PKPdf     17 06 23.7  -0.3
DMN    Daman               148.51  26  eP         PKPdf     17 06 24.1  -0.1
CD2    Chengdu             148.62 354   PKPbc     PKPdf     17 06 23.3  -0.7
CD2                                     sPKP                17 06 37.1
CD2                                     PP        PP        17 10 00.3 +4.6
CD2                                     SKKS                17 16 46.8
CD2                                     SS        SS        17 29 02.8 +0.5
CD2                                     LR        LR
       comp=Z,4µm,21.0s
CD2                                     LR        LR
       comp=Z,40µm,18.9s
CD2                                     LR        LR
       comp=Z,21µm,28.4s
PKIN   Phulchoki           148.66  26  eP         PKPdf     17 06 23.8  -0.7
PKI    Pulchoki            148.67  26  eP         PKPdf     17 06 23.9  -0.7
YULB   Yu-li               148.70 321   IAMs_20   IAMs_20   18 26 55.1
       comp=Z,11µm,22.0s
LSA    Lhasa               148.76  15   IAMs_20   IAMs_20   18 25 43.0
       comp=Z,17µm,22.0s
LSA    Lhasa               148.76  15   PKPbc     PKPdf     17 06 25.0 +0.2
LSA                                     PP        PP        17 09 54.6  -2.6
LSA                                     LR        LR
       comp=Z,8µm,18.5s
LSA                                     LR        LR
       comp=Z,11µm,19.2s
LSA                                     LR        LR
       comp=Z,13µm,19.2s
LSA    Lhasa               148.76  15   P         PKPdf     17 06 26.0 +1.2
LSA    Lhasa               148.76  15 i PKPbc     PKPdf     17 06 25.1 +0.3
       SNR=86
KAD    Karad               148.81  54  eP         PKPdf     17 06 24.9 +0.2
KAD    Karad               148.81  54  ex         x         17 06 27.4
AKL    Akola               149.00  46  eP         PKPdf     17 06 24.3  -0.5
AKL                                   ⇑ix         x         17 06 27.3
AKL    Akola               149.00  46  ex         x         17 06 28.1
CNSH   ChangSha            149.04 338 ⇑PKPbc      PKPdf     17 06 22.1  -2.6
CNSH                                    LR        LR
       comp=Z,7µm,23.2s
CNSH                                    LR        LR
       comp=Z,11µm,22.9s
CNSH                                    LR        LR
       comp=Z,18µm,23.4s
QZH    Quanzhou            149.14 326 i PKPbc     PKPdf     17 06 24.8  -0.1
QZH                                     PP        PP        17 10 05.1 +5.7
QZH                                     LR        LR
       comp=Z,14µm,19.4s
QZH                                     LR        LR
       comp=Z,7µm,18.0s
QZH                                     LR        LR
       comp=Z,16µm,18.5s
TPUB   Ta-pu               149.19 321   IAMs_20   IAMs_20   18 16 38.9
       comp=Z,11µm,20.0s
TWG    Pinlang             149.26 320   IAMs_20   IAMs_20   18 18 16.8
       comp=Z,15µm,22.0s
VAR    Varanasi            149.42  32  ex         PKPbc     17 06 28.7  -1.1
GOA    Goa                 149.43  58  ex         PKPbc     17 06 30.6 +0.6
GOA    Goa                 149.43  58  ex         PKPbc     17 06 29.2  -0.8
RAMN   Ramite              149.73  25  eP         PKPdf     17 06 26.0  -0.2
TAPN   Taplejung           149.82  23  eP         PKPdf     17 06 26.2  -0.2
LATR   Latur               150.07  50  eP         PKPdf     17 06 28.0 +1.4
GTK    Tadong              150.18  21  ex         x         17 06 32.0
GTK    Tadong              150.18  21  eP         PKPdf     17 06 26.7  -0.1
SLGI   Shiliguri           150.67  22  eP         PKPdf     17 06 26.9  -0.4
BLSP   Bilaspur            151.41  37  eP         PKPdf     17 06 28.2  -0.4
BLSP   Bilaspur            151.41  37  eP         PKPdf     17 06 24.8  -3.7
BLSP                                   i PP       PP        17 10 08.9  -3.7
MNGI   Mangalore           151.45  61  ex         PKPbc     17 06 35.1 +0.3
MNGI   Mangalore           151.45  61  ex         PKPbc     17 06 34.4  -0.4
DHUB   DHUBRI              151.86  20  eP         PKPdf     17 06 30.0 +0.9
DHUB   DHUBRI              151.86  20  eP         PKPdf     17 06 28.2  -0.9
DHUB                                    IAmb      IAmb      17 06 45.8
       comp=Z,302nm,1.1s
DHUB                                   i x        x         17 10 10.6
MBWA   Marble Bar          152.01 221   PKPdf     PKPdf     17 06 28.0  -1.5
MBWA   Marble Bar          152.01 221   P         PKPdf     17 06 28.7  -0.8
BOK    Bokaro              152.12  29  eP         PKPdf     17 06 30.4 +0.8
BOK    Bokaro              152.12  29  eP         PKPdf     17 06 29.8 +0.1
HYBB   Hyderabad (bro      152.18  49  ePKPdf     PKPdf     17 06 29.5  -0.4
HYBB                                   ePP        PP        17 10 20.8 +3.1
HYBB                                   eSKSdf     SKSdf     17 13 35.1  -0.5
HYBB                                    IVMs_BB   IVMs_BB   18 26 25.6
       comp=Z,7µm,20.5s
GUWA   GUWAHATI            152.23  17  ex         x         17 06 35.7
GUWA   GUWAHATI            152.23  17  eP         PKPdf     17 06 28.6  -1.1
GUWA                                   i x        x         17 10 16.2
JORH   JORHAT              152.33  12  eP         PKPdf     17 06 29.8   0.0
JORH                                    IAmb      IAmb      17 06 48.8
       comp=Z,1µm,1.3s
GLSP   General Luna,       152.34 292⇓eP          PKPdf     17 06 28.0  -2.1
PVCP   Virac               152.53 301⇓eP          PKPdf     17 06 29.6  -0.7
GYA    Guiyang             152.54 348   Pdif                17 04 02.4
GYA                                   ⇑PKPbc      PKPdf     17 06 29.8  -0.5
GYA                                     pPKP      pPKPdf    17 06 40.5   0.0
GYA                                     PKPab     pPKPbc    17 06 46.6  -0.7
GYA                                     PP        PP        17 10 25.1 +6.7
GYA    Guiyang             152.54 348 ⇑PKPbc      PKPdf     17 06 29.8  -0.5
GYA                                     pPKP      pPKPdf    17 06 40.5   0.0
GYA                                     PKPab     pPKPbc    17 06 46.6  -0.7
GYA                                     PP        PP        17 10 25.1 +6.7
GYA                                     SS        SS        17 29 48.3 +2.3
GYA                                     LR        LR
       comp=Z,16µm,22.9s
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GYA                                     LR        LR
       comp=Z,8µm,20.8s
GYA                                     LR        LR
       comp=Z,26µm,25.4s
GULI   GuiLin              152.60 340   PKPbc     PKPdf     17 06 27.8  -2.5
GULI                                    LR        LR
       comp=Z,6µm,19.5s
GULI                                    LR        LR
       comp=Z,7µm,19.0s
GULI                                    LR        LR
       comp=Z,18µm,22.8s
BIPH   Bislig              152.62 289⇑iP          PKPdf     17 06 25.4  -5.2
JHSG   JHARSUGUGA          152.66  35  ex         x         17 06 38.1
JHSG   JHARSUGUGA          152.66  35  eP         PKPdf     17 06 30.3  -0.1
MOKO   MOKOCHONG           152.80  11  eP         PKPdf     17 06 32.7 +1.9
MOKO   MOKOCHONG           152.80  11  eP         PKPdf     17 06 30.6  -0.2
SHL    Shillong            152.88  17  eP         PKPdf     17 06 29.8  -1.2
SHL                                    i x        PP        17 10 19.1  -1.4
BUTP   Butuan              153.08 291⇓eP          PKPdf     17 06 28.1  -3.1
PZH    PanZhiHua           153.15 357   PKPbc     PKPdf     17 06 30.6  -0.6
PZH                                     pPKP      pPKPdf    17 06 41.0  -0.4
PZH                                     sPKP                17 06 46.6
PZH                                     PKPab     sPKPbc    17 06 51.3  -0.9
PZH                                     PKS       PP        17 10 04.3   -17
PZH                                     PP        PP        17 10 21.8   0.0
PZH                                     SKKS                17 17 09.8
PZH                                     SS        SS        17 29 52.3  -0.3
PZH                                     AMB       AMB
       comp=Z,590nm,5.3s
PZH                                     LR        LR
       comp=Z,11µm,20.2s
PZH                                     LR        LR
       comp=Z,12µm,22.1s
PZH                                     LR        LR
       comp=Z,11µm,21.6s
SAMP   Sagada Mountai      153.23 312⇓eP          PKPdf     17 06 29.1  -2.3
KOHI   KOHIMA              153.29  12  ex         x         17 06 40.4
KOHI   KOHIMA              153.29  12  eP         PKPdf     17 06 31.7 +0.3
KOHI                                    IAmb      IAmb      17 06 52.9
       comp=Z,488nm,0.9s
GZH    Guangzhou           153.37 332   PKPbc     PKPdf     17 06 29.8  -1.6
GZH                                     PP        PP        17 10 20.9  -2.4
GZH                                     SS        SS        17 29 50.3  -5.3
GZH                                     LR        LR
       comp=Z,5µm,20.5s
GZH                                     LR        LR
       comp=Z,7µm,18.3s
MSLP   Maasin              153.38 294⇓eP          PKPab     17 06 55.2 +3.9
JCNP   Jose Panganiba      153.41 304⇓eP          PKPdf     17 06 31.4  -0.2
BALP   Baler               153.51 308⇓eP          PKPbc     17 06 39.4   0.0
DAV    Davao City (W)      153.68 287   PKPab     PKPab     17 06 50.5  -2.2
       comp=Z,95nm,0.3s,baz=32,slow=9.2,SNR=4.6
DDMP   Don Marcelino,      153.79 285⇓eP          PKPdf     17 06 32.7 +0.4
SMPP   San Manuel, Pa      153.97 310⇓eP          PKPdf     17 06 29.1  -3.4
PCPH   Palayan             153.99 309⇑eP          PKPdf     17 06 33.5 +1.1
AGT    Agartala            154.26  19  eP         PKPdf     17 06 32.1  -0.5
AGT                                    i x        x         17 10 29.8
VJD    Vijayawada          154.31  48  eP         PKPdf     17 06 34.6 +1.7
VJD    Vijayawada          154.31  48  eP         PKPdf     17 06 32.7  -0.2
RAGD   RAYAGADA            154.38  39  eP         PKPdf     17 06 32.5  -0.4
RAGD   RAYAGADA            154.38  39  eP         PKPdf     17 06 30.7  -2.3
RAGD                                   i x        x         17 10 27.5
KMI    Kunming             154.45 355 ⇑PKPbc      PKPdf     17 06 33.3 +0.1
KMI                                     sPKP                17 06 47.9
TBP    Tagbilaran          154.45 294⇑eP          PKPdf     17 06 30.9  -2.3
BOAC   Boac                154.55 304⇓eP          PKPdf     17 06 33.8 +0.6
RCP    Roxas               154.69 299⇑eP          PKPdf     17 06 33.0  -0.5
AZL    Aizawl              154.84  17  eP         PKPdf     17 06 35.0 +1.4
AZL    Aizawl              154.84  17  eP         PKPdf     17 06 33.3  -0.4
AZL                                    i x        x         17 10 32.0
CTBH   Cotabato--PC H      154.91 288⇑iP          PKPdf     17 06 31.9  -1.9
KOD    Kodaikanal          154.93  64  eP         PKPdf     17 06 32.1  -2.1
KOD    Kodaikanal          154.93  64  eP         PKPdf     17 06 32.3  -1.9
BWNR   Bhubaneshwar        154.97  34  eP         PKPdf     17 06 32.2  -1.5
BWNR   Bhubaneshwar        154.97  34  eP         PKPdf     17 06 29.8  -4.0
SALM   Salem               154.98  61  eP         PKPdf     17 06 34.1 +0.2
SALM   Salem               154.98  61  eP         PKPdf     17 06 32.7  -1.2
SALM                                   i PP       PP        17 10 36.3 +2.5
MACP   Maragondon, Ca      155.03 307⇓eP          PKPdf     17 06 37.0 +3.1
SNPH   Sibulan             155.16 294  eP         PKPdf     17 06 34.4 +0.1
PGP    Puerto Galera       155.26 305⇑eP          PKPdf     17 06 32.7  -1.6
CNOP   Candoni, Negro      155.51 295⇓eP          PKPdf     17 06 32.9  -1.8
LUBP   Lubang              155.71 306⇓eP          PKPdf     17 06 33.0  -1.9
ENPP   El Nido             157.72 302⇓eP          PKPdf     17 06 37.0  -0.5
QIZ    Qiongzhong          158.47 335   PKP       PKPdf     17 06 38.8 +0.5
QIZ                                     PP        PP        17 10 51.3  -0.4
QIZ                                     LR        LR
       comp=Z,16µm,17.2s
QIZ                                     LR        LR
       comp=Z,15µm,18.6s
QIZ                                     LR        LR
       comp=Z,25µm,17.7s
PALK   Pallekele           159.01  68   PKPab     PKPab     17 07 14.0  -1.6
       comp=Z,76nm,1.2s,baz=183,slow=4.0,SNR=3.9
KAPI   Kappang             160.04 257   P         PKPdf     17 06 39.3  -1.0
BATP   Bataraza            160.27 298⇓eP          PKPdf     17 06 40.7 +0.2
CHTO   Chiang Mai          160.80   4   PKPdf     PKPdf     17 06 39.8  -1.2
CHTO                                    PKPab     PKPab     17 07 21.6  -1.2
CHTO   Chiang Mai          160.80   4   PKP2      PKPab     17 07 21.7  -1.2
CHTO                                                        18 06 39.8
CHTO   Chiang Mai          160.80   4   P         PKPdf     17 06 40.3  -0.7
CM31   Chiang Mai Arr      161.15   4   P         PKPdf     17 06 41.2  -0.1
CMAR   Chiang Mai Arr      161.15   4   PKP       PKPdf     17 06 41.0  -0.3
       comp=Z,15nm,0.9s,baz=300,slow=2.1,SNR=69
CMAR                                    PKPab     PKPab     17 07 23.4  -1.0
       comp=Z,78nm,1.0s,baz=335,slow=5.5,SNR=27
SPMM   Sapulut             163.04 288   P         PKPdf     17 06 43.0  -0.5
DGPR   DIGLIPUR            164.61  28  eP         PKPdf     17 06 44.2  -0.5
DGPR                                   i PP       PP        17 11 24.2  -0.4
PBA    Port Blair          165.82  32  i x        PP        17 11 30.9  -0.1
SBUM   Sibu                167.72 284   P         PKPdf     17 06 47.0  -0.3
KSM    Kuching             169.79 281             PKPdf     17 06 47.3  -1.4
KSM    Kuching             169.79 281   P         PKPdf     17 06 48.0  -0.7
LEM    Lembang             170.33 229   PKP       PKPdf     17 06 48.4  -0.8
       comp=Z,35nm,0.9s,baz=88,slow=2.5,SNR=11
LEM                                     PKPab     PKPab     17 08 06.2 +0.8
       comp=Z,94nm,1.2s,baz=155,slow=12,SNR=3.0
SRIT   Nakonsritamara      170.97   4   PKPdf     PKPdf     17 06 48.2  -1.1
SRIT                                              PKPab     17 08 06.8  -1.0
KULM   Kulim               174.27 356   P         PKPdf     17 06 50.0  -0.7
IPM    Ipoh                175.03 351   PKPdf     PKPdf     17 06 48.6  -2.4
IPM    Ipoh                175.03 351   P         PKPdf     17 06 50.0  -1.0
JRMM   Jerantut            175.16 333   P         PKPdf     17 06 50.0  -1.0
MYKOM  Kota Tinggi         175.79 302   PKPdf     PKPdf     17 06 49.1  -2.1
MYKOM  Kota Tinggi         175.79 302   P         PKPdf     17 06 50.0  -1.1
PSI    Prapat              176.48  23   PKP       PKPdf     17 06 50.0  -1.5
       comp=Z,44nm,1.0s,baz=221,slow=3.7,SNR=36
PSI                                     PKPab     PKPab     17 08 31.4  -1.0
       comp=Z,128nm,0.9s,baz=301,slow=4.3,SNR=18
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NDI ***18*** *16:57:05.6±3.7, 32°.63N×95°.22E, h10^{km}, mb4.3, mb4.7(NEIC)*

IDC ***18*** *16:57:09.2±0.8, 32°.02N×94°.98E, h0^{km}, mb4.3/24, mbtmp4.2/28, ML3.7/4, MS5.0/3, Error ellipse: s-maj=20.7km s-min=15.0km az=13.0*

BJI ***18*** *16:57:11.5±0.0, 31°.94N×95°.07E, h4^{km}, mb4.3/28, mB4.6/5, ML4.0/8, Ms4.0/19, Ms7 4.0/18*

NEIC ***18*** *16:57:11.4±1.8, 32°.12N±0°.08×95°.09E±0°.10, h10^{km}±1^{km}, mb4.7/44, ML4.4(BJI), Error ellipse: s-maj=14.7km s-min=12.8km az=231.0*

ISC 18 16:57:11.5±0.4**, 32°.10N**±0°.04×**95°.00E**±0°.04**, h10**^{km}**, n115,** σ1^{s}**.87**/118**, mb4.5**/37**, 3C-1D, Xizang**

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Code   Station Name          Δ°   AZ°    Phase ID             Time      Res
                                        Op        ISC       h  m  s     ISC
LSA    Lhasa                4.09 235    Pn        Pn        16 58 15.3 +0.8
LSA    Lhasa                4.09 235    Pn        Pn        16 58 17.0 +2.5
LSA                                     Sn        Sb        16 59 10.3  -3.1
LSA                                     LR        LR
       comp=E,2µm,8.9s
LSA                                     LR        LR
       comp=Z,1µm,7.8s
GOMU   GeErMu               4.09 358    Pn        Pn        16 58 18.8 +4.4
GOMU                                    Sg        Sg        16 59 20.3  -2.5
GOMU                                    smax      smax
       comp=N,67nm,0.9s
GOMU                                    smax      smax
       comp=E,65nm,1.0s
MOKO   MOKOCHONG            5.78 184   eP         Pn        16 58 36.4  -1.0
MOKO                                   eS         Sb        17 00 08.7 +6.9
KOHI   KOHIMA               6.41 187   eP         Pn        16 58 45.8  -0.3
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GUWA	**GUWAHATI**	**6.56**	**207**	*e*P	**Pn**	**16 58 49.2**	**+1.1**
GUWA				*e*S	**Sn**	**17 00 04.4**	**+1.5**
SHL	**Shillong**	**7.06**	**204**	*e*P	**Pn**	**16 58 56.7**	**+1.6**
DHUB	**DHUBRI**	**7.48**	**217**	*e*P	**Pn**	**16 59 00.2**	**-0.4**
DHUB				*e*S	**Sn**	**17 00 24.4**	**-1.1**
TAPN	**Taplejung**	**7.91**	**235**	*e*P	**Pn**	**16 59 06.8**	**-0.1**
	32nm,0.4s						
PZH	**PanZhiHua**	**8.11**	**132**	P	**Pn**	**16 59 08.6**	**-0.8**
PZH				S	**Sn**	**17 00 39.1**	**-2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				LR	LR		
	comp=N,1µm,7.7s						
PZH				LR	LR		
	comp=E,1µm,8.2s						
PZH				LR	LR		
	comp=Z,1µm,7.9s						
GTA	**Gaotai**	**8.27**	**27**	⇑P	**Pn**	**16 59 13.6**	**+2.0**
GTA				sP	Pb	16 59 29.3	-5.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
LZH	**Lanzhou**	**8.34**	**59**	*e*P	**Pn**	**16 59 15.4**	**+2.8**
LZH				pP	Pb	16 59 22.4	-14
LZH				sP	Pb	16 59 27.8	-8.2
LZH				S	**Sn**	**17 00 47.8**	**+0.9**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				LR	LR		
	comp=E,1µm,7.3s						
LZH				LR	LR		
	comp=Z,2µm,10.0s						
AZL	**Aizawl**	**8.58**	**194**	*e*P	**Pn**	**16 59 16.2**	**+0.4**
AZL				*e*S	**Sn**	**17 00 56.0**	**+3.2**
RAMN	**Ramite**	**8.94**	**237**	*e*P	**Pn**	**16 59 19.5**	**-1.4**
BELO	**BELONIA**	**9.37**	**201**	*e*P	**Pn**	**16 59 27.9**	**+1.4**
KKN	**Kakani**	**9.46**	**245**	*e*P	**Pn**	**16 59 26.9**	**-1.2**
	27nm,0.4s						
PKI	**Pulchoki**	**9.47**	**244**	*e*P	**Pn**	**16 59 26.5**	**-1.8**
PKIN	**Phulchoki**	**9.48**	**244**	*e*P	**Pn**	**16 59 26.5**	**-1.9**
	23nm,0.3s						
DMN	**Daman**	**9.69**	**245**	*e*P	**Pn**	**16 59 30.1**	**-1.1**
KMI	**Kunming**	**9.72**	**134**	⇑P	**Pn**	**16 59 31.8**	**+0.2**
KMI				pP		16 59 39.4	
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=N,1µm,9.1s						
KMI				LR	LR		
	comp=E,1µm,9.1s						
KMI				LR	LR		
	comp=Z,770nm,10.0s						
GKN	**Gorkha**	**9.87**	**248**	*e*P	**Pn**	**16 59 31.0**	**-2.5**
DANN	**Dangsing**	**10.42**	**252**	*e*P	**Pn**	**16 59 38.9**	**-2.3**
BOK	**Bokaro**	**11.55**	**226**	*e*P	**Pn**	**16 59 56.2**	**-0.2**
XAN	**Xi'an**	**11.84**	**77**	⇓P	**Pn**	**17 00 01.1**	**+0.7**
XAN				pP		17 00 06.3	
XAN				sP		17 00 09.9	
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				LR	LR		
	comp=E,490nm,13.1s						
XAN				LR	LR		
	comp=Z,710nm,13.7s						
ENH	**Enshi**	**12.54**	**95**	Pn	**Pn**	**17 00 07.1**	**-2.9**
LGTI	**Lohaghat**	**12.96**	**262**	*e*x	x	17 00 16.1	
WMQ	**Urumqi**	**13.03**	**336**	*e*P	**Pn**	**17 00 20.3**	**+3.6**
WMQ				pP	P	17 00 22.5	-4.7
WMQ				sP		17 00 26.8	
WMQ				PP	**PnPn**	**17 00 30.5**	**+5.9**
CHTO	**Chiang Mai**	**13.70**	**164**		**Pn**	**17 00 25.3**	**-0.6**
CM31	**Chiang Mai Arr**	**14.04**	**164**		**Pn**	**17 00 30.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**14.04**	**164**	Pn	**Pn**	**17 00 28.2**	**-2.3**
	0.1nm,0.3s,baz=341,slow=12,SNR=10.0						
	0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.04**	**164**		**Pn**	**17 00 29.9**	**-0.7**
SMLA	**Simla**	**15.23**	**271**	*e*P	**Pn**	**17 00 45.0**	**-1.6**
SMLA				IAmb	IAmb	17 00 52.5	
	comp=Z,16nm,0.9s						
HHC	**Hu-ho-hao-te**	**15.91**	**52**	*e*P	**Pn**	**17 00 56.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,50nm,1.0s						
WHN	**Wuhan**	**16.61**	**90**	⇑P	**P**	**17 01 07.6**	**+0.7**
TARG	**Taragay, Kyrgy**	**16.75**	**310**	P	**P**	**17 01 11.0**	**+2.2**
PRZ	**Przheval'sk**	**16.76**	**313**	Pn	**Pn**	**17 01 06.0**	**-0.4**
KSH	**Kashi**	**17.10**	**301**	P	**P**	**17 01 18.6**	**+6.2**
KSH				sP	sP	17 01 27.8	+9.1
KSH				PP	**PnPn**	**17 01 30.4**	**+10**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,65nm,3.6s						
MK31	**Makanchi Array**	**17.62**	**330**	Pn	**Pn**	**17 01 16.5**	**-0.5**
MKAR	**Makanchi Array**	**17.62**	**330**	P	**Pn**	**17 01 16.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=142,slow=11,SNR=19						
MKAR				LR	LR	17 08 26.1	
	comp=Z,4µm,20.7s,baz=246,slow=38						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**17.62**	**330**		**Pn**	**17 01 16.6**	**-0.4**
MAKZ	**Makanchi**	**17.76**	**330**		**P**	**17 01 20.1**	**+0.5**
SONM	**Songino Array**	**17.94**	**26**	P	**Pn**	**17 01 20.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=211,slow=11,SNR=9.3						
SONM				LR	LR	17 08 33.5	
	comp=Z,3µm,18.1s,baz=103,slow=38						
	comp=Z,4.6nm,1.0s						
SONM	**Songino Array**	**17.94**	**26**		**Pn**	**17 01 20.1**	**-1.0**
ULN	**Ulaanbaatar**	**18.21**	**27**	P	**P**	**17 01 24.2**	**-0.5**
NIL	**Nilore**	**18.34**	**281**	P	**P**	**17 01 25.2**	**-0.8**
NIL				IAmb	IAmb	17 01 32.0	
	comp=Z,38nm,1.1s						
UBPT	**Khong Chiam**	**19.27**	**148**	P	**P**	**17 01 34.4**	**-1.9**
FRU1	**Bishkek**	**19.34**	**309**	P	**P**	**17 01 37.3**	**+0.3**
AAK	**Ala-Archa**	**19.35**	**309**	P	**P**	**17 01 37.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=185,slow=4.9,SNR=12						
	comp=Z,2.4nm,0.7s						
AAK	**Ala-Archa**	**19.35**	**309**	P	**Pn**	**17 01 38.9**	**+0.5**
AAK				IAmb	IAmb	17 01 47.8	
	comp=Z,42nm,1.4s						
DRK	**Karamyk**	**20.18**	**298**	P	**P**	**17 01 46.6**	**+0.2**
BTK	**Batken**	**21.05**	**299**	P	**P**	**17 01 56.4**	**+0.7**
BTK				IAmb	IAmb	17 02 05.4	
	comp=Z,34nm,1.3s						
GAR	**Garm**	**21.20**	**296**	P	**P**	**17 01 56.1**	**-1.1**
KBL	**Kabul**	**21.81**	**283**	P	**P**	**17 02 04.1**	**+0.1**
KBL				IAmb	IAmb	17 02 09.7	
	comp=Z,26nm,0.8s						
CHGR	**Chuyangaron**	**22.02**	**294**	P	**P**	**17 02 05.2**	**-1.0**
KURBB	**Kurchatov Arra**	**22.16**	**331**	P	**P**	**17 02 07.5**	**+0.1**
	comp=Z,9.9nm,0.7s,baz=135,slow=11,SNR=43						
	comp=Z,9.9nm,0.7s						
KURK	**Kurchatov**	**22.20**	**332**	P	**P**	**17 02 06.8**	**-1.0**
KURK				IAmb	IAmb	17 02 13.6	
	comp=Z,59nm,1.5s						
KK31	**Karatay Array**	**22.22**	**307**	P	**P**	**17 02 07.6**	**-0.5**
KKAR	**Karatay Array**	**22.22**	**307**	P	**P**	**17 02 08.2**	**+0.1**
KKAR	**Karatay Array**	**22.22**	**307**	P	**P**	**17 02 07.6**	**-0.5**
KKAR				IAmb	IAmb	17 02 16.7	
	comp=Z,15nm,1.3s						
ZAA0	**Zalesovo Array**	**23.02**	**344**	P	**P**	**17 02 15.2**	**-1.3**
ZALV	**Zalesovo Beam**	**23.02**	**344**	P	**P**	**17 02 16.4**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=141,slow=9.6,SNR=14						
	comp=Z,3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**23.02**	**344**	P	**P**	**17 02 15.6**	**-0.9**
HIA	**Hailar**	**25.24**	**40**	P	**P**	**17 02 37.0**	**-0.5**
HIA				IAmb	IAmb	17 02 39.8	
	comp=Z,15nm,1.1s						
HIA	**Hailar**	**25.24**	**40**	P	**P**	**17 02 37.0**	**-0.5**
HIA	**Hailar**	**25.24**	**40**	pmax	pmax		
	comp=Z,15nm,1.1s						
CN2	**Changchun**	**26.55**	**55**	*e*P	**P**	**17 02 49.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSRS	**Korea Array**	**27.48**	**70**	P	**P**	**17 02 58.4**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=260,slow=9.1,SNR=3.7						
	comp=Z,0.8nm,0.8s						
BRVK	**Borovoye**	**27.50**	**327**	P	**P**	**17 02 57.0**	**-0.9**
BRVK				IAmb	IAmb	17 03 05.0	
	comp=Z,7.3nm,0.7s						
GEYT	**Alibeck**	**30.62**	**291**	P	**P**	**17 03 26.9**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=283,slow=7.2,SNR=1.5						
	comp=Z,0.8nm,0.4s						
GEYT	**Alibeck**	**30.62**	**291**	P	**P**	**17 03 25.4**	**-0.4**
ABKAR	**Akbulak array**	**31.27**	**314**	P	**P**	**17 03 31.4**	**0.0**
KLR	**Kul'dur**	**32.31**	**47**	P	**P**	**17 03 40.6**	**+0.1**
	comp=Z,5.1nm,1.0s,baz=267,slow=10,SNR=10						
	comp=Z,5.1nm,1.0s						
AKTO	**Aktyubinsk**	**32.85**	**315**	P	**P**	**17 03 44.9**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=111,slow=14,SNR=6.2						
	comp=Z,3.3nm,0.8s						
ARU	**Arti**	**35.01**	**325**	LR	LR	17 17 32.7	
	comp=Z,7µm,22.0s,baz=112,slow=35						
YAK	**Yakutsk**	**37.30**	**26**	P	**P**	**17 04 22.9**	**-0.5**
	comp=Z,4.5nm,0.4s,baz=33,slow=2.4,SNR=4.5						
	comp=Z,4.5nm,0.4s						
YAK	**Yakutsk**	**37.30**	**26**	P	**P**	**17 04 22.6**	**-0.9**
YAK				IAmb	IAmb	17 04 24.2	
	comp=Z,17nm,0.9s						
NRIK	**Noril'sk**	**37.52**	**356**	P	**P**	**17 04 25.2**	**0.0**
	comp=Z,1.8nm,0.4s,baz=139,slow=6.2,SNR=2.0						
	comp=Z,1.8nm,0.4s						
ASAJ	**Asahikawa**	**38.82**	**58**	P	**P**	**17 04 36.8**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=275,slow=14,SNR=4.1						
	comp=Z,5.0nm,0.8s						
JKA	**Kamikawa-asahi**	**38.82**	**58**	P	**P**	**17 04 36.8**	**+0.3**
JKA	**Kamikawa-asahi**	**38.82**	**58**	IAmb	IAmb	17 04 42.5	
	comp=Z,24nm,1.5s						
KIRV	**Kirov**	**40.39**	**325**	P	**P**	**17 04 49.2**	**-0.1**
	comp=Z,11nm,0.5s,baz=185,slow=1.5,SNR=4.3						
	comp=Z,11nm,0.5s						
TIXI	**Tiksi**	**43.54**	**15**	P	**P**	**17 05 14.6**	**-0.3**
	comp=Z,9.9nm,1.0s,baz=270,slow=20,SNR=7.2						
	comp=Z,9.9nm,1.0s						
TIXI	**Tiksi**	**43.54**	**15**	IAmb	IAmb	17 05 15.5	
	comp=Z,20nm,1.1s						
TNTI	**Ternate**	**43.62**	**129**	P	**P**	**17 05 14.8**	**-1.5**
TNTI				IAmb	IAmb	17 05 19.7	
	comp=Z,6.3nm,0.8s						
AKASG	**Malin Array Be**	**50.98**	**312**	P	**P**	**17 06 12.3**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=72,slow=7.4,SNR=6.4						
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**50.98**	**312**	IAmb	IAmb	17 06 22.0	
	comp=Z,14nm,1.5s						
FINES	**FINESS Array B**	**52.38**	**326**	P	**P**	**17 06 23.1**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=76,slow=10.0,SNR=4.1						
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**53.16**	**336**	P	**P**	**17 06 28.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=88,slow=6.7,SNR=7.9						
	comp=Z,2.5nm,0.8s						
MLR	**Muntele Rosu**	**53.89**	**306**	P	**P**	**17 06 35.2**	**+0.1**
	comp=Z,8.7nm,0.9s,baz=152,slow=9.0,SNR=4.2						
	comp=Z,8.7nm,0.9s						
MLR	**Muntele Rosu**	**53.89**	**306**	IAmb	IAmb	17 06 39.1	
	comp=Z,15nm,1.0s						
IDI	**Anoyia**	**57.29**	**294**	P	**P**	**17 06 58.4**	**-1.2**
	comp=Z,9.7nm,0.9s,baz=122,slow=13,SNR=2.0						
	comp=Z,9.7nm,0.9s						
NB2	**NORSAR Subarra**	**59.55**	**326**	P	**P**	**17 07 14.2**	**-0.7**
	comp=Z,10nm,1.2s,baz=79,slow=6.9						
NOA	**NORSAR Array B**	**59.55**	**326**	P	**P**	**17 07 14.2**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=79,slow=6.9,SNR=8.7						
	comp=Z,1.8nm,0.9s						
GEC2	**GERESS Array S**	**61.19**	**312**	P	**P**	**17 07 25.1**	**-1.4**
GEC2				IAmb	IAmb	17 07 40.0	
	comp=Z,5.3nm,1.0s						
GERES	**GERESS Array B**	**61.19**	**312**	P	**P**	**17 07 25.7**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=65,slow=6.3,SNR=4.7						
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**61.19**	**312**	P	**P**	**17 07 26.7**	**+0.3**
ASAR	**Alice Springs**	**66.77**	**141**	P	**P**	**17 08 01.8**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=323,slow=6.0,SNR=4.9						
	comp=Z,3.4nm,0.7s						
TOLK	**Toolik Lake Re**	**68.98**	**21**	P	**P**	**17 08 17.0**	**+0.4**
TOLK				IAmb	IAmb	17 08 24.6	
	comp=Z,6.7nm,0.9s						
IMAR	**Indian Mountai**	**69.10**	**24**	P	**P**	**17 08 17.2**	**-0.2**
H21K	**Melozitna Rive**	**69.61**	**24**	P	**P**	**17 08 20.9**	**+0.3**
H21K				IAmb	IAmb	17 08 40.0	
	comp=Z,9.9nm,1.2s						
J20K	**Nowinta River**	**69.93**	**26**	P	**P**	**17 08 23.2**	**+0.8**
BMAR	**Burnt Mountain**	**71.22**	**21**	P	**P**	**17 08 30.9**	**+0.6**
PPLA	**Purkeypile**	**71.37**	**26**	P	**P**	**17 08 31.4**	**0.0**
M20K	**Styx River**	**71.58**	**28**	P	**P**	**17 08 31.9**	**-0.8**
M20K				IAmb	IAmb	17 08 45.4	
	comp=Z,9.3nm,1.2s						
ILAR	**Eielson Array**	**72.15**	**23**	P	**P**	**17 08 34.7**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=288,slow=3.7,SNR=7.4						
	comp=Z,1.9nm,0.9s						
SML	**Sawmill**	**73.47**	**26**	P	**P**	**17 08 44.0**	**+0.1**
SCRK	**Sand Creek**	**73.63**	**23**	P	**P**	**17 08 44.5**	**-0.4**
SCRK				IAmb	IAmb	17 08 51.3	
	comp=Z,5.3nm,0.8s						
SCM	**Sheep Creek Mo**	**73.83**	**26**	P	**P**	**17 08 46.3**	**+0.3**
KLU	**Klutina**	**74.56**	**26**	P	**P**	**17 08 51.0**	**+0.7**
BCAR	**Beaver Creek A**	**74.98**	**23**	P	**P**	**17 08 53.5**	**+0.8**
ESDC	**Sonseca Array**	**76.45**	**308**	P	**P**	**17 09 00.7**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=33,slow=4.9,SNR=5.9						
	comp=Z,1.4nm,0.9s						
P33M	**Teslin, Yukon**	**80.00**	**22**	P	**P**	**17 09 20.1**	**-0.7**
P33M				IAmb	IAmb	17 09 36.4	
	comp=Z,6.3nm,1.2s						
YKA	**Yellowknife Ar**	**82.77**	**13**	P	**P**	**17 09 36.8**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=334,slow=3.8,SNR=4.2						
	comp=Z,1.2nm,0.8s						
FRB	**Frobisher Bay**	**83.59**	**353**	P	**P**	**17 09 38.5**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=25,slow=7.4,SNR=3.3						
	comp=Z,4.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**85.88**	**283**	P	**P**	**17 09 51.2**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=45,slow=4.2,SNR=11						
	comp=Z,2.8nm,0.8s						

IDC **18** *17:06:26.1±1.4, $18\overset{\circ}{.}84$N×$104\overset{\circ}{.}74$W, h0^{km}, mb3.7/4, mbtmp3.7/6, ML3.8/2, Error ellipse: s-maj=45.4km s-min=28.9km az=70.0*

NEIC **18** *17:06:29.4±2.0, $18\overset{\circ}{.}84$N±$0\overset{\circ}{.}04$×$104\overset{\circ}{.}47$W±$0\overset{\circ}{.}05$, h10^{km}±1^{km}, mb4.2/32, Md4.6/27(MEX), Error ellipse: s-maj=8.8km s-min=5.2km az=122.0*

MEX **18** *17:06:32.2±1.4, $18\overset{\circ}{.}93$N×$104\overset{\circ}{.}44$W, h7^{km}±7^{km}, MD4.6*

ISC 18 17:06:27.2±2.2, $18\overset{\circ}{.}84$N±$0\overset{\circ}{.}06$×$104\overset{\circ}{.}58$W±$0\overset{\circ}{.}07$, h4^{km}±14^{km}, n63, $\sigma 1\overset{s}{.}41$/67, mb4.2/14, 1C, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAR	**Ciudad de Arme**	**0.55**	**79**	*e*P	**Pb**	**17 06 39.4**	**0.0**
CDAR				*i* S	**Sb**	**17 06 46.6**	**-1.0**
R15V		**0.65**	**59**	*i* P	**Pb**	**17 06 41.0**	**-0.3**
R15V				*i* S	**Sg**	**17 06 48.3**	**0.0**
COIG	**Colima**	**0.91**	**68**	*i* P	**Pg**	**17 06 45.0**	**+0.4**
COIG				*i* S	**Sg**	**17 06 55.8**	**-0.6**
COMA	**Comala**	**0.91**	**58**	*i* P	**Pg**	**17 06 45.1**	**+0.4**
COMA				*e*S	**Sg**	**17 06 55.9**	**-0.7**
MNGA	**Volcan de Coli**	**1.10**	**55**	*e*P	**Pg**	**17 06 48.4**	**+0.1**
EZ5V		**1.12**	**55**		**Pg**	**17 06 48.8**	**+0.1**
EZ5V		**1.12**	**55**	*i* P	**Pg**	**17 06 48.8**	**+0.1**
EZ5V				*e*S	**Sg**	**17 07 03.0**	**-0.3**
INCO	**Volcan de Coli**	**1.15**	**53**	*i* P	**Pg**	**17 06 49.1**	**-0.2**
INCO				*i* S	**Sg**	**17 07 00.4**	**-3.8**
JUBC	**Volcan de Coli**	**1.17**	**54**	*e*P	**Pg**	**17 06 49.6**	**-0.1**
MMIG	**Aquila**	**1.29**	**115**		**Pn**	**17 06 51.5**	**-0.6**
MMIG					**Sg**	**17 07 07.6**	**-1.1**
MMIG	**Aquila**	**1.29**	**115**	*i* P	**Pn**	**17 06 51.5**	**-0.6**
MMIG				*i* S	**Sg**	**17 07 07.6**	**-1.1**
PUVA	**Puert Vallarta**	**1.88**	**341**		**Pn**	**17 07 00.2**	**0.0**
PUVA					**Sn**	**17 07 24.0**	**-0.4**
PUVA	**Puert Vallarta**	**1.88**	**341**	*i* P	**Pn**	**17 07 00.2**	**0.0**
PUVA				*i* S	**Sn**	**17 07 24.0**	**-0.4**
MOIG	**Morelia**	**3.31**	**75**	Pn	**Pn**	**17 07 21.4**	**+1.3**
AAIG	**Aguscalientes**	**3.74**	**33**	*e*P	**Pn**	**17 07 26.8**	**+0.8**
ZAIG	**Zacatecas**	**4.34**	**25**		**Pn**	**17 07 37.1**	**+2.8**
CAIG	**El Cayaco**	**4.47**	**113**		**Pn**	**17 07 37.3**	**+1.5**
CAIG	**El Cayaco**	**4.47**	**113**	⇑*e*P	**Pn**	**17 07 37.3**	**+1.5**
TLIG	**Tlapa**	**5.85**	**102**		**Pn**	**17 07 56.1**	**+1.1**
SLBS	**Sierra La Lagu**	**6.95**	**315**		**Pn**	**17 08 13.1**	**+3.1**
CMIG	**Matias Romero**	**9.39**	**99**	Pn	**Pn**	**17 08 46.0**	**+2.6**
	0.3nm,0.3s,baz=285,slow=12,SNR=3.3						
	1.6nm,0.2s						
TX31	**Lajitas Ar. Si**	**10.48**	**4**	Pn	**Pn**	**17 09 01.9**	**+3.4**
TX32	**Lajitas Array**	**10.48**	**4**	Pn	**Pn**	**17 09 01.6**	**+3.2**
TXAR	**Lajitas Array**	**10.48**	**4**	Pn	**Pn**	**17 09 00.3**	**+1.8**
	0.4nm,0.3s,baz=189,slow=16,SNR=7.3						
	1.9nm,0.7s						
TXAR	**Lajitas Array**	**10.48**	**4**		**Pn**	**17 08 59.4**	**+0.9**
MSTX	**Muleshoe**	**15.16**	**6**		**Pn**	**17 10 04.4**	**+2.1**
MSTX				IAmb	IAmb	17 10 11.2	
	comp=Z,16nm,1.1s						
WMOK	**Wichita Mounta**	**16.66**	**17**		**Pn**	**17 10 21.9**	**+0.3**
PFO	**Pinyon Flats O**	**18.15**	**327**	P	**P**	**17 10 41.8**	**+1.0**
GSC	**Goldstone, Bar**	**19.66**	**329**	P	**Pn**	**17 10 59.1**	**+0.5**
QSM	**Queen of Sheba**	**20.22**	**330**	P	Pn	17 11 05.6	+0.4
QSM				IAmb	IAmb	17 11 06.2	
	comp=Z,7.3nm,0.8s						
GWY	**Greenwater Val**	**20.31**	**331**	P	Pn	17 11 06.3	-0.1
TPNV	**Topopah Spring**	**20.75**	**333**	P	**P**	**17 11 10.5**	**+1.3**
TPNV				IAmb	IAmb	17 11 13.0	
	comp=Z,8.6nm,0.8s						
ISA	**Isabella, Lake**	**20.78**	**327**	P	Pn	17 11 11.2	-0.6
ISA				IAmb	IAmb	17 11 15.4	
	comp=Z,8.0nm,0.8s						
S11A	**Rachel**	**21.13**	**335**	P	**P**	**17 11 15.2**	**+1.9**
TMUT	**Trail Mountain**	**21.18**	**346**	P	**P**	**17 11 14.2**	**+0.2**
MDPB	**Devils Postpil**	**22.62**	**329**	P	**P**	**17 11 29.8**	**+0.4**
MDPB				IAmb	IAmb	17 11 32.7	
	comp=Z,7.5nm,1.0s						
NV11	**Mina Array Sit**	**22.82**	**332**	P	**P**	**17 11 32.2**	**+0.8**
NV11				IAmb	IAmb	17 11 35.1	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**22.89**	**331**	P	**P**	**17 11 32.5**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=151,slow=11,SNR=13						
	comp=Z,3.1nm,0.9s						
NVAR	**Mina Array Bea**	**22.89**	**331**	P	**P**	**17 11 33.9**	**+1.7**
KVN	**Kaiserville**	**23.31**	**333**	P	**P**	**17 11 38.1**	**+1.6**
KVN				IAmb	IAmb	17 11 38.9	
	comp=Z,15nm,1.4s						
YERR	**Yerington**	**23.77**	**331**	P	**P**	**17 11 42.2**	**+1.2**
YERR				IAmb	IAmb	17 11 44.1	
	comp=Z,3.6nm,0.8s						
PNTR	**Pine Nut**	**24.02**	**330**	P	**P**	**17 11 45.1**	**+1.6**
PNTR				IAmb	IAmb	17 11 46.7	
	comp=Z,9.2nm,0.8s						
PDAR	**Pinedale Array**	**24.23**	**351**	P	**P**	**17 11 44.3**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=140,slow=11,SNR=2.9						
	comp=Z,0.7nm,0.8s						
MPK	**Martis Peak**	**24.39**	**330**	P	**P**	**17 11 48.5**	**+1.5**
MPK				IAmb	IAmb	17 11 50.5	
	comp=Z,9.4nm,0.8s						
BEKR	**Beckworth**	**24.99**	**330**	P	**P**	**17 11 53.3**	**+1.0**
BEKR				IAmb	IAmb	17 11 54.5	
	comp=Z,7.6nm,1.0s						
SNOW	**Snow King Moun**	**25.10**	**349**	P	**P**	**17 11 54.1**	**+0.8**
WVOR	**Wild Horse Val**	**26.38**	**336**	P	**P**	**17 12 04.6**	**-0.2**
WVOR				IAmb	IAmb	17 12 13.5	
	comp=Z,4.6nm,1.4s						
J04D	**Umpqua Nationa**	**28.47**	**332**	P	**P**	**17 12 25.3**	**+1.6**
HOOD	**Mount Hood Mea**	**29.98**	**336**	P	**P**	**17 12 35.6**	**-1.4**
YKA	**Yellowknife Ar**	**44.17**	**353**	P	**P**	**17 14 34.2**	**-2.7**
	comp=Z,0.5nm,0.7s,baz=184,slow=7.2,SNR=1.9						
	comp=Z,0.5nm,0.7s						
K27K	**Chicken**	**51.76**	**340**	P	**P**	**17 15 36.5**	**+0.9**
K27K				IAmb	IAmb	17 15 37.6	
	comp=Z,5.0nm,0.9s						
RIDG	**Independent Ri**	**52.49**	**339**	P	**P**	**17 15 41.3**	**+0.1**
IL31		**53.83**	**339**	P	**P**	**17 15 50.6**	**-0.3**
IL31				IAmb	IAmb	17 15 51.2	
	comp=Z,3.2nm,0.8s						
ILAR	**Eielson Array**	**53.83**	**339**	P	**P**	**17 15 49.6**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=153,slow=6.8,SNR=20						
	comp=Z,2.1nm,0.8s						
TRF	**Thorofare Moun**	**54.28**	**337**	P	**P**	**17 15 54.1**	**-0.4**
BWN	**Browne**	**54.38**	**338**	P	**P**	**17 15 56.7**	**+1.8**
M20K	**Styx River**	**54.58**	**334**	P	**P**	**17 15 56.3**	**-0.3**
H21K	**Melozitna Rive**	**56.39**	**338**	P	**P**	**17 16 08.6**	**-0.9**
H03N2	**Juan Fernandez**	**57.46**	**155**	T	T	18 18 24.6	
	baz=333,slow=77						
H03N1	**Juan Fernandez**	**57.47**	**155**	T	T	18 18 30.6	
	baz=333,slow=77						
H03N3	**Juan Fernandez**	**57.48**	**155**	T	T	18 18 23.4	
	baz=333,slow=77						
WRA	**Warramunga Arr**	**124.67**	**258**	PKP	**PKPdf**	**17 25 27.9**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=80,slow=1.4,SNR=7.9						
ASAR	**Alice Springs**	**125.60**	**254**	PKP	**PKPdf**	**17 25 29.7**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=84,slow=2.3,SNR=8.6						

NEIC **18** *17:27:43.4±2.2, $22\overset{\circ}{.}6$N±$0\overset{\circ}{.}1$×$12\overset{\circ}{.}5$W±$0\overset{\circ}{.}2$, h0^{km}±2^{km}, mb4.1/4, Error ellipse: s-maj=28.3km s-min=14.5km az=235.0*

IDC **18** *17:27:45.7±1.9, $22\overset{\circ}{.}81$N×$12\overset{\circ}{.}14$W, h0^{km}, mb3.7/7, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=59.3km s-min=26.5km az=91.0*

ISC 18 17:27:42.7±1.0, $22\overset{\circ}{.}55$N±$0\overset{\circ}{.}10$×$12\overset{\circ}{.}3$W±$0\overset{\circ}{.}2$, h0^{km}, n20, $\sigma 2\overset{s}{.}95$/19, mb3.8/7, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACI	**Morro de la Ar**	**6.83**	**327**	Pn	**Pn**	**17 29 22.7**	**-1.7**
PMOZ	**Porto Moniz, M**	**11.11**	**338**	Pn	**Pn**	**17 30 19.5**	**-3.5**
KOWA	**Kowa**	**11.21**	**134**	Pn	**Pn**	**17 30 26.9**	**+2.6**
KOWA				Sn	**Sn**	**17 32 31.7**	**+1.2**
MDT	**Midelt**	**12.28**	**32**	Lg	Lg	17 34 01.4	
	0.2nm,0.3s,baz=330,slow=16,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**16.26**	**123**	Pn	**Pn**	**17 31 33.9**	**+1.3**
TORD	**Torodi Ar. Bea**	**16.26**	**123**	Pn	**Pn**	**17 31 34.0**	**+1.3**
	0.3nm,0.3s,baz=314,slow=12,SNR=13						
TORD				Sn	**Sn**	**17 34 26.7**	**-7.1**
	0.1nm,0.3s,baz=309,slow=18,SNR=3.0						
	0.9nm,0.5s						
DBIC	**Dimbokro**	**17.34**	**154**	P	**P**	**17 31 50.8**	**+3.0**
	0.5nm,0.3s,baz=336,slow=7.9,SNR=4.7						
DBIC				S	**Sn**	**17 34 53.3**	**-6.7**
	2.5nm,0.8s,baz=157,slow=7.7,SNR=1.2						
DBIC				Lg	Lg	17 37 02.5	
	baz=89,slow=15,SNR=1.6						
	3.7nm,0.5s						
DBIC	**Dimbokro**	**17.34**	**154**		**Pn**	**17 31 47.4**	**+1.1**
DBIC				IAmb	IAmb	17 32 14.1	
	comp=Z,21nm,1.4s						
I17CI	**DIMBOKRO INFRA**	**17.34**	**154**	*i*		19 33 30.0	
	baz=333,slow=327,SNR=0.4						
I42PT	**GRACIOSA ISLAN**	**21.22**	**324**	*i*		19 33 50.0	
	baz=138,slow=329,SNR=2.1						
KEST	**Kesra**	**22.95**	**50**	P	**P**	**17 32 48.3**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=216,slow=8.7,SNR=1.7						
	comp=Z,1.0nm,0.5s						
KEST	**Kesra**	**22.95**	**50**	IAmb	IAmb	17 32 57.1	
	comp=Z,4.9nm,0.9s						
GERES	**GERESS Array B**	**33.37**	**32**	P	**P**	**17 34 22.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=214,slow=9.0,SNR=7.6						
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**41.75**	**19**	P	**P**	**17 35 33.7**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=243,slow=45,SNR=2.1						
	comp=Z,0.5nm,0.5s						
AKASG	**Malin Array Be**	**42.74**	**38**	P	**P**	**17 35 41.5**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=218,slow=18,SNR=2.1						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**46.95**	**24**	P	**P**	**17 36 15.9**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=218,slow=4.7,SNR=9.7						
	comp=Z,1.7nm,0.7s						
ARU	**Arti**	**60.95**	**37**	P	**P**	**17 37 59.0**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=255,slow=5.8,SNR=3.4						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**76.92**	**45**	P	**P**	**17 39 37.9**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=284,slow=5.7,SNR=11						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**148.83**	**92**	PKPbc	**PKiKP**	**17 47 35.8**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=291,slow=2.3,SNR=6.3						
ASAR	**Alice Springs**	**148.93**	**99**	PKPbc	**PKPab**	**17 47 36.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=294,slow=1.8,SNR=15						

UPP **18** *17:28:01.7±0.1, $67\overset{\circ}{.}08$N×$20\overset{\circ}{.}95$E, h0^{km}, ML2.6, Explosion*

HEL **18** *17:28:01.9, $67\overset{\circ}{.}08$N×$20\overset{\circ}{.}87$E, h0^{km}, ML2.2, Explosion*

IDC **18** *17:28:02.9±0.9, $67\overset{\circ}{.}05$N×$21\overset{\circ}{.}31$E, h0^{km}, mbtmp2.8/4, ML2.0/4, Error ellipse: s-maj=19.4km s-min=8.7km az=102.0*

ISC 18 17:28:01.7±0.8, $67\overset{\circ}{.}09$N±$0\overset{\circ}{.}02$×$20\overset{\circ}{.}97$E±$0\overset{\circ}{.}02$, h0^{km}, n37, $\sigma 1\overset{s}{.}05$/50, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.16**	**281**	P	**Pg**	**17 28 04.9**	**+0.1**
DUNU				S	**Sg**	**17 28 07.0**	**+0.1**
DUNU	**Dundret**	**0.16**	**281**	*i* P	**Pg**	**17 28 04.9**	**+0.1**
DUNU				*i* S	**Sg**	**17 28 07.0**	**+0.1**
ERTU	**Ertsjaerv**	**0.72**	**138**	P	**Pg**	**17 28 15.3**	**-0.3**
ERTU	**Ertsjaerv**	**0.72**	**138**	*e*P	**Pg**	**17 28 15.1**	**-0.4**
ERTU				*e*S	**Sg**	**17 28 26.0**	**+1.1**
PAJU	**Pajala**	**0.84**	**94**	P	**Pg**	**17 28 17.6**	**-0.3**
PAJU	**Pajala**	**0.84**	**94**	*e*P	**Pg**	**17 28 17.5**	**-0.3**
	baz=277						
PAJU				*e*SB	**Sb**	**17 28 30.7**	**-0.4**
HARU	**Harads**	**0.93**	**180**	P	**Pg**	**17 28 18.8**	**-0.8**
HARU	**Harads**	**0.93**	**180**	*e*P	**Pg**	**17 28 18.8**	**-0.8**
SALU	**Saltoluokta**	**1.00**	**288**	*e*P	**Pg**	**17 28 19.8**	**-1.1**
LANU	**Lannavaara**	**1.04**	**22**	*e*P	**Pg**	**17 28 21.1**	**-0.5**
KLF	**Kolari**	**1.18**	**82**	*e*P	**Pg**	**17 28 23.8**	**-0.5**
KOVU	**Salmi**	**1.18**	**345**	P	**Pg**	**17 28 23.6**	**-0.7**

KOVU	Salmi	1.18	345	eP	Pg	17 28 23.6	-0.7
KALU	Kalix	1.56	141	P	Pn	17 28 30.3	-0.4
KALU	Kalix	1.56	141	eP	Pn	17 28 30.2	-0.5
	baz=322						
KALU				eSN	Sg	17 28 52.6	+0.7
HEF	Hetta	1.67	37	eP	Pn	17 28 31.9	-0.4
HEF	Hetta	1.67	37	eP	Pn	17 28 32.1	-0.2
	baz=221						
HEF				MSG		17 28 53.0	
	comp=Z,11nm,0.2s						
TOF	Tornio	1.68	126	eP	Pn	17 28 32.5	+0.2
TOF				MSG		17 28 53.0	
	comp=Z,32nm,0.2s						
TOF				eSN	Sg	17 28 55.9	+0.2
KIF	Kilpisjarvi	1.92	358	ePG	Pb	17 28 37.1	-0.5
	baz=175						
KIF				MSG		17 29 00.5	
	comp=Z,21nm,0.2s						
KIF				eSG	Sg	17 29 04.7	+1.2
RNF	Rovaniemi	2.05	101	ePB	Pb	17 28 38.5	-1.3
RNF				eSG	Sg	17 29 07.7	+0.2
I37NO	I37NO	2.18	337	i		17 41 47.4	
	baz=158,slow=327,SNR=5.6						
OUL	Oulu	2.84	133	ePB	Pn	17 28 50.6	+2.3
	baz=314						
OBF0	Syolatti, Pyha	2.93	151	ePB	Pb	17 28 52.8	-2.0
ARCES	ARCESS Array B	2.98	32	Pn	Pn	17 28 50.6	+0.5
	comp=Z,0.3nm,0.3s,baz=211,slow=14,SNR=56						
ARCES				Sn	Sn	17 29 27.8	+1.2
	comp=Z,0.5nm,0.3s,baz=220,slow=22,SNR=12						
	comp=Z,1.4nm,0.2s						
OUF	Merijarvi	3.15	149	eP	Pn	17 28 54.5	+2.0
OUF				MSG		17 29 34.7	
	comp=Z,3.4nm,0.2s						
UMAU	Umeaa	3.23	182	eP	Pn	17 28 54.1	+0.5
UMAU				eS	Sn	17 29 33.2	+0.7
VRF	Varrio	3.40	75	eP	Pn	17 28 56.8	+0.9
VRF				eSG	Sg	17 29 48.1	-2.7
OLKF	Oulanka, Finla	3.44	99	eP	Pn	17 28 58.0	+1.5
OLKF				eSG	Sb	17 29 48.3	+2.6
MSF	Maaselka	3.44	106	eP	Pn	17 28 58.3	+1.7
KEV	Kevo	3.48	37	eP	Pn	17 28 57.4	+0.3
	baz=224						
KU6	Riekki	3.72	103	eP	Pn	17 29 02.1	+1.8
HUSU	Husum	3.84	192	eP	Pn	17 29 02.9	+1.0
HUSU				eS	Sn	17 29 47.7	+0.1
VAF	Ylistaro	4.13	169	eP	Pn	17 29 07.0	+1.1
	baz=348						
FINES	FINESS Array B	6.09	156	Pn	Pn	17 29 33.0	+0.2
	comp=Z,0.1nm,0.3s,baz=348,slow=11,SNR=7.2						
FINES				Sn	Sn	17 30 42.3	-0.8
	comp=Z,0.2nm,0.3s,baz=346,slow=21,SNR=9.5						
	comp=Z,1.9nm,0.9s						
NOA	NORSAR Array B	7.42	220	Pn	Pn	17 29 51.1	-0.1
	baz=51,slow=18,SNR=2.0						
	comp=Z,0.4nm,0.8s						
HFS	Hagfors	7.69	208	Pn	Pn	17 29 54.6	-0.3
	comp=Z,0.1nm,0.3s,baz=324,slow=22,SNR=1.1						
	comp=Z,0.4nm,0.7s						
SPITS	Spitsbergen Ar	11.22	355	Pn	Pn	17 30 43.3	+0.2
	baz=163,slow=15						

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*IDC **18** 17:37:43.7±1.8, 32°.97N×130°.54E, h0^{km}, mb3.6/1, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=22.8km s-min=9.4km az=166.0*

*JMA **18** 17:37:44.3±0.0, 32°.83N±0°.09×130°.8E±0°.1, h16^{km}, MV3.9/20, NW KUMAMOTO PREF*

JMA Felt II J1 at NW KUMAMOTO PREF .

ISC 18 17:37:43.5±0.9**, 32°.81N**±0°.04×**130°.75E**±0°.07**, h10^{km}, n8,** σ1^{s}**97**/11**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.24	311	⇓iP	Pg	17 37 50.2	+1.8
JTA				⇓S	Sg	17 37 54.2	+2.6
JIU3	Izumi3	0.27	168	P	Pg	17 37 50.4	+1.5
JIU3				S	Sg	17 37 54.9	+2.3
JNU	Nakatsue	0.33	20	Pg	Pg	17 37 50.1	-0.1
	889nm,0.3s,baz=173,slow=2.1,SNR=4072						
JNU				Lg	Lg	17 37 54.4	
	3µm,0.3s,baz=21,slow=11,SNR=54						
JZO	Okuchi	0.68	191	i P	Pn	17 37 57.8	-1.4
JZO				S	Sn	17 38 07.5	-2.3
KSRS	Korea Array	5.18	334	Pn	Pn	17 38 59.5	-1.5
	0.4nm,0.3s,baz=152,slow=15,SNR=5.0						
KSRS				Pg	Pb	17 39 14.0	-0.1
	0.4nm,0.3s,baz=155,slow=14,SNR=5.0						
KSRS				Lg	Lg	17 40 23.6	
	1.4nm,0.3s,baz=152,slow=32,SNR=6.6						
	0.5nm,0.3s						
JOW	Kunigami	6.33	200	Pn	Pn	17 39 20.8	+3.8
	1.3nm,0.3s,baz=75,slow=16,SNR=1.6						
	6.0nm,0.6s						
MJAR	Matsushiro Arr	7.19	57	Pn	Pn	17 39 29.6	+0.9
	0.1nm,0.3s,baz=242,slow=14,SNR=6.5						
	1.4nm,0.5s						
SONM	Songino Array	23.73	316	P	P	17 42 54.2	-1.6
	0.8nm,0.4s,baz=126,slow=9.4,SNR=2.4						
	0.8nm,0.4s						

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*NEIC **18** 17:57:08.2±2.2, 21°.22S±0°.10×178°.8W±0°.1, h569^{km}±6^{km}, mb4.6/128, Error ellipse: s-maj=15.8km s-min=13.6km az=114.0*

*IDC **18** 17:57:09.6±1.2, 21°.10S×178°.93W, h582^{km}±13^{km}, mb3.7/17, mbtmp4.7/19, Error ellipse: s-maj=13.8km s-min=10.1km az=112.0*

*NOU **18** 17:57:10.0, 21°.21S×178°.78W, h593^{km}, mb4.6/64, Fiji Islands Region*

ISC 18 17:57:12.2±0.3**, 21°.24S**±0°.06×**178°.95W**±0°.07**, h619^{km}, n464,** σ1^{s}**08**/485**, mb4.5**/93**, 33C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.99	2	P	P	17 58 30.2	-2.8
DGTI	Dogotuki	5.06	346	P	P	17 58 44.7	-2.2
NIUE	Niue	8.74	77	P	P	17 59 11.6	-7.7
AFI	Afiamalu	9.99	44	P	P	17 59 26.3	-5.1
	145nm,0.7s,baz=72,slow=1.4,SNR=26						
AFI				S	S	18 01 13.6	-12
	41nm,0.7s,baz=73,slow=19,SNR=3.4						
AFI	Afiamalu	9.99	44	P	P	17 59 26.1	-5.3
AFI	Afiamalu	9.99	44	P	P	17 59 26.3	-5.1
MARNC	Mare, Loyalty	12.14	266	P	P	17 59 50.4	-1.9
MARNC	Mare, Loyalty	12.14	266	P	P	17 59 51.3	-1.0
PINNC	Pines Island,	12.70	261	P	P	17 59 56.2	-1.6
PINNC	Pines Island,	12.70	261	P	P	17 59 57.4	-0.4
LIFNC	LIFOU	12.91	270	P	P	17 59 57.5	-2.3
LIFNC	LIFOU	12.91	270	P	P	17 59 58.2	-1.6
YATNC	Mamie plateau,	13.19	264	P	P	18 00 01.8	-0.8
OUENC	Ouen Island, N	13.25	262	P	P	18 00 02.4	-0.8
DZM	Mont Dzumac	13.61	264	P	P	18 00 05.5	-1.3
	4.8nm,0.4s,baz=284,slow=22,SNR=20						
DZM	Mont Dzumac	13.61	264	P	P	18 00 05.2	-1.6
DZM	Mont Dzumac	13.61	264	P	P	18 00 05.7	-1.1
NOUC	Port Laguerre	13.74	264	P	P	18 00 06.9	-1.1
SANVU	Saraoutou	14.35	291	P	P	18 00 12.3	-1.5
SANVU	Saraoutou	14.35	291	P	P	18 00 14.0	+0.2
OUZ	Omahuta	15.39	204	P	P	18 00 24.1	+1.1
MXZ	Matakaoa Point	16.44	188	P	P	18 00 31.4	-1.1
URZ	Urewera	17.30	190	P	P	18 00 37.7	-2.6
	13nm,0.3s,baz=294,slow=2.4,SNR=28						
URZ				S	S	18 03 23.6	-5.9
	13nm,0.8s,baz=130,slow=2.9,SNR=3.0						
URZ	Urewera	17.30	190	P	P	18 00 36.8	-3.6
URZ	Urewera	17.30	190	P	P	18 00 38.3	-2.1
HIZ	Hauiti	18.03	196	P	P	18 00 48.9	+1.9
BKZ	Black Stump Fm	18.30	191	P	P	18 00 46.0	-3.5
BKZ	Black Stump Fm	18.30	191	P	P	18 00 46.8	-2.7
KNTN	Kanton	19.65	22	P	P	18 01 00.4	-1.7
SNZO	South Karori	20.72	194	P	P	18 01 09.5	-1.8
SNZO	South Karori	20.72	194	P	P	18 01 10.4	-0.9
BHW	Baring Head	20.78	193	P	P	18 01 10.2	-1.6
QRZ	Quartz Range	20.83	198	P	P	18 01 12.4	+0.1
PLWZ	Palliser	20.86	192	P	P	18 01 10.8	-1.7
NNZ	Nelson	20.95	196	P	P	18 01 12.1	-1.3
BSWZ	Blackbirch Sta	21.30	195	P	P	18 01 14.0	-2.5
THZ	Tophouse	21.59	197	P	P	18 01 16.8	-2.3
KHZ	Kahutara	22.04	195	P	P	18 01 21.2	-1.8
KHZ	Kahutara	22.04	195	P	P	18 01 21.2	-1.8
LTZ	Lake Taylor	22.71	197	P	P	18 01 26.7	-2.3
OXZ	Oxford	23.28	197	P	P	18 01 31.6	-2.4
TARA	Tarawa	23.82	340	P	P	18 01 38.7	-0.5
RPZ	Rata Peaks	23.91	198	P	P	18 01 39.4	-0.2
	10nm,0.6s,baz=342,slow=2.2,SNR=6.8						
	10nm,0.6s						
RPZ	Rata Peaks	23.91	198	P	P	18 01 39.4	-0.2
RPZ	Rata Peaks	23.91	198	P	P	18 01 41.3	+1.6
FOZ	Fox Glacier	24.13	200	P	P	18 01 40.6	-0.8
WKZ	Wanaka	25.54	200	P	P	18 01 52.5	-1.5
MLZ	Mavora Lakes	26.31	201	P	P	18 01 59.2	-1.6
DCZ	Deep Cove	26.73	202	P	P	18 02 03.3	-1.1
WHZ	Wether Hill Ro	26.84	201	P	P	18 02 04.4	-0.8
EIDS	Eidsvold	27.80	256	P	P	18 02 13.5	-0.5
EIDS	Eidsvold	27.80	256	P	P	18 02 15.1	+1.1
ARMA	Armidale	27.95	245	P	P	18 02 14.8	-0.6
ARMA				IAmb	IAmb	18 02 17.6	
	comp=Z,7.0nm,0.8s						
ARMA	Armidale	27.95	245	P	P	18 02 17.2	+1.8
MGCD	Mangrove Creek	29.07	239	P	P	18 02 26.6	+1.7
RMQ	Roma	29.94	254	P	P	18 02 34.1	+1.6
CNB	Canberra Magne	31.08	236	P	P	18 02 43.5	+1.4
CTA	Charters Tower	32.54	266	P	P	18 02 55.4	+0.7
CTAO	Charters Tower	32.54	266	P	P	18 02 55.3	+0.7
CTAO				IAmb	IAmb	18 02 55.5	
	comp=Z,14nm,0.5s						
CTAO	Charters Tower	32.54	266	P	P	18 02 55.4	+0.7
CMSA	Cobar Meteorol	33.17	245	P	P	18 03 00.5	+0.8
QLP	Quilpie	34.00	254	P	P	18 03 07.4	+0.7
PMG	Port Moresby	34.65	285	P	P	18 03 12.6	+0.3
PMG	Port Moresby	34.65	285	P	P	18 03 12.7	+0.4
PMG	Port Moresby	34.65	285	P	P	18 03 12.8	+0.4
MTSU	Mount Surprise	34.68	269	P	P	18 03 13.1	+0.6
TOO	Toolangi	34.75	234	P	P	18 03 12.7	-0.1
TOO				IAmb	IAmb	18 03 21.8	
	comp=Z,25nm,1.2s						
TOO	Toolangi	34.75	234	P	P	18 03 13.6	+0.8
TAU	Tasmania Unive	35.48	225	P	P	18 03 18.5	-0.2
STKA	Stephens Creek	36.67	245	P	P	18 03 29.1	+0.4
	comp=Z,3.2nm,0.4s,baz=90,slow=9.6,SNR=13						
	comp=Z,3.2nm,0.4s						
STKA	Stephens Creek	36.67	245	P	P	18 03 29.3	+0.6
STKA	Stephens Creek	36.67	245	P	P	18 03 30.1	+1.4
COEN	Coen	36.75	275	P	P	18 03 30.0	+0.4
COEN				IAmb	IAmb	18 03 31.2	
	comp=Z,17nm,0.8s						
COEN	Coen	36.75	275	P	P	18 03 30.3	+0.7
INKA	Innaminka	37.12	252	P	P	18 03 34.2	+1.8
QIS	Mount Isa	38.65	263	P	P	18 03 45.3	+0.4
HTT	Hallett	39.10	243	P	P	18 03 49.3	+0.9
LCRK	Leigh Creek	39.43	248	P	P	18 03 51.6	+0.6
TWOA	Tennyson Woods	39.60	240	P	P	18 03 52.9	+0.6
NAPP	Napperby	39.72	243	P	P	18 03 54.0	+0.8
BBOO	Buckleboo	41.43	244	P	P	18 04 06.9	+0.1
OOD	Oodnadatta	41.61	252	P	P	18 04 09.6	+1.4
WAKE	Wake Island	42.66	340	P	P	18 04 15.7	-0.8
MULG	Mulgathing	43.02	248	P	P	18 04 19.3	+0.1
WR0	Warramunga Arr	43.44	263	P	P	18 04 22.3	-0.2
WR0				IAmb	IAmb	18 04 23.8	
	comp=Z,12nm,1.2s						
AS31	Alice Springs	43.49	258	P	P	18 04 22.6	-0.4
ASAR	Alice Springs	43.49	258	P	P	18 04 22.9	-0.1
	comp=Z,4.0nm,0.3s,baz=94,slow=8.0,SNR=312						
ASAR				ScP	ScP	18 08 53.5	+3.3
	comp=Z,0.7nm,0.7s,baz=112,slow=5.0,SNR=4.4						
ASAR				S	S	18 10 08.3	-0.2
	comp=Z,6.0nm,0.8s,baz=95,slow=16,SNR=28						
	comp=Z,4.0nm,0.3s						
ASAR	Alice Springs	43.49	258	P	P	18 04 22.7	-0.3
WB0	Warramunga Arr	43.61	263	P	P	18 04 23.3	-0.6
WB0				IAmb	IAmb	18 04 24.3	
	comp=Z,16nm,1.0s						
WB2	Warramunga Arr	43.61	263	P	P	18 04 23.5	-0.5
WB2				IAmb	IAmb	18 04 25.0	
	comp=Z,19nm,1.1s						
WRAB	Tennant Creek	43.62	263	P	P	18 04 23.6	-0.4
WRAB				IAmb	IAmb	18 04 25.0	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	43.62	263	P	P	18 04 23.8	-0.2
WRA	Warramunga Arr	43.62	263	P	P	18 04 23.6	-0.4
	comp=Z,4.3nm,0.3s,baz=97,slow=7.8,SNR=232						
WRA				ScP	ScP	18 08 55.1	+4.4
	comp=Z,1.0nm,0.9s,baz=102,slow=4.1,SNR=3.7						
WRA				S	S	18 10 08.5	-1.9
	comp=Z,6.7nm,1.0s,baz=99,slow=13,SNR=7.6						
	comp=Z,4.3nm,0.3s						
WRA	Warramunga Arr	43.62	263	P	P	18 04 23.3	-0.7
FORT	Forrest	48.19	247	P	P	18 04 58.8	+0.5
MTN	Manton Dam	48.29	272	P	P	18 04 58.9	-0.3
MTN				IAmb	IAmb	18 04 59.6	
	comp=Z,24nm,0.8s						
MTN	Manton Dam	48.29	272	P	P	18 04 59.5	+0.2
WRKA	Warakurna	48.41	255	P	P	18 05 00.3	+0.2
KNRA	Kununurra	49.73	267	P	P	18 05 09.9	+0.1
KNRA				IAmb	IAmb	18 05 10.4	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	49.73	267	P	P	18 05 10.3	+0.5
SWI	Sorong	52.58	286	P	P	18 05 30.6	+0.2
	comp=Z,207nm,0.8s						
AAI	Ambon	54.19	281	P	P	18 05 40.7	-1.0
	comp=Z,38nm,1.2s						
SOEI	Soe	55.64	273	P	P	18 05 53.3	+1.3
SOEI	Soe	55.64	273	P	P	18 05 53.4	+1.5
	comp=Z,112nm,0.9s						
SOEI	Soe	55.64	273	P	P	18 05 54.1	+2.2
BATI	Baumata	56.06	272	P	P	18 05 55.5	+0.8
	comp=Z,26nm,1.2s						
LBMI	Labuha	56.07	284	P	P	18 05 55.4	+0.7
	comp=Z,33nm,1.1s						
PSA00	Pilbara Seismi	56.64	258	P	P	18 05 56.9	-1.7
PSA00	Pilbara Seismi	56.64	258	P	P	18 05 57.8	-0.7
PSA00				IAmb	IAmb	18 05 59.4	
	comp=Z,13nm,0.9s						
TNTI	Ternate	56.79	286	P	P	18 05 59.5	-0.2
TNTI				IAmb	IAmb	18 06 01.0	
	comp=Z,46nm,0.9s						
MBWA	Marble Bar	56.83	258	P	P	18 05 59.0	-0.8
MBWA	Marble Bar	56.83	258	P	P	18 05 59.7	-0.1
SANI	Sanana	56.86	282	P	P	18 05 59.6	-0.5
	comp=Z,32nm,1.0s						
SANI	Sanana	56.86	282	P	P	18 06 00.6	+0.5
SBA	Scott Base	57.08	184	P	P	18 06 01.7	+1.1
VNDA	Vanda	57.10	185	P	P	18 06 02.6	+1.9
	comp=Z,2.2nm,0.7s,baz=350,slow=7.2,SNR=18						
	comp=Z,2.2nm,0.7s						
VNDA	Vanda	57.10	185	P	P	18 06 01.8	+1.1
MMRI	Maumere	57.90	273	P	P	18 06 06.5	-0.7
MMRI				IAmb	IAmb	18 06 07.9	
	comp=Z,51nm,1.0s						
MTKN	Mount Kenneth	58.58	245	P	P	18 06 10.0	-1.5
MORW	Morawa	58.73	248	P	P	18 06 14.7	+2.2
LUWI	Luwuk	60.20	281	P	P	18 06 20.1	-2.4
LUWI				IAmb	IAmb	18 06 24.2	
	comp=Z,52nm,1.0s						
JCJ	Chichijima	61.02	320	P	P	18 06 24.9	-2.7
JCJ				IAmb	IAmb	18 06 31.8	
	comp=Z,33nm,1.0s						
JCJ	Chichijima	61.02	320	P	P	18 06 27.9	+0.3
GIRL	Giralia	61.50	255	P	P	18 06 32.7	+1.8
TOLI2	Tolitoli	62.89	283	P	P	18 06 39.2	-0.8
TOLI2				IAmb	IAmb	18 06 40.9	
	comp=Z,19nm,0.9s						
TOLI2	Tolitoli	62.89	283	P	P	18 06 41.6	+1.6
QSPA	South Pole Qui	68.84	180	P	P	18 07 17.2	+1.3
	comp=Z,18nm,1.0s,baz=30,slow=1.3,SNR=37						
	comp=Z,18nm,1.0s						
QSPA	South Pole Qui	68.84	180	P	P	18 07 17.0	+1.0
QSPA				IAmb	IAmb	18 07 18.4	
	comp=Z,21nm,1.0s						
JYT	Yasato	68.98	325	P	P	18 07 17.6	+0.5
JYT				IAmb	IAmb	18 07 18.6	
	comp=Z,32nm,1.0s						
JMM	Marumori	69.92	327	P	P	18 07 22.6	-0.1
JMM				IAmb	IAmb	18 07 23.6	
	comp=Z,17nm,0.9s						
JOW	Kunigami	69.96	311	P	P	18 07 23.3	+0.1
JOW				IAmb	IAmb	18 07 25.2	
	comp=Z,26nm,0.9s						
JGF	Kuroka	70.06	323	P	P	18 07 23.6	0.0
JGF				IAmb	IAmb	18 07 24.6	
	comp=Z,10nm,0.7s						
INU	Inuyama	70.07	323	P	P	18 07 23.3	-0.3
INU				IAmb	IAmb	18 07 25.0	
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	70.28	324	P	P	18 07 24.2	-0.6
	comp=Z,12nm,0.9s,baz=156,slow=5.7,SNR=28						
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	70.28	324	P	P	18 07 24.6	-0.3
MAJO	Matsushiro	70.28	324	P	P	18 07 24.8	-0.1
MAJO				IAmb	IAmb	18 07 25.9	
	comp=Z,19nm,0.9s						
MJB9	Matsu-Tunnel	70.29	324	P	P	18 07 24.5	-0.4
MJB9				IAmb	IAmb	18 07 25.9	
	comp=Z,18nm,0.9s						
SBUM	Sibu	71.26	280	P	P	18 07 31.3	+0.3
JSD	Sado	71.36	326	P	P	18 07 31.6	+0.5
JSD				IAmb	IAmb	18 07 33.4	
	comp=Z,24nm,0.8s						
JSU	Suzuyama	71.42	316	P	P	18 07 31.9	+0.3
JSU				IAmb	IAmb	18 07 33.2	
	comp=Z,29nm,0.9s						
JHS	Saijyo	72.09	320	P	P	18 07 36.0	+0.6
KSM	Kuching	72.64	279	P	P	18 07 39.0	0.0
KSM				IAmb	IAmb	18 07 40.9	
	comp=Z,20nm,0.8s						
YULB	Yu-li	73.17	304	P	P	18 07 40.4	-1.4
YULB				IAmb	IAmb	18 07 48.5	
	comp=Z,26nm,1.3s						
ATKA	Atka Island	73.24	3	P	P	18 07 41.5	0.0
TPUB	Ta-pu	73.63	304	P	P	18 07 43.7	-0.8
TPUB	Ta-pu	73.63	304	P	P	18 07 44.3	-0.2
SSLB	Suanglung	73.64	304	P	P	18 07 43.8	-0.8
SSLB				IAmb	IAmb	18 07 44.7	
	comp=Z,19nm,0.7s						
SSLB	Suanglung	73.64	304	P	P	18 07 44.6	+0.1
JKA	Kamikawa-asahi	73.95	332	P	P	18 07 47.5	+1.8
JKA				IAmb	IAmb	18 07 48.8	
	comp=Z,24nm,1.0s						
NIKH	Nikolski High	74.41	6	P	P	18 07 47.5	-0.7
NIKH	Nikolski High	74.41	6	P	P	18 07 48.2	+0.1
	baz=190						
PETK	Petropavlovsk-	76.76	346	P	P	18 08 00.9	-0.2
	comp=Z,9.7nm,0.7s,baz=159,slow=4.5,SNR=19						
	comp=Z,9.7nm,0.7s						
PETK	Petropavlovsk-	76.76	346	P	P	18 08 00.5	-0.6
KSRS	Korea Array	76.85	319	P	P	18 08 02.4	+0.4
	comp=Z,4.3nm,1.0s,baz=143,slow=6.3,SNR=20						
	comp=Z,4.3nm,1.0s						
KSAR	Wonju Array Be	76.87	319	P	P	18 08 02.8	+0.8
FALS	False Pass	76.94	9	P	P	18 08 03.1	+1.1
	baz=195						
SEHB	SEOHWA	77.18	320	P	P	18 08 04.6	+0.9
SEHB				IAmb	IAmb	18 08 06.3	
	comp=Z,9.8nm,0.8s						
INCN	Inchon	77.66	319	P	P	18 08 06.4	0.0
INCN				IAmb	IAmb	18 08 08.6	
	comp=Z,18nm,1.1s						
SMAI	San Martin Ant	78.24	159	P	P	18 08 10.1	+1.1
SMAI				IAmb	IAmb	18 08 11.6	
	comp=Z,19nm,0.9s						
SPIA	Saint Paul Isl	78.45	5	P	P	18 08 11.6	+1.6
	baz=188						
MYKOM	Kota Tinggi	78.73	276	P	P	18 08 13.4	+0.9
MYKOM				IAmb	IAmb	18 08 14.6	
	comp=Z,16nm,1.0s						
SCZ2	Santa Cruz Isl	78.75	47	P	P	18 08 12.8	+0.5
	baz=235						
BELA	Belgrano 2	78.94	173	P	P	18 08 12.3	-0.2
BELA				IAmb	IAmb	18 08 13.9	
	comp=Z,9.3nm,0.8s						
USRK	Ussuriysk Ar.	79.08	326	P	P	18 08 14.1	+0.5
	comp=Z,17nm,0.9s,baz=117,slow=3.9,SNR=20						
	comp=Z,17nm,0.9s						
PKM	Mcpherson Peak	79.14	46	P	P	18 08 14.8	+0.2
	baz=234						
CHGN	Chignik	79.16	11	P	P	18 08 15.2	+1.4
	baz=199						
NJ2	Nanjing	79.67	310	eP	P	18 08 17.3	+0.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
BFSC	Mount Baldy Ra	80.24	48	P	P	18 08 20.5	+0.4
	baz=236						
MONP2	Monument Peak	80.36	49	P	P	18 08 22.0	+1.1
	baz=237						
EDW2	Edwards Air Fo	80.36	47	P	P	18 08 22.2	+1.5
	baz=236						
IKP	In-Ko-Pah, Jac	80.45	50	P	P	18 08 22.5	+1.2
	baz=237						
ISA	Isabella, Lake	80.48	46	P	P	18 08 22.1	+0.7
ISA	Isabella, Lake	80.48	46	P	P	18 08 22.7	+1.4
	baz=235						
MAW	Mawson	80.57	200	P	P	18 08 21.8	+0.7
	comp=Z,2.8nm,0.8s,baz=68,slow=2.7,SNR=5.0						
	comp=Z,2.8nm,0.8s						
MAW	Mawson	80.57	200	IAmb	IAmb	18 08 23.2	
	comp=Z,0.9nm,0.9s						
MDJ	Mudanjiang	80.61	326	P	P	18 08 22.6	+0.9
MDJ				IAmb	IAmb	18 08 24.1	
	comp=Z,15nm,0.9s						
LRMC	Laurel Mtn Rad	80.91	46	P	P	18 08 24.7	+1.1
	baz=236						
CWC	Cottonwood Cre	81.18	45	P	P	18 08 26.7	+1.6
	baz=235						
MDPB	Devils Postpil	81.21	44	P	P	18 08 26.7	+1.4
BELC	Belle Mtn. Jos	81.26	48	P	P	18 08 26.8	+1.4
	baz=237						
GSC	Goldstone, Bar	81.41	47	P	P	18 08 27.4	+1.3
	baz=236						
YBH	Yreka Blue Hor	81.42	39	P	P	18 08 25.8	-0.2
	comp=Z,5.3nm,0.8s,baz=145,slow=1.3,SNR=10						
	comp=Z,5.3nm,0.8s						
YBH	Yreka Blue Hor	81.42	39	IAmb	IAmb	18 08 28.8	
	comp=Z,7.8nm,0.9s						
BC3	Big Chuckawall	81.45	49	P	P	18 08 27.5	+1.1
	baz=237						
HEC	Hector,Ludlow	81.47	48	P	P	18 08 27.7	+1.2
	baz=237						
GLA	Glamis	81.58	50	P	P	18 08 29.0	+2.0
	baz=238						
PNTR	Pine Nut	81.72	43	P	P	18 08 27.8	0.0
PNTR				IAmb	IAmb	18 08 30.6	
	comp=Z,11nm,0.7s						
YERR	Yerington	81.89	43	P	P	18 08 29.3	+0.7
GMRC	Granite Mounta	81.91	48	P	P	18 08 29.8	+1.0
	baz=237						
LCH	Last Change Ra	81.92	45	P	P	18 08 29.4	+0.7
LHV	Little Huntoon	81.94	44	P	P	18 08 29.5	+1.0
IRM	Iron Mountain	81.94	49	P	P	18 08 30.1	+1.3
	baz=238						
GRAC	Grapevine Rang	81.97	45	P	P	18 08 30.6	+1.7
	baz=236,SNR=5.3						
GWY	Greenwater Val	81.99	46	P	P	18 08 28.8	-0.3
TUQ	Turquoise Moun	82.08	47	P	P	18 08 30.3	+0.7
	baz=237						
NVAR	Mina Array Bea	82.17	44	P	P	18 08 31.2	+1.1
	comp=Z,2.0nm,0.6s,baz=224,slow=8.4,SNR=14						
	comp=Z,2.0nm,0.6s						
NVAR	Mina Array Bea	82.17	44	P	P	18 08 29.9	-0.2
PAHR	Pah Rah Range	82.22	42	P	P	18 08 30.7	+0.5
CN2	Changchun	82.34	323	eP	P	18 08 31.5	+1.0
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
IPM	Ipoh	82.35	278	P	P	18 08 32.1	+0.8
IPM				IAmb	IAmb	18 08 33.3	
	comp=Z,21nm,0.8s						
214A	Organ Pipe Nat	82.46	52	P	P	18 08 32.7	+1.2
	baz=239						
P18K	Big Mountain,	82.67	12	P	P	18 08 31.7	-0.1
	baz=202						
TPNV	Topopah Spring	82.69	46	P	P	18 08 32.6	0.0
TPNV	Topopah Spring	82.69	46	P	P	18 08 33.7	+1.1
	baz=236,SNR=5.7						
PDMCI	Parker Dam,Lak	82.72	49	P	P	18 08 33.0	+0.4
	baz=238						
MOD	Modoc Plateau	82.95	40	P	P	18 08 35.0	+1.2
K05A	Summer Lake	83.09	39	P	P	18 08 36.1	+1.6
K05A				IAmb	IAmb	18 08 37.2	
	comp=Z,14nm,0.9s						
P19K	Oil Pt	83.31	13	P	P	18 08 34.7	-0.3
	baz=204						
H04A	Detroit Lake	83.55	37	P	P	18 08 37.4	+0.9
H04A				IAmb	IAmb	18 08 37.9	
	comp=Z,9.5nm,1.1s						
N18K	Kilae Creek	83.74	11	P	P	18 08 36.2	-0.9
	baz=201						
PRN	Pahroc Range	83.74	46	P	P	18 08 38.7	+0.9
O20K	Slope Mountain	83.82	13	P	P	18 08 37.3	-0.3
	baz=204						
R11A	Troy Canyon, C	83.89	45	P	P	18 08 36.6	-2.1
	baz=237						
BRLK	Bradley Lake	83.91	14	P	P	18 08 37.9	0.0
BRLK				IAmb	IAmb	18 08 39.0	

	comp=Z,24nm,1.0s						
BRSE	**Bradley Lake S**	**83.92**	**14**	P	**P**	**18 08 38.3**	**+0.3**
	baz=206						
TUC	**Tucson**	**84.13**	**52**	P	**P**	**18 08 40.3**	**+0.6**
	baz=240						
WVOR	**Wild Horse Val**	**84.26**	**40**	P	**P**	**18 08 41.3**	**+1.1**
GSI	**Gunungsitoli**	**84.39**	**274**	P	**P**	**18 08 42.7**	**+1.4**
I07A	**Izee**	**84.71**	**39**	P	**P**	**18 08 43.7**	**+1.3**
J08A	**Circle Bar Ran**	**84.89**	**40**	P	**P**	**18 08 44.7**	**+1.5**
SPCR	**Spurr Chakacha**	**84.93**	**13**	P	**P**	**18 08 42.4**	**-0.6**
	baz=205						
U15A	**North Rim**	**85.11**	**48**	P	**P**	**18 08 46.0**	**+1.3**
M19K	**Big River Lodg**	**85.15**	**11**	P	**P**	**18 08 43.8**	**-0.1**
	baz=203						
WUAZ	**Wupatki**	**85.29**	**49**	P	**P**	**18 08 45.8**	**+0.4**
	baz=240						
L19K	**White Mountain**	**85.32**	**11**	P	**P**	**18 08 45.1**	**+0.3**
L19K				IAmb	IAmb	18 08 46.3	
	comp=Z,20nm,1.1s						
L19K	**White Mountain**	**85.32**	**11**	P	**P**	**18 08 44.8**	**+0.1**
	baz=202						
RC01	**Rabbit Creek A**	**85.36**	**14**	P	**P**	**18 08 44.5**	**-0.4**
RC01				IAmb	IAmb	18 08 46.6	
	comp=Z,26nm,1.3s						
RC01	**Rabbit Creek A**	**85.36**	**14**	P	**P**	**18 08 44.0**	**-0.9**
	baz=207						
M20K	**Styx River**	**85.37**	**12**	P	**P**	**18 08 44.6**	**-0.5**
	baz=204						
HNS	**HongShan**	**85.39**	**313**	⇓P	**P**	**18 08 47.0**	**+1.4**
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
G08A	**Pilot Rock**	**85.74**	**38**	P	**P**	**18 08 48.1**	**+0.8**
G08A				IAmb	IAmb	18 08 49.5	
	comp=Z,5.8nm,1.0s						
L20K	**Farewell, AK**	**85.78**	**11**	P	**P**	**18 08 46.4**	**-0.5**
	baz=203						
GLI	**Glacier Island**	**85.78**	**15**	P	**P**	**18 08 46.4**	**-0.6**
GLI	**Glacier Island**	**85.78**	**15**	P	**P**	**18 08 46.9**	**-0.1**
	baz=209,SNR=6.3						
BJI	**Beijing**	**85.79**	**316**	P	**P**	**18 08 48.8**	**+1.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TTA	**Tatalina**	**85.82**	**10**	P	**P**	**18 08 47.2**	**+0.1**
	baz=201						
EYAK	**Cordova Ski Ar**	**85.83**	**16**	P	**P**	**18 08 47.0**	**-0.1**
	baz=211						
M22K	**Willow**	**85.87**	**13**	P	**P**	**18 08 47.4**	**+0.2**
	baz=207						
KNK	**Knik Glacier**	**85.93**	**14**	P	**P**	**18 08 48.0**	**+0.3**
	baz=208						
PMR	**Palmer**	**85.94**	**14**	P	**P**	**18 08 47.8**	**+0.2**
	baz=208						
GHO	**Glory Hole Cre**	**86.14**	**14**	P	**P**	**18 08 48.8**	**+0.1**
SML	**Sawmill**	**86.31**	**14**	P	**P**	**18 08 49.0**	**-0.4**
	baz=208						
CUT	**Chulitna**	**86.42**	**13**	P	**P**	**18 08 50.4**	**+0.6**
	baz=206						
M23K	**Glacier View**	**86.43**	**14**	P	**P**	**18 08 50.7**	**+0.7**
	baz=209						
BMO	**Blue Mountains**	**86.44**	**39**	P	**P**	**18 08 51.0**	**+0.5**
BMRM	**Bremner River**	**86.48**	**16**	P	**P**	**18 08 50.0**	**-0.3**
BMRM				IAmb	IAmb	18 08 51.5	
	comp=Z,15nm,0.9s						
BMRM	**Bremner River**	**86.48**	**16**	P	**P**	**18 08 50.8**	**+0.6**
	baz=212						
MFID	**Camas Ranch**	**86.52**	**41**	P	**P**	**18 08 50.4**	**-0.6**
K20K	**Telida**	**86.55**	**11**	P	**P**	**18 08 50.1**	**-0.4**
K20K				IAmb	IAmb	18 08 51.6	
	comp=Z,10.0nm,1.1s						
K20K	**Telida**	**86.55**	**11**	P	**P**	**18 08 50.8**	**+0.3**
	baz=203						
SCM	**Sheep Creek Mo**	**86.56**	**14**	P	**P**	**18 08 50.4**	**-0.3**
SCM	**Sheep Creek Mo**	**86.56**	**14**	P	**P**	**18 08 50.8**	**+0.1**
	baz=209,SNR=9.5						
KLU	**Klutina**	**86.60**	**15**	P	**P**	**18 08 51.3**	**+0.5**
	baz=210						
D08A	**Wollman Farm,**	**86.80**	**36**	P	**P**	**18 08 53.3**	**+1.2**
D08A				IAmb	IAmb	18 08 54.3	
	comp=Z,9.3nm,0.8s						
PNL	**Peninsula**	**86.86**	**19**	P	**P**	**18 08 52.6**	**+0.5**
	baz=216						
VRDI	**Verde Repeater**	**87.00**	**16**	P	**P**	**18 08 52.9**	**0.0**
VRDI				IAmb	IAmb	18 08 53.8	
	comp=Z,6.9nm,0.9s						
N25K	**Chitina, Valde**	**87.03**	**16**	P	**P**	**18 08 53.1**	**+0.3**
N25K				IAmb	IAmb	18 08 54.2	
	comp=Z,11nm,0.8s						
N25K	**Chitina, Valde**	**87.03**	**16**	P	**P**	**18 08 53.3**	**+0.4**
	baz=212,SNR=5.6						
M24K	**Tolsona, Glenn**	**87.07**	**15**	P	**P**	**18 08 53.4**	**+0.4**
	baz=210						
WAT6	**Susitna Watana**	**87.12**	**14**	P	**P**	**18 08 53.3**	**-0.1**
	baz=209,SNR=8.1						
F10A	**Beach Ranch, E**	**87.12**	**38**	P	**P**	**18 08 53.5**	**-0.2**
F10A				IAmb	IAmb	18 08 55.5	
	comp=Z,11nm,0.9s						
WAT1	**Susitna Watana**	**87.16**	**13**	P	**P**	**18 08 53.5**	**+0.1**
	baz=208						
MCARA	**McCarthy VSAT**	**87.24**	**16**	P	**P**	**18 08 54.6**	**+0.8**
MCARA				IAmb	IAmb	18 08 55.4	
	comp=Z,13nm,1.0s						
MCARA	**McCarthy VSAT**	**87.24**	**16**	P	**P**	**18 08 54.1**	**+0.3**
	baz=213						
J20K	**Nowinta River**	**87.30**	**11**	P	**P**	**18 08 53.9**	**-0.1**
	baz=203,SNR=7.1						
B08A	**Colville Reser**	**87.34**	**35**	P	**P**	**18 08 55.3**	**+0.7**
B08A				IAmb	IAmb	18 08 56.1	
	comp=Z,7.0nm,0.8s						
PLID	**Pearl Lake**	**87.34**	**39**	P	**P**	**18 08 55.7**	**+0.7**
PLID				IAmb	IAmb	18 08 56.9	
	comp=Z,10nm,1.4s						
CTG	**Chitna Glacier**	**87.35**	**17**	P	**P**	**18 08 54.6**	**+0.1**
	baz=215						
CHUM	**Lake Minchumin**	**87.35**	**11**	P	**P**	**18 08 53.5**	**-0.7**
	baz=205						
TRF	**Thorofare Moun**	**87.35**	**12**	P	**P**	**18 08 53.9**	**-0.6**
TRF	**Thorofare Moun**	**87.35**	**12**	P	**P**	**18 08 54.0**	**-0.6**
	baz=206,SNR=20						
HLID	**Hailey**	**87.46**	**41**	P	**P**	**18 08 56.5**	**+1.0**
	baz=237,SNR=6.8						
HARP	**HAARP**	**87.57**	**15**	P	**P**	**18 08 55.7**	**+0.4**
	baz=211						
RND	**Reindeer**	**87.61**	**13**	P	**P**	**18 08 55.0**	**-0.5**
DHY	**Denali Highway**	**87.64**	**14**	P	**P**	**18 08 55.6**	**-0.2**
	baz=209						
BPAW	**Bear Paw Mtn.**	**87.80**	**12**	P	**P**	**18 08 55.2**	**-1.2**
	baz=206						
XAN	**Xi'an**	**87.87**	**308**	P	**P**	**18 08 59.3**	**+1.8**
XAN				pmax	pmax		
	comp=Z,17nm,1.4s						
MNTX	**Cornudas Mount**	**87.90**	**55**	P	**P**	**18 08 56.7**	**-0.9**
	baz=243						
SKAG	**Skagway**	**87.98**	**21**	P	**P**	**18 08 58.0**	**+0.8**
	baz=220						
PAX	**Paxson**	**87.98**	**15**	P	**P**	**18 08 57.0**	**-0.3**
	baz=211						
M26K	**Nabesna, AK**	**88.11**	**16**	P	**P**	**18 08 58.3**	**+0.5**
M26K				IAmb	IAmb	18 08 59.5	
	comp=Z,10nm,1.1s						
M26K	**Nabesna, AK**	**88.11**	**16**	P	**P**	**18 08 58.4**	**+0.5**
	baz=213,SNR=6.7						
TXAR	**Lajitas Array**	**88.20**	**58**	P	**P**	**18 09 00.2**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=217,slow=6.1,SNR=8.2						
	comp=Z,1.5nm,0.8s						
YUK3	**Moose Creek**	**88.26**	**17**	P	**P**	**18 08 59.1**	**+0.3**
	baz=215,SNR=8.7						
S34M	**Telegraph Cree**	**88.29**	**23**	P	**P**	**18 08 59.7**	**+1.0**
	baz=224						
HYT	**Haines Junctio**	**88.35**	**19**	P	**P**	**18 08 59.9**	**+0.7**
	baz=218						
M27K	**Edge Creek, AK**	**88.36**	**16**	P	**P**	**18 09 00.1**	**+1.0**
	baz=214						
YUK4	**Talbot Arm**	**88.43**	**18**	P	**P**	**18 09 01.0**	**+1.4**
	baz=217						
L26K	**Log Cabin Wild**	**88.54**	**15**	P	**P**	**18 09 00.5**	**+0.7**
	baz=213						
ANMO	**Albuquerque**	**88.55**	**52**	P	**P**	**18 09 01.4**	**+0.6**
	baz=243						
I21K	**Tanana**	**88.59**	**11**	P	**P**	**18 09 00.4**	**+0.4**
	baz=205						
NEA2	**Nenana**	**88.62**	**12**	P	**P**	**18 08 59.0**	**-1.1**
NEA2				IAmb	IAmb	18 09 00.1	
	comp=Z,3.7nm,0.8s						
NEA2	**Nenana**	**88.62**	**12**	P	**P**	**18 08 59.7**	**-0.4**
	baz=208						
K24K	**Donnelly Dome**	**88.63**	**14**	P	**P**	**18 09 00.4**	**+0.2**
	baz=210,SNR=6.5						
BVCY	**Beaver Creek**	**88.67**	**17**	P	**P**	**18 09 01.1**	**+0.6**
	baz=215						
WRH	**Wood River Hil**	**88.71**	**13**	P	**P**	**18 09 00.2**	**-0.4**
RIDG	**Independent Ri**	**88.79**	**14**	P	**P**	**18 09 01.2**	**+0.2**
	baz=211						
H21K	**Melozitna Rive**	**88.89**	**11**	P	**P**	**18 09 01.5**	**+0.1**
	baz=204,SNR=6.4						
KMI	**Kunming**	**88.89**	**297**	⇑P	**P**	**18 09 04.8**	**+2.2**
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
DOT	**Dot Lake**	**88.90**	**15**	P	**P**	**18 09 01.7**	**+0.2**
DOT				IAmb	IAmb	18 09 02.6	
	comp=Z,7.0nm,0.7s						
HDA	**Harding Lake**	**88.90**	**13**	P	**P**	**18 09 01.2**	**-0.2**
HDA				IAmb	IAmb	18 09 02.0	
	comp=Z,6.9nm,0.6s						
HDA	**Harding Lake**	**88.90**	**13**	P	**P**	**18 09 01.4**	**-0.1**
	baz=209,SNR=7.4						
CCB	**Clear Creek Bu**	**88.92**	**13**	P	**P**	**18 09 00.6**	**-0.9**
CCB				IAmb	IAmb	18 09 01.9	
	comp=Z,9.9nm,0.8s						
L27K	**Beaver Creek,**	**88.96**	**16**	P	**P**	**18 09 02.5**	**+0.7**
	baz=214						
BCAR	**Beaver Creek A**	**88.97**	**16**	P	**P**	**18 09 02.2**	**+0.3**
IMAR	**Indian Mountai**	**89.03**	**10**	P	**P**	**18 09 02.1**	**+0.1**
WHY	**Whitehorse**	**89.04**	**20**	P	**P**	**18 09 03.4**	**+1.1**
	baz=220						
I23K	**Minto, Yukon-K**	**89.06**	**12**	P	**P**	**18 09 03.0**	**+0.9**
	baz=207						
MCMT	**McKenzie Canyo**	**89.08**	**41**	P	**P**	**18 09 02.4**	**-0.7**
MDM	**Murphy Dome**	**89.11**	**13**	P	**P**	**18 09 01.9**	**-0.5**
MDM				IAmb	IAmb	18 09 02.8	
	comp=Z,13nm,1.0s						
SCRK	**Sand Creek**	**89.19**	**15**	P	**P**	**18 09 02.8**	**-0.2**
SCRK				IAmb	IAmb	18 09 04.2	
	comp=Z,4.7nm,0.9s						
SCRK	**Sand Creek**	**89.19**	**15**	P	**P**	**18 09 02.8**	**-0.2**
	baz=212,SNR=5.5						
IL31		**89.23**	**13**	P	**P**	**18 09 02.0**	**-0.8**
IL31				IAmb	IAmb	18 09 04.1	
	comp=Z,13nm,1.3s						
ILAR	**Eielson Array**	**89.23**	**13**	P	**P**	**18 09 02.2**	**-0.7**
	comp=Z,3.2nm,0.7s,baz=224,slow=5.4,SNR=23						
	comp=Z,3.2nm,0.7s						
HHC	**Hu-ho-hao-te**	**89.23**	**315**	*e*P	**P**	**18 09 03.4**	**-0.3**
P33M	**Teslin, Yukon**	**89.38**	**21**	P	**P**	**18 09 05.0**	**+1.1**
	baz=222						
N31M	**Braeburn, Yuko**	**89.39**	**19**	P	**P**	**18 09 04.6**	**+0.7**
	baz=220						
POKR	**Poker Plat Res**	**89.41**	**13**	P	**P**	**18 09 03.5**	**-0.4**
	baz=209						
J25K	**Salcha River,**	**89.42**	**14**	P	**P**	**18 09 03.3**	**-0.7**
	baz=211,SNR=5.3						
CM31	**Chiang Mai Arr**	**89.53**	**290**	P	**P**	**18 09 06.5**	**+1.1**
CM31				IAmb	IAmb	18 09 08.6	
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.53**	**290**	P	**P**	**18 09 07.7**	**+2.2**
	comp=Z,6.0nm,0.9s,baz=128,slow=3.2,SNR=42						
	comp=Z,6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.53**	**290**	P	**P**	**18 09 07.2**	**+1.8**
S22A	**4UR Ranch, Cre**	**89.57**	**49**	P	**P**	**18 09 06.7**	**+1.1**
	baz=242						
H23K	**Yukon River**	**89.62**	**12**	P	**P**	**18 09 04.3**	**-0.5**
	baz=207						
BILL	**Bilibino**	**89.68**	**354**	P	**P**	**18 09 04.9**	**-0.1**
BILL				IAmb	IAmb	18 09 06.3	
	comp=Z,7.9nm,1.0s						
K27K	**Chicken**	**89.70**	**15**	P	**P**	**18 09 05.9**	**+0.8**
	baz=214						
O20A	**White River Ci**	**89.71**	**46**	P	**P**	**18 09 06.4**	**+0.4**
	baz=242						
J26L	**Joseph Creek**	**89.74**	**15**	P	**P**	**18 09 05.6**	**+0.2**
	baz=212,SNR=17						
M30M	**Minto, Yukon**	**89.94**	**18**	P	**P**	**18 09 06.7**	**+0.3**
	baz=219,SNR=7.2						
BW06	**Boulder Array**	**90.10**	**44**	P	**P**	**18 09 06.8**	**-1.0**
BW06	**Boulder Array**	**90.10**	**44**	P	**P**	**18 09 08.7**	**+0.8**
	baz=241						
PDAR	**Pinedale Array**	**90.10**	**44**	P	**P**	**18 09 08.0**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=209,slow=2.7,SNR=13						
	comp=Z,1.8nm,0.8s						
PDAR	**Pinedale Array**	**90.10**	**44**	P	**P**	**18 09 06.8**	**-1.0**
BOZ	**Bozeman (W)**	**90.22**	**40**	P	**P**	**18 09 09.4**	**+1.2**
	baz=239						
PZH	**PanZhiHua**	**90.27**	**298**	P	**P**	**18 09 10.4**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
DAWY	**Dawson**	**90.41**	**16**	P	**P**	**18 09 09.3**	**+0.8**
	baz=216						
SDCO	**Great Sand Dun**	**90.50**	**49**	P	**P**	**18 09 10.5**	**+0.6**
	baz=243						
EGAK	**Eagle**	**90.54**	**15**	P	**P**	**18 09 09.1**	**+0.1**
EGAK				IAmb	IAmb	18 09 10.8	
	comp=Z,16nm,1.4s						
EGAK	**Eagle**	**90.54**	**15**	P	**P**	**18 09 09.3**	**+0.2**
	baz=215						
N23A	**Red Feather La**	**91.61**	**46**	P	**P**	**18 09 15.8**	**+0.9**
	baz=243						
I29M	**Ogilvie Camp,**	**91.73**	**16**	P	**P**	**18 09 14.8**	**+0.3**
	baz=217						
YAK	**Yakutsk**	**92.46**	**338**	P	**P**	**18 09 17.5**	**-0.3**
LZH	**Lanzhou**	**92.51**	**308**	*e*P	**P**	**18 09 20.3**	**+1.3**
LZH				pP	pP	18 11 29.0	-2.3
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
EPYK	**Eagle Plains**	**92.93**	**16**	P	**P**	**18 09 19.9**	**-0.1**
	baz=219						
INK	**Inuvik**	**95.21**	**15**	P	**P**	**18 09 29.9**	**-0.4**
	baz=222						
LRAL	**Lakeview Retre**	**102.83**	**59**	P	**Pdif**	**18 10 04.2**	**-0.9**
	baz=253						
MKAR	**Makanchi Array**	**111.06**	**313**	PKiKP	**PKiKP**	**18 14 36.2**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=46,slow=4.2,SNR=3.6						
LBNH	**Lisbon**	**116.53**	**50**	P	**PKiKP**	**18 14 48.3**	**+1.2**
	baz=266						
HRV	**Adam Dziewonsk**	**116.65**	**52**	P	**PKiKP**	**18 14 48.7**	**+1.4**
	baz=265						
ABKAR	**Akbulak array**	**126.00**	**316**		**PKPdf**	**18 15 04.6**	**-0.4**
ARCES	**ARCESS Array B**	**129.48**	**349**	PKP	**PKPdf**	**18 15 11.1**	**0.0**
	comp=Z,2.1nm,0.6s,baz=73,slow=1.1,SNR=10						
KLMR	**Klimovskoe**	**132.19**	**336**	*e*PKPdf	**PKPdf**	**18 15 16.1**	**-0.3**
KLMR				AMP		18 15 18.1	
	comp=Z,7.0nm,1.0s						
KLMR				*e*PP	**PP**	**18 17 47.4**	**-0.8**
FINES	**FINESS Array B**	**136.22**	**343**	PKP	**PKPdf**	**18 15 23.1**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=101,slow=1.5,SNR=5.4						
FINES				SKPbc	**SKiKP**	**18 18 01.6**	**-2.4**
	comp=Z,2.7nm,0.8s,baz=342,slow=0.6,SNR=6.4						
NB2	**NORSAR Subarra**	**139.59**	**352**	PKP	**PKPdf**	**18 15 22.8**	**-7.4**
	comp=Z,0.1nm,0.3s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.59**	**352**	PKP	**PKPdf**	**18 15 31.1**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=13,slow=4.0,SNR=3.3						
NOA				SKPbc	**SKiKP**	**18 18 10.7**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=14,slow=4.4,SNR=4.9						
SUW	**Suwalki**	**143.20**	**338**		PKPab	18 15 35.1	+0.1
AKASG	**Malin Array Be**	**143.21**	**330**	PKhKP	PKPpre	18 15 34.6	
	comp=Z,17nm,0.6s,baz=42,slow=4.7,SNR=92						
AKASG				SKPbc	**SKiKP**	**18 18 20.5**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=52,slow=2.3,SNR=7.7						
AKASG	**Malin Array Be**	**143.21**	**330**		PKPab	18 15 34.5	-0.7
AKBB	**Malin Array Si**	**143.21**	**330**		PKPab	18 15 34.6	-0.6
SORM	**Soroca**	**145.35**	**327**	⇑P	**PKPbc**	**18 15 42.4**	**+0.3**
BNN	**Bunyan**	**145.40**	**308**		**PKPbc**	**18 15 42.8**	**+0.1**
MILM	**Milestii Mici**	**145.90**	**325**	*e*PKP	**PKPbc**	**18 15 43.0**	**-0.6**
	comp=Z,30nm,0.7s						
VASR	**Vaslui**	**146.62**	**326**	⇑P	**PKPbc**	**18 15 46.6**	**+1.0**
BR131	**Keskin Array S**	**146.66**	**311**		**PKPbc**	**18 15 45.3**	**-0.9**
BRTR	**Keskin Array B**	**146.66**	**311**	PKPbc	**PKPbc**	**18 15 45.6**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=129,slow=4.4,SNR=11						
TLCR		**146.97**	**323**	⇓P	**PKPbc**	**18 15 47.3**	**+0.8**
JURR	**Jurilovca**	**147.19**	**322**	⇓P	**PKPbc**	**18 15 46.3**	**-0.8**
ANTO	**Ankara**	**147.19**	**312**		**PKPdf**	**18 15 44.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**147.24**	**329**		**PKPbc**	**18 15 47.7**	**+0.4**
BURAR	**Bucovina Array**	**147.25**	**329**	⇑P	**PKiKP**	**18 15 48.5**	**-0.5**
BURAR	**Bucovina Array**	**147.25**	**329**		**PKPbc**	**18 15 47.3**	**0.0**
BIZ	**Bicaz**	**147.28**	**328**	⇑P	**PKiKP**	**18 15 48.8**	**-0.2**
TESR	**Tescani**	**147.30**	**326**	⇑P	**PKPbc**	**18 15 47.7**	**+0.3**
CFR	**Carcaliu**	**147.35**	**323**	⇑P	**PKPbc**	**18 15 47.5**	**0.0**
OJC	**Ojcow**	**147.51**	**337**		**PKPbc**	**18 15 47.3**	**-0.5**
KOLS	**Kolonicke sedl**	**147.58**	**334**	*e*PKP	**PKiKP**	**18 15 49.5**	**0.0**
VRI	**Vrincioaia**	**147.68**	**326**	⇑P	**PKPbc**	**18 15 49.1**	**+0.7**
PLOR	**Plostina**	**147.73**	**326**	⇑P	**PKPbc**	**18 15 49.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**147.94**	**334**	*e*PKP	**PKiKP**	**18 15 50.1**	**-0.2**
COVR	**Voineasa-Covas**	**147.97**	**326**	⇑P	**PKPbc**	**18 15 49.7**	**+0.5**
OZUR		**148.02**	**327**	⇑P	**PKiKP**	**18 15 50.2**	**-0.3**
DOPR	**Dopca**	**148.31**	**327**	⇓P	**PKiKP**	**18 15 50.9**	**-0.3**
MLR	**Muntele Rosu**	**148.34**	**326**	⇑P	**PKPbc**	**18 15 50.7**	**+0.4**
MLR	**Muntele Rosu**	**148.34**	**326**		**PKPbc**	**18 15 50.1**	**-0.1**
OSTC	**Ostas**	**148.39**	**341**	⇑*e*PKP	**PKiKP**	**18 15 50.9**	**-0.2**
OSTC				*e*PKPAB	**PKPab**	**18 15 56.5**	**+0.7**
OKC	**Ostrava-Krasne**	**148.41**	**339**	⇑*e*PKP	**PKiKP**	**18 15 50.8**	**-0.3**
OKC				*e*PKPAB	**PKPab**	**18 15 56.7**	**+0.9**
UPC	**Upice**	**148.50**	**342**	⇑*e*PKP	**PKiKP**	**18 15 51.5**	**+0.2**
UPC				*e*PKPAB	**PKPab**	**18 15 57.2**	**+1.0**
LANS	**Liptovska Anna**	**148.51**	**337**	*e*PKP	**PKiKP**	**18 15 52.0**	**+0.5**
DPC	**Dobruska-Polom**	**148.54**	**341**	⇑*e*PKP	**PKiKP**	**18 15 51.1**	**-0.4**
DPC				*e*PKPAB	**PKPab**	**18 15 57.3**	**+0.8**
CLL	**Collm**	**148.56**	**346**		**PKPbc**	**18 15 50.3**	**-0.1**
CLL	**Collm**	**148.56**	**346**	⇓*i*PKPbc	**PKPbc**	**18 15 50.8**	**+0.4**
	comp=Z,22nm,1.1s						
CLL				⇑*i*PKPab	**PKPab**	**18 15 56.7**	**+0.3**
	comp=Z,10.0nm,0.9s						
CLL				*e*pPKPab	**pPKPdf**	**18 18 06.0**	**-2.1**
KRLC	**Kraliky**	**148.65**	**340**	⇑*e*PKP	**PKiKP**	**18 15 51.5**	**-0.2**
KRLC				*e*PKPAB	**PKPab**	**18 15 56.7**	**-0.2**
MORC	**Moravsky Berou**	**148.66**	**339**	⇑P	**PKiKP**	**18 15 51.8**	**0.0**
MORC	**Moravsky Berou**	**148.66**	**339**		**PKPbc**	**18 15 50.4**	**-0.3**
MORC	**Moravsky Berou**	**148.66**	**339**	*e*PKP	**PKPbc**	**18 15 51.3**	**+0.5**
MORC				*e*		18 15 57.9	
KECS	**Kecovo**	**148.67**	**335**	*e*PKP	**PKiKP**	**18 15 53.0**	**+1.3**
BRG	**Berggiesshubel**	**148.74**	**344**	*e*PKP	**PKiKP**	**18 15 51.5**	**-0.3**
BRG				Amp		18 15 53.4	
	comp=Z,28nm,1.5s						
BRG				*i* x	x	18 15 58.0	
BRG				Amp		18 15 59.0	
	comp=Z,13nm,1.1s						
VOIR		**148.84**	**326**	⇑P	**PKiKP**	**18 15 52.1**	**-0.2**
PVCC	**Panska Ves**	**148.89**	**343**	⇑*e*PKP	**PKiKP**	**18 15 52.1**	**0.0**
MAUC	**Maruska**	**148.92**	**339**	⇑*e*PKP	**PKiKP**	**18 15 52.5**	**+0.2**
VYHS	**Vyhne**	**149.29**	**337**	*e*PKP	**PKiKP**	**18 15 53.1**	**0.0**
VYHS				*e*		18 16 00.8	
PSZ	**Piszkesteto**	**149.36**	**335**	⇓P	**PKiKP**	**18 15 53.3**	**0.0**
PSZ	**Piszkesteto**	**149.36**	**335**		**PKPbc**	**18 15 51.8**	**-0.7**
VRAC	**Vranov**	**149.38**	**340**	⇑P	**PKiKP**	**18 15 53.5**	**+0.3**
VRAC	**Vranov**	**149.38**	**340**	*e*PKP	**PKiKP**	**18 15 53.1**	**-0.1**
VRAC				*e*		18 16 01.2	
KOLL	**Kolacno**	**149.38**	**337**	*e*PKP	**PKiKP**	**18 15 53.6**	**+0.4**
KOLL				*e*		18 16 01.8	
PRU	**Pruhonice**	**149.38**	**343**	⇑*e*PKP	**PKiKP**	**18 15 53.0**	**-0.2**
JAVC	**Velka Javorina**	**149.40**	**338**	*e*PKP	**PKiKP**	**18 15 54.2**	**+0.9**
JAVC				*e*		18 16 01.9	
KRUC	**Moravsky**	**149.65**	**340**	*e*PKP	**PKiKP**	**18 15 53.6**	**-0.2**
KRUC				*e*		18 16 01.9	
NKC	**Novy Kostel**	**149.69**	**345**	⇑*e*PKP	**PKiKP**	**18 15 53.8**	**0.0**
NKC				*e*PKPAB	**PKPab**	**18 16 01.4**	**+0.2**
TREC	**Trest**	**149.73**	**341**	⇑*e*PKP	**PKPbc**	**18 15 53.5**	**+0.2**
TREC				*e*PKPAB	**PKPab**	**18 16 01.9**	**+0.5**
SMOL	**Smolenice**	**149.78**	**338**	*e*PKP	**PKiKP**	**18 15 54.9**	**+0.8**
SMOL				*e*		18 16 02.7	
SIRR	**Siria**	**149.90**	**331**	⇑P	**PKiKP**	**18 15 54.7**	**+0.3**
MODS	**Modra-Piesok**	**149.95**	**338**	*e*PKP	**PKiKP**	**18 15 55.2**	**+0.8**
MODS				*e*		18 16 03.9	
BZS	**Buzias**	**150.41**	**330**	⇑P	**PKiKP**	**18 15 55.6**	**+0.2**
KHC	**Kasperske Hory**	**150.43**	**343**		**PKPbc**	**18 15 55.0**	**+0.1**
KHC	**Kasperske Hory**	**150.43**	**343**	⇑*e*PKP	**PKiKP**	**18 15 55.5**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**18 16 05.1**	**+0.8**
MEM	**Membach**	**150.43**	**354**	*d*PKiKP	**PKiKP**	**18 15 55.2**	**-0.1**
BTNL	**Ternell**	**150.44**	**353**	*d*PKiKP	**PKiKP**	**18 15 55.5**	**+0.1**
CSKK	**Cskako**	**150.45**	**336**	PKP	**PKPbc**	**18 15 54.7**	**-0.3**
CSKK	**Cskako**	**150.45**	**336**	PKP	**PKiKP**	**18 15 55.8**	**+0.4**
BSTI	**Sart Tilman**	**150.50**	**354**	*d*PKiKP	**PKiKP**	**18 15 55.7**	**+0.3**
CKRC	**Cesky Krumlov**	**150.50**	**342**	⇑*e*PKP	**PKPbc**	**18 15 55.1**	**0.0**
CKRC				*e*PKPAB	**PKPab**	**18 16 04.9**	**+0.3**
HERR	**Herculane**	**150.56**	**328**	⇓P	**PKPbc**	**18 15 55.6**	**+0.2**
GEC2	**GERESS Array S**	**150.65**	**343**		**PKiKP**	**18 15 55.9**	**-0.1**
GERES	**GERESS Array B**	**150.65**	**343**	PKPbc	**PKPbc**	**18 15 55.7**	**+0.1**
	comp=Z,5.7nm,0.9s,baz=45,slow=2.1,SNR=37						
GERES				PKPab	**PKPab**	**18 16 05.4**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=46,slow=5.8,SNR=6.8						
SOP	**Sopron**	**150.79**	**338**	PKP	**PKPbc**	**18 15 54.7**	**-1.0**
SOP	**Sopron**	**150.79**	**338**	PKP	**PKiKP**	**18 15 56.9**	**+0.8**
CONA	**Conrad Observa**	**150.82**	**339**	*i* P	**PKiKP**	**18 15 56.7**	**+0.3**
	comp=Z,11nm,0.8s,SNR=9.7						
CONA				*e*P	**PKPab**	**18 16 07.8**	**+1.7**
	comp=Z,12nm,1.3s						
BMRD	**Maredsous**	**150.84**	**355**	*d*PKiKP	**PKiKP**	**18 15 56.1**	**-0.1**
RONA	**Rosalia, Austr**	**150.87**	**339**	*i* P	**PKiKP**	**18 15 56.7**	**+0.4**
	SNR=8.7						
RONA				*e*P	**PKPab**	**18 16 07.7**	**+1.4**
MPLH	**Magyarpolny**	**150.88**	**337**	PKP	**PKPbc**	**18 15 55.7**	**-0.3**
MPLH	**Magyarpolny**	**150.88**	**337**	PKP	**PKiKP**	**18 15 56.6**	**+0.3**
RCHB	**Rochefort**	**150.95**	**354**	*d*PKiKP	**PKiKP**	**18 15 56.5**	**+0.2**
MDVR	**Moldovita**	**150.98**	**329**	⇑P	**PKPbc**	**18 15 55.8**	**-0.6**
MORH	**Mrgy, Hungar**	**151.24**	**334**	⇑P	**PKPbc**	**18 15 56.6**	**-0.2**
MORH	**Mrgy, Hungar**	**151.24**	**334**	PKP	**PKPbc**	**18 15 57.0**	**+0.2**
WLF	**Walferdange**	**151.34**	**353**	*d*PKiKP	**PKiKP**	**18 15 57.9**	**+0.6**
MOA	**Molln**	**151.39**	**341**	*i* P	**PKPbc**	**18 15 56.9**	**-0.3**
	comp=Z,6.9nm,0.4s,SNR=9.9						
KOVH	**Kovagotottos**	**151.56**	**335**	PKP	**PKiKP**	**18 15 57.7**	**0.0**
VTS	**Vitosha**	**151.71**	**324**	⇑P	**PKPbc**	**18 15 57.2**	**-1.0**
VTS	**Vitosha**	**151.71**	**324**	PKPdf	**PKPdf**	**18 15 48.6**	**-2.6**
VTS				PKPbc	**PKiKP**	**18 15 58.8**	**+0.4**
BIOA	**Bad Ischl, Aus**	**151.72**	**342**	*e*P	**PKiKP**	**18 15 58.2**	**+0.1**
BIOA				*e*P	**PKPab**	**18 16 11.2**	**+1.4**
SOKA	**Soboth**	**152.18**	**339**	*e*P	**PKPbc**	**18 15 59.1**	**+0.1**
	comp=Z,5.9nm,1.0s						
DIVS	**Divibare**	**152.31**	**330**		**PKiKP**	**18 15 59.8**	**+0.3**
BFO	**Black Forest**	**152.34**	**350**		**PKPdf**	**18 15 51.3**	**-0.5**
BFO				PKPbc	**PKiKP**	**18 15 59.5**	**+0.2**
KBA	**Koelnbreinsper**	**152.35**	**342**	*e*P	**PKPbc**	**18 15 59.5**	**0.0**
	comp=Z,4.3nm,0.8s						
OBKA	**Obir**	**152.49**	**340**	*e*P	**PKPbc**	**18 15 59.6**	**-0.1**
	comp=Z,3.9nm,1.0s						
WATA	**Walderalm**	**152.60**	**344**	*e*P	**PKiKP**	**18 16 00.2**	**+0.1**
	comp=Z,3.4nm,0.8s						
WATA				*e*P	**PKPab**	**18 16 14.8**	**+1.1**
	comp=Z,15nm,1.5s						
WTTA	**Wattenberg**	**152.65**	**344**	*e*P	**PKiKP**	**18 16 00.5**	**+0.3**
	comp=Z,6.4nm,0.9s						
WTTA				*e*P	**PKPab**	**18 16 14.9**	**+0.9**
	comp=Z,7.9nm,0.9s						
RETA	**Reutte**	**152.66**	**346**	*e*P	**PKiKP**	**18 16 00.4**	**+0.3**
	comp=Z,1.2nm,0.6s						
RETA				*e*P	**PKPab**	**18 16 14.4**	**+0.5**
	comp=Z,6.0nm,0.9s						
MOTA	**Moosalm**	**152.71**	**345**	*e*P	**PKiKP**	**18 16 00.6**	**+0.2**
	comp=Z,3.7nm,0.7s						
MOTA				*e*P	**PKPab**	**18 16 14.9**	**+0.7**
	comp=Z,11nm,1.0s						
SQTA	**Sankt Quirin**	**152.80**	**345**	*e*P	**PKiKP**	**18 16 00.8**	**+0.3**
	comp=Z,8.9nm,1.4s						
ABTA	**Abfaltersbach**	**152.89**	**343**	*e*P	**PKPbc**	**18 16 00.4**	**-0.2**
	comp=Z,7.8nm,0.8s						
DAVA	**Damuels**	**153.04**	**347**	*e*P	**PKiKP**	**18 16 02.7**	**+1.6**
	comp=Z,3.6nm,0.7s						
DAVA				*e*P	**PKPab**	**18 16 16.4**	**+0.7**
	comp=Z,8.0nm,0.9s						
FETA	**Feichten**	**153.10**	**345**	*e*P	**PKiKP**	**18 16 01.5**	**+0.4**
	comp=Z,5.8nm,1.0s						
STAL	**STALIGIAL**	**153.28**	**342**		**PKPbc**	**18 16 01.0**	**-0.3**
CTI	**Castel Tesino**	**153.77**	**343**		**PKPab**	**18 16 18.5**	**-0.2**
TUE	**Stuetta**	**153.93**	**347**	PKPdf	**PKPdf**	**18 15 51.9**	**-2.5**
FNA	**Florina**	**153.97**	**323**		**PKPdf**	**18 15 52.0**	**-2.4**
ESDC	**Sonseca Array**	**161.13**	**12**	PKPab	**PKPab**	**18 16 50.0**	**-0.7**
	comp=Z,3.0nm,1.1s,baz=336,slow=4.0,SNR=10						
ESDC	**Sonseca Array**	**161.13**	**12**		**PKPab**	**18 16 50.2**	**-0.5**
KEST	**Kesra**	**163.83**	**335**	PKPab	**PKPab**	**18 17 02.5**	**-0.4**
	comp=Z,6.0nm,0.8s,baz=333,slow=6.5,SNR=6.0						
TORD	**Torodi Ar. Bea**	**171.93**	**184**	PKPab	**PKPab**	**18 17 38.2**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=160,slow=4.6,SNR=3.1						

MAN ***18*** *18:13:15.7, 5°.44N×126°.58E, h3km, mb5.1, ML4.0, MS4.1,*
Hypocentre not reviewed by the ISC
IDC ***18*** *18:13:16.4±2.3, 5°.60N×126°.85E, h33km±16km, mb3.9/10,*
mbtmp4.1/12, ML4.1/2, Error ellipse: s-maj=31.6km
s-min=11.7km az=63.0
NEIC ***18*** *18:13:17.1±1.8, 5°.47N±0°.03×126°.61E±0°.09, h38km±8km,*
mb4.4/25, Error ellipse: s-maj=12.7km s-min=3.4km
az=77.0
DJA ***18*** *18:13:19.5±0.3, 5°N±2°×12°6E±°, h10km, M4.4/8, mb4.5/7,*
mB5.3/1, MLv4.3/8, Mw(mB)4.7/1
ISC 18 18:13:18.1±1.0, **5°.36N**±0°.04×**126°.54E**±0°.06, **h50**km±9km,
n66, σ1**s.94**/72, **mb4.3**/22, **5C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.11	312	⇓eP	Pn	18 13 35.9	-1.5
DDMP				eS	Sn	18 13 54.3	+2.6
MATI	Mati	1.61	350	⇓eP	Pn	18 13 43.0	-1.1
MATI				eS	Sn	18 14 09.4	+5.7
GSPH	General Santos	1.74	295	⇑iP	Pn	18 13 43.5	-2.6
GSPH				i S	Sn	18 14 02.3	-4.9
SGSI	Sangihe	1.94	211	P	Pn	18 13 48.7	0.0
SGSI				S	Sn	18 14 14.2	+2.3
DAV	Davao City (W)	1.95	331	Pn	Pn	18 13 47.9	-1.0
	50nm,0.3s,baz=138,slow=4.3,SNR=2.2						
DAV				Lg	Lg	18 14 18.5	
	62nm,0.3s,baz=271,slow=21,SNR=5.8						
DAV	Davao City (W)	1.95	331		Pn	18 13 47.5	-1.3
KCP	Kidapawan	2.19	319	⇑iP	Pn	18 13 51.5	-0.6
KCP				i S	Sn	18 14 24.3	+6.3
CTBH	Cotabato--PC H	2.94	309	⇑iP	Pn	18 14 03.0	+0.7
CTBH				i S	Sn	18 14 39.6	+3.2
PAGZ	Pagadian	4.00	308	⇓eP	Pn	18 14 19.0	+2.1
GLSP	General Luna,	4.42	355	⇓eP	Pn	18 14 24.5	+1.8
GLSP				eS	Sn	18 15 15.6	+2.7
TNTI	Ternate	4.63	170		Pn	18 14 26.1	+0.6
TNTI	Ternate	4.63	170	P	Pn	18 14 28.6	+3.1
MSLP	Maasin	5.03	341	⇓eP	Pn	18 14 30.1	-1.0
SNPH	Sibulan	5.14	321	⇑eP	Pn	18 14 36.5	+3.9
KMSI	Cibinong	5.39	208	P	Pn	18 14 54.5	+18
GTOI	Gorontalo	5.87	217	P	Pn	18 14 43.4	+0.9
	0.1nm11nm,0.5s						
LBMI	Labuha	6.03	171	P	Pn	18 14 46.9	+2.1
	0.1nm29nm,0.8s						
MRSI	Marisa	6.68	224	P	Pn	18 14 55.8	+2.2
	0.3nm45nm,0.5s						
TOLI2	Tolitoli	7.13	234		Pn	18 14 59.7	-0.2
RCP	Roxas	7.22	329	⇑eP	Pn	18 15 04.2	+3.1
LUWI	Luwuk	7.38	211	Pn	Pn	18 15 02.9	-0.5
LUWI	Luwuk	7.38	211	P	Pn	18 15 21.2	+18
SIJI	Sorong	7.78	143	Pn	Pn	18 15 07.5	-1.3
	1.3nm,0.3s,baz=304,slow=16,SNR=7.4						
SIJI				Sn	Sn	18 16 32.9	-2.6
	0.1nm,0.3s,baz=299,slow=23,SNR=1.0						
	3.3nm,0.4s						
MYLDM	Lahad Datu	8.01	269	Pn	Pn	18 15 12.0	0.0
SBUM	Sibu	14.57	259	P	P	18 16 46.7	-0.1
BATI	Baumata	15.72	191	Pn	P	18 17 01.3	+1.7
	1.6nm,0.3s,baz=317,slow=20,SNR=2.2						
	7.0nm,0.5s						
MTN	Manton Dam	18.65	166	P	P	18 17 31.4	-0.5
TPUB	Ta-pu	18.73	343	P	P	18 17 30.1	-2.7
TPUB				IAmb	IAmb	18 17 32.1	
	comp=Z,58nm,1.4s						
SSLB	Suanglung	19.10	344	P	P	18 17 35.5	-1.4
SSLB				IAmb	IAmb	18 17 42.4	
	comp=Z,19nm,1.1s						
KNRA	Kununurra	21.01	174		P	18 17 57.7	+0.1
KNRA				IAmb	IAmb	18 18 10.6	
	comp=Z,13nm,0.6s						
MYKOM	Kota Tinggi	22.92	262	P	P	18 18 17.9	-0.2
COEN	Coen	25.31	139	P	P	18 18 40.7	+0.4
COEN				IAmb	IAmb	18 18 42.5	
	comp=Z,13nm,1.2s						
KULM	Kulim	25.78	271	P	P	18 18 44.1	-0.5
WB0	Warramunga Arr	26.13	163	P	P	18 18 47.7	0.0
WB0				IAmb	IAmb	18 18 58.6	
	comp=Z,9.1nm,1.1s						
JCJ	Chichijima	26.26	33	P	P	18 18 45.0	-3.8
	comp=Z,17nm,0.7s,baz=66,slow=22,SNR=2.1						
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	26.28	163	P	P	18 18 50.5	+1.4
	comp=Z,2.2nm,0.6s,baz=343,slow=10,SNR=32						
WRA				ScP	ScP	18 25 52.7	+2.2
	comp=Z,0.6nm,0.8s,baz=347,slow=2.8,SNR=2.9						
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	26.28	163	P	P	18 18 48.9	-0.2
WB2	Warramunga Arr	26.29	163	P	P	18 18 49.6	+0.5
WB2				IAmb	IAmb	18 19 01.3	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	26.36	163	P	P	18 18 50.2	+0.5
WR0				IAmb	IAmb	18 18 55.2	
	comp=Z,11nm,1.2s						
GSI	Gunungsitoli	29.19	263	P	P	18 19 14.3	-0.9
AS31	Alice Springs	29.73	166	P	P	18 19 20.9	+1.1
ASAR	Alice Springs	29.73	166	P	P	18 19 21.4	+1.6
	comp=Z,0.4nm,0.5s,baz=345,slow=7.4,SNR=13						
ASAR				PcP	PcP	18 22 23.7	+0.7
	comp=Z,0.2nm,0.4s,baz=353,slow=2.3,SNR=4.8						
ASAR				ScP	ScP	18 26 03.6	+2.5
	comp=Z,0.4nm,0.7s,baz=342,slow=3.1,SNR=6.3						
	comp=Z,0.4nm,0.5s						
CMAR	Chiang Mai Arr	29.92	298	P	P	18 19 21.9	+0.3
	comp=Z,0.5nm,0.6s,baz=112,slow=7.4,SNR=5.2						
	comp=Z,0.5nm,0.6s						
PZH	PanZhiHua	31.67	314	P	P	18 19 38.3	+1.2
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
XAN	Xi'an	32.89	332	P	P	18 19 47.1	-0.5
XAN				pP	pP	18 19 55.6	-4.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	37.81	341	eP	P	18 20 32.8	+3.0
BBOO	Buckleboo	39.02	167	P	P	18 20 41.3	+1.4
BBOO				IAmb	IAmb	18 21 05.2	
	comp=Z,9.7nm,1.1s						
STKA	Stephens Creek	39.71	160	P	P	18 20 45.9	+0.2
	comp=Z,1.0nm,0.4s,baz=353,slow=9.4,SNR=4.3						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	39.71	160	P	P	18 20 46.5	+0.7
WMQ	Urumqi	51.30	324	eP	P	18 22 18.5	+1.2
MK31	Makanchi Array	56.12	325	P	P	18 22 51.8	-0.7
MK31				IAmb	IAmb	18 22 54.3	
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	56.12	325	P	P	18 22 51.9	-0.6
	comp=Z,1.8nm,0.5s,baz=115,slow=7.1,SNR=31						
MKAR				PcP	PcP	18 23 49.9	-0.1
	comp=Z,1.4nm,0.8s,baz=112,slow=5.9,SNR=4.6						
	comp=Z,1.8nm,0.5s						
MAKZ	Makanchi	56.31	325	P	P	18 22 53.2	-0.7
MAKZ				IAmb	IAmb	18 23 06.4	
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	59.06	333	P	P	18 23 12.9	-0.1
	comp=Z,0.8nm,0.5s,baz=139,slow=9.0,SNR=3.7						
	comp=Z,0.8nm,0.5s						
KURK	Kurchatov	60.28	327	P	P	18 23 21.0	-0.5
KK31	Karatay Array	61.93	316	P	P	18 23 30.1	-2.7
KKAR	Karatay Array	61.93	316		P	18 23 30.4	-2.5
KKAR	Karatay Array	61.93	316	P	P	18 23 30.4	-2.5
BRVK	Borovoye	65.94	327	P	P	18 23 58.4	-0.5
BRVK				IAmb	IAmb	18 24 12.2	
	comp=Z,3.1nm,0.9s						
TIXI	Tiksi	66.23	1	P	P	18 24 00.3	-0.2
TIXI				IAmb	IAmb	18 24 14.9	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	70.78	320	P	P	18 24 27.9	-1.4
ILAR	Eielson Array	83.73	25	P	P	18 25 40.9	-0.7
	comp=Z,0.3nm,0.6s,baz=224,slow=6.3,SNR=4.1						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	88.87	340	P	P	18 26 06.2	-0.5
	comp=Z,4.0nm,0.9s,baz=75,slow=6.4,SNR=7.8						
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	88.87	340	IAmb	IAmb	18 26 07.6	
	comp=Z,25nm,1.4s						
FINES	FINESS Array B	90.32	332	P	P	18 26 13.2	-0.4
	comp=Z,0.7nm,0.5s,baz=62,slow=4.2,SNR=13						
	comp=Z,0.7nm,0.5s						
TORD	Torodi Ar. Bea	122.22	289	PKP	PKiKP	18 32 10.2	+1.5
	comp=Z,0.3nm,0.5s,baz=70,slow=1.7,SNR=2.7						

*IDC **18** 18:49:45.1±1.1, 0°.72S×21°.23W, h0^{km}, mb3.8/4, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=56.1km s-min=27.1km az=143.0*

*NEIC **18** 18:49:46.7±2.8, 0°.72S±0°.08×21°.38W±0°.09, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=19.9km s-min=7.6km az=49.0*

ISC 18 18:49:45.9±0.7, **0°.7S**±0°.1×**21°.3W**±0°.1, **h10**^{km}, **n17**, σ**1^{s}.08**/13, **mb4.1**/5, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	9.84	136	T	T	19 02 09.1	
	baz=316,slow=74,SNR=521						
H10N2	ASCENSION HYDR	9.84	136	T	T	19 01 51.5	
	baz=316,slow=74,SNR=512						
H10N1	ASCENSION HYDR	9.85	136	T	T	19 02 16.0	
	baz=316,slow=74,SNR=692						
ASCN	Ascension	10.00	136	Pn	Pn	18 52 09.2	-0.6
RCBR	Riachuelo	15.40	250	Pn	Pn	18 53 22.2	-1.3
RCBR				IAmb	IAmb	18 53 27.4	
	comp=Z,16nm,1.0s						
SACV	Santiago Islan	15.73	352	Pn	Pn	18 53 26.6	-1.2
SACV				IAmb	IAmb	18 53 43.7	
	comp=Z,39nm,0.8s						
DBIC	Dimbokro	18.01	66	P	P	18 53 57.5	+0.5
	comp=Z,0.4nm,0.3s,baz=267,slow=13,SNR=4.7						
	comp=Z,1.1nm,0.4s						
KOWA	Kowa	22.85	48	P	P	18 54 48.3	-1.3
KOWA				IAmb	IAmb	18 55 09.0	
	comp=Z,20nm,1.4s						
TORD	Torodi Ar. Bea	26.66	58	P	P	18 55 24.0	-1.3
	comp=Z,0.9nm,0.9s,baz=230,slow=9.7,SNR=3.2						
	comp=Z,0.9nm,0.9s						
LPAZ	La Paz	48.63	249	P	P	18 58 32.4	+1.2
	comp=Z,0.5nm,0.4s,baz=108,slow=6.1,SNR=4.1						
	comp=Z,0.5nm,0.4s						
LBTB	Lobatse	51.35	122	P	P	18 58 51.2	+0.1
TRQA	Tornquist	52.67	220		P	18 59 00.5	-0.2
AKASG	Malin Array Be	66.76	32	P	P	19 00 37.6	+0.1
	comp=Z,0.6nm,0.7s,baz=236,slow=6.3,SNR=2.4						
	comp=Z,0.6nm,0.7s						
AKASG	Malin Array Be	66.76	32	IAmb	IAmb	19 01 04.0	
	comp=Z,2.5nm,1.1s						
FINES	FINESS Array B	71.67	22	P	P	19 01 09.3	+1.6
	comp=Z,1.2nm,0.7s,baz=226,slow=5.6,SNR=2.2						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	145.86	137	PKPbc	PKPdf	19 09 26.6	+0.6
	comp=Z,1.9nm,0.7s,baz=222,slow=2.7,SNR=35						
WRA	Warramunga Arr	148.55	132	PKPbc	PKPbc	19 09 34.0	-0.1
	comp=Z,0.8nm,0.7s,baz=233,slow=2.7,SNR=11						

*JMA **18** 19:15:16.9±0.2, 35°.4N±0°.5×140°.5E±0°.9, h55^{km}±1^{km}, MV3.2/37, KUJUKURI COAST BOSO PEN*

JMA Felt I J1 at KUJUKURI COAST BOSO PEN .

*IDC **18** 19:15:17.8±2.2, 35°.26N×140°.45E, h59^{km}±22^{km}, mb3.3/4, mbtmp3.8/8, ML3.3/3, Error ellipse: s-maj=27.9km s-min=8.3km az=71.0*

ISC 18 19:15:16.9±0.9, **35°.33N**±0°.05×**140°.50E**±0°.05, **h59**^{km}±6^{km}, **n27**, σ**1^{s}.25**/30, **mb3.7**/4, **14D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTR	Katsuura	0.24	220	⇓P	Pn	19 15 26.5	+0.1
KTR				⇓S	Sn	19 15 33.6	+0.3
JCN	Nagara	0.26	290	⇓P	Pn	19 15 26.3	-0.3
JCN				⇓S	Sn	19 15 33.5	-0.1
JKUC	kamogawauchiur	0.30	235	⇓P	Pn	19 15 26.8	-0.1
JKUC				⇓S	Sn	19 15 34.2	+0.1
JSMT	Sammumatsuo	0.31	352	⇓P	Pn	19 15 26.1	-0.9
JSMT				⇓S	Sn	19 15 33.2	-1.1
BSO4	Boso 4	0.36	201	⇓P	Pn	19 15 28.0	+0.7
CHOJ	Chosi	0.47	38	P	Pn	19 15 28.0	-0.5
CHOJ				eS	Sn	19 15 36.0	-0.9
BSO3	Boso 3	0.53	179	⇓P	Pn	19 15 29.8	+0.9
BSO1	Boso 1	0.78	150	P	Pn	19 15 32.5	+0.9
JIM2	Oshima 3	1.07	235	i P	Pn	19 15 35.4	-0.5
JOD2	Odawara 2	1.16	267	⇓iP	Pn	19 15 36.4	-0.6
JOD2				⇓S	Sn	19 15 50.4	-1.5
JAG	Ashikaga	1.38	322	⇓iP	Pn	19 15 39.0	-1.1
JRY	Ryogami san	1.47	298	⇓iP	Pn	19 15 40.6	-0.7
MJAR	Matsushiro Arr	2.22	304	P	Pn	19 15 51.0	-0.4
	1.4nm,0.3s,baz=132,slow=14,SNR=54						
MJAR				S	Sn	19 16 18.9	+1.2
	13nm,0.4s,baz=126,slow=27,SNR=2.9						
	5.4nm,0.3s						
JHJ	Hachijo jima 2	2.29	195	P	Pn	19 15 52.2	-0.1
	116nm,0.3s,baz=337,slow=20,SNR=21						
JHJ				S	Sn	19 16 18.9	-0.4
	242nm,0.4s,baz=205,slow=23,SNR=10						
	254nm,0.3s						
JNU	Nakatsue	8.27	257	P	Pn	19 17 14.7	+0.5
	0.4nm,0.3s,baz=40,slow=8.9,SNR=1.5						
	4.6nm,0.7s						
JCJ	Chichijima	8.34	170	P	Pn	19 17 14.1	-1.0
	35nm,0.3s,baz=308,slow=11,SNR=16						
JCJ				S	Sn	19 18 43.4	-4.5
	15nm,0.3s,baz=105,slow=23,SNR=3.2						
ASAJ	Asahikawa	8.92	10	P	Pn	19 17 21.0	-2.1
	2.2nm,0.8s,baz=288,slow=6.6,SNR=1.6						
H11N2	WAKE ISLAND Hy	27.98	117	T	T	19 50 24.3	
	baz=309,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	27.98	117	T	T	19 50 24.3	
	baz=309,slow=75,SNR=52						
H11N3	WAKE ISLAND Hy	28.00	117	T	T	19 50 25.6	
	baz=309,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	28.62	119	T	T	19 51 09.6	
	baz=311,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	28.62	119	T	T	19 51 12.8	
	baz=311,slow=75,SNR=30						
H11S2	WAKE ISLAND Hy	28.64	119	T	T	19 51 10.8	
	baz=311,slow=75,SNR=22						
ZALV	Zalesovo Beam	42.53	314	P	P	19 23 07.7	+1.2
	0.6nm,0.5s,baz=102,slow=8.2,SNR=2.6						
	0.6nm,0.5s						
MKAR	Makanchi Array	44.42	303	P	P	19 23 22.6	+0.8
	0.4nm,0.7s,baz=92,slow=8.7,SNR=3.7						
	0.4nm,0.7s						
ILAR	Eielson Array	51.33	32	P	P	19 24 16.2	+1.3
	0.6nm,0.7s,baz=266,slow=6.1,SNR=6.4						
	0.6nm,0.7s						
WRA	Warramunga Arr	55.28	187	P	P	19 24 44.6	+0.2
	0.7nm,0.8s,baz=2.3,slow=7.6,SNR=7.4						
	0.7nm,0.8s						

*IDC **18** 19:17:32.0±28.0, 18°.42N×72°.42E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=707.9km s-min=80.7km az=136.0*

*NDI **18** 19:17:43.0±3.2, 17°.39N×73°.82E, h10^{km}, ML3.6*

ISC 18 19:17:43.3±1.3, **17°.44N**±0°.04×**73°.91E**±0°.06, **h13**^{km}±9^{km}, **n13**, σ**1^{s}.63**/23, **mb3.5**/3, **1C-2D**, **Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.29	117	⇑iPG	Pg	19 17 49.6	+0.2
KAD				eP	Pg	19 17 49.6	+0.2
KAD				eS	Sb	19 17 54.6	-0.6
KAD				i SG	Sb	19 17 54.7	-0.6
POO	Poona	1.08	357	⇓iP	Pg	19 18 02.0	-2.2
	510nm,1.0s						
POO				eP	Pn	19 18 04.6	+0.3
POO				i S	Sg	19 18 18.0	-0.4
POO				eS	Sn	19 18 20.1	+0.9
POO				IAML		19 18 27.1	
	comp=N,346nm,0.4s						
POO				IAML		19 18 27.6	
	comp=E,661nm,0.4s						
BOM	Bombay	1.78	324	i P	Pn	19 18 14.1	+0.3
BOM				AMP		19 18 14.3	
	comp=Z,0.8nm,0.2s						
BOM				eS	Sb	19 18 38.7	+0.6
BOM	Bombay	1.78	324	eP	Pb	19 18 15.3	-0.6
BOM				eS	Sb	19 18 38.1	0.0
GOA	Goa	1.94	182	eP	Pn	19 18 15.1	-0.8
GOA				eS	Sn	19 18 40.0	-0.1
GOA				IAML		19 18 43.4	
	comp=E,2µm,0.2s						
GOA				IAML		19 18 43.5	
	comp=N,2µm,0.5s						
BHPL	Bhopal	6.65	29	eS	Sn	19 20 34.4	-2.0
PCHI	Peechi	7.26	161	eP	Pn	19 19 29.7	+0.6
PCHI				eS	Sn	19 20 47.1	-4.5
JBP	Jabalpur	8.06	44	ex	x	19 19 41.2	
JBP				⇓eP	P	19 19 41.2	+1.2
JBP				ex	x	19 21 09.4	
BLSP	Bilaspur	9.04	58	eS	Sn	19 21 33.0	-2.2
SMLA	Simla	13.95	12	eP	Pn	19 21 00.7	+0.1
SMLA				eS	Sn	19 23 26.8	-8.5
CMAR	Chiang Mai Arr	23.83	84	P	P	19 22 59.3	+2.9
	comp=N,0.4nm,0.7s,baz=275,slow=9.8,SNR=4.9						
	comp=N,0.4nm,0.7s						
WRA	Warramunga Arr	69.99	119	P	P	19 28 56.4	+1.4
	comp=N,0.5nm,0.9s,baz=307,slow=5.5,SNR=7.8						
	comp=N,0.5nm,0.9s						
ASAR	Alice Springs	71.41	123	P	P	19 29 04.8	+1.2
	comp=N,0.2nm,0.5s,baz=306,slow=5.6,SNR=6.4						
	comp=N,0.2nm,0.5s						

*IDC **18** 19:27:23.8±1.9, 36°.95N×142°.27E, h0^{km}, mb3.4/2, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=37.4km s-min=33.7km az=59.0*

*JMA **18** 19:27:26.6±0.2, 37°.0N±0°.7×14°2E±$^{\circ}$, h41^{km}, MV3.3/37, E OFF FUKUSHIMA PREF*

ISC 18 19:27:25.2±2.0, **37°.04N**±0°.05×**142°.08E**±0°.07, **h14**^{km}±12^{km}, **n24**, σ**1^{s}.31**/27, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.02	289	P	Pg	19 27 45.0	+0.2
JFK				eS	Sn	19 27 58.8	-0.4
ONAJ	Iwakimizuishiy	1.03	274	i P	Pg	19 27 45.1	+0.1
JMST	Minamisoumatoc	1.17	306	eP	Pg	19 27 47.6	-0.1
JMST				S	Sb	19 28 02.0	-0.2
JFFD	Fukushimafurud	1.22	273	i P	Pb	19 27 47.8	-0.1
JFFD				eS	Sn	19 28 03.1	-1.0
JHO	Hitachi	1.28	251	eP	Pb	19 27 48.7	-0.5
JMM	Marumori	1.31	309	P	Pb	19 27 49.6	0.0
JMM				eS	Sb	19 28 06.4	0.0
JFT	Otama	1.47	290	i P	Pb	19 27 52.6	+0.3
JFT				eS	Sb	19 28 11.5	+0.6
JIO	Ouri	1.53	338	P	Pb	19 27 52.2	-1.0
JIO				eS	Sn	19 28 10.5	-1.3
JOU	Okura	1.74	320	P	Pb	19 27 56.9	+0.1
JOU				eS	Sb	19 28 18.4	-0.2
JFY	Yanaizu	1.93	282	P	Pb	19 27 59.8	-0.4
JFY				eS	Sb	19 28 23.9	-0.3
JYS	Shirataka	1.99	307	eS	Sb	19 28 25.9	+0.2
JMK	Ichinoseki	2.03	341	eP	Pb	19 27 59.9	-1.9
JAG	Ashikaga	2.20	255	P	Pb	19 28 02.6	-2.1
JYK	Kaneyama	2.32	325	eP	Pb	19 28 05.0	-1.7
MJAR	Matsushiro Arr	3.15	262	Pn	Pn	19 28 16.7	+2.4
	0.9nm,0.3s,baz=88,slow=15,SNR=40						
MJAR				Sn	Sb	19 28 55.2	-3.9
	0.2nm,0.3s,baz=311,slow=39,SNR=1.1						
	6.0nm,0.4s						
ASAJ	Asahikawa	7.08	3	Pn	Pn	19 29 09.8	+1.4
	0.2nm,0.3s,baz=326,slow=25,SNR=2.1						
	2.1nm,0.6s						
H11N2	WAKE ISLAND Hy	27.70	122	T	T	20 02 16.8	
	baz=314,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	27.70	122	T	T	20 02 14.4	
	baz=314,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	27.71	122	T	T	20 02 28.8	
	baz=314,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	28.42	124	T	T	20 03 09.3	
	baz=316,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	28.42	124	T	T	20 03 37.8	
	baz=316,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	28.43	124	T	T	20 03 30.3	
	baz=316,slow=76,SNR=9.8						
WRA	Warramunga Arr	57.14	189	P	P	19 37 11.3	-0.2
	0.5nm,0.8s,baz=7.2,slow=7.3,SNR=6.7						
	0.5nm,0.8s						
ASAR	Alice Springs	60.87	189	P	P	19 37 38.2	+0.9
	0.2nm,0.6s,baz=22,slow=10.0,SNR=4.9						
	0.2nm,0.6s						

*IDC **18** 19:43:24.8±1.4, 60°.32N×153°.45W, h117^{km}±15^{km}, mb3.2/4, mbtmp3.6/7, Error ellipse: s-maj=23.6km s-min=11.1km az=100.0*

*NEIC **18** 19:43:27.1±1.0, 60°.27N±0°.02×153°.22W±0°.09, h145^{km}±3^{km}, Error ellipse: s-maj=6.2km s-min=3.3km az=97.0*

*AEIC **18** 19:43:28.1±1.1, 60°.26N±0°.04×153°.18W±0°.09, h144^{km}±4^{km}, ML3.4/149, ML3.5/124(NEIC), Error ellipse: s-maj=6.2km s-min=5.6km az=104.0*

ISC 18 19:43:27.5±0.8, **60°.27N**±0°.04×**153°.17W**±0°.04, **h146**^{km}±5^{km}, **n256**, σ**0^{s}.88**/233, **mb3.4**/4, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RED	Redoubt Volcan	0.25	53		Pn	19 43 47.1	-0.5
RDWB	Redoubt West	0.27	37		Pn	19 43 47.2	-0.5
RDWB					Sn	19 44 02.1	-1.1
RSO	Redoubt South	0.28	47		Pn	19 43 47.3	-0.5
NCT	North Crescent	0.32	22		Pn	19 43 47.5	-0.3
NCT					Sn	19 44 02.5	-0.7
O20K	Slope Mountain	0.33	125		Pn	19 43 47.5	-0.3
O20K					Sn	19 44 03.1	-0.1
O20K	Slope Mountain	0.33	125	P	Pn	19 43 47.5	-0.3
	baz=303						
O20K				S	Sn	19 44 03.1	-0.1
	baz=303						
RDJH	Redoubt Jeurge	0.37	29		Pn	19 43 47.6	-0.4
RDJH					Sn	19 44 03.0	-0.7
DFR	Drift River	0.40	36		Pn	19 43 47.6	-0.5
DFR					Sn	19 44 03.6	-0.2
O19K	Port Alsworth	0.58	263		Pn	19 43 48.1	-0.7
O19K	Port Alsworth	0.58	263		Sn	19 44 04.3	-0.7
O19K	Port Alsworth	0.58	263	IAML		19 43 49.0	
	comp=E,1µm,0.4s						
O19K				IAML		19 43 49.0	
	comp=N,707nm,0.4s						
O19K	Port Alsworth	0.58	263	P	Pn	19 43 48.1	-0.7
	baz=83						
O19K				S	Sn	19 44 04.3	-0.7
	baz=83						
OPT	Oil Point	0.62	183		Pn	19 43 48.9	-0.3
OPT	Oil Point	0.62	183	P	Pn	19 43 48.9	-0.3
	baz=2.5						
P19K	Oil Pt	0.62	183		Pn	19 43 48.9	-0.3
P19K	Oil Pt	0.62	183		Sn	19 44 05.4	-0.2
P19K	Oil Pt	0.62	183	IAML		19 43 49.5	
	comp=N,385nm,0.2s						
P19K	Oil Pt	0.62	183	P	Pn	19 43 48.9	-0.3
	baz=2.5						
P19K				S	Sn	19 44 05.4	-0.2
	baz=2.5						
N19K	Bonanza Creek	0.85	311		Pn	19 43 50.2	-0.5
N19K	Bonanza Creek	0.85	311		Sn	19 44 07.1	-1.4
N19K	Bonanza Creek	0.85	311	IAML		19 43 51.0	
	comp=E,233nm,0.6s						
N19K	Bonanza Creek	0.85	311	P	Pn	19 43 50.2	-0.5
	baz=130						
N19K				S	Sn	19 44 07.1	-1.4
	baz=130						
AUL	Augustine Lava	0.90	189		Pn	19 43 50.8	-0.3
AUL					Sn	19 44 09.0	-0.1
AU22	Augustine Moun	0.91	186		Pn	19 43 50.6	-0.5
AU2	Augustine Isla	0.91	187		Pn	19 43 50.8	-0.3
AUH	Augustine H	0.92	189		Pn	19 43 51.0	-0.4
AUCH	Augustine Cone	0.92	189		Pn	19 43 51.0	-0.4
AUQ	Augustine Qik'	0.93	188		Pn	19 43 51.0	-0.4
HOM	Homer	0.98	128		Pn	19 43 51.6	-0.1
HOM	Homer	0.98	128	P	Pn	19 43 51.6	-0.1
	baz=309						
SPCR	Spurr Chakacha	1.05	26		Pn	19 43 52.2	-0.2
SPCR	Spurr Chakacha	1.05	26	P	Pn	19 43 52.2	-0.2
	baz=207						
SPWE	Spurr West	1.05	16		Pn	19 43 52.6	+0.2
SPU	Mount Spurr	1.07	30		Pn	19 43 48.8	-3.8
SPBG	Spurr Blockage	1.07	21		Pn	19 43 52.8	+0.2
SPBG					Sn	19 44 12.1	+0.3
CKN	Chakachatna No	1.07	26		Pn	19 43 52.6	+0.1
CAPN	Captain Cook N	1.11	63	Pn	Pn	19 43 54.0	+1.1
SPCG	Spurr Capps Gl	1.17	28		Pn	19 43 53.4	-0.2
CNPM	China Poot	1.23	127		Pn	19 43 53.9	-0.2
BRLK	Bradley Lake	1.25	113		Pn	19 43 54.3	0.0
BRSE	Bradley Lake S	1.33	112		Pn	19 43 54.6	-0.5
BRSE	Bradley Lake S	1.33	112	P	Pn	19 43 54.6	-0.5
	baz=294						
P18K	Big Mountain,	1.36	231		Pn	19 43 54.5	-0.9
P18K	Big Mountain,	1.36	231	P	Pn	19 43 54.5	-0.9
	baz=49						
Q19K	Cape Douglas,	1.37	190		Pn	19 43 54.6	-0.9
Q19K	Cape Douglas,	1.37	190	IAML		19 44 17.2	
	comp=E,594nm,0.7s						
Q19K				IAML		19 44 20.5	
	comp=N,422nm,0.9s						
Q19K	Cape Douglas,	1.37	190	P	Pn	19 43 54.6	-0.9
	baz=9.8						
STLK	Strandline Lak	1.40	27		Pn	19 43 55.6	-0.1
N18K	Kilae Creek	1.41	288		Pn	19 43 55.2	-0.6
N18K	Kilae Creek	1.41	288	P	Pn	19 43 55.2	-0.6
	baz=106						
SVW2	Sparrevohn	1.45	306		Pn	19 43 55.5	-0.7
SVW2	Sparrevohn	1.45	306	IAML		19 44 01.0	
	comp=N,71nm,0.4s						
SVW2				IAML		19 44 17.4	

	comp=E,171nm,0.8s						
SLKM	Skilak Lake	1.48	79		Pn	19 43 55.6	-1.0
M20K	Styx River	1.62	1		Pn	19 43 58.1	0.0
M20K	Styx River	1.62	1	P	Pn	19 43 58.1	0.0
	baz=181						
FIS	Fire Island	1.69	58		Pn	19 43 59.1	+0.3
O22K	Cooper Landing	1.73	81		Pn	19 43 58.9	-0.3
O22K	Cooper Landing	1.73	81	P	Pn	19 43 58.9	-0.3
	baz=264						
M19K	Big River Lodg	1.74	341		Pn	19 43 59.2	-0.2
M19K	Big River Lodg	1.74	341	IAML		19 44 06.0	
	comp=N,36nm,0.5s						
M19K				IAML		19 44 24.2	
	comp=E,66nm,0.8s						
M19K	Big River Lodg	1.74	341	P	Pn	19 43 59.2	-0.2
	baz=160						
SEW	Seward	1.86	94		Pn	19 44 00.5	-0.3
SEW	Seward	1.86	94	P	Pn	19 44 00.5	-0.3
	baz=276						
RC01	Rabbit Creek A	1.88	63		Pn	19 43 59.8	-1.1
RC01	Rabbit Creek A	1.88	63	IAML		19 44 26.3	
	comp=E,531nm,0.3s						
RC01				IAML		19 44 26.6	
	comp=N,544nm,0.3s						
RC01	Rabbit Creek A	1.88	63	P	Pn	19 43 59.8	-1.1
	baz=245						
L19K	White Mountain	2.08	338		Pn	19 44 02.9	-0.5
L19K	White Mountain	2.08	338	P	Pn	19 44 02.9	-0.5
	baz=156						
M22K	Willow	2.10	44		Pn	19 44 03.2	-0.3
M22K	Willow	2.10	44	P	Pn	19 44 03.2	-0.3
	baz=226						
L20K	Farewell, AK	2.24	352		Pn	19 44 05.5	+0.2
L20K	Farewell, AK	2.24	352	P	Pn	19 44 05.5	+0.2
	baz=171						
KABU	Katmai Buttres	2.28	209		Pn	19 44 05.4	-0.4
PMR	Palmer	2.38	54		Pn	19 44 05.2	-1.6
PMR	Palmer	2.38	54	IAML		19 44 36.6	
	comp=E,182nm,0.2s						
PMR				IAML		19 44 42.7	
	comp=N,156nm,0.3s						
PMR	Palmer	2.38	54	P	Pn	19 44 05.2	-1.6
	baz=238						
KDAK	Kodiak Island	2.51	173	P	Pn	19 44 06.4	-2.2
	comp=N,64nm,0.3s,baz=38,slow=7.5,SNR=200						
KDAK				S	Sn	19 44 37.1	-3.0
	comp=N,53nm,0.3s,baz=157,slow=23,SNR=19						
KDAK	Kodiak Island	2.51	173	IAML		19 44 38.2	
	comp=N,244nm,0.3s						
KDAK				IAML		19 44 40.3	
	comp=N,136nm,0.3s						
KJL	Kejulik	2.54	210		Pn	19 44 10.9	+1.9
CUT	Chulitna	2.56	32		Pn	19 44 08.8	-0.2
CUT	Chulitna	2.56	32	P	Pn	19 44 08.8	-0.2
	baz=214						
GHO	Glory Hole Cre	2.56	52		Pn	19 44 07.6	-1.5
GHO	Glory Hole Cre	2.56	52	IAML		19 44 40.4	
	comp=N,207nm,0.5s						
GHO				IAML		19 44 46.5	
	comp=E,373nm,0.3s						
KNK	Knik Glacier	2.58	62		Pn	19 44 07.7	-1.7
KNK	Knik Glacier	2.58	62	IAML		19 44 40.3	
	comp=E,344nm,0.2s						
KNK				IAML		19 44 41.6	
	comp=N,319nm,0.2s						
KNK	Knik Glacier	2.58	62	P	Pn	19 44 07.7	-1.7
	baz=245						
PPLA	Purkeypile	2.68	10		Pn	19 44 11.1	+0.3
PPLA	Purkeypile	2.68	10	P	Pn	19 44 11.0	+0.3
	baz=191						
SML	Sawmill	2.81	55		Pn	19 44 10.7	-1.6
SML	Sawmill	2.81	55	IAML		19 44 45.9	
	comp=E,156nm,0.5s						
SML				IAML		19 44 46.5	
	comp=N,203nm,0.3s						
SML	Sawmill	2.81	55	P	Pn	19 44 10.7	-1.6
	baz=239						
TT01	Tatalina	2.98	334		Pn	19 44 13.8	-0.5
TTA	Tatalina	3.00	334		Pn	19 44 14.0	-0.7
TTA	Tatalina	3.00	334	P	Pn	19 44 14.0	-0.7
	baz=152						
M23K	Glacier View	3.06	58	P	Pn	19 44 13.9	-1.5
	baz=242						
OHAK	Old Harbor	3.06	181		Pn	19 44 12.8	-2.6
OHAK	Old Harbor	3.06	181	IAML		19 44 49.8	
	comp=E,136nm,0.3s						
OHAK				IAML		19 44 53.0	
	comp=N,93nm,0.9s						
OHAK	Old Harbor	3.06	181	P	Pn	19 44 12.8	-2.6
	baz=1.0						
GLI	Glacier Island	3.06	76		Pn	19 44 14.9	-0.5
GLI	Glacier Island	3.06	76	IAML		19 44 53.4	
	comp=E,194nm,0.4s						
GLI				IAML		19 44 56.3	
	comp=N,129nm,0.3s						
GLI	Glacier Island	3.06	76	P	Pn	19 44 14.9	-0.5
	baz=261						
K20K	Telida	3.13	353		Pn	19 44 16.5	+0.3
K20K	Telida	3.13	353	P	Pn	19 44 16.5	+0.3
	baz=172						
SCM	Sheep Creek Mo	3.25	59		Pn	19 44 16.5	-1.4
SCM	Sheep Creek Mo	3.25	59	IAML		19 44 58.8	
	comp=E,155nm,0.4s						
SCM				IAML		19 44 59.0	
	comp=N,154nm,0.5s						
SCM	Sheep Creek Mo	3.25	59	P	Pn	19 44 16.5	-1.4
	baz=244						
HIN	Hinchinbrook I	3.32	85		Pn	19 44 18.1	-0.6
HIN	Hinchinbrook I	3.32	85	IAML		19 44 57.8	
	comp=N,150nm,0.7s						
HIN				IAML		19 44 59.9	
	comp=E,152nm,0.5s						
JPK	Jack Peak	3.33	73		Pn	19 44 18.7	-0.2
FID	Port Fidalgo	3.34	79		Pn	19 44 17.8	-1.3
WAT1	Susitna Watana	3.39	39		Pn	19 44 19.0	-0.7
WAT1	Susitna Watana	3.39	39	P	Pn	19 44 19.0	-0.7
	baz=223						
TRF	Thorofare Moun	3.47	22		Pn	19 44 20.6	-0.3
TRF	Thorofare Moun	3.47	22	IAML		19 45 02.6	
	comp=E,80nm,0.3s						
TRF				IAML		19 45 02.9	
	comp=N,107nm,0.4s						
TRF	Thorofare Moun	3.47	22	P	Pn	19 44 20.5	-0.3
	baz=204						
WAT6	Susitna Watana	3.49	46		Pn	19 44 19.9	-1.2
WAT6	Susitna Watana	3.49	46	P	Pn	19 44 19.9	-1.2
	baz=231						
Q23K	Middleton Isla	3.54	101		Pn	19 44 21.0	-0.6
Q23K	Middleton Isla	3.54	101	IAML		19 46 33.4	
	comp=E,151nm,3.5s						
Q23K	Middleton Isla	3.54	101	P	Pn	19 44 21.0	-0.6
	baz=286						
MID	Middleton Isla	3.55	101		Pn	19 44 21.0	-0.7
MID	Middleton Isla	3.55	101	IAML		19 45 02.1	
	comp=E,160nm,2.9s						
CHUM	Lake Minchumin	3.65	6		Pn	19 44 22.9	-0.1
CHUM	Lake Minchumin	3.65	6	P	Pn	19 44 22.8	-0.1
	baz=187						
EYAK	Cordova Ski Ar	3.69	82		Pn	19 44 22.7	-0.8
EYAK	Cordova Ski Ar	3.69	82	P	Pn	19 44 22.7	-0.8
	baz=269						
DIV	Divide	3.74	73		Pn	19 44 23.5	-0.7
KLU	Klutina	3.75	68		Pn	19 44 22.8	-1.6
KLU	Klutina	3.75	68	IAML		19 45 08.3	
	comp=N,99nm,0.3s						
KLU				IAML		19 45 08.7	
	comp=E,138nm,0.2s						
KLU	Klutina	3.75	68	P	Pn	19 44 22.8	-1.6
	baz=254						
RND	Reindeer	3.75	31		Pn	19 44 23.9	-0.6
RND	Reindeer	3.75	31	IAML		19 45 08.2	
	comp=E,55nm,0.4s						
RND				IAML		19 45 11.8	
	comp=N,48nm,0.3s						
SII	Sitkinak Islan	3.76	189		Pn	19 44 21.8	-2.7
SII	Sitkinak Islan	3.76	189	P	Pn	19 44 21.8	-2.7
	baz=7.7						
M24K	Tolsona, Glenn	3.85	58		Pn	19 44 25.0	-0.7
M24K	Tolsona, Glenn	3.85	58	IAML		19 45 20.6	
	comp=N,83nm,0.9s						
M24K	Tolsona, Glenn	3.85	58	P	Pn	19 44 25.0	-0.7
	baz=244						
DHY	Denali Highway	3.94	42		Pn	19 44 26.1	-0.8
DHY	Denali Highway	3.94	42	IAML		19 45 13.3	
	comp=N,106nm,0.3s						
DHY				IAML		19 45 13.4	
	comp=E,88nm,0.4s						
DHY	Denali Highway	3.94	42	P	Pn	19 44 26.1	-0.8
	baz=227						
J20K	Nowinta River	3.95	354		Pn	19 44 27.1	+0.3
J20K	Nowinta River	3.95	354	P	Pn	19 44 27.1	+0.3
	baz=173						
BPAW	Bear Paw Mtn.	3.98	14		Pn	19 44 26.6	-0.6
BPAW	Bear Paw Mtn.	3.98	14	IAML		19 45 13.0	
	comp=E,31nm,0.5s						
BPAW	Bear Paw Mtn.	3.98	14	P	Pn	19 44 26.6	-0.6
	baz=196						
BMRM	Bremner River	4.28	77		Pn	19 44 30.5	-0.8
BMRM	Bremner River	4.28	77	IAML		19 45 19.5	
	comp=N,74nm,0.4s						
BMRM				IAML		19 45 19.6	
	comp=E,82nm,0.4s						
BMRM	Bremner River	4.28	77	P	Pn	19 44 30.5	-0.8
	baz=264						
BWN	Browne	4.28	22	Pn	Pn	19 44 32.1	+0.8
BWN				IAML		19 45 46.3	
	comp=N,50nm,0.8s						
BWN				IAML		19 45 48.7	
	comp=E,39nm,1.1s						
N25K	Chitina, Valde	4.39	69		Pn	19 44 31.8	-1.0
N25K	Chitina, Valde	4.39	69	IAML		19 45 23.1	
	comp=E,48nm,0.6s						
N25K				IAML		19 45 24.6	
	comp=N,45nm,0.5s						
N25K	Chitina, Valde	4.39	69	P	Pn	19 44 31.8	-1.0
	baz=256						
HARP	HAARP	4.41	58		Pn	19 44 32.5	-0.5
HARP	HAARP	4.41	58	P	Pn	19 44 32.5	-0.5
	baz=244						
HMT	Hamilton	4.43	85		Pn	19 44 32.7	-0.6
PAX	Paxson	4.56	50		Pn	19 44 34.4	-0.6
PAX	Paxson	4.56	50	P	Pn	19 44 34.4	-0.6
	baz=237						
NICHA	Nichawak Mount	4.59	86		Pn	19 44 34.8	-0.5
PS10	TAPS Pump St10	4.72	45		Pn	19 44 37.4	+0.4
GLB	Gilahina Butte	4.73	72		Pn	19 44 37.0	-0.1
GLB	Gilahina Butte	4.73	72	IAML		19 45 30.0	
	comp=N,32nm,0.7s						
GLB				IAML		19 45 32.8	
	comp=E,22nm,0.8s						
NEA2	Nenana	4.74	22		Pn	19 44 36.6	-0.7
NEA2	Nenana	4.74	22	IAML		19 45 30.6	
	comp=E,20nm,0.7s						
NEA2	Nenana	4.74	22	P	Pn	19 44 36.6	-0.7
	baz=206						
WRH	Wood River Hil	4.83	27		Pn	19 44 37.5	-1.0
WRH	Wood River Hil	4.83	27	IAML		19 45 32.0	
	comp=E,18nm,0.6s						
WRH				IAML		19 45 36.2	
	comp=N,22nm,0.4s						
CHGN	Chignik	4.85	217	Pn	Pn	19 44 37.2	-1.5
CHGN				IAML		19 45 35.9	
	comp=E,36nm,0.7s						
CHGN				IAML		19 46 11.3	
	comp=N,41nm,2.3s						
VRDI	Verde Repeater	4.86	74		Pn	19 44 38.9	-0.2
VRDI	Verde Repeater	4.86	74	IAML		19 45 35.0	
	comp=E,37nm,0.6s						
VRDI				IAML		19 45 35.6	
	comp=N,32nm,0.9s						
KHIT	Khitrov Hills	4.93	84		Pn	19 44 39.2	-0.7
I21K	Tanana	4.96	6	Pn	Pn	19 44 39.9	-0.3
K24K	Donnelly Dome	4.97	41	P	Pn	19 44 41.3	+1.0
	baz=228						
CCB	Clear Creek Bu	5.05	27		Pn	19 44 40.5	-0.8
CCB	Clear Creek Bu	5.05	27	IAML		19 45 40.3	
	comp=N,20nm,0.4s						
CCB				IAML		19 45 40.8	
	comp=E,24nm,0.3s						
HDA	Harding Lake	5.06	32		Pn	19 44 40.8	-0.7
HDA	Harding Lake	5.06	32	P	Pn	19 44 40.8	-0.7
	baz=218						
MCARA	McCarthy VSAT	5.09	73		Pn	19 44 42.0	+0.1
MCARA	McCarthy VSAT	5.09	73	IAML		19 45 41.0	
	comp=N,41nm,0.4s						
MCARA				IAML		19 45 47.9	
	comp=E,47nm,0.5s						
MCARA	McCarthy VSAT	5.09	73	P	Pn	19 44 42.0	+0.1
	baz=262						
TGL	Tana Glacier	5.13	80		Pn	19 44 42.3	-0.3
I23K	Minto, Yukon-K	5.20	18		Pn	19 44 43.3	0.0
I23K	Minto, Yukon-K	5.20	18	P	Pn	19 44 43.3	0.0
	baz=201						
PS08	TAPS Pump Stn8	5.20	32		Pn	19 44 42.7	-0.7
MDM	Murphy Dome	5.23	24		Pn	19 44 43.1	-0.6
MDM	Murphy Dome	5.23	24	IAML		19 45 41.8	
	comp=N,12nm,0.9s						
MDM				IAML		19 45 43.3	
	comp=E,11nm,0.9s						
RIDG	Independent Ri	5.24	45		Pn	19 44 43.9	-0.1
RIDG	Independent Ri	5.24	45	IAML		19 45 47.8	
	comp=N,36nm,1.4s						
RIDG	Independent Ri	5.24	45	P	Pn	19 44 43.9	-0.1
	baz=232						
MENT	Mentasta	5.24	55		Pn	19 44 43.3	-0.7
MENT				IAML		19 45 59.5	
	comp=N,33nm,0.5s						
MENT				IAML		19 46 01.0	
	comp=E,38nm,0.5s						
PTPK	Patty Peak	5.33	75		Pn	19 44 45.4	0.0
M26K	Nabesna, AK	5.34	62		Pn	19 44 45.3	-0.1
M26K	Nabesna, AK	5.34	62	IAML		19 45 46.5	
	comp=N,26nm,0.6s						
M26K				IAML		19 45 47.4	
	comp=E,16nm,0.9s						
M26K	Nabesna, AK	5.34	62	P	Pn	19 44 45.3	-0.1
	baz=251						
KIAG	Kiagna River	5.37	78		Pn	19 44 45.2	-0.6
IL31		5.37	30		Pn	19 44 44.8	-0.8
ILAR	Eielson Array	5.37	30	P	Pn	19 44 44.8	-0.8
	comp=E,2.8nm,0.4s,baz=217,slow=13,SNR=46						
ILAR				S	Sn	19 45 43.2	-3.5
	comp=E,9.6nm,0.6s,baz=219,slow=23,SNR=13						
ILAR	Eielson Array	5.37	30	Pn	Pn	19 44 44.5	-1.2
ISLE	Juniper Island	5.38	82		Pn	19 44 45.5	-0.3
ISLE	Juniper Island	5.38	82	IAML		19 45 45.4	
	comp=E,38nm,0.5s						
BALM	Baldy	5.38	77		Pn	19 44 45.7	-0.2
H21K	Melozitna Rive	5.41	2		Pn	19 44 46.0	-0.2
H21K	Melozitna Rive	5.41	2	P	Pn	19 44 46.0	-0.2
	baz=182						
BAGL	Bagley Icefiel	5.50	83		Pn	19 44 47.2	-0.2
POKR	Poker Plat Res	5.53	26		Pn	19 44 47.3	-0.5
POKR	Poker Plat Res	5.53	26	P	Pn	19 44 47.3	-0.5
	baz=211						
MESA	MESA	5.59	86		Pn	19 44 48.6	-0.2
MESA	MESA	5.59	86	P	Pn	19 44 48.6	-0.2
	baz=276						
GRNC	Granite Creek	5.66	80		Pn	19 44 49.7	-0.1
J25K	Salcha River,	5.66	36		Pn	19 44 49.0	-0.6
J25K	Salcha River,	5.66	36	P	Pn	19 44 49.0	-0.6
	baz=223						
YAH	Yahtse	5.68	84		Pn	19 44 50.4	+0.4
SCRK	Sand Creek	5.69	45		Pn	19 44 48.8	-1.2
SCRK	Sand Creek	5.69	45	P	Pn	19 44 48.8	-1.2
	baz=233						
BARN	Barnard Glacie	5.71	77		Pn	19 44 50.5	0.0
IM03		5.74	358		Pn	19 44 50.6	+0.1
IMAR	Indian Mountai	5.74	358	Pn	Pn	19 44 50.3	-0.3
H23K	Yukon River	5.81	15		Pn	19 44 51.4	-0.2
H23K	Yukon River	5.81	15	P	Pn	19 44 51.4	-0.2
	baz=198						
PS06	TAPS Pump Stn6	5.82	14		Pn	19 44 51.4	-0.2
M27K	Edge Creek, AK	5.83	64	Pn	Pn	19 44 52.3	+0.4
CTG	Chitna Glacier	5.87	78	P	Pn	19 44 52.4	0.0
	baz=268						
CTGM	Chitina Glacie	5.87	78		Pn	19 44 52.4	-0.1
TABL	Table Mountain	5.97	83		Pn	19 44 53.7	-0.2
CHX	Chaix Hills	6.02	87		Pn	19 44 54.6	+0.2
LOGN	Logan Glacier	6.03	79		Pn	19 44 54.6	0.0
H24K	Noodor Dome	6.08	21		Pn	19 44 54.2	-0.9
H24K	Noodor Dome	6.08	21	P	Pn	19 44 54.2	-0.9
	baz=206						
L27K	Beaver Creek,	6.08	58	Pn	Pn	19 44 54.9	-0.2
BC03		6.10	58		Pn	19 44 55.1	-0.2
BCAR	Beaver Creek A	6.10	58	Pn	Pn	19 44 55.0	-0.4
J26L	Joseph Creek	6.16	42	P	Pn	19 44 55.5	-0.7
	baz=231						
SAMH	Samovar Hills	6.18	86		Pn	19 44 56.6	0.0
YUK2	White River	6.18	70		Pn	19 44 56.4	-0.2
BVCY	Beaver Creek	6.30	65		Pn	19 44 58.1	0.0
BVCY	Beaver Creek	6.30	65	P	Pn	19 44 58.1	0.0
	baz=255						
YUK3	Moose Creek	6.36	71		Pn	19 44 59.5	+0.4
YUK3	Moose Creek	6.36	71	P	Pn	19 44 59.5	+0.4
	baz=262						
K27K	Chicken	6.42	49		Pn	19 44 58.8	-0.8
K27K	Chicken	6.42	49	P	Pn	19 44 58.8	-0.8
	baz=239						
PCA	Pinnacle	6.45	86		Pn	19 44 59.4	-0.7
PINM	Pinnacle	6.45	86	P	Pn	19 44 59.4	-0.7
	baz=277						
PNL	Peninsula	6.94	89		Pn	19 45 06.3	-0.3
PNL	Peninsula	6.94	89	P	Pn	19 45 06.3	-0.3
	baz=281						
COLD	Coldfoot	7.11	9		Pn	19 45 08.4	-0.3
COLD	Coldfoot	7.11	9	P	Pn	19 45 08.4	-0.3
	baz=192						
N30M	Aishikik Lake	7.94	74	P	Pn	19 45 19.0	-1.0
	baz=268						
BM03	Burnt Mountain	8.10	24		Pn	19 45 20.9	-1.2
BMAR	Burnt Mountain	8.12	24	Pn	Pn	19 45 21.3	-1.0
TOLK	Toolik Lake Re	8.54	9		Pn	19 45 27.8	-0.2
TOLK	Toolik Lake Re	8.54	9	P	Pn	19 45 27.8	-0.2
	baz=192						
A36M	Sachs Harbour	16.07	32		P	19 47 05.7	+0.4
YKA	Yellowknife Ar	18.42	66	P	P	19 47 32.0	+0.9
	comp=E,0.8nm,0.6s,baz=276,slow=9.9,SNR=4.7						
PDAR	Pinedale Array	31.54	104	P	P	19 49 37.4	+1.5
	comp=E,0.3nm,0.6s,baz=331,slow=7.2,SNR=4.0						
	comp=E,0.3nm,0.6s						
TXAR	Lajitas Array	45.16	111	P	P	19 51 30.6	+1.2
	comp=E,0.5nm,0.6s,baz=308,slow=4.5,SNR=3.5						
	comp=E,0.5nm,0.6s						
ZALV	Zalesovo Beam	57.10	323	P	P	19 52 57.5	-0.5
	comp=E,0.5nm,0.4s,baz=30,slow=6.7,SNR=2.9						
	comp=E,0.5nm,0.4s						
MKAR	Makanchi Array	64.17	321	P	P	19 53 45.4	-0.6
	comp=E,0.3nm,0.6s,baz=42,slow=6.8,SNR=4.4						
	comp=E,0.3nm,0.6s						

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*IDC **18** 19:57:51.0±1.7, 62°.91S×148°.13E, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=77.8km s-min=26.2km az=90.0*

*NEIC **18** 19:57:51.9±0.9, 63°.1S±0°.1×147°.3E±0°.2, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=22.1km s-min=11.0km az=11.0*

ISC 18 19:57:52.0±0.8**, 63°.20S**±0°.09×**147°.9E**±0°.2**, h10^{km}, n30, σ2^{s}.29**/24**, mb4.1**/6**, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	15.04	168	Pn	Pn	20 01 26.2	+2.0
	0.4nm,0.3s,baz=334,slow=14,SNR=17						
VNDA				Sn	Sn	20 04 06.0	-4.6
	1.0nm,0.3s,baz=211,slow=19,SNR=6.2						
	1.2nm,0.4s						
VNDA	Vanda	15.04	168		Pn	20 01 26.4	+2.2
VNDA				IAmb	IAmb	20 01 56.0	
	comp=Z,5.0nm,0.7s						
VNDA					Sn	20 04 00.8	-10
SBA	Scott Base	15.84	165	Pn	Pn	20 01 36.6	+1.9
SBA				IAmb	IAmb	20 01 58.8	
	comp=Z,6.6nm,0.9s						
SBA				Sn	Sn	20 04 25.3	-4.7
CASY	Casey	16.07	242	Pn	Pn	20 01 34.6	-3.0
CASY				IAmb	IAmb	20 01 52.9	
	comp=Z,23nm,1.2s						
QSPA	South Pole Qui	26.88	180	P	P	20 03 34.0	+1.3
QSPA				IAmb	IAmb	20 04 02.4	
	comp=Z,24nm,1.9s						
MAW	Mawson	33.03	224	P	P	20 04 29.8	+3.0
	comp=Z,1.2nm,0.8s,baz=273,slow=8.9,SNR=1.6						
	comp=Z,1.2nm,0.8s						
MAW	Mawson	33.03	224	IAmb	IAmb	20 04 52.9	
	comp=Z,1.1nm,1.2s						
H01W1	Cape Leeuwin H	35.17	308	T	T	20 41 43.8	
	baz=153,slow=76,SNR=20						
H01W2	Cape Leeuwin H	35.17	308	T	T	20 41 51.2	
	baz=153,slow=76,SNR=16						
H01W3	Cape Leeuwin H	35.19	308	T	T	20 41 47.7	
	baz=153,slow=76,SNR=16						
ASAR	Alice Springs	40.62	340	P	P	20 05 30.3	-1.6
	comp=Z,1.2nm,0.8s,baz=166,slow=9.4,SNR=16						
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	40.62	340	P	P	20 05 29.4	-2.4
AS31	Alice Springs	40.62	340	P	P	20 05 30.1	-1.7
SNAA	Sanae	43.91	193	P	P	20 05 58.6	+0.5
WR0	Warramunga Arr	44.17	342	P	P	20 05 57.9	-2.8
WR0				IAmb	IAmb	20 06 10.3	
	comp=Z,12nm,1.6s						
WB2	Warramunga Arr	44.21	342	P	P	20 05 59.0	-2.1
WB2				IAmb	IAmb	20 06 19.2	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	44.21	342	P	P	20 05 59.0	-2.1
	comp=Z,0.8nm,0.7s,baz=167,slow=7.0,SNR=6.5						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	44.21	342	IAmb	IAmb	20 06 08.0	
	comp=Z,0.9nm,1.9s						
WB0	Warramunga Arr	44.38	342	P	P	20 06 00.6	-1.8
H08S2	Diego Garcia H	76.64	280	T	T	21 34 06.7	
	baz=154						
H08S1	Diego Carcia H	76.65	280	T	T	21 34 10.0	
	baz=154						
H08S3	Diego Garcia H	76.66	280	T	T	21 34 08.1	
	baz=154						
BCAR	Beaver Creek A	136.39	38	PKPdf	PKPdf	20 17 12.1	-0.1
EYMN	Ely	144.59	87	PKPdf	PKPdf	20 17 27.3	-0.1
YKA	Yellowknife Ar	144.78	53	PKP	PKPdf	20 17 28.2	+0.9
	comp=Z,0.7nm,0.7s,baz=238,slow=3.3,SNR=4.0						
BURAR	Bucovina Array	145.28	271	PKPdf	PKPbc	20 17 28.8	+0.2
AKASG	Malin Array Be	145.71	278	PKPbc	PKPab	20 17 31.0	+0.9
	comp=Z,0.3nm,0.3s,baz=99,slow=3.4,SNR=1.9						
ESDC	Sonseca Array	151.08	229	PKPbc	PKiKP	20 17 45.6	+0.7
	comp=Z,0.4nm,0.7s,baz=144,slow=0.4,SNR=2.0						
GERES	GERESS Array B	151.39	262	PKPbc	PKPbc	20 17 45.2	+0.4
	comp=Z,0.1nm,0.3s,baz=222,slow=2.6,SNR=4.3						
GERES	GERESS Array B	151.39	262	PKPdf	PKPdf	20 17 39.0	+0.3

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*BER **18** 20:23:24.1±2.1, 80°.23N×1°.58W, h10^{km}, ML2.3, ML3.1(NAO), Confirmed Earthquake*

*DNK **18** 20:23:26.0±2.1, 80°.22N×0°.95W, h36^{km}±26^{km}, ML2.1*

*IEPN **18** 20:23:28.0, 80°.06N×0°.33W, h10^{km}*

ISC 18 20:23:21.1±0.8**, 80°.20N**±0°.05×**1°.11W**±0°.04**, h10^{km}, n30, σ3^{s}.06**/54**, 1C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	2.69	112	Pn	Pn	20 24 06.9	+2.5
KBS				Sn	Sn	20 24 36.1	-0.7
KBS	Kingsbay	2.69	112	*i* P	Pn	20 24 06.2	+1.9
KBS				*i* S	Sn	20 24 35.6	-1.3
KBS	Kingsbay	2.69	112	*e*P	Pn	20 24 06.6	+2.3
KBS				*e*S	Sn	20 24 36.2	-0.7
KBS				IAML		20 24 43.7	
	comp=Z,14nm,0.4s						
KBS	Kingsbay	2.69	112	*e*P	Pn	20 24 06.5	+2.1
KBS				*e*S	Sn	20 24 35.7	-1.2
NOR	Nord	2.84	307	Pn	Pn	20 24 07.0	+0.7
NOR	Nord	2.84	307	*i* P	Pn	20 24 08.0	+1.6
NOR	Nord	2.84	307	*e*P	Pn	20 24 06.7	+0.3
NOR				*e*S	Sn	20 24 37.2	-3.4
BRBB	Barentsburg B	3.58	118	Pn	Pb	20 24 21.1	-3.2
BRBB				Sn	Sn	20 25 00.5	+1.8
BRBB	Barentsburg B	3.58	118	*e*P	Pn	20 24 20.1	+3.7
BRBB				*e*S	Sn	20 24 59.6	+1.0
BRBA	Barentsburg A	3.60	119	Pn	Pb	20 24 21.5	-3.2
BRBA				Sn	Sn	20 25 00.9	+1.7
BRBA	Barentsburg A	3.60	119	*e*P	Pn	20 24 20.7	+3.9
BRBA				*e*S	Sn	20 25 00.1	+0.9
BRBA				IAML		20 25 05.3	
	comp=Z,13nm,0.9s						
SPA0	Spitsbergen Ar	3.85	113	Pn	Pn	20 24 23.4	+3.2
	baz=310,slow=7.4						
SPA0				Sn	Sn	20 25 05.2	-0.3
SPA0	Spitsbergen Ar	3.85	113	Pn	Pn	20 24 23.4	+3.2
	baz=310,slow=7.4						
SPA0				Sn	Sn	20 25 05.2	-0.3
SPA0	Spitsbergen Ar	3.85	113	⇑*i*P	Pn	20 24 23.5	+3.2
SPA0				*i* S	Sn	20 25 05.0	-0.5
HSPB	Hornsund (broa	4.58	126	Pn	Pn	20 24 34.4	+4.1
HSPB				Sn	Sn	20 25 25.5	+2.0
HSPB	Hornsund (broa	4.58	126	*e*P	Pn	20 24 34.0	+3.7

HSPB				eS	Sn	20 25 23.7	+0.3
HSPB				IAML		20 25 30.4	
	comp=Z,10.0nm,0.6s						
HSPB	Hornsund (broa	4.58	126	eP	Pn	20 24 33.9	+3.7
HSPB				eS	Sn	20 25 22.4	-1.0
DAG	Danmarks Havn	4.89	234	i P	Pn	20 24 35.0	+0.5
DAG				eS	Sn	20 25 28.8	-2.3
DAG				IAML		20 25 31.1	
	comp=Z,9.0nm,0.4s						
DAG	Danmarks Havn	4.89	234	eP	Pn	20 24 35.6	+1.1
DAG				eS	Sn	20 25 26.0	-5.1
HOPEN	Hopen	6.38	112	Sn	Sn	20 26 06.9	-0.9
HOPEN	Hopen	6.38	112	eP	Pn	20 24 57.6	+2.6
HOPEN				eS	Sn	20 26 04.9	-2.9
HOPEN				IAML		20 26 09.0	
	comp=Z,15nm,0.5s						
HOPEN	Hopen	6.38	112	eP	Pn	20 24 57.2	+2.2
HOPEN				eS	Sn	20 26 02.4	-5.4
DBG	Daneborg	7.21	225	Pn	Pn	20 25 07.4	+1.1
DBG				Sn	Sn	20 26 23.1	-5.0
DBG	Daneborg	7.21	225	i P	Pn	20 25 07.8	+1.5
DBG				eS	Sn	20 26 22.2	-5.9
DBG				IAML		20 26 27.0	
	comp=Z,5.1nm,0.4s						
DBG	Daneborg	7.21	225	eP	Pn	20 25 07.1	+0.8
DBG				eS	Sn	20 26 21.2	-6.9
ZFI2	Zemlya Franca-	7.88	62	eP	Pn	20 25 17.7	+2.2
ZFI2				eS	Sn	20 26 39.3	-5.2
	comp=Z,21nm,1.6s						
ZFI	Zemlya Franca-	7.88	62	eP	Pn	20 25 17.6	+2.1
ZFI				eS	Sn	20 26 39.1	-5.4
	comp=Z,26nm,1.3s						
SUMG	Summit	11.34	248	i P	Pn	20 26 03.3	+0.1
ARA0	ARCESS Array S	12.54	133	Pn	Pn	20 26 23.7	+4.5
	baz=346,slow=11						
ARA0	ARCESS Array S	12.54	133	Pn	Pn	20 26 23.7	+4.5
	baz=346,slow=11						

*IDC **18** 20:53:41.6±2.0, 7°.40S×129°.18E, h103^{km}±21^{km}, mb3.3/2, mbtmp3.8/6, Error ellipse: s-maj=26.4km s-min=15.0km az=123.0*

ISC 18 20:53:41.0±0.9**, 7°.51S**±0°.07×**129°.29E**±0°.10**, h100**^{km}**, n6, σ2^{s}.44**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.17	244	P	Pn	20 55 11.2	+1.5
	57nm,0.5s,baz=76,slow=2.9,SNR=30						
BATI				S	Sn	20 56 17.5	-1.4
	57nm,0.5s,baz=106,slow=21,SNR=8.4						
SIJI	Sorong	6.88	17	P	Pn	20 55 19.9	+0.5
	3.1nm,0.3s,baz=118,slow=23,SNR=5.5						
SIJI				S	Sn	20 56 35.0	-1.2
	3.6nm,0.2s,baz=210,slow=23,SNR=2.2						
WRA	Warramunga Arr	13.30	159	P	Pn	20 56 46.8	+0.9
	1.0nm,0.3s,baz=339,slow=13,SNR=30						
WRA				S	Sn	20 59 05.5	-6.8
	2.6nm,0.4s,baz=336,slow=23,SNR=12						
ASAR	Alice Springs	16.67	165	P	P	20 57 31.9	+2.6
	0.7nm,0.5s,baz=342,slow=9.4,SNR=20						
ASAR				S	Sn	21 00 29.1	-4.6
	1.1nm,0.5s,baz=344,slow=25,SNR=5.2						
CMAR	Chiang Mai Arr	39.52	311	P	P	21 01 01.8	-0.6
	0.3nm,0.6s,baz=135,slow=7.2,SNR=2.5						
	0.3nm,0.6s						
MKAR	Makanchi Array	68.26	327	P	P	21 04 30.4	-0.8
	0.6nm,0.4s,baz=124,slow=7.3,SNR=15						
	0.6nm,0.4s						

*IDC **18** 21:04:08.8±0.7, 30°.63S×71°.67W, h0^{km}, mb4.4/10, mbtmp4.3/13, ML4.1/3, Error ellipse: s-maj=23.9km s-min=16.1km az=119.0*

*GUC **18** 21:04:12.6±0.8, 30°.68S×71°.63W, h31^{km}±2^{km}, ML4.3*

*NEIC **18** 21:04:13.3±1.8, 30°.61S±0°.03×71°.80W±0°.08, h29^{km}±4^{km}, mb4.5/21, Mwr4.2/47, ML4.3(GUC), Error ellipse: s-maj=10.8km s-min=4.0km az=103.0*

*NEIC **18** 21:04:13.5, 30°.67S×71°.71W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.90; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-1.78; $M_{r\theta}$0.52; $M_{\theta\phi}$0.59; $M_{\phi r}$-1.43; Fault plane solution: $M_0$2.46000×10^{15} NP1:ϕ_s160.92000°, δ64.12000°, λ88.69000°. NP2:ϕ_s343.92000°, δ25.91000°, λ92.70000°. Principal axes: T 2.4233, Plg71.0000°, Azm68.0000°; N 0.0670, Plg1.0000°, Azm161.0000°; P -2.4903, Plg19.0000°, Azm252.0000°;*

*VAO **18** 21:04:47.6±1.2, 28°.49S×69°.01W, h10^{km}, mb4.4*

ISC 18 21:04:13.0±0.7**, 30°.62S**±0°.03×**71°.80W**±0°.05**, h26**^{km}±4^{km}**, n119, σ1^{s}.76**/129**, mb4.5**/14**, 2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.15	111		Pb	21 04 18.4	+0.2
CO06				Sg	Sb	21 04 21.9	+0.2
CO06	Fray Jorge	0.15	111	⇓iP	Pb	21 04 18.4	+0.2
CO06				eS	Sb	21 04 21.9	+0.2
CO06				IAML		21 04 22.5	
	comp=E,77µm,0.2s						
CO05	La Serena	0.85	35		Pb	21 04 28.7	-0.4
CO05					Sn	21 04 40.6	-0.3
CO05	La Serena	0.85	35	⇓iP	Pb	21 04 28.7	-0.4
CO05				i S	Sn	21 04 40.9	-0.1
CO05				IAML		21 04 43.1	
	comp=N,25µm,0.5s						
CO02	Combarbal	0.90	131		Pb	21 04 28.2	-1.8
CO02				Sg	Sb	21 04 39.5	-2.2
CO02	Combarbal	0.90	131	⇓iP	Pb	21 04 28.2	-1.8
CO02				i S	Sb	21 04 39.6	-2.0
CO02				IAML		21 04 44.0	
	comp=E,22µm,0.3s						
GO04	Tololo Observa	0.97	63	Pn	Pn	21 04 30.2	-1.0
GO04	Tololo Observa	0.97	63	⇓iP	Pn	21 04 30.1	-1.0
GO04				eS	Sb	21 04 41.8	-2.0
CO01	Juntas del Tor	1.61	67		Pn	21 04 40.3	+0.3
CO01	Juntas del Tor	1.61	67	⇓iP	Pn	21 04 40.3	+0.3
CO01				i S	Sn	21 05 00.5	+0.6
CO01				IAML		21 05 05.3	
	comp=N,4µm,0.3s						
LCO	Las Campanas	1.86	31		Pn	21 04 44.0	+0.5
LCO	Las Campanas	1.86	31	⇑eP	Pn	21 04 44.0	+0.5
LCO				eS	Sb	21 05 08.8	-0.8
VA06	Catapilco	1.98	168		Pn	21 04 44.6	-0.3
VA06	Catapilco	1.98	168	eP	Pn	21 04 44.4	-0.4
VA06				eS	Sn	21 05 10.2	+1.4
VA06				IAML		21 05 18.8	
	comp=N,3µm,0.3s						
VA03	San Esteban	2.38	154		Pn	21 04 51.1	+0.6
VA03	San Esteban	2.38	154	⇑eP	Pn	21 04 51.2	+0.7
VA03				eS	Sn	21 05 20.9	+1.9
VA03				IAML		21 05 28.0	
	comp=E,3µm,0.3s						
VA01	Torpederas	2.40	177	Pn	Pn	21 04 50.0	-0.6
VA01	Torpederas	2.40	177	eP	Pn	21 04 49.9	-0.6
VA01				eS	Sn	21 05 21.4	+2.3
ROC1	El Roble	2.44	164		Pn	21 04 48.9	-2.5
AC04	Llanos de Chal	2.49	15		Pn	21 04 52.1	+0.2
AC04	Llanos de Chal	2.49	15	eP	Pn	21 04 51.6	-0.3
AC04				eS	Sn	21 05 21.4	0.0
PEL	Peldehue	2.69	160		Pn	21 04 54.3	-0.4
PEL	Peldehue	2.69	160	eP	Pn	21 04 54.9	+0.3
PEL				eS	Sn	21 05 28.1	+1.7
PEL				IAML		21 05 38.3	
	comp=E,1µm,0.4s						
MT02	Curacav	2.69	168		Pn	21 04 54.0	-0.6
MT02	Curacav	2.69	168	eP	Pn	21 04 54.1	-0.5
MT02				eS	Sn	21 05 28.1	+1.8
ZON	Zonda	2.83	110		Pn	21 04 58.8	+2.2
FCH	Farellones	2.99	155	eP	Pn	21 05 00.0	+1.0
FCH				eS	Sn	21 05 35.8	+1.6
VA05	Santo Domingo	3.03	177		Pn	21 04 58.7	-0.6
MT03	Universidad Ad	3.06	159		Pn	21 05 00.4	+0.5
MT03	Universidad Ad	3.06	159	eP	Pn	21 05 00.4	+0.5
MT03				eS	Sn	21 05 36.7	+0.9
MT03				IAML		21 05 51.5	
	comp=N,2µm,0.6s						
MT09	Talagante	3.22	168	Pn	Pn	21 05 02.2	+0.1
MT09	Talagante	3.22	168	eP	Pn	21 05 02.2	+0.1
MT09				eS	Sn	21 05 38.2	-1.5
MT09				IAML		21 05 54.0	
	comp=E,902nm,0.5s						
GO03	Copiap	3.31	25		Pn	21 05 04.0	+0.8
GO03	Copiap	3.31	25	eP	Pn	21 05 03.2	0.0
AC06	Mina Casimiro	3.49	22		Pn	21 05 05.8	+0.1
AC06	Mina Casimiro	3.49	22	eP	Pn	21 05 06.0	+0.4
LMEL	Las Melosas	3.49	158		Pn	21 05 06.5	+0.7
BO04	La Punta	3.50	164		Pn	21 05 06.1	+0.2
BO01	Tunca	3.81	171	Pn	Pn	21 05 09.7	-0.3
GO05	Huala	4.38	181		Pn	21 05 16.3	-1.6
AC02	Maricunga	4.44	32	Pn	Pn	21 05 20.1	+0.9
AC01	Pan de Azucar	4.58	14	Pn	Pn	21 05 19.4	-1.3
ML02	Panimavida	5.14	177		Pn	21 05 27.4	-0.9
GO02	Mina Guanaco	5.78	20	Pn	Pn	21 05 36.2	-1.2
H03N1	Juan Fernandez	6.66	243	Pn	Pn	21 05 48.6	-0.4
H03N1				T	T	21 12 42.2	
	baz=71,slow=72,SNR=5271						
H03N2	Juan Fernandez	6.68	243	Pn	Pn	21 05 48.5	-0.7
H03N2				T	T	21 12 43.1	
	baz=71,slow=72,SNR=4988						
H03N3	Juan Fernandez	6.68	243	Pn	Pn	21 05 48.5	-0.7
H03N3				T	T	21 12 41.6	
	baz=71,slow=72,SNR=3216						
H03S3	Juan Fernandez	6.82	240	Pn	Pn	21 05 49.6	-1.6
H03S3				T	T	21 12 55.4	
	baz=76						
H03S1	Juan Fernandez	6.83	240	Pn	Pn	21 05 49.3	-1.9
H03S1				T	T	21 12 56.6	
	baz=76,SNR=7.8						
H03S2	Juan Fernandez	6.84	240	Pn	Pn	21 05 49.6	-1.8
H03S2				T	T	21 12 57.2	
	baz=76,SNR=10						
PB10	IPOC Station P	7.17	9	Pn	Pn	21 05 55.3	-0.9
PB04	IPOC Station P	8.38	11	Pn	Pn	21 06 12.4	-0.7
PLCA	Paso Flores	10.14	175	Pn	Pn	21 06 36.2	-0.7
	comp=E,0.3nm,0.3s,baz=332,slow=11,SNR=8.3						
	comp=E,1.0nm,0.5s						
PLCA	Paso Flores	10.14	175	Pn	Pn	21 06 35.7	-1.2
TRQA	Tornquist	10.99	135		Pn	21 06 47.1	-1.4
ITQB	Itaqui	13.17	90	Pn	Pn	21 07 15.6	-2.8
CPUP	Villa Florida	13.42	75	Pn	Pn	21 07 20.1	-1.7
	comp=E,0.6nm,0.3s,baz=266,slow=9.3,SNR=4.4						
CPUP				Sn	Sn	21 09 56.1	+5.9
	comp=E,0.3nm,0.3s,baz=255,slow=5.6,SNR=3.5						
	comp=E,1.5nm,0.5s						
CPUP	Villa Florida	13.42	75	Pn	Pn	21 07 19.7	-2.1
CPUP	Villa Florida	13.42	75	eP	Pn	21 07 19.1	-2.7
LPAZ	La Paz	14.66	14	Pn	Pn	21 07 41.1	+1.8
	comp=E,0.4nm,0.3s,baz=184,slow=8.4,SNR=13						
LPAZ	La Paz	14.66	14	Pn	Pn	21 07 41.2	+1.9
LPAZ	La Paz	14.66	14	eP	Pn	21 07 41.3	+1.9
PLTB	Pedras Altas	15.61	99	Pn	Pn	21 07 49.6	-1.7
ITAB	Concordia	17.54	84		P	21 08 17.7	+1.0
ITAB				IAmb	IAmb	21 08 46.1	
	comp=Z,57nm,1.4s						
ITAB	Concordia	17.54	84	eP	P	21 08 18.6	+1.9
SIV	San Ignacio	17.56	36	Pn	Pn	21 08 16.3	+0.2
	baz=215,slow=11,SNR=21						
	comp=Z,7.1nm,0.9s						
AQDB	Aquidauana	17.67	59	eP	Pn	21 08 13.4	-4.0
PTGB	Pitanga	18.43	76	eP	Pn	21 08 28.7	+1.9
TRCB	Terra Rica	18.79	70	eP	P	21 08 30.8	+0.2
PTLB	Pontes e Lacer	19.05	40	eP	P	21 08 31.9	-1.5
PP1B	Ponte de Pedra	20.13	54	eP	P	21 08 44.5	-0.6
SALV	Santo Antonio	20.78	49	eP	P	21 08 52.2	-0.1
ITRB	Iturama	22.20	66	eP	P	21 09 11.3	+3.8
CZSB	Cruzeiro do Su	22.79	358	eP	P	21 09 30.7	+17
BB19B	Bebedouro	22.96	71	eP	P	21 09 21.1	+5.5
SAML	Samuel	23.01	22	P	P	21 09 15.4	-0.7
VAO	Valinhos	23.39	77	eP	P	21 09 27.1	+7.1
PDRB	Porto dos Gac	23.51	40	eP	P	21 09 21.6	+0.4
USHA	Ushuaia	24.32	175	P	P	21 09 28.7	+0.4
	comp=Z,7.1nm,0.9s,baz=348,slow=11,SNR=3.5						
	comp=Z,7.1nm,0.9s						
PARB	Paraibuna	24.39	79	eP	P	21 09 37.8	+8.4
CLDB	Colider	24.64	40	eP	P	21 09 36.8	+5.2
IPMB	Ipameri, GO	24.84	65	eP	P	21 09 39.8	+6.3
BDFB	Brasilia	26.39	61	P	P	21 09 46.5	-1.1
	comp=Z,5.7nm,0.7s,baz=223,slow=9.0,SNR=9.4						
	comp=Z,5.7nm,0.7s						
BDFB	Brasilia	26.39	61	P	P	21 09 46.1	-1.5
BDFB				IAmb	IAmb	21 09 59.3	
	comp=Z,16nm,1.0s						
VAS01	Vassouras-RJ	26.66	79	eP	P	21 10 01.8	+12
DIAM	Diamantina, MG	28.30	71	eP	P	21 10 14.5	+10
SMTB	Santa Maria do	31.29	51	eP	P	21 10 39.7	+8.6
MALB	Monte Alegre	33.09	33	eP	P	21 10 57.0	+10
NBLA	Lagarto - SE	37.09	66	eP	P	21 11 31.5	+10
ZARC	Zaragoza, Cauc	38.01	355	P	P	21 11 28.9	-0.2
ZARC				IAmb	IAmb	21 11 32.2	
	comp=Z,4.3nm,1.0s						
NBPS	Pedro II - PI	38.71	54	eP	P	21 11 45.2	+10
BAUV	El Baul	39.50	6	P	P	21 11 41.2	-0.4
BAUV				IAmb	IAmb	21 11 43.5	
	comp=Z,13nm,1.0s						
CELP	Cerrillos	48.67	7	P	P	21 12 53.9	-1.2
SNAA	Sanae	54.64	159	P	P	21 13 38.4	-0.7
	comp=Z,1.6nm,0.7s,baz=268,slow=9.0,SNR=2.8						
	comp=Z,1.6nm,0.7s						
SNAA	Sanae	54.64	159	P	P	21 13 38.9	-0.3
SNAA				IAmb	IAmb	21 13 47.7	
	comp=Z,2.6nm,0.7s						
QSPA	South Pole Qui	59.61	180	P	P	21 14 14.9	+0.5
	comp=Z,4.7nm,1.2s,baz=147,slow=2.7,SNR=9.8						
	comp=Z,4.7nm,1.2s						
QSPA	South Pole Qui	59.61	180	P	P	21 14 14.8	+0.3
QSPA				IAmb	IAmb	21 14 38.1	
	comp=Z,5.0nm,1.2s						
DBIC	Dimbokro	73.92	72	P	P	21 15 45.9	-0.4
	comp=Z,3.5nm,0.4s,baz=239,slow=6.0,SNR=10						
	comp=Z,3.5nm,0.4s						
DBIC	Dimbokro	73.92	72	P	P	21 15 45.8	-0.5
SUR	Sutherland	76.29	120	P	P	21 16 00.3	+0.3
MAW	Mawson	76.35	164	P	P	21 15 59.5	+0.1
	comp=Z,2.5nm,0.5s,baz=225,slow=8.1,SNR=14						
	comp=Z,2.5nm,0.5s						
MAW	Mawson	76.35	164	P	P	21 15 59.7	+0.3
KOWA	Kowa	79.07	66	P	P	21 16 14.5	-0.9
KOWA				IAmb	IAmb	21 16 28.5	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	81.24	325	P	P	21 16 28.6	+1.7
	comp=Z,0.4nm,0.4s,baz=123,slow=6.6,SNR=4.0						
	comp=Z,0.4nm,0.4s						
BOSA	Boshof	81.47	118	P	P	21 16 26.1	-2.3
	comp=Z,2.5nm,0.8s,baz=225,slow=7.1,SNR=3.2						
	comp=Z,2.5nm,0.8s						
BOSA	Boshof	81.47	118	P	P	21 16 26.1	-2.3
TOA0	Torodi Ar. Sit	82.87	70	P	P	21 16 34.9	-0.9
TOA0				IAmb	IAmb	21 16 48.4	
	comp=Z,7.0nm,0.9s						
TORD	Torodi Ar. Bea	82.87	70	P	P	21 16 35.1	-0.7
	comp=Z,1.7nm,0.5s,baz=278,slow=6.1,SNR=48						
	comp=Z,1.7nm,0.5s						
ULM	Lac du Bonnet	83.30	345	P	P	21 16 37.0	0.0
	comp=Z,2.5nm,0.6s,baz=146,slow=8.3,SNR=3.4						
	comp=Z,2.5nm,0.6s						
LBTB	Lobatse	83.54	115	P	P	21 16 38.7	-0.6
WRA	Warramunga Arr	123.80	210	PKP	PKPdf	21 23 08.1	-1.2
	comp=Z,0.4nm,0.5s,baz=150,slow=1.7,SNR=6.2						
H11S2	WAKE ISLAND Hy	125.96	271	T	T	23 41 55.9	
	baz=114,slow=74,SNR=135						
H11S1	WAKE ISLAND Hy	125.97	271	T	T	23 41 56.0	
	baz=114,slow=74,SNR=167						
H11S3	WAKE ISLAND Hy	125.98	271	T	T	23 41 57.5	
	baz=114,slow=74,SNR=138						
ZALV	Zalesovo Beam	151.22	29	PKPbc	PKPbc	21 24 03.5	-0.1
	comp=Z,5.8nm,0.8s,baz=300,slow=3.3,SNR=26						
ZALV				PKPab	PKPab	21 24 10.6	-0.9
	comp=Z,4.3nm,0.7s,baz=298,slow=3.8,SNR=6.5						
ZALV	Zalesovo Beam	151.22	29		PKPbc	21 24 03.0	-0.5
MKAR	Makanchi Array	154.29	44	PKPbc	PKiKP	21 24 12.8	+2.1
	comp=Z,0.2nm,0.5s,baz=318,slow=1.9,SNR=1.9						
MKAR				PKPab	sPKPbc	21 24 22.0	+0.3
	comp=Z,1.4nm,0.9s,baz=278,slow=3.6,SNR=6.3						
MKAR	Makanchi Array	154.29	44		PKiKP	21 24 11.8	+1.1
SONM	Songino Array	162.75	4	PKPab	PKPab	21 25 04.5	+3.1
	comp=Z,0.2nm,0.3s,baz=324,slow=4.5,SNR=2.2						

*IDC **18** 21:10:44.3±1.2, 32°.60N×141°.70E, h0^{km}, mb3.5/5, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=31.8km s-min=17.4km az=61.0*

*JMA **18** 21:10:46.1±0.4, 32°.7N±0°.9×14°2E±°, h35^{km}, MV3.4/17, E OFF HACHIJOJIMA ISLAND*

ISC 18 21:10:48.6±0.9**, 32°.61N**±0°.06×**141°.77E**±0°.10**, h35**^{km}**, n14, σ0^{s}.89**/20**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.72	286	eP	Pn	21 11 16.1	+0.1
JHJ	Hachijo jima 2	1.75	287	Pn	Pn	21 11 16.2	-0.2
	22nm,0.3s,baz=165,slow=19,SNR=2.0						
JHJ				Sn	Sn	21 11 36.5	-0.9
	26nm,0.3s,baz=46,slow=23,SNR=1.3						
BSO1	Boso 1	2.14	342	eP	Pn	21 11 20.2	-1.1
BSO1				eS	Sn	21 11 45.9	-0.5
JHU	Hanno	3.83	328	eP	Pn	21 11 44.9	-0.2
JHU				eS	Sn	21 12 28.2	-0.7
JHO	Hitachi	4.11	346	eP	Pn	21 11 48.2	-0.6
JRY	Ryogami san	4.14	326	eP	Pn	21 11 50.1	+0.8
JAG	Ashikaga	4.26	334	eP	Pn	21 11 51.0	+0.1
JAG				eS	Sn	21 12 39.3	0.0
MJAR	Matsushiro Arr	4.90	324	Pn	Pn	21 12 00.1	+0.4
	0.1nm,0.3s,baz=153,slow=10,SNR=7.3						
MJAR				Sn	Sn	21 12 54.4	-0.8
	baz=147,slow=14,SNR=1.3						
	1.2nm,0.4s						
JCJ	Chichijima	5.51	176	Pn	Pn	21 12 08.4	+0.4
	3.7nm,0.3s,baz=360,slow=19,SNR=11						
JCJ				Sn	Sn	21 13 08.6	-1.6
	5.3nm,0.3s,baz=287,slow=22,SNR=2.3						
	9.9nm,0.3s						
SONM	Songino Array	30.68	310	P	P	21 16 58.4	-1.5
	0.5nm,0.8s,baz=99,slow=8.9,SNR=1.9						
	0.5nm,0.8s						
MKAR	Makanchi Array	46.83	306	P	P	21 19 16.0	+1.1
	0.5nm,0.6s,baz=88,slow=9.4,SNR=6.6						
	0.5nm,0.6s						
WRA	Warramunga Arr	52.74	189	P	P	21 20 00.7	+0.7
	1.0nm,0.6s,baz=5.2,slow=7.7,SNR=14						
	1.0nm,0.6s						
ILAR	Eielson Array	53.11	31	P	P	21 20 03.6	+1.4
	0.6nm,1.0s,baz=270,slow=5.4,SNR=2.2						
	0.6nm,1.0s						
ASAR	Alice Springs	56.46	189	P	P	21 20 27.2	+0.3
	0.2nm,0.7s,baz=14,slow=12,SNR=4.4						
	0.2nm,0.7s						

NOU 18 21:12:12.9, 14°.06S×172°.09W, h86^{km}**, MLv3.1**/4**, Samoa Islands, Samoa Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	0.34	64	P	Pn	21 12 27.6	+1.4
AFI	Afiamalu	0.34	64	P	Pn	21 12 27.8	+1.6

*IDC **18** 21:20:58.0±5.1, 56°.18S×27°.22W, h90^{km}±46^{km}, mb4.1/8, mbtmp4.5/10, Error ellipse: s-maj=20.4km s-min=16.5km az=62.0*

*NEIC **18** 21:20:58.0±0.9, 56°.3S±0°.1×27°.3W±0°.1, h91^{km}±6^{km}, mb4.7/24, Error ellipse: s-maj=18.2km s-min=5.2km az=206.0*

ISC 18 21:20:59.8±0.5**, 56°.26S**±0°.08×**27°.43W**±0°.09**, h112**^{km}**, n54, σ0^{s}.69**/49**, mb4.5**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.54	287	Pn	Pn	21 22 18.4	-1.4
VNA1	Neumayer--Stat	16.66	158	P	P	21 24 47.1	+0.6
VNA3	Neumayer Olymp	16.84	160	P	Pn	21 24 47.8	-0.6
EFI	East Falkland	18.50	271	P	P	21 25 08.1	+1.1
EFI				IAmb	IAmb	21 25 34.1	
	comp=Z,56nm,1.4s						
SNAA	Sanae	18.61	156	P	P	21 25 07.1	-0.9
SNAA	Sanae	18.61	156	P	P	21 25 07.1	-0.9
	comp=Z,34nm,0.7s,baz=303,slow=9.7,SNR=132						
SNAA	Sanae	18.61	156	P	P	21 25 06.7	-1.3
SNAA				IAmb	IAmb	21 25 10.1	
	comp=Z,37nm,0.7s						
PMSA	Palmer Station	19.66	229	P	Pn	21 25 22.0	+0.1
	comp=Z,7.0nm,0.5s,baz=67,slow=6.1,SNR=13						
TROLL	Troll, Antarti	20.12	153	P	P	21 25 23.5	-1.0
BELA	Belgrano 2	21.86	184	P	P	21 25 42.2	-0.7
BELA				IAmb	IAmb	21 25 44.7	
	comp=Z,30nm,0.7s						
DSPA	Despedida	23.23	258	P	P	21 25 56.3	-0.5
MG02	Cerro Sombrero	24.23	261	P	P	21 26 06.4	+0.6
PLTB	Pedras Altas	30.54	312	P	P	21 27 02.3	-0.1
QSPA	South Pole Qui	33.99	180	P	P	21 27 33.0	+0.6
	comp=Z,6.8nm,0.6s,baz=202,slow=8.7,SNR=52						
	comp=Z,6.8nm,0.6s						
QSPA	South Pole Qui	33.99	180		P	21 27 33.0	+0.6
CPUP	Villa Florida	36.85	312	P	P	21 27 56.0	-1.0
	comp=Z,2.0nm,0.8s,baz=138,slow=4.0,SNR=2.9						
	comp=Z,2.0nm,0.8s						
MT02	Curacav	37.72	289	P	P	21 28 03.2	-1.1
MT02				IAmb	IAmb	21 28 03.9	
	comp=Z,19nm,1.4s						
CO01	Juntas del Tor	39.77	293	P	P	21 28 22.0	+0.2
MAW	Mawson	40.06	143	P	P	21 28 23.5	+0.1
	comp=Z,3.1nm,0.5s,baz=229,slow=6.4,SNR=8.0						
	comp=Z,3.1nm,0.5s						
MAW	Mawson	40.06	143	P	P	21 28 23.4	+0.1
AC02	Maricunga	41.85	297	P	P	21 28 39.4	+0.3
LVC	Limon Verde	45.29	301	P	P	21 29 06.9	+0.4
LVC				IAmb	IAmb	21 29 09.6	
	comp=Z,5.2nm,0.6s						
SBA	Scott Base	45.86	184	P	P	21 29 11.1	+1.1
VNDA	Vanda	46.36	183	P	P	21 29 15.1	+1.3
	comp=Z,3.1nm,0.7s,baz=178,slow=6.6,SNR=19						
	comp=Z,3.1nm,0.7s						
VNDA	Vanda	46.36	183	P	P	21 29 15.0	+1.1
PB02	IPOC Station P	46.86	300	P	P	21 29 19.1	+0.5
PB01	IPOC Station P	46.90	301	P	P	21 29 19.2	+0.3
PB01				IAmb	IAmb	21 29 20.1	
	comp=Z,6.9nm,0.6s						
H10S2	ASCENSION HYDR	48.24	17	T	T	22 22 14.0	
H10S3	ASCENSION HYDR	48.24	17	T	T	22 22 13.1	
	SNR=11						
LBTB	Lobatse	49.20	73	P	P	21 29 36.0	-0.5
	comp=Z,2.8nm,0.9s,baz=231,slow=5.6,SNR=5.3						
	comp=Z,2.8nm,0.9s						
LBTB	Lobatse	49.20	73	P	P	21 29 35.6	-1.0
LBTB				IAmb	IAmb	21 29 40.7	
	comp=Z,11nm,1.4s						
PB16	IPOC Station P	49.24	303		P	21 29 37.5	+0.1
PB16				IAmb	IAmb	21 29 39.1	
	comp=Z,2.5nm,0.5s						
H10N1	ASCENSION HYDR	49.36	17	T	T	22 23 37.4	
	baz=189,slow=76,SNR=4.7						
H10N3	ASCENSION HYDR	49.36	17	T	T	22 23 38.0	
	baz=189,slow=76,SNR=19						
H10N2	ASCENSION HYDR	49.37	17	T	T	22 23 38.9	
	baz=189,slow=76,SNR=3.9						
LPAZ	La Paz	50.39	306	P	P	21 29 47.1	+0.9
	comp=Z,3.4nm,0.6s,baz=172,slow=6.4,SNR=18						
	comp=Z,3.4nm,0.6s						
LPAZ	La Paz	50.39	306		P	21 29 46.6	+0.4
LPAZ				IAmb	IAmb	21 29 51.2	
	comp=Z,3.3nm,0.7s						
DBIC	Dimbokro	65.41	25	P	P	21 31 30.6	+0.3
	comp=Z,3.1nm,0.6s,baz=208,slow=9.6,SNR=5.4						
	comp=Z,3.1nm,0.6s						
DBIC	Dimbokro	65.41	25	P	P	21 31 30.4	+0.1
DBIC				IAmb	IAmb	21 31 58.7	
	comp=Z,15nm,1.4s						
TOA0	Torodi Ar. Sit	73.30	30	P	P	21 32 19.3	+0.5
TOA0				IAmb	IAmb	21 32 20.0	
	comp=Z,5.7nm,0.7s						
TORD	Torodi Ar. Bea	73.30	30	P	P	21 32 19.1	+0.2
	comp=Z,4.9nm,0.6s,baz=204,slow=6.9,SNR=29						
	comp=Z,4.9nm,0.6s						
BIRV	Birongo	73.88	320	P	P	21 32 23.3	+1.0
QRZ	Quartz Range	81.82	195	P	P	21 33 05.6	-0.4
FINES	FINESS Array B	124.63	28	PKP	PKPdf	21 39 44.4	0.0
	comp=Z,1.6nm,0.5s,baz=180,slow=1.9,SNR=27						
FINES	FINESS Array B	124.63	28		PKPdf	21 39 44.2	-0.2
CMAR	Chiang Mai Arr	125.12	111	PKP	PKiKP	21 39 47.5	+0.4
	comp=Z,0.3nm,0.4s,baz=249,slow=1.7,SNR=4.1						
ARCES	ARCESS Array B	131.19	22	PKP	PKPdf	21 39 57.0	+0.2
	comp=Z,3.4nm,1.0s,baz=210,slow=2.7,SNR=7.6						
YKA	Yellowknife Ar	136.23	318	PKP	PKPdf	21 40 06.7	+0.3
	comp=Z,0.6nm,0.4s,baz=125,slow=2.9,SNR=7.7						
INK	Inuvik	145.88	320	PKPbc	PKPbc	21 40 24.8	+0.4
	comp=Z,7.0nm,0.6s,baz=88,slow=3.6,SNR=27						
ILAR	Eielson Array	150.15	311	PKPbc	PKPbc	21 40 36.2	+0.4
	comp=Z,5.1nm,0.8s,baz=120,slow=2.9,SNR=41						
KDAK	Kodiak Island	150.79	296	PKPbc	PKiKP	21 40 38.2	+0.1
	comp=Z,7.9nm,0.6s,baz=156,slow=0.9,SNR=12						
KDAK	Kodiak Island	150.79	296		PKiKP	21 40 38.0	-0.1
SONM	Songino Array	150.88	87	PKPbc	PKPbc	21 40 38.0	-0.3

	comp=Z,1.4nm,0.5s,baz=213,slow=3.4,SNR=5.6						
SONM	Songino Array	150.88	87		PKPbc	21 40 37.9	-0.4

ANF ***18*** *21:35:45.9±0.3, 36°.93N×97°.86W, h4^{km}, ML3.1/7, Error ellipse: s-maj=3.7km s-min=2.8km az=178.0*
TUL ***18*** *21:35:45.6±0.5, 36°.92N±0°.01×97°.86W±0°.02, h4^{km}±2^{km}, ML2.8, mb_Lg2.6/40(NEIC), Error ellipse: s-maj=2.6km s-min=1.3km az=109.0*
NEIC ***18*** *21:35:46.3±0.4, 36°.920N±0°.008×97°.86W±0°.02, h2^{km}±5^{km}, Error ellipse: s-maj=1.9km s-min=1.2km az=100.0*
ISC 18 21:35:45.8±1.4**, 36°.93N**±0°.04×**97°.84W**±0°.03**, h1**^{km}±13^{km}**, n39, σ0^{s}.68**/31**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.06	90		Pg	21 36 05.9	-0.3
T35B	Sooner Cattle	1.06	90	P	Pg	21 36 06.0	-0.2
	baz=271						
T35B				S	Sg	21 36 20.6	+0.5
	baz=271						
U32A	Winter Ranch,	1.08	240		Pg	21 36 05.8	-0.7
U32A	Winter Ranch,	1.08	240	P	Pg	21 36 05.9	-0.7
	baz=59						
U32A				S	Sg	21 36 21.0	+0.4
	baz=59						
OKCFA	Oklahoma City	1.54	168		Pn	21 36 13.9	-0.6
OKCFA				IAmb_Lg		21 36 33.4	
	comp=Z,29nm,0.7s						
OKCFA	Oklahoma City	1.54	168	P	Pn	21 36 14.2	-0.3
	baz=348						
OKCFA				S	Sg	21 36 35.7	+0.4
	baz=348						
R32A	Long Quarter,	1.65	335		Pn	21 36 16.0	0.0
R32A	Long Quarter,	1.65	335	P	Pn	21 36 16.3	+0.3
	baz=156						
R32A				S	Sn	21 36 37.8	0.0
	baz=156						
FNO	Franklin	1.70	168	Pn	Pn	21 36 16.5	-0.2
TUL1	Leonard	1.94	121	Pn	Pn	21 36 18.9	-1.0
TUL1				IAmb_Lg		21 36 51.4	
	comp=Z,30nm,0.8s						
TUL1	Leonard	1.94	121	P	Pn	21 36 21.1	+1.2
	baz=302						
TUL1				S	Sb	21 36 46.5	-0.1
	baz=302						
WMOK	Wichita Mounta	2.31	200		Pn	21 36 24.5	-0.6
WMOK	Wichita Mounta	2.31	200	P	Pn	21 36 24.8	-0.3
	baz=19						
X34A	Smith Ranch, M	2.32	180	Pn	Pn	21 36 25.7	+0.5
X34A				IAmb_Lg		21 36 58.2	
	comp=Z,26nm,1.3s						
KSU1	Kansas State U	2.38	24	Pn	Pn	21 36 26.1	+0.1
KSU1				IAmb_Lg		21 37 00.0	
	comp=Z,20nm,0.7s						
CBKS	Cedar Bluff	2.41	322	Pn	Pn	21 36 26.4	0.0
X37A	Clayton	3.08	139		Pn	21 36 36.0	+0.4
X37A				IAmb_Lg		21 37 31.3	
	comp=Z,22nm,1.0s						
X37A	Clayton	3.08	139	P	Pn	21 36 36.2	+0.6
	baz=320						
HHAR	Hobbs	3.20	100		Pn	21 36 37.4	+0.1
S39A	Bolivar	3.68	77		Pn	21 36 43.6	-0.4
W39A	Magazine	3.71	116	IAmb_Lg		21 37 52.2	
	comp=Z,19nm,1.1s						
AMTX	Amarillo	3.72	238	P	Pb	21 36 53.2	+0.8
	baz=56						
N33A	J Bar K, Exete	3.82	4	Pn	Pn	21 36 45.1	-0.8
U40A	Yellville	4.05	97	Pn	Pn	21 36 48.7	-0.3
MIAR	Mount Ida	4.20	123	IAmb_Lg		21 38 08.1	
	comp=Z,9.4nm,0.8s						
P38A	Dawn	4.33	50	Pn	Pn	21 36 53.0	+0.1
MGMO	Mountain Grove	4.46	85	IAmb_Lg		21 38 15.2	
	comp=Z,12nm,0.9s						
BGNE	Belgrade	4.48	357	IAmb_Lg		21 38 11.6	
	comp=Z,18nm,0.7s						
ABTX	Abilene, Hawle	4.54	200	IAmb_Lg		21 38 10.7	
	comp=Z,14nm,0.9s						
R40A	Maddies Statio	4.63	71		Pn	21 36 56.4	-0.5
FCAR	Ozark Folk Cen	4.72	101	Pn	Pn	21 36 56.1	-2.2
FCAR				IAmb_Lg		21 38 17.5	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	4.74	119	IAmb_Lg		21 38 28.3	
	comp=Z,10nm,0.9s						
P40A	Paris	5.25	59	IAmb_Lg		21 38 32.7	
	comp=Z,11nm,0.8s						
T25A	Trinidad	5.26	274	IAmb_Lg		21 38 37.9	
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	5.37	76	IAmb_Lg		21 38 41.3	
	comp=Z,8.3nm,0.8s						
PBMO	Poplar Bluff	5.94	89	IAmb_Lg		21 38 58.2	
	comp=Z,9.3nm,0.8s						
FVM	French Village	5.99	78	IAmb_Lg		21 38 58.8	
	comp=Z,9.6nm,0.8s						
Q24A	Divide	6.12	292	IAmb_Lg		21 39 15.2	
	comp=Z,5.8nm,0.8s						
RWWY	Rawlins	8.68	306	IAmb_Lg		21 40 39.8	
	comp=Z,5.9nm,1.1s						

IDC ***18*** *22:00:13.2±3.5, 36°.05N×141°.30E, h36^{km}±31^{km}, mb3.5/3, mbtmp3.9/7, ML3.8/3, MS3.2/3, Error ellipse: s-maj=33.6km s-min=18.8km az=81.0*
NEIC ***18*** *22:00:14.9±1.9, 36°.04N±0°.05×141°.09E±0°.07, h44^{km}±11^{km}, mb4.0/6, Error ellipse: s-maj=8.9km s-min=6.9km az=122.0*
JMA ***18*** *22:00:15.1±0.1, 36°.0N±0°.3×141°.0E±0°.8, h49^{km}±1^{km}, MV3.2/36, E OFF IBARAKI PREF*
JMA Felt I J1 at E OFF IBARAKI PREF .
ISC 18 22:00:14.1±1.0**, 36°.04N**±0°.05×**141°.12E**±0°.06**, h43**^{km}±10^{km}**, n45, σ1^{s}.14**/45**, mb3.9**/6**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.40	213	P	Pn	22 00 24.5	+0.8
CHOJ				eS	Sn	22 00 31.3	+0.9
JIHU	Itakohorinouch	0.49	262	P	Pn	22 00 25.1	+0.3
JIHU				eS	Sn	22 00 32.9	+0.5
JHYU	Hitachinakayam	0.53	305	⇓P	Pn	22 00 25.7	+0.4
JHYU				⇓eS	Sn	22 00 33.5	+0.2
JSMT	Sammumatsuo	0.68	235	P	Pn	22 00 27.8	+0.6
JHO	Hitachi	0.73	322	P	Pn	22 00 28.2	+0.2
JYT	Yasato	0.78	284		Pn	22 00 27.9	-0.7
JYT				Sn	Sn	22 00 37.4	-1.7
JYT	Yasato	0.78	284	⇓P	Pn	22 00 28.2	-0.4
JYT				⇓eS	Sn	22 00 37.7	-1.4
JFK	Kawauchi	1.34	351	P	Pn	22 00 37.1	+0.7
JAG	Ashikaga	1.41	286	⇓P	Pn	22 00 37.1	-0.1
JMM	Marumori	1.84	352		Pn	22 00 44.5	+1.3
JMM				Sn	Sn	22 01 06.0	+0.6
MJAR	Matsushiro Arr	2.41	283	Pn	Pn	22 00 51.4	+0.3
	3.8nm,0.3s,baz=103,slow=8.9,SNR=28						
MJAR				Sn	Sn	22 01 21.7	+2.4
	1.0nm,0.3s,baz=84,slow=11,SNR=2.9						
MJAR	Matsushiro Arr	2.41	283		Pn	22 00 52.1	+1.1
MAJO	Matsushiro	2.41	283		Pn	22 00 52.2	+1.1
MJB9	Matsu-Tunnel	2.41	283		Pn	22 00 52.4	+1.3
JSD	Sado	3.04	312		Pn	22 01 00.6	+1.0
JGF	Kuroka	3.09	263		Pn	22 01 02.3	+1.9
JHJ	Hachijo jima 2	3.11	201	Pn	Pn	22 01 01.6	+0.9
	7.9nm,0.3s,baz=72,slow=20,SNR=2.0						
JHJ				Sn	Sn	22 01 36.8	+0.1
	39nm,0.3s,baz=63,slow=22,SNR=7.8						
	217nm,0.8s						
INU	Inuyama	3.41	260	Pn	Pn	22 01 05.6	+0.9
JTM	Tenmabayashi	4.74	359	Pn	Pn	22 01 25.0	+1.9
ERM	Erimo	6.18	14		Pn	22 01 42.1	-0.6
JHS	Saijyo	6.61	263	Pn	Pn	22 01 50.6	+1.9
ASAJ	Asahikawa	8.15	8	Pn	Pn	22 02 08.8	-0.9
	1.4nm,0.3s,baz=224,slow=12,SNR=8.0						
ASAJ				Sn	Sn	22 03 38.9	-1.6
	0.5nm,0.3s,baz=44,slow=26,SNR=2.3						
	2.7nm,0.3s						
JKA	Kamikawa-asahi	8.15	8	Pn	Pn	22 02 08.8	-1.0
JCJ	Chichijima	8.96	174	Pn	Pn	22 02 19.3	-1.6
	2.2nm,0.3s,baz=6.0,slow=19,SNR=6.5						
JCJ				Sn	Sn	22 03 51.6	-9.0
	3.5nm,0.3s,baz=274,slow=22,SNR=2.0						
	10nm,0.5s						
USRK	Ussuriysk Ar.	10.73	322	LR	LR	22 06 49.1	
	comp=Z,68nm,20.3s,baz=181,slow=37						
JOW	Kunigami	14.29	234	LR	LR	22 09 11.7	
	comp=Z,148nm,19.8s,baz=228,slow=37						
BJT	Baijiatuau	20.04	289	P	P	22 04 40.4	-2.9
BJT				IAmb	IAmb	22 04 42.0	
	comp=Z,6.5nm,0.5s						
PETK	Petropavlovsk-	20.67	29	P	P	22 04 49.8	-0.3
H11N2	WAKE ISLAND Hy	27.86	119	T	T	22 35 14.0	
	baz=311,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	27.86	119	T	T	22 35 05.7	
	baz=311,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	27.87	119	T	T	22 35 09.7	
	baz=311,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	28.53	121	T	T	22 36 02.4	
	baz=313,slow=75,SNR=39						
H11S3	WAKE ISLAND Hy	28.53	121	T	T	22 35 57.5	
	baz=313,slow=75,SNR=26						
H11S2	WAKE ISLAND Hy	28.55	121	T	T	22 36 00.8	
	baz=313,slow=75,SNR=21						
MK31	Makanchi Array	44.46	303	P	P	22 08 21.3	+0.5
MKAR	Makanchi Array	44.46	303	P	P	22 08 21.7	+0.9
	comp=Z,0.8nm,0.6s,baz=87,slow=10.0,SNR=11						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	44.46	303	P	P	22 08 21.2	+0.4
MAKZ	Makanchi	44.67	303	P	P	22 08 23.8	+1.3
MAKZ				IAmb	IAmb	22 08 25.6	
	comp=Z,2.5nm,1.4s						
KURK	Kurchatov	46.37	309	P	P	22 08 35.8	-0.1
KURK				IAmb	IAmb	22 08 36.7	
	comp=Z,2.4nm,0.8s						
KURBB	Kurchatov Arra	46.44	309	P	P	22 08 36.7	+0.3
	comp=Z,1.1nm,0.4s,baz=83,slow=7.8,SNR=12						
	comp=Z,1.1nm,0.4s						
WRA	Warramunga Arr	56.04	188	P	P	22 09 48.7	+0.1
	comp=Z,0.2nm,0.4s,baz=360,slow=7.4,SNR=2.0						
	comp=Z,0.2nm,0.4s						
ARU	Arti	56.95	319	P	P	22 09 55.2	+0.4
ABKAR	Akbulak array	58.41	311	P	P	22 10 05.3	+0.3
ABKAR	Akbulak array	58.41	311	P	P	22 10 05.3	+0.3
ABKAR				IAmb	IAmb	22 10 06.3	
	comp=Z,0.8nm,0.8s						
DLBC	Dease Lake	59.55	38	LR	LR	22 36 57.5	
	comp=Z,32nm,20.6s,baz=254,slow=37						

SNET ***18*** *22:01:09.8±1.0, 12°.85N×88°.69W, h33^{km}±4^{km}, ML4.2*
INET ***18*** *22:01:09.4±0.8, 12°.75N×88°.65W, h29^{km}±9^{km}, MW4.2*
UCR ***18*** *22:01:10.0±1.4, 12°.86N×88°.69W, h33^{km}±4^{km}, ML4.1, MW3.8, mb4.2(NEIC)*
NEIC ***18*** *22:01:11.1±2.6, 12°.89N±0°.07×88°.52W±0°.06, h63^{km}±10^{km}, mb4.2/17, Md4.4(SNET), Error ellipse: s-maj=11.3km s-min=5.7km az=218.0*
GCG ***18*** *22:01:11.0±0.3, 12°.54N×89°.17W, h8^{km}±58^{km}, MD3.8*
IDC ***18*** *22:01:14.5±24.0, 12°.74N×88°.24W, h122^{km}±150^{km}, mb3.4/9, mbtmp3.8/9, MS3.6/1, Error ellipse: s-maj=194.0km s-min=38.1km az=162.0*
ISC 18 22:01:09.3±1.0**, 12°.83N**±0°.05×**88°.63W**±0°.03**, h54**^{km}±8^{km}**, n123, σ1^{s}.33**/160**, mb4.2**/14**, 6D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	0.56	41	⇓eP	Pn	22 01 21.7	+0.1
JUCU				eS	Sn	22 01 30.8	+0.3
JUCU				IAML		22 01 37.3	
	comp=Z,7µm,0.3s						
JUCU	Jucuar¡n	0.56	41	⇓eP	Pn	22 01 21.7	+0.1
JUCU				eS	Sn	22 01 30.8	+0.3
JUCU				IAML		22 01 37.3	
	comp=Z,7µm,0.3s						
JUCU	Jucuar¡n	0.56	41	eP	Pn	22 01 21.7	+0.1
JUCU				eS	Sn	22 01 31.2	+0.7
LCY	Lacayo	0.68	29	⇓eP	Pn	22 01 23.6	+0.5
LCY	Lacayo	0.68	29	⇓eP	Pn	22 01 23.6	+0.5
PACA	Pacayal	0.70	25	eP	Pn	22 01 23.9	+0.5
PACA				eS	Sn	22 01 34.7	+1.1
PACA				IAML		22 01 36.7	
	comp=Z,62µm,0.3s						
PACA	Pacayal	0.70	25	eP	Pn	22 01 23.9	+0.5
PACA				eS	Sn	22 01 34.7	+1.1
PACA				IAML		22 01 36.7	
	comp=Z,62µm,0.3s						
PACA	Pacayal	0.70	25	eP	Pn	22 01 24.0	+0.5
PACA				eS	Sn	22 01 35.3	+1.6
PQSS	Presa 15 de Se	0.79	5	eP	Pn	22 01 24.5	+0.1
PQSS				eS	Sn	22 01 36.1	+0.6
PQSS	Presa 15 de Se	0.79	5	eP	Pn	22 01 24.5	+0.1
PQSS				eS	Sn	22 01 36.1	+0.6
COEG	Centro de Oper	0.82	343	eP	Pn	22 01 24.7	-0.2
COEG				eS	Sn	22 01 36.5	+0.2
COEG	Centro de Oper	0.82	343	eP	Pn	22 01 24.7	-0.2
COEG				eS	Sn	22 01 36.5	+0.2
LCND	La Caada	0.86	56	eP	Pn	22 01 25.6	+0.2
LCND				eS	Sn	22 01 38.5	+1.4
LCND				IAML		22 01 43.6	
	comp=Z,7µm,0.3s						
LCND	La Caada	0.86	56	eP	Pn	22 01 25.6	+0.2
LCND				eS	Sn	22 01 38.5	+1.4
LCND				IAML		22 01 43.6	
	comp=Z,7µm,0.3s						
CNCH	Conchagua	0.89	60	eP	Pn	22 01 26.7	+0.8
CNCH	Conchagua	0.89	60	eP	Pn	22 01 26.7	+0.8
CNCH	Conchagua	0.89	60	eP	Pn	22 01 25.7	-0.1
CNCH				eS	Sn	22 01 39.7	+1.7
LFRS	El Faro	0.90	332	eP	Pn	22 01 25.8	-0.1
LFRS	El Faro	0.90	332	eP	Pn	22 01 25.8	-0.1
PAVA	Las Pavas	0.93	341	eP	Pn	22 01 26.4	+0.1
PAVA				eS	Sn	22 01 39.2	+0.4
PAVA	Las Pavas	0.93	341	eP	Pn	22 01 26.4	+0.1
PAVA				eS	Sn	22 01 39.2	+0.4
PAVA	Las Pavas	0.93	341	eP	Pn	22 01 26.8	+0.5
PAVA				eS	Sn	22 01 40.2	+1.4
LALI	Alcalda de L	0.94	314	eP	Pn	22 01 25.2	-1.2
LALI				eS	Sn	22 01 37.6	-1.3
LALI	Alcalda de L	0.94	314	eP	Pn	22 01 25.2	-1.2
LALI				eS	Sn	22 01 37.6	-1.3
LALI	Alcalda de L	0.94	314	eP	Pn	22 01 26.1	-0.2
LALI				eS	Sn	22 01 37.6	-1.3
LBRS	Las Brisas	0.99	336	eP	Pn	22 01 26.8	-0.3
LBRS	Las Brisas	0.99	336	eP	Pn	22 01 26.8	-0.3
FAGO	Alcalda de S	1.00	30	eP	Pn	22 01 25.3	-1.8
FAGO				eS	Sn	22 01 40.0	-0.4
LFU	La Fuente	1.03	333	eP	Pn	22 01 27.5	-0.1
LFU	La Fuente	1.03	333	eP	Pn	22 01 27.5	-0.1
SNET	Serv Nac Est T	1.04	326		Pn	22 01 27.6	-0.1
CSGN	Cosiguina Volc	1.05	82	eP	Pn	22 01 27.7	-0.3
BOQS	Boqueron	1.10	325	eP	Pn	22 01 28.9	+0.2
BOQS				eS	Sn	22 01 43.6	+0.6
BOQS	Boqueron	1.10	325	eP	Pn	22 01 28.9	+0.2
BOQS				eS	Sn	22 01 43.6	+0.6
JAYA	Jayaque - finc	1.15	316	eP	Pn	22 01 27.7	-1.5
JAYA				eS	Sn	22 01 42.4	-1.7
JAYA				IAML		22 01 43.7	
	comp=Z,6µm,0.1s						
JAYA	Jayaque - finc	1.15	316	eP	Pn	22 01 27.7	-1.5
JAYA				eS	Sn	22 01 42.4	-1.7
JAYA				IAML		22 01 43.7	
	comp=Z,6µm,0.1s						
CEDA	San Andres	1.22	323	eP	Pn	22 01 30.1	0.0
CEDA	San Andres	1.22	323	eP	Pn	22 01 30.1	0.0
CEVE	Cerro Verde	1.39	316	eP	Pn	22 01 33.4	+0.8
CEVE				eS	Sn	22 01 50.5	+0.5
CEVE				IAML		22 02 00.1	
	comp=Z,4µm,0.3s						
CEVE	Cerro Verde	1.39	316	eP	Pn	22 01 33.4	+0.8
CEVE				eS	Sn	22 01 50.5	+0.5
CEVE				IAML		22 02 00.1	
	comp=Z,4µm,0.3s						
SBLS	San Blas	1.40	316	eP	Pn	22 01 33.2	+0.5
SBLS	San Blas	1.40	316	eP	Pn	22 01 33.2	+0.5
RTR	El Retiro	1.45	317	eP	Pn	22 01 34.0	+0.6
RTR				eS	Sn	22 01 52.4	+0.9
RTR	El Retiro	1.45	317	eP	Pn	22 01 34.0	+0.6
RTR				eS	Sn	22 01 52.4	+0.9
CRIN	San Cristobal	1.55	95	Pn	Pn	22 01 35.0	+0.4
CRIN				Sn	Sn	22 01 54.3	+0.7
CRIN	San Cristobal	1.55	95	eP	Pn	22 01 35.0	+0.4
CRIN				eS	Sn	22 01 54.5	+0.9
NUBE	Las Nubes	1.55	314	eP	Pn	22 01 34.8	+0.2
NUBE				eS	Sn	22 01 53.0	-0.7
NUBE	Las Nubes	1.55	314	eP	Pn	22 01 34.8	+0.2
NUBE				eS	Sn	22 01 53.0	-0.7
MTO3	Montecristo	1.72	336	Pn	Pn	22 01 37.9	+0.8
MTO3				Sn	Sn	22 02 00.0	+2.1
MTO3	Montecristo	1.72	336	⇓eP	Pn	22 01 37.6	+0.6
MTO3	Montecristo	1.72	336	⇓eP	Pn	22 01 37.6	+0.6
MTO3	Montecristo	1.72	336	eP	Pn	22 01 37.8	+0.8
MTO3				eS	Sn	22 02 00.8	+2.8
TGUH	Tegucigalpa,Un	1.80	47	Pn	Pn	22 01 39.2	+1.2
TGUH				Sn	Sn	22 02 01.0	+1.2
TGUH	Tegucigalpa,Un	1.80	47	eP	Pn	22 01 39.2	+1.2
ESQI	Esquipulas	1.86	338	Pn	Pn	22 01 40.1	+1.3
ESQI				Sn	Sn	22 02 03.4	+2.2
CNGN	Cerro Negro	1.91	100	Pn	Pn	22 01 39.0	-0.5
CNGN				Sn	Sn	22 02 00.3	-2.2
MOMN	Momotombo	2.08	101	eP	Pn	22 01 41.4	-0.4
MOMN				eS	Sn	22 02 05.2	-1.4
COPN	Copaltepe	2.09	108	eP	Pn	22 01 41.3	-0.6
APYN	Apoyeque	2.30	105	eP	Pn	22 01 44.1	-0.8
NBG	Las Nubes	2.42	317	eP	Pn	22 01 50.3	+3.6
MRL	Marmol	2.46	336	eP	Pn	22 01 53.5	+6.3
MATN	Matagalpa	2.64	88	Pn	Pn	22 01 49.6	+0.1
MATN	Matagalpa	2.64	88	eP	Pn	22 01 49.5	-0.1
MATN				eS	Sn	22 02 20.2	-0.2
FUG	Fuego 3	2.69	307	eS	Sn	22 02 24.3	+2.6
BOAB	BOACO BROADBAN	2.92	97	Pn	Pn	22 01 52.9	-0.4
STG3	Santiaguito 3,	3.42	304	eS	Sn	22 02 41.3	+1.7
ACON	Acoyapa	3.48	104	Pn	Pn	22 02 01.1	+0.1
HZTE	Horizontes, Gu	3.64	125	Pn	Pn	22 02 04.2	+1.0
BUEV	Buena Vista	3.74	122	eP	Pn	22 02 06.8	+2.1
LIM1	Limonal	3.93	122	eP	Pn	22 02 09.7	+2.6
ORTG	Ortega, Santa	3.96	128	Pn	Pn	22 02 08.8	+1.2
SAJU	San Juanillo,	3.96	134	eP	Pn	22 02 08.2	+0.6
GUAI	GUAI	3.98	129	eP	Pn	22 02 09.3	+1.5
HORNC	Hornillas	3.98	122	eP	Pn	22 02 09.6	+1.7
CUI	Cuipilapa	4.02	122	eP	Pn	22 02 10.3	+1.8
PLVR	Palo Verde	4.05	127	eP	Pn	22 02 10.5	+1.5
DUNO	Dulce Nombre,	4.11	131	Pn	Pn	22 02 10.7	+1.1
ACAL	Aguas Claras	4.14	121	eP	Pn	22 02 14.7	+4.6
JTS	Las Juntas de	4.40	125	Pn	Pn	22 02 16.2	+2.6
CEDE	Laguna Cedeo	4.50	121	eP	Pn	22 02 17.4	+2.4
LAFE	Finca La Fe, P	4.72	129	eP	Pn	22 02 19.0	+0.9
CCIG	Comitan	4.83	316	Pn	Pn	22 02 23.1	+3.4
LCR2	La Lucha 2	5.47	124	eP	Pn	22 02 31.3	+2.7
RIMA	Rio Macho	5.58	123	Pn	Pn	22 02 32.4	+2.5
RIMA	Rio Macho	5.58	123	eP	Pn	22 02 33.4	+3.5
CDM	Cerro de Muert	5.78	124	eP	Pn	22 02 35.8	+2.9
SRBA	San Rafael, Bu	6.29	124	Pn	Pn	22 02 41.4	+1.8
SRBA	San Rafael, Bu	6.29	124	eP	Pn	22 02 41.9	+2.3
DRK0	Durika	6.36	123	Pn	Pn	22 02 42.8	+2.1
DRK0	Durika	6.36	123	eP	Pn	22 02 43.0	+2.3
BAUV	El Baul	20.58	99	P	P	22 05 41.6	-2.3
BAUV				IAmb	IAmb	22 05 47.9	
	comp=Z,10nm,1.0s						
GOGA	Godfrey	21.02	12	P	P	22 05 49.6	+1.1
Y49A	Blount Mountai	21.03	5	P	P	22 05 50.0	+1.3
TXAR	Lajitas Array	21.56	322	P	P	22 05 57.8	+3.4
	comp=Z,0.8nm,0.7s,baz=135,slow=11,SNR=6.4						
	comp=Z,0.8nm,0.7s						
TXAR	Lajitas Array	21.56	322	P	P	22 05 55.5	+1.0
TX31	Lajitas Ar. Si	21.56	322	P	P	22 05 55.8	+1.4
TKL	Tuckaleechee C	23.15	10	P	P	22 06 11.0	0.0
	comp=Z,1.7nm,0.6s,baz=153,slow=3.1,SNR=2.1						
	comp=Z,1.7nm,0.6s						
TKL	Tuckaleechee C	23.15	10	P	P	22 06 10.7	-0.3
TKL				IAmb	IAmb	22 06 28.9	
	comp=Z,16nm,1.4s						
LPIG	La Paz	23.38	302	P	P	22 06 15.9	+2.4
	comp=Z,60nm,0.3s,baz=204,slow=3.0,SNR=4.6						
V58A	Windy Hill, Pi	24.43	19	P	P	22 06 22.9	0.0
V58A				IAmb	IAmb	22 06 49.0	
	comp=Z,20nm,1.5s						
MSTX	Muleshoe	24.67	331	P	P	22 06 25.2	-0.1
MSTX				IAmb	IAmb	22 06 26.7	
	comp=Z,6.0nm,0.8s						
Q54A	Coxs Mills	26.95	13	P	P	22 06 45.8	+0.1
Q54A				IAmb	IAmb	22 06 58.0	
	comp=Z,7.6nm,1.2s						
ILAM	Ilet Lapin Mar	27.02	83	P	P	22 06 45.5	-1.0
PDAR	Pinedale Array	34.90	333	P	P	22 07 55.9	-0.1
	comp=Z,0.6nm,0.7s,baz=111,slow=4.9,SNR=3.8						
	comp=Z,0.6nm,0.7s						
REDW	Red Top Meadow	35.96	332	P	P	22 08 05.5	+0.5
NVAR	Mina Array Bea	36.66	319	P	P	22 08 12.4	+1.2
	comp=Z,0.3nm,0.6s,baz=134,slow=7.6,SNR=2.3						
	comp=Z,0.3nm,0.6s						
GCMT	Greycliff	37.39	336	P	P	22 08 16.1	-1.0
MCMT	McKenzie Canyo	38.00	332	P	P	22 08 23.6	+1.1
BOZ	Bozeman (W)	38.05	334	P	P	22 08 23.1	+0.4
EGMT	Eagleton	39.26	338	P	P	22 08 33.4	+0.7
SCHQ	Schefferville	45.26	18	P	P	22 09 18.9	-2.4
	comp=Z,2.1nm,0.7s,baz=230,slow=5.4,SNR=4.5						
	comp=Z,2.1nm,0.7s						
SCHQ	Schefferville	45.26	18	P	P	22 09 19.8	-1.5
SCHQ				IAmb	IAmb	22 09 44.7	
	comp=Z,5.7nm,1.1s						
FCC	Fort Churchill	46.03	356	P	P	22 09 26.4	-0.9
FCC				IAmb	IAmb	22 09 26.6	
	comp=Z,2.4nm,0.7s						
BBB	Bella Bella	50.41	329	LR	LR	22 33 40.8	
	comp=Z,57nm,19.3s,baz=344,slow=38						
YKA	Yellowknife Ar	52.95	345	P	P	22 10 19.0	-1.0
	comp=Z,1.7nm,0.6s,baz=133,slow=8.5,SNR=11						
	comp=Z,1.7nm,0.6s						
YKA	Yellowknife Ar	52.95	345	P	P	22 10 19.2	-0.8
DLBC	Dease Lake	55.08	335	P	P	22 10 36.0	+0.3
	comp=Z,1.9nm,0.5s,baz=139,slow=6.3,SNR=3.6						
	comp=Z,1.9nm,0.5s						
DLBC	Dease Lake	55.08	335	P	P	22 10 35.4	-0.3
INK	Inuvik	62.51	343	P	P	22 11 26.4	-0.6
	comp=Z,1.2nm,0.6s,baz=135,slow=10,SNR=7.1						
	comp=Z,1.2nm,0.6s						
INK	Inuvik	62.51	343	P	P	22 11 26.7	-0.2
INK				IAmb	IAmb	22 11 27.1	
	comp=Z,1.5nm,0.7s						
ILAR	Eielson Array	65.21	336	P	P	22 11 43.9	-1.0
	comp=Z,0.5nm,0.8s,baz=160,slow=4.9,SNR=6.5						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	65.21	336	P	P	22 11 44.1	-0.8
BMAR	Burnt Mountain	65.52	339	P	P	22 11 46.7	-0.2

IDC ***18*** *22:16:16.9±1.3, 13°.92N×90°.80W, h0^{km}, mb3.9/8, mbtmp3.9/10, ML4.3/2, Error ellipse: s-maj=29.9km s-min=28.8km az=2.0*
INET ***18*** *22:16:25.1±1.5, 13°.83N×91°.48W, h15^{km}±11^{km}, MW4.2*
SNET ***18*** *22:16:26.3±1.1, 13°.99N×91°.27W, h15^{km}±4^{km}, ML4.8*
GCG ***18*** *22:16:26.4±0.4, 13°.92N×91°.44W, h24^{km}±3^{km}, MD4.1*
UCR ***18*** *22:16:26.3±1.1, 13°.98N×91°.27W, h14^{km}±5^{km}, ML4.5, mb4.3(NEIC)*
NEIC ***18*** *22:16:27.3±2.3, 14°.05N±0°.06×91°.37W±0°.05, h59^{km}±5^{km}, mb4.3/23, Md4.4(SNET), Error ellipse: s-maj=9.4km s-min=6.3km az=217.0*
ISC 18 22:16:26.5±0.9**, 13°.95N**±0°.06×**91°.40W**±0°.05**, h65**^{km}±8^{km}**, n129, σ1^{s}.21**/156**, mb4.2**/19**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.64	333		Pn	22 16 39.2	-1.2
RTAL					Sn	22 16 49.7	-0.9
RTAL	Retalhuleu	0.64	333	eP	Pn	22 16 39.3	-1.2
RTAL				eS	Sn	22 16 48.5	-2.1
FUG	Fuego 3	0.73	47	eP	Pn	22 16 41.6	-0.1
STG3	Santiaguito 3,	0.78	348	eP	Pn	22 16 41.7	-0.5
PCG	Pacaya	0.89	60	eP	Pn	22 16 44.1	+0.6
NBG	Las Nubes	1.20	58	eP	Pn	22 16 49.4	+1.8
NBG				eS	Sn	22 17 07.0	+3.6
HUEH	Huehuetenango	1.37	356		Pn	22 16 48.0	-1.8
HUEH	Huehuetenango	1.37	356	eP	Pn	22 16 50.8	+1.0
HUEH				eS	Sn	22 17 09.4	+2.2
HUEH	Huehuetenango	1.37	356	eP	Pn	22 16 50.8	+1.0
HUEH				eS	Sn	22 17 09.4	+2.2
HUEH	Huehuetenango	1.37	356	eP	Pn	22 16 51.4	+1.6
HUEH				eS	Sn	22 17 10.2	+3.0
SLOZ	Alcaldia de Sa	1.57	87	eP	Pn	22 16 51.9	-0.4
SLOZ				eS	Sn	22 17 12.1	+0.4
NUBE	Las Nubes	1.57	91	eP	Pn	22 16 51.5	-0.9
NUBE				eS	Sn	22 17 10.9	-1.1
NUBE	Las Nubes	1.57	91	eP	Pn	22 16 51.5	-0.9
NUBE				eS	Sn	22 17 10.9	-1.1
RTR	El Retiro	1.70	91	eP	Pn	22 16 54.4	+0.2
RTR	El Retiro	1.70	91	eP	Pn	22 16 54.4	+0.2
CEVE	Cerro Verde	1.73	94	eP	Pn	22 16 54.1	-0.5
CEVE				eS	Sn	22 17 16.3	+0.5
CEVE	Cerro Verde	1.73	94	eP	Pn	22 16 54.1	-0.5

CEVE				*e*S	Sn	22 17 16.3	+0.5
SBLS	San Blas	1.73	93	*e*P	Pn	22 16 54.2	-0.4
SBLS	San Blas	1.73	93	*e*P	Pn	22 16 54.2	-0.4
SNJE	San Jose	1.74	92	*e*P	Pn	22 16 54.4	-0.4
SNJE	San Jose	1.74	92	*e*P	Pn	22 16 54.4	-0.4
JAYA	Jayaque - finc	1.92	98	*e*P	Pn	22 16 55.2	-1.9
JAYA				*e*S	Sn	22 17 18.3	-1.9
JAYA				IAML		22 17 20.7	
	comp=Z,6µm,0.2s						
JAYA	Jayaque - finc	1.92	98	*e*P	Pn	22 16 55.2	-1.9
JAYA				*e*S	Sn	22 17 18.3	-1.9
JAYA				IAML		22 17 20.7	
	comp=Z,6µm,0.2s						
CEDA	San Andres	1.95	94	*e*P	Pn	22 16 57.4	0.0
CEDA				*e*S	Sn	22 17 21.8	+0.9
CEDA	San Andres	1.95	94	*e*P	Pn	22 16 57.4	0.0
CEDA				*e*S	Sn	22 17 21.8	+0.9
CEDA	San Andres	1.95	94	*e*P	Pn	22 16 57.5	+0.1
CEDA				*e*S	Sn	22 17 22.3	+1.4
MRL	Marmol	2.01	56	*e*P	Pn	22 17 00.1	+1.7
MTO3	Montecristo	2.03	77		Pn	22 16 58.3	-0.3
MTO3				Sn	Sn	22 17 25.2	+2.2
MTO3	Montecristo	2.03	77	*e*P	Pn	22 16 58.4	-0.2
MTO3	Montecristo	2.03	77	*e*P	Pn	22 16 58.4	-0.2
MTO3	Montecristo	2.03	77	*e*P	Pn	22 16 58.5	-0.1
BOQS	Boqueron	2.07	96	*e*P	Pn	22 16 59.1	0.0
BOQS				*e*S	Sn	22 17 25.3	+1.3
BOQS	Boqueron	2.07	96	*e*P	Pn	22 16 59.1	0.0
BOQS				*e*S	Sn	22 17 25.3	+1.3
LALI	Alcalda de L	2.07	102	*e*P	Pn	22 16 58.5	-0.5
LALI	Alcalda de L	2.07	102	*e*P	Pn	22 16 58.5	-0.5
LALI	Alcalda de L	2.07	102	*e*P	Pn	22 16 58.7	-0.3
LALI				*e*S	Sn	22 17 24.4	+0.7
ESQI	Esquipulas	2.09	73	Pn	Pn	22 16 59.6	+0.3
ESQI	Esquipulas	2.09	73	*e*P	Pn	22 16 59.3	0.0
UEES	Universidad Ev	2.11	96	*e*P	Pn	22 16 59.3	-0.3
UEES				*e*S	Sn	22 17 26.3	+1.5
UEES	Universidad Ev	2.11	96	*e*P	Pn	22 16 59.3	-0.3
UEES				*e*S	Sn	22 17 26.3	+1.5
SNET	Serv Nac Est T	2.12	97		Pn	22 16 59.5	-0.3
SNET	Serv Nac Est T	2.12	97	*e*P	Pn	22 16 59.6	-0.1
SNET				*e*S	Sn	22 17 25.1	0.0
SNET	Serv Nac Est T	2.12	97	*e*P	Pn	22 16 59.6	-0.1
SNET				*e*S	Sn	22 17 25.1	0.0
SNET	Serv Nac Est T	2.12	97	*e*P	Pn	22 16 59.7	-0.1
SNET				*e*S	Sn	22 17 26.3	+1.2
LFRS	El Faro	2.29	98	*e*P	Pn	22 17 02.2	+0.1
LFRS	El Faro	2.29	98	*e*P	Pn	22 17 02.2	+0.1
SJTE	Alcalda de S	2.35	98	*e*P	Pn	22 17 02.9	+0.1
SJTE	Alcalda de S	2.35	98	*e*P	Pn	22 17 02.9	+0.1
PAVA	Las Pavas	2.40	95	*e*P	Pn	22 17 03.7	+0.1
PAVA	Las Pavas	2.40	95	*e*P	Pn	22 17 03.7	+0.1
PAVA	Las Pavas	2.40	95	*e*P	Pn	22 17 04.1	+0.6
PAVA				*e*S	Sn	22 17 35.8	+3.8
COEG	Centro de Oper	2.47	97	*e*P	Pn	22 17 04.8	+0.3
COEG	Centro de Oper	2.47	97	*e*P	Pn	22 17 04.8	+0.3
COEG	Centro de Oper	2.47	97	*e*P	Pn	22 17 05.4	+1.0
COEG				*e*S	Sn	22 17 36.2	+2.7
SCLA	Alcaldia de Sa	2.60	95	*e*P	Pn	22 17 06.3	0.0
SCLA	Alcaldia de Sa	2.60	95	*e*P	Pn	22 17 06.3	0.0
PACA	Pacayal	3.02	99	*e*P	Pn	22 17 13.0	+0.9
PACA				IAML		22 17 55.9	
	comp=Z,8µm,0.4s						
PACA	Pacayal	3.02	99	*e*P	Pn	22 17 13.0	+0.9
PACA				IAML		22 17 55.9	
	comp=Z,8µm,0.4s						
VSM	San Miguel	3.08	99	*e*P	Pn	22 17 13.9	+1.0
VSM	San Miguel	3.08	99	*e*P	Pn	22 17 13.9	+1.0
PETF	Flores	3.30	26	Pn	Pn	22 17 15.8	0.0
LCND	La Caada	3.47	100	*e*P	Pn	22 17 18.5	+0.5
LCND				IAML		22 17 23.7	
	comp=Z,1µm,0.3s						
LCND	La Caada	3.47	100	*e*P	Pn	22 17 18.5	+0.5
LCND				IAML		22 17 23.7	
	comp=Z,1µm,0.3s						
TGUH	Tegucigalpa,Un	4.00	88		Pn	22 17 25.1	-0.5
CRIN	San Cristobal	4.41	106		Pn	22 17 30.8	-0.2
CRIN	San Cristobal	4.41	106	*e*P	Pn	22 17 30.7	-0.2
CMIG	Matias Romero	4.59	313	Pn	Pn	22 17 33.7	+0.3
	comp=Z,17nm,0.3s,baz=164,slow=13,SNR=69						
CMIG				Sn	Sn	22 18 24.9	-0.6
	comp=Z,17nm,0.3s,baz=119,slow=11,SNR=6.7						
	comp=Z,31nm,0.3s						
CNGN	Cerro Negro	4.80	107		Pn	22 17 36.0	-0.3
MOMN	Momotombo	4.97	107	*e*P	Pn	22 17 37.5	-1.2
COPN	Copaltepe	5.00	110	*e*P	Pn	22 17 38.5	-0.5
MATN	Matagalpa	5.42	100		Pn	22 17 44.4	-0.5
BOAB	BOACO BROADBAN	5.78	104	Pn	Pn	22 17 48.6	-1.0
ACON	Acoyapa	6.38	107		Pn	22 17 57.6	-0.3
HZTE	Horizontes, Gu	6.52	119	Pn	Pn	22 18 01.5	+1.7
ORTG	Ortega, Santa	6.81	121		Pn	22 18 05.2	+1.3
DUNO	Dulce Nombre,	6.94	123		Pn	22 18 06.0	+0.5
ESPN	Las Esperanzas	7.13	103		Pn	22 18 07.8	-0.4
JTS	Las Juntas de	7.27	119		Pn	22 18 11.9	+1.7
TLIG	Tlapa	7.78	298	Pn	Pn	22 18 17.8	+0.6
JACO	JACO, Garabito	7.85	122	Pn	Pn	22 18 18.6	+0.6
RIMA	Rio Macho	8.46	119		Pn	22 18 27.9	+1.3
PEZE	Perez Zeledon,	8.82	120		Pn	22 18 32.4	+1.1
SRBA	San Rafael, Bu	9.16	120		Pn	22 18 37.9	+1.8
DRK0	Durika	9.24	119	Pn	Pn	22 18 38.3	+1.0
RIOS	Rincon, Osa	9.32	123		Pn	22 18 39.9	+1.7
CDITO	Canoas	9.92	122	Pn	Pn	22 18 48.8	+2.4
TX31	Lajitas Ar. Si	19.07	325	P	P	22 20 45.8	+2.0
TXAR	Lajitas Array	19.07	325	P	P	22 20 45.7	+1.8
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=4.7						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	19.07	325	P	P	22 20 45.8	+1.9
WLAR	White Oak Lake	19.72	356	P	P	22 20 52.1	+1.3
WLAR				IAmb	IAmb	22 20 54.4	
	comp=Z,13nm,0.6s						
Y49A	Blount Mountai	20.34	12	P	P	22 20 57.9	+0.4
Y49A				IAmb	IAmb	22 21 01.8	
	comp=Z,18nm,1.5s						
GOGA	Godfrey	20.68	19	P	Pn	22 21 03.2	-0.9
LCAR	Lake Charles	22.03	1	P	P	22 21 16.2	+0.6
TKL	Tuckaleechee C	22.68	16	P	P	22 21 22.9	+0.3
	comp=Z,1.6nm,0.5s,baz=170,slow=8.9,SNR=7.2						
TKL	Tuckaleechee C	22.68	16	P	P	22 21 22.4	-0.2
TKL				IAmb	IAmb	22 21 48.3	
	comp=Z,11nm,1.1s						
BAUV	El Baul	23.42	100	P	P	22 21 29.1	-1.0
BAUV				IAmb	IAmb	22 21 39.6	
	comp=Z,29nm,1.4s						
TZTN	Tazewell	23.58	16	P	P	22 21 30.6	-0.8
V55A	Taylorsville	23.66	21	P	P	22 21 31.8	-0.3
V55A				IAmb	IAmb	22 21 54.3	
	comp=Z,12nm,1.2s						
ANMO	Albuquerque	24.94	330	P	P	22 21 44.6	+0.7
	comp=Z,1.1nm,0.7s,baz=144,slow=11,SNR=3.5						
	comp=Z,1.1nm,0.7s						
ANMO	Albuquerque	24.94	330	P	P	22 21 44.5	+0.5
SSPA	Standing Stone	29.10	21	P	P	22 22 19.9	-1.1
SSPA				IAmb	IAmb	22 22 40.0	
	comp=Z,13nm,1.5s						
L59A	Walton	31.51	24	P	P	22 22 41.0	-1.4
L59A				IAmb	IAmb	22 23 05.2	
	comp=Z,10nm,1.3s						
SADO	Sadowa	32.45	16	P	P	22 22 47.8	-2.7
	comp=Z,1.4nm,0.4s,baz=232,slow=8.7,SNR=1.9						
	comp=Z,1.4nm,0.4s						
SADO	Sadowa	32.45	16	P	P	22 22 48.1	-2.3
SADO				IAmb	IAmb	22 22 51.5	
	comp=Z,6.2nm,1.4s						
NVAR	Mina Array Bea	34.08	321	P	P	22 23 07.8	+2.7
	comp=Z,0.6nm,0.7s,baz=141,slow=8.2,SNR=5.7						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	34.08	321	P	P	22 23 05.3	+0.3
SAML	Samuel	36.07	128	P	P	22 23 22.7	+0.5
SAML				IAmb	IAmb	22 23 41.2	
	comp=Z,5.8nm,1.5s						
PKME	Peaks-Kenny Pk	36.41	27	P	P	22 23 24.2	-0.5
F10A	Beach Ranch, E	38.64	331	P	P	22 23 44.2	+0.6
F10A				IAmb	IAmb	22 23 45.1	
	comp=Z,4.1nm,0.7s						
SCHQ	Schefferville	45.07	20	P	P	22 24 33.5	-2.4
	comp=Z,2.9nm,0.8s,baz=262,slow=7.6,SNR=5.2						
	comp=Z,2.9nm,0.8s						
SCHQ	Schefferville	45.07	20	P	P	22 24 33.6	-2.3
YKA	Yellowknife Ar	51.22	346	P	P	22 25 22.5	-0.6
	comp=Z,0.5nm,0.3s,baz=140,slow=8.7,SNR=6.0						
	comp=Z,0.5nm,0.3s						
VRDI	Verde Repeater	60.10	334	P	P	22 26 27.7	+0.6
BCAR	Beaver Creek A	60.32	336	P	P	22 26 28.9	+0.5
INK	Inuvik	60.66	343	P	P	22 26 30.2	-0.2
INK				IAmb	IAmb	22 26 36.4	
	comp=Z,2.2nm,1.1s						
BRLK	Bradley Lake	62.87	331	P	P	22 26 46.4	+0.8
KDAK	Kodiak Island	63.07	328	P	P	22 26 47.7	+0.8
IL31		63.12	337	P	P	22 26 46.8	-0.2
IL31				IAmb	IAmb	22 26 49.0	
	comp=Z,4.4nm,1.4s						
ILAR	Eielson Array	63.12	337	P	P	22 26 47.0	-0.1
	comp=Z,0.3nm,0.4s,baz=126,slow=5.8,SNR=5.5						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	63.12	337	P	P	22 26 47.0	-0.1
BMAR	Burnt Mountain	63.54	340	P	P	22 26 50.4	+0.4
M19K	Big River Lodg	65.19	332	P	P	22 27 01.0	+0.3
M19K				IAmb	IAmb	22 27 08.7	
	comp=Z,6.1nm,1.1s						
PPT	Papeete	65.39	243	P	P	22 27 05.1	+2.4
	comp=Z,18nm,0.3s,baz=58,slow=19,SNR=5.0						
ARCES	ARCESS Array B	86.01	18	P	P	22 28 57.1	-2.4
	comp=Z,6.0nm,1.2s,baz=286,slow=6.5,SNR=4.1						
	comp=Z,6.0nm,1.2s						
TORD	Torodi Ar. Bea	89.82	77	P	P	22 29 16.2	-2.6
	comp=Z,0.2nm,0.6s,baz=266,slow=4.4,SNR=1.2						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	119.28	5	PKP	PKPdf	22 35 07.8	-0.8
	comp=Z,0.2nm,0.4s,baz=303,slow=4.0,SNR=4.6						
MKAR	Makanchi Array	119.28	5		PKPdf	22 35 07.9	-0.7
CMAR	Chiang Mai Arr	146.23	342	PKPbc	PKPdf	22 36 00.6	+1.1
	comp=Z,2.6nm,0.5s,baz=339,slow=3.4,SNR=11						
CMAR	Chiang Mai Arr	146.23	342		PKPdf	22 35 59.8	+0.3

MOS ***18*** *22:44:03.5±2.1, 40°.48N×48°.63E, $h13^{km}$, mb4.6/2, Error ellipse: s-maj=13.2km s-min=6.3km az=105.2*
IDC ***18*** *22:44:03.5±1.1, 40°.55N×48°.50E, $h0^{km}$, mb3.7/8, mbtmp3.6/14, ML3.4/5, MS3.2/1, Error ellipse: s-maj=24.0km s-min=10.5km az=168.0*
AZER ***18*** *22:44:04.8±0.0, 40°.60N×48°.51E, $h6^{km}$, Error ellipse: s-maj=0.3km s-min=0.2km az=319.0*
DRS ***18*** *22:44:05.6±0.0, 40°.43N×48°.51E, $h17^{km}$*
TEH ***18*** *22:44:07.6, 40°.61N×48°.50E, $h19^{km}$, ML3.4*
NNC ***18*** *22:44:14.4±3.8, 41°.25N×49°.11E, $h0^{km}$, mb3.7, Error ellipse: s-maj=53.7km s-min=26.0km az=106.0*
ISC 18 22:44:06.9±0.8, **40°.57N**±0°.02×**48°.50E**±0°.02, **$h25^{km}$**$\pm6^{km}$**,**
n128, $\sigma2^{s}.25$/175, **mb3.6**/9, **5C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PQL	Pirkuli	0.23	18	*e*Pg	Pb	22 44 11.8	-1.3
PQL	Pirkuli	0.23	18	P	Pb	22 44 11.8	-1.3
	SNR=1357						
PQL				S	Sb	22 44 16.7	-0.6
KDMR	Kurdemir	0.31	231	*e*Pg	Pb	22 44 14.8	+0.8
KDMR	Kurdemir	0.31	231	P	Pb	22 44 14.8	+0.8
	SNR=253						
KDMR				S	Sn	22 44 22.3	+0.8
IML	Ismayilli	0.33	313	*e*Pg	Pb	22 44 14.3	-0.1
IML	Ismayilli	0.33	313	P	Pb	22 44 14.3	-0.1
	SNR=968						
IML				S	Sn	22 44 21.5	-0.8
GBS	Qobustan	0.34	95	*e*Pn	Pb	22 44 14.5	-0.1
GBS	Qobustan	0.34	95	P	Pb	22 44 14.5	-0.1
	SNR=253						
GBS				S	Sn	22 44 22.1	-0.4
ATGJ	Altiaghaj	0.44	49	*e*Pn	Pb	22 44 15.8	-0.5
ATGJ	Altiaghaj	0.44	49	P	Pb	22 44 15.8	-0.5
	SNR=121						
ATGJ				S	Sn	22 44 24.4	-0.8
SIZA	Siyzn	0.59	31	*e*Pn	Pb	22 44 18.6	-0.1
SIZA	Siyzn	0.59	31	P	Pb	22 44 18.7	-0.1
	SNR=418						
SIZA				S	Sn	22 44 30.2	+1.4
QBL	Gabala	0.63	307	*e*Pn	Pb	22 44 19.2	-0.1
QBL	Gabala	0.63	307	P	Pb	22 44 19.2	-0.1
	SNR=84						
QBL				S	Sn	22 44 29.7	+0.1
XNQ	Khinaliq	0.66	336	*e*Pn	Pb	22 44 19.6	-0.4
XNQ	Khinaliq	0.66	336	P	Pb	22 44 19.6	-0.4
	SNR=141						
XNQ				S	Sn	22 44 30.1	-0.6
ZRD	Zardab	0.69	245	*e*Pn	Pn	22 44 21.7	+0.7
ZRD	Zardab	0.69	245	P	Pn	22 44 21.7	+0.7
	SNR=191						
ZRD				S	Sn	22 44 34.6	+3.7
SAAT	Saatly	0.71	185	*e*Pn	Pn	22 44 21.4	0.0
SAAT	Saatly	0.71	185	P	Pn	22 44 21.5	+0.1
	SNR=37						
SAAT				S	Sn	22 44 34.4	+2.9
ALIB	Äli-Bayra	0.72	147	*e*Pn	Pn	22 44 22.7	+1.1
ALIB	Äli-Bayra	0.72	147	P	Pn	22 44 23.0	+1.4
	SNR=22						
ALIB				S	Sn	22 44 34.2	+2.4
QUBA	Quba, Azerbaij	0.79	360	P	Pn	22 44 22.8	+0.3
	SNR=174						
QUBA				S	Sn	22 44 34.9	+1.4
QUB	Quba	0.82	353	*e*Pn	Pn	22 44 22.9	-0.1
GOBA	Gobu	0.96	100	*e*Pn	Pb	22 44 27.8	+3.0
GOBA	Gobu	0.96	100	P	Pb	22 44 28.0	+3.2
	SNR=52						
GOBA				S	Sn	22 44 44.1	+6.5
QSAR	Qusar	0.96	349	*e*Pn	Pb	22 44 25.5	+0.6
QSAR	Qusar	0.96	349	P	Pb	22 44 25.6	+0.6
	SNR=121						
QSAR				S	Sn	22 44 39.8	+1.9
BRDA	Brd	1.05	254	*e*Pn	Pb	22 44 28.1	+1.6
BRDA	Brd	1.05	254	P	Pb	22 44 28.1	+1.6
	SNR=13						
BRDA				S	Sn	22 44 45.5	+5.6
KSMR	Kasumkent	1.07	345	⇑*i*PG	Pb	22 44 27.4	+0.6
KSMR				*e*S	Sn	22 44 44.9	+4.3
KSMR				pmax	pmax		
	comp=Z,324nm,0.8s						
KSMR				smax	smax		
	comp=N,3.0nm,0.4s						
KSMR				smax	smax		
	comp=E,5.0nm,0.3s						
KSMR				smax	smax		
	comp=E,4.0nm,0.3s						
KSMR	Kasumkent	1.07	345	*i* Pg	Pb	22 44 27.4	+0.6
	comp=E,324nm,0.8s						
KSMR				*e*Sg	Sn	22 44 44.9	+4.3
	comp=E,1µm,0.3s						
AKT	Akhty	1.08	328	⇑*i*PG	Pb	22 44 26.7	-0.3
AKT				*e*S	Sn	22 44 43.6	+2.7
AKT				pmax	pmax		
	comp=Z,213nm,0.3s						
AKT				smax	smax		
	comp=N,934nm,0.5s						
AKT	Akhty	1.08	328	*i* Pg	Pb	22 44 26.7	-0.3
	comp=N,214nm,0.3s						
AKT				*e*Sg	Sn	22 44 43.1	+2.2
	comp=N,4.0nm,0.3s						
MNGR	Mingechevir, A	1.09	281	*e*Pn	Pb	22 44 27.8	+0.6
MNGR	Mingechevir, A	1.09	281	P	Pb	22 44 28.0	+0.8
	SNR=18						
MNGR				S	Sn	22 44 45.8	+4.8
BLQ	Beylaqan	1.11	221	*e*Pn	Pb	22 44 27.7	+0.3
BLQ	Beylaqan	1.11	221	P	Pb	22 44 27.8	+0.3
	SNR=110						
BLQ				S	Sb	22 44 44.4	+2.9
NDR	Nardaran	1.13	89	*e*Pn	Pb	22 44 29.0	+1.2
NDR	Nardaran	1.13	89	P	Pb	22 44 29.6	+1.8
	SNR=40						
NDR				S	Sb	22 44 44.6	+2.5
AGDM	Agdam	1.16	247	P	Pb	22 44 28.9	+0.6
	SNR=201						
AGDM				S	Sb	22 44 47.0	+4.1
SEKA	Sheki	1.18	303	*e*Pn	Pb	22 44 28.0	-0.6
SEKA	Sheki	1.18	303	P	Pb	22 44 28.1	-0.6
	SNR=426						
SEKA				S	Sb	22 44 45.9	+2.5
GALA	Gala	1.27	97	S	Sb	22 44 50.6	+4.5
GLBA	Clilabad	1.33	184	*e*Pn	Pn	22 44 30.5	+0.6
GLBA	Clilabad	1.33	184	Pn	Pn	22 44 30.5	+0.6
	SNR=31						
GLBA				Sn	Sb	22 44 50.5	+2.8
QRD	Qoradiz	1.43	220	*e*Pn	Pb	22 44 32.3	-0.6
QRD	Qoradiz	1.43	220	Pn	Pb	22 44 32.2	-0.6
	SNR=33						
QRD				Sn	Sb	22 44 53.0	+2.4
DRN	Derbent	1.47	355	⇑*i*PG	Pb	22 44 34.2	+0.8
DRN				*e*S	Sb	22 44 56.6	+5.0
DRN				pmax	pmax		
	comp=Z,404nm,0.4s						
DRN				smax	smax		
	comp=E,2µm,0.3s						
DRN				smax	smax		
	comp=N,1µm,0.3s						
DRN				smax	smax		
	comp=E,2µm,0.3s						
DRN	Derbent	1.47	355	*i* Pg	Pb	22 44 34.3	+0.8
	comp=E,404nm,0.4s						
DRN				*e*Sg	Sb	22 44 56.7	+5.0
	comp=E,268nm,0.4s						
GANJ	Ganja	1.66	273	*e*Pn	Pn	22 44 35.4	+0.9
GANJ	Ganja	1.66	273	Pn	Pn	22 44 35.2	+0.7
	SNR=185						
GANJ				Sn	Sb	22 44 57.9	+0.6
YRD	Yardimli	1.66	187	*e*Pn	Pb	22 44 36.0	-1.0
YRD	Yardimli	1.66	187	Pg	Pn	22 44 35.6	+1.0
	SNR=56						
YRD				Sn	Sb	22 44 59.2	+1.6
URKR	Urkarakh	1.72	338	*e*PN	Pb	22 44 38.5	+0.5
URKR				*e*S	Sb	22 45 04.9	+5.6
URKR				pmax	pmax		
	comp=Z,112nm,0.5s						
URKR				smax	smax		
	comp=E,319nm,0.8s						
URKR	Urkarakh	1.72	338	*e*Pg	Pb	22 44 38.5	+0.5
	comp=E,112nm,0.5s						
URKR				*e*Sg	Sb	22 45 04.5	+5.2
	comp=E,259nm,0.6s						
ZKT	Zaqatala	1.76	309	*e*Pn	Pb	22 44 38.0	-0.5
ZKTA	Zakatala	1.78	308	Pn	Pb	22 44 38.1	-0.7
	SNR=132						
ZKTA				Sn	Sb	22 45 04.2	+3.5
LKRN	Lenkeran, Azer	1.87	173	*e*Pn	Pb	22 44 39.0	-1.4
LKRN	Lenkeran, Azer	1.87	173	Pn	Pb	22 44 38.9	-1.4
	SNR=26						
LKRN				Sn	Sb	22 45 04.3	+1.1
KMKR	Kumukh	1.88	326	*e*PN	Pb	22 44 40.8	+0.1
KMKR				*e*S	Sb	22 45 08.9	+5.0
KMKR				pmax	pmax		
	comp=Z,195nm,0.4s						
KMKR				smax	smax		
	comp=E,315nm,0.4s						
KMKR	Kumukh	1.88	326	*e*Pg	Pb	22 44 40.9	+0.1
	comp=E,195nm,0.4s						
KMKR				*e*Sg	Sb	22 45 08.5	+4.6
	comp=E,224nm,0.4s						
LRK	Lerik	1.93	184	*e*Pn	Pb	22 44 40.1	-1.4
LRK	Lerik	1.93	184	Pg	Pb	22 44 40.0	-1.4
	SNR=73						
LRK				Sg	Sb	22 45 05.7	+0.6
SGKR	Sergokala	1.99	342	*e*PN	Pb	22 44 42.0	-0.5
SGKR				*e*S	Sb	22 45 10.7	+3.9
SGKR				*e*S	Sn	22 45 11.3	+8.0
SGKR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SGKR				smax	smax		
	comp=E,366nm,0.6s						
SGKR				smax	smax		
	comp=N,225nm,0.4s						
SGKR				smax	smax		
	comp=E,344nm,0.6s						
SGKR	Sergokala	1.99	342	*e*Pg	Pb	22 44 42.0	-0.5
	comp=E,1.0nm,0.5s						
SGKR				*e*Sg	Sb	22 45 10.8	+3.9
ASTR	Astara	2.02	173	*e*Pn	Pn	22 44 40.5	+1.1
ASTR	Astara	2.02	173	Pg	Pn	22 44 40.4	+1.1
	SNR=13						
ASTR				Sn	Sb	22 45 08.7	+1.1
GDB	GEDABAY	2.09	275	*e*Pn	Pn	22 44 41.5	+0.9
GDB	GEDABAY	2.09	275	Pg	Pn	22 44 41.7	+1.1
	SNR=57						
GDB				Sg	Sb	22 45 09.6	-0.4
QZX	Qazax, Azerbai	2.42	283	*e*Pn	Pn	22 44 46.6	+1.6
QZX	Qazax, Azerbai	2.42	283	Pn	Pn	22 44 46.5	+1.6
	SNR=48						
QZX				Sn	Sb	22 45 18.0	-1.3
TVRZ	Varzaqan	2.50	215	*e*Pn	Pn	22 44 48.6	+2.4
TVRZ				*e*		22 45 28.9	
	comp=Z,4µm,0.4s						
MAK	Makhachkala	2.50	343	*e*PN	Pn	22 44 44.8	-1.2
MAK				pmax	pmax		
	comp=Z,96nm,0.7s						
MAK				MLR	MLR		
	comp=Z,104nm,7.0s						
IHRS	Heris	2.51	207	*e*Pn	Pn	22 44 48.6	+2.2
IHRS				*e*		22 44 55.5	
	comp=Z,2µm,0.2s						
ORD	Ordubad	2.53	230	*e*Pn	Pn	22 44 48.5	+2.0
ORD	Ordubad	2.53	230	Pn	Pb	22 44 49.2	-2.5
	SNR=48						
ORD				Sn	Sb	22 45 22.8	+0.3
SBZ	Shahbuz	2.55	244	*e*Pn	Pb	22 44 49.9	-2.1
SBZ	Shahbuz	2.55	244	Pn	Pb	22 44 49.5	-2.5
	SNR=33						
SBZ				Sg	Sb	22 45 25.9	+2.9
NAX	Nakhchivan	2.70	240	Pg	Pb	22 44 53.2	-1.3
	SNR=32						
NAX				Sg	Sb	22 45 31.6	+4.4
ISRB	Sarab	2.81	194	*e*Pn	Pn	22 44 52.5	+1.9
ISRB				*e*		22 45 09.9	
	comp=Z,959nm,0.4s						
IMRD	Marand	2.84	230	*e*Pn	Pb	22 44 54.4	-2.7
IMRD				*e*		22 45 45.9	
	comp=Z,4µm,0.5s						
GNI	Garni	2.90	263	Pn	Pn	22 44 54.2	+2.5
	comp=Z,8.9nm,0.3s,baz=322,slow=13,SNR=14						
GNI				Lg	Lg	22 45 37.6	
	comp=Z,12nm,0.3s,baz=204,slow=19,SNR=7.2						
HYR	Heyderabad	2.92	254	Pn	Pb	22 44 55.2	-3.1
	SNR=16						
HYR				Sg	Sb	22 45 36.8	+3.2
ITBZ	Tabriz	2.96	219	*e*Pn	Pb	22 44 56.0	-3.0
ITBZ				*e*		22 45 00.4	
	comp=Z,980nm,0.4s						
IBST	Bostanabad	3.12	204	*e*Pn	Pn	22 44 57.1	+2.3
ISHB	Shabestar	3.19	225	*e*Pn	Pn	22 44 58.0	+2.2
ISHB				*e*		22 45 51.9	
	comp=Z,1µm,0.6s						
GROC	Groznyy	3.32	323	*e*PN	Pb	22 45 05.9	+0.9
GROC				*e*		22 45 40.1	
GROC				*e*		22 45 54.4	
GROC				pmax	pmax		
	comp=Z,57nm,0.6s						
GROC				smax	smax		
	comp=N,43nm,0.6s						
GROC				smax	smax		
	comp=N,70nm,0.6s						
GROC				smax	smax		
	comp=N,53nm,0.7s						
GROC				smax	smax		
	comp=E,36nm,0.5s						
GROC				MLR	MLR		
	comp=Z,33nm,2.0s						
IHSH	Hashtrud	3.40	197	*e*Pn	Pn	22 45 01.6	+2.9
IHSH				*e*		22 45 22.0	
	comp=Z,646nm,0.6s						
LHJ2	Lahijan - Gila	3.61	160	*e*Pn	Pn	22 45 00.5	-0.8
JIR1	Jirandeh	3.99	165	*e*Pn	Pn	22 45 06.4	-0.2
ZEI	Tsey	4.09	304	*e*PN	Pn	22 45 11.1	+3.0
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
QALM	Alamut, Qazvin	4.46	157	*e*Pn	Pn	22 45 12.4	-0.8
QABG	Abgarm-Qazvin	4.93	170	*e*Pn	Pn	22 45 19.1	-0.5
KBZ	Khabaz	5.22	309	Pn	Pn	22 45 25.8	+2.4
	comp=Z,0.1nm,0.3s,baz=61,slow=20,SNR=2.3						
	comp=Z,0.8nm,0.7s						
IPRN	Peran	5.27	144	*e*Pn	Pn	22 45 23.9	-0.3
KIV	Kislovodsk	5.48	310	*e*P	Pb	22 45 41.0	-0.9
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,10.0nm,8.0s						
IFIR	Firoozkooh	5.95	144	*e*Pn	Pn	22 45 35.9	+2.2
GEYT	Alibeck	7.92	106	Pn	Pn	22 45 58.9	-1.6
	comp=Z,0.5nm,0.3s,baz=270,slow=16,SNR=6.8						
	comp=Z,1.3nm,0.4s						
ISFR	Sfrayin	8.21	112	*e*Pn	Pn	22 46 04.5	-0.1
IEMG	Emamgholi	8.51	108	*e*Pn	Pn	22 46 08.3	-0.5
IAKL	Akhelmad	8.95	113	*e*Pn	Pn	22 46 15.4	+0.5
IPAY	Payeh	9.20	113	*e*Pn	Pn	22 46 17.9	-0.3
IKRD	Kardeh	9.41	110	*e*Pn	Pn	22 46 20.2	-0.9
AB31	Akbulak array	11.87	39	⇓Pn	Pn	22 46 52.7	-1.9
	comp=Z,0.9nm,0.6s,baz=228,slow=13,SNR=12						
AB31				⇑Sn	Sn	22 48 59.0	-7.1

	comp=Z,0.6nm,0.5s,baz=215,slow=22,SNR=2.6						
AKTO	Aktyubinsk	11.90	31	Pn	Pn	22 46 53.2	-1.8
	comp=Z,0.3nm,0.3s,baz=209,slow=14,SNR=3.4						
	comp=Z,0.9nm,0.4s						
AKTO	Aktyubinsk	11.90	31	⇓Pn	Pn	22 46 54.5	-0.5
	comp=Z,1.1nm,0.6s						
AKTO				⇑Sn	Sn	22 49 00.4	-6.4
	comp=Z,2.5nm,0.7s						
KK31	Karatay Array	16.59	74	Pn	P	22 48 01.0	+0.8
	comp=Z,0.4nm,0.5s,baz=262,slow=14,SNR=7.1						
AKASG	Malin Array Be	16.82	313	Pn	Pn	22 47 59.2	-1.3
	comp=Z,0.4nm,0.3s,baz=122,slow=12,SNR=3.3						
	comp=Z,0.5nm,0.5s						
ARU	Arti	17.18	19	P	Pn	22 48 02.4	-2.7
	comp=Z,1.2nm,0.5s,baz=210,slow=8.3,SNR=3.5						
SVE	Sverdlovsk	18.09	22	eP	P	22 48 17.3	+0.8
SVE				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	Ala-Archa	19.53	75	P	Pn	22 48 34.1	+0.1
	comp=Z,0.3nm,0.3s,baz=274,slow=11,SNR=4.2						
	comp=Z,1.4nm,0.7s						
NACGM	Naroch	20.35	322	⇓eP	Pn	22 48 42.5	-0.9
	baz=128						
KLMR	Klimovskoe	21.05	348	eP	P	22 48 46.9	-1.9
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KLMR	Klimovskoe	21.05	348	e	P	22 48 47.0	-1.9
KLMR				AMP		22 48 48.9	
	comp=Z,9.0nm,0.6s						
PRGR	Permogore	21.17	356	eP	P	22 48 48.3	-1.7
KURBB	Kurchatov Arra	23.15	54	P	P	22 49 11.9	+0.8
	comp=Z,1.0nm,0.8s,baz=260,slow=9.7,SNR=8.8						
	comp=Z,1.0nm,0.8s						
KURK	Kurchatov	23.23	54	P	P	22 49 11.9	-0.1
FINES	FINESS Array B	24.97	334	P	P	22 49 28.2	0.0
	comp=Z,1.6nm,0.4s,baz=134,slow=9.4,SNR=20						
	comp=Z,1.6nm,0.4s						
MKAR	Makanchi Array	25.08	64	P	P	22 49 30.1	+0.7
	comp=Z,1.1nm,0.5s,baz=258,slow=10,SNR=20						
	comp=Z,1.1nm,0.5s						
ZALV	Zalesovo Beam	27.71	49	P	P	22 49 53.0	0.0
	comp=Z,0.5nm,0.4s,baz=262,slow=12,SNR=2.5						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	27.71	49	P	P	22 49 53.0	0.0
HFS	Hagfors	29.08	324	P	P	22 50 04.9	-0.3
	comp=Z,1.0nm,0.8s,baz=77,slow=15,SNR=2.4						
	comp=Z,1.0nm,0.8s						
NB2	NORSAR Subarra	30.58	325	P	P	22 50 18.2	-0.3
	comp=Z,0.4nm,0.7s,baz=118,slow=8.6						
NOA	NORSAR Array B	30.58	325	P	P	22 50 18.3	-0.1
	comp=Z,0.4nm,0.8s,baz=118,slow=8.3,SNR=4.1						
	comp=Z,0.4nm,0.8s						
MDT	Midelt	42.73	277	LR	LR	23 10 38.0	
	comp=Z,29nm,20.2s,baz=336,slow=37						
TORD	Torodi Ar. Bea	49.13	250	P	P	22 52 52.5	-0.2
	comp=Z,0.4nm,0.9s,baz=59,slow=7.4,SNR=2.3						
	comp=Z,0.4nm,0.9s						
YKA	Yellowknife Ar	76.39	352	P	P	22 55 54.2	+0.6
	comp=Z,1.0nm,0.7s,baz=6.7,slow=6.2,SNR=3.5						
	comp=Z,1.0nm,0.7s						

IDC 18 22:44:24.8±2.0,**7°04S**×**129°16E**,**h0**^{km},**mb3.5**/2,
mbtmp3.4/4,**ML3.3**/2,**Error ellipse: s-maj=149.2km**
s-min=31.0km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.78	159	Pn	Pn	22 47 40.8	-0.8
	0.2nm,0.3s,baz=342,slow=13,SNR=7.5						
WRA				Sn	Sn	22 50 08.5	-7.0
	0.1nm,0.3s,baz=333,slow=22,SNR=2.4						
	0.7nm,0.8s						
ASAR	Alice Springs	17.15	165	P	Pn	22 48 26.8	+0.6
	0.1nm,0.3s,baz=339,slow=9.6,SNR=7.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	67.80	327	P	P	22 55 24.1	-0.6
	0.2nm,0.6s,baz=129,slow=6.8,SNR=2.4						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	72.11	329	P	P	22 55 51.7	+0.6
	0.3nm,0.6s,baz=119,slow=4.3,SNR=3.0						
	0.3nm,0.6s						

*BJI **18** 22:49:21.9±0.0,59°88N×153°70W,h158^{km},mb4.8/32,*
mB4.7/12
*IDC **18** 22:49:22.6±0.8,60°07N×153°66W,h135^{km}±8^{km},mb3.9/23,*
mbtmp4.3/27,MS2.5/1,Error ellipse: s-maj=10.2km
s-min=8.8km az=76.0
*NEIC **18** 22:49:24.5±1.2,60°06N±0°04×153°60W±0°08,*
h156^{km}±4^{km},Error ellipse: s-maj=5.8km s-min=5.5km
az=121.0
*AEIC **18** 22:49:25±1.3,60°04N±0°03×153°60W±0°06,h156^{km}±3^{km},*
ML4.3,mb4.6/36(NEIC),ML4.3/117(NEIC),Error ellipse:
s-maj=5.7km s-min=2.2km az=135.0
ISC 18 22:49:24.9±0.5,**60°03N**±0°03×**153°53W**±0°03,
h159^{km}±4^{km},**n398**,σ**1ˢ14**/454,**mb4.5**/47,**2D,Southern**
Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPT	Oil Point	0.41	158		Pn	22 49 46.5	-0.3
P19K	Oil Pt	0.41	158		Pn	22 49 46.5	-0.4
P19K	Oil Pt	0.41	158		Sn	22 50 03.5	-0.1
P19K	Oil Pt	0.41	158	P	Pn	22 49 46.5	-0.4
	baz=342,SNR=747						
P19K				S	Sn	22 50 03.3	-0.3
	baz=342						
O19K	Port Alsworth	0.43	293		Pn	22 49 45.9	-0.9
O19K	Port Alsworth	0.43	293		Sn	22 50 02.5	-1.1
O19K	Port Alsworth	0.43	293	P	Pn	22 49 45.9	-0.9
	baz=106,SNR=400						
O19K				S	Sn	22 50 02.0	-1.6
	baz=106						
O20K	Slope Mountain	0.46	83		Pn	22 49 46.8	-0.3
O20K					Sn	22 50 04.0	-0.1
O20K	Slope Mountain	0.46	83	P	Pn	22 49 46.8	-0.3
	baz=269,SNR=222						
O20K				S	Sn	22 50 03.6	-0.5
	baz=269						
RED	Redoubt Volcan	0.54	44		Pn	22 49 46.9	-0.7
RED					Sn	22 50 04.1	-0.8
RDWB	Redoubt West	0.57	37		Pn	22 49 47.1	-0.6
RDWB					Sn	22 50 04.7	-0.6
RSO	Redoubt South	0.58	41		Pn	22 49 47.3	-0.6
NCT	North Crescent	0.61	29		Pn	22 49 47.3	-0.5
NCT					Sn	22 50 05.1	-0.5
AUL	Augustine Lava	0.65	176		Pn	22 49 47.8	-0.2
AUL					Sn	22 50 05.6	-0.1
AU2	Augustine Isla	0.67	173		Pn	22 49 47.8	-0.3
AU22	Augustine Moun	0.67	172		Pn	22 49 47.7	-0.4
AU22					Sn	22 50 05.3	-0.4
RDJH	Redoubt Jeurge	0.67	32		Pn	22 49 48.2	0.0
RDJH					Sn	22 50 05.6	-0.6
AUH	Augustine H	0.67	176		Pn	22 49 48.0	-0.3
AUCH	Augustine Cone	0.67	176		Pn	22 49 47.9	-0.4
AUQ	Augustine Qik’	0.68	175		Pn	22 49 48.0	-0.3
DFR	Drift River	0.70	36		Pn	22 49 47.8	-0.6
DFR					Sn	22 50 05.5	-1.0
N19K	Bonanza Creek	0.92	329		Pn	22 49 49.2	-0.7
N19K				IAML		22 50 08.9	
	comp=N,3µm,1.0s						
N19K	Bonanza Creek	0.92	329		Sn	22 50 08.0	-1.2
N19K	Bonanza Creek	0.92	329	P	Pn	22 49 49.2	-0.7
	baz=146,SNR=278						
N19K				S	Sn	22 50 07.7	-1.4
	baz=146						
HOM	Homer	1.02	111		Pn	22 49 50.6	0.0
HOM	Homer	1.02	111	IAML		22 50 11.9	
	comp=E,8µm,0.8s						
HOM				IAML		22 50 12.2	
	comp=N,8µm,0.5s						
HOM	Homer	1.02	111	P	Pn	22 49 50.3	-0.3
	baz=295,SNR=115						
HOM				S	Sn	22 50 10.2	-0.1
	baz=295						
P18K	Big Mountain,	1.07	234		Pn	22 49 50.1	-1.0
P18K					Sn	22 50 09.6	-1.6
P18K	Big Mountain,	1.07	234	P	Pn	22 49 50.1	-1.0
	baz=51						
P18K				S	Sn	22 50 09.2	-2.0
	baz=51						
Q19K	Cape Douglas,	1.11	183		Pn	22 49 50.7	-0.7
Q19K				IAML		22 50 19.2	
	comp=E,14µm,0.9s						
Q19K	Cape Douglas,	1.11	183		Sn	22 50 10.7	-1.0
Q19K	Cape Douglas,	1.11	183	P	Pn	22 49 50.8	-0.7
	baz=3.4,SNR=233						
Q19K				S	Sn	22 50 10.5	-1.2
	baz=3.4						
CNPM	China Poot	1.27	113		Pn	22 49 52.4	-0.4
CNPM				IAML		22 50 13.8	
	comp=N,5µm,0.6s						
CNPM				IAML		22 50 14.8	
	comp=E,5µm,0.7s						
CNPM	China Poot	1.27	113		Sn	22 50 12.8	-1.4
SPWE	Spurr West	1.34	21		Pn	22 49 53.6	+0.1
N18K	Kilae Creek	1.34	300	Pn	Pn	22 49 53.0	-0.5
N18K	Kilae Creek	1.34	300	P	Pn	22 49 53.0	-0.5
	baz=116,SNR=135						
N18K				S	Sn	22 50 13.8	-1.7
	baz=116						
SPCR	Spurr Chakacha	1.34	28		Pn	22 49 53.3	-0.3
SPCR	Spurr Chakacha	1.34	28	P	Pn	22 49 53.3	-0.3
	baz=210,SNR=100						
SPCR				S	Sn	22 50 14.8	-0.9
	baz=210						
BRLK	Bradley Lake	1.36	100		Pn	22 49 53.4	-0.3
BRLK				IAML		22 50 15.7	
	comp=N,2µm,0.3s						
BRLK				IAML		22 50 15.9	
	comp=E,4µm,0.4s						
BRLK	Bradley Lake	1.36	100		Sn	22 50 14.5	-1.3
SPBG	Spurr Blockage	1.36	24		Pn	22 49 53.9	+0.1
SPU	Mount Spurr	1.37	32	Pn	Pn	22 49 53.4	-0.4
CKN	Chakachatna No	1.37	28		Pn	22 49 53.8	0.0
CAPN	Captain Cook N	1.39	57		Pn	22 49 55.2	+1.3
CAPN				IAML		22 50 20.1	
	comp=E,8µm,1.0s						
CAPN	Captain Cook N	1.39	57	P	Pn	22 49 54.7	+0.8
	baz=240						
CAPN				S	Sn	22 50 18.8	+2.5
	baz=240						
BRSE	Bradley Lake S	1.44	100		Pn	22 49 54.1	-0.3
BRSE					Sn	22 50 16.0	-1.1
BRSE	Bradley Lake S	1.44	100	P	Pn	22 49 54.2	-0.3
	baz=285,SNR=358						
BRSE				S	Sn	22 50 15.9	-1.3
	baz=285						
SPCG	Spurr Capps Gl	1.47	30		Pn	22 49 54.6	-0.3
SVW2	Sparrevohn	1.47	317		Pn	22 49 53.9	-0.9
SVW2	Sparrevohn	1.47	317		Sn	22 50 16.8	-1.1
STLK	Strandline Lak	1.69	29		Pn	22 49 56.9	-0.2
SLKM	Skilak Lake	1.72	72		Pn	22 49 57.0	-0.4
SLKM					Sn	22 50 20.7	-1.7
M20K	Styx River	1.87	6		Pn	22 49 59.1	+0.1
M20K	Styx River	1.87	6	P	Pn	22 49 59.0	-0.1
	baz=186						
M20K				S	Sn	22 50 24.7	-0.8
	baz=186						
M19K	Big River Lodg	1.93	348		Pn	22 49 59.2	-0.5
M19K	Big River Lodg	1.93	348	P	Pn	22 49 59.0	-0.6
	baz=166						
M19K				S	Sn	22 50 25.5	-1.1
	baz=166						
O22K	Cooper Landing	1.95	75		Pn	22 49 59.7	-0.2
O22K				IAML		22 50 38.6	
	comp=E,5µm,0.8s						
O22K	Cooper Landing	1.95	75	P	Pn	22 49 59.5	-0.4
	baz=259,SNR=65						
O22K				S	Sn	22 50 25.1	-1.8
	baz=259						
KELA	Mount Kelaz	1.96	216		Pn	22 50 01.4	+1.3
FIS	Fire Island	1.98	54		Pn	22 50 00.5	+0.3
FIS				IAML		22 50 31.4	
	comp=E,4µm,0.8s						
KABU	Katmai Buttres	1.98	208		Pn	22 50 00.0	-0.4
SEW	Seward	2.05	86		Pn	22 50 00.7	-0.3
SEW	Seward	2.05	86		Sn	22 50 27.0	-1.8
SEW	Seward	2.05	86	P	Pn	22 50 00.2	-0.7
	baz=271,SNR=61						
SEW				S	Sn	22 50 26.5	-2.3
	baz=271						
ANCK	Angle Creek	2.10	210		Pn	22 50 03.1	+1.4
RC01	Rabbit Creek A	2.15	59		Pn	22 50 01.2	-1.0
RC01	Rabbit Creek A	2.15	59		Sn	22 50 30.0	-1.1
RC01	Rabbit Creek A	2.15	59	IAML		22 50 30.8	
	comp=N,965nm,0.4s						
RC01				IAML		22 50 34.8	
	comp=E,900nm,0.6s						
RC01	Rabbit Creek A	2.15	59	P	Pn	22 50 01.3	-1.0
	baz=243,SNR=22						
RC01				S	Sn	22 50 29.3	-1.8
	baz=243						
CAHL	Cahill	2.19	206		Pn	22 50 04.1	+1.4
KJL	Kejulik	2.25	209		Pn	22 50 05.1	+1.6
L19K	White Mountain	2.25	344		Pn	22 50 02.7	-0.7
L19K	White Mountain	2.25	344	P	Pn	22 50 02.6	-0.7
	baz=162,SNR=243						
L19K				S	Sn	22 50 32.1	-1.2
	baz=162						
KDAK	Kodiak Island	2.31	167	P	Pn	22 50 01.5	-2.5
	comp=E,126nm,0.3s,baz=31,slow=5.5,SNR=198						
KDAK				S	Sn	22 50 30.7	-3.6
	comp=E,1µm,0.4s,baz=301,slow=19,SNR=19						
KDAK				LR	LR	22 51 14.3	
	comp=E,94nm,20.8s,baz=218,slow=47						
KDAK	Kodiak Island	2.31	167		Pn	22 50 02.1	-2.0
KDAK				IAML		22 50 34.3	
	comp=E,2µm,0.4s						
KDAK	Kodiak Island	2.31	167	P	Pn	22 50 02.0	-2.0
	baz=349						
KDAK				S	Sn	22 50 31.3	-3.0
	baz=349						
M22K	Willow	2.40	42		Pn	22 50 04.5	-0.7
M22K	Willow	2.40	42	P	Pn	22 50 04.4	-0.7
	baz=226,SNR=12						
M22K				S	Sn	22 50 35.7	-0.6
	baz=226						
L20K	Farewell, AK	2.46	356		Pn	22 50 05.7	-0.2
L20K	Farewell, AK	2.46	356	P	Pn	22 50 05.7	-0.2
	baz=176,SNR=379						
L20K				S	Sn	22 50 37.2	-0.6
	baz=176						
PMR	Palmer	2.67	52		Pn	22 50 06.6	-1.7
PMR				IAML		22 50 40.4	
	comp=E,614nm,1.1s						
PMR				IAML		22 50 40.9	
	comp=N,892nm,0.9s						
PMR	Palmer	2.67	52	P	Pn	22 50 06.6	-1.7
	baz=236,SNR=7.7						
PMR				S	Sn	22 50 39.3	-2.7
	baz=236						
PLK5	Peulik 5	2.67	222		Pn	22 50 10.5	+2.0
PLK3	Peulik 3	2.75	212		Pn	22 50 10.9	+1.5
PLK1	Peulik 1	2.75	217		Pn	22 50 11.0	+1.7
OHAK	Old Harbor	2.82	177		Pn	22 50 08.2	-2.1
OHAK				IAML		22 50 45.0	
	comp=N,2µm,0.4s						
OHAK	Old Harbor	2.82	177	P	Pn	22 50 08.0	-2.3
	baz=358,SNR=54						
OHAK				S	Sn	22 50 42.2	-3.2
	baz=358						
GHO	Glory Hole Cre	2.85	50		Pn	22 50 09.1	-1.6
GHO	Glory Hole Cre	2.85	50	IAML		22 50 50.8	
	comp=E,2µm,0.8s						
GHO				IAML		22 50 52.4	
	comp=N,1µm,0.8s						
KNK	Knik Glacier	2.85	59		Pn	22 50 09.1	-1.6
KNK	Knik Glacier	2.85	59	IAML		22 50 45.9	
	comp=E,1µm,0.6s						
KNK				IAML		22 50 46.3	
	comp=N,1µm,0.6s						
KNK	Knik Glacier	2.85	59	P	Pn	22 50 09.2	-1.5
	baz=244						
KNK				S	Sn	22 50 44.3	-1.9
	baz=244						
CUT	Chulitna	2.86	32		Pn	22 50 10.2	-0.5
CUT	Chulitna	2.86	32	P	Pn	22 50 10.1	-0.5
	baz=215,SNR=84						
CUT				S	Sn	22 50 45.1	-1.2
	baz=215						
PLBL	Peulik Blue Cr	2.90	218		Pn	22 50 13.1	+1.9
PPLA	Purkeypile	2.95	12		Pn	22 50 12.6	+0.6
PPLA	Purkeypile	2.95	12	P	Pn	22 50 12.6	+0.6
	baz=193,SNR=167						
PPLA				S	Sn	22 50 48.8	+0.2
	baz=193						
SML	Sawmill	3.10	53	Pn	Pn	22 50 12.6	-1.2
SML				IAML		22 50 51.4	
	comp=E,837nm,1.1s						
SML				IAML		22 50 53.2	
	comp=N,801nm,0.9s						
SML	Sawmill	3.10	53	P	Pn	22 50 12.1	-1.7
	baz=238,SNR=7.8						
SML				S	Sn	22 50 49.1	-2.7
	baz=238						
TT01	Tatalina	3.12	339		Pn	22 50 13.2	-0.8
TTA	Tatalina	3.14	339	Pn	Pn	22 50 13.4	-1.0
TTA	Tatalina	3.14	339	P	Pn	22 50 13.4	-1.0
	baz=156,SNR=171						
TTA				S	Sn	22 50 50.7	-2.1
	baz=156						
GLI	Glacier Island	3.30	72		Pn	22 50 15.9	-0.3
GLI				IAML		22 50 56.9	
	comp=N,646nm,0.5s						
GLI				IAML		22 50 57.2	
	comp=E,873nm,0.7s						
GLI	Glacier Island	3.30	72	P	Pn	22 50 15.3	-1.0
	baz=258,SNR=7.8						
GLI				S	Sn	22 50 53.3	-2.9
	baz=258						
M23K	Glacier View	3.34	56	P	Pn	22 50 15.3	-1.5
	baz=241,SNR=8.6						
M23K				S	Sn	22 50 54.3	-2.8
	baz=241						
K20K	Telida	3.35	356		Pn	22 50 16.8	-0.1
K20K	Telida	3.35	356	P	Pn	22 50 16.7	-0.1
	baz=175,SNR=482						
CAST	Castle Rocks	3.47	11		Pn	22 50 18.4	0.0
CAST	Castle Rocks	3.47	11	P	Pn	22 50 18.2	-0.3
	baz=192,SNR=18						
SII	Sitkinak Islan	3.50	186		Pn	22 50 16.7	-2.1
SII	Sitkinak Islan	3.50	186	P	Pn	22 50 16.8	-2.1
	baz=5.5,SNR=26						
SII				S	Sn	22 50 56.6	-4.2
	baz=5.5						
SCM	Sheep Creek Mo	3.53	56	Pn	Pn	22 50 17.9	-1.4
SCM				IAML		22 51 02.3	
	comp=E,1µm,1.1s						
SCM	Sheep Creek Mo	3.53	56	P	Pn	22 50 17.8	-1.4
	baz=242,SNR=12						
SCM				S	Sn	22 50 59.0	-2.5
	baz=242						
HIN	Hinchinbrook I	3.53	81		Pn	22 50 18.8	-0.4
HIN				IAML		22 51 00.8	
	comp=E,1µm,1.1s						
FID	Port Fidalgo	3.57	75		Pn	22 50 19.0	-0.7
JPK	Jack Peak	3.58	70		Pn	22 50 18.7	-1.1
Q23K	Middleton Isla	3.69	96		Pn	22 50 20.8	-0.3
Q23K				IAML		22 51 06.7	
	comp=N,285nm,0.9s						
Q23K				IAML		22 51 08.2	
	comp=E,295nm,0.7s						
Q23K	Middleton Isla	3.69	96	P	Pn	22 50 20.4	-0.7
	baz=283						
Q23K				S	Sn	22 51 04.1	-0.9
	baz=283						
WAT1	Susitna Watana	3.69	38		Pn	22 50 20.2	-1.0
WAT1	Susitna Watana	3.69	38	P	Pn	22 50 20.1	-1.1
	baz=223						
WAT1				S	Sn	22 51 01.6	-3.6
	baz=223						
MID	Middleton Isla	3.69	96	Pn	Pn	22 50 20.9	-0.3
MID				IAML		22 51 05.2	
	comp=N,292nm,0.9s						
MID				IAML		22 51 08.2	
	comp=E,293nm,0.7s						
KTH	Kantishna Hill	3.75	18		Pn	22 50 21.7	-0.3
TRF	Thorofare Moun	3.76	23		Pn	22 50 21.8	-0.6
TRF				IAML		22 51 06.3	
	comp=N,302nm,0.8s						
TRF				IAML		22 51 07.9	
	comp=E,248nm,0.7s						
TRF	Thorofare Moun	3.76	23	P	Pn	22 50 21.4	-0.9
	baz=206,SNR=123						
TRF				S	Sn	22 51 04.3	-2.8
	baz=206						
WAT6	Susitna Watana	3.79	45		Pn	22 50 21.2	-1.5
WAT6	Susitna Watana	3.79	45	P	Pn	22 50 21.4	-1.3
	baz=230,SNR=57						
WAT6				S	Sn	22 51 05.1	-2.5
	baz=230						
EYAK	Cordova Ski Ar	3.91	79		Pn	22 50 23.7	-0.3
EYAK	Cordova Ski Ar	3.91	79	P	Pn	22 50 23.1	-0.9
	baz=266,SNR=7.3						
EYAK				S	Sn	22 51 07.8	-2.3
	baz=266						
CHUM	Lake Minchumin	3.91	8		Pn	22 50 23.9	-0.1
CHUM	Lake Minchumin	3.91	8	P	Pn	22 50 23.8	-0.2
	baz=189,SNR=174						
ANNE	Aniakchak Nort	3.93	219		Pn	22 50 23.8	-0.6
ANNW	Aniakchak Nort	3.93	221		Pn	22 50 24.8	+0.3
DIV	Divide	3.98	71		Pn	22 50 24.3	-0.8
AZAC	Aniakchak	4.00	220		Pn	22 50 25.2	-0.1
KLU	Klutina	4.01	65		Pn	22 50 24.5	-1.0
KLU	Klutina	4.01	65	P	Pn	22 50 24.3	-1.2
	baz=252,SNR=29						
KLU				S	Sn	22 51 11.2	-1.5
	baz=252						
RND	Reindeer	4.05	31		Pn	22 50 25.2	-0.8
RND				IAML		22 51 18.8	
	comp=E,145nm,1.0s						
RND				IAML		22 51 35.4	
	comp=N,179nm,1.0s						
ANPB	Aniakchak Plen	4.09	220		Pn	22 50 26.0	-0.5
M24K	Tolsona, Glenn	4.14	57		Pn	22 50 26.6	-0.5
M24K	Tolsona, Glenn	4.14	57	P	Pn	22 50 26.2	-0.9
	baz=243,SNR=18						
M24K				S	Sn	22 51 15.5	0.0
	baz=243						
J20K	Nowinta River	4.17	356		Pn	22 50 27.5	0.0
J20K	Nowinta River	4.17	356	P	Pn	22 50 27.4	0.0
	baz=176,SNR=243						
DHY	Denali Highway	4.24	41	Pn	Pn	22 50 27.5	-1.0
DHY				IAML		22 51 18.1	
	comp=N,446nm,0.6s						
DHY				IAML		22 51 18.2	
	comp=E,322nm,0.6s						
DHY	Denali Highway	4.24	41	P	Pn	22 50 27.6	-1.0
	baz=227,SNR=98						
BPAW	Bear Paw Mtn.	4.26	15		Pn	22 50 27.6	-1.0
BPAW				IAML		22 51 18.0	
	comp=N,112nm,1.4s						
BPAW	Bear Paw Mtn.	4.26	15	P	Pn	22 50 27.3	-1.3
	baz=198,SNR=216						
PS12	TAPS Pump St12	4.36	67		Pn	22 50 29.0	-1.0
CHIR	Chirikof Islan	4.37	196		Pn	22 50 27.6	-2.4
CHIR				IAML		22 51 17.8	
	comp=N,621nm,0.5s						
CHIR				IAML		22 51 18.4	
	comp=E,498nm,0.6s						
CHIR	Chirikof Islan	4.37	196	P	Pn	22 50 27.5	-2.6
	baz=14,SNR=5.4						
PS11	TAPS Pump St11	4.42	59		Pn	22 50 28.3	-2.4
BMRM	Bremner River	4.51	74		Pn	22 50 30.9	-1.0
BMRM	Bremner River	4.51	74	P	Pn	22 50 31.4	-0.6
	baz=262,SNR=17						
CHGN	Chignik	4.55	217		Pn	22 50 31.1	-1.3
CHGN				IAML		22 51 23.9	
	comp=N,472nm,0.7s						
CHGN				IAML		22 51 24.1	
	comp=E,530nm,0.5s						
CHGN	Chignik	4.55	217	P	Pn	22 50 30.9	-1.5
	baz=32,SNR=54						
BWN	Browne	4.57	23		Pn	22 50 32.6	-0.1
BWN	Browne	4.57	23	IAML		22 51 30.2	
	comp=E,281nm,0.8s						
BWN				IAML		22 52 05.1	
	comp=N,272nm,1.0s						
HMT	Hamilton	4.64	82		Pn	22 50 33.5	-0.1
HMT				IAML		22 51 29.3	
	comp=N,504nm,0.6s						
N25K	Chitina, Valde	4.65	66		Pn	22 50 33.0	-0.8
N25K	Chitina, Valde	4.65	66	IAML		22 51 32.8	
	comp=N,381nm,0.8s						
N25K	Chitina, Valde	4.65	66	P	Pn	22 50 33.4	-0.4
	baz=254,SNR=33						
HARP	HAARP	4.69	56		Pn	22 50 33.2	-1.1
HARP	HAARP	4.69	56	P	Pn	22 50 33.8	-0.5
	baz=244,SNR=16						
NICHA	Nichawak Mount	4.79	83		Pn	22 50 34.9	-0.6
VNHG	Veniaminof 1	4.85	220		Pn	22 50 36.0	-0.5
PAX	Paxson	4.86	49		Pn	22 50 35.7	-0.9
PAX	Paxson	4.86	49	P	Pn	22 50 35.8	-0.7
	baz=236,SNR=46						
GLB	Gilahina Butte	4.98	69		Pn	22 50 37.2	-0.8

GLB				IAML		22 51 35.6	
	comp=N,370nm,0.9s						
GLB				IAML		22 51 41.7	
	comp=E,239nm,0.9s						
GCSA	Galena City Sc	4.98	343		Pn	22 50 37.5	-0.5
GCSA	Galena City Sc	4.98	343	P	Pn	22 50 37.4	-0.7
	baz=160						
PS10	TAPS Pump St10	5.02	44		Pn	22 50 38.8	+0.2
NEA2	Nenana	5.03	23		Pn	22 50 37.5	-1.2
NEA2				IAML		22 51 36.8	
	comp=N,79nm,0.9s						
NEA2				IAML		22 51 37.6	
	comp=E,62nm,0.7s						
NEA2	Nenana	5.03	23	P	Pn	22 50 37.5	-1.2
	baz=206,SNR=510						
VRDI	Verde Repeater	5.11	72		Pn	22 50 39.3	-0.6
VRDI				IAML		22 51 41.8	
	comp=E,207nm,1.0s						
GRIN	Grindle Hills	5.11	83		Pn	22 50 39.3	-0.5
WRH	Wood River Hil	5.13	27		Pn	22 50 38.8	-1.2
WRH				IAML		22 51 37.4	
	comp=E,80nm,0.7s						
WRH				IAML		22 51 38.5	
	comp=N,70nm,1.3s						
KHIT	Khitrov Hills	5.14	81		Pn	22 50 40.0	-0.3
I21K	Tanana	5.22	7		Pn	22 50 40.5	-0.6
I21K	Tanana	5.22	7	P	Pn	22 50 40.6	-0.6
	baz=188,SNR=87						
K24K	Donnelly Dome	5.27	41	P	Pn	22 50 42.5	+0.7
	baz=228,SNR=209						
MCARA	McCarthy VSAT	5.34	71		Pn	22 50 43.0	+0.2
MCARA	McCarthy VSAT	5.34	71	P	Pn	22 50 43.2	+0.4
	baz=260,SNR=17						
CCB	Clear Creek Bu	5.34	27		Pn	22 50 41.6	-1.2
CCB				IAML		22 51 44.0	
	comp=E,66nm,0.6s						
CCB				IAML		22 51 44.4	
	comp=N,58nm,0.5s						
SNH	Sunshine Point	5.35	84	Pn	Pn	22 50 43.3	+0.3
SNH				IAML		22 51 46.0	
	comp=E,244nm,1.1s						
TGL	Tana Glacier	5.36	78		Pn	22 50 43.0	-0.1
TGL				IAML		22 51 52.4	
	comp=N,293nm,1.3s						
HDA	Harding Lake	5.36	32	Pn	Pn	22 50 42.1	-0.9
HDA				IAML		22 51 42.4	
	comp=E,252nm,0.7s						
HDA	Harding Lake	5.36	32	P	Pn	22 50 42.1	-0.9
	baz=218,SNR=429						
I23K	Minto, Yukon-K	5.49	19		Pn	22 50 43.7	-0.9
I23K	Minto, Yukon-K	5.49	19	P	Pn	22 50 43.3	-1.3
	baz=202,SNR=289						
PS08	TAPS Pump Stn8	5.50	32		Pn	22 50 43.8	-1.1
MDM	Murphy Dome	5.52	24		Pn	22 50 44.0	-1.1
TCOL	CIGO, UAF Yank	5.53	26		Pn	22 50 44.4	-0.8
TCOL	CIGO, UAF Yank	5.53	26	P	Pn	22 50 44.1	-1.0
	baz=211,SNR=41						
COLA	College	5.53	26		Pn	22 50 44.0	-1.2
COLA	College	5.53	26	P	Pn	22 50 44.2	-1.0
	baz=211						
MENT	Mentasta	5.53	54		Pn	22 50 44.8	-0.5
RIDG	Independent Ri	5.54	44		Pn	22 50 45.3	-0.2
RIDG	Independent Ri	5.54	44	P	Pn	22 50 45.2	-0.2
	baz=232,SNR=164						
PTPK	Patty Peak	5.57	73		Pn	22 50 46.1	+0.1
ISLE	Juniper Island	5.59	79		Pn	22 50 46.0	-0.3
KIAG	Kiagna River	5.60	76		Pn	22 50 46.1	-0.3
BALM	Baldy	5.61	75		Pn	22 50 46.6	+0.1
M26K	Nabesna, AK	5.62	60		Pn	22 50 46.6	+0.1
M26K	Nabesna, AK	5.62	60	P	Pn	22 50 46.9	+0.4
	baz=250,SNR=83						
H21K	Melozitna Rive	5.66	3		Pn	22 50 46.5	-0.5
H21K	Melozitna Rive	5.66	3	P	Pn	22 50 46.5	-0.5
	baz=184,SNR=387						
IL31		5.67	30		Pn	22 50 45.8	-1.2
ILAR	Eielson Array	5.67	30	P	Pn	22 50 45.8	-1.4
	comp=E,224nm,0.6s,baz=218,slow=13,SNR=1761						
ILAR				S	Sn	22 51 46.8	-4.7
	comp=E,86nm,0.8s,baz=220,slow=22,SNR=14						
ILAR	Eielson Array	5.67	30		Pn	22 50 45.5	-1.6
BAGL	Bagley Icefiel	5.71	80		Pn	22 50 48.3	+0.6
L26K	Log Cabin Wild	5.72	54		Pn	22 50 47.7	-0.2
L26K	Log Cabin Wild	5.72	54	P	Pn	22 50 47.6	-0.3
	baz=243,SNR=23						
DOT	Dot Lake	5.77	47		Pn	22 50 48.1	-0.4
MESA	MESA	5.79	84		Pn	22 50 49.1	+0.1
MESA	MESA	5.79	84	P	Pn	22 50 49.2	+0.1
	baz=274						
PS07	TAPS Pump Stn7	5.82	22		Pn	22 50 48.3	-0.8
POKR	Poker Plat Res	5.83	26		Pn	22 50 48.3	-0.9
POKR	Poker Plat Res	5.83	26	P	Pn	22 50 48.1	-1.1
	baz=212,SNR=109						
GRNC	Granite Creek	5.88	78		Pn	22 50 50.3	+0.1
YAH	Yahtse	5.89	82		Pn	22 50 50.7	+0.4
BARN	Barnard Glacie	5.95	75		Pn	22 50 51.3	+0.3
J25K	Salcha River,	5.96	36		Pn	22 50 50.2	-0.8
J25K	Salcha River,	5.96	36	P	Pn	22 50 50.3	-0.8
	baz=223,SNR=214						
IM03		5.98	359		Pn	22 50 51.0	-0.1
IMAR	Indian Mountai	5.98	359		Pn	22 50 50.9	-0.2
SCRK	Sand Creek	5.99	45		Pn	22 50 50.3	-1.1
SCRK	Sand Creek	5.99	45	P	Pn	22 50 50.3	-1.1
	baz=233,SNR=57						
SDPT	Sand Point	5.99	221	Pn	Pn	22 50 49.5	-1.9
SDPT	Sand Point	5.99	221	P	Pn	22 50 48.9	-2.5
	baz=35,SNR=5.8						
H23K	Yukon River	6.09	16		Pn	22 50 51.8	-1.0
H23K	Yukon River	6.09	16	P	Pn	22 50 51.3	-1.4
	baz=199,SNR=412						
CTG	Chitna Glacier	6.10	76	P	Pn	22 50 53.3	+0.4
	baz=267,SNR=14						
M27K	Edge Creek, AK	6.10	62		Pn	22 50 53.2	+0.2
M27K	Edge Creek, AK	6.10	62	P	Pn	22 50 53.6	+0.7
	baz=253						
PS06	TAPS Pump Stn6	6.10	15		Pn	22 50 51.9	-0.8
CTGM	Chitina Glacie	6.10	76		Pn	22 50 53.4	+0.4
CHNA	Chernabura Isl	6.15	215	P	Pn	22 50 50.4	-3.1
	baz=29,SNR=18						
CNBA	Chernabura Isl	6.16	215	Pn	Pn	22 50 50.4	-3.3
TABL	Table Mountain	6.19	81		Pn	22 50 54.5	+0.3
CHX	Chaix Hills	6.22	84		Pn	22 50 55.2	+0.7
LOGN	Logan Glacier	6.25	77		Pn	22 50 55.4	+0.3
BLHA	Black Hill	6.29	230		Pn	22 50 55.5	+0.1
L27K	Beaver Creek,	6.36	56		Pn	22 50 56.1	-0.3
L27K	Beaver Creek,	6.36	56	P	Pn	22 50 56.1	-0.3
	baz=247						
H24K	Noodor Dome	6.37	21		Pn	22 50 55.1	-1.4
H24K	Noodor Dome	6.37	21	P	Pn	22 50 55.3	-1.2
	baz=206,SNR=422						
SAMH	Samovar Hills	6.38	84		Pn	22 50 57.1	+0.4
BC03		6.38	56		Pn	22 50 56.6	+0.1
BCAR	Beaver Creek A	6.38	56	Pn	Pn	22 50 56.4	-0.3
YUK2	White River	6.43	69		Pn	22 50 57.6	+0.2
J26L	Joseph Creek	6.46	42	P	Pn	22 50 56.6	-1.0
	baz=231,SNR=303						
HAG	Hague Volcano	6.52	227		Pn	22 50 58.5	+0.1
BVCY	Beaver Creek	6.57	63	P	Pn	22 50 59.3	+0.3
	baz=255						
YUK3	Moose Creek	6.61	69		Pn	22 50 60.0	+0.1
YUK3	Moose Creek	6.61	69	P	Pn	22 50 59.9	+0.1
	baz=261,SNR=18						
PCA	Pinnacle	6.65	84		Pn	22 50 59.6	-0.5
PINM	Pinnacle	6.65	84	P	Pn	22 51 00.4	+0.2
	baz=276						
K27K	Chicken	6.71	48		Pn	22 51 00.3	-0.6
K27K	Chicken	6.71	48	P	Pn	22 51 00.4	-0.6
	baz=239						
PS05	TAPS Pump Stn5	6.93	9		Pn	22 51 02.9	-0.9
BALA	Baldy Mountain	6.94	230		Pn	22 51 04.5	+0.4
BCPM	Bancas Point	6.97	85		Pn	22 51 03.9	-0.6
PNL	Peninsula	7.13	87		Pn	22 51 06.2	-0.4
PNL	Peninsula	7.13	87	P	Pn	22 51 06.4	-0.1
	baz=279,SNR=7.5						
COLD	Coldfoot	7.38	10		Pn	22 51 08.9	-0.8
COLD	Coldfoot	7.38	10	P	Pn	22 51 08.5	-1.3
	baz=193,SNR=44						
YUK4	Talbot Arm	7.42	73	P	Pn	22 51 10.9	+0.3
	baz=266						
FALS	False Pass	7.44	230	Pn	Pn	22 51 09.9	-0.7
EGAK	Eagle	7.46	45		Pn	22 51 09.9	-0.9
EGAK	Eagle	7.46	45	P	Pn	22 51 09.7	-1.1
	baz=236,SNR=37						
YUK6	Outpost Mounta	7.55	76		Pn	22 51 12.0	-0.3
YUK6	Outpost Mounta	7.55	76	P	Pn	22 51 12.3	0.0
	baz=270						
ISLZ	Isanotski Laza	7.65	230		Pn	22 51 13.0	-0.5
YUK7	Dusty Glacier	7.67	80		Pn	22 51 13.1	-0.8
SSLN	Shishaldin Nor	7.69	232		Pn	22 51 14.3	+0.2
DAWY	Dawson	7.77	53		Pn	22 51 14.8	-0.2
DAWY	Dawson	7.77	53	P	Pn	22 51 14.7	-0.4
	baz=245,SNR=16						
HYT	Haines Junctio	7.97	77		Pn	22 51 17.6	-0.2
HYT	Haines Junctio	7.97	77	P	Pn	22 51 18.1	+0.4
	baz=272						
N30M	Aishikik Lake	8.18	73	P	Pn	22 51 19.4	-1.1
	baz=267						
BM03	Burnt Mountain	8.40	24		Pn	22 51 20.9	-2.4
BMAR	Burnt Mountain	8.41	24		Pn	22 51 21.6	-1.9
M30M	Minto, Yukon	8.45	65	Pn	Pn	22 51 24.2	+0.2
M30M	Minto, Yukon	8.45	65	P	Pn	22 51 24.0	0.0
	baz=260						
TNA	Tin City	8.60	316	Pn	Pn	22 51 26.6	+0.6
I29M	Ogilvie Camp,	8.79	46		Pn	22 51 27.8	-0.8
TOLK	Toolik Lake Re	8.81	10		Pn	22 51 27.9	-1.0
TOLK	Toolik Lake Re	8.81	10	P	Pn	22 51 28.4	-0.5
	baz=193,SNR=39						
AKSA	Akutan Strait	8.87	234		Pn	22 51 29.6	0.0
AKUT	Akutan	8.90	234	Pn	Pn	22 51 27.6	-2.4
ZRO	Akutan Zero	9.01	234		Pn	22 51 31.0	-0.6
RDOG	Red Dog Mine	9.03	337		Pn	22 51 30.0	-1.7
RDOG	Red Dog Mine	9.03	337	P	Pn	22 51 29.9	-1.7
	baz=148						
WHY	Whitehorse	9.26	78		Pn	22 51 34.9	0.0
WHY	Whitehorse	9.26	78	P	Pn	22 51 34.1	-0.8
	baz=274						
MTBL	Makushin Table	9.39	235		Pn	22 51 36.3	-0.3
UNV	Unalaska Valle	9.41	234		Pn	22 51 34.9	-1.9
UNV	Unalaska Valle	9.41	234	P	Pn	22 51 34.8	-1.9
	baz=43						
MNAT	Makushin Natee	9.45	235		Pn	22 51 35.8	-1.6
MSW	Makushin Switc	9.47	236		Pn	22 51 36.7	-0.9
M31M	Drury Creek, Y	9.51	69		Pn	22 51 38.8	+0.8
M31M	Drury Creek, Y	9.51	69	P	Pn	22 51 37.4	-0.7
	baz=266,SNR=6.6						
EPYK	Eagle Plains	9.87	43		Pn	22 51 42.4	-0.5
EPYK	Eagle Plains	9.87	43	P	Pn	22 51 42.1	-0.8
	baz=238,SNR=101						
P33M	Teslin, Yukon	10.33	80		Pn	22 51 50.0	+1.0
P33M	Teslin, Yukon	10.33	80	P	Pn	22 51 48.5	-0.5
	baz=278						
NIKH	Nikolski High	11.01	237	Pn	Pn	22 51 56.9	-0.9
NIKH	Nikolski High	11.01	237	P	Pn	22 51 56.5	-1.4
	baz=44						
INK	Inuvik	11.97	38	P	Pn	22 52 09.5	-0.7
	comp=E,40nm,0.8s,baz=240,slow=15,SNR=102						
INK				S	S	22 54 37.0	+1.1
	comp=E,8.8nm,0.8s,baz=198,slow=20,SNR=11						
INK	Inuvik	11.97	38	Pn	Pn	22 52 09.7	-0.6
INK	Inuvik	11.97	38	P	Pn	22 52 09.3	-0.9
	baz=236,SNR=53						
DLBC	Dease Lake	12.12	87	P	P	22 52 18.2	-0.2
	comp=E,7.5nm,0.5s,baz=239,slow=9.7,SNR=5.2						
C36M	Paulatuk	15.49	41	Pn	Pn	22 52 53.6	-1.0
C36M	Paulatuk	15.49	41	P	Pn	22 52 52.6	-1.9
	baz=248,SNR=31						
A36M	Sachs Harbour	16.37	32	P	Pn	22 53 05.0	-0.2
A36M	Sachs Harbour	16.37	32	P	P	22 53 04.1	-1.0
	baz=238,SNR=17						
YKA	Yellowknife Ar	18.68	66	P	P	22 53 31.3	+0.8
	comp=E,4.2nm,0.7s,baz=277,slow=10,SNR=21						
YKA				PcP	PcP	22 57 51.4	+0.3
	comp=E,1.5nm,0.5s,baz=281,slow=1.4,SNR=12						
YKA				ScP	ScP	23 01 11.9	+0.4
	comp=E,0.4nm,0.6s,baz=288,slow=2.1,SNR=4.4						
YKA	Yellowknife Ar	18.68	66		P	22 53 30.5	0.0
BILL	Bilibino	18.99	312	P	P	22 53 33.2	-0.7
EDM	Edmonton	22.83	89	P	P	22 54 14.3	+0.4
SEY	Seymchan	25.34	300	P	P	22 54 35.9	-0.7
	comp=E,4.7nm,0.6s,baz=99,slow=8.1,SNR=11						
	comp=E,4.7nm,0.6s						
PEA0B	Petropavlovsk-	27.19	277	P	P	22 54 53.9	+0.6
PETK	Petropavlovsk-	27.19	277	P	P	22 54 52.6	-0.7
	comp=E,2.5nm,0.5s,baz=73,slow=14,SNR=6.7						
	comp=E,2.5nm,0.5s						
MA2	Magadan	27.32	294	P	P	22 54 54.4	+0.1
	comp=E,11nm,0.4s,baz=76,slow=12,SNR=5.8						
	comp=E,11nm,0.4s						
MA2	Magadan	27.32	294	P	P	22 54 55.0	+0.6
NVAR	Mina Array Bea	30.97	118	P	P	22 55 28.8	+1.7
	comp=E,0.3nm,0.6s,baz=280,slow=6.2,SNR=1.9						
NVAR				PcP	PcP	22 58 20.1	+0.9
	comp=E,0.7nm,0.4s,baz=291,slow=2.8,SNR=5.9						
NVAR				ScP	ScP	23 01 48.4	+1.7
	comp=E,1.0nm,0.8s,baz=307,slow=2.5,SNR=6.1						
	comp=E,0.3nm,0.6s						
PDAR	Pinedale Array	31.66	103	P	P	22 55 34.5	+1.4
	comp=E,0.5nm,0.4s,baz=354,slow=3.9,SNR=7.0						
	comp=E,0.5nm,0.4s						
PDAR	Pinedale Array	31.66	103	P	P	22 55 34.2	+1.1
SUMG	Summit	40.49	25	P	P	22 56 48.2	+0.4
DAG	Danmarks Havn	40.53	15	*i* P	P	22 56 46.0	-1.7
ERM	Erimo	41.86	274	P	P	22 57 00.1	+1.2
ERM				IAmb	IAmb	22 57 00.9	
	comp=Z,14nm,0.9s						
NRIK	Noril'sk	43.75	333	P	P	22 57 13.9	+0.1
	comp=Z,8.2nm,0.5s,baz=61,slow=7.1,SNR=18						
NRIK				ScP	ScP	23 02 32.0	-1.7
	comp=Z,1.2nm,0.4s,baz=359,slow=22,SNR=2.3						
	comp=Z,8.2nm,0.5s						
NRIK	Noril'sk	43.75	333	P	P	22 57 13.9	+0.1
NRIK				IAmb	IAmb	22 57 15.0	
	comp=Z,9.0nm,0.6s						
SCHQ	Schefferville	43.77	57	P	P	22 57 14.8	+0.6
	comp=Z,1.5nm,0.6s,baz=282,slow=7.7,SNR=5.1						
	comp=Z,1.5nm,0.6s						
TXAR	Lajitas Array	45.24	110	P	P	22 57 28.3	+2.1
	comp=Z,0.3nm,0.5s,baz=303,slow=7.1,SNR=2.1						
TXAR				ScP	ScP	23 02 41.6	+1.0
	comp=Z,0.4nm,0.7s,baz=319,slow=5.1,SNR=2.0						
	comp=Z,0.3nm,0.5s						
JCT	Junction City	46.14	105	P	P	22 57 35.3	+2.1
JCT				IAmb	IAmb	22 57 36.0	
	comp=Z,9.3nm,0.6s						
JSD	Sado	47.33	274	P	P	22 57 41.6	-0.6
MJAR	Matsushiro Arr	48.51	273	P	P	22 57 50.5	-0.9
	comp=Z,1.5nm,0.5s,baz=23,slow=7.0,SNR=9.0						
MJAR				S	S	23 04 42.6	+2.3
	comp=Z,0.9nm,0.8s,baz=81,slow=6.0,SNR=4.3						
	comp=Z,1.5nm,0.5s						
CN2	Changchun	49.21	289	*e*P	P	22 57 57.1	+0.5
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
JGF	Kuroka	49.68	273	P	P	22 58 00.9	+0.6
JGF				IAmb	IAmb	22 58 04.0	
	comp=Z,7.5nm,0.8s						
SEHB	SEOHWA	52.11	282	P	P	22 58 18.9	+0.5
SEHB				IAmb	IAmb	22 58 20.8	
	comp=Z,12nm,1.1s						
JHS	Saijyo	52.27	276	P	P	22 58 19.9	+0.3
JHS				IAmb	IAmb	22 58 35.9	
	comp=Z,13nm,1.2s						
KS19	Wonju Array Si	52.90	282	P	P	22 58 25.2	+1.0
KS19				IAmb	IAmb	22 58 26.2	
	comp=Z,5.1nm,0.6s						
KSRS	Korea Array	52.91	282	P	P	22 58 23.7	-0.5
	comp=Z,5.4nm,0.8s,baz=36,slow=6.9,SNR=25						
	comp=Z,5.4nm,0.8s						
KSAR	Wonju Array Be	52.94	282	P	P	22 58 24.4	-0.1
JCJ	Chichijima	54.12	262	P	P	22 58 32.2	-1.0
ULN	Ulaanbaatar	54.26	305	P	P	22 58 34.3	+0.1
ULN				IAmb	IAmb	22 58 35.9	
	comp=Z,5.2nm,0.6s						
JTU	Tsushima	54.50	279	P	P	22 58 36.0	+0.2
SONM	Songino Array	54.56	305	P	P	22 58 37.1	+0.9
	comp=Z,9.5nm,0.7s,baz=40,slow=6.1,SNR=12						
SONM				ScP	ScP	23 03 23.3	+3.0
	comp=Z,1.4nm,0.5s,baz=8.3,slow=11,SNR=2.5						
	comp=Z,9.5nm,0.7s						
SONM	Songino Array	54.56	305	P	P	22 58 37.3	+1.0
SONM				IAmb	IAmb	22 58 38.4	
	comp=Z,7.2nm,0.7s						
ZAA0	Zalesovo Array	57.19	323	P	P	22 58 55.0	+0.3
ZALV	Zalesovo Beam	57.19	323	P	P	22 58 54.7	0.0
	comp=Z,14nm,0.5s,baz=29,slow=7.1,SNR=55						
	comp=Z,14nm,0.5s						
HHC	Hu-ho-hao-te	57.93	297	*e*P	P	22 58 59.6	-0.6
NOA	NORSAR Array B	58.68	9	P	P	22 59 05.0	-0.1
	comp=Z,0.4nm,0.7s,baz=35,slow=11,SNR=1.6						
	comp=Z,0.4nm,0.7s						
FINES	FINESS Array B	58.85	0	P	P	22 59 05.4	-0.7
	comp=Z,1.9nm,0.8s,baz=2.5,slow=7.9,SNR=5.5						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	58.85	0	P	P	22 59 05.7	-0.4
ARU	Arti	61.13	340	P	P	22 59 21.2	-0.5
	comp=Z,2.4nm,0.4s,baz=347,slow=2.2,SNR=12						
	comp=Z,2.4nm,0.4s						
ARU	Arti	61.13	340	P	P	22 59 21.3	-0.5
KURK	Kurchatov	61.85	325	P	P	22 59 26.6	0.0
KURK				IAmb	IAmb	22 59 27.2	
	comp=Z,12nm,1.0s						
BRVK	Borovoye	61.91	332	P	P	22 59 26.8	-0.2
BRVK				IAmb	IAmb	22 59 27.5	
	comp=Z,9.4nm,0.8s						
KURBB	Kurchatov Arra	61.96	325	P	P	22 59 27.4	0.0
	comp=Z,4.9nm,0.4s,baz=28,slow=6.6,SNR=76						
KURBB				PcP	PcP	23 00 06.2	-0.2
	comp=Z,1.3nm,0.6s,baz=26,slow=4.0,SNR=4.3						
	comp=Z,4.9nm,0.4s						
EKA	Eskdalemuir Ar	62.59	19	P	P	22 59 31.2	-0.2
	comp=Z,0.4nm,0.5s,baz=345,slow=5.2,SNR=3.6						
	comp=Z,0.4nm,0.5s						
LYN	LuoYang	62.66	292	⇓*i*P	P	22 59 33.0	+0.8
LYN				pmax	pmax		
	comp=Z,30nm,0.5s						
GTA	Gaotai	64.19	304	*e*P	P	22 59 42.9	+0.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK31	Makanchi Array	64.24	321	P	P	22 59 42.1	-0.4
MKAR	Makanchi Array	64.24	321	P	P	22 59 41.8	-0.7
	comp=Z,2.7nm,0.5s,baz=40,slow=7.0,SNR=49						
	comp=Z,2.7nm,0.5s						
MKAR	Makanchi Array	64.24	321	P	P	22 59 42.0	-0.5
MAKZ	Makanchi	64.33	321	P	P	22 59 42.6	-0.4
MAKZ				IAmb	IAmb	22 59 43.4	
	comp=Z,5.5nm,0.9s						
XAN	Xi'an	64.72	294	⇓P	P	22 59 45.8	0.0
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
XAN				LR	LR		
	comp=Z,130nm,14.4s						
XAN				LR	LR		
	comp=Z,210nm,17.2s						
WMQ	Urumqi	65.05	316	*e*P	P	22 59 48.9	+1.1
WMQ				PcP	PcP	23 00 21.8	+2.4
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
LZH	Lanzhou	65.28	300	*e*P	P	22 59 49.8	+0.3
LZH				pmax	pmax		
	comp=Z,40nm,1.1s						
BELG	Belogornoye	66.64	346	P	P	22 59 57.5	-0.2
	comp=Z,6.9nm,0.5s,baz=328,slow=4.4,SNR=5.2						
	comp=Z,6.9nm,0.5s						
AKTO	Aktyubinsk	66.97	339	P	P	22 59 59.4	-0.4
	comp=Z,3.8nm,0.6s,baz=13,slow=4.9,SNR=10.0						
	comp=Z,3.8nm,0.6s						
SSLB	Suanglung	67.49	279	P	P	23 00 03.0	-0.5
ABKAR	Akbulak array	67.73	337	P	P	23 00 03.9	-0.8
ABKAR	Akbulak array	67.73	337	P	P	23 00 04.2	-0.4
ABKAR				IAmb	IAmb	23 00 05.1	
	comp=Z,6.2nm,0.7s						
GOMU	GeErMu	68.98	306	P	P	23 00 12.8	-0.3
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,46nm,5.2s						
AKASG	Malin Array Be	69.60	358	P	P	23 00 15.0	-1.2
	comp=Z,0.6nm,0.4s,baz=3.5,slow=5.7,SNR=5.6						
	comp=Z,0.6nm,0.4s						
KKAR	Karatay Array	71.06	327	P	P	23 00 25.2	0.0
KKAR	Karatay Array	71.06	327	P	P	23 00 25.0	-0.2
KKAR				IAmb	IAmb	23 00 25.7	
	comp=Z,3.4nm,0.7s						
KSH	Kashi	72.79	322	P	P	23 00 39.6	+3.9
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TUE	Stuetta	72.94	12	P	P	23 00 37.7	+1.1
GAR	Garm	74.94	326	P	P	23 00 48.1	-0.1
GAR				IAmb	IAmb	23 00 49.3	
	comp=Z,6.8nm,0.8s						
KIV	Kislovodsk	75.52	348	P	P	23 00 51.3	-0.1
CHGR	Chuyangaron	75.58	327	P	P	23 00 51.6	-0.3
CHGR				IAmb	IAmb	23 00 52.3	
	comp=Z,13nm,0.8s						
LSA	Lhasa	76.14	306	P	P	23 00 55.4	-0.3
LSA				IAmb	IAmb	23 00 57.6	
	comp=Z,7.1nm,0.7s						
ESDC	Sonseca Array	77.54	24	P	P	23 01 02.6	-0.2
	comp=Z,0.5nm,0.9s,baz=344,slow=5.2,SNR=2.5						
	comp=Z,0.5nm,0.9s						
NIL	Nilore	79.03	322	P	P	23 01 10.6	-0.5
NIL				IAmb	IAmb	23 01 11.2	
	comp=Z,8.9nm,0.6s						
KKN	Kakani	80.17	310	*e*P	P	23 01 16.8	-0.7
GKN	Gorkha	80.22	310	*e*P	P	23 01 16.9	-0.8
DANN	Dangsing	80.25	311	*e*P	P	23 01 18.4	+0.4
PKI	Pulchoki	80.31	310	*e*P	P	23 01 17.8	-0.6
PKIN	Phulchoki	80.31	310	*e*P	P	23 01 17.0	-1.4
UBPT	Khong Chiam	82.30	287	P	P	23 01 28.5	0.0
UBPT				IAmb	IAmb	23 01 28.9	
	comp=Z,7.6nm,0.6s						
CM31	Chiang Mai Arr	82.61	294	P	P	23 01 29.9	-0.3
CMAR	Chiang Mai Arr	82.61	294	P	P	23 01 29.9	-0.3
	comp=Z,3.4nm,0.7s,baz=13,slow=5.7,SNR=18						
	comp=Z,3.4nm,0.7s						
CMAR	Chiang Mai Arr	82.61	294	P	P	23 01 29.4	-0.8
BOSA	Boshof	148.58	2	PKPbc	PKPbc	23 08 51.1	-1.5
	comp=Z,3.4nm,0.7s,baz=5.6,slow=2.9,SNR=9.5						

IDC ***18*** *22:55:53.0±1.3, 34°.34N×25°.16E, h0^{km}, mb3.7/4, mbtmp3.6/7, ML3.9/3, Error ellipse: s-maj=25.6km s-min=18.6km az=84.0*
ISK ***18*** *22:55:55.5, 34°.30N×25°.18E, h9^{km}, ML3.3/19*
THE ***18*** *22:55:56.6, 34°.33N×25°.12E, h0^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=3.7km s-min=1.2km az=166.0*
ATH ***18*** *22:55:56.8, 34°.32N×25°.13E, h14^{km}±4^{km}, ML3.0/6, Error ellipse: s-maj=5.6km s-min=1.6km az=5.0*
DDA ***18*** *22:56:04.0±0.0, 34°.52N×25°.59E, h33^{km}, ML2.9*
ISC 18 22:55:55.5±1.5**, 34°.28N**±0°.06×**25°.18E**±0°.03**, h13**^{km}±9^{km}**, n59,** σ1^{s}**58**/80**, mb3.6**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.80	337	P	Pg	22 56 10.7	-0.2
SIVA				S	Sg	22 56 20.8	-0.5
SIVA				AML	AML	22 56 27.6	
	comp=E,10186µm,0.5s						
SIVA				AML	AML	22 56 28.8	
	comp=N,5338µm,0.6s						
FRMA	Ierapetra Chan	0.86	32	P	Pn	22 56 14.2	+1.0
TMBK	Timbaki Herakl	0.86	337	P	Pg	22 56 12.3	+0.2
TMBK				S	Sb	22 56 23.5	-0.1
TMBK				AML	AML	22 56 29.8	
	comp=E,4033µm,0.4s						
TMBK				AML	AML	22 56 32.7	
	comp=N,4545µm,0.7s						
TMBK	Timbaki Herakl	0.86	337	P	Pg	22 56 12.3	+0.2
TMBK				S	Sb	22 56 24.6	+1.0
	comp=N,722nm,0.6s						
KSTL	Kastelli Herak	1.02	355	P	Pg	22 56 13.6	-1.6
KSTL	Kastelli Herak	1.02	355	P	Pg	22 56 13.9	-1.3
HRKL	Herakleio	1.03	356	P	Pb	22 56 16.0	+0.9
HRKL	Herakleio	1.03	356	P	Pn	22 56 16.3	+0.7
HRKL				S	Sn	22 56 31.1	+1.3
	comp=N,1µm,0.9s						
HRKL	Herakleio	1.03	356	PG	Pg	22 56 15.6	+0.3
HRKL				SG	Sn	22 56 29.8	0.0
IDI	Anoyia	1.03	347	Pn	Pg	22 56 14.4	-1.0
	comp=N,26nm,0.3s,baz=177,slow=15,SNR=312						
IDI				Sn	Sb	22 56 29.4	+0.8
	comp=N,22nm,0.3s,baz=235,slow=16,SNR=7.8						
IDI	Anoyia	1.03	347	P	Pg	22 56 14.7	-0.6
IDI				AML	AML	22 56 34.4	
	comp=E,644µm,0.3s						
IDI				AML	AML	22 56 37.4	
	comp=N,625µm,0.4s						
IDI	Anoyia	1.03	347	P	Pg	22 56 14.8	-0.6
IDI				S	Sb	22 56 28.9	+0.2
	comp=N,408nm,0.7s						
IDI	Anoyia	1.03	347	PG	Pg	22 56 14.8	-0.6
IDI				SG	Sb	22 56 29.8	+1.1
NPS	Neapolis	1.04	20	P	Pg	22 56 15.0	-0.6
NPS	Neapolis	1.04	20	P	Pg	22 56 15.5	-0.1
NPS				S	Sn	22 56 31.2	+1.1
GVD	Gavdhos	1.06	302	P	Pg	22 56 15.4	-0.5

GVD				S	Sg	22 56 29.1	-0.7
GVD				AML	AML	22 56 36.5	
	comp=N,2559µm,0.2s						
GVD				AML	AML	22 56 39.6	
	comp=E,3066µm,0.3s						
GVD	Gavdhos	1.06	302	P	Pg	22 56 15.7	-0.2
GVD				S	Sn	22 56 31.0	+0.4
	comp=E,2µm,0.3s						
GVD	Gavdhos	1.06	302	PG	Pg	22 56 15.7	-0.2
GVD				SG	Sn	22 56 31.0	+0.4
GVDS	Gavdos	1.06	302	P	Pg	22 56 15.9	-0.1
GVDS				S	Sn	22 56 30.8	+0.2
	comp=E,988nm,0.2s						
ZKR	Zakros	1.19	45	P	Pb	22 56 18.8	+1.0
ZKR				AML	AML	22 56 49.9	
	comp=E,903µm,0.7s						
ZKR				AML	AML	22 56 55.8	
	comp=N,465µm,0.8s						
ZKR	Zakros	1.19	45	P	Pb	22 56 18.9	+1.0
ZKR				S	Sn	22 56 37.0	+3.2
	comp=N,378nm,1.1s						
ZKR	Zakros	1.19	45	PN	Pb	22 56 18.9	+1.0
ZKR				SN	Sn	22 56 35.2	+1.4
IMMV	Iera Moni Meta	1.54	320	P	Pn	22 56 23.6	+1.0
IMMV				AML	AML	22 56 56.5	
	comp=N,870µm,0.6s						
IMMV				AML	AML	22 56 59.4	
	comp=E,1064µm,1.1s						
IMMV	Iera Moni Meta	1.54	320	P	Pn	22 56 23.2	+0.7
IMMV	Iera Moni Meta	1.54	320	PN	Pn	22 56 23.8	+1.2
IMMV				SN	Sg	22 56 44.3	-0.6
KNDR	Palaiochora Ch	1.56	308	P	Pn	22 56 24.2	+1.4
KNDR	Palaiochora Ch	1.56	308	PN	Pb	22 56 24.8	+0.7
RODP	Rodopos	1.73	318	PN	Pn	22 56 26.6	+1.4
KARP	Karpathos	2.06	52	PN	Pn	22 56 31.1	+1.3
THR6	Thira Island,	2.08	5	P	Pn	22 56 31.6	+1.6
THR3	Thira Island,	2.13	5	P	Pn	22 56 32.2	+1.5
THR5	Thira Island,	2.13	4	P	Pn	22 56 31.5	+0.7
MHLO	Agia Marina, M	2.48	345	P	Pn	22 56 35.8	+0.2
ARG	Arkhangelos	3.09	50	PN	Pn	22 56 45.8	+1.9
DAT	Datca	3.13	38	PN	Pn	22 56 46.3	+1.8
DAT	Datca	3.13	38	P	Pn	22 56 46.2	+1.7
DAT				S	Sn	22 57 19.0	-2.7
DAT				*i* AML	AML	22 57 40.0	
	comp=E,30nm,1.8s						
TURN	Turunc	3.52	44	PN	Pn	22 56 51.6	+1.7
TURN	Turunc	3.52	44	P	Pn	22 56 51.5	+1.6
TURN				S	Sn	22 57 26.4	-5.0
DALY	Dalyan (Mula)	3.79	47	PN	Pn	22 56 56.0	+2.4
YER	Yerkesik	3.80	41	PN	Pn	22 56 55.9	+2.1
MULA	Mugla, Merkez-	3.91	40	P	Pn	22 56 57.7	+2.4
MULA				*i* AML	AML	22 57 36.0	
	comp=E,19nm,0.8s						
ITM	Ithomi	3.92	318	PN	Pn	22 56 57.6	+2.2
FETY	Fethiye	3.96	52	PN	Pn	22 56 57.4	+1.6
FETY	Fethiye	3.96	52	P	Pn	22 57 00.4	+4.6
FETY				S	Sn	22 57 41.4	-0.7
AYDN	Tasoluk	4.02	32	P	Pn	22 56 59.0	+2.2
AKAS	Kas	4.11	60	PN	Pn	22 57 00.3	+2.2
AKAS	Kas	4.11	60	P	Pn	22 56 59.7	+1.7
AKAS				S	Sn	22 57 43.2	-2.8
AKAS				*i* AML	AML	22 57 49.0	
	comp=E,29nm,0.8s						
AYDB	Zeytinkoy-Aydi	4.26	30	PN	Pn	22 57 02.3	+2.1
CAME	Cameli-Denizli	4.28	50	PN	Pn	22 57 02.1	+1.7
CAEL	Denizli, Camel	4.40	49	P	Pn	22 57 04.4	+2.3
CAEL				S	Sn	22 57 54.2	+0.9
CAEL				*i* AML	AML	22 58 12.0	
	comp=E,19nm,1.0s						
GOLH	Golhisar	4.62	49	P	Pn	22 57 06.5	+1.5
GOLH				*i* AML	AML	22 58 02.0	
	comp=E,25nm,2.1s						
GOLH				*i* AML	AML	22 58 08.0	
	comp=E,31nm,1.7s						
KORT	Korkueli	5.01	56	PN	Pn	22 57 12.9	+2.5
EIL	Elat	9.48	116	Pn	Pn	22 58 11.2	-0.5
	comp=E,0.4nm,0.3s,baz=23,slow=0.8,SNR=12						
EIL				Sn	Sn	22 59 51.9	-6.3
	comp=E,0.5nm,0.3s,baz=44,slow=23,SNR=2.4						
	comp=E,1.7nm,0.4s						
AKASG	Malin Array Be	16.67	9	Pn	Pn	22 59 48.3	-0.3
	comp=E,0.5nm,0.3s,baz=201,slow=11,SNR=5.8						
	comp=E,0.1nm,0.3s						
GERES	GERESS Array B	16.87	333	Pn	Pn	22 59 50.7	-0.6
	comp=E,0.2nm,0.3s,baz=139,slow=12,SNR=10						
	comp=E,1.0nm,0.6s						
FINES	FINESS Array B	27.18	1	P	P	23 01 35.8	-2.6
	comp=E,0.6nm,0.7s,baz=191,slow=14,SNR=1.2						
	comp=E,0.6nm,0.7s						
TORD	Torodi Ar. Bea	29.95	231	P	P	23 02 03.4	-0.1
	comp=E,0.6nm,0.4s,baz=33,slow=9.0,SNR=22						
	comp=E,0.6nm,0.4s						
MKAR	Makanchi Array	44.25	56	P	P	23 04 04.1	-0.4
	comp=E,0.3nm,0.5s,baz=260,slow=12,SNR=4.7						
	comp=E,0.3nm,0.5s						
ZALV	Zalesovo Beam	45.60	46	P	P	23 04 14.4	-0.7
	comp=E,0.9nm,0.4s,baz=276,slow=8.7,SNR=4.0						
	comp=E,0.9nm,0.4s						

IDC ***18*** *23:35:12.3±0.5, 10°.24S×161°.31E, h66km±3km, mb4.4/23, mbtmp4.7/26, MS3.4/33, Error ellipse: s-maj=10.8km s-min=6.7km az=39.0*

BJI ***18*** *23:35:13.2±0.0, 9°.76S×161°.35E, h73km, mb4.8/25, mB4.9/16, Ms4.9/1*

NEIC ***18*** *23:35:15.6±1.4, 10°.18S±0°.08×161°.13E±0°.08, h84km±6km, mb4.9/93, Error ellipse: s-maj=14.1km s-min=9.3km az=223.0*

ISC 18 23:35:13.6±0.4**, 10°.22S**±0°.05×**161°.23E**±0°.06**, h74**km±3km**, h74**km**:pP-P, n326,** σ1s.06/322**, mb4.9**/71**, 17C-22D, Fault plane solution: NP1:**φs229.99034°**,** δ12.31619°, λ177.43224°. **NP2:**φs322.49908°**,** δ89.45245°**,** λ77.69580°. **Principal axes:** T Plg44.2340°**,** Azm220.3586°**;** N Plg12.3036°**,** Azm322.6185°**;** P Plg43.1630°, Azm64.4214°**; Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.48	302	P	Pn	23 35 38.6	+0.1
	2µm,0.3s,baz=179,slow=6.3,SNR=51						
HNR				S	Sn	23 35 57.6	+0.3
	16µm,0.3s,baz=124,slow=18,SNR=25						
HNR	Honiara	1.48	302	P	Pn	23 35 39.2	+0.7
SANVU	Saraoutou	7.81	132		Pn	23 37 06.0	+1.5
SANVU	Saraoutou	7.81	132	P	Pn	23 37 06.3	+1.8
DVP	Devils Point	10.06	139	P	Pn	23 37 38.0	+2.7
LIFNC	LIFOU	11.99	152	Pn	Pn	23 38 02.5	+0.9
LIFNC	LIFOU	11.99	152	P	Pn	23 38 03.3	+1.7
NOUC	Port Laguerre	12.78	158	P	Pn	23 38 15.3	+3.0
DZM	Mont Dzumac	12.80	158	*e*P	Pn	23 38 15.0	+2.3
	53nm,1.4s						
DZM				*e*S	Sn	23 40 30.2	-3.3
DZM				*e*LR	LR	23 40 48.9	
	comp=Z,575nm,27.5s						
DZM	Mont Dzumac	12.80	158	P	Pn	23 38 11.4	-1.4
	9.9nm,0.9s,baz=118,slow=17,SNR=4.1						
DZM				S	Sn	23 40 32.9	-0.6
	3.7nm,0.3s,baz=118,slow=23,SNR=2.9						
DZM				LR	LR	23 42 33.3	
	comp=Z,148nm,20.5s,baz=258,slow=35						
DZM	Mont Dzumac	12.80	158		Pn	23 38 15.1	+2.3
DZM	Mont Dzumac	12.80	158	P	Pn	23 38 15.4	+2.6
MARNC	Mare, Loyalty	12.96	151	Pn	Pn	23 38 16.8	+2.0
MARNC	Mare, Loyalty	12.96	151	P	Pn	23 38 17.5	+2.6
YATNC	Mamie plateau,	12.96	156	P	Pn	23 38 16.4	+1.5
OUENC	Ouen Island, N	13.27	157		Pn	23 38 21.8	+2.8
OUENC	Ouen Island, N	13.27	157	P	P	23 38 22.4	-3.6
PINNC	Pines Island,	13.69	155	Pn	Pn	23 38 26.8	+2.3
PMG	Port Moresby	13.89	272	P	Pn	23 38 28.7	+1.6
	6.8nm,0.3s,baz=35,slow=3.5,SNR=5.5						
PMG	Port Moresby	13.89	272	Pn	Pn	23 38 28.9	+1.8
TARA	Tarawa	16.36	46	P	P	23 39 00.8	+0.3
TARA				IAmb	IAmb	23 39 14.0	
	comp=Z,95nm,0.8s						
PATS	Pohnpei	17.19	350		P	23 39 10.9	+1.2
CTA	Charters Tower	17.45	234	P	P	23 39 13.6	+1.0
	comp=Z,19nm,0.6s,baz=59,slow=12,SNR=19						
CTA				LR	LR	23 45 47.1	
	comp=Z,67nm,19.2s,baz=60,slow=36						
CTA	Charters Tower	17.45	234	P	P	23 39 15.8	+3.3
CTAO	Charters Tower	17.45	234	P	P	23 39 14.1	+1.6
CTAO	Charters Tower	17.45	234	P	P	23 39 15.8	+3.3
EIDS	Eidsvold	17.88	211	P	Pn	23 39 19.6	+2.1
	baz=18,SNR=6.9						
EIDS	Eidsvold	17.88	211	P	Pn	23 39 19.1	+1.6
COEN	Coen	18.04	256	P	Pn	23 39 21.6	+2.1
	baz=18,SNR=10.0						
COEN	Coen	18.04	256	P	Pn	23 39 21.1	+1.7
COEN	Coen	18.04	256	P	Pn	23 39 23.0	+3.6
MTSU	Mount Surprise	18.17	242	P	Pn	23 39 22.5	+1.4
	baz=18,SNR=14						
RMQ	Roma	20.02	214	P	Pn	23 39 42.6	-0.3
	baz=20,SNR=14						
RMQ	Roma	20.02	214	P	Pn	23 39 44.0	+1.1
LKBA	Tubou, Lakemba	20.91	115	P	Pn	23 39 53.7	+0.3
ARMA	Armidale	21.99	203	P	P	23 40 02.3	+0.4
	baz=22,SNR=4.9						
ARMA	Armidale	21.99	203	P	P	23 40 02.3	+0.4
QLP	Quilpie	22.86	222	P	P	23 40 11.7	+0.7
	baz=23,SNR=8.7						
QIS	Mount Isa	23.21	241	P	P	23 40 14.9	+0.4
	baz=23,SNR=4.8						
CMSA	Cobar Meteorol	25.64	212	P	P	23 40 37.1	+0.7
	baz=26,SNR=17						
AFI	Afiamalu	26.65	101	LR	LR	23 49 56.3	
	comp=Z,71nm,18.1s,baz=161,slow=33						
WR0	Warramunga Arr	27.48	246	P	P	23 40 52.9	-0.3
WB2	Warramunga Arr	27.65	246	P	P	23 40 54.4	-0.3
	baz=28						
WB2	Warramunga Arr	27.65	246	P	P	23 40 54.2	-0.5
WRA	Warramunga Arr	27.66	246	P	P	23 40 54.2	-0.6
	comp=Z,8.8nm,0.6s,baz=74,slow=9.2,SNR=79						
WRA				pP	pP	23 41 10.9	+0.2
	comp=Z,4.6nm,0.6s,baz=75,slow=8.7,SNR=4.7						
WRA				PcP	PcP	23 44 09.5	-1.1
	comp=Z,3.4nm,0.9s,baz=73,slow=3.1,SNR=6.1						
WRA				ScP	ScP	23 47 44.0	-0.9
	comp=Z,0.5nm,0.6s,baz=71,slow=3.4,SNR=3.0						
WRA				LR	LR	23 50 57.0	
	comp=Z,68nm,21.8s,baz=32,slow=34						
	comp=Z,8.8nm,0.6s						
WRA	Warramunga Arr	27.66	246	P	P	23 40 53.5	-1.3
STKA	Stephens Creek	28.18	217	P	P	23 40 58.9	-0.4
	comp=Z,7.2nm,0.9s,baz=21,slow=10,SNR=7.0						
STKA				LR	LR	23 51 33.5	
	comp=Z,62nm,21.9s,baz=35,slow=35						
	comp=Z,7.2nm,0.9s						
STKA	Stephens Creek	28.18	217	P	P	23 41 00.2	+0.9
	baz=28,SNR=9.8						
STKA	Stephens Creek	28.18	217	P	P	23 40 59.6	+0.3
GUMO	Guam	28.69	325	LR	LR	23 51 39.6	
	comp=Z,93nm,21.9s,baz=107,slow=34						
AS31	Alice Springs	29.28	239	P	P	23 41 08.9	-0.3
ASAR	Alice Springs	29.28	239	P	P	23 41 08.1	-1.1
	comp=Z,1.9nm,0.5s,baz=68,slow=9.4,SNR=25						
ASAR				pP	pP	23 41 24.8	-0.5
	comp=Z,1.8nm,0.8s,baz=62,slow=10,SNR=3.6						
ASAR				sP	sP	23 41 32.8	-0.6
	comp=Z,4.1nm,0.5s,baz=70,slow=9.5,SNR=7.7						
ASAR				PcP	PcP	23 44 13.6	-1.0
	comp=Z,1.4nm,0.8s,baz=71,slow=2.8,SNR=5.3						
ASAR				ScP	ScP	23 47 49.2	-0.7
	comp=Z,0.2nm,0.4s,baz=75,slow=2.4,SNR=1.4						
ASAR				LR	LR	23 52 56.4	
	comp=Z,139nm,18.1s,baz=102,slow=36						
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	29.28	239	P	P	23 41 08.4	-0.8
TOO	Toolangi	30.70	205	P	P	23 41 23.1	+1.5
	baz=31						
TOO	Toolangi	30.70	205	P	P	23 41 22.4	+0.8
TOO				IAmb	IAmb	23 41 51.3	
	comp=Z,51nm,1.6s						
HTT	Hallett	30.88	218	P	P	23 41 23.9	+0.7
	baz=31,SNR=7.0						
URZ	Urewera	31.35	156	LR	LR	23 52 33.5	
	comp=Z,69nm,19.2s,baz=31,slow=33						
BKZ	Black Stump Fm	31.89	157	P	P	23 41 32.5	+0.6
KNRA	Kununurra	32.07	257	P	P	23 41 33.7	-0.1
	baz=32,SNR=9.2						
KNRA	Kununurra	32.07	257	P	P	23 41 33.4	-0.5
BBOO	Buckleboo	32.29	222	P	P	23 41 35.8	+0.2
	baz=32,SNR=27						
BBOO	Buckleboo	32.29	222	P	P	23 41 35.7	+0.1
RPZ	Rata Peaks	34.44	167	P	P	23 41 53.7	-0.5
	comp=Z,16nm,0.7s,baz=285,slow=3.5,SNR=5.9						
	comp=Z,16nm,0.7s						
RPZ	Rata Peaks	34.44	167	P	P	23 41 54.7	+0.6
WRKA	Warakurna	34.55	240	P	P	23 41 54.3	-1.0
	baz=35,SNR=35						
BATI	Baumata	36.95	267	P	P	23 42 16.7	+0.6
	comp=Z,25nm,0.6s,baz=172,slow=1.1,SNR=5.5						
	comp=Z,25nm,0.6s						
FORT	Forrest	36.97	232	P	P	23 42 16.1	+0.1
RAR	Rarotonga	39.00	111	LR	LR	23 55 59.0	
	comp=Z,60nm,18.1s,baz=225,slow=32						
DAV	Davao City (W)	39.44	294	LR	LR	23 57 00.7	
	comp=Z,31nm,21.6s,baz=323,slow=33						
PSA00	Pilbara Seismi	41.24	249	P	P	23 42 51.0	-0.7
PSA00	Pilbara Seismi	41.24	249	P	P	23 42 50.6	-1.2
PSA00				IAmb	IAmb	23 42 54.7	
	comp=Z,52nm,1.8s						
MBWA	Marble Bar	41.28	250	P	P	23 42 51.1	-0.9
MBWA				IAmb	IAmb	23 42 52.7	
	comp=Z,23nm,1.1s						
JCJ	Chichijima	41.44	334	P	P	23 42 52.0	-1.2
	comp=Z,19nm,0.6s,baz=236,slow=9.9,SNR=4.1						
JCJ				LR	LR	23 58 24.5	
	comp=Z,45nm,21.7s,baz=178,slow=34						
	comp=Z,19nm,0.6s						
JCJ	Chichijima	41.44	334	P	P	23 42 52.0	-1.2
BLDU	Ballidu	46.02	237	P	P	23 43 29.8	-0.2
	baz=46,SNR=8.3						
MORW	Morawa	46.17	239	P	P	23 43 31.2	0.0
	baz=46,SNR=4.4						
MORW	Morawa	46.17	239	P	P	23 43 30.4	-0.8
MORW				IAmb	IAmb	23 43 32.6	
	comp=Z,17nm,1.0s						
JAGI	Jajag, Banyuwa	46.45	268	P	P	23 43 31.1	-2.5
PPT	Papeete	48.20	104	LR	LR	23 59 04.9	
	comp=Z,22nm,21.3s,baz=336,slow=30						
PPT2	Papeete2	48.20	104	*e*LR	LR	23 56 32.6	
	comp=Z,140nm,29.2s						
MJAR	Matsushiro Arr	51.31	336	P	P	23 44 09.5	-0.9
	comp=Z,1.7nm,0.4s,baz=153,slow=8.6,SNR=6.6						
MJAR				LR	LR	00 04 17.9	
	comp=Z,20nm,22.0s,baz=170,slow=34						
	comp=Z,1.7nm,0.4s						
MAJO	Matsushiro	51.31	336	P	P	23 44 09.2	-1.2
MAJO				IAmb	IAmb	23 44 11.9	
	comp=Z,25nm,1.4s						
LEM	Lembang	53.08	269	P	P	23 44 24.2	+0.1
	comp=Z,15nm,0.5s,baz=327,slow=15,SNR=2.3						
LEM				pP	pP	23 44 41.9	-0.5
	comp=Z,13nm,0.3s,baz=52,slow=3.3,SNR=2.0						
	comp=Z,15nm,0.5s						
NAWB	Namwon	55.52	327	P	P	23 44 41.2	-0.1
NAWB				IAmb	IAmb	23 44 42.3	
	comp=Z,17nm,1.0s						
TJN	Taejon	56.25	327	P	P	23 44 46.4	0.0
KSCHJ	Chungju	56.30	328	P	P	23 44 46.1	-0.8
JKA	Kamikawa-asahi	56.66	344	P	P	23 44 49.5	+0.2
ASAJ	Asahikawa	56.66	344	P	P	23 44 49.6	+0.4
	comp=Z,8.4nm,0.5s,baz=224,slow=10,SNR=6.4						
ASAJ				LR	LR	00 06 49.8	
	comp=Z,45nm,21.6s,baz=173,slow=34						
	comp=Z,8.4nm,0.5s						
KSRS	Korea Array	56.77	329	P	P	23 44 50.2	+0.1
	comp=Z,5.4nm,0.9s,baz=143,slow=7.2,SNR=24						
KSRS				pP	pP	23 45 08.0	-0.6
	comp=Z,4.3nm,0.9s,baz=150,slow=7.9,SNR=4.7						
KSRS				LR	LR	00 06 50.1	
	comp=Z,17nm,21.7s,baz=140,slow=33						
	comp=Z,5.4nm,0.9s						
KSAR	Wonju Array Be	56.78	328	P	P	23 44 49.9	-0.3
KS19	Wonju Array Si	56.84	329	P	P	23 44 49.9	-0.7
KS19				IAmb	IAmb	23 44 51.1	
	comp=Z,8.1nm,0.9s						
SEHB	SEOHWA	57.23	329	P	P	23 44 53.3	-0.1
SEHB				IAmb	IAmb	23 44 54.7	
	comp=Z,11nm,0.9s						
INCN	Inchon	57.47	328	P	P	23 44 54.7	-0.4
USRK	Ussuriysk Ar.	60.31	336	P	P	23 45 15.0	+0.4
	comp=Z,20nm,0.9s,baz=154,slow=6.5,SNR=22						
USRK				pP	pP	23 45 33.0	-0.1
	comp=Z,8.5nm,0.9s,baz=147,slow=6.1,SNR=3.5						
	comp=Z,20nm,0.9s						
MDJ	Mudanjiang	61.63	335	P	P	23 45 23.4	-0.1
CN2	Changchun	62.83	332	*e*P	P	23 45 31.3	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	Petropavlovsk-	63.15	358	P	P	23 45 33.7	+0.2
	comp=Z,8.3nm,1.1s,baz=172,slow=11,SNR=4.2						
PETK				LR	LR	00 09 34.2	
	comp=Z,22nm,21.3s,baz=135,slow=33						
	comp=Z,8.3nm,1.1s						
SHEM	Shemya Is, Ala	63.66	9	LR	LR	00 06 50.6	
	comp=Z,19nm,21.8s,baz=290,slow=30						
GSI	Gunungsitoli	64.35	276	P	P	23 45 41.2	-1.1
GSI				IAmb	IAmb	23 45 42.0	
	comp=Z,15nm,0.9s						
KIWB	Kanaga Island	64.58	15	P	P	23 45 43.5	+0.6
KLR	Kul'dur	64.62	339	LR	LR	00 13 41.9	
	comp=Z,17nm,19.6s,baz=118,slow=36						
XAN	Xi'an	66.32	314	⇑P	P	23 45 53.9	-0.8
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VNDA	Vanda	67.28	180	P	P	23 46 00.7	+0.7
	comp=Z,9.6nm,0.7s,baz=344,slow=6.4,SNR=57						
VNDA				LR	LR	00 10 36.6	
	comp=Z,18nm,20.7s,baz=1.0,slow=32						
	comp=Z,9.6nm,0.7s						
VNDA	Vanda	67.28	180	P	P	23 46 00.4	+0.4
VNDA				IAmb	IAmb	23 46 01.6	
	comp=Z,12nm,0.8s						
XLT	XiLinHaoTe	67.66	326	⇓*i*P	P	23 46 03.8	+0.8
XLT				PcP	sP	23 46 29.5	-0.7
XLT				sP	PcP	23 46 34.1	+4.6
XLT				pmax	pmax		
	comp=Z,36nm,1.1s						
XLT				pmax	pmax		
	comp=Z,81nm,3.9s						
SBA	Scott Base	67.68	179	P	P	23 46 03.5	+1.1
SBA				IAmb	IAmb	23 46 05.2	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	67.72	295	P	P	23 46 04.1	+0.3
	comp=Z,0.6nm,0.3s,baz=140,slow=3.8,SNR=5.1						
CMAR				pP	pP	23 46 22.1	-0.5
	comp=Z,1.5nm,0.5s,baz=122,slow=4.9,SNR=2.7						
	comp=Z,0.6nm,0.3s						
CMAR	Chiang Mai Arr	67.72	295	P	P	23 46 03.0	-0.8
NIKH	Nikolski High	67.94	19	P	P	23 46 05.7	+1.2
	baz=212						
PZH	PanZhiHua	68.31	304	P	P	23 46 09.1	+1.6
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,6.1s						
HHC	Hu-ho-hao-te	68.38	322	*e*P	P	23 46 10.0	+2.4
HHC				pmax	pmax		
	comp=Z,37nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.8s						
CD2	Chengdu	68.60	309	P	P	23 46 09.6	+0.5
HIA	Hailar	69.52	332	P	P	23 46 14.2	-0.2
HIA				IAmb	IAmb	23 46 15.3	
	comp=Z,18nm,0.8s						
MA2	Magadan	70.07	354	LR	LR	00 14 57.7	
	comp=Z,15nm,20.6s,baz=150,slow=34						
LZH	Lanzhou	70.95	314	*e*P	P	23 46 24.8	+1.2
LZH				pP	PcP	23 46 46.5	+2.8
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
CHNA	Chernabura Isl	72.68	23	P	P	23 46 33.4	+0.1
	baz=221						
SEY	Seymchan	73.25	356	LR	LR	00 21 17.8	
	comp=Z,14nm,18.1s,baz=186,slow=38						
ULN	Ulaanbaatar	75.07	326	P	P	23 46 48.0	+0.3
ULN				IAmb	IAmb	23 46 49.1	
	comp=Z,16nm,0.9s						
GTA	Gaotai	75.32	315	*e*P	P	23 46 50.4	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	75.42	325	P	P	23 46 49.6	-0.1
	comp=Z,11nm,0.8s,baz=141,slow=5.8,SNR=28						
SONM				pP	pP	23 47 08.0	-1.1
	comp=Z,5.5nm,0.7s,baz=139,slow=4.8,SNR=3.5						
	comp=Z,11nm,0.8s						
SONM	Songino Array	75.42	325	P	P	23 46 49.3	-0.3
SONM				IAmb	IAmb	23 46 50.8	
	comp=Z,11nm,0.8s						
SII	Sitkinak Islan	76.04	24	P	P	23 46 53.7	+0.9
	baz=225						
YAK	Yakutsk	76.11	345	LR	LR	00 17 35.1	
	comp=Z,18nm,21.9s,baz=98,slow=33						
YAK	Yakutsk	76.11	345	P	P	23 46 52.8	-0.3
GAMB	Gambell	76.62	12	P	P	23 46 56.2	+0.4
	baz=208						
OHAK	Old Harbor	76.85	23	P	P	23 46 57.6	+0.3
	baz=226						
KDAK	Kodiak Island	77.52	23	LR	LR	00 18 58.7	
	comp=Z,38nm,18.5s,baz=232,slow=34						
KDAK	Kodiak Island	77.52	23	P	P	23 47 01.9	+0.8
KDAK				IAmb	IAmb	23 47 03.1	
	comp=Z,26nm,1.1s						
KDAK	Kodiak Island	77.52	23	P	P	23 47 01.5	+0.5
	baz=227						
P18K	Big Mountain,	77.67	21	P	P	23 47 01.8	-0.2
	baz=224						
Q19K	Cape Douglas,	77.91	22	P	P	23 47 03.2	-0.1
	baz=226						
BILL	Bilibino	78.14	2	P	P	23 47 04.8	+0.4
N18K	Kilae Creek	78.37	20	P	P	23 47 05.9	+0.1
N18K				IAmb	IAmb	23 47 31.5	
	comp=Z,19nm,1.3s						
N18K	Kilae Creek	78.37	20	P	P	23 47 06.6	+0.7
	baz=223						
SVW2	Sparrevohn	78.78	20	P	P	23 47 09.0	+1.0
N19K	Bonanza Creek	78.95	20	P	P	23 47 09.5	+0.4
	baz=224						
O20K	Slope Mountain	79.09	22	P	P	23 47 10.9	+1.1
	baz=226						
HOM	Homer	79.16	22	P	P	23 47 11.3	+1.2
	baz=227						
CNPM	China Poot	79.22	23	P	P	23 47 11.2	+0.7
CNPM				IAmb	IAmb	23 47 38.5	
	comp=Z,27nm,1.2s						
BRSE	Bradley Lake S	79.55	23	P	P	23 47 12.9	+0.7
	baz=228						
M19K	Big River Lodg	79.76	20	P	P	23 47 14.7	+1.3
M19K	Big River Lodg	79.76	20	P	P	23 47 13.6	+0.2
	baz=224,SNR=9.5						
QSPA	South Pole Qui	79.78	180	P	P	23 47 13.6	-0.1
	comp=Z,23nm,0.8s,baz=9.4,slow=1.8,SNR=61						
	comp=Z,23nm,0.8s						
QSPA	South Pole Qui	79.78	180	P	P	23 47 13.7	+0.1
L19K	White Mountain	79.81	19	P	P	23 47 14.6	+1.0
L19K				IAmb	IAmb	23 47 15.7	
	comp=Z,18nm,1.1s						
L19K	White Mountain	79.81	19	P	P	23 47 14.8	+1.2
	baz=224,SNR=9.7						
TTA	Tatalina	79.99	18	P	P	23 47 15.3	+0.7
TTA	Tatalina	79.99	18	P	P	23 47 15.3	+0.7
	baz=223,SNR=5.5						
M20K	Styx River	80.17	20	P	P	23 47 16.3	+0.7
	baz=226						
SEW	Seward	80.28	23	P	P	23 47 16.8	+0.7
	baz=229						
L20K	Farewell, AK	80.34	19	P	P	23 47 17.3	+0.8
	baz=225,SNR=5.2						
RC01	Rabbit Creek A	80.82	22	P	P	23 47 19.6	+0.5
	baz=229						
K20K	Telida	80.91	19	P	P	23 47 19.8	+0.3
K20K	Telida	80.91	19	P	P	23 47 20.3	+0.8
	baz=225,SNR=6.4						
Q23K	Middleton Isla	81.07	24	P	P	23 47 21.0	+0.7
	baz=232						
PPLA	Purkeypile	81.19	20	P	P	23 47 21.6	+0.4
	baz=226						
PMR	Palmer	81.38	22	P	P	23 47 22.8	+0.9
	baz=229						
J20K	Nowinta River	81.47	18	P	P	23 47 23.0	+0.6
J20K				IAmb	IAmb	23 47 24.6	
	comp=Z,15nm,1.1s						
J20K	Nowinta River	81.47	18	P	P	23 47 23.2	+0.8
	baz=224,SNR=8.1						
KNK	Knik Glacier	81.50	22	P	P	23 47 23.1	+0.4
	baz=230						
SML	Sawmill	81.80	22	P	P	23 47 24.6	+0.3
	baz=230						
CHUM	Lake Minchumin	81.83	19	P	P	23 47 24.6	+0.2
	baz=226,SNR=7.2						
EYAK	Cordova Ski Ar	81.99	23	P	P	23 47 25.2	0.0
	baz=233						
M23K	Glacier View	82.02	22	P	P	23 47 25.4	0.0
	baz=231						
SCM	Sheep Creek Mo	82.19	22	P	P	23 47 26.3	0.0
	baz=231						

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TRF    Thorofare Moun    82.20  20  P        P        23 47 26.0 -0.5
TRF                                 IAmb     IAmb     23 47 26.9
       comp=Z,13nm,1.1s
TRF    Thorofare Moun    82.20  20  P        P        23 47 25.7 -0.8
       baz=228,SNR=6.0
WAT1   Susitna Watana    82.39  21  P        P        23 47 27.2 -0.1
       baz=230
BPAW   Bear Paw Mtn.     82.41  19  P        P        23 47 27.1 -0.3
BPAW   Bear Paw Mtn.     82.41  19  P        P        23 47 27.1 -0.3
       baz=227
KLU    Klutina           82.50  23  P        P        23 47 29.2 +1.2
       baz=232
WAT6   Susitna Watana    82.51  21  P        P        23 47 28.7 +0.5
       baz=231
RND    Reindeer          82.66  20  P        P        23 47 28.7 -0.1
RND                                 IAmb     IAmb     23 47 52.9
       comp=Z,14nm,1.0s
BMRM   Bremner River     82.69  23  P        P        23 47 29.2 +0.2
       baz=234
I21K   Tanana            82.84  18  P        P        23 47 30.1 +0.5
       baz=226,SNR=5.4
IMAR   Indian Mountai    82.88  17  P        P        23 47 29.9 +0.1
H21K   Melozitna Rive    82.93  17  P        P        23 47 30.6 +0.5
       baz=226,SNR=5.4
DHY    Denali Highway    82.96  21  P        P        23 47 30.6 +0.2
       baz=231
N25K   Chitina, Valde    83.08  23  P        P        23 47 30.9 -0.1
       baz=234
VRDI   Verde Repeater    83.30  24  P        P        23 47 32.5 +0.3
HARP   HAARP             83.34  22  P        P        23 47 32.4 +0.2
       baz=233
NEA2   Nenana            83.36  19  P        P        23 47 31.9 -0.4
NEA2                                IAmb     IAmb     23 47 33.4
       comp=Z,13nm,1.0s
NEA2   Nenana            83.36  19  P        P        23 47 31.7 -0.6
       baz=229,SNR=12
MCARA  McCarthy VSAT     83.56  24  P        P        23 47 34.5 +1.1
       baz=235
WRH    Wood River Hil    83.61  20  P        P        23 47 33.2 -0.3
WRH                                 IAmb     IAmb     23 47 34.1
       comp=Z,16nm,1.2s
I23K   Minto, Yukon-K    83.64  19  P        P        23 47 33.5 -0.1
       baz=229
MAW    Mawson            83.80 202  P        P        23 47 34.4 -0.2
       comp=Z,9.3nm,0.9s,baz=101,slow=6.7,SNR=13
MAW                                 LR       LR       00 19 29.0
       comp=Z,38nm,21.6s,baz=136,slow=32
       comp=Z,9.3nm,0.9s
MAW    Mawson            83.80 202  P        P        23 47 34.8 +0.2
       baz=84,SNR=8.4
MAW    Mawson            83.80 202  P        P        23 47 34.7 +0.2
CCB    Clear Creek Bu    83.81  20  P        P        23 47 34.3 -0.2
MDM    Murphy Dome       83.88  19  P        P        23 47 34.5 -0.5
BARN   Barnard Glacie    83.92  24  P        P        23 47 36.5 +1.0
HDA    Harding Lake      83.95  20  P        P        23 47 34.8 -0.5
       baz=231,SNR=7.2
K24K   Donnelly Dome     83.97  21  P        P        23 47 35.5 +0.1
       baz=232
PINM   Pinnacle          83.97  25  P        P        23 47 35.8 +0.2
       baz=238
CTG    Chitna Glacier    84.00  24  P        P        23 47 35.6 -0.2
       baz=237
H23K   Yukon River       84.03  18  P        P        23 47 35.9 +0.2
H23K   Yukon River       84.03  18  P        P        23 47 36.0 +0.3
       baz=229,SNR=7.3
M26K   Nabesna, AK       84.16  23  P        P        23 47 37.5 +1.0
       baz=235,SNR=7.3
IL31                     84.20  20  P        P        23 47 35.9 -0.6
IL31                                IAmb     IAmb     23 47 37.0
       comp=Z,14nm,1.3s
ILAR   Eielson Array     84.20  20  P        P        23 47 36.4 -0.1
       comp=Z,2.0nm,0.5s,baz=241,slow=5.0,SNR=21
       comp=Z,2.0nm,0.5s
ILAR   Eielson Array     84.20  20  P        P        23 47 36.1 -0.5
POKR   Poker Plat Res    84.24  19  P        P        23 47 36.1 -0.7
       baz=231
RIDG   Independent Ri    84.27  21  P        P        23 47 37.2 +0.2
       baz=233
L26K   Log Cabin Wild    84.39  22  P        P        23 47 38.4 +0.8
       baz=235,SNR=5.2
TIXI   Tiksi             84.48 350  P        P        23 47 37.2 -0.6
TIXI                                IAmb     IAmb     23 47 38.2
       comp=Z,20nm,1.5s
H24K   Noodor Dome       84.56  19  P        P        23 47 39.0 +0.6
       baz=230
M27K   Edge Creek, AK    84.56  23  P        P        23 47 39.3 +0.6
M27K                                IAmb     IAmb     23 48 04.6
       comp=Z,14nm,0.8s
M27K   Edge Creek, AK    84.56  23  P        P        23 47 39.1 +0.5
       baz=236
J25K   Salcha River,     84.61  20  P        P        23 47 38.8  0.0
J25K                                IAmb     IAmb     23 48 03.9
       comp=Z,7.1nm,0.7s
J25K   Salcha River,     84.61  20  P        P        23 47 38.8  0.0
       baz=233,SNR=7.1
SCRK   Sand Creek        84.71  21  P        P        23 47 39.6 +0.3
SCRK                                IAmb     IAmb     23 48 04.3
       comp=Z,9.5nm,0.9s
SCRK   Sand Creek        84.71  21  P        P        23 47 39.8 +0.5
       baz=234,SNR=6.8
YUK3   Moose Creek       84.80  24  P        P        23 47 40.7 +0.8
       baz=237,SNR=9.8
L27K   Beaver Creek,     84.98  23  P        P        23 47 41.2 +0.6
       baz=236
BVCY   Beaver Creek      84.99  23  P        P        23 47 42.1 +1.5
       baz=237
BCAR   Beaver Creek A    85.00  23  P        P        23 47 41.3 +0.6
J26L   Joseph Creek      85.17  21  P        P        23 47 42.1 +0.5
       baz=234
YUK4   Talbot Arm        85.31  25  P        P        23 47 44.0 +1.5
       baz=239,SNR=8.2
WMQ    Urumqi            85.39 316 eP        P        23 47 43.8 +0.7
K27K   Chicken           85.43  22  P        P        23 47 43.9 +1.1
       baz=236
HYT    Haines Junctio    85.52  26  P        P        23 47 44.1 +0.7
HYT    Haines Junctio    85.52  26  P        P        23 47 44.1 +0.7
       baz=240
SKAG   Skagway           85.81  27  P        P        23 47 46.3 +1.6
       baz=242
TOLK   Toolik Lake Re    85.90  16  P        P        23 47 45.6 +0.5
TOLK   Toolik Lake Re    85.90  16  P        P        23 47 45.9 +0.8
       baz=228
A21K   Barrow            86.09  13  P        P        23 47 46.9 +1.1
       baz=222
EGAK   Eagle             86.18  21  P        P        23 47 47.5 +1.0
EGAK                                IAmb     IAmb     23 48 12.5
       comp=Z,14nm,1.0s
EGAK   Eagle             86.18  21  P        P        23 47 47.3 +0.8
       baz=236,SNR=8.5
DAWY   Dawson            86.44  22  P        P        23 47 48.5 +0.7
DAWY   Dawson            86.44  22  P        P        23 47 48.9 +1.1
       baz=238,SNR=7.7
WHY    Whitehorse        86.57  26  P        P        23 47 49.5 +0.9
       baz=242
N31M   Braeburn, Yuko    86.57  25  P        P        23 47 49.5 +1.0
       baz=242
BMAR   Burnt Mountain    86.58  18  P        P        23 47 49.0 +0.6
M30M   Minto, Yukon      86.69  24  P        P        23 47 50.0 +1.0
       baz=241
PKM    Mcpherson Peak    86.87  54  P        P        23 47 51.8 +1.1
       baz=255
M31M   Drury Creek, Y    87.49  25  P        P        23 47 53.1 +0.2
       baz=243
I29M   Ogilvie Camp,     87.52  21  P        P        23 47 53.7 +0.7
       baz=239,SNR=12
DLBC   Dease Lake        87.84  29  LR       LR       00 27 33.6
       comp=Z,26nm,18.2s,baz=302,slow=36
ISA    Isabella, Lake    88.12  53  P        P        23 47 57.6 +1.0
       baz=256
EDW2   Edwards Air Fo    88.32  54  P        P        23 47 58.4 +0.8
       baz=256
PAHR   Pah Rah Range     88.42  49  P        P        23 47 58.9 +0.9
PAHR                                IAmb     IAmb     23 48 00.3
       comp=Z,8.2nm,1.2s
BFSC   Mount Baldy Ra    88.44  55  P        P        23 47 58.9 +0.7
       baz=257
EPYK   Eagle Plains      88.59  21  P        P        23 47 59.5 +1.5
       baz=240
LRMC   Laurel Mtn Rad    88.71  54  P        P        23 48 00.8 +1.4
       baz=257
NVAR   Mina Array Bea    88.92  51  P        P        23 48 01.3 +0.8
       comp=Z,4.4nm,1.0s,baz=238,slow=6.0,SNR=20
NVAR                                sP       pwP      23 48 23.7 +3.1
       comp=Z,1.4nm,0.8s,baz=235,slow=7.2,SNR=4.2
       comp=Z,4.4nm,1.0s
NV11   Mina Array Sit    89.03  51  P        P        23 48 01.5 +0.6
NV11                                IAmb     IAmb     23 48 03.9
       comp=Z,18nm,1.4s
MONP2  Monument Peak     89.14  57  P        P        23 48 02.8 +1.1
       baz=257
KVN    Kaiserville       89.22  50  P        P        23 48 02.6 +0.7
KVN                                 IAmb     IAmb     23 48 04.8
       comp=Z,9.0nm,1.2s
PFO    Pinyon Flats O    89.27  56  LR       LR       00 19 02.5
       comp=Z,31nm,20.1s,baz=262,slow=30
PFO    Pinyon Flats O    89.27  56  P        P        23 48 02.7 +0.6
       baz=257
TPFO   Pinon Flats       89.28  56  P        P        23 48 02.9 +0.8
       baz=257
GRAC   Grapevine Rang    89.31  52  P        P        23 48 02.5 +0.4
GRAC                                IAmb     IAmb     23 48 06.0
       comp=Z,17nm,1.6s
GRAC   Grapevine Rang    89.31  52  P        P        23 48 03.1 +0.9
       baz=257
IKP    In-Ko-Pah, Jac    89.35  57  P        P        23 48 03.6 +1.2
       baz=258
GSC    Goldstone, Bar    89.37  54  P        P        23 48 03.3 +0.8
       baz=257
I07A   Izee              89.44  45  P        P        23 48 03.7 +1.1
I07A                                IAmb     IAmb     23 48 06.0
       comp=Z,7.7nm,1.1s
FURC   Furnace Creek,    89.58  53  P        P        23 48 04.4 +1.1
       baz=257
HEC    Hector,Ludlow     89.64  55  P        P        23 48 04.2 +0.5
       baz=257,SNR=5.2
WVOR   Wild Horse Val    89.64  47  P        P        23 48 04.8 +1.2
TPH    Tonopah           89.67  51  P        P        23 48 04.9 +0.9
SWSC   Sam W. Stewart    89.67  57  P        P        23 48 04.7 +0.9
       baz=258
BELC   Belle Mtn. Jos    89.73  56  P        P        23 48 05.4 +1.1
       baz=258,SNR=6.7
MK31   Makanchi Array    89.90 318  P        P        23 48 03.6 -1.1
MKAR   Makanchi Array    89.90 318  P        P        23 48 03.5 -1.1
       comp=Z,1.6nm,0.8s,baz=101,slow=6.1,SNR=12
MKAR                                pP       pP       23 48 21.7 -2.6
       comp=Z,1.1nm,0.6s,baz=93,slow=6.1,SNR=5.5
       comp=Z,1.6nm,0.8s
TUQ    Turquoise Moun    90.10  54  P        P        23 48 06.9 +0.9
       baz=258
BC3    Big Chuckawall    90.10  56  P        P        23 48 07.0 +1.0
       baz=258
G08A   Pilot Rock        90.11  44  P        P        23 48 06.5 +0.8
G08A                                IAmb     IAmb     23 48 08.0
       comp=Z,6.8nm,1.2s
MAKZ   Makanchi          90.11 318  P        P        23 48 04.9 -0.7
TPNV   Topopah Spring    90.17  53  P        P        23 48 06.7 +0.4
       baz=257,SNR=8.5
GMRC   Granite Mounta    90.17  55  P        P        23 48 06.5 +0.2
       baz=258,SNR=6.2
ZALV   Zalesovo Beam     90.31 325  P        P        23 48 04.6 -1.7
       comp=Z,0.3nm,0.4s,baz=114,slow=3.6,SNR=1.9
ZALV                                pP       pP       23 48 24.8 -1.2
       comp=Z,1.2nm,0.8s,baz=44,slow=8.8,SNR=2.4
ZALV                                LR       LR       00 28 38.6
       comp=Z,9.8nm,19.2s,baz=85,slow=36
       comp=Z,0.3nm,0.4s
IRM    Iron Mountain     90.46  56  P        P        23 48 08.5 +1.0
       baz=258,SNR=8.1
GLA    Glamis            90.49  57  P        P        23 48 08.7 +1.0
       baz=258
INK    Inuvik            90.60  20  LR       LR       00 21 27.1
       comp=Z,34nm,21.7s,baz=138,slow=31
SHPR   Sheep Range       90.93  53  P        P        23 48 10.9 +1.0
SHPR                                IAmb     IAmb     23 48 12.4
       comp=Z,9.4nm,1.1s
R11A   Troy Canyon, C    90.98  51  P        P        23 48 10.9 +0.8
R11A                                IAmb     IAmb     23 48 12.9
       comp=Z,8.4nm,1.2s
R11A   Troy Canyon, C    90.98  51  P        P        23 48 10.7 +0.6
       baz=258,SNR=11
BMO    Blue Mountains    91.15  45  P        P        23 48 11.4 +0.8
BMO                                 IAmb     IAmb     23 48 12.6
       comp=Z,9.0nm,1.2s
PDMCI  Parker Dam,Lak    91.30  56  P        P        23 48 12.5 +1.1
       baz=259
BELA   Belgrano 2        91.60 177  P        P        23 48 11.2 -0.7
BELA                                IAmb     IAmb     23 48 11.4
       comp=Z,4.9nm,1.0s
W13A   Hualapai Mount    91.66  55  P        P        23 48 13.6 +0.2
ELK    Elko              91.74  49  P        P        23 48 14.3 +0.7
ELK                                 IAmb     IAmb     23 48 15.9
       comp=Z,6.1nm,1.1s
NEW    Newport           92.05  41  P        P        23 48 15.2 +0.7
       baz=257,SNR=5.1
PLID   Pearl Lake        92.11  45  P        P        23 48 15.4 +0.2
PLID                                IAmb     IAmb     23 48 16.7
       comp=Z,6.8nm,1.1s
LPIG   La Paz            92.72  66  LR       LR       00 24 57.8
       comp=Z,18nm,18.1s,baz=193,slow=32
HLID   Hailey            92.91  46  P        P        23 48 20.2 +1.4
HLID                                IAmb     IAmb     23 48 22.0
       comp=Z,8.4nm,1.1s
HLID   Hailey            92.91  46  P        P        23 48 19.8 +0.9
       baz=259,SNR=13
KURK   Kurchatov         93.19 321  P        P        23 48 17.9 -1.8
KURK                                IAmb     IAmb     23 48 42.7
       comp=Z,6.5nm,1.1s
DUG    Dugway, Tooele    93.45  50  P        P        23 48 22.8 +1.4
       baz=260
TUC    Tucson            93.70  58  P        P        23 48 24.0 +1.3
       baz=260
HVU    Hansel Valley     93.77  48  P        P        23 48 24.1 +1.3
HVU                                 IAmb     IAmb     23 48 25.1
       comp=Z,5.2nm,1.1s
NRIK   Noril'sk          93.82 340  LR       LR       00 30 02.2
       comp=Z,21nm,21.9s,baz=139,slow=35
C36M   Paulatuk          94.17  20  P        P        23 48 24.3 +0.5
       baz=252
MCMT   McKenzie Canyo    94.25  45  P        P        23 48 26.3 +1.2
BOZ    Bozeman (W)       95.23  45  P        P        23 48 30.2 +0.8
       baz=261
PDAR   Pinedale Array    96.28  48  P        P        23 48 32.8 -1.6
       comp=Z,1.0nm,0.9s,baz=232,slow=1.7,SNR=6.7
       comp=Z,1.0nm,0.9s
YKA    Yellowknife Ar    96.30  28  P        P        23 48 32.8 -0.9
       comp=Z,2.4nm,0.8s,baz=256,slow=4.5,SNR=11
YKA                                 sP       pwP      23 48 57.3 +1.7
       comp=Z,1.9nm,0.8s,baz=256,slow=4.5,SNR=6.0
       comp=Z,2.4nm,0.8s
EGMT   Eagleton          96.86  43  P        P        23 48 37.5 +0.9
       baz=262
SNAA   Sanae             97.60 185  LR       LR       00 31 23.9
       comp=Z,23nm,18.0s,baz=134,slow=34
ANMO   Albuquerque       97.66  56  LR       LR       00 28 50.6
       comp=Z,8.8nm,19.3s,baz=268,slow=33
ANMO   Albuquerque       97.66  56  P        Pdif     23 48 41.3 +0.5
       baz=263
TXAR   Lajitas Array     99.35  62  LR       LR       00 25 18.8
       comp=Z,24nm,19.9s,baz=276,slow=30
ARCES  ARCESS Array B   114.39 344  PKP      PKiKP    23 53 44.8 +0.3
       comp=Z,3.6nm,1.1s,baz=68,slow=1.3,SNR=5.0
AKASG  Malin Array Be   123.70 325  PKP      PKPdf    23 54 01.7 -1.1
       comp=Z,0.3nm,0.4s,baz=55,slow=1.5,SNR=2.1
LPAZ   La Paz           124.51 118  PKP      PKPdf    23 54 05.7 -0.5
       comp=Z,0.6nm,0.5s,baz=252,slow=3.7,SNR=4.0
NOA    NORSAR Array B   124.68 343  PKP      PKPdf    23 54 03.4 -1.1
       comp=Z,0.5nm,0.8s,baz=36,slow=2.0,SNR=4.0
LANS   Liptovska Anna   129.84 328 ePKP      PKPdf    23 54 14.4 -0.3
GERES  GERESS Array B   132.92 331  PKP      PKPdf    23 54 20.8 +0.1
       comp=Z,0.2nm,0.4s,baz=48,slow=2.0,SNR=5.5
KEST   Kesra            143.98 319  PKP      PKPbc    23 54 39.5 +0.3
       comp=Z,1.7nm,0.6s,baz=0.0,slow=5.1,SNR=2.1
PCAB   Cabril           147.24 345 ePKPbc    PKPbc    23 54 48.8 -0.1
MVO    Moncorvo         147.48 343 ePKPbc    PKPbc    23 54 49.4 -0.3
POLO   Lamas de Olo     147.50 345 ePKPbc    PKPbc    23 54 49.9 +0.2
PVRL   Vila Real        147.57 344 ePKPbc    PKPbc    23 54 50.1 +0.3
ESDC   Sonseca Array    147.84 338  PKPbc    PKPbc    23 54 50.0 -0.6
       comp=Z,2.8nm,1.2s,baz=3.3,slow=3.7,SNR=6.8
PVIS   Viseu            148.14 344 ePKPbc    PKPbc    23 54 51.6 +0.2
MTE    Manteigas        148.34 344 ePKPbc    PKPbc    23 54 52.4 +0.4
PMRV   Marv??o          149.19 343 ePKPbc    PKPbc    23 54 53.8 -0.3
PSBE   So Bento         149.50 345 ePKPbc    PKiKP    23 54 55.1 -0.9
PMTG   Montargil        149.77 344 ePKPbc    PKPbc    23 54 53.6 -1.9
EVO    Evora            150.21 343 ePKPbc    PKPbc    23 54 56.4 -0.2
PBEJ   Beja             150.63 342 ePKPbc    PKPbc    23 54 57.2 -0.4
PNCL   Nicolau / Gran   150.74 343 ePKPbc    PKiKP    23 54 58.3 -0.2
MESJ   Messejana        150.91 343 ePKPbc    PKPbc    23 54 57.7 -0.5
PCVE   Castro Verde     151.05 342 ePKPbc    PKiKP    23 54 58.8 -0.4
TORD   Torodi Ar. Bea   159.75 280  PKP      PKPdf    23 55 03.5 -1.6
       comp=Z,1.6nm,1.1s,baz=117,slow=1.6,SNR=4.2
TORD                                pPKP     pPKPdf   23 55 23.8 -2.2
       comp=Z,1.0nm,1.1s,baz=93,slow=0.9,SNR=2.0
TORD                                PKPab    PKPab    23 55 42.8 -1.4
       comp=Z,0.4nm,0.6s,baz=79,slow=1.7,SNR=4.5
```

IDC 18 23:51:54.7±4.7**,6°.72S×130°.57E,h59^{km}**±66^{km}**,mb3.0**/1**,**
mbtmp3.7/4**,ML3.8**/3**,MS3.5**/1 **Error ellipse:**
s-maj=135.1km s-min=26.9km az=83.0,Banda Sea

```
Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC        h  m  s    ISC
SIJI   Sorong             5.86   7  P        Pn       23 53 19.5 +0.5
       1.9nm,0.3s,baz=153,slow=16,SNR=2.1
SIJI                                S        Sn       23 54 20.6 -4.1
       14nm,0.2s,baz=188,slow=22,SNR=9.2
       4.4nm,0.3s
WRA    Warramunga Arr    13.64 165  P        Pn       23 55 04.3 -1.1
       0.5nm,0.3s,baz=349,slow=14,SNR=16
WRA                                 S        Sn       23 57 27.4 -8.0
       0.5nm,0.3s,baz=350,slow=19,SNR=6.9
       1.2nm,0.5s
ASAR   Alice Springs     17.15 170  P        P        23 55 51.6 +0.3
       0.4nm,0.3s,baz=345,slow=9.6,SNR=27
ASAR                                S        Sn       23 58 53.3 -7.3
       0.3nm,0.4s,baz=352,slow=27,SNR=2.9
       1.1nm,0.6s
HNR    Honiara           29.20  97  LR       LR       00 09 53.7
       comp=Z,108nm,21.2s,baz=196,slow=37
MKAR   Makanchi Array    68.31 326  P        P        00 02 49.4 -0.2
       0.1nm,0.3s,baz=127,slow=6.0,SNR=2.1
       0.1nm,0.3s
```

DNK ***18*** *23:56:55.6±2.3, 69°.16N×53°.81W, h9^{km}±9^{km}, ML3.0*
OTT ***18*** *23:56:55.7±0.2, 69°.14N×53°.87W, h18^{km}, ML2.8/3,*
Western Greenland. 448km northeast from Qikiqtarjuaq,
Nu Eastern Arctic Background Seismic Zone.

ISC 18 23:56:50.9±0.7**,69°.19N**±0°.04×**53°.93W**±0°.04**,h10^{km},n17,**
σ**2^{s}.61**/26**,Western Kalaallit Nunaat**

```
Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC        h  m  s    ISC
ILULI  Ilulissat          1.01  87 i P       Pn       23 57 13.5 +2.4
ILULI                              i S       Sn       23 57 26.3 +1.1
ILULI                               IAML              23 57 32.4
       comp=Z,359nm,0.3s
ILULI  Ilulissat          1.01  87  PG       Pn       23 57 13.6 +2.6
ILULI                               SG       Sn       23 57 26.6 +1.4
ILULI                               Trac              23 57 32.5
       comp=Z,245nm,0.2s
NUUG   Nuugaatsiaq        2.38   6 i P       Pg       23 57 34.7 -1.7
NUUG                               i S       Sg       23 58 04.8 -2.3
NUUG                                IAML              23 58 19.0
       comp=Z,51nm,1.1s
SFJD   Kangerlussuaq      2.52 149 i P       Pb       23 57 35.2 -1.0
SFJD                                IAML              23 58 06.5
       comp=Z,244nm,0.4s
SFJD   Kangerlussuaq      2.52 149  PN       Pb       23 57 35.4 -0.8
SFJD                                SN       Sb       23 58 04.7 -2.6
SFJD                                Trac              23 58 10.9
       comp=Z,9.7nm,0.1s
DY2G   Dye2               3.98 130 i P       Pn       23 57 55.3 +3.2
DY2G                               i S       Sn       23 58 40.2 +1.4
DY2G                                IAML              23 58 59.2
       comp=Z,60nm,0.4s
NUUK   Nuuk               5.10 169 i P       Pn       23 58 10.1 +2.9
NUUK                               i S       Sn       23 59 07.1 +1.0
NUUK                                IAML              23 59 36.1
       comp=Z,68nm,2.6s
ICESG  Greenland Ices     5.11  84 i P       Pn       23 58 12.4 +4.8
ICESG                              i S       Sn       23 59 07.7 +1.0
CLRN   Clyde River        5.23 291  PN       Pn       23 58 12.6 +3.6
CLRN                                SN       Sn       23 59 10.7 +1.5
CLRN                                Trac              23 59 15.6
       comp=Z,5.9nm,0.1s
SUMG   Summit             6.11  49 i P       Pn       23 58 24.4 +3.1
ANGG   Ammassalik, Gr     7.21 112 i P       Pn       23 58 40.3 +4.1
ANGG                               i S       Sn       23 59 53.6 -4.4
FRB    Frobisher Bay      7.98 234  PN       Pn       23 58 50.1 +3.5
FRB                                 SN       Sn       00 00 14.2 -2.7
NRS    Narsarsuaq         8.81 152 i P       Pn       23 58 59.4 +1.4
KNGQ   Kangiqsujuaq      10.66 233  PN       Pn       23 59 25.2 +1.9
KNGQ                                SN       Sn       00 01 16.9 -5.5
SCO    Scoresbysund      11.04  68 i P       Pn       23 59 29.0 +0.6
DBG    Daneborg          11.59  49 i P       Pn       23 59 34.9 -1.1
DAG    Danmarks Havn     12.57  38 i P       Pn       23 59 48.7 -0.7
```

IDC ***19*** *00:07:16.4±1.4, 1°.18N×122°.50E, h0^{km}, mb3.5/3,*
mbtmp3.6/4, ML4.0/1, MS2.8/1, Error ellipse: s-maj=64.6km
s-min=24.9km az=66.0
DJA ***19*** *00:07:25.9±0.4, 1°N±3°×12°2E±°, h14^{km}±3^{km}, M4.5/12,*
mb4.9/3, mB5.0/3, MLv4.2/12, Mw(mB)4.3/3
NEIC ***19*** *00:07:27.1±2.0, 0°.80N±0°.06×121°.95E±0°.09, h74^{km}±10^{km},*
mb4.1/9, Error ellipse: s-maj=15.4km s-min=5.4km
az=61.0

ISC 19 00:07:25.4±1.0**,0°.96N**±0°.07×**122°.10E**±0°.06**,h64^{km}**±9^{km}**,**
n28,σ**1^{s}.94**/32**,mb3.9**/7**,Minahassa Peninsula, Sulawesi**

```
Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC        h  m  s    ISC
MRSI   Marisa             0.51 199  P        Pn       00 07 36.9 -0.9
MRSI                                S        Sn       00 07 45.9 -0.9
TOLI2  Tolitoli           1.33 276  Pn       Pn       00 07 48.4 +0.4
TOLI2                               Sn       Sn       00 08 04.3 -0.6
APSI   Ampana             1.91 194  P        Pn       00 07 57.5 +1.7
APSI                                S        Sn       00 08 22.6 +3.7
KMSI   Cibinong           1.92 102  P        Pn       00 07 59.2 +3.4
KMSI                                S        Sn       00 08 28.5  +10
LUWI   Luwuk              2.10 161  Pn       Pn       00 07 58.7 +0.4
LUWI                                Sn       Sn       00 08 23.0 -0.4
LUWI   Luwuk              2.10 161  P        Pn       00 07 59.0 +0.7
LUWI                                S        Sn       00 08 28.1 +4.8
MPSI   Mapaga             2.29 254  P        Pn       00 08 02.8 +1.9
TTSI   Tana Toraja        4.59 210  P        Pn       00 08 34.0 +1.7
SANI   Sanana             4.90 128  P        Pn       00 08 35.4 -1.2
SPSI   Sidrap Palu        5.42 205  P        Pn       00 08 45.9 +2.2
       0.3nm999nm58nm,0.6s
MYLDM  Lahad Datu         5.52 319           Pn       00 08 47.4 +2.3
BNSI   Bone               5.69 201  P        Pn       00 08 50.1 +2.7
KAPI   Kappang            6.38 202  Pn       Pn       00 08 57.4 +0.5
       2.8nm,0.3s,baz=23,slow=3.1,SNR=5.0
KAPI                                LR       LR       00 11 36.2
       comp=Z,90nm,21.9s,baz=296,slow=39
       8.5nm,0.4s
KAPI   Kappang            6.38 202           Pn       00 08 57.0 +0.1
BKSI   Bulukumba          6.55 198  P        Pn       00 09 18.4  +19
MTN    Manton Dam        16.38 147           Pn       00 11 11.8 +0.4
KNRA   Kununurra         17.79 159           Pn       00 11 28.7 -0.1
KNRA                                IAmb     IAmb     00 11 32.3
       comp=Z,23nm,1.5s
MBWA   Marble Bar        22.11 186  P        P        00 12 13.3 -2.2
MBWA                                IAmb     IAmb     00 12 13.5
       comp=Z,15nm,1.4s
WB0    Warramunga Arr    23.87 150  P        P        00 12 30.8 -2.4
WB0                                 IAmb     IAmb     00 12 57.4
       comp=Z,7.8nm,1.2s
WRA    Warramunga Arr    23.99 151  P        P        00 12 32.4 -1.8
       comp=Z,0.7nm,0.7s,baz=327,slow=10,SNR=8.0
       comp=Z,0.7nm,0.7s
COEN   Coen              25.60 126  P        P        00 12 48.2 -0.8
ASAR   Alice Springs     27.03 156  P        P        00 13 01.9  0.0
       comp=Z,0.6nm,0.8s,baz=345,slow=14,SNR=5.4
       comp=Z,0.6nm,0.8s
MK31   Makanchi Array    57.33 328  P        P        00 17 07.9 +1.0
MK31                                IAmb     IAmb     00 17 18.6
       comp=Z,1.3nm,1.1s
MKAR   Makanchi Array    57.33 328  P        P        00 17 07.4 +0.5
       comp=Z,0.3nm,0.4s,baz=136,slow=8.2,SNR=4.5
       comp=Z,0.3nm,0.4s
MKAR   Makanchi Array    57.33 328  P        P        00 17 07.9 +1.0
KBL    Kabul             59.64 310  P        P        00 17 24.9 +1.4
QSPA   South Pole Qui    90.89 180  P        P        00 20 19.4 -2.5
QSPA                                IAmb     IAmb     00 20 32.9
       comp=Z,1.8nm,1.2s
TORD   Torodi Ar. Bea   119.29 286  PKP      PKPdf    00 26 07.5 -0.9
       comp=Z,0.5nm,1.0s,baz=66,slow=3.6,SNR=5.2
```

RSNC 19 00:09:11.4±1.0**,7°.23N×75°.54W,h12^{km}**±3^{km}**,ML3.1,**
Mw3.5,1C-1D,Northern Colombia

```
Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC        h  m  s    ISC
UREC   San Jos de Ur      0.52   0 eP        Pg       00 09 20.3 -1.3
UREC                               eS        Sg       00 09 28.4 -0.1
ZARC   Zaragoza, Cauc     0.72  69⇓iP        Pg       00 09 24.4 -1.0
ZARC                               eS        Sg       00 09 34.7 -0.2
```

ZARC				*i*		00 09 35.9	
	comp=Z,3μm,0.3s						
HELC	Santa Helena	1.03	180⇑	*e*P	Pg	00 09 29.7	-1.7
HELC				*e*S	Sg	00 09 44.4	-0.4
HELC				*i*		00 09 46.0	
	comp=Z,265nm,0.3s						
PTBC	PUERTO BERRIO,	1.27	122	*e*P	Pn	00 09 33.1	-2.0
PTBC				*e*S	Sb	00 09 50.5	-1.2
PTBC				*i*		00 09 51.5	
	comp=Z,602nm,0.6s						
CBOC	Ciudad Bolivar	1.44	199	*e*P	Pn	00 09 35.8	-1.6
CBOC				*e*S	Sn	00 09 55.8	-0.6
CBOC				*i*		00 09 58.3	
	comp=Z,110nm,0.7s						
NORC	Norcasia	1.78	158	*e*P	Pn	00 09 40.6	-1.5
NORC				*e*S	Sn	00 10 04.1	-0.6
NORC				*i*		00 10 07.5	
	comp=Z,116nm,0.5s						
BRRC	Barranca, Sant	1.81	94	*e*P	Pn	00 09 40.9	-1.6
BRRC				*e*S	Sn	00 10 05.1	-0.4
BRRC				*i*		00 10 13.8	
	comp=Z,82nm,0.3s						
LCBC	Los crdobas,	1.81	333	*e*P	Pn	00 09 38.3	-4.2
LCBC				*e*S	Sn	00 09 59.0	-6.4
SPBC	San Pablo de B	2.14	137	*e*P	Pn	00 09 45.6	-1.4
SPBC				*e*S	Sn	00 10 12.4	-1.1
SPBC				*i*		00 10 21.0	
	comp=Z,376nm,0.0s						
OCAC	Ocana	2.42	65	*e*S	Sn	00 10 15.5	-5.0
BARC	Barichara	2.42	105	*e*P	Pn	00 09 50.3	-0.8
BARC				*e*S	Sn	00 10 20.6	-0.2
BARC				*i*		00 10 33.5	
	comp=Z,306nm,0.1s						
PLMC	San Jos del P	2.42	198	*e*P	Pn	00 09 50.1	-0.9
PLMC				*e*S	Sn	00 10 22.2	+1.6
PLMC				*i*		00 10 40.9	
	comp=Z,34nm,0.6s						
ROSC	El Rosal	2.66	153	*e*P	Pb	00 09 58.3	-1.0
ROSC				*e*S	Sn	00 10 28.1	+1.2
SJCC	San Jacinto, C	2.67	8	*e*P	Pn	00 09 49.3	-5.1
SJCC				*e*S	Sn	00 10 19.3	-7.4
ANIL	Santa Ana	2.72	177	*e*P	Pn	00 09 57.0	+1.8
RUSC	La Rusia	2.78	118	*e*P	Pn	00 09 54.8	-1.3
RUSC				*e*S	Sn	00 10 27.9	-2.0
PAMC	Pamplona, Colo	2.82	88	*e*P	Pn	00 09 55.4	-1.3
PAMC				*e*S	Sn	00 10 29.7	-1.2
PAMC				*i*		00 10 48.2	
	comp=Z,97nm,0.6s						
CHIC	Chingaza	3.15	145	*e*P	Pn	00 09 58.9	-2.3
CHIC				*e*S	Sg	00 10 49.6	-3.0
ORTC	Ortega, Tolima	3.31	175	*e*P	Pn	00 10 05.9	+2.8
ORTC				*e*S	Sg	00 10 57.7	-0.2
ORTC				*i*		00 11 04.2	
	comp=Z,28nm,0.4s						
PRAC	Prado	3.55	169	*e*P	Pn	00 10 07.3	+0.8
PRAC				*e*S	Sg	00 11 03.6	-2.0
PRAC				*i*		00 11 09.0	
	comp=Z,36nm,0.5s						
VILC	Villavicencio,	3.60	149	*e*P	Pn	00 10 07.8	+0.6
VILC				*e*S	Sn	00 10 49.2	-0.5
TAMC	Tame, Arauca	3.80	102	*e*P	Pn	00 10 09.3	-0.6
TAMC				*e*S	Sn	00 10 53.0	-1.6
TAMC				*i*		00 10 56.9	
	comp=Z,44nm,0.2s						
SMRC	Santa Marta, M	4.12	18	*e*S	Sn	00 10 54.4	-8.0
PTGC	Puerto Gaitan,	4.53	131	*e*P	Pn	00 10 17.4	-2.5
PTGC				*e*S	Sn	00 11 10.8	-1.7
PTGC				*i*		00 11 17.5	
	comp=Z,19nm,0.6s						

IDC ***19*** *00:48:34.0±15.0, 19°.98S×178°.14W, h510km±148km, mb3.2/4, mbtmp4.1/4, Error ellipse: s-maj=153.6km s-min=56.2km az=131.0*

NEIC ***19*** *00:48:40.4±0.5, 20°.5S±0°.2×178°.4W±0°.1, h562km±14km, mb4.1/15, Error ellipse: s-maj=25.0km s-min=13.8km az=170.0*

NOU ***19*** *00:48:41.0, 20°.40S×178°.18W, h584km, MLv4.5/8, Fiji Islands Region*

ISC 19 00:48:40.0±0.8**, 20°.6S**±0°.1×**178°.4W**±0°.1**, h550km, n32, σ1s.73**/32**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.41	350	P	P	00 49 53.5	+1.7
DGTI	Dogotuki	4.66	337	P	P	00 50 11.2	+4.1
MARNC	Mare, Loyalty	12.73	264	P	P	00 51 26.4	+0.3
PINNC	Pines Island,	13.34	259	P	P	00 51 32.9	+0.5
YATNC	Mamie plateau,	13.81	261	P	P	00 51 37.9	+0.7
DZM	Mont Dzumac	14.22	261	P	P	00 51 41.1	-0.5
DZM	Mont Dzumac	14.22	261	P	P	00 51 45.9	+4.3
URZ	Urewera	18.01	192	P	P	00 52 16.4	-1.4
URZ	Urewera	18.01	192	P	P	00 52 19.8	+2.1
	50nm,0.7s						
WHZ	Wether Hill Ro	27.60	201	P	P	00 53 43.7	+0.4
CTAO	Charters Tower	33.13	265	P	P	00 54 31.0	-0.3
CTAO				IAmb	IAmb	00 54 32.0	
	comp=Z,8.4nm,0.7s						
COEN	Coen	37.24	274	P	P	00 55 04.9	-0.7
COEN				IAmb	IAmb	00 55 06.1	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	37.42	244	P	P	00 55 07.1	+0.3
	comp=Z,0.6nm,0.3s,baz=72,slow=12,SNR=3.2						
	comp=Z,0.6nm,0.3s						
STKA	Stephens Creek	37.42	244	P	P	00 55 06.9	+0.1
STKA				IAmb	IAmb	00 55 24.4	
	comp=Z,1.4nm,1.2s						
BBOO	Buckleboo	42.18	244	P	P	00 55 44.3	-0.6
WR0	Warramunga Arr	44.05	262	P	P	00 55 59.0	-0.7
WR0				IAmb	IAmb	00 56 17.0	
	comp=Z,9.0nm,1.4s						
AS31	Alice Springs	44.15	257	P	P	00 55 59.7	-0.7
AS31				IAmb	IAmb	00 56 01.5	
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	44.15	257	P	P	00 55 59.9	-0.5
	comp=Z,5.4nm,0.7s,baz=87,slow=8.6,SNR=46						
ASAR				PcP	PcP	00 57 32.3	-1.1
	comp=Z,0.4nm,0.5s,baz=97,slow=3.8,SNR=2.7						
	comp=Z,5.4nm,0.7s						
WRA	Warramunga Arr	44.24	262	P	P	00 56 00.1	-1.0
	comp=Z,1.4nm,0.3s,baz=97,slow=7.5,SNR=38						
	comp=Z,1.4nm,0.3s						
WRA	Warramunga Arr	44.24	262	P	P	00 56 00.1	-1.0
KNRA	Kununurra	50.30	266	P	P	00 56 45.5	-1.2
KNRA				IAmb	IAmb	00 56 56.1	
	comp=Z,28nm,1.4s						
MBWA	Marble Bar	57.49	258	P	P	00 57 36.0	-1.3
MBWA				IAmb	IAmb	00 58 00.1	
	comp=Z,22nm,1.4s						
SBA	Scott Base	57.73	184	P	P	00 57 39.7	+1.8
VNDA	Vanda	57.76	185	P	P	00 57 39.7	+1.5
VNDA				IAmb	IAmb	00 57 50.6	
	comp=Z,3.6nm,1.5s						
MORW	Morawa	59.46	248	P	P	00 57 49.6	-0.8
MORW				IAmb	IAmb	00 58 12.8	
	comp=Z,9.6nm,1.1s						
QSPA	South Pole Qui	69.45	180	P	P	00 58 53.4	+0.3
IMAR	Indian Mountai	88.33	10	P	P	01 00 31.8	-1.0
ILAR	Eielson Array	88.51	13	P	P	01 00 28.1	-5.5
	comp=Z,0.2nm,0.5s,baz=225,slow=5.0,SNR=3.1						
	comp=Z,0.2nm,0.5s						
FINES	FINESS Array B	135.79	343	PKP	PKPdf	01 06 55.4	-2.4
	comp=Z,2.2nm,1.0s,baz=343,slow=2.9,SNR=2.7						
AKASG	Malin Array Be	142.95	331	PKP	PKPdf	01 07 07.2	-3.9
	comp=Z,1.6nm,0.4s,baz=40,slow=4.3,SNR=9.7						
CLL	Collm	148.10	346	*i* PKPbc	PKPbc	01 07 23.3	-0.5
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	150.22	344	PKPbc	PKPdf	01 07 25.5	+2.2
	comp=Z,0.2nm,0.5s,baz=27,slow=3.3,SNR=2.3						

IDC ***19*** *00:55:23.4±6.0, 14°.96N×92°.60W, h0km, mb3.7/4, mbtmp3.6/6, ML3.6/2, Error ellipse: s-maj=170.5km s-min=46.0km az=28.0*

GCG ***19*** *00:55:25.0±2.0, 14°.55N×93°.18W, h34km±999km, MD4.0*

MEX ***19*** *00:55:25.1±0.8, 14°.44N×93°.20W, h10km, MD4.1*

ISC 19 00:55:22.6±1.6**, 14°.36N**±0°.08×**93°.08W**±0°.04**, h19**km±3km**, n22, σ1s.49**/35**, mb3.8**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.96	55	*e*P	Pg	00 55 41.6	+0.3
THIG				*e*S	Sn	00 55 54.1	0.0
PATR	El Naranjo	1.11	47	*e*P	Pn	00 55 43.3	0.0
PATR				*e*S	Sg	00 55 58.0	-0.9
CHUJ	Union Juarez	1.19	52	*e*P	Pg	00 55 44.9	-0.8
CHUJ				*e*S	Sg	00 56 00.5	-0.9
PAVE	Pavencul	1.21	46	*e*P	Pb	00 55 44.8	-0.1
PAVE				*e*S	Sg	00 56 00.8	-1.0
PCIG		1.35	354	*e*P	Pn	00 55 45.4	-1.0
PCIG				*e*S	Sn	00 55 59.8	-4.0
STG3	Santiaguito 3,	1.50	76	*e*P	Pg	00 55 50.3	-1.2
STG3				*e*S	Sb	00 56 07.8	-0.9
CARR	Arriaga	2.05	337	*i* P	Pn	00 55 56.2	+0.2
CARR				*e*S	Sn	00 56 19.2	-1.8
FUG	Fuego 3	2.17	87	*e*P	Pb	00 56 00.5	-0.8
PCG	Pacaya	2.39	89	*e*S	Sb	00 56 34.2	-0.2
TGIG		2.41	359	*e*P	Pn	00 56 02.7	+1.7
TGIG				*e*S	Sn	00 56 30.1	0.0
NBG	Las Nubes	2.65	85	*e*P	Pb	00 56 08.8	-0.8
NBG				*e*S	Sb	00 56 42.4	+0.4
UXUV	UXUV	3.12	341	*e*P	Pn	00 56 12.6	+1.8
UXUV				*e*S	Sn	00 56 47.1	-0.5
CMIG	Matias Romero	3.23	328	Pn	Pn	00 56 12.6	+0.3
	6.0nm,0.3s,baz=170,slow=14,SNR=42						
CMIG				Sn	Sn	00 56 50.1	-0.2
	20nm,0.3s,baz=14,slow=17,SNR=11						
	12nm,0.3s						
CMIG	Matias Romero	3.23	328	*i* P	Pn	00 56 12.3	0.0
CMIG				*i* S	Sn	00 56 50.1	-0.2
NEUV	Arroyo Zacate	4.25	322	*e*P	Pn	00 56 25.9	-0.3
NEUV				*e*S	Sn	00 57 11.9	-3.4
PEIG	Puerto Escondi	4.26	293	*e*	Pn	00 56 26.3	-0.1
PEIG				*e*		00 57 08.5	
TXIG	Tlaxiaco	5.36	303	*e*	Pn	00 56 38.3	-3.5
TXIG				*e*		00 57 44.9	
TXAR	Lajitas Array	17.84	328	P	P	00 59 31.1	+0.6
	0.1nm,0.3s,baz=145,slow=14,SNR=1.4						
	0.2nm,0.5s						
NVAR	Mina Array Bea	32.74	322	P	P	01 01 57.6	+3.1
	0.8nm,0.7s,baz=133,slow=8.7,SNR=6.0						
	0.8nm,0.7s						
YKA	Yellowknife Ar	50.45	347	P	P	01 04 19.3	+0.6
	0.9nm,0.7s,baz=151,slow=7.4,SNR=4.6						
	0.9nm,0.7s						
INK	Inuvik	59.81	344	P	P	01 05 27.2	+1.0
	1.0nm,0.5s,baz=133,slow=7.7,SNR=7.4						
	1.0nm,0.5s						
ILAR	Eielson Array	62.11	337	P	P	01 05 42.3	+0.4
	0.4nm,0.7s,baz=142,slow=6.1,SNR=5.3						
	0.4nm,0.7s						

TUL ***19*** *00:58:31.7±0.4, 36°.270N±0°.010×97°.57W±0°.01, h5km±4km, ML2.6, mb_Lg2.4/26(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=52.0*

NEIC 19 00:58:32.4±0.4**, 36°.270N**±0°.009×**97°.57W**±0°.01**, h1**km±6km**, Error ellipse: s-maj=1.6km s-min=1.3km az=115.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.86	173	Pg	Pg	00 58 48.0	-0.8
OKCSW	OKLAHOMA CITY	0.87	173	Pg	Pg	00 58 48.2	-0.9
FNO	Franklin	1.02	172	Pg	Pg	00 58 50.9	-1.0
T35A	Sooner Cattle	1.07	53	Pg	Pg	00 58 52.0	-0.9
U32A	Winter Ranch,	1.16	276	Pg	Pg	00 58 53.2	-1.4
TUL1	Leonard	1.49	103		Pn	00 58 58.6	-1.6
TUL1				IAmb_Lg		00 59 20.9	
	comp=Z,17nm,0.8s						
X34A	Smith Ranch, M	1.68	187		Pn	00 59 02.9	0.0
X34A				IAmb_Lg		00 59 28.2	
	comp=Z,19nm,0.8s						
WMOK	Wichita Mounta	1.82	213		Pn	00 59 03.9	-0.9
X37A	Clayton	2.46	132		Pn	00 59 12.7	-0.8
X37A				IAmb_Lg		00 59 55.2	
	comp=Z,11nm,0.7s						
KSU1	Kansas State U	2.93	15		Pn	00 59 19.3	-0.7
HHAR	Hobbs	2.94	89		Pn	00 59 20.8	+0.6
Z35A	Perchaven, San	2.94	175	Pn	Pn	00 59 19.5	-0.8
CBKS	Cedar Bluff	3.07	327	IAmb_Lg		01 00 11.9	
	comp=Z,6.6nm,0.7s						
AMTX	Amarillo	3.62	249	IAmb_Lg		01 00 32.6	
	comp=Z,11nm,0.8s						
Z38A	Mt. Pleasant	3.68	144	IAmb_Lg		01 00 34.9	
	comp=Z,17nm,0.8s						
S39A	Bolivar	3.69	66		Pn	00 59 29.0	-1.5
S39A				IAmb_Lg		01 00 31.7	
	comp=Z,17nm,0.9s						
MIAR	Mount Ida	3.69	117	Pn	Pn	00 59 29.9	-0.6
MIAR				IAmb_Lg		01 00 33.4	
	comp=Z,5.7nm,0.7s						
U40A	Yellville	3.81	87		Pn	00 59 31.1	-1.1
X40A	Basin Creek Fa	4.26	113		Pn	00 59 37.6	-0.8
MGMO	Mountain Grove	4.35	77	IAmb_Lg		01 00 48.7	
	comp=Z,15nm,0.8s						
W41B	Gary Mavity, V	4.47	103	Pn	Pn	00 59 40.5	-0.8
P38A	Dawn	4.63	42	IAmb_Lg		01 01 05.8	
	comp=Z,6.8nm,0.7s						
N35A	Tabor	4.83	18	IAmb_Lg		01 01 15.9	
	comp=Z,12nm,0.7s						
CCM	Cathedral Cave	5.36	69	IAmb_Lg		01 01 29.9	
	comp=Z,9.6nm,0.8s						
L34A	Svendsen Farm,	5.76	9	IAmb_Lg		01 01 43.1	
	comp=Z,9.6nm,0.7s						
PHWY	Pilot Hill	7.94	312	IAmb_Lg		01 02 55.5	
	comp=Z,4.1nm,1.1s						

FUNV ***19*** *01:02:24.8, 10°.68N×62°.14W, h34km, MW3.0*

TRN ***19*** *01:02:25.3, 10°.80N×62°.24W, h85km, MD3.1*

ISC 19 01:02:23.9±1.5**, 10°.76N**±0°.07×**62°.31W**±0°.05**, h91**km±16km**, n13, σ1s.17**/23**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.89	97	*e*P	Pn	01 02 43.3	+0.9
TRN				*e*S	Sn	01 02 55.6	-0.7
CRUV	Carupano	0.92	265	*e*P	Pn	01 02 43.5	+0.8
CRUV				*e*S	Sn	01 02 55.6	-1.3
GRFF	Grenada Fort F	1.39	23	*e*P	Pn	01 02 49.0	+0.6
GRFF				*e*S	Sn	01 03 05.9	-1.0
GRGR	Grenville	1.50	25	*e*P	Pn	01 02 50.1	+0.4
GRGR				*e*S	Sn	01 03 09.0	-0.3
GRSS	Sisters	1.67	24	*e*P	Pn	01 02 53.1	+1.2
TOSP	Speyside	1.82	73	*e*P	Pn	01 02 54.1	+0.4
TOSP				*e*S	Sn	01 03 15.9	-0.5
GCMP	Grenada, Carri	1.92	27	*e*P	Pn	01 02 55.4	+0.3
GCMP				*e*S	Sn	01 03 17.9	-0.9
PCRV	Puerto La Cruz	2.37	256	*e*P	Pn	01 03 02.2	+1.2
PCRV				*e*S	Sn	01 03 29.3	-0.2
BIRV	Birongo	3.91	266	*e*P	Pn	01 03 23.5	+1.8
BIRV				*e*S	Sn	01 04 07.6	+1.0
MERV	Las Mercedes	4.21	249	*e*P	Pn	01 03 26.6	+0.8
MERV				*e*S	Sn	01 04 13.1	-0.8
CACV	CAICARA DEL OR	5.25	233	*e*P	Pn	01 03 35.2	-4.8
CACV				*e*S	Sn	01 04 27.3	-12
BENV	Beln	5.27	262	*e*P	Pn	01 03 40.4	+0.1
BENV				*e*S	Sn	01 04 38.0	-1.9
BAUV	El Baul	5.94	253	*e*P	Pn	01 03 50.0	+0.6
BAUV				*e*S	Sn	01 04 53.2	-2.7

TAP 19 01:11:34.2, 24°.53N×121°.91E, h15km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.10	326	*i* P	Pg	01 11 37.6	+0.1
	baz=331						
TWC				*i* S	Sg	01 11 39.4	-0.2
	baz=331						
EWUT	Wuta	0.14	237	P	Pg	01 11 38.0	0.0
	baz=236						
EWUT				S	Sg	01 11 40.5	0.0
	baz=236						
ENA	Nanau	0.18	238	*i* P	Pg	01 11 38.6	+0.1
	baz=236						
ENA				*i* S	Sg	01 11 41.6	+0.2
	baz=236						
LATG	Datong	0.35	272	P	Pg	01 11 41.8	+0.3
	baz=271						
LATG				S	Sg	01 11 46.8	+0.4
	baz=271						
FUSB	Fushanzhiwuyua	0.38	309	P	Pb	01 11 42.6	-0.1
	baz=309						
FUSB				*e*S	Sb	01 11 48.3	0.0
	baz=309						
NNSB	Datong	0.49	259	P	Pb	01 11 44.6	-0.1
	baz=258						
NNSB				S	Sg	01 11 51.1	+0.5
	baz=258						
ETLH	Xiulin Townshi	0.50	231	P	Pg	01 11 44.0	-0.2
	baz=230						
ETLH				S	Sg	01 11 51.0	0.0
	baz=230						
YHNB	Yeheng	0.51	287	P	Pb	01 11 45.0	+0.1
	baz=286						
YHNB				S	Sb	01 11 51.8	-0.4
	baz=286						

JMA 19 01:12:18.7±0.0**, 24°.4N**±0°.2×**123°.9E**±0°.1**, h0km, MV0.4**/7**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKRS	Kuro-shima	0.18	153	*e*S	Sg	01 12 25.6	+1.1
IRIF	Iriomote-Funau	0.18	249	P	Pg	01 12 22.8	+0.6
IRIF				*e*S	Sg	01 12 25.4	+0.7
JIJ	Ishigaki jima	0.21	100	P	Pg	01 12 23.2	+0.5
JIJ				S	Sg	01 12 26.3	+1.0
HATJ	Hateruma jima	0.36	197	*e*P	Pg	01 12 26.1	+0.5
JISG	Ishigakijimahi	0.40	62	P	Pg	01 12 27.1	+0.7
JTJ	Tarama	0.75	71	*e*S	Sb	01 12 44.6	-0.9

IDC ***19*** *01:32:13.1±2.2, 17°.84S×168°.18E, h0km, mb3.8/5, mbtmp3.8/6, ML4.1/1, MS3.5/20, Error ellipse: s-maj=64.5km s-min=29.5km az=122.0*

NOU ***19*** *01:32:17.2, 17°.87S×168°.14E, h47km, MLv4.2/10, Vanuatu Islands*

NEIC ***19*** *01:32:17.5±1.6, 17°.98S±0°.07×168°.3E±0°.2, h49km±11km, mb4.6/4, Error ellipse: s-maj=22.9km s-min=9.9km az=98.0*

ISC 19 01:32:17.0±0.8**, 17°.99S**±0°.05×**168°.1E**±0°.1**, h32km, n56, σ1s.46**/40**, mb3.8**/6**, MS3.5**/18**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.28	14	P	Pn	01 32 26.0	+1.1
RTV	Rentapao	0.36	56	P	Pn	01 32 27.5	+1.5
SANVU	Saraoutou	2.68	341		Pn	01 32 58.8	+0.8
LIFNC	LIFOU	2.89	196	Pn	Pn	01 33 00.2	-0.6
LIFNC	LIFOU	2.89	196	P	Pn	01 33 02.4	+1.6
MARNC	Mare, Loyalty	3.47	181		Pn	01 33 08.3	-0.6
YATNC	Mamie plateau,	4.21	196	P	Pn	01 33 20.2	+1.2
DZM	Mont Dzumac	4.35	201	*e*LR	LR	01 34 25.9	
	comp=Z,660nm,24.6s						
DZM	Mont Dzumac	4.35	201	Pn	Pn	01 33 22.2	+1.2
	9.1nm,0.3s,baz=94,slow=16,SNR=58						
DZM				Sn	Sn	01 34 10.8	+0.1
	6.4nm,0.3s,baz=327,slow=23,SNR=6.7						
DZM				LR	LR	01 35 00.7	
	comp=Z,435nm,21.5s,baz=94,slow=37						
	19nm,0.4s						
DZM	Mont Dzumac	4.35	201		Pn	01 33 21.8	+0.7
DZM	Mont Dzumac	4.35	201	P	Pn	01 33 23.1	+2.1
NOUC	Port Laguerre	4.43	202	P	Pn	01 33 23.4	+1.4
OUENC	Ouen Island, N	4.56	195	Pn	Pn	01 33 24.0	+0.1
OUENC				Sn	Sn	01 34 17.1	+1.3
OUENC	Ouen Island, N	4.56	195	P	Pn	01 33 25.3	+1.4
ONTNC	Ouen Toro	4.57	200		Pn	01 33 24.1	+0.2
ONTNC	Ouen Toro	4.57	200	P	Pn	01 33 25.1	+1.2
PINNC	Pines Island,	4.64	188	Pn	Pn	01 33 25.7	+0.8
AFI	Afiamalu	19.75	81	LR	LR	01 42 24.6	
	comp=Z,123nm,21.1s,baz=173,slow=31						
CTA	Charters Tower	20.77	261	LR	LR	01 44 20.9	
	comp=Z,195nm,18.3s,baz=82,slow=35						
URZ	Urewera	21.67	161	LR	LR	01 44 55.8	
	comp=Z,124nm,18.2s,baz=31,slow=35						
STKA	Stephens Creek	27.65	235	P	P	01 38 04.7	+2.7
	0.8nm,0.4s,baz=37,slow=10,SNR=3.4						
STKA				LR	LR	01 49 09.9	
	comp=Z,104nm,18.1s,baz=52,slow=37						
	0.8nm,0.4s						
RAR	Rarotonga	30.39	101	LR	LR	01 50 18.6	
	comp=Z,60nm,18.3s,baz=260,slow=36						
WB2	Warramunga Arr	31.96	261	P	P	01 38 38.4	-1.9
WRA	Warramunga Arr	31.97	261	P	P	01 38 41.3	+0.8
	0.6nm,0.9s,baz=88,slow=8.5,SNR=1.7						
	0.6nm,0.9s						
BBOO	Buckleboo	32.35	237	P	P	01 38 43.2	-0.4
BBOO				IAmb	IAmb	01 39 18.1	
	comp=Z,37nm,1.5s						
ASAR	Alice Springs	32.42	254	P	P	01 38 45.5	+1.2
	comp=Z,0.6nm,0.4s,baz=81,slow=9.0,SNR=12						
ASAR				LR	LR	01 51 02.2	
	comp=Z,148nm,19.8s,baz=122,slow=35						
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	32.42	254	P	P	01 38 44.0	-0.4
KNRA	Kununurra	37.69	267	P	P	01 39 29.4	-0.4
SIJI	Sorong	40.00	291	LR	LR	01 56 27.5	
	comp=Z,65nm,18.4s,baz=256,slow=36						
PPT	Papeete	40.23	96	LR	LR	01 52 15.2	
	comp=Z,128nm,21.4s,baz=242,slow=30						
BATI	Baumata	43.72	274	LR	LR	01 58 03.3	
	comp=Z,154nm,18.2s,baz=152,slow=35						
JCJ	Chichijima	51.40	330	LR	LR	02 00 42.8	
	comp=Z,20nm,21.4s,baz=348,slow=33						
SHEM	Shemya Is, Ala	70.62	4	LR	LR	02 10 23.6	
	comp=Z,28nm,18.9s,baz=118,slow=32						
PETK	Petropavlovsk-	71.38	353	LR	LR	02 13 05.9	
	comp=Z,7.7nm,19.2s,baz=238,slow=34						
MA2	Magadan	78.58	351	LR	LR	02 13 16.8	
	comp=Z,24nm,20.7s,baz=160,slow=31						
SONM	Songino Array	85.59	323	P	P	01 44 54.0	+1.6
	comp=Z,0.9nm,0.6s,baz=142,slow=4.9,SNR=5.4						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	85.59	323	P	P	01 44 51.5	-0.8
SONM				IAmb	IAmb	01 44 55.9	
	comp=Z,1.9nm,1.0s						
YBH	Yreka Blue Hor	87.15	44	LR	LR	02 17 26.8	
	comp=Z,37nm,18.3s,baz=236,slow=31						
ILAR	Eielson Array	89.37	18	P	P	01 45 09.6	-0.3
	comp=Z,0.2nm,0.6s,baz=235,slow=4.4,SNR=2.0						
	comp=Z,0.2nm,0.6s						
ILAR	Eielson Array	89.37	18	P	P	01 45 08.0	-2.0
LPIG	La Paz	89.84	65	LR	LR	02 17 02.5	
	comp=Z,49nm,20.6s,baz=194,slow=30						
ELK	Elko	91.87	48	LR	LR	02 25 53.6	
	comp=Z,38nm,18.0s,baz=215,slow=35						
INK	Inuvik	95.70	19	LR	LR	02 24 34.6	
	comp=Z,24nm,18.6s,baz=113,slow=33						
PDAR	Pinedale Array	96.55	47	LR	LR	02 20 14.3	
	comp=Z,16nm,20.6s,baz=258,slow=30						
TXAR	Lajitas Array	97.11	62	LR	LR	02 20 29.2	
	comp=Z,18nm,18.9s,baz=265,slow=30						
BIOA	Bad Ischl, Aus	143.76	330	*e*P	PKiKP	01 51 54.4	+2.0
OBKA	Obir	144.16	328	*e*P	PKiKP	01 51 53.4	+0.1
	comp=Z,6.0nm,1.0s						
KBA	Koelnbreinsper	144.34	330	*e*P	PKiKP	01 51 54.0	+0.2
	comp=Z,2.5nm,0.8s						
WATA	Walderalm	144.97	332	*e*P	PKiKP	01 51 52.9	-2.1
	comp=Z,1.8nm,0.5s						
ABTA	Abfaltersbach	144.98	330	*e*P	PKiKP	01 51 52.3	-2.7
	comp=Z,6.6nm,0.7s						
WTTA	Wattenberg	145.00	332	*e*P	PKiKP	01 51 53.2	-2.0
	comp=Z,1.7nm,0.5s						
MOTA	Moosalm	145.18	332	*e*P	PKiKP	01 51 53.5	-2.0
	comp=Z,5.5nm,0.9s						
RETA	Reutte	145.22	333	*e*P	PKiKP	01 51 53.3	-2.1
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	145.22	332	*e*P	PKiKP	01 51 53.6	-2.0
	comp=Z,4.3nm,0.5s						
FETA	Feichten	145.59	332	*e*P	PKiKP	01 51 54.9	-1.5
	comp=Z,4.9nm,0.9s						
DAVA	Damuels	145.75	333	P	PKiKP	01 51 55.7	-0.9
	comp=Z,4.0nm,0.8s						

NEIC ***19*** *02:19:55.5±1.5, 17°.2N±0°.1×68°.46W±0°.09, h17km±21km, Error ellipse: s-maj=21.3km s-min=10.3km az=200.0*

OSPL ***19*** *02:19:56.8±3.8, 17°.08N×68°.49W, h31km±67km, ML2.2*

RSPR ***19*** *02:19:56.4, 17°.08N×68°.44W, h7km±6km, MD3.6/15*

ISC 19 02:19:54.8±1.7**, 17°.1N**±0°.1×**68°.56W**±0°.03**, h38km, n58, σ1s.07**/65**, 12C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	1.68	55⇓	*e*P	Pn	02 20 20.8	-0.8
CRPR	Cabo Rojo, PR	1.68	55		Pn	02 20 20.8	-0.8

CRPR	Cabo Rojo, PR	1.68	55	i P	Pn	02 20 20.7	-0.9
CRPR				eS	Sn	02 20 39.0	-2.8
CRPR				IAML		02 20 43.0	
	comp=Z,15nm,0.1s						
IDE	Isla Desecheo	1.68	38	⇑eP	Pn	02 20 21.6	-0.2
IDE	Isla Desecheo	1.68	38	eS	Sn	02 20 42.3	+0.2
MLPR	Magueyes Islan	1.71	57	⇓eP	Pn	02 20 21.4	-0.7
MLPR	Magueyes Islan	1.71	57	eS	Sn	02 20 42.6	-0.1
MLPR	Magueyes Islan	1.71	57		Pn	02 20 21.4	-0.7
MLPR					Sn	02 20 42.6	-0.1
LSP	Las Mesas	1.80	51	⇑eP	Pn	02 20 23.1	-0.2
GBPR	Guanica, Bosqu	1.85	60	⇑eP	Pn	02 20 25.3	+1.3
GBPR	Guanica, Bosqu	1.85	60	eS	Sn	02 20 45.5	-0.6
DR12	Loma Pena Alta	1.90	336	⇑eP	Pn	02 20 25.6	+0.8
DR12	Loma Pena Alta	1.90	336		Pn	02 20 25.6	+0.8
AGPR	Aguadilla, PR	1.97	44	⇑eP	Pn	02 20 25.2	-0.5
AGPR	Aguadilla, PR	1.97	44	eS	Sn	02 20 48.2	-1.0
AGPR	Aguadilla, PR	1.97	44		Pn	02 20 25.2	-0.5
AGPR					Sn	02 20 48.2	-1.0
AGPR	Aguadilla, PR	1.97	44	IAML		02 21 07.7	
	comp=E,96nm,2.0s						
AGPR				IAML		02 21 23.0	
	comp=N,110nm,2.1s						
AGPR	Aguadilla, PR	1.97	44	i P	Pn	02 20 26.9	+1.2
AGPR				eS	Sn	02 20 43.6	-5.6
AGPR				IAML		02 20 53.5	
	comp=Z,16nm,0.1s						
OBIP	Obispado Ponce	2.11	62	⇑eP	Pn	02 20 27.8	+0.3
OBIP	Obispado Ponce	2.11	62	eS	Sn	02 20 52.4	-0.1
OBIP	Obispado Ponce	2.11	62		Pn	02 20 27.8	+0.3
OBIP					Sn	02 20 52.4	-0.1
CELP	Cerrillos	2.15	61	⇓eP	Pn	02 20 27.6	-0.5
CELP	Cerrillos	2.15	61	eS	Sn	02 20 51.9	-1.5
CELP	Cerrillos	2.15	61		Pn	02 20 27.6	-0.5
CELP					Sn	02 20 51.9	-1.5
CELP	Cerrillos	2.15	61	IAML		02 20 57.2	
	comp=E,45nm,0.4s						
CELP				IAML		02 21 02.6	
	comp=N,31nm,0.8s						
AOPR	Arecibo Observ	2.15	53	⇓eP	Pn	02 20 28.0	-0.2
AOPR	Arecibo Observ	2.15	53	eS	Sn	02 20 52.8	-0.8
AOPR	Arecibo Observ	2.15	53		Pn	02 20 28.0	-0.2
AOPR					Sn	02 20 52.8	-0.8
AOPR	Arecibo Observ	2.15	53	IAML		02 21 09.3	
	comp=N,86nm,0.5s						
BANI	BANI	2.17	308	i P	Pn	02 20 30.5	+2.0
BANI				eS	Sn	02 20 53.6	-0.7
BANI				IAML		02 21 00.1	
	comp=Z,35nm,0.6s						
EMPR	Esperanza - Ma	2.40	53	⇑eP	Pn	02 20 32.4	+0.9
EMPR	Esperanza - Ma	2.40	53	eS	Sn	02 21 00.3	+0.6
EMPR	Esperanza - Ma	2.40	53		Pn	02 20 32.4	+0.9
EMPR					Sn	02 21 00.3	+0.6
IGPR	InterUniversit	2.51	68	⇓eP	Pn	02 20 32.5	-0.5
IGPR	InterUniversit	2.51	68	eS	Sn	02 21 01.6	-0.9
LOBA2	Hotel Casa Bon	2.63	293	i P	Pn	02 20 34.2	-0.5
LOBA2				eS	Sn	02 21 01.6	-3.7
LOBA2				IAML		02 21 07.5	
	comp=Z,12nm,0.6s						
GCPR	Guaynabo City	2.67	62	⇑eP	Pn	02 20 35.9	+0.6
GCPR	Guaynabo City	2.67	62	eS	Sn	02 21 05.8	-0.6
GCPR	Guaynabo City	2.67	62		Pn	02 20 35.9	+0.6
GCPR					Sn	02 21 05.8	-0.6
GCPR	Guaynabo City	2.67	62	IAML		02 21 10.6	
	comp=N,22nm,0.5s						
GCPR				IAML		02 21 12.8	
	comp=E,25nm,0.5s						
HUMP	Col San Antoni	2.80	67	⇑eP	Pn	02 20 38.5	+1.5
HUMP	Col San Antoni	2.80	67		Pn	02 20 38.5	+1.5
HUMP	Col San Antoni	2.80	67	IAML		02 21 18.4	
	comp=N,26nm,0.3s						
CBYP	Canovanas	2.85	64	⇓eP	Pn	02 20 37.8	0.0
CBYP	Canovanas	2.85	64	eS	Sn	02 21 09.8	-1.1
CBYP	Canovanas	2.85	64		Pn	02 20 37.8	0.0
CBYP					Sn	02 21 09.8	-1.1
MTP	Monte Pirata	3.05	70	⇑eP	Pn	02 20 40.5	0.0
MTP	Monte Pirata	3.05	70	eS	Sn	02 21 15.0	-0.8
MTP	Monte Pirata	3.05	70		Pn	02 20 40.5	0.0
MTP					Sn	02 21 15.0	-0.8
MTP	Monte Pirata	3.05	70	IAML		02 21 29.3	
	comp=N,26nm,2.4s						
MTP				IAML		02 21 46.2	
	comp=E,24nm,2.5s						
SDDR	Presa de Saban	3.23	307	i P	Pn	02 20 45.4	+2.3
SDDR				IAML		02 21 26.9	
	comp=Z,3.1nm,0.1s						
CUPR	Culebra, Puert	3.37	68	⇑eP	Pn	02 20 45.3	+0.5
CUPR	Culebra, Puert	3.37	68	eS	Sn	02 21 23.9	+0.4
CUPR	Culebra, Puert	3.37	68		Pn	02 20 45.3	+0.5
CUPR					Sn	02 21 23.9	+0.4
CUPR	Culebra, Puert	3.37	68	IAML		02 21 32.2	
	comp=E,12nm,0.8s						
CUPR				IAML		02 22 04.1	
	comp=N,11nm,0.9s						
SJVI	Gifft Hill Sch	3.83	70	⇑eP	Pn	02 20 53.2	+2.0
SJVI	Gifft Hill Sch	3.83	70	eS	Sn	02 21 35.2	+0.2
SJVI	Gifft Hill Sch	3.83	70		Pn	02 20 53.2	+2.0
SJVI					Sn	02 21 35.2	+0.2

TAP 19 03:04:41.9, 24°.20N × 121°.73E, h13^{km}, ML2.4, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.10	248	i P	Pg	03 04 45.0	+0.1
	baz=248						
ETL				S	Sg	03 04 47.4	+0.2
	baz=248						
EHP	Heping Village	0.11	6	eP	Pg	03 04 45.1	+0.1
	baz=9.0						
EHP				eS	Sg	03 04 47.7	+0.5
	baz=9.0						
NACB	Ninganchiao	0.12	258	i P	Pg	03 04 45.4	+0.2
	baz=259						
NACB				i S	Sg	03 04 47.9	+0.4
	baz=259						
TWD	Chiawan	0.17	226	i P	Pg	03 04 46.0	+0.2
	baz=225						
TWD				S	Sg	03 04 49.0	+0.4
	baz=225						
ETLH	Xiulin Townshi	0.23	272	i P	Pg	03 04 47.1	+0.3
	baz=272						
ETLH				S	Sb	03 04 51.1	-0.9
	baz=272						
ENA	Nanau	0.23	3	P	Pg	03 04 46.9	+0.1
	baz=4.0						
ENA				S	Sg	03 04 50.6	+0.4
	baz=4.0						
EWUT	Wuta	0.25	10	i P	Pg	03 04 47.3	+0.1
	baz=9.0						
EWUT				S	Sg	03 04 51.4	+0.7
	baz=9.0						
LATG	Datong	0.38	331	⇓iP	Pg	03 04 50.0	+0.4
	baz=330						
LATG				eS	Sb	03 04 55.9	-0.7
	baz=330						
NNSB	Datong	0.39	306	i P	Pg	03 04 50.1	+0.4
	baz=305						
NNSB				eS	Sg	03 04 55.4	+0.3
	baz=305						
NNS	Nan Shan	0.40	307	eP	Pg	03 04 50.4	+0.3
	baz=306						
NNS				eS	Sb	03 04 56.5	-0.7
	baz=306						
TWC	Suao	0.42	15	i P	Pg	03 04 50.5	+0.1
	baz=9.0						
TWC				eS	Sb	03 04 56.8	-0.8
	baz=9.0						
WHF	Hehuan Shan	0.43	263	i P	Pg	03 04 50.8	+0.3
	baz=263						
WHF				S	Sg	03 04 56.9	+0.6
	baz=263						
NDS	Dongshan	0.43	358	i P	Pg	03 04 50.9	+0.4
	baz=357						
NDS				S	Sb	03 04 57.2	-0.7
	baz=357						
FUSS	Fushou	0.45	276	i P	Pg	03 04 51.1	+0.3
	baz=277						
FUSS				eS	Sb	03 04 57.8	-0.7
	baz=277						
ENTT	Nioudou	0.46	341	i P	Pb	03 04 51.6	-0.4
	baz=341						
ENTT				eS	Sg	03 04 57.9	+0.6
	baz=341						
ESL	Shilin	0.47	215	eP	Pg	03 04 50.9	-0.3
	baz=222						
ESL				eS	Sg	03 04 57.8	+0.4
	baz=222						
TWT	Tachien	0.51	276	eP	Pb	03 04 52.5	-0.3
	baz=276						
TWT				eS	Sb	03 05 00.1	-0.2
	baz=276						
TWE	Neicheng	0.52	354	eP	Pb	03 04 52.6	-0.4
	baz=355						
TDCB	Techi	0.52	276	eP	Pb	03 04 52.9	-0.2
	baz=277						
CHGB	Renai	0.53	255	P	Pg	03 04 52.7	+0.4
	baz=248						
CHGB				eS	Sb	03 05 00.2	-0.6
	baz=248						
OWD	Renai	0.56	244	P	Pb	03 04 53.4	-0.3
	baz=246						
OWD				eS	Sg	03 05 00.9	+0.5
	baz=246						
YHNB	Yeheng	0.57	326	P	Pg	03 04 53.4	+0.4
	baz=325						
YHNB				eS	Sb	03 05 01.7	-0.2
	baz=325						
FUSB	Fushanzhiwuyua	0.57	347	P	Pb	03 04 53.5	-0.3
	baz=346						
FUSB				eS	Sb	03 05 01.5	-0.6
	baz=346						
NSK	Sanguang	0.58	325	i P	Pb	03 04 53.8	-0.3
	baz=324						
NSK				eS	Sb	03 05 01.9	-0.4
	baz=324						
EGFH	Guangfu	0.60	208	eP	Pb	03 04 54.8	+0.6
	baz=214						
EGFH				eS	Sb	03 05 03.5	+1.0
	baz=214						
WUSB	Renai	0.60	250	P	Pb	03 04 54.1	-0.2
	baz=245						
WUSB				eS	Sg	03 05 01.7	+0.2
	baz=245						
NWLT	Wulai	0.61	340	i P	Pb	03 04 54.4	-0.1
	baz=340						
NWLT				eS	Sb	03 05 02.6	-0.5
	baz=340						
VWDT	VWDT	0.70	231	P	Pb	03 04 56.0	0.0
	baz=232						
VWDT				eS	Sb	03 05 05.7	+0.3
	baz=232						
NFF	Wufeng Townshi	0.70	308	eP	Pb	03 04 56.2	+0.1
	baz=307						
NFF				eS	Sn	03 05 07.3	-1.2
	baz=307						
WHP	Taichung City	0.72	276	eP	Pb	03 04 56.8	+0.4
	baz=277						
WHP				eS	Sb	03 05 07.2	+0.9
	baz=277						
HGSD	Ruisui	0.76	202	eP	Pn	03 04 59.0	+0.7
	baz=193						
WCS	Beigang Elemen	0.76	259	eP	Pb	03 04 57.1	0.0
	baz=260						
TIPB	Shuangxi	0.78	6	eP	Pb	03 04 57.2	-0.1
	baz=5.0						
TIPB				eS	Sg	03 05 06.5	-0.6
	baz=5.0						
LIOB	Emei	0.79	305	eP	Pn	03 04 59.4	+0.6
	baz=304						
LIOB				eS	Sn	03 05 09.8	-0.7
	baz=304						
SSLB	Suanglung	0.82	240	eP	Pg	03 04 57.7	-0.1
	baz=241						
SMLT	Sun Moon Lake	0.82	248	eP	Pg	03 04 57.9	0.0
	baz=248						
NWF	Wu-fen Shan	0.87	3	eP	Pn	03 04 59.6	-0.4
	baz=2.0						
YULB	Yu-li	0.90	206	eP	Pg	03 04 58.2	-1.0
	baz=220						
SXI1	Grass Mountain	0.90	8	eP	Pb	03 04 59.8	+0.3
	baz=354						
YUS	Yu-Shan	1.00	225	eP	Pg	03 05 00.8	-0.6
	baz=227						
FULB	Fuli	1.07	202	eP	Pb	03 05 02.5	+0.1
	baz=218						

JMA 19 03:04:56.3±0.2, 24°.0N±0°.8 × 123°.6E±0°.9, h35^{km}±1^{km}, MV1.5/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.18	59	i P	Pb	03 05 02.7	-0.2
HATJ				S	Sb	03 05 07.2	-0.2
IRIF	Iriomote-Funau	0.38	13	P	Pb	03 05 05.1	-0.2
IRIF				eS	Sn	03 05 11.1	-0.3
JKRS	Kuro-shima	0.44	51	P	Pb	03 05 06.0	-0.1
JKRS				eS	Sb	03 05 12.6	-0.2
JIJ	Ishigaki jima	0.61	49	eP	Pn	03 05 08.2	-0.4
JISG	Ishigakijimahi	0.88	45	eP	Pn	03 05 12.3	+0.1
JISG				eS	Sb	03 05 25.0	+0.4

OSPL ***19*** *03:08:28.5±1.6, 20°.83N × 71°.50W, h74^{km}±27^{km}, ML2.1*

SSNC ***19*** *03:08:29.2±2.7, 20°.80N × 71°.38W, h36^{km}±822^{km}, MD3.5, MW3.6*

ISC 19 03:08:26.3±1.4, 20°.65N±0°.04 × 71°.4W±0°.1, h8^{km}±19^{km}, n12, σ1^{s}12/21, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRTK	Grand Turk	0.89	14	eP	Pg	03 08 42.8	-0.7
GRTK	Grand Turk	0.89	14	i P	Pg	03 08 43.5	+0.1
GRTK				eS	Sg	03 08 54.8	-0.3
GRTK				IAML		03 09 00.7	
	comp=Z,53nm,0.7s						
SDDR	Presa de Saban	1.66	177	eP	Pb	03 08 57.4	+0.3
SDDR				eS	Sg	03 09 20.2	+0.6
SDDR	Presa de Saban	1.66	177	i P	Pb	03 08 57.5	+0.3
SDDR				eS	Sg	03 09 19.1	-0.5
SDDR				IAML		03 09 23.9	
	comp=Z,9.0nm,0.1s						
LONE2	Loma La Sidra	2.08	183	i P	Pb	03 09 03.7	-0.7
LONE2				eS	Sn	03 09 27.2	-0.6
LONE2				IAML		03 09 35.2	
	comp=Z,21nm,2.7s						
MASC	Masc	2.72	261	eP	Pn	03 09 10.4	0.0
MASC				eS	Sn	03 09 43.1	-0.3
MOAC	Moa	3.36	271	eP	Pn	03 09 19.2	+0.1
MOAC				eS	Sn	03 09 58.3	-1.0
GTBY	Guantanamo Bay	3.58	259	eP	Pn	03 09 23.1	+0.9
GTBY				eS	Sn	03 10 04.1	-0.6
RCC	Rio Carpintero	4.11	262	eP	Pn	03 09 30.5	+1.1
RCC				eS	Sn	03 10 16.7	-1.1
HLGC	Holguin	4.40	274	eP	Pn	03 09 35.6	+2.2
HLGC				eS	Sn	03 10 26.5	+1.7
LMGC	Las Mercedes	5.32	265	eP	Pn	03 09 46.7	+0.7
LMGC				eS	Sn	03 10 45.0	-2.5
CCCC	Cccc	6.00	276	eP	Pn	03 09 49.3	-6.2
CCCC				eS	Sn	03 10 51.0	-13

IDC ***19*** *03:14:02.7±2.0, 60°.20N × 154°.05W, h137^{km}±22^{km}, mb3.3/2, mbtmp3.9/6, Error ellipse: s-maj=29.2km s-min=22.1km az=82.0*

NEIC ***19*** *03:14:04.6±1.3, 60°.13N±0°.03 × 153°.59W±0°.08, h168^{km}±3^{km}, Error ellipse: s-maj=6.3km s-min=3.9km az=118.0*

ANF ***19*** *03:14:04.2±0.2, 60°.07N × 153°.51W, h166^{km}±2^{km}, ML3.8/51, Error ellipse: s-maj=2.8km s-min=1.8km az=126.0*

AEIC ***19*** *03:14:05.5±1.4, 60°.12N±0°.04 × 153°.58W±0°.06, h166^{km}±4^{km}, ML3.5/151, mb4.3/3(NEIC), ML3.6/104(NEIC), Error ellipse: s-maj=6.4km s-min=3.6km az=207.0*

ISC 19 03:14:04.7±0.7, 60°.10N±0°.03 × 153°.53W±0°.03, h169^{km}±5^{km}, n269, σ0^{s}99/278, mb3.8/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
O19K	Port Alsworth	0.41	284		Pn	03 14 27.4	-0.4
O19K					Sn	03 14 44.4	-1.2
O19K	Port Alsworth	0.41	284	P	Pn	03 14 27.4	-0.4
	baz=102						
O19K				S	Sn	03 14 44.2	-1.4
	baz=102						
O20K	Slope Mountain	0.45	92		Pn	03 14 28.0	-0.1
O20K					Sn	03 14 46.0	-0.1
O20K	Slope Mountain	0.45	92	P	Pn	03 14 28.1	-0.1
	baz=274,SNR=33						
O20K				S	Sn	03 14 45.7	-0.4
	baz=274						
OPT	Oil Point	0.47	162		Pn	03 14 28.3	+0.1
P19K	Oil Pt	0.47	161		Pn	03 14 28.1	-0.1
P19K	Oil Pt	0.47	161		Sn	03 14 46.1	-0.1
P19K	Oil Pt	0.47	161	IAML		03 14 31.1	
	comp=E,233nm,0.2s						
P19K	Oil Pt	0.47	161	P	Pn	03 14 28.3	+0.1
	baz=340,SNR=37						
P19K				S	Sn	03 14 46.1	-0.1
	baz=340						
RED	Redoubt Volcan	0.49	49		Pn	03 14 28.1	-0.3
RDWB	Redoubt West	0.52	41		Pn	03 14 28.3	-0.2
RDWB					Sn	03 14 45.7	-1.2
RSO	Redoubt South	0.53	46		Pn	03 14 28.5	-0.2
NCT	North Crescent	0.55	32		Pn	03 14 28.4	-0.2
RDJH	Redoubt Jeurge	0.61	36		Pn	03 14 28.7	-0.2
DFR	Drift River	0.65	40		Pn	03 14 28.7	-0.3
DFR					Sn	03 14 47.3	-0.6
AUL	Augustine Lava	0.72	176		Pn	03 14 29.5	+0.1
AU2	Augustine Isla	0.74	174		Pn	03 14 29.5	0.0
AU22	Augustine Moun	0.74	173		Pn	03 14 29.4	-0.1
AUH	Augustine H	0.74	177		Pn	03 14 29.8	+0.2
AUQ	Augustine Qik'	0.75	176		Pn	03 14 29.6	-0.1
N19K	Bonanza Creek	0.86	327		Pn	03 14 30.0	-0.3
N19K	Bonanza Creek	0.86	327	IAML		03 14 31.6	
	comp=N,120nm,0.5s						
N19K	Bonanza Creek	0.86	327	P	Pn	03 14 30.1	-0.3
	baz=147,SNR=167						
N19K				S	Sn	03 14 48.6	-1.6
	baz=147						
HOM	Homer	1.05	114		Pn	03 14 32.0	+0.4
HOM					Sn	03 14 52.1	-0.3
HOM	Homer	1.05	114	P	Pn	03 14 32.0	+0.4
	baz=296,SNR=5.4						
HOM				S	Sn	03 14 52.0	-0.4
	baz=296						
P18K	Big Mountain,	1.12	231		Pn	03 14 31.9	-0.4
P18K	Big Mountain,	1.12	231	IAML		03 14 32.2	
	comp=E,92nm,0.6s						
P18K				IAML		03 14 53.1	
	comp=N,100nm,0.9s						
P18K	Big Mountain,	1.12	231	P	Pn	03 14 31.9	-0.4
	baz=48						
P18K				S	Sn	03 14 52.4	-1.1
	baz=48						
Q19K	Cape Douglas,	1.18	183		Pn	03 14 32.4	-0.4
Q19K	Cape Douglas,	1.18	183	IAML		03 14 59.2	
	comp=N,1µm,0.9s						
Q19K				IAML		03 15 02.1	
	comp=E,709nm,1.0s						
Q19K	Cape Douglas,	1.18	183	P	Pn	03 14 32.5	-0.3
	baz=1.7,SNR=55						
Q19K				S	Sn	03 14 53.5	-0.9
	baz=1.7						
SPWE	Spurr West	1.27	22		Pn	03 14 34.0	+0.3
SPCR	Spurr Chakacha	1.28	30		Pn	03 14 33.7	-0.1
SPCR	Spurr Chakacha	1.28	30	P	Pn	03 14 33.7	-0.1
	baz=212,SNR=55						
CNPM	China Poot	1.29	115		Pn	03 14 33.8	0.0
CNPM					Sn	03 14 55.0	-1.3
CNPM	China Poot	1.29	115	IAML		03 14 56.7	
	comp=N,2µm,0.3s						
SPBG	Spurr Blockage	1.29	26		Pn	03 14 34.3	+0.4
SPU	Mount Spurr	1.31	33		Pn	03 14 33.8	-0.2
CKN	Chakachatna No	1.31	30		Pn	03 14 34.2	+0.2
N18K	Kilae Creek	1.31	297		Pn	03 14 33.8	-0.1
N18K					Sn	03 14 55.3	-1.3
N18K	Kilae Creek	1.31	297	P	Pn	03 14 33.8	-0.1
	baz=115,SNR=56						
N18K				S	Sn	03 14 55.0	-1.5
	baz=115						
CRP	Crater Peak	1.35	29		Pn	03 14 34.7	+0.2
CAPN	Captain Cook N	1.35	59		Pn	03 14 35.5	+1.2
CAPN	Captain Cook N	1.35	59	IAML		03 15 00.3	
	comp=E,1µm,0.5s						
CAPN				IAML		03 15 04.3	
	comp=N,792nm,0.4s						
CAPN	Captain Cook N	1.35	59	P	Pn	03 14 35.4	+1.2
	baz=242						
BRLK	Bradley Lake	1.37	103		Pn	03 14 34.5	0.0
SPCG	Spurr Capps Gl	1.41	31		Pn	03 14 34.8	-0.1
SVW2	Sparrevohn	1.42	316		Pn	03 14 34.6	-0.4
SVW2	Sparrevohn	1.42	316		Sn	03 14 56.7	-1.7
SVW2	Sparrevohn	1.42	316	IAML		03 14 36.1	
	comp=E,82nm,0.4s						
BRSE	Bradley Lake S	1.45	103		Pn	03 14 35.2	-0.1
BRSE	Bradley Lake S	1.45	103	P	Pn	03 14 35.4	+0.2
	baz=286,SNR=153						
BRSE				S	Sn	03 14 57.3	-1.5
	baz=286						
STLK	Strandline Lak	1.63	30		Pn	03 14 37.0	-0.1
SLKM	Skilak Lake	1.70	75		Pn	03 14 37.0	-0.8
SLKM					Sn	03 15 01.3	-2.0
M20K	Styx River	1.80	6		Pn	03 14 39.2	+0.3
M20K	Styx River	1.80	6	P	Pn	03 14 39.2	+0.3
	baz=187,SNR=127						
M20K				S	Sn	03 15 04.5	-0.9
	baz=187						
M19K	Big River Lodg	1.86	347		Pn	03 14 39.1	-0.2
M19K	Big River Lodg	1.86	347	P	Pn	03 14 39.2	-0.2
	baz=167,SNR=57						
M19K				S	Sn	03 15 05.3	-1.1
	baz=167						
O22K	Cooper Landing	1.93	77		Pn	03 14 39.6	-0.5
O22K					Sn	03 15 06.2	-1.4
O22K	Cooper Landing	1.93	77	IAML		03 15 10.3	
	comp=E,910nm,0.4s						
O22K	Cooper Landing	1.93	77	P	Pn	03 14 39.7	-0.5
	baz=261,SNR=16						
O22K				S	Sn	03 15 06.3	-1.4
	baz=261						
FIS	Fire Island	1.94	56		Pn	03 14 40.5	+0.3
FIS	Fire Island	1.94	56	IAML		03 15 10.5	
	comp=E,810nm,0.8s						
FIS				IAML		03 15 15.6	
	comp=N,447nm,0.3s						
KELA	Mount Kelaz	2.02	215		Pn	03 14 40.8	-0.5
SEW	Seward	2.04	88		Pn	03 14 41.5	+0.1
SEW					Sn	03 15 07.8	-2.0
SEW	Seward	2.04	88	P	Pn	03 14 41.2	-0.1
	baz=272,SNR=29						
SEW				S	Sn	03 15 07.4	-2.4
	baz=272						
KABU	Katmai Buttres	2.05	207		Pn	03 14 41.3	-0.3
RC01	Rabbit Creek A	2.12	60		Pn	03 14 41.3	-1.0
RC01	Rabbit Creek A	2.12	60	IAML		03 15 11.2	
	comp=N,422nm,0.2s						
RC01				IAML		03 15 11.6	
	comp=E,314nm,0.2s						
RC01	Rabbit Creek A	2.12	60	P	Pn	03 14 41.3	-1.0
	baz=244,SNR=11						
RC01				S	Sn	03 15 10.0	-1.5
	baz=244						
ANCK	Angle Creek	2.16	209		Pn	03 14 42.6	-0.3
L19K	White Mountain	2.19	343		Pn	03 14 42.7	-0.4
L19K					Sn	03 15 11.8	-1.1
L19K	White Mountain	2.19	343	P	Pn	03 14 42.7	-0.4
	baz=163,SNR=33						
L19K				S	Sn	03 15 11.7	-1.2
	baz=163						
CAHL	Cahill	2.25	205		Pn	03 14 43.7	-0.2
KJL	Kejulik	2.31	208		Pn	03 14 44.4	-0.2
M22K	Willow	2.35	44		Pn	03 14 44.5	-0.5
M22K					Sn	03 15 15.5	-0.6
M22K	Willow	2.35	44	P	Pn	03 14 44.4	-0.5
	baz=227,SNR=14						
M22K				S	Sn	03 15 15.4	-0.7
	baz=227						
KDAK	Kodiak Island	2.38	168	P	Pn	03 14 43.7	-1.6
	comp=E,67nm,0.2s,baz=325,slow=16,SNR=244						
KDAK				S	Sn	03 15 13.8	-2.9
	comp=E,79nm,0.3s,baz=222,slow=22,SNR=22						
KDAK	Kodiak Island	2.38	168	IAML		03 15 15.3	
	comp=E,196nm,0.3s						
KDAK				IAML		03 15 18.9	
	comp=E,186nm,0.4s						
KDAK	Kodiak Island	2.38	168	P	Pn	03 14 43.6	-1.6
	baz=348						
KDAK				S	Sn	03 15 14.5	-2.2
	baz=348						
L20K	Farewell, AK	2.39	356		Pn	03 14 45.6	+0.1
L20K	Farewell, AK	2.39	356	P	Pn	03 14 45.6	+0.1

	baz=176,SNR=33						
L20K				S	Sn	03 15 16.3	-0.9
	baz=176						
PMR	Palmer	2.62	53		Pn	03 14 46.4	-1.7
PMR	Palmer	2.62	53	IAML		03 15 21.3	
	comp=E,245nm,0.3s						
PMR				IAML		03 15 21.5	
	comp=N,241nm,0.3s						
PMR	Palmer	2.62	53	P	Pn	03 14 46.4	-1.7
	baz=238,SNR=17						
PMR				S	Sn	03 15 19.2	-2.7
	baz=238						
CUT	Chulitna	2.80	33		Pn	03 14 50.3	+0.1
CUT					Sn	03 15 24.1	-1.6
CUT	Chulitna	2.80	33	P	Pn	03 14 50.2	-0.1
	baz=216,SNR=37						
CUT				S	Sn	03 15 24.5	-1.3
	baz=216						
GHO	Glory Hole Cre	2.80	51		Pn	03 14 49.1	-1.4
GHO	Glory Hole Cre	2.80	51	IAML		03 15 27.1	
	comp=E,375nm,0.5s						
PLK1	Peulik 1	2.80	216		Pn	03 14 50.5	+0.2
KNK	Knik Glacier	2.81	60		Pn	03 14 49.1	-1.5
KNK	Knik Glacier	2.81	60	IAML		03 15 26.1	
	comp=N,347nm,0.5s						
KNK				IAML		03 15 26.6	
	comp=E,364nm,0.5s						
KNK	Knik Glacier	2.81	60	P	Pn	03 14 49.0	-1.5
	baz=245						
KNK				S	Sn	03 15 24.4	-1.8
	baz=245						
PPLA	Purkeypile	2.88	12		Pn	03 14 52.1	+0.7
PPLA					Sn	03 15 27.6	-0.2
PPLA	Purkeypile	2.88	12	P	Pn	03 14 51.8	+0.4
	baz=194,SNR=18						
OHAK	Old Harbor	2.89	177		Pn	03 14 49.6	-1.9
OHAK	Old Harbor	2.89	177	IAML		03 15 25.1	
	comp=N,134nm,0.4s						
OHAK				IAML		03 15 25.7	
	comp=E,92nm,0.3s						
OHAK	Old Harbor	2.89	177	P	Pn	03 14 49.6	-1.9
	baz=357,SNR=12						
OHAK				S	Sn	03 15 24.1	-3.6
	baz=357						
SML	Sawmill	3.06	54		Pn	03 14 52.1	-1.4
SML	Sawmill	3.06	54	IAML		03 15 31.2	
	comp=N,331nm,0.2s						
SML	Sawmill	3.06	54	P	Pn	03 14 52.1	-1.4
	baz=239,SNR=8.6						
TT01	Tatalina	3.06	338		Pn	03 14 53.0	-0.4
TTA	Tatalina	3.08	338		Pn	03 14 53.2	-0.6
TTA	Tatalina	3.08	338	P	Pn	03 14 53.1	-0.6
	baz=156,SNR=5.2						
TTA				S	Sn	03 15 30.5	-1.6
	baz=156						
GLI	Glacier Island	3.28	73		Pn	03 14 54.4	-1.9
GLI					Sn	03 15 34.7	-1.6
GLI	Glacier Island	3.28	73	IAML		03 15 37.7	
	comp=E,316nm,0.2s						
GLI	Glacier Island	3.28	73	P	Pn	03 14 54.3	-1.9
	baz=259						
K20K	Telida	3.28	356		Pn	03 14 56.5	+0.3
K20K	Telida	3.28	356	P	Pn	03 14 56.3	+0.1
	baz=176,SNR=19						
K20K				S	Sn	03 15 35.6	-0.8
	baz=176						
M23K	Glacier View	3.30	57	P	Pn	03 14 55.3	-1.2
	baz=242,SNR=15						
SCM	Sheep Creek Mo	3.49	57		Pn	03 14 57.8	-1.1
SCM	Sheep Creek Mo	3.49	57	P	Pn	03 14 57.8	-1.1
	baz=243,SNR=11						
HIN	Hinchinbrook I	3.52	82		Pn	03 14 58.4	-0.9
JPK	Jack Peak	3.55	71		Pn	03 14 59.0	-0.7
FID	Port Fidalgo	3.56	76		Pn	03 14 57.9	-1.9
FID	Port Fidalgo	3.56	76	IAML		03 15 41.7	
	comp=E,264nm,0.3s						
SII	Sitkinak Islan	3.57	186	P	Pn	03 14 58.2	-1.7
	baz=4.9						
WAT1	Susitna Watana	3.63	39		Pn	03 14 60.0	-0.8
WAT1	Susitna Watana	3.63	39	P	Pn	03 14 59.9	-0.8
	baz=224						
TRF	Thorofare Moun	3.70	23		Pn	03 15 01.2	-0.5
TRF	Thorofare Moun	3.70	23	IAML		03 15 46.4	
	comp=E,71nm,0.3s						
TRF				IAML		03 15 47.7	
	comp=N,133nm,0.5s						
TRF	Thorofare Moun	3.70	23	P	Pn	03 15 01.0	-0.7
	baz=206,SNR=19						
WAT6	Susitna Watana	3.74	46		Pn	03 15 01.1	-1.1
WAT6	Susitna Watana	3.74	46	P	Pn	03 15 01.1	-1.1
	baz=231,SNR=14						
CHUM	Lake Minchumin	3.84	8		Pn	03 15 03.2	-0.1
CHUM	Lake Minchumin	3.84	8	P	Pn	03 15 03.2	-0.1
	baz=190,SNR=14						
EYAK	Cordova Ski Ar	3.89	80		Pn	03 15 03.8	-0.2
EYAK	Cordova Ski Ar	3.89	80	P	Pn	03 15 03.4	-0.5
	baz=267						
DIV	Divide	3.96	72		Pn	03 15 04.0	-0.9
KLU	Klutina	3.98	66		Pn	03 15 04.5	-0.7
KLU	Klutina	3.98	66	P	Pn	03 15 04.2	-1.0
	baz=253,SNR=30						
RND	Reindeer	3.99	32		Pn	03 15 04.5	-0.8
RND	Reindeer	3.99	32	IAML		03 15 51.6	
	comp=E,61nm,0.3s						
RND				IAML		03 15 52.4	
	comp=N,70nm,0.3s						
M24K	Tolsona, Glenn	4.10	57		Pn	03 15 06.4	-0.3
M24K	Tolsona, Glenn	4.10	57	P	Pn	03 15 06.3	-0.3
	baz=244,SNR=16						
J20K	Nowinta River	4.10	356		Pn	03 15 06.9	+0.3
J20K	Nowinta River	4.10	356	P	Pn	03 15 06.7	+0.1
	baz=176,SNR=21						
BPAW	Bear Paw Mtn.	4.19	15		Pn	03 15 06.8	-1.0
BPAW	Bear Paw Mtn.	4.19	15	IAML		03 15 55.5	
	comp=N,66nm,1.1s						
BPAW				IAML		03 15 56.1	
	comp=E,50nm,0.6s						
BPAW	Bear Paw Mtn.	4.19	15	P	Pn	03 15 06.9	-0.8
	baz=198,SNR=63						
DHY	Denali Highway	4.19	42		Pn	03 15 07.2	-0.7
DHY	Denali Highway	4.19	42	IAML		03 15 58.4	
	comp=E,114nm,0.3s						
DHY				IAML		03 15 58.9	
	comp=N,116nm,0.4s						
DHY	Denali Highway	4.19	42	P	Pn	03 15 07.2	-0.7
	baz=228,SNR=14						
PS11	TAPS Pump St11	4.38	60		Pn	03 15 09.8	-0.5
CHIR	Chirikof Islan	4.43	195	P	Pn	03 15 09.6	-1.4
	baz=13						
BMRM	Bremner River	4.49	75		Pn	03 15 11.0	-0.8
BMRM	Bremner River	4.49	75	IAML		03 16 03.8	
	comp=N,120nm,0.4s						
BMRM				IAML		03 16 05.8	
	comp=E,109nm,0.5s						
BMRM	Bremner River	4.49	75	P	Pn	03 15 10.2	-1.6
	baz=263,SNR=12						
BWN	Browne	4.51	23		Pn	03 15 11.6	-0.3
BWN	Browne	4.51	23	IAML		03 16 09.5	
	comp=E,60nm,0.5s						
BWN				IAML		03 16 28.7	
	comp=N,43nm,1.0s						
CHGN	Chignik	4.60	216		Pn	03 15 12.3	-1.0
CHGN	Chignik	4.60	216	IAML		03 16 06.6	
	comp=N,85nm,0.3s						
CHGN				IAML		03 16 11.1	
	comp=E,104nm,0.1s						
CHGN	Chignik	4.60	216	P	Pn	03 15 12.2	-1.0
	baz=32						
N25K	Chitina, Valde	4.62	67		Pn	03 15 12.9	-0.6
N25K	Chitina, Valde	4.62	67	P	Pn	03 15 12.5	-1.0
	baz=255,SNR=24						
HARP	HAARP	4.65	57		Pn	03 15 13.8	-0.1
HARP	HAARP	4.65	57	P	Pn	03 15 13.7	-0.1
	baz=244,SNR=13						
PAX	Paxson	4.81	50		Pn	03 15 15.7	-0.2
PAX	Paxson	4.81	50	P	Pn	03 15 15.6	-0.3
	baz=237,SNR=12						
GLB	Gilahina Butte	4.95	70		Pn	03 15 17.5	-0.2
GLB	Gilahina Butte	4.95	70	IAML		03 16 15.3	
	comp=N,60nm,1.0s						
GLB				IAML		03 16 15.9	
	comp=E,46nm,0.5s						
NEA2	Nenana	4.96	23		Pn	03 15 16.5	-1.3
NEA2	Nenana	4.96	23	IAML		03 16 13.4	
	comp=N,23nm,0.4s						
NEA2				IAML		03 16 13.7	
	comp=E,31nm,0.6s						
NEA2	Nenana	4.96	23	P	Pn	03 15 16.5	-1.3
	baz=207,SNR=61						
WRH	Wood River Hil	5.07	28		Pn	03 15 18.0	-1.1
WRH	Wood River Hil	5.07	28	IAML		03 16 15.3	
	comp=E,29nm,0.5s						
WRH				IAML		03 16 23.9	
	comp=N,19nm,0.4s						
VRDI	Verde Repeater	5.08	73		Pn	03 15 19.5	-0.1
VRDI	Verde Repeater	5.08	73	IAML		03 16 19.4	
	comp=N,66nm,0.6s						
VRDI				IAML		03 16 20.4	
	comp=E,38nm,0.5s						
KHIT	Khitrov Hills	5.13	82		Pn	03 15 20.0	-0.1
I21K	Tanana	5.15	7		Pn	03 15 19.7	-0.5
I21K	Tanana	5.15	7	IAML		03 16 16.7	
	comp=E,19nm,0.8s						
I21K				IAML		03 16 53.0	
	comp=N,12nm,3.0s						
I21K	Tanana	5.15	7	P	Pn	03 15 19.8	-0.5
	baz=189,SNR=37						
K24K	Donnelly Dome	5.21	41	P	Pn	03 15 21.9	+0.8
	baz=228,SNR=7.7						
CCB	Clear Creek Bu	5.28	28		Pn	03 15 20.6	-1.3
CCB	Clear Creek Bu	5.28	28	IAML		03 16 21.1	
	comp=E,32nm,0.5s						
CCB				IAML		03 16 21.6	
	comp=N,24nm,0.4s						
HDA	Harding Lake	5.30	33		Pn	03 15 21.4	-0.9
HDA	Harding Lake	5.30	33	P	Pn	03 15 21.3	-0.9
	baz=219,SNR=55						
MCARA	McCarthy VSAT	5.31	71		Pn	03 15 22.9	+0.5
MCARA	McCarthy VSAT	5.31	71	P	Pn	03 15 22.8	+0.4
	baz=261						
TGL	Tana Glacier	5.34	78		Pn	03 15 23.1	+0.2
TGL	Tana Glacier	5.34	78	IAML		03 16 26.6	
	comp=N,48nm,0.5s						
TGL				IAML		03 16 30.9	
	comp=E,43nm,0.4s						
I23K	Minto, Yukon-K	5.42	19		Pn	03 15 22.7	-1.0
I23K	Minto, Yukon-K	5.42	19	P	Pn	03 15 22.7	-1.0
	baz=203,SNR=21						
PS08	TAPS Pump Stn8	5.44	32		Pn	03 15 23.3	-0.8
MDM	Murphy Dome	5.46	24		Pn	03 15 23.3	-1.0
TCOL	CIGO, UAF Yank	5.46	26		Pn	03 15 23.6	-0.7
TCOL	CIGO, UAF Yank	5.46	26	P	Pn	03 15 23.5	-0.7
	baz=212,SNR=9.6						
COLA	College	5.46	26		Pn	03 15 23.6	-0.8
COLA	College	5.46	26	P	Pn	03 15 23.5	-0.8
	baz=212						
MENT	Mentasta	5.49	55		Pn	03 15 24.9	+0.2
RIDG	Independent Ri	5.49	45		Pn	03 15 25.0	+0.3
RIDG	Independent Ri	5.49	45	P	Pn	03 15 24.6	-0.1
	baz=232,SNR=17						
PTPK	Patty Peak	5.55	74		Pn	03 15 26.0	+0.3
ISLE	Juniper Island	5.58	80		Pn	03 15 26.2	+0.2
KIAG	Kiagna River	5.58	77		Pn	03 15 26.5	+0.4
M26K	Nabesna, AK	5.58	61		Pn	03 15 26.4	+0.4
M26K	Nabesna, AK	5.58	61	P	Pn	03 15 26.4	+0.4
	baz=250,SNR=30						
H21K	Melozitna Rive	5.59	3		Pn	03 15 25.6	-0.4
H21K	Melozitna Rive	5.59	3	P	Pn	03 15 25.5	-0.4
	baz=184,SNR=12						
BALM	Baldy	5.59	76		Pn	03 15 26.5	+0.3
IL31		5.61	30		Pn	03 15 25.2	-1.0
ILAR	Eielson Array	5.61	30	P	Pn	03 15 25.1	-1.2
	comp=E,11nm,0.5s,baz=221,slow=13,SNR=182						
ILAR				S	Sn	03 16 26.6	-3.7
	comp=E,9.4nm,0.4s,baz=237,slow=17,SNR=3.4						
ILAR	Eielson Array	5.61	30	Pn	Pn	03 15 25.2	-1.1
L26K	Log Cabin Wild	5.68	55		Pn	03 15 27.2	0.0
L26K	Log Cabin Wild	5.68	55	P	Pn	03 15 27.2	0.0
	baz=244,SNR=17						
BAGL	Bagley Icefiel	5.70	81		Pn	03 15 28.2	+0.8
DOT	Dot Lake	5.72	47		Pn	03 15 28.8	+1.0
POKR	Poker Plat Res	5.76	27		Pn	03 15 27.7	-0.7
POKR	Poker Plat Res	5.76	27	P	Pn	03 15 27.6	-0.7
	baz=212,SNR=23						
MESA	MESA	5.79	84		Pn	03 15 29.1	+0.2
MESA	MESA	5.79	84	P	Pn	03 15 29.6	+0.8
	baz=274						
GRNC	Granite Creek	5.87	79		Pn	03 15 30.5	+0.5
YAH	Yahtse	5.88	82		Pn	03 15 30.7	+0.7
IM03		5.91	359		Pn	03 15 30.2	+0.1
IMAR	Indian Mountai	5.91	359	Pn	Pn	03 15 30.5	+0.3
J25K	Salcha River,	5.91	36		Pn	03 15 29.6	-0.7
J25K	Salcha River,	5.91	36	P	Pn	03 15 29.6	-0.7
	baz=224,SNR=58						
BARN	Barnard Glacie	5.93	76		Pn	03 15 31.4	+0.7
SCRK	Sand Creek	5.94	45		Pn	03 15 29.9	-0.8
SCRK	Sand Creek	5.94	45	P	Pn	03 15 29.8	-0.8
	baz=234,SNR=12						
H23K	Yukon River	6.03	16		Pn	03 15 30.6	-1.2
H23K	Yukon River	6.03	16	P	Pn	03 15 30.7	-1.0
	baz=200,SNR=46						
M27K	Edge Creek, AK	6.06	63		Pn	03 15 33.4	+1.0
M27K	Edge Creek, AK	6.06	63	P	Pn	03 15 33.5	+1.1
	baz=254						
CTG	Chitna Glacier	6.08	77	P	Pn	03 15 33.3	+0.7
	baz=267						
CTGM	Chitina Glacie	6.08	77		Pn	03 15 33.7	+1.0
TABL	Table Mountain	6.17	81		Pn	03 15 34.6	+0.7
CHX	Chaix Hills	6.21	85		Pn	03 15 35.2	+0.9
LOGN	Logan Glacier	6.24	78		Pn	03 15 35.3	+0.5
H24K	Noodor Dome	6.30	22		Pn	03 15 34.3	-1.2
H24K	Noodor Dome	6.30	22	P	Pn	03 15 34.3	-1.2
	baz=207,SNR=30						
L27K	Beaver Creek,	6.33	57		Pn	03 15 36.3	+0.5
L27K	Beaver Creek,	6.33	57	P	Pn	03 15 35.8	+0.1
	baz=248						
BC03		6.34	57		Pn	03 15 36.3	+0.4
BCAR	Beaver Creek A	6.34	57	Pn	Pn	03 15 36.4	+0.4
J26L	Joseph Creek	6.41	42	P	Pn	03 15 36.0	-0.9
	baz=231,SNR=71						
YUK2	White River	6.41	69		Pn	03 15 37.4	+0.5
BVCY	Beaver Creek	6.54	64	P	Pn	03 15 38.7	+0.2
	baz=255,SNR=10						
YUK3	Moose Creek	6.59	70	P	Pn	03 15 39.7	+0.3
	baz=261,SNR=8.0						
PINM	Pinnacle	6.64	84	P	Pn	03 15 40.4	+0.5
	baz=276						
K27K	Chicken	6.67	49		Pn	03 15 40.8	+0.6
K27K	Chicken	6.67	49	P	Pn	03 15 40.2	0.0
	baz=239						
COLD	Coldfoot	7.31	10		Pn	03 15 47.5	-1.1
COLD	Coldfoot	7.31	10	P	Pn	03 15 47.6	-1.1
	baz=193						
EGAK	Eagle	7.40	45		Pn	03 15 49.6	-0.4
YUK4	Talbot Arm	7.40	74	P	Pn	03 15 51.7	+1.6
	baz=266						
YUK6	Outpost Mounta	7.53	77	P	Pn	03 15 53.4	+1.5
	baz=270						
DAWY	Dawson	7.73	53		Pn	03 15 55.3	+1.0
HYT	Haines Junctio	7.95	78	P	Pn	03 15 58.9	+1.5
	baz=272						
N30M	Aishikik Lake	8.16	73	P	Pn	03 16 00.0	+0.1
	baz=268						
BMAR	Burnt Mountain	8.35	24	Pn	Pn	03 16 00.5	-1.9
M30M	Minto, Yukon	8.41	66	P	Pn	03 16 04.7	+1.3
	baz=260						
TOLK	Toolik Lake Re	8.74	10		Pn	03 16 08.1	+0.5
TOLK	Toolik Lake Re	8.74	10	P	Pn	03 16 07.4	-0.2
	baz=193						
UNV	Unalaska Valle	9.45	234	P	Pn	03 16 15.9	-1.1
	baz=43						
INK	Inuvik	11.92	38	P	Pn	03 16 49.2	+0.2
	comp=E,4.9nm,0.6s,baz=240,slow=12,SNR=17						
INK	Inuvik	11.92	38	Pn	Pn	03 16 50.2	+1.2
INK	Inuvik	11.92	38	P	Pn	03 16 49.2	+0.2
	baz=236,SNR=5.9						
DLBC	Dease Lake	12.12	88	P	P	03 16 56.9	-0.6
	comp=E,1.7nm,0.4s,baz=259,slow=10,SNR=1.8						
C36M	Paulatuk	15.44	41	Pn	Pn	03 17 31.9	-1.3
C36M				IAmb	IAmb	03 17 34.7	
	comp=Z,13nm,0.5s						
C36M	Paulatuk	15.44	41	P	Pn	03 17 32.0	-1.3
	baz=248,SNR=11						
A36M	Sachs Harbour	16.31	32	P	P	03 17 42.5	-1.1
A36M				IAmb	IAmb	03 17 44.9	
	comp=Z,7.2nm,0.7s						
YKA	Yellowknife Ar	18.65	66	P	P	03 18 10.4	+1.2
	comp=Z,1.2nm,0.5s,baz=276,slow=9.8,SNR=11						
YKA	Yellowknife Ar	18.65	66	P	P	03 18 10.3	+1.1
FCC	Fort Churchill	29.38	66	P	P	03 19 53.2	+1.7
FCC				IAmb	IAmb	03 20 15.0	
	comp=Z,8.7nm,1.4s						
NVAR	Mina Array Bea	31.00	118	P	P	03 20 09.8	+3.6
	comp=Z,0.3nm,0.6s,baz=301,slow=7.3,SNR=2.4						
	comp=Z,0.3nm,0.6s						
NVAR	Mina Array Bea	31.00	118	P	P	03 20 07.0	+0.8
ZALV	Zalesovo Beam	57.13	323	P	P	03 23 33.2	+0.2
	comp=Z,0.7nm,0.5s,baz=46,slow=6.2,SNR=2.2						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	57.13	323	P	P	03 23 33.5	+0.5

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*IDC **19** 03:22:27.4±0.8, 49°.93S×114°.47E, h0^{km}, mb4.2/9, mbtmp4.2/9, MS4.0/34, Error ellipse: s-maj=37.5km s-min=16.3km az=109.0*

*NEIC **19** 03:22:28.6±1.1, 49°.91S±0°.08×114°.5E±0°.3, h10^{km}±2^{km}, mb4.7/13, Error ellipse: s-maj=28.0km s-min=12.9km az=76.0*

ISC 19 03:22:29.5±0.6**, 49°.87S**±0°.09×**114°.4E**±0°.2**, h17^{km}, n65, σ0^{s}.89**/28**, mb4.4**/12**, MS4.0**/34**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.96	359	T	T	03 41 17.8	
	baz=178,slow=74,SNR=521						
H01W1	Cape Leeuwin H	14.97	359	T	T	03 41 18.1	
	baz=178,slow=74,SNR=592						
H01W3	Cape Leeuwin H	14.98	359	T	T	03 41 15.4	
	baz=178,slow=74,SNR=610						
CASY	Casey	16.58	186	Pn	Pn	03 26 20.1	-0.7
NWAO	Narrogin (SRO)	17.06	8		P	03 26 29.4	+0.6
NWAO				IAmb	IAmb	03 26 52.7	
	comp=Z,89nm,2.0s						
MORW	Morawa	20.81	4	P	P	03 27 10.0	0.0
MORW				IAmb	IAmb	03 27 14.8	
	comp=Z,51nm,1.2s						
FORT	Forrest	21.65	33	P	P	03 27 18.7	-0.3
STKA	Stephens Creek	27.07	59	P	P	03 28 12.0	+1.0
	comp=Z,3.0nm,0.8s,baz=216,slow=11,SNR=2.9						
STKA				LR	LR	03 37 05.5	
	comp=Z,200nm,21.0s,baz=210,slow=32						
	comp=Z,3.0nm,0.8s						
PSA00	Pilbara Seismi	28.56	11	P	P	03 28 21.9	-2.5
PSA00				IAmb	IAmb	03 28 22.8	
	comp=Z,26nm,1.8s						
ASAR	Alice Springs	30.27	37	P	P	03 28 40.6	+1.0
	comp=Z,3.3nm,0.9s,baz=209,slow=8.1,SNR=21						
ASAR				LR	LR	03 39 12.1	
	comp=Z,170nm,20.7s,baz=203,slow=33						
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	30.27	37	P	P	03 28 39.5	-0.1
MAW	Mawson	30.86	216	P	P	03 28 44.0	-0.3
	comp=Z,2.0nm,0.8s,baz=94,slow=18,SNR=3.6						
MAW				LR	LR	03 39 13.2	
	comp=Z,73nm,18.1s,baz=64,slow=33						
	comp=Z,2.0nm,0.8s						
MAW	Mawson	30.86	216	P	P	03 28 43.4	-1.0
VNDA	Vanda	32.92	163	P	P	03 29 02.2	-0.1
	comp=Z,2.0nm,1.0s,baz=272,slow=7.3,SNR=4.1						
VNDA				LR	LR	03 41 48.0	
	comp=Z,397nm,18.2s,baz=322,slow=35						
	comp=Z,2.0nm,1.0s						
VNDA	Vanda	32.92	163	P	P	03 29 03.0	+0.7
WRA	Warramunga Arr	33.81	35	P	P	03 29 11.6	+0.9
	comp=Z,9.4nm,0.7s,baz=204,slow=8.7,SNR=49						
WRA				LR	LR	03 41 36.0	
	comp=Z,114nm,21.9s,baz=259,slow=34						
	comp=Z,9.4nm,0.7s						
WRA	Warramunga Arr	33.81	35	P	P	03 29 10.4	-0.2
WB2	Warramunga Arr	33.82	35	P	P	03 29 11.1	+0.4
WB2				IAmb	IAmb	03 29 12.2	
	comp=Z,9.7nm,0.7s						
WRAB	Tennant Creek	33.83	35	P	P	03 29 09.5	-1.2
WR0	Warramunga Arr	33.87	35	P	P	03 29 11.1	-0.1
WR0				IAmb	IAmb	03 29 12.7	
	comp=Z,9.4nm,0.8s						
WB0	Warramunga Arr	33.99	35	P	P	03 29 11.9	-0.3
RPZ	Rata Peaks	38.45	103	LR	LR	03 42 48.6	
	comp=Z,117nm,18.5s,baz=246,slow=32						
CTA	Charters Tower	39.01	52	LR	LR	03 45 25.9	
	comp=Z,263nm,18.9s,baz=236,slow=35						
QSPA	South Pole Qui	40.26	180	P	P	03 30 05.3	+0.1
	comp=Z,1.8nm,0.7s,baz=321,slow=1.6,SNR=14						
QSPA				LR	LR	03 46 07.3	
	comp=Z,526nm,18.4s,baz=328,slow=35						
	comp=Z,1.8nm,0.7s						
QSPA	South Pole Qui	40.26	180	P	P	03 30 04.6	-0.6
QSPA				IAmb	IAmb	03 30 12.8	
	comp=Z,31nm,1.9s						
BATI	Baumata	40.28	14	LR	LR	03 46 38.3	
	comp=Z,271nm,18.1s,baz=204,slow=36						
LEM	Lembang	43.28	350	LR	LR	03 45 44.8	
	comp=Z,300nm,19.7s,baz=196,slow=32						
KAPI	Kappang	44.93	8	LR	LR	03 50 33.5	
	comp=Z,113nm,18.3s,baz=197,slow=38						
URZ	Urewera	45.25	100	LR	LR	03 45 51.6	
	comp=Z,98nm,20.5s,baz=211,slow=31						
PMG	Port Moresby	48.63	45	LR	LR	03 49 54.9	
	comp=Z,131nm,20.9s,baz=178,slow=34						
DZM	Mont Dzumac	49.14	75	LR	LR	03 49 00.2	
	comp=Z,112nm,19.4s,baz=230,slow=32						
TROLL	Troll, Antarti	49.48	202	P	P	03 31 25.0	+6.5
SIJI	Sorong	50.90	22	LR	LR	03 52 48.5	
	comp=Z,49nm,21.5s,baz=153,slow=36						
SNAA	Sanae	50.99	201	P	P	03 31 36.1	+6.3
SNAA	Sanae	50.99	201	P	P	03 31 31.0	+1.2
	comp=Z,1.9nm,0.8s,baz=37,slow=23,SNR=3.5						
SNAA				LR	LR	03 51 11.2	
	comp=Z,85nm,20.7s,baz=140,slow=34						
	comp=Z,1.9nm,0.8s						
SNAA	Sanae	50.99	201	P	P	03 31 30.3	+0.5
SNAA				IAmb	IAmb	03 31 32.2	
	comp=Z,20nm,1.6s						
PSI	Prapat	54.15	341	LR	LR	03 50 54.9	
	comp=Z,202nm,20.6s,baz=184,slow=32						
H08S2	Diego Garcia H	54.70	306	T	T	04 30 48.4	
	baz=148,slow=76,SNR=36						
H08S1	Diego Carcia H	54.71	306	T	T	04 30 49.1	
	baz=148,slow=76,SNR=30						
H08S3	Diego Garcia H	54.72	306	T	T	04 30 50.1	
	baz=148,slow=76,SNR=42						
KRVT	Keravat (AS076	55.38	48	LR	LR	03 54 40.6	
	comp=Z,118nm,20.3s,baz=260,slow=35						
PALK	Pallekele	64.03	322	LR	LR	03 54 17.7	
	comp=Z,150nm,21.2s,baz=261,slow=30						
PMSA	Palmer Station	65.69	181	LR	LR	04 02 20.0	
	comp=Z,124nm,18.9s,baz=190,slow=36						
SUR	Sutherland	68.17	245	LR	LR	03 55 56.1	
	comp=Z,99nm,21.9s,baz=162,slow=30						
BOSA	Boshof	68.20	251	LR	LR	03 56 49.8	
	comp=Z,74nm,19.5s,baz=182,slow=30						
AFI	Afiamalu	69.05	87	LR	LR	03 58 54.2	
	comp=Z,56nm,19.4s,baz=150,slow=32						
CMAR	Chiang Mai Arr	69.39	344	P	P	03 33 37.4	+1.2
	comp=Z,3.3nm,0.5s,baz=186,slow=5.7,SNR=13						
CMAR				LR	LR	04 02 34.6	
	comp=Z,30nm,19.4s,baz=180,slow=35						
	comp=Z,3.3nm,0.5s						
CMAR	Chiang Mai Arr	69.39	344	P	P	03 33 36.8	+0.6
LBTB	Lobatse	70.58	254	LR	LR	03 57 54.8	
	comp=Z,170nm,21.7s,baz=154,slow=30						
USHA	Ushuaia	75.64	178	LR	LR	04 06 45.9	
	comp=Z,169nm,19.6s,baz=195,slow=35						
LSZ	Lusaka	76.08	263	LR	LR	04 02 35.5	
	comp=Z,125nm,18.2s,baz=150,slow=32						
TSUM	Tsumeb	79.84	252	LR	LR	04 03 22.4	
	comp=Z,125nm,21.2s,baz=155,slow=31						
PPT	Papeete	80.54	106	LR	LR	04 03 32.9	
	comp=Z,66nm,21.2s,baz=147,slow=31						
MBAR	Mbarara	85.47	274	LR	LR	04 05 46.2	
	comp=Z,58nm,19.5s,baz=91,slow=30						
KSRS	Korea Array	87.76	11	P	P	03 35 18.2	+1.3
	comp=Z,0.4nm,0.3s,baz=190,slow=3.6,SNR=2.0						
	comp=Z,0.4nm,0.3s						
WSAR	Wadi Sarin	87.97	310	LR	LR	04 07 49.9	
	comp=Z,110nm,19.6s,baz=150,slow=31						
PLCA	Paso Flores	89.67	176	LR	LR	04 12 20.0	
	comp=Z,134nm,20.7s,baz=185,slow=33						
RPN	Rapa Nui	94.05	142	LR	LR	04 10 39.2	
	comp=Z,35nm,19.5s,baz=326,slow=31						
AAK	Ala-Archa	98.54	331	LR	LR	04 15 26.3	
	comp=Z,150nm,21.8s,baz=120,slow=32						
H10S2	ASCENSION HYDR	106.56	233	T	T	05 36 32.7	
	baz=144,slow=74,SNR=9.3						
H10S3	ASCENSION HYDR	106.57	233	T	T	05 36 35.0	
	baz=76,slow=74,SNR=17						
NVAR	Mina Array Bea	141.23	87	PKhKP	PKPpre	03 41 54.3	

	comp=Z,0.1nm,0.3s,baz=225,slow=9.9,SNR=2.0						
TXAR	**Lajitas Array**	**144.71**	**111**	PKP	**PKPdf**	**03 42 05.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=158,slow=7.6,SNR=2.0						
PDAR	**Pinedale Array**	**149.16**	**86**	PKPbc	**PKPbc**	**03 42 15.9**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=191,slow=4.3,SNR=2.5						
YKA	**Yellowknife Ar**	**150.72**	**46**	PKPbc	**PKPbc**	**03 42 18.8**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=280,slow=1.8,SNR=8.2						

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*NEIC **19** 03:25:39.5±0.7, 5°.8N±0°.4×126°.5E±0°.7, h50^{km}±13^{km}, mb4.0/8, Error ellipse: s-maj=112.6km s-min=10.2km az=55.0*

*MAN **19** 03:25:40.9, 5°.95N×127°.19E, h59^{km}, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*

*DJA **19** 03:25:41.9±1.3, 6°N±4°×12°7E±°, h22^{km}±11^{km}, M4.3/7, mb4.3/5, mB5.3/1, MLv4.3/7, Mw(mB)4.7/1*

*IDC **19** 03:25:41.9±2.6, 6°.06N×127°.28E, h87^{km}±23^{km}, mb3.4/5, mbtmp3.8/6, Error ellipse: s-maj=48.2km s-min=13.4km az=56.0*

ISC 19 03:25:41.3±1.0**, 5°.97N**±0°.05×**127°.18E**±0°.09**, h83**^{km}±11^{km}**, n32, σ1^s.38**/39**, mb4.0**/9**, 7D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**1.33**	**317**	⇓*e*P	**Pn**	**03 26 04.6**	**0.0**
MATI				*e*S	**Sn**	**03 26 22.3**	**+0.2**
DDMP	**Don Marcelino,**	**1.46**	**275**	⇓*e*P	**Pn**	**03 26 05.3**	**-0.9**
DDMP				*e*S	**Sn**	**03 26 23.2**	**-1.8**
DAV	**Davao City (W)**	**1.93**	**305**	P	**Pn**	**03 26 13.6**	**+1.4**
	622nm,0.4s,baz=186,slow=1.3,SNR=14						
DAV				S	**Sn**	**03 26 38.0**	**+2.1**
	254nm,0.4s,baz=299,slow=23,SNR=14						
DAV	**Davao City (W)**	**1.93**	**305**	Pn	Pn	03 26 04.7	-7.5
KCP	**Kidapawan**	**2.31**	**297**	⇓*i*P	**Pn**	**03 26 17.6**	**+0.1**
KCP				*i* S	**Sn**	**03 26 45.7**	**+0.5**
BIPH	**Bislig**	**2.34**	**340**	⇓*e*P	**Pn**	**03 26 18.6**	**+0.7**
BIPH				*e*S	**Sn**	**03 26 45.1**	**-0.7**
SGSI	**Sangihe**	**2.80**	**216**	P	**Pn**	**03 26 25.4**	**+1.4**
BUKP	**Musuan**	**2.83**	**312**	⇓*e*P	**Pn**	**03 26 26.3**	**+1.9**
BUKP				*e*S	**Sn**	**03 26 54.0**	**-3.5**
GLSP	**General Luna,**	**3.93**	**345**	⇓*e*P	**Pn**	**03 26 40.4**	**+1.1**
GLSP				*e*S	**Sn**	**03 27 21.4**	**-2.8**
PAGZ	**Pagadian**	**4.20**	**297**	⇓*e*P	**Pn**	**03 26 44.7**	**+1.7**
TNTI	**Ternate**	**5.17**	**178**	P	**Pn**	**03 26 55.3**	**-0.9**
TNTI				S	**Sn**	**03 27 52.6**	**-2.0**
LBMI	**Labuha**	**6.58**	**177**	P	**Pn**	**03 27 14.0**	**-1.4**
	0.2nm36nm,0.7s						
GTOI	**Gorontalo**	**6.74**	**218**	P	**Pn**	**03 27 16.2**	**-1.4**
	0.0nm6.4nm,0.5s						
MRSI	**Marisa**	**7.56**	**224**	P	**Pn**	**03 27 28.2**	**-0.6**
	0.2nm46nm,0.6s						
SIJI	**Sorong**	**7.93**	**149**	P	**Pn**	**03 27 34.7**	**+0.8**
	11nm,0.3s,baz=1.0,slow=8.7,SNR=9.4						
FAKI	**Fak Fak**	**10.18**	**150**	Pn	**Pn**	**03 28 05.5**	**+0.9**
WB0	**Warramunga Arr**	**26.55**	**165**	P	**P**	**03 31 13.1**	**+1.6**
WB0				IAmb	IAmb	03 31 52.0	
	comp=Z,4.9nm,1.0s						
WRA	**Warramunga Arr**	**26.70**	**165**	P	**P**	**03 31 14.5**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=347,slow=10,SNR=5.6						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**26.70**	**165**	P	**P**	**03 31 14.1**	**+1.2**
WB2	**Warramunga Arr**	**26.70**	**165**	P	**P**	**03 31 14.0**	**+1.1**
WB2				IAmb	IAmb	03 31 49.4	
	comp=Z,6.1nm,1.1s						
ASAR	**Alice Springs**	**30.18**	**168**	P	**P**	**03 31 45.4**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=346,slow=6.9,SNR=1.9						
	comp=Z,0.3nm,0.8s						
STKA	**Stephens Creek**	**40.07**	**161**	P	**P**	**03 33 07.6**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=3.6,slow=16,SNR=2.0						
	comp=Z,1.4nm,0.7s						
STKA	**Stephens Creek**	**40.07**	**161**	P	**P**	**03 33 09.5**	**+0.9**
MK31	**Makanchi Array**	**55.99**	**324**	P	**P**	**03 35 10.5**	**-0.7**
MK31				IAmb	IAmb	03 35 12.7	
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**55.99**	**324**	P	**P**	**03 35 11.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=123,slow=8.2,SNR=19						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**55.99**	**324**	P	**P**	**03 35 10.4**	**-0.9**
KURK	**Kurchatov**	**60.11**	**327**	P	**P**	**03 35 39.8**	**-0.1**
BRVK	**Borovoye**	**65.77**	**326**	P	**P**	**03 36 17.2**	**-0.2**
ABKAR	**Akbulak array**	**70.71**	**320**	P	**P**	**03 36 48.2**	**-0.2**
ABKAR				IAmb	IAmb	03 36 48.9	
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**70.71**	**320**	P	**P**	**03 36 48.2**	**-0.2**
ILAR	**Eielson Array**	**82.90**	**26**	P	**P**	**03 37 56.0**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=261,slow=6.3,SNR=4.5						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**122.62**	**290**	PKP	**PKPdf**	**03 44 27.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=58,slow=2.5,SNR=7.6						

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*GII **19** 03:43:48.6±1.1, 28°.46N×34°.80E, h2^{km}±13^{km}, MD3.0/2, Mm3.0/2*

*SGS **19** 03:43:51.0, 28°.52N×34°.69E, h13^{km}, Ml3.0*

*HLW **19** 03:43:51.2, 28°.55N×34°.65E, h13^{km}±1^{km}, Md2.8, Ml3.4*

ISC 19 03:43:50.5±1.0**, 28°.52N**±0°.03×**34°.69E**±0°.03**, h15**^{km}±7^{km}**, n26, σ0^s.58**/31**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAYS	**Tayyib Ism**	**0.17**	**78**	S	**Sg**	**03 43 57.6**	**+0.1**
TAYS	**Tayyib Ism**	**0.17**	**78**	P	**Pg**	**03 43 54.8**	**0.0**
HDHB	**Dhahab**	**0.21**	**344**	P	**Pg**	**03 43 55.6**	**+0.2**
	baz=352						
BDAS	**Al Bad`**	**0.38**	**103**	P	**Pg**	**03 43 58.4**	**+0.1**
NUB	**Nuweibaa**	**0.51**	**356**	P	**Pg**	**03 43 59.9**	**-0.7**
	baz=0.0						
HAQS	**Haql**	**0.57**	**21**	P	**Pg**	**03 44 01.6**	**-0.2**
HAQS	**Haql**	**0.57**	**21**	S	**Sg**	**03 44 10.1**	**+0.6**
HKAT	**Jabal Katrina**	**0.61**	**271**	P	**Pg**	**03 44 02.4**	**-0.2**
	baz=268						
AYUS	**`Aynunah**	**0.61**	**122**	P	**Pg**	**03 44 02.6**	**+0.1**
HBST	**Basata**	**0.70**	**3**	P	**Pg**	**03 44 04.3**	**+0.1**
	baz=6.0						
HBST				SG	**Sg**	**03 44 13.7**	**+0.2**
	baz=6.0						
JLOS		**0.74**	**73**	P	**Pg**	**03 44 04.5**	**-0.5**
JMOS	**Jabal al Moall**	**0.75**	**30**	P	**Pg**	**03 44 04.7**	**-0.4**
TR1	**Tor 1**	**0.82**	**232**	PG	**Pg**	**03 44 06.7**	**+0.2**
	baz=230						
HQLS		**0.85**	**23**	P	**Pg**	**03 44 06.5**	**-0.5**
TR2	**Tor 2**	**0.86**	**261**	PG	**Pg**	**03 44 06.9**	**-0.3**
	baz=260						
EIL	**Elat**	**1.17**	**11**	Pg	**Pb**	**03 44 11.4**	**-1.1**
EIL				Sg	**Sn**	**03 44 29.1**	**+1.0**
HRDS	**Abu Rudays**	**1.23**	**279**	PG	**Pn**	**03 44 13.3**	**+0.1**
	baz=279						
MBRI	**Mt Berech**	**1.29**	**9**	Pn	**Pn**	**03 44 13.3**	**-0.8**
HRFI	**Mount Harif**	**1.54**	**11**	Pn	**Pn**	**03 44 17.7**	**+0.2**
HRFI				Sn	**Sb**	**03 44 39.8**	**+1.5**
KRMI	**Paran Flat**	**1.59**	**1**	Pn	**Pn**	**03 44 18.3**	**+0.1**
KRMI				Sn	**Sb**	**03 44 40.5**	**+0.8**
GRB	**Gharib**	**1.69**	**262**	PG	**Pn**	**03 44 19.2**	**-0.4**
	baz=261						
PRNI	**Paran**	**1.85**	**9**	Pn	**Pn**	**03 44 21.5**	**-0.2**
ZFRI	**Zfri**	**2.08**	**12**	Pn	**Pn**	**03 44 24.8**	**0.0**
ZFRI				Sn	**Sb**	**03 44 53.1**	**-0.3**
KZIT	**Kziot**	**2.39**	**354**	Pn	**Pn**	**03 44 30.0**	**+0.8**
BIDS	**Bi'r al Bayda'**	**2.60**	**129**	P	**Pn**	**03 44 32.3**	**+0.2**
EWJHS	**Al Wajh**	**2.93**	**143**	P	**Pn**	**03 44 36.0**	**-0.5**

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*TAP **19** 03:59:11.6, 24°.68N×122°.03E, h8^{km}, ML3.1, C*

*JMA **19** 03:59:12.4±0.1, 24°.7N±0°.3×122°.0E±0°.3, h34^{km}, MV2.5/8, TAIWAN REGION*

ISC 19 03:59:12.2±0.9**, 24°.69N**±0°.02×**122°.03E**±0°.02**, h15**^{km}±7^{km}**, n57, σ0^s.40**/93**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.18**	**329**	*i* P	**Pg**	**03 59 16.3**	**-0.2**
	baz=333						
TWC	**Suao**	**0.19**	**244**	*i* P	**Pg**	**03 59 16.0**	**-0.6**
	baz=245						
NTC	**Toucheng**	**0.25**	**311**	*i* P	**Pg**	**03 59 17.5**	**0.0**
	baz=313						
NTC				*e*S	**Sb**	**03 59 22.7**	**+0.2**
	baz=313						
ILA	**Ilan**	**0.27**	**286**	*i* P	**Pg**	**03 59 18.0**	**+0.1**
	baz=288						
ILA				S	**Sg**	**03 59 22.1**	**+0.2**
	baz=288						
NDS	**Dongshan**	**0.29**	**259**	P	**Pg**	**03 59 18.2**	**-0.2**
	baz=261						
NDS				*e*S	**Sb**	**03 59 23.6**	**-0.3**
	baz=261						
TWB1	**Santiao Chiao**	**0.32**	**353**	*i* P	**Pg**	**03 59 18.9**	**+0.1**
	baz=354						
TWE	**Neicheng**	**0.34**	**275**	*i* P	**Pg**	**03 59 18.8**	**-0.2**
	baz=276						
TWE				*e*S	**Sb**	**03 59 24.6**	**-0.4**
	baz=276						
TIPB	**Shuangxi**	**0.34**	**326**	*i* P	**Pg**	**03 59 19.3**	**+0.2**
	baz=327						
TIPB				*e*S	**Sb**	**03 59 25.2**	**0.0**
	baz=327						
EWUT	**Wuta**	**0.34**	**224**	*i* P	**Pg**	**03 59 19.3**	**+0.2**
	baz=224						
ENA	**Nanau**	**0.37**	**226**	*i* P	**Pg**	**03 59 19.7**	**-0.1**
	baz=225						
FUSB	**Fushanzhiwuyua**	**0.41**	**280**	P	**Pg**	**03 59 20.7**	**+0.2**
	baz=281						
FUSB				*e*S	**Sb**	**03 59 27.4**	**+0.1**
	baz=281						
SXI1	**Grass Mountain**	**0.43**	**340**	P	**Pb**	**03 59 21.1**	**-0.4**
	baz=341						
SXI1				*e*S	**Sb**	**03 59 28.5**	**+0.7**
	baz=341						
ENTT	**Nioudou**	**0.43**	**263**	*i* P	**Pg**	**03 59 20.8**	**0.0**
	baz=264						
ENTT				*e*S	**Sb**	**03 59 27.7**	**-0.1**
	baz=264						
NWF	**Wu-fen Shan**	**0.44**	**329**	*i* P	**Pb**	**03 59 21.5**	**-0.2**
	baz=329						
NWF				S	**Sb**	**03 59 28.6**	**+0.3**
	baz=329						
LATG	**Datong**	**0.49**	**252**	P	**Pg**	**03 59 21.7**	**-0.2**
	baz=252						
LATG				*e*S	**Sb**	**03 59 29.8**	**+0.3**
	baz=252						
NWLT	**Wulai**	**0.49**	**280**	P	**Pb**	**03 59 22.2**	**-0.3**
	baz=281						
NWLT				*e*S	**Sb**	**03 59 29.4**	**-0.2**
	baz=281						
TWA	**Mucha**	**0.50**	**305**	*i* P	**Pb**	**03 59 22.5**	**-0.2**
	baz=306						
TWA				*e*S	**Sb**	**03 59 30.2**	**+0.4**
	baz=306						
TNOU	**National Taiwa**	**0.51**	**333**	*i* P	**Pb**	**03 59 22.9**	**-0.1**
	baz=333						
NHDH	**Xindian Distri**	**0.54**	**300**	*e*P	**Pb**	**03 59 23.0**	**-0.3**
	baz=301						
NHDH				*e*S	**Sb**	**03 59 31.2**	**+0.3**
	baz=301						
YHNB	**Yeheng**	**0.60**	**268**	P	**Pg**	**03 59 24.1**	**+0.2**
	baz=269						
YHNB				*e*S	**Sb**	**03 59 32.9**	**+0.2**
	baz=269						
NSK	**Sanguang**	**0.61**	**269**	P	**Pg**	**03 59 24.2**	**0.0**
	baz=269						
YM01	**YM01**	**0.62**	**317**	P	**Pb**	**03 59 25.1**	**+0.3**
	baz=317						
YM01				*e*S	**Sb**	**03 59 34.1**	**+0.8**
	baz=317						
NNSB	**Datong**	**0.65**	**246**	P	**Pb**	**03 59 25.2**	**-0.1**
	baz=247						
NNSB				*e*S	**Sb**	**03 59 34.4**	**+0.2**
	baz=247						
ETL	**Fush Village**	**0.65**	**215**	P	**Pg**	**03 59 24.5**	**-0.4**
	baz=215						
NACB	**Ninganchiao**	**0.65**	**218**	*e*P	**Pg**	**03 59 25.0**	**+0.1**
	baz=218						
NACB				*e*S	**Sg**	**03 59 33.2**	**-0.3**
	baz=218						
NNS	**Nan Shan**	**0.65**	**248**	P	**Pg**	**03 59 24.9**	**0.0**
	baz=247						
NNS				*e*S	**Sb**	**03 59 34.3**	**0.0**
	baz=247						
TWS1	**Kuangyinshan**	**0.69**	**306**	*e*P	**Pn**	**03 59 26.8**	**-0.7**
	baz=307						
TWS1				*e*S	**Sn**	**03 59 36.6**	**-1.4**
	baz=307						
ETLH	**Xiulin Townshi**	**0.70**	**226**	P	**Pg**	**03 59 25.6**	**-0.2**
	baz=226						
ETLH				*e*S	**Sb**	**03 59 35.9**	**+0.3**
	baz=226						
TWY	**Chenhua**	**0.70**	**326**	P	**Pb**	**03 59 26.7**	**+0.5**
	baz=326						
TWD	**Chiawan**	**0.73**	**213**	P	**Pg**	**03 59 25.9**	**-0.5**
	baz=213						
NFF	**Wufeng Townshi**	**0.84**	**266**	*e*P	**Pb**	**03 59 28.9**	**+0.4**
	baz=266						
NFF				*e*S	**Sn**	**03 59 41.3**	**-0.3**
	baz=266						
FUSS	**Fushou**	**0.84**	**239**	P	**Pb**	**03 59 28.7**	**0.0**
	baz=239						
FUSS				*e*S	**Sn**	**03 59 41.1**	**-0.9**
	baz=239						
JYNG	**Yonagunijimaku**	**0.86**	**106**	P	**Pg**	**03 59 29.0**	**+0.1**
JYNG				*e*S	**Sb**	**03 59 40.7**	**+0.5**
WHF	**Hehuan Shan**	**0.89**	**232**	P	**Pg**	**03 59 29.1**	**-0.4**
	baz=232						
WHF				*e*S	**Sb**	**03 59 41.6**	**+0.3**
	baz=232						
TDCB	**Techi**	**0.91**	**242**	P	**Pb**	**03 59 29.1**	**-0.7**
	baz=241						
TDCB				*e*S	**Sn**	**03 59 42.9**	**-0.7**
	baz=241						
YOJ	**Yonaguni jima**	**0.92**	**104**	P	**Pb**	**03 59 29.7**	**-0.1**
	baz=103						
YOJ				*e*S	**Sg**	**03 59 42.8**	**+0.7**
	baz=103						
YOJ	**Yonaguni jima**	**0.92**	**104**	P	**Pb**	**03 59 29.7**	**-0.1**
YOJ				S	**Sg**	**03 59 42.0**	**0.0**
LIOB	**Emei**	**0.93**	**267**	P	**Pb**	**03 59 30.0**	**0.0**
	baz=268						
PCYT	**Pengchaiyu**	**0.94**	**2**	P	**Pg**	**03 59 30.4**	**+0.1**
	baz=2.0						
NSTT	**Nanjuang**	**0.94**	**267**	*e*P	**Pn**	**03 59 30.9**	**-0.1**
	baz=266						
SBCB	**Hsinchu**	**0.96**	**276**	*e*P	**Pn**	**03 59 31.2**	**0.0**
	baz=276						
SBCB				*e*S	**Sn**	**03 59 45.1**	**+0.6**
	baz=276						
CHGB	**Renai**	**1.00**	**231**	P	**Pb**	**03 59 31.3**	**-0.2**
	baz=231						
CHGB				*e*S	**Sg**	**03 59 45.3**	**+0.5**
	baz=231						
ESL	**Shilin**	**1.03**	**212**	P	**Pb**	**03 59 31.9**	**+0.1**
	baz=211						
ESL				*e*S	**Sn**	**03 59 46.2**	**-0.1**
	baz=211						
OWD	**Renai**	**1.07**	**227**	P	**Pb**	**03 59 32.5**	**0.0**
	baz=227						
WHP	**Taichung City**	**1.07**	**248**	P	**Pg**	**03 59 33.1**	**+0.2**
	baz=247						
WHP				*e*S	**Sn**	**03 59 47.7**	**+0.2**
	baz=247						
WUSB	**Renai**	**1.09**	**230**	P	**Pb**	**03 59 32.6**	**-0.2**
	baz=230						
TWQ1	**Liyutan**	**1.20**	**254**	*e*P	**Pg**	**03 59 35.9**	**+0.6**
	baz=253						
VWDT	**VWDT**	**1.24**	**221**	*e*P	**Pg**	**03 59 36.0**	**-0.1**
	baz=221						
VWDT				*e*S	**Sg**	**03 59 52.5**	**+0.3**
	baz=221						
SMLT	**Sun Moon Lake**	**1.31**	**232**	P	**Pb**	**03 59 36.8**	**+0.2**
	baz=232						
HGSD	**Ruisui**	**1.32**	**205**	*e*P	**Pb**	**03 59 36.8**	**+0.2**
	baz=205						
SSLB	**Suanglung**	**1.33**	**228**	*e*P	**Pb**	**03 59 36.7**	**-0.2**
	baz=227						
SSLB				*e*S	**Sb**	**03 59 54.6**	**+0.7**
	baz=227						
EHY	**Hungye**	**1.35**	**209**	*e*P	**Pb**	**03 59 37.1**	**0.0**
	baz=208						
YULB	**Yu-li**	**1.46**	**208**	*e*P	**Pn**	**03 59 38.5**	**+0.5**
	baz=207						
IRIF	**Iriomote-Funau**	**1.58**	**103**	P	**Pn**	**03 59 39.0**	**-0.7**
IRIF				*e*S	**Sn**	**03 59 59.5**	**-0.6**
JKRS	**Kuro-shima**	**1.86**	**104**	P	**Pn**	**03 59 43.5**	**0.0**
JKRS				*e*S	**Sn**	**04 00 05.8**	**-0.9**
JIJ	**Ishigaki jima**	**1.95**	**99**	*e*P	**Pn**	**03 59 44.8**	**+0.1**
JIJ				*e*S	**Sn**	**04 00 08.6**	**-0.4**
LAY	**Lan-yu**	**2.68**	**190**	*e*P	**Pn**	**03 59 55.8**	**+1.0**
	baz=189						

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*IDC **19** 04:08:25.4±2.1, 5°.47N×123°.61E, h0^{km}, mb3.6/4, mbtmp3.6/4, MS3.9/15, Error ellipse: s-maj=283.2km s-min=23.4km az=64.0*

*MAN **19** 04:08:26.6, 6°.55N×126°.14E, h28^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

ISC 19 04:08:28.0±4.5**, 6°.54N**±0°.06×**126°.12E**±0°.09**, h38**^{km}±6^{km}**, n24, σ0^s.76**/12**, mb3.5**/4**, MS4.0**/15**, 6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.42**	**19**	⇓*e*P	**Pn**	**04 08 36.3**	**-1.1**
MATI				*e*S	**Sn**	**04 08 45.2**	**+0.9**
DDMP	**Don Marcelino,**	**0.59**	**223**	⇓*e*P	**Pn**	**04 08 39.7**	**-0.4**
DDMP				*e*S	**Sn**	**04 08 49.2**	**+0.7**
KCP	**Kidapawan**	**1.12**	**294**	⇓*i*P	**Pn**	**04 08 46.6**	**-0.6**
KCP				*i* S	**Sn**	**04 09 01.4**	**-0.1**
BIPH	**Bislig**	**1.65**	**8**	⇓*e*P	**Pn**	**04 08 53.9**	**-0.5**
BIPH				*e*S	**Sn**	**04 09 14.4**	**+0.1**
BUKP	**Musuan**	**1.69**	**322**	⇓*e*P	**Pn**	**04 08 54.8**	**-0.3**
BUKP				*e*S	**Sn**	**04 09 15.9**	**+0.4**
GLSP	**General Luna,**	**3.22**	**0**	⇓*e*P	**Pn**	**04 09 16.5**	**+0.4**
GLSP				*e*S	**Sn**	**04 09 54.0**	**+0.9**
SIJI	**Sorong**	**8.98**	**145**	LR	LR	04 14 09.1	
	comp=Z,18nm,21.9s,baz=84,slow=35						
WRA	**Warramunga Arr**	**27.53**	**163**	P	P	04 14 12.4	+1.1
	0.3nm,0.6s,baz=336,slow=11,SNR=2.0						
	0.3nm,0.6s						
JHJ	**Hachijo jima 2**	**29.34**	**24**	LR	LR	04 27 07.1	
	comp=Z,88nm,21.0s,baz=226,slow=36						
ASAR	**Alice Springs**	**30.97**	**166**	P	P	04 14 41.9	+0.2
	0.2nm,0.5s,baz=341,slow=6.8,SNR=2.0						
	0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**31.84**	**19**	LR	LR	04 28 21.8	
	comp=Z,247nm,21.5s,baz=216,slow=36						
PETK	**Petropavlovsk-**	**53.09**	**23**	LR	LR	04 40 25.5	
	comp=Z,92nm,20.6s,baz=233,slow=35						
MKAR	**Makanchi Array**	**54.92**	**324**	P	P	04 17 54.5	-0.5
	0.7nm,0.7s,baz=125,slow=8.4,SNR=6.1						
MKAR				LR	LR	04 41 07.6	
	comp=Z,286nm,19.6s,baz=99,slow=36						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**57.83**	**333**	LR	LR	04 41 53.2	
	comp=Z,322nm,20.4s,baz=126,slow=35						
KURBB	**Kurchatov Arra**	**59.06**	**327**	P	P	04 18 23.7	-0.5
	0.7nm,0.4s,baz=128,slow=5.7,SNR=9.3						
KURBB				LR	LR	04 43 58.0	
	comp=Z,152nm,18.4s,baz=60,slow=36						
	0.7nm,0.4s						
SEY	**Seymchan**	**59.45**	**14**	LR	LR	04 44 19.4	
	comp=Z,117nm,20.6s,baz=202,slow=35						
ARU	**Arti**	**72.25**	**327**	LR	LR	04 52 16.7	
	comp=Z,112nm,19.4s,baz=95,slow=37						
GNI	**Garni**	**79.23**	**310**	LR	LR	04 59 20.2	
	comp=Z,52nm,20.8s,baz=88,slow=39						
KBZ	**Khabaz**	**80.62**	**313**	LR	LR	05 00 52.7	
	comp=Z,95nm,19.0s,baz=64,slow=40						
ILAR	**Eielson Array**	**82.84**	**26**	LR	LR	05 01 07.5	
	comp=Z,30nm,19.3s,baz=264,slow=37						
MMAI	**Mount Meron Ar**	**87.08**	**303**	LR	LR	05 04 32.7	
	comp=Z,31nm,21.6s,baz=220,slow=39						
ARCES	**ARCESS Array B**	**87.62**	**340**	LR	LR	05 04 22.0	
	comp=Z,90nm,20.3s,baz=130,slow=38						
BRTR	**Keskin Array B**	**87.77**	**310**	LR	LR	05 06 21.1	
	comp=Z,64nm,18.5s,baz=80,slow=40						
EIL	**Elat**	**87.82**	**299**	LR	LR	05 07 25.2	
	comp=Z,49nm,18.3s,baz=338,slow=41						

GCMT 19 04:15:27.0±0.4**, 23°.54N**±0°.03×**123°.65E**±0°.03**, h27**^{km}±1^{km}**, MW4.9**/72**, Moment Tensor Solution. s24,c27; s72,c96; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M$_{rr}$1.62±.20; M$_{\theta\theta}$-1.55±.12; M$_{\phi\phi}$-0.07±.11; M$_{r\theta}$1.37±.20; M$_{\theta\phi}$-1.07±.08; M$_{\phi r}$1.28±.22; **Best double couple:** M$_0$2.65700×10^{16} **NP1:**ϕ_s259.00000°, δ25.00000°, λ117.00000°. **NP2:**ϕ_s50.00000°**,** δ68.00000°**,** λ78.00000°. **Principal axes:** T 2.4590, Plg65.0000°, Azm300.0000°**;** N 0.3880**,** Plg11.0000°, Azm54.0000°**;** P -2.8560**,** Plg22.0000°, Azm149.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southwestern Ryukyu Islands**

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*TUL **19** 04:19:03.8±1.1, 36°.29N±0°.01×97°.51W±0°.01, h7^{km}±7^{km}, ML2.6, mb_Lg2.3/9(NEIC) Error ellipse: s-maj=1.6km s-min=1.1km az=196.0*

NEIC 19 04:19:03.9±1.0**, 36°.29N**±0°.01×**97°.51W**±0°.01**, h5**^{km}±6^{km}**, Error ellipse: s-maj=1.6km s-min=1.3km az=183.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.87**	**177**	Pg	Pg	04 19 20.4	-0.2
OKCSW	**OKLAHOMA CITY**	**0.88**	**176**		Pg	04 19 20.6	-0.2
T35A	**Sooner Cattle**	**1.02**	**52**	Pg	Pg	04 19 23.3	-0.2
FNO	**Franklin**	**1.03**	**175**	Pg	Pg	04 19 22.9	-0.7
U32A	**Winter Ranch,**	**1.21**	**275**	Pn	Pg	04 19 26.3	-0.7
TUL1	**Leonard**	**1.44**	**105**	Pn	Pn	04 19 30.0	-0.7
X34A	**Smith Ranch, M**	**1.70**	**189**		Pb	04 19 35.0	-0.6
WMOK	**Wichita Mounta**	**1.86**	**214**		Pn	04 19 35.4	-1.0
R32A	**Long Quarter,**	**2.34**	**336**	Pn	Pn	04 19 43.5	+0.5
X37A	**Clayton**	**2.43**	**133**	Pn	Pn	04 19 45.0	+0.6
X37A				IAmb_Lg		04 20 27.7	
	comp=Z,10nm,0.8s						
HHAR	**Hobbs**	**2.89**	**89**		Pn	04 19 51.4	+0.8
KSU1	**Kansas State U**	**2.90**	**14**		Pn	04 19 50.7	0.0
S39A	**Bolivar**	**3.64**	**66**	Pn	Pn	04 20 01.9	+1.0
MIAR	**Mount Ida**	**3.65**	**117**	Pn	Pn	04 20 01.9	+0.8
U40A	**Yellville**	**3.76**	**88**	Pn	Pn	04 20 02.8	+0.1
U40A				IAmb_Lg		04 21 02.3	
	comp=Z,8.8nm,0.8s						
ABTX	**Abilene, Hawle**	**4.05**	**206**	Pn	Pn	04 20 04.9	-1.8
P38A	**Dawn**	**4.58**	**42**	IAmb_Lg		04 21 36.4	
	comp=Z,5.4nm,0.8s						
T25A	**Trinidad**	**5.61**	**281**	IAmb_Lg		04 22 09.4	
	comp=Z,3.3nm,1.0s						
PBMO	**Poplar Bluff**	**5.72**	**83**	IAmb_Lg		04 22 10.8	
	comp=Z,5.0nm,0.7s						

IDC 19 04:26:52.1±4.3**, 56°.35S**×**25°.00W, h0**^{km}**, mb3.9**/2**, mbtmp3.9**/2**, Error ellipse: s-maj=142.8km s-min=47.7km az=171.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**51.56**	**303**	P	P	04 36 00.4	-0.1
	2.9nm,0.7s,baz=167,slow=6.3,SNR=21						
	2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.73**	**27**	P	P	04 38 21.9	0.0
	0.2nm,0.5s,baz=202,slow=6.4,SNR=6.1						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**151.23**	**311**	PKPbc	PKPbc	04 46 45.6	-0.2
	0.4nm,0.8s,baz=116,slow=2.1,SNR=3.4						

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*IDC **19** 04:39:11.3±1.7, 4°.75N×35°.48E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.3/1, MS3.0/2, Error ellipse: s-maj=43.2km s-min=34.1km az=67.0*

*AAE **19** 04:39:29.8±9.7, 3°.69N×37°.71E, h0^{km}±183^{km}*

ISC 19 04:39:12.1±1.4**, 4°.80N**±0°.04×**35°.35E**±0°.06**, h5**^{km}±10^{km}**, n39, σ2^s.69**/57**, mb3.6**/3**, 5D, Kenya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LODK	**Lodwar**	**1.37**	**180**	*e*P	**Pn**	**04 39 35.4**	**-2.6**
LODK				*e*S	**Sb**	**04 39 52.9**	**-3.2**
LODK	**Lodwar**	**1.37**	**180**	*e*P	**Pn**	**04 39 35.1**	**-2.9**
LODK				*e*S	**Sb**	**04 39 53.6**	**-2.5**
LODK	**Lodwar**	**1.37**	**180**	⇓*e*P	**Pn**	**04 39 36.0**	**-2.1**
LODK				⇓*e*S	**Sb**	**04 39 53.7**	**-2.4**
LODK				*i* Sg	**Sn**	**04 39 54.4**	**-2.1**
LODK	**Lodwar**	**1.37**	**180**	*e*P	Pn	04 39 32.9	-5.0
LODK				*e*S	**Sb**	**04 39 51.8**	**-4.3**
LODK	**Lodwar**	**1.37**	**180**	*e*P	**Pn**	**04 39 36.2**	**-1.7**
LODK				*e*S	**Sb**	**04 39 53.1**	**-3.0**
LODK	**Lodwar**	**1.37**	**180**	*e*P	**Pn**	**04 39 35.9**	**-2.1**
LODK				*e*S	**Sb**	**04 39 53.7**	**-2.4**
LODK	**Lodwar**	**1.37**	**180**	*e*P	**Sn**	**04 40 03.4**	**+6.9**
DILA	**Dilla**	**3.34**	**61**	*e*P	**Pn**	**04 40 02.5**	**-2.7**
DILA				*e*S	**Sn**	**04 40 44.1**	**-1.2**
DILA	**Dilla**	**3.34**	**61**	*e*P	Pn	04 40 00.9	-4.3
DILA				*e*S	**Sn**	**04 40 44.2**	**-1.2**

DILA	Dilla	3.34	61	eP	Pn	04 40 04.3	-0.9
DILA				eS	Sn	04 40 43.9	-1.5
DILA	Dilla	3.34	61	eP	Pb	04 40 11.1	-0.9
DILA				eS	Sn	04 40 43.9	-1.5
FURI	Furi	5.24	39	eP	Pb	04 40 37.0	-7.5
FURI				eS	Sb	04 41 48.1	+0.2
FURI	Furi	5.24	39	eP	Pb	04 40 47.0	+2.5
FURI				eS	Sb	04 41 50.2	+2.3
FURI	Furi	5.24	39	eP	Pb	04 40 37.2	-7.3
FURI				eS	Sb	04 41 51.7	+3.9
FURI	Furi	5.24	39	eP	Pn	04 40 30.7	-0.7
FURI				eP	Pb	04 40 38.7	-5.8
FURI				⇓eS	Sb	04 41 48.8	+1.0
FURI	Furi	5.24	39	eP	Pb	04 40 45.2	+0.7
FURI				eS	Sb	04 41 49.8	+2.0
FURI	Furi	5.24	39	eP	Pb	04 40 45.2	+0.7
FURI				eS	Sb	04 41 49.8	+2.0
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 49.7	+2.5
AAE				eS	Sb	04 41 52.9	+0.5
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 47.0	-0.1
AAE				eS	Sb	04 41 55.5	+3.2
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 49.1	+1.9
AAE				⇓eS	Sb	04 41 55.6	+3.2
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 42.7	-4.4
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 48.4	+1.2
AAE				eS	Sb	04 41 53.0	+0.6
AAE	Adis Abeba	5.40	39	eP	Pb	04 40 48.4	+1.2
AAE				eS	Sb	04 41 53.0	+0.6
TEBE	Entebbe	5.52	212	eP	Sn	04 41 39.4	+0.2
TEBE				eS	Sg	04 42 08.5	-1.2
KMBO	Kilima Mbogo	6.19	162	Pn	Pn	04 40 42.5	-1.9
	0.8nm,0.3s,baz=343,slow=17,SNR=5.3						
KMBO				Lg	Lg	04 42 17.4	
	6.9nm,0.3s,baz=52,slow=23,SNR=7.6						
	2.0nm,0.3s						
KMBO	Kilima Mbogo	6.19	162	eP	Pb	04 41 00.9	+0.3
KMBO				eS	Sn	04 41 58.3	+2.7
KMBO	Kilima Mbogo	6.19	162	eP	Pn	04 40 40.7	-3.7
KIL	Kilembe	7.03	230	eP	Sn	04 42 15.9	-0.5
KIL				eS	Sg	04 42 56.2	-1.8
MBAR	Mbarara	7.08	221	LR	LR	04 43 04.1	
	comp=Z,43nm,19.4s,baz=344,slow=33						
MBAR	Mbarara	7.08	221	eS	Sb	04 42 46.7	+6.1
MBAR	Mbarara	7.08	221	eP	Pg	04 41 27.6	-0.1
MBAR				eS	Sb	04 42 40.7	+0.2
MBAR	Mbarara	7.08	221	eP	Pb	04 41 06.6	-9.1
MBAR				eS	Sg	04 42 54.7	-4.8
MBAR	Mbarara	7.08	221	eS	Sb	04 42 47.6	+7.1
MBAR	Mbarara	7.08	221	eP	Pg	04 41 31.9	+4.2
ATD	Arta Tunnel	9.98	47	⇓eP	Pn	04 41 24.5	-12
TORD	Torodi Ar. Bea	34.23	286	P	P	04 46 00.8	+1.6
	1.0nm,1.2s,baz=101,slow=7.5,SNR=2.0						
	1.0nm,1.2s						
DBIC	Dimbokro	40.04	275	LR	LR	05 03 43.3	
	comp=Z,51nm,18.5s,baz=116,slow=37						
GERES	GERESS Array B	47.60	341	P	P	04 47 48.9	-0.1
	1.0nm,0.8s,baz=159,slow=11,SNR=8.5						
	1.0nm,0.8s						
MKAR	Makanchi Array	58.14	36	P	P	04 49 07.1	+0.2
	0.3nm,0.6s,baz=228,slow=3.7,SNR=3.0						
	0.3nm,0.6s						

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*IDC **19** 04:58:39.6±2.5, 1°.46N×124°.60E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=327.6km s-min=28.3km az=64.0*

*DJA **19** 04:59:00.4±0.6, 0°N±3°×12°2E±°, h137km±5km, M3.8/8, mb5.0/1, MLv3.2/8*

ISC 19 04:58:59.0±1.0**, 0°.21N**±0°.07×**122°.49E**±0°.07**, h150km, n11, σ1s.31**/15**, mb3.2**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.61	296	P	Pn	04 59 21.3	+0.4
MRSI				S	Sn	04 59 38.2	+0.6
GTOI	Gorontalo	0.67	51	P	Pn	04 59 22.1	+0.8
GTOI				S	Sn	04 59 39.6	+1.3
LUWI	Luwuk	1.28	167	P	Pn	04 59 26.8	+0.5
LUWI				S	Sn	04 59 47.8	+0.6
APSI	Ampana	1.40	217	P	Pn	04 59 28.5	+1.0
APSI				S	Sn	04 59 50.5	+1.2
KMSI	Cibinong	1.53	76	P	Pn	04 59 30.4	+1.5
MPSI	Mapaga	2.60	273	P	Pn	04 59 42.3	+1.0
TTSI	Tana Toraja	4.20	220	P	Pn	05 00 03.5	+1.7
BKB	Balikpapan	5.78	255	P	Pn	05 00 23.2	+0.4
WRA	Warramunga Arr	23.15	151	P	P	05 03 50.0	-2.3
	0.6nm,0.6s,baz=336,slow=9.7,SNR=7.8						
	0.6nm,0.6s						
ASAR	Alice Springs	26.20	156	P	P	05 04 18.2	-1.7
	0.2nm,0.3s,baz=340,slow=12,SNR=1.7						
	0.2nm,0.3s						
MKAR	Makanchi Array	58.17	329	P	P	05 08 36.6	-0.6
	0.2nm,0.6s,baz=139,slow=9.6,SNR=2.5						
	0.2nm,0.6s						

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*IDC **19** 05:02:07.1±5.8, 2°.59S×28°.37E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=133.6km s-min=41.2km az=171.0*

*EAF **19** 05:02:08.1±2.9, 0°.84S×27°.34E, h0km±841km, MD3.8*

*ECGS **19** 05:02:13.6, 1°.52S±0°.03×28°.24E±0°.08, h20km±7km, ML3.8, Error ellipse: s-maj=13.6km s-min=3.2km az=109.3, smi:local/37381118-a412-4cc3-9919-734b36d28876 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX -82.3046 Y -2.99967 Z 18.5965 CovXX 71.7292 XY -23.5473 XZ 19.1776 YY 12.6366 YZ -9.91481 ZZ 50.3293 EllAz1 198.058 Dip1 -4.31401 Len1 3.83791 Az2 279.926 Dip2 61.9288 Len2 11.7848 Len3 1.794051e+01*

ISC 19 05:02:15.5±0.9**, 1°.55S**±0°.06×**28°.34E**±0°.06**, h10km, n24, σ1s.79**/25**, mb3.8**/5**, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOBN	Bobandana	0.69	103	i P	Pg	05 02 27.5	-1.4
BOBN	Bobandana	0.69	103	i S	Sg	05 02 29.6	-8.4
KTSH	Kitshanga	0.77	66	i P	Pg	05 02 29.1	-1.4
LWI	Lwiro	0.82	146	i P	Pg	05 02 30.2	-1.2
RSY	Rusayo	0.84	92	i P	Pg	05 02 30.9	-0.8
IDJ	Idjwi	0.88	125	i P	Pg	05 02 31.4	-1.1
GOM	Goma	0.89	98	i P	Pg	05 02 31.6	-1.2
KBTI	Kibati	0.94	91	i P	Pg	05 02 32.3	-1.3
KBTI	Kibati	0.94	91	i S	Sg	05 02 45.6	-0.2
RGB	Rumangabo	1.04	79	i P	Pg	05 02 34.2	-1.4
BUTK	Butaka	1.05	89	i P	Pg	05 02 34.3	-1.5
BUTK	Butaka	1.05	89	i S	Sg	05 02 48.7	-0.8
SAHA	Sahara	1.20	90	i P	Pn	05 02 36.8	-1.8
BUJA	Bujumbura/Buru	2.11	150	i P	Pn	05 02 53.4	+2.4
KIL	Kilembe	2.41	44	eP	Pn	05 02 56.0	+0.9
KIL				eS	Sn	05 03 27.4	+2.6
MBAR	Mbarara	2.58	69	i P	Pn	05 02 56.5	-0.9
MBAR	Mbarara	2.58	69	eP	Pn	05 02 56.9	-0.5
MBAR				eS	Sn	05 03 33.2	+4.3
TEBE	Entebbe	4.43	69	eP	Pn	05 03 26.0	+3.1
TEBE				eS	Sb	05 04 26.3	-0.6
KMBO	Kilima Mbogo	8.92	87	Lg	Lg	05 06 51.8	
	0.7nm,0.3s,baz=28,slow=20,SNR=6.1						
TORD	Torodi Ar. Bea	30.20	300	P	P	05 08 24.6	-1.8
	0.7nm,0.5s,baz=111,slow=7.0,SNR=12						
	0.7nm,0.5s						
BRTR	Keskin Array B	41.36	6	P	P	05 10 03.4	+1.5
	1.9nm,0.7s,baz=202,slow=6.9,SNR=5.0						
	1.9nm,0.7s						
AKASG	Malin Array Be	52.06	1	P	P	05 11 26.6	+1.3
	0.2nm,0.3s,baz=190,slow=7.3,SNR=2.5						
	0.2nm,0.3s						
MKAR	Makanchi Array	67.38	37	P	P	05 13 09.8	-1.3
	0.3nm,0.7s,baz=255,slow=4.3,SNR=2.7						
	0.3nm,0.7s						
ARCES	ARCESS Array B	70.97	359	P	P	05 13 31.8	-1.1
	4.1nm,0.9s,baz=169,slow=5.2,SNR=7.9						
	4.1nm,0.9s						

IDC 19 05:03:34.1±3.3**, 16°.52S**×**178°.82W, h0km, mb3.7**/4**, mbtmp3.7**/4**, Error ellipse: s-maj=184.9km s-min=28.8km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.52	258	P	P	05 11 47.0	-0.8
	0.7nm,1.0s,baz=96,slow=7.4,SNR=4.8						
	0.7nm,1.0s						
ASAR	Alice Springs	44.81	253	P	P	05 11 50.6	+0.5
	1.9nm,0.4s,baz=88,slow=8.1,SNR=34						
	1.9nm,0.4s						
NVAR	Mina Array Bea	78.70	44	P	P	05 15 39.4	+0.7
	0.2nm,0.6s,baz=221,slow=6.7,SNR=2.3						
	0.2nm,0.6s						
ILAR	Eielson Array	84.64	13	P	P	05 16 08.4	-0.8
	0.2nm,0.4s,baz=229,slow=5.6,SNR=4.3						
	0.2nm,0.4s						

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*IDC **19** 05:17:23.5±0.9, 27°.97N×139°.93E, h346km±10km, mb3.1/9, mbtmp3.9/12, Error ellipse: s-maj=25.8km s-min=13.8km az=80.0*

*JMA **19** 05:17:25.3±0.3, 28°N±1°×14°1E±°, h367km±3km, MV3.5/29, W OFF OGASAWARA*

ISC 19 05:17:24.2±0.7**, 28°.04N**±0°.08×**140°.1E**±0°.1**, h350km, n21, σ1s.12**/26**, mb3.3**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.11	116	eP	Pn	05 18 17.0	+0.6
CBIJ				eS	S	05 18 57.6	-0.6
JCJ	Chichijima	2.11	116	P	Pn	05 18 17.0	+0.6
	74nm,0.3s,baz=74,slow=3.2,SNR=30						
JCJ				S	S	05 18 57.6	-0.6
	231nm,0.5s,baz=318,slow=21,SNR=17						
JHH2	Haha-jima-NKT2	2.35	126	eP	Pn	05 18 19.4	+1.2
JHH2				eS	S	05 19 02.0	+0.5
BSO3	Boso 3	6.75	3	eP	Pn	05 19 04.4	+1.2
BSO3				eS	S	05 20 21.8	-2.0
JRY	Ryogami san	8.01	353	eP	Pn	05 19 19.8	+1.4
JHO	Hitachi	8.55	3	eP	Pn	05 19 24.9	+0.1
MJAR	Matsushiro Arr	8.62	350	P	Pn	05 19 27.0	+1.5
	1.0nm,0.3s,baz=156,slow=7.6,SNR=4.8						
JHS	Saijyo	9.12	321	eP	P	05 19 35.2	+1.5
JMK	Ichinoseki	10.92	5	eP	P	05 19 54.4	+0.7
KSRS	Korea Array	13.86	316	P	Pn	05 20 29.6	+1.9
	0.7nm,0.3s,baz=134,slow=13,SNR=5.3						
USRK	Ussuriysk Ar.	17.37	340	P	P	05 21 04.8	+0.4
	4.5nm,0.6s,baz=177,slow=13,SNR=9.1						
WRA	Warramunga Arr	48.02	187	P	P	05 25 28.6	-0.9
	0.5nm,0.4s,baz=2.6,slow=7.8,SNR=11						
	0.5nm,0.4s						
MKAR	Makanchi Array	48.41	309	P	P	05 25 30.5	-1.7
	0.2nm,0.5s,baz=73,slow=12,SNR=2.2						
MKAR				PcP	PcP	05 26 51.9	-0.5
	0.4nm,0.7s,baz=80,slow=6.8,SNR=3.7						
	0.2nm,0.5s						
ASAR	Alice Springs	51.75	187	P	P	05 25 56.4	-0.9
	0.2nm,0.4s,baz=15,slow=10,SNR=4.1						
	0.2nm,0.4s						
ARCES	ARCESS Array B	72.02	340	P	P	05 28 10.4	+0.1
	7.3nm,1.0s,baz=46,slow=8.7,SNR=7.6						
	7.3nm,1.0s						
YKA	Yellowknife Ar	72.20	28	P	P	05 28 11.2	-0.3
	0.4nm,0.6s,baz=282,slow=7.0,SNR=2.6						
	0.4nm,0.6s						
FINES	FINESS Array B	76.26	333	P	P	05 28 34.1	-0.6
	1.7nm,0.5s,baz=75,slow=5.1,SNR=9.2						
	1.7nm,0.5s						
NVAR	Mina Array Bea	81.41	51	P	P	05 29 04.2	+0.9
	0.7nm,0.7s,baz=285,slow=5.1,SNR=8.9						
	0.7nm,0.7s						
NB2	NORSAR Subarra	82.02	337	P	P	05 29 04.4	-1.3
	comp=Z,0.5nm,0.5s,baz=51,slow=4.6						
NOA	NORSAR Array B	82.02	337	P	P	05 29 04.6	-1.2
	comp=Z,0.8nm,0.5s,baz=46,slow=4.9,SNR=4.9						
	comp=Z,0.8nm,0.5s						
PDAR	Pinedale Array	84.85	44	P	P	05 29 21.1	+0.5
	comp=Z,0.2nm,0.4s,baz=323,slow=2.7,SNR=1.6						
	comp=Z,0.2nm,0.4s						

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*IDC **19** 05:44:10.1±1.8, 3°.31N×124°.98E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=180.9km s-min=23.9km az=64.0*

*DJA **19** 05:44:20.3±0.8, 4°N±6°×12°7E±°, h48km±11km, M4.2/9, mB5.3/3, mb4.2/5, MLv4.2/9, Mw(mB)4.7/3*

ISC 19 05:44:16.9±1.1**, 3°.93N**±0°.05×**126°.69E**±0°.08**, h50km, n13, σ2s.08**/18**, mb3.6**/3**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.19	258	P	Pn	05 44 38.8	+1.6
SGSI				S	Sn	05 44 53.2	+1.0
DDMP	Don Marcelino,	2.37	336	⇓eP	Pn	05 44 54.7	+1.3
DDMP				eS	Sn	05 45 21.9	+0.7
TNTI	Ternate	3.21	168	P	Pn	05 45 07.5	+2.6
KCP	Kidapawan	3.45	333	⇑iP	Pn	05 45 10.0	+1.7
KCP				i S	Sn	05 45 49.5	+1.7
LBMI	Labuha	4.61	170	P	Pn	05 45 26.9	+2.7
GTOI	Gorontalo	4.92	228	P	Pn	05 45 30.5	+2.1
GTOI				S	Sn	05 46 23.1	-1.1
MRSI	Marisa	5.86	234	P	Pn	05 45 44.2	+2.9
	0.3nm1µm61nm,0.5s						
MRSI				S	Sn	05 46 45.7	-1.4
	0.3nm1µm61nm,0.5s						
SANI	Sanana	5.98	187	P	Pn	05 45 42.4	-0.6
	0.4nm3µm24nm,0.6s						
APSI	Ampana	6.97	226	P	Pn	05 45 57.8	+1.3
	0.1nm22nm,0.9s						
EDFI	Ende, Flores	13.55	202	P	Pn	05 47 29.6	+2.9
WRA	Warramunga Arr	24.89	163	P	P	05 49 33.9	-1.4
	1.5nm,0.8s,baz=336,slow=10,SNR=20						
	1.5nm,0.8s						
ASAR	Alice Springs	28.32	166	P	P	05 50 05.3	-0.8
	0.3nm,0.4s,baz=345,slow=7.2,SNR=8.6						
	0.3nm,0.4s						
MKAR	Makanchi Array	57.37	325	P	P	05 53 57.0	-3.2
	0.6nm,0.4s,baz=122,slow=7.2,SNR=14						
	0.6nm,0.4s						

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*INET **19** 05:44:37.1±0.4, 13°.80N×88°.38W, h1km±1km, MW2.2*

*SNET **19** 05:44:37.1±1.1, 13°.34N×88°.16W, h12km±2km, ML2.5*

ISC 19 05:44:37.4±0.9**, 13°.40N**±0°.04×**88°.16W**±0°.03**, h16km**±7km**, n17, σ0s.52**/34**, 5C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.12	282	eP	Pb	05 44 41.7	+0.2
VSM				eS	Sb	05 44 44.6	+0.5
RANC	El Ranchito	0.13	283	⇑iP	Pb	05 44 41.8	+0.2
RANC				eS	Sg	05 44 44.1	+0.1
RANC				eS	Sb	05 44 44.5	0.0
LCY	Lacayo	0.14	278	eP	Pb	05 44 41.7	0.0
LCY				eS	Sb	05 44 44.9	+0.4
PACA	Pacayal	0.18	292	i P	Pb	05 44 42.6	+0.2
PACA				eS	Sb	05 44 46.7	+1.0
LCND	La Caada	0.27	110	⇑iP	Pg	05 44 43.2	-0.1
LCND				eS	Sg	05 44 47.9	+0.4
LCND				IAML		05 44 49.6	
	comp=Z,784nm,0.3s						
FAGO	Alcalda de S	0.29	9	⇓iP	Pg	05 44 42.9	-0.9
FAGO				eS	Sg	05 44 48.7	+0.7
FAGO	Alcalda de S	0.29	9	eP	Pg	05 44 42.9	-0.9
FAGO				eS	Sb	05 44 49.2	+0.3
CNCH	Conchagua	0.34	112	⇑iP	Pg	05 44 44.2	-0.3
CNCH				eS	Sg	05 44 49.5	+0.1
CNCH				eS	Sb	05 44 50.1	-0.2
COEB	Comit de Eme	0.38	285	i P	Pg	05 44 45.4	+0.2
COEB				eS	Sb	05 44 51.4	-0.1
COEB	Comit de Eme	0.38	285	eP	Pg	05 44 45.4	+0.2
COEB				eS	Sb	05 44 51.3	-0.1
PQSS	Presa 15 de Se	0.45	299	⇑iP	Pb	05 44 47.2	+0.2
PQSS				eS	Sb	05 44 54.5	+1.0
SCLA	Alcaldia de Sa	0.63	298	eP	Pb	05 44 50.5	+0.4
COEG	Centro de Oper	0.74	287	⇑eP	Pg	05 44 51.4	-0.4
COEG				eS	Sb	05 45 02.1	+0.3
COEG				IAML		05 45 04.5	
	comp=Z,201nm,0.3s						
COEG	Centro de Oper	0.74	287	eP	Pg	05 44 51.1	-0.8
COEG				eS	Sb	05 45 02.4	+0.6
PAVA	Las Pavas	0.82	292	eP	Pb	05 44 53.4	+0.1
PAVA				eS	Sn	05 45 05.4	-0.9
SJTE	Alcalda de S	0.85	284	eP	Pb	05 44 53.2	-0.7
SJTE				eS	Sb	05 45 05.2	0.0
TGUH	Tegucigalpa,Un	1.07	53	eP	Pg	05 44 58.6	+0.4

IDC 19 06:17:21.1±3.9**, 54°.27N**×**86°.64E, h0km, mbtmp2.8**/1**, ML3.0**/1**, Error ellipse: s-maj=28.1km s-min=15.9km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.12	254	i		06 24 00.0	
	baz=74,slow=323,SNR=3.8						
ZALV	Zalesovo Beam	1.12	254	Pg	Pg	06 17 41.2	-1.2
	1.3nm,0.3s,baz=72,slow=17,SNR=17						
ZALV				Lg	Lg	06 17 58.5	
	1.1nm,0.3s,baz=73,slow=26,SNR=11						
MKAR	Makanchi Array	7.98	202	Pn	Pn	06 19 19.9	+1.7
	0.2nm,0.3s,baz=26,slow=13,SNR=3.0						
MKAR				Lg	Lg	06 21 34.2	
	0.1nm,0.3s,baz=24,slow=29,SNR=5.3						
	0.4nm,0.5s						

RSNC 19 06:27:52.1±1.1**, 6°.83N**×**73°.11W, h149km**±5km**, ML3.1, Mw3.6, 2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	196	⇓iP	Pn	06 28 12.2	-0.6
BARC				i		06 28 28.6	
	comp=Z,312nm,0.2s						
PAMC	Pamplona, Colo	0.65	39	⇑eP	Pn	06 28 14.9	+0.1
PAMC				eS	Sn	06 28 32.1	0.0
PAMC				i		06 28 34.5	
	comp=Z,224nm,0.6s						
BRRC	Barranca, Sant	0.66	295	eP	Pn	06 28 14.2	0.0
BRRC				eS	Sn	06 28 30.8	-0.3
BRRC				i		06 28 35.6	
	comp=E,424nm,0.2s						
RUSC	La Rusia	0.93	178	⇓iP	Pn	06 28 16.1	-0.8
RUSC				eS	Sn	06 28 35.0	-0.7
RUSC				i		06 28 36.1	
	comp=Z,132nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	258	eS	Sn	06 28 39.9	-1.8
PTBC				i		06 28 41.9	
	comp=Z,158nm,0.5s						
TAMC	Tame, Arauca	1.37	106	⇑iP	Pn	06 28 20.5	+0.1
TAMC				i		06 28 41.4	
	comp=Z,61nm,0.3s						
TAMC				eS	Sn	06 28 41.9	0.0
OCAC	Ocana	1.42	352	eP	Pn	06 28 20.2	-0.7
OCAC				eS	Sn	06 28 41.9	-1.1
OCAC				i		06 28 47.8	
	comp=Z,322nm,0.3s						
SPBC	San Pablo de B	1.51	219	eP	Pn	06 28 21.1	-0.8
SPBC				eS	Sn	06 28 43.5	-1.1
SPBC				i		06 28 45.9	
	comp=Z,223nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	291	eP	Pn	06 28 24.9	-0.6
ZARC				eS	Sn	06 28 50.6	-0.6
ZARC				i		06 28 56.8	
	comp=Z,119nm,0.3s						
NORC	Norcasia	2.15	234	eP	Pn	06 28 28.2	-0.9
NORC				eS	Sn	06 28 56.5	-0.9
NORC				i		06 29 01.5	
	comp=Z,106nm,0.5s						
CHIC	Chingaza	2.27	196	eP	Pn	06 28 30.5	-0.4
CHIC				eS	Sn	06 28 59.6	-1.0
CHIC				i		06 29 03.9	
	comp=Z,46nm,0.4s						
ROSC	El Rosal	2.31	211	⇓iP	Pn	06 28 32.0	+0.7
ROSC				eS	Sn	06 29 02.2	+0.8
ROSC				i		06 29 07.0	
	comp=Z,84nm,0.5s						
HELC	Santa Helena	2.48	255	eP	Pn	06 28 32.6	-0.7
HELC				eS	Sn	06 29 05.7	+0.7
HELC				i		06 29 12.2	
	comp=Z,76nm,0.4s						
UREC	San Jos de Ur	2.57	291	eP	Pn	06 28 32.2	-1.8
UREC				eS	Sn	06 29 03.2	-3.2
UREC				i		06 29 12.9	
	comp=Z,59nm,0.2s						
LL1C	La Loma 1 Cana	2.73	351	eP	Pn	06 28 36.8	+0.7
LL1C				eS	Sn	06 29 11.8	+1.8
PTGC	Puerto Gaitan,	2.79	159	eP	Pn	06 28 35.3	-1.6
PTGC				eS	Sn	06 29 08.4	-3.0
PTGC				i		06 29 08.7	
	comp=Z,43nm,0.4s						
LL6C	La Loma 6 Bece	2.89	357	eP	Pn	06 28 36.8	-1.3
LL6C				eS	Sn	06 29 10.5	-3.2
LL6C				i		06 29 15.2	
	comp=Z,18nm,0.4s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	06 28 40.3	+0.2
CBOC				eS	Sn	06 29 16.0	-1.1
CBOC				i		06 29 25.9	
	comp=Z,26nm,0.4s						
SDV	Santo Domingo	3.20	50	eP	Pn	06 28 41.3	-0.8
SDV				eS	Sn	06 29 18.9	-2.0
SDV				i		06 29 23.4	
	comp=Z,25nm,0.6s						
ARGC	Ariguani, Magd	3.21	340	eP	Pn	06 28 42.3	+0.1
ARGC				eS	Sn	06 29 20.8	-0.2
ARGC				i		06 29 28.6	
	comp=Z,20nm,0.3s						
ANIL	Santa Ana	3.25	225	eP	Pn	06 28 43.2	+0.3
ANIL				eS	Sn	06 29 22.3	0.0
ANIL				i		06 29 27.5	
	comp=Z,87nm,0.3s						
PRAC	Prado	3.56	210	eP	Pn	06 28 45.6	-1.2
PRAC				eS	Sn	06 29 29.5	+0.4
PRAC				i		06 29 34.8	
	comp=Z,45nm,0.4s						
ORTC	Ortega, Tolima	3.59	216	eP	Pn	06 28 46.7	-0.5
ORTC				eS	Sn	06 29 29.4	-0.4
ORTC				i		06 29 36.4	
	comp=Z,37nm,0.6s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	06 28 46.2	-1.9
SJCC				eS	Sn	06 29 27.6	-4.0
SJCC				i		06 29 31.1	
	comp=Z,34nm,0.4s						
PLMC	San Jos del P	3.69	239	eP	Pn	06 28 48.1	-0.3
PLMC				eS	Sn	06 29 30.8	-1.2
PLMC				i		06 29 36.9	
	comp=Z,27nm,0.5s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	06 28 52.5	-2.2
CRJC				eS	Sn	06 29 38.7	-4.7
CRJC				i		06 29 43.8	
	comp=Z,18nm,0.4s						
YOTC	Yotoco, Valle	4.28	229	eP	Pn	06 28 55.6	-0.6
YOTC				eS	Sn	06 29 43.0	-3.1
GUVC	San Jose del G	4.28	173	eP	Pn	06 28 55.1	-1.0
GUVC				eS	Sn	06 29 43.3	-2.7
GUVC				i		06 29 54.2	
	comp=Z,27nm,0.3s						
MACC	Macarena, Meta	4.71	189	eP	Pn	06 28 59.2	-2.6
MACC				eS	Sn	06 29 50.1	-5.9
MACC				i		06 30 23.9	
	comp=Z,9.1nm,0.5s						

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*FUNV **19** 06:32:46.5, 10°.72N×62°.20W, h21km, MW3.2*

*TRN **19** 06:32:47.9, 10°.83N×62°.30W, h65km, MD3.1*

ISC 19 06:32:46.7±1.5**, 10°.81N**±0°.07×**62°.33W**±0°.05**, h80km**±17km**, n13, σ1s.12**/23**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.91	262	eP	Pn	06 33 05.1	+0.5
CRUV				eS	Sn	06 33 17.5	-0.6
TRN	Trinidad (W)	0.92	100	eP	Pn	06 33 05.6	+0.7
TRN				eS	Sn	06 33 17.5	-0.8
GRFF	Grenada Fort F	1.36	25	eP	Pn	06 33 10.2	-0.1
GRFF				eS	Sn	06 33 26.9	-1.0
GRGR	Grenville	1.47	27	eP	Pn	06 33 12.0	+0.3
GRGR				eS	Sn	06 33 30.2	-0.3
TOSP	Speyside	1.82	74	eP	Pn	06 33 16.8	+0.6
TOSP				eS	Sn	06 33 37.9	-0.8
GCMP	Grenada, Carri	1.88	28	eP	Pn	06 33 17.9	+0.8
GCMP				eS	Sn	06 33 40.4	+0.2
PCRV	Puerto La Cruz	2.36	255	eP	Pn	06 33 24.2	+0.7
PCRV				eS	Sn	06 33 52.3	+0.7
BIRV	Birongo	3.89	265	eP	Pn	06 33 45.6	+1.4
BIRV				eS	Sn	06 34 29.6	+0.9
BENV	Beln	5.26	261	eP	Pn	06 34 03.4	+0.6

BENV				*e*S	**Sn**	**06 35 00.9**	**-1.3**
CACV	**CAICARA DEL OR**	**5.26**	**233**	*e*P	Pn	06 33 58.0	-4.9
CACV				*e*S	Sn	06 34 50.1	-12
BAUV	**El Baul**	**5.93**	**252**	*e*S	**Sn**	**06 35 17.7**	**-0.9**
BAUV	**El Baul**	**5.93**	**252**	*e*P	**Pn**	**06 34 12.8**	**+0.8**
BAUV				*e*S	**Sn**	**06 35 16.7**	**-1.9**
MAPV	**Macapo**	**6.11**	**261**	*e*P	**Pn**	**06 34 15.1**	**+0.5**
MAPV				*e*S	**Sn**	**06 35 20.3**	**-2.8**

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*IDC **19** 06:35:54.6±0.9, 31°.88S×69°.23W, h0^{km}, mb3.6/3, mbtmp3.5/8, ML3.3/5, Error ellipse: s-maj=36.3km s-min=25.6km az=105.0*

*GUC **19** 06:36:09.6±0.8, 31°.34S×69°.54W, h142^{km}±8^{km}, ML3.7*

ISC 19 06:36:07.9±0.8**, 31°.32S**±0°.04×**69°.04W**±0°.07**, h97**^{km}±9^{km}**, n32,** σ**2^{s}00**/45**, mb3.4**/3**, 7C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO01	**Juntas del Tor**	**1.62**	**325**	*i* P	**Pn**	**06 36 39.5**	**+3.7**
CO01				*i* S	**Sn**	**06 37 01.2**	**+4.4**
CO01				IAML		06 37 02.6	
	comp=E,767nm,0.7s						
CO02	**Combarbal**	**1.69**	**273**	⇑*i*P	**Pn**	**06 36 37.1**	**+0.6**
CO02				*i* S	**Sn**	**06 36 57.9**	**-0.2**
CO02				IAML		06 36 59.2	
	comp=E,5μm,0.3s						
GO04	**Tololo Observa**	**1.90**	**307**	⇑*i*P	**Pn**	**06 36 40.5**	**+1.2**
GO04				*i* S	**Sn**	**06 37 02.8**	**-0.5**
GO04				IAML		06 37 09.6	
	comp=E,2μm,0.5s						
VA03	**San Esteban**	**1.93**	**221**	⇑*i*P	**Pn**	**06 36 41.0**	**+1.4**
VA03				*i* S	**Sn**	**06 37 04.2**	**+0.5**
VA03				IAML		06 37 07.0	
	comp=E,709nm,0.2s						
FCH	**Farellones**	**2.27**	**208**	*e*P	**Pn**	**06 36 46.6**	**+2.4**
FCH				*i* S	**Sn**	**06 37 14.7**	**+2.9**
FCH				IAML		06 37 17.8	
	comp=N,174nm,0.2s						
VA06	**Catapilco**	**2.29**	**237**	⇑*i*P	**Pn**	**06 36 43.3**	**-0.8**
VA06				*i* S	**Sn**	**06 37 08.2**	**-3.6**
VA06				IAML		06 37 16.1	
	comp=E,575nm,0.5s						
CO06	**Fray Jorge**	**2.32**	**285**	⇑*i*P	**Pn**	**06 36 43.6**	**-0.9**
CO06				IAML		06 37 14.9	
	comp=E,424nm,0.2s						
CO05	**La Serena**	**2.35**	**306**	⇑*i*P	**Pn**	**06 36 45.4**	**+0.4**
CO05				*i* S	**Sn**	**06 37 11.7**	**-1.8**
CO05				IAML		06 37 12.9	
	comp=N,661nm,0.5s						
MT03	**Universidad Ad**	**2.50**	**209**	*e*P	**Pn**	**06 36 48.6**	**+1.6**
MT03				*i* S	**Sn**	**06 37 18.3**	**+1.2**
MT03				IAML		06 37 20.4	
	comp=E,434nm,0.2s						
MT02	**Curacav**	**2.63**	**222**	*e*P	**Pn**	**06 36 48.5**	**-0.1**
LCO	**Las Campanas**	**2.71**	**328**	⇑*i*P	**Pn**	**06 36 51.6**	**+1.6**
MT09	**Talagante**	**2.95**	**213**	*e*P	**Pn**	**06 36 53.1**	**0.0**
MT09				IAML		06 37 30.3	
	comp=E,176nm,0.5s						
BO04	**La Punta**	**2.98**	**206**	*e*P	**Pn**	**06 36 54.5**	**+1.2**
BO04				*e*S	**Sn**	**06 37 27.7**	**-0.5**
BO04				IAML		06 37 30.3	
	comp=E,181nm,0.4s						
VA05	**Santo Domingo**	**3.19**	**222**	*e*P	**Pn**	**06 36 54.9**	**-1.2**
VA05				IAML		06 37 42.8	
	comp=N,235nm,0.3s						
BO01	**Tunca**	**3.52**	**209**	*e*P	**Pn**	**06 36 59.9**	**-0.6**
BO01				*e*S	**Sn**	**06 37 38.8**	**-2.4**
BO01				IAML		06 37 43.8	
	comp=N,44nm,0.4s						
AC04	**Llanos de Chal**	**3.57**	**330**	*e*P	**Pn**	**06 37 02.0**	**+0.7**
GO03	**Copiap**	**3.86**	**344**	*e*P	**Pn**	**06 37 07.2**	**+2.0**
BO03	**Pichilemu**	**4.01**	**217**	*e*P	**Pn**	**06 37 04.7**	**-2.5**
AC06	**Mina Casimiro**	**4.11**	**343**	*e*P	**Pn**	**06 37 10.5**	**+1.9**
AC06				*e*S	**Sn**	**06 37 54.0**	**-1.6**
LVC	**Limon Verde**	**8.68**	**1**	Pn	**Pn**	**06 38 10.4**	**-0.6**
	comp=N,0.4nm,0.3s,baz=180,slow=16,SNR=2.0						
LVC				Sn	**Sn**	**06 39 44.0**	**-3.3**
	comp=N,0.5nm,0.3s,baz=123,slow=13,SNR=1.9						
	comp=N,1.0nm,0.4s						
PLCA	**Paso Flores**	**9.47**	**187**	Pn	Pn	06 38 05.8	-16
	baz=285,slow=18,SNR=1.0						
PLCA				Sn	Sn	06 39 41.6	-25
	baz=355,slow=17,SNR=1.5						
	comp=N,0.9nm,1.1s						
CPUP	**Villa Florida**	**11.40**	**67**	Pn	**Pn**	**06 38 45.7**	**-2.0**
	comp=N,0.2nm,0.3s,baz=251,slow=11,SNR=4.7						
CPUP				Sn	**Sn**	**06 40 47.3**	**-5.8**
	comp=N,0.1nm,0.3s,baz=252,slow=13,SNR=1.1						
	comp=N,1.6nm,0.7s						
LPAZ	**La Paz**	**14.99**	**3**	Pn	**Pn**	**06 39 36.8**	**+1.5**
	baz=167,slow=15,SNR=2.4						
	comp=N,0.8nm,1.0s						
SIV	**San Ignacio**	**16.90**	**27**	P	**P**	**06 40 00.8**	**+1.8**
	baz=249,slow=14,SNR=3.6						
	comp=N,0.9nm,0.3s						
TXAR	**Lajitas Array**	**68.73**	**328**	P	**P**	**06 47 02.0**	**+0.6**
	comp=N,0.2nm,0.5s,baz=163,slow=9.4,SNR=2.4						
	comp=N,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**80.90**	**69**	P	**P**	**06 48 11.9**	**+0.1**
	comp=N,0.7nm,0.6s,baz=274,slow=5.9,SNR=7.0						
	comp=N,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**83.20**	**323**	P	**P**	**06 48 25.1**	**+1.6**
	comp=N,0.3nm,0.7s,baz=143,slow=6.2,SNR=2.6						
	comp=N,0.3nm,0.7s						
ASAR	**Alice Springs**	**121.08**	**205**	PKP	**PKPdf**	**06 54 48.3**	**-1.6**
	comp=N,0.2nm,0.4s,baz=134,slow=2.7,SNR=1.7						
WRA	**Warramunga Arr**	**124.31**	**207**	PKP	**PKPdf**	**06 54 55.4**	**-0.7**
	comp=N,0.4nm,0.3s,baz=155,slow=1.7,SNR=14						
KURBB	**Kurchatov Arra**	**149.19**	**42**	PKPbc	**PKiKP**	**06 55 46.0**	**+0.2**
	comp=N,0.1nm,0.3s,baz=303,slow=2.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**150.62**	**32**	PKPbc	**PKiKP**	**06 55 49.1**	**+0.5**
	comp=N,2.1nm,0.5s,baz=288,slow=3.3,SNR=8.6						
MKAR	**Makanchi Array**	**153.09**	**47**	PKPbc	**PKPbc**	**06 55 54.5**	**+0.6**
	comp=N,0.3nm,0.6s,baz=306,slow=2.9,SNR=4.2						
MKAR				PKPab	**PKPab**	**06 56 07.2**	**+1.4**
	comp=N,0.4nm,0.6s,baz=318,slow=5.2,SNR=4.5						

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*JMA **19** 06:43:51.9±0.2, 33°N±2°×13°8E±°, h357^{km}, MV3.1/51, FAR S OFF TOKAI DISTRICT*

*IDC **19** 06:43:55.9±0.8, 33°.26N×137°.90E, h321^{km}±9^{km}, mb3.0/7, mbtmp3.7/9, Error ellipse: s-maj=21.9km s-min=14.0km az=73.0*

ISC 19 06:43:57.1±0.8**, 33°.46N**±0°.09×**138°.02E**±0°.08**, h350**^{km}**, n27,** σ**2^{s}81**/32**, mb3.1**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.54**	**336**	*e*P	**Pn**	**06 44 38.6**	**-2.5**
TTO3	**TONANKAI O.B.S**	**0.66**	**308**	*e*P	**Pn**	**06 44 39.2**	**-2.3**
TTO4	**TONANKAI O.B.S**	**0.68**	**324**	*e*P	**Pn**	**06 44 38.8**	**-2.6**
TTO5	**TONANKAI O.B.S**	**0.83**	**342**	*e*P	**Pn**	**06 44 39.8**	**-2.2**
TTO2	**TONANKAI O.B.S**	**0.87**	**289**	P	**Pn**	**06 44 39.8**	**-2.2**
HMMJ	**Hamamatsu 2**	**1.42**	**350**	P	**Pn**	**06 44 42.6**	**-2.1**
JIE	**Ise**	**1.44**	**311**	P	**Pn**	**06 44 42.2**	**-2.6**
JHJ	**Hachijo jima 2**	**1.52**	**102**	P	**Pn**	**06 44 43.3**	**-2.0**
	168nm,0.7s,baz=268,slow=19,SNR=1.7						
JHJ				S	**S**	**06 45 18.4**	**-5.6**
	53nm,0.3s,baz=248,slow=19,SNR=1.1						
JKN2	**Miekihoku**	**1.65**	**299**	P	**Pn**	**06 44 43.2**	**-2.8**
JNY	**Yasuok**	**1.90**	**356**	P	**Pn**	**06 44 46.1**	**-1.7**
JAO	**Obara**	**1.91**	**341**	*e*P	**Pn**	**06 44 46.1**	**-1.7**
JTNC	**Tanabenakahech**	**2.04**	**281**	*e*P	**Pn**	**06 44 45.6**	**-3.1**
JYN	**Shimob**	**2.08**	**12**	*e*P	**Pn**	**06 44 47.5**	**-1.5**
JYTA	**Yamagatataniai**	**2.38**	**334**	*e*P	**Pn**	**06 44 49.7**	**-1.5**
BSO4	**Boso 4**	**2.46**	**51**	*e*P	**Pn**	**06 44 48.9**	**-2.7**
JHU	**Hanno**	**2.60**	**23**	*e*P	**Pn**	**06 44 50.8**	**-2.1**
JHU				*e*S	**S**	**06 45 32.1**	**-5.8**
JRY	**Ryogami san**	**2.65**	**16**	*e*P	**Pn**	**06 44 51.8**	**-1.6**
JRY				*e*S	**S**	**06 45 36.0**	**-2.7**
JAI	**Aioi**	**3.00**	**277**	*e*P	**Pn**	**06 44 54.0**	**-2.4**
MJAR	**Matsushiro Arr**	**3.08**	**3**	P	**Pn**	**06 44 54.3**	**-2.8**
	6.7nm,0.6s,baz=184,slow=9.8,SNR=17						
MJAR				S	**S**	**06 45 40.7**	**-4.7**
	1.2nm,0.3s,baz=260,slow=28,SNR=1.4						
KSRS	**Korea Array**	**9.15**	**299**	P	**Pn**	**06 46 05.1**	**+0.3**
	5.3nm,0.8s,baz=113,slow=12,SNR=27						
KSRS				S	**S**	**06 47 47.1**	**-2.2**
	0.5nm,0.3s,baz=106,slow=23,SNR=2.0						
MKAR	**Makanchi Array**	**43.77**	**305**	P	**P**	**06 51 30.9**	**+1.7**
	0.2nm,0.4s,baz=85,slow=10.0,SNR=4.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**46.10**	**310**	P	**P**	**06 51 49.1**	**+1.9**
	0.2nm,0.2s,baz=89,slow=7.2,SNR=2.4						
	0.2nm,0.2s						
WRA	**Warramunga Arr**	**53.22**	**184**	P	**P**	**06 52 40.5**	**-0.2**
	0.6nm,0.3s,baz=1.0,slow=7.6,SNR=25						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**53.99**	**31**	P	**P**	**06 52 48.9**	**+3.2**
	0.6nm,0.9s,baz=271,slow=6.7,SNR=4.4						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**56.94**	**185**	P	**P**	**06 53 06.9**	**-0.2**
	0.4nm,0.5s,baz=12,slow=9.5,SNR=9.0						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**70.66**	**332**	P	**P**	**06 54 36.2**	**+1.0**
	1.2nm,0.8s,baz=11,slow=16,SNR=2.5						
	1.2nm,0.8s						
NVAR	**Mina Array Bea**	**79.37**	**51**	P	**P**	**06 55 28.9**	**+3.6**
	0.4nm,0.6s,baz=290,slow=5.2,SNR=4.2						
	0.4nm,0.6s						

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*IDC **19** 06:44:18.0±2.4, 54°.11N×86°.43E, h0^{km}, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=19.0km s-min=11.9km az=60.0*

*NNC **19** 06:44:19.1±3.7, 54°.01N×86°.33E, h0^{km}, mb3.4, mpv2.7, Error ellipse: s-maj=29.9km s-min=16.5km az=24.0, Suspected Mining explosion.*

ISC 19 06:44:20.5±4.0**, 54°.0N**±0°.2×**86°.2E**±0°.2**, h0**^{km}**, n8,** σ**2^{s}01**/13**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**269**	*i*		06 49 50.3	
	baz=81,slow=317,SNR=4.9						
ZAA0	**Zalesovo Array**	**0.83**	**269**	⇑P	**Pg**	**06 44 35.5**	**-0.9**
	0.3nm,0.3s						
ZAA0				⇑S	**Sb**	**06 44 49.0**	**-0.6**
	0.1nm,0.2s						
ZALV	**Zalesovo Beam**	**0.83**	**269**	Pg	**Pg**	**06 44 35.1**	**-1.3**
	1.9nm,0.3s,baz=78,slow=17,SNR=20						
ZALV				Lg	Lg	06 44 50.7	
	2.1nm,0.3s,baz=78,slow=31,SNR=7.2						
KURK	**Kurchatov**	**5.69**	**238**	⇓Pn	**Pn**	**06 45 48.0**	**+1.9**
	2.9nm,0.7s						
KURK				⇓Sn	**Sn**	**06 46 51.3**	**-0.9**
	0.5nm,0.4s						
KURK				⇑Lg	Lg	06 47 24.8	
	6.6nm,1.2s						
KURBB	**Kurchatov Arra**	**5.79**	**238**	Pn	**Pn**	**06 45 48.5**	**+1.0**
	0.2nm,0.3s,baz=54,slow=13,SNR=11						
KURBB				Sn	**Sn**	**06 46 55.4**	**+0.8**
	baz=45,slow=21						
KURBB				Lg	Lg	06 47 27.4	
	baz=52,slow=28,SNR=2.6						
	1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**5.79**	**238**	⇓Pn	**Pn**	**06 45 47.7**	**+0.1**
	0.7nm,0.3s						
KURBB				⇑Sn	**Sn**	**06 46 57.7**	**+3.0**
	2.1nm,0.6s						
KURBB				⇑Lg	Lg	06 47 28.4	
	3.1nm,0.8s						
MK31	**Makanchi Array**	**7.61**	**201**	Pn	**Pn**	**06 46 13.6**	**+1.0**
	0.1nm,0.2s,baz=24,slow=13,SNR=16						
MK31				⇑Sn	**Sn**	**06 47 35.3**	**-4.2**
	0.4nm,0.5s,baz=46,slow=5.9,SNR=4.1						
MK31				⇑Lg	Lg	06 48 20.9	
	0.5nm,0.7s,baz=17,slow=27,SNR=4.3						
MKAR	**Makanchi Array**	**7.61**	**201**	Pn	**Pn**	**06 46 13.5**	**+0.9**
	0.3nm,0.3s,baz=25,slow=13,SNR=11						
MKAR				Sn	**Sn**	**06 47 41.3**	**+1.8**
	0.1nm,0.3s,baz=20,slow=26,SNR=1.7						
MKAR				Lg	Lg	06 48 22.9	
	baz=26,slow=27,SNR=6.4						
	0.4nm,0.3s						

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*IDC **19** 06:53:06.2±4.2, 32°.74S×179°.97W, h225^{km}±34^{km}, mb4.2/3, mbtmp4.6/6, Error ellipse: s-maj=41.6km s-min=25.0km az=60.0*

*WEL **19** 06:53:08.6±1.4, 33°S±15°×18°0W±3°5, h17^{km}±11^{km}, M4.9/13, mB5.2/7, ML4.7/12, MLv5.1/13, Mw(mB)4.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=112.4*

*NOU **19** 06:54:03.9, 37°.54S×178°.67E, h182^{km}, mb4.3/6, Off E. Coast of N. Island, N.Z.*

ISC 19 06:53:06.7±0.9**, 32°.87S**±0°.08×**179°.6W**±0°.2**, h200**^{km}**, n80,** σ**2^{s}28**/79**, mb4.3**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.89**	**23**	P	**Pn**	**06 54 09.0**	**+1.9**
GLKZ				S	**Sn**	**06 54 54.4**	**-0.1**
RAO	**Raoul Island**	**3.90**	**23**	S	**Sn**	**06 54 57.5**	**+2.8**
	444nm,0.5s,baz=280,slow=22,SNR=2.6						
RIZ	**Raoul Island**	**3.90**	**23**	S	**Sn**	**06 54 56.8**	**+2.0**
WMGZ	**Waiomatatini S**	**5.19**	**197**	P	**Pn**	**06 54 26.2**	**+2.8**
WMGZ				S	**Sn**	**06 55 22.1**	**-1.9**
HAZ	**Te Kaha**	**5.31**	**203**	P	**Pn**	**06 54 27.8**	**+2.9**
HAZ				S	**Sn**	**06 55 29.1**	**+2.2**
PKGZ	**Pakihiroa**	**5.34**	**200**	P	**Pn**	**06 54 27.5**	**+2.0**
PKGZ				S	**Sn**	**06 55 28.6**	**+0.8**
PUZ	**Puketiti**	**5.47**	**198**	P	**Pn**	**06 54 28.7**	**+1.7**
PUZ				S	**Sn**	**06 55 32.5**	**+2.0**
RUGZ	**Raukumara Rang**	**5.54**	**203**	P	**Pn**	**06 54 30.3**	**+2.3**
TWGZ	**Tauwhareparae**	**5.64**	**199**	P	**Pn**	**06 54 33.3**	**+4.0**
TWGZ				S	**Sn**	**06 55 37.1**	**+2.5**
OPRZ	**Ohinepanea**	**5.86**	**211**	P	**Pn**	**06 54 34.1**	**+2.1**
CNGZ	**Carnagh Statio**	**5.87**	**197**	P	**Pn**	**06 54 34.4**	**+2.2**
MWZ	**Matawai**	**5.92**	**202**	P	**Pn**	**06 54 34.0**	**+1.1**
MWZ				S	**Sn**	**06 55 42.8**	**+1.7**
TKGZ	**Te Karaka**	**5.92**	**199**	P	**Pn**	**06 54 33.9**	**+1.1**
TKGZ				S	**Sn**	**06 55 43.1**	**+2.0**
URZ	**Urewera**	**6.00**	**205**	P	**Pn**	**06 54 34.6**	**+0.8**
	11nm,0.3s,baz=304,slow=3.5,SNR=29						
URZ				S	**Sn**	**06 55 43.2**	**+0.5**
	78nm,0.3s,baz=99,slow=19,SNR=18						
URZ	**Urewera**	**6.00**	**205**	P	**Pn**	**06 54 34.8**	**+1.0**
URZ				S	**Sn**	**06 55 43.9**	**+1.2**
URZ	**Urewera**	**6.00**	**205**	P	**Pn**	**06 54 35.0**	**+1.2**
RAGZ	**Rawiri**	**6.10**	**202**	P	**Pn**	**06 54 36.7**	**+1.4**
RIGZ	**Rimuhau**	**6.20**	**199**	P	**Pn**	**06 54 38.7**	**+2.3**
MUGZ	**Murupara**	**6.31**	**207**	P	**Pn**	**06 54 38.4**	**+0.4**
RTZ	**Ruatahuna**	**6.36**	**205**	P	**Pn**	**06 54 39.1**	**+0.5**
PRGZ	**Paritu Road**	**6.37**	**198**	P	**Pn**	**06 54 39.1**	**+0.5**
PRRZ	**Plateau Road**	**6.48**	**209**	P	**Pn**	**06 54 43.8**	**+3.8**
KNZ	**Kokohu**	**6.51**	**199**	P	**Pn**	**06 54 42.0**	**+1.5**
ALRZ	**Allen Road**	**6.55**	**209**	P	**Pn**	**06 54 43.9**	**+2.9**
MHGZ	**Mahia Peninsul**	**6.58**	**197**	P	**Pn**	**06 54 42.2**	**+0.9**
RAHZ	**Arahi**	**6.59**	**203**	P	**Pn**	**06 54 42.1**	**+0.5**
KUTZ	**Kaahu Road**	**6.71**	**212**	P	**Pn**	**06 54 47.6**	**+4.5**
TLZ	**Tolley Road**	**6.71**	**214**	P	Pn	06 54 48.8	+5.6
MRHZ	**Matea Rd**	**6.76**	**207**	P	**Pn**	**06 54 44.9**	**+1.2**
NMHZ	**Naumai**	**6.85**	**204**	P	**Pn**	**06 54 48.9**	**+3.9**
WATZ	**Wairara**	**6.93**	**211**	P	**Pn**	**06 54 50.0**	**+4.0**
ARHZ	**Aropaoanui**	**6.94**	**202**	P	**Pn**	**06 54 46.0**	**0.0**
BKZ	**Black Stump Fm**	**7.02**	**205**	P	**Pn**	**06 54 46.1**	**-1.1**
RATZ	**Rangitukua**	**7.05**	**211**	P	**Pn**	**06 54 51.7**	**+4.2**
RITZ	**Rihia Road**	**7.10**	**210**	P	**Pn**	**06 54 50.9**	**+2.7**
HIZ	**Hauiti**	**7.19**	**217**	P	**Pn**	**06 54 53.6**	**+4.2**
HIZ	**Hauiti**	**7.19**	**217**	P	Pn	06 54 55.5	+6.2
CKHZ	**Cape Kidnapper**	**7.28**	**200**	P	**Pn**	**06 54 51.9**	**+1.5**
NTVZ	**North Tongarir**	**7.28**	**210**	P	**Pn**	**06 54 52.7**	**+2.1**
TMVZ	**Te Maari**	**7.29**	**210**	P	**Pn**	**06 54 53.7**	**+3.0**
ETVZ	**East Tongariro**	**7.30**	**210**	P	**Pn**	**06 54 53.3**	**+2.5**
WTVZ	**West Tongariro**	**7.33**	**210**	P	**Pn**	**06 54 54.3**	**+3.0**
OTVZ	**Oturere**	**7.34**	**210**	P	**Pn**	**06 54 48.6**	**-2.9**
TWVZ	**Taurewa**	**7.36**	**211**	P	**Pn**	**06 54 54.1**	**+2.4**
SNVZ	**South Ngauruho**	**7.37**	**210**	P	**Pn**	**06 54 54.4**	**+2.6**
NGZ	**Ngauruhoe**	**7.38**	**210**	P	**Pn**	**06 54 55.0**	**+3.1**
TUVZ	**Tukino**	**7.43**	**209**	P	**Pn**	**06 54 55.3**	**+2.7**
KAHZ	**Kahuranaki**	**7.46**	**201**	P	**Pn**	**06 54 53.9**	**+1.0**
BHHZ	**Black Hill Sta**	**7.46**	**206**	P	**Pn**	**06 54 52.3**	**-0.6**
KRHZ	**Kereru**	**7.49**	**204**	P	**Pn**	**06 54 55.0**	**+1.8**
WNVZ	**Wahianoa**	**7.51**	**209**	P	**Pn**	**06 54 55.1**	**+1.5**
MOVZ	**Moawhango**	**7.51**	**208**	P	**Pn**	**06 54 54.3**	**+0.8**
PKVZ	**Pokaka**	**7.58**	**211**	P	**Pn**	**06 54 56.4**	**+1.9**
PXZ	**Pawanui**	**7.68**	**200**	P	**Pn**	**06 54 56.9**	**+1.3**
VRZ	**Vera Road**	**7.72**	**214**	P	**Pn**	**06 55 00.0**	**+3.9**
PNHZ	**Pukenui**	**7.79**	**204**	P	**Pn**	**06 54 58.8**	**+1.7**
PRHZ	**Porangahau**	**7.97**	**201**	P	**Pn**	**06 54 59.3**	**-0.1**
TSZ	**Takapari Road**	**8.00**	**205**	P	**Pn**	**06 55 00.2**	**+0.3**
LREZ	**Lake Rotokare**	**8.15**	**214**	P	**Pn**	**06 55 04.7**	**+2.9**
POWZ	**Post Office Ro**	**8.37**	**205**	P	**Pn**	**06 55 05.1**	**+0.5**
PRWZ	**Pori Road**	**8.44**	**203**	P	**Pn**	**06 55 05.9**	**+0.3**
HOWZ	**Holdsworth Sta**	**8.90**	**204**	P	**Pn**	**06 55 11.1**	**-0.5**
TRWZ	**Traveller**	**9.29**	**202**	P	**Pn**	**06 55 16.0**	**-0.7**
QRZ	**Quartz Range**	**10.12**	**216**	P	**Pn**	**06 55 26.8**	**-0.5**
KHZ	**Kahutara**	**10.95**	**208**	P	**Pn**	**06 55 35.3**	**-2.7**
RPZ	**Rata Peaks**	**13.05**	**211**	P	**Pn**	**06 56 01.7**	**-3.1**
	12nm,1.0s,baz=74,slow=16,SNR=9.3						
RPZ				S	S	06 58 15.1	-15
	7.8nm,0.3s,baz=120,slow=22,SNR=19						
RPZ	**Rata Peaks**	**13.05**	**211**	P	**Pn**	**06 56 02.5**	**-2.2**
ODZ	**Otahua Downs**	**14.30**	**209**	P	**Pn**	**06 56 18.4**	**-1.8**
DZM	**Mont Dzumac**	**16.35**	**308**	P	**P**	**06 56 40.7**	**-4.0**
	7.5nm,0.7s,baz=131,slow=16,SNR=8.6						
KRVT	**Keravat (AS076**	**38.83**	**311**	P	P	07 00 07.2	-5.4
	50nm,0.6s,baz=59,slow=7.0,SNR=5.0						
	50nm,0.6s						
ASAR	**Alice Springs**	**41.65**	**270**	P	P	07 00 30.6	-5.0
	1.3nm,0.4s,baz=106,slow=7.2,SNR=45						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**42.87**	**276**	P	P	07 00 40.1	-5.4
	3.2nm,0.3s,baz=114,slow=7.9,SNR=132						
	3.2nm,0.3s						
H03S2	**Juan Fernandez**	**80.27**	**124**	T	T	08 34 11.3	
	baz=237						
H03S1	**Juan Fernandez**	**80.28**	**124**	T	T	08 34 24.5	
	baz=237						
H03S3	**Juan Fernandez**	**80.28**	**124**	T	T	08 34 23.4	
	baz=237						
H03N3	**Juan Fernandez**	**80.47**	**124**	T	T	08 34 24.2	
	baz=244,slow=74						
H03N2	**Juan Fernandez**	**80.48**	**124**	T	T	08 34 27.8	
	baz=244						
H03N1	**Juan Fernandez**	**80.49**	**124**	T	T	08 34 25.8	
	baz=244,slow=74						
FINES	**FINESS Array B**	**146.93**	**338**	PKPbc	**PKPdf**	**07 12 19.6**	**-2.8**
	0.9nm,0.4s,baz=31,slow=4.5,SNR=9.4						
TORD	**Torodi Ar. Bea**	**160.33**	**184**	PKPab	**PKPab**	**07 13 21.9**	**-2.5**
	0.3nm,0.6s,baz=202,slow=3.9,SNR=1.9						

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*IDC **19** 07:03:07.7±3.3, 53°.79N×88°.16E, h0^{km}, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=25.5km s-min=17.1km az=59.0*

*NNC **19** 07:03:08.8±3.5, 53°.57N×88°.17E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=25.9km s-min=16.1km az=69.0, Suspected Mining explosion.*

ISC 19 07:03:07.1±3.5**, 53°.9N**±0°.1×**88°.1E**±0°.2**, h0**^{km}**, n8,** σ**1^{s}03**/12**, 5C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**274**	*i*		07 15 43.4	
	0.2nm,0.8s,baz=93,slow=327,SNR=6.7						
ZAA0	**Zalesovo Array**	**1.96**	**274**	⇓P	**Pb**	**07 03 43.6**	**0.0**
	1.9nm,0.7s						
ZAA0				⇓S	**Sg**	**07 04 11.8**	**+1.8**
	6.6nm,0.7s						
ZALV	**Zalesovo Beam**	**1.96**	**274**	Pg	**Pg**	**07 03 43.8**	**-0.9**
	2.1nm,0.3s,baz=90,slow=12,SNR=31						
ZALV				Lg	Lg	07 04 11.0	
	4.8nm,0.3s,baz=93,slow=24,SNR=27						
KURK	**Kurchatov**	**6.63**	**245**	⇑Pn	**Pn**	**07 04 46.4**	**+0.6**
	0.6nm,0.7s						
KURK				⇓Sn	**Sn**	**07 06 00.7**	**-1.3**
	0.7nm,0.6s						
KURK				⇑Lg	Lg	07 06 36.4	
	5.0nm,0.9s						
KURBB	**Kurchatov Arra**	**6.73**	**245**	Pn	**Pn**	**07 04 48.1**	**+1.1**
	0.1nm,0.3s,baz=63,slow=14,SNR=5.0						
KURBB				Sn	**Sn**	**07 06 03.1**	**-1.3**
	baz=62,slow=24,SNR=1.4						
KURBB				Lg	Lg	07 06 39.5	
	0.1nm,0.3s,baz=63,slow=32,SNR=3.4						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**6.73**	**245**	⇑Pn	**Pn**	**07 04 46.7**	**-0.3**
	1.0nm,0.5s,baz=62,slow=14						
KURBB				⇑Sn	**Sn**	**07 06 03.8**	**-0.5**
	4.4nm,0.6s						
KURBB				⇓Lg	Lg	07 06 36.7	
	12nm,0.9s						
MK31	**Makanchi Array**	**8.00**	**210**	⇓Sn	**Sn**	**07 06 35.5**	**-0.2**
	0.2nm,0.3s,baz=259,slow=24						
MK31				⇑Lg	Lg	07 07 13.9	
	1.1nm,0.8s,baz=255,slow=32,SNR=4.4						
MKAR	**Makanchi Array**	**8.00**	**210**	Pn	**Pn**	**07 05 05.1**	**+0.6**
	0.1nm,0.3s,baz=32,slow=19,SNR=2.6						
MKAR				Sn	**Sn**	**07 06 35.6**	**-0.2**
	0.1nm,0.3s,baz=31,slow=34,SNR=2.0						
MKAR				Lg	Lg	07 07 18.6	
	0.1nm,0.3s,baz=29,slow=24,SNR=5.5						
	0.3nm,0.5s						

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*IDC **19** 07:05:43.6±0.6, 0°.69N×80°.07W, h0^{km}, mb4.1/16, mbtmp4.2/20, ML3.4/4, MS3.4/20, Error ellipse: s-maj=20.5km s-min=12.3km az=63.0*

*IGQ **19** 07:05:46±0.6, 1°N±2°×8°0W±°, h5^{km}*

*VAO **19** 07:05:48.7±0.5, 0°.38N×79°.79W, h10^{km}, mb4.8*

*NEIC **19** 07:05:50.6±1.9, 0°.62N±0°.03×80°.02W±0°.06, h37^{km}±7^{km}, mb4.5/38, Error ellipse: s-maj=9.5km s-min=3.3km az=78.0*

ISC 19 07:05:47.2±0.9**, 0°.59N**±0°.03×**80°.07W**±0°.04**, h19**^{km}±3^{km}**, n216,** σ**1^{s}59**/220**, mb4.5**/28**, MS3.4**/17**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMA1	**Acelerografo,**	**0.49**	**46**	P	**Pg**	**07 05 56.0**	**-1.2**
AMA1				S	**Sn**	**07 06 06.0**	**-1.2**
AV21	**Acelerografo,**	**0.53**	**83**	P	**Pg**	**07 05 58.0**	**0.0**
AV21				S	**Sn**	**07 06 07.0**	**-1.2**
AV18	**Acelerografo,**	**0.66**	**115**	P	**Pb**	**07 06 00.0**	**0.0**
MAG1	**Magdalena**	**0.72**	**155**	P	**Pb**	**07 06 01.0**	**-0.3**
JAMA	**Jama**	**0.86**	**189**	P	**Pb**	**07 06 02.0**	**-1.6**
JAMA				S	**Sg**	**07 06 16.0**	**+0.6**
BV15	**Puerto Quito-O**	**0.95**	**117**	P	**Pb**	**07 06 04.0**	**-1.2**
BV15				S	**Sn**	**07 06 21.0**	**+2.3**
FLF1	**Flavio Alfaro-**	**0.97**	**166**	P	**Pn**	**07 06 06.0**	**+0.1**
FLF1				S	**Sn**	**07 06 21.0**	**+1.8**
CABP	**Cabo Pasado**	**1.03**	**200**	P	**Pb**	**07 06 06.0**	**-0.5**
APR2	**Miler**	**1.22**	**115**	P	**Pn**	**07 06 08.0**	**-1.3**
APR1	**Acelerografo,**	**1.59**	**113**	P	**Pn**	**07 06 14.0**	**-0.7**
HPAL	**Hacienda Las P**	**1.64**	**119**	P	**Pn**	**07 06 14.0**	**-1.3**
PINO	**Pino**	**1.65**	**117**	P	**Pn**	**07 06 15.0**	**-0.7**
TERV	**Terraza Guagua**	**1.66**	**117**	P	**Pn**	**07 06 15.0**	**-0.8**
OTAV	**Otavalo**	**1.66**	**102**	Pn	**Pn**	**07 06 15.9**	**+0.2**
OTAV	**Otavalo**	**1.66**	**102**	*e*P	**Pn**	**07 06 16.0**	**+0.2**
OTAV				*e*S	**Sb**	**07 06 39.1**	**+0.9**
YANA	**Yana**	**1.66**	**115**	P	**Pn**	**07 06 15.0**	**-0.8**
GGPC	**Guagua Pichinc**	**1.66**	**117**	P	**Pn**	**07 06 16.0**	**+0.1**
GGPT	**Toaza - Volcan**	**1.67**	**119**	P	**Pn**	**07 06 15.0**	**-0.8**
JUA2	**San Juan 2**	**1.67**	**119**	P	**Pn**	**07 06 16.0**	**+0.1**
CUSE	**Cuicocha Este**	**1.70**	**100**	P	**Pn**	**07 06 16.0**	**-0.3**
ALIT	**Ecuador-Imbabu**	**1.73**	**83**	P	**Pn**	**07 06 16.0**	**-0.4**
CUIC	**Cuicocha-Domo**	**1.74**	**99**	P	**Pn**	**07 06 17.0**	**+0.2**
CUSW	**Cuicocha Oeste**	**1.75**	**100**	P	**Pn**	**07 06 17.0**	**+0.1**
COTA	**Cotacachi**	**1.75**	**98**	P	**Pn**	**07 06 15.0**	**-2.1**
TUMC	**Tumaco**	**1.82**	**48**		**Pn**	**07 06 17.7**	**+0.2**
TUMC	**Tumaco**	**1.82**	**48**	*e*P	**Pn**	**07 06 17.3**	**-0.2**
TUMC				*e*S	**Sb**	**07 06 42.0**	**-0.3**
TUMC	**Tumaco**	**1.82**	**48**	P	**Pn**	**07 06 17.0**	**-0.5**
URCU	**Urcuqui**	**1.82**	**95**	P	**Pn**	**07 06 18.0**	**0.0**
AV11	**Acelerografo,**	**1.83**	**111**	P	**Pb**	**07 06 20.0**	**-0.2**
AOTA	**Otavalo**	**1.85**	**101**	P	**Pb**	**07 06 20.0**	**-0.7**
ILLI	**Illinizas Sur**	**1.87**	**134**	P	**Pn**	**07 06 18.0**	**-0.7**
PAST	**Pastocalle**	**1.92**	**132**	P	**Pn**	**07 06 20.0**	**+0.7**
AIB2	**Ibarra (Univer**	**1.99**	**97**	P	**Pn**	**07 06 21.0**	**+0.9**
SUCR	**Mariscal Sucre**	**2.00**	**128**	P	**Pn**	**07 06 21.0**	**+0.6**
CAMI	**Rancho Maria**	**2.01**	**129**	P	**Pn**	**07 06 22.0**	**+1.4**
SRAM	**San Ramn-Vol**	**2.01**	**131**	P	**Pn**	**07 06 21.0**	**+0.5**
YAHU	**Yahuarcocha**	**2.02**	**96**	P	**Pb**	**07 06 22.0**	**-1.5**
NAS2	**Nasa**	**2.02**	**127**	P	**Pn**	**07 06 22.0**	**+1.2**
BNAS	**Cotopaxi Volca**	**2.03**	**128**	P	**Pn**	**07 06 21.0**	**+0.1**
CHMA	**Chilma**	**2.03**	**82**	P	**Pn**	**07 06 19.0**	**-1.7**
SLOR	**San Lorenzo -**	**2.05**	**130**	P	**Pn**	**07 06 22.0**	**+0.8**
BREF	**Cotopaxi Volca**	**2.06**	**127**	P	**Pb**	**07 06 23.0**	**-1.4**
VC1	**Cotopaxi 1**	**2.07**	**126**	P	**Pb**	**07 06 23.0**	**-1.6**
BVC2	**Cotopaxi Volca**	**2.08**	**127**	P	**Pn**	**07 06 23.0**	**+1.4**
LNGL	**El Angel-Carch**	**2.08**	**86**	P	**Pn**	**07 06 22.0**	**+0.5**
ISPT	**Isla de la Pla**	**2.10**	**208**	P	**Pn**	**07 06 22.0**	**+0.7**
BTAM	**Cotopaxi Volca**	**2.10**	**127**	P	**Pn**	**07 06 23.0**	**+1.1**
BRRN	**Barrancas-Volc**	**2.10**	**131**	P	**Pn**	**07 06 23.0**	**+1.1**
ECEN	**Cerro Negro**	**2.12**	**84**	P	**Pn**	**07 06 23.0**	**+0.9**
ANTG	**Antisana-Guama**	**2.12**	**121**	P	**Pn**	**07 06 23.0**	**+0.8**
TAMB	**Tambo**	**2.13**	**127**	P	**Pb**	**07 06 25.0**	**-0.6**
ANGU	**Angureal**	**2.14**	**105**	P	**Pb**	**07 06 25.0**	**-0.7**

CHL1	**Volc¡n Chiles**	**2.14**	**85**	P	**Pn**	**07 06 23.0**	**+0.6**
CAYR	**Refugio Cayamb**	**2.15**	**105**	P	**Pb**	**07 06 25.0**	**-0.9**
ANTM	**Antisana-La Mi**	**2.16**	**121**	P	**Pn**	**07 06 24.0**	**+1.2**
CHL2	**Volc¡n Chiles**	**2.17**	**84**	P	**Pb**	**07 06 25.0**	**-1.2**
ANTI	**Antisana**	**2.17**	**118**	P	**Pn**	**07 06 24.0**	**+1.1**
VCES	**Cotopaxi**	**2.18**	**129**	P	**Pn**	**07 06 24.0**	**+1.1**
ANTS	**Antisana-Sarah**	**2.19**	**120**	P	**Pn**	**07 06 24.0**	**+0.8**
CMBC	**Cumbal**	**2.28**	**81**	P	**Pn**	**07 06 25.0**	**+0.8**
TULM	**Tulcn-Chalpat**	**2.29**	**87**	P	**Pb**	**07 06 27.0**	**-1.3**
ATUL	**Tulcn**	**2.36**	**86**	P	**Pn**	**07 06 27.0**	**+1.8**
CHSH	**Refugio Sur-Vo**	**2.40**	**150**	P	**Pn**	**07 06 27.0**	**+1.0**
PIAT	**Ana Tenorio**	**2.40**	**131**	P	**Pn**	**07 06 27.0**	**+1.1**
PORT	**Chimborazo Vol**	**2.42**	**147**	P	**Pn**	**07 06 27.0**	**+0.7**
TAMH	**Tambohuasha Ch**	**2.48**	**149**	P	**Pn**	**07 06 28.0**	**+0.9**
CONE	**Cono NE Rev Vo**	**2.52**	**105**	P	**Pb**	**07 06 31.0**	**-1.1**
BONI	**La Bonita**	**2.55**	**93**	P	**Pn**	**07 06 30.0**	**+2.2**
JUI6	**Juive**	**2.57**	**141**	P	**Pn**	**07 06 30.0**	**+1.9**
BBIL	**Ulba Tungurahu**	**2.58**	**142**	P	**Pn**	**07 06 30.0**	**+1.8**
POND	**Pondoa**	**2.58**	**141**	P	**Pn**	**07 06 30.0**	**+1.8**
BRUN	**Tungurahua Vol**	**2.60**	**140**	P	**Pn**	**07 06 30.0**	**+1.4**
RETU	**Refugio**	**2.60**	**141**	P	**Pn**	**07 06 31.0**	**+2.2**
BMAS	**Trigal station**	**2.62**	**143**	P	**Pn**	**07 06 31.0**	**+2.1**
ARRY	**Arrayan**	**2.64**	**142**	P	**Pn**	**07 06 31.0**	**+1.9**
BPAT	**Tungurahua Vol**	**2.65**	**142**	P	**Pb**	**07 06 32.0**	**-2.4**
CASC	**Dorado de Casc**	**2.77**	**99**	P	**Pb**	**07 06 34.0**	**-2.3**
CCUFI	**Cufio, Nario**	**2.80**	**77**	*e*P	**Pn**	**07 06 33.2**	**+1.8**
GCUF	**Volcan Galeras**	**2.80**	**77**	*e*P	**Pn**	**07 06 32.7**	**+1.2**
GCUF				*e*S	**Sn**	**07 07 05.0**	**0.0**
CPAS2	**Pasto**	**2.89**	**78**	*e*P	**Pn**	**07 06 35.4**	**+2.8**
GR1C	**Gorgona, Isla**	**3.06**	**39**	*e*P	**Pn**	**07 06 32.4**	**-2.2**
GR1C				*e*S	**Sg**	**07 07 27.6**	**+1.9**
CRUC	**La Cruz**	**3.27**	**73**	*e*P	**Pn**	**07 06 39.3**	**+1.5**
CRUC				*e*S	**Sb**	**07 07 23.2**	**-1.3**
SOTA	**Rioblanco**	**3.79**	**66**	*e*P	**Pn**	**07 06 45.8**	**+0.7**
SOTA				*e*S	**Sn**	**07 07 33.9**	**+4.5**
SOTA				*i*		07 07 51.0	
	comp=Z,5137µm,2.5s						
PCON	**Cinco Dias**	**4.06**	**65**	*e*P	**Pn**	**07 06 49.5**	**+0.6**
PCON				*e*S	**Sb**	**07 07 47.5**	**+0.1**
MALC	**Bahia Malaga**	**4.36**	**39**	*e*P	Pb	07 06 57.9	-5.4
MARP	**Paez Belalcaza**	**4.69**	**61**	*e*P	**Pn**	**07 06 58.6**	**+1.4**
MARP				*e*S	**Sn**	**07 07 55.7**	**+4.5**
GARC	**Garzon, Huila**	**4.85**	**71**	*e*P	**Pn**	**07 07 01.2**	**+1.8**
YOTC	**Yotoco, Valle**	**5.02**	**48**	*e*P	**Pn**	**07 07 02.2**	**+0.4**
YOTC				*e*S	**Sn**	**07 07 55.2**	**-4.1**
BETC	**Betania**	**5.08**	**66**	*e*P	**Pn**	**07 07 05.8**	**+3.4**
PLMC	**San Jos del P**	**5.72**	**41**	*e*P	**Pn**	**07 07 13.7**	**+2.4**
PLMC				*e*S	**Sn**	**07 08 23.1**	**+6.6**
ORTC	**Ortega, Tolima**	**5.84**	**56**	*e*P	**Pn**	**07 07 15.0**	**+2.1**
ORTC				*e*S	**Sn**	**07 08 25.1**	**+5.7**
ORTC				*i*		07 08 40.3	
	comp=Z,76nm,0.6s						
PRAC	**Prado**	**6.04**	**59**	*e*P	**Pn**	**07 07 16.5**	**+0.8**
PRAC				*e*S	**Sn**	**07 08 33.2**	**+8.8**
ANIL	**Santa Ana**	**6.06**	**50**	*e*P	Pn	07 07 20.9	+4.8
MACC	**Macarena, Meta**	**6.41**	**76**	*e*P	**Pn**	**07 07 22.9**	**+2.2**
CBOC	**Ciudad Bolivar**	**6.62**	**38**	*e*P	**Pn**	**07 07 28.3**	**+4.5**
CBOC				*e*S	Sb	07 08 49.8	-11
ROSC	**El Rosal**	**7.13**	**54**	Pn	**Pn**	**07 07 29.9**	**-1.0**
	comp=Z,4.7nm,0.3s,baz=222,slow=22,SNR=6.7						
ROSC				Sn	**Sn**	**07 08 52.3**	**+0.6**
	baz=308,slow=22						
	comp=Z,5.2nm,0.4s						
ROSC	**El Rosal**	**7.13**	**54**	Pn	**Pn**	**07 07 30.2**	**-0.7**
HELC	**Santa Helena**	**7.18**	**39**	*e*P	Pn	07 07 38.0	+6.5
HELC				*e*S	Sb	07 09 06.0	-11
GUVC	**San Jose del G**	**7.69**	**75**	*e*P	**Pn**	**07 07 39.9**	**+1.6**
ATAH	**Atahualpa**	**7.86**	**168**	Pn	**Pn**	**07 07 42.6**	**+1.7**
	comp=Z,1.6nm,0.3s,baz=14,slow=5.4,SNR=14						
ATAH				Sn	**Sn**	**07 09 09.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=261,slow=20,SNR=1.5						
ATAH				LR	LR	07 10 56.4	
	comp=Z,146nm,19.6s,baz=343,slow=39						
	comp=Z,9.0nm,0.5s						
CDITO	**Canoas**	**8.40**	**341**	Pn	**Pn**	**07 07 50.1**	**+2.0**
BCIP	**Isla Barro Col**	**8.52**	**2**	Pn	**Pn**	**07 07 49.5**	**-0.2**
ZARC	**Zaragoza, Cauc**	**8.60**	**37**	Pn	**Pn**	**07 07 53.5**	**+2.6**
ZARC	**Zaragoza, Cauc**	**8.60**	**37**	*e*P	**Pn**	**07 07 53.5**	**+2.6**
ZARC				*e*S	**Sn**	**07 09 30.9**	**+3.4**
DRK0	**Durika**	**9.17**	**340**		**Pn**	**07 08 00.9**	**+2.1**
SRBA	**San Rafael, Bu**	**9.19**	**339**		**Pn**	**07 07 59.3**	**+0.4**
RIMA	**Rio Macho**	**9.86**	**338**		**Pn**	**07 08 09.1**	**+0.9**
OCAC	**Ocana**	**10.15**	**41**		**Pn**	**07 08 12.3**	**+0.2**
HDC	**Heredia**	**10.17**	**337**		**Pn**	**07 08 12.5**	**0.0**
PAYG	**Puerto Ayora**	**10.29**	**263**	Pn	**Pn**	**07 08 15.2**	**+1.2**
SJCC	**San Jacinto, C**	**10.45**	**28**	Pn	**Pn**	**07 08 16.1**	**-0.1**
JTS	**Las Juntas de**	**10.79**	**333**	LR	LR	07 11 41.6	
	comp=Z,241nm,18.8s,baz=222,slow=34						
SDV	**Santo Domingo**	**12.50**	**48**	Pn	**Pn**	**07 08 44.0**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=241,slow=6.3,SNR=1.2						
	comp=Z,3.5nm,0.3s						
SDV	**Santo Domingo**	**12.50**	**48**	*e*P	**Pn**	**07 08 46.9**	**+2.5**
NNA	**Nana**	**12.90**	**166**	Pn	**Pn**	**07 08 50.1**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=325,slow=9.2,SNR=2.8						
NNA				Sn	**Sn**	**07 11 09.8**	**-3.2**
	comp=Z,0.8nm,0.3s,baz=260,slow=6.1,SNR=2.8						
NNA				LR	LR	07 14 21.5	
	comp=Z,76nm,20.4s,baz=337,slow=40						
	comp=Z,5.9nm,0.5s						
TGUH	**Tegucigalpa,Un**	**15.16**	**332**	Pn	**Pn**	**07 09 21.6**	**+1.1**
TGUH				IAmb	IAmb	07 09 28.4	
	comp=Z,32nm,0.9s						
BIRV	**Birongo**	**16.88**	**54**	Pn	**Pn**	**07 09 42.4**	**-0.1**
BIRV				IAmb	IAmb	07 10 02.3	
	comp=Z,36nm,0.9s						
ETMB	**Extrema**	**17.24**	**127**	*e*P	**Pn**	**07 09 45.4**	**-1.7**
SAML	**Samuel**	**19.31**	**120**	P	**P**	**07 10 11.3**	**-0.1**
SAML				IAmb	IAmb	07 10 19.2	
	comp=Z,21nm,0.8s						
BOAV	**Boa Vista**	**19.63**	**85**	*e*P	**Pn**	**07 10 15.9**	**-0.4**
MACA	**Manacapuru-AM**	**19.74**	**101**	*e*P	**P**	**07 10 15.6**	**-0.5**
LPAZ	**La Paz**	**20.50**	**145**	P	**P**	**07 10 25.7**	**+0.7**
	comp=Z,11nm,0.7s,baz=320,slow=6.4,SNR=27						
	comp=Z,11nm,0.7s						
LPAZ	**La Paz**	**20.50**	**145**	P	**P**	**07 10 23.1**	**-1.9**
LPAZ	**La Paz**	**20.50**	**145**	*e*P	**P**	**07 10 25.2**	**+0.2**
DR12	**Loma Pena Alta**	**20.91**	**30**	P	**P**	**07 10 30.0**	**+1.2**
TRN	**Trinidad (W)**	**21.08**	**61**	*e*P	**P**	**07 10 30.9**	**+0.3**
PB12	**IPOC Station P**	**21.36**	**154**	P	**P**	**07 10 34.3**	**+0.7**
PB16	**IPOC Station P**	**21.49**	**152**	P	**P**	**07 10 36.8**	**+1.2**
PB16				IAmb	IAmb	07 10 41.7	
	comp=Z,15nm,0.7s						
CMIG	**Matias Romero**	**21.94**	**319**	P	**P**	**07 10 39.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=186,slow=12,SNR=3.0						
	comp=Z,0.8nm,0.6s						
TOSP	**Speyside**	**22.13**	**61**	P	**P**	**07 10 41.9**	**-0.1**
SJG	**San Juan**	**22.14**	**37**	P	**P**	**07 10 40.9**	**-1.1**
	comp=Z,6.9nm,0.2s,baz=236,slow=3.6,SNR=1.4						
SJG				LR	LR	07 20 42.5	
	comp=Z,60nm,20.8s,baz=241,slow=41						
	comp=Z,6.9nm,0.2s						
CBYP	**Canovanas**	**22.45**	**38**	P	**P**	**07 10 46.2**	**+0.8**
PB11	**IPOC Station P**	**22.66**	**154**	P	**P**	**07 10 46.6**	**-1.1**
VILB	**Vilhena**	**23.87**	**125**	*e*P	**P**	**07 10 59.6**	**-0.2**
ITTB	**Itaituba**	**24.81**	**102**	*e*P	**P**	**07 11 07.6**	**-0.9**
SIV	**San Ignacio**	**24.97**	**132**	P	**P**	**07 11 10.1**	**+0.2**
	comp=Z,7.8nm,0.8s,baz=303,slow=9.7,SNR=26						
	comp=Z,7.8nm,0.8s						
LVC	**Limon Verde**	**25.50**	**155**	P	**P**	**07 11 16.3**	**+1.4**
	comp=Z,6.6nm,0.6s,baz=23,slow=6.7,SNR=9.1						
	comp=Z,6.6nm,0.6s						
LVC	**Limon Verde**	**25.50**	**155**	P	**P**	**07 11 16.1**	**+1.1**
LVC	**Limon Verde**	**25.50**	**155**	*e*P	**P**	**07 11 16.4**	**+1.4**
PTLB	**Pontes e Lacer**	**26.12**	**128**	*e*P	**P**	**07 11 20.5**	**+0.3**
PDRB	**Porto dos Gac**	**26.17**	**118**	*e*P	**P**	**07 11 20.4**	**-0.4**
CLDB	**Colider**	**26.69**	**116**	*e*P	**P**	**07 11 24.9**	**-0.6**
MDP	**Montagnes des**	**27.76**	**80**	P	**P**	**07 11 35.1**	**0.0**
	comp=Z,15nm,0.9s,baz=247,slow=5.8,SNR=4.6						
MDP				LR	LR	07 22 58.0	
	comp=Z,194nm,20.4s,baz=240,slow=37						
	comp=Z,15nm,0.9s						
SALV	**Santo Antonio**	**29.12**	**125**	*e*P	**P**	**07 11 47.2**	**0.0**
PP1B	**Ponte de Pedra**	**30.69**	**127**	*e*P	**P**	**07 12 01.4**	**+0.2**
SNDB	**Serra Nova Dou**	**31.19**	**115**	*e*P	**P**	**07 12 04.7**	**-0.8**
AQDB	**Aquidauana**	**31.75**	**133**	P	**P**	**07 12 10.8**	**+0.5**
AQDB				IAmb	IAmb	07 12 11.1	
	comp=Z,14nm,1.3s						
AQDB	**Aquidauana**	**31.75**	**133**	*e*P	**P**	**07 12 10.8**	**+0.5**
DVLD	**Doverlandia**	**32.41**	**123**	*e*P	**P**	**07 12 16.7**	**+0.4**
CPUP	**Villa Florida**	**34.61**	**142**	P	**P**	**07 12 33.7**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=336,slow=9.7,SNR=7.0						
CPUP				LR	LR	07 30 01.8	
	comp=Z,214nm,18.2s,baz=346,slow=42						
	comp=Z,2.9nm,0.8s						
CPUP	**Villa Florida**	**34.61**	**142**	P	**P**	**07 12 35.2**	**0.0**
MT02	**Curacav**	**34.71**	**167**	P	**P**	**07 12 37.8**	**+1.7**
MT02				IAmb	IAmb	07 13 01.7	
	comp=Z,6.6nm,1.1s						
TKL	**Tuckaleechee C**	**35.06**	**355**	LR	LR	07 26 16.6	
	comp=Z,61nm,20.2s,baz=169,slow=35						
JCT	**Junction City**	**35.14**	**330**	P	**P**	**07 12 40.2**	**+0.4**
JCT				IAmb	IAmb	07 12 46.4	
	comp=Z,5.2nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**35.25**	**303**	T	T	07 49 53.0	
	SNR=18						
BDFB	**Brasilia**	**35.54**	**118**	P	**P**	**07 12 42.2**	**-1.4**
	comp=Z,2.9nm,0.6s,baz=302,slow=9.8,SNR=7.9						
	comp=Z,2.9nm,0.6s						
BDFB	**Brasilia**	**35.54**	**118**	P	**P**	**07 12 43.4**	**-0.1**
BDFB				IAmb	IAmb	07 12 44.1	
	comp=Z,5.9nm,1.0s						
TXAR	**Lajitas Array**	**36.38**	**324**	P	**P**	**07 12 47.6**	**-2.9**
	comp=Z,0.2nm,0.6s,baz=129,slow=7.1,SNR=1.9						
TXAR				PcP	**PcP**	**07 15 15.0**	**0.0**
	comp=Z,0.2nm,0.6s,baz=147,slow=8.5,SNR=2.3						
	comp=Z,0.2nm,0.6s						
IPMB	**Ipameri, GO**	**36.38**	**122**	*e*P	**P**	**07 12 50.3**	**-0.4**
PTGB	**Pitanga**	**37.00**	**135**	*e*P	**P**	**07 12 55.5**	**-0.5**
SDBA	**SAO DESIDERIO**	**37.22**	**112**	*e*P	**P**	**07 12 57.2**	**-0.7**
ITQB	**Itaqui**	**37.50**	**145**	*e*P	**P**	**07 13 00.2**	**+0.2**
BB19B	**Bebedouro**	**37.60**	**127**	*e*P	**P**	**07 13 00.3**	**-0.8**
ITAB	**Concordia**	**38.57**	**138**	P	**P**	**07 13 08.7**	**-0.3**
ITAB	**Concordia**	**38.57**	**138**	*e*P	**P**	**07 13 08.7**	**-0.3**
JANB	**Januaria**	**38.63**	**115**	*e*P	**P**	**07 13 08.6**	**-1.2**
MNTX	**Cornudas Mount**	**39.11**	**325**	P	**P**	**07 13 13.6**	**+0.1**
MVL	**Millersville**	**39.37**	**5**	P	**P**	**07 13 16.5**	**+1.0**
MVL				IAmb	IAmb	07 13 17.2	
	comp=Z,9.8nm,1.0s						
CPSB	**Cacapava Do Su**	**39.91**	**143**	*e*P	**P**	**07 13 19.6**	**-0.7**
DIAM	**Diamantina, MG**	**40.41**	**120**	*e*P	**P**	**07 13 24.3**	**-0.4**
PARB	**Paraibuna**	**41.08**	**128**	*e*P	**P**	**07 13 28.8**	**-1.3**
NBPN	**Ponto Novo - B**	**41.24**	**107**	*e*P	**P**	**07 13 32.3**	**+0.8**
LL04	**Puerto Octay**	**41.89**	**171**	P	**P**	**07 13 36.9**	**+0.5**
LL04				IAmb	IAmb	07 13 37.7	
	comp=Z,9.0nm,0.8s						
PLCA	**Paso Flores**	**42.03**	**169**	P	**P**	**07 13 37.8**	**+0.1**
	comp=Z,8.4nm,0.8s,baz=346,slow=9.8,SNR=23						
	comp=Z,8.4nm,0.8s						
PLCA	**Paso Flores**	**42.03**	**169**	P	**P**	**07 13 38.5**	**+0.8**
PLCA				IAmb	IAmb	07 13 39.5	
	comp=Z,9.6nm,0.8s						
PLCA	**Paso Flores**	**42.03**	**169**	*e*P	**P**	**07 13 38.7**	**+1.0**
ANMO	**Albuquerque**	**42.12**	**327**	LR	LR	07 31 37.1	
	comp=Z,21nm,18.1s,baz=161,slow=37						
ANMO	**Albuquerque**	**42.12**	**327**	P	**P**	**07 13 40.3**	**+1.7**
ANMO				IAmb	IAmb	07 13 46.0	
	comp=Z,11nm,0.9s						
GDU01	**Guandu, BA**	**42.56**	**111**	*e*P	**P**	**07 13 41.6**	**-0.7**
CMC01	**Camacan, BA**	**43.09**	**113**	*e*P	**P**	**07 13 46.2**	**-0.3**
NBLA	**Lagarto - SE**	**43.58**	**107**	*e*P	**P**	**07 13 49.2**	**-1.4**
RIB01	**Linhares ES**	**43.66**	**119**	*e*P	**P**	**07 13 51.8**	**+0.7**
SDCO	**Great Sand Dun**	**43.77**	**331**	P	**P**	**07 13 51.6**	**-0.5**
SDCO				IAmb	IAmb	07 13 59.5	
	comp=Z,7.8nm,0.9s						
RCBR	**Riachuelo**	**44.56**	**99**	LR	LR	07 33 03.9	
	comp=Z,128nm,19.7s,baz=48,slow=37						
NBAN	**Anadia - AL**	**44.77**	**104**	*e*P	**P**	**07 14 00.1**	**0.0**
E43A	**Lone Tree Farm**	**46.00**	**353**	P	**P**	**07 14 08.3**	**-0.9**
E43A				IAmb	IAmb	07 14 08.6	
	comp=Z,5.1nm,0.7s						
PFO	**Pinyon Flats O**	**47.36**	**318**	LR	LR	07 31 22.2	
	comp=Z,22nm,20.6s,baz=148,slow=32						
PDAR	**Pinedale Array**	**49.61**	**332**	P	**P**	**07 14 37.6**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=128,slow=5.8,SNR=2.6						
PDAR				LR	LR	07 36 48.9	
	comp=Z,43nm,20.6s,baz=146,slow=38						
	comp=Z,1.1nm,0.9s						
ELK	**Elko**	**51.11**	**326**	LR	LR	07 35 59.1	
	comp=Z,23nm,18.3s,baz=141,slow=36						
NVAR	**Mina Array Bea**	**51.44**	**322**	P	**P**	**07 14 51.6**	**0.0**
	comp=Z,0.8nm,0.6s,baz=126,slow=7.0,SNR=2.8						
	comp=Z,0.8nm,0.6s						
GCMT	**Greycliff**	**52.00**	**334**	P	**P**	**07 14 56.3**	**+0.8**
HLID	**Hailey**	**52.61**	**329**	P	**P**	**07 15 02.0**	**+1.9**
HLID				IAmb	IAmb	07 15 06.9	
	comp=Z,5.0nm,0.9s						
BCYI	**Bear Canyon**	**52.63**	**330**	P	**P**	**07 15 00.1**	**-0.2**
SCHQ	**Schefferville**	**55.14**	**9**	LR	LR	07 38 33.0	
	comp=Z,14nm,20.8s,baz=101,slow=36						
YBH	**Yreka Blue Hor**	**56.12**	**322**	LR	LR	07 38 00.4	
	comp=Z,33nm,18.7s,baz=142,slow=35						
YKA	**Yellowknife Ar**	**66.95**	**343**	P	**P**	**07 16 36.6**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=136,slow=6.1,SNR=5.2						
	comp=Z,0.7nm,0.7s						
PPT	**Papeete**	**70.67**	**251**	LR	LR	07 40 28.9	
	comp=Z,84nm,18.2s,baz=17,slow=30						
DBIC	**Dimbokro**	**75.25**	**83**	LR	LR	07 49 35.4	
	comp=Z,43nm,18.3s,baz=270,slow=35						
DAWY	**Dawson**	**76.49**	**337**	P	**P**	**07 17 36.4**	**+0.7**
INK	**Inuvik**	**76.65**	**342**	P	**P**	**07 17 37.7**	**+1.3**
INK				IAmb	IAmb	07 17 43.2	
	comp=Z,4.7nm,1.1s						
A36M	**Sachs Harbour**	**76.76**	**347**	P	**P**	**07 17 36.4**	**-0.6**
BCAR	**Beaver Creek A**	**77.00**	**336**	P	**P**	**07 17 39.6**	**+0.9**
GLB	**Gilahina Butte**	**77.19**	**334**	P	**P**	**07 17 41.0**	**+1.2**
GLB				IAmb	IAmb	07 17 46.0	
	comp=Z,3.9nm,0.9s						
MDT	**Midelt**	**77.48**	**57**	LR	LR	07 51 43.8	
	comp=Z,16nm,19.3s,baz=286,slow=36						
EGAK	**Eagle**	**77.50**	**337**	P	**P**	**07 17 42.2**	**+0.9**
EGAK				IAmb	IAmb	07 17 48.1	
	comp=Z,6.1nm,1.1s						
ESDC	**Sonseca Array**	**78.94**	**50**	P	**P**	**07 17 48.9**	**-1.0**
	comp=Z,2.1nm,1.0s,baz=269,slow=6.1,SNR=7.4						
ESDC				LR	LR	07 50 32.1	
	comp=Z,13nm,19.4s,baz=224,slow=34						
	comp=Z,2.1nm,1.0s						
ESDC	**Sonseca Array**	**78.94**	**50**	P	**P**	**07 17 50.1**	**+0.2**
ILAR	**Eielson Array**	**79.75**	**336**	P	**P**	**07 17 53.0**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=134,slow=3.9,SNR=4.0						
ILAR				LR	LR	07 55 20.2	
	comp=Z,31nm,18.7s,baz=196,slow=37						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.85**	**77**	P	**P**	**07 18 04.9**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=282,slow=6.5,SNR=41						
	comp=Z,2.2nm,0.5s						
SNAA	**Sanae**	**86.55**	**162**	P	**P**	**07 18 29.6**	**+0.8**
TSUM	**Tsumeb**	**97.43**	**109**	LR	LR	08 02 09.0	
	comp=Z,40nm,18.1s,baz=170,slow=35						
KURK	**Kurchatov**	**125.75**	**17**		**PKPdf**	**07 24 45.7**	**-2.1**
KURBB	**Kurchatov Arra**	**125.81**	**17**	PKP	**PKPdf**	**07 24 45.7**	**-2.2**
	comp=Z,1.0nm,0.5s,baz=325,slow=2.3,SNR=10						
MKAR	**Makanchi Array**	**130.34**	**16**	PKP	**PKPdf**	**07 24 55.3**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=340,slow=3.2,SNR=3.9						
ASAR	**Alice Springs**	**139.85**	**233**	PKhKP	PKPpre	07 25 05.3	
	comp=Z,0.1nm,0.4s,baz=120,slow=1.9,SNR=1.6						
WRA	**Warramunga Arr**	**141.22**	**238**	PKhKP	PKPpre	07 25 12.5	
	comp=Z,0.4nm,0.6s,baz=114,slow=2.1,SNR=2.5						

IDC 19 07:14:03.4±1.9**, 13°.10S**×**166°.39E, h0**^{km}**, mb3.3**/3**, mbtmp3.3**/4**, ML2.7**/1**, Error ellipse: s-maj=48.3km s-min=31.6km az=110.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.93**	**180**	Pn	Pn	07 16 13.4	-0.4
	0.1nm,0.3s,baz=348,slow=19,SNR=1.5						
DZM				Sn	Sn	07 17 57.7	+2.5
	0.1nm,0.3s,baz=342,slow=20,SNR=1.2						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**31.43**	**253**	P	P	07 20 26.9	+0.2
	0.2nm,0.7s,baz=86,slow=8.4,SNR=1.2						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**32.49**	**246**	P	P	07 20 35.8	-0.2
	0.3nm,0.8s,baz=74,slow=9.7,SNR=4.8						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**85.25**	**18**	P	P	07 26 41.6	0.0
	0.2nm,0.7s,baz=234,slow=4.6,SNR=4.1						
	0.2nm,0.7s						

IDC ***19*** *07:18:29.5±5.2, 12°.25S×167°.41E, h337*^{km}*±54*^{km}*, mb3.3/9, mbtmp3.9/10, Error ellipse: s-maj=37.1km s-min=22.9km az=155.0*

ISC 19 07:18:25.7±0.8**, 12°.3S**±0°.1×**167°.5E**±0°.2**, h300**^{km}**, n10,** σ**1**^{s}**.05**/10**, mb3.5**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.82**	**186**	P	**P**	**07 20 45.1**	**-0.4**
	1.2nm,0.6s,baz=54,slow=14,SNR=1.5						
CTA	**Charters Tower**	**21.85**	**246**	P	**P**	**07 22 55.1**	**+0.5**
	1.3nm,0.5s,baz=45,slow=12,SNR=1.3						
	1.3nm,0.5s						
STKA	**Stephens Creek**	**30.83**	**227**	P	**P**	**07 24 15.9**	**+1.4**
	2.8nm,0.7s,baz=59,slow=9.5,SNR=4.7						
	2.8nm,0.7s						
WRA	**Warramunga Arr**	**32.75**	**252**	P	**P**	**07 24 30.4**	**-1.0**
	0.4nm,0.4s,baz=85,slow=8.4,SNR=4.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**33.85**	**246**	P	**P**	**07 24 40.0**	**-0.9**
	0.5nm,0.6s,baz=74,slow=9.3,SNR=12						
	0.5nm,0.6s						
VNDA	**Vanda**	**65.33**	**181**	P	**P**	**07 28 35.3**	**-0.4**
	0.3nm,0.3s,baz=37,slow=5.1,SNR=2.2						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**84.11**	**18**	P	**P**	**07 30 22.8**	**-0.1**
	2.3nm,0.7s,baz=246,slow=4.9,SNR=26						
	2.3nm,0.7s						
NVAR	**Mina Array Bea**	**85.47**	**49**	P	**P**	**07 30 31.9**	**+1.3**
	0.3nm,0.7s,baz=244,slow=10.0,SNR=3.0						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**95.24**	**27**	P	**P**	**07 31 14.0**	**-1.3**
	0.4nm,0.5s,baz=252,slow=5.1,SNR=3.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**95.60**	**317**	P	**P**	**07 31 17.5**	**+0.2**
	0.4nm,0.6s,baz=79,slow=6.3,SNR=4.1						
	0.4nm,0.6s						

IDC ***19*** *07:18:43.6±3.0, 54°.39N×87°.92E, h0*^{km}*, mbtmp3.3/3, ML3.0/3, Error ellipse: s-maj=29.1km s-min=23.6km az=59.0*

NNC ***19*** *07:18:49.6±5.6, 54°.17N×87°.26E, h0*^{km}*, mb2.9, mpv2.6, Error ellipse: s-maj=42.6km s-min=29.9km az=25.0, Suspected Mining explosion.*

ISC 19 07:18:42.9±1.3**, 52°.99N**±0°.06×**87°.17E**±0°.07**, h0**^{km}**, n9,** σ**2**^{s}**.52**/12**, 5C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**305**	*i*		07 27 20.0	
	baz=79,slow=323,SNR=1.9						
ZAA0	**Zalesovo Array**	**1.70**	**305**	⇓P	**Pb**	**07 19 14.7**	**-0.3**
	0.3nm,0.5s						
ZAA0				⇓S	**Sb**	**07 19 37.6**	**+0.7**
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**1.70**	**305**	Pg	**Pg**	**07 19 16.0**	**+0.5**
	1.2nm,0.3s,baz=78,slow=17,SNR=10						
ZALV				Lg	Lg	07 19 38.1	
	1.2nm,0.3s,baz=78,slow=29,SNR=7.9						
KURK	**Kurchatov**	**5.77**	**250**	⇑Pn	**Pb**	**07 20 27.0**	**+2.7**
	1.7nm,0.6s						
KURK				⇓Sn	**Sb**	**07 21 36.1**	**+2.3**
	0.3nm,0.4s						
KURK				⇑Lg	Lg	07 22 10.0	
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**5.86**	**250**	Pn	**Pb**	**07 20 25.9**	**+0.1**
	0.1nm,0.3s,baz=56,slow=14,SNR=14						
KURBB				Lg	Lg	07 22 17.1	
	baz=59,slow=33,SNR=4.1						
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**5.86**	**250**	⇓Pn	**Pb**	**07 20 26.7**	**+0.8**
	0.5nm,0.3s						
KURBB				⇓Sn	**Sb**	**07 21 36.4**	**-0.1**
	1.1nm,0.6s						
KURBB				⇓Lg	Lg	07 22 12.0	
	1.2nm,0.6s						
MK31	**Makanchi Array**	**6.96**	**209**	⇑Pn	Pg	07 20 50.8	-5.3
	0.1nm,0.3s,baz=31,slow=15,SNR=3.6						
MK31				⇑Sn	**Sg**	**07 22 22.4**	**-3.8**
	0.7nm,0.7s						
MK31				⇑Lg	Lg	07 23 02.0	
	1.9nm,0.9s						
MKAR	**Makanchi Array**	**6.96**	**209**	Pn	**Pb**	**07 20 47.9**	**+3.4**
	0.1nm,0.3s,baz=28,slow=14,SNR=2.7						
MKAR				Sn	**Sg**	**07 22 22.1**	**-4.1**
	baz=28,slow=28,SNR=2.5						
MKAR				Lg	Lg	07 23 06.4	
	0.1nm,0.3s,baz=33,slow=30,SNR=1.5						
	0.2nm,0.3s						
SONM	**Songino Array**	**13.29**	**105**	Pn	**Pn**	**07 21 52.2**	**-0.6**
	0.4nm,0.3s,baz=313,slow=11,SNR=3.8						
	1.6nm,0.7s						

BEO ***19*** *07:28:52.6±0.7, 41°.10N×19°.76E, h2*^{km}*±2*^{km}*, ML2.3/8*

ATH ***19*** *07:28:54.9, 41°.40N×20°.04E, h9*^{km}*±5*^{km}*, ML2.2/4, Error ellipse: s-maj=11.7km s-min=1.5km az=349.0*

PDG ***19*** *07:28:55.5±0.1, 41°.34N×20°.02E, h2*^{km}*, ML2.5/10, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

SKO ***19*** *07:28:55.1, 41°.22N×19°.90E, h8*^{km}

THE ***19*** *07:28:55.5, 41°.29N×20°.01E, h6*^{km}*±1*^{km}*, ML2.1/4, Error ellipse: s-maj=1.7km s-min=0.6km az=354.0*

ISC 19 07:28:55.4±0.9**, 41°.29N**±0°.03×**20°.01E**±0°.02**, h9**^{km}±6^{km}**, n36,** σ**0**^{s}**.94**/66**, 5C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.12**	**297**	*e*Pg	**Pg**	**07 28 57.7**	**-0.5**
TIR				*e*Sg	**Sg**	**07 29 00.7**	**+0.6**
TIR	**Tirane**	**0.12**	**297**	P	**Pg**	**07 28 58.1**	**-0.1**
TIR				S	**Sg**	**07 28 59.9**	**-0.2**
TIR				AML	AML	07 29 00.8	
	comp=N,7946µm,0.2s						
TIR				AML	AML	07 29 00.9	
	comp=E,7015µm,0.2s						
TIR	**Tirane**	**0.12**	**297**	P	**Pg**	**07 28 58.0**	**-0.1**
TIR				S	**Sg**	**07 29 00.2**	**+0.1**
	comp=E,1µm,0.1s						
TIR	**Tirane**	**0.12**	**297**	*i* Pg	**Pg**	**07 28 58.0**	**-0.1**
PHP	**Peshkopia**	**0.51**	**40**	P	**Pg**	**07 29 05.2**	**-0.1**
PHP				S	**Sg**	**07 29 13.0**	**+1.0**
OHR	**Ohrid**	**0.62**	**107**	*e*Pg	**Pg**	**07 29 07.5**	**0.0**
OHR				*e*Sg	**Sb**	**07 29 17.5**	**+0.1**
OHR	**Ohrid**	**0.62**	**107**	*i* Pg	**Pg**	**07 29 07.4**	**0.0**
OHR				*i* Sg	**Sb**	**07 29 17.6**	**+0.1**
DRME	**Dracevica, Mon**	**1.08**	**326**	⇑*i*Pg	**Pg**	**07 29 14.7**	**-1.5**
DRME				*i* Sg	**Sb**	**07 29 31.5**	**+0.8**
FNA	**Florina**	**1.15**	**116**	P	**Pg**	**07 29 16.3**	**-1.2**
FNA				S	**Sn**	**07 29 33.8**	**0.0**
FNA				AML	AML	07 29 38.1	
	comp=N,191µm,0.4s						
FNA				AML	AML	07 29 39.1	
	comp=E,269µm,0.3s						
FNA	**Florina**	**1.15**	**116**	P	**Pg**	**07 29 16.7**	**-0.9**
FNA				S	**Sn**	**07 29 33.8**	**0.0**
	comp=E,112nm,0.4s						
FNA	**Florina**	**1.15**	**116**	*i* Pg	**Pg**	**07 29 16.7**	**-0.9**
NEST	**Nestorio**	**1.18**	**138**	P	**Pb**	**07 29 17.9**	**-0.1**
NEST				AML	AML	07 29 41.4	
	comp=E,169µm,0.7s						
NEST				AML	AML	07 29 41.5	
	comp=N,102µm,0.4s						
NEST	**Nestorio**	**1.18**	**138**	P	**Pb**	**07 29 18.0**	**-0.1**
NEST				S	**Sn**	**07 29 34.6**	**+0.1**
	comp=N,50nm,0.5s						
LSK	**Leskovik**	**1.23**	**158**	P	**Pb**	**07 29 18.6**	**-0.3**
LSK				S	**Sn**	**07 29 35.6**	**-0.1**
	comp=N,78nm,0.7s						
PDG	**Podgorica**	**1.27**	**334**	*e*Pg	**Pn**	**07 29 17.4**	**-1.9**
PDG				*e*Sg	**Sn**	**07 29 37.5**	**+1.0**
TTG	**Podgorica**	**1.27**	**334**	⇑*i*Pg	**Pn**	**07 29 18.0**	**-1.3**
TTG				*i* Sg	**Sn**	**07 29 37.3**	**+0.8**
PVY	**Plav**	**1.30**	**358**	⇓*i*Pg	**Pn**	**07 29 18.6**	**-1.3**
PVY				*i* Sg	**Sn**	**07 29 38.3**	**+0.8**
BUM	**Brajici-Budva**	**1.31**	**321**	⇓*i*Pg	**Pn**	**07 29 18.9**	**-1.1**
BUM				*i* Sg	**Sn**	**07 29 39.1**	**+1.5**
CEME	**Cevo**	**1.49**	**327**	⇑*i*Pg	**Pn**	**07 29 22.3**	**-0.2**
CEME				*i* Sg	**Sg**	**07 29 45.2**	**+1.8**
IVA	**Berane**	**1.58**	**357**	⇓*i*Pg	**Pn**	**07 29 24.0**	**+0.3**
IVA				*i* Sg	**Sg**	**07 29 47.8**	**+1.6**
KEK	**Kerkira**	**1.59**	**186**	P	**Pb**	**07 29 24.9**	**0.0**
KEK				AML	AML	07 29 56.7	
	comp=E,83µm,0.5s						
KEK				AML	AML	07 29 58.0	
	comp=N,63µm,0.7s						
KOME	**Kolasin**	**1.60**	**347**	⇓*i*Pg	**Pn**	**07 29 24.1**	**+0.1**
KOME				*i* Sg	**Sg**	**07 29 48.7**	**+1.9**
HCY	**Herceg Novi**	**1.61**	**316**	⇑*i*Pn	**Pn**	**07 29 24.6**	**+0.5**
HCY				*i* Sn	**Sg**	**07 29 49.2**	**+1.9**
SCTE	**Santa Cesarea**	**1.69**	**224**	P	**Pg**	**07 29 27.5**	**-0.3**
NKY	**Niksic**	**1.70**	**334**	⇑*i*Pn	**Pn**	**07 29 26.0**	**+0.6**
NKY				*i* Sn	**Sg**	**07 29 51.2**	**+1.3**

TREB	Trebinje	1.88	320	ePn	Pn	07 29 25.9	-1.9
TREB				eSn	Sn	07 29 51.6	-0.1
BRY	Bratogost	1.94	326	⇓iPn	Pb	07 29 30.0	-1.1
BRY				i Sn	Sg	07 29 57.3	-0.6
SJES	Sjenica	1.97	359	ePn	Pn	07 29 29.7	+0.6
SJES				eSn	Sb	07 29 56.7	+0.5
BARS	Barje	2.03	41	ePn	Pb	07 29 31.6	-0.9
BARS				eSn	Sg	07 30 01.1	+0.4
SELS	Selova	2.09	23	ePn	Pn	07 29 31.8	+1.0
SELS				eSn	Sg	07 30 01.6	-1.1
BOSS	Bosilegrad	2.20	56	ePn	Pn	07 29 32.7	+0.5
IVAS	Ivanjica	2.28	3	ePn	Pn	07 29 33.5	+0.1
IVAS				eSn	Sb	07 30 04.6	-0.7
STON	Ston	2.33	313	ePn	Pn	07 29 35.4	+1.5
STON				Sn	Sn	07 30 02.2	-0.5
LSTV	Lastovo	2.75	303	ePn	Pn	07 29 40.3	+0.6
LSTV				Sn	Sn	07 30 11.1	-2.0
RICI	Ricice	3.06	317	ePn	Pn	07 29 45.0	+1.0
RICI				Sn	Sn	07 30 20.7	-0.1
KIJV	Kijevo	3.79	317	ePn	Pn	07 29 55.0	+0.9
KIJV				Sn	Sn	07 30 39.0	+0.1

IDC 19 07:55:32.9±341.0**, 56°.88N**×**39°.90E, h0^{km}, Error ellipse: s-maj=69.8km s-min=34.1km az=94.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	1.48	265	i		08 05 20.0	
	0.1nm,0.7s,baz=83,slow=322,SNR=1.5						
I37NO	I37NO	15.47	331	i		09 24 04.1	
	baz=132,slow=328,SNR=2.0						
I26DE	FREYUNG INFRAS	17.64	254	i		09 45 50.0	
	baz=52,slow=334,SNR=0.7						

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*NIED **19** 08:16:43.8, 37°.89N×144°.05E, h42^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.97; $M_{\theta\theta}$0.10; $M_{\phi\phi}$0.87; $M_{r\theta}$0.62; $M_{\theta\phi}$0.32; $M_{\phi r}$0.71; Fault plane solution: $M_0$1.36000×10^{14} NP1:ϕ_s7.00000°, δ25.00000°, λ-115.00000°. NP2:ϕ_s214.00000°, δ67.00000°, λ-79.00000°.*

JMA 19 08:16:43.8±0.1**, 37°.9N**±0°.6×**144°.1E**±0°.7**, h42^{km}, MV3.5**/29**, FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.08	282	eP	Pn	08 17 17.2	+1.1
JIKH				eS	Sn	08 17 42.3	+1.5
JIO	Ouri	2.20	286	eP	Pn	08 17 19.0	+1.2
JIO				S	Sn	08 17 45.1	+1.4
OFUJ	Ofunato	2.21	303	eP	Pn	08 17 19.3	+1.3
OFUJ				eS	Sn	08 17 45.4	+1.3
JKMT	Kesennumamotoy	2.22	295	eP	Pn	08 17 19.2	+1.1
JKMT				eS	Sn	08 17 45.9	+1.6
JMK	Ichinoseki	2.46	296	eP	Pn	08 17 22.9	+1.5
JMK				eS	Sn	08 17 51.9	+1.7
JOM	Ohasama	2.67	307	eP	Pn	08 17 26.2	+1.9
JOM				eS	Sn	08 17 57.7	+2.3
JFT	Otama	2.97	264	eP	Pn	08 17 29.7	+1.4
JFT				S	Sn	08 18 04.9	+2.2
JYK	Kaneyama	3.07	291	eP	Pn	08 17 31.9	+2.1
JYK				S	Sn	08 18 07.9	+2.6
JANG	Nango	3.16	322	eS	Sn	08 18 07.8	+0.2
JOT	Ohata	4.18	327	eS	Sn	08 18 32.2	-0.4
JRY	Ryogami san	4.53	247	P	Pn	08 17 50.7	+0.9
JRY				S	Sn	08 18 40.8	-0.4
JCH	Churui	4.75	354	eP	Pn	08 17 52.4	-0.3
JCH				eS	Sn	08 18 43.3	-3.1
NEM2	Nemuro 2	5.62	13	eP	Pn	08 18 02.4	-2.3
NEM2				eS	Sn	08 19 02.0	-5.9

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*IDC **19** 08:21:42.6±0.9, 33°.06N×132°.60E, h0^{km}, mb3.9/6, mbtmp3.8/8, ML3.5/2, MS3.1/7, Error ellipse: s-maj=18.7km s-min=13.9km az=20.0*

*NIED **19** 08:21:48.1, 33°.11N×132°.41E, h36^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.11; $M_{\theta\theta}$0.06; $M_{\phi\phi}$1.05; $M_{r\theta}$0.17; $M_{\theta\phi}$0.06; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.10000×10^{15} NP1: ϕ_s356.00000°, δ44.00000°, λ-102.00000°. NP2: ϕ_s192.00000°, δ47.00000°, λ-79.00000°.*

*JMA **19** 08:21:48.1±0.0, 33°.1N±0°.1×132°.4E±0°.1, h36^{km}, MD4.0/39, MV4.3/39, SW EHIME PREF*

JMA Felt III J1 at SW EHIME PREF .

ISC 19 08:21:47.6±1.1**, 33°.08N**±0°.05×**132°.42E**±0°.04**, h33^{km}**±4^{km}**, n44, σ0^{s}.84**/25**, mb3.9**/7**, 5D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UWA2	Uwa jima 2	0.22	53	⇓P	Pn	08 21 54.7	+0.6
UWA2				⇓eS	Sb	08 21 59.5	+0.4
UWA2	Uwa jima 2	0.22	53	A	A	08 21 54.7	
	comp=E,39nm,0.7s,comp=E,28nm,0.2s						
JTO	Tosashimizu	0.39	124	P	Pn	08 21 57.4	+0.4
JTO				eS	Sb	08 22 04.0	+1.3
JTO	Tosashimizu	0.39	124	A	A	08 21 57.4	
	comp=E,49nm,0.7s,comp=E,41nm,1.1s						
JNA	Nagahama	0.48	6	⇓P	Pb	08 21 57.7	-0.1
JNA				⇓S	Sb	08 22 04.7	-0.3
JNA	Nagahama	0.48	6	A	A	08 21 57.7	
	comp=E,14nm,0.3s,comp=E,18nm,0.7s						
JSKE	Saikikamae	0.52	237	A	A	08 21 58.9	
	comp=E,12nm,0.7s,comp=E,8.0nm,0.4s						
JUS	Usuki	0.56	269	P	Pn	08 21 59.2	0.0
JUS				eS	Sb	08 22 07.7	+0.7
JUS	Usuki	0.56	269	A	A	08 21 59.2	
	comp=E,19nm,1.6s,comp=E,15nm,0.9s						
JKU	Kubokawa	0.59	67	P	Pn	08 21 59.9	+0.2
JKU				eS	Sn	08 22 08.1	0.0
JKU	Kubokawa	0.59	67	A	A	08 21 59.9	
	comp=E,20nm,1.7s,comp=E,21nm,1.0s						
JET	Tanbara	0.88	37	P	Pn	08 22 03.6	0.0
JET				S	Sn	08 22 15.1	-0.1
JET	Tanbara	0.88	37	A	A	08 22 03.6	
	comp=E,13nm,0.3s,comp=E,15nm,0.3s						
JBEP	Beppuamama	0.88	287	A	A	08 22 04.0	
	comp=E,19nm,0.8s,comp=E,29nm,0.4s						
JKI	Kunimi	0.90	308	A	A	08 22 04.1	
	comp=E,11nm,0.4s,comp=E,16nm,0.7s						
JKIT	Kitakata	0.93	241	A	A	08 22 05.0	
	comp=E,7.0nm,0.6s,comp=E,7.0nm,0.4s						
JKHR	Kochiharuno	1.00	64	A	A	08 22 06.0	
	comp=E,8.0nm,0.6s,comp=E,10.0nm,0.8s						
JHM	Kurahashi	1.06	5	⇓P	Pn	08 22 06.2	+0.1
JHM	Kurahashi	1.06	5	A	A	08 22 06.2	
	comp=E,6.0nm,1.3s,comp=E,2.0nm,0.8s						
JNU	Nakatsue	1.29	272	Pg	Pn	08 22 09.8	+0.4
	301nm,0.3s,baz=53,slow=4.2,SNR=657						
JNU				Lg	Lg	08 22 29.1	
	308nm,0.3s,baz=6.6,slow=22,SNR=8.0						
JMN	Monobe	1.38	62	A	A	08 22 11.6	
	comp=E,6.0nm,0.6s,comp=E,6.0nm,0.7s						
MRT2	Murotomisaki 2	1.48	78	A	A	08 22 13.1	
	comp=E,4.0nm,5.4s,comp=E,3.0nm,1.3s						
JHT	Toyohira	1.58	0	A	A	08 22 14.2	
	comp=E,3.0nm,0.3s,comp=E,3.0nm,0.6s						
JTA	Tamana	1.59	266	A	A	08 22 14.6	
	comp=E,3.0nm,4.6s,comp=E,3.0nm,1.5s						
JTZ	Takazaki	1.63	224	A	A	08 22 15.5	
	comp=E,4.0nm,2.5s,comp=E,2.0nm,4.7s						
JJG	Jouge	1.67	21	A	A	08 22 15.6	
	comp=E,3.0nm,0.2s,comp=E,3.0nm,0.3s						
JJS	Sakaide	1.81	44	A	A	08 22 17.6	
	comp=E,3.0nm,0.6s,comp=E,5.0nm,2.2s						
KSRS	Korea Array	5.70	321	Pn	Pn	08 23 11.7	+1.7
	1.0nm,0.3s,baz=143,slow=14,SNR=6.8						
KSRS				Sn	Sn	08 24 15.6	+1.4
	1.6nm,0.3s,baz=148,slow=18,SNR=5.1						
KSRS				Lg	Lg	08 24 48.2	
	1.1nm,0.3s,baz=143,slow=29,SNR=5.4						
KSRS				LR	LR	08 25 39.0	
	comp=Z,148nm,20.4s,baz=145,slow=41						
	1.7nm,0.3s						
MJAR	Matsushiro Arr	5.88	52	Pn	Pn	08 23 13.3	+0.8
	0.9nm,0.3s,baz=244,slow=14,SNR=29						
MJAR				Lg	Lg	08 24 55.1	
	0.1nm,0.3s,baz=223,slow=28,SNR=3.0						
MJAR				LR	LR	08 25 48.2	
	comp=Z,167nm,18.1s,baz=214,slow=42						
JCJ	Chichijima	10.35	123	LR	LR	08 27 48.8	
	comp=Z,76nm,19.7s,baz=314,slow=36						
ASAJ	Asahikawa	13.58	33	LR	LR	08 29 57.2	
	comp=Z,68nm,18.2s,baz=107,slow=37						
KLR	Kul'dur	16.14	358	Pn	Pn	08 25 33.1	+1.3
	0.3nm,0.3s,baz=175,slow=13,SNR=3.5						
KLR				LR	LR	08 31 23.1	
	comp=Z,42nm,20.9s,baz=207,slow=36						
	0.6nm,0.4s						
SONM	Songino Array	24.53	315	P	P	08 27 03.6	-0.6
	1.8nm,0.5s,baz=106,slow=9.1,SNR=3.0						
	1.8nm,0.5s						
PETK	Petropavlovsk-	26.99	35	LR	LR	08 37 22.0	
	comp=Z,41nm,21.5s,baz=257,slow=35						
H11N2	WAKE ISLAND Hy	33.46	105	T	T	09 03 18.3	
	baz=302,slow=75						
H11N1	WAKE ISLAND Hy	33.47	105	T	T	09 03 20.2	
	baz=302,slow=75						
H11N3	WAKE ISLAND Hy	33.48	105	T	T	09 03 19.3	
	baz=302,slow=75						
KURBB	Kurchatov Arra	42.78	311	P	P	08 29 40.2	-1.6
	0.4nm,0.7s,baz=99,slow=9.1,SNR=1.8						
WRA	Warramunga Arr	52.76	178	P	P	08 30 59.0	-0.4
	1.3nm,0.8s,baz=360,slow=7.8,SNR=12						
	1.3nm,0.8s						
ASAR	Alice Springs	56.45	178	P	P	08 31 26.1	-0.1
	1.3nm,0.8s,baz=11,slow=12,SNR=22						
	1.3nm,0.8s						
ILAR	Eielson Array	56.70	30	P	P	08 31 27.2	-0.3
	0.5nm,0.8s,baz=288,slow=5.7,SNR=5.9						
	0.5nm,0.8s						
FINES	FINESS Array B	68.72	330	P	P	08 32 46.7	-0.9
	1.2nm,0.5s,baz=64,slow=8.7,SNR=5.4						
	1.2nm,0.5s						
NVAR	Mina Array Bea	83.19	48	P	P	08 34 11.7	+0.8
	0.5nm,0.6s,baz=309,slow=6.0,SNR=6.6						
	0.5nm,0.6s						
ATD	Arta Tunnel	83.45	279	LR	LR	09 13 48.0	
	comp=Z,48nm,18.1s,baz=355,slow=37						

IDC 19 08:30:35.1±3.4**, 55°.55N**×**86°.12E, h0^{km}, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=30.0km s-min=25.7km az=44.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.77	206	i		08 42 09.7	
	baz=24,slow=326,SNR=2.4						
ZALV	Zalesovo Beam	1.77	206	Pn	Pn	08 31 06.1	-0.8
	3.6nm,0.3s,baz=27,slow=16,SNR=19						
ZALV				Lg	Lg	08 31 31.1	
	3.4nm,0.3s,baz=25,slow=29,SNR=9.9						
KURBB	Kurchatov Arra	6.72	226	Pn	Pn	08 32 15.0	+0.1
	0.1nm,0.3s,baz=43,slow=14,SNR=8.0						
	0.6nm,0.4s						
MKAR	Makanchi Array	9.09	197	Pn	Pn	08 32 47.6	+0.2
	0.1nm,0.3s,baz=16,slow=12,SNR=4.2						
	0.2nm,0.4s						

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*KRNET **19** 08:43:59.3±0.1, 39°.56N×75°.47E, mb3.0*

*SOME **19** 08:44:01.9, 39°.83N×75°.43E, h10^{km}*

*NNC **19** 08:44:03.4±3.5, 39°.94N×75°.29E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=24.0km s-min=19.9km az=169.0*

ISC 19 08:43:59.7±1.9**, 39°.82N**±0°.08×**75°.44E**±0°.04**, h10^{km}, n30, σ1^{s}.27**/47**, 22C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	2.15	290	⇑iP	Pg	08 44 40.3	-0.6
	baz=96						
OHH				⇑iS	Sg	08 45 09.7	+1.0
	baz=96						
ARLS	Aral	2.21	338	⇑iP	Pg	08 44 42.5	+0.5
	baz=40						
ARLS				⇑iS	Sg	08 45 14.0	+3.3
	baz=40						
ULHL	Ulahol	2.50	14	P	Pg	08 44 48.0	+0.4
	SNR=5.1						
ULHL	Ulahol	2.50	14	⇑iP	Pg	08 44 46.6	-1.0
	baz=12						
ULHL				⇑iS	Sg	08 45 21.2	+1.1
	baz=12						
UCH	Uchtor	2.51	344	P	Pg	08 44 46.5	-1.2
	SNR=18						
UCH	Uchtor	2.51	344	⇑iP	Pg	08 44 47.0	-0.7
	baz=45						
UCH				⇑iS	Sg	08 45 21.9	+1.6
	baz=45						
TARG	Taragay, Kyrgy	2.62	43	⇑iP	Pb	08 44 47.6	+0.6
	baz=39						
TARG				⇑iS	Sg	08 45 22.9	-1.1
	baz=39						
AML	Almayashu	2.66	331	P	Pb	08 44 48.5	+0.8
	SNR=6.4						
KDJ	Kajisay	2.66	29	⇑iP	Pb	08 44 48.6	+1.1
	baz=27						
KDJ				⇑iS	Sg	08 45 24.2	-1.0
	baz=27						
BOOM	Boomskoye usch	2.70	8	⇑eP	Pb	08 44 49.4	+1.3
	baz=7.0						
BOOM				⇑iS	Sg	08 45 25.9	-0.4
	baz=7.0						
KBK	Karagaybulak	2.86	353	⇑eP	Pb	08 44 51.8	+0.9
	baz=53						
KBK				⇑iS	Sg	08 45 30.4	-1.2
	baz=53						
AAK	Ala-Archa	2.91	346	P	Pb	08 44 52.7	+1.1
	SNR=6.7						
AAK	Ala-Archa	2.91	346	⇑eP	Pb	08 44 52.3	+0.6
	baz=47						
AAK				⇑iS	Sg	08 45 31.2	-1.8
	baz=47						
TKM2	Tokmak 2	3.10	2	P	Pb	08 44 55.0	-0.1
	SNR=6.8						
TKM2	Tokmak 2	3.10	2	⇑Pg	Pb	08 44 54.4	-0.7
	1.6nm,0.3s						
TKM2				⇑Lg	Lg	08 45 35.6	
	2.8nm,0.5s						
TKM2	Tokmak 2	3.10	2	⇑eP	Pb	08 44 55.1	0.0
	baz=2.0						
TKM2				⇑eS	Sg	08 45 36.3	-3.0
	baz=2.0						
KST	Kastek	3.25	7	eP	Pg	08 45 02.9	+1.0
	2.9nm,0.4s						
KST				eS	Sg	08 45 46.3	+2.3
	6.0nm,0.4s						
KST	Kastek	3.25	7	Pg	Pg	08 45 02.2	+0.3
	6.1nm,0.2s						
KST				Lg	Lg	08 45 45.7	
	6.0nm,0.4s						
MRKS	Merke	3.37	331	eP	Pg	08 45 02.5	-1.7
	3.5nm,0.5s						
MRKS				eS	Sg	08 45 45.6	-2.1
	4.9nm,0.5s						
MRKS	Merke	3.37	331	Pg	Pg	08 45 02.2	-2.0
	3.5nm,0.5s						
MRKS				Lg	Lg	08 45 45.5	
	3.6nm,0.5s						
TNSS	Tian-Shan	3.41	19	eP	Pg	08 45 05.8	+0.7
	3.2nm,0.3s						
TNSS				eS	Sg	08 45 51.2	+2.0
	2.3nm,0.3s						
TNSS	Tian-Shan	3.41	19	Pg	Pg	08 45 04.9	-0.2
	3.2nm,0.3s						
TNSS				Lg	Lg	08 45 50.0	
	2.3nm,0.3s						
MDOK	Medeo	3.56	19	eP	Pg	08 45 07.7	-0.1
	1.5nm,0.2s						
MDOK				eS	Sg	08 45 54.3	+0.4
	5.4nm,0.6s						
MDOK	Medeo	3.56	19	Pg	Pg	08 45 07.5	-0.3
	2.2nm,0.3s						
MDOK				Lg	Lg	08 45 54.0	
	5.4nm,0.6s						
KRBS	Karabastau	3.88	3	eP	Pg	08 45 12.9	-1.1
	2.7nm,0.3s						
KRBS				eS	Sg	08 46 03.9	-0.3
	2.2nm,0.7s						
KRBS	Karabastau	3.88	3	Pg	Pg	08 45 12.9	-1.1
	2.7nm,0.3s						
KRBS				Lg	Lg	08 46 03.9	
	2.2nm,0.7s						
KTBS	Karatobe	4.00	13	eP	Pg	08 45 15.5	-0.8
	2.2nm,0.3s						
KTBS				eS	Sg	08 46 08.1	-0.1
	5.5nm,0.5s						
KTBS	Karatobe	4.00	13	Pg	Pg	08 45 15.5	-0.8
	2.2nm,0.3s						
KTBS				Lg	Lg	08 46 08.1	
	5.5nm,0.5s						
PDGK	Podgornoye	4.64	40	Pg	Pg	08 45 27.2	-1.4
	0.4nm,0.3s						
PDGK				Lg	Lg	08 46 28.2	
	1.0nm,0.3s						
IUG	Iuzhnay	4.71	301	eP	Pg	08 45 28.9	-0.9
	46nm,0.4s						
IUG				eS	Sg	08 46 31.2	+0.5
	5.1nm,0.4s						

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*DJA **19** 08:54:05.5±0.5, 1°S±3°×12°7E±°, h14^{km}±4^{km}, M4.3/11, mb5.0/2, mB5.1/2, MLv4.0/11, Mw(mB)4.5/2*

*IDC **19** 08:54:10.8±2.8, 1°.13S×126°.83E, h57^{km}±30^{km}, mb3.6/7, mbtmp4.0/9, ML4.0/2, Error ellipse: s-maj=20.1km s-min=18.0km az=84.0*

ISC 19 08:54:06.5±0.8**, 1°.00S**±0°.04×**127°.08E**±0°.07**, h34^{km}, n18, σ2^{s}.48**/18**, mb3.9**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	0.55	49	P	Pb	08 54 19.2	+1.2
LBMI				S	Sb	08 54 28.6	+2.7
SANI	Sanana	1.51	226	P	Pn	08 54 29.7	-1.5
TNTI	Ternate	1.78	9	P	Pb	08 54 34.9	-3.7
TNTI				S	Sn	08 54 55.8	-0.6
AAI	Ambon	2.89	157	P	Pb	08 54 54.8	-2.7
MSAI	Masohi	2.97	142	P	Pb	08 54 55.8	-3.1
KMSI	Cibinong	3.47	297	P	Pn	08 54 54.2	-4.0
SWI	Sorong	4.18	88	P	Pn	08 55 12.7	+4.7
SIJI	Sorong	4.19	88	P	Pb	08 55 16.2	-3.4
	5.9nm,0.3s,baz=246,slow=7.3,SNR=11						
SIJI				S	Sb	08 56 07.1	-2.6
	4.8nm,0.3s,baz=277,slow=22,SNR=1.0						
	22nm,0.4s						
SPSI	Sidrap Palu	7.88	248	P	Pn	08 55 57.8	-1.0
	0.6nm3µm131nm,0.5s						
BKSI	Bulukumba	8.17	238	P	Pn	08 56 03.6	+0.8
KAPI	Kappang	8.33	241	P	Pn	08 56 05.6	+0.5
	2.7nm,0.3s,baz=62,slow=7.7,SNR=7.3						
	18nm,0.5s						
WRA	Warramunga Arr	20.12	160	P	Pn	08 58 38.9	-0.9
	3.0nm,0.8s,baz=339,slow=12,SNR=16						
	3.0nm,0.8s						
ASAR	Alice Springs	23.48	164	P	P	08 59 14.6	+1.2
	2.2nm,0.9s,baz=345,slow=11,SNR=19						
	2.2nm,0.9s						
STKA	Stephens Creek	33.63	157	P	P	09 00 46.8	+2.7
	3.4nm,0.7s,baz=354,slow=7.3,SNR=5.4						
	3.4nm,0.7s						
KSRS	Korea Array	38.27	1	P	P	09 01 24.7	+1.1
	0.9nm,0.7s,baz=186,slow=10,SNR=2.5						
	0.9nm,0.7s						
MKAR	Makanchi Array	61.64	327	P	P	09 04 21.9	+0.9
	0.9nm,0.8s,baz=124,slow=8.1,SNR=6.8						
	0.9nm,0.8s						
ZALV	Zalesovo Beam	64.95	334	P	P	09 04 46.4	+3.7
	0.6nm,0.6s,baz=150,slow=9.4,SNR=1.9						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	65.91	328	P	P	09 04 50.7	+1.7
	0.6nm,0.6s,baz=129,slow=6.2,SNR=5.8						
	0.6nm,0.6s						

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*IDC **19** 09:03:59.9±1.6, 2°.75N×123°.98E, h0^{km}, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=197.5km s-min=22.6km az=63.0*

*DJA **19** 09:04:17.9±0.8, 3°N±5°×12°6E±°, h156^{km}±7^{km}, M4.4/9, mb5.0/2, mB5.4/2, MLv4.1/9, Mw(mB)4.8/2*

ISC 19 09:04:16.7±0.9**, 3°.40N**±0°.06×**125°.81E**±0°.10**, h150^{km}, n13, σ1^{s}.81**/14**, mb3.5**/4**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.40	315	P	Pn	09 04 40.0	+2.4
SGSI				S	Sn	09 04 56.4	+2.9
DDMP	Don Marcelino,	2.69	358	⇓eP	Pn	09 05 00.8	+0.7
TNTI	Ternate	3.04	149	P	Pn	09 05 06.0	+1.4
KMSI	Cibinong	3.35	213	P	Pn	09 05 09.4	+0.9
KCP	Kidapawan	3.66	349	⇑iP	Pn	09 05 19.1	+6.5
KCP				i S	Sn	09 05 56.6	+0.7
GTOI	Gorontalo	3.92	226	P	Pn	09 05 16.7	+0.8
LBMI	Labuha	4.35	157	P	Pn	09 05 23.9	+2.3
MRSI	Marisa	4.83	233	P	Pn	09 05 29.8	+1.9
SANI	Sanana	5.42	178	P	Pn	09 05 34.9	-0.7
	0.7nm5µm123nm,0.8s						
WRA	Warramunga Arr	24.66	160	P	P	09 09 23.2	-0.5
	0.6nm,0.5s,baz=334,slow=11,SNR=34						
	0.6nm,0.5s						
ASAR	Alice Springs	28.03	164	P	P	09 09 53.1	-0.9
	0.2nm,0.4s,baz=342,slow=6.9,SNR=7.1						
	0.2nm,0.4s						
STKA	Stephens Creek	38.16	158	P	P	09 11 21.5	0.0
	1.0nm,0.6s,baz=353,slow=8.7,SNR=5.5						
	1.0nm,0.6s						
MKAR	Makanchi Array	57.31	326	P	P	09 13 46.2	-2.7
	0.6nm,0.4s,baz=120,slow=7.9,SNR=13						
	0.6nm,0.4s						

IDC 19 09:05:04.0±47.0**, 22°.93S**×**173°.83W, h0^{km}, mb4.1**/3**, mbtmp4.1**/3**, Error ellipse: s-maj=889.9km s-min=175.2km az=87.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.33	247	P	P	09 12 42.5	-0.9
	1.0nm,0.5s,baz=85,slow=12,SNR=4.9						
	1.0nm,0.5s						
ASAR	Alice Springs	47.78	258	P	P	09 13 43.5	+0.1
	1.2nm,0.6s,baz=100,slow=7.9,SNR=17						
	1.2nm,0.6s						
WRA	Warramunga Arr	48.14	263	P	P	09 13 46.4	+0.2
	2.6nm,0.5s,baz=99,slow=6.8,SNR=54						
	2.6nm,0.5s						

IDC 19 09:09:53.1±3.5**, 54°.61N**×**83°.56E, h0^{km}, mbtmp2.3**/1**, ML1.7**/1**, Error ellipse: s-maj=24.8km s-min=14.4km az=150.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.99	131	i		09 16 20.0	
	baz=310,slow=318,SNR=4.0						
ZALV	Zalesovo Beam	0.99	131	Pg	Pg	09 10 11.6	-0.5
	1.3nm,0.3s,baz=314,slow=16,SNR=17						
ZALV				Lg	Lg	09 10 26.1	
	1.8nm,0.3s,baz=315,slow=35,SNR=9.7						
MKAR	Makanchi Array	7.87	186	Pn	Pn	09 11 49.2	+0.5
	baz=6.7,slow=14,SNR=1.5						
	0.1nm,0.4s						

IDC 19 09:19:06.0±5.7**, 4°.95S**×**141°.39E, h0^{km}, mb3.4**/1**, mbtmp3.6**/3**, ML3.5**/2**, Error ellipse: s-maj=201.3km s-min=35.5km az=92.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.41	204	Pn	Pn	09 22 56.2	-1.7
	0.2nm,0.3s,baz=27,slow=12,SNR=15						
	0.8nm,0.6s						
ASAR	Alice Springs	19.96	200	P	P	09 23 40.7	+0.7
	0.2nm,0.3s,baz=29,slow=12,SNR=31						
	3.5nm,1.0s						
MKAR	Makanchi Array	73.19	322	P	P	09 30 38.8	0.0
	0.2nm,0.6s,baz=99,slow=6.6,SNR=2.6						
	0.2nm,0.6s						

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*IDC **19** 09:21:00.0±4.8, 18°.62S×169°.31E, h246^{km}±63^{km}, mb3.2/4, mbtmp3.9/5, MS3.0/1, Error ellipse: s-maj=139.6km s-min=26.4km az=159.0*

*NOU **19** 09:21:00.3, 18°.76S×169°.37E, h244^{km}, MLv4.2/16, Vanuatu Islands*

ISC 19 09:21:00.2±1.1**, 18°.77S**±0°.07×**169°.3E**±0°.2**, h250^{km}, n18, σ0^{s}.95**/18**, mb3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	1.27	320	P	Pn	09 21 37.8	+0.9
DVP	Devils Point	1.47	315	P	Pn	09 21 38.5	+0.2
LIFNC	LIFOU	2.77	224	P	Pn	09 21 49.9	-0.3
MARNC	Mare, Loyalty	2.94	203	P	Pn	09 21 51.9	-0.1

SANVU	Saraoutou	3.85	329	P	Pn	09 22 02.5	+0.1
YATNC	Mamie plateau,	3.97	214	P	Pn	09 22 03.1	-0.5
PINNC	Pines Island,	4.19	204	P	Pn	09 22 07.0	+0.8
DZM	Mont Dzumac	4.23	219	P	Pn	09 22 07.8	+1.1
	17nm,0.5s,baz=140,slow=21,SNR=54						
DZM				S	S	09 22 58.1	-1.7
	10.0nm,0.4s,baz=224,slow=22,SNR=1.4						
DZM	Mont Dzumac	4.23	219	P	Pn	09 22 07.9	+1.1
OUENC	Ouen Island, N	4.29	212	P	Pn	09 22 08.4	+1.0
NOUC	Port Laguerre	4.34	220	P	Pn	09 22 09.1	+1.2
ONTNC	Ouen Toro	4.41	216	P	Pn	09 22 10.1	+1.3
WRA	Warramunga Arr	32.96	262	P	P	09 27 12.0	+0.2
	1.3nm,1.3s,baz=97,slow=8.6,SNR=1.8 1.3nm,1.3s						
ASAR	Alice Springs	33.28	255	P	P	09 27 15.5	+0.8
	0.9nm,0.4s,baz=82,slow=8.8,SNR=22 0.9nm,0.4s						
DAV	Davao City (W)	50.16	297	LR	LR	09 49 13.8	
	comp=Z,18nm,20.9s,baz=312,slow=34						
NVAR	Mina Array Bea	88.46	49	P	P	09 33 25.3	+0.7
	0.3nm,0.6s,baz=225,slow=8.9,SNR=2.4 0.3nm,0.6s						
ILAR	Eielson Array	89.77	17	P	P	09 33 28.8	-1.0
	0.5nm,0.5s,baz=234,slow=5.1,SNR=9.2 0.5nm,0.5s						
ARCES	ARCESS Array B	124.62	345	PKP	PKPdf	09 39 28.7	-0.5
	2.6nm,0.8s,baz=58,slow=3.4,SNR=5.1						

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*NNC **19** 09:33:32.2±4.2, 54°.15N×86°.59E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=34.2km s-min=19.9km az=19.0, Suspected Mining explosion.*

*IDC **19** 09:33:34.6±2.3, 54°.02N×86°.50E, h0^{km}, mbtmp3.4/2, ML2.9/2, Error ellipse: s-maj=19.1km s-min=11.3km az=62.0*

ISC 19 09:33:33.4±3.9**, 54°.1N**±0°.2×**86°.6E**±0°.2**, h0^{km}, n8, σ1^{s}.80**/12**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.04	263	*i*		09 39 40.0	
	baz=87,slow=330,SNR=1.3						
ZAA0	Zalesovo Array	1.04	263	⇑P	Pg	09 33 51.5	-1.8
	0.2nm,0.2s						
ZAA0				⇑S	Sg	09 34 06.9	+0.1
	0.8nm,0.3s						
ZALV	Zalesovo Beam	1.04	263	Pg	Pg	09 33 51.9	-1.4
	1.7nm,0.3s,baz=87,slow=17,SNR=19						
ZALV				Lg	Lg	09 34 08.2	
	3.5nm,0.3s,baz=85,slow=31,SNR=21						
KURK	Kurchatov	5.92	238	⇓Pn	Pn	09 35 03.2	+0.9
	0.7nm,0.5s						
KURK				⇑Sn	Sn	09 36 13.3	+2.5
	2.3nm,0.9s						
KURK				⇑Lg	Lg	09 36 45.3	
	3.9nm,0.8s						
KURBB	Kurchatov Arra	6.03	238	Pn	Pn	09 35 04.6	+1.0
	0.2nm,0.3s,baz=56,slow=14,SNR=21						
KURBB				Lg	Lg	09 36 45.5	
	baz=46,slow=31,SNR=5.6 3.2nm,0.6s						
KURBB	Kurchatov Arra	6.03	238	⇓Pn	Pn	09 35 03.9	+0.2
	2.3nm,0.4s						
KURBB				⇑Sn	Sn	09 36 14.7	+1.4
	1.6nm,0.5s						
KURBB				⇑Lg	Lg	09 36 49.4	
	5.9nm,0.7s						
MK31	Makanchi Array	7.80	202	⇓Pn	Pn	09 35 29.9	+1.8
	0.2nm,0.3s,baz=26,slow=14,SNR=28						
MK31				⇑Sn	Sn	09 36 54.3	-2.7
	0.5nm,0.6s						
MK31				Lg	Lg	09 37 40.2	
	3.3nm,0.9s,baz=3.6,slow=24,SNR=4.4						
MKAR	Makanchi Array	7.80	202	Pn	Pn	09 35 29.6	+1.5
	0.4nm,0.3s,baz=26,slow=14,SNR=21						
MKAR				Sn	Sn	09 36 56.2	-0.8
	0.2nm,0.3s,baz=23,slow=26,SNR=4.4						
MKAR				Lg	Lg	09 37 38.9	
	0.1nm,0.3s,baz=20,slow=29,SNR=6.1 0.6nm,0.2s						

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*IDC **19** 10:01:24.4±3.7, 2°.07N×100°.93W, h0^{km}, mb3.5/6, mbtmp3.5/6, MS3.4/20, Error ellipse: s-maj=159.3km s-min=27.5km az=53.0*

ISC 19 10:01:26.5±3.2**, 2°.2N**±0°.6×**100°.8W**±0°.8**, h10^{km}, n32, σ0^{s}.87**/6**, mb3.5**/6**, MS3.3**/19**, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	Las Juntas de	17.67	62	LR	LR	10 10 26.0	
	comp=Z,204nm,19.8s,baz=348,slow=30						
LPIG	La Paz	23.66	338	LR	LR	10 13 50.5	
	comp=Z,159nm,18.2s,baz=186,slow=32						
TXAR	Lajitas Array	27.14	354	P	P	10 07 10.7	+0.5
	0.7nm,0.9s,baz=178,slow=12,SNR=4.2						
TXAR				LR	LR	10 16 50.5	
	comp=Z,97nm,20.1s,baz=166,slow=34 0.7nm,0.9s						
NNA	Nana	27.64	121	LR	LR	10 15 45.5	
	comp=Z,45nm,19.7s,baz=306,slow=31						
RPN	Rapa Nui	30.28	195	LR	LR	10 16 37.6	
	comp=Z,83nm,20.6s,baz=322,slow=30						
ANMO	Albuquerque	33.03	351	LR	LR	10 20 30.4	
	comp=Z,156nm,18.8s,baz=166,slow=35						
PFO	Pinyon Flats O	34.54	337	LR	LR	10 19 10.5	
	comp=Z,52nm,18.0s,baz=187,slow=31						
LPAZ	La Paz	37.11	121	P	P	10 08 38.4	+0.2
	0.9nm,0.5s,baz=310,slow=6.7,SNR=4.3 0.9nm,0.5s						
SJG	San Juan	37.47	63	LR	LR	10 22 33.5	
	comp=Z,28nm,20.8s,baz=262,slow=34						
NVAR	Mina Array Bea	39.48	338	P	P	10 08 58.4	+0.9
	0.3nm,0.7s,baz=158,slow=12,SNR=3.2 0.3nm,0.7s						
LVC	Limon Verde	39.67	130	LR	LR	10 21 18.6	
	comp=Z,38nm,20.5s,baz=296,slow=30						
ELK	Elko	40.56	343	LR	LR	10 22 11.8	
	comp=Z,18nm,20.8s,baz=156,slow=31						
H03N2	Juan Fernandez	40.99	152	T	T	10 52 57.9	
	baz=326,slow=77,SNR=7.9						
H03N1	Juan Fernandez	41.00	152	T	T	10 52 57.9	
	baz=326,slow=77,SNR=8.4						
H03N3	Juan Fernandez	41.01	152	T	T	10 52 54.7	
	baz=326,slow=77,SNR=9.5						
PDAR	Pinedale Array	41.17	350	P	P	10 09 11.7	+0.3
	0.4nm,0.6s,baz=153,slow=10,SNR=4.3						
PDAR				LR	LR	10 24 31.6	
	comp=Z,34nm,19.8s,baz=165,slow=34 0.4nm,0.6s						
NEW	Newport	48.02	345	LR	LR	10 27 32.6	
	comp=Z,34nm,21.6s,baz=158,slow=33						
ULM	Lac du Bonnet	48.08	4	LR	LR	10 28 30.5	
	comp=Z,33nm,19.5s,baz=27,slow=34						
MDP	Montagnes des	48.12	85	LR	LR	10 27 20.1	
	comp=Z,33nm,21.6s,baz=9.0,slow=32						
PLCA	Paso Flores	50.84	150	LR	LR	10 27 03.1	
	comp=Z,67nm,18.1s,baz=350,slow=30						
YKA	Yellowknife Ar	61.05	353	P	P	10 11 39.4	-0.9
	0.3nm,0.7s,baz=156,slow=8.7,SNR=3.9 0.3nm,0.7s						
RAR	Rarotonga	62.17	245	LR	LR	10 31 29.5	
	comp=Z,47nm,21.9s,baz=66,slow=29						
RCBR	Riachuelo	65.28	97	LR	LR	10 40 06.5	
	comp=Z,28nm,18.9s,baz=348,slow=36						
INK	Inuvik	69.66	348	LR	LR	10 42 22.6	
	comp=Z,28nm,18.3s,baz=134,slow=35						
ILAR	Eielson Array	70.67	341	P	P	10 12 41.6	-0.5
	0.4nm,0.8s,baz=147,slow=4.9,SNR=4.4						
ILAR				LR	LR	10 40 45.2	
	comp=Z,37nm,18.1s,baz=254,slow=33 0.4nm,0.8s						
H11N3	WAKE ISLAND Hy	91.44	290	T	T	11 55 31.0	
	baz=88,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	91.46	290	T	T	11 55 28.7	
	baz=88,slow=75,SNR=8.2						
H11N1	WAKE ISLAND Hy	91.46	290	T	T	11 55 29.8	
	baz=88,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	91.70	288	T	T	11 55 49.1	
	baz=85,slow=74,SNR=8.4						
H11S1	WAKE ISLAND Hy	91.70	288	T	T	11 55 54.3	
	baz=85,slow=74,SNR=6.8						
H11S3	WAKE ISLAND Hy	91.72	288	T	T	11 55 53.9	
	baz=85,slow=74,SNR=6.8						
NOA	NORSAR Array B	98.58	27	LR	LR	10 56 50.1	
	comp=Z,5.2nm,21.2s,baz=65,slow=34						

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*UCR **19** 10:06:12.4±1.9, 10°.72N×86°.90W, h12^{km}±24^{km}, MW3.9*

*INET **19** 10:06:13.1±0.4, 11°.01N×86°.84W, h15^{km}, MW3.3*

ISC 19 10:06:12.5±1.9**, 10°.96N**±0°.08×**86°.9W**±0°.1**, h30^{km}, n24, σ0^{s}.72**/27**, 3C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	1.25	15	*e*P	Pn	10 06 33.9	-0.1
HZTE	Horizontes, Gu	1.32	101	⇑*e*P	Pn	10 06 35.2	+0.3
HZTE	Horizontes, Gu	1.32	101	*e*P	Pn	10 06 35.1	+0.1
TISN	Laguna Tiscapa	1.33	28	*e*P	Pn	10 06 34.9	-0.2
MGAN	Managua	1.35	29	*e*P	Pn	10 06 35.1	-0.1
MGAN				*e*P	Pn	10 06 35.2	-0.1
APYN	Apoyeque	1.38	24	*e*P	Pn	10 06 34.8	-1.0
WILN	Americas 2	1.39	31	*e*P	Pn	10 06 35.4	-0.4
SAJU	San Juanillo,	1.48	127	⇓*e*P	Pn	10 06 36.9	-0.2
SAJU				*e*S	Sn	10 06 53.6	-1.9
BUEV	Buena Vista	1.49	96	*i* P	Pn	10 06 37.6	+0.3
GB1A	Borinquen Arri	1.50	95	*i* P	Pn	10 06 38.1	+0.7
CNGN	Cerro Negro	1.54	8	*e*P	Pn	10 06 38.1	+0.1
HUEN		1.55	28	*e*P	Pn	10 06 37.8	-0.3
GPS2	Hotel Rincn d	1.55	98	*i* P	Pn	10 06 38.5	+0.3
GPS2				*i* S	Sb	10 07 01.4	+1.4
ORTG	Ortega, Santa	1.55	112	*e*P	Pn	10 06 38.1	0.0
COLC	Colonia	1.71	100	*i* P	Pn	10 06 41.0	+0.7
HORNC	Hornillas	1.73	98	*i* P	Pn	10 06 41.1	+0.6
CRIN	San Cristobal	1.73	356	*e*P	Pn	10 06 40.8	+0.2
CUI	Cuipilapa	1.75	100	*i* P	Pn	10 06 41.5	+0.7
VMAR	Armenia, Volca	1.77	95	⇑*e*P	Pn	10 06 42.0	+0.8
JTS	Las Juntas de	2.04	109	⇑*e*P	Pn	10 06 45.4	+0.5
MATN	Matagalpa	2.18	26	*e*P	Pn	10 06 46.4	-0.5
ARE1	Arenal 1	2.22	103	*e*P	Pn	10 06 48.1	+0.8
LAFE	Finca La Fe, P	2.28	120	*e*P	Pn	10 06 47.5	-0.7
CNCH	Conchagua	2.47	339	*e*P	Pn	10 06 51.9	+1.1

NOU 19 10:49:28.8, 16°.92S×168°.03E, h30^{km}, MLv3.7/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.81	169	P	Pb	10 49 44.6	+0.1
RTV	Rentapao	0.95	157	P	Pb	10 49 46.7	0.0
SANVU	Saraoutou	1.67	331	P	Pn	10 49 56.1	+0.1
YATNC	Mamie plateau,	5.22	192	P	Pn	10 50 44.8	-0.1
DZM	Mont Dzumac	5.34	196	P	Pn	10 50 46.1	-0.5
PINNC	Pines Island,	5.69	185	P	Pn	10 50 51.6	+0.3

IDC 19 10:52:03.2±5.8**, 6°.52S×130°.26E, h181^{km}**±60^{km}**, mb2.9**/1**, mbtmp3.4**/3**, Error ellipse: s-maj=129.0km s-min=23.2km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.92	164	P	Pn	10 55 11.9	-1.0
	0.2nm,0.3s,baz=346,slow=13,SNR=18						
WRA				S	Sn	10 57 40.0	-8.1
	1.0nm,0.5s,baz=351,slow=22,SNR=11						
ASAR	Alice Springs	17.41	169	P	Pn	10 55 55.9	+0.5
	0.6nm,0.5s,baz=346,slow=10.0,SNR=21						
ASAR				S	S	10 59 05.3	-0.4
	0.4nm,0.7s,baz=354,slow=26,SNR=6.5						
MKAR	Makanchi Array	67.97	327	P	P	11 02 42.5	-0.1
	0.2nm,0.6s,baz=111,slow=6.5,SNR=2.5 0.2nm,0.6s						

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*KRNET **19** 11:11:10.0±0.1, 39°.42N×74°.67E, mb3.0*

*NNC **19** 11:11:19.6±3.7, 39°.97N×74°.29E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=26.8km s-min=13.7km az=172.0*

*SOME **19** 11:11:22.7, 40°.08N×73°.85E, h15^{km}*

ISC 19 11:11:19.1±1.7**, 39°.91N**±0°.06×**74°.04E**±0°.04**, h3^{km}**±12^{km}**, n28, σ2^{s}.34**/47**, 23C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	1.14	303	⇑*i*P	Pn	11 11 44.1	+2.1
	baz=8.0						
OHH				⇑*i*S	Sn	11 12 08.5	+10
	baz=8.0						
DRK	Karamyk	1.78	257	⇑*i*P	Pn	11 11 50.2	-0.8
	baz=73						
DRK				⇑*i*S	Sg	11 12 20.0	+3.6
	baz=73						
ARLS	Aral	1.96	6	⇑*e*P	Pn	11 11 53.6	+0.3
	baz=54						
ARLS				⇑*i*S	Sg	11 12 25.4	+3.4
	baz=54						
UCH	Uchtor	2.34	9	⇑*i*P	Pn	11 11 58.8	0.0
	baz=58						
UCH				⇑*i*S	Sg	11 12 34.3	0.0
	baz=58						
ARK	Arkit	2.46	321	⇓*i*P	Pb	11 12 03.2	-0.7
	baz=20						
ARK				⇓*i*S	Sg	11 12 42.5	+4.5
	baz=20						
BTK	Batken	2.48	274	⇓*i*P	Pn	11 12 01.9	+1.5
	baz=83						
BTK				⇓*i*S	Sg	11 12 39.1	+0.3
	baz=83						
TRKS	Terek-Say	2.73	307	⇑*e*P	Pb	11 12 06.5	-2.2
	baz=9.0						
TRKS				⇑*i*S	Sg	11 12 47.5	+0.6
	baz=9.0						
AAK	Ala-Archa	2.74	7	⇑*i*P	Pn	11 12 04.3	+0.2
	baz=58						
AAK				⇑*i*S	Sg	11 12 43.8	-3.4
	baz=58						
EKS2	Erkin-Say	2.75	356	⇑*i*P	Pn	11 12 05.7	+1.5
	baz=48						
EKS2				⇑*i*S	Sg	11 12 46.2	-1.3
	baz=48						
ULHL	Ulahol	2.86	35	⇑*e*P	Pn	11 12 01.9	-3.9
	baz=22						
ULHL				⇑*i*S	Sn	11 12 39.8	-1.0
	baz=22						
MRKS	Merke	2.90	348	*e*P	Pg	11 12 14.8	+0.3
	2.0nm,0.2s						
MRKS				*e*S	Sg	11 12 52.4	+0.3
	7.8nm,0.3s						
MRKS	Merke	2.90	348	Pg	Pb	11 12 11.6	+0.2
	2.0nm,0.2s						
MRKS				Lg	Lg	11 12 52.4	
	5.6nm,0.3s						
BOOM	Boomskoye usch	2.95	28	⇓*e*P	Pn	11 12 04.2	-2.7
	baz=17						
BOOM				⇓*i*S	Sn	11 12 43.6	+0.8
	baz=17						
GAR	Garm	3.02	254	⇑*i*P	Pn	11 12 07.0	-0.9
	baz=64						
GAR				⇑*i*S	Sb	11 12 48.4	-2.6
	baz=64						
TKM2	Tokmak 2	3.22	21	⇑Pg	Pb	11 12 16.9	-0.2
	1.2nm,0.3s						
TKM2				⇓Lg	Lg	11 12 55.7	
	5.0nm,0.6s						
TKM2	Tokmak 2	3.22	21	⇑*e*P	Pn	11 12 09.1	-1.7
	baz=11						
TKM2				⇑*i*S	Sn	11 12 52.3	+2.5
	baz=11						
KST	Kastek	3.44	24	*e*P	Pb	11 12 21.3	+0.6
	1.9nm,0.4s						
KST				*e*S	Sb	11 13 03.3	+0.3
	14nm,0.4s						
IUG	Iuzhnay	3.77	308	*e*P	Pb	11 12 25.7	-0.6
	95nm,0.4s						
IUG				*e*S	Sb	11 13 10.6	-1.7
	24nm,0.3s						
IUG	Iuzhnay	3.77	308	Pg	Pn	11 12 21.1	+3.0
	30nm,0.2s						
IUG				Lg	Lg	11 13 09.7	
	19nm,0.7s						
TNSS	Tian-Shan	3.81	34	*e*P	Pb	11 12 30.3	+3.2
	2.1nm,0.4s						
TNSS				*e*S	Sg	11 13 19.3	-2.1
	1.8nm,0.3s						
TNSS	Tian-Shan	3.81	34	Pg	Pb	11 12 26.4	-0.8
	3.0nm,0.3s						
TNSS				Lg	Lg	11 13 19.3	
	1.8nm,0.3s						
MDOK	Medeo	3.95	34	*e*P	Pb	11 12 32.6	+3.1
	3.6nm,0.7s						
MDOK				*e*S	Sb	11 13 23.0	+5.3
	7.0nm,0.7s						
MDOK	Medeo	3.95	34	Pg	Pb	11 12 28.6	-0.9
	0.7nm,0.1s						
MDOK				Lg	Lg	11 13 23.0	
	7.0nm,0.7s						
KRBS	Karabastau	3.97	17	*e*P	Pg	11 12 34.2	-1.0
	1.1nm,0.2s						
KRBS				*e*S	Sg	11 13 25.7	-1.0
	6.0nm,0.4s						
KRBS	Karabastau	3.97	17	Pg	Pb	11 12 29.3	-0.4
	0.2nm,0.4s						
KRBS				Lg	Lg	11 13 25.1	
	5.9nm,0.4s						
KK31	Karatay Array	4.14	321	Pn	Pn	11 12 24.5	+1.2
	0.2nm,0.3s,baz=128,slow=13,SNR=9.5						
KK31				⇑Sn	Sb	11 13 16.5	-6.6
	0.9nm,0.4s,baz=131,slow=24						
KK31				⇑Lg	Lg	11 13 32.4	
	1.2nm,0.4s,baz=128,slow=28						
KTBS	Karatobe	4.28	27	*e*P	Pb	11 12 39.0	+4.0
	0.9nm,0.3s						
KTBS				*e*S	Sg	11 13 34.0	-2.5
	7.6nm,0.5s						
KTBS	Karatobe	4.28	27	Pg	Pb	11 12 34.4	-0.5
	1.3nm,0.3s						
KTBS				Lg	Lg	11 13 34.0	
	7.6nm,0.5s						

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*IASPEI **19** 11:17:02.8±0.9, 36°.29N±0°.02×89°.41W±0°.02, h13^{km}±5^{km}, Error ellipse: s-maj=3.3km s-min=2.9km az=107.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **19** 11:17:02.7±0.2, 36°.30N×89°.41W, h7^{km}, ML3.3/15, Error ellipse: s-maj=2.5km s-min=2.3km az=100.0*

*SLM **19** 11:17:02.9±1.1, 36°.29N±0°.02×89°.43W±0°.04, h7^{km}, Md2.8/51, mb_Lg2.9/101(NEIC), Error ellipse: s-maj=4.9km s-min=2.4km az=113.0*

*NEIC **19** 11:17:03.4±1.7, 36°.26N±0°.02×89°.41W±0°.04, h9^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=2.1km az=100.0*

ISC 19 11:17:03.4±0.8**, 36°.29N**±0°.02×**89°.42W**±0°.02**, h11^{km}**±5^{km}**, n128, σ0^{s}.76**/110**, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WYBT	Wynnburg	0.09	314		Pg	11 17 05.3	-0.7
WYBT					Sg	11 17 07.4	-0.5
GLAT	Glass	0.11	99		Pg	11 17 05.8	-0.4
GLAT					Sg	11 17 08.2	-0.1
GLST	Glass	0.11	99		Pg	11 17 05.8	-0.4
GLST					Sg	11 17 08.2	0.0
MIST	Miston	0.13	211		Pg	11 17 06.0	-0.6
MIST					Sg	11 17 08.5	-0.3
FLPT	Flippin	0.15	32		Pg	11 17 06.5	-0.3
PPLM	Point Pleasant	0.18	311		Pg	11 17 06.9	-0.4
PPLM					Sg	11 17 10.0	0.0
LNXT	Lenox	0.19	198		Pg	11 17 07.2	-0.3
LNXT					Sg	11 17 10.5	+0.1
LNXT	Lenox	0.19	198	S	Sg	11 17 10.5	+0.1
	baz=16						
POBM	Portage Bay	0.23	302		Pg	11 17 07.8	-0.4
POBM					Sg	11 17 11.9	+0.4
PENMO	Penman	0.24	314		Pg	11 17 07.9	-0.4
PENMO					Sg	11 17 12.0	+0.4
PVMO	Portageville	0.26	299		Pg	11 17 08.2	-0.6
RELT	Roellen	0.27	160		Pg	11 17 08.7	-0.2
WALK	Watson Lake	0.27	338		Pg	11 17 08.5	-0.4
HICK	Hickman	0.30	31		Pg	11 17 09.0	-0.4
PGVM	Portageville	0.31	305		Pg	11 17 09.1	-0.5
FPST	Four Points	0.31	186		Pg	11 17 09.3	-0.4
WADM	Wardell	0.32	285		Pg	11 17 09.2	-0.5
MARMO	Marston	0.32	320		Pg	11 17 09.3	-0.5
NMMO	New Madrid	0.32	340		Pg	11 17 09.4	-0.4
CWPT	Cottonwood Poi	0.32	212		Pg	11 17 09.5	-0.4
SJMO	Saint John’s B	0.35	352		Pg	11 17 10.0	-0.3
SJMO					Sg	11 17 15.3	+0.3
BRGM	Braggadocio	0.36	257		Pg	11 17 10.2	-0.5
CATM	Catron	0.38	331		Pg	11 17 10.3	-0.5
HALT	Halls	0.38	170		Pg	11 17 10.6	-0.3
PEBM	Pemiscott Bayo	0.40	245		Pg	11 17 10.8	-0.5
HENM	Henderson Moun	0.43	354		Pg	11 17 11.4	-0.5
EPRM	East Prairie	0.43	6		Pg	11 17 11.4	-0.5
KEWM	Kewanee	0.43	341		Pg	11 17 11.4	-0.6
EDIT	Edith	0.44	195		Pg	11 17 11.9	-0.1
TOPM	Tallapoosa	0.45	302		Pg	11 17 11.6	-0.6
PARMO	Parma	0.46	325		Pg	11 17 11.8	-0.6
CHNM	Channel	0.48	240		Pg	11 17 12.4	-0.3
COKM	Charter Oak	0.49	330		Pg	11 17 12.4	-0.6
MATM	Matthews	0.51	343		Pg	11 17 12.7	-0.6
DWDM	Dogwood	0.51	353		Pg	11 17 12.8	-0.6
FMKY	Fulgham	0.56	47		Pg	11 17 13.7	-0.5
CHRM	Charleston	0.57	5		Pg	11 17 13.8	-0.6
ARPT	Arp	0.57	201		Pg	11 17 14.3	-0.2
GNAR	Gosnell	0.58	237		Pg	11 17 14.4	-0.3
PBMO	Poplar Bluff	0.95	301		Pg	11 17 20.4	-1.4
PBMO	Poplar Bluff	0.95	301	P	Pg	11 17 20.3	-1.4
	baz=121,SNR=27						
PBMO				S	Sg	11 17 33.3	-0.9
	baz=121						
T45B	Paducah	0.96	40	P	Pg	11 17 20.9	-1.0
	baz=221,SNR=24						
T45B				S	Sg	11 17 33.5	-0.8
	baz=221						
T45A	Paducah	0.96	40		Pg	11 17 20.9	-1.0
LPAR	Lepanto	0.99	227		Pg	11 17 21.4	-1.1
SFTN	Shelby Forest	1.05	208		Pg	11 17 22.6	-0.9
W45A	Hickory Valley	1.14	170		Pg	11 17 23.7	-1.7
W45A	Hickory Valley	1.14	170	P	Pg	11 17 23.6	-1.7
	baz=350,SNR=91						
HBAR	Harrisburg	1.24	234		Pn	11 17 26.1	-0.6
HBAR					Sn	11 17 43.4	0.0
HBAR	Harrisburg	1.24	234	P	Pn	11 17 26.1	-0.6
	baz=54,SNR=12						
HBAR				S	Sn	11 17 44.1	+0.7
	baz=54						
WVT	Waverly	1.29	96	Pn	Pn	11 17 26.4	-1.0
WVT	Waverly	1.29	96	P	Pn	11 17 26.2	-1.2
	baz=277,SNR=177						
S44A	Carbondale	1.41	5		Pn	11 17 28.5	-0.5
S44A	Carbondale	1.41	5	P	Pn	11 17 28.6	-0.4
	baz=186,SNR=37						
S44A				S	Sn	11 17 47.1	-0.5
	baz=186						
LCAR	Lake Charles	1.42	262		Pn	11 17 28.4	-0.8
LCAR	Lake Charles	1.42	262	P	Pn	11 17 28.3	-0.8
	baz=81,SNR=47						
PLAL	Pickwick Lake	1.70	140		Pn	11 17 32.7	-0.2
PWLA	Pickwick Lake	1.71	139		Pn	11 17 32.5	-0.6
OXF	Oxford	1.77	180		Pn	11 17 34.1	+0.2
OXF	Oxford	1.77	180	P	Pn	11 17 34.4	+0.4
	baz=360,SNR=44						
FVM	French Village	1.88	335		Pn	11 17 35.7	+0.3
FVM	French Village	1.88	335	P	Pn	11 17 35.9	+0.5
	baz=154,SNR=198						
FVM				S	Sn	11 18 00.9	+1.8
	baz=154						
T47A	Sharon Grove	1.99	69		Pn	11 17 37.6	+0.7
T47A	Sharon Grove	1.99	69	P	Pn	11 17 37.6	+0.7
	baz=250,SNR=97						
T47A				Sb	Sb	11 18 05.2	+0.9
	baz=250						
V48A	Smith Brothers	2.17	104		Pn	11 17 40.2	+0.8
FCAR	Ozark Folk Cen	2.23	261		Pn	11 17 41.2	+1.0
CCM	Cathedral Cave	2.29	321		Pn	11 17 41.8	+0.7
CCM				IAmb_Lg		11 18 16.9	
	comp=Z,42nm,0.7s						
CCM	Cathedral Cave	2.29	321	P	Pn	11 17 41.7	+0.6
	baz=140,SNR=98						
Y45A	Yeager Farm, C	2.42	182	P	Pn	11 17 43.8	+0.9
	baz=2.3						
SLM	Saint Louis	2.44	345	Sb	Sb	11 18 17.3	+0.1
	baz=164						
MGMO	Mountain Grove	2.45	292		Pn	11 17 44.0	+0.7
CLTN	Cedars of Leba	2.50	94		Pn	11 17 44.7	+0.7
WHAR	Wooly Hollow	2.54	248		Pn	11 17 44.4	-0.1
WHAR				IAmb_Lg		11 18 21.9	
	comp=Z,38nm,1.0s						
W41B	Gary Mavity, V	2.56	245		Pn	11 17 44.6	-0.1
W41B	Gary Mavity, V	2.56	245	P	Pn	11 17 44.7	-0.1
	baz=63,SNR=24						

Q44A	Meyer Farm, Va	2.63	7		Pn	11 17 46.7	+0.9
X48A	Hartselle	2.67	133		Pn	11 17 46.9	+0.6
X48A	Hartselle	2.67	133	P	Pn	11 17 46.9	+0.6
	baz=314,SNR=22						
X48A				Sb	Sb	11 18 24.7	+0.8
	baz=314						
U40A	Yellville	2.78	272		Pn	11 17 49.5	+1.7
UALR	University of	2.82	239	Pn	Pn	11 17 48.4	0.0
U49A	Red Boiling Sp	2.94	85	Pn	Pn	11 17 51.0	+0.9
R40A	Maddies Statio	3.03	312		Pn	11 17 51.8	+0.6
R40A	Maddies Statio	3.03	312	P	Pn	11 17 51.8	+0.6
	baz=131,SNR=36						
SWET	Sewanee	3.03	110	IAmb_Lg		11 18 45.1	
	comp=Z,36nm,1.0s						
CCAR	Cane Creek	3.05	220	Pn	Pn	11 17 52.4	+0.8
CCAR				IAmb_Lg		11 18 46.7	
	comp=Z,34nm,0.9s						
Z47A	Carrollton	3.27	160	IAmb_Lg		11 18 49.6	
	comp=Z,27nm,0.8s						
X40A	Basin Creek Fa	3.32	238		Pn	11 17 55.5	+0.3
P43A	Skaggs, Pawnee	3.35	359	IAmb_Lg		11 18 52.8	
	comp=Z,34nm,1.1s						
S39A	Bolivar	3.43	295		Pn	11 17 57.4	+0.7
Y49A	Blount Mountai	3.46	134		Pn	11 17 57.5	+0.3
Y49A				IAmb_Lg		11 18 57.7	
	comp=Z,35nm,0.7s						
Y49A	Blount Mountai	3.46	134	P	Pn	11 17 57.4	+0.3
	baz=315,SNR=19						
W50A	Signal Mountai	3.51	107	IAmb_Lg		11 18 53.5	
	comp=Z,36nm,0.7s						
FPAL	Fort Paine	3.56	118	IAmb_Lg		11 19 02.7	
	comp=Z,34nm,0.8s						
BLO	Bloomington	3.68	38		Pb	11 18 08.3	-0.1
BLO				IAmb_Lg		11 19 00.4	
	comp=Z,39nm,0.8s						
T50A	Nancy	3.75	77	Pn	Pn	11 18 02.7	+1.4
T50A				IAmb_Lg		11 19 07.1	
	comp=Z,30nm,0.9s						
P46A	Rosedale	3.76	27	IAmb_Lg		11 19 06.3	
	comp=Z,33nm,0.8s						
LRAL	Lakeview Retre	3.81	148	IAmb_Lg		11 19 10.8	
	comp=Z,23nm,0.9s						
MIAR	Mount Ida	3.81	244		Pn	11 18 02.2	+0.1
P40A	Paris	3.85	328	IAmb_Lg		11 19 06.4	
	comp=Z,25nm,1.0s						
Z41A	Richland Creek	4.11	224	IAmb_Lg		11 19 24.8	
	comp=Z,28nm,1.2s						
V51A	Loudon	4.13	95	IAmb_Lg		11 19 16.0	
	comp=Z,26nm,0.7s						
SFIN	Lafayette	4.47	23	IAmb_Lg		11 19 31.7	
	comp=Z,23nm,0.8s						
N41A	Harden Midland	4.56	346	IAmb_Lg		11 19 34.3	
	comp=Z,26nm,0.9s						
W52A	Murphy	4.62	103	IAmb_Lg		11 19 35.9	
	comp=Z,22nm,0.8s						
P38A	Dawn	4.66	317	Pn	Pn	11 18 13.6	-0.1
V52A	Sevierville	4.74	94	IAmb_Lg		11 19 35.1	
	comp=Z,30nm,0.8s						
S51A	Beattyville	4.86	72	Pn	Pn	11 18 16.3	0.0
S51A				IAmb_Lg		11 19 37.1	
	comp=Z,24nm,0.8s						
P49A	Miami Univ. Ec	4.93	47	IAmb_Lg		11 19 44.8	
	comp=Z,17nm,0.8s						
250A	Grady	5.03	148	IAmb_Lg		11 19 50.9	
	comp=Z,26nm,0.9s						
X37A	Clayton	5.15	253	IAmb_Lg		11 19 45.2	
	comp=Z,16nm,0.8s						
TUL1	Leonard	5.17	268	IAmb_Lg		11 19 56.8	
	comp=Z,21nm,1.0s						
M44A	Midewin, Midew	5.21	11	IAmb_Lg		11 19 48.4	
	comp=Z,22nm,0.7s						
Q51A	Peebles	5.54	59	IAmb_Lg		11 19 56.4	
	comp=Z,15nm,0.8s						
O49A	Covington	5.58	44	IAmb_Lg		11 20 03.6	
	comp=Z,15nm,1.0s						
L42A	Oliver, Polo	5.71	358	IAmb_Lg		11 20 07.8	
	comp=Z,16nm,0.9s						
P51A	Williamsport	5.96	56	IAmb_Lg		11 20 10.3	
	comp=Z,20nm,0.8s						
N49A	Columbus Grove	6.18	40	IAmb_Lg		11 20 16.8	
	comp=Z,18nm,1.0s						
L46A	Eue Claire	6.21	22	IAmb_Lg		11 20 28.7	
	comp=Z,22nm,0.8s						
Q52A	Bidwell	6.27	63	IAmb_Lg		11 20 21.1	
	comp=Z,18nm,1.1s						
R53A	Hurricane	6.29	69	IAmb_Lg		11 20 26.0	
	comp=Z,13nm,0.8s						
ACSO	Alum Creek Sta	6.42	50		Pn	11 18 34.3	-3.5
ACSO	Alum Creek Sta	6.42	50	IAmb_Lg		11 20 27.3	
	comp=Z,23nm,0.9s						
K43A	Burlington	6.46	7	IAmb_Lg		11 20 39.4	
	comp=Z,22nm,1.1s						
JFWS	Jewell Farm	6.65	355	IAmb_Lg		11 20 39.7	
	comp=Z,14nm,0.7s						
S54A	Dingess, Beckl	6.66	74	IAmb_Lg		11 20 40.7	
	comp=Z,18nm,0.8s						
L48A	N Adams	6.85	33	IAmb_Lg		11 20 43.7	
	comp=Z,20nm,0.7s						
K38A	Parkersburg	6.86	339	IAmb_Lg		11 20 42.0	
	comp=Z,13nm,0.7s						
O52A	Adamsville	7.09	55	IAmb_Lg		11 20 52.4	
	comp=Z,18nm,0.9s						
J47A	Sunmer	7.79	26	IAmb_Lg		11 21 18.4	
	comp=Z,18nm,0.9s						

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*HEL **19** 11:29:03.4±0.1,63°.97N×28°.18E,h0^{km},ML1.6,Explosion*
*IDC **19** 11:29:04.4±1.5,63°.81N×28°.23E,h0^{km},mbtmp2.6/2,ML1.6/2,Error ellipse: s-maj=20.3km s-min=8.9km az=120.0*
ISC 19 11:29:02.0±0.8**,63°.96N**±0°.03×**28°.18E**±0°.04**,h0**^{km}**,n21,**σ**1**^{s}**15**/33**,Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUL	Oulu	1.50	320	PG	Pn	11 29 30.4	+0.2
OUL				SG	Sg	11 29 49.3	-0.9
SUF	Sumiainen	1.55	217	PG	Pb	11 29 31.2	-0.2
SUF				MSG		11 29 50.1	
	comp=Z,1.9nm,0.2s						
SUF				SG	Sn	11 29 51.3	-0.2
OUF	Merijarvi	1.56	287	PG	Pn	11 29 31.1	+0.1
OUF				MSG		11 29 50.1	
	comp=Z,4.3nm,0.2s						
OUF				SG	Sn	11 29 51.3	-0.7
JOF	Joensuu	1.75	125	PG	Pg	11 29 35.3	-0.3
	baz=310						
JOF				SG	Sg	11 29 58.4	+0.1
OBF0	Syolatti, Pyha	1.81	289	PG	Pb	11 29 36.1	+0.2
OBF0				SG	Sn	11 29 58.6	+0.7
MSF	Maaselka	1.99	10	PG	Pb	11 29 38.6	-0.5
	baz=193						
MSF				SG	Sn	11 30 03.1	+0.5
KAF	Kangasniemi	2.04	206	PG	Pb	11 29 39.8	-0.1
	baz=22						
KAF				SB	Sb	11 30 05.9	+0.1
KU6	Riekki	2.20	19	PG	Pb	11 29 42.4	-0.1
	baz=198						
KU6				MSG		11 30 08.2	
	comp=Z,3.5nm,0.2s						
KU6				SG	Sb	11 30 10.3	0.0
KEF	Keuruu	2.35	221	PG	Pb	11 29 44.9	-0.2
KEF				MSG		11 30 13.1	
	comp=Z,4.2nm,0.2s						
KEF				SB	Sb	11 30 14.4	-0.2
OLKF	Oulanka, Finla	2.43	12	PG	Pb	11 29 46.2	-0.3
OLKF				SG	Sb	11 30 16.4	-0.5
VAF	Ylistaro	2.64	252	PB	Pb	11 29 49.0	-1.0
	baz=69						
VAF				MSG		11 30 21.1	
	comp=Z,2.9nm,0.2s						
VAF				SB	Sb	11 30 22.7	-0.2
FIA0	FINESS Array S	2.71	202	PB	Pb	11 29 50.3	-0.9
	baz=16						
FIA0				SB	Sb	11 30 24.4	-0.5
FINES	FINESS Array B	2.71	202	Pn	Pb	11 29 50.1	-1.2
	comp=Z,0.3nm,0.3s,baz=27,slow=16,SNR=7.5						
FINES				Lg	Lg	11 30 24.8	
	comp=Z,0.7nm,0.3s,baz=22,slow=27,SNR=19						
	comp=Z,0.9nm,0.4s						
KALU	Kalix	2.80	315	SN	Sn	11 30 23.3	+0.8
RNF	Rovaniemi	2.81	342	SG	Sb	11 30 27.5	-0.4
ERTU	Ertsjaerv	3.62	319	PB	Pn	11 30 02.5	+3.2
KLF	Kolari	3.72	334	SN	Sn	11 30 44.8	-0.4
PAJU	Pajala	3.73	328	SN	Sn	11 30 45.3	-0.1
VRF	Varrio	3.85	8	SB	Sb	11 30 54.8	-3.0
ARCES	ARCESS Array B	5.70	350	Pn	Pn	11 30 30.6	+2.8
	baz=166,slow=12,SNR=1.3						
ARCES				Sn	Sn	11 31 31.5	-2.3
	comp=Z,0.2nm,0.3s,baz=171,slow=24,SNR=5.4						
	comp=Z,1.5nm,0.9s						
I37NO	I37NO	6.40	328	*i*		12 07 40.0	
	baz=139,slow=327,SNR=2.0						

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*DJA **19** 11:49:57.0±0.8,2˚N±4˚×12˚7E±˚,h120^{km}±8^{km},M3.4/5,MLv3.4/5*
*IDC **19** 11:50:26.8±7.4,1°.16N×126°.65E,h412^{km}±90^{km},mb2.7/3,mbtmp3.4/3,Error ellipse: s-maj=59.0km s-min=15.0km az=91.0*
ISC 19 11:49:57.9±1.1**,1°.80N**±0°.06×**127°.0E**±0°.1**,h100**^{km}**,n11,**σ**2**^{s}**63**/10**,mb4.0**/5**,1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.08	160	S	Sn	11 50 40.0	+4.7
LBMI	Labuha	2.47	168	P	Pn	11 50 36.5	-0.1
SANI	Sanana	3.95	195	P	Pn	11 50 55.8	-0.7
SANI				S	Sn	11 51 37.5	-4.4
GTOI	Gorontalo	4.15	254	P	Pn	11 51 00.2	+1.1
DDMP	Don Marcelino,	4.47	343	⇓*e*P	Pn	11 51 03.2	-0.2
DDMP				*e*S	Sn	11 51 53.3	-1.0
GUMO	Guam	21.21	56	P	P	11 54 46.8	+11
	52nm,0.7s,baz=264,slow=10,SNR=4.7						
WRA	Warramunga Arr	22.77	162	P	P	11 54 50.8	-1.4
	0.3nm,0.3s,baz=338,slow=11,SNR=16						
	0.3nm,0.3s						
ASAR	Alice Springs	26.19	166	P	P	11 55 21.7	-1.6
	0.1nm,0.5s,baz=346,slow=8.4,SNR=4.5						
	0.1nm,0.5s						
JNU	Nakatsue	31.37	6	P	P	11 56 17.7	+8.4
	121nm,0.2s,baz=194,slow=8.3,SNR=229						
STKA	Stephens Creek	36.24	159	P	P	11 56 50.6	-0.8
	0.9nm,0.5s,baz=345,slow=12,SNR=1.5						
	0.9nm,0.5s						
TORD	Torodi Ar. Bea	123.75	287	PKP	PKPdf	12 08 36.2	-8.8
	0.4nm,0.6s,baz=83,slow=2.4,SNR=2.4						

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*BJI **19** 11:50:08.6±0.0,27°.00N×127°.00E,h110^{km},mb4.7/65,mB4.5/32*
*IDC **19** 11:50:08.2±0.8,27°.07N×127°.01E,h104^{km}±7^{km},mb4.3/25,mbtmp4.6/30,MS3.3/23,Error ellipse: s-maj=12.9km s-min=8.0km az=71.0*
*NEIC **19** 11:50:09.3±2.2,26°.99N±0°.06×127°.05E±0°.07,h108^{km}±6^{km},mb4.8/124,Error ellipse: s-maj=9.8km s-min=8.8km az=129.0*
*JMA **19** 11:50:10.1±0.3,27˚N±1˚×12˚7E±˚,h102^{km}±3^{km},MD4.4/13,MV4.7/13,NW OFF OKINAWAJIMA IS*
JMA Felt II J1 at NW OFF OKINAWAJIMA IS .
*NIED **19** 11:50:10.1,27°.05N×127°.08E,h102^{km},MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.29; M$_{\theta\theta}$-0.37; M$_{\phi\phi}$0.07; M$_{r\theta}$-0.75; M$_{\theta\phi}$-0.07; M$_{\phi r}$-0.70; Fault plane solution: M$_{0}$1.08000×10^{16} NP1: ϕ_s106.00000°,δ13.00000°,λ146.00000°. NP2: ϕ_s229.00000°,δ83.00000°,λ79.00000°.*
ISC 19 11:50:08.9±0.5**,27°.04N**±0°.04×**127°.05E**±0°.03**,h108**^{km}±3^{km}**,n342,**σ**1**^{s}**19**/315**,mb4.7**/104**,3C-4D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	Aguni-jima	0.48	159	*i* P	Pn	11 50 26.1	+0.8
JAGN				S	Sn	11 50 38.2	+0.5
JAGN	Aguni-jima	0.48	159	A	A	11 50 26.1	
	comp=E,65nm,0.6s,comp=E,101nm,1.3s						
JKE	Kume jima 2	0.75	198	*i* P	Pn	11 50 28.3	+0.9
JKE				S	Sn	11 50 41.8	+0.4
JKE	Kume jima 2	0.75	198	A	A	11 50 28.3	
	comp=E,42nm,2.0s,comp=E,23nm,1.8s						
JIH	Iheya	0.82	90	*i* P	Pn	11 50 29.0	+1.0
JIH				S	Sn	11 50 42.8	+0.3
JIH	Iheya	0.82	90	A	A	11 50 29.0	
	comp=E,29nm,0.5s,comp=E,41nm,2.2s						
JNTH	Nagotoyohara	1.02	121	*i* P	Pn	11 50 30.9	+0.8
JNTH				S	Sn	11 50 45.9	-0.1
JNTH	Nagotoyohara	1.02	121	A	A	11 50 30.9	
	comp=E,13nm,0.7s,comp=E,26nm,0.5s						
JJT3	Tamagusuku3	1.11	143	*i* P	Pn	11 50 32.5	+1.4
JJT3				S	Sn	11 50 49.2	+1.4
JJT3	Tamagusuku3	1.11	143	A	A	11 50 32.5	
	comp=E,18nm,1.5s,comp=E,27nm,1.5s						
JOW	Kunigami	1.12	100	P	Pn	11 50 31.6	+0.5
	4μm,0.3s,baz=104,slow=23,SNR=7461						
JOW				S	Sn	11 50 47.6	-0.3
	12μm,0.3s,baz=132,slow=29,SNR=41						
JOW	Kunigami	1.12	100	Pn	Pn	11 50 31.9	+0.7
JOW				Sn	Sn	11 50 47.0	-1.0
JOW	Kunigami	1.12	100	P	Pn	11 50 31.9	+0.7
JOW	Kunigami	1.12	100	*i* P	Pn	11 50 31.8	+0.7
JOW				S	Sn	11 50 47.4	-0.5
JOW	Kunigami	1.12	100	A	A	11 50 31.8	
	comp=E,22nm,0.3s,comp=E,25nm,0.2s						
JYRO	Yoronjima	1.25	90	*i* P	Pn	11 50 33.2	+0.6
JYRO				S	Sn	11 50 49.7	-0.9
JOKE	Okinoerabujima	1.39	76	*i* P	Pn	11 50 34.8	+0.5
JOKE				S	Sn	11 50 53.0	-0.6
JOKE	Okinoerabujima	1.39	76	A	A	11 50 34.8	
	comp=E,10.0nm,0.3s,comp=E,13nm,1.9s						
JTK	Tokunoshima	1.85	66	*i* P	Pn	11 50 40.2	+0.4
JTK				S	Sn	11 51 03.1	-0.3
JTK	Tokunoshima	1.85	66	A	A	11 50 40.2	
	comp=E,6.0nm,0.8s,comp=E,7.0nm,1.0s						
JAMN	Amaminishikomi	2.24	57	*i* P	Pn	11 50 45.2	+0.5
JAMN				S	Sn	11 51 10.6	-1.6
JMJ	Miyako jima 2	2.72	216	P	Pn	11 50 52.4	+1.3
YOJ	Yonaguni jima	4.45	236	Pn	Pn	11 51 14.7	+0.4
YOJ	Yonaguni jima	4.45	236	P	Pn	11 51 15.3	+1.0
JSU	Suzuyama	5.35	33	Pn	Pn	11 51 27.0	+0.6
TATO	Taipei	5.41	249	Pn	Pn	11 51 31.3	+4.1
YHNB	Yeheng	5.63	246	Pn	Pn	11 51 33.1	+2.8
NACB	Ninganchiao	5.69	241	Pn	Pn	11 51 30.8	-0.3
YULB	Yu-li	6.35	236		Pn	11 51 37.6	-2.3
SSLB	Suanglung	6.39	241	Pn	Pn	11 51 40.1	-0.4
TWG	Pinlang	6.86	234		Pn	11 51 44.2	-2.7
TPUB	Ta-pu	6.90	239	Pn	Pn	11 51 47.7	+0.2
JNU	Nakatsue	6.91	28	P	Pn	11 51 48.2	+0.7
	36nm,0.6s,baz=266,slow=4.3,SNR=20						
JNU				S	Sn	11 53 04.7	0.0
	10nm,0.7s,baz=53,slow=19,SNR=0.9						
JNU	Nakatsue	6.91	28	Pn	Pn	11 51 49.5	+2.0
JNU	Nakatsue	6.91	28	P	Pn	11 51 49.6	+2.0
JTU	Tsushima	7.73	15	Pn	Pn	11 52 02.1	+3.5
NAWB	Namwon	8.36	2	Pn	Pn	11 52 09.1	+1.9
NJ2	Nanjing	8.71	307	⇓P	Pn	11 52 14.3	+2.4
NJ2				pmax	pmax		
	comp=Z,55nm,0.9s						
TJN	Taejon	9.31	2	Pn	Pn	11 52 23.5	+3.5
KSCHJ	Chungju	9.83	4	Pn	Pn	11 52 29.6	+2.4
KSAR	Wonju Array Be	10.39	4	Pn	Pn	11 52 37.3	+2.6
KSRS	Korea Array	10.41	4	P	Pn	11 52 34.6	-0.3
	16nm,0.8s,baz=185,slow=14,SNR=101						
INCN	Inchon	10.42	358	Pn	Pn	11 52 36.7	+1.6
KS19	Wonju Array Si	10.45	4	Pn	Pn	11 52 36.5	+0.9
SEHB	SEOHWA	11.24	5	Pn	Pn	11 52 47.9	+1.7
WHN	Wuhan	11.67	290	⇓P	Pn	11 52 53.4	+1.4
WHN				S	Sn	11 55 00.4	+0.1
WHN				pmax	pmax		
	comp=Z,42nm,0.7s						
WHN				LR	LR		
	comp=N,990nm,5.4s						
WHN				LR	LR		
	comp=E,650nm,4.3s						
WHN				LR	LR		
	comp=Z,530nm,6.1s						
INU	Inuyama	11.89	43	P	Pn	11 52 56.4	+1.6
	16nm,1.5s						
TIA	Tai'an	12.44	320	⇑*i*P	Pn	11 53 05.3	+3.1
TIA				pmax	pmax		
	comp=Z,25nm,1.0s						
TIA				pmax	pmax		
	comp=Z,170nm,4.6s						
TIA				LR	LR		
	comp=N,94nm,4.1s						
TIA				LR	LR		
	comp=E,130nm,3.8s						
TIA				LR	LR		
	comp=Z,200nm,6.5s						
MJAR	Matsushiro Arr	13.40	42	P	Pn	11 53 14.7	0.0
	0.7nm,0.4s,baz=236,slow=13,SNR=2.5						
MJAR				LR	LR	11 58 06.4	
	comp=Z,40nm,20.9s,baz=216,slow=36						
MJAR	Matsushiro Arr	13.40	42	Pn	Pn	11 53 15.9	+1.3
JCJ	Chichijima	13.49	86	P	Pn	11 53 15.6	-0.3
	56nm,0.9s,baz=266,slow=20,SNR=5.9						
JCJ				LR	LR	11 57 47.2	
	comp=Z,31nm,20.8s,baz=312,slow=34						
JCJ	Chichijima	13.49	86	Pn	Pn	11 53 16.6	+0.7
JCJ	Chichijima	13.49	86	P	Pn	11 53 17.3	+1.4
LYN	LuoYang	14.59	304	*e*P	Pn	11 53 31.8	+1.9
LYN				S	Sn	11 56 11.5	+0.7
LYN				pmax	pmax		
	comp=Z,70nm,1.0s						
LYN				LR	LR		
	comp=E,180nm,12.2s						
LYN				LR	LR		
	comp=Z,190nm,9.4s						
HNS	HongShan	14.67	318	⇓P	P	11 53 33.4	-0.9
HNS				S	Sn	11 56 14.4	+1.5
HNS				pmax	pmax		
	comp=Z,23nm,1.3s						
HNS				LR	LR		
	comp=N,140nm,5.3s						
HNS				LR	LR		
	comp=E,170nm,5.8s						
HNS				LR	LR		
	comp=Z,160nm,7.6s						
ENH	Enshi	15.75	286		P	11 53 47.5	+1.1
BJT	Baijiatuau	15.79	328		P	11 53 47.1	+0.4
BJI	Beijing	15.80	328	P	P	11 53 47.0	+0.2
BJI				sP	sP	11 54 16.0	-4.1
BJI				pmax	pmax		
	comp=Z,30nm,1.2s						
BJI				pmax	pmax		
	comp=Z,140nm,7.2s						
TIY	Taiyuan	16.28	314	*e*P	P	11 53 54.4	+2.2
TIY				pmax	pmax		
	comp=Z,130nm,4.5s						
CN2	Changchun	16.77	356	*e*P	P	11 53 58.0	+0.4
CN2				sP	sP	11 54 30.3	-0.4
CN2				S	Sn	11 56 59.9	-3.5
CN2				pmax	pmax		
	comp=Z,50nm,0.7s						
CN2				LR	LR		
	comp=N,90nm,11.0s						
CN2				LR	LR		
	comp=E,60nm,11.0s						
CN2				LR	LR		
	comp=Z,50nm,12.0s						
XAN	Xi'an	17.09	298	P	P	11 54 02.6	+1.4
XAN				pP	pP	11 54 17.8	-3.1
XAN				S	S	11 57 13.3	-0.5
XAN				pmax	pmax		
	comp=Z,25nm,1.1s						
XAN				pmax	pmax		
	comp=Z,220nm,3.9s						
XAN				LR	LR		
	comp=N,260nm,6.7s						
XAN				LR	LR		
	comp=Z,210nm,13.1s						
USRK	Ussuriysk Ar.	17.58	12	P	P	11 54 04.3	-2.1
	1.6nm,0.5s,baz=190,slow=8.6,SNR=5.3						
MDJ	Mudanjiang	17.66	6	P	P	11 54 07.8	+0.5
MDJ				S	S	11 57 29.3	+4.2
MDJ				sS	Sn	11 57 39.9	+15
MDJ				PcS	PcS	12 02 16.3	-0.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,120nm,6.0s						
BNX	BinXian	18.66	1	⇑P	Pn	11 54 22.9	+3.0
BNX				pmax	pmax		
	comp=Z,40nm,0.9s						
BNX				pmax	pmax		
	comp=Z,130nm,4.8s						
BNX				LR	LR		
	comp=N,260nm,4.1s						
BNX				LR	LR		
	comp=E,350nm,5.5s						
BNX				LR	LR		
	comp=Z,250nm,4.1s						
HHC	Hu-ho-hao-te	18.79	321	*e*P	Pn	11 54 22.5	+0.9
HHC				S	Sn	11 57 52.3	+0.1
HHC				pmax	pmax		
	comp=Z,83nm,1.0s						
HHC				pmax	pmax		
	comp=Z,400nm,5.3s						
HHC				LR	LR		
	comp=N,180nm,9.2s						
HHC				LR	LR		
	comp=E,110nm,9.2s						
HHC				LR	LR		
	comp=Z,210nm,10.5s						
XLT	XiLinHaoTe	19.01	335	*e*P	Pn	11 54 23.8	-0.4
XLT				pP	pP	11 54 40.8	-1.4
XLT				sP	sP	11 54 58.6	+2.9
XLT				S	S	11 57 52.8	+0.4
XLT				pmax	pmax		
	comp=Z,27nm,0.8s						
XLT				pmax	pmax		
	comp=Z,200nm,3.5s						
ERM	Erimo	19.93	37	P	Pn	11 54 34.9	+0.2
CD2	Chengdu	20.73	286	P	P	11 54 40.6	-0.3
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
ASAJ	Asahikawa	21.16	32	P	P	11 54 43.8	-1.5
	2.0nm,0.4s,baz=256,slow=24,SNR=2.3						
JKA	Kamikawa-asahi	21.16	32	P	P	11 54 43.8	-1.5
GUMO	Guam	21.37	125	LR	LR	12 02 50.8	
	comp=Z,32nm,18.1s,baz=300,slow=36						
GUMO	Guam	21.37	125	P	P	11 54 47.8	0.0
LZH	Lanzhou	21.69	300	⇑P	P	11 54 51.8	+0.6
LZH				PP	PnPn	11 55 17.8	-0.3
LZH				pmax	pmax		
	comp=Z,22nm,1.5s						
KLR	Kul'dur	22.45	8	P	P	11 54 56.5	-2.4
	1.4nm,0.4s,baz=253,slow=8.5,SNR=3.0						
KLR				LR	LR	12 03 05.5	
	comp=Z,34nm,19.1s,baz=186,slow=35						
	1.4nm,0.4s						
PZH	PanZhiHua	22.59	274	P	P	11 55 01.4	+0.7
PZH				S	S	11 58 56.4	-4.2
PZH				sS	sS	11 59 36.3	-0.6
PZH				SS	SnSn	11 59 47.3	+5.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
MYLDM	Lahad Datu	23.22	202	P	P	11 55 04.4	-2.2
MYLDM				IAmb	IAmb	11 55 10.1	
	comp=Z,31nm,0.9s						
GTA	Gaotai	25.80	305	⇓P	P	11 55 29.4	-0.6
GTA				pP	pP	11 55 54.4	+1.3
GTA				sP	sP	11 56 07.9	+2.4
GTA				pmax	pmax		
	comp=Z,17nm,0.7s						
ULN	Ulaanbaatar	26.01	328	P	P	11 55 31.4	-0.5
ULN				IAmb	IAmb	11 55 35.9	
	comp=Z,48nm,1.2s						
TNTI	Ternate	26.12	179	P	P	11 55 32.9	-0.1
TNTI				IAmb	IAmb	11 55 41.5	
	comp=Z,21nm,0.9s						
SONM	Songino Array	26.30	328	P	P	11 55 33.7	-0.8
	comp=Z,24nm,0.6s,baz=143,slow=8.8,SNR=15						
SONM				ScP	ScP	12 02 28.2	+0.3
	comp=Z,2.7nm,0.6s,baz=115,slow=2.1,SNR=2.1						
	comp=Z,24nm,0.6s						
SONM	Songino Array	26.30	328	P	P	11 55 34.4	-0.1
SONM				IAmb	IAmb	11 55 38.5	
	comp=Z,36nm,1.2s						
TOLI2	Tolitoli	26.48	194	P	P	11 55 35.8	-0.3
TOLI2	Tolitoli	26.48	194	P	P	11 55 36.8	+0.7
CMAR	Chiang Mai Arr	27.24	258	P	P	11 55 41.6	-1.5
	comp=Z,0.7nm,0.3s,baz=55,slow=7.6,SNR=9.3						
CMAR				PcP	PcP	11 59 02.4	+1.9
	comp=Z,0.5nm,0.4s,baz=81,slow=1.2,SNR=1.8						
CMAR				ScP	ScP	12 02 32.6	+1.6
	comp=Z,0.4nm,0.3s,baz=105,slow=1.7,SNR=4.1						
CMAR				LR	LR	12 06 18.1	
	comp=Z,23nm,18.7s,baz=70,slow=36						
	comp=Z,0.7nm,0.3s						
MPSI	Mapaga	27.43	196	P	P	11 55 45.0	+0.4
	comp=Z,11nm,1.0s						
LBMI	Labuha	27.52	179	P	P	11 55 45.4	-0.1
	comp=Z,423nmcomp=Z,11nm,1.0s						

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SIJI  Sorong           28.05 171  LR    LR     12 04 46.6
      comp=Z,59nm,20.8s,baz=199,slow=31
SANI  Sanana           28.94 182  P     P      11 55 57.1 -1.0
      comp=Z,30nm,0.9s
AAI   Ambon            30.57 178  P     P      11 56 12.2 -0.3
      comp=Z,34nm,1.1s
BBKI  Banjar Baru      32.54 203  P     P      11 56 31.4 +1.6
      comp=Z,42nm,0.7s
PETK  Petropavlovsk-   34.58  33  P     P      11 56 46.0 -1.2
      comp=Z,1.2nm,0.7s,baz=214,slow=6.8,SNR=6.3
      comp=Z,1.2nm,0.7s
WMQ   Urumqi           35.78 308 eP     P      11 56 58.0 +0.3
WMQ                               sP    sP     11 57 37.3 +3.7
WMQ                               pmax  pmax
      comp=Z,33nm,0.7s
PKI   Pulchoki         36.88 281 eP     P      11 57 06.7 -0.8
      comp=Z,23nm,0.7s
PKIN  Phulchoki        36.89 281 eP     P      11 57 06.9 -0.6
      comp=Z,18nm,0.5s
KKN   Kakani           36.96 281 eP     P      11 57 08.3 +0.3
      comp=Z,11nm,0.4s
DMN   Daman            37.14 281 eP     P      11 57 08.2 -1.4
BATI  Baumata          37.17 186  P     P      11 57 07.5 -2.1
      comp=Z,29nm,0.6s,baz=346,slow=2.4,SNR=7.2
      comp=Z,29nm,0.6s
GKN   Gorkha           37.49 282 eP     P      11 57 12.6 +0.2
      comp=Z,20nm,0.5s
RABL  Rabaul           39.41 138  P     P      11 57 29.5 +1.0
SEY   Seymchan         39.57  18  P     P      11 57 27.6 -1.6
      comp=Z,1.7nm,0.6s,baz=236,slow=7.3,SNR=1.8
SEY                               LR    LR     12 14 10.9
      comp=Z,28nm,21.3s,baz=127,slow=36
      comp=Z,1.7nm,0.6s
MTN   Manton Dam       39.84 174  P     P      11 57 30.7 -1.3
MK31  Makanchi Array   40.21 311  P     P      11 57 34.1 -0.6
MKAR  Makanchi Array   40.21 311  P     P      11 57 33.8 -0.9
      comp=Z,6.0nm,0.5s,baz=98,slow=10,SNR=67
MKAR                              PcP   PcP    11 59 37.4 +0.6
      comp=Z,3.1nm,0.7s,baz=81,slow=3.7,SNR=7.4
MKAR                              ScP   ScP    12 03 15.8 -0.3
      comp=Z,1.3nm,0.6s,baz=99,slow=4.5,SNR=7.7
      comp=Z,6.0nm,0.5s
MKAR  Makanchi Array   40.21 311  P     P      11 57 34.0 -0.7
MAKZ  Makanchi         40.42 311  P     P      11 57 35.9 -0.6
MAKZ                              IAmb  IAmb   11 57 37.2
      comp=Z,11nm,1.0s
ZAA0  Zalesovo Array   40.96 323  P     P      11 57 40.4 -0.4
ZAA0                              IAmb  IAmb   11 57 41.6
      comp=Z,13nm,0.8s
ZALV  Zalesovo Beam    40.96 323  P     P      11 57 39.9 -0.9
      comp=Z,9.0nm,0.4s,baz=110,slow=8.0,SNR=39
ZALV                              pP    pwP    11 58 07.4 +0.4
      comp=Z,12nm,0.7s,baz=108,slow=8.2,SNR=13
ZALV                              PcP   PcP    11 59 38.2 -0.8
      comp=Z,1.6nm,0.5s,baz=204,slow=3.3,SNR=3.6
ZALV                              ScP   ScP    12 03 16.7 -2.2
      comp=Z,1.7nm,0.6s,baz=143,slow=3.1,SNR=6.5
ZALV                              LR    LR     12 15 27.3
      comp=Z,24nm,21.6s,baz=84,slow=37
      comp=Z,9.0nm,0.4s
ZALV  Zalesovo Beam    40.96 323  P     P      11 57 40.2 -0.5
PMG   Port Moresby     41.15 149  LR    LR     12 12 36.5
      comp=Z,44nm,21.6s,baz=298,slow=33
KNRA  Kununurra        42.50 178  P     P      11 57 52.8 -0.8
KNRA  Kununurra        42.50 178  P     P      11 57 53.9 +0.3
TARG  Taragay, Kyrgy   42.63 303  IAmb  IAmb   11 58 25.4
      comp=Z,26nm,1.1s
KURK  Kurchatov        43.50 316  P     P      11 58 00.9 -0.5
KURK                              IAmb  IAmb   11 58 02.1
      comp=Z,9.7nm,0.8s
KSH   Kashi            43.94 300  P     P      11 58 10.3 +5.0
KSH                               pP    sP     11 58 38.3 -3.5
KSH                               pmax  pmax
      comp=Z,4.0nm,0.6s
AAK   Ala-Archa        45.14 304  LR    LR     12 18 00.6
      comp=Z,45nm,18.2s,baz=123,slow=37
NIL   Nilore           46.46 292  P     P      11 58 24.0 -1.2
NIL                               IAmb  IAmb   11 58 25.6
      comp=Z,9.7nm,0.6s
WB0   Warramunga Arr   47.07 171  IAmb  IAmb   11 58 30.9
      comp=Z,19nm,0.8s
WRAB  Tennant Creek    47.23 171  P     P      11 58 30.5 -0.7
WRAB  Tennant Creek    47.23 171  P     P      11 58 31.3 +0.2
WRA   Warramunga Arr   47.24 171  P     P      11 58 31.3 +0.1
      comp=Z,18nm,0.7s,baz=353,slow=8.5,SNR=109
WRA                               PcP   PcP    12 00 00.8  0.0
      comp=Z,2.2nm,0.8s,baz=349,slow=4.0,SNR=4.6
WRA                               ScP   ScP    12 03 44.6 -0.4
      comp=Z,0.3nm,0.9s,baz=353,slow=5.4,SNR=3.7
      comp=Z,18nm,0.7s
WR0   Warramunga Arr   47.28 170  IAmb  IAmb   11 58 32.6
      comp=Z,21nm,0.9s
NRIK  Noril'sk         48.16 342  PcP   PcP    12 00 04.5 +1.1
      comp=Z,5.1nm,0.6s,baz=121,slow=3.9,SNR=9.3
QIS   Mount Isa        48.86 164  P     P      11 58 44.1 +0.4
BRVK  Borovoye         49.03 318  P     P      11 58 44.7  0.0
BRVK                              IAmb  IAmb   11 58 45.7
      comp=Z,7.3nm,0.8s
KBL   Kabul            49.81 294  P     P      11 58 51.1 -0.1
KBL                               IAmb  IAmb   11 58 54.2
      comp=Z,10nm,0.8s
CTA   Charters Tower   50.41 156  LR    LR     12 20 26.4
      comp=Z,26nm,19.1s,baz=281,slow=36
ASAR  Alice Springs    50.84 172  P     P      11 58 58.6 -0.1
      comp=Z,12nm,0.9s,baz=358,slow=9.3,SNR=100
ASAR                              PcP   PcP    12 00 14.4 +0.4
      comp=Z,3.7nm,0.8s,baz=359,slow=4.1,SNR=7.9
ASAR                              ScP   ScP    12 03 59.7 -0.6
      comp=Z,0.2nm,0.4s,baz=348,slow=7.0,SNR=2.7
      comp=Z,12nm,0.9s
ASAR  Alice Springs    50.84 172  P     P      11 58 58.3 -0.4
WRKA  Warakurna        51.79 179  P     P      11 59 06.4 +0.7
NIKH  Nikolski High    53.43  43  P     P      11 59 18.0 +0.4
      baz=267
OOD   Oodnadatta       55.15 171  P     P      11 59 30.6 +0.4
QLP   Quilpie          55.82 161  P     P      11 59 35.0  0.0
INKA  Innaminka        56.04 165  P     P      11 59 37.2 +0.7
ARU   Arti             56.10 321  LR    LR     12 26 30.9
      comp=Z,40nm,18.8s,baz=164,slow=39
AKTO  Aktyubinsk       56.51 314  LR    LR     12 26 26.1
      comp=Z,33nm,18.4s,baz=128,slow=39
MULG  Mulgathing       57.39 173  P     P      11 59 46.6 +0.5
FORT  Forrest          57.50 179  P     P      11 59 46.5 -0.4
FORT  Forrest          57.50 179  P     P      11 59 47.0 +0.2
GEYT  Alibeck          57.97 299  LR    LR     12 28 07.4
      comp=Z,37nm,19.6s,baz=94,slow=39
LCRK  Leigh Creek      58.16 169  P     P      11 59 52.1 +0.7
CHGN  Chignik          59.47  39  P     P      12 00 01.1 +0.8
      baz=274
GCSA  Galena City Sc   59.96  29  P     P      12 00 04.2 +0.7
      baz=270
BBOO  Buckleboo        60.14 171  P     P      12 00 05.6 +0.6
STKA  Stephens Creek   60.21 166  P     P      12 00 05.5 -0.1
      comp=Z,18nm,0.7s,baz=346,slow=6.3,SNR=38
      comp=Z,18nm,0.7s
STKA  Stephens Creek   60.21 166  IAmb  IAmb   12 00 06.8
      comp=Z,3.5nm,0.8s
TTA   Tatalina         60.38  31  P     P      12 00 07.1 +0.6
TTA                               IAmb  IAmb   12 00 08.1
      comp=Z,6.6nm,0.9s
TTA   Tatalina         60.38  31  P     P      12 00 07.2 +0.7
      baz=272,SNR=6.1
N18K  Kilae Creek      60.53  33  P     P      12 00 07.9 +0.4
      baz=273
SVW2  Sparrevohn       60.66  33  IAmb  IAmb   12 00 23.9
      comp=Z,13nm,1.5s
NAPP  Napperby         60.81 169  P     P      12 00 10.5 +0.9
CMSA  Cobar Meteorol   60.91 162  P     P      12 00 11.6 +1.3
L19K  White Mountain   60.95  32  P     P      12 00 10.9 +0.6
L19K                              IAmb  IAmb   12 00 12.4
      comp=Z,5.3nm,0.8s
L19K  White Mountain   60.95  32  P     P      12 00 11.5 +1.2
      baz=273
P18K  Big Mountain,    60.95  35  P     P      12 00 11.2 +0.8
      baz=274
J20K  Nowinta River    61.16  29  P     P      12 00 13.1 +1.4
      baz=273,SNR=24
M19K  Big River Lodg   61.18  32  P     P      12 00 11.7 -0.2
      baz=274
HTT   Hallett          61.19 169  P     P      12 00 12.9 +0.7
N19K  Bonanza Creek    61.21  33  P     P      12 00 13.1 +0.9
      baz=274
K20K  Telida           61.24  30  IAmb  IAmb   12 00 14.6
      comp=Z,12nm,0.8s
K20K  Telida           61.24  30  P     P      12 00 13.6 +1.3
      baz=273,SNR=13
O19K  Port Alsworth    61.34  34  IAmb  IAmb   12 00 14.9
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      comp=Z,6.8nm,0.7s
O19K  Port Alsworth    61.34  34  P     P      12 00 13.5 +0.6
      baz=275
L20K  Farewell, AK     61.38  31  P     P      12 00 14.4 +1.1
      baz=274,SNR=5.5
H21K  Melozitna Rive   61.65  28  IAmb  IAmb   12 00 17.0
      comp=Z,10nm,0.7s
H21K  Melozitna Rive   61.65  28  P     P      12 00 16.2 +1.2
      baz=273
M20K  Styx River       61.78  32  IAmb  IAmb   12 00 18.9
      comp=Z,7.2nm,0.6s
M20K  Styx River       61.78  32  P     P      12 00 17.2 +1.2
      baz=275
SII   Sitkinak Islan   61.79  38  P     P      12 00 16.8 +0.7
      baz=277
DZM   Mont Dzumac      61.94 138  P     P      12 00 17.8 +0.2
      comp=Z,6.4nm,0.6s,baz=268,slow=8.8,SNR=13
      comp=Z,6.4nm,0.6s
CHUM  Lake Minchumin   61.98  30  P     P      12 00 18.3 +1.1
      baz=274,SNR=6.2
I21K  Tanana           62.03  28  P     P      12 00 18.7 +1.3
      baz=274,SNR=10.0
PPLA  Purkeypile       62.12  31  P     P      12 00 19.4 +1.0
      baz=275,SNR=8.1
SPCR  Spurr Chakacha   62.28  33  P     P      12 00 20.2 +0.8
      baz=276
MARNC Mare, Loyalty    62.45 136  P     P      12 00 21.1 +0.2
KDAK  Kodiak Island    62.50  37  P     P      12 00 21.8 +1.1
      baz=278
BPAW  Bear Paw Mtn.    62.55  29  IAmb  IAmb   12 00 22.8
      comp=Z,6.4nm,0.7s
BPAW  Bear Paw Mtn.    62.55  29  P     P      12 00 21.8 +0.8
      baz=276,SNR=6.9
COLD  Coldfoot         62.59  26  P     P      12 00 21.9 +0.7
      baz=275
TOLK  Toolik Lake Re   62.71  24  IAmb  IAmb   12 00 23.8
      comp=Z,6.4nm,0.7s
TOLK  Toolik Lake Re   62.71  24  P     P      12 00 22.9 +0.8
      baz=274
TRF   Thorofare Moun   62.92  30  P     P      12 00 25.1 +1.4
      baz=276
H23K  Yukon River      62.98  27  P     P      12 00 25.4 +1.6
      baz=276,SNR=35
CUT   Chulitna         63.06  31  P     P      12 00 24.2 -0.1
      baz=277
I23K  Minto, Yukon-K   63.13  28  P     P      12 00 25.6 +0.8
      baz=276
BRSE  Bradley Lake S   63.18  34  P     P      12 00 26.2 +1.0
      baz=278
M22K  Willow           63.21  32  P     P      12 00 25.9 +0.6
      baz=278
NEA2  Nenana           63.32  29  P     P      12 00 27.0 +0.9
      baz=277,SNR=31
RC01  Rabbit Creek A   63.48  33  P     P      12 00 27.9 +0.7
      baz=278
O22K  Cooper Landing   63.58  33  P     P      12 00 27.5 -0.3
      baz=278
MDM   Murphy Dome      63.63  28  P     P      12 00 28.7 +0.6
H24K  Noodor Dome      63.66  27  IAmb  IAmb   12 00 30.7
      comp=Z,10nm,0.8s
H24K  Noodor Dome      63.66  27  P     P      12 00 29.6 +1.2
      baz=277,SNR=18
PMR   Palmer           63.70  32  P     P      12 00 29.7 +1.1
      baz=278
WRH   Wood River Hil   63.76  29  IAmb  IAmb   12 00 31.9
      comp=Z,6.5nm,0.6s
SEW   Seward           63.77  34  P     P      12 00 29.7 +0.7
      baz=279
WAT1  Susitna Watana   63.79  31  P     P      12 00 29.3  0.0
      baz=278
TCOL  CIGO, UAF Yank   63.80  28  P     P      12 00 30.2 +1.1
      baz=278,SNR=6.9
COLA  College          63.80  28  P     P      12 00 30.0 +0.8
COLA  College          63.80  28  P     P      12 00 30.2 +1.0
      baz=278
CCB   Clear Creek Bu   63.86  29  IAmb  IAmb   12 00 30.7
      comp=Z,4.8nm,0.6s
POKR  Poker Plat Res   63.95  28  P     P      12 00 30.7 +0.5
      baz=278,SNR=6.2
SML   Sawmill          64.05  32  IAmb  IAmb   12 00 32.1
      comp=Z,7.0nm,0.9s
SML   Sawmill          64.05  32  P     P      12 00 31.2 +0.3
      baz=279
KNK   Knik Glacier     64.05  32  IAmb  IAmb   12 00 32.9
      comp=Z,7.0nm,0.8s
KNK   Knik Glacier     64.05  32  P     P      12 00 31.2 +0.3
      baz=279
WAT6  Susitna Watana   64.20  31  P     P      12 00 32.5 +0.4
      baz=279,SNR=7.4
ILAR  Eielson Array    64.23  28  P     P      12 00 31.4 -0.6
      comp=Z,2.2nm,0.7s,baz=265,slow=3.5,SNR=47
      comp=Z,2.2nm,0.7s
HDA   Harding Lake     64.26  29  IAmb  IAmb   12 00 33.1
      comp=Z,15nm,0.8s
HDA   Harding Lake     64.26  29  P     P      12 00 32.1 -0.2
      baz=279,SNR=20
DHY   Denali Highway   64.28  30  P     P      12 00 33.1 +0.5
      baz=279
M23K  Glacier View     64.33  32  P     P      12 00 33.3 +0.5
      baz=280
SCM   Sheep Creek Mo   64.51  32  IAmb  IAmb   12 00 35.4
      comp=Z,12nm,1.0s
SCM   Sheep Creek Mo   64.51  32  P     P      12 00 34.3 +0.3
      baz=280
GLI   Glacier Island   64.79  33  P     P      12 00 36.1 +0.3
      baz=280
K24K  Donnelly Dome    64.87  29  P     P      12 00 36.6 +0.3
      baz=280,SNR=9.9
J25K  Salcha River,    64.90  28  P     P      12 00 36.2 -0.3
      baz=280,SNR=7.8
M24K  Tolsona, Glenn   65.00  31  IAmb  IAmb   12 00 42.8
      comp=Z,18nm,1.1s
M24K  Tolsona, Glenn   65.00  31  P     P      12 00 37.7 +0.6
      baz=281
PAX   Paxson           65.16  30  IAmb  IAmb   12 00 40.9
      comp=Z,6.8nm,0.6s
PAX   Paxson           65.16  30  P     P      12 00 38.4 +0.2
      baz=281,SNR=9.2
KLU   Klutina          65.23  32  IAmb  IAmb   12 00 40.1
      comp=Z,9.2nm,1.0s
KLU   Klutina          65.23  32  P     P      12 00 38.9 +0.2
      baz=281
RIDG  Independent Ri   65.28  29  IAmb  IAmb   12 00 40.6
      comp=Z,12nm,0.9s
RIDG  Independent Ri   65.28  29  P     P      12 00 39.0  0.0
      baz=281,SNR=9.0
DIV   Divide           65.38  32  IAmb  IAmb   12 00 41.2
      comp=Z,10nm,1.0s
HARP  HAARP            65.41  31  P     P      12 00 40.6 +0.9
      baz=281
EYAK  Cordova Ski Ar   65.50  33  P     P      12 00 40.9 +0.5
      baz=282
SCRK  Sand Creek       65.61  29  IAmb  IAmb   12 00 42.1
      comp=Z,9.4nm,0.8s
SCRK  Sand Creek       65.61  29  P     P      12 00 41.0 -0.1
      baz=282,SNR=21
DOT   Dot Lake         65.64  29  IAmb  IAmb   12 00 42.5
      comp=Z,12nm,0.7s
J26L  Joseph Creek     65.68  28  P     P      12 00 41.4 -0.2
      baz=282,SNR=33
N25K  Chitina, Valde   65.83  32  P     P      12 00 42.6 +0.1
      baz=282
MENT  Mentasta         65.95  30  IAmb  IAmb   12 00 45.5
      comp=Z,9.6nm,0.6s
BMRM  Bremner River    65.96  32  P     P      12 00 43.6 +0.2
      baz=282
L26K  Log Cabin Wild   66.09  30  IAmb  IAmb   12 00 46.5
      comp=Z,5.7nm,0.8s
L26K  Log Cabin Wild   66.09  30  P     P      12 00 44.7 +0.6
      baz=283,SNR=8.9
GLB   Gilahina Butte   66.23  32  IAmb  IAmb   12 00 46.9
      comp=Z,8.0nm,1.1s
M26K  Nabesna, AK      66.39  31  P     P      12 00 46.7 +0.6
      baz=283,SNR=14
K27K  Chicken          66.42  29  IAmb  IAmb   12 00 48.1
      comp=Z,8.1nm,0.8s
K27K  Chicken          66.42  29  P     P      12 00 47.1 +0.9
      baz=283
MCARA McCarthy VSAT    66.62  32  P     P      12 00 47.6 +0.2
      baz=284
EGAK  Eagle            66.63  28  IAmb  IAmb   12 00 49.1
      comp=Z,5.7nm,0.7s
EGAK  Eagle            66.63  28  P     P      12 00 47.8 +0.3
      baz=284,SNR=10
L27K  Beaver Creek,    66.76  30  P     P      12 00 49.4 +1.0
      baz=284
M27K  Edge Creek, AK   66.91  30  IAmb  IAmb   12 00 51.6
      comp=Z,6.1nm,0.6s
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M27K  Edge Creek, AK   66.91  30  P     P      12 00 50.2 +0.7
      baz=284
BVCY  Beaver Creek     67.35  30  P     P      12 00 53.3 +1.2
      baz=285
CTG   Chitna Glacier   67.51  32  P     P      12 00 54.4 +1.1
      baz=285
DAWY  Dawson           67.56  28  P     P      12 00 54.1 +0.6
      baz=286,SNR=7.4
I29M  Ogilvie Camp,    67.65  27  IAmb  IAmb   12 00 56.4
      comp=Z,7.6nm,0.8s
I29M  Ogilvie Camp,    67.65  27  P     P      12 00 54.9 +0.9
      baz=286
YUK3  Moose Creek      67.70  31  P     P      12 00 55.1 +0.5
      baz=286
KBZ   Khabaz           67.83 309  P     P      12 00 55.8 +0.4
      comp=Z,11nm,0.9s,baz=98,slow=2.3,SNR=17
      comp=Z,11nm,0.9s
KIV   Kislovodsk       67.91 309  P     P      12 00 57.1 +1.1
KIV                               IAmb  IAmb   12 00 58.2
      comp=Z,16nm,0.9s
J29M  Klondike Camp    67.94  28  P     P      12 00 56.8 +0.9
      baz=286
EPYK  Eagle Plains     67.99  26  P     P      12 00 56.7 +0.6
      baz=287,SNR=25
INK   Inuvik           68.56  23  IAmb  IAmb   12 01 01.0
      comp=Z,13nm,0.8s
INK   Inuvik           68.56  23  P     P      12 00 60.0 +0.4
      baz=289,SNR=16
ARCES ARCESS Array B   68.86 338  P     P      12 01 01.0 -0.5
      comp=Z,0.6nm,0.3s,baz=59,slow=8.0,SNR=13
      comp=Z,0.6nm,0.3s
M30M  Minto, Yukon     69.11  30  P     P      12 01 04.5 +1.3
      baz=288
N30M  Aishikik Lake    69.34  31  P     P      12 01 05.1 +0.5
      baz=288
HYT   Haines Junctio   69.35  31  P     P      12 01 06.0 +1.3
      baz=288
A36M  Sachs Harbour    69.80  18  P     P      12 01 07.4 +0.3
      baz=295,SNR=5.2
N31M  Braeburn, Yuko   69.92  30  P     P      12 01 09.3 +1.1
      baz=290
M31M  Drury Creek, Y   70.30  29  P     P      12 01 11.7 +1.3
      baz=290
WHY   Whitehorse       70.62  31  P     P      12 01 13.7 +1.2
      baz=291
C36M  Paulatuk         71.31  21  P     P      12 01 16.7 +0.4
      baz=297,SNR=7.9
FINES FINESS Array B   71.64 330  P     P      12 01 17.7 -0.7
      comp=Z,2.4nm,0.4s,baz=54,slow=6.3,SNR=26
FINES                             LR    LR     12 35 46.9
      comp=Z,25nm,20.1s,baz=23,slow=38
      comp=Z,2.4nm,0.4s
RAYN  Ar Rayn          72.55 288  P     P      12 01 24.6 -0.1
RAYN                              IAmb  IAmb   12 01 39.3
      comp=Z,10nm,1.0s
AKASG Malin Array Be   74.23 319  P     P      12 01 33.0 -0.9
      comp=Z,0.9nm,0.3s,baz=54,slow=5.6,SNR=14
AKASG                             LR    LR     12 36 53.8
      comp=Z,38nm,18.3s,baz=24,slow=38
      comp=Z,0.9nm,0.3s
DAG   Danmarks Havn    74.31 352 i P    P      12 01 32.0 -2.0
DAG                               IAmb  IAmb   12 01 34.0
      comp=Z,5.4nm,0.9s
RES   Resolute Bay     74.95  11  IAmb  IAmb   12 01 38.6
      comp=Z,8.8nm,0.8s
BR131 Keskin Array S   75.70 307  IAmb  IAmb   12 01 43.8
      comp=Z,15nm,0.8s
BRTR  Keskin Array B   75.70 307  P     P      12 01 42.5 -0.3
      comp=Z,7.6nm,0.7s,baz=92,slow=5.2,SNR=20
      comp=Z,7.6nm,0.7s
DBG   Daneborg         76.65 351 i P    P      12 01 46.3 -1.0
DBG                               IAmb  IAmb   12 01 48.0
      comp=Z,6.3nm,0.8s
HFS   Hagfors          77.61 332  LR    LR     12 38 51.0
      comp=Z,31nm,18.3s,baz=34,slow=38
NC405 NORSAR Array S   77.88 333  IAmb  IAmb   12 01 54.8
      comp=Z,12nm,0.6s
NB2   NORSAR Subarra   78.12 333  P     P      12 01 55.5 -0.3
      comp=Z,2.0nm,0.5s,baz=54,slow=5.6
NOA   NORSAR Array B   78.12 333  P     P      12 01 54.8 -1.1
      comp=Z,3.0nm,0.6s,baz=52,slow=5.7,SNR=15
NOA                               LR    LR     12 39 14.1
      comp=Z,21nm,18.9s,baz=290,slow=38
      comp=Z,3.0nm,0.6s
NC204 NORSAR Array S   78.16 334  IAmb  IAmb   12 01 56.2
      comp=Z,9.5nm,0.6s
YKA   Yellowknife Ar   78.24  25  P     P      12 01 56.6 +0.3
      comp=Z,2.9nm,0.4s,baz=298,slow=5.5,SNR=41
      comp=Z,2.9nm,0.4s
MLR   Muntele Rosu     78.43 315  LR    LR     12 41 40.4
      comp=Z,17nm,20.1s,baz=188,slow=40
SUMG  Summit           80.15 356  P     P      12 02 07.0 -0.1
SUMG  Summit           80.15 356 i P    P      12 02 08.0 +0.8
SUMG                              IAmb  IAmb   12 02 08.5
      comp=Z,20nm,0.7s
RPZ   Rata Peaks       81.16 149  P     P      12 02 11.5 -0.8
      comp=Z,17nm,0.9s,baz=281,slow=5.2,SNR=6.4
      comp=Z,17nm,0.9s
VYHS  Vyhne            81.24 320 eP     P      12 02 13.6 +0.6
VTS   Vitosha          81.49 314  P     P      12 02 14.7 +0.1
KRLC  Kraliky          81.56 322 eP     P      12 02 14.6  0.0
DPC   Dobruska-Polom   81.66 323 eP     P      12 02 17.2 +2.0
SMOL  Smolenice        82.03 321 eP     P      12 02 18.2 +1.1
VRAC  Vranov           82.07 322  LR    LR     12 41 11.6
      comp=Z,32nm,18.7s,baz=64,slow=37
D03D  Eldon            82.69  40  P     P      12 02 21.7 +1.2
      baz=302
CLL   Collm            82.88 325  P     P      12 02 20.7 -0.7
CLL                               IAmb  IAmb   12 02 22.3
      comp=Z,6.9nm,0.9s
CLL   Collm            82.88 325 i P    P      12 02 21.5 +0.1
      comp=Z,7.0nm,0.8s
CKRC  Cesky Krumlov    83.60 322 eP     P      12 02 25.8 +0.6
ICESG Greenland Ices   83.66 355 i P    P      12 02 26.0 +0.5
ICESG                             IAmb  IAmb   12 02 26.4
      comp=Z,21nm,0.7s
SOEG  Soedalen         83.70 352 i P    P      12 02 25.4 +0.2
SOEG                              IAmb  IAmb   12 02 25.8
      comp=Z,14nm,0.6s
NKC   Novy Kostel      83.79 324 eP     P      12 02 27.3 +1.2
KHC   Kasperske Hory   83.82 323 eP     P      12 02 27.2 +0.9
GERES GERESS Array B   83.91 322  P     P      12 02 27.0 +0.1
      comp=Z,2.9nm,0.7s,baz=48,slow=6.0,SNR=19
GERES                             LR    LR     12 44 07.2
      comp=Z,41nm,18.9s,baz=72,slow=39
      comp=Z,2.9nm,0.7s
GERES GERESS Array B   83.91 322  P     P      12 02 26.1 -0.8
I03D  Drain, OR        84.59  43  P     P      12 02 30.7 +0.4
      baz=302
I04A  Tendick Farm,    85.11  43  P     P      12 02 33.3 +0.3
      baz=303
I05D  Terrebonne, OR   85.46  42  P     P      12 02 35.3 +0.6
      baz=304
J04D  Umpqua Nationa   85.60  43  P     P      12 02 35.8 +0.1
      baz=303
NEW   Newport          85.60  37  P     P      12 02 35.2 -0.1
      baz=306
PINE  Pine Mountain    86.00  42  P     P      12 02 38.9 +1.3
PINE                              IAmb  IAmb   12 02 41.6
      comp=Z,9.7nm,1.1s
L04D  Klamath Falls    86.04  44  P     P      12 02 38.0 +0.3
      baz=303
J05D  Fort Rock, OR    86.11  43  P     P      12 02 38.9 +0.9
      baz=304
SFJD  Kangerlussuaq    86.24 359 i P    P      12 02 35.9 -2.1
DY2G  Dye2             86.64 357 i P    P      12 02 39.3 -1.0
DY2G                              IAmb  IAmb   12 02 41.3
      comp=Z,12nm,0.7s
DAVOX Davos/Dischmat   87.21 322  LR    LR     12 43 51.8
      comp=Z,32nm,18.1s,baz=83,slow=37
J08A  Circle Bar Ran   87.72  42  IAmb  IAmb   12 02 47.7
      comp=Z,3.9nm,0.6s
EGMT  Eagleton         89.58  34  IAmb  IAmb   12 02 56.2
      comp=Z,4.8nm,0.8s
EGMT  Eagleton         89.58  34  P     P      12 02 55.5 +1.0
      baz=312
HLID  Hailey           89.95  40  P     P      12 02 57.7 +1.3
      baz=308
BOZ   Bozeman (W)      90.20  37  IAmb  IAmb   12 02 58.1
      comp=Z,3.3nm,0.8s
BOZ   Bozeman (W)      90.20  37  P     P      12 02 57.2 -0.3
      baz=310
NVAR  Mina Array Bea   90.70  46  P     P      12 03 00.7 +0.7
      comp=Z,0.3nm,0.4s,baz=301,slow=4.4,SNR=5.1
      comp=Z,0.3nm,0.4s
YHL   Hebgen Lake      90.93  37  IAmb  IAmb   12 03 03.7
      comp=Z,3.7nm,0.8s
H17A  Grant Village    91.55  37  IAmb  IAmb   12 03 10.0
```

	comp=Z,9.1nm,1.2s						
H17A	**Grant Village**	**91.55**	**37**	P	**P**	**12 03 06.4**	**+2.5**
	baz=311						
FLWY	**Flagg Ranch**	**91.69**	**38**	IAmb	IAmb	12 03 07.6	
	comp=Z,5.2nm,0.7s						
RLMT	**Red Lodge**	**91.77**	**36**	IAmb	IAmb	12 03 07.0	
	comp=Z,3.9nm,0.8s						
RLMT	**Red Lodge**	**91.77**	**36**	P	**P**	**12 03 05.5**	**+0.7**
	baz=312						
HVU	**Hansel Valley**	**92.02**	**40**	P	**P**	**12 03 05.7**	**-0.2**
HVU				IAmb	IAmb	12 03 08.4	
	comp=Z,3.6nm,0.9s						
R11A	**Troy Canyon, C**	**92.46**	**44**	P	**P**	**12 03 07.4**	**-0.7**
	baz=308						
FURC	**Furnace Creek,**	**92.78**	**46**	P	**P**	**12 03 11.0**	**+1.6**
	baz=307						
HWUT	**Hardware Ranch**	**92.82**	**40**	IAmb	IAmb	12 03 14.2	
	comp=Z,6.1nm,1.1s						
LRMC	**Laurel Mtn Rad**	**92.83**	**48**	P	**P**	**12 03 11.3**	**+1.4**
	baz=306						
TPNV	**Topopah Spring**	**92.89**	**46**	P	**P**	**12 03 10.9**	**+0.8**
	baz=307						
DUG	**Dugway, Tooele**	**93.00**	**42**	P	**P**	**12 03 10.6**	**+0.1**
	baz=310						
BW06	**Boulder Array**	**93.19**	**38**	P	**P**	**12 03 11.2**	**-0.3**
	baz=312						
PDAR	**Pinedale Array**	**93.19**	**38**	P	**P**	**12 03 11.3**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=354,slow=1.5,SNR=7.1						
	comp=Z,0.7nm,0.6s						
GSC	**Goldstone, Bar**	**93.52**	**47**	P	**P**	**12 03 13.3**	**+0.4**
	baz=307						
CIS	**Catalina Islan**	**93.56**	**50**	P	**P**	**12 03 12.9**	**-0.2**
	baz=306						
SCI2	**San Clemente I**	**93.71**	**50**	P	**P**	**12 03 13.7**	**0.0**
	baz=306						
PFO	**Pinyon Flats O**	**94.75**	**49**	P	**P**	**12 03 17.8**	**-0.9**
	baz=307						
TPFO	**Pinon Flats**	**94.76**	**49**	P	**P**	**12 03 17.8**	**-0.9**
	baz=307						
MONP2	**Monument Peak**	**95.21**	**49**	P	**P**	**12 03 19.2**	**-1.7**
	baz=307						
Q24A	**Divide**	**98.22**	**38**	P	**P**	**12 03 33.9**	**-0.6**
	baz=315						
ESDC	**Sonseca Array**	**99.45**	**324**	P	**Pdif**	**12 03 39.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=20,slow=5.9,SNR=4.8						
ESDC				LR	LR	12 54 13.3	
	comp=Z,10nm,18.9s,baz=115,slow=39						
	comp=Z,0.8nm,0.6s						

*IDC **19** 12:37:25.7±6.0, 37°.00N×71°.33E, h99^{km}±53^{km}, mb3.3/5, mbtmp3.7/10, Error ellipse: s-maj=42.7km s-min=28.6km az=26.0*

*NNC **19** 12:37:28.3±2.9, 37°.23N×71°.04E, h105^{km}±58^{km}, mb3.9, mpv4.5, Error ellipse: s-maj=23.5km s-min=20.5km az=168.0*

ISC 19 12:37:25.3±1.2**, 37°.07N**±0°.10×**71°.03E**±0°.10**, h88**^{km}**, n23,** σ**1^{s}.67**/29**, mb3.6**/5**, 1C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.45**	**21**	P	**Pn**	**12 38 45.7**	**+1.3**
	SNR=68						
UCH	**Uchtor**	**5.81**	**26**	P	**Pn**	**12 38 50.5**	**+1.3**
	SNR=19						
EKS2	**Erkin-Say**	**5.97**	**20**	P	**Pn**	**12 38 53.5**	**+2.3**
	SNR=12						
KK31	**Karatay Array**	**6.04**	**356**	P	**Pn**	**12 38 53.4**	**+1.4**
	14nm,0.3s,baz=178,slow=12,SNR=134						
KK31				⇓S	**Sn**	**12 39 59.5**	**-0.2**
	3.0nm,0.3s						
AAK	**Ala-Archa**	**6.16**	**25**	P	**Pn**	**12 38 55.6**	**+1.8**
	SNR=11						
AAK	**Ala-Archa**	**6.16**	**25**	P	**Pn**	**12 38 55.4**	**+1.6**
	18nm,0.3s,baz=205,slow=7.7,SNR=38						
AAK				S	**Sn**	**12 40 02.9**	**0.0**
	6.2nm,0.4s,baz=143,slow=20,SNR=8.8						
KBK	**Karagaybulak**	**6.34**	**27**	P	**Pn**	**12 38 58.6**	**+2.4**
	SNR=6.5						
CHMS	**Chumysh**	**6.57**	**25**	P	**Pn**	**12 39 00.4**	**+1.2**
	SNR=25						
CHMS	**Chumysh**	**6.57**	**25**	⇓P	**Pn**	**12 39 00.1**	**+0.8**
	35nm,0.5s						
CHMS				⇓S	**Sn**	**12 40 12.2**	**-0.5**
	11nm,0.7s						
USP	**Ospenovka**	**6.73**	**22**	P	**Pn**	**12 39 02.4**	**+0.9**
	SNR=12						
TKM2	**Tokmak 2**	**6.81**	**30**	P	**Pn**	**12 39 04.0**	**+1.3**
	SNR=5.5						
TKM2	**Tokmak 2**	**6.81**	**30**	⇓P	**Pn**	**12 39 03.7**	**+1.0**
	13nm,0.5s						
TKM2				⇑S	**Sn**	**12 40 19.8**	**+1.0**
	4.4nm,0.6s						
MKAR	**Makanchi Array**	**12.81**	**37**	P	**Pn**	**12 40 22.9**	**-1.1**
	0.8nm,0.6s,baz=225,slow=16,SNR=10.0						
KURBB	**Kurchatov Arra**	**14.57**	**19**	P	**Pn**	**12 40 45.5**	**-1.4**
	0.2nm,0.4s,baz=212,slow=12,SNR=4.3						
AB31	**Akbulak array**	**14.60**	**330**	P	**Pn**	**12 40 46.2**	**-1.0**
	2.1nm,0.5s,baz=136,slow=14,SNR=76						
AKTO	**Aktyubinsk**	**16.30**	**329**	P	**Pn**	**12 41 09.0**	**+0.3**
	4.6nm,0.3s,baz=147,slow=8.1,SNR=16						
AKTO				S	**Sn**	**12 44 03.9**	**-5.1**
	1.2nm,0.6s,baz=213,slow=22,SNR=2.9						
AKTO	**Aktyubinsk**	**16.30**	**329**	⇓P	**P**	**12 41 10.7**	**+0.6**
	3.7nm,0.5s						
ZALV	**Zalesovo Beam**	**19.39**	**25**	P	**P**	**12 41 42.9**	**-1.1**
	1.6nm,0.4s,baz=218,slow=9.8,SNR=8.0						
FINES	**FINESS Array B**	**37.03**	**326**	P	**P**	**12 44 27.4**	**+1.2**
	0.4nm,0.5s,baz=119,slow=8.1,SNR=1.7						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**12 44 56.8**	**+0.6**
	6.4nm,1.2s,baz=116,slow=8.1,SNR=1.6						
	6.4nm,1.2s						
NOA	**NORSAR Array B**	**43.94**	**323**	P	**P**	**12 45 24.5**	**+1.3**
	0.3nm,0.6s,baz=12,slow=12,SNR=1.9						
NOA				pP	**pP**	**12 45 47.0**	**+2.0**
	0.6nm,0.6s,baz=96,slow=8.0,SNR=2.8						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.76**	**268**	P	**P**	**12 48 01.5**	**+0.3**
	0.3nm,0.7s,baz=120,slow=7.5,SNR=1.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**82.27**	**122**	P	**P**	**12 49 34.9**	**-2.2**
	0.2nm,0.5s,baz=326,slow=4.9,SNR=1.7						
	0.2nm,0.5s						

IDC 19 12:42:19.9±2.2**, 4°.49S**×**128°.48E, h0**^{km}**, mb3.3**/1**, mbtmp3.0**/3**, ML3.2**/2**, MS3.3**/1**, Error ellipse: s-maj=137.6km s-min=31.6km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.39**	**160**	Pn	Pn	12 46 10.3	-1.2
	0.1nm,0.3s,baz=339,slow=13,SNR=8.8						
WRA				LR	LR	12 53 09.2	
	comp=Z,92nm,18.3s,baz=122,slow=40						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**19.77**	**165**	P	P	12 46 52.4	+0.6
	0.1nm,0.3s,baz=342,slow=9.5,SNR=5.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**65.31**	**327**	P	P	12 53 03.8	0.0
	0.2nm,0.7s,baz=140,slow=7.6,SNR=2.1						
	0.2nm,0.7s						

*AUST **19** 12:48:18.6±2.9, 25°.58S×129°.78E, h9^{km}±21^{km}, Error ellipse: s-maj=11.5km s-min=6.8km az=29.0*

*IDC **19** 12:48:22.6±6.9, 25°.60S×130°.18E, h18^{km}±31^{km}, mbtmp4.1/3, ML4.0/3, Error ellipse: s-maj=42.9km s-min=28.1km az=81.0*

ISC 19 12:48:17.5±0.7**, 25°.56S**±0°.05×**129°.80E**±0°.04**, h10**^{km}**, n27,** σ**2^{s}.20**/38**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.46**	**291**	P	**Pg**	**12 48 46.2**	**+0.7**
	baz=1.4,SNR=218						
WRKA				S	**Sg**	**12 49 04.7**	**+0.2**
	baz=1.4						
ASAR	**Alice Springs**	**4.18**	**64**	Pn	**Pn**	**12 49 23.8**	**+2.3**
	5.2nm,0.3s,baz=243,slow=12,SNR=319						
ASAR				Pg	**Pb**	**12 49 35.5**	**+4.2**
	5.7nm,0.3s,baz=241,slow=16,SNR=21						
ASAR				Sn	**Sn**	**12 50 09.3**	**-1.0**
	5.7nm,0.3s,baz=233,slow=30,SNR=5.8						
ASAR				Lg	Lg	12 50 26.5	
	8.1nm,0.3s,baz=247,slow=25,SNR=6.0						
	15nm,0.4s						
FORT	**Forrest**	**5.42**	**196**	P	**Pn**	**12 49 40.4**	**+2.0**
	baz=5.4,SNR=32						
FORT				S	**Sn**	**12 50 43.8**	**+2.8**
	baz=5.4						
OOD	**Oodnadatta**	**5.72**	**114**	P	**Pn**	**12 49 44.6**	**+2.1**
	baz=5.7,SNR=21						
OOD				S	**Sn**	**12 50 50.5**	**+2.3**
	baz=5.7						
MULG	**Mulgathing**	**6.03**	**142**	P	**Pn**	**12 49 48.8**	**+2.0**
	baz=6.0,SNR=4.7						
MULG				S	**Sn**	**12 50 57.7**	**+1.9**
	baz=6.0						
WRA	**Warramunga Arr**	**6.98**	**38**	Pn	**Pn**	**12 50 02.0**	**+2.1**
	3.4nm,0.3s,baz=218,slow=14,SNR=106						
WRA				Sn	**Sn**	**12 51 18.6**	**-0.8**
	2.9nm,0.3s,baz=216,slow=22,SNR=9.5						
WRA				Lg	Lg	12 51 55.0	
	4.6nm,0.3s,baz=211,slow=27,SNR=11						
	7.5nm,0.5s						
WB2	**Warramunga Arr**	**6.99**	**38**	P	**Pn**	**12 50 02.2**	**+2.2**
	baz=7.0						
LCRK	**Leigh Creek**	**8.89**	**125**	P	**Pn**	**12 50 27.3**	**+1.3**
	baz=8.9,SNR=9.0						
LCRK				S	**Sn**	**12 52 05.7**	**-0.6**
	baz=8.9						
BBOO	**Buckleboo**	**9.06**	**144**	P	**Pn**	**12 50 29.5**	**+1.1**
	baz=9.1,SNR=16						
BBOO				S	**Sn**	**12 52 07.7**	**-2.8**
	baz=9.1						
KNRA	**Kununurra**	**9.88**	**354**	P	**Pn**	**12 50 41.9**	**+2.3**
	baz=9.9,SNR=9.3						
KNRA				S	**Sn**	**12 52 28.3**	**-2.4**
	baz=9.9						
INKA	**Innaminka**	**10.03**	**105**	P	**Pn**	**12 50 42.6**	**+0.9**
	baz=10.0,SNR=13						
INKA				S	**Sn**	**12 52 30.6**	**-3.6**
	baz=10.0						
MEEK	**Meekatharra**	**10.12**	**261**	P	**Pn**	**12 50 42.1**	**-0.8**
	baz=10						
QIS	**Mount Isa**	**10.30**	**63**	P	**Pn**	**12 50 47.3**	**+1.8**
	baz=10,SNR=6.1						
HTT	**Hallett**	**11.16**	**137**	P	**Pn**	**12 50 56.7**	**-0.5**
	baz=11						
AUKAT	**Katherine High**	**11.28**	**12**	P	Pn	12 50 56.9	-2.0
	baz=11						
STKA	**Stephens Creek**	**12.11**	**124**	Pn	**Pn**	**12 51 07.9**	**-2.3**
	0.7nm,0.3s,baz=306,slow=11,SNR=24						
STKA				Sn	**Sn**	**12 53 19.6**	**-5.7**
	1.3nm,0.3s,baz=14,slow=23,SNR=6.2						
	1.9nm,0.2s						
STKA	**Stephens Creek**	**12.11**	**124**	P	**Pn**	**12 51 09.2**	**-0.9**
	baz=12,SNR=12						
KLBR	**Kellerberrin**	**12.17**	**238**	P	**Pn**	**12 51 10.0**	**-1.1**
	baz=12,SNR=5.9						
BLDU	**Ballidu**	**12.61**	**243**	P	**Pn**	**12 51 15.2**	**-1.8**
	baz=13						
MTN	**Manton Dam**	**12.71**	**6**	P	**Pn**	**12 51 17.1**	**-1.3**
	baz=13,SNR=4.7						
MORW	**Morawa**	**12.73**	**251**	P	**Pn**	**12 51 16.7**	**-1.9**
	baz=13						
QLP	**Quilpie**	**13.01**	**98**	P	**Pn**	**12 51 21.8**	**-0.7**
	baz=13,SNR=9.0						
KDU	**Kakadu**	**13.05**	**12**	P	**Pn**	**12 51 22.1**	**-0.9**
	baz=13,SNR=8.9						
MUN	**Mundaring**	**13.53**	**239**	P	**Pn**	**12 51 28.3**	**-1.2**
	baz=14						
GIRL	**Giralia**	**14.51**	**278**	P	**Pn**	**12 51 41.0**	**-2.1**
	baz=14						
AUNHS	**Nhulunbuy High**	**14.84**	**28**	P	**Pn**	**12 51 44.9**	**-2.6**
	baz=15						
CMSA	**Cobar Meteorol**	**15.17**	**117**	P	**Pn**	**12 51 50.3**	**-1.6**
	baz=15						

*SKHL **19** 13:09:18.6±0.1, 43°.60N×147°.60E, h76^{km}±5^{km}, mb4.8/4*

*MOS **19** 13:09:18.6±1.1, 43°.79N×147°.55E, h69^{km}, mb4.3/1, Error ellipse: s-maj=13.4km s-min=11.6km az=71.0*

*JMA **19** 13:09:19.3±0.2, 43°.6N±0°.9×14°8E±°, h33^{km}, MV3.9/37, E OFF HOKKAIDO*

*NIED **19** 13:09:19.3, 43°.55N×147°.52E, h33^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.27; M$_{\theta\theta}$2.66; M$_{\phi\phi}$-2.93; M$_{r\theta}$2.27; M$_{\theta\phi}$-1.39; M$_{\phi r}$1.02; Fault plane solution: M$_0$3.99000×10^{14} NP1: φ$_s$150.00000°, δ52.00000°, λ5.00000°. NP2: φ$_s$57.00000°, δ86.00000°, λ142.00000°.*

*IDC **19** 13:09:23.5±4.7, 44°.11N×147°.38E, h79^{km}±25^{km}, mb3.6/10, mbtmp3.9/13, MS2.7/2 Error ellipse: s-maj=82.5km s-min=20.0km az=160.0*

ISC 19 13:09:17.5±1.4**, 43°.56N**±0°.08×**147°.74E**±0°.08**, h53**^{km}±11^{km}**, n52,** σ**1^{s}.44**/68**, mb3.9**/10**, 4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.73**	**296**	*d* *i*PN	**Pn**	**13 09 32.1**	**+0.5**
SHO				*e*S	**Sn**	**13 09 41.3**	**-0.7**
SHO				pmax	pmax		
	comp=Z,4μm,0.3s						
SHO				pmax	pmax		
	comp=N,805nm,0.2s						
SHO				pmax	pmax		
	comp=E,1μm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.2s						
SHO				smax	smax		
	comp=E,3μm,0.2s						
SHO	**Shikotan**	**0.73**	**296**	*i* P	**Pn**	**13 09 32.1**	**+0.5**
SHO				AMB	AMB	13 09 32.8	
	comp=E,370nm,0.2s						
SHO				*e*S	**Sn**	**13 09 42.3**	**+0.3**
SHO				A	A	13 09 42.6	
	comp=E,2μm,0.3s						
SHO				A	A	13 09 42.6	
	comp=E,3μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.44**	**290**	*d* *i*PN	**Pn**	**13 09 41.2**	**+0.1**
YUK				*e*S	**Sn**	**13 09 57.1**	**-1.8**
YUK				pmax	pmax		
	comp=Z,486nm,0.2s						
YUK				pmax	pmax		
	comp=N,127nm,0.1s						
YUK				smax	smax		
	comp=E,848nm,0.4s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.44**	**290**	*i* P	**Pn**	**13 09 41.1**	**0.0**
YUK				AMB	AMB	13 09 42.7	
	comp=N,130nm,0.3s						
YUK				AMB	AMB	13 09 42.7	
	comp=N,490nm,0.3s						
YUK				*i* S	**Sn**	**13 09 57.7**	**-1.2**
YUK				A	A	13 09 58.6	
	comp=N,1μm,0.3s						
YUK				A	A	13 09 58.6	
	comp=N,850nm,0.3s						
NEM2	**Nemuro 2**	**1.46**	**263**	*i* P	**Pn**	**13 09 42.0**	**+0.5**
NEM2				S	**Sn**	**13 09 58.3**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.47**	**263**	⇓*i*PN	**Pn**	**13 09 42.0**	**+0.4**
NMR				*e*S	**Sn**	**13 09 57.6**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.47**	**263**	*i* P	**Pn**	**13 09 42.0**	**+0.4**
NMR				*e*S	**Sn**	**13 09 57.6**	**-2.2**
GLVR	**Golovnino**	**1.62**	**277**	*e*PN	**Pn**	**13 09 44.3**	**+0.7**
GLVR				*e*S	**Sn**	**13 10 02.6**	**-0.7**
GLVR				pmax	pmax		
	comp=Z,624nm,0.4s						
GLVR				pmax	pmax		
	comp=N,88nm,0.3s						
GLVR				pmax	pmax		
	comp=E,104nm,0.3s						
GLVR				smax	smax		
	comp=N,2μm,0.5s						
GLVR				smax	smax		
	comp=E,1μm,0.5s						
GLVR	**Golovnino**	**1.62**	**277**	*e*P	**Pn**	**13 09 44.2**	**+0.7**
GLVR				AMB	AMB	13 09 44.9	
	comp=E,90nm,0.3s						
GLVR				AMB	AMB	13 09 44.9	
	comp=E,100nm,0.3s						
GLVR				AMB	AMB	13 09 44.9	
	comp=E,620nm,0.3s						
GLVR				*e*S	**Sn**	**13 10 02.6**	**-0.7**
GLVR				A	A	13 10 03.7	
	comp=E,2μm,0.6s						
GLVR				A	A	13 10 03.7	
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**1.68**	**3**	*e*PN	**Pn**	**13 09 45.0**	**+0.6**
KUR				*i* S	**Sn**	**13 10 04.2**	**-0.5**
KUR				pmax	pmax		
	comp=Z,95nm,0.4s						
KUR				pmax	pmax		
	comp=E,40nm,0.5s						
KUR				pmax	pmax		
	comp=N,35nm,0.3s						
KUR				smax	smax		
	comp=N,366nm,0.5s						
KUR				smax	smax		
	comp=E,329nm,0.3s						
KUR	**Kuril'sk**	**1.68**	**3**	*e*P	**Pn**	**13 09 45.0**	**+0.6**
KUR				AMB	AMB	13 09 46.9	
	comp=E,40nm,0.3s						
KUR				AMB	AMB	13 09 46.9	
	comp=E,40nm,0.3s						
KUR				AMB	AMB	13 09 46.9	
	comp=E,120nm,0.3s						
KUR				*i* S	**Sn**	**13 10 04.6**	**-0.1**
KUR				A	A	13 10 06.7	
	comp=E,390nm,0.3s						
KUR				A	A	13 10 06.7	
	comp=E,330nm,0.3s						
RUSJ	**Misakicho**	**1.88**	**288**	⇓*i*PN	**Pn**	**13 09 48.1**	**+0.9**
RUSJ				*e*S	**Sn**	**13 10 09.9**	**+0.2**
JRA	**Rausu**	**1.93**	**282**	P	**Pn**	**13 09 48.7**	**+0.9**
JRA				*e*S	**Sn**	**13 10 10.2**	**-0.7**
JKHN	**Kushirohamanak**	**1.94**	**257**	*e*P	**Pn**	**13 09 49.0**	**+1.1**
JKHN				*e*S	**Sn**	**13 10 10.5**	**-0.6**
JNSB	**Nemuroshibetsu**	**1.99**	**277**	*e*P	**Pn**	**13 09 49.7**	**+1.0**
JNSB				*e*S	**Sn**	**13 10 12.4**	**-0.1**
AKK	**Akkeshi**	**2.18**	**257**	*e*P	**Pn**	**13 09 52.2**	**+0.9**
AKK				*e*S	**Sn**	**13 10 16.6**	**-0.5**
JNK	**Nakash**	**2.19**	**272**	*i* P	**Pn**	**13 09 52.0**	**+0.6**
JNK				*e*S	**Sn**	**13 10 16.5**	**-0.9**
JAK	**Akkeshi**	**2.29**	**257**	P	**Pn**	**13 09 53.5**	**+0.8**
JAK				*e*S	**Sn**	**13 10 18.2**	**-1.5**
JTKR	**Abashiri--Toko**	**2.80**	**280**	*i* P	**Pn**	**13 10 01.2**	**+1.5**
JAR	**Ashorobuto**	**2.90**	**266**	P	**Pn**	**13 10 02.5**	**+1.4**
JAR				*e*S	**Sn**	**13 10 34.1**	**-0.6**
JOB	**Onbets**	**2.92**	**258**	P	**Pn**	**13 10 02.7**	**+1.3**
JOB				*e*S	**Sn**	**13 10 34.3**	**-1.0**
JMP	**Maruseppu**	**3.20**	**280**	*e*P	**Pn**	**13 10 06.9**	**+1.6**
JCH	**Churui**	**3.34**	**255**	*e*P	**Pn**	**13 10 08.2**	**+1.0**
JCH				*e*S	**Sn**	**13 10 43.8**	**-1.8**
JKK2	**Kamakawa 2**	**3.63**	**277**	*e*P	**Pn**	**13 10 12.6**	**+1.5**
JEM	**Erimo**	**3.71**	**247**	*e*P	**Pn**	**13 10 15.0**	**+2.8**
JKA	**Kamikawa-asahi**	**3.76**	**280**	*e*P	**Pn**	**13 10 14.8**	**+1.9**
ASAJ	**Asahikawa**	**3.76**	**280**	P	**Pn**	**13 10 14.8**	**+1.9**
	comp=E,5.1nm,0.5s,baz=67,slow=8.0,SNR=14						
ASAJ				S	**Sn**	**13 11 03.1**	**+7.2**
	comp=E,14nm,0.6s,baz=11,slow=26,SNR=4.3						
ASAJ				LR	LR	13 11 51.1	
	comp=E,40nm,18.6s,baz=112,slow=43						
ASAJ	**Asahikawa**	**3.76**	**280**	*e*P	**Pn**	**13 10 15.5**	**+2.6**
JNBK	**Urakawa-nobuka**	**3.88**	**252**	*e*P	**Pn**	**13 10 15.6**	**+1.1**
YSS	**Yuzh-Sakhalins**	**4.89**	**316**	*e*P	**Pn**	**13 10 28.5**	**+0.2**
YSS				AMB	AMB	13 10 34.7	
	comp=E,10.0nm,0.4s						
PETK	**Petropavlovsk-**	**11.62**	**31**	P	**Pn**	**13 12 01.1**	**+0.7**
	comp=E,1.2nm,0.6s,baz=212,slow=10,SNR=5.3						
SEY	**Seymchan**	**19.60**	**6**	P	**P**	**13 13 40.0**	**-1.0**
	comp=E,2.6nm,1.0s,baz=182,slow=7.0,SNR=8.3						
SEY	**Seymchan**	**19.60**	**6**	P	**P**	**13 13 40.0**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**28.68**	**140**	T	T	13 45 56.6	
	baz=330,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**28.69**	**140**	T	T	13 46 03.8	
	baz=330,slow=76,SNR=35						
H11N3	**WAKE ISLAND Hy**	**28.70**	**140**	T	T	13 46 02.4	
	baz=330,slow=76,SNR=35						
H11S1	**WAKE ISLAND Hy**	**29.65**	**141**	T	T	13 47 13.2	
	baz=331,slow=76,SNR=114						
H11S3	**WAKE ISLAND Hy**	**29.66**	**141**	T	T	13 47 16.2	
	baz=331,slow=76,SNR=91						
H11S2	**WAKE ISLAND Hy**	**29.67**	**141**	T	T	13 47 11.7	
	baz=331,slow=76,SNR=72						
ILAR	**Eielson Array**	**41.39**	**36**	P	**P**	**13 16 59.5**	**+1.4**
	comp=E,0.3nm,0.5s,baz=265,slow=8.4,SNR=4.5						
	comp=E,0.3nm,0.5s						
MKAR	**Makanchi Array**	**45.05**	**298**	P	**P**	**13 17 27.6**	**-0.3**
	comp=E,0.7nm,0.6s,baz=76,slow=9.3,SNR=6.8						
	comp=E,0.7nm,0.6s						
INK	**Inuvik**	**46.35**	**30**	P	**P**	**13 17 38.7**	**+0.9**
	comp=E,1.6nm,0.5s,baz=275,slow=6.5,SNR=14						
	comp=E,1.6nm,0.5s						
RES	**Resolute Bay**	**55.03**	**17**	P	**P**	**13 18 42.0**	**-1.0**
	comp=E,1.8nm,0.5s,baz=345,slow=5.1,SNR=8.0						
	comp=E,1.8nm,0.5s						
RES	**Resolute Bay**	**55.03**	**17**	P	**P**	**13 18 42.0**	**-1.0**
YKA	**Yellowknife Ar**	**55.73**	**34**	P	**P**	**13 18 49.3**	**+1.2**
	comp=E,0.5nm,0.8s,baz=307,slow=7.0,SNR=2.6						
YKA				LR	LR	13 43 40.1	
	comp=E,15nm,19.5s,baz=346,slow=37						
	comp=E,0.5nm,0.8s						
ARCES	**ARCESS Array B**	**59.57**	**340**	P	**P**	**13 19 14.5**	**-0.7**
	comp=E,3.9nm,0.9s,baz=56,slow=8.0,SNR=1.8						
	comp=E,3.9nm,0.9s						
FINES	**FINESS Array B**	**65.24**	**333**	P	**P**	**13 19 52.0**	**-1.0**
	comp=E,1.1nm,0.5s,baz=35,slow=7.0,SNR=6.9						
	comp=E,1.1nm,0.5s						
FINES	**FINESS Array B**	**65.24**	**333**	P	**P**	**13 19 52.0**	**-1.0**
NB2	**NORSAR Subarra**	**69.93**	**339**	P	**P**	**13 20 22.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.93**	**339**	P	**P**	**13 20 22.2**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=31,slow=6.5,SNR=5.1						
	comp=Z,0.6nm,0.5s						
AKASG	**Malin Array Be**	**71.98**	**324**	P	**P**	**13 20 34.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=32,slow=4.4,SNR=4.0						
	comp=Z,0.4nm,0.3s						
GERES	**GERESS Array B**	**79.53**	**331**	P	**P**	**13 21 17.8**	**-0.7**
	comp=Z,0.4nm,0.2s,baz=28,slow=5.7,SNR=1.7						
	comp=Z,0.4nm,0.2s						

*IDC **19** 13:12:10.1±0.8, 18°.51N×70°.11W, h70^{km}±7^{km}, mb3.6/13, mbtmp4.0/15, MS3.2/8, Error ellipse: s-maj=15.6km s-min=11.0km az=20.0*

*OSPL **19** 13:12:10.3±0.8, 18°.38N×69°.90W, h76^{km}±7^{km}, ML4.2, Fault plane solution: NP1: φ$_s$55.10000°, δ72.10000°, λ-116.00000°.*

*NEIC **19** 13:12:11.2±2.3, 18°.48N±0°.05×70°.10W±0°.03, h69^{km}±7^{km}, mb4.5/6, Error ellipse: s-maj=9.2km s-min=1.1km az=150.0*

ISC 19 13:12:09.7±0.5**, 18°.39N**±0°.04×**70°.10W**±0°.03**, h72**^{km}±5^{km}**, n117,** σ**2^{s}.34**/153**, mb4.2**/17**, 6C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.19**	**70**	Pn	**Pn**	**13 12 20.7**	**+0.3**
SDD				Sn	**Sn**	**13 12 28.2**	**-0.1**
SDD	**Santo Domingo**	**0.19**	**70**	ASPG		13 12 20.3	
	comp=Z,11μm,0.3s						
SDD				⇓*i*P	**Pn**	**13 12 20.7**	**+0.3**
SDD				ATPG		13 12 21.4	
	comp=Z,30μm,0.3s						
SDD				ASSG		13 12 27.6	
	comp=Z,52μm,0.3s						
SDD				*e*S	**Sn**	**13 12 28.0**	**-0.3**
SDD				ATSG		13 12 29.6	
	comp=Z,212μm,0.3s						
BANI	**BANI**	**0.24**	**270**		**Pn**	**13 12 22.5**	**+1.7**
BANI	**BANI**	**0.24**	**270**	⇑*i*P	**Pn**	**13 12 22.5**	**+1.7**
DR12	**Loma Pena Alta**	**0.79**	**60**	Pn	**Pn**	**13 12 24.5**	**-1.3**
LOBA2	**Hotel Casa Bon**	**0.99**	**252**	ASPG		13 12 29.8	
	comp=Z,5μm,0.3s						
LOBA2				⇑*i*P	**Pn**	**13 12 30.2**	**+2.0**
LOBA2				ATPG		13 12 30.9	
	comp=Z,17μm,0.3s						
LOBA2				ASSG		13 12 44.5	
	comp=Z,58μm,0.3s						
LOBA2				*e*S	**Sn**	**13 12 44.9**	**+3.0**
LOBA2				IAML		13 12 45.7	
	comp=Z,7μm,0.9s						
LOBA2				ATSG		13 12 46.2	
	comp=Z,208μm,0.3s						
SC01	**Santiago de lo**	**1.19**	**330**		**Pn**	**13 12 32.3**	**+1.6**
SC01	**Santiago de lo**	**1.19**	**330**	ASPG		13 12 31.6	
	comp=Z,3μm,0.3s						
SC01				⇑*i*P	**Pn**	**13 12 32.0**	**+1.4**
SC01				ATPG		13 12 33.9	
	comp=Z,10μm,0.3s						
SC01				ASSG		13 12 48.0	
	comp=Z,25μm,0.3s						

SC01				*e*S	**Sn**	**13 12 48.4**	**+2.1**
SC01				ATSG		13 12 50.3	
	comp=Z,60μm,0.3s						
SC01				IAML		13 12 52.9	
	comp=Z,3μm,0.5s						
SDDR	**Presa de Saban**	**1.27**	**298**	Pn	**Pn**	**13 12 33.7**	**+1.9**
SDDR				Sn	**Sn**	**13 12 50.6**	**+2.3**
SDDR	**Presa de Saban**	**1.27**	**298**	*e*P	**Pn**	**13 12 33.7**	**+1.9**
SDDR				*e*S	**Sn**	**13 12 50.6**	**+2.3**
SDDR	**Presa de Saban**	**1.27**	**298**	*e*Pg	**Pn**	**13 12 33.3**	**+1.6**
SDDR				*i* Pn	Pn	13 12 36.0	+4.2
SDDR				*e*Sg	**Sn**	**13 12 49.6**	**+1.3**
SDDR				Sn	Sn	13 12 54.7	+6.5
SDDR	**Presa de Saban**	**1.27**	**298**	⇑*i*P	**Pn**	**13 12 33.5**	**+1.7**
SDDR				*e*S	**Sn**	**13 12 49.3**	**+1.0**
SDDR				IAML		13 12 56.2	
	comp=Z,4μm,0.9s						
LONE2	**Loma La Sidra**	**1.31**	**277**	ASPG		13 12 34.3	
	comp=Z,2μm,0.3s						
LONE2				⇑*i*P	**Pn**	**13 12 34.7**	**+2.4**
LONE2				ATPG		13 12 36.7	
	comp=Z,9μm,0.3s						
LONE2				ASSG		13 12 54.0	
	comp=Z,25μm,0.3s						
LONE2				*e*S	**Sn**	**13 12 54.4**	**+5.0**
LONE2				ATSG		13 12 55.9	
	comp=Z,70μm,0.3s						
LONE2				IAML		13 12 56.4	
	comp=Z,3μm,0.3s						
LOPE2	**Hotel El Peder**	**1.60**	**257**	ASPG		13 12 39.0	
	comp=Z,1μm,0.3s						
LOPE2				⇓*i*P	**Pn**	**13 12 39.4**	**+3.3**
LOPE2				ATPG		13 12 41.0	
	comp=Z,6μm,0.3s						
LOPE2				ASSG		13 13 01.0	
	comp=Z,13μm,0.3s						
LOPE2				*e*S	**Sn**	**13 13 01.4**	**+5.3**
LOPE2				ATSG		13 13 02.7	
	comp=Z,48μm,0.3s						
LOPE2				IAML		13 13 10.0	
	comp=Z,2μm,0.5s						
LOPP1	**Punta Rusia, P**	**1.79**	**325**	ASPG		13 12 40.7	
	comp=Z,4μm,0.3s						
LOPP1				*i* P	**Pn**	**13 12 41.1**	**+2.5**
LOPP1				ATPG		13 12 41.9	
	comp=Z,16μm,0.3s						
LOPP1				ASSG		13 13 04.4	
	comp=Z,28μm,0.3s						
LOPP1				*e*S	**Sn**	**13 13 04.8**	**+4.5**
LOPP1				ATSG		13 13 06.5	
	comp=Z,63μm,0.3s						
LOPP1				IAML		13 13 09.1	
	comp=Z,5μm,0.4s						
LODA1	**ITESIL, Dajabo**	**1.90**	**307**	*i* P	**Pn**	**13 12 42.9**	**+2.9**
LODA1				IAML		13 13 11.1	
	comp=Z,2μm,0.4s						
PAPH	**Port-au-Prince**	**2.09**	**274**	ASPG		13 12 44.8	
	comp=Z,493nm,0.3s						
PAPH				⇓*i*P	**Pn**	**13 12 45.2**	**+2.6**
PAPH				ATPG		13 12 46.1	
	comp=Z,2μm,0.3s						
PAPH				ASSG		13 13 12.0	
	comp=Z,4μm,0.3s						
PAPH				*e*S	**Sn**	**13 13 12.4**	**+4.7**
PAPH				ATSG		13 13 14.2	
	comp=Z,12μm,0.3s						
PAPH				IAML		13 13 16.4	
	comp=Z,611nm,0.3s						
JAKH	**Jacmel**	**2.30**	**267**	Pn	**Pn**	**13 12 48.2**	**+2.8**
JAKH	**Jacmel**	**2.30**	**267**	ASPG		13 12 48.0	
	comp=Z,319nm,0.3s						
JAKH				*i* P	**Pn**	**13 12 48.4**	**+2.9**
JAKH				ATPG		13 12 49.3	
	comp=Z,914nm,0.3s						
JAKH				ASSG		13 13 15.3	
	comp=Z,1μm,0.3s						
JAKH				*e*S	**Sn**	**13 13 15.7**	**+2.9**
JAKH				ATSG		13 13 16.8	
	comp=Z,4μm,0.3s						
JAKH				IAML		13 13 21.3	
	comp=Z,293nm,0.5s						
LGNH	**Logne**	**2.38**	**273**		**Pn**	**13 12 49.4**	**+2.9**
LGNH	**Logne**	**2.38**	**273**	*e*P	**Pn**	**13 12 48.9**	**+2.4**
LGNH				*e*S	**Sn**	**13 13 19.6**	**+4.9**
LGNH	**Logne**	**2.38**	**273**	*i* P	**Pn**	**13 12 49.4**	**+2.9**
PRSN	**Puerto Rico Se**	**2.81**	**93**		**Pn**	**13 12 55.4**	**+3.0**
AGPR	**Aguadilla, PR**	**2.84**	**88**		**Pn**	**13 12 53.8**	**+1.0**
AGPR	**Aguadilla, PR**	**2.84**	**88**	*i* P	**Pn**	**13 12 54.3**	**+1.5**
AGPR				ATPG		13 12 56.3	
	comp=Z,5μm,0.3s						
AGPR				ASSG		13 13 24.5	
	comp=Z,2μm,0.3s						
AGPR				ATSG		13 13 26.7	
	comp=Z,6μm,0.3s						
AGPR				IAML		13 13 33.0	
	comp=Z,2μm,0.8s						
CRPR	**Cabo Rojo, PR**	**2.87**	**97**		**Pn**	**13 12 55.0**	**+1.8**
CRPR	**Cabo Rojo, PR**	**2.87**	**97**	*i* P	**Pn**	**13 12 53.5**	**+0.4**
CRPR				IAML		13 13 36.6	
	comp=Z,919nm,0.7s						
MLPR	**Magueyes Islan**	**2.94**	**98**	Pn	**Pn**	**13 12 55.2**	**+1.1**
AOPR	**Arecibo Observ**	**3.18**	**90**	Pn	**Pn**	**13 12 59.0**	**+1.6**
GRTK	**Grand Turk**	**3.25**	**343**	Pn	**Pn**	**13 12 58.1**	**-0.2**
GRTK	**Grand Turk**	**3.25**	**343**	ASPG		13 12 57.7	
	comp=Z,2μm,0.3s						
GRTK				*i* P	**Pn**	**13 12 58.1**	**-0.2**
GRTK				ATPG		13 12 58.9	
	comp=Z,6μm,0.3s						
GRTK				ASSG		13 13 33.4	
	comp=Z,2μm,0.3s						
GRTK				*e*S	**Sn**	**13 13 33.8**	**-2.1**
GRTK				ATSG		13 13 35.1	
	comp=Z,6μm,0.3s						
GRTK				IAML		13 13 37.6	
	comp=Z,409nm,0.2s						
OBIP	**Obispado Ponce**	**3.34**	**95**		**Pn**	**13 13 01.3**	**+1.7**
EMPR	**Esperanza - Ma**	**3.39**	**88**		**Pn**	**13 13 02.7**	**+2.4**
ICMP	**Isla Caja de M**	**3.44**	**98**	Pn	**Pn**	**13 13 02.3**	**+1.5**
SJG	**San Juan**	**3.77**	**94**	P	**Pn**	**13 13 07.7**	**+2.3**
	comp=Z,120nm,0.3s,baz=308,slow=9.6,SNR=25						
SJG				S	**Sn**	**13 13 51.2**	**+2.6**
	comp=Z,398nm,0.3s,baz=287,slow=19,SNR=22						
SJG				LR	LR	13 14 33.6	
	comp=Z,154nm,21.1s,baz=272,slow=38						
SJG	**San Juan**	**3.77**	**94**		**Pn**	**13 13 07.1**	**+1.7**
SJG	**San Juan**	**3.77**	**94**	*e*P	**Pn**	**13 13 07.7**	**+2.3**
SJG				*e*S	**Sn**	**13 13 51.4**	**+2.9**
SJG				*i*		13 14 00.2	
	comp=Z,2μm,0.2s						
SJG	**San Juan**	**3.77**	**94**	*e*P	**Pn**	**13 13 07.4**	**+2.0**
SJG				*e*S	**Sn**	**13 13 50.1**	**+1.6**
GCPR	**Guaynabo City**	**3.82**	**91**		**Pn**	**13 13 07.1**	**+1.0**
PDPR	**Patillas Dam,**	**3.90**	**95**		**Pn**	**13 13 08.4**	**+1.2**
CBYP	**Canovanas**	**4.03**	**91**		**Pn**	**13 13 10.3**	**+1.2**
HUMP	**Col San Antoni**	**4.05**	**93**		**Pn**	**13 13 10.9**	**+1.6**
MASC	**Masc**	**4.28**	**295**	*e*P	**Pn**	**13 13 13.0**	**+0.5**
MASC				*e*S	**Sn**	**13 14 01.0**	**-0.1**
MASC				IAML		13 14 04.1	
	comp=N,81nm,0.5s						
MASC				IAML		13 14 04.6	
	comp=E,74nm,0.5s						
MASC	**Masc**	**4.28**	**295**	⇑*i*P	**Pn**	**13 13 12.9**	**+0.5**
MASC				ATPG		13 13 14.8	
	comp=Z,829nm,0.3s						
MASC				ASSG		13 13 59.7	
	comp=Z,76nm,0.3s						
MASC				*e*S	**Sn**	**13 14 00.1**	**-1.1**
MASC				ATSG		13 14 01.3	
	comp=Z,220nm,0.3s						
MASC				IAML		13 14 08.0	
	comp=Z,79nm,0.6s						
MTP	**Monte Pirata**	**4.33**	**93**	Pn	**Pn**	**13 13 15.2**	**+2.0**
CUPR	**Culebra, Puert**	**4.58**	**90**	Pn	**Pn**	**13 13 16.9**	**+0.4**
STVI	**Saint Thomas**	**4.89**	**90**		**Pn**	**13 13 22.0**	**+1.3**
GTBY	**Guantanamo Bay**	**4.97**	**289**	Pn	**Pn**	**13 13 22.3**	**+0.4**
GTBY	**Guantanamo Bay**	**4.97**	**289**	*e*P	**Pn**	**13 13 22.3**	**+0.4**
GTBY				*e*S	**Sn**	**13 14 15.8**	**-2.3**
GTBY	**Guantanamo Bay**	**4.97**	**289**	*i* P	**Pn**	**13 13 22.3**	**+0.4**
CDVI	**St. Croix**	**5.12**	**96**	Pn	**Pn**	**13 13 24.0**	**+0.2**
RCC	**Rio Carpintero**	**5.52**	**288**	*e*P	**Pn**	**13 13 29.8**	**+0.4**
RCC				*e*S	**Sn**	**13 14 29.8**	**-1.7**
RCC				IAML		13 14 32.0	
	comp=N,39nm,0.3s						
RCC				IAML		13 14 32.9	
	comp=E,46nm,0.4s						
HATO	**Hato, Curacao**	**6.28**	**170**	Pn	**Pn**	**13 13 41.7**	**+2.0**
LMGC	**Las Mercedes**	**6.73**	**285**	*e*P	**Pn**	**13 13 46.1**	**+0.2**
LMGC				*e*S	**Sn**	**13 14 57.7**	**-3.5**
URIC	**Uribia, Colomb**	**6.90**	**196**	*e*P	**Pn**	**13 13 50.1**	**+1.8**
URIC				*e*S	**Sn**	**13 15 00.8**	**-4.5**
MBFL	**Flemmings, Mon**	**7.70**	**101**	*e*P	**Pn**	**13 14 01.5**	**+2.3**
MLYT	**Lee's Yard**	**7.73**	**101**	*e*P	**Pn**	**13 14 01.6**	**+2.0**
CRJC	**Cerrejon, Guaj**	**7.81**	**201**	*e*P	**Pn**	**13 14 02.6**	**+1.9**
CRJC				*e*S	**Sn**	**13 15 25.3**	**-2.4**
CRJC				*i*		13 15 29.3	
	comp=Z,217nm,0.5s						
ANWB	**Willy Bob**	**7.95**	**94**	*e*P	**Pn**	**13 14 02.5**	**-0.1**
BPA	**Boggy Peak**	**7.97**	**98**	*e*P	**Pn**	**13 14 03.8**	**+0.9**
ANBD	**Bethesda, Anti**	**8.06**	**98**	*e*P	**Pn**	**13 14 04.0**	**0.0**
SMRC	**Santa Marta, M**	**8.22**	**210**	*e*P	**Pn**	**13 14 06.6**	**+0.3**
SMRC				*e*S	**Sn**	**13 15 33.4**	**-4.3**
CVALL	**Valledupar, Ce**	**8.41**	**202**	*e*S	**Sn**	**13 15 39.3**	**-3.2**
BIRV	**Birongo**	**8.70**	**154**	Pn	**Pn**	**13 14 14.9**	**+2.0**
DSLB	**Salisbury**	**8.81**	**108**	*e*P	**Pn**	**13 14 17.4**	**+3.0**
H05N1	**Guadeloupe/Mar**	**8.88**	**102**	P	**Pn**	**13 14 18.1**	**+2.8**
	SNR=6.9						
LL6C	**La Loma 6 Bece**	**9.14**	**200**	*e*P	**Pn**	**13 14 20.9**	**+2.0**
LL6C				*e*S	**Sn**	**13 15 56.6**	**-3.6**
ARGC	**Ariguani, Magd**	**9.39**	**206**	*e*S	**Sn**	**13 16 04.0**	**-2.3**
SDV	**Santo Domingo**	**9.46**	**183**	P	**Pn**	**13 14 25.3**	**+1.8**
	comp=Z,12nm,0.3s,baz=336,slow=18,SNR=7.3						
SDV				S	**Sn**	**13 16 05.4**	**-3.1**
	comp=Z,21nm,0.4s,baz=278,slow=20,SNR=3.4						
SDV	**Santo Domingo**	**9.46**	**183**	*e*P	Pn	13 14 28.1	+4.6
SDV				*e*S	**Sn**	**13 16 07.6**	**-0.9**
BAUV	**El Baul**	**9.61**	**168**	Pn	**Pn**	**13 14 28.0**	**+2.7**
MPOM	**Morne Pois Mar**	**9.70**	**113**	*e*P	**Pn**	**13 14 26.8**	**+0.3**
OCAC	**Ocana**	**10.57**	**198**	*e*P	**Pn**	**13 14 41.0**	**+2.5**
OCAC				*e*S	**Sn**	**13 16 30.2**	**-5.2**
PAMC	**Pamplona, Colo**	**11.28**	**193**	*e*P	**Pn**	**13 14 51.1**	**+2.6**
PAMC				*e*S	**Sn**	**13 16 50.7**	**-2.4**
ZARC	**Zaragoza, Cauc**	**11.78**	**204**	Pn	**Pn**	**13 14 58.8**	**+3.8**
ZARC	**Zaragoza, Cauc**	**11.78**	**204**	*e*P	Pn	13 15 00.2	+5.2
ZARC				*e*S	**Sn**	**13 17 01.8**	**-3.0**
BARC	**Barichara**	**12.11**	**195**	*e*P	**Pn**	**13 15 03.5**	**+3.8**
BARC				*e*S	**Sn**	**13 17 09.5**	**-3.5**
BARC				*i*		13 17 19.3	
	comp=Z,22nm,0.4s						
PTBC	**PUERTO BERRIO,**	**12.52**	**200**	*e*P	**Pn**	**13 15 08.5**	**+3.4**
RUSC	**La Rusia**	**12.76**	**194**	*e*P	**Pn**	**13 15 10.7**	**+2.0**
RUSC				*e*S	**Sn**	**13 17 25.1**	**-4.2**
BCIP	**Isla Barro Col**	**13.17**	**227**	Pn	**Pn**	**13 15 12.8**	**-1.0**
HELC	**Santa Helena**	**13.23**	**204**	*e*P	**P**	**13 15 19.8**	**-2.5**
HELC				*e*S	**Sn**	**13 17 38.5**	**-2.2**
HELC				*i*		13 17 42.5	
	comp=Z,15nm,0.7s						
SPBC	**San Pablo de B**	**13.24**	**198**	*e*P	**P**	**13 15 19.0**	**-3.1**
SPBC				*e*S	**Sn**	**13 17 35.3**	**-5.3**
NORC	**Norcasia**	**13.57**	**201**	*e*P	**P**	**13 15 24.4**	**-1.4**
NORC				*e*S	**Sn**	**13 17 43.8**	**-4.7**
CBOC	**Ciudad Bolivar**	**13.72**	**206**	*e*P	**P**	**13 15 24.1**	**-3.4**
CBOC				*e*S	**Sn**	**13 17 48.9**	**-3.4**
CBOC				*i*		13 17 54.4	
	comp=Z,11nm,0.5s						
ROSC	**El Rosal**	**14.09**	**198**	P	**Pn**	**13 15 28.6**	**+2.2**
	comp=Z,8.6nm,0.4s,baz=45,slow=19,SNR=1.8						
ROSC				S	**Sn**	**13 18 04.8**	**+3.3**
	comp=Z,8.0nm,0.4s,baz=314,slow=23,SNR=1.4						
PLMC	**San Jos del P**	**14.70**	**205**	*e*P	**P**	**13 15 37.2**	**-1.2**
ANIL	**Santa Ana**	**14.76**	**201**	*e*P	P	13 15 44.5	+5.3
ORTC	**Ortega, Tolima**	**15.25**	**200**	*e*P	**P**	**13 15 44.2**	**-0.2**
ORTC				*e*S	**Sn**	**13 18 33.5**	**+4.4**
YOTC	**Yotoco, Valle**	**15.57**	**204**	*e*P	**P**	**13 15 49.6**	**+1.6**
TKL	**Tuckaleechee C**	**21.03**	**328**	S	**S**	**13 20 33.0**	**-5.0**
	comp=Z,2.0nm,0.5s,baz=171,slow=6.2,SNR=2.0						
MDP	**Montagnes des**	**21.57**	**126**	LR	LR	13 25 22.0	
	comp=Z,24nm,18.4s,baz=246,slow=37						
TXAR	**Lajitas Array**	**32.46**	**296**	P	**P**	**13 18 34.9**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=119,slow=7.5,SNR=5.5						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**32.46**	**296**	P	**P**	**13 18 33.8**	**+0.3**
LPAZ	**La Paz**	**34.52**	**177**	P	**P**	**13 18 54.7**	**+2.7**
	comp=Z,1.2nm,0.6s,baz=342,slow=5.2,SNR=4.7						
	comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**34.52**	**177**	P	**P**	**13 18 54.6**	**+2.6**
LPAZ				IAmb	IAmb	13 18 57.8	
	comp=Z,12nm,1.9s						
SCHQ	**Schefferville**	**36.46**	**3**	P	**P**	**13 19 07.9**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=191,slow=10,SNR=3.9						
	comp=Z,2.4nm,0.8s						
PB16	**IPOC Station P**	**36.50**	**179**	P	**P**	**13 19 09.6**	**+0.7**
PB16				IAmb	IAmb	13 20 02.6	
	comp=Z,2.9nm,0.9s						
PB11	**IPOC Station P**	**37.92**	**179**	P	**P**	**13 19 20.4**	**-0.1**
PB11				IAmb	IAmb	13 20 12.7	
	comp=Z,11nm,1.2s						
FRB	**Frobisher Bay**	**45.33**	**1**	LR	LR	13 39 56.3	
	comp=Z,20nm,18.6s,baz=292,slow=37						
NVAR	**Mina Array Bea**	**46.27**	**306**	P	**P**	**13 20 29.4**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=96,slow=8.1,SNR=7.3						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**53.69**	**336**	P	**P**	**13 21 23.3**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=114,slow=6.8,SNR=3.8						
YKA				pP	**pP**	**13 21 40.5**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=114,slow=6.8,SNR=5.0						
	comp=Z,0.6nm,0.7s						
PLCA	**Paso Flores**	**58.82**	**180**	P	**P**	**13 22 00.9**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=19,slow=11,SNR=3.7						
	comp=Z,0.6nm,0.5s						
PLCA	**Paso Flores**	**58.82**	**180**	P	**P**	**13 22 00.7**	**-0.1**
PLCA				IAmb	IAmb	13 23 29.8	
	comp=Z,10nm,1.6s						
ESDC	**Sonseca Array**	**60.27**	**54**	P	**P**	**13 22 10.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=269,slow=7.7,SNR=3.0						
ESDC				pP	**pP**	**13 22 28.8**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=275,slow=7.0,SNR=5.6						
ESDC				LR	LR	13 43 06.4	
	comp=Z,11nm,21.6s,baz=298,slow=31						
	comp=Z,0.6nm,0.7s						
TIC	**Toumodi**	**64.31**	**91**	*e*P	**P**	**13 22 37.9**	**-0.4**
LIC	**Lamto**	**64.43**	**92**	*e*P	**P**	**13 22 39.3**	**+0.3**
	comp=Z,26nm,1.7s						
DBIC	**Dimbokro**	**64.46**	**91**	P	**P**	**13 22 39.0**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=307,slow=6.5,SNR=7.9						
DBIC				LR	LR	13 50 49.0	
	comp=Z,18nm,18.0s,baz=184,slow=36						
	comp=Z,2.2nm,0.3s						
DBIC	**Dimbokro**	**64.46**	**91**	P	**P**	**13 22 38.1**	**-1.1**
KIC	**Kosan Boka**	**64.66**	**92**	*e*P	**P**	**13 22 40.3**	**-0.3**
	comp=Z,9.0nm,0.4s						
ILAR	**Eielson Array**	**67.89**	**333**	P	**P**	**13 23 00.2**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=114,slow=11,SNR=2.2						
	comp=Z,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**68.91**	**83**	P	**P**	**13 23 07.2**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=301,slow=7.3,SNR=21						
TORD				pP	**pP**	**13 23 26.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=293,slow=7.3,SNR=2.3						
TORD				LR	LR	13 51 22.9	
	comp=Z,62nm,21.3s,baz=216,slow=34						
	comp=Z,1.4nm,0.7s						
VRAC	**Vranov**	**74.16**	**43**	LR	LR	13 52 06.9	
	comp=Z,12nm,20.9s,baz=328,slow=32						
ARCES	**ARCESS Array B**	**74.87**	**21**	P	**P**	**13 23 42.5**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=19,slow=12,SNR=4.5						
	comp=Z,3.7nm,1.0s						
FINES	**FINESS Array B**	**76.94**	**29**	P	**P**	**13 23 54.4**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=282,slow=7.0,SNR=2.3						
	comp=Z,1.6nm,0.8s						
PPT	**Papeete**	**85.91**	**250**	LR	LR	13 57 27.4	
	comp=Z,24nm,18.7s,baz=87,slow=32						
TIXI	**Tiksi**	**89.25**	**354**	P	**P**	**13 24 57.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=325,slow=5.2,SNR=3.7						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**141.83**	**17**	PKP	**PKPdf**	**13 31 34.5**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=306,slow=3.1,SNR=1.6						

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*REN **19** 14:05:01.4±0.8, 38°.26N±0°.02×114°.62W±0°.03, h1^{km}±7^{km}, ML3.1/7, ML2.8/38(NEIC), Error ellipse: s-maj=3.3km s-min=1.9km az=119.0*

NEIC 19 14:05:01.9±1.6**, 38°.26N**±0°.03×**114°.65W**±0°.02**, h11**^{km}±7^{km}**, Error ellipse: s-maj=4.5km s-min=1.3km az=151.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSUT	**Pine Spring**	**0.68**	**66**		Pg	14 05 14.2	-1.0
PSUT					Sg	14 05 23.6	-0.7
PSUT	**Pine Spring**	**0.68**	**66**	IAML		14 05 23.7	
	comp=N,309nm,0.3s						
PSUT				IAML		14 05 25.4	
	comp=E,178nm,0.4s						
R11A	**Troy Canyon, C**	**0.74**	**277**	Pg	Pg	14 05 16.1	-0.1
R11A				IAML		14 05 30.4	
	comp=N,337nm,0.3s						
R11A				IAML		14 05 30.7	
	comp=E,338nm,0.3s						
PRN	**Pahroc Range**	**0.91**	**201**	Pg	Pg	14 05 18.8	-0.6
PRN				IAML		14 05 34.4	
	comp=E,513nm,0.5s						
S11A	**Rachel**	**1.06**	**235**	Pg	Pg	14 05 22.1	-0.3
S11A				IAML		14 05 39.5	
	comp=N,382nm,0.6s						
CCUT	**Cedar City**	**1.24**	**124**		Pn	14 05 24.5	-0.8
CCUT	**Cedar City**	**1.24**	**124**	IAML		14 05 43.5	
	comp=N,168nm,0.4s						
CCUT				IAML		14 05 43.5	
	comp=E,251nm,0.4s						
ICU	**Indian Springs**	**1.25**	**152**		Pn	14 05 24.7	-0.7
SZCU	**Shurtz Canyon**	**1.40**	**118**		Pn	14 05 27.7	+0.1
LCMT	**Little Creek M**	**1.67**	**138**		Pb	14 05 32.0	-0.7
LCMT				IAML		14 05 56.0	
	comp=E,74nm,0.3s						
LCMT				IAML		14 05 58.6	
	comp=N,63nm,0.1s						
TCRU	**Three Creeks R**	**1.77**	**78**		Pn	14 05 33.2	+0.5
SHPR	**Sheep Range**	**1.79**	**193**		Pn	14 05 32.8	-0.2
TPNV	**Topopah Spring**	**1.82**	**225**		Pn	14 05 33.5	+0.1
TPNV				IAML		14 06 02.7	
	comp=N,108nm,0.4s						
TPNV				IAML		14 06 03.1	
	comp=N,119nm,0.4s						
MTPU	**Mount Pierson**	**1.96**	**96**		Pn	14 05 35.2	-0.1
MTPU				IAML		14 06 06.4	
	comp=N,57nm,0.4s						
MSU	**Marysvale**	**1.96**	**82**	Pn	Pn	14 05 35.0	-0.3
TPH	**Tonopah**	**2.04**	**266**		Pn	14 05 36.9	+0.6
ELK	**Elko**	**2.53**	**350**	Pn	Pn	14 05 43.1	0.0
U15A	**North Rim**	**2.62**	**133**		Pn	14 05 44.6	+0.2
U15A				IAML		14 06 27.3	
	comp=N,42nm,0.9s						
U15A				IAML		14 06 27.6	
	comp=E,26nm,0.8s						
KVN	**Kaiserville**	**2.81**	**287**		Pn	14 05 47.5	+0.5
KVN				IAML		14 06 34.5	
	comp=N,26nm,0.5s						
KVN				IAML		14 06 39.1	
	comp=E,30nm,0.6s						
TMUT	**Trail Mountain**	**2.88**	**68**		Pn	14 05 48.3	+0.2
BGU	**Big Grassy Mou**	**2.94**	**25**	Pn	Pn	14 05 49.0	+0.3
BGU				IAML		14 06 44.1	
	comp=E,18nm,0.5s						
HVU	**Hansel Valley**	**3.80**	**22**		Pn	14 06 01.4	+0.8
PNTR	**Pine Nut**	**3.96**	**284**	Pn	Pn	14 06 02.2	-0.6

KRSZO 19 14:39:19.2, 47°.89N×19°.41E, h0^{km}, ML1.7/6, Explosion. GT info : GT2 explosion locality : Bercel, Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.33**	**85**	Pg	Pg	14 39 25.5	0.0
PSZ				Lg	Lg	14 39 30.7	
PSZ	**Piszkesteto**	**0.33**	**85**	P	Pg	14 39 25.5	0.0
PSZ				S	Sg	14 39 30.7	+0.9
A336A	**Medovarce**	**0.44**	**322**	Pg	Pg	14 39 28.3	+0.7
VYHS	**Vyhne**	**0.71**	**328**	Pn	Pb	14 39 34.7	+0.1
VYHS				Lg	Lg	14 39 44.3	
VYHS	**Vyhne**	**0.71**	**328**	*e*PG	Pb	14 39 34.8	+0.3
VYHS				*e*SG	Sb	14 39 43.9	-1.0
VYHS				*e*LG	Lg	14 39 47.0	
A335A	**Lovce**	**0.91**	**308**	Pn	Pb	14 39 38.3	+0.5
A335A				Lg	Lg	14 39 50.9	
KECS	**Kecovo**	**0.93**	**50**	Pn	Pb	14 39 38.3	0.0
KECS	**Kecovo**	**0.93**	**50**	*e*PG	Pb	14 39 37.9	-0.4
CSKK	**Cskako**	**0.94**	**236**	Sn	Sn	14 39 55.5	+1.7
CSKK	**Cskako**	**0.94**	**236**	S	Sn	14 39 55.5	+1.7
KOLL	**Kolacno**	**0.96**	**316**	*e*PG	Pg	14 39 37.2	-0.4
KOLL				*e*SG	Sg	14 39 50.2	+0.1
A332A	**Rudnianska**	**1.11**	**326**	Lg	Lg	14 39 56.7	
LANS	**Liptovska Anna**	**1.26**	**2**	Pg	Pb	14 39 43.8	-0.1
LANS				Sn	Sb	14 40 00.7	0.0
LANS	**Liptovska Anna**	**1.26**	**2**	*e*PG	Pb	14 39 43.7	-0.2
LANS				*e*SG	Sn	14 40 02.3	+0.5
MPLH	**Magyarpolny**	**1.46**	**241**	Lg	Lg	14 40 10.0	
MPLH	**Magyarpolny**	**1.46**	**241**	S	Sn	14 40 10.0	+3.5
MODS	**Modra-Piesok**	**1.50**	**289**	*e*SG	Sg	14 40 07.0	-0.5
JAVC	**Velka Javorina**	**1.51**	**311**	*e*PG	Pb	14 39 49.4	+1.3
JAVC				*e*SG	Sg	14 40 07.4	-0.2
JAVC	**Velka Javorina**	**1.51**	**311**	Pg	Pb	14 39 49.4	+1.3
JAVC				Lg	Lg	14 40 07.4	
JAVC				Sn	Sn	14 40 08.7	+0.8

KRSZO 19 14:41:20.8, 47°.89N×19°.41E, h0^{km}, ML1.1/4, Explosion. locality : Kisnna GT info : GT2 explosion, Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.33**	**85**	Pg	Pg	14 41 27.0	0.0
PSZ				Lg	Lg	14 41 32.7	
PSZ	**Piszkesteto**	**0.33**	**85**	P	Pg	14 41 27.0	0.0
PSZ				S	Sg	14 41 32.7	+1.4
VYHS	**Vyhne**	**0.71**	**328**	Pn	Pb	14 41 36.3	+0.3
VYHS				Lg	Lg	14 41 44.3	
VYHS	**Vyhne**	**0.71**	**328**	*e*PG	Pb	14 41 36.9	+0.8
VYHS				*e*SG	Sb	14 41 45.4	-1.0
A335A	**Lovce**	**0.91**	**308**	Pn	Pb	14 41 39.3	0.0
A335A				Sn	Sb	14 41 52.1	+0.1
KECS	**Kecovo**	**0.93**	**50**	Lg	Lg	14 41 53.4	
KECS	**Kecovo**	**0.93**	**50**	*e*SG	Sb	14 41 53.1	+0.3
JAVC	**Velka Javorina**	**1.51**	**311**	Sn	Sn	14 42 10.4	+1.0

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*DSN **19** 14:45:38.9±2.7, 26°.49N×58°.00E, h10^{km}, ML3.3/7, Error ellipse: s-maj=37.3km s-min=14.1km az=7.0*

*OMAN **19** 14:45:43.4±0.1, 26°.60N×57°.94E, h32^{km}±3^{km}, ml3.5/18, Error ellipse: s-maj=4.6km s-min=0.8km az=22.0*

*TEH **19** 14:45:44.1, 26°.96N×57°.64E, h8^{km}, ML3.5*

ISC 19 14:45:39.4±2.0**, 26°.60N**±0°.04×**57°.88E**±0°.04**, h3**^{km}±17^{km}**, n43, σ1^{s}.64**/64**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**1.35**	**353**	*e*Pg	**Pn**	**14 46 02.7**	**-2.5**
KHNJ				*e*		14 46 26.1	
	comp=Z,16μm,0.4s						
IBND	**Bandar-abas**	**1.47**	**305**	*e*Pg	**Pn**	**14 46 05.9**	**-0.8**
IBND				*e*		14 46 50.0	
	comp=Z,13μm,0.4s						
BANOM	**Banah**	**1.57**	**245**	*e*Pn	**Pn**	**14 46 07.8**	**-0.5**
BANOM	**Banah**	**1.57**	**245**	P	**Pn**	**14 46 06.9**	**-1.3**
	SNR=179						
BANOM				S	**Sn**	**14 46 29.6**	**+0.4**
BANOM	**Banah**	**1.57**	**245**	P	**Pn**	**14 46 06.9**	**-1.3**
BANOM				S	**Sn**	**14 46 29.4**	**+0.2**
SHME	**Shamm**	**1.66**	**251**	*e*Pn	**Pn**	**14 46 08.9**	**-0.5**
SHME	**Shamm**	**1.66**	**251**	P	**Pn**	**14 46 09.2**	**-0.2**
	SNR=49						
SHME				S	**Sb**	**14 46 32.2**	**+0.3**
SHME	**Shamm**	**1.66**	**251**	P	**Pn**	**14 46 09.2**	**-0.2**
SHME				S	**Sb**	**14 46 32.1**	**+0.3**
GENO	**Geno**	**1.72**	**298**	*e*Pg	**Pn**	**14 46 10.0**	**-0.4**
GENO				*e*		14 46 38.5	
	comp=Z,9μm,0.5s						
MASF	**Masafi**	**1.98**	**232**	P	**Pn**	**14 46 11.9**	**-1.9**
MASF				S	**Sn**	**14 46 37.4**	**-1.7**
MSFE	**Esma-Masafi**	**1.98**	**232**	P	**Pn**	**14 46 11.5**	**-2.4**
UOSS	**Minazif**	**2.24**	**223**	P	**Pn**	**14 46 15.0**	**-2.4**
UOSS				S	**Sn**	**14 46 45.3**	**-0.2**
UOSS	**Minazif**	**2.24**	**223**	P	**Pn**	**14 46 14.6**	**-2.7**
HATD	**Hatta, Dubai**	**2.37**	**222**	P	**Pn**	**14 46 17.4**	**-1.8**
ASHO	**Ashiyiah**	**2.52**	**221**	P	**Pn**	**14 46 20.7**	**-0.6**
ASHO				S	**Sn**	**14 46 54.0**	**+1.5**
ASHO	**Ashiyiah**	**2.52**	**221**	P	**Pn**	**14 46 20.1**	**-1.2**
NAZ	**Nazwa, Dubai**	**2.57**	**232**	*e*Pn	**Pn**	**14 46 22.7**	**+0.8**
NAZ	**Nazwa, Dubai**	**2.57**	**232**	P	**Pn**	**14 46 22.6**	**+0.8**
NAZ				S	**Sn**	**14 46 55.0**	**+1.4**
NAZ	**Nazwa, Dubai**	**2.57**	**232**	P	**Pn**	**14 46 21.8**	**0.0**
KBAM	**BAM**	**2.58**	**11**	*e*Pn	**Pn**	**14 46 23.7**	**+1.6**
KBAM				*e*		14 46 35.8	
	comp=Z,2μm,0.3s						
FAQ	**Al Faqa, Dubai**	**2.77**	**229**	*e*Pn	**Pn**	**14 46 25.7**	**+1.0**

FAQ	Al Faqa, Dubai	2.77	229	P	Pn	14 46 25.9	+1.2
FAQ				S	Sn	14 47 01.8	+3.1
ASUD	Al Ashush, Dub	3.03	230	P	Pn	14 46 29.8	+1.6
ASUD				S	Sn	14 47 06.9	+1.8
ASUD	Al Ashush, Dub	3.03	230	P	Pn	14 46 29.5	+1.2
HOQ	Hoqain	3.05	190	P	Pn	14 46 27.4	-1.1
	SNR=16						
HOQ				S	Sn	14 47 03.4	-2.1
BIDO	Bidbid	3.07	176	P	Pn	14 46 29.3	+0.5
	SNR=7.5						
BIDO				S	Sn	14 47 05.4	-0.7
NGCH	Negor - Chabah	3.18	112	*e*Pn	Pg	14 46 41.5	+1.2
ALNE	Al Ain	3.19	218	P	Pn	14 46 32.6	+2.2
ALNE				S	Sn	14 47 11.3	+2.4
NGRK	Negar Kerman	3.20	342	*e*Pn	Pn	14 46 31.3	+0.4
NGRK				*e*		14 47 18.7	
	comp=Z,1µm,0.3s						
CHMN	Cheshme madani	3.26	355	*e*Pn	Pn	14 46 33.1	+1.3
CHMN				*e*		14 47 25.8	
	comp=Z,1µm,0.4s						
WSAR	Wadi Sarin	3.42	168	P	Pn	14 46 34.5	+0.9
WSAR				S	Sn	14 47 13.2	-1.4
ARQ	Araqi	3.48	201	P	Pn	14 46 36.0	+1.6
ARQ				S	Sn	14 47 18.4	+2.3
TVBK	TV Kerman	3.52	344	*e*Pn	Pn	14 46 36.8	+1.6
TVBK				*e*		14 47 36.8	
	comp=Z,1µm,0.4s						
SMDO	Samad	3.53	178	P	Pn	14 46 36.4	+1.2
SMDO				S	Sn	14 47 16.7	-0.8
ZHDN	Zahedan	3.80	42	*e*Pn	Pb	14 46 44.7	-2.6
BSY	Bisya	3.89	189	P	Pn	14 46 42.2	+2.1
BSY				S	Sn	14 47 28.2	+1.9
WBK	Wadi Bani Khal	4.09	166	P	Pn	14 46 44.9	+2.0
	SNR=12						
WBK				S	Sn	14 47 29.8	-1.5
SRVN	Saravan	4.11	78	*e*Pn	Pb	14 46 50.7	-1.7
JMDO	Jabal Madar	4.22	177	P	Pn	14 46 47.7	+3.1
JMDO				S	Sn	14 47 35.4	+1.1
UMZA	Um Al Zommool	4.59	213	P	Pn	14 46 49.7	-0.1
UMZA				S	Sn	14 47 41.9	-1.7
JLN	Jalan Bani Buh	4.64	162	P	Pn	14 46 51.5	+1.0
JLN				S	Sn	14 47 42.9	-2.0
NHDN	Nehbandan	5.14	21	*e*Pn	Pn	14 47 00.9	+3.5
IRAM	Ramesheh	7.07	318	*e*Pn	Pn	14 47 23.8	-0.3

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*NEIC **19** 15:13:19.1±2.4, 18°.24N±0°.06×146°.5E±0°.1, h56km±7km, mb4.4/37, Error ellipse: s-maj=17.5km s-min=9.3km az=89.0*

*IDC **19** 15:13:20.1±2.8, 18°.26N×146°.55E, h64km±26km, mb3.7/16, mbtmp4.1/19, ML3.9/3, MS3.0/8, Error ellipse: s-maj=27.7km s-min=12.5km az=93.0*

ISC 19 15:13:19.6±0.5, 18°.25N±0°.06×146°.6E±0°.1, h66km, n76, σ1s.45/63, mb4.3/31, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.91	200	P	Pn	15 14 32.1	+1.1
	8.8nm,0.3s,baz=352,slow=8.6,SNR=5.3						
GUMO				S	Sn	15 15 27.2	+0.7
	23nm,0.3s,baz=176,slow=22,SNR=1.3						
GUMO				LR	LR	15 16 16.9	
	comp=Z,114nm,20.7s,baz=48,slow=36						
	39nm,0.5s						
GUMO	Guam	4.91	200		Pn	15 14 31.3	+0.4
JCJ	Chichijima	9.69	336	P	Pn	15 15 35.8	-0.5
	2.7nm,0.3s,baz=112,slow=21,SNR=5.4						
JCJ				S	Sn	15 17 21.2	-2.3
	14nm,0.7s,baz=293,slow=23,SNR=1.5						
	6.8nm,0.3s						
JCJ	Chichijima	9.69	336	Pn	Pn	15 15 35.2	-1.0
PATS	Pohnpei	16.11	133	Pn	Pn	15 16 56.3	-5.8
JOW	Kunigami	18.92	300	LR	LR	15 23 15.2	
	comp=Z,49nm,21.0s,baz=154,slow=32						
INU	Inuyama	19.03	335	P	P	15 17 34.0	-2.2
H11S3	WAKE ISLAND Hy	19.10	86	T	T	15 37 05.3	
	baz=274,slow=74,SNR=8.4						
H11S1	WAKE ISLAND Hy	19.11	86	T	T	15 36 58.0	
	baz=274,slow=74,SNR=6.2						
H11S2	WAKE ISLAND Hy	19.12	86	T	T	15 37 04.9	
	baz=274,slow=74,SNR=5.8						
JGF	Kuroka	19.12	337	P	P	15 17 37.5	+0.3
JGF				IAmb	IAmb	15 17 45.9	
	comp=Z,26nm,1.5s						
H11N1	WAKE ISLAND Hy	19.28	82	T	T	15 38 58.1	
	baz=267,slow=74,SNR=6.2						
H11N2	WAKE ISLAND Hy	19.28	82	T	T	15 38 55.1	
	baz=267,slow=74,SNR=4.7						
H11N3	WAKE ISLAND Hy	19.29	82	T	T	15 38 59.5	
	baz=267,slow=74,SNR=4.7						
MJB4	Matsu-Nakagumi	19.57	340	P	P	15 17 42.3	+0.1
MJB3	Matsu-Daira	19.58	340	P	Pn	15 17 44.2	0.0
MJB6	Matsu-Irikarui	19.58	340	P	P	15 17 40.2	-2.2
MJA3	Matsu-Soehiyam	19.61	340	P	P	15 17 41.4	-1.2
MJAR	Matsushiro Arr	19.66	340	P	P	15 17 44.6	+1.4
	comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=2.8						
	comp=Z,0.9nm,0.4s						
MJAR	Matsushiro Arr	19.66	340	P	P	15 17 40.9	-2.3
KSRS	Korea Array	25.17	323	P	P	15 18 40.3	+1.6
	comp=Z,12nm,0.5s,baz=136,slow=8.7,SNR=2.7						
KSRS				LR	LR	15 28 02.1	
	comp=Z,61nm,21.5s,baz=135,slow=35						
	comp=Z,12nm,0.5s						
PETK	Petropavlovsk-	35.86	11	LR	LR	15 35 47.0	
	comp=Z,14nm,18.3s,baz=173,slow=38						
KNRA	Kununurra	38.00	209	P	P	15 20 28.3	-3.1
KNRA				IAmb	IAmb	15 20 47.5	
	comp=Z,17nm,1.6s						
WB0	Warramunga Arr	39.62	198	P	P	15 20 41.5	-3.5
WB0				IAmb	IAmb	15 20 53.6	
	comp=Z,4.4nm,1.1s						
WR6	Warramunga Arr	39.78	198	P	P	15 20 45.2	-1.1
WR6				IAmb	IAmb	15 21 03.3	
	comp=Z,7.7nm,1.4s						
WRA	Warramunga Arr	39.80	198	P	P	15 20 46.7	+0.2
	comp=Z,0.7nm,0.7s,baz=27,slow=8.3,SNR=12						
	comp=Z,0.7nm,0.7s						
WRA	Warramunga Arr	39.80	198	IAmb	IAmb	15 20 48.2	
	comp=Z,0.6nm,1.6s						
SHEM	Shemya Is, Ala	40.57	26	LR	LR	15 34 49.1	
	comp=Z,20nm,19.9s,baz=214,slow=32						
MA2	Magadan	41.39	3	LR	LR	15 37 40.6	
	comp=Z,17nm,19.6s,baz=268,slow=35						
AS15	Alice Springs	43.42	197	P	P	15 21 16.2	+0.1
ASAR	Alice Springs	43.45	197	P	P	15 21 17.2	+0.9
	comp=Z,0.2nm,0.5s,baz=21,slow=6.9,SNR=12						
	comp=Z,0.2nm,0.5s						
SEY	Seymchan	44.83	4	P	P	15 21 28.3	+1.5
	comp=Z,0.5nm,0.4s,baz=201,slow=11,SNR=2.4						
	comp=Z,0.5nm,0.4s						
CM07	Chiang Mai Arr	45.11	278	P	P	15 21 29.2	-0.5
STKA	Stephens Creek	50.07	186	P	P	15 22 09.8	+2.0
	comp=Z,0.7nm,0.4s,baz=355,slow=12,SNR=1.5						
	comp=Z,0.7nm,0.4s						
BBOO	Buckleboo	51.76	191	P	P	15 22 21.8	+1.3
ZALV	Zalesovo Beam	58.87	323	P	P	15 23 12.2	+0.7
	comp=Z,0.7nm,0.4s,baz=103,slow=6.4,SNR=3.3						
	comp=Z,0.7nm,0.4s						
MKAR	Makanchi Array	59.37	314	P	P	15 23 15.4	+0.3
	comp=Z,0.6nm,0.8s,baz=89,slow=9.0,SNR=4.5						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	59.37	314	P	P	15 23 14.3	-0.8
CNPM	China Poot	60.41	31	P	P	15 23 22.4	+0.4
H21K	Melozitna Rive	61.55	24	P	P	15 23 30.3	+0.8
H21K				IAmb	IAmb	15 24 04.9	
	comp=Z,5.5nm,1.6s						
I21K	Tanana	61.72	25	P	P	15 23 31.8	+1.1
I21K				IAmb	IAmb	15 23 32.9	
	comp=Z,3.9nm,1.2s						
BPAW	Bear Paw Mtn.	61.79	26	P	P	15 23 32.2	+0.9
BPAW				IAmb	IAmb	15 23 33.1	
	comp=Z,2.6nm,0.8s						
KURK	Kurchatov	62.16	318	P	P	15 23 34.6	+0.8
KURK				IAmb	IAmb	15 23 40.3	
	comp=Z,4.3nm,1.5s						
NRIK	Noril'sk	62.31	340	P	P	15 23 34.5	-0.1
	comp=Z,1.3nm,0.4s,baz=83,slow=8.9,SNR=2.1						
	comp=Z,1.3nm,0.4s						
NRIK	Noril'sk	62.31	340	IAmb	IAmb	15 23 37.2	
	comp=Z,1.9nm,0.7s						
SCM	Sheep Creek Mo	62.83	29	P	P	15 23 39.4	+1.1
H23K	Yukon River	62.88	25	P	P	15 23 39.3	+0.9
H23K				IAmb	IAmb	15 23 59.9	
	comp=Z,4.4nm,1.5s						
FID	Port Fidalgo	63.01	30	P	P	15 23 38.5	-0.9
MDM	Murphy Dome	63.17	26	P	P	15 23 42.1	+1.7
EYAK	Cordova Ski Ar	63.33	31	P	P	15 23 42.3	+0.8
H24K	Noodor Dome	63.54	25	P	P	15 23 43.9	+1.0
H24K				IAmb	IAmb	15 24 09.6	
	comp=Z,7.7nm,1.6s						
IL05	Eielson Array	63.67	26	P	P	15 23 42.8	-0.9
ILAR	Eielson Array	63.68	26	P	P	15 23 43.1	-0.6
	comp=Z,0.7nm,0.6s,baz=252,slow=5.8,SNR=8.4						
	comp=Z,0.7nm,0.6s						
TOLK	Toolik Lake Re	63.71	22	P	P	15 23 44.4	+0.5
TOLK				IAmb	IAmb	15 23 46.3	
	comp=Z,3.5nm,1.1s						
J25K	Salcha River,	64.29	26	P	P	15 23 47.3	-0.6
J25K				IAmb	IAmb	15 24 21.8	
	comp=Z,4.3nm,1.6s						
SCRK	Sand Creek	64.75	27	P	P	15 23 50.4	-0.5
SCRK				IAmb	IAmb	15 24 26.4	
	comp=Z,4.7nm,1.4s						
BM03	Burnt Mountain	65.19	23	P	P	15 23 55.0	+1.4
BC01	Beaver Creek A	65.56	28	P	P	15 23 55.3	-0.8
BCAR	Beaver Creek A	65.58	28	P	P	15 23 56.6	+0.3
PCA	Pinnacle	65.97	32	P	P	15 23 57.1	-1.7
EGAK	Eagle	66.10	27	P	P	15 23 59.4	-0.1
EGAK				IAmb	IAmb	15 24 15.8	
	comp=Z,6.7nm,1.6s						
HYT	Haines Junctio	67.39	31	P	P	15 24 08.2	+0.3
HYT				IAmb	IAmb	15 24 37.4	
	comp=Z,8.6nm,1.5s						
N31M	Braeburn, Yuko	68.25	30	P	P	15 24 14.2	+1.0
N31M				IAmb	IAmb	15 24 35.0	
	comp=Z,13nm,1.6s						
INK	Inuvik	69.46	23	P	P	15 24 20.9	+0.5
	comp=Z,1.2nm,0.8s,baz=274,slow=7.7,SNR=4.7						
	comp=Z,1.2nm,0.8s						
INK	Inuvik	69.46	23	IAmb	IAmb	15 24 45.5	
	comp=Z,5.0nm,1.4s						
ABKAR	Akbulak array	74.23	317	P	P	15 24 48.2	-1.3
YKAB8	New Yellowknif	77.98	28	P	P	15 25 11.3	+0.8
YKA	Yellowknife Ar	78.00	28	P	P	15 25 11.3	+0.7
	comp=Z,1.1nm,0.6s,baz=284,slow=5.4,SNR=7.6						
	comp=Z,1.1nm,0.6s						
EUNU	Eureka	78.05	8	P	P	15 25 11.5	+0.8
RES	Resolute Bay	79.66	14	P	P	15 25 21.1	+1.6
	comp=Z,4.3nm,1.0s,baz=297,slow=2.3,SNR=4.6						
	comp=Z,4.3nm,1.0s						
RES	Resolute Bay	79.66	14	IAmb	IAmb	15 25 25.3	
	comp=Z,8.0nm,1.1s						
NVAR	Mina Array Bea	82.77	52	P	P	15 25 38.0	+1.0
	comp=Z,0.9nm,0.5s,baz=263,slow=6.0,SNR=10						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	83.17	342	P	P	15 25 39.1	+0.9
	comp=Z,3.5nm,0.9s,baz=46,slow=3.5,SNR=6.4						
ARCES				LR	LR	16 05 56.5	
	comp=Z,12nm,21.6s,baz=140,slow=38						
	comp=Z,3.5nm,0.9s						
ELK	Elko	84.29	49	P	P	15 25 46.2	+1.4
	comp=Z,1.1nm,0.6s,baz=300,slow=8.8,SNR=5.9						
	comp=Z,1.1nm,0.6s						
FINES	FINESS Array B	87.64	336	P	P	15 25 59.8	-0.7
	comp=Z,0.8nm,0.4s,baz=69,slow=5.6,SNR=11						
	comp=Z,0.8nm,0.4s						
VRAC	Vranov	99.46	329	LR	LR	16 15 49.4	
	comp=Z,15nm,18.1s,baz=76,slow=38						

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*IDC **19** 15:29:10.3±0.7, 3°.58S×131°.54E, h0km, mb4.3/11, mbtmp4.3/14, ML3.8/4, MS3.4/10, Error ellipse: s-maj=25.3km s-min=14.2km az=63.0*

*NEIC **19** 15:29:14.7±2.9, 3°.74S±0°.03×131°.56E±0°.07, h39km±6km, mb4.5/48, Error ellipse: s-maj=10.9km s-min=2.6km az=67.0*

*DJA **19** 15:29:15.5±0.2, 4°S±2°×13°2E±°, h41km±4km, M4.4/27, mB5.0/6, mb4.5/27, MLv4.4/13, Mw(mB)4.3/6*

ISC 19 15:29:13.4±0.3, 3°.71S±0°.04×131°.52E±0°.05, h24km, n171, σ1s.76/165, mb4.5/31, MS3.5/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.80	243	P	Pn	15 29 44.5	+1.5
KMPI	Kaimana, Papua	2.18	89	P	Pn	15 29 49.1	+0.9
MSAI	Masohi	2.61	278	P	Pn	15 29 55.0	+0.9
SIJI	Sorong	2.83	355	Pn	Pn	15 29 55.4	-1.7
	8.4nm,0.3s,baz=282,slow=23,SNR=36						
SIJI				Sn	Sn	15 30 26.3	-4.1
	51nm,0.3s,baz=138,slow=22,SNR=17						
SIJI				LR	LR	15 30 60.0	
	comp=Z,407nm,20.9s,baz=305,slow=40						
	25nm,0.3s						
SWI	Sorong	2.83	355	P	Pn	15 29 55.8	-1.4
SWI				S	Sn	15 30 26.7	-3.9
AAI	Ambon	3.31	270	P	Pn	15 30 04.9	+1.1
SAUI	Saumlaki	4.25	183	Pn	Pn	15 30 13.9	-2.9
LBMI	Labuha	5.04	307	P	Pn	15 30 26.6	-0.9
SRPI	Serui, Papua	5.06	69	P	Pn	15 30 27.5	-0.3
BAKI	Biak	5.22	62	P	Pn	15 30 30.7	+0.7
	1.5nm5µm486nm,0.7s						
SANI	Sanana	5.76	286	P	Pn	15 30 35.8	-1.6
	0.2nm63nm,0.8s						
TNTI	Ternate	6.08	317		Pn	15 30 41.7	-0.2
TNTI	Ternate	6.08	317	P	Pn	15 30 41.8	0.0
	0.1nm15nm,0.8s						
SMPI	Sarmi	7.38	77	P	Pn	15 31 00.1	+0.3
	0.1nm28nm,0.8s						
KMSI	Cibinong	8.65	299	P	Pn	15 31 17.3	+0.2
	2µm56nm,0.6s						
KDU	Kakadu	8.97	174	P	Pn	15 31 20.4	-1.2
	baz=9.1,SNR=128						
KDU	Kakadu	8.97	174	P	Pn	15 31 20.7	-0.9
MTN	Manton Dam	9.09	182	P	Pn	15 31 22.8	-0.4
	baz=9.2,SNR=141						
MTN	Manton Dam	9.09	182	Pn	Pn	15 31 22.0	-1.2
MTN	Manton Dam	9.09	182	P	Pn	15 31 23.0	-0.2
BBSI	Bau Bau	9.09	258	P	Pn	15 31 25.8	+2.6
	86nm11nm,1.1s						
LUWI	Luwuk	9.13	287	Pn	Pn	15 31 24.1	+0.3
SOEI	Soe	9.38	230	Pn	Pn	15 31 29.4	+2.2
SOEI	Soe	9.38	230	P	Pn	15 31 30.7	+3.5
	2µm199nm,1.1s						
SOEI	Soe	9.38	230	P	Pn	15 31 26.4	-0.8
SGSI	Sangihe	9.47	321	P	Pn	15 31 41.6	+13
GTOI	Gorontalo	9.53	297	P	Pn	15 31 31.0	+1.8
	208nm12nm,1.1s						
BATI	Baumata	10.12	230	Pn	Pn	15 31 39.9	+2.5
	7.8nm,0.3s,baz=133,slow=1.7,SNR=19						
BATI	Baumata	10.12	230	P	Pn	15 31 40.9	+3.5
	118nm,0.9s						
APSI	Ampana	10.24	285	P	Pn	15 31 39.2	+0.2
	391nm48nm,1.0s						
MRSI	Marisa	10.43	293	P	Pn	15 31 42.6	+1.0
MMRI	Maumere	10.44	242	Pn	Pn	15 31 42.7	+1.0
EDFI	Ende, Flores	10.98	242	P	Pn	15 31 52.6	+3.4
	14nm,0.9s						
BSSI	Bau Bau, Buton	11.25	257	P	Pn	15 31 55.1	+2.3
	26nm,1.2s						
BKSI	Bulukumba	11.47	262	P	Pn	15 31 57.9	+2.1
	16nm,1.6s						
TOLI2	Tolitoli	11.75	294	Pn	Pn	15 31 57.6	-2.0
TOLI2	Tolitoli	11.75	294	P	Pn	15 32 02.0	+2.4
KAPI	Kappang	11.80	263	Pn	Pn	15 32 02.4	+2.0
	2.4nm,0.3s,baz=265,slow=15,SNR=2.0						
	5.9nm,0.3s						
KAPI	Kappang	11.80	263	Pn	Pn	15 32 00.2	-0.2
KNRA	Kununurra	12.20	193	Pn	Pn	15 32 02.8	-3.1
KNRA				Sn	Sn	15 34 14.7	-6.5
KNRA	Kununurra	12.20	193	P	Pn	15 32 03.2	-2.6
PLAI	Plampang	14.57	249	P	Pn	15 32 38.2	0.0
BKB	Balikpapan	14.81	279		P	15 32 45.0	-2.1
BKB	Balikpapan	14.81	279	P	P	15 32 51.6	+4.5
COEN	Coen	15.37	132	P	Pn	15 32 49.7	+0.8
	baz=16,SNR=4.7						
MYLDM	Lahad Datu	15.71	304		Pn	15 32 54.5	+1.1
MYLDM				IAmb	IAmb	15 33 29.5	
	comp=Z,23nm,1.1s						
MANU	Manus Island	15.91	84	P	Pn	15 32 56.2	+0.2
WB0	Warramunga Arr	16.21	170		Pn	15 32 56.1	-3.6
WRAB	Tennant Creek	16.37	170	P	Pn	15 32 57.0	-4.7
WRA	Warramunga Arr	16.37	171	Pn	Pn	15 32 58.0	-3.8
	comp=Z,0.6nm,0.3s,baz=352,slow=13,SNR=20						
WRA				Sn	Sn	15 35 50.6	-12
	comp=Z,1.5nm,0.3s,baz=349,slow=22,SNR=11						
WRA	Warramunga Arr	16.37	171	P	Pn	15 32 57.4	-4.4
WB2	Warramunga Arr	16.38	171		Pn	15 32 58.1	-3.7
WR0	Warramunga Arr	16.42	170	P	Pn	15 32 58.8	-3.7
WR0				IAmb	IAmb	15 33 07.2	
	comp=Z,14nm,0.6s						
PMG	Port Moresby	16.54	111	Pn	Pn	15 33 03.8	0.0
	comp=Z,1.8nm,0.3s,baz=183,slow=2.4,SNR=8.3						
	comp=Z,21nm,0.8s						
PMG	Port Moresby	16.54	111		Pn	15 33 03.6	-0.3
PMG				IAmb	IAmb	15 33 07.8	
	comp=Z,20nm,0.8s						
PMG	Port Moresby	16.54	111	P	Pn	15 33 05.0	+1.1
PMG	Port Moresby	16.54	111	P	Pn	15 33 04.9	+1.1
BBKI	Banjar Baru	16.64	270	P	P	15 33 09.9	+2.4
JAGI	Jajag, Banyuwa	17.90	254	P	Pn	15 33 18.9	-2.0
JAGI				IAmb	IAmb	15 33 45.5	
	comp=Z,48nm,1.2s						
JAGI	Jajag, Banyuwa	17.90	254	P	P	15 33 22.1	+0.7
	comp=Z,35nm,1.3s						
QIS	Mount Isa	18.51	155	P	P	15 33 28.8	+0.6
	baz=19,SNR=15						
QIS	Mount Isa	18.51	155	P	P	15 33 28.9	+0.7
MTSU	Mount Surprise	19.05	140	P	P	15 33 35.1	+1.0
	baz=19,SNR=13						
MTSU	Mount Surprise	19.05	140	P	Pn	15 33 35.3	+0.4
AS31	Alice Springs	19.98	174		P	15 33 43.0	-1.2
AS31				IAmb	IAmb	15 33 47.0	
	comp=Z,7.9nm,0.6s						
ASAR	Alice Springs	19.98	174	P	P	15 33 45.5	+1.2
	comp=Z,18nm,0.6s,baz=353,slow=10.0,SNR=397						
ASAR				S	S	15 37 17.3	-11
	comp=Z,5.1nm,0.7s,baz=3.6,slow=29,SNR=8.2						
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	19.98	174		P	15 33 44.0	-0.2
ASAR					S	15 37 16.4	-12
STKI	Sintang	20.37	280	P	P	15 33 48.9	+0.3
	comp=Z,8.2nm,0.8s						
KRVT	Keravat (AS076	20.47	92	P	Pn	15 33 53.5	+1.7
	comp=Z,40nm,0.5s,baz=154,slow=1.6,SNR=26						
RABL	Rabaul	20.60	92	P	P	15 33 51.4	+0.3
RABL	Rabaul	20.60	92	P	Pn	15 33 54.5	+1.1
MBWA	Marble Bar	20.79	212	P	P	15 33 50.7	-2.3
MBWA	Marble Bar	20.79	212		P	15 33 51.4	-1.7
MBWA				IAmb	IAmb	15 33 52.0	
	comp=Z,15nm,0.7s						
MBWA	Marble Bar	20.79	212	P	P	15 33 51.7	-1.3
PSA00	Pilbara Seismi	21.07	212	P	P	15 33 53.6	-2.5
PSA00				IAmb	IAmb	15 33 55.6	
	comp=Z,35nm,0.7s						
PSA00	Pilbara Seismi	21.07	212	P	P	15 33 53.3	-2.7
PSA00				IAmb	IAmb	15 33 55.6	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	21.07	212	P	P	15 33 55.2	-0.8
WRKA	Warakurna	21.43	188	P	P	15 34 00.1	+0.1
	baz=22,SNR=139						
WRKA	Warakurna	21.43	188	P	P	15 34 00.2	+0.2
CTA	Charters Tower	21.72	140	P	P	15 34 04.9	+2.0
	comp=Z,12nm,0.5s,baz=314,slow=10,SNR=38						
	comp=Z,12nm,0.5s						
CTA	Charters Tower	21.72	140	P	P	15 34 05.0	+2.0
CTAO	Charters Tower	21.72	140	P	P	15 34 03.9	+0.9
CTAO				IAmb	IAmb	15 34 10.2	
	comp=Z,14nm,0.8s						
CTAO	Charters Tower	21.72	140	P	P	15 34 05.0	+2.0
KSM	Kuching	21.81	283	P	P	15 34 04.4	+0.3
KSM				IAmb	IAmb	15 34 10.5	
	comp=Z,33nm,1.2s						
LEM	Lembang	24.00	262	LR	LR	15 45 05.6	
	comp=Z,319nm,19.9s,baz=91,slow=40						
OOD	Oodnadatta	24.29	171	P	P	15 34 29.6	+0.6
INKA	Innaminka	25.47	161	P	P	15 34 41.5	+1.7
QLP	Quilpie	25.80	153	P	P	15 34 44.2	+1.4
	baz=26,SNR=3.7						
QLP	Quilpie	25.80	153	P	P	15 34 45.1	+2.3
MEEK	Meekatharra	25.94	207	P	P	15 34 43.5	-0.6
MULG	Mulgathing	26.54	175	P	P	15 34 50.1	+0.6
FORT	Forrest	27.13	187	P	P	15 34 55.5	+0.8
	baz=27,SNR=15						
FORT	Forrest	27.13	187	P	P	15 34 53.9	-0.8
FORT				IAmb	IAmb	15 35 13.1	
	comp=Z,21nm,0.7s						
FORT	Forrest	27.13	187	P	P	15 34 55.1	+0.4
LCRK	Leigh Creek	27.34	167	P	P	15 34 58.1	+1.5
MORW	Morawa	29.20	209	P	P	15 35 12.1	-1.1
MORW				IAmb	IAmb	15 35 13.1	
	comp=Z,8.8nm,0.8s						
BBOO	Buckleboo	29.27	172	P	P	15 35 12.7	-1.0
BBOO				IAmb	IAmb	15 35 30.0	
	comp=Z,41nm,1.4s						
RGRI	Rengat	29.35	276	P	P	15 35 30.9	+16
STKA	Stephens Creek	29.58	162	P	P	15 35 17.8	+1.2
	comp=Z,3.8nm,0.7s,baz=329,slow=11,SNR=11						
	comp=Z,3.8nm,0.7s						
STKA	Stephens Creek	29.58	162	P	P	15 35 18.1	+1.4
	baz=30,SNR=6.0						
STKA	Stephens Creek	29.58	162	P	P	15 35 16.9	+0.3
BLDU	Ballidu	30.20	206	P	P	15 35 21.5	-0.6
	baz=30,SNR=8.2						
BLDU	Ballidu	30.20	206	P	P	15 35 21.5	-0.6
KLBR	Kellerberrin	30.61	203	P	P	15 35 25.6	-0.1
	baz=31,SNR=15						
KLBR	Kellerberrin	30.61	203	P	P	15 35 24.8	-0.9
MUN	Mundaring	31.59	205	P	P	15 35 34.0	-0.3
	baz=32,SNR=3.6						
MUN	Mundaring	31.59	205	P	P	15 35 34.3	0.0
NWAO	Narrogin (SRO)	32.00	203	P	P	15 35 37.9	-0.1
NWAO	Narrogin (SRO)	32.00	203	P	P	15 35 38.2	+0.3
KULM	Kulim	32.10	286	P	P	15 35 38.7	-0.4
KULM				IAmb	IAmb	15 36 00.4	
	comp=Z,7.3nm,1.1s						
JCJ	Chichijima	32.31	18	LR	LR	15 47 37.1	
	comp=Z,67nm,19.3s,baz=204,slow=34						
ARMA	Armidale	32.67	147	P	P	15 35 44.7	+0.8
ARMA				IAmb	IAmb	15 36 09.0	
	comp=Z,28nm,1.6s						
PSI	Prapat	33.21	281	P	P	15 35 47.9	-1.1
	comp=Z,2.4nm,0.5s,baz=100,slow=6.1,SNR=4.4						
	comp=Z,2.4nm,0.5s						
ARPS	Mount Arapiles	34.25	165	P	P	15 35 59.0	+1.5
	baz=34,SNR=4.7						
ARPS	Mount Arapiles	34.25	165	P	P	15 35 58.4	+0.9
GSI	Gunungsitoli	34.28	278	P	P	15 35 58.1	-0.1
CAN	Canberra	35.38	155	P	P	15 36 08.5	+1.1
TOO	Toolangi	36.06	161	P	P	15 36 15.3	+2.2
TOO	Toolangi	36.06	161	P	P	15 36 14.0	+0.9
JNU	Nakatsue	36.63	359	P	P	15 36 21.2	+3.1
JHJ	Hachijo jima 2	37.45	11	LR	LR	15 51 54.0	
	comp=Z,69nm,18.1s,baz=269,slow=36						
NJ2	Nanjing	37.54	342	*e*P	P	15 36 29.3	+3.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RTV	Rentapao	38.76	114	P	P	15 36 38.8	+2.5
CM31	Chiang Mai Arr	38.92	306	P	P	15 36 37.5	-0.1
CM31				IAmb	IAmb	15 36 39.5	
	comp=Z,7.1nm,1.1s						
CMAR	Chiang Mai Arr	38.92	306	P	P	15 36 38.2	+0.6
	comp=Z,2.5nm,0.9s,baz=134,slow=6.8,SNR=15						
	comp=Z,2.5nm,0.9s						
CMAR	Chiang Mai Arr	38.92	306	P	P	15 36 37.4	-0.2
CHTO	Chiang Mai	39.10	306	P	P	15 36 38.5	-0.7
CHTO				IAmb	IAmb	15 36 40.8	
	comp=Z,9.8nm,1.2s						
PZH	PanZhiHua	41.61	318	P	P	15 37 01.8	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
JMM	Marumori	42.25	11	P	P	15 37 03.7	-1.1
HHC	Hu-ho-hao-te	47.95	340	*e*P	P	15 37 53.5	+3.3
HHC				pmax	pmax		
	comp=Z,56nm,0.9s						
MDJ	Mudanjiang	48.13	358	P	P	15 37 54.4	+3.0
MDJ				pP	sP	15 38 06.8	+5.6
MDJ				sP	pP	15 38 13.3	+15
MDJ				ScP	ScP	15 43 11.0	-1.0
MDJ				PcS	PcS	15 43 16.4	+2.0
MDJ				S	S	15 44 50.5	+1.6
MDJ				sS	sS	15 45 13.9	+13
MDJ				ScS	ScS	15 47 42.8	-0.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,70nm,4.3s						
MDJ				LR	LR		
	comp=N,65nm,6.3s						
MDJ				LR	LR		
	comp=E,57nm,5.1s						
MDJ				LR	LR		
	comp=Z,170nm,22.6s						
ASAJ	Asahikawa	48.63	11	LR	LR	15 58 08.0	

	comp=Z,24nm,20.9s,baz=177,slow=36						
PALK	Pallekele	51.87	282	LR	LR	16 02 28.8	
	comp=Z,49nm,19.3s,baz=210,slow=38						
GTA	Gaotai	51.89	329	*e*P	P	15 38 20.4	+0.1
GTA				sP	sP	15 38 41.6	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	Ulaanbaatar	55.65	340	P	P	15 38 46.5	-1.2
ULN				IAmb	IAmb	15 39 07.2	
	comp=Z,5.9nm,1.1s						
SONM	Songino Array	55.85	340	P	P	15 38 47.5	-1.5
MIDW	Midway	58.49	54	P	P	15 39 07.0	-0.9
PEA0B	Petropavlovsk-	60.74	18	P	P	15 39 22.7	-0.3
PETK	Petropavlovsk-	60.74	18	LR	LR	16 06 40.4	
	comp=Z,19nm,18.9s,baz=198,slow=37						
PETK	Petropavlovsk-	60.74	18	P	P	15 39 20.9	-2.1
WMQ	Urumqi	61.52	325	*e*P	P	15 39 29.9	+1.4
MA2	Magadan	64.90	11	LR	LR	16 08 11.6	
	comp=Z,13nm,18.0s,baz=166,slow=36						
MK31	Makanchi Array	66.35	325	P	P	15 39 59.3	-0.9
MK31				IAmb	IAmb	15 40 08.5	
	comp=Z,2.7nm,1.0s						
MKAR	Makanchi Array	66.35	325	P	P	15 40 01.1	+0.8
	comp=Z,1.3nm,0.7s,baz=118,slow=8.6,SNR=13						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	66.35	325	P	P	15 39 59.9	-0.4
MAKZ	Makanchi	66.54	325	P	P	15 40 01.0	-0.4
MAKZ				IAmb	IAmb	15 40 03.5	
	comp=Z,4.9nm,1.1s						
KSH	Kashi	66.67	316	P	P	15 40 06.5	+4.0
KSH				pP	sP	15 40 16.6	+3.9
AAK	Ala-Archa	69.05	318	P	P	15 40 17.8	+0.3
AAK				IAmb	IAmb	15 40 25.8	
	comp=Z,4.1nm,1.3s						
ZAA0	Zalesovo Array	69.34	333	P	P	15 40 17.7	-1.2
ZAA0				IAmb	IAmb	15 40 26.2	
	comp=Z,4.3nm,1.1s						
ZALV	Zalesovo Beam	69.34	333	P	P	15 40 18.7	-0.2
	comp=Z,1.7nm,0.7s,baz=96,slow=6.6,SNR=6.2						
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	69.34	333	P	P	15 40 17.2	-1.6
KURK	Kurchatov	70.54	327	P	P	15 40 25.3	-1.0
KURK				IAmb	IAmb	15 40 34.5	
	comp=Z,7.7nm,0.9s						
KK31	Karatay Array	71.91	318	P	P	15 40 34.2	-0.6
KKAR	Karatay Array	71.91	318	P	P	15 40 33.0	-1.8
KKAR	Karatay Array	71.91	318	P	P	15 40 34.0	-0.8
KKAR				IAmb	IAmb	15 40 53.0	
	comp=Z,1.8nm,0.8s						
OPA	Opana	73.34	66	P	P	15 40 41.3	-2.4
TIXI	Tiksi	75.23	359	P	P	15 40 52.0	-1.7
VNDA	Vanda	75.52	173	P	P	15 40 56.8	+1.5
	comp=Z,2.8nm,0.8s,baz=321,slow=6.9,SNR=7.6						
	comp=Z,2.8nm,0.8s						
VNDA	Vanda	75.52	173	P	P	15 40 54.5	-0.9
VNDA				IAmb	IAmb	15 40 58.4	
	comp=Z,5.2nm,1.1s						
BRVK	Borovoye	76.19	327	P	P	15 40 58.9	-0.6
BRVK				IAmb	IAmb	15 41 15.4	
	comp=Z,2.8nm,0.8s						
UNV	Unalaska Valle	76.93	32	P	P	15 41 01.7	-2.0
MAW	Mawson	78.55	201	P	P	15 41 12.9	+0.4
	comp=Z,1.0nm,0.6s,baz=86,slow=4.1,SNR=1.7						
	comp=Z,1.0nm,0.6s						
MAW	Mawson	78.55	201	P	P	15 41 09.9	-2.6
NRIK	Noril'sk	78.76	345	P	P	15 41 12.3	-1.3
	comp=Z,1.0nm,0.3s,baz=40,slow=2.5,SNR=1.8						
NRIK				LR	LR	16 19 14.9	
	comp=Z,34nm,19.7s,baz=158,slow=38						
	comp=Z,1.0nm,0.3s						
SDPT	Sand Point	80.75	32	P	P	15 41 23.1	-1.6
ABKAR	Akbulak array	80.90	321	P	P	15 41 23.7	-1.9
ILAR	Eielson Array	89.74	25	P	P	15 42 10.0	+0.6
	comp=Z,0.4nm,0.7s,baz=268,slow=4.5,SNR=2.3						
	comp=Z,0.4nm,0.7s						
BBB	Bella Bella	99.28	38	LR	LR	16 21 21.3	
	comp=Z,24nm,20.1s,baz=15,slow=32						
TORD	Torodi Ar. Bea	129.57	284	PKP	PKiKP	15 48 21.6	-0.5
	comp=Z,0.5nm,0.6s,baz=48,slow=1.1,SNR=3.7						
CPUP	Villa Florida	148.94	164	PKPbc	PKiKP	15 49 01.4	-0.1
	comp=Z,1.5nm,0.9s,baz=231,slow=6.9,SNR=3.9						
LPAZ	La Paz	152.22	136	PKPbc	PKiKP	15 49 10.9	+1.7
	comp=Z,0.6nm,0.4s,baz=190,slow=6.1,SNR=1.9						

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*IDC **19** 15:52:16.0±1.6, 2°.72N×126°.22E, h0km, mb3.8/3, mbtmp4.0/5, ML4.0/2, MS3.2/3, Error ellipse: s-maj=63.2km s-min=25.3km az=63.0*

*DJA **19** 15:52:20.8±1.4, 3°N±6°×12°7E±°, h26km±17km, M3.6/6, mb3.7/2, MLv3.5/6*

*NEIC **19** 15:52:23.9±1.9, 3°.1N±0°.1×126°.8E±0°.1, h70km±11km, mb4.0/8, Error ellipse: s-maj=25.1km s-min=11.1km az=46.0*

ISC 19 15:52:21.5±0.9, 3°.1N±0°.1×126°.9E±0°.1, h44km, n26, σ1s.76/23, mb4.2/6, MS3.3/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.45	294	P	Pn	15 52 47.4	+2.1
SGSI				S	Sn	15 53 07.3	+4.1
TNTI	Ternate	2.35	167		Pn	15 52 57.8	+0.1
TNTI	Ternate	2.35	167	P	Pn	15 52 58.7	+1.0
LBMI	Labuha	3.75	170	P	Pn	15 53 18.0	+1.1
SANI	Sanana	5.17	190	P	Pn	15 53 36.2	-0.2
SIJI	Sorong	5.91	132	Pn	Pn	15 53 47.7	+1.2
	1.9nm,0.3s,baz=167,slow=22,SNR=6.8						
SIJI				Sn	Sn	15 54 57.1	+4.2
	0.7nm,0.3s,baz=83,slow=23,SNR=1.7						
	3.7nm,0.3s						
TOLI2	Tolitoli	6.38	252	Pn	Pn	15 53 53.7	+0.8
MYLDM	Lahad Datu	8.59	284	Pn	Pn	15 54 22.9	-0.4
BATI	Baumata	13.58	193	Pn	Pn	15 55 21.6	-10
	1.7nm,0.3s,baz=294,slow=22,SNR=1.5						
	15nm,0.6s						
MTN	Manton Dam	16.38	165		Pn	15 56 06.3	-2.2
MTN				IAmb	IAmb	15 56 14.0	
	comp=Z,4.8nm,0.7s						
KNRA	Kununurra	18.74	174	P	P	15 56 36.4	-0.3
WB8	Warramunga Arr	23.93	162	P	P	15 57 30.0	-1.6
WB8				IAmb	IAmb	15 57 38.9	
	comp=Z,9.6nm,1.1s						
WRA	Warramunga Arr	24.04	162	P	P	15 57 31.4	-1.2
	comp=Z,1.1nm,0.4s,baz=340,slow=11,SNR=30						
	comp=Z,1.1nm,0.4s						
WB1	Warramunga Ar.	24.05	162	P	P	15 57 31.8	-1.0
WB1				IAmb	IAmb	15 57 43.8	
	comp=Z,14nm,1.5s						
PSAC2	Pilbara Seismi	25.42	195	P	P	15 57 45.4	+0.1
AS14	Alice Springs	27.45	166	P	P	15 58 02.8	-0.7
AS31	Alice Springs	27.46	166	P	P	15 58 02.7	-1.0
ASAR	Alice Springs	27.46	166	P	P	15 58 03.0	-0.7
	comp=Z,0.3nm,0.3s,baz=344,slow=8.0,SNR=23						
	comp=Z,0.3nm,0.3s						
PSI	Prapat	27.89	270	LR	LR	16 10 06.8	
	comp=Z,77nm,19.9s,baz=216,slow=39						
JCJ	Chichijima	28.02	30	LR	LR	16 07 11.4	
	comp=Z,14nm,20.7s,baz=144,slow=31						
STKA	Stephens Creek	37.48	159	P	P	15 59 30.9	-0.2
	comp=Z,1.1nm,0.4s,baz=353,slow=11,SNR=5.7						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	37.48	159	IAmb	IAmb	15 59 46.6	
	comp=Z,2.8nm,1.4s						
MK09	Makanchi Array	58.15	325	P	P	16 02 08.4	-2.5
MKAR	Makanchi Array	58.15	325	P	P	16 02 10.7	-0.2
	comp=Z,16nm,0.4s,baz=125,slow=8.0,SNR=3.0						
AB03	Akbulak array	72.72	321	P	P	16 03 44.4	-0.6
GNI	Garni	81.99	310	LR	LR	16 46 48.0	
	comp=Z,21nm,18.7s,baz=144,slow=40						

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*TUL **19** 15:55:35.4±1.5, 35°.95N±0°.01×97°.393W±0°.008, h6km±4km, ML3.1, mb_Lg2.7/48(NEIC), Error ellipse: s-maj=1.6km s-min=0.9km az=164.0*

NEIC 19 15:55:35.5±0.8, 35°.97N±0°.01×97°.40W±0°.02, h10km±3km, Error ellipse: s-maj=2.0km s-min=1.6km az=61.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.39	183	Pg	Pg	15 55 43.0	-0.2
OK009				Sg	Sg	15 55 48.5	+0.2
OKCFA	Oklahoma City	0.55	185		Pg	15 55 46.1	-0.2
OKCFA				Sg	Sg	15 55 53.7	+0.1
OKCSW	OKLAHOMA CITY	0.56	183	Pg	Pg	15 55 46.2	-0.2
OKCSW				Sg	Sg	15 55 54.0	+0.1
FNO	Franklin	0.71	180	Pg	Pg	15 55 48.7	-0.5
FNO				Sg	Sg	15 55 58.5	0.0
T35A	Sooner Cattle	1.19	37		Pb	15 55 57.6	-0.5
T35A				Sg	Sb	15 56 13.4	-0.2
TUL1	Leonard	1.30	92	Pn	Pn	15 55 58.9	-0.9
U32A	Winter Ranch,	1.36	288		Pn	15 56 00.4	-0.2
X34A	Smith Ranch, M	1.41	195	Pn	Pn	15 56 01.6	+0.3
WMOK	Wichita Mounta	1.67	223		Pn	15 56 05.0	+0.2
X37A	Clayton	2.15	129	Pn	Pn	15 56 11.7	+0.2
U38A	Gravette	2.48	78	Pn	Pn	15 56 16.6	+0.6
Z35A	Perchaven, San	2.63	177	Pn	Pn	15 56 19.1	+1.0
R32A	Long Quarter,	2.67	337	Pn	Pn	15 56 19.1	+0.5
HHAR	Hobbs	2.82	83		Pn	15 56 21.2	+0.6
W39A	Magazine	3.04	104	Pn	Pn	15 56 26.1	+2.4
W39A				IAmb_Lg		15 57 20.7	
	comp=Z,29nm,0.7s						
KSU1	Kansas State U	3.19	11	Pn	Pn	15 56 24.4	-1.3
KSU1				IAmb_Lg		15 57 21.9	
	comp=Z,32nm,0.7s						
Z38A	Mt. Pleasant	3.35	143		Pn	15 56 28.5	+0.5
CBKS	Cedar Bluff	3.40	327	Pn	Pn	15 56 27.9	-0.8
MIAR	Mount Ida	3.43	113		Pn	15 56 29.3	+0.2
MIAR				IAmb_Lg		15 57 33.5	
	comp=Z,18nm,0.8s						
AMTX	Amarillo	3.66	254		Pn	15 56 30.6	-1.8
S39A	Bolivar	3.69	61	Pn	Pn	15 56 33.0	+0.4
U40A	Yellville	3.70	83	Pn	Pn	15 56 32.7	0.0
ABTX	Abilene, Hawle	3.82	210		Pn	15 56 34.2	-0.2
WHTX	Lake Whitney,	3.97	181	Pn	Pn	15 56 36.6	+0.2
X40A	Basin Creek Fa	4.02	110	Pn	Pn	15 56 38.5	+1.4
237A	Washetta, Mont	4.17	161	Pn	Pn	15 56 38.4	-0.8
WLAR	White Oak Lake	4.20	122	Pn	Pn	15 56 38.1	-1.4
WHAR	Wooly Hollow	4.22	98	Pn	Pn	15 56 39.0	-0.9
WHAR				IAmb_Lg		15 57 48.2	
	comp=Z,20nm,1.0s						
W41B	Gary Mavity, V	4.27	99	Pn	Pn	15 56 40.5	-0.1
FCAR	Ozark Folk Cen	4.28	89	Pn	Pn	15 56 38.9	-1.8
FCAR				IAmb_Lg		15 57 58.6	
	comp=Z,17nm,0.8s						
MGMO	Mountain Grove	4.29	72	Pn	Pn	15 56 40.4	-0.5
MGMO				IAmb_Lg		15 57 55.4	
	comp=Z,14nm,0.7s						
UALR	University of	4.30	105	IAmb_Lg		15 57 56.4	
	comp=Z,27nm,1.0s						
R40A	Maddies Statio	4.71	59		Pn	15 56 45.7	-0.9
R40A				IAmb_Lg		15 58 04.0	
	comp=Z,10nm,0.8s						
N33A	J Bar K, Exete	4.76	360	IAmb_Lg		15 58 17.9	
	comp=Z,20nm,0.9s						
P38A	Dawn	4.76	39		Pn	15 56 45.4	-1.9
P38A				IAmb_Lg		15 58 18.0	
	comp=Z,14nm,0.9s						
MSTX	Muleshoe	4.84	247		Pn	15 56 48.7	+0.1
LCAR	Lake Charles	5.06	87	Pn	Pn	15 56 48.3	-3.2
LCAR				IAmb_Lg		15 58 20.5	
	comp=Z,12nm,0.9s						
KSCO	Kaye Shedlock'	5.15	308	IAmb_Lg		15 58 28.2	
	comp=Z,13nm,0.7s						
435B	Jarrell	5.17	182	IAmb_Lg		15 58 27.4	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	5.35	65	Pn	Pn	15 56 54.2	-1.2
P40A	Paris	5.53	48	Pn	Pn	15 56 54.4	-3.5
T25A	Trinidad	5.77	284	Pn	Pn	15 56 58.4	-3.0
T25A				IAmb_Lg		15 58 42.5	
	comp=Z,14nm,0.7s						
JCT	Junction City	5.83	201	Pn	Pn	15 56 59.0	-3.1
FVM	French Village	5.93	68	Pn	Pn	15 57 00.9	-2.5
SDCO	Great Sand Dun	6.74	288	IAmb_Lg		15 59 11.2	
	comp=Z,6.6nm,0.9s						
SCIA	State Center	6.77	28	IAmb_Lg		15 59 19.7	
	comp=Z,14nm,0.8s						
Q24A	Divide	6.85	298	IAmb_Lg		15 59 21.2	
	comp=Z,7.6nm,0.9s						
N41A	Harden Midland	6.99	45	IAmb_Lg		15 59 15.0	
	comp=Z,12nm,0.7s						
K38A	Parkersburg	7.57	27	IAmb_Lg		15 59 51.8	
	comp=Z,15nm,0.8s						
PLAL	Pickwick Lake	7.67	95	IAmb_Lg		15 59 45.6	
	comp=Z,5.9nm,0.9s						
WVT	Waverly	7.75	86	Pn	Pn	15 57 30.5	+2.1
MNTX	Cornudas Mount	7.89	240	IAmb_Lg		16 00 04.3	
	comp=Z,5.5nm,1.3s						
N23A	Red Feather La	8.31	309	IAmb_Lg		16 00 04.4	
	comp=Z,5.7nm,0.9s						
JFWS	Jewell Farm	8.87	36	IAmb_Lg		16 00 15.6	
	comp=Z,7.4nm,0.8s						

TAP 19 15:58:18.9, 24°.32N×121°.74E, h9km±1km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.01	150	*e*P	Pg	15 58 20.8	+0.3
	baz=131						
ENA	Nanau	0.11	2	P	Pg	15 58 22.5	+1.0
	baz=6.0						
ENA				*i* S	Sg	15 58 24.4	+1.1
	baz=6.0						
EWUT	Wuta	0.13	17	*i* P	Pg	15 58 22.8	+0.9
	baz=17						
EWUT				*e*S	Sg	15 58 24.8	+0.9
	baz=17						
ETL	Fush Village	0.19	213	*i* P	Pg	15 58 23.8	+1.0
	baz=212						
ETL				S	Sg	15 58 27.1	+1.6
	baz=212						
NACB	Ninganchiao	0.19	222	*i* P	Pg	15 58 23.9	+1.0
	baz=221						
NACB				S	Sg	15 58 27.2	+1.6
	baz=221						
ETLH	Xiulin Townshi	0.26	245	P	Pb	15 58 25.3	-0.5
	baz=244						
ETLH				S	Sb	15 58 29.6	-0.9
	baz=244						
TWD	Chiawan	0.27	208	P	Pb	15 58 25.3	-0.6
	baz=206						
LATG	Datong	0.29	319	*e*P	Pb	15 58 26.3	-0.1
	baz=318						
LATG				S	Sb	15 58 30.5	-0.9
	baz=318						
NDS	Dongshan	0.32	357	*e*S	Sg	15 58 30.7	+1.3
	baz=356						
NNSB	Datong	0.34	289	P	Pb	15 58 26.8	-0.4
	baz=288						
NNSB				S	Sb	15 58 32.3	-0.6
	baz=288						
NNS	Nan Shan	0.35	290	P	Pb	15 58 26.7	-0.8
	baz=290						
NNS				S	Sb	15 58 32.7	-0.5
	baz=290						
ENTT	Nioudou	0.36	334	*e*P	Pb	15 58 27.5	0.0
	baz=335						
ENTT				S	Sb	15 58 32.9	-0.4
	baz=335						
WHF	Hehuan Shan	0.46	248	P	Pb	15 58 29.3	-0.3
	baz=247						
WHF				S	Sb	15 58 35.9	-0.8
	baz=247						
NWLT	Wulai	0.50	335	*e*S	Sb	15 58 37.1	-0.4
	baz=335						

JMA 19 15:58:20.9±0.2, 24°.3N±0°.3×123°.8E±0°.4, h18km±1km, MV0.7/5, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.10	322	*i* P	Pg	15 58 24.5	0.0
IRIF				*e*S	Sg	15 58 26.8	-0.2
JKRS	Kuro-shima	0.20	96	*i* P	Pb	15 58 25.7	0.0
JKRS				*e*S	Sg	15 58 29.2	+0.1
HATJ	Hateruma jima	0.20	178	*i* P	Pg	15 58 25.6	-0.2
HATJ				S	Sb	15 58 29.1	0.0
JIJ	Ishigaki jima	0.33	71	P	Pg	15 58 27.7	-0.3
JIJ				*e*S	Sg	15 58 32.4	-0.4

IDC 19 16:06:18.8±2.2, 3°.14N×126°.99E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=154.8km s-min=28.0km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.05	163	P	P	16 11 35.9	0.0
	0.2nm,0.4s,baz=343,slow=11,SNR=11						
	0.2nm,0.4s						
ASAR	Alice Springs	27.48	166	P	P	16 12 07.3	+0.3
	0.1nm,0.8s,baz=345,slow=12,SNR=6.8						
	0.1nm,0.8s						
MKAR	Makanchi Array	58.19	325	P	P	16 16 14.4	-0.4
	0.2nm,0.7s,baz=105,slow=7.9,SNR=1.7						
	0.2nm,0.7s						

TAP 19 16:14:08.5, 22°.78N×120°.90E, h13km±1km, ML0.9, 2C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	0.17	74	⇑*i*P	Pb	16 14 13.5	+0.1
	baz=75						
TWG				*i* S	Sb	16 14 16.5	-0.2
	baz=75						
TWGBT	Beinan	0.17	76	⇑P	Pb	16 14 13.5	-0.1
	baz=75						
TWGBT				S	Sb	16 14 16.4	-0.5
	baz=75						
ECL	Taimali	0.18	164	P	Pb	16 14 14.0	+0.3
	baz=161						
ECL				S	Sb	16 14 17.1	-0.1
	baz=161						
TTN	Taitung	0.23	95	*e*P	Pb	16 14 14.1	-0.4
	baz=95						
TTN				S	Sb	16 14 19.0	+0.5
	baz=95						
TSMG	Majia	0.24	254	*e*P	Pb	16 14 14.5	-0.2
	baz=253						
TSMG				*e*S	Sb	16 14 18.7	-0.3
	baz=253						
SSD	Sandimen	0.25	263	*i* P	Pb	16 14 14.5	-0.3
	baz=262						
SSD				*e*S	Sg	16 14 17.5	+0.2
	baz=262						
LONT	Longtian	0.25	58	*e*P	Pb	16 14 15.1	+0.2
	baz=58						
LONT				*e*S	Sb	16 14 18.6	-0.5
	baz=58						
MASBT	Mashibuluo	0.29	237	P	Pb	16 14 15.2	-0.4
	baz=236						
MASBT				S	Sb	16 14 20.9	+0.5
	baz=236						
SGLT	Jiouru	0.38	263	*e*P	Pg	16 14 16.6	+0.4
	baz=262						
EAST	Anshuo	0.39	187	*e*S	Sb	16 14 23.3	0.0
	baz=185						
STYH	Taoyuan	0.41	344	*e*P	Pb	16 14 17.6	+0.1
	baz=344						
SSPT	Xinbi	0.42	227	*e*P	Pb	16 14 17.6	-0.1
	baz=226						
SSPT				*e*S	Sb	16 14 24.1	+0.1
	baz=226						
EDH	Donghe	0.42	62	*e*S	Sb	16 14 24.6	+0.6
	baz=62						
TAWH	Dawu Township	0.43	181	*e*P	Pb	16 14 17.9	0.0
	baz=181						
TAWH				*e*S	Sb	16 14 24.4	0.0
	baz=181						
SCZT	Fangliau	0.48	213	*e*P	Pb	16 14 18.5	-0.2
	baz=211						
SCZT				*e*S	Sb	16 14 26.3	+0.7
	baz=211						
WTP	Ta-pu	0.54	331	*e*P	Pg	16 14 18.5	-0.6
	baz=331						
SLIU	Shizi	0.56	189	*e*P	Pb	16 14 20.0	-0.2
	baz=189						
SLIU				*e*S	Sb	16 14 28.9	+0.7
	baz=189						

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*DNK **19** 16:17:57.1±1.5, 55°.79N×20°.08E, h0km, ML2.5, Suspected explosion*

*UPP **19** 16:17:59.2±1.7, 55°.88N×19°.87E, h0km, ML2.8, Suspected explosion*

*HEL **19** 16:17:59.8±0.1, 55°.90N×19°.81E, h0km, ML3.3, ML2.8(UPP), Explosion*

*IDC **19** 16:17:59.6±3.1, 56°.00N×19°.54E, h0km, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=29.7km s-min=14.8km az=175.0*

ISC 19 16:17:58.4±0.9, 55°.94N±0°.05×19°.78E±0°.02, h0km, n69, σ1s.66/90, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBUR	Paburge	1.21	85	*e*P	Pn	16 18 22.7	+0.1
PBUR	Paburge	1.21	85	*e*P	Pg	16 18 21.3	-0.3
PBUR				*e*S	Sb	16 18 38.3	0.0
GOTU	Gotland	1.88	340	P	Pn	16 18 32.9	+1.1
GOTU	Gotland	1.88	340	P	Pn	16 18 32.9	+1.1
GOTU	Gotland	1.88	340	*e*P	Pn	16 18 33.0	+1.3
GOTU				*e*S	Sb	16 18 58.4	+0.9
BYXU	Byxelkrok	2.05	313	P	Pn	16 18 35.7	+1.7
BYXU				S	Sb	16 19 03.6	+1.2
BYXU	Byxelkrok	2.05	313	P	Pn	16 18 35.7	+1.7
BYXU				S	Sb	16 19 03.6	+1.2
BYXU	Byxelkrok	2.05	313	*e*P	Pn	16 18 35.7	+1.7
BYXU				*e*S	Sb	16 19 03.6	+1.2
SLIT	Slitere, Latvi	2.19	38	*e*P	Pn	16 18 36.7	+0.7
SLIT	Slitere, Latvi	2.19	38	*e*P	Pn	16 18 37.1	+1.1
SLIT				*e*S	Sb	16 19 06.0	-0.4
BLEU	Blekinge	2.25	281	P	Pn	16 18 38.7	+1.8
BLEU				*i* P	Pb	16 18 39.1	-0.8
BLEU				S	Sb	16 19 08.8	+0.5
BLEU				*i* S	Sg	16 19 11.1	+0.3
BLEU	Blekinge	2.25	281	P	Pn	16 18 38.7	+1.8
BLEU				S	Sb	16 19 08.8	+0.5
BLEU	Blekinge	2.25	281	*e*P	Pn	16 18 38.7	+1.8
BLEU				*e*S	Sb	16 19 08.8	+0.5
OSKU	Oskarshamn	2.40	303	P	Pn	16 18 40.7	+1.8
OSKU				S	Sb	16 19 12.3	-0.2
OSKU	Oskarshamn	2.40	303	P	Pn	16 18 40.7	+1.8
OSKU				S	Sb	16 19 12.3	-0.2
OSKU	Oskarshamn	2.40	303	*e*P	Pn	16 18 40.7	+1.8
OSKU				*e*S	Sb	16 19 12.3	-0.2
PABE	Paberze	2.41	99	*e*P	Pb	16 18 42.2	-0.3
PABE	Paberze	2.41	99	*e*PG	Pb	16 18 42.5	-0.1
PABE				*e*SG	Sb	16 19 13.8	+1.1
VXJU	Vaexsjoe	2.87	292	P	Pn	16 18 47.1	+1.8
VXJU	Vaexsjoe	2.87	292	P	Pn	16 18 47.1	+1.8
VXJU	Vaexsjoe	2.87	292	*e*P	Pn	16 18 47.1	+1.8
BSD	Bornholm Skovb	2.89	255	*e*P	Pn	16 18 46.6	+1.0
BSD	Bornholm Skovb	2.89	255	*i* P	Pn	16 18 46.8	+1.2
BSD				IAML		16 18 54.5	
	comp=Z,7.5nm,0.3s						
BSD	Bornholm Skovb	2.89	255	*e*P	Pn	16 18 46.9	+1.2
VIKU	Vikbolandet	3.07	328	*e*P	Pn	16 18 50.4	+2.3
VIKU	Vikbolandet	3.07	328	P	Pn	16 18 50.8	+2.7
VIKU	Vikbolandet	3.07	328	P	Pn	16 18 50.8	+2.7
VIKU	Vikbolandet	3.07	328	*e*P	Pn	16 18 50.8	+2.7
NYNU	Nynaeshamn	3.22	343	P	Pn	16 18 51.9	+1.7
NYNU	Nynaeshamn	3.22	343	P	Pn	16 18 51.9	+1.7
NYNU	Nynaeshamn	3.22	343	*e*P	Pn	16 18 51.9	+1.7
LNKU	Linkoeping	3.27	316	P	Pn	16 18 53.3	+2.4
LNKU	Linkoeping	3.27	316	P	Pn	16 18 53.3	+2.4
LNKU	Linkoeping	3.27	316	*e*P	Pn	16 18 53.3	+2.4
DEL	Delary	3.35	282	*e*P	Pn	16 18 53.4	+1.5
DEL	Delary	3.35	282	*i* P	Pn	16 18 53.0	+1.1
DEL				P	Pb	16 18 53.3	-5.3
DEL	Delary	3.35	282	P	Pn	16 18 53.3	+1.4
DEL	Delary	3.35	282	*e*P	Pn	16 18 53.3	+1.4
MTSE	Matsula	3.54	36	*e*P	Pn	16 18 55.8	+1.3
MTSE	Matsula	3.54	36	*e*P	Pn	16 18 56.2	+1.6
MTSE				*e*S	Sn	16 19 39.2	+2.2
LUNU	Lund	3.59	268	*i* P	Pn	16 18 56.0	+0.7
LUNU				*e*S	Sg	16 19 54.4	+0.6
IIGN	Ignalina	3.70	97	*e*P	Pn	16 18 59.2	+2.5
IIGN				IAML		16 19 09.6	
	comp=Z,6.2nm,0.3s						
NRTU	Norrtaelje	3.80	351	P	Pn	16 19 00.4	+2.2
NRTU	Norrtaelje	3.80	351	P	Pn	16 19 00.4	+2.2
NRTU	Norrtaelje	3.80	351	*e*P	Pn	16 19 00.4	+2.2
IDID	Didziasalis	3.99	96	IAML		16 19 12.7	
	comp=Z,4.8nm,0.3s						
FABU	Falkenberg	4.06	288	*i* P	Pn	16 19 03.2	+1.5
BACU	Backbrunna	4.18	341	P	Pn	16 19 05.3	+2.0
BACU	Backbrunna	4.18	341	P	Pn	16 19 05.3	+2.0
BACU	Backbrunna	4.18	341	*e*P	Pn	16 19 05.3	+2.0

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BORU  Boraas              4.22 297 iP      Pn      16 19 05.6 +1.8
AAL   Aland               4.25   1 eP      Pn      16 19 05.2 +0.8
AAL   Aland               4.25   1 eP      Pn      16 19 05.9 +1.5
VSU   Vasula              4.55  53 eP      Pn      16 19 09.4 +0.9
ONAU  Onsala              4.58 292 iP      Pn      16 19 10.2 +1.4
MEF   Metsahovi           4.94  28 eP      Pn      16 19 15.9 +2.2
MEF   Metsahovi           4.94  28 eP      Pn      16 19 16.1 +2.3
MEF                                eS      Sn      16 20 11.9 +0.3
RAF   Rauma               5.21  11 eP      Pn      16 19 18.3 +0.9
RAF   Rauma               5.21  11 eP      Pn      16 19 18.8 +1.4
RAF                                 MPN            16 19 20.3
      comp=Z,3.5nm,0.2s
RAF                                eS      Sn      16 20 17.1 -0.9
NUR   Nurmijrvi           5.25  27  MPN            16 19 21.6
      comp=Z,3.8nm,0.2s
PVF   Pernaja             5.62  32 eP      Pn      16 19 24.5 +1.3
PVF                                eS      Sn      16 20 27.4 -1.0
FIA0  FINESS Array S      6.42  28 eP      Pn      16 19 35.3 +1.2
FIA0                               eS      Sn      16 20 46.6 -1.4
FINES FINESS Array B      6.42  28  Pn     Pn      16 19 34.9 +0.8
      comp=Z,0.7nm,0.3s,baz=210,slow=11,SNR=50
FINES                               Sn     Sn      16 20 47.3 -0.7
      comp=Z,0.6nm,0.3s,baz=212,slow=18,SNR=8.4
FINES                               Lg     Lg      16 21 19.4
      comp=Z,1.0nm,0.3s,baz=215,slow=24,SNR=7.2
      comp=Z,1.8nm,0.2s
FIA1  FINESS Array S      6.42  28  MPN            16 19 35.8
      comp=Z,2.5nm,0.2s
KEF   Keuruu              6.77  21 eP      Pn      16 19 41.2 +2.2
KEF                                eS      Sn      16 20 55.8 -1.0
NOA   NORSAR Array B      6.80 322  Pn     Pn      16 19 35.5 -4.0
      baz=141,slow=17,SNR=11
NOA                                 Sn     Sn      16 20 52.8 -4.7
      baz=29,slow=22,SNR=1.7
NOA                                 Lg     Lg      16 21 27.1
      comp=Z,0.1nm,0.3s,baz=58,slow=13,SNR=4.8
      comp=Z,0.1nm,0.3s
KAF   Kangasniemi         7.04  26 eP      Pn      16 19 44.0 +1.3
KAF                                eS      Sn      16 21 01.4 -2.0
JOF   Joensuu             9.12  35 eP      Pn      16 20 10.7 -0.5
ARCES ARCESS Array B     13.89   8  Pn     Pn      16 21 12.2 -4.0
      comp=Z,0.1nm,0.3s,baz=194,slow=13,SNR=11
      comp=Z,0.9nm,0.7s
```

IDC ***19*** *16:20:29.3±2.4, 31°.21S×68°.57W, h95^{km}±20^{km}, mb3.8/3, mbtmp3.9/7, Error ellipse: s-maj=33.2km s-min=20.0km az=99.0*

NEIC ***19*** *16:20:31.1±2.7, 31°.23S±0°.05×68°.6W±0°.1, h109^{km}±3^{km}, mb4.1/8, Md4.0(SJA), ML4.1(GUC), Error ellipse: s-maj=14.0km s-min=7.9km az=83.0*

GUC ***19*** *16:20:33.9±0.5, 31°.23S×68°.84W, h120^{km}±15^{km}, ML4.1*

ISC 19 16:20:29.6±0.6**, 31°.15S**±0°.04×**68°.59W**±0°.05**, h107**^{km}±6^{km}**, n83, σ1^{s}.86**/108**, mb4.1**/5**, 8C-3D, San Juan Province**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op      ISC      h  m  s     ISC
ZON   Zonda               0.40 190  Pn     Pn      16 20 47.3 +1.6
ZON                                 Sn     Sn      16 20 59.6 +1.9
CO01  Juntas del Tor      1.74 312         Pn      16 21 03.0 +3.6
CO01                                Sn     Sn      16 21 26.2 +4.1
CO01  Juntas del Tor      1.74 312⇑iP      Pn      16 21 03.0 +3.6
CO01                               eS      Sn      16 21 25.3 +3.1
CO01                                IAML           16 21 27.2
      comp=N,4μm,0.3s
CO02  Combarbal           2.06 268         Pn      16 21 05.4 +2.1
CO02                                Sn     Sn      16 21 31.7 +2.5
CO02  Combarbal           2.06 268⇓iP      Pn      16 21 05.4 +2.1
CO02                               eS      Sn      16 21 28.9 -0.3
CO02                                IAML           16 21 33.3
      comp=N,5μm,0.3s
GO04  Tololo Observa      2.13 297         Pn      16 21 06.3 +1.9
GO04                                Sn     Sn      16 21 32.5 +1.5
GO04  Tololo Observa      2.13 297⇓iP      Pn      16 21 06.6 +2.1
GO04                               eS      Sn      16 21 32.2 +1.1
GO04                                IAML           16 21 40.9
      comp=N,2μm,0.5s
VA03  San Esteban         2.32 225         Pn      16 21 08.5 +1.9
VA03                                Sn     Sn      16 21 35.5 +0.5
VA03  San Esteban         2.32 225⇑iP      Pn      16 21 08.7 +2.0
VA03                               eS      Sn      16 21 35.0  0.0
VA03                                IAML           16 21 40.3
      comp=E,2μm,0.2s
CO05  La Serena           2.59 298  Pn     Pn      16 21 10.8 +0.7
CO05  La Serena           2.59 298 eP      Pn      16 21 10.6 +0.5
CO05                               eS      Sn      16 21 39.1 -2.1
FCH   Farellones          2.61 213⇑iP      Pn      16 21 13.0 +2.3
FCH                                eS      Sn      16 21 43.0 +0.9
FCH                                 IAML           16 21 50.8
      comp=E,412nm,0.4s
CO06  Fray Jorge          2.66 279         Pn      16 21 11.3 +0.3
CO06  Fray Jorge          2.66 279⇓iP      Pn      16 21 11.4 +0.4
CO06                               eS      Sn      16 21 39.8 -2.9
VA06  Catapilco           2.70 238         Pn      16 21 11.9 +0.4
VA06  Catapilco           2.70 238 eP      Pn      16 21 11.9 +0.4
VA06                               eS      Sn      16 21 43.0 -0.7
VA06                                IAML           16 21 47.5
      comp=E,856nm,0.5s
ROCH  El Roble            2.74 228⇑iP      Pn      16 21 10.8 -1.6
ROCH                               eS      Sn      16 21 42.3 -2.9
ROCH                                IAML           16 21 50.9
      comp=N,836nm,0.3s
ROC1  El Roble            2.75 228         Pn      16 21 10.9 -1.5
LCO   Las Campanas        2.81 319         Pn      16 21 14.7 +1.5
LCO   Las Campanas        2.81 319 eP      Pn      16 21 15.4 +2.2
LCO                                eS      Sn      16 21 46.0 -0.7
MT03  Universidad Ad      2.85 214         Pn      16 21 14.8 +1.3
MT03  Universidad Ad      2.85 214 eP      Pn      16 21 15.6 +2.0
MT03                               eS      Sn      16 21 47.3 -0.2
MT03                                IAML           16 21 51.6
      comp=E,871nm,0.2s
MT02  Curacav             3.01 225         Pn      16 21 16.2 +0.5
MT02  Curacav             3.01 225⇑eP      Pn      16 21 16.1 +0.4
MT02                               eS      Sn      16 21 48.0 -3.2
MT02                                IAML           16 21 54.0
      comp=E,244nm,0.4s
LMEL  Las Melosas         3.02 206         Pn      16 21 17.4 +1.6
LMEL  Las Melosas         3.02 206 eP      Pn      16 21 17.0 +1.1
LMEL                               eS      Sn      16 21 53.4 +1.8
LMEL                                IAML           16 22 04.9
      comp=N,270nm,0.4s
VA01  Torpederas          3.20 233         Pn      16 21 17.2 -0.9
VA01  Torpederas          3.20 233 eP      Pn      16 21 17.8 -0.3
VA01                               eS      Sn      16 21 52.8 -2.7
VA01                                IAML           16 21 58.5
      comp=N,332nm,0.5s
BO04  La Punta            3.31 210         Pn      16 21 21.0 +1.4
BO04  La Punta            3.31 210⇑iP      Pn      16 21 21.1 +1.5
BO04                               eS      Sn      16 21 58.3 +0.1
BO04                                IAML           16 22 02.0
      comp=E,406nm,0.2s
MT09  Talagante           3.31 217         Pn      16 21 20.0 +0.2
MT09  Talagante           3.31 217⇑iP      Pn      16 21 20.2 +0.4
MT09                               eS      Sn      16 21 58.2 -0.3
MT09                                IAML           16 22 02.7
      comp=E,597nm,0.2s
MT01  Popeta              3.52 219         Pn      16 21 22.1 -0.3
MT01                                Sn     Sn      16 22 00.5 -2.7
VA05  Santo Domingo       3.58 225         Pn      16 21 22.1 -1.1
AC04  Llanos de Chal      3.64 323         Pn      16 21 24.9 +0.8
GO03  Copiap              3.82 338         Pn      16 21 28.8 +2.2
GO03  Copiap              3.82 338 eP      Pn      16 21 28.5 +1.9
GO03                               eS      Sn      16 22 11.3 +0.6
BO01  Tunca               3.86 212         Pn      16 21 26.4 -0.5
BO01  Tunca               3.86 212⇑iP      Pn      16 21 26.7 -0.2
BO01                               eS      Sn      16 22 10.3 -1.1
AC06  Mina Casimiro       4.08 337         Pn      16 21 31.3 +1.3
AC02  Maricunga           4.32 354         Pn      16 21 36.7 +3.0
GO05  Huala               4.76 215         Pn      16 21 37.1 -2.1
ML02  Panimavida          5.17 206         Pn      16 21 43.6 -1.0
AC01  Pan de Azucar       5.28 340         Pn      16 21 47.4 +1.1
GO02  Mina Guanaco        6.03 351         Pn      16 21 57.4 +0.8
BI05  Punta Hualpn        6.76 213  Pn     Pn      16 22 03.0 -3.2
PB10  IPOC Station P      7.80 347  Pn     Pn      16 22 19.6 -0.8
PB15  IPOC Station P      7.95 354         Pn      16 22 22.1 -0.5
PB06  IPOC Station P      8.45 354  Pn     Pn      16 22 28.6 -0.9
LVC   Limon Verde         8.51 358  P      Pn      16 22 30.1 -0.2
      comp=E,4.6nm,0.3s,baz=209,slow=6.0,SNR=15
LVC                                 S      Sn      16 24 00.2 -4.7
      comp=E,3.2nm,0.5s,baz=92,slow=8.5,SNR=1.7
LVC   Limon Verde         8.51 358         Pn      16 22 29.7 -0.6
LC02  Puerto Saavedr      8.58 206  Pn     Pn      16 22 27.2 -3.6
TRQA  Tornquist           8.79 143         Pn      16 22 32.0 -1.7
PB04  IPOC Station P      8.89 351  Pn     Pn      16 22 31.2 -4.1
PB09  IPOC Station P      9.33 356         Pn      16 22 40.9 -0.5
PB07  IPOC Station P      9.45 353  Pn     Pn      16 22 40.7 -2.3
LR04  Corral              9.56 203  Pn     Pn      16 22 39.0 -5.1
PLCA  Paso Flores         9.70 189  P      Pn      16 22 44.9 -1.2
      comp=E,1.1nm,0.4s,baz=1.3,slow=10,SNR=15
PLCA  Paso Flores         9.70 189         Pn      16 22 44.8 -1.3
PB02  IPOC Station P      9.86 353  Pn     Pn      16 22 45.7 -2.8
PB01  IPOC Station P     10.10 355  Pn     Pn      16 22 48.0 -3.6
LL04  Puerto Octay       10.22 197         Pn      16 22 48.8 -4.2
CPUP  Villa Florida      10.99  67  P      Pn      16 23 02.7 -0.9
      comp=E,0.5nm,0.3s,baz=24,slow=17,SNR=1.7
CPUP                                S      Sn      16 24 58.4 -6.1
      comp=E,2.5nm,0.6s,baz=231,slow=14,SNR=1.8
CPUP  Villa Florida      10.99  67         Pn      16 23 02.1 -1.5
PB11  IPOC Station P     11.38 355  Pn     Pn      16 23 05.2 -3.9
AY01  Puyuhuapi          13.63 192  P      P       16 23 43.7 +0.3
LPAZ  La Paz             14.80   2  P      P       16 23 57.0 -0.2
      comp=E,1.7nm,0.7s,baz=193,slow=10,SNR=5.7
LPAZ  La Paz             14.80   2  P      Pn      16 23 55.9 +1.8
GO08  Villa O'Higgin     17.56 189  P      P       16 24 24.9 -2.0
GO08                                IAmb   IAmb    16 24 34.0
      comp=Z,4.7nm,0.9s
MG04  Isla Riesco        21.80 185  P      P       16 25 11.1 -1.7
SAML  Samuel             22.66  14  P      P       16 25 22.7 +0.8
MG03  Isla Dawson        22.73 183  P      P       16 25 21.6 -0.7
MG03                                IAmb   IAmb    16 25 32.2
      comp=Z,32nm,1.2s
DSPA  Despedida          22.79 180  P      P       16 25 22.8 -0.2
USHA  Ushuaia            23.67 180  P      P       16 25 33.1 +2.0
      comp=Z,5.5nm,0.7s,baz=354,slow=10,SNR=2.1
      comp=Z,5.5nm,0.7s
TXAR  Lajitas Array      68.79 327  P      P       16 31 24.1 +1.8
      comp=Z,0.6nm,0.7s,baz=143,slow=7.2,SNR=4.5
      comp=Z,0.6nm,0.7s
WVT   Waverly            69.32 343  P      P       16 31 25.9 +0.6
WVT                                 IAmb   IAmb    16 31 27.0
      comp=Z,3.5nm,0.7s
TORD  Torodi Ar. Bea     80.48  68  P      P       16 32 31.3 +1.2
      comp=Z,2.5nm,0.7s,baz=280,slow=6.3,SNR=14
TORD                                pP     pP      16 33 00.1 +2.3
      comp=Z,0.7nm,0.6s,baz=252,slow=4.6,SNR=3.5
      comp=Z,2.5nm,0.7s
TORD  Torodi Ar. Bea     80.48  68  P      P       16 32 31.2 +1.2
TORD                                IAmb   IAmb    16 32 32.1
      comp=Z,2.4nm,0.7s
ASAR  Alice Springs     121.39 204  PKP    PKPdf   16 39 10.4 -0.4
      comp=Z,0.3nm,0.9s,baz=134,slow=1.6,SNR=4.3
WRA   Warramunga Arr    124.63 206  PKP    PKPdf   16 39 17.3 +0.2
      comp=Z,0.5nm,1.0s,baz=157,slow=1.5,SNR=6.7
WRA                                 pPKP   pPKPdf  16 39 46.3 -0.5
      comp=Z,0.3nm,0.8s,baz=153,slow=2.2,SNR=2.1
ZALV  Zalesovo Beam     150.27  32  PKPbc  PKPbc   16 40 09.1 +1.5
      comp=Z,1.8nm,0.4s,baz=308,slow=3.0,SNR=10
MKAR  Makanchi Array    152.70  47  PKPbc  PKPbc   16 40 14.6 +1.0
      comp=Z,0.6nm,0.6s,baz=293,slow=3.0,SNR=8.0
MKAR                                PKPab  PKPab   16 40 26.0 +1.4
      comp=Z,0.6nm,0.7s,baz=284,slow=4.9,SNR=6.5
MKAR  Makanchi Array    152.70  47  PKPab  PKPab   16 40 25.7 +1.1
```

IDC ***19*** *16:31:33.1±2.4, 32°.15S×109°.10W, h0^{km}, mb3.8/5, mbtmp3.8/5, MS3.6/19, Error ellipse: s-maj=69.5km s-min=33.0km az=2.0*

ISC 19 16:31:35.1±2.3**, 32°.0S**±0°.5×**109°.1W**±0°.2**, h10**^{km}**, n31, σ1^{s}.38**/5**, mb3.8**/5**, MS3.6**/19**, Southern East Pacific Rise**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op      ISC      h  m  s     ISC
H03S2 Juan Fernandez     25.36 102  T      T       17 03 23.0
      baz=261
H03S3 Juan Fernandez     25.38 102  T      T       17 03 23.5
      baz=261
H03S1 Juan Fernandez     25.38 102  T      T       17 03 23.8
      baz=261
H03N2 Juan Fernandez     25.39 101  T      T       17 03 19.4
      baz=267,slow=73
H03N3 Juan Fernandez     25.39 101  T      T       17 03 22.2
      baz=267,slow=73
H03N1 Juan Fernandez     25.41 101  T      T       17 03 21.0
      baz=267,slow=73
PLCA  Paso Flores        32.03 117  LR     LR      16 47 20.8
      comp=Z,85nm,19.0s,baz=247,slow=30
NNA   Nana               35.74  63  LR     LR      16 48 55.8
      comp=Z,141nm,21.9s,baz=211,slow=29
LVC   Limon Verde        36.75  85  LR     LR      16 49 40.0
      comp=Z,69nm,21.6s,baz=238,slow=30
ATAH  Atahualpa          37.84  56  LR     LR      16 50 38.2
      comp=Z,84nm,19.3s,baz=241,slow=30
PPT   Papeete            39.21 282  P      P       16 39 03.5 -0.2
      6.7nm,0.6s,baz=29,slow=19,SNR=1.8
PPT                                 LR     LR      16 51 04.0
      comp=Z,71nm,21.4s,baz=141,slow=30
      6.7nm,0.6s
LPAZ  La Paz             40.28  77  P      P       16 39 13.3  0.0
      1.3nm,0.6s,baz=227,slow=4.2,SNR=5.0
LPAZ                                LR     LR      16 52 17.7
      comp=Z,52nm,18.8s,baz=227,slow=31
      1.3nm,0.6s
RAR   Rarotonga          46.19 271  LR     LR      16 53 46.0
      comp=Z,83nm,19.9s,baz=147,slow=29
JTS   Las Juntas de      48.01  33  LR     LR      16 55 32.5
      comp=Z,185nm,21.5s,baz=267,slow=30
LPIG  La Paz             55.82 359  LR     LR      17 00 01.4
      comp=Z,48nm,20.7s,baz=238,slow=30
VNDA  Vanda              58.79 195  LR     LR      17 00 44.8
      comp=Z,50nm,21.6s,baz=54,slow=30
URZ   Urewera            59.19 242  LR     LR      17 01 25.0
      comp=Z,53nm,18.3s,baz=212,slow=30
TXAR  Lajitas Array      61.24   5  P      P       16 41 49.2 -1.2
      0.2nm,0.7s,baz=182,slow=11,SNR=1.9
TXAR                                LR     LR      17 04 40.4
      comp=Z,36nm,19.9s,baz=149,slow=32
      0.2nm,0.7s
RPZ   Rata Peaks         61.83 234  LR     LR      17 05 02.5
      comp=Z,46nm,18.2s,baz=172,slow=32
SJG   San Juan           64.65  46  LR     LR      17 08 15.8
      comp=Z,27nm,18.6s,baz=118,slow=34
MDP   Montagnes des      65.12  66  LR     LR      17 07 07.2
      comp=Z,28nm,21.5s,baz=248,slow=33
NVAR  Mina Array Bea     70.61 352  P      P       16 42 51.8 +1.0
      0.6nm,0.7s,baz=176,slow=8.8,SNR=4.2
      0.6nm,0.7s
RCBR  Riachuelo          72.70  86  LR     LR      17 12 01.7
      comp=Z,57nm,19.6s,baz=323,slow=33
PDAR  Pinedale Array     74.43 360  P      P       16 43 14.6 +1.1
      0.3nm,0.4s,baz=161,slow=3.8,SNR=5.5
      0.3nm,0.4s
YBH   Yreka Blue Hor     74.45 349  LR     LR      17 11 28.3
      comp=Z,35nm,18.8s,baz=230,slow=32
SADO  Sadowa             81.15  21  LR     LR      17 17 19.4
      comp=Z,27nm,20.5s,baz=221,slow=34
SCHQ  Schefferville      93.83  23  LR     LR      17 22 45.2
      comp=Z,37nm,21.6s,baz=282,slow=33
H01W1 Cape Leeuwin H    102.00 215  T      T       18 39 10.5
      baz=142,slow=76,SNR=5.7
H01W2 Cape Leeuwin H    102.01 215  T      T       18 39 16.1
      baz=142,slow=76,SNR=5.7
H01W3 Cape Leeuwin H    102.02 215  T      T       18 39 14.4
      baz=142,slow=76,SNR=5.5
AKASG Malin Array Be    144.17  46  PKP    PKPbc   16 51 08.3 -0.6
      0.5nm,0.5s,baz=286,slow=4.1,SNR=7.0
```

MDD ***19*** *16:33:20.7±0.3, 35°.49N×3°.75W, h0^{km}, mb_Lg2.7/18, Error ellipse: s-maj=3.2km s-min=2.0km az=178.0*

IDC ***19*** *16:33:20.6±1.6, 35°.48N×4°.00W, h0^{km}, mb3.2/2, mbtmp3.1/4, ML2.8/2, MS3.0/1, Error ellipse: s-maj=47.7km s-min=13.7km az=99.0*

SFS ***19*** *16:33:20.0, 35°.40N×3°.70W, ML2.7, ALBORAN SUR*

CNRM ***19*** *16:33:21.4, 35°.46N×3°.75W, h28^{km}, ml3.2*

INMG ***19*** *16:33:21.5±2.3, 35°.58N×3°.72W, h0^{km}±8^{km}, ML2.5, Error ellipse: s-maj=6.3km s-min=4.1km az=21.0*

IGIL ***19*** *16:33:21.6, 35°.49N×3°.75W, h5^{km}, ML2.4*

ISC 19 16:33:21.3±0.9**, 35°.47N**±0°.02×**3°.74W**±0°.02**, h16**^{km}±7^{km}**, n65, σ1^{s}.66**/106**, Strait of Gibraltar**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op      ISC      h  m  s     ISC
PALE  Palemas             0.30 213  P      Pg      16 33 28.1 +0.4
PALE                                S      Sg      16 33 32.9 +0.8
PVLZ  Peæn de             0.55 238  P      Pg      16 33 31.1 -1.0
PVLZ                                S      Sg      16 33 40.6 +1.2
GOG   Mont Gurugu         0.66 112  P      Pg      16 33 34.6 +0.3
GOG                                 S      Sg      16 33 43.6 +0.6
WMELI Melilla             0.66 103  P      Pg      16 33 34.3  0.0
WMELI                               S      Sg      16 33 43.6 +0.5
EMEL  Melilla             0.66 104  Pg     Pg      16 33 34.4 +0.1
EMEL                                Sg     Sg      16 33 43.6 +0.5
EALB  Alboran             0.74  50  Pg     Pg      16 33 35.2 -0.7
EALB                                Sg     Sg      16 33 45.0 -0.7
EALB                               iVmb_Lg         16 33 46.4
AKLM  AKL                 0.96 186  P      Pb      16 33 39.6 -0.1
AKLM                                S      Sg      16 33 50.2 -2.3
CHAS  Isla Isabel II      1.11 104  P      Pb      16 33 40.5 -1.6
CHAS                                S      Sb      16 33 54.8 -1.5
TAF   Taforalt            1.27 121  P      Pn      16 33 43.4 -1.1
TAF                                 S      Sb      16 33 58.2 -2.7
SMIR  Smir Dam            1.35 280  P      Pn      16 33 45.2 -0.4
SMIR                                S      Sb      16 34 01.1 -2.3
CHEFC Chefchaouen         1.36 255  P      Pn      16 33 44.9 -0.8
EMIJ  Mijas               1.38 323  Pg     Pn      16 33 44.6 -1.3
EMIJ                                Sg     Sn      16 34 01.8 -2.1
EMIJ                               iVmb_Lg         16 34 09.6
CEU   Ceuta               1.40 288  P      Pn      16 33 42.8 -3.4
CEU                                 S      Sn      16 34 00.1 -4.2
ECEU  Ceuta               1.40 288  Pg     Pn      16 33 44.3 -1.9
ECEU                                Sg     Sn      16 34 01.4 -3.0
ECEU                               iVmb_Lg         16 34 03.6
ELGU  Los Guajares,       1.40   4  Pg     Pn      16 33 44.2 -2.1
ELGU                                Sg     Sn      16 34 02.9 -1.6
ELGU                               iVmb_Lg         16 34 12.0
EMAL  Malaga-Limoner      1.41 337  P      Pn      16 33 44.9 -1.4
EMAL                                S      Sn      16 34 00.7 -3.8
JBK   JBK                 1.48 139  P      Pn      16 33 46.8 -0.7
JBK                                 S      Sn      16 34 04.6 -2.1
EBER  Berja               1.58  25  Pg     Pn      16 33 47.0 -1.9
EBER                                Sg     Sn      16 34 08.6 -0.6
EBER                               iVmb_Lg         16 34 27.5
EGOR  Sierra Gorda,       1.67 350  Pn     Pn      16 33 50.7 +0.6
EGOR                                Sn     Sn      16 34 10.8 -0.4
EGOR                               iVmb_Lg         16 34 28.7
EJIF  Jimena Fronter      1.71 305  Pn     Pn      16 33 50.6 +0.1
EQUE  Quentar             1.75   8  Pn     Pn      16 33 51.7 +0.5
EQUE                                Sn     Sn      16 34 13.7 +0.5
EQUE                               iVmb_Lg         16 34 23.0
SICH  Sidi Chahed         1.88 224  P      Pg      16 33 59.0 +1.5
ENIJ  Nijar               1.95  39  Pn     Pn      16 33 51.7 -2.0
ENIJ                                Sn     Sn      16 34 16.3 -1.6
ENIJ                               iVmb_Lg         16 34 38.7
LIJA  Lijar               1.97 317  P      Pb      16 33 57.0 +0.1
LCRM  LCR                 2.00 208  P      Pn      16 33 55.7 +1.0
ESPR  Espera              2.21 310  Pn     Pn      16 33 58.9 +1.6
ESPR                                Sn     Sn      16 34 24.8 +0.5
ESPR                               iVmb_Lg         16 34 42.4
EQES  Quesada             2.39  13  Pn     Pn      16 34 01.1 +1.1
EQES                                Sn     Sn      16 34 30.0 +1.0
EQES                               iVmb_Lg         16 34 43.6
MD31  MD31                2.73 198  P      Pn      16 34 04.9 +0.3
MDT   Midelt              2.74 195  Pn     Pn      16 34 05.0 +0.2
      1.6nm,0.3s,baz=168,slow=14,SNR=42
MDT                                 Sn     Sn      16 34 38.2 +0.6
      6.7nm,0.3s,baz=213,slow=20,SNR=6.3
MDT                                 Lg     Lg      16 34 46.8
      7.2nm,0.3s,baz=280,slow=23,SNR=5.8
      4.6nm,0.2s
MDT   Midelt              2.74 195  P      Pn      16 34 05.0 +0.2
EADA  Adamuz              2.78 346  Pn     Pn      16 34 06.4 +1.2
EADA                                Sn     Sn      16 34 39.7 +1.3
EADA                               iVmb_Lg         16 34 49.9
TDRA  Tendrara            2.81 149  P      Pn      16 34 05.5 -0.2
EZAR  Zarzadilla de       2.91  34  Pn     Pn      16 34 06.1 -1.0
EZAR                                Sn     Sn      16 34 40.7 -1.1
ECAB  El Cabril           2.93 333  Pn     Pn      16 34 09.2 +1.9
ECAB                                Sn     Sn      16 34 43.1 +0.9
ECAB                               iVmb_Lg         16 34 51.4
CART  Cartagena           3.06  45  P      Pn      16 34 07.9 -1.0
EMUR  La Murta            3.11  40  Pn     Pn      16 34 08.7 -1.0
EMUR                                Sn     Sn      16 34 43.9 -2.6
EMUR                               iVmb_Lg         16 34 50.1
EMIN  Mina Concepcio      3.29 315  Pn     Pn      16 34 11.6 -0.6
EMIN                                Sn     Sn      16 34 52.8 +1.7
EMIN                               iVmb_Lg         16 35 06.0
ETOB  Tobarra             3.62  28  Pn     Pn      16 34 18.0 +1.2
ETOB                                Sn     Sn      16 34 58.1 -1.2
EGRO  El Granado          3.65 305  Pn     Pn      16 34 16.2 -1.0
EGRO                                Sn     Sn      16 34 60.0  0.0
EGRO                               iVmb_Lg         16 35 08.1
PVAQ  Vaqueiros           3.74 302 ePn     Pn      16 34 17.8 -0.6
PVAQ                               eSn     Sn      16 34 59.2 -3.0
PVAQ                                A      A       16 35 05.8
      9.1nm,0.3s
PVAQ  Vaqueiros           3.74 302  P      Pn      16 34 18.5  0.0
PBAR  Barrancos           3.78 317 eSn     Sn      16 35 01.8 -1.3
PBAR                                A      A       16 35 07.0
      3.9nm,0.9s
PBDV  Barranco-do-Ve      3.82 299 ePn     Pn      16 34 18.7 -0.8
PBDV                               eSn     Sn      16 35 01.1 -3.0
PBDV                                A      A       16 35 14.0
      7.1nm,0.6s
FIGM  Figuig              3.91 147  P      Pn      16 34 19.8 -1.1
PCVE  Castro Verde        4.08 303 ePn     Pn      16 34 22.6 -0.5
PCVE                               eSn     Sn      16 35 09.1 -1.4
PCVE                                A      A       16 35 18.2
      6.0nm,0.5s
PAB   San Pablo           4.10 353  Pn     Pn      16 34 22.9 -0.5
PAB                                 Sn     Sn      16 35 11.5 +0.4
PAB                                iVmb_Lg         16 35 32.8
EBAD  Badajoz             4.20 322  Pn     Pn      16 34 24.8 +0.2
EBAD                                Sn     Sn      16 35 11.5 -1.9
EBAD                               iVmb_Lg         16 35 25.2
ESDC  Sonseca Array       4.20 358  Pn     Pn      16 34 23.5 -1.3
      0.2nm,0.3s,baz=179,slow=13,SNR=9.8
ESDC                                Lg     Lg      16 35 33.8
      0.6nm,0.3s,baz=177,slow=27,SNR=4.8
      0.6nm,0.3s
MESJ  Messejana           4.31 305 eP      Pn      16 34 25.7 -0.6
MESJ                               eS      Sn      16 35 12.3 -3.8
MESJ                                IAML           16 35 17.0
      comp=N,7.2nm,0.3s
MESJ  Messejana           4.31 305 ePn     Pn      16 34 26.6 +0.4
MESJ                               eSn     Sn      16 35 14.9 -1.3
MESJ                                A      A       16 35 30.2
      comp=N,6.1nm,0.4s
MORF  Marmelete           4.37 296 eSn     Sn      16 35 15.4 -2.2
MORF                                A      A       16 35 19.0
      comp=N,6.4nm,0.7s
PESTR Estremoz            4.58 319 ePn     Pn      16 34 30.1 +0.2
PESTR                              eSn     Sn      16 35 22.2 -0.6
PESTR                               A      A       16 35 46.4
      comp=N,4.4nm,0.5s
EVO   Evora               4.59 313  P      Pn      16 34 29.1 -0.9
EVO                                 S      Sn      16 35 18.6 -4.4
EVO   Evora               4.59 313 ePn     Pn      16 34 29.9 -0.1
EVO                                eSn     Sn      16 35 20.2 -2.8
EVO                                 A      A       16 35 30.2
      comp=N,5.3nm,0.6s
PNCL  Nicolau / Gran      4.66 306 ePn     Pn      16 34 31.4 +0.3
PNCL                               eSn     Sn      16 35 22.8 -2.0
PNCL                                A      A       16 35 31.4
      comp=N,3.2nm,0.3s
PMRV  Marv??o             4.91 325 ePn     Pn      16 34 34.6 +0.2
OUZM  OUZ                 5.20 210  P      Pn      16 34 38.8 +0.2
PCBR  Castelo Branco      5.28 327 ePn     Pn      16 34 39.3 -0.2
OUK   Oukaimeden          5.47 220  P      Pn      16 34 41.5 -1.1
MVO   Moncorvo            6.25 337 ePn     Pn      16 34 53.7 +0.8
MVO                                eSn     Sn      16 36 04.6 +0.6
MVO                                 A      A       16 36 12.5
      comp=N,5.1nm,0.6s
TTIG  Tnine Tigouga,      6.30 220  P      Pn      16 34 50.5 -3.1
PBRG  Braganca            6.75 341 ePn     Pn      16 35 03.1 +3.3
TORD  Torodi Ar. Bea     22.76 166  P      P       16 38 25.7 +2.7
      comp=N,0.7nm,0.7s,baz=340,slow=11,SNR=3.5
      comp=N,0.7nm,0.7s
AKTO  Aktyubinsk         46.28  51  LR     LR      17 03 16.4
      comp=N,15nm,18.1s,baz=76,slow=39
MKAR  Makanchi Array     62.71  50  P      P       16 43 49.0 +3.6
      comp=N,0.3nm,0.8s,baz=309,slow=6.9,SNR=2.2
      comp=N,0.3nm,0.8s
```

CNRM ***19*** *16:37:42.7, 35°.54N×3°.71W, h25^{km}, ml2.8*

SFS ***19*** *16:37:42.0, 35°.53N×3°.74W, ML2.6, ALBORAN SUR*

MDD ***19*** *16:37:43.0±0.4, 35°.54N×3°.74W, h0^{km}, mb_Lg2.6/17, Error ellipse: s-maj=3.1km s-min=2.3km az=4.0*

*INMG **19** 16:37:43.6±1.7, 35°.63N×3°.71W, h1km±5km, ML2.2, Error ellipse: s-maj=4.2km s-min=3.4km az=16.0*

ISC 19 16:37:41.4±1.1, **35°.52N**±0°.02×**3°.73W**±0°.02, **h10**km±10km, **n45**, σ1s.**55**/76, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.35	209	P	Pb	16 37 50.2	+0.4
PALE				S	Sb	16 37 55.2	-0.2
PVLZ	Peæn de	0.58	233	P	Pg	16 37 53.0	+0.3
PVLZ				S	Sg	16 38 00.8	+0.5
WMELI	Melilla	0.67	108	P	Pn	16 37 56.1	-0.8
WMELI				S	Sb	16 38 05.1	+0.6
EMEL	Melilla	0.67	109	Pg	Pn	16 37 56.5	-0.5
EMEL				Sg	Sb	16 38 05.8	+1.2
GOG	Mont Gurugu	0.67	116	P	Pn	16 37 56.3	-0.8
GOG				S	Sb	16 38 04.3	-0.4
EALB	Alboran	0.70	53	Pg	Pn	16 37 57.1	-0.4
EALB				Sg	Sn	16 38 07.0	-1.4
EALB				*i* Vmb_Lg		16 38 08.6	
AKLM	AKL	1.01	186	P	Pn	16 38 02.1	+0.3
CHAS	Isla Isabel II	1.11	107	P	Pb	16 38 02.5	-0.3
CHAS				S	Sg	16 38 16.8	-0.6
TAF	Taforalt	1.29	123	P	Pg	16 38 05.8	-0.4
TAF				S	Sb	16 38 19.2	-3.3
EMIJ	Mijas	1.34	321	Pg	Pg	16 38 06.9	-0.3
EMIJ				Sg	Sn	16 38 24.0	-0.2
EMIJ				*i* Vmb_Lg		16 38 31.5	
ELGU	Los Guajares,	1.35	4	Pg	Pb	16 38 06.5	-0.4
ELGU				Sg	Sb	16 38 23.3	-0.9
ELGU				*i* Vmb_Lg		16 38 27.2	
SMIR	Smir Dam	1.35	277	P	Pn	16 38 06.6	+0.2
SMIR				S	Sb	16 38 21.6	-2.7
EMAL	Malaga-Limoner	1.36	336	P	Pg	16 38 09.0	+1.4
EMAL				S	Sb	16 38 22.8	-1.7
CHEFC	Chefchaouen	1.38	253	P	Pb	16 38 07.5	+0.1
CEU	Ceuta	1.39	286	P	Pn	16 38 05.5	-1.4
CEU				S	Sb	16 38 19.8	-5.5
ECEU	Ceuta	1.39	286	Pg	Pn	16 38 06.5	-0.5
ECEU				Sg	Sb	16 38 21.8	-3.6
ECEU				*i* Vmb_Lg		16 38 25.1	
JBK	JBK	1.52	141	P	Pn	16 38 08.8	-0.1
EBER	Berja	1.53	26	Pg	Pb	16 38 09.7	-0.3
EBER				Sg	Sn	16 38 28.8	-0.3
EBER				*i* Vmb_Lg		16 38 33.5	
EGOR	Sierra Gorda,	1.61	349	Pg	Pg	16 38 13.1	+0.7
EGOR				Sg	Sg	16 38 33.5	0.0
EGOR				*i* Vmb_Lg		16 38 39.9	
EQUE	Quentar	1.70	8	Pn	Pb	16 38 12.5	-0.3
EQUE				Sn	Sn	16 38 32.9	-0.2
EQUE				*i* Vmb_Lg		16 38 45.7	
ENIJ	Nijar	1.90	40	Pn	Pn	16 38 13.9	0.0
ENIJ				Sn	Sn	16 38 37.5	-0.5
ENIJ				*i* Vmb_Lg		16 38 37.6	
LCRM	LCR	2.05	207	P	Pb	16 38 19.5	+0.6
ESPR	Espera	2.18	309	Pn	Pb	16 38 19.4	-1.6
ESPR				Sn	Sn	16 38 46.4	+1.5
ESPR				*i* Vmb_Lg		16 38 52.4	
EQES	Quesada	2.34	13	Pn	Pb	16 38 23.2	-0.6
EQES				Sn	Sb	16 38 52.1	-0.6
EQES				*i* Vmb_Lg		16 38 54.0	
EADA	Adamuz	2.73	346	Pn	Pb	16 38 28.7	-1.6
EADA				Sn	Sn	16 38 59.2	+0.9
EADA				*i* Vmb_Lg		16 39 11.9	
MD31	MD31	2.78	198	P	Pn	16 38 27.4	+1.2
MDT	Midelt	2.80	195	P	Pn	16 38 28.5	+2.1
EZAR	Zarzadilla de	2.86	34	Sn	Sn	16 39 02.4	+0.6
ECAB	El Cabril	2.89	332	Pn	Pb	16 38 30.3	-2.8
ECAB				Sn	Sn	16 39 03.2	+0.8
ECAB				*i* Vmb_Lg		16 39 20.0	
EMIN	Mina Concepcio	3.26	314	Pn	Pn	16 38 33.7	+1.1
EMIN				Sn	Sn	16 39 11.0	-0.5
ETOB	Tobarra	3.57	29	Pn	Pn	16 38 39.6	+2.6
ETOB				*i* Vmb_Lg		16 38 51.2	
ETOB				Sn	Sn	16 39 20.9	+1.6
EGRO	El Granado	3.63	305	Pn	Pn	16 38 38.5	+0.8
EGRO				Sn	Sn	16 39 20.3	-0.2
EGRO				*i* Vmb_Lg		16 40 26.8	
PVAQ	Vaqueiros	3.72	301	*e*Pn	Pn	16 38 40.1	+1.1
PVAQ				*e*Sn	Sn	16 39 23.3	+0.4
PVAQ				A	A	16 39 29.3	
	4.7nm,0.4s						
PVAQ	Vaqueiros	3.72	301	P	Pn	16 38 39.7	+0.7
PBAR	Barrancos	3.75	316	*e*Sn	Sn	16 39 24.3	+0.8
PBDV	Barranco-do-Ve	3.80	298	*e*Pn	Pn	16 38 42.5	+2.4
PBDV				*e*Sn	Sn	16 39 24.9	0.0
FIGM	Figuig	3.96	148	P	Pn	16 38 42.8	+0.5
PAB	San Pablo	4.05	353	Pn	Pn	16 38 45.6	+2.1
PAB				Sn	Sb	16 39 43.4	+1.6
PAB				*i* Vmb_Lg		16 41 28.4	
PCVE	Castro Verde	4.06	303	*e*Pn	Pn	16 38 45.8	+2.2
PCVE				*e*Sn	Sn	16 39 32.8	+1.6
PCVE				A	A	16 39 41.0	
	3.7nm,0.7s						
EBAD	Badajoz	4.16	322	Pn	Pn	16 38 46.0	+1.1
EBAD				Sn	Sn	16 39 33.7	0.0
EBAD				*i* Vmb_Lg		16 39 45.3	
MESJ	Messejana	4.29	304	*e*Pn	Pn	16 38 50.1	+3.4
PNCL	Nicolau / Gran	4.64	305	*e*Pn	Pn	16 38 52.9	+1.4
PNCL				*e*Sn	Sn	16 39 45.3	-0.1
PMRV	Marv??o	4.87	324	*e*Pn	Pn	16 38 59.0	+4.3
PMTG	Montargil	5.04	316	*e*Pn	Pn	16 38 59.3	+2.2
OUK	Oukaimeden	5.52	220	P	Pn	16 39 04.6	+0.6

IDC 19 16:38:34.6±3.7, **8°.35S**×**118°.04E**, **h183**km±31km, **mb2.9**/2, **mbtmp3.4**/4, **Error ellipse: s-maj=88.8km s-min=16.5km az=46.0**, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.85	109	P	Pn	16 40 00.1	+0.4
	7.5nm,0.3s,baz=159,slow=1.6,SNR=10.0						
BATI				S	Sn	16 40 56.5	-10
	30nm,0.8s,baz=224,slow=17,SNR=2.3						
WRA	Warramunga Arr	19.53	128	P	P	16 42 46.5	-1.7
	0.2nm,0.8s,baz=304,slow=12,SNR=1.5						
WRA				S	S	16 46 20.1	+1.0
	0.5nm,1.0s,baz=302,slow=21,SNR=1.2						
ASAR	Alice Springs	21.51	137	P	P	16 43 09.8	+0.5
	0.4nm,0.3s,baz=316,slow=8.9,SNR=37						
	0.4nm,0.3s						
MKAR	Makanchi Array	63.46	333	P	P	16 48 45.0	+0.1
	0.2nm,0.4s,baz=155,slow=4.7,SNR=5.1						
	0.2nm,0.4s						

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*IDC **19** 16:50:03.1±1.2, 36°.30N×141°.82E, h0km, mb3.3/4, mbtmp3.5/9, ML2.9/4, MS2.4/1, Error ellipse: s-maj=27.6km s-min=20.1km az=83.0*

*JMA **19** 16:50:07.9±0.2, 36°.4N±0°.3×14°2E±°, h47km±4km, MV3.0/25, FAR E OFF IBARAKI PREF*

ISC 19 16:50:06.1±1.6, **36°.25N**±0°.05×**141°.80E**±0°.07, **h30**km±13km, **n24**, σ2s.**09**/27, **mb3.4**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.94	235	P	Pb	16 50 24.2	+0.4
CHOJ				*e*S	Sb	16 50 35.5	-0.5
JHYU	Hitachinakayam	0.98	275	P	Pn	16 50 23.0	-0.8
JHYU				S	Sn	16 50 33.7	-3.0
JHO	Hitachi	1.06	290	P	Pn	16 50 23.4	-1.5
ONAJ	Iwakimizuishiy	1.17	317	P	Pn	16 50 25.1	-1.3
JFK	Kawauchi	1.34	326	*e*P	Pn	16 50 27.9	-0.9
JFK				S	Sn	16 50 42.9	-2.6
JFT	Otama	1.72	318	P	Pn	16 50 34.2	+0.2
JFT				*e*S	Sn	16 50 53.9	-1.2
BSO1	Boso 1	1.73	203	P	Pb	16 50 36.0	-0.9
JMM	Marumori	1.80	334	*e*P	Pn	16 50 35.0	0.0
JMM				S	Sn	16 50 55.6	-1.3
JAG	Ashikaga	1.90	276	P	Pn	16 50 35.9	-0.6
MJAR	Matsushiro Arr	2.91	277	Pn	Pn	16 50 50.9	+0.5
	0.4nm,0.3s,baz=114,slow=9.2,SNR=27						
MJAR				Sn	Sn	16 51 25.4	+1.0
	0.5nm,0.3s,baz=122,slow=34,SNR=3.5						
MJAR				LR	LR	16 52 07.1	
	comp=Z,61nm,18.4s,baz=54,slow=42						
	4.5nm,0.7s						
JHJ	Hachijo jima 2	3.54	209	Pn	Pn	16 51 00.6	+1.6
	19nm,0.3s,baz=230,slow=20,SNR=1.2						
JHJ				Sn	Sn	16 51 39.3	-0.6
	46nm,0.3s,baz=262,slow=23,SNR=6.0						
	191nm,0.6s						
ASAJ	Asahikawa	7.88	4	Pn	Pn	16 51 59.1	+0.6
	0.3nm,0.3s,baz=104,slow=29,SNR=1.3						
ASAJ				Sn	Sn	16 53 23.8	-2.8
	0.2nm,0.3s,baz=34,slow=18,SNR=2.1						
	1.0nm,0.3s						
JCJ	Chichijima	9.13	178	Pn	Pn	16 52 17.1	+1.2
	5.1nm,0.3s,baz=130,slow=21,SNR=1.5						
JCJ				Sn	Sn	16 53 50.6	-7.1
	1.6nm,0.3s,baz=274,slow=23,SNR=1.6						
USRK	Ussuriysk Ar.	10.91	320	Pn	Pn	16 52 41.3	+1.2
	0.1nm,0.3s,baz=130,slow=13,SNR=2.6						
	0.9nm,0.6s						
H11N2	WAKE ISLAND Hy	27.48	120	T	T	17 25 17.2	
	baz=313,slow=74,SNR=7.6						
H11N1	WAKE ISLAND Hy	27.49	120	T	T	17 25 27.2	
	baz=313,slow=74,SNR=5.6						
H11N3	WAKE ISLAND Hy	27.50	120	T	T	17 25 18.4	
	baz=313,slow=74,SNR=6.5						
H11S1	WAKE ISLAND Hy	28.18	122	T	T	17 25 38.3	
	baz=314,slow=75,SNR=7.6						
H11S3	WAKE ISLAND Hy	28.18	122	T	T	17 25 43.4	
	baz=314,slow=75,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.19	122	T	T	17 25 41.0	
	baz=314,slow=75,SNR=4.7						
MKAR	Makanchi Array	44.80	303	P	P	16 58 17.9	+0.8
	0.4nm,0.8s,baz=94,slow=8.8,SNR=3.8						
	0.4nm,0.8s						
ILAR	Eielson Array	49.99	32	P	P	16 58 58.0	+0.9
	0.3nm,0.8s,baz=288,slow=6.6,SNR=1.5						
	0.3nm,0.8s						
WRA	Warramunga Arr	56.33	188	P	P	16 59 45.8	+1.6
	0.5nm,0.9s,baz=3.1,slow=7.1,SNR=6.8						
	0.5nm,0.9s						
ASAR	Alice Springs	60.06	188	P	P	17 00 12.4	+2.2
	0.3nm,0.9s,baz=3.8,slow=6.8,SNR=2.0						
	0.3nm,0.9s						

IDC 19 16:54:37.4±3.6, **55°.54S**×**144°.80W**, **h0**km, **mb3.9**/3, **mbtmp3.9**/3, **Error ellipse: s-maj=106.5km s-min=44.9km az=53.0**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	South Pole Qui	34.62	180	P	P	17 01 27.9	0.0
	1.3nm,0.9s,baz=72,slow=3.2,SNR=2.5						
	1.3nm,0.9s						
H03S2	Juan Fernandez	49.51	93	T	T	17 56 36.2	
	baz=222						
H03S1	Juan Fernandez	49.51	93	T	T	17 56 37.6	
	baz=222						
H03S3	Juan Fernandez	49.52	93	T	T	17 56 37.2	
	baz=222						
H03N3	Juan Fernandez	49.79	92	T	T	17 56 56.4	
	baz=224,slow=72,SNR=18						
H03N2	Juan Fernandez	49.79	92	T	T	17 56 52.4	
	baz=224,slow=72,SNR=15						
H03N1	Juan Fernandez	49.80	92	T	T	17 56 55.5	
	baz=224,slow=72,SNR=22						
ASAR	Alice Springs	65.97	263	P	P	17 05 25.4	0.0
	1.4nm,0.7s,baz=139,slow=6.5,SNR=29						
	1.4nm,0.7s						
H01W1	Cape Leeuwin H	67.73	241	T	T	18 20 07.8	
	baz=142,slow=76,SNR=38						
H01W2	Cape Leeuwin H	67.73	241	T	T	18 20 08.5	
	baz=142,slow=76,SNR=39						
H01W3	Cape Leeuwin H	67.74	241	T	T	18 20 11.0	
	baz=142,slow=76,SNR=36						
WRA	Warramunga Arr	68.66	266	P	P	17 05 42.5	0.0
	0.7nm,1.0s,baz=142,slow=6.1,SNR=6.4						
	0.7nm,1.0s						
H10N3	ASCENSION HYDR	104.64	129	T	T	19 06 11.6	
	baz=206,slow=74,SNR=4.6						
H10N1	ASCENSION HYDR	104.65	129	T	T	19 06 14.7	
	baz=206,slow=74,SNR=6.2						
H10N2	ASCENSION HYDR	104.66	129	T	T	19 06 11.0	
	baz=206,slow=74,SNR=4.9						
MKAR	Makanchi Array	149.73	273	PKPbc	PKPbc	17 14 27.7	-0.5
	1.0nm,0.8s,baz=118,slow=3.1,SNR=9.3						

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*ISK **19** 16:54:53.3, 35°.16N×31°.86E, h16km, ML3.0/13*
*DDA **19** 16:54:53.9±0.0, 35°.22N×31°.84E, h12km, ML2.6*
*NIC **19** 16:54:53.9±0.0, 35°.12N×31°.84E, h27km, Ml3.2/6*
*GII **19** 16:54:55.6±0.0, 34°.83N×31°.99E, h10km, Mm2.9/2*

ISC 19 16:54:52.3±1.4, **35°.06N**±0°.03×**31°.82E**±0°.03, **h17**km±10km, **n50**, σ1s.**32**/81, **1C-3D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	0.42	95⇓	*e*P	Pn	16 55 03.1	-0.5
AKMS				S	Sn	16 55 10.3	-0.7
AKMS				AML	AML	16 55 11.3	
	7.6nm,0.4s						
AKMS				AML	AML	16 55 11.3	
	7.6nm,0.4s						
AKMS				AML	AML	16 55 13.1	
	4.8nm,0.3s						
AKMS				AML	AML	16 55 13.1	
	4.8nm,0.3s						
ALFC	Alefka	0.64	81⇓	*e*P	Pn	16 55 06.4	-0.4
ALFC				S	Sn	16 55 16.2	-0.4
ALFC				AML	AML	16 55 16.3	
	8.4nm,0.5s						
ALFC				AML	AML	16 55 16.3	
	8.4nm,0.5s						
ALFC				AML	AML	16 55 18.6	
	5.3nm,0.3s						
ALFC				AML	AML	16 55 18.6	
	5.3nm,0.3s						
NATA	Nata	0.67	114⇓	*e*P	Pn	16 55 07.5	+0.4
NATA				S	Sn	16 55 18.6	+1.3
NATA				AML	AML	16 55 22.3	
	7.0nm,0.5s						
NATA				AML	AML	16 55 22.3	
	7.0nm,0.5s						
NATA				AML	AML	16 55 27.8	
	5.6nm,0.7s						
NATA				AML	AML	16 55 27.8	
	5.6nm,0.7s						
LEF	Lefka	0.88	86	PG	Pb	16 55 09.2	+0.1
LEF				SG	Sb	16 55 21.1	+0.5
LEF	Lefka	0.88	86	P	Pg	16 55 09.9	+0.5
LEF				S	Sg	16 55 21.6	+0.7
SZAC	Souni	0.92	109	P	Pn	16 55 10.8	+0.2
SZAC				S	Sn	16 55 24.5	+1.1
SZAC				AML	AML	16 55 24.7	
	1.9nm,0.2s						
SZAC				AML	AML	16 55 24.7	
	1.9nm,0.2s						
SZAC				AML	AML	16 55 24.8	
	2.1nm,0.3s						
SZAC				AML	AML	16 55 24.8	
	2.1nm,0.3s						
AKDN	Akdeniz- Kıbrı	0.97	75	PG	Pn	16 55 11.5	+0.3
AKDN				SG	Sn	16 55 24.8	+0.3
ASGA	Asgata	1.20	103	P	Pn	16 55 14.7	+0.3
ASGA				S	Sg	16 55 31.5	+0.3
ASGA				AML	AML	16 55 31.9	
	1.0nm,0.4s						
ASGA				AML	AML	16 55 31.9	
	1.0nm,0.4s						
ASGA				AML	AML	16 55 32.9	
	0.8nm,0.3s						
ASGA				AML	AML	16 55 32.9	
	0.8nm,0.3s						
CSS	Mathiatis	1.24	94	PN	Pn	16 55 15.4	+0.5
CSS	Mathiatis	1.24	94⇑	*e*P	Pn	16 55 15.5	+0.5
CSS				S	Sb	16 55 31.7	+0.6
GAZI	Gazipasa	1.24	19	PN	Pn	16 55 14.8	-0.2
GAZI				SN	Sb	16 55 30.7	-0.4
GAZI	Gazipasa	1.24	19	P	Pn	16 55 14.4	-0.6
GAZI				S	Sb	16 55 29.6	-1.5
GAZI				*i* AML	AML	16 55 31.0	
	comp=E,117nm,0.4s						
ATHAL	Athalassa	1.29	86	S	Sb	16 55 32.9	+0.4
LFK	Lefkose	1.42	80	PN	Pb	16 55 18.3	-0.1
MVOU	Mavrovouni	1.48	91	P	Pn	16 55 18.3	+0.1
MVOU				AML	AML	16 55 40.2	
	0.3nm,0.5s						
MVOU				AML	AML	16 55 49.0	
	0.5nm,1.0s						
TEKE	Tekeli-Mersin	1.51	44	PN	Pn	16 55 18.9	+0.3
BERE	Bereket-Mersin	1.72	41	PN	Pn	16 55 22.3	+0.6
BERE				SN	Sn	16 55 42.9	-0.4
AKK1	Akkuyu-Mersin	1.77	52	PN	Pn	16 55 22.9	+0.7
AKK2	Akkuyu-Mersin	1.77	52	PN	Pn	16 55 22.9	+0.7
AKKU	Akkuyu-Mersin	1.79	51	PN	Pn	16 55 23.2	+0.8
GULN	MERSIN_Gulnar	1.80	51	P	Pn	16 55 23.3	+0.8
GULN				S	Sn	16 55 43.7	-1.3
ERMK	Ermenek	1.81	29	P	Pb	16 55 24.8	-0.4
ERMK				S	Sn	16 55 46.4	+0.7
ERMK				*i* AML	AML	16 55 49.0	
	comp=N,57nm,0.6s						
ERMK				*i* AML	AML	16 55 53.0	
	comp=E,57nm,0.4s						
KEPZ	Antalya-Kepez	1.85	355	P	Pb	16 55 24.6	-1.1
KEPZ				S	Sn	16 55 46.0	-0.4
TISA	Tisan-Mersin	1.87	53	PN	Pn	16 55 24.4	+0.8
TEVE	Tevekalti-Mers	1.91	43	PN	Pn	16 55 24.7	+0.6
KARG	Kargicak-Mersi	1.92	53	PN	Pn	16 55 24.9	+0.7
IKL	Isikli	1.92	52	PN	Pn	16 55 25.0	+0.7
HDMB	Hadim	1.98	16	PN	Pn	16 55 25.5	+0.2
OSC2	CSNet OBS 4	2.01	169	P	Pn	16 55 27.1	+1.6
OSC2				S	Sn	16 55 52.2	+2.0
KEBE	Keben-Mersin	2.07	47	PN	Pn	16 55 27.2	+0.8
SILI	Silifke-Mersin	2.15	52	PN	Pn	16 55 28.3	+0.9
KKBE	Karaman, Kazim	2.34	22	P	Pb	16 55 33.2	-1.0
KKBE				S	Sb	16 56 02.2	-0.6
SEDI	Konya, Seydise	2.39	359	P	Pb	16 55 33.2	-1.8
SEDI				S	Sb	16 56 05.3	+1.0
SEDI				*i* AML	AML	16 56 12.0	
	comp=E,29nm,0.5s						
KRMN	Karaman	2.41	28	PN	Pn	16 55 31.8	+0.6
FETY	Fethiye	2.73	306	P	Pb	16 55 39.3	-1.4
FETY				S	Sn	16 56 07.8	-0.2
KMER	Konya-Meram	2.74	9	P	Pb	16 55 40.0	-1.0
KERG	Konya-Eregli	3.00	38	P	Pb	16 55 42.6	-2.8
KERG				S	Sn	16 56 16.6	+1.7
KERG				*i* AML	AML	16 56 22.0	
	comp=E,30nm,0.9s						
KERG				*i* AML	AML	16 56 25.0	
	comp=N,22nm,0.5s						
DOGA	KONYA_Doganhis	3.05	358	P	Pb	16 55 43.9	-2.3
DOGA				S	Sn	16 56 17.3	+1.2
YVAC	Isparta, Yalva	3.24	352	P	Pn	16 55 45.2	+2.6
YVAC				S	Sn	16 56 23.4	+2.5
GULE	Gulek	3.26	46	P	Pb	16 55 46.8	-3.2
GULE				S	Sn	16 56 25.4	+4.0
GULE				*i* AML	AML	16 56 31.0	
	comp=N,25nm,0.7s						
GULE				*i* AML	AML	16 56 44.0	
	comp=E,35nm,0.9s						
ALIN	Konya, Altinte	3.34	14	P	Pb	16 55 48.3	-2.9
ALIN				S	Sn	16 56 27.0	+3.6
MMA0B	Mount Meron ar	3.60	123	Pn	Pn	16 55 48.0	+0.5
MMA0B				Sn	Sn	16 56 28.8	-0.9
GEM	Giv'at Ha'Em	3.68	119	Pn	Pn	16 55 49.7	+1.2
GEM				Sn	Sn	16 56 30.3	-1.1
NATI	Neve Ativ	3.71	118	Pn	Pn	16 55 49.5	+0.7
NATI				Sn	Sn	16 56 30.8	-1.3
MMLI	Mount Malkishu	3.98	130	Pn	Pn	16 55 53.4	+0.8
MMLI				Sn	Sn	16 56 37.6	-1.2
HMDT	Nahal Hemdat	4.17	131	Pn	Pn	16 55 55.9	+0.8
HMDT				Sn	Sn	16 56 42.3	-1.1
PRNI	Paran	5.40	149	Pn	Pn	16 56 13.5	+1.3
HRFI	Mount Harif	5.69	151	Pn	Pn	16 56 16.8	+0.6
HRFI				Sn	Sn	16 57 19.1	-2.1
MBRI	Mt Berech	5.86	153	Pn	Pn	16 56 19.3	+0.8
EIL	Elat	5.99	153	Pn	Pn	16 56 21.0	+0.8
EIL				Sn	Sn	16 57 26.4	-2.0

DJA 19 16:56:41.9±0.4, **9°S**±5°×**11°8E**±°, **h112**km±6km, **M3.7**/8, **mb4.0**/1, **MLv3.6**/8, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.62	252	P	Pn	16 57 01.2	+1.4
PLAI				S	Sn	16 57 15.8	+2.6
WBSI	Waikabubak, Su	1.42	135	P	Pn	16 57 08.0	+0.1
WBSI				S	Sn	16 57 28.2	+0.6
IGBI	Denpasar	3.19	267	P	Pn	16 57 30.8	+0.3
IGBI				S	Sn	16 58 09.1	+1.1
BSSI	Bau Bau, Buton	3.25	40	P	Pn	16 57 31.3	0.0
EDFI	Ende, Flores	3.28	92	P	Pn	16 57 32.3	+0.5
BKSI	Bulukumba	3.73	28	P	Pn	16 57 37.9	+0.2
MMRI	Maumere	3.82	90	P	Pn	16 57 39.2	+0.2
JAGI	Jajag, Banyuwa	4.17	272	P	Pn	16 57 42.5	-1.2
GMJI	Gumukmas	4.89	274	P	Pn	16 57 53.1	-0.1
BATI	Baumata	5.45	107	P	Pn	16 58 00.8	-0.1

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*INET **19** 17:01:51.7±0.7, 12°.41N×87°.90W, h46km±16km, MW3.6*
*SNET **19** 17:01:53.8±1.0, 12°.54N×87°.96W, h28km±4km, ML4.0*
*UCR **19** 17:01:53.6±1.1, 12°.53N×87°.94W, h29km±5km, ML3.9, mb3.7(NEIC)*
*NEIC **19** 17:01:53.5±1.5, 12°.60N±0°.08×87°.76W±0°.06, h33km±14km, mb3.7/2, Md4.0(SNET), Error ellipse: s-maj=13.8km s-min=5.8km az=210.0*

ISC 19 17:01:53.2±1.2, **12°.49N**±0°.06×**87°.84W**±0°.04, **h46**km±21km, **n66**, σ0s.**84**/89, **4C**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.56	30	*e*P	Pn	17 02 04.6	-0.5
CNCH	Conchagua	0.78	1⇑	*e*P	Pn	17 02 08.0	-0.1
CNCH				*e*S	Sn	17 02 19.6	+0.7
CNCH	Conchagua	0.78	1⇑	*e*P	Pn	17 02 08.0	-0.1
CNCH				*e*S	Sn	17 02 19.6	+0.7
CRIN	San Cristobal	0.80	75	Pn	Pn	17 02 08.0	-0.3
CRIN	San Cristobal	0.80	75	*e*P	Pn	17 02 08.1	-0.2
CRIN				*e*S	Sn	17 02 20.4	+1.2
LCND	La Caada	0.82	357⇑	*e*P	Pn	17 02 08.2	-0.2
LCND				*e*S	Sn	17 02 19.2	-0.3
LCND				IAML		17 02 23.0	
	comp=Z,5μm,0.3s						
LCND	La Caada	0.82	357⇑	*e*P	Pn	17 02 08.2	-0.2
LCND				*e*S	Sn	17 02 19.2	-0.3
LCND				IAML		17 02 23.0	
	comp=Z,5μm,0.3s						
JUCU	Jucuar¡n	0.86	332	*e*P	Pn	17 02 08.3	-0.7
JUCU	Jucuar¡n	0.86	332	*e*P	Pn	17 02 08.3	-0.7
TEL3	Telica 3	0.98	85	*e*P	Pn	17 02 09.6	-1.0
VSM	San Miguel	1.02	336	*e*P	Pn	17 02 11.6	+0.2
VSM				*e*S	Sn	17 02 24.8	-0.1
VSM	San Miguel	1.02	336	*e*P	Pn	17 02 11.6	+0.2
VSM				*e*S	Sn	17 02 24.8	-0.1
LCY	Lacayo	1.03	335	*e*P	Pn	17 02 11.3	-0.1
LCY				*e*S	Sn	17 02 24.7	-0.1
LCY	Lacayo	1.03	335	*e*P	Pn	17 02 11.3	-0.1
LCY				*e*S	Sn	17 02 24.7	-0.1
PACA	Pacayal	1.08	334	*e*P	Pn	17 02 11.9	-0.2
PACA				*e*S	Sn	17 02 26.4	+0.4
PACA	Pacayal	1.08	334	*e*P	Pn	17 02 11.9	-0.2
PACA				*e*S	Sn	17 02 26.4	+0.4
CNGN	Cerro Negro	1.12	89	Pn	Pn	17 02 11.5	-1.0
CNGN	Cerro Negro	1.12	89	*e*P	Pn	17 02 11.3	-1.2
COPN	Copaltepe	1.26	104	*e*P	Pn	17 02 13.2	-1.3
MOMN	Momotombo	1.27	93	*e*P	Pn	17 02 13.6	-1.1
APYN	Apoyeque	1.48	100	*e*P	Pn	17 02 15.6	-1.8
SCLA	Alcaldia de Sa	1.48	324	*e*P	Pn	17 02 17.6	0.0
SCLA				*e*S	Sn	17 02 36.7	+1.0
SCLA	Alcaldia de Sa	1.48	324	*e*P	Pn	17 02 17.6	0.0
SCLA				*e*S	Sn	17 02 36.7	+1.0
COEG	Centro de Oper	1.51	318	*e*P	Pn	17 02 17.4	-0.5
COEG	Centro de Oper	1.51	318	*e*P	Pn	17 02 17.4	-0.5
SJTE	Alcalda de S	1.59	315	*e*P	Pn	17 02 18.6	-0.5
SJTE				*e*S	Sn	17 02 37.5	-1.1
SJTE	Alcalda de S	1.59	315	*e*P	Pn	17 02 18.6	-0.5
SJTE				*e*S	Sn	17 02 37.5	-1.1
PAVA	Las Pavas	1.62	319	*e*P	Pn	17 02 19.6	+0.1
PAVA				*e*S	Sn	17 02 39.5	+0.3
PAVA	Las Pavas	1.62	319	*e*P	Pn	17 02 19.6	+0.1
PAVA				*e*S	Sn	17 02 39.5	+0.3
LFRS	El Faro	1.64	314	*e*P	Pn	17 02 19.3	-0.4
LFRS				*e*S	Sn	17 02 39.1	-0.6
LFRS	El Faro	1.64	314	*e*P	Pn	17 02 19.3	-0.4
LFRS				*e*S	Sn	17 02 39.1	-0.6
TGUH	Tegucigalpa,Un	1.65	20	Pn	Pn	17 02 20.0	0.0
TGUH	Tegucigalpa,Un	1.65	20	*e*P	Pn	17 02 20.2	+0.3
TGUH	Tegucigalpa,Un	1.65	20	*e*P	Pn	17 02 20.2	+0.3
LALI	Alcalda de L	1.75	305	*e*P	Pn	17 02 20.4	-0.7
LALI	Alcalda de L	1.75	305	*e*P	Pn	17 02 20.4	-0.7
SNET	Serv Nac Est T	1.80	311	Pn	Pn	17 02 19.6	-2.3

BOQS	**Boqueron**	**1.87**	**312**	*e*P	**Pn**	**17 02 23.3**	**+0.3**
BOQS				*e*S	**Sn**	**17 02 46.1**	**+0.5**
BOQS	**Boqueron**	**1.87**	**312**	*e*P	**Pn**	**17 02 23.3**	**+0.3**
BOQS				*e*S	**Sn**	**17 02 46.1**	**+0.5**
MATN	**Matagalpa**	**1.92**	**77**	Pn	**Pn**	**17 02 22.4**	**-1.2**
MATN	**Matagalpa**	**1.92**	**77**	*e*P	**Pn**	**17 02 22.4**	**-1.2**
JAYA	**Jayaque - finc**	**1.95**	**307**	*e*P	**Pn**	**17 02 22.2**	**-1.8**
JAYA				*e*S	**Sn**	**17 02 46.2**	**-1.1**
JAYA				IAML		17 02 49.6	
	comp=Z,1µm,0.2s						
JAYA	**Jayaque - finc**	**1.95**	**307**	*e*P	**Pn**	**17 02 22.2**	**-1.8**
JAYA				*e*S	**Sn**	**17 02 46.2**	**-1.1**
JAYA				IAML		17 02 49.6	
	comp=Z,1µm,0.2s						
BOAB	**BOACO BROADBAN**	**2.12**	**91**	Pn	**Pn**	**17 02 25.0**	**-1.3**
BOAB	**BOACO BROADBAN**	**2.12**	**91**	*e*P	**Pn**	**17 02 25.0**	**-1.3**
CEVE	**Cerro Verde**	**2.19**	**308**	*e*P	**Pn**	**17 02 27.6**	**+0.2**
CEVE				IAML		17 03 01.1	
	comp=Z,1µm,0.2s						
CEVE	**Cerro Verde**	**2.19**	**308**	*e*P	**Pn**	**17 02 27.6**	**+0.2**
CEVE				IAML		17 03 01.1	
	comp=Z,1µm,0.2s						
NUBE	**Las Nubes**	**2.35**	**307**	*e*P	**Pn**	**17 02 29.6**	**0.0**
NUBE	**Las Nubes**	**2.35**	**307**	*e*P	**Pn**	**17 02 29.6**	**0.0**
MTO3	**Montecristo**	**2.41**	**322**	Pn	**Pn**	**17 02 30.3**	**0.0**
MTO3	**Montecristo**	**2.41**	**322**	*e*P	**Pn**	**17 02 30.3**	**0.0**
MTO3	**Montecristo**	**2.41**	**322**	*e*P	**Pn**	**17 02 30.3**	**0.0**
ESQI	**Esquipulas**	**2.52**	**325**	Pn	**Pn**	**17 02 31.3**	**-0.6**
ACON	**Acoyapa**	**2.66**	**101**		**Pn**	**17 02 30.6**	**-3.0**
HZTE	**Horizontes, Gu**	**2.82**	**128**	Pn	**Pn**	**17 02 36.2**	**+0.3**
ORTG	**Ortega, Santa**	**3.15**	**132**	Pn	**Pn**	**17 02 40.2**	**-0.2**
JTS	**Las Juntas de**	**3.58**	**127**	Pn	**Pn**	**17 02 46.6**	**+0.3**
JACO	**JACO, Garabito**	**4.20**	**132**	Pn	**Pn**	**17 02 56.5**	**+1.7**
RIMA	**Rio Macho**	**4.75**	**124**	Pn	**Pn**	**17 03 03.6**	**+1.1**
PETF	**Flores**	**4.82**	**336**		**Pn**	**17 03 03.0**	**-0.3**
SRBA	**San Rafael, Bu**	**5.46**	**126**	Pn	**Pn**	**17 03 12.7**	**+0.5**
DRK0	**Durika**	**5.54**	**125**	Pn	**Pn**	**17 03 14.3**	**+0.9**
RIOS	**Rincon, Osa**	**5.68**	**131**	Pn	**Pn**	**17 03 16.6**	**+1.4**
TX31	**Lajitas Ar. Si**	**22.30**	**321**	P	**P**	**17 06 47.2**	**+0.2**
TX31				IAmb	IAmb	17 07 09.9	
	comp=Z,6.2nm,1.1s						
TX32	**Lajitas Array**	**22.30**	**321**	P	**P**	**17 06 47.3**	**+0.3**
TX32				IAmb	IAmb	17 07 09.9	
	comp=Z,2.1nm,1.1s						
TXAR	**Lajitas Array**	**22.30**	**321**	P	**P**	**17 06 47.2**	**+0.2**

*IDC **19** 18:02:10.0±4.6, 38°.10N×73°.25E, h92^{km}±30^{km}, mb3.3/6, mbtmp3.7/11, MS2.7/2, Error ellipse: s-maj=59.5km s-min=28.4km az=144.0*

*NNC **19** 18:02:15.3±4.7, 38°.90N×72°.89E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=46.3km s-min=24.3km az=149.0*

*SOME **19** 18:02:19.4, 39°.87N×73°.10E, h5^{km}*

ISC 19 18:02:10.3±0.7**, 38°.23N**±0°.06×**73°.09E**±0°.05**, h100^{km}, n48, σ2^{s}57**/55**, mb3.5**/5**, 5C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.93**	**7**	P	**Pn**	**18 03 09.8**	**+1.0**
	SNR=190						
UCH	**Uchtor**	**4.14**	**15**	P	**Pn**	**18 03 13.3**	**+1.5**
	SNR=150						
EKS2	**Erkin-Say**	**4.46**	**7**	P	**Pn**	**18 03 17.4**	**+1.6**
	SNR=113						
CEP	**Cherat**	**4.50**	**193**	P	Pn	18 03 24.6	+8.2
AAK	**Ala-Archa**	**4.53**	**13**	P	**Pn**	**18 03 18.8**	**+1.9**
	SNR=22						
AAK	**Ala-Archa**	**4.53**	**13**	P	**Pn**	**18 03 18.7**	**+1.9**
	26nm,0.4s,baz=172,slow=6.1,SNR=112						
AAK				S	**Sn**	**18 04 05.7**	**-2.7**
	32nm,0.3s,baz=0.2,slow=20,SNR=19						
CHCP	**Chirah Chowk**	**4.56**	**178**	P	Pn	18 03 25.4	+8.2
IUG	**Iuzhnay**	**4.56**	**330**	*e*P	**Pn**	**18 03 20.2**	**+3.1**
	437nm,0.2s						
IUG				*e*S	**Sn**	**18 04 05.0**	**-4.0**
	207nm,0.4s						
KBK	**Karagaybulak**	**4.64**	**17**	P	**Pn**	**18 03 20.2**	**+1.9**
	SNR=22						
ULHL	**Ulahol**	**4.68**	**30**	P	**Pn**	**18 03 20.4**	**+1.5**
	SNR=31						
DZA	**Taraz**	**4.85**	**345**	*e*P	**Pn**	**18 03 23.1**	**+2.1**
	125nm,0.3s						
DZA				*e*S	Sn	18 04 10.0	-5.9
	84nm,0.2s						
CHM	**Chimkent**	**4.88**	**328**	*e*P	**Pn**	**18 03 24.8**	**+3.4**
	5.6nm,0.4s						
CHM				*e*S	**Sn**	**18 04 12.9**	**-3.8**
	90nm,0.6s						
CHMS	**Chumysh**	**4.93**	**14**	P	**Pn**	**18 03 23.7**	**+1.6**
	SNR=16						
CHMS	**Chumysh**	**4.93**	**14**	⇓P	**Pn**	**18 03 23.5**	**+1.4**
	8.8nm,0.4s						
CHMS				⇑S	**Sn**	**18 04 15.1**	**-2.8**
	48nm,0.7s						
TKM2	**Tokmak 2**	**5.06**	**21**	P	**Pn**	**18 03 25.6**	**+1.6**
	SNR=16						
TKM2	**Tokmak 2**	**5.06**	**21**	⇑P	**Pn**	**18 03 25.2**	**+1.2**
	3.7nm,0.4s						
TKM2				⇑S	**Sn**	**18 04 18.3**	**-3.0**
	19nm,0.6s						
USP	**Ospenovka**	**5.15**	**12**	P	**Pn**	**18 03 26.3**	**+1.2**
	SNR=28						
KK31	**Karatay Array**	**5.25**	**339**	⇑P	**Pn**	**18 03 27.5**	**+1.1**
	5.3nm,0.2s,baz=142,slow=12,SNR=214						
KK31				⇓S	**Sn**	**18 04 21.7**	**-4.0**
	15nm,0.4s,baz=147,slow=17,SNR=7.1						
KST	**Kastek**	**5.28**	**24**	*e*P	**Pn**	**18 03 31.2**	**+4.2**
	7.9nm,0.2s						
KST				*e*S	**Sn**	**18 04 24.2**	**-2.4**
	44nm,0.7s						
SGDS	**Sogindy**	**5.35**	**12**	*e*P	**Pn**	**18 03 30.4**	**+2.6**
	13nm,0.3s						
SGDS				*e*S	**Sn**	**18 04 22.9**	**-5.2**
	19nm,0.7s						
BRLS	**Borolday**	**5.40**	**334**	*e*P	**Pn**	**18 03 28.1**	**-0.3**
	6.7nm,0.2s						
BRLS				*e*S	Sn	18 04 19.1	-10
	15nm,0.2s						
MTBS	**Maitube**	**5.51**	**26**	*e*P	**Pn**	**18 03 33.9**	**+3.9**
	6.1nm,0.1s						
MTBS				*e*S	**Sn**	**18 04 29.3**	**-2.9**
	20nm,0.5s						
THW	**Thamme Wali**	**5.53**	**192**	P	Pn	18 03 37.0	+6.7
TNSS	**Tian-Shan**	**5.63**	**30**	*e*P	**Pn**	**18 03 36.4**	**+4.5**
	3.2nm,0.2s						
TNSS				*e*S	**Sn**	**18 04 33.5**	**-1.9**
	6.3nm,0.6s						
KRBS	**Karabastau**	**5.80**	**19**	*e*P	Pn	18 03 39.2	+5.2
	0.1nm,0.2s						
KRBS				*e*S	**Sn**	**18 04 38.3**	**-0.8**
	7.0nm,0.6s						
OTUK	**Ortayu**	**10.03**	**357**	⇓P	**Pn**	**18 04 30.7**	**-0.6**
	7.5nm,0.6s						
MKAR	**Makanchi Array**	**10.92**	**35**	P	**Pn**	**18 04 43.7**	**+0.3**
	0.3nm,0.7s,baz=215,slow=16,SNR=3.1						
GEYT	**Alibeck**	**11.81**	**273**	P	**Pn**	**18 04 56.6**	**+1.2**
	0.7nm,0.3s,baz=110,slow=13,SNR=2.0						
GEYT				S	**Sn**	**18 07 00.2**	**-5.0**
	2.1nm,0.5s,baz=212,slow=47,SNR=2.4						
GEYT				LR	LR	18 09 48.2	
	comp=Z,16nm,21.8s,baz=176,slow=38						
KURBB	**Kurchatov Arra**	**12.98**	**16**	P	**Pn**	**18 05 08.1**	**-2.7**
	0.4nm,0.4s,baz=208,slow=13,SNR=7.8						
DANN	**Dangsing**	**13.28**	**135**	*e*P	**Pn**	**18 05 14.5**	**-0.7**
GKN	**Gorkha**	**14.04**	**133**	*e*P	**Pn**	**18 05 24.4**	**-0.6**
AB31	**Akbulak array**	**14.53**	**324**	P	**Pn**	**18 05 29.3**	**-1.6**
	1.3nm,0.4s,baz=130,slow=13,SNR=58						
KKN	**Kakani**	**14.58**	**132**	*e*P	**P**	**18 05 32.8**	**-2.8**
DMN	**Daman**	**14.61**	**133**	*e*P	**P**	**18 05 32.6**	**-3.4**
PKIN	**Phulchoki**	**14.80**	**132**	*e*P	**P**	**18 05 35.2**	**-3.0**
PKI	**Pulchoki**	**14.82**	**132**	*e*P	**P**	**18 05 35.0**	**-3.4**
RAMN	**Ramite**	**15.98**	**131**	*e*P	**P**	**18 05 48.4**	**-2.8**
AKTO	**Aktyubinsk**	**16.25**	**324**	P	**Pn**	**18 05 52.9**	**+0.4**
	3.3nm,0.3s,baz=126,slow=13,SNR=9.5						
AKTO	**Aktyubinsk**	**16.25**	**324**	⇑P	**Pn**	**18 05 52.6**	**+0.2**
	3.9nm,0.6s						
TAPN	**Taplejung**	**16.37**	**127**	*e*P	**P**	**18 05 55.0**	**-0.6**
ZALV	**Zalesovo Beam**	**17.66**	**23**	P	**P**	**18 06 08.8**	**-0.4**
	2.2nm,0.5s,baz=218,slow=10,SNR=12						
ARU	**Arti**	**20.62**	**337**	P	**P**	**18 06 44.1**	**+2.7**
	0.5nm,0.4s,baz=156,slow=18,SNR=3.3						
	0.5nm,0.4s						
AKASG	**Malin Array Be**	**33.21**	**306**	P	**P**	**18 08 40.1**	**+2.7**
	0.3nm,0.4s,baz=78,slow=8.1,SNR=4.2						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**37.02**	**324**	P	**P**	**18 09 11.4**	**+1.5**
	0.6nm,0.4s,baz=118,slow=9.4,SNR=13						
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**40.21**	**336**	P	**P**	**18 09 38.7**	**+2.1**
	0.9nm,0.4s,baz=105,slow=7.2,SNR=14						
	0.9nm,0.4s						
NOA	**NORSAR Array B**	**44.03**	**322**	P	**P**	**18 10 09.4**	**+1.7**
	0.2nm,0.4s,baz=93,slow=7.6,SNR=2.4						
	0.2nm,0.4s						
MA2	**Magadan**	**51.98**	**39**	LR	LR	18 33 36.6	
	comp=Z,20nm,18.1s,baz=128,slow=36						
TORD	**Torodi Ar. Bea**	**67.42**	**269**	P	**P**	**18 12 56.8**	**+1.4**
	0.2nm,0.4s,baz=24,slow=3.2,SNR=2.2						
	0.2nm,0.4s						

IDC 19 18:04:57.1±2.3**, 3°.80N**×**126°.05E, h0^{km}, mb3.2**/3**, mbtmp3.2**/3**, Error ellipse: s-maj=199.6km s-min=28.7km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.96**	**161**	P	P	18 10 22.4	-0.1
	0.3nm,0.7s,baz=340,slow=11,SNR=4.8						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**28.36**	**165**	P	P	18 10 53.0	-0.1
	0.2nm,0.8s,baz=341,slow=9.2,SNR=1.8						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**57.11**	**326**	P	P	18 14 45.6	+0.1
	0.2nm,0.5s,baz=120,slow=7.7,SNR=4.2						
	0.2nm,0.5s						

NDI 19 18:07:24.6±2.7**, 17°.37N**×**73°.82E, h10^{km}**±11^{km}**, ML3.5, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POO	**Poona**	**1.16**	**1**	*e*P	Pb	18 07 45.8	-1.0
POO				*e*P	Pg	18 07 45.8	-1.0
POO				*e*S	Sg	18 08 02.0	+0.1
POO				*e*S	Sb	18 08 02.1	+0.2
BOM	**Bombay**	**1.80**	**328**	*i* P	Pb	18 07 57.2	-0.4
BOM				*e*P	Pn	18 07 57.3	+1.6
BOM				*e*S	Sb	18 08 19.7	-0.6
BOM				*e*S	Sg	18 08 20.7	-1.8
GOA	**Goa**	**1.86**	**180**	*e*P	Pn	18 07 57.0	+0.4
GOA				*e*P	Pb	18 07 57.1	-1.7
GOA				*e*S	Sn	18 08 18.8	-1.5
GOA				*e*S	Sb	18 08 21.7	-0.5
GOA				IAML		18 08 25.2	
	comp=E,645nm,0.2s						
GOA				IAML		18 08 27.5	
	comp=E,673nm,0.3s						
GOA				IAML		18 08 27.8	
	comp=N,438nm,0.2s						
GOA				IAML		18 08 27.8	
	comp=N,442nm,0.3s						
LATR	**Latur**	**2.81**	**68**	*i* x	x	18 08 16.2	
LATR				*e*x	Pb	18 08 13.8	-1.0
LATR				*e*P	Pg	18 08 16.5	-2.0
LATR				*e*x	x	18 08 49.7	
LATR				*e*S	S	18 08 49.7	+6.2
MNGI	**Mangalore**	**4.50**	**167**	*e*P	Pg	18 08 50.2	-0.8
MNGI				*e*S	Sb	18 09 38.8	+0.6
PCHI	**Peechi**	**7.22**	**160**	*e*S	Sn	18 10 28.4	-4.0

IDC 19 18:15:03.5±2.0**, 6°.81S**×**128°.95E, h184^{km}**±24^{km}**, mb3.2**/1**, mbtmp3.8**/5**, MS3.2**/2**, Error ellipse: s-maj=32.5km s-min=20.8km az=97.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.22**	**237**	P	Pn	18 16 34.0	+0.5
	11nm,0.4s,baz=207,slow=1.9,SNR=11						
BATI				S	Sn	18 17 44.2	-0.3
	7.0nm,0.3s,baz=157,slow=21,SNR=7.6						
SIJI	**Sorong**	**6.34**	**22**	P	Pn	18 16 34.9	-0.2
	2.2nm,0.3s,baz=208,slow=18,SNR=15						
SIJI				S	Sn	18 17 42.7	-4.7
	3.1nm,0.3s,baz=226,slow=23,SNR=9.0						
WRA	**Warramunga Arr**	**14.07**	**159**	P	Pn	18 18 13.4	-1.6
	0.6nm,0.4s,baz=335,slow=12,SNR=13						
WRA				S	Sn	18 20 42.8	-9.1
	0.5nm,0.5s,baz=330,slow=23,SNR=7.3						
ASAR	**Alice Springs**	**17.43**	**165**	P	Pn	18 18 55.2	-0.6
	0.8nm,0.4s,baz=338,slow=10,SNR=23						
ASAR				pP	pP	18 19 23.9	-0.3
	0.6nm,0.6s,baz=345,slow=11,SNR=3.5						
ASAR				S	S	18 22 02.9	-3.3
	0.3nm,0.8s,baz=340,slow=24,SNR=2.7						
PMG	**Port Moresby**	**18.21**	**99**	LR	LR	18 26 45.7	
	comp=Z,50nm,18.5s,baz=292,slow=39						
DZM	**Mont Dzumac**	**39.21**	**117**	LR	LR	18 39 27.1	
	comp=Z,43nm,18.0s,baz=38,slow=37						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	18 25 39.8	0.0
	0.4nm,0.4s,baz=111,slow=8.2,SNR=7.8						
	0.4nm,0.4s						

*IDC **19** 18:21:18.0±1.7, 7°.00S×154°.58E, h0^{km}, mb3.7/4, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=32.4km s-min=24.5km az=72.0*

*NEIC **19** 18:21:20.4±1.6, 7°.0S±0°.1×154°.5E±0°.1, h10^{km}±2^{km}, mb4.1/5, Error ellipse: s-maj=23.0km s-min=15.4km az=50.0*

ISC 19 18:21:23.2±1.3**, 6°.98S**±0°.09×**154°.6E**±0°.1**, h39^{km}, n12, σ1^{s}02**/13**, mb3.9**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.67**	**319**	Pn	**Pn**	**18 22 17.3**	**-0.2**
KRVT	**Keravat (AS076**	**3.68**	**316**	Pn	**Pn**	**18 22 17.5**	**-0.1**
	4.5nm,0.3s,baz=338,slow=3.7,SNR=13						
KRVT				Sn	**Sn**	**18 22 59.7**	**0.0**
	10nm,0.3s,baz=181,slow=22,SNR=5.7						
	11nm,0.3s						
PMG	**Port Moresby**	**7.74**	**251**	Pn	**Pn**	**18 23 13.7**	**+0.4**
	11nm,0.9s,baz=274,slow=14,SNR=2.7						
PMG				Sn	**Sn**	**18 24 39.9**	**+0.2**
	1.1nm,0.3s,baz=18,slow=8.4,SNR=2.0						
DZM	**Mont Dzumac**	**18.87**	**144**	P	**P**	**18 25 40.6**	**+0.2**
	0.1nm,0.3s,baz=287,slow=5.1,SNR=3.2						
	7.4nm,1.0s						
DZM	**Mont Dzumac**	**18.87**	**144**	IAmb	IAmb	18 25 45.5	
	comp=Z,15nm,1.2s						
WR0	**Warramunga Arr**	**23.34**	**234**	P	**P**	**18 26 28.1**	**-0.1**
WR0				IAmb	IAmb	18 26 32.3	
	comp=Z,7.4nm,1.2s						
WB2	**Warramunga Arr**	**23.48**	**235**	P	**P**	**18 26 28.8**	**-0.8**
WB2				IAmb	IAmb	18 26 52.9	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Arr**	**23.49**	**235**	P	**P**	**18 26 29.0**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=60,slow=9.8,SNR=8.1						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**25.88**	**228**	P	**P**	**18 26 50.9**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=58,slow=9.3,SNR=9.0						
	comp=Z,0.6nm,0.8s						
KNRA	**Kununurra**	**26.73**	**249**	P	**P**	**18 26 56.9**	**-2.3**
CMAR	**Chiang Mai Arr**	**60.41**	**296**	P	**P**	**18 31 30.9**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=124,slow=5.0,SNR=8.1						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**83.12**	**319**	P	**P**	**18 33 44.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=95,slow=5.1,SNR=9.1						
	comp=Z,0.6nm,0.6s						

*NOU **19** 18:26:33.2, 24°.30S×179°.51W, h532^{km}, mb4.5/53, South of Fiji Islands*

*IDC **19** 18:26:33.5±1.0, 24°.32S×179°.85W, h503^{km}±10^{km}, mb3.7/20, mbtmp4.6/24, Error ellipse: s-maj=11.8km s-min=10.3km az=51.0*

*NEIC **19** 18:26:34.6±2.4, 24°.40S±0°.10×179°.9W±0°.1, h513^{km}±6^{km}, mb4.6/60, Error ellipse: s-maj=15.5km s-min=13.9km az=103.0*

ISC 19 18:26:33.4±0.3**, 24°.37S**±0°.05×**179°.81W**±0°.06**, h505^{km}, n229, σ1^{s}71**/252**, mb4.3**/45**, 6C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**5.14**	**161**	P	**P**	**18 28 03.0**	**+1.2**
RIZ				S	**S**	**18 29 18.1**	**+4.0**
RAO	**Raoul Island**	**5.15**	**161**	P	**P**	**18 28 02.6**	**+0.7**
	313nm,0.3s,baz=258,slow=4.3,SNR=7.7						
RAO				S	**S**	**18 29 16.3**	**+2.0**
	223nm,0.3s,baz=74,slow=24,SNR=2.1						
RAO	**Raoul Island**	**5.15**	**161**	P	**P**	**18 28 02.1**	**+0.2**
RAO	**Raoul Island**	**5.15**	**161**	P	**P**	**18 28 03.6**	**+1.7**
GLKZ	**Green Lake**	**5.16**	**161**	P	**P**	**18 28 02.5**	**+0.5**
GLKZ				S	**S**	**18 29 11.6**	**-2.8**
DGTI	**Dogotuki**	**8.04**	**357**	P	**P**	**18 28 32.1**	**+1.6**
NIUE	**Niue**	**10.59**	**62**	P	**P**	**18 28 58.0**	**+0.9**
NIUE	**Niue**	**10.59**	**62**	P	**P**	**18 28 54.4**	**-2.7**
MARNC	**Mare, Loyalty**	**11.57**	**282**		**P**	**18 29 07.3**	**-0.2**
MARNC	**Mare, Loyalty**	**11.57**	**282**	P	**P**	**18 29 09.1**	**+1.7**
PINNC	**Pines Island,**	**11.82**	**276**	P	**P**	**18 29 10.8**	**+0.7**
PINNC	**Pines Island,**	**11.82**	**276**	P	**P**	**18 29 12.9**	**+2.8**
OUZ	**Omahuta**	**12.23**	**206**	P	**P**	**18 29 14.6**	**+0.3**
OUZ	**Omahuta**	**12.23**	**206**	P	**P**	**18 29 15.4**	**+1.1**
OUZ	**Omahuta**	**12.23**	**206**	P	**P**	**18 29 16.9**	**+2.7**
OUENC	**Ouen Island, N**	**12.41**	**276**		**P**	**18 29 17.9**	**+1.5**
OUENC	**Ouen Island, N**	**12.41**	**276**	P	**P**	**18 29 19.0**	**+2.7**
YATNC	**Mamie plateau,**	**12.44**	**278**	P	**P**	**18 29 19.4**	**+2.7**
LIFNC	**LIFOU**	**12.48**	**284**	P	**P**	**18 29 18.2**	**+1.0**
LIFNC	**LIFOU**	**12.48**	**284**	P	**P**	**18 29 18.6**	**+1.5**
WCZ	**Waipu Caves**	**12.59**	**202**	P	**P**	**18 29 20.2**	**+2.2**
ONTNC	**Ouen Toro**	**12.78**	**276**		**P**	**18 29 22.4**	**+2.1**
DZM	**Mont Dzumac**	**12.84**	**277**	P	**P**	**18 29 22.4**	**+1.4**
	25nm,0.7s,baz=86,slow=16,SNR=37						
DZM	**Mont Dzumac**	**12.84**	**277**		**P**	**18 29 22.7**	**+1.7**
DZM	**Mont Dzumac**	**12.84**	**277**	P	**P**	**18 29 23.6**	**+2.6**
AFI	**Afiamalu**	**12.87**	**38**	P	**P**	**18 29 20.9**	**-0.5**
	16nm,0.3s,baz=219,slow=19,SNR=2.3						
AFI				S	**S**	**18 31 33.9**	**-5.9**
	39nm,0.7s,baz=354,slow=20,SNR=1.8						
KUZ	**Kuaotunu**	**12.92**	**196**	P	P	18 29 29.9	+8.4
NOUC	**Port Laguerre**	**12.96**	**277**	P	**P**	**18 29 24.5**	**+2.3**
DVP	**Devils Point**	**13.00**	**298**	P	**P**	**18 29 24.6**	**+1.9**
MXZ	**Matakaoa Point**	**13.25**	**187**	P	**P**	**18 29 26.2**	**+1.2**
MXZ	**Matakaoa Point**	**13.25**	**187**	P	**P**	**18 29 27.4**	**+2.5**
MXZ				S	**S**	**18 31 41.3**	**-5.2**
ETAZ	**East Tamaki Re**	**13.33**	**199**	P	P	18 29 33.2	+7.3
MKAZ	**Moumakai**	**13.41**	**198**	P	P	18 29 33.2	+6.6
WMGZ	**Waiomatatini S**	**13.50**	**186**	P	**P**	**18 29 30.0**	**+2.5**
WMGZ				S	**S**	**18 31 43.9**	**-7.3**
HAZ	**Te Kaha**	**13.51**	**188**	P	**P**	**18 29 29.9**	**+2.3**
HAZ				S	**S**	**18 31 52.7**	**+1.4**
PKGZ	**Pakihiroa**	**13.60**	**187**	P	**P**	**18 29 30.1**	**+1.4**
PKGZ				S	**S**	**18 31 53.1**	**-0.2**
RUGZ	**Raukumara Rang**	**13.72**	**188**	P	**P**	**18 29 31.9**	**+1.8**
RUGZ				S	**S**	**18 31 51.2**	**-4.6**
PUZ	**Puketiti**	**13.76**	**186**	P	**P**	**18 29 32.5**	**+2.1**
PUZ				S	**S**	**18 31 57.7**	**+1.4**
TWGZ	**Tauwhareparae**	**13.89**	**187**	P	**P**	**18 29 35.4**	**+3.6**
TWGZ				S	**S**	**18 32 00.6**	**+1.7**
TOZ	**Tahuroa Road**	**13.91**	**196**	P	P	18 29 37.9	+6.0
URZ	**Urewera**	**14.10**	**190**	P	**P**	**18 29 34.6**	**+0.8**
	17nm,0.3s,baz=297,slow=2.3,SNR=52						
URZ				S	**S**	**18 31 59.4**	**-3.3**
	22nm,0.8s,baz=187,slow=21,SNR=2.7						
URZ	**Urewera**	**14.10**	**190**		**P**	**18 29 34.1**	**+0.2**
URZ	**Urewera**	**14.10**	**190**	P	**P**	**18 29 30.3**	**-3.6**
URZ				S	**S**	**18 31 58.7**	**-4.0**
URZ	**Urewera**	**14.10**	**190**	P	**P**	**18 29 35.0**	**+1.1**
MWZ	**Matawai**	**14.11**	**189**	P	**P**	**18 29 35.0**	**+1.0**
MWZ				S	**S**	**18 32 01.8**	**-1.2**
CNGZ	**Carnagh Statio**	**14.17**	**186**	P	**P**	**18 29 37.2**	**+2.6**
RRRZ	**Republican Roa**	**14.28**	**192**	P	**P**	**18 29 40.4**	**+4.6**
RAGZ	**Rawiri**	**14.28**	**189**	P	**P**	**18 29 38.1**	**+2.2**
MUGZ	**Murupara**	**14.36**	**191**	P	**P**	**18 29 38.9**	**+2.2**
MUGZ				S	**S**	**18 32 05.2**	**-2.7**
SNGZ	**Shannon Statio**	**14.57**	**189**	P	**P**	**18 29 40.8**	**+1.9**
SNGZ				S	**S**	**18 32 09.7**	**-2.2**
PRGZ	**Paritu Road**	**14.64**	**187**	P	**P**	**18 29 42.5**	**+2.8**
PRGZ				S	**S**	**18 32 13.1**	**-0.1**
MTHZ	**Maungataniwha**	**14.72**	**190**	P	**P**	**18 29 42.7**	**+2.3**
MTHZ				S	**S**	**18 32 12.2**	**-2.5**
RAHZ	**Arahi**	**14.74**	**190**	P	**P**	**18 29 42.0**	**+1.3**
RAHZ				S	**S**	**18 32 11.0**	**-4.1**
KNZ	**Kokohu**	**14.77**	**188**	P	**P**	**18 29 43.4**	**+2.5**
KNZ				S	**S**	**18 32 14.0**	**-1.5**
MRHZ	**Matea Rd**	**14.77**	**192**	P	**P**	**18 29 43.0**	**+1.9**
MRHZ				S	**S**	**18 32 11.4**	**-4.4**
HIZ	**Hauiti**	**14.81**	**197**	P	**P**	**18 29 40.2**	**-1.2**
HIZ	**Hauiti**	**14.81**	**197**	P	**P**	**18 29 42.5**	**+1.1**
BKZ	**Black Stump Fm**	**15.08**	**191**		**P**	**18 29 42.9**	**-1.4**
BKZ				IAmb	IAmb	18 29 47.2	
	comp=Z,21nm,0.5s						
BKZ	**Black Stump Fm**	**15.08**	**191**	P	**P**	**18 29 45.1**	**+0.8**
BKZ				S	**S**	**18 32 18.9**	**-2.8**
BKZ	**Black Stump Fm**	**15.08**	**191**	P	**P**	**18 29 44.7**	**+0.4**
SANVU	**Saraoutou**	**15.09**	**304**	P	**P**	**18 29 41.6**	**-2.9**
SANVU				IAmb	IAmb	18 29 55.0	
	comp=Z,41nm,1.1s						
ARHZ	**Aropaoanui**	**15.10**	**190**	P	**P**	**18 29 45.9**	**+1.6**
TWVZ	**Taurewa**	**15.20**	**194**	P	**P**	**18 29 47.8**	**+2.2**
BFZ	**Birch Farm**	**16.60**	**191**	P	**P**	**18 29 57.9**	**-2.1**
BFZ	**Birch Farm**	**16.60**	**191**	P	**P**	**18 29 58.2**	**-1.8**
MSWZ	**Moikau Station**	**17.50**	**192**	P	**P**	**18 30 06.3**	**-2.4**
SNZO	**South Karori**	**17.51**	**194**	P	**P**	**18 30 05.7**	**-3.1**
SNZO	**South Karori**	**17.51**	**194**	P	**P**	**18 30 08.3**	**-0.5**
BHW	**Baring Head**	**17.56**	**193**	P	**P**	**18 30 07.6**	**-1.7**
QRZ	**Quartz Range**	**17.62**	**200**	P	**P**	**18 30 09.3**	**-0.6**
QRZ	**Quartz Range**	**17.62**	**200**	P	**P**	**18 30 09.6**	**-0.3**
PLWZ	**Palliser**	**17.64**	**192**	P	**P**	**18 30 07.2**	**-2.9**
NNZ	**Nelson**	**17.74**	**197**	P	**P**	**18 30 08.0**	**-2.9**
TUWZ	**Tuamarina**	**17.80**	**196**	P	**P**	**18 30 09.0**	**-2.5**
BSWZ	**Blackbirch Sta**	**18.08**	**195**	P	**P**	**18 30 12.9**	**-1.2**
THZ	**Tophouse**	**18.38**	**198**		**P**	**18 30 15.9**	**-1.0**
KHZ	**Kahutara**	**18.83**	**195**		**P**	**18 30 19.6**	**-1.2**
KHZ				IAmb	IAmb	18 30 20.5	
	comp=Z,33nm,0.9s						
KHZ	**Kahutara**	**18.83**	**195**	P	**P**	**18 30 19.7**	**-1.2**
LTZ	**Lake Taylor**	**19.50**	**198**		**P**	**18 30 25.4**	**-1.7**
LTZ				IAmb	IAmb	18 30 29.3	
	comp=Z,29nm,0.8s						
OXZ	**Oxford**	**20.07**	**198**	P	**P**	**18 30 30.7**	**-1.5**
MQZ	**McQueen's Vall**	**20.26**	**196**	P	**P**	**18 30 32.3**	**-1.6**
RPZ	**Rata Peaks**	**20.70**	**199**	P	**P**	**18 30 36.6**	**-1.4**
	comp=Z,27nm,0.5s,baz=5.4,slow=1.6,SNR=17						
	comp=Z,27nm,0.5s						
RPZ	**Rata Peaks**	**20.70**	**199**		**P**	**18 30 36.0**	**-2.0**
RPZ				IAmb	IAmb	18 30 40.6	
	comp=Z,26nm,0.7s						
RPZ	**Rata Peaks**	**20.70**	**199**	P	**P**	**18 30 37.5**	**-0.5**
FOZ	**Fox Glacier**	**20.93**	**202**	P	**P**	**18 30 38.8**	**-1.2**
LBZ	**Lake Benmore**	**21.58**	**200**	P	**P**	**18 30 43.7**	**-2.2**
LBZ				IAmb	IAmb	18 30 59.7	
	comp=Z,50nm,1.4s						
ODZ	**Otahua Downs**	**22.04**	**198**	P	**P**	**18 30 48.3**	**-1.7**
ODZ	**Otahua Downs**	**22.04**	**198**	P	**P**	**18 30 49.0**	**-1.0**
WKZ	**Wanaka**	**22.34**	**201**	P	**P**	**18 30 50.9**	**-1.9**
MLZ	**Mavora Lakes**	**23.12**	**202**	P	**P**	**18 30 58.5**	**-1.3**
MLZ				IAmb	IAmb	18 31 00.2	
	comp=Z,44nm,1.2s						
WHZ	**Wether Hill Ro**	**23.64**	**202**	P	**P**	**18 31 03.8**	**-0.6**
WHZ				IAmb	IAmb	18 31 16.1	
	comp=Z,45nm,1.4s						
MGCD	**Mangrove Creek**	**26.90**	**244**	P	**P**	**18 31 33.9**	**+0.6**
CNB	**Canberra Magne**	**28.77**	**241**	P	**P**	**18 31 49.9**	**+0.1**
CAN	**Canberra**	**29.06**	**241**	P	**P**	**18 31 53.6**	**+1.3**
CAN				IAmb	IAmb	18 32 21.2	
	comp=Z,23nm,1.2s						
CAN	**Canberra**	**29.06**	**241**	P	**P**	**18 31 53.5**	**+1.2**
CMSA	**Cobar Meteorol**	**31.21**	**249**	P	**P**	**18 32 11.4**	**+0.5**
CTA	**Charters Tower**	**31.65**	**271**	P	**P**	**18 32 15.6**	**+0.8**
	comp=Z,13nm,0.4s,baz=93,slow=11,SNR=37						
	comp=Z,13nm,0.4s						
CTA	**Charters Tower**	**31.65**	**271**	P	**P**	**18 32 15.7**	**+0.8**
CTAO	**Charters Tower**	**31.65**	**271**	P	**P**	**18 32 15.7**	**+0.8**
CTAO				IAmb	IAmb	18 32 16.2	
	comp=Z,14nm,0.6s						
CTAO	**Charters Tower**	**31.65**	**271**	P	**P**	**18 32 15.8**	**+0.9**
TOO	**Toolangi**	**32.34**	**238**	P	**P**	**18 32 20.3**	**-0.2**
TOO				IAmb	IAmb	18 32 35.5	
	comp=Z,33nm,1.3s						
TOO	**Toolangi**	**32.34**	**238**	P	**P**	**18 32 21.5**	**+0.9**
TAU	**Tasmania Unive**	**32.74**	**227**	P	**P**	**18 32 24.4**	**+0.6**
TAU	**Tasmania Unive**	**32.74**	**227**	P	**P**	**18 32 24.7**	**+0.9**
BRAT	**Ballarat**	**33.54**	**238**	P	**P**	**18 32 32.3**	**+1.6**
KRVT	**Keravat (AS076**	**33.66**	**302**	P	**P**	**18 32 31.1**	**-0.9**
	comp=Z,16nm,0.5s,baz=354,slow=4.8,SNR=7.3						
	comp=Z,16nm,0.5s						
MTSU	**Mount Surprise**	**33.94**	**273**	P	**P**	**18 32 35.1**	**+0.8**
MCQ	**Macquarie Isla**	**33.99**	**202**	P	**P**	**18 32 33.8**	**-0.4**
STKA	**Stephens Creek**	**34.71**	**249**	P	**P**	**18 32 40.7**	**+0.1**

	comp=Z,2.2nm,0.4s,baz=95,slow=6.2,SNR=18						
STKA				PcP	PcP	18 35 00.8	+0.4
	comp=Z,1.4nm,0.4s,baz=79,slow=5.2,SNR=4.0						
	comp=Z,2.2nm,0.4s						
STKA	Stephens Creek	34.71	249	P	P	18 32 40.6	-0.1
STKA	Stephens Creek	34.71	249	P	P	18 32 41.1	+0.5
PMG	Port Moresby	34.81	290	P	P	18 32 41.5	-0.1
	comp=Z,20nm,0.7s,baz=122,slow=3.7,SNR=9.5						
	comp=Z,20nm,0.7s						
PMG	Port Moresby	34.81	290	P	P	18 32 41.6	-0.1
PMG				IAmb	IAmb	18 32 42.5	
	comp=Z,24nm,0.8s						
PMG	Port Moresby	34.81	290	P	P	18 32 41.3	-0.3
PMG	Port Moresby	34.81	290	P	P	18 32 41.4	-0.1
ARPS	Mount Arapiles	35.03	240	P	P	18 32 43.8	+0.6
INKA	Innaminka	35.49	256	P	P	18 32 48.9	+1.7
HTT	Hallett	37.04	246	P	P	18 33 00.2	+0.2
LCRK	Leigh Creek	37.59	251	P	P	18 33 04.8	+0.3
PATS	Pohnpei	37.64	323	P	P	18 33 05.4	+0.4
NAPP	Napperby	37.68	247	P	P	18 33 05.6	+0.4
BBOO	Buckleboo	39.42	247	P	P	18 33 18.6	-0.7
BBOO				IAmb	IAmb	18 33 26.1	
	comp=Z,16nm,1.3s						
BBOO	Buckleboo	39.42	247	P	P	18 33 19.0	-0.4
OOD	Oodnadatta	39.95	255	P	P	18 33 24.6	+0.9
MULG	Mulgathing	41.19	251	P	P	18 33 33.2	-0.3
JOHN	Johnston Islan	42.06	15	P	P	18 33 41.3	+0.9
AS31	Alice Springs	42.13	261	P	P	18 33 40.6	-0.6
ASAR	Alice Springs	42.13	261	P	P	18 33 41.1	0.0
	comp=Z,0.6nm,0.3s,baz=95,slow=6.9,SNR=60						
ASAR				ScP	ScP	18 38 27.2	+0.7
	comp=Z,0.7nm,1.0s,baz=132,slow=3.7,SNR=4.4						
ASAR				S	S	18 39 21.3	-2.8
	comp=Z,0.9nm,0.8s,baz=103,slow=14,SNR=9.2						
	comp=Z,0.6nm,0.3s						
ASAR	Alice Springs	42.13	261	P	P	18 33 40.5	-0.6
WR0	Warramunga Arr	42.36	267	P	P	18 33 42.3	-0.7
WB2	Warramunga Arr	42.54	267	P	P	18 33 43.8	-0.6
WB2				IAmb	IAmb	18 33 44.1	
	comp=Z,5.1nm,0.5s						
WRAB	Tennant Creek	42.54	267	P	P	18 33 43.9	-0.5
WB0	Warramunga Arr	42.54	267	P	P	18 33 43.8	-0.6
WB0				IAmb	IAmb	18 33 44.8	
	comp=Z,4.7nm,0.7s						
WRA	Warramunga Arr	42.55	267	P	P	18 33 43.8	-0.7
	comp=Z,3.9nm,0.5s,baz=98,slow=8.2,SNR=80						
WRA				ScP	ScP	18 38 29.6	+1.5
	comp=Z,3.2nm,0.9s,baz=103,slow=4.5,SNR=9.9						
WRA				S	S	18 39 25.4	-4.7
	comp=Z,2.5nm,1.0s,baz=102,slow=14,SNR=7.3						
	comp=Z,3.9nm,0.5s						
WRA	Warramunga Arr	42.55	267	P	P	18 33 42.7	-1.8
FORT	Forrest	46.31	250	P	P	18 34 12.4	-1.0
FORT				IAmb	IAmb	18 34 13.5	
	comp=Z,20nm,0.6s						
FORT	Forrest	46.31	250	P	P	18 34 12.7	-0.7
WRKA	Warakurna	46.91	258	P	P	18 34 17.7	-0.3
KNRA	Kununurra	48.86	270	P	P	18 34 32.5	-0.2
KNRA				IAmb	IAmb	18 34 33.1	
	comp=Z,7.6nm,0.7s						
KNRA	Kununurra	48.86	270	P	P	18 34 32.9	+0.2
SIJI	Sorong	52.75	289	P	P	18 35 00.9	-0.3
	comp=Z,26nm,0.7s,baz=94,slow=6.4,SNR=24						
	comp=Z,26nm,0.7s						
SBA	Scott Base	53.92	183	P	P	18 35 11.5	+3.1
SBA				IAmb	IAmb	18 35 12.6	
	comp=Z,20nm,0.9s						
VNDA	Vanda	53.93	185	P	P	18 35 10.2	+1.6
	comp=Z,3.4nm,0.6s,baz=355,slow=6.9,SNR=18						
VNDA				PcP	PcP	18 36 05.8	-0.2
	comp=Z,0.9nm,0.6s,baz=343,slow=4.3,SNR=5.7						
	comp=Z,3.4nm,0.6s						
VNDA	Vanda	53.93	185	P	P	18 35 10.1	+1.6
KLBR	Kellerberrin	54.97	247	P	P	18 35 16.4	-0.2
MEEK	Meekatharra	55.15	254	P	P	18 35 17.2	-0.8
NWAO	Narrogin (SRO)	55.20	246	P	P	18 35 16.7	-1.6
NWAO				IAmb	IAmb	18 35 21.2	
	comp=Z,16nm,1.2s						
PSA00	Pilbara Seismi	55.25	260	P	P	18 35 17.0	-1.7
PSA00	Pilbara Seismi	55.25	260	P	P	18 35 18.0	-0.7
PSA00				IAmb	IAmb	18 35 27.8	
	comp=Z,14nm,1.2s						
BATI	Baumata	55.43	274	P	P	18 35 21.1	+0.9
	comp=Z,11nm,0.8s,baz=126,slow=8.7,SNR=1.6						
	comp=Z,11nm,0.8s						
BLDU	Ballidu	56.02	248	P	P	18 35 23.2	-0.8
MORW	Morawa	56.88	250	P	P	18 35 29.3	-0.6
MORW	Morawa	56.88	250	P	P	18 35 29.6	-0.3
TNTI	Ternate	56.94	288	P	P	18 35 29.6	-0.9
CASY	Casey	59.77	206	P	P	18 35 48.6	-0.2
CASY				IAmb	IAmb	18 35 49.9	
	comp=Z,8.4nm,0.8s						
MJAR	Matsushiro Arr	72.38	326	P	P	18 37 07.6	-0.3
	comp=Z,1.9nm,0.8s,baz=160,slow=5.1,SNR=4.3						
	comp=Z,1.9nm,0.8s						
MJAR	Matsushiro Arr	72.38	326	P	P	18 37 06.4	-1.4
MAJO	Matsushiro	72.38	326	P	P	18 37 07.2	-0.6
MJB9	Matsu-Tunnel	72.38	326	P	P	18 37 07.2	-0.7
MJB9				IAmb	IAmb	18 37 08.4	
	comp=Z,6.7nm,1.0s						
BELA	Belgrano 2	75.95	173	P	P	18 37 27.3	-0.1
BELA				IAmb	IAmb	18 37 28.3	
	comp=Z,14nm,0.8s						
MAW	Mawson	77.37	200	P	P	18 37 36.0	+0.6
	comp=Z,10nm,0.6s,baz=135,slow=6.4,SNR=35						
	comp=Z,10nm,0.6s						
MAW	Mawson	77.37	200	P	P	18 37 35.1	-0.3
KSRS	Korea Array	78.71	320	P	P	18 37 43.9	+0.9
	comp=Z,1.0nm,0.6s,baz=135,slow=5.3,SNR=8.5						
	comp=Z,1.0nm,0.6s						
PETK	Petropavlovsk-	79.59	346	P	P	18 37 47.0	-0.3
	comp=Z,1.9nm,0.7s,baz=115,slow=8.1,SNR=7.3						
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	84.20	179	P	P	18 38 10.0	-0.8
SNAA	Sanae	84.20	179	P	P	18 38 08.9	-1.9
SNAA				IAmb	IAmb	18 38 11.1	
	comp=Z,5.5nm,1.0s						
YBH	Yreka Blue Hor	84.34	39	P	P	18 38 12.9	+1.0
	comp=Z,1.9nm,0.8s,baz=182,slow=3.3,SNR=3.6						
	comp=Z,1.9nm,0.8s						
YBH	Yreka Blue Hor	84.34	39	IAmb	IAmb	18 38 14.4	
	comp=Z,4.2nm,1.1s						
VNA3	Neumayer Olymp	84.40	177	P	P	18 38 11.4	-0.4
COYC	Coyhaique	84.44	138	P	P	18 38 13.8	+1.4
COYC				IAmb	IAmb	18 38 14.9	
	comp=Z,16nm,0.7s						
NVAR	Mina Array Bea	84.97	44	P	P	18 38 16.6	+1.3
	comp=Z,0.9nm,0.7s,baz=229,slow=9.0,SNR=4.2						
	comp=Z,0.9nm,0.7s						
VNA1	Neumayer--Stat	85.06	177	P	P	18 38 14.7	-0.2
LL02	Futaleuf	85.75	136		P	18 38 19.8	+0.9
LL02				IAmb	IAmb	18 38 21.1	
	comp=Z,13nm,0.8s						
TUC	Tucson	86.67	52	P	P	18 38 25.1	+1.7
TUC				IAmb	IAmb	18 38 26.3	
	comp=Z,4.9nm,0.8s						
ORCD	Orcadas	87.70	160	P	P	18 38 28.3	+0.7
ORCD				IAmb	IAmb	18 38 29.2	
	comp=Z,12nm,0.8s						
U15A	North Rim	87.78	48	P	P	18 38 30.3	+1.5
U15A				IAmb	IAmb	18 38 31.8	
	comp=Z,3.3nm,0.9s						
PLCA	Paso Flores	87.82	134	P	P	18 38 29.5	+0.7
	comp=Z,1.6nm,0.7s,baz=184,slow=21,SNR=2.3						
	comp=Z,1.6nm,0.7s						
PLCA	Paso Flores	87.82	134	IAmb	IAmb	18 38 30.6	
	comp=Z,2.1nm,0.8s						
XAN	Xi'an	89.16	308	P	P	18 38 35.8	+0.8
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MFID	Camas Ranch	89.40	41	P	P	18 38 36.2	+0.2
MFID				IAmb	IAmb	18 38 38.3	
	comp=Z,6.9nm,1.4s						
SEY	Seymchan	89.76	348	P	P	18 38 37.4	+0.5
	comp=Z,0.4nm,0.4s,baz=58,slow=2.4,SNR=30						
	comp=Z,0.4nm,0.4s						
YAH	Yahtse	89.95	18	P	P	18 38 38.5	+0.3
TMUT	Trail Mountain	90.04	46	P	P	18 38 40.7	+1.5
TMUT				IAmb	IAmb	18 38 41.6	
	comp=Z,4.7nm,0.7s						
MNTX	Cornudas Mount	90.34	55	P	P	18 38 41.2	+0.8
TXAR	Lajitas Array	90.53	58	P	P	18 38 42.6	+1.1
	comp=Z,2.2nm,0.8s,baz=209,slow=6.2,SNR=14						
	comp=Z,2.2nm,0.8s						
HHC	Hu-ho-hao-te	90.87	315	*e*P	P	18 38 46.8	+4.0
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
PZH	PanZhiHua	91.06	299	P	P	18 38 45.3	+1.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,140nm,5.1s						
PDAR	Pinedale Array	92.91	44	P	P	18 38 52.6	+0.3
	comp=Z,0.5nm,0.8s,baz=208,slow=2.9,SNR=4.6						
	comp=Z,0.5nm,0.8s						
ZALV	Zalesovo Beam	112.42	320	PKiKP	PKiKP	18 44 09.5	-1.9
	comp=Z,0.5nm,0.3s,baz=99,slow=2.9,SNR=2.8						
MKAR	Makanchi Array	112.59	313	PKiKP	PKiKP	18 44 10.5	-1.5
	comp=Z,0.4nm,0.5s,baz=107,slow=1.3,SNR=7.1						
KURK	Kurchatov	115.66	316		PKPdf	18 44 16.5	-1.1
KURBB	Kurchatov Arra	115.70	316	PKP	PKPdf	18 44 16.5	-1.2
	comp=Z,1.0nm,0.6s,baz=94,slow=1.8,SNR=15						
KK31	Karatay Array	120.28	307		PKPdf	18 44 25.9	-0.9
KKAR	Karatay Array	120.28	307		PKPdf	18 44 25.6	-1.2
SPITS	Spitsbergen Ar	125.60	356	PKP	PKPdf	18 44 35.3	-0.8
	comp=Z,3.6nm,0.7s,baz=92,slow=5.0,SNR=6.9						
ARU	Arti	127.36	323	PKP	PKPdf	18 44 39.8	-0.2
	comp=Z,1.4nm,0.4s,baz=110,slow=4.9,SNR=7.2						
AKTO	Aktyubinsk	128.75	316	PKP	PKiKP	18 44 43.5	-0.1
	baz=208,slow=3.6,SNR=4.3						
ARCES	ARCESS Array B	132.38	348	PKP	PKPdf	18 44 48.4	-0.7
	comp=Z,1.6nm,0.6s,baz=25,slow=1.3,SNR=11						
BELG	Belogornoye	134.61	321	PKP	PKPdf	18 44 52.5	-1.3
	comp=Z,6.1nm,0.7s,baz=328,slow=3.1,SNR=2.5						
FINES	FINESS Array B	138.94	341	PKhKP	PKPpre	18 44 53.7	
	comp=Z,0.8nm,0.6s,baz=45,slow=3.0,SNR=4.5						
FINES				PKP	PKPdf	18 45 02.5	+1.1
	comp=Z,0.7nm,0.3s,baz=56,slow=2.2,SNR=7.6						
FINES				SKPbc	SKPbc	18 47 48.7	0.0
	comp=Z,2.3nm,0.6s,baz=72,slow=4.5,SNR=8.7						
MBAR	Mbarara	141.36	234	PKP	PKPdf	18 45 07.5	-0.1
	comp=Z,3.1nm,0.3s,baz=118,slow=3.3,SNR=3.8						
HFS	Hagfors	143.04	349	PKhKP	PKPpre	18 45 05.8	
	comp=Z,2.0nm,0.4s,baz=9.9,slow=18,SNR=26						
NACGM	Naroch	143.70	334	*e*PKP	PKPbc	18 45 09.6	+0.6
	comp=Z,18nm,1.0s,baz=40						
PABE	Paberze	144.31	337		PKPbc	18 45 10.4	-0.4
AKASG	Malin Array Be	145.46	327	PKPbc	PKPdf	18 45 13.7	+0.4
	comp=Z,1.1nm,0.4s,baz=45,slow=4.3,SNR=11						
AKASG				SKPbc	SKiKP	18 48 05.4	-0.2
	comp=Z,1.5nm,0.7s,baz=38,slow=2.2,SNR=5.4						
BRTR	Keskin Array B	148.00	307	PKPbc	PKPbc	18 45 21.6	-0.4
	comp=Z,2.1nm,0.6s,baz=154,slow=4.8,SNR=5.3						
EIL	Elat	148.66	287	PKPbc	PKPbc	18 45 22.9	-0.9
	comp=Z,3.7nm,0.6s,baz=69,slow=12,SNR=4.4						
EKA	Eskdalemuir Ar	148.97	4	PKPbc	PKPbc	18 45 22.8	-0.8
	comp=Z,0.7nm,0.4s,baz=347,slow=2.5,SNR=9.5						
KWP	Kalwaria Pacla	149.26	331	*e*PKPbc	PKPbc	18 45 24.7	+0.1
KWP	Kalwaria Pacla	149.26	331		PKPbc	18 45 24.7	+0.1
KOLS	Kolonicke sedl	149.96	330	*e*PKP	PKiKP	18 45 27.3	+0.4
OJC	Ojcow	150.03	334	*e*PKPbc	PKPbc	18 45 26.3	-0.1
OJC	Ojcow	150.03	334		PKPbc	18 45 25.9	-0.5
CRVS	Cervenica-Dubn	150.35	331	*e*PKP	PKiKP	18 45 28.1	+0.4
MLR	Muntele Rosu	150.39	322	PKPbc	PKPbc	18 45 25.8	-1.7
	comp=Z,1.5nm,0.4s,baz=255,slow=13,SNR=4.9						
NIE	Niedzica	150.45	333	*e*PKPbc	PKiKP	18 45 28.9	+0.9
KSP	Ksiaz	150.78	339	*e*PKPbc	PKiKP	18 45 28.6	0.0
LANS	Liptovska Anna	151.00	333	*e*PKP	PKiKP	18 45 30.1	+1.0
OSTC	Ostas	151.05	339⇑	*e*PKP	PKPbc	18 45 28.7	-0.1
DPC	Dobruska-Polom	151.19	338⇑	*e*PKP	PKPbc	18 45 29.0	-0.1
KRLC	Kraliky	151.27	337⇑	*e*PKP	PKPbc	18 45 29.1	-0.2
CLL	Collm	151.35	343		PKPbc	18 45 28.9	-0.5
CLL	Collm	151.35	343	*i* PKPbc	PKPbc	18 45 28.9	-0.5
	comp=Z,10.0nm,0.7s						
CLL				*e*pPKPbc	pPKPbc	18 47 29.0	+1.6
MAUC	Maruska	151.48	335⇑	*e*PKP	PKiKP	18 45 30.4	+0.3
BRG	Berggiesshubel	151.48	342	*i* PKP	PKPbc	18 45 29.8	+0.1
BRG				Amp		18 45 30.3	
	comp=Z,6.5nm,0.5s						
KHC	Kasperske Hory	153.14	340⇑	*e*PKP	PKPbc	18 45 33.2	-0.3
CKRC	Cesky Krumlov	153.18	339⇑	*e*PKP	PKPbc	18 45 33.5	0.0
GERES	GERESS Array B	153.35	340	PKPbc	PKPbc	18 45 33.4	-0.6
	comp=Z,0.4nm,0.6s,baz=15,slow=4.1,SNR=3.0						
TORD	Torodi Ar. Bea	168.75	188	PKP	PKPdf	18 45 41.5	-1.3
	comp=Z,1.3nm,0.9s,baz=102,slow=0.4,SNR=5.0						
TORD				PKPab	PKPab	18 46 56.3	-0.1
	comp=Z,3.8nm,0.7s,baz=171,slow=3.7,SNR=18						

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*VAO **19** 18:28:17.4±3.6, 31°.59S×72°.35W, h4^{km}±22^{km}, mb4.4*
*IDC **19** 18:28:27.2±0.5, 30°.73S×71°.39W, h0^{km}, mb4.4/12, mbtmp4.3/16, ML4.0/4, MS3.3/11, Error ellipse: s-maj=18.4km s-min=16.6km az=117.0*
*SJA **19** 18:28:30.4±0.8, 30°.72S×71°.65W, h27^{km}±4^{km}, ML4.4, MW4.3*
*NEIC **19** 18:28:34.0±1.7, 30°.71S±0°.04×71°.44W±0°.04, h46^{km}±5^{km}, mb4.6/95, ML4.4(GUC), Error ellipse: s-maj=7.1km s-min=1.5km az=217.0*
*GUC **19** 18:28:34.6±0.6, 30°.68S×71°.34W, h31^{km}±2^{km}, ML4.4*
ISC 19 18:28:32.8±0.5**, 30°.72S**±0°.02×**71°.35W**±0°.05**, h37**^{km}±1^{km}**, n230,** σ1^{s}**.87**/229**, mb4.7**/51**, MS3.4**/7**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.25	281		Pn	18 28 41.1	-0.2
CO06	Fray Jorge	0.25	281⇑	*i*P	Pn	18 28 41.1	-0.2
CO06				*e*S	Sn	18 28 45.7	-3.4
CO06				IAML		18 28 47.5	
	comp=E,68µm,0.3s						
CO02	Combarbal	0.57	148		Pn	18 28 46.0	+1.3
CO02					Sn	18 28 55.3	+2.5
CO02	Combarbal	0.57	148⇓	*i*P	Pn	18 28 46.1	+1.5
CO02				*e*S	Sn	18 28 55.1	+2.3
CO02				IAML		18 28 56.7	
	comp=N,89µm,0.5s						
CO02	Combarbal	0.57	148	*e*P	Pn	18 28 55.6	+11
GO04	Tololo Observa	0.73	41		Pn	18 28 48.2	+1.4
GO04	Tololo Observa	0.73	41⇑	*e*P	Pn	18 28 48.2	+1.4
GO04				*e*S	Sn	18 28 57.5	+0.8
GO04				IAML		18 29 01.4	
	comp=N,43µm,0.3s						
GO04	Tololo Observa	0.73	41	*e*P	Pn	18 28 48.5	+1.8
GO04				*e*S	Sn	18 29 00.0	+3.3
CO05	La Serena	0.81	7		Pn	18 28 48.6	+1.0
CO05	La Serena	0.81	7⇓	*i*P	Pn	18 28 48.7	+1.1
CO05				*e*S	Sn	18 28 58.9	+0.5
CO05				IAML		18 29 05.2	
	comp=E,14µm,0.3s						
CO01	Juntas del Tor	1.32	56		Pn	18 28 57.6	+2.7
CO01	Juntas del Tor	1.32	56⇓	*i*P	Pn	18 28 57.6	+2.7
CO01				*e*S	Sn	18 29 13.1	+1.8
CO01				IAML		18 29 20.2	
	comp=N,7µm,0.2s						
CO01	Juntas del Tor	1.32	56	*e*P	Pn	18 28 57.8	+2.9
CO01				*e*S	Sn	18 29 16.1	+4.8
CO01				IAML		18 29 20.1	
	comp=Z,4µm,0.2s						
AROD	Rodeo	1.71	72	*e*P	Pn	18 29 05.2	+4.8
AROD				*e*S	Sn	18 29 30.4	+9.2
LCO	Las Campanas	1.80	19		Pn	18 29 03.1	+1.7
LCO	Las Campanas	1.80	19	*e*P	Pn	18 29 02.9	+1.4
LCO				*e*S	Sn	18 29 25.5	+2.4
LCO	Las Campanas	1.80	19	*e*P	Pn	18 29 03.4	+1.9
LCO				*e*S	Sn	18 29 26.0	+2.8
VA06	Catapilco	1.83	179		Pn	18 29 03.3	+1.6
VA06	Catapilco	1.83	179	*e*P	Pn	18 29 03.3	+1.6
VA06				*e*S	Sn	18 29 26.7	+3.0
ACCO	Cerro Coronel	1.98	87	*e*P	Pn	18 29 09.3	+5.3
ACCO				*e*S	Sn	18 29 36.7	+9.0
ACDV	Cuesta del Vie	2.00	75	*e*P	Pn	18 28 58.3	-6.0
ACDV				*e*S	Sn	18 29 38.0	+10
RTLS	Leoncito	2.06	122	*e*P	Pn	18 29 10.1	+5.0
RTLS				IAML		18 29 48.0	
	comp=Z,1µm,0.4s						
VA03	San Esteban	2.15	162		Pn	18 29 08.3	+2.2
VA03	San Esteban	2.15	162	*e*P	Pn	18 29 09.1	+2.9
VA03				*e*S	Sn	18 29 36.4	+4.8
VA03				IAML		18 29 44.7	
	comp=E,5µm,0.5s						
AUSP	Uspallata	2.25	132	*e*P	Pn	18 29 12.4	+4.6
ROC1	El Roble	2.27	173		Pn	18 29 07.7	-0.3
ROC1	El Roble	2.27	173	*e*P	Pn	18 29 07.3	-0.6
ROC1				*e*S	Sn	18 29 38.0	+3.3
VA01	Torpederas	2.31	186		Pn	18 29 08.8	+0.6
VA01	Torpederas	2.31	186	*e*P	Pn	18 29 08.9	+0.6
VA01				*e*S	Sn	18 29 42.1	+6.7
VA01				IAML		18 29 48.2	
	comp=E,1µm,0.5s						
VA01	Torpederas	2.31	186	*e*P	Pn	18 29 08.9	+0.7
ZON	Zonda	2.44	110		Pn	18 29 14.8	+4.7
ZON	Zonda	2.44	110	*e*P	Pn	18 29 15.1	+5.1
ZON				*e*S	Sn	18 29 57.4	+19
ZON				IAML		18 30 03.4	
	comp=Z,2µm,0.7s						
AC04	Llanos de Chal	2.52	6	Pn	Pn	18 29 12.7	+1.5
AC04	Llanos de Chal	2.52	6⇑	*i*P	Pn	18 29 12.7	+1.5
AC04				*e*S	Sn	18 29 45.9	+5.3
AC04				IAML		18 29 52.9	
	comp=N,2µm,0.5s						
AC04	Llanos de Chal	2.52	6	*e*P	Pn	18 29 12.7	+1.5
AC04				*e*S	Sn	18 29 44.9	+4.3
AC04				IAML		18 29 57.4	
	comp=Z,2µm,0.7s						
MT02	Curacav	2.54	176		Pn	18 29 12.9	+1.5
MT02	Curacav	2.54	176	*e*P	Pn	18 29 12.8	+1.3
MT02				*e*S	Sn	18 29 44.5	+3.4
MT02				IAML		18 29 58.8	
	comp=E,2µm,0.4s						
MT02	Curacav	2.54	176	*e*P	Pn	18 29 12.6	+1.2
MT02				*e*S	Sn	18 29 40.4	-0.7
MT02				IAML		18 29 58.0	
	comp=Z,1µm,0.5s						
RTCV	Cerro Valdivia	2.66	116	*e*P	Pn	18 29 18.5	+5.3
RTCV				*e*S	Sn	18 30 04.9	+21
MT03	Universidad Ad	2.86	166		Pn	18 29 18.6	+2.7
MT03	Universidad Ad	2.86	166	*e*P	Pn	18 29 19.1	+3.2
MT03				*e*S	Sn	18 29 55.6	+6.5
MT03				IAML		18 30 10.3	
	comp=N,3µm,0.3s						
VA05	Santo Domingo	2.94	184	Pn	Pn	18 29 17.3	+0.5
VA05	Santo Domingo	2.94	184	*e*P	Pn	18 29 17.5	+0.6
VA05				*e*S	Sn	18 29 55.2	+4.4
VA05				IAML		18 30 13.7	
	comp=E,2µm,0.3s						
MT09	Talagante	3.06	174		Pn	18 29 20.7	+1.9
MT09	Talagante	3.06	174	*e*P	Pn	18 29 20.7	+1.9
MT09				*e*S	Sn	18 29 57.4	+3.2
MT09				IAML		18 30 09.1	
	comp=N,1µm,0.4s						
MT01	Popeta	3.13	178		Pn	18 29 21.1	+1.4
GO03	Copiap	3.27	18		Pn	18 29 23.4	+1.9
GO03	Copiap	3.27	18	*e*P	Pn	18 29 23.8	+2.3
GO03				*e*S	Sn	18 30 06.4	+7.2
LMEL	Las Melosas	3.27	163		Pn	18 29 24.8	+3.2
BO04	La Punta	3.32	169		Pn	18 29 24.2	+2.0
AVFE	Valle Fertil	3.36	90	*e*P	Pn	18 29 26.8	+4.0
AVFE				*e*S	Sn	18 30 10.4	+9.0
AVFE				IAML		18 30 22.9	
	comp=Z,721nm,0.5s						
AC06	Mina Casimiro	3.46	15		Pn	18 29 25.7	+1.5
BO01	Tunca	3.67	177		Pn	18 29 28.3	+1.3
BO01	Tunca	3.67	177	*e*P	Pn	18 29 28.6	+1.7
BO01				*e*S	Sn	18 30 12.4	+3.4
ACHE	Chepes	4.05	97	*e*P	Pn	18 29 30.4	-2.0
ACHE				*e*P	Pn	18 29 36.1	+3.7
ACHE				*e*S	Sn	18 30 28.4	+10
GO05	Huala	4.30	186		Pn	18 29 35.4	-0.3
GO05	Huala	4.30	186	*e*P	Pn	18 29 35.8	+0.1
GO05				*e*S	Sn	18 30 26.9	+2.2
AC02	Maricunga	4.33	27	Pn	Pn	18 29 39.2	+2.7
AC01	Pan de Azucar	4.60	8	Pn	Pn	18 29 39.2	-0.6
ML02	Panimavida	5.03	181		Pn	18 29 46.0	+0.3
GO02	Mina Guanaco	5.75	16	Pn	Pn	18 29 56.0	0.0
PB14	IPOC Station P	6.13	8	Pn	Pn	18 29 58.6	-2.5
BI05	Punta Hualpn	6.20	194	Pn	Pn	18 30 00.3	-1.4
H03N1	Juan Fernandez	6.96	245	Pn	Pn	18 30 10.7	-1.2
	baz=114,slow=19						
H03N1				T	T	18 37 01.4	
	baz=73,slow=72,SNR=3464						
H03N3	Juan Fernandez	6.98	245	Pn	Pn	18 30 10.7	-1.5
	baz=114,slow=19						
H03N3				T	T	18 37 00.8	
	baz=73,slow=72,SNR=5838						
H03N2	Juan Fernandez	6.98	245	Pn	Pn	18 30 10.8	-1.4
	baz=114,slow=19						
H03N2				T	T	18 37 02.1	
	baz=73,slow=72,SNR=6217						
H03S3	Juan Fernandez	7.11	242	Pn	Pn	18 30 10.9	-3.1
H03S1	Juan Fernandez	7.11	242	Pn	Pn	18 30 10.9	-3.1
H03S2	Juan Fernandez	7.12	242	Pn	Pn	18 30 10.9	-3.3
PB15	IPOC Station P	7.67	13		Pn	18 30 21.2	-1.0
LVC	Limon Verde	8.37	16	Pn	Pn	18 30 30.2	-1.7
	comp=Z,1.0nm,0.3s,baz=49,slow=19,SNR=3.4						
LVC				Sn	Sn	18 32 01.0	-4.3
	comp=Z,4.8nm,0.3s,baz=354,slow=23,SNR=3.6						
LVC				LR	LR	18 34 14.6	
	comp=Z,99nm,21.4s,baz=199,slow=41						
	comp=Z,2.2nm,0.3s						
LVC	Limon Verde	8.37	16	Pn	Pn	18 30 32.2	+0.3
PB04	IPOC Station P	8.42	8	Pn	Pn	18 30 33.2	+0.8
PB01	IPOC Station P	9.78	10		Pn	18 30 47.6	-3.4
PLCA	Paso Flores	10.01	176	Pn	Pn	18 30 53.6	-0.5
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=2.0						
PLCA				LR	LR	18 35 18.6	
	comp=Z,111nm,18.9s,baz=337,slow=41						
	comp=Z,0.5nm,0.4s						
ITQB	Itaqui	12.79	89	Pn	Pn	18 31 31.3	-0.7
ITQB	Itaqui	12.79	89	*e*P	Pn	18 31 31.5	-0.4
CPUP	Villa Florida	13.08	74	Pn	Pn	18 31 35.8	-0.2
	comp=Z,0.4nm,0.3s,baz=247,slow=12,SNR=4.3						
CPUP				Sn	Sn	18 34 00.2	0.0
	comp=Z,0.5nm,0.3s,baz=230,slow=13,SNR=1.4						
CPUP				LR	LR	18 37 09.5	
	comp=Z,143nm,20.7s,baz=244,slow=40						
	comp=Z,1.2nm,0.4s						
CPUP	Villa Florida	13.08	74	Pn	Pn	18 31 36.8	+0.8
LPAZ	La Paz	14.67	12	Pn	P	18 32 00.2	-3.8
	comp=Z,0.4nm,0.3s,baz=190,slow=9.1,SNR=22						
LPAZ	La Paz	14.67	12	Pn	Pn	18 31 59.2	+1.0
PLTB	Pedras Altas	15.22	98	Pn	Pn	18 32 03.7	-1.3
PLTB	Pedras Altas	15.22	98	*e*P	Pn	18 32 02.6	-2.4
CPSB	Cacapava Do Su	15.44	93	*e*P	Pn	18 32 06.9	-1.0
ITAB	Concordia	17.17	83	Pn	P	18 32 30.2	-1.0
ITAB	Concordia	17.17	83	*e*P	P	18 32 31.2	+0.1
AQDB	Aquidauana	17.40	58	Pn	Pn	18 32 31.2	-1.5
AQDB	Aquidauana	17.40	58	*e*P	P	18 32 37.3	+3.6
SIV	San Ignacio	17.42	35	P	P	18 32 34.1	+0.1
	comp=Z,0.1nm,0.3s,baz=211,slow=9.3,SNR=22						
	comp=Z,5.1nm,0.5s						
CNLB	Canela	17.81	91	*e*P	Pn	18 32 35.1	-2.7
PTGB	Pitanga	18.09	75	*e*P	Pn	18 32 43.1	+1.9
TRCB	Terra Rica	18.47	69	*e*P	Pn	18 32 47.3	+1.4
NNA	Nana	19.32	344	LR	LR	18 38 55.5	
	comp=Z,38nm,20.2s,baz=192,slow=32						
TER01	Tubaro-SC	19.44	89	*e*P	P	18 32 53.7	-2.4
PP1B	Ponte de Pedra	19.88	53	*e*P	Pn	18 33 02.0	-0.8
PCMB	Pacaembu	20.16	68	*e*P	Pn	18 33 05.0	-1.1
VILB	Vilhena	20.46	33	*e*P	Pn	18 33 08.0	-1.7
SALV	Santo Antonio	20.56	48	*e*P	Pn	18 33 08.3	-2.4
FRTB	Fartura	20.73	75	*e*P	Pn	18 33 11.2	-1.6
ETMB	Extrema	21.34	14	*e*P	P	18 33 17.2	+0.4
NBRS	Nobres	21.71	45	*e*P	P	18 33 22.0	+1.2
ITRB	Iturama	21.89	65	*e*P	P	18 33 22.9	+0.2
DVLD	Doverlandia	22.43	56	*e*P	P	18 33 30.6	+2.1
BB19B	Bebedouro	22.64	70	*e*P	P	18 33 29.5	-1.2
SAML	Samuel	22.96	21	P	P	18 33 33.6	-0.5
ARAG	Araguaiana, MT	23.31	55	*e*P	P	18 33 38.1	+0.5
PDRB	Porto dos Gac	23.35	39	*e*P	P	18 33 38.3	+0.4
USHA	Ushuaia	24.19	176	P	P	18 33 46.3	+0.8
	comp=Z,9.4nm,0.7s,baz=346,slow=5.4,SNR=7.4						
	comp=Z,9.4nm,0.7s						
CLDB	Colider	24.47	39	*e*P	P	18 33 47.4	-1.0
IPMB	Ipameri, GO	24.54	64	*e*P	P	18 33 48.2	-1.0
BDFB	Brasilia	26.11	60	P	P	18 34 03.3	-0.1
	comp=Z,7.7nm,0.6s,baz=232,slow=10.0,SNR=9.7						
	comp=Z,7.7nm,0.6s						
BDFB	Brasilia	26.11	60	P	P	18 34 03.0	-0.3
SNDB	Serra Nova Dou	26.32	49	*e*P	P	18 34 05.3	+0.1
PEXB	Peixe	28.25	54	*e*P	P	18 34 22.8	+0.2
JANB	Januaria	29.28	64	*e*P	P	18 34 31.6	-0.2
ALF01	Guarapari-ES	29.30	77	*e*P	P	18 34 28.1	-3.7
PRPB	Parauapebas	31.71	44	*e*P	P	18 34 52.9	-0.2
RPN	Rapa Nui	33.33	267	LR	LR	18 44 24.8	
	comp=Z,74nm,18.0s,baz=292,slow=29						
PMSA	Palmer Station	34.38	174	LR	LR	18 47 56.4	
	comp=Z,58nm,18.4s,baz=350,slow=34						
BOAV	Boa Vista	34.51	19	*e*P	P	18 35 17.7	+0.1
ORCD	Orcadas	34.81	157	P	P	18 35 19.4	-0.3
ORCD				IAmb	IAmb	18 35 20.4	

	comp=Z,8.9nm,1.0s						
NBPN	Ponto Novo - B	35.01	62	*e*P	P	18 35 21.2	-0.8
MCPB	Macapa, AP	35.32	35	*e*P	P	18 35 24.2	-0.3
ZARC	Zaragoza, Cauc	38.14	354	P	P	18 35 46.5	-2.1
BAUV	El Baul	39.56	5	P	P	18 35 59.9	-0.6
MDP	Montagnes des	39.86	30	LR	LR	18 54 54.7	
	comp=Z,48nm,19.7s,baz=180,slow=40						
RCBR	Riachuelo	41.48	61	LR	LR	18 53 40.0	
	comp=Z,45nm,18.9s,baz=322,slow=36						
MLPR	Magueyes Islan	48.59	5	P	P	18 37 12.4	-0.3
CRPR	Cabo Rojo, PR	48.62	5	P	P	18 37 12.9	0.0
PDPR	Patillas Dam,	48.73	7	P	P	18 37 13.3	-0.5
CELP	Cerrillos	48.73	6	P	P	18 37 13.5	-0.3
SNAA	Sanae	54.41	159	P	P	18 37 56.1	+0.4
TROLL	Troll, Antarti	56.12	159	P	P	18 38 09.1	+0.9
V55A	Taylorsville	66.87	351	P	P	18 39 21.3	+0.4
W50A	Signal Mountai	66.88	348	P	P	18 39 19.6	-1.4
W50A				IAmb	IAmb	18 39 21.9	
	comp=Z,11nm,1.2s						
CPCT	Cooper Cave	66.98	348	P	P	18 39 20.8	-0.7
CPCT				IAmb	IAmb	18 39 22.4	
	comp=Z,8.1nm,0.9s						
SWET	Sewanee	67.01	347	P	P	18 39 21.4	-0.4
SWET				IAmb	IAmb	18 39 22.8	
	comp=Z,8.3nm,1.1s						
TKL	Tuckaleechee C	67.05	349	P	P	18 39 21.1	-1.0
TKL				IAmb	IAmb	18 39 22.6	
	comp=Z,5.5nm,0.8s						
TX32	Lajitas Array	67.19	330	P	P	18 39 22.5	-0.7
TXAR	Lajitas Array	67.19	330	P	P	18 39 23.9	+0.8
	comp=Z,2.1nm,0.7s,baz=149,slow=8.5,SNR=12						
	comp=Z,2.1nm,0.7s						
TXAR	Lajitas Array	67.19	330	P	P	18 39 22.8	-0.4
TX31	Lajitas Ar. Si	67.19	330	P	P	18 39 23.4	+0.2
V52A	Sevierville	67.20	349	P	P	18 39 23.0	0.0
V52A				IAmb	IAmb	18 39 23.6	
	comp=Z,5.8nm,0.8s						
PLAL	Pickwick Lake	67.22	345	P	P	18 39 21.9	-1.2
V51A	Loudon	67.29	349	P	P	18 39 22.4	-1.1
V51A				IAmb	IAmb	18 39 40.7	
	comp=Z,14nm,1.4s						
U54A	Nelsons Funny	67.61	351	P	P	18 39 24.9	-0.8
V48A	Smith Brothers	67.69	346	P	P	18 39 25.9	-0.2
V48A				IAmb	IAmb	18 39 27.7	
	comp=Z,12nm,1.2s						
CLTN	Cedars of Leba	67.93	347	P	P	18 39 28.1	+0.5
CLTN				IAmb	IAmb	18 39 28.4	
	comp=Z,5.5nm,0.8s						
MIAR	Mount Ida	68.22	340	P	P	18 39 28.8	-0.6
MIAR				IAmb	IAmb	18 39 30.6	
	comp=Z,7.1nm,1.4s						
Z35A	Perchaven, San	68.25	337	P	P	18 39 29.9	+0.3
WVT	Waverly	68.28	346	P	P	18 39 28.8	-0.9
WVT				IAmb	IAmb	18 39 31.2	
	comp=Z,9.4nm,1.1s						
ABTX	Abilene, Hawle	68.46	335	P	P	18 39 30.1	-1.0
ABTX				IAmb	IAmb	18 39 32.5	
	comp=Z,6.3nm,1.0s						
R58B	Mineral	68.60	354	P	P	18 39 31.0	-0.7
R58B				IAmb	IAmb	18 39 33.2	
	comp=Z,8.1nm,1.0s						
W39A	Magazine	68.88	340		P	18 39 33.6	+0.1
W39A				IAmb	IAmb	18 39 35.4	
	comp=Z,9.0nm,0.8s						
T47A	Sharon Grove	68.95	347	P	P	18 39 33.4	-0.6
T47A				IAmb	IAmb	18 39 34.7	
	comp=Z,15nm,1.2s						
LCAR	Lake Charles	68.99	343	P	P	18 39 34.0	-0.2
LCAR				IAmb	IAmb	18 39 35.0	
	comp=Z,6.1nm,0.7s						
FCAR	Ozark Folk Cen	69.08	342	P	P	18 39 33.2	-1.5
U40A	Yellville	69.71	342		P	18 39 38.5	-0.2
U40A				IAmb	IAmb	18 39 39.6	
	comp=Z,5.2nm,0.8s						
HHAR	Hobbs	69.94	341		P	18 39 39.8	-0.3
HHAR				IAmb	IAmb	18 39 41.1	
	comp=Z,9.1nm,0.9s						
MNTX	Cornudas Mount	69.97	329	P	P	18 39 39.5	-0.9
WMOK	Wichita Mounta	70.05	336	P	P	18 39 40.4	-0.4
Q51A	Peebles	70.28	350	P	P	18 39 41.3	-0.8
Q51A				IAmb	IAmb	18 39 42.8	
	comp=Z,6.0nm,0.8s						
MGMO	Mountain Grove	70.31	342	P	P	18 39 41.2	-1.1
MGMO				IAmb	IAmb	18 39 43.4	
	comp=Z,4.7nm,0.9s						
FVM	French Village	70.64	344	P	P	18 39 43.4	-0.9
FVM				IAmb	IAmb	18 39 45.4	
	comp=Z,9.6nm,1.1s						
P51A	Williamsport	70.69	350	P	P	18 39 43.5	-1.0
MSTX	Muleshoe	70.85	333	P	P	18 39 45.6	-0.2
MSTX				IAmb	IAmb	18 39 47.0	
	comp=Z,8.1nm,0.8s						
CCM	Cathedral Cave	70.90	343		P	18 39 46.0	+0.1
CCM				IAmb	IAmb	18 39 47.0	
	comp=Z,7.6nm,0.8s						
S39A	Bolivar	71.09	342	P	P	18 39 47.4	+0.3
S39A				IAmb	IAmb	18 39 48.2	
	comp=Z,7.6nm,1.1s						
AMTX	Amarillo	71.23	334	P	P	18 39 48.0	-0.2
AMTX				IAmb	IAmb	18 39 49.5	
	comp=Z,11nm,1.2s						
R40A	Maddies Statio	71.38	343	P	P	18 39 48.8	+0.1
121A	Cookes Peak, D	71.75	328	P	P	18 39 50.1	-1.3
121A				IAmb	IAmb	18 39 54.3	
	comp=Z,5.9nm,0.9s						
N49A	Columbus Grove	72.27	350	P	P	18 39 53.0	-1.0
P40A	Paris	72.50	343	P	P	18 39 55.1	-0.3
L56A	Greenwood	72.72	355	P	P	18 39 57.2	+0.4
P38A	Dawn	72.96	342	P	P	18 39 58.0	-0.2
P38A				IAmb	IAmb	18 39 59.0	
	comp=Z,8.0nm,0.8s						
DBIC	Dimbokro	73.59	72	P	P	18 40 02.9	+0.4
	comp=Z,7.9nm,0.6s,baz=237,slow=6.2,SNR=19						
DBIC				LR	LR	19 10 00.1	
	comp=Z,32nm,19.9s,baz=200,slow=34						
	comp=Z,7.9nm,0.6s						
DBIC	Dimbokro	73.59	72	P	P	18 40 02.6	+0.1
214A	Organ Pipe Nat	73.69	324	P	P	18 40 03.4	+0.7
214A				IAmb	IAmb	18 40 05.1	
	comp=Z,6.3nm,1.1s						
L40A	Anamosa	74.70	345	P	P	18 40 08.0	-0.4
SDCO	Great Sand Dun	75.22	333	P	P	18 40 12.7	+0.9
Q24A	Divide	76.14	333	P	P	18 40 18.1	+1.0
Q24A				IAmb	IAmb	18 40 19.8	
	comp=Z,6.5nm,0.8s						
MAW	Mawson	76.15	164	P	P	18 40 16.9	+0.4
	comp=Z,2.1nm,0.5s,baz=194,slow=7.2,SNR=8.4						
	comp=Z,2.1nm,0.5s						
MAW	Mawson	76.15	164	IAmb	IAmb	18 40 17.4	
	comp=Z,1.9nm,1.3s						
LMN	Caledonia Moun	76.44	5	P	P	18 40 17.9	-0.3
LMN				IAmb	IAmb	18 40 20.5	
	comp=Z,6.9nm,1.1s						
TRQ	Mont Tremblant	76.64	358	P	P	18 40 18.1	-1.3
TRQ				IAmb	IAmb	18 40 20.5	
	comp=Z,4.5nm,0.8s						
W13A	Hualapai Mount	76.74	325	P	P	18 40 18.9	-1.6
PV13	Radium Mtn., P	76.94	331	P	P	18 40 22.3	+0.8
SMCO	Snowmass	77.04	332	P	P	18 40 22.6	+0.3
SMCO				IAmb	IAmb	18 40 24.8	
	comp=Z,9.7nm,1.1s						
U15A	North Rim	77.05	327	P	P	18 40 24.0	+1.7
I37A	Lemond, Waseca	77.06	344	P	P	18 40 21.6	-0.2
ECSD	EROS Data Cent	77.62	342	P	P	18 40 25.1	+0.1
SPMN	Marine on St.	78.06	345	P	P	18 40 26.8	-0.6
SPMN				IAmb	IAmb	18 40 27.7	
	comp=Z,6.0nm,0.8s						
COWI	Conover	78.14	347	P	P	18 40 27.9	+0.1
COWI				IAmb	IAmb	18 40 39.5	
	comp=Z,8.9nm,1.5s						
CCUT	Cedar City	78.46	327	P	P	18 40 31.0	+1.0
SRU	San Rafael Swe	78.46	330	P	P	18 40 30.1	+0.1
SRU				IAmb	IAmb	18 40 31.6	
	comp=Z,4.2nm,0.9s						
P18A	Preston Nutter	78.77	330	P	P	18 40 30.0	-1.8
P18A				IAmb	IAmb	18 40 34.0	
	comp=Z,5.4nm,0.9s						
F36A	Milaca	78.83	344	P	P	18 40 31.2	-0.4
F36A				IAmb	IAmb	18 40 32.0	
	comp=Z,5.4nm,0.8s						
D41A	Chassel	78.96	348	P	P	18 40 33.0	+0.8
F33A	5 Mile Ranch,	79.49	343	P	P	18 40 34.5	-0.6
F33A				IAmb	IAmb	18 40 58.1	
	comp=Z,6.4nm,1.2s						
HWUT	Hardware Ranch	80.97	331	P	P	18 40 43.9	+0.4
HWUT				IAmb	IAmb	18 40 44.8	
	comp=Z,4.5nm,0.8s						
BOSA	Boshof	81.08	118	P	P	18 40 44.8	+0.2
	comp=Z,3.0nm,0.7s,baz=214,slow=4.3,SNR=4.3						
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	81.08	118	IAmb	IAmb	18 40 46.6	
	comp=Z,8.3nm,1.1s						
PDAR	Pinedale Array	81.12	333	P	P	18 40 44.3	0.0
	comp=Z,0.5nm,0.6s,baz=134,slow=8.5,SNR=4.0						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	81.54	325	P	P	18 40 47.5	+0.8
	comp=Z,1.2nm,0.8s,baz=149,slow=7.2,SNR=1.4						
	comp=Z,1.2nm,0.8s						
ELK	Elko	81.89	328	P	P	18 40 48.9	+0.5
	comp=Z,2.1nm,0.8s,baz=138,slow=2.9,SNR=7.5						
	comp=Z,2.1nm,0.8s						
ELK	Elko	81.89	328	P	P	18 40 49.0	+0.5
TOA0	Torodi Ar. Sit	82.55	70	P	P	18 40 52.1	-0.1
TOA0				IAmb	IAmb	18 41 14.9	
	comp=Z,9.0nm,1.2s						
TORD	Torodi Ar. Bea	82.55	70	P	P	18 40 52.8	+0.6
	comp=Z,2.2nm,0.5s,baz=260,slow=4.4,SNR=33						
	comp=Z,2.2nm,0.5s						
TORD	Torodi Ar. Bea	82.55	70	P	P	18 40 51.7	-0.5
LBTB	Lobatse	83.15	115	LR	LR	19 15 07.7	
	comp=Z,53nm,21.3s,baz=186,slow=34						
ULM	Lac du Bonnet	83.50	344	P	P	18 40 56.0	-0.2
	comp=Z,3.6nm,0.5s,baz=146,slow=6.3,SNR=4.4						
	comp=Z,3.6nm,0.5s						
ULM	Lac du Bonnet	83.50	344	IAmb	IAmb	18 40 56.8	
	comp=Z,5.8nm,0.9s						
ESDC	Sonseca Array	93.88	46	LR	LR	19 22 31.5	
	comp=Z,12nm,18.3s,baz=190,slow=34						
YKA	Yellowknife Ar	99.15	341	P	Pdif	18 42 08.9	-0.6
	comp=Z,0.3nm,0.6s,baz=141,slow=4.0,SNR=3.1						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	120.74	207	PKP	PKiKP	18 47 19.6	-1.9
	comp=Z,0.2nm,0.6s,baz=116,slow=1.7,SNR=4.7						
WRA	Warramunga Arr	123.90	209	PKP	PKiKP	18 47 26.1	-1.7
	comp=Z,0.5nm,1.0s,baz=154,slow=1.8,SNR=5.7						
H11S2	WAKE ISLAND Hy	126.34	271	T	T	21 06 19.4	
	baz=116,slow=75,SNR=147						
H11S1	WAKE ISLAND Hy	126.36	271	T	T	21 06 22.0	
	baz=116,slow=75,SNR=143						
H11S3	WAKE ISLAND Hy	126.36	271	T	T	21 06 21.0	
	baz=116,slow=75,SNR=118						
H11N3	WAKE ISLAND Hy	126.67	273	T	T	21 06 45.1	
	baz=116,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	126.69	273	T	T	21 06 46.2	
	baz=116,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	126.69	273	T	T	21 06 46.4	
	baz=116,slow=75,SNR=39						
BELG	Belogornoye	131.10	45	PKP	PKiKP	18 47 39.8	-1.3
	comp=Z,17nm,1.0s,baz=142,slow=3.4,SNR=5.0						
SEY	Seymchan	137.45	332	PKP	PKiKP	18 47 52.0	-1.6
	comp=Z,1.3nm,0.8s,baz=243,slow=4.5,SNR=4.2						
KURBB	Kurchatov Arra	150.04	40	PKPbc	PKiKP	18 48 18.9	-0.9
	comp=Z,2.6nm,0.7s,baz=300,slow=3.1,SNR=34						
KURK	Kurchatov	150.04	40		PKiKP	18 48 18.9	-1.0
ZALV	Zalesovo Beam	151.12	30	PKPbc	PKiKP	18 48 21.4	-0.6
	comp=Z,11nm,0.5s,baz=302,slow=3.3,SNR=49						
ZALV	Zalesovo Beam	151.12	30		PKiKP	18 48 21.1	-0.9
MKAR	Makanchi Array	154.09	44	PKPbc	PKiKP	18 48 28.0	-0.4
	comp=Z,0.8nm,0.7s,baz=357,slow=2.4,SNR=7.9						
MJAR	Matsushiro Arr	154.77	291	PKPab	PKPab	18 48 45.5	+0.2
	comp=Z,1.7nm,0.8s,baz=235,slow=0.6,SNR=4.8						

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*GUC **19** 19:01:30.0±0.5, 30°.70S×71°.40W, h44^{km}±1^{km}, ML3.8*
*IDC **19** 19:01:39.7±67.0, 24°.60S×70°.12W, h0^{km}, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=3126.0km s-min=101.5km az=15.0*
ISC 19 19:01:29.7±1.0**, 30°.68S**±0°.03×**71°.52W**±0°.08**, h50**^{km}**, n22,** σ**1^{s}06**/30**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.10	276	*e*P	Pn	19 01 37.1	-0.5
CO06				*i* S	Sn	19 01 42.6	-0.5
CO02	Combarbal	0.69	139	*e*P	Pn	19 01 42.3	-1.1
CO02				*i* S	Sn	19 01 51.3	-2.0
CO05	La Serena	0.80	18	*e*P	Pn	19 01 45.0	+0.2
CO05				*i* S	Sn	19 01 55.9	+0.1
CO05				IAML		19 02 02.0	
	comp=N,2μm,0.4s						
GO04	Tololo Observa	0.81	51	*e*P	Pn	19 01 44.4	-0.8
GO04				*i* S	Sn	19 01 55.3	-1.0
GO04				IAML		19 02 01.3	
	comp=N,6μm,0.4s						
CO01	Juntas del Tor	1.42	61	*e*P	Pn	19 01 53.6	+0.2
CO01				*i* S	Sn	19 02 11.2	+0.1
CO01				IAML		19 02 16.0	
	comp=N,1μm,0.2s						
LCO	Las Campanas	1.81	23	*i* P	Pn	19 01 59.3	+0.5
LCO				*e*S	Sn	19 02 21.7	+1.0
VA06	Catapilco	1.88	174	*e*P	Pn	19 01 59.4	0.0
VA06				*i* S	Sn	19 02 23.7	+1.7
VA06				IAML		19 02 30.5	
	comp=E,1μm,0.4s						
VA03	San Esteban	2.23	158	*e*P	Pn	19 02 05.3	+0.9
VA03				*i* S	Sn	19 02 32.5	+1.7
VA03				IAML		19 02 44.3	
	comp=N,986nm,0.3s						
AC04	Llanos de Chal	2.50	9	*e*P	Pn	19 02 08.6	+0.6
AC04				IAML		19 02 49.6	
	comp=N,314nm,0.7s						
MT02	Curacav	2.59	173	*e*P	Pn	19 02 08.8	-0.3
FCH	Farellones	2.83	159	*e*P	Pn	19 02 14.4	+1.6
FCH				IAML		19 03 00.2	
	comp=E,228nm,0.3s						
MT03	Universidad Ad	2.93	163	*e*P	Pn	19 02 15.1	+1.1
MT03				IAML		19 03 05.5	
	comp=E,709nm,0.4s						
MT09	Talagante	3.12	172	*e*P	Pn	19 02 16.9	+0.4
MT09				IAML		19 03 02.9	
	comp=E,318nm,0.3s						
GO03	Copiap	3.28	20	*e*P	Pn	19 02 19.6	+0.9
GO03				IAML		19 03 15.9	
	comp=N,260nm,0.4s						
LMEL	Las Melosas	3.35	161	*e*P	Pn	19 02 21.8	+2.1
LMEL				IAML		19 03 10.5	
	comp=N,329nm,0.4s						
BO04	La Punta	3.38	167	*e*P	Pn	19 02 20.7	+0.6
BO04				IAML		19 03 14.0	
	comp=E,306nm,0.4s						
AC06	Mina Casimiro	3.47	17	*e*P	Pn	19 02 21.9	+0.6
BO01	Tunca	3.71	174	*e*P	Pn	19 02 24.5	-0.1
BO03	Pichilemu	3.82	185	*e*P	Pn	19 02 24.4	-1.6
DBIC	Dimbokro	73.72	72	P	P	19 12 57.4	-1.4
	comp=E,3.4nm,0.8s,baz=238,slow=4.6,SNR=3.5						
	comp=E,3.4nm,0.8s						
TORD	Torodi Ar. Bea	82.67	70	P	P	19 13 48.9	+0.6
	comp=E,0.5nm,0.5s,baz=251,slow=4.3,SNR=11						
	comp=E,0.5nm,0.5s						
ZALV	Zalesovo Beam	151.16	29	PKPbc	PKiKP	19 21 17.5	+0.1
	comp=E,1.3nm,0.5s,baz=300,slow=3.3,SNR=7.0						

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*IDC **19** 19:02:45.6±2.2, 1°.66N×126°.22E, h0^{km}, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=178.7km s-min=28.3km az=65.0*
*DJA **19** 19:02:52.1±3.4, 2°N±5°×12°6E±°, h20^{km}±35^{km}, M3.0/6, MLv3.0/6*
ISC 19 19:02:52.1±1.5**, 1°.8N**±0°.2×**126°.4E**±0°.1**, h47**^{km}**, n7,** σ**1^{s}50**/7**, mb3.3**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.36	137	P	Pn	19 03 15.8	+1.1
GTOI	Gorontalo	3.61	252	P	Pn	19 03 47.7	+2.1
SANI	Sanana	3.83	187	P	Pn	19 03 49.1	+0.5
MRSI	Marisa	4.68	254	P	Pn	19 03 59.5	-0.8
WRA	Warramunga Arr	22.94	161	P	P	19 07 50.9	-1.5
	0.6nm,0.5s,baz=339,slow=11,SNR=14						
	0.6nm,0.5s						
ASAR	Alice Springs	26.31	164	P	P	19 08 23.1	-0.5
	0.2nm,0.8s,baz=344,slow=11,SNR=2.1						
	0.2nm,0.8s						
MKAR	Makanchi Array	58.99	326	P	P	19 12 47.0	-0.1
	0.2nm,0.5s,baz=121,slow=8.3,SNR=2.0						
	0.2nm,0.5s						

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*IDC **19** 19:04:20.0±2.2, 1°.79N×125°.94E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=180.5km s-min=27.5km az=65.0*
*DJA **19** 19:04:26.7±0.9, 2°N±4°×12°6E±°, h12^{km}±8^{km}, M3.1/7, MLv3.1/7*
ISC 19 19:04:26.0±1.5**, 2°.0N**±0°.2×**126°.6E**±0°.1**, h47**^{km}**, n7,** σ**1^{s}01**/8**, mb3.4**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.49	147	P	Pn	19 04 51.1	+0.7
TNTI				S	Sn	19 05 09.7	+1.0
LBMI	Labuha	2.81	161	P	Pn	19 05 09.0	+0.4
GTOI	Gorontalo	3.82	249	P	Pn	19 05 23.4	+1.1
SANI	Sanana	4.10	188	P	Pn	19 05 25.3	-0.9
WRA	Warramunga Arr	23.14	161	P	P	19 09 27.4	-1.0
	0.8nm,0.4s,baz=338,slow=11,SNR=19						
	0.8nm,0.4s						
ASAR	Alice Springs	26.53	165	P	P	19 09 59.5	-0.1
	0.2nm,0.5s,baz=343,slow=11,SNR=9.3						
	0.2nm,0.5s						
MKAR	Makanchi Array	58.85	326	P	P	19 14 19.5	-0.5
	0.2nm,0.6s,baz=116,slow=7.1,SNR=1.9						
	0.2nm,0.6s						

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*IDC **19** 19:08:15.8±0.5, 14°.35S×166°.60E, h0^{km}, mb4.5/26, mbtmp4.5/29, ML2.3/1, MS4.0/47, Error ellipse: s-maj=13.5km s-min=13.2km az=69.0*
*GCMT **19** 19:08:20.1±0.2, 14°.39S±0°.02×166°.45E±0°.01, h19^{km}, MW5.0/101, Moment Tensor Solution. s62,c78; s101,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.10±.15; $M_{\theta\theta}$-0.11±.10; $M_{\phi\phi}$-3.99±.11; $M_{r\theta}$1.16±.23; $M_{\theta\phi}$1.31±.08; $M_{\phi r}$-0.02±.19; Best double couple: $M_0$4.40800×10^{16} NP1:ϕ_s357.00000°, δ45.00000°, λ112.00000°. NP2:ϕ_s148.00000°, δ49.00000°, λ70.00000°. Principal axes: T 4.4100, Plg75.0000°, Azm352.0000°; N -0.0050, Plg15.0000°, Azm162.0000°; P -4.4070, Plg2.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **19** 19:08:21.1±1.8, 14°.37S±0°.07×166°.68E±0°.08, h35^{km}±1^{km}, mb4.9/67 Error ellipse: s-maj=16.1km s-min=8.0km az=46.0*
ISC 19 19:08:20.4±0.3**, 14°.39S**±0°.05×**166°.58E**±0°.06**, h28**^{km}**, n199,** σ**1^{s}54**/180**, mb4.8**/77**, MS4.0**/52**, 1C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.21	150		Pn	19 08 40.1	-1.4
LIFNC	LIFOU	6.38	174	Pn	Pn	19 09 52.2	-0.4
MARNC	Mare, Loyalty	7.19	169	Pn	Pn	19 10 04.6	+1.0
DZM	Mont Dzumac	7.64	181	*e*Pn	Pn	19 10 10.0	0.0
	129nm,1.4s						
DZM				*e*Sn	Sn	19 11 48.6	+13
	174nm,1.1s						
DZM	Mont Dzumac	7.64	181	Pn	Pn	19 10 10.3	+0.4
	16nm,0.3s,baz=348,slow=11,SNR=76						
DZM				Sn	Sn	19 11 34.9	-0.8
	baz=103,slow=24						
DZM				LR	LR	19 12 21.7	
	comp=Z,916nm,19.3s,baz=1.5,slow=32						
DZM	Mont Dzumac	7.64	181		Pn	19 10 10.7	+0.8
ONTNC	Ouen Toro	7.88	181		Pn	19 10 12.7	-0.4
OUENC	Ouen Island, N	7.99	178	Pn	Pn	19 10 15.5	+0.8
HNR	Honiara	8.15	306	Pn	Pn	19 10 15.8	-1.1
	114nm,0.6s,baz=119,slow=9.7,SNR=1.9						
HNR				Sn	Sn	19 11 45.0	-3.1
	baz=244,slow=4.0						
HNR				LR	LR	19 12 57.6	
	comp=Z,1μm,21.2s,baz=136,slow=35						
PINNC	Pines Island,	8.22	174	Pn	Pn	19 10 17.6	-0.2
KRVT	Keravat (AS076	17.50	304	LR	LR	19 19 51.4	
	comp=Z,906nm,18.3s,baz=268,slow=40						
EIDS	Eidsvold	18.19	231	P	P	19 12 32.0	+0.9
	baz=18,SNR=4.1						
EIDS	Eidsvold	18.19	231	P	P	19 12 31.2	+0.1
PMG	Port Moresby	19.63	282	P	P	19 12 46.0	-1.0
	0.3nm,0.3s,baz=287,slow=23,SNR=2.3						
PMG				S	Sn	19 16 30.0	+1.7
	6.9nm,0.9s,baz=133,slow=23,SNR=1.7						
PMG				LR	LR	19 19 26.1	
	comp=Z,2μm,18.2s,baz=20,slow=34						
	14nm,0.9s						
PMG	Port Moresby	19.63	282	P	P	19 12 46.7	-0.2
CTA	Charters Tower	20.21	251	P	P	19 12 53.1	-0.2
	5.1nm,0.8s,baz=117,slow=11,SNR=2.7						
CTA				LR	LR	19 19 11.2	
	comp=Z,380nm,20.6s,baz=74,slow=32						
	5.1nm,0.8s						
CTAO	Charters Tower	20.21	251		P	19 12 53.7	+0.4
RMQ	Roma	20.55	231	P	Pn	19 12 58.6	-0.7
	baz=21,SNR=18						
AFI	Afiamalu	20.99	91	P	P	19 13 05.7	+3.8
	29nm,0.9s,baz=68,slow=22,SNR=2.3						
AFI				LR	LR	19 19 33.2	
	comp=Z,436nm,18.1s,baz=258,slow=32						
AFI	Afiamalu	20.99	91	P	P	19 12 57.9	-3.9
AFI				IAmb	IAmb	19 13 14.2	
	comp=Z,52nm,0.8s						
QLP	Quilpie	24.14	236	P	P	19 13 33.9	-0.3
	baz=24,SNR=3.6						
URZ	Urewera	25.54	161	P	P	19 13 46.5	-0.2
	comp=Z,5.2nm,0.6s,baz=284,slow=6.1,SNR=1.9						
	comp=Z,5.2nm,0.6s						
CMSA	Cobar Meteorol	25.63	225	P	P	19 13 49.8	+2.1
	baz=26,SNR=8.8						
STKA	Stephens Creek	28.71	228	P	P	19 14 15.6	+0.3
	comp=Z,4.9nm,0.6s,baz=28,slow=6.7,SNR=12						
STKA				LR	LR	19 25 36.5	
	comp=Z,426nm,18.2s,baz=61,slow=36						
	comp=Z,4.9nm,0.6s						
STKA	Stephens Creek	28.71	228	P	P	19 14 15.8	+0.5
	baz=29,SNR=8.9						
STKA	Stephens Creek	28.71	228	P	P	19 14 15.8	+0.5
RPZ	Rata Peaks	29.47	173	LR	LR	19 25 33.0	
	comp=Z,535nm,18.6s,baz=360,slow=35						
WB0	Warramunga Arr	31.20	256	P	P	19 14 35.6	-1.9
WB2	Warramunga Arr	31.25	255	P	P	19 14 36.3	-1.7
	baz=31						
WRA	Warramunga Arr	31.26	255	P	P	19 14 36.1	-2.0
	comp=Z,2.1nm,0.9s,baz=86,slow=8.5,SNR=12						
WRA				PcP	PcP	19 17 32.6	+0.3
	comp=Z,1.2nm,1.0s,baz=81,slow=2.4,SNR=3.2						
WRA				LR	LR	19 26 56.2	
	comp=Z,371nm,18.7s,baz=41,slow=36						
	comp=Z,2.1nm,0.9s						
AS31	Alice Springs	32.17	248	P	P	19 14 44.2	-1.9
ASAR	Alice Springs	32.17	248	P	P	19 14 44.5	-1.6
	comp=Z,1.1nm,0.6s,baz=73,slow=9.5,SNR=22						
ASAR				PcP	PcP	19 17 34.2	-0.5
	comp=Z,0.7nm,0.7s,baz=84,slow=3.8,SNR=2.2						
ASAR				LR	LR	19 26 17.4	
	comp=Z,242nm,21.7s,baz=70,slow=34						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	32.17	248	P	P	19 14 44.8	-1.3
RAR	Rarotonga	32.70	107	LR	LR	19 27 28.1	
	comp=Z,114nm,18.1s,baz=306,slow=35						
BBOO	Buckleboo	33.26	231	P	P	19 14 55.6	+0.1
	baz=33,SNR=6.2						
GUMO	Guam	35.14	321	LR	LR	19 27 55.5	
	comp=Z,262nm,21.8s,baz=135,slow=34						
KNRA	Kununurra	36.51	263	P	P	19 15 22.1	-1.7
	baz=36,SNR=5.0						
SIJI	Sorong	37.40	288	P	P	19 15 30.8	-0.5
	comp=Z,3.5nm,0.6s,baz=94,slow=9.5,SNR=5.7						
SIJI				LR	LR	19 31 59.3	
	comp=Z,565nm,18.1s,baz=140,slow=38						
	comp=Z,3.5nm,0.6s						
WRKA	Warakurna	37.44	248	P	P	19 15 30.5	-1.1
	baz=38,SNR=17						
FORT	Forrest	38.90	239	P	P	19 15 44.4	+0.7
	baz=39						
LBMI	Labuha	40.98	286	P	P	19 16 00.8	-0.4
	comp=Z,22nm,0.9s						
TNTI	Ternate	41.63	288	P	P	19 16 05.0	-1.5
SANI	Sanana	41.91	283	P	P	19 16 07.5	-1.4
	comp=Z,34nm,0.8s						
BATI	Baumata	42.09	271	P	P	19 16 11.3	+0.9
	comp=Z,14nm,0.7s,baz=102,slow=4.4,SNR=5.3						
BATI				LR	LR	19 33 48.8	
	comp=Z,295nm,19.7s,baz=146,slow=36						
	comp=Z,14nm,0.7s						
PPT2	Papeete2	42.20	100	*e*S	S	19 22 23.4	-6.7
	comp=Z,232nm,27.5s						
PPT2				*e*LR	LR	19 27 56.8	

	comp=Z,880nm,44.5s						
PPT	Papeete	42.20	100	LR	LR	19 29 35.2	
	comp=Z,124nm,19.6s,baz=308,slow=30						
TBI	Tubuai	42.41	109	eS	S	19 22 36.4	+3.5
TBI				eLR	LR	19 28 16.4	
	comp=Z,298nm,35.0s						
EDFI	Ende, Flores	44.28	272	P	P	19 16 27.6	-0.6
	comp=Z,8.4nm,0.8s						
KMSI	Cibinong	44.70	286	P	P	19 16 31.1	-0.3
	comp=Z,64nm,0.7s						
PSA00	Pilbara Seismi	44.89	254	P	P	19 16 31.1	-1.8
MBWA	Marble Bar	44.99	254	P	P	19 16 31.7	-1.9
MBWA				IAmb	IAmb	19 16 41.1	
	comp=Z,25nm,1.4s						
LUWI	Luwuk	45.28	283	P	P	19 16 35.0	-1.0
DAV	Davao City (W)	45.92	295	LR	LR	19 37 00.0	
	comp=Z,36nm,18.3s,baz=115,slow=38						
KAPI	Kappang	47.00	277	LR	LR	19 35 18.3	
	comp=Z,131nm,21.5s,baz=98,slow=34						
KLBR	Kellerberrin	47.69	240	P	P	19 16 54.0	-0.7
	baz=48,SNR=5.6						
MPSI	Mapaga	48.44	284	P	P	19 16 59.6	-1.2
	comp=Z,23nm,0.8s						
MORW	Morawa	48.81	244	P	P	19 17 03.0	-0.5
	baz=49,SNR=5.7						
MORW	Morawa	48.81	244	P	P	19 17 03.0	-0.5
MORW				IAmb	IAmb	19 17 04.5	
	comp=Z,7.0nm,0.8s						
MYLDM	Lahad Datu	51.49	289	P	P	19 17 22.4	-1.5
TAOE	Nuku Hiva Isla	52.38	90	eLR	LR	19 32 28.4	
	comp=Z,536nm,28.3s						
JGF	Kuroka	56.90	332	P	P	19 18 03.0	-0.1
JGF				IAmb	IAmb	19 18 13.7	
	comp=Z,14nm,0.9s						
MJAR	Matsushiro Arr	57.30	333	P	P	19 18 04.7	-1.1
	comp=Z,3.0nm,0.8s,baz=166,slow=8.3,SNR=7.3						
MJAR				LR	LR	19 43 16.2	
	comp=Z,67nm,19.0s,baz=180,slow=37						
	comp=Z,3.0nm,0.8s						
MJAR	Matsushiro Arr	57.30	333	P	P	19 18 05.0	-0.8
MAJO	Matsushiro	57.30	333	P	P	19 18 05.7	0.0
MAJO				IAmb	IAmb	19 18 14.8	
	comp=Z,8.8nm,0.8s						
MJB9	Matsu-Tunnel	57.30	333	P	P	19 18 05.9	+0.1
MJB9				IAmb	IAmb	19 18 14.7	
	comp=Z,8.7nm,0.8s						
KSM	Kuching	57.89	281	P	P	19 18 10.3	-0.1
JNU	Nakatsue	58.26	325	P	P	19 18 11.9	-0.7
	comp=Z,12nm,0.9s,baz=143,slow=8.1,SNR=5.0						
	comp=Z,12nm,0.9s						
LEM	Lembang	58.31	271	P	P	19 18 13.5	0.0
	comp=Z,14nm,0.4s,baz=149,slow=23,SNR=1.4						
LEM				LR	LR	19 44 44.6	
	comp=Z,109nm,19.0s,baz=5.0,slow=38						
	comp=Z,14nm,0.4s						
JHS	Saijyo	58.49	328	P	P	19 18 14.4	+0.3
TPUB	Ta-pu	58.51	309	P	P	19 18 13.4	-1.2
JSD	Sado	58.53	334	P	P	19 18 14.9	+0.6
JSD				IAmb	IAmb	19 18 41.5	
	comp=Z,12nm,0.9s						
ASAJ	Asahikawa	62.20	341	LR	LR	19 42 27.7	
	comp=Z,107nm,20.4s,baz=170,slow=33						
TJN	Taejon	62.61	325		P	19 18 40.5	-1.7
KSCHJ	Chungju	62.63	326	P	P	19 18 41.0	-1.4
KSCHJ				IAmb	IAmb	19 18 50.9	
	comp=Z,6.8nm,0.7s						
KSRS	Korea Array	63.09	326	P	P	19 18 45.2	-0.1
	comp=Z,2.9nm,0.9s,baz=123,slow=32,SNR=8.3						
	comp=Z,2.9nm,0.9s						
KS19	Wonju Array Si	63.15	326	P	P	19 18 45.7	-0.2
KS19				IAmb	IAmb	19 18 50.3	
	comp=Z,7.1nm,0.9s						
VNDA	Vanda	63.18	181	P	P	19 18 46.2	+0.8
	comp=Z,1.5nm,0.7s,baz=359,slow=6.0,SNR=6.7						
VNDA				LR	LR	19 43 22.1	
	comp=Z,71nm,19.1s,baz=14,slow=33						
	comp=Z,1.5nm,0.7s						
VNDA	Vanda	63.18	181	P	P	19 18 46.2	+0.8
VNDA				IAmb	IAmb	19 18 57.7	
	comp=Z,12nm,1.3s						
SBA	Scott Base	63.47	180	P	P	19 18 49.0	+1.6
NJ2	Nanjing	64.97	316	eP	P	19 18 57.3	-0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KRJI	Kerinci	65.39	274	P	P	19 19 00.7	-0.4
	comp=Z,2µmcomp=Z,122nm,0.6s						
USRK	Ussuriysk Ar.	66.28	334	P	P	19 19 07.1	+1.0
	comp=Z,8.3nm,0.9s,baz=170,slow=8.3,SNR=9.6						
	comp=Z,8.3nm,0.9s						
SHEM	Shemya Is, Ala	67.16	5	P	P	19 19 10.7	-0.7
	comp=Z,14nm,0.8s,baz=302,slow=8.7,SNR=1.8						
SHEM				LR	LR	19 43 28.5	
	comp=Z,108nm,19.5s,baz=264,slow=32						
	comp=Z,14nm,0.8s						
IPM	Ipoh	67.62	281	P	P	19 19 14.6	-0.7
PETK	Petropavlovsk-	67.66	354	P	P	19 19 14.7	0.0
	comp=Z,2.7nm,0.8s,baz=178,slow=10,SNR=3.9						
PETK				LR	LR	19 44 26.5	
	comp=Z,129nm,19.9s,baz=155,slow=32						
	comp=Z,2.7nm,0.8s						
MDJ	Mudanjiang	67.67	332	P	P	19 19 14.5	-0.4
MDJ	Mudanjiang	67.67	332	P	P	19 19 16.1	+1.2
MDJ				S	S	19 28 12.9	+2.4
MDJ				SS	SS	19 32 33.9	+1.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,120nm,7.3s						
MDJ				LR	LR		
	comp=Z,80nm,9.4s						
MDJ				LR	LR		
	comp=Z,99nm,12.2s						
MDJ				LR	LR		
	comp=Z,160nm,18.4s						
CN2	Changchun	69.01	329	eP	P	19 19 24.8	+1.5
CN2				esP	pwP	19 19 39.1	+3.5
CN2				eS	S	19 28 26.9	+0.4
CN2				esS	sS	19 28 44.1	+4.7
CN2				LR	LR		
	comp=Z,110nm,17.0s						
CN2				LR	LR		
	comp=Z,90nm,11.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
RPSI	Rantau Prapat	69.12	279	P	P	19 19 24.4	-0.2
PSI	Prapat	69.14	279	P	P	19 19 24.4	-0.6
	comp=Z,4.5nm,0.4s,baz=107,slow=1.7,SNR=7.2						
PSI				LR	LR	19 50 07.8	
	comp=Z,91nm,18.8s,baz=98,slow=36						
	comp=Z,4.5nm,0.4s						
BNX	BinXian	69.53	332	⇓P	P	19 19 26.6	+0.1
BNX				pmax	pmax		
	comp=Z,14nm,0.6s						
BNX				pmax	pmax		
	comp=Z,210nm,4.2s						
KLR	Kul'dur	70.43	337	P	P	19 19 32.4	+0.4
	comp=Z,2.0nm,0.7s,baz=185,slow=5.1,SNR=6.2						
KLR				LR	LR	19 49 34.6	
	comp=Z,65nm,19.3s,baz=146,slow=35						
	comp=Z,2.0nm,0.7s						
ENH	Enshi	70.64	310	P	P	19 19 32.5	-1.2
ENH				IAmb	IAmb	19 19 43.3	
	comp=Z,9.5nm,0.8s						
HNS	HongShan	70.91	318	⇑P	P	19 19 44.6	+10
XAN	Xi'an	72.97	313	P	P	19 19 47.9	+0.2
XAN				pP	pP	19 19 56.5	+1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,110nm,6.5s						
XAN				LR	LR		
	comp=Z,180nm,16.5s						
XAN				LR	LR		
	comp=Z,170nm,17.2s						
KMI	Kunming	73.56	302	⇓P	P	19 19 55.5	+4.0
KMI				pP	sP	19 20 01.6	-0.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT	XiLinHaoTe	74.04	325	eP	P	19 19 55.8	+2.0
XLT				pP	pwP	19 20 07.1	+1.0
XLT				sP	PcP	19 20 09.9	+1.0
XLT				S	S	19 29 29.6	+4.8
XLT				sS	sS	19 29 41.8	+4.1
XLT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,130nm,3.9s						
CMAR	Chiang Mai Arr	74.20	294	P	P	19 19 55.8	+0.7
	comp=Z,3.0nm,0.9s,baz=130,slow=4.5,SNR=16						
CMAR				LR	LR	19 55 45.0	
	comp=Z,20nm,18.2s,baz=130,slow=38						
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	74.20	294	P	P	19 19 55.0	-0.2
CHTO	Chiang Mai	74.33	295	P	P	19 19 56.6	+0.7
CHTO				IAmb	IAmb	19 20 06.8	
	comp=Z,12nm,1.2s						
MA2	Magadan	74.82	352	P	P	19 19 57.6	-0.2
	comp=Z,3.8nm,0.8s,baz=148,slow=6.5,SNR=3.9						
MA2				LR	LR	19 49 10.6	
	comp=Z,155nm,20.4s,baz=163,slow=33						
	comp=Z,3.8nm,0.8s						
HHC	Hu-ho-hao-te	74.90	320	eP	P	19 19 59.9	+1.0
HHC				pmax	pmax		
	comp=Z,53nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,5.8s						
HHC				LR	LR		
	comp=Z,300nm,15.9s						
HHC				LR	LR		
	comp=Z,200nm,16.5s						
HHC				LR	LR		
	comp=Z,290nm,15.9s						
PZH	PanZhiHua	74.95	303	P	P	19 20 05.9	+6.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
QSPA	South Pole Qui	75.63	180	P	P	19 20 03.0	+0.3
	comp=Z,3.3nm,0.8s,baz=54,slow=3.0						
QSPA				LR	LR	19 52 35.8	
	comp=Z,93nm,18.1s,baz=42,slow=35						
	comp=Z,3.3nm,0.8s						
QSPA	South Pole Qui	75.63	180	P	P	19 20 03.0	+0.3
QSPA				IAmb	IAmb	19 20 18.4	
	comp=Z,12nm,1.1s						
HIA	Hailar	75.66	330	P	P	19 20 02.1	-0.8
HIA				IAmb	IAmb	19 20 12.7	
	comp=Z,9.4nm,1.0s						
LZH	Lanzhou	77.60	313	⇓P	P	19 20 24.4	+10
LZH				pP	pwP	19 20 34.1	+8.4
LZH				sP	sP	19 20 39.9	+15
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
LZH				LR	LR		
	comp=N,120nm,16.3s						
LZH				LR	LR		
	comp=E,140nm,17.4s						
LZH				LR	LR		
	comp=Z,100nm,16.1s						
SEY	Seymchan	77.87	353	P	P	19 20 14.8	-0.3
	comp=Z,2.9nm,0.7s,baz=138,slow=5.8,SNR=14						
SEY				LR	LR	19 51 13.3	
	comp=Z,180nm,20.5s,baz=160,slow=33						
	comp=Z,2.9nm,0.7s						
KDAK	Kodiak Island	79.39	21	LR	LR	19 50 24.4	
	comp=Z,78nm,18.8s,baz=238,slow=32						
ULN	Ulaanbaatar	81.47	324	P	P	19 20 34.8	-0.4
ULN				IAmb	IAmb	19 20 45.3	
	comp=Z,7.1nm,0.8s						
YAK	Yakutsk	81.52	343	P	P	19 20 33.1	-1.8
SONM	Songino Array	81.83	324	P	P	19 20 37.0	-0.1
	comp=Z,1.4nm,0.7s,baz=151,slow=8.1,SNR=9.4						
SONM				LR	LR	19 57 56.5	
	comp=Z,66nm,18.6s,baz=83,slow=36						
	comp=Z,1.4nm,0.7s						
SONM	Songino Array	81.83	324	P	P	19 20 35.8	-1.3
MAW	Mawson	81.94	202	LR	LR	19 50 54.3	
	comp=Z,110nm,19.5s,baz=144,slow=31						
GTA	Gaotai	81.95	314	eP	P	19 20 38.8	+0.9
GTA				pP	sP	19 20 47.9	-1.0
GTA				sP	pwP	19 20 55.6	+6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,95nm,6.4s						
GTA				LR	LR		
	comp=Z,72nm,13.1s						
GTA				LR	LR		
	comp=Z,110nm,15.9s						
GTA				LR	LR		
	comp=Z,88nm,17.1s						
M19K	Big River Lodg	82.02	18	P	P	19 20 38.4	+0.8
M19K				IAmb	IAmb	19 21 00.6	
	comp=Z,10nm,1.1s						
L19K	White Mountain	82.11	17	P	P	19 20 37.7	-0.4
BILL	Bilibino	82.20	360	P	P	19 20 37.3	-1.1
BILL				IAmb	IAmb	19 20 48.1	
	comp=Z,6.5nm,0.7s						
J20K	Nowinta River	83.89	16	P	P	19 20 46.9	-0.3
SCM	Sheep Creek Mo	84.18	20	P	P	19 20 48.3	-0.5
SCM				IAmb	IAmb	19 20 53.2	
	comp=Z,11nm,0.8s						
GOMU	GeErMu	84.26	309	P	P	19 20 59.9	+10
GOMU				pP	pwP	19 21 01.8	+0.1
GOMU				sP	sP	19 21 05.0	+3.8
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,41nm,5.0s						
TRF	Thorofare Moun	84.42	18	P	P	19 20 49.2	-0.9
TRF				IAmb	IAmb	19 20 54.0	
	comp=Z,8.6nm,0.8s						
BPAW	Bear Paw Mtn.	84.71	17	P	P	19 20 49.5	-1.9
RND	Reindeer	84.83	18	P	P	19 20 51.2	-0.8
N25K	Chitina, Valde	84.95	21	P	P	19 20 52.0	-0.8
N25K				IAmb	IAmb	19 20 54.2	
	comp=Z,5.7nm,0.9s						
DHY	Denali Highway	85.05	19	P	P	19 20 52.8	-0.5
DHY				IAmb	IAmb	19 21 10.5	
	comp=Z,7.7nm,1.1s						
I21K	Tanana	85.25	16	P	P	19 20 53.5	-0.5
H21K	Melozitna Rive	85.40	16	P	P	19 20 54.6	-0.3
H21K				IAmb	IAmb	19 20 57.0	
	comp=Z,9.2nm,1.0s						
IMAR	Indian Mountai	85.42	15	P	P	19 20 54.4	-0.5
NEA2	Nenana	85.64	18	P	P	19 20 54.9	-1.1
BARN	Barnard Glacie	85.65	23	P	P	19 20 56.4	0.0
BARN				IAmb	IAmb	19 21 04.0	
	comp=Z,9.3nm,1.2s						
YBH	Yreka Blue Hor	85.65	45	LR	LR	19 54 15.7	
	comp=Z,51nm,18.7s,baz=236,slow=32						
WRH	Wood River Hil	85.84	18	P	P	19 20 56.3	-0.7
WRH				IAmb	IAmb	19 20 57.7	
	comp=Z,5.9nm,0.8s						
M26K	Nabesna, AK	86.05	21	P	P	19 20 57.6	-0.6
M26K				IAmb	IAmb	19 21 12.6	
	comp=Z,4.6nm,0.9s						
HDA	Harding Lake	86.14	18	P	P	19 20 57.3	-1.1
MDM	Murphy Dome	86.15	18	P	P	19 20 56.3	-2.3
MDM				IAmb	IAmb	19 20 59.8	
	comp=Z,13nm,1.1s						
RIDG	Independent Ri	86.33	20	P	P	19 20 57.9	-1.7
H23K	Yukon River	86.41	17	P	P	19 20 59.6	-0.3
H23K				IAmb	IAmb	19 21 25.9	
	comp=Z,10nm,1.1s						
IL31		86.41	18	P	P	19 20 58.0	-1.8
IL31				IAmb	IAmb	19 21 00.6	
	comp=Z,7.5nm,0.8s						
ILAR	Eielson Array	86.41	18	P	P	19 20 58.5	-1.3
	comp=Z,6.1nm,0.8s,baz=235,slow=5.5,SNR=45						
ILAR				LR	LR	19 55 34.9	
	comp=Z,90nm,19.6s,baz=262,slow=33						
	comp=Z,6.1nm,0.8s						
ILAR	Eielson Array	86.41	18	P	P	19 20 57.9	-2.0
J25K	Salcha River,	86.77	19	P	P	19 21 00.2	-1.5
J25K				IAmb	IAmb	19 21 16.4	
	comp=Z,7.3nm,0.7s						
SCRK	Sand Creek	86.77	20	P	P	19 21 01.1	-0.6
SCRK				IAmb	IAmb	19 21 05.5	
	comp=Z,5.9nm,0.8s						
BBB	Bella Bella	86.87	34	LR	LR	19 56 00.5	
	comp=Z,57nm,18.1s,baz=192,slow=33						
TAPN	Taplejung	86.93	299	eP	P	19 21 10.6	+7.0
BELA	Belgrano 2	87.11	176	P	P	19 21 02.5	-0.7
BELA				IAmb	IAmb	19 21 18.3	
	comp=Z,5.5nm,0.9s						
COLD	Coldfoot	87.28	15	P	P	19 21 04.5	+0.5
COLD				IAmb	IAmb	19 21 07.0	
	comp=Z,7.8nm,1.0s						
PFO	Pinyon Flats O	87.34	54	LR	LR	19 54 50.0	
	comp=Z,239nm,18.2s,baz=228,slow=32						
NVAR	Mina Array Bea	87.56	49	LR	LR	19 54 53.6	
	comp=Z,222nm,18.7s,baz=270,slow=32						
RAMN	Ramite	87.75	298	eP	P	19 21 11.3	+3.8
PALK	Pallekele	87.82	278	LR	LR	20 01 52.1	
	comp=Z,59nm,18.6s,baz=225,slow=37						
EGAK	Eagle	88.23	20	P	P	19 21 07.8	-0.7
EGAK				IAmb	IAmb	19 21 16.0	
	comp=Z,4.6nm,0.9s						
TOLK	Toolik Lake Re	88.50	15	P	P	19 21 10.6	+0.7
TOLK				IAmb	IAmb	19 21 12.2	
	comp=Z,5.6nm,0.8s						
PKI	Pulchoki	88.95	299	eP	P	19 21 12.2	-1.1
DLBC	Dease Lake	88.96	28	LR	LR	19 59 57.4	
	comp=Z,59nm,18.2s,baz=242,slow=35						
PKIN	Phulchoki	88.96	299	eP	P	19 21 12.4	-0.9
KKN	Kakani	89.12	299	eP	P	19 21 13.9	0.0
	comp=Z,18nm,0.8s						
DMN	Daman	89.22	299	eP	P	19 21 14.7	+0.2
	comp=Z,64nm,1.2s						
TIXI	Tiksi	89.51	349	P	P	19 21 14.6	+0.2
LPIG	La Paz	89.66	65	LR	LR	19 51 10.4	
	comp=Z,70nm,21.4s,baz=227,slow=29						
GKN	Gorkha	89.73	299	eP	P	19 21 15.4	-1.3
	comp=Z,27nm,0.9s						
ELK	Elko	90.56	48	LR	LR	19 56 24.8	
	comp=Z,117nm,18.6s,baz=242,slow=32						
NEW	Newport	91.74	41	LR	LR	20 00 55.1	
	comp=Z,55nm,18.0s,baz=206,slow=34						
WMQ	Urumqi	92.02	315	eP	P	19 21 27.9	+1.0
INK	Inuvik	92.78	19	LR	LR	19 57 50.9	
	comp=Z,60nm,21.2s,baz=212,slow=32						
TROLL	Troll, Antarti	93.14	185	PcP	P	19 21 32.2	+0.5
SNAA	Sanae	93.85	183	PcP	P	19 21 35.6	+0.7
VNA3	Neumayer Olymp	94.54	181	PcP	P	19 21 37.7	-0.3
PDAR	Pinedale Array	95.21	47	LR	LR	19 58 47.5	
	comp=Z,50nm,18.5s,baz=264,slow=32						
MK31	Makanchi Array	96.50	317	P	P	19 21 47.0	-0.3
MK31				IAmb	IAmb	19 21 57.2	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	96.50	317	P	P	19 21 47.4	0.0
	comp=Z,2.3nm,0.8s,baz=98,slow=6.1,SNR=18						
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	96.50	317	P	P	19 21 46.9	-0.4
TXAR	Lajitas Array	96.70	62	LR	LR	19 58 00.5	
	comp=Z,65nm,19.2s,baz=254,slow=31						
ZALV	Zalesovo Beam	96.72	324	P	P	19 21 47.1	-1.0
	comp=Z,1.3nm,0.7s,baz=97,slow=2.8,SNR=5.3						
ZALV				LR	LR	20 04 24.8	
	comp=Z,44nm,21.0s,baz=86,slow=35						
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	97.56	27	P	P	19 21 50.5	-1.2
	comp=Z,0.9nm,0.8s,baz=258,slow=4.4,SNR=6.9						
YKA				LR	LR	20 02 30.4	
	comp=Z,31nm,18.1s,baz=246,slow=33						
	comp=Z,0.9nm,0.8s						
ARCES	ARCESS Array B	119.76	345	PKP	PKPdf	19 27 07.1	-0.2
	comp=Z,3.2nm,0.8s,baz=93,slow=2.6,SNR=10.0						
KLMR	Klimovskoe	120.08	333	ePKPdf	PKiKP	19 27 14.0	+5.8
KLMR				AMP		19 27 15.0	
	comp=Z,5.0nm,0.8s						
SIV	San Ignacio	124.07	121	PKP	PKPdf	19 27 16.6	-0.6
	comp=Z,0.5nm,0.4s,baz=98,slow=2.6,SNR=4.2						
FINES	FINESS Array B	125.16	338	PKP	PKPdf	19 27 17.7	-0.2
	comp=Z,1.2nm,0.6s,baz=352,slow=3.9,SNR=6.6						
AKASG	Malin Array Be	130.08	326	PKP	PKPdf	19 27 27.1	-0.5
	comp=Z,0.5nm,0.4s,baz=69,slow=1.1,SNR=1.4						
NB2	NORSAR Subarra	130.12	345	PKPdf	PKiKP	19 27 34.2	+5.9
	comp=Z,1.1nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.12	345	PKP	PKPdf	19 27 26.6	-0.9
	comp=Z,1.6nm,0.7s,baz=32,slow=2.0,SNR=6.1						
GERES	GERESS Array B	139.04	333	PKP	PKPdf	19 27 45.1	+0.5
	comp=Z,0.6nm,0.7s,baz=45,slow=2.3,SNR=4.5						
ABTA	Abfaltersbach	141.13	331	i P	PKiKP	19 27 51.1	-0.1
	comp=Z,1.5nm,0.6s						
WTTA	Wattenberg	141.14	333	eP	PKiKP	19 27 57.6	+6.3
	comp=Z,2.0nm,0.5s						
MOTA	Moosalm	141.31	333	i P	PKiKP	19 27 51.9	+0.3
	comp=Z,1.6nm,0.5s						
DAVA	Damuels	141.89	334	eP	PKPdf	19 27 50.7	+0.9
	comp=Z,1.3nm,0.5s						
KEST	Kesra	150.53	320	PKPbc	PKiKP	19 28 10.4	-0.4
	comp=Z,3.3nm,0.6s,baz=223,slow=2.8,SNR=3.1						
PGAV	Gavieira, Arco	152.16	352	ePKPab	PKPab	19 28 20.6	-2.7
POLO	Lamas de Olo	152.67	351	ePKPbc	PKiKP	19 28 14.8	-0.3
POLO	Lamas de Olo	152.67	351	ePKPab	PKPab	19 28 24.2	-1.2
MVO	Moncorvo	152.75	349	ePKPbc	PKiKP	19 28 15.3	+0.1
PVIS	Viseu	153.33	351	ePKPab	PKPab	19 28 27.9	-0.2
ESDC	Sonseca Array	153.48	343	PKPbc	PKiKP	19 28 16.6	-0.2
	comp=Z,0.6nm,0.8s,baz=316,slow=3.5,SNR=4.0						
MTE	Manteigas	153.58	350	ePKPbc	PKiKP	19 28 18.0	+1.1
PCBR	Castelo Branco	154.12	349	ePKPbc	PKiKP	19 28 18.2	+0.2
PMRV	Marv??o	154.50	349	ePKPbc	PKiKP	19 28 20.0	+1.2
PMRV	Marv??o	154.50	349	ePKPab	PKPab	19 28 31.1	-2.0
TORD	Torodi Ar. Bea	165.26	267	PKP	PKPdf	19 28 24.8	+1.7
	comp=Z,0.6nm,0.7s,baz=279,slow=1.0,SNR=3.1						
TORD				PKPab	PKPab	19 29 20.6	-0.1
	comp=Z,1.1nm,0.9s,baz=101,slow=2.7,SNR=3.3						

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*IDC **19** 19:10:49.2±1.7, 5°.50N×126°.04E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=235.4km s-min=25.1km az=73.0*

*MAN **19** 19:10:56.8, 6°.10N×125°.71E, h123^{km}, mb4.7, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

ISC 19 19:10:57.2±1.0**, 6°.04N**±0°.07×**125°.73E**±0°.07**, h120**^{km}±8^{km}**, n11, σ0ˢ.59**/19**, mb3.2**/3**, 7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.07	340	⇓eP	Pn	19 11 13.4	-0.2
DDMP				eS	Sn	19 11 26.1	+0.2
DAV	Davao City (W)	1.03	351	Pn	Pn	19 11 19.2	-0.4
	56nm,0.3s,baz=227,slow=2.2,SNR=2.1						
DAV				Sn	Sn	19 11 36.8	+0.4
	92nm,0.3s,baz=235,slow=23,SNR=7.0						
MATI	Mati	1.04	30	⇓eP	Pn	19 11 18.9	-0.6
MATI				eS	Sn	19 11 37.1	+0.6
KCP	Kidapawan	1.16	326	⇓iP	Pn	19 11 21.4	+0.5
KCP				i S	Sn	19 11 39.0	+0.2
CTBH	Cotabato--PC H	1.89	308	⇓iP	Pn	19 11 29.2	0.0
CTBH				i S	Sn	19 11 53.4	-0.3
BIPH	Bislig	2.22	16	⇓eP	Pn	19 11 32.9	-0.5
BIPH				eS	Sn	19 12 01.5	+0.4
PAGZ	Pagadian	2.94	308	⇓eP	Pn	19 11 43.2	+0.4
PAGZ				eS	Sn	19 12 16.7	-1.2
GLSP	General Luna,	3.74	6	⇓eP	Pn	19 11 54.0	+0.7
GLSP				eS	Sn	19 12 36.0	-0.7
WRA	Warramunga Arr	27.17	162	P	P	19 16 29.0	-0.7
	0.3nm,0.5s,baz=342,slow=9.7,SNR=1.6						
	0.3nm,0.5s						
ASAR	Alice Springs	30.59	165	P	P	19 16 59.7	-0.2
	0.2nm,0.4s,baz=346,slow=6.7,SNR=5.5						
	0.2nm,0.4s						
STKA	Stephens Creek	40.63	159	P	P	19 18 26.0	+0.5
	1.7nm,0.8s,baz=329,slow=12,SNR=1.8						
	1.7nm,0.8s						

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*IDC **19** 19:11:39.9±1.1, 52°.09N×169°.65W, h0^{km}, mb3.8/13, mbtmp3.8/15, ML3.7/2, MS3.1/1, Error ellipse: s-maj=30.0km s-min=16.8km az=169.0*

*NEIC **19** 19:11:40.7±2.6, 51°.99N±0°.05×169°.54W±0°.04, h10^{km}±1^{km}, mb3.8/27, ML3.2(AEIC), Error ellipse: s-maj=8.8km s-min=2.9km az=157.0*

*AEIC **19** 19:11:44±2.0, 52°.01N±0°.06×169°.52W±0°.06, h38^{km}±6^{km}, Error ellipse: s-maj=9.7km s-min=5.0km az=163.0*

ISC 19 19:11:43.7±0.7**, 52°.05N**±0°.10×**169°.51W**±0°.06**, h30**^{km}**, n67, σ1ˢ.13**/60**, mb3.7**/13**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.00	23		Pb	19 12 02.3	-0.2
NIKH	Nikolski High	1.00	23		Sb	19 12 15.7	+0.3
OKSO	Okmok South	1.54	32		Pb	19 12 10.4	-1.2
OKSO					Sb	19 12 31.7	+1.0
OKFG	Magazine Ridge	1.67	35		Pb	19 12 12.2	-1.6
MSW	Makushin Switc	2.49	40		Pn	19 12 23.8	+1.6
MNAT	Makushin Natee	2.51	42		Pn	19 12 24.1	+1.7
UNV	Unalaska Valle	2.56	44	Pn	Pn	19 12 23.1	+0.1
MTBL	Makushin Table	2.57	41		Pn	19 12 25.4	+2.1
ATKA	Atka Island	2.89	275		Pn	19 12 27.4	-0.2
AKUT	Akutan	3.07	46	Pn	Pn	19 12 30.7	+0.6
GSTR	Great Sitkin T	4.04	273	Pn	Pn	19 12 44.1	+0.7
GSMY	Great Sitkin M	4.04	272		Pn	19 12 43.6	+0.2
GSTD	Great Sitkin T	4.10	273		Pn	19 12 44.5	+0.3
TASE	Tanaga Southea	5.28	271		Pn	19 13 02.6	+2.1

KDAK	Kodiak Island	11.29	53	Pn	Pn	19 14 21.6	-1.1
	0.4nm,0.3s,baz=264,slow=7.5,SNR=5.4						
RSO	Redoubt South	12.53	41	Pn	Pn	19 14 38.6	-1.2
SEW	Seward	13.75	46	Pn	Pn	19 14 57.0	+0.7
J20K	Nowinta River	14.56	27	P	P	19 15 13.4	-0.1
BPAW	Bear Paw Mtn.	15.46	32	P	P	19 15 23.6	+0.1
BPAW				IAmb	IAmb	19 15 25.7	
	comp=Z,6.0nm,1.0s						
SCM	Sheep Creek Mo	15.48	42		Pn	19 15 19.3	-0.4
SCM				IAmb	IAmb	19 15 24.1	
	comp=Z,14nm,1.2s						
KLU	Klutina	15.92	44		Pn	19 15 24.2	-1.2
KLU				IAmb	IAmb	19 15 25.1	
	comp=Z,5.5nm,0.4s						
M24K	Tolsona, Glenn	16.09	42	Pn	Pn	19 15 27.1	-0.4
HMT	Hamilton	16.23	49	Pn	Pn	19 15 28.4	-0.7
BMRM	Bremner River	16.29	47	Pn	Pn	19 15 28.6	-1.5
BMRM				IAmb	IAmb	19 15 52.2	
	comp=Z,15nm,1.4s						
NEA2	Nenana	16.42	32		P	19 15 32.7	-1.4
WRH	Wood River Hil	16.67	33	P	P	19 15 35.6	-1.2
GLB	Gilahina Butte	16.83	46	Pn	Pn	19 15 35.5	-1.3
SNH	Sunshine Point	16.85	51	P	P	19 15 38.4	-0.5
VRDI	Verde Repeater	16.91	47	Pn	Pn	19 15 36.8	-1.2
VRDI				IAmb	IAmb	19 16 04.0	
	comp=Z,4.1nm,1.0s						
ILAR	Eielson Array	17.26	34	P	Pn	19 15 41.1	-1.1
	comp=Z,0.2nm,0.3s,baz=204,slow=10,SNR=5.8						
	comp=Z,0.3nm,0.4s						
RIDG	Independent Ri	17.43	38	P	P	19 15 45.1	-0.2
RIDG				IAmb	IAmb	19 15 58.9	
	comp=Z,8.5nm,1.4s						
GRNC	Granite Creek	17.53	49		Pn	19 15 44.7	-0.9
GRNC				IAmb	IAmb	19 16 07.4	
	comp=Z,14nm,1.4s						
H24K	Noodor Dome	17.61	30	Pn	Pn	19 15 45.0	-1.5
BARN	Barnard Glacie	17.67	48	P	P	19 15 48.5	+0.3
BARN				IAmb	IAmb	19 16 12.8	
	comp=Z,7.7nm,1.2s						
J25K	Salcha River,	17.70	35		Pn	19 15 46.6	-1.1
TABL	Table Mountain	17.73	51		Pn	19 15 47.6	-0.6
TABL				IAmb	IAmb	19 16 05.6	
	comp=Z,7.9nm,0.9s						
CTGM	Chitina Glacie	17.79	49	Pn	Pn	19 15 47.8	-1.1
CTGM				IAmb	IAmb	19 16 04.2	
	comp=Z,4.7nm,1.0s						
SCRK	Sand Creek	17.88	38	P	P	19 15 50.0	-0.4
LOGN	Logan Glacier	17.91	50	Pn	Pn	19 15 48.9	-1.4
LOGN				IAmb	IAmb	19 15 52.5	
	comp=Z,6.0nm,1.0s						
TOLK	Toolik Lake Re	19.17	22	P	P	19 16 03.7	-0.7
TOLK				IAmb	IAmb	19 16 15.6	
	comp=Z,6.2nm,1.4s						
BMAR	Burnt Mountain	19.65	29		Pn	19 16 10.2	-1.0
PEA0B	Petropavlovsk-	19.86	286	P	Pn	19 16 12.2	-1.6
PETK	Petropavlovsk-	19.86	286	P	P	19 16 11.8	-0.3
	comp=Z,2.0nm,0.3s,baz=94,slow=14,SNR=79						
	comp=Z,3.7nm,0.4s						
PETK	Petropavlovsk-	19.86	286	P	P	19 16 11.5	-0.5
I29M	Ogilvie Camp,	20.69	38	P	P	19 16 19.2	-1.6
I29M				IAmb	IAmb	19 16 25.9	
	comp=Z,6.8nm,1.4s						
SEY	Seymchan	22.82	313	P	P	19 16 44.0	+0.2
	comp=Z,1.3nm,0.7s,baz=115,slow=8.3,SNR=5.1						
	comp=Z,1.3nm,0.7s						
INK	Inuvik	23.66	33	P	P	19 16 52.4	+0.4
	comp=Z,0.8nm,0.4s,baz=254,slow=8.9,SNR=6.2						
	comp=Z,0.8nm,0.4s						
INK	Inuvik	23.66	33	IAmb	IAmb	19 17 01.7	
	comp=Z,4.1nm,1.4s						
YKA	Yellowknife Ar	30.52	48	P	P	19 17 55.4	+1.7
	comp=Z,0.6nm,0.7s,baz=271,slow=9.4,SNR=6.7						
	comp=Z,0.6nm,0.7s						
KLR	Kul'dur	36.48	290	P	P	19 18 45.3	-0.4
	comp=Z,1.3nm,0.4s,baz=83,slow=5.9,SNR=6.8						
	comp=Z,1.3nm,0.4s						
H11N2	WAKE ISLAND Hy	37.15	219	T	T	19 58 58.6	
	baz=23						
H11N3	WAKE ISLAND Hy	37.16	219	T	T	19 59 00.5	
	baz=23						
H11N1	WAKE ISLAND Hy	37.17	219	T	T	19 59 00.5	
	baz=23						
LHV	Little Huntoon	37.73	91	P	P	19 18 53.0	-3.4
H11S1	WAKE ISLAND Hy	38.34	218	T	T	20 00 08.1	
	baz=23,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	38.35	218	T	T	20 00 10.2	
	baz=23,slow=76,SNR=8.7						
H11S3	WAKE ISLAND Hy	38.35	218	T	T	20 00 06.4	
	baz=23,slow=76,SNR=6.0						
PDAR	Pinedale Array	40.55	79	P	P	19 19 22.5	+2.2
	comp=Z,0.3nm,0.6s,baz=297,slow=6.0,SNR=2.8						
	comp=Z,0.3nm,0.6s						
KSRS	Korea Array	45.36	277	P	P	19 19 59.4	+0.6
	comp=Z,1.2nm,0.8s,baz=53,slow=8.7,SNR=5.6						
	comp=Z,1.2nm,0.8s						
TXAR	Lajitas Array	52.84	89	P	P	19 20 57.4	+1.0
	comp=Z,0.2nm,0.5s,baz=246,slow=3.8,SNR=2.4						
	comp=Z,0.2nm,0.5s						
JMIC	Jan Mayen	56.51	7	LR	LR	19 46 23.7	
	comp=Z,18nm,19.6s,baz=260,slow=37						
ZALV	Zalesovo Beam	57.60	318	P	P	19 21 30.1	-0.1
	comp=Z,0.4nm,0.5s,baz=64,slow=6.6,SNR=1.7						
	comp=Z,0.4nm,0.5s						
ARCES	ARCESS Array B	58.23	354	P	P	19 21 34.9	+0.5
	comp=Z,1.4nm,0.6s,baz=27,slow=5.7,SNR=5.1						
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	66.17	352	P	P	19 22 27.9	+0.2
	comp=Z,0.6nm,0.3s,baz=15,slow=8.5,SNR=11						
	comp=Z,0.6nm,0.3s						
NOA	NORSAR Array B	67.26	360	P	P	19 22 34.8	+0.1
	comp=Z,1.1nm,0.9s,baz=1.5,slow=6.3,SNR=3.5						
	comp=Z,1.1nm,0.9s						
CMAR	Chiang Mai Arr	76.60	283	P	P	19 23 32.0	+0.7
	comp=Z,0.3nm,0.4s,baz=30,slow=7.3,SNR=2.0						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	90.12	230	P	P	19 24 40.8	+0.1
	comp=Z,0.8nm,0.7s,baz=31,slow=4.7,SNR=7.9						
	comp=Z,0.8nm,0.7s						

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*SJA **19** 19:25:47.1±0.7, 31°.84S×72°.56W, h12^{km}, ML4.6, MW4.4*
*IDC **19** 19:25:51.1±0.9, 31°.80S×71°.96W, h0^{km}, mb4.2/7, mbtmp4.0/12, ML3.8/5, MS3.7/13, Error ellipse: s-maj=26.1km s-min=19.8km az=105.0*
*NEIC **19** 19:25:52.0±1.9, 31°.84S±0°.03×72°.12W±0°.06, h10^{km}±1^{km}, mb4.4/8, ML4.6(GUC), Error ellipse: s-maj=8.6km s-min=4.7km az=96.0*
*VAO **19** 19:25:52.4±0.9, 32°.07S×72°.27W, h36^{km}±8^{km}, mb4.4*
*GUC **19** 19:25:52.9±0.7, 31°.83S×72°.16W, h41^{km}±3^{km}, ML4.6*
ISC 19 19:25:51.2±1.6, **31°.82S**±0°.02×**72°.16W**±0°.04, **h6**^{km}±9^{km}, **n134,** σ**1^{s}.28**/155, **mb4.5**/9, **MS3.8**/10, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	1.04	135		Pb	19 26 11.4	-0.3
VA06					Sb	19 26 24.4	-1.3
VA06	Catapilco	1.04	135	*e*P	Pb	19 26 11.4	-0.3
VA06				*i* S	Sb	19 26 25.2	-0.4
VA06				IAML		19 26 33.5	
	comp=N,35µm,0.3s						
CO02	Combarbal	1.17	59		Pb	19 26 13.6	-0.3
CO02	Combarbal	1.17	59	*e*P	Pb	19 26 13.7	-0.2
CO02				*i* S	Sb	19 26 29.6	+0.3
CO02				IAML		19 26 30.9	
	comp=N,16µm,0.7s						
CO02	Combarbal	1.17	59	*e*P	Pb	19 26 13.8	0.0
CO02				*e*S	Sg	19 26 30.0	+1.3
CO02				IAML		19 26 32.7	
	comp=Z,9µm,1.0s						
CO06	Fray Jorge	1.23	22	Pn	Pn	19 26 14.3	-0.7
CO06	Fray Jorge	1.23	22	*e*P	Pn	19 26 14.2	-0.7
CO06				*i* S	Sb	19 26 30.9	0.0
VA01	Torpederas	1.28	160	Pn	Pn	19 26 14.9	-0.7
VA01	Torpederas	1.28	160	*e*P	Pn	19 26 15.1	-0.5
VA01				*i* S	Sb	19 26 31.8	-0.6
VA01	Torpederas	1.28	160	*e*P	Pn	19 26 15.0	-0.7
VA01				*e*S	Sb	19 26 32.1	-0.3
ROC1	El Roble	1.51	140		Pn	19 26 16.4	-2.7
ROC1				Sn	Sn	19 26 36.5	-2.7
ROC1	El Roble	1.51	140	*e*P	Pn	19 26 16.4	-2.7
ROC1				*e*S	Sn	19 26 38.0	-1.2
VA03	San Esteban	1.66	125		Pn	19 26 21.1	+0.2
VA03	San Esteban	1.66	125	*e*P	Pn	19 26 21.1	+0.2
VA03				*i* S	Sn	19 26 41.8	-0.9
VA03				IAML		19 26 56.0	
	comp=N,10µm,0.5s						
VA03	San Esteban	1.66	125	*e*P	Pn	19 26 21.0	0.0
VA03				*e*P	Pb	19 26 21.6	-0.7
VA03				IAML		19 26 49.3	
	comp=Z,6µm,0.7s						
MT02	Curacav	1.68	149		Pn	19 26 21.1	0.0
MT02	Curacav	1.68	149	*e*P	Pn	19 26 21.0	-0.1
MT02				*i* S	Sn	19 26 41.9	-1.1
MT02	Curacav	1.68	149	*e*P	Pn	19 26 21.0	-0.1
MT02				IAML		19 26 51.3	
	comp=Z,4µm,0.7s						
VA05	Santo Domingo	1.89	166		Pn	19 26 23.9	-0.2
GO04	Tololo Observa	2.02	36		Pn	19 26 25.5	-0.5
GO04	Tololo Observa	2.02	36	*e*P	Pn	19 26 25.9	-0.1
GO04				*i* S	Sn	19 26 51.9	+0.2
GO04				IAML		19 27 01.0	
	comp=N,8µm,0.7s						
GO04	Tololo Observa	2.02	36	*e*P	Pn	19 26 26.1	+0.1
GO04				*e*S	Sg	19 26 56.5	+0.5
CO05	La Serena	2.05	23		Pn	19 26 26.0	-0.3
CO05	La Serena	2.05	23	*e*P	Pn	19 26 26.0	-0.3
MT03	Universidad Ad	2.18	141		Pn	19 26 28.6	+0.5
MT03	Universidad Ad	2.18	141	*e*P	Pn	19 26 28.2	+0.2
MT03				*i* S	Sn	19 26 54.8	-0.6
MT03				IAML		19 27 04.5	
	comp=N,6µm,0.4s						
MT03	Universidad Ad	2.18	141	*e*P	Pn	19 26 28.8	+0.7
MT03				*e*S	Sg	19 27 01.7	+0.5
MT03				IAML		19 27 05.9	
	comp=Z,4µm,0.9s						
FCH	Farellones	2.18	134	*e*P	Pn	19 26 28.7	+0.3
FCH				*i* S	Sn	19 26 56.8	+0.9
MT09	Talagante	2.19	153		Pn	19 26 28.6	+0.3
MT09	Talagante	2.19	153	*e*P	Pn	19 26 28.6	+0.3
MT09				*i* S	Sn	19 26 55.4	-0.4
MT09				IAML		19 27 07.9	
	comp=N,4µm,0.5s						
AUSP	Uspallata	2.39	100	*e*P	Pb	19 26 34.0	-0.9
AUSP				*e*P	Pb	19 26 34.0	-0.9
AUSP				*e*S	Sg	19 27 08.6	+0.5
RTLS	Leoncito	2.44	90	*e*P	Pb	19 26 34.0	-1.7
RTLS				*e*S	Sn	19 27 03.0	+0.7
RTLS				*e*S	Sg	19 27 08.9	-0.7
RTLS				IAML		19 27 13.0	
	comp=Z,2µm,0.6s						
BO04	La Punta	2.53	149		Pn	19 26 33.6	+0.7
BO04	La Punta	2.53	149	*e*P	Pn	19 26 33.6	+0.7
BO04				*i* S	Sn	19 27 03.8	-0.3
BO04				IAML		19 27 16.0	
	comp=E,3µm,0.4s						
CO01	Juntas del Tor	2.56	45		Pn	19 26 34.1	+0.7
CO01	Juntas del Tor	2.56	45	*e*P	Pn	19 26 34.0	+0.6
CO01				*e*P	Pb	19 26 34.5	-3.1
CO01				*e*S	Sb	19 27 11.9	+2.4
CO01				IAML		19 27 14.4	
	comp=Z,2µm,1.1s						
LMEL	Las Melosas	2.61	141		Pn	19 26 34.5	+0.4
LMEL	Las Melosas	2.61	141	*e*P	Pn	19 26 34.5	+0.4
LMEL				*i* S	Sn	19 27 05.7	-0.6
BO01	Tunca	2.72	161		Pn	19 26 35.6	0.0
BO01	Tunca	2.72	161	*e*P	Pn	19 26 35.5	0.0
BO01	Tunca	2.72	161	*e*P	Pn	19 26 34.5	-1.0
BO01				*e*P	Pb	19 26 35.5	-4.8
BO01				IAML		19 27 22.6	
	comp=Z,1µm,0.6s						
AROD	Rodeo	2.84	55	*e*P	Pn	19 26 40.0	+2.6
AROD				*e*S	Sb	19 27 16.5	-1.1
ACCO	Cerro Coronel	2.92	66	*e*P	Pb	19 26 41.8	-2.2
ACCO				*e*P	Pn	19 26 42.0	+3.4
ACCO				*e*S	Sn	19 27 16.5	+2.2
ACCO				*e*S	Sg	19 27 23.6	-1.6
LCO	Las Campanas	3.07	25		Pn	19 26 40.2	-0.3
LCO	Las Campanas	3.07	25	*e*P	Pn	19 26 41.0	+0.5
GO05	Huala	3.19	177		Pn	19 26 41.6	-0.3
GO05	Huala	3.19	177	*e*P	Pn	19 26 42.0	+0.1
GO05				*e*S	Sn	19 27 18.0	-2.3
AC04	Llanos de Chal	3.72	15	Pn	Pn	19 26 48.1	-1.2
AC04	Llanos de Chal	3.72	15	*e*P	Pn	19 26 49.1	-0.2
AC04				*e*S	Sn	19 27 37.0	+3.5
ML02	Panimavida	3.98	171		Pn	19 26 52.8	0.0
AVFE	Valle Fertil	4.20	75	*e*P	Pn	19 26 58.5	+2.7
AVFE				*e*S	Sb	19 27 52.0	-4.5
AVFE				IAML		19 28 02.1	
	comp=Z,1µm,0.7s						
RFA	San Rafael	4.27	135	*e*P	Pn	19 26 58.8	+1.9
RFA				*e*S	Sb	19 28 03.0	+4.3
RFA				IAML		19 28 11.0	
	comp=Z,434nm,0.9s						
GO03	Copiap	4.53	22		Pn	19 26 59.6	-0.9
GO03	Copiap	4.53	22	*e*P	Pn	19 27 01.0	+0.5
GO03				*e*S	Sb	19 28 08.5	+2.3
AC06	Mina Casimiro	4.72	20		Pn	19 27 03.2	+0.3
BI05	Punta Hualpn	4.99	190	Pn	Pn	19 27 05.7	-0.9
AC02	Maricunga	5.63	29		Pn	19 27 14.4	-1.5
AC01	Pan de Azucar	5.81	14		Pn	19 27 17.5	-0.5
H03N1	Juan Fernandez	5.92	252	T	T	19 34 08.7	
	baz=86,slow=73						
H03N3	Juan Fernandez	5.93	252	T	T	19 34 07.4	
	baz=86,slow=73						
H03N2	Juan Fernandez	5.93	252	T	T	19 34 05.5	
	baz=86,slow=73						
H03S3	Juan Fernandez	6.02	249	T	T	19 34 17.8	
	baz=83						
H03S1	Juan Fernandez	6.02	249	T	T	19 34 11.0	
	baz=83						
H03S2	Juan Fernandez	6.04	249	T	T	19 34 11.6	
	baz=83						
LR04	Corral	8.11	187	Pn	Pn	19 27 48.1	-1.3
PLCA	Paso Flores	8.99	172	Pn	Pn	19 28 02.9	+1.3
	comp=Z,0.5nm,0.3s,baz=334,slow=14,SNR=16						
PLCA				LR	LR	19 31 59.3	
	comp=Z,298nm,19.1s,baz=348,slow=41						
	comp=Z,2.1nm,0.6s						
PLCA	Paso Flores	8.99	172	Pn	Pn	19 28 02.1	+0.5
LVC	Limon Verde	9.62	18	Pn	Pn	19 28 11.9	+1.4
	comp=Z,0.7nm,0.3s,baz=38,slow=16,SNR=2.0						
LVC				Sn	Sn	19 29 59.5	+0.3
	comp=Z,0.7nm,0.3s,baz=187,slow=10,SNR=3.1						
LVC				LR	LR	19 32 04.3	
	comp=Z,232nm,18.6s,baz=192,slow=39						
	comp=Z,1.5nm,0.5s						
ITQB	Itaqui	13.54	85	*e*P	Pn	19 29 03.8	0.0
ITQB				*e*S	Sn	19 31 34.5	-0.2
CPUP	Villa Florida	14.07	71	Pn	Pn	19 29 10.8	-0.4
	comp=Z,0.1nm,0.3s,baz=230,slow=9.6,SNR=5.6						
CPUP				Sn	Sn	19 31 45.7	-2.1
	comp=Z,0.3nm,0.3s,baz=307,slow=15,SNR=2.4						
CPUP				LR	LR	19 34 51.9	
	comp=Z,277nm,21.5s,baz=248,slow=39						
	comp=Z,3.6nm,0.9s						
CPUP	Villa Florida	14.07	71	*e*P	Pn	19 29 10.6	-0.5
CPUP				*e*S	Sn	19 31 48.4	+0.7
PLTB	Pedras Altas	15.79	95	*e*P	Pn	19 29 33.5	-0.6
LPAZ	La Paz	15.89	14	Pn	Pn	19 29 36.6	+0.5
	comp=Z,0.1nm,0.3s,baz=200,slow=8.9,SNR=7.6						
	comp=Z,1.7nm,0.6s						
LPAZ	La Paz	15.89	14		Pn	19 29 35.5	-0.6
LPAZ	La Paz	15.89	14	*e*P	Pn	19 29 36.7	+0.5
CPSB	Cacapava Do Su	16.10	90	*e*P	Pn	19 29 36.7	-1.5
ITAB	Concordia	18.02	80	*e*P	Pn	19 30 01.6	-0.7
AQDB	Aquidauana	18.58	57	*e*P	P	19 30 08.8	-0.2
AQDB				*e*S	S	19 33 40.6	-0.7
SIV	San Ignacio	18.71	35	P	P	19 30 09.9	-0.7
	baz=226,slow=12,SNR=7.7						
	comp=Z,3.0nm,0.9s						
PTGB	Pitanga	19.05	73	*e*P	P	19 30 14.3	0.0
PTGB				*e*S	S	19 33 50.6	-0.4
TRCB	Terra Rica	19.52	67	*e*P	P	19 30 19.2	-0.2
TRCB				*e*S	Sn	19 33 59.1	-1.0
PTLB	Pontes e Lacer	20.17	39	*e*P	P	19 30 27.2	+0.8
TER01	Tubaro-SC	20.18	87	*e*P	P	19 30 25.8	-0.7
TER01				*e*S	S	19 34 11.5	-1.9
PCMB	Pacaembu	21.23	66	*e*P	P	19 30 38.0	0.0
TIJ01	Guaruva-PR	21.32	78	*e*P	P	19 30 38.0	-1.0
VILB	Vilhena	21.76	33	*e*P	P	19 30 43.4	-0.3
SALV	Santo Antonio	21.82	47	*e*P	P	19 30 42.9	-1.4
ETMB	Extrema	22.58	15	*e*P	P	19 30 53.6	+1.2
ITRB	Iturama	23.00	64	*e*P	P	19 30 55.8	-1.1
USHA	Ushuaia	23.16	175	P	P	19 30 59.9	+1.7
	comp=Z,8.4nm,1.0s,baz=77,slow=8.0,SNR=2.9						
	comp=Z,8.4nm,1.0s						
PET01	Itanhaem-SP	23.18	77	*e*P	P	19 30 58.9	+0.2
SPB	Sao Paulo	23.34	76	*e*P	P	19 30 59.9	-0.5
DVLD	Doverlandia	23.62	55	*e*P	P	19 31 02.8	-0.5
BB19B	Bebedouro	23.67	69	*e*P	P	19 31 02.9	-0.8
RCLB	Rio Claro- Sao	23.80	73	*e*P	P	19 31 03.9	-1.1
VAO	Valinhos	23.99	75	*e*P	P	19 31 03.4	-3.4
SAML	Samuel	24.24	22	P	P	19 31 08.6	-0.5
PDRB	Porto dos Gac	24.64	39	*e*P	P	19 31 11.0	-1.8
IPMB	Ipameri, GO	25.65	63	*e*P	P	19 31 18.0	-3.9
CLDB	Colider	25.75	40	*e*P	P	19 31 22.2	-0.6
BDFB	Brasilia	27.26	59	P	P	19 31 35.4	-1.1
	comp=Z,13nm,0.9s,baz=238,slow=8.2,SNR=12						
BDFB				LR	LR	19 44 05.2	
	comp=Z,240nm,21.3s,baz=233,slow=40						
	comp=Z,13nm,0.9s						
BDFB	Brasilia	27.26	59		P	19 31 35.5	-1.0
SMTB	Santa Maria do	32.29	50	*e*P	P	19 32 20.8	-0.2
PMSA	Palmer Station	33.36	174	LR	LR	19 44 52.6	
	comp=Z,98nm,19.4s,baz=282,slow=34						
MDP	Montagnes des	41.16	30	LR	LR	19 52 40.5	
	comp=Z,63nm,18.1s,baz=182,slow=39						
RCBR	Riachuelo	42.62	60	LR	LR	19 53 38.1	
	comp=Z,100nm,20.0s,baz=0.5,slow=39						
SNAA	Sanae	53.64	158	P	P	19 35 13.4	+0.2
SNAA	Sanae	53.64	158		P	19 35 12.4	-0.7
SNAA				IAmb	IAmb	19 35 14.8	
	comp=Z,7.8nm,0.8s						
TROLL	Troll, Antarti	55.35	159	P	P	19 35 26.2	+0.5
QSPA	South Pole Qui	58.41	180	P	P	19 35 48.0	+0.5
QSPA				IAmb	IAmb	19 36 01.1	
	comp=Z,4.7nm,0.9s						
TXAR	Lajitas Array	67.79	330	P	P	19 36 51.5	+1.5
	comp=Z,0.5nm,0.5s,baz=154,slow=9.0,SNR=4.0						
	comp=Z,0.5nm,0.5s						
TKL	Tuckaleechee C	68.00	350	LR	LR	20 06 05.8	
	comp=Z,42nm,21.2s,baz=304,slow=36						
DBIC	Dimbokro	74.59	72	P	P	19 37 31.6	0.0
	comp=Z,7.7nm,0.9s,baz=233,slow=7.9,SNR=5.8						
DBIC				LR	LR	20 06 36.1	
	comp=Z,60nm,21.7s,baz=210,slow=33						
	comp=Z,7.7nm,0.9s						
DBIC	Dimbokro	74.59	72	IAmb	IAmb	19 37 32.5	
	comp=Z,11nm,0.9s						
SADO	Sadowa	76.49	355	LR	LR	20 14 35.0	
	comp=Z,90nm,18.6s,baz=340,slow=38						
BOSA	Boshof	81.18	118	LR	LR	20 10 52.2	
	comp=Z,83nm,19.0s,baz=182,slow=33						
PDAR	Pinedale Array	81.77	333	P	P	19 38 12.8	+1.8
	comp=Z,0.1nm,0.3s,baz=151,slow=4.0,SNR=1.6						
	comp=Z,0.1nm,0.3s						
NVAR	Mina Array Bea	82.04	325	P	P	19 38 13.7	+1.2
	comp=Z,0.3nm,0.5s,baz=148,slow=7.1,SNR=1.8						
	comp=Z,0.3nm,0.5s						
LBTB	Lobatse	83.32	115	LR	LR	20 14 18.2	
	comp=Z,63nm,19.9s,baz=148,slow=35						
TORD	Torodi Ar. Bea	83.57	70	P	P	19 38 20.6	-0.1
	comp=Z,5.2nm,0.7s,baz=258,slow=4.4,SNR=25						
	comp=Z,5.2nm,0.7s						
LSZ	Lusaka	90.59	108	LR	LR	20 16 50.9	
	comp=Z,37nm,18.8s,baz=140,slow=34						
WRA	Warramunga Arr	122.60	210	PKP	PKPdf	19 44 48.2	-0.3
	comp=Z,0.3nm,0.6s,baz=161,slow=1.7,SNR=2.3						
H11S2	WAKE ISLAND Hy	125.67	271	T	T	22 03 59.5	
	baz=118,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	125.68	271	T	T	22 03 59.6	
	baz=118,slow=74,SNR=9.2						
H11S3	WAKE ISLAND Hy	125.68	271	T	T	22 03 59.6	
	baz=118,slow=74,SNR=8.5						
H11N3	WAKE ISLAND Hy	126.03	272	T	T	22 04 14.5	
	baz=116						
H11N1	WAKE ISLAND Hy	126.04	272	T	T	22 04 17.7	
	baz=116						
H11N2	WAKE ISLAND Hy	126.04	272	T	T	22 04 16.6	
	baz=116						
ZALV	Zalesovo Beam	152.42	30	PKPbc	PKiKP	19 45 48.2	+0.2
	comp=Z,2.3nm,0.5s,baz=291,slow=3.2,SNR=15						
ZALV	Zalesovo Beam	152.42	30		PKPbc	19 45 47.6	-0.1
KSH	Kashi	153.10	64	PKPbc	PKiKP	19 45 51.1	+1.0
KSH				sPKP		19 46 00.3	
MKAR	Makanchi Array	155.36	45	PKPbc	PKPdf	19 45 54.4	+9.0
	comp=Z,0.6nm,0.8s,baz=354,slow=3.7,SNR=5.3						
CMAR	Chiang Mai Arr	164.46	147	PKP	PKPdf	19 45 56.6	+0.2
	comp=Z,0.6nm,0.9s,baz=182,slow=2.3,SNR=2.5						
PZH	PanZhiHua	172.49	133	PKP	PKPdf	19 46 00.4	-1.3

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*IDC **19** 19:48:46.3±25.0, 15°.16S×166°.27E, h0^{km}, mb4.0/3, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=441.3km s-min=46.9km az=53.0*
*NEIC **19** 19:48:49.6±1.0, 15°.38S±0°.10×166°.27E±0°.04, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=16.7km s-min=7.2km az=357.0*
*NOU **19** 19:48:50.9, 15°.20S×167°.48E, h102^{km}, MLv4.3/13, Vanuatu Islands*
ISC 19 19:48:51.4±1.8, **15°.4S**±0°.1×**167°.4E**±0°.2, **h113**^{km}±9^{km}, **n24,** σ**1^{s}.79**/32, **mb4.1**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.18	251		Pn	19 49 06.9	-0.2
SANVU				Sg	Sn	19 49 19.7	+0.8
SANVU	Saraoutou	0.18	251	P	Pn	19 49 07.2	+0.1
DVP	Devils Point	2.45	162	P	Pn	19 49 31.5	+1.2
RTV	Rentapao	2.59	157	P	Pn	19 49 33.3	+1.1
LIFNC	LIFOU	5.36	181	Pn	Pn	19 50 07.5	-1.7
LIFNC				Sn	Sn	19 51 05.8	-3.9
MARNC	Mare, Loyalty	6.09	174	Pn	Pn	19 50 18.8	-0.2
MARNC				Sn	Sn	19 51 24.3	-3.1
YATNC	Mamie plateau,	6.65	184	P	Pn	19 50 27.8	+1.2
DZM	Mont Dzumac	6.71	187	Pn	Pn	19 50 28.8	+1.3
	3.8nm,0.3s,baz=28,slow=14,SNR=40						
DZM				Sn	Sn	19 51 44.6	+2.2
	3.2nm,0.3s,baz=326,slow=23,SNR=7.5						
	6.3nm,0.3s						
DZM	Mont Dzumac	6.71	187		Pn	19 50 28.3	+0.9
DZM					Sn	19 51 42.6	+0.2
DZM	Mont Dzumac	6.71	187	P	Pn	19 50 29.0	+1.6
NOUC	Port Laguerre	6.75	188	P	Pn	19 50 29.9	+1.9
ONTNC	Ouen Toro	6.94	187	Pn	Pn	19 50 28.0	-2.5
ONTNC					Sn	19 51 45.5	-2.5
ONTNC	Ouen Toro	6.94	187	P	Pn	19 50 33.2	+2.7
OUENC	Ouen Island, N	7.01	184	Pn	Pn	19 50 32.9	+1.4
OUENC					Sn	19 51 51.9	+2.2
OUENC	Ouen Island, N	7.01	184	P	Pn	19 50 34.7	+3.2
PINNC	Pines Island,	7.19	179	Pn	Pn	19 50 35.4	+1.6
PINNC				Sn	Sn	19 51 53.6	-0.4
STKA	Stephens Creek	28.65	231	P	P	19 54 38.4	+0.8
	1.9nm,0.8s,baz=54,slow=11,SNR=5.0						
	1.9nm,0.8s						
WR0	Warramunga Arr	31.58	257	P	P	19 55 02.9	-0.7
WR0				IAmb	IAmb	19 55 07.4	
	comp=Z,7.2nm,1.4s						
WRA	Warramunga Arr	31.77	257	P	P	19 55 04.2	-1.0
	comp=Z,0.7nm,0.7s,baz=86,slow=9.1,SNR=6.1						
	comp=Z,0.7nm,0.7s						
AS31	Alice Springs	32.54	250	P	P	19 55 11.5	-0.5
AS31				IAmb	IAmb	19 55 12.4	
	comp=Z,1.3nm,0.4s						
ASAR	Alice Springs	32.54	250	P	P	19 55 11.3	-0.6
	comp=Z,1.5nm,0.4s,baz=78,slow=8.9,SNR=46						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	32.54	250	P	P	19 55 11.1	-0.8
BBOO	Buckleboo	33.26	233	P	P	19 55 18.0	-0.1
FORT	Forrest	39.05	240	P	P	19 56 08.2	+0.8
FORT				IAmb	IAmb	19 56 15.0	
	comp=Z,13nm,0.9s						

KRSC 19 19:51:11.4±1.0, **55°.97N**×**164°.05E, h14**^{km}±16^{km}, **ML3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.73	290	*e*P	Pg	19 51 24.9	-0.7
KBTR				*e*S	Sg	19 51 35.4	+0.2
KBG	Krutoberegovo	0.81	292	*e*P	Pg	19 51 26.1	-0.9
KBG				*e*S	Sg	19 51 37.4	-0.2
BKI	Bering	1.33	124	*i* P	Pb	19 51 35.9	-0.3
BKI				*e*S	Sn	19 51 53.7	+0.6
SMKR	Semkarok	1.56	294	*e*P	Pn	19 51 38.8	-0.1
SMKR				*e*S	Sn	19 51 57.9	-1.1
BDR	Baidarnaya	1.69	292	*e*P	Pn	19 51 41.0	+0.3
BDR				*e*S	Sb	19 52 03.2	-0.4
SRKR	Sorokina	1.75	294	*e*P	Pn	19 51 41.6	+0.3
KLY	Klyuchi	1.93	282	*e*S	Sn	19 52 07.1	-0.8
KMNR	Kamenistaya	2.16	266	*e*P	Pb	19 51 49.8	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUMD	Tumrok D	2.21	251	eP	Pb	19 51 50.0	-1.1
TUMD				eS	Sb	19 52 17.5	-0.8
TUMR	Tumrok	2.32	254	eP	Pb	19 51 52.2	-0.8
KOZ	Kozyrevsk	2.34	274	eP	Pb	19 51 52.6	-0.8
KII	Karymskiy	3.28	236	eP	Pn	19 52 05.7	+3.3
SPN	Mys Shipunski	3.71	221	eP	Pn	19 52 10.0	+1.8
SPN				eS	Sn	19 52 54.3	+2.6
SDLR	Sedlovina	4.03	230	eP	Pn	19 52 16.3	+3.5
KRER	Koryakskii	4.07	231	eP	Pn	19 52 17.6	+4.2
SMAR	Somma	4.08	231	eP	Pn	19 52 17.0	+3.5
KRX	Arik	4.08	232	eP	Pn	19 52 17.4	+3.9
AVH	Avacha	4.11	231	eP	Pn	19 52 17.7	+3.9
UGLR	Uglovaya	4.11	230	eP	Pn	19 52 17.4	+3.6
KOK	Koryaka	4.13	232	eP	Pn	19 52 18.2	+4.1
GNL	Ganaly	4.20	240	eP	Pn	19 52 19.4	+4.3
KRMR	Karymshinskiy	4.67	230	eP	Pn	19 52 25.9	+4.5
KRMR				eS	Sn	19 53 20.9	+5.5
RUS	Russkaya	4.80	225	eP	Pn	19 52 26.6	+3.3
GRL	Gorelyy	4.89	228	eP	Pn	19 52 29.3	+4.6
MTVR	Mutnovka	4.90	227	eP	Pn	19 52 29.0	+4.3
ASAK	Asacha	5.09	228	eP	Pn	19 52 31.9	+4.6
KDTR	Khodutka, Kamc	5.46	223	eP	Pn	19 52 35.2	+2.9

IDC 19 19:51:30.6±49.0**, 15°.37S**×**171°.38W, h0^{km}, mb4.3**/3**, mbtmp4.3**/3**, Error ellipse: s-maj=966.9km s-min=174.0km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.74	240	P	P	19 59 54.1	+0.2
	1.1nm,0.5s,baz=66,slow=8.5,SNR=7.2						
	1.1nm,0.5s						
WRA	Warramunga Arr	51.74	257	P	P	20 00 40.2	-0.1
	1.1nm,0.5s,baz=94,slow=6.9,SNR=28						
	1.1nm,0.5s						
ASAR	Alice Springs	51.97	252	P	P	20 00 41.7	-0.3
	7.5nm,0.4s,baz=89,slow=7.8,SNR=226						
	7.5nm,0.4s						

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*VAO **19** 20:25:42.0±0.3, 27°.96S×66°.67W, h152^{km}, mb5.0*

*SJA **19** 20:25:42.7±0.7, 28°.01S×66°.65W, h191^{km}±3^{km}, ML5.1, MW4.9*

*NEIC **19** 20:25:42.1±1.4, 27°.98S±0°.06×66°.47W±0°.09, h157^{km}±5^{km}, mb4.9/398, Mww5.1, Md5.0(SJA), ML5.6(GUC), Error ellipse: s-maj=11.2km s-min=8.4km az=93.0*

*MOS **19** 20:25:42.7±1.2, 27°.81S×66°.55W, h166^{km}, mb5.4/4, Error ellipse: s-maj=11.2km s-min=6.5km az=103.9*

*IDC **19** 20:25:43.8±0.3, 27°.88S×66°.45W, h166^{km}±2^{km}, mb4.5/19, mbtmp5.0/24, MS3.7/9, Error ellipse: s-maj=11.1km s-min=9.0km az=82.0*

*BJI **19** 20:25:43.0±0.0, 28°.00S×66°.50W, h157^{km}, mB4.9/6*

*GUC **19** 20:25:45.3±0.3, 28°.07S×66°.82W, h160^{km}, ML5.6*

*NEIC **19** 20:25:46, 28°.06S×66°.56W, h170^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.28; $M_{\theta\theta}$3.00; $M_{\phi\phi}$1.27; $M_{r\theta}$1.57; $M_{\theta\phi}$-3.89; $M_{\phi r}$0.34; Fault plane solution: $M_0$5.67000×10^{16} NP1: ϕ_s150.00000°, δ44.00000°, λ-57.00000°. NP2: ϕ_s289.00000°, δ54.00000°, λ-117.00000°. Principal axes: T 6.2241, Plg6.0000°, Azm38.0000°; N -1.3399, Plg22.0000°, Azm306.0000°; P -4.8842, Plg67.0000°, Azm141.0000°;*

*GCMT **19** 20:25:51.1±0.2, 28°.15S±0°.01×66°.35W±0°.02, h180^{km}±1^{km}, MW5.1/111, Moment Tensor Solution. s51,c57; s111,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.36±.13; $M_{\theta\theta}$1.81±.18; $M_{\phi\phi}$2.55±.20; $M_{r\theta}$2.16±.11; $M_{\theta\phi}$-3.91±.14; $M_{\phi r}$1.19±.14; Best double couple: $M_0$5.97300×10^{16} NP1:ϕ_s165.00000°, δ49.00000°, λ-48.00000°. NP2:ϕ_s291.00000°, δ55.00000°, λ-128.00000°. Principal axes: T 6.1410, Plg3.0000°, Azm47.0000°; N -0.3360, Plg30.0000°, Azm315.0000°; P -5.8050, Plg59.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 20:25:43.1±0.3**, 27°.96S**±0°.03×**66°.66W**±0°.04**, h165^{km}**±2^{km}**, h165^{km}:pP-P, n936, σ1^{s}17**/1042**, mb4.9**/221**, 30C-10D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TINO	Tinogasta	0.81	263	eP	Pn	20 26 10.6	+2.6
TINO				eS	Sn	20 26 31.8	+4.7
ACLC	CERRO LA CRUZ	1.48	190	eP	Pn	20 26 15.9	+2.1
ACLC				eS	Sn	20 26 40.0	+2.4
ACLC				IAML		20 26 40.1	
	comp=Z,9μm,1.3s						
FSA	Cafayete	1.94	18	eP	Pn	20 26 21.0	+2.3
FSA				eS	Sn	20 26 48.3	+2.1
APLL	PUNTA DE LOS L	2.43	177	eP	Pn	20 26 25.5	+1.4
AC02	Maricunga	2.46	297		Pn	20 26 27.5	+2.5
AVFE	Valle Fertil	2.77	194	eP	Pn	20 26 29.3	+0.9
AVFE				eS	Sn	20 27 04.0	+0.5
AVFE				IAML		20 27 06.9	
	comp=Z,5μm,0.6s						
ACDV	Cuesta del Vie	3.08	224	eP	Pn	20 26 34.0	+1.9
ACDV				eS	Sn	20 27 10.7	+0.5
ACDV				IAML		20 27 13.0	
	comp=Z,7μm,0.6s						
GO03	Copiap	3.19	276		Pn	20 26 34.8	+1.4
GO03	Copiap	3.19	276	⇑iP	Pn	20 26 34.7	+1.3
GO03				i S	Sn	20 27 12.5	0.0
GO03	Copiap	3.19	276	eP	Pn	20 26 34.9	+1.4
GO03				eS	Sn	20 27 13.0	+0.5
ACHE	Chepes	3.19	180	eP	Pn	20 26 34.5	+1.0
AROD	Rodeo	3.30	228	eP	Pn	20 26 37.0	+1.9
AROD				eS	Sn	20 27 15.9	+0.4
AC06	Mina Casimiro	3.33	280		Pn	20 26 36.2	+1.0
AC06	Mina Casimiro	3.33	280	⇑iP	Pn	20 26 36.1	+1.0
AC06				eS	Sn	20 27 14.4	-1.3
AC06				IAML		20 27 17.6	
	comp=N,8μm,0.3s						
ACCO	Cerro Coronel	3.35	218	eP	Pn	20 26 37.0	+1.2
ACCO				eP	Pn	20 26 37.0	+1.2
SLA	San Lorenzo	3.39	18	⇑iP	Pn	20 26 38.4	+2.3
SLA				eS	Sn	20 27 17.6	+0.2
SLA	San Lorenzo	3.39	18	eP	Pn	20 26 38.4	+2.3
SLA				eS	Sn	20 27 19.9	+2.5
SLA				IAML		20 27 48.9	
	comp=Z,1μm,1.4s						
CO01	Juntas del Tor	3.61	235		Pn	20 26 41.2	+2.2
CO01	Juntas del Tor	3.61	235	⇑iP	Pn	20 26 41.3	+2.3
CO01				eS	Sn	20 27 21.5	-1.0
CO01	Juntas del Tor	3.61	235	eP	Pn	20 26 41.2	+2.2
CO01				eS	Sn	20 27 26.7	+4.2
CO01				IAML		20 27 28.4	
	comp=Z,3μm,0.6s						
LCO	Las Campanas	3.70	253		Pn	20 26 41.1	+0.9
LCO	Las Campanas	3.70	253	P	Pn	20 26 41.1	+0.9
LCO	Las Campanas	3.70	253	i P	Pn	20 26 40.6	+0.4
LCO				eS	Sn	20 27 23.7	-0.9
LCO	Las Campanas	3.70	253	eP	Pn	20 26 41.3	+1.1
TCA	Tanti	3.81	152	eP	Pn	20 26 42.1	+0.7
TCA				eS	Sn	20 27 25.9	-1.0
TCA				IAML		20 27 46.2	
	comp=Z,1μm,0.7s						
GO02	Mina Guanaco	3.83	316		Pn	20 26 44.1	+2.3
GO02	Mina Guanaco	3.83	316	⇓iP	Pn	20 26 44.3	+2.4
GO02				eS	Sn	20 27 27.9	+0.3
GO02	Mina Guanaco	3.83	316	eP	Pn	20 26 44.3	+2.4
GO02				eS	Sn	20 27 31.0	+3.5
AC04	Llanos de Chal	3.90	265		Pn	20 26 42.8	+0.3
AC04	Llanos de Chal	3.90	265	⇑iP	Pn	20 26 42.8	+0.3
AC04				i S	Sn	20 27 27.0	-1.8
AC04	Llanos de Chal	3.90	265	eP	Pn	20 26 43.0	+0.5
AC04				eS	Sn	20 27 29.0	+0.2
AC04				IAML		20 27 31.8	
	comp=Z,3μm,0.8s						
AC01	Pan de Azucar	3.95	296	Pn	Pn	20 26 43.9	+0.7
AC01	Pan de Azucar	3.95	296	⇓iP	Pn	20 26 43.8	+0.7
ZON	Zonda	3.98	206		Pn	20 26 44.1	+0.7
ZON	Zonda	3.98	206	P	Pn	20 26 44.2	+0.7
ZON	Zonda	3.98	206	eP	Pn	20 26 44.2	+0.7
ZON				eS	Sn	20 27 30.8	+0.1
ZON				IAML		20 27 31.8	
	comp=Z,2μm,1.1s						
RTCV	Cerro Valdivia	4.21	202	eP	Pn	20 26 47.0	+0.5
RTCV				eS	Sn	20 27 35.2	-0.9
GO04	Tololo Observa	4.24	238		Pn	20 26 47.5	+0.4
GO04	Tololo Observa	4.24	238	eP	Pn	20 26 47.4	+0.4
GO04				eS	Sn	20 27 35.3	-1.6
GO04	Tololo Observa	4.24	238	eP	Pn	20 26 47.6	+0.6
GO04				eS	Sn	20 27 38.2	+1.3
RTLS	Leoncito	4.45	210	eP	Pn	20 26 50.6	+0.7
RTLS				eS	Sn	20 27 43.3	+1.2
RTLS				IAML		20 27 44.7	
	comp=Z,2μm,0.6s						
CO05	La Serena	4.46	243	Pn	Pn	20 26 49.1	-0.5
CO05	La Serena	4.46	243	⇑iP	Pn	20 26 49.1	-0.5
MRA	San Martin	4.52	170	eP	Pn	20 26 51.0	+0.5
MRA				eS	Sn	20 27 43.2	0.0
MRA				IAML		20 27 58.1	
	comp=Z,4μm,0.6s						
PB14	IPOC Station P	4.72	314		Pn	20 26 54.6	+1.1
PB14	IPOC Station P	4.72	314	eP	Pn	20 26 54.7	+1.3
PB14				eS	Sn	20 27 46.8	-1.6
PB14	IPOC Station P	4.72	314	eP	Pn	20 26 54.9	+1.5
PB14				eS	Sn	20 27 48.7	+0.3
PB14				IAML		20 27 52.4	
	comp=Z,1μm,0.6s						
AUSP	Uspallata	4.86	208	eP	Pn	20 26 55.7	+0.6
AUSP				eS	Sn	20 27 52.9	+1.4
HJA	Humahuaca	4.87	14	eP	Pn	20 26 57.5	+2.1
CO02	Combarbal	4.97	228		Pn	20 26 56.1	-0.4
CO02	Combarbal	4.97	228	⇑iP	Pn	20 26 56.1	-0.4
CO06	Fray Jorge	5.11	237		Pn	20 26 56.6	-1.6
CO06	Fray Jorge	5.11	237	⇑iP	Pn	20 26 56.6	-1.6
AF01	San Pedro de A	5.17	344		Pn	20 27 01.5	+2.1
PB15	IPOC Station P	5.37	331		Pn	20 27 02.4	+0.6
PB10	IPOC Station P	5.65	321		Pn	20 27 05.9	+0.6
PB10	IPOC Station P	5.65	321	⇓iP	Pn	20 27 06.0	+0.6
LVC	Limon Verde	5.70	339	P	Pn	20 27 07.8	+1.4
	comp=Z,212nm,0.3s,baz=170,slow=8.9,SNR=314						
LVC				S	Sn	20 28 09.6	-2.1
	comp=Z,399nm,0.4s,baz=49,slow=21,SNR=25						
LVC	Limon Verde	5.70	339		Pn	20 27 07.2	+0.8
LVC	Limon Verde	5.70	339	P	Pn	20 27 07.2	+0.8
VA03	San Esteban	5.84	214		Pn	20 27 07.7	-0.2
VA03	San Esteban	5.84	214	⇑iP	Pn	20 27 07.8	-0.1
VA03				i S	Sn	20 28 14.5	0.0
PB06	IPOC Station P	5.86	333		Pn	20 27 08.5	+0.3
VA06	Catapilco	6.09	220		Pn	20 27 09.1	-1.9
VA06	Catapilco	6.09	220	⇑iP	Pn	20 27 09.1	-1.9
ROCH	El Roble	6.24	216	⇑iP	Pn	20 27 09.5	-3.8
ROCH				i S	Sn	20 28 19.3	-4.9
ROC1	El Roble	6.25	216		Pn	20 27 09.2	-4.2
MT03	Universidad Ad	6.43	210		Pn	20 27 15.5	-0.2
MT03	Universidad Ad	6.43	210	⇑iP	Pn	20 27 15.5	-0.2
PB04	IPOC Station P	6.43	330		Pn	20 27 15.2	-0.6
MT02	Curacav	6.54	215		Pn	20 27 14.7	-2.3
MT02	Curacav	6.54	215	⇑iP	Pn	20 27 14.9	-2.1
PB09	IPOC Station P	6.57	339		Pn	20 27 18.1	+0.4
LMEL	Las Melosas	6.61	207		Pn	20 27 18.1	0.0
VA01	Torpederas	6.63	219		Pn	20 27 15.5	-2.6
VA01	Torpederas	6.63	219	eP	Pn	20 27 15.6	-2.6
VA01				i S	Sn	20 28 29.9	-3.0
PB07	IPOC Station P	6.86	334		Pn	20 27 20.8	-0.8
MT09	Talagante	6.88	212		Pn	20 27 19.7	-2.0
MT09	Talagante	6.88	212	⇑iP	Pn	20 27 19.8	-1.9
BO04	La Punta	6.89	208		Pn	20 27 21.1	-0.7
BO04	La Punta	6.89	208	⇑iP	Pn	20 27 21.3	-0.5
MT01	Popeta	7.08	213		Pn	20 27 21.2	-3.0
VA05	Santo Domingo	7.09	216	Pn	Pn	20 27 21.6	-2.7
VA05	Santo Domingo	7.09	216	⇑iP	Pn	20 27 21.5	-2.8
PB02	IPOC Station P	7.24	335		Pn	20 27 25.5	-1.0
PB01	IPOC Station P	7.35	339		Pn	20 27 27.2	-0.8
BO01	Tunca	7.44	209		Pn	20 27 26.4	-2.6
BO01	Tunca	7.44	209	⇑iP	Pn	20 27 26.8	-2.2
PATCX	Punta Patache	7.79	335		Pn	20 27 32.1	-1.7
BO03	Pichilemu	7.93	214	⇑iP	Pn	20 27 31.6	-3.9
TA01	Diego Aracena	8.03	336		Pn	20 27 34.6	-2.3
PB08	IPOC Station P	8.11	343		Pn	20 27 37.5	-0.8
GO05	Huala	8.34	211		Pn	20 27 37.1	-3.8
CPUP	Villa Florida	8.47	81	P	Pn	20 27 41.2	-1.5
	comp=Z,99nm,1.0s,baz=262,slow=12,SNR=113						
CPUP	Villa Florida	8.47	81		Pn	20 27 40.0	-2.6
CPUP	Villa Florida	8.47	81	P	Pn	20 27 40.1	-2.6
CPUP	Villa Florida	8.47	81	eP	Pn	20 27 41.0	-1.7
PB11	IPOC Station P	8.61	341	Pn	Pn	20 27 42.1	-2.7
ML02	Panimavida	8.76	206		Pn	20 27 43.5	-2.9
ITQB	Itaqui	8.97	103		Pn	20 27 46.3	-3.0
ITQB	Itaqui	8.97	103	eP	Pn	20 27 47.0	-2.3
PB12	IPOC Station P	9.89	339	Pn	Pn	20 27 58.8	-2.8
PB16	IPOC Station P	9.93	344	Pn	Pn	20 28 01.2	-1.3
LPA	La Plata	10.17	135	eP	Pn	20 28 01.6	-3.4
LPA				sP	P	20 28 41.6	+27
LPA				S	Sn	20 29 54.3	-3.6
LPA				PCP	PcP	20 33 59.2	+1.2
LPA				SCS	ScS	20 40 50.6	+0.9
LPA				PKIKP	PKiKP	20 41 59.4	+2.0
LPA				SKIKP		20 45 13.0	
LPA				PKIKS		20 45 24.6	
LPA				SKIKS		20 48 48.4	
BI05	Punta Hualpn	10.35	211	Pn	Pn	20 28 03.8	-3.5
PB18	Visviri	10.65	345		Pn	20 28 09.8	-2.1
LPAZ	La Paz	11.70	353	P	Pn	20 28 24.8	-0.9
	comp=Z,32nm,0.4s,baz=149,slow=5.2,SNR=80						
LPAZ				S	Sn	20 30 27.9	-7.8
	comp=Z,5.1nm,0.4s,baz=198,slow=20,SNR=1.3						
LPAZ	La Paz	11.70	353	Pn	Pn	20 28 23.9	-1.8
LPAZ	La Paz	11.70	353	P	Pn	20 28 23.9	-1.8
LPAZ	La Paz	11.70	353	eP	Pn	20 28 24.6	-1.0
CPSB	Cacapava Do Su	11.81	105	eP	Pn	20 28 25.1	-1.4
PLTB	Pedras Altas	11.95	112		Pn	20 28 26.2	-2.1
PLTB	Pedras Altas	11.95	112	eP	Pn	20 28 26.5	-1.8
AQDB	Aquidauana	12.47	56		Pn	20 28 33.9	-1.1
AQDB	Aquidauana	12.47	56	eP	Pn	20 28 34.3	-0.7
ITAB	Concordia	12.91	90	P	Pn	20 28 38.9	-1.7
ITAB	Concordia	12.91	90	eP	Pn	20 28 39.1	-1.5
SIV	San Ignacio	12.99	25	P	Pn	20 28 40.5	-1.2
	comp=Z,26nm,0.5s,baz=216,slow=12,SNR=78						
PLCA	Paso Flores	13.13	193	P	Pn	20 28 42.6	-0.8
	comp=Z,4.8nm,0.5s,baz=4.5,slow=13,SNR=21						
PLCA	Paso Flores	13.13	193	Pn	Pn	20 28 42.1	-1.3
PLCA	Paso Flores	13.13	193	eP	Pn	20 28 42.8	-0.6
PLCA	Paso Flores	13.13	193	eP	Pn	20 28 42.8	-0.6
LR04	Corral	13.14	203	Pn	Pn	20 28 40.3	-3.1
TRCB	Terra Rica	13.68	71	P	Pn	20 28 49.1	-1.4
TRCB	Terra Rica	13.68	71	eP	Pn	20 28 49.8	-0.7
LL04	Puerto Octay	13.75	199	P	Pn	20 28 48.2	-3.0
CNLB	Canela	13.95	99	eP	Pn	20 28 52.7	-1.2
LL03	Petrohue	13.96	198		Pn	20 28 51.2	-2.6
PTLB	Pontes e Lacer	14.28	31	eP	Pn	20 28 57.3	-0.6
PP1B	Ponte de Pedra	14.97	49	eP	Pn	20 29 06.0	-0.5
PCMB	Pacaembu	15.35	69	eP	Pn	20 29 10.8	-0.4
TER01	Tubaro-SC	15.47	96	eP	Pn	20 29 11.6	-1.0
SALV	Santo Antonio	15.72	43	eP	Pn	20 29 14.8	-1.0
LL02	Futaleuf	15.76	194	P	Pn	20 29 15.7	-0.4
TIJ01	Guaruva-PR	16.01	85	eP	Pn	20 29 17.2	-2.1
FRTB	Fartura	16.09	77	eP	Pn	20 29 18.6	-1.6
VILB	Vilhena	16.11	23	eP	Pn	20 29 19.8	-0.8
GO07	Milladeo Hill,	16.14	199	P	Pn	20 29 20.1	-0.5
ITRB	Iturama	17.02	65	eP	P	20 29 30.7	+0.1
AY01	Puyuhuapi	17.11	195	P	P	20 29 31.1	-0.3
AY01				IAmb	IAmb	20 29 36.8	
	comp=Z,31nm,0.7s						
PET01	Itanhaem-SP	17.79	83	eP	P	20 29 38.5	-0.5
BB19B	Bebedouro	17.86	71	eP	P	20 29 38.8	-1.1
ETMB	Extrema	18.06	1	eP	P	20 29 42.8	+0.8
COYC	Coyhaique	18.09	192	Pn	P	20 29 42.9	+0.8
COYC				IAmb	IAmb	20 29 48.5	
	comp=Z,64nm,0.8s						
COYC	Coyhaique	18.09	192	P	P	20 29 42.2	+0.1
COYC				IAmb	IAmb	20 29 48.5	
	comp=Z,65nm,0.8s						
RCLB	Rio Claro- Sao	18.17	77	eP	P	20 29 42.7	-0.5
VAO	Valinhos	18.45	79	eP	P	20 29 46.4	0.0
NNA	Nana	18.53	327	P	P	20 29 47.6	+0.4
	comp=Z,5.1nm,0.4s,baz=208,slow=8.5,SNR=1.8						
NNA	Nana	18.53	327	P	P	20 29 46.7	-0.5
NNA				IAmb	IAmb	20 29 55.0	
	comp=Z,42nm,1.1s						
PDRB	Porto dos Gac	18.74	32	eP	P	20 29 48.1	-1.3
PARB	Paraibuna	19.52	81	eP	P	20 29 57.1	-0.7
IPMB	Ipameri, GO	19.66	64	eP	P	20 29 58.6	-0.8
CLDB	Colider	19.83	33	eP	P	20 29 59.5	-1.7
CZSB	Cruzeiro do Su	20.92	343	eP	P	20 30 12.9	0.0
GO08	Villa O'Higgin	20.97	191	P	P	20 30 15.6	+2.4
BDFB	Brasilia	21.18	59	P	P	20 30 14.5	-1.3
	comp=Z,39nm,0.7s,baz=223,slow=11,SNR=50						
	comp=Z,39nm,0.7s						
BDFB	Brasilia	21.18	59		P	20 30 12.7	-3.1
BDFB				IAmb	IAmb	20 30 15.5	
	comp=Z,70nm,1.0s						
SNDB	Serra Nova Dou	21.45	45	eP	P	20 30 16.3	-2.2
DUB01	Friburgo-RJ	22.76	81	eP	P	20 30 30.6	-0.8
DIAM	Diamantina, MG	23.20	70	eP	P	20 30 34.5	-1.1
PEXB	Peixe	23.32	51	eP	P	20 30 34.7	-1.9
JANB	Januaria	24.39	63	eP	P	20 30 44.4	-1.9
EFI	East Falkland	24.55	167	P	P	20 30 45.3	-2.0
EFI	East Falkland	24.55	167	ceP	P	20 30 45.9	-1.4
EFI				pmax	pmax		
	comp=Z,186nm,1.0s						
ALF01	Guarapari-ES	24.72	79	eP	P	20 30 47.9	-1.2
SJMB	Sao Joao De Ma	25.10	74	eP	P	20 30 51.3	-1.4
MG04	Isla Riesco	25.13	187	P	P	20 30 52.6	0.0
MACA	Manacapuru-AM	25.32	14	eP	P	20 30 54.6	0.0
GO10	Punta Arenas	25.38	186	P	P	20 30 54.0	-0.8
SDBA	SAO DESIDERIO	25.56	57	eP	P	20 30 55.2	-1.7
ITTB	Itaituba	25.67	26	eP	P	20 30 56.2	-1.6
SMTB	Santa Maria do	26.17	47	eP	P	20 31 00.7	-1.6
USHA	Ushuaia	26.88	182	P	P	20 31 08.9	+0.7
	comp=Z,4.8nm,0.6s,baz=30,slow=5.6,SNR=5.6						
	comp=Z,4.8nm,0.6s						
MG01	Puerto William	26.96	181	P	P	20 31 09.1	+0.2
GUA01	Guaratinga, BA	27.25	71	eP	P	20 31 10.7	-1.3
CMC01	Camacan, BA	28.10	69	eP	P	20 31 17.9	-1.6
BOAV	Boa Vista	30.76	12	eP	P	20 31 43.0	+0.1
TMAB	Tom-Au,PA,Br	31.02	38	eP	P	20 31 45.7	+0.3
SOTA	Rioblanco	31.42	341	eP	P	20 31 52.5	+3.1
PCON	Cinco Dias	31.54	341	eP	P	20 31 49.6	-0.9
ROSB	Rosrio	32.93	45	eP	P	20 32 00.6	-1.4
YOTC	Yotoco, Valle	33.10	342	eP	P	20 32 03.1	-0.6
ROSC	El Rosal	33.44	346	LR	LR	20 47 40.9	
	comp=Z,256nm,19.2s,baz=224,slow=39						
NBPS	Pedro II - PI	33.55	50	eP	P	20 32 06.7	-0.8
NBPB	Pedra_Branca-C	34.03	54	eP	P	20 32 10.9	-0.7
RUSC	La Rusia	34.22	349	eP	P	20 32 13.7	-0.1
NORC	Norcasia	34.26	345	eP	P	20 32 11.7	-1.8
CBOC	Ciudad Bolivar	34.82	344	eP	P	20 32 18.5	0.0
BARC	Barichara	34.92	349	eP	P	20 32 15.6	-3.9
PTBC	PUERTO BERRIO,	35.12	346	eP	P	20 32 17.5	-3.3
NBMO	Morrinhos-CE	35.29	51	eP	P	20 32 21.2	-1.2
MDP	Montagnes des	35.55	25	P	P	20 32 23.7	-0.8
	comp=Z,23nm,0.4s,baz=201,slow=9.5,SNR=50						
	comp=Z,23nm,0.4s						
ORCD	Orcadas	35.96	162	P	P	20 32 26.2	-1.3
ORCD				IAmb	IAmb	20 32 30.3	
	comp=Z,20nm,0.9s						
ESPZ	Base Esperanza	35.99	173	P	P	20 32 25.9	-1.9
ZARC	Zaragoza, Cauc	36.13	346	P	P	20 32 27.6	-1.8
ZARC				IAmb	IAmb	20 32 29.5	
	comp=Z,15nm,0.7s						
ZARC	Zaragoza, Cauc	36.13	346	eP	P	20 32 28.1	-1.3
UREC	San Jos de Ur	36.52	345	eP	P	20 32 29.1	-3.8
RCBR	Riachuelo	36.56	59	P	P	20 32 32.7	-0.6
	comp=Z,25nm,1.0s,baz=21,slow=11,SNR=6.1						
	comp=Z,25nm,1.0s						
RCBR	Riachuelo	36.56	59	eP	P	20 32 33.8	+0.5
RCBR	Riachuelo	36.56	59	P	P	20 32 33.4	+0.2
BAUV	El Baul	36.71	358	P	P	20 32 32.9	-1.5
BAUV				IAmb	IAmb	20 32 34.1	
	comp=Z,14nm,0.8s						
SDV	Santo Domingo	36.83	353	LR	LR	20 48 11.6	
	comp=Z,176nm,21.5s,baz=204,slow=37						
SDV	Santo Domingo	36.83	353	P	P	20 32 33.5	-2.2
SDV	Santo Domingo	36.83	353	eP	P	20 32 34.7	-0.9
PMSA	Palmer Station	36.86	178	P	P	20 32 36.0	+1.0
	comp=Z,21nm,1.0s,baz=71,slow=1.1,SNR=2.4						
	comp=Z,21nm,1.0s						
RPN	Rapa Nui	37.70	261	LR	LR	20 44 06.6	
	comp=Z,104nm,19.1s,baz=228,slow=29						
SJCC	San Jacinto, C	38.53	346	P	P	20 32 48.6	-1.2
DRK0	Durika	40.34	334	P	P	20 33 06.9	+2.0
SRBA	San Rafael, Bu	40.35	334	P	P	20 33 07.0	+2.1
SRBA				IAmb	IAmb	20 33 08.2	
	comp=Z,20nm,0.9s						
JTS	Las Juntas de	41.95	332	⇑eP	P	20 33 18.1	+0.3
JTS				pmax	pmax		
	comp=Z,18nm,1.5s						
ORTG	Ortega, Santa	42.22	332	P	P	20 33 22.5	+2.4
ORTG				IAmb	IAmb	20 33 23.4	
	comp=Z,43nm,1.2s						
FDF	Fort de France	42.78	8	P	P	20 33 23.5	-1.0
FDF	Fort de France	42.78	8	P	P	20 33 23.5	-1.0
FDF				pmax	pmax		
	comp=Z,183nm,1.4s						
OBIP	Obispado Ponce	45.73	0	P	P	20 33 47.1	-0.8
OBIP				IAmb	IAmb	20 33 47.6	
	comp=Z,25nm,0.5s						
CELP	Cerrillos	45.77	0	P	P	20 33 47.4	-0.7
SJG	San Juan	45.80	1	P	P	20 33 46.4	-2.0
SJG				IAmb	IAmb	20 33 56.9	
	comp=Z,40nm,1.5s						
SJG	San Juan	45.80	1	P	P	20 33 46.4	-2.0
SJG				pmax	pmax		
	comp=Z,40nm,1.5s						
CBYP	Canovanas	45.97	1	P	P	20 33 47.8	-2.0
CBYP				IAmb	IAmb	20 33 48.4	
	comp=Z,27nm,1.1s						
STVI	Saint Thomas	46.07	2	P	P	20 33 49.0	-1.5
STVI				IAmb	IAmb	20 34 17.6	
	comp=Z,53nm,1.4s						
TGUH	Tegucigalpa,Un	46.30	332	P	P	20 33 52.1	-0.5
MTDJ	Mount Denham	47.11	346	P	P	20 33 59.1	+0.4
MTDJ				IAmb	IAmb	20 34 00.3	
	comp=Z,37nm,0.8s						
MTO3	Montecristo	47.51	330	P	P	20 34 02.9	+0.9
MTO3				IAmb	IAmb	20 34 04.0	
	comp=Z,27nm,1.1s						
ESQI	Esquipulas	47.64	330	P	P	20 34 03.1	+0.2
ESQI				IAmb	IAmb	20 34 05.3	
	comp=Z,39nm,1.0s						
CCIG	Comitan	50.43	328	P	P	20 34 24.4	+0.2
CCIG				IAmb	IAmb	20 34 25.9	
	comp=Z,16nm,0.9s						
BELA	Belgrano 2	52.09	172	P	P	20 34 35.0	-0.6
SOR	Soroa	52.87	341	P	P	20 34 42.5	+0.6
SOR				IAmb	IAmb	20 34 43.0	
	comp=Z,14nm,0.9s						
SOR	Soroa	52.87	341	P	P	20 34 42.5	+0.6
SOR				pmax	pmax		
	comp=Z,14nm,0.9s						
VNA3	Neumayer Olymp	53.33	160	P	P	20 34 45.6	+0.8
VNA1	Neumayer--Stat	53.54	159	P	P	20 34 47.4	+1.2
SNAA	Sanae	55.53	160	P	P	20 35 01.3	+0.5
SNAA	Sanae	55.53	160	P	P	20 35 01.1	+0.4
	comp=Z,56nm,1.1s,baz=288,slow=6.7,SNR=69						
SNAA				PcP	PcP	20 35 59.0	+0.5
	comp=Z,16nm,1.0s,baz=304,slow=5.8,SNR=4.8						
	comp=Z,56nm,1.1s						
SNAA	Sanae	55.53	160	P	P	20 35 00.6	-0.1
SNAA	Sanae	55.53	160	d iP	P	20 35 00.9	+0.2
SNAA				pmax	pmax		
	comp=Z,125nm,1.7s						
TROLL	Troll, Antarti	57.25	160	P	P	20 35 13.6	+0.7
656A	Willston	59.00	344	P	P	20 35 25.0	-0.4
NVL	N'lazarevskaya	60.10	158	⇑iP	P	20 35 33.0	+0.6
NVL				eS	S	20 43 34.6	+2.6
NVL				pmax	pmax		
	comp=Z,85nm,1.0s						
553A	Crawfordville	60.27	342	P	P	20 35 34.4	+0.4
ZAIG	Zacatecas	61.20	322	P	P	20 35 42.2	+1.3
ZAIG				IAmb	IAmb	20 35 44.4	
	comp=Z,10nm,0.9s						
TIGA	Tifton	61.23	344	P	P	20 35 40.2	-0.3
352A	Blakely	61.62	342	P	P	20 35 42.7	-0.4
BRAL	Brewton	61.93	340	P	P	20 35 45.6	+0.3
	baz=160						
154A	Montrose	62.24	344	P	P	20 35 47.0	-0.2
QSPA	South Pole Qui	62.26	180	P	P	20 35 47.9	+0.7
QSPA	South Pole Qui	62.26	180	P	P	20 35 48.4	+1.2
QSPA				pP	pP	20 36 26.5	+0.3
HAW	Hawthorne Fire	62.62	346	P	P	20 35 50.0	+0.2
	baz=165						
152A	Waverly Hall	62.69	343	P	P	20 35 50.0	-0.3
152A				IAmb	IAmb	20 35 50.8	
	comp=Z,14nm,1.2s						
Y57A	Sumter	63.00	347	P	P	20 35 52.0	-0.2
GOGA	Godfrey	63.09	344	P	P	20 35 52.1	-0.7
GOGA	Godfrey	63.09	344	P	P	20 35 52.1	-0.7
GOGA				pmax	pmax		
	comp=Z,11nm,1.1s						

GOGA	**Godfrey**	**63.09**	**344**	P	**P**	**20 35 52.2**	**-0.6**
	baz=163						
GOGA	**Godfrey**	**63.09**	**344**	P	**P**	**20 35 52.5**	**-0.3**
	baz=163						
X58A	**Rowland**	**63.33**	**348**	P	**P**	**20 35 54.1**	**-0.2**
X58A	**Rowland**	**63.33**	**348**	P	**P**	**20 35 54.1**	**-0.2**
	baz=167						
X58A				P	**P**	**20 35 54.1**	**-0.2**
	baz=167						
Z51A	**Franklin**	**63.43**	**343**	P	**P**	**20 35 54.9**	**-0.2**
Z51A				IAmb	IAmb	20 35 55.3	
	comp=Z,13nm,1.1s						
JSC	**Jenkinsville**	**63.43**	**347**	P	**P**	**20 35 55.2**	**+0.1**
JSC				IAmb	IAmb	20 35 55.8	
	comp=Z,8.2nm,0.7s						
JSC	**Jenkinsville**	**63.43**	**347**	P	**P**	**20 35 55.2**	**+0.1**
JSC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HODGE	**Hodges**	**63.60**	**346**	P	**P**	**20 35 56.8**	**+0.7**
	baz=164						
BIRD	**Birdtown, Kers**	**63.62**	**347**	P	**P**	**20 35 56.9**	**+0.6**
BIRD				IAmb	IAmb	20 35 57.7	
	comp=Z,33nm,1.3s						
BIRD	**Birdtown, Kers**	**63.62**	**347**	P	**P**	**20 35 56.8**	**+0.4**
	baz=166						
LRAL	**Lakeview Retre**	**63.66**	**341**	P	**P**	**20 35 52.6**	**-4.0**
LRAL				IAmb	IAmb	20 35 56.7	
	comp=Z,7.6nm,0.7s						
LRAL	**Lakeview Retre**	**63.66**	**341**	P	**P**	**20 35 56.1**	**-0.5**
	baz=160						
LRAL	**Lakeview Retre**	**63.66**	**341**	P	**P**	**20 35 56.4**	**-0.2**
	baz=160						
Y52A	**Lilburn**	**63.66**	**344**	P	**P**	**20 35 56.4**	**-0.2**
Y52A				IAmb	IAmb	20 35 57.3	
	comp=Z,21nm,1.1s						
342A	**Flagon Creek P**	**63.88**	**336**	P	**P**	**20 35 56.0**	**-2.0**
HKT	**Hockley**	**63.98**	**332**	⇑*e*P	**P**	**20 35 59.6**	**+0.9**
HKT				*i* *PP	**pP**	**20 36 41.7**	**+3.4**
HKT				pmax	pmax		
	comp=Z,23nm,1.4s						
VBMS	**Vicksburg**	**64.01**	**338**	P	**P**	**20 35 59.0**	**+0.1**
VBMS	**Vicksburg**	**64.01**	**338**	P	**P**	**20 35 59.4**	**+0.5**
	baz=156						
W57A	**Gilead**	**64.03**	**348**	P	**P**	**20 35 59.0**	**+0.1**
W57A				IAmb	IAmb	20 36 00.1	
	comp=Z,19nm,0.9s						
W57A	**Gilead**	**64.03**	**348**	P	**P**	**20 35 59.3**	**+0.4**
	baz=167,SNR=6.0						
W57A				P	**P**	**20 35 59.3**	**+0.4**
	baz=167,SNR=6.0						
PAULI	**Pauline**	**64.07**	**346**	P	**P**	**20 35 59.5**	**+0.2**
PAULI	**Pauline**	**64.07**	**346**	P	**P**	**20 35 59.2**	**0.0**
	baz=165						
Z47A	**Carrollton**	**64.13**	**340**	P	**P**	**20 35 59.6**	**-0.1**
Z47A				IAmb	IAmb	20 36 00.4	
	comp=Z,16nm,0.7s						
833A	**Chaparral WMA,**	**64.16**	**328**	P	**P**	**20 36 00.8**	**+0.8**
833A	**Chaparral WMA,**	**64.16**	**328**	P	**P**	**20 36 01.2**	**+1.2**
	baz=148,SNR=15						
833A	**Chaparral WMA,**	**64.16**	**328**	P	**P**	**20 36 01.0**	**+1.0**
	baz=148,SNR=15						
Y49A	**Blount Mountai**	**64.27**	**342**	P	**P**	**20 36 00.3**	**-0.2**
Y49A				IAmb	IAmb	20 36 01.2	
	comp=Z,13nm,0.8s						
Y49A	**Blount Mountai**	**64.27**	**342**	P	**P**	**20 36 00.4**	**-0.2**
	baz=160						
KMSC	**Kings Mountain**	**64.28**	**347**	P	**P**	**20 36 00.8**	**+0.2**
KMSC	**Kings Mountain**	**64.28**	**347**	P	**P**	**20 36 00.2**	**-0.4**
	baz=166						
KMSC	**Kings Mountain**	**64.28**	**347**	P	**P**	**20 36 01.1**	**+0.5**
	baz=166						
CASEE	**Lake Jocassee**	**64.48**	**345**	P	**P**	**20 36 01.7**	**-0.3**
	baz=164						
V58A	**Windy Hill, Pi**	**64.49**	**349**	P	**P**	**20 36 02.0**	**0.0**
V58A				IAmb	IAmb	20 36 12.3	
	comp=Z,10nm,0.8s						
V58A	**Windy Hill, Pi**	**64.49**	**349**	P	**P**	**20 36 02.0**	**0.0**
	baz=168						
V58A				P	**P**	**20 36 02.0**	**0.0**
	baz=168						
X51A	**Calhoun**	**64.53**	**343**	P	**P**	**20 36 02.0**	**-0.3**
X51A	**Calhoun**	**64.53**	**343**	P	**P**	**20 36 02.4**	**+0.1**
	baz=162,SNR=7.1						
X51A				P	**P**	**20 36 02.4**	**+0.1**
	baz=162,SNR=7.1						
FPAL	**Fort Paine**	**64.70**	**343**	P	**P**	**20 36 03.2**	**-0.2**
FPAL				IAmb	IAmb	20 36 03.9	
	comp=Z,11nm,0.6s						
143A	**Socs Landing,**	**64.75**	**337**	P	**P**	**20 36 04.3**	**+0.6**
W52A	**Murphy**	**64.80**	**344**	P	**P**	**20 36 03.6**	**-0.5**
W52A				IAmb	IAmb	20 36 04.9	
	comp=Z,19nm,1.3s						
W52A	**Murphy**	**64.80**	**344**	P	**P**	**20 36 04.1**	**0.0**
	baz=163						
U59A	**Littleton**	**64.83**	**350**	P	**P**	**20 36 04.0**	**-0.1**
U59A				IAmb	IAmb	20 36 04.9	
	comp=Z,6.8nm,0.6s						
V55A	**Taylorsville**	**64.94**	**347**	P	**P**	**20 36 05.2**	**+0.3**
V55A				IAmb	IAmb	20 36 05.8	
	comp=Z,14nm,0.8s						
V55A	**Taylorsville**	**64.94**	**347**	P	**P**	**20 36 05.4**	**+0.5**
	baz=166,SNR=6.0						
V55A				P	**P**	**20 36 05.4**	**+0.5**
	baz=166,SNR=6.0						
X48A	**Hartselle**	**65.00**	**341**	P	**P**	**20 36 05.0**	**-0.4**
X48A	**Hartselle**	**65.00**	**341**	P	**P**	**20 36 05.4**	**+0.1**
	baz=160,SNR=6.8						
V53A	**Saluda**	**65.10**	**346**	P	**P**	**20 36 04.9**	**-1.1**
V53A	**Saluda**	**65.10**	**346**	P	**P**	**20 36 05.7**	**-0.3**
	baz=164						
V53A				P	**P**	**20 36 05.7**	**-0.3**
	baz=164						
NATX	**Nacogdoches**	**65.10**	**334**	P	**P**	**20 36 07.0**	**+1.0**
NATX	**Nacogdoches**	**65.10**	**334**	P	**P**	**20 36 07.3**	**+1.3**
	baz=153						
Y45A	**Yeager Farm, C**	**65.20**	**339**	P	**P**	**20 36 06.9**	**+0.3**
W50A	**Signal Mountai**	**65.25**	**343**	P	**P**	**20 36 06.8**	**-0.2**
W50A				IAmb	IAmb	20 36 07.8	
	comp=Z,17nm,0.9s						
W50A	**Signal Mountai**	**65.25**	**343**	P	**P**	**20 36 06.9**	**0.0**
	baz=162,SNR=5.7						
U56A	**King**	**65.26**	**348**	P	**P**	**20 36 07.3**	**+0.3**
U56A				IAmb	IAmb	20 36 08.1	
	comp=Z,10nm,0.9s						
U56A	**King**	**65.26**	**348**	P	**P**	**20 36 07.6**	**+0.7**
	baz=166						
U56A				P	**P**	**20 36 07.6**	**+0.7**
	baz=166						
CPCT	**Cooper Cave**	**65.29**	**344**	P	**P**	**20 36 07.0**	**-0.1**
CPCT				IAmb	IAmb	20 36 07.8	
	comp=Z,13nm,0.9s						
TKL	**Tuckaleechee C**	**65.31**	**345**	LR	LR	21 08 01.6	
	comp=Z,35nm,19.7s,baz=149,slow=39						
TKL	**Tuckaleechee C**	**65.31**	**345**	P	**P**	**20 36 06.7**	**-0.6**
TKL				IAmb	IAmb	20 36 07.7	
	comp=Z,17nm,1.1s						
TKL	**Tuckaleechee C**	**65.31**	**345**	P	**P**	**20 36 06.7**	**-0.6**
TKL				pmax	pmax		
	comp=Z,17nm,1.1s						
SWET	**Sewanee**	**65.42**	**343**	P	**P**	**20 36 07.8**	**-0.3**
SWET				IAmb	IAmb	20 36 08.8	
	comp=Z,23nm,1.0s						
V52A	**Sevierville**	**65.44**	**345**	P	**P**	**20 36 07.5**	**-0.6**
V52A				IAmb	IAmb	20 36 08.6	
	comp=Z,15nm,1.1s						
435B	**Jarrell**	**65.45**	**331**	P	**P**	**20 36 08.6**	**+0.4**
435B				IAmb	IAmb	20 36 10.0	
	comp=Z,16nm,1.1s						
435B	**Jarrell**	**65.45**	**331**	P	**P**	**20 36 08.7**	**+0.5**
	baz=150						
V51A	**Loudon**	**65.58**	**344**	P	**P**	**20 36 08.8**	**-0.3**
V51A				IAmb	IAmb	20 36 11.0	
	comp=Z,18nm,1.5s						
T57A	**Hurt**	**65.69**	**349**	P	**P**	**20 36 09.5**	**-0.2**
U54A	**Nelsons Funny**	**65.71**	**347**	P	**P**	**20 36 09.9**	**0.0**
U54A	**Nelsons Funny**	**65.71**	**347**	P	**P**	**20 36 10.2**	**+0.2**
	baz=165						
U54A				P	**P**	**20 36 10.2**	**+0.2**
	baz=165						
Z41A	**Richland Creek**	**65.75**	**336**	P	**P**	**20 36 11.1**	**+1.0**
Z41A				IAmb	IAmb	20 36 31.2	
	comp=Z,18nm,0.8s						
Z41A	**Richland Creek**	**65.75**	**336**	P	**P**	**20 36 10.9**	**+0.8**
	baz=155						
OXF	**Oxford**	**65.76**	**340**	P	**P**	**20 36 09.6**	**-0.6**
OXF	**Oxford**	**65.76**	**340**	P	**P**	**20 36 09.6**	**-0.6**
OXF				pmax	pmax		
	comp=Z,33nm,1.1s						
OXF	**Oxford**	**65.76**	**340**	P	**P**	**20 36 09.6**	**-0.6**
	baz=158						
PLAL	**Pickwick Lake**	**65.80**	**341**	P	**P**	**20 36 09.5**	**-0.9**
TZTN	**Tazewell**	**66.10**	**345**	P	**P**	**20 36 12.6**	**+0.2**
	baz=164						
BLA	**Blacksburg**	**66.11**	**348**	P	**P**	**20 36 13.0**	**+0.6**
	baz=167						
V48A	**Smith Brothers**	**66.15**	**342**	P	**P**	**20 36 12.2**	**-0.5**
V48A				IAmb	IAmb	20 36 13.0	
	comp=Z,15nm,0.8s						
V48A	**Smith Brothers**	**66.15**	**342**	P	**P**	**20 36 12.7**	**0.0**
	baz=160,SNR=7.5						
JCT	**Junction City**	**66.17**	**329**	P	**P**	**20 36 13.4**	**+0.5**
JCT	**Junction City**	**66.17**	**329**	P	**P**	**20 36 13.5**	**+0.5**
JCT				pmax	pmax		
	comp=Z,28nm,0.9s						
JCT	**Junction City**	**66.17**	**329**	P	**P**	**20 36 14.2**	**+1.3**
	baz=148,SNR=8.3						
JCT	**Junction City**	**66.17**	**329**	P	**P**	**20 36 13.7**	**+0.7**
	baz=148,SNR=8.3						
WLAR	**White Oak Lake**	**66.25**	**336**	P	**P**	**20 36 14.6**	**+1.3**
W45A	**Hickory Valley**	**66.29**	**340**	P	**P**	**20 36 13.2**	**-0.3**
CLTN	**Cedars of Leba**	**66.35**	**343**	P	**P**	**20 36 13.3**	**-0.6**
CLTN				IAmb	IAmb	20 36 14.5	
	comp=Z,13nm,0.7s						
S57A	**Dark Hollow, R**	**66.39**	**349**	P	**P**	**20 36 14.9**	**+0.7**
S57A				IAmb	IAmb	20 36 15.8	
	comp=Z,29nm,1.4s						
R58B	**Mineral**	**66.42**	**350**	P	**P**	**20 36 14.5**	**+0.2**
R58B				IAmb	IAmb	20 36 16.1	
	comp=Z,17nm,1.1s						
R58B	**Mineral**	**66.42**	**350**	P	**P**	**20 36 14.6**	**+0.3**
	baz=169						
R58B				P	**P**	**20 36 14.6**	**+0.3**
	baz=169						
WHTX	**Lake Whitney,**	**66.44**	**332**	P	**P**	**20 36 15.2**	**+0.7**
WHTX				IAmb	IAmb	20 36 15.7	
	comp=Z,20nm,0.8s						
WHTX	**Lake Whitney,**	**66.44**	**332**	P	**P**	**20 36 15.3**	**+0.7**
	baz=150						
WHTX	**Lake Whitney,**	**66.44**	**332**	P	**P**	**20 36 15.1**	**+0.6**
	baz=150						
Z38A	**Mt. Pleasant**	**66.56**	**334**	P	**P**	**20 36 16.1**	**+0.8**
Z38A				IAmb	IAmb	20 36 16.8	
	comp=Z,17nm,0.9s						
U49A	**Red Boiling Sp**	**66.61**	**343**	P	**P**	**20 36 14.8**	**-0.8**
U49A	**Red Boiling Sp**	**66.61**	**343**	P	**P**	**20 36 15.0**	**-0.6**
	baz=162						
WVT	**Waverly**	**66.80**	**341**	P	**P**	**20 36 15.9**	**-0.9**
WVT	**Waverly**	**66.80**	**341**	P	**P**	**20 36 15.9**	**-0.9**
WVT				pmax	pmax		
	comp=Z,30nm,0.8s						
WVT	**Waverly**	**66.80**	**341**	P	**P**	**20 36 16.4**	**-0.4**
	baz=160,SNR=20						
WVT	**Waverly**	**66.80**	**341**	P	**P**	**20 36 16.3**	**-0.4**
	baz=160						
WVT	**Waverly**	**66.80**	**341**	P	**P**	**20 36 16.3**	**-0.4**
WVT				pP	**pP**	**20 36 59.0**	**+2.2**
WVT				sP	**sP**	**20 37 15.0**	**+0.2**
S54A	**Dingess, Beckl**	**66.84**	**347**	P	**P**	**20 36 17.0**	**-0.1**
X40A	**Basin Creek Fa**	**66.87**	**337**	P	**P**	**20 36 17.4**	**+0.2**
	baz=155						
UALR	**University of**	**66.96**	**337**	P	**P**	**20 36 17.2**	**-0.5**
UALR				IAmb	IAmb	20 36 18.9	
	comp=Z,27nm,1.3s						
TXAR	**Lajitas Array**	**67.08**	**325**	P	**P**	**20 36 19.7**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=141,slow=8.1,SNR=22						
TXAR				PcP	**PcP**	**20 36 46.8**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=140,slow=4.7,SNR=3.1						
	comp=Z,3.1nm,0.9s						
TXAR	**Lajitas Array**	**67.08**	**325**	P	**P**	**20 36 19.2**	**+0.4**
TX31	**Lajitas Ar. Si**	**67.08**	**325**	P	**P**	**20 36 19.6**	**+0.8**
TX31				IAmb	IAmb	20 36 21.0	
	comp=Z,22nm,1.1s						
TX31	**Lajitas Ar. Si**	**67.08**	**325**	P	**P**	**20 36 19.4**	**+0.6**
	baz=145,SNR=5.4						
TX32	**Lajitas Array**	**67.08**	**325**	P	**P**	**20 36 19.4**	**+0.5**
R55A	**Marlinton**	**67.09**	**349**	P	**P**	**20 36 19.2**	**+0.6**
R55A				IAmb	IAmb	20 36 20.8	
	comp=Z,23nm,1.0s						
R55A	**Marlinton**	**67.09**	**349**	P	**P**	**20 36 19.6**	**+0.9**
	baz=167,SNR=6.6						
R55A				P	**P**	**20 36 19.6**	**+0.9**
	baz=167,SNR=6.6						
MIAR	**Mount Ida**	**67.18**	**336**	P	**P**	**20 36 19.2**	**0.0**
MIAR				IAmb	IAmb	20 36 20.7	
	comp=Z,16nm,1.0s						
MIAR	**Mount Ida**	**67.18**	**336**	P	**P**	**20 36 19.3**	**0.0**
MIAR				pmax	pmax		
	comp=Z,16nm,1.0s						
MIAR	**Mount Ida**	**67.18**	**336**	P	**P**	**20 36 19.0**	**-0.2**
	baz=154,SNR=11						
MIAR	**Mount Ida**	**67.18**	**336**	P	**P**	**20 36 19.6**	**+0.3**
	baz=154,SNR=11						
W41B	**Gary Mavity, V**	**67.29**	**337**	P	**P**	**20 36 19.7**	**-0.1**
W41B	**Gary Mavity, V**	**67.29**	**337**	P	**P**	**20 36 19.7**	**-0.1**
	baz=156,SNR=7.2						
W41B	**Gary Mavity, V**	**67.29**	**337**	P	**P**	**20 36 20.0**	**+0.2**
	baz=156,SNR=7.2						
T47A	**Sharon Grove**	**67.40**	**342**	P	**P**	**20 36 19.7**	**-0.9**
T47A				IAmb	IAmb	20 36 20.9	
	comp=Z,16nm,1.1s						
WHAR	**Wooly Hollow**	**67.41**	**337**	P	**P**	**20 36 20.6**	**0.0**
WHAR				IAmb	IAmb	20 36 21.9	
	comp=Z,18nm,1.1s						
R53A	**Hurricane**	**67.48**	**347**	P	**P**	**20 36 20.8**	**-0.3**
R53A				IAmb	IAmb	20 36 21.4	
	comp=Z,22nm,1.4s						
Z35A	**Perchaven, San**	**67.52**	**333**	P	**P**	**20 36 21.8**	**+0.5**
Z35A	**Perchaven, San**	**67.52**	**333**	P	**P**	**20 36 22.0**	**+0.7**
	baz=151,SNR=8.0						
LCAR	**Lake Charles**	**67.74**	**339**	P	**P**	**20 36 22.1**	**-0.5**
LCAR				IAmb	IAmb	20 36 23.7	
	comp=Z,26nm,1.2s						
LCAR	**Lake Charles**	**67.74**	**339**	P	**P**	**20 36 22.4**	**-0.3**
	baz=157,SNR=8.1						
W39A	**Magazine**	**67.84**	**336**	P	**P**	**20 36 23.9**	**+0.6**
W39A				IAmb	IAmb	20 36 25.3	
	comp=Z,31nm,1.2s						
W39A	**Magazine**	**67.84**	**336**	P	**P**	**20 36 24.5**	**+1.1**
	baz=154,SNR=10						
W39A	**Magazine**	**67.84**	**336**	P	**P**	**20 36 24.3**	**+1.0**
	baz=154,SNR=10						
PARMO	**Parma**	**67.86**	**340**	P	**P**	**20 36 23.4**	**0.0**
X37A	**Clayton**	**67.88**	**335**		**P**	**20 36 23.9**	**+0.3**
X37A				IAmb	IAmb	20 36 25.6	
	comp=Z,16nm,0.8s						
X37A	**Clayton**	**67.88**	**335**	P	**P**	**20 36 24.5**	**+0.8**
	baz=153,SNR=12						
FCAR	**Ozark Folk Cen**	**67.90**	**338**	P	**P**	**20 36 23.1**	**-0.5**
FCAR				IAmb	IAmb	20 36 25.3	
	comp=Z,19nm,1.2s						
Q54A	**Coxs Mills**	**67.90**	**348**	P	**P**	**20 36 23.6**	**0.0**
Q54A				IAmb	IAmb	20 36 24.2	
	comp=Z,10nm,0.7s						
Q54A	**Coxs Mills**	**67.90**	**348**	P	**P**	**20 36 23.9**	**+0.2**
	baz=166						
Q54A				P	**P**	**20 36 23.9**	**+0.2**
	baz=166						
ABTX	**Abilene, Hawle**	**67.92**	**330**	P	**P**	**20 36 24.3**	**+0.3**
ABTX				IAmb	IAmb	20 36 25.6	
	comp=Z,24nm,1.1s						
ABTX	**Abilene, Hawle**	**67.92**	**330**	P	**P**	**20 36 24.6**	**+0.7**
	baz=149,SNR=6.5						
ABTX	**Abilene, Hawle**	**67.92**	**330**	P	**P**	**20 36 24.3**	**+0.3**
	baz=149,SNR=6.5						
P57A	**Homestead Farm**	**67.93**	**351**	P	**P**	**20 36 24.4**	**+0.7**
P57A				IAmb	IAmb	20 36 25.5	
	comp=Z,17nm,0.6s						
P57A	**Homestead Farm**	**67.93**	**351**	P	**P**	**20 36 25.2**	**+1.5**
	baz=169,SNR=7.1						
P57A				P	**P**	**20 36 25.2**	**+1.5**
	baz=169,SNR=7.1						
WUPA	**West Chester U**	**68.06**	**353**	P	**P**	**20 36 24.8**	**+0.2**
R49A	**Shelbyville**	**68.15**	**344**	P	**P**	**20 36 24.6**	**-0.6**
R49A				IAmb	IAmb	20 36 34.1	
	comp=Z,16nm,0.7s						
Q52A	**Bidwell**	**68.16**	**347**	P	**P**	**20 36 24.4**	**-0.8**
Q52A				IAmb	IAmb	20 36 26.1	
	comp=Z,14nm,0.9s						
Q52A	**Bidwell**	**68.16**	**347**	P	**P**	**20 36 25.3**	**+0.1**
	baz=165						
Q52A				P	**P**	**20 36 25.3**	**+0.1**
	baz=165						
PBMO	**Poplar Bluff**	**68.17**	**340**	P	**P**	**20 36 24.8**	**-0.5**
PBMO	**Poplar Bluff**	**68.17**	**340**	P	**P**	**20 36 25.4**	**+0.1**
	baz=157,SNR=16						
MVL	**Millersville**	**68.21**	**352**	P	**P**	**20 36 25.6**	**+0.1**
MVL				IAmb	IAmb	20 36 27.4	
	comp=Z,17nm,1.1s						
MCWV	**Mont Chateau**	**68.39**	**349**	P	**P**	**20 36 26.6**	**0.0**
MCWV				IAmb	IAmb	20 36 27.9	
	comp=Z,16nm,0.7s						
MCWV	**Mont Chateau**	**68.39**	**349**	P	**P**	**20 36 27.4**	**+0.8**
	baz=167						
MCWV	**Mont Chateau**	**68.39**	**349**	P	**P**	**20 36 27.4**	**+0.8**
	baz=167						
LIC	**Lamto**	**68.44**	**70**	*e*P	**P**	**20 36 26.3**	**-1.2**
	comp=Z,33nm,1.7s						
Q51A	**Peebles**	**68.44**	**346**	P	**P**	**20 36 26.6**	**-0.4**
Q51A				IAmb	IAmb	20 36 27.7	
	comp=Z,16nm,1.1s						
PAGS	**Pennsylvania G**	**68.48**	**352**	P	**P**	**20 36 27.9**	**+0.7**
PAGS				IAmb	IAmb	20 36 28.9	
	comp=Z,23nm,1.0s						
P53A	**Whipple**	**68.49**	**348**	P	**P**	**20 36 27.6**	**+0.3**
P53A				IAmb	IAmb	20 36 28.6	
	comp=Z,19nm,0.8s						
P53A	**Whipple**	**68.49**	**348**	P	**P**	**20 36 27.9**	**+0.6**
	baz=166,SNR=5.7						
P53A				P	**P**	**20 36 27.9**	**+0.6**
	baz=166,SNR=5.7						
U40A	**Yellville**	**68.57**	**337**	P	**P**	**20 36 27.7**	**-0.1**
U40A	**Yellville**	**68.57**	**337**	P	**P**	**20 36 28.1**	**+0.3**
	baz=155,SNR=13						
U40A				P	**P**	**20 36 28.1**	**+0.3**
	baz=155,SNR=13						
U40A	**Yellville**	**68.57**	**337**	P	**P**	**20 36 28.0**	**+0.1**
	baz=155,SNR=13						
S44A	**Carbondale**	**68.66**	**341**	P	**P**	**20 36 27.7**	**-0.7**
S44A				IAmb	IAmb	20 36 28.3	
	comp=Z,12nm,0.6s						
S44A	**Carbondale**	**68.66**	**341**	P	**P**	**20 36 28.0**	**-0.4**
	baz=158						
TIC	**Toumodi**	**68.67**	**70**	*e*P	**P**	**20 36 27.4**	**-1.6**
	comp=Z,5.2nm,0.3s						
KIC	**Kosan Boka**	**68.75**	**70**	*e*P	**P**	**20 36 27.9**	**-1.6**
	comp=Z,20nm,0.5s						
P52A	**Corning**	**68.78**	**347**	P	**P**	**20 36 28.5**	**-0.5**
P52A				IAmb	IAmb	20 36 29.7	
	comp=Z,26nm,1.0s						
P52A	**Corning**	**68.78**	**347**	P	**P**	**20 36 28.8**	**-0.3**
	baz=165						
P51A	**Williamsport**	**68.82**	**346**	P	**P**	**20 36 28.8**	**-0.5**
P51A				IAmb	IAmb	20 36 29.9	
	comp=Z,23nm,1.3s						
DBIC	**Dimbokro**	**68.82**	**70**	P	**P**	**20 36 28.5**	**-1.4**
	comp=Z,8.1nm,0.5s,baz=233,slow=3.7,SNR=30						
DBIC				LR	LR	21 06 36.9	
	comp=Z,75nm,18.6s,baz=264,slow=36						
DBIC				P4KPbc		21 13 00.6	
	comp=Z,6.1nm,1.0s,baz=319,slow=11,SNR=3.5						
	comp=Z,8.1nm,0.5s						
DBIC	**Dimbokro**	**68.82**	**70**	P	**P**	**20 36 28.1**	**-1.9**
DBIC				IAmb	IAmb	20 36 29.2	
	comp=Z,11nm,0.8s						
DBIC	**Dimbokro**	**68.82**	**70**	P	**P**	**20 36 28.4**	**-1.5**
X34A	**Smith Ranch, M**	**68.86**	**333**		**P**	**20 36 30.2**	**+0.5**
HHAR	**Hobbs**	**68.87**	**337**	P	**P**	**20 36 29.7**	**0.0**
HHAR				IAmb	IAmb	20 36 31.2	
	comp=Z,46nm,1.5s						
HHAR	**Hobbs**	**68.87**	**337**	P	**P**	**20 36 30.0**	**+0.2**
	baz=154						
O54A	**Avella**	**68.99**	**349**	P	**P**	**20 36 30.3**	**0.0**
O54A				IAmb	IAmb	20 36 31.0	
	comp=Z,10.0nm,0.6s						
SSPA	**Standing Stone**	**69.04**	**351**	P	**P**	**20 36 31.0**	**+0.4**
SSPA	**Standing Stone**	**69.04**	**351**	P	**P**	**20 36 31.4**	**+0.7**
	baz=169						
SSPA	**Standing Stone**	**69.04**	**351**	P	**P**	**20 36 31.6**	**+0.9**
SSPA				pP	**pP**	**20 37 13.3**	**+2.4**
SSPA				sP	**sP**	**20 37 28.0**	**-0.9**
N58A	**Sunbury**	**69.09**	**352**	P	**P**	**20 36 31.6**	**+0.6**
N58A				IAmb	IAmb	20 36 32.9	
	comp=Z,19nm,1.0s						
MGMO	**Mountain Grove**	**69.10**	**338**	P	**P**	**20 36 31.2**	**+0.1**
MGMO				IAmb	IAmb	20 36 32.5	
	comp=Z,24nm,0.9s						
O52A	**Adamsville**	**69.19**	**348**	P	**P**	**20 36 31.3**	**-0.3**
O52A				IAmb	IAmb	20 36 32.3	
	comp=Z,16nm,0.8s						
O52A	**Adamsville**	**69.19**	**348**	P	**P**	**20 36 31.2**	**-0.4**
	baz=166,SNR=5.1						
O52A				P	**P**	**20 36 31.2**	**-0.4**
	baz=166,SNR=5.1						
O53A	**New Philadelph**	**69.20**	**348**	P	**P**	**20 36 31.8**	**+0.1**
O53A				IAmb	IAmb	20 36 32.7	
	comp=Z,18nm,1.1s						
O53A	**New Philadelph**	**69.20**	**348**	P	**P**	**20 36 31.6**	**0.0**
	baz=166						
TUL1	**Leonard**	**69.21**	**335**	P	**P**	**20 36 32.0**	**+0.1**
TUL1				IAmb	IAmb	20 36 33.2	
	comp=Z,26nm,1.0s						
TUL1	**Leonard**	**69.21**	**335**	P	**P**	**20 36 32.3**	**+0.5**
	baz=152						
TUL1	**Leonard**	**69.21**	**335**	P	**P**	**20 36 31.9**	**+0.1**
	baz=152						
P49A	**Miami Univ. Ec**	**69.23**	**345**	P	**P**	**20 36 31.0**	**-0.8**
P49A				IAmb	IAmb	20 36 32.0	
	comp=Z,39nm,1.5s						
P49A	**Miami Univ. Ec**	**69.23**	**345**	P	**P**	**20 36 31.2**	**-0.7**
	baz=163						
FNO	**Franklin**	**69.26**	**333**	P	**P**	**20 36 32.2**	**0.0**
FNO				IAmb	IAmb	20 36 33.3	
	comp=Z,38nm,1.2s						
FVM	**French Village**	**69.28**	**340**	P	**P**	**20 36 31.6**	**-0.6**
FVM				IAmb	IAmb	20 36 33.0	
	comp=Z,28nm,1.1s						
FVM	**French Village**	**69.28**	**340**	P	**P**	**20 36 31.6**	**-0.6**
FVM				pmax	pmax		
	comp=Z,29nm,1.1s						
FVM	**French Village**	**69.28**	**340**	P	**P**	**20 36 32.2**	**0.0**
	baz=158,SNR=9.6						
WMOK	**Wichita Mounta**	**69.36**	**332**	P	**P**	**20 36 32.1**	**-0.7**
WMOK	**Wichita Mounta**	**69.36**	**332**	P	**P**	**20 36 32.2**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMOK	**Wichita Mounta**	**69.36**	**332**	P	**P**	**20 36 32.3**	**-0.5**
	baz=150,SNR=9.4						
WMOK	**Wichita Mounta**	**69.36**	**332**	P	**P**	**20 36 32.6**	**-0.2**
	baz=150,SNR=9.4						
OKCFA	**Oklahoma City**	**69.42**	**333**	P	**P**	**20 36 33.1**	**0.0**
ACSO	**Alum Creek Sta**	**69.52**	**347**	P	**P**	**20 36 33.0**	**-0.7**
ACSO				IAmb	IAmb	20 36 34.3	
	comp=Z,14nm,0.8s						
ACSO	**Alum Creek Sta**	**69.52**	**347**	P	**P**	**20 36 33.8**	**+0.1**
	baz=164						
ACSO	**Alum Creek Sta**	**69.52**	**347**	P	**P**	**20 36 33.3**	**-0.4**
	baz=164						
CCM	**Cathedral Cave**	**69.59**	**339**	P	**P**	**20 36 33.7**	**-0.4**
CCM				IAmb	IAmb	20 36 35.1	
	comp=Z,24nm,0.8s						
CCM	**Cathedral Cave**	**69.59**	**339**	P	**P**	**20 36 33.7**	**-0.4**
CCM				pmax	pmax		
	comp=Z,24nm,0.8s						
CCM	**Cathedral Cave**	**69.59**	**339**	P	**P**	**20 36 34.2**	**+0.1**
	baz=157,SNR=17						
CCM	**Cathedral Cave**	**69.59**	**339**	P	**P**	**20 36 34.0**	**-0.1**
	baz=157						
CCM	**Cathedral Cave**	**69.59**	**339**	P	**P**	**20 36 34.0**	**-0.1**
CCM				pP	**pP**	**20 37 15.9**	**+1.6**
CCM				sP	**sP**	**20 37 33.7**	**+1.5**
M57A	**Sunshine Farm,**	**69.63**	**352**	P	**P**	**20 36 34.9**	**+0.6**
M57A	**Sunshine Farm,**	**69.63**	**352**	P	**P**	**20 36 35.0**	**+0.7**
	baz=170						
M57A				P	**P**	**20 36 35.0**	**+0.7**
	baz=170						
KSPA	**Keystone Colle**	**69.68**	**353**	P	**P**	**20 36 35.7**	**+1.1**
	baz=171						
NPNY	**Mohonk Preserv**	**69.71**	**354**	P	**P**	**20 36 36.1**	**+1.3**
	baz=173						
Q44A	**Meyer Farm, Va**	**69.72**	**342**	P	**P**	**20 36 33.4**	**-1.4**
Q44A				IAmb	IAmb	20 36 34.8	
	comp=Z,26nm,1.2s						
O49A	**Covington**	**69.77**	**346**	P	**P**	**20 36 34.5**	**-0.7**
O49A				IAmb	IAmb	20 36 35.7	
	comp=Z,11nm,0.8s						
MNTX	**Cornudas Mount**	**69.86**	**325**	P	**P**	**20 36 35.8**	**-0.1**
MNTX	**Cornudas Mount**	**69.86**	**325**	P	**P**	**20 36 36.2**	**+0.3**
	baz=144,SNR=8.2						

MNTX	Cornudas Mount	69.86	325	P	P	20 36 36.0	0.0
	baz=144,SNR=8.2						
SBA	Scott Base	69.87	190	P	P	20 36 37.5	+2.1
SBA				IAmb	IAmb	20 36 38.3	
	comp=Z,32nm,1.2s						
SBA	Scott Base	69.87	190	P	P	20 36 37.5	+2.1
SBA				pmax	pmax		
	comp=Z,32nm,1.3s						
SBA	Scott Base	69.87	190	P	P	20 36 37.7	+2.4
SBA				x	x	20 37 01.6	
SBA				pP	pP	20 37 12.6	-2.7
P46A	Rosedale	69.91	343	P	P	20 36 35.0	-1.0
P46A				IAmb	IAmb	20 36 36.2	
	comp=Z,13nm,0.8s						
S39A	Bolivar	69.93	338	P	P	20 36 36.2	0.0
S39A	Bolivar	69.93	338	P	P	20 36 36.8	+0.5
	baz=155,SNR=36						
M55A	Ridgway	69.98	350	P	P	20 36 36.5	+0.1
M55A				IAmb	IAmb	20 36 38.0	
	comp=Z,28nm,1.1s						
M55A	Ridgway	69.98	350	P	P	20 36 36.4	-0.1
	baz=168,SNR=7.4						
M55A				P	P	20 36 36.4	-0.1
	baz=168,SNR=7.4						
O48B	Farmland	70.02	345	P	P	20 36 35.9	-0.8
	baz=162						
R40A	Maddies Statio	70.13	339	P	P	20 36 37.0	-0.5
R40A	Maddies Statio	70.13	339	P	P	20 36 36.9	-0.5
	baz=156,SNR=14						
L59A	Walton	70.23	353	P	P	20 36 38.8	+0.8
L59A				IAmb	IAmb	20 36 39.9	
	comp=Z,20nm,0.9s						
M53A	WI Miller and	70.26	349	P	P	20 36 38.2	+0.1
M53A				IAmb	IAmb	20 36 39.3	
	comp=Z,26nm,1.2s						
M53A	WI Miller and	70.26	349	P	P	20 36 38.2	+0.1
	baz=167						
HRV	Adam Dziewonsk	70.26	356	P	P	20 36 38.1	0.0
HRV				IAmb	IAmb	20 36 39.9	
	comp=Z,16nm,0.9s						
HRV	Adam Dziewonsk	70.26	356	P	P	20 36 38.1	0.0
HRV				pmax	pmax		
	comp=Z,16nm,1.0s						
HRV	Adam Dziewonsk	70.26	356	P	P	20 36 38.5	+0.5
	baz=175						
HRV	Adam Dziewonsk	70.26	356	P	P	20 36 38.0	0.0
	baz=175						
HRV	Adam Dziewonsk	70.26	356	P	P	20 36 39.0	+0.9
HRV				pP	pP	20 37 16.2	-2.3
HRV				pwP	sP	20 37 21.0	-15
HRV				sP	PcP	20 37 33.4	+35
L61B	Northampton	70.28	355	P	P	20 36 38.8	+0.6
L61B	Northampton	70.28	355	P	P	20 36 38.9	+0.6
	baz=174						
BINY	Binghamton	70.34	353	P	P	20 36 39.5	+0.9
BINY				IAmb	IAmb	20 36 40.4	
	comp=Z,15nm,1.1s						
BINY	Binghamton	70.34	353	P	P	20 36 39.1	+0.5
	baz=171						
BINY	Binghamton	70.34	353	P	P	20 36 39.4	+0.8
	baz=171						
T35A	Sooner Cattle	70.37	335		P	20 36 39.6	+0.7
T35A				IAmb	IAmb	20 36 40.6	
	comp=Z,22nm,1.1s						
T35B	Sooner Cattle	70.37	335	P	P	20 36 39.2	+0.3
	baz=152						
ALLY	Alegheny Colle	70.38	349	P	P	20 36 38.9	+0.1
ALLY				IAmb	IAmb	20 36 40.0	
	comp=Z,16nm,0.8s						
N49A	Columbus Grove	70.44	346	P	P	20 36 38.2	-0.9
N49A	Columbus Grove	70.44	346	P	P	20 36 39.0	-0.2
	baz=164,SNR=7.0						
N49A				P	P	20 36 39.0	-0.2
	baz=164,SNR=7.0						
MSTX	Muleshoe	70.46	329	P	P	20 36 40.3	+0.6
MSTX	Muleshoe	70.46	329	P	P	20 36 39.9	+0.3
	baz=146						
K62A	Royalston	70.47	356	P	P	20 36 40.4	+1.1
L56A	Greenwood	70.47	351	P	P	20 36 39.0	-0.4
L56A				IAmb	IAmb	20 36 40.9	
	comp=Z,20nm,1.1s						
L56A	Greenwood	70.47	351	P	P	20 36 39.1	-0.4
	baz=170,SNR=5.3						
L56A				P	P	20 36 39.1	-0.4
	baz=170,SNR=5.3						
M52A	Chesterland	70.48	348	P	P	20 36 38.7	-0.7
M52A	Chesterland	70.48	348	P	P	20 36 39.2	-0.2
	baz=166						
M52A				P	P	20 36 39.2	-0.2
	baz=166						
P43A	Skaggs, Pawnee	70.55	341	P	P	20 36 39.0	-0.9
P43A				IAmb	IAmb	20 36 40.3	
	comp=Z,30nm,1.1s						
SFIN	Lafayette	70.60	344	P	P	20 36 39.1	-1.0
SFIN				IAmb	IAmb	20 36 40.1	
	comp=Z,32nm,1.3s						
SFIN	Lafayette	70.60	344	P	P	20 36 38.9	-1.3
	baz=161						
AMTX	Amarillo	70.73	330	P	P	20 36 41.1	-0.2
AMTX	Amarillo	70.73	330	P	P	20 36 41.7	+0.5
	baz=147						
N47A	Urbana	70.73	345	P	P	20 36 40.4	-0.6
N47A				IAmb	IAmb	20 36 41.3	
	comp=Z,25nm,0.9s						
N47A	Urbana	70.73	345	P	P	20 36 40.5	-0.5
	baz=162						
N47A				P	P	20 36 40.5	-0.5
	baz=162						
O44A	Mansfield	70.74	342	P	P	20 36 40.2	-0.9
HSIG		70.76	320	P	P	20 36 42.0	+0.5
HSIG				IAmb	IAmb	20 36 44.1	
	comp=Z,30nm,1.1s						
ERPA	Erie	70.81	350	P	P	20 36 41.3	-0.2
ERPA				IAmb	IAmb	20 36 42.6	
	comp=Z,28nm,0.9s						
ERPA	Erie	70.81	350	P	P	20 36 41.8	+0.4
	baz=167						
VNDA	Vanda	70.86	190	P	P	20 36 43.2	+1.8
	comp=Z,13nm,1.0s,baz=144,slow=4.6,SNR=28						
	comp=Z,13nm,1.0s						
VNDA	Vanda	70.86	190	P	P	20 36 43.1	+1.7
VNDA				IAmb	IAmb	20 36 44.7	
	comp=Z,21nm,1.1s						
VNDA	Vanda	70.86	190	P	P	20 36 43.6	+2.2
U32A	Winter Ranch,	70.87	333		P	20 36 42.6	+0.6
U32A				IAmb	IAmb	20 36 43.7	
	comp=Z,29nm,0.9s						
WVNY	West Valley, N	70.88	351	P	P	20 36 42.2	+0.4
WVNY				IAmb	IAmb	20 36 43.0	
	comp=Z,15nm,0.8s						
WVNY	West Valley, N	70.88	351	P	P	20 36 42.3	+0.4
	baz=169						
MMNY	Mt. Morris Dam	71.10	351	P	P	20 36 42.6	-0.6
MMNY				IAmb	IAmb	20 36 44.0	
	comp=Z,14nm,0.8s						
J61A	Chester	71.16	355	P	P	20 36 44.2	+0.7
P40A	Paris	71.19	339	P	P	20 36 43.4	-0.4
P40A				IAmb	IAmb	20 36 44.3	
	comp=Z,17nm,0.7s						
P40A	Paris	71.19	339	P	P	20 36 44.0	+0.1
	baz=156,SNR=9.3						
HDIL	Hopedale	71.34	342	P	P	20 36 44.4	-0.3
	baz=159						
J59A	Piesco	71.44	354	P	P	20 36 45.8	+0.6
J59A				IAmb	IAmb	20 36 47.0	
	comp=Z,18nm,0.9s						
J59A	Piesco	71.44	354	P	P	20 36 46.2	+0.9
	baz=172,SNR=12						
J59A				P	P	20 36 46.2	+0.9
	baz=172,SNR=12						
L48A	N Adams	71.47	346	P	P	20 36 44.8	-0.7
L48A				IAmb	IAmb	20 36 45.7	
	comp=Z,27nm,1.1s						
J56A	Wolcott	71.50	352	P	P	20 36 45.2	-0.3
J56A				IAmb	IAmb	20 36 46.6	
	comp=Z,22nm,0.9s						
J56A	Wolcott	71.50	352	P	P	20 36 45.7	+0.1
	baz=170,SNR=5.2						
J56A				P	P	20 36 45.7	+0.1
	baz=170,SNR=5.2						
J57A	Williamstown	71.54	353	P	P	20 36 46.0	+0.3
J57A	Williamstown	71.54	353	P	P	20 36 46.1	+0.3
	baz=171						
J57A				P	P	20 36 46.1	+0.3
	baz=171						
I62A	Tamworth	71.61	356	P	P	20 36 46.1	-0.1
121A	Cookes Peak, D	71.75	324	P	P	20 36 48.3	+0.8
	baz=142						
I63A	Otisfield	71.75	357	P	P	20 36 48.1	+1.1
P38A	Dawn	71.75	338	P	P	20 36 46.6	-0.5
K50A	Casco	71.91	348	P	P	20 36 47.2	-0.8
NCB	Newcomb	71.92	354	P	P	20 36 48.7	+0.6
NCB	Newcomb	71.92	354	P	P	20 36 48.7	+0.6
	baz=173						
N41A	Harden Midland	71.92	341	P	P	20 36 46.0	-2.1
N41A				IAmb	IAmb	20 36 48.6	
	comp=Z,15nm,0.8s						
L46A	Eue Claire	71.95	345	P	P	20 36 46.4	-1.9
L46A				IAmb	IAmb	20 36 47.9	
	comp=Z,20nm,0.6s						
LBNH	Lisbon	72.01	356	P	P	20 36 48.8	+0.2
LBNH	Lisbon	72.01	356	P	P	20 36 48.8	+0.2
LBNH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LBNH	Lisbon	72.01	356	P	P	20 36 48.1	-0.5
	baz=175						
LBNH	Lisbon	72.01	356	P	P	20 36 49.6	+1.0
	baz=175						
WCNY	West Carthage	72.07	353	P	P	20 36 49.6	+0.7
	baz=172,SNR=6.5						
PECO	Prince Edward	72.17	352	P	P	20 36 48.6	-0.8
H62A	Milan	72.30	357	P	P	20 36 51.7	+1.4
KSU1	Kansas State U	72.34	336	P	P	20 36 49.4	-1.2
KSU1				IAmb	IAmb	20 37 06.1	
	comp=Z,17nm,1.0s						
KSU1	Kansas State U	72.34	336	P	P	20 36 50.3	-0.3
	baz=152						
L44A	Lake County Fo	72.50	344	P	P	20 36 50.4	-1.1
L44A				IAmb	IAmb	20 36 52.0	
	comp=Z,32nm,0.9s						
L44A	Lake County Fo	72.50	344	P	P	20 36 50.9	-0.6
	baz=160						
R32A	Long Quarter,	72.53	334	P	P	20 36 52.0	+0.2
R32A				IAmb	IAmb	20 36 53.7	
	comp=Z,32nm,1.1s						
LONY	Lake Ozonia	72.59	354	P	P	20 36 52.1	+0.1
LONY	Lake Ozonia	72.59	354	P	P	20 36 52.7	+0.7
	baz=172,SNR=5.5						
N38A	Joes South For	72.72	339	P	P	20 36 52.9	0.0
FRNY	Flat Rock	72.72	355	P	P	20 36 53.7	+0.9
FRNY	Flat Rock	72.72	355	P	P	20 36 53.6	+0.9
	baz=173,SNR=6.1						
L42A	Oliver, Polo	72.79	342	P	P	20 36 52.5	-0.7
L42A				IAmb	IAmb	20 36 53.9	
	comp=Z,29nm,1.4s						
J47A	Sunmer	72.79	346	P	P	20 36 52.3	-0.9
J47A				IAmb	IAmb	20 36 53.6	
	comp=Z,46nm,1.5s						
BMNY	Brushton-Moira	72.81	354	P	P	20 36 53.9	+0.7
	baz=173						
DELO	Deloro Mine	72.82	352	P	P	20 36 52.7	-0.7
G62A	West of Eustis	72.92	357	P	P	20 36 54.8	+0.8
G62A	West of Eustis	72.92	357	P	P	20 36 55.0	+1.1
	baz=176,SNR=5.1						
G62A				P	P	20 36 55.0	+1.1
	baz=176,SNR=5.1						
PKME	Peaks-Kenny Pk	72.92	358	P	P	20 36 54.0	+0.2
PKME	Peaks-Kenny Pk	72.92	358	P	P	20 36 54.5	+0.7
	baz=177						
PKME	Peaks-Kenny Pk	72.92	358	P	P	20 36 54.8	+1.0
	baz=177						
ANMO	Albuquerque	73.00	327	P	P	20 36 56.2	+1.3
ANMO	Albuquerque	73.00	327	P	P	20 36 56.2	+1.3
ANMO				pmax	pmax		
	comp=Z,13nm,1.1s						
ANMO	Albuquerque	73.00	327	P	P	20 36 56.2	+1.3
	baz=144						
I49A	Point Hope	73.07	348	P	P	20 36 54.2	-0.6
I49A				IAmb	IAmb	20 36 55.2	
	comp=Z,32nm,1.2s						
K43A	Burlington	73.10	343	P	P	20 36 54.2	-0.8
K43A	Burlington	73.10	343	P	P	20 36 55.0	0.0
	baz=160,SNR=5.7						
TUC	Tucson	73.17	322	P	P	20 36 57.1	+1.3
	baz=140						
CBKS	Cedar Bluff	73.27	334	P	P	20 36 57.0	+0.9
CBKS				IAmb	IAmb	20 36 58.3	
	comp=Z,49nm,1.3s						
CBKS	Cedar Bluff	73.27	334	P	P	20 36 57.1	+0.9
CBKS				pmax	pmax		
	comp=Z,49nm,1.3s						
CBKS	Cedar Bluff	73.27	334	P	P	20 36 57.2	+1.0
	baz=150						
SADO	Sadowa	73.27	351	LR	LR	21 11 10.8	
	comp=Z,32nm,20.0s,baz=172,slow=37						
SADO	Sadowa	73.27	351	P	P	20 36 55.9	-0.1
L40A	Anamosa	73.28	341	P	P	20 36 55.1	-1.0
L40A	Anamosa	73.28	341	P	P	20 36 56.3	+0.2
	baz=157,SNR=18						
MNTQ	Montreal, Queb	73.39	355	P	P	20 36 56.6	0.0
MNTQ				IAmb	IAmb	20 36 58.2	
	comp=Z,14nm,0.7s						
LMN	Caledonia Moun	73.48	1	P	P	20 36 57.3	+0.1
LMN				IAmb	IAmb	20 36 58.9	
	comp=Z,20nm,1.1s						
F64A	Sherman	73.49	359	P	P	20 36 57.4	+0.2
F64A	Sherman	73.49	359	P	P	20 36 57.7	+0.5
	baz=178,SNR=8.0						
F64A				P	P	20 36 57.7	+0.5
	baz=178,SNR=8.0						
N35A	Tabor	73.57	337	P	P	20 36 57.9	0.0
SCIA	State Center	73.72	340	P	P	20 36 58.8	0.0
SCIA				IAmb	IAmb	20 36 59.7	
	comp=Z,12nm,0.6s						
SCIA	State Center	73.72	340	P	P	20 36 58.5	-0.2
	baz=156						
JFWS	Jewell Farm	73.79	342	P	P	20 36 58.7	-0.4
JFWS				IAmb	IAmb	20 36 59.5	
	comp=Z,15nm,0.6s						
JFWS	Jewell Farm	73.79	342	P	P	20 36 58.7	-0.4
JFWS				pmax	pmax		
	comp=Z,15nm,0.6s						
JFWS	Jewell Farm	73.79	342	P	P	20 36 59.4	+0.3
	baz=158						
JFWS	Jewell Farm	73.79	342	P	P	20 36 59.0	-0.2
	baz=158						
T25A	Trinidad	73.83	329	P	P	20 37 00.4	+0.7
T25A	Trinidad	73.83	329	P	P	20 37 01.3	+1.5
	baz=146,SNR=9.5						
KOWA	Kowa	73.88	64	P	P	20 36 58.4	-1.8
214A	Organ Pipe Nat	74.02	320	P	P	20 37 02.1	+1.3
214A				IAmb	IAmb	20 37 03.8	
	comp=Z,31nm,1.2s						
214A	Organ Pipe Nat	74.02	320	P	P	20 37 02.5	+1.7
	baz=138						
E63A	Oxbow	74.05	359	P	P	20 37 00.1	-0.4
	baz=178						
E63A				P	P	20 37 00.1	-0.4
	baz=178						
N33A	J Bar K, Exete	74.09	336	P	P	20 37 01.1	+0.2
TRQ	Mont Tremblant	74.18	354	P	P	20 37 01.8	+0.4
TRQ				IAmb	IAmb	20 37 02.5	
	comp=Z,18nm,1.0s						
K38A	Parkersburg	74.27	340	P	P	20 37 01.1	-0.8
I42A	Draeger Farm,	74.36	343	P	P	20 37 01.9	-0.4
I42A				IAmb	IAmb	20 37 03.2	
	comp=Z,49nm,1.3s						
I42A	Draeger Farm,	74.36	343	P	P	20 37 02.5	+0.2
	baz=160,SNR=8.2						
KSCO	Kaye Shedlock’	74.61	332	P	P	20 37 04.0	-0.1
KSCO				IAmb	IAmb	20 37 07.5	
	comp=Z,42nm,1.2s						
KSCO	Kaye Shedlock’	74.61	332	P	P	20 37 05.6	+1.5
	baz=147						
H43A	Windswept, Lux	74.62	344	P	P	20 37 03.0	-0.8
H43A				IAmb	IAmb	20 37 04.1	
	comp=Z,12nm,0.7s						
D62A	Allapoint, All	74.72	358	P	P	20 37 05.0	+0.6
D62A				IAmb	IAmb	20 37 06.3	
	comp=Z,28nm,0.9s						
D62A	Allapoint, All	74.72	358	P	P	20 37 05.4	+1.1
	baz=178,SNR=22						
D62A				P	P	20 37 05.4	+1.1
	baz=178,SNR=22						
W18A	Petrified Fore	74.78	325	P	P	20 37 06.7	+1.4
	baz=141						
I40A	Norwalk	74.80	342	P	P	20 37 04.1	-0.8
SDCO	Great Sand Dun	74.82	329	P	P	20 37 05.8	+0.3
SDCO	Great Sand Dun	74.82	329	P	P	20 37 06.3	+0.8
	baz=145,SNR=10.0						
SDCO	Great Sand Dun	74.82	329	P	P	20 37 06.8	+1.3
	baz=145,SNR=10.0						
BATG	Bathurst New B	74.89	0	P	P	20 37 05.5	+0.1
BATG				IAmb	IAmb	20 37 07.3	
	comp=Z,21nm,1.1s						
BGNE	Belgrade	74.93	336	P	P	20 37 05.9	+0.2
BGNE	Belgrade	74.93	336	P	P	20 37 06.1	+0.4
	baz=151						
LATQ	La Tuque	75.20	356	P	P	20 37 06.6	-0.4
LATQ				IAmb	IAmb	20 37 08.1	
	comp=Z,15nm,0.8s						
LMQ	La Malbaie	75.23	357	P	P	20 37 07.9	+0.6
S22A	4UR Ranch, Cre	75.43	328	P	P	20 37 09.9	+0.9
S22A	4UR Ranch, Cre	75.43	328	P	P	20 37 09.7	+0.6
	baz=144						
Q24A	Divide	75.66	330	P	P	20 37 11.6	+1.3
Q24A				IAmb	IAmb	20 37 12.9	
	comp=Z,28nm,1.1s						
Q24A	Divide	75.66	330	P	P	20 37 11.8	+1.4
	baz=145,SNR=12						
E46A	Sault Ste Mari	75.69	347	P	P	20 37 09.3	-0.6
E46A				IAmb	IAmb	20 37 10.6	
	comp=Z,29nm,1.1s						
E46A	Sault Ste Mari	75.69	347	P	P	20 37 09.9	0.0
	baz=164,SNR=5.7						
I37A	Lemond, Waseca	75.70	340	P	P	20 37 10.1	+0.1
I37A				IAmb	IAmb	20 37 11.1	
	comp=Z,20nm,0.8s						
I37B	Waseca	75.70	340	P	P	20 37 10.5	+0.4
	baz=156						
MVCO	Mesa Verde	75.80	327	P	P	20 37 10.2	-0.9
MVCO				IAmb	IAmb	20 37 13.8	
	comp=Z,21nm,1.0s						
MVCO	Mesa Verde	75.80	327	P	P	20 37 12.6	+1.5
	baz=142						
PPTF	Pamatai, Papee	75.86	257	P	P	20 37 10.5	-1.2
PPT	Papeete	75.87	257	P	P	20 37 14.6	+2.9
	comp=Z,15nm,0.3s,baz=102,slow=8.8,SNR=5.8						
	comp=Z,15nm,0.3s						
WUAZ	Wupatki	75.93	324	P	P	20 37 13.7	+2.0
	baz=140						
G40A	Rib Lake	75.97	343	P	P	20 37 10.9	-0.7
G40A	Rib Lake	75.97	343	P	P	20 37 11.3	-0.3
	baz=159						
GLA	Glamis	75.98	320	P	P	20 37 12.6	+0.7
GLA	Glamis	75.98	320	P	P	20 37 12.6	+0.7
GLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GLA	Glamis	75.98	320	P	P	20 37 13.5	+1.6
	baz=137						
K31A	O'Neill	76.21	336	P	P	20 37 13.8	+0.8
E43A	Lone Tree Farm	76.25	346	P	P	20 37 11.6	-1.5
YUH	Yuha Desert	76.31	319	P	P	20 37 14.4	+0.6
BLYC	Blythe	76.32	321	P	P	20 37 15.8	+2.0
BLYC				IAmb	IAmb	20 37 16.7	
	comp=Z,24nm,1.1s						
VLDQ	Val d'Or	76.34	353	P	P	20 37 14.0	+0.4
IKP	In-Ko-Pah, Jac	76.42	319	P	P	20 37 15.9	+1.4
	baz=136						
ECSD	EROS Data Cent	76.45	338	P	P	20 37 14.3	-0.1
ECSD				IAmb	IAmb	20 37 15.5	
	comp=Z,44nm,1.4s						
ECSD	EROS Data Cent	76.45	338	P	P	20 37 14.6	+0.3
	baz=153,SNR=13						
ECSD	EROS Data Cent	76.45	338	P	P	20 37 14.4	+0.1
	baz=153,SNR=13						
SWSC	Sam W. Stewart	76.46	319	P	P	20 37 16.3	+1.7
	baz=136						
COWI	Conover	76.48	344	P	P	20 37 14.3	-0.1
COWI	Conover	76.48	344	P	P	20 37 14.5	+0.1
	baz=160						
PDMCI	Parker Dam,Lak	76.51	321	P	P	20 37 15.9	+1.1
	baz=138						
ISCO	Idaho Springs	76.55	330	P	P	20 37 15.9	+0.6
ISCO	Idaho Springs	76.55	330	P	P	20 37 15.9	+0.6
ISCO				pmax	pmax		
	comp=Z,17nm,1.1s						
ISCO	Idaho Springs	76.55	330	P	P	20 37 16.0	+0.7
	baz=145,SNR=14						
ISCO	Idaho Springs	76.55	330	P	P	20 37 16.6	+1.3
	baz=145,SNR=14						
SPMN	Marine on St.	76.63	341	P	P	20 37 14.7	-0.6
SPMN	Marine on St.	76.63	341	P	P	20 37 14.9	-0.4
	baz=156						
SMCO	Snowmass	76.66	329	P	P	20 37 17.5	+1.4
SMCO				IAmb	IAmb	20 37 19.1	
	comp=Z,27nm,1.3s						
PV15	Paradox Valley	76.69	327	P	P	20 37 17.9	+1.8
PV15				IAmb	IAmb	20 37 19.1	
	comp=Z,28nm,1.2s						
PV13	Radium Mtn., P	76.71	327	P	P	20 37 17.6	+1.4
PV13				IAmb	IAmb	20 37 18.8	
	comp=Z,27nm,1.2s						
BC3	Big Chuckawall	76.77	320	P	P	20 37 17.9	+1.4
	baz=137,SNR=8.4						
BAR	Barrett	76.78	318	P	P	20 37 17.8	+1.4
MONP2	Monument Peak	76.78	319	P	P	20 37 18.1	+1.4
	baz=136						
PV11	David Mesa, Pa	76.84	327	P	P	20 37 18.0	+1.1
PV07	Paradox Valley	76.84	327	P	P	20 37 18.2	+1.3
W13A	Hualapai Mount	76.96	322	P	P	20 37 18.6	+1.0
IRM	Iron Mountain	76.97	320	P	P	20 37 18.7	+1.3
	baz=137,SNR=5.2						
PV10	Paradox Valley	76.98	327	P	P	20 37 17.9	+0.1
PV10				IAmb	IAmb	20 37 19.8	
	comp=Z,20nm,1.0s						
PV23	Carpenter Ridg	77.03	327	P	P	20 37 18.5	+0.5
NEE2	Needles Airpor	77.12	321	P	P	20 37 19.8	+1.6
	baz=138						
D41A	Chassel	77.25	345	P	P	20 37 18.7	0.0
D41A	Chassel	77.25	345	P	P	20 37 19.4	+0.8
	baz=160,SNR=8.0						
DRLN	Deer Lake	77.30	6	P	P	20 37 19.4	+0.5
DRLN				IAmb	IAmb	20 37 20.5	
	comp=Z,27nm,0.8s						
TPFO	Pinon Flats	77.31	319	P	P	20 37 21.0	+1.4
	baz=136						
PFO	Pinyon Flats O	77.32	319	P	P	20 37 21.4	+1.8
PFO	Pinyon Flats O	77.32	319	P	P	20 37 21.4	+1.8
PFO				pmax	pmax		
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	77.32	319	P	P	20 37 21.2	+1.6
	baz=136						
BELC	Belle Mtn. Jos	77.34	320	P	P	20 37 21.2	+1.5
	baz=137						
F36A	Milaca	77.42	341	P	P	20 37 18.9	-0.8
F36A	Milaca	77.42	341	P	P	20 37 19.1	-0.6
	baz=156,SNR=7.7						
E38A	The Farm, Brul	77.56	343	P	P	20 37 20.2	-0.2
MAW	Mawson	77.58	162	P	P	20 37 21.2	+0.9
	comp=Z,34nm,1.0s,baz=234,slow=7.7,SNR=28						
	comp=Z,34nm,1.0s						
MAW	Mawson	77.58	162	P	P	20 37 20.8	+0.5
N23A	Red Feather La	77.59	331	P	P	20 37 21.7	+0.6
N23A	Red Feather La	77.59	331	P	P	20 37 22.4	+1.3
	baz=145,SNR=7.6						
GMRC	Granite Mounta	77.71	321	P	P	20 37 23.4	+1.7
	baz=137,SNR=14						
PHWY	Pilot Hill	77.72	331	P	P	20 37 22.0	+0.2
MURC	Murrieta	77.74	319	P	P	20 37 23.3	+1.5
	baz=136						
TOA0	Torodi Ar. Sit	77.74	68	P	P	20 37 20.4	-1.7
TOA0				IAmb	IAmb	20 37 22.0	
	comp=Z,17nm,0.8s						
TORD	Torodi Ar. Bea	77.74	68	P	P	20 37 21.1	-1.1
	comp=Z,15nm,0.8s,baz=254,slow=5.1,SNR=62						
TORD				pP	pP	20 38 00.8	-2.3
	comp=Z,4.6nm,0.7s,baz=253,slow=4.6,SNR=2.8						
	comp=Z,15nm,0.8s						
TORD	Torodi Ar. Bea	77.74	68	P	P	20 37 20.7	-1.4
TORD				IAmb	IAmb	20 37 22.0	
	comp=Z,14nm,0.8s						
PKCU	Pink Cliffs	77.89	324	P	P	20 37 23.2	+0.3
ELS	Elsinore Mount	77.91	319	P	P	20 37 23.7	+0.9
O20A	White River Ci	78.01	329	P	P	20 37 23.8	+0.5
O20A				IAmb	IAmb	20 37 26.0	
	comp=Z,36nm,1.1s						
O20A	White River Ci	78.01	329	P	P	20 37 24.8	+1.4
	baz=143,SNR=20						
LCMT	Little Creek M	78.05	324	P	P	20 37 24.4	+0.8
HEC	Hector,Ludlow	78.13	320	P	P	20 37 25.8	+1.9
	baz=136						
SRU	San Rafael Swe	78.28	327	P	P	20 37 25.6	+0.8
SRU				IAmb	IAmb	20 37 27.1	
	comp=Z,22nm,1.0s						
SRU	San Rafael Swe	78.28	327	P	P	20 37 25.6	+0.8
SRU				pmax	pmax		
	comp=Z,22nm,1.0s						

MTPU	Mount Pierson	78.28	325	P	P	20 37 25.6	+0.5
TUQ	Turquoise Moun	78.34	321	P	P	20 37 26.7	+1.6
	baz=137,SNR=5.2						
SZCU	Shurtz Canyon	78.41	324	P	P	20 37 26.6	+1.0
Q16A	Castle Valley	78.45	326	P	P	20 37 27.5	+1.7
Q16A				IAmb	IAmb	20 37 28.6	
	comp=Z,21nm,1.1s						
BFSC	Mount Baldy Ra	78.46	319	P	P	20 37 27.0	+1.1
	baz=136						
CCUT	Cedar City	78.52	324	P	P	20 37 28.2	+2.0
CCUT				IAmb	IAmb	20 37 29.6	
	comp=Z,24nm,1.1s						
RRX	Edison Barstow	78.54	320	P	P	20 37 27.6	+1.5
	baz=136						
P18A	Preston Nutter	78.55	327	P	P	20 37 27.2	+0.7
P18A				IAmb	IAmb	20 37 29.2	
	comp=Z,29nm,1.2s						
MSU	Marysvale	78.64	325	P	P	20 37 28.0	+1.1
MSU	Marysvale	78.64	325	P	P	20 37 28.0	+1.1
P17A	Butcher Ranch,	78.67	327	P	P	20 37 28.3	+1.3
P17A				IAmb	IAmb	20 37 29.4	
	comp=Z,29nm,1.1s						
BOSA	Boshof	78.69	116	P	P	20 37 27.2	-0.2
	comp=Z,32nm,0.8s,baz=254,slow=4.1,SNR=47						
BOSA				pP	pP	20 38 06.2	-2.6
	comp=Z,10nm,1.0s,baz=194,slow=7.3,SNR=3.2						
BOSA				LR	LR	21 07 34.8	
	comp=Z,29nm,19.2s,baz=194,slow=32						
	comp=Z,32nm,0.8s						
BOSA	Boshof	78.69	116	P	P	20 37 27.0	-0.4
SHPR	Sheep Range	78.70	322	P	P	20 37 28.6	+1.5
GSC	Goldstone, Bar	78.73	320	P	P	20 37 28.3	+1.0
GSC	Goldstone, Bar	78.73	320	P	P	20 37 28.3	+1.0
GSC				pmax	pmax		
	comp=Z,14nm,1.2s						
GSC	Goldstone, Bar	78.73	320	P	P	20 37 29.0	+1.7
	baz=136,SNR=5.6						
TMUT	Trail Mountain	78.76	326	P	P	20 37 28.9	+1.3
TMUT				IAmb	IAmb	20 37 30.2	
	comp=Z,24nm,1.4s						
EYMN	Ely	78.79	343	P	P	20 37 26.7	-0.5
EYMN	Ely	78.79	343	P	P	20 37 26.3	-0.9
	baz=158,SNR=9.5						
EYMN	Ely	78.79	343	P	P	20 37 27.0	-0.1
	baz=158,SNR=9.5						
RWWY	Rawlins	78.79	330	P	P	20 37 28.2	+0.5
RWWY				IAmb	IAmb	20 37 29.1	
	comp=Z,37nm,1.0s						
DECC	Green Verdugo	78.87	319	P	P	20 37 29.6	+1.6
	baz=135						
SHOC	Shoshone, Teco	78.87	321	P	P	20 37 29.3	+1.4
	baz=137						
RDMU	Red Mountain	78.97	328	P	P	20 37 29.3	+0.7
RDMU				IAmb	IAmb	20 37 30.9	
	comp=Z,31nm,1.0s						
EDW2	Edwards Air Fo	79.11	319	P	P	20 37 29.8	+0.5
	baz=135						
K22A	Casper	79.28	331	P	P	20 37 31.2	+1.1
K22A				IAmb	IAmb	20 37 32.7	
	comp=Z,40nm,1.3s						
K22A	Casper	79.28	331	P	P	20 37 31.4	+1.1
	baz=145,SNR=6.3						
K22A	Casper	79.28	331	P	P	20 37 31.3	+1.1
	baz=145,SNR=6.3						
GWY	Greenwater Val	79.30	321	P	P	20 37 30.9	+0.5
GWY				IAmb	IAmb	20 37 32.7	
	comp=Z,24nm,1.4s						
PRN	Pahroc Range	79.30	323	P	P	20 37 32.2	+1.8
PRN				IAmb	IAmb	20 37 33.5	
	comp=Z,18nm,1.0s						
CCAC	Calif City Air	79.32	319		P	20 37 30.9	+0.5
CCAC				IAmb	IAmb	20 37 32.4	
	comp=Z,12nm,0.5s						
RSSD	Black Hills	79.47	334	P	P	20 37 31.0	-0.3
RSSD	Black Hills	79.47	334	P	P	20 37 31.0	-0.3
RSSD				pmax	pmax		
	comp=Z,14nm,1.0s						
RSSD	Black Hills	79.47	334	P	P	20 37 32.2	+1.0
	baz=147,SNR=10						
RSSD	Black Hills	79.47	334	P	P	20 37 32.0	+0.7
	baz=147						
PSUT	Pine Spring	79.51	324	P	P	20 37 32.5	+0.9
PSUT				IAmb	IAmb	20 37 34.3	
	comp=Z,16nm,1.0s						
MPU	Maple Canyon	79.52	326	P	P	20 37 32.4	+0.8
MPU				IAmb	IAmb	20 37 34.0	
	comp=Z,24nm,1.2s						
FURC	Furnace Creek,	79.61	321	P	P	20 37 33.9	+2.0
	baz=136						
TPNV	Topopah Spring	79.62	322	P	P	20 37 32.8	+0.7
TPNV	Topopah Spring	79.62	322	P	P	20 37 32.8	+0.7
TPNV				pmax	pmax		
	comp=Z,13nm,1.0s						
TPNV	Topopah Spring	79.62	322	P	P	20 37 34.0	+1.9
	baz=137						
NLU	North Lily Min	79.69	326	P	P	20 37 33.3	+0.7
B35A	Bob, Littlefor	79.76	342	P	P	20 37 32.6	+0.3
B35A				IAmb	IAmb	20 37 33.4	
	comp=Z,21nm,0.9s						
B35A	Bob, Littlefor	79.76	342	P	P	20 37 32.1	-0.3
	baz=156,SNR=18						
JLU	Jordanelle	79.89	327	P	P	20 37 34.4	+0.8
ISA	Isabella, Lake	79.94	319	P	P	20 37 35.0	+1.2
	baz=135						
PKM	Mcpherson Peak	80.18	318	P	P	20 37 36.4	+1.2
	baz=134,SNR=5.4						
DUG	Dugway, Tooele	80.24	326	P	P	20 37 36.4	+1.0
DUG	Dugway, Tooele	80.24	326	P	P	20 37 36.4	+1.0
DUG				pmax	pmax		
	comp=Z,11nm,0.9s						
DUG	Dugway, Tooele	80.24	326	P	P	20 37 36.7	+1.3
	baz=140,SNR=7.5						
CWC	Cottonwood Cre	80.27	320	P	P	20 37 36.8	+1.2
	baz=135						
R11A	Troy Canyon, C	80.28	323	P	P	20 37 37.0	+1.3
R11A	Troy Canyon, C	80.28	323	P	P	20 37 37.3	+1.6
	baz=137,SNR=8.5						
AGMN	Agassiz Nation	80.31	341	P	P	20 37 35.5	+0.1
AGMN				IAmb	IAmb	20 37 36.5	
	comp=Z,18nm,0.9s						
AGMN	Agassiz Nation	80.31	341	P	P	20 37 35.7	+0.3
	baz=154,SNR=6.2						
AGMN	Agassiz Nation	80.31	341	P	P	20 37 35.4	+0.1
	baz=154,SNR=6.2						
VES	Vestal, Richgr	80.42	319	P	P	20 37 37.5	+1.2
	baz=135						
LBTB	Lobatse	80.53	113	P	P	20 37 36.8	-0.6
LBTB	Lobatse	80.53	113	P	P	20 37 36.8	-0.6
LBTB				pmax	pmax		
	comp=Z,78nm,1.2s						
LCH	Last Change Ra	80.59	321	P	P	20 37 38.2	+0.8
BW06	Boulder Array	80.70	329	P	P	20 37 38.2	+0.3
BW06	Boulder Array	80.70	329	P	P	20 37 38.5	+0.6
	baz=142,SNR=18						
PD31	Pinedale Array	80.70	329	P	P	20 37 38.0	+0.2
PDAR	Pinedale Array	80.70	329	P	P	20 37 38.5	+0.6
	comp=Z,3.1nm,0.4s,baz=126,slow=7.6,SNR=41						
PDAR				pP	pP	20 38 20.0	+0.8
	comp=Z,2.8nm,0.8s,baz=118,slow=5.9,SNR=3.2						
PDAR				PKKPbc	PKKPbc	20 56 15.3	-3.0
	comp=Z,0.1nm,0.5s,baz=239,slow=4.9,SNR=4.2						
	comp=Z,3.1nm,0.4s						
PDAR	Pinedale Array	80.70	329	P	P	20 37 37.8	-0.1
HWUT	Hardware Ranch	80.72	328	P	P	20 37 38.7	+0.8
HWUT				IAmb	IAmb	20 37 40.0	
	comp=Z,28nm,1.0s						
TIN	Tinemaha, Big	80.79	321	P	P	20 37 39.7	+1.3
	baz=135						
BGU	Big Grassy Mou	80.90	326	P	P	20 37 39.9	+0.9
TPH	Tonopah	80.97	322	P	P	20 37 39.7	+0.3
TPH	Tonopah	80.97	322	P	P	20 37 39.7	+0.3
TPH				pmax	pmax		
	comp=Z,69nm,1.2s						
MDND	Maddock	81.07	338	P	P	20 37 39.8	+0.4
	baz=151						
AHID	Auburn Hatcher	81.40	329	P	P	20 37 42.3	+0.8
NV11	Mina Array Sit	81.73	322	P	P	20 37 44.4	+1.1
REDW	Red Top Meadow	81.75	329	P	P	20 37 43.6	+0.2
NVAR	Mina Array Bea	81.81	322	P	P	20 37 44.3	+0.4
	comp=Z,2.0nm,0.7s,baz=149,slow=6.7,SNR=12						
NVAR				pP	pP	20 38 24.5	-1.2
	comp=Z,0.9nm,0.8s,baz=120,slow=6.5,SNR=2.2						
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	81.81	322	P	P	20 37 44.6	+0.7
LOHW	Long Hollow	81.83	329	P	P	20 37 44.6	+0.7
ELK	Elko	81.87	325	P	P	20 37 44.8	+0.7
ELK	Elko	81.87	325	P	P	20 37 44.8	+0.7
TPAW	Teton Pass	81.90	329	P	P	20 37 44.6	+0.4
TPAW				IAmb	IAmb	20 37 47.0	
	comp=Z,20nm,1.2s						
ULM	Lac du Bonnet	82.07	342	P	P	20 37 44.3	-0.2
	comp=Z,10nm,0.9s,baz=153,slow=3.9,SNR=10.0						
ULM				pP	pP	20 38 24.8	-1.2
	comp=Z,11nm,0.9s,baz=165,slow=7.8,SNR=4.3						
ULM				LR	LR	21 17 35.2	
	comp=Z,36nm,19.7s,baz=145,slow=38						
	comp=Z,10nm,0.9s						
ULM	Lac du Bonnet	82.07	342	P	P	20 37 44.6	0.0
ULM				IAmb	IAmb	20 37 45.6	
	comp=Z,30nm,1.2s						
KVN	Kaiserville	82.14	322	P	P	20 37 45.9	+0.4
KVN	Kaiserville	82.14	322	P	P	20 37 45.9	+0.4
KVN				pmax	pmax		
	comp=Z,12nm,1.1s						
FLWY	Flagg Ranch	82.25	330	P	P	20 37 45.7	-0.2
FLWY				IAmb	IAmb	20 37 48.6	
	comp=Z,37nm,1.3s						
H17A	Grant Village	82.44	330	P	P	20 37 47.5	+0.5
	baz=142						
RLMT	Red Lodge	82.44	331	P	P	20 37 47.3	+0.3
RLMT				IAmb	IAmb	20 37 49.0	
	comp=Z,15nm,0.9s						
RLMT	Red Lodge	82.44	331	P	P	20 37 47.9	+0.9
	baz=143,SNR=7.7						
SCHQ	Schefferville	82.45	360	P	P	20 37 46.3	-0.2
	comp=Z,7.0nm,0.9s,baz=177,slow=4.4,SNR=7.8						
	comp=Z,7.0nm,0.9s						
SCHQ	Schefferville	82.45	360	P	P	20 37 46.5	0.0
LAO	LASA Array	82.47	334	P	P	20 37 47.5	+0.7
	baz=145						
YERR	Yerington	82.72	321	P	P	20 37 50.0	+1.5
YERR				IAmb	IAmb	20 37 52.7	
	comp=Z,32nm,1.0s						
YMR	Madison River	82.82	330	P	P	20 37 50.4	+1.5
YHL	Hebgen Lake	83.06	330	P	P	20 37 51.9	+1.7
YHL				IAmb	IAmb	20 37 53.1	
	comp=Z,28nm,1.4s						
GCMT	Greycliff	83.14	331	P	P	20 37 50.6	+0.2
DGMT	Dagmar	83.19	336	P	P	20 37 50.9	+0.4
DGMT	Dagmar	83.19	336	P	P	20 37 51.4	+0.9
	baz=147,SNR=5.5						
DGMT	Dagmar	83.19	336	P	P	20 37 51.3	+0.9
	baz=147,SNR=5.5						
HLID	Hailey	83.57	327	P	P	20 37 53.8	+1.1
HLID				IAmb	IAmb	20 37 55.3	
	comp=Z,23nm,1.1s						
HLID	Hailey	83.57	327	P	P	20 37 54.1	+1.4
	baz=139,SNR=32						
BCYI	Bear Canyon	83.66	328	P	P	20 37 54.0	+0.8
MCMT	McKenzie Canyo	83.80	329	P	P	20 37 54.4	+0.5
BOZ	Bozeman (W)	83.84	330	P	P	20 37 54.3	+0.3
BOZ	Bozeman (W)	83.84	330	P	P	20 37 54.3	+0.3
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOZ	Bozeman (W)	83.84	330	P	P	20 37 54.9	+0.8
	baz=141						
BEKR	Beckworth	83.96	321	P	P	20 37 55.6	+0.8
DLMT	Dillon	84.09	329	P	P	20 37 56.2	+0.9
DLMT				IAmb	IAmb	20 37 57.7	
	comp=Z,20nm,1.1s						
MFID	Camas Ranch	84.14	326	P	P	20 37 55.9	+0.3
ORV	Oroville	84.38	321	P	P	20 37 58.1	+1.5
ORV				IAmb	IAmb	20 37 59.1	
	comp=Z,25nm,1.2s						
ORV	Oroville	84.38	321	P	P	20 37 58.2	+1.5
ORV				pmax	pmax		
	comp=Z,25nm,1.3s						
LRM	Limekiln Ridge	84.38	330	P	P	20 37 57.8	+0.9
HRY	Holter Researc	84.80	331	P	P	20 37 59.7	+0.9
EGMT	Eagleton	84.96	333	P	P	20 37 59.6	+0.1
EGMT	Eagleton	84.96	333	P	P	20 37 59.8	+0.3
	baz=143						
PBDV	Barranco-do-Ve	85.11	43	eP	P	20 38 02.0	+1.6
	comp=Z,54nm,1.4s						
PCVE	Castro Verde	85.30	43	eP	P	20 38 02.4	+1.1
PNCL	Nicolau / Gran	85.32	42	eP	P	20 38 02.6	+1.2
MESJ	Messejana	85.32	43	eP	P	20 38 02.7	+1.3
MOD	Modoc Plateau	85.35	323	P	P	20 38 02.1	+0.4
MOD				IAmb	IAmb	20 38 03.8	
	comp=Z,16nm,1.2s						
J08A	Circle Bar Ran	85.42	325	P	P	20 38 02.9	+0.9
PLID	Pearl Lake	85.46	327	P	P	20 38 01.8	-0.5
PLID				IAmb	IAmb	20 38 04.3	
	comp=Z,25nm,1.1s						
PBEJ	Beja	85.66	43	eP	P	20 38 04.4	+1.3
	comp=Z,20nm,1.7s						
MSO	Missoula	85.82	330	P	P	20 38 04.8	+0.9
MSO	Missoula	85.82	330	P	P	20 38 04.9	+1.1
	baz=139						
CASY	Casey	86.03	179	P	P	20 38 05.1	+0.5
PSBE	So Bento	86.08	41	eP	P	20 38 05.0	-0.2
	comp=Z,54nm,1.3s						
PMTG	Montargil	86.12	42	eP	P	20 38 06.4	+1.1
	comp=Z,26nm,1.7s						
K05A	Summer Lake	86.23	323	P	P	20 38 07.2	+1.1
PBAR	Barrancos	86.25	43	eP	P	20 38 05.3	-0.7
	comp=Z,19nm,1.4s						
I07A	Izee	86.46	325	P	P	20 38 08.1	+1.1
PCAS	Casmilo, Conde	86.61	41	eP	P	20 38 09.1	+1.4
L04D	Klamath Falls	86.64	322	P	P	20 38 08.8	+0.8
	baz=133						
JTMT	Jette	86.66	330	P	P	20 38 08.9	+0.9
JTMT				IAmb	IAmb	20 38 09.9	
	comp=Z,16nm,0.8s						
F10A	Beach Ranch, E	86.70	327	P	P	20 38 08.5	+0.4
F10A				IAmb	IAmb	20 38 12.0	
	comp=Z,14nm,1.0s						
J05D	Fort Rock, OR	86.80	323	P	P	20 38 09.9	+1.1
	baz=134,SNR=8.1						
PMRV	Marv??o	86.85	42	eP	P	20 38 09.5	+0.6
PINE	Pine Mountain	87.00	324	P	P	20 38 10.2	+0.4
G08A	Pilot Rock	87.05	326	P	P	20 38 10.3	+0.4
PCBR	Castelo Branco	87.06	41	eP	P	20 38 10.6	+0.7
J04D	Umpqua Nationa	87.23	323	P	P	20 38 11.3	+0.4
J04D	Umpqua Nationa	87.23	323	P	P	20 38 12.2	+1.3
	baz=133						
L02F	Cave Junction	87.27	321	P	P	20 38 12.1	+1.2
	baz=132						
MTE	Manteigas	87.39	41	eP	P	20 38 12.0	+0.5
	comp=Z,25nm,1.6s						
WALA	Waterton Lakes	87.50	331	P	P	20 38 12.3	+0.4
I05D	Terrebonne, OR	87.59	324	P	P	20 38 13.4	+1.1
	baz=134						
K02D	Willamette Mer	87.71	322	P	P	20 38 14.3	+1.2
	baz=132						
I04A	Tendick Farm,	87.77	323	P	P	20 38 13.8	+0.5
	baz=133						
PGAV	Gavieira, Arco	88.00	39	eP	P	20 38 16.7	+2.3
HAWA	Hanford	88.11	326	P	P	20 38 15.1	+0.4
HAWA				IAmb	IAmb	20 38 16.8	
	comp=Z,22nm,1.1s						
MVO	Moncorvo	88.18	41	eP	P	20 38 15.9	+0.6
	comp=Z,20nm,1.9s						
G05D	Wamic, OR	88.20	325	P	P	20 38 15.7	+0.5
	baz=134						
I03D	Drain, OR	88.21	323	P	P	20 38 16.0	+0.8
	baz=132						
H04A	Detroit Lake	88.26	324	P	P	20 38 15.9	+0.3
H04A				IAmb	IAmb	20 38 17.0	
	comp=Z,19nm,1.1s						
D08A	Wollman Farm,	88.29	327	P	P	20 38 16.4	+0.8
D08A				IAmb	IAmb	20 38 16.9	
	comp=Z,16nm,1.3s						
NEW	Newport	88.32	329	LR	LR	21 21 20.4	
	comp=Z,35nm,18.7s,baz=230,slow=38						
NEW	Newport	88.32	329	P	P	20 38 15.9	+0.2
	baz=137						
C09A	Chrisman Ranch	88.52	328	P	P	20 38 17.2	+0.5
F05D	White Salmon	88.72	325	P	P	20 38 18.6	+1.0
	baz=134						
I02E	Swisshome, OR	88.75	323	P	P	20 38 18.7	+0.9
	baz=132						
ESDC	Sonseca Array	89.06	43	P	P	20 38 19.4	0.0
	comp=Z,2.3nm,0.8s,baz=241,slow=4.3,SNR=17						
	comp=Z,2.3nm,0.8s						
ESDC	Sonseca Array	89.06	43	P	P	20 38 19.9	+0.5
EDM	Edmonton	90.45	334	P	P	20 38 25.0	-0.6
EDM	Edmonton	90.45	334	P	P	20 38 25.0	-0.6
EDM				pmax	pmax		
	comp=Z,31nm,1.0s						
YKA	Yellowknife Ar	97.93	340	P	P	20 38 59.4	-0.1
	comp=Z,3.0nm,0.9s,baz=130,slow=4.4,SNR=18						
YKA				pP	pP	20 39 41.4	-0.4
	comp=Z,3.6nm,1.0s,baz=136,slow=4.7,SNR=7.9						
	comp=Z,3.0nm,0.9s						
DAVOX	Davos/Dischmat	101.38	43	P	Pdif	20 39 15.8	+0.3
	comp=Z,2.8nm,0.8s,baz=263,slow=1.2,SNR=3.4						
KMBO	Kilima Mbogo	101.75	98⇑	eP	Pdif	20 39 15.9	-2.2
GERES	GERESS Array B	104.62	42	PKKPbc	PKKPbc	20 55 14.5	-0.8
	comp=Z,0.2nm,0.6s,baz=180,slow=2.7,SNR=4.6						
K27K	Chicken	108.71	333	P	PKiKP	20 43 52.4	+0.8
	baz=115						
J26L	Joseph Creek	109.49	333	P	PKiKP	20 43 54.7	+1.4
	baz=114						
RIDG	Independent Ri	109.70	332	P	PKiKP	20 43 55.2	+1.6
	baz=113						
WAT6	Susitna Watana	110.48	331	P	PKiKP	20 43 56.1	+0.8
	baz=111						
HOM	Homer	111.26	327	P	PKiKP	20 43 57.5	+0.9
	baz=109						
POKR	Poker Plat Res	111.26	333	P	PKiKP	20 43 57.7	+1.2
	baz=110						
BPAW	Bear Paw Mtn.	112.37	332	P	PKiKP	20 43 59.1	+0.5
	baz=108						
COLD	Coldfoot	113.01	335	P	PKiKP	20 44 00.9	+1.2
	baz=107						
TOLK	Toolik Lake Re	113.20	337	P	PKiKP	20 44 00.8	+0.7
	baz=107						
H21K	Melozitna Rive	113.57	333	P	PKiKP	20 44 01.8	+1.0
	baz=106						
J20K	Nowinta River	113.72	331	P	PKiKP	20 44 02.4	+1.2
	baz=105						
TTA	Tatalina	114.22	330	P	PKiKP	20 44 03.1	+0.8
	baz=104						
AKASG	Malin Array Be	114.69	44	PKP	PKPdf	20 44 02.4	-1.0
	comp=Z,1.1nm,0.6s,baz=310,slow=0.8,SNR=6.0						
AKBB	Malin Array Si	114.69	44⇓	iPKIKP	PKPdf	20 44 03.3	-0.1
MNK	Minsk	114.82	40	i PKIKP	PKiKP	20 44 04.2	+0.7
MNK				i		20 44 48.7	
MNK				i		20 44 59.8	
MNK				i		20 45 04.1	
MNK				i PPP	PPP	20 47 32.0	
MNK				i		20 50 59.9	
MNK				i SP	SP	20 54 26.8	+0.9
MNK				i PS	PS	20 54 46.8	+1.2
MNK				i SS	SS	21 00 48.6	+1.9
MNK				i SSS	SSS	21 05 06.0	
MNK				pmax	pmax		
	comp=N,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MNK	Minsk	114.82	40	i PKP	PKiKP	20 44 04.2	+0.7
	comp=E,1.0nm,1.0s						
MNK				i PKP	PKiKP	20 44 04.2	+0.7
	comp=N,5.0nm,0.9s						
MNK				i PKP	PKiKP	20 44 04.2	+0.7
	comp=Z,6.0nm,1.1s,baz=256						
MNK				i pPKP	PP	20 44 48.8	-16
MNK				i sPKP		20 44 59.9	
MNK				i PP	PP	20 45 04.1	-0.7
MNK				i PPP	PPP	20 47 32.1	
MNK				i SKS	SKSdf	20 50 60.0	+0.2
MNK				i SP	SP	20 54 26.8	+0.9
MNK				i PS	PS	20 54 46.8	+1.2
MNK				i SS	SS	21 00 48.6	+1.9
MNK				i SSS	SSS	21 05 06.3	
MNK				i LR	LR	21 25 16.2	
FINES	FINESS Array B	115.43	32	PKP	PKPdf	20 44 03.8	-0.7
	comp=Z,0.4nm,0.5s,baz=27,slow=2.1,SNR=4.4						
FINES				PKKPbc	PKKPab	20 54 41.6	-0.9
	comp=Z,1.2nm,0.8s,baz=57,slow=7.0,SNR=4.2						
ARCES	ARCESS Array B	116.64	23	PKP	PKPdf	20 44 06.3	-0.4
	comp=Z,1.9nm,0.8s,baz=9.5,slow=3.7,SNR=6.5						
OBN	Obninsk	119.88	40⇑	iPKIKP	PKiKP	20 44 13.5	+0.2
OBN				e		20 45 38.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VORR	Voronezh	121.04	44	ePKIKP	PKPdf	20 44 14.6	-1.0
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
KLMR	Klimovskoe	121.83	34	ePKIKP	PKPdf	20 44 15.8	-1.0
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	121.83	34	ePKPdf	PKPdf	20 44 15.9	-0.9
KLMR				AMP		20 44 17.5	
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	122.30	54	ePKIKP	PKPdf	20 44 18.3	-0.1
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	Khabaz	122.41	54	PKP	PKiKP	20 44 18.7	0.0
	comp=Z,3.4nm,1.0s,baz=234,slow=3.7,SNR=4.1						
KBZ	Khabaz	122.41	54c	iPKIKP	PKiKP	20 44 19.1	+0.5
CTA	Charters Tower	122.59	217	PKP	PKPdf	20 44 19.1	-0.5
	comp=Z,6.2nm,0.9s,baz=254,slow=8.8,SNR=3.4						
PRGR	Permogore	124.75	33	ePKIKP	PKPdf	20 44 21.5	-0.9
PRGR				e		20 45 06.4	
ASAR	Alice Springs	124.97	203	PKP	PKPdf	20 44 24.0	-0.2
	comp=Z,6.6nm,0.4s,baz=134,slow=1.7,SNR=114						
ASAR				pPKP	pPKPdf	20 45 06.7	-1.2
	comp=Z,3.0nm,0.6s,baz=138,slow=1.7,SNR=4.3						
ASAR				PKKPbc	PKKPbc	20 54 03.5	-1.2
	comp=Z,0.3nm,0.5s,baz=337,slow=3.2,SNR=4.6						
ASAR	Alice Springs	124.97	203	PKPdf	PKPdf	20 44 22.9	-1.3
BELG	Belogornoye	126.27	44	PKP	PKPdf	20 44 25.8	+0.2
	comp=Z,15nm,1.0s,baz=288,slow=1.4,SNR=4.2						
KIRV	Kirov	126.94	36⇓	iPKIKP	PKiKP	20 44 27.8	+0.6
WRA	Warramunga Arr	128.22	205	PKP	PKPdf	20 44 30.5	0.0
	comp=Z,5.8nm,0.3s,baz=156,slow=1.9,SNR=107						
WRA				pPKP	pPKPdf	20 45 13.8	-0.4
	comp=Z,4.6nm,0.6s,baz=169,slow=1.6,SNR=5.6						
WRAB	Tennant Creek	128.23	205d	iPKIKP	PKPdf	20 44 30.2	-0.3
WRAB				pmax	pmax		
	comp=Z,45nm,1.7s						
BILL	Bilibino	129.25	337	i PKIKP	PKiKP	20 44 32.0	+0.4
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PMG	Port Moresby	130.49	226	PKP	PKiKP	20 44 36.0	+0.3
	comp=Z,6.1nm,0.7s,baz=84,slow=9.6,SNR=3.5						
PMG	Port Moresby	130.49	226	PKIKP	PKiKP	20 44 36.0	+0.3
ARU	Arti	132.17	38	PKP	PKiKP	20 44 38.1	+0.3
	comp=Z,1.3nm,0.5s,baz=85,slow=3.1,SNR=8.1						
ARU				SKPbc	SKPbc	20 47 47.7	-0.1
	comp=Z,0.5nm,0.5s,baz=233,slow=3.2,SNR=6.1						
ARU	Arti	132.17	38	i PKIKP	PKiKP	20 44 38.0	+0.2
ARU						20 47 01.7	
ARU				SS	SS	21 04 19.2	-6.1
AKTO	Aktyubinsk	132.88	46	PKP	PKiKP	20 44 39.5	+0.1
	comp=Z,1.9nm,0.8s,baz=345,slow=5.3,SNR=7.9						
AKTO				SKPbc	SKPbc	20 47 50.0	-0.4
	comp=Z,1.4nm,0.7s,baz=276,slow=5.0,SNR=4.5						
TIXI	Tiksi	135.43	353⇑	iPKIKP	PKPdf	20 44 42.6	+0.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NRIK	Noril'sk	135.95	13	PKP	PKPdf	20 44 43.9	+0.5
	comp=Z,1.8nm,0.4s,baz=193,slow=3.0,SNR=3.5						
NRIK	Noril'sk	135.95	13⇑	iPKIKP	PKiKP	20 44 44.4	-0.7
SEY	Seymchan	136.81	335c	iPKIKP	PKiKP	20 44 46.7	-0.3
SEY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PETK	Petropavlovsk-	138.89	320	PKP	PKPdf	20 44 50.2	+0.9
	comp=Z,8.5nm,0.9s,baz=116,slow=5.1,SNR=6.2						
PETK				pPKP	pPKPdf	20 45 33.7	+0.6
	comp=Z,5.7nm,0.9s,baz=96,slow=6.0,SNR=2.9						
BRVK	Borovoye	139.64	40⇑	iPKIKP	PKiKP	20 44 52.3	-0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
YAK	Yakutsk	144.25	347d	iPKIKP	PKPbc	20 44 57.2	-0.1
YAK				e		20 45 41.6	
YAK				e		20 48 14.4	
YAK				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,107nm,4.6s						
YAK				pmax	pmax		
	comp=N,58nm,4.8s						
YAK				pmax	pmax		
	comp=E,58nm,4.2s						
EKS2	Erkin-Say	144.88	55	P	PKPdf	20 45 01.0	+0.5
	SNR=38						
AML	Almayashu	144.93	56	P	PKPdf	20 45 01.4	+0.4
	SNR=38						
USP	Ospenovka	145.27	54	P	PKPab	20 45 02.0	+0.5

	SNR=13						
KURBB	**Kurchatov Arra**	**145.31**	**40**	PKPbc	**PKPab**	**20 45 01.8**	**+0.5**
	comp=E,42nm,0.9s,baz=300,slow=3.5,SNR=283						
KURBB				pPKPbc	pPKPab	20 45 43.3	-0.6
	comp=E,12nm,0.9s,baz=301,slow=3.7,SNR=5.5						
KURBB				SKPbc	**SKPbc**	**20 48 25.1**	**+0.1**
	comp=E,1.4nm,0.8s,baz=301,slow=3.7,SNR=3.5						
KURK	**Kurchatov**	**145.31**	**40**		**PKPab**	**20 45 01.6**	**+0.3**
KURK	**Kurchatov**	**145.31**	**40** *d*	*i*PKIKP	**PKPdf**	**20 45 00.8**	**0.0**
AAK	**Ala-Archa**	**145.41**	**55**	P	**PKPab**	**20 45 03.1**	**+0.9**
	SNR=106						
AAK	**Ala-Archa**	**145.41**	**55**	*i* PKP2	**PKPab**	**20 45 02.8**	**+0.6**
UCH	**Uchtor**	**145.50**	**55**	P	**PKPab**	**20 45 03.7**	**+0.8**
	SNR=113						
CHMS	**Chumysh**	**145.51**	**54**	P	**PKPab**	**20 45 03.0**	**+0.6**
	SNR=36						
KBK	**Karagaybulak**	**145.73**	**54**	P	**PKPab**	**20 45 04.2**	**+0.8**
	SNR=51						
TKM2	**Tokmak 2**	**146.13**	**54**	P	**PKPbc**	**20 45 04.1**	**0.0**
	SNR=31						
SIJI	**Sorong**	**146.56**	**214**	PKPbc	**PKPbc**	**20 45 05.9**	**+0.1**
	comp=E,62nm,0.9s,baz=17,slow=4.1,SNR=44						
SIJI				pPKPbc	pPKPab	20 45 50.1	+0.5
	comp=E,12nm,0.8s,baz=198,slow=20,SNR=1.6						
ZALV	**Zalesovo Beam**	**146.68**	**31**	PKPbc	**PKPbc**	**20 45 04.3**	**-0.7**
	comp=E,20nm,0.4s,baz=310,slow=2.5,SNR=71						
ZALV				pPKPbc	pPKPab	20 45 48.5	-0.5
	comp=E,24nm,0.8s,baz=281,slow=2.4,SNR=6.4						
ZALV	**Zalesovo Beam**	**146.68**	**31**	PKPdf	**PKPdf**	**20 45 03.3**	**+0.3**
ULHL	**Ulahol**	**146.75**	**55**	P	**PKPbc**	**20 45 05.8**	**-0.1**
	SNR=20						
MKAR	**Makanchi Array**	**149.27**	**44**	PKP	**PKPdf**	**20 45 08.2**	**+0.7**
	comp=E,32nm,0.9s,baz=333,slow=1.6,SNR=32						
MKAR				PKPbc	**PKPbc**	**20 45 12.4**	**+0.3**
	comp=E,32nm,0.9s,baz=295,slow=1.9,SNR=86						
MKAR				pPKPbc	**pPKPbc**	**20 45 55.1**	**-0.3**
	comp=E,12nm,0.8s,baz=298,slow=2.6,SNR=4.5						
BOD	**Bodaibo**	**150.16**	**359**	*e*PKIKP	**PKPdf**	**20 45 08.1**	**-0.5**
BOD				pmax	pmax		
	comp=Z,33nm,1.2s						
YSS	**Yuzh-Sakhalins**	**150.18**	**317** *c*	*i*PKIKP	**PKiKP**	**20 45 16.1**	**+1.2**
YSS				pmax	pmax		
	comp=Z,51nm,1.7s						
ASAJ	**Asahikawa**	**151.57**	**312**	PKPbc	**PKiKP**	**20 45 18.2**	**+0.3**
	comp=Z,30nm,0.9s,baz=130,slow=18,SNR=14						
ASAJ				pPKPbc	**pPKPbc**	**20 46 02.7**	**+1.6**
	comp=Z,23nm,0.9s,baz=40,slow=3.6,SNR=4.1						
WMQ	**Urumqi**	**154.03**	**46**	*e*PKPbc	**PKPdf**	**20 45 14.8**	**-0.1**
JCJ	**Chichijima**	**154.43**	**275**	PKPab	**PKPab**	**20 45 39.5**	**+0.1**
	comp=Z,28nm,0.8s,baz=131,slow=20,SNR=3.7						
MJAR	**Matsushiro Arr**	**157.34**	**298**	PKPab	**PKPab**	**20 45 51.6**	**-0.1**
	comp=Z,5.7nm,0.9s,baz=112,slow=2.4,SNR=8.6						
MJAR				pPKPab	**pPKPab**	**20 46 34.4**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=115,slow=2.3,SNR=5.8						
MJAR	**Matsushiro Arr**	**157.34**	**298**	PKPab	**PKPab**	**20 45 52.0**	**+0.3**
SONM	**Songino Array**	**159.44**	**13**	PKP	**PKPdf**	**20 45 22.7**	**+1.0**
	comp=Z,6.7nm,1.1s,baz=161,slow=1.2,SNR=19						
SONM				PKPab	**PKPab**	**20 46 00.1**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=321,slow=3.6,SNR=6.9						
SONM				pPKP	**pPKPdf**	**20 46 06.9**	**+1.2**
	comp=Z,10.0nm,1.1s,baz=265,slow=0.7,SNR=7.9						
SONM	**Songino Array**	**159.44**	**13**	PKPdf	**PKPdf**	**20 45 22.5**	**+0.8**
GOMU	**GeErMu**	**162.31**	**58**	PKP	**PKPdf**	**20 45 27.5**	**+2.0**
GOMU				AMB	AMB		
	comp=Z,45nm,4.6s						
CMAR	**Chiang Mai Arr**	**163.75**	**123**	PKP	**PKPdf**	**20 45 28.0**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=257,slow=2.4,SNR=18						
CMAR				pPKP	**pPKPdf**	**20 46 10.4**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=254,slow=2.2,SNR=8.7						
CMAR				PKPab	**PKPab**	**20 46 19.9**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=242,slow=3.9,SNR=8.8						
CMAR				pPKPab	**pPKPab**	**20 47 01.5**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=267,slow=3.6,SNR=2.1						
CMAR				PP	**PP**	**20 50 06.3**	**+0.6**
	comp=Z,1.5nm,1.1s,baz=238,slow=6.5,SNR=5.4						
CMAR	**Chiang Mai Arr**	**163.75**	**123**		**PKPdf**	**20 45 27.3**	**+0.3**
GTA	**Gaotai**	**163.99**	**41**	PKP	**PKPdf**	**20 45 27.6**	**+0.9**
GTA				pPKP	pPKPdf	20 46 13.3	+2.6
KSRS	**Korea Array**	**164.51**	**311**	PKP	**PKPdf**	**20 45 27.9**	**+0.9**
	comp=Z,4.0nm,1.0s,baz=70,slow=0.5,SNR=22						
KSRS				pPKP	**pPKPdf**	**20 46 12.7**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=33,slow=0.3,SNR=3.0						
KSRS				PKPab	**PKPab**	**20 46 23.8**	**+1.0**
	comp=Z,4.4nm,0.9s,baz=64,slow=3.8,SNR=12						
KSRS				pPKPab	**pPKPab**	**20 47 06.5**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=61,slow=4.6,SNR=3.5						
HHC	**Hu-ho-hao-te**	**167.06**	**6**	*e*PKP	**PKPdf**	**20 45 26.8**	**-2.4**
LZH	**Lanzhou**	**168.58**	**42**	⇓PKP	**PKPdf**	**20 45 31.4**	**+0.9**
PZH	**PanZhiHua**	**169.58**	**95**	PKP	**PKPdf**	**20 45 30.6**	**-0.7**
XAN	**Xi'an**	**172.86**	**31**	PKP	**PKPdf**	**20 45 33.4**	**+0.8**
XAN				pPKP	pPKPdf	20 46 20.0	+3.3
NJ2	**Nanjing**	**173.72**	**312**	*e*PKP	**PKPdf**	**20 45 33.4**	**+0.5**

PGC 19 20:30:15.4±0.6, 50°.63N×130°.42W, h10^{km}, MLSn2.9/21, Mw3.5/21, 211km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.45**	**89**	P	Pn	20 30 39.9	-1.9
HOLB				Sn	Sn	20 30 56.8	-4.1
HG4B	**Hotspring**	**1.73**	**344**	Pn	Pn	20 30 43.3	-2.3
HG4B				Sn	Sn	20 31 04.3	-3.5
BPBC	**Brooks Peninsu**	**1.76**	**105**	Pn	Pn	20 30 43.6	-2.4
BPBC				Sn	Sn	20 31 04.0	-4.5
PACB	**Port Alice, BC**	**1.88**	**95**	Pn	Pn	20 30 45.7	-1.9
PACB				Sn	Sn	20 31 06.6	-4.6
PHC	**Port Hardy**	**1.90**	**87**	Pn	Pn	20 30 46.3	-1.6
PHC				Sn	Sn	20 31 08.2	-3.6
MAYB	**Maynard**	**2.08**	**95**	Pn	Pn	20 30 49.0	-1.6
MAYB				Sn	Sn	20 31 12.7	-3.9
BNB	**Barry Inlet**	**2.12**	**337**	Pn	Pn	20 30 49.1	-1.8
BBB	**Bella Bella**	**2.12**	**42**	Pn	Pn	20 30 49.4	-1.5
BBB				Sn	Sn	20 31 13.4	-3.8
EDB	**Eliza Dome**	**2.25**	**108**	Pn	Pn	20 30 50.9	-1.8
WOSB	**Woss**	**2.50**	**99**	Pn	Pn	20 30 55.2	-1.1
BUTB	**Butedale**	**2.72**	**26**	Pn	Pn	20 30 58.5	-0.7
BUTB				Sn	Sn	20 31 29.3	-2.9
BNKB	**Banks Island**	**2.72**	**6**	Pn	Pn	20 30 57.6	-1.6
BNKB				Sn	Sn	20 31 28.2	-4.0
NCRB	**Newcastle Ridg**	**2.79**	**93**	Pn	Pn	20 30 58.8	-1.4
DIB	**Dawson Inlet,**	**2.87**	**334**	Pn	Pn	20 30 59.7	-1.5
GDR	**Gold River**	**2.94**	**105**	Pn	Pn	20 31 00.2	-2.0
HWKB	**Hawksbury Isla**	**3.07**	**14**	Pn	Pn	20 31 02.1	-1.9
HWKB				Sn	Sn	20 31 37.4	-3.4
SPLB	**Strathcona Par**	**3.14**	**102**	Sn	Sn	20 31 40.0	-2.6
GRNB	**Grenville Isla**	**3.23**	**5**	Pn	Pn	20 31 04.9	-1.3
GRNB				Sn	Sn	20 31 42.0	-2.7
CBB	**Campbell River**	**3.29**	**99**	Pn	Pn	20 31 06.3	-0.7
CBB				Sn	Sn	20 31 43.1	-3.1
BTB	**Buttle Lake**	**3.36**	**108**	Pn	Pn	20 31 06.8	-1.4
KITB	**Kitimat**	**3.62**	**17**	Pn	Pn	20 31 11.3	-0.1
KITB				Sn	Sn	20 31 52.9	-1.3
TXB	**Texada**	**3.96**	**101**	Pn	Pn	20 31 15.5	-0.6
GHNB	**Nanoose**	**4.20**	**106**	Pn	Pn	20 31 19.4	-0.1
SHB	**Sechelt**	**4.33**	**101**	Pn	Pn	20 31 21.1	-0.4
UBRB	**Upper Baezaeko**	**4.54**	**58**	Pn	Pn	20 31 24.2	-0.1
MBW	**Mount Baker**	**5.83**	**105**	Pn	Pn	20 31 42.5	+0.5
RPW	**Rockport**	**6.19**	**107**	Pn	Pn	20 31 48.0	+1.1

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*IDC **19** 20:39:13.2±1.0, 9°.42S×157°.83E, h0^{km}, mb4.0/6, mbtmp4.0/7, ML4.0/1, MS3.5/4, Error ellipse: s-maj=33.6km s-min=20.2km az=159.0*

ISC 19 20:39:17.4±0.8, 9°.5S±0°.2×157°.84E±0°.09, h27^{km}, n10, σ0^s.64/9, mb3.9/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.08**	**90**	Pn	**Pn**	**20 39 50.7**	**+0.2**
	52nm,0.3s,baz=286,slow=6.9,SNR=2.4						
HNR				Sn	**Sn**	**20 40 15.5**	**-0.1**
	41nm,0.3s,baz=338,slow=24,SNR=5.9						
	109nm,0.3s						
PMG	**Port Moresby**	**10.54**	**269**	LR	LR	20 45 45.9	
	comp=Z,118nm,18.6s,baz=142,slow=37						
CTA	**Charters Tower**	**15.39**	**225**	LR	LR	20 47 42.2	
	comp=Z,73nm,19.2s,baz=70,slow=33						
WRA	**Warramunga Arr**	**24.98**	**243**	P	**P**	**20 44 38.7**	**-0.3**
	5.2nm,0.7s,baz=68,slow=9.8,SNR=21						
WRA				PcP	**PcP**	**20 48 14.7**	**+0.6**
	0.6nm,1.1s,baz=74,slow=2.4,SNR=2.0						
	5.2nm,0.7s						
ASAR	**Alice Springs**	**26.88**	**235**	P	**P**	**20 44 55.3**	**-1.0**
	1.6nm,0.8s,baz=77,slow=4.2,SNR=5.2						
	1.6nm,0.8s						
STKA	**Stephens Creek**	**26.93**	**212**	P	**P**	**20 44 56.9**	**+0.3**
	3.1nm,0.8s,baz=44,slow=16,SNR=4.6						
STKA				LR	LR	20 56 31.0	
	comp=Z,38nm,18.6s,baz=29,slow=38						
	3.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**64.38**	**296**	P	**P**	**20 49 52.0**	**+0.5**
	0.5nm,0.5s,baz=120,slow=4.1,SNR=5.7						
	0.5nm,0.5s						
MA2	**Magadan**	**69.03**	**356**	LR	LR	21 15 14.6	
	comp=Z,261nm,21.0s,baz=348,slow=31						
ILAR	**Eielson Array**	**84.63**	**21**	P	**P**	**20 51 47.5**	**-0.7**
	1.0nm,0.9s,baz=247,slow=5.0,SNR=5.9						
	1.0nm,0.9s						
MKAR	**Makanchi Array**	**87.09**	**318**	P	**P**	**20 52 01.0**	**+0.2**
	0.4nm,0.7s,baz=108,slow=6.9,SNR=4.3						
	0.4nm,0.7s						

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*IDC **19** 21:09:58.5±1.1, 32°.70N×130°.48E, h0^{km}, mb3.3/6, mbtmp3.3/9, ML2.9/3, MS2.6/1, Error ellipse: s-maj=18.8km s-min=8.9km az=132.0*

*JMA **19** 21:10:01.2±0.0, 32°.74N±0°.09×130°.6E±0°.1, h11^{km}, MV3.8/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

*NIED **19** 21:10:01.2, 32°.74N×130°.60E, h11^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.21; $M_{\theta\theta}$5.01; $M_{\phi\phi}$-2.79; $M_{r\theta}$-1.94; $M_{\theta\phi}$0.06; $M_{\phi r}$2.32; Fault plane solution: $M_0$5.27000×10^{14} NP1: ϕ_s232.00000°, δ48.00000°, λ-156.00000°. NP2: ϕ_s125.00000°, δ73.00000°, λ-45.00000°.*

ISC 19 21:10:00.3±0.8, 32°.67N±0°.05×130°.51E±0°.08, h10^{km}, n13, σ1^s.15/16, mb3.2/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.28**	**116**	*i* P	**Pg**	**21 10 06.5**	**+0.4**
JIU3				S	**Sg**	**21 10 10.2**	**+0.2**
JTA	**Tamana**	**0.29**	**4**	*i* P	**Pg**	**21 10 06.2**	**0.0**
JTA				S	**Sg**	**21 10 09.6**	**-0.5**
JNU	**Nakatsue**	**0.54**	**35**	Pg	**Pg**	**21 10 09.3**	**-1.7**
	368nm,0.3s,baz=238,slow=4.9,SNR=1336						
JNU				Lg	Lg	21 10 15.9	
	2µm,0.3s,baz=293,slow=23,SNR=84						
JTZ	**Takazaki**	**0.91**	**147**	*i* P	**Pn**	**21 10 19.2**	**0.0**
KSRS	**Korea Array**	**5.22**	**337**	Pn	**Pn**	**21 11 19.2**	**+0.8**
	0.3nm,0.3s,baz=153,slow=14,SNR=3.7						
KSRS				Pg	**Pb**	**21 11 34.5**	**+2.8**
	1.0nm,0.3s,baz=152,slow=15,SNR=15						
KSRS				Lg	Lg	21 12 41.7	
	1.9nm,0.3s,baz=150,slow=29,SNR=7.3						
	1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**7.43**	**57**	Pn	**Pn**	**21 11 50.2**	**+1.4**
	0.1nm,0.3s,baz=243,slow=14,SNR=5.4						
	1.8nm,0.5s						
KLR	**Kul'dur**	**16.57**	**3**	Pn	**Pn**	**21 13 52.1**	**-0.6**
	0.1nm,0.3s,baz=210,slow=20,SNR=1.5						
KLR				LR	LR	21 19 14.8	
	comp=Z,23nm,21.2s,baz=188,slow=34						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**39.06**	**306**	P	**P**	**21 17 27.5**	**+0.1**
	0.3nm,0.8s,baz=81,slow=11,SNR=3.1						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**41.83**	**311**	P	**P**	**21 17 49.0**	**-1.2**
	0.1nm,0.4s,baz=72,slow=5.9,SNR=4.1						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**52.45**	**175**	P	**P**	**21 19 13.1**	**-0.2**
	0.4nm,1.0s,baz=355,slow=7.8,SNR=1.7						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**56.12**	**176**	P	**P**	**21 19 39.6**	**-0.4**
	0.1nm,0.6s,baz=15,slow=4.2,SNR=1.8						
	0.1nm,0.6s						
FINES	**FINESS Array B**	**68.27**	**330**	P	**P**	**21 21 00.5**	**-0.6**
	0.2nm,0.4s,baz=72,slow=4.5,SNR=1.2						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**71.96**	**319**	P	**P**	**21 21 22.8**	**-1.1**
	0.4nm,0.5s,baz=62,slow=2.2,SNR=1.7						
	0.4nm,0.5s						

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*ANF **19** 21:17:08.5±0.3, 35°.87N×97°.21W, h6^{km}, ML3.9/15, Error ellipse: s-maj=3.2km s-min=2.3km az=131.0*

*TUL **19** 21:17:08.5±0.7, 35°.86N±0°.02×97°.23W±0°.02, h6^{km}±7^{km}, ML3.6, mb_Lg3.4/100(NEIC), Mwr3.2/11(SLM), Error ellipse: s-maj=3.5km s-min=1.7km az=137.0*

*NEIC **19** 21:17:08.5, 35°.86N×97°.22W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}0.00; $M_{\theta\theta}$6.79; $M_{\phi\phi}$-6.79; $M_{r\theta}$0.39; $M_{\theta\phi}$-1.20; $M_{\phi r}$-0.46; Fault plane solution: $M_0$6.92000×10^{13} NP1:ϕ_s50.00000°, δ85.00000°, λ-180.00000°. NP2:ϕ_s320.00000°, δ90.00000°, λ-5.00000°. Principal axes: T 6.9216, Plg4.0000°, Azm5.0000°; N -0.0001, Plg85.0000°, Azm140.0000°; P -6.9215, Plg4.0000°, Azm275.0000°;*

*NEIC **19** 21:17:09.1±0.7, 35°.85N±0°.01×97°.23W±0°.02, h1^{km}±7^{km} Error ellipse: s-maj=2.6km s-min=1.5km az=132.0*

ISC 19 21:17:08.6±1.0, 35°.87N±0°.02×97°.23W±0°.02, h7^{km}±9^{km}, n99, σ0^s.88/94, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.24**	**208**	Pg	**Pg**	**21 17 13.5**	**0.0**
ADOK				Sg	**Sg**	**21 17 17.1**	**+0.4**
OK001	**Jones High Sch**	**0.31**	**189**	Pg	**Pg**	**21 17 14.7**	**0.0**
OK001				Sg	**Sg**	**21 17 19.3**	**+0.5**
OK009	**Oakdale Elemen**	**0.33**	**209**	Pg	**Pg**	**21 17 15.1**	**+0.1**
OK009				Sg	**Sg**	**21 17 19.9**	**+0.6**
OKCFA	**Oklahoma City**	**0.48**	**202**	Pg	**Pg**	**21 17 18.0**	**0.0**
OKCFA				Sg	**Sg**	**21 17 24.9**	**+0.5**
OKCFA	**Oklahoma City**	**0.48**	**202**	P	**Pg**	**21 17 18.0**	**0.0**
	baz=22,SNR=55						
OKCFA				S	**Sg**	**21 17 25.0**	**+0.6**
	baz=22						
OKCSW	**OKLAHOMA CITY**	**0.49**	**200**	Pg	**Pg**	**21 17 18.1**	**0.0**
OKCSW				Sg	**Sg**	**21 17 24.9**	**+0.4**
FNO	**Franklin**	**0.62**	**193**	Pg	**Pg**	**21 17 20.5**	**-0.2**
FNO				Sg	**Sg**	**21 17 29.1**	**+0.3**
TUL1	**Leonard**	**1.17**	**87**	Pg	**Pg**	**21 17 29.6**	**-1.4**
TUL1	**Leonard**	**1.17**	**87**	P	**Pg**	**21 17 29.7**	**-1.4**
	baz=268,SNR=178						
TUL1				S	**Sg**	**21 17 46.1**	**-0.1**
	baz=268						
TUL1	**Leonard**	**1.17**	**87**	P	**Pg**	**21 17 29.7**	**-1.4**
	baz=268						
TUL1				S	**Sg**	**21 17 46.1**	**-0.1**
	baz=268						
T35A	**Sooner Cattle**	**1.20**	**29**	Pg	**Pg**	**21 17 30.8**	**-0.8**
T35B	**Sooner Cattle**	**1.20**	**29**	P	**Pg**	**21 17 30.8**	**-0.8**
	baz=209,SNR=172						
T35B				S	**Sg**	**21 17 47.1**	**-0.1**
	baz=209						
X34A	**Smith Ranch, M**	**1.36**	**202**		**Pn**	**21 17 33.8**	**-0.2**
U32A	**Winter Ranch,**	**1.52**	**290**		**Pn**	**21 17 36.3**	**0.0**
U32A					**Sg**	**21 17 57.8**	**+0.2**
U32A				IAmb_Lg		21 18 00.7	
	comp=Z,204nm,1.0s						
U32A	**Winter Ranch,**	**1.52**	**290**	P	**Pn**	**21 17 36.3**	**0.0**
	baz=110,SNR=59						
U32A				S	**Sg**	**21 17 57.7**	**+0.1**
	baz=110						
WMOK	**Wichita Mounta**	**1.70**	**229**		**Pn**	**21 17 39.0**	**+0.3**
WMOK				Sg	**Sb**	**21 18 02.0**	**+0.2**
WMOK	**Wichita Mounta**	**1.70**	**229**	P	**Pn**	**21 17 39.1**	**+0.4**
	baz=48,SNR=196						
WMOK	**Wichita Mounta**	**1.70**	**229**	P	**Pn**	**21 17 39.1**	**+0.4**
	baz=48						
WMOK				S	**Sb**	**21 18 01.9**	**+0.2**
	baz=48						
X37A	**Clayton**	**1.98**	**129**	Pn	**Pn**	**21 17 43.1**	**+0.5**
X37A				Sg	**Sg**	**21 18 11.0**	**-1.4**
X37A				IAmb_Lg		21 18 15.0	
	comp=Z,208nm,0.8s						
X37A	**Clayton**	**1.98**	**129**	P	**Pn**	**21 17 43.3**	**+0.7**
	baz=310,SNR=46						
X37A				Sb	**Sb**	**21 18 10.4**	**+0.4**
	baz=310						
Z35A	**Perchaven, San**	**2.53**	**180**	Pn	**Pn**	**21 17 50.7**	**+0.5**
Z35A	**Perchaven, San**	**2.53**	**180**	P	**Pn**	**21 17 50.9**	**+0.8**
	baz=0.5,SNR=14						
Z35A				Sb	**Sb**	**21 18 26.6**	**+0.9**
	baz=0.5						
HHAR	**Hobbs**	**2.70**	**80**		**Pn**	**21 17 53.0**	**+0.5**
HHAR				IAmb_Lg		21 18 34.1	
	comp=Z,122nm,0.8s						
R32A	**Long Quarter,**	**2.81**	**336**	IAmb_Lg		21 18 36.1	
	comp=Z,74nm,0.8s						
W39A	**Magazine**	**2.89**	**102**	Pn	**Pn**	**21 17 55.5**	**+0.4**
W39A				IAmb_Lg		21 18 47.7	
	comp=Z,196nm,0.8s						
W39A	**Magazine**	**2.89**	**102**	P	**Pn**	**21 17 55.7**	**+0.6**
	baz=284,SNR=11						
W39A	**Magazine**	**2.89**	**102**	P	**Pn**	**21 17 55.7**	**+0.6**
	baz=284						
Z38A	**Mt. Pleasant**	**3.19**	**144**	Pn	**Pn**	**21 17 59.6**	**+0.3**
Z38A				IAmb_Lg		21 18 56.2	
	comp=Z,116nm,0.8s						
Z38A	**Mt. Pleasant**	**3.19**	**144**	Sb	**Sb**	**21 18 46.9**	**+2.1**
	baz=325						
KSU1	**Kansas State U**	**3.27**	**8**	Pn	**Pn**	**21 18 00.6**	**+0.3**
KSU1				IAmb_Lg		21 18 59.6	
	comp=Z,177nm,0.9s						
KSU1	**Kansas State U**	**3.27**	**8**	P	**Pb**	**21 18 08.6**	**+1.7**
	baz=189						
MIAR	**Mount Ida**	**3.27**	**113**	Pn	**Pn**	**21 18 01.3**	**+1.0**
MIAR				IAmb_Lg		21 18 59.4	
	comp=Z,70nm,0.8s						
MIAR	**Mount Ida**	**3.27**	**113**	P	**Pn**	**21 18 01.4**	**+1.0**
	baz=295,SNR=24						
MIAR	**Mount Ida**	**3.27**	**113**	S	**Sn**	**21 18 41.6**	**+2.2**
	baz=295						
CBKS	**Cedar Bluff**	**3.56**	**327**	S	**Sn**	**21 18 48.2**	**+1.6**
	baz=145						
U40A	**Yellville**	**3.58**	**81**	Pn	**Pn**	**21 18 04.5**	**0.0**
U40A				IAmb_Lg		21 19 05.7	
	comp=Z,87nm,0.8s						
S39A	**Bolivar**	**3.63**	**59**	Pn	**Pn**	**21 18 05.4**	**+0.2**
S39A	**Bolivar**	**3.63**	**59**	P	**Pn**	**21 18 05.7**	**+0.5**
	baz=241,SNR=17						
AMTX	**Amarillo**	**3.77**	**256**	Pn	**Pn**	**21 18 07.8**	**+0.6**
AMTX				IAmb_Lg		21 19 16.8	
	comp=Z,74nm,0.7s						
AMTX	**Amarillo**	**3.77**	**256**	Pb	**Pb**	**21 18 14.8**	**-0.7**
	baz=74						
AMTX	**Amarillo**	**3.77**	**256**	Pb	**Pb**	**21 18 14.5**	**-1.0**
	baz=74						
ABTX	**Abilene, Hawle**	**3.80**	**212**	IAmb_Lg		21 19 10.3	
	comp=Z,80nm,1.1s						
X40A	**Basin Creek Fa**	**3.85**	**110**	Pn	**Pn**	**21 18 09.1**	**+0.8**
X40A				IAmb_Lg		21 19 13.9	
	comp=Z,156nm,0.7s						
X40A	**Basin Creek Fa**	**3.85**	**110**	P	**Pn**	**21 18 09.7**	**+1.4**
	baz=292,SNR=14						
X40A				P	**Pn**	**21 18 09.7**	**+1.4**
	baz=292,SNR=14						
X40A	**Basin Creek Fa**	**3.85**	**110**	P	**Pn**	**21 18 09.7**	**+1.4**
	baz=292						
WHTX	**Lake Whitney,**	**3.87**	**183**	Pn	**Pn**	**21 18 08.6**	**0.0**
WHTX	**Lake Whitney,**	**3.87**	**183**	Pb	**Pb**	**21 18 15.8**	**-1.4**
	baz=2.8						
WLAR	**White Oak Lake**	**4.03**	**121**	IAmb_Lg		21 19 26.6	
	comp=Z,65nm,0.9s						
237A	**Washetta, Mont**	**4.03**	**163**	Pn	**Pn**	**21 18 10.6**	**-0.2**
237A	**Washetta, Mont**	**4.03**	**163**	S	**Sn**	**21 18 58.3**	**+0.1**
	baz=343						
WHAR	**Wooly Hollow**	**4.07**	**97**	Pn	**Pn**	**21 18 11.7**	**+0.4**
WHAR				IAmb_Lg		21 19 21.5	
	comp=Z,67nm,0.8s						
W41B	**Gary Mavity, V**	**4.12**	**98**	Pn	**Pn**	**21 18 12.3**	**+0.3**
W41B				IAmb_Lg		21 19 19.4	
	comp=Z,73nm,0.7s						
W41B	**Gary Mavity, V**	**4.12**	**98**	P	**Pn**	**21 18 12.6**	**+0.6**
	baz=281,SNR=44						
W41B				S	**Sn**	**21 19 00.9**	**+0.4**
	baz=281						
W41B	**Gary Mavity, V**	**4.12**	**98**	P	**Pn**	**21 18 12.6**	**+0.6**
	baz=281						
UALR	**University of**	**4.14**	**104**	Pn	**Pn**	**21 18 12.8**	**+0.6**
UALR				IAmb_Lg		21 19 20.7	
	comp=Z,58nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.15**	**88**		**Pn**	**21 18 13.7**	**+1.3**
FCAR				IAmb_Lg		21 19 24.8	
	comp=Z,78nm,0.7s						
MGMO	**Mountain Grove**	**4.20**	**71**	Pn	**Pn**	**21 18 14.0**	**+0.9**
Z41A	**Richland Creek**	**4.49**	**124**	IAmb_Lg		21 19 38.8	
	comp=Z,66nm,0.9s						
R40A	**Maddies Statio**	**4.65**	**57**	Pn	**Pn**	**21 18 19.1**	**-0.1**
R40A				IAmb_Lg		21 19 38.9	
	comp=Z,101nm,0.9s						
R40A	**Maddies Statio**	**4.65**	**57**	P	**Pn**	**21 18 19.5**	**+0.3**
	baz=240,SNR=14						
R40A				S	**Sn**	**21 19 13.0**	**-0.4**
	baz=240						
P38A	**Dawn**	**4.76**	**37**	Pn	**Pn**	**21 18 21.8**	**+1.0**
P38A				IAmb_Lg		21 19 51.5	
	comp=Z,69nm,0.9s						
N33A	**J Bar K, Exete**	**4.87**	**358**	IAmb_Lg		21 19 54.0	
	comp=Z,47nm,0.7s						
CCAR	**Cane Creek**	**4.89**	**112**	IAmb_Lg		21 19 52.2	
	comp=Z,65nm,0.7s						
LCAR	**Lake Charles**	**4.93**	**86**	Pn	**Pn**	**21 18 22.9**	**-0.2**
LCAR				IAmb_Lg		21 19 54.6	
	comp=Z,49nm,0.9s						
435B	**Jarrell**	**5.08**	**183**	IAmb_Lg		21 19 58.5	
	comp=Z,59nm,1.0s						
N35A	**Tabor**	**5.14**	**14**	Pn	**Pn**	**21 18 26.8**	**+0.8**
CCM	**Cathedral Cave**	**5.27**	**64**	Pg	**Pb**	**21 18 43.7**	**+2.7**
CCM				IAmb_Lg		21 19 56.0	
	comp=Z,92nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.32**	**308**	Pn	**Pn**	**21 18 29.9**	**+1.3**
KSCO				IAmb_Lg		21 20 06.8	
	comp=Z,88nm,0.9s						
P40A	**Paris**	**5.50**	**47**	IAmb_Lg		21 20 08.4	
	comp=Z,102nm,0.7s						
PBMO	**Poplar Bluff**	**5.56**	**79**	IAmb_Lg		21 20 08.6	
	comp=Z,93nm,0.9s						
JCT	**Junction City**	**5.79**	**203**	IAmb_Lg		21 20 24.0	
	comp=Z,60nm,0.8s						
FVM	**French Village**	**5.84**	**67**	Pn	**Pn**	**21 18 35.5**	**-0.2**
FVM				IAmb_Lg		21 20 20.4	
	comp=Z,93nm,1.0s						
T25A	**Trinidad**	**5.92**	**284**		**Pn**	**21 18 36.8**	**-0.2**
T25A				IAmb_Lg		21 20 21.1	
	comp=Z,56nm,0.9s						
OGNE	**Ogallala**	**6.32**	**325**	Pn	**Pn**	**21 18 42.5**	**+0.2**
OGNE				IAmb_Lg		21 20 31.6	
	comp=Z,70nm,0.7s						
OXF	**Oxford**	**6.54**	**100**	Pn	**Pn**	**21 18 43.8**	**-1.5**
OXF				IAmb_Lg		21 20 51.9	
	comp=Z,30nm,0.9s						
S44A	**Carbondale**	**6.65**	**72**	IAmb_Lg		21 20 40.1	
	comp=Z,69nm,0.7s						
SCIA	**State Center**	**6.79**	**26**	Pn	**Pn**	**21 18 48.6**	**-0.2**
SDCO	**Great Sand Dun**	**6.90**	**288**		**Pn**	**21 18 51.2**	**+0.8**
Q24A	**Divide**	**7.02**	**298**	IAmb_Lg		21 21 04.0	
	comp=Z,33nm,0.8s						
PLAL	**Pickwick Lake**	**7.53**	**94**	Pg	Pg	21 19 26.8	-5.9
ANMO	**Albuquerque**	**7.59**	**266**	Pg	Pg	21 19 28.1	-5.9
K38A	**Parkersburg**	**7.60**	**26**	IAmb_Lg		21 21 18.6	
	comp=Z,68nm,1.0s						
WVT	**Waverly**	**7.62**	**85**	IAmb_Lg		21 21 15.6	
	comp=Z,25nm,0.9s						
ISCO	**Idaho Springs**	**7.71**	**303**	Pn	**Pn**	**21 19 01.8**	**+0.3**
833A	**Chaparral WMA,**	**7.74**	**194**	IAmb_Lg		21 21 24.0	
	comp=Z,24nm,1.0s						
L40A	**Anamosa**	**7.75**	**35**	Pn	**Pn**	**21 19 00.6**	**-1.3**
ECSD	**EROS Data Cent**	**7.87**	**3**		**Pn**	**21 19 03.2**	**-0.4**
BNM	**Barren Site**	**7.90**	**260**	Pn	**Pn**	**21 19 04.0**	**-0.2**
MNTX	**Cornudas Mount**	**7.96**	**241**	Pn	**Pn**	**21 19 03.5**	**-1.3**
MNTX				IAmb_Lg		21 21 43.3	
	comp=Z,26nm,1.2s						
Z47A	**Carrollton**	**8.01**	**107**	IAmb_Lg		21 21 25.3	
	comp=Z,29nm,1.2s						
PHWY	**Pilot Hill**	**8.42**	**313**	IAmb_Lg		21 21 52.4	
	comp=Z,43nm,1.1s						
N23A	**Red Feather La**	**8.48**	**309**	Pn	**Pn**	**21 19 09.9**	**-2.3**
N23A				IAmb_Lg		21 21 43.2	
	comp=Z,48nm,0.9s						
L42A	**Oliver, Polo**	**8.50**	**42**	Pn	**Pn**	**21 19 11.6**	**-0.5**
I37A	**Lemond, Waseca**	**8.65**	**19**	IAmb_Lg		21 21 54.0	
	comp=Z,35nm,0.8s						
SUSD	**Miller**	**8.67**	**352**	IAmb_Lg		21 21 56.7	
	comp=Z,34nm,0.8s						
I40A	**Norwalk**	**9.49**	**30**	IAmb_Lg		21 22 14.0	
	comp=Z,23nm,0.8s						
K43A	**Burlington**	**9.70**	**43**	IAmb_Lg		21 22 26.5	
	comp=Z,39nm,0.7s						
RSSD	**Black Hills**	**9.76**	**330**	IAmb_Lg		21 22 33.8	
	comp=Z,16nm,0.8s						
K22A	**Casper**	**9.89**	**316**	IAmb_Lg		21 22 41.1	

comp=Z,42nm,1.0s

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*IDC **19** 21:25:42.0±28.0, 18°.09S×174°.85W, h0^{km}, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=519.4km s-min=148.1km az=75.0*

*NEIC **19** 21:26:22.0±1.8, 18°.10S±0°.09×176°.0W±0°.1, h303^{km}±9^{km}, mb4.0/23, Error ellipse: s-maj=19.4km s-min=13.0km az=104.0*

ISC 19 21:26:21.3±0.6, **18°.1S**±0°.1×**176°.04W**±0°.10, **h300**^{km}, **n32**, σ**1^{s}22**/31, **mb4.0**/14, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.85	45	Pn	Pn	21 27 49.4	+0.4
NIUE	Niue	5.87	100	Pn	Pn	21 27 47.9	-1.2
RAO	Raoul Island	11.22	188	P	P	21 28 57.6	+1.1
LIFNC	LIFOU	15.99	258	P	P	21 29 49.2	-0.1
PINNC	Pines Island,	16.12	251	P	P	21 29 51.3	+0.6
PINNC				IAmb	IAmb	21 30 09.6	
	comp=Z,24nm,1.1s						
URZ	Urewera	20.94	195	P	P	21 30 41.2	-0.3
URZ				IAmb	IAmb	21 30 59.3	
	comp=Z,26nm,1.2s						
WHZ	Wether Hill Ro	30.73	202	P	P	21 32 09.9	+0.9
ARMA	Armidale	31.80	241	P	P	21 32 18.9	+0.1
ARMA				IAmb	IAmb	21 32 32.4	
	comp=Z,6.8nm,1.1s						
CTA	Charters Tower	35.64	261	P	P	21 32 53.2	+1.6
	comp=Z,3.9nm,0.8s,baz=91,slow=8.4,SNR=1.4						
	comp=Z,3.9nm,0.8s						
CTAO	Charters Tower	35.64	261	P	P	21 32 52.9	+1.3
CTAO				IAmb	IAmb	21 32 58.0	
	comp=Z,6.0nm,1.1s						
TOO	Toolangi	38.81	232	P	P	21 33 14.9	-3.0
TOO				IAmb	IAmb	21 33 19.8	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	40.52	242	P	P	21 33 31.7	-0.2
	comp=Z,1.2nm,0.5s,baz=98,slow=9.8,SNR=7.4						
	comp=Z,1.2nm,0.5s						
STKA	Stephens Creek	40.52	242	P	P	21 33 31.9	0.0
BBOO	Buckleboo	45.29	242	P	P	21 34 09.1	-0.8
BBOO				IAmb	IAmb	21 34 28.9	
	comp=Z,7.7nm,1.1s						
WR0	Warramunga Arr	46.62	259	P	P	21 34 20.7	+0.2
WB0	Warramunga Arr	46.78	260	P	P	21 34 21.6	-0.2
WB0				IAmb	IAmb	21 34 35.6	
	comp=Z,3.3nm,1.1s						
WB2	Warramunga Arr	46.80	259	P	P	21 34 21.7	-0.2
WB2				IAmb	IAmb	21 34 22.0	
	comp=Z,2.9nm,0.9s						
WRA	Warramunga Arr	46.81	259	P	P	21 34 21.7	-0.3
	comp=Z,2.0nm,0.5s,baz=97,slow=7.9,SNR=53						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	46.81	259	IAmb	IAmb	21 34 21.9	
	comp=Z,0.2nm,0.8s						
AS31	Alice Springs	46.91	254	P	P	21 34 22.7	0.0
AS31				IAmb	IAmb	21 34 23.9	
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	46.91	254	P	P	21 34 22.4	-0.3
	comp=Z,2.7nm,0.5s,baz=87,slow=8.6,SNR=44						
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	46.91	254	P	P	21 34 22.2	-0.5
FORT	Forrest	51.96	245	P	P	21 34 58.8	-1.7
FORT				IAmb	IAmb	21 35 16.8	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	52.71	264	P	P	21 35 06.0	-0.1
KNRA				IAmb	IAmb	21 35 15.0	
	comp=Z,7.6nm,1.1s						
PSA00	Pilbara Seismi	60.04	255	P	P	21 35 56.4	-1.1
MBWA	Marble Bar	60.21	256	P	P	21 35 57.3	-1.4
MBWA				IAmb	IAmb	21 36 01.7	
	comp=Z,5.3nm,1.1s						
MORW	Morawa	62.47	246	P	P	21 36 12.6	-1.0
MORW				IAmb	IAmb	21 36 19.9	
	comp=Z,6.0nm,1.1s						
QSPA	South Pole Qui	71.94	180	P	P	21 37 13.5	+1.3
CHIR	Chirikof Islan	75.65	12	P	P	21 37 30.8	-2.6
JCC	Jacoby Creek,	75.93	38	P	P	21 37 34.3	-1.0
KNK	Knik Glacier	82.27	13	P	P	21 38 10.6	+1.5
MCMT	McKenzie Canyo	84.94	40	P	P	21 38 25.5	+2.2

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*IDC **19** 21:47:07.8±2.7, 40°.53N×142°.74E, h0^{km}, mb3.4/4, mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=75.4km s-min=29.7km az=70.0*

*JMA **19** 21:47:24.7±0.1, 40°.1N±0°.3×141°.3E±0°.4, h88^{km}, MV2.9/39, NORTHERN IWATE PREF*

ISC 19 21:47:23.8±1.0, **40°.11N**±0°.05×**141°.38E**±0°.08, **h94**^{km}±7^{km}, **n22**, σ**0^{s}55**/24, **mb3.5**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKZ	Kuzumaki	0.14	197	i P	Pn	21 47 37.5	+0.4
JKZ				S	Sn	21 47 46.7	-0.3
JKEN	Kujiedanarisaw	0.27	70	i P	Pn	21 47 38.0	+0.5
JKEN				S	Sn	21 47 48.0	+0.3
JANG	Nango	0.28	22	P	Pn	21 47 37.9	+0.3
JANG				S	Sn	21 47 47.6	-0.3
JAH	Hinai	0.58	278	P	Pn	21 47 39.5	0.0
JAH				S	Sn	21 47 50.5	-0.8
JOM	Ohasama	0.64	186	P	Pn	21 47 40.5	+0.3
JOM				S	Sn	21 47 52.1	-0.2
JTM	Tenmabayashi	0.71	341	i P	Pn	21 47 41.2	+0.5
JTM				*e*S	Sn	21 47 53.8	+0.3
JRG	Rokugo	0.92	219	i P	Pn	21 47 43.4	+0.5
JRG				S	Sn	21 47 57.7	+0.5
JIW	Iwasaki	1.15	295	P	Pn	21 47 46.0	+0.5
JMK	Ichinoseki	1.17	186	i P	Pn	21 47 46.2	+0.5
JMK				S	Sn	21 48 02.0	-0.1
JOT	Ohata	1.29	349	P	Pn	21 47 48.1	+0.9
JYK	Kaneyama	1.43	214	i P	Pn	21 47 49.3	+0.4
MJAR	Matsushiro Arr	4.35	216	Pn	Pn	21 48 28.8	+1.1
	0.2nm,0.3s,baz=27,slow=15,SNR=9.4						
	1.3nm,0.4s						
H11N2	WAKE ISLAND Hy	29.85	125	T	T	22 24 11.4	
	baz=317,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	29.86	125	T	T	22 24 18.4	
	baz=317,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	29.87	125	T	T	22 24 15.9	
	baz=317,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	30.65	127	T	T	22 25 12.4	
	baz=318,slow=74,SNR=3.8						
H11S3	WAKE ISLAND Hy	30.65	127	T	T	22 25 12.4	
	baz=318,slow=74,SNR=7.1						
H11S2	WAKE ISLAND Hy	30.67	127	T	T	22 25 14.1	
	baz=318						
ZALV	Zalesovo Beam	39.88	310	P	P	21 54 47.7	-0.3
	0.5nm,0.5s,baz=77,slow=6.4,SNR=2.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	42.53	299	P	P	21 55 09.9	0.0
	0.3nm,0.6s,baz=79,slow=9.4,SNR=2.7						
	0.3nm,0.6s						
WRA	Warramunga Arr	60.10	188	P	P	21 57 21.0	-0.2
	0.3nm,0.7s,baz=13,slow=7.7,SNR=1.9						
	0.3nm,0.7s						
ASAR	Alice Springs	63.83	188	P	P	21 57 45.4	-0.8
	0.2nm,0.3s,baz=1.6,slow=6.5,SNR=1.8						
	0.2nm,0.3s						

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*IDC **19** 22:29:48.1±2.7, 38°.71N×72°.48E, h0^{km}, mb3.7/3, mbtmp3.6/6, ML3.0/3, MS3.1/1, Error ellipse: s-maj=50.9km s-min=25.9km az=148.0*

*SOME **19** 22:29:53.5, 39°.28N×72°.07E, h0^{km}*

*NNC **19** 22:29:56.1±4.9, 39°.24N×72°.31E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=37.8km s-min=21.8km az=1.0*

ISC 19 22:29:51.6±1.5, **38°.5N**±0°.1×**72°.36E**±0°.08, **h30**^{km}, **n25**, σ**2^{s}36**/34, **mb3.7**/3, **1C-3D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.03	335	*e*P	Pn	22 30 54.9	+3.5
	419nm,0.6s						
IUG				*e*S	Sn	22 31 39.8	+2.2
	138nm,0.3s						
IUG	Iuzhnay	4.03	335	Pg	Pn	22 30 53.8	+2.4
	419nm,0.6s						
IUG				Lg	Lg	22 31 39.8	
	138nm,0.3s						
MRKS	Merke	4.27	9	*e*P	Pn	22 30 59.9	+5.3
	7.9nm,0.3s						
MRKS				*e*S	Sn	22 31 48.3	+4.9
	21nm,0.6s						
MRKS	Merke	4.27	9	Pg	Pn	22 30 57.6	+3.0
	6.6nm,0.6s						
MRKS				Lg	Lg	22 31 46.1	
	21nm,0.6s						
DZA	Taraz	4.43	350	*e*P	Pn	22 31 00.1	+3.3
	41nm,0.3s						
DZA				*e*S	Sn	22 31 48.6	+1.2
	58nm,0.9s						
DZA	Taraz	4.43	350	Pg	Pn	22 30 59.0	+2.2
	59nm,0.4s						
DZA				Lg	Lg	22 31 48.4	
	58nm,0.9s						
KK31	Karatay Array	4.78	344	Pn	Pn	22 31 01.9	+0.3
	6.1nm,0.3s,baz=149,slow=11,SNR=300						
KK31				Sn	Sn	22 31 56.6	+0.6
	16nm,0.7s,baz=153,slow=22,SNR=11						
TKM2	Tokmak 2	5.04	28	⇑Pn	Pn	22 31 07.9	+2.6
	0.8nm,0.3s						
TKM2				⇓Pg	Pb	22 31 20.2	+1.2
	4.7nm,0.7s						
TKM2				⇓Lg	Lg	22 32 18.4	
	7.4nm,0.7s						
SGDS	Sogindy	5.21	19	*e*P	Pb	22 31 19.2	-2.8
	6.0nm,0.1s						
SGDS				*e*S	Sb	22 32 21.4	-2.9
	5.6nm,0.2s						
KST	Kastek	5.28	30	*e*P	Pb	22 31 21.6	-1.5
	3.6nm,0.5s						
KST				*e*S	Sb	22 32 25.7	-0.4
	12nm,0.8s						
KST	Kastek	5.28	30	Pg	Pb	22 31 21.0	-2.2
	1.7nm,0.3s						
KST				Lg	Lg	22 32 26.2	
	12nm,0.8s						
TNSS	Tian-Shan	5.70	36	*e*P	Pb	22 31 30.5	0.0
	2.0nm,0.4s						
TNSS				*e*S	Sb	22 32 40.9	+2.5
	3.7nm,0.7s						
TNSS	Tian-Shan	5.70	36	Pg	Pb	22 31 28.5	-2.0
	2.0nm,0.3s						
TNSS				Lg	Lg	22 32 39.2	
	3.7nm,0.7s						
KRBS	Karabastau	5.74	25	*e*P	Pb	22 31 30.6	-0.5
	1.7nm,0.5s						
KRBS				*e*S	Sb	22 32 40.7	+1.4
	5.1nm,0.6s						
KRBS	Karabastau	5.74	25	Pg	Pb	22 31 29.2	-1.8
	0.1nm,0.1s						
KRBS				Lg	Lg	22 32 40.6	
	3.9nm,0.7s						
KTBS	Karatobe	6.12	31	*e*P	Pb	22 31 35.9	-1.6
	0.9nm,0.7s						
KTBS				*e*S	Sb	22 32 50.2	-0.2
	10nm,0.7s						
KTBS	Karatobe	6.12	31	Pg	Pb	22 31 34.7	-2.8
	1.6nm,0.7s						
KTBS				Lg	Lg	22 32 50.2	
	10nm,0.7s						
MKAR	Makanchi Array	11.03	38	Pn	Pn	22 32 26.2	-1.1
	0.1nm,0.3s,baz=230,slow=14,SNR=3.3						
	0.4nm,0.8s						
AB31	Akbulak array	13.95	324	P	Pn	22 33 03.5	-3.6
	1.3nm,0.7s,baz=134,slow=13,SNR=18						
AKTO	Aktyubinsk	15.67	324	Pn	Pn	22 33 27.1	-2.9
	0.1nm,0.3s,baz=134,slow=11,SNR=1.7						
	0.9nm,0.6s						
AKTO	Aktyubinsk	15.67	324	⇓P	Pn	22 33 31.5	+1.4
	2.5nm,0.9s						
ZALV	Zalesovo Beam	17.63	25	P	Pn	22 33 51.4	-3.4
	0.2nm,0.3s,baz=219,slow=11,SNR=3.4						
	0.4nm,0.3s						
FINES	FINESS Array B	36.44	324	P	P	22 36 52.2	-1.1
	0.9nm,0.8s,baz=115,slow=9.0,SNR=4.8						
	0.9nm,0.8s						
ARCES	ARCESS Array B	39.71	336	P	P	22 37 20.5	-0.3
	2.4nm,1.1s,baz=106,slow=9.5,SNR=4.8						
ARCES				LR	LR	22 54 29.6	
	comp=Z,24nm,19.1s,baz=292,slow=37						
	2.4nm,1.1s						
TORD	Torodi Ar. Bea	66.84	269	P	P	22 40 43.0	+2.1
	0.2nm,0.4s,baz=46,slow=6.3,SNR=5.9						
	0.2nm,0.4s						

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*NOU **19** 22:41:01.2, 30°.49S×175°.74W, h5^{km}, mb4.9/21, Kermadec Islands Region*

*IDC **19** 22:41:12.5±0.8, 30°.36S×177°.66W, h0^{km}, mb4.4/7, mbtmp4.4/7, MS3.6/22, Error ellipse: s-maj=28.7km s-min=15.7km az=87.0*

*NEIC **19** 22:41:15.5±2.4, 30°.40S±0°.03×177°.6W±0°.1, h14^{km}±4^{km}, mb4.5/22, Error ellipse: s-maj=18.7km s-min=4.7km az=85.0*

ISC 19 22:41:17.8±0.7, **30°.51S**±0°.05×**177°.6W**±0°.1, **h33**^{km}, **n113**, σ**1^{s}71**/81, **mb4.5**/14, **MS3.8**/21, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.28	348	Pn	Pn	22 41 37.1	-2.2
	426nm,0.3s,baz=126,slow=19,SNR=26						
RAO				Sn	Sn	22 41 52.2	-3.1
	3μm,0.3s,baz=106,slow=19,SNR=19						
RAO				LR	LR	22 42 02.1	
	comp=Z,1μm,19.9s,baz=226,slow=44						
RAO	Raoul Island	1.28	348		Pn	22 41 37.5	-1.8
RAO	Raoul Island	1.28	348	P	Pn	22 41 39.4	+0.1
MXZ	Matakaoa Point	7.81	205	Pn	Pn	22 43 10.5	+1.4
MXZ				Sn	Sn	22 44 35.3	-1.0
OUZ	Omahuta	8.76	235	Pn	Pn	22 43 25.2	+3.1
OUZ	Omahuta	8.76	235	P	Pn	22 43 27.4	+5.3
URZ	Urewera	8.88	208	Pn	Pn	22 43 17.4	-6.2
	0.9nm,0.3s,baz=300,slow=20,SNR=11						
URZ				Sn	Sn	22 44 56.5	-6.0
	9.9nm,0.3s,baz=66,slow=19,SNR=12						
URZ	Urewera	8.88	208	Pn	Pn	22 43 20.7	-2.9
URZ	Urewera	8.88	208	P	Pn	22 43 21.6	-2.1
BKZ	Black Stump Fm	9.90	208	Pn	Pn	22 43 36.2	-1.6
BKZ	Black Stump Fm	9.90	208	P	Pn	22 43 36.2	-1.6
HIZ	Hauiti	10.12	216	Pn	Pn	22 43 41.6	+1.0
PLWZ	Palliser	12.45	206	Pn	Pn	22 44 14.7	+2.1
TUWZ	Tuamarina	12.86	210	Pn	Pn	22 44 19.3	+1.1
NNZ	Nelson	12.94	212	Pn	Pn	22 44 20.7	+1.5
THZ	Tophouse	13.59	212	Pn	Pn	22 44 28.2	0.0
KHZ	Kahutara	13.85	208	Pn	Pn	22 44 31.6	+0.1
KHZ	Kahutara	13.85	208	P	Pn	22 44 29.5	-2.1
LTZ	Lake Taylor	14.68	211		Pn	22 44 43.6	+0.5
OXZ	Oxford	15.22	210	Pn	Pn	22 44 51.1	+0.9
OXZ				IAmb	IAmb	22 44 58.6	
	comp=Z,21nm,0.7s						
MQZ	McQueen's Vall	15.28	208	Pn	Pn	22 44 51.6	+0.7
MQZ				IAmb	IAmb	22 45 10.8	
	comp=Z,30nm,1.1s						
RPZ	Rata Peaks	15.96	211	Pn	Pn	22 44 54.5	-5.3
	comp=Z,0.7nm,0.3s,baz=350,slow=11,SNR=1.5						
RPZ				Sn	Sn	22 47 37.7	-18
	comp=Z,0.9nm,0.3s,baz=101,slow=23,SNR=6.1						
RPZ	Rata Peaks	15.96	211	Pn	Pn	22 44 59.1	-0.7
RPZ				IAmb	IAmb	22 45 04.7	
	comp=Z,15nm,0.7s						
RPZ	Rata Peaks	15.96	211	P	Pn	22 44 57.4	-2.4
OUENC	Ouen Island, N	16.07	296	P	P	22 45 06.4	+2.0
YATNC	Mamie plateau,	16.23	298	P	P	22 45 08.6	+2.4
FOZ	Fox Glacier	16.40	214	P	P	22 45 08.1	+0.3
FOZ				IAmb	IAmb	22 45 10.1	
	comp=Z,47nm,1.0s						
DZM	Mont Dzumac	16.57	297	*e*P	P	22 45 19.7	+10
DZM				*e*LR	LR	22 49 05.3	
	comp=Z,780nm,24.6s						
DZM	Mont Dzumac	16.57	297	LR	LR	22 50 07.9	
	comp=Z,506nm,20.6s,baz=120,slow=32						
DZM	Mont Dzumac	16.57	297	P	P	22 45 12.6	+2.6
ODZ	Otahua Downs	17.20	209	P	Pn	22 45 13.0	-2.4
AFI	Afiamalu	17.37	19	LR	LR	22 52 09.6	
	comp=Z,58nm,19.6s,baz=184,slow=38						
RAR	Rarotonga	18.51	64	LR	LR	22 50 33.4	
	comp=Z,300nm,21.7s,baz=258,slow=30						
TBI	Tubuai	26.05	81	*e*LR	LR	22 53 18.2	
	comp=Z,470nm,29.5s						
TBI	Tubuai	26.05	81	*e*T	T	23 13 49.7	
	comp=Z,9.3nm,0.3s						
TBI				*e*T	T	23 13 49.7	
	comp=Z,9.3nm,0.3s						
MGCD	Mangrove Creek	26.66	256	P	P	22 46 55.3	+1.7
EIDS	Eidsvold	28.08	273	P	P	22 47 07.2	+0.8
EIDS				IAmb	IAmb	22 47 09.5	
	comp=Z,6.0nm,0.6s						
EIDS	Eidsvold	28.08	273	P	P	22 47 07.2	+0.8
PAE	Paea	28.52	70	*e*T	T	23 16 56.6	
	comp=Z,3.9nm,0.3s						
PAE				*e*T	T	23 16 56.6	
	comp=Z,3.9nm,0.3s						
PPT2	Papeete2	28.56	70	*e*LR	LR	22 54 08.6	
	comp=Z,377nm,27.0s,baz=242						
PPT	Papeete	28.57	70	LR	LR	22 55 46.7	
	comp=Z,73nm,20.9s,baz=199,slow=31						
RK1H	Rockhampton Ha	29.23	276	P	P	22 47 18.0	+1.3
RMQ	Roma	29.76	269	P	P	22 47 23.1	+1.7
CMSA	Cobar Meteorol	31.38	259	P	P	22 47 37.1	+1.5
VAH	Vaihoa	31.40	68	*e*T	T	23 20 29.6	
	comp=Z,17nm,0.2s						
VAH				*e*T	T	23 20 29.6	
	comp=Z,17nm,0.2s						
CTA	Charters Tower	34.15	279	LR	LR	23 00 13.3	
	comp=Z,222nm,19.0s,baz=84,slow=34						
CTA	Charters Tower	34.15	279	P	P	22 48 01.0	+1.1
CTAO	Charters Tower	34.15	279	P	P	22 48 01.3	+1.3
CTAO	Charters Tower	34.15	279	P	P	22 48 01.0	+1.1
STKA	Stephens Creek	34.78	257	P	P	22 48 06.0	+0.7
	comp=Z,8.2nm,0.4s,baz=101,slow=11,SNR=31						
STKA				LR	LR	23 00 34.6	
	comp=Z,192nm,18.9s,baz=36,slow=33						
	comp=Z,8.2nm,0.4s						
STKA	Stephens Creek	34.78	257	P	P	22 48 06.6	+1.3
STKA				IAmb	IAmb	22 48 07.1	
	comp=Z,2.8nm,0.6s						
STKA	Stephens Creek	34.78	257	P	P	22 48 06.5	+1.2
HTT	Hallett	36.80	254	P	P	22 48 23.1	+0.5
NAPP	Napperby	37.47	254	P	P	22 48 29.4	+1.1
LCRK	Leigh Creek	37.88	259	P	P	22 48 32.4	+0.6
PMG	Port Moresby	38.95	295	LR	LR	23 02 07.2	
	comp=Z,118nm,20.7s,baz=136,slow=32						
AS31	Alice Springs	43.44	267	P	P	22 49 17.5	-0.3
ASAR	Alice Springs	43.44	267	P	P	22 49 16.6	-1.1
	comp=Z,2.5nm,0.5s,baz=104,slow=7.2,SNR=36						
ASAR				PcP	PcP	22 51 05.5	-0.3
	comp=Z,0.4nm,0.4s,baz=112,slow=4.2,SNR=1.6						
ASAR				ScP	ScP	22 54 55.8	+1.1
	comp=Z,0.4nm,0.7s,baz=91,slow=4.6,SNR=3.1						
ASAR				LR	LR	23 07 06.1	
	comp=Z,177nm,18.8s,baz=128,slow=36						
	comp=Z,2.5nm,0.5s						
WR0	Warramunga Arr	44.26	272	P	P	22 49 23.2	-1.1
WR0				IAmb	IAmb	22 49 26.2	
	comp=Z,3.8nm,0.9s						
WB2	Warramunga Arr	44.43	272	P	P	22 49 24.7	-1.1
WB2				IAmb	IAmb	22 49 40.7	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	44.44	272	P	P	22 49 24.4	-1.4
	comp=Z,3.5nm,0.3s,baz=110,slow=8.1,SNR=94						
WRA				LR	LR	23 06 17.8	
	comp=Z,148nm,20.8s,baz=15,slow=34						
	comp=Z,3.5nm,0.3s						
WRA	Warramunga Arr	44.44	272	P	P	22 49 25.1	-0.7
WB0	Warramunga Arr	44.46	272	P	P	22 49 24.7	-1.3
WB0				IAmb	IAmb	22 49 27.9	
	comp=Z,9.2nm,1.0s						
FORT	Forrest	46.34	255	P	P	22 49 39.3	-1.5
SBA	Scott Base	47.96	184	P	P	22 49 55.1	+2.4
VNDA	Vanda	48.02	186	P	P	22 49 55.3	+2.1
	comp=Z,0.5nm,0.6s,baz=16,slow=5.3,SNR=5.1						
	comp=Z,0.5nm,0.6s						
CASY	Casey	55.20	208	P	P	22 50 46.7	-0.2
MBWA	Marble Bar	56.55	264	P	P	22 50 55.1	-2.2
MBWA				IAmb	IAmb	22 50 58.4	
	comp=Z,7.7nm,1.1s						
MORW	Morawa	56.82	253	P	P	22 50 57.2	-2.0
QSPA	South Pole Qui	59.60	180	P	P	22 51 19.7	+1.5
	comp=Z,1.0nm,0.3s,baz=346,slow=1.1,SNR=7.0						
	comp=Z,1.0nm,0.3s						
QSPA	South Pole Qui	59.60	180	P	P	22 51 20.5	+2.3
GIRL	Giralia	60.66	260	P	P	22 51 27.1	+1.2
MYLDM	Lahad Datu	70.55	288	P	P	22 52 30.2	+0.3
MYLDM				IAmb	IAmb	22 52 30.6	
	comp=Z,3.6nm,0.8s						
MAW	Mawson	72.33	200	P	P	22 52 39.9	+0.2
	comp=Z,1.4nm,0.5s,baz=144,slow=7.2,SNR=1.7						
	comp=Z,1.4nm,0.5s						
MAW	Mawson	72.33	200	P	P	22 52 40.0	+0.3
SNAA	Sanae	78.04	178	P	P	22 53 14.2	+1.5
SNAA				IAmb	IAmb	22 53 28.4	
	comp=Z,2.9nm,1.0s						
H03S2	Juan Fernandez	80.13	123	T	T	00 22 36.8	
	SNR=26						
H03S1	Juan Fernandez	80.14	123	T	T	00 22 35.7	
	SNR=28						
H03S3	Juan Fernandez	80.14	123	T	T	00 22 37.1	
	SNR=23						
H03N3	Juan Fernandez	80.32	123	T	T	00 22 47.0	
	baz=241,slow=72,SNR=7.8						
H03N2	Juan Fernandez	80.32	123	T	T	00 22 45.8	
	baz=241,slow=72,SNR=5.8						
H03N1	Juan Fernandez	80.33	123	T	T	00 22 45.8	
	baz=241,slow=72,SNR=11						
PLCA	Paso Flores	82.19	133	LR	LR	23 21 42.0	
	comp=Z,48nm,19.7s,baz=214,slow=30						
LPIG	La Paz	84.31	58	LR	LR	23 24 10.3	
	comp=Z,33nm,18.4s,baz=224,slow=31						
PETK	Petropavlovsk-	86.00	345	P	P	22 53 54.3	0.0
	comp=Z,3.3nm,0.9s,baz=116,slow=6.8,SNR=3.7						
	comp=Z,3.3nm,0.9s						
YBH	Yreka Blue Hor	87.91	38	LR	LR	23 32 14.9	
	comp=Z,19nm,18.1s,baz=220,slow=35						
NVAR	Mina Array Bea	88.09	43	LR	LR	23 27 08.0	
	comp=Z,36nm,19.2s,baz=266,slow=31						
ELK	Elko	91.39	42	LR	LR	23 29 10.2	
	comp=Z,29nm,19.1s,baz=241,slow=32						
TXAR	Lajitas Array	92.16	57	LR	LR	23 29 15.0	
	comp=Z,25nm,19.3s,baz=202,slow=31						
CMIG	Matias Romero	92.47	72	LR	LR	23 27 43.6	
	comp=Z,16nm,20.1s,baz=201,slow=30						
NNA	Nana	93.07	106	LR	LR	23 26 28.4	
	comp=Z,35nm,21.6s,baz=228,slow=29						
ANMO	Albuquerque	93.38	51	LR	LR	23 27 42.0	
	comp=Z,24nm,21.7s,baz=247,slow=30						
LVC	Limon Verde	93.59	119	LR	LR	23 28 24.4	
	comp=Z,34nm,19.9s,baz=214,slow=30						
ATAH	Atahualpa	94.29	101	LR	LR	23 27 52.0	
	comp=Z,22nm,20.3s,baz=208,slow=30						
LPAZ	La Paz	97.80	114	LR	LR	23 30 51.1	
	comp=Z,17nm,20.8s,baz=78,slow=30						
CPUP	Villa Florida	99.66	128	LR	LR	23 34 44.3	
	comp=Z,19nm,18.3s,baz=216,slow=32						
MKAR	Makanchi Array	118.10	310	PKP	PKPdf	22 59 59.7	-1.3
	comp=Z,0.5nm,0.5s,baz=201,slow=1.3,SNR=7.5						
MKAR	Makanchi Array	118.10	310		PKPdf	23 00 00.2	-0.9
KURK	Kurchatov	121.36	314		PKPdf	23 00 06.1	-1.0
KURBB	Kurchatov Arra	121.40	314	PKP	PKPdf	23 00 06.1	-1.1
	comp=Z,1.6nm,0.6s,baz=109,slow=1.8,SNR=25						
AAK	Ala-Archa	122.45	304	PKP	PKPdf	23 00 09.1	-0.6
	comp=Z,0.8nm,0.4s,baz=170,slow=5.9,SNR=4.5						
H10N3	ASCENSION HYDR	138.57	154	T	T	01 36 18.9	
	baz=203,slow=75,SNR=9.5						
H10N1	ASCENSION HYDR	138.57	154	T	T	01 36 16.6	
	baz=203,slow=75,SNR=23						
H10N2	ASCENSION HYDR	138.59	154	T	T	01 36 16.0	
	baz=203,slow=75,SNR=16						
ARCES	ARCESS Array B	138.76	348	PKhKP	PKPpre	23 00 31.4	
	comp=Z,3.6nm,1.0s,baz=54,slow=6.2,SNR=4.0						
FINES	FINESS Array B	145.36	340	PKPbc	PKPbc	23 00 50.5	-0.8
	comp=Z,15nm,0.5s,baz=59,slow=3.8,SNR=148						
FINES	FINESS Array B	145.36	340		PKPdf	23 00 50.7	-0.8
KBZ	Khabaz	145.45	304	PKPbc	PKPab	23 00 52.2	-0.2
	comp=Z,1.3nm,0.5s,baz=91,slow=1.5,SNR=5.0						
NB2	NORSAR Subarra	148.91	352	PKP	PKPbc	23 01 01.0	-0.5
	comp=Z,6.3nm,1.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.91	352	PKPbc	PKPbc	23 01 00.7	-0.8
	comp=Z,1.1nm,0.6s,baz=14,slow=4.2,SNR=8.9						
AKASG	Malin Array Be	151.59	323	PKPbc	PKPbc	23 01 07.2	-1.0
	comp=Z,4.7nm,0.5s,baz=48,slow=3.5,SNR=30						
BRTR	Keskin Array B	152.94	298	PKPbc	PKPbc	23 01 10.7	-1.1
	comp=Z,0.9nm,0.6s,baz=121,slow=5.9,SNR=4.3						
TORD	Torodi Ar. Bea	162.71	178	PKPab	PKPab	23 02 05.7	+0.2
	comp=Z,0.6nm,0.6s,baz=163,slow=2.7,SNR=5.5						

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*IDC **19** 22:53:46.9±0.9, 31°.43N×130°.44E, h158^{km}±8^{km}, mb3.8/13, mbtmp4.2/16, MS3.6/1, Error ellipse: s-maj=17.5km s-min=10.6km az=84.0*

*JMA **19** 22:53:47.5±0.1, 31°.4N±0°.4×130°.4E±0°.7, h150^{km}±1^{km}, MV4.0/39, SATSUMA PENINSULA REGION*

JMA Felt I J1 at SATSUMA PENINSULA REGION.

*NEIC **19** 22:53:47±2.0, 31°.42N±0°.06×130°.40E±0°.08, h154^{km}±6^{km},* *mb4.3/52, Error ellipse: s-maj=10.3km s-min=8.3km az=112.0*

*NIED **19** 22:53:47.5, 31°.38N×130°.44E, h150^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.26; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-0.59; $M_{r\theta}$-0.98; $M_{\theta\phi}$0.29; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.32000×10^{15} NP1: ϕ_s202.00000°, δ24.00000°, λ164.00000°. NP2: ϕ_s307.00000°, δ84.00000°, λ67.00000°.*

ISC 19 22:53:46.5±0.5**, 31°.39N**±0°.04×**130°.41E**±0°.05**, h154**^{km}±5^{km}**, n115, σ1§26**/127**, mb4.3**/36**, 7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSU	Suzuyama	0.12	20		Pn	22 54 07.9	+0.7
JSU				Sn	Sn	22 54 23.4	+0.3
JSU	Suzuyama	0.12	20	*i* P	Pn	22 54 07.9	+0.7
JSU				S	Sn	22 54 23.4	+0.3
JTSR	Tashiro 2	0.49	117	*i* P	Pn	22 54 08.9	+0.5
JTSR				S	Sn	22 54 24.6	-0.4
JTSR	Tashiro 2	0.49	117	A	A	22 54 08.9	
	comp=E,16nm,0.3s,comp=E,10.0nm,0.3s						
JSJ	Shimokoshiki	0.66	296	*i* P	Pn	22 54 09.6	+0.4
JSJ				S	Sn	22 54 26.8	+0.3
JTZ	Takazaki	0.77	49	*i* P	Pn	22 54 10.5	+0.6
JTZ				S	Sn	22 54 27.6	-0.3
JTN	Tanegashima 3	0.89	146	⇓*i*P	Pn	22 54 11.4	+0.6
JTN				⇓S	Sn	22 54 28.5	-0.9
JMTN	Minamitane	1.08	157	⇓*i*P	Pn	22 54 13.0	+0.6
JMTN				⇓*e*S	Sn	22 54 32.2	0.0
JYAK	Yakushimahirau	1.16	176	⇓*i*P	Pn	22 54 13.4	+0.3
JYAK				⇓S	Sn	22 54 32.7	-0.7
JIU3	Izumi3	1.20	17	*i* P	Pn	22 54 14.4	+0.9
JIU3				*e*S	Sn	22 54 34.8	+0.6
JNN	Nakanoshima	1.61	197	⇓P	Pn	22 54 18.3	+0.7
JNU	Nakatsue	1.77	13	P	Pn	22 54 19.5	+0.2
	357nm,0.5s,baz=206,slow=2.8,SNR=143						
JNU				S	Sn	22 54 44.7	+0.1
	170nm,0.4s,baz=12,slow=21,SNR=11						
JNU	Nakatsue	1.77	13		Pn	22 54 20.0	+0.7
JTU	Tsushima	3.23	345		Pn	22 54 37.0	+0.1
JMN	Monobe	3.74	51	Pn	Pn	22 54 43.8	+0.2
JMN					Sn	22 55 26.5	-1.4
JHS	Saijyo	4.25	32		Pn	22 54 49.6	-0.5
JHS				Sn	Sn	22 55 36.4	-3.3
NAWB	Namwon	4.74	329		Pn	22 54 57.2	+0.7
JOW	Kunigami	4.91	203	S	Sn	22 55 48.6	-6.7
	97nm,0.2s,baz=90,slow=20,SNR=15						
JOW	Kunigami	4.91	203	Pn	Pn	22 54 57.7	-1.2
TJN	Taejon	5.58	334		Pn	22 55 08.5	+0.9
JWT	Wachi	5.70	46	Pn	Pn	22 55 09.1	-0.1
KSCHJ	Chungju	5.83	340		Pn	22 55 11.6	+0.8
KSAR	Wonju Array Be	6.38	342	Pn	Pn	22 55 19.6	+1.3
KSRS	Korea Array	6.38	342	P	Pn	22 55 19.4	+1.1
	1.8nm,0.5s,baz=159,slow=16,SNR=11						
KS19	Wonju Array Si	6.44	342	Pn	Pn	22 55 19.8	+0.7
INU	Inuyama	6.79	53	Pn	Pn	22 55 26.4	+2.6
INU				Sn	Sn	22 56 40.9	+0.9
INCN	Inchon	6.83	334	Pn	Pn	22 55 24.9	+0.7
JGF	Kuroka	7.16	52		Pn	22 55 29.1	+0.4
JGF					Sn	22 56 47.4	-1.6
JHJ2	Mitsune	8.15	75	Pn	Pn	22 55 41.9	0.0
MAJO	Matsushiro	8.27	49	Pn	Pn	22 55 43.3	-0.1
MJB9	Matsu-Tunnel	8.27	49	Pn	Pn	22 55 43.1	-0.3
MJAR	Matsushiro Arr	8.27	49	P	Pn	22 55 43.3	-0.1
	2.2nm,0.3s,baz=242,slow=15,SNR=11						
MJAR				S	Sn	22 57 09.0	-6.4
	3.6nm,0.6s,baz=222,slow=18,SNR=6.9						
YHNB	Yeheng	10.41	232	Pn	Pn	22 56 13.3	+1.2
NACB	Ninganchiao	10.61	229	Pn	Pn	22 56 12.8	-1.7
JMM	Marumori	10.71	50	Pn	Pn	22 56 15.3	-0.4
JCJ	Chichijima	11.14	110	Pn	Pn	22 56 23.2	+1.7
SSLB	Suanglung	11.30	230	Pn	Pn	22 56 22.7	-0.9
BJT	Baijiatuau	14.40	311		Pn	22 57 04.6	+1.4
ERM	Erimo	14.71	40	Pn	Pn	22 57 06.6	-0.4
ASAJ	Asahikawa	15.92	34	P	Pn	22 57 20.3	-1.6
	12nm,0.8s,baz=232,slow=10,SNR=6.8						
JKA	Kamikawa-asahi	15.92	34	P	Pn	22 57 20.6	-1.3
JKA				IAmb	IAmb	22 57 22.9	
	comp=Z,9.2nm,0.7s						
KLR	Kul'dur	17.85	3	P	P	22 57 44.5	+0.9
	comp=Z,2.3nm,0.5s,baz=203,slow=7.0,SNR=7.6						
ENH	Enshi	18.00	272	P	P	22 57 46.5	+0.9
ENH				IAmb	IAmb	22 57 49.0	
	comp=Z,15nm,0.8s						
GUMO	Guam	22.15	140	P	P	22 58 31.9	+1.9
	comp=Z,28nm,0.3s,baz=0.0,slow=20,SNR=2.1						
UBPT	Khong Chiam	27.86	241	P	P	22 59 22.6	+0.8
UBPT				IAmb	IAmb	22 59 23.3	
	comp=Z,2.5nm,0.7s						
PEA0B	Petropavlovsk-	29.34	34	P	P	22 59 34.9	+0.3
CHTO	Chiang Mai	31.01	254	P	P	22 59 50.2	+0.6
KULM	Kulim	38.12	233	P	P	23 00 48.4	-2.4
KULM				IAmb	IAmb	23 00 52.1	
	comp=Z,8.9nm,1.0s						
IPM	Ipoh	38.45	232	P	P	23 00 52.0	-1.5
IPM				IAmb	IAmb	23 00 54.6	
	comp=Z,7.7nm,0.8s						
MKAR	Makanchi Array	39.74	307	P	P	23 01 05.6	+1.6
	comp=Z,0.2nm,0.6s,baz=88,slow=7.7,SNR=1.9						
PBA	Port Blair	39.90	249	P	P	23 01 06.0	+0.5
PSI	Prapat	41.10	233	P	P	23 01 15.9	+0.3
	comp=Z,3.0nm,0.4s,baz=327,slow=5.7,SNR=5.4						
	comp=Z,3.0nm,0.4s						
RPSI	Rantau Prapat	41.18	232	P	P	23 01 15.9	-0.1
KURBB	Kurchatov Arra	42.62	312	P	P	23 01 28.6	+1.3
	comp=Z,0.1nm,0.4s,baz=105,slow=7.2,SNR=1.8						
GSI	Gunungsitoli	43.11	232	P	P	23 01 31.5	-0.1
GSI				IAmb	IAmb	23 01 32.1	
	comp=Z,8.4nm,0.7s						
KIWB	Kanaga Island	43.12	46	P	P	23 01 31.6	+0.2
KDJ	Kajisay	43.34	300	P	P	23 01 31.5	-2.0
UGM	Wanagama	43.47	209	P	P	23 01 33.7	-0.9
MTN	Manton Dam	43.99	179	P	P	23 01 38.1	-0.5
KNRA	Kununurra	46.83	182	P	P	23 02 01.0	+0.1
KKAR	Karatay Array	48.16	302	P	P	23 02 12.2	+1.2
WB0	Warramunga Arr	51.01	175	P	P	23 02 32.6	-0.2
WRA	Warramunga Arr	51.18	175	P	P	23 02 33.8	-0.2
	comp=Z,2.4nm,0.4s,baz=355,slow=7.9,SNR=40						
	comp=Z,2.4nm,0.4s						
WRA	Warramunga Arr	51.18	175	P	P	23 02 33.8	-0.2
WB2	Warramunga Arr	51.18	175	P	P	23 02 33.8	-0.2
WB2				IAmb	IAmb	23 02 34.0	
	comp=Z,3.2nm,0.6s						
WR0	Warramunga Arr	51.21	175	P	P	23 02 34.1	-0.1
WR0				IAmb	IAmb	23 02 34.6	
	comp=Z,4.5nm,1.1s						
CTA	Charters Tower	53.40	161	P	P	23 02 50.6	+0.2
	comp=Z,2.8nm,0.7s,baz=0.0,slow=8.1,SNR=1.6						
	comp=Z,2.8nm,0.7s						
CTAO	Charters Tower	53.40	161	P	P	23 02 50.9	+0.5
CTAO				IAmb	IAmb	23 03 08.1	
	comp=Z,9.2nm,1.1s						
PSA00	Pilbara Seismi	53.63	192	P	P	23 02 51.9	-0.2
PSA00				IAmb	IAmb	23 02 52.0	
	comp=Z,6.2nm,0.9s						
PSA00	Pilbara Seismi	53.63	192	P	P	23 02 51.3	-0.7
PSA00				IAmb	IAmb	23 02 52.9	
	comp=Z,2.4nm,0.9s						
AS31	Alice Springs	54.85	176	P	P	23 03 01.0	+0.1
AS31				IAmb	IAmb	23 03 02.8	
	comp=Z,2.4nm,0.4s						
ASAR	Alice Springs	54.85	176	P	P	23 03 00.5	-0.4
	comp=Z,2.5nm,0.3s,baz=7.7,slow=14,SNR=55						
	comp=Z,2.5nm,0.3s						
ASAR	Alice Springs	54.85	176	P	P	23 03 00.9	0.0
SVW2	Sparrevohn	55.42	35	P	P	23 03 05.2	+0.6
SVW2				IAmb	IAmb	23 03 09.0	
	comp=Z,3.4nm,1.1s						
L19K	White Mountain	55.71	33	P	P	23 03 07.1	+0.5
L19K				IAmb	IAmb	23 03 13.1	
	comp=Z,3.6nm,1.1s						
J20K	Nowinta River	55.94	31	P	P	23 03 08.8	+0.7
M19K	Big River Lodg	55.94	34	P	P	23 03 09.7	+1.4
K20K	Telida	56.01	32	P	P	23 03 09.7	+1.0
K20K				IAmb	IAmb	23 03 11.0	
	comp=Z,4.1nm,1.0s						
IMAR	Indian Mountai	56.04	29	P	P	23 03 09.0	+0.1
H21K	Melozitna Rive	56.44	29	P	P	23 03 12.8	+1.1
M20K	Styx River	56.54	34	P	P	23 03 13.6	+1.1
Q19K	Cape Douglas,	56.57	37	P	P	23 03 11.5	-1.3
RSO	Redoubt South	56.86	35	P	P	23 03 15.3	+0.4
PPLA	Purkeypile	56.89	32	P	P	23 03 15.7	+0.6
PPLA				IAmb	IAmb	23 03 16.7	
	comp=Z,3.3nm,0.6s						
KDAK	Kodiak Island	57.27	38	P	P	23 03 17.5	-0.1
	comp=Z,2.4nm,0.4s,baz=311,slow=4.7,SNR=6.8						
KDAK				LR	LR	23 29 47.3	
	comp=Z,46nm,19.6s,baz=218,slow=38						
	comp=Z,2.4nm,0.4s						
KDAK	Kodiak Island	57.27	38	IAmb	IAmb	23 03 34.2	
	comp=Z,6.9nm,1.0s						
BPAW	Bear Paw Mtn.	57.32	31	P	P	23 03 18.9	+0.9
BPAW				IAmb	IAmb	23 03 19.3	
	comp=Z,2.8nm,1.1s						
H23K	Yukon River	57.78	29	P	P	23 03 22.5	+1.4
H23K				IAmb	IAmb	23 03 23.5	
	comp=Z,3.2nm,0.8s						
RND	Reindeer	58.34	31	P	P	23 03 25.4	+0.2
RND				IAmb	IAmb	23 03 26.1	
	comp=Z,3.5nm,0.8s						
MDM	Murphy Dome	58.42	30	P	P	23 03 26.3	+0.8
MDM				IAmb	IAmb	23 03 27.2	
	comp=Z,3.0nm,0.8s						
H24K	Noodor Dome	58.46	29	P	P	23 03 26.6	+0.8
ILAR	Eielson Array	59.01	30	P	P	23 03 29.2	-0.4
	comp=Z,0.6nm,0.6s,baz=288,slow=8.0,SNR=7.2						
	comp=Z,0.6nm,0.6s						
GLI	Glacier Island	59.55	34	P	P	23 03 32.0	-1.4
FORT	Forrest	61.87	182	P	P	23 03 49.5	+0.2
DZM	Mont Dzumac	63.40	142	P	P	23 03 59.9	+0.1
	comp=Z,2.6nm,0.8s,baz=323,slow=20,SNR=1.7						
	comp=Z,2.6nm,0.8s						
DZM	Mont Dzumac	63.40	142	P	P	23 04 00.2	+0.4
DZM				IAmb	IAmb	23 04 16.2	
	comp=Z,3.3nm,0.9s						
STKA	Stephens Creek	63.81	169	P	P	23 04 02.7	+0.5
	comp=Z,2.9nm,0.4s,baz=343,slow=8.0,SNR=12						
	comp=Z,2.9nm,0.4s						
ARCES	ARCESS Array B	65.93	338	P	P	23 04 14.8	-0.7
	comp=Z,2.7nm,0.9s,baz=32,slow=7.9,SNR=3.8						
	comp=Z,2.7nm,0.9s						
ARCES	ARCESS Array B	65.93	338	IAmb	IAmb	23 04 16.0	
	comp=Z,5.5nm,1.1s						
C36M	Paulatuk	66.21	22	P	P	23 04 17.0	-0.2
EUNU	Eureka	66.95	7	P	P	23 04 22.0	+0.1
FIA1	FINESS Array S	69.33	330	P	P	23 04 36.4	-0.5
FINES	FINESS Array B	69.33	330	P	P	23 04 36.1	-0.8
	comp=Z,0.6nm,0.3s,baz=63,slow=6.0,SNR=8.1						
	comp=Z,0.6nm,0.3s						
FINES	FINESS Array B	69.33	330	P	P	23 04 36.3	-0.6
YKA	Yellowknife Ar	73.06	26	P	P	23 04 59.0	-0.3
	comp=Z,0.5nm,0.6s,baz=290,slow=10,SNR=6.6						
	comp=Z,0.5nm,0.6s						
RAYN	Ar Rayn	74.01	288	P	P	23 05 06.0	+0.4
OZB	Mount Ozzard	75.37	41	P	P	23 05 13.7	+0.7
NB201	NORSAR Array S	75.50	334	P	P	23 05 12.4	-1.1
NB201				IAmb	IAmb	23 05 23.6	
	comp=Z,3.2nm,0.9s						
NB2	NORSAR Subarra	75.53	334	P	P	23 05 12.5	-1.2
	comp=Z,0.3nm,0.5s,baz=48,slow=5.6						
NOA	NORSAR Array B	75.53	334	P	P	23 05 12.4	-1.2
	comp=Z,1.3nm,1.1s,baz=50,slow=5.7,SNR=4.2						
	comp=Z,1.3nm,1.1s						
NC204	NORSAR Array S	75.55	334	P	P	23 05 12.9	-0.8
NC204				IAmb	IAmb	23 05 28.1	
	comp=Z,4.0nm,0.9s						
KBO	Bosley Butte	79.71	47	P	P	23 05 36.4	-0.8
AGG	Agios Georgios	83.20	312	P	P	23 05 53.9	-1.8
AGG				IAmb	IAmb	23 06 09.3	
	comp=Z,4.6nm,1.2s						
ITM	Ithomi	84.53	310	P	P	23 06 01.1	-1.3
ITM				IAmb	IAmb	23 06 02.1	
	comp=Z,6.8nm,0.9s						
NVAR	Mina Array Bea	85.58	47	P	P	23 06 08.1	+0.2
	comp=Z,0.8nm,0.6s,baz=309,slow=5.5,SNR=5.4						
	comp=Z,0.8nm,0.6s						

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*IDC **19** 23:10:17.9±0.5, 22°.73N×93°.87E, h0^{km}, mb4.4/22, mbtmp4.4/23, ML4.1/1, MS3.8/64, Error ellipse: s-maj=21.0km s-min=12.1km az=55.0*

*NDI **19** 23:10:20.5±3.7, 22°.84N×94°.00E, h33^{km}±94^{km}, mb4.5, mb4.8(NEIC)*

*MOS **19** 23:10:22.2±0.9, 22°.68N×93°.86E, h43^{km}, mb4.9/32, MS4.0/7, Error ellipse: s-maj=10.1km s-min=3.8km az=123.8*

*BJI **19** 23:10:24.2±0.0, 22°.78N×93°.86E, h61^{km}, mb4.4/45, mB4.5/23, ML4.0/1, Ms4.2/43, Ms7 4.0/40*

*NEIC **19** 23:10:24.7±1.2, 22°.76N±0°.05×93°.92E±0°.05, h42^{km}±6^{km}, mb4.8/162, Error ellipse: s-maj=8.5km s-min=6.0km az=137.0*

ISC 19 23:10:25.0±0.3**, 22°.73N**±0°.04×**93°.78E**±0°.04**, h50**^{km}**, n519, σ1§51**/509**, mb4.8**/156**, MS3.9**/76**, 50C-15D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	3.31	329		Pn	23 11 13.6	-0.9
SHL				Sn	Sn	23 11 51.0	-1.7
SHL	Shillong	3.31	329	P	Pn	23 11 13.6	-0.9
SHL						23 11 51.0	
SHL	Shillong	3.31	329	*e*P	Pn	23 11 15.7	+1.2
SHL				*e*S	Sn	23 11 51.1	-1.6
CHTO	Chiang Mai	6.21	128	Pn	Pn	23 11 51.8	-2.3
CHTO	Chiang Mai	6.21	128	P	Pn	23 11 51.8	-2.3
SLGI	Shiliguri	6.28	310	*e*P	Pn	23 11 56.2	+1.2
SLGI				*e*S	Sn	23 13 04.0	-1.4
CM31	Chiang Mai Arr	6.44	130	Pn	Pn	23 11 56.5	-0.8
CMAR	Chiang Mai Arr	6.44	130	Pn	Pn	23 11 54.9	-2.4
	1.1nm,0.3s,baz=308,slow=13,SNR=37						
CMAR				Lg	Lg	23 13 36.5	
	baz=301,slow=32						
CMAR				LR	LR	23 14 46.3	
	comp=Z,1μm,19.1s,baz=305,slow=42						
	9.2nm,0.8s						
CMAR	Chiang Mai Arr	6.44	130		Pn	23 11 55.6	-1.7
CMAR	Chiang Mai Arr	6.44	130	*i* P	Pn	23 11 56.9	-0.4
CMAR				pmax	pmax		
	comp=Z,28nm,0.9s						
TAPN	Taplejung	7.17	311	*e*Pg	Pn	23 12 07.7	+0.1
TAPN				*e*Sn	Sn	23 13 25.6	-2.2
LSA	Lhasa	7.33	342	Pn	Pn	23 12 11.0	+1.1
LSA					Sn	23 13 32.7	+0.7
LSA	Lhasa	7.33	342	P	Pn	23 12 11.0	+1.1
LSA						23 13 32.7	
LSA	Lhasa	7.33	342	P	Pn	23 12 11.4	+1.5
LSA				LR	LR		
	comp=Z,720nm,7.8s						
LSA				LR	LR		
	comp=Z,2μm,11.4s						
LSA				LR	LR		
	comp=Z,610nm,12.8s						
BOK	Bokaro	7.34	280	*e*P	Pn	23 12 11.0	+1.4
BOK				*e*S	Sn	23 13 30.4	-1.1
RAMN	Ramite	7.76	304	*e*Pn	Pn	23 12 15.8	+0.3
RAMN				*e*Sn	Sn	23 13 42.4	+0.3
	comp=Z,118nm,0.4s						
BWNR	Bhubaneshwar	7.81	253	*e*P	Pn	23 12 16.5	+0.5
PZH	PanZhiHua	8.16	61	P	Pn	23 12 23.5	+2.6
PZH				sP		23 12 38.4	
PZH				S	Sn	23 13 57.8	+5.9
PZH				pmax	pmax		
	comp=Z,30nm,1.3s						
PZH				pmax	pmax		
	comp=Z,120nm,5.1s						
PZH				LR	LR		
	comp=Z,2μm,16.2s						
PZH				LR	LR		
	comp=Z,2μm,15.0s						
PZH				LR	LR		
	comp=Z,3μm,12.6s						
KMI	Kunming	8.54	72	⇑P	Pn	23 12 29.6	+3.4
KMI				sP		23 12 41.3	
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,3.6s						
KMI				LR	LR		
	comp=Z,840nm,8.8s						
KMI				LR	LR		
	comp=Z,1μm,12.5s						
KMI				LR	LR		
	comp=Z,1μm,13.1s						
PKI	Pulchoki	8.98	304	*e*Pn	Pn	23 12 31.8	-0.6
PKI				*e*Sn	Sn	23 14 10.0	-2.4
	comp=Z,111nm,0.4s						
PKIN	Phulchoki	9.00	304	*e*Pn	Pn	23 12 32.0	-0.5
PKIN				*e*Sn	Sn	23 14 11.0	-1.6
	comp=Z,206nm,0.6s						
KKN	Kakani	9.19	305	*e*Pn	Pn	23 12 34.2	-1.0
KKN				*e*Sn	Sn	23 14 13.6	-3.8
DMN	Daman	9.23	303	*e*Pn	Pn	23 12 35.5	-0.3
DMN				*e*Sn	Sn	23 14 16.0	-2.4
	comp=Z,228nm,0.7s						
GKN	Gorkha	9.79	304	*e*Pn	Pn	23 12 42.1	-1.2
GKN				*e*Sn	Sn	23 14 27.8	-4.1
	comp=Z,214nm,0.4s						
VLK	Valmikinagar	10.08	299	*e*S	Sn	23 14 34.2	-4.6
DANN	Dangsing	10.63	304	*e*Pn	Pn	23 12 53.9	-1.1
BLSP	Bilaspur	10.79	269	*e*P	Pn	23 12 57.0	+0.1
BLSP				*e*S	Sn	23 14 51.0	-5.3
CD2	Chengdu	12.07	45	P	Pn	23 13 16.6	+2.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1μm,9.3s						
CD2				LR	LR		
	comp=Z,1μm,15.2s						
GYA	Guiyang	12.29	70	⇑P	Pn	23 13 18.3	+0.8
GYA				pP	P	23 13 28.4	0.0
GYA				pmax	pmax		
	comp=Z,12nm,0.5s						
GYA				LR	LR		
	comp=Z,360nm,8.2s						
GYA				LR	LR		
	comp=Z,760nm,7.4s						
GYA				LR	LR		
	comp=Z,1μm,11.6s						
JBP	Jabalpur	12.72	275	*e*x	P	23 13 25.1	-7.9
JBP				*e*P	P	23 13 25.1	-7.9
JBP				⇓*e*S	Sn	23 15 39.8	-3.5
UBPT	Khong Chiam	13.30	122		Pn	23 13 29.6	-1.7
GOMU	GeErMu	13.45	4	P	Pn	23 13 30.8	-2.7
GOMU				S	Sn	23 15 55.4	-6.2
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,43nm,5.0s						
GOMU				LR	LR		
	comp=Z,160nm,14.8s						
GOMU				LR	LR		
	comp=Z,550nm,14.1s						
LGTI	Lohaghat	13.87	302	*e*P	Pn	23 13 38.6	-0.3
LGTI				*e*S	Sn	23 16 05.5	-5.9
PTH	Pithoragarh	13.94	302	*e*P	Pn	23 13 38.8	-1.3
PTH				*e*S	Sn	23 16 05.6	-7.8
QIZ	Qiongzhong	15.46	101	P	Pn	23 13 56.3	-3.5
QIZ				S	Sn	23 16 49.5	-0.6
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.8s						
QIZ				LR	LR		
	comp=Z,210nm,12.7s						
QIZ				LR	LR		
	comp=Z,450nm,12.7s						
QIZ				LR	LR		
	comp=Z,500nm,11.2s						
LZH	Lanzhou	15.92	31	*e*P	Pn	23 14 06.8	+1.0
LZH				sP	pP	23 14 20.1	0.0
LZH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LZH				LR	LR		
	comp=Z,500nm,12.5s						
LZH				LR	LR		
	comp=Z,490nm,11.4s						
LZH				LR	LR		
	comp=Z,810nm,12.0s						
ENH	Enshi	15.93	59	P	P	23 14 07.6	-1.1
SMLA	Simla	17.00	303	*e*P	Pn	23 14 18.5	-0.7
SMLA				IAmb	IAmb	23 14 30.9	
	comp=Z,27nm,0.7s						
SMLA				*e*S	Sn	23 17 18.7	-8.6
GTA	Gaotai	17.40	16	*e*P	P	23 14 24.8	-0.3
GTA				pP	pP	23 14 34.8	-2.0
GTA				sP	sP	23 14 41.5	-1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,69nm,5.2s						
GTA				LR	LR		
	comp=Z,300nm,13.9s						
GTA				LR	LR		
	comp=Z,640nm,17.1s						
GTA				LR	LR		
	comp=Z,360nm,14.3s						
XAN	Xi'an	17.43	46	P	Pn	23 14 23.5	-1.0
XAN				pP	pP	23 14 35.6	-1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				LR	LR		
	comp=Z,500nm,20.0s						
XAN				LR	LR		
	comp=Z,730nm,17.9s						
XAN				LR	LR		
	comp=Z,1μm,19.9s						
AJM	Ajmer	17.80	286	*e*P	P	23 14 31.5	+2.1
IPM	Ipoh	19.45	158	P	P	23 14 47.2	-0.4
KCSI	Kotacane, Aceh	19.48	168	P	P	23 14 46.3	-1.6
	comp=Z,28nm,0.8s						
TSI	Tuntungan	19.67	166	P	Pn	23 14 51.1	-0.6
	comp=Z,171nm,1.1s						
PALK	Pallekele	19.87	221	LR	LR	23 22 33.4	
	comp=Z,309nm,21.5s,baz=137,slow=37						
WHN	Wuhan	19.95	63	⇑P	Pn	23 14 56.8	+1.9
WHN				S	S	23 18 36.5	+1.9
WHN				LR	LR		
	comp=Z,930nm,11.4s						
WHN				LR	LR		
	comp=Z,450nm,6.3s						
WHN				LR	LR		
	comp=Z,1μm,20.6s						
LYN	LuoYang	20.15	50	⇑*i*P	P	23 14 52.5	-2.6
LYN				S	S	23 18 39.4	+0.7
LYN				LR	LR		
	comp=Z,570nm,10.8s						
LYN				LR	LR		
	comp=Z,1μm,15.5s						
LYN				LR	LR		
	comp=Z,1μm,17.6s						
PSI	Prapat	20.43	165	P	P	23 14 59.3	+1.0
	comp=Z,5.8nm,0.6s,baz=154,slow=23,SNR=1.7						
PSI				LR	LR	23 24 12.3	
	comp=Z,119nm,19.6s,baz=320,slow=41						
	comp=Z,5.8nm,0.6s						
SARP	Sargodha	20.84	301	P	P	23 15 02.8	+0.3
CHCP	Chirah Chowk	21.07	306	P	P	23 15 05.8	+0.8
NIL	Nilore	21.07	306	P	P	23 15 04.9	-0.2
NIL				IAmb	IAmb	23 15 06.6	
	comp=Z,48nm,0.9s						
NIL	Nilore	21.07	306	P	P	23 15 04.9	-0.2
NIL				pmax	pmax		
	comp=Z,48nm,0.9s						
GSI	Gunungsitoli	21.62	170	P	P	23 15 10.6	-0.3
GSI				IAmb	IAmb	23 15 22.5	
	comp=Z,32nm,1.0s						
GSI	Gunungsitoli	21.62	170	P	P	23 15 11.1	+0.1
	comp=Z,45nm,1.3s						
WMQ	Urumqi	21.63	348	*e*P	P	23 15 12.4	+1.4
WMQ				pP	sP	23 15 27.8	-1.8
WMQ				PP	PnPn	23 15 37.6	+4.3
WMQ				S	S	23 19 08.0	+0.2
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.3s						
WMQ				LR	LR		
	comp=Z,360nm,13.1s						
WMQ				LR	LR		
	comp=Z,300nm,13.7s						
WMQ				LR	LR		
	comp=Z,200nm,15.7s						
THW	Thamme Wali	21.89	302	P	P	23 15 13.5	-0.3
CEP	Cherat	22.16	305	P	P	23 15 16.2	-0.7
KSH	Kashi	22.57	322	P	P	23 15 21.1	0.0
KSH				sP	sP	23 15 41.0	+1.3
KSH				S	S	23 19 21.8	-3.4
KSH				pmax	pmax		
	comp=Z,25nm,1.1s						
KSH				LR	LR		
	comp=Z,210nm,13.4s						
KSH				LR	LR		
	comp=Z,120nm,13.1s						
KSH				LR	LR		

	comp=Z,270nm,16.5s						
TARG	**Taragay, Kyrgy**	**23.20**	**328**	P	**P**	**23 15 28.4**	**+0.5**
TARG				IAmb	IAmb	23 15 32.3	
	comp=Z,26nm,1.1s						
TARG	**Taragay, Kyrgy**	**23.20**	**328**	P	**P**	**23 15 28.4**	**+0.5**
TARG				pmax	pmax		
	comp=Z,26nm,1.1s						
HNS	**HongShan**	**23.20**	**46**	⇓P	**P**	**23 15 27.0**	**-0.5**
HNS				S	**S**	**23 19 35.0**	**-0.6**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HNS				LR	LR		
	comp=Z,320nm,14.4s						
HNS				LR	LR		
	comp=Z,400nm,14.9s						
HNS				LR	LR		
	comp=Z,580nm,18.2s						
HHC	**Hu-ho-hao-te**	**23.48**	**36**	*e*P	**P**	**23 15 30.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				LR	LR		
	comp=Z,510nm,14.6s						
HHC				LR	LR		
	comp=Z,400nm,14.3s						
HHC				LR	LR		
	comp=Z,770nm,15.6s						
PRZ	**Przheval'sk**	**23.50**	**331**	P	**P**	**23 15 30.2**	**-0.4**
PRZ	**Przheval'sk**	**23.50**	**331**	P	**P**	**23 15 30.2**	**-0.4**
PDGK	**Podgornoye**	**23.71**	**333**	P	**P**	**23 15 32.0**	**-0.5**
KDJ	**Kajisay**	**23.81**	**328**	P	**P**	**23 15 34.2**	**+0.8**
KDJ				IAmb	IAmb	23 15 37.1	
	comp=Z,28nm,1.2s						
KDJ	**Kajisay**	**23.81**	**328**	P	**P**	**23 15 34.2**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,28nm,1.2s						
NJ2	**Nanjing**	**24.07**	**62**	*e*P	**P**	**23 15 35.5**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ULHL	**Ulahol**	**24.36**	**327**	P	**P**	**23 15 40.4**	**+1.9**
	SNR=11						
KBL	**Kabul**	**24.63**	**304**	P	**P**	**23 15 42.5**	**+1.5**
KBL				IAmb	IAmb	23 15 44.3	
	comp=Z,39nm,1.1s						
KBL	**Kabul**	**24.63**	**304**	P	**P**	**23 15 42.5**	**+1.5**
KBL				pmax	pmax		
	comp=Z,39nm,1.1s						
BOOM	**Boomskoye usch**	**24.69**	**327**	P	**P**	**23 15 42.5**	**+1.1**
BOOM	**Boomskoye usch**	**24.69**	**327**	P	**P**	**23 15 42.5**	**+1.1**
BOOM				pmax	pmax		
	comp=Z,19nm,1.1s						
DRK	**Karamyk**	**25.05**	**317**	P	**P**	**23 15 44.7**	**-0.3**
DRK				IAmb	IAmb	23 15 48.1	
	comp=Z,32nm,0.7s						
TKM2	**Tokmak 2**	**25.17**	**327**	P	**P**	**23 15 47.1**	**+1.2**
	SNR=28						
TKM2	**Tokmak 2**	**25.17**	**327**	*i* P	**P**	**23 15 46.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,27nm,1.1s						
UCH	**Uchtor**	**25.23**	**325**	P	**P**	**23 15 49.9**	**+3.1**
	SNR=11						
KBK	**Karagaybulak**	**25.31**	**326**	P	**P**	**23 15 49.4**	**+2.3**
	SNR=11						
AAK	**Ala-Archa**	**25.53**	**326**	P	**P**	**23 15 51.4**	**+2.3**
	SNR=21						
AAK	**Ala-Archa**	**25.53**	**326**	P	**P**	**23 15 50.9**	**+1.7**
	comp=Z,24nm,1.1s,baz=151,slow=8.1,SNR=29						
AAK				LR	LR	23 28 01.8	
	comp=Z,180nm,19.7s,baz=145,slow=42						
	comp=Z,24nm,1.1s						
AAK	**Ala-Archa**	**25.53**	**326**	P	**P**	**23 15 50.5**	**+1.4**
AAK				IAmb	IAmb	23 15 53.5	
	comp=Z,39nm,1.3s						
AAK	**Ala-Archa**	**25.53**	**326**	⇑*i*P	**P**	**23 15 50.8**	**+1.7**
AAK				pmax	pmax		
	comp=Z,34nm,1.3s						
FRU1	**Bishkek**	**25.58**	**326**	P	**P**	**23 15 50.8**	**+1.3**
FRU1				IAmb	IAmb	23 15 54.5	
	comp=Z,35nm,1.4s						
FRU1	**Bishkek**	**25.58**	**326**	P	**P**	**23 15 50.8**	**+1.3**
FRU1				pmax	pmax		
	comp=Z,35nm,1.4s						
AML	**Almayashu**	**25.61**	**324**	P	**P**	**23 15 52.1**	**+2.1**
	SNR=19						
CHMS	**Chumysh**	**25.66**	**326**	P	**P**	**23 15 52.8**	**+2.7**
	SNR=5.0						
MK31	**Makanchi Array**	**25.74**	**342**	P	**P**	**23 15 51.2**	**+0.4**
MK31	**Makanchi Array**	**25.74**	**342**	*c i*P	**P**	**23 15 51.1**	**+0.4**
MK31				pmax	pmax		
	comp=Z,24nm,1.0s						
MKAR	**Makanchi Array**	**25.74**	**342**	P	**P**	**23 15 51.6**	**+0.9**
	comp=Z,16nm,0.8s,baz=153,slow=6.9,SNR=65						
MKAR				LR	LR	23 28 24.8	
	comp=Z,108nm,20.1s,baz=160,slow=42						
	comp=Z,16nm,0.8s						
MKAR	**Makanchi Array**	**25.74**	**342**	P	**P**	**23 15 51.3**	**+0.6**
MKAR	**Makanchi Array**	**25.74**	**342**	⇑*e*P	**P**	**23 15 51.7**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,157nm,0.8s						
GAR	**Garm**	**25.75**	**314**	P	**P**	**23 15 51.9**	**+0.9**
SSE	**Sheshan**	**25.77**	**65**	P	**P**	**23 15 50.6**	**-0.5**
SSE				S	**S**	**23 20 20.8**	**+3.9**
SSE				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SSE				LR	LR		
	comp=Z,190nm,25.3s						
SSE				LR	LR		
	comp=Z,170nm,25.2s						
MAKZ	**Makanchi**	**25.84**	**341**	P	**P**	**23 15 52.2**	**+0.5**
MAKZ				IAmb	IAmb	23 15 54.6	
	comp=Z,21nm,1.1s						
MAKZ	**Makanchi**	**25.84**	**341**	P	**P**	**23 15 52.2**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,21nm,1.2s						
EKS2	**Erkin-Say**	**25.93**	**325**	P	**P**	**23 15 55.0**	**+2.4**
	SNR=18						
BTK	**Batken**	**26.01**	**317**	P	**P**	**23 15 54.5**	**+1.2**
BTK				IAmb	IAmb	23 16 00.0	
	comp=Z,64nm,1.4s						
BTK	**Batken**	**26.01**	**317**	P	**P**	**23 15 54.5**	**+1.2**
BTK				pmax	pmax		
	comp=Z,64nm,1.4s						
CHGR	**Chuyangaron**	**26.34**	**313**	P	**P**	**23 15 56.8**	**+0.4**
CHGR				IAmb	IAmb	23 15 59.1	
	comp=Z,60nm,1.3s						
CHGR	**Chuyangaron**	**26.34**	**313**	P	**P**	**23 15 56.8**	**+0.4**
CHGR				pmax	pmax		
	comp=Z,60nm,1.3s						
SONM	**Songino Array**	**27.01**	**19**	P	**P**	**23 16 03.3**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=203,slow=8.2,SNR=9.2						
SONM				LR	LR	23 28 37.8	
	comp=Z,436nm,18.1s,baz=215,slow=41						
	comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**27.01**	**19**	P	**P**	**23 16 02.3**	**-0.1**
SONM	**Songino Array**	**27.01**	**19**	P	**P**	**23 16 02.3**	**-0.1**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.24**	**20**	P	**P**	**23 16 03.6**	**-0.8**
ULN	**Ulaanbaatar**	**27.24**	**20**	⇑*e*P	**P**	**23 16 04.6**	**+0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KNGR	**Kungurtug, Tuv**	**27.98**	**5**	⇑*e*P	**P**	**23 16 12.6**	**+1.7**
XLT	**XiLinHaoTe**	**28.00**	**36**	*e*P	**P**	**23 16 12.3**	**+1.1**
XLT				S	**S**	**23 20 53.6**	**+1.6**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,77nm,4.2s						
XLT				LR	LR		
	comp=Z,170nm,10.2s						
XLT				LR	LR		
	comp=Z,280nm,12.4s						
KK31	**Karatay Array**	**28.02**	**322**	P	**P**	**23 16 11.9**	**+0.6**
KK31	**Karatay Array**	**28.02**	**322**	P	**P**	**23 16 11.9**	**+0.6**
KK31				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	**Karatay Array**	**28.02**	**322**	P	**P**	**23 16 11.8**	**+0.5**
KKAR	**Karatay Array**	**28.02**	**322**	P	**P**	**23 16 11.8**	**+0.5**
KKAR				IAmb	IAmb	23 16 13.7	
	comp=Z,8.1nm,1.4s						
KKAR	**Karatay Array**	**28.02**	**322**	P	**P**	**23 16 11.8**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZAK	**Zakamensk**	**28.59**	**13**	*e*P	**P**	**23 16 16.2**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LWLI	**Liwa**	**29.35**	**159**	P	P	23 16 38.5	+15
MYLDM	**Lahad Datu**	**29.57**	**122**	P	**P**	**23 16 24.1**	**-1.2**
HRA	**Herat**	**29.92**	**300**	P	**P**	**23 16 28.3**	**-0.2**
KURBB	**Kurchatov Arra**	**30.28**	**341**	LR	LR	23 31 20.4	
	comp=Z,92nm,21.2s,baz=124,slow=42						
KURK	**Kurchatov**	**30.34**	**341**	P	**P**	**23 16 31.2**	**-0.5**
KURK	**Kurchatov**	**30.34**	**341**	⇑*e*P	**P**	**23 16 31.7**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OTUK	**Ortayu**	**30.66**	**331**	P	**P**	**23 16 34.0**	**-0.7**
ZAA0	**Zalesovo Array**	**31.90**	**350**	P	**P**	**23 16 45.4**	**-0.1**
ZAA0				IAmb	IAmb	23 16 47.6	
	comp=Z,14nm,1.2s						
ZALV	**Zalesovo Beam**	**31.90**	**350**	P	**P**	**23 16 46.2**	**+0.8**
	comp=Z,3.6nm,0.5s,baz=169,slow=7.4,SNR=23						
ZALV				LR	LR	23 31 16.5	
	comp=Z,83nm,20.5s,baz=186,slow=39						
	comp=Z,3.6nm,0.5s						
ZALV	**Zalesovo Beam**	**31.90**	**350**	P	**P**	**23 16 45.1**	**-0.4**
ZALV	**Zalesovo Beam**	**31.90**	**350**	*i* P	**P**	**23 16 46.2**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSRS	**Korea Array**	**32.78**	**56**	LR	LR	23 30 22.3	
	comp=Z,137nm,21.8s,baz=240,slow=37						
GEYT	**Alibeck**	**34.07**	**305**	LR	LR	23 33 02.1	
	comp=Z,193nm,21.8s,baz=129,slow=40						
GEYT	**Alibeck**	**34.07**	**305**	P	**P**	**23 17 06.1**	**+1.4**
GYA0B	**ALIBECK ARRAY**	**34.07**	**305**	P	**P**	**23 17 06.0**	**+1.3**
JNU	**Nakatsue**	**34.22**	**64**	LR	LR	23 32 58.2	
	comp=Z,264nm,18.5s,baz=264,slow=40						
XMIS	**Christmas Isla**	**35.00**	**159**	P	**P**	**23 17 12.2**	**-0.6**
BRVK	**Borovoye**	**35.18**	**335**	P	**P**	**23 17 13.8**	**-0.1**
BRVK	**Borovoye**	**35.18**	**335**	⇓*e*P	**P**	**23 17 14.7**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KAPI	**Kappang**	**37.48**	**134**	LR	LR	23 35 16.4	
	comp=Z,130nm,19.2s,baz=304,slow=40						
ABKAR	**Akbulak array**	**37.56**	**323**	P	**P**	**23 17 35.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**37.94**	**46**	LR	LR	23 35 48.1	
	comp=Z,343nm,18.0s,baz=246,slow=40						
BOD	**Bodaibo**	**37.98**	**17**	*e*P	**P**	**23 17 37.9**	**+0.1**
BOD				pmax	pmax		
	comp=Z,15nm,1.4s						
JWT	**Wachi**	**38.23**	**61**	P	**P**	**23 17 37.4**	**-2.8**
AKTO	**Aktyubinsk**	**39.24**	**324**	LR	LR	23 37 44.7	
	comp=Z,114nm,20.4s,baz=137,slow=42						
KLR	**Kul'dur**	**39.89**	**39**	LR	LR	23 36 19.4	
	comp=Z,136nm,19.7s,baz=236,slow=39						
MJAR	**Matsushiro Arr**	**40.65**	**60**	P	**P**	**23 17 58.3**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=296,slow=9.6,SNR=4.4						
MJAR				LR	LR	23 37 15.3	
	comp=Z,308nm,18.9s,baz=264,slow=40						
	comp=Z,0.9nm,0.3s						
JHJ	**Hachijo jima 2**	**41.66**	**65**	LR	LR	23 35 59.7	
	comp=Z,102nm,19.9s,baz=244,slow=37						
SVE	**Sverdlovsk**	**41.76**	**333**	⇑*e*P	**P**	**23 18 10.6**	**+1.4**
SVE				pmax	pmax		
	comp=Z,25nm,1.1s						
ARU	**Arti**	**42.40**	**332**	LR	LR	23 39 44.1	
	comp=Z,135nm,19.0s,baz=127,slow=42						
ARU	**Arti**	**42.40**	**332**	P	**P**	**23 18 14.3**	**0.0**
ARU	**Arti**	**42.40**	**332**	*c i*P	**P**	**23 18 15.0**	**+0.7**
ARU				*PP	**pP**	**23 18 26.0**	**-2.1**
ARU						23 19 53.0	
ARU						23 20 06.8	
ARU				S	**S**	**23 24 35.8**	**+3.6**
ARU				SS	**SS**	**23 27 41.0**	**-1.4**
ARU				pmax	pmax		
	comp=Z,21nm,1.6s						
ARU				MLR	MLR		
	comp=Z,136nm,19.0s						
SEKA	**Sheki**	**43.04**	**307**	P	**P**	**23 18 22.0**	**+2.1**
MNGR	**Mingechevir, A**	**43.04**	**306**	P	**P**	**23 18 22.1**	**+2.3**
GANJ	**Ganja**	**43.59**	**306**	P	**P**	**23 18 26.5**	**+2.2**
JCJ	**Chichijima**	**43.91**	**74**	LR	LR	23 37 02.6	
	comp=Z,71nm,21.8s,baz=155,slow=37						
BATI	**Baumata**	**43.92**	**135**	LR	LR	23 39 42.4	
	comp=Z,160nm,18.0s,baz=290,slow=40						
NAX	**Nakhchivan**	**44.01**	**303**	P	**P**	**23 18 30.0**	**+2.3**
RAYN	**Ar Rayn**	**44.24**	**281**	P	**P**	**23 18 29.9**	**+0.2**
RAYN	**Ar Rayn**	**44.24**	**281**	P	**P**	**23 18 29.9**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ASAJ	**Asahikawa**	**45.22**	**50**	LR	LR	23 39 30.2	
	comp=Z,92nm,18.3s,baz=206,slow=39						
AKH	**Akhalkalaki**	**45.82**	**306**	⇑P	**P**	**23 18 44.2**	**+2.0**
BELG	**Belogornoye**	**45.93**	**322**	*d i*P	**P**	**23 18 43.2**	**+0.6**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**45.97**	**46**	*e*P	P	23 18 51.0	+7.9
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
KARS	**Kars**	**46.03**	**305**	P	**P**	**23 18 43.2**	**-0.7**
KARS	**Kars**	**46.03**	**305**	P	**P**	**23 18 43.2**	**-0.7**
KARS				pmax	pmax		
	comp=Z,53nm,1.1s						
YAK	**Yakutsk**	**46.26**	**22**	LR	LR	23 40 36.5	
	comp=Z,212nm,20.4s,baz=268,slow=39						
KBZ	**Khabaz**	**46.61**	**309**	LR	LR	23 42 04.3	
	comp=Z,109nm,21.0s,baz=90,slow=41						
KBZ	**Khabaz**	**46.61**	**309**	⇓*e*P	**P**	**23 18 49.3**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GURO	**Guroymak-BITLI**	**46.63**	**302**	P	**P**	**23 18 49.9**	**+1.2**
NRIK	**Noril'sk**	**46.77**	**357**	P	**P**	**23 18 48.0**	**-1.0**
	comp=Z,3.5nm,0.5s,baz=163,slow=4.1,SNR=7.8						
	comp=Z,3.5nm,0.5s						
NRIK	**Noril'sk**	**46.77**	**357**	P	**P**	**23 18 48.7**	**-0.3**
NRIK				IAmb	IAmb	23 18 53.4	
	comp=Z,6.8nm,0.9s						
NRIK	**Noril'sk**	**46.77**	**357**	⇑*e*P	**P**	**23 18 49.8**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KVAR	**Kislovodsk Arr**	**46.80**	**310**	LR	LR	23 42 32.6	
	comp=Z,117nm,21.0s,baz=42,slow=41						
KIV	**Kislovodsk**	**46.80**	**310**	P	**P**	**23 18 50.6**	**+0.8**
KIV				IAmb	IAmb	23 18 52.8	
	comp=Z,11nm,1.0s						
KIV	**Kislovodsk**	**46.80**	**310**	*e*P	**P**	**23 18 51.3**	**+1.5**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,74nm,17.0s						
KIRV	**Kirov**	**47.70**	**330**	⇓*e*P	**P**	**23 18 56.8**	**+0.4**
VRH	**Novokhopyorsk**	**49.02**	**319**	*e*P	**P**	**23 19 06.6**	**-0.1**
VRH				pmax	pmax		
	comp=Z,40nm,1.4s						
GUMO	**Guam**	**49.19**	**91**	LR	LR	23 41 22.0	
	comp=Z,75nm,18.3s,baz=120,slow=38						
ATD	**Arta Tunnel**	**49.72**	**266**	LR	LR	23 39 26.2	
	comp=Z,91nm,21.1s,baz=82,slow=35						
ATD	**Arta Tunnel**	**49.72**	**266**	P	**P**	**23 19 13.3**	**+0.7**
ATD				IAmb	IAmb	23 19 30.5	
	comp=Z,11nm,1.1s						
VORD	**Divnogorie**	**50.45**	**318**	*e*P	**P**	**23 19 17.4**	**-0.1**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VSR	**Storozhevoye**	**50.58**	**318**	*e*P	**P**	**23 19 18.2**	**-0.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORR	**Voronezh**	**50.66**	**319**	*e*P	**P**	**23 19 19.9**	**+0.8**
VORR				pmax	pmax		
	comp=Z,21nm,0.4s						
PRGR	**Permogore**	**50.82**	**333**	*e*P	**P**	**23 19 19.5**	**-0.7**
ASF	**Jabal al Asfar**	**50.85**	**294**	LR	LR	23 44 55.8	
	comp=Z,196nm,20.4s,baz=115,slow=41						
LPSR	**Galich'ya Gora**	**51.05**	**320**	*e*P	**P**	**23 19 21.4**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KNRA	**Kununurra**	**51.28**	**135**	P	**P**	**23 19 24.2**	**0.0**
KNRA				IAmb	IAmb	23 19 26.1	
	comp=Z,11nm,0.7s						
BNN	**Bunyan**	**51.48**	**302**	P	**P**	**23 19 26.9**	**+1.2**
BNN				IAmb	IAmb	23 19 40.8	
	comp=Z,20nm,1.4s						
MOS	**Moscow**	**52.58**	**324**	*e*P	**P**	**23 19 33.2**	**-0.2**
MOS				pmax	pmax		
	comp=Z,48nm,1.4s						
TIXI	**Tiksi**	**52.86**	**13**	P	**P**	**23 19 34.7**	**-0.5**
TIXI				IAmb	IAmb	23 19 36.6	
	comp=Z,8.2nm,0.8s						
TIXI	**Tiksi**	**52.86**	**13**	P	**P**	**23 19 34.7**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BZK	**Bozkurt**	**52.95**	**306**	⇑P	**P**	**23 19 38.0**	**+1.7**
BZK	**Bozkurt**	**52.95**	**306**	P	**P**	**23 19 36.7**	**+0.4**
OBN	**Obninsk**	**53.01**	**323**	P	**P**	**23 19 36.8**	**+0.3**
OBN	**Obninsk**	**53.01**	**323**	⇓*e*P	**P**	**23 19 37.3**	**+0.8**
OBN				*e*		23 21 35.2	
OBN				pmax	pmax		
	comp=Z,32nm,1.2s						
OBN				MLR	MLR		
	comp=Z,115nm,20.0s						
ILGA	**Ilgaz**	**53.14**	**305**	P	**P**	**23 19 38.8**	**+0.7**
BR131	**Keskin Array S**	**53.20**	**303**	P	**P**	**23 19 38.5**	**+0.2**
BR131				IAmb	IAmb	23 19 41.0	
	comp=Z,8.2nm,1.1s						
BR131	**Keskin Array S**	**53.20**	**303**	P	**P**	**23 19 38.6**	**+0.2**
BR131				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BRTR	**Keskin Array B**	**53.20**	**303**	P	**P**	**23 19 39.1**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=122,slow=6.0,SNR=6.1						
	comp=Z,1.8nm,0.9s						
BRTR	**Keskin Array B**	**53.20**	**303**	P	**P**	**23 19 39.0**	**+0.6**
BRTR	**Keskin Array B**	**53.20**	**303**	*ce*P	**P**	**23 19 39.4**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KLMR	**Klimovskoe**	**53.20**	**330**	*e*P	**P**	**23 19 35.6**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
KLMR	**Klimovskoe**	**53.20**	**330**	*e*P	**P**	**23 19 35.7**	**-2.2**
KLMR				AMP		23 19 40.3	
	comp=Z,13nm,1.1s						
CSS	**Mathiatis**	**53.62**	**297**	P	**P**	**23 19 42.0**	**+0.5**
CSS				IAmb	IAmb	23 19 52.5	
	comp=Z,18nm,1.4s						
ANTO	**Ankara**	**53.85**	**304**	P	**P**	**23 19 43.4**	**+0.3**
ANTO				IAmb	IAmb	23 19 45.0	
	comp=Z,9.9nm,0.8s						
ANTO	**Ankara**	**53.85**	**304**	P	**P**	**23 19 43.4**	**+0.3**
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**54.08**	**32**	LR	LR	23 45 46.2	
	comp=Z,154nm,19.9s,baz=270,slow=39						
MDUB	**Mudurnu**	**55.06**	**304**	P	**P**	**23 19 52.6**	**+0.7**
SKR	**Severo-Kuril's**	**55.31**	**43**	*e*P	P	23 19 47.9	-5.5
SKR				*e*S	**S**	**23 27 26.6**	**-7.1**
SKR				*e*SS	**SS**	**23 31 22.4**	**+4.0**
SKR				*e*SSS	SSS	23 33 21.6	
SKR				MLR	MLR		
	comp=Z,200nm,19.0s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
BORA	**Eskisehir**	**55.65**	**304**	P	**P**	**23 19 56.3**	**+0.1**
BORA				IAmb	IAmb	23 19 57.6	
	comp=Z,10nm,0.9s						
SEY	**Seymchan**	**55.83**	**28**	LR	LR	23 46 47.3	
	comp=Z,444nm,20.1s,baz=254,slow=39						
PURM	**Purcari**	**56.06**	**312**	⇑P	**P**	**23 20 00.2**	**+1.3**
ELL	**Elmali**	**56.26**	**300**	P	**P**	**23 20 00.7**	**+0.1**
ELL	**Elmali**	**56.26**	**300**	P	**P**	**23 20 00.7**	**+0.1**
ELL				pmax	pmax		
	comp=Z,103nm,1.0s						
PETK	**Petropavlovsk-**	**56.55**	**40**	LR	LR	23 47 37.5	
	comp=Z,74nm,18.2s,baz=264,slow=40						
PETK	**Petropavlovsk-**	**56.55**	**40**	P	**P**	**23 20 01.6**	**-0.6**
PETK	**Petropavlovsk-**	**56.55**	**40**	P	**P**	**23 20 01.6**	**-0.6**
AKASG	**Malin Array Be**	**56.72**	**317**	P	**P**	**23 20 03.1**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=79,slow=6.8,SNR=19						
AKASG				LR	LR	23 50 23.3	
	comp=Z,84nm,18.2s,baz=65,slow=42						
	comp=Z,1.6nm,0.4s						
AKASG	**Malin Array Be**	**56.72**	**317**	P	**P**	**23 20 02.9**	**-0.5**
AKASG	**Malin Array Be**	**56.72**	**317**	*ce*P	**P**	**23 20 03.0**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	**Malin Array Si**	**56.72**	**317**	P	**P**	**23 20 03.2**	**-0.2**
AKBB				IAmb	IAmb	23 20 05.3	
	comp=Z,18nm,1.1s						
AKBB	**Malin Array Si**	**56.72**	**317**	*ce*P	**P**	**23 20 03.1**	**-0.4**
TLCR		**56.77**	**310**	⇑P	**P**	**23 20 04.8**	**+0.8**
MILM	**Milestii Mici**	**56.80**	**312**	⇑P	**P**	**23 20 04.7**	**+0.6**
PET	**Petropavlovsk**	**57.11**	**41**	*e*P	**P**	**23 20 03.8**	**-2.4**
PET				*e*S	**S**	**23 27 52.9**	**-4.6**
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
SORM	**Soroca**	**57.15**	**314**	⇑P	**P**	**23 20 07.1**	**+0.5**
CFR	**Carcaliu**	**57.26**	**310**	⇓P	**P**	**23 20 08.4**	**+1.1**
VLDR	**Vladesti**	**57.29**	**311**	⇑P	**P**	**23 20 09.4**	**+1.8**
HARR	**Harsova**	**57.40**	**309**	⇑P	**P**	**23 20 09.8**	**+1.4**
VARL	**Varlezi**	**57.46**	**311**	⇑P	**P**	**23 20 10.1**	**+1.4**
VASR	**Vaslui**	**57.50**	**312**	⇑P	**P**	**23 20 10.3**	**+1.3**
MNK	**Minsk**	**57.86**	**321**	*i* P	**P**	**23 20 12.1**	**+0.7**
MNK				*i*		23 22 20.7	
MNK				*i* PPP	PPP	23 23 38.8	
MNK				*i* S	**S**	**23 28 12.6**	**+5.3**
MNK				*i* SS	**SS**	**23 32 03.2**	**+4.8**
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.2s						
MNK				pmax	pmax		
	comp=Z,200nm,25.5s						
MNK				MLR	MLR		
	comp=E,14nm,15.0s						
MNK				MLR	MLR		
	comp=Z,119nm,15.0s						
MNK				MLR	MLR		
	comp=N,41nm,14.0s						
MNK	**Minsk**	**57.86**	**321**	*i* P	**P**	**23 20 12.1**	**+0.7**
	comp=E,3.0nm,1.2s						
MNK				*i* P	**P**	**23 20 12.1**	**+0.7**
	comp=N,5.0nm,0.8s						
MNK				*i* P	**P**	**23 20 12.1**	**+0.7**
	comp=Z,200nm,25.6s,baz=95						
MNK				*i* PP	**PP**	**23 22 20.7**	**+0.8**
MNK				*i* PPP	PPP	23 23 38.9	
MNK				*i* S	**S**	**23 28 12.7**	**+5.3**
MNK				*i* SS	**SS**	**23 32 03.2**	**+4.8**
MNK				*i* SSS	SSS	23 34 35.1	
MNK				*i* LQ	LQ	23 40 28.0	
MNK				*i* LR	LR	23 44 30.7	
MNK				*i* LRM	MLR	23 49 27.2	
	comp=E,14nm,15.3s						
MNK				*i* LRM	MLR	23 49 52.7	
	comp=Z,119nm,15.3s						
MNK				*i* LRM	MLR	23 49 57.8	
	comp=N,41nm,14.1s						
WRA	**Warramunga Arr**	**58.02**	**134**	P	**P**	**23 20 12.0**	**-1.1**
	comp=N,3.6nm,0.7s,baz=321,slow=7.4,SNR=29						
	comp=N,3.6nm,0.7s						
WRA	**Warramunga Arr**	**58.02**	**134**	P	**P**	**23 20 11.9**	**-1.1**
WRAB	**Tennant Creek**	**58.02**	**134**	P	**P**	**23 20 11.5**	**-1.5**
WRAB	**Tennant Creek**	**58.02**	**134**	P	**P**	**23 20 11.5**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,28nm,0.9s						
VRI	**Vrincioaia**	**58.24**	**311**	⇑P	**P**	**23 20 15.3**	**+1.0**
TESR	**Tescani**	**58.29**	**312**	⇑P	**P**	**23 20 15.2**	**+0.5**
PLOR	**Plostina**	**58.29**	**311**	⇑P	**P**	**23 20 16.5**	**+1.8**
RAZG	**Razgrad**	**58.46**	**308**	⇑P	**P**	**23 20 17.4**	**+1.6**
NACGM	**Naroch**	**58.53**	**321**	⇓*e*P	**P**	**23 20 16.9**	**+0.7**
KARP	**Karpathos**	**58.59**	**299**	P	**P**	**23 20 17.7**	**+0.8**
IDID	**Didziasalis**	**58.59**	**322**	*e*P	**P**	**23 20 17.6**	**+1.0**
COVR	**Voineasa-Covas**	**58.61**	**311**	⇑P	**P**	**23 20 18.4**	**+1.5**
BIZ	**Bicaz**	**58.66**	**312**	⇑P	**P**	**23 20 18.2**	**+1.0**
MLR	**Muntele Rosu**	**58.80**	**310**	⇑P	**P**	**23 20 19.6**	**+1.3**
MLR	**Muntele Rosu**	**58.80**	**310**	LR	LR	23 50 38.2	
	comp=Z,118nm,20.6s,baz=76,slow=41						
MLR	**Muntele Rosu**	**58.80**	**310**	P	**P**	**23 20 18.9**	**+0.6**
MLR	**Muntele Rosu**	**58.80**	**310**	P	**P**	**23 20 18.9**	**+0.6**
MLR				pmax	pmax		
	comp=Z,56nm,1.4s						
IIGN	**Ignalina**	**58.89**	**322**	*e*P	**P**	**23 20 19.7**	**+1.1**
VSU	**Vasula**	**58.93**	**326**	*de*P	**P**	**23 20 19.0**	**+0.2**
VSU				pmax	pmax		
	comp=Z,35nm,1.3s						
VSU	**Vasula**	**58.93**	**326**	*e*P	**P**	**23 20 18.7**	**-0.1**
ALN	**Alexandroupoli**	**58.95**	**305**	P	**P**	**23 20 18.7**	**-0.6**
ALN	**Alexandroupoli**	**58.95**	**305**	P	**P**	**23 20 18.7**	**-0.6**
ALN				pmax	pmax		
	comp=Z,21nm,1.2s						
DOPR	**Dopca**	**59.17**	**311**	⇑P	**P**	**23 20 22.3**	**+1.5**
BURAR	**Bucovina Array**	**59.26**	**313**	⇑P	**P**	**23 20 22.8**	**+1.3**
BURAR	**Bucovina Array**	**59.26**	**313**	P	**P**	**23 20 21.9**	**+0.4**
BURAR				IAmb	IAmb	23 20 23.4	
	comp=Z,8.7nm,1.3s						
BUR08	**Bucovina Ar. S**	**59.27**	**313**	P	**P**	**23 20 21.9**	**+0.4**
BUR08				IAmb	IAmb	23 20 23.2	

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      comp=Z,14nm,1.4s
RDO   Rodhopi          59.32 305   P      P      23 20 22.9 +1.1
COPA  Copaceanca       59.37 309 ⇑P      P      23 20 23.8 +1.7
VOIR                   59.43 310 ⇓P      P      23 20 23.5 +0.9
LODK  Lodwar           59.64 260   P      P      23 20 25.4 +0.9
LODK                               IAmb   IAmb   23 20 27.5
      comp=Z,12nm,1.2s
FINES FINESS Array B   59.65 329   P      P      23 20 23.8  0.0
      comp=Z,2.3nm,0.8s,baz=112,slow=6.4,SNR=11
FINES                              LR     LR     23 50 00.4
      comp=Z,123nm,19.9s,baz=106,slow=40
      comp=Z,2.3nm,0.8s
FINES FINESS Array B   59.65 329   P      P      23 20 24.4 +0.6
FINES FINESS Array B   59.65 329   P      P      23 20 24.4 +0.6
NWAO  Narrogin (SRO)   59.70 157   P      P      23 20 25.2 +0.7
NWAO                               IAmb   IAmb   23 20 26.2
      comp=Z,14nm,1.0s
NWAO  Narrogin (SRO)   59.70 157   P      P      23 20 25.2 +0.7
NWAO                               pmax   pmax
      comp=Z,14nm,1.0s
SANT  Santorini        59.86 300 ⇑P      P      23 20 26.4 +0.7
SANT  Santorini        59.86 300   P      P      23 20 25.4 -0.4
KMBO  Kilima Mbogo     59.89 255   LR     LR     23 45 17.3
      comp=Z,95nm,21.8s,baz=55,slow=35
LVV   L'vov            60.02 315  eP      P      23 20 26.5  0.0
PABE  Paberze          60.18 322   P      P      23 20 27.2 -0.3
PABE  Paberze          60.18 322  eP      P      23 20 28.0 +0.5
MEF   Metsahovi        60.32 327  eP      P      23 20 28.4  0.0
CJR   Cluj-Napoca      60.38 312 ⇑P      P      23 20 31.2 +2.0
AS31  Alice Springs    60.40 137   P      P      23 20 27.4 -2.1
ASAR  Alice Springs    60.40 137   P      P      23 20 29.3 -0.2
      comp=Z,6.3nm,0.7s,baz=319,slow=6.9,SNR=48
ASAR                               LR     LR     23 49 51.7
      comp=Z,52nm,19.6s,baz=301,slow=39
      comp=Z,6.3nm,0.7s
ASAR  Alice Springs    60.40 137   P      P      23 20 27.3 -2.2
ASAR  Alice Springs    60.40 137   P      P      23 20 27.3 -2.2
IDI   Anoyia           60.46 299 ⇑P      P      23 20 30.8 +0.9
IDI   Anoyia           60.46 299   P      P      23 20 29.2 -0.7
IDI                                IAmb   IAmb   23 20 32.8
      comp=Z,14nm,1.1s
MTSE  Matsula          60.48 326  eP      P      23 20 29.6 +0.2
SUW   Suwalki          60.58 320   P      P      23 20 29.3 -1.0
SUW   Suwalki          60.58 320   P      P      23 20 29.3 -1.0
SUW                                pmax   pmax
      comp=Z,49nm,1.1s
KWP   Kalwaria Pacla   60.88 315  eP      P      23 20 33.0 +0.5
KWP   Kalwaria Pacla   60.88 315   P      P      23 20 32.8 +0.3
KWP   Kalwaria Pacla   60.88 315   P      P      23 20 32.8 +0.3
KWP                                pmax   pmax
      comp=Z,386nm,1.3s
DEV   Deva             60.91 311 ⇑P      P      23 20 34.1 +1.5
VTS   Vitosha          60.91 307 ⇑P      P      23 20 33.8 +0.8
VTS   Vitosha          60.91 307   P      P      23 20 32.8 -0.1
VTS                                IAmb   IAmb   23 20 34.9
      comp=Z,9.7nm,1.1s
VTS   Vitosha          60.91 307   P      P      23 20 32.8 -0.1
VTS                                pmax   pmax
      comp=Z,10.0nm,1.1s
DRGR                   60.99 312 ⇑P      P      23 20 33.9 +0.6
ARA0  ARCESS Array S   61.32 338  eP      P      23 20 35.4 +0.3
ARCES ARCESS Array B   61.32 338   P      P      23 20 35.2 +0.1
      comp=Z,2.5nm,0.8s,baz=102,slow=7.1,SNR=13
ARCES                              LR     LR     23 50 00.1
      comp=Z,70nm,20.4s,baz=134,slow=39
      comp=Z,2.5nm,0.8s
ARCES ARCESS Array B   61.32 338   P      P      23 20 34.8 -0.3
ARCES                              IAmb   IAmb   23 20 51.2
      comp=Z,16nm,1.4s
ARCES ARCESS Array B   61.32 338   P      P      23 20 34.8 -0.3
ARCES                              pmax   pmax
      comp=Z,16nm,1.4s
PBUR  Paburge          61.35 323  eP      P      23 20 35.7 +0.2
ABPO  Ambohimpanom     61.56 231   P      P      23 20 37.9 +0.3
ABPO  Ambohimpanom     61.56 231   P      P      23 20 37.9 +0.3
ABPO                               pmax   pmax
      comp=Z,25nm,1.5s
RAF   Rauma            61.68 328  eP      P      23 20 37.2 -0.3
CRVS  Cervenica-Dubn   61.72 314  eP      P      23 20 40.0 +1.9
CRVS                               pmax   pmax
      comp=Z,31nm,1.5s
CRVS  Cervenica-Dubn   61.72 314  eP      P      23 20 40.0 +1.9
LIT   Litokhoron       61.73 304   P      P      23 20 38.6 +0.2
LIT                                IAmb   IAmb   23 20 39.2
      comp=Z,14nm,1.0s
LIT   Litokhoron       61.73 304   P      P      23 20 38.6 +0.2
LIT                                pmax   pmax
      comp=Z,14nm,1.0s
SIRR  Siria            61.75 311 ⇑P      P      23 20 39.5 +1.2
MDVR  Moldovita        61.83 310 ⇑P      P      23 20 40.8 +1.8
BZS   Buzias           61.83 311 ⇑P      P      23 20 38.1 -0.8
AGG   Agios Georgios   61.98 303   P      P      23 20 38.7 -1.4
AGG   Agios Georgios   61.98 303   P      P      23 20 38.7 -1.4
KTK1  Kautokeino       62.02 337  eP      P      23 20 40.3 +0.6
HAMF  Hammerfest       62.16 339  eP      P      23 20 41.3 +0.7
FNA   Florina          62.49 305   P      P      23 20 43.5 +0.1
FNA                                IAmb   IAmb   23 20 44.1
      comp=Z,11nm,0.9s
FNA   Florina          62.49 305   P      P      23 20 43.6 +0.1
FNA                                pmax   pmax
      comp=Z,11nm,0.9s
FORT  Forrest          62.55 147   P      P      23 20 43.7  0.0
ITM   Ithomi           62.56 301   P      P      23 20 43.5 -0.5
ITM                                IAmb   IAmb   23 20 59.7
      comp=Z,18nm,1.2s
BILL  Bilibino         62.58  24  i P     P      23 20 39.4 -4.1
BILL                              i              23 20 52.0
BILL                              i              23 23 01.2
BILL                               pmax   pmax
      comp=Z,4.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,96nm,20.0s
PSZ   Piszkesteto      62.83 313   P      P      23 20 45.7 +0.1
JETT  Jettan, Norway   63.09 338  eP      P      23 20 47.4 +0.4
DIVS  Divibare         63.12 309   P      P      23 20 48.8 +1.1
DIVS                               IAmb   IAmb   23 20 50.8
      comp=Z,21nm,1.5s
TRO   Tromso           63.62 338  eP      P      23 20 50.9 +0.5
UPP   Uppsala          63.69 327  eP      P      23 20 51.1 +0.2
OKC   Ostrava-Krasne   63.82 316  eP      P      23 20 52.8 +0.7
OKC   Ostrava-Krasne   63.82 316  eP      P      23 20 52.8 +0.7
SRO2  Moca             63.85 313  eP      P      23 20 52.4 +0.2
SRO2                               pmax   pmax
      comp=Z,15nm,0.8s
SRO2  Moca             63.85 313  eP      P      23 20 52.4 +0.2
PDG   Podgorica        63.85 307   P      P      23 20 52.5 +0.1
SRO   Srobarova        63.90 313  eP      P      23 20 53.6 +1.0
SRO                                pmax   pmax
      comp=Z,17nm,1.3s
SRO   Srobarova        63.90 313  eP      P      23 20 53.6 +1.0
MAUC  Maruska          64.07 315  eP      P      23 20 54.8 +1.0
VIKU  Vikbolandet      64.19 325  eP      P      23 20 55.1 +0.8
MORC  Moravsky Berou   64.22 316 ⇑P      P      23 20 56.2 +1.4
MORC  Moravsky Berou   64.22 316   P      P      23 20 55.0 +0.2
MORC                               IAmb   IAmb   23 20 56.6
      comp=Z,11nm,1.2s
MORC  Moravsky Berou   64.22 316   P      P      23 20 55.0 +0.2
MORC                               pmax   pmax
      comp=Z,11nm,1.2s
MORC  Moravsky Berou   64.22 316  eP      P      23 20 55.4 +0.7
JAVC  Velka Javorina   64.22 315  eP      P      23 20 56.1 +1.3
MODS  Modra-Piesok     64.53 314  eP      P      23 20 57.9 +1.1
MODS  Modra-Piesok     64.53 314  eP      P      23 20 57.9 +1.1
KRLC  Kraliky          64.68 316  eP      P      23 20 57.9 +0.1
KRLC  Kraliky          64.68 316  eP      P      23 20 57.9 +0.1
FAUS  Fauske           64.81 335  eP      P      23 20 58.7 +0.5
STEI  Steigen          64.85 336  eP      P      23 20 58.0 -0.4
VRAC  Vranov           64.88 315 ⇑P      P      23 21 00.2 +1.2
VRAC  Vranov           64.88 315   LR     LR     23 54 11.9
      comp=Z,37nm,19.6s,baz=81,slow=41
VRAC  Vranov           64.88 315  eP      P      23 20 59.8 +0.8
KSP   Ksiaz            64.92 317  eP      P      23 20 60.0 +0.8
DPC   Dobruska-Polom   64.95 316  eP      P      23 21 00.4 +0.9
DPC   Dobruska-Polom   64.95 316  eP      P      23 21 00.4 +0.9
OSTC  Ostas            64.99 317  eP      P      23 21 00.5 +0.8
KRUC  Moravsky         65.04 315  eP      P      23 21 00.4 +0.4
CHVC  Chvalec          65.09 317  eP      P      23 21 01.0 +0.6
UPC   Upice            65.13 317  eP      P      23 21 01.1 +0.5
UPC   Upice            65.13 317  eP      P      23 21 01.1 +0.5
MOR8  Moi Rana         65.14 334  eP      P      23 21 00.1 -0.3
RONA  Rosalia, Austr   65.26 313  eP      P      23 21 02.1 +0.5
SPB2  Spitsbergen Ar   65.32 347   P      P      23 21 02.5 +1.0
SPA0  Spitsbergen Ar   65.33 347  eP      P      23 21 01.6 +0.1
SPITS Spitsbergen Ar   65.33 347   LR     LR     23 53 33.1
      comp=Z,66nm,18.6s,baz=178,slow=40
SPITS Spitsbergen Ar   65.33 347   P      P      23 21 02.6 +1.2
LOF   Lofoten          65.49 336  eP      P      23 21 02.5  0.0
MBAR  Mbarara          65.51 258   LR     LR     23 49 21.0
      comp=Z,149nm,21.2s,baz=65,slow=36
MBAR  Mbarara          65.51 258ceP      P      23 21 06.4 +2.6
MBAR                               pmax   pmax
      comp=Z,16nm,1.7s
TREC  Trest            65.60 315  eP      P      23 21 05.1 +1.4
TREC  Trest            65.60 315  eP      P      23 21 05.1 +1.4
HFS   Hagfors          65.66 327   LR     LR     23 52 47.5
      comp=Z,125nm,18.1s,baz=86,slow=39
DEL   Delary           65.83 323  eP      P      23 21 05.2 +0.2
ARSA  Arzberg          65.84 313  eP      P      23 21 06.0 +0.7
      comp=Z,3.1nm,0.7s
PRU   Pruhonice        66.13 316  eP      P      23 21 07.7 +0.7
PRU   Pruhonice        66.13 316  eP      P      23 21 07.7 +0.7
NSS   Namsos           66.22 332  eP      P      23 21 08.3 +1.0
TIP   Timpagrande      66.24 304   P      P      23 21 08.4 +0.3
SOKA  Soboth           66.25 312  i P     P      23 21 08.8 +0.8
      comp=Z,3.6nm,0.7s,SNR=4.5
BRG   Berggiesshubel   66.39 317  eP      P      23 21 09.3 +0.6
BRG                                Amp           23 21 11.3
      comp=Z,12nm,1.2s
BRG                               ex      x      23 21 20.3
BRG                                Amp           23 21 23.3
      comp=Z,5.8nm,1.2s
BRG   Berggiesshubel   66.39 317  eP      P      23 21 09.3 +0.6
BRG                               e              23 21 20.2
BRG                                pmax   pmax
      comp=Z,12nm,1.2s
BRG                                pmax   pmax
      comp=Z,6.0nm,1.3s
CKRC  Cesky Krumlov    66.43 315  eP      P      23 21 10.0 +0.9
SHEM  Shemya Is, Ala   66.46  41   LR     LR     23 52 41.8
      comp=Z,45nm,19.8s,baz=134,slow=38
NC405 NORSAR Array S   66.56 328   P      P      23 21 10.5 +0.9
NC405                              IAmb   IAmb   23 21 11.9
      comp=Z,18nm,1.4s
MOA   Molln            66.60 314  eP      P      23 21 10.9 +0.7
      comp=Z,13nm,1.4s
NC602 NORSAR Array S   66.68 328   P      P      23 21 09.2 -1.1
NC602                              IAmb   IAmb   23 21 11.1
      comp=Z,20nm,1.1s
NB2   NORSAR Subarra   66.81 328   P      P      23 21 10.5 -0.8
      comp=Z,10nm,1.2s,baz=86,slow=6.2
NB2   NORSAR Subarra   66.81 328   P      P      23 21 10.5 -0.8
      baz=86,slow=6.2
NOA   NORSAR Array B   66.81 328   P      P      23 21 09.6 -1.6
      comp=Z,4.0nm,1.1s,baz=86,slow=6.4,SNR=5.5
NOA                                LR     LR     23 54 00.3
      comp=Z,74nm,19.3s,baz=100,slow=39
      comp=Z,4.0nm,1.1s
GEC2  GERESS Array S   66.83 315   P      P      23 21 11.6 -0.1
GEC2                               IAmb   IAmb   23 21 13.3
      comp=Z,25nm,1.4s
GERES GERESS Array B   66.83 315   P      P      23 21 12.4 +0.7
      comp=Z,4.6nm,0.6s,baz=74,slow=7.1,SNR=52
GERES                              LR     LR     23 54 25.8
      comp=Z,43nm,18.6s,baz=72,slow=40
      comp=Z,4.6nm,0.6s
KHC   Kasperske Hory   66.86 315   P      P      23 21 12.0 +0.2
KHC                                IAmb   IAmb   23 21 13.5
      comp=Z,10nm,1.4s
KHC   Kasperske Hory   66.86 315ceP      P      23 21 12.3 +0.5
KHC                                pmax   pmax
      comp=Z,12nm,1.2s
KHC   Kasperske Hory   66.86 315  eP      P      23 21 11.3 -0.5
CLL   Collm            66.92 318   P      P      23 21 12.0  0.0
CLL                                IAmb   IAmb   23 21 13.5
      comp=Z,13nm,1.4s
CLL   Collm            66.92 318⇓iP      P      23 21 12.7 +0.6
CLL                                pmax   pmax
      comp=Z,15nm,1.5s
CLL   Collm            66.92 318⇓iP      P      23 21 12.7 +0.6
      comp=Z,15nm,1.5s
BIOA  Bad Ischl, Aus   67.04 314  eP      P      23 21 13.3 +0.3
CEL   Celeste          67.08 303   P      P      23 21 13.8 +0.4
KBA   Koelnbreinsper   67.34 313  eP      P      23 21 15.2 +0.1
      comp=Z,3.3nm,0.7s
NKC   Novy Kostel      67.43 317  eP      P      23 21 16.5 +1.2
NKC   Novy Kostel      67.43 317  eP      P      23 21 16.5 +1.2
STAL  STALIGIAL        67.91 312   IAmb   IAmb   23 21 20.4
      comp=Z,16nm,1.0s
ABTA  Abfaltersbach    67.95 313  eP      P      23 21 18.6 -0.2
      comp=Z,12nm,1.3s
NRCA  Norcia           68.26 309   P      P      23 21 21.3 +0.5
GRA1  Grafenberg Arr   68.30 316   P      P      23 21 21.1 +0.3
GRF   Grafenberg Arr   68.30 316   P      P      23 21 21.1 +0.3
GRF                                pmax   pmax
      comp=Z,36nm,1.4s
GRFO  Grafenberg       68.30 316   P      P      23 21 20.7 -0.1
GRFO  Grafenberg       68.30 316   P      P      23 21 20.7 -0.1
GRFO                               pmax   pmax
      comp=Z,33nm,1.4s
BBOO  Buckleboo        68.40 142   P      P      23 21 20.7 -0.9
BBOO                               IAmb   IAmb   23 21 24.1
      comp=Z,11nm,1.0s
WTTA  Wattenberg       68.45 314  eP      P      23 21 22.1  0.0
      comp=Z,12nm,1.1s
WATA  Walderalm        68.48 314  eP      P      23 21 22.0 -0.1
      comp=Z,6.0nm,0.9s
HOMB  Homborsund       68.51 326  eP      P      23 21 23.4 +1.5
SQTA  Sankt Quirin     68.75 314  i P     P      23 21 23.1 -0.7
      comp=Z,14nm,1.2s,SNR=5.1
MOTA  Moosalm          68.79 314  i P     P      23 21 24.1 -0.1
      comp=Z,7.6nm,0.9s,SNR=5.0
RETA  Reutte           69.00 314  eP      P      23 21 25.5 +0.2
      comp=Z,4.9nm,0.6s
FETA  Feichten         69.11 313  i P     P      23 21 26.2 +0.1
      comp=Z,12nm,1.4s,SNR=4.6
SALO  Salr             69.53 312   P      P      23 21 28.4 -0.2
DAVA  Damuels          69.62 314  eP      P      23 21 29.5 +0.2
      comp=Z,15nm,1.0s
DAVOX Davos/Dischmat   69.73 313   LR     LR     23 56 01.1
      comp=Z,47nm,18.1s,baz=79,slow=39
BER   Bergen           69.76 328  eP      P      23 21 30.4 +0.8
TUE   Stuetta          70.15 313   P      P      23 21 32.4 -0.2
TUE                                IAmb   IAmb   23 21 44.8
      comp=Z,8.8nm,0.9s
STKA  Stephens Creek   71.00 138   P      P      23 21 38.5 +1.0
      comp=Z,2.6nm,0.5s,baz=262,slow=8.3,SNR=5.6
STKA                               LR     LR     23 58 56.3
      comp=Z,78nm,20.0s,baz=25,slow=41
      comp=Z,2.6nm,0.5s
STKA  Stephens Creek   71.00 138   P      P      23 21 37.3 -0.3
STKA  Stephens Creek   71.00 138   P      P      23 21 37.3 -0.3
STKA                               pmax   pmax
      comp=Z,4.0nm,1.5s
ECH   Echery           71.22 315   P      P      23 21 39.2 +0.4
ECH   Echery           71.22 315   P      P      23 21 39.2 +0.4
ECH                                pmax   pmax
      comp=Z,6.0nm,1.1s
BTNL  Ternell          71.33 318  dP      P      23 21 39.7 +0.2
      comp=Z,5.4nm,0.9s
WLF   Walferdange      71.53 317   P      P      23 21 41.6 +1.0
WLF   Walferdange      71.53 317   P      P      23 21 41.6 +1.0
WLF                                pmax   pmax
      comp=Z,33nm,1.2s
SENIN Lac Senin/Sane   71.55 313   P      P      23 21 41.4 +0.3
JMIC  Jan Mayen        72.63 340   LR     LR     23 58 29.1
      comp=Z,28nm,18.8s,baz=72,slow=40
KEST  Kesra            72.77 302   P      P      23 21 48.6 +0.2
      comp=Z,18nm,1.1s,baz=69,slow=2.9,SNR=7.1
      comp=Z,18nm,1.1s
KEST  Kesra            72.77 302   P      P      23 21 48.8 +0.4
LSZ   Lusaka           74.48 246   LR     LR     23 51 53.2
      comp=Z,96nm,21.8s,baz=66,slow=34
LSZ   Lusaka           74.48 246   P      P      23 21 59.0 +0.3
LSZ                                IAmb   IAmb   23 22 01.2
      comp=Z,15nm,1.1s
LSZ   Lusaka           74.48 246   P      P      23 21 59.0 +0.3
LSZ                                pmax   pmax
      comp=Z,15nm,1.1s
EKA   Eskdalemuir Ar   75.43 324   LR     LR     00 01 16.1
      comp=Z,49nm,18.9s,baz=61,slow=40
EUNU  Eureka           77.42   0   P      P      23 22 15.3 +0.9
EUNU                               IAmb   IAmb   23 22 26.2
      comp=Z,18nm,1.2s
IMAR  Indian Mountai   78.11  23   P      P      23 22 17.8 -0.5
TOLK  Toolik Lake Re   78.12  20   P      P      23 22 18.3 -0.2
TOLK                               IAmb   IAmb   23 22 29.8
      comp=Z,8.0nm,1.1s
H21K  Melozitna Rive   78.61  23   P      P      23 22 20.9 -0.2
H21K                               IAmb   IAmb   23 22 33.0
      comp=Z,13nm,1.4s
J20K  Nowinta River    78.85  24   P      P      23 22 23.3 +0.9
I21K  Tanana           79.15  23   P      P      23 22 25.4 +1.3
K20K  Telida           79.28  25   P      P      23 22 26.2 +1.3
L19K  White Mountain   79.54  26   P      P      23 22 26.6 +0.3
L19K                               IAmb   IAmb   23 22 37.6
      comp=Z,11nm,1.3s
H23K  Yukon River      79.67  22   P      P      23 22 28.2 +1.3
BORG  Borgarnes        79.69 337   LR     LR     23 59 49.4
      comp=Z,32nm,19.2s,baz=37,slow=37
N18K  Kilae Creek      79.83  28   P      P      23 22 28.5 +0.6
N18K                               IAmb   IAmb   23 22 33.7
      comp=Z,12nm,1.4s
M19K  Big River Lodg   79.87  27   P      P      23 22 28.4 +0.3
BPAW  Bear Paw Mtn.    80.08  24   P      P      23 22 30.1 +1.0
SDPT  Sand Point       80.08  34   P      P      23 22 29.9 +0.7
CART  Cartagena        80.08 307   P      P      23 22 29.1 -0.6
I23K  Minto, Yukon-K   80.10  23   P      P      23 22 30.4 +1.2
H24K  Noodor Dome      80.23  22   P      P      23 22 31.0 +1.0
PPLA  Purkeypile       80.25  25   P      P      23 22 30.5 +0.2
PPLA                               IAmb   IAmb   23 22 41.9
      comp=Z,17nm,1.5s
BMAR  Burnt Mountain   80.36  19   P      P      23 22 31.0 +0.3
N19K  Bonanza Creek    80.37  28   P      P      23 22 31.1 +0.2
M20K  Styx River       80.40  26   P      P      23 22 31.3 +0.3
NEA2  Nenana           80.51  23   P      P      23 22 30.5 -1.0
MDM   Murphy Dome      80.60  22   P      P      23 22 32.0  0.0
MDM                                IAmb   IAmb   23 22 43.6
      comp=Z,13nm,1.1s
COLA  College          80.79  22⇓eP      P      23 22 33.7 +0.8
COLA                               pmax   pmax
      comp=Z,2.0nm,0.8s
IL31                   81.18  22   P      P      23 22 35.1 +0.1
ILAR  Eielson Array    81.18  22   P      P      23 22 34.0 -1.1
      comp=Z,1.2nm,0.7s,baz=280,slow=4.9,SNR=12
ILAR                               PP     PP     23 25 39.5 -0.7
      comp=Z,0.9nm,1.1s,baz=306,slow=8.0,SNR=4.5
ILAR                               LR     LR     00 03 03.4
      comp=Z,110nm,19.3s,baz=279,slow=39
      comp=Z,1.2nm,0.7s
ILAR  Eielson Array    81.18  22   P      P      23 22 34.6 -0.4
ILAR  Eielson Array    81.18  22   P      P      23 22 34.6 -0.4
RND   Reindeer         81.25  24   P      P      23 22 35.4 -0.1
RND                                IAmb   IAmb   23 22 36.8
      comp=Z,13nm,1.5s
RND   Reindeer         81.25  24   P      P      23 22 35.4 -0.1
RND                                pmax   pmax
      comp=Z,13nm,1.5s
LBTB  Lobatse          81.39 238   LR     LR     23 56 52.3
      comp=Z,107nm,20.6s,baz=64,slow=34
ESBB  Sonseca Array    81.47 309   P      P      23 22 37.0 -0.1
ESBB                               IAmb   IAmb   23 22 39.7
      comp=Z,12nm,1.4s
ESDC  Sonseca Array    81.47 309   P      P      23 22 37.8 +0.6
      comp=Z,5.0nm,1.2s,baz=57,slow=5.2,SNR=14
ESDC                               LR     LR     00 05 17.5
      comp=Z,33nm,18.9s,baz=44,slow=40
      comp=Z,5.0nm,1.2s
Q19K  Cape Douglas,    81.68  29   P      P      23 22 37.7 -0.1
Q19K                               IAmb   IAmb   23 22 56.0
      comp=Z,24nm,1.2s
A36M  Sachs Harbour    81.84  11   P      P      23 22 40.2 +1.9
A36M                               IAmb   IAmb   23 22 41.7
      comp=Z,14nm,0.7s
DHY   Denali Highway   81.99  24   P      P      23 22 40.5 +0.9
SML   Sawmill          82.36  25   P      P      23 22 42.5 +1.2
SML                                IAmb   IAmb   23 22 52.3
      comp=Z,8.9nm,1.0s
BRLK  Bradley Lake     82.45  27   P      P      23 22 41.7 -0.1
BRLK                               IAmb   IAmb   23 22 43.6
      comp=Z,8.0nm,0.5s
RIDG  Independent Ri   82.52  23   P      P      23 22 42.1 -0.1
RIDG                               IAmb   IAmb   23 22 45.4
      comp=Z,5.7nm,0.9s
RES   Resolute Bay     82.66   2   LR     LR     00 02 26.8
      comp=Z,37nm,19.5s,baz=117,slow=38
RES   Resolute Bay     82.66   2   P      P      23 22 42.9 +0.3
RES                                IAmb   IAmb   23 22 44.7
      comp=Z,11nm,1.3s
RES   Resolute Bay     82.66   2   P      P      23 22 42.9 +0.3
RES                                pmax   pmax
      comp=Z,11nm,1.3s
SCRK  Sand Creek       82.67  22   P      P      23 22 43.0 -0.1
SCRK                               IAmb   IAmb   23 22 53.9
      comp=Z,12nm,1.4s
SCM   Sheep Creek Mo   82.73  25   P      P      23 22 44.9 +1.6
SCM                                IAmb   IAmb   23 23 03.2
      comp=Z,6.0nm,0.9s
SCM   Sheep Creek Mo   82.73  25   P      P      23 22 44.9 +1.6
SCM                                pmax   pmax
      comp=Z,6.0nm,0.9s
KDAK  Kodiak Island    82.75  30   LR     LR     00 03 47.2
      comp=Z,115nm,19.0s,baz=322,slow=39
KDAK  Kodiak Island    82.75  30   P      P      23 22 43.0 -0.4
KDAK  Kodiak Island    82.75  30   P      P      23 22 43.0 -0.4
KDAK                               pmax   pmax
      comp=Z,27nm,1.4s
INK   Inuvik           82.88  16   LR     LR     00 04 52.2
      comp=Z,65nm,21.5s,baz=231,slow=40
INK   Inuvik           82.88  16   P      P      23 22 44.5 +0.6
INK                                IAmb   IAmb   23 22 55.6
      comp=Z,12nm,1.5s
INK   Inuvik           82.88  16   P      P      23 22 44.5 +0.6
INK                                pmax   pmax
      comp=Z,12nm,1.5s
M24K  Tolsona, Glenn   83.01  24   P      P      23 22 45.9 +1.2
M24K                               IAmb   IAmb   23 22 57.4
      comp=Z,9.7nm,0.9s
MVO   Moncorvo         83.04 312  eP      P      23 22 47.7 +2.4
K27K  Chicken          83.29  22   IAmb   IAmb   23 22 57.9
      comp=Z,9.0nm,1.2s
GLI   Glacier Island   83.38  25   P      P      23 22 47.3 +0.7
BOSA  Boshof           83.45 235   P      P      23 22 48.6 +1.0
      comp=Z,8.0nm,0.9s,baz=71,slow=3.3,SNR=9.7
BOSA                               LR     LR     23 57 07.5
      comp=Z,56nm,21.9s,baz=12,slow=34
      comp=Z,8.0nm,0.9s
BOSA  Boshof           83.45 235   P      P      23 22 48.9 +1.3
BOSA                               IAmb   IAmb   23 22 50.3
      comp=Z,15nm,1.1s
BOSA  Boshof           83.45 235   P      P      23 22 48.9 +1.3
BOSA                               pmax   pmax
      comp=Z,15nm,1.1s
KLU   Klutina          83.47  25   P      P      23 22 48.0 +0.8
KLU                                IAmb   IAmb   23 22 50.6
      comp=Z,7.9nm,0.6s
FID   Port Fidalgo     83.70  25   P      P      23 22 48.9 +0.6
FID                                IAmb   IAmb   23 23 06.9
      comp=Z,14nm,1.2s
MTE   Manteigas        83.71 311  eP      P      23 22 51.7 +2.9
MTE   Manteigas        83.71 311   P      P      23 22 49.5 +0.7
HIN   Hinchinbrook I   83.90  26   P      P      23 22 50.5 +1.2
HIN                                IAmb   IAmb   23 23 01.0
      comp=Z,13nm,0.9s
N25K  Chitina, Valde   83.91  24   P      P      23 22 50.4 +1.0
N25K                               IAmb   IAmb   23 22 53.2
      comp=Z,6.4nm,0.8s
L27K  Beaver Creek,    84.00  22   P      P      23 22 50.3 +0.5
L27K                               IAmb   IAmb   23 23 02.4
      comp=Z,6.7nm,1.2s
PMRV  Marv??o          84.00 310  eP      P      23 22 51.4 +1.1
M26K  Nabesna, AK      84.01  23   P      P      23 22 50.1 +0.2
M26K                               IAmb   IAmb   23 22 57.6
      comp=Z,6.7nm,1.1s
BCAR  Beaver Creek A   84.01  22   P      P      23 22 49.6 -0.3
PBAR  Barrancos        84.27 309  eP      P      23 22 52.7 +1.1
BMRM  Bremner River    84.30  25   P      P      23 22 51.3 -0.1
GLB   Gilahina Butte   84.31  24   P      P      23 22 51.8 +0.3
GLB                                IAmb   IAmb   23 23 03.4
      comp=Z,10nm,1.3s
M27K  Edge Creek, AK   84.44  23   P      P      23 22 52.3 +0.1
M27K                               IAmb   IAmb   23 22 59.7
      comp=Z,5.6nm,0.9s
VRDI  Verde Repeater   84.58  24   P      P      23 22 53.2 +0.3
VRDI                               IAmb   IAmb   23 23 03.7
      comp=Z,6.5nm,1.1s
MCARA McCarthy VSAT    84.64  24   P      P      23 22 52.9 -0.2
MCARA                              IAmb   IAmb   23 22 56.5
      comp=Z,15nm,1.2s
PVAQ  Vaqueiros        85.08 308  eP      P      23 22 57.2 +1.5
MESJ  Messejana        85.25 309  eP      P      23 22 59.3 +2.7
TSUM  Tsumeb           85.26 247   LR     LR     23 59 18.4
      comp=Z,83nm,21.8s,baz=4.5,slow=34
PBDV  Barranco-do-Ve   85.30 308  eP      P      23 22 58.7 +1.9
PNCL  Nicolau / Gran   85.36 309  eP      P      23 22 58.4 +1.3
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ISLE	Juniper Island	85.40	24	P	P	23 22 56.9	-0.1
ISLE				IAmb	IAmb	23 23 07.0	
	comp=Z,7.3nm,0.8s						
SFJD	Kangerlussuaq	86.66	347	LR	LR	00 06 02.8	
	comp=Z,42nm,20.6s,baz=9.5,slow=39						
TOA0	Torodi Ar. Sit	86.90	283	P	P	23 23 05.2	+0.1
TOA0				IAmb	IAmb	23 23 07.5	
	comp=Z,7.7nm,1.1s						
TORD	Torodi Ar. Bea	86.90	283	P	P	23 23 06.0	+1.0
	comp=Z,3.9nm,0.9s,baz=58,slow=4.8,SNR=18						
	comp=Z,3.9nm,0.9s						
TORD	Torodi Ar. Bea	86.90	283	P	P	23 23 04.8	-0.3
TORD				IAmb	IAmb	23 23 07.6	
	comp=Z,7.2nm,1.1s						
N31M	Braeburn, Yuko	87.15	21	P	P	23 23 07.3	+1.8
N31M				IAmb	IAmb	23 23 08.7	
	comp=Z,4.6nm,0.8s						
SUR	Sutherland	88.62	234	LR	LR	23 57 45.0	
	comp=Z,157nm,21.0s,baz=82,slow=32						
DLBC	Dease Lake	91.36	21	LR	LR	00 09 52.8	
	comp=Z,127nm,18.7s,baz=283,slow=39						
YKA	Yellowknife Ar	92.11	13	P	P	23 23 28.6	0.0
	comp=Z,0.9nm,0.7s,baz=326,slow=4.0,SNR=6.8						
YKA				LR	LR	00 10 02.0	
	comp=Z,33nm,19.3s,baz=293,slow=39						
	comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	92.11	13	*ce*P	P	23 23 29.5	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FRB	Frobisher Bay	92.70	352	LR	LR	00 10 17.4	
	comp=Z,29nm,18.7s,baz=17,slow=39						
MAW	Mawson	92.94	191	LR	LR	00 00 06.8	
	comp=Z,34nm,18.9s,baz=329,slow=32						
DBIC	Dimbokro	95.36	279	LR	LR	00 12 07.0	
	comp=Z,41nm,18.2s,baz=96,slow=39						
TXAR	Lajitas Array	125.58	19	PKP	PKPdf	23 29 20.5	-0.9
	comp=Z,0.2nm,0.6s,baz=5.7,slow=3.6,SNR=3.8						
CPUP	Villa Florida	153.50	256	PKPbc	PKPbc	23 30 17.1	-1.4
	comp=Z,2.2nm,0.6s,baz=47,slow=3.1,SNR=6.7						

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*NEIC **19** 23:16:45.3±2.0, 19.°84S±0.°09×175.°38W±0.°08, h127^{km}±5^{km}, mb4.4/40, Error ellipse: s-maj=12.9km s-min=10.8km az=174.0*

*NOU **19** 23:16:49.2, 19.°94S×175.°02W, h168^{km}, MLv4.8/7, Tonga Islands*

*IDC **19** 23:17:06.7±17.0, 19.°35S×176.°46W, h294^{km}±135^{km}, mb3.4/3, mbtmp4.2/4, Error ellipse: s-maj=144.5km s-min=64.9km az=130.0*

ISC 19 23:16:42.6±0.5**, 19.°89S**±0.°08×**175.°37W**±0.°07**, h100**^{km}**, n53,** σ**1.^{s}84**/54**, mb4.5**/17**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.20	82	Pn	Pn	23 18 01.2	+3.2
NIUE				Sn	Sn	23 18 55.5	-1.2
NIUE	Niue	5.20	82	P	Pn	23 18 01.5	+3.5
AFI	Afiamalu	6.87	31	Pn	Pn	23 18 24.2	+3.4
AFI				Sn	Sn	23 19 36.3	-1.2
AFI	Afiamalu	6.87	31	P	Pn	23 18 25.9	+5.1
MARNC	Mare, Loyalty	15.61	261	Pn	Pn	23 20 16.9	-0.1
PINNC	Pines Island,	16.25	257		Pn	23 20 25.9	+1.0
PINNC				IAmb	IAmb	23 20 28.2	
	comp=Z,16nm,1.0s						
LIFNC	LIFOU	16.33	264		Pn	23 20 26.6	+0.6
LIFNC				IAmb	IAmb	23 20 45.0	
	comp=Z,24nm,0.8s						
YATNC	Mamie plateau,	16.71	259	P	P	23 20 36.7	+5.4
OUENC	Ouen Island, N	16.78	258		Pn	23 20 32.3	+0.7
DZM	Mont Dzumac	17.12	260	P	P	23 20 39.2	+3.2
	comp=Z,8.0nm,0.6s,baz=75,slow=19,SNR=11						
DZM	Mont Dzumac	17.12	260	P	Pn	23 20 36.2	+0.4
DZM	Mont Dzumac	17.12	260	P	P	23 20 41.3	+5.3
ONTNC	Ouen Toro	17.13	259	P	Pn	23 20 35.9	+0.1
ONTNC				IAmb	IAmb	23 20 54.2	
	comp=Z,22nm,1.1s						
SANVU	Saraoutou	17.18	282	P	Pn	23 20 36.4	-0.1
SANVU				IAmb	IAmb	23 20 45.1	
	comp=Z,41nm,1.1s						
KNTN	Kanton	17.38	12	P	P	23 20 37.8	-0.9
KNTN				IAmb	IAmb	23 20 39.2	
	comp=Z,16nm,0.9s						
URZ	Urewera	19.44	198	P	P	23 20 59.4	-1.7
URZ				IAmb	IAmb	23 21 11.8	
	comp=Z,15nm,1.1s						
PLWZ	Palliser	23.04	198	P	P	23 21 38.9	-0.3
QRZ	Quartz Range	23.29	204	P	P	23 21 41.4	-0.1
THZ	Tophouse	23.97	202	P	P	23 21 48.0	+0.3
THZ				IAmb	IAmb	23 21 59.3	
	comp=Z,21nm,1.1s						
TARA	Tarawa	24.03	330	P	P	23 21 45.0	-3.4
KHZ	Kahutara	24.34	200	P	P	23 21 52.4	+1.5
LTZ	Lake Taylor	25.09	202	P	P	23 21 58.9	+1.0
LTZ				IAmb	IAmb	23 22 02.8	
	comp=Z,13nm,1.1s						
OXZ	Oxford	25.65	202	P	P	23 22 02.9	0.0
OXZ				IAmb	IAmb	23 22 03.3	
	comp=Z,14nm,0.9s						
RPZ	Rata Peaks	26.34	203	P	P	23 22 09.2	+0.1
FOZ	Fox Glacier	26.65	204	P	P	23 22 12.1	+0.3
WHZ	Wether Hill Ro	29.35	204	P	P	23 22 36.8	+0.9
EIDS	Eidsvold	31.39	254	P	P	23 22 54.2	+0.1
ARMA	Armidale	31.55	244	P	P	23 22 54.9	-0.8
ARMA				IAmb	IAmb	23 22 55.6	
	comp=Z,5.2nm,1.1s						
CTAO	Charters Tower	36.01	263	P	P	23 23 34.2	-0.1
PATS	Pohnpei	37.09	313	P	P	23 23 38.8	-4.6
COEN	Coen	40.02	272	P	P	23 24 08.7	+0.6
COEN				IAmb	IAmb	23 24 15.8	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	40.27	244	P	P	23 24 08.4	-1.5
	comp=Z,0.9nm,0.4s,baz=96,slow=10,SNR=3.1						
	comp=Z,0.9nm,0.4s						
BBOO	Buckleboo	45.03	243	P	P	23 24 48.6	+0.2
BBOO				IAmb	IAmb	23 25 04.0	
	comp=Z,7.2nm,1.1s						
WR0	Warramunga Arr	46.94	261	P	P	23 25 02.6	-1.0
AS31	Alice Springs	47.06	256	P	P	23 25 03.9	-0.7
ASAR	Alice Springs	47.06	256	P	P	23 25 03.0	-1.6
	comp=Z,1.4nm,0.5s,baz=91,slow=8.5,SNR=16						
ASAR				PcP	PcP	23 26 33.9	-1.2
	comp=Z,1.0nm,0.8s,baz=107,slow=4.1,SNR=6.6						
	comp=Z,1.4nm,0.5s						
WB0	Warramunga Arr	47.11	261	P	P	23 25 04.1	-0.8
WB0				IAmb	IAmb	23 25 04.6	
	comp=Z,3.9nm,0.6s						
WB2	Warramunga Arr	47.12	261	P	P	23 25 04.1	-0.9
WB2				IAmb	IAmb	23 25 04.7	
	comp=Z,3.8nm,0.7s						
WRA	Warramunga Arr	47.13	261	P	P	23 25 03.1	-2.0
	comp=Z,1.7nm,0.5s,baz=95,slow=7.6,SNR=29						
WRA				PcP	PcP	23 26 34.0	-1.4
	comp=Z,0.3nm,0.4s,baz=97,slow=3.3,SNR=2.5						
	comp=Z,1.7nm,0.5s						
WRA	Warramunga Arr	47.13	261	P	P	23 25 04.2	-0.9
MTN	Manton Dam	51.63	269	P	P	23 25 38.5	-0.8
MTN				IAmb	IAmb	23 25 50.8	
	comp=Z,6.5nm,0.9s						
FORT	Forrest	51.80	246	P	P	23 25 37.1	-3.3
KNRA	Kununurra	53.17	265	P	P	23 25 50.2	-0.4
MORW	Morawa	62.34	247	P	P	23 26 54.1	-0.7
CASY	Casey	65.57	205	P	P	23 27 14.0	-1.2
CASY				IAmb	IAmb	23 27 28.3	
	comp=Z,4.8nm,1.1s						
QSPA	South Pole Qui	70.18	180	P	P	23 27 43.4	-0.9
JMN	Monobe	71.98	317	P	P	23 27 54.7	-0.8
CCAC	Calif City Air	77.16	45	P	P	23 28 23.5	-2.0
CCAC				IAmb	IAmb	23 28 23.9	
	comp=Z,5.6nm,0.5s						
TPNV	Topopah Spring	79.37	44	P	P	23 28 39.0	+1.2
TPNV				IAmb	IAmb	23 28 39.7	
	comp=Z,8.2nm,0.8s						
HMT	Hamilton	83.83	15	P	P	23 29 01.0	+0.5
HMT				IAmb	IAmb	23 29 15.3	
	comp=Z,9.7nm,1.2s						
MPU	Maple Canyon	84.08	44	P	P	23 29 00.6	-1.9
MPU				IAmb	IAmb	23 29 04.5	
	comp=Z,4.8nm,0.7s						
COYC	Coyhaique	84.91	137	P	P	23 29 05.3	-1.2
GERES	GERESS Array B	150.20	348	PKPbc	PKPdf	23 36 20.4	+3.7
	comp=Z,0.5nm,0.6s,baz=29,slow=2.2,SNR=6.0						

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*IDC **19** 23:35:07.1±1.6, 6.°31S×103.°96E, h0^{km}, mb3.8/5, mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=64.7km s-min=20.0km az=45.0*

*DJA **19** 23:35:14.3±1.0, 6°S±3°×10°4E±°, h17^{km}±8^{km}, M3.8/6, MLv3.8/6*

*NEIC **19** 23:35:18.6±1.9, 5.°57S±0.°09×104.°82E±0.°06, h66^{km}±9^{km}, mb4.0/16, Error ellipse: s-maj=13.1km s-min=8.7km az=198.0*

ISC 19 23:35:12.4±0.7**, 6.°28S**±0.°06×**104.°40E**±0.°06**, h10**^{km}**, n40,** σ**1.^{s}83**/32**, mb4.0**/11**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	0.75	7	P	Pb	23 35 29.3	+1.6
KASI				S	Sb	23 35 39.0	+1.0
BLSI	Bandar Lampung	1.23	43	P	Pn	23 35 37.3	+1.6
BLSI				S	Sb	23 35 52.9	+1.1
LWLI	Liwa	1.30	345	P	Pn	23 35 37.8	+1.1
LWLI				S	Sb	23 35 53.2	-0.6
SKJI	Sukabumi	2.26	109	P	Pn	23 35 51.5	+1.6
MNAI	Manna	2.39	323	Pn	Pn	23 35 52.7	+1.1
MNAI				Sn	Sn	23 36 20.2	-0.8
MNAI	Manna	2.39	323	P	Pn	23 35 52.7	+1.1
CNJI	Cibinong	2.90	111	P	Pn	23 36 00.8	+2.2
LEM	Lembang	3.24	100	Pn	Pn	23 36 06.1	+2.6
	2.5nm,0.3s,baz=317,slow=19,SNR=2.4						
LEM				Sn	Sb	23 36 49.1	-0.7
	3.8nm,0.3s,baz=188,slow=24,SNR=1.7						
	10nm,0.4s						
UGM	Wanagama	6.29	105	Pn	Pn	23 36 46.5	+1.1
JAGI	Jajag, Banyuwa	9.91	103	Pn	Pn	23 37 31.8	-3.3
GSI	Gunungsitoli	10.16	318	Pn	Pn	23 37 37.5	-1.0
KULM	Kulim	12.09	342	Pn	Pn	23 37 59.6	-5.2
MMRI	Maumere	17.84	99		Pn	23 39 17.7	-3.3
MMRI				IAmb	IAmb	23 39 34.3	
	comp=Z,20nm,1.0s						
TOLI2	Tolitoli	17.92	66	Pn	Pn	23 39 13.5	-8.6
GIRL	Giralia	18.83	151	P	Pn	23 39 36.4	+3.3
SOEI	Soe	19.97	101	P	P	23 39 42.4	-2.8
MBWA	Marble Bar	20.96	136	P	P	23 39 57.5	+1.7
MBWA				IAmb	IAmb	23 40 12.0	
	comp=Z,7.6nm,1.1s						
PSA00	Pilbara Seismi	21.32	137		P	23 40 02.5	+2.8
PSA00				IAmb	IAmb	23 40 13.7	
	comp=Z,5.6nm,1.1s						
UBPT	Khong Chiam	21.44	3	P	P	23 39 53.1	-7.9
H01W3	Cape Leeuwin H	29.85	164	T	T	00 12 51.3	
	baz=339						
H01W1	Cape Leeuwin H	29.86	164	T	T	00 12 51.3	
	baz=339						
H01W2	Cape Leeuwin H	29.86	164	T	T	00 12 51.3	
	baz=339						
H08S2	Diego Garcia H	31.70	266	T	T	00 15 08.8	
	baz=89,slow=76,SNR=31						
H08S3	Diego Garcia H	31.71	266	T	T	00 15 08.4	
	baz=89,slow=76,SNR=33						
H08S1	Diego Carcia H	31.72	266	T	T	00 15 08.8	
	baz=89,slow=76,SNR=18						
KAAM	Kaadhehdhoo	32.06	281	P	P	23 41 42.1	+2.3
WB0	Warramunga Arr	32.07	118	P	P	23 41 38.3	-1.6
WB0				IAmb	IAmb	23 41 54.3	
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	32.09	118	P	P	23 41 39.0	-1.1
	comp=Z,0.2nm,0.3s,baz=304,slow=8.8,SNR=5.5						
WRA				PcP	PcP	23 44 26.8	-2.7
	comp=Z,0.4nm,0.8s,baz=313,slow=2.4,SNR=1.8						
	comp=Z,0.2nm,0.3s						
WRA	Warramunga Arr	32.09	118	IAmb	IAmb	23 41 44.9	
	comp=Z,0.1nm,1.1s						
WB2	Warramunga Arr	32.10	118	P	P	23 41 39.2	-0.9
WB2				IAmb	IAmb	23 41 53.8	
	comp=Z,6.1nm,1.1s						
WR0	Warramunga Arr	32.27	118	P	P	23 41 40.6	-1.0
WR0				IAmb	IAmb	23 41 47.7	
	comp=Z,1.9nm,1.1s						
ASAR	Alice Springs	33.21	124	P	P	23 41 49.5	-0.4
	comp=Z,0.5nm,0.7s,baz=301,slow=7.2,SNR=3.1						
	comp=Z,0.5nm,0.7s						
STKA	Stephens Creek	43.05	131	P	P	23 43 10.9	-1.7
	comp=Z,1.5nm,0.4s,baz=275,slow=5.3,SNR=4.9						
	comp=Z,1.5nm,0.4s						
STKA	Stephens Creek	43.05	131	P	P	23 43 12.6	0.0
ARMA	Armidale	50.37	125	P	P	23 44 08.7	-1.5
MK31	Makanchi Array	56.37	342	P	P	23 44 49.9	-3.9
MK31				IAmb	IAmb	23 44 55.7	
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	56.37	342	P	P	23 44 49.2	-4.7
	comp=Z,0.5nm,0.5s,baz=144,slow=10,SNR=8.1						
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	62.22	347	P	P	23 45 29.5	-4.7
	comp=Z,0.7nm,0.3s,baz=154,slow=5.9,SNR=5.8						
	comp=Z,0.7nm,0.3s						
QSPA	South Pole Qui	83.71	180	P	P	23 47 41.6	+0.1
QSPA				IAmb	IAmb	23 47 52.4	
	comp=Z,1.4nm,1.1s						
TXAR	Lajitas Array	144.97	46	PKPbc	PKPab	23 54 47.8	-2.2
	comp=Z,0.7nm,0.7s,baz=296,slow=1.7,SNR=8.5						

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*IDC **19** 23:56:10.8±1.4, 30.°11S×178.°95W, h328^{km}±17^{km}, mb3.2/2, mbtmp4.1/5, Error ellipse: s-maj=39.7km s-min=21.2km az=109.0*

ISC 19 23:56:11.2±0.8**, 30.°03S**±0.°06×**179.°5W**±0.°1**, h300**^{km}**, n32,** σ**1.^{s}91**/51**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.54	61	P	Pn	23 56 54.5	-0.1
GLKZ				S	S	23 57 29.5	+0.4
RIZ	Raoul Island	1.54	60	P	Pn	23 56 54.5	-0.1
RAO	Raoul Island	1.54	60	P	Pn	23 56 55.2	+0.6
	216nm,0.3s,baz=270,slow=20,SNR=8.7						
RAO				S	S	23 57 26.6	-2.7
	266nm,0.2s,baz=144,slow=18,SNR=5.2						
MXZ	Matakaoa Point	7.74	193	P	Pn	23 58 04.8	+3.3
MXZ				S	S	23 59 31.3	+0.5
WCZ	Waipu Caves	7.87	220	P	Pn	23 58 02.5	-0.5
WMGZ	Waiomatatini S	7.97	192	P	Pn	23 58 08.5	+4.2
WMGZ				S	S	23 59 36.3	+0.3
HAZ	Te Kaha	8.04	196	P	Pn	23 58 08.4	+3.3
HAZ				S	S	23 59 35.8	-1.8
PKGZ	Pakihiroa	8.10	194	P	Pn	23 58 08.8	+2.8
PKGZ				S	S	23 59 39.5	+0.4
PUZ	Puketiti	8.24	193	P	Pn	23 58 10.0	+2.3
PUZ				S	S	23 59 42.5	+0.2
RUGZ	Raukumara Rang	8.27	196	P	Pn	23 58 11.2	+3.2
RUGZ				S	S	23 59 41.6	-1.3
CNGZ	Carnagh Statio	8.65	192	P	P	23 58 18.0	+0.2
MWZ	Matawai	8.65	196	P	P	23 58 16.0	-1.8
MWZ				S	S	23 59 51.9	+0.4
URZ	Urewera	8.69	198	P	Pn	23 58 13.9	+0.9
	3.2nm,0.3s,baz=87,slow=12,SNR=16						
URZ				S	S	23 59 54.5	+2.3
	7.7nm,0.3s,baz=42,slow=22,SNR=13						
URZ	Urewera	8.69	198	P	P	23 58 16.3	-1.8
URZ				S	S	23 59 53.5	+1.3
RIGZ	Rimuhau	8.96	194	S	S	00 00 00.5	+2.2
MUGZ	Murupara	8.99	199	P	P	23 58 19.3	-2.2
SNGZ	Shannon Statio	9.12	196	P	P	23 58 22.9	-0.1
SNGZ				S	S	00 00 03.4	+1.3
KNZ	Kokohu	9.28	194	P	P	23 58 22.5	-2.2
KNZ				S	S	00 00 02.9	-2.5
MHGZ	Mahia Peninsul	9.36	193	P	P	23 58 24.1	-1.5
MHGZ				S	S	00 00 05.5	-1.8
BKZ	Black Stump Fm	9.71	199	P	P	23 58 28.7	-0.9
BKZ				S	S	00 00 13.8	-1.6
CKHZ	Cape Kidnapper	10.02	196	S	S	00 00 21.2	-1.1
KRHZ	Kereru	10.19	199	P	P	23 58 33.2	-1.6
KRHZ				S	S	00 00 24.7	-1.4
KAHZ	Kahuranaki	10.20	196	P	P	23 58 35.3	+0.3
KAHZ				S	S	00 00 23.4	-3.0
PNHZ	Pukenui	10.49	199	P	Pn	23 58 36.4	+1.2
PRHZ	Porangahau	10.70	196	P	P	23 58 40.3	-0.3
PRHZ				S	S	00 00 34.7	-3.0
BFZ	Birch Farm	11.19	197	P	P	23 58 45.5	-0.5
BFZ				S	S	00 00 46.3	-2.5
MSVF	Nonsavu	12.45	349	P	Pn	23 59 00.3	+0.9
	4.2nm,0.2s,baz=232,slow=19,SNR=2.3						
DZM	Mont Dzumac	14.94	299	P	P	23 59 30.7	+2.9
	1.7nm,0.5s,baz=176,slow=16,SNR=1.8						
ASAR	Alice Springs	41.87	267	P	P	00 03 32.9	0.0
	0.6nm,0.7s,baz=104,slow=6.6,SNR=6.0						
	0.6nm,0.7s						
WRA	Warramunga Arr	42.83	273	P	P	00 03 40.9	+0.4
	2.2nm,0.5s,baz=113,slow=6.7,SNR=21						
	2.2nm,0.5s						
ARCES	ARCESS Array B	137.95	347	PKP	PKPdf	00 14 57.8	-1.5
	2.8nm,1.0s,baz=60,slow=2.2,SNR=1.8						
FINES	FINESS Array B	144.36	339	PKP	PKPab	00 15 07.1	-2.9
	1.3nm,0.3s,baz=51,slow=4.3,SNR=31						

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*TUL **20** 00:15:45.4±1.3, 35.°07N±0.°01×97.°55W±0.°02, h3^{km}±6^{km}, ML2.5, mb_Lg2.3/36(NEIC), Error ellipse: s-maj=2.8km s-min=1.0km az=125.0*

NEIC 20 00:15:45.7±0.9**, 35.°07N**±0.°02×**97.°55W**±0.°03**, h9**^{km}±1^{km}**, Error ellipse: s-maj=3.4km s-min=2.0km az=120.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.22	34	Pg	Pg	00 15 50.2	0.0
FNO				Sg	Sg	00 15 53.1	-0.2
OKCFA	Oklahoma City	0.35	13	Pg	Pg	00 15 52.0	-0.6
OKCFA				Sg	Sg	00 15 57.0	-0.3
X34A	Smith Ranch, M	0.53	206	Pg	Pg	00 15 55.7	-0.2
X34A				Sg	Sb	00 16 03.8	-1.0
WMOK	Wichita Mounta	1.07	252		Pg	00 16 05.5	-0.6
TUL1	Leonard	1.66	59		Pn	00 16 15.1	+0.1
Z35A	Perchaven, San	1.75	172		Pn	00 16 16.0	-0.3
U32A	Winter Ranch,	1.76	318	Pn	Pn	00 16 16.7	+0.3
X37A	Clayton	1.86	104		Pn	00 16 17.8	+0.1
X37A				IAmb_Lg		00 16 48.8	
	comp=Z,9.8nm,0.8s						
T35A	Sooner Cattle	2.02	24		Pn	00 16 20.5	+0.6
T35A				IAmb_Lg		00 16 51.2	
	comp=Z,13nm,0.7s						
ABTX	Abilene, Hawle	3.00	216	IAmb_Lg		00 17 20.4	
	comp=Z,7.5nm,1.2s						
WHTX	Lake Whitney,	3.07	179	IAmb_Lg		00 17 29.8	
	comp=Z,6.2nm,0.8s						
U40A	Yellville	4.03	70	IAmb_Lg		00 18 00.2	
	comp=Z,8.7nm,0.8s						
435B	Jarrell	4.28	180	IAmb_Lg		00 18 03.3	
	comp=Z,10nm,0.7s						
S39A	Bolivar	4.30	51	IAmb_Lg		00 18 12.7	
	comp=Z,5.7nm,0.7s						
MGMO	Mountain Grove	4.75	63	IAmb_Lg		00 18 24.3	
	comp=Z,7.4nm,0.7s						
R40A	Maddies Statio	5.32	51	IAmb_Lg		00 18 34.6	
	comp=Z,4.6nm,0.8s						
CCM	Cathedral Cave	5.88	58	IAmb_Lg		00 19 05.1	
	comp=Z,6.1nm,0.7s						
P40A	Paris	6.25	43	IAmb_Lg		00 19 16.9	
	comp=Z,7.2nm,0.7s						

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*SNET **20** 00:35:16.8±1.6, 13.°61N×91.°36W, h13^{km}±17^{km}, ML2.9*

*GCG **20** 00:35:18.5±0.7, 13.°76N×91.°48W, h53^{km}±13^{km}, MD3.9*

ISC 20 00:35:15.9±3.6**, 13.°6N**±0.°1×**91.°5W**±0.°1**, h23**^{km}±21^{km}**, n15,** σ**0.^{s}91**/23**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.95	347	*e*P	Pn	00 35 33.7	-0.2
FUG	Fuego 3	1.05	36	*e*P	Pb	00 35 35.7	+0.2
FUG				*e*S	Sb	00 35 49.5	+0.6
STG3	Santiaguito 3,	1.12	355	*e*P	Pn	00 35 36.2	-0.1
STG3				*e*S	Sb	00 35 50.2	-0.6
PCG	Pacaya	1.16	47	*e*P	Pb	00 35 37.9	+0.5
PCG				*e*S	Sb	00 35 52.7	+0.6
NBG	Las Nubes	1.48	48	*e*P	Pb	00 35 43.1	+0.2
NBG				*e*S	Sb	00 36 01.1	-0.1
NUBE	Las Nubes	1.68	79	*e*P	Pn	00 35 43.7	-0.3
NUBE				IAML		00 35 47.6	
	comp=Z,110nm,0.2s						
NUBE				*e*S	Sn	00 36 04.0	-0.8
LOAL	Lomas de Alarc	1.69	76	*e*P	Pn	00 35 44.7	+0.5
SLOZ	Alcaldia de Sa	1.70	75	*e*P	Pn	00 35 45.2	+1.1
SLOZ				*e*S	Sb	00 36 05.6	-1.9
CEVE	Cerro Verde	1.81	82	*e*P	Pn	00 35 45.9	-0.1
SBLS	San Blas	1.82	82	*e*P	Pn	00 35 46.2	+0.2
SBLS				IAML		00 36 15.3	
	comp=Z,253nm,0.2s						
JAYA	Jayaque - finc	1.97	88	*e*P	Pn	00 35 47.1	-1.0
MTO3	Montecristo	2.20	68	*e*P	Pn	00 35 52.0	+0.7
MTO3				IAML		00 35 55.3	
	comp=Z,32nm,0.2s						
MTO3				*e*S	Sb	00 36 20.3	-1.8
LFRS	El Faro	2.35	89	*e*P	Pn	00 35 54.2	+1.0
SJTE	Alcalda de S	2.40	89	*e*P	Pn	00 35 55.0	+1.2
SJTE				*e*S	Sn	00 36 22.6	0.0
SJTE				IAML		00 36 31.8	
	comp=Z,150nm,0.2s						
SCLA	Alcaldia de Sa	2.67	87	*e*P	Pn	00 35 58.8	+1.2

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*IDC **20** 00:44:41.7±0.9, 32.°33S×179.°50E, h394^{km}±10^{km}, mb3.3/4, mbtmp4.4/8, Error ellipse: s-maj=20.5km s-min=12.4km az=116.0*

*WEL **20** 00:44:48.3±0.9, 33°S±9°×18°0E±2°3, h315^{km}±15^{km}, M4.5/18, mB5.0/13, ML5.1/5, MLv5.0/18, Mw(mB)4.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*

ISC 20 00:44:41.9±0.7**, 32.°42S**±0.°07×**179.°7E**±0.°1**, h400**^{km}**, n61,** σ**2.^{s}40**/85**, mb3.6**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.77	34	P	Pn	00 45 50.9	-1.0
GLKZ				S	S	00 46 45.3	-3.3
RAO	Raoul Island	3.78	34	P	Pn	00 45 52.5	+0.5
	134nm,0.4s,baz=252,slow=20,SNR=1.5						
RAO				S	S	00 46 48.0	-0.8
	246nm,0.4s,baz=279,slow=19,SNR=5.3						
RIZ	Raoul Island	3.78	34	P	Pn	00 45 51.5	-0.5
RIZ				S	S	00 46 47.8	-0.9
GRZ	Great Barrier	5.17	221	P	Pn	00 46 08.8	+3.3
MXZ	Matakaoa Point	5.25	192	P	Pn	00 46 07.8	+1.4
MXZ				S	S	00 47 15.4	+0.2
WMGZ	Waiomatatini S	5.49	190	P	Pn	00 46 10.7	+1.9
PUZ	Puketiti	5.76	191	P	Pn	00 46 13.8	+2.0
PUZ				S	S	00 47 24.0	-1.1
RUGZ	Raukumara Rang	5.77	196	P	Pn	00 46 14.0	+1.9
RUGZ				S	S	00 47 23.6	-1.9
WHRZ	Whale Island	5.86	201	P	Pn	00 46 17.7	+4.8
TWGZ	Tauwhareparae	5.91	193	P	Pn	00 46 17.0	+3.5
OPRZ	Ohinepanea	5.98	204	P	Pn	00 46 17.9	+3.7
EDRZ	Edgecumbe	6.16	202	P	Pn	00 46 20.1	+3.9
CNGZ	Carnagh Statio	6.17	191	P	Pn	00 46 18.9	+2.7
TKGZ	Te Karaka	6.19	193	P	Pn	00 46 19.1	+2.7
URZ	Urewera	6.19	199	P	Pn	00 46 16.3	-0.1
	78nm,0.4s,baz=28,slow=4.8,SNR=100						
URZ				S	S	00 47 32.1	-1.5
	63nm,0.3s,baz=46,slow=23,SNR=20						
URZ	Urewera	6.19	199	P	Pn	00 46 17.4	+0.9
URZ				S	S	00 47 31.6	-2.0
KARZ	Kaharoa	6.25	206	P	Pn	00 46 21.2	+4.1
OMRZ	Omania	6.28	204	P	Pn	00 46 21.8	+4.3
RAGZ	Rawiri	6.34	196	P	Pn	00 46 20.8	+2.6
TARZ	Mount Tarawera	6.35	203	P	Pn	00 46 22.4	+4.0
RRRZ	Republican Roa	6.44	203	P	Pn	00 46 22.8	+3.5
RIGZ	Rimuhau	6.46	193	P	P	00 46 22.0	+2.5
RIGZ				S	S	00 47 36.4	-2.8
MUGZ	Murupara	6.49	200	P	P	00 46 22.5	+2.7
MUGZ				S	S	00 47 38.0	-1.7
RTZ	Ruatahuna	6.56	199	P	P	00 46 23.2	+1.9
RTZ				S	S	00 47 39.5	-1.7
ALRZ	Allen Road	6.70	203	P	P	00 46 25.0	+2.3
RATZ	Rangitukua	7.17	205	P	P	00 46 29.9	+1.9
BKZ	Black Stump Fm	7.21	200	P	Pn	00 46 28.0	+0.1
BKZ				S	S	00 47 51.1	-3.4
MCHZ	McNeill Hill	7.41	198	P	Pn	00 46 31.3	+1.2
MCHZ				S	S	00 47 57.8	-0.8
TMVZ	Te Maari	7.42	205	P	P	00 46 32.3	+1.5
ETVZ	East Tongariro	7.43	204	P	P	00 46 32.7	+1.7
WTVZ	West Tongariro	7.46	205	P	P	00 46 32.3	+1.0
NNVZ	North Ngauruho	7.46	205	P	P	00 46 33.2	+1.9
KWHZ	Kaweka Forest	7.47	200	P	Pn	00 46 32.2	+1.4
KWHZ				S	S	00 47 59.3	-0.6
OTVZ	Oturere	7.47	205	P	P	00 46 33.0	+1.5
TWVZ	Taurewa	7.47	206	P	P	00 46 32.9	+1.5
SNVZ	South Ngauruho	7.50	205	P	P	00 46 33.6	+1.8
NGZ	Ngauruhoe	7.51	205	P	P	00 46 33.3	+1.4
CKHZ	Cape Kidnapper	7.52	195	P	Pn	00 46 32.9	+1.6
CKHZ				S	S	00 47 58.5	-2.4
FWVZ	Far West T-bar	7.59	205	P	P	00 46 34.6	+1.7
WHVZ	Whangaehu Hut	7.61	205	P	P	00 46 34.1	+1.1

TRVZ	**Turoa**	**7.63**	**205**	P	**P**	**00 46 34.4**	**+1.0**
BHHZ	**Black Hill Sta**	**7.64**	**201**	P	**Pn**	**00 46 33.2**	**+0.5**
BHHZ				S	**S**	**00 47 59.8**	**-3.5**
WNVZ	**Wahianoa**	**7.64**	**204**	P	**Pn**	**00 46 34.3**	**+1.4**
WNVZ				S	**S**	**00 48 01.8**	**-1.9**
MOVZ	**Moawhango**	**7.66**	**203**	P	**Pn**	**00 46 33.2**	**+0.3**
MOVZ				S	**S**	**00 47 59.7**	**-4.2**
KRHZ	**Kereru**	**7.69**	**199**	P	**Pn**	**00 46 32.8**	**-0.4**
KRHZ				S	**S**	**00 47 58.8**	**-5.6**
KAHZ	**Kahuranaki**	**7.70**	**196**	P	**Pn**	**00 46 34.8**	**+1.4**
KAHZ				S	**S**	**00 48 01.4**	**-3.2**
VRZ	**Vera Road**	**7.79**	**209**	P	**P**	**00 46 37.3**	**+2.5**
PNHZ	**Pukenui**	**7.99**	**200**	P	**Pn**	**00 46 35.1**	**-1.5**
PNHZ				S	**S**	**00 48 05.6**	**-5.1**
WPHZ	**Waipukurau**	**8.06**	**198**	P	**Pn**	**00 46 38.6**	**+1.2**
WPHZ				S	**S**	**00 48 07.0**	**-5.2**
TSZ	**Takapari Road**	**8.19**	**200**	P	**Pn**	**00 46 39.5**	**+0.6**
TSZ				S	**S**	**00 48 10.2**	**-4.7**
PRHZ	**Porangahau**	**8.21**	**196**	P	**Pn**	**00 46 39.9**	**+0.8**
PRHZ				S	**S**	**00 48 12.9**	**-2.3**
DVHZ	**Dannevirke**	**8.36**	**199**	P	**Pn**	**00 46 41.3**	**+0.5**
DVHZ				S	**S**	**00 48 13.5**	**-4.9**
DZM	**Mont Dzumac**	**15.61**	**308**	P	**P**	**00 48 01.4**	**+0.2**
	5.1nm,0.6s,baz=128,slow=6.5,SNR=10						
AFI	**Afiamalu**	**20.02**	**25**	P	**P**	**00 48 47.1**	**+0.4**
	15nm,0.3s,baz=175,slow=11,SNR=1.8						
CTA	**Charters Tower**	**32.24**	**284**	P	**P**	**00 50 35.3**	**0.0**
	3.0nm,0.4s,baz=130,slow=11,SNR=5.6						
	3.0nm,0.4s						
ASAR	**Alice Springs**	**41.06**	**270**	P	**P**	**00 51 47.5**	**-1.2**
	0.4nm,0.4s,baz=109,slow=7.9,SNR=6.1						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**42.23**	**276**	P	**P**	**00 51 56.5**	**-1.6**
	1.9nm,0.4s,baz=112,slow=7.9,SNR=14						
	1.9nm,0.4s						
QSPA	**South Pole Qui**	**57.70**	**180**	P	**P**	**00 53 54.2**	**+2.0**
	1.3nm,0.8s,baz=34,slow=5.3,SNR=6.3						
	1.3nm,0.8s						
FINES	**FINESS Array B**	**146.29**	**337**	PKPbc	**PKPdf**	**01 03 34.1**	**+0.4**
	1.3nm,0.5s,baz=43,slow=4.3,SNR=15						
NB2	**NORSAR Subarra**	**150.38**	**349**	PKP	**PKPbc**	**01 03 44.5**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.38**	**349**	PKPbc	**PKPbc**	**01 03 44.9**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=22,slow=4.3,SNR=3.9						

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*GCG **20** 01:15:51.0±0.8, 13°.58N×91°.64W, h27^{km}±5^{km}, MD3.8*
*SNET **20** 01:15:51.6±1.1, 13°.76N×91°.41W, h8^{km}±14^{km}, ML3.0*
ISC 20 01:15:48.7±3.3**, 13°.6N**±0°.1×**91°.6W**±0°.1**, h4**^{km}±15^{km}**, n16,**
σ**0^{s}.79**/22**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.13**	**38**	*e*P	**Pn**	**01 16 11.7**	**+0.3**
FUG				*e*S	**Sn**	**01 16 28.6**	**+1.2**
STG3	**Santiaguito 3,**	**1.15**	**359**	*e*P	**Pn**	**01 16 11.8**	**0.0**
STG3				*e*S	**Sn**	**01 16 27.3**	**-0.8**
PCG	**Pacaya**	**1.24**	**48**	*e*P	**Pn**	**01 16 13.5**	**+0.5**
PCG				*e*S	**Sn**	**01 16 31.7**	**+1.3**
NBG	**Las Nubes**	**1.56**	**48**	*e*P	**Pg**	**01 16 18.8**	**+0.1**
NBG				*e*S	**Sn**	**01 16 38.3**	**+0.1**
NUBE	**Las Nubes**	**1.76**	**78**	*e*P	**Pn**	**01 16 19.5**	**-0.6**
SLOZ	**Alcaldia de Sa**	**1.78**	**74**	*e*P	**Pn**	**01 16 20.1**	**-0.2**
SLOZ				IAML		01 16 51.2	
	comp=Z,178nm,0.6s						
RTR	**El Retiro**	**1.88**	**79**	*e*P	**Pn**	**01 16 22.6**	**+0.8**
CEVE	**Cerro Verde**	**1.89**	**81**	*e*P	**Pn**	**01 16 21.6**	**-0.4**
CEVE				*e*S	**Sb**	**01 16 46.2**	**-1.9**
SBLS	**San Blas**	**1.90**	**81**	*e*P	**Pn**	**01 16 21.8**	**-0.3**
JAYA	**Jayaque - finc**	**2.05**	**87**	IAML		01 16 52.8	
	comp=Z,513nm,0.2s						
MTO3	**Montecristo**	**2.29**	**68**	*e*P	**Pn**	**01 16 27.7**	**+0.3**
MTO3				IAML		01 17 04.4	
	comp=Z,31nm,0.5s						
LFRS	**El Faro**	**2.42**	**88**	*e*P	**Pn**	**01 16 29.6**	**+0.4**
SJTE	**Alcalda de S**	**2.48**	**88**	*e*P	**Pn**	**01 16 30.6**	**+0.7**
SJTE				*e*S	**Sn**	**01 17 00.6**	**0.0**
SJTE				IAML		01 17 05.7	
	comp=Z,67nm,0.3s						
COEG	**Centro de Oper**	**2.60**	**88**	*e*P	**Pn**	**01 16 32.2**	**+0.7**
COEG				*e*S	**Sn**	**01 17 03.7**	**+0.1**
SCLA	**Alcaldia de Sa**	**2.75**	**87**	*e*P	**Pn**	**01 16 34.6**	**+1.0**
LCND	**La Caada**	**3.57**	**93**	*e*S	**Sn**	**01 17 27.7**	**+0.2**

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*NDI **20** 01:40:12.5±3.0, 34°.96N×69°.06E, h33^{km}±551^{km}, ML4.1, mb4.0(NEIC)*
*NEIC **20** 01:40:18.7±1.5, 34°.61N±0°.08×69°.35E±0°.08, h32^{km}±6^{km}, mb4.0/11, Error ellipse: s-maj=11.4km s-min=9.2km az=201.0*
*NNC **20** 01:40:21.0±3.6, 34°.84N×69°.11E, h47^{km}±81^{km}, mb4.2, mpv4.1, Error ellipse: s-maj=28.7km s-min=25.0km az=53.0*
*IDC **20** 01:40:23.2±3.8, 34°.78N×69°.59E, h70^{km}±31^{km}, mb3.4/10, mbtmp3.8/14, ML3.9/4, MS2.8/8, Error ellipse: s-maj=25.8km s-min=21.6km az=175.0*
ISC 20 01:40:19.1±0.6**, 34°.74N**±0°.06×**69°.33E**±0°.06**, h35**^{km}**, n67,**
σ**2^{s}.17**/69**, mb3.8**/12**, MS2.9**/4**, 3C-4D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.31**	**230**		**Pn**	**01 40 26.3**	**-1.0**
THW	**Thamme Wali**	**2.79**	**133**	P	**Pn**	**01 41 03.6**	**+2.3**
NIL	**Nilore**	**3.43**	**107**		**Pn**	**01 41 09.7**	**-0.3**
CHCP	**Chirah Chowk**	**3.43**	**107**	P	**Pn**	**01 41 11.4**	**+1.3**
CHGR	**Chuyangaron**	**3.92**	**358**		**Pn**	**01 41 18.4**	**+1.6**
GAR	**Garm**	**4.33**	**10**		**Pn**	**01 41 24.5**	**+2.0**
JMU	**Jammu**	**5.06**	**112**	*e*P	**Pn**	**01 41 32.3**	**-0.1**
JMU				*e*S	**Sn**	**01 42 32.7**	**+3.1**
BTK	**Batken**	**5.44**	**12**		**Pn**	**01 41 40.9**	**+3.1**
THN	**Thein Dam**	**5.80**	**112**	*e*P	**Pn**	**01 41 43.9**	**+1.2**
THN				*e*S	**Sn**	**01 42 51.5**	**+3.5**
HRA	**Herat**	**5.86**	**269**	Pn	**Pn**	**01 41 43.6**	**0.0**
BHK	**Bhakra**	**6.81**	**117**	*e*P	**Pn**	**01 41 57.8**	**+1.3**
BHK				*e*S	**Sn**	**01 43 12.9**	**+0.1**
SMLA	**Simla**	**7.51**	**116**	*e*P	**Pn**	**01 42 05.6**	**-0.4**
SMLA				*e*S	**Sn**	**01 43 28.6**	**-1.2**
SMLA				IAML		01 43 31.4	
	comp=E,143nm,0.5s						
SMLA				IAML		01 43 31.8	
	comp=N,168nm,0.3s						
AML	**Almayashu**	**8.14**	**24**	P	**Pn**	**01 42 16.6**	**+1.5**
	SNR=74						
KK31	**Karatay Array**	**8.40**	**6**	Pn	**Pn**	**01 42 19.7**	**+1.4**
KK31	**Karatay Array**	**8.40**	**6**	P	**Pn**	**01 42 19.6**	**+1.2**
	comp=N,3.6nm,0.4s,baz=202,slow=14,SNR=68						
KK31				⇓S	**Sn**	**01 43 53.6**	**+1.6**
	comp=N,5.2nm,0.5s,baz=201,slow=27,SNR=5.2						
KKAR	**Karatay Array**	**8.40**	**6**	Pn	**Pn**	**01 42 19.7**	**+1.3**
KKAR	**Karatay Array**	**8.40**	**6**		**Pn**	**01 42 18.9**	**+0.6**
UCH	**Uchtor**	**8.51**	**27**	P	**Pn**	**01 42 22.0**	**+1.8**
	SNR=9.0						
EKS2	**Erkin-Say**	**8.64**	**22**	P	**Pn**	**01 42 22.8**	**+1.1**
	SNR=9.3						
AAK	**Ala-Archa**	**8.86**	**26**	P	**Pn**	**01 42 27.3**	**+2.6**
	SNR=11						
AAK	**Ala-Archa**	**8.86**	**26**	P	**Pn**	**01 42 25.9**	**+1.2**
	comp=N,4.1nm,0.3s,baz=202,slow=7.6,SNR=21						
AAK				S	**Sn**	**01 44 05.3**	**+1.9**
	comp=N,11nm,0.6s,baz=331,slow=20,SNR=10						
AAK				LR	LR	01 45 49.1	
	comp=N,31nm,19.1s,baz=208,slow=37						
	comp=N,8.8nm,0.4s						
AAK	**Ala-Archa**	**8.86**	**26**	Pn	**Pn**	**01 42 26.0**	**+1.2**
CHMS	**Chumysh**	**9.27**	**25**	P	**Pn**	**01 42 31.8**	**+1.7**
	SNR=9.1						
CHMS	**Chumysh**	**9.27**	**25**	⇑P	**Pn**	**01 42 31.5**	**+1.3**
	comp=N,7.5nm,0.5s						
CHMS				⇓S	**Sn**	**01 44 16.4**	**+3.2**
	comp=N,39nm,1.1s						
BOOM	**Boomskoye usch**	**9.31**	**32**		**Pn**	**01 42 31.8**	**+0.9**
TKM2	**Tokmak 2**	**9.52**	**29**	P	**Pn**	**01 42 34.3**	**+0.5**
	SNR=13						
TKM2	**Tokmak 2**	**9.52**	**29**	⇓P	**Pn**	**01 42 34.3**	**+0.5**
	comp=N,11nm,0.7s						
TKM2				⇑S	**Sn**	**01 44 19.9**	**+0.2**
	comp=N,7.2nm,0.8s						
GEYT	**Alibeck**	**9.59**	**293**	P	Pn	01 42 41.6	+7.0
	comp=N,0.9nm,0.3s,baz=74,slow=32,SNR=3.7						
GEYT				LR	LR	01 47 29.3	
	comp=N,39nm,18.2s,baz=176,slow=44						
	comp=N,2.5nm,0.5s						
GEYT	**Alibeck**	**9.59**	**293**		**Pn**	**01 42 35.6**	**+1.0**
BHPL	**Bhopal**	**13.46**	**146**	*e*P	**Pn**	**01 43 28.6**	**+0.9**
DANN	**Dangsing**	**13.85**	**113**	*e*P	**Pn**	**01 43 29.6**	**-3.5**
DMN	**Daman**	**15.25**	**113**	*e*P	**Pn**	**01 43 46.3**	**-5.7**
	comp=N,42nm,0.6s						
KKN	**Kakani**	**15.29**	**113**	*e*P	**Pn**	**01 43 47.5**	**-5.0**
	comp=N,60nm,0.6s						
MAKZ	**Makanchi**	**15.38**	**35**		**Pn**	**01 43 53.0**	**-0.4**
MAKZ				IAmb	IAmb	01 44 14.2	
	comp=Z,7.0nm,1.1s						
PKIN	**Phulchoki**	**15.49**	**113**	*e*P	**Pn**	**01 43 49.4**	**-5.7**
	comp=Z,35nm,0.4s						
PKI	**Pulchoki**	**15.50**	**113**	*e*P	**Pn**	**01 43 49.6**	**-5.7**
	comp=Z,30nm,0.5s						
MKAR	**Makanchi Array**	**15.51**	**35**	P	**Pn**	**01 43 56.8**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=204,slow=11,SNR=11						
MKAR				LR	LR	01 50 27.1	
	comp=Z,30nm,20.6s,baz=236,slow=39						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**15.51**	**35**	Pn	**Pn**	**01 43 54.5**	**-0.6**
AB31	**Akbulak array**	**16.08**	**337**	P	**Pn**	**01 44 01.1**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=156,slow=13,SNR=59						
AB31				S	**Sn**	**01 46 55.8**	**-3.6**
	comp=Z,4.2nm,0.9s,baz=154,slow=22,SNR=8.4						
ABKAR	**Akbulak array**	**16.08**	**337**	Pn	**Pn**	**01 44 01.8**	**-0.5**
RAMN	**Ramite**	**16.73**	**113**	*e*P	Pn	01 44 03.1	-7.8
	comp=Z,18nm,0.4s						
KURBB	**Kurchatov Arra**	**17.23**	**20**	P	**Pn**	**01 44 14.1**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=6.0						
KURK	**Kurchatov**	**17.34**	**20**	Pn	**Pn**	**01 44 18.6**	**+0.4**
TAPN	**Taplejung**	**17.37**	**110**	*e*P	**Pn**	**01 44 14.2**	**-4.9**
	comp=Z,16nm,0.4s						
AKTO	**Aktyubinsk**	**17.73**	**336**	P	**P**	**01 44 25.9**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=181,slow=9.0,SNR=10						
AKTO				LR	LR	01 51 51.7	
	comp=Z,25nm,18.9s,baz=134,slow=39						
	comp=Z,2.8nm,0.6s						
AKTO	**Aktyubinsk**	**17.73**	**336**	⇑P	**Pn**	**01 44 23.8**	**+0.8**
	comp=Z,6.5nm,1.0s						
AKTO				⇓S	**Sn**	**01 47 36.6**	**-2.8**
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**18.33**	**2**	P	**P**	**01 44 30.9**	**+0.7**
SHL	**Shillong**	**21.50**	**109**	P	**P**	**01 45 03.0**	**-2.1**
ZAA0	**Zalesovo Array**	**22.08**	**25**	P	**P**	**01 45 10.8**	**-0.1**
ZAA0				IAmb	IAmb	01 45 24.5	
	comp=Z,6.5nm,0.9s						
ZALV	**Zalesovo Beam**	**22.08**	**25**	P	**P**	**01 45 10.6**	**-0.3**
	comp=Z,3.0nm,0.4s,baz=216,slow=10,SNR=12						
	comp=Z,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**22.08**	**25**	P	**P**	**01 45 10.3**	**-0.6**
ARU	**Arti**	**22.91**	**345**	LR	LR	01 54 33.0	
	comp=Z,25nm,21.0s,baz=118,slow=37						
ARU	**Arti**	**22.91**	**345**	P	**P**	**01 45 20.1**	**+0.4**
ARU				IAmb	IAmb	01 45 27.5	
	comp=Z,3.4nm,0.8s						
NRIK	**Noril'sk**	**36.11**	**11**	P	**P**	**01 47 15.6**	**-1.6**
	comp=Z,1.2nm,0.4s,baz=141,slow=13,SNR=1.8						
	comp=Z,1.2nm,0.4s						
FINES	**FINESS Array B**	**38.22**	**328**	P	**P**	**01 47 36.5**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=125,slow=8.7,SNR=5.4						
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**42.27**	**339**	P	**P**	**01 48 09.7**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=107,slow=8.1,SNR=7.3						
	comp=Z,1.2nm,0.8s						
ARCES	**ARCESS Array B**	**42.27**	**339**	IAmb	IAmb	01 48 34.0	
	comp=Z,2.3nm,1.0s						
NOA	**NORSAR Array B**	**44.99**	**324**	P	**P**	**01 48 32.0**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=107,slow=7.5,SNR=1.1						
NOA				LR	LR	02 09 58.7	
	comp=Z,13nm,20.2s,baz=110,slow=39						
	comp=Z,0.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**45.59**	**304**	LR	LR	02 13 14.6	
	comp=Z,13nm,18.6s,baz=218,slow=43						
TORD	**Torodi Ar. Bea**	**64.31**	**268**	P	**P**	**01 50 52.2**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=35,slow=5.3,SNR=3.0						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**64.31**	**268**	IAmb	IAmb	01 50 55.9	
	comp=Z,2.2nm,1.3s						
LBTB	**Lobatse**	**72.46**	**221**	LR	LR	02 24 47.7	
	comp=Z,25nm,18.4s,baz=168,slow=37						
INK	**Inuvik**	**75.85**	**9**	P	**P**	**01 52 01.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=321,slow=6.5,SNR=3.9						
	comp=Z,0.7nm,0.8s						
INK	**Inuvik**	**75.85**	**9**	IAmb	IAmb	01 52 08.6	
	comp=Z,2.4nm,1.1s						
WRA	**Warramunga Arr**	**82.24**	**121**	P	**P**	**01 52 36.1**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=326,slow=5.0,SNR=1.9						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**83.06**	**2**	P	**P**	**01 52 40.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=350,slow=5.3,SNR=4.3						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**84.39**	**124**	P	**P**	**01 52 47.5**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=314,slow=5.2,SNR=5.0						
	comp=Z,0.3nm,0.7s						

IDC 20 01:51:29.7±5.1**, 18°.83S**×**176°.07W, h0**^{km}**, mb3.9**/2**,**
mbtmp3.9/2**, Error ellipse: s-maj=265.8km**
s-min=54.4km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.65**	**260**	P	P	02 00 00.1	-0.3
	0.5nm,0.3s,baz=96,slow=7.3,SNR=16						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**46.69**	**255**	P	P	02 00 00.7	+0.1
	1.4nm,0.6s,baz=93,slow=8.2,SNR=20						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**134.66**	**345**	PKP	PKPdf	02 10 49.6	-0.2
	0.6nm,0.9s,baz=56,slow=3.5,SNR=1.1						
BRTR	**Keskin Array B**	**147.00**	**315**	PKPbc	PKPbc	02 11 13.9	-1.0
	0.8nm,0.6s,baz=126,slow=3.4,SNR=2.1						

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*TUL **20** 02:16:03.9±1.1, 36°.47N±0°.04×98°.75W±0°.05, h8^{km}±6^{km}, ML3.6, mb_Lg3.0/75(NEIC), Error ellipse: s-maj=6.1km s-min=4.9km az=155.0*
*NEIC **20** 02:16:04.5±1.8, 36°.47N±0°.04×98°.68W±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=6.0km s-min=4.5km az=171.0*
*ANF **20** 02:16:04.2±0.4, 36°.49N×98°.78W, h8^{km}, ML3.7/10, Error ellipse: s-maj=4.5km s-min=3.7km az=147.0*
ISC 20 02:16:04.3±0.9**, 36°.44N**±0°.03×**98°.71W**±0°.03**, h10**^{km}**, n78,**
σ**0^{s}.84**/61**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.24**	**255**	Pg	**Pg**	**02 16 08.8**	**-0.5**
U32A				Sg	**Sg**	**02 16 12.4**	**-0.2**
U32A	**Winter Ranch,**	**0.24**	**255**	P	**Pg**	**02 16 08.8**	**-0.5**
	baz=66,SNR=646						
U32A				S	**Sg**	**02 16 12.5**	**-0.2**
	baz=66						
OKCFA	**Oklahoma City**	**1.45**	**135**	Pn	**Pn**	**02 16 30.8**	**+0.2**
OKCFA	**Oklahoma City**	**1.45**	**135**	S	**Sb**	**02 16 51.2**	**+1.4**
	baz=316						
OKCSW	**OKLAHOMA CITY**	**1.46**	**135**		**Pn**	**02 16 31.2**	**+0.4**
FNO	**Franklin**	**1.59**	**138**	Pn	**Pn**	**02 16 33.4**	**+0.8**
WMOK	**Wichita Mounta**	**1.70**	**182**		**Pn**	**02 16 34.0**	**0.0**
WMOK	**Wichita Mounta**	**1.70**	**182**	P	**Pn**	**02 16 34.1**	**0.0**
	baz=0.9,SNR=305						
WMOK	**Wichita Mounta**	**1.70**	**182**	P	**Pn**	**02 16 34.1**	**0.0**
	baz=0.9						
T35A	**Sooner Cattle**	**1.83**	**74**	Pn	**Pn**	**02 16 36.2**	**+0.4**
T35B	**Sooner Cattle**	**1.83**	**74**	P	**Pn**	**02 16 36.2**	**+0.4**
	baz=257,SNR=109						
T35B				S	**Sb**	**02 17 01.7**	**+0.8**
	baz=257						
X34A	**Smith Ranch, M**	**1.97**	**158**	Pn	**Pn**	**02 16 39.0**	**+1.2**
R32A	**Long Quarter,**	**1.98**	**360**		**Pn**	**02 16 38.7**	**+0.8**
R32A	**Long Quarter,**	**1.98**	**360**	P	**Pn**	**02 16 38.7**	**+0.8**
	baz=181,SNR=49						
R32A				Sb	**Sb**	**02 17 05.0**	**0.0**
	baz=181						
TUL1	**Leonard**	**2.42**	**102**	Pn	**Pn**	**02 16 44.5**	**+0.5**
TUL1	**Leonard**	**2.42**	**102**	P	**Pn**	**02 16 44.5**	**+0.5**
	baz=284,SNR=24						
TUL1				S	**Sb**	**02 17 18.6**	**+0.8**
	baz=284						
TUL1	**Leonard**	**2.42**	**102**	P	**Pn**	**02 16 44.5**	**+0.5**
	baz=284						
TUL1				S	**Sb**	**02 17 18.6**	**+0.8**
	baz=284						
CBKS	**Cedar Bluff**	**2.50**	**341**	Pn	**Pn**	**02 16 45.5**	**+0.4**
CBKS	**Cedar Bluff**	**2.50**	**341**	S	**Sb**	**02 17 19.8**	**-0.5**
	baz=161						
AMTX	**Amarillo**	**2.88**	**238**		**Pn**	**02 16 51.5**	**+1.2**
AMTX	**Amarillo**	**2.88**	**238**	S	**Sb**	**02 17 32.6**	**+1.5**
	baz=56						
KSU1	**Kansas State U**	**3.13**	**31**		**Pn**	**02 16 54.5**	**+0.8**
KSU1	**Kansas State U**	**3.13**	**31**	P	**Pn**	**02 16 54.7**	**+0.9**
	baz=213						
KSU1				S	**Sb**	**02 17 40.5**	**+2.2**
	baz=213						
X37A	**Clayton**	**3.29**	**123**	Pn	**Pn**	**02 16 56.3**	**+0.4**
X37A				IAmb_Lg		02 17 54.2	
	comp=Z,49nm,0.7s						
Z35A	**Perchaven, San**	**3.33**	**158**		**Pn**	**02 16 57.4**	**+1.0**
Z35A	**Perchaven, San**	**3.33**	**158**	P	**Pn**	**02 16 57.6**	**+1.2**
	baz=339,SNR=6.7						
HHAR	**Hobbs**	**3.85**	**91**	Pn	**Pn**	**02 17 03.7**	**0.0**
ABTX	**Abilene, Hawle**	**3.89**	**192**		**Pn**	**02 17 04.3**	**+0.2**
ABTX	**Abilene, Hawle**	**3.89**	**192**	P	**Pn**	**02 17 04.4**	**+0.2**
	baz=11						
ABTX	**Abilene, Hawle**	**3.89**	**192**	P	**Pn**	**02 17 04.6**	**+0.5**
	baz=11						
KSCO	**Kaye Shedlock'**	**4.03**	**311**		**Pn**	**02 17 06.7**	**+0.5**
MSTX	**Muleshoe**	**4.14**	**235**		**Pn**	**02 17 07.5**	**-0.2**
MSTX				IAmb_Lg		02 18 21.2	
	comp=Z,28nm,0.7s						
W39A	**Magazine**	**4.19**	**106**		**Pn**	**02 17 07.9**	**-0.4**
W39A				IAmb_Lg		02 18 24.7	
	comp=Z,32nm,0.8s						
N33A	**J Bar K, Exete**	**4.40**	**13**	IAmb_Lg		02 18 30.4	
	comp=Z,36nm,0.9s						
Z38A	**Mt. Pleasant**	**4.41**	**135**	Pn	**Pn**	**02 17 11.8**	**+0.5**
Z38A				IAmb_Lg		02 18 29.7	
	comp=Z,35nm,0.8s						
Z38A	**Mt. Pleasant**	**4.41**	**135**	Sb	**Sg**	**02 18 23.4**	**-2.7**
	baz=317						
S39A	**Bolivar**	**4.49**	**72**	Pn	**Pn**	**02 17 12.2**	**-0.1**
S39A				IAmb_Lg		02 18 34.2	
	comp=Z,22nm,0.8s						
WHTX	**Lake Whitney,**	**4.56**	**166**	Pn	**Pn**	**02 17 13.3**	**-0.1**
WHTX	**Lake Whitney,**	**4.56**	**166**	P	**Pn**	**02 17 13.8**	**+0.4**
	baz=347,SNR=6.9						
MIAR	**Mount Ida**	**4.60**	**113**	Pn	**Pn**	**02 17 13.5**	**-0.4**
MIAR				IAmb_Lg		02 18 38.8	
	comp=Z,24nm,0.7s						
T25A	**Trinidad**	**4.63**	**280**	Pn	**Pn**	**02 17 12.4**	**-2.1**
T25A				IAmb_Lg		02 18 34.3	
	comp=Z,26nm,0.7s						
T25A	**Trinidad**	**4.63**	**280**	P	**Pn**	**02 17 14.7**	**+0.2**
	baz=97						
U40A	**Yellville**	**4.72**	**89**		**Pn**	**02 17 15.4**	**-0.2**
U40A				IAmb_Lg		02 18 40.8	
	comp=Z,26nm,0.9s						
BGNE	**Belgrade**	**4.98**	**5**	IAmb_Lg		02 18 39.9	
	comp=Z,25nm,0.9s						
N35A	**Tabor**	**5.02**	**28**	Pn	**Pn**	**02 17 19.7**	**0.0**
P38A	**Dawn**	**5.18**	**51**	Pn	**Pn**	**02 17 21.0**	**-0.8**
P38A	**Dawn**	**5.18**	**51**	P	**Pn**	**02 17 22.3**	**+0.5**
	baz=234,SNR=12						
X40A	**Basin Creek Fa**	**5.18**	**110**	Pn	**Pn**	**02 17 22.5**	**+0.7**
X40A				IAmb_Lg		02 18 57.8	
	comp=Z,25nm,0.8s						
OGNE	**Ogallala**	**5.19**	**331**	IAmb_Lg		02 18 58.8	
	comp=Z,27nm,0.7s						
MGMO	**Mountain Grove**	**5.22**	**80**		**Pn**	**02 17 23.1**	**+0.7**
WHAR	**Wooly Hollow**	**5.34**	**101**	Pn	**Pn**	**02 17 24.5**	**+0.4**
WHAR				IAmb_Lg		02 19 05.7	
	comp=Z,21nm,0.9s						
WLAR	**White Oak Lake**	**5.35**	**119**	IAmb_Lg		02 19 09.3	
	comp=Z,24nm,1.0s						
W41B	**Gary Mavity, V**	**5.40**	**102**	Pn	**Pn**	**02 17 25.3**	**+0.4**
UALR	**University of**	**5.45**	**106**	IAmb_Lg		02 19 04.0	
	comp=Z,25nm,1.1s						
R40A	**Maddies Statio**	**5.45**	**68**	Pn	**Pn**	**02 17 25.8**	**+0.2**
R40A				IAmb_Lg		02 19 03.8	
	comp=Z,23nm,0.9s						
SDCO	**Great Sand Dun**	**5.58**	**285**		**Pn**	**02 17 27.6**	**0.0**
SDCO				IAmb_Lg		02 19 09.2	
	comp=Z,17nm,1.2s						
Q24A	**Divide**	**5.69**	**298**	Pn	**Pn**	**02 17 28.3**	**-0.9**
Q24A				IAmb_Lg		02 19 05.0	
	comp=Z,18nm,0.7s						
435B	**Jarrell**	**5.72**	**170**	IAmb_Lg		02 19 18.1	
	comp=Z,16nm,0.8s						
NATX	**Nacogdoches**	**5.75**	**143**	IAmb_Lg		02 19 20.8	
	comp=Z,17nm,0.8s						
Z41A	**Richland Creek**	**5.80**	**121**	IAmb_Lg		02 19 19.2	
	comp=Z,19nm,0.7s						
JCT	**Junction City**	**6.02**	**189**	IAmb_Lg		02 19 27.6	
	comp=Z,22nm,0.9s						
CCM	**Cathedral Cave**	**6.17**	**73**	Pn	**Pn**	**02 17 35.9**	**+0.5**
CCM				IAmb_Lg		02 19 26.4	
	comp=Z,29nm,0.9s						
K31A	**O'Neill**	**6.17**	**360**	IAmb_Lg		02 19 23.1	
	comp=Z,27nm,0.9s						
ISCO	**Idaho Springs**	**6.39**	**304**	Pn	**Pn**	**02 17 37.1**	**-1.7**
PBMO	**Poplar Bluff**	**6.67**	**85**	IAmb_Lg		02 19 38.7	
	comp=Z,25nm,0.8s						
FVM	**French Village**	**6.79**	**74**	IAmb_Lg		02 19 38.3	
	comp=Z,17nm,0.8s						
SLM	**Saint Louis**	**7.08**	**69**	IAmb_Lg		02 19 50.6	
	comp=Z,21nm,1.0s						
PHWY	**Pilot Hill**	**7.16**	**315**	IAmb_Lg		02 19 49.7	
	comp=Z,16nm,0.9s						
S44A	**Carbondale**	**7.66**	**78**	IAmb_Lg		02 20 09.8	
	comp=Z,20nm,0.8s						
K38A	**Parkersburg**	**7.71**	**35**	IAmb_Lg		02 20 25.7	
	comp=Z,24nm,0.8s						
W45A	**Hickory Valley**	**7.84**	**97**	IAmb_Lg		02 20 12.9	
	comp=Z,19nm,0.8s						
K22A	**Casper**	**8.65**	**318**	IAmb_Lg		02 20 43.6	
	comp=Z,13nm,0.9s						
RSSD	**Black Hills**	**8.68**	**334**	IAmb_Lg		02 20 51.1	
	comp=Z,9.5nm,0.8s						
146A	**Union**	**8.82**	**113**	IAmb_Lg		02 20 49.9	
	comp=Z,18nm,0.8s						
L42A	**Oliver, Polo**	**8.95**	**49**	IAmb_Lg		02 20 51.5	
	comp=Z,16nm,0.8s						
JFWS	**Jewell Farm**	**9.18**	**43**	IAmb_Lg		02 21 20.0	
	comp=Z,15nm,0.7s						
F33A	**5 Mile Ranch,**	**9.56**	**10**	IAmb_Lg		02 21 11.1	
	comp=Z,9.8nm,1.2s						
I40A	**Norwalk**	**9.67**	**37**	IAmb_Lg		02 21 15.2	
	comp=Z,9.3nm,0.8s						

IDC 20 02:25:16.4±3.0**, 11°.85N**×**144°.79E, h41**^{km}±29^{km}**, mb3.5**/5**,**
mbtmp3.7/5**, Error ellipse: s-maj=60.1km s-min=16.6km**
az=98.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.73**	**3**	P	Pn	02 25 44.0	0.0
	154nm,0.3s,baz=28,slow=6.3,SNR=38						
GUMO				S	Sn	02 26 04.9	+0.1
	485nm,0.3s,baz=49,slow=20,SNR=28						
GUMO				LR	LR	02 26 05.6	
	comp=Z,45nm,19.0s,baz=88,slow=28						
WRA	**Warramunga Arr**	**33.23**	**198**	P	P	02 31 49.5	-0.2
	0.7nm,0.6s,baz=22,slow=9.6,SNR=8.9						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**36.87**	**197**	P	P	02 32 21.0	-0.1
	0.4nm,0.7s,baz=17,slow=12,SNR=5.4						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**62.68**	**317**	P	P	02 35 36.8	-0.2
	0.3nm,0.5s,baz=95,slow=6.6,SNR=3.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**70.16**	**25**	P	P	02 36 24.6	+0.1
	0.4nm,0.5s,baz=251,slow=5.9,SNR=6.2						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**92.69**	**335**	P	P	02 38 23.8	0.0
	0.5nm,0.5s,baz=64,slow=6.6,SNR=3.9						
	0.5nm,0.5s						

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*RSPR **20** 02:31:29.3, 19°.31N×65°.59W, h34^{km}±27^{km}, MD3.6/16*
*NEIC **20** 02:31:32.0±3.0, 19°.02N±0°.07×65°.67W±0°.03, h35^{km}±46^{km}, Error ellipse: s-maj=9.7km s-min=4.0km az=188.0*
ISC 20 02:31:28.7±1.6**, 19°.19N**±0°.08×**65°.62W**±0°.04**, h26**^{km}**, n60,**
σ**0^{s}.76**/68**, 17C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**0.94**	**160**	⇑*e*P	**Pb**	**02 31 45.9**	**-0.5**
CUPR	**Culebra, Puert**	**0.94**	**160**	*e*S	**Sn**	**02 31 59.7**	**+0.9**
CUPR	**Culebra, Puert**	**0.94**	**160**		**Pb**	**02 31 45.9**	**-0.5**
CUPR					**Sn**	**02 31 59.7**	**+0.9**
CUPR	**Culebra, Puert**	**0.94**	**160**	IAML		02 32 01.9	
	comp=E,256nm,0.5s						
CBYP	**Canovanas**	**0.94**	**194**	⇑*e*P	**Pn**	**02 31 45.6**	**-0.7**
CBYP	**Canovanas**	**0.94**	**194**	*e*S	**Sb**	**02 31 59.2**	**+0.6**

CBYP	Canovanas	0.94	194		Pn	02 31 45.6	-0.7
CBYP					Sb	02 31 59.2	+0.6
GCPR	Guaynabo City	0.98	207	⇓eP	Pn	02 31 46.0	-0.8
GCPR	Guaynabo City	0.98	207	eS	Sn	02 32 00.2	+0.2
GCPR	Guaynabo City	0.98	207		Pn	02 31 46.0	-0.8
GCPR					Sn	02 32 00.2	+0.2
GCPR	Guaynabo City	0.98	207	IAML		02 32 01.2	
	comp=N,229nm,0.4s						
STVI	Saint Thomas	1.05	143	⇓eP	Pb	02 31 47.4	-0.8
STVI	Saint Thomas	1.05	143	eS	Sb	02 32 02.6	+1.1
STVI	Saint Thomas	1.05	143		Pb	02 31 47.4	-0.8
STVI					Sb	02 32 02.6	+1.1
HUMP	Col San Antoni	1.07	192	⇑eP	Pn	02 31 47.4	-0.6
HUMP	Col San Antoni	1.07	192	eS	Sn	02 32 02.0	0.0
HUMP	Col San Antoni	1.07	192		Pn	02 31 47.4	-0.6
HUMP					Sn	02 32 02.0	0.0
HUMP	Col San Antoni	1.07	192	IAML		02 32 05.2	
	comp=N,274nm,0.3s						
MTP	Monte Pirata	1.09	177	⇑eP	Pn	02 31 48.0	-0.4
MTP	Monte Pirata	1.09	177	eS	Sb	02 32 02.8	0.0
MTP	Monte Pirata	1.09	177		Pn	02 31 48.0	-0.4
MTP					Sb	02 32 02.8	0.0
MTP	Monte Pirata	1.09	177	IAML		02 32 04.9	
	comp=E,545nm,0.3s						
MTP				IAML		02 32 06.0	
	comp=N,299nm,0.3s						
EMPR	Esperanza - Ma	1.12	231	⇑eP	Pn	02 31 48.5	-0.2
EMPR	Esperanza - Ma	1.12	231	eS	Sb	02 32 04.3	+0.7
EMPR	Esperanza - Ma	1.12	231		Pn	02 31 48.5	-0.2
EMPR					Sb	02 32 04.3	+0.7
EMPR	Esperanza - Ma	1.12	231	IAML		02 32 07.5	
	comp=E,377nm,0.6s						
EMPR				IAML		02 32 18.1	
	comp=N,276nm,0.5s						
SJVI	Gifft Hill Sch	1.17	137	⇑eP	Pb	02 31 48.9	-1.5
SJVI	Gifft Hill Sch	1.17	137	eS	Sb	02 32 05.4	+0.2
SJVI	Gifft Hill Sch	1.17	137		Pb	02 31 48.9	-1.5
SJVI					Sb	02 32 05.4	+0.2
SJG	San Juan	1.19	205		Pn	02 31 49.6	-0.1
SJG				IAML		02 32 12.1	
	comp=N,238nm,0.5s						
SJG				IAML		02 32 15.5	
	comp=N,244nm,0.3s						
PDPR	Patillas Dam,	1.23	198		Pn	02 31 50.1	-0.2
PDPR				IAML		02 32 11.7	
	comp=E,226nm,0.3s						
IGPR	InterUniversit	1.30	201	⇑eP	Pn	02 31 51.1	-0.2
IGPR	InterUniversit	1.30	201	eS	Sb	02 32 09.0	+0.1
AOPR	Arecibo Observ	1.37	232	⇑eP	Pn	02 31 51.6	-0.6
AOPR	Arecibo Observ	1.37	232	eS	Sn	02 32 10.1	+0.7
AOPR	Arecibo Observ	1.37	232		Pn	02 31 51.6	-0.6
AOPR					Sn	02 32 10.1	+0.7
CELP	Cerrillos	1.44	219	⇑eP	Pn	02 31 52.8	-0.3
CELP	Cerrillos	1.44	219	eS	Sb	02 32 12.7	0.0
CELP	Cerrillos	1.44	219		Pn	02 31 52.8	-0.3
CELP					Sb	02 32 12.7	0.0
OBIP	Obispado Ponce	1.48	219	⇑eP	Pn	02 31 53.5	-0.2
OBIP	Obispado Ponce	1.48	219	eS	Sn	02 32 13.1	+0.9
OBIP	Obispado Ponce	1.48	219		Pn	02 31 53.5	-0.2
OBIP					Sn	02 32 13.1	+0.9
AGPR	Aguadilla, PR	1.59	243	⇑eP	Pn	02 31 55.0	-0.2
AGPR	Aguadilla, PR	1.59	243	eS	Sn	02 32 15.6	+0.7
AGPR	Aguadilla, PR	1.59	243		Pn	02 31 55.0	-0.2
AGPR					Sn	02 32 15.6	+0.7
AGPR	Aguadilla, PR	1.59	243	IAML		02 32 17.9	
	comp=N,120nm,0.6s						
AGPR				IAML		02 32 25.0	
	comp=E,113nm,0.6s						
CDVI	St. Croix	1.65	150	⇑eP	Pb	02 31 57.3	-1.1
CDVI	St. Croix	1.65	150	eS	Sb	02 32 20.8	+2.1
CDVI	St. Croix	1.65	150		Pb	02 31 57.3	-1.1
CDVI					Sb	02 32 20.8	+2.1
GBPR	Guanica, Bosqu	1.70	225	⇑eP	Pn	02 31 57.3	+0.6
LSP	Las Mesas	1.72	234	⇑eP	Pn	02 31 57.0	-0.1
PRSN	Puerto Rico Se	1.74	236		Pb	02 31 58.7	-1.3
PRSN				IAML		02 32 34.6	
	comp=E,361nm,0.3s						
MLPR	Magueyes Islan	1.82	228	⇑eP	Pn	02 31 58.7	+0.3
MLPR	Magueyes Islan	1.82	228	eS	Sn	02 32 21.9	+1.3
MLPR	Magueyes Islan	1.82	228		Pn	02 31 58.7	+0.3
MLPR					Sn	02 32 21.9	+1.3
CRPR	Cabo Rojo, PR	1.84	230	⇑eP	Pn	02 31 58.8	+0.1
CRPR	Cabo Rojo, PR	1.84	230		Pn	02 31 58.8	+0.1
IDE	Isla Desecheo	1.93	246	⇑eP	Pn	02 31 59.8	-0.1
DR12	Loma Pena Alta	3.58	264	Pn	Pn	02 32 23.4	+0.6
SDDR	Presa de Saban	5.37	269	Pn	Pn	02 32 46.9	-0.3
SDDR				IAML		02 33 51.0	
	comp=E,18nm,0.7s						

TUL **20** *02:39:48.3±0.9, 36°.48N±0°.04×98°.75W±0°.06, h8^{km}±6^{km}, ML2.8, mb_Lg2.3/21(NEIC), Error ellipse: s-maj=7.5km s-min=4.0km az=130.0*

NEIC 20 02:39:48.7±0.9**, 36°.49N**±0°.04×**98°.72W**±0°.05**, h9**^{km}±6^{km}**, Error ellipse: s-maj=7.8km s-min=3.8km az=132.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.26	244	Pg	Pg	02 39 53.3	-0.5
FNO	Franklin	1.63	139	Pn	Pn	02 40 17.2	-0.3
WMOK	Wichita Mounta	1.75	182		Pn	02 40 18.8	-0.4
T35A	Sooner Cattle	1.82	76		Pn	02 40 20.9	+0.7
R32A	Long Quarter,	1.93	0		Pn	02 40 21.9	+0.2
X34A	Smith Ranch, M	2.02	159		Pn	02 40 23.2	+0.3
TUL1	Leonard	2.44	103	Pn	Pn	02 40 29.0	+0.4
CBKS	Cedar Bluff	2.46	341	IAmb_Lg		02 41 12.6	
	comp=Z,8.6nm,1.1s						
AMTX	Amarillo	2.90	237	Pn	Pn	02 40 35.0	-0.1
X37A	Clayton	3.32	124	Pn	Pn	02 40 40.3	-0.5
X37A				IAmb_Lg		02 41 38.7	
	comp=Z,8.9nm,0.7s						
HHAR	Hobbs	3.86	92	Pn	Pn	02 40 48.1	-0.1
ABTX	Abilene, Hawle	3.93	191	Pn	Pn	02 40 49.3	+0.1
ABTX				IAmb_Lg		02 41 59.4	
	comp=Z,6.1nm,1.1s						
MSTX	Muleshoe	4.16	234	IAmb_Lg		02 42 04.7	
	comp=Z,5.2nm,0.9s						
S39A	Bolivar	4.48	73	Pn	Pn	02 40 56.9	+0.2
S39A				IAmb_Lg		02 42 18.7	
	comp=Z,6.4nm,1.1s						
T25A	Trinidad	4.62	280	Pn	Pn	02 40 58.6	-0.1
MIAR	Mount Ida	4.62	113	Pn	Pn	02 40 58.5	-0.2
MIAR				IAmb_Lg		02 42 26.3	
	comp=Z,4.4nm,0.7s						
U40A	Yellville	4.73	90	IAmb_Lg		02 42 25.6	
	comp=Z,6.1nm,1.1s						
P38A	Dawn	5.15	51	Pn	Pn	02 41 04.8	-1.1
W41B	Gary Mavity, V	5.42	102	IAmb_Lg		02 42 42.3	
	comp=Z,4.2nm,1.0s						
Q24A	Divide	5.67	298	IAmb_Lg		02 42 49.1	
	comp=Z,4.5nm,0.8s						
PBMO	Poplar Bluff	6.67	85	IAmb_Lg		02 43 24.8	
	comp=Z,3.8nm,0.8s						
PHWY	Pilot Hill	7.12	314	IAmb_Lg		02 43 34.3	
	comp=Z,3.6nm,1.0s						

TUL **20** *02:45:50.6±0.9, 36°.85N±0°.03×98°.31W±0°.03, h4^{km}±6^{km}, ML2.5, mb_Lg2.1/11(NEIC), Error ellipse: s-maj=4.9km s-min=1.6km az=132.0*

NEIC 20 02:45:50.9±1.1**, 36°.83N**±0°.03×**98°.31W**±0°.04**, h11**^{km}±6^{km}**, Error ellipse: s-maj=6.1km s-min=1.0km az=132.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.72	231	Pg	Pg	02 46 04.3	-0.5
T35A	Sooner Cattle	1.44	86		Pb	02 46 17.5	-0.3
R32A	Long Quarter,	1.62	349		Pb	02 46 20.3	-0.6
FNO	Franklin	1.73	155	Pn	Pn	02 46 21.6	+0.5
FNO				IAmb_Lg		02 46 44.8	
	comp=Z,5.0nm,0.9s						
WMOK	Wichita Mounta	2.12	191		Pn	02 46 27.7	+1.2
TUL1	Leonard	2.23	114	Pn	Pn	02 46 29.1	+1.2
TUL1				IAmb_Lg		02 47 02.0	
	comp=Z,7.2nm,0.9s						
X34A	Smith Ranch, M	2.26	170	Pn	Pn	02 46 29.8	+1.5
CBKS	Cedar Bluff	2.28	331	IAmb_Lg		02 47 04.4	
	comp=Z,3.0nm,0.7s						
X37A	Clayton	3.27	132	Pn	Pn	02 46 43.0	+0.7
HHAR	Hobbs	3.56	98	Pn	Pn	02 46 47.8	+1.7
S39A	Bolivar	4.07	76	Pn	Pn	02 46 54.0	+0.8
S39A				IAmb_Lg		02 48 01.5	
	comp=Z,3.8nm,1.0s						
MGMO	Mountain Grove	4.85	84	IAmb_Lg		02 48 36.3	
	comp=Z,7.7nm,1.3s						
T25A	Trinidad	4.89	275	IAmb_Lg		02 48 32.0	
	comp=Z,6.8nm,1.1s						
W41B	Gary Mavity, V	5.18	107	IAmb_Lg		02 48 43.6	
	comp=Z,5.3nm,1.1s						

TUL **20** *02:56:53.5±0.9, 36°.48N±0°.03×98°.75W±0°.05, h5^{km}±7^{km}, ML2.5, mb_Lg2.3/22(NEIC), Error ellipse: s-maj=5.8km s-min=3.5km az=91.0*

NEIC 20 02:56:53.6±0.7**, 36°.49N**±0°.01×**98°.74W**±0°.05**, h6**^{km}±7^{km}**, Error ellipse: s-maj=6.2km s-min=1.8km az=88.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.24	243	Pg	Pg	02 56 58.3	0.0
FNO	Franklin	1.64	138	Pn	Pn	02 57 23.0	0.0
WMOK	Wichita Mounta	1.75	181		Pn	02 57 24.3	-0.1
T35A	Sooner Cattle	1.84	76	Pn	Pn	02 57 25.9	+0.1
T35A				IAmb_Lg		02 57 52.9	
	comp=Z,20nm,1.1s						
R32A	Long Quarter,	1.93	1	Pn	Pn	02 57 27.2	+0.1
X34A	Smith Ranch, M	2.02	158		Pn	02 57 28.7	+0.5
X34A				IAmb_Lg		02 57 57.5	
	comp=Z,11nm,0.8s						
TUL1	Leonard	2.45	103	Pn	Pn	02 57 34.2	+0.1
AMTX	Amarillo	2.88	237	Pn	Pn	02 57 39.6	-0.5
AMTX				IAmb_Lg		02 58 29.1	
	comp=Z,12nm,0.9s						
X37A	Clayton	3.34	124	Pn	Pn	02 57 46.1	-0.2
X37A				IAmb_Lg		02 58 47.2	
	comp=Z,5.7nm,0.7s						
HHAR	Hobbs	3.88	92	IAmb_Lg		02 59 03.5	
	comp=Z,6.1nm,0.8s						
S39A	Bolivar	4.50	73	Pn	Pn	02 58 02.9	+0.7
S39A				IAmb_Lg		02 59 17.2	
	comp=Z,7.1nm,0.8s						
T25A	Trinidad	4.60	280	Pn	Pn	02 58 03.6	-0.2
T25A				IAmb_Lg		02 59 23.5	
	comp=Z,6.9nm,0.7s						
MIAR	Mount Ida	4.64	113	Pn	Pn	02 58 04.5	+0.3
X40A	Basin Creek Fa	5.21	111	Pn	Pn	02 58 12.7	+0.6
X40A				IAmb_Lg		02 59 51.2	
	comp=Z,4.3nm,0.8s						
MGMO	Mountain Grove	5.23	81	IAmb_Lg		02 59 53.7	
	comp=Z,3.5nm,0.8s						
FCAR	Ozark Folk Cen	5.38	94	IAmb_Lg		02 59 44.0	
	comp=Z,6.0nm,0.9s						
W41B	Gary Mavity, V	5.43	102	IAmb_Lg		02 59 52.4	
	comp=Z,6.5nm,0.9s						
R40A	Maddies Statio	5.46	69	Pn	Pn	02 58 15.1	-0.3
N23A	Red Feather La	7.15	310	IAmb_Lg		03 00 45.6	
	comp=Z,3.5nm,0.9s						

MOS **20** *03:00:59.3±1.3, 48°.43N×155°.51E, h68^{km}, mb4.3/14, Error ellipse: s-maj=11.3km s-min=4.4km az=75.3*

NEIC **20** *03:01:00.8±1.1, 48°.61N±0°.10×155°.4E±0°.2, h58^{km}±8^{km}, mb4.2/17, Error ellipse: s-maj=21.8km s-min=3.2km az=128.0*

KRSC **20** *03:01:01.7±1.9, 48°.56N×157°.25E, h16^{km}±34^{km}, ML4.5*

IDC **20** *03:01:02.9±2.8, 48°.57N×155°.38E, h75^{km}±26^{km}, mb3.6/11, mbtmp3.9/16, MS2.9/12, Error ellipse: s-maj=31.1km s-min=13.4km az=153.0*

SKHL **20** *03:02:00.0±0.5, 48°.40N×155°.40E, h73^{km}±5^{km}, mb4.7/6*

ISC 20 03:00:59.6±0.7**, 48°.44N**±0°.07×**155°.58E**±0°.07**, h50**^{km}**, n143,** σ**2^{s}27**/153**, mb4.1**/28**, MS3.0**/9**, 4C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.27	9	i PN	Pn	03 01 35.6	+1.0
SKR	Severo-Kuril's	2.27	9	eP	Pn	03 01 34.9	+0.3
SKR				eS	Sn	03 02 01.5	+0.2
SKR				A	A	03 02 03.9	
	230nm,0.2s						
SKR				A	A	03 02 03.9	
	190nm,0.2s						
PAU	Pauzhetka	3.13	14	PN	Pn	03 01 48.3	+1.9
PAU				S	Sn	03 02 23.6	+1.1
PAU	Pauzhetka	3.13	14	eP	Pn	03 01 48.3	+1.9
PAU				eS	Sn	03 02 23.6	+1.1
PAU	Pauzhetka	3.13	14	eP	Pn	03 01 48.1	+1.7
PAU				AMB	AMB	03 01 50.1	
	20nm,0.3s						
PAU				eS	Sn	03 02 23.8	+1.3
PAU				A	A	03 02 26.4	
	430nm,0.4s						
PAU				A	A	03 02 26.4	
	160nm,0.4s						
KDTR	Khodutka, Kamc	3.73	24	PN	Pn	03 01 55.5	+0.9
KDTR				S	Sn	03 02 36.9	-0.4
KDTR	Khodutka, Kamc	3.73	24	eP	Pn	03 01 55.5	+0.9
KDTR				eS	Sn	03 02 36.9	-0.4
MIPR	Malaya Ipel'ka	3.91	11	PN	Pn	03 02 00.4	+3.3
MIPR	Malaya Ipel'ka	3.91	11	eP	Pn	03 02 00.4	+3.3
ASAK	Asacha	4.22	20	PN	Pn	03 02 03.6	+2.3
ASAK	Asacha	4.22	20	eP	Pn	03 02 03.6	+2.3
MTVR	Mutnovka	4.37	21	PN	Pn	03 02 05.3	+1.8
MTVR				S	Sn	03 02 52.8	-0.5
MTVR	Mutnovka	4.37	21	eP	Pn	03 02 05.3	+1.8
MTVR				eS	Sn	03 02 52.8	-0.5
GRL	Gorelyy	4.41	20	PN	Pn	03 02 06.4	+2.4
GRL				S	Sn	03 02 54.9	+0.7
GRL	Gorelyy	4.41	20	eP	Pn	03 02 06.4	+2.4
GRL				eS	Sn	03 02 54.9	+0.7
KRMR	Karymshinskiy	4.68	19	PN	Pn	03 02 10.3	+2.7
KRMR				S	Sn	03 03 00.7	+0.1
KRMR	Karymshinskiy	4.68	19	eP	Pn	03 02 10.3	+2.7
KRMR				eS	Sn	03 03 00.7	+0.1
PEA0B	Petropavlovsk-	4.86	15	Pn	Pn	03 02 12.5	+2.4
PEA0B	Petropavlovsk-	4.86	15	⇑iPN	Pn	03 02 12.4	+2.3
PETK	Petropavlovsk-	4.86	15	P	Pn	03 02 11.9	+1.8
	2.3nm,0.3s,baz=197,slow=14,SNR=25						
PETK				S	Sn	03 03 18.0	+13
	2.1nm,0.4s,baz=186,slow=39,SNR=1.9						
PETK	Petropavlovsk-	4.86	15		Pn	03 02 09.6	-0.5
PET	Petropavlovsk	4.99	22	Pn	Pn	03 02 09.7	-2.0
PET					Sn	03 03 09.0	+1.0
PET	Petropavlovsk	4.99	22	ePN	Pn	03 02 10.1	-1.7
PET				eS	Sn	03 03 08.9	+0.9
PET				smax	smax		
	comp=E,104nm,0.5s						
PET				smax	smax		
	comp=N,115nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	Petropavlovsk	4.99	22	eP	Pn	03 02 13.5	+1.7
PET				AMB	AMB	03 02 19.4	
	comp=Z,20nm,0.3s						
PET				eS	Sn	03 03 08.9	+0.9
PET				A	A	03 03 10.6	
	comp=Z,120nm,0.5s						
PET				A	A	03 03 10.6	
	comp=Z,100nm,0.5s						
DALK	Dalny	5.02	22	eS	Sn	03 03 08.9	+0.1
UGLR	Uglovaya	5.20	22	PN	Pn	03 02 16.8	+2.0
UGLR	Uglovaya	5.20	22	eP	Pn	03 02 16.8	+2.0
AVH	Avacha	5.23	21	PN	Pn	03 02 18.9	+3.7
AVH	Avacha	5.23	21	eP	Pn	03 02 18.9	+3.7
KOK	Koryaka	5.23	21	PN	Pn	03 02 18.4	+3.2
KOK	Koryaka	5.23	21	eP	Pn	03 02 18.4	+3.2
KOK	Koryaka	5.23	21	eP	Pn	03 02 18.4	+3.2
KRER	Koryakskii	5.26	21	eS	Sn	03 03 15.6	+0.4
SDLR	Sedlovina	5.28	22	PN	Pn	03 02 17.3	+1.4
SDLR	Sedlovina	5.28	22	eP	Pn	03 02 17.3	+1.4
KRX	Arik	5.29	20	PN	Pn	03 02 19.0	+2.9
KRX	Arik	5.29	20	eP	Pn	03 02 19.0	+2.9
SPN	Mys Shipunski	5.45	29	PN	Pn	03 02 19.1	+1.0
SPN	Mys Shipunski	5.45	29	eP	Pn	03 02 19.1	+1.0
SPN				eS	Sn	03 03 16.6	-2.8
GNL	Ganaly	5.47	15	PN	Pn	03 02 22.4	+3.9
GNL	Ganaly	5.47	15	eP	Pn	03 02 22.4	+3.9
KII	Karymskiy	6.11	22	PN	Pn	03 02 30.5	+3.3
KII	Karymskiy	6.11	22	eP	Pn	03 02 30.5	+3.3
KUR	Kuril'sk	6.19	242	ePN	Pn	03 02 30.9	+2.6
KUR				eS	Sn	03 03 39.5	+1.8
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax	smax		
	comp=N,146nm,0.3s						
KUR				smax	smax		
	comp=E,111nm,0.7s						
KUR	Kuril'sk	6.19	242	eP	Pn	03 02 30.9	+2.6
KUR				AMB	AMB	03 02 31.8	
	comp=E,80nm,0.5s						
KUR				eS	Sn	03 03 39.5	+1.8
KUR				A	A	03 03 44.3	
	comp=E,150nm,0.6s						
KUR				A	A	03 03 44.3	
	comp=E,110nm,0.6s						
MKZ	Mys Kozlova	7.22	30	PN	Pn	03 02 42.5	+0.1
MKZ	Mys Kozlova	7.22	30	eP	Pn	03 02 42.5	+0.1
MKZ				eS	Sn	03 03 58.3	-4.7
TUMD	Tumrok D	7.40	22	eP	Pn	03 02 48.4	+3.5
TUMD				eS	Sn	03 04 06.3	-1.1
TUMR	Tumrok	7.41	21	PN	Pn	03 02 48.4	+3.3
TUMR	Tumrok	7.41	21	P	Pn	03 02 49.8	+4.7
SHO	Shikotan	7.60	236	ePN	Pn	03 02 45.6	-2.1
SHO	Shikotan	7.60	236	eP	Pn	03 02 46.3	-1.4
SHO				AMB	AMB	03 02 48.7	
	comp=E,20nm,0.4s						
SHO				eS	Sn	03 04 05.5	-6.9
SHO				A	A	03 04 14.0	
	comp=E,20nm,0.3s						
SHO				A	A	03 04 14.0	
	comp=E,80nm,0.3s						
YUK	Yuzh-Kuril'sk	8.05	240	⇓ePN	Pn	03 03 05.0	+11
YUK	Yuzh-Kuril'sk	8.05	240	eP	Pn	03 02 53.0	-0.8
YUK				AMB	AMB	03 02 55.4	
	comp=E,200nm,0.5s						
NMR	Nemuro--Hokkai	8.54	237	eP	Pn	03 02 58.7	-1.8
YSS	Yuzh-Sakhalins	8.78	265	eP	Pn	03 02 59.9	-3.9
BKI	Bering	9.33	40	eS	Sn	03 04 45.0	-10
OKH	Okha	9.47	307	eP	Pn	03 03 14.4	+1.2
OKH				AMB	AMB	03 03 16.3	
	comp=E,80nm,6.0s						
JKA	Kamikawa-asahi	9.97	249		Pn	03 03 20.3	+0.2
JKA	Kamikawa-asahi	9.97	249	eP	Pn	03 03 20.3	+0.2
ASAJ	Asahikawa	9.97	249	P	Pn	03 03 22.9	+2.7
	comp=E,6.3nm,0.7s,baz=80,slow=15,SNR=4.7						
ASAJ				LR	LR	03 07 25.7	
	comp=E,18nm,19.2s,baz=332,slow=39						
ASAJ	Asahikawa	9.97	249	PN	Pn	03 03 20.3	+0.2
ERM	Erimo	10.86	238	⇓ePN	Pn	03 03 41.4	+9.2
SHEM	Shemya Is, Ala	12.52	63	LR	LR	03 08 47.9	
	comp=E,34nm,20.4s,baz=208,slow=37						
KLR	Kul'dur	15.70	282	P	Pn	03 04 38.5	+1.3
	comp=E,3.8nm,0.9s,baz=78,slow=11,SNR=9.2						
KLR				LR	LR	03 10 51.3	
	comp=E,27nm,20.3s,baz=97,slow=38						
KLR	Kul'dur	15.70	282	eP	Pn	03 04 33.7	-3.6
JSD	Sado	16.32	237		Pn	03 04 46.2	+1.1
JSD				IAmb	IAmb	03 04 49.7	
	comp=Z,18nm,0.8s						
USRK	Ussuriysk Ar.	16.82	264	P	Pn	03 04 51.8	+0.3
	comp=Z,1.6nm,0.6s,baz=84,slow=11,SNR=4.2						
USRK				LR	LR	03 10 30.7	
	comp=Z,44nm,21.5s,baz=62,slow=34						
MJAR	Matsushiro Arr	17.43	233	P	Pn	03 05 00.1	+1.0
	comp=Z,1.2nm,0.3s,baz=21,slow=10,SNR=6.9						
MJAR				LR	LR	03 11 29.7	
	comp=Z,36nm,21.4s,baz=28,slow=36						
MJAR	Matsushiro Arr	17.43	233		Pn	03 04 58.7	-0.4
MJAR	Matsushiro Arr	17.43	233	P	Pn	03 04 58.7	-0.4
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BNX	BinXian	19.33	273	⇓P	P	03 05 22.3	+1.8
BNX				pmax	pmax		
	comp=Z,16nm,1.1s						
BNX				pmax	pmax		
	comp=Z,98nm,4.5s						
BILL	Bilibino	20.38	12	eP	P	03 05 31.0	-0.8
BILL				e*SP	sP	03 06 00.0	+11
BILL				pmax	pmax		
	comp=Z,8.0nm,2.2s						
BILL				MLR	MLR		
	comp=Z,15nm,10.0s						
KSRS	Korea Array	22.91	252	P	P	03 05 59.5	+0.5
	comp=Z,5.4nm,1.0s,baz=52,slow=10,SNR=18						
KSRS				LR	LR	03 14 29.1	
	comp=Z,17nm,20.4s,baz=35,slow=35						
	comp=Z,5.4nm,1.0s						
KSAR	Wonju Array Be	22.94	252	P	P	03 05 58.5	-0.9
KSAR	Wonju Array Be	22.94	252	P	P	03 05 58.5	-0.9
KSAR	Wonju Array Be	22.94	252	eP	P	03 05 58.5	-0.9
KSCHJ	Chungju	23.23	250	P	P	03 06 01.8	-0.5
KSCHJ				IAmb	IAmb	03 06 04.4	
	comp=Z,7.2nm,0.9s						
BJT	Baijiatuau	29.20	268	P	P	03 06 51.7	-4.5
BJT				IAmb	IAmb	03 06 53.7	
	comp=Z,5.3nm,0.9s						
BJT	Baijiatuau	29.20	268	P	P	03 06 51.7	-4.5
BJT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H11N2	WAKE ISLAND Hy	30.07	158	T	T	03 39 01.0	
	baz=342,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	30.08	158	T	T	03 39 06.6	
	baz=342,slow=76,SNR=54						
H11N3	WAKE ISLAND Hy	30.08	158	T	T	03 39 03.2	
	baz=342,slow=76,SNR=31						
H11S1	WAKE ISLAND Hy	31.19	159	T	T	03 40 25.5	
	baz=344,slow=76,SNR=208						
H11S3	WAKE ISLAND Hy	31.20	159	T	T	03 40 24.0	
	baz=344,slow=76,SNR=248						
H11S2	WAKE ISLAND Hy	31.21	159	T	T	03 40 26.9	
	baz=344,slow=76,SNR=159						
RSO	Redoubt South	31.49	48		S	03 12 21.2	+0.1
KDAK	Kodiak Island	31.74	53	LR	LR	03 19 48.9	
	comp=Z,40nm,21.8s,baz=233,slow=35						
ULN	Ulaanbaatar	31.95	288	P	P	03 07 18.6	-2.0
ULN				IAmb	IAmb	03 07 22.9	
	comp=Z,1.8nm,0.5s						
ULN	Ulaanbaatar	31.95	288	⇑eP	P	03 07 23.0	+2.4
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TOLK	Toolik Lake Re	33.42	33	P	P	03 07 33.5	+0.4
TOLK				IAmb	IAmb	03 07 50.9	
	comp=Z,3.5nm,1.1s						
ILAR	Eielson Array	34.18	40	P	P	03 07 38.9	-0.8
	comp=Z,0.6nm,1.0s,baz=267,slow=8.2,SNR=5.4						
	comp=Z,0.6nm,1.0s						
L27K	Beaver Creek,	36.51	43	P	P	03 08 00.4	+0.7
BCAR	Beaver Creek A	36.52	43	P	P	03 08 00.3	+0.4
KNGR	Kungurtug, Tuv	36.93	296	i P	P	03 08 03.2	-0.3
NRIK	Noril'sk	38.20	328	ceP	P	03 08 13.8	0.0
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	39.32	34	P	P	03 08 25.2	+1.9
	comp=Z,0.9nm,0.8s,baz=323,slow=6.2,SNR=3.4						
INK				LR	LR	03 28 25.1	
	comp=Z,22nm,18.1s,baz=90,slow=42						
	comp=Z,0.9nm,0.8s						
MK31	Makanchi Array	47.66	297	P	P	03 09 28.9	-1.7
MK31	Makanchi Array	47.66	297	P	P	03 09 29.0	-1.7
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	47.66	297	P	P	03 09 29.8	-0.9
	comp=Z,3.1nm,0.8s,baz=61,slow=8.3,SNR=24						
MKAR				LR	LR	03 29 38.2	
	comp=Z,23nm,21.2s,baz=72,slow=36						
	comp=Z,3.1nm,0.8s						
KURK	Kurchatov	47.83	303	P	P	03 09 30.2	-1.6
KURK	Kurchatov	47.83	303	P	P	03 09 30.2	-1.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	47.83	303	eP	P	03 09 30.2	-1.6
MAKZ	Makanchi	47.83	297	P	P	03 09 30.9	-1.1
MAKZ	Makanchi	47.83	297	P	P	03 09 30.9	-1.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
YKA	Yellowknife Ar	48.56	38	P	P	03 09 38.4	+1.0
	comp=Z,1.4nm,0.8s,baz=298,slow=7.6,SNR=8.8						
	comp=Z,1.4nm,0.8s						
BRVK	Borovoye	51.12	309	⇓eP	P	03 09 55.1	-1.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,2.5s						
BRVK	Borovoye	51.12	309	eP	P	03 09 55.1	-1.8
BOOM	Boomskoye usch	53.80	296	P	P	03 10 15.8	-1.3
BOOM				IAmb	IAmb	03 10 17.3	
	comp=Z,1.8nm,0.8s						
BOOM	Boomskoye usch	53.80	296	P	P	03 10 15.8	-1.3
BOOM				pmax	pmax		
	comp=Z,2.0nm,0.9s						

CMAR	Chiang Mai Arr	54.38	257	P	P	03 10 21.3	-0.1
	comp=Z,0.8nm,0.3s,baz=17,slow=6.6,SNR=6.5						
	comp=Z,0.8nm,0.3s						
ARU	Arti	54.89	318	d iP	P	03 10 23.6	-1.0
ARU				S	S	03 17 57.3	-4.8
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	54.89	318	eP	P	03 10 23.6	-1.0
YBH	Yreka Blue Hor	55.48	64	LR	LR	03 31 38.5	
	comp=Z,14nm,19.5s,baz=300,slow=33						
ARCES	ARCESS Array B	56.80	341	P	P	03 10 37.0	-1.1
	comp=Z,1.1nm,0.7s,baz=25,slow=9.4,SNR=1.4						
	comp=Z,1.1nm,0.7s						
ARCES	ARCESS Array B	56.80	341	IAmb	IAmb	03 10 46.4	
	comp=Z,18nm,1.5s						
ARCES	ARCESS Array B	56.80	341	P	P	03 10 37.0	-1.1
ARCES				pmax	pmax		
	comp=Z,18nm,1.5s						
WVOR	Wild Horse Val	57.46	61	P	P	03 10 42.6	-0.7
WVOR	Wild Horse Val	57.46	61	P	P	03 10 42.6	-0.7
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ABKAR	Akbulak array	58.62	310	P	P	03 10 47.8	-3.3
ABKAR				IAmb	IAmb	03 10 55.5	
	comp=Z,2.2nm,1.4s						
BOZ	Bozeman (W)	59.43	55	P	P	03 10 57.2	+0.2
BOZ	Bozeman (W)	59.43	55	P	P	03 10 57.2	+0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NVAR	Mina Array Bea	60.18	65	P	P	03 11 03.0	+0.6
	comp=Z,0.5nm,0.7s,baz=297,slow=6.5,SNR=3.6						
	comp=Z,0.5nm,0.7s						
ELK	Elko	60.51	61	LR	LR	03 36 48.7	
	comp=Z,10nm,19.1s,baz=248,slow=35						
PDAR	Pinedale Array	62.41	56	P	P	03 11 17.9	+0.6
	comp=Z,0.8nm,0.7s,baz=279,slow=2.9,SNR=5.7						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	62.41	56	P	P	03 11 17.7	+0.3
FINES	FINESS Array B	63.21	335	P	P	03 11 21.3	-0.8
	comp=Z,0.6nm,0.5s,baz=35,slow=8.3,SNR=8.9						
	comp=Z,0.6nm,0.5s						
FINES	FINESS Array B	63.21	335	i P	P	03 11 20.6	-1.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	Obninsk	64.84	326	eP	P	03 11 30.3	-2.6
OBN				e		03 12 07.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
OBN	Obninsk	64.84	326	eP	P	03 11 30.3	-2.6
MNK	Minsk	68.38	330	i P	P	03 11 53.0	-2.4
MNK				i *PP	pP	03 12 13.6	+4.7
MNK				i		03 12 17.9	
MNK				i		03 14 21.9	
MNK				i PPP	PPP	03 16 02.9	
MNK				i S	S	03 20 46.7	-5.9
MNK				i		03 21 12.8	
MNK				i *SS	sS	03 21 21.4	+5.3
MNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,254nm,21.0s						
MNK				MLR	MLR		
	comp=E,25nm,22.0s						
MNK				MLR	MLR		
	comp=Z,94nm,15.0s						
MNK	Minsk	68.38	330	i P	P	03 11 53.0	-2.4
	comp=E,1.0nm,1.0s						
MNK				i P	P	03 11 53.0	-2.4
	comp=N,5.0nm,0.7s						
MNK				i P	P	03 11 53.0	-2.4
	comp=Z,3.0nm,0.8s,baz=35						
MNK				i pP	pP	03 12 13.7	+4.7
MNK				i PcP	sP	03 12 18.0	+3.5
MNK				i PP	PP	03 14 22.0	-4.1
MNK				i PPP	PPP	03 16 02.9	
MNK				i S	S	03 20 46.7	-5.9
MNK				i pS	pS	03 21 12.8	+3.2
MNK				i sS	sS	03 21 21.4	+5.3
MNK				i SS	SS	03 25 07.8	-7.9
MNK				i SSS	SSS	03 28 29.1	
MNK				i LQ	LQ	03 36 51.7	
MNK				i LR	LR	03 41 36.0	
MNK				i LRM	MLR	03 44 18.8	
	comp=N,254nm,21.0s						
MNK				i LRM	MLR	03 44 31.9	
	comp=E,25nm,22.4s						
MNK				i LRM	MLR	03 44 46.3	
	comp=Z,94nm,15.2s						
KBZ	Khabaz	70.87	315	ceP	P	03 12 12.4	+1.5
KBZ	Khabaz	70.87	315	eP	P	03 12 12.4	+1.5
TX32	Lajitas Array	75.22	63	P	P	03 12 37.1	+0.1
TXAR	Lajitas Array	75.22	63	P	P	03 12 38.1	+1.1
	comp=Z,1.4nm,0.7s,baz=291,slow=4.3,SNR=16						
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	75.22	63	P	P	03 12 37.4	+0.4
TXAR	Lajitas Array	75.22	63	P	P	03 12 37.4	+0.4
U40A	Yellville	75.95	51	P	P	03 12 40.8	-0.2
U40A				IAmb	IAmb	03 12 41.7	
	comp=Z,2.9nm,0.8s						
TKL	Tuckaleechee C	80.99	45	LR	LR	03 52 39.1	
	comp=Z,8.8nm,19.2s,baz=326,slow=38						
H03N2	Juan Fernandez	137.09	90	T	T	05 53 27.0	
	baz=310,slow=77,SNR=3.3						
H03N1	Juan Fernandez	137.10	90	T	T	05 53 37.8	
	baz=310,slow=77,SNR=3.8						
H03N3	Juan Fernandez	137.10	90	T	T	05 53 38.8	
	baz=310,slow=77,SNR=2.8						

BJI ***20*** *03:03:50.2±0.0, 7°.51S×125°.37E, h529^{km}, mb4.5/32, mB4.5/13*

DJA ***20*** *03:03:54.2±0.5, 7°S±5°×12°5E±°, h533^{km}±11^{km}, M4.8/7, mB5.1/6, mb4.8/7, MLv5.0/5, Mw(mB)4.5/6*

IDC ***20*** *03:03:55.5±0.6, 6°.97S×125°.11E, h523^{km}±7^{km}, mb3.9/16, mbtmp4.9/21, Error ellipse: s-maj=11.8km s-min=7.5km az=70.0*

NEIC ***20*** *03:03:55.6±1.6, 6°.96S±0°.09×125°.1E±0°.1, h520^{km}±7^{km}, mb4.6/70, Error ellipse: s-maj=16.2km s-min=12.7km az=64.0*

ISC 20 03:03:56.4±0.3**, 6°.97S**±0°.05×**125°.04E**±0°.06**, h543**^{km}**, n210,** σ**1^{s}52**/205**, mb4.6**/65**, 4C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	2.87	195	P	P	03 05 07.8	-2.4
SOEI	Soe	2.87	195	P	P	03 05 07.6	-2.6
SOEI	Soe	2.87	195	P	P	03 05 08.5	-1.7
MMRI	Maumere	3.23	239	P	P	03 05 09.4	-2.9
MMRI	Maumere	3.23	239	P	P	03 05 09.1	-3.2
MMRI	Maumere	3.23	239	P	P	03 05 09.5	-2.8
BATI	Baumata	3.49	203	P	P	03 05 12.1	-2.0
	1µm,0.3s,baz=81,slow=1.5,SNR=224						
BATI				S	S	03 06 12.9	-4.4
	622nm,0.4s,baz=11,slow=23,SNR=6.2						
SANI	Sanana	4.98	11	P	P	03 05 23.0	-2.7
SANI	Sanana	4.98	11	P	P	03 05 24.9	-0.8
BNDI	Bandanaira	5.42	64	P	P	03 05 29.9	+0.4
KAPI	Kappang	5.61	290	P	P	03 05 31.3	+0.2
	106nm,0.6s,baz=129,slow=5.7,SNR=71						
KAPI				S	S	03 06 48.6	+0.1
	24nm,0.7s,baz=18,slow=22,SNR=11						
KAPI	Kappang	5.61	290	P	P	03 05 29.8	-1.3
LUWI	Luwuk	6.31	339	P	P	03 05 34.8	-2.8
LUWI	Luwuk	6.31	339	P	P	03 05 24.0	-14
LUWI	Luwuk	6.31	339	P	P	03 05 36.1	-1.5
PLAI	Plampang	7.42	255	P	P	03 05 44.8	-3.4
	5.1nm4µm311nm,0.8s						
PLAI	Plampang	7.42	255	P	P	03 05 45.3	-2.9
TNTI	Ternate	8.04	17	P	P	03 05 52.0	-2.4
TNTI	Ternate	8.04	17	P	P	03 05 53.1	-1.3
	71nm,0.9s						
TNTI	Ternate	8.04	17	P	P	03 05 53.2	-1.2
FAKI	Fak Fak	8.24	61	P	P	03 05 53.5	-2.9
FAKI	Fak Fak	8.24	61	P	P	03 05 52.9	-3.5
	2µm109nm,0.5s						
FAKI	Fak Fak	8.24	61	P	P	03 05 55.1	-1.3
MTN	Manton Dam	8.37	135	P	P	03 05 56.6	-1.0
	baz=8.4,SNR=732						
MTN	Manton Dam	8.37	135	P	P	03 05 56.3	-1.4
MTN	Manton Dam	8.37	135	P	P	03 05 56.8	-0.8
SIJI	Sorong	8.68	46	P	P	03 06 00.5	-0.3
	142nm,0.5s,baz=216,slow=6.4,SNR=69						
SIJI				S	S	03 07 37.4	-5.6
	22nm,0.6s,baz=126,slow=20,SNR=5.7						
TOLI2	Tolitoli	9.09	332	P	P	03 06 03.6	-1.4
TOLI2	Tolitoli	9.09	332	P	P	03 06 04.5	-0.4
KDU	Kakadu	9.27	128	P	P	03 06 05.2	-1.4
	baz=9.3,SNR=266						
KDU	Kakadu	9.27	128	P	P	03 06 05.3	-1.4
KNRA	Kununurra	9.39	157	P	P	03 06 07.1	-0.8
	baz=9.4,SNR=149						
KNRA	Kununurra	9.39	157	P	P	03 06 07.2	-0.7
KNRA	Kununurra	9.39	157	P	P	03 06 07.4	-0.5
BKB	Balikpapan	9.90	305	P	P	03 06 21.9	+8.6
JAGI	Jajag, Banyuwa	10.89	261	P	P	03 06 21.0	-2.5
JAGI	Jajag, Banyuwa	10.89	261	P	P	03 06 19.9	-3.6
	30nm,1.3s						
MYLDM	Lahad Datu	13.72	331	P	P	03 06 52.2	-0.7
MBWA	Marble Bar	15.01	199	P	P	03 07 04.5	-1.6
MBWA	Marble Bar	15.01	199	P	P	03 07 04.7	-1.3
	18nm,1.5s						
PSA00	Pilbara Seismi	15.36	199	P	P	03 07 08.0	-1.7
PSA00				IAmb	IAmb	03 07 09.0	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	15.36	199	P	P	03 07 09.0	-0.7
WB0	Warramunga Arr	15.63	145	P	P	03 07 10.4	-2.0
WRAB	Tennant Creek	15.74	146	P	P	03 07 11.8	-1.8
WRAB	Tennant Creek	15.74	146	P	P	03 07 12.5	-1.1
WRA	Warramunga Arr	15.74	146	P	P	03 07 12.1	-1.5
	comp=Z,70nm,0.6s,baz=326,slow=6.9,SNR=365						
WRA				S	S	03 09 55.2	+0.1
	comp=Z,6.6nm,0.8s,baz=333,slow=17,SNR=4.8						
WRA	Warramunga Arr	15.74	146	P	P	03 07 11.6	-2.0
WRA				IAmb	IAmb	03 07 12.9	
	comp=Z,17nm,1.2s						
WB2	Warramunga Arr	15.74	146	P	P	03 07 12.0	-1.6
	baz=16						
WB2	Warramunga Arr	15.74	146	P	P	03 07 12.2	-1.5
SBUM	Sibu	15.85	306	P	P	03 07 14.1	-0.7
WR0	Warramunga Arr	15.87	145	P	P	03 07 13.3	-1.5
KSM	Kuching	16.92	299	P	P	03 07 24.3	-0.6
KSM	Kuching	16.92	299	P	P	03 07 24.8	-0.1
LEM	Lembang	17.29	269	P	P	03 07 28.4	0.0
	comp=Z,48nm,0.6s,baz=20,slow=4.6,SNR=7.7						
WRKA	Warakurna	18.23	171	P	P	03 07 37.1	+0.3
	baz=18,SNR=70						
WRKA	Warakurna	18.23	171	P	P	03 07 37.6	+0.9
AS31	Alice Springs	18.66	154	P	P	03 07 41.2	+0.5
ASAR	Alice Springs	18.66	154	P	P	03 07 41.2	+0.6
	comp=Z,66nm,0.6s,baz=331,slow=8.5,SNR=901						
ASAR				S	S	03 10 43.9	+0.8
	comp=Z,5.3nm,0.9s,baz=351,slow=23,SNR=5.3						
ASAR				ScP	ScP	03 14 26.9	+1.1
	comp=Z,1.5nm,0.6s,baz=0.0,slow=5.3,SNR=4.3						
COEN	Coen	19.13	113	P	P	03 07 45.1	+0.1
	baz=19,SNR=63						
COEN	Coen	19.13	113	P	P	03 07 44.7	-0.3
COEN	Coen	19.13	113	P	P	03 07 47.0	+2.0
QIS	Mount Isa	19.53	135	P	P	03 07 48.7	+0.1
	baz=20,SNR=163						
QIS	Mount Isa	19.53	135	P	P	03 07 49.0	+0.3
MEEK	Meekatharra	20.49	197	P	P	03 07 57.3	0.0
	baz=20,SNR=6.3						
MTSU	Mount Surprise	21.82	122	P	P	03 08 09.9	+0.5
	baz=22,SNR=26						
MTSU	Mount Surprise	21.82	122	P	P	03 08 10.5	+1.1
	comp=Z,11nm,1.0s						
OOD	Oodnadatta	23.04	155	P	P	03 08 20.8	+0.7
MORW	Morawa	23.56	200	P	P	03 08 24.4	-0.3
MORW				IAmb	IAmb	03 08 34.0	
	comp=Z,17nm,1.4s						
FORT	Forrest	23.85	174	P	P	03 08 27.1	-0.1
	baz=24,SNR=15						
FORT	Forrest	23.85	174	P	P	03 08 26.9	-0.4
FORT	Forrest	23.85	174	P	P	03 08 28.6	+1.3
	comp=Z,36nm,0.7s						
CTA	Charters Tower	24.36	124	P	P	03 08 32.7	+0.8
	comp=Z,11nm,0.8s,baz=308,slow=11,SNR=7.5						
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	24.36	124	P	P	03 08 32.4	+0.4
CTAO				IAmb	IAmb	03 08 33.6	
	comp=Z,19nm,1.0s						
MULG	Mulgathing	24.69	161	P	P	03 08 35.4	+0.7
BLDU	Ballidu	24.78	197	P	P	03 08 35.6	+0.1
	baz=25,SNR=8.1						
INKA	Innaminka	25.46	146	P	P	03 08 43.0	+1.4
	comp=Z,58nm,0.9s						
LCRK	Leigh Creek	26.43	154	P	P	03 08 50.9	+0.9
QLP	Quilpie	26.72	139	P	P	03 08 53.6	+0.9
	baz=27,SNR=7.1						
QLP	Quilpie	26.72	139	P	P	03 08 53.8	+1.1
KULM	Kulim	27.22	296	P	P	03 08 57.1	-0.1
KULM				IAmb	IAmb	03 08 58.0	
	comp=Z,12nm,0.6s						
BBOO	Buckleboo	27.68	160	P	P	03 09 01.3	+0.3
	baz=28,SNR=42						
BBOO	Buckleboo	27.68	160	P	P	03 09 00.8	-0.2
BBOO	Buckleboo	27.68	160	P	P	03 09 01.6	+0.6
PSI	Prapat	27.81	290	P	P	03 09 02.4	-0.2
	comp=Z,28nm,0.9s,baz=120,slow=5.6,SNR=27						
	comp=Z,28nm,0.9s						
WHYH	Whyalla	28.42	157	P	P	03 09 08.0	+0.5
	comp=Z,50nm,0.7s						
STKA	Stephens Creek	29.20	150	P	P	03 09 15.2	+0.9
	comp=Z,44nm,0.5s,baz=324,slow=9.4,SNR=111						
	comp=Z,44nm,0.5s						
STKA	Stephens Creek	29.20	150	P	P	03 09 15.0	+0.7
	baz=29,SNR=24						
STKA	Stephens Creek	29.20	150	P	P	03 09 14.5	+0.2
STKA				IAmb	IAmb	03 09 15.9	
	comp=Z,10nm,0.7s						
STKA	Stephens Creek	29.20	150	P	P	03 09 15.5	+1.2
HTT	Hallett	29.30	156	P	P	03 09 16.3	+1.1
	baz=29,SNR=41						
HTT	Hallett	29.30	156	P	P	03 09 16.5	+1.3
UBPT	Khong Chiam	29.41	319	P	P	03 09 16.3	+0.1
UBPT				IAmb	IAmb	03 09 17.6	
	comp=Z,12nm,0.8s						
SRIT	Nakonsritamara	29.70	301	P	P	03 09 18.5	-0.4
SRIT				IAmb	IAmb	03 09 20.6	
	comp=Z,31nm,0.8s						
RMQ	Roma	29.77	133	P	P	03 09 20.2	+0.8
	baz=30,SNR=4.3						
TPUB	Ta-pu	30.40	352	P	P	03 09 25.2	+0.5
	comp=Z,38nm,0.8s						
YULB	Yu-li	30.40	353	P	P	03 09 22.7	-2.0
YULB				IAmb	IAmb	03 09 26.0	
	comp=Z,15nm,1.2s						
EIDS	Eidsvold	30.88	129	P	P	03 09 27.4	-1.5
CMSA	Cobar Meteorol	31.14	144	P	P	03 09 32.2	+1.2
	baz=31,SNR=50						
CMSA	Cobar Meteorol	31.14	144	P	P	03 09 32.4	+1.4
YHNB	Yeheng	31.65	354	P	P	03 09 34.8	-0.7
YHNB				IAmb	IAmb	03 09 53.8	
	comp=Z,33nm,1.2s						
ARPS	Mount Arapiles	33.39	155	P	P	03 09 51.3	+1.3
	baz=34,SNR=16						
ARPS	Mount Arapiles	33.39	155	P	P	03 09 51.5	+1.5
JOW	Kunigami	33.75	5	P	P	03 09 53.4	+0.2
ARMA	Armidale	34.15	136	P	P	03 09 58.6	+1.9
	baz=34,SNR=6.0						
ARMA	Armidale	34.15	136	P	P	03 09 56.8	+0.1
ARMA				IAmb	IAmb	03 10 00.2	
	comp=Z,9.8nm,0.6s						
BRAT	Ballarat	34.95	153	P	P	03 10 04.3	+1.2
MGCD	Mangrove Creek	35.58	141	P	P	03 10 09.7	+1.3
TOO	Toolangi	35.68	152	P	P	03 10 11.2	+1.9
	baz=36,SNR=17						
TOO	Toolangi	35.68	152	P	P	03 10 10.2	+0.9
TOO				IAmb	IAmb	03 10 11.9	
	comp=Z,15nm,0.6s						
CAN	Canberra	35.78	145	P	P	03 10 10.9	+0.8
CAN	Canberra	35.78	145	P	P	03 10 12.3	+2.2
CNB	Canberra Magne	35.98	145	P	P	03 10 13.7	+1.9
	baz=36,SNR=13						
CMAR	Chiang Mai Arr	36.07	315	ceP	P	03 10 14.0	-6.4
CMAR	Chiang Mai Arr	36.07	315	pmax	pmax		
	comp=Z,10.0nm,0.7s						
CM31	Chiang Mai Arr	36.07	315	P	P	03 10 13.4	+0.7
CM31				IAmb	IAmb	03 10 14.6	
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	36.07	315	P	P	03 10 13.9	+1.3
	comp=Z,8.6nm,0.7s,baz=144,slow=6.5,SNR=43						
CMAR				ScP	ScP	03 15 22.3	+3.3
	comp=Z,0.7nm,0.3s,baz=158,slow=3.1,SNR=7.0						
	comp=Z,8.6nm,0.7s						
CMAR	Chiang Mai Arr	36.07	315	P	P	03 10 14.1	+1.4
CHTO	Chiang Mai	36.31	315	P	P	03 10 14.9	+0.2
CHTO				IAmb	IAmb	03 10 16.4	
	comp=Z,13nm,0.8s						
CHTO	Chiang Mai	36.31	315	P	P	03 10 15.7	+1.0
	comp=Z,12nm,1.1s						
JCJ	Chichijima	37.72	25	P	P	03 10 24.4	-1.7
	comp=Z,76nm,0.6s,baz=288,slow=23,SNR=13						
	comp=Z,76nm,0.6s						
JCJ	Chichijima	37.72	25	P	P	03 10 24.6	-1.5
JCJ	Chichijima	37.72	25	P	P	03 10 27.1	+1.0
	comp=Z,146nm,0.9s						
JNU	Nakatsue	40.26	8	P	P	03 10 46.4	-0.1
	comp=Z,11nm,0.7s,baz=236,slow=7.4,SNR=4.5						
	comp=Z,11nm,0.7s						
JNU	Nakatsue	40.26	8	P	P	03 10 46.0	-0.6
JNU				IAmb	IAmb	03 10 47.9	
	comp=Z,17nm,1.0s						
JHS	Saijyo	42.44	10	IAmb	IAmb	03 11 06.0	
	comp=Z,22nm,0.7s						
XAN	Xi'an	43.55	340	⇓P	P	03 11 12.3	-0.2
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
TIA	Tai'an	43.59	351	⇑P	P	03 11 12.8	+0.1
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSCHJ	Chungju	43.70	3	IAmb	IAmb	03 11 15.3	
	comp=Z,14nm,0.6s						
KSAR	Wonju Array Be	44.27	3		P	03 11 18.2	+0.4
KSRS	Korea Array	44.28	3	P	P	03 11 19.1	+1.2
	comp=Z,5.7nm,0.6s,baz=179,slow=9.6,SNR=37						
	comp=Z,5.7nm,0.6s						
KS19	Wonju Array Si	44.32	3	P	P	03 11 18.9	+0.6
MJAR	Matsushiro Arr	45.02	15	P	P	03 11 23.9	+0.3
	comp=Z,13nm,0.9s,baz=187,slow=8.9,SNR=19						
	comp=Z,13nm,0.9s						
MJAR	Matsushiro Arr	45.02	15	P	P	03 11 22.8	-0.9
SEHB	SEOHWA	45.11	4	P	P	03 11 25.6	+1.2
SEHB				IAmb	IAmb	03 11 27.0	
	comp=Z,13nm,0.9s						
HNS	HongShan	45.19	348	⇑P	P	03 11 25.5	+0.6
HNS				pmax	pmax		
	comp=Z,14nm,0.8s						
SHL	Shillong	45.66	316	P	P	03 11 28.3	-0.7
JSD	Sado	46.45	14	P	P	03 11 35.3	+0.8
JSD				IAmb	IAmb	03 11 36.1	
	comp=Z,32nm,1.2s						
LZH	Lanzhou	47.24	336	eP	P	03 11 42.1	+1.4
LZH				pmax	pmax		
	comp=Z,20nm,1.6s						
LSA	Lhasa	48.89	320	P	P	03 11 54.1	+0.6
LSA				IAmb	IAmb	03 11 56.6	
	comp=Z,15nm,0.7s						
HHC	Hu-ho-hao-te	49.17	346	eP	P	03 11 58.1	+3.1
HHC				pmax	pmax		
	comp=Z,29nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.3s						
TAPN	Taplejung	49.68	315	eP	P	03 11 59.4	+0.2
	comp=Z,36nm,0.4s						
JTM	Tenmabayashi	49.76	16	P	P	03 12 00.3	+1.1
RAMN	Ramite	50.23	314	eP	P	03 12 04.2	+1.0
	comp=Z,91nm,0.6s						
XLT	XiLinHaoTe	51.28	352	eP	P	03 12 10.1	-0.2
XLT				pmax	pmax		
	comp=Z,15nm,0.9s						
XLT				pmax	pmax		
	comp=Z,66nm,3.9s						
USA0B	Ussuriysk Arra	51.32	6	P	P	03 12 10.8	+0.3
USA0B				IAmb	IAmb	03 12 12.2	
	comp=Z,12nm,0.7s						
USRK	Ussuriysk Ar.	51.32	6	P	P	03 12 10.9	+0.4
	comp=Z,10nm,0.5s,baz=193,slow=6.4,SNR=24						
	comp=Z,10nm,0.5s						
PKI	Pulchoki	51.45	314	eP	P	03 12 12.3	+0.1
	comp=Z,35nm,0.5s						
PKIN	Phulchoki	51.46	314	eP	P	03 12 12.5	+0.3
	comp=Z,42nm,0.5s						
MDJ	Mudanjiang	51.52	4		P	03 12 12.2	+0.4
MDJ				IAmb	IAmb	03 12 14.1	
	comp=Z,35nm,1.0s						
GTA	Gaotai	51.72	335	eP	P	03 12 15.3	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GKN	Gorkha	52.26	314	eP	P	03 12 17.9	+0.1
	comp=Z,47nm,0.4s						
BNX	BinXian	52.52	2	⇑P	P	03 12 19.3	+0.2
BNX				pmax	pmax		
	comp=Z,32nm,1.5s						
BNX				pmax	pmax		
	comp=Z,130nm,3.8s						
RPZ	Rata Peaks	54.34	140	P	P	03 12 33.4	+1.3
RPZ				IAmb	IAmb	03 12 35.0	
	comp=Z,74nm,1.3s						
ULN	Ulaanbaatar	56.87	346	P	P	03 12 50.8	+1.2
SONM	Songino Array	57.00	345	P	P	03 12 51.9	+1.3
	comp=Z,4.0nm,0.8s,baz=160,slow=7.4,SNR=13						
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	57.00	345	P	P	03 12 51.6	+1.1
WMQ	Urumqi	60.79	330	eP	P	03 13 18.4	+2.4
NIL	Nilore	63.53	313	P	P	03 13 33.9	0.0
NIL				IAmb	IAmb	03 13 34.2	
	comp=Z,15nm,0.5s						
KSH	Kashi	64.74	320	P	P	03 13 42.8	+1.1
KSH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MK31	Makanchi Array	65.59	329	P	P	03 13 48.1	+1.4
MKAR	Makanchi Array	65.59	329	P	P	03 13 48.2	+1.5
	comp=Z,7.2nm,0.5s,baz=126,slow=7.5,SNR=63						
	comp=Z,7.2nm,0.5s						
MKAR	Makanchi Array	65.59	329	P	P	03 13 47.9	+1.2
PEA0B	Petropavlovsk-	65.95	21	P	P	03 13 50.1	+1.4
PEA0B				IAmb	IAmb	03 13 50.9	
	comp=Z,24nm,0.8s						
PETK	Petropavlovsk-	65.95	21	P	P	03 13 49.8	+1.1
	comp=Z,8.4nm,0.5s,baz=203,slow=3.6,SNR=13						
	comp=Z,8.4nm,0.5s						
KBL	Kabul	67.03	312	P	P	03 13 57.2	+1.1
KBL				IAmb	IAmb	03 13 57.5	
	comp=Z,6.8nm,0.6s						
AAK	Ala-Archa	67.41	322	P	P	03 13 58.7	+0.5
GAR	Garm	68.21	317	P	P	03 14 03.4	+0.2
YAK	Yakutsk	68.89	2	P	P	03 14 07.5	+1.0
MA2	Magadan	69.43	14	P	P	03 14 10.9	+1.0
MA2				IAmb	IAmb	03 14 12.4	
	comp=Z,18nm,0.8s						
ZAA0	Zalesovo Array	69.47	336	P	P	03 14 09.5	-0.7
ZALV	Zalesovo Beam	69.47	336	P	P	03 14 10.6	+0.4
	comp=Z,2.6nm,0.4s,baz=138,slow=5.3,SNR=11						
ZALV				S	S	03 22 33.5	-1.0
	comp=Z,1.4nm,0.7s,baz=140,slow=9.2,SNR=5.5						
	comp=Z,2.6nm,0.4s						
KURK	Kurchatov	70.00	331	P	P	03 14 14.3	+0.9
KKAR	Karatay Array	70.13	321	P	P	03 14 13.8	-0.7
HRA	Herat	72.09	309	P	P	03 14 26.7	+0.3
VNDA	Vanda	73.11	172	P	P	03 14 32.0	+0.9
	comp=Z,0.8nm,0.5s,baz=317,slow=9.1,SNR=9.0						
	comp=Z,0.8nm,0.5s						
BRVK	Borovoye	75.55	329	P	P	03 14 46.0	+0.8
TIXI	Tiksi	78.50	1	P	P	03 15 00.3	-0.7
TIXI				IAmb	IAmb	03 15 02.3	
	comp=Z,13nm,0.4s						
ABKAR	Akbulak array	79.47	323	P	P	03 15 07.8	+1.3
NRIK	Noril'sk	80.40	347	P	P	03 15 10.9	-0.1
	comp=Z,1.9nm,0.4s,baz=194,slow=4.3,SNR=3.7						
	comp=Z,1.9nm,0.4s						
NRIK	Noril'sk	80.40	347	P	P	03 15 11.8	+0.7
IMAR	Indian Mountai	92.75	24	P	P	03 16 11.6	+1.2
COLD	Coldfoot	94.35	23	IAmb	IAmb	03 16 19.5	
	comp=Z,2.8nm,0.8s						
I23K	Minto, Yukon-K	94.42	25	IAmb	IAmb	03 16 19.4	
	comp=Z,6.6nm,0.9s						
H23K	Yukon River	94.43	24	IAmb	IAmb	03 16 19.7	
	comp=Z,3.7nm,0.8s						
RND	Reindeer	94.44	27	IAmb	IAmb	03 16 18.4	
	comp=Z,5.1nm,0.8s						
WRH	Wood River Hil	94.89	26	IAmb	IAmb	03 16 20.4	
	comp=Z,3.8nm,1.0s						
CCB	Clear Creek Bu	95.03	26	IAmb	IAmb	03 16 21.3	
	comp=Z,4.8nm,1.1s						
H24K	Noodor Dome	95.11	24	IAmb	IAmb	03 16 22.9	
	comp=Z,4.2nm,0.9s						
ILAR	Eielson Array	95.44	25	P	P	03 16 21.7	-0.9
	comp=Z,0.5nm,0.4s,baz=234,slow=5.2,SNR=12						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	95.44	25	P	P	03 16 21.1	-1.5

BMAR	**Burnt Mountain**	**96.54**	**23**	P	**P**	**03 16 27.9**	**+0.3**
MNK	**Minsk**	**99.79**	**324**	*i* P	**Pdif**	**03 16 41.1**	**-1.2**
	comp=E,1.0nm,0.6s						
MNK				*i* P	**Pdif**	**03 16 41.1**	**-1.2**
	comp=N,6.0nm,0.7s						
MNK				*i* P	**Pdif**	**03 16 41.1**	**-1.2**
	comp=Z,3.0nm,0.7s,baz=88						
MNK				*i* pP	**pP**	**03 18 35.5**	**-6.8**
MNK				*i* PP	**PP**	**03 20 59.4**	**+3.7**
MNK				*i* PPP	PPP	03 23 07.3	
MNK				*i* SKS		03 25 56.1	
MNK				*i* S	**SKSac**	**03 26 27.1**	**-1.2**
MNK				*i* SP	**SP**	**03 28 57.4**	**-4.1**
MNK				*i* pS	pS	03 29 13.2	-51
MNK				*i* SS	**SS**	**03 34 33.1**	**-3.7**
MNK				*i* SSS	SSS	03 38 36.0	
MNK				*i* LR	LR	03 54 56.6	
MNK				*i* LRM	MLR	04 01 29.0	
	comp=Z,163nm,22.4s						
MNK				*i* LRM	MLR	04 01 60.0	
	comp=N,758nm,23.9s						
MNK				*i* LRM	MLR	04 02 14.9	
	comp=E,56nm,23.2s						
YKA	**Yellowknife Ar**	**109.86**	**25**	PKiKP	**PKiKP**	**03 21 26.2**	**+0.6**
	comp=E,0.4nm,0.5s,baz=293,slow=2.1,SNR=5.9						
HLID	**Hailey**	**116.72**	**44**		**PKiKP**	**03 21 40.6**	**+1.0**
PDAR	**Pinedale Array**	**120.34**	**44**	PKP	**PKiKP**	**03 21 47.9**	**+1.1**
	comp=E,0.5nm,0.4s,baz=205,slow=4.0,SNR=2.6						
O20A	**White River Ci**	**122.17**	**47**		**PKPdf**	**03 21 50.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.97**	**281**	PKP	**PKPdf**	**03 21 54.8**	**+0.7**
	comp=E,0.9nm,0.8s,baz=94,slow=1.6,SNR=4.9						
TXAR	**Lajitas Array**	**129.11**	**58**	PKP	**PKiKP**	**03 22 05.7**	**+1.2**
	comp=E,0.4nm,0.5s,baz=211,slow=3.5,SNR=5.7						
TXAR				SKPab	SKPbc	03 24 37.5	+3.0
	comp=E,1.7nm,0.7s,baz=269,slow=3.9,SNR=15						
SCHQ	**Schefferville**	**131.33**	**9**	SKPab	**SKPab**	**03 24 42.6**	**+0.1**
	comp=E,1.9nm,0.7s,baz=333,slow=2.3,SNR=3.7						
S39A	**Bolivar**	**133.71**	**43**		**PKiKP**	**03 22 13.2**	**-0.2**
LRAL	**Lakeview Retre**	**140.56**	**45**		PKPpre	03 22 20.3	
FPAL	**Fort Paine**	**140.63**	**42**		PKPpre	03 22 20.1	
152A	**Waverly Hall**	**142.34**	**43**		**PKPdf**	**03 22 25.6**	**-2.3**
W57A	**Gilead**	**143.73**	**36**		PKPbc	03 22 29.9	+0.7
T59A	**Double "B" Far**	**143.73**	**31**		PKPab	03 22 29.4	+0.3
V58A	**Windy Hill, Pi**	**143.77**	**34**		PKPbc	03 22 29.8	+0.4
BIRD	**Birdtown, Kers**	**143.80**	**37**	PKPdf	PKPab	03 22 29.3	-0.1
Y57A	**Sumter**	**144.28**	**38**		**PKPdf**	**03 22 32.2**	**+1.0**
Y59A	**Loris**	**145.20**	**36**	PKPbc	**PKPbc**	**03 22 34.1**	**+0.4**
CPUP	**Villa Florida**	**146.81**	**176**	PKPbc	**PKPdf**	**03 22 37.5**	**+1.7**
	comp=E,1.2nm,0.7s,baz=251,slow=4.6,SNR=3.4						

KRSC 20 03:28:55.5±1.9, 52°.08N×157°.65E, h144^{km}±15^{km}, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAK	**Asacha**	**0.34**	**27**	*e*P	Pn	03 29 16.6	+1.0
KDTR	**Khodutka, Kamc**	**0.38**	**135**	*i* P	Pn	03 29 16.1	+0.5
KDTR				*e*S	Sn	03 29 31.0	+0.2
MTVR	**Mutnovka**	**0.52**	**39**	*e*P	Pn	03 29 17.5	+1.0
GRL	**Gorelyy**	**0.54**	**29**	*e*P	Pn	03 29 18.0	+1.5
MIPR	**Malaya Ipel'ka**	**0.58**	**290**	*i* P	Pn	03 29 16.6	0.0
MIPR				*e*S	Sn	03 29 31.7	-1.0
RUS	**Russkaya**	**0.64**	**56**	*i* P	Pn	03 29 18.0	+1.1
PAU	**Pauzhetka**	**0.80**	**221**	*e*P	Pn	03 29 18.3	+0.2
KRMR	**Karymshinskiy**	**0.81**	**21**	*i* P	Pn	03 29 19.3	+1.2
KRMR				*e*S	Sn	03 29 37.1	+1.7
APC	**Apacha**	**0.90**	**341**	*i* P	Pn	03 29 19.3	+0.5
APC				*e*S	Sn	03 29 36.4	-0.3
PET	**Petropavlovsk**	**1.13**	**33**	*e*P	Pn	03 29 22.1	+1.3
DALK	**Dalny**	**1.17**	**35**	*e*P	Pn	03 29 22.6	+1.4
DALK				*e*S	Sn	03 29 43.2	+2.3
UGLR	**Uglovaya**	**1.34**	**32**	*e*P	Pn	03 29 25.3	+2.2
KOK	**Koryaka**	**1.36**	**26**	*e*P	Pn	03 29 25.4	+2.2
AVH	**Avacha**	**1.36**	**29**	*e*P	Pn	03 29 25.5	+2.3
SMAR	**Somma**	**1.38**	**30**	*e*P	Pn	03 29 25.7	+2.1
KRER	**Koryakskii**	**1.40**	**28**	*e*P	Pn	03 29 25.8	+2.0
SDLR	**Sedlovina**	**1.42**	**32**	*e*P	Pn	03 29 25.9	+2.0
KRX	**Arik**	**1.42**	**25**	*e*P	Pn	03 29 25.7	+1.8
GNL	**Ganaly**	**1.63**	**6**	*e*P	Pn	03 29 27.2	+1.1
SPN	**Mys Shipunski**	**1.77**	**54**	*e*P	Pn	03 29 29.4	+1.8
SPN				*e*S	Sn	03 29 53.0	+0.8
KII	**Karymskiy**	**2.25**	**28**	*e*P	Pn	03 29 36.3	+3.1
MKZ	**Mys Kozlova**	**3.49**	**43**	*e*P	Pn	03 29 50.2	+1.4
MKZ				*e*S	Sn	03 30 29.9	-0.2
TUMD	**Tumrok D**	**3.54**	**27**	*e*P	Pn	03 29 52.4	+2.9
TUMD				*e*S	Sn	03 30 34.1	+2.8
TUMR	**Tumrok**	**3.54**	**24**	*e*P	Pn	03 29 52.8	+3.2
KBTR	**Krutoberegovo**	**5.14**	**34**	*e*P	Pn	03 30 11.8	+1.3
BKI	**Bering**	**5.86**	**54**	*e*P	Pn	03 30 21.5	+1.4
BKI				*e*S	Sn	03 31 22.3	-3.9

MAN ***20*** *03:36:13.9, 14°.42N×119°.40E, h33^{km}, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*

NEIC ***20*** *03:36:18.3±1.1, 14°.4N±0°.1×119°.6E±0°.1, h55^{km}±9^{km}, mb4.3/17, Error ellipse: s-maj=21.2km s-min=15.1km az=201.0*

IDC ***20*** *03:36:19.9±2.6, 14°.46N×119°.79E, h73^{km}±23^{km}, mb3.7/12, mbtmp4.0/12, MS3.1/3, Error ellipse: s-maj=39.9km s-min=15.0km az=75.0*

ISC 20 03:36:15.9±0.6, 14°.44N±0°.05×119°.50E±0°.06, h36^{km}, n48, σ1^{s}69/50, mb4.1/19, MS3.0/3, 16D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**1.01**	**134**	⇓*i*P	**Pn**	**03 36 33.0**	**-0.6**
MACP	**Maragondon, Ca**	**1.19**	**99**	⇓*e*P	**Pn**	**03 36 35.6**	**-0.4**
SCZP	**Santa Cruz**	**1.38**	**17**	⇓*e*P	**Pn**	**03 36 37.0**	**-1.6**
TGY	**Tagaytay City**	**1.43**	**104**	P	**Pn**	**03 36 40.6**	**+1.2**
	2µm,0.5s,baz=285,slow=2.5,SNR=54						
TGY				S	**Sn**	**03 37 00.3**	**+3.3**
	2µm,0.3s,baz=80,slow=23,SNR=11						
TGY	**Tagaytay City**	**1.43**	**104**	⇓*e*P	**Pn**	**03 36 40.4**	**+1.0**
TGY				*e*S	**Sn**	**03 37 00.2**	**+3.1**
QVP	**Quezon City--P**	**1.47**	**83**	⇓*e*P	**Pn**	**03 36 40.9**	**+1.1**
PGP	**Puerto Galera**	**1.69**	**123**	⇓*e*P	**Pn**	**03 36 43.1**	**+0.2**
PGP				*i* S	**Sn**	**03 36 58.7**	**-4.7**
BOLP	**Bolinao**	**1.97**	**12**	⇓*e*P	**Pn**	**03 36 44.3**	**-2.4**
LQP	**Lukban**	**2.00**	**99**	⇓*e*P	**Pn**	**03 36 47.9**	**+0.5**
LQP				*e*S	**Sn**	**03 37 04.3**	**-7.0**
SMPP	**San Manuel, Pa**	**2.04**	**34**	⇓*e*P	**Pn**	**03 36 47.0**	**-0.7**
BALP	**Baler**	**2.38**	**57**	⇓*e*P	**Pn**	**03 36 52.8**	**+0.3**
BOAC	**Boac**	**2.48**	**113**	⇓*e*P	**Pn**	**03 36 54.4**	**+0.7**
SJMP	**San Jose**	**2.52**	**141**	⇓*e*P	**Pn**	**03 36 53.5**	**-0.8**
SAMP	**Sagada Mountai**	**2.95**	**27**	⇓*e*P	**Pn**	**03 37 00.5**	**+0.3**
JCNP	**Jose Panganiba**	**3.10**	**92**	⇓*e*P	**Pn**	**03 37 03.0**	**+0.7**
ENPP	**El Nido**	**3.22**	**181**	⇓*e*P	**Pn**	**03 37 03.9**	**0.0**
APYP	**Conner**	**3.79**	**26**	⇓*i*P	**Pn**	**03 37 13.4**	**+1.6**
CMAR	**Chiang Mai Arr**	**20.11**	**284**	P	**P**	**03 40 48.6**	**+1.8**
CHTO	**Chiang Mai**	**20.17**	**285**	P	**P**	**03 40 48.9**	**+1.5**
CHTO				IAmb	IAmb	03 40 53.1	
	comp=Z,8.0nm,0.5s						
JHS	**Saijyo**	**23.86**	**29**	P	**P**	**03 41 25.1**	**-0.9**
JHS				IAmb	IAmb	03 41 44.8	
	comp=Z,16nm,1.5s						
KSRS	**Korea Array**	**24.11**	**17**	P	**P**	**03 41 27.5**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=198,slow=9.4,SNR=6.0						
KSRS				LR	LR	03 52 07.9	
	comp=Z,46nm,18.4s,baz=240,slow=40						
	comp=Z,0.7nm,0.5s						
ULN	**Ulaanbaatar**	**34.89**	**345**	P	**P**	**03 43 03.1**	**-0.9**
ULN				IAmb	IAmb	03 43 05.5	
	comp=Z,5.8nm,1.4s						
SONM	**Songino Array**	**35.03**	**345**	P	**P**	**03 43 06.0**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=176,slow=5.8,SNR=2.1						
	comp=Z,0.5nm,0.6s						
KLR	**Kul'dur**	**36.12**	**14**	P	**P**	**03 43 14.1**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=216,slow=7.0,SNR=11						
KLR				LR	LR	04 00 26.9	
	comp=Z,23nm,18.0s,baz=228,slow=40						
	comp=Z,2.9nm,0.6s						
WB0	**Warramunga Arr**	**37.02**	**156**	P	**P**	**03 43 21.1**	**-1.3**
WB0				IAmb	IAmb	03 43 21.9	
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**37.16**	**156**	P	**P**	**03 43 22.6**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=334,slow=9.7,SNR=22						
	comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**37.16**	**156**	IAmb	IAmb	03 43 28.8	
	comp=Z,0.2nm,1.1s						
WB2	**Warramunga Arr**	**37.16**	**156**	P	**P**	**03 43 22.3**	**-1.3**
ASAR	**Alice Springs**	**40.41**	**159**	P	**P**	**03 43 50.8**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=338,slow=6.7,SNR=23						
	comp=Z,1.5nm,0.5s						
MK31	**Makanchi Array**	**44.75**	**324**	P	**P**	**03 44 26.5**	**+0.7**
ZAA0	**Zalesovo Array**	**47.87**	**333**	P	**P**	**03 44 50.3**	**+0.1**
ZALV	**Zalesovo Beam**	**47.87**	**333**	P	**P**	**03 44 52.0**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=91,slow=12,SNR=3.5						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**48.93**	**326**	P	**P**	**03 44 59.4**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=124,slow=8.1,SNR=12						
	comp=Z,1.2nm,0.7s						
KURK	**Kurchatov**	**48.93**	**327**	P	**P**	**03 45 00.1**	**+1.7**
KURK				IAmb	IAmb	03 45 00.7	
	comp=Z,2.8nm,0.8s						
MA2	**Magadan**	**50.59**	**20**	LR	LR	04 10 01.0	
	comp=Z,14nm,18.0s,baz=215,slow=40						
MA2	**Magadan**	**50.59**	**20**	P	**P**	**03 45 10.8**	**-0.2**
ABKAR	**Akbulak array**	**59.41**	**319**	P	**P**	**03 46 15.3**	**+0.5**
TTA	**Tatalina**	**74.75**	**28**	P	**P**	**03 47 52.0**	**0.0**
TTA				IAmb	IAmb	03 47 53.1	
	comp=Z,3.0nm,0.6s						
J20K	**Nowinta River**	**75.53**	**27**	P	**P**	**03 47 56.3**	**-0.2**
J20K				IAmb	IAmb	03 47 58.3	
	comp=Z,3.1nm,0.7s						
H21K	**Melozitna Rive**	**76.01**	**25**	P	**P**	**03 47 59.0**	**-0.2**
H21K				IAmb	IAmb	03 48 01.0	
	comp=Z,4.7nm,1.1s						
BPAW	**Bear Paw Mtn.**	**76.92**	**27**	P	**P**	**03 48 04.4**	**0.0**
RND	**Reindeer**	**77.95**	**27**	P	**P**	**03 48 10.0**	**-0.2**
ARCES	**ARCESS Array B**	**77.98**	**339**	P	**P**	**03 48 11.1**	**+0.9**
	comp=Z,2.4nm,1.0s,baz=69,slow=6.6,SNR=5.3						
	comp=Z,2.4nm,1.0s						
ILAR	**Eielson Array**	**78.59**	**26**	P	**P**	**03 48 12.3**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=263,slow=3.5,SNR=6.3						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**79.07**	**331**	P	**P**	**03 48 16.6**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=42,slow=8.8,SNR=4.7						
	comp=Z,0.7nm,0.6s						
NB2	**NORSAR Subarra**	**86.07**	**332**	P	**P**	**03 48 52.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=66,slow=4.8						
NOA	**NORSAR Array B**	**86.07**	**332**	P	**P**	**03 48 52.5**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=68,slow=4.9,SNR=5.2						
	comp=Z,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**92.53**	**22**	P	**P**	**03 49 23.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=311,slow=4.1,SNR=8.9						
	comp=Z,0.5nm,0.6s						

NOU 20 03:36:58.2, 14°.50S×167°.48E, h116^{km}, mb3.6/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.98**	**196**	P	Pn	03 37 19.5	-0.2
DVP	**Devils Point**	**3.28**	**168**	P	Pn	03 37 48.5	+0.5
YATNC	**Mamie plateau,**	**7.54**	**184**	P	Pn	03 38 44.3	-1.2
DZM	**Mont Dzumac**	**7.59**	**187**	P	Pn	03 38 46.1	-0.2
NOUC	**Port Laguerre**	**7.64**	**188**	P	Pn	03 38 47.6	+0.8
OUENC	**Ouen Island, N**	**7.90**	**184**	P	Pn	03 38 50.8	+0.5
	10nm,0.9s						

BJI ***20*** *04:08:55.1±0.0, 11°.87S×65°.92E, h10^{km}, mb4.7/50, mB5.0/27, Ms4.8/35, Ms7 4.5/35*

IDC ***20*** *04:08:59.1±0.4, 11°.44S×66°.32E, h0^{km}, mb4.4/34, mbtmp4.4/35, ML4.2/1, MS4.2/60, Error ellipse: s-maj=13.1km s-min=12.7km az=177.0*

NEIC ***20*** *04:09:01.6±1.7, 11°.42S±0°.09×66°.33E±0°.08, h10^{km}±1^{km}, mb4.9/104, Error ellipse: s-maj=15.8km s-min=13.2km az=166.0*

GCMT ***20*** *04:09:02.6±0.2, 11°.48S±0°.01×66°.29E±0°.01, h12^{km}, MW5.1/127, Moment Tensor Solution. s57,c69; s127,c199; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.24±.09; $M_{\theta\theta}$1.74±.09; $M_{\phi\phi}$3.50±.09; $M_{r\theta}$0.72±.33; $M_{\theta\phi}$-2.33±.08; $M_{\phi r}$0.30±.32; Best double couple: $M_0$5.23100×10^{16} NP1:ϕ_s153.00000°, δ45.00000°, λ-79.00000°. NP2:ϕ_s317.00000°, δ46.00000°, λ-101.00000°. Principal axes: T 5.1130, Plg1.0000°, Azm55.0000°; N 0.2360, Plg8.0000°, Azm325.0000°; P -5.3490, Plg82.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:09:01.6±0.6, 11°.46S±0°.06×66°.30E±0°.05, h16^{km}±3^{km}, h17^{km}:pP-P, n316, σ1^{s}61/295, mb4.8/107, MS4.4/73, 28C-1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**7.17**	**59**	Pn	**Pn**	**04 10 42.2**	**-3.4**
H08S1				Sn	**Sn**	**04 11 58.9**	**-7.8**
H08S1				T	T	04 18 08.8	
	baz=237,slow=76,SNR=301						
H08S2	**Diego Garcia H**	**7.19**	**59**	Pn	**Pn**	**04 10 42.7**	**-3.2**
H08S2				Sn	**Sn**	**04 11 58.9**	**-8.2**
H08S2				T	T	04 18 10.5	
	baz=237,slow=76,SNR=221						
H08S3	**Diego Garcia H**	**7.19**	**59**	Pn	**Pn**	**04 10 42.4**	**-3.6**
H08S3				Sn	**Sn**	**04 11 58.8**	**-8.4**
H08S3				T	T	04 17 57.0	
	baz=237,slow=76,SNR=263						
DGAR	**Diego Garcia**	**7.28**	**57**	Pn	**Pn**	**04 10 44.5**	**-2.9**
MSEY	**Mahe Island**	**12.65**	**301**	Pn	**Pn**	**04 12 00.8**	**-0.4**
OPO	**Ambohidratompo**	**19.76**	**247**	P	**Pn**	**04 13 32.9**	**+0.1**
	0.1nm,0.3s,baz=64,slow=7.0,SNR=3.7						
OPO				LR	LR	04 19 11.4	
	comp=Z,498nm,20.6s,baz=190,slow=31						
	8.8nm,0.9s						
ABPO	**Ambohimpanom**	**19.86**	**245**	P	**P**	**04 13 31.3**	**-1.1**
ABPO				IAmb	IAmb	04 13 49.8	
	comp=Z,73nm,1.6s						
VOI	**Vohitsoka**	**21.35**	**238**	P	**P**	**04 13 48.9**	**+0.4**
VOI				IAmb	IAmb	04 13 54.0	
	comp=Z,52nm,1.2s						
PCHI	**Peechi**	**24.02**	**25**	*e*P	P	04 14 07.7	-8.3
PCHI				*e*S	**S**	**04 18 35.2**	**+2.6**
KMBO	**Kilima Mbogo**	**30.60**	**288**	P	**P**	**04 15 15.8**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=63,slow=9.5,SNR=5.4						
KMBO				LR	LR	04 25 59.7	
	comp=Z,780nm,18.5s,baz=94,slow=33						
	comp=Z,2.1nm,0.4s						
KMBO	**Kilima Mbogo**	**30.60**	**288**	P	**P**	**04 15 14.5**	**-1.0**
ATD	**Arta Tunnel**	**32.62**	**314**	LR	LR	04 26 16.8	
	comp=Z,226nm,19.8s,baz=134,slow=32						
ATD	**Arta Tunnel**	**32.62**	**314**	P	**P**	**04 15 33.0**	**0.0**
ATD				IAmb	IAmb	04 15 41.0	
	comp=Z,19nm,1.2s						
FURI	**Furi**	**34.11**	**305**	P	**P**	**04 15 46.1**	**-0.1**
LODK	**Lodwar**	**34.14**	**294**	P	**P**	**04 15 46.4**	**+0.1**
LODK				IAmb	IAmb	04 16 08.4	
	comp=Z,22nm,1.7s						
WSAR	**Wadi Sarin**	**35.29**	**348**	LR	LR	04 27 56.7	
	comp=Z,238nm,18.4s,baz=162,slow=32						
PSI	**Prapat**	**35.40**	**68**	LR	LR	04 27 50.3	
	comp=Z,1µm,20.9s,baz=256,slow=32						
MBAR	**Mbarara**	**36.92**	**284**	LR	LR	04 29 41.5	
	comp=Z,661nm,18.3s,baz=94,slow=34						
MBAR	**Mbarara**	**36.92**	**284**	P	**P**	**04 16 10.4**	**+0.1**
LSZ	**Lusaka**	**37.24**	**260**	LR	LR	04 30 29.2	
	comp=Z,731nm,18.3s,baz=106,slow=35						
LSZ	**Lusaka**	**37.24**	**260**	P	**P**	**04 16 13.3**	**+0.3**
MATP	**Matopo**	**37.35**	**251**	P	**P**	**04 16 14.2**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=97,slow=9.4,SNR=4.3						
MATP				LR	LR	04 30 20.8	
	comp=Z,1µm,21.1s,baz=60,slow=34						
	comp=Z,4.0nm,0.9s						
UOSS	**Minazif**	**37.50**	**345**	P	**P**	**04 16 13.6**	**-1.2**
IPM	**Ipoh**	**38.00**	**67**	P	**P**	**04 16 18.3**	**-1.1**
IPM				IAmb	IAmb	04 16 21.9	
	comp=Z,36nm,1.7s						
KULM	**Kulim**	**38.01**	**66**	P	**P**	**04 16 18.7**	**-0.7**
KULM				IAmb	IAmb	04 16 22.2	
	comp=Z,18nm,1.2s						
SRIT	**Nakonsritamara**	**38.65**	**60**	P	**P**	**04 16 25.0**	**+0.2**
SRIT				IAmb	IAmb	04 16 41.7	
	comp=Z,27nm,1.4s						
MYKOM	**Kota Tinggi**	**39.58**	**73**	P	**P**	**04 16 33.0**	**+0.5**
RAYN	**Ar Rayn**	**40.28**	**330**	P	**P**	**04 16 38.3**	**0.0**
LBTB	**Lobatse**	**40.77**	**245**	P	**P**	**04 16 42.1**	**-0.4**
	comp=Z,9.7nm,0.9s,baz=80,slow=9.9,SNR=10						
LBTB				LR	LR	04 31 00.0	
	comp=Z,850nm,22.0s,baz=78,slow=32						
	comp=Z,9.7nm,0.9s						
LBTB	**Lobatse**	**40.77**	**245**	P	**P**	**04 16 42.8**	**+0.3**
LBTB				IAmb	IAmb	04 16 50.1	
	comp=Z,58nm,1.5s						
LEM	**Lembang**	**41.02**	**87**	LR	LR	04 31 05.2	
	comp=Z,321nm,19.0s,baz=306,slow=32						
BOSA	**Boshof**	**41.92**	**240**	P	**P**	**04 16 51.4**	**-0.4**
	comp=Z,3.8nm,0.9s,baz=56,slow=9.4,SNR=3.0						
BOSA				LR	LR	04 32 19.8	
	comp=Z,1µm,18.7s,baz=78,slow=33						
	comp=Z,3.8nm,0.9s						
BOSA	**Boshof**	**41.92**	**240**	IAmb	IAmb	04 18 10.9	
	comp=Z,45nm,1.8s						
CM31	**Chiang Mai Arr**	**43.83**	**48**	P	**P**	**04 17 07.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**43.83**	**48**	P	**P**	**04 17 08.3**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=247,slow=9.6,SNR=11						
CMAR				LR	LR	04 35 00.6	
	comp=Z,276nm,18.5s,baz=235,slow=36						
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.83**	**48**	P	**P**	**04 17 07.5**	**+0.3**
CHTO	**Chiang Mai**	**44.06**	**47**	P	**P**	**04 17 08.7**	**-0.5**
SHL	**Shillong**	**44.45**	**34**	P	**P**	**04 17 12.2**	**-0.1**
SHL				IAmb	IAmb	04 17 15.5	
	comp=Z,17nm,1.0s						
NIL	**Nilore**	**45.34**	**8**	P	**P**	**04 17 19.1**	**0.0**
NIL				IAmb	IAmb	04 17 19.9	
	comp=Z,18nm,1.0s						
HRA	**Herat**	**45.75**	**355**	P	**P**	**04 17 22.2**	**-0.4**
KBL	**Kabul**	**45.82**	**3**	P	**P**	**04 17 23.0**	**-0.1**
KBL				IAmb	IAmb	04 17 32.1	
	comp=Z,13nm,1.1s						
SUR	**Sutherland**	**46.63**	**236**	LR	LR	04 33 08.1	
	comp=Z,1µm,21.3s,baz=78,slow=31						
UBPT	**Khong Chiam**	**47.02**	**56**	P	**P**	**04 17 32.5**	**-0.1**
UBPT				IAmb	IAmb	04 18 04.8	
	comp=Z,32nm,1.7s						
LSA	**Lhasa**	**47.42**	**30**	P	**P**	**04 17 36.1**	**+0.1**
LSA				IAmb	IAmb	04 17 42.9	
	comp=Z,25nm,1.4s						
TSUM	**Tsumeb**	**47.48**	**254**	LR	LR	04 35 25.0	
	comp=Z,459nm,21.9s,baz=126,slow=33						
SBUM	**Sibu**	**47.70**	**76**	P	**P**	**04 17 38.1**	**0.0**
SBUM				IAmb	IAmb	04 17 43.9	
	comp=Z,8.8nm,1.2s						
H01W3	**Cape Leeuwin H**	**49.20**	**126**	T	T	05 10 24.3	
	baz=286,slow=75,SNR=90						
H01W2	**Cape Leeuwin H**	**49.21**	**126**	T	T	05 10 22.7	
	baz=286,slow=75,SNR=95						
H01W1	**Cape Leeuwin H**	**49.22**	**126**	T	T	05 10 25.6	
	baz=286,slow=75,SNR=99						
GEYT	**Alibeck**	**49.72**	**352**	LR	LR	04 37 19.4	
	comp=Z,222nm,20.1s,baz=170,slow=34						
GEYT	**Alibeck**	**49.72**	**352**	P	**P**	**04 17 52.9**	**-0.2**
CHGR	**Chuyangaron**	**49.92**	**3**	P	**P**	**04 17 54.4**	**-0.3**
CHGR				IAmb	IAmb	04 18 02.4	
	comp=Z,26nm,1.2s						
GAR	**Garm**	**50.34**	**4**	P	**P**	**04 17 57.8**	**-0.1**
EIL	**Elat**	**50.84**	**324**	LR	LR	04 37 39.0	
	comp=Z,196nm,19.0s,baz=82,slow=34						
PZH	**PanZhiHua**	**51.09**	**42**	P	**P**	**04 18 05.4**	**+1.6**
PZH				sP	**pwP**	**04 18 13.9**	**+1.8**
PZH				PP	**PP**	**04 20 04.9**	**+4.2**
PZH				S	**S**	**04 25 26.9**	**+5.7**
PZH				SS	**SS**	**04 28 59.3**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,70nm,4.5s						
PZH				LR	LR		
	comp=Z,860nm,23.1s						
PZH				LR	LR		
	comp=Z,650nm,22.0s						
PZH				LR	LR		
	comp=Z,900nm,20.6s						
BTK	**Batken**	**51.42**	**4**	P	**P**	**04 18 05.8**	**-0.2**
BTK				IAmb	IAmb	04 18 13.5	
	comp=Z,22nm,1.2s						
KSH	**Kashi**	**51.51**	**10**	P	**P**	**04 18 04.3**	**-2.4**
KSH				pP	pP	04 18 09.3	-1.4
KSH				pmax	pmax		
	comp=Z,34nm,0.9s						
KSH				LR	LR		
	comp=Z,450nm,22.0s						
QIZ	**Qiongzhong**	**52.54**	**55**	P	**P**	**04 18 16.5**	**+1.9**
QIZ				S	**S**	**04 25 43.8**	**+2.7**
QIZ				LR	LR		
	comp=Z,340nm,19.9s						
QIZ				LR	LR		
	comp=Z,470nm,21.5s						
QIZ				LR	LR		
	comp=Z,510nm,22.3s						
MMAI	**Mount Meron Ar**	**53.15**	**327**	LR	LR	04 38 57.5	
	comp=Z,168nm,19.8s,baz=316,slow=34						
KAPI	**Kappang**	**53.22**	**88**	LR	LR	04 38 31.7	
	comp=Z,284nm,20.1s,baz=244,slow=33						
TARG	**Taragay, Kyrgy**	**53.97**	**11**	P	**P**	**04 18 25.6**	**+0.4**
MARD	**Mardin**	**54.11**	**335**	P	**P**	**04 18 26.1**	**0.0**
MARD				IAmb	IAmb	04 18 30.1	
	comp=Z,49nm,2.0s						
KDJ	**Kajisay**	**54.25**	**10**	P	**P**	**04 18 26.7**	**-0.3**
AAK	**Ala-Archa**	**54.35**	**7**	LR	LR	04 40 52.6	
	comp=Z,188nm,18.5s,baz=182,slow=35						
AAK	**Ala-Archa**	**54.35**	**7**	P	**P**	**04 18 27.6**	**-0.1**
AAK				IAmb	IAmb	04 18 34.7	
	comp=Z,11nm,1.2s						
GYA	**Guiyang**	**54.40**	**46**	⇑P	**P**	**04 18 29.3**	**+1.0**
GYA				pP	pP	04 18 33.8	+1.6
GYA				S	**S**	**04 26 13.0**	**+6.6**
GYA				pmax	pmax		
	comp=Z,15nm,0.9s						
GYA				LR	LR		
	comp=Z,200nm,16.8s						
GYA				LR	LR		
	comp=Z,280nm,12.5s						
GYA				LR	LR		
	comp=Z,310nm,18.1s						
BOOM	**Boomskoye usch**	**54.41**	**9**	P	**P**	**04 18 27.6**	**-0.5**
KK31	**Karatay Array**	**54.43**	**4**	P	**P**	**04 18 27.8**	**-0.3**
KKAR	**Karatay Array**	**54.43**	**4**	P	**P**	**04 18 27.8**	**-0.3**
GOMU	**GeErMu**	**54.50**	**28**	P	**P**	**04 18 30.3**	**+1.1**
GOMU				S	**S**	**04 26 12.4**	**+4.5**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,99nm,4.6s						
GOMU				LR	LR		
	comp=Z,480nm,16.7s						
GOMU				LR	LR		
	comp=Z,250nm,16.1s						
GOMU				LR	LR		
	comp=Z,610nm,16.7s						
GURO	**Guroymak-BITLI**	**54.67**	**337**	P	**P**	**04 18 30.8**	**+0.7**
GNI	**Garni**	**55.10**	**340**	P	**P**	**04 18 34.6**	**+1.4**
	comp=Z,13nm,0.8s,baz=192,slow=5.0,SNR=10						
GNI				LR	LR	04 42 52.8	
	comp=Z,86nm,18.1s,baz=143,slow=37						
	comp=Z,13nm,0.8s						
GNI	**Garni**	**55.10**	**340**	P	**P**	**04 18 33.0**	**-0.2**
GNI				IAmb	IAmb	04 18 35.6	
	comp=Z,23nm,1.1s						
CD2	**Chengdu**	**55.39**	**39**	P	**P**	**04 18 35.9**	**+0.6**
CD2				S	**S**	**04 26 21.8**	**+2.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=Z,310nm,14.7s						
CD2				LR	LR		
	comp=Z,420nm,17.7s						
TOLI2	**Tolitoli**	**55.55**	**81**	P	**P**	**04 18 36.1**	**-0.7**
TOLI2				IAmb	IAmb	04 18 38.9	
	comp=Z,24nm,1.4s						
KARS	**Kars**	**56.10**	**339**	P	**P**	**04 18 40.7**	**+0.3**
MAW	**Mawson**	**56.13**	**182**	P	**P**	**04 18 39.6**	**-0.4**
	comp=Z,6.1nm,0.9s,baz=3.8,slow=8.8,SNR=5.9						
	comp=Z,6.1nm,0.9s						
MAW	**Mawson**	**56.13**	**182**	P	**P**	**04 18 39.9**	**-0.1**
BATI	**Baumata**	**56.28**	**95**	LR	LR	04 38 57.1	
	comp=Z,456nm,21.2s,baz=284,slow=32						
KOPT	**Kop Dagi**	**56.54**	**336**	P	**P**	**04 18 43.9**	**+0.3**
KOPT				IAmb	IAmb	04 18 46.5	
	comp=Z,18nm,1.4s						
SOEI	**Soe**	**56.92**	**94**	P	**P**	**04 18 47.0**	**+0.3**
BNN	**Bunyan**	**57.55**	**332**	P	**P**	**04 18 50.2**	**-0.4**
WMQ	**Urumqi**	**58.37**	**18**	*e*P	**P**	**04 18 57.5**	**+1.3**
WMQ				pP	pP	04 19 01.8	+1.5
WMQ				S	**S**	**04 27 00.3**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,42nm,1.3s						
WMQ				LR	LR		
	comp=Z,710nm,16.1s						

WMQ				LR	LR		
	comp=Z,570nm,19.3s						
WMQ				LR	LR		
	comp=Z,670nm,22.5s						
KBZ	**Khabaz**	**58.92**	**340**	P	**P**	**04 18 59.2**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=177,slow=4.8,SNR=4.4						
KBZ				LR	LR	04 43 36.0	
	comp=Z,82nm,18.7s,baz=152,slow=35						
	comp=Z,2.4nm,0.8s						
LZH	**Lanzhou**	**59.08**	**35**	*e*P	**P**	**04 19 03.1**	**+1.6**
LZH				pP	sP	04 19 08.8	+1.5
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
LZH				LR	LR		
	comp=Z,210nm,15.7s						
LZH				LR	LR		
	comp=Z,370nm,15.2s						
LZH				LR	LR		
	comp=Z,250nm,15.7s						
KVAR	**Kislovodsk Arr**	**59.19**	**340**	LR	LR	04 44 08.1	
	comp=Z,61nm,20.4s,baz=60,slow=36						
BRTR	**Keskin Array B**	**59.28**	**331**	P	**P**	**04 19 03.0**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=147,slow=9.7,SNR=6.0						
BRTR				LR	LR	04 44 37.5	
	comp=Z,109nm,18.7s,baz=134,slow=36						
	comp=Z,1.8nm,0.9s						
GTA	**Gaotai**	**59.44**	**30**	*e*P	**P**	**04 19 04.3**	**+0.4**
GTA				pP	pP	04 19 08.6	+0.7
GTA				sP	pwP	04 19 12.3	-0.4
GTA				S	**S**	**04 27 17.8**	**+5.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,62nm,5.6s						
GTA				LR	LR		
	comp=Z,240nm,19.9s						
GTA				LR	LR		
	comp=Z,420nm,19.9s						
GTA				LR	LR		
	comp=Z,430nm,19.5s						
MAKZ	**Makanchi**	**59.68**	**12**	P	**P**	**04 19 04.7**	**-0.5**
MK31	**Makanchi Array**	**59.73**	**13**	P	**P**	**04 19 04.2**	**-1.3**
MKAR	**Makanchi Array**	**59.73**	**13**	P	**P**	**04 19 04.6**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=204,slow=7.6,SNR=18						
MKAR				LR	LR	04 44 50.6	
	comp=Z,194nm,19.2s,baz=176,slow=36						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**59.73**	**13**	P	**P**	**04 19 04.4**	**-1.1**
ABKAR	**Akbulak array**	**60.71**	**355**	P	**P**	**04 19 11.6**	**-0.6**
XAN	**Xi'an**	**60.72**	**40**	P	**P**	**04 19 12.1**	**-0.6**
XAN				pP	pP	04 19 17.6	+0.6
XAN				sP	pwP	04 19 21.4	+0.7
XAN				PcP	**PcP**	**04 19 56.1**	**-0.5**
XAN				S	**S**	**04 27 27.9**	**-1.2**
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN				pmax	pmax		
	comp=Z,170nm,3.9s						
XAN				LR	LR		
	comp=Z,280nm,19.9s						
XAN				LR	LR		
	comp=Z,220nm,22.0s						
XAN				LR	LR		
	comp=Z,450nm,22.0s						
BORA	**Eskisehir**	**60.96**	**329**	IAmb	IAmb	04 19 15.8	
	comp=Z,32nm,1.7s						
DAV	**Davao City (W)**	**61.78**	**76**	LR	LR	04 43 44.4	
	comp=Z,299nm,21.9s,baz=252,slow=34						
TNTI	**Ternate**	**61.86**	**83**	P	**P**	**04 19 20.2**	**-0.5**
AKTO	**Aktyubinsk**	**62.05**	**354**	P	**P**	**04 19 21.3**	**0.0**
	comp=Z,6.9nm,1.0s,baz=173,slow=8.2,SNR=14						
AKTO				LR	LR	04 46 04.5	
	comp=Z,100nm,20.1s,baz=161,slow=36						
	comp=Z,6.9nm,1.0s						
WHN	**Wuhan**	**62.25**	**46**	⇑P	**P**	**04 19 25.5**	**+2.5**
CASY	**Casey**	**62.31**	**161**	P	**P**	**04 19 22.5**	**-0.3**
KURBB	**Kurchatov Arra**	**62.73**	**9**	P	**P**	**04 19 25.6**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=208,slow=7.0,SNR=23						
KURBB				LR	LR	04 45 41.8	
	comp=Z,281nm,20.9s,baz=174,slow=35						
	comp=Z,3.7nm,0.8s						
KURK	**Kurchatov**	**62.84**	**9**	P	**P**	**04 19 26.2**	**-0.2**
KURK				IAmb	IAmb	04 19 27.1	
	comp=Z,6.5nm,0.8s						
BRVK	**Borovoye**	**64.35**	**3**	P	**P**	**04 19 35.6**	**-0.8**
BRVK				IAmb	IAmb	04 19 43.3	
	comp=Z,15nm,1.2s						
KDZ	**Kurdzhali**	**64.86**	**327**	P	**P**	**04 19 40.0**	**0.0**
ASAR	**Alice Springs**	**65.09**	**111**	P	**P**	**04 19 42.4**	**+0.4**
	comp=Z,7.7nm,1.1s,baz=273,slow=5.7,SNR=31						
ASAR				LR	LR	04 44 23.3	
	comp=Z,214nm,20.6s,baz=314,slow=33						
	comp=Z,7.7nm,1.1s						
ASAR	**Alice Springs**	**65.09**	**111**	P	**P**	**04 19 42.1**	**+0.1**
AS31	**Alice Springs**	**65.09**	**111**	P	**P**	**04 19 41.6**	**-0.4**
RZN	**Rozhen**	**65.26**	**327**	P	**P**	**04 19 41.8**	**-1.1**
SIJI	**Sorong**	**65.31**	**86**	LR	LR	04 44 38.8	
	comp=Z,189nm,21.8s,baz=22,slow=33						
TIRR	**Tirgusor**	**65.40**	**331**	⇑P	**P**	**04 19 44.0**	**+0.5**
WRA	**Warramunga Arr**	**65.68**	**107**	P	**P**	**04 19 46.1**	**+0.2**
	comp=Z,11nm,1.1s,baz=276,slow=6.4,SNR=34						
WRA				LR	LR	04 44 25.6	
	comp=Z,367nm,21.5s,baz=239,slow=32						
	comp=Z,11nm,1.1s						
WB2	**Warramunga Arr**	**65.69**	**107**	P	**P**	**04 19 46.6**	**+0.6**
MMB	**Musomiste**	**65.73**	**326**	P	**P**	**04 19 45.6**	**-0.1**
HARR	**Harsova**	**65.80**	**331**	⇑P	**P**	**04 19 46.6**	**+0.6**
WR0	**Warramunga Arr**	**65.87**	**107**	P	**P**	**04 19 47.2**	**+0.1**
CFR	**Carcaliu**	**66.07**	**331**	⇑P	**P**	**04 19 48.2**	**+0.5**
KKB	**Krupnik**	**66.27**	**326**	P	**P**	**04 19 49.1**	**-0.1**
NJ2	**Nanjing**	**66.30**	**47**	*e*P	**P**	**04 19 49.1**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HNS	**HongShan**	**66.49**	**41**	⇑P	**P**	**04 19 51.4**	**+0.8**
HNS				S	**S**	**04 28 44.6**	**+3.9**
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
HNS				LR	LR		
	comp=Z,150nm,16.0s						
HNS				LR	LR		
	comp=Z,260nm,16.6s						
HNS				LR	LR		
	comp=Z,270nm,16.1s						
VTS	**Vitosha**	**66.70**	**327**	⇑P	**P**	**04 19 52.8**	**+0.7**
VTS	**Vitosha**	**66.70**	**327**	IAmb	IAmb	04 19 53.6	
	comp=Z,17nm,1.3s						
VTS	**Vitosha**	**66.70**	**327**	P	**P**	**04 19 49.5**	**-2.6**
HHC	**Hu-ho-hao-te**	**66.75**	**36**	*e*P	**P**	**04 19 54.9**	**+2.6**
HHC				sP	pwP	04 20 04.8	+4.3
HHC				S	**S**	**04 28 50.3**	**+6.4**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.1s						
HHC				LR	LR		
	comp=Z,330nm,17.3s						
HHC				LR	LR		
	comp=Z,590nm,17.6s						
HHC				LR	LR		
	comp=Z,810nm,16.3s						
MPEP	**Malo Peshtene**	**66.94**	**328**	P	**P**	**04 19 52.5**	**-0.9**
BISRR	**Bisoca**	**67.02**	**331**	⇑P	**P**	**04 19 55.0**	**+1.1**
ZAA0	**Zalesovo Array**	**67.03**	**12**	IAmb	IAmb	04 20 00.2	
	comp=Z,12nm,1.0s						
ZALV	**Zalesovo Beam**	**67.03**	**12**	P	**P**	**04 19 53.0**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=212,slow=5.3,SNR=14						
ZALV				LR	LR	04 47 51.4	
	comp=Z,220nm,21.1s,baz=192,slow=35						
	comp=Z,4.8nm,0.8s						
MILM	**Milestii Mici**	**67.08**	**333**	*e*P	**P**	**04 19 54.0**	**-0.1**
	comp=Z,140nm,2.4s						
VRI	**Vrincioaia**	**67.24**	**331**	⇑P	**P**	**04 19 56.5**	**+1.2**
PLOR	**Plostina**	**67.27**	**331**	⇑P	**P**	**04 19 56.8**	**+1.4**
MLR	**Muntele Rosu**	**67.34**	**330**	⇑P	**P**	**04 19 58.1**	**+2.1**
MLR	**Muntele Rosu**	**67.34**	**330**	P	**P**	**04 19 57.2**	**+1.1**
	comp=Z,5.0nm,1.0s,baz=126,slow=9.2,SNR=6.8						
	comp=Z,5.0nm,1.0s						
TIA	**Tai'an**	**67.37**	**43**	⇑P	**P**	**04 19 57.4**	**+1.1**
TIA				pmax	pmax		
	comp=Z,11nm,1.2s						
COVR	**Voineasa-Covas**	**67.48**	**331**	⇓P	**P**	**04 19 57.3**	**+0.5**
BLKB	**Belogradchik**	**67.69**	**327**	⇑P	**P**	**04 19 58.4**	**+0.3**
VOIR		**67.74**	**330**	⇑P	**P**	**04 19 58.5**	**0.0**
TESR	**Tescani**	**67.76**	**332**	⇑P	**P**	**04 19 58.6**	**+0.1**
ARU	**Arti**	**67.94**	**355**	P	**P**	**04 19 59.2**	**-0.2**
	comp=Z,2.0nm,0.2s,baz=178,slow=10,SNR=8.1						
ARU				LR	LR	04 49 56.3	
	comp=Z,124nm,18.7s,baz=146,slow=36						
	comp=Z,2.0nm,0.2s						
ARU	**Arti**	**67.94**	**355**	P	**P**	**04 19 59.5**	**+0.1**
DOPR	**Dopca**	**67.96**	**330**	⇑P	**P**	**04 19 59.8**	**+0.1**
SORM	**Soroca**	**68.20**	**334**	⇑P	**P**	**04 20 00.8**	**-0.4**
BIZ	**Bicaz**	**68.32**	**332**	⇑P	**P**	**04 20 02.9**	**+0.8**
LOT	**Lotru**	**68.39**	**329**	⇑P	**P**	**04 20 02.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**68.60**	**289**	P	**P**	**04 20 04.5**	**+0.1**
	comp=Z,1.5nm,1.1s,baz=27,slow=1.7,SNR=5.9						
	comp=Z,1.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**68.60**	**289**	P	**P**	**04 20 04.2**	**-0.1**
TORD				IAmb	IAmb	04 20 05.1	
	comp=Z,17nm,1.8s						
HERR	**Herculane**	**68.68**	**328**	⇑P	**P**	**04 20 04.9**	**+0.6**
GZR	**Gura Zlata**	**68.85**	**329**	⇑P	**P**	**04 20 06.1**	**+0.6**
SONM	**Songino Array**	**68.94**	**28**	P	**P**	**04 20 06.8**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=220,slow=6.2,SNR=15						
	comp=Z,3.5nm,0.7s						
SONM	**Songino Array**	**68.94**	**28**	P	**P**	**04 20 05.8**	**-0.3**
MDVR	**Moldovita**	**68.98**	**328**	⇑P	**P**	**04 20 06.8**	**+0.5**
BURAR	**Bucovina Array**	**69.23**	**332**	⇑P	**P**	**04 20 07.3**	**-0.5**
BUR08	**Bucovina Ar. S**	**69.26**	**332**	IAmb	IAmb	04 20 11.5	
	comp=Z,20nm,1.9s						
ULN	**Ulaanbaatar**	**69.26**	**28**	P	**P**	**04 20 07.8**	**-0.3**
DIVS	**Divibare**	**69.45**	**326**	IAmb	IAmb	04 20 18.3	
	comp=Z,18nm,1.1s						
BZS	**Buzias**	**69.60**	**328**	⇑P	**P**	**04 20 10.6**	**+0.6**
AKASG	**Malin Array Be**	**69.81**	**336**	P	**P**	**04 20 10.7**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=128,slow=5.2,SNR=17						
AKASG				LR	LR	04 54 28.7	
	comp=Z,47nm,18.1s,baz=78,slow=39						
	comp=Z,4.9nm,0.8s						
AKBB	**Malin Array Si**	**69.81**	**336**	P	**P**	**04 20 10.9**	**-0.3**
AKBB				IAmb	IAmb	04 20 11.1	
	comp=Z,11nm,0.8s						
DRGR		**69.85**	**330**	⇑P	**P**	**04 20 12.4**	**+0.8**
SIRR	**Siria**	**70.02**	**329**	⇑P	**P**	**04 20 13.6**	**+1.0**
OBN	**Obninsk**	**70.88**	**342**	P	**P**	**04 20 18.0**	**+0.4**
JOW	**Kunigami**	**71.16**	**56**	LR	LR	04 50 22.8	
	comp=Z,352nm,20.8s,baz=267,slow=35						
TROLL	**Troll, Antarti**	**71.20**	**197**	P	**P**	**04 20 19.6**	**0.0**
KEST	**Kesra**	**71.33**	**314**	LR	LR	04 50 02.6	
	comp=Z,87nm,21.7s,baz=240,slow=34						
KOLS	**Kolonicke sedl**	**71.55**	**331**	*e*P	**P**	**04 20 23.3**	**+1.4**
STKA	**Stephens Creek**	**71.61**	**120**	P	**P**	**04 20 23.1**	**+0.3**
	comp=Z,4.3nm,0.9s,baz=283,slow=18,SNR=5.2						
STKA				LR	LR	04 47 44.4	
	comp=Z,212nm,20.0s,baz=255,slow=32						
	comp=Z,4.3nm,0.9s						
CRVS	**Cervenica-Dubn**	**71.92**	**331**	*e*P	**P**	**04 20 24.4**	**+0.3**
CRVS				*e*		04 20 31.5	
CSKK	**Cskako**	**72.49**	**328**	P	**P**	**04 20 27.3**	**-0.2**
SNAA	**Sanae**	**72.68**	**198**	P	**P**	**04 20 27.6**	**-0.8**
SNAA	**Sanae**	**72.68**	**198**	P	**P**	**04 20 27.8**	**-0.6**
SNAA				IAmb	IAmb	04 20 30.7	
	comp=Z,6.8nm,0.9s						
VYHS	**Vyhne**	**72.93**	**329**	*e*P	**P**	**04 20 30.5**	**+0.4**
VYHS				*e*		04 20 37.1	
DBIC	**Dimbokro**	**73.04**	**281**	P	**P**	**04 20 32.1**	**+0.6**
	comp=Z,7.4nm,1.1s,baz=167,slow=1.5,SNR=3.5						
DBIC				LR	LR	04 50 35.3	
	comp=Z,437nm,21.3s,baz=126,slow=34						
	comp=Z,7.4nm,1.1s						
LANS	**Liptovska Anna**	**73.05**	**330**	*e*P	**P**	**04 20 31.6**	**+0.7**
LANS				*e*		04 20 38.2	
MNK	**Minsk**	**73.28**	**338**	*i* P	P	04 20 26.1	-5.9
	comp=E,1.0nm,1.2s						
MNK				*i* P	P	04 20 26.1	-5.9
	comp=N,13nm,0.8s						
MNK				*i* P	P	04 20 26.1	-5.9
	comp=Z,5.0nm,0.8s,baz=140						
MNK				*i* PcP	pwP	04 20 41.9	+1.2
MNK				*i* PP	**PP**	**04 23 08.7**	**-6.9**
MNK				*i* PPP	PPP	04 24 54.9	
MNK				*i* S	**S**	**04 29 55.8**	**-4.0**
MNK				*i* SS	**SS**	**04 34 35.6**	**-6.5**
MNK				*i* SSS	SSS	04 37 59.9	
MNK				*i* LQ	LQ	04 47 31.4	
MNK				*i* LR	LR	04 52 55.7	
MNK				*i* LRM	MLR	04 56 25.6	
	comp=E,54nm,19.0s						
MNK				*i* LRM	MLR	04 56 28.3	
	comp=N,397nm,22.4s						
MNK				*i* LRM	MLR	04 57 27.6	
	comp=Z,244nm,21.7s						
OJC	**Ojcow**	**73.61**	**331**	P	**P**	**04 20 33.0**	**-1.1**
MODS	**Modra-Piesok**	**73.65**	**328**	*e*P	**P**	**04 20 34.4**	**0.0**
MODS				*e*		04 20 41.1	
SMOL	**Smolenice**	**73.66**	**329**	*e*P	**P**	**04 20 34.3**	**-0.1**
RONA	**Rosalia, Austr**	**73.73**	**327**	*e*P	**P**	**04 20 35.1**	**+0.2**
JAVC	**Velka Javorina**	**73.76**	**329**	*e*P	**P**	**04 20 35.6**	**+0.5**
SOKA	**Soboth**	**73.79**	**326**	*e*P	**P**	**04 20 36.3**	**+1.0**
	comp=Z,10nm,1.2s						
ARSA	**Arzberg**	**73.87**	**327**	*e*P	**P**	**04 20 36.5**	**+0.8**
	comp=Z,10nm,1.0s						
VNA2	**Neumayer--Watz**	**73.92**	**199**	P	**P**	**04 20 35.4**	**-0.3**
	baz=74,slow=6.0						
OBKA	**Obir**	**73.95**	**326**	*e*P	**P**	**04 20 36.4**	**+0.1**
	comp=Z,20nm,1.4s						
NACGM	**Naroch**	**74.00**	**338**	⇑*e*P	**P**	**04 20 37.0**	**+0.8**
	baz=140						
MAUC	**Maruska**	**74.00**	**329**	*e*P	**P**	**04 20 36.8**	**+0.3**
MAUC				*e*x	x	04 20 43.4	
CONA	**Conrad Observa**	**74.11**	**327**	*e*P	**P**	**04 20 37.5**	**+0.3**
	comp=Z,14nm,1.1s						
KOWA	**Kowa**	**74.29**	**289**	P	**P**	**04 20 39.0**	**+0.2**
KOWA				IAmb	IAmb	04 20 46.5	
	comp=Z,15nm,1.3s						
MORC	**Moravsky Berou**	**74.41**	**330**	⇑P	**P**	**04 20 39.2**	**+0.4**
MORC	**Moravsky Berou**	**74.41**	**330**	*e*P	**P**	**04 20 38.6**	**-0.2**
MYKA	**Terra Mystica**	**74.53**	**325**	*e*P	**P**	**04 20 41.6**	**+2.0**
	comp=Z,11nm,1.1s						
KRUC	**Moravsky**	**74.54**	**329**	*e*P	**P**	**04 20 39.4**	**-0.1**
TOO	**Toolangi**	**74.58**	**126**	P	**P**	**04 20 40.8**	**+0.6**
VRAC	**Vranov**	**74.59**	**329**	P	**P**	**04 20 40.3**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=141,slow=6.5,SNR=5.3						
	comp=Z,1.4nm,0.4s						
VNA3	**Neumayer Olymp**	**74.71**	**199**	P	**P**	**04 20 40.2**	**0.0**
SUW	**Suwalki**	**74.75**	**335**	*e*P	**P**	**04 20 41.0**	**+0.4**
MOA	**Molln**	**74.91**	**327**	*e*P	**P**	**04 20 42.3**	**+0.5**
	comp=Z,18nm,1.0s						
KBA	**Koelnbreinsper**	**74.96**	**326**	*e*P	**P**	**04 20 42.1**	**-0.1**
	comp=Z,12nm,1.4s						
KRLC	**Kraliky**	**74.98**	**330**	*e*P	**P**	**04 20 41.9**	**-0.2**
KRLC				*e*pP	**sP**	**04 20 48.1**	**+0.2**
KLMR	**Klimovskoe**	**75.15**	**347**	*e*P	**P**	**04 20 40.8**	**-2.0**
KLMR				AMP		04 20 50.7	
	comp=Z,40nm,1.3s						
BIOA	**Bad Ischl, Aus**	**75.16**	**326**	*e*P	**P**	**04 20 43.3**	**+0.1**
ABTA	**Abfaltersbach**	**75.23**	**325**	*e*P	**P**	**04 20 44.3**	**+0.6**
	comp=Z,13nm,0.9s						
KSAR	**Wonju Array Be**	**75.42**	**46**	P	**P**	**04 20 44.8**	**0.0**
KSRS	**Korea Array**	**75.45**	**46**	P	**P**	**04 20 44.7**	**-0.3**
	comp=Z,4.3nm,1.0s,baz=240,slow=5.9,SNR=16						
KSRS				LR	LR	04 53 26.5	
	comp=Z,396nm,20.8s,baz=270,slow=35						
	comp=Z,4.3nm,1.0s						
OSTC	**Ostas**	**75.57**	**330**	*e*P	**P**	**04 20 46.2**	**+0.7**
OSTC				*e*pP	**sP**	**04 20 52.5**	**+1.3**
CHVC	**Chvalec**	**75.67**	**330**	*e*P	**P**	**04 20 46.4**	**+0.4**
CHVC				*e*x	x	04 20 53.0	
GEC2	**GERESS Array S**	**75.81**	**327**	IAmb	IAmb	04 20 53.4	
	comp=Z,18nm,1.6s						
GERES	**GERESS Array B**	**75.81**	**327**	P	**P**	**04 20 46.5**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=150,slow=6.0,SNR=10						
	comp=Z,1.4nm,0.8s						
WTTA	**Wattenberg**	**76.02**	**325**	*e*P	**P**	**04 20 48.4**	**+0.1**
	comp=Z,17nm,1.2s						
KHC	**Kasperske Hory**	**76.04**	**327**	IAmb	IAmb	04 20 48.4	
	comp=Z,14nm,1.3s						
KHC	**Kasperske Hory**	**76.04**	**327**	*e*P	**P**	**04 20 46.4**	**-1.8**
KHC				*e*pP	**pP**	**04 20 53.8**	**+1.4**
SEHB	**SEOHWA**	**76.05**	**46**	IAmb	IAmb	04 20 54.9	
	comp=Z,16nm,1.3s						
PRU	**Pruhonice**	**76.06**	**329**	*e*P	**P**	**04 20 49.0**	**+0.8**
PRU				*e*pP	**sP**	**04 20 55.0**	**+1.0**
WATA	**Walderalm**	**76.09**	**325**	*e*P	**P**	**04 20 48.2**	**-0.5**
	comp=Z,31nm,2.4s						
SQTA	**Sankt Quirin**	**76.23**	**325**	*e*P	**P**	**04 20 49.5**	**+0.1**
	comp=Z,12nm,1.0s						
MOTA	**Moosalm**	**76.36**	**325**	*e*P	**P**	**04 20 49.9**	**-0.3**
	comp=Z,14nm,1.0s						
PVCC	**Panska Ves**	**76.37**	**329**	*e*P	**P**	**04 20 50.8**	**+0.8**
PVCC				*e*pP	**sP**	**04 20 57.3**	**+1.5**
FETA	**Feichten**	**76.39**	**325**	*e*P	**P**	**04 20 50.5**	**0.0**
	comp=Z,6.9nm,1.0s						
RETA	**Reutte**	**76.63**	**325**	*e*P	**P**	**04 20 51.5**	**-0.2**
	comp=Z,8.5nm,1.3s						
VSU	**Vasula**	**76.74**	**340**	*e*P	**P**	**04 20 52.0**	**+0.1**
DAVOX	**Davos/Dischmat**	**76.75**	**324**	P	**P**	**04 20 52.7**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=162,slow=9.6,SNR=6.1						
	comp=Z,3.8nm,0.9s						
CTA	**Charters Tower**	**76.81**	**108**	LR	LR	04 54 25.1	
	comp=Z,216nm,18.4s,baz=249,slow=36						
TUE	**Stuetta**	**76.89**	**324**	P	**P**	**04 20 54.2**	**+0.9**
TUE				IAmb	IAmb	04 21 02.4	
	comp=Z,23nm,1.4s						
BRG	**Berggiesshubel**	**76.90**	**329**	*e*P	**P**	**04 20 54.1**	**+1.1**
BRG				Amp		04 20 55.4	
	comp=Z,27nm,1.7s						
BRG	**Berggiesshubel**	**76.90**	**329**	Pg	**P**	**04 20 57.0**	**+4.0**
BRG				*e*x	x	04 21 01.2	
BRG				Amp		04 21 02.2	
	comp=Z,14nm,1.3s						
DAVA	**Damuels**	**77.02**	**324**	*e*P	**P**	**04 20 54.0**	**0.0**
	comp=Z,12nm,1.0s						
NKC	**Novy Kostel**	**77.29**	**328**	*e*P	**P**	**04 20 56.1**	**+0.9**
NKC				*e*pP	**sP**	**04 21 02.8**	**+1.8**
GRA1	**Grafenberg Arr**	**77.62**	**327**	IAmb	IAmb	04 21 04.8	
	comp=Z,19nm,1.0s						
GRFO	**Grafenberg**	**77.62**	**327**	P	**P**	**04 20 57.3**	**+0.2**
GRFO				IAmb	IAmb	04 21 04.7	
	comp=Z,18nm,1.0s						
CLL	**Collm**	**77.64**	**329**	IAmb	IAmb	04 21 05.5	
	comp=Z,18nm,1.3s						
CLL	**Collm**	**77.64**	**329**	*i* P	**P**	**04 20 57.8**	**+0.7**
	comp=Z,29nm,1.7s						
CLL				*i* x	x	04 21 04.4	
	comp=Z,14nm,1.2s						
CLL				*e*PP	**PP**	**04 23 53.0**	**+0.5**
MTSE	**Matsula**	**77.94**	**339**	*e*P	**P**	**04 20 59.5**	**+0.9**
SENIN	**Lac Senin/Sane**	**78.04**	**323**	IAmb	IAmb	04 21 07.5	
	comp=Z,8.3nm,0.9s						
JHS	**Saijyo**	**78.22**	**50**	P	**P**	**04 21 00.3**	**-0.5**
JHS				IAmb	IAmb	04 21 06.0	
	comp=Z,20nm,1.2s						
BFO	**Black Forest**	**78.47**	**325**	P	**P**	**04 21 01.3**	**-0.5**
BFO				IAmb	IAmb	04 21 04.9	
	comp=Z,11nm,1.2s						
QSPA	**South Pole Qui**	**78.60**	**180**	P	**P**	**04 21 02.4**	**-0.1**
QSPA				IAmb	IAmb	04 21 06.8	
	comp=Z,24nm,1.1s						
BSD	**Bornholm Skovb**	**79.05**	**333**	*e*P	**P**	**04 21 05.8**	**+1.0**
SSB	**Saint Sauveur**	**79.18**	**321**	P	**P**	**04 21 05.2**	**-0.7**
SSB				IAmb	IAmb	04 21 13.9	
	comp=Z,10nm,1.0s						
FINES	**FINESS Array B**	**79.25**	**342**	P	**P**	**04 21 05.8**	**0.0**
	comp=Z,1.7nm,0.8s,baz=114,slow=14,SNR=5.8						
FINES				LR	LR	04 57 28.6	
	comp=Z,46nm,19.5s,baz=124,slow=37						
	comp=Z,1.7nm,0.8s						
PMG	**Port Moresby**	**79.30**	**97**	LR	LR	04 52 23.5	
	comp=Z,143nm,19.4s,baz=189,slow=33						
MDJ	**Mudanjiang**	**79.83**	**40**	P	**P**	**04 21 09.5**	**+0.1**
MDJ				S	**S**	**04 31 14.3**	**+2.3**
MDJ				sS	SKSac	04 31 23.8	-2.0
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.8s						
MDJ				LR	LR		
	comp=Z,180nm,16.9s						
MDJ				LR	LR		
	comp=Z,200nm,17.1s						
VNDA	**Vanda**	**80.09**	**167**	P	**P**	**04 21 10.4**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=285,slow=4.4,SNR=7.0						
	comp=Z,1.9nm,0.9s						
VNDA	**Vanda**	**80.09**	**167**	P	**P**	**04 21 09.9**	**-0.4**
RAF	**Rauma**	**80.33**	**340**	*e*P	**P**	**04 21 11.4**	**-0.2**
VIKU	**Vikbolandet**	**80.47**	**336**	*e*P	**P**	**04 21 13.5**	**+1.0**
MDT	**Midelt**	**80.58**	**306**	LR	LR	04 56 56.5	
	comp=Z,111nm,21.0s,baz=126,slow=36						
UPP	**Uppsala**	**81.01**	**337**	*e*P	**P**	**04 21 15.3**	**+0.1**
SBA	**Scott Base**	**81.07**	**168**	P	**P**	**04 21 16.9**	**+1.4**
SBA				IAmb	IAmb	04 21 21.6	
	comp=Z,15nm,1.3s						
BELA	**Belgrano 2**	**81.16**	**192**	P	**P**	**04 21 14.9**	**-1.1**
USRK	**Ussuriysk Ar.**	**81.19**	**42**	P	**P**	**04 21 15.7**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=232,slow=8.2,SNR=5.7						
USRK				LR	LR	04 57 10.8	
	comp=Z,179nm,20.7s,baz=241,slow=36						
	comp=Z,3.4nm,0.8s						
GUMO	**Guam**	**81.79**	**74**	LR	LR	04 53 38.3	
	comp=Z,32nm,21.9s,baz=103,slow=33						
NRIK	**Noril'sk**	**81.97**	**7**	P	**P**	**04 21 20.7**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=149,slow=4.4,SNR=5.3						
NRIK				LR	LR	04 58 35.6	
	comp=Z,123nm,19.0s,baz=182,slow=36						
	comp=Z,1.7nm,0.5s						
NRIK	**Noril'sk**	**81.97**	**7**	P	**P**	**04 21 19.8**	**-0.4**
ESBB	**Sonseca Array**	**82.53**	**313**	P	**P**	**04 21 24.3**	**+0.4**
ESBB				IAmb	IAmb	04 21 25.0	
	comp=Z,6.8nm,1.0s						
ESDC	**Sonseca Array**	**82.53**	**313**	P	**P**	**04 21 24.3**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=102,slow=4.2,SNR=26						
ESDC				LR	LR	04 56 59.3	
	comp=Z,74nm,20.3s,baz=130,slow=35						
	comp=Z,4.4nm,0.9s						
ESDC	**Sonseca Array**	**82.53**	**313**	P	**P**	**04 21 24.3**	**+0.4**
ESDC				IAmb	IAmb	04 21 24.9	
	comp=Z,7.4nm,1.1s						
MJAR	**Matsushiro Arr**	**82.64**	**51**	P	**P**	**04 21 24.9**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=230,slow=4.6,SNR=8.1						
MJAR				LR	LR	04 56 07.3	
	comp=Z,169nm,21.9s,baz=232,slow=34						
	comp=Z,2.8nm,0.8s						
MJAR	**Matsushiro Arr**	**82.64**	**51**	P	**P**	**04 21 24.4**	**-0.1**
MJAR				IAmb	IAmb	04 21 31.9	
	comp=Z,16nm,1.5s						
JHJ	**Hachijo jima 2**	**82.73**	**54**	LR	LR	04 58 34.1	
	comp=Z,63nm,19.5s,baz=274,slow=36						
PAB	**San Pablo**	**82.76**	**313**	P	**P**	**04 21 25.2**	**0.0**
PAB				IAmb	IAmb	04 21 26.4	
	comp=Z,9.8nm,1.0s						
JCJ	**Chichijima**	**82.89**	**61**	LR	LR	04 58 56.7	
	comp=Z,55nm,18.2s,baz=162,slow=36						
KLR	**Kul'dur**	**83.23**	**37**	LR	LR	05 00 15.0	
	comp=Z,67nm,20.4s,baz=250,slow=37						
NOA	**NORSAR Array B**	**84.22**	**336**	P	**P**	**04 21 32.2**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=117,slow=5.0,SNR=3.5						
	comp=Z,1.7nm,1.0s						
ARCES	**ARCESS Array B**	**85.63**	**347**	P	**P**	**04 21 39.3**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=134,slow=2.6,SNR=6.0						
ARCES				LR	LR	05 00 40.5	
	comp=Z,87nm,21.4s,baz=94,slow=36						
	comp=Z,3.4nm,0.8s						
ARCES	**ARCESS Array B**	**85.63**	**347**	P	**P**	**04 21 39.6**	**+0.7**
YAK	**Yakutsk**	**88.11**	**25**	LR	LR	05 01 31.4	
	comp=Z,222nm,19.9s,baz=268,slow=36						
ASAJ	**Asahikawa**	**88.26**	**44**	LR	LR	05 00 50.4	
	comp=Z,214nm,20.1s,baz=170,slow=35						
TIXI	**Tiksi**	**92.53**	**16**	P	**P**	**04 22 11.3**	**-0.3**
	baz=324,slow=3.4						
TIXI				LR	LR	05 03 49.0	
	comp=Z,470nm,18.2s,baz=180,slow=36						
TIXI	**Tiksi**	**92.53**	**16**	P	**P**	**04 22 11.3**	**-0.3**
SPITS	**Spitsbergen Ar**	**93.61**	**351**	LR	LR	05 06 49.9	
	comp=Z,55nm,18.3s,baz=201,slow=37						
JMIC	**Jan Mayen**	**95.87**	**341**	LR	LR	05 07 39.0	
	comp=Z,37nm,18.2s,baz=78,slow=37						
MA2	**Magadan**	**97.00**	**31**	LR	LR	05 07 06.2	
	comp=Z,168nm,19.9s,baz=266,slow=36						
SEY	**Seymchan**	**98.33**	**27**	LR	LR	05 07 39.3	
	comp=Z,705nm,20.4s,baz=274,slow=36						
BORG	**Borgarnes**	**99.26**	**334**	LR	LR	05 08 03.6	
	comp=Z,50nm,21.6s,baz=62,slow=36						
INK	**Inuvik**	**121.74**	**9**	PKP	**PKPdf**	**04 27 53.7**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=90,slow=1.9,SNR=5.5						
ILAR	**Eielson Array**	**122.00**	**16**	PKP	**PKPdf**	**04 27 53.7**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=286,slow=2.8,SNR=4.8						
LPAZ	**La Paz**	**127.16**	**239**	PKP	**PKPdf**	**04 28 07.0**	**0.0**
	comp=Z,1.6nm,1.0s,baz=75,slow=8.9,SNR=5.1						
YKA	**Yellowknife Ar**	**129.04**	**1**	PKP	**PKPdf**	**04 28 08.7**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=347,slow=2.3,SNR=13						
YKA				PP	**PP**	**04 30 14.2**	**-1.3**
	comp=Z,1.0nm,1.1s,baz=359,slow=5.9,SNR=4.5						
F33A	**5 Mile Ranch,**	**142.66**	**340**	PKPdf	**PKPdf**	**04 28 35.0**	**+0.8**
OTAV	**Otavalo**	**143.26**	**255**	PKPdf	**PKPdf**	**04 28 36.1**	**-0.8**
O44A	**Mansfield**	**143.75**	**326**	PKPdf	**PKPdf**	**04 28 35.9**	**-0.5**
LAO	**LASA Array**	**144.32**	**351**	PKPdf	**PKPdf**	**04 28 38.2**	**+1.0**
N41A	**Harden Midland**	**144.59**	**329**	PKPdf	PKPbc	04 28 36.8	+0.4

ECSD	EROS Data Cent	144.61	338	PKPdf	PKPab	04 28 35.5	-0.8
MSO	Missoula	144.75	0	PKPdf	PKPab	04 28 36.5	-0.2
SUSD	Miller	144.77	342	PKPdf	PKPbc	04 28 37.1	+0.2
SCIA	State Center	144.77	333	PKPdf	PKPab	04 28 36.9	0.0
154A	Montrose	144.89	312	PKPdf	PKPab	04 28 37.3	-0.3
W50A	Signal Mountai	145.04	317	PKPbc	PKPbc	04 28 37.5	-0.7
T47A	Sharon Grove	145.10	321	PKPbc	PKPbc	04 28 38.0	-0.3
SWET	Sewanee	145.44	318	PKPbc	PKPbc	04 28 38.8	-0.6
F10A	Beach Ranch, E	145.47	4	PKPbc	PKPab	04 28 40.2	+0.7
FPAL	Fort Paine	145.62	316		PKPdf	04 28 39.9	+0.1
LRM	Limekiln Ridge	145.74	358	PKPbc	PKPdf	04 28 40.1	+0.2
BOZ	Bozeman (W)	145.93	357	PKPbc	PKPbc	04 28 41.0	+0.2
L34A	Svendsen Farm,	146.04	337	PKPbc	PKPdf	04 28 40.1	-0.2
WVT	Waverly	146.09	321	PKPbc	PKPdf	04 28 40.7	+0.2
FVM	French Village	146.36	326	PKPbc	PKPdf	04 28 41.5	+0.5
Y49A	Blount Mountai	146.56	316	PKPbc	PKPbc	04 28 42.8	0.0
N35A	Tabor	146.67	335	PKPbc	PKPbc	04 28 42.5	-0.5
352A	Blakely	146.80	311	PKPbc	PKPbc	04 28 43.0	-0.6
PLAL	Pickwick Lake	146.98	319	PKPbc	PKPdf	04 28 43.0	+1.0
R40A	Maddies Statio	147.13	328	PKPbc	PKPbc	04 28 44.3	0.0
BCYI	Bear Canyon	147.26	360	PKPbc	PKPbc	04 28 45.6	+0.8
J08A	Circle Bar Ran	147.95	7	PKPbc	PKPbc	04 28 46.2	-0.4
Z47A	Carrollton	148.06	317	PKPbc	PKPbc	04 28 46.7	-0.4
S39A	Bolivar	148.12	328	PKPbc	PKPbc	04 28 46.5	-0.6
KSU1	Kansas State U	148.55	334	PKPbc	PKPbc	04 28 46.4	-1.7
PDAR	Pinedale Array	148.60	354	PKP	PKPdf	04 28 44.5	-0.3
	comp=Z,3.6nm,0.7s,baz=38,slow=2.6,SNR=5.4						
PDAR				PKPbc	PKPbc	04 28 48.2	-0.2
	comp=Z,3.7nm,0.7s,baz=64,slow=2.1,SNR=20						
PDAR	Pinedale Array	148.60	354	PKPbc	PKPbc	04 28 47.8	-0.7
FCAR	Ozark Folk Cen	148.81	325	PKPbc	PKPbc	04 28 49.0	+0.1
WHAR	Wooly Hollow	149.33	324	PKPbc	PKPbc	04 28 49.5	-0.7
UALR	University of	149.73	324	PKPbc	PKPbc	04 28 51.2	0.0
HWUT	Hardware Ranch	149.91	357	PKPbc	PKiKP	04 28 52.3	-0.4
CCAR	Cane Creek	149.98	322	PKPbc	PKPbc	04 28 49.6	-2.3
R32A	Long Quarter,	149.99	336	PKPbc	PKPbc	04 28 49.6	-2.2
NVAR	Mina Array Bea	152.83	8	PKPbc	PKiKP	04 28 59.8	+1.0
	comp=Z,2.8nm,0.7s,baz=286,slow=2.2,SNR=19						
TXAR	Lajitas Array	159.90	334	PKPab	PKPab	04 29 39.9	0.0
	comp=Z,0.8nm,0.7s,baz=46,slow=5.4,SNR=5.6						

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*IDC **20** 04:28:18.3±0.6, 27°.94N×142°.99E, h0^{km}, mb4.0/15, mbtmp4.0/18, ML3.2/3, MS3.2/7, Error ellipse: s-maj=18.8km s-min=14.7km az=106.0*

*NEIC **20** 04:28:20.6±1.4, 27°.97N±0°.05×142°.89E±0°.07, h10^{km}±1^{km}, mb4.5/28, Error ellipse: s-maj=11.4km s-min=7.6km az=63.0*

ISC 20 04:28:19.8±0.6**, 27°.96N**±0°.06×**142°.94E**±0°.09**, h10^{km}, n73, σ0ˢ.80**/65**, mb4.4**/32**, MS3.3**/6**, 1C-1D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.09	218	Pn	Pg	04 28 40.8	+0.1
	50nm,0.3s,baz=134,slow=23,SNR=49						
JCJ				Sn	Sg	04 28 54.2	-0.6
	145nm,0.3s,baz=270,slow=19,SNR=14						
JCJ	Chichijima	1.09	218		Pg	04 28 40.9	+0.2
MJAR	Matsushiro Arr	9.45	336	Pn	Pn	04 30 36.2	+0.2
	0.2nm,0.3s,baz=146,slow=12,SNR=10						
	4.9nm,0.7s						
MJAR	Matsushiro Arr	9.45	336	Pn	Pn	04 30 35.4	-0.5
MAJO	Matsushiro	9.45	336	Pn	Pn	04 30 36.0	0.0
MJB9	Matsu-Tunnel	9.45	336		Pn	04 30 36.0	0.0
JMM	Marumori	10.04	350		Pn	04 30 43.2	-0.8
JOW	Kunigami	13.08	268	LR	LR	04 35 38.3	
	comp=Z,145nm,21.1s,baz=246,slow=34						
KSRS	Korea Array	15.78	311	Pn	Pn	04 32 02.5	+0.5
	0.2nm,0.3s,baz=110,slow=11,SNR=1.7						
KSRS				LR	LR	04 38 10.1	
	comp=Z,130nm,18.4s,baz=110,slow=37						
	1.1nm,0.6s						
USA0B	Ussuriysk Arra	18.44	334		P	04 32 35.4	+0.1
USRK	Ussuriysk Ar.	18.44	334	P	P	04 32 34.5	-0.8
	0.3nm,0.3s,baz=146,slow=10,SNR=12						
	9.5nm,0.9s						
MDJ	Mudanjiang	19.76	331	P	P	04 32 49.6	-0.2
MDJ	Mudanjiang	19.76	331	P	Pn	04 32 51.8	+0.5
MDJ				pP	sP	04 32 54.1	+1.9
MDJ				sP	pwP	04 32 56.8	-0.3
MDJ				S	S	04 36 32.5	+0.1
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.5s						
MDJ				LR	LR		
	comp=N,180nm,16.9s						
MDJ				LR	LR		
	comp=E,200nm,16.1s						
MDJ				LR	LR		
	comp=Z,210nm,14.7s						
SSLB	Suanglung	20.21	263	P	Pn	04 32 56.2	-0.6
SSLB				IAmb	IAmb	04 33 11.1	
	comp=Z,29nm,1.0s						
BNX	BinXian	21.60	329	⇓P	P	04 33 09.3	-0.5
BNX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,220nm,4.4s						
KLR	Kul'dur	22.92	341	P	P	04 33 25.6	+1.8
	comp=Z,2.4nm,0.6s,baz=146,slow=8.5,SNR=6.7						
	comp=Z,2.4nm,0.6s						
TIA	Tai'an	23.32	297	P	P	04 33 26.4	-1.7
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
H11N2	WAKE ISLAND Hy	23.36	105	T	T	04 57 37.3	
	baz=297,slow=74,SNR=8.6						
H11N1	WAKE ISLAND Hy	23.36	105	T	T	04 57 33.7	
	baz=297,slow=74,SNR=6.4						
H11N3	WAKE ISLAND Hy	23.38	105	T	T	04 57 35.2	
	baz=297,slow=74,SNR=6.9						
BJT	Baijiatuau	25.15	306	P	P	04 33 43.2	-1.9
PETK	Petropavlovsk-	27.40	19	LR	LR	04 47 22.3	
	comp=Z,20nm,19.2s,baz=128,slow=42						
HIA	Hailar	27.75	326	P	P	04 34 09.0	+0.5
HIA				IAmb	IAmb	04 34 13.9	
	comp=Z,6.7nm,0.8s						
ENH	Enshi	29.26	283	P	P	04 34 19.7	-2.5
SHEM	Shemya Is, Ala	33.84	34	LR	LR	04 49 06.4	
	comp=Z,28nm,19.1s,baz=171,slow=37						
CD2	Chengdu	34.13	285	P	P	04 35 04.4	-0.7
CD2				pP	pP	04 35 07.1	+0.3
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
ULN	Ulaanbaatar	34.17	315	P	P	04 35 05.6	+0.3
ULN				IAmb	IAmb	04 35 08.8	
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	34.57	315	P	P	04 35 09.2	+0.4
	comp=Z,1.6nm,0.9s,baz=120,slow=8.8,SNR=7.6						
	comp=Z,1.6nm,0.9s						
SONM	Songino Array	34.57	315	P	P	04 35 08.3	-0.4
GTA	Gaotai	37.34	299	*e*P	P	04 35 32.3	-0.3
GTA				pP	sP	04 35 36.9	+1.8
GTA				sP	pwP	04 35 41.3	+1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,25nm,6.0s						
GTA				LR	LR		
	comp=N,240nm,18.7s						
GTA				LR	LR		
	comp=E,420nm,19.5s						
GTA				LR	LR		
	comp=Z,430nm,19.5s						
CMAR	Chiang Mai Arr	41.34	267	P	P	04 36 06.7	+0.6
	comp=Z,0.9nm,0.3s,baz=42,slow=7.4,SNR=5.4						
CMAR				LR	LR	04 54 39.0	
	comp=Z,20nm,18.1s,baz=320,slow=38						
	comp=Z,0.9nm,0.3s						
SHL	Shillong	45.38	279	P	P	04 36 39.2	+0.4
SHL				IAmb	IAmb	04 36 42.4	
	comp=Z,5.4nm,0.8s						
WMQ	Urumqi	46.62	305	⇑*i*P	P	04 36 49.5	+1.2
WMQ				pP	sP	04 36 53.6	+2.7
WMQ				pmax	pmax		
	comp=Z,39nm,0.7s						
WB0	Warramunga Arr	48.16	191	P	P	04 37 01.3	+1.0
WB2	Warramunga Arr	48.34	191	P	P	04 37 02.4	+0.8
WRA	Warramunga Arr	48.34	191	P	P	04 37 01.6	-0.1
	comp=Z,2.7nm,0.6s,baz=12,slow=8.4,SNR=24						
	comp=Z,2.7nm,0.6s						
ZAA0	Zalesovo Array	49.28	319	P	P	04 37 09.0	+0.4
ZAA0				IAmb	IAmb	04 37 20.3	
	comp=Z,3.5nm,0.8s						
ZALV	Zalesovo Beam	49.28	319	P	P	04 37 09.8	+1.2
	comp=Z,4.3nm,1.0s,baz=99,slow=9.2,SNR=9.0						
	comp=Z,4.3nm,1.0s						
ZALV	Zalesovo Beam	49.28	319	P	P	04 37 09.0	+0.4
MK31	Makanchi Array	50.45	309	P	P	04 37 18.0	+0.3
MKAR	Makanchi Array	50.45	309	P	P	04 37 17.6	-0.1
	comp=Z,3.2nm,1.0s,baz=91,slow=9.8,SNR=12						
	comp=Z,3.2nm,1.0s						
MAKZ	Makanchi	50.66	309	P	P	04 37 19.9	+0.6
ASAR	Alice Springs	52.06	191	P	P	04 37 30.1	+0.3
	comp=Z,0.4nm,0.6s,baz=18,slow=12,SNR=4.7						
	comp=Z,0.4nm,0.6s						
KURK	Kurchatov	52.87	314	P	P	04 37 36.1	+0.5
K20K	Telida	53.32	30	P	P	04 37 40.0	+1.3
K20K				IAmb	IAmb	04 37 41.6	
	comp=Z,5.1nm,1.0s						
TARG	Taragay, Kyrgy	54.01	303	IAmb	IAmb	04 37 46.4	
	comp=Z,6.2nm,1.1s						
NEA2	Nenana	55.69	29	P	P	04 37 55.7	-0.3
NEA2				IAmb	IAmb	04 37 58.6	
	comp=Z,4.1nm,0.9s						
IL31		56.64	29	P	P	04 38 01.2	-1.5
IL31				IAmb	IAmb	04 38 03.3	
	comp=Z,4.2nm,1.1s						
ILAR	Eielson Array	56.64	29	P	P	04 38 02.6	-0.2
	comp=Z,1.6nm,0.9s,baz=260,slow=6.2,SNR=13						
	comp=Z,1.6nm,0.9s						
BRVK	Borovoye	57.93	317	P	P	04 38 13.5	+1.4
BRVK				IAmb	IAmb	04 38 15.7	
	comp=Z,7.7nm,1.1s						
KK31	Karatay Array	59.13	306	P	P	04 38 20.6	0.0
KK31				IAmb	IAmb	04 38 22.9	
	comp=Z,4.9nm,1.0s						
KKAR	Karatay Array	59.13	306	P	P	04 38 20.6	0.0
GAR	Garm	60.12	301	P	P	04 38 27.7	0.0
ARU	Arti	64.16	322	P	P	04 38 54.4	+0.2
ABKAR	Akbulak array	64.98	314	P	P	04 39 00.0	+0.3
HRA	Herat	67.64	298	P	P	04 39 18.3	+0.9
HRA				IAmb	IAmb	04 39 22.2	
	comp=Z,2.2nm,0.7s						
YKA	Yellowknife Ar	71.07	29	P	P	04 39 37.9	+0.1
	comp=Z,1.1nm,1.0s,baz=295,slow=5.3,SNR=6.9						
	comp=Z,1.1nm,1.0s						
FINES	FINESS Array B	77.47	334	P	P	04 40 15.6	+0.4
	comp=Z,1.2nm,0.8s,baz=89,slow=13,SNR=3.8						
	comp=Z,1.2nm,0.8s						
KBZ	Khabaz	77.91	313	P	P	04 40 18.6	+0.6
	comp=Z,3.1nm,0.9s,baz=151,slow=5.9,SNR=4.2						
	comp=Z,3.1nm,0.9s						
NVAR	Mina Array Bea	79.46	52	P	P	04 40 27.6	+0.7
	comp=Z,1.2nm,0.8s,baz=261,slow=5.9,SNR=6.4						
	comp=Z,1.2nm,0.8s						
NVAR	Mina Array Bea	79.46	52	P	P	04 40 26.5	-0.4
LRM	Limekiln Ridge	79.79	43	P	P	04 40 28.8	+0.2
R11A	Troy Canyon, C	81.39	51	P	P	04 40 37.4	+0.1
R11A				IAmb	IAmb	04 40 50.0	
	comp=Z,3.6nm,1.0s						
AKASG	Malin Array Be	82.32	324	P	P	04 40 41.3	-0.3
	comp=Z,0.4nm,0.4s,baz=52,slow=5.6,SNR=5.6						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	83.13	45	P	P	04 40 46.3	-0.1
	comp=Z,0.4nm,0.8s,baz=280,slow=5.4,SNR=3.2						
	comp=Z,0.4nm,0.8s						
FRB	Frobisher Bay	85.28	13	LR	LR	05 22 09.7	
	comp=Z,22nm,20.2s,baz=1.0,slow=38						
RAYN	Ar Rayn	85.41	294	P	P	04 40 57.9	-0.2
TXAR	Lajitas Array	94.55	54	P	P	04 41 39.3	-1.8
	comp=Z,0.7nm,0.9s,baz=316,slow=3.5,SNR=3.8						
	comp=Z,0.7nm,0.9s						
TXAR	Lajitas Array	94.55	54	P	P	04 41 40.2	-1.0
SADO	Sadowa	98.07	29	LR	LR	05 26 40.9	
	comp=Z,28nm,21.9s,baz=32,slow=36						
TORD	Torodi Ar. Bea	124.51	312	PKP	PKPdf	04 47 20.1	0.0
	comp=Z,0.7nm,1.1s,baz=198,slow=0.3,SNR=4.6						
LPAZ	La Paz	149.05	75	PKPbc	PKPbc	04 48 10.4	+0.8
	comp=Z,1.7nm,0.7s,baz=351,slow=2.8,SNR=10.0						
LPAZ	La Paz	149.05	75	PKPbc	PKPbc	04 48 09.1	-0.6

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*IDC **20** 04:37:53.5±1.6, 65°.13S×178°.51E, h0^{km}, mb4.1/4, mbtmp4.1/5, ML3.9/1, MS4.3/29, Error ellipse: s-maj=66.3km s-min=22.6km az=68.0*

*NEIC **20** 04:37:54.6±0.9, 65°.2S±0°.1×178°.6E±0°.6, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=43.6km s-min=17.9km az=72.0*

*GCMT **20** 04:37:55.6±0.2, 65°.04S±0°.01×179°.44E±0°.04, h17^{km}±1^{km}, MW5.2/106, Moment Tensor Solution. s56,c69; s106,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.49±.21; $M_{\theta\theta}$7.01±.21; $M_{\phi\phi}$-5.52±.17; $M_{r\theta}$-2.02±.41; $M_{\theta\phi}$-0.79±.14; $M_{\phi r}$-0.57±.42; Best double couple: $M_0$6.59600×10^{16} NP1:ϕ_s319.00000°, δ74.00000°, λ2.00000°. NP2:ϕ_s229.00000°, δ88.00000°, λ164.00000°. Principal axes: T 7.4980, Plg12.0000°, Azm183.0000°; N -1.8030, Plg74.0000°, Azm43.0000°; P -5.6950, Plg10.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:37:53.0±0.8**, 65°.1S**±0°.1×**179°.4E**±0°.2**, h10^{km}, n63, σ1ˢ.01**/17**, mb4.2**/7**, MS4.3**/32**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	Scott Base	13.41	191		Pn	04 41 01.5	-1.5
VNDA	Vanda	13.61	196	Pn	Pn	04 41 05.0	-0.7
	0.5nm,0.3s,baz=38,slow=16,SNR=21						
VNDA				LR	LR	04 45 07.8	
	comp=Z,1μm,20.3s,baz=360,slow=32						
	2.4nm,0.4s						
VNDA	Vanda	13.61	196		Pn	04 41 04.0	-1.8
RPZ	Rata Peaks	21.89	344	LR	LR	04 49 52.7	
	comp=Z,1μm,18.7s,baz=166,slow=33						
QSPA	South Pole Qui	25.03	180	P	P	04 43 17.4	+0.4
	8.4nm,1.1s,baz=38,slow=4.3,SNR=8.7						
	8.4nm,1.1s						
QSPA	South Pole Qui	25.03	180	P	P	04 43 18.0	+1.0
URZ	Urewera	26.87	356	LR	LR	04 52 22.3	
	comp=Z,1μm,20.5s,baz=211,slow=32						
RAO	Raoul Island	35.86	4	LR	LR	04 56 13.4	
	comp=Z,344nm,21.3s,baz=144,slow=31						
MAW	Mawson	40.18	212	LR	LR	05 01 55.0	
	comp=Z,2μm,19.7s,baz=141,slow=36						
STKA	Stephens Creek	40.43	307	LR	LR	04 59 59.0	
	comp=Z,223nm,21.7s,baz=232,slow=33						
PMSA	Palmer Station	42.53	145	LR	LR	05 00 18.3	
	comp=Z,132nm,18.4s,baz=210,slow=32						
SNAA	Sanae	43.53	179	P	P	04 45 57.9	+1.7
	1.2nm,0.9s,baz=228,slow=12,SNR=2.5						
SNAA				LR	LR	05 03 39.5	
	comp=Z,727nm,18.7s,baz=195,slow=36						
	1.2nm,0.9s						
SNAA	Sanae	43.53	179	IAmb	IAmb	04 46 04.2	
	comp=Z,10nm,1.4s						
EIDS	Eidsvold	43.63	322	P	P	04 45 58.1	+0.7
EIDS				IAmb	IAmb	04 46 03.8	
	comp=Z,6.8nm,1.1s						
DZM	Mont Dzumac	43.80	343	*e*S	S	04 52 48.8	+19
DZM				*e*LR	LR	04 58 19.8	
	comp=Z,1μm,30.9s						
RAR	Rarotonga	45.93	28	LR	LR	05 00 30.0	
	comp=Z,389nm,20.4s,baz=191,slow=29						
TBI	Tubuai	46.34	41	*e*LR	LR	04 58 31.3	
	comp=Z,769nm,29.5s						
TBI	Tubuai	46.34	41	*e*T	T	05 35 38.3	
	comp=Z,26nm,0.3s						
TBI				*e*T	T	05 35 38.3	
	comp=Z,26nm,0.3s						
TBI				*e*T	T	05 35 38.3	
	comp=Z,26nm,0.3s						
H01W1	Cape Leeuwin H	48.55	275	T	T	05 39 07.1	
	baz=148,slow=76,SNR=68						
H01W2	Cape Leeuwin H	48.56	275	T	T	05 39 12.6	
	baz=148,slow=76,SNR=88						
H01W3	Cape Leeuwin H	48.57	275	T	T	05 39 13.5	
	baz=148,slow=76,SNR=82						
CTA	Charters Tower	49.98	318	LR	LR	05 05 29.8	
	comp=Z,206nm,19.2s,baz=124,slow=33						
AS31	Alice Springs	50.64	302	P	P	04 46 51.9	-0.2
AS31				IAmb	IAmb	04 46 52.7	
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	50.64	302	P	P	04 46 52.0	-0.1
	comp=Z,1.3nm,0.6s,baz=156,slow=7.5,SNR=21						
ASAR				LR	LR	05 06 30.4	
	comp=Z,147nm,18.4s,baz=144,slow=34						
	comp=Z,1.3nm,0.6s						
AFI	Afiamalu	51.45	11	LR	LR	05 04 07.5	
	comp=Z,205nm,20.5s,baz=212,slow=30						
PAE	Paea	51.72	39	*e*T	T	05 42 20.3	
	comp=Z,1.5nm,0.2s						
PAE				*e*T	T	05 42 20.3	
	comp=Z,1.5nm,0.2s						
PAE				*e*T	T	05 42 20.3	
	comp=Z,1.5nm,0.2s						
PPT2	Papeete2	51.79	39	*e*S	S	04 54 21.2	-1.5
	comp=Z,140nm,26.2s						
PPT2				*e*LR	LR	05 01 30.0	
	comp=Z,871nm,29.8s						
PPT2	Papeete2	51.79	39	*e*T	T	05 42 16.3	
	comp=Z,4.4nm,0.3s						
PPT2				*e*T	T	05 42 16.3	
	comp=Z,4.4nm,0.3s						
PPT2				*e*T	T	05 42 16.3	
	comp=Z,4.4nm,0.3s						
PPT	Papeete	51.81	39	LR	LR	05 02 43.1	
	comp=Z,187nm,20.0s,baz=190,slow=29						
WR0	Warramunga Arr	53.82	305	P	P	04 47 15.3	-0.4
WR0				IAmb	IAmb	04 47 38.7	
	comp=Z,7.2nm,1.2s						
WRA	Warramunga Arr	53.91	305	P	P	04 47 16.0	-0.4
	comp=Z,1.5nm,0.6s,baz=158,slow=6.5,SNR=17						
WRA				LR	LR	05 07 11.7	
	comp=Z,393nm,20.1s,baz=208,slow=33						
	comp=Z,1.5nm,0.6s						
VAH	Vaihoa	54.56	40	*e*T	T	05 45 54.1	
	comp=Z,40nm,0.2s						
VAH				*e*T	T	05 45 54.1	
	comp=Z,40nm,0.2s						
VAH				*e*T	T	05 45 54.1	
	comp=Z,40nm,0.2s						
PMOR	Pomariorio Ree	54.72	40	*e*T	T	05 46 01.8	
	comp=Z,7.4nm,0.3s						
PMOR				*e*T	T	05 46 01.8	
	comp=Z,7.4nm,0.3s						
PMOR				*e*T	T	05 46 01.8	
	comp=Z,7.4nm,0.3s						
HNR	Honiara	57.17	337	LR	LR	05 07 58.3	
	comp=Z,261nm,21.8s,baz=169,slow=32						
RPN	Rapa Nui	57.87	86	LR	LR	05 07 23.6	
	comp=Z,146nm,19.8s,baz=208,slow=30						
PMG	Port Moresby	59.92	323	LR	LR	05 08 54.5	
	comp=Z,214nm,21.3s,baz=142,slow=31						
TAOE	Nuku Hiva Isla	62.79	46	*e*LR	LR	05 06 32.0	
	comp=Z,382nm,28.0s						
H03S2	Juan Fernandez	64.52	115	T	T	05 59 15.0	
	baz=205,SNR=45						
H03S1	Juan Fernandez	64.52	115	T	T	05 59 16.3	
	baz=205,SNR=40						
H03S3	Juan Fernandez	64.53	115	T	T	05 59 13.0	
	baz=205,SNR=38						
H03N3	Juan Fernandez	64.85	115	T	T	05 59 37.5	
	baz=215,slow=74,SNR=33						
H03N2	Juan Fernandez	64.86	115	T	T	05 59 33.5	
	baz=215,slow=74,SNR=66						
H03N1	Juan Fernandez	64.87	115	T	T	05 59 36.8	
	baz=215,SNR=23						
SIJI	Sorong	72.73	309	LR	LR	05 20 05.8	
	comp=Z,104nm,20.6s,baz=358,slow=35						
KAPI	Kappang	73.00	296	LR	LR	05 17 44.7	
	comp=Z,100nm,20.7s,baz=160,slow=33						
LEM	Lembang	76.18	284	LR	LR	05 19 18.9	
	comp=Z,140nm,18.1s,baz=164,slow=33						
SUR	Sutherland	81.45	198	LR	LR	05 23 16.7	
	comp=Z,417nm,19.6s,baz=164,slow=34						
DAV	Davao City (W)	82.07	306	LR	LR	05 27 01.7	
	comp=Z,48nm,19.2s,baz=152,slow=36						
BOSA	Boshof	84.49	203	LR	LR	05 25 05.4	
	comp=Z,154nm,21.1s,baz=178,slow=34						
LBTB	Lobatse	87.95	204	LR	LR	05 27 17.4	
	comp=Z,190nm,20.2s,baz=166,slow=34						
PSI	Prapat	88.49	280	LR	LR	05 29 27.4	
	comp=Z,82nm,18.2s,baz=140,slow=35						
OPO	Ambohidratompo	89.05	225	LR	LR	05 27 14.2	
	comp=Z,103nm,18.9s,baz=356,slow=33						
H08S2	Diego Garcia H	90.13	252	T	T	06 31 16.6	
	baz=154,slow=76,SNR=26						
H08S1	Diego Carcia H	90.14	252	T	T	06 31 17.3	
	baz=154,slow=76,SNR=22						
H08S3	Diego Garcia H	90.15	252	T	T	06 31 18.0	
	baz=154,slow=76,SNR=30						
TSUM	Tsumeb	94.85	197	LR	LR	05 31 47.9	
	comp=Z,384nm,18.9s,baz=152,slow=34						
LSZ	Lusaka	96.97	208	LR	LR	05 32 47.1	
	comp=Z,172nm,18.6s,baz=165,slow=34						
PALK	Pallekele	100.21	265	LR	LR	05 29 07.8	
	comp=Z,124nm,19.1s,baz=247,slow=31						
ILAR	Eielson Array	131.84	19	PKP	PKiKP	04 57 06.2	+0.7
	comp=Z,0.8nm,1.0s,baz=216,slow=4.5,SNR=4.2						
YKA	Yellowknife Ar	136.23	38	PKP	PKiKP	04 57 14.8	+0.3
	comp=Z,0.3nm,0.8s,baz=198,slow=1.9,SNR=3.7						
KBZ	Khabaz	147.85	250	PKPbc	PKPab	04 57 39.3	-0.3
	comp=Z,3.8nm,1.1s,baz=106,slow=7.4,SNR=4.0						
BRTR	Keskin Array B	147.86	235	PKPbc	PKiKP	04 57 38.8	-0.5
	comp=Z,2.1nm,1.0s,baz=175,slow=6.2,SNR=5.6						
KIV	Kislovodsk	148.12	250	PKPbc	PKPbc	04 57 37.8	-0.1

HLW 20 04:48:57.4, 34°.08N×25°.42E, h22^{km}±12^{km}**, Md3.8, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLUM	Salum	2.58	184	PN	Pn	04 49 37.6	-0.2
	baz=185						
SLUM				S	Sn	04 50 06.7	-1.9
	baz=185						
SWA2		4.82	180	PN	Pn	04 50 08.3	-0.3
	baz=179						
RYAN	Fayoum	6.47	139	P	Pn	04 50 31.7	+0.3
	baz=138						

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*IDC **20** 04:57:16.4±2.2, 3°.25S×101°.08E, h0^{km}, mb4.0/6, mbtmp4.0/6, MS3.9/3, Error ellipse: s-maj=86.2km s-min=19.8km az=55.0*

*DJA **20** 04:57:23.9±1.0, 3°S±4°×10°1E±°, h23^{km}±9^{km}, M4.5/10, mb5.0/1, MLv4.3/10*

*NEIC **20** 04:57:24.4±1.8, 3°.3S±0°.1×101°.1E±0°.1, h60^{km}±10^{km}, mb4.1/9, Error ellipse: s-maj=28.2km s-min=5.2km az=49.0*

ISC 20 04:57:23.3±0.8**, 3°.24S**±0°.07×**101°.15E**±0°.07**, h50^{km}, n40, σ1ˢ.29**/32**, mb4.2**/11**, MS4.1**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.18	15	P	Pn	04 57 44.4	+0.8
KRJI				S	Sn	04 58 00.0	+1.3
PPSI	Pulau Pagai	1.23	293	P	Pn	04 57 46.2	+2.0
MNAI	Manna	2.12	122		Pn	04 57 57.7	+1.4
MNAI	Manna	2.12	122	P	Pn	04 57 57.7	+1.4
SISI	Saibi	2.80	313	P	Pn	04 58 06.8	+1.2
PPI	Padang Panjang	2.86	345	P	Pn	04 58 07.1	+0.6
MDSI	Maura Dua	3.27	112	P	Pn	04 58 14.3	+2.2
LWLI	Liwa	3.40	121	P	Pn	04 58 16.7	+2.7
BKNI	Bangkinang	3.54	358	Pn	Pn	04 58 18.1	+2.3
KLI	Kotabumi	4.04	114	P	Pn	04 58 24.4	+1.8
KASI	Kota Agung	4.04	124	P	Pn	04 58 24.5	+1.9
MNSI	Mandailing Nat	4.30	339	P	Pn	04 58 27.8	+1.5
GSI	Gunungsitoli	5.75	322		Pn	04 58 47.6	+1.3
GSI	Gunungsitoli	5.75	322	P	Pn	04 58 47.2	+1.0
JAGI	Jajag, Banyuwa	13.94	112	Pn	Pn	05 00 36.7	-1.6
H08S2	Diego Garcia H	28.85	260	T	T	05 32 50.1	
	baz=82,slow=75,SNR=21						
H08S3	Diego Garcia H	28.86	260	T	T	05 32 44.2	
	baz=82,slow=75,SNR=14						
H08S1	Diego Carcia H	28.87	260	T	T	05 32 31.7	
	baz=82,slow=75,SNR=17						
WB0	Warramunga Arr	36.36	119	P	P	05 04 22.9	-0.1
WRA	Warramunga Arr	36.38	120	P	P	05 04 23.2	+0.1
	1.3nm,0.4s,baz=304,slow=8.7,SNR=33						
	1.3nm,0.4s						
WRA	Warramunga Arr	36.38	120	IAmb	IAmb	05 04 25.9	
	comp=Z,0.2nm,0.9s						
WB2	Warramunga Arr	36.39	120	P	P	05 04 23.2	-0.1
WB2				IAmb	IAmb	05 04 25.5	
	comp=Z,3.6nm,0.9s						
ASAR	Alice Springs	37.60	126	P	P	05 04 33.6	+0.1
	comp=Z,1.2nm,0.5s,baz=300,slow=8.1,SNR=23						
	comp=Z,1.2nm,0.5s						
AS31	Alice Springs	37.60	126	P	P	05 04 32.2	-1.3
AS31				IAmb	IAmb	05 04 53.6	
	comp=Z,2.1nm,1.4s						
GUMO	Guam	46.49	68	LR	LR	05 27 04.9	
	comp=Z,62nm,18.3s,baz=98,slow=38						

```
SONM  Songino Array      51.07   5  P        P       05 06 21.2 +0.4
      comp=Z,0.4nm,0.3s,baz=188,slow=12,SNR=3.4
      comp=Z,0.4nm,0.3s
SONM  Songino Array      51.07   5  IAmb     IAmb    05 06 23.0
      comp=Z,0.8nm,0.9s
MK31  Makanchi Array     52.53 344  P        P       05 06 31.4  -0.1
MK31                                IAmb     IAmb    05 06 32.5
      comp=Z,1.2nm,0.8s
MKAR  Makanchi Array     52.53 344  P        P       05 06 31.4  -0.1
      comp=Z,1.0nm,0.4s,baz=156,slow=9.0,SNR=20
      comp=Z,1.0nm,0.4s
MAKZ  Makanchi           52.63 344  P        P       05 06 31.1  -1.2
MAKZ                                IAmb     IAmb    05 06 36.7
      comp=Z,3.8nm,1.5s
USRK  Ussuriysk Ar.      54.72  27  P        P       05 06 47.5  -0.1
      comp=Z,1.6nm,0.4s,baz=224,slow=5.1,SNR=5.1
      comp=Z,1.6nm,0.4s
KURBB Kurchatov Arra     57.06 343  P        P       05 07 04.0  -0.3
      comp=Z,0.9nm,0.6s,baz=161,slow=7.0,SNR=9.5
      comp=Z,0.9nm,0.6s
KURK  Kurchatov          57.11 343  P        P       05 07 04.0  -0.7
KURK  Kurchatov          57.11 343  IAmb     IAmb    05 07 05.3
      comp=Z,1.7nm,0.8s
ABKAR Akbulak array      63.27 331  P        P       05 07 46.1  -0.7
PETK  Petropavlovsk-     73.32  32  LR       LR      05 38 51.4
      comp=Z,104nm,21.9s,baz=148,slow=34
SEY   Seymchan           76.34  22  LR       LR      05 47 39.1
      comp=Z,98nm,18.0s,baz=150,slow=40
TX31  Lajitas Ar. Si    144.95  40  PKPbc    PKPdf   05 16 55.7  -0.2
TXAR  Lajitas Array     144.95  40  PKP      PKPdf   05 16 55.8  -0.1
      comp=Z,1.2nm,0.6s,baz=249,slow=0.8,SNR=14
TXAR  Lajitas Array     144.95  40           PKPbc   05 16 54.3  -0.9
```

NNC ***20*** *05:06:10.5±2.4, 54°.32N×87°.11E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=20.7km s-min=11.5km az=9.0, Suspected Mining explosion.*

IDC ***20*** *05:06:15.0±2.8, 54°.34N×86°.71E, h0^{km}, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=22.1km s-min=14.4km az=56.0*

ISC 20 05:06:12.4±4.5**, 54°.3N**±0°.2×**86°.9E**±0°.2**, h0^{km}, n9, σ1^{s}56**/14**, 11C-3D, Southwestern Siberia**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
I46RU ZALESOVO INFRA     1.30 253  i                   05 13 30.0
      baz=70,slow=325,SNR=9.5
ZAA0  Zalesovo Array     1.30 253 ⇓P       Pg        05 06 36.0  -1.3
      0.7nm,0.5s
ZAA0                              ⇑S       Sn        05 06 55.5  -0.4
      4.9nm,0.9s
ZALV  Zalesovo Beam      1.30 253  Pg      Pg        05 06 35.9  -1.4
      2.5nm,0.3s,baz=68,slow=17,SNR=26
ZALV                               Lg      Lg        05 06 53.7
      4.2nm,0.3s,baz=68,slow=26,SNR=16
KURK  Kurchatov          6.24 238 ⇓Pn      Pn        05 07 46.5  +0.9
      2.5nm,0.7s
KURK                              ⇓Sn      Sn        05 08 58.3  +0.8
      2.6nm,0.9s
KURK                              ⇑Lg      Lg        05 09 30.7
      11nm,1.1s
KURBB Kurchatov Arra     6.34 237  Pn      Pn        05 07 49.2  +2.3
      0.2nm,0.3s,baz=54,slow=14,SNR=20
KURBB                              Sn      Sn        05 08 60.0   0.0
      0.1nm,0.3s,baz=60,slow=20,SNR=5.3
KURBB                              Lg      Lg        05 09 31.8
      baz=58,slow=32,SNR=5.7
      2.3nm,0.5s
KURBB Kurchatov Arra     6.34 237 ⇑Pn      Pn        05 07 47.6  +0.6
      3.4nm,0.6s
KURBB                             ⇑Sn      Sn        05 09 01.2  +1.2
      5.0nm,0.5s
KURBB                             ⇑Lg      Lg        05 09 34.9
      18nm,1.1s
MK31  Makanchi Array     8.11 203 ⇑Pn      Pn        05 08 08.9  -2.5
      0.2nm,0.5s,baz=21,slow=12,SNR=7.9
MK31                              ⇑Sn      Sn        05 09 44.1  +0.4
      0.4nm,0.4s,baz=23,slow=26,SNR=2.5
MK31                              ⇑Lg      Lg        05 10 31.8
      4.9nm,0.9s,baz=22,slow=30,SNR=6.5
MKAR  Makanchi Array     8.11 203  Pn      Pn        05 08 14.2  +2.8
      0.2nm,0.3s,baz=14,slow=12,SNR=6.4
MKAR                               Sn      Sn        05 09 44.0  +0.2
      0.2nm,0.3s,baz=19,slow=25,SNR=6.1
MKAR                               Lg      Lg        05 10 31.9
      0.1nm,0.3s,baz=25,slow=33,SNR=8.3
      0.3nm,0.3s
MAKZ  Makanchi           8.17 205 ⇑Pn      Pn        05 08 07.1  -5.1
      0.7nm,0.6s
MAKZ                              ⇑Sn      Sn        05 09 45.0  -0.2
      0.7nm,0.6s
MAKZ                              ⇑Lg      Lg        05 10 34.7
      7.9nm,1.2s
```

IDC ***20*** *05:22:16.8±2.2, 85°.95N×106°.87E, h0^{km}, mb3.7/5, mbtmp3.8/6, ML3.2/1, MS3.8/2, Error ellipse: s-maj=111.5km s-min=20.9km az=166.0*

ISC 20 05:22:18.2±1.7**, 85°.9N**±0°.4×**107°.5E**±0°.1**, h10^{km}, n10, σ1^{s}29**/6**, mb3.7**/5**, North of Severnaya Zemlya**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
ZFI2  Zemlya Franca-     8.01 266  eP      Pn        05 24 07.9  -6.5
ZFI2                               eS      Sn        05 25 30.4   -14
      20nm,2.0s
ZFI   Zemlya Franca-     8.01 266  eP      Pn        05 24 08.6  -5.8
ZFI                                eS      Sn        05 25 30.8   -14
SPITS Spitsbergen Ar    12.67 290  Pn      Pn        05 25 18.5  +0.4
      baz=23,slow=16
      8.3nm,1.2s
INK   Inuvik            24.09  53  P       P         05 27 33.4  +0.2
      0.5nm,0.8s,baz=352,slow=4.1,SNR=2.2
      0.5nm,0.8s
ILAR  Eielson Array     26.77  66  P       P         05 27 58.3  +0.7
      0.7nm,1.0s,baz=345,slow=6.5,SNR=4.1
      0.7nm,1.0s
FINES FINESS Array B    28.37 269  P       P         05 28 12.5  +0.5
      1.8nm,0.8s,baz=20,slow=16,SNR=4.0
      1.8nm,0.8s
AKASG Malin Array Be    38.83 263  P       P         05 29 43.2  +0.5
      1.2nm,0.7s,baz=12,slow=9.0,SNR=4.6
      1.2nm,0.7s
AAK   Ala-Archa         44.13 215  LR      LR        05 50 17.8
      comp=Z,43nm,21.0s,baz=130,slow=38
TORD  Torodi Ar. Bea    78.10 287  P       P         05 34 15.0  -1.9
      1.0nm,0.7s,baz=354,slow=7.0,SNR=5.6
      1.0nm,0.7s
PSI   Prapat            83.13 189  LR      LR        06 13 09.1
      comp=Z,132nm,18.5s,baz=222,slow=37
```

IDC ***20*** *05:22:23.5±0.5, 43°.14N×88°.51E, h0^{km}, mb4.2/24, mbtmp4.2/28, ML3.8/4, MS3.4/6, Error ellipse: s-maj=15.6km s-min=10.1km az=36.0*

BJI ***20*** *05:22:25.5±0.0, 43°.14N×88°.49E, h6^{km}, mb4.3/31, mB4.4/15, ML4.4/12, Ms3.9/16, Ms7 3.6/17*

NEIC ***20*** *05:22:25.2±1.5, 43°.17N±0°.09×88°.5E±0°.1, h10^{km}±1^{km}, mb4.6/27, ML4.3(BJI), Error ellipse: s-maj=15.2km s-min=14.6km az=72.0*

NNC ***20*** *05:22:25.1±2.6, 43°.44N×88°.51E, h0^{km}, mb4.4, mpv4.5, Error ellipse: s-maj=24.8km s-min=19.3km az=56.0*

ISC 20 05:22:25.0±0.4**, 43°.18N**±0°.05×**88°.42E**±0°.05**, h10^{km}, n113, σ1^{s}64**/128**, mb4.3**/37**, MS3.8**/5**, 13C-8D, Northern Xinjiang**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC       h  m  s    ISC
WMQ   Urumqi             0.83 321 ⇓iPg     Pb        05 22 42.3  +0.8
WMQ                                Sg      Sg        05 22 53.4  +1.6
MK31  Makanchi Array     5.65 312  Pn      Pn        05 23 51.0  +2.0
MK31  Makanchi Array     5.65 312  Pn      Pn        05 23 50.9  +2.0
      17nm,0.5s,baz=125,slow=14,SNR=188
MK31                               Sn      Sn        05 24 55.0  +1.1
      67nm,0.7s,baz=125,slow=31,SNR=5.4
MK31                              ⇓Lg      Lg        05 25 22.3
      135nm,0.7s,baz=129,slow=28,SNR=4.1
MKAR  Makanchi Array     5.65 312  Pn      Pn        05 23 51.5  +2.5
      11nm,0.3s,baz=125,slow=14,SNR=116
MKAR                               Sn      Sn        05 24 55.8  +1.9
      16nm,0.3s,baz=125,slow=26,SNR=8.4
MKAR                               Lg      Lg        05 25 27.4
      14nm,0.3s,baz=126,slow=26,SNR=7.4
MKAR                               LR      LR        05 26 37.6
      comp=Z,268nm,19.5s,baz=128,slow=44
      33nm,0.4s
MKAR  Makanchi Array     5.65 312  Pn      Pn        05 23 50.9  +1.9
MAKZ  Makanchi           5.83 311          Pn        05 23 53.5  +2.0
MAKZ  Makanchi           5.83 311 ⇓Pn      Pn        05 23 53.5  +2.0
      46nm,0.5s
MAKZ                              ⇑Sn      Sn        05 24 59.4  +1.0
      51nm,0.6s
MAKZ                              ⇓Lg      Lg        05 25 25.9
      295nm,0.8s
PDGK  Podgornoye         6.52 274 ⇑Pn      Pn        05 24 02.3  +1.2
      15nm,0.6s
PDGK                              ⇑Lg      Lg        05 25 54.8
      134nm,0.8s
UZB   Uzynbulak          6.87 273  i P     Pn        05 24 07.1  +1.2
      3.9nm,0.9s,baz=272
ZHN   Zhinishke          7.30 273  i P     Pn        05 24 12.5  +0.8
      baz=272
SATY  Saty               7.33 272  i P     Pn        05 24 12.9  +0.8
      2.7nm,0.8s,baz=272
SATY                               eS      Sn        05 25 35.4   0.0
      baz=272
TDK   Taldyqorghan       7.43 288  i P     Pn        05 24 13.4   0.0
      baz=287
TARG  Taragay, Kyrgy     7.98 263          Pn        05 24 22.6  +1.2
MDOK  Medeo              8.31 274  eP      Pn        05 24 26.0  +0.4
      baz=273
CHKK  Chushkaly          8.34 279  eP      Pn        05 24 27.1  +1.3
      baz=278
CHKK                               eS      Sn        05 26 00.5  +0.5
      baz=278
KDJ   Kajisay            8.35 267          Pn        05 24 27.3  +1.1
TNSS  Tian-Shan          8.39 273  i P     Pn        05 24 28.1  +1.0
      baz=272
GOMU  GeErMu             8.54 143  P       Pn        05 24 29.4  +0.4
GOMU                               S       Sn        05 26 05.3  -0.2
GOMU                               pmax    pmax
      comp=Z,7.0nm,0.6s
GOMU                               LR      LR
      comp=N,230nm,4.2s
GOMU                               LR      LR
      comp=E,390nm,4.5s
GOMU                               LR      LR
      comp=Z,140nm,4.8s
SEM   Semipalatinsk      9.14 325  eP      Pn        05 24 35.6  -1.4
      baz=325
SEM                                eS      Sn        05 26 16.9  -3.1
      baz=325
BOOM  Boomskoye usch     9.20 270  Pn      Pn        05 24 37.8   0.0
GTA   Gaotai             9.37 110  eP      Pn        05 24 40.4  +0.3
GTA                                pP                05 24 46.0
GTA                                sP                05 24 50.3
GTA                                pmax    pmax
      comp=Z,4.0nm,0.7s
GTA                                pmax    pmax
      comp=Z,21nm,4.0s
GTA                                LR      LR
      comp=N,240nm,7.2s
GTA                                LR      LR
      comp=E,260nm,6.4s
GTA                                LR      LR
      comp=Z,170nm,8.0s
KSH   Kashi             10.05 253  P       Pn        05 24 57.4  +8.0
KSH                                sP                05 25 08.5
KSH                                S       Sn        05 27 05.1   +23
KSH                                pmax    pmax
      comp=Z,5.0nm,0.5s
KURBB Kurchatov Arra    10.05 321  Pn      Pn        05 24 49.5  +0.2
      0.7nm,0.3s,baz=131,slow=13,SNR=36
KURBB                              Sn      Sn        05 26 39.3  -2.7
      0.8nm,0.3s,baz=129,slow=28,SNR=6.0
KURBB                              Lg      Lg        05 27 46.8
      0.7nm,0.3s,baz=142,slow=32,SNR=5.5
KURBB                              LR      LR        05 29 25.6
      comp=Z,170nm,18.6s,baz=90,slow=42
      8.6nm,0.6s
KURBB Kurchatov Arra    10.05 321 ⇓Pn      Pn        05 24 49.2  -0.1
      9.7nm,0.6s
KURBB                             ⇓Sn      Sn        05 26 39.7  -2.4
      20nm,0.7s
KURBB                             ⇓Lg      Lg        05 27 42.0
      160nm,0.8s
KURK  Kurchatov         10.08 322  Pn      Pn        05 24 49.3  -0.3
KURK  Kurchatov         10.08 322 ⇑Pn      Pn        05 24 49.3  -0.3
      6.5nm,1.0s
KURK                              ⇑Sn      Sn        05 26 39.0  -3.7
      12nm,0.6s
KURK                              ⇑Lg      Lg        05 27 41.4
      85nm,0.8s
AAK   Ala-Archa         10.23 272  Pn      Pn        05 24 54.0  +2.0
      0.3nm,0.3s,baz=29,slow=19,SNR=1.9
AAK                                LR      LR        05 28 58.5
      comp=Z,102nm,19.9s,baz=100,slow=38
      0.8nm,0.4s
BTLS  Baital            10.50 285  i P     Pn        05 24 57.0  +1.5
      baz=284
ZAA0  Zalesovo Array    11.03 349          Pn        05 25 02.4  -0.3
ZAA0  Zalesovo Array    11.03 349 ⇑Pn      Pn        05 25 02.2  -0.5
      1.1nm,0.5s
ZAA0                              ⇑Sn      Sn        05 27 01.1  -5.0
      7.7nm,0.8s
ZALV  Zalesovo Beam     11.03 349  Pn      Pn        05 25 02.6  -0.1
      3.0nm,0.3s,baz=168,slow=13,SNR=40
ZALV                               Sn      Sn        05 27 03.4  -2.7
      5.7nm,0.3s,baz=163,slow=24,SNR=22
ZALV                               LR      LR        05 29 53.4
      comp=Z,117nm,19.6s,baz=182,slow=41
      12nm,0.5s
ZALV  Zalesovo Beam     11.03 349  Pn      Pn        05 25 02.3  -0.5
OTUK  Ortayu            12.32 300 ⇑Pn      Pn        05 25 20.0  -0.4
      4.3nm,0.8s
OTUK                              ⇑Lg      Lg        05 28 54.7
      46nm,1.1s
BRZS  Berezniki         12.77 308  i P     Pn        05 25 26.5   0.0
      baz=307
KK31  Karatay Array     13.08 276  Pn      Pn        05 25 31.1  +0.3
KKAR  Karatay Array     13.08 276          Pn        05 25 30.8   0.0
KKAR  Karatay Array     13.08 276  Pn      Pn        05 25 31.2  +0.4
SONM  Songino Array     13.43  64  Lg      Lg        05 29 26.9
      0.3nm,0.3s,baz=243,slow=26,SNR=3.6
IUG   Iuzhnay           13.57 272  eP      Pn        05 25 38.4  +0.8
      baz=271
LZH   Lanzhou           13.83 116 ⇑P       P         05 25 47.6  -2.0
LZH                                sP      Pn        05 25 55.5   +14
LZH                                pmax    pmax
      comp=Z,29nm,1.5s
LZH                                LR      LR
      comp=N,260nm,9.8s
LZH                                LR      LR
      comp=E,260nm,9.8s
LZH                                LR      LR
      comp=Z,220nm,10.9s
GAR   Garm              14.27 259          Pn        05 25 45.9  -1.2
NIL   Nilore            15.21 236          Pn        05 25 58.4  -1.4
NIL                                IAmb    IAmb      05 26 06.4
      comp=Z,22nm,0.8s
CHGR  Chuyangaron       15.24 259  Pn      Pn        05 25 59.6  -0.6
CHGR                               IAmb    IAmb      05 26 18.2
      comp=Z,19nm,0.6s
BRVK  Borovoye          15.59 316          Pn        05 26 03.9  -0.7
BRVK                               IAmb    IAmb      05 26 18.4
      comp=Z,16nm,1.1s
CEP   Cherat            15.92 240  P       Pn        05 26 06.8  -2.4
CEP                                S       Sn        05 28 58.0  -7.8
HHC   Hu-ho-hao-te      17.35  90  eP      Pn        05 26 25.1  -2.1
HHC                                pmax    pmax
      comp=Z,22nm,0.9s
HHC                                pmax    pmax
      comp=Z,79nm,4.1s
HHC                                LR      LR
      comp=Z,260nm,10.6s
HHC                                LR      LR
      comp=Z,360nm,12.1s
HHC                                LR      LR
      comp=Z,300nm,11.2s
SHL   Shillong          17.80 170  P       Pn        05 26 32.7  -0.3
XAN   Xi'an             18.40 113  P       P         05 26 46.4  +6.2
XAN                                pmax    pmax
      comp=Z,6.0nm,1.4s
XAN                                LR      LR
      comp=Z,180nm,15.1s
XAN                                LR      LR
      comp=Z,140nm,10.3s
XAN                                LR      LR
      comp=Z,240nm,11.7s
PZH   PanZhiHua         19.87 143  P       P         05 26 56.9  +0.5
PZH                                pmax    pmax
      comp=Z,10.0nm,0.5s
PZH                                pmax    pmax
      comp=Z,40nm,3.5s
AB31  Akbulak array     20.54 297  Pn      P         05 27 03.5  +0.1
      comp=Z,2.5nm,0.6s,baz=97,slow=12,SNR=18
ABKAR Akbulak array     20.54 297  P       P         05 27 03.5   0.0
ABKAR Akbulak array     20.54 297  P       P         05 27 03.0  -0.4
HNS   HongShan          20.83  97 ⇑P       Pn        05 27 13.9  +4.9
HNS                                pmax    pmax
      comp=Z,33nm,0.9s
HNS                                LR      LR
      comp=Z,130nm,11.0s
HNS                                LR      LR
      comp=Z,160nm,11.0s
HNS                                LR      LR
      comp=Z,230nm,12.9s
KMI   Kunming           21.51 142 ⇓P       P         05 27 17.1  +2.9
KMI                                pmax    pmax
      comp=Z,9.0nm,0.6s
AKTO  Aktyubinsk        21.93 300  P       P         05 27 20.5  +2.2
      comp=Z,2.6nm,0.6s,baz=87,slow=10.0,SNR=8.7
      comp=Z,2.6nm,0.6s
HRA   Herat             22.14 255  P       P         05 27 22.2  +1.2
TIA   Tai'an            23.09  98 ⇑P       P         05 27 37.0  +6.2
TIA                                pmax    pmax
      comp=Z,10.0nm,0.9s
ARU   Arti              23.16 315  P       P         05 27 32.0  +0.7
      comp=Z,2.9nm,0.2s,baz=126,slow=7.0,SNR=10
ARU                                LR      LR        05 36 44.2
      comp=Z,50nm,18.7s,baz=52,slow=37
      comp=Z,2.9nm,0.2s
ARU   Arti              23.16 315  P       P         05 27 31.4  +0.1
ARU                                IAmb    IAmb      05 27 33.5
      comp=Z,26nm,1.4s
GEYT  Alibeck           23.54 267  P       P         05 27 36.8  +1.5
      comp=Z,2.9nm,0.5s,baz=67,slow=17,SNR=2.4
      comp=Z,2.9nm,0.5s
GEYT  Alibeck           23.54 267  P       P         05 27 34.0  -1.3
CMAR  Chiang Mai Arr    26.21 157  P       P         05 28 00.6  +0.7
      comp=Z,1.5nm,0.3s,baz=336,slow=10,SNR=11
      comp=Z,1.5nm,0.3s
CMAR  Chiang Mai Arr    26.21 157  P       P         05 27 59.3  -0.6
NRIK  Noril'sk          26.23 359  P       P         05 28 00.2  +0.6
      comp=Z,5.7nm,0.6s,baz=156,slow=7.4,SNR=7.1
      comp=Z,5.7nm,0.6s
NRIK  Noril'sk          26.23 359  P       P         05 27 59.5  -0.2
NRIK                               IAmb    IAmb      05 28 01.6
      comp=Z,6.6nm,0.7s
NJ2   Nanjing           26.41 105  eP      P         05 28 01.5  -0.1
NJ2                                pmax    pmax
      comp=Z,12nm,0.5s
KSRS  Korea Array       30.45  87  P       P         05 28 37.0  -0.6
      comp=Z,1.1nm,0.5s,baz=280,slow=9.0,SNR=7.0
      comp=Z,1.1nm,0.5s
GNI   Garni             32.49 280  P       P         05 28 57.9  +2.1
GNI                                IAmb    IAmb      05 29 11.7
      comp=Z,6.9nm,0.7s
KBZ   Khabaz            32.73 287  P       P         05 28 58.4  +0.8
      comp=Z,1.5nm,0.7s,baz=70,slow=9.7,SNR=3.9
      comp=Z,1.5nm,0.7s
KLMR  Klimovskoe        33.90 319  eP      P         05 29 07.4  -0.3
KLMR                               AMP               05 29 08.8
      comp=Z,7.0nm,0.6s
TIXI  Tiksi             34.61  21  P       P         05 29 14.3  +0.6
      comp=Z,12nm,0.7s,baz=269,slow=23,SNR=25
      comp=Z,12nm,0.7s
TIXI  Tiksi             34.61  21  P       P         05 29 13.5  -0.1
TIXI                               IAmb    IAmb      05 29 15.6
      comp=Z,13nm,0.8s
OBN   Obninsk           35.14 308  P       P         05 29 18.9  +0.5
ILGA  Ilgaz             40.02 286  P       P         05 30 01.4  +1.1
ILGA                               IAmb    IAmb      05 30 02.9
      comp=Z,17nm,0.8s
AKASG Malin Array Be    40.14 302  P       P         05 30 00.5  -0.3
      comp=Z,1.1nm,0.5s,baz=66,slow=8.8,SNR=5.8
      comp=Z,1.1nm,0.5s
AKBB  Malin Array Si    40.14 302  P       P         05 30 01.0  +0.3
AKBB                               IAmb    IAmb      05 30 02.6
      comp=Z,11nm,1.2s
MNK   Minsk             40.20 308  i P     P         05 30 02.4  +1.1
      comp=E,4.0nm,1.1s
MNK                                i P     P         05 30 02.4  +1.1
      comp=N,26nm,1.2s
MNK                                i P     P         05 30 02.4  +1.1
      comp=Z,8.0nm,0.7s,baz=260
MNK                                i PP    PP        05 31 35.7  +2.2
MNK                                i PPP   PPP       05 31 58.5
MNK                                i S     S         05 36 08.1  +0.1
MNK                                i SS    SS        05 39 03.2  -2.3
MNK                                i SSS   SSS       05 39 32.8
MNK                                i LQ    LQ        05 43 41.4
MNK                                i LR    LR        05 46 53.5
MNK                                i LRM   MLR       05 49 05.2
      comp=N,241nm,21.7s
MNK                                i LRM   MLR       05 49 09.5
      comp=Z,125nm,19.5s
MNK                                i LRM   MLR       05 50 00.2
      comp=E,26nm,21.7s
FINES FINESS Array B    40.43 319  P       P         05 30 03.5  +0.4
      comp=E,0.9nm,0.4s,baz=91,slow=8.4,SNR=10
      comp=E,0.9nm,0.4s
BRTR  Keskin Array B    40.59 284  P       P         05 30 06.4  +1.6
      comp=E,3.5nm,0.8s,baz=111,slow=6.9,SNR=12
      comp=E,3.5nm,0.8s
BRTR  Keskin Array B    40.59 284  P       P         05 30 05.1  +0.2
ARCES ARCESS Array B    40.94 331  P       P         05 30 08.3  +1.2
      comp=E,2.4nm,0.8s,baz=77,slow=7.8,SNR=7.3
ARCES                              PcP     PcP       05 32 06.7  -0.6
      comp=E,3.0nm,1.0s,baz=93,slow=3.1,SNR=5.4
      comp=E,2.4nm,0.8s
SEY   Seymchan          41.13  39  P       P         05 30 09.1  +0.3
      comp=E,2.9nm,0.2s,baz=217,slow=0.4,SNR=15
      comp=E,2.9nm,0.2s
BURAR Bucovina Array    43.51 299  P       P         05 30 28.9  +0.3
KWP   Kalwaria Pacla    44.46 302  P       P         05 30 37.1  +1.0
OJC   Ojcow             46.06 304  P       P         05 30 49.1  +0.4
HFS   Hagfors           46.62 318  P       P         05 30 53.5  +0.5
      comp=E,0.8nm,0.5s,baz=165,slow=22,SNR=4.5
      comp=E,0.8nm,0.5s
NB2   NORSAR Subarra    47.58 320  P       P         05 31 00.7  +0.2
      comp=Z,1.4nm,0.5s,baz=73,slow=7.9
NOA   NORSAR Array B    47.58 320  P       P         05 31 00.7  +0.2
      comp=Z,2.5nm,0.6s,baz=75,slow=7.8,SNR=15
      comp=Z,2.5nm,0.6s
IDI   Anoyia            48.78 283  P       P         05 31 09.5  -0.7
IDI                                IAmb    IAmb      05 31 11.3
      comp=Z,6.0nm,0.5s
CLL   Collm             49.73 307  eP      P         05 31 16.0  -1.1
      comp=Z,5.0nm,1.0s
CLL                                Lm      MLR       05 53 00.0
      comp=Z,100nm,19.1s
CLL                                Lm      MLR       06 16 00.0
      comp=Z,100nm,21.9s
GERES GERESS Array B    50.26 304  P       P         05 31 21.9  +0.6
      comp=Z,0.3nm,0.3s,baz=75,slow=5.3,SNR=6.1
      comp=Z,0.3nm,0.3s
GERES GERESS Array B    50.26 304  P       P         05 31 21.3   0.0
EKA   Eskdalemuir Ar    56.76 317  P       P         05 32 08.1  -0.7
      comp=Z,2.0nm,0.8s,baz=66,slow=7.4,SNR=4.5
      comp=Z,2.0nm,0.8s
KEST  Kesra             59.38 292  LR      LR        06 02 49.3
      comp=Z,155nm,21.4s,baz=118,slow=41
TOLK  Toolik Lake Re    60.50  21  P       P         05 32 35.1  +0.4
TOLK                               IAmb    IAmb      05 32 35.9
      comp=Z,5.7nm,0.7s
COLD  Coldfoot          61.33  22  P       P         05 32 40.5  +0.3
COLD                               IAmb    IAmb      05 32 42.2
      comp=Z,5.0nm,1.0s
BMAR  Burnt Mountain    62.67  20  P       P         05 32 49.1  -0.2
A36M  Sachs Harbour     62.70  11  P       P         05 32 49.5  +0.1
ILAR  Eielson Array     64.05  23  P       P         05 32 58.4   0.0
      comp=Z,2.0nm,0.7s,baz=314,slow=5.0,SNR=24
      comp=Z,2.0nm,0.7s
INK   Inuvik            64.49  16  P       P         05 33 01.6  +0.4
      comp=Z,2.4nm,0.6s,baz=338,slow=6.0,SNR=11
      comp=Z,2.4nm,0.6s
RIDG  Independent Ri    65.42  23  P       P         05 33 07.1  -0.3
SCRK  Sand Creek        65.48  23  P       P         05 33 07.8  -0.1
SCRK                               IAmb    IAmb      05 33 08.8
      comp=Z,1.8nm,0.7s
ESDC  Sonseca Array     65.79 302  P       P         05 33 10.1  -0.2
      comp=Z,0.5nm,0.5s,baz=72,slow=4.2,SNR=5.0
      comp=Z,0.5nm,0.5s
DAWY  Dawson            66.65  21  P       P         05 33 15.2  -0.1
DAWY                               IAmb    IAmb      05 33 16.5
      comp=Z,4.7nm,1.2s
BCAR  Beaver Creek A    66.81  22  P       P         05 33 16.6  +0.3
M27K  Edge Creek, AK    67.34  23  P       P         05 33 21.0  +1.1
YKA   Yellowknife Ar    73.06  11  P       P         05 33 54.9  +0.2
      comp=Z,2.1nm,0.8s,baz=336,slow=5.9,SNR=18
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	75.67	136	P	P	05 34 10.2	-0.2
	comp=Z,1.5nm,0.8s,baz=338,slow=5.9,SNR=15						
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	75.67	136	IAmb	IAmb	05 34 17.2	
	comp=Z,0.3nm,1.0s						
ASAR	Alice Springs	78.58	138	P	P	05 34 26.9	+0.1
	comp=Z,1.4nm,0.7s,baz=338,slow=5.7,SNR=15						
	comp=Z,1.4nm,0.7s						
TORD	Torodi Ar. Bea	78.76	277	P	P	05 34 27.4	-0.6
	comp=Z,1.4nm,0.5s,baz=41,slow=5.2,SNR=14						
	comp=Z,1.4nm,0.5s						
LPAZ	La Paz	146.57	316	PKPbc	PKPdf	05 42 06.2	0.0
	comp=Z,0.4nm,0.5s,baz=338,slow=5.4,SNR=2.6						
CPUP	Villa Florida	147.50	290	PKPbc	PKPdf	05 42 08.2	+1.4
	comp=Z,1.9nm,0.6s,baz=84,slow=4.3,SNR=10.0						

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*IDC **20** 05:32:45.8±1.3, 25°.13N×123°.62E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=37.0km s-min=29.7km az=65.0*

*JMA **20** 05:33:00.2±0.2, 25°N±2°×123°.3E±0°.6, h103^{km}±2^{km}, MV3.4/13, NW OFF ISHIGAKIJIMA IS*

ISC 20 05:32:59.2±1.0**, 24°.9N**±0°.1×**123°.27E**±0°.06**, h109**^{km}±9^{km}**, n15,** σ**0^s.72**/23**, mb3.5**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.49	209	*i* P	Pn	05 33 16.4	+0.5
YOJ				S	Sn	05 33 28.5	+0.1
JYNG	Yonagunijimaku	0.53	214	*i* P	Pn	05 33 16.8	+0.5
JYNG				S	Sn	05 33 29.1	+0.2
IRIF	Iriomote-Funau	0.69	143	*i* P	Pn	05 33 17.4	-0.1
IRIF				S	Sn	05 33 30.4	-0.7
JKRS	Kuro-shima	0.94	134	*i* P	Pn	05 33 20.1	+0.4
JKRS				S	Sn	05 33 34.8	-0.3
JIJ	Ishigaki jima	0.95	124	*i* P	Pn	05 33 19.8	-0.1
JIJ				S	Sn	05 33 34.2	-1.1
HATJ	Hateruma jima	0.96	150	*i* P	Pn	05 33 20.3	+0.4
JTJ	Tarama	1.32	101	*i* P	Pn	05 33 24.2	+0.3
JTJ				S	Sn	05 33 42.1	-0.5
JIRB	Irabujima	1.73	92	P	Pn	05 33 29.2	+0.5
JIRB				S	Sn	05 33 50.9	-0.3
JIKM	Ikemajima	1.79	89	S	Sn	05 33 53.2	+0.6
JMJ2	Miyako jima3	1.87	94	P	Pn	05 33 31.6	+1.1
JMJ2				S	Sn	05 33 54.7	+0.2
JOGS	Gusukube	1.94	93	*e*S	Sn	05 33 56.9	+0.9
CMAR	Chiang Mai Arr	23.48	259	P	P	05 38 00.4	+1.1
	1.0nm,0.4s,baz=74,slow=9.5,SNR=5.0						
	1.0nm,0.4s						
MKAR	Makanchi Array	39.18	314	P	P	05 40 16.1	-0.4
	0.4nm,0.4s,baz=90,slow=7.9,SNR=8.5						
	0.4nm,0.4s						
WRA	Warramunga Arr	45.85	165	P	P	05 41 11.2	+0.5
	0.3nm,0.6s,baz=348,slow=8.8,SNR=7.0						
	0.3nm,0.6s						
YKA	Yellowknife Ar	81.57	23	P	P	05 45 03.1	-1.5
	0.4nm,0.6s,baz=304,slow=5.2,SNR=8.4						
	0.4nm,0.6s						

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*TUL **20** 05:41:04.7±0.5, 36°.48N±0°.02×98°.75W±0°.03, h6^{km}±5^{km}, ML3.0, mb_Lg3.0/76(NEIC), Error ellipse: s-maj=4.2km s-min=2.7km az=64.0*

*ANF **20** 05:41:05.1±0.3, 36°.49N×98°.74W, h6^{km}, ML3.6/8, Error ellipse: s-maj=3.4km s-min=3.0km az=153.0*

*NEIC **20** 05:41:05.2±0.3, 36°.48N±0°.02×98°.75W±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=3.6km s-min=2.9km az=64.0*

ISC 20 05:41:04.8±1.5**, 36°.48N**±0°.03×**98°.75W**±0°.04**, h4**^{km}±13^{km}**, n60,** σ**1^s.05**/36**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.22	245	Pg	Pg	05 41 09.6	+0.4
U32A	Winter Ranch,	0.22	245	P	Pg	05 41 09.6	+0.4
	baz=63,SNR=635						
U32A				S	Sg	05 41 13.3	+1.3
	baz=63						
OKCFA	Oklahoma City	1.50	135		Pn	05 41 31.8	-0.7
OKCFA	Oklahoma City	1.50	135	P	Pn	05 41 32.0	-0.5
	baz=316,SNR=8.9						
OKCFA				S	Sn	05 41 52.3	-0.1
	baz=316						
OKCSW	OKLAHOMA CITY	1.51	135		Pn	05 41 32.0	-0.7
FNO	Franklin	1.64	137	Pn	Pn	05 41 34.2	-0.2
FNO				IAmb_Lg		05 42 00.3	
	comp=Z,69nm,0.9s						
WMOK	Wichita Mounta	1.73	181	P	Pn	05 41 36.0	+0.2
	baz=0.9						
WMOK				S	Sg	05 42 00.7	+0.1
	baz=0.9						
T35A	Sooner Cattle	1.85	76	IAmb_Lg		05 42 04.3	
	comp=Z,55nm,0.8s						
T35B	Sooner Cattle	1.85	76	P	Pn	05 41 38.1	+0.6
	baz=257,SNR=35						
T35B				S	Sb	05 42 02.7	-0.2
	baz=257						
R32A	Long Quarter,	1.94	1	Pn	Pn	05 41 39.4	+0.7
R32A	Long Quarter,	1.94	1	P	Pn	05 41 39.7	+1.0
	baz=181,SNR=27						
R32A				Sb	Sb	05 42 06.0	+0.5
	baz=181						
X34A	Smith Ranch, M	2.02	158	IAmb_Lg		05 42 12.6	
	comp=Z,54nm,0.8s						
TUL1	Leonard	2.46	102		Pn	05 41 45.7	-0.1
TUL1				IAmb_Lg		05 42 23.6	
	comp=Z,57nm,0.8s						
TUL1	Leonard	2.46	102	P	Pn	05 41 45.6	-0.1
	baz=284,SNR=22						
TUL1				S	Sn	05 42 17.1	+0.8
	baz=284						
TUL1	Leonard	2.46	102	P	Pn	05 41 45.7	-0.1
	baz=284						
TUL1				S	Sn	05 42 17.1	+0.8
	baz=284						
CBKS	Cedar Bluff	2.46	342	S	Sb	05 42 20.5	+0.1
	baz=161						
AMTX	Amarillo	2.86	237	IAmb_Lg		05 42 40.3	
	comp=Z,56nm,0.8s						
AMTX	Amarillo	2.86	237	S	Sb	05 42 33.1	+1.1
	baz=55						
KSU1	Kansas State U	3.12	32	P	Pn	05 41 55.8	+0.9
	baz=214,SNR=9.4						
KSU1	Kansas State U	3.12	32	P	Pn	05 41 55.8	+0.9
	baz=214						
KSU1				S	Sn	05 42 33.3	+0.6
	baz=214						
X37A	Clayton	3.34	123	Pn	Pn	05 41 57.4	-0.4
X37A				IAmb_Lg		05 42 59.0	
	comp=Z,32nm,1.0s						
X37A	Clayton	3.34	123	P	Pn	05 41 58.0	+0.1
	baz=306,SNR=36						
HHAR	Hobbs	3.89	91		Pn	05 42 05.0	-0.4
HHAR				IAmb_Lg		05 43 10.5	
	comp=Z,36nm,0.8s						
MSTX	Muleshoe	4.13	234	IAmb_Lg		05 43 18.3	
	comp=Z,41nm,1.3s						
N33B	J Bar K, Exete	4.38	13	S	Sn	05 43 02.4	-1.1
	baz=194						
N33A	J Bar K, Exete	4.38	13	IAmb_Lg		05 43 33.4	
	comp=Z,25nm,0.8s						
Z38A	Mt. Pleasant	4.46	135	IAmb_Lg		05 43 29.2	
	comp=Z,19nm,0.8s						
S39A	Bolivar	4.51	73		Pn	05 42 13.6	-0.3
S39A				IAmb_Lg		05 43 28.5	
	comp=Z,36nm,0.8s						
S39A	Bolivar	4.51	73	P	Pn	05 42 14.0	+0.1
	baz=256,SNR=10.0						
T25A	Trinidad	4.59	280		Pn	05 42 15.6	+0.4
T25A	Trinidad	4.59	280	S	Sg	05 43 27.5	-4.7
	baz=96						
MIAR	Mount Ida	4.64	113	IAmb_Lg		05 43 44.8	
	comp=Z,24nm,0.7s						
MIAR	Mount Ida	4.64	113	S	Sn	05 43 09.8	-0.3
	baz=296						
U40A	Yellville	4.76	90		Pn	05 42 16.5	-0.8
BGNE	Belgrade	4.95	5	P	Pn	05 42 19.9	-0.1
	baz=186						
OGNE	Ogallala	5.15	331	IAmb_Lg		05 43 58.3	
	comp=Z,33nm,0.8s						
X40A	Basin Creek Fa	5.22	111	IAmb_Lg		05 43 55.4	
	comp=Z,30nm,1.2s						
MGMO	Mountain Grove	5.25	81	IAmb_Lg		05 43 58.6	
	comp=Z,15nm,0.8s						
WHAR	Wooly Hollow	5.38	101	IAmb_Lg		05 44 10.7	
	comp=Z,24nm,0.9s						
FCAR	Ozark Folk Cen	5.39	94	IAmb_Lg		05 43 58.2	
	comp=Z,30nm,0.9s						
W41B	Gary Mavity, V	5.44	102	IAmb_Lg		05 44 00.8	
	comp=Z,22nm,0.8s						
UALR	University of	5.49	106	IAmb_Lg		05 44 06.4	
	comp=Z,27nm,0.9s						
Z41A	Richland Creek	5.85	122	IAmb_Lg		05 44 22.1	
	comp=Z,20nm,0.9s						
JCT	Junction City	6.04	189	IAmb_Lg		05 44 28.8	
	comp=Z,13nm,0.7s						
N38A	Joes South For	6.10	43	IAmb_Lg		05 44 19.4	
	comp=Z,28nm,0.7s						
P40A	Paris	6.11	58	IAmb_Lg		05 44 21.7	
	comp=Z,22nm,0.8s						
LCAR	Lake Charles	6.15	92	IAmb_Lg		05 44 25.8	
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	6.19	73	IAmb_Lg		05 44 24.1	
	comp=Z,18nm,0.8s						
PBMO	Poplar Bluff	6.70	85	IAmb_Lg		05 44 41.6	
	comp=Z,15nm,0.7s						
FVM	French Village	6.81	75	IAmb_Lg		05 44 40.8	
	comp=Z,24nm,0.8s						
SCIA	State Center	6.92	37	IAmb_Lg		05 44 53.4	
	comp=Z,13nm,0.8s						
SLM	Saint Louis	7.10	70	IAmb_Lg		05 44 47.8	
	comp=Z,18nm,0.9s						
N23A	Red Feather La	7.15	310	IAmb_Lg		05 44 56.6	
	comp=Z,14nm,0.8s						
441A	DeRidder	7.36	139	IAmb_Lg		05 45 12.7	
	comp=Z,15nm,1.0s						
S44A	Carbondale	7.69	78	IAmb_Lg		05 45 14.8	
	comp=Z,14nm,0.7s						
K38A	Parkersburg	7.70	35	IAmb_Lg		05 45 21.1	
	comp=Z,16nm,0.9s						
OXF	Oxford	7.87	102	IAmb_Lg		05 45 19.1	
	comp=Z,13nm,0.9s						
L40A	Anamosa	8.08	44	IAmb_Lg		05 45 22.3	
	comp=Z,13nm,0.7s						
L42A	Oliver, Polo	8.95	49	IAmb_Lg		05 46 02.4	
	comp=Z,16nm,1.1s						
JFWS	Jewell Farm	9.18	43	IAmb_Lg		05 45 53.1	
	comp=Z,9.2nm,0.7s						

IDC 20 05:47:05.9±6.7**, 19°.60S**×**176°.51W, h0**^{km}**, mb4.1**/2**, mbtmp4.1**/2**, Error ellipse: s-maj=294.1km s-min=105.3km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.09	256	P	P	05 55 32.0	-0.1
	1.7nm,0.5s,baz=94,slow=7.8,SNR=29						
	1.7nm,0.5s						
WRA	Warramunga Arr	46.12	261	P	P	05 55 32.2	-0.1
	0.8nm,0.3s,baz=98,slow=7.4,SNR=42						
	0.8nm,0.3s						
AKASG	Malin Array Be	142.88	333	PKP	PKPdf	06 06 40.7	-0.7
	0.7nm,0.4s,baz=45,slow=4.8,SNR=4.2						

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*NIED **20** 06:01:58.2, 31°.02N×129°.02E, h15^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.83; $M_{\theta\theta}$5.13; $M_{\phi\phi}$-4.30; $M_{r\theta}$0.68; $M_{\theta\phi}$1.00; $M_{\phi r}$2.88; Fault plane solution: $M_0$5.68000×10^{14} NP1: ϕ_s125.00000°, δ62.00000°, λ-14.00000°. NP2: ϕ_s222.00000°, δ77.00000°, λ-151.00000°.*

JMA 20 06:01:58.2±0.2**, 31°.0N**±0°.4×**129°.0E**±0°.8**, h15**^{km}±2^{km}**, MV3.8**/25**, SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.89	42	P	Pb	06 02 15.2	-0.2
JSJ				S	Sb	06 02 27.1	-0.1
JKC	Kuchinoerabu	1.16	118	P	Pn	06 02 19.9	0.0
JKC				S	Sn	06 02 35.2	-0.2
JSU	Suzuyama	1.33	68	*i* P	Pn	06 02 22.3	0.0
JYAK	Yakushimahirau	1.50	121	P	Pn	06 02 24.7	+0.1
JYAK				S	Sn	06 02 44.0	0.0
JFU	Fukue jima 2	1.65	352	P	Pn	06 02 26.9	+0.2
JFU				*e*S	Sn	06 02 47.8	+0.2
JTN	Tanegashima 3	1.73	101	P	Pn	06 02 27.8	+0.1

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*IDC **20** 06:06:13.0±1.1, 65°.13S×178°.95E, h0^{km}, mb4.2/4, mbtmp4.2/5, ML3.6/1, MS4.1/28, Error ellipse: s-maj=42.7km s-min=24.0km az=57.0*

*NEIC **20** 06:06:14.7±1.1, 65°.2S±0°.1×178°.8E±0°.2, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=23.9km s-min=10.0km az=39.0*

*GCMT **20** 06:06:16.7±0.4, 64°.96S±0°.02×179°.50E±0°.06, h29^{km}±1^{km}, MW5.1/75, Moment Tensor Solution. s17,c17; s75,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.72±.27; $M_{\theta\theta}$5.10±.23; $M_{\phi\phi}$-4.38±.20; $M_{r\theta}$-0.45±.29; $M_{\theta\phi}$-0.20±.19; $M_{\phi r}$1.45±.37; Best double couple: $M_0$5.01500×10^{16} NP1: ϕ_s228.00000°, δ73.00000°, λ-170.00000°. NP2: ϕ_s135.00000°, δ80.00000°, λ-17.00000°. Principal axes: T 5.1450, Plg5.0000°, Azm182.0000°; N -0.2610, Plg70.0000°, Azm286.0000°; P -4.8850, Plg19.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 06:06:14.4±0.7**, 65°.14S**±0°.09×**178°.8E**±0°.2**, h10**^{km}**, n63,** σ**0^s.89**/26**, mb4.5**/11**, MS4.1**/30**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	13.29	191		Pn	06 09 22.1	-0.6
VNDA	Vanda	13.47	196	Pn	Pn	06 09 25.0	-0.3
	0.3nm,0.3s,baz=50,slow=18,SNR=16						
VNDA				LR	LR	06 13 27.8	
	comp=Z,685nm,20.2s,baz=14,slow=32						
	4.1nm,0.8s						
VNDA	Vanda	13.47	196		Pn	06 09 25.9	+0.6
RPZ	Rata Peaks	21.90	345	LR	LR	06 18 13.4	
	comp=Z,676nm,18.5s,baz=168,slow=33						
LTZ	Lake Taylor	22.70	347	P	P	06 11 16.8	+0.8
QSPA	South Pole Qui	24.95	180	P	P	06 11 37.5	-0.2
	7.4nm,1.0s,baz=44,slow=5.6,SNR=10						
QSPA				LR	LR	06 20 06.9	
	comp=Z,666nm,20.6s,baz=44,slow=33						
	7.4nm,1.0s						
QSPA	South Pole Qui	24.95	180	P	P	06 11 37.6	-0.1
QSPA				IAmb	IAmb	06 11 44.2	
	comp=Z,26nm,1.4s						
CASY	Casey	26.87	236	P	P	06 11 53.1	-1.7
URZ	Urewera	26.93	357	LR	LR	06 21 12.3	
	comp=Z,522nm,18.9s,baz=211,slow=33						
CAN	Canberra	34.76	314	P	P	06 13 04.8	+0.1
CAN				IAmb	IAmb	06 13 22.4	
	comp=Z,23nm,1.4s						
BELA	Belgrano 2	35.79	169	P	P	06 13 13.9	+0.8
BELA				IAmb	IAmb	06 13 19.5	
	comp=Z,11nm,1.5s						
RAO	Raoul Island	35.96	5	LR	LR	06 27 18.8	
	comp=Z,178nm,18.4s,baz=160,slow=35						
MAW	Mawson	39.99	212	LR	LR	06 30 15.3	
	comp=Z,788nm,19.7s,baz=140,slow=36						
STKA	Stephens Creek	40.30	307	LR	LR	06 28 19.8	
	comp=Z,86nm,21.9s,baz=213,slow=33						
BBOO	Buckleboo	41.40	300	P	P	06 14 01.2	+0.6
BBOO				IAmb	IAmb	06 14 30.3	
	comp=Z,16nm,1.3s						
PMSA	Palmer Station	42.59	146	LR	LR	06 28 47.3	
	comp=Z,129nm,18.0s,baz=215,slow=32						
PMSA	Palmer Station	42.59	146	P	P	06 14 10.1	+0.2
OUENC	Ouen Island, N	43.42	344	P	P	06 14 16.3	-0.8
SNAA	Sanae	43.45	179	LR	LR	06 32 08.6	
	comp=Z,378nm,18.2s,baz=188,slow=36						
SNAA	Sanae	43.45	179	P	P	06 14 16.4	-0.5
EIDS	Eidsvold	43.56	322	P	P	06 14 18.1	-0.1
EIDS				IAmb	IAmb	06 14 32.2	
	comp=Z,11nm,1.2s						
DZM	Mont Dzumac	43.81	343	*e*LR	LR	06 26 53.0	
	comp=Z,625nm,23.8s						
DZM	Mont Dzumac	43.81	343	LR	LR	06 30 33.4	
	comp=Z,271nm,18.4s,baz=208,slow=33						
RAR	Rarotonga	46.11	28	LR	LR	06 29 00.7	
	comp=Z,217nm,18.7s,baz=190,slow=30						
TBI	Tubuai	46.55	42	*e*LR	LR	06 27 02.1	
	comp=Z,403nm,28.0s						
TBI	Tubuai	46.55	42	*e*T	T	07 04 11.8	
	comp=Z,19nm,0.2s						
TBI				*e*T	T	07 04 11.8	
	comp=Z,19nm,0.2s						
MSVF	Nonsavu	47.37	359	LR	LR	06 32 04.5	
	comp=Z,97nm,18.4s,baz=163,slow=33						
H01W1	Cape Leeuwin H	48.34	276	T	T	07 07 27.6	
	baz=148,slow=76,SNR=6.3						
H01W2	Cape Leeuwin H	48.34	276	T	T	07 07 26.9	
	baz=148,slow=76,SNR=3.3						
H01W3	Cape Leeuwin H	48.35	276	T	T	07 07 27.4	
	baz=148,slow=76,SNR=3.2						
CTA	Charters Tower	49.89	319	LR	LR	06 33 49.9	
	comp=Z,102nm,18.8s,baz=102,slow=33						
ASAR	Alice Springs	50.49	303	P	P	06 15 12.8	+0.5
	comp=Z,2.4nm,0.6s,baz=156,slow=7.2,SNR=35						
ASAR				LR	LR	06 34 51.2	
	comp=Z,112nm,18.3s,baz=132,slow=34						
	comp=Z,2.4nm,0.6s						
AS31	Alice Springs	50.49	303	P	P	06 15 12.4	0.0
AFI	Afiamalu	51.57	12	LR	LR	06 32 27.8	
	comp=Z,94nm,20.4s,baz=195,slow=30						
PPT2	Papeete2	52.00	39	*e*S	S	06 22 55.9	+8.9
PPT2				*e*LR	LR	06 29 44.2	
	comp=Z,476nm,30.5s,baz=203						
PPT	Papeete	52.02	39	LR	LR	06 31 03.4	
	comp=Z,98nm,19.7s,baz=177,slow=29						
WR0	Warramunga Arr	53.68	305	P	P	06 15 36.0	-0.1
WR0				IAmb	IAmb	06 15 37.1	
	comp=Z,17nm,1.4s						
WB2	Warramunga Arr	53.77	305	P	P	06 15 36.5	-0.3
WB2				IAmb	IAmb	06 15 37.5	
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	53.77	305	P	P	06 15 36.6	-0.2
	comp=Z,3.2nm,0.7s,baz=158,slow=6.4,SNR=26						
WRA				LR	LR	06 35 22.4	
	comp=Z,167nm,20.6s,baz=146,slow=32						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	53.77	305	IAmb	IAmb	06 15 37.5	
	comp=Z,0.3nm,0.9s						
HNR	Honiara	57.16	338	LR	LR	06 36 29.4	
	comp=Z,78nm,19.3s,baz=199,slow=32						
KNRA	Kununurra	59.68	301	P	P	06 16 19.0	+0.2
KNRA				IAmb	IAmb	06 16 20.3	
	comp=Z,6.9nm,0.8s						
PMG	Port Moresby	59.85	323	LR	LR	06 37 04.5	
	comp=Z,100nm,21.6s,baz=152,slow=31						
TAOE	Nuku Hiva Isla	63.01	47	*e*LR	LR	06 34 57.0	
	comp=Z,224nm,24.2s						
BATI	Baumata	66.59	298	LR	LR	06 42 25.9	
	comp=Z,254nm,19.2s,baz=264,slow=33						
KAPI	Kappang	72.83	297	LR	LR	06 47 48.6	
	comp=Z,40nm,18.7s,baz=178,slow=34						
LEM	Lembang	75.98	284	LR	LR	06 44 50.9	
	comp=Z,53nm,21.8s,baz=168,slow=30						
SUR	Sutherland	81.30	199	LR	LR	06 51 26.6	
	comp=Z,207nm,19.6s,baz=168,slow=33						
BOSA	Boshof	84.33	203	LR	LR	06 53 54.5	
	comp=Z,82nm,18.5s,baz=178,slow=34						
LPAZ	La Paz	84.63	117	P	P	06 18 48.3	-0.4
	comp=Z,0.6nm,0.7s,baz=216,slow=4.4,SNR=2.7						
	comp=Z,0.6nm,0.7s						
LPAZ	La Paz	84.63	117	IAmb	IAmb	06 18 57.3	
	comp=Z,5.7nm,1.5s						
LBTB	Lobatse	87.79	204	LR	LR	06 55 47.6	
	comp=Z,92nm,19.8s,baz=166,slow=34						
PSI	Prapat	88.28	280	LR	LR	06 56 55.6	
	comp=Z,91nm,18.6s,baz=224,slow=34						
H08S2	Diego Garcia H	89.89	252	T	T	07 59 42.6	
	baz=154,slow=76,SNR=14						
H08S1	Diego Carcia H	89.90	252	T	T	07 59 43.7	
	baz=154,slow=76,SNR=12						
H08S3	Diego Garcia H	89.91	252	T	T	07 59 44.2	
	baz=154,slow=76,SNR=13						
TSUM	Tsumeb	94.71	198	LR	LR	07 00 26.7	
	comp=Z,212nm,18.9s,baz=150,slow=34						
LSZ	Lusaka	96.80	208	LR	LR	06 59 59.2	
	comp=Z,97nm,21.0s,baz=163,slow=33						
ILAR	Eielson Array	131.99	19	PKP	PKPdf	06 25 24.6	-1.7
	comp=Z,0.5nm,0.9s,baz=211,slow=3.2,SNR=4.0						
SCHQ	Schefferville	147.14	76	PKPbc	PKPbc	06 25 56.5	+0.3
	comp=Z,3.4nm,0.9s,baz=256,slow=1.2,SNR=4.2						
KBZ	Khabaz	147.61	250	PKPbc	PKiKP	06 25 59.9	+0.1
	comp=Z,0.5nm,0.3s,baz=153,slow=2.3,SNR=1.8						
BRTR	Keskin Array B	147.63	235	PKPdf	PKPdf	06 25 55.4	-0.1
CLL	Collm	164.32	215	*i* PKPab	PKPab	06 27 14.0	+3.0
	comp=Z,4.0nm,0.5s						

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*NNC **20** 06:10:57.1±1.7, 54°.18N×87°.33E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=11.1km s-min=7.7km az=50.0, Suspected Mining explosion.*

*IDC **20** 06:10:59.1±2.5, 54°.16N×87°.20E, h0^{km}, mbtmp3.4/2, ML3.1/2, Error ellipse: s-maj=21.6km s-min=15.2km az=63.0*

ISC 20 06:10:59.2±4.3**, 54°.2N**±0°.2×**87°.1E**±0°.2**, h0**^{km}**, n9,** σ**0^s.94**/15**, 8C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.37	262	*i*		06 19 56.6	
	baz=82,slow=325,SNR=1.5						
ZAA0	Zalesovo Array	1.37	262	⇓P	Pg	06 11 24.3	-1.2
	1.1nm,0.2s,baz=81,slow=14						
ZAA0				⇓S	Sn	06 11 45.3	+0.8
	4.7nm,0.3s,baz=78,slow=26						
ZALV	Zalesovo Beam	1.37	262	Pg	Pg	06 11 24.4	-1.1
	12nm,0.3s,baz=84,slow=16,SNR=70						
ZALV				Lg	Lg	06 11 44.2	
	7.0nm,0.3s,baz=79,slow=27,SNR=10						
KURK	Kurchatov	6.23	240	⇓Pn	Pn	06 12 33.1	+0.7
	0.5nm,0.4s						
KURK				⇓Sn	Sn	06 13 44.2	-0.1
	2.0nm,0.5s						
KURK				⇓Lg	Lg	06 14 15.9	
	5.2nm,0.8s						
KURBB	Kurchatov Arra	6.33	240	Pn	Pn	06 12 35.0	+1.2
	0.3nm,0.3s,baz=54,slow=13,SNR=17						
KURBB				Sn	Sn	06 13 47.2	+0.4
	0.1nm,0.3s,baz=57,slow=22,SNR=4.1						
KURBB				Lg	Lg	06 14 20.7	
	0.1nm,0.3s,baz=59,slow=26,SNR=2.7						
	1.7nm,0.4s						
KURBB	Kurchatov Arra	6.33	240	⇓Pn	Pn	06 12 35.0	+1.2
	0.8nm,0.2s						
KURBB				⇑Sn	Sn	06 13 47.0	+0.2
	7.9nm,0.6s						
KURBB				⇑Lg	Lg	06 14 20.7	
	8.8nm,0.7s						
MK31	Makanchi Array	7.98	205	⇑Pn	Pn	06 12 56.3	-0.2
	0.1nm,0.2s,baz=28,slow=14,SNR=32						
MK31				⇑Sn	Sn	06 14 26.5	-0.9
	0.4nm,0.5s,baz=271,slow=43,SNR=5.3						
MK31				⇑Lg	Lg	06 15 12.4	
	1.3nm,0.6s						
MKAR	Makanchi Array	7.98	205	Pn	Pn	06 12 57.8	+1.3
	0.5nm,0.3s,baz=28,slow=14,SNR=20						
MKAR				Sn	Sn	06 14 28.1	+0.7
	0.3nm,0.3s,baz=21,slow=25,SNR=5.8						
MKAR				Lg	Lg	06 15 13.2	
	0.1nm,0.3s,baz=30,slow=29,SNR=3.3						
	0.6nm,0.2s						
MAKZ	Makanchi	8.05	206	⇑Pn	Pn	06 12 57.0	-0.3
	0.3nm,0.3s						
MAKZ				⇑Sn	Sn	06 14 29.7	+0.7
	1.1nm,0.5s						
MAKZ				⇑Lg	Lg	06 15 15.4	
	2.3nm,0.9s						

IDC 20 06:14:40.5±1.4**, 84°.40N**×**106°.18E, h0**^{km}**, mb3.6**/3**, mbtmp3.7**/4**, ML3.6**/1**, MS3.4**/5**, Error ellipse: s-maj=53.8km s-min=29.1km az=139.0, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRIK	Noril'sk	15.54	205	Pn	Pn	06 18 18.9	-1.6
	0.3nm,0.3s,baz=40,slow=6.8,SNR=2.1						
	1.1nm,0.3s						
ILAR	Eielson Array	27.52	63	P	P	06 20 28.0	-0.1
	0.8nm,1.0s,baz=351,slow=9.3,SNR=5.5						
	0.8nm,1.0s						
ARU	Arti	30.20	235	LR	LR	06 34 28.9	
	comp=Z,52nm,19.7s,baz=360,slow=39						
AKTO	Aktyubinsk	36.20	234	LR	LR	06 36 46.6	
	comp=Z,57nm,19.3s,baz=347,slow=37						
MKAR	Makanchi Array	38.29	207	P	P	06 22 02.3	+0.2
	0.4nm,0.7s,baz=15,slow=6.6,SNR=4.3						
	0.4nm,0.7s						
AAK	Ala-Archa	42.83	215	LR	LR	06 42 32.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,41nm,20.9s,baz=355,slow=39						
NEW	**Newport**	**46.16**	**39**	LR	LR	06 44 05.0	
	comp=Z,30nm,18.3s,baz=30,slow=38						
TORD	**Torodi Ar. Bea**	**78.41**	**286**	P	P	06 26 42.6	+0.1
	0.8nm,0.7s,baz=349,slow=6.7,SNR=4.9						
	0.8nm,0.7s						
KMBO	**Kilima Mbogo**	**89.09**	**249**	LR	LR	07 08 25.6	
	comp=Z,36nm,18.8s,baz=94,slow=36						

IDC 20 06:31:05.2±2.5**, 54.°18N**×**86.°36E, h0^{km}, mbtmp3.1**/2**, ML2.7**/2**, Error ellipse: s-maj=19.4km s-min=11.3km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**256**	*i*		06 36 50.0	
	baz=75,slow=326,SNR=1.6						
ZALV	**Zalesovo Beam**	**0.94**	**256**	Pg	Pg	06 31 21.6	-1.5
	3.8nm,0.3s,baz=75,slow=17,SNR=39						
ZALV				Lg	Lg	06 31 36.1	
	4.5nm,0.3s,baz=78,slow=30,SNR=20						
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn	Pn	06 32 35.9	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=9.0						
KURBB				Lg	Lg	06 34 17.7	
	baz=49,slow=32,SNR=3.9						
	2.9nm,0.9s						
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn	06 33 00.9	+0.5
	0.2nm,0.3s,baz=25,slow=14,SNR=7.6						
MKAR				Sn	Sn	06 34 30.9	+1.1
	0.1nm,0.3s,baz=28,slow=28,SNR=5.6						
MKAR				Lg	Lg	06 35 13.7	
	baz=22,slow=29,SNR=5.8						
	0.3nm,0.4s						

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*ASRS **20** 06:40:11.7±0.2, 50°N±2°×91.°4E±1.°0, h5^{km}, MLh4.1/17, Error ellipse: s-maj=3.5km s-min=2.0km az=165.2, confirmed*

*NNC **20** 06:40:16.2±4.0, 50.°38N×91.°09E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=37.6km s-min=22.1km az=86.0*

ISC 20 06:40:15.0±0.8**, 50.°42N**±0.°03×**91.°26E**±0.°03**, h10^{km}, n28, σ2.^{s}24**/54**, 11C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**1.89**	**261**	⇑Pg	**Pg**	**06 40 50.6**	**-0.8**
CUR				Sg	**Sg**	**06 41 17.0**	**+1.1**
ULGR	**Ulagan, Altay**	**2.11**	**277**	⇑Pg	**Pg**	**06 40 55.8**	**+0.2**
ULGR				Sg	**Sg**	**06 41 24.8**	**+1.8**
AKAR	**Aktash**	**2.33**	**269**	Pn	**Pb**	**06 40 55.7**	**-1.5**
AKAR				Pg	**Pg**	**06 40 59.0**	**-0.7**
AKAR				Sg	**Sg**	**06 41 30.5**	**+0.5**
DJO	**Djoy, Khakassi**	**2.37**	**359**	⇑Pg	**Pg**	**06 40 58.5**	**-1.9**
DJO				Sg	**Sb**	**06 41 27.9**	**+0.9**
DJOS	**Djoyskaya Sosn**	**2.38**	**2**	⇑Pg	**Pg**	**06 40 59.7**	**-0.9**
KZLR	**Kyzyl**	**2.39**	**56**	Pg	**Pb**	**06 40 56.1**	**-2.1**
KZLR				Sg	**Sb**	**06 41 26.4**	**-1.4**
CHBI	**Chibit, Altay**	**2.41**	**269**	Pn	**Pb**	**06 40 57.9**	**-0.6**
CHBI				Pg	**Pg**	**06 41 01.4**	**+0.2**
CHBI				Sg	**Sg**	**06 41 31.6**	**-0.7**
CERR	**Cheremushki**	**2.44**	**2**	Pg	**Pg**	**06 41 00.7**	**-1.1**
CERR				Sg	**Sg**	**06 41 33.4**	**0.0**
ERNS	**Erzin**	**2.50**	**92**	Pg	**Pn**	**06 40 55.6**	**-0.2**
ERNS				Sg	**Sn**	**06 41 26.6**	**+0.2**
ARDR	**Aradan**	**2.55**	**31**	Pg	**Pb**	**06 41 00.3**	**-0.6**
ARDR				Sg	**Sb**	**06 41 32.3**	**-0.1**
DGZ	**Jazzator, Alta**	**2.57**	**255**	Pg	**Pg**	**06 41 03.1**	**-1.1**
DGZ				Sg	**Sg**	**06 41 37.5**	**-0.1**
ARTR	**Artybash**	**2.86**	**300**	Pn	**Pb**	**06 41 04.5**	**-1.7**
ARTR				Pg	**Pg**	**06 41 09.1**	**-0.7**
ARTR				Sg	**Sg**	**06 41 46.3**	**-0.6**
TASR	**Tashtagol**	**3.15**	**319**	Pg	**Pg**	**06 41 14.1**	**-1.2**
TASR				Sg	**Sg**	**06 41 52.7**	**-3.4**
LUZB	**Luzhba, Kemero**	**3.56**	**337**	Pn	**Pn**	**06 41 12.4**	**+2.2**
LUZB				Pg	**Pg**	**06 41 20.1**	**-3.1**
LUZB				Sg	**Sg**	**06 42 09.5**	**+0.3**
KNGR	**Kungurtug, Tuv**	**4.00**	**85**	Pg	**Pb**	**06 41 22.5**	**-3.1**
KNGR				Sg	**Sb**	**06 42 17.6**	**+3.5**
UKR	**Ust'-Kan**	**4.16**	**280**	Pg	**Pg**	**06 41 31.4**	**-3.2**
UKR				Sg	**Sg**	**06 42 29.9**	**+1.4**
ELT	**Eltsovka**	**4.22**	**314**	Pn	**Pn**	**06 41 21.0**	**+1.7**
ELT				Pg	**Pg**	**06 41 31.9**	**-3.9**
ELT				Sg	**Sg**	**06 42 28.4**	**-1.9**
MINR	**Mina**	**4.83**	**21**	Pn	**Pn**	**06 41 31.2**	**+3.4**
MINR				Pg	**Pb**	**06 41 41.9**	**+2.1**
MINR				Sg	**Sg**	**06 42 47.3**	**-2.7**
ZAA0	**Zalesovo Array**	**5.31**	**314**	⇑Pg	**Pb**	**06 41 51.1**	**+3.3**
	0.7nm,0.6s						
ZAA0				⇓Lg	Lg	06 43 00.9	
	5.5nm,0.6s						
BRCR	**Berchikul'**	**5.52**	**342**	Pg	Pg	06 41 55.5	-5.2
BRCR				Sg	**Sg**	**06 43 06.9**	**-5.2**
MOY	**Mondy**	**6.27**	**75**	Pg	**Pb**	**06 42 04.0**	**-0.3**
MOY				Sg	**Sb**	**06 43 25.2**	**+6.0**
MK31	**Makanchi Array**	**6.96**	**242**	⇑Pn	**Pn**	**06 41 58.3**	**+1.2**
	0.3nm,0.3s,baz=56,slow=17,SNR=29						
MK31				⇑Lg	Lg	06 43 55.3	
	10nm,0.5s,baz=62,slow=32,SNR=7.1						
MKAR	**Makanchi Array**	**6.96**	**242**	Pn	**Pn**	**06 41 58.3**	**+1.2**
MKAR				Pg	**Pg**	**06 42 26.2**	**-2.2**
MKAR				Sg	**Sg**	**06 43 56.9**	**-1.5**
MAKZ	**Makanchi**	**7.13**	**243**	⇑Pn	**Pn**	**06 41 57.7**	**-1.7**
	0.6nm,0.6s						
MAKZ				⇑Lg	Lg	06 43 58.1	
	75nm,1.4s						
MAKZ	**Makanchi**	**7.13**	**243**	Pg	**Pg**	**06 42 28.4**	**-3.2**
MAKZ				Sg	**Sg**	**06 44 01.2**	**-2.7**
KURK	**Kurchatov**	**8.05**	**277**	⇑Pn	**Pn**	**06 42 15.8**	**+3.8**
	1.7nm,0.9s						
KURK				⇓Lg	Lg	06 44 28.6	
	34nm,0.8s						
KURBB	**Kurchatov Arra**	**8.12**	**276**	⇓Pn	**Pn**	**06 42 14.4**	**+1.6**
	1.2nm,0.4s						
KURBB				⇓Lg	Lg	06 44 31.3	
	59nm,0.6s						
OTUK	**Ortayu**	**12.53**	**267**	⇑Lg	Lg	06 46 50.0	
	20nm,1.7s						

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*DJA **20** 06:42:31.9±0.6, 3°S±4°×13°9E±°, h12^{km}±9^{km}, M3.9/7, mb3.6/1, MLv4.0/7*

*IDC **20** 06:42:36.1±4.6, 3.°63S×138.°73E, h0^{km}, mb3.4/2, mbtmp3.6/3, ML3.9/1, MS3.2/3, Error ellipse: s-maj=180.3km s-min=33.4km az=86.0*

ISC 20 06:42:32.4±1.1**, 2.°64S**±0.°06×**139.°31E**±0.°05**, h35^{km}, n12, σ3.^{s}40**/12**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.86**	**87**	P	**Pn**	**06 42 48.8**	**+0.9**
GENI				S	**Sn**	**06 43 03.0**	**+3.8**
SMPI	**Sarmi**	**0.88**	**317**	P	**Pn**	**06 42 48.3**	**0.0**
SMPI				S	**Sn**	**06 43 03.2**	**+3.3**
WAMI	**Wamena**	**1.37**	**206**	P	**Pn**	**06 42 56.5**	**+1.5**
WAMI				S	**Sn**	**06 43 17.2**	**+5.2**
SRPI	**Serui, Papua**	**3.16**	**284**	P	**Pn**	**06 43 21.1**	**+1.4**
BAKI	**Biak**	**3.51**	**294**	P	**Pn**	**06 43 25.7**	**+1.2**
MMPI	**Merauke**	**5.88**	**170**	P	**Pn**	**06 43 58.8**	**+1.7**
FAKI	**Fak Fak**	**7.06**	**268**	P	**Pn**	**06 44 14.4**	**+1.1**
WRA	**Warramunga Arr**	**17.87**	**195**	Pn	**Pn**	**06 46 32.9**	**-5.4**
	0.5nm,0.3s,baz=15,slow=13,SNR=37						
WRA				LR	LR	06 53 14.8	
	comp=Z,65nm,20.5s,baz=79,slow=38						
	0.8nm,0.3s						
CTA	**Charters Tower**	**18.62**	**159**	LR	LR	06 53 10.2	
	comp=Z,73nm,21.5s,baz=282,slow=35						
ASAR	**Alice Springs**	**21.55**	**194**	P	**P**	**06 47 15.3**	**-3.5**
	0.6nm,0.4s,baz=23,slow=9.2,SNR=16						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**29.16**	**176**	LR	LR	07 00 27.7	
	comp=Z,93nm,20.5s,baz=20,slow=38						
MKAR	**Makanchi Array**	**70.10**	**322**	P	P	06 53 53.0	+12
	0.5nm,0.9s,baz=100,slow=7.9,SNR=2.9						
	0.5nm,0.9s						

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*IDC **20** 06:42:46.0±2.0, 33.°20S×109.°56W, h0^{km}, mb4.1/8, mbtmp4.0/8, MS3.8/15, Error ellipse: s-maj=65.6km s-min=25.0km az=25.0*

*NEIC **20** 06:42:49.3±1.1, 32.°9S±0.°1×109.°5W±0.°2, h10^{km}±1^{km}, mb4.8/29, Error ellipse: s-maj=23.9km s-min=21.8km az=314.0*

ISC 20 06:42:48.8±0.7**, 33.°0S**±0.°1×**109.°5W**±0.°1**, h10^{km}, n58, σ0.^{s}68**/38**, mb4.7**/20**, MS3.8**/14**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**5.81**	**1**	LR	LR	06 45 48.4	
	comp=Z,584nm,18.5s,baz=196,slow=30						
PTCN	**Pitcairn Islan**	**19.67**	**288**	P	**P**	**06 47 17.0**	**-1.0**
H03S2	**Juan Fernandez**	**25.45**	**100**	T	T	07 14 40.3	
	baz=264,SNR=450						
H03S3	**Juan Fernandez**	**25.47**	**100**	T	T	07 14 43.2	
	baz=264,SNR=206						
H03S1	**Juan Fernandez**	**25.47**	**100**	T	T	07 14 40.4	
	baz=264,SNR=341						
H03N2	**Juan Fernandez**	**25.50**	**100**	T	T	07 14 35.8	
	baz=267,slow=73,SNR=2151						
H03N3	**Juan Fernandez**	**25.50**	**100**	T	T	07 14 37.3	
	baz=267,slow=73,SNR=2443						
H03N1	**Juan Fernandez**	**25.52**	**100**	T	T	07 14 35.9	
	baz=267,slow=73,SNR=2490						
PLCA	**Paso Flores**	**31.88**	**115**	LR	LR	06 58 39.9	
	comp=Z,154nm,19.1s,baz=281,slow=30						
AC02	**Maricunga**	**35.32**	**91**	P	**P**	**06 49 44.9**	**0.0**
PB15	**IPOC Station P**	**36.40**	**85**	P	**P**	**06 49 52.8**	**-1.0**
PB15				IAmb	IAmb	06 49 55.3	
	comp=Z,20nm,1.3s						
NNA	**Nana**	**36.41**	**63**	LR	LR	07 00 35.6	
	comp=Z,182nm,20.5s,baz=230,slow=29						
LVC	**Limon Verde**	**37.12**	**84**	P	**P**	**06 50 00.4**	**+0.3**
	comp=Z,5.0nm,1.0s,baz=239,slow=11,SNR=7.3						
LVC				LR	LR	07 00 56.5	
	comp=Z,145nm,21.7s,baz=250,slow=29						
	comp=Z,5.0nm,1.0s						
LVC	**Limon Verde**	**37.12**	**84**	P	**P**	**06 49 59.9**	**-0.2**
LVC				IAmb	IAmb	06 50 01.6	
	comp=Z,21nm,1.4s						
ATAH	**Atahualpa**	**38.59**	**55**	LR	LR	07 02 04.0	
	comp=Z,143nm,18.0s,baz=214,slow=30						
PPT	**Papeete**	**39.14**	**283**	LR	LR	07 01 50.1	
	comp=Z,78nm,18.4s,baz=124,slow=29						
LPAZ	**La Paz**	**40.77**	**76**	P	**P**	**06 50 30.3**	**-0.7**
	comp=Z,2.7nm,1.1s,baz=222,slow=5.2,SNR=6.4						
LPAZ				LR	LR	07 04 18.1	
	comp=Z,64nm,18.4s,baz=242,slow=32						
	comp=Z,2.7nm,1.1s						
LPAZ	**La Paz**	**40.77**	**76**	P	**P**	**06 50 30.1**	**-0.9**
PMSA	**Palmer Station**	**42.08**	**153**	LR	LR	07 01 44.1	
	comp=Z,59nm,21.8s,baz=64,slow=27						
OTAV	**Otavalo**	**44.07**	**48**	P	**P**	**06 50 57.1**	**-0.5**
CPUP	**Villa Florida**	**45.40**	**96**	LR	LR	07 06 30.9	
	comp=Z,106nm,19.8s,baz=232,slow=31						
RAR	**Rarotonga**	**45.93**	**272**	LR	LR	07 05 34.2	
	comp=Z,156nm,18.6s,baz=178,slow=30						
SIV	**San Ignacio**	**46.73**	**81**	P	**P**	**06 51 18.1**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=222,slow=11,SNR=5.2						
	comp=Z,1.1nm,0.4s						
ROSC	**El Rosal**	**50.22**	**48**	LR	LR	07 09 32.2	
	comp=Z,107nm,18.8s,baz=230,slow=32						
ROSC	**El Rosal**	**50.22**	**48**	P	**P**	**06 51 45.9**	**+0.3**
QSPA	**South Pole Qui**	**57.24**	**180**	P	**P**	**06 52 36.1**	**0.0**
VNDA	**Vanda**	**57.82**	**195**	LR	LR	07 11 51.1	
	comp=Z,80nm,21.2s,baz=103,slow=30						
BDFB	**Brasilia**	**57.83**	**88**	P	**P**	**06 52 40.6**	**-0.4**
	comp=Z,7.4nm,1.2s,baz=243,slow=4.5,SNR=4.7						
	comp=Z,7.4nm,1.2s						
BDFB	**Brasilia**	**57.83**	**88**	IAmb	IAmb	06 52 42.3	
	comp=Z,24nm,1.5s						
AFI	**Afiamalu**	**59.44**	**273**	LR	LR	07 12 30.9	
	comp=Z,71nm,19.2s,baz=111,slow=30						
RPZ	**Rata Peaks**	**61.06**	**235**	LR	LR	07 16 38.6	
	comp=Z,82nm,18.1s,baz=132,slow=33						
TXAR	**Lajitas Array**	**62.19**	**6**	P	**P**	**06 53 11.3**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=170,slow=11,SNR=4.3						
	comp=Z,0.6nm,0.9s						
JCT	**Junction City**	**63.75**	**9**	P	**P**	**06 53 20.8**	**0.0**
JCT				IAmb	IAmb	06 53 21.8	
	comp=Z,5.5nm,0.9s						
435B	**Jarrell**	**64.38**	**11**	P	**P**	**06 53 24.8**	**0.0**
435B				IAmb	IAmb	06 53 26.3	
	comp=Z,7.3nm,0.9s						
CRPR	**Cabo Rojo, PR**	**64.84**	**45**	P	**P**	**06 53 29.0**	**+0.9**
X18A	**Snowflake**	**67.13**	**360**	P	**P**	**06 53 43.7**	**+0.9**
X18A				IAmb	IAmb	06 53 59.4	
	comp=Z,6.4nm,1.3s						
W41B	**Gary Mavity, V**	**69.67**	**15**	P	**P**	**06 53 58.8**	**+0.5**
W41B				IAmb	IAmb	06 54 05.9	
	comp=Z,10nm,1.2s						
WHAR	**Wooly Hollow**	**69.77**	**15**	P	**P**	**06 53 59.6**	**+0.6**
WHAR				IAmb	IAmb	06 54 27.7	
	comp=Z,9.1nm,1.4s						
U40A	**Yellville**	**70.68**	**14**	P	**P**	**06 54 04.3**	**-0.3**
NVAR	**Mina Array Bea**	**71.50**	**353**	P	**P**	**06 54 10.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=177,slow=6.3,SNR=4.7						
	comp=Z,0.4nm,0.3s						
MGMO	**Mountain Grove**	**71.57**	**14**	P	**P**	**06 54 10.6**	**+0.6**
MGMO				IAmb	IAmb	06 54 12.2	
	comp=Z,10nm,1.1s						
PBMO	**Poplar Bluff**	**71.61**	**16**	P	**P**	**06 54 10.0**	**-0.2**
PBMO				IAmb	IAmb	06 54 10.7	
	comp=Z,11nm,1.4s						
ISCO	**Idaho Springs**	**72.48**	**3**	P	**P**	**06 54 16.1**	**+0.4**
T47A	**Sharon Grove**	**72.64**	**19**	P	**P**	**06 54 16.3**	**-0.1**
CCM	**Cathedral Cave**	**72.65**	**15**	P	**P**	**06 54 16.6**	**+0.2**
CCM				IAmb	IAmb	06 54 17.6	
	comp=Z,14nm,1.4s						
RCBR	**Riachuelo**	**73.05**	**86**	LR	LR	07 23 58.4	
	comp=Z,64nm,19.1s,baz=90,slow=34						
N35A	**Tabor**	**74.55**	**11**	P	**P**	**06 54 28.0**	**+0.5**
PDAR	**Pinedale Array**	**75.35**	**360**	P	**P**	**06 54 32.5**	**0.0**
	comp=Z,1.8nm,1.0s,baz=182,slow=3.2,SNR=6.6						
	comp=Z,1.8nm,1.0s						
L40A	**Anamosa**	**76.51**	**14**	P	**P**	**06 54 38.7**	**0.0**
L40A				IAmb	IAmb	06 54 40.1	
	comp=Z,8.1nm,0.9s						
M50A	**Fremont**	**77.89**	**20**	P	**P**	**06 54 46.5**	**+0.1**
MSO	**Missoula**	**79.52**	**357**	P	**P**	**06 54 56.0**	**+0.5**
MAW	**Mawson**	**79.58**	**177**	P	**P**	**06 54 57.0**	**+1.4**
F36A	**Milaca**	**79.76**	**11**	P	**P**	**06 54 56.8**	**+0.1**
F36A				IAmb	IAmb	06 55 06.0	
	comp=Z,9.2nm,1.1s						
NEW	**Newport**	**81.14**	**355**	P	**P**	**06 55 05.1**	**+1.0**
NEW				IAmb	IAmb	06 55 05.8	
	comp=Z,10nm,1.4s						
YKA	**Yellowknife Ar**	**95.20**	**358**	P	**P**	**06 56 11.9**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=175,slow=4.8,SNR=5.4						
	comp=Z,0.5nm,0.9s						
AKASG	**Malin Array Be**	**145.02**	**47**	PKPbc	**PKPbc**	**07 02 23.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=286,slow=3.5,SNR=12						
SONM	**Songino Array**	**149.24**	**310**	PKPbc	**PKPbc**	**07 02 36.1**	**-1.4**
	comp=Z,1.2nm,0.8s,baz=114,slow=3.5,SNR=2.9						
BRTR	**Keskin Array B**	**149.66**	**67**	PKPbc	**PKPbc**	**07 02 37.9**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=236,slow=1.6,SNR=2.7						

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*TRN **20** 06:58:58.6, 17.°14N×65.°26W, h258^{km}, MD4.2*

*RSPR **20** 06:58:58.1, 19.°01N×64.°96W, h23^{km}±19^{km}*

*NEIC **20** 06:58:58.2±0.8, 18.°9N±0.°2×65.°0W±0.°1, h32^{km}±25^{km}, ML2.8/25, Error ellipse: s-maj=30.2km s-min=5.5km az=207.0*

ISC 20 06:58:56.7±1.6**, 18.°98N**±0.°08×**65.°03W**±0.°03**, h21^{km}**±5^{km}**, n54, σ0.^{s}57**/62**, 12C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.63**	**173**	⇑*i*P	**Pb**	**06 59 09.3**	**+0.3**
STVI	**Saint Thomas**	**0.63**	**173**	*e*S	**Sn**	**06 59 18.2**	**-1.6**
STVI	**Saint Thomas**	**0.63**	**173**		**Pb**	**06 59 09.4**	**+0.3**
STVI				Sn	**Sb**	**06 59 17.8**	**+0.3**
SJVI	**Gifft Hill Sch**	**0.69**	**159**	⇑*i*P	**Pb**	**06 59 09.9**	**-0.2**
SJVI	**Gifft Hill Sch**	**0.69**	**159**	*e*S	**Sb**	**06 59 19.8**	**+0.6**
CUPR	**Culebra, Puert**	**0.71**	**199**	⇑*e*P	**Pb**	**06 59 11.0**	**+0.7**
CUPR	**Culebra, Puert**	**0.71**	**199**	*e*S	**Sn**	**06 59 21.1**	**-0.6**
CUPR	**Culebra, Puert**	**0.71**	**199**		**Pb**	**06 59 11.2**	**+0.8**
CUPR				Sn	**Sn**	**06 59 20.6**	**-1.1**
MTP	**Monte Pirata**	**1.01**	**209**	⇑*e*P	**Pb**	**06 59 15.8**	**+0.4**
MTP	**Monte Pirata**	**1.01**	**209**	*e*S	**Sn**	**06 59 29.0**	**-0.1**
MTP	**Monte Pirata**	**1.01**	**209**		**Pb**	**06 59 15.4**	**0.0**
CBYP	**Canovanas**	**1.05**	**228**	⇓*e*P	**Pb**	**06 59 15.8**	**-0.4**
CBYP	**Canovanas**	**1.05**	**228**	*e*S	**Sb**	**06 59 29.7**	**+0.2**
CBYP	**Canovanas**	**1.05**	**228**		**Pb**	**06 59 16.0**	**-0.2**
CBYP				Sn	**Sb**	**06 59 29.1**	**-0.5**
HUMP	**Col San Antoni**	**1.14**	**223**	⇓*e*P	**Pn**	**06 59 17.2**	**-0.2**
HUMP	**Col San Antoni**	**1.14**	**223**	*e*S	**Sb**	**06 59 31.7**	**-0.3**
HUMP	**Col San Antoni**	**1.14**	**223**		**Pn**	**06 59 17.2**	**-0.2**
HUMP				Sn	**Sb**	**06 59 30.7**	**-1.3**
HUMP				IAML		06 59 35.7	
	comp=N,194nm,0.4s						
GCPR	**Guaynabo City**	**1.20**	**236**	⇑*e*P	**Pn**	**06 59 17.7**	**-0.5**
GCPR	**Guaynabo City**	**1.20**	**236**	*e*S	**Sb**	**06 59 33.5**	**-0.2**
GCPR	**Guaynabo City**	**1.20**	**236**		**Pn**	**06 59 17.6**	**-0.5**
CDVI	**St. Croix**	**1.25**	**168**	⇓*e*P	**Pn**	**06 59 19.4**	**+0.5**
CDVI	**St. Croix**	**1.25**	**168**	*e*S	**Sn**	**06 59 35.8**	**+0.7**
CDVI	**St. Croix**	**1.25**	**168**		**Pn**	**06 59 19.4**	**+0.5**
PDPR	**Patillas Dam,**	**1.34**	**225**		**Pn**	**06 59 20.0**	**-0.1**
PDPR				IAML		06 59 39.3	
	comp=E,113nm,0.4s						
SJG	**San Juan**	**1.37**	**231**		**Pn**	**06 59 20.2**	**-0.4**
SJG				IAML		06 59 38.2	
	comp=E,115nm,0.3s						
IGPR	**InterUniversit**	**1.43**	**225**	⇑*e*P	**Pn**	**06 59 21.5**	**0.0**
IGPR	**InterUniversit**	**1.43**	**225**	*e*S	**Sn**	**06 59 39.6**	**-0.1**
EMPR	**Esperanza - Ma**	**1.50**	**251**	⇑*e*P	**Pn**	**06 59 22.5**	**+0.1**
EMPR	**Esperanza - Ma**	**1.50**	**251**	*e*S	**Sn**	**06 59 41.6**	**+0.2**
EMPR	**Esperanza - Ma**	**1.50**	**251**	Pn	**Pn**	**06 59 22.2**	**-0.2**
EMPR				IAML		06 59 43.9	
	comp=E,209nm,0.8s						
EMPR				IAML		06 59 48.5	
	comp=N,145nm,0.8s						
CELP	**Cerrillos**	**1.72**	**239**	⇑*e*P	**Pn**	**06 59 25.6**	**+0.2**
CELP	**Cerrillos**	**1.72**	**239**	*e*S	**Sn**	**06 59 46.6**	**-0.1**
CELP	**Cerrillos**	**1.72**	**239**		**Pn**	**06 59 25.8**	**+0.4**
CELP				IAML		06 59 49.5	
	comp=N,79nm,0.4s						
AOPR	**Arecibo Observ**	**1.75**	**249**	⇓*e*P	**Pn**	**06 59 25.7**	**-0.1**
AOPR	**Arecibo Observ**	**1.75**	**249**	*e*S	**Sn**	**06 59 48.1**	**+0.7**
AOPR	**Arecibo Observ**	**1.75**	**249**		**Pn**	**06 59 25.9**	**+0.1**
AOPR				IAML		06 59 50.4	
	comp=N,207nm,0.3s						
AOPR	**Arecibo Observ**	**1.75**	**249**	*e*P	**Pn**	**06 59 25.6**	**-0.2**
AOPR				*e*S	**Sb**	**06 59 49.7**	**+0.1**
OBIP	**Obispado Ponce**	**1.76**	**238**	⇑*e*P	**Pn**	**06 59 26.2**	**+0.3**
OBIP	**Obispado Ponce**	**1.76**	**238**	*e*S	**Sn**	**06 59 47.0**	**-0.7**
OBIP	**Obispado Ponce**	**1.76**	**238**		**Pn**	**06 59 26.3**	**+0.3**
OBIP				IAML		06 59 50.6	
	comp=N,83nm,0.7s						
AGPR	**Aguadilla, PR**	**2.03**	**256**	⇑*e*P	**Pn**	**06 59 29.6**	**0.0**
AGPR	**Aguadilla, PR**	**2.03**	**256**	*e*S	**Sn**	**06 59 55.0**	**+0.5**
AGPR	**Aguadilla, PR**	**2.03**	**256**	Pn	**Pn**	**06 59 29.7**	**0.0**
AGPR				IAML		06 59 55.7	
	comp=N,102nm,1.8s						
AGPR				IAML		07 00 04.6	
	comp=E,115nm,2.5s						
LSP	**Las Mesas**	**2.10**	**248**	⇑*e*P	**Pn**	**06 59 31.2**	**+0.5**
MLPR	**Magueyes Islan**	**2.16**	**243**	⇑*e*P	**Pn**	**06 59 32.1**	**+0.7**
MLPR	**Magueyes Islan**	**2.16**	**243**	*e*S	**Sn**	**06 59 57.7**	**+0.2**
MLPR	**Magueyes Islan**	**2.16**	**243**	Pn	**Pn**	**06 59 32.2**	**+0.9**
MLPR				IAML		07 00 06.3	
	comp=E,52nm,0.6s						
CRPR	**Cabo Rojo, PR**	**2.19**	**244**	⇑*e*P	**Pn**	**06 59 32.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.19**	**244**	*e*S	**Sn**	**06 59 58.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.19**	**244**	Pn	**Pn**	**06 59 32.2**	**+0.3**
CRPR				IAML		07 00 04.5	
	comp=N,52nm,0.8s						
CRPR				IAML		07 00 04.9	
	comp=E,45nm,1.4s						
IDE	**Isla Desecheo**	**2.39**	**256**	⇑*e*P	**Pn**	**06 59 34.9**	**+0.3**
MBFL	**Flemmings, Mon**	**3.48**	**129**	*e*P	**Pn**	**06 59 48.8**	**-0.9**
MBFL				*e*S	**Sn**	**07 00 31.8**	**+1.4**
BPA	**Boggy Peak**	**3.58**	**122**	*e*P	**Pn**	**06 59 51.2**	**+0.1**
BPA				*e*S	**Sn**	**07 00 33.1**	**+0.3**
ANBD	**Bethesda, Anti**	**3.66**	**121**	*e*P	**Pn**	**06 59 51.2**	**-0.8**
ANBD				*e*S	**Sn**	**07 00 33.3**	**-1.3**

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*IDC **20** 07:01:02.5±0.7, 43.°82N×128.°57W, h0^{km}, mb4.2/21, mbtmp4.1/27, ML3.7/6, MS3.9/60, Error ellipse: s-maj=23.3km s-min=9.2km az=35.0*

*GCMT **20** 07:01:04.7±0.2, 43.°74N±0.°02×128.°68W±0.°02, h14^{km}, MW4.9/103, Moment Tensor Solution. s32,c41; s103,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.47±.13; M$_{\theta\theta}$0.25±.08; M$_{\phi\phi}$2.22±.09; M$_{r\theta}$-0.24±.20; M$_{\theta\phi}$0.66±.05; M$_{\phi r}$-0.83±.17; Best double couple: M$_0$2.59300×10^{16} NP1:ϕ_s197.00000°, δ35.00000°, λ-90.00000°. NP2:ϕ_s17.00000°, δ55.00000°, λ-90.00000°. Principal axes: T 2.5680, Plg10.0000°, Azm107.0000°; N 0.0460, Plg0.0000°, Azm17.0000°; P -2.6180, Plg80.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 07:01:05.1±2.6, 43.°79N±0.°08×128.°46W±0.°10, h10^{km}±1^{km}, mb4.9/105, ML3.7/44, Mww5.0 Error ellipse: s-maj=14.7km s-min=9.3km az=218.0*

*NEIC **20** 07:01:18, 43.°77N×127.°92W, h12^{km}, Moment Tensor Solution. Duration: 18.^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.12; M$_{\theta\theta}$0.33; M$_{\phi\phi}$1.79; M$_{r\theta}$-0.93; M$_{\theta\phi}$0.47; M$_{\phi r}$-3.42; Fault plane solution: M$_0$4.09000×10^{16} NP1: ϕ_s197.00000°, δ15.00000°, λ-88.00000°. NP2:ϕ_s15.00000°, δ75.00000°, λ-90.00000°. Principal axes: T 3.9872, Plg30.0000°, Azm106.0000°; N 0.1954, Plg0.0000°, Azm15.0000°; P -4.1827, Plg60.0000°, Azm285.0000°;*

ISC 20 07:01:04.9±0.5**, 43.°83N**±0.°06×**128.°45W**±0.°06**, h13^{km}, n597, σ1.^{s}27**/565**, mb4.7**/74**, MS3.9**/52**, 1D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.15**	**106**		**Pn**	**07 01 51.5**	**-2.8**
KEBM				IAML		07 02 33.5	
	comp=E,274nm,0.7s						
KEBM				IAML		07 02 34.1	
	comp=N,262nm,0.7s						
I02E	**Swisshome, OR**	**3.34**	**84**	P	**Pn**	**07 01 54.1**	**-2.6**
	baz=267						
I02E				S	**Sn**	**07 02 35.4**	**-0.8**
	baz=267						
J01E	**Myrtle Point**	**3.36**	**100**		**Pn**	**07 01 55.3**	**-1.7**
J01E				IAML		07 02 38.6	
	comp=N,131nm,0.9s						
J01E				IAML		07 02 45.0	
	comp=E,219nm,2.2s						
J01E	**Myrtle Point**	**3.36**	**100**	P	**Pn**	**07 01 55.0**	**-2.0**
	baz=283,SNR=54						
J01E				S	**Sn**	**07 02 36.0**	**-0.7**
	baz=283						
KBO	**Bosley Butte**	**3.50**	**116**	Pn	**Pn**	**07 01 57.3**	**-1.7**
KBO				IAML		07 02 38.0	
	comp=E,146nm,2.6s						
HEBO	**Mount Hebo**	**3.64**	**66**	Pn	**Pn**	**07 02 00.0**	**-0.9**
HEBO				IAML		07 02 39.3	
	comp=N,143nm,2.8s						
K02D	**Willamette Mer**	**3.68**	**106**	P	**Pn**	**07 01 59.1**	**-2.4**
	baz=290,SNR=67						
K02D				S	**Sn**	**07 02 43.4**	**-1.3**
	baz=290						
I03D	**Drain, OR**	**3.70**	**90**	P	**Pn**	**07 01 59.7**	**-2.0**
	baz=274,SNR=519						
COR	**Corvallis**	**3.78**	**77**		**Pn**	**07 02 02.1**	**-0.7**
COR				IAML		07 02 52.8	
	comp=N,123nm,1.9s						
COR				IAML		07 03 05.7	
	comp=N,112nm,2.0s						
DBO	**Dodson Butte**	**3.86**	**99**		**Pn**	**07 02 02.4**	**-1.6**
KSXB	**Camp Six Broad**	**3.91**	**119**	Pn	**Pn**	**07 02 02.7**	**-2.0**
G03D	**McMinnville, O**	**3.96**	**68**		**Pn**	**07 02 04.5**	**-0.8**
G03D				IAML		07 02 55.6	
	comp=E,126nm,2.0s						
G03D	**McMinnville, O**	**3.96**	**68**	P	**Pn**	**07 02 03.4**	**-1.9**
	baz=251,SNR=45						
BUCK	**Buck Mountain**	**3.96**	**83**	Pn	**Pn**	**07 02 04.2**	**-1.2**
BUCK				IAML		07 02 59.9	
	comp=N,118nm,1.9s						
BUCK				IAML		07 03 17.5	
	comp=E,137nm,2.1s						
L02F	**Cave Junction**	**3.97**	**114**	P	**Pn**	**07 02 04.2**	**-1.2**
	baz=298						
L02F				S	**Sn**	**07 02 51.8**	**-0.1**
	baz=298						
H04D	**Lebanon**	**4.17**	**78**	Pn	**Pn**	**07 02 07.1**	**-1.1**
H04D				IAML		07 03 05.5	
	comp=N,92nm,1.4s						
H04D	**Lebanon**	**4.17**	**78**	P	**Pn**	**07 02 06.2**	**-2.0**
	baz=262,SNR=15						
HUMO	**Hull Mountain**	**4.20**	**105**	Pn	**Pn**	**07 02 07.0**	**-1.6**
I04A	**Tendick Farm,**	**4.37**	**88**	P	**Pn**	**07 02 09.7**	**-1.4**
	baz=273,SNR=84						

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E03A  Lebam              4.40  50              Pn     07 02 10.0 -1.3
E03A                                   IAML           07 03 16.1
      comp=N,80nm,1.5s
E03A                                   IAML           07 03 21.9
      comp=E,80nm,2.4s
F04D  Rainier, OR        4.47  58      P       Pn     07 02 11.2 -1.1
      baz=241,SNR=7.2
F04D                                   S       Sn     07 03 03.5 -0.8
      baz=241
H04A  Detroit Lake       4.58  77              Pn     07 02 13.6 -0.3
H04A                                   IAML           07 03 17.8
      comp=E,50nm,0.6s
J04D  Umpqua Nationa     4.65  95              Pn     07 02 14.9 -0.1
J04D  Umpqua Nationa     4.65  95      P       Pn     07 02 14.6 -0.4
      baz=280,SNR=51
WISH  Wishkah            4.66  43              Pn     07 02 15.1 +0.3
YBH   Yreka Blue Hor     4.72 114      Pn      Pn     07 02 15.9 +0.1
      comp=E,0.9nm,0.3s,baz=280,slow=14,SNR=10.0
YBH                                    Sn      Sn     07 03 12.2 +1.8
      comp=E,0.7nm,0.3s,baz=148,slow=15,SNR=1.8
      comp=E,5.9nm,0.6s
YBH   Yreka Blue Hor     4.72 114              Pn     07 02 15.7 -0.1
F04A  Amboy              4.78  62      Pn      Pn     07 02 16.0 -0.5
L04D  Klamath Falls      4.79 108              Pn     07 02 16.3 -0.4
L04D                                   IAML           07 03 39.9
      comp=E,69nm,3.1s
L04D                                   IAML           07 03 58.6
      comp=N,47nm,4.8s
L04D  Klamath Falls      4.79 108      P       Pn     07 02 16.4 -0.4
      baz=292,SNR=14
L04D                                   S       Sn     07 03 12.3 +0.1
      baz=292
E04D  Cinebar            4.98  55      Pn      Pn     07 02 19.1 -0.2
E04D                                   IAML           07 03 29.8
      comp=N,47nm,2.5s
E04D                                   IAML           07 03 35.6
      comp=E,51nm,1.2s
E04D  Cinebar            4.98  55      P       Pn     07 02 17.6 -1.7
      baz=238
K04D  Chiloquin, OR      5.04 101      P       Pn     07 02 19.2 -1.1
      baz=286,SNR=8.3
HOOD  Mount Hood Mea     5.08  71              Pn     07 02 20.8 -0.1
I05D  Terrebonne, OR     5.15  82      P       Pn     07 02 21.0 -0.8
      baz=267,SNR=12
D04E  Lakebay            5.21  48      P       Pn     07 02 21.7 -0.8
      baz=232
J05D  Fort Rock, OR      5.27  93      P       Pn     07 02 23.4 -0.1
      baz=279,SNR=18
J05D                                   S       Sn     07 03 24.8 +0.6
      baz=279
D03D  Eldon              5.28  44      P       Pn     07 02 22.7 -0.7
      baz=227,SNR=12
G05D  Wamic, OR          5.29  72      P       Pn     07 02 22.9 -0.8
      baz=257,SNR=25
F05D  White Salmon       5.38  65              Pn     07 02 24.6 -0.2
F05D  White Salmon       5.38  65      P       Pn     07 02 23.5 -1.4
      baz=250,SNR=26
F05D                                   S       Sn     07 03 27.1 +0.5
      baz=250
PINE  Pine Mountain      5.44  88      Pn      Pn     07 02 24.9 -0.8
B04A  Port Angeles       5.46  37              Pn     07 02 26.6 +0.7
K05A  Summer Lake        5.63  99              Pn     07 02 27.9 -0.5
D05A  Enumclaw           5.65  51              Pn     07 02 28.8 +0.2
CLRS  Cowichan Lake      5.82  29      Pn      Pn     07 02 30.5 -0.3
MOD   Modoc Plateau      6.29 105      Pn      Pn     07 02 36.4 -1.0
F07A  Phinny Hill Vi     6.40  68              Pn     07 02 38.5 -0.3
LTY   Liberty            6.45  55              Pn     07 02 38.8 -0.8
I07A  Izee               6.46  85              Pn     07 02 38.1 -1.7
CBB   Campbell River     6.56  18      Pn      Pn     07 02 42.5 +1.5
E07A  Sunnyside          6.66  63      Pn      Pn     07 02 42.3 -0.1
ORV   Oroville           6.73 127      Pn      Pn     07 02 45.1 +1.8
B06A  Marblemount        6.74  43              Pn     07 02 44.6 +1.2
HAWA  Hanford            6.81  65              Pn     07 02 44.5  0.0
HOLB  Holberg            6.82   2              Pn     07 02 47.5 +2.9
G08A  Pilot Rock         6.94  75              Pn     07 02 45.2 -1.1
J08A  Circle Bar Ran     7.26  90              Pn     07 02 50.0 -0.8
WVOR  Wild Horse Val     7.32  98              Pn     07 02 49.6 -1.9
D08A  Wollman Farm,      7.44  61      Pn      Pn     07 02 52.6 -0.5
VCNR  Virginia City      8.00 121              Pn     07 03 03.4 +2.4
BMO   Blue Mountains     8.06  79      Pn      Pn     07 03 00.3 -1.4
LLLB  Lillooet           8.12  31      Pn      Pn     07 03 04.1 +1.6
C09A  Chrisman Ranch     8.14  57              Pn     07 03 01.7 -1.1
PNTR  Pine Nut           8.16 122              Pn     07 03 05.9 +2.7
F10A  Beach Ranch, E     8.25  71              Pn     07 03 03.1 -1.2
BBB   Bella Bella        8.37   1      Pn      Pn     07 03 07.8 +2.1
      comp=E,0.7nm,0.3s,baz=191,slow=4.7,SNR=13
BBB                                    LR      LR     07 05 48.4
      comp=E,228nm,18.7s,baz=189,slow=34
CMB   Columbia Colle     8.41 131              Pn     07 03 08.6 +2.2
YERR  Yerington          8.44 122              Pn     07 03 09.5 +2.5
PLID  Pearl Lake         9.00  78      Pn      Pn     07 03 15.3 +0.6
NEW   Newport            9.04  57      LR      LR     07 06 40.8
      comp=E,843nm,21.2s,baz=246,slow=37
NEW   Newport            9.04  57      Pn      Pn     07 03 14.6 -0.5
NEW   Newport            9.04  57      P       Pn     07 03 14.2 -0.9
      baz=245
RYN   Ryan               9.11 121              Pn     07 03 17.1 +1.0
KVN   Kaiserville        9.12 118      Pn      Pn     07 03 17.0 +0.6
NVAR  Mina Array Bea     9.36 122      Pn      Pn     07 03 22.9 +3.2
      comp=E,0.7nm,0.3s,baz=296,slow=14,SNR=21
NVAR                                   LR      LR     07 06 59.6
      comp=E,2µm,20.8s,baz=276,slow=38
      comp=E,6.4nm,0.7s
NVAR  Mina Array Bea     9.36 122              Pn     07 03 20.9 +1.2
NV11  Mina Array Sit     9.45 121              Pn     07 03 22.2 +1.3
H02S1 DAWSON INLET T     9.75 346      T       T      07 12 43.8
      SNR=14
HLID  Hailey            10.18  87      P       Pn     07 03 29.1 -1.6
      baz=276
ELK   Elko              10.27 103      Pn      Pn     07 03 35.1 +3.1
      comp=E,0.2nm,0.3s,baz=292,slow=14,SNR=28
ELK                                    LR      LR     07 07 38.2
      comp=E,1µm,20.0s,baz=311,slow=38
      comp=E,6.8nm,0.9s
ELK   Elko              10.27 103      Pn      Pn     07 03 32.3 +0.2
LCH   Last Change Ra    10.53 125              Pn     07 03 37.9 +2.3
JTMT  Jette             10.64  63      Pn      Pn     07 03 35.9 -1.3
MSO   Missoula          10.65  69              Pn     07 03 36.8 -0.4
MSO   Missoula          10.65  69      P       Pn     07 03 35.4 -1.8
      baz=259,SNR=9.0
SMMC  Simmler           10.71 140      P       Pn     07 03 39.5 +1.5
      baz=326
VES   Vestal, Richgr    10.74 135      P       Pn     07 03 40.0 +1.7
      baz=321
CWC   Cottonwood Cre    10.83 129      P       Pn     07 03 40.6 +0.8
      baz=316
GRAC  Grapevine Rang    10.86 125      P       Pn     07 03 40.7 +0.8
      baz=313
R11A  Troy Canyon, C    11.14 115              Pn     07 03 43.3 -0.8
R11A  Troy Canyon, C    11.14 115      P       Pn     07 03 43.6 -0.4
      baz=304
PKM   Mcpherson Peak    11.15 140      P       Pn     07 03 45.8 +1.7
      baz=326
ISA   Isabella, Lake    11.19 133              Pn     07 03 46.1 +1.5
ISA   Isabella, Lake    11.19 133      P       Pn     07 03 45.9 +1.3
      baz=320
WALA  Waterton Lakes    11.31  57      Pn      Pn     07 03 45.8 -0.4
ARVC  Arvin             11.43 136      P       Pn     07 03 49.1 +1.3
      baz=323
LRM   Limekiln Ridge    11.54  74              Pn     07 03 49.1 -0.4
TPNV  Topopah Spring    11.56 122      P       Pn     07 03 50.3 +0.6
      baz=311
QSM   Queen of Sheba    11.86 128              Pn     07 03 56.4 +2.7
EDW2  Edwards Air Fo    12.05 134      P       Pn     07 03 57.5 +1.2
      baz=321
BOZ   Bozeman (W)       12.10  76              Pn     07 03 58.9 +1.8
BOZ   Bozeman (W)       12.10  76      P       Pn     07 03 56.0 -1.1
      baz=268
DUG   Dugway, Tooele    12.19 102              Pn     07 03 58.7 +0.5
DUG   Dugway, Tooele    12.19 102      P       Pn     07 03 58.4 +0.2
      baz=293
QLMT  Earthquake Lak    12.24  79              Pn     07 04 00.6 +1.6
DECC  Green Verdugo     12.37 137      P       Pn     07 04 01.7 +1.1
      baz=324
GSC   Goldstone, Bar    12.37 130      P       Pn     07 04 02.6 +1.9
      baz=317,SNR=10
SHPR  Sheep Range       12.51 121      Pn      Pn     07 04 04.0 +1.2
YMR   Madison River     12.57  80              Pn     07 04 04.4 +0.8
RRX   Edison Barstow    12.58 131      P       Pn     07 04 02.0 -1.5
      baz=319
YPP   Pitchstone Pla    12.71  82              Pn     07 04 04.4 -1.1
BFSC  Mount Baldy Ra    12.72 135      P       Pn     07 04 06.7 +1.2
      baz=322
TUQ   Turquoise Moun    12.78 127      P       Pn     07 04 06.5 +0.2
      baz=315
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FLWY  Flagg Ranch       12.80  83              Pn     07 04 07.2 +0.5
MOOW  Moose Ponds       12.80  84      Pn      Pn     07 04 06.2 -0.5
NLU   North Lily Min    12.80 102      Pn      Pn     07 04 07.6 +0.9
SNOW  Snow King Moun    12.83  85              Pn     07 04 07.6 +0.5
WRAK  Wrangell Islan    12.85 350      P       Pn     07 04 09.0 +2.0
      baz=167
H17A  Grant Village     12.87  81      P       Pn     07 04 06.5 -1.1
      baz=274,SNR=10
LOHW  Long Hollow       12.92  85              Pn     07 04 08.7 +0.4
HEC   Hector,Ludlow     12.98 130      P       Pn     07 04 10.7 +1.7
      baz=318
CIS   Catalina Islan    13.02 140      P       Pn     07 04 10.9 +1.3
      baz=326
SCI2  San Clemente I    13.31 141      P       Pn     07 04 15.1 +1.5
      baz=328
GMRC  Granite Mounta    13.39 128      P       Pn     07 04 15.4 +0.7
      baz=317,SNR=5.5
MURC  Murrieta          13.46 136      P       Pn     07 04 15.6 +0.1
      baz=323
EGMT  Eagleton          13.67  66              Pn     07 04 18.7 +0.3
EGMT  Eagleton          13.67  66      P       Pn     07 04 16.6 -1.8
      baz=259,SNR=6.6
RLMT  Red Lodge         13.76  78              Pn     07 04 19.9 +0.1
RLMT  Red Lodge         13.76  78      P       Pn     07 04 16.2 -3.6
      baz=271
BW06  Boulder Array     13.81  88              Pn     07 04 18.6 -1.9
BW06  Boulder Array     13.81  88      P       Pn     07 04 17.0 -3.4
      baz=281,SNR=5.7
PD31  Pinedale Array    13.81  88              Pn     07 04 20.4  0.0
PDAR  Pinedale Array    13.81  88      Pn      Pn     07 04 23.6 +3.1
      comp=E,0.1nm,0.3s,baz=284,slow=12,SNR=20
PDAR                                   LR      LR     07 09 53.9
      comp=E,1µm,18.1s,baz=276,slow=38
      comp=E,2.8nm,0.8s
PFO   Pinyon Flats O    13.83 133      Pn      Pn     07 04 23.2 +2.5
      comp=E,0.2nm,0.3s,baz=328,slow=7.7,SNR=4.3
PFO                                    LR      LR     07 09 23.8
      comp=E,597nm,19.2s,baz=322,slow=36
      comp=E,3.5nm,0.9s
PFO   Pinyon Flats O    13.83 133      Pn      Pn     07 04 21.2 +0.5
PFO   Pinyon Flats O    13.83 133      P       Pn     07 04 21.9 +1.2
      baz=321
TPFO  Pinon Flats       13.84 133      P       Pn     07 04 22.2 +1.5
      baz=321
Q16A  Castle Valley     13.87 105              Pn     07 04 22.5 +1.2
P17A  Butcher Ranch,    13.94 102              Pn     07 04 23.2 +1.0
SIT   Sitka             13.94 344      P       Pn     07 04 24.4 +2.5
      baz=159
NEE2  Needles Airpor    14.01 126      P       Pn     07 04 21.2 -1.7
      baz=315
109C  Camp Elliot, M    14.07 137      P       Pn     07 04 23.9  0.0
      baz=324
IRM   Iron Mountain     14.14 129      P       Pn     07 04 25.9 +1.1
      baz=317
W13A  Hualapai Mount    14.22 123              Pn     07 04 27.0 +0.9
P18A  Preston Nutter    14.23 101              Pn     07 04 26.2 -0.1
SRU   San Rafael Swe    14.24 103              Pn     07 04 26.4  0.0
BC3   Big Chuckawall    14.34 131      P       Pn     07 04 27.1 -0.5
      baz=319
MONP2 Monument Peak     14.41 135      P       Pn     07 04 29.3 +0.6
      baz=323
TKX   Tecate            14.58 136              Pn     07 04 31.1 +0.2
PDMCI Parker Dam,Lak    14.61 126      P       Pn     07 04 32.3 +1.1
      baz=315
DLBC  Dease Lake        14.66 357      LR      LR     07 09 28.9
      comp=E,329nm,18.4s,baz=180,slow=34
SWSC  Sam W. Stewart    14.69 133      P       Pn     07 04 32.5 +0.1
      baz=322
IKP   In-Ko-Pah, Jac    14.77 135      P       Pn     07 04 34.0 +0.6
      baz=323
BLYC  Blythe            14.79 128      Pn      Pn     07 04 34.5 +0.9
YUH   Yuha Desert       14.86 134              Pn     07 04 34.0 -0.7
GLA   Glamis            15.13 131      P       Pn     07 04 39.3 +0.9
      baz=320
O20A  White River Ci    15.47  97      P       Pn     07 04 42.2 -0.7
      baz=291,SNR=27
WUAZ  Wupatki           15.53 117      P       Pn     07 04 43.8 +0.1
      baz=308,SNR=5.3
LAO   LASA Array        15.90  72      P       Pn     07 04 50.2 +1.8
      baz=268
LAO   LASA Array        15.90  72      P       Pn     07 04 45.9 -2.5
      baz=268
K22A  Casper            16.02  87      P       Pn     07 04 52.0 +2.0
      baz=282
K22A  Casper            16.02  87      P       Pn     07 04 48.0 -2.0
      baz=282
SKAG  Skagway           16.21 347      P       P      07 04 56.3 +1.1
      baz=162
PLBC  Pleasant Camp     16.38 346      P       P      07 04 59.5 +2.3
      baz=159
MVCO  Mesa Verde        16.53 107      P       Pn     07 04 55.7 -0.9
      baz=300,SNR=17
W18A  Petrified Fore    16.84 115      P       Pn     07 05 00.5  0.0
      baz=307,SNR=5.3
N23A  Red Feather La    16.89  92      P       Pn     07 05 00.3 -0.8
      baz=288,SNR=28
214A  Organ Pipe Nat    17.08 129      P       Pn     07 05 03.1 -0.2
      baz=319
PNL   Peninsula         17.21 341      P       P      07 05 07.5 +1.1
      baz=152
DGMT  Dagmar            17.41  66      P       Pn     07 05 08.4 +1.1
      baz=264
DGMT  Dagmar            17.41  66      P       Pn     07 05 06.0 -1.4
      baz=264
S22A  4UR Ranch, Cre    17.45 103      P       Pn     07 05 08.6 +0.5
      baz=297,SNR=23
ISCO  Idaho Springs     17.48  95      P       Pn     07 05 09.0 +0.4
      baz=291,SNR=23
ISCO  Idaho Springs     17.48  95      P       Pn     07 05 08.8 +0.2
      baz=291,SNR=23
RSSD  Black Hills       17.57  81      P       Pn     07 05 11.1 +1.6
      baz=278,SNR=12
RSSD  Black Hills       17.57  81      P       Pn     07 05 08.8 -0.7
      baz=278
TGTN  Hyland Airport    17.73   0      P       P      07 05 14.0 +1.9
      baz=180
PINM  Pinnacle          17.79 340      P       P      07 05 13.3 +0.5
      baz=151
HYT   Haines Junctio    17.87 345      P       P      07 05 14.1 +0.4
      baz=158
TUC   Tucson            18.01 124      P       P      07 05 16.1 +0.7
      baz=315
Q24A  Divide            18.13  98      P       Pn     07 05 16.2 -0.4
      baz=293
YUK6  Outpost Mounta    18.14 344      P       Pn     07 05 16.5  0.0
      baz=156
MESA  MESA              18.30 338      P       P      07 05 18.8 +0.3
      baz=147
SDCO  Great Sand Dun    18.39 101      P       P      07 05 20.0 +0.3
SDCO  Great Sand Dun    18.39 101      P       Pn     07 05 21.5 +1.8
      baz=297,SNR=42
SDCO  Great Sand Dun    18.39 101      P       P      07 05 18.6 -1.1
      baz=297,SNR=42
N30M  Aishikik Lake     18.39 347      P       P      07 05 19.5 +0.1
      baz=160
YUK4  Talbot Arm        18.57 344      P       Pn     07 05 23.8 +2.2
      baz=156
FARO  Faro, Yukon       18.66 353      P       Pn     07 05 23.8 +1.2
      baz=169
GRNC  Granite Creek     18.72 339      P       Pn     07 05 23.6  0.0
M31M  Drury Creek, Y    18.74 351      P       Pn     07 05 24.2 +0.7
      baz=166
CTGM  Chitina Glacie    18.82 340      P       Pn     07 05 26.0 +1.4
CTG   Chitna Glacier    18.82 340      P       Pn     07 05 25.2 +0.6
      baz=150
MMPY  Sheldon Lake,     18.90 356      P       P      07 05 25.7 +0.7
      baz=174
BARN  Barnard Glacie    18.98 340      P       Pn     07 05 27.1 +0.5
ANMO  Albuquerque       19.13 110      P       Pn     07 05 29.5 +0.8
      comp=E,0.1nm,0.3s,baz=308,slow=11,SNR=20
ANMO                                   LR      LR     07 13 17.7
      comp=E,2µm,19.0s,baz=313,slow=38
      comp=E,6.1nm,1.0s
ANMO  Albuquerque       19.13 110      P       Pn     07 05 29.6 +0.8
ANMO  Albuquerque       19.13 110      P       Pn     07 05 29.5 +0.8
      baz=304,SNR=15
ANMO  Albuquerque       19.13 110      P       P      07 05 28.0 +0.2
      baz=304
Y22D  IRIS PASSCAL I    19.32 113      P       P      07 05 28.6 -1.3
      baz=307
YUK3  Moose Creek       19.33 343      P       Pn     07 05 31.4 +0.5
      baz=153
Y22A  Socorro           19.38 113      P       Pn     07 05 34.0 +2.4
      baz=307,SNR=8.1
M30M  Minto, Yukon      19.41 348      P       Pn     07 05 32.2 +0.6
M30M  Minto, Yukon      19.41 348      P       P      07 05 31.2 +0.8
      baz=161
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T25A  Trinidad          19.43 102      P       P      07 05 29.6 -1.5
T25A                                   IAmb    IAmb   07 05 43.1
      comp=Z,51nm,1.1s
T25A  Trinidad          19.43 102      P       P      07 05 30.6 -0.5
      baz=298,SNR=38
BNM   Barren Site       19.48 112      P       P      07 05 32.7 +1.0
319A  Douglas           19.57 123      P       Pn     07 05 34.6 +0.7
319A                                   IAmb    IAmb   07 05 45.6
      comp=Z,41nm,1.2s
MCARA McCarthy VSAT     19.60 339      P       Pn     07 05 34.6 +0.7
MCARA McCarthy VSAT     19.60 339      P       Pn     07 05 34.3 +0.4
      baz=147
BMRM  Bremner River     19.70 336      P       Pn     07 05 34.6 -0.5
BMRM  Bremner River     19.70 336      P       Pn     07 05 36.4 +1.3
      baz=143
OGNE  Ogallala          19.70  89      P       P      07 05 32.3 -1.6
      baz=287
EYAK  Cordova Ski Ar    19.71 334      P       Pn     07 05 38.1 +2.9
      baz=140
E28A  Huff              19.71  72      P       P      07 05 35.3 +1.3
E28A                                   IAmb    IAmb   07 05 51.1
      comp=Z,135nm,1.2s
E28A  Huff              19.71  72      P       Pn     07 05 36.8 +1.3
      baz=272,SNR=6.7
121A  Cookes Peak, D    19.72 118      P       P      07 05 34.3  0.0
121A                                   IAmb    IAmb   07 05 45.8
      comp=Z,48nm,1.2s
121A  Cookes Peak, D    19.72 118      P       Pn     07 05 37.8 +2.1
      baz=311
121A  Cookes Peak, D    19.72 118      P       P      07 05 34.9 +0.6
      baz=311
KSCO  Kaye Shedlock’    19.92  95      P       P      07 05 38.0 +1.6
KSCO                                   IAmb    IAmb   07 05 48.6
      comp=Z,56nm,1.1s
KSCO  Kaye Shedlock’    19.92  95      P       Pn     07 05 39.2 +1.2
      baz=292,SNR=6.6
KSCO  Kaye Shedlock’    19.92  95      P       P      07 05 36.1 -0.3
      baz=292
BVCY  Beaver Creek      19.98 343      P       Pn     07 05 40.2 +1.6
      baz=153
M27K  Edge Creek, AK    20.16 342      P       Pn     07 05 40.6 -0.1
M27K  Edge Creek, AK    20.16 342      P       Pn     07 05 40.1 -0.6
      baz=151,SNR=8.4
DIV   Divide            20.17 335      P       P      07 05 39.2 +0.3
N25K  Chitina, Valde    20.21 337      P       Pn     07 05 40.8 -0.4
N25K  Chitina, Valde    20.21 337      P       P      07 05 39.8 +0.5
      baz=144
YKA   Yellowknife Ar    20.38  19      P       P      07 05 41.4 +0.5
      comp=Z,12nm,0.8s,baz=204,slow=11,SNR=41
YKA                                    PcP     PcP    07 09 52.4 -0.8
      comp=Z,0.5nm,0.8s,baz=190,slow=2.1,SNR=4.8
      comp=Z,12nm,0.8s
MDND  Maddock           20.44  69      P       P      07 05 40.0 -1.8
      baz=269
M26K  Nabesna, AK       20.46 340      P       P      07 05 43.0 +1.0
M26K  Nabesna, AK       20.46 340      P       P      07 05 42.6 +0.7
      baz=148,SNR=5.8
KLU   Klutina           20.50 336      P       Pn     07 05 44.4 -0.3
KLU   Klutina           20.50 336      P       P      07 05 43.6 +1.1
      baz=142
KDAK  Kodiak Island     20.52 321      LR      LR     07 11 45.0
      comp=Z,836nm,18.8s,baz=159,slow=31
KDAK  Kodiak Island     20.52 321      P       Pn     07 05 45.5 +0.7
      baz=122
OHAK  Old Harbor        20.56 319      P       Pn     07 05 46.3 +1.1
      baz=120
SII   Sitkinak Islan    20.67 317      P       Pn     07 05 45.6 -1.0
      baz=117
L27K  Beaver Creek,     20.77 343      P       Pn     07 05 46.7 -1.0
      baz=152
HARP  HAARP             21.01 338      P       P      07 05 50.2 +2.3
      baz=144
M24K  Tolsona, Glenn    21.06 337      P       P      07 05 51.2 +2.7
M24K                                   IAmb    IAmb   07 06 00.3
      comp=Z,26nm,1.1s
M24K  Tolsona, Glenn    21.06 337      P       P      07 05 50.8 +2.4
      baz=142
L26K  Log Cabin Wild    21.08 341      P       P      07 05 50.1 +1.4
L26K  Log Cabin Wild    21.08 341      P       P      07 05 50.0 +1.4
      baz=149
SUSD  Miller            21.13  78      P       P      07 05 49.6 +0.2
SUSD                                   IAmb    IAmb   07 05 56.5
      comp=Z,78nm,1.0s
SUSD  Miller            21.13  78      P       P      07 05 45.1 -4.3
      baz=279
SCM   Sheep Creek Mo    21.19 335      P       P      07 05 53.2 +3.3
      baz=140
DAWY  Dawson            21.21 347      P       P      07 05 50.8 +0.7
      baz=158
KNK   Knik Glacier      21.24 333      P       P      07 05 51.3 +1.0
      baz=137
M23K  Glacier View      21.28 334      P       P      07 05 51.6 +0.8
      baz=139
SML   Sawmill           21.48 334      P       P      07 05 54.0 +1.0
      baz=138
PAX   Paxson            21.56 339      P       P      07 05 56.9 +3.0
PAX   Paxson            21.56 339      P       P      07 05 55.1 +1.3
      baz=145
PMR   Palmer            21.59 333      P       P      07 05 55.7 +1.7
      baz=136
Q19K  Cape Douglas,     21.62 323      P       P      07 05 58.8 +4.4
      baz=123
K31A  O'Neill           21.63  83      P       P      07 05 54.8 +0.2
K31A                                   IAmb    IAmb   07 06 08.4
      comp=Z,99nm,1.2s
K31A  O'Neill           21.63  83      P       P      07 05 56.5 +1.8
      baz=283
GHO   Glory Hole Cre    21.65 333      P       P      07 05 57.1 +2.3
GHO                                    IAmb    IAmb   07 06 08.1
      comp=Z,30nm,1.0s
K27K  Chicken           21.68 344      P       P      07 05 55.8 +0.8
K27K  Chicken           21.68 344      P       P      07 05 56.6 +1.6
      baz=152
MNTX  Cornudas Mount    21.81 116      P       P      07 05 59.4 +2.6
      baz=310,SNR=9.6
MNTX  Cornudas Mount    21.81 116      P       P      07 05 58.2 +1.5
      baz=310,SNR=9.6
O20K  Slope Mountain    21.86 327      P       P      07 05 59.0 +1.9
      baz=127
WAT6  Susitna Watana    21.89 336      P       P      07 05 59.0 +1.5
      baz=140
M22K  Willow            22.04 332      P       P      07 05 59.9 +1.1
      baz=134
RIDG  Independent Ri    22.05 340      P       P      07 05 59.1 +0.1
      baz=147,SNR=11
SCRK  Sand Creek        22.05 342      P       P      07 06 00.3 +1.2
SCRK  Sand Creek        22.05 342      P       P      07 06 00.5 +1.4
      baz=149
CBKS  Cedar Bluff       22.08  93      P       P      07 06 01.6 +1.9
      baz=292
CBKS  Cedar Bluff       22.08  93      P       P      07 05 59.9 +0.3
      baz=292
DHY   Denali Highway    22.17 337      P       P      07 06 02.0 +1.6
DHY                                    IAmb    IAmb   07 06 12.6
      comp=Z,31nm,1.0s
DHY   Denali Highway    22.17 337      P       P      07 06 01.7 +1.2
      baz=141,SNR=15
EGAK  Eagle             22.18 346      P       P      07 06 01.1 +0.7
EGAK  Eagle             22.18 346      P       P      07 06 00.7 +0.4
      baz=155,SNR=6.1
MSTX  Muleshoe          22.20 108      P       P      07 06 01.6 +0.6
      baz=304
I29M  Ogilvie Camp,     22.27 349      P       P      07 06 01.4 +0.1
      baz=161
WAT1  Susitna Watana    22.32 335      P       P      07 06 03.0 +1.0
      baz=139
K24K  Donnelly Dome     22.33 340      P       P      07 06 03.4 +1.4
      baz=145
BGNE  Belgrade          22.37  86      P       P      07 05 59.9 -2.8
      baz=286
SPCR  Spurr Chakacha    22.40 329      P       P      07 06 02.8 -0.1
      baz=130
J26L  Joseph Creek      22.41 343      P       P      07 06 03.3 +0.4
      baz=150
AMTX  Amarillo          22.47 104      P       P      07 06 04.6 +0.8
AMTX                                   IAmb    IAmb   07 06 14.9
      comp=Z,104nm,1.4s
AMTX  Amarillo          22.47 104      P       P      07 06 05.5 +1.7
      baz=302,SNR=6.8
AMTX  Amarillo          22.47 104      P       P      07 06 04.3 +0.5
      baz=302
P18K  Big Mountain,     22.56 323      P       P      07 06 04.4 -0.1
      baz=122
O19K  Port Alsworth     22.61 325      P       P      07 06 03.4 -1.7
      baz=125
F33A  5 Mile Ranch,     22.82  74      P       P      07 06 08.7 +1.4
      baz=277,SNR=29
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J25K	Salcha River,	22.91	341	P	P	07 06 08.4	+0.3
	baz=147						
ECSD	EROS Data Cent	22.92	79	P	P	07 06 08.9	+0.4
ECSD				IAmb	IAmb	07 06 16.6	
	comp=Z,55nm,1.1s						
ECSD	EROS Data Cent	22.92	79	P	P	07 06 09.3	+0.8
	baz=281,SNR=26						
ECSD	EROS Data Cent	22.92	79	P	P	07 06 05.0	-3.4
	baz=281,SNR=26						
AGMN	Agassiz Nation	22.95	67	P	P	07 06 08.8	+0.1
	baz=271						
AGMN	Agassiz Nation	22.95	67	P	P	07 06 05.0	-3.7
	baz=271						
R32A	Long Quarter,	22.98	93	P	P	07 06 10.2	+1.1
	baz=293,SNR=5.3						
ULM	Lac du Bonnet	22.98	62	P	P	07 06 09.8	+0.8
	comp=Z,38nm,1.3s,baz=274,slow=10,SNR=13						
ULM				LR	LR	07 15 25.3	
	comp=Z,423nm,18.1s,baz=262,slow=37						
	comp=Z,38nm,1.3s						
ULM	Lac du Bonnet	22.98	62	P	P	07 06 08.6	-0.4
ULM				IAmb	IAmb	07 06 18.9	
	comp=Z,63nm,1.1s						
N19K	Bonanza Creek	23.04	327	P	P	07 06 10.6	+1.0
	baz=126,SNR=5.3						
N33A	J Bar K, Exete	23.08	87	P	P	07 06 10.3	+0.2
N33A				IAmb	IAmb	07 06 15.8	
	comp=Z,46nm,0.9s						
HDA	Harding Lake	23.12	339	P	P	07 06 11.3	+1.0
HDA	Harding Lake	23.12	339	P	P	07 06 10.9	+0.5
	baz=144						
M20K	Styx River	23.18	330	P	P	07 06 11.8	+0.7
	baz=130						
TRF	Thorofare Moun	23.31	335	P	P	07 06 12.9	+0.4
	baz=137						
ILAR	Eielson Array	23.40	340	P	P	07 06 14.3	+1.2
	comp=Z,2.1nm,0.9s,baz=155,slow=9.1,SNR=17						
ILAR				PcP	PcP	07 09 58.5	-0.6
	comp=Z,1.5nm,0.7s,baz=179,slow=1.9,SNR=13						
ILAR				LR	LR	07 13 59.4	
	comp=Z,398nm,19.1s,baz=130,slow=33						
	comp=Z,2.1nm,0.9s						
L34A	Svendsen Farm,	23.50	83	P	P	07 06 13.8	-0.5
L34A	Svendsen Farm,	23.50	83	P	P	07 06 14.9	+0.5
	baz=286						
PPLA	Purkeypile	23.53	332	P	P	07 06 15.8	+1.3
PPLA				IAmb	IAmb	07 06 39.8	
	comp=Z,28nm,1.2s						
PPLA	Purkeypile	23.53	332	P	P	07 06 14.7	+0.2
	baz=133						
N18K	Kilae Creek	23.53	325	P	P	07 06 16.2	+1.7
N18K				IAmb	IAmb	07 06 34.0	
	comp=Z,31nm,1.3s						
N18K	Kilae Creek	23.53	325	P	P	07 06 14.8	+0.3
	baz=123						
CCB	Clear Creek Bu	23.53	339	P	P	07 06 14.7	+0.3
U32A	Winter Ranch,	23.64	98	P	P	07 06 17.2	+1.5
	baz=298,SNR=8.6						
SVW2	Sparrevohn	23.64	326	P	P	07 06 17.2	+1.7
M19K	Big River Lodg	23.66	329	P	P	07 06 16.5	+0.7
	baz=128						
COLA	College	23.73	339	P	P	07 06 12.8	-3.5
	baz=143						
TCOL	CIGO, UAF Yank	23.73	339	P	P	07 06 12.3	-4.1
	baz=143						
POKR	Poker Plat Res	23.82	340	P	P	07 06 15.8	-1.4
	baz=144						
NEA2	Nenana	23.83	338	P	P	07 06 17.7	+0.4
	baz=141,SNR=6.5						
L20K	Farewell, AK	23.83	330	P	P	07 06 18.0	+0.6
	baz=130						
BPAW	Bear Paw Mtn.	24.00	336	P	P	07 06 19.4	+0.4
	baz=137,SNR=7.0						
L19K	White Mountain	24.00	329	P	P	07 06 20.0	+0.9
	baz=128,SNR=5.4						
KSU1	Kansas State U	24.24	90	P	P	07 06 22.1	+0.7
	baz=292						
CHUM	Lake Minchumin	24.25	334	P	P	07 06 21.8	+0.6
	baz=134						
I23K	Minto, Yukon-K	24.34	339	P	P	07 06 22.9	+0.9
	baz=141,SNR=6.3						
N35A	Tabor	24.34	86	P	P	07 06 24.1	+1.7
	baz=288,SNR=10						
B35A	Bob, Littlefor	24.37	67	P	P	07 06 22.9	+0.4
	baz=272						
K20K	Telida	24.47	332	P	P	07 06 23.3	0.0
	baz=131						
TX31	Lajitas Ar. Si	24.48	118	P	P	07 06 25.6	+1.8
	baz=313,SNR=11						
TX32	Lajitas Array	24.48	118	P	P	07 06 24.4	+0.6
TX32				IAmb	IAmb	07 06 34.8	
	comp=Z,32nm,1.4s						
TXAR	Lajitas Array	24.48	118	P	P	07 06 25.3	+1.5
	comp=Z,1.3nm,0.8s,baz=291,slow=7.4,SNR=9.6						
TXAR				PcP	PcP	07 10 01.6	-0.6
	comp=Z,0.4nm,0.6s,baz=8.5,slow=2.5,SNR=4.5						
	comp=Z,1.3nm,0.8s						
TXAR	Lajitas Array	24.48	118	P	P	07 06 24.7	+0.9
H24K	Noodor Dome	24.52	341	P	P	07 06 24.6	+0.9
	baz=144						
WMOK	Wichita Mounta	24.59	102	P	P	07 06 27.0	+2.3
	baz=301,SNR=43						
WMOK	Wichita Mounta	24.59	102	P	P	07 06 25.3	+0.7
	baz=301,SNR=43						
LPIG	La Paz	24.67	137	LR	LR	07 16 21.9	
	comp=Z,205nm,18.6s,baz=333,slow=37						
INK	Inuvik	24.68	355	P	P	07 06 25.2	+0.1
	comp=Z,3.2nm,1.1s,baz=149,slow=11,SNR=4.6						
INK				LR	LR	07 16 06.1	
	comp=Z,206nm,18.5s,baz=180,slow=37						
	comp=Z,3.2nm,1.1s						
INK	Inuvik	24.68	355	P	P	07 06 25.1	-0.1
	baz=171						
F36A	Milaca	24.73	73	P	P	07 06 26.9	+1.1
	baz=278,SNR=10						
TTA	Tatalina	24.89	330	P	P	07 06 27.1	0.0
	baz=127						
H23K	Yukon River	24.92	339	P	P	07 06 27.8	+0.5
	baz=142						
J20K	Nowinta River	25.04	333	P	P	07 06 29.0	+0.6
	baz=132,SNR=6.4						
I21K	Tanana	25.09	337	P	P	07 06 29.5	+0.7
I21K				IAmb	IAmb	07 06 40.0	
	comp=Z,21nm,1.1s						
I21K	Tanana	25.09	337	P	P	07 06 29.3	+0.5
	baz=137,SNR=7.1						
ABTX	Abilene, Hawle	25.12	107	P	P	07 06 29.8	+0.3
	baz=305						
I37A	Lemond, Waseca	25.14	77	P	P	07 06 28.4	-1.1
I37A				IAmb	IAmb	07 06 39.6	
	comp=Z,18nm,0.8s						
BMAR	Burnt Mountain	25.18	345	P	P	07 06 31.0	+1.2
T35A	Sooner Cattle	25.19	95	P	P	07 06 30.6	+0.6
T35B	Sooner Cattle	25.19	95	P	P	07 06 31.3	+1.2
	baz=296,SNR=26						
SPMN	Marine on St.	25.33	74	P	P	07 06 31.7	+0.4
SPMN				IAmb	IAmb	07 06 42.6	
	comp=Z,24nm,1.1s						
SPMN	Marine on St.	25.33	74	P	P	07 06 32.4	+1.1
	baz=280						
SPMN	Marine on St.	25.33	74	P	P	07 06 30.7	-0.6
	baz=280						
X34A	Smith Ranch, M	25.33	101	P	P	07 06 32.1	+0.8
H21K	Melozitna Rive	25.67	337	P	P	07 06 34.3	+0.1
H21K				IAmb	IAmb	07 06 45.0	
	comp=Z,19nm,1.2s						
H21K	Melozitna Rive	25.67	337	P	P	07 06 35.0	+0.9
	baz=136,SNR=14						
C36M	Paulatuk	25.68	4	P	P	07 06 34.1	0.0
	baz=187						
SCIA	State Center	25.78	82	P	P	07 06 31.6	-3.8
	baz=286						
EYMN	Ely	25.89	68	P	P	07 06 37.1	+0.8
EYMN				IAmb	IAmb	07 06 45.7	
	comp=Z,22nm,0.9s						
EYMN	Ely	25.89	68	P	P	07 06 37.3	+1.0
	baz=275,SNR=8.1						
EYMN	Ely	25.89	68	P	P	07 06 36.2	-0.1
	baz=275,SNR=8.1						
K38A	Parkersburg	25.90	80	P	P	07 06 36.6	+0.1
K38A				IAmb	IAmb	07 06 46.5	
	comp=Z,16nm,0.9s						
E38A	The Farm, Brul	25.99	71	P	P	07 06 37.4	+0.2
E38A				IAmb	IAmb	07 06 47.2	
	comp=Z,20nm,1.2s						
E38A	The Farm, Brul	25.99	71	P	P	07 06 38.2	+1.0
	baz=277						
TUL1	Leonard	26.16	96	P	P	07 06 40.2	+1.3
TUL1				IAmb	IAmb	07 06 48.6	
	comp=Z,72nm,1.4s						
TUL1	Leonard	26.16	96	P	P	07 06 40.3	+1.4
	baz=298						
TUL1	Leonard	26.16	96	P	P	07 06 39.4	+0.5
	baz=298						
IMAR	Indian Mountai	26.18	337	P	P	07 06 38.6	-0.1
COLD	Coldfoot	26.19	341	P	P	07 06 40.9	+2.0
COLD	Coldfoot	26.19	341	P	P	07 06 40.1	+1.2
	baz=142						
P38A	Dawn	26.28	87	P	P	07 06 40.0	+0.1
	baz=291,SNR=8.0						
JCT	Junction City	26.29	111	P	P	07 06 40.9	+0.9
	baz=309,SNR=6.5						
JCT	Junction City	26.29	111	P	P	07 06 41.2	+1.1
	baz=309,SNR=6.5						
GCSA	Galena City Sc	26.31	333	P	P	07 06 39.4	-0.5
	baz=129						
Z35A	Perchaven, San	26.41	103	P	P	07 06 40.6	-0.5
Z35A				IAmb	IAmb	07 06 57.8	
	comp=Z,39nm,1.1s						
UNV	Unalaska Valle	26.67	306	P	P	07 06 44.9	+1.6
	baz=96						
WHTX	Lake Whitney,	27.00	105	P	P	07 06 46.0	-0.4
WHTX				IAmb	IAmb	07 06 58.8	
	comp=Z,39nm,1.1s						
WHTX	Lake Whitney,	27.00	105	P	P	07 06 46.2	-0.2
	baz=305						
X37A	Clayton	27.09	99	P	P	07 06 47.0	-0.2
X37A				IAmb	IAmb	07 07 05.5	
	comp=Z,59nm,1.4s						
X37A	Clayton	27.09	99	P	P	07 06 48.2	+0.9
	baz=300,SNR=6.6						
I40A	Norwalk	27.13	77	P	P	07 06 49.0	+1.5
	baz=283						
G40A	Rib Lake	27.13	73	P	P	07 06 48.2	+0.7
G40A	Rib Lake	27.13	73	P	P	07 06 49.0	+1.4
	baz=281						
S39A	Bolivar	27.16	91	P	P	07 06 49.0	+1.1
	baz=294,SNR=13						
L40A	Anamosa	27.17	81	P	P	07 06 49.6	+1.8
	baz=286						
TOLK	Toolik Lake Re	27.20	343	P	P	07 06 48.1	+0.2
	baz=145,SNR=6.3						
HHAR	Hobbs	27.32	94	P	P	07 06 50.6	+1.3
	baz=297						
435B	Jarrell	27.62	108	P	P	07 06 49.5	-2.5
	baz=307						
JFWS	Jewell Farm	27.63	78	P	P	07 06 51.3	-0.7
	baz=285						
R40A	Maddies Statio	27.69	89	P	P	07 06 53.5	+0.9
	baz=293,SNR=8.1						
COWI	Conover	27.72	71	P	P	07 06 51.7	-1.1
COWI				IAmb	IAmb	07 07 01.3	
	comp=Z,15nm,1.0s						
COWI	Conover	27.72	71	P	P	07 06 52.5	-0.3
	baz=280						
N41A	Harden Midland	27.84	83	P	P	07 06 54.1	+0.1
N41A				IAmb	IAmb	07 07 02.6	
	comp=Z,38nm,1.0s						
N41A	Harden Midland	27.84	83	P	P	07 06 55.2	+1.3
	baz=289,SNR=6.5						
W39A	Magazine	27.94	96	P	P	07 06 56.6	+1.8
	baz=299,SNR=15						
W39A	Magazine	27.94	96	P	P	07 06 54.6	-0.2
	baz=299,SNR=15						
833A	Chaparral WMA,	27.94	114	P	P	07 06 53.3	-1.5
	baz=312						
D41A	Chassel	27.96	69	P	P	07 06 57.2	+2.3
	baz=278,SNR=7.5						
U40A	Yellville	28.07	93	P	P	07 06 56.7	+0.7
	baz=297,SNR=8.9						
U40A				P	P	07 06 56.7	+0.7
	baz=297,SNR=8.9						
U40A	Yellville	28.07	93	P	P	07 06 55.9	-0.1
	baz=297,SNR=8.9						
237A	Washetta, Mont	28.15	104	P	P	07 06 58.0	+1.3
A36M	Sachs Harbour	28.28	2	P	P	07 06 57.3	-0.1
	baz=185						
L42A	Oliver, Polo	28.29	80	P	P	07 06 57.8	-0.1
L42A	Oliver, Polo	28.29	80	P	P	07 06 59.0	+1.1
	baz=287,SNR=6.0						
I42A	Draeger Farm,	28.33	76	P	P	07 06 59.9	+1.7
	baz=284						
MIAR	Mount Ida	28.40	97	P	P	07 07 02.9	+3.9
	baz=300,SNR=9.9						
MIAR	Mount Ida	28.40	97	P	P	07 06 58.9	-0.1
	baz=300,SNR=9.9						
CCM	Cathedral Cave	28.52	89	P	P	07 06 59.7	-0.3
CCM				IAmb	IAmb	07 07 12.0	
	comp=Z,26nm,1.1s						
CCM	Cathedral Cave	28.52	89	P	P	07 06 59.7	-0.3
	baz=294						
X40A	Basin Creek Fa	28.96	97	P	P	07 07 03.7	-0.2
	baz=300						
WHAR	Wooly Hollow	28.97	95	P	P	07 07 05.2	+1.2
H43A	Windswept, Lux	28.99	74	P	P	07 07 05.5	+1.4
	baz=283,SNR=5.1						
HDIL	Hopedale	29.01	83	P	P	07 07 03.3	-1.0
HDIL				IAmb	IAmb	07 07 12.6	
	comp=Z,40nm,1.1s						
HDIL	Hopedale	29.01	83	P	P	07 07 06.2	+1.8
	baz=290						
HDIL	Hopedale	29.01	83	P	P	07 07 03.9	-0.5
	baz=290						
W41B	Gary Mavity, V	29.05	95	P	P	07 07 05.9	+1.1
	baz=298,SNR=7.8						
W41B	Gary Mavity, V	29.05	95	P	P	07 07 05.2	+0.4
	baz=298,SNR=7.8						
E43A	Lone Tree Farm	29.14	70	P	P	07 07 06.2	+0.8
	baz=280,SNR=5.5						
FVM	French Village	29.14	88	P	P	07 07 05.5	-0.1
	baz=294,SNR=5.3						
WLAR	White Oak Lake	29.16	98	P	P	07 07 06.7	+1.0
Z41A	Richland Creek	29.61	99	P	P	07 07 08.7	-0.9
	baz=302						
PBMO	Poplar Bluff	29.64	91	P	P	07 07 10.2	+0.2
	baz=296,SNR=5.2						
HICK	Hickman	30.61	90	P	P	07 07 19.0	+0.4
SFIN	Lafayette	30.65	82	P	P	07 07 18.2	-0.6
	baz=290						
L46A	Eue Claire	30.69	79	P	P	07 07 19.3	+0.1
L46A				IAmb	IAmb	07 07 28.1	
	comp=Z,19nm,0.8s						
E46A	Sault Ste Mari	30.97	70	P	P	07 07 21.7	+0.2
E46A	Sault Ste Mari	30.97	70	P	P	07 07 22.1	+0.5
	baz=282,SNR=16						
GLMI	Grayling	31.09	73	P	P	07 07 21.7	-1.0
	baz=284						
W45A	Hickory Valley	31.27	93	P	P	07 07 25.6	+1.2
	baz=298						
J47A	Sunmer	31.37	76	P	P	07 07 24.8	-0.3
J47A	Sunmer	31.37	76	P	P	07 07 26.4	+1.3
	baz=286,SNR=5.8						
J47A				P	P	07 07 26.4	+1.3
	baz=286,SNR=5.8						
OXF	Oxford	31.42	94	P	P	07 07 27.1	+1.4
	baz=299						
OXF	Oxford	31.42	94	P	P	07 07 25.7	0.0
	baz=299						
N47A	Urbana	31.48	80	P	P	07 07 26.3	+0.1
	baz=290						
N47A				P	P	07 07 26.3	+0.1
	baz=290						
BLO	Bloomington	31.50	84	P	P	07 07 26.5	+0.1
WVT	Waverly	31.81	90	P	P	07 07 28.8	-0.3
WVT				IAmb	IAmb	07 07 37.5	
	comp=Z,15nm,0.9s						
WVT	Waverly	31.81	90	P	P	07 07 29.8	+0.7
	baz=297						
WVT	Waverly	31.81	90	P	P	07 07 29.0	-0.1
	baz=297						
L48A	N Adams	32.03	78	P	P	07 07 31.3	+0.4
L48A	N Adams	32.03	78	P	P	07 07 31.9	+1.0
	baz=289,SNR=5.2						
L48A				P	P	07 07 31.9	+1.0
	baz=289,SNR=5.2						
O48B	Farmland	32.08	81	P	P	07 07 32.1	+0.6
	baz=291						
O48B	Farmland	32.08	81	P	P	07 07 31.4	0.0
	baz=291						
P48A	Milroy	32.18	83	P	P	07 07 32.9	+0.6
	baz=292,SNR=6.0						
P48A				P	P	07 07 32.9	+0.6
	baz=292,SNR=6.0						
N49A	Columbus Grove	32.54	80	P	P	07 07 36.3	+0.8
	baz=290						
N49A				P	P	07 07 36.3	+0.8
	baz=290						
P49A	Miami Univ. Ec	32.66	82	P	P	07 07 36.9	+0.4
P49A				IAmb	IAmb	07 07 44.6	
	comp=Z,34nm,1.1s						
P49A	Miami Univ. Ec	32.66	82	P	P	07 07 37.1	+0.5
	baz=292,SNR=5.7						
P49A	Miami Univ. Ec	32.66	82	P	P	07 07 36.3	-0.2
	baz=292,SNR=5.7						
V48A	Smith Brothers	32.72	90	P	P	07 07 37.1	0.0
	baz=297,SNR=6.3						
CLTN	Cedars of Leba	32.91	89	P	P	07 07 39.4	+0.6
CLTN				IAmb	IAmb	07 07 47.5	
	comp=Z,31nm,1.3s						
Z47A	Carrollton	33.04	95	P	P	07 07 40.8	+0.9
Z47A				IAmb	IAmb	07 07 47.9	
	comp=Z,27nm,0.9s						
ACSO	Alum Creek Sta	33.64	80	P	P	07 07 46.0	+0.9
ACSO	Alum Creek Sta	33.64	80	P	P	07 07 44.7	-0.4
	baz=291						
N51A	Ashland	33.83	79	P	P	07 07 48.0	+1.3
	baz=291,SNR=6.2						
N51A				P	P	07 07 48.0	+1.3
	baz=291,SNR=6.2						
P51A	Williamsport	33.87	81	P	P	07 07 47.7	+0.6
P51A	Williamsport	33.87	81	P	P	07 07 48.4	+1.4
	baz=292						
P51A				P	P	07 07 48.4	+1.4
	baz=292						
LRAL	Lakeview Retre	33.90	94	P	P	07 07 47.0	-0.4
	baz=301						
Y49A	Blount Mountai	33.91	93	P	P	07 07 49.0	+1.5
	baz=300						
W50A	Signal Mountai	34.06	90	P	P	07 07 50.0	+1.2
	baz=298						
FPAL	Fort Paine	34.15	91	P	P	07 07 50.3	+0.6
FPAL				IAmb	IAmb	07 07 58.0	
	comp=Z,29nm,0.9s						
RES	Resolute Bay	34.36	15	P	P	07 07 51.9	+1.0
	comp=Z,5.3nm,1.0s,baz=225,slow=14,SNR=2.7						
	comp=Z,5.3nm,1.0s						
RES	Resolute Bay	34.36	15	IAmb	IAmb	07 07 52.5	
	comp=Z,5.0nm,0.9s						
X51A	Calhoun	34.69	90	P	P	07 07 56.0	+1.8
X51A	Calhoun	34.69	90	P	P	07 07 55.2	+1.0
	baz=299,SNR=7.5						
X51A				P	P	07 07 55.2	+1.0
	baz=299,SNR=7.5						
BRAL	Brewton	34.84	97	P	P	07 07 55.7	+0.1
	baz=303						
M53A	WI Miller and	34.85	77	P	P	07 07 54.6	-1.0
	baz=290						
SADO	Sadowa	34.87	71	LR	LR	07 22 27.9	
	comp=Z,450nm,19.4s,baz=276,slow=37						
O53A	New Philadelph	34.90	79	P	P	07 07 55.5	-0.5
	baz=292						
N53A	Lisbon	34.96	78	P	P	07 07 56.8	+0.3
	baz=291,SNR=5.3						
N53A				P	P	07 07 56.8	+0.3
	baz=291,SNR=5.3						
250A	Grady	34.97	95	P	P	07 07 57.3	+0.6
	baz=302,SNR=8.5						
ERPA	Erie	35.10	76	P	P	07 07 56.0	-1.7
	baz=290						
W52A	Murphy	35.11	89	P	P	07 07 58.6	+0.8
W52A				IAmb	IAmb	07 08 05.9	
	comp=Z,17nm,0.9s						
O54A	Avella	35.51	79	P	P	07 08 02.9	+1.6
	baz=292,SNR=6.7						
O54A				P	P	07 08 02.9	+1.6
	baz=292,SNR=6.7						
Y52A	Lilburn	35.60	91	P	P	07 08 02.3	+0.2
Y52A				IAmb	IAmb	07 08 10.9	
	comp=Z,29nm,0.9s						
Y52A	Lilburn	35.60	91	P	P	07 08 03.3	+1.1
	baz=300						
Y52A				P	P	07 08 03.3	+1.1
	baz=300						
Q54A	Coxs Mills	35.65	81	P	P	07 08 04.1	+1.6
	baz=294						
Q54A				P	P	07 08 04.1	+1.6
	baz=294						
BG3	Lake Jocassee	35.88	88	P	P	07 08 05.5	+1.0
BG3				IAmb	IAmb	07 08 12.6	
	comp=Z,14nm,0.9s						
MCWV	Mont Chateau	36.09	79	P	P	07 08 06.7	+0.4
MCWV	Mont Chateau	36.09	79	P	P	07 08 05.7	-0.6
	baz=293						
M55A	Ridgway	36.19	76	P	P	07 08 06.1	-1.0
	baz=291,SNR=7.5						
M55A				P	P	07 08 06.1	-1.0
	baz=291,SNR=7.5						
352A	Blakely	36.20	95	P	P	07 08 08.8	+1.5
352A				IAmb	IAmb	07 08 16.0	
	comp=Z,52nm,1.4s						
J55A	Hilton	36.24	73	P	P	07 08 09.3	+1.9
	baz=289,SNR=7.3						
J55A				P	P	07 08 09.3	+1.9
	baz=289,SNR=7.3						
GOGA	Godfrey	36.26	91	P	P	07 08 09.3	+1.5
	baz=300						
GOGA	Godfrey	36.26	91	P	P	07 08 07.7	0.0
	baz=300						
BLA	Blacksburg	36.69	84	P	P	07 08 11.3	-0.1
	baz=296						
V55A	Taylorsville	36.72	86	P	P	07 08 11.8	+0.1
V55A				IAmb	IAmb	07 08 19.7	
	comp=Z,12nm,1.1s						
J56A	Wolcott	36.90	72	P	P	07 08 13.8	+0.7
J56A				IAmb	IAmb	07 08 21.4	
	comp=Z,48nm,1.2s						
J56A	Wolcott	36.90	72	P	P	07 08 14.3	+1.2
	baz=289,SNR=11						
J56A				P	P	07 08 14.3	+1.2
	baz=289,SNR=11						
KMSC	Kings Mountain	36.96	87	P	P	07 08 13.4	-0.3
	baz=298						
SSPA	Standing Stone	37.11	77	P	P	07 08 14.7	-0.2
	baz=292						
M57A	Sunshine Farm,	37.38	76	P	P	07 08 18.7	+1.5
	baz=292,SNR=8.5						
M57A				P	P	07 08 18.7	+1.5
	baz=292,SNR=8.5						
P57A	Homestead Farm	37.46	79	P	P	07 08 19.7	+1.8
	baz=294,SNR=5.9						
P57A				P	P	07 08 19.7	+1.8
	baz=294,SNR=5.9						
WCNY	West Carthage	37.49	71	P	P	07 08 18.6	+0.5
	baz=289,SNR=5.2						
N58A	Sunbury	37.85	76	P	P	07 08 22.4	+1.2
	baz=292,SNR=5.9						
N58A				P	P	07 08 22.4	+1.2
	baz=292,SNR=5.9						
BINY	Binghamton	37.87	74	P	P	07 08 20.3	-1.1
	baz=291						
J58A	Remsen	37.95	72	P	P	07 08 23.2	+1.1
J58A				IAmb	IAmb	07 08 30.5	
	comp=Z,36nm,1.1s						
J58A	Remsen	37.95	72	P	P	07 08 23.7	+1.6
	baz=290,SNR=9.1						
J58A				P	P	07 08 23.7	+1.6
	baz=290,SNR=9.1						
BMNY	Brushton-Moira	38.00	69	P	P	07 08 23.3	+0.9
	baz=288,SNR=8.4						
LONY	Lake Ozonia	38.02	69	P	P	07 08 21.4	-1.3
	baz=288,SNR=8.9						
V58A	Windy Hill, Pi	38.26	85	P	P	07 08 24.7	0.0
	baz=298						
V58A				P	P	07 08 24.7	0.0
	baz=298						
SHEM	Shemya Is, Ala	38.31	304	LR	LR	07 21 00.9	
	comp=Z,126nm,20.4s,baz=49,slow=31						
J59A	Piesco	38.45	71	P	P	07 08 27.5	+1.2
	baz=290,SNR=10						
J59A				P	P	07 08 27.5	+1.2
	baz=290,SNR=10						
FRNY	Flat Rock	38.62	69	P	P	07 08 28.6	+1.0
	baz=289,SNR=7.0						
FRB	Frobisher Bay	38.79	38	LR	LR	07 24 58.9	
	comp=Z,65nm,21.1s,baz=252,slow=37						
HCNY	Howe Caverns	38.79	72	P	P	07 08 30.7	+1.6
	baz=291,SNR=5.8						
T59A	Double "B" Far	38.85	82	P	P	07 08 32.2	+2.6
	baz=297,SNR=5.7						
T59A				P	P	07 08 32.2	+2.6
	baz=297,SNR=5.7						
CMIG	Matias Romero	38.89	123	P	P	07 08 36.2	+6.0

	comp=Z,2.3nm,0.7s,baz=337,slow=11,SNR=4.3						
CMIG				LR	LR	07 25 53.6	
	comp=Z,141nm,18.9s,baz=349,slow=38						
ODNJ	**Ogdensburg**	**39.24**	**75**	P	**P**	**07 08 33.7**	**+0.8**
	baz=293,SNR=7.0						
MCVT	**Middlebury Col**	**39.32**	**70**	P	**P**	**07 08 34.0**	**+0.5**
	baz=290,SNR=6.6						
VT1	**Waterbury**	**39.35**	**69**	P	P	07 08 41.1	+7.3
	baz=290,SNR=8.9						
LBNH	**Lisbon**	**39.94**	**69**	P	**P**	**07 08 39.8**	**+1.1**
	baz=290,SNR=6.0						
LBNH	**Lisbon**	**39.94**	**69**	P	**P**	**07 08 38.1**	**-0.6**
	baz=290,SNR=6.0						
H62A	**Milan**	**40.35**	**68**	P	**P**	**07 08 44.2**	**+2.1**
	baz=290,SNR=6.3						
H62A				P	**P**	**07 08 44.2**	**+2.1**
	baz=290,SNR=6.3						
SCHQ	**Schefferville**	**40.37**	**52**	P	P	07 08 47.1	+5.0
	comp=Z,11nm,1.0s,baz=290,slow=6.2,SNR=8.6						
SCHQ				LR	LR	07 24 33.6	
	comp=Z,173nm,21.6s,baz=261,slow=35						
SCHQ	**Schefferville**	**40.37**	**52**	P	**P**	**07 08 42.9**	**+0.7**
SCHQ				IAmb	IAmb	07 08 50.1	
	comp=Z,20nm,1.1s						
G62A	**West of Eustis**	**40.55**	**67**	P	**P**	**07 08 44.2**	**+0.5**
	baz=289,SNR=5.5						
G62A				P	**P**	**07 08 44.2**	**+0.5**
	baz=289,SNR=5.5						
D62A	**Allapoint, All**	**40.93**	**64**	P	**P**	**07 08 48.0**	**+1.2**
	baz=288,SNR=9.5						
D62A				P	**P**	**07 08 48.0**	**+1.2**
	baz=288,SNR=9.5						
F63A	**Nahmakanta, Br**	**41.34**	**66**	P	**P**	**07 08 50.6**	**+0.4**
	baz=290,SNR=8.6						
F63A				P	**P**	**07 08 50.6**	**+0.4**
	baz=290,SNR=8.6						
WVL	**Waterville**	**41.36**	**68**	P	**P**	**07 08 49.3**	**-1.0**
	baz=290,SNR=6.2						
PKME	**Peaks-Kenny Pk**	**41.36**	**67**	P	P	07 08 56.9	+6.6
	baz=290,SNR=6.0						
PKME	**Peaks-Kenny Pk**	**41.36**	**67**	P	**P**	**07 08 49.8**	**-0.6**
	baz=290,SNR=6.0						
E63A	**Oxbow**	**41.55**	**65**	P	P	07 08 58.5	+6.7
	baz=289,SNR=5.5						
E63A				P	P	07 08 58.5	+6.7
	baz=289,SNR=5.5						
F64A	**Sherman**	**41.78**	**65**	P	P	07 09 00.8	+7.0
	baz=290,SNR=7.8						
F64A				P	P	07 09 00.8	+7.0
	baz=290,SNR=7.8						
G65A	**Princeton**	**42.53**	**66**	P	P	07 09 07.6	+7.8
	baz=291,SNR=10						
G65A				P	P	07 09 07.6	+7.8
	baz=291,SNR=10						
SFJD	**Kangerlussuaq**	**46.01**	**32**	LR	LR	07 28 28.8	
	comp=Z,98nm,18.2s,baz=271,slow=36						
GBN	**Guysborough**	**46.41**	**63**	P	**P**	**07 09 32.9**	**+2.0**
SEY	**Seymchan**	**47.48**	**322**	P	**P**	**07 09 38.6**	**-0.4**
	comp=Z,4.6nm,0.9s,baz=103,slow=7.5,SNR=13						
SEY				LR	LR	07 29 09.6	
	comp=Z,196nm,18.1s,baz=66,slow=36						
	comp=Z,4.6nm,0.9s						
PETK	**Petropavlovsk-**	**47.78**	**309**	P	**P**	**07 09 41.1**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=112,slow=12,SNR=1.7						
PETK				LR	LR	07 27 01.0	
	comp=Z,193nm,20.9s,baz=85,slow=33						
	comp=Z,1.9nm,0.7s						
DY2G	**Dye2**	**47.82**	**32**	*i* P	**P**	**07 09 41.6**	**-0.3**
DY2G				IAmb	IAmb	07 09 52.4	
	comp=Z,4.7nm,0.6s						
SUMG	**Summit**	**48.85**	**24**	*i* P	**P**	**07 09 49.9**	**-0.1**
SUMG				IAmb	IAmb	07 09 58.1	
	comp=Z,4.6nm,0.7s						
MA2	**Magadan**	**49.23**	**318**	LR	LR	07 30 11.4	
	comp=Z,176nm,18.9s,baz=75,slow=36						
ICESG	**Greenland Ices**	**49.50**	**28**	*i* P	**P**	**07 09 54.0**	**-1.0**
ICESG				IAmb	IAmb	07 10 02.4	
	comp=Z,5.4nm,0.9s						
DAG	**Danmarks Havn**	**52.05**	**16**	*i* P	**P**	**07 10 12.3**	**-1.2**
DAG				IAmb	IAmb	07 10 13.7	
	comp=Z,2.5nm,0.8s						
TIXI	**Tiksi**	**52.83**	**337**	P	**P**	**07 10 18.9**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=270,slow=20,SNR=5.8						
TIXI				LR	LR	07 30 53.6	
	comp=Z,95nm,20.2s,baz=358,slow=34						
	comp=Z,1.3nm,0.5s						
DBG	**Daneborg**	**52.96**	**19**	*i* P	**P**	**07 10 18.8**	**-1.6**
DBG				IAmb	IAmb	07 10 21.6	
	comp=Z,4.6nm,0.8s						
SPITS	**Spitsbergen Ar**	**56.41**	**8**	LR	LR	07 35 44.0	
	comp=Z,70nm,18.9s,baz=319,slow=37						
YAK	**Yakutsk**	**57.43**	**327**	LR	LR	07 34 41.4	
	comp=Z,212nm,20.3s,baz=88,slow=35						
SJG	**San Juan**	**57.78**	**96**	LR	LR	07 39 09.7	
	comp=Z,93nm,18.3s,baz=268,slow=40						
BORG	**Borgarnes**	**57.87**	**29**	LR	LR	07 36 07.8	
	comp=Z,66nm,18.7s,baz=292,slow=36						
H11N3	**WAKE ISLAND Hy**	**58.43**	**268**	T	T	08 14 03.6	
	baz=49,slow=75,SNR=387						
H11N2	**WAKE ISLAND Hy**	**58.43**	**268**	T	T	08 14 05.9	
	baz=49,slow=75,SNR=352						
H11N1	**WAKE ISLAND Hy**	**58.45**	**268**	T	T	08 14 08.2	
	baz=49,slow=75,SNR=342						
H11S1	**WAKE ISLAND Hy**	**59.36**	**267**	T	T	08 15 17.8	
	baz=50,slow=75,SNR=204						
H11S2	**WAKE ISLAND Hy**	**59.37**	**267**	T	T	08 15 17.3	
	baz=50,slow=75,SNR=108						
H11S3	**WAKE ISLAND Hy**	**59.38**	**267**	T	T	08 15 20.9	
	baz=50,slow=75,SNR=94						
ASAJ	**Asahikawa**	**60.77**	**304**	P	**P**	**07 11 15.5**	**-0.8**
	comp=Z,7.0nm,0.7s,baz=311,slow=5.2,SNR=6.0						
ASAJ				LR	LR	07 32 59.8	
	comp=Z,91nm,21.7s,baz=29,slow=32						
	comp=Z,7.0nm,0.7s						
SDV	**Santo Domingo**	**60.87**	**107**	LR	LR	07 41 07.7	
	comp=Z,92nm,18.3s,baz=318,slow=40						
ROSC	**El Rosal**	**61.29**	**113**	LR	LR	07 40 17.4	
	comp=Z,57nm,21.5s,baz=347,slow=38						
KLR	**Kul'dur**	**63.87**	**314**	LR	LR	07 39 18.5	
	comp=Z,62nm,18.5s,baz=50,slow=36						
NRIK	**Noril'sk**	**64.07**	**347**	P	**P**	**07 11 37.1**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=25,slow=3.6,SNR=4.9						
	comp=Z,2.2nm,0.8s						
NRIK	**Noril'sk**	**64.07**	**347**	IAmb	IAmb	07 11 38.0	
	comp=Z,6.5nm,1.2s						
PPT	**Papeete**	**64.09**	**202**	LR	LR	07 33 30.9	
	comp=Z,26nm,21.5s,baz=328,slow=30						
USRK	**Ussuriysk Ar.**	**66.86**	**310**	LR	LR	07 38 35.3	
	comp=Z,78nm,21.5s,baz=40,slow=34						
MDJ	**Mudanjiang**	**67.92**	**311**	P	P	07 12 17.4	+14
MDJ				pmax	pmax		
	comp=Z,13nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,80nm,4.5s						
AFI	**Afiamalu**	**69.73**	**225**	LR	LR	07 34 04.0	
	comp=Z,58nm,19.9s,baz=52,slow=28						
NB2	**NORSAR Subarra**	**70.47**	**20**	P	**P**	**07 12 18.3**	**-0.3**
	comp=Z,9.0nm,1.2s,baz=331,slow=6.2						
NOA	**NORSAR Array B**	**70.47**	**20**	P	**P**	**07 12 18.4**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=331,slow=6.2,SNR=4.2						
NOA				LR	LR	07 44 08.0	
	comp=Z,33nm,19.5s,baz=355,slow=37						
	comp=Z,2.0nm,1.0s						
RAR	**Rarotonga**	**70.81**	**211**	LR	LR	07 35 19.9	
	comp=Z,94nm,20.5s,baz=308,slow=29						
JCJ	**Chichijima**	**71.35**	**290**	LR	LR	07 37 20.5	
	comp=Z,79nm,21.3s,baz=131,slow=31						
NNA	**Nana**	**72.70**	**127**	LR	LR	07 42 07.0	
	comp=Z,26nm,19.0s,baz=332,slow=34						
FINES	**FINESS Array B**	**73.07**	**12**	P	**P**	**07 12 33.9**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=343,slow=4.0,SNR=8.9						
	comp=Z,3.6nm,0.9s						
KSRS	**Korea Array**	**73.61**	**306**	P	**P**	**07 12 36.9**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=50,slow=6.1,SNR=6.9						
	comp=Z,1.2nm,0.6s						
KLMR	**Klimovskoe**	**75.22**	**6**	*e*P	**P**	**07 12 44.5**	**-2.2**
KLMR				AMP		07 12 46.6	
	comp=Z,7.0nm,1.0s						
MDP	**Montagnes des**	**76.25**	**96**	LR	LR	07 50 42.6	
	comp=Z,46nm,18.3s,baz=297,slow=39						
ULN	**Ulaanbaatar**	**76.46**	**325**	P	**P**	**07 12 53.4**	**-0.9**
ULN				IAmb	IAmb	07 12 55.1	
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**76.75**	**326**	P	**P**	**07 12 55.9**	**0.0**
	comp=Z,4.6nm,0.9s,baz=45,slow=4.3,SNR=22						
SONM				LR	LR	07 46 37.7	
	comp=Z,191nm,20.5s,baz=29,slow=36						
	comp=Z,4.6nm,0.9s						
SONM	**Songino Array**	**76.75**	**326**	P	**P**	**07 12 55.3**	**-0.6**
SONM				IAmb	IAmb	07 12 56.9	
	comp=Z,6.2nm,0.9s						
GUMO	**Guam**	**78.35**	**278**	LR	LR	07 39 12.9	
	comp=Z,137nm,20.8s,baz=48,slow=29						
MSVF	**Nonsavu**	**78.38**	**231**	LR	LR	07 39 49.5	
	comp=Z,70nm,20.2s,baz=148,slow=30						
ZALV	**Zalesovo Beam**	**78.53**	**341**	P	**P**	**07 13 04.7**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=356,slow=9.1,SNR=4.5						
ZALV				LR	LR	07 51 48.4	
	comp=Z,94nm,18.1s,baz=13,slow=39						
	comp=Z,2.3nm,0.7s						
CLL	**Collm**	**79.52**	**23**	*e*P	**P**	**07 13 11.0**	**0.0**
	comp=Z,4.0nm,0.8s						
CLL				*e*SSS	SSS	07 31 42.0	
CLL				*e*x	x	07 35 12.0	
CLL				LmV		07 48 00.0	
	comp=Z,100nm,21.7s						
HHC	**Hu-ho-hao-te**	**79.91**	**318**	*e*P	P	07 13 18.8	+5.3
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
ARU	**Arti**	**79.94**	**356**	LR	LR	07 49 26.9	
	comp=Z,30nm,21.6s,baz=92,slow=36						
LPAZ	**La Paz**	**81.27**	**122**	P	**P**	**07 13 21.1**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=0.6,slow=7.0,SNR=5.6						
	comp=Z,1.3nm,0.9s						
LPAZ	**La Paz**	**81.27**	**122**	P	**P**	**07 13 20.0**	**-1.5**
GERES	**GERESS Array B**	**81.92**	**24**	P	**P**	**07 13 23.7**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=4.0,SNR=4.2						
	comp=Z,0.5nm,0.6s						
VRAC	**Vranov**	**82.33**	**22**	LR	LR	07 51 31.6	
	comp=Z,50nm,19.4s,baz=330,slow=37						
DAVOX	**Davos/Dischmat**	**82.55**	**27**	LR	LR	07 48 53.3	
	comp=Z,84nm,21.7s,baz=264,slow=35						
ESDC	**Sonseca Array**	**82.97**	**40**	P	**P**	**07 13 28.8**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=307,slow=4.0,SNR=6.2						
ESDC				LR	LR	07 48 51.7	
	comp=Z,32nm,19.0s,baz=317,slow=35						
	comp=Z,1.4nm,1.0s						
PB11	**IPOC Station P**	**83.04**	**126**	P	**P**	**07 13 30.7**	**+0.5**
PB11				IAmb	IAmb	07 13 38.5	
	comp=Z,10.0nm,0.9s						
KURBB	**Kurchatov Arra**	**83.04**	**343**	LR	LR	07 53 34.8	
	comp=Z,100nm,18.6s,baz=10,slow=38						
AKASG	**Malin Array Be**	**83.87**	**14**	P	**P**	**07 13 33.1**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=342,slow=4.7,SNR=6.3						
	comp=Z,1.6nm,0.7s						
AKASG	**Malin Array Be**	**83.87**	**14**	IAmb	IAmb	07 13 41.9	
	comp=Z,2.1nm,1.1s						
MKAR	**Makanchi Array**	**85.76**	**339**	P	**P**	**07 13 41.5**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=45,slow=4.7,SNR=4.8						
MKAR				LR	LR	07 54 23.2	
	comp=Z,155nm,19.7s,baz=18,slow=37						
	comp=Z,0.7nm,0.7s						
AKTO	**Aktyubinsk**	**85.95**	**356**	LR	LR	07 54 01.4	
	comp=Z,29nm,19.6s,baz=7.7,slow=37						
WMQ	**Urumqi**	**86.96**	**335**	*e*P	P	07 13 56.8	+7.2
ABKAR	**Akbulak array**	**87.01**	**355**	P	**P**	**07 13 49.0**	**-0.7**
ABKAR	**Akbulak array**	**87.01**	**355**	P	**P**	**07 13 48.7**	**-1.0**
ABKAR				IAmb	IAmb	07 13 50.6	
	comp=Z,6.9nm,1.3s						
DZM	**Mont Dzumac**	**88.58**	**237**	LR	LR	07 44 33.4	
	comp=Z,61nm,22.0s,baz=30,slow=30						
AAK	**Ala-Archa**	**91.50**	**343**	LR	LR	07 59 04.8	
	comp=Z,70nm,18.0s,baz=11,slow=38						
PMG	**Port Moresby**	**92.42**	**259**	LR	LR	07 48 00.4	
	comp=Z,52nm,19.9s,baz=350,slow=30						
KBZ	**Khabaz**	**92.49**	**6**	LR	LR	07 57 50.7	
	comp=Z,30nm,19.5s,baz=24,slow=37						
BDFB	**Brasilia**	**93.96**	**108**	LR	LR	08 00 41.2	
	comp=Z,117nm,19.2s,baz=17,slow=38						
CPUP	**Villa Florida**	**95.41**	**121**	LR	LR	07 59 17.4	
	comp=Z,23nm,18.1s,baz=6.0,slow=37						
RCBR	**Riachuelo**	**95.83**	**92**	LR	LR	07 54 24.5	
	comp=Z,42nm,21.8s,baz=123,slow=33						
PZH	**PanZhiHua**	**96.25**	**316**	P	P	07 14 38.8	+5.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.1s						
DAV	**Davao City (W)**	**96.50**	**286**	LR	LR	07 51 20.8	
	comp=Z,113nm,20.3s,baz=164,slow=31						
KMI	**Kunming**	**96.88**	**315**	⇓P	**P**	**07 14 38.1**	**+1.9**
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
GEYT	**Alibeck**	**98.41**	**355**	LR	LR	08 03 49.6	
	comp=Z,37nm,19.6s,baz=356,slow=38						
PLCA	**Paso Flores**	**98.99**	**139**	LR	LR	07 51 34.7	
	comp=Z,25nm,20.7s,baz=342,slow=31						

IDC ***20*** *07:11:42.9±1.3, 64°.44N×18°.28W, h0^{km}, mb3.5/5, mbtmp3.6/6, ML3.6/1, MS3.2/2, Error ellipse: s-maj=42.5km s-min=18.1km az=17.0*

REY ***20*** *07:11:45.1, 64°.67N×17°.41W, h6^{km}*

ISC 20 07:11:44.4±0.8**, 64°.67N**±0°.02×**17°.52W**±0°.03**, h15**^{km}±5^{km}**, n57,** σ**1^{s}29**/75**, mb3.6**/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.10**	**272**	P	**Pg**	**07 11 48.4**	**+0.6**
	baz=272						
IVON				S	**Sg**	**07 11 50.8**	**+0.9**
	baz=272						
IDYN	**Dyngjuhals**	**0.14**	**28**	P	**Pg**	**07 11 47.7**	**-0.5**
	baz=8.4						
IDYN				S	**Sg**	**07 11 50.2**	**-0.5**
	baz=8.4						
IURH	**Urdarhals**	**0.22**	**46**	P	**Pg**	**07 11 49.0**	**-0.4**
	baz=36						
IURH				S	**Sg**	**07 11 52.5**	**-0.2**
	baz=36						
IGRF	**Grimsfjall**	**0.29**	**158**	S	**Sg**	**07 11 53.6**	**-1.1**
	baz=167						
IHUS	**Husbondi**	**0.38**	**189**	P	**Pb**	**07 11 52.8**	**-0.2**
	baz=196						
IHUS				S	**Sb**	**07 11 58.5**	**-0.2**
	baz=196						
ISKR	**Skrokkalda**	**0.39**	**254**	P	**Pb**	**07 11 52.9**	**-0.2**
	baz=256						
THOR	**Thorvaldshraun**	**0.45**	**53**	P	**Pg**	**07 11 52.8**	**-0.6**
	baz=49						
THOR				S	**Sg**	**07 11 59.4**	**0.0**
	baz=49						
IJOK	**Jokulheimar**	**0.47**	**221**	P	**Pb**	**07 11 53.7**	**-0.7**
	baz=225						
IKRE	**Kreppuhraun**	**0.50**	**76**	P	**Pg**	**07 11 53.4**	**-0.9**
	baz=75						
IKRE				S	**Sg**	**07 12 00.2**	**-0.8**
	baz=75						
IASK	**Askja**	**0.53**	**44**	P	**Pg**	**07 11 54.2**	**-0.7**
	baz=40						
IASK				S	**Sg**	**07 12 00.9**	**-1.2**
	baz=40						
IMKO	**Mokollar**	**0.59**	**58**	P	**Pg**	**07 11 55.1**	**-0.9**
	baz=55						
IMKO				S	**Sg**	**07 12 03.5**	**-0.4**
	baz=55						
IIEY	**Innrieyrar**	**0.64**	**205**	P	**Pb**	**07 11 56.4**	**-0.8**
	baz=209						
IIEY				S	**Sb**	**07 12 05.0**	**-0.9**
	baz=209						
ISVA	**Svartarkot**	**0.68**	**9**	P	**Pg**	**07 11 56.9**	**-0.7**
	baz=5.5						
ISVA				S	**Sb**	**07 12 06.3**	**-0.9**
	baz=5.5						
IKSK	**Karasker**	**0.68**	**138**	P	**Pg**	**07 11 56.4**	**-1.3**
	baz=141						
IKSK				S	**Sg**	**07 12 05.4**	**-1.4**
	baz=141						
IHAE	**Haedir**	**0.69**	**160**	P	**Pg**	**07 11 56.8**	**-1.0**
	baz=164						
IKAL	**Kalfafell**	**0.73**	**186**	P	**Pg**	**07 11 57.8**	**-0.8**
	baz=190						
IKAL				S	**Sb**	**07 12 08.6**	**0.0**
	baz=190						
IVAT	**Vatnsfell**	**0.78**	**232**	P	**Pb**	**07 11 59.3**	**-0.3**
	baz=234						
IVAT				S	**Sb**	**07 12 09.4**	**-0.6**
	baz=234						
IVSH	**V-Sauoahnukur**	**0.78**	**79**	P	**Pg**	**07 11 57.8**	**-1.7**
	baz=78						
IVSH				S	**Sg**	**07 12 08.1**	**-1.7**
	baz=78						
IFAG	**Fagurholsmyri**	**0.88**	**154**	S	**Sg**	**07 12 11.1**	**-1.9**
	baz=157						
ISTE	**Stelbrattur**	**0.92**	**283**	P	**Pn**	**07 12 01.9**	**-1.0**
	baz=282						
ISTE				S	**Sn**	**07 12 14.7**	**-1.2**
	baz=282						
IMEL	**Melhnausar**	**0.97**	**22**	P	**Pg**	**07 12 01.5**	**-1.7**
	baz=19						
IMEL				S	**Sg**	**07 12 15.1**	**-0.9**
	baz=19						
ISNB	**Snabyli**	**1.06**	**208**	P	**Pb**	**07 12 03.4**	**-1.0**
	baz=210						
IKVO	**Krokottuvotn**	**1.08**	**14**	P	**Pb**	**07 12 03.4**	**-1.4**
	baz=12						
ISLY	**Slysaalda**	**1.10**	**220**	P	**Pb**	**07 12 04.3**	**-0.8**
	baz=222						
IGRS	**Grimsstaoir**	**1.14**	**31**	P	**Pb**	**07 12 04.4**	**-1.4**
	baz=28						
IRJU	**Rjupnafell**	**1.17**	**206**	P	**Pb**	**07 12 05.4**	**-0.9**
	baz=208						
IMJO	**Mjoaskard**	**1.20**	**233**	P	**Pg**	**07 12 06.3**	**-1.1**
	baz=234						
ISKI	**Skildingahlsh**	**1.22**	**10**	P	**Pn**	**07 12 05.7**	**-1.3**
	baz=7.4						
ISKI				S	**Sb**	**07 12 22.2**	**-0.6**
	baz=7.4						
IGHA	**Grjothals**	**1.23**	**17**	P	**Pn**	**07 12 05.9**	**-1.2**
	baz=14						
IGRA	**Granastaoir**	**1.25**	**359**	P	**Pn**	**07 12 06.5**	**-0.9**
	baz=357						
IGOD	**Go??abunga**	**1.29**	**219**	P	**Pb**	**07 12 07.7**	**-0.7**
	baz=220						
IHVO	**Lagu-Hvolar**	**1.29**	**208**	P	**Pb**	**07 12 07.8**	**-0.5**
	baz=210						
IDIM	**Dimmadalss**	**1.32**	**10**	P	**Pn**	**07 12 06.8**	**-1.5**
	baz=8.5						
IHLA	**Hella**	**1.33**	**344**	P	**Pn**	**07 12 07.8**	**-0.6**
	baz=343						
IALF	**Alftagrof**	**1.39**	**212**	P	**Pb**	**07 12 09.3**	**-0.8**
	baz=214						
IHED	**Heoinshofoi**	**1.42**	**3**	P	**Pn**	**07 12 08.9**	**-0.7**
	baz=1.6						
IESK	**Eystri-Skogar**	**1.43**	**217**	P	**Pn**	**07 12 09.5**	**-0.3**
	baz=219						
ISAU	**Saurbar**	**1.44**	**243**	P	**Pb**	**07 12 09.7**	**-1.1**
	baz=244						
IBRE	**Brettingsstaoi**	**1.47**	**354**	P	**Pn**	**07 12 09.5**	**-0.8**
	baz=352						
IGIL	**Gilhagi**	**1.50**	**19**	P	**Pn**	**07 12 09.6**	**-1.0**
	baz=17						
ISIG	**Siglufjorour**	**1.58**	**339**	P	**Pn**	**07 12 11.6**	**-0.3**
	baz=338						
ISIG				S	**Sn**	**07 12 31.4**	**-0.6**
	baz=338						
BORG	**Borgarnes**	**1.64**	**274**	Pn	**Pn**	**07 12 08.7**	**-3.9**
	4.6nm,0.3s,baz=102,slow=7.0,SNR=28						
BORG				Sn	**Sb**	**07 12 33.3**	**-1.4**
	12nm,0.3s,baz=42,slow=19,SNR=9.3						
ISOL	**Solvholt**	**1.67**	**245**	P	**Pb**	**07 12 13.2**	**-1.6**
	baz=246						
IHEI	**Heioarbar**	**1.68**	**255**	P	**Pb**	**07 12 14.0**	**-1.0**
	baz=256						
ILEI	**Leirhofn**	**1.80**	**13**	P	**Pn**	**07 12 14.6**	**-0.2**
	baz=12						
IBJA	**Bjarnastaoir**	**1.80**	**248**	P	**Pb**	**07 12 15.4**	**-1.7**
	baz=249						
IHRN	**Hraun**	**1.81**	**324**	P	**Pn**	**07 12 15.3**	**+0.3**
	baz=323						
IHRN				S	**Sb**	**07 12 38.9**	**-0.8**
	baz=323						
IGRI	**Grimsey**	**1.89**	**354**	P	**Pn**	**07 12 15.7**	**-0.4**
	baz=353						
SCO	**Scoresbysund**	**6.08**	**346**	*i* P	**Pn**	**07 13 12.0**	**-1.6**
JMIC	**Jan Mayen**	**7.19**	**24**	LR	LR	07 15 49.5	
	comp=Z,47nm,19.6s,baz=284,slow=33						
EKA	**Eskdalemuir Ar**	**11.77**	**136**	Pn	**Pn**	**07 14 30.9**	**-0.6**
	baz=322,slow=14						
	1.6nm,0.6s						
FINES	**FINESS Array B**	**19.71**	**79**	P	**Pn**	**07 16 17.9**	**+3.5**
	2.1nm,0.9s,baz=287,slow=10.0,SNR=4.6						
	2.1nm,0.9s						
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**07 16 52.0**	**+3.9**
	0.2nm,0.2s,baz=344,slow=14,SNR=3.8						
	0.2nm,0.2s						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**07 20 05.5**	**+1.6**
	1.3nm,1.1s,baz=27,slow=7.0,SNR=6.1						
	1.3nm,1.1s						
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**07 21 00.8**	**+2.7**
	0.7nm,0.9s,baz=325,slow=7.2,SNR=4.4						
	0.7nm,0.9s						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**07 21 00.8**	**-0.8**
	0.5nm,0.6s,baz=50,slow=6.0,SNR=3.0						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**84.14**	**59**	LR	LR	08 02 18.7	
	comp=Z,42nm,19.9s,baz=35,slow=36						

IDC ***20*** *07:14:10.3±2.1, 19°.08S×177°.33W, h340^{km}±23^{km}, mb3.8/13, mbtmp4.5/15, Error ellipse: s-maj=19.7km s-min=11.0km az=152.0*

NEIC ***20*** *07:14:13.4±2.6, 19°.1S±0°.1×177°.2W±0°.1, h366^{km}±7^{km}, mb4.3/42, Error ellipse: s-maj=18.3km s-min=14.0km az=157.0*

ISC 20 07:14:11.3±0.4**, 19°.11S**±0°.09×**177°.27W**±0°.07**, h350**^{km}**, n67,** σ**0^{s}94**/66**, mb4.3**/34**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**286**	P	Pn	07 15 32.5	+5.3
	94nm,0.6s,baz=134,slow=23,SNR=90						
NIUE	**Niue**	**6.94**	**91**	Pn	**Pn**	**07 15 54.2**	**+1.2**
AFI	**Afiamalu**	**7.38**	**46**	P	**Pn**	**07 15 57.1**	**-1.2**
	50nm,0.3s,baz=195,slow=0.9,SNR=30						
AFI	**Afiamalu**	**7.38**	**46**	Pn	**Pn**	**07 15 57.2**	**-1.0**
FUNA	**Funafuti**	**11.06**	**341**	P	**P**	**07 16 44.4**	**+1.8**
LIFNC	**LIFOU**	**14.66**	**261**	P	**Pn**	**07 17 26.2**	**+1.9**
PINNC	**Pines Island,**	**14.71**	**254**	P	**Pn**	**07 17 26.8**	**+2.0**
DZM	**Mont Dzumac**	**15.53**	**256**	P	**Pn**	**07 17 33.4**	**-1.0**
	4.5nm,1.0s,baz=100,slow=18,SNR=2.6						
URZ	**Urewera**	**19.70**	**193**	P	**P**	**07 18 14.9**	**-1.2**
	5.2nm,0.5s,baz=276,slow=3.1,SNR=14						
PPT	**Papeete**	**26.32**	**91**	P	**P**	**07 19 17.7**	**+1.1**
	29nm,0.7s,baz=112,slow=6.4,SNR=5.7						
	29nm,0.7s						
PPTF	**Pamatai, Papee**	**26.33**	**91**	P	**P**	**07 19 17.1**	**+0.5**
ARMA	**Armidale**	**30.31**	**242**	P	**P**	**07 19 52.0**	**+0.4**
CTA	**Charters Tower**	**34.34**	**262**	P	**P**	**07 20 26.2**	**-0.2**
	16nm,0.5s,baz=91,slow=12						
	16nm,0.5s						
CTAO	**Charters Tower**	**34.34**	**262**	P	**P**	**07 20 25.8**	**-0.7**
CTAO				IAmb	IAmb	07 20 27.1	
	comp=Z,23nm,0.9s						
TAOE	**Nuku Hiva Isla**	**37.36**	**79**	P	**P**	**07 20 51.9**	**-0.1**
COEN	**Coen**	**38.21**	**272**	P	**P**	**07 20 58.2**	**-0.8**
COEN				IAmb	IAmb	07 20 59.5	
	comp=Z,9.7nm,0.6s						
MANU	**Manus Island**	**38.54**	**292**	P	**P**	**07 21 02.3**	**+0.6**
STKA	**Stephens Creek**	**39.02**	**243**	P	**P**	**07 21 05.9**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=97,slow=12,SNR=6.2						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**39.02**	**243**	P	**P**	**07 21 05.4**	**-0.1**
KHU	**Kahuku**	**43.64**	**30**	P	**P**	**07 21 42.5**	**-0.4**
BBOO	**Buckleboo**	**43.79**	**242**	P	**P**	**07 21 43.2**	**-0.6**
BBOO				IAmb	IAmb	07 21 51.5	
	comp=Z,23nm,1.4s						
WB2	**Warramunga Arr**	**45.48**	**261**	P	**P**	**07 21 56.0**	**-1.2**
WRA	**Warramunga Arr**	**45.49**	**261**	P	**P**	**07 21 56.0**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=98,slow=6.8,SNR=191						
	comp=Z,3.2nm,0.3s						
WRA	**Warramunga Arr**	**45.49**	**261**	P	**P**	**07 21 56.3**	**-1.0**
AS31	**Alice Springs**	**45.52**	**255**	P	**P**	**07 21 57.0**	**-0.5**
AS31				IAmb	IAmb	07 21 57.7	
	comp=Z,13nm,0.7s						
ASAR	**Alice Springs**	**45.52**	**255**	P	**P**	**07 21 57.0**	**-0.5**
	comp=Z,40nm,0.5s,baz=92,slow=8.5,SNR=783						
	comp=Z,40nm,0.5s						
ASAR	**Alice Springs**	**45.52**	**255**	P	**P**	**07 21 57.3**	**-0.2**
MTN	**Manton Dam**	**49.85**	**269**	P	**P**	**07 22 29.5**	**-1.0**
MTN				IAmb	IAmb	07 22 29.9	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**51.45**	**265**	P	**P**	**07 22 41.5**	**-0.8**
KNRA				IAmb	IAmb	07 22 42.8	
	comp=Z,16nm,0.7s						
FAKI	**Fak Fak**	**51.88**	**282**	P	**P**	**07 22 45.3**	**-0.2**
FAKI				IAmb	IAmb	07 22 46.4	
	comp=Z,11nm,0.9s						
SOEI	**Soe**	**57.16**	**271**	P	**P**	**07 23 23.8**	**+0.5**
MBWA	**Marble Bar**	**58.84**	**256**	P	**P**	**07 23 33.5**	**-1.0**
MBWA				IAmb	IAmb	07 23 42.6	

	comp=Z,22nm,1.5s						
SBA	Scott Base	59.30	184	P	P	07 23 37.9	+1.2
GIRL	Giralia	63.59	254	P	P	07 24 06.3	+0.1
MJAR	Matsushiro Arr	69.51	323	P	P	07 24 42.5	-0.5
	comp=Z,1.9nm,0.6s,baz=142,slow=5.7,SNR=4.9						
	comp=Z,1.9nm,0.6s						
JSD	Sado	70.54	324	P	P	07 24 49.7	+0.6
QSPA	South Pole Qui	70.96	180	P	P	07 24 50.8	-0.5
JHS	Saijyo	71.51	319	P	P	07 24 55.1	+0.1
LCH	Last Change Ra	79.30	44	P	P	07 25 39.5	+0.5
LCH				IAmb	IAmb	07 25 40.0	
	comp=Z,3.1nm,0.6s						
NVAR	Mina Array Bea	79.54	43	P	P	07 25 41.0	+0.7
	comp=Z,2.8nm,0.7s,baz=226,slow=8.9,SNR=11						
	comp=Z,2.8nm,0.7s						
113A	Mohawk Valley,	79.62	50	P	P	07 25 41.4	+0.8
113A				IAmb	IAmb	07 25 42.5	
	comp=Z,4.4nm,0.9s						
KVN	Kaiserville	80.03	43	P	P	07 25 42.9	0.0
KVN				IAmb	IAmb	07 25 43.8	
	comp=Z,3.9nm,0.7s						
K05A	Summer Lake	80.45	38	P	P	07 25 45.6	+0.6
Y14A	Wickenburg	80.76	49	P	P	07 25 47.4	+0.7
Y14A				IAmb	IAmb	07 25 48.5	
	comp=Z,4.8nm,1.0s						
PINE	Pine Mountain	81.07	38	P	P	07 25 48.7	+0.4
WVOR	Wild Horse Val	81.62	40	P	P	07 25 51.6	+0.5
WVOR				IAmb	IAmb	07 25 52.8	
	comp=Z,7.4nm,1.1s						
I07A	Izee	82.07	38	P	P	07 25 54.0	+0.7
I07A				IAmb	IAmb	07 25 55.1	
	comp=Z,4.3nm,0.9s						
ELK	Elko	82.80	43	P	P	07 25 58.0	+0.6
ELK				IAmb	IAmb	07 25 58.6	
	comp=Z,4.7nm,1.0s						
G08A	Pilot Rock	83.10	37	P	P	07 25 59.1	+0.5
G08A				IAmb	IAmb	07 25 60.0	
	comp=Z,5.2nm,0.7s						
TTA	Tatalina	83.46	10	P	P	07 25 59.0	-0.9
GHO	Glory Hole Cre	83.72	13	P	P	07 26 00.4	-0.8
GHO				IAmb	IAmb	07 26 08.5	
	comp=Z,4.8nm,0.9s						
MFID	Camas Ranch	83.88	40	P	P	07 26 03.4	+0.9
TMUT	Trail Mountain	84.69	45	P	P	07 26 08.0	+1.0
TMUT				IAmb	IAmb	07 26 08.4	
	comp=Z,2.7nm,0.6s						
SRU	San Rafael Swe	85.06	46	P	P	07 26 08.6	-0.1
SRU				IAmb	IAmb	07 26 09.8	
	comp=Z,3.6nm,0.7s						
RND	Reindeer	85.19	12	P	P	07 26 07.8	-0.8
RND				IAmb	IAmb	07 26 16.4	
	comp=Z,7.2nm,1.2s						
MNTX	Cornudas Mount	85.39	54	P	P	07 26 11.3	+1.1
MNTX				IAmb	IAmb	07 26 12.2	
	comp=Z,7.8nm,1.1s						
TXAR	Lajitas Array	85.73	57	P	P	07 26 13.2	+1.2
	comp=Z,6.7nm,0.9s,baz=217,slow=7.0,SNR=49						
	comp=Z,6.7nm,0.9s						
MCMT	McKenzie Canyo	86.45	40	P	P	07 26 15.8	+0.5
CCB	Clear Creek Bu	86.51	12	P	P	07 26 13.1	-1.7
CCB				IAmb	IAmb	07 26 27.0	
	comp=Z,4.3nm,1.3s						
ILAR	Eielson Array	86.81	13	P	P	07 26 15.0	-1.3
	comp=Z,0.4nm,0.4s,baz=215,slow=5.1,SNR=16						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	87.48	43	P	P	07 26 20.2	-0.1
	comp=Z,0.9nm,0.7s,baz=202,slow=3.5,SNR=7.5						
	comp=Z,0.9nm,0.7s						
VNA3	Neumayer Olymp	89.48	176	P	P	07 26 27.4	-1.5
PLCA	Paso Flores	89.73	133	P	P	07 26 30.9	+0.1
	comp=Z,1.0nm,0.7s,baz=230,slow=14,SNR=5.4						
	comp=Z,1.0nm,0.7s						
VNA2	Neumayer--Watz	89.93	177	P	P	07 26 29.6	-1.4
	baz=182,slow=3.0						
CMAR	Chiang Mai Arr	90.30	289	P	P	07 26 34.7	+1.0
	comp=Z,0.4nm,0.3s,baz=106,slow=2.9,SNR=2.1						
	comp=Z,0.4nm,0.3s						
YKA	Yellowknife Ar	94.97	24	P	P	07 26 53.4	-0.7
	comp=Z,0.2nm,0.6s,baz=240,slow=4.3,SNR=6.2						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	127.68	350	PKP	PKPdf	07 32 32.9	-1.8
	comp=Z,2.4nm,0.9s,baz=48,slow=1.3,SNR=4.1						

NORS ***20*** *07:26:11.5±0.0, 42°.18N×45°.78E, h1km, MPVA3.7*
DDA ***20*** *07:26:11.2±0.0, 42°.08N×45°.59E, h4km±4km, ML2.8*
MOS ***20*** *07:26:11.5±0.0, 42°.22N×45°.80E, h20km, MPVA3.7*
TIF ***20*** *07:26:11.4, 42°.19N×45°.71E, h11km±2km*
DRS ***20*** *07:26:14.1±0.0, 42°.19N×45°.71E, h18km*
ISC 20 07:26:11.4±1.1**, 42°.18N**±0°.02×**45°.70E**±0°.02**, h4**km±10km**,**
n46, σ1.s42/88**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.53	130	P	Pb	07 26 22.5	-0.8
LGD				S	Sb	07 26 30.0	-1.2
BTLR	Botlikh	0.62	38	*e*Pg	Pg	07 26 23.6	+0.3
BTLR				*e*Sg	Sg	07 26 31.6	+0.3
DGRG	David-gareji	0.77	199	P	Pn	07 26 28.6	-0.4
DDFL	Dedoflistskaro	0.80	157	P	Pn	07 26 31.2	+1.8
DDFL	Dedoflistskaro	0.80	157	P	Pn	07 26 31.4	+2.0
DDFL				S	Sn	07 26 48.3	+6.5
XNZR	Khunzakh	0.83	64	*e*Pg	Pb	07 26 27.8	-0.7
XNZR				*e*Sg	Sg	07 26 38.1	+0.1
BTNK	Botanikuri	0.84	234	P	Pg	07 26 24.7	-2.6
BTNK				S	Sg	07 26 37.1	-1.1
BTNK	Botanikuri	0.84	234	P	Pg	07 26 24.8	-2.6
BTNK				S	Sg	07 26 36.7	-1.5
DVE	Vedeno	0.84	22	*e*Pg	Pg	07 26 27.7	+0.3
DVE				*e*Sg	Sb	07 26 39.0	-1.2
GNBR	Gunib	0.96	77	*e*Pg	Pb	07 26 30.3	-0.3
GNBR				*e*Sg	Sg	07 26 42.2	0.0
UNCR	Uncukul	0.97	56	*e*Pg	Pb	07 26 30.2	-0.6
UNCR				*e*Sg	Sb	07 26 42.8	-1.1
MTEO	Meteo	1.00	300	P	Pg	07 26 30.8	+0.2
MTEO				S	Sg	07 26 43.5	0.0
GROC	Groznyy	1.02	4	*e*Pg	Pn	07 26 32.5	0.0
GROC				*e*Sg	Sn	07 26 47.2	-0.1
KMKR	Kumukh	1.04	92	*e*Pg	Pb	07 26 31.6	-0.5
KMKR				*e*Sg	Sg	07 26 45.0	+0.2
ARKR	Arakani	1.05	66	*e*Pg	Pb	07 26 31.6	-0.5
ARKR				*e*Sg	Sb	07 26 45.3	-0.9
KMGR	Komgaron	1.07	325	*e*Pg	Pn	07 26 33.0	-0.2
KMGR				*e*Sg	Sn	07 26 48.7	+0.1
KRNR	Karanay	1.10	54	*e*Pg	Pb	07 26 32.1	-1.0
KRNR				*e*Sg	Sg	07 26 46.1	-0.6
DLMR	Dylym	1.12	37	*e*Pg	Pb	07 26 32.9	-0.5
DLMR				*e*Sg	Sn	07 26 48.6	-1.2
VLKR	Vladikavkaz	1.15	319	*e*Pg	Pg	07 26 35.3	+1.9
VLKR				*e*Sg	Sn	07 26 50.9	+0.4
DBC	Dubki	1.18	44	*e*Pg	Pb	07 26 33.9	-0.5
DBC				*e*Sg	Sg	07 26 49.6	+0.2
LACR	Lac	1.22	302	*e*Pg	Pb	07 26 34.8	-0.3
LACR				*e*Sg	Sb	07 26 50.8	-0.5
BUJR	Buynaksk	1.22	58	*e*Pg	Pb	07 26 34.7	-0.4
BUJR				*e*Sg	Sn	07 26 51.1	-1.2
KZRT	Kazreti	1.25	231	P	Pn	07 26 35.2	-0.5
KZRT				S	Sg	07 26 53.1	+1.4
TRLG	Trialeti	1.35	242	P	Pg	07 26 37.6	+0.3
TRLG				S	Sg	07 26 56.6	+1.7
DMNI	Dmanisi	1.41	234	P	Pg	07 26 38.5	0.0
DMNI				S	Sg	07 26 57.8	+1.0
URKR	Urkarakh	1.44	90	*e*Pg	Pb	07 26 38.2	-0.5
URKR				*e*Sg	Sg	07 26 57.3	-0.3
ARNR	Ardon	1.45	314	*e*Pg	Pg	07 26 40.0	+0.9
ARNR				*e*Sg	Sg	07 27 00.2	+2.4
BTKR	Batakoyurt	1.47	325	*e*Pg	Pg	07 26 40.2	+0.8
BTKR				*e*Sg	Sg	07 27 00.9	+2.4
SGKR	Sergokala	1.48	78	*e*Pg	Pb	07 26 38.6	-0.8
SGKR				*e*Sg	Sb	07 26 57.8	-0.8
BRNG	Burnasheti	1.50	249	P	Pg	07 26 41.3	+1.1
BRNG				S	Sg	07 27 02.0	+2.3
KORR	Kora	1.51	307	*e*Pg	Pg	07 26 40.9	+0.6
KORR				*e*Sg	Sg	07 27 02.9	+3.1
MAK	Makhachkala	1.54	59	*e*Pg	Pb	07 26 40.4	-0.1
MAK				*e*Sg	Sg	07 27 02.6	+1.6
KANR	Karaman	1.66	52	*e*Pg	Pb	07 26 42.0	-0.6
KANR				*e*Sg	Sg	07 27 04.6	-0.2
BKRG	Bakuriani	1.68	256	P	Pg	07 26 43.6	+0.1
BKRG				S	Sg	07 27 05.6	+0.3
STDR	Stavd-Durt	1.69	315	*e*Pg	Pb	07 26 43.0	0.0
STDR				*e*Sg	Sg	07 27 08.5	+2.8
DIGR	Digorskoe uzhe	1.72	295	*e*Pg	Pg	07 26 44.0	-0.4
DIGR				*e*Sg	Sg	07 27 08.4	+1.6
LSNR	Lesken	1.76	309	*e*Pg	Pg	07 26 44.7	-0.5
LSNR				*e*Sg	Sg	07 27 09.5	+1.5
TKB	Tkibuli	2.02	276	P	Pb	07 26 48.9	+0.3
TKB				S	Sg	07 27 15.6	-0.5
GNI	Garni	2.15	200	*e*Pn	Pb	07 26 51.7	+0.7
GNI				*e*Sn	Sg	07 27 21.5	+0.9
ABS	Abastumani	2.19	260	P	Pb	07 26 50.9	-0.8
ABS				S	Sg	07 27 20.5	-1.4
DIGO	Kars	2.49	226	P	Pb	07 26 56.4	-0.3
DIGO				S	Sg	07 27 30.3	-0.9
DIGO				*i* AML	AML	07 27 38.0	
	comp=E,71nm,0.5s						
KBZ	Khabaz	2.58	308	*e*Pn	Pb	07 26 57.5	-0.5
KBZ				*e*Sn	Sb	07 27 29.1	-1.0
SHA1	Shidzhatmaz	2.72	306	*e*Pn	Pb	07 26 58.3	-2.4
BEYR	Belyy Ugol+	2.79	312	*e*Sn	Sb	07 27 33.9	-2.5
KIV0	Kislovodsk Arr	2.83	310	*e*Pn	Pn	07 26 57.7	+0.3
KIV0				*e*Sn	Sb	07 27 34.8	-2.6
DAGI	Agillar	3.04	250	P	Pb	07 27 07.5	+1.3
DAGI				S	Sg	07 27 47.2	-1.9

NIC ***20*** *07:51:18.9±0.0, 36°.19N×31°.82E, h1km±1km, Ml2.9/4*
DDA ***20*** *07:51:21.3±0.0, 35°.88N×31°.40E, h24km±1km, ML2.4*
ISK ***20*** *07:51:22.4, 35°.98N×31°.42E, h20km, ML3.0/13*
ISC 20 07:51:22.9±1.2**, 35°.87N**±0°.03×**31°.39E**±0°.03**, h23**km±14km**,**
n46, σ1.s26/68**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.83	64	PG	Pb	07 51 37.8	-0.9
GAZI				SG	Sb	07 51 49.5	+0.1
GAZI	Gazipasa	0.83	64	P	Pb	07 51 37.8	-0.9
GAZI				S	Sb	07 51 49.5	+0.1
GAZI				*i* AML	AML	07 51 50.0	
	comp=N,100nm,0.2s						
GAZI				*i* AML	AML	07 51 54.0	
	comp=E,176nm,0.4s						
AKUM	Antalya-Kumluc	0.96	298	P	Pb	07 51 39.2	-1.6
AKUM				S	Sn	07 51 55.0	+1.0
AKUM				*i* AML	AML	07 51 57.0	
	comp=E,64nm,0.4s						
AKUM				*i* AML	AML	07 51 59.0	
	comp=N,107nm,0.8s						
KEMT	Kemer-ANTALYA	1.00	317	PG	Pn	07 51 41.4	-0.1
KEPZ	Antalya-Kepez	1.04	9	P	Pn	07 51 40.8	-1.3
KEPZ				S	Sb	07 51 55.0	-0.5
KEPZ				*i* AML	AML	07 51 56.0	
	comp=N,110nm,0.8s						
KEPZ				*i* AML	AML	07 51 56.0	
	comp=E,77nm,0.7s						
AKMS	Akamas	1.15	138	P	Pn	07 51 42.6	-0.9
AKMS				S	Sb	07 52 02.3	+3.8
AKMS				AML	AML	07 52 03.1	
	1.1nm,0.7s						
AKMS				AML	AML	07 52 03.1	
	1.1nm,0.7s						
AKMS				AML	AML	07 52 06.3	
	0.7nm,0.4s						
AKMS				AML	AML	07 52 06.3	
	0.7nm,0.4s						
ALFC	Alefka	1.21	126	P	Pn	07 51 42.1	-2.4
ALFC				S	Sn	07 52 00.4	+0.1
ALFC				AML	AML	07 52 05.8	
	0.9nm,0.6s						
ALFC				AML	AML	07 52 05.8	
	0.9nm,0.6s						
ALFC				AML	AML	07 52 10.0	
	0.7nm,0.3s						
ALFC				AML	AML	07 52 10.0	
	0.7nm,0.3s						
KORT	Korkueli	1.41	324	PN	Pn	07 51 46.6	-0.7
KORT	Korkueli	1.41	324	P	Pn	07 51 46.9	-0.4
KORT				S	Sb	07 52 08.2	+2.1
KORT				*i* AML	AML	07 52 15.0	
	comp=N,63nm,0.5s						
KORT				*i* AML	AML	07 52 18.0	
	comp=E,83nm,0.7s						
TEKE	Tekeli-Mersin	1.42	78	PN	Pn	07 51 46.9	-0.4
TEKE				SN	Sn	07 52 05.5	+0.2
ERMK	Ermenek	1.45	57	P	Pb	07 51 49.8	+0.5
ERMK				S	Sb	07 52 08.8	+1.4
ERMK				*i* AML	AML	07 52 14.0	
	comp=E,72nm,0.3s						
ERMK				*i* AML	AML	07 52 15.0	
	comp=N,65nm,0.4s						
NATA	Nata	1.45	138	P	Pn	07 51 47.5	-0.3
NATA				S	Sb	07 52 10.3	+3.0
NATA				AML	AML	07 52 14.3	
	1.1nm,0.4s						
NATA				AML	AML	07 52 14.3	
	1.1nm,0.4s						
NATA				AML	AML	07 52 18.6	
	1.9nm,0.6s						
NATA				AML	AML	07 52 18.6	
	1.9nm,0.6s						
ELL	Elmali	1.49	307	PN	Pn	07 51 48.4	+0.1
ELL	Elmali	1.49	307	P	Pb	07 51 49.0	-0.9
ELL				S	Sb	07 52 11.8	+3.5
AKAS	Kas	1.49	285	P	Pn	07 51 46.1	-2.3
AKAS				*i* AML	AML	07 52 18.0	
	comp=E,52nm,0.6s						
AKAS				*i* AML	AML	07 52 24.0	
	comp=N,80nm,0.5s						
BERE	Bereket-Mersin	1.56	72	PN	Pn	07 51 49.4	+0.1
BERE				SN	Sn	07 52 08.4	-0.5
SEYD	Seydisehir-KON	1.57	13	PN	Pn	07 51 48.4	-1.1
BUCA	Burdur, Bucak-	1.60	335	P	Pn	07 51 48.2	-1.7
BUCA				S	Sb	07 52 13.3	+1.6
BUCA				*i* AML	AML	07 52 27.0	
	comp=E,32nm,0.4s						
SEDI	Konya, Seydise	1.60	10	P	Pn	07 51 50.3	+0.4
SEDI				S	Sb	07 52 11.3	-0.5
SEDI				*i* AML	AML	07 52 13.0	
	comp=N,44nm,0.6s						
SEDI				*i* AML	AML	07 52 16.0	
	comp=E,48nm,0.6s						
SZAC	Souni	1.65	132	S	Sb	07 52 13.1	+0.2
SZAC				AML	AML	07 52 17.3	
	0.2nm,0.5s						
OREN	Orenkoy-Mersin	1.71	78	PN	Pn	07 51 51.5	+0.3
AKK1	Akkuyu-Mersin	1.76	80	PN	Pn	07 51 52.2	+0.2
AKK2	Akkuyu-Mersin	1.77	81	PN	Pn	07 51 52.1	0.0
GULN	MERSIN_Gulnar	1.77	79	P	Pn	07 51 52.4	+0.3
GULN				S	Sb	07 52 15.6	-0.8
GULN				*i* AML	AML	07 52 20.0	
	comp=N,51nm,0.4s						
GULN				*i* AML	AML	07 52 20.0	
	comp=E,49nm,0.7s						
AKKU	Akkuyu-Mersin	1.77	80	PN	Pn	07 51 51.9	-0.2
AKKU				SN	Sn	07 52 14.2	+0.2
KKBE	Karaman, Kazim	1.83	42	P	Pb	07 51 54.5	-1.3
KKBE				S	Sb	07 52 19.9	+1.5
KKBE				*i* AML	AML	07 52 25.0	
	comp=N,33nm,0.6s						
KKBE				*i* AML	AML	07 52 25.0	
	comp=E,47nm,0.7s						
YESI	Yesilovacik-Me	1.85	79	PN	Pn	07 51 53.2	0.0
ASGA	Asgata	1.86	125	S	Sn	07 52 16.4	+0.2
TISA	Tisan-Mersin	1.88	80	PN	Pn	07 51 53.8	+0.3
IKL	Isikli	1.89	78	PN	Pn	07 51 54.1	+0.3
KARG	Kargicak-Mersi	1.91	79	PN	Pn	07 51 54.7	+0.7
KEBE	Keben-Mersin	1.96	72	PN	Pn	07 51 55.0	+0.2
CAME	Cameli-Denizli	2.00	303	PN	Pn	07 51 55.6	+0.2
MVOU	Mavrovouni	2.02	114	P	Pn	07 51 52.9	-2.6
KMER	Konya-Meram	2.05	22	P	Pn	07 51 57.2	+1.1
BAGO	Egridir - ISPA	2.17	347	P	Pn	07 51 57.3	-0.4
BAGO				S	Sb	07 52 28.5	+0.5
KONT	Konya--Tatoy	2.21	20	PN	Pn	07 51 57.3	-0.9
KONT	Konya--Tatoy	2.21	20	P	Pn	07 51 59.3	+1.1
DOGA	KONYA_Doganhis	2.24	6	P	Pn	07 51 59.9	+1.1
DOGA				S	Sb	07 52 29.5	-0.7
DOGA				*i* AML	AML	07 52 33.0	
	comp=N,24nm,0.5s						
DOGA				*i* AML	AML	07 52 36.0	
	comp=E,34nm,0.7s						
YVAC	Isparta, Yalva	2.40	357	P	Pn	07 52 01.1	+0.2
YVAC				S	Sn	07 52 30.1	+0.5
LADK	Ladik-KONYA	2.45	18	PN	Pn	07 52 00.8	-0.8
KERG	Konya-Eregli	2.68	54	P	Pn	07 52 06.5	+1.7
KERG				S	Sb	07 52 42.2	-0.7
KERG				*i* AML	AML	07 52 46.0	
	comp=E,24nm,0.4s						
KERG				*i* AML	AML	07 52 46.0	
	comp=N,18nm,0.3s						
KDHN	Kadinhani	2.71	12	P	Pn	07 52 06.0	+0.9
MERS	Mersin	2.71	68	PN	Pn	07 52 04.9	-0.3
GULE	Gulek	3.07	62	P	Pn	07 52 12.8	+2.7
GULE				S	Sb	07 52 54.1	+0.2
GULE				*i* AML	AML	07 53 01.0	
	comp=N,20nm,0.3s						
CMRD	Camardi-Nigde	3.40	57	PN	Pn	07 52 14.3	-0.3

IDC ***20*** *07:58:44.3±0.9, 1°.95S×133°.22E, h0km, mb4.0/7, mbtmp4.1/9, ML3.7/2, MS3.5/5, Error ellipse: s-maj=35.8km s-min=17.6km az=68.0*
NEIC ***20*** *07:58:46.0±1.7, 1°.98S±0°.06×133°.11E±0°.05, h10km±1km, mb4.3/16, Error ellipse: s-maj=10.4km s-min=7.7km az=163.0*
DJA ***20*** *07:58:47.4±0.3, 2°S±4°×13°3E±°, h98km±8km, M4.5/8, mB5.6/3, mb4.6/6, MLv4.3/8, Mw(mB)5.1/3*
ISC 20 07:58:48.9±0.6**, 1°.99S**±0°.05×**133°.13E**±0°.05**, h35**km**, n43,**
σ1.s30/39**, mb4.2**/13**, MS3.8**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.27	224		Pn	07 59 10.1	-0.2
FAKI	Fak Fak	1.27	224	P	Pn	07 59 09.9	-0.4
FAKI				S	Sn	07 59 28.1	+1.9
KMPI	Kaimana, Papua	1.76	161	P	Pn	07 59 21.5	+4.6
SIJI	Sorong	2.17	301	Pn	Pn	07 59 21.4	-1.3
	22nm,0.3s,baz=198,slow=22,SNR=26						
SIJI				Sn	Sn	07 59 50.1	+1.7
	45nm,0.3s,baz=268,slow=24,SNR=7.6						
SIJI				LR	LR	07 59 55.2	
	comp=Z,194nm,21.6s,baz=234,slow=32						
	247nm,0.6s						
SWI	Sorong	2.18	301	P	Pn	07 59 20.6	-2.1
BAKI	Biak	3.08	75	P	Pn	07 59 35.7	+0.6
SRPI	Serui, Papua	3.11	88	P	Pn	07 59 34.0	-1.5
MSAI	Masohi	4.41	252	P	Pn	07 59 52.5	-0.9
SMPI	Sarmi	5.58	90	P	Pn	08 00 07.7	-1.8
	0.1nm22nm,0.9s						
LBMI	Labuha	5.79	283	P	Pn	08 00 09.0	-3.4
	0.2nm822nm39nm,0.5s						
SANI	Sanana	7.14	269	P	Pn	08 00 18.8	-12
MTN	Manton Dam	10.96	190	Pn	Pn	08 01 21.5	-1.9
APSI	Ampana	11.53	275	P	Pn	08 01 25.8	-5.4
	28nm,0.7s						
COEN	Coen	15.49	141	Pn	Pn	08 02 24.2	-0.7
COEN				IAmb	IAmb	08 02 29.0	
	comp=Z,26nm,1.4s						
WB0	Warramunga Arr	17.71	176	Pn	Pn	08 02 51.4	-1.5
WRAB	Tennant Creek	17.87	176		Pn	08 02 53.6	-1.4
WRA	Warramunga Arr	17.88	176	P	Pn	08 02 53.5	-1.5
	comp=Z,0.3nm,0.3s,baz=355,slow=13,SNR=19						
WRA				S	Sn	08 06 00.6	-13
	comp=Z,3.7nm,0.8s,baz=356,slow=23,SNR=5.9						
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	17.88	176		Pn	08 02 53.0	-2.1
AS31	Alice Springs	21.56	178		P	08 03 35.8	+0.2
ASAR	Alice Springs	21.56	178	P	P	08 03 36.6	+1.1
	comp=Z,9.8nm,0.6s,baz=0.1,slow=11,SNR=53						
ASAR				S	S	08 07 32.2	-0.7
	comp=Z,0.9nm,0.6s,baz=0.6,slow=27,SNR=3.4						
	comp=Z,9.8nm,0.6s						
ASAR	Alice Springs	21.56	178		P	08 03 35.7	+0.1
MBWA	Marble Bar	23.10	213	P	P	08 03 51.4	-0.5
MBWA				IAmb	IAmb	08 03 56.8	
	comp=Z,7.0nm,0.8s						
PSA00	Pilbara Seismi	23.37	213	P	P	08 03 55.1	+0.5
PSA00				IAmb	IAmb	08 04 13.1	
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	30.78	166	P	P	08 05 02.1	+0.8
	comp=Z,1.5nm,0.6s,baz=45,slow=4.3,SNR=2.9						
	comp=Z,1.5nm,0.6s						
ARMA	Armidale	33.27	150	P	P	08 05 24.1	+0.7
KLR	Kul'dur	51.03	359	P	P	08 07 47.5	0.0
	comp=Z,1.4nm,0.7s,baz=256,slow=4.2,SNR=5.2						
	comp=Z,1.4nm,0.7s						
RPZ	Rata Peaks	53.46	146	LR	LR	08 30 14.6	
	comp=Z,140nm,18.4s,baz=268,slow=35						
URZ	Urewera	54.03	138	LR	LR	08 31 35.0	
	comp=Z,118nm,20.0s,baz=31,slow=36						
SONM	Songino Array	54.84	338	P	P	08 08 18.0	+2.1
	comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=4.6						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	54.84	338	IAmb	IAmb	08 08 19.6	
	comp=Z,3.4nm,1.3s						
MK31	Makanchi Array	65.89	324		P	08 09 31.4	+0.1
MK31				IAmb	IAmb	08 09 35.4	
	comp=Z,3.7nm,1.3s						
MKAR	Makanchi Array	65.89	324	P	P	08 09 32.5	+1.2
	comp=Z,1.9nm,0.8s,baz=120,slow=8.1,SNR=13						
MKAR				LR	LR	08 38 50.8	
	comp=Z,25nm,21.4s,baz=164,slow=36						
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	65.89	324		P	08 09 31.0	-0.2
MAKZ	Makanchi	66.08	324	P	P	08 09 33.1	+0.6
MAKZ				IAmb	IAmb	08 09 35.2	
	comp=Z,3.4nm,0.9s						
KURK	Kurchatov	69.99	327		P	08 09 55.8	-1.1
KURBB	Kurchatov Arra	69.99	326	P	P	08 09 57.9	+1.0
	comp=Z,2.8nm,0.9s,baz=121,slow=5.6,SNR=7.1						
	comp=Z,2.8nm,0.9s						
VNDA	Vanda	77.04	174	P	P	08 10 37.6	-0.3
VNDA				IAmb	IAmb	08 10 39.3	
	comp=Z,3.2nm,1.4s						
ABKAR	Akbulak array	80.60	321	P	P	08 10 58.6	+0.6
ABKAR	Akbulak array	80.60	321	P	P	08 10 58.5	+0.5
ABKAR				IAmb	IAmb	08 11 02.5	
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	87.52	25	P	P	08 11 32.0	-0.9
	comp=Z,0.5nm,0.6s,baz=265,slow=4.8,SNR=7.1						
	comp=Z,0.5nm,0.6s						
QSPA	South Pole Qui	87.95	180	P	P	08 11 34.7	-0.4
RIDG	Independent Ri	88.24	26	P	P	08 11 37.4	+0.9
DLBC	Dease Lake	95.28	32	LR	LR	08 49 29.3	
	comp=Z,19nm,19.6s,baz=282,slow=32						

IDC ***20*** *07:59:47.5±1.3, 1°.74S×133°.31E, h0km, mb4.0/4, mbtmp4.1/6, ML4.2/2, MS3.3/2, Error ellipse: s-maj=46.1km s-min=23.9km az=73.0*
ISC 20 07:59:52.7±1.2**, 1°.9S**±0°.2×**133°.2E**±0°.2**, h35**km**, n8, σ1.s06**/7**,**
mb4.0/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.13	297	Pn	Pn	08 00 26.0	+0.2
	68nm,0.3s,baz=106,slow=20,SNR=1.7						
SIJI				Sn	Sn	08 00 50.8	-0.3
	15nm,0.3s,baz=351,slow=19,SNR=0.8						
	339nm,0.5s						
WRA	Warramunga Arr	18.02	176	P	Pn	08 03 59.0	-1.4
	0.7nm,0.3s,baz=356,slow=12,SNR=6.5						
	3.9nm,0.5s						
ASAR	Alice Springs	21.70	178	P	P	08 04 42.2	+1.5
	8.0nm,0.5s,baz=357,slow=10,SNR=11						
	8.0nm,0.5s						
LEM	Lembang	25.94	258	LR	LR	08 18 08.0	
	comp=Z,138nm,18.2s,baz=148,slow=42						
JCJ	Chichijima	30.07	16	LR	LR	08 17 52.9	
	comp=Z,18nm,18.1s,baz=178,slow=36						
MKAR	Makanchi Array	65.79	324	P	P	08 10 34.1	-0.3
	0.9nm,0.6s,baz=115,slow=7.6,SNR=4.4						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	69.89	326	P	P	08 11 00.3	+0.2
	1.1nm,0.8s,baz=120,slow=5.2,SNR=3.0						
	1.1nm,0.8s						
ILAR	Eielson Array	87.38	25	P	P	08 12 35.9	-0.1
	0.6nm,0.6s,baz=259,slow=4.9,SNR=6.2						
	0.6nm,0.6s						

RHSSO 20 08:03:00.5±0.4**, 45°.56N×17°.27E, h4**km**, ML1.8**/4**,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOSL	Moslavina	0.36	279	*e*Pg	Pg	08 03 07.5	0.0
MOSL				Sg	Sg	08 03 12.8	+0.5
A252A	Venje	0.43	107	*e*Pg	Pg	08 03 07.6	-1.2
A252A				Sg	Sg	08 03 13.1	-1.2
A052A	Srbac	0.49	159	*e*Pg	Pg	08 03 09.4	-0.5
A052A				*e*Sg	Sg	08 03 16.5	+0.3
A051A	Mrakovica	0.60	205	*e*Pg	Pg	08 03 11.3	-0.8

A051A				*e*Sg	Sg	08 03 20.2	+0.3
KALN	Kalnik	0.80	316	*e*Pg	Pb	08 03 16.8	-0.3
KALN				Sg	Sb	08 03 28.4	+0.1
BLY	Banja Luka	0.81	184	*e*Pg	Pg	08 03 15.3	-0.8
BLY				*e*Sg	Sg	08 03 27.1	+0.5
PTJ	Puntijarka	0.97	291	*e*Pg	Pg	08 03 19.0	-0.1
PTJ				Sg	Sg	08 03 32.3	+0.5
MGRS	Mrkonjic Grad	1.15	187	*e*Sg	Sg	08 03 36.7	-0.7
MORH	Mrgy, Hungar	1.16	55	*e*Pg	Pg	08 03 21.8	-1.0
MORH				*e*Sg	Sg	08 03 37.2	-0.7
A050A	Klekovaca	1.20	206	*e*Pg	Pg	08 03 22.4	-1.0
A050A				*e*Sg	Sg	08 03 38.5	-0.5
CRES	Cresnjev	1.30	282	*e*Pg	Pg	08 03 23.5	-1.8
CRES				*e*Sg	Sg	08 03 41.7	-0.4

VIE 20 08:03:35.6±0.4**, 47°.03N**×**15°.66E, h0^{km}, mb1.6**/3**, ml1.4**/5**, Error ellipse: s-maj=3.6km s-min=1.7km az=121.0 8 km SE of Lassnitzhoehe Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSA	Arzberg	0.24	337	*e*Pg	Pg	08 03 41.0	+0.8
	4.8nm,0.2s						
ARSA				*e*Sg	Sg	08 03 43.5	+0.2
	24nm,0.3s						
SOKA	Soboth	0.56	231	*e*Pg	Pg	08 03 45.9	-0.3
	0.6nm,0.1s						
SOKA				*e*Sg	Sg	08 03 54.0	+0.6
	2.1nm,0.2s						
RONA	Rosalia, Austr	0.80	33	*e*Pg	Pg	08 03 51.5	+0.6
RONA				*e*Sg	Sg	08 04 01.3	0.0
OBKA	Obir	0.92	236	*e*Pg	Pg	08 03 53.7	+0.5
	0.8nm,0.2s						
OBKA				*e*Sg	Sg	08 04 06.1	+0.8
	2.7nm,0.3s						
MOA	Molln	1.25	311	*e*Pg	Pn	08 04 00.3	-0.1
	0.9nm,0.2s						
MOA				*e*Sg	Sb	08 04 16.5	-0.3
	0.6nm,0.2s						

VAO ***20*** *08:03:12.8±1.1, 15°.34S×75°.21W, h10^{km}, mb4.1*
IDC ***20*** *08:03:53.3±1.3, 15°.27S×72°.15W, h128^{km}±15^{km}, mb3.2/2, mbtmp3.7/7, Error ellipse: s-maj=27.5km s-min=10.7km az=31.0*
ISC 20 08:03:53.0±0.8**, 15°.13S**±0°.08×**72°.05W**±0°.08**, h124^{km}, n26, σ2^{s}04**/29**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.84	155	*e*P	Pn	08 04 51.2	+0.6
LPAZ	La Paz	3.95	108	P	Pn	08 04 54.9	+2.3
	4.0nm,0.3s,baz=298,slow=10,SNR=27						
LPAZ				S	Sn	08 05 41.0	+2.4
	7.2nm,0.6s,baz=63,slow=22,SNR=6.5						
LPAZ	La Paz	3.95	108	*e*P	Pn	08 04 54.8	+2.3
LPAZ	La Paz	3.95	108	*e*P	Pn	08 04 55.1	+2.6
PB16	IPOC Station P	4.02	143	*e*P	Pn	08 04 55.6	+2.3
PB16				*e*S	Sn	08 05 42.7	+2.6
NNA	Nana	5.60	303	P	Pn	08 05 15.4	+1.2
	10.0nm,0.4s,baz=104,slow=8.4,SNR=7.7						
NNA				S	Sn	08 06 17.1	-0.4
	22nm,0.3s,baz=202,slow=20,SNR=9.2						
ETMB	Extrema	7.77	48	*e*P	Pn	08 05 41.2	-2.2
LVC	Limon Verde	8.02	159	P	Pn	08 05 47.4	+0.4
	1.4nm,0.3s,baz=25,slow=8.8,SNR=7.1						
LVC				S	Sn	08 07 12.5	-3.8
	4.3nm,0.3s,baz=63,slow=23,SNR=17						
SIV	San Ignacio	10.62	96	P	Pn	08 06 21.9	+0.1
	0.5nm,0.3s,baz=282,slow=13,SNR=2.8						
VILB	Vilhena	11.70	81	*e*P	P	08 06 42.8	-1.6
PDRB	Porto dos Gac	15.31	79	*e*P	P	08 07 26.1	+1.5
MACA	Manacapuru-AM	16.34	44	*e*P	Pn	08 07 33.6	-1.7
CLDB	Colider	16.39	77	*e*P	P	08 07 37.6	+1.1
PP1B	Ponte de Pedra	16.66	101	*e*P	P	08 07 40.6	+1.0
CPUP	Villa Florida	17.70	131	P	P	08 07 51.0	+0.2
	2.0nm,0.9s,baz=292,slow=10.0,SNR=4.7						
CPUP	Villa Florida	17.70	131	*e*P	P	08 07 45.4	-5.4
ITTB	Itaituba	19.29	58	*e*P	P	08 08 07.5	-0.8
TRCB	Terra Rica	19.87	116	*e*P	P	08 08 13.4	-1.2
PCMB	Pacaembu	20.75	111	*e*P	P	08 08 23.6	-0.4
ITRB	Iturama	21.19	106	*e*P	P	08 08 28.0	-0.8
IPMB	Ipameri, GO	23.03	100	*e*P	P	08 08 46.0	-1.6
PEXB	Peixe	23.28	86	*e*P	P	08 08 49.1	-0.7
CNLB	Canela	24.12	129	*e*P	P	08 08 50.2	-7.2
SMTB	Santa Maria do	24.71	78	*e*P	P	08 09 01.5	-1.4
TORD	Torodi Ar. Bea	78.19	73	P	P	08 15 38.5	-0.9
	0.4nm,0.5s,baz=264,slow=4.5,SNR=5.5						
	0.4nm,0.5s						
YKA	Yellowknife Ar	84.22	342	P	P	08 16 12.1	+2.0
	0.2nm,0.6s,baz=138,slow=5.5,SNR=7.4						
	0.2nm,0.6s						

IDC 20 08:13:06.7±7.3**, 23°.87S**×**179°.90W, h550^{km}**±80^{km}**, mb3.3**/5**, mbtmp4.2**/6**, Error ellipse: s-maj=109.0km s-min=36.3km az=157.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.71	275	P	P	08 15 52.4	-0.4
	1.4nm,0.6s,baz=87,slow=17,SNR=6.2						
CTA	Charters Tower	31.57	270	P	P	08 18 45.0	+0.3
	6.3nm,0.3s,baz=96,slow=10,SNR=19						
	6.3nm,0.3s						
STKA	Stephens Creek	34.82	248	P	P	08 19 12.6	+0.6
	0.9nm,0.6s,baz=72,slow=3.2,SNR=3.0						
	0.9nm,0.6s						
ASAR	Alice Springs	42.13	261	P	P	08 20 11.3	-0.1
	1.5nm,0.4s,baz=99,slow=7.1,SNR=29						
	1.5nm,0.4s						
WRA	Warramunga Arr	42.50	266	P	P	08 20 13.5	-0.8
	3.0nm,0.5s,baz=105,slow=8.5,SNR=208						
	3.0nm,0.5s						
TXAR	Lajitas Array	90.34	58	P	P	08 25 09.7	-0.1
	0.3nm,0.7s,baz=196,slow=9.4,SNR=4.0						
	0.3nm,0.7s						

ATH ***20*** *08:21:11.9, 34°.20N×25°.99E, h56^{km}±16^{km}, ML3.1/7, Error ellipse: s-maj=18.6km s-min=2.7km az=358.0*
HLW ***20*** *08:21:14.7, 34°.27N×26°.19E, h19^{km}±12^{km}, Md3.5*
THE ***20*** *08:21:14.3, 34°.31N×25°.97E, h0^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=2.7km s-min=1.0km az=163.0*
IDC ***20*** *08:21:20.2±2.7, 34°.63N×25°.73E, h80^{km}±21^{km}, mb3.4/5, mbtmp3.7/5, Error ellipse: s-maj=48.5km s-min=24.5km az=138.0*
GII ***20*** *08:21:23.2±0.2, 34°.02N×26°.61E, h40^{km}*
ISC 20 08:21:15.1±1.0**, 34°.25N**±0°.04×**26°.11E**±0°.05**, h45^{km}**±13^{km}**, n33, σ1^{s}99**/46**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	0.82	338	P	Pn	08 21 28.5	-1.9
FRMA				S	Sn	08 21 41.7	+0.2
FRMA				AML	AML	08 21 49.4	
	comp=N,4058μm,0.5s						
FRMA				AML	AML	08 21 51.8	
	comp=E,2818μm,0.4s						
FRMA	Ierapetra Chan	0.82	338	P	Pn	08 21 28.4	-1.9
FRMA				S	Sn	08 21 39.0	-2.4
	comp=E,585nm,0.5s						
ZKR	Zakros	0.87	6	P	Pn	08 21 30.4	-0.5
ZKR				S	Sn	08 21 43.3	+0.7
ZKR				AML	AML	08 21 45.1	
	comp=N,1520μm,0.5s						
ZKR				AML	AML	08 21 45.9	
	comp=E,3432μm,0.6s						
ZKR	Zakros	0.87	6	P	Pn	08 21 30.5	-0.5
ZKR				S	Sn	08 21 43.7	+1.1
	comp=E,1μm,0.5s						
NPS	Neapolis	1.09	338	P	Pn	08 21 33.1	-0.8
NPS				S	Sn	08 21 48.7	+0.8
NPS	Neapolis	1.09	338	P	Pn	08 21 33.2	-0.8
NPS				S	Sn	08 21 49.0	+1.0
KSTL	Kastelli Herak	1.35	321	P	Pn	08 21 33.7	-3.9
KSTL				AML	AML	08 21 57.6	
	comp=N,1467μm,0.6s						
KSTL				AML	AML	08 22 05.3	
	comp=E,672μm,0.8s						
KSTL	Kastelli Herak	1.35	321	P	Pn	08 21 34.3	-3.3
KSTL				S	Sn	08 21 49.3	-5.1
	comp=E,182nm,0.5s						
IDI	Anoyia	1.44	316	P	Pn	08 21 38.8	0.0
	comp=E,21nm,0.4s,baz=124,slow=15,SNR=19						
IDI				LR	LR	08 22 08.5	
	comp=E,39nm,18.5s,baz=92,slow=51						
IDI	Anoyia	1.44	316	P	Pn	08 21 38.4	-0.4
IDI				AML	AML	08 22 01.6	
	comp=E,437μm,0.6s						
IDI				AML	AML	08 22 16.1	
	comp=N,513μm,0.7s						
IDI	Anoyia	1.44	316	P	Pn	08 21 38.8	0.0
KARP	Karpathos	1.56	33	P	Pn	08 21 42.4	+1.9
KARP				AML	AML	08 22 21.1	
	comp=N,592μm,0.6s						
KARP				AML	AML	08 22 34.2	
	comp=E,521μm,1.0s						
KARP	Karpathos	1.56	33	P	Pn	08 21 42.4	+1.9
KARP				S	Sn	08 22 02.6	+3.1
	comp=E,275nm,0.7s						
GVDS	Gavdos	1.77	290	P	Pn	08 21 43.1	-0.1
GVD	Gavdhos	1.77	290	P	Pn	08 21 42.8	-0.4
GVD				AML	AML	08 22 18.4	
	comp=E,874μm,0.5s						
GVD				AML	AML	08 22 18.7	
	comp=N,853μm,0.5s						
GVD	Gavdhos	1.77	290	P	Pn	08 21 43.0	-0.2
IMMV	Iera Moni Meta	2.12	305	P	Pn	08 21 48.1	0.0
IMMV				AML	AML	08 22 35.0	
	comp=N,478μm,0.6s						
IMMV				AML	AML	08 22 36.0	
	comp=E,589μm,0.8s						
IMMV	Iera Moni Meta	2.12	305	P	Pn	08 21 48.1	0.0
SLUM	Salum	2.85	196	P	Pn	08 21 59.3	+1.2
	baz=197						
SLUM				S	Sn	08 22 31.8	+0.7
	baz=197						
SWA2		5.02	187	P	Pn	08 22 29.3	+1.4
	baz=188						
RYAN	Fayoum	6.26	144	P	Pn	08 22 46.2	+1.4
	baz=144						
HSAF	As Saff	6.54	133	P	Pn	08 22 51.1	+2.4
	baz=134						
SUZ	Suez	7.20	126	P	Pn	08 22 58.6	+0.7
	baz=126						
KZIT	Kziot	7.75	113	Sn	Sn	08 24 29.6	-2.2
DSI	Dead Sea	8.24	106	Pn	Pn	08 23 14.1	+2.0
DSI				Sn	Sn	08 24 41.3	-2.6
KRMI	Paran Flat	8.38	117	Pn	Pn	08 23 16.3	+2.2
KRMI				Sn	Sn	08 24 44.3	-3.1
PRNI	Paran	8.47	115	Pn	Pn	08 23 16.9	+1.6
PRNI				Sn	Sn	08 24 46.8	-2.8
MBRI	Mt Berech	8.70	118	Pn	Pn	08 23 20.8	+2.4
MBRI				Sn	Sn	08 24 52.3	-2.8
TORD	Torodi Ar. Bea	30.53	232	P	P	08 27 25.9	+1.6
	comp=E,0.3nm,0.4s,baz=32,slow=8.7,SNR=5.2						
	comp=E,0.3nm,0.4s						
ARCES	ARCESS Array B	35.34	360	P	P	08 28 03.9	-1.8
	comp=E,1.8nm,0.8s,baz=172,slow=9.2,SNR=4.3						
	comp=E,1.8nm,0.8s						
MKAR	Makanchi Array	43.63	56	P	P	08 29 16.8	+1.7
	comp=E,0.6nm,0.5s,baz=273,slow=6.7,SNR=7.2						
	comp=E,0.6nm,0.5s						
ZALV	Zalesovo Beam	45.08	46	P	P	08 29 27.7	+1.2
	comp=E,0.7nm,0.5s,baz=274,slow=10.0,SNR=2.3						
	comp=E,0.7nm,0.5s						
YKA	Yellowknife Ar	78.55	343	P	P	08 33 10.1	-1.2
	comp=E,0.1nm,0.5s,baz=31,slow=5.8,SNR=3.6						
	comp=E,0.1nm,0.5s						

SJA ***20*** *08:29:38.3±0.6, 31°.77S×72°.55W, h7^{km}, ML4.3, MW4.2*
IDC ***20*** *08:29:42.1±1.1, 31°.76S×72°.16W, h0^{km}, mb4.1/4, mbtmp3.8/9, ML3.9/5, MS3.7/19, Error ellipse: s-maj=36.1km s-min=21.6km az=99.0*
NEIC ***20*** *08:29:43.9±1.9, 31°.83S±0°.03×72°.17W±0°.08, h10^{km}±1^{km}, mb4.4/4, Mwr4.3/58, ML4.1(GUC), Error ellipse: s-maj=11.0km s-min=5.6km az=267.0*
NEIC ***20*** *08:29:43.9, 31°.83S×72°.17W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.43; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-3.67; $M_{r\theta}$-0.62; $M_{\theta\phi}$0.56; $M_{\phi r}$-1.46; Fault plane solution: $M_0 3.93000\times10^{15}$ NP1:ϕ_s184.52000°, δ56.67000°, λ104.60000°. NP2:ϕ_s339.16000°, δ36.04000°, λ69.03000°. Principal axes: T 3.8603, Plg74.0000°, Azm134.0000°; N 0.1355, Plg12.0000°, Azm356.0000°; P -3.9958, Plg11.0000°, Azm264.0000°;*
GUC ***20*** *08:29:44.0±0.7, 31°.77S×72°.20W, h24^{km}±4^{km}, ML4.1*
ISC 20 08:29:42.5±2.0**, 31°.76S**±0°.03×**72°.18W**±0°.05**, h4^{km}**±12^{km}**, n117, σ1^{s}59**/114**, mb4.4**/4**, MS3.8**/15**, 6C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.09	137		Pb	08 30 03.2	-0.8
VA06	Catapilco	1.09	137	⇑ *i*P	Pb	08 30 03.7	-0.3
VA06				*i* S	Sb	08 30 18.1	-0.5
VA06				IAML		08 30 24.3	
	comp=N,9μm,0.4s						
CO02	Combarbal	1.15	61		Pn	08 30 05.3	-0.3
CO02	Combarbal	1.15	61	⇑ *i*P	Pn	08 30 04.9	-0.6
CO02				*e*S	Sb	08 30 20.2	-0.2
CO02				IAML		08 30 22.4	
	comp=E,12μm,0.5s						
CO02	Combarbal	1.15	61	*e*P	Pn	08 30 05.0	-0.6
CO02				IAML		08 30 29.6	
	comp=Z,4μm,0.3s						
CO06	Fray Jorge	1.18	23		Pn	08 30 05.0	-0.9
CO06	Fray Jorge	1.18	23	⇑ *i*P	Pn	08 30 05.2	-0.6
CO06				IAML		08 30 31.5	
	comp=E,4μm,0.5s						
VA01	Torpederas	1.33	160		Pn	08 30 06.9	-1.0
VA01	Torpederas	1.33	160	*e*P	Pn	08 30 06.7	-1.2
VA01	Torpederas	1.33	160	*e*P	Pn	08 30 07.0	-1.0
ROC1	El Roble	1.56	141		Pn	08 30 08.6	-2.7
ROC1	El Roble	1.56	141	*e*P	Pn	08 30 08.0	-3.3
VA03	San Esteban	1.70	126		Pn	08 30 13.2	+0.1
VA03	San Esteban	1.70	126	⇑ *i*P	Pn	08 30 13.0	-0.1
VA03				*e*S	Sn	08 30 34.4	-1.0
VA03				IAML		08 30 41.0	
	comp=N,5μm,0.5s						
MT02	Curacav	1.73	150		Pn	08 30 13.1	-0.3
MT02	Curacav	1.73	150	⇑ *i*P	Pn	08 30 13.0	-0.4
MT02				*i* S	Sn	08 30 32.9	-3.1
MT02	Curacav	1.73	150	*e*P	Pn	08 30 13.0	-0.4
MT02				*e*S	Sg	08 30 38.7	+0.5
MT02				IAML		08 30 44.5	
	comp=Z,1μm,0.6s						
VA05	Santo Domingo	1.95	166	Pn	Pn	08 30 15.7	-0.7
VA05	Santo Domingo	1.95	166	*e*P	Pn	08 30 15.6	-0.8
VA05				IAML		08 30 51.9	
	comp=E,2μm,0.3s						
GO04	Tololo Observa	1.98	37	Pn	Pn	08 30 17.7	+0.7
GO04	Tololo Observa	1.98	37	⇑ *i*P	Pn	08 30 16.9	-0.1
GO04	Tololo Observa	1.98	37	*e*P	Pn	08 30 17.3	+0.3
GO04				*e*S	Sg	08 30 47.3	+1.2
CO05	La Serena	2.01	24	Pn	Pn	08 30 17.9	+0.7
CO05	La Serena	2.01	24	*e*P	Pn	08 30 17.4	+0.2
CO05				IAML		08 30 51.7	
	comp=E,3μm,0.5s						
MT03	Universidad Ad	2.23	141		Pn	08 30 20.1	-0.2
MT03	Universidad Ad	2.23	141	*e*P	Pn	08 30 20.5	+0.1
MT03				IAML		08 30 58.2	
	comp=E,2μm,0.3s						
MT03	Universidad Ad	2.23	141	*e*P	Pn	08 30 21.0	+0.7
MT03				*e*S	Sg	08 30 54.9	+0.8
MT03				IAML		08 31 03.8	
	comp=Z,1μm,1.4s						
FCH	Farellones	2.23	135	*e*P	Pn	08 30 20.5	-0.1
FCH				*e*S	Sb	08 30 50.6	-1.1
FCH				IAML		08 30 54.8	
	comp=E,894nm,0.3s						
MT01	Popeta	2.24	160		Pn	08 30 19.6	-0.7
MT01	Popeta	2.24	160	*e*P	Pn	08 30 19.8	-0.5
MT01				*e*S	Sn	08 30 45.5	-2.9
MT01	Popeta	2.24	160	*e*P	Pn	08 30 20.0	-0.4
MT09	Talagante	2.25	154	Pn	Pn	08 30 20.4	-0.2
MT09	Talagante	2.25	154	*e*P	Pn	08 30 20.8	+0.1
MT09				IAML		08 31 03.1	
	comp=N,1μm,0.2s						
AUSP	Uspallata	2.42	102	*e*P	Pb	08 30 25.6	-1.1
AUSP				*e*S	Sg	08 31 00.9	+0.6
RTLS	Leoncito	2.46	92	*e*P	Pb	08 30 26.1	-1.3
RTLS				*e*S	Sg	08 31 00.9	-0.5
RTLS				IAML		08 31 03.4	
	comp=Z,1μm,1.8s						
CO01	Juntas del Tor	2.53	46		Pn	08 30 25.8	+1.2
CO01	Juntas del Tor	2.53	46	⇓ *e*P	Pn	08 30 25.6	+1.1
CO01				*e*S	Sn	08 30 54.4	-1.5
CO01	Juntas del Tor	2.53	46	*e*P	Pn	08 30 25.7	+1.2
CO01				IAML		08 31 07.8	
	comp=Z,796nm,0.5s						
BO04	La Punta	2.58	150		Pn	08 30 26.1	+0.9
BO04	La Punta	2.58	150	*e*P	Pn	08 30 25.7	+0.5
BO04				IAML		08 31 12.6	
	comp=N,797nm,0.4s						
BO03	Pichilemu	2.73	176	*e*P	Pn	08 30 26.2	-0.9
BO01	Tunca	2.78	161	Pn	Pn	08 30 27.1	-0.7
BO01	Tunca	2.78	161	*e*P	Pn	08 30 27.5	-0.3
BO01	Tunca	2.78	161	*e*P	Pn	08 30 27.7	-0.1
BO01				*e*S	Sb	08 31 05.2	-1.9
BO01				IAML		08 31 14.3	
	comp=Z,458nm,1.9s						
AROD	Rodeo	2.82	56	*e*P	Pn	08 30 31.0	+2.4
AROD				*e*S	Sg	08 31 12.0	-1.1
ACCO	Cerro Coronel	2.92	67	*e*P	Pb	08 30 33.0	-2.3
ACCO				*e*S	Sb	08 31 10.2	-1.2
ZON	Zonda	2.99	87	Pn	Pb	08 30 33.9	-2.6
LCO	Las Campanas	3.02	25	Pn	Pn	08 30 32.0	+0.6
LCO	Las Campanas	3.02	25	*e*P	Pn	08 30 31.4	-0.1
LCO	Las Campanas	3.02	25	*e*P	Pn	08 30 32.0	+0.6
GO05	Huala	3.25	176		Pn	08 30 33.2	-1.1
GO05	Huala	3.25	176	*e*P	Pn	08 30 33.2	-1.1
GO05	Huala	3.25	176	*e*P	Pn	08 30 33.0	-1.3
AC04	Llanos de Chal	3.67	15	Pn	Pn	08 30 39.5	-0.6
AC04	Llanos de Chal	3.67	15	*e*P	Pn	08 30 39.4	-0.7
AC04	Llanos de Chal	3.67	15	*e*P	Pn	08 30 40.0	-0.1
AC04				*e*S	Sb	08 31 33.2	+0.3
ML02	Panimavida	4.04	171		Pn	08 30 44.3	-0.8
ML02	Panimavida	4.04	171	*e*P	Pn	08 30 44.9	-0.2
AVFE	Valle Fertil	4.19	76	*e*P	Pn	08 30 44.2	-3.1
AVFE				*e*P	Pb	08 30 50.0	-6.9
AVFE				*e*S	Sb	08 31 44.2	-3.8
AVFE				*e*S	Sn	08 31 47.2	+10
AVFE				IAML		08 31 54.5	
	comp=Z,327nm,2.0s						
RFA	San Rafael	4.32	135	*e*P	Pn	08 30 51.0	+1.9
RFA				*e*S	Sb	08 31 55.7	+4.1
RFA				IAML		08 32 01.2	
	comp=Z,229nm,1.5s						
GO03	Copiap	4.49	23		Pn	08 30 51.9	+0.5
GO03	Copiap	4.49	23	*e*P	Pn	08 30 51.7	+0.4
GO03	Copiap	4.49	23	*e*P	Pn	08 30 54.0	+2.7
GO03				*e*S	Sn	08 31 47.2	+3.2
ACHE	Chepes	4.75	84	*e*P	Pn	08 30 59.0	+3.9
ACHE				*e*S	Sb	08 32 04.4	+0.3
APLL	PUNTA DE LOS L	5.04	76	*e*P	Pn	08 31 02.9	+4.0
APLL				*e*S	Sb	08 32 14.2	+2.0
ACLC	CERRO LA CRUZ	5.07	64	*e*P	Pn	08 31 01.7	+2.2
ACLC				*e*S	Sb	08 32 06.2	-7.2
ACLC				IAML		08 32 15.6	
	comp=Z,419nm,0.5s						
AC01	Pan de Azucar	5.76	14	Pn	Pn	08 31 06.8	-2.1
H03N1	Juan Fernandez	5.92	252	T	T	08 38 00.5	
	baz=81,slow=72,SNR=131						
H03N3	Juan Fernandez	5.94	252	T	T	08 37 57.8	
	baz=81,slow=72,SNR=134						
H03N2	Juan Fernandez	5.94	252	T	T	08 37 59.0	
	baz=81,slow=72,SNR=104						
H03S3	Juan Fernandez	6.03	248	T	T	08 38 03.2	
	baz=83,SNR=9.7						
H03S1	Juan Fernandez	6.03	248	T	T	08 38 01.0	
	baz=83,SNR=9.9						
H03S2	Juan Fernandez	6.04	248	T	T	08 38 03.1	
	baz=83,SNR=13						
LR03	Panguipulli	7.85	181		Pn	08 31 37.3	-0.3
PLCA	Paso Flores	9.05	172	Pn	Pn	08 31 54.3	+0.3
	comp=Z,0.6nm,0.3s,baz=335,slow=12,SNR=33						
PLCA				LR	LR	08 35 52.2	
	comp=Z,308nm,18.1s,baz=349,slow=41						
	comp=Z,1.3nm,0.3s						
LVC	Limon Verde	9.57	18	Pn	Pn	08 32 01.5	0.0
	comp=Z,0.6nm,0.3s,baz=197,slow=12,SNR=2.4						
LVC				Sn	Sn	08 33 57.8	+8.2
	comp=Z,0.3nm,0.3s,baz=356,slow=19,SNR=1.3						
LVC				LR	LR	08 35 53.7	
	comp=Z,255nm,19.5s,baz=202,slow=39						
	comp=Z,0.6nm,0.3s						
LL05	Los Muermos	9.68	186	Pn	Pn	08 32 03.1	+0.5
TRQA	Tornquist	10.46	130		Pn	08 32 13.1	-0.2
PB02	IPOC Station P	10.60	12		Pn	08 32 15.1	-0.2
ITQB	Itaqui	13.55	85	Pn	Pn	08 32 59.0	+3.5
CPUP	Villa Florida	14.07	71	Pn	Pn	08 33 04.2	+1.5
	comp=Z,0.2nm,0.3s,baz=189,slow=10,SNR=4.3						
CPUP				LR	LR	08 38 43.4	
	comp=Z,245nm,21.4s,baz=250,slow=38						
	comp=Z,1.4nm,0.9s						
LPAZ	La Paz	15.84	14	Pn	Pn	08 33 27.8	+0.8
	comp=Z,0.2nm,0.3s,baz=201,slow=7.0,SNR=9.6						
	comp=Z,1.1nm,0.5s						
SIV	San Ignacio	18.68	35	P	Pn	08 34 02.6	+0.6
	baz=249,slow=11,SNR=2.3						
SIV				LR	LR	08 42 35.0	
	comp=Z,195nm,20.4s,baz=219,slow=41						
	comp=Z,0.6nm,0.5s						
NNA	Nana	20.14	347	LR	LR	08 40 25.5	
	comp=Z,70nm,20.2s,baz=163,slow=32						
USHA	Ushuaia	23.21	174	LR	LR	08 44 36.6	
	comp=Z,45nm,20.7s,baz=242,slow=38						
BDFB	Brasilia	27.24	60	P	P	08 35 27.4	-0.5
	comp=Z,3.4nm,0.5s,baz=235,slow=6.0,SNR=6.8						
BDFB				LR	LR	08 47 55.5	
	comp=Z,253nm,20.1s,baz=168,slow=40						
	comp=Z,3.4nm,0.5s						
PMSA	Palmer Station	33.42	174	LR	LR	08 48 22.4	
	comp=Z,91nm,19.9s,baz=344,slow=34						
MDP	Montagnes des	41.12	30	LR	LR	08 56 06.6	
	comp=Z,70nm,20.5s,baz=282,slow=38						
RCBR	Riachuelo	42.61	60	LR	LR	08 57 08.6	
	comp=Z,152nm,21.9s,baz=356,slow=39						
VNA3	Neumayer Olymp	51.47	158	P	P	08 38 50.3	+1.7
VNA2	Neumayer--Watz	52.12	158	P	P	08 38 54.3	+0.9
	baz=285,slow=9.0						
SNAA	Sanae	53.70	158	P	P	08 39 06.0	+0.8
SNAA	Sanae	53.70	158	P	P	08 39 05.9	+0.7
	comp=Z,4.0nm,0.8s,baz=173,slow=23,SNR=9.0						
SNAA				LR	LR	09 00 12.7	
	comp=Z,69nm,20.2s,baz=350,slow=34						
	comp=Z,4.0nm,0.8s						
SNAA	Sanae	53.70	158	P	P	08 39 05.3	+0.2
SNAA				IAmb	IAmb	08 39 07.4	
	comp=Z,5.8nm,1.0s						
TROLL	Troll, Antarti	55.41	159	P	P	08 39 18.7	+1.0
QSPA	South Pole Qui	58.47	180	P	P	08 39 39.9	+0.4
TXAR	Lajitas Array	67.73	330	P	P	08 40 42.5	+1.1
	comp=Z,0.2nm,0.5s,baz=144,slow=11,SNR=1.9						
	comp=Z,0.2nm,0.5s						
MAW	Mawson	75.35	164	LR	LR	09 14 19.7	
	comp=Z,77nm,19.3s,baz=224,slow=36						
SUR	Sutherland	76.02	119	LR	LR	09 12 30.4	
	comp=Z,42nm,18.5s,baz=160,slow=34						
TSUM	Tsumeb	79.95	106	LR	LR	09 15 47.9	
	comp=Z,67nm,19.4s,baz=166,slow=35						
BOSA	Boshof	81.22	118	LR	LR	09 14 44.6	
	comp=Z,45nm,18.5s,baz=196,slow=33						
LBTB	Lobatse	83.36	115	LR	LR	09 16 58.5	
	comp=Z,58nm,19.2s,baz=202,slow=34						
TORD	Torodi Ar. Bea	83.57	70	P	P	08 42 12.2	-0.1
	comp=Z,1.8nm,0.7s,baz=282,slow=5.3,SNR=11						
	comp=Z,1.8nm,0.7s						
TORD	Torodi Ar. Bea	83.57	70	P	P	08 42 11.9	-0.3
TORD				IAmb	IAmb	08 42 13.4	
	comp=Z,2.0nm,0.8s						
MDT	Midelt	90.51	51	LR	LR	09 23 03.2	
	comp=Z,28nm,19.2s,baz=216,slow=35						
AFI	Afiamalu	90.73	253	LR	LR	09 15 50.9	
	comp=Z,44nm,18.0s,baz=180,slow=30						
ESDC	Sonseca Array	95.11	46	LR	LR	09 22 49.6	
	comp=Z,37nm,20.1s,baz=216,slow=34						
WRA	Warramunga Arr	122.64	210	PKP	PKiKP	08 48 39.9	-0.5
	comp=Z,0.4nm,0.8s,baz=151,slow=1.6,SNR=2.0						
H11S2	WAKE ISLAND Hy	125.65	271	T	T	11 07 46.1	
	baz=116,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	125.66	271	T	T	11 07 47.1	
	baz=116,slow=74,SNR=8.2						
H11S3	WAKE ISLAND Hy	125.67	271	T	T	11 07 49.9	
	baz=116,slow=74,SNR=6.8						
H11N3	WAKE ISLAND Hy	126.01	272	T	T	11 08 02.5	
	baz=117,slow=74,SNR=4.2						
H11N1	WAKE ISLAND Hy	126.02	272	T	T	11 08 04.4	

	baz=117						
H11N2	WAKE ISLAND Hy	126.03	272	T	T	11 08 03.7	
	baz=117,slow=74,SNR=10						
KURBB	Kurchatov Arra	151.29	40	PKPbc	PKiKP	08 49 37.1	-0.3
	comp=Z,0.4nm,0.4s,baz=304,slow=2.6,SNR=5.9						
KURK	Kurchatov	151.29	40		PKiKP	08 49 37.1	-0.3
ZALV	Zalesovo Beam	152.38	30	PKPbc	PKPbc	08 49 37.8	-1.5
	comp=Z,1.4nm,0.5s,baz=305,slow=5.2,SNR=4.3						

RSNC 20 08:30:16.4±1.0, 6°.92N×76°.20W, h0^{km}±9^{km}, ML1.9, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HELC	Santa Helena	0.99	137	eP	Pg	08 30 34.1	-1.2
HELC				eS	Sg	08 30 48.5	+0.4
HELC				i		08 30 51.8	
	comp=Z,11nm,0.6s						
UREC	San Jos de Ur	1.06	39	eP	Pg	08 30 35.3	-1.4
UREC				eS	Sg	08 30 50.0	-0.3
UREC				i		08 30 52.5	
	comp=Z,51nm,0.3s						
CBOC	Ciudad Bolivar	1.07	170	⇑eP	Pg	08 30 35.7	-1.2
CBOC				eS	Sb	08 30 53.0	+0.5
CBOC				i		08 30 58.9	
	comp=Z,19nm,0.2s						
ZARC	Zaragoza, Cauc	1.45	67	eP	Pn	08 30 42.0	-1.9
ZARC				eS	Sg	08 31 01.9	-1.0
ZARC				i		08 31 03.5	
	comp=Z,36nm,0.7s						
PTBC	PUERTO BERRIO,	1.77	102	eP	Pn	08 30 47.7	-0.6
PTBC				eS	Sn	08 31 11.3	-0.3
NORC	Norcasia	1.89	136	eP	Pn	08 30 49.9	-0.1
NORC				eS	Sn	08 31 13.8	-0.8
NORC				i		08 31 17.7	
	comp=Z,5.1nm,0.2s						
SPBC	San Pablo de B	2.46	121	eP	Pn	08 30 59.7	+1.8

RSNC 20 08:35:48.4±1.3, 6°.79N×73°.16W, h148^{km}±7^{km}, ML2.0, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.20	187	eP	Pn	08 36 08.2	-0.6
BARC				eS	Sn	08 36 23.1	-1.1
BARC				i		08 36 24.1	
	comp=Z,20nm,0.2s						
BRRC	Barranca, Sant	0.63	300	⇑iP	Pn	08 36 10.0	-0.3
BRRC				eS	Sn	08 36 27.2	+0.4
BRRC				i		08 36 30.0	
	comp=Z,17nm,0.4s						
PTBC	PUERTO BERRIO,	1.31	259	eP	Pn	08 36 14.7	-1.2
PTBC				eS	Sn	08 36 35.5	-1.4
PTBC				i		08 36 37.8	
	comp=Z,9.4nm,0.2s						
OCAC	Ocana	1.45	354	eP	Pn	08 36 16.4	-1.1
OCAC				eS	Sn	08 36 39.5	-0.1
OCAC				i		08 36 46.0	
	comp=Z,16nm,0.3s						
SPBC	San Pablo de B	1.45	219	eP	Pn	08 36 17.0	-0.4
SPBC				eS	Sn	08 36 39.6	0.0
SPBC				i		08 36 45.9	
	comp=Z,13nm,0.1s						
ZARC	Zaragoza, Cauc	1.83	293	eP	Pn	08 36 20.7	-0.7
ZARC				eS	Sn	08 36 45.9	-0.8
ZARC				i		08 36 51.8	
	comp=Z,7.6nm,0.5s						
NORC	Norcasia	2.09	234	eP	Pn	08 36 24.1	-0.5
NORC				eS	Sn	08 36 51.9	-0.4
NORC				i		08 36 58.6	
	comp=Z,5.4nm,0.2s						
HELC	Santa Helena	2.43	256	eP	Pn	08 36 29.4	+0.4
HELC				eS	Sn	08 36 59.3	-0.8
UREC	San Jos de Ur	2.54	292	eP	Pn	08 36 30.9	+0.9
UREC				eS	Sn	08 36 58.7	-3.3
UREC				i		08 37 04.5	
	comp=Z,4.4nm,0.1s						
CBOC	Ciudad Bolivar	2.98	252	eP	Pn	08 36 35.2	-0.5
CBOC				eS	Sn	08 37 12.5	+0.4

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*NIED **20** 08:40:06.3, 37°.36N×141°.73E, h44^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.25; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.46; $M_{r\theta}$1.09; $M_{\theta\phi}$-0.50; $M_{\phi r}$0.96; Fault plane solution: $M_0$1.89000×10^{14} NP1: ϕ_s238.00000°, δ20.00000°, λ97.00000°. NP2: ϕ_s50.00000°, δ70.00000°, λ87.00000°.*

JMA 20 08:40:06.3±0.2, 37°.4N±0°.4×14°2E±°, h44^{km}±2^{km}, MV3.5/37, 15D, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.68	271	⇓iP	Pn	08 40 19.7	+0.1
JFK				⇓S	Sn	08 40 28.9	-0.4
JMST	Minamisoumatoc	0.77	299	⇓iP	Pn	08 40 20.7	0.0
JMST				⇓S	Sn	08 40 30.7	-0.5
ONAJ	Iwakimizuishiy	0.79	251	⇓iP	Pn	08 40 21.0	-0.1
ONAJ				⇓eS	Sn	08 40 31.5	-0.3
JMM	Marumori	0.90	305	⇓iP	Pn	08 40 22.8	+0.2
JMM				⇓eS	Sn	08 40 33.9	-0.6
JFFD	Fukushimafurud	0.97	255	⇓iP	Pn	08 40 23.6	+0.1
JFFD				⇓S	Sn	08 40 35.9	-0.3
JFT	Otama	1.12	279	⇓iP	Pn	08 40 26.8	+1.2
JFT				⇓eS	Sn	08 40 41.0	+1.2
JIO	Ouri	1.14	345	⇓iP	Pn	08 40 25.8	0.0
JIO				⇓eS	Sn	08 40 39.7	-0.5
JHO	Hitachi	1.19	232	P	Pn	08 40 26.3	-0.2
JOU	Okura	1.31	320	P	Pn	08 40 28.8	+0.6
JYS	Shirataka	1.58	304	eP	Pn	08 40 32.9	+1.1
JMK	Ichinoseki	1.64	346	⇓iP	Pn	08 40 33.4	+0.7

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*IDC **20** 08:45:31.6±0.7, 39°.24N×22°.91E, h0^{km}, mb3.8/12, mbtmp3.8/14, ML3.9/3, MS3.0/15, Error ellipse: s-maj=17.1km s-min=14.3km az=117.0*

*ISK **20** 08:45:32.0, 39°.28N×23°.00E, h11^{km}, ML3.9/22*

*THE **20** 08:45:33.7, 39°.26N×22°.93E, h10^{km}, ML4.0/20, Error ellipse: s-maj=0.7km s-min=0.4km az=306.0*

*PDG **20** 08:45:33.2±0.5, 39°.28N×22°.99E, h12^{km}, ML4.0/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*ATH **20** 08:45:33.6, 39°.27N×22°.93E, h15^{km}, Mw4.1, Moment Tensor Solution. s10 Moment tensor: M_{rr}-1.34; $M_{\theta\theta}$1.56; $M_{\phi\phi}$-0.23; $M_{r\theta}$-0.50; $M_{\theta\phi}$-0.53; $M_{\phi r}$0.68; Fault plane solution: NP1: ϕ_s264.00000°, δ37.00000°, λ-125.00000°. NP2: ϕ_s125.00000°, δ60.00000°, λ-66.00000°.*

*NEIC **20** 08:45:33.1±1.8, 39°.27N±0°.05×22°.97E±0°.06, h6^{km}±5^{km} Error ellipse: s-maj=7.2km s-min=6.1km az=214.0*

*DDA **20** 08:45:35.0±0.0, 39°.38N×23°.06E, h51^{km}, MW4.0*

*SOF **20** 08:45:39.9, 39°.84N×23°.35E, h2^{km}, MD3.9*

ISC 20 08:45:33.8±0.8, 39°.24N±0°.01×22°.95E±0°.02, h13^{km}±5^{km}, n265, σ1^{s}10/300, mb3.8/12, MS2.9/10, 30C-9D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.22	72	P	Pg	08 45 38.7	0.0
NEO				S	Sg	08 45 42.2	+0.2
NEO				AML	AML	08 45 43.2	
NEO				AML	AML	08 45 43.3	
NEO	Neokhori	0.22	72	P	Pg	08 45 38.6	0.0
NEO				S	Sg	08 45 42.0	0.0
	148µm,0.2s						
XOR	Xorichti	0.23	56	P	Pg	08 45 38.6	-0.1
XOR				S	Sg	08 45 42.3	+0.2
XOR				AML	AML	08 45 42.6	
XOR				AML	AML	08 45 43.1	
XOR	Xorichti	0.23	56	P	Pg	08 45 38.6	-0.1
XOR				S	Sg	08 45 42.6	+0.5
	117µm,0.4s						
AGG	Agios Georgios	0.53	246	P	Pg	08 45 43.7	-0.5
AGG				S	Sg	08 45 50.7	-0.6
AGG				AML	AML	08 45 53.0	
	comp=N,61622µm,0.7s						
AGG				AML	AML	08 45 56.1	
	comp=E,40078µm,0.6s						
AGG	Agios Georgios	0.53	246	P	Pg	08 45 43.7	-0.5
AGG				S	Sb	08 45 51.7	-0.8
	comp=E,25µm,0.6s						
AGG	Agios Georgios	0.53	246	PG	Pg	08 45 43.8	-0.5
AGG				SG	Sb	08 45 51.9	-0.6
AGG	Agios Georgios	0.53	246	Pg	Pg	08 45 43.7	-0.5
ATAL	Atalanti	0.55	174	P	Pb	08 45 44.6	-0.7
ATAL				S	Sb	08 45 53.0	0.0
ATAL				AML	AML	08 45 58.0	
	comp=N,25998µm,0.7s						
ATAL				AML	AML	08 45 58.6	
	comp=E,38722µm,0.6s						
ATAL	Atalanti	0.55	174	P	Pb	08 45 44.6	-0.7
ATAL				S	Sb	08 45 52.5	-0.5
	comp=E,18µm,0.8s						
LKR	Lokris	0.59	176	P	Pb	08 45 44.6	-1.3
LKR				S	Sb	08 45 54.3	+0.2
	comp=E,15µm,0.4s						
LRSO	Larissa Observ	0.61	315	P	Pg	08 45 45.0	-0.8
LRSO				S	Sg	08 45 53.8	-0.1
LRSO				AML	AML	08 46 00.3	
	comp=E,27493µm,0.6s						
LRSO				AML	AML	08 46 00.3	
	comp=N,31684µm,0.6s						
LRSO	Larissa Observ	0.61	315	P	Pg	08 45 45.0	-0.8
LRSO				S	Sg	08 45 52.9	-1.0
MAKR	Makrakomi, Fth	0.68	251	P	Pb	08 45 46.6	-0.9
MAKR				AML	AML	08 46 01.6	
	comp=N,38412µm,0.4s						
MAKR				AML	AML	08 46 02.5	
	comp=E,34494µm,0.6s						
MAKR	Makrakomi, Fth	0.68	251	P	Pg	08 45 46.4	-0.6
MAKR				S	Sb	08 45 57.1	+0.4
	comp=E,54µm,0.5s						
ALNA	Alonissos	0.72	97	P	Pb	08 45 47.6	-0.5
ALNA				S	Sn	08 45 58.6	-1.8
ALNA				AML	AML	08 46 01.2	
	comp=N,89602µm,0.7s						
ALNA				AML	AML	08 46 01.5	
	comp=E,60512µm,0.4s						
TYRN	Tyrnavos	0.73	311	P	Pg	08 45 47.0	-0.9
TYRN				AML	AML	08 46 00.7	
	comp=E,13051µm,0.9s						
TYRN				AML	AML	08 46 02.2	
	comp=N,9889µm,0.6s						
TYRN	Tyrnavos	0.73	311	P	Pg	08 45 47.1	-0.9
THL	Klokotos Trika	0.80	294	P	Pg	08 45 47.8	-1.4
THL				AML	AML	08 46 03.1	
	comp=N,11679µm,0.6s						
THL				AML	AML	08 46 03.7	
	comp=E,6630µm,0.4s						
THL	Klokotos Trika	0.80	294	P	Pg	08 45 47.8	-1.4
THL				S	Sg	08 45 59.6	-0.1
DLFA	Delphi	0.84	205	P	Pg	08 45 49.1	-0.9
DLFA				AML	AML	08 46 06.9	
	comp=N,15895µm,0.5s						
DLFA				AML	AML	08 46 07.5	
	comp=E,21291µm,0.6s						
PAIG	Paliouri	0.89	39	P	Pb	08 45 50.8	-0.3
PAIG				AML	AML	08 46 05.3	
	comp=E,17786µm,0.5s						
PAIG				AML	AML	08 46 06.1	
	comp=N,18967µm,0.6s						
PAIG	Paliouri	0.89	39	P	Pb	08 45 50.8	-0.3
PAIG				S	Sb	08 46 02.8	0.0
	comp=N,9µm,0.5s						
LIT	Litokhoron	0.93	338	P	Pg	08 45 50.6	-1.2
LIT				AML	AML	08 46 09.2	
	comp=E,11639µm,0.5s						
LIT				AML	AML	08 46 10.9	
	comp=N,16555µm,0.7s						
LIT	Litokhoron	0.93	338	P	Pg	08 45 50.4	-1.4
LIT				S	Sg	08 46 03.6	-0.4
	comp=N,7µm,0.5s						
LIT	Litokhoron	0.93	338	Pg	Pg	08 45 50.5	-1.4
EVR	Evrytania	0.95	251	P	Pg	08 45 51.3	-0.8
EVR				AML	AML	08 46 09.3	
	comp=E,14277µm,0.7s						
EVR				AML	AML	08 46 12.1	
	comp=N,13770µm,0.8s						
EVR	Evrytania	0.95	251	P	Pg	08 45 51.3	-0.8
EVR				S	Sb	08 46 04.3	-0.3
	comp=N,7µm,0.7s						
ANX	Ano Chora	1.03	232	P	Pg	08 45 52.2	-1.5
ANX				AML	AML	08 46 12.8	
	comp=E,25116µm,0.6s						
ANX				AML	AML	08 46 13.9	
	comp=N,11368µm,0.4s						
ANX	Ano Chora	1.03	232	P	Pg	08 45 52.6	-1.1
ANX				S	Sb	08 46 07.0	0.0
	comp=N,9µm,0.5s						
VIL2	Platees	1.05	166	P	Pn	08 45 54.4	+0.2
VIL2				AML	AML	08 46 17.8	
	comp=E,21668µm,0.5s						
VIL2				AML	AML	08 46 18.6	
	comp=N,18362µm,0.6s						
KYMI	Kymi, Euboea I	1.08	124	P	Pn	08 45 54.2	-0.4
KYMI				AML	AML	08 46 13.6	
	comp=E,9400µm,0.4s						
KYMI				AML	AML	08 46 16.1	
	comp=N,5793µm,0.6s						
KYMI	Kymi, Euboea I	1.08	124	P	Pn	08 45 54.1	-0.5
KYMI				S	Sn	08 46 10.5	+1.1
	comp=N,4µm,0.5s						
VILL	Villia	1.11	165	P	Pn	08 45 54.6	-0.5
VILL				S	Sn	08 46 11.0	+0.8
	comp=N,7µm,0.5s						
EFP	Efpalio	1.15	226	P	Pg	08 45 54.8	-1.1
EFP				AML	AML	08 46 16.4	
	comp=N,14748µm,0.8s						
EFP				AML	AML	08 46 20.4	
	comp=E,12990µm,0.6s						
EFP	Efpalio	1.15	226	P	Pb	08 45 55.0	-0.5
EFP				S	Sn	08 46 11.1	0.0
	comp=E,7µm,0.7s						
ALIK	Aliki, Aigiali	1.18	214	P	Pn	08 45 56.5	+0.6
ALIK				S	Sn	08 46 12.7	+0.9
PLG	Polygyros	1.20	18	P	Pg	08 45 55.2	-1.7
PLG				AML	AML	08 46 11.0	
	comp=N,3897µm,0.7s						
PLG				AML	AML	08 46 12.2	
	comp=E,6244µm,0.9s						
PLG	Polygyros	1.20	18	P	Pg	08 45 55.2	-1.7
PLG				S	Sb	08 46 11.6	-0.1
	comp=E,8µm,0.8s						
LTK	Loutraki	1.21	179	P	Pn	08 45 56.3	-0.1
THAL	Thalero	1.22	191	P	Pn	08 45 56.7	+0.1
THAL				AML	AML	08 46 23.6	
	comp=E,19727µm,0.5s						
THAL				AML	AML	08 46 26.9	
	comp=N,10790µm,0.4s						
THAL	Thalero	1.22	191	P	Pn	08 45 56.8	+0.3
LAKA	Lakka	1.25	218	P	Pn	08 45 57.6	+0.6
LAKA				AML	AML	08 46 25.1	
	comp=N,12844µm,1.2s						
LAKA				AML	AML	08 46 27.8	
	comp=E,12921µm,0.6s						
PVO	Paravola	1.27	241	P	Pg	08 45 57.4	-0.9
SKY	Skiros Island	1.29	106	P	Pb	08 45 57.4	-0.6
SKY				AML	AML	08 46 20.5	
	comp=E,9526µm,0.2s						
SKY				AML	AML	08 46 20.6	
	comp=N,12579µm,0.6s						
SKY	Skiros Island	1.29	106	P	Pb	08 45 57.4	-0.6
SKY				S	Sn	08 46 16.0	+1.3
KTI	Kastanea	1.32	331	P	Pn	08 45 57.8	-0.3
KLV	Kalavryta, Ach	1.35	208	P	Pn	08 45 58.0	-0.3
KLV				AML	AML	08 46 23.1	
	comp=E,3064µm,0.6s						
KLV				AML	AML	08 46 25.0	
	comp=N,2933µm,0.9s						
KLV	Kalavryta, Ach	1.35	208	P	Pb	08 45 58.3	-0.6
OUR	Ouranopolis	1.35	36	P	Pn	08 45 57.6	-0.7
OUR				AML	AML	08 46 18.2	
	comp=N,9290µm,0.7s						
OUR				AML	AML	08 46 20.3	
	comp=E,9702µm,0.9s						
OUR	Ouranopolis	1.35	36	P	Pn	08 45 57.9	-0.4
OUR				S	Sn	08 46 16.7	+0.6
	comp=E,5µm,1.0s						
OUR	Ouranopolis	1.35	36	PN	Pn	08 45 57.2	-1.1
OUR				SN	Sb	08 46 14.8	-1.3
HORT	Hortiatis	1.36	5	P	Pn	08 45 57.5	-1.0
HORT				AML	AML	08 46 15.8	
	comp=E,4253µm,0.4s						
HORT				AML	AML	08 46 31.9	
	comp=N,2962µm,0.9s						
HORT	Hortiatis	1.36	5	P	Pn	08 45 57.6	-1.0
HORT				S	Sb	08 46 15.5	-1.1
HORT	Hortiatis	1.36	5	PN	Pn	08 45 57.1	-1.5
HORT				SN	Sb	08 46 14.8	-1.8
PTL	Penteli	1.39	149	P	Pg	08 45 59.3	-1.1
PTL	Penteli	1.39	149	P	Pg	08 45 59.4	-1.1
DION	Dionisos Attik	1.39	146	P	Pg	08 45 59.4	-1.2
DION				AML	AML	08 46 20.7	
	comp=N,13392µm,0.6s						
DION				AML	AML	08 46 23.1	
	comp=E,19183µm,0.5s						
DION	Dionisos Attik	1.39	146	P	Pg	08 45 59.3	-1.2
DION				S	Sn	08 46 17.8	+0.7
	comp=E,12µm,0.5s						
THE	Thessaloniki	1.39	0	P	Pn	08 45 57.8	-1.1
THE				AML	AML	08 46 20.1	
	comp=E,2163µm,0.7s						
THE				AML	AML	08 46 23.5	
	comp=N,1219µm,0.8s						
THE	Thessaloniki	1.39	0	P	Pn	08 45 57.7	-1.1
ATH	Athens Observa	1.40	154	P	Pg	08 45 59.6	-1.1
ATH				AML	AML	08 46 17.9	
	comp=E,9948µm,0.5s						
ATH				AML	AML	08 46 24.1	
	comp=N,9063µm,0.4s						
ATH	Athens Observa	1.40	154	P	Pg	08 45 59.6	-1.1
ATH				S	Sn	08 46 17.5	+0.2
	comp=N,5µm,0.4s						
KZN	Kozani	1.40	320	P	Pn	08 45 59.2	+0.1
KZN	Kozani	1.40	320	P	Pn	08 45 58.8	-0.3
KZN				S	Sb	08 46 17.9	+0.2
	comp=N,2µm,0.9s						
KPRO	Kipourio	1.42	301	P	Pn	08 45 59.1	-0.2
KPRO	Kipourio	1.42	301	P	Pn	08 45 59.2	-0.2
ATHU	Athens Univers	1.43	153	P	Pg	08 45 59.8	-1.4
ATHU				AML	AML	08 46 25.9	
	comp=N,4724µm,0.5s						
ATHU				AML	AML	08 46 27.5	
	comp=E,2973µm,0.6s						
ATHU	Athens Univers	1.43	153	P	Pg	08 45 59.9	-1.3
ATHU				S	Sg	08 46 18.9	-0.9
	comp=E,2µm,0.5s						
VLY	Voula,Athens	1.53	154	P	Pb	08 46 01.4	-0.7
VLY				AML	AML	08 46 26.9	
	comp=E,8327µm,0.3s						
VLY				AML	AML	08 46 31.9	
	comp=N,8972µm,0.5s						
VLY	Voula,Athens	1.53	154	P	Pb	08 46 01.4	-0.7
VLY				S	Sb	08 46 21.1	-0.3
EFSA	Agios Efstrati	1.61	79	P	Pb	08 46 02.5	-0.8
DRO	Drossia	1.61	218	P	Pb	08 46 02.5	-0.8
DRO				AML	AML	08 46 34.0	
	comp=N,5633µm,0.5s						
DRO				AML	AML	08 46 34.7	
	comp=E,2621µm,0.6s						
DRO	Drossia	1.61	218	P	Pb	08 46 02.6	-0.8
SOH	Sokhos	1.61	11	P	Pn	08 46 02.0	0.0
SOH				AML	AML	08 46 39.0	
	comp=N,7800µm,0.8s						
SOH				AML	AML	08 46 40.6	
	comp=E,8156µm,0.7s						
SOH	Sokhos	1.61	11	P	Pn	08 46 02.1	+0.1
SOH				S	Sn	08 46 22.6	0.0
EPID	Epidavros	1.63	175	P	Pb	08 46 02.6	-1.0
EPID	Epidavros	1.63	175	P	Pb	08 46 02.7	-1.0
EPID				S	Sb	08 46 23.9	-0.2
	comp=E,3µm,0.9s						
KARY	Karystos	1.67	136	P	Pb	08 46 03.1	-1.3
KARY	Karystos	1.67	136	P	Pb	08 46 03.2	-1.3
KARY				S	Sb	08 46 24.4	-1.0
PENT	Pentalofos	1.69	305	P	Pn	08 46 03.8	+0.6
GRG	Griva	1.77	346	P	Pn	08 46 04.1	0.0
GRG	Griva	1.77	346	P	Pn	08 46 04.1	0.0
KOKK	Kokkinochori,	1.77	27	P	Pn	08 46 03.5	-0.6
KOKK	Kokkinochori,	1.77	27	P	Pn	08 46 03.6	-0.5
LIA	Limnos Island	1.85	68	P	Pn	08 46 04.6	-0.5
LIA				S	Sn	08 46 28.3	0.0
KRND	KRANIDI	1.86	175	P	Pb	08 46 06.1	-1.5
KRND				AML	AML	08 46 41.2	
	comp=E,4880µm,0.9s						
KRND				AML	AML	08 46 42.5	
	comp=N,5838µm,0.6s						
KRND	KRANIDI	1.86	175	P	Pb	08 46 06.1	-1.5
NEST	Nestorio	1.88	309	P	Pn	08 46 06.6	+0.9
KNT	Kendrikon	1.92	359	P	Pn	08 46 06.2	+0.1
KNT	Kendrikon	1.92	359	P	Pn	08 46 06.3	+0.1
THAS	Thassos island	1.93	44	P	Pn	08 46 05.2	-1.0
SRS	Serrai	1.94	14	P	Pn	08 46 06.2	-0.3
SRS				AML	AML	08 46 31.1	
	comp=E,2209µm,0.9s						
SRS				AML	AML	08 46 38.7	
	comp=N,1648µm,0.9s						
SRS	Serrai	1.94	14	P	Pn	08 46 06.1	-0.3
SRS				S	Sn	08 46 30.4	-0.3
FNA	Florina	1.96	322	P	Pn	08 46 07.3	+0.5
FNA	Florina	1.96	322		Pn	08 46 06.6	-0.2
VAY	Valandovo	2.10	352	i Pn	Pn	08 46 09.3	+0.7
KAVA	Kavala	2.13	34	P	Pn	08 46 08.0	-1.0
KBN	Korca	2.16	310		Pn	08 46 10.7	+1.1
ITM	Ithomi	2.21	202		Pb	08 46 11.6	-2.0
NVR	Nevrokopi	2.22	18	P	Pn	08 46 10.1	-0.2
SIGR	SIGRI	2.25	90	P	Pn	08 46 10.5	-0.2
SMTH	Samothraki Isl	2.33	57	P	Pn	08 46 10.7	-1.2
MMB	Musomiste	2.42	14	i P	Pn	08 46 12.6	-0.5
GADA	Gvkgeada	2.46	66	PN	Pn	08 46 12.6	-1.0
GOKA	anakkale-Gk	2.47	66	P	Pn	08 46 13.3	-0.4
BOZC	Bozcaada	2.47	75	PN	Pn	08 46 12.8	-0.9
BOZC	Bozcaada	2.47	75	P	Pn	08 46 11.9	-1.8
KOCA	Canakkale, Ayv	2.48	83	P	Pn	08 46 13.4	-0.5
KEK	Kerkira	2.49	282		Pb	08 46 16.4	-1.9
OHR	Ohrid	2.49	319	i Pn	Pb	08 46 17.0	-1.5
VLI	Veliai	2.52	180	P	Pn	08 46 14.9	+0.5
CHOS	Chios island	2.57	108	P	Pn	08 46 15.7	+0.5
CHOS	Chios island	2.57	108	PN	Pn	08 46 14.5	-0.7
PRK	Paraskevi	2.58	89	P	Pn	08 46 15.9	+0.7
ECEA	Canakkale, Ece	2.62	71	P	Pn	08 46 15.7	+0.1
KKB	Krupnik	2.63	2	i P	Pn	08 46 16.0	+0.1
EZN	Ezine	2.67	76	PN	Pn	08 46 15.7	-0.8
RDO	Rodhopi	2.75	45	P	Pn	08 46 16.6	-1.0
RDO	Rodhopi	2.75	45	PN	Pn	08 46 15.6	-1.9
RDO	Rodhopi	2.75	45		Pn	08 46 16.5	-1.0
RZN	Rozhen	2.79	28	i P	Pn	08 46 18.4	+0.1
BAYC	CANAKKALE_Bayr	2.83	79	P	Pn	08 46 18.3	-0.3
CAVK	Edirne/Enez-Ca	2.87	59	P	Pn	08 46 17.9	-1.2
ENEZ	Enez	2.88	58	PN	Pn	08 46 18.3	-1.0
ALN	Alexandroupoli	2.90	54	P	Pn	08 46 18.7	-0.8
ALN	Alexandroupoli	2.90	54	PN	Pn	08 46 18.6	-0.9
ALN	Alexandroupoli	2.90	54	Pn	Pn	08 46 18.5	-1.1
AYVA	Ayvalik	2.90	87	P	Pn	08 46 20.1	+0.4
GELI	Tayfur-Gelibol	2.95	66	PN	Pn	08 46 19.4	-0.9
ZEYE	Izmir, Urla-Ze	2.95	109	P	Pn	08 46 17.5	-2.8
SKO	Skopje	2.96	338	i Pn	Pn	08 46 21.0	+0.5
APE	Apeiranthos	2.97	136	⇑P	Pn	08 46 21.4	+0.7
APE	Apeiranthos	2.97	136	P	Pn	08 46 21.2	+0.6
APE	Apeiranthos	2.97	136	PN	Pn	08 46 20.7	+0.1
KTHA	Kythira Island	2.98	178	P	Pn	08 46 21.9	+1.2
URLA	Izmir	2.98	106	PN	Pn	08 46 20.7	0.0
URLA	Izmir	2.98	106	P	Pn	08 46 20.3	-0.4
KDZ	Kurdzhali	3.06	37	i P	Pn	08 46 20.5	-1.3
ERIK	Erikli-Kesan	3.09	61	PN	Pn	08 46 21.3	-0.9
PLD	Plovdiv	3.16	24	PN	Pn	08 46 22.7	-0.5
PLD	Plovdiv	3.16	24	i P	Pn	08 46 24.9	+1.7
BUHA	Balikesir, Bur	3.21	84	P	Pn	08 46 24.1	+0.3
ZEDA	zmir-Bergama	3.22	94	P	Pn	08 46 24.9	+0.8
BLCB	Balcova	3.31	104	PN	Pn	08 46 24.9	-0.3
VTS	Vitosha	3.38	4	⇑P	Pn	08 46 27.2	+0.8
VTS	Vitosha	3.38	4	Pn	Pn	08 46 26.1	-0.3
VTS	Vitosha	3.38	4	i P	Pn	08 46 26.7	+0.3
UKOP	Uzunkopru-Edir	3.39	55	PN	Pn	08 46 25.5	-0.9
DIM	Dimitrovgrad	3.43	34	i P	Pn	08 46 26.4	-0.5
PGB	Panagyurishte	3.43	15	i P	Pn	08 46 27.7	+0.7
SANT	Santorini	3.48	144	⇑P	Pn	08 46 30.3	+2.6
SANT	Santorini	3.48	144		Pn	08 46 27.9	+0.3
KRBG	Karabiga-Canak	3.54	70	PN	Pn	08 46 28.2	-0.2
RKY	Sarkoy-Tekirda	3.56	65	PN	Pn	08 46 27.8	-0.9
SCTE	Santa Cesarea	3.56	285	Pn	Pn	08 46 27.9	-0.8
MAR6	Marsite Statio	3.62	65	PN	Pn	08 46 28.8	-0.8
BALY	Balya	3.65	81	P	Pn	08 46 30.7	+0.7
MAR3	Marsite Statio	3.66	64	PN	Pn	08 46 29.1	-1.0
KNL	Balıkesir	3.67	72	P	Pn	08 46 29.3	-0.9
GZKV	Gazikoy-Tekird	3.68	64	PN	Pn	08 46 29.2	-1.2
STEP	BALIKESIR_Sava	3.70	86	P	Pn	08 46 31.3	+0.6
EDRB	Edirne	3.89	47	PN	Pn	08 46 32.9	-0.3

KIRK	Kırklareli	4.05	50	P	Pb	08 46 43.0	-2.0
DRME	Dracevica, Mon	4.11	317	⇓iPn	Pn	08 46 36.9	+0.7
DRME				i Sn	Sn	08 47 26.3	+2.2
MPEP	Malo Peshtene	4.16	8	i P	Pn	08 46 38.4	+1.5
IDI	Anoyia	4.24	158	⇑P	Pn	08 46 40.3	+2.2
IDI	Anoyia	4.24	158	Pn	Pn	08 46 39.7	+1.6
	comp=N,2.8nm,0.3s,baz=344,slow=12,SNR=16						
IDI				Sn	Sn	08 47 26.1	-1.3
	comp=N,3.5nm,0.3s,baz=248,slow=22,SNR=3.2						
IDI				LR	LR	08 48 18.1	
	comp=N,118nm,19.9s,baz=231,slow=39						
	comp=N,21nm,0.6s						
IDI	Anoyia	4.24	158	Pn	Pn	08 46 38.3	+0.2
PDG	Podgorica	4.25	320	⇓P	Pn	08 46 40.2	+2.1
TTG	Podgorica	4.25	320	⇑iPn	Pn	08 46 39.2	+1.1
TTG				i Sn	Sn	08 47 29.4	+1.9
DURS	Dursunbey	4.29	83	P	Pn	08 46 40.2	+1.3
IVA	Berane	4.30	328	⇑iPn	Pn	08 46 40.0	+1.0
IVA				i Sn	Sn	08 47 30.2	+1.1
BUM	Brajici-Budva	4.34	316	⇓iPn	Pn	08 46 40.6	+1.1
BUM				i Sn	Sn	08 47 32.0	+2.0
BLKB	Belogradchik	4.38	357	⇑P	Pn	08 46 41.0	+0.9
VIZE	Kirklareli, Vi	4.40	56	P	Pn	08 46 38.0	-2.3
KOME	Kolasin	4.45	325	⇓iPn	Pn	08 46 41.6	+0.6
KOME				i Sn	Sn	08 47 33.9	+1.3
BOVS	Bovan	4.49	348	⇑P	Pn	08 46 42.0	+0.5
CEME	Cevo	4.50	319	⇓iPn	Pn	08 46 42.5	+0.8
CEME				i Sn	Sn	08 47 35.7	+1.8
HCY	Herceg Novi	4.66	315	ePn	Pn	08 46 44.8	+1.0
HCY				i Sn	Sn	08 47 39.2	+1.5
USAK	Uak-Merkez	4.76	94	P	Pn	08 46 46.9	+1.7
TIP	Timpagrande	4.81	271	⇑P	Pn	08 46 47.5	+1.5
TIP	Timpagrande	4.81	271		Pn	08 46 46.4	+0.4
ULDT	Uludag	4.86	77	P	Pn	08 46 47.9	+1.2
PLE	Pljevlja	4.89	328	⇑iPn	Pn	08 46 47.7	+0.6
PLE				i Sn	Sn	08 47 44.7	+1.1
BRY	Bratogost	4.95	319	⇑iPn	Pn	08 46 48.9	+0.9
BRY				i Sn	Sn	08 47 46.1	+1.0
KARP	Karpathos	4.98	136		Pn	08 46 48.0	-0.3
UPM	Unac-Piva	5.00	324	⇓iPn	Pn	08 46 49.6	+0.9
UPM				eSn	Sn	08 47 47.2	+0.8
MATE	Matera	5.00	288	⇑P	Pn	08 46 51.1	+2.6
COPA	Copaceanca	5.18	18	⇑P	Pn	08 46 52.3	+1.4
PRD	Provadia	5.19	39	i P	Pn	08 46 51.1	+0.1
DIVS	Divibare	5.34	336		Pn	08 46 53.4	+0.2
CEL	Celeste	5.60	262	Pn	Pn	08 46 55.8	-1.1
MDVR	Moldovita	5.62	351	⇑P	Pn	08 46 57.4	+0.4
HERR	Herculane	5.65	356	⇑P	Pn	08 46 58.1	+0.6
BORA	Eskisehir	5.83	81		Pn	08 47 00.3	+0.3
SGRT	San Giovanni R	6.04	297	Pn	Pn	08 47 01.7	-1.2
GZR	Gura Zlata	6.15	359	⇓P	Pn	08 47 06.4	+2.0
LOT	Lotru	6.24	5	⇓P	Pn	08 47 05.6	+0.1
FRGS	Fruska Gora	6.36	340	⇓P	Pn	08 47 08.4	+1.3
VOIR		6.39	13	⇑P	Pn	08 47 08.8	+1.2
BZS	Buzias	6.45	352	⇑P	Pn	08 47 08.8	+0.4
ISR	Istrita	6.45	23	⇑P	Pn	08 47 09.5	+1.0
MDUB	Mudurnu	6.46	76		Pn	08 47 07.7	-1.0
TIRR	Tirgusor	6.62	36	⇑P	Pn	08 47 10.5	-0.2
TIRR	Tirgusor	6.62	36		Pn	08 47 09.6	-1.0
MLR	Muntele Rosu	6.63	19	⇑P	Pn	08 47 12.3	+1.3
MLR	Muntele Rosu	6.63	19	Pn	Pn	08 47 12.3	+1.3
	comp=N,2.5nm,0.3s,baz=184,slow=8.4,SNR=31						
MLR				Sn	Sn	08 48 28.9	+2.5
	baz=242,slow=18						
MLR				LR	LR	08 50 10.3	
	comp=N,309nm,19.7s,baz=232,slow=42						
MLR	Muntele Rosu	6.63	19		Pn	08 47 11.2	+0.2
PAOL	Paolisi	6.67	288	Pn	Pn	08 47 11.3	-0.2
TPGR	Topolog	6.93	34	⇑P	Pn	08 47 15.1	+0.1
DOPR	Dopca	6.96	14	⇑P	Pn	08 47 16.7	+1.2
COVR	Voineasa-Covas	7.03	19	⇑P	Pn	08 47 17.8	+1.4
PLOR	Plostina	7.15	21	⇑P	Pn	08 47 19.7	+1.7
OZUR		7.16	16	⇑P	Pn	08 47 20.0	+1.7
VRI	Vrincioaia	7.18	22	⇑P	Pn	08 47 20.2	+1.7
DRGR		7.55	359	⇑P	Pn	08 47 23.6	0.0
MORH	Mrgy, Hungar	7.66	337	P	Pn	08 47 21.3	-3.7
KOVH	Kovagotottos	7.72	334	P	Pn	08 47 28.2	+2.4
TESR	Tescani	7.76	19	⇑P	Pn	08 47 27.4	+1.1
BIZ	Bicaz	8.03	16	⇑P	Pn	08 47 31.4	+1.3
LTVH	Ltavrtes, Hu	8.18	355	P	Pn	08 47 37.6	+5.5
NRCA	Norcia	8.26	299		Pn	08 47 33.5	+0.2
BR131	Keskin Array S	8.28	83	Pn	Pn	08 47 34.5	+0.8
BRTR	Keskin Array B	8.28	83	Pn	Pn	08 47 35.4	+1.7
	comp=N,0.4nm,0.3s,baz=266,slow=12,SNR=8.8						
BRTR				LR	LR	08 50 45.2	
	comp=N,50nm,18.3s,baz=276,slow=38						
	comp=N,2.2nm,0.6s						
BRTR	Keskin Array B	8.28	83	Pn	Pn	08 47 34.4	+0.7
BURAR	Bucovina Array	8.53	10	⇑P	Pn	08 47 38.0	+1.0
BUR08	Bucovina Ar. S	8.56	10		Pn	08 47 38.9	+1.5
MPLH	Magyarpolny	8.86	335	P	Pn	08 47 43.6	+2.2
PSZ	Piszkesteto	8.96	347	P	Pn	08 47 51.3	+8.5
SOKA	Soboth	9.43	325	ePn	Pn	08 47 53.0	+3.6
	comp=N,9.6nm,1.2s						
ARSA	Arzberg	9.66	328	ePn	Pn	08 47 55.4	+2.9
	comp=N,4.9nm,0.8s						
KBA	Koelnbreinsper	10.51	321	ePn	Pn	08 48 06.4	+2.2
	comp=N,6.9nm,1.1s						
MOA	Molln	10.66	327	ePn	Pn	08 48 11.8	+5.6
	comp=N,7.4nm,1.2s						
ABTA	Abfaltersbach	10.71	318	ePn	Pn	08 48 12.2	+5.4
	comp=N,3.3nm,0.7s						
BIOA	Bad Ischl, Aus	10.82	324	ePn	Pn	08 48 14.1	+5.8
WTTA	Wattenberg	11.50	318	ePn	Pn	08 48 10.8	-6.9
	comp=N,3.3nm,0.5s						
DAVOX	Davos/Dischmat	12.17	312	LR	LR	08 54 25.9	
	comp=N,38nm,20.2s,baz=264,slow=44						
AKASG	Malin Array Be	12.29	19	LR	LR	08 53 37.5	
	comp=N,88nm,21.1s,baz=252,slow=40						
KBZ	Khabaz	15.60	67	Pn	P	08 49 20.7	+3.3
	comp=N,0.1nm,0.3s,baz=269,slow=7.4,SNR=6.7						
ESDC	Sonseca Array	20.76	280	P	P	08 50 15.6	+1.2
	comp=N,2.9nm,0.9s,baz=73,slow=11,SNR=13						
ESDC				LR	LR	08 58 30.0	
	comp=N,26nm,18.0s,baz=141,slow=38						
	comp=N,2.9nm,0.9s						
ESDC	Sonseca Array	20.76	280	IAmb	IAmb	08 50 18.9	
	comp=Z,6.3nm,1.5s						
BELG	Belogornoye	21.52	44	P	P	08 50 25.6	+3.4
	comp=Z,17nm,1.0s,baz=89,slow=9.6,SNR=4.7						
BELG				LR	LR	08 59 25.2	
	comp=Z,60nm,19.4s,baz=189,slow=39						
HFS	Hagfors	21.71	347	LR	LR	08 59 42.6	
	comp=Z,57nm,19.6s,baz=172,slow=39						
FINES	FINESS Array B	22.32	4	P	P	08 50 30.6	-0.2
	comp=Z,1.7nm,0.7s,baz=180,slow=3.8,SNR=5.4						
FINES				LR	LR	08 59 48.3	
	comp=Z,79nm,18.3s,baz=198,slow=38						
	comp=Z,1.7nm,0.7s						
NB2	NORSAR Subarra	23.01	345	P	P	08 50 37.6	-0.6
	comp=Z,1.1nm,0.7s,baz=156,slow=11						
NOA	NORSAR Array B	23.01	345	P	P	08 50 38.0	-0.2
	comp=Z,0.7nm,0.6s,baz=150,slow=11,SNR=4.9						
NOA				LR	LR	09 00 20.9	
	comp=Z,19nm,18.7s,baz=95,slow=39						
	comp=Z,0.7nm,0.6s						
MDT	Midelt	23.14	262	P	P	08 50 40.1	+0.3
	comp=Z,2.7nm,1.1s,baz=135,slow=1.4,SNR=3.0						
	comp=Z,2.7nm,1.1s						
EKA	Eskdalemuir Ar	23.73	321	P	P	08 50 43.9	-1.5
	comp=Z,1.2nm,0.6s,baz=120,slow=8.4,SNR=3.5						
EKA				LR	LR	09 02 32.2	
	comp=Z,20nm,19.7s,baz=168,slow=43						
	comp=Z,1.2nm,0.6s						
AKTO	Aktyubinsk	27.02	54	LR	LR	09 03 01.1	
	comp=Z,23nm,19.1s,baz=290,slow=39						
ARCES	ARCESS Array B	30.39	2	LR	LR	09 05 52.7	
	comp=Z,16nm,18.9s,baz=250,slow=40						
TORD	Torodi Ar. Bea	32.07	222	P	P	08 52 00.5	+0.1
	comp=Z,1.2nm,0.7s,baz=32,slow=8.8,SNR=9.7						
	comp=Z,1.2nm,0.7s						
TORD	Torodi Ar. Bea	32.07	222	IAmb	IAmb	08 52 09.5	
	comp=Z,13nm,1.9s						
KURBB	Kurchatov Arra	40.07	55	P	P	08 53 09.3	+0.7
	comp=Z,0.3nm,0.6s,baz=276,slow=8.1,SNR=3.1						
	comp=Z,0.3nm,0.6s						
KURK	Kurchatov	40.12	55	P	P	08 53 09.3	+0.3
MKAR	Makanchi Array	43.12	60	P	P	08 53 33.8	+0.1
	comp=Z,1.0nm,0.5s,baz=280,slow=6.7,SNR=13						
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	43.56	49	LR	LR	09 14 52.5	
	comp=Z,22nm,19.3s,baz=173,slow=40						
SCHQ	Schefferville	58.97	318	P	P	08 55 31.7	-1.0
	comp=Z,2.8nm,0.6s,baz=50,slow=5.3,SNR=9.8						
	comp=Z,2.8nm,0.6s						
SCHQ	Schefferville	58.97	318	IAmb	IAmb	08 55 40.3	
	comp=Z,22nm,1.9s						
BOSA	Boshof	67.54	178	P	P	08 56 29.9	+0.2
	comp=Z,3.4nm,0.8s,baz=339,slow=8.6,SNR=2.5						
	comp=Z,3.4nm,0.8s						
RCBR	Riachuelo	70.36	245	LR	LR	09 26 39.9	
	comp=Z,19nm,19.6s,baz=130,slow=35						
YKA	Yellowknife Ar	73.03	341	P	P	08 57 02.6	-0.3
	comp=Z,0.5nm,0.6s,baz=31,slow=5.3,SNR=14						
	comp=Z,0.5nm,0.6s						
KSRS	Korea Array	77.18	52	P	P	08 57 26.9	-0.4
	comp=Z,1.1nm,0.6s,baz=304,slow=4.6,SNR=4.8						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	118.69	93	PKP	PKPdf	09 04 20.2	-1.6
	comp=Z,0.4nm,0.9s,baz=318,slow=1.8,SNR=1.4						
ASAR	Alice Springs	120.40	97	PKP	PKPdf	09 04 23.9	-1.2
	comp=Z,0.2nm,0.7s,baz=289,slow=1.5,SNR=6.6						

IDC 20 08:52:06.6±2.9**, 53°.60N×88°.01E, h0^{km}, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=26.7km s-min=18.2km az=85.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.93	282	i		09 04 10.0	
	0.1nm,0.9s,baz=98,slow=325,SNR=3.2						
ZALV	Zalesovo Beam	1.93	282	Pn	Pn	08 52 39.5	-1.2
	2.2nm,0.3s,baz=100,slow=15,SNR=33						
ZALV				Sn	Sn	08 53 06.2	+0.6
	5.4nm,0.3s,baz=98,slow=26,SNR=20						
KURBB	Kurchatov Arra	6.55	247	Pn	Pn	08 53 44.8	+0.6
	0.1nm,0.3s,baz=62,slow=14,SNR=9.7						
KURBB				Sn	Sn	08 54 59.5	-0.1
	baz=52,slow=25,SNR=4.7						
KURBB				Lg	Lg	08 55 34.2	
	0.1nm,0.3s,baz=62,slow=32,SNR=7.8						
	1.1nm,0.5s						
MKAR	Makanchi Array	7.74	211	Pn	Pn	08 54 02.2	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=7.7						
MKAR				Sn	Sn	08 55 27.3	-1.4
	0.1nm,0.3s,baz=32,slow=29,SNR=4.1						
MKAR				Lg	Lg	08 56 10.7	
	0.1nm,0.3s,baz=31,slow=27,SNR=2.9						
	0.4nm,0.4s						

IDC 20 09:13:21.7±2.5**, 53°.92N×86°.55E, h0^{km}, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=20.7km s-min=12.8km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.02	272	i		09 20 02.1	
	baz=89,slow=322,SNR=3.8						
ZALV	Zalesovo Beam	1.02	272	Pg	Pg	09 13 40.2	-1.0
	1.3nm,0.3s,baz=90,slow=17,SNR=13						
ZALV				Lg	Lg	09 13 55.6	
	3.6nm,0.3s,baz=94,slow=30,SNR=16						
ZALV				Rg	Rg	09 14 01.5	
	4.2nm,0.6s,baz=92,slow=27,SNR=14						
KURBB	Kurchatov Arra	5.93	239	Pn	Pn	09 14 51.6	+1.0
	0.2nm,0.3s,baz=57,slow=13,SNR=4.7						
KURBB				Lg	Lg	09 16 31.5	
	baz=60,slow=28,SNR=6.6						
	0.8nm,0.3s						
MKAR	Makanchi Array	7.63	203	Pn	Pn	09 15 15.4	+1.3
	0.2nm,0.3s,baz=24,slow=12,SNR=8.5						
MKAR				Lg	Lg	09 17 21.6	
	baz=20,slow=29,SNR=2.5						
	0.3nm,0.3s						

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*IDC **20** 09:17:01.4±2.4, 37°.80N×141°.67E, h77^{km}±21^{km}, mb3.5/5, mbtmp4.0/11, MS2.6/3, Error ellipse: s-maj=36.0km s-min=16.5km az=90.0*

*JMA **20** 09:17:03.4±0.1, 37°.9N±0°.2×141°.4E±0°.3, h72^{km}, MV3.8/40, SENDAI BAY REGION*

JMA Felt I J1 at SENDAI BAY REGION .

ISC 20 09:17:02.0±0.9**, 37°.85N**±0°.04×**141°.53E**±0°.07**, h74**^{km}±7^{km}**, n28,** σ0^s.**82**/41**, mb3.7**/5**, 2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.46	353	i P	Pn	09 17 15.6	+0.8
JIKH				S	Sn	09 17 24.3	0.0
JMST	Minamisoumatoc	0.53	256	i P	Pn	09 17 15.8	+0.4
JMST				S	Sn	09 17 24.8	-0.5
JMM	Marumori	0.59	272	i P	Pn	09 17 16.1	+0.1
JMM				S	Sn	09 17 25.2	-1.1
JIO	Ouri	0.62	346	i P	Pn	09 17 16.9	+0.5
JIO				S	Sn	09 17 26.5	-0.4
JFK	Kawauchi	0.71	228	⇓iP	Pn	09 17 18.2	+0.8
JFK				⇓S	Sn	09 17 29.2	+0.4
JOU	Okura	0.86	307	i P	Pn	09 17 18.6	-0.5
JOU				S	Sn	09 17 30.6	-1.1
JFT	Otama	1.01	251	i P	Pn	09 17 21.1	+0.3
JFT				S	Sn	09 17 34.2	-0.6
JMK	Ichinoseki	1.13	347	i P	Pn	09 17 22.5	+0.2
JMK				S	Sn	09 17 36.7	-0.7
JYS	Shirataka	1.22	288	i P	Pn	09 17 23.3	-0.1
JYS				S	Sn	09 17 38.8	-0.7
JYK	Kaneyama	1.41	319	i P	Pn	09 17 25.8	-0.1
JYK				S	Sn	09 17 42.7	-1.2
JFY	Yanaizu	1.52	254	P	Pn	09 17 27.8	+0.4
JFY				S	Sn	09 17 46.0	-0.5
JYA	Atsumi	1.61	298	i P	Pn	09 17 28.2	-0.4
JYA				S	Sn	09 17 48.1	-0.6
JOM	Ohasama	1.63	353	i P	Pn	09 17 29.1	+0.3
JOM				S	Sn	09 17 48.7	-0.4
JRG	Rokugo	1.70	336	i P	Pn	09 17 30.1	+0.4
JRG				eS	Sn	09 17 51.3	+0.6
JNS	Sasagawa	1.76	270	P	Pn	09 17 30.5	0.0
MJAR	Matsushiro Arr	2.96	245	P	Pn	09 17 47.2	+0.4
	7.0nm,0.6s,baz=65,slow=11,SNR=29						
MJAR				LR	LR	09 18 30.1	
	comp=Z,16nm,20.8s,baz=20,slow=29						
JHJ	Hachijo jima 2	4.93	197	P	Pn	09 18 13.8	+0.2
	154nm,0.6s,baz=138,slow=23,SNR=8.0						
JHJ				S	Sn	09 19 07.8	-1.5
	142nm,0.3s,baz=9.8,slow=23,SNR=10						
ASAJ	Asahikawa	6.31	7	P	Pn	09 18 30.9	-1.5
	1.3nm,0.3s,baz=222,slow=12,SNR=2.1						
USRK	Ussuriysk Ar.	9.60	314	P	Pn	09 19 18.0	+0.7
	4.2nm,0.3s,baz=122,slow=14,SNR=22						
JCJ	Chichijima	10.74	177	P	Pn	09 19 32.5	-0.4
	20nm,0.5s,baz=335,slow=24,SNR=6.9						
KSRS	Korea Array	10.80	272	P	Pn	09 19 36.4	+2.7
	0.7nm,0.5s,baz=90,slow=13,SNR=5.4						
SHEM	Shemya Is, Ala	27.03	46	LR	LR	09 37 18.9	
	comp=Z,9.1nm,18.0s,baz=344,slow=45						
SONM	Songino Array	27.42	303	P	P	09 22 41.6	+0.9
	0.3nm,0.3s,baz=81,slow=8.9,SNR=3.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	43.77	301	P	P	09 24 59.0	-1.1
	0.8nm,0.6s,baz=79,slow=7.5,SNR=5.9						
	0.8nm,0.6s						
KURBB	Kurchatov Arra	45.58	307	P	P	09 25 14.0	-0.4
	1.9nm,0.5s,baz=81,slow=7.8,SNR=16						
	1.9nm,0.5s						
HNR	Honiara	50.09	156	LR	LR	09 44 13.4	
	comp=Z,55nm,21.3s,baz=204,slow=33						
NOA	NORSAR Array B	73.47	337	P	P	09 28 26.6	+0.4
	0.3nm,0.4s,baz=39,slow=6.2,SNR=2.5						
	0.3nm,0.4s						
AKASG	Malin Array Be	73.71	322	P	P	09 28 27.5	-0.2
	0.5nm,0.4s,baz=45,slow=5.5,SNR=5.2						
	0.5nm,0.4s						

IDC 20 09:25:20.3±1.8**, 6°.64S×128°.63E, h0^{km}, mb3.8**/1**, mbtmp3.8**/4**, ML4.1**/3**, MS2.8**/1**, Error ellipse: s-maj=64.4km s-min=29.0km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	5.17	45	P	Pn	09 26 34.0	-4.9
SOEI	Soe	5.31	234	P	Pg	09 27 00.7	-1.4
SIJI	Sorong	6.31	25	Pn	Pn	09 26 54.5	-0.1
	5.3nm,0.3s,baz=211,slow=22,SNR=42						
SIJI				Sn	Sn	09 27 54.1	-13
	5.7nm,0.3s,baz=208,slow=23,SNR=14						
	12nm,0.3s						
MTN	Manton Dam	6.64	158	P	Pn	09 27 05.4	+6.2
KDU	Kakadu	7.11	148	P	Pn	09 27 07.9	+2.3
KAPI	Kappang	8.97	280	LR	LR	09 31 32.9	
	comp=Z,60nm,18.9s,baz=262,slow=42						
KNRA	Kununurra	8.98	179	P	Pn	09 27 41.8	+10
WRA	Warramunga Arr	14.34	158	Pn	Pn	09 28 43.1	-1.6
	0.9nm,0.3s,baz=336,slow=15,SNR=26						
WRA				Sn	Sn	09 31 07.0	-18
	0.4nm,0.3s,baz=336,slow=23,SNR=2.8						
	0.9nm,0.3s						
COEN	Coen	16.05	118	P	Pn	09 29 01.5	-6.0
ASAR	Alice Springs	17.67	164	P	P	09 29 29.0	-0.1
	0.3nm,0.3s,baz=347,slow=8.3,SNR=10						
ASAR				S	Sn	09 32 34.2	-12
	0.6nm,0.7s,baz=355,slow=27,SNR=3.8						
	0.5nm,0.4s						
MKAR	Makanchi Array	67.18	327	P	P	09 36 16.3	+0.1
	0.6nm,0.6s,baz=116,slow=6.6,SNR=4.5						
	0.6nm,0.6s						

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*IDC **20** 09:32:31.0±2.6, 53°.56N×87°.88E, h0^{km}, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=22.2km s-min=15.1km az=63.0*

*NNC **20** 09:32:30.7±2.9, 53°.53N×87°.85E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=21.0km s-min=12.5km az=81.0, Suspected Mining explosion.*

ISC 20 09:32:32.6±3.5**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0**^{km}**, n8,** σ0^s.**84**/13**, 7C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.72	284	i		09 44 30.0	
	0.1nm,1.1s,baz=99,slow=322,SNR=15						
ZAA0	Zalesovo Array	1.72	284	⇑Pn	Pn	09 33 03.3	-0.4
	1.3nm,0.4s,baz=96,slow=17						
ZAA0				⇑Sn	Sg	09 33 29.2	+1.3
	4.7nm,0.5s,baz=101,slow=24						
ZALV	Zalesovo Beam	1.72	284	Pn	Pn	09 33 03.6	-0.2
	7.2nm,0.3s,baz=97,slow=17,SNR=62						
ZALV				Lg	Lg	09 33 30.4	
	9.4nm,0.3s,baz=102,slow=25,SNR=30						
KURK	Kurchatov	6.25	246	⇓Pn	Pn	09 34 06.2	+0.3
	1.1nm,0.6s						
KURK				⇑Sn	Sn	09 35 16.7	-1.4
	1.9nm,0.6s						
KURK				⇓Lg	Lg	09 35 51.2	
	6.4nm,0.7s						
KURBB	Kurchatov Arra	6.35	246	Pn	Pn	09 34 08.0	+0.7
	0.3nm,0.3s,baz=62,slow=14,SNR=8.9						
KURBB				Sn	Sn	09 35 19.9	-0.5
	0.1nm,0.3s,baz=64,slow=25,SNR=5.1						
KURBB				Lg	Lg	09 35 56.7	
	0.1nm,0.3s,baz=60,slow=34,SNR=4.6						
	1.9nm,0.4s						
KURBB	Kurchatov Arra	6.35	246	⇑Pn	Pn	09 34 07.6	+0.3
	2.1nm,0.3s						
KURBB				⇑Sn	Sn	09 35 19.4	-1.0
	10nm,0.7s						
KURBB				⇓Lg	Lg	09 35 56.0	
	15nm,0.7s						
MK31	Makanchi Array	7.61	209	⇑Pn	Pn	09 34 24.9	+0.3
	0.2nm,0.5s,baz=28,slow=13,SNR=10						
MK31				⇓Sn	Sn	09 35 50.5	-1.0
	0.2nm,0.3s						
MK31				⇑Lg	Lg	09 36 32.0	
	2.0nm,0.7s,baz=39,slow=32,SNR=5.7						
MKAR	Makanchi Array	7.61	209	Pn	Pn	09 34 25.1	+0.5
	0.3nm,0.3s,baz=29,slow=14,SNR=10						
MKAR				Sn	Sn	09 35 51.3	-0.2
	0.2nm,0.3s,baz=28,slow=28,SNR=4.0						
MKAR				Lg	Lg	09 36 33.4	
	0.2nm,0.3s,baz=35,slow=28,SNR=9.7						
	0.4nm,0.3s						

IDC 20 09:37:11.4±2.6**, 53°.91N×86°.52E, h0^{km}, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=20.7km s-min=12.7km az=69.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	273	i		09 43 50.0	
	baz=91,slow=330,SNR=9.3						
ZALV	Zalesovo Beam	1.01	273	Pg	Pg	09 37 30.4	-0.3
	0.7nm,0.3s,baz=88,slow=17,SNR=5.4						
ZALV				Lg	Lg	09 37 44.1	
	1.9nm,0.3s,baz=96,slow=29,SNR=10						
KURBB	Kurchatov Arra	5.91	239	Pn	Pn	09 38 41.2	+1.2
	0.1nm,0.3s,baz=56,slow=14,SNR=4.9						
KURBB				Lg	Lg	09 40 19.9	
	baz=49,slow=31,SNR=5.5						
	0.7nm,0.3s						
MKAR	Makanchi Array	7.62	202	Pn	Pn	09 39 04.1	+0.5
	0.1nm,0.3s,baz=23,slow=12,SNR=4.2						
MKAR				Lg	Lg	09 41 17.7	
	0.1nm,0.3s,baz=26,slow=26,SNR=8.2						
	0.3nm,0.4s						

JMA 20 09:59:35.2±0.2**, 37°.8N**±0°.8×**14°4E**±°**, h48**^{km}**, MV3.5**/30**, FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.26	284	P	Pn	10 00 11.1	+1.1
JIKH				S	Sn	10 00 37.7	+1.1
JIO	Ouri	2.38	287	P	Pn	10 00 13.0	+1.3
JIO				S	Sn	10 00 41.0	+1.3
OFUJ	Ofunato	2.40	303	P	Pn	10 00 13.3	+1.4
OFUJ				S	Sn	10 00 41.6	+1.4
JKMT	Kesennumamotoy	2.41	296	P	Pn	10 00 13.2	+1.1
JKMT				eS	Sn	10 00 41.9	+1.5
JMK	Ichinoseki	2.65	297	eP	Pn	10 00 16.9	+1.5
JOM	Ohasama	2.86	307	eS	Sn	10 00 53.5	+2.0
JFT	Otama	3.12	266	eP	Pn	10 00 23.6	+1.7
JFT				eS	Sn	10 01 00.4	+2.5
JYK	Kaneyama	3.26	291	eP	Pn	10 00 26.2	+2.5
JYK				eS	Sn	10 01 04.2	+3.0
JANG	Nango	3.34	321	eP	Pn	10 00 26.6	+1.6
JANG				eS	Sn	10 01 04.0	+0.7
BSO1	Boso 1	4.10	221	eP	Pn	10 00 34.6	-0.1
JRY	Ryogami san	4.64	249	eP	Pn	10 00 44.0	+1.3
JRY				S	Sn	10 01 35.3	0.0
JOD2	Odawara 2	4.86	240	eP	Pn	10 00 47.2	+1.4
JOD2				eS	Sn	10 01 39.9	-0.9
JCH	Churui	4.87	352	eP	Pn	10 00 45.0	-0.7
JCH				eS	Sn	10 01 37.8	-3.0
NEM2	Nemuro 2	5.68	11	eP	Pn	10 00 54.1	-2.9
NEM2				S	Sn	10 01 54.7	-6.2
JTKR	Abashiri--Toko	6.18	358	eP	Pn	10 01 03.1	-0.7
JTKR				S	Sn	10 02 09.1	-4.0

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*HEL **20** 09:59:59.6±0.1, 64°.75N×30°.69E, h0^{km}, ML2.0, Explosion*

*IDC **20** 10:00:03.5±1.7, 64°.80N×30°.00E, h0^{km}, mbtmp2.6/3, ML1.8/3, Error ellipse: s-maj=24.2km s-min=8.5km az=110.0*

ISC 20 09:59:58.5±1.0**, 64°.75N**±0°.03×**30°.53E**±0°.05**, h0**^{km}**, n22,** σ1^s.**64**/33**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.30	349	PG	Pg	10 00 23.4	-0.1
KU6				MSG		10 00 39.5	
	comp=Z,9.7nm,0.2s						
KU6				SG	Sg	10 00 40.2	-0.1
MSF	Maaselka	1.32	333	PG	Pg	10 00 24.0	+0.2
	baz=147						
MSF				SB	Sb	10 00 42.0	+0.4
OLKF	Oulanka, Finla	1.64	344	PG	Pb	10 00 29.5	-0.1
OLKF				SG	Sb	10 00 50.8	0.0
JOF	Joensuu	1.88	169	PG	Pb	10 00 32.9	-0.6
JOF				SG	Sg	10 00 58.8	+0.2
OUL	Oulu	2.00	282	PG	Pg	10 00 36.8	+0.1
OUL				SG	Sg	10 01 03.1	+0.4
OUF	Merijarvi	2.53	264	PB	Pb	10 00 44.2	-0.5
OUF				MSG		10 01 16.3	
	comp=Z,12nm,0.2s						
OUF				SG	Sg	10 01 19.3	-0.4
RNF	Rovaniemi	2.64	317	PB	Pb	10 00 46.1	-0.5
RNF				SG	Sb	10 01 20.1	+0.7
OBF0	Syolatti, Pyha	2.72	267	PG	Pb	10 00 48.7	+0.8
OBF0				SB	Sb	10 01 21.2	-0.6
SUF	Sumiainen	2.82	226	PB	Pb	10 00 48.8	-0.8
SUF				MSG		10 01 24.1	
	comp=Z,6.3nm,0.2s						

SUF				SG	Sg	10 01 27.8	-1.2
TOF	Tornio	2.91	300	PB	Pb	10 00 51.3	0.0
TOF				SN	Sn	10 01 23.4	+1.7
TOF				MSG		10 01 26.9	
	comp=Z,4.9nm,0.2s						
VRF	Varrio	3.03	353	PN	Pn	10 00 49.3	+1.6
	baz=172						
VRF				MSG		10 01 29.0	
	comp=Z,2.2nm,0.2s						
VRF				SG	Sb	10 01 31.6	+0.8
SGF	Sodankyl	3.15	331	PB	Pb	10 00 53.5	-1.8
KALU	Kalix	3.21	293	PB	Pb	10 00 54.8	-1.4
KAF	Kangasniemi	3.26	217	PB	Pb	10 00 55.4	-1.7
KEF	Keuruu	3.63	227	PB	Pb	10 01 00.0	-3.4
FIA0	FINESS Array S	3.89	213	PN	Pn	10 01 02.4	+3.0
FINES	FINESS Array B	3.89	213	Pn	Pn	10 01 02.6	+3.2
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=1.5						
FINES				Lg	Lg	10 02 04.2	
	comp=Z,1.5nm,0.3s,baz=28,slow=27,SNR=15						
	comp=Z,1.2nm,0.9s						
UMAU	Umeaa	4.37	263	SG	Sg	10 02 18.5	-0.3
HEF	Hetta	4.58	326	SG	Sb	10 02 20.2	+5.0
ARCES	ARCESS Array B	5.18	340	Pn	Pn	10 01 18.4	+1.2
	comp=Z,0.2nm,0.3s,baz=156,slow=14,SNR=18						
ARCES				Sn	Sn	10 02 15.9	-1.8
	comp=Z,0.2nm,0.3s,baz=157,slow=23,SNR=1.7						
ARCES				Lg	Lg	10 02 36.4	
	comp=Z,0.3nm,0.3s,baz=150,slow=35,SNR=4.1						
	comp=Z,0.4nm,0.3s						
I37NO	I37NO	6.38	318	*i*		10 37 10.0	
	baz=129,slow=330,SNR=2.4						
NOA	NORSAR Array B	9.55	256	Pn	Pn	10 02 16.4	-0.7
	baz=50,slow=10.0,SNR=1.7						
	comp=Z,0.2nm,0.5s						

*IDC **20** 10:00:04.9±0.7, 4.°34S×153.°04E, h0^{km}, mb4.1/10, mbtmp4.1/10, MS3.2/4, Error ellipse: s-maj=21.0km s-min=17.5km az=113.0*

*NEIC **20** 10:00:07.7±1.4, 4.°34S±0.°09×153.°04E±0.°07, h16^{km}±4^{km}, mb4.6/17, Error ellipse: s-maj=13.5km s-min=10.6km az=177.0*

ISC 20 10:00:12.0±0.5**, 4.°27S**±0.°08×**152.°86E**±0.°08**, h55^{km}, n53,** σ**1^{s}06**/51**, mb4.3**/17**, MS3.1**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.70	276	Pg	Pn	10 00 25.6	-0.4
RABL	Rabaul	0.70	276	P	Pn	10 00 25.9	-0.1
KRVT	Keravat (AS076	0.83	267	Pn	Pn	10 00 27.3	-0.4
	174nm,0.3s,baz=15,slow=3.5,SNR=102						
KRVT				Sn	Sn	10 00 39.0	-0.2
	893nm,0.3s,baz=195,slow=20,SNR=23						
MANU	Manus Island	5.92	292	Pn	Pn	10 01 36.6	-0.5
PMG	Port Moresby	7.62	228	LR	LR	10 05 15.3	
	comp=Z,140nm,18.2s,baz=61,slow=40						
PATS	Pohnpei	12.30	26	Pn	Pn	10 03 01.0	-3.5
COEN	Coen	13.56	224	Pn	Pn	10 03 18.4	-3.3
FAKI	Fak Fak	20.62	273	P	P	10 04 47.6	+0.6
QIS	Mount Isa	20.70	217	P	P	10 04 49.2	+1.4
KDU	Kakadu	21.81	246	P	P	10 04 59.6	-0.2
DZM	Mont Dzumac	22.06	145	P	P	10 05 01.9	-0.5
	3.5nm,0.4s,baz=285,slow=8.2,SNR=24						
	3.5nm,0.4s						
DZM	Mont Dzumac	22.06	145	P	P	10 05 02.1	-0.3
DZM				IAmb	IAmb	10 05 21.3	
	comp=Z,18nm,1.1s						
DZM	Mont Dzumac	22.06	145	P	P	10 05 02.8	+0.4
MTN	Manton Dam	23.09	247	P	P	10 05 12.6	-0.8
MTN				IAmb	IAmb	10 05 15.2	
	comp=Z,8.1nm,0.7s						
MTN	Manton Dam	23.09	247	P	P	10 05 14.3	+1.0
WB0	Warramunga Arr	23.69	228	P	P	10 05 18.6	-0.4
WR0	Warramunga Arr	23.70	227	P	P	10 05 19.1	0.0
WR0				IAmb	IAmb	10 05 20.9	
	comp=Z,18nm,0.7s						
WRAB	Tennant Creek	23.83	228	P	P	10 05 20.3	+0.1
WRAB	Tennant Creek	23.83	228	P	P	10 05 20.3	+0.1
WB2	Warramunga Arr	23.83	228	P	P	10 05 20.0	-0.2
WRA	Warramunga Arr	23.84	228	P	P	10 05 20.3	0.0
	comp=Z,22nm,0.6s,baz=54,slow=10.0,SNR=123						
WRA				PcP	PcP	10 09 03.5	+1.0
	comp=Z,1.0nm,0.6s,baz=50,slow=2.6,SNR=4.8						
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	23.84	228	P	P	10 05 19.4	-0.9
INKA	Innaminka	26.04	205	P	P	10 05 40.9	+0.7
KNRA	Kununurra	26.26	243	P	P	10 05 42.9	+0.5
KNRA	Kununurra	26.26	243	P	P	10 05 43.0	+0.6
AS31	Alice Springs	26.58	222	P	P	10 05 46.3	+1.1
ASAR	Alice Springs	26.58	222	P	P	10 05 44.9	-0.4
	comp=Z,3.3nm,0.6s,baz=53,slow=8.6,SNR=32						
	comp=Z,3.3nm,0.6s						
OOD	Oodnadatta	28.55	213	P	P	10 06 03.4	+0.7
STKA	Stephens Creek	29.43	200	P	P	10 06 10.2	-0.3
	comp=Z,2.4nm,0.6s,baz=35,slow=13,SNR=7.5						
STKA				LR	LR	10 17 00.5	
	comp=Z,60nm,19.0s,baz=26,slow=34						
	comp=Z,2.4nm,0.6s						
STKA	Stephens Creek	29.43	200	IAmb	IAmb	10 06 12.2	
	comp=Z,0.6nm,0.8s						
DAV	Davao City (W)	29.47	292	LR	LR	10 17 40.1	
	comp=Z,46nm,19.9s,baz=121,slow=36						
LCRK	Leigh Creek	29.48	206	P	P	10 06 11.3	+0.3
WRKA	Warakurna	31.36	226	P	P	10 06 27.3	-0.4
MULG	Mulgathing	31.38	212	P	P	10 06 27.5	-0.2
BBOO	Buckleboo	32.45	207	P	P	10 06 35.6	-1.5
BBOO				IAmb	IAmb	10 07 04.0	
	comp=Z,22nm,1.5s						
FORT	Forrest	35.23	219	P	P	10 07 01.2	-0.1
FORT				IAmb	IAmb	10 07 18.0	
	comp=Z,14nm,0.8s						
AFI	Afiamalu	36.16	108	LR	LR	10 20 08.2	
	comp=Z,33nm,19.4s,baz=256,slow=34						
PSA00	Pilbara Seismi	36.35	239	P	P	10 07 10.5	-0.6
PSA00				IAmb	IAmb	10 07 11.2	
	comp=Z,16nm,1.1s						
MORW	Morawa	42.73	231	P	P	10 08 04.1	+0.1
MORW				IAmb	IAmb	10 08 04.8	
	comp=Z,12nm,0.9s						
PETK	Petropavlovsk-	57.31	3	P	P	10 09 55.9	+1.8
	comp=Z,2.0nm,0.8s,baz=176,slow=8.9,SNR=7.8						
	comp=Z,2.0nm,0.8s						
CASY	Casey	68.54	197	P	P	10 11 09.1	+0.7
CASY				IAmb	IAmb	10 11 28.8	
	comp=Z,4.8nm,1.2s						
VNDA	Vanda	73.35	178	P	P	10 11 38.4	+0.9
	comp=Z,0.7nm,0.8s,baz=338,slow=8.7,SNR=3.0						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	79.97	319	P	P	10 12 18.8	+3.3
	comp=Z,0.3nm,0.7s,baz=101,slow=5.8,SNR=2.5						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	81.65	22	P	P	10 12 23.4	-0.6
	comp=Z,0.8nm,0.7s,baz=245,slow=5.5,SNR=9.3						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	81.65	22	P	P	10 12 24.2	+0.2
QSPA	South Pole Qui	85.69	180	P	P	10 12 44.7	-0.1
	comp=Z,1.2nm,0.7s,baz=323,slow=5.1,SNR=9.6						
	comp=Z,1.2nm,0.7s						
QSPA	South Pole Qui	85.69	180	P	P	10 12 45.6	+0.8
QSPA				IAmb	IAmb	10 12 47.8	
	comp=Z,5.7nm,1.3s						
YKA	Yellowknife Ar	94.93	28	P	P	10 13 27.6	-0.5
	comp=Z,0.2nm,0.7s,baz=276,slow=5.1,SNR=6.0						
	comp=Z,0.2nm,0.7s						
GERES	GERESS Array B	123.64	329	PKP	PKiKP	10 19 04.7	+0.7
	comp=Z,0.4nm,0.5s,baz=330,slow=7.7,SNR=4.5						
GERES	GERESS Array B	123.64	329		PKiKP	10 19 03.7	-0.3
LPAZ	La Paz	134.61	118	PKP	PKiKP	10 19 27.5	0.0
	comp=Z,0.7nm,0.5s,baz=270,slow=4.0,SNR=4.1						
TORD	Torodi Ar. Bea	150.20	289	PKPbc	PKiKP	10 19 58.3	-0.5
	comp=Z,3.1nm,0.5s,baz=63,slow=2.3,SNR=46						
BDFB	Brasilia	151.39	134	PKPbc	PKiKP	10 20 01.8	+0.5
	comp=Z,4.0nm,0.7s,baz=261,slow=1.4,SNR=6.4						
SIJI	Sorong	21.68	156	LR	LR	10 22 15.0	
	comp=Z,438nm,19.2s,baz=183,slow=42						
CMAR	Chiang Mai Arr	22.28	272	LR	LR	10 19 32.6	
	comp=Z,17nm,20.2s,baz=220,slow=34						
KLR	Kul'dur	30.94	12	LR	LR	10 26 54.1	
	comp=Z,34nm,18.8s,baz=182,slow=39						
SONM	Songino Array	31.48	339	LR	LR	10 26 44.9	
	comp=Z,33nm,18.7s,baz=220,slow=38						
WRA	Warramunga Arr	40.54	163	P	P	10 14 37.0	-0.2
	0.2nm,0.7s,baz=347,slow=8.7,SNR=8.4						
	0.2nm,0.7s						
MKAR	Makanchi Array	42.86	319	P	P	10 14 55.3	-0.7
	0.5nm,0.7s,baz=132,slow=8.0,SNR=3.5						
	0.5nm,0.7s						
ASAR	Alice Springs	43.98	165	P	P	10 15 05.7	+0.5
	0.3nm,0.6s,baz=350,slow=7.5,SNR=6.3						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	45.15	329	P	P	10 15 15.5	+1.4
	0.4nm,0.4s,baz=114,slow=9.6,SNR=2.0						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	46.78	323	P	P	10 15 27.0	-0.1
	baz=123,slow=7.4						
NOA	NORSAR Array B	83.23	333	LR	LR	10 59 25.3	
	comp=Z,16nm,18.3s,baz=70,slow=38						
YKA	Yellowknife Ar	87.14	23	P	P	10 19 42.7	-0.5
	0.5nm,0.8s,baz=313,slow=4.5,SNR=9.1						
	0.5nm,0.8s						

*IDC **20** 10:06:55.9±1.0, 19.°23N×122.°69E, h0^{km}, mb3.5/5, mbtmp3.5/5, MS3.3/5, Error ellipse: s-maj=67.6km s-min=20.2km az=66.0*

*MAN **20** 10:06:57.3, 19.°44N×121.°23E, h23^{km}, mb4.8, ML3.7, MS3.7, Hypocentre not reviewed by the ISC*

ISC 20 10:07:01.1±1.2**, 19.°1N**±0.°2×**122.°5E**±0.°5**, h35^{km}, n11,** σ**0^{s}99**/6**, mb3.3**/5**, MS3.0**/5**, Philippine Islands region**

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

NOU 20 10:07:07.5, 16.°01S×167.°56E, h20^{km}, MLv4.1/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.66	328	P	Pb	10 07 20.7	+0.4
DVP	Devils Point	1.81	161	P	Pn	10 07 37.6	+0.1
RTV	Rentapao	1.96	155	P	Pn	10 07 40.0	+0.4
MARNC	Mare, Loyalty	5.46	175	P	Pn	10 08 27.9	+0.1
YATNC	Mamie plateau,	6.05	186	P	Pn	10 08 35.1	-0.8
DZM	Mont Dzumac	6.12	190	P	Pn	10 08 35.9	-1.0
NOUC	Port Laguerre	6.17	191	P	Pn	10 08 37.2	-0.4
OUENC	Ouen Island, N	6.41	186	P	Pn	10 08 41.0	+0.2

*IDC **20** 10:24:43.0±1.0, 16.°13N×97.°28W, h0^{km}, mb3.8/7, mbtmp3.9/9, ML3.4/2, MS3.4/38, Error ellipse: s-maj=30.8km s-min=19.0km az=71.0*

*NEIC **20** 10:24:48.3±2.5, 16.°17N±0.°06×97.°22W±0.°04, h35^{km}±2^{km}, mb4.2/105, Md4.6/106(MEX), Error ellipse: s-maj=10.9km s-min=6.2km az=194.0*

*MEX **20** 10:24:48.6±3.2, 16.°14N×97.°24W, h30^{km}±23^{km}, MD4.6*

ISC 20 10:24:46.5±0.8**, 16.°21N**±0.°03×**97.°23W**±0.°02**, h25^{km}**±7^{km}**, n234,** σ**1^{s}72**/256**, mb4.3**/31**, MS3.3**/35**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.22	160	*e*P	Pb	10 24 52.9	+0.5
PEIG				*e*S	Sb	10 24 57.4	+0.9
YOIG	Yosondua	0.71	335	*e*P	Pn	10 25 00.9	-0.4
YOIG				*e*S	Sn	10 25 10.6	-1.0
PNIG	Pinotepa	0.88	282		Pb	10 25 02.4	-0.8
PNIG					Sb	10 25 13.4	-1.2
PNIG	Pinotepa	0.88	282	*e*P	Pb	10 25 02.4	-0.8
PNIG				*e*S	Sb	10 25 13.4	-1.2
PANG	Puerto Angel	0.90	127		Pb	10 25 02.0	-1.5
PANG					Sb	10 25 12.5	-2.6
PANG	Puerto Angel	0.90	127	*e*P	Pb	10 25 02.0	-1.5
PANG				*i* S	Sb	10 25 12.5	-2.6
OXBJ	Oaxaca	0.98	29		Pn	10 25 05.0	+0.1
OXBJ					Sn	10 25 18.2	+0.1
OXBJ	Oaxaca	0.98	29	*e*P	Pn	10 25 05.0	+0.1
OXBJ				*e*S	Sn	10 25 18.2	+0.1
VHO	Vista Hermosa	0.98	29	*e*P	Pn	10 25 05.0	+0.2
VHO				*e*S	Sn	10 25 18.1	0.0
OXLC	Oaxaca	0.99	30	*e*P	Pn	10 25 05.2	+0.2
OXLC				*e*S	Sn	10 25 18.1	-0.2
TXIG	Tlaxiaco	1.16	334	*e*P	Pb	10 25 07.9	-0.2
TXIG				*i* S	Sn	10 25 23.2	+0.5
MGIG	Malinaltepec	1.69	307	*e*P	Pn	10 25 15.2	+0.6
MGIG				*e*S	Sb	10 25 37.9	-0.1
HLIG	Huajuapan de L	1.70	341	*e*P	Pb	10 25 15.9	-1.3
HLIG				*e*S	Sb	10 25 37.2	-1.1
TLIG	Tlapa	1.86	317	Pn	Pn	10 25 18.0	+1.1
TLIG	Tlapa	1.86	317		Sn	10 25 40.6	+0.9
TLIG	Tlapa	1.86	317	*e*P	Pn	10 25 17.9	+1.1
TLIG				*e*S	Sn	10 25 40.6	+0.9
TOIG	Toxpalan	1.88	5	*e*P	Pb	10 25 19.9	-0.4
TOIG				*e*S	Sb	10 25 42.3	-1.1
FTIG	Fresnillo de T	1.90	333	*e*P	Pb	10 25 19.3	-1.2
FTIG				*i* S	Sn	10 25 41.4	+0.8
CRIG	Cruz Grande	1.90	286		Pn	10 25 16.8	-0.5
CRIG					Sn	10 25 40.2	-0.3
CRIG	Cruz Grande	1.90	286	*e*P	Pn	10 25 16.8	-0.5
CRIG				*i* S	Sn	10 25 40.2	-0.3
NEUV	Arroyo Zacate	2.02	42	*e*P	Pn	10 25 20.3	+1.2
NEUV				*i* S	Sn	10 25 42.8	-0.7
HMTT	Tlapaneco	2.03	321		Pb	10 25 21.0	-1.7
HMTT					Sb	10 25 46.4	-1.3
HMTT	Tlapaneco	2.03	321	*e*P	Pb	10 25 21.0	-1.7
HMTT				*i* S	Sb	10 25 46.4	-1.3
CMIG	Matias Romero	2.41	68	Pn	Pn	10 25 24.1	-0.2
	31nm,0.3s,baz=255,slow=11,SNR=415						
CMIG				Sn	Sn	10 25 53.3	+0.2
	202nm,0.3s,baz=333,slow=19,SNR=10						
CMIG				LR	LR	10 26 42.7	
	comp=Z,726nm,21.1s,baz=244,slow=48						
	111nm,0.4s						
CMIG	Matias Romero	2.41	68	*e*P	Pn	10 25 24.5	+0.1
CMIG				*i* S	Sn	10 25 54.2	+1.1
DAIG	Los Arroyos	2.46	289		Pn	10 25 24.9	-0.2
DAIG	Los Arroyos	2.46	289	*e*P	Pn	10 25 24.9	-0.2
DAIG				*e*S	Sn	10 25 51.5	-2.9
ACP2	Acapulco	2.64	285	*e*P	Pb	10 25 34.9	+1.9
ACP2				*i* S	Sn	10 25 56.1	-2.6
OZST	Orizaba	2.64	3	*e*P	Pb	10 25 31.7	-1.5
OZST				*i* S	Sb	10 26 01.6	-3.6
MEIG	Mezcala	2.86	307		Pb	10 25 35.2	-1.6
MEIG					Sb	10 26 09.2	-2.2
MEIG	Mezcala	2.86	307	*e*P	Pb	10 25 35.2	-1.6
MEIG				*i* S	Sb	10 26 09.2	-2.2
PHPU	Puebla	2.96	342		Pn	10 25 32.9	+0.8
PHPU					Sn	10 26 08.1	+1.0
PHPU	Puebla	2.96	342	*e*P	Pn	10 25 32.9	+0.8
PHPU				*i* S	Sn	10 26 08.1	+1.0
CAIG	El Cayaco	3.03	286		Pn	10 25 31.4	-1.5
CAIG	El Cayaco	3.03	286	*e*P	Pn	10 25 31.4	-1.5
CAIG				*i* S	Sn	10 26 04.6	-3.8
PLIG	Platanillo	3.07	315		Pn	10 25 35.7	+2.1
PLIG					Sn	10 26 08.3	-1.3
PLIG	Platanillo	3.07	315	*e*P	Pn	10 25 35.7	+2.1
PLIG				*i* S	Sn	10 26 08.3	-1.3
PPM	Popocatepetl	3.14	335	*e*P	Pn	10 25 37.0	+2.2
UXUV	UXUV	3.15	69	*e*P	Pn	10 25 34.5	0.0
UXUV				*i* S	Sn	10 26 10.6	-0.8
YAIG	Yautepec	3.17	327		Pn	10 25 36.5	+1.6
YAIG					Sn	10 26 12.3	+0.2
YAIG	Yautepec	3.17	327	*e*P	Pn	10 25 36.5	+1.6
YAIG				*e*S	Sn	10 26 12.3	+0.2
AMVM	AMECAMECA	3.27	333		Pn	10 25 36.3	-0.1
AMVM					Sn	10 26 14.1	-0.6
AMVM	AMECAMECA	3.27	333	*e*P	Pn	10 25 36.3	-0.1
AMVM				*i* S	Sn	10 26 14.1	-0.6
MAVM	Malinalco, Edo	3.48	322		Pn	10 25 42.2	+2.9
MAVM					Sn	10 26 20.4	+0.4
MAVM	Malinalco, Edo	3.48	322	*i* P	Pn	10 25 42.2	+2.9
MAVM				*i* S	Sn	10 26 20.4	+0.4
UNM	Universidad Na	3.62	329	Pn	Pn	10 25 42.6	+1.4
UNM	Universidad Na	3.62	329	*e*P	Pn	10 25 38.8	-2.5
UNM				*e*S	Sn	10 26 25.9	+2.6
ARIG	Puente Sto Nin	3.62	305		Pb	10 25 45.4	-4.5
ARIG					Sn	10 26 26.2	+3.0
ARIG	Puente Sto Nin	3.62	305	*e*P	Pb	10 25 45.4	-4.5
ARIG				*i* S	Sn	10 26 26.2	+3.0
AOVM	Tlapan	3.64	327	*e*P	Pn	10 25 44.9	+3.2
AOVM				*i* S	Sn	10 26 28.4	+4.3
MCRU	Las Cruces	3.65	328	*e*P	Pn	10 25 45.2	+3.5
MCRU				*i* S	Sb	10 26 30.1	-4.4
GMVM	Gustavo A Made	3.73	331	*e*P	Pb	10 25 48.9	-2.9
GMVM				*i* S	Sn	10 26 30.1	+4.1
PTVM	Pico Tres Padr	3.81	332	*e*P	Pb	10 25 51.7	-1.6
PTVM				*i* S	Sn	10 26 27.9	-0.2
TOVM	TOLUCA	3.85	323		Pn	10 25 47.9	+3.4
TOVM					Sn	10 26 28.6	-0.5
TOVM	TOLUCA	3.85	323	*e*P	Pn	10 25 47.9	+3.4
TOVM				*e*S	Sn	10 26 28.6	-0.5
AZVM	Cuida Lopez Ma	3.89	330		Pb	10 25 49.7	-4.9
AZVM					Sn	10 26 33.8	+3.8
AZVM	Cuida Lopez Ma	3.89	330	*e*P	Pb	10 25 49.7	-4.9
AZVM				*e*S	Sn	10 26 33.8	+3.8
PCIG		3.89	97		Pn	10 25 45.9	+1.2
PCIG		3.89	97	*e*P	Pn	10 25 43.9	-0.8
PCIG				*e*P	Pb	10 25 45.9	-8.4
PCIG				*i* S	Sn	10 26 19.7	-10
PCIG				*i* S	Sb	10 26 25.5	-16
CXUV	Coxquihui	3.96	355	*e*P	Pb	10 25 52.4	-3.1
TGIG		3.98	81		Pn	10 25 46.8	+0.8
TGIG					Sn	10 26 32.3	+0.4
TGIG		3.98	81	*e*P	Pn	10 25 46.8	+0.8
TGIG				*i* S	Sn	10 26 32.3	+0.4
ZIIG	Zihuatanejo	4.29	290		Pn	10 25 51.4	+1.2
ZIIG	Zihuatanejo	4.29	290	*i* P	Pn	10 25 51.4	+1.2
ZIIG				*e*S	Sn	10 26 35.8	-3.7
DEIG	Demacu	4.42	337	*e*P	Pb	10 26 02.4	-1.2
DEIG				*i* S	Sb	10 26 51.3	-5.2
ACIG	Acambay	4.52	326	*e*P	Pn	10 25 53.3	-0.3
ACIG				*i* S	Sn	10 26 49.6	+4.2
CCIG	Comitan	4.89	88		Pn	10 26 00.7	+2.0
CCIG	Comitan	4.89	88	*e*P	Pn	10 26 00.4	+1.8
CCIG				*i* S	Sn	10 26 51.1	-3.4
PATR	El Naranjo	4.93	102	*e*P	Pn	10 26 00.6	+1.4
PATR				*i* S	Sn	10 26 53.7	-2.0
PAVE	Pavencul	4.97	101	*e*P	Pn	10 26 00.8	+1.1
PAVE				*i* S	Sn	10 26 58.9	+2.3
CHUJ	Union Juarez	5.05	102	*e*P	Pn	10 26 01.3	+0.3
CHUJ				*i* S	Sn	10 26 57.0	-1.7
MOIG	Morelia	5.11	313	Pn	Pn	10 26 04.3	+2.5
MOIG	Morelia	5.11	313	*e*P	Pn	10 26 04.6	+2.9
MOIG				*i* S	Sn	10 26 57.1	-3.0
JRQG	Juriquilla Cam	5.42	326		Pn	10 26 09.4	+3.5
JRQG					Sn	10 27 08.6	+1.0
JRQG	Juriquilla Cam	5.42	326	*i* P	Pn	10 26 09.4	+3.5
JRQG				*i* S	Sn	10 27 08.6	+1.0
HUEH	Huehuetenango	5.58	98	Pn	Pn	10 26 09.7	+1.5
RTAL	Retalhuleu	5.59	107	Pn	Pn	10 26 07.5	-0.7
MMIG	Aquila	6.20	290		Pn	10 26 16.3	-0.2
MMIG	Aquila	6.20	290	*e*P	Pn	10 26 16.3	-0.2
MMIG				*i* S	Sn	10 27 34.0	+7.3
SCIG	Sabancuy	6.38	64	*e*P	Pn	10 26 11.7	-7.3
SCIG				*i* S	Sn	10 27 24.0	-7.1
PETF	Flores	7.09	83		Pn	10 26 29.9	+1.2
MTO3	Montecristo	7.80	102	Pn	Pn	10 26 39.7	+1.0
SNET	Serv Nac Est T	8.12	107	Pn	Pn	10 26 43.9	+0.9
ZAIG	Zacatecas	8.24	323	Pn	Pn	10 26 45.4	+0.6
833A	Chaparral WMA,	12.22	351	Pn	Pn	10 27 40.0	+0.9
ORTG	Ortega, Santa	12.84	115		Pn	10 27 48.3	+0.7
DUNO	Dulce Nombre,	12.95	117	Pn	Pn	10 27 49.9	+0.9
JTS	Las Juntas de	13.31	115	Pn	Pn	10 27 53.9	-0.1
TX31	Lajitas Ar. Si	14.34	337		Pn	10 28 09.1	+0.9
TX32	Lajitas Array	14.34	337		Pn	10 28 08.0	-0.2
TXAR	Lajitas Array	14.34	337	Pn	Pn	10 28 11.0	+2.8
	baz=153,slow=14,SNR=12						
TXAR				LR	LR	10 34 05.3	
	comp=Z,406nm,19.3s,baz=140,slow=39						
	1.2nm,0.8s						
TXAR	Lajitas Array	14.34	337	Pn	Pn	10 28 08.2	0.0
JCT	Junction City	14.40	351		Pn	10 28 08.6	-0.2
CVTR	Volcan Turrial	14.48	113	Pn	Pn	10 28 09.3	-1.1
RIMA	Rio Macho	14.51	115		Pn	10 28 11.3	+0.7
435B	Jarrell	14.51	359	Pn	Pn	10 28 12.9	+2.6
LPIG	La Paz	14.57	305	LR	LR	10 33 28.4	
	comp=Z,139nm,18.3s,baz=96,slow=36						
PEZE	Perez Zeledon,	14.85	116	Pn	Pn	10 28 15.2	+0.2
SOR	Soroa	14.91	62	Pn	Pn	10 28 14.1	-1.8
DRK0	Durika	15.28	115	Pn	Pn	10 28 21.7	+0.8
WHTX	Lake Whitney,	15.71	359	Pn	Pn	10 28 26.2	-0.1
342A	Flagon Creek P	15.74	16	Pn	Pn	10 28 27.0	+0.3
342A				IAmb	IAmb	10 28 50.3	
	comp=Z,21nm,0.9s						
344A	Westbrook Farm	16.29	20	Pn	Pn	10 28 34.8	+1.2
344A				IAmb	IAmb	10 28 46.1	
	comp=Z,41nm,1.4s						
ABTX	Abilene, Hawle	16.49	353		Pn	10 28 36.6	+0.4
ABTX				IAmb	IAmb	10 28 55.0	
	comp=Z,17nm,0.9s						
346A	Big Creek Wild	16.68	24	Pn	Pn	10 28 38.8	+0.2
CBCY	The Bluff, Cay	16.98	75	Pn	Pn	10 28 42.4	-0.1
Z35A	Perchaven, San	17.05	360	Pn	Pn	10 28 43.3	0.0
Z35A				IAmb	IAmb	10 29 01.9	
	comp=Z,15nm,0.8s						
Z38A	Mt. Pleasant	17.10	6	Pn	P	10 28 44.5	-0.9
MNTX	Cornudas Mount	17.11	336	Pn	P	10 28 44.8	-0.8
143A	Socs Landing,	17.25	17	Pn	Pn	10 28 45.9	+0.2
143A				IAmb	IAmb	10 29 00.6	
	comp=Z,18nm,0.8s						
WLAR	White Oak Lake	17.80	11		P	10 28 52.7	-0.4
WLAR				IAmb	IAmb	10 29 12.0	
	comp=Z,20nm,1.0s						
X34A	Smith Ranch, M	18.32	358	P	Pn	10 28 58.3	-0.7
X34A				IAmb	IAmb	10 29 27.4	
	comp=Z,13nm,0.6s						
MSTX	Muleshoe	18.38	345	P	Pn	10 29 00.8	+1.0
MSTX				IAmb	IAmb	10 29 01.5	
	comp=Z,19nm,1.1s						
X37A	Clayton	18.38	5	P	Pn	10 29 00.3	+0.6
WMOK	Wichita Mounta	18.50	356	P	P	10 29 00.2	-0.8
MIAR	Mount Ida	18.55	10	P	Pn	10 29 02.2	+0.4
MIAR				IAmb	IAmb	10 29 11.8	
	comp=Z,15nm,0.8s						
X40A	Basin Creek Fa	18.62	11	P	Pn	10 29 02.8	+0.2
319A	Douglas	18.67	326	P	P	10 29 02.8	-0.2
121A	Cookes Peak, D	18.86	331	P	P	10 29 05.3	+0.2
UALR	University of	19.00	12		Pn	10 29 07.7	+0.5
UALR				IAmb	IAmb	10 29 16.0	
	comp=Z,13nm,0.9s						
AMTX	Amarillo	19.02	349	P	Pn	10 29 07.5	0.0
LRAL	Lakeview Retre	19.14	27	P	P	10 29 07.2	-0.7
W39A	Magazine	19.16	9	P	P	10 29 08.0	-0.1
W39A				IAmb	IAmb	10 29 28.2	
	comp=Z,9.1nm,0.7s						
W41B	Gary Mavity, V	19.41	12	P	Pn	10 29 12.0	0.0
TUL1	Leonard	19.66	3	P	Pn	10 29 14.3	-0.8
TUL1				IAmb	IAmb	10 29 32.4	
	comp=Z,15nm,0.8s						
BNM	Barren Site	19.77	336	P	Pn	10 29 16.2	-0.4
152A	Waverly Hall	19.92	32	P	P	10 29 16.9	+0.3
152A				IAmb	IAmb	10 29 31.8	
	comp=Z,10.0nm,0.8s						
Y49A	Blount Mountai	20.09	27	P	P	10 29 18.2	-0.1
Y49A				IAmb	IAmb	10 29 26.9	
	comp=Z,14nm,1.1s						
FCAR	Ozark Folk Cen	20.12	12	P	P	10 29 18.9	+0.3
FCAR				IAmb	IAmb	10 29 28.1	
	comp=Z,7.2nm,0.7s						
HBAR	Harrisburg	20.14	16	P	P	10 29 19.1	+0.2
U32A	Winter Ranch,	20.15	356	P	P	10 29 19.8	+0.8
U32A				IAmb	IAmb	10 29 46.1	
	comp=Z,15nm,1.1s						
W45A	Hickory Valley	20.20	19	P	P	10 29 19.1	-0.4
W45A				IAmb	IAmb	10 29 44.8	
	comp=Z,15nm,0.8s						
HHAR	Hobbs	20.20	8	P	Pn	10 29 21.3	-0.3
TUC	Tucson	20.21	325	P	Pn	10 29 22.0	+0.3
TUC				IAmb	IAmb	10 29 36.0	
	comp=Z,10nm,0.9s						
X48A	Hartselle	20.34	25	P	P	10 29 21.2	+0.2
X48A				IAmb	IAmb	10 29 29.4	
	comp=Z,7.4nm,0.7s						
ANMO	Albuquerque	20.41	338	P	Pn	10 29 24.1	-0.1
	comp=Z,3.1nm,0.9s,baz=148,slow=14,SNR=13						
ANMO				LR	LR	10 38 02.6	
	comp=Z,193nm,19.2s,baz=158,slow=39						
	comp=Z,3.1nm,0.9s						
ANMO	Albuquerque	20.41	338	P	Pn	10 29 24.2	+0.1
PLAL	Pickwick Lake	20.41	22	P	P	10 29 21.8	0.0
U40A	Yellville	20.44	10	P	Pn	10 29 23.2	-1.1
U40A				IAmb	IAmb	10 29 38.1	
	comp=Z,9.0nm,0.8s						
LCAR	Lake Charles	20.51	14	P	P	10 29 22.9	+0.1
T35A	Sooner Cattle	20.64	2	P	Pn	10 29 25.3	-1.3
FPAL	Fort Paine	21.02	28	P	P	10 29 27.0	-1.4
GOGA	Godfrey	21.16	33	P	P	10 29 29.5	-0.3
GOGA				IAmb	IAmb	10 29 50.6	
	comp=Z,15nm,1.2s						
Y52A	Lilburn	21.20	32	P	P	10 29 29.6	-0.8

Y52A				IAmb	IAmb	10 29 44.6	
	comp=Z,10nm,0.9s						
MGMO	**Mountain Grove**	**21.32**	**11**	P	**P**	**10 29 33.8**	**+2.2**
PBMO	**Poplar Bluff**	**21.36**	**15**	P	**P**	**10 29 32.1**	**+0.1**
PBMO				IAmb	IAmb	10 29 49.7	
	comp=Z,12nm,0.9s						
T42A	**Van Buren**	**21.44**	**14**	P	**P**	**10 29 32.4**	**-0.4**
T42A				IAmb	IAmb	10 29 42.3	
	comp=Z,8.0nm,0.8s						
SWET	**Sewanee**	**21.46**	**26**	P	**P**	**10 29 32.2**	**-0.9**
X18A	**Snowflake**	**21.52**	**330**	P	**P**	**10 29 34.0**	**0.0**
X18A				IAmb	IAmb	10 29 50.1	
	comp=Z,13nm,1.1s						
WVT	**Waverly**	**21.53**	**21**	P	**P**	**10 29 34.0**	**+0.2**
WVT				IAmb	IAmb	10 29 36.6	
	comp=Z,13nm,1.1s						
V48A	**Smith Brothers**	**21.55**	**24**	P	**P**	**10 29 33.1**	**-1.0**
V48A				IAmb	IAmb	10 29 36.8	
	comp=Z,8.3nm,0.7s						
S39A	**Bolivar**	**21.67**	**8**	P	**P**	**10 29 36.0**	**+0.6**
S39A				IAmb	IAmb	10 29 45.7	
	comp=Z,10.0nm,1.0s						
W50A	**Signal Mountai**	**21.71**	**27**	P	**P**	**10 29 34.9**	**-1.0**
W50A				IAmb	IAmb	10 29 53.5	
	comp=Z,10nm,0.8s						
T25A	**Trinidad**	**21.80**	**344**	P	**P**	**10 29 36.8**	**-0.2**
T25A				IAmb	IAmb	10 29 44.5	
	comp=Z,16nm,1.2s						
R32A	**Long Quarter,**	**22.17**	**357**	P	**P**	**10 29 43.1**	**+2.4**
R32A				IAmb	IAmb	10 29 55.2	
	comp=Z,8.5nm,0.8s						
CPCT	**Cooper Cave**	**22.27**	**28**	P	**P**	**10 29 41.2**	**-0.6**
CPCT				IAmb	IAmb	10 30 03.9	
	comp=Z,14nm,1.3s						
CCM	**Cathedral Cave**	**22.39**	**12**	P	**P**	**10 29 44.0**	**+0.9**
CCM				IAmb	IAmb	10 30 02.8	
	comp=Z,6.9nm,0.8s						
R40A	**Maddies Statio**	**22.43**	**10**	P	**P**	**10 29 44.8**	**+1.4**
R40A				IAmb	IAmb	10 30 04.4	
	comp=Z,10nm,0.9s						
T47A	**Sharon Grove**	**22.56**	**22**	P	**P**	**10 29 43.9**	**-1.0**
T47A				IAmb	IAmb	10 30 11.7	
	comp=Z,9.2nm,0.8s						
CBKS	**Cedar Bluff**	**22.63**	**355**	P	**P**	**10 29 46.4**	**+0.7**
CBKS				IAmb	IAmb	10 30 05.4	
	comp=Z,11nm,0.8s						
U49A	**Red Boiling Sp**	**22.64**	**25**	P	**P**	**10 29 44.7**	**-1.0**
U49A				IAmb	IAmb	10 29 50.9	
	comp=Z,8.8nm,0.7s						
V51A	**Loudon**	**22.64**	**28**	P	**P**	**10 29 44.3**	**-1.5**
V51A				IAmb	IAmb	10 30 11.1	
	comp=Z,8.4nm,1.0s						
Y14A	**Wickenburg**	**22.66**	**324**	P	**P**	**10 29 47.2**	**+1.1**
SDCO	**Great Sand Dun**	**22.66**	**343**	P	**P**	**10 29 47.4**	**+1.1**
TKL	**Tuckaleechee C**	**22.79**	**29**	P	**P**	**10 29 50.2**	**+2.8**
	comp=Z,2.8nm,0.6s,baz=192,slow=9.0,SNR=4.5						
TKL				LR	LR	10 41 11.6	
	comp=Z,29nm,20.2s,baz=182,slow=43						
	comp=Z,2.8nm,0.6s						
KSU1	**Kansas State U**	**22.81**	**1**	P	**P**	**10 29 48.7**	**+1.2**
WUAZ	**Wupatki**	**23.01**	**329**	P	**P**	**10 29 52.1**	**+2.3**
WUAZ				IAmb	IAmb	10 30 03.0	
	comp=Z,12nm,1.1s						
S22A	**4UR Ranch, Cre**	**23.07**	**340**	P	**P**	**10 29 51.2**	**+0.7**
MVCO	**Mesa Verde**	**23.18**	**337**	P	**P**	**10 29 52.3**	**+0.7**
KSCO	**Kaye Shedlock'**	**23.20**	**349**	P	**P**	**10 29 49.6**	**-2.1**
KSCO				IAmb	IAmb	10 30 15.9	
	comp=Z,6.0nm,0.8s						
T50A	**Nancy**	**23.46**	**26**	P	**P**	**10 29 53.1**	**-1.0**
ZARC	**Zaragoza, Cauc**	**23.52**	**109**	P	**P**	**10 29 56.3**	**+1.4**
P38A	**Dawn**	**23.55**	**7**	P	**P**	**10 29 55.3**	**+0.3**
P38A				IAmb	IAmb	10 30 24.6	
	comp=Z,5.8nm,0.8s						
Q44A	**Meyer Farm, Va**	**23.73**	**16**	P	**P**	**10 29 58.4**	**+1.7**
PV13	**Radium Mtn., P**	**24.13**	**337**	P	**P**	**10 30 00.9**	**+0.2**
OTAV	**Otavalo**	**24.39**	**129**	P	**P**	**10 30 02.0**	**-1.6**
U54A	**Nelsons Funny**	**24.43**	**31**	P	**P**	**10 30 03.5**	**+0.2**
PV23	**Carpenter Ridg**	**24.46**	**337**	P	**P**	**10 30 04.8**	**+0.9**
S51A	**Beattyville**	**24.51**	**27**	P	**P**	**10 30 04.0**	**0.0**
S51A				IAmb	IAmb	10 30 31.3	
	comp=Z,8.2nm,0.9s						
PFO	**Pinyon Flats O**	**24.51**	**319**	LR	LR	10 39 43.7	
	comp=Z,73nm,21.4s,baz=199,slow=37						
N35A	**Tabor**	**24.60**	**3**	P	**P**	**10 30 04.9**	**+0.2**
ISCO	**Idaho Springs**	**24.62**	**344**	P	**P**	**10 30 06.6**	**+1.3**
N38A	**Joes South For**	**24.74**	**7**	P	**P**	**10 30 06.9**	**+0.9**
P49A	**Miami Univ. Ec**	**25.68**	**23**	P	**P**	**10 30 13.8**	**-0.8**
O20A	**White River Ci**	**25.70**	**340**	P	**P**	**10 30 14.6**	**-0.3**
O20A				IAmb	IAmb	10 30 36.2	
	comp=Z,8.9nm,0.9s						
P51A	**Williamsport**	**26.28**	**25**	P	**P**	**10 30 19.7**	**-0.3**
O49A	**Covington**	**26.39**	**23**	P	**P**	**10 30 20.4**	**-0.6**
N47A	**Urbana**	**26.54**	**20**	P	**P**	**10 30 22.2**	**-0.1**
R55A	**Marlinton**	**26.64**	**31**	P	**P**	**10 30 23.5**	**+0.2**
R55A				IAmb	IAmb	10 30 39.1	
	comp=Z,7.1nm,0.8s						
SDV	**Santo Domingo**	**26.94**	**102**	LR	LR	10 42 37.5	
	comp=Z,73nm,18.1s,baz=244,slow=40						
ECSD	**EROS Data Cent**	**27.44**	**1**	P	**P**	**10 30 32.8**	**+2.4**
PDAR	**Pinedale Array**	**28.50**	**341**	LR	LR	10 43 12.3	
	comp=Z,83nm,19.5s,baz=154,slow=39						
NVAR	**Mina Array Bea**	**28.86**	**324**	LR	LR	10 43 44.4	
	comp=Z,172nm,18.9s,baz=260,slow=40						
ELK	**Elko**	**29.01**	**331**	LR	LR	10 44 58.1	
	comp=Z,40nm,19.2s,baz=136,slow=42						
ATAH	**Atahualpa**	**29.76**	**140**	LR	LR	10 39 28.9	
	comp=Z,19nm,18.4s,baz=356,slow=30						
M55A	**Ridgway**	**29.79**	**29**	P	**P**	**10 30 52.1**	**+0.8**
DLMT	**Dillon**	**31.80**	**339**	P	**P**	**10 31 11.0**	**+1.8**
ULM	**Lac du Bonnet**	**33.97**	**2**	LR	LR	10 46 40.4	
	comp=Z,64nm,18.6s,baz=112,slow=39						
NNA	**Nana**	**34.52**	**143**	LR	LR	10 42 43.9	
	comp=Z,60nm,19.9s,baz=310,slow=31						
G62A	**West of Eustis**	**36.59**	**32**	P	**P**	**10 31 50.7**	**+0.2**
LPAZ	**La Paz**	**43.20**	**137**	P	**P**	**10 32 46.8**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=2.4,slow=5.5,SNR=3.6						
LPAZ				LR	LR	10 49 51.3	
	comp=Z,30nm,18.7s,baz=241,slow=35						
	comp=Z,1.0nm,0.9s						
BBB	**Bella Bella**	**43.43**	**333**	LR	LR	10 53 27.8	
	comp=Z,64nm,18.6s,baz=124,slow=40						
MDP	**Montagnes des**	**45.08**	**99**	LR	LR	10 54 01.3	
	comp=Z,21nm,19.0s,baz=250,slow=39						
SCHQ	**Schefferville**	**45.11**	**24**	P	**P**	**10 33 00.3**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=237,slow=14,SNR=1.6						
SCHQ				LR	LR	10 56 18.8	
	comp=Z,34nm,18.6s,baz=200,slow=42						
	comp=Z,0.8nm,0.5s						
SCHQ	**Schefferville**	**45.11**	**24**	IAmb	IAmb	10 33 11.3	
	comp=Z,6.1nm,1.1s						
LVC	**Limon Verde**	**47.51**	**144**	LR	LR	10 51 57.9	
	comp=Z,32nm,18.5s,baz=280,slow=34						
YKA	**Yellowknife Ar**	**47.82**	**349**	P	**P**	**10 33 21.1**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=155,slow=7.2,SNR=14						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**47.82**	**349**	P	**P**	**10 33 22.0**	**+0.2**
DLBC	**Dease Lake**	**48.65**	**338**	LR	LR	10 55 45.7	
	comp=Z,74nm,20.6s,baz=171,slow=38						
FRB	**Frobisher Bay**	**51.44**	**16**	LR	LR	10 57 26.2	
	comp=Z,32nm,21.7s,baz=212,slow=38						
INK	**Inuvik**	**56.95**	**345**	LR	LR	11 01 30.9	
	comp=Z,67nm,18.7s,baz=156,slow=39						
KDAK	**Kodiak Island**	**58.21**	**329**	LR	LR	10 59 38.4	
	comp=Z,37nm,19.1s,baz=143,slow=36						
RES	**Resolute Bay**	**58.50**	**1**	LR	LR	11 00 38.0	
	comp=Z,36nm,19.3s,baz=261,slow=37						
ILAR	**Eielson Array**	**58.86**	**338**	P	**P**	**10 34 44.1**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=119,slow=4.4,SNR=6.6						
ILAR				LR	LR	11 02 02.3	
	comp=Z,69nm,18.1s,baz=86,slow=38						
	comp=Z,0.7nm,0.9s						
SFJD	**Kangerlussuaq**	**59.03**	**19**	LR	LR	11 03 04.7	
	comp=Z,28nm,18.4s,baz=229,slow=39						
PLCA	**Paso Flores**	**61.83**	**157**	P	**P**	**10 35 03.9**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=342,slow=9.5,SNR=7.1						
	comp=Z,3.6nm,0.9s						
PLCA	**Paso Flores**	**61.83**	**157**	IAmb	IAmb	10 35 04.7	
	comp=Z,3.6nm,0.8s						
RCBR	**Riachuelo**	**64.49**	**105**	LR	LR	11 04 47.7	
	comp=Z,36nm,18.2s,baz=128,slow=37						
BORG	**Borgarnes**	**69.45**	**26**	LR	LR	11 07 59.0	
	comp=Z,14nm,18.3s,baz=305,slow=37						
JMIC	**Jan Mayen**	**74.39**	**20**	LR	LR	11 10 33.4	
	comp=Z,19nm,21.0s,baz=296,slow=37						
SPITS	**Spitsbergen Ar**	**78.92**	**11**	LR	LR	11 14 00.3	
	comp=Z,25nm,19.5s,baz=3.5,slow=37						
ESDC	**Sonseca Array**	**82.29**	**51**	LR	LR	11 11 49.9	
	comp=Z,19nm,20.2s,baz=256,slow=34						
MDT	**Midelt**	**83.53**	**58**	LR	LR	11 08 41.5	
	comp=Z,28nm,19.0s,baz=330,slow=32						
NB2	**NORSAR Subarra**	**84.58**	**28**	P	P	10 37 28.0	+10
	comp=Z,3.5nm,1.0s,baz=298,slow=5.3						
NOA	**NORSAR Array B**	**84.58**	**28**	LR	LR	11 16 32.9	
	comp=Z,5.1nm,20.1s,baz=270,slow=37						
HFS	**Hagfors**	**86.07**	**28**	LR	LR	11 17 03.4	
	comp=Z,14nm,19.1s,baz=2.0,slow=36						
DAVOX	**Davos/Dischmat**	**89.58**	**41**	LR	LR	11 13 43.0	
	comp=Z,16nm,21.5s,baz=261,slow=33						
FINES	**FINESS Array B**	**90.58**	**24**	LR	LR	11 21 45.6	
	comp=Z,10nm,18.1s,baz=3.5,slow=38						
GERES	**GERESS Array B**	**91.06**	**38**	LR	LR	11 17 30.5	
	comp=Z,12nm,21.3s,baz=216,slow=35						
VRAC	**Vranov**	**92.53**	**37**	LR	LR	11 18 30.7	
	comp=Z,12nm,21.8s,baz=346,slow=35						
AKASG	**Malin Array Be**	**98.56**	**31**	LR	LR	11 22 30.2	
	comp=Z,10nm,21.1s,baz=50,slow=35						
WRA	**Warramunga Arr**	**130.99**	**257**	PKP	**PKPdf**	**10 43 56.5**	**-0.4**
	comp=Z,1.1nm,1.0s,baz=79,slow=2.0,SNR=6.6						
ASAR	**Alice Springs**	**131.57**	**253**	PKP	**PKPdf**	**10 43 57.9**	**0.0**
	comp=Z,0.5nm,0.7s,baz=66,slow=1.9,SNR=8.0						
PZH	**PanZhiHua**	**133.71**	**336**	PKP	**PKiKP**	**10 44 04.0**	**+0.7**

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*IDC **20** 10:35:11.5±1.5, 7°.03N×73°.20W, h157^{km}±26^{km}, mb2.8/1, mbtmp3.4/3, MS2.7/1, Error ellipse: s-maj=70.1km s-min=15.5km az=131.0*

*RSNC **20** 10:35:12.7±0.9, 6°.80N×73°.14W, h148^{km}±3^{km}, ML2.8*

ISC 20 10:35:11.3±1.0**, 6°.81N**±0°.03×**73°.11W**±0°.04**, h155**^{km}±6^{km}**, n31, σ1ˢ38**/58**, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**199**	⇓*i*P	**Pn**	**10 35 32.5**	**-0.1**
BARC				*e*S	**Sn**	**10 35 47.6**	**-1.1**
BARC				*i*		10 35 50.1	
	comp=Z,210nm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**38**	*e*P	**Pn**	**10 35 35.4**	**+0.7**
PAMC				*e*S	**Sn**	**10 35 52.4**	**-0.1**
PAMC				*i*		10 35 54.7	
	comp=Z,89nm,0.4s						
BRRC	**Barranca, Sant**	**0.67**	**296**	⇑*i*P	**Pn**	**10 35 34.3**	**+0.2**
BRRC				*e*S	**Sn**	**10 35 51.3**	**-0.2**
BRRC				*i*		10 35 55.0	
	comp=Z,136nm,0.4s						
RUSC	**La Rusia**	**0.91**	**179**	*e*P	**Pn**	**10 35 36.4**	**0.0**
RUSC				*e*S	**Sn**	**10 35 55.2**	**-0.4**
RUSC				*i*		10 35 56.5	
	comp=Z,64nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**106**	*e*P	**Pn**	**10 35 40.9**	**+1.0**
TAMC				*e*S	**Sn**	**10 36 02.4**	**+0.7**
TAMC				*i*		10 36 04.9	
	comp=Z,41nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	*e*P	**Pn**	**10 35 39.5**	**-0.4**
PTBC				*e*S	**Sn**	**10 36 00.5**	**-1.3**
PTBC				*i*		10 36 06.5	
	comp=Z,78nm,0.4s						
OCAC	**Ocana**	**1.44**	**352**	*e*P	**Pn**	**10 35 40.5**	**-0.3**
OCAC				*e*S	**Sn**	**10 36 03.3**	**-0.1**
OCAC				*i*		10 36 10.9	
	comp=Z,145nm,0.2s						
SPBC	**San Pablo de B**	**1.50**	**220**	*e*P	**Pn**	**10 35 41.4**	**0.0**
SPBC				*e*S	**Sn**	**10 36 03.7**	**-0.7**
SPBC				*i*		10 36 08.0	
	comp=Z,118nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**10 35 45.2**	**0.0**
ZARC				*e*S	**Sn**	**10 36 10.5**	**-0.7**
ZARC				*i*		10 36 15.6	
	comp=Z,82nm,0.3s						
NORC	**Norcasia**	**2.15**	**235**	*e*P	**Pn**	**10 35 48.7**	**+0.2**
NORC				*e*S	**Sn**	**10 36 16.1**	**-1.0**
NORC				*i*		10 36 23.8	
	comp=Z,44nm,0.2s						
CHIC	**Chingaza**	**2.25**	**196**	*e*P	**Pn**	**10 35 50.6**	**+0.4**
CHIC				*e*S	**Sn**	**10 36 19.8**	**-0.2**
CHIC				*i*		10 36 23.5	
	comp=Z,49nm,0.5s						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**10 35 52.4**	**+1.8**
	comp=Z,21nm,0.3s,baz=5.2,slow=11,SNR=18						
ROSC				S	**Sn**	**10 36 19.5**	**-1.5**
	comp=Z,108nm,0.4s,baz=36,slow=22,SNR=5.7						
ROSC	**El Rosal**	**2.30**	**212**	*e*P	**Pn**	**10 35 53.0**	**+2.3**
ROSC				*e*S	**Sn**	**10 36 22.8**	**+1.8**
ROSC				*i*		10 36 27.1	
	comp=Z,130nm,0.4s						
HELC	**Santa Helena**	**2.48**	**256**	*e*P	**Pn**	**10 35 54.0**	**+1.2**
HELC				*e*S	**Sn**	**10 36 24.8**	**0.0**
HELC				*i*		10 36 30.8	
	comp=Z,26nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**10 35 53.0**	**-0.7**
UREC				*e*S	**Sn**	**10 36 23.5**	**-2.9**
UREC				*i*		10 36 36.1	
	comp=Z,52nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**10 35 57.5**	**+1.7**
LL1C				*e*S	**Sn**	**10 36 33.7**	**+3.5**
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇓*i*P	**Pn**	**10 35 55.6**	**-0.4**
PTGC				*e*S	**Sn**	**10 36 29.1**	**-1.5**
PTGC				*i*		10 36 30.9	
	comp=Z,26nm,0.2s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	*e*P	**Pn**	**10 35 56.9**	**-0.9**
LL6C				*e*S	**Sn**	**10 36 32.3**	**-1.5**
LL6C				*i*		10 36 38.4	
	comp=Z,20nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**10 36 00.9**	**+1.4**
CBOC				*e*S	**Sn**	**10 36 35.6**	**-1.2**
CBOC				*i*		10 36 47.2	
	comp=Z,9.9nm,0.2s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**10 36 02.0**	**+0.4**
	comp=Z,16nm,0.3s,baz=243,slow=9.9,SNR=9.2						
SDV				S	**Sn**	**10 36 39.5**	**-1.1**
	comp=Z,8.6nm,0.4s,baz=263,slow=19,SNR=5.1						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**10 36 02.1**	**+0.4**
SDV				*e*S	**Sn**	**10 36 39.8**	**-0.8**
SDV				*i*		10 36 44.5	
	comp=Z,7.6nm,0.7s						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**10 36 02.9**	**+1.1**
ARGC				*e*S	**Sn**	**10 36 41.7**	**+0.7**
ARGC				*i*		10 36 48.0	
	comp=Z,15nm,0.4s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**10 36 04.2**	**+1.9**
ANIL				*e*S	**Sn**	**10 36 41.4**	**-0.3**
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**10 36 06.1**	**+0.2**
PRAC				*e*S	**Sn**	**10 36 48.3**	**-0.1**
PRAC				*i*		10 36 52.6	
	comp=Z,42nm,0.5s						
ORTC	**Ortega, Tolima**	**3.58**	**217**	*e*P	**Pn**	**10 36 06.8**	**+0.4**
ORTC				*e*S	**Sn**	**10 36 49.8**	**+0.7**
ORTC				*i*		10 36 53.7	
	comp=Z,26nm,0.2s						
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	**Pn**	**10 36 08.0**	**+0.3**
PLMC				*e*S	**Sn**	**10 36 50.2**	**-1.3**
PLMC				*i*		10 36 56.0	
	comp=Z,11nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*e*P	**Pn**	**10 36 12.8**	**-1.5**
CRJC				*e*S	**Sn**	**10 37 00.9**	**-2.4**
CRJC				*i*		10 37 07.5	
	comp=Z,21nm,0.3s						
MACC	**Macarena, Meta**	**4.69**	**189**	*e*P	**Pn**	**10 36 19.5**	**-1.3**
MACC				*e*S	**Sn**	**10 37 11.6**	**-3.5**
MACC				*i*		10 37 16.7	
	comp=Z,18nm,0.8s						
SJG	**San Juan**	**13.12**	**30**	LR	LR	10 43 59.3	
	comp=Z,38nm,20.4s,baz=244,slow=41						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**10 45 21.8**	**-1.5**
	comp=Z,0.1nm,0.5s,baz=136,slow=6.4,SNR=5.4						
	comp=Z,0.1nm,0.5s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**10 54 41.6**	**+3.6**
	comp=Z,0.4nm,0.8s,baz=104,slow=5.9,SNR=1.9						

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*IDC **20** 10:40:44.8±2.1, 0°.67N×125°.69E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=194.0km s-min=27.8km az=65.0*

*DJA **20** 10:40:46.6±1.9, 1°N±4°×12°6E±°, h34^{km}±37^{km}, M3.4/9, MLv3.4/9*

ISC 20 10:40:46.6±1.3**, 1°.36N**±0°.07×**126°.09E**±0°.06**, h50**^{km}**, n14, σ0ˢ95**/12**, mb3.2**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**114**	P	**Pn**	**10 41 10.6**	**+0.7**
KMSI	**Cibinong**	**2.25**	**250**	P	**Pn**	**10 41 20.9**	**-0.5**
KMSI				S	**Sn**	**10 41 47.7**	**-0.2**
SGSI	**Sangihe**	**2.38**	**346**	P	**Pn**	**10 41 23.0**	**-0.2**
LBMI	**Labuha**	**2.44**	**145**	P	**Pn**	**10 41 23.8**	**-0.2**
GTOI	**Gorontalo**	**3.16**	**257**	P	**Pn**	**10 41 35.3**	**+1.4**
SANI	**Sanana**	**3.39**	**182**	P	**Pn**	**10 41 37.1**	**+0.1**
LUWI	**Luwuk**	**4.08**	**234**	P	**Pn**	**10 41 46.2**	**-0.4**
MRSI	**Marisa**	**4.24**	**258**	P	Pn	10 42 01.5	+13
APSI	**Ampana**	**4.98**	**243**	P	**Pn**	**10 41 58.9**	**0.0**
BASI	**Baing, Sumba**	**12.74**	**205**	P	**Pn**	**10 43 46.1**	**+0.9**
WRA	**Warramunga Arr**	**22.66**	**159**	P	**P**	**10 45 41.8**	**-2.1**
	0.5nm,0.5s,baz=336,slow=11,SNR=9.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.01**	**163**	P	**P**	**10 46 15.3**	**+0.2**
	0.2nm,0.4s,baz=346,slow=12,SNR=14						
	0.2nm,0.4s						
MNSI	**Mandailing Nat**	**26.51**	**269**	P	P	10 46 11.2	-8.5
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	10 50 49.7	+7.4
	0.3nm,0.6s,baz=121,slow=7.3,SNR=2.8						
	0.3nm,0.6s						

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*SSNC **20** 10:42:25.2±2.8, 19°.89N×74°.43W, h20^{km}±17^{km}, MD3.3, ML3.3, MW3.3*

*OSPL **20** 10:42:25.2±1.5, 19°.85N×74°.51W, h0^{km}±18^{km}, ML2.9*

ISC 20 10:42:23.5±2.1**, 19°.85N**±0°.06×**74°.49W**±0°.03**, h10**^{km}±16^{km}**, n15, σ1ˢ07**/25**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**0.41**	**37**	*e*P	**Pb**	**10 42 31.8**	**-0.9**
MASC				*e*S	**Sb**	**10 42 37.8**	**-1.3**
MASC				IAML		10 42 40.0	
	comp=E,476nm,0.2s						
MASC				IAML		10 42 40.1	
	comp=N,328nm,0.2s						
MASC	**Masc**	**0.41**	**37**	*i* P	**Pb**	**10 42 31.9**	**-0.9**
MASC				*e*S	**Sb**	**10 42 38.0**	**-1.0**
MASC				IAML		10 42 42.2	
	comp=Z,952nm,0.5s						
GTBY	**Guantanamo Bay**	**0.59**	**278**	*e*P	**Pb**	**10 42 36.4**	**+0.5**
GTBY				*e*S	**Sb**	**10 42 44.6**	**+0.4**
GTBY	**Guantanamo Bay**	**0.59**	**278**	*i* P	**Pb**	**10 42 36.3**	**+0.5**
GTBY				*e*S	**Sg**	**10 42 42.6**	**+0.1**
GTBY				IAML		10 42 51.7	
	comp=Z,388nm,0.4s						
RCC	**Rio Carpintero**	**1.14**	**277**	*e*P	**Pb**	**10 42 44.0**	**-1.3**
RCC				*e*S	**Sb**	**10 42 58.9**	**-1.3**
RCC				IAML		10 43 04.6	
	comp=E,254nm,0.3s						
RCC				IAML		10 43 04.6	
	comp=N,224nm,0.3s						
HLGC	**Holguin**	**1.80**	**305**	*e*P	**Pb**	**10 42 57.3**	**+0.8**
LGNH	**Logne**	**2.23**	**126**	*e*P	**Pn**	**10 42 58.8**	**-1.7**
LGNH	**Logne**	**2.23**	**126**	*i* P	**Pn**	**10 43 00.9**	**+0.4**
LGNH				*e*S	**Sn**	**10 43 28.0**	**-0.1**
LGNH				IAML		10 43 42.7	
	comp=Z,30nm,0.4s						
LMGC	**Las Mercedes**	**2.37**	**276**	*e*P	**Pn**	**10 43 03.0**	**+0.5**
LMGC				*e*S	**Sn**	**10 43 30.8**	**-0.8**
LMGC				IAML		10 43 36.9	
	comp=N,104nm,0.2s						
LMGC				IAML		10 43 36.9	
	comp=E,84nm,0.3s						
PAPH	**Port-au-Prince**	**2.46**	**122**	*i* P	**Pn**	**10 43 04.6**	**+0.9**
PAPH				*e*S	**Sn**	**10 43 34.7**	**+0.8**
PAPH				IAML		10 43 41.0	
	comp=Z,50nm,0.6s						
JAKH	**Jacmel**	**2.46**	**130**	*i* P	**Pn**	**10 43 04.6**	**+0.9**
JAKH				*e*S	**Sn**	**10 43 33.7**	**-0.3**
JAKH				IAML		10 43 44.2	
	comp=Z,58nm,1.3s						
LONE2	**Loma La Sidra**	**3.13**	**114**	*i* P	**Pn**	**10 43 14.5**	**+1.4**
LONE2				IAML		10 44 12.4	
	comp=Z,48nm,1.0s						
SDDR	**Presa de Saban**	**3.15**	**105**	*i* P	**Pn**	**10 43 14.2**	**+1.0**
SDDR				*e*S	**Sn**	**10 43 51.3**	**+0.3**
SDDR				IAML		10 43 53.2	
	comp=Z,68nm,0.5s						
MTDJ	**Mount Denham**	**3.30**	**241**	*e*P	**Pn**	**10 43 15.2**	**-0.2**
GRTK	**Grand Turk**	**3.55**	**62**	*i* P	**Pn**	**10 43 21.0**	**+2.3**
GRTK				IAML		10 44 17.8	
	comp=Z,86nm,2.1s						

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*NOU **20** 10:43:05.0, 14°.67S×167°.25E, h105^{km}, mb4.6/16, Vanuatu Islands*

*IDC **20** 10:43:05.7±5.0, 14°.83S×167°.48E, h116^{km}±44^{km}, mb3.8/7, mbtmp4.2/8, Error ellipse: s-maj=32.1km s-min=28.4km az=2.0*

ISC 20 10:43:04.6±1.2**, 14°.74S**±0°.10×**167°.4E**±0°.2**, h100**^{km}**, n18, σ1ˢ50**/19**, mb4.0**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.73**	**196**	P	**Pn**	**10 43 24.4**	**+2.1**
DVP	**Devils Point**	**3.06**	**166**	P	**Pn**	**10 43 53.5**	**+2.4**
LIFNC	**LIFOU**	**6.01**	**182**	P	**Pn**	**10 44 30.9**	**-0.1**
MARNC	**Mare, Loyalty**	**6.73**	**175**	P	**Pn**	**10 44 41.8**	**+1.0**
YATNC	**Mamie plateau,**	**7.30**	**184**	P	**Pn**	**10 44 48.4**	**-0.1**
DZM	**Mont Dzumac**	**7.35**	**187**	P	**Pn**	**10 44 50.1**	**+0.8**
	18nm,0.4s,baz=355,slow=10.0,SNR=81						
DZM				S	**Sn**	**10 46 09.5**	**-1.8**
	14nm,0.4s,baz=127,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**7.35**	**187**	P	**Pn**	**10 44 50.7**	**+1.4**
NOUC	**Port Laguerre**	**7.40**	**188**	P	**Pn**	**10 44 51.7**	**+1.8**
ONTNC	**Ouen Toro**	**7.58**	**187**	P	**Pn**	**10 44 54.1**	**+1.7**
OUENC	**Ouen Island, N**	**7.66**	**184**	P	**Pn**	**10 44 55.0**	**+1.6**
PINNC	**Pines Island,**	**7.83**	**180**	P	**Pn**	**10 44 57.3**	**+1.5**
CTA	**Charters Tower**	**20.88**	**252**	P	**P**	**10 47 40.4**	**+1.5**
	4.0nm,0.7s,baz=79,slow=17,SNR=2.4						
	4.0nm,0.7s						
STKA	**Stephens Creek**	**29.09**	**230**	P	**P**	**10 48 56.5**	**+0.6**
	8.9nm,0.5s,baz=44,slow=8.1,SNR=16						
	8.9nm,0.5s						
WRA	**Warramunga Arr**	**31.96**	**256**	P	**P**	**10 49 20.1**	**-1.2**
	0.7nm,0.8s,baz=81,slow=6.7,SNR=8.7						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**32.80**	**249**	P	**P**	**10 49 27.4**	**-1.2**
	1.9nm,0.6s,baz=79,slow=8.9,SNR=42						
	1.9nm,0.6s						
VNDA	**Vanda**	**62.85**	**181**	P	**P**	**10 53 18.2**	**-1.2**
	0.9nm,0.5s,baz=1.7,slow=7.9,SNR=5.7						
	0.9nm,0.5s						
ILAR	**Eielson Array**	**86.49**	**18**	P	**P**	**10 55 34.9**	**-0.9**
	0.5nm,0.7s,baz=242,slow=4.2,SNR=6.3						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**97.31**	**316**	P	**P**	**10 56 27.0**	**+0.5**
	0.3nm,0.5s,baz=88,slow=5.5,SNR=4.0						
	0.3nm,0.5s						

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*IDC **20** 10:44:23.6±1.2, 65°.19S×178°.76E, h0^{km}, mb4.1/4, mbtmp4.1/5, ML3.3/1, MS3.8/26, Error ellipse: s-maj=49.1km s-min=23.2km az=58.0*

*NEIC **20** 10:44:24.9±0.5, 65°.19S±0°.05×178°.7E±0°.4, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=29.3km s-min=6.3km az=103.0*

ISC 20 10:44:25.0±0.9**, 65°.29S**±0°.09×**178°.3E**±0°.2**, h10**^{km}**, n54, σ1ˢ64**/20**, mb4.4**/9**, MS3.9**/25**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.09**	**191**		**Pn**	**10 47 32.2**	**+1.5**
VNDA	**Vanda**	**13.26**	**196**	Pn	**Pn**	**10 47 34.6**	**+1.7**
	0.1nm,0.3s,baz=52,slow=18,SNR=25						
VNDA				Sn	**Sn**	**10 49 55.5**	**-4.7**
	0.1nm,0.3s,baz=292,slow=5.4,SNR=1.0						
VNDA				LR	LR	10 51 37.2	
	comp=Z,498nm,19.4s,baz=24,slow=32						
	5.0nm,0.9s						
VNDA	**Vanda**	**13.26**	**196**		**Pn**	**10 47 34.9**	**+2.0**
RPZ	**Rata Peaks**	**22.00**	**346**	LR	LR	10 56 32.9	
	comp=Z,375nm,18.3s,baz=178,slow=33						
QSPA	**South Pole Qui**	**24.79**	**180**	P	**P**	**10 49 48.0**	**+1.2**
	15nm,1.0s,baz=40,slow=6.2,SNR=18						
QSPA				LR	LR	10 58 15.9	
	comp=Z,443nm,20.2s,baz=40,slow=33						
	15nm,1.0s						
QSPA	**South Pole Qui**	**24.79**	**180**	P	**P**	**10 49 47.7**	**+0.9**
URZ	**Urewera**	**27.08**	**358**	LR	LR	10 58 53.3	
	comp=Z,363nm,20.4s,baz=211,slow=32						
BELA	**Belgrano 2**	**35.68**	**169**	P	**P**	**10 51 22.2**	**-0.4**
BELA				IAmb	IAmb	10 51 32.1	

	comp=Z,4.0nm,1.2s						
RAO	Raoul Island	36.14	6	LR	LR	11 02 31.4	
	comp=Z,142nm,19.9s,baz=224,slow=30						
MAW	Mawson	39.74	213	LR	LR	11 08 24.8	
	comp=Z,468nm,19.6s,baz=144,slow=36						
SNAA	Sanae	43.30	179	LR	LR	11 10 18.0	
	comp=Z,247nm,18.3s,baz=185,slow=36						
SNAA	Sanae	43.30	179	P	P	10 52 27.2	+1.0
SNAA				IAmb	IAmb	10 52 29.1	
	comp=Z,6.9nm,1.2s						
DZM	Mont Dzumac	43.90	344	LR	LR	11 07 33.5	
	comp=Z,201nm,21.0s,baz=206,slow=32						
MARNC	Mare, Loyalty	44.32	346	P	P	10 52 32.8	-2.0
RAR	Rarotonga	46.35	29	LR	LR	11 07 48.9	
	comp=Z,106nm,19.0s,baz=174,slow=30						
H01W1	Cape Leeuwin H	48.15	277	T	T	11 45 37.4	
	baz=148,slow=76,SNR=45						
H01W2	Cape Leeuwin H	48.15	277	T	T	11 45 37.7	
	baz=148,slow=76,SNR=54						
H01W3	Cape Leeuwin H	48.16	277	T	T	11 45 38.6	
	baz=148,slow=76,SNR=41						
AS31	Alice Springs	50.40	304	P	P	10 53 22.2	-0.1
ASAR	Alice Springs	50.40	304	P	P	10 53 23.3	+1.0
	comp=Z,1.6nm,0.9s,baz=152,slow=8.0,SNR=10						
ASAR				LR	LR	11 12 08.8	
	comp=Z,30nm,18.1s,baz=139,slow=33						
	comp=Z,1.6nm,0.9s						
AFI	Afiamalu	51.77	12	LR	LR	11 12 48.1	
	comp=Z,60nm,19.1s,baz=146,slow=33						
PPT	Papeete	52.28	40	LR	LR	11 09 33.3	
	comp=Z,65nm,19.1s,baz=180,slow=29						
WR0	Warramunga Arr	53.61	306	P	P	10 53 45.8	-0.4
WB2	Warramunga Arr	53.69	306	P	P	10 53 47.4	+0.6
WB2				IAmb	IAmb	10 53 59.3	
	comp=Z,4.4nm,0.9s						
WRA	Warramunga Arr	53.69	306	P	P	10 53 47.2	+0.4
	comp=Z,1.9nm,0.9s,baz=160,slow=6.5,SNR=9.4						
WRA				LR	LR	11 14 04.0	
	comp=Z,114nm,19.4s,baz=148,slow=33						
	comp=Z,1.9nm,0.9s						
WRA	Warramunga Arr	53.69	306	IAmb	IAmb	10 53 47.9	
	comp=Z,0.4nm,1.2s						
WRAB	Tennant Creek	53.70	306	P	P	10 53 46.9	+0.1
WRAB				IAmb	IAmb	10 53 49.5	
	comp=Z,10nm,1.3s						
WB0	Warramunga Arr	53.84	306	P	P	10 53 48.2	+0.3
WB0				IAmb	IAmb	10 53 49.1	
	comp=Z,9.0nm,1.1s						
PLCA	Paso Flores	61.66	126	P	P	10 54 42.1	-0.6
	comp=Z,1.1nm,0.8s,baz=252,slow=6.4,SNR=3.2						
PLCA				LR	LR	11 15 03.9	
	comp=Z,19nm,21.0s,baz=206,slow=30						
	comp=Z,1.1nm,0.8s						
PLCA	Paso Flores	61.66	126	IAmb	IAmb	10 54 44.9	
	comp=Z,7.4nm,1.3s						
H03S2	Juan Fernandez	64.80	116	T	T	12 05 36.0	
H03S1	Juan Fernandez	64.81	116	T	T	12 05 43.9	
	baz=208,SNR=22						
H03S3	Juan Fernandez	64.82	116	T	T	12 05 38.1	
	baz=208,SNR=24						
H03N3	Juan Fernandez	65.14	116	T	T	12 06 08.8	
	baz=211,slow=76,SNR=11						
H03N2	Juan Fernandez	65.15	116	T	T	12 06 00.4	
	baz=211,slow=76,SNR=36						
H03N1	Juan Fernandez	65.16	116	T	T	12 06 00.3	
	baz=211,slow=76,SNR=10						
BATI	Baumata	66.48	299	LR	LR	11 22 23.0	
	comp=Z,278nm,18.2s,baz=238,slow=34						
KAPI	Kappang	72.72	297	LR	LR	11 25 17.0	
	comp=Z,62nm,19.2s,baz=172,slow=34						
LVC	Limon Verde	78.66	120	LR	LR	11 23 57.6	
	comp=Z,34nm,18.6s,baz=214,slow=30						
CPUP	Villa Florida	79.19	131	LR	LR	11 27 21.7	
	comp=Z,19nm,19.6s,baz=197,slow=33						
SUR	Sutherland	81.08	199	LR	LR	11 29 46.2	
	comp=Z,124nm,19.4s,baz=140,slow=34						
BOSA	Boshof	84.10	204	LR	LR	11 31 35.9	
	comp=Z,36nm,21.6s,baz=184,slow=34						
LPAZ	La Paz	84.74	118	LR	LR	11 25 38.2	
	comp=Z,18nm,19.9s,baz=178,slow=29						
NNA	Nana	85.30	108	LR	LR	11 25 52.7	
	comp=Z,25nm,21.3s,baz=197,slow=29						
LBTB	Lobatse	87.56	205	LR	LR	11 34 25.6	
	comp=Z,54nm,18.3s,baz=173,slow=34						
ATAH	Atahualpa	89.08	105	LR	LR	11 27 55.6	
	comp=Z,76nm,20.4s,baz=214,slow=29						
H08S2	Diego Garcia H	89.64	252	T	T	12 37 50.4	
	baz=154,slow=76,SNR=8.1						
H08S1	Diego Carcia H	89.65	252	T	T	12 37 47.9	
	baz=154,slow=76,SNR=6.8						
H08S3	Diego Garcia H	89.66	252	T	T	12 37 51.3	
	baz=154,slow=76,SNR=8.8						
TSUM	Tsumeb	94.49	198	LR	LR	11 38 35.7	
	comp=Z,135nm,19.2s,baz=144,slow=34						
LSZ	Lusaka	96.56	209	LR	LR	11 38 38.3	
	comp=Z,63nm,19.3s,baz=159,slow=34						
ILAR	Eielson Array	132.21	19	PKP	PKiKP	11 03 37.4	-1.0
	comp=Z,0.6nm,0.7s,baz=255,slow=2.6,SNR=5.5						
KBZ	Khabaz	147.36	251	PKPbc	PKPab	11 04 11.4	+1.8
	comp=Z,2.6nm,0.8s,baz=202,slow=2.1,SNR=4.9						
BRTR	Keskin Array B	147.36	236	PKPbc	PKPbc	11 04 08.6	+0.5
	comp=Z,1.4nm,1.0s,baz=219,slow=1.8,SNR=2.9						

IDC 20 11:13:22.1±11.0**, 5°.63N×95°.67E, h0^{km}, mb3.2**/2**, mbtmp3.3**/3**, ML3.7**/1**, MS3.2**/2**, Error ellipse: s-maj=307.0km s-min=45.5km az=81.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.15	14	Pn	Pn	11 16 30.7	+0.5
	0.1nm,0.3s,baz=206,slow=11,SNR=2.9						
	1.1nm,0.7s						
DAV	Davao City (W)	29.76	86	LR	LR	11 32 55.4	
	comp=Z,38nm,18.7s,baz=92,slow=39						
WRA	Warramunga Arr	45.74	125	P	P	11 21 45.1	-0.4
	0.2nm,0.7s,baz=307,slow=8.4,SNR=5.8						
	0.2nm,0.7s						
ASAR	Alice Springs	47.32	129	P	P	11 21 58.1	+0.1
	0.1nm,0.4s,baz=300,slow=7.6,SNR=6.8						
	0.1nm,0.4s						
MJAR	Matsushiro Arr	49.59	46	LR	LR	11 44 35.3	
	comp=Z,22nm,18.2s,baz=195,slow=38						
MODS	Modra-Piesok	78.10	318	*e*SG	S	11 35 24.6	+6.0

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*MOS **20** 11:59:11.5±1.0, 28°.30N×58°.50E, h100^{km}, mb4.3/23, Error ellipse: s-maj=7.2km s-min=5.1km az=88.8*

*IDC **20** 11:59:15.0±0.5, 28°.33N×58°.53E, h116^{km}±5^{km}, mb4.0/25, mbtmp4.3/27, MS3.5/2, Error ellipse: s-maj=10.5km s-min=9.4km az=120.0*

*DSN **20** 11:59:14.8±0.9, 28°.55N×58°.23E, h100^{km}, mb4.7/1, ML4.5/14, Error ellipse: s-maj=35.6km s-min=9.1km az=124.0*

*TEH **20** 11:59:15.3, 28°.29N×58°.56E, h99^{km}, ML4.4*

*NEIC **20** 11:59:15.8±1.6, 28°.36N±0°.06×58°.56E±0°.06, h119^{km}±6^{km}, Error ellipse: s-maj=8.8km s-min=8.0km az=152.0*

*OMAN **20** 11:59:17.2±0.1, 28°.04N×58°.53E, h33^{km}, mb5.7/13, ml4.8/16, Error ellipse: s-maj=1.6km s-min=1.2km az=235.0*

ISC 20 11:59:14.2±0.3**, 28°.26N**±0°.04×**58°.60E**±0°.04**, h116^{km}, n328, σ1.35**/360**, mb4.4**/67**, 13C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.84	249		Pn	11 59 36.0	+1.6
KHNJ	Kahnooj	0.84	249	*e*Pg	Pn	11 59 35.8	+1.4
KBAM	BAM	0.88	352	*e*Pg	Pn	11 59 34.7	-0.2
KBAM				*e*		11 59 35.2	
	comp=Z,83µm,0.2s						
KBAM				*e*Sg	Sn	11 59 48.8	-1.7
CHMN	Cheshme madani	1.84	330		Pn	11 59 46.3	+0.4
CHMN	Cheshme madani	1.84	330	*e*Pg	Pn	11 59 46.3	+0.4
IBND	Bandar-abas	1.99	247	*e*Pn	Pn	11 59 48.6	+1.3
IBND				*e*		12 00 27.9	
	comp=Z,40µm,0.3s						
NGRK	Negar Kerman	2.14	311		Pn	11 59 50.8	+1.2
NGRK	Negar Kerman	2.14	311	*e*Pn	Pn	11 59 50.6	+1.0
NGRK				*e*		12 00 20.3	
	comp=Z,39µm,0.2s						
ZHDN	Zahedan	2.25	59	*e*Pn	Pn	11 59 53.1	+2.3
GENO	Geno	2.31	249		Pn	11 59 53.5	+1.9
GENO	Geno	2.31	249	*e*Pn	Pn	11 59 53.3	+1.7
GENO				*e*		12 00 24.0	
	comp=Z,15µm,0.2s						
KRBR	Kerman	2.35	317	*e*Pn	Pn	11 59 53.5	+1.3
TVBK	TV Kerman	2.35	317	*e*Pn	Pn	11 59 53.5	+1.2
TVBK				*e*		12 00 30.9	
	comp=Z,23µm,0.3s						
JASK	Jask - Hormozg	2.47	195		Pn	11 59 55.9	+2.4
JASK	Jask - Hormozg	2.47	195	*e*Pn	Pn	11 59 55.7	+2.2
KHGB	Koh Gabri	2.81	319	Pn	Pn	11 59 58.7	+0.7
KHGB	Koh Gabri	2.81	319	*e*Pn	Pn	11 59 58.8	+0.7
KHGB				*e*		12 00 39.2	
	comp=Z,5µm,0.3s						
BANOM	Banah	3.10	222	*e*Pn	Pn	12 00 03.1	+1.4
BANOM	Banah	3.10	222	P	Pn	12 00 03.0	+1.2
	SNR=166						
BANOM				S	Sn	12 00 35.5	-2.9
BANOM	Banah	3.10	222	*i* P	Pn	12 00 02.8	+1.1
	SNR=15						
BANOM				S	Sn	12 00 37.9	-0.5
SHME	Shamm	3.10	225	*e*Pn	Pn	12 00 03.5	+1.8
SHME	Shamm	3.10	225	P	Pn	12 00 03.8	+2.1
	SNR=62						
SHME				S	Sn	12 00 35.9	-2.5
SHME	Shamm	3.10	225	*i* P	Pn	12 00 03.5	+1.8
	SNR=62						
NHDN	Nehbandan	3.37	22	Pn	Pn	12 00 06.1	+0.7
NHDN	Nehbandan	3.37	22	*e*		12 00 07.0	
	comp=Z,10µm,0.4s						
NHDN				*e*Pn	Pn	12 00 06.1	+0.7
SRVN	Saravan	3.47	103	*e*		12 00 56.1	
	comp=Z,4µm,0.5s						
SRVN				*e*Pn	Pn	12 00 09.7	+2.9
MASF	Masafi	3.61	218	P	Pn	12 00 08.5	0.0
	SNR=29						
MASF				S	Sn	12 00 48.0	-2.4
MSFE	Esma-Masafi	3.62	218	*e*Pn	Pn	12 00 09.7	+1.1
MSFE	Esma-Masafi	3.62	218	*i* P	Pn	12 00 09.1	+0.5
	SNR=11						
NGCH	Negor - Chabah	3.67	141	*e*Pn	Pn	12 00 11.0	+1.7
BSRN	Basiran	3.72	7	*e*Pn	Pn	12 00 10.1	0.0
UMQ	Umm Al-Quwin	3.78	225	*e*Pn	Pn	12 00 12.0	+1.3
UMQ	Umm Al-Quwin	3.78	225	P	Pn	12 00 12.8	+2.1
LAR1	LAR	3.78	262	Pn	Pn	12 00 12.0	+1.2
LAR1	LAR	3.78	262	*e*Pn	Pn	12 00 12.9	+2.1
UOSS	Minazif	3.93	214		Pn	12 00 12.7	-0.1
UOSS	Minazif	3.93	214	*e*Pn	Pn	12 00 14.0	+1.2
UOSS	Minazif	3.93	214	P	Pn	12 00 12.6	-0.2
UOSS				S	Sn	12 00 55.1	-3.1
UOSS	Minazif	3.93	214	*i* P	Pn	12 00 13.0	+0.1
	SNR=7.1						
HATD	Hatta, Dubai	4.07	213	*e*Pn	Pn	12 00 15.6	+1.0
HATD	Hatta, Dubai	4.07	213	P	Pn	12 00 14.6	-0.1
	SNR=6.4						
HATD				S	Sn	12 00 59.5	-2.0
	SNR=7.5						
HATD	Hatta, Dubai	4.07	213	*i* P	Pn	12 00 15.3	+0.6
	SNR=8.8						
NAZ	Nazwa, Dubai	4.18	220	*e*Pn	Pn	12 00 17.6	+1.4
NAZ	Nazwa, Dubai	4.18	220	P	Pn	12 00 19.2	+3.0
	SNR=14						
NAZ				S	Sn	12 01 02.7	-1.5
	SNR=5.6						
NAZ	Nazwa, Dubai	4.18	220	*i* P	Pn	12 00 18.8	+2.6
	SNR=14						
ASHO	Ashiyiah	4.22	213	*e*Pn	Pn	12 00 18.5	+1.7
ASHO	Ashiyiah	4.22	213	P	Pn	12 00 18.8	+2.0
	SNR=82						
ASHO				S	Sn	12 01 03.3	-2.0
ASHO	Ashiyiah	4.22	213	*i* P	Pn	12 00 20.0	+3.2
	SNR=44						
IBAF	Bafgh	4.24	322	Pn	Pn	12 00 17.7	+0.8
IBAF	Bafgh	4.24	322	*e*Pn	Pn	12 00 17.8	+0.8
FAQ	Al Faqa, Dubai	4.41	218	*e*Pn	Pn	12 00 21.1	+1.8
FAQ	Al Faqa, Dubai	4.41	218	P	Pn	12 00 22.0	+2.7
	SNR=39						
FAQ				S	Sn	12 01 10.9	+1.1
	SNR=14						
FAQ	Al Faqa, Dubai	4.41	218	*i* P	Pn	12 00 21.8	+2.6
	SNR=39						
JHRM	Jahrom	4.43	274	Pn	Pn	12 00 20.1	+0.6
JHRM	Jahrom	4.43	274	*e*Pn	Pn	12 00 21.1	+1.6
SOHO	SOHO	4.50	205	*e*Pn	Pn	12 00 21.0	+0.5
SOHO	SOHO	4.50	205	P	Pn	12 00 20.4	-0.1
SOHO				S	Sn	12 01 08.2	-3.7
SOHO	SOHO	4.50	205	*i* P	Pn	12 00 20.8	+0.3
	SNR=9.4						
ASUD	Al Ashush, Dub	4.65	220	*e*Pn	Pn	12 00 24.4	+1.9
ASUD	Al Ashush, Dub	4.65	220	P	Pn	12 00 25.7	+3.2
	SNR=17						
ASUD				S	Sn	12 01 16.0	+0.5
ASUD	Al Ashush, Dub	4.65	220	*i* P	Pn	12 00 25.5	+3.0
	SNR=17						
IMEH	Mehriz	4.66	313	*e*Pn	Pn	12 00 22.9	+0.2
BIDO	Bidbid	4.74	185	*e*Pn	Pn	12 00 24.4	+0.8
BIDO	Bidbid	4.74	185	P	Pn	12 00 24.2	+0.6
BIDO				S	Sn	12 01 15.3	-2.3
HOQ	Hoqain	4.80	194	P	Pn	12 00 25.0	+0.5
	SNR=8.0						
HOQ				S	Sn	12 01 16.2	-2.8
LMD1	Lamerd	4.90	260	*e*Pn	Pn	12 00 27.3	+1.6
QIR1	Qir	4.90	274	*e*Pn	Pn	12 00 27.1	+1.3
AJN	Ajban	4.90	222	*e*Pn	Pn	12 00 27.9	+2.2
AJN	Ajban	4.90	222	P	Pn	12 00 27.7	+1.9
	SNR=16						
AJN				S	Sn	12 01 21.0	-0.4
AJN	Ajban	4.90	222	*i* P	Pn	12 00 28.0	+2.2
	SNR=16						
ALNE	Al Ain	4.90	212	*e*Pn	Pn	12 00 28.8	+2.9
ALNE	Al Ain	4.90	212	P	Pn	12 00 28.8	+2.9
	SNR=32						
ALNE				S	Sn	12 01 21.5	-0.1
ALNE	Al Ain	4.90	212	*i* P	Pn	12 00 28.7	+2.8
	SNR=32						
WSAR	Wadi Sarin	5.00	180	P	Pn	12 00 28.9	+1.8
	comp=Z,62nm,0.3s,baz=3.3,slow=5.4,SNR=416						
WSAR				S	Sn	12 01 23.2	-0.7
	comp=Z,354nm,0.3s,baz=325,slow=17,SNR=34						
WSAR				LR	LR	12 02 44.8	
	comp=Z,132nm,18.7s,baz=24,slow=41						
WSAR	Wadi Sarin	5.00	180	P	Pn	12 00 28.9	+1.7
	SNR=25						
WSAR				S	Sn	12 01 22.6	-1.3
TPRV	Parvadeh(Tabas	5.03	341	*e*Pn	Pn	12 00 29.1	+1.5
AFRZ	Afriz	5.16	4	*e*Pn	Pn	12 00 29.8	+0.4
SMDO	Samad	5.20	186	P	Pn	12 00 31.4	+1.4
	SNR=94						
SMDO				S	Sn	12 01 28.0	-0.9
ARQ	Araqi	5.25	201	P	Pn	12 00 33.5	+3.0
	SNR=222						
ARQ				S	Sn	12 01 31.3	+1.4
ICHK	Chekchek	5.38	319	*e*Pn	Pn	12 00 33.5	+1.1
ICHK				*e*		12 00 34.0	
	comp=Z,2µm,0.4s						
YZKH	Yazd	5.38	321	*e*Pn	Pn	12 00 33.1	+0.8
TKDS	Koohdasht(Taba	5.49	347	*e*Pn	Pn	12 00 34.6	+0.8
SHI	Shiraz	5.50	286	*e*Pn	Pn	12 00 34.0	-0.1
TABS	Tabas	5.52	347	*e*Pn	Pn	12 00 35.4	+1.2
SHRT	Shahrakht	5.56	15	*e*Pn	Pn	12 00 35.8	+1.0
BSY	Bisya	5.63	193	P	Pn	12 00 39.1	+3.3
	SNR=8.2						
BSY				S	Sn	12 01 40.9	+1.6
WBK	Wadi Bani Khal	5.63	176	P	Pn	12 00 37.0	+1.3
	SNR=141						
WBK				S	Sn	12 01 37.1	-2.2
JMDO	Jabal Madar	5.88	184	P	Pn	12 00 41.0	+2.0
	SNR=50						
JMDO				S	Sn	12 01 43.9	-1.3
JRN	Qarnain Island	6.11	239	*e*Pn	Pn	12 00 42.8	+0.7
JRN	Qarnain Island	6.11	239	P	Pn	12 00 42.6	+0.5
	SNR=7.0						
JRN				S	Sn	12 01 48.8	-1.9
	SNR=13						
JLN	Jalan Bani Buh	6.13	173	P	Pn	12 00 42.8	+0.4
	SNR=8.9						
JLN				S	Sn	12 01 48.0	-3.2
	SNR=22						
JLN				S	Sn	12 01 48.0	-3.2
MZWR	Madinat Zayed	6.17	225	P	Pn	12 00 42.8	-0.1
MZWR				S	Sn	12 01 50.6	-1.5
KAZ1	Kazerun	6.25	284	*e*Pn	Pn	12 00 43.8	-0.2
UMZA	Um Al Zommool	6.33	210	*e*Pn	Pn	12 00 46.5	+1.3
UMZA	Um Al Zommool	6.33	210	P	Pn	12 00 46.4	+1.3
UMZA				S	Sn	12 01 55.6	-0.5
IRAM	Ramesheh	6.44	305	*e*Pn	Pn	12 00 46.0	-0.8
AHBU	AHRAM	6.45	277	*e*Pn	Pn	12 00 46.4	-0.3
ANAR	Anarak	6.46	321	*e*Pn	Pn	12 00 47.6	+0.7
KLNJ	Kolanjah	6.68	296	*e*Pn	Pn	12 00 50.1	-0.1
GHWR	Ruwais	6.69	232	*e*Pn	Pn	12 00 50.3	+0.3
GHWR	Ruwais	6.69	232	P	Pn	12 00 50.2	+0.3
GHWR				S	Sn	12 02 01.7	-3.0
NASN	Na'in	6.74	314	*e*Pn	Pn	12 00 51.5	+0.6
HRA	Herat	6.86	26	Pn	Pn	12 00 53.1	+0.6
MZR	Muzera	6.98	223	*e*Pn	Pn	12 00 54.8	+0.9
MZR	Muzera	6.98	223	P	Pn	12 00 54.8	+0.9
	SNR=8.1						
MZR				S	Sn	12 02 10.8	-1.0
MZR	Muzera	6.98	223	*i* P	Pn	12 00 54.0	+0.1
	SNR=9.4						
IGAR	Gharneh	7.01	308	*e*Pn	Pn	12 00 53.8	-0.7
IZEF	Zefreh	7.11	312	*e*Pn	Pn	12 00 55.9	+0.1
TBJM	Torbat-e-JAM	7.14	11	*e*Pn	Pn	12 00 57.6	+1.4
IBRJ	Brojen	7.32	302	*e*Pn	Pn	12 00 58.2	-0.5
ABEH	Behbahan	7.64	290	*e*Pn	Pn	12 01 02.7	-0.1
SMRA	Abu-Samra	7.79	245	P	Pn	12 01 05.6	+0.8
KRSH	Karshahi	7.94	317	*e*Pn	Pn	12 01 07.8	+0.8
SHRO	Shahrood	8.01	345	*e*Pn	Pn	12 01 09.6	+1.6
SBZV	Sabzevar	8.15	354	*e*Pn	Pn	12 01 11.8	+1.9
ISFB	Sefidab	8.15	320	*e*Pn	Pn	12 01 10.9	+1.1
IMYA	Miami	8.16	9	*e*Pn	Pn	12 01 12.0	+2.0
IANJ	Anjilo	8.21	332	*e*Pn	Pn	12 01 11.7	+0.9
QAMS	Qamsar	8.24	313	*e*Pn	Pn	12 01 11.5	+0.3
IAKL	Akhelmad	8.32	1	*e*Pn	Pn	12 01 14.2	+1.9
ILAS	Lasjerd	8.57	327	*e*Pn	Pn	12 01 17.2	+1.6
AMIS	Naft Sefid	8.76	295	*e*Pn	Pn	12 01 16.8	-1.2
IFIR	Firoozkooh	8.88	327	*e*Pn	Pn	12 01 20.5	+0.7
IVRN	Varamin	8.91	321	*e*Pn	Pn	12 01 21.3	+1.3
IGLO	Ghaloghah	9.15	335	*e*Pn	Pn	12 01 25.6	+2.2
IQOM	Qom	9.18	318	*e*Pn	Pn	12 01 24.6	+0.8
IDMV	Damavand	9.18	324	*e*Pn	Pn	12 01 24.5	+0.6
IPRN	Peran	9.56	328	*e*Pn	Pn	12 01 32.1	+3.2
MRVT	Maraveh tapeh	9.61	348	*e*Pn	Pn	12 01 31.1	+1.6
ASAO	Ashtian	9.64	313	*e*Pn	Pn	12 01 31.4	+1.4
GEYT	Alibeck	9.65	358	Pn	Pn	12 01 28.9	-1.1
CHTH	Charan	9.91	322	*e*Pn	Pn	12 01 35.8	+2.1
DOK	Doka	10.43	204	P	Pn	12 01 41.3	+0.6
	SNR=14						
KBL	Kabul	10.90	52	Pn	Pn	12 01 46.5	-0.6
KBL	Kabul	10.90	52	P	Pn	12 01 46.5	-0.6
DMTO	DMTO	11.02	199	P	Pn	12 01 48.6	0.0
WHFO	Wadi Hawf	11.21	204	P	Pn	12 01 51.0	-0.1
	SNR=44						
RBK	Rabkut	11.44	202	P	Pn	12 01 54.2	-0.1
ABTO	Aybut	11.90	205	P	Pn	12 01 59.5	-0.8
	SNR=22						
RAYN	Ar Rayn	12.69	251	Pn	Pn	12 02 07.2	-3.5
RAYN	Ar Rayn	12.69	251	P	Pn	12 02 07.2	-3.5
RAYN	Ar Rayn	12.69	251	*i* P	Pn	12 02 06.9	-3.8
	SNR=7.7						
CHGR	Chuyangaron	13.60	38	Pn	Pn	12 02 21.5	-0.9
CHGR	Chuyangaron	13.60	38	P	Pn	12 02 21.5	-0.9
GAR	Garm	14.48	39	Pn	Pn	12 02 32.5	-1.2
BTK	Batken	15.50	37	Pn	Pn	12 02 44.2	-2.3
BTK	Batken	15.50	37	P	Pn	12 02 44.2	-2.3
BTK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GNI	Garni	16.47	320	P	P	12 03 01.9	+2.7
	comp=Z,8.4nm,0.4s,baz=358,slow=3.8,SNR=5.9						
GNI				LR	LR	12 10 34.8	
	comp=Z,16nm,18.1s,baz=166,slow=42						
GNI	Garni	16.47	320	IAmb	IAmb	12 03 02.7	
	comp=Z,27nm,1.1s						
GNI	Garni	16.47	320	*i* P	P	12 02 59.1	-0.1
SOCY	Socotra	16.56	196		Pn	12 02 58.1	-1.6
SOCY				IAmb	IAmb	12 02 59.9	
	comp=Z,50nm,1.0s						
GURO	Guroymak-BITLI	17.20	311		Pn	12 03 07.1	-0.4
MARD	Mardin	17.47	306		P	12 03 09.4	-0.8
MARD				IAmb	IAmb	12 03 20.1	
	comp=Z,18nm,0.7s						
KK31	Karatay Array	17.67	30		P	12 03 12.6	+0.4
KK31				IAmb	IAmb	12 03 15.9	
	comp=Z,18nm,1.1s						
KK31	Karatay Array	17.67	30	P	P	12 03 12.6	+0.4
KK31				pmax	pmax		
	comp=Z,18nm,1.2s						
KKAR	Karatay Array	17.67	30		P	12 03 12.2	0.0
KKAR	Karatay Array	17.67	30	P	P	12 03 12.2	0.0
GROC	Groznyy	18.14	329	*e*P	P	12 03 17.2	-0.2
GROC				S	S	12 06 37.9	-1.4
GROC				pmax	pmax		
	comp=Z,21nm,0.4s						
AML	Almayashu	18.50	38	*i* P	P	12 03 22.5	+0.7
	SNR=11						
ZEI	Tsey	18.75	324	*e*P	Pn	12 03 25.2	-0.9
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KOPT	Kop Dagi	18.99	313	P	P	12 03 27.7	+0.7
KOPT				IAmb	IAmb	12 03 40.0	
	comp=Z,8.3nm,0.6s						
ASF	Jabal al Asfar	19.15	287	P	Pn	12 03 31.3	+0.6
	comp=Z,14nm,0.5s,baz=93,slow=4.0,SNR=26						
AAK	Ala-Archa	19.28	38	P	Pn	12 03 31.7	-0.5
	comp=Z,6.3nm,0.6s,baz=231,slow=3.4,SNR=11						
AAK	Ala-Archa	19.28	38	P	P	12 03 29.9	-0.1
AAK	Ala-Archa	19.28	38	*ce*P	P	12 03 31.0	+1.0
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	19.28	38	*i* P	P	12 03 31.2	+1.2
	SNR=8.5						
KBZ	Khabaz	19.94	325	P	Pn	12 03 39.5	-0.1
	comp=Z,4.0nm,0.6s,baz=165,slow=13,SNR=11						
KBZ	Khabaz	19.94	325	*ce*P	P	12 03 36.5	-0.4
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BOOM	Boomskoye usch	19.99	40	P	P	12 03 38.5	+0.8
BOOM	Boomskoye usch	19.99	40	P	P	12 03 38.5	+0.8
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHA1	Shidzhatmaz	20.07	325	*i* P	P	12 03 38.6	0.0
TKM2	Tokmak 2	20.07	39	P	P	12 03 39.0	+0.4
PYA1	Pyatigorsk	20.08	326	*i* P	P	12 03 38.8	+0.3
KVAR	Kislovodsk Arr	20.20	325	P	P	12 03 40.1	+0.2
	comp=Z,8.1nm,0.4s,baz=86,slow=19,SNR=2.2						
	comp=Z,8.1nm,0.4s						
KIV	Kislovodsk	20.21	325	P	P	12 03 40.8	+0.9
KIV	Kislovodsk	20.21	325	*e*P	Pn	12 03 41.2	-1.7
KIV				*e*S	S	12 07 23.0	+2.7
KIV				pmax	pmax		
	comp=Z,52nm,1.1s						
GHAJ	Ghor Haditha	20.21	284	P	P	12 03 41.3	+1.3
GHAJ				IAmb	IAmb	12 03 43.0	
	comp=Z,35nm,1.0s						
KDJ	Kajisay	20.49	43	P	P	12 03 43.8	+0.7
KDJ				IAmb	IAmb	12 04 09.3	
	comp=Z,15nm,0.8s						
KDJ	Kajisay	20.49	43	P	P	12 03 43.8	+0.7
KDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MMAI	Mount Meron Ar	20.50	289	P	P	12 03 44.3	+1.1
	comp=Z,6.4nm,0.8s,baz=320,slow=10,SNR=8.6						
	comp=Z,6.4nm,0.8s						
TARG	Taragay, Kyrgy	20.63	44	P	P	12 03 45.6	+0.7
TARG	Taragay, Kyrgy	20.63	44	P	P	12 03 45.6	+0.7
TARG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
EIL	Elat	20.73	280	P	Pn	12 03 47.5	-1.6
	comp=Z,29nm,0.8s,baz=119,slow=5.4,SNR=21						
	comp=Z,29nm,0.8s						
AB31	Akbulak array	20.99	2	*e*P	P	12 03 48.6	+0.4
ABKAR	Akbulak array	20.99	2	P	P	12 03 48.5	+0.3
BNN	Bunyan	21.65	305	P	P	12 03 57.4	+1.9
AKTO	Aktyubinsk	22.15	359	P	P	12 04 00.6	+0.2
	comp=Z,12nm,0.4s,baz=174,slow=10.0,SNR=39						
	comp=Z,12nm,0.4s						
CSS	Mathiatis	22.50	294	P	P	12 04 04.5	+0.3
CSS				IAmb	IAmb	12 04 08.1	
	comp=Z,22nm,1.1s						
OTUK	Ortayu	22.62	24	P	P	12 04 05.2	-0.1
BR131	Keskin Array S	23.56	306	P	P	12 04 14.4	0.0
BR131				IAmb	IAmb	12 04 15.3	
	comp=Z,21nm,1.0s						
BR131	Keskin Array S	23.56	306	P	P	12 04 14.4	0.0
BR131				pmax	pmax		
	comp=Z,21nm,1.0s						
BRTR	Keskin Array B	23.56	306	P	P	12 04 14.2	-0.2
	comp=Z,8.5nm,0.8s,baz=121,slow=12,SNR=34						
	comp=Z,8.5nm,0.8s						
BRTR	Keskin Array B	23.56	306	P	P	12 04 13.8	-0.6
ANN	Anapa	23.59	320	*e*P	P	12 04 13.9	-0.5

ANN				pmax	pmax		
	comp=Z,36nm,0.7s						
ILGA	**Ilgaz**	**24.02**	**309**	P	**P**	**12 04 18.7**	**0.0**
ILGA				IAmb	IAmb	12 04 20.6	
	comp=Z,18nm,1.0s						
BZK	**Bozkurt**	**24.22**	**311**	P	**P**	**12 04 19.6**	**-0.5**
ANTO	**Ankara**	**24.22**	**305**	P	**P**	**12 04 21.1**	**+0.8**
ANTO				IAmb	IAmb	12 04 23.1	
	comp=Z,15nm,0.6s						
ANTO	**Ankara**	**24.22**	**305**	P	**P**	**12 04 21.1**	**+0.8**
ANTO				pmax	pmax		
	comp=Z,15nm,0.6s						
BELG	**Belogornoye**	**25.46**	**344**	P	**P**	**12 04 31.1**	**-0.1**
	comp=Z,43nm,0.7s,baz=336,slow=2.0,SNR=13						
MDUB	**Mudurnu**	**25.58**	**306**	P	**P**	**12 04 32.0**	**-0.6**
AKAS	**Kas**	**25.71**	**295**	P	**P**	**12 04 35.8**	**+2.0**
BORA	**Eskisehir**	**25.93**	**304**	P	**P**	**12 04 35.9**	**+0.2**
BORA				IAmb	IAmb	12 04 36.7	
	comp=Z,28nm,1.5s						
MAKZ	**Makanchi**	**26.04**	**38**	P	**P**	**12 04 37.9**	**+1.3**
MAKZ	**Makanchi**	**26.04**	**38**	P	**P**	**12 04 37.9**	**+1.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**26.21**	**39**	P	**P**	**12 04 39.1**	**+1.1**
MK31	**Makanchi Array**	**26.21**	**39**	P	**P**	**12 04 39.2**	**+1.1**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**26.21**	**39**	P	**P**	**12 04 38.8**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=225,slow=8.0,SNR=20						
MKAR				pP	**pP**	**12 05 03.9**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=216,slow=8.7,SNR=3.7						
	comp=Z,0.9nm,0.3s						
MKAR	**Makanchi Array**	**26.21**	**39**	P	**P**	**12 04 39.1**	**+1.0**
MKAR	**Makanchi Array**	**26.21**	**39**	*ce*P	**P**	**12 04 39.0**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**26.24**	**16**	P	**P**	**12 04 39.0**	**+0.7**
BRVK				IAmb	IAmb	12 04 39.9	
	comp=Z,7.1nm,0.9s						
BRVK	**Borovoye**	**26.24**	**16**	*ce*P	**P**	**12 04 38.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURBB	**Kurchatov Arra**	**26.96**	**29**	P	**P**	**12 04 45.6**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=227,slow=8.7,SNR=25						
KURBB				pP	**pP**	**12 05 11.4**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=227,slow=9.0,SNR=5.0						
	comp=Z,1.4nm,0.5s						
KURK	**Kurchatov**	**27.07**	**29**	P	**P**	**12 04 45.6**	**-0.1**
KURK	**Kurchatov**	**27.07**	**29**	IAmb	IAmb	12 04 47.5	
	comp=Z,3.1nm,1.1s						
KURK	**Kurchatov**	**27.07**	**29**	*ce*P	**P**	**12 04 46.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KARP	**Karpathos**	**27.58**	**293**	P	**P**	**12 04 51.7**	**+1.2**
WMQ	**Urumqi**	**28.01**	**49**	*e*P	**P**	**12 04 56.0**	**+1.7**
WMQ				sP	sP	12 05 30.3	-2.9
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
SANT	**Santorini**	**29.04**	**295**	P	**P**	**12 05 03.8**	**+0.3**
IDI	**Anoyia**	**29.40**	**292**	P	**P**	**12 05 08.0**	**+1.3**
	comp=Z,8.7nm,0.3s,baz=225,slow=19,SNR=30						
	comp=Z,8.7nm,0.3s						
IDI	**Anoyia**	**29.40**	**292**	P	**P**	**12 05 08.0**	**+1.3**
IDI				IAmb	IAmb	12 05 14.6	
	comp=Z,16nm,1.2s						
RDO	**Rodhopi**	**29.88**	**304**	P	**P**	**12 05 10.4**	**-0.4**
RDO				IAmb	IAmb	12 05 11.5	
	comp=Z,9.0nm,0.8s						
KIRV	**Kirov**	**30.98**	**351**	*ce*P	**P**	**12 05 20.2**	**0.0**
MLR	**Muntele Rosu**	**30.99**	**313**	P	**P**	**12 05 20.4**	**-0.3**
MLR				IAmb	IAmb	12 05 23.4	
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**30.99**	**313**	P	**P**	**12 05 20.5**	**-0.3**
MLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN	**Obninsk**	**31.20**	**335**	*e*P	**P**	**12 05 22.7**	**+0.4**
OBN				*e*		12 06 01.7	
OBN				*e*		12 06 28.0	
OBN				pmax	pmax		
	comp=Z,11nm,0.6s						
AKASG	**Malin Array Be**	**31.53**	**323**	P	**P**	**12 05 24.1**	**-1.2**
	comp=Z,2.8nm,0.4s,baz=126,slow=8.3,SNR=18						
	comp=Z,2.8nm,0.4s						
AKASG	**Malin Array Be**	**31.53**	**323**	P	**P**	**12 05 25.1**	**-0.1**
AKASG	**Malin Array Be**	**31.53**	**323**	*ce*P	**P**	**12 05 24.2**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	**Malin Array Si**	**31.53**	**323**	P	**P**	**12 05 24.2**	**-1.0**
AKBB	**Malin Array Si**	**31.53**	**323**	*ce*P	**P**	**12 05 24.8**	**-0.4**
AGG	**Agios Georgios**	**31.86**	**299**	P	**P**	**12 05 27.9**	**-0.4**
AGG				IAmb	IAmb	12 05 37.9	
	comp=Z,9.7nm,1.2s						
AGG	**Agios Georgios**	**31.86**	**299**	P	**P**	**12 05 27.9**	**-0.4**
AGG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LIT	**Litokhoron**	**31.91**	**301**	P	**P**	**12 05 28.2**	**-0.6**
LIT				IAmb	IAmb	12 05 44.9	
	comp=Z,8.4nm,1.2s						
LIT	**Litokhoron**	**31.91**	**301**	P	**P**	**12 05 28.2**	**-0.6**
LIT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VTS	**Vitosha**	**31.92**	**306**	P	**P**	**12 05 29.0**	**+0.1**
VTS				IAmb	IAmb	12 05 29.2	
	comp=Z,4.7nm,0.9s						
VTS	**Vitosha**	**31.92**	**306**	P	**P**	**12 05 29.0**	**+0.1**
VTS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ITM	**Ithomi**	**31.95**	**296**	P	**P**	**12 05 29.2**	**+0.2**
ZAA0	**Zalesovo Array**	**32.04**	**29**	P	**P**	**12 05 29.9**	**+0.3**
ZAA0				IAmb	IAmb	12 05 30.9	
	comp=Z,8.8nm,0.8s						
ZALV	**Zalesovo Beam**	**32.04**	**29**	P	**P**	**12 05 29.9**	**+0.3**
	comp=Z,8.6nm,0.3s,baz=233,slow=8.8,SNR=42						
	comp=Z,8.6nm,0.3s						
BURAR	**Bucovina Array**	**32.30**	**316**	⇑P	**P**	**12 05 31.8**	**-0.4**
BURAR	**Bucovina Array**	**32.30**	**316**	P	**P**	**12 05 31.6**	**-0.6**
BUR08	**Bucovina Ar. S**	**32.33**	**316**	P	**P**	**12 05 32.1**	**-0.3**
FNA	**Florina**	**32.87**	**302**	P	**P**	**12 05 35.8**	**-1.4**
FNA				IAmb	IAmb	12 05 39.4	
	comp=Z,17nm,1.3s						
FNA	**Florina**	**32.87**	**302**	P	**P**	**12 05 35.8**	**-1.4**
FNA				pmax	pmax		
	comp=Z,17nm,1.3s						
KBN	**Korca**	**33.28**	**302**	P	**P**	**12 05 40.7**	**-0.1**
KBN	**Korca**	**33.28**	**302**	P	**P**	**12 05 40.7**	**-0.1**
KBN				pmax	pmax		
	comp=Z,21nm,0.8s						
DRGR		**33.56**	**313**	⇓P	**P**	**12 05 42.3**	**-0.8**
KOLS	**Kolonicke sedl**	**34.64**	**317**	*e*P	**P**	**12 05 53.9**	**+1.6**
KOLS	**Kolonicke sedl**	**34.64**	**317**	*e*P	**P**	**12 05 53.9**	**+1.6**
KLMR	**Klimovskoe**	**35.03**	**344**	*e*P	**P**	**12 05 53.8**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,21nm,1.3s						
KLMR	**Klimovskoe**	**35.03**	**344**	*e*P	**P**	**12 05 53.8**	**-1.7**
KLMR				AMP		12 05 56.2	
	comp=Z,21nm,1.3s						
KMBO	**Kilima Mbogo**	**35.68**	**219**	*i* P	**P**	**12 06 01.1**	**-0.7**
KNGR	**Kungurtug, Tuv**	**36.84**	**42**	*i* P	**P**	**12 06 12.6**	**+1.4**
PABE	**Paberze**	**36.84**	**327**	P	**P**	**12 06 11.0**	**0.0**
CUC	**Castrocucco**	**36.97**	**300**	P	**P**	**12 06 12.4**	**+0.1**
RONA	**Rosalia, Austr**	**38.00**	**312**	*e*P	**P**	**12 06 21.5**	**+0.6**
PZH	**PanZhiHua**	**38.21**	**82**	P	**P**	**12 06 22.9**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
LZH	**Lanzhou**	**38.81**	**67**	*e*P	P	12 06 23.8	-4.2
LZH				sP	sP	12 07 01.9	-5.7
LZH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MOA	**Molln**	**39.36**	**312**	*e*P	**P**	**12 06 31.2**	**-1.1**
	comp=Z,2.8nm,0.5s						
FIA0	**FINESS Array S**	**39.60**	**336**	P	**P**	**12 06 33.9**	**-0.1**
FIA0	**FINESS Array S**	**39.60**	**336**	P	**P**	**12 06 33.9**	**-0.1**
FIA1	**FINESS Array S**	**39.60**	**336**	P	**P**	**12 06 33.9**	**-0.2**
FINES	**FINESS Array B**	**39.60**	**336**	P	**P**	**12 06 33.5**	**-0.5**
	comp=Z,9.0nm,0.4s,baz=134,slow=8.7,SNR=99						
	comp=Z,9.0nm,0.4s						
BIOA	**Bad Ischl, Aus**	**39.74**	**312**	*e*P	**P**	**12 06 34.9**	**-0.5**
KBA	**Koelnbreinsper**	**39.80**	**311**	*e*P	**P**	**12 06 35.1**	**-1.1**
	comp=Z,1.3nm,0.3s						
GEC2	**GERESS Array S**	**39.97**	**313**	P	**P**	**12 06 36.0**	**-1.3**
GERES	**GERESS Array B**	**39.97**	**313**	P	**P**	**12 06 36.5**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=106,slow=8.6,SNR=8.4						
GERES				ScP	**ScP**	**12 12 16.7**	**-2.1**
	comp=Z,0.9nm,0.9s,baz=81,slow=6.1,SNR=3.6						
	comp=Z,1.1nm,0.5s						
GERES	**GERESS Array B**	**39.97**	**313**	P	**P**	**12 06 35.9**	**-1.5**
WTTA	**Wattenberg**	**40.98**	**311**	*e*P	**P**	**12 06 44.8**	**-1.0**
	comp=Z,2.5nm,0.3s						
WATA	**Walderalm**	**41.03**	**311**	*e*P	**P**	**12 06 44.8**	**-1.4**
	comp=Z,1.1nm,0.2s						
CLL	**Collm**	**41.05**	**317**	*e*P	**P**	**12 06 46.0**	**-0.1**
SQTA	**Sankt Quirin**	**41.26**	**310**	*e*P	**P**	**12 06 47.1**	**-0.9**
	comp=Z,1.5nm,0.2s						
MOTA	**Moosalm**	**41.35**	**311**	*e*P	**P**	**12 06 47.0**	**-1.8**
	comp=Z,2.9nm,0.2s						
FETA	**Feichten**	**41.55**	**310**	*e*P	**P**	**12 06 49.6**	**-0.8**
	comp=Z,0.4nm,0.1s						
SONM	**Songino Array**	**41.65**	**49**	P	**P**	**12 06 52.5**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=232,slow=7.3,SNR=4.3						
	comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**41.65**	**49**	IAmb	IAmb	12 06 53.6	
	comp=Z,1.3nm,1.0s						
ULN	**Ulaanbaatar**	**42.09**	**49**	*ce*P	**P**	**12 06 55.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
DAVA	**Damuels**	**42.16**	**310**	*e*P	**P**	**12 06 54.4**	**-1.1**
	comp=Z,2.5nm,0.2s						
ECH	**Echery**	**44.12**	**311**	IAmb	IAmb	12 07 09.7	
	comp=Z,2.0nm,0.5s						
ECH				P	**P**	**12 07 09.7**	**-1.3**
BNI	**Bardonecchia**	**44.12**	**307**	P	**P**	**12 07 09.9**	**-1.3**
BNI				IAmb	IAmb	12 07 11.0	
	comp=Z,2.8nm,0.6s						
BNI	**Bardonecchia**	**44.12**	**307**	P	**P**	**12 07 09.9**	**-1.3**
BNI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	**Noril'sk**	**44.42**	**14**	P	**P**	**12 07 13.1**	**0.0**
	comp=Z,7.2nm,0.9s,baz=219,slow=4.4,SNR=6.5						
	comp=Z,7.2nm,0.9s						
NRIK	**Noril'sk**	**44.42**	**14**	P	**P**	**12 07 13.8**	**+0.8**
NRIK				IAmb	IAmb	12 07 15.0	
	comp=Z,6.7nm,1.0s						
NRIK	**Noril'sk**	**44.42**	**14**	*ce*P	**P**	**12 07 13.0**	**0.0**
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**44.77**	**59**	*e*P	**P**	**12 07 16.9**	**+0.5**
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
NB2	**NORSAR Subarra**	**45.40**	**330**	P	**P**	**12 07 19.8**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=110,slow=7.9						
NOA	**NORSAR Array B**	**45.40**	**330**	P	**P**	**12 07 19.7**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=113,slow=7.8,SNR=6.9						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**45.51**	**344**	P	**P**	**12 07 21.2**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=138,slow=8.5,SNR=40						
	comp=Z,1.6nm,0.4s						
ARCES	**ARCESS Array B**	**45.51**	**344**	IAmb	IAmb	12 07 31.0	
	comp=Z,14nm,1.3s						
ARCES	**ARCESS Array B**	**45.51**	**344**	P	**P**	**12 07 21.2**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,14nm,1.3s						
NJ2	**Nanjing**	**51.66**	**70**	P	**P**	**12 08 06.5**	**-2.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ESDC	**Sonseca Array**	**52.17**	**300**	P	**P**	**12 08 12.8**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=72,slow=6.6,SNR=9.8						
	comp=Z,0.8nm,0.4s						
PBRG	**Braganca**	**53.98**	**303**	*e*P	**P**	**12 08 26.1**	**-0.2**
MVO	**Moncorvo**	**54.29**	**302**	*e*P	**P**	**12 08 28.3**	**-0.3**
PBAR	**Barrancos**	**54.78**	**298**	*e*P	**P**	**12 08 31.9**	**-0.2**
	comp=Z,15nm,0.7s						
PVRL	**Vila Real**	**54.78**	**302**	*e*P	**P**	**12 08 32.0**	**-0.1**
PCBR	**Castelo Branco**	**54.83**	**301**	*e*P	**P**	**12 08 32.5**	**+0.1**
	comp=Z,14nm,1.6s						
PMRV	**Marv??o**	**54.83**	**300**	*e*P	**P**	**12 08 32.3**	**-0.2**
TOA0	**Torodi Ar. Sit**	**54.85**	**266**	P	**P**	**12 08 34.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**54.85**	**266**	P	**P**	**12 08 33.8**	**+0.9**
	comp=Z,4.6nm,0.4s,baz=60,slow=7.1,SNR=82						
TORD				pP	**pP**	**12 09 00.3**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=62,slow=7.2,SNR=3.4						
	comp=Z,4.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**54.85**	**266**	P	**P**	**12 08 34.1**	**+1.2**
TORD				IAmb	IAmb	12 08 34.5	
	comp=Z,3.6nm,0.6s						
EVO	**Evora**	**55.47**	**299**	*e*P	**P**	**12 08 37.3**	**+0.3**
PCVE	**Castro Verde**	**55.66**	**298**	*e*P	**P**	**12 08 38.4**	**0.0**
MESJ	**Messejana**	**55.76**	**298**	*e*P	**P**	**12 08 39.1**	**0.0**
PNCL	**Nicolau / Gran**	**55.95**	**299**	*e*P	**P**	**12 08 40.6**	**+0.2**
PFVI	**Vila Bisbo**	**56.37**	**298**	*e*P	**P**	**12 08 43.7**	**+0.2**
TIXI	**Tiksi**	**57.24**	**21**	*ce*P	**P**	**12 08 48.7**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	**Korea Array**	**57.79**	**62**	P	**P**	**12 08 53.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=283,slow=6.5,SNR=7.9						
KSRS				pP	**pP**	**12 09 22.2**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=268,slow=8.2,SNR=4.8						
	comp=Z,1.1nm,0.6s						
KLR	**Kul'dur**	**58.45**	**47**	*i* P	**P**	**12 08 55.3**	**-2.6**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.8s						
DBIC	**Dimbokro**	**63.51**	**263**	P	**P**	**12 09 33.8**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=67,slow=6.1,SNR=4.1						
	comp=Z,1.3nm,0.4s						
DBIC	**Dimbokro**	**63.51**	**263**	P	**P**	**12 09 33.8**	**+1.2**
DBIC				pmax	pmax		
	comp=Z,17nm,1.5s						
BOSA	**Boshof**	**64.94**	**212**	P	**P**	**12 09 43.7**	**+2.0**
	comp=Z,5.4nm,0.6s,baz=39,slow=9.0,SNR=4.8						
	comp=Z,5.4nm,0.6s						
BOSA	**Boshof**	**64.94**	**212**	IAmb	IAmb	12 09 44.4	
	comp=Z,6.1nm,0.6s						
BOSA	**Boshof**	**64.94**	**212**	P	**P**	**12 09 43.7**	**+2.0**
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SEY	**Seymchan**	**66.91**	**30**	*ce*P	**P**	**12 09 53.5**	**-0.3**
SEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BILL	**Bilibino**	**70.39**	**22**	*e*P	**P**	**12 10 15.7**	**+0.4**
BILL				*e*		12 10 37.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
A36M	**Sachs Harbour**	**79.99**	**1**	P	**P**	**12 11 09.9**	**-0.3**
A36M				IAmb	IAmb	12 11 11.1	
	comp=Z,6.5nm,0.9s						
TOLK	**Toolik Lake Re**	**81.18**	**10**		**P**	**12 11 17.3**	**+0.6**
TOLK				IAmb	IAmb	12 11 17.8	
	comp=Z,3.7nm,0.6s						
COLD	**Coldfoot**	**82.36**	**11**		**P**	**12 11 22.8**	**0.0**
BMAR	**Burnt Mountain**	**83.03**	**9**	P	**P**	**12 11 27.2**	**+0.9**
H21K	**Melozitna Rive**	**83.31**	**13**	P	**P**	**12 11 28.1**	**+0.3**
ILAR	**Eielson Array**	**85.17**	**11**	P	**P**	**12 11 35.8**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=324,slow=4.8,SNR=7.5						
ILAR				pP	**pP**	**12 12 06.5**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=335,slow=4.4,SNR=5.5						
ILAR				LR	LR	12 52 52.8	
	comp=Z,78nm,21.7s,baz=112,slow=38						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**85.17**	**11**	P	**P**	**12 11 36.5**	**-0.7**
DAWY	**Dawson**	**86.90**	**8**	P	**P**	**12 11 45.2**	**-0.6**
DAWY				IAmb	IAmb	12 11 46.2	
	comp=Z,2.7nm,0.9s						
WRA	**Warramunga Arr**	**87.44**	**114**	P	**P**	**12 11 51.3**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=321,slow=3.9,SNR=17						
WRA				pP	**pP**	**12 12 20.4**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=317,slow=4.1,SNR=3.6						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**87.44**	**114**	IAmb	IAmb	12 11 59.7	
	comp=Z,0.2nm,1.2s						
ASAR	**Alice Springs**	**89.02**	**117**	P	**P**	**12 11 59.0**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=299,slow=5.3,SNR=6.1						
ASAR				pP	**pP**	**12 12 27.8**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=299,slow=4.6,SNR=4.8						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**89.40**	**357**	P	**P**	**12 11 57.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=0.1,slow=5.1,SNR=12						
YKA				pP	**pP**	**12 12 28.2**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=358,slow=5.0,SNR=3.5						
	comp=Z,0.3nm,0.6s						

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*NEIC **20** 12:11:40.7±1.9, 18°.85N±0°.08×146°.0E±0°.1, h162^{km}±8^{km}, mb4.5/37, Error ellipse: s-maj=19.3km s-min=11.2km az=87.0*

*IDC **20** 12:11:43.6±4.4, 18°.90N×146°.63E, h212^{km}±29^{km}, mb3.5/4, mbtmp4.1/6, Error ellipse: s-maj=106.0km s-min=16.7km az=79.0*

ISC 20 12:11:43.4±0.6**, 18°.86N**±0°.05×**145°.9E**±0°.1**, h200**^{km}**, n62,** σ**1^{s}.44**/61**, mb4.3**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.34**	**191**	P	**Pn**	**12 13 06.5**	**+4.2**
	20nm,0.3s,baz=180,slow=20,SNR=1.4						
GUMO				S	**Sn**	**12 14 02.2**	**-2.3**
	30nm,0.3s,baz=167,slow=22,SNR=4.1						
GUMO	**Guam**	**5.34**	**191**		**Pn**	**12 12 59.2**	**-3.0**
JCJ	**Chichijima**	**8.89**	**338**	P	**Pn**	**12 13 49.6**	**+1.5**
	11nm,0.4s,baz=285,slow=22,SNR=9.0						
JCJ				S	**Sn**	**12 15 24.1**	**-3.8**
	21nm,0.4s,baz=282,slow=22,SNR=6.7						
JCJ	**Chichijima**	**8.89**	**338**		**Pn**	**12 13 44.8**	**-3.4**
JOW	**Kunigami**	**18.08**	**299**	P	**P**	**12 15 40.5**	**+0.3**
JOW				IAmb	IAmb	12 15 55.9	
	comp=Z,58nm,1.2s						
MJAR	**Matsushiro Arr**	**18.87**	**340**	P	**P**	**12 15 48.8**	**+0.1**
MAJO	**Matsushiro**	**18.88**	**340**	P	**P**	**12 15 49.5**	**+0.8**
MJB9	**Matsu-Tunnel**	**18.88**	**340**	P	**P**	**12 15 49.5**	**+0.8**
MJB9				IAmb	IAmb	12 16 01.4	
	comp=Z,11nm,1.4s						
MANU	**Manus Island**	**20.82**	**176**	P	**P**	**12 16 08.9**	**-0.8**
MANU				IAmb	IAmb	12 16 12.6	
	comp=Z,26nm,1.2s						
KSRS	**Korea Array**	**24.31**	**323**	P	**P**	**12 16 46.4**	**+3.8**
	comp=Z,0.3nm,0.3s,baz=130,slow=8.7,SNR=5.3						
	comp=Z,0.3nm,0.3s						
FAKI	**Fak Fak**	**25.49**	**213**	P	**P**	**12 16 52.0**	**-1.5**
FAKI				IAmb	IAmb	12 16 56.5	
	comp=Z,11nm,1.1s						
FAKI	**Fak Fak**	**25.49**	**213**	P	**P**	**12 16 51.8**	**-1.7**
COEN	**Coen**	**32.73**	**185**	P	**P**	**12 17 58.2**	**+0.8**
COEN				IAmb	IAmb	12 18 23.5	
	comp=Z,21nm,1.4s						
COEN	**Coen**	**32.73**	**185**	P	**P**	**12 17 58.0**	**+0.6**
KDU	**Kakadu**	**34.04**	**204**	P	**P**	**12 18 08.3**	**-0.5**
MMRI	**Maumere**	**35.95**	**223**		**P**	**12 18 24.3**	**-0.9**
SBUM	**Sibu**	**36.80**	**248**	P	**P**	**12 18 32.0**	**-0.3**
SBUM				IAmb	IAmb	12 18 32.5	
	comp=Z,4.4nm,0.7s						
MTSU	**Mount Surprise**	**36.80**	**183**	P	**P**	**12 18 33.4**	**+1.1**
KNRA	**Kununurra**	**38.25**	**207**	P	**P**	**12 18 44.5**	**0.0**
KNRA				IAmb	IAmb	12 18 45.0	
	comp=Z,11nm,0.9s						
KNRA	**Kununurra**	**38.25**	**207**	P	**P**	**12 18 44.6**	**+0.1**
CTA	**Charters Tower**	**38.71**	**179**	P	**P**	**12 18 49.2**	**+0.9**
	comp=Z,3.9nm,0.9s,baz=358,slow=11,SNR=1.6						
	comp=Z,3.9nm,0.9s						
PLAI	**Plampang**	**39.08**	**228**	P	**P**	**12 18 51.1**	**-0.4**
QIS	**Mount Isa**	**39.66**	**189**	P	**P**	**12 18 56.9**	**+0.7**
SANVU	**Saraoutou**	**40.02**	**147**	P	P	12 19 05.3	+6.2
WB0	**Warramunga Arr**	**40.02**	**197**	P	**P**	**12 18 59.6**	**+0.5**
WR0	**Warramunga Arr**	**40.16**	**197**	P	**P**	**12 19 00.8**	**+0.5**
WR0				IAmb	IAmb	12 19 01.0	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**40.19**	**197**	P	**P**	**12 19 01.0**	**+0.5**
WRAB	**Tennant Creek**	**40.19**	**197**	P	**P**	**12 19 01.1**	**+0.6**
WB2	**Warramunga Arr**	**40.20**	**197**	P	**P**	**12 19 01.3**	**+0.7**
WRA	**Warramunga Arr**	**40.20**	**197**	P	**P**	**12 19 01.2**	**+0.6**
	comp=Z,15nm,0.6s,baz=21,slow=8.9,SNR=128						
WRA	**Warramunga Arr**	**40.20**	**197**	P	**P**	**12 19 00.0**	**-0.6**
FUNA	**Funafuti**	**42.63**	**127**	P	P	12 19 31.9	+11
	comp=Z,107nm,1.7s						
AS31	**Alice Springs**	**43.87**	**196**	P	**P**	**12 19 30.8**	**+0.6**
ASAR	**Alice Springs**	**43.87**	**196**	P	**P**	**12 19 30.4**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=19,slow=7.7,SNR=45						
	comp=Z,2.7nm,0.7s						
EIDS	**Eidsvold**	**44.25**	**173**	P	**P**	**12 19 33.9**	**+0.7**
EIDS				IAmb	IAmb	12 19 44.9	
	comp=Z,17nm,1.4s						
CMAR	**Chiang Mai Arr**	**44.41**	**277**	P	**P**	**12 19 36.2**	**+1.6**
MYKOM	**Kota Tinggi**	**44.55**	**253**	P	**P**	**12 19 36.2**	**+0.3**
MYKOM				IAmb	IAmb	12 19 37.0	
	comp=Z,8.8nm,0.9s						
RMQ	**Roma**	**45.16**	**176**	P	**P**	**12 19 42.7**	**+2.3**
DZM	**Mont Dzumac**	**45.37**	**153**	P	**P**	**12 19 39.2**	**-3.0**
DZM				IAmb	IAmb	12 19 56.5	
	comp=Z,20nm,1.5s						
YATNC	**Mamie plateau,**	**45.55**	**152**	P	P	12 19 49.4	+5.9
KULM	**Kulim**	**46.13**	**259**	P	**P**	**12 19 48.9**	**+0.7**
KULM				IAmb	IAmb	12 20 12.7	
	comp=Z,6.3nm,1.1s						
INKA	**Innaminka**	**46.60**	**186**	P	**P**	**12 19 53.4**	**+1.9**
WRKA	**Warakurna**	**46.89**	**202**	P	**P**	**12 19 54.6**	**+0.7**
MBWA	**Marble Bar**	**47.33**	**214**	P	**P**	**12 19 57.0**	**-0.2**
MBWA				IAmb	IAmb	12 19 57.1	
	comp=Z,6.9nm,0.5s						
OOD	**Oodnadatta**	**47.43**	**192**	P	**P**	**12 19 58.9**	**+1.0**
PSA00	**Pilbara Seismi**	**47.61**	**214**	P	**P**	**12 19 58.6**	**-0.8**
PSA00				IAmb	IAmb	12 19 59.7	
	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**47.61**	**214**	P	**P**	**12 19 59.3**	**-0.1**
ARMA	**Armidale**	**49.30**	**173**	P	**P**	**12 20 11.8**	**-0.5**
ARMA				IAmb	IAmb	12 20 37.6	
	comp=Z,12nm,1.2s						
GSI	**Gunungsitoli**	**50.47**	**256**	P	**P**	**12 20 21.5**	**+0.1**
STKA	**Stephens Creek**	**50.62**	**185**	P	**P**	**12 20 21.4**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=1.9,slow=9.9,SNR=6.5						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**50.62**	**185**	P	**P**	**12 20 22.2**	**+0.1**
GIRL	**Giralia**	**51.58**	**218**	P	**P**	**12 20 30.5**	**+1.1**
BBOO	**Buckleboo**	**52.24**	**191**	P	**P**	**12 20 34.5**	**+0.4**
BBOO				IAmb	IAmb	12 21 00.6	
	comp=Z,26nm,1.4s						
FORT	**Forrest**	**52.26**	**200**	P	**P**	**12 20 34.6**	**+0.3**
MORW	**Morawa**	**55.71**	**212**	P	**P**	**12 20 59.0**	**-0.2**
MORW				IAmb	IAmb	12 21 08.4	
	comp=Z,18nm,1.4s						
BRLK	**Bradley Lake**	**60.44**	**31**	P	**P**	**12 21 32.4**	**+0.6**
BPAW	**Bear Paw Mtn.**	**61.51**	**26**	P	**P**	**12 21 39.9**	**+1.0**
BPAW				IAmb	IAmb	12 21 46.5	
	comp=Z,6.5nm,1.5s						
TOLK	**Toolik Lake Re**	**63.36**	**22**	P	**P**	**12 21 51.2**	**+0.1**
BKZ	**Black Stump Fm**	**64.43**	**154**	P	**P**	**12 21 59.9**	**+1.5**
BARN	**Barnard Glacie**	**65.17**	**31**	P	**P**	**12 22 02.3**	**-0.8**
BARN				IAmb	IAmb	12 22 21.1	
	comp=Z,4.9nm,1.2s						
C36M	**Paulatuk**	**72.52**	**22**	P	**P**	**12 22 48.6**	**+0.6**
ABKAR	**Akbulak array**	**73.36**	**317**	P	**P**	**12 22 53.9**	**+0.5**

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*IDC **20** 12:12:51.2±0.9, 8°.81N×102°.55W, h0^{km}, mb4.1/8, mbtmp4.1/9, ML3.6/1, MS4.0/43, Error ellipse: s-maj=40.9km s-min=16.8km az=59.0*

*NEIC **20** 12:12:52.7±1.9, 8°.6N±0°.1×102°.8W±0°.1, h10^{km}±1^{km}, mb4.7/108, Error ellipse: s-maj=23.3km s-min=16.7km az=245.0*

*GCMT **20** 12:12:53.7±0.3, 8°.53N±0°.01×102°.99W±0°.02, h14^{km}±1^{km}, MW4.9/102, Moment Tensor Solution. s31,c37; s102,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.10; $M_{\theta\theta}$1.23±.09; $M_{\phi\phi}$-0.92±.10; $M_{r\theta}$-0.98±.23; $M_{\theta\phi}$-2.61±.10; $M_{\phi r}$0.71±.22; Best double couple: $M_0$3.02400×10^{16} NP1:ϕ_s257.00000°,δ76.00000°, λ168.00000°. NP2:ϕ_s350.00000°,δ78.00000°,λ14.00000°. Principal axes: T 3.3740, Plg18.0000°, Azm214.0000°; N -0.7030, Plg72.0000°, Azm30.0000°; P -2.6750, Plg1.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 12:12:53.5±0.7**, 8°.58N**±0°.10×**102°.8W**±0°.1**, h19**^{km}**, n174,** σ**0^{s}.97**/127**, mb4.6**/49**, MS4.0**/42**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**9.82**	**24**		**Pn**	**12 15 14.1**	**+0.2**
CMIG	**Matias Romero**	**11.43**	**41**	Pn	Pn	12 15 32.7	-3.1
	0.4nm,0.3s,baz=226,slow=12,SNR=2.9						
CMIG				LR	LR	12 19 03.2	
	comp=Z,2μm,21.9s,baz=191,slow=34						
	1.5nm,0.4s						
H06E1	**SOCORRO T-PHAS**	**12.86**	**323**	T	T	12 29 00.7	
	SNR=39						
HUEH	**Huehuetenango**	**12.90**	**58**	Pn	**Pn**	**12 15 56.4**	**+0.3**
CCIG	**Comitan**	**12.90**	**53**	Pn	**Pn**	**12 15 55.4**	**-0.7**
MTO3	**Montecristo**	**14.36**	**65**	Pn	**Pn**	**12 16 16.3**	**+0.3**
PETF	**Flores**	**15.06**	**55**	Pn	**Pn**	**12 16 25.4**	**-0.1**
PETF				IAmb	IAmb	12 16 36.1	
	comp=Z,24nm,0.7s						
LPIG	**La Paz**	**17.03**	**336**	LR	LR	12 21 51.0	
	comp=Z,879nm,18.4s,baz=160,slow=32						
MATN	**Matagalpa**	**17.11**	**74**	Pn	**Pn**	**12 16 51.9**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JTS	Las Juntas de	17.66	83	LR	LR	12 22 09.9	
	comp=Z,243nm,20.6s,baz=325,slow=32						
HPIG		18.46	352	P	P	12 17 07.8	-0.6
833A	Chaparral WMA,	19.90	9	P	P	12 17 24.7	+0.8
833A				IAmb	IAmb	12 17 42.4	
	comp=Z,81nm,1.8s						
TX31	Lajitas Ar. Si	20.66	358	P	P	12 17 33.0	+0.6
TX31				IAmb	IAmb	12 17 46.3	
	comp=Z,40nm,1.1s						
TX32	Lajitas Array	20.66	358	P	P	12 17 33.0	+0.7
TXAR	Lajitas Array	20.66	358	P	P	12 17 34.0	+1.6
	comp=Z,2.9nm,0.9s,baz=180,slow=11,SNR=16						
TXAR				LR	LR	12 25 04.8	
	comp=Z,872nm,19.1s,baz=174,slow=36						
TXAR	Lajitas Array	20.66	358	P	P	12 17 33.0	+0.6
SRIG	Santa Rosalia	20.68	336	P	P	12 17 30.7	-1.7
SRIG				IAmb	IAmb	12 17 45.9	
	comp=Z,25nm,1.1s						
JCT	Junction City	21.96	7	P	P	12 17 45.8	-0.5
JCT				IAmb	IAmb	12 17 52.0	
	comp=Z,24nm,1.2s						
HKT	Hockley	22.23	16	P	P	12 17 48.5	-0.6
435B	Jarrell	22.61	12	P	P	12 17 54.4	+1.1
MNTX	Cornudas Mount	23.13	354	P	P	12 17 57.7	-0.9
319A	Douglas	23.48	346	P	P	12 18 01.7	-0.5
319A				IAmb	IAmb	12 18 05.8	
	comp=Z,28nm,1.5s						
ABTX	Abilene, Hawle	24.10	6	P	P	12 18 08.5	+0.5
ABTX				IAmb	IAmb	12 18 11.9	
	comp=Z,39nm,1.4s						
237A	Washetta, Mont	24.19	15	P	P	12 18 09.6	+0.8
237A				IAmb	IAmb	12 19 02.6	
	comp=Z,14nm,0.9s						
NATX	Nacogdoches	24.27	17	P	P	12 18 09.1	-0.5
NATX				IAmb	IAmb	12 18 13.8	
	comp=Z,30nm,1.1s						
121A	Cookes Peak, D	24.28	350	P	P	12 18 10.6	+0.7
121A				IAmb	IAmb	12 18 25.5	
	comp=Z,24nm,1.6s						
TUC	Tucson	24.75	344	P	P	12 18 13.9	-0.1
TUC				IAmb	IAmb	12 18 28.4	
	comp=Z,20nm,1.6s						
Z35A	Perchaven, San	25.15	11	P	P	12 18 18.2	+0.7
MSTX	Muleshoe	25.27	0	P	P	12 18 18.2	-0.5
OTAV	Otavalo	25.61	108	P	P	12 18 21.6	-0.8
OTAV				IAmb	IAmb	12 18 32.3	
	comp=Z,38nm,1.7s						
BNM	Barren Site	25.69	353	P	P	12 18 21.7	-1.1
113A	Mohawk Valley,	26.13	339	P	P	12 18 25.9	-0.6
AMTX	Amarillo	26.20	2	P	P	12 18 24.6	-2.5
AMTX				IAmb	IAmb	12 19 05.9	
	comp=Z,16nm,1.4s						
WMOK	Wichita Mounta	26.29	7	P	P	12 18 26.7	-1.3
ANMO	Albuquerque	26.46	353	P	P	12 18 27.8	-1.9
	comp=Z,0.3nm,0.4s,baz=170,slow=7.9,SNR=1.8						
ANMO				LR	LR	12 28 37.0	
	comp=Z,269nm,18.4s,baz=176,slow=36						
	comp=Z,0.3nm,0.4s						
Y14A	Wickenburg	26.94	341	P	P	12 18 32.1	-1.7
MIAR	Mount Ida	27.19	17	P	P	12 18 36.6	+0.6
MIAR				IAmb	IAmb	12 18 39.9	
	comp=Z,16nm,1.1s						
W39A	Magazine	27.74	16	P	P	12 18 40.9	-0.1
PFO	Pinyon Flats O	27.93	335	LR	LR	12 27 43.7	
	comp=Z,604nm,20.4s,baz=143,slow=32						
TUL1	Leonard	27.94	12	P	P	12 18 43.0	+0.2
WUAZ	Wupatki	27.94	345	P	P	12 18 41.2	-1.7
WUAZ				IAmb	IAmb	12 18 50.0	
	comp=Z,23nm,1.8s						
WHAR	Wooly Hollow	28.27	18	P	P	12 18 46.7	+1.1
WHAR				IAmb	IAmb	12 18 49.2	
	comp=Z,30nm,1.6s						
ROSC	El Rosal	28.50	96	LR	LR	12 26 41.1	
	comp=Z,132nm,18.6s,baz=222,slow=29						
T35A	Sooner Cattle	28.78	10	P	P	12 18 50.0	-0.2
T35A				IAmb	IAmb	12 19 32.9	
	comp=Z,7.4nm,0.8s						
ATAH	Atahualpa	28.88	122	P	P	12 18 53.3	+1.5
	comp=Z,4.7nm,0.9s,baz=295,slow=14,SNR=4.4						
ATAH				LR	LR	12 28 04.9	
	comp=Z,856nm,20.3s,baz=296,slow=32						
	comp=Z,4.7nm,0.9s						
U40A	Yellville	29.09	17	P	P	12 18 53.4	+0.5
SDCO	Great Sand Dun	29.14	356	P	P	12 18 54.2	+0.5
PV11	David Mesa, Pa	30.09	350	P	P	12 19 03.1	+1.1
PV11				IAmb	IAmb	12 19 04.9	
	comp=Z,16nm,1.4s						
R40A	Maddies Statio	31.06	16	P	P	12 19 10.7	+0.4
R40A				IAmb	IAmb	12 19 13.9	
	comp=Z,7.5nm,1.1s						
SDV	Santo Domingo	31.76	87	LR	LR	12 30 39.1	
	comp=Z,227nm,21.7s,baz=276,slow=34						
TKL	Tuckaleechee C	32.06	30	LR	LR	12 33 19.9	
	comp=Z,203nm,21.5s,baz=204,slow=39						
P40A	Paris	32.28	16	P	P	12 19 21.9	+0.8
MPU	Maple Canyon	32.29	347	P	P	12 19 22.3	+0.9
MPU				IAmb	IAmb	12 19 25.5	
	comp=Z,8.1nm,1.1s						
OMMB	Old Mammoth Mi	32.42	336	P	P	12 19 22.1	-0.6
RDMU	Red Mountain	32.43	350	P	P	12 19 22.4	-0.2
Q44A	Meyer Farm, Va	32.62	20	P	P	12 19 25.7	+1.6
Q44A				IAmb	IAmb	12 19 33.9	
	comp=Z,13nm,1.0s						
DUG	Dugway, Tooele	32.73	346	P	P	12 19 26.7	+1.5
NVAR	Mina Array Bea	32.85	337	LR	LR	12 30 41.4	
	comp=Z,200nm,21.7s,baz=131,slow=33						
NNA	Nana	32.90	128	LR	LR	12 30 02.9	
	comp=Z,179nm,21.4s,baz=316,slow=31						
HWUT	Hardware Ranch	33.80	348	P	P	12 19 34.1	-0.4
HWUT				IAmb	IAmb	12 19 41.7	
	comp=Z,8.5nm,1.2s						
EMB	Emerald Bay	34.03	335	P	P	12 19 35.2	-1.5
VCNR	Virginia City	34.12	336	P	P	12 19 38.0	+0.6
VCNR				IAmb	IAmb	12 19 43.9	
	comp=Z,7.0nm,1.0s						
BMN	Battle Mountai	34.23	340	P	P	12 19 37.3	-1.0
BMN				IAmb	IAmb	12 19 52.1	
	comp=Z,13nm,1.4s						
BW06	Boulder Array	34.57	351	P	P	12 19 41.3	0.0
PD31	Pinedale Array	34.57	351	P	P	12 19 42.0	+0.7
PDAR	Pinedale Array	34.57	351	P	P	12 19 42.0	+0.7
	comp=Z,2.0nm,0.9s,baz=168,slow=7.6,SNR=10						
	comp=Z,2.0nm,0.9s						
Q51A	Peebles	34.97	27	P	P	12 19 44.0	-0.5
ORV	Oroville	35.10	334	P	P	12 19 44.2	-1.4
ORV				IAmb	IAmb	12 19 52.1	
	comp=Z,17nm,1.4s						
M44A	Midewin, Midew	35.18	19	P	P	12 19 47.5	+1.2
L42A	Oliver, Polo	35.24	17	P	P	12 19 48.9	+2.1
L42A				IAmb	IAmb	12 19 49.9	
	comp=Z,17nm,1.1s						
RSSD	Black Hills	35.42	358	P	P	12 19 48.4	-0.2
P51A	Williamsport	35.47	27	P	P	12 19 48.4	-0.5
P51A				IAmb	IAmb	12 19 57.4	
	comp=Z,7.3nm,0.8s						
LOHW	Long Hollow	35.56	350	P	P	12 19 49.9	+0.1
RPN	Rapa Nui	36.06	190	LR	LR	12 30 56.5	
	comp=Z,466nm,18.6s,baz=288,slow=30						
Q54A	Coxs Mills	36.12	30	P	P	12 19 55.4	+1.0
WVOR	Wild Horse Val	36.50	340	P	P	12 19 57.9	+0.2
WVOR				IAmb	IAmb	12 20 05.8	
	comp=Z,18nm,1.6s						
O52A	Adamsville	36.54	27	P	P	12 19 58.0	+0.1
SJG	San Juan	36.81	71	LR	LR	12 34 25.0	
	comp=Z,91nm,18.2s,baz=272,slow=35						
MCMT	McKenzie Canyo	37.15	348	P	P	12 20 04.5	+1.1
YBH	Yreka Blue Hor	37.42	335	LR	LR	12 33 20.2	
	comp=Z,121nm,21.7s,baz=152,slow=33						
SPMN	Marine on St.	37.51	12	P	P	12 20 05.8	-0.3
SPMN				IAmb	IAmb	12 20 16.4	
	comp=Z,14nm,1.4s						
GCMT	Greycliff	37.55	352	P	P	12 20 07.2	+0.6
DLMT	Dillon	37.62	349	P	P	12 20 07.9	+0.7
F36A	Milaca	37.99	11	P	P	12 20 10.2	0.0
PLID	Pearl Lake	38.13	345	P	P	12 20 12.3	+0.6
BMO	Blue Mountains	38.27	343	P	P	12 20 13.5	+0.8
PINE	Pine Mountain	38.49	339	P	P	12 20 16.1	+1.4
PINE				IAmb	IAmb	12 20 21.5	
	comp=Z,15nm,1.2s						
AGMN	Agassiz Nation	40.01	7	P	P	12 20 27.4	+0.3
D41A	Chassel	40.22	15	P	P	12 20 29.8	+1.0
B35A	Bob, Littlefor	40.38	9	P	P	12 20 30.2	+0.1
EYMN	Ely	40.38	12	P	P	12 20 29.7	-0.5
TAOE	Nuku Hiva Isla	41.06	246	*e*T	T	13 03 41.8	
	comp=Z,71nm,0.3s						
TAOE				*e*T	T	13 03 41.8	
	comp=Z,71nm,0.3s						
NEW	Newport	41.37	345	P	P	12 20 39.0	+0.7
SADO	Sadowa	41.46	26	LR	LR	12 39 04.0	
	comp=Z,86nm,19.7s,baz=222,slow=38						
ULM	Lac du Bonnet	41.93	7	LR	LR	12 37 14.3	
	comp=Z,223nm,21.0s,baz=210,slow=35						
B08A	Colville Reser	42.04	344	P	P	12 20 44.3	+0.5
B08A				IAmb	IAmb	12 20 56.3	
	comp=Z,22nm,1.9s						
LPAZ	La Paz	42.26	126	P	P	12 20 46.7	0.0
	comp=Z,4.0nm,0.7s,baz=304,slow=4.0,SNR=12						
	comp=Z,4.0nm,0.7s						
LPAZ	La Paz	42.26	126	P	P	12 20 46.0	-0.7
LPAZ				IAmb	IAmb	12 20 58.1	
	comp=Z,18nm,1.3s						
PB16	IPOC Station P	42.35	129	P	P	12 20 46.3	-1.0
SAML	Samuel	43.11	113	P	P	12 20 51.8	-1.2
SAML				IAmb	IAmb	12 20 59.3	
	comp=Z,12nm,0.9s						
PB08	IPOC Station P	43.69	131	P	P	12 20 55.9	-2.2
EDM	Edmonton	45.33	351	P	P	12 21 10.2	-0.1
LVC	Limon Verde	45.40	134	LR	LR	12 35 34.9	
	comp=Z,223nm,21.4s,baz=294,slow=30						
H03N2	Juan Fernandez	47.54	153	T	T	13 12 23.4	
	baz=329,slow=77,SNR=128						
H03N1	Juan Fernandez	47.55	153	T	T	13 12 18.5	
	baz=329,slow=77,SNR=168						
H03N3	Juan Fernandez	47.56	153	T	T	13 12 19.4	
	baz=329,slow=77,SNR=149						
SIV	San Ignacio	47.97	121	LR	LR	12 39 49.9	
	comp=Z,329nm,21.6s,baz=288,slow=34						
BBB	Bella Bella	48.16	339	LR	LR	12 40 04.6	
	comp=Z,117nm,18.9s,baz=142,slow=34						
MDP	Montagnes des	49.87	91	LR	LR	12 40 50.0	
	comp=Z,97nm,20.9s,baz=258,slow=34						
PMOR	Pomariorio Ree	50.49	243	*e*T	T	13 15 32.2	
	comp=Z,3.6nm,0.2s						
PMOR				*e*T	T	13 15 32.2	
	comp=Z,3.6nm,0.2s						
PPT	Papeete	53.04	240	LR	LR	12 38 56.3	
	comp=Z,128nm,18.3s,baz=84,slow=29						
PPT2	Papeete2	53.05	240	*e*LR	LR	12 36 49.3	
	comp=Z,383nm,26.2s						
DLBC	Dease Lake	53.95	343	P	P	12 22 17.6	+1.7
SCHQ	Schefferville	54.26	25	LR	LR	12 47 30.7	
	comp=Z,169nm,18.9s,baz=202,slow=38						
YKA	Yellowknife Ar	54.50	353	P	P	12 22 18.8	-0.9
	comp=Z,0.7nm,0.7s,baz=163,slow=7.5,SNR=12						
YKA				PcP	PcP	12 23 21.5	-1.5
	comp=Z,1.1nm,0.9s,baz=162,slow=3.3,SNR=5.3						
YKA				LR	LR	12 45 57.2	
	comp=Z,328nm,19.5s,baz=185,slow=37						
	comp=Z,0.7nm,0.7s						
TBI	Tubuai	55.59	234	*e*LR	LR	12 38 08.5	
	comp=Z,316nm,28.5s						
TBI	Tubuai	55.59	234	*e*T	T	13 21 54.9	
	comp=Z,5.6nm,0.3s						
TBI				*e*T	T	13 21 54.9	
	comp=Z,5.6nm,0.3s						
CPUP	Villa Florida	56.13	130	P	P	12 22 31.1	-1.0
	comp=Z,4.1nm,0.9s,baz=313,slow=9.4,SNR=6.9						
	comp=Z,4.1nm,0.9s						
CPUP	Villa Florida	56.13	130	P	P	12 22 32.5	+0.4
CPUP				IAmb	IAmb	12 22 33.9	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	57.35	151	LR	LR	12 41 55.5	
	comp=Z,95nm,18.5s,baz=315,slow=30						
BDFB	Brasilia	59.33	114	LR	LR	12 44 55.6	
	comp=Z,47nm,20.5s,baz=12,slow=32						
MCARA	McCarthy VSAT	60.44	339	P	P	12 23 02.0	+0.3
MCARA				IAmb	IAmb	12 23 07.0	
	comp=Z,7.3nm,1.0s						
M27K	Edge Creek, AK	60.72	340	P	P	12 23 04.9	+1.1
M27K				IAmb	IAmb	12 23 21.4	
	comp=Z,6.8nm,1.3s						
DAWY	Dawson	61.17	343	P	P	12 23 06.4	-0.2
DAWY				IAmb	IAmb	12 23 13.3	
	comp=Z,7.0nm,1.1s						
BCAR	Beaver Creek A	61.19	341	P	P	12 23 08.0	+1.2
L27K	Beaver Creek,	61.20	341	P	P	12 23 08.7	+1.9
L27K				IAmb	IAmb	12 23 19.4	
	comp=Z,11nm,1.7s						
I29M	Ogilvie Camp,	61.84	344	P	P	12 23 11.4	+0.3
K27K	Chicken	61.96	342	P	P	12 23 12.5	+0.5
K27K				IAmb	IAmb	12 23 19.9	
	comp=Z,6.1nm,0.8s						
EPYK	Eagle Plains	62.20	345	P	P	12 23 13.7	+0.1
SCRK	Sand Creek	62.54	341	P	P	12 23 15.9	0.0
RIDG	Independent Ri	62.66	340	P	P	12 23 17.4	+0.7
PMR	Palmer	62.83	337	P	P	12 23 18.3	+0.6
INK	Inuvik	63.03	348	P	P	12 23 18.2	-0.7
	comp=Z,2.3nm,1.0s,baz=149,slow=6.7,SNR=5.2						
	comp=Z,2.3nm,1.0s						
INK	Inuvik	63.03	348	P	P	12 23 19.2	+0.3
INK				IAmb	IAmb	12 23 26.0	
	comp=Z,4.3nm,1.0s						
RND	Reindeer	63.83	339	P	P	12 23 26.2	+1.7
IL31		64.01	341	P	P	12 23 26.2	+0.8
IL31				IAmb	IAmb	12 23 31.8	
	comp=Z,5.3nm,0.7s						
ILAR	Eielson Array	64.01	341	P	P	12 23 24.5	-1.0
	comp=Z,2.0nm,0.7s,baz=147,slow=4.9,SNR=21						
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	64.01	341	P	P	12 23 26.4	+0.8
M20K	Styx River	64.57	336	P	P	12 23 28.7	-0.6
NEA2	Nenana	64.63	340	P	P	12 23 29.5	-0.1
H24K	Noodor Dome	65.01	341	P	P	12 23 32.7	+0.6
H24K				IAmb	IAmb	12 23 38.4	
	comp=Z,8.4nm,1.1s						
I23K	Minto, Yukon-K	65.07	340	P	P	12 23 32.3	-0.1
I23K				IAmb	IAmb	12 23 38.9	
	comp=Z,5.5nm,0.9s						
BMAR	Burnt Mountain	65.08	344	P	P	12 23 31.9	-0.6
M19K	Big River Lodg	65.09	336	P	P	12 23 32.7	+0.1
N18K	Kilae Creek	65.09	334	P	P	12 23 31.6	-1.1
K20K	Telida	65.73	337	P	P	12 23 35.4	-1.3
K20K				IAmb	IAmb	12 23 47.9	
	comp=Z,10nm,1.4s						
I21K	Tanana	65.98	340	P	P	12 23 37.6	-0.7
I21K				IAmb	IAmb	12 23 44.7	
	comp=Z,5.7nm,0.9s						
J20K	Nowinta River	66.19	338	P	P	12 23 39.5	-0.2
J20K				IAmb	IAmb	12 23 45.3	
	comp=Z,5.4nm,0.9s						
RES	Resolute Bay	66.22	2	LR	LR	12 53 17.5	
	comp=Z,168nm,19.3s,baz=191,slow=37						
H21K	Melozitna Rive	66.53	340	P	P	12 23 42.7	+0.8
COLD	Coldfoot	66.61	342	P	P	12 23 44.0	+1.6
COLD				IAmb	IAmb	12 23 48.5	
	comp=Z,9.4nm,1.5s						
IMAR	Indian Mountai	67.04	340	P	P	12 23 44.5	-0.6
TOLK	Toolik Lake Re	67.30	343	P	P	12 23 46.9	+0.1
TOLK				IAmb	IAmb	12 23 53.7	
	comp=Z,4.3nm,0.8s						
SFJD	Kangerlussuaq	67.99	20	LR	LR	12 54 40.5	
	comp=Z,100nm,18.9s,baz=240,slow=37						
BORG	Borgarnes	78.64	26	LR	LR	12 59 20.1	
	comp=Z,51nm,19.7s,baz=284,slow=36						
SHEM	Shemya Is, Ala	79.07	322	LR	LR	12 52 09.0	
	comp=Z,82nm,22.0s,baz=104,slow=30						
MSVF	Nonsavu	82.41	251	LR	LR	12 55 47.1	
	comp=Z,55nm,18.8s,baz=46,slow=31						
SPITS	Spitsbergen Ar	87.38	10	LR	LR	13 05 35.8	
	comp=Z,85nm,19.2s,baz=272,slow=36						
URZ	Urewera	87.58	231	LR	LR	12 55 35.4	
	comp=Z,74nm,21.5s,baz=31,slow=29						
EKA	Eskdalemuir Ar	88.44	34	LR	LR	13 05 47.4	
	comp=Z,57nm,18.8s,baz=227,slow=36						
PETK	Petropavlovsk-	88.88	324	LR	LR	12 59 15.0	
	comp=Z,32nm,20.8s,baz=81,slow=31						
ESDC	Sonseca Array	91.30	50	LR	LR	13 04 13.9	
	comp=Z,65nm,18.2s,baz=306,slow=34						
MDT	Midelt	92.20	57	LR	LR	13 01 20.2	
	comp=Z,32nm,21.9s,baz=334,slow=32						
RPZ	Rata Peaks	93.11	226	LR	LR	12 57 51.0	
	comp=Z,77nm,20.1s,baz=88,slow=29						
DZM	Mont Dzumac	93.89	248	LR	LR	13 02 44.8	
	comp=Z,44nm,18.1s,baz=40,slow=32						
ARCES	ARCESS Array B	94.40	16	LR	LR	13 08 35.6	
	comp=Z,130nm,21.9s,baz=285,slow=36						
DBIC	Dimbokro	96.79	82	LR	LR	13 07 13.6	
	comp=Z,24nm,19.9s,baz=313,slow=34						
DAVOX	Davos/Dischmat	98.86	40	LR	LR	13 08 45.0	
	comp=Z,52nm,19.6s,baz=263,slow=34						
FINES	FINESS Array B	99.68	22	LR	LR	13 13 56.5	
	comp=Z,61nm,18.3s,baz=320,slow=37						
WRA	Warramunga Arr	123.74	252	PKP	PKiKP	12 31 53.5	+2.2
	comp=Z,0.8nm,0.8s,baz=88,slow=1.6,SNR=7.6						
ASAR	Alice Springs	123.87	247	PKP	PKPdf	12 31 53.0	+1.9
	comp=Z,0.5nm,0.7s,baz=82,slow=1.8,SNR=4.7						
PZH	PanZhiHua	137.78	326	PKP	PKPdf	12 32 16.8	-0.8
CMAR	Chiang Mai Arr	145.63	322	PKPbc	PKPdf	12 32 32.0	+0.4
	comp=Z,1.4nm,0.7s,baz=4.4,slow=2.5,SNR=6.8						
CMAR	Chiang Mai Arr	145.63	322		PKPdf	12 32 29.5	-2.1

IDC 20 12:34:14.2±2.0**,2°.81N**×**126°.36E,h0^{km},mb3.5**/4**,**
mbtmp3.5/4**,Error ellipse: s-maj=182.6km**
s-min=25.6km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.93	161	P	P	12 39 30.1	-0.1
	0.6nm,0.4s,baz=340,slow=11,SNR=24						
	0.6nm,0.4s						
ASAR	Alice Springs	27.32	165	P	P	12 40 01.2	+0.2
	0.1nm,0.4s,baz=346,slow=12,SNR=2.0						
	0.1nm,0.4s						
STKA	Stephens Creek	37.41	158	P	P	12 41 29.3	+0.2
	0.6nm,0.3s,baz=315,slow=11,SNR=4.2						
	0.6nm,0.3s						
MKAR	Makanchi Array	58.10	326	P	P	12 44 09.2	-0.4
	0.3nm,0.5s,baz=115,slow=8.8,SNR=4.2						
	0.3nm,0.5s						

TUL ***20*** *12:49:17.8±1.3,36°.69N±0°.02×98°.71W±0°.02,h5^{km}±5^{km},*
ML2.7,mb_Lg2.5/37(NEIC),Error ellipse: s-maj=2.9km
s-min=1.8km az=118.0
NEIC 20 12:49:18±1.2**,36°.70N**±0°.01×**98°.70W**±0°.02**,h8^{km}**±4^{km}**,**
Error ellipse: s-maj=2.0km s-min=1.8km az=153.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.40	217	Pg	Pg	12 49 25.7	-0.1
U32A				Sg	Sg	12 49 31.4	+0.4
ADOK	Arcadia Dam	1.50	134	Pn	Pn	12 49 44.9	-0.4
R32A	Long Quarter,	1.72	360		Pb	12 49 49.3	-0.6
R32A				IAmb_Lg		12 50 12.9	
	comp=Z,20nm,0.7s						
T35A	Sooner Cattle	1.77	82		Pb	12 49 50.0	-0.8
FNO	Franklin	1.79	143	Pn	Pn	12 49 49.1	-0.1
FNO					Pb	12 49 50.1	-0.9
WMOK	Wichita Mounta	1.96	182		Pn	12 49 52.0	+0.4
X34A	Smith Ranch, M	2.21	161		Pn	12 49 56.0	+1.0
CBKS	Cedar Bluff	2.27	339	Pn	Pn	12 49 56.1	+0.2
TUL1	Leonard	2.48	108	Pn	Pn	12 49 58.5	-0.2
TUL1				IAmb_Lg		12 50 38.3	
	comp=Z,15nm,1.0s						
KSU1	Kansas State U	2.91	34	Pn	Pn	12 50 03.1	-1.6
AMTX	Amarillo	3.02	234	Pn	Pn	12 50 04.8	-1.5
AMTX				IAmb_Lg		12 51 00.6	
	comp=Z,16nm,0.8s						
X37A	Clayton	3.44	127	IAmb_Lg		12 51 15.0	
	comp=Z,15nm,0.9s						
KSCO	Kaye Shedlock'	3.87	308	IAmb_Lg		12 51 28.0	
	comp=Z,8.7nm,0.7s						
W39A	Magazine	4.26	109	IAmb_Lg		12 51 44.7	
	comp=Z,10nm,0.8s						
MSTX	Muleshoe	4.30	232	Pn	Pn	12 50 22.2	-1.7
S39A	Bolivar	4.41	75	Pn	Pn	12 50 23.7	-1.5
S39A				IAmb_Lg		12 51 39.9	
	comp=Z,6.9nm,0.7s						
T25A	Trinidad	4.59	277	IAmb_Lg		12 51 44.8	
	comp=Z,14nm,1.1s						
U40A	Yellville	4.72	92	Pn	Pn	12 50 28.6	-1.0
U40A				IAmb_Lg		12 51 46.9	
	comp=Z,12nm,0.8s						
P38A	Dawn	5.01	53	IAmb_Lg		12 51 59.2	
	comp=Z,6.3nm,0.8s						
MGMO	Mountain Grove	5.18	83	Pn	Pn	12 50 35.1	-0.7
X40A	Basin Creek Fa	5.27	113	IAmb_Lg		12 52 14.1	
	comp=Z,7.1nm,0.8s						
WHAR	Wooly Hollow	5.39	103	IAmb_Lg		12 52 08.8	
	comp=Z,7.0nm,0.9s						
W41B	Gary Mavity, V	5.46	104	IAmb_Lg		12 52 16.1	
	comp=Z,10nm,1.0s						
Q24A	Divide	5.58	296	IAmb_Lg		12 52 24.3	
	comp=Z,8.3nm,0.8s						
P40A	Paris	5.96	60	IAmb_Lg		12 52 27.6	
	comp=Z,9.6nm,0.9s						
LCAR	Lake Charles	6.12	94	IAmb_Lg		12 52 48.3	
	comp=Z,4.7nm,1.1s						
JCT	Junction City	6.27	189	IAmb_Lg		12 52 40.4	
	comp=Z,11nm,1.2s						
PHWY	Pilot Hill	6.98	313	IAmb_Lg		12 53 00.4	
	comp=Z,8.2nm,1.3s						
N23A	Red Feather La	7.04	309	IAmb_Lg		12 53 16.2	
	comp=Z,7.6nm,0.9s						

IDC 20 12:54:36.9±17.0**,0°.74S**×**123°.66E,h0^{km},mb3.3**/3**,**
mbtmp3.3/3**,Error ellipse: s-maj=269.5km**
s-min=178.1km az=164.0,Minahassa Peninsula,
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.76	152	P	P	12 59 30.2	-0.1
	0.2nm,0.3s,baz=330,slow=11,SNR=7.4						
	0.2nm,0.3s						
ASAR	Alice Springs	24.86	157	P	P	13 00 02.2	+0.8
	0.5nm,1.0s,baz=342,slow=14,SNR=7.2						
	0.5nm,1.0s						
STKA	Stephens Creek	35.30	153	P	P	13 01 32.9	-1.0
	0.5nm,0.3s,baz=312,slow=12,SNR=1.9						
	0.5nm,0.3s						

VIE ***20*** *13:14:42.7±0.1,47°.48N×13°.23E,h0^{km},mb2.5/21,*
ml2.9/21,Error ellipse: s-maj=0.9km s-min=0.8km az=70.0
long-period event 3 km E of Werfen Suspected Mining
induced.
BGR ***20*** *13:14:43.4±0.4,47°.48N×13°.16E,h10^{km},ML2.5/4,Error*
ellipse: s-maj=7.8km s-min=5.6km az=78.0
PRU ***20*** *13:14:44.8±0.0,47°.55N×13°.35E,h0^{km},Werfen*
LDG ***20*** *13:14:45.0±0.2,47°.44N×13°.20E,h6^{km},Ml3.3/8,Error*
ellipse: s-maj=5.5km s-min=3.6km az=11.0
ISC 20 13:14:42.1±0.7**,47°.51N**±0°.02×**13°.21E**±0°.01**,h0^{km},n57,**
σ**1^{s}.52**/100**,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIOA	Bad Ischl, Aus	0.34	58	*i* Pg	Pg	13 14 49.2	+0.6
BIOA				*e*Sg	Sg	13 14 54.5	+1.4
RJOB	Jochberg	0.36	309	*e*Pg	Pg	13 14 49.9	+1.0
KBA	Koelnbreinsper	0.45	168	*e*Pg	Pg	13 14 51.1	+0.5
	54nm,0.3s,SNR=54						
KBA				*e*Sg	Sg	13 14 57.1	+0.8
	141nm,0.5s						
KBA	Koelnbreinsper	0.45	168	*e*Pg	Pg	13 14 51.1	+0.5
MOA	Molln	0.79	64	*e*Pg	Pb	13 14 58.4	-0.3
	6.6nm,0.3s						
MOA				*e*Sg	Sb	13 15 09.3	-0.7
	34nm,0.4s						
MOA	Molln	0.79	64	*e*Pg	Pb	13 14 58.4	-0.3
ABTA	Abfaltersbach	0.90	212	*e*Pg	Pg	13 14 60.0	+0.6
	24nm,0.5s,SNR=8.6						
ABTA				*e*Sg	Sg	13 15 11.6	+0.6
	25nm,0.5s						
MYKA	Terra Mystica	0.93	161	*i* Pg	Pg	13 14 59.7	-0.3
	1.7nm,0.1s						
MYKA				*e*Sg	Sg	13 15 12.3	+0.3
	12nm,0.3s						
WTTA	Wattenberg	1.10	257	*e*Pg	Pb	13 15 03.7	-0.3
	16nm,0.2s,SNR=24						
WTTA				*e*Sg	Sb	13 15 19.0	+0.1
	62nm,0.4s						
WTTA	Wattenberg	1.10	257	*e*Pg	Pg	13 15 03.4	+0.3
WATA	Walderalm	1.12	261	*e*Pg	Pb	13 15 04.4	0.0
	18nm,0.6s,SNR=9.9						
WATA				*e*Sg	Sb	13 15 20.2	+0.6
	38nm,0.3s						
OBKA	Obir	1.36	137	*e*Pg	Pg	13 15 07.9	-0.2
	14nm,0.3s						
OBKA				*e*Sg	Sb	13 15 26.1	-0.3
	36nm,0.4s						
OBKA	Obir	1.36	137	*e*Pg	Pg	13 15 07.8	-0.4
GEC2	GERESS Array S	1.37	14	*e*Pn	Pb	13 15 09.6	+0.9
GEC2				*e*Sg	Sn	13 15 28.3	+0.7

SQTA	**Sankt Quirin**	**1.39**	**259**	ePg	**Pb**	**13 15 09.3**	**+0.3**
	41nm,0.5s,SNR=27						
SQTA				Sg	**Sn**	**13 15 30.2**	**+2.2**
	228nm,0.8s						
MOTA	**Moosalm**	**1.44**	**264**	ePg	**Pb**	**13 15 10.6**	**+0.7**
	41nm,0.6s,SNR=27						
MOTA				Sg	**Sn**	**13 15 32.4**	**+3.2**
	193nm,0.8s						
CKRC	**Cesky Krumlov**	**1.50**	**29**	ePG	**Pg**	**13 15 11.0**	**+0.2**
CKRC				eSG	**Sn**	**13 15 30.9**	**+0.3**
SOKA	**Soboth**	**1.50**	**123**	Pg	**Pn**	**13 15 10.3**	**0.0**
	7.7nm,0.3s,SNR=10						
SOKA				Sg	**Sn**	**13 15 31.3**	**+0.7**
	20nm,0.4s						
ARSA	**Arzberg**	**1.60**	**99**	ePg	**Pg**	**13 15 13.1**	**+0.4**
	12nm,0.3s,SNR=9.5						
ARSA				eSg	**Sg**	**13 15 34.9**	**+1.6**
	44nm,0.7s						
ARSA	**Arzberg**	**1.60**	**99**	ePn	**Pg**	**13 15 12.5**	**-0.1**
KHC	**Kasperske Hory**	**1.64**	**9**	ePG	**Pb**	**13 15 13.0**	**-0.2**
KHC				eSG	**Sg**	**13 15 37.2**	**+2.5**
	comp=Z,174nm,0.8s						
WET	**Wettzell**	**1.65**	**352**	ePn	**Pb**	**13 15 13.0**	**-0.3**
WET				eSg	**Sg**	**13 15 35.2**	**+0.2**
RETA	**Reutte**	**1.66**	**270**	ePg	**Pg**	**13 15 15.0**	**+1.2**
	13nm,0.4s,SNR=11						
RETA				eSg	**Sg**	**13 15 38.4**	**+3.1**
	126nm,0.8s						
FETA	**Feichten**	**1.76**	**255**	Pn	**Pn**	**13 15 14.7**	**+0.8**
	9.4nm,0.4s,SNR=16						
FETA				eSg	**Sg**	**13 15 41.9**	**+3.4**
	1.6nm,0.2s						
CONA	**Conrad Observa**	**1.84**	**76**	ePn	**Pb**	**13 15 16.2**	**-0.4**
	13nm,0.4s,SNR=9.3						
CONA				eSn	**Sb**	**13 15 40.5**	**+0.2**
	24nm,0.3s						
RONA	**Rosalia, Austr**	**2.10**	**84**	ePn	**Pb**	**13 15 20.5**	**-0.5**
RONA				eSg	**Sg**	**13 15 50.3**	**+0.8**
DAVA	**Damuels**	**2.27**	**265**	ePg	**Pg**	**13 15 25.4**	**-0.2**
	30nm,0.6s,SNR=11						
DAVA				eSg	**Sg**	**13 15 57.4**	**+2.4**
	55nm,0.6s						
SMRN	**Sveta Marina**	**2.56**	**165**	ePn	**Pn**	**13 15 26.3**	**+1.5**
SMRN				Sn	**Sb**	**13 15 59.2**	**-1.7**
PRU	**Pruhonice**	**2.63**	**19**	ePG	**Pg**	**13 15 32.0**	**-0.5**
PRU				eSG	**Sg**	**13 16 06.1**	**-0.4**
	comp=Z,53nm,0.6s						
KRUC	**Moravsky**	**2.63**	**53**	ePN	**Pn**	**13 15 25.3**	**-0.5**
KRUC				eSN	**Sn**	**13 15 59.8**	**+1.3**
BRJN	**Brijuni**	**2.63**	**172**	ePn	**Pb**	**13 15 29.7**	**-0.4**
BRJN				Sn	**Sb**	**13 16 03.1**	**+0.1**
NKC	**Novy Kostel**	**2.77**	**350**	ePG	**Pg**	**13 15 35.8**	**+0.7**
NKC				eSG	**Sg**	**13 16 12.7**	**+1.7**
	comp=Z,30nm,0.5s						
MODS	**Modra-Piesok**	**2.87**	**71**	ePG	**Pg**	**13 15 37.7**	**+0.7**
MODS				eSN	**Sn**	**13 16 05.1**	**+0.8**
VRAC	**Vranov**	**2.88**	**50**	ePN	**Pn**	**13 15 28.8**	**-0.5**
VRAC				eSN	**Sn**	**13 16 05.5**	**+0.8**
PVCC	**Panska Ves**	**3.15**	**16**	eSG	**Sg**	**13 16 23.7**	**+0.5**
	comp=Z,76nm,0.5s						
KRLC	**Kraliky**	**3.49**	**41**	eSG	**Sg**	**13 16 33.0**	**-1.0**
	comp=Z,61nm,0.6s						
DPC	**Dobruska-Polom**	**3.50**	**35**	eSG	**Sg**	**13 16 33.4**	**-1.2**
	comp=Z,36nm,0.7s						
UPC	**Upice**	**3.52**	**31**	eSG	**Sg**	**13 16 33.7**	**-1.4**
	comp=Z,62nm,0.5s						
MAUC	**Maruska**	**3.59**	**57**	eSG	**Sg**	**13 16 34.9**	**-2.5**
	comp=Z,52nm,0.6s						
CHVC	**Chvalec**	**3.60**	**30**	ePN	**Pn**	**13 15 39.5**	**+0.3**
CHVC				eSG	**Sg**	**13 16 36.8**	**-0.9**
	comp=Z,31nm,0.7s						
OSTC	**Ostas**	**3.63**	**32**	ePN	**Pn**	**13 15 40.0**	**+0.4**
OSTC				eSG	**Sg**	**13 16 37.6**	**-1.1**
	comp=Z,51nm,0.6s						
MORC	**Moravsky Berou**	**3.66**	**50**	eSN	**Sn**	**13 16 24.0**	**+0.2**
DUGI	**Dugi Otok**	**3.75**	**159**	ePn	**Pn**	**13 15 42.3**	**+1.1**
DUGI				Sn	**Sn**	**13 16 27.0**	**+1.0**
CLL	**Collm**	**3.80**	**358**	ePn	**Pn**	**13 15 43.0**	**+1.2**
CLL				ePg	**Pg**	**13 15 57.0**	**+2.1**
CLL				i Sg	**Sg**	**13 16 44.2**	**+0.1**
	comp=Z,31nm,0.8s						
KSP	**Ksiaz**	**3.90**	**30**	eSg	**Sg**	**13 16 46.7**	**-0.6**
OKC	**Ostrava-Krasne**	**4.01**	**53**	eSG	**Sg**	**13 16 48.3**	**-2.7**
	comp=Z,39nm,0.7s						
CDF	**Champ du Feu**	**4.08**	**285**	ePg	**Pg**	**13 16 00.9**	**+0.6**
CDF				eSn	**Sn**	**13 16 30.7**	**-3.7**
CDF				eSg	**Sg**	**13 16 53.4**	**+0.1**
	comp=Z,35nm,0.8s						
ZIRJ	**Zirje**	**4.22**	**155**	ePn	**Pn**	**13 15 48.2**	**+0.6**
ZIRJ				Sn	**Sn**	**13 16 37.2**	**-0.4**
HINF	**Hinteralfeld**	**4.30**	**276**	ePn	**Pn**	**13 15 48.3**	**-0.5**
HINF				eSn	**Sn**	**13 16 36.6**	**-3.1**
HINF				eSg	**Sg**	**13 16 59.8**	**-0.5**
	comp=Z,19nm,0.8s						
CABF	**La Chapelle**	**4.95**	**262**	ePg	**Pg**	**13 16 16.8**	**-0.1**
CABF				eSg	**Sg**	**13 17 19.6**	**-1.4**
	comp=Z,28nm,1.0s						
PAGF	**Fort de Pagny**	**5.13**	**284**	ePn	**Pn**	**13 16 01.4**	**+1.3**
PAGF	**Fort de Pagny**	**5.13**	**284**	ePg	**Pg**	**13 16 19.5**	**-0.8**
	baz=101						
PAGF				eSg	**Sg**	**13 17 25.4**	**-1.3**
	comp=Z,36nm,0.9s						
MBDF	**Montbardon**	**5.27**	**240**	eP	**Pn**	**13 16 06.0**	**+3.8**
ORIF	**Oris-en-Rattie**	**5.71**	**246**	ePn	**Pn**	**13 16 09.0**	**+0.8**
SMF	**Signal de Mont**	**6.46**	**266**	ePn	**Pn**	**13 16 18.1**	**-0.2**
SMF				eSn	**Sn**	**13 17 27.6**	**-5.1**
	comp=Z,2.2nm,0.2s						
BGF	**Bois d'Agland**	**7.14**	**266**	ePn	**Pn**	**13 16 27.5**	**-0.3**
BGF	**Bois d'Agland**	**7.14**	**266**	ePg	**Pg**	**13 16 56.4**	**-2.5**
BGF				eSn	**Sn**	**13 17 44.4**	**-5.2**
	comp=Z,8.1nm,0.3s						
BGF				eSg	**Sg**	**13 18 27.9**	**-3.5**
	comp=Z,4.8nm,0.3s						

*PRU **20** 13:15:13.0±0.0,50°.30N×19°.00E,h0^{km}*
ISC 20 13:15:12.2±1.2,**50°.30N**±0°.08×**19°.02E**±0°.04,**h10**^{km},**n9**, σ**0^{s}.40**/16,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.51**	**99**	ePg	**Pb**	**13 15 23.2**	**-0.1**
OJC				eSg	**Sb**	**13 15 30.8**	**+0.1**
OKC	**Ostrava-Krasne**	**0.73**	**231**	ePG	**Pb**	**13 15 27.0**	**0.0**
OKC				eSG	**Sb**	**13 15 36.9**	**-0.1**
	comp=Z,7.1nm,0.4s						
MORC	**Moravsky Berou**	**1.09**	**242**	ePG	**Pg**	**13 15 32.9**	**-0.2**
MORC				eSG	**Sb**	**13 15 47.3**	**-0.1**
LANS	**Liptovska Anna**	**1.19**	**166**	ePG	**Pn**	**13 15 35.3**	**+0.4**
LANS				eSG	**Sn**	**13 15 50.2**	**-1.0**
LANS				eLG	Lg	13 15 52.5	
MAUC	**Maruska**	**1.21**	**220**	ePG	**Pg**	**13 15 35.2**	**-0.3**
MAUC				eSG	**Sn**	**13 15 52.3**	**+0.6**
	comp=Z,15nm,0.6s						
KRLC	**Kraliky**	**1.45**	**262**	ePG	**Pn**	**13 15 39.0**	**+0.4**
KRLC				eSG	**Sb**	**13 15 58.2**	**+0.2**
	comp=Z,9.5nm,0.8s						
DPC	**Dobruska-Polom**	**1.73**	**273**	ePG	**Pb**	**13 15 43.6**	**-0.5**
DPC				eSG	**Sg**	**13 16 07.8**	**0.0**
VYHS	**Vyhne**	**1.81**	**184**	eSN	**Sn**	**13 16 06.8**	**+0.3**
VYHS	**Vyhne**	**1.81**	**184**	ePN	**Pn**	**13 15 43.8**	**+0.3**

*IDC **20** 13:21:21.1±2.0,15°.23S×175°.20W,h259^{km}±21^{km},mb3.3/7, mbtmp3.9/8,Error ellipse: s-maj=37.6km s-min=16.0km az=147.0*
ISC 20 13:21:20.4±0.8,**15°.3S**±0°.3×**175°.2W**±0°.1,**h250**^{km},**n9**, σ**1^{s}.14**/10,**mb3.4**/7,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.53**	**68**	P	**Pn**	**13 22 20.4**	**+1.5**
	60nm,0.6s,baz=176,slow=1.3,SNR=11						
AFI				S	**S**	**13 23 03.6**	**-1.7**
	60nm,0.4s,baz=235,slow=22,SNR=9.0						
MSVF	**Nonsavu**	**6.97**	**248**	P	Pn	13 23 06.7	+5.9
	14nm,0.9s,baz=113,slow=14,SNR=5.3						
STKA	**Stephens Creek**	**42.65**	**239**	P	**P**	**13 28 52.1**	**-0.6**
	0.6nm,0.6s,baz=76,slow=12,SNR=1.5						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**48.23**	**257**	P	**P**	**13 29 36.0**	**-0.6**
	0.3nm,0.3s,baz=87,slow=8.0,SNR=22						
WRA				PcP	**sP**	**13 30 58.6**	**+1.6**
	0.1nm,0.4s,baz=85,slow=3.2,SNR=3.2						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**13 29 38.8**	**-0.2**
	2.2nm,0.3s,baz=86,slow=8.1,SNR=47						
	2.2nm,0.3s						
VNDA	**Vanda**	**63.35**	**185**	P	**P**	**13 31 22.4**	**-0.2**
	2.9nm,1.3s,baz=37,slow=5.1,SNR=3.9						
	2.9nm,1.3s						
TXAR	**Lajitas Array**	**81.94**	**57**	P	**P**	**13 33 13.2**	**+0.4**
	0.6nm,0.9s,baz=241,slow=2.6,SNR=4.3						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**82.64**	**12**	P	**P**	**13 33 14.8**	**-0.6**
	0.4nm,0.5s,baz=232,slow=5.0,SNR=9.3						
	0.4nm,0.5s						
PDAR	**Pinedale Array**	**83.30**	**42**	P	**P**	**13 33 19.4**	**-0.2**
	0.9nm,0.7s,baz=214,slow=5.0,SNR=4.1						
	0.9nm,0.7s						

*IDC **20** 13:30:45.9±0.6,2°.46N×121°.03E,h671^{km}±7^{km},mb4.0/38, mbtmp5.0/41,Error ellipse: s-maj=7.4km s-min=4.9km az=70.0*
*DJA **20** 13:30:45.6±0.2,2°N±3°×12°1E±°,h661^{km}±3^{km},M4.6/45, mB5.2/41,mb5.0/45,MLv5.1/22,Mw(mB)4.5/41, MwMwp7.0/1,Mwp6.8/1*
*NEIC **20** 13:30:46.7±2.1,2°.46N±0°.08×120°.99E±0°.09,h673^{km}±5^{km}, mb4.8/105,Error ellipse: s-maj=13.9km s-min=11.8km az=68.0*
ISC 20 13:30:45.7±0.4,**2°.45N**±0°.03×**121°.01E**±0°.05,**h668**^{km}±5^{km}, **n403**,σ**1^{s}.01**/452,**mb4.8**/98,**88C-55D**,**Fault plane solution: NP1:**ϕ_s292.28934°,δ46.48777°,λ59.52029°. **NP2:**ϕ_s152.81462°,δ51.31727°,λ118.11487°. **Principal axes:** T Plg68.2480°, Azm126.8618°; N Plg21.5837°, Azm314.3488°; P Plg2.5736°, Azm223.3300°; **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**1.35**	**190**	P	**P**	**13 32 03.2**	**-1.1**
MRSI	**Marisa**	**2.17**	**155**	P	**P**	**13 32 05.8**	**-1.0**
MPSI	**Mapaga**	**2.38**	**208**	P	**P**	**13 32 07.5**	**-0.1**
GTOI	**Gorontalo**	**2.70**	**132**	P	**P**	**13 32 07.1**	**-1.9**
APSI	**Ampana**	**3.40**	**169**	P	**P**	**13 32 11.8**	**-0.8**
KMSI	**Cibinong**	**3.51**	**122**	P	**P**	**13 32 12.0**	**-1.2**
MYLDM	**Lahad Datu**	**3.69**	**317**	P	**P**	**13 32 15.3**	**+1.1**
LUWI	**Luwuk**	**3.90**	**153**	P	**P**	**13 32 13.9**	**-1.6**
LUWI	**Luwuk**	**3.90**	**153**	P	**P**	**13 32 13.7**	**-1.8**
SGSI	**Sangihe**	**4.68**	**75**	P	**P**	**13 32 19.0**	**-1.6**
SMKI	**Samarinda**	**4.77**	**233**	P	**P**	**13 32 22.7**	**+1.5**
BKB	**Balikpapan**	**5.52**	**228**	P	**P**	**13 32 27.6**	**+0.8**
	2.5nm7µm760nm,1.0s						
TTSI	**Tana Toraja**	**5.59**	**192**	P	**P**	**13 32 26.2**	**-1.1**
	0.7nm3µm160nm,0.9s						
CTBH	**Cotabato--PC H**	**5.73**	**34**	⇓iP	**P**	**13 32 28.4**	**+0.1**
PAGZ	**Pagadian**	**5.86**	**24**	⇓iP	**P**	**13 32 30.0**	**+0.7**
DDMP	**Don Marcelino,**	**5.93**	**52**	⇓eP	**P**	**13 32 28.8**	**-1.1**
KCP	**Kidapawan**	**6.08**	**42**	⇑iP	**P**	**13 32 30.7**	**-0.5**
KCP				i S	**S**	**13 33 57.9**	**+0.6**
DAV	**Davao City (W)**	**6.46**	**45**	P	**P**	**13 32 35.7**	**+1.5**
	2µm,0.7s,baz=177,slow=0.9,SNR=40						
DAV				S	**S**	**13 34 03.8**	**+1.0**
	190nm,0.4s,baz=233,slow=20,SNR=1.5						
DAV	**Davao City (W)**	**6.46**	**45**	P	**P**	**13 32 35.4**	**+1.2**
SPSI	**Sidrap Palu**	**6.49**	**191**	P	**P**	**13 32 32.9**	**-1.6**
	0.6nm2µm128nm,0.6s						
TNTI	**Ternate**	**6.57**	**105**	P	**P**	**13 32 33.6**	**-1.5**
TNTI	**Ternate**	**6.57**	**105**	P	**P**	**13 32 33.7**	**-1.5**
	1.5nm4µm440nm,1.0s						
SANI	**Sanana**	**6.69**	**132**	P	**P**	**13 32 34.5**	**-1.6**
	1.2nm3µm330nm,0.8s						
BNSI	**Bone**	**6.87**	**188**	P	**P**	**13 32 36.2**	**-1.4**
	0.4nm2µm132nm,1.0s						
MATI	**Mati**	**6.88**	**49**	⇓eP	**P**	**13 32 36.7**	**-0.9**
MTKI	**Muara Teweh, K**	**6.98**	**241**	P	**P**	**13 32 38.8**	**+0.3**
	1.3nm342nm,0.9s						
BATP	**Bataraza**	**7.06**	**333**	⇓eP	**P**	**13 32 39.3**	**+0.1**
LBMI	**Labuha**	**7.18**	**115**	P	**P**	**13 32 39.7**	**-0.6**
	1.2nm4µm339nm,0.9s						
SNPH	**Sibulan**	**7.19**	**18**	eP	**P**	**13 32 40.6**	**+0.2**
CNOP	**Candoni, Negro**	**7.50**	**12**	⇓iP	**P**	**13 32 42.8**	**-0.2**
KAPI	**Kappang**	**7.52**	**190**	P	**P**	**13 32 42.5**	**-0.7**
	139nm,0.7s,baz=0.5,slow=4.3,SNR=69						
KAPI				S	**S**	**13 34 18.1**	**-1.1**
	13nm,0.4s,baz=101,slow=24,SNR=7.3						
KAPI	**Kappang**	**7.52**	**190**	P	**P**	**13 32 42.4**	**-0.8**
TBP	**Tagbilaran**	**7.73**	**21**	⇓iP	**P**	**13 32 44.7**	**-0.3**
TBP				eS	**S**	**13 34 21.3**	**-1.2**
BKSI	**Bulukumba**	**7.77**	**187**	P	**P**	**13 32 44.1**	**-1.3**
	0.4nm1µm128nm,0.9s						
BUTP	**Butuan**	**7.93**	**35**	⇓eP	**P**	**13 32 45.8**	**-1.0**
CUYO	**Cuyo Island**	**8.34**	**0**	⇓eP	**P**	**13 32 50.8**	**+0.4**
LLP	**Lapu-Lapu**	**8.35**	**20**	⇓eP	**P**	**13 32 49.4**	**-1.1**
LLP				eS	**S**	**13 34 30.7**	**-1.8**
BBKI	**Banjar Baru**	**8.52**	**226**	P	**P**	**13 32 51.7**	**-0.3**
	5µm404nm,0.9s						
MSLP	**Maasin**	**8.54**	**26**	⇓eP	**P**	**13 32 51.4**	**-0.7**
BSSI	**Bau Bau, Buton**	**8.55**	**183**	P	**P**	**13 32 51.5**	**-0.9**
	1µm129nm,1.0s						
SBUM	**Sibu**	**8.78**	**270**	P	**P**	**13 32 54.7**	**+0.3**
ENPP	**El Nido**	**8.84**	**350**	⇓eP	**P**	**13 32 55.3**	**+0.4**
GLSP	**General Luna,**	**8.88**	**35**	⇓eP	**P**	**13 32 54.0**	**-1.4**
RCP	**Roxas**	**9.21**	**11**	⇑eP	**P**	**13 32 57.8**	**-0.6**
AAI	**Ambon**	**9.42**	**130**	P	**P**	**13 32 58.7**	**-1.7**
	2µm184nm,1.0s						
MSAI	**Masohi**	**9.79**	**126**	P	**P**	**13 33 05.0**	**+1.2**
	612nm47nm,0.7s						
STKI	**Sintang**	**9.82**	**256**	P	**P**	**13 33 03.9**	**-0.1**
	112nm,1.5s						
SJMP	**San Jose**	**9.94**	**1**	⇓eP	**P**	**13 33 05.9**	**+0.8**
PBKI	**Pangkalan Bun**	**10.65**	**241**	P	**P**	**13 33 13.4**	**+1.6**
	7µm617nm,0.9s						
KSM	**Kuching**	**10.74**	**265**	P	**P**	**13 33 12.8**	**+0.2**
SWI	**Sorong**	**10.77**	**108**	P	**P**	**13 33 11.8**	**-1.2**
	1µm61nm,0.9s						
SIJI	**Sorong**	**10.78**	**108**	P	**P**	**13 33 13.3**	**+0.2**
	22nm,0.3s,baz=308,slow=8.5,SNR=20						
SIJI				S	**S**	**13 35 14.2**	**+0.6**
	5.2nm,0.6s,baz=13,slow=24,SNR=11						
BOAC	**Boac**	**10.97**	**4**	⇓eP	**P**	**13 33 14.9**	**+0.1**
PGP	**Puerto Galera**	**10.98**	**360**	⇑iP	**P**	**13 33 15.7**	**+0.8**
MMRI	**Maumere**	**11.08**	**174**	P	**P**	**13 33 15.1**	**-0.8**
MMRI	**Maumere**	**11.08**	**174**	P	**P**	**13 33 15.8**	**-0.1**
	5µm397nm,0.7s						
EDFI	**Ende, Flores**	**11.15**	**177**	P	**P**	**13 33 16.5**	**-0.1**
	8µm677nm,0.7s						
LUBP	**Lubang**	**11.23**	**356**	⇓iP	**P**	**13 33 17.8**	**+0.5**
PVCP	**Virac**	**11.50**	**16**	⇓eP	**P**	**13 33 19.4**	**-0.3**
TGY	**Tagaytay City**	**11.57**	**360**	P	**P**	**13 33 21.0**	**+0.6**
	2µm,0.7s,baz=200,slow=1.5,SNR=76						
TGY				S	**S**	**13 35 29.3**	**+2.5**
	172nm,0.4s,baz=223,slow=23,SNR=5.6						
LQP	**Lukban**	**11.60**	**3**	⇓eP	**P**	**13 33 19.5**	**-1.3**
PLAI	**Plampang**	**11.66**	**196**	P	**P**	**13 33 21.5**	**+0.3**
	25µm3µm,0.7s						
MACP	**Maragondon, Ca**	**11.74**	**359**	⇓eP	**P**	**13 33 21.7**	**-0.1**
KMMI	**Kalianget**	**11.77**	**217**	P	**P**	**13 33 21.1**	**-1.1**
	6µm563nm,0.9s						
JCNP	**Jose Panganiba**	**11.88**	**8**	⇓iP	**P**	**13 33 23.3**	**+0.2**
SRBI	**Singaraja**	**11.96**	**209**	P	**P**	**13 33 24.4**	**+0.5**
	4µm356nm,1.1s						
QVP	**Quezon City--P**	**12.09**	**360**	⇓eP	**P**	**13 33 26.0**	**+1.0**
FAKI	**Fak Fak**	**12.44**	**115**	P	**P**	**13 33 28.3**	**0.0**
FAKI	**Fak Fak**	**12.44**	**115**	P	**P**	**13 33 29.7**	**+1.4**
	3µm454nm,0.9s						
DNP	**Denpasar**	**12.48**	**208**	P	**P**	**13 33 28.4**	**-0.2**
	18µm1µm,1.0s						
SOEI	**Soe**	**12.56**	**165**	P	**P**	**13 33 29.1**	**-0.4**
SOEI	**Soe**	**12.56**	**165**	P	**P**	**13 33 31.7**	**+2.2**
	111nm,0.7s						
BASI	**Baing, Sumba**	**12.60**	**182**	P	**P**	**13 33 28.0**	**-1.7**
	6µm238nm,1.1s						
IGBI	**Denpasar**	**12.63**	**207**	P	**P**	**13 33 30.6**	**+0.6**
	9µm504nm,0.7s						
JAGI	**Jajag, Banyuwa**	**12.82**	**212**	P	**P**	**13 33 30.6**	**-1.2**
JAGI	**Jajag, Banyuwa**	**12.82**	**212**	P	**P**	**13 33 32.6**	**+0.8**
	10µm1µm,1.1s						
BATI	**Baumata**	**12.85**	**168**	P	**P**	**13 33 31.9**	**-0.2**
	261nm,0.5s,baz=199,slow=2.0,SNR=65						
BATI				S	**S**	**13 35 44.9**	**-2.8**
	150nm,0.6s,baz=214,slow=23,SNR=13						
BATI	**Baumata**	**12.85**	**168**	P	**P**	**13 33 32.1**	**0.0**
	3µm225nm,0.7s						
BALP	**Baler**	**13.21**	**2**	⇓eP	**P**	**13 33 34.6**	**-0.7**
UWJI	**Ujung Watu**	**13.36**	**229**	P	**P**	**13 33 37.8**	**+1.1**
	41µm135nm,0.7s						
SMPP	**San Manuel, Pa**	**13.61**	**359**	⇓eP	**P**	**13 33 38.7**	**-0.3**
BOLP	**Bolinao**	**13.88**	**356**	⇓eP	**P**	**13 33 41.3**	**0.0**
SMRI	**Semarang**	**14.15**	**228**	P	**P**	**13 33 44.4**	**+0.5**
TPI	**Tanjungpandan**	**14.32**	**249**	P	**P**	**13 33 46.2**	**+0.8**
	1µm140nm,1.0s						
SAMP	**Sagada Mountai**	**14.54**	**360**	⇓eP	**P**	**13 33 46.2**	**-1.1**
UGM	**Wanagama**	**14.68**	**225**	P	**P**	**13 33 49.2**	**+0.5**
APYP	**Conner**	**15.31**	**1**	⇑iP	**P**	**13 33 53.5**	**-1.0**
KPJI	**Karang Pucung**	**15.48**	**231**	P	**P**	**13 33 57.9**	**+1.9**
	5µm601nm,0.7s						
LEM	**Lembang**	**16.24**	**235**	P	**P**	**13 34 04.3**	**+1.3**
	369nm,0.8s,baz=42,slow=8.5,SNR=61						
LEM	**Lembang**	**16.24**	**235**	P	**P**	**13 34 04.4**	**+1.3**
	2µm260nm,0.8s						
CBJI	**Citeko**	**16.66**	**238**	P	**P**	**13 34 09.4**	**+2.6**
	7µm722nm,1.0s						
DBJI	**Dramaga**	**16.81**	**238**	P	**P**	**13 34 08.4**	**+0.2**
	564µm14µm228nm,1.1s						
CNJI	**Cibinong**	**16.91**	**235**	P	**P**	**13 34 09.3**	**+0.3**
	4µm592nm,0.8s						
MYKOM	**Kota Tinggi**	**17.16**	**268**	P	**P**	**13 34 12.1**	**+0.8**
BLSI	**Bandar Lampung**	**17.56**	**244**	P	**P**	**13 34 15.4**	**+0.5**
	4µm398nm,0.7s						
KLI	**Kotabumi**	**17.70**	**246**	P	**P**	**13 34 16.9**	**+0.7**
	7µm983nm,0.8s						
MTN	**Manton Dam**	**18.22**	**147**	P	**P**	**13 34 20.7**	**-0.1**
	baz=18,SNR=41						
MTN	**Manton Dam**	**18.22**	**147**	P	**P**	**13 34 20.9**	**0.0**
MTN				IAmb	IAmb	13 34 22.1	
	comp=Z,26nm,0.5s						
KASI	**Kota Agung**	**18.30**	**244**	P	**P**	**13 34 21.7**	**+0.1**
	comp=Z,3µmcomp=Z,431nm,0.8s						
KDU	**Kakadu**	**18.87**	**143**	P	**P**	**13 34 26.6**	**-0.1**
	baz=19,SNR=52						
MNAI	**Manna**	**19.27**	**249**	P	**P**	**13 34 31.1**	**+0.7**
KNRA	**Kununurra**	**19.58**	**157**	P	**P**	**13 34 33.6**	**+0.5**
	baz=20,SNR=46						
KNRA	**Kununurra**	**19.58**	**157**	P	**P**	**13 34 33.2**	**+0.1**
KNRA				IAmb	IAmb	13 34 33.9	
	comp=Z,27nm,0.6s						
QIZ	**Qiongzhong**	**19.77**	**327**	P	**P**	**13 34 34.6**	**-0.1**
QIZ				IAmb	IAmb	13 34 35.8	
	comp=Z,19nm,0.7s						
UBPT	**Khong Chiam**	**19.93**	**311**	P	**P**	**13 34 36.8**	**+0.6**
UBPT				IAmb	IAmb	13 34 37.7	
	comp=Z,24nm,0.9s						
BKNI	**Bangkinang**	**20.07**	**264**	P	**P**	**13 34 37.8**	**+0.3**
TWG	**Pinlang**	**20.25**	**0**	P	**P**	**13 34 38.1**	**-0.9**
TWG				IAmb	IAmb	13 34 47.6	
	comp=Z,28nm,0.6s						
TPUB	**Ta-pu**	**20.73**	**359**	P	**P**	**13 34 43.8**	**+0.5**
TPUB				IAmb	IAmb	13 34 44.5	
	comp=Z,63nm,0.9s						
YULB	**Yu-li**	**20.82**	**1**	P	**P**	**13 34 42.9**	**-1.1**
YULB				IAmb	IAmb	13 34 46.7	
	comp=Z,25nm,0.8s						
SSLB	**Suanglung**	**21.21**	**360**	P	**P**	**13 34 47.5**	**0.0**
SSLB				IAmb	IAmb	13 34 52.8	
	comp=Z,32nm,0.7s						
YOJ	**Yonaguni jima**	**21.96**	**5**	P	**P**	**13 34 54.8**	**+0.7**
PSI	**Prapat**	**22.06**	**271**	P	**P**	**13 34 56.0**	**+0.6**
	comp=Z,19nm,0.7s,baz=76,slow=4.5,SNR=22						
PSI				S	**S**	**13 38 15.2**	**-0.5**
	comp=Z,27nm,0.9s,baz=324,slow=23,SNR=51						
	comp=Z,19nm,0.7s						
YHNB	**Yeheng**	**22.09**	**1**	P	**P**	**13 34 54.5**	**-0.9**
TATO	**Taipei**	**22.40**	**1**	P	**P**	**13 34 56.9**	**-1.1**
GSI	**Gunungsitoli**	**23.45**	**268**	P	**P**	**13 35 07.1**	**-0.4**
MBWA	**Marble Bar**	**23.50**	**183**	P	**P**	**13 35 06.9**	**-0.9**
MBWA				IAmb	IAmb	13 35 08.4	
	comp=Z,36nm,0.7s						
PSA00	**Pilbara Seismi**	**23.91**	**183**	P	**P**	**13 35 11.1**	**-0.3**
PSA00	**Pilbara Seismi**	**23.91**	**183**	P	**P**	**13 35 10.3**	**-1.1**
PSA00				IAmb	IAmb	13 35 12.1	
	comp=Z,24nm,0.8s						
JOW	**Kunigami**	**25.22**	**15**	P	**P**	**13 35 23.6**	**+0.7**
	comp=Z,40nm,0.6s,baz=223,slow=8.8,SNR=9.1						
	comp=Z,40nm,0.6s						
JOW	**Kunigami**	**25.22**	**15**	P	**P**	**13 35 23.0**	**+0.1**
WB0	**Warramunga Arr**	**25.70**	**150**	P	**P**	**13 35 26.8**	**-0.4**
GIRL	**Giralia**	**25.80**	**194**	P	**P**	**13 35 29.0**	**+0.9**
	baz=26,SNR=9.4						
GIRL	**Giralia**	**25.80**	**194**	P	**P**	**13 35 28.1**	**+0.1**
WRAB	**Tennant Creek**	**25.82**	**150**	P	**P**	**13 35 27.7**	**-0.5**
WRA	**Warramunga Arr**	**25.82**	**150**	P	**P**	**13 35 27.9**	**-0.3**
	comp=Z,44nm,0.5s,baz=334,slow=9.6,SNR=845						
WRA				PcP	**PcP**	**13 38 33.5**	**+0.1**
	comp=Z,6.6nm,0.8s,baz=328,slow=2.7,SNR=7.9						
WRA				S	**S**	**13 39 10.1**	**-4.1**
	comp=Z,14nm,0.9s,baz=328,slow=16,SNR=18						
WRA				PKiKP	**PKiKP**	**13 46 10.9**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=306,slow=1.3,SNR=4.7						
	comp=Z,44nm,0.5s						
WRA	**Warramunga Arr**	**25.82**	**150**	P	**P**	**13 35 26.7**	**-1.5**
WB2	**Warramunga Arr**	**25.83**	**150**	P	**P**	**13 35 27.8**	**-0.5**
WR0	**Warramunga Arr**	**25.93**	**150**	P	**P**	**13 35 28.7**	**-0.5**
WR0				IAmb	IAmb	13 35 29.7	
	comp=Z,47nm,0.8s						
GUMO	**Guam**	**26.05**	**64**	P	**P**	**13 35 30.1**	**-0.3**
	comp=Z,40nm,0.5s,baz=270,slow=2.4,SNR=5.1						
	comp=Z,40nm,0.5s						
GUMO	**Guam**	**26.05**	**64**	P	**P**	**13 35 29.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**26.84**	**308**	P	**P**	**13 35 38.4**	**+1.2**
	comp=Z,15nm,0.7s,baz=135,slow=7.3,SNR=78						
CMAR				PcP	**PcP**	**13 38 37.0**	**+1.1**
	comp=Z,4.1nm,0.8s,baz=162,slow=2.0,SNR=11						
CMAR				ScP	**ScP**	**13 41 15.8**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=191,slow=3.0,SNR=9.9						
	comp=Z,15nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.84**	**308**	P	**P**	**13 35 36.5**	**-0.6**
CHTO	**Chiang Mai**	**27.04**	**308**	P	**P**	**13 35 39.9**	**+1.1**
COEN	**Coen**	**27.37**	**127**	P	**P**	**13 35 41.3**	**-0.5**
	baz=28,SNR=14						
COEN	**Coen**	**27.37**	**127**	P	**P**	**13 35 41.2**	**-0.5**
COEN				IAmb	IAmb	13 35 41.6	
	comp=Z,13nm,0.6s						
WRKA	**Warakurna**	**28.23**	**166**	P	**P**	**13 35 49.5**	**+0.4**
	baz=28,SNR=110						
PMG	**Port Moresby**	**28.60**	**115**	P	**P**	**13 35 52.7**	**+0.4**
	comp=Z,67nm,0.7s,baz=334,slow=3.3,SNR=20						
	comp=Z,67nm,0.7s						
PMG	**Port Moresby**	**28.60**	**115**	P	**P**	**13 35 52.8**	**+0.4**
KMI	**Kunming**	**28.60**	**324**	⇑P	**P**	**13 35 54.3**	**+1.8**
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
WHN	**Wuhan**	**28.64**	**348**	⇑P	**P**	**13 35 54.8**	**+2.3**
WHN				pmax	pmax		
	comp=Z,50nm,1.1s						
AS31	**Alice Springs**	**28.84**	**155**	P	**P**	**13 35 54.9**	**+0.6**
ASAR	**Alice Springs**	**28.84**	**155**	P	**P**	**13 35 54.9**	**+0.5**
	comp=Z,19nm,0.5s,baz=332,slow=7.1,SNR=344						
ASAR				PcP	**PcP**	**13 38 41.1**	**+0.3**
	comp=Z,7.8nm,0.7s,baz=347,slow=2.4,SNR=17						
ASAR				S	**S**	**13 39 58.9**	**-1.9**
	comp=Z,47nm,0.9s,baz=337,slow=20,SNR=73						
	comp=Z,19nm,0.5s						
ASAR	**Alice Springs**	**28.84**	**155**	P	**P**	**13 35 54.7**	**+0.4**
MEEK	**Meekatharra**	**29.01**	**184**	P	**P**	**13 35 55.9**	**+0.1**
	baz=29,SNR=47						
QIS	**Mount Isa**	**29.25**	**142**	P	**P**	**13 35 58.5**	**+0.7**
	baz=30,SNR=88						
PZH	**PanZhiHua**	**30.23**	**324**	P	**P**	**13 36 06.8**	**+0.5**
PZH				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH				pmax	pmax		
	comp=Z,50nm,4.5s						
JSU	**Suzuyama**	**30.24**	**16**	P	**P**	**13 36 06.3**	**+0.1**
JSU				IAmb	IAmb	13 36 06.7	
	comp=Z,43nm,0.8s						
MTSU	**Mount Surprise**	**30.75**	**133**	P	**P**	**13 36 12.0**	**+1.3**
	baz=31,SNR=42						
MORW	**Morawa**	**31.70**	**188**	P	**P**	**13 36 18.9**	**+0.4**
	baz=32,SNR=19						
MORW	**Morawa**	**31.70**	**188**	P	**P**	**13 36 18.6**	**+0.1**
KRVT	**Keravat (AS076**	**31.72**	**102**	P	**P**	**13 36 20.4**	**+1.5**
	comp=Z,141nm,0.9s,baz=260,slow=2.4,SNR=17						
	comp=Z,141nm,0.9s						
JCJ	**Chichijima**	**31.81**	**38**	P	**P**	**13 36 18.0**	**-1.5**
	comp=Z,126nm,0.5s,baz=268,slow=4.3,SNR=37						
JCJ				S	**S**	**13 40 41.1**	**-4.8**
	comp=Z,81nm,0.7s,baz=183,slow=23,SNR=10.0						
	comp=Z,126nm,0.5s						
JCJ	**Chichijima**	**31.81**	**38**	P	**P**	**13 36 18.0**	**-1.5**
RABL	**Rabaul**	**31.83**	**102**	P	**P**	**13 36 20.8**	**+0.9**
JNU	**Nakatsue**	**31.88**	**16**	P	**P**	**13 36 19.4**	**-0.7**
	comp=Z,38nm,0.8s,baz=32,slow=21,SNR=14						
	comp=Z,38nm,0.8s						

CD2	Chengdu	32.67	332	P	P	13 36 26.9	+0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
JTU	Tsushima	32.85	13	P	P	13 36 28.2	+0.1
BLDU	Ballidu	33.14	187	P	P	13 36 30.3	-0.3
	baz=33,SNR=18						
XAN	Xi'an	33.39	342	P	P	13 36 34.0	+1.4
XAN				PcP	PcP	13 38 53.1	-0.1
XAN				S	S	13 41 08.1	-1.5
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CTA	Charters Tower	33.40	133	P	P	13 36 34.2	+1.3
	comp=Z,22nm,0.9s,baz=300,slow=8.1,SNR=15						
CTA				ScP	ScP	13 41 36.9	+0.5
	comp=Z,8.4nm,0.9s,baz=331,slow=2.9,SNR=6.6						
	comp=Z,22nm,0.9s						
CTAO	Charters Tower	33.40	133	P	P	13 36 33.8	+0.9
CTAO				IAmb	IAmb	13 36 35.3	
	comp=Z,39nm,1.1s						
FORT	Forrest	33.73	169	P	P	13 36 36.2	+0.8
	baz=34,SNR=32						
FORT	Forrest	33.73	169	P	P	13 36 35.9	+0.5
TIA	Tai'an	33.78	354	⇑P	P	13 36 36.3	+0.5
TIA				S	S	13 41 17.8	+2.5
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLBR	Kellerberrin	34.00	185	P	P	13 36 37.8	+0.2
	baz=34,SNR=46						
JHS	Saijyo	34.28	18	P	P	13 36 40.5	+0.5
MUN	Mundaring	34.55	187	P	P	13 36 42.5	+0.4
	baz=35,SNR=4.9						
NWAO	Narrogin (SRO)	35.37	185	P	P	13 36 49.3	+0.4
NWAO				IAmb	IAmb	13 36 50.4	
	comp=Z,34nm,0.7s						
KSAR	Wonju Array Be	35.39	9	P	P	13 36 49.3	+0.3
KSRS	Korea Array	35.41	10	P	P	13 36 49.9	+0.8
	comp=Z,28nm,0.8s,baz=186,slow=10,SNR=168						
KSRS				PcP	PcP	13 39 00.1	+1.1
	comp=Z,2.7nm,0.8s,baz=200,slow=3.2,SNR=7.3						
KSRS				ScP	ScP	13 41 43.5	+0.3
	comp=Z,2.2nm,0.7s,baz=179,slow=3.1,SNR=11						
	comp=Z,28nm,0.8s						
KS19	Wonju Array Si	35.45	9	P	P	13 36 50.0	+0.5
KS19				IAmb	IAmb	13 36 51.0	
	comp=Z,32nm,0.8s						
INU	Inuyama	35.95	23	P	P	13 36 53.5	-0.1
INU				IAmb	IAmb	13 36 55.0	
	comp=Z,42nm,0.8s						
SEHB	SEOHWA	36.26	10	P	P	13 36 56.6	+0.5
SEHB				IAmb	IAmb	13 36 58.2	
	comp=Z,25nm,1.2s						
DL2	Dalian	36.28	1	P	P	13 36 56.4	+0.1
DL2				pmax	pmax		
	comp=Z,52nm,0.7s						
JGF	Kuroka	36.30	23	P	P	13 36 55.8	-0.8
JGF				IAmb	IAmb	13 36 56.9	
	comp=Z,39nm,0.8s						
QLP	Quilpie	36.56	144	P	P	13 37 00.2	+1.5
	baz=37,SNR=32						
LZH	Lanzhou	37.04	337	*e*P	P	13 37 04.5	+1.8
LZH				PcP	PcP	13 39 04.4	0.0
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
RKGY	Rocky Gully	37.06	186	P	P	13 37 04.0	+1.4
	baz=37,SNR=8.1						
MAJO	Matsushiro	37.46	23	P	P	13 37 05.0	-0.9
MAJO				IAmb	IAmb	13 37 06.8	
	comp=Z,34nm,0.8s						
MJAR	Matsushiro Arr	37.46	23	P	P	13 37 05.0	-0.9
	comp=Z,33nm,0.9s,baz=184,slow=8.8,SNR=73						
MJAR				ScP	ScP	13 41 50.5	-0.5
	comp=Z,4.8nm,0.7s,baz=179,slow=5.3,SNR=11						
	comp=Z,33nm,0.9s						
MJB9	Matsu-Tunnel	37.46	23	P	P	13 37 05.0	-0.9
MJB9				IAmb	IAmb	13 37 06.7	
	comp=Z,34nm,0.8s						
BBOO	Buckleboo	37.86	159	P	P	13 37 09.7	+0.6
	baz=38,SNR=66						
BBOO	Buckleboo	37.86	159	P	P	13 37 09.2	+0.1
BBOO				IAmb	IAmb	13 37 10.1	
	comp=Z,36nm,0.7s						
BWNR	Bhubaneshwar	38.65	300	*e*P	P	13 37 16.0	+0.3
LSA	Lhasa	39.21	317	P	P	13 37 21.9	+1.3
LSA	Lhasa	39.21	317	P	P	13 37 22.1	+1.5
LSA				pmax	pmax		
	comp=Z,64nm,0.6s						
SNY	Shenyang	39.27	3	⇓P	P	13 37 19.9	-0.3
SNY				S	S	13 42 34.3	-1.5
SNY				pmax	pmax		
	comp=Z,40nm,0.8s						
RMQ	Roma	39.33	139	P	P	13 37 22.2	+1.2
	baz=40,SNR=6.2						
STKA	Stephens Creek	39.34	152	P	P	13 37 22.1	+1.1
	comp=Z,36nm,0.4s,baz=338,slow=7.8,SNR=210						
STKA				PcP	PP	13 39 11.4	+0.1
	comp=Z,14nm,0.8s,baz=318,slow=4.7,SNR=5.0						
STKA				S	S	13 42 37.4	+0.1
	comp=Z,6.4nm,1.1s,baz=98,slow=21,SNR=6.4						
	comp=Z,36nm,0.4s						
STKA	Stephens Creek	39.34	152	P	P	13 37 22.1	+1.1
	baz=40,SNR=225						
STKA	Stephens Creek	39.34	152	P	P	13 37 21.5	+0.5
STKA				IAmb	IAmb	13 37 23.0	
	comp=Z,15nm,0.9s						
HTT	Hallett	39.50	156	P	P	13 37 23.6	+1.3
	baz=40,SNR=43						
JMM	Marumori	39.64	25	P	P	13 37 23.2	0.0
JMM				IAmb	IAmb	13 37 24.7	
	comp=Z,34nm,0.6s						
EIDS	Eidsvold	40.18	135	P	P	13 37 28.0	+0.3
	baz=40,SNR=9.1						
EIDS	Eidsvold	40.18	135	P	P	13 37 27.6	-0.2
EIDS				IAmb	IAmb	13 37 29.2	
	comp=Z,22nm,1.0s						
RAGD	RAYAGADA	40.33	297	*e*P	P	13 37 29.5	+0.5
TAPN	Taplejung	40.34	311	*e*P	P	13 37 29.9	+0.5
HNR	Honiara	40.55	107	P	P	13 37 30.6	-0.3
	comp=Z,59nm,0.5s,baz=338,slow=1.8,SNR=6.4						
	comp=Z,59nm,0.5s						
RAMN	Ramite	40.98	310	*e*P	P	13 37 35.1	+0.8
	comp=Z,180nm,0.6s						
CMSA	Cobar Meteorol	41.15	147	P	P	13 37 36.9	+1.6
	baz=41,SNR=67						
GOMU	GeErMu	41.40	327	P	P	13 37 39.3	+1.7
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,69nm,4.9s						
GTA	Gaotai	41.53	335	⇑P	P	13 37 39.5	+1.2
GTA				PcP	PcP	13 39 19.6	+0.7
GTA				ScP	ScP	13 42 07.5	+0.4
GTA				S	S	13 43 08.8	0.0
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
PKI	Pulchoki	42.20	310	*e*P	P	13 37 43.9	-0.1
PKIN	Phulchoki	42.22	310	*e*P	P	13 37 44.2	+0.2
JTM	Tenmabayashi	42.25	23	P	P	13 37 43.3	-0.3
KKN	Kakani	42.41	310	*e*P	P	13 37 45.5	0.0
DMN	Daman	42.46	310	*e*P	P	13 37 46.0	+0.2
BLSP	Bilaspur	42.51	301	*e*P	P	13 37 44.9	-1.1
MDJ	Mudanjiang	42.67	9	P	P	13 37 47.3	+0.5
MDJ				pmax	pmax		
	comp=Z,87nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.7s						
USA0B	Ussuriysk Arra	42.69	12	P	P	13 37 47.2	+0.2
USA0B				IAmb	IAmb	13 37 48.2	
	comp=Z,30nm,0.7s						
USRK	Ussuriysk Ar.	42.69	12	P	P	13 37 47.4	+0.4
	comp=Z,26nm,0.6s,baz=188,slow=8.0,SNR=39						
	comp=Z,26nm,0.6s						
USRK	Ussuriysk Ar.	42.69	12	P	P	13 37 47.6	+0.6
GKN	Gorkha	43.01	310	*e*P	P	13 37 50.2	+0.2
	comp=Z,69nm,0.6s						
BNX	BinXian	43.47	7	⇑P	P	13 37 52.5	-0.5
BNX				pmax	pmax		
	comp=Z,26nm,0.9s						
BNX				pmax	pmax		
	comp=Z,68nm,4.8s						
ARPS	Mount Arapiles	43.58	156	P	P	13 37 54.8	+0.8
	baz=44,SNR=92						
ARMA	Armidale	43.84	141	P	P	13 37 58.9	+2.7
	baz=44,SNR=30						
ARMA	Armidale	43.84	141	P	P	13 37 58.3	+2.1
ARMA				IAmb	IAmb	13 37 59.8	
	comp=Z,58nm,0.9s						
DANN	Dangsing	43.86	310	*e*P	P	13 37 57.1	+0.5
	comp=Z,13nm,0.2s						
ALBI	Allahabad	44.04	305	*e*P	P	13 37 56.8	-0.9
ERM	Erimo	44.12	24	P	P	13 37 58.4	+0.4
ERM				IAmb	IAmb	13 37 59.7	
	comp=Z,18nm,0.8s						
MGCD	Mangrove Creek	45.46	144	P	P	13 38 10.9	+2.6
	baz=46,SNR=8.6						
ASAJ	Asahikawa	45.68	22	P	P	13 38 10.2	+0.4
	comp=Z,34nm,0.7s,baz=232,slow=11,SNR=48						
	comp=Z,34nm,0.7s						
JKA	Kamikawa-asahi	45.68	22	P	P	13 38 09.9	+0.1
JKA				IAmb	IAmb	13 38 11.1	
	comp=Z,44nm,0.9s						
CAN	Canberra	45.82	148	P	P	13 38 12.6	+1.5
TOO	Toolangi	45.84	153	P	P	13 38 12.8	+1.7
	baz=46,SNR=6.5						
TOO	Toolangi	45.84	153	P	P	13 38 12.3	+1.1
CNB	Canberra Magne	46.01	147	P	P	13 38 14.0	+1.5
	baz=46,SNR=10						
AKL	Akola	46.54	296	*e*P	P	13 38 16.4	-0.2
JHNI	Jhansi	46.81	303	*e*P	P	13 38 16.9	-1.8
ULN	Ulaanbaatar	46.82	347	P	P	13 38 18.7	+0.2
SONM	Songino Array	46.94	347	P	P	13 38 20.1	+0.8
	comp=Z,4.1nm,0.5s,baz=163,slow=8.2,SNR=20						
SONM				PcP	PcP	13 39 37.4	-0.2
	comp=Z,3.9nm,0.7s,baz=163,slow=4.1,SNR=8.7						
SONM				ScP	ScP	13 42 28.7	-0.6
	comp=Z,2.7nm,0.9s,baz=163,slow=3.7,SNR=5.4						
	comp=Z,4.1nm,0.5s						
SONM	Songino Array	46.94	347	P	P	13 38 20.0	+0.7
BHPL	Bhopal	46.97	300	*e*P	P	13 38 19.8	-0.1
BHPL				IAmb	IAmb	13 38 21.0	
	comp=Z,92nm,1.2s						
LGTI	Lohaghat	47.09	309	*e*P	P	13 38 20.5	-0.1
KLR	Kul'dur	47.50	10	P	P	13 38 23.0	-0.3
	comp=Z,4.0nm,0.6s,baz=214,slow=5.1,SNR=20						
KLR				PcP	PcP	13 39 39.3	-0.1
	comp=Z,3.1nm,0.7s,baz=220,slow=3.2,SNR=4.4						
KLR				ScP	ScP	13 42 31.0	-0.5
	comp=Z,0.3nm,0.3s,baz=280,slow=5.7,SNR=3.8						
	comp=Z,4.0nm,0.6s						
YSS	Yuzh-Sakhalins	48.19	20	P	P	13 38 28.9	+0.5
YSS				IAmb	IAmb	13 38 29.2	
	comp=Z,16nm,0.6s						
KAD	Karad	48.27	291	*e*P	P	13 38 27.9	-1.7
SANVU	Saraoutou	49.03	113	P	P	13 38 36.1	+1.0
SANVU				IAmb	IAmb	13 38 37.8	
	comp=Z,68nm,0.9s						
SONA	Sohna	49.09	306	*e*P	P	13 38 34.4	-0.9
SMLA	Simla	50.22	309	*e*P	P	13 38 44.5	+0.9
SMLA				IAmb	IAmb	13 38 45.2	
	comp=Z,114nm,0.6s						
DZM	Mont Dzumac	50.62	121	P	P	13 38 47.6	+0.9
LIFNC	LIFOU	50.82	119	P	P	13 38 49.9	+1.9
LIFNC				IAmb	IAmb	13 38 50.6	
	comp=Z,76nm,0.8s						
TAU	Tasmania Unive	51.01	155	P	P	13 38 49.8	+0.8
TAU				IAmb	IAmb	13 38 56.2	
	comp=Z,108nm,1.5s						
OUENC	Ouen Island, N	51.10	121	P	P	13 38 50.5	+0.6
PINNC	Pines Island,	51.69	121	P	P	13 38 55.4	+1.2
PINNC				IAmb	IAmb	13 38 57.0	
	comp=Z,20nm,0.9s						
THN	Thein Dam	51.90	310	*e*P	P	13 38 55.6	+0.1
NIL	Nilore	54.29	310	P	P	13 39 11.5	-0.8
NIL				IAmb	IAmb	13 39 12.2	
	comp=Z,22nm,0.6s						
KSH	Kashi	55.03	318	P	P	13 39 19.3	+1.8
KSH				PcP	PcP	13 40 10.1	+1.7
KSH				pmax	pmax		
	comp=Z,21nm,0.9s						
MK31	Makanchi Array	55.49	329	P	P	13 39 21.1	+0.7
MKAR	Makanchi Array	55.49	329	P	P	13 39 21.1	+0.6
	comp=Z,18nm,0.5s,baz=122,slow=8.8,SNR=275						
MKAR				PcP	PcP	13 40 08.9	-1.1
	comp=Z,8.6nm,0.7s,baz=120,slow=4.8,SNR=13						
MKAR				ScP	ScP	13 43 05.8	-0.5
	comp=Z,1.8nm,0.8s,baz=126,slow=6.6,SNR=4.1						
MKAR				S	S	13 46 19.1	+1.5
	comp=Z,0.4nm,0.7s,baz=120,slow=14,SNR=4.1						
	comp=Z,18nm,0.5s						
KDJ	Kajisay	55.63	321	P	P	13 39 22.9	+1.3
MAKZ	Makanchi	55.67	328	P	P	13 39 22.1	+0.5
MAKZ				IAmb	IAmb	13 39 22.6	
	comp=Z,16nm,0.6s						
BOOM	Boomskoye usch	56.59	321	P	P	13 39 28.8	+0.6
TKM2	Tokmak 2	57.04	321	P	P	13 39 31.6	+0.3
	SNR=22						
KBK	Karagaybulak	57.31	321	P	P	13 39 34.4	+1.4
	SNR=7.7						
UCH	Uchtor	57.36	320	P	P	13 39 35.0	+1.2
	SNR=16						
AAK	Ala-Archa	57.58	321	P	P	13 39 35.8	+0.9
	SNR=10						
AAK	Ala-Archa	57.58	321	P	P	13 39 35.8	+0.9
AML	Almayashu	57.84	320	P	P	13 39 37.9	+1.0
	SNR=19						
KBL	Kabul	57.85	310	P	P	13 39 37.1	+0.2
KBL				IAmb	IAmb	13 39 38.0	
	comp=Z,50nm,0.7s						
USP	Ospenovka	57.90	321	P	P	13 39 37.6	+0.8
	SNR=5.0						
EKS2	Erkin-Say	58.05	320	P	P	13 39 39.1	+1.2
	SNR=11						
GAR	Garm	58.68	315	P	P	13 39 42.5	+0.3
GAR				IAmb	IAmb	13 39 43.4	
	comp=Z,53nm,0.9s						
PEA0B	Petropavlovsk-	58.87	25	P	P	13 39 43.8	+0.7
PEA0B				IAmb	IAmb	13 39 44.9	
	comp=Z,24nm,0.8s						
PETK	Petropavlovsk-	58.87	25	P	P	13 39 44.1	+1.0
	comp=Z,13nm,0.7s,baz=210,slow=11,SNR=15						
	comp=Z,13nm,0.7s						
PETK	Petropavlovsk-	58.87	25	P	P	13 39 43.6	+0.5
ZAA0	Zalesovo Array	59.27	336	P	P	13 39 45.2	-0.5
ZALV	Zalesovo Beam	59.27	336	P	P	13 39 44.9	-0.8
	comp=Z,9.1nm,0.7s,baz=125,slow=5.7,SNR=37						
ZALV				PcP	PcP	13 40 23.6	-1.2
	comp=Z,1.7nm,0.6s,baz=110,slow=6.9,SNR=1.8						
ZALV				S	S	13 47 03.0	-2.0
	comp=Z,3.1nm,0.9s,baz=121,slow=14,SNR=7.1						
	comp=Z,9.1nm,0.7s						
ZALV	Zalesovo Beam	59.27	336	P	P	13 39 45.3	-0.4
CHGR	Chuyangaron	59.36	314	P	P	13 39 45.9	-0.8
CHGR				IAmb	IAmb	13 39 47.6	
	comp=Z,58nm,1.0s						
MSVF	Nonsavu	59.66	112	P	P	13 39 51.4	+2.4
	baz=235,slow=16						
YAK	Yakutsk	59.79	5	P	P	13 39 48.4	-0.5
	comp=Z,7.9nm,0.4s,baz=275,slow=1.0,SNR=8.8						
	comp=Z,7.9nm,0.4s						
YAK	Yakutsk	59.79	5	P	P	13 39 48.8	-0.1
YAK				IAmb	IAmb	13 39 49.7	
	comp=Z,26nm,0.6s						
KURK	Kurchatov	59.87	330	P	P	13 39 49.9	+0.2
KURK				IAmb	IAmb	13 39 50.8	
	comp=Z,47nm,0.7s						
KK31	Karatay Array	60.37	319	P	P	13 39 52.5	-0.6
KKAR	Karatay Array	60.37	319	P	P	13 39 52.7	-0.4
MA2	Magadan	61.44	17	P	P	13 40 01.2	+1.4
	comp=Z,6.4nm,0.6s,baz=200,slow=6.0,SNR=10						
MA2				PcP	PcP	13 40 34.7	+1.2
	comp=Z,5.4nm,0.9s,baz=158,slow=6.9,SNR=3.6						
	comp=Z,6.4nm,0.6s						
MA2	Magadan	61.44	17	P	P	13 40 00.9	+1.1
QRZ	Quartz Range	63.64	138	P	P	13 40 15.4	+1.3
QRZ				IAmb	IAmb	13 40 33.6	
	comp=Z,105nm,1.2s						
KUZ	Kuaotunu	64.01	133	P	P	13 40 29.3	+13
RPZ	Rata Peaks	64.16	142	P	P	13 40 18.0	+0.6
RPZ				IAmb	IAmb	13 40 19.6	
	comp=Z,52nm,0.9s						
TOZ	Tahuroa Road	64.27	134	P	P	13 40 17.5	-0.7
SEY	Seymchan	64.66	15	P	P	13 40 20.9	+0.8
	comp=Z,2.7nm,0.6s,baz=263,slow=24,SNR=12						
SEY				PcP	PcP	13 40 47.6	+0.9
	comp=Z,1.2nm,0.6s,baz=125,slow=3.7,SNR=4.3						
	comp=Z,2.7nm,0.6s						
MOVZ	Moawhango	65.17	136	P	P	13 40 24.3	+0.4
HATZ	Hinemaiaia	65.19	135	P	P	13 40 25.0	+1.1
BHHZ	Black Hill Sta	65.42	136	P	P	13 40 25.9	+0.4
BRVK	Borovoye	65.44	329	P	P	13 40 25.3	+0.1
BRVK				IAmb	IAmb	13 40 26.2	
	comp=Z,26nm,1.2s						
BKZ	Black Stump Fm	65.59	135	P	P	13 40 27.3	+0.8
BKZ	Black Stump Fm	65.59	135	P	P	13 40 26.9	+0.5
URZ	Urewera	65.64	134	P	P	13 40 26.8	+0.1
KWHZ	Kaweka Forest	65.65	136	P	P	13 40 19.3	-7.5
MTHZ	Maungataniwha	65.70	135	P	P	13 40 27.9	+0.7
NMHZ	Naumai	65.78	135	P	P	13 40 29.1	+1.5
MCHZ	McNeill Hill	65.85	135	P	P	13 40 29.5	+1.5
HAZ	Te Kaha	65.92	133	P	P	13 40 28.9	+0.4
RUGZ	Raukumara Rang	65.93	134	P	P	13 40 28.3	-0.4
MWZ	Matawai	65.97	134	P	P	13 40 29.4	+0.5
KAHZ	Kahuranaki	66.12	136	P	P	13 40 30.7	+1.0
PUZ	Puketiti	66.39	134	P	P	13 40 32.0	+0.6
GEYT	Alibeck	67.29	310	P	P	13 40 37.3	+0.4
	comp=Z,8.9nm,0.7s,baz=163,slow=7.7,SNR=12						
	comp=Z,8.9nm,0.7s						
GEYT	Alibeck	67.29	310	P	P	13 40 37.4	+0.4
CASY	Casey	68.99	185	P	P	13 40 45.6	-0.8
TIXI	Tiksi	69.28	3	P	P	13 40 47.4	-0.7
	comp=Z,6.2nm,0.7s,baz=268,slow=20,SNR=33						
	comp=Z,6.2nm,0.7s						
TIXI	Tiksi	69.28	3	P	P	13 40 47.2	-0.9
ABKAR	Akbulak array	69.58	322	P	P	13 40 49.8	-0.5
ABKAR	Akbulak array	69.58	322	P	P	13 40 50.2	-0.1
ABKAR				IAmb	IAmb	13 40 51.1	
	comp=Z,10nm,0.9s						
NRIK	Noril'sk	70.39	348	P	P	13 40 54.9	+0.2
	comp=Z,9.1nm,0.6s,baz=140,slow=6.1,SNR=12						
	comp=Z,9.1nm,0.6s						
NRIK	Noril'sk	70.39	348	P	P	13 40 54.8	+0.2
ARU	Arti	73.02	329	P	P	13 41 09.9	-0.1
ARU				IAmb	IAmb	13 41 10.2	
	comp=Z,16nm,0.8s						
RAYN	Ar Rayn	75.73	294	P	P	13 41 25.3	-0.7
VOI	Vohitsoka	76.31	247	P	P	13 41 28.1	-1.1
VOI				IAmb	IAmb	13 41 29.8	
	comp=Z,22nm,0.7s						
KBZ	Khabaz	79.72	314	P	P	13 41 46.5	-0.2
	comp=Z,6.4nm,0.9s,baz=162,slow=7.7,SNR=11						
	comp=Z,6.4nm,0.9s						
VNDA	Vanda	82.94	172	P	P	13 42 02.7	+0.3
	comp=Z,3.4nm,0.7s,baz=304,slow=6.5,SNR=24						
	comp=Z,3.4nm,0.7s						
VNDA	Vanda	82.94	172	P	P	13 42 02.7	+0.3
KLMR	Klimovskoe	83.72	331	*e*P	P	13 42 03.1	-3.4
KLMR				AMP		13 42 06.8	
	comp=Z,36nm,0.7s						
KMBO	Kilima Mbogo	83.81	269	P	P	13 42 09.3	+0.9
	comp=Z,7.7nm,0.9s,baz=73,slow=7.3,SNR=7.3						
	comp=Z,7.7nm,0.9s						
SBA	Scott Base	83.91	171	P	P	13 42 07.8	+0.6
TTA	Tatalina	84.62	27	P	P	13 42 11.6	+0.6
IMAR	Indian Mountai	85.83	24	P	P	13 42 16.9	+0.3
BRTR	Keskin Array B	86.42	309	P	P	13 42 18.9	-1.2
	comp=Z,2.1nm,0.7s,baz=139,slow=5.9,SNR=9.4						
BRTR				PP	PP	13 45 53.4	-1.6
	comp=Z,1.1nm,0.8s,baz=89,slow=7.8,SNR=4.0						
	comp=Z,2.1nm,0.7s						
BRTR	Keskin Array B	86.42	309	P	P	13 42 19.0	-1.2
BPAW	Bear Paw Mtn.	86.94	26	P	P	13 42 22.3	+0.4
ILAR	Eielson Array	88.70	25	P	P	13 42 27.8	-2.3
	comp=Z,0.5nm,0.7s,baz=250,slow=4.0,SNR=6.7						
ILAR				PKKPbc	PKKPbc	14 00 06.5	-2.7
	comp=Z,0.5nm,0.7s,baz=103,slow=1.2,SNR=5.6						
AKASG	Malin Array Be	89.25	321	P	P	13 42 31.5	-1.4
	comp=Z,2.7nm,0.6s,baz=68,slow=5.2,SNR=12						
	comp=Z,2.7nm,0.6s						
BMAR	Burnt Mountain	89.45	23	P	P	13 42 34.8	+1.2
ARCES	ARCESS Array B	89.65	340	P	P	13 42 33.2	-1.2
	comp=Z,2.8nm,0.7s,baz=79,slow=6.3,SNR=10						
	comp=Z,2.8nm,0.7s						
ARCES	ARCESS Array B	89.65	340	P	P	13 42 33.8	-0.6
FIA1	FINESS Array S	90.23	331	P	P	13 42 35.6	-1.5
FIA1				IAmb	IAmb	13 42 36.6	
	comp=Z,6.6nm,0.8s						
FINES	FINESS Array B	90.23	331	P	P	13 42 36.0	-1.2
	comp=Z,4.3nm,0.6s,baz=66,slow=4.8,SNR=12						
	comp=Z,4.3nm,0.6s						
FINES	FINESS Array B	90.23	331	P	P	13 42 35.2	-2.0
L27K	Beaver Creek,	91.08	27	P	P	13 42 42.0	+0.8
BCAR	Beaver Creek A	91.10	27	P	P	13 42 41.0	-0.3
BURAR	Bucovina Array	92.11	318	P	P	13 42 46.0	-0.4
BURAR				IAmb	IAmb	13 42 47.2	
	comp=Z,8.8nm,0.8s						
BUR08	Bucovina Ar. S	92.12	318	P	P	13 42 45.6	-0.8
BUR08				IAmb	IAmb	13 42 47.0	
	comp=Z,7.9nm,0.8s						
QSPA	South Pole Qui	92.37	180	P	P	13 42 47.1	0.0
QSPA				IAmb	IAmb	13 42 48.5	
	comp=Z,9.1nm,1.2s						
INK	Inuvik	93.42	21	P	P	13 42 51.7	0.0
	comp=Z,1.2nm,0.6s,baz=268,slow=6.2,SNR=4.5						
	comp=Z,1.2nm,0.6s						
KOLS	Kolonicke sedl	93.90	319	*e*P	P	13 42 54.7	+0.3
CRVS	Cervenica-Dubn	94.44	319	*e*P	P	13 42 57.4	+0.6
NB2	NORSAR Subarra	97.33	333	P	Pdif	13 43 07.5	-2.0
	comp=Z,1.2nm,0.7s,baz=76,slow=4.6						
NOA	NORSAR Array B	97.33	333	P	Pdif	13 43 07.8	-1.7
	comp=Z,1.0nm,0.7s,baz=75,slow=4.6,SNR=6.0						
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	99.46	320	P	Pdif	13 43 18.7	-0.6
	comp=Z,0.2nm,0.2s,baz=52,slow=5.2,SNR=3.9						
	comp=Z,0.2nm,0.2s						
YKA	Yellowknife Ar	102.96	23	PKiKP	PKiKP	13 47 50.0	+0.1
	comp=Z,1.0nm,0.7s,baz=315,slow=1.7,SNR=13						
YKA				PKKPbc	PKKPbc	13 59 27.9	-3.3
	comp=Z,0.9nm,0.7s,baz=119,slow=2.4,SNR=11						
NVAR	Mina Array Bea	111.97	47	PKiKP	PKiKP	13 48 08.2	+0.4
	comp=Z,0.3nm,0.3s,baz=290,slow=2.6,SNR=3.7						
ESDC	Sonseca Array	114.51	316	PP	PP	13 49 22.2	0.0
	comp=Z,0.4nm,0.8s,baz=46,slow=6.1,SNR=4.4						
PDAR	Pinedale Array	116.01	39	PKP	PKPdf	13 48 14.8	-0.7
	comp=Z,0.4nm,0.4s,baz=101,slow=0.8,SNR=4.0						
U15A	North Rim	117.16	47		PKiKP	13 48 19.6	+1.6
TORD	Torodi Ar. Bea	117.83	286	PKP	PKPdf	13 48 18.9	-0.5
	comp=Z,3.5nm,0.8s,baz=55,slow=2.1,SNR=17						
TORD				SKP		13 50 54.4	
	comp=Z,1.0nm,0.8s,baz=54,slow=2.7,SNR=3.7						
TORD				PKKPab	PKKPab	13 58 48.8	+0.9
	comp=Z,1.3nm,0.8s,baz=276,slow=4.6,SNR=5.9						
O20A	White River Ci	118.21	41	PKPdf	PKiKP	13 48 20.3	+0.5
ULM	Lac du Bonnet	118.71	26	PKP	PKPdf	13 48 19.8	-0.4
	comp=Z,1.0nm,0.3s,baz=288,slow=6.4,SNR=3.5						
PV13	Radium Mtn., P	118.81	43		PKiKP	13 48 21.5	+0.4
EYMN	Ely	122.34	25		PKPdf	13 48 26.9	-0.3
SCHQ	Schefferville	122.54	5	PKP	PKPdf	13 48 27.3	-0.1
	comp=Z,5.6nm,0.6s,baz=342,slow=1.8,SNR=14						
D41A	Chassel	124.27	24		PKiKP	13 48 31.3	0.0
DBIC	Dimbokro	125.20	280	PKP	PKiKP	13 48 33.9	-0.1
	comp=Z,4.9nm,0.6s,baz=147,slow=8.8,SNR=5.9						
DBIC	Dimbokro	125.20	280		PKPdf	13 48 33.7	+0.1
TXAR	Lajitas Array	126.84	50	PKP	PKiKP	13 48 37.2	+0.1
	comp=Z,1.2nm,0.7s,baz=284,slow=0.6,SNR=19						
TXAR				SKPab	SKiKP	13 50 53.5	-18
	comp=Z,1.2nm,0.7s,baz=320,slow=1.1,SNR=12						
S39A	Bolivar	128.95	35	PKPdf	PKPdf	13 48 40.2	+0.1
GBN	Guysborough	132.29	2	PKPdf	PKiKP	13 48 47.0	-0.4
PLCA	Paso Flores	140.49	166	PKhKP	PKPpre	13 48 58.5	
	comp=Z,2.2nm,0.7s,baz=260,slow=4.8,SNR=6.0						
PLCA	Paso Flores	140.49	166	*e*P	PKPdf	13 48 58.8	-2.8
BI05	Punta Hualpn	143.45	161		PKPdf	13 49 06.4	-0.4
TRQA	Tornquist	144.46	176		PKPab	13 49 09.5	-0.2
BO01	Tunca	146.28	162		PKPbc	13 49 14.5	+0.2
RFA	San Rafael	146.66	166	*i* P	PKiKP	13 49 16.3	-0.9
MT01	Popeta	146.72	161		PKPbc	13 49 15.5	+0.1
ROC1	El Roble	147.61	161	*i* P	PKPbc	13 49 16.2	-1.8
AUSP	Uspallata	148.81	163	*i* P	PKiKP	13 49 22.3	+0.3
RTLS	Leoncito	149.24	163	*i* P	PKiKP	13 49 23.2	+0.2
MRA	San Martin	149.53	169	*i* P	PKiKP	13 49 23.2	-0.1
ACCO	Cerro Coronel	150.44	162	*i* P	PKiKP	13 49 25.9	+0.4
ACHE	Chepes	150.54	167	*i* P	PKiKP	13 49 25.4	0.0
AROD	Rodeo	150.70	161	*i* P	PKiKP	13 49 26.9	+0.8
TCA	Tanti	150.79	170	*i* P	PKiKP	13 49 26.4	+0.5
ACDV	Cuesta del Vie	150.81	162	*i* P	PKiKP	13 49 26.6	+0.5
AVFE	Valle Fertil	150.82	165	*i* P	PKiKP	13 49 26.3	+0.3
APLL	PUNTA DE LOS L	151.31	166	*i* P	PKiKP	13 49 27.1	+0.2
CPSB	Cacapava Do Su	151.71	190	*e*P	PKPdf	13 49 21.1	+0.7
ACLC	CERRO LA CRUZ	152.13	165	*i* P	PKiKP	13 49 28.8	0.0
GO03	Copiap	152.79	158	PKPdf	PKPdf	13 49 20.6	-1.6
GO03				PKPbc	PKiKP	13 49 30.5	+0.4
GO03				PKPab	PKPab	13 49 44.8	+0.5
ITQB	Itaqui	152.84	185	*e*P	PKPdf	13 49 22.6	+0.6
AC06	Mina Casimiro	152.95	157	PKPdf	PKPdf	13 49 20.6	-1.7
AC06				PKPbc	PKiKP	13 49 30.9	+0.6
AC06				PKPab	PKPab	13 49 45.5	+0.5
CPUP	Villa Florida	156.21	184	PKP	PKPdf	13 49 27.0	+0.3
	comp=Z,2.5nm,0.8s,baz=88,slow=1.8,SNR=5.3						

CPUP				PKPab	PKPab	13 49 59.2	+0.3
	comp=Z,4.1nm,0.9s,baz=185,slow=4.4,SNR=7.0						
CPUP	Villa Florida	156.21	184	PKPdf	PKPdf	13 49 26.3	-0.4
CPUP				PKPab	PKPab	13 49 59.1	+0.2
CPUP	Villa Florida	156.21	184	*e*P	PKPdf	13 49 26.6	-0.2
SJMB	Sao Joao De Ma	156.23	226	*e*P	PKPdf	13 49 28.7	+1.7
VAO	Valinhos	156.48	209	*e*P	PKPdf	13 49 27.1	-0.2
CMC01	Camacan, BA	156.91	235	*e*P	PKPdf	13 49 27.7	-0.2
DIAM	Diamantina, MG	158.24	223	*e*P	PKPdf	13 49 29.2	-0.5
OTAV	Otavalo	160.37	82	*e*P	PKPdf	13 49 32.8	+0.2
AQDB	Aquidauana	161.80	190	PKPdf	PKPdf	13 49 32.3	-1.0
AQDB				PKPab	PKPab	13 50 23.1	-0.4
AQDB	Aquidauana	161.80	190	*e*P	PKPdf	13 49 33.9	+0.7
SDBA	SAO DESIDERIO	162.90	234	*e*P	PKPdf	13 49 34.3	-0.3
LPAZ	La Paz	163.57	147	PKP	PKPdf	13 49 36.7	+0.8
	comp=Z,5.6nm,1.0s,baz=71,slow=2.0,SNR=13						
LPAZ				PKPab	PKPab	13 50 33.4	+1.2
	comp=Z,2.2nm,0.8s,baz=228,slow=4.4,SNR=4.2						
LPAZ	La Paz	163.57	147	*e*P	PKPdf	13 49 36.4	+0.6
SDV	Santo Domingo	163.83	46	*e*P	PKPdf	13 49 35.5	-0.1
PP1B	Ponte de Pedra	164.41	195	*e*P	PKPdf	13 49 36.7	+0.9
ROSB	Rosrio	165.14	268	*e*P	PKPdf	13 49 36.6	+0.1
PEXB	Peixe	165.71	227	*e*P	PKPdf	13 49 37.5	+0.5
SALV	Santo Antonio	166.25	193	*e*P	PKPdf	13 49 37.8	+0.5
SMTB	Santa Maria do	166.99	240	*e*P	PKPdf	13 49 37.9	-0.1
PTLB	Pontes e Lacer	167.09	179	*e*P	PKPdf	13 49 38.5	+0.6
SNDB	Serra Nova Dou	167.85	219	*e*P	PKPdf	13 49 38.5	-0.1
TMAB	Tom-Au,PA,Br	169.11	270	*e*P	PKPdf	13 49 40.0	+0.6

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*IDC **20** 13:35:24.4±0.9, 52°.40N×162°.23E, h0^{km}, mb3.7/7, mbtmp3.8/8, ML3.1/1 Error ellipse: s-maj=39.8km s-min=17.8km az=135.0*

*KRSC **20** 13:35:41.3±0.8, 54°.10N×159°.12E, h198^{km}±8^{km}, ML3.9*

ISC 20 13:35:43.8±0.8**, 54°.09N**±0°.04×**159°.12E**±0°.06**, h200^{km}, n45, σ1^{s}.95**/57**, mb3.5**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	Karymskiy	0.20	106	*e*P	Pn	13 36 08.3	-1.9
KII				*e*S	Sn	13 36 28.5	-2.1
KRX	Arik	0.79	201	*e*P	Pn	13 36 10.8	-1.7
GNL	Ganaly	0.80	241	*e*P	Pn	13 36 10.0	-2.5
GNL				*e*S	Sn	13 36 30.9	-3.7
KRER	Koryakskii	0.82	196	*e*P	Pn	13 36 11.2	-1.5
SDLR	Sedlovina	0.83	190	*i* P	Pn	13 36 11.2	-1.5
KOK	Koryaka	0.85	200	*e*P	Pn	13 36 11.5	-1.3
SMAR	Somma	0.85	193	*e*P	Pn	13 36 11.5	-1.4
AVH	Avacha	0.86	196	*e*P	Pn	13 36 11.4	-1.4
UGLR	Uglovaya	0.90	191	*e*P	Pn	13 36 11.9	-1.2
NLC	Nalytchevo	0.93	172	*e*P	Pn	13 36 11.4	-1.7
NLC				*e*S	Sn	13 36 34.0	-1.7
DALK	Dalny	1.08	192	*e*P	Pn	13 36 12.6	-1.6
PET	Petropavlovsk	1.11	195	*i* P	Pn	13 36 12.8	-1.5
PET				*e*S	Sn	13 36 36.0	-1.8
SPN	Mys Shipunski	1.13	151	*e*P	Pn	13 36 13.0	-1.5
SPN				*e*S	Sn	13 36 35.1	-3.1
PETK	Petropavlovsk-	1.30	221	Pn	Pn	13 36 13.1	-2.8
	15nm,0.3s,baz=61,slow=12,SNR=150						
	45nm,0.6s						
TUMR	Tumrok	1.33	26	*e*P	Pn	13 36 14.8	-1.4
TUMR				*e*S	Sn	13 36 39.8	-1.6
TUMD	Tumrok D	1.34	33	*e*P	Pn	13 36 14.4	-1.7
KRMR	Karymshinskiy	1.40	205	*i* P	Pn	13 36 14.9	-1.7
MKZ	Mys Kozlova	1.60	72	*e*P	Pn	13 36 16.9	-1.4
MKZ				*e*S	Sn	13 36 41.4	-3.7
APC	Apacha	1.66	226	*e*P	Pn	13 36 17.3	-1.6
GRL	Gorelyy	1.67	203	*e*P	Pn	13 36 18.3	-0.9
RUS	Russkaya	1.70	193	*e*P	Pn	13 36 17.5	-1.9
MTVR	Mutnovka	1.71	200	*e*P	Pn	13 36 18.7	-0.9
MTVR				*e*S	Sn	13 36 45.8	-1.5
KMNR	Kamenistaya	1.79	21	*e*P	Pn	13 36 19.2	-1.0
ESO	Esso	1.85	353	*e*P	Pn	13 36 18.8	-2.0
ESO				*e*S	Sn	13 36 46.2	-3.5
ASAK	Asacha	1.86	204	*e*P	Pn	13 36 20.0	-1.0
KOZ	Kozyrevsk	2.02	12	*e*P	Pn	13 36 20.2	-2.2
MIPR	Malaya Ipel'ka	2.31	219	*e*P	Pn	13 36 23.9	-1.7
KDTR	Khodutka, Kamc	2.37	196	*e*P	Pn	13 36 24.0	-2.3
KLY	Klyuchi	2.39	21	*e*P	Pn	13 36 26.1	-0.3
BDR	Baidarnaya	2.75	25	*e*P	Pn	13 36 30.2	-0.3
BDR				*e*S	Sn	13 37 06.6	-0.6
SRKR	Sorokina	2.82	24	*e*P	Pn	13 36 30.7	-0.6
SMKR	Semkarok	2.83	27	*e*P	Pn	13 36 31.6	+0.1
PAU	Pauzhetka	2.98	209	*e*P	Pn	13 36 32.2	-1.0
KBG	Krutoberegovo	2.99	42	*e*P	Pn	13 36 32.2	-0.9
KBG				*e*S	Sn	13 37 08.2	-3.6
KBTR	Krutoberegovo	3.00	44	*e*P	Pn	13 36 31.6	-1.7
SKR	Severo-Kuril's	3.88	210	*e*P	Pn	13 36 43.0	-1.0
SKR				*e*S	Sn	13 37 29.0	-2.2
BKI	Bering	4.13	72	*e*P	Pn	13 36 46.2	-0.9
BKI				*e*S	Sn	13 37 32.9	-4.0
PALN	Palana	5.03	5	*e*P	Pn	13 36 56.3	-2.1
MJAR	Matsushiro Arr	22.75	228	P	P	13 40 31.2	+2.5
	1.0nm,0.5s,baz=28,slow=9.6,SNR=5.2						
	1.0nm,0.5s						
ILAR	Eielson Array	28.54	47	P	P	13 41 21.8	+1.4
	0.7nm,0.5s,baz=269,slow=7.4,SNR=11						
	0.7nm,0.5s						
INK	Inuvik	33.44	39	P	P	13 42 04.9	+1.7
	1.4nm,0.3s,baz=292,slow=8.8,SNR=19						
	1.4nm,0.3s						
YKA	Yellowknife Ar	42.82	43	P	P	13 43 23.1	+1.7
	0.4nm,0.6s,baz=302,slow=8.4,SNR=5.6						
	0.4nm,0.6s						
WRA	Warramunga Arr	76.75	204	P	P	13 47 13.8	+0.9
	0.4nm,0.6s,baz=18,slow=5.9,SNR=6.2						
	0.4nm,0.6s						
ASAR	Alice Springs	80.44	203	P	P	13 47 34.0	+1.0
	0.3nm,0.7s,baz=19,slow=4.9,SNR=5.9						
	0.3nm,0.7s						
ESDC	Sonseca Array	85.48	347	P	P	13 48 12.9	+14
	1.0nm,1.1s,baz=347,slow=4.6,SNR=5.5						
	1.0nm,1.1s						

NDI 20 13:36:17.8±1.6**, 24°.91N×92°.11E, h15^{km}**±4^{km}**, ML3.5, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SILR	SILCHAR	0.64	101	*e*P	Pg	13 36 29.6	-0.8
SILR				*e*S	Sb	13 36 40.0	+0.6
SILR				IAML		13 36 44.2	
	comp=E,2µm,0.1s						
SILR				IAML		13 36 44.5	
	comp=N,2µm,0.4s						
SHL	Shillong	0.69	342	*e*P	Pg	13 36 31.3	0.0
SHL				*e*S	Sb	13 36 41.6	+0.6
SHL				IAML		13 36 42.5	
	comp=E,2µm,0.1s						
SHL				IAML		13 36 44.0	
	comp=N,1µm,0.1s						
SHL	Shillong	0.69	342	IAML		13 36 42.1	
	comp=E,2µm,0.2s						
AZL	Aizawl	1.28	156	*e*P	Pn	13 36 38.7	-2.5
AZL				*e*S	Sb	13 36 54.0	-4.0
AZL				IAML		13 36 56.6	
	comp=N,609nm,0.3s						
AZL				IAML		13 36 56.9	
	comp=E,2µm,0.3s						
AGT	Agartala	1.29	218	*e*P	Pn	13 36 40.9	-0.3
AGT				*e*S	Sg	13 36 59.2	-0.2
AGT				IAML		13 37 01.8	
	comp=E,2µm,0.5s						
AGT				IAML		13 37 02.3	
	comp=N,1µm,0.5s						
GUWA	GUWAHATI	1.33	344	*e*P	Pn	13 36 42.1	+0.2
GUWA				*e*S	Sb	13 36 59.9	+0.4
TURI	Tura	1.73	292	*e*P	Pg	13 36 50.6	-0.5
TURI				*e*S	Sb	13 37 11.1	+0.2
TURI				IAML		13 37 17.4	
	comp=E,902nm,0.2s						
TURI				IAML		13 37 17.4	
	comp=N,826nm,0.2s						
TEZP	TEZPUR	1.81	20	*e*P	Pn	13 36 49.2	+0.8
TEZP				*e*S	Sn	13 37 11.3	+0.2
KOHI	KOHIMA	1.98	66	*e*x	Pn	13 36 44.0	-6.9
KOHI				*e*S	Sn	13 37 15.9	+0.4
KOHI				IAML		13 37 29.2	
	comp=E,251nm,0.4s						
KOHI				IAML		13 37 30.7	
	comp=N,367nm,0.8s						

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*IDC **20** 13:44:57.7±13.0, 15°.54S×165°.89E, h0^{km}, mb3.7/3, mbtmp3.9/4, ML4.6/1, MS3.4/2, Error ellipse: s-maj=233.0km s-min=36.2km az=57.0*

*NEIC **20** 13:44:59.9±1.2, 15°.61S±0°.03×166°.28E±0°.06, h35^{km}±2^{km}, mb4.0/7, Error ellipse: s-maj=10.9km s-min=3.0km az=72.0*

ISC 20 13:44:59.0±0.9**, 15°.44S**±0°.09×**166°.28E**±0°.08**, h35^{km}, n19, σ1^{s}.40**/19**, mb3.9**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.89	91	Pn	Pn	13 45 14.5	-0.5
SANVU				Sn	Sn	13 45 28.3	+1.6
LIFNC	LIFOU	5.39	170	Pn	Pn	13 46 16.1	-0.8
MARNC	Mare, Loyalty	6.24	165	Pn	Pn	13 46 24.9	-3.6
DZM	Mont Dzumac	6.60	179	Pn	Pn	13 46 35.4	+1.7
	14nm,0.3s,baz=188,slow=20,SNR=141						
DZM				Sn	Sn	13 47 50.0	+2.3
	5.2nm,0.3s,baz=127,slow=23,SNR=12						
	32nm,0.3s						
PINNC	Pines Island,	7.22	171		Pn	13 46 42.2	+0.2
STKA	Stephens Creek	27.81	230	P	P	13 50 45.4	+0.3
	0.6nm,0.4s,baz=52,slow=7.0,SNR=3.6						
	0.6nm,0.4s						
STKA	Stephens Creek	27.81	230	P	P	13 50 44.5	-0.5
STKA				IAmb	IAmb	13 50 56.0	
	comp=Z,0.8nm,1.1s						
WB0	Warramunga Arr	30.67	257	P	P	13 51 10.5	0.0
WB0				IAmb	IAmb	13 51 12.5	
	comp=Z,9.7nm,1.4s						
WRA	Warramunga Arr	30.73	257	P	P	13 51 11.4	+0.3
	comp=Z,0.4nm,0.7s,baz=85,slow=8.7,SNR=5.4						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	30.73	257	P	P	13 51 10.0	-1.1
AS31	Alice Springs	31.53	250	P	P	13 51 17.6	-0.5
AS31				IAmb	IAmb	13 51 18.6	
	comp=Z,1.5nm,1.4s						
ASAR	Alice Springs	31.53	250	P	P	13 51 18.6	+0.5
	comp=Z,1.2nm,0.6s,baz=78,slow=8.9,SNR=32						
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	31.53	250	P	P	13 51 17.1	-1.1
BBOO	Buckleboo	32.39	232	P	P	13 51 24.7	-0.9
BBOO				IAmb	IAmb	13 51 30.9	
	comp=Z,17nm,1.3s						
FORT	Forrest	38.12	240	P	P	13 52 14.0	-0.9
JHJ	Hachijo jima 2	54.52	333	LR	LR	14 15 17.6	
	comp=Z,48nm,21.8s,baz=347,slow=33						
VNDA	Vanda	62.14	181	P	P	13 55 15.6	-0.6
VNDA				IAmb	IAmb	13 55 40.8	
	comp=Z,1.3nm,1.1s						
KSAR	Wonju Array Be	63.80	327	P	P	13 55 28.9	+1.2
INK	Inuvik	93.86	19	LR	LR	14 37 56.3	
	comp=Z,13nm,18.0s,baz=224,slow=34						

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*VIE **20** 13:47:24.8±0.1, 47°.49N×13°.21E, h0^{km}, mb2.5/6, ml2.2/12, Error ellipse: s-maj=1.2km s-min=0.9km az=42.0 long-period event 2 km ENE of Werfen Suspected Mining induced.*

*PRU **20** 13:47:25.5±0.0, 47°.48N×13°.23E, h0^{km}, Werfen*

ISC 20 13:47:25.2±0.8**, 47°.49N**±0°.02×**13°.25E**±0°.02**, h0^{km}, n35, σ0^{s}.99**/54**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIOA	Bad Ischl, Aus	0.33	53	*e*Pg	Pg	13 47 31.3	-0.2
	SNR=9.5						
BIOA				*e*Sg	Sg	13 47 36.5	+0.6
BIOA	Bad Ischl, Aus	0.33	53	*e*Pg	Pg	13 47 31.3	-0.2
	SNR=9.5						
BIOA				*e*Sg	Sg	13 47 36.5	+0.6
KBA	Koelnbreinsper	0.42	171	*e*Pg	Pg	13 47 32.8	-0.4
	6.5nm,0.1s,SNR=5.1						
KBA				*i* Sg	Sg	13 47 38.8	+0.1
	20nm,0.2s						
KBA	Koelnbreinsper	0.42	171	*e*Pg	Pg	13 47 32.8	-0.4
	6.5nm,0.1s,SNR=5.1						
KBA				*i* Sg	Sg	13 47 38.8	+0.1
	20nm,0.2s						
MOA	Molln	0.78	62	*e*Pg	Pg	13 47 40.3	+0.2
	2.5nm,0.2s						
MOA				*e*Sg	Sb	13 47 52.1	-0.6
	8.5nm,0.2s						
MOA	Molln	0.78	62	*e*Pg	Pg	13 47 40.3	+0.2
	2.5nm,0.2s						
MOA				*e*Sg	Sb	13 47 52.1	-0.6
	8.5nm,0.2s						
ABTA	Abfaltersbach	0.90	214	*e*Pg	Pg	13 47 41.8	-0.5
	1.4nm,0.1s						
ABTA				Sg	Sg	13 47 53.6	-0.3
	2.0nm,0.2s						
ABTA	Abfaltersbach	0.90	214	*e*Pg	Pg	13 47 41.8	-0.5
	1.4nm,0.1s						
ABTA				Sg	Sg	13 47 53.6	-0.3
	2.0nm,0.2s						
WTTA	Wattenberg	1.12	259	*e*Pg	Pg	13 47 46.4	-0.2
	6.1nm,0.2s						
WTTA				*e*Sg	Sn	13 48 03.5	-0.9
	16nm,0.3s						
WTTA	Wattenberg	1.12	259	*e*Pg	Pg	13 47 46.4	-0.2
	6.1nm,0.2s						
WTTA				*e*Sg	Sn	13 48 03.5	-0.9
	16nm,0.3s						
OBKA	Obir	1.33	137	*i* Pg	Pg	13 47 49.9	-0.7
	2.0nm,0.1s						
OBKA				*e*Sg	Sn	13 48 09.4	-0.1
	11nm,0.5s						
OBKA	Obir	1.33	137	*i* Pg	Pg	13 47 49.9	-0.7
	2.0nm,0.1s						
OBKA				*e*Sg	Sn	13 48 09.4	-0.1
	11nm,0.5s						
SQTA	Sankt Quirin	1.41	260	*e*Pg	Pg	13 47 51.5	-0.8
	10nm,0.3s,SNR=7.4						
SQTA				*e*Sg	Sn	13 48 13.7	+2.1
	22nm,0.4s						
SQTA	Sankt Quirin	1.41	260	*e*Pg	Pg	13 47 51.5	-0.8
	10nm,0.3s,SNR=7.4						
SQTA				*e*Sg	Sn	13 48 13.7	+2.1
	22nm,0.4s						
MOTA	Moosalm	1.46	265	*e*Pg	Pn	13 47 52.3	-0.7
	3.9nm,0.2s,SNR=5.1						
MOTA				*e*Sg	Sn	13 48 15.6	+2.7
	4.6nm,0.2s						
MOTA	Moosalm	1.46	265	*e*Pg	Pn	13 47 52.3	-0.7
	3.9nm,0.2s,SNR=5.1						
MOTA				*e*Sg	Sn	13 48 15.6	+2.7
	4.6nm,0.2s						
CKRC	Cesky Krumlov	1.51	28	*e*SG	Sg	13 48 13.5	-0.1
ARSA	Arzberg	1.57	98	*e*Pg	Pg	13 47 55.5	+0.3
	7.3nm,0.5s						
ARSA				*e*Sg	Sg	13 48 17.7	+2.2
	2.6nm,0.2s						
ARSA	Arzberg	1.57	98	*e*Pg	Pg	13 47 55.5	+0.3
	7.3nm,0.5s						
ARSA				*e*Sg	Sg	13 48 17.7	+2.2
	2.6nm,0.2s						
KHC	Kasperske Hory	1.66	8	*e*PG	Pn	13 47 54.5	-1.0
KHC				*e*SG	Sg	13 48 18.8	+0.5
	comp=Z,30nm,0.8s						
RETA	Reutte	1.68	271	*e*Sg	Sg	13 48 20.3	+1.1
	17nm,0.3s						
RETA	Reutte	1.68	271	*e*Sg	Sg	13 48 20.3	+1.1
	17nm,0.3s						
FETA	Feichten	1.78	256	*e*Sg	Sg	13 48 23.4	+1.2
	2.6nm,0.4s						
FETA	Feichten	1.78	256	*e*Sg	Sg	13 48 23.4	+1.2
	2.6nm,0.4s						
CONA	Conrad Observa	1.82	75	*e*Sn	Sb	13 48 22.9	+0.1
	16nm,0.5s						
CONA	Conrad Observa	1.82	75	*e*Sn	Sb	13 48 22.9	+0.1
	16nm,0.5s						
KRUC	Moravsky	2.62	52	*e*SG	Sb	13 48 46.0	+0.1
PRU	Pruhonice	2.64	18	*e*SG	Sg	13 48 49.0	-1.0
	comp=Z,16nm,0.5s						
NKC	Novy Kostel	2.79	349	*e*SG	Sg	13 48 54.1	-0.8
	comp=Z,5.9nm,0.4s						
VRAC	Vranov	2.88	50	*e*SG	Sb	13 48 53.6	+0.5
DPC	Dobruska-Polom	3.51	34	*e*SG	Sg	13 49 16.8	-1.0
	comp=Z,5.5nm,0.4s						
UPC	Upice	3.52	30	*e*SG	Sg	13 49 18.6	+0.2
	comp=Z,9.1nm,0.5s						
CHVC	Chvalec	3.61	30	*e*SG	Sg	13 49 21.4	+0.4
	comp=Z,3.5nm,0.4s						
OSTC	Ostas	3.64	31	*e*SG	Sg	13 49 22.3	+0.3
	comp=Z,11nm,0.9s						
MORC	Moravsky Berou	3.65	50	*e*SG	Sg	13 49 21.8	-0.7

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*JMA **20** 13:56:16.1±0.2, 24°N±1°×122°.5E±0°.4, h73^{km}±1^{km}, MV3.8/14, NW OFF ISHIGAKIJIMA IS*

*TAP **20** 13:56:16.5, 24°.40N×122°.52E, h71^{km}, ML4.4, B*

*NIED **20** 13:56:16.1, 24°.40N×122°.50E, h73^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}0.89; $M_{\theta\theta}$3.09; $M_{\phi\phi}$-3.98; $M_{r\theta}$5.05; $M_{\theta\phi}$-0.94; $M_{\phi r}$-0.92; Fault plane solution: $M_0$5.73000×10^{14} NP1:ϕ_s42.00000°, δ56.00000°, λ157.00000°. NP2:ϕ_s145.00000°, δ71.00000°, λ36.00000°.*

*IDC **20** 13:56:17.4±4.3, 24°.51N×122°.61E, h88^{km}±41^{km}, mb3.3/7, mbtmp3.7/9 Error ellipse: s-maj=36.0km s-min=17.4km az=76.0*

ISC 20 13:56:15.7±0.7**, 24°.36N**±0°.02×**122°.53E**±0°.02**, h71^{km}**±5^{km}**, n150, σ1^{s}.36**/288**, mb3.5**/7**, 19C-36D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.39	77	P	Pn	13 56 28.6	+0.9
JYNG				S	Sn	13 56 37.3	+0.8
YOJ	Yonaguni jima	0.45	77	⇓*i*P	Pn	13 56 29.1	+0.9
	baz=81						
YOJ				*i* S	Sn	13 56 37.8	+0.5
	baz=81						
YOJ	Yonaguni jima	0.45	77	P	Pn	13 56 29.1	+0.9
YOJ				S	Sn	13 56 38.0	+0.6
TWC	Suao	0.66	292	⇓*i*P	Pn	13 56 30.8	+0.5
	baz=289						
TWC				*i* S	Sn	13 56 41.0	0.0
	baz=289						
EWUT	Wuta	0.69	277	*i* P	Pn	13 56 31.1	+0.6
	baz=274						
EWUT				*e*S	Sn	13 56 41.1	-0.4
	baz=274						
EHP	Heping Village	0.72	266	*e*P	Pn	13 56 31.6	+0.8
	baz=263						
ENA	Nanau	0.72	275	*i* P	Pn	13 56 31.4	+0.5
	baz=272						
ENA				*e*S	Sn	13 56 42.2	+0.1
	baz=272						
EGS		0.72	312	P	Pn	13 56 31.5	+0.6
	baz=310						
EGS				*e*S	Sn	13 56 42.3	+0.1
	baz=310						
NDS	Dongshan	0.79	290	⇓*i*P	Pn	13 56 32.4	+0.8
	baz=288						
NDS				*e*S	Sn	13 56 43.7	+0.2
	baz=288						
NTC	Toucheng	0.80	308	*i* P	Pn	13 56 32.4	+0.6
	baz=306						
NTC				*e*S	Sn	13 56 43.7	-0.1
	baz=306						
TWB1	Santiao Chiao	0.81	323	*i* P	Pn	13 56 32.3	+0.4
	baz=322						
TWB1				*e*S	Sn	13 56 43.2	-0.7
	baz=322						
ILA	Ilan	0.81	300	*e*P	Pn	13 56 32.8	+0.9
	baz=298						
ILA				*e*S	Sn	13 56 44.5	+0.5
	baz=298						
ETL	Fush Village	0.85	256	*i* P	Pn	13 56 33.1	+0.6
	baz=254						
ETL				*e*S	Sn	13 56 45.1	+0.2
	baz=254						
TWE	Neicheng	0.86	295	⇓*i*P	Pn	13 56 33.3	+0.8
	baz=293						
TWE				*e*S	Sn	13 56 45.0	0.0
	baz=293						
NACB	Ninganchiao	0.87	258	⇑*i*P	Pn	13 56 33.2	+0.5
	baz=255						
NACB				*e*S	Sn	13 56 44.2	-1.0
	baz=255						
TIPB	Shuangxi	0.88	314	⇓*i*P	Pn	13 56 33.2	+0.5
	baz=312						
TIPB				*e*S	Sn	13 56 45.3	-0.2
	baz=312						
TWD	Chiawan	0.90	252	⇑P	Pn	13 56 33.4	+0.5
	baz=249						
TWD				*e*S	Sn	13 56 45.9	+0.2
	baz=249						
ENTT	Nioudou	0.92	288	⇓*i*P	Pn	13 56 34.4	+1.2
	baz=286						
ENTT				*e*S	Sn	13 56 47.4	+1.1
	baz=286						
HWA	Hwalien	0.93	246	P	Pn	13 56 34.2	+0.9
	baz=243						
HWA				*e*S	Sn	13 56 47.4	+1.0
	baz=243						
LATG	Datong	0.93	281	⇓*i*P	Pn	13 56 34.4	+1.0
	baz=279						
LATG				*e*S	Sn	13 56 47.4	+0.8
	baz=279						
SXI1	Grass Mountain	0.94	321	⇓*i*P	Pn	13 56 34.1	+0.5
	baz=320						
SXI1				*e*S	Sn	13 56 46.7	-0.1
	baz=320						
FUSB	Fushanzhiwuyua	0.94	295	⇓*i*P	Pn	13 56 34.5	+0.9
	baz=293						
FUSB				*e*S	Sn	13 56 47.0	+0.1
	baz=293						
NDT	Datong Townshi	0.95	285	⇓*i*P	Pn	13 56 35.0	+1.3
	baz=283						
NDT				*e*S	Sn	13 56 47.8	+0.7
	baz=283						
ETLH	Xiulin Townshi	0.97	261	⇓P	Pn	13 56 34.5	+0.6
	baz=259						
ETLH				*e*S	Sn	13 56 47.6	+0.2
	baz=259						
NWF	Wu-fen Shan	0.98	316	⇓P	Pn	13 56 34.7	+0.7
	baz=315						
NWF				*e*S	Sn	13 56 47.7	0.0
	baz=315						
WFSB	Wu-fen Shan	0.98	316	⇓P	Pn	13 56 34.7	+0.8
	baz=315						
WFSB				*e*S	Sn	13 56 47.7	+0.1
	baz=315						
TEYL	Yanliau Villag	0.98	240	*e*P	Pn	13 56 34.6	+0.7
	baz=240						
TEYL				*e*S	Sn	13 56 48.2	+0.6
	baz=240						
NWLT	Wulai	1.02	294	⇓*i*P	Pn	13 56 35.6	+1.1
	baz=292						
NWLT				*e*S	Sn	13 56 48.9	+0.4
	baz=292						
ETM	Tongmen	1.02	247	P	Pn	13 56 35.0	+0.5
	baz=245						
ETM				*e*S	Sn	13 56 48.6	+0.1
	baz=245						
TNOU	National Taiwa	1.04	319	*e*P	Pn	13 56 35.2	+0.5
	baz=318						
TNOU				*e*S	Sn	13 56 48.6	-0.3
	baz=318						
NNSB	Datong	1.04	274	⇓*i*P	Pn	13 56 35.8	+0.9
	baz=272						
NNSB				*e*S	Sn	13 56 49.5	+0.3
	baz=272						
NNS	Nan Shan	1.05	274	⇓P	Pn	13 56 35.9	+0.8
	baz=272						
NNS				*e*S	Sn	13 56 49.6	+0.1
	baz=272						
TWA	Mucha	1.05	306	⇓P	Pn	13 56 35.6	+0.7
	baz=304						
TWA				*e*S	Sn	13 56 48.9	-0.4
	baz=304						
NHDH	Xindian Distri	1.09	303	⇓*i*P	Pn	13 56 36.1	+0.8
	baz=302						
NHDH				*e*S	Sn	13 56 49.8	-0.2
	baz=302						
YHNB	Yeheng	1.09	286	⇓*i*P	Pn	13 56 36.6	+1.2
	baz=285						
YHNB				*e*S	Sn	13 56 51.0	+0.8
	baz=285						
IRIF	Iriomote-Funau	1.10	91	P	Pn	13 56 36.1	+0.7
IRIF				S	Sn	13 56 50.8	+0.6
NSK	Sanguang	1.11	287	⇓*i*P	Pn	13 56 36.7	+1.1
	baz=285						
NSK				*e*S	Sn	13 56 51.3	+0.7
	baz=285						
TEGC	Jichi Village	1.11	234	⇑P	Pn	13 56 36.4	+0.8
	baz=232						
TEGC				*e*S	Sn	13 56 51.3	+0.8
	baz=232						
TATO	Taipei	1.12	303	⇓P	Pn	13 56 36.4	+0.6
	baz=302						

TATO	baz=302			*e*S	Sn	13 56 50.6	-0.2
TAP1	**Taipei** baz=305	1.13	307	*e*P	Pn	13 56 37.3	+1.4
TAP1	baz=305			*e*S	Sn	13 56 51.2	+0.2
ESL	**Shilin** baz=239	1.14	242	P	Pn	13 56 36.3	+0.4
ESL	baz=239			*e*S	Sn	13 56 51.0	-0.2
TAP	**Taipei** baz=305	1.15	306	*e*P	Pn	13 56 36.8	+0.7
TAP	baz=305			*e*S	Sn	13 56 51.3	0.0
YM01	**YM01** baz=311	1.17	312	⇓P	Pn	13 56 36.9	+0.5
YM01	baz=311			*e*S	Sn	13 56 51.3	-0.6
WHF	**Hehuan Shan** baz=258	1.17	260	*e*P	Pn	13 56 37.5	+0.7
WHF	baz=258			*e*S	Sn	13 56 52.8	+0.2
FUSS	**Fushou** baz=263	1.18	265	⇓P	Pn	13 56 37.7	+1.0
FUSS	baz=263			*e*S	Sn	13 56 52.7	+0.3
YM08	**YM08** baz=313	1.18	314	*e*P	Pn	13 56 36.8	+0.2
YM08	baz=313			*e*S	Sn	13 56 51.1	-1.1
HATJ	**Hateruma jima**	1.21	104	P	Pn	13 56 38.4	+1.5
HATJ				*e*S	Sn	13 56 54.8	+2.1
EGFH	**Guangfu** baz=234	1.22	236	P	Pn	13 56 37.5	+0.4
EGFH	baz=234			*e*S	Sn	13 56 53.6	+0.6
TWT	**Tachien** baz=263	1.24	265	*e*P	Pn	13 56 39.1	+1.7
TWT	baz=263			*e*S	Sn	13 56 54.7	+1.0
TWY	**Chenhua** baz=316	1.24	317	⇓*e*P	Pn	13 56 38.2	+0.9
TWY	baz=316			*e*S	Sn	13 56 54.4	+1.0
TWS1	**Kuangyinshan** baz=305	1.25	306	⇓P	Pn	13 56 38.1	+0.8
TWS1	baz=305			*e*S	Sn	13 56 53.9	+0.3
TDCB	**Techi** baz=263	1.25	265	⇓*e*P	Pn	13 56 38.9	+1.3
TDCB	baz=263			*e*S	Sn	13 56 54.4	+0.4
NTST	**Danshui** baz=308	1.26	309	*e*P	Pn	13 56 38.4	+0.9
NTST	baz=308			*e*S	Sn	13 56 54.2	+0.3
CHGB	**Renai** baz=255	1.27	257	⇓*e*P	Pn	13 56 39.0	+1.1
CHGB	baz=255			*e*S	Sn	13 56 54.9	+0.4
NTY	**Taoyuan** baz=298	1.28	300	*e*P	Pn	13 56 39.0	+1.1
NTY	baz=298			*e*S	Sn	13 56 55.8	+1.3
OWD	**Renai** baz=250	1.30	252	⇑P	Pn	13 56 39.0	+0.9
OWD	baz=250			*e*S	Sn	13 56 55.0	-0.1
NFF	**Wufeng Townshi** baz=280	1.31	282	⇓P	Pn	13 56 39.5	+1.3
NFF	baz=280			*e*S	Sn	13 56 55.8	+0.6
PCYT	**Pengchaiyu** baz=342	1.33	342	⇓*e*P	Pn	13 56 39.5	+1.1
PCYT	baz=342			*e*S	Sn	13 56 57.5	+2.1
HGSD	**Ruisui** baz=228	1.33	230	⇑P	Pn	13 56 39.0	+0.5
HGSD	baz=228			*e*S	Sn	13 56 55.5	0.0
WUSB	**Renai** baz=253	1.34	254	⇓P	Pn	13 56 39.9	+1.3
WUSB	baz=253			*e*S	Sn	13 56 56.3	+0.3
JKRS	**Kuro-shima**	1.36	95	P	Pn	13 56 40.1	+1.3
JKRS				S	Sn	13 56 57.9	+1.7
NCU	**National Centr** baz=295	1.36	297	*e*P	Pn	13 56 40.0	+1.2
NCU	baz=295			*e*S	Sn	13 56 57.5	+1.3
NCUH	**Zhongli** baz=295	1.36	297	*e*P	Pn	13 56 39.9	+1.1
NCUH	baz=295			*e*S	Sn	13 56 57.3	+1.0
EHY	**Hungye** baz=231	1.39	232	⇑*e*P	Pn	13 56 39.6	+0.3
EHY	baz=231			*e*S	Sn	13 56 55.8	-1.3
VWDT	**VWDT** baz=243	1.40	245	⇑P	Pn	13 56 40.7	+1.3
VWDT	baz=243			*e*S	Sn	13 56 57.9	+0.6
LIOB	**Emei** baz=280	1.41	282	⇓P	Pn	13 56 40.9	+1.5
LIOB	baz=280			*e*S	Sn	13 56 59.0	+1.6
NSTT	**Nanjuang** baz=280	1.42	281	⇓P	Pn	13 56 40.9	+1.3
NSTT	baz=280			*e*S	Sn	13 56 58.5	+1.0
WHP	**Taichung City** baz=265	1.44	267	*e*P	Pn	13 56 42.1	+2.1
WHP	baz=265			*e*S	Sn	13 56 59.6	+1.2
SBCB	**Hsinchu** baz=286	1.47	287	*e*P	Pn	13 56 41.5	+1.3
SBCB	baz=286			*e*S	Sn	13 56 59.8	+1.1
JIJ	**Ishigaki jima**	1.47	90	P	Pn	13 56 41.0	+0.7
JIJ				S	Sn	13 56 59.0	+0.1
WPL	**Puli Township** baz=255	1.48	257	*e*P	Pn	13 56 41.9	+1.6
WPL	baz=255			*e*S	Sn	13 57 00.1	+1.1
YULB	**Yu-li** baz=228	1.48	230	⇑P	Pn	13 56 40.9	+0.5
YULB	baz=228			*e*S	Sn	13 56 58.8	-0.3
NHW	**Xinwu Township** baz=294	1.49	296	*e*P	Pn	13 56 41.6	+1.1
NHW	baz=294			*e*S	Sn	13 57 00.8	+1.5
DPDB	**Guoxing** baz=256	1.50	258	*e*P	Pn	13 56 42.4	+1.7
DPDB	baz=256			*e*S	Sn	13 57 00.9	+1.4
EYUL	**Yuli** baz=226	1.50	228	*e*P	Pn	13 56 41.5	+0.9
EYUL	baz=226			*e*S	Sn	13 56 58.8	-0.7
WCS	**Beigang Elemen** baz=257	1.50	259	⇓*e*P	Pn	13 56 42.4	+1.7
WCS	baz=257			*e*S	Sn	13 57 01.1	+1.4
TWF1	**Yuli** baz=227	1.51	228	⇑P	Pn	13 56 41.4	+0.6
TWF1	baz=227			*e*S	Sn	13 56 56.9	-2.9
SSLB	**Suanglung** baz=247	1.55	249	⇓P	Pn	13 56 42.5	+1.2
SSLB	baz=247			*e*S	Sn	13 57 00.7	0.0
SMLT	**Sun Moon Lake** baz=251	1.56	253	*e*P	Pn	13 56 43.1	+1.5
SMLT	baz=251			*e*S	Sn	13 57 02.1	+1.0
NMLH	**Miaoli** baz=275	1.59	277	*e*P	Pn	13 56 43.5	+1.6
NMLH	baz=275			*e*S	Sn	13 57 02.6	+1.0
TYC	**Yuchr** baz=252	1.59	254	*e*P	Pn	13 56 43.6	+1.7
TYC	baz=252			*e*S	Sn	13 57 02.8	+1.1
TWQ1	**Liyutan** baz=268	1.60	270	*e*P	Pn	13 56 43.3	+1.3
TWQ1	baz=268			*e*S	Sn	13 57 03.8	+1.9
NSY	**Sanyi** baz=271	1.61	272	*e*P	Pn	13 56 44.0	+1.8
NSY	baz=271			*e*S	Sn	13 57 03.8	+1.6
FULB	**Fuli** baz=223	1.62	224	⇑P	Pn	13 56 42.6	+0.4
FULB	baz=223			*e*S	Sn	13 57 02.1	-0.3
CHKT	**Chengkung** baz=219	1.65	220	⇑*i*P	Pn	13 56 42.7	+0.1
CHKT	baz=219			*e*S	Sn	13 57 02.0	-1.0
YUS	**Yu-Shan** baz=238	1.68	239	*e*P	Pn	13 56 44.9	+1.4
YUS	baz=238			*e*S	Sn	13 57 04.7	+0.1
WWF	**Wufeng** baz=258	1.70	260	*e*P	Pn	13 56 45.8	+2.4
WWF	baz=258			*e*S	Sn	13 57 07.1	+2.9
TCU	**Taichung** baz=262	1.70	263	*e*P	Pn	13 56 45.3	+1.9
WDJ	**Dajia District** baz=268	1.72	270	*e*P	Pn	13 56 44.9	+1.3
WJS	**Zhushan** baz=251	1.73	252	*e*P	Pn	13 56 46.2	+2.5
WJS	baz=251			*e*S	Sn	13 57 08.0	+3.0
ECS	**Chishang** baz=223	1.74	224	*e*P	Pn	13 56 44.9	+1.0
ECS	baz=223			*e*S	Sn	13 57 06.5	+1.2
WNT1	**Nantou City** baz=254	1.75	255	*e*P	Pn	13 56 46.1	+2.2
WNT1	baz=254			*e*S	Sn	13 57 08.6	+3.2
WNT	**Mingjian** baz=253	1.75	254	*e*P	Pn	13 56 46.4	+2.4
WNT	baz=253			*e*S	Sn	13 57 08.6	+3.1
EDH	**Donghe** baz=218	1.78	219	⇑*e*P	Pn	13 56 44.5	+0.1
EDH	baz=218			*e*S	Sn	13 57 05.0	-1.2
ALS	**Alishan** baz=240	1.79	242	*e*P	Pn	13 56 46.9	+2.1
ELDTW	**Lidau** baz=229	1.81	230	⇑*e*P	Pn	13 56 45.5	+0.6
ELDTW	baz=229			*e*S	Sn	13 57 07.2	+0.1
CHN5	**Tsauling** baz=245	1.85	246	⇓*e*P	Pn	13 56 47.5	+2.1
CHN5	baz=245			*e*S	Sn	13 57 10.5	+2.4
WGK	**Gukeng** baz=248	1.92	250	*e*P	Pn	13 56 48.6	+2.4
WGK	baz=248			*e*S	Sn	13 57 12.9	+3.4
LONT	**Longtian** baz=221	1.94	222	*e*P	Pn	13 56 46.8	+0.3
LONT	baz=221			*e*S	Sn	13 57 10.3	+0.4
WDLH	**Douliu** baz=249	1.94	250	*e*P	Pn	13 56 48.9	+2.4
WDLH	baz=249			*e*S	Sn	13 57 12.9	+2.9
LDUT	**Ludao** baz=209	1.94	210	⇑*e*P	Pn	13 56 46.6	0.0
LDUT	baz=209			*e*S	Sn	13 57 08.7	-1.3
STYH	**Taoyuan** baz=233	2.00	234	⇑*e*P	Pn	13 56 49.0	+1.8
STYH	baz=233			*e*S	Sn	13 57 12.6	+1.2
JTJ	**Tarama**	2.00	82	*i* P	Pn	13 56 48.4	+1.1
JTJ				S	Sn	13 57 12.3	+0.8
STYT	**Tauyuan** baz=233	2.01	234	⇑*e*P	Pn	13 56 49.5	+2.0
STYT	baz=233			*e*S	Sn	13 57 13.6	+1.7
TWGBT	**Beinan** baz=220	2.03	221	⇑*e*P	Pn	13 56 48.0	+0.3
TWGBT	baz=220			*e*S	Sn	13 57 11.8	-0.4
TPUB	**Ta-pu** baz=238	2.03	239	*e*P	Pn	13 56 50.0	+2.2
TPUB	baz=238			*e*S	Sn	13 57 14.6	+2.2
TWG	**Pinlang** baz=220	2.03	221	⇑*e*P	Pn	13 56 48.1	+0.3
TWG	baz=220			*e*S	Sn	13 57 11.8	-0.5
CHN4	**Tsaushan** baz=239	2.04	241	*e*P	Pn	13 56 50.2	+2.4
CHN4	baz=239			*e*S	Sn	13 57 15.1	+2.7
CHN2	**Minshiung** baz=245	2.05	247	*e*P	Pn	13 56 50.7	+2.7
CHN2	baz=245			*e*S	Sn	13 57 16.7	+4.1
WTK	**Tuku** baz=250	2.07	251	*e*P	Pn	13 56 50.0	+1.7
WTK	baz=250			*e*S	Sn	13 57 15.4	+2.3
WTP	**Ta-pu** baz=237	2.08	238	*e*P	Pn	13 56 50.5	+2.1
WTP	baz=237			*e*S	Sn	13 57 15.4	+2.0
WTCT	**Ta-ch'eng** baz=255	2.11	257	*e*P	Pn	13 56 50.0	+1.2
WTCT	baz=255			*e*S	Sn	13 57 15.5	+1.4
TWK	**Hsinying** baz=239	2.16	240	*e*P	Pn	13 56 51.8	+2.2
TWK	baz=239			*e*S	Sn	13 57 18.2	+2.7
CHN1	**Nanshi** baz=237	2.17	238	*e*P	Pn	13 56 52.0	+2.3
CHN1	baz=237			*e*S	Sn	13 57 18.3	+2.6
SNST	**Tainan City** baz=238	2.18	239	*e*P	Pn	13 56 52.0	+2.3
SNST	baz=238			*e*S	Sn	13 57 18.3	+2.5
WSF	**Szhu** baz=250	2.23	252	*e*P	Pn	13 56 51.8	+1.4
WSF	baz=250			*e*S	Sn	13 57 19.0	+2.0
WSL	**Shuilin Townsh** baz=247	2.26	249	*e*P	Pn	13 56 52.7	+1.8
WSL	baz=247			*e*S	Sn	13 57 19.8	+2.0
ECL	**Taimali** baz=219	2.27	220	*e*P	Pn	13 56 51.1	0.0
ECL	baz=219			*e*S	Sn	13 57 16.9	-1.2
ICHU	**Yijhu** baz=243	2.29	245	*e*P	Pn	13 56 52.8	+1.6
ICHU	baz=243			*e*S	Sn	13 57 20.8	+2.4
CHN8	**Yiju** baz=244	2.35	245	*e*P	Pn	13 56 54.1	+2.1
CHN8	baz=244			*e*S	Sn	13 57 22.6	+2.7
SSD	**Sandimen** baz=226	2.37	228	*e*P	Pn	13 56 54.1	+1.8
SSD	baz=226			*e*S	Sn	13 57 21.7	+1.3
SCST	**Cishan** baz=231	2.37	232	*e*P	Pn	13 56 55.5	+3.1
SCST	baz=231			*e*S	Sn	13 57 25.0	+4.5
JIRB	**Irabujima**	2.45	79	P	Pn	13 56 54.3	+0.9
JIRB				*e*S	Sn	13 57 23.3	+0.9
MASBT	**Mashibuluo** baz=224	2.46	225	*e*P	Pn	13 56 55.2	+1.7
MASBT	baz=224			*e*S	Sn	13 57 23.5	+0.8
LAY	**Lan-yu** baz=201	2.48	201	*e*P	Pn	13 56 53.8	-0.1
LAY	baz=201			*e*S	Sn	13 57 20.3	-2.8
EAST	**Anshuo** baz=217	2.50	218	*e*P	Pn	13 56 54.6	+0.4
EAST	baz=217			*e*S	Sn	13 57 22.7	-1.0
LYUB	**Lan-yu** baz=200	2.50	200	⇑*e*P	Pn	13 56 53.8	-0.4
LYUB	baz=200			*e*S	Sn	13 57 20.9	-2.8
TAWH	**Dawu Township** baz=216	2.52	217	*e*P	Pn	13 56 54.9	+0.6
TAWH	baz=216			*e*S	Sn	13 57 23.2	-0.7
JIKM	**Ikemajima**	2.54	77	P	Pn	13 56 56.4	+1.8
JIKM				*e*S	Sn	13 57 24.7	+0.2
JMJ2	**Miyako jima3**	2.58	81	P	Pn	13 56 56.9	+1.7
JMJ2				*e*S	Sn	13 57 27.0	+1.5
SCZT	**Fangliau** baz=221	2.65	222	*e*P	Pn	13 56 57.1	+1.1
SCZT	baz=221			*e*S	Sn	13 57 28.6	+1.5
JOGS	**Gusukube**	2.65	81	P	Pn	13 56 57.8	+1.7
JOGS				S	Sn	13 57 28.4	+1.2
SLIU	**Shizi** baz=216	2.66	217	*e*P	Pn	13 56 56.8	+0.5
SLIU	baz=216			*e*S	Sn	13 57 26.8	-0.8
PNG	**Penghu** baz=253	2.83	254	*e*P	Pn	13 56 59.1	+0.5
PNG	baz=253			*e*S	Sn	13 57 31.3	-0.3
PHUB	**P'eng-hu** baz=252	2.83	253	*e*P	Pn	13 56 59.1	+0.5
PHUB	baz=252			*e*S	Sn	13 57 31.4	-0.2
WDGT	**Dungji** baz=247	2.84	248	*e*P	Pn	13 56 60.0	+1.2
WDGT	baz=247			*e*S	Sn	13 57 31.9	-0.1
VWUC	**VWUC** baz=282	2.87	283	⇓*e*P	Pn	13 56 59.3	+0.3
VWUC	baz=282			*e*S	Sn	13 57 30.1	-2.4
TWKBT	**Hengchun** baz=213	2.88	214	*e*P	Pn	13 57 00.5	+1.2
TWKBT	baz=213			*e*S	Sn	13 57 32.4	-0.5
MATB	**Ma-tsu** baz=307	2.94	308	*e*P	Pn	13 56 59.9	-0.1
MATB	baz=307			*e*S	Sn	13 57 33.0	-1.3
PTMZ	**Houxiangcun** baz=282	3.17	283	*e*P	Pn	13 57 03.4	+0.2
PTMZ	baz=282			*e*S	Sn	13 57 37.1	-2.7
XPSS	**Dashiqiu** baz=320	3.31	321	*e*P	Pn	13 57 04.9	-0.2
XPSS	baz=320			*e*S	Sn	13 57 44.3	+0.9
JOW	**Kunigami** 28nm,0.3s,baz=176,slow=11,SNR=27	5.74	63	P	Pn	13 57 37.9	-0.4
KSRS	**Korea Array** 0.9nm,0.6s,baz=202,slow=12,SNR=4.6	13.84	18	P	Pn	13 59 28.8	+0.3
USRK	**Ussuriysk Ar.** 3.1nm,0.7s,baz=209,slow=13,SNR=5.6 3.1nm,0.7s	21.25	19	P	P	14 00 55.1	-0.6
ASAJ	**Asahikawa** 1.0nm,0.4s,baz=246,slow=20,SNR=5.2 1.0nm,0.4s	25.64	35	P	P	14 01 36.2	-2.2
SONM	**Songino Array** 1.3nm,1.0s,baz=154,slow=11,SNR=4.3 1.3nm,1.0s	26.70	335	P	P	14 01 47.5	-0.7
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=105,slow=9.3,SNR=4.9	39.07	315	P	P	14 03 34.9	-0.8
MKAR	0.1nm,0.5s,baz=106,slow=5.1,SNR=3.5 0.3nm,0.5s			PcP	PcP	14 05 43.5	-0.9
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=347,slow=8.8,SNR=8.3 0.2nm,0.5s	45.52	164	P	P	14 04 29.1	+0.9
ASAR	**Alice Springs** 0.3nm,0.6s,baz=347,slow=10,SNR=8.1 0.3nm,0.6s	49.00	166	P	P	14 04 56.3	+1.0
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=339,slow=4.1,SNR=3.9 0.2nm,0.6s	82.33	23	P	P	14 08 28.9	-0.4

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*NEIC **20** 14:04:43.8±1.6, 44°.28N±0°.10×147°.9E±0°.1, h71^{km}±2^{km}, mb5.1/149, Mww4.8, Error ellipse: s-maj=15.7km s-min=11.1km az=140.0*

*MOS **20** 14:04:44.2±0.9, 44°.23N×148°.00E, h98^{km}, mb5.0/60, MS3.8/5, Error ellipse: s-maj=5.4km s-min=4.2km az=114.8*

MOS Felt (III) at Malokuril'skoye.

*GCMT **20** 14:04:45.8±0.3, 44°.34N±0°.02×148°.09E±0°.03, h106^{km}±3^{km}, MW4.9/95, Moment Tensor Solution. s24,c28; s95,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.72±.08; $M_{\theta\theta}$-0.38±.11; $M_{\phi\phi}$2.10±.09; $M_{r\theta}$-0.57±.07; $M_{\theta\phi}$1.54±.09; $M_{\phi r}$0.61±.07; Best double couple: $M_0$2.56300×10^{16} NP1:ϕ_s56.00000°,δ51.00000°, λ-44.00000°. NP2:ϕ_s177.00000°,δ58.00000°, λ-131.00000°. Principal axes: T 2.8590, Plg4.0000°, Azm295.0000°; N -0.5880, Plg34.0000°, Azm202.0000°; P -2.2680, Plg56.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NIED **20** 14:04:45.5, 44°.02N×148°.06E, h85^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.65; $M_{\theta\theta}$0.02; $M_{\phi\phi}$1.63; $M_{r\theta}$-0.72; $M_{\theta\phi}$0.50; $M_{\phi r}$0.00; Fault plane solution: $M_0$1.86000×10^{16} NP1: ϕ_s176.00000°,δ45.00000°,λ-120.00000°. NP2: ϕ_s36.00000°,δ52.00000°,λ-63.00000°.*

*IDC **20** 14:04:45.3±1.6, 44°.34N×147°.93E, h90^{km}±13^{km}, mb4.5/32, mbtmp4.8/40, MS3.4/53 Error ellipse: s-maj=11.3km s-min=8.4km az=136.0*

*JMA **20** 14:04:45.5±0.3, 44°N±1°×14°8E±°, h85^{km}, MD4.9/40, MW4.8/40, SE OFF ETOROFU*

JMA Felt II J1 at SE OFF ETOROFU .

*SKHL **20** 14:04:45.9±0.3, 44°.30N×148°.00E, h100^{km}±3^{km}, mb5.9/11, mbv5.3/4, ms4.5/9, msh5.4/3, msha6.8/3*

*BJI **20** 14:04:46.6±0.0, 44°.50N×147°.59E, h90^{km}, mb5.0/68, mB4.9/39, Ms4.0/30, Ms7 3.8/27*

*NEIC **20** 14:04:47, 43°.87N×148°.13E, h80^{km}, Moment Tensor Solution. Duration: 6^{s}.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.37; $M_{\theta\theta}$0.05; $M_{\phi\phi}$1.32; $M_{r\theta}$0.16; $M_{\theta\phi}$1.12; $M_{\phi r}$0.59; Fault plane solution: $M_0$1.85000×10^{16} NP1:ϕ_s41.00000°, δ36.00000°,λ-73.00000°. NP2:ϕ_s201.00000°,δ55.00000°, λ-101.00000°. Principal axes: T 2.0704, Plg10.0000°, Azm300.0000°; N -0.5709, Plg10.0000°, Azm208.0000°; P -1.4995, Plg76.0000°, Azm74.0000°;*

ISC 20 14:04:44.0±0.5**, 44°.27N**±0°.04×**148°.03E**±0°.03**, h81**^{km}±3^{km}**, h81**^{km}**:pP-P, n890,** σ1^{s}.**49**/912**, mb5.0**/186**, 39C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHO	**Shikotan**	0.95	246	*d i*PN	Pn	14 05 04.3	+1.7
SHO				*i* S	Sn	14 05 17.2	+0.8
SHO	comp=Z,7μm,0.4s			pmax	pmax		
SHO	comp=N,2μm,0.3s			pmax	pmax		
SHO	comp=N,45μm,0.6s			smax	smax		
SHO	comp=E,52μm,1.6s			smax	smax		
SHO	comp=N,12μm,0.3s			smax	smax		
SHO	comp=E,48μm,0.3s			smax	smax		
SHO	**Shikotan**	0.95	246	*i* P	Pn	14 05 04.3	+1.7
SHO	comp=E,7μm,0.4s			AMB	AMB	14 05 05.2	
SHO				*i* S	Sn	14 05 17.8	+1.4
SHO	comp=E,45μm,1.6s			A	A	14 05 18.5	
SHO	comp=E,52μm,1.6s			A	A	14 05 18.5	
SHO	comp=E,12μm,0.4s			A	A	14 05 21.2	
SHO	comp=E,48μm,0.4s			A	A	14 05 21.2	
KUR	**Kuril'sk**	0.97	353	*d i*PN	Pn	14 05 05.9	+3.1
KUR				*i* S	Sn	14 05 20.9	+4.2
KUR	comp=Z,3μm,0.8s			pmax	pmax		
KUR				pmax	pmax		

	comp=E,1μm,0.4s						
KUR				pmax	pmax		
	comp=N,986nm,0.6s						
KUR				smax	smax		
	comp=N,13μm,0.7s						
KUR				smax	smax		
	comp=E,7μm,0.4s						
KUR	**Kuril'sk**	**0.97**	**353**	*i* P	**Pn**	**14 05 05.9**	**+3.1**
KUR				AMB	AMB	14 05 09.5	
	comp=E,3μm,0.3s						
KUR				*i* S	**Sn**	**14 05 20.9**	**+4.2**
KUR				A	A	14 05 23.4	
	comp=E,13μm,0.6s						
KUR				A	A	14 05 23.4	
	comp=E,7μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.58**	**262**	*c i*PN	**Pn**	**14 05 12.2**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**1.58**	**262**	*i* P	**Pn**	**14 05 12.2**	**+1.8**
YUK				AMB	AMB	14 05 13.6	
	comp=E,2μm,0.4s						
YUK				AMB	AMB	14 05 13.6	
	comp=E,1μm,0.4s						
YUK				AMB	AMB	14 05 13.6	
	comp=E,8μm,0.4s						
YUK				*i* S	**Sn**	**14 05 31.7**	**+1.3**
YUK				A	A	14 05 35.2	
	comp=E,43μm,0.5s						
YUK				A	A	14 05 35.2	
	comp=E,8μm,0.5s						
NEM2	**Nemuro 2**	**1.89**	**242**	*e*P	**Pn**	**14 05 15.2**	**+0.7**
NEM2				*e*S	**Sn**	**14 05 37.3**	**-0.2**
NEM2	**Nemuro 2**	**1.89**	**242**	A	A	14 05 15.2	
	comp=E,21nm,1.8s,comp=E,9.0nm,1.6s						
GLVR	**Golovnino**	**1.89**	**255**	⇑*i*PN	**Pn**	**14 05 16.2**	**+1.8**
GLVR				*i* S	**Sn**	**14 05 38.8**	**+1.2**
GLVR				pmax	pmax		
	comp=Z,3μm,0.3s						
GLVR				pmax	pmax		
	comp=N,721nm,0.2s						
GLVR				pmax	pmax		
	comp=E,682nm,0.2s						
GLVR				smax	smax		
	comp=N,32μm,1.3s						
GLVR				smax	smax		
	comp=E,27μm,1.2s						
GLVR				smax	smax		
	comp=E,28μm,0.3s						
GLVR				smax	smax		
	comp=N,9μm,0.2s						
GLVR	**Golovnino**	**1.89**	**255**	*i* P	**Pn**	**14 05 16.2**	**+1.8**
GLVR				AMB	AMB	14 05 17.8	
	comp=N,720nm,0.3s						
GLVR				AMB	AMB	14 05 17.8	
	comp=N,680nm,0.3s						
GLVR				AMB	AMB	14 05 17.8	
	comp=N,3μm,0.3s						
GLVR				*i* S	**Sn**	**14 05 38.8**	**+1.2**
GLVR				A	A	14 05 40.1	
	comp=N,32μm,1.3s						
GLVR				A	A	14 05 40.1	
	comp=N,27μm,1.3s						
GLVR				A	A	14 05 46.5	
	comp=N,9μm,0.4s						
GLVR				A	A	14 05 46.5	
	comp=N,28μm,0.4s						
NMR	**Nemuro--Hokkai**	**1.90**	**242**	⇑*i*PN	**Pn**	**14 05 15.3**	**+0.8**
NMR				*i* S	**Sn**	**14 05 37.2**	**-0.5**
NMR	**Nemuro--Hokkai**	**1.90**	**242**	*i* P	**Pn**	**14 05 15.3**	**+0.8**
NMR				*i* S	**Sn**	**14 05 37.5**	**-0.2**
RUSJ	**Misakicho**	**2.01**	**266**	⇑*i*PN	**Pn**	**14 05 18.3**	**+2.3**
RUSJ				*i* S	**Sn**	**14 05 44.1**	**+3.6**
JRA	**Rausu**	**2.12**	**262**	*e*S	**Sn**	**14 05 46.0**	**+2.8**
JRA	**Rausu**	**2.12**	**262**	A	A	14 05 46.0	
	comp=N,45nm,1.3s,comp=N,34nm,1.8s						
JNSB	**Nemuroshibetsu**	**2.24**	**258**	P	**Pn**	**14 05 21.5**	**+2.4**
JNSB				*e*S	**Sn**	**14 05 48.7**	**+2.7**
JNSB	**Nemuroshibetsu**	**2.24**	**258**	A	A	14 05 21.5	
	comp=N,41nm,1.7s,comp=N,49nm,1.8s						
JKHN	**Kushirohamanak**	**2.40**	**241**	P	**Pn**	**14 05 22.3**	**+1.1**
JKHN				*e*S	**Sn**	**14 05 49.8**	**+0.1**
JKHN	**Kushirohamanak**	**2.40**	**241**	A	A	14 05 22.3	
	comp=N,28nm,1.4s,comp=N,19nm,0.5s						
JNK	**Nakash**	**2.49**	**255**	*e*P	**Pn**	**14 05 24.1**	**+1.7**
JNK				*e*S	**Sn**	**14 05 52.7**	**+0.8**
JNK	**Nakash**	**2.49**	**255**	A	A	14 05 24.1	
	comp=N,8.0nm,2.8s,comp=N,12nm,2.9s						
AKK	**Akkeshi**	**2.63**	**243**	*e*P	**Pn**	**14 05 25.4**	**+1.0**
AKK				*e*S	**Sn**	**14 05 54.9**	**-0.5**
JAK	**Akkeshi**	**2.74**	**243**	*e*P	**Pn**	**14 05 26.5**	**+0.8**
JAK				*e*S	**Sn**	**14 05 57.1**	**-0.8**
JAK	**Akkeshi**	**2.74**	**243**	A	A	14 05 26.5	
	comp=N,15nm,1.6s,comp=N,15nm,1.4s						
JTKR	**Abashiri--Toko**	**2.99**	**266**	P	**Pn**	**14 05 31.5**	**+2.4**
JAR	**Ashorobuto**	**3.24**	**254**	*e*P	**Pn**	**14 05 34.8**	**+2.2**
JAR				*e*S	**Sn**	**14 06 12.1**	**+2.1**
JAR	**Ashorobuto**	**3.24**	**254**	A	A	14 05 34.8	
	comp=N,8.0nm,0.4s,comp=N,9.0nm,2.3s						
JOB	**Onbets**	**3.34**	**247**	*e*P	**Pn**	**14 05 35.5**	**+1.6**
JOB				*e*S	**Sn**	**14 06 12.8**	**+0.3**
JOB	**Onbets**	**3.34**	**247**	A	A	14 05 35.5	
	comp=N,12nm,1.7s,comp=N,14nm,2.9s						
JMP	**Maruseppu**	**3.38**	**267**	A	A	14 05 37.2	
	comp=N,4.0nm,7.0s,comp=N,4.0nm,2.5s						
JCH	**Churui**	**3.78**	**246**	*e*P	**Pn**	**14 05 41.0**	**+1.1**
JCH				*e*S	**Sn**	**14 06 22.2**	**-1.0**
JKK2	**Kamakawa 2**	**3.83**	**266**	*e*P	**Pn**	**14 05 43.3**	**+2.7**
JKA	**Kamikawa-asahi**	**3.91**	**270**		**Pn**	**14 05 44.5**	**+2.8**
JKA	**Kamikawa-asahi**	**3.91**	**270**	*e*P	**Pn**	**14 05 44.5**	**+2.8**
ASAJ	**Asahikawa**	**3.91**	**270**	P	**Pn**	**14 05 44.1**	**+2.4**
	comp=N,271nm,0.5s,baz=76,slow=20,SNR=318						
ASAJ				S	**Sn**	**14 06 27.2**	**+0.7**
	comp=N,263nm,0.6s,baz=85,slow=12,SNR=4.5						
ASAJ	**Asahikawa**	**3.91**	**270**	PN	**Pn**	**14 05 44.5**	**+2.8**
JSE	**Soyaes**	**3.95**	**282**	P	**Pn**	**14 05 44.9**	**+2.7**
JTHR	**Tokachihiroo**	**3.98**	**242**	A	A	14 05 44.1	
	comp=N,8.0nm,1.8s,comp=N,4.0nm,0.6s						
JEM	**Erimo**	**4.22**	**239**	A	A	14 05 47.2	
	comp=N,4.0nm,1.4s,comp=N,6.0nm,1.4s						
ERM	**Erimo**	**4.22**	**239**		**Pn**	**14 05 47.7**	**+1.8**
ERM	**Erimo**	**4.22**	**239**	PN	**Pn**	**14 05 47.7**	**+1.8**
JAB	**Ashibetsu**	**4.27**	**262**	A	A	14 05 49.2	
	comp=N,3.0nm,2.2s,comp=N,3.0nm,2.0s						
JNBK	**Urakawa-nobuka**	**4.34**	**245**	*e*P	**Pn**	**14 05 47.9**	**+0.4**
JNBK				*e*S	**Sn**	**14 06 35.8**	**-1.0**
JNBK	**Urakawa-nobuka**	**4.34**	**245**	A	A	14 05 47.9	
	comp=N,8.0nm,0.4s,comp=N,7.0nm,0.5s						
JSS	**Shosan**	**4.44**	**274**	*e*P	**Pn**	**14 05 52.4**	**+3.6**
JSS	**Shosan**	**4.44**	**274**	A	A	14 05 52.4	
	comp=N,3.0nm,6.6s,comp=N,2.0nm,3.4s						
JSHD	**Hidakashinhida**	**4.47**	**247**	A	A	14 05 51.1	
	comp=N,4.0nm,5.3s,comp=N,6.0nm,8.3s						
JWK2	**Keihoku**	**4.49**	**286**	*e*P	**Pn**	**14 05 53.7**	**+4.1**
JWK2	**Keihoku**	**4.49**	**286**	A	A	14 05 53.7	
	comp=N,3.0nm,5.7s,comp=N,2.0nm,5.4s						
YSS	**Yuzh-Sakhalins**	**4.57**	**308**	Pn	**Pn**	**14 05 53.5**	**+2.9**
YSS	**Yuzh-Sakhalins**	**4.57**	**308**	α *i*PN	**Pn**	**14 05 53.6**	**+2.9**
YSS				*e*S	**Sn**	**14 06 44.3**	**+1.8**
YSS				pmax	pmax		
	comp=Z,560nm,1.1s						
YSS				pmax	pmax		
	comp=Z,800nm,4.6s						
YSS				smax	smax		
	comp=E,270nm,1.0s						
YSS				smax	smax		
	comp=E,900nm,4.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS	**Yuzh-Sakhalins**	**4.57**	**308**	*i* P	**Pn**	**14 05 53.5**	**+2.9**
YSS				*i* P	**Pn**	**14 05 53.5**	**+2.9**
YSS				AMB	AMB	14 05 54.6	
	comp=Z,350nm,0.4s						
YSS				AMB	AMB	14 05 58.1	
	comp=Z,800nm,4.6s						
YSS				*e*S	**Sn**	**14 06 44.2**	**+1.8**
YSS				A	A	14 06 46.6	
	comp=Z,270nm,1.0s						
YSS				A	A	14 06 54.2	
	comp=Z,800nm,4.0s						
YSS				A	A	14 06 54.2	
	comp=Z,900nm,4.0s						
YSS				AMS	AMS	14 07 43.0	
	comp=Z,600nm,15.0s						
JHR	**Hokuryu**	**4.58**	**266**	*e*P	**Pn**	**14 05 54.4**	**+3.6**
JHR	**Hokuryu**	**4.58**	**266**	A	A	14 05 54.4	
	comp=Z,3.0nm,6.3s,comp=Z,4.0nm,9.1s						
JIAM	**Iburiatsuma**	**4.75**	**252**	A	A	14 05 55.2	
	comp=Z,6.0nm,8.9s,comp=Z,8.0nm,1.9s						
JEW	**Eniwo**	**4.99**	**256**	Pn	**Pn**	**14 05 58.9**	**+2.5**
JEW	**Eniwo**	**4.99**	**256**	P	**Pn**	**14 05 58.9**	**+2.5**
JEW				*e*S	**Sn**	**14 06 55.9**	**+3.1**
JRBN	**Rebuntou**	**5.09**	**286**	*e*P	**Pn**	**14 06 00.7**	**+3.0**
JKB	**Kayabe**	**5.65**	**248**	A	A	14 06 07.5	
	comp=Z,3.0nm,5.0s,comp=Z,4.0nm,0.3s						
JAHD	**Aomorihigashid**	**5.77**	**241**	A	A	14 06 08.8	
	comp=Z,10.0nm,0.5s,comp=Z,15nm,1.7s						
JOT	**Ohata**	**5.89**	**243**	*e*P	**Pn**	**14 06 08.3**	**-0.4**
JOT				*e*S	**Sn**	**14 07 10.2**	**-4.6**
JARK	**Aomorirokkasho**	**5.90**	**239**	A	A	14 06 10.4	
	comp=Z,7.0nm,2.7s,comp=Z,7.0nm,2.7s						
JANG	**Nango**	**6.20**	**233**	*e*P	**Pn**	**14 06 11.5**	**-1.5**
JANG				*e*S	**Sn**	**14 07 16.4**	**-6.0**
JANG	**Nango**	**6.20**	**233**	A	A	14 06 11.5	
	comp=Z,4.0nm,2.0s,comp=Z,4.0nm,2.0s						
JTM	**Tenmabayashi**	**6.21**	**238**	Pn	**Pn**	**14 06 12.7**	**-0.3**
UGL	**Uglegorsk**	**6.32**	**322**	*e*PN	**Pn**	**14 06 17.5**	**+3.0**
UGL				S	**Sn**	**14 07 33.0**	**+7.8**
UGL				pmax	pmax		
	comp=Z,687nm,1.0s						
UGL				smax	smax		
	comp=N,276nm,0.9s						
UGL				smax	smax		
	comp=E,234nm,0.8s						
UGL				MLR	MLR		
	comp=Z,2μm,11.0s						
UGL				MLR	MLR		
	comp=N,3μm,15.0s						
UGL				MLR	MLR		
	comp=E,2μm,15.0s						
UGL	**Uglegorsk**	**6.32**	**322**	*e*P	**Pn**	**14 06 17.5**	**+3.0**
UGL				AMB	AMB	14 06 19.1	
	comp=E,690nm,0.8s						
UGL				*e*S	**Sn**	**14 07 26.5**	**+1.3**
UGL				A	A	14 07 42.5	
	comp=E,280nm,0.8s						
UGL				A	A	14 07 42.5	
	comp=E,230nm,0.8s						
UGL				AMS	AMS	14 10 50.0	
	comp=E,3μm,13.0s						
UGL				AMS	AMS	14 10 50.0	
	comp=E,2μm,13.0s						
UGL				AMS	AMS	14 10 50.0	
	comp=E,2μm,13.0s						
JRG	**Rokugo**	**7.36**	**231**	A	A	14 06 30.2	
	comp=E,3.0nm,2.3s,comp=E,3.0nm,1.9s						
JYW	**Yuwa**	**7.51**	**234**	A	A	14 06 32.3	
	comp=E,5.0nm,4.1s,comp=E,5.0nm,4.4s						
TYV	**Tymovskoe**	**7.53**	**333**	*e*PN	**Pn**	**14 06 34.3**	**+3.3**
TYV				*e*S	**Sn**	**14 07 57.1**	**+2.4**
TYV				pmax	pmax		
	comp=Z,29nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,3.2s						
TYV				smax	smax		
	comp=N,22nm,0.8s						
TYV				smax	smax		
	comp=E,30nm,0.8s						
TYV	**Tymovskoe**	**7.53**	**333**	*e*P	**Pn**	**14 06 34.3**	**+3.3**
TYV				AMB	AMB	14 06 34.8	
	comp=E,30nm,0.9s						
TYV				AMB	AMB	14 06 35.0	
	comp=E,300nm,3.2s						
TYV				*e*S	**Sn**	**14 07 55.7**	**+1.0**
TYV				A	A	14 07 57.5	
	comp=E,20nm,0.8s						
TYV				A	A	14 07 57.5	
	comp=E,30nm,0.8s						
TYV				AMS	AMS	14 09 01.6	
	comp=E,2μm,16.0s						
TYV				AMS	AMS	14 09 01.6	
	comp=E,5μm,16.0s						
TYV				AMS	AMS	14 09 01.6	
	comp=E,2μm,16.0s						
TEY	**Ternei**	**8.19**	**279**	⇑*e*PN	**Pn**	**14 06 43.0**	**+3.0**
TEY				*e*		14 08 14.0	
TEY				pmax	pmax		
	comp=Z,200nm,2.0s						
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=E,90nm,1.1s						
TEY				pmax	pmax		
	comp=Z,80nm,1.1s						
TEY	**Ternei**	**8.19**	**279**	*e*P	**Pn**	**14 06 43.0**	**+3.0**
TEY				AMB	AMB	14 06 43.9	
	comp=Z,200nm,2.0s						
TEY				AMB	AMB	14 06 44.2	
	comp=Z,20nm,0.9s						
TEY				AMB	AMB	14 06 44.2	
	comp=Z,90nm,0.9s						
TEY				AMB	AMB	14 06 44.2	
	comp=Z,80nm,0.9s						
TEY				AMS	AMS	14 09 01.6	
	comp=Z,2μm,16.0s						
TEY				AMS	AMS	14 09 01.6	
	comp=Z,5μm,16.0s						
TEY				AMS	AMS	14 09 01.6	
	comp=Z,2μm,16.0s						
JMM	**Marumori**	**8.41**	**223**		**Pn**	**14 06 41.3**	**-1.8**
SKR	**Severo-Kuril's**	**8.43**	**38**	*e*PN	**Pn**	**14 06 43.7**	**+0.5**
SKR				pmax	pmax		
	comp=Z,23nm,0.5s						
SKR	**Severo-Kuril's**	**8.43**	**38**	*e*P	**Pn**	**14 06 45.4**	**+2.2**
SKR				AMB	AMB	14 06 45.8	
	comp=Z,40nm,0.4s						
SKR				AMB	AMB	14 06 48.4	
	comp=Z,200nm,2.0s						
SKR				*e*S	**Sn**	**14 08 15.4**	**-1.2**
SKR				A	A	14 08 20.9	
	comp=Z,190nm,2.0s						
SKR				A	A	14 08 20.9	
	comp=Z,210nm,2.0s						
SKR				A	A	14 08 23.7	
	comp=Z,80nm,0.6s						
SKR				A	A	14 08 23.7	
	comp=Z,60nm,0.6s						
SKR				AMS	AMS	14 09 47.3	
	comp=Z,800nm,11.0s						
SKR				AMS	AMS	14 09 47.3	
	comp=Z,700nm,11.0s						
SKR				AMS	AMS	14 09 47.3	
	comp=Z,400nm,11.0s						
PAU	**Pauzhetka**	**9.30**	**36**	*e*P	**Pn**	**14 06 56.2**	**+1.1**
PAU				AMB	AMB	14 06 56.9	
	comp=Z,40nm,0.5s						
PAU				*e*S	**Sn**	**14 08 35.9**	**-2.0**
PAU				A	A	14 08 43.0	
	comp=Z,70nm,0.5s						
PAU				A	A	14 08 43.0	
	comp=Z,90nm,0.5s						
JSD	**Sado**	**9.64**	**233**	Pn	**Pn**	**14 06 59.0**	**-0.9**
OKH	**Okha**	**9.87**	**342**	*e*P	**Pn**	**14 07 05.8**	**+2.9**
OKH				AMB	AMB	14 07 08.4	
	comp=Z,180nm,0.8s						
OKH				AMS	AMS	14 12 16.0	
	comp=Z,800nm,14.0s						
OKH				AMS	AMS	14 12 16.0	
	comp=Z,500nm,14.0s						
OKH				AMS	AMS	14 12 16.0	
	comp=Z,600nm,14.0s						
KHBR	**Khabarovsk**	**9.90**	**300**	*e*P	**Pn**	**14 07 05.4**	**+2.1**
KHBR				AMB	AMB	14 07 08.8	
	comp=Z,20nm,0.9s						
JYT	**Yasato**	**10.02**	**219**	Pn	**Pn**	**14 07 03.3**	**-1.6**
GRNR	**Gornyy**	**10.19**	**314**	⇑*i*PN	**Pn**	**14 07 10.1**	**+2.9**
GRNR				*e*S	**Sn**	**14 09 07.1**	**+7.5**
GRNR				pmax	pmax		
	comp=N,8.0nm,0.7s						
GRNR				pmax	pmax		
	comp=E,6.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,160nm,16.0s						
GRNR				MLR	MLR		
	comp=N,130nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,16.0s						
GRNR	**Gornyy**	**10.19**	**314**	*i* P	**Pn**	**14 07 10.1**	**+2.9**
GRNR				AMB	AMB	14 07 11.5	
	comp=Z,10.0nm,0.7s						
GRNR				AMB	AMB	14 07 11.5	
	comp=Z,10.0nm,0.7s						
GRNR				AMB	AMB	14 07 11.5	
	comp=Z,30nm,0.7s						
GRNR				AMS	AMS	14 10 32.0	
	comp=Z,200nm,16.0s						
GRNR				AMS	AMS	14 10 32.0	
	comp=Z,400nm,16.0s						
MJB9	**Matsu-Tunnel**	**10.75**	**227**		**Pn**	**14 07 14.2**	**-0.8**
MAJO	**Matsushiro**	**10.75**	**227**	Pn	**Pn**	**14 07 14.2**	**-0.8**
MAJO	**Matsushiro**	**10.75**	**227**	PN	**Pn**	**14 07 14.2**	**-0.8**
MJAR	**Matsushiro Arr**	**10.75**	**227**	P	**Pn**	**14 07 14.5**	**-0.5**
	comp=Z,8.9nm,0.5s,baz=26,slow=14,SNR=52						
MJAR				S	**Sn**	**14 09 13.3**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=165,slow=24,SNR=1.3						
MJAR	**Matsushiro Arr**	**10.75**	**227**	Pn	**Pn**	**14 07 14.0**	**-1.0**
PEA0B	**Petropavlovsk-**	**10.90**	**32**	Pn	**Pn**	**14 07 17.1**	**+0.2**
PEA0B	**Petropavlovsk-**	**10.90**	**32**	*ce*PN	**Pn**	**14 07 17.6**	**+0.7**
PETK	**Petropavlovsk-**	**10.90**	**32**	P	**Pn**	**14 07 16.6**	**-0.4**
	comp=Z,11nm,0.8s,baz=196,slow=12,SNR=30						
PETK	**Petropavlovsk-**	**10.90**	**32**	Pn	**Pn**	**14 07 17.4**	**+0.6**
PETK	**Petropavlovsk-**	**10.90**	**32**	PN	**Pn**	**14 07 17.5**	**+0.6**
PET	**Petropavlovsk**	**11.22**	**35**	*e*PN	**Pn**	**14 07 20.1**	**-1.1**
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
PET	**Petropavlovsk**	**11.22**	**35**	*e*P	**Pn**	**14 07 20.6**	**-0.6**
PET				AMB	AMB	14 07 23.0	
	comp=Z,30nm,0.4s						
PET				*e*S	**Sn**	**14 09 23.1**	**-1.4**
PET				AMS	AMS	14 11 35.3	
	comp=Z,300nm,15.0s						
GRTR	**Gornotajezhnoj**	**11.46**	**273**	*e*P	**Pn**	**14 07 24.8**	**+0.3**
GRTR				AMB	AMB	14 07 26.2	
	comp=Z,20nm,0.8s						
GRTR				AMS	AMS	14 10 28.2	
	comp=Z,400nm,14.0s						
GRTR				AMS	AMS	14 10 28.2	
	comp=Z,200nm,14.0s						
GRTR				AMS	AMS	14 10 28.2	
	comp=Z,200nm,14.0s						
USA0B	**Ussuriysk Arra**	**11.52**	**275**		**Pn**	**14 07 25.9**	**+0.6**
USA0B	**Ussuriysk Arra**	**11.52**	**275**	PN	**Pn**	**14 07 25.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**11.52**	**275**	P	**Pn**	**14 07 25.9**	**+0.7**
	comp=Z,76nm,0.8s,baz=89,slow=13,SNR=93						
USRK	**Ussuriysk Ar.**	**11.52**	**275**	PN	**Pn**	**14 07 26.0**	**+0.7**
VLA	**Vladivostok**	**11.75**	**270**	*i* PN	**Pn**	**14 07 28.1**	**-0.4**
VLA				pmax	pmax		
	comp=Z,44nm,1.0s						
VLA	**Vladivostok**	**11.75**	**270**	*i* P	**Pn**	**14 07 28.1**	**-0.4**
VLA				AMB	AMB	14 07 30.6	
	comp=Z,40nm,1.0s						
JGF	**Kuroka**	**11.91**	**227**		**Pn**	**14 07 30.1**	**-0.8**
KLR	**Kul'dur**	**12.21**	**300**	P	**Pn**	**14 07 35.4**	**+0.6**
	comp=Z,23nm,1.0s,baz=104,slow=14,SNR=40						
KLR				LR	LR	14 12 36.8	
	comp=Z,131nm,21.3s,baz=112,slow=39						
KLR	**Kul'dur**	**12.21**	**300**	*ce*PN	**Pn**	**14 07 36.5**	**+1.7**
KLR				pmax	pmax		
	comp=Z,55nm,1.3s						
KLR	**Kul'dur**	**12.21**	**300**	*e*P	**Pn**	**14 07 36.5**	**+1.7**
KLR				AMB	AMB	14 07 38.0	
	comp=Z,50nm,1.0s						
INU	**Inuyama**	**12.28**	**227**	Pn	**Pn**	**14 07 34.7**	**-1.1**
MSHR	**Mys Shultsa**	**12.39**	**268**	*ce*PN	**Pn**	**14 07 36.5**	**-0.7**
MSHR				pmax	pmax		
	comp=Z,35nm,1.3s						
MDJ	**Mudanjiang**	**13.19**	**278**	Pn	**Pn**	**14 07 47.4**	**-0.5**
MDJ	**Mudanjiang**	**13.19**	**278**	P	**Pn**	**14 07 47.5**	**-0.3**
MDJ				S	**Sn**	**14 10 14.3**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,33nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,3.7s						
BNX	**BinXian**	**14.67**	**283**	⇑P	**Pn**	**14 08 06.9**	**-0.2**
BNX				pmax	pmax		
	comp=Z,66nm,0.9s						
BNX				pmax	pmax		
	comp=Z,360nm,4.4s						
KBG	**Krutoberegovo**	**15.19**	**33**	*e*P	**Pn**	**14 08 13.2**	**-0.5**
KBG				AMB	AMB	14 08 16.3	
	comp=Z,50nm,0.4s						
MA2	**Magadan**	**15.42**	**5**	P	**Pn**	**14 08 16.3**	**-0.2**
	comp=Z,32nm,0.8s,baz=179,slow=9.1,SNR=43						
MA2				LR	LR	14 14 04.7	
	comp=Z,104nm,18.6s,baz=186,slow=36						
MA2	**Magadan**	**15.42**	**5**	P	**Pn**	**14 08 16.4**	**-0.2**
MA2	**Magadan**	**15.42**	**5**	P	**Pn**	**14 08 16.4**	**-0.2**
MA2				pmax	pmax		
	comp=Z,68nm,1.0s						
SEHB	**SEOHWA**	**16.02**	**255**	P	**Pn**	**14 08 21.9**	**-2.5**
CN2	**Changchun**	**16.25**	**276**	*e*P	Pn	14 08 20.3	-6.8
CN2				*e*PP	pP	14 08 40.4	-4.2
CN2				*e*S	**Sn**	**14 11 19.9**	**-6.7**
CN2				*e*sS	S	14 11 42.0	+7.3
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,100nm,16.0s						
CN2				LR	LR		
	comp=Z,250nm,18.0s						
ZEA	**Zeya**	**16.55**	**312**	*e*P	**Pn**	**14 08 30.9**	**+0.1**
ZEA				*e*S	**Sn**	**14 11 23.4**	**-10**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,100nm,4.4s						
ZEA				pmax	pmax		
	comp=E,100nm,2.7s						
ZEA				smax	smax		
	comp=E,100nm,6.1s						
ZEA				MLR	MLR		
	comp=Z,100nm,14.0s						
ZEA	**Zeya**	**16.55**	**312**	*e*P	**Pn**	**14 08 30.9**	**+0.1**
ZEA				AMB	AMB	14 08 33.4	
	comp=Z,20nm,0.9s						
ZEA				AMB	AMB	14 08 33.4	
	comp=Z,10.0nm,0.9s						
ZEA				AMB	AMB	14 08 33.4	
	comp=Z,30nm,0.9s						
ZEA				AMB	AMB	14 08 37.0	
	comp=Z,100nm,4.0s						
ZEA				AMB	AMB	14 08 37.0	
	comp=Z,10.0nm,4.0s						
ZEA				AMB	AMB	14 08 37.0	
	comp=Z,30nm,4.0s						
ZEA				AMS	AMS	14 15 59.0	
	comp=Z,100nm,14.0s						
KSRS	**Korea Array**	**16.65**	**253**	P	**Pn**	**14 08 31.4**	**-0.8**
	comp=Z,12nm,0.9s,baz=61,slow=12,SNR=75						
KSRS				S	**S**	**14 11 43.6**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=66,slow=23,SNR=7.2						
KSRS				PcP	**PcP**	**14 13 17.4**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=75,slow=1.4,SNR=7.3						
KSRS				LR	LR	14 15 20.6	
	comp=Z,86nm,19.2s,baz=60,slow=38						
KS19	**Wonju Array Si**	**16.66**	**253**		**Pn**	**14 08 31.3**	**-1.0**
KSAR	**Wonju Array Be**	**16.68**	**253**	Pn	**Pn**	**14 08 30.9**	**-1.6**
KSAR	**Wonju Array Be**	**16.68**	**253**	P	**Pn**	**14 08 31.0**	**-1.6**
KSCHJ	**Chungju**	**16.91**	**251**	P	**Pn**	**14 08 34.6**	**-0.8**
JNU	**Nakatsue**	**17.38**	**236**	P	**Pn**	**14 08 41.8**	**+0.6**
	comp=Z,17nm,0.8s,baz=60,slow=5.1,SNR=6.6						
JNU	**Nakatsue**	**17.38**	**236**	P	**Pn**	**14 08 40.9**	**-0.3**
TJN	**Taejon**	**17.59**	**250**	*ce*P	**P**	**14 08 43.5**	**-0.2**
JCJ	**Chichijima**	**17.77**	**197**	P	**P**	**14 08 46.5**	**+0.7**
	comp=Z,16nm,0.7s,baz=333,slow=18,SNR=1.4						
JCJ				S	Sn	14 11 52.4	-11
	comp=Z,30nm,0.7s,baz=255,slow=23,SNR=6.5						
SNY	**Shenyang**	**18.02**	**271**	⇑P	**P**	**14 08 48.8**	**+0.4**
SNY				S	**Sn**	**14 12 09.0**	**-0.5**
SNY				pmax	pmax		
	comp=Z,90nm,0.9s						
SNY				LR	LR		
	comp=Z,110nm,8.5s						
SNY				LR	LR		
	comp=Z,83nm,10.7s						
SNY				LR	LR		
	comp=Z,89nm,15.9s						
NAWB	**Namwon**	**18.11**	**248**	P	**Pn**	**14 08 50.5**	**+0.6**
SEY	**Seymchan**	**18.87**	**6**	P	**P**	**14 08 57.1**	**-0.2**

	comp=Z,18nm,0.7s,baz=182,slow=8.8,SNR=63						
SEY				LR	LR	14 16 15.2	
	comp=Z,113nm,18.7s,baz=138,slow=37						
SEY	**Seymchan**	**18.87**	**6**	*ce*P	**P**	**14 08 56.3**	**-1.1**
SEY				pmax	pmax		
	comp=Z,45nm,1.3s						
SHEM	**Shemya Is, Ala**	**19.15**	**55**	P	**P**	**14 09 02.2**	**+1.6**
	comp=Z,14nm,0.4s,baz=103,slow=7.1,SNR=7.4						
SHEM				S	**S**	**14 12 25.7**	**-7.5**
	comp=Z,16nm,0.6s,baz=306,slow=14,SNR=6.8						
SHEM				LR	LR	14 15 59.3	
	comp=Z,44nm,20.9s,baz=297,slow=35						
SMY	**Shemya**	**19.15**	**55**	P	**P**	**14 09 00.4**	**-0.2**
SMY				IAmb	IAmb	14 09 05.7	
	comp=Z,122nm,1.3s						
SMY	**Shemya**	**19.15**	**55**	P	**P**	**14 09 00.4**	**-0.2**
SMY				pmax	pmax		
	comp=Z,122nm,1.3s						
HIA	**Hailar**	**19.95**	**295**	P	**P**	**14 09 07.2**	**-2.2**
HIA	**Hailar**	**19.95**	**295**	P	**P**	**14 09 07.2**	**-2.2**
HIA				pmax	pmax		
	comp=Z,17nm,1.0s						
DL2	**Dalian**	**20.42**	**264**	P	**P**	**14 09 14.8**	**+0.3**
DL2				pP	**pP**	**14 09 34.4**	**+3.7**
DL2				S	**S**	**14 12 58.1**	**-0.5**
DL2				pmax	pmax		
	comp=Z,35nm,0.4s						
DL2				pmax	pmax		
	comp=Z,72nm,5.3s						
YAK	**Yakutsk**	**20.78**	**335**	P	**P**	**14 09 15.9**	**-2.2**
	comp=Z,24nm,0.4s,baz=139,slow=0.3,SNR=38						
YAK				S	**S**	**14 12 57.0**	**-8.2**
	comp=Z,6.0nm,0.5s,baz=333,slow=4.5,SNR=12						
YAK				LR	LR	14 17 12.0	
	comp=Z,98nm,21.0s,baz=106,slow=36						
	comp=Z,24nm,0.4s						
YAK	**Yakutsk**	**20.78**	**335**	P	**P**	**14 09 15.5**	**-2.6**
YAK				IAmb	IAmb	14 09 18.2	
	comp=Z,108nm,0.7s						
YAK	**Yakutsk**	**20.78**	**335**	*e*P	**P**	**14 09 15.1**	**-3.0**
YAK				*e*S	**S**	**14 13 00.7**	**-4.5**
YAK				*e**SS	Sn	14 13 18.2	+2.9
YAK				pmax	pmax		
	comp=Z,86nm,0.8s						
YAK				pmax	pmax		
	comp=N,17nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,1.0s						
YAK				smax	smax		
	comp=N,194nm,1.7s						
YAK				smax	smax		
	comp=E,93nm,1.3s						
XLT	**XiLinHaoTe**	**22.88**	**280**	⇑*i*P	**P**	**14 09 39.3**	**-1.5**
XLT				pP	pP	14 09 54.6	-2.8
XLT				sP	sP	14 10 09.6	+2.1
XLT				S	**S**	**14 13 41.9**	**-2.3**
XLT				sS	Sn	14 14 07.0	+1.0
XLT				pmax	pmax		
	comp=E,49nm,0.9s						
XLT				pmax	pmax		
	comp=E,65nm,3.6s						
XLT				LR	LR		
	comp=E,40nm,17.6s						
XLT				LR	LR		
	comp=E,230nm,13.1s						
XLT				LR	LR		
	comp=E,240nm,14.8s						
JOW	**Kunigami**	**23.59**	**229**	LR	LR	14 18 55.9	
	comp=E,101nm,20.4s,baz=86,slow=36						
BJI	**Beijing**	**23.91**	**271**	P	**P**	**14 09 50.6**	**+0.4**
BJI				PP	**PnPn**	**14 10 27.5**	**+4.6**
BJI				S	**S**	**14 13 58.0**	**-2.5**
BJI				pmax	pmax		
	comp=E,37nm,1.0s						
BJI				pmax	pmax		
	comp=E,190nm,3.7s						
BJI				LR	LR		
	comp=E,150nm,12.0s						
BJI				LR	LR		
	comp=E,66nm,12.6s						
BJI				LR	LR		
	comp=E,130nm,13.9s						
ADK	**Adak**	**24.58**	**59**	P	**P**	**14 09 56.8**	**+0.7**
ADK	**Adak**	**24.58**	**59**	P	**P**	**14 09 56.8**	**+0.7**
ADK				pmax	pmax		
	comp=Z,41nm,1.1s						
TIA	**Tai'an**	**24.82**	**262**	⇓P	**P**	**14 09 59.9**	**+1.4**
TIA				pmax	pmax		
	comp=Z,31nm,0.9s						
TIA				pmax	pmax		
	comp=Z,110nm,4.0s						
BOD	**Bodaibo**	**25.01**	**315**	*e*P	**P**	**14 09 56.7**	**-3.3**
BOD				pmax	pmax		
	comp=Z,25nm,0.9s						
BILL	**Bilibino**	**25.68**	**16**	P	**P**	**14 10 06.2**	**+0.2**
BILL	**Bilibino**	**25.68**	**16**	*e*P	**P**	**14 10 04.4**	**-1.6**
BILL				*e*		14 10 35.5	
BILL				pmax	pmax		
	comp=Z,17nm,1.3s						
BILL				MLR	MLR		
	comp=Z,38nm,16.0s						
NJ2	**Nanjing**	**25.84**	**252**	*e*P	**P**	**14 10 07.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HNS	**HongShan**	**26.01**	**266**	⇑P	**P**	**14 10 11.3**	**+2.1**
HNS				S	**S**	**14 14 31.8**	**-2.1**
HNS				pmax	pmax		
	comp=Z,16nm,1.0s						
HNS				LR	LR		
	comp=Z,150nm,17.8s						
HNS				LR	LR		
	comp=Z,170nm,19.4s						
HHC	**Hu-ho-hao-te**	**26.94**	**276**	*e*P	**P**	**14 10 19.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,170nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,3.9s						
TIY	**Taiyuan**	**27.50**	**269**	*e*P	**P**	**14 10 27.6**	**+4.8**
TIY				S	**S**	**14 15 01.0**	**+3.3**
TIY				pmax	pmax		
	comp=Z,110nm,3.5s						
ULN	**Ulaanbaatar**	**28.42**	**292**	*ce*P	**P**	**14 10 31.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,24nm,0.8s						
ULN	**Ulaanbaatar**	**28.42**	**292**	*e*P	**P**	**14 10 31.2**	**+0.3**
SONM	**Songino Array**	**28.86**	**292**	P	**P**	**14 10 34.9**	**+0.1**
	comp=Z,10nm,0.6s,baz=82,slow=8.7,SNR=55						
SONM				PcP	**PcP**	**14 13 42.1**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=58,slow=3.6,SNR=3.2						
SONM				LR	LR	14 22 52.6	
	comp=Z,145nm,19.4s,baz=78,slow=38						
	comp=Z,10nm,0.6s						
SONM	**Songino Array**	**28.86**	**292**	P	**P**	**14 10 35.4**	**+0.6**
TIXI	**Tiksi**	**28.98**	**348**	P	**P**	**14 10 32.3**	**-3.1**
	comp=Z,1.6nm,0.4s,baz=269,slow=22,SNR=10.0						
TIXI	**Tiksi**	**28.98**	**348**	P	**P**	**14 10 32.5**	**-2.9**
TIXI	**Tiksi**	**28.98**	**348**	P	**P**	**14 10 32.5**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.09**	**141**	T	T	14 41 39.4	
	baz=333,slow=74						
H11N1	**WAKE ISLAND Hy**	**29.11**	**141**	T	T	14 41 48.4	
	baz=333,slow=74						
H11N3	**WAKE ISLAND Hy**	**29.11**	**141**	T	T	14 41 41.8	
	baz=333,slow=74						
NIKH	**Nikolski High**	**29.41**	**57**	P	**P**	**14 10 37.8**	**-1.6**
	baz=270						
GAMB	**Gambell**	**29.91**	**35**	P	**P**	**14 10 42.5**	**-1.2**
	baz=249						
H11S1	**WAKE ISLAND Hy**	**30.08**	**143**	T	T	14 42 55.5	
	baz=333,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.09**	**143**	T	T	14 42 57.8	
	baz=333,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.10**	**143**	T	T	14 42 58.7	
	baz=333,slow=76						
ZAK	**Zakamensk**	**30.57**	**298**	*e*P	**P**	**14 10 49.0**	**-0.9**
ZAK				*e*		14 13 46.7	
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
UNV	**Unalaska Valle**	**30.80**	**56**	P	**P**	**14 10 50.5**	**-1.2**
	baz=271						
XAN	**Xi'an**	**31.74**	**265**	P	**P**	**14 11 02.5**	**+2.3**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				LR	LR		
	comp=Z,160nm,17.2s						
MOY	**Mondy**	**31.88**	**300**	*e*P	**P**	**14 11 00.5**	**-0.9**
TNA	**Tin City**	**32.07**	**33**	P	**P**	**14 11 02.2**	**-0.5**
TNA				IAmb	IAmb	14 11 05.3	
	comp=Z,51nm,1.1s						
TNA	**Tin City**	**32.07**	**33**	P	**P**	**14 11 00.8**	**-1.8**
	baz=250,SNR=7.4						
ANM	**Nome**	**32.80**	**35**	P	**P**	**14 11 07.1**	**-2.0**
	baz=254						
SDPT	**Sand Point**	**34.26**	**53**	P	**P**	**14 11 20.7**	**-1.1**
	baz=273						
LZH	**Lanzhou**	**34.39**	**272**	⇑P	**P**	**14 11 25.6**	**+2.1**
LZH				pP	pP	14 11 48.6	+6.2
LZH				sP	sP	14 11 59.5	+7.7
LZH				pmax	pmax		
	comp=Z,34nm,1.4s						
LZH				LR	LR		
	comp=Z,150nm,13.6s						
LZH				LR	LR		
	comp=Z,170nm,13.6s						
LZH				LR	LR		
	comp=Z,140nm,13.0s						
RDOG	**Red Dog Mine**	**34.76**	**30**	P	**P**	**14 11 23.9**	**-2.1**
	baz=252						
CHNA	**Chernabura Isl**	**34.80**	**53**	P	**P**	**14 11 24.5**	**-2.1**
	baz=275						
CHGN	**Chignik**	**35.37**	**51**	P	**P**	**14 11 30.2**	**-1.1**
	baz=273						
GTA	**Gaotai**	**35.84**	**279**	P	**P**	**14 11 37.5**	**+1.7**
GTA				pP	pP	14 11 56.8	+1.9
GTA				sP	sP	14 12 09.8	+5.6
GTA				PcP	**PcP**	**14 14 02.8**	**+1.2**
GTA				S	**S**	**14 17 09.9**	**+2.3**
GTA				sS	sS	14 17 41.8	+1.5
GTA				pmax	pmax		
	comp=Z,12nm,0.2s						
GTA				pmax	pmax		
	comp=Z,67nm,8.8s						
GTA				LR	LR		
	comp=Z,96nm,14.7s						
GTA				LR	LR		
	comp=Z,110nm,15.1s						
GTA				LR	LR		
	comp=Z,100nm,14.3s						
GCSA	**Galena City Sc**	**36.41**	**36**	P	**P**	**14 11 41.1**	**+0.9**
	baz=263,SNR=25						
N18K	**Kilae Creek**	**36.59**	**43**	P	**P**	**14 11 44.1**	**+2.3**
N18K	**Kilae Creek**	**36.59**	**43**	P	**P**	**14 11 44.2**	**+2.3**
	baz=269,SNR=11						
TTA	**Tatalina**	**36.62**	**39**	P	**P**	**14 11 43.5**	**+1.3**
TTA				IAmb	IAmb	14 11 45.1	
	comp=Z,34nm,1.0s						
TTA	**Tatalina**	**36.62**	**39**	P	**P**	**14 11 43.5**	**+1.3**
TTA				pmax	pmax		
	comp=Z,34nm,1.0s						
TTA	**Tatalina**	**36.62**	**39**	P	**P**	**14 11 43.6**	**+1.4**
	baz=266,SNR=22						
SVW2	**Sparrevohn**	**36.75**	**43**	P	**P**	**14 11 44.8**	**+1.6**
SVW2				IAmb	IAmb	14 11 46.6	
	comp=Z,46nm,1.3s						
P18K	**Big Mountain,**	**36.94**	**45**	P	**P**	**14 11 45.1**	**+0.3**
	baz=272						
CHIR	**Chirikof Islan**	**36.97**	**51**	P	**P**	**14 11 45.3**	**+0.2**
	baz=276						
CD2	**Chengdu**	**37.09**	**264**	P	**P**	**14 11 49.4**	**+2.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
L19K	**White Mountain**	**37.12**	**41**	P	**P**	**14 11 47.6**	**+1.3**
L19K				IAmb	IAmb	14 11 49.6	
	comp=Z,28nm,1.2s						
L19K	**White Mountain**	**37.12**	**41**	P	**P**	**14 11 47.9**	**+1.5**
	baz=268,SNR=10						
N19K	**Bonanza Creek**	**37.28**	**43**	P	**P**	**14 11 49.5**	**+1.6**
	baz=270,SNR=6.2						
M19K	**Big River Lodg**	**37.34**	**41**	P	**P**	**14 11 49.6**	**+1.4**
	baz=269						
O19K	**Port Alsworth**	**37.38**	**44**	P	**P**	**14 11 50.4**	**+2.0**
	baz=271						
K20K	**Telida**	**37.53**	**39**	P	**P**	**14 11 51.7**	**+2.0**
K20K				IAmb	IAmb	14 11 52.9	
	comp=Z,38nm,1.1s						
K20K	**Telida**	**37.53**	**39**	P	**P**	**14 11 51.6**	**+1.8**
	baz=268,SNR=18						
J20K	**Nowinta River**	**37.54**	**37**	P	**P**	**14 11 51.6**	**+1.9**
J20K	**Nowinta River**	**37.54**	**37**	P	**P**	**14 11 51.3**	**+1.6**
	baz=266,SNR=58						
L20K	**Farewell, AK**	**37.59**	**40**	P	**P**	**14 11 52.0**	**+1.8**
	baz=269,SNR=9.9						
SII	**Sitkinak Islan**	**37.69**	**50**	P	**P**	**14 11 51.3**	**+0.1**
	baz=276						
Q19K	**Cape Douglas,**	**37.77**	**46**	P	**P**	**14 11 52.4**	**+0.5**
	baz=274						
A21K	**Barrow**	**37.80**	**26**	P	**P**	**14 11 51.6**	**-0.3**
	baz=255						
IMAR	**Indian Mountai**	**37.85**	**35**	P	**P**	**14 11 54.0**	**+1.5**
M20K	**Styx River**	**37.93**	**41**	P	**P**	**14 11 55.4**	**+2.1**
	baz=270,SNR=8.4						
OHAK	**Old Harbor**	**38.11**	**49**	P	**P**	**14 11 54.4**	**-0.2**
	baz=276						
RSO	**Redoubt South**	**38.15**	**44**	P	**P**	**14 11 57.5**	**+2.3**
H21K	**Melozitna Rive**	**38.21**	**35**	P	**P**	**14 11 57.0**	**+1.5**
	baz=266,SNR=52						
O20K	**Slope Mountain**	**38.23**	**44**	P	**P**	**14 11 56.4**	**+0.7**
	baz=273						
CHUM	**Lake Minchumin**	**38.33**	**38**	P	**P**	**14 11 58.3**	**+1.9**
	baz=268,SNR=35						
PPLA	**Purkeypile**	**38.37**	**40**	P	**P**	**14 11 59.2**	**+2.3**
PPLA	**Purkeypile**	**38.37**	**40**	P	**P**	**14 11 59.3**	**+2.3**
	baz=270,SNR=16						
SPCR	**Spurr Chakacha**	**38.38**	**42**	P	**P**	**14 11 59.1**	**+2.1**
	baz=272						
KDAK	**Kodiak Island**	**38.43**	**48**	LR	LR	14 30 19.7	
	comp=Z,32nm,18.6s,baz=261,slow=40						
KDAK	**Kodiak Island**	**38.43**	**48**	P	**P**	**14 11 57.2**	**0.0**
KDAK	**Kodiak Island**	**38.43**	**48**	P	**P**	**14 11 57.3**	**0.0**
KDAK				pmax	pmax		
	comp=Z,53nm,1.0s						
KDAK	**Kodiak Island**	**38.43**	**48**	P	**P**	**14 11 57.6**	**+0.3**
	baz=276						
I21K	**Tanana**	**38.53**	**36**	P	**P**	**14 12 00.1**	**+2.1**
I21K	**Tanana**	**38.53**	**36**	P	**P**	**14 11 59.6**	**+1.6**
	baz=267,SNR=35						
HOM	**Homer**	**38.75**	**45**	P	**P**	**14 12 01.3**	**+1.3**
	baz=274						
CAPN	**Captain Cook N**	**38.92**	**43**	P	**P**	**14 12 02.4**	**+1.1**
	baz=273						
BPAW	**Bear Paw Mtn.**	**38.92**	**38**	P	**P**	**14 12 03.2**	**+1.8**
BPAW				IAmb	IAmb	14 12 04.4	
	comp=Z,29nm,0.9s						
BPAW	**Bear Paw Mtn.**	**38.92**	**38**	P	**P**	**14 12 03.1**	**+1.7**
	baz=269,SNR=33						
NRIK	**Noril'sk**	**39.10**	**331**	LR	LR	14 28 18.7	
	comp=Z,41nm,19.0s,baz=122,slow=36						
NRIK	**Noril'sk**	**39.10**	**331**	*ce*P	**P**	**14 12 00.8**	**-2.0**
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.8s						
BRSE	**Bradley Lake S**	**39.20**	**45**	P	**P**	**14 12 04.4**	**+0.6**
	baz=275						
TRF	**Thorofare Moun**	**39.23**	**39**	P	**P**	**14 12 04.9**	**+0.7**
	baz=271						
CUT	**Chulitna**	**39.27**	**40**	P	**P**	**14 12 05.2**	**+0.9**
CUT				IAmb	IAmb	14 12 05.8	
	comp=Z,29nm,1.0s						
CUT	**Chulitna**	**39.27**	**40**	P	**P**	**14 12 05.1**	**+0.9**
	baz=272						
M22K	**Willow**	**39.36**	**41**	P	**P**	**14 12 05.1**	**+0.1**
	baz=273						
COLD	**Coldfoot**	**39.37**	**33**	P	**P**	**14 12 06.5**	**+1.4**
COLD				IAmb	IAmb	14 12 07.7	
	comp=Z,18nm,0.8s						
COLD	**Coldfoot**	**39.37**	**33**	P	**P**	**14 12 06.1**	**+1.0**
	baz=266,SNR=32						
H23K	**Yukon River**	**39.57**	**35**	P	**P**	**14 12 08.6**	**+1.8**
H23K	**Yukon River**	**39.57**	**35**	P	**P**	**14 12 09.0**	**+2.2**
	baz=269,SNR=75						
BWN	**Browne**	**39.59**	**38**	P	**P**	**14 12 09.7**	**+2.7**
RC01	**Rabbit Creek A**	**39.59**	**42**	P	**P**	**14 12 07.6**	**+0.7**
	baz=274						
I23K	**Minto, Yukon-K**	**39.63**	**36**	P	**P**	**14 12 09.2**	**+2.0**
I23K	**Minto, Yukon-K**	**39.63**	**36**	P	**P**	**14 12 09.0**	**+1.8**
	baz=270						
O22K	**Cooper Landing**	**39.64**	**43**	P	**P**	**14 12 08.0**	**+0.6**
	baz=275						
TOLK	**Toolik Lake Re**	**39.72**	**31**	P	**P**	**14 12 09.6**	**+1.6**
TOLK				IAmb	IAmb	14 12 10.4	
	comp=Z,17nm,0.9s						
TOLK	**Toolik Lake Re**	**39.72**	**31**	P	**P**	**14 12 09.0**	**+1.0**
	baz=265						
NEA2	**Nenana**	**39.76**	**37**	P	**P**	**14 12 09.7**	**+1.4**
NEA2	**Nenana**	**39.76**	**37**	P	**P**	**14 12 09.9**	**+1.6**
	baz=270						
SEW	**Seward**	**39.81**	**44**	P	**P**	**14 12 09.2**	**+0.4**
	baz=276						
PMR	**Palmer**	**39.84**	**42**	P	**P**	**14 12 09.7**	**+0.6**
	baz=274						
RND	**Reindeer**	**39.88**	**39**	P	**P**	**14 12 09.8**	**+0.4**
RND	**Reindeer**	**39.88**	**39**	P	**P**	**14 12 09.9**	**+0.4**
RND				pmax	pmax		
	comp=Z,46nm,1.0s						
WAT1	**Susitna Watana**	**40.04**	**40**	P	**P**	**14 12 11.3**	**+0.5**
	baz=273						
MDM	**Murphy Dome**	**40.11**	**36**	P	**P**	**14 12 13.1**	**+1.8**
KNK	**Knik Glacier**	**40.18**	**42**	P	**P**	**14 12 12.6**	**+0.7**
	baz=275						
SML	**Sawmill**	**40.21**	**41**	P	**P**	**14 12 13.2**	**+1.1**
	baz=274						
H24K	**Noodor Dome**	**40.25**	**35**	P	**P**	**14 12 14.5**	**+2.0**
H24K	**Noodor Dome**	**40.25**	**35**	P	**P**	**14 12 14.6**	**+2.1**
	baz=270,SNR=60						
TCOL	**CIGO, UAF Yank**	**40.27**	**36**	P	**P**	**14 12 14.0**	**+1.5**
	baz=271						
COLA	**College**	**40.27**	**36**	P	**P**	**14 12 14.8**	**+2.3**
COLA	**College**	**40.27**	**36**	*d i*P	**P**	**14 12 13.7**	**+1.1**
COLA				pmax	pmax		
	comp=Z,102nm,1.0s						
COLA	**College**	**40.27**	**36**	P	**P**	**14 12 14.2**	**+1.6**
	baz=271						
WAT6	**Susitna Watana**	**40.43**	**40**	P	**P**	**14 12 14.6**	**+0.5**
	baz=274						
POKR	**Poker Plat Res**	**40.45**	**36**	P	**P**	**14 12 15.4**	**+1.4**
POKR	**Poker Plat Res**	**40.45**	**36**	P	**P**	**14 12 16.1**	**+2.0**
	baz=271						
M23K	**Glacier View**	**40.50**	**41**	P	**P**	**14 12 15.1**	**+0.6**
	baz=275						
DHY	**Denali Highway**	**40.56**	**39**	P	**P**	**14 12 15.9**	**+0.7**
	baz=274						
HDA	**Harding Lake**	**40.68**	**37**	P	**P**	**14 12 16.5**	**+0.6**
HDA	**Harding Lake**	**40.68**	**37**	P	**P**	**14 12 16.2**	**+0.3**
	baz=273						
SCM	**Sheep Creek Mo**	**40.68**	**41**	P	**P**	**14 12 15.7**	**-0.4**
	baz=275,SNR=8.3						
IL31		**40.69**	**37**	P	**P**	**14 12 17.1**	**+1.1**
ILAR	**Eielson Array**	**40.69**	**37**	P	**P**	**14 12 16.9**	**+0.9**
	comp=Z,52nm,1.1s,baz=256,slow=6.6,SNR=170						
ILAR				PcP	**PcP**	**14 14 14.9**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=290,slow=3.5,SNR=4.8						
	comp=Z,52nm,1.1s						
GOMU	**GeErMu**	**40.80**	**278**	P	**P**	**14 12 19.4**	**+1.6**
GOMU				PcP	**PcP**	**14 14 19.1**	**+1.7**
GOMU				S	**S**	**14 18 20.8**	**-2.1**
GOMU				pmax	pmax		
	comp=Z,17nm,0.8s						
GOMU				LR	LR		
	comp=Z,120nm,18.7s						
GOMU				LR	LR		
	comp=Z,60nm,18.0s						
GOMU				LR	LR		
	comp=Z,73nm,18.3s						
GLI	**Glacier Island**	**40.89**	**43**	P	**P**	**14 12 18.1**	**+0.4**
	baz=277						
PZH	**PanZhiHua**	**41.10**	**260**	P	**P**	**14 12 20.4**	**+0.4**
PZH				S	**S**	**14 18 23.8**	**-3.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,3.9s						
PZH				LR	LR		
	comp=Z,110nm,17.6s						
PZH				LR	LR		
	comp=Z,190nm,16.0s						
PZH				LR	LR		
	comp=Z,220nm,19.6s						
ZAA0	**Zalesovo Array**	**41.20**	**307**	P	**P**	**14 12 20.2**	**-0.1**
ZALV	**Zalesovo Beam**	**41.20**	**307**	P	**P**	**14 12 18.9**	**-1.4**
	comp=Z,2.7nm,0.4s,baz=84,slow=8.8,SNR=13						
ZALV				PcP	**PcP**	**14 14 17.5**	**-0.4**
	comp=Z,11nm,0.6s,baz=81,slow=2.9,SNR=23						
ZALV				LR	LR	14 29 27.4	
	comp=Z,53nm,19.3s,baz=70,slow=36						
	comp=Z,2.7nm,0.4s						
ZALV	**Zalesovo Beam**	**41.20**	**307**	P	**P**	**14 12 19.8**	**-0.5**
M24K	**Tolsona, Glenn**	**41.20**	**41**	P	**P**	**14 12 20.9**	**+0.6**
M24K	**Tolsona, Glenn**	**41.20**	**41**	P	**P**	**14 12 21.7**	**+1.4**
	baz=276,SNR=6.6						
K24K	**Donnelly Dome**	**41.23**	**38**	P	**P**	**14 12 20.8**	**+0.3**
	baz=274,SNR=7.9						
KMI	**Kunming**	**41.25**	**258**	⇓P	**P**	**14 12 26.0**	**+4.6**
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
J25K	**Salcha River,**	**41.35**	**37**	P	**P**	**14 12 21.5**	**0.0**
J25K				IAmb	IAmb	14 12 23.5	
	comp=Z,16nm,0.8s						
J25K	**Salcha River,**	**41.35**	**37**	P	**P**	**14 12 21.4**	**-0.2**
	baz=274						
KLU	**Klutina**	**41.38**	**42**	P	**P**	**14 12 23.1**	**+1.2**
	baz=277						
PAX	**Paxson**	**41.44**	**39**	P	**P**	**14 12 24.0**	**+1.7**
	baz=276,SNR=10						
BMAR	**Burnt Mountain**	**41.55**	**32**	P	**P**	**14 12 25.5**	**+2.4**
EYAK	**Cordova Ski Ar**	**41.59**	**43**	P	**P**	**14 12 24.6**	**+1.2**
	baz=278						
HARP	**HAARP**	**41.64**	**40**	P	**P**	**14 12 25.3**	**+1.4**
	baz=276						
RIDG	**Independent Ri**	**41.65**	**38**	P	**P**	**14 12 24.7**	**+0.7**
	baz=275						
DAV	**Davao City (W)**	**41.93**	**215**	LR	LR	14 28 41.2	
	comp=Z,27nm,21.8s,baz=11,slow=34						
N25K	**Chitina, Valde**	**42.00**	**41**	P	**P**	**14 12 28.5**	**+1.6**
	baz=278						
SCRK	**Sand Creek**	**42.00**	**38**	P	**P**	**14 12 27.3**	**+0.4**
SCRK				IAmb	IAmb	14 12 28.9	
	comp=Z,36nm,0.8s						
SCRK	**Sand Creek**	**42.00**	**38**	P	**P**	**14 12 27.2**	**+0.3**
	baz=276,SNR=59						
BMRM	**Bremner River**	**42.09**	**42**	P	**P**	**14 12 28.4**	**+0.9**
BMRM				IAmb	IAmb	14 12 30.4	
	comp=Z,32nm,1.0s						
BMRM	**Bremner River**	**42.09**	**42**	P	**P**	**14 12 28.8**	**+1.2**
	baz=278,SNR=10						
J26L	**Joseph Creek**	**42.14**	**37**	P	**P**	**14 12 28.2**	**+0.2**
	baz=275						
MENT	**Mentasta**	**42.24**	**39**	P	**P**	**14 12 30.5**	**+1.8**
HMT	**Hamilton**	**42.35**	**43**	P	**P**	**14 12 31.2**	**+1.5**
HMT				IAmb	IAmb	14 12 32.9	
	comp=Z,38nm,1.2s						
L26K	**Log Cabin Wild**	**42.39**	**39**	P	**P**	**14 12 31.9**	**+1.9**
	baz=277,SNR=18						
GLB	**Gilahina Butte**	**42.40**	**41**	P	**P**	**14 12 31.6**	**+1.5**
WMQ	**Urumqi**	**42.50**	**291**	⇑*i*P	**P**	**14 12 32.4**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,35nm,3.7s						
WMQ				LR	LR		
	comp=Z,160nm,6.9s						
WMQ				LR	LR		
	comp=Z,200nm,13.9s						
WMQ				LR	LR		
	comp=Z,89nm,26.5s						
VRDI	**Verde Repeater**	**42.60**	**42**	P	**P**	**14 12 33.0**	**+1.1**
VRDI				IAmb	IAmb	14 12 34.9	
	comp=Z,20nm,1.1s						
M26K	**Nabesna, AK**	**42.64**	**40**	P	**P**	**14 12 34.4**	**+2.3**
M26K	**Nabesna, AK**	**42.64**	**40**	P	**P**	**14 12 34.2**	**+2.1**
	baz=278,SNR=52						
MCARA	**McCarthy VSAT**	**42.78**	**41**	P	**P**	**14 12 35.2**	**+2.0**
	baz=279,SNR=10						
K27K	**Chicken**	**42.83**	**37**	P	**P**	**14 12 35.1**	**+1.6**
	baz=277						
ZSN	**Zaisan**	**43.03**	**297**	*e*P	**P**	**14 12 35.1**	**-0.2**
ZSN	**Zaisan**	**43.03**	**297**	*e*P	**P**	**14 12 35.2**	**-0.2**
	baz=297						
L27K	**Beaver Creek,**	**43.08**	**39**	P	**P**	**14 12 37.8**	**+2.3**
	baz=278,SNR=65						
BCAR	**Beaver Creek A**	**43.09**	**39**	P	**P**	**14 12 37.8**	**+2.1**
EGAK	**Eagle**	**43.14**	**36**	P	**P**	**14 12 37.0**	**+1.1**
EGAK	**Eagle**	**43.14**	**36**	P	**P**	**14 12 36.9**	**+0.9**
	baz=277,SNR=57						
M27K	**Edge Creek, AK**	**43.16**	**40**	P	**P**	**14 12 38.6**	**+2.2**
	baz=279,SNR=30						
MESA	**MESA**	**43.51**	**43**	P	**P**	**14 12 40.7**	**+1.4**
	baz=281						
BVCY	**Beaver Creek**	**43.62**	**40**	P	**P**	**14 12 41.7**	**+1.8**
	baz=280,SNR=16						
CTG	**Chitna Glacier**	**43.66**	**42**	P	**P**	**14 12 42.1**	**+1.7**

	baz=281,SNR=19						
YUK3	**Moose Creek**	43.92	41	P	**P**	14 12 44.1	+1.5
	baz=281,SNR=17						
DAWY	**Dawson**	44.00	37	P	**P**	14 12 44.3	+1.4
DAWY	**Dawson**	44.00	37	P	**P**	14 12 44.2	+1.2
	baz=279,SNR=13						
I29M	**Ogilvie Camp,**	44.25	35	P	**P**	14 12 46.6	+1.7
	baz=279,SNR=66						
PINM	**Pinnacle**	44.36	43	P	**P**	14 12 46.7	+0.8
	baz=283						
EPYK	**Eagle Plains**	44.74	34	P	**P**	14 12 50.6	+1.8
	baz=279,SNR=92						
YUK4	**Talbot Arm**	44.86	41	P	**P**	14 12 51.4	+1.4
	baz=283						
PNL	**Peninsula**	44.88	43	P	**P**	14 12 51.5	+1.6
	baz=284						
SEM	**Semipalatinsk**	44.90	303	*e*P	**P**	14 12 50.0	-0.5
SEM	**Semipalatinsk**	44.90	303	*e*P	**P**	14 12 50.0	-0.5
	baz=303						
MK31	**Makanchi Array**	44.91	297	P	**P**	14 12 50.8	+0.4
MK31				IAmb	IAmb	14 12 52.3	
	comp=Z,26nm,1.1s						
MK31	**Makanchi Array**	44.91	297	*i* P	**P**	14 12 50.7	+0.3
MK31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MKAR	**Makanchi Array**	44.91	297	P	**P**	14 12 50.8	+0.4
	comp=Z,17nm,0.8s,baz=72,slow=7.2,SNR=106						
MKAR				PcP	**PcP**	14 14 30.1	-0.4
	comp=Z,3.7nm,0.7s,baz=66,slow=5.6,SNR=6.1						
MKAR				LR	LR	14 33 00.8	
	comp=Z,98nm,18.6s,baz=80,slow=38						
	comp=Z,17nm,0.8s						
MKAR	**Makanchi Array**	44.91	297	P	**P**	14 12 50.4	0.0
MKAR	**Makanchi Array**	44.91	297	P	**P**	14 12 50.4	0.0
YUK6	**Outpost Mounta**	45.08	41	P	**P**	14 12 54.0	+2.2
	baz=283						
M30M	**Minto, Yukon**	45.44	39	P	**P**	14 12 56.5	+2.1
	baz=283,SNR=20						
HYT	**Haines Junctio**	45.52	41	P	**P**	14 12 57.6	+2.5
	baz=284						
N30M	**Aishikik Lake**	45.56	40	P	**P**	14 12 56.6	+1.2
	baz=284,SNR=6.3						
INK	**Inuvik**	45.63	31	P	**P**	14 12 57.1	+1.4
	comp=Z,13nm,0.3s,baz=293,slow=8.7,SNR=175						
	comp=Z,13nm,0.3s						
INK	**Inuvik**	45.63	31	P	**P**	14 12 57.4	+1.7
INK				IAmb	IAmb	14 12 58.4	
	comp=Z,32nm,0.9s						
INK	**Inuvik**	45.63	31	P	**P**	14 12 57.1	+1.4
	baz=280,SNR=39						
KURK	**Kurchatov**	45.77	304	P	**P**	14 12 56.3	-0.8
KURK				IAmb	IAmb	14 12 59.1	
	comp=Z,10nm,0.5s						
KURK	**Kurchatov**	45.77	304	*ce*P	**P**	14 12 55.6	-1.5
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURBB	**Kurchatov Arra**	45.85	304	LR	LR	14 33 17.0	
	comp=Z,42nm,18.1s,baz=47,slow=37						
KURBB	**Kurchatov Arra**	45.85	304	P	**P**	14 12 57.4	-0.3
N31M	**Braeburn, Yuko**	46.16	40	P	**P**	14 13 02.5	+2.4
	baz=285,SNR=16						
PLBC	**Pleasant Camp**	46.42	43	P	**P**	14 13 04.2	+2.1
	baz=286,SNR=10						
M31M	**Drury Creek, Y**	46.61	39	P	**P**	14 13 05.4	+1.8
	baz=285,SNR=22						
WHY	**Whitehorse**	46.80	41	P	**P**	14 13 07.2	+2.0
	baz=286,SNR=9.6						
SKAG	**Skagway**	46.93	43	P	**P**	14 13 07.7	+1.6
	baz=287						
SIJI	**Sorong**	47.37	203	LR	LR	14 31 11.6	
	comp=Z,26nm,20.9s,baz=46,slow=34						
BESE	**Bessie Mountai**	47.43	44	P	**P**	14 13 11.0	+1.0
BESE				IAmb	IAmb	14 13 13.6	
	comp=Z,25nm,1.2s						
A36M	**Sachs Harbour**	47.63	25	P	**P**	14 13 12.8	+1.5
A36M	**Sachs Harbour**	47.63	25	P	**P**	14 13 12.2	+0.9
	baz=284,SNR=24						
SIT	**Sitka**	47.68	46	P	**P**	14 13 13.9	+2.0
	baz=289						
MMPY	**Sheldon Lake,**	47.90	38	P	**P**	14 13 15.8	+2.2
	baz=287						
P33M	**Teslin, Yukon**	47.91	41	P	**P**	14 13 16.0	+2.2
P33M				IAmb	IAmb	14 13 17.3	
	comp=Z,34nm,1.1s						
P33M	**Teslin, Yukon**	47.91	41	P	**P**	14 13 16.1	+2.2
	baz=288,SNR=25						
TDK	**Taldyqorghan**	48.11	297	*e*P	**P**	14 13 16.2	+0.8
TDK	**Taldyqorghan**	48.11	297	*e*P	**P**	14 13 16.3	+0.8
	baz=297						
CMAR	**Chiang Mai Arr**	48.28	254	P	**P**	14 13 17.6	+0.6
	comp=Z,1.1nm,0.6s,baz=41,slow=7.0,SNR=9.7						
CMAR				PcP	**PcP**	14 14 43.1	+0.3
	comp=Z,1.1nm,0.9s,baz=28,slow=4.1,SNR=4.1						
CMAR				LR	LR	14 35 38.0	
	comp=Z,18nm,18.4s,baz=25,slow=38						
	comp=Z,1.1nm,0.6s						
CMAR	**Chiang Mai Arr**	48.28	254	P	**P**	14 13 17.0	0.0
CMAR	**Chiang Mai Arr**	48.28	254	P	**P**	14 13 17.0	0.0
UZB	**Uzynbulak**	48.52	294	*e*P	**P**	14 13 19.1	+0.3
UZB	**Uzynbulak**	48.52	294	*e*P	**P**	14 13 19.1	+0.3
	baz=294						
KPKS	**Kokpek**	48.60	295	*e*P	**P**	14 13 19.9	+0.6
KPKS				pmax	pmax		
	comp=Z,11nm,0.9s						
KPKS	**Kokpek**	48.60	295	*e*P	**P**	14 13 19.9	+0.6
	comp=Z,11nm,0.9s,baz=295						
C36M	**Paulatuk**	48.72	28	P	**P**	14 13 20.9	+1.2
C36M	**Paulatuk**	48.72	28	P	**P**	14 13 20.4	+0.7
	baz=287,SNR=54						
ZHN	**Zhinishke**	48.90	294	*e*P	**P**	14 13 22.2	+0.6
ZHN	**Zhinishke**	48.90	294	*e*P	**P**	14 13 22.3	+0.6
	baz=294						
SATY	**Saty**	48.96	294	*e*P	**P**	14 13 22.8	+0.6
SATY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SATY	**Saty**	48.96	294	*e*P	**P**	14 13 22.9	+0.7
	comp=Z,9.6nm,0.9s,baz=294						
MRSI	**Marisa**	49.39	215	P	**P**	14 13 26.2	+0.7
	comp=Z,17nm,1.3s						
WRAK	**Wrangell Islan**	49.44	46	P	**P**	14 13 27.3	+2.0
	baz=292						
S34M	**Telegraph Cree**	49.51	44	P	**P**	14 13 27.9	+2.0
	baz=291,SNR=5.0						
CHKK	**Chushkaly**	49.53	296	*e*P	**P**	14 13 26.7	+0.4
CHKK	**Chushkaly**	49.53	296	*e*P	**P**	14 13 26.7	+0.4
	baz=296						
BRZS	**Berezniki**	49.57	305	*e*P	**P**	14 13 26.3	-0.2
BRZS	**Berezniki**	49.57	305	*e*P	**P**	14 13 26.3	-0.2
	baz=305						
TGTN	**Hyland Airport**	49.58	39	P	**P**	14 13 28.5	+2.0
	baz=290						
BRVK	**Borovoye**	49.71	309	*ce*P	**P**	14 13 26.6	-0.9
BRVK				pmax	pmax		
	comp=Z,13nm,2.5s						
MDOK	**Medeo**	49.80	295	*e*P	**P**	14 13 29.3	+0.7
MDOK	**Medeo**	49.80	295	*e*P	**P**	14 13 29.3	+0.7
	baz=295						
DLBC	**Dease Lake**	49.86	43	LR	LR	14 36 59.4	
	comp=Z,28nm,18.8s,baz=304,slow=39						
AAA	**Alma-Ata**	49.87	295	*e*P	**P**	14 13 30.0	+1.1
AAA				pmax	pmax		
	comp=Z,20nm,0.7s						
AAA	**Alma-Ata**	49.87	295	*e*P	**P**	14 13 30.1	+1.1
	comp=Z,20nm,0.7s,baz=295						
AAA	**Alma-Ata**	49.87	295	*e*P	**P**	14 13 30.0	+1.1
TNSS	**Tian-Shan**	49.93	295	*e*P	**P**	14 13 30.6	+0.8
TNSS	**Tian-Shan**	49.93	295	*e*P	**P**	14 13 30.6	+0.8
	baz=295						
KUU	**Kurty**	49.93	296	*e*P	**P**	14 13 29.1	-0.2
KUU				pmax	pmax		
	comp=Z,19nm,0.8s						
KUU	**Kurty**	49.93	296	*e*P	**P**	14 13 29.1	-0.2
	comp=Z,19nm,0.8s,baz=296						
SANI	**Sanana**	50.15	209	P	**P**	14 13 31.0	-0.2
	comp=Z,19nm,1.0s						
KDJ	**Kajisay**	50.19	294	P	**P**	14 13 32.2	+0.7
KDJ				IAmb	IAmb	14 13 33.9	
	comp=Z,12nm,0.7s						
KDJ	**Kajisay**	50.19	294	P	**P**	14 13 32.3	+0.7
KDJ				pmax	pmax		
	comp=Z,12nm,0.7s						
OTUK	**Ortayu**	50.50	303	P	**P**	14 13 34.5	+0.9
ULHL	**Ulahol**	50.76	294	P	**P**	14 13 37.1	+1.3
	SNR=6.6						
BOOM	**Boomskoye usch**	50.84	295	P	**P**	14 13 37.0	+0.6
BOOM				IAmb	IAmb	14 13 39.0	
	comp=Z,23nm,0.8s						
BOOM	**Boomskoye usch**	50.84	295	P	**P**	14 13 37.0	+0.6
BOOM				pmax	pmax		
	comp=Z,23nm,0.9s						
TKM2	**Tokmak 2**	50.86	295	P	**P**	14 13 38.0	+1.4
	SNR=24						
TKM2	**Tokmak 2**	50.86	295	*i* P	**P**	14 13 37.4	+0.8
TKM2				pmax	pmax		
	comp=Z,37nm,1.3s						
BTLS	**Baital**	50.87	299	*e*P	**P**	14 13 36.3	-0.1
BTLS	**Baital**	50.87	299	*e*P	**P**	14 13 36.3	-0.1
	baz=298						
SGDS	**Sogindy**	51.23	296	*e*P	**P**	14 13 38.6	-0.6
SGDS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SGDS	**Sogindy**	51.23	296	*e*P	**P**	14 13 38.7	-0.6
	comp=Z,7.7nm,0.9s,baz=296						
KBK	**Karagaybulak**	51.40	295	P	**P**	14 13 41.8	+1.2
	SNR=14						
USP	**Ospenovka**	51.40	296	P	**P**	14 13 41.1	+0.6
	SNR=6.7						
AAK	**Ala-Archa**	51.71	296	P	**P**	14 13 44.0	+1.1
	SNR=9.2						
AAK	**Ala-Archa**	51.71	296	LR	LR	14 35 45.6	
	comp=Z,40nm,19.1s,baz=66,slow=36						
AAK	**Ala-Archa**	51.71	296	P	**P**	14 13 42.9	0.0
AAK				IAmb	IAmb	14 13 45.0	
	comp=Z,14nm,1.0s						
AAK	**Ala-Archa**	51.71	296	*ce*P	**P**	14 13 41.8	-1.1
AAK				pmax	pmax		
	comp=Z,20nm,1.3s						
EKS2	**Erkin-Say**	52.16	296	P	**P**	14 13 47.4	+1.2
	SNR=15						
EUNU	**Eureka**	52.23	10	P	**P**	14 13 45.7	-0.5
EUNU				IAmb	IAmb	14 13 47.9	
	comp=Z,11nm,0.9s						
KSH	**Kashi**	52.26	291	P	P	14 13 52.6	+5.6
KSH				sP	sP	14 14 24.6	+8.3
KSH				PP	PP	14 15 55.5	+10
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				LR	LR		
	comp=Z,250nm,15.1s						
KSH				LR	LR		
	comp=Z,210nm,18.2s						
AML	**Almayashu**	52.47	295	P	**P**	14 13 50.4	+1.5
	SNR=13						
SVE	**Sverdlovsk**	53.20	317	*e*P	**P**	14 13 53.0	-0.5
SVE				pmax	pmax		
	comp=Z,28nm,0.9s						
SVE	**Sverdlovsk**	53.20	317	*e*P	**P**	14 13 53.0	-0.5
DZA	**Taraz**	53.62	297	*e*P	**P**	14 13 57.0	+0.2
DZA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DZA	**Taraz**	53.62	297	*e*P	**P**	14 13 57.0	+0.2
	comp=Z,8.9nm,0.6s,baz=297						
KK31	**Karatay Array**	54.03	298	P	**P**	14 14 00.4	+0.6
KK31				IAmb	IAmb	14 14 01.5	
	comp=Z,18nm,0.8s						
KK31	**Karatay Array**	54.03	298	P	**P**	14 14 00.4	+0.6
KK31				pmax	pmax		
	comp=Z,18nm,0.9s						
KKAR	**Karatay Array**	54.03	298	P	**P**	14 14 00.1	+0.3
KKAR	**Karatay Array**	54.03	298	P	**P**	14 14 00.1	+0.3
NOR	**Nord**	54.11	357	*i* P	**P**	14 13 56.9	-3.0
NOR				IAmb	IAmb	14 14 00.1	
	comp=Z,2.8nm,0.8s						
RES	**Resolute Bay**	54.28	17	P	**P**	14 14 01.4	+0.3
	comp=Z,19nm,0.7s,baz=337,slow=6.0,SNR=32						
RES				LR	LR	14 40 20.7	
	comp=Z,21nm,19.1s,baz=102,slow=39						
	comp=Z,19nm,0.7s						
RES	**Resolute Bay**	54.28	17	P	**P**	14 14 01.7	+0.6
RES				IAmb	IAmb	14 14 03.5	
	comp=Z,19nm,0.8s						
RES	**Resolute Bay**	54.28	17	P	**P**	14 14 01.7	+0.6
RES				pmax	pmax		
	comp=Z,19nm,0.9s						
SPA0	**Spitsbergen Ar**	54.39	349	*e*P	**P**	14 14 02.3	+0.4
SPITS	**Spitsbergen Ar**	54.39	349	P	**P**	14 14 00.7	-1.3
	comp=Z,1.3nm,0.4s,baz=58,slow=7.9,SNR=29						
SPITS				PcP	**PcP**	14 15 04.8	+0.2
	comp=Z,1.2nm,0.4s,baz=93,slow=3.6,SNR=5.5						
	comp=Z,1.3nm,0.4s						
ARU	**Arti**	54.40	317	LR	LR	14 37 38.5	
	comp=Z,33nm,19.3s,baz=56,slow=36						
ARU	**Arti**	54.40	317	P	**P**	14 14 01.7	-0.6
ARU				IAmb	IAmb	14 14 02.3	
	comp=Z,20nm,0.8s						
ARU	**Arti**	54.40	317	*ce*P	**P**	14 14 00.9	-1.4
ARU				pmax	pmax		
	comp=Z,33nm,1.3s						
IUG	**Iuzhnay**	54.82	297	*e*P	**P**	14 14 06.2	+0.6
IUG	**Iuzhnay**	54.82	297	*e*P	**P**	14 14 06.2	+0.6
	baz=297						
YKA	**Yellowknife Ar**	55.01	34	P	**P**	14 14 07.2	+0.7
	comp=Z,24nm,0.9s,baz=300,slow=6.7,SNR=143						
YKA				PcP	**PcP**	14 15 07.9	+0.7
	comp=Z,4.0nm,0.8s,baz=303,slow=4.0,SNR=6.7						
	comp=Z,24nm,0.9s						
YKA	**Yellowknife Ar**	55.01	34	P	**P**	14 14 07.6	+1.0
BTK	**Batken**	55.39	295	P	**P**	14 14 10.5	+0.7
BTK				IAmb	IAmb	14 14 13.9	
	comp=Z,16nm,1.1s						
BTK	**Batken**	55.39	295	P	**P**	14 14 10.5	+0.7
BTK				pmax	pmax		
	comp=Z,16nm,1.1s						
HSPB	**Hornsund (broa**	55.41	348	*e*P	**P**	14 14 08.4	-0.8
BJO1	**Bjornoya**	56.74	346	*e*P	**P**	14 14 18.2	-0.6
CHGR	**Chuyangaron**	57.23	294	P	**P**	14 14 23.1	+0.3
CHGR	**Chuyangaron**	57.23	294	P	**P**	14 14 23.2	+0.3
CHGR				pmax	pmax		
	comp=Z,43nm,0.5s						
AB31	**Akbulak array**	57.23	309	*e*P	**P**	14 14 22.7	+0.1
ABKAR	**Akbulak array**	57.23	309	P	**P**	14 14 22.8	+0.2
ABKAR				IAmb	IAmb	14 14 23.8	
	comp=Z,16nm,1.0s						
ABKAR	**Akbulak array**	57.23	309	P	**P**	14 14 22.5	-0.1
PRGR	**Permogore**	57.49	326	*e*P	**P**	14 14 23.6	-0.6
KIRV	**Kirov**	57.58	322	LR	LR	14 41 01.5	
	comp=Z,41nm,20.3s,baz=53,slow=38						
KIRV	**Kirov**	57.58	322	*ce*P	**P**	14 14 24.1	-0.7
AKTO	**Aktyubinsk**	57.68	311	LR	LR	14 39 15.1	
	comp=Z,40nm,20.9s,baz=49,slow=36						
AKTO	**Aktyubinsk**	57.68	311	P	**P**	14 14 25.2	-0.5
APA	**Apatity**	58.16	336	⇓*i*P	**P**	14 14 29.7	+0.9
APA				pmax	pmax		
	comp=Z,19nm,0.7s						
APA				MLR	MLR		
	comp=Z,400nm,13.0s						
APA	**Apatity**	58.16	336	*i* P	**P**	14 14 29.7	+0.9
BATI	**Baumata**	58.55	208	LR	LR	14 44 53.8	
	comp=Z,92nm,18.1s,baz=116,slow=41						
D03D	**Eldon**	58.59	53	P	**P**	14 14 33.6	+1.5
	baz=303						
MTN	**Manton Dam**	58.89	199	P	**P**	14 14 34.9	+0.5
MTN				IAmb	IAmb	14 14 36.0	
	comp=Z,20nm,0.9s						
DAG	**Danmarks Havn**	58.94	356	*i* P	**P**	14 14 32.0	-2.1
DAG				IAmb	IAmb	14 14 34.6	
	comp=Z,2.5nm,1.2s						
ARA0	**ARCESS Array S**	58.98	340	*e*P	**P**	14 14 34.1	-0.4
ARCES	**ARCESS Array B**	58.98	340	P	**P**	14 14 33.8	-0.7
	comp=Z,1.3nm,0.3s,baz=47,slow=7.4,SNR=23						
ARCES				PcP	**PcP**	14 15 22.8	+0.1
	comp=Z,4.8nm,0.8s,baz=54,slow=4.6,SNR=5.2						
ARCES				LR	LR	14 42 01.2	
	comp=Z,41nm,21.6s,baz=320,slow=38						
	comp=Z,1.3nm,0.3s						
E04D	**Cinebar**	59.42	53	P	**P**	14 14 38.8	+0.9
	baz=304						
KBL	**Kabul**	59.61	290	P	**P**	14 14 39.5	-0.1
KBL				IAmb	IAmb	14 14 41.6	
	comp=Z,24nm,1.1s						
KBL	**Kabul**	59.61	290	P	**P**	14 14 39.5	-0.1
KBL				pmax	pmax		
	comp=Z,24nm,1.1s						
KTK1	**Kautokeino**	59.92	340	*e*P	**P**	14 14 41.2	+0.3
JETT	**Jettan, Norway**	60.19	341	*e*P	**P**	14 14 42.7	-0.1
KLMR	**Klimovskoe**	60.34	328	*e*P	**P**	14 14 43.1	-0.8
KLMR				pmax	pmax		
	comp=Z,13nm,0.8s						
KLMR	**Klimovskoe**	60.34	328	*e*P	**P**	14 14 43.2	-0.7
KLMR				AMP		14 14 44.7	
	comp=Z,13nm,0.8s						
F05D	**White Salmon**	60.44	53	P	**P**	14 14 46.0	+1.1
	baz=304						
H04D	**Lebanon**	60.46	55	P	**P**	14 14 46.2	+1.1
	baz=304						
TRO	**Tromso**	60.46	342	*e*P	**P**	14 14 44.0	-0.7
EDM	**Edmonton**	60.59	43	P	**P**	14 14 46.6	+0.8
EDM	**Edmonton**	60.59	43	P	**P**	14 14 46.6	+0.8
EDM				pmax	pmax		
	comp=Z,40nm,1.1s						
G05D	**Wamic, OR**	60.88	54	P	**P**	14 14 49.8	+1.9
	baz=305						
K02D	**Willamette Mer**	60.94	57	P	**P**	14 14 48.7	+0.2
	baz=305						
I04A	**Tendick Farm,**	61.07	56	P	**P**	14 14 50.3	+1.1
	baz=305						
C09A	**Chrisman Ranch**	61.15	50	P	**P**	14 14 51.0	+1.3
C09A				IAmb	IAmb	14 14 51.1	
	comp=Z,12nm,1.1s						
L02F	**Cave Junction**	61.33	58	P	**P**	14 14 51.8	+0.9
	baz=305						
I05D	**Terrebonne, OR**	61.39	55	P	**P**	14 14 52.1	+0.7
	baz=305						
DBG	**Daneborg**	61.45	356	*i* P	**P**	14 14 49.0	-2.2
DBG				IAmb	IAmb	14 14 50.5	
	comp=Z,3.3nm,0.9s						
NEW	**Newport**	61.51	49	LR	LR	14 42 50.6	
	comp=Z,12nm,18.6s,baz=318,slow=37						
NEW	**Newport**	61.51	49	P	**P**	14 14 52.7	+0.5
	baz=306,SNR=8.4						
J04D	**Umpqua Nationa**	61.56	56	P	**P**	14 14 53.0	+0.2
	baz=305						
BELG	**Belogornoye**	61.95	317	*i* P	**P**	14 14 54.5	-0.4
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
L04D	**Klamath Falls**	62.04	57	P	**P**	14 14 55.8	-0.1
	baz=306						
J05D	**Fort Rock, OR**	62.06	56	P	**P**	14 14 56.2	+0.1
	baz=306,SNR=6.2						
STEI	**Steigen**	62.64	342	*e*P	**P**	14 14 58.6	-0.6
WALA	**Waterton Lakes**	62.76	47	P	**P**	14 15 01.2	+0.6
WALA				IAmb	IAmb	14 15 02.9	
	comp=Z,12nm,0.9s						
LOF	**Lofoten**	62.85	343	*e*P	**P**	14 15 01.2	+0.6
FAUS	**Fauske**	63.07	341	*e*P	**P**	14 15 01.7	-0.5
JTMT	**Jette**	63.35	48	P	**P**	14 15 05.8	+1.2
JTMT				IAmb	IAmb	14 15 07.1	
	comp=Z,15nm,1.1s						
SUMG	**Summit**	63.37	2	P	**P**	14 15 04.9	+0.3
SUMG	**Summit**	63.37	2	P	**P**	14 15 04.9	+0.3
SUMG				pmax	pmax		
	comp=Z,41nm,0.9s						
SUMG	**Summit**	63.37	2	*i* P	**P**	14 15 03.7	-0.9
SUMG				IAmb	IAmb	14 15 05.6	
	comp=Z,21nm,0.9s						
BMO	**Blue Mountains**	63.42	52	P	**P**	14 15 06.3	+1.3
BMO	**Blue Mountains**	63.42	52	P	**P**	14 15 06.3	+1.3
BMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PLID	**Pearl Lake**	64.02	52	P	**P**	14 15 09.9	+0.8
MSO	**Missoula**	64.09	49	P	**P**	14 15 10.3	+0.9
	baz=308,SNR=16						
HRA	**Herat**	64.23	294	P	**P**	14 15 11.5	+0.9
HRA				IAmb	IAmb	14 15 13.6	
	comp=Z,9.8nm,0.8s						
MOR8	**Moi Rana**	64.25	341	*e*P	**P**	14 15 08.5	-1.5
FIA1	**FINESS Array S**	64.70	333	P	**P**	14 15 12.4	-0.5
FIA1				IAmb	IAmb	14 15 13.8	
	comp=Z,22nm,1.1s						
FIA0	**FINESS Array S**	64.70	333	P	**P**	14 15 13.1	+0.2
FIA0	**FINESS Array S**	64.70	333	P	**P**	14 15 13.1	+0.2
FINES	**FINESS Array B**	64.70	333	P	**P**	14 15 12.1	-0.9
	comp=Z,5.1nm,0.3s,baz=50,slow=5.9,SNR=55						
FINES				LR	LR	14 47 55.7	
	comp=Z,42nm,19.2s,baz=40,slow=40						
	comp=Z,5.1nm,0.3s						
FINES	**FINESS Array B**	64.70	333	P	**P**	14 15 12.7	-0.2
FINES	**FINESS Array B**	64.70	333	P	**P**	14 15 12.7	-0.2
GEYT	**Alibeck**	64.75	299	P	**P**	14 15 13.5	-0.2
	comp=Z,11nm,0.8s,baz=270,slow=3.0,SNR=8.6						
GEYT				LR	LR	14 44 01.4	
	comp=Z,63nm,18.8s,baz=70,slow=36						
	comp=Z,11nm,0.8s						
GEYT	**Alibeck**	64.75	299	P	**P**	14 15 14.2	+0.5
GYA0B	**ALIBECK ARRAY**	64.75	299	P	**P**	14 15 14.4	+0.7
GYA0B				IAmb	IAmb	14 15 16.7	
	comp=Z,13nm,1.0s						
WB0	**Warramunga Arr**	64.94	194	P	**P**	14 15 14.9	0.0
WB0				IAmb	IAmb	14 15 16.6	
	comp=Z,14nm,1.0s						
WR0	**Warramunga Arr**	65.10	194	P	**P**	14 15 15.6	-0.4
WRAB	**Tennant Creek**	65.11	194	*ce*P	**P**	14 15 15.5	-0.5
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
WB2	**Warramunga Arr**	65.11	194	P	**P**	14 15 16.1	0.0
WB2				IAmb	IAmb	14 15 17.8	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	65.12	194	P	**P**	14 15 15.7	-0.4
	comp=Z,9.3nm,1.1s,baz=9.6,slow=6.9,SNR=36						
WRA				PKP2bc		14 44 01.8	
	comp=Z,1.3nm,0.9s,baz=190,slow=2.6,SNR=7.5						
	comp=Z,9.3nm,1.1s						
WRA	**Warramunga Arr**	65.12	194	P	**P**	14 15 15.9	-0.2
WRA	**Warramunga Arr**	65.12	194	*i* P	**P**	14 15 15.6	-0.5
WRA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MFID	**Camas Ranch**	65.14	53	P	**P**	14 15 16.8	+0.5
FCC	**Fort Churchill**	65.25	30	P	**P**	14 15 16.9	+0.4
FCC				IAmb	IAmb	14 15 18.1	
	comp=Z,30nm,0.8s						
FCC	**Fort Churchill**	65.25	30	P	**P**	14 15 16.9	+0.4
FCC				pmax	pmax		
	comp=Z,30nm,0.9s						
OBN	**Obninsk**	65.27	324	*e*P	**P**	14 15 15.1	-1.6
OBN				*e*		14 15 46.8	
OBN				*e*		14 17 43.3	
OBN				*e*PPP	PPP	14 19 12.7	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,42nm,15.0s						
OBN	**Obninsk**	65.27	324	*e*P	**P**	14 15 15.1	-1.6
EGMT	**Eagleton**	65.57	46	P	**P**	14 15 19.6	+0.6
EGMT				IAmb	IAmb	14 15 21.1	
	comp=Z,19nm,0.8s						
EGMT	**Eagleton**	65.57	46	P	**P**	14 15 19.6	+0.6
	baz=310,SNR=10						
CMB	**Columbia Colle**	65.72	60	P	**P**	14 15 20.7	+0.7
CMB	**Columbia Colle**	65.72	60	P	**P**	14 15 20.7	+0.7
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
HLID	**Hailey**	65.85	52	P	**P**	14 15 22.3	+1.4
HLID	**Hailey**	65.85	52	P	**P**	14 15 22.1	+1.2
	baz=309,SNR=6.9						
BOZ	**Bozeman (W)**	66.12	49	P	**P**	14 15 23.4	+0.9
	baz=310,SNR=32						
MEF	**Metsahovi**	66.17	333	*e*P	**P**	14 15 22.8	+0.4
RAF	**Rauma**	66.38	335	*e*P	**P**	14 15 24.1	+0.4
VORR	**Voronezh**	66.43	320	*e*P	**P**	14 15 25.2	+1.0
VORR				pmax	pmax		
	comp=Z,60nm,0.5s						
KVN	**Kaiserville**	66.50	58	P	**P**	14 15 26.6	+1.4
KVN				IAmb	IAmb	14 15 27.6	
	comp=Z,17nm,0.8s						
KVN	**Kaiserville**	66.50	58	P	**P**	14 15 26.6	+1.4
KVN				pmax	pmax		
	comp=Z,17nm,0.8s						
VSU	**Vasula**	66.69	331	*e*P	**P**	14 15 26.5	+0.7
NVAR	**Mina Array Bea**	66.76	59	P	**P**	14 15 27.5	+0.6
	comp=Z,6.2nm,0.4s,baz=289,slow=6.7,SNR=41						
	comp=Z,6.2nm,0.4s						
ICESG	**Greenland Ices**	66.82	3	*i* P	**P**	14 15 26.1	-0.8
ICESG				IAmb	IAmb	14 15 28.2	
	comp=Z,49nm,0.8s						
ELK	**Elko**	67.15	55	LR	LR	14 43 01.2	
	comp=Z,11nm,20.3s,baz=304,slow=34						
H17A	**Grant Village**	67.46	50	P	**P**	14 15 34.2	+2.9
	baz=310,SNR=17						
MTSE	**Matsula**	67.51	332	*e*P	**P**	14 15 31.6	+0.7
AAL	**Aland**	67.59	335	*e*P	**P**	14 15 31.4	0.0
RLMT	**Red Lodge**	67.70	48	P	**P**	14 15 34.2	+1.5
	baz=311,SNR=6.6						
MOOW	**Moose Ponds**	67.79	50	P	**P**	14 15 35.1	+1.8
MOOW				IAmb	IAmb	14 15 36.2	
	comp=Z,17nm,1.1s						
SOEG	**Soedalen**	67.85	360	*i* P	**P**	14 15 33.0	+0.1
SOEG				IAmb	IAmb	14 15 33.3	
	comp=Z,10nm,0.7s						

MAK	**Makhachkala**	**67.91**	**309**	*e*P	**P**	**14 15 30.8**	**-3.0**
MAK				e*PP	**pP**	**14 15 52.3**	**-2.4**
MAK				e*SP	**sP**	**14 16 03.9**	**+0.3**
MAK				*e*		14 18 02.1	
MAK				*e*S	**S**	**14 24 22.0**	**-3.9**
MAK				e*SS	**sS**	**14 24 58.9**	**-1.9**
MAK				pmax	pmax		
	comp=Z,159nm,1.9s						
MAK				MLR	MLR		
	comp=Z,99nm,17.0s						
PKM	**Mcpherson Peak**	**68.04**	**62**	P	**P**	**14 15 36.8**	**+1.8**
	baz=309						
DGMT	**Dagmar**	**68.08**	**43**	P	**P**	**14 15 35.6**	**+0.8**
	baz=313						
SFJD	**Kangerlussuaq**	**68.15**	**8**	P	**P**	**14 15 34.1**	**-0.7**
	comp=Z,17nm,1.0s,baz=354,slow=8.0,SNR=6.6						
SFJD				LR	LR	14 45 51.8	
	comp=Z,29nm,18.9s,baz=314,slow=36						
	comp=Z,17nm,1.0s						
CWC	**Cottonwood Cre**	**68.15**	**60**	P	**P**	**14 15 36.2**	**+0.6**
	baz=310						
LAO	**LASA Array**	**68.26**	**46**	P	**P**	**14 15 37.3**	**+1.3**
	baz=312						
ISA	**Isabella, Lake**	**68.40**	**61**	P	**P**	**14 15 37.5**	**+0.5**
	baz=310						
R11A	**Troy Canyon, C**	**68.47**	**57**	P	**P**	**14 15 38.4**	**+0.8**
	baz=310,SNR=14						
AFI	**Afiamalu**	**68.49**	**138**	LR	LR	14 45 15.6	
	comp=Z,9.8nm,18.8s,baz=64,slow=35						
FRB	**Frobisher Bay**	**68.50**	**17**	P	**P**	**14 15 36.2**	**-0.8**
	comp=Z,13nm,0.4s,baz=331,slow=7.3,SNR=26						
FRB				LR	LR	14 47 52.2	
	comp=Z,16nm,19.9s,baz=310,slow=38						
	comp=Z,13nm,0.4s						
ARVC	**Arvin**	**68.52**	**62**	P	**P**	**14 15 38.2**	**+0.5**
	baz=310						
UPP	**Uppsala**	**68.56**	**336**	*e*P	**P**	**14 15 37.6**	**+0.1**
PALK	**Pallekele**	**68.77**	**259**	LR	LR	14 47 12.4	
	comp=Z,35nm,18.1s,baz=196,slow=37						
AS31	**Alice Springs**	**68.83**	**194**	P	**P**	**14 15 40.1**	**+0.5**
ASAR	**Alice Springs**	**68.83**	**194**	P	**P**	**14 15 40.3**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=12,slow=6.2,SNR=44						
ASAR				PKP2bc		14 43 53.5	
	comp=Z,1.4nm,0.9s,baz=183,slow=1.6,SNR=8.6						
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**68.83**	**194**	P	**P**	**14 15 40.2**	**+0.6**
SLIT	**Slitere, Latvi**	**68.86**	**332**	*e*P	**P**	**14 15 39.6**	**+0.2**
FURC	**Furnace Creek,**	**68.89**	**59**	P	**P**	**14 15 40.8**	**+0.9**
	baz=310						
DUG	**Dugway, Tooele**	**68.92**	**54**	P	**P**	**14 15 41.2**	**+0.9**
	baz=311,SNR=9.5						
GOF	**Gofitskoye**	**68.96**	**313**	⇑*e*P	**P**	**14 15 41.3**	**+1.0**
TPNV	**Topopah Spring**	**68.96**	**59**	P	**P**	**14 15 41.7**	**+1.1**
	baz=310						
DOMB	**Dombas**	**69.01**	**341**	*e*P	**P**	**14 15 40.5**	**+0.1**
DY2G	**Dye2**	**69.04**	**6**	*i* P	**P**	**14 15 39.5**	**-1.2**
DY2G				IAmb	IAmb	14 15 40.8	
	comp=Z,15nm,0.8s						
IDID	**Didziasalis**	**69.06**	**328**	*e*P	**P**	**14 15 41.5**	**+0.9**
BW06	**Boulder Array**	**69.09**	**50**	P	**P**	**14 15 41.8**	**+0.3**
BW06	**Boulder Array**	**69.09**	**50**	P	**P**	**14 15 42.2**	**+0.8**
	baz=311,SNR=13						
PD31	**Pinedale Array**	**69.09**	**50**	P	**P**	**14 15 42.1**	**+0.7**
PDAR	**Pinedale Array**	**69.09**	**50**	P	**P**	**14 15 41.8**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=270,slow=3.0,SNR=27						
	comp=Z,4.3nm,0.7s						
ISAL	**Salakas**	**69.09**	**329**	*e*P	**P**	**14 15 42.0**	**+1.1**
EDW2	**Edwards Air Fo**	**69.20**	**61**	P	**P**	**14 15 43.3**	**+1.3**
	baz=310						
IIGN	**Ignalina**	**69.22**	**329**	*e*P	**P**	**14 15 42.7**	**+1.0**
MNK	**Minsk**	**69.23**	**327**	*i* P	**P**	**14 15 43.0**	**+1.2**
MNK				i *PP	**pP**	**14 16 03.8**	**+1.1**
MNK				*i*		14 18 16.6	
MNK				*i* S	**S**	**14 24 46.6**	**+5.4**
MNK				*i* SS	**SS**	**14 29 12.0**	**+4.0**
MNK				MLR	MLR		
	comp=N,368nm,27.0s						
MNK				MLR	MLR		
	comp=E,195nm,19.0s						
MNK	**Minsk**	**69.23**	**327**	*i* P	**P**	**14 15 43.0**	**+1.2**
MNK				*i* P	**P**	**14 15 43.0**	**+1.2**
MNK				*i* P	**P**	**14 15 43.0**	**+1.2**
	baz=222						
MNK				*i* pP	**pP**	**14 16 03.8**	**+1.1**
MNK				*i* PP	**PP**	**14 18 16.6**	**+1.6**
MNK				*i* PPP	PPP	14 19 42.5	
MNK				*i* S	**S**	**14 24 46.6**	**+5.4**
MNK				*i* SS	**SS**	**14 29 12.1**	**+4.0**
MNK				*i* SSS	SSS	14 32 24.7	
MNK				*i* LQ	LQ	14 41 23.8	
MNK				*i* LR	LR	14 45 28.6	
MNK				*i* LRM	MLR	14 48 48.3	
	comp=E,195nm,19.2s						
MNK				*i* LRM	MLR	14 48 48.3	
	comp=N,368nm,26.8s						
MNK				*i* LRM	MLR	14 48 48.3	
	comp=Z,230nm,30.7s						
NB201	**NORSAR Array S**	**69.32**	**339**	P	**P**	**14 15 42.3**	**+0.1**
NB201				IAmb	IAmb	14 15 42.5	
	comp=Z,31nm,0.9s						
NB2	**NORSAR Subarra**	**69.34**	**339**	P	**P**	**14 15 41.8**	**-0.6**
	comp=Z,14nm,0.9s,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**69.34**	**339**	P	**P**	**14 15 41.8**	**-0.6**
	baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.34**	**339**	P	**P**	**14 15 42.1**	**-0.3**
	comp=Z,5.7nm,0.6s,baz=31,slow=6.2,SNR=46						
NOA				LR	LR	14 50 24.1	
	comp=Z,26nm,19.0s,baz=40,slow=40						
	comp=Z,5.7nm,0.6s						
NACGM	**Naroch**	**69.35**	**328**	⇑*e*P	**P**	**14 15 42.9**	**+0.4**
	baz=42						
HFS	**Hagfors**	**69.45**	**338**	LR	LR	14 49 23.7	
	comp=Z,30nm,19.4s,baz=37,slow=39						
NC602	**NORSAR Array S**	**69.52**	**339**	*e*P	**P**	**14 15 43.5**	**+0.1**
VSVD	**Vaisvydziai**	**69.58**	**330**	*e*P	**P**	**14 15 44.3**	**+0.5**
GSC	**Goldstone, Bar**	**69.67**	**60**	P	**P**	**14 15 45.6**	**+0.6**
	baz=310						
FMP	**Fort Macarthur**	**69.76**	**62**	P	**P**	**14 15 46.4**	**+1.0**
	baz=310						
BFSC	**Mount Baldy Ra**	**69.83**	**62**	P	**P**	**14 15 46.3**	**+0.3**
	baz=310						
KVAR	**Kislovodsk Arr**	**69.88**	**312**	LR	LR	14 51 42.3	
	comp=Z,57nm,19.0s,baz=274,slow=40						
KIV	**Kislovodsk**	**69.89**	**312**	⇑P	**P**	**14 15 47.2**	**+1.1**
KIV	**Kislovodsk**	**69.89**	**312**	P	**P**	**14 15 46.9**	**+0.7**
KIV	**Kislovodsk**	**69.89**	**312**	*e*P	**P**	**14 15 46.5**	**+0.4**
KIV				*e*S	**S**	**14 24 50.2**	**+0.7**
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KIV				MLR	MLR		
	comp=Z,43nm,17.0s						
KIV	**Kislovodsk**	**69.89**	**312**	*e*P	**P**	**14 15 46.5**	**+0.4**
SHPR	**Sheep Range**	**69.91**	**58**	P	**P**	**14 15 47.5**	**+1.0**
SHPR				IAmb	IAmb	14 15 49.1	
	comp=Z,14nm,1.1s						
KBZ	**Khabaz**	**69.93**	**312**	P	**P**	**14 15 46.5**	**+0.2**
	comp=Z,14nm,0.7s,baz=67,slow=3.9,SNR=34						
KBZ				LR	LR	14 51 20.9	
	comp=Z,57nm,19.1s,baz=48,slow=40						
	comp=Z,14nm,0.7s						
KBZ	**Khabaz**	**69.93**	**312**	*ce*P	**P**	**14 15 46.6**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,20nm,0.8s						
KBZ	**Khabaz**	**69.93**	**312**	*e*P	**P**	**14 15 46.6**	**+0.4**
PABE	**Paberze**	**69.93**	**330**	P	**P**	**14 15 45.8**	**-0.2**
PABE	**Paberze**	**69.93**	**330**	*e*P	**P**	**14 15 46.7**	**+0.7**
VIKU	**Vikbolandet**	**69.94**	**335**	*e*P	**P**	**14 15 46.2**	**+0.2**
ZEI	**Tsey**	**70.02**	**311**	*e*P	**P**	**14 15 46.1**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SHA1	**Shidzhatmaz**	**70.05**	**312**	*i* P	**P**	**14 15 48.3**	**+1.0**
TUQ	**Turquoise Moun**	**70.14**	**60**	P	**P**	**14 15 48.7**	**+0.9**
	baz=311						
HEC	**Hector,Ludlow**	**70.28**	**60**	P	**P**	**14 15 49.6**	**+0.9**
	baz=311,SNR=6.8						
CCUT	**Cedar City**	**70.32**	**57**	P	**P**	**14 15 50.0**	**+0.9**
ANGG	**Ammassalik, Gr**	**70.36**	**2**	*i* P	**P**	**14 15 47.2**	**-1.2**
ANGG				IAmb	IAmb	14 15 48.0	
	comp=Z,9.7nm,0.8s						
SKAR	**Skarslia**	**70.38**	**340**	*e*P	**P**	**14 15 49.2**	**+0.4**
ISOG	**Isortoq, Green**	**70.38**	**3**	*i* P	**P**	**14 15 46.4**	**-2.2**
ISOG				IAmb	IAmb	14 15 48.2	
	comp=Z,12nm,0.8s						
MURC	**Murrieta**	**70.53**	**62**	P	**P**	**14 15 50.2**	**0.0**
	baz=311						
ULM	**Lac du Bonnet**	**70.70**	**38**	P	**P**	**14 15 51.0**	**+0.2**
	comp=Z,5.3nm,0.3s,baz=317,slow=5.9,SNR=8.6						
	comp=Z,5.3nm,0.3s						
ULM	**Lac du Bonnet**	**70.70**	**38**	P	**P**	**14 15 51.0**	**+0.2**
ULM				IAmb	IAmb	14 15 51.6	
	comp=Z,13nm,1.0s						
ULM	**Lac du Bonnet**	**70.70**	**38**	P	**P**	**14 15 51.0**	**+0.2**
ULM				pmax	pmax		
	comp=Z,13nm,1.0s						
GMRC	**Granite Mounta**	**70.72**	**60**	P	**P**	**14 15 51.8**	**+0.3**
	baz=311,SNR=8.1						
K22A	**Casper**	**70.82**	**49**	P	**P**	**14 15 52.7**	**+0.7**
	baz=313						
SUE	**Sulen**	**70.87**	**342**	*e*P	**P**	**14 15 52.7**	**+1.1**
KONO	**Kongsberg**	**70.95**	**339**	*e*P	**P**	**14 15 52.7**	**+0.5**
PFO	**Pinyon Flats O**	**70.99**	**61**	LR	LR	14 39 48.8	
	comp=Z,39nm,22.0s,baz=225,slow=30						
PFO	**Pinyon Flats O**	**70.99**	**61**	P	**P**	**14 15 53.7**	**+0.7**
	baz=311						
TPFO	**Pinon Flats**	**71.00**	**61**	P	**P**	**14 15 53.8**	**+0.7**
	baz=311						
BORG	**Borgarnes**	**71.00**	**355**	P	**P**	**14 15 54.1**	**+1.7**
	comp=Z,18nm,0.8s,baz=13,slow=2.2,SNR=9.1						
	comp=Z,18nm,0.8s						
BELC	**Belle Mtn. Jos**	**71.03**	**61**	P	**P**	**14 15 52.9**	**-0.4**
	baz=311						
RSSD	**Black Hills**	**71.14**	**46**	P	**P**	**14 15 54.4**	**+0.5**
RSSD	**Black Hills**	**71.14**	**46**	P	**P**	**14 15 54.4**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,11nm,0.9s						
RSSD	**Black Hills**	**71.14**	**46**	P	**P**	**14 15 54.4**	**+0.5**
	baz=314						
GNI	**Garni**	**71.33**	**308**	LR	LR	14 50 43.6	
	comp=Z,35nm,18.6s,baz=66,slow=39						
BER	**Bergen**	**71.34**	**341**	*e*P	**P**	**14 15 55.5**	**+1.0**
SUW	**Suwalki**	**71.38**	**329**	*e*P	**P**	**14 15 54.1**	**-0.8**
SUW	**Suwalki**	**71.38**	**329**	*e*P	**P**	**14 15 54.7**	**-0.1**
NEE2	**Needles Airpor**	**71.38**	**59**	P	**P**	**14 15 55.9**	**+0.6**
	baz=311						
IRM	**Iron Mountain**	**71.46**	**60**	P	**P**	**14 15 56.5**	**+0.8**
	baz=311,SNR=7.2						
ODD1	**Odda**	**71.46**	**341**	*e*P	**P**	**14 15 55.7**	**+0.4**
MONP2	**Monument Peak**	**71.48**	**62**	P	**P**	**14 15 55.8**	**-0.3**
	baz=311						
AKASG	**Malin Array Be**	**71.53**	**324**	P	**P**	**14 15 55.5**	**-0.3**
	comp=Z,9.3nm,0.4s,baz=39,slow=6.7,SNR=79						
AKASG				LR	LR	14 48 46.9	
	comp=Z,12nm,20.1s,baz=64,slow=37						
	comp=Z,9.3nm,0.4s						
AKASG	**Malin Array Be**	**71.53**	**324**	P	**P**	**14 15 56.0**	**+0.2**
AKASG				IAmb	IAmb	14 15 56.9	
	comp=Z,16nm,1.1s						
AKBB	**Malin Array Si**	**71.53**	**324**	P	**P**	**14 15 55.4**	**-0.5**
AKBB	**Malin Array Si**	**71.53**	**324**	P	**P**	**14 15 55.4**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,37nm,0.9s						
O20A	**White River Ci**	**71.58**	**52**	P	**P**	**14 15 57.2**	**+0.6**
O20A				IAmb	IAmb	14 15 58.4	
	comp=Z,17nm,1.2s						
O20A	**White River Ci**	**71.58**	**52**	P	**P**	**14 15 56.3**	**-0.3**
	baz=313,SNR=7.7						
BC3	**Big Chuckawall**	**71.59**	**61**	P	**P**	**14 15 56.8**	**+0.1**
	baz=311						
IKP	**In-Ko-Pah, Jac**	**71.84**	**62**	P	**P**	**14 15 58.5**	**+0.4**
	baz=311						
PDMCI	**Parker Dam,Lak**	**71.98**	**60**	P	**P**	**14 15 59.3**	**+0.4**
	baz=312						
ANN	**Anapa**	**72.03**	**316**	*e*P	**P**	**14 15 59.3**	**+0.4**
ANN				pmax	pmax		
	comp=Z,14nm,0.5s						
ANN	**Anapa**	**72.03**	**316**	*e*P	**P**	**14 15 59.3**	**+0.4**
AGMN	**Agassiz Nation**	**72.14**	**39**	P	**P**	**14 15 59.6**	**+0.1**
	baz=317,SNR=6.5						
N23A	**Red Feather La**	**72.34**	**50**	P	**P**	**14 16 02.4**	**+1.2**
	baz=314						
GLA	**Glamis**	**72.39**	**61**	P	**P**	**14 16 02.4**	**+1.0**
	baz=312						
DEL	**Delary**	**72.49**	**335**	*e*P	**P**	**14 16 01.6**	**+0.1**
WUAZ	**Wupatki**	**72.87**	**57**	P	**P**	**14 16 05.5**	**+1.2**
	baz=312						
ISCO	**Idaho Springs**	**73.28**	**51**	P	**P**	**14 16 08.0**	**+1.1**
	baz=314,SNR=9.9						
BSD	**Bornholm Skovb**	**73.31**	**334**	*e*P	**P**	**14 16 06.9**	**+0.6**
BSD	**Bornholm Skovb**	**73.31**	**334**	*i* P	**P**	**14 16 04.4**	**-1.9**
BSD				IAmb	IAmb	14 16 06.3	
	comp=Z,14nm,0.7s						
MVCO	**Mesa Verde**	**73.42**	**54**	P	**P**	**14 16 08.7**	**+1.0**
MVCO	**Mesa Verde**	**73.42**	**54**	P	**P**	**14 16 08.6**	**+1.0**
	baz=313,SNR=6.1						
SIM	**Simferopol'**	**73.56**	**317**	*e*P	**P**	**14 16 08.8**	**+0.8**
WSAR	**Wadi Sarin**	**73.75**	**287**	LR	LR	14 53 03.9	
	comp=Z,31nm,19.1s,baz=132,slow=39						
S22A	**4UR Ranch, Cre**	**74.02**	**53**	P	**P**	**14 16 12.3**	**+1.1**
	baz=314						
Q24A	**Divide**	**74.12**	**51**	P	**P**	**14 16 12.6**	**+0.8**
	baz=314						
W18A	**Petrified Fore**	**74.12**	**56**	P	**P**	**14 16 13.1**	**+1.4**
	baz=313						
EYMN	**Ely**	**74.33**	**37**	P	**P**	**14 16 12.7**	**+0.2**
	baz=320,SNR=15						
214A	**Organ Pipe Nat**	**74.38**	**61**	P	**P**	**14 16 13.2**	**+0.1**
	baz=313						
OGNE	**Ogallala**	**74.42**	**48**	P	**P**	**14 16 13.8**	**+0.6**
OGNE	**Ogallala**	**74.42**	**48**	P	**P**	**14 16 13.6**	**+0.4**
	baz=316,SNR=5.4						
MILM	**Milestii Mici**	**74.57**	**322**	⇓*i*P	**P**	**14 16 13.7**	**-0.1**
	comp=Z,25nm,0.5s						
MILM	**Milestii Mici**	**74.57**	**322**	*d i*P	**P**	**14 16 13.5**	**-0.3**
MILM				pmax	pmax		
	comp=Z,25nm,0.5s						
SDCO	**Great Sand Dun**	**74.77**	**52**	P	**P**	**14 16 16.7**	**+1.2**
	baz=315,SNR=12						
KWP	**Kalwaria Pacla**	**75.02**	**327**	*e*P	**P**	**14 16 17.3**	**+0.9**
ECSD	**EROS Data Cent**	**75.15**	**43**	P	**P**	**14 16 17.7**	**+0.4**
ECSD				IAmb	IAmb	14 16 18.7	
	comp=Z,26nm,1.1s						
ECSD	**EROS Data Cent**	**75.15**	**43**	P	**P**	**14 16 17.6**	**+0.3**
	baz=318,SNR=13						
DIKM	**Dikmen**	**75.39**	**314**	⇓P	**P**	**14 16 19.4**	**+0.7**
TUC	**Tucson**	**75.40**	**59**	P	**P**	**14 16 19.7**	**+0.6**
	baz=313						
KSCO	**Kaye Shedlock'**	**75.48**	**49**	P	**P**	**14 16 20.1**	**+0.7**
	baz=316						
BUR08	**Bucovina Ar. S**	**75.58**	**324**	P	**P**	**14 16 20.0**	**+0.3**
BUR08				IAmb	IAmb	14 16 21.1	
	comp=Z,13nm,0.7s						
BURAR	**Bucovina Array**	**75.59**	**324**	⇑P	**P**	**14 16 20.2**	**+0.3**
BURAR	**Bucovina Array**	**75.59**	**324**	P	**P**	**14 16 20.2**	**+0.3**
BURAR				IAmb	IAmb	14 16 21.5	
	comp=Z,19nm,0.8s						
OJC	**Ojcow**	**75.67**	**329**	*e*P	**P**	**14 16 20.5**	**+0.4**
OJC	**Ojcow**	**75.67**	**329**	P	**P**	**14 16 20.5**	**+0.4**
OJC				IAmb	IAmb	14 16 21.6	
	comp=Z,35nm,1.1s						
OJC	**Ojcow**	**75.67**	**329**	P	**P**	**14 16 20.5**	**+0.4**
OJC				pmax	pmax		
	comp=Z,35nm,1.1s						
BIZ	**Bicaz**	**75.74**	**323**	⇓P	**P**	**14 16 21.5**	**+0.9**
KOLS	**Kolonicke sedl**	**75.75**	**326**	*e*P	**P**	**14 16 21.3**	**+0.6**
KOLS				pmax	pmax		
	comp=Z,13nm,0.9s						
KOLS	**Kolonicke sedl**	**75.75**	**326**	*e*P	**P**	**14 16 21.2**	**+0.6**
T25A	**Trinidad**	**75.82**	**52**	P	**P**	**14 16 22.3**	**+0.8**
T25A				IAmb	IAmb	14 16 23.4	
	comp=Z,16nm,1.1s						
T25A	**Trinidad**	**75.82**	**52**	P	**P**	**14 16 21.4**	**-0.1**
	baz=315						
SPMN	**Marine on St.**	**75.83**	**40**	P	**P**	**14 16 21.7**	**+0.6**
SPMN				IAmb	IAmb	14 16 22.3	
	comp=Z,27nm,1.2s						
SPMN	**Marine on St.**	**75.83**	**40**	P	**P**	**14 16 20.8**	**-0.4**
	baz=320						
TESR	**Tescani**	**75.83**	**323**	⇓P	**P**	**14 16 21.5**	**+0.4**
STKA	**Stephens Creek**	**76.01**	**186**	P	**P**	**14 16 22.9**	**+0.9**
	comp=Z,2.9nm,0.5s,baz=11,slow=5.6,SNR=8.7						
	comp=Z,2.9nm,0.5s						
CRVS	**Cervenica-Dubn**	**76.10**	**327**	*e*P	**P**	**14 16 23.3**	**+0.7**
CRVS				pmax	pmax		
	comp=Z,17nm,0.9s						
CRVS	**Cervenica-Dubn**	**76.10**	**327**	*e*P	**P**	**14 16 23.3**	**+0.7**
BGNE	**Belgrade**	**76.10**	**45**	P	**P**	**14 16 22.4**	**-0.4**
	baz=318						
ANMO	**Albuquerque**	**76.18**	**55**	P	**P**	**14 16 24.3**	**+0.8**
ANMO	**Albuquerque**	**76.18**	**55**	*ce*P	**P**	**14 16 24.0**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,11nm,1.7s						
ANMO	**Albuquerque**	**76.18**	**55**	P	**P**	**14 16 24.6**	**+1.1**
	baz=315						
CFR	**Carcaliu**	**76.20**	**321**	⇑P	**P**	**14 16 24.0**	**+0.8**
KSP	**Ksiaz**	**76.42**	**331**	*e*P	**P**	**14 16 24.7**	**+0.3**
I37A	**Lemond, Waseca**	**76.48**	**41**	P	**P**	**14 16 25.8**	**+0.9**
LANS	**Liptovska Anna**	**76.67**	**328**	*e*P	**P**	**14 16 27.3**	**+1.5**
LANS				pmax	pmax		
	comp=Z,12nm,1.0s						
LANS	**Liptovska Anna**	**76.67**	**328**	*e*P	**P**	**14 16 27.3**	**+1.5**
OSTC	**Ostas**	**76.69**	**331**	*e*P	**P**	**14 16 26.5**	**+0.6**
UPC	**Upice**	**76.80**	**331**	*e*P	**P**	**14 16 27.8**	**+1.3**
UPC	**Upice**	**76.80**	**331**	*e*P	**P**	**14 16 27.8**	**+1.3**
DPC	**Dobruska-Polom**	**76.83**	**331**	*e*P	**P**	**14 16 27.5**	**+0.8**
DPC	**Dobruska-Polom**	**76.83**	**331**	*e*P	**P**	**14 16 27.5**	**+0.8**
MORC	**Moravsky Berou**	**76.86**	**330**	⇓P	**P**	**14 16 27.4**	**+0.5**
MORC	**Moravsky Berou**	**76.86**	**330**	P	**P**	**14 16 27.6**	**+0.7**
MORC				IAmb	IAmb	14 16 28.7	
	comp=Z,22nm,1.0s						
MORC	**Moravsky Berou**	**76.86**	**330**	P	**P**	**14 16 27.6**	**+0.7**
MORC				pmax	pmax		
	comp=Z,22nm,1.0s						
MORC	**Moravsky Berou**	**76.86**	**330**	*e*P	**P**	**14 16 27.5**	**+0.5**
KRLC	**Kraliky**	**76.89**	**330**	*e*P	**P**	**14 16 28.0**	**+0.9**
KRLC	**Kraliky**	**76.89**	**330**	*e*P	**P**	**14 16 28.0**	**+0.9**
SCHQ	**Schefferville**	**76.92**	**20**	P	**P**	**14 16 26.9**	**-0.2**
	comp=Z,8.4nm,0.4s,baz=267,slow=9.5,SNR=16						
SCHQ				LR	LR	14 54 46.3	
	comp=Z,17nm,18.6s,baz=100,slow=39						
	comp=Z,8.4nm,0.4s						
SCHQ	**Schefferville**	**76.92**	**20**	P	**P**	**14 16 26.9**	**-0.2**
SCHQ				IAmb	IAmb	14 16 28.6	
	comp=Z,35nm,1.2s						
MLR	**Muntele Rosu**	**76.94**	**322**	⇑P	**P**	**14 16 28.4**	**+0.8**
MLR	**Muntele Rosu**	**76.94**	**322**	LR	LR	14 55 12.3	
	comp=Z,7.0nm,19.6s,baz=64,slow=39						
319A	**Douglas**	**76.97**	**59**	P	**P**	**14 16 28.3**	**+0.3**
319A				IAmb	IAmb	14 16 30.2	
	comp=Z,21nm,0.9s						
121A	**Cookes Peak, D**	**77.08**	**57**	P	**P**	**14 16 29.8**	**+1.2**
	baz=315						
MAUC	**Maruska**	**77.10**	**329**	*e*P	**P**	**14 16 28.7**	**+0.4**
CLL	**Collm**	**77.14**	**333**	⇓*i*P	**P**	**14 16 28.4**	**0.0**
CLL				pmax	pmax		
	comp=Z,38nm,1.0s						
CLL	**Collm**	**77.14**	**333**	⇓*i*P	**P**	**14 16 28.4**	**0.0**
	comp=Z,38nm,1.0s						
CBKS	**Cedar Bluff**	**77.18**	**48**	P	**P**	**14 16 28.8**	**-0.1**
	baz=317						
BRG	**Berggiesshubel**	**77.20**	**332**	*e*P	**P**	**14 16 29.3**	**+0.5**
BRG				Amp		14 16 30.1	
	comp=Z,11nm,1.0s						
BRG	**Berggiesshubel**	**77.20**	**332**	*e*P	**P**	**14 16 29.3**	**+0.5**
BRG				pmax	pmax		
	comp=Z,11nm,1.0s						
PVCC	**Panska Ves**	**77.28**	**332**	*e*P	**P**	**14 16 30.0**	**+0.8**
PVCC	**Panska Ves**	**77.28**	**332**	*e*P	**P**	**14 16 30.0**	**+0.8**
DRGR		**77.29**	**325**	⇓P	**P**	**14 16 29.6**	**+0.2**
VYHS	**Vyhne**	**77.44**	**328**	*e*P	**P**	**14 16 30.8**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VYHS	**Vyhne**	**77.44**	**328**	*e*P	**P**	**14 16 30.8**	**+0.6**
E43A	**Lone Tree Farm**	**77.47**	**36**	P	**P**	**14 16 30.4**	**0.0**
E43A				IAmb	IAmb	14 16 31.4	
	comp=Z,12nm,0.8s						
PSZ	**Piszkesteto**	**77.51**	**327**	P	**P**	**14 16 31.1**	**+0.5**
PSZ				IAmb	IAmb	14 16 32.5	
	comp=Z,12nm,0.8s						
PSZ	**Piszkesteto**	**77.51**	**327**	P	**P**	**14 16 31.1**	**+0.5**
PSZ	**Piszkesteto**	**77.51**	**327**	P	**P**	**14 16 31.3**	**+0.7**
JAVC	**Velka Javorina**	**77.58**	**329**	*e*P	**P**	**14 16 32.3**	**+1.3**
VRAC	**Vranov**	**77.60**	**330**	LR	LR	14 55 40.9	
	comp=Z,41nm,18.4s,baz=34,slow=39						
VRAC	**Vranov**	**77.60**	**330**	*e*P	**P**	**14 16 31.9**	**+0.9**
BR131	**Keskin Array S**	**77.64**	**314**	P	**P**	**14 16 32.0**	**+0.4**
BR131	**Keskin Array S**	**77.64**	**314**	P	**P**	**14 16 32.0**	**+0.4**
BR131				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR	**Keskin Array B**	**77.64**	**314**	P	**P**	**14 16 31.4**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=73,slow=4.3,SNR=12						
BRTR				LR	LR	14 54 53.5	
	comp=Z,23nm,20.3s,baz=84,slow=39						
	comp=Z,3.4nm,0.8s						
BRTR	**Keskin Array B**	**77.64**	**314**	P	**P**	**14 16 31.3**	**-0.3**
BRTR	**Keskin Array B**	**77.64**	**314**	P	**P**	**14 16 31.3**	**-0.3**
PRU	**Pruhonice**	**77.75**	**331**	*e*P	**P**	**14 16 32.2**	**+0.4**
PRU	**Pruhonice**	**77.75**	**331**	*e*P	**P**	**14 16 32.2**	**+0.4**
KRUC	**Moravsky**	**77.88**	**330**	*e*P	**P**	**14 16 33.1**	**+0.5**
SMOL	**Smolenice**	**77.95**	**329**	*e*P	**P**	**14 16 34.4**	**+1.4**
SMOL				pmax	pmax		
	comp=Z,12nm,1.3s						
SMOL	**Smolenice**	**77.95**	**329**	*e*P	**P**	**14 16 34.4**	**+1.4**
TREC	**Trest**	**78.01**	**330**	*e*P	**P**	**14 16 34.2**	**+0.9**
TREC	**Trest**	**78.01**	**330**	*e*P	**P**	**14 16 34.2**	**+0.9**
MODS	**Modra-Piesok**	**78.13**	**329**	*e*P	**P**	**14 16 35.0**	**+1.0**
MODS				pmax	pmax		
	comp=Z,31nm,1.0s						
MODS	**Modra-Piesok**	**78.13**	**329**	*e*P	**P**	**14 16 35.0**	**+1.0**
SCIA	**State Center**	**78.17**	**42**	P	**P**	**14 16 34.4**	**+0.1**
	baz=320						
NKC	**Novy Kostel**	**78.25**	**333**	*e*P	**P**	**14 16 34.7**	**+0.1**
NKC	**Novy Kostel**	**78.25**	**333**	*e*P	**P**	**14 16 34.7**	**+0.1**
ZST	**Bratislava**	**78.34**	**329**	*e*P	**P**	**14 16 36.3**	**+1.2**
ZST	**Bratislava**	**78.34**	**329**	*e*P	**P**	**14 16 36.3**	**+1.2**
GZR	**Gura Zlata**	**78.38**	**324**	⇓P	**P**	**14 16 35.7**	**+0.2**
KSU1	**Kansas State U**	**78.61**	**46**	P	**P**	**14 16 36.4**	**-0.4**
	baz=319						
BZS	**Buzias**	**78.69**	**325**	⇑P	**P**	**14 16 37.0**	**-0.1**
JFWS	**Jewell Farm**	**78.78**	**40**	P	**P**	**14 16 36.9**	**-0.8**
	baz=322						
KHC	**Kasperske Hory**	**78.81**	**331**	*i* P	**P**	**14 16 37.6**	**-0.2**
KHC				pmax	pmax		
	comp=Z,45nm,0.8s						
KHC	**Kasperske Hory**	**78.81**	**331**	*e*P	**P**	**14 16 37.9**	**+0.1**
CKRC	**Cesky Krumlov**	**78.82**	**331**	*e*P	**P**	**14 16 38.0**	**+0.2**
AMTX	**Amarillo**	**78.97**	**52**	P	**P**	**14 16 40.0**	**+1.0**
AMTX				IAmb	IAmb	14 16 41.0	
	comp=Z,18nm,0.8s						
AMTX	**Amarillo**	**78.97**	**52**	P	**P**	**14 16 39.6**	**+0.6**
	baz=317						
GEC2	**GERESS Array S**	**79.01**	**331**	P	**P**	**14 16 38.9**	**0.0**
GERES	**GERESS Array B**	**79.01**	**331**	P	**P**	**14 16 38.8**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=33,slow=5.1,SNR=25						
	comp=Z,3.1nm,0.6s						
GERES	**GERESS Array B**	**79.01**	**331**	P	**P**	**14 16 38.9**	**0.0**
MSTX	**Muleshoe**	**79.01**	**53**	P	**P**	**14 16 39.5**	**+0.3**
	baz=316						
CONA	**Conrad Observa**	**79.02**	**329**	*e*P	**P**	**14 16 40.2**	**+1.3**
	comp=Z,11nm,0.8s,SNR=6.2						
MPLH	**Magyarpolny**	**79.03**	**328**	P	**P**	**14 16 39.3**	**+0.4**
RONA	**Rosalia, Austr**	**79.05**	**329**	*e*P	**P**	**14 16 40.5**	**+1.4**
	SNR=5.5						
MNTX	**Cornudas Mount**	**79.11**	**56**	P	**P**	**14 16 40.1**	**+0.5**
MNTX	**Cornudas Mount**	**79.11**	**56**	P	**P**	**14 16 40.6**	**+1.0**
	baz=316,SNR=14						
MDVR	**Moldovita**	**79.32**	**324**	⇑P	**P**	**14 16 40.8**	**+0.2**
MORH	**Mrgy, Hungar**	**79.39**	**327**	P	**P**	**14 16 39.9**	**-1.1**
MOA	**Molln**	**79.66**	**330**	*i* P	**P**	**14 16 43.1**	**+0.7**
	comp=Z,5.1nm,0.7s						
VLDQ	**Val d'Or**	**79.70**	**29**	P	**P**	**14 16 41.5**	**-1.0**
VLDQ				IAmb	IAmb	14 16 42.7	
	comp=Z,33nm,1.1s						
KOVH	**Kovagotottos**	**79.71**	**327**	P	**P**	**14 16 42.5**	**-0.1**
ARSA	**Arzberg**	**79.72**	**329**	*i* P	**P**	**14 16 43.7**	**+1.0**
	comp=Z,4.0nm,0.7s						
BLKB	**Belogradchik**	**79.84**	**323**	⇓P	**P**	**14 16 43.0**	**-0.5**
BTNL	**Ternell**	**79.89**	**336**	*d*P	**P**	**14 16 43.5**	**0.0**
BIOA	**Bad Ischl, Aus**	**80.02**	**331**	*i* P	**P**	**14 16 45.2**	**+0.9**
BCLA	**Clavier**	**80.27**	**337**	*d*P	**P**	**14 16 45.8**	**+0.2**
BGES	**Gesves**	**80.36**	**337**	*d*P	**P**	**14 16 46.5**	**+0.5**
	comp=Z,9.3nm,0.9s						
SOKA	**Soboth**	**80.38**	**329**	*e*P	**P**	**14 16 46.8**	**+0.4**
	comp=Z,19nm,1.0s,SNR=6.4						
PERS	**Pernice**	**80.38**	**329**	*i* P	**P**	**14 16 46.5**	**+0.2**
GROS	**Grobnik**	**80.39**	**329**	*e*P	**P**	**14 16 46.3**	**-0.1**
BMRD	**Maredsous**	**80.53**	**337**	*d*P	**P**	**14 16 47.2**	**+0.2**
RCHB	**Rochefort**	**80.53**	**337**	*d*P	**P**	**14 16 47.0**	**0.0**
RCHB				*d*PcP	**PcP**	**14 16 54.0**	**+0.3**
KBA	**Koelnbreinsper**	**80.65**	**330**	*i* P	**P**	**14 16 48.9**	**+1.0**
	comp=Z,28nm,0.9s,SNR=13						
WMOK	**Wichita Mounta**	**80.70**	**50**	P	**P**	**14 16 48.5**	**+0.3**
	baz=318,SNR=8.5						
OBKA	**Obir**	**80.70**	**329**	*i* P	**P**	**14 16 48.2**	**+0.1**
	comp=Z,7.8nm,0.8s						
RAR	**Rarotonga**	**80.75**	**132**	LR	LR	14 45 13.4	
	comp=Z,39nm,21.5s,baz=308,slow=30						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DOU	Dourbes	80.76	337	dP	P	14 16 47.6	-0.7
DOU				dPcP	PcP	14 16 53.8	-0.9
MYKA	Terra Mystica	80.92	330	i P	P	14 16 48.9	-0.4
	comp=Z,4.8nm,0.5s						
CRES	Cresnjev	80.94	329	i P	P	14 16 45.3	-4.0
WATA	Walderalm	81.04	332	eP	P	14 16 50.2	+0.3
	comp=Z,13nm,0.6s,SNR=6.2						
HDIL	Hopedale	81.08	40	P	P	14 16 50.2	+0.1
	baz=322						
WTTA	Wattenberg	81.08	332	i P	P	14 16 50.7	+0.5
	comp=Z,12nm,0.5s,SNR=6.9						
RETA	Reutte	81.18	332	eP	P	14 16 51.0	+0.4
	comp=Z,13nm,0.8s,SNR=7.5						
MOTA	Moosalm	81.19	332	i P	P	14 16 51.0	+0.3
	comp=Z,34nm,1.1s,SNR=9.4						
VISS	Visnje	81.19	329	i P	P	14 16 50.2	-0.4
ABTA	Abfaltersbach	81.22	331	i P	P	14 16 49.5	-1.4
	comp=Z,10nm,1.2s						
SQTA	Sankt Quirin	81.26	332	i P	P	14 16 51.5	+0.4
	comp=Z,16nm,0.9s						
S39A	Bolivar	81.35	45	P	P	14 16 51.1	-0.5
S39A				IAmb	IAmb	14 16 52.3	
	comp=Z,22nm,0.9s						
TUL1	Leonard	81.43	47	P	P	14 16 52.0	0.0
	baz=320						
FETA	Feichten	81.60	332	eP	P	14 16 53.3	+0.4
	comp=Z,14nm,1.2s,SNR=5.7						
DAVA	Damuels	81.65	333	eP	P	14 16 53.6	+0.4
	comp=Z,21nm,1.1s,SNR=6.1						
MMAI	Mount Meron Ar	81.66	308	LR	LR	15 00 03.1	
	comp=Z,20nm,18.5s,baz=220,slow=41						
ABTX	Abilene, Hawle	81.78	52	P	P	14 16 54.4	+0.4
	baz=318						
TXAR	Lajitas Array	81.83	57	P	P	14 16 55.2	+0.8
	comp=Z,9.5nm,0.5s,baz=296,slow=4.0,SNR=114						
	comp=Z,9.5nm,0.5s						
SADO	Sadowa	81.93	32	P	P	14 16 53.4	-1.1
	comp=Z,9.4nm,1.2s,baz=297,slow=5.8,SNR=3.8						
SADO				LR	LR	14 56 45.6	
	comp=Z,16nm,18.2s,baz=326,slow=38						
	comp=Z,9.4nm,1.2s						
CCM	Cathedral Cave	82.11	43	P	P	14 16 55.8	+0.2
CCM				IAmb	IAmb	14 16 56.9	
	comp=Z,33nm,0.9s						
CCM	Cathedral Cave	82.11	43	P	P	14 16 55.8	+0.2
CCM				pmax	pmax		
	comp=Z,33nm,0.9s						
CCM	Cathedral Cave	82.11	43	P	P	14 16 55.6	+0.1
	baz=322						
HHAR	Hobbs	82.12	46	P	P	14 16 55.8	+0.1
HHAR				IAmb	IAmb	14 16 56.7	
	comp=Z,18nm,0.9s						
SFIN	Lafayette	82.23	39	P	P	14 16 56.1	0.0
	baz=324						
TRQ	Mont Tremblant	82.33	28	P	P	14 16 56.9	+0.2
TRQ				IAmb	IAmb	14 16 57.6	
	comp=Z,29nm,1.0s						
U40A	Yellville	82.62	45	P	P	14 16 58.1	-0.2
	baz=321						
PMOR	Pomariorio Ree	82.84	119	eT	T	15 48 21.0	
	comp=Z,22nm,0.2s						
PMOR				eT	T	15 48 21.0	
	comp=Z,22nm,0.2s						
W39A	Magazine	83.03	47	P	P	14 17 00.7	+0.3
	baz=320,SNR=10						
O48B	Farmland	83.20	38	P	P	14 17 01.0	-0.2
	baz=325						
JCT	Junction City	83.27	54	P	P	14 17 02.3	+0.5
	baz=318						
SENIN	Lac Senin/Sane	83.30	334	P	P	14 17 01.9	0.0
WHTX	Lake Whitney,	83.48	51	P	P	14 17 03.3	+0.5
WHTX				IAmb	IAmb	14 17 04.5	
	comp=Z,40nm,1.4s						
WHTX	Lake Whitney,	83.48	51	P	P	14 17 03.1	+0.3
	baz=319						
MIAR	Mount Ida	83.64	47	P	P	14 17 04.1	+0.6
MIAR				IAmb	IAmb	14 17 05.2	
	comp=Z,26nm,0.8s						
MIAR	Mount Ida	83.64	47	P	P	14 17 04.1	+0.6
MIAR				pmax	pmax		
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	83.64	47	P	P	14 17 03.7	+0.2
	baz=321,SNR=20						
LONY	Lake Ozonia	83.72	29	P	P	14 17 02.8	-1.0
	baz=331						
WHAR	Wooly Hollow	83.74	46	P	P	14 17 04.6	+0.6
PPT	Papeete	83.75	122	LR	LR	14 52 34.5	
	comp=Z,28nm,19.0s,baz=310,slow=34						
PPT2	Papeete2	83.76	122	eLR	LR	14 42 08.5	
	comp=Z,325nm,44.5s						
PPT2	Papeete2	83.76	122	eT	T	15 49 34.2	
	comp=Z,4.2nm,0.3s						
PPT2				eT	T	15 49 34.2	
	comp=Z,4.2nm,0.3s						
ERPA	Erie	83.84	34	P	P	14 17 05.0	+0.5
	baz=328						
W41B	Gary Mavity, V	83.85	46	P	P	14 17 05.0	+0.4
	baz=321						
P49A	Miami Univ. Ec	83.99	38	P	P	14 17 05.9	+0.6
P49A	Miami Univ. Ec	83.99	38	P	P	14 17 05.1	-0.2
	baz=325						
BATG	Bathurst New B	84.01	23	P	P	14 17 05.8	+0.6
BATG				IAmb	IAmb	14 17 06.7	
	comp=Z,20nm,0.9s						
X40A	Basin Creek Fa	84.08	47	P	P	14 17 06.2	+0.4
	baz=321						
M53A	WI Miller and	84.13	35	P	P	14 17 06.3	+0.4
	baz=327						
ACSO	Alum Creek Sta	84.17	37	P	P	14 17 06.4	+0.3
	baz=326						
435B	Jarrell	84.32	52	P	P	14 17 07.4	+0.4
	baz=319						
NCB	Newcomb	84.41	29	P	P	14 17 07.0	-0.4
NCB				IAmb	IAmb	14 17 08.3	
	comp=Z,13nm,0.9s						
G62A	West of Eustis	84.54	26	P	P	14 17 08.1	+0.1
G62A				IAmb	IAmb	14 17 09.7	
	comp=Z,28nm,0.9s						
PKME	Peaks-Kenny Pk	84.89	25	P	P	14 17 10.3	+0.7
	baz=334,SNR=5.3						
O53A	New Philadelph	84.91	36	P	P	14 17 10.0	+0.2
	baz=327						
H62A	Milan	84.92	27	P	P	14 17 10.4	+0.5
LBNH	Lisbon	84.96	28	P	P	14 17 10.5	+0.4
	baz=332						
P52A	Corning	85.03	37	P	P	14 17 09.9	-0.6
	baz=326						
833A	Chaparral WMA,	85.11	55	P	P	14 17 11.5	+0.4
	baz=318						
NATX	Nacogdoches	85.20	49	P	P	14 17 12.0	+0.5
	baz=320						
WVT	Waverly	85.30	42	P	P	14 17 11.8	-0.1
WVT				IAmb	IAmb	14 17 13.5	
	comp=Z,15nm,0.8s						
WVT	Waverly	85.30	42	P	P	14 17 11.8	-0.1
WVT				pmax	pmax		
	comp=Z,15nm,0.9s						
WVT	Waverly	85.30	42	P	P	14 17 12.1	+0.2
	baz=324						
BINY	Binghamton	85.31	31	P	P	14 17 11.9	0.0
	baz=330						
IDI	Anoyia	85.48	317	⇑P	P	14 17 12.8	-0.1
IDI	Anoyia	85.48	317	LR	LR	14 58 08.6	
	comp=Z,21nm,18.7s,baz=237,slow=38						
GGN	Saint George	85.76	24	P	P	14 17 13.5	-0.5
GGN				IAmb	IAmb	14 17 15.2	
	comp=Z,13nm,1.0s						
OXF	Oxford	85.81	44	P	P	14 17 14.4	0.0
OXF	Oxford	85.81	44	P	P	14 17 14.4	0.0
OXF				pmax	pmax		
	comp=Z,43nm,1.0s						
OXF	Oxford	85.81	44	P	P	14 17 14.5	+0.1
	baz=323,SNR=5.2						
SSPA	Standing Stone	85.93	33	P	P	14 17 15.5	+0.5
	baz=329						
U49A	Red Boiling Sp	85.96	41	P	P	14 17 15.8	+0.6
MCWV	Mont Chateau	85.97	35	P	P	14 17 15.7	+0.5
	baz=328						
HRV	Adam Dziewonsk	86.62	28	P	P	14 17 18.9	+0.7
	baz=333						
TZTN	Tazewell	86.97	39	P	P	14 17 20.5	+0.4
	baz=326						
PAL	Palisades	87.12	30	P	P	14 17 20.4	-0.4
	baz=331						
TKL	Tuckaleechee C	87.59	40	P	P	14 17 23.0	-0.1
	comp=Z,17nm,0.8s,baz=268,slow=1.9,SNR=19						
TKL				LR	LR	15 00 50.4	
	comp=Z,11nm,18.5s,baz=286,slow=38						
	comp=Z,17nm,0.8s						
TKL	Tuckaleechee C	87.59	40	P	P	14 17 23.5	+0.4
BLA	Blacksburg	87.79	37	P	P	14 17 23.9	-0.2
	baz=328						
LRAL	Lakeview Retre	88.19	44	P	P	14 17 25.6	-0.4
	baz=324						
KMSC	Kings Mountain	89.13	38	P	P	14 17 30.8	+0.4
	baz=327						
GOGA	Godfrey	89.59	41	P	P	14 17 33.2	+0.6
	baz=326						
ATD	Arta Tunnel	92.65	289	LR	LR	15 03 29.3	
	comp=Z,37nm,18.5s,baz=112,slow=38						
ESDC	Sonseca Array	92.70	339	P	P	14 17 46.1	-0.9
	comp=Z,2.1nm,0.8s,baz=14,slow=4.3,SNR=14						
ESDC				LR	LR	15 04 03.8	
	comp=Z,23nm,21.7s,baz=40,slow=38						
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	92.70	339	P	P	14 17 46.5	-0.5
MDT	Midelt	99.33	337	LR	LR	15 08 21.5	
	comp=Z,15nm,20.2s,baz=142,slow=38						
TORD	Torodi Ar. Bea	115.17	323	PKP	PKiKP	14 23 15.0	-1.2
	comp=Z,0.7nm,0.3s,baz=14,slow=2.3,SNR=14						
AC02	Maricunga	145.48	72		PKPab	14 24 14.3	+0.6
NVL	N'lazarevskaya	145.91	204	ePKP2	PKPbc	14 24 13.1	+0.3
NVL				pmax	pmax		
	comp=Z,24nm,0.9s						
NBPN	Ponto Novo - B	145.95	15	eP	PKPab	14 24 15.3	+0.2
CO06	Fray Jorge	146.05	80		PKPdf	14 24 14.3	+0.8
BELA	Belgrano 2	146.27	179	PKPdf	PKPbc	14 24 13.9	+0.2
GO04	Tololo Observa	146.35	79		PKPbc	14 24 15.5	-0.2
SDBA	SAO DESIDERIO	146.36	23	eP	PKPbc	14 24 16.5	+0.7
TROLL	Troll, Antarti	147.69	199	PKPbc	PKPbc	14 24 18.8	+0.7
BDFB	Brasilia	148.38	31	PKPbc	PKPbc	14 24 21.3	-0.1
	comp=Z,12nm,0.5s,baz=292,slow=0.6,SNR=16						
JANB	Januaria	149.05	24	eP	PKPbc	14 24 23.1	0.0
SNAA	Sanae	149.14	197	PKPbc	PKPbc	14 24 21.8	+0.1
SNAA	Sanae	149.14	197		PKPbc	14 24 21.7	0.0
SNAA	Sanae	149.14	197	c iPKP2	PKPbc	14 24 22.4	+0.7
SNAA				pmax	pmax		
	comp=Z,23nm,2.5s						
AQDB	Aquidauana	149.15	47	PKPdf	PKPdf	14 24 18.3	-0.5
AQDB				PKPbc	PKPbc	14 24 23.7	+0.6
IPMB	Ipameri, GO	150.45	33	eP	PKPbc	14 24 25.6	-0.8
CMC01	Camacan, BA	150.48	15	eP	PKPdf	14 24 23.8	+2.7
VNA2	Neumayer--Watz	150.66	196	PKPbc	PKPbc	14 24 25.8	+0.5
	baz=116,slow=2.0						
VNA3	Neumayer Olymp	150.84	195	PKPbc	PKPbc	14 24 25.4	-0.3
LL02	Futaleuf	151.35	102		PKPbc	14 24 28.2	+0.4
PLCA	Paso Flores	151.51	96	PKPbc	PKPbc	14 24 28.9	+0.6
	comp=Z,7.1nm,0.8s,baz=277,slow=3.2,SNR=14						
PLCA				PKPab	PKPab	14 24 38.1	+1.0
	comp=Z,4.5nm,0.8s,baz=271,slow=3.2,SNR=6.3						
PLCA	Paso Flores	151.51	96	eP	PKPdf	14 24 25.6	+3.6
GUA01	Guaratinga, BA	151.61	16	eP	PKPbc	14 24 27.1	-2.0
CPUP	Villa Florida	152.81	57	PKPbc	PKPbc	14 24 31.4	-0.1
	comp=Z,1.1nm,0.3s,baz=324,slow=5.8,SNR=4.3						
CPUP				PKPab	PKPab	14 24 43.2	+0.5
	comp=Z,2.1nm,0.5s,baz=336,slow=2.7,SNR=5.6						
CPUP	Villa Florida	152.81	57	PKPdf	PKPdf	14 24 21.8	-2.5
CPUP					PKPbc	14 24 30.4	-1.2
CPUP				PKPab	PKPab	14 24 43.0	+0.3

BJI ***20*** *14:18:13.4±0.0, 5°.57S×147°.05E, h110^{km}, mb4.8/40, mB4.8/22*

NEIC ***20*** *14:18:15.9±1.8, 5°.77S±0°.06×146°.54E±0°.09, h102^{km}±6^{km}, mb4.8/59, Error ellipse: s-maj=12.6km s-min=8.8km az=90.0*

IDC ***20*** *14:18:16.2±0.6, 5°.72S×146°.55E, h115^{km}±4^{km}, mb4.3/27, mbtmp4.7/34, MS3.2/16, Error ellipse: s-maj=12.7km s-min=7.8km az=91.0*

DJA ***20*** *14:18:17.5±0.3, 6°S±3°×14°6E±°, h103^{km}±5^{km}, M4.9/25, mB5.2/10, mb5.0/25, MLv5.2/3, Mw(mB)4.6/10*

ISC 20 14:18:15.1±0.3**, 5°.77S**±0°.04×**146°.56E**±0°.05**, h100**^{km}**, n325,** σ**1^{s}08**/330**, mb4.8**/93**, 15C-62D, Fault plane solution: NP1:**φ$_s$252.85747°**,** δ56.66665°**,** λ-64.80492°. **NP2:** φ$_s$32.28916°**,** δ40.88697°**,** λ-122.91286°. **Principal axes:** T Plg8.3959°, Azm325.1428°**;** N Plg20.8344°, Azm58.3626°**;** P Plg67.3890°, Azm214.3873°**; Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	171	P	Pn	14 19 10.0	+0.2
	1μm,0.6s,baz=31,slow=5.6,SNR=732						
PMG				S	Sn	14 19 51.3	-0.8
	595nm,0.7s,baz=311,slow=15,SNR=7.3						
PMG	Port Moresby	3.66	171	Pn	Pn	14 19 09.7	-0.1
PMG	Port Moresby	3.66	171	P	Pn	14 19 10.1	+0.3
PMG	Port Moresby	3.66	171	P	Pn	14 19 10.0	+0.2
MANU	Manus Island	3.79	12	Pn	Pn	14 19 14.0	+2.5
KRVT	Keravat (AS076	5.63	75	P	Pn	14 19 37.8	+1.3
	216nm,0.5s,baz=247,slow=0.4,SNR=68						
RABL	Rabaul	5.80	75	Pn	Pn	14 19 39.1	+0.3
RABL	Rabaul	5.80	75	P	Pn	14 19 42.0	+3.3
	1μm,0.5s						
SMPI	Sarmi	8.68	295	P	Pn	14 20 20.7	+2.7
	22nm,1.0s						
COEN	Coen	8.79	202	P	Pn	14 20 20.7	+1.2
	baz=8.8,SNR=150						
COEN	Coen	8.79	202	Pn	Pn	14 20 20.6	+1.1
COEN	Coen	8.79	202	P	Pn	14 20 20.9	+1.4
	238nm,0.8s						
SRPI	Serui, Papua	11.00	290	P	Pn	14 20 50.3	+0.8
	71nm,0.7s						
MTSU	Mount Surprise	12.49	190	P	Pn	14 21 10.0	+0.7
	baz=12,SNR=68						
MTSU	Mount Surprise	12.49	190	P	Pn	14 21 10.0	+0.7
	15nm,0.6s						
HNR	Honiara	13.76	106	P	Pn	14 21 26.6	+0.6
	177nm,0.9s,baz=233,slow=3.2,SNR=12						
HNR	Honiara	13.76	106	Pn	Pn	14 21 26.7	+0.7
HNR	Honiara	13.76	106	P	P	14 21 30.1	-1.1
	452nm,1.0s						
CTA	Charters Tower	14.24	181	P	Pn	14 21 34.9	+2.7
	33nm,0.5s,baz=0.4,slow=14,SNR=90						
CTA	Charters Tower	14.24	181	P	P	14 21 35.7	-0.8
	67nm,0.9s						
CTAO	Charters Tower	14.24	181		P	14 21 36.3	-0.2
CTAO	Charters Tower	14.24	181	P	P	14 21 35.5	-1.0
	58nm,0.9s						
FAKI	Fak Fak	14.55	281	P	Pn	14 21 37.7	+1.5
	16nm,1.1s						
FAKI	Fak Fak	14.55	281	P	Pn	14 21 36.7	+0.5
	16nm,1.2s						
KDU	Kakadu	15.51	243	P	Pn	14 21 48.2	-0.1
	baz=16,SNR=35						
KDU	Kakadu	15.51	243	P	Pn	14 21 48.4	+0.1
	103nm,1.2s						
SIJI	Sorong	16.02	287	P	Pn	14 21 54.3	-0.5
	21nm,0.7s,baz=77,slow=5.0,SNR=8.4						
SWI	Sorong	16.03	287	P	P	14 21 56.5	+0.1
	1μm37nm,0.7s						
QIS	Mount Isa	16.18	204	P	Pn	14 21 57.3	+0.6
	baz=16,SNR=24						
QIS	Mount Isa	16.18	204	P	P	14 21 58.9	+0.8
	66nm,0.8s						
MTN	Manton Dam	16.76	244	P	Pn	14 22 03.8	-0.2
	baz=17,SNR=35						
MTN	Manton Dam	16.76	244		Pn	14 22 03.6	-0.3
MTN	Manton Dam	16.76	244	P	Pn	14 22 04.1	+0.2
	67nm,0.7s						
RK1H	Rockhampton Ha	17.92	168	P	Pn	14 22 18.6	+0.6
	16nm,1.0s						
WB0	Warramunga Arr	18.27	219	P	P	14 22 20.8	-0.3
WB0				IAmb	IAmb	14 22 24.9	
	comp=Z,48nm,0.8s						
WR0	Warramunga Arr	18.32	219	P	P	14 22 21.7	0.0
WR0				IAmb	IAmb	14 22 25.9	
	comp=Z,79nm,0.8s						
AAI	Ambon	18.42	276	P	Pn	14 22 25.7	+1.7
	comp=Z,110nm,0.7s						
WRAB	Tennant Creek	18.42	219	P	P	14 22 22.6	-0.1
WRAB	Tennant Creek	18.42	219	P	P	14 22 23.0	+0.3
	comp=Z,131nm,0.8s						
WC3	Warramunga Arr	18.42	219	P	P	14 22 22.8	0.0
	baz=18						
WB2	Warramunga Arr	18.43	219	P	P	14 22 22.9	+0.1
WRA	Warramunga Arr	18.43	219	P	P	14 22 22.8	-0.1
	comp=Z,64nm,0.8s,baz=41,slow=11,SNR=176						
WRA				S	S	14 25 46.4	-1.9
	comp=Z,1.1nm,0.6s,baz=33,slow=18,SNR=1.8						
WRA				LR	LR	14 30 04.1	
	comp=Z,271nm,18.1s,baz=26,slow=38						
WRA				ScP	ScP	14 30 14.8	-1.5
	comp=Z,1.3nm,0.7s,baz=40,slow=2.4,SNR=5.0						
WRA	Warramunga Arr	18.43	219	P	P	14 22 21.6	-1.3
GUMO	Guam	19.30	355	P	P	14 22 31.4	-0.9
	comp=Z,90nm,0.8s,baz=323,slow=20,SNR=4.2						
GUMO				LR	LR	14 28 20.6	
	comp=Z,56nm,20.2s,baz=126,slow=31						
EIDS	Eidsvold	19.97	168	P	P	14 22 41.0	+1.5
	baz=20,SNR=28						
EIDS	Eidsvold	19.97	168	P	P	14 22 41.0	+1.5
EIDS				IAmb	IAmb	14 22 41.9	
	comp=Z,54nm,0.7s						
EIDS	Eidsvold	19.97	168	P	P	14 22 41.2	+1.7
	comp=Z,75nm,0.8s						
KNRA	Kununurra	20.05	239	P	P	14 22 39.9	-0.6
	baz=20,SNR=96						
KNRA	Kununurra	20.05	239	P	P	14 22 40.1	-0.4
KNRA	Kununurra	20.05	239	P	P	14 22 40.3	-0.2
	comp=Z,83nm,1.1s						
RMQ	Roma	20.71	174	P	P	14 22 48.9	+1.3
	baz=21,SNR=76						
RMQ	Roma	20.71	174	P	P	14 22 48.2	+0.7
	comp=Z,119nm,0.8s						
QLP	Quilpie	20.82	186	P	P	14 22 49.4	+0.7
	baz=21,SNR=44						
QLP	Quilpie	20.82	186	P	P	14 22 49.6	+0.9
	comp=Z,130nm,0.9s						
SANI	Sanana	20.85	279	P	Pn	14 22 52.9	+0.3
	comp=Z,436nmcomp=Z,28nm,0.6s						
SANI	Sanana	20.85	279	P	P	14 22 50.0	+0.8
	comp=Z,27nm,1.0s						
AS31	Alice Springs	21.57	213	P	P	14 22 57.1	+0.3
AS31				IAmb	IAmb	14 23 00.0	
	comp=Z,29nm,0.5s						
ASAR	Alice Springs	21.57	213	P	P	14 22 57.4	+0.6
	comp=Z,36nm,0.6s,baz=47,slow=8.6,SNR=955						
ASAR				S	S	14 26 49.5	-0.8
	comp=Z,3.5nm,0.9s,baz=36,slow=18,SNR=5.4						
ASAR				LR	LR	14 31 40.2	
	comp=Z,196nm,18.9s,baz=51,slow=37						
	comp=Z,36nm,0.6s						
ASAR	Alice Springs	21.57	213	P	P	14 22 57.0	+0.2
SANVU	Saraoutou	22.43	117	P	P	14 23 05.2	-0.7
SANVU				IAmb	IAmb	14 23 06.7	
	comp=Z,53nm,0.9s						
SANVU	Saraoutou	22.43	117	P	P	14 23 05.8	-0.1
	comp=Z,72nm,1.0s						
SOEI	Soe	22.44	258	P	P	14 23 05.9	-0.2
	comp=Z,38nm,0.9s						
INKA	Innaminka	22.54	194	P	P	14 23 07.3	+0.4
	comp=Z,637nm,0.9s						
BATI	Baumata	23.09	258	P	P	14 23 13.3	+0.8
	comp=Z,55nm,0.7s,baz=127,slow=3.4,SNR=13						
	comp=Z,55nm,0.7s						
BATI	Baumata	23.09	258	P	P	14 23 14.6	+2.0
	comp=Z,37nm,0.7s						
OOD	Oodnadatta	24.22	204	P	P	14 23 23.3	+0.7
	comp=Z,131nm,0.7s						
MMRI	Maumere	24.30	262	P	P	14 23 23.2	-0.3
MMRI	Maumere	24.30	262	P	P	14 23 23.8	+0.3
	comp=Z,1μmcomp=Z,56nm,0.6s						
MMRI	Maumere	24.30	262	P	P	14 23 23.8	+0.3
	comp=Z,54nm,0.6s						
EDFI	Ende, Flores	24.84	262	P	P	14 23 28.3	-0.3
	comp=Z,24nm,0.6s						
ARMA	Armidale	24.98	170	P	P	14 23 31.0	+1.3
	baz=25,SNR=48						
ARMA	Armidale	24.98	170	P	P	14 23 31.1	+1.3
ARMA				IAmb	IAmb	14 23 32.5	
	comp=Z,40nm,0.7s						
ARMA	Armidale	24.98	170	P	P	14 23 30.9	+1.3
	comp=Z,63nm,0.8s						
LIFNC	LIFOU	25.00	129	P	P	14 23 30.1	+0.3
LIFNC	LIFOU	25.00	129	P	P	14 23 30.5	+0.7
	comp=Z,80nm,0.8s						
DZM	Mont Dzumac	25.15	132	P	P	14 23 30.3	-0.9
	comp=Z,13nm,0.7s,baz=255,slow=11,SNR=20						
DZM				LR	LR	14 32 20.4	
	comp=Z,57nm,21.0s,baz=28,slow=34						
	comp=Z,13nm,0.7s						
DZM	Mont Dzumac	25.15	132	P	P	14 23 31.6	+0.3
DZM				IAmb	IAmb	14 23 32.8	
	comp=Z,34nm,1.3s						
DZM	Mont Dzumac	25.15	132	P	P	14 23 31.6	+0.3
	comp=Z,20nm,1.0s						
YATNC	Mamie plateau,	25.47	131	P	P	14 23 34.8	+0.7
	comp=Z,26nm,1.0s						
CMSA	Cobar Meteorol	25.65	182	P	P	14 23 36.5	+0.9
	baz=26,SNR=70						
CMSA	Cobar Meteorol	25.65	182	P	P	14 23 36.5	+0.9
	comp=Z,56nm,0.9s						
LCRK	Leigh Creek	25.78	197	P	P	14 23 37.6	+0.9
	comp=Z,365nm,0.8s						
WRKA	Warakurna	25.96	221	P	P	14 23 38.6	+0.1
	baz=26,SNR=152						
WRKA	Warakurna	25.96	221	P	P	14 23 39.0	+0.5
	comp=Z,46nm,0.5s						
STKA	Stephens Creek	26.39	190	P	P	14 23 42.1	-0.1
	comp=Z,27nm,0.8s,baz=352,slow=8.5,SNR=50						
STKA				LR	LR	14 34 04.6	
	comp=Z,64nm,19.6s,baz=21,slow=36						
	comp=Z,27nm,0.8s						
STKA	Stephens Creek	26.39	190	P	P	14 23 42.7	+0.5
	baz=26,SNR=45						
STKA	Stephens Creek	26.39	190	P	P	14 23 42.7	+0.5
STKA	Stephens Creek	26.39	190	P	P	14 23 42.7	+0.5
	comp=Z,7.9nm,0.8s						
TOLI2	Tolitoli	26.63	284	P	P	14 23 45.2	+0.5
	comp=Z,14nm,1.0s						
MULG	Mulgathing	27.08	204	P	P	14 23 49.1	+0.6
	comp=Z,28nm,0.9s						
MGCD	Mangrove Creek	27.63	172	P	P	14 23 54.1	+0.7
	comp=Z,22nm,1.1s						
NAPP	Napperby	28.38	195	P	P	14 24 00.8	+0.8
	comp=Z,102nm,0.6s						
WHYH	Whyalla	28.39	196	P	P	14 24 01.0	+0.9
	comp=Z,58nm,1.0s						
PTPS	Port Pirie	28.41	195	P	P	14 24 01.0	+0.7
	comp=Z,132nm,0.5s						
HTT	Hallett	28.43	194	P	P	14 24 01.2	+0.7
	baz=28,SNR=23						
HTT	Hallett	28.43	194	P	P	14 24 01.2	+0.7
	comp=Z,22nm,1.1s						
BBOO	Buckleboo	28.63	199	P	P	14 24 02.6	+0.3
	baz=29,SNR=37						
BBOO	Buckleboo	28.63	199	P	P	14 24 02.5	+0.3
BBOO				IAmb	IAmb	14 24 03.5	
	comp=Z,26nm,0.7s						
BBOO	Buckleboo	28.63	199	P	P	14 24 02.6	+0.3
	comp=Z,53nm,1.1s						
PLAI	Plampang	28.71	262	P	P	14 24 02.2	-1.0
	comp=Z,25nm,0.9s						
CAN	Canberra	29.50	176	P	P	14 24 10.5	+0.6
CAN				IAmb	IAmb	14 24 12.2	
	comp=Z,31nm,1.1s						
CAN	Canberra	29.50	176	P	P	14 24 10.8	+0.8
	comp=Z,42nm,1.6s						
CNB	Canberra Magne	29.52	175	P	P	14 24 11.2	+1.1
	baz=30,SNR=5.5						
CNB	Canberra Magne	29.52	175	P	P	14 24 10.9	+0.7
	comp=Z,17nm,0.8s						
TWOA	Tennyson Woods	30.04	193	P	P	14 24 15.6	+0.9
	comp=Z,23nm,0.6s						
MBWA	Marble Bar	30.16	237	P	P	14 24 16.9	+0.9
MBWA				IAmb	IAmb	14 24 17.4	
	comp=Z,22nm,0.8s						
MBWA	Marble Bar	30.16	237	P	P	14 24 16.7	+0.7
	comp=Z,19nm,1.3s						
PSA00	Pilbara Seismi	30.26	236	P	P	14 24 17.4	+0.6
PSA00	Pilbara Seismi	30.26	236	P	P	14 24 17.6	+0.8
FORT	Forrest	30.35	213	P	P	14 24 18.1	+0.6
	baz=30,SNR=19						
FORT	Forrest	30.35	213	P	P	14 24 17.8	+0.2
FORT	Forrest	30.35	213	P	P	14 24 18.1	+0.6
	comp=Z,80nm,0.8s						
ARPS	Mount Arapiles	31.16	187	P	P	14 24 25.8	+1.3
	baz=31,SNR=15						
ARPS	Mount Arapiles	31.16	187	P	P	14 24 26.0	+1.5
	comp=Z,62nm,0.8s						
TOO	Toolangi	31.67	182	P	P	14 24 30.6	+1.5
	baz=32,SNR=6.7						
TOO	Toolangi	31.67	182	P	P	14 24 30.6	+1.5
TOO				IAmb	IAmb	14 24 31.4	
	comp=Z,18nm,0.8s						
TOO	Toolangi	31.67	182	P	P	14 24 30.8	+1.7
	comp=Z,26nm,1.0s						
JAGI	Jajag, Banyuwa	32.26	263	P	P	14 24 32.6	-2.0

MEEK	Meekatharra	33.77	229	P	P	14 24 48.5	+0.9
	baz=34,SNR=67						
MEEK	Meekatharra	33.77	229	P	P	14 24 48.5	+0.9
	comp=Z,139nm,0.7s						
GIRL	Giralia	35.41	238	P	P	14 25 01.4	-0.4
	baz=35,SNR=4.2						
GIRL	Giralia	35.41	238	P	P	14 25 03.8	+2.0
GIRL	Giralia	35.41	238	P	P	14 25 04.1	+2.3
	comp=Z,93nm,0.9s						
JOW	Kunigami	36.93	332	LR	LR	14 40 02.8	
	comp=Z,20nm,19.5s,baz=310,slow=35						
MORW	Morawa	37.00	228	P	P	14 25 16.0	+0.8
	baz=37,SNR=8.5						
MORW	Morawa	37.00	228	P	P	14 25 16.0	+0.8
MORW				IAmb	IAmb	14 25 19.1	
	comp=Z,17nm,0.8s						
MORW	Morawa	37.00	228	P	P	14 25 16.0	+0.8
KLBR	Kellerberrin	37.24	223	P	P	14 25 17.5	+0.3
	baz=37,SNR=42						
KLBR	Kellerberrin	37.24	223	P	P	14 25 17.4	+0.2
	comp=Z,113nm,0.5s						
BLDU	Ballidu	37.38	225	P	P	14 25 19.0	+0.5
	baz=37,SNR=34						
BLDU	Ballidu	37.38	225	P	P	14 25 18.9	+0.5
	comp=Z,38nm,1.5s						
YULB	Yu-li	38.06	321	P	P	14 25 23.5	-0.7
YULB				IAmb	IAmb	14 25 27.7	
	comp=Z,6.8nm,0.7s						
NWAO	Narrogin (SRO)	38.41	222	P	P	14 25 27.3	+0.3
NWAO				IAmb	IAmb	14 25 37.3	
	comp=Z,25nm,1.1s						
NWAO	Narrogin (SRO)	38.41	222	P	P	14 25 27.7	+0.7
TPUB	Ta-pu	38.42	320	P	P	14 25 26.2	-1.0
	comp=Z,27nm,2.1s						
MUN	Mundaring	38.53	224	P	P	14 25 28.6	+0.6
	baz=39,SNR=7.2						
MUN	Mundaring	38.53	224	P	P	14 25 28.7	+0.7
	comp=Z,45nm,1.7s						
SSLB	Suanglung	38.56	321	P	P	14 25 27.4	-1.0
SSLB				IAmb	IAmb	14 25 32.4	
	comp=Z,11nm,0.9s						
SSLB	Suanglung	38.56	321	P	P	14 25 28.5	+0.1
	comp=Z,12nm,1.6s						
LEM	Lembang	38.72	266	LR	LR	14 43 18.4	
	comp=Z,35nm,18.5s,baz=82,slow=39						
YHNB	Yeheng	38.94	322	P	P	14 25 33.5	+1.9
	comp=Z,25nm,1.3s						
RKGY	Rocky Gully	39.63	220	P	P	14 25 38.3	+1.1
	baz=40,SNR=9.9						
RKGY	Rocky Gully	39.63	220	P	P	14 25 38.7	+1.5
	comp=Z,114nm,0.9s						
KNTN	Kanton	41.70	88	P	P	14 25 54.2	-0.3
KNTN	Kanton	41.70	88	P	P	14 25 55.2	+0.7
	comp=Z,36nm,1.1s						
URZ	Urewera	42.60	144	P	P	14 26 03.0	+1.6
	comp=Z,160nm,1.1s						
MJAR	Matsushiro Arr	42.81	350	P	P	14 26 01.8	-1.3
	comp=Z,2.4nm,0.8s,baz=166,slow=7.9,SNR=5.1						
	comp=Z,2.4nm,0.8s						
THZ	Tophouse	42.84	151	P	P	14 26 02.7	-0.7
THZ				IAmb	IAmb	14 26 11.1	
	comp=Z,30nm,1.2s						
BKZ	Black Stump Fm	42.85	145	P	P	14 26 04.8	+1.3
	comp=Z,109nm,2.5s						
MYKOM	Kota Tinggi	43.31	279	P	P	14 26 07.8	+0.3
MYKOM				IAmb	IAmb	14 26 09.5	
	comp=Z,11nm,1.1s						
RPZ	Rata Peaks	43.51	154	P	P	14 26 10.0	+1.3
	comp=Z,11nm,0.5s,baz=327,slow=5.1,SNR=10						
	comp=Z,11nm,0.5s						
RPZ	Rata Peaks	43.51	154	P	P	14 26 10.9	+2.2
	comp=Z,187nm,2.0s						
KHZ	Kahutara	43.64	151	P	P	14 26 10.5	+0.8
	comp=Z,68nm,2.4s						
NJ2	Nanjing	45.95	327	*e*P	P	14 26 31.3	+3.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	Korea Array	46.38	339	P	P	14 26 30.9	-0.5
	comp=Z,5.3nm,0.9s,baz=158,slow=9.3,SNR=27						
KSRS				LR	LR	14 44 07.4	
	comp=Z,21nm,20.2s,baz=170,slow=34						
	comp=Z,5.3nm,0.9s						
KSAR	Wonju Array Be	46.38	339	P	P	14 26 31.0	-0.5
KS19	Wonju Array Si	46.44	339	P	P	14 26 31.1	-0.9
KS19				IAmb	IAmb	14 26 32.4	
	comp=Z,9.3nm,0.9s						
JTM	Tenmabayashi	46.60	354	P	P	14 26 32.3	-0.8
SEHB	SEOHWA	47.00	340	P	P	14 26 36.0	-0.3
SEHB				IAmb	IAmb	14 26 37.3	
	comp=Z,11nm,1.0s						
KULM	Kulim	47.14	283	P	P	14 26 37.4	-0.4
KULM				IAmb	IAmb	14 26 39.1	
	comp=Z,11nm,1.1s						
GSI	Gunungsitoli	49.42	277	P	P	14 26 54.8	-0.5
GSI				IAmb	IAmb	14 27 21.9	
	comp=Z,13nm,0.9s						
ASAJ	Asahikawa	49.78	356	P	P	14 26 57.4	-0.2
	comp=Z,2.5nm,0.4s,baz=226,slow=9.3,SNR=11						
	comp=Z,2.5nm,0.4s						
TIA	Tai'an	50.05	329	⇓P	P	14 26 59.1	-0.7
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	Ussuriysk Ar.	51.44	347	P	P	14 27 09.6	-0.4
	comp=Z,3.8nm,0.8s,baz=159,slow=8.9,SNR=5.8						
	comp=Z,3.8nm,0.8s						
USRK	Ussuriysk Ar.	51.44	347	P	P	14 27 09.8	-0.2
HNS	HongShan	52.21	328	⇑P	P	14 27 15.5	-0.4
HNS				pmax	pmax		
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	52.76	298	P	P	14 27 20.1	-0.1
	comp=Z,2.3nm,0.8s,baz=121,slow=5.7,SNR=9.6						
	comp=Z,2.3nm,0.8s						
XAN	Xi'an	53.23	321	⇑P	P	14 27 22.8	-0.7
XAN				pP	pP	14 27 50.5	+3.2
XAN				sP	sP	14 28 01.1	+2.8
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
PZH	PanZhiHua	53.97	309	P	P	14 27 31.5	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,5.1s						
BNX	BinXian	54.06	344	⇑P	P	14 27 29.3	0.0
BNX				pmax	pmax		
	comp=Z,18nm,0.5s						
BNX				pmax	pmax		
	comp=Z,140nm,3.7s						
KLR	Kul'dur	56.27	348	P	P	14 27 44.5	-0.7
	comp=Z,1.4nm,0.6s,baz=169,slow=1.3,SNR=6.0						
KLR				LR	LR	14 51 01.5	
	comp=Z,17nm,18.1s,baz=172,slow=35						
	comp=Z,1.4nm,0.6s						
HHC	Hu-ho-hao-te	56.41	329	*e*P	P	14 27 50.1	+3.7
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
PEA0B	Petropavlovsk-	59.41	8	P	P	14 28 07.5	+0.5
PETK	Petropavlovsk-	59.41	8	P	P	14 28 06.9	-0.1
	comp=Z,3.3nm,0.8s,baz=172,slow=7.0,SNR=8.1						
PETK				LR	LR	14 49 31.9	
	comp=Z,28nm,21.4s,baz=188,slow=32						
	comp=Z,3.3nm,0.8s						
PETK	Petropavlovsk-	59.41	8	P	P	14 28 07.1	+0.1
GTA	Gaotai	62.28	320	⇑P	P	14 28 27.1	+0.1
GTA				pP	pP	14 28 57.0	+5.7
GTA				sP	PcP	14 29 11.0	+5.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHEM	Shemya Is, Ala	62.79	18	P	P	14 28 29.8	0.0
	comp=Z,16nm,0.9s,baz=41,slow=11,SNR=2.1						
SHEM				LR	LR	14 50 11.6	
	comp=Z,6.8nm,19.7s,baz=337,slow=30						
	comp=Z,16nm,0.9s						
SONM	Songino Array	63.99	331	P	P	14 28 37.6	-0.5
	comp=Z,5.3nm,1.1s,baz=149,slow=8.6,SNR=16						
SONM				pP	pP	14 29 05.7	+3.2
	comp=Z,1.2nm,0.8s,baz=155,slow=6.7,SNR=2.2						
	comp=Z,5.3nm,1.1s						
SONM	Songino Array	63.99	331	P	P	14 28 38.4	+0.4
MA2	Magadan	65.22	2	P	P	14 28 45.1	-0.5
	comp=Z,7.3nm,0.8s,baz=152,slow=8.2,SNR=9.2						
MA2				LR	LR	14 54 10.8	
	comp=Z,9.9nm,21.8s,baz=180,slow=33						
	comp=Z,7.3nm,0.8s						
MA2	Magadan	65.22	2	P	P	14 28 45.5	-0.2
MA2				IAmb	IAmb	14 28 46.5	
	comp=Z,8.3nm,1.0s						
CASY	Casey	65.36	195	P	P	14 28 46.6	+0.1
CASY				IAmb	IAmb	14 28 48.5	
	comp=Z,4.6nm,0.7s						
SEY	Seymchan	68.65	3	P	P	14 29 07.0	-0.3
	comp=Z,5.9nm,0.8s,baz=164,slow=5.5,SNR=26						
	comp=Z,5.9nm,0.8s						
YAK	Yakutsk	68.85	352	LR	LR	14 55 46.0	
	comp=Z,16nm,21.8s,baz=265,slow=33						
NIKH	Nikolski High	69.57	27	P	P	14 29 13.3	+0.1
	baz=228						
VNDA	Vanda	72.17	177	P	P	14 29 29.3	+0.7
	comp=Z,2.1nm,0.6s,baz=333,slow=6.3,SNR=21						
	comp=Z,2.1nm,0.6s						
VNDA	Vanda	72.17	177	P	P	14 29 29.8	+1.2
WMQ	Urumqi	72.33	319	*e*P	P	14 29 33.3	+3.1
SDPT	Sand Point	74.91	28	P	P	14 29 45.1	+0.2
	baz=235						
CHNA	Chernabura Isl	75.04	29	P	P	14 29 45.6	-0.1
	baz=236						
GAMB	Gambell	76.09	18	P	P	14 29 51.5	0.0
	baz=223						
CHGN	Chignik	76.41	28	P	P	14 29 53.2	-0.2
	baz=237						
MK31	Makanchi Array	77.04	321	P	P	14 29 56.7	-0.6
MKAR	Makanchi Array	77.04	321	P	P	14 29 56.3	-1.0
	comp=Z,1.6nm,0.6s,baz=100,slow=7.8,SNR=22						
MKAR				pP	pP	14 30 25.0	+2.3
	comp=Z,6.2nm,0.8s,baz=107,slow=5.8,SNR=16						
	comp=Z,1.6nm,0.6s						
MAKZ	Makanchi	77.24	320	P	P	14 29 57.1	-1.4
TIXI	Tiksi	78.14	354	P	P	14 30 01.1	-1.7
	comp=Z,4.6nm,0.6s,baz=271,slow=22,SNR=22						
	comp=Z,4.6nm,0.6s						
TIXI	Tiksi	78.14	354	P	P	14 30 01.8	-1.0
TIXI				IAmb	IAmb	14 30 03.3	
	comp=Z,5.6nm,0.6s						
ZAA0	Zalesovo Array	78.58	328		P	14 30 03.4	-2.3
ZALV	Zalesovo Beam	78.58	328	P	P	14 30 03.4	-2.2
	comp=Z,2.8nm,0.4s,baz=107,slow=6.1,SNR=12						
ZALV				pP	pP	14 30 34.4	+3.4
	comp=Z,3.5nm,0.6s,baz=116,slow=4.9,SNR=7.2						
	comp=Z,2.8nm,0.4s						
ZALV	Zalesovo Beam	78.58	328	P	P	14 30 03.6	-2.1
BOOM	Boomskoye usch	79.80	315	P	P	14 30 12.6	-0.2
BOOM				IAmb	IAmb	14 30 13.0	
	comp=Z,4.4nm,0.5s						
N18K	Kilae Creek	79.87	25	P	P	14 30 13.3	+0.7
	baz=238						
KDAK	Kodiak Island	79.90	28	P	P	14 30 11.3	-1.5
	comp=Z,11nm,1.2s,baz=227,slow=1.0,SNR=7.0						
	comp=Z,11nm,1.2s						
KURK	Kurchatov	80.76	323	P	P	14 30 16.9	-0.6
KURBB	Kurchatov Arra	80.78	323	P	P	14 30 16.2	-1.4
	comp=Z,0.8nm,0.6s,baz=115,slow=4.4,SNR=10						
KURBB				pP	pP	14 30 45.6	+2.6
	comp=Z,3.3nm,0.9s,baz=107,slow=4.2,SNR=11						
	comp=Z,0.8nm,0.6s						
TTA	Tatalina	81.01	23	P	P	14 30 18.9	+0.2
	baz=238						
L19K	White Mountain	81.08	24	P	P	14 30 19.7	+0.7
L19K	White Mountain	81.08	24	P	P	14 30 19.5	+0.5
	baz=239						
M19K	Big River Lodg	81.12	24	P	P	14 30 19.9	+0.7
	baz=240						
HOM	Homer	81.22	27	P	P	14 30 20.0	+0.3
	baz=242						
L20K	Farewell, AK	81.62	24	P	P	14 30 22.1	+0.2
	baz=240						
M20K	Styx River	81.63	25	P	P	14 30 22.0	0.0
	baz=241						
RDOG	Red Dog Mine	81.65	17	P	P	14 30 19.9	-1.9
	baz=231						
GCSA	Galena City Sc	81.66	21	P	P	14 30 21.9	0.0
	baz=237,SNR=7.5						
SPCR	Spurr Chakacha	81.69	25	P	P	14 30 22.6	+0.3
	baz=242						
CAPN	Captain Cook N	81.94	26	P	P	14 30 23.6	+0.2
	baz=243						
K20K	Telida	81.98	23	P	P	14 30 24.0	+0.3
	baz=240						
MAW	Mawson	82.29	203	P	P	14 30 24.2	-1.0
	comp=Z,2.6nm,0.7s,baz=94,slow=11,SNR=6.1						
	comp=Z,2.6nm,0.7s						
J20K	Nowinta River	82.37	22	P	P	14 30 26.1	+0.4
J20K	Nowinta River	82.37	22	P	P	14 30 25.7	0.0
	baz=240,SNR=5.0						
PPLA	Purkeypile	82.50	24	P	P	14 30 26.3	-0.3
	baz=242						
RC01	Rabbit Creek A	82.71	26	P	P	14 30 27.1	-0.4
	baz=244						
CAST	Castle Rocks	82.79	23	P	P	14 30 26.8	-1.1
	baz=242						
M22K	Willow	82.83	25	P	P	14 30 27.8	-0.3
	baz=244						
CHUM	Lake Minchumin	82.93	23	P	P	14 30 28.4	-0.2
	baz=241						
CUT	Chulitna	83.06	25	P	P	14 30 29.4	+0.1
	baz=243						
PMR	Palmer	83.19	26	P	P	14 30 29.6	-0.3
	baz=244						
KNK	Knik Glacier	83.40	26	P	P	14 30 30.6	-0.6
	baz=245						
IMAR	Indian Mountai	83.43	21	P	P	14 30 30.9	-0.2
TRF	Thorofare Moun	83.53	24	P	P	14 30 31.7	-0.2
	baz=243						
BPAW	Bear Paw Mtn.	83.55	23	P	P	14 30 31.1	-0.7
	baz=243						
H21K	Melozitna Rive	83.60	21	P	P	14 30 31.9	-0.2
	baz=241						
SML	Sawmill	83.62	26	P	P	14 30 31.9	-0.4
	baz=245						
I21K	Tanana	83.67	22	P	P	14 30 32.1	-0.3
	baz=242,SNR=5.9						
GLI	Glacier Island	83.79	27	P	P	14 30 32.6	-0.5
	baz=246						
KK31	Karatay Array	83.81	314	P	P	14 30 32.8	-0.9
KKAR	Karatay Array	83.81	314	P	P	14 30 32.4	-1.3
M23K	Glacier View	83.88	26	P	P	14 30 32.2	-1.4
	baz=246						
WAT1	Susitna Watana	83.96	25	P	P	14 30 33.1	-0.9
	baz=245						
SCM	Sheep Creek Mo	84.07	26	P	P	14 30 33.9	-0.7
	baz=246						
RND	Reindeer	84.09	24	P	P	14 30 33.6	-1.0
RND				IAmb	IAmb	14 30 34.2	
	comp=Z,9.8nm,0.8s						
QSPA	South Pole Qui	84.20	180	P	P	14 30 35.8	+0.6
QSPA				IAmb	IAmb	14 30 41.5	
	comp=Z,14nm,1.4s						
WAT6	Susitna Watana	84.20	25	P	P	14 30 34.9	-0.4
	baz=246						
EYAK	Cordova Ski Ar	84.27	27	P	P	14 30 34.9	-0.6
	baz=248						
NEA2	Nenana	84.51	23	P	P	14 30 35.2	-1.5
	baz=244,SNR=6.9						
KLU	Klutina	84.55	26	P	P	14 30 36.5	-0.6
	baz=247						
DHY	Denali Highway	84.56	25	P	P	14 30 36.4	-0.7
	baz=246						
I23K	Minto, Yukon-K	84.64	22	P	P	14 30 36.2	-1.1
	baz=244,SNR=10.0						
H23K	Yukon River	84.88	22	P	P	14 30 38.1	-0.4
H23K				IAmb	IAmb	14 30 39.1	
	comp=Z,4.9nm,0.7s						
H23K	Yukon River	84.88	22	P	P	14 30 38.2	-0.3
	baz=244,SNR=7.1						
NRIK	Noril'sk	84.92	342	P	P	14 30 35.9	-2.8
	comp=Z,4.0nm,0.5s,baz=111,slow=4.0,SNR=5.8						
NRIK				pP	pP	14 31 08.0	+3.7
	comp=Z,11nm,1.0s,baz=111,slow=5.9,SNR=4.4						
	comp=Z,4.0nm,0.5s						
BMRM	Bremner River	84.94	27	P	P	14 30 38.4	-0.6
	baz=249						
TCOL	CIGO, UAF Yank	85.10	23	P	P	14 30 38.4	-1.2
	baz=245						
COLA	College	85.11	23	P	P	14 30 38.2	-1.4
	baz=245						
N25K	Chitina, Valde	85.18	27	P	P	14 30 39.8	-0.4
	baz=249						
COLD	Coldfoot	85.27	20	P	P	14 30 41.1	+0.7
COLD				IAmb	IAmb	14 30 41.5	
	comp=Z,9.4nm,1.2s						
COLD	Coldfoot	85.27	20	P	P	14 30 40.4	0.0
	baz=243						
HDA	Harding Lake	85.27	24	P	P	14 30 39.1	-1.3
	baz=246						
PAX	Paxson	85.31	25	P	P	14 30 40.4	-0.5
	baz=248						
POKR	Poker Plat Res	85.37	23	P	P	14 30 40.3	-0.6
	baz=246						
IL31		85.44	23	P	P	14 30 39.5	-1.8
IL31				IAmb	IAmb	14 30 40.2	
	comp=Z,10nm,0.6s						
ILAR	Eielson Array	85.44	23	P	P	14 30 38.9	-2.5
	comp=Z,8.6nm,0.6s,baz=253,slow=4.9,SNR=100						
ILAR				LR	LR	15 06 16.0	
	comp=Z,11nm,19.8s,baz=328,slow=34						
	comp=Z,8.6nm,0.6s						
ILAR	Eielson Array	85.44	23	P	P	14 30 39.7	-1.7
H24K	Noodor Dome	85.50	22	P	P	14 30 41.0	-0.6
	baz=245,SNR=6.8						
MCARA	McCarthy VSAT	85.81	27	P	P	14 30 41.5	-1.7
	baz=250						
RIDG	Independent Ri	85.86	25	P	P	14 30 42.7	-0.8
	baz=248						
J25K	Salcha River,	85.98	24	P	P	14 30 43.0	-1.1
J25K	Salcha River,	85.98	24	P	P	14 30 43.0	-1.1
	baz=248,SNR=18						
TOLK	Toolik Lake Re	86.12	19	P	P	14 30 45.1	+0.4
TOLK	Toolik Lake Re	86.12	19	P	P	14 30 44.8	+0.2
	baz=244						
M26K	Nabesna, AK	86.17	26	P	P	14 30 44.9	-0.1
	baz=250						
L26K	Log Cabin Wild	86.23	25	P	P	14 30 45.2	-0.1
	baz=250						
SCRK	Sand Creek	86.30	24	P	P	14 30 45.0	-0.8
	baz=249						
CTG	Chitna Glacier	86.44	28	P	P	14 30 46.4	-0.1
	baz=252,SNR=5.7						
M27K	Edge Creek, AK	86.65	26	P	P	14 30 47.5	0.0
	baz=251,SNR=11						
J26L	Joseph Creek	86.66	24	P	P	14 30 46.8	-0.6
	baz=249,SNR=12						
PINM	Pinnacle	86.69	29	P	P	14 30 46.9	-0.7
	baz=253						
L27K	Beaver Creek,	86.90	26	P	P	14 30 48.9	+0.3
L27K	Beaver Creek,	86.90	26	P	P	14 30 48.5	-0.1
	baz=251,SNR=5.2						
BCAR	Beaver Creek A	86.92	26	P	P	14 30 48.6	0.0
PNL	Peninsula	86.97	29	P	P	14 30 48.8	-0.1
	baz=253						
YUK3	Moose Creek	87.10	27	P	P	14 30 49.6	-0.2
	baz=252,SNR=6.5						
K27K	Chicken	87.11	25	P	P	14 30 50.0	+0.5
K27K				IAmb	IAmb	14 30 52.5	
	comp=Z,8.7nm,0.9s						
BVCY	Beaver Creek	87.11	26	P	P	14 30 49.7	+0.1
	baz=252,SNR=6.5						
EGAK	Eagle	87.73	24	P	P	14 30 52.0	-0.5
EGAK	Eagle	87.73	24	P	P	14 30 52.1	-0.4
	baz=252,SNR=6.7						
YUK6	Outpost Mounta	87.82	28	P	P	14 30 52.9	-0.4
	baz=254						
HYT	Haines Junctio	88.20	28	P	P	14 30 54.5	-0.4
	baz=255						
DAWY	Dawson	88.25	25	P	P	14 30 54.9	-0.1
	baz=253						
N30M	Aishikik Lake	88.56	28	P	P	14 30 56.5	-0.1
	baz=255						
M30M	Minto, Yukon	88.97	27	P	P	14 30 58.3	-0.1
	baz=256						
I29M	Ogilvie Camp,	89.06	24	P	P	14 30 58.4	-0.4
	baz=254						
N31M	Braeburn, Yuko	89.17	28	P	P	14 30 59.4	+0.1
	baz=256						
WHY	Whitehorse	89.41	29	P	P	14 31 00.8	+0.2
	baz=257						
EPYK	Eagle Plains	89.96	23	P	P	14 31 02.4	-0.5
	baz=256						
M31M	Drury Creek, Y	89.97	27	P	P	14 31 03.5	+0.4
	baz=258						
P33M	Teslin, Yukon	90.32	30	P	P	14 31 05.4	+0.6
	baz=259						
INK	Inuvik	91.60	21	P	P	14 31 10.4	0.0
	baz=258						
ABKAR	Akbulak array	92.12	319		P	14 31 10.3	-3.0
YBH	Yreka Blue Hor	94.34	49	LR	LR	15 10 16.7	
	comp=Z,13nm,18.1s,baz=332,slow=33						
SBC	Santa Barbara	96.30	56	P	P	14 31 33.0	+0.2
	baz=267						
SCI2	San Clemente I	97.20	58	P	P	14 31 37.3	+0.3
	baz=268						
NVAR	Mina Array Bea	97.57	52	P	P	14 31 38.6	-0.2
	comp=Z,1.1nm,0.6s,baz=255,slow=7.6,SNR=5.4						
	comp=Z,1.1nm,0.6s						
NEW	Newport	98.48	42	P	P	14 31 41.8	-0.5
	baz=271						
YKA	Yellowknife Ar	99.17	28	P	Pdif	14 31 43.9	-1.2
	comp=Z,0.9nm,0.8s,baz=276,slow=5.0,SNR=9.4						
	comp=Z,0.9nm,0.8s						
ELK	Elko	99.95	50	LR	LR	15 11 30.9	
	comp=Z,14nm,18.2s,baz=178,slow=32						
HLID	Hailey	100.49	47	P	Pdif	14 31 52.1	+0.4
	baz=272						
BOZ	Bozeman (W)	102.36	45	P	Pdif	14 32 00.4	+0.5
	baz=274						
BW06	Boulder Array	104.08	47	P	Pdif	14 32 07.0	-0.8
	baz=275						
PDAR	Pinedale Array	104.08	47	Pdiff	Pdif	14 32 06.5	-1.3
	comp=Z,0.8nm,0.7s,baz=187,slow=3.9,SNR=5.5						
ARCES	ARCESS Array B	105.90	342	Pdiff	Pdif	14 32 12.6	-2.3
	comp=Z,4.5nm,1.1s,baz=66,slow=9.0,SNR=4.5						
ARCES				PKKPbc	PKKPbc	14 47 49.1	-3.8
	comp=Z,4.3nm,1.0s,baz=226,slow=2.4,SNR=5.5						
NATX	Nacogdoches	117.41	57	P	PKPdf	14 36 47.7	-2.0
	baz=281						
W39A	Magazine	117.42	53	P	PKPdf	14 36 48.4	-1.2
	baz=283						
U40A	Yellville	117.88	52	P	PKPdf	14 36 48.7	-1.8
	baz=284						
PLCA	Paso Flores	122.56	147	PKP	PKPdf	14 36 59.2	-0.3
	comp=Z,2.2nm,0.5s,baz=195,slow=2.3,SNR=6.7						
LRAL	Lakeview Retre	123.41	54	P	PKPdf	14 37 00.9	-0.3
	baz=287						
PKME	Peaks-Kenny Pk	129.81	33	P	PKPdf	14 37 12.3	-0.7
	baz=311						
TORD	Torodi Ar. Bea	144.61	285	PKP	PKPab	14 37 39.0	-0.9
	comp=Z,5.1nm,0.6s,baz=64,slow=3.6,SNR=34						
TORD	Torodi Ar. Bea	144.61	285		PKPab	14 37 39.4	-0.5
KIC	Kosan Boka	151.46	273	*e*PKIKP	PKPbc	14 37 57.9	-0.7
	comp=Z,5.4nm,0.5s						
DBIC	Dimbokro	151.57	273	PKPbc	PKPbc	14 37 58.1	-0.7
	comp=Z,2.5nm,0.5s,baz=105,slow=2.3,SNR=7.4						
TIC	Toumodi	151.73	273	*e*PKIKP	PKPbc	14 37 58.4	-0.8
	comp=Z,7.3nm,0.3s						
LIC	Lamto	151.74	272	*e*P	PKPbc	14 37 58.4	-0.8
	comp=Z,31nm,1.5s						
BDFB	Brasilia	154.29	146	PKPbc	PKPbc	14 38 04.0	-0.9
	comp=Z,7.7nm,0.5s,baz=192,slow=1.2,SNR=10						
BDFB	Brasilia	154.29	146	PKPdf	PKPdf	14 37 54.9	-1.6
BDFB					PKPbc	14 38 05.3	+0.4

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*IDC **20** 15:00:56.4±0.7, 31°.86S×72°.06W, h0^{km}, mb4.0/7, mbtmp4.0/12, ML4.0/5, MS3.6/9 Error ellipse: s-maj=23.7km s-min=18.2km az=117.0*

*NEIC **20** 15:00:57.4±1.5, 31°.79S±0°.03×72°.3W±0°.1, h10^{km}±1^{km}, Error ellipse: s-maj=16.7km s-min=5.2km az=277.0*

*GUC **20** 15:00:57.8±0.5, 31°.81S×72°.19W, h32^{km}±3^{km}, ML4.2*

*NEIC **20** 15:00:59, 31°.83S×72°.30W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.04; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-2.18; $M_{r\theta}$-0.32; $M_{\theta\phi}$-0.10; $M_{\phi r}$-1.56; Fault plane solution: $M_0$2.65000×10^{15} NP1:ϕ_s188.24000°, δ63.62000°, λ95.39000°. NP2:ϕ_s356.26000°, δ26.89000°, λ79.28000°. Principal axes: T 2.5875, Plg71.0000°, Azm110.0000°; N 0.1182, Plg5.0000°, Azm6.0000°; P -2.7057, Plg18.0000°, Azm274.0000°;*

ISC 20 15:00:57.0±1.5**, 31°.82S**±0°.03×**72°.21W**±0°.04**, h6**^{km}±10^{km}**, n94, σ1^s.57**/106**, mb4.2**/8**, MS3.8**/9**, 2C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.07	134		Pg	15 01 17.4	-0.1
VA06	Catapilco	1.07	134	⇓*i*P	Pg	15 01 17.4	-0.1
VA06				*e*S	Sg	15 01 30.8	-0.6
VA06				IAML		15 01 36.7	
	comp=N,8μm,0.5s						
CO02	Combarbal	1.20	60		Pb	15 01 19.5	-0.7
CO02	Combarbal	1.20	60	⇑*i*P	Pb	15 01 19.4	-0.8
CO02				*i* S	Sb	15 01 34.5	-1.5
CO02				IAML		15 01 36.4	

	comp=E,36µm,0.4s						
CO06	Fray Jorge	1.24	23		Pn	15 01 20.2	-0.7
CO06	Fray Jorge	1.24	23	⇓*i*P	Pn	15 01 20.2	-0.7
CO06				*e*S	Sb	15 01 35.6	-1.5
CO06				IAML		15 01 43.3	
	comp=N,3µm,0.4s						
VA01	Torpederas	1.29	159		Pn	15 01 21.2	-0.3
VA01	Torpederas	1.29	159	⇓*i*P	Pn	15 01 21.2	-0.3
VA01				*e*S	Sb	15 01 37.4	-1.1
ROC1	El Roble	1.53	139		Pn	15 01 22.8	-2.4
ROCH	El Roble	1.53	139	⇓*i*P	Pn	15 01 22.6	-2.5
ROCH				*e*S	Sn	15 01 42.1	-3.3
ROCH				IAML		15 01 49.8	
	comp=E,5µm,0.5s						
VA03	San Esteban	1.69	124		Pn	15 01 27.6	+0.4
VA03	San Esteban	1.69	124	*e*P	Pn	15 01 27.4	+0.3
VA03				*e*S	Sn	15 01 48.2	-1.0
VA03				IAML		15 01 54.5	
	comp=N,9µm,0.5s						
MT02	Curacav	1.70	148		Pn	15 01 27.3	+0.1
MT02	Curacav	1.70	148	⇓*i*P	Pn	15 01 27.3	+0.1
MT02				*e*S	Sn	15 01 47.0	-2.2
PEL	Peldehue	1.84	136		Pn	15 01 29.8	+0.6
VA05	Santo Domingo	1.90	165	Pn	Pn	15 01 29.8	-0.2
VA05	Santo Domingo	1.90	165	*e*P	Pn	15 01 30.0	0.0
VA05				*e*S	Sn	15 01 52.2	-2.0
VA05				IAML		15 02 07.7	
	comp=N,3µm,0.4s						
GO04	Tololo Observa	2.04	37	Pn	Pn	15 01 31.9	-0.2
GO04	Tololo Observa	2.04	37	*e*P	Pn	15 01 31.8	-0.2
GO04				*e*S	Sn	15 01 55.4	-2.6
GO04				IAML		15 02 07.1	
	comp=E,11µm,0.5s						
CO05	La Serena	2.07	24		Pn	15 01 31.9	-0.4
MT01	Popeta	2.19	159		Pn	15 01 34.1	+0.1
MT01	Popeta	2.19	159	*e*P	Pn	15 01 34.2	+0.1
MT01				*e*S	Sn	15 01 59.9	-1.6
MT01				IAML		15 02 15.8	
	comp=N,888nm,0.7s						
MT03	Universidad Ad	2.20	140		Pn	15 01 34.9	+0.7
MT03	Universidad Ad	2.20	140	*e*P	Pn	15 01 34.9	+0.7
MT03				*e*S	Sn	15 01 58.4	-3.4
MT03				IAML		15 02 13.2	
	comp=E,3µm,0.5s						
MT09	Talagante	2.21	153	Pn	Pn	15 01 35.7	+1.3
MT09	Talagante	2.21	153	*e*P	Pn	15 01 35.2	+0.9
MT09				*e*S	Sn	15 02 00.1	-1.9
MT09				IAML		15 02 11.4	
	comp=E,1µm,0.4s						
FCH	Farellones	2.21	133	*e*P	Pn	15 01 35.0	+0.5
FCH				*e*S	Sn	15 02 02.1	-0.3
FCH				IAML		15 02 08.2	
	comp=E,2µm,0.3s						
BO04	La Punta	2.55	149		Pn	15 01 39.7	+0.8
BO04	La Punta	2.55	149	*e*P	Pn	15 01 40.0	+1.0
BO04				*e*S	Sn	15 02 08.3	-2.0
BO04				IAML		15 02 24.5	
	comp=N,1µm,0.5s						
CO01	Juntas del Tor	2.58	45		Pn	15 01 40.5	+0.9
CO01	Juntas del Tor	2.58	45	*e*P	Pn	15 01 40.8	+1.2
CO01				*e*S	Sn	15 02 11.4	0.0
CO01				IAML		15 02 17.6	
	comp=E,977nm,0.4s						
LMEL	Las Melosas	2.63	141		Pn	15 01 41.6	+1.3
LMEL	Las Melosas	2.63	141	⇑*i*P	Pn	15 01 41.5	+1.3
LMEL				*e*S	Sn	15 02 11.3	-1.3
LMEL				IAML		15 02 24.8	
	comp=N,920nm,0.3s						
BO03	Pichilemu	2.68	176	⇓*i*P	Pn	15 01 40.6	-0.1
BO03				*e*S	Sn	15 02 10.1	-3.3
BO01	Tunca	2.73	160	Pn	Pn	15 01 41.9	+0.5
BO01	Tunca	2.73	160	*e*P	Pn	15 01 41.7	+0.3
BO01				*e*S	Sn	15 02 12.2	-2.6
BO01				IAML		15 02 35.3	
	comp=E,392nm,0.5s						
LCO	Las Campanas	3.08	25	Pn	Pn	15 01 46.2	-0.3
LCO	Las Campanas	3.08	25	*e*P	Pn	15 01 46.0	-0.5
LCO				*e*S	Sn	15 02 20.8	-3.1
GO05	Huala	3.19	176		Pn	15 01 47.5	-0.3
GO05	Huala	3.19	176	*e*P	Pn	15 01 47.5	-0.3
GO05				*e*S	Sn	15 02 23.0	-3.1
GO05				IAML		15 02 57.5	
	comp=N,250nm,0.4s						
AC04	Llanos de Chal	3.73	16	Pn	Pn	15 01 54.0	-1.1
AC04	Llanos de Chal	3.73	16	*e*P	Pn	15 01 54.2	-1.0
AC04				*e*S	Sn	15 02 33.0	-6.5
GO03	Copiap	4.54	23		Pn	15 02 06.2	-0.2
BI05	Punta Hualpn	4.98	189	Pn	Pn	15 02 11.8	-0.5
BI05	Punta Hualpn	4.98	189	*e*P	Pn	15 02 11.9	-0.5
AC02	Maricunga	5.64	29	Pn	Pn	15 02 21.7	-0.2
AC01	Pan de Azucar	5.82	14	Pn	Pn	15 02 22.0	-2.0
H03N1	Juan Fernandez	5.88	252	Pn	Pn	15 02 26.3	+1.8
	baz=3.9						
H03N1				Sn	Sn	15 03 29.4	-2.8
H03N1				T	T	15 09 21.4	
	baz=80,slow=72,SNR=304						
H03N3	Juan Fernandez	5.90	252	Pn	Pn	15 02 25.9	+1.2
	baz=3.9						
H03N3				Sn	Sn	15 03 29.4	-3.2
H03N3				T	T	15 09 18.6	
	baz=80,slow=72,SNR=292						
H03N2	Juan Fernandez	5.90	252	Pn	Pn	15 02 26.0	+1.3
	baz=3.9						
H03N2				Sn	Sn	15 03 29.6	-2.9
H03N2				T	T	15 09 10.7	
	baz=80,slow=72,SNR=1032						
PLCA	Paso Flores	9.00	172	Pn	Pn	15 03 08.0	+0.5
	comp=N,0.5nm,0.3s,baz=345,slow=13,SNR=8.0						
	comp=N,2.4nm,0.4s						
PLCA	Paso Flores	9.00	172		Pn	15 03 08.9	+1.3
LVC	Limon Verde	9.63	19	Pn	Pn	15 03 16.1	-0.4
	comp=N,0.8nm,0.3s,baz=290,slow=19,SNR=3.2						
LVC				Sn	Sn	15 05 09.0	+3.8
	comp=N,0.2nm,0.3s,baz=293,slow=12,SNR=2.1						
	comp=N,2.6nm,0.8s						
LVC	Limon Verde	9.63	19		Pn	15 03 15.8	-0.7
TRQA	Tornquist	10.44	129		Pn	15 03 29.7	+2.4
CPUP	Villa Florida	14.11	71	Pn	Pn	15 04 16.5	-0.9
	comp=N,0.3nm,0.3s,baz=242,slow=12,SNR=4.9						
CPUP				Sn	Sn	15 06 53.4	-1.0
	comp=N,0.2nm,0.3s,baz=224,slow=9.3,SNR=2.0						
CPUP				Lg	Lg	15 08 15.6	
	comp=N,0.2nm,0.3s,baz=342,slow=13,SNR=2.0						
	comp=N,1.8nm,0.6s						
CPUP	Villa Florida	14.11	71		Pn	15 04 17.7	+0.2
LPAZ	La Paz	15.90	14	Pn	Pn	15 04 43.0	+1.0
	comp=N,0.2nm,0.3s,baz=203,slow=10,SNR=6.4						
	comp=N,1.8nm,0.7s						
LPAZ	La Paz	15.90	14	P	Pn	15 04 43.7	+1.6
SIV	San Ignacio	18.73	35	P	P	15 05 16.5	-0.1
	baz=241,slow=11,SNR=2.3						
	comp=N,3.1nm,0.6s						
NNA	Nana	20.19	347	LR	LR	15 11 24.8	
	comp=N,67nm,20.6s,baz=186,slow=31						
ATAH	Atahualpa	25.23	345	P	P	15 06 25.4	+1.1
	comp=N,3.4nm,0.7s,baz=120,slow=16,SNR=2.1						
	comp=N,3.4nm,0.7s						
BDFB	Brasilia	27.29	59	P	P	15 06 41.2	-1.4
	comp=N,4.0nm,0.7s,baz=217,slow=9.5,SNR=3.1						
	comp=N,4.0nm,0.7s						
PMSA	Palmer Station	33.37	174	LR	LR	15 21 15.4	
	comp=N,90nm,18.1s,baz=351,slow=37						
RCBR	Riachuelo	42.65	60	LR	LR	15 28 14.9	
	comp=N,212nm,18.4s,baz=338,slow=38						
VNA3	Neumayer Olymp	51.43	158	P	P	15 10 04.5	+1.9
VNA2	Neumayer--Watz	52.08	158	P	P	15 10 08.9	+1.6
	baz=291,slow=8.0						
SNAA	Sanae	53.66	158	P	P	15 10 19.8	+0.8
SNAA	Sanae	53.66	158	LR	LR	15 31 18.4	
	comp=N,40nm,19.7s,baz=256,slow=34						
SNAA	Sanae	53.66	158	P	P	15 10 20.0	+0.9
SNAA				IAmb	IAmb	15 10 21.4	
	comp=Z,4.7nm,0.8s						
TROLL	Troll, Antarti	55.37	159	P	P	15 10 32.8	+1.2
QSPA	South Pole Qui	58.41	180	P	P	15 10 53.7	+0.5
VNDA	Vanda	66.21	191	P	P	15 11 45.9	+0.8
	comp=Z,0.8nm,1.0s,baz=56,slow=3.6,SNR=2.5						
	comp=Z,0.8nm,1.0s						
TXAR	Lajitas Array	67.77	331	P	P	15 11 56.4	+0.6
	comp=Z,1.0nm,0.7s,baz=150,slow=7.4,SNR=9.8						
	comp=Z,1.0nm,0.7s						
TSUM	Tsumeb	79.95	106	LR	LR	15 44 24.2	
	comp=Z,48nm,20.7s,baz=149,slow=33						
BOSA	Boshof	81.21	118	LR	LR	15 45 59.3	
	comp=Z,35nm,18.5s,baz=196,slow=33						
PDAR	Pinedale Array	81.76	333	P	P	15 13 18.2	+1.5
	comp=Z,0.2nm,0.4s,baz=130,slow=3.6,SNR=2.3						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	82.02	325	P	P	15 13 19.1	+1.0
	comp=Z,0.9nm,0.7s,baz=162,slow=4.2,SNR=4.5						
	comp=Z,0.9nm,0.7s						
LBTB	Lobatse	83.35	115	LR	LR	15 46 09.0	
	comp=Z,50nm,21.1s,baz=190,slow=33						
TORD	Torodi Ar. Bea	83.60	70	P	P	15 13 26.3	-0.3
	comp=Z,2.2nm,0.7s,baz=258,slow=4.1,SNR=14						
	comp=Z,2.2nm,0.7s						
TORD	Torodi Ar. Bea	83.60	70	P	P	15 13 26.8	+0.1
TORD				IAmb	IAmb	15 13 28.5	
	comp=Z,3.7nm,1.0s						
ESDC	Sonseca Array	95.17	46	LR	LR	15 55 56.7	
	comp=Z,24nm,18.6s,baz=168,slow=35						
BBB	Bella Bella	96.87	329	LR	LR	15 53 58.1	
	comp=Z,34nm,21.8s,baz=37,slow=33						
ASAR	Alice Springs	119.44	208	PKP	PKPdf	15 19 47.4	-0.7
	comp=Z,0.3nm,0.9s,baz=118,slow=1.3,SNR=4.1						
WRA	Warramunga Arr	122.59	210	PKP	PKPdf	15 19 54.0	-0.2
	comp=Z,1.0nm,1.0s,baz=151,slow=1.5,SNR=10						
H11S2	WAKE ISLAND Hy	125.63	271	T	T	17 39 02.5	
	baz=117,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	125.64	271	T	T	17 39 03.9	
	baz=117,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	125.65	271	T	T	17 39 04.4	
	baz=117,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	125.99	272	T	T	17 39 26.5	
	baz=117,slow=74						
H11N1	WAKE ISLAND Hy	126.00	272	T	T	17 39 27.8	
	baz=117						
H11N2	WAKE ISLAND Hy	126.01	272	T	T	17 39 28.8	
	baz=117,slow=74						
KURBB	Kurchatov Arra	151.34	40	PKPbc	PKiKP	15 20 52.0	+0.3
	comp=Z,1.6nm,0.7s,baz=298,slow=2.9,SNR=17						
ZALV	Zalesovo Beam	152.44	30	PKPbc	PKiKP	15 20 53.9	+0.1
	comp=Z,2.2nm,0.5s,baz=292,slow=4.2,SNR=9.2						
ZALV				PKPab	PKPab	15 21 02.8	-1.0
	comp=Z,1.6nm,0.4s,baz=308,slow=4.3,SNR=4.0						
MKAR	Makanchi Array	155.38	45	PKPab	PKPab	15 21 16.7	+0.1
	comp=Z,0.4nm,0.8s,baz=309,slow=2.7,SNR=3.2						

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*IDC **20** 15:04:01.6±4.1, 44°.57N×147°.67E, h0^{km}, mb3.4/2, mbtmp3.4/3, ML2.5/1, MS3.0/1, Error ellipse: s-maj=329.0km s-min=29.6km az=119.0*

*SKHL **20** 15:04:17.4±0.5, 45°.20N×147°.70E, h169^{km}±2^{km}, mb4.3/3, msha4.8/3*

*JMA **20** 15:04:18.1±0.6, 45°N±2°×14°8E±°, h189^{km}, MV3.0/23, NEAR ETOROFU ISLAND*

ISC 20 15:04:19.6±1.2**, 45°.08N**±0°.10×**147°.4E**±0°.1**, h196**^{km}±9^{km}**, n26,** σ1s.**54**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	1.28	199	*e*P	Pn	15 04 49.8	-1.2
SHO				AMB	AMB	15 04 50.3	
	40nm,0.2s						
SHO				*e*S	Sn	15 05 14.7	-0.7
SHO				A	A	15 05 15.6	
	110nm,0.5s						
SHO				A	A	15 05 15.6	
	270nm,0.5s						
YUK	Yuzh-Kuril'sk	1.52	227	*e*P	Pn	15 04 53.0	-0.1
YUK				AMB	AMB	15 04 53.8	
	40nm,0.2s						
YUK				*e*S	Sn	15 05 21.2	+2.2
YUK				A	A	15 05 22.9	
	50nm,0.5s						
YUK				A	A	15 05 22.9	
	190nm,0.5s						
JRA	Rausu	1.99	236	*e*P	Pn	15 04 57.3	-0.3
NEM2	Nemuro 2	2.09	215	*e*P	Pn	15 04 58.1	-0.6
NEM2				*e*S	Sn	15 05 28.5	-0.6
NMR	Nemuro--Hokkai	2.09	216	*e*P	Pn	15 04 58.2	-0.5
NMR				AMB	AMB	15 04 59.0	
	20nm,0.2s						
NMR				*i* S	Sn	15 05 28.4	-0.7
NMR				A	A	15 05 32.2	
	100nm,0.4s						
NMR				A	A	15 05 32.2	
	70nm,0.4s						
JKHN	Kushirohamanak	2.57	220	*e*P	Pn	15 05 04.1	+0.1
JKHN				*e*S	Sn	15 05 40.4	+1.9
JTKR	Abashiri--Toko	2.73	247	*e*P	Pn	15 05 05.7	-0.2
AKK	Akkeshi	2.77	223	*i* P	Pn	15 05 06.3	0.0
AKK				*e*S	Sn	15 05 43.5	+0.9
JAK	Akkeshi	2.85	224	*e*P	Pn	15 05 07.5	+0.2
JAK				*e*S	Sn	15 05 45.5	+1.1
JKK2	Kamakawa 2	3.54	252	*e*P	Pn	15 05 16.0	+0.5
JCH	Churui	3.82	231	*e*P	Pn	15 05 19.3	+0.4
JCH				*e*S	Sn	15 06 06.0	+0.5
JWK2	Keihoku	3.90	275	*e*P	Pn	15 05 19.3	-0.5
JNBK	Urakawa-nobuka	4.38	232	*e*P	Pn	15 05 25.6	-0.4
JOT	Ohata	5.93	234	*e*P	Pn	15 05 44.8	-1.1
JOT				*e*S	Sn	15 06 51.1	-2.8
JANG	Nango	6.39	225	*e*P	Pn	15 05 50.2	-1.7
JANG				*e*S	Sn	15 07 01.2	-3.7
JMK	Ichinoseki	7.66	219	*e*S	Sn	15 07 32.5	-2.2
PETK	Petropavlovsk-	10.49	36	Pn	Pn	15 06 37.3	-7.6
	0.2nm,0.3s,baz=216,slow=12,SNR=9.3						
PETK				Sn	Sn	15 08 39.8	-2.0
	0.1nm,0.3s,baz=213,slow=13,SNR=1.6						
	0.8nm,0.5s						
H11N2	WAKE ISLAND Hy	30.00	141	T	T	15 41 39.4	
	baz=329						
H11N1	WAKE ISLAND Hy	30.02	141	T	T	15 41 49.5	
	baz=329						
H11N3	WAKE ISLAND Hy	30.02	141	T	T	15 41 41.1	
	baz=329						
H11S1	WAKE ISLAND Hy	31.00	142	T	T	15 42 57.9	
	baz=337,slow=74						
H11S3	WAKE ISLAND Hy	31.00	143	T	T	15 43 01.2	
	baz=337,slow=74						
H11S2	WAKE ISLAND Hy	31.02	142	T	T	15 42 55.3	
	baz=337						
INK	Inuvik	45.17	31	LR	LR	15 33 37.6	
	comp=Z,16nm,18.3s,baz=64,slow=39						
WRA	Warramunga Arr	65.79	193	P	P	15 14 45.1	+1.6
	0.3nm,0.8s,baz=9.1,slow=6.7,SNR=2.5						
	0.3nm,0.8s						
ASAR	Alice Springs	69.51	193	P	P	15 15 09.4	+2.6
	0.2nm,0.5s,baz=13,slow=6.3,SNR=4.1						
	0.2nm,0.5s						

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*IDC **20** 15:16:39.3±0.7, 14°.98S×173°.68W, h0^{km}, mb4.1/10, mbtmp4.1/11, ML5.1/1, MS3.4/28, Error ellipse: s-maj=36.0km s-min=16.7km az=141.0*

*NEIC **20** 15:16:42.6±1.2, 15°.05S±0°.10×173°.52W±0°.07, h23^{km}±8^{km}, mb4.6/17, Error ellipse: s-maj=14.1km s-min=9.9km az=180.0*

*NOU **20** 15:16:43.9, 15°.11S×173°.21W, h4^{km}, MLv4.9/7, Tonga Islands*

ISC 20 15:16:43.3±0.6**, 15°.06S**±0°.08×**173°.47W**±0°.09**, h30**^{km}**, n61,** σ1s.**37**/36**, mb4.6**/17**, MS3.6**/27**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.00	55	Pn	Pn	15 17 15.9	+0.7
	552nm,0.3s,baz=198,slow=2.7,SNR=664						
AFI				Sn	Sn	15 17 35.7	-3.5
	892nm,0.3s,baz=52,slow=22,SNR=10						
AFI				LR	LR	15 17 59.1	
	comp=Z,630nm,20.9s,baz=188,slow=38						
	1µm,0.3s						
AFI	Afiamalu	2.00	55	Pn	Pn	15 17 15.5	+0.3
AFI	Afiamalu	2.00	55	P	Pn	15 17 15.8	+0.7
NIUE	Niue	5.24	140		Pn	15 17 59.9	+0.2
NIUE	Niue	5.24	140	P	Pn	15 17 59.9	+0.2
MSVF	Nonsavu	8.56	251	LR	LR	15 20 50.2	
	comp=Z,27nm,21.4s,baz=118,slow=30						
MARNC	Mare, Loyalty	18.68	247	P	Pn	15 21 01.6	+1.9
DZM	Mont Dzumac	20.26	247	P	P	15 21 15.3	-1.3
	2.8nm,0.8s,baz=182,slow=20,SNR=1.9						
DZM				LR	LR	15 28 00.9	
	comp=Z,88nm,18.9s,baz=36,slow=34						
	2.8nm,0.8s						
URZ	Urewera	24.56	198	LR	LR	15 30 57.1	
	comp=Z,78nm,20.6s,baz=31,slow=35						
URZ	Urewera	24.56	198	P	P	15 21 59.6	-0.9
BFZ	Birch Farm	27.06	197	P	P	15 22 21.4	-1.6
RPZ	Rata Peaks	31.47	202	LR	LR	15 34 19.9	
	comp=Z,132nm,20.3s,baz=9.5,slow=34						
WHZ	Wether Hill Ro	34.48	203	P	P	15 23 28.9	+0.4
ARMA	Armidale	35.46	238	P	P	15 23 36.3	-1.1
ARMA				IAmb	IAmb	15 23 52.6	
	comp=Z,11nm,1.1s						
H11S2	WAKE ISLAND Hy	38.63	329	T	T	16 04 44.3	
	baz=146,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	38.65	329	T	T	16 04 44.5	
	baz=146,slow=76,SNR=6.8						
CTA	Charters Tower	38.65	257	LR	LR	15 37 22.4	
	comp=Z,43nm,20.4s,baz=97,slow=32						
H11S1	WAKE ISLAND Hy	38.65	329	T	T	16 04 53.6	
	baz=146,slow=76,SNR=7.5						
CAN	Canberra	39.18	232	P	P	15 24 05.7	-3.1
CAN				IAmb	IAmb	15 24 23.4	
	comp=Z,14nm,1.1s						
H11N3	WAKE ISLAND Hy	39.58	330	T	T	16 06 21.5	
	baz=158,slow=80,SNR=9.9						
H11N1	WAKE ISLAND Hy	39.59	330	T	T	16 06 35.9	
	baz=158,slow=80,SNR=8.9						
H11N2	WAKE ISLAND Hy	39.60	330	T	T	16 06 40.0	
	baz=158,slow=80,SNR=11						
TOO	Toolangi	42.63	230	P	P	15 24 35.3	-1.8
TOO				IAmb	IAmb	15 24 51.4	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	44.15	240	P	P	15 24 48.7	-0.7
	comp=Z,1.7nm,0.6s,baz=86,slow=9.9,SNR=4.7						
STKA				LR	LR	15 40 20.0	
	comp=Z,23nm,21.5s,baz=195,slow=32						
	comp=Z,1.7nm,0.6s						
STKA	Stephens Creek	44.15	240	P	P	15 24 48.8	-0.7
BBOO	Buckleboo	48.92	239	P	P	15 25 26.4	-0.5
WR0	Warramunga Arr	49.66	256	P	P	15 25 32.2	-0.6
WR0				IAmb	IAmb	15 25 46.3	
	comp=Z,8.1nm,1.4s						
WB0	Warramunga Arr	49.81	257	P	P	15 25 33.2	-0.6
WB0				IAmb	IAmb	15 25 33.7	
	comp=Z,6.1nm,1.1s						
WB2	Warramunga Arr	49.84	256	P	P	15 25 33.2	-0.9
WRAB	Tennant Creek	49.84	256	P	P	15 25 32.8	-1.3
WRAB				IAmb	IAmb	15 25 52.7	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	49.85	256	P	P	15 25 33.1	-1.1
	comp=Z,1.9nm,0.8s,baz=98,slow=5.9,SNR=34						
	comp=Z,1.9nm,0.8s						
WRA	Warramunga Arr	49.85	256	P	P	15 25 32.2	-2.0
AS31	Alice Springs	50.15	252	P	P	15 25 35.1	-1.3
ASAR	Alice Springs	50.15	252	P	P	15 25 35.2	-1.2
	comp=Z,6.7nm,0.6s,baz=86,slow=8.1,SNR=108						
ASAR				LR	LR	15 45 15.6	
	comp=Z,98nm,18.7s,baz=130,slow=34						
	comp=Z,6.7nm,0.6s						
ASAR	Alice Springs	50.15	252	P	P	15 25 34.8	-1.6
SBA	Scott Base	63.58	185	P	P	15 27 12.3	+1.6
SBA				IAmb	IAmb	15 27 14.5	
	comp=Z,3.6nm,0.8s						
VNDA	Vanda	63.71	186	P	P	15 27 12.9	+1.3
	comp=Z,2.3nm,0.8s,baz=11,slow=6.9,SNR=13						
VNDA				LR	LR	15 52 31.5	
	comp=Z,17nm,19.4s,baz=354,slow=34						
	comp=Z,2.3nm,0.8s						
VNDA	Vanda	63.71	186	P	P	15 27 11.7	+0.1
VNDA				IAmb	IAmb	15 27 14.1	
	comp=Z,4.6nm,1.0s						
SHEM	Shemya Is, Ala	68.36	352	LR	LR	15 50 54.7	
	comp=Z,52nm,21.6s,baz=18,slow=30						
MJAR	Matsushiro Arr	68.63	320	LR	LR	15 52 05.2	
	comp=Z,17nm,21.8s,baz=156,slow=31						
PETK	Petropavlovsk-	72.28	342	LR	LR	15 55 16.8	
	comp=Z,12nm,21.9s,baz=227,slow=32						
PFO	Pinyon Flats O	72.74	47	LR	LR	15 50 49.3	
	comp=Z,65nm,21.8s,baz=220,slow=28						
LPIG	La Paz	72.92	59	LR	LR	15 51 17.9	
	comp=Z,30nm,19.2s,baz=294,slow=28						
YBH	Yreka Blue Hor	73.37	37	LR	LR	15 52 13.2	
	comp=Z,38nm,20.7s,baz=216,slow=29						
NVAR	Mina Array Bea	74.12	42	P	P	15 28 18.3	+1.1
	comp=Z,2.8nm,1.1s,baz=228,slow=9.4,SNR=5.1						
NVAR				LR	LR	15 52 40.1	
	comp=Z,43nm,21.9s,baz=268,slow=29						
	comp=Z,2.8nm,1.1s						
KDAK	Kodiak Island	74.60	11	LR	LR	15 53 31.0	
	comp=Z,39nm,21.3s,baz=213,slow=30						
QSPA	South Pole Qui	74.98	180	P	P	15 28 22.4	+0.7
QSPA				IAmb	IAmb	15 28 23.8	
	comp=Z,6.3nm,0.8s						
ELK	Elko	77.38	41	LR	LR	15 54 27.8	
	comp=Z,29nm,20.1s,baz=237,slow=29						
MA2	Magadan	79.82	342	LR	LR	15 57 48.1	
	comp=Z,12nm,20.4s,baz=151,slow=31						
NEW	Newport	80.47	34	LR	LR	16 01 45.8	
	comp=Z,19nm,18.8s,baz=189,slow=34						
TXAR	Lajitas Array	80.48	56	LR	LR	15 56 21.7	
	comp=Z,24nm,21.1s,baz=272,slow=30						
ANMO	Albuquerque	80.64	50	LR	LR	15 58 03.2	
	comp=Z,37nm,19.1s,baz=250,slow=31						
DLBC	Dease Lake	81.41	21	LR	LR	16 01 01.0	
	comp=Z,22nm,18.5s,baz=322,slow=33						
PDAR	Pinedale Array	82.06	42	P	P	15 29 02.2	+1.0
	comp=Z,0.3nm,0.7s,baz=169,slow=1.5,SNR=2.5						
PDAR				LR	LR	15 59 38.6	
	comp=Z,25nm,20.8s,baz=258,slow=31						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	82.12	11	P	P	15 29 00.7	0.0
	comp=Z,0.7nm,0.9s,baz=209,slow=6.8,SNR=5.2						
ILAR				LR	LR	15 57 48.5	
	comp=Z,25nm,21.3s,baz=294,slow=30						
	comp=Z,0.7nm,0.9s						
INK	Inuvik	87.95	14	LR	LR	16 01 34.7	
	comp=Z,25nm,19.5s,baz=134,slow=31						
MAW	Mawson	88.09	199	P	P	15 29 30.9	+0.2
	comp=Z,3.8nm,0.7s,baz=132,slow=8.5,SNR=8.5						
	comp=Z,3.8nm,0.7s						
YAK	Yakutsk	88.77	337	LR	LR	16 03 25.9	
	comp=Z,13nm,21.2s,baz=92,slow=32						
YKA	Yellowknife Ar	89.81	23	P	P	15 29 40.3	+1.6
	comp=Z,0.3nm,0.7s,baz=225,slow=4.3,SNR=2.9						
YKA				LR	LR	16 02 01.1	
	comp=Z,34nm,19.5s,baz=311,slow=30						
	comp=Z,0.3nm,0.7s						
ULM	Lac du Bonnet	93.71	39	LR	LR	16 06 25.5	
	comp=Z,38nm,20.4s,baz=225,slow=32						
BRTR	Keskin Array B	145.85	321	PKPbc	PKPab	15 36 20.6	0.0
	comp=Z,2.2nm,0.7s,baz=107,slow=1.8,SNR=9.8						

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*NEIC **20** 15:32:48.9±1.8, 6°.98S±0°.10×125°.0E±0°.1, h529^{km}±9^{km}, mb4.4/23, Error ellipse: s-maj=21.4km s-min=14.1km az=76.0*

*IDC **20** 15:32:49.2±0.8, 7°.03S×125°.00E, h528^{km}±9^{km}, mb3.2/10, mbtmp4.2/15, Error ellipse: s-maj=22.3km s-min=8.9km az=71.0*

*DJA **20** 15:32:49.4±0.4, 7°S±3°×12°5E±°, h516^{km}±5^{km}, M3.9/16, mB4.3/7, mb4.2/12, MLv4.2/16, Mw(mB)3.4/7*

ISC 20 15:32:49.6±0.4**, 7°.01S**±0°.05×**125°.00E**±0°.08**, h543**^{km}**, n96,** σ1s.**46**/102**, mb3.9**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.82	195	P	P	15 34 01.2	-1.9
SOEI	Soe	2.82	195	P	P	15 34 01.5	-1.6
SOEI	Soe	2.82	195	P	P	15 34 01.3	-1.9
MMRI	Maumere	3.17	239	P	P	15 34 02.6	-2.6
MMRI	Maumere	3.17	239	P	P	15 34 02.5	-2.6
MMRI				S	S	15 35 04.3	-2.4
MMRI	Maumere	3.17	239	P	P	15 34 03.2	-2.0
BATI	Baumata	3.44	202	P	P	15 34 05.5	-1.4
	204nm,0.5s,baz=108,slow=1.0,SNR=72						
BATI				S	S	15 35 07.0	-3.0
	94nm,0.5s,baz=71,slow=13,SNR=8.3						
BATI	Baumata	3.44	202	P	P	15 34 05.1	-1.9
EDFI	Ende, Flores	3.70	242	P	P	15 34 06.2	-2.7
BSSI	Bau Bau, Buton	4.56	281	P	P	15 34 15.4	0.0
AAI	Ambon	4.59	44	P	P	15 34 13.7	-1.9
SANI	Sanana	5.02	11	P	P	15 34 18.2	-1.1
	0.3nm825nm95nm,0.8s						
SANI				S	S	15 35 29.6	-2.8
	0.3nm825nm95nm,0.8s						
SANI	Sanana	5.02	11	P	P	15 34 18.1	-1.2
BKSI	Bulukumba	5.13	289	P	P	15 34 20.0	-0.1
MSAI	Masohi	5.34	47	P	P	15 34 19.3	-2.8
	0.0nm362nm2.5nm,0.5s						
BASI	Baing, Sumba	5.41	234	P	P	15 34 20.9	-1.6
	1.3nm110nm,0.9s						
BNDI	Bandanaira	5.47	63	P	P	15 34 21.9	-1.3
BNSI	Bone	5.51	298	P	P	15 34 24.1	+0.6
	0.4nm86nm,0.7s						

KAPI	Kappang	5.58	291	P	P	15 34 24.0	-0.1
	20nm,0.5s,baz=140,slow=5.8,SNR=8.5						
KAPI	Kappang	5.58	291	P	P	15 34 24.1	0.0
SPSI	Sidrap Palu	6.02	300	P	P	15 34 27.8	-0.3
	0.1nm570nm40nm,0.6s						
WBSI	Waikabubak, Su	6.13	244	P	P	15 34 26.3	-2.8
	26nm,0.7s						
TTSI	Tana Toraja	6.49	307	P	P	15 34 34.1	+1.7
	0.1nm1µm33nm,0.8s						
PLAI	Plampang	7.38	255	P	P	15 34 39.0	-2.0
	0.5nm57nm,0.5s						
PLAI	Plampang	7.38	255	P	P	15 34 39.3	-1.7
GTOI	Gorontalo	7.85	345	P	P	15 34 47.7	+2.1
	9.1nm,0.9s						
FAKI	Fak Fak	8.29	61	P	P	15 34 47.5	-2.5
FAKI	Fak Fak	8.29	61	P	P	15 34 48.2	-1.9
	904nm102nm,0.8s						
FAKI	Fak Fak	8.29	61	P	P	15 34 49.2	-0.9
MTN	Manton Dam	8.38	134	P	P	15 34 50.1	-0.8
MTN	Manton Dam	8.38	134	P	P	15 34 50.5	-0.4
SIJI	Sorong	8.73	46	P	P	15 34 53.9	-0.7
	22nm,0.7s,baz=262,slow=6.3,SNR=7.2						
MPSI	Mapaga	8.89	325	P	P	15 34 56.9	+0.7
TOLI2	Tolitoli	9.10	332	P	P	15 34 58.1	-0.1
TOLI2	Tolitoli	9.10	332	P	P	15 34 58.1	-0.1
KDU	Kakadu	9.28	128	P	P	15 34 59.0	-1.0
KNRA	Kununurra	9.37	157	P	P	15 34 59.9	-1.1
KNRA	Kununurra	9.37	157	P	P	15 35 00.6	-0.4
PSA00	Pilbara Seismi	15.31	198	P	P	15 36 01.4	-1.0
PSA00				IAmb	IAmb	15 36 04.0	
	comp=Z,30nm,1.8s						
WB0	Warramunga Arr	15.62	145	P	P	15 36 04.4	-1.3
WB0				IAmb	IAmb	15 36 36.1	
	comp=Z,28nm,1.7s						
WRAB	Tennant Creek	15.73	146	P	P	15 36 04.9	-1.9
WRAB				IAmb	IAmb	15 36 07.2	
	comp=Z,4.2nm,0.7s						
WRAB	Tennant Creek	15.73	146	P	P	15 36 06.0	-0.7
WRA	Warramunga Arr	15.73	146	P	P	15 36 05.5	-1.3
	comp=Z,4.2nm,0.6s,baz=324,slow=11,SNR=35						
WRA				S	S	15 38 45.8	-2.5
	comp=Z,1.4nm,1.0s,baz=322,slow=19,SNR=3.9						
WRA	Warramunga Arr	15.73	146	P	P	15 36 05.1	-1.6
WB2	Warramunga Arr	15.74	146	P	P	15 36 05.2	-1.6
WB2				IAmb	IAmb	15 36 07.2	
	comp=Z,6.2nm,0.6s						
WR0	Warramunga Arr	15.86	145	P	P	15 36 06.8	-1.2
WR0				IAmb	IAmb	15 36 08.7	
	comp=Z,13nm,0.6s						
WRKA	Warakurna	18.20	170	P	P	15 36 30.7	+1.0
AS31	Alice Springs	18.64	154	P	P	15 36 34.7	+0.9
AS31				IAmb	IAmb	15 36 35.9	
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	18.64	154	P	P	15 36 34.6	+0.9
	comp=Z,5.0nm,0.6s,baz=331,slow=8.6,SNR=149						
ASAR				S	S	15 39 37.3	+1.2
	comp=Z,0.6nm,0.7s,baz=347,slow=25,SNR=4.5						
ASAR				ScP	ScP	15 43 20.4	+1.4
	comp=Z,0.3nm,0.4s,baz=347,slow=2.0,SNR=14						
COEN	Coen	19.16	113	P	P	15 36 38.3	-0.2
COEN				IAmb	IAmb	15 37 31.5	
	comp=Z,39nm,1.4s						
COEN	Coen	19.16	113	P	P	15 36 39.9	+1.4
QIS	Mount Isa	19.54	135	P	P	15 36 42.6	+0.7
MEEK	Meekatharra	20.45	197	P	P	15 36 50.4	+0.3
MTSU	Mount Surprise	21.84	122	P	P	15 37 03.9	+1.2
OOD	Oodnadatta	23.03	155	P	P	15 37 14.2	+1.0
MULG	Mulgathing	24.67	161	P	P	15 37 28.7	+1.0
BLDU	Ballidu	24.74	197	P	P	15 37 29.4	+1.0
INKA	Innaminka	25.46	146	P	P	15 37 36.7	+2.0
LCRK	Leigh Creek	26.41	154	P	P	15 37 43.7	+0.6
QLP	Quilpie	26.72	139	P	P	15 37 48.4	+2.5
BBOO	Buckleboo	27.66	160	P	P	15 37 54.1	0.0
BBOO	Buckleboo	27.66	160	P	P	15 37 54.1	0.0
STKA	Stephens Creek	29.19	150	P	P	15 38 08.5	+1.0
	comp=Z,5.1nm,0.5s,baz=324,slow=9.4,SNR=23						
	comp=Z,5.1nm,0.5s						
STKA	Stephens Creek	29.19	150	P	P	15 38 08.4	+1.0
STKA	Stephens Creek	29.19	150	P	P	15 38 08.7	+1.3
HTT	Hallett	29.29	156	P	P	15 38 09.8	+1.5
TPUB	Ta-pu	30.42	352	P	P	15 38 17.5	-0.6
TPUB	Ta-pu	30.42	352	P	P	15 38 18.2	0.0
CMSA	Cobar Meteorol	31.14	144	P	P	15 38 25.9	+1.7
YHNB	Yeheng	31.68	354	P	P	15 38 27.6	-1.4
ARPS	Mount Arapiles	33.38	155	P	P	15 38 45.0	+1.9
TOO	Toolangi	35.67	152	P	P	15 38 59.9	-2.5
TOO				IAmb	IAmb	15 40 14.2	
	comp=Z,42nm,1.6s						
CAN	Canberra	35.78	145	P	P	15 39 04.6	+1.3
CAN	Canberra	35.78	145	P	P	15 39 06.1	+2.8
CNB	Canberra Magne	35.98	145	P	P	15 39 07.6	+2.6
CMAR	Chiang Mai Arr	36.07	315	P	P	15 39 06.8	+0.9
	comp=Z,0.8nm,0.7s,baz=152,slow=6.4,SNR=5.8						
	comp=Z,0.8nm,0.7s						
JSU	Suzuyama	38.65	7	P	P	15 39 26.6	-0.2
KSRS	Korea Array	44.31	3	P	P	15 40 12.6	+1.2
	comp=Z,1.2nm,0.5s,baz=180,slow=9.4,SNR=7.6						
	comp=Z,1.2nm,0.5s						
USRK	Ussuriysk Ar.	51.36	6	P	P	15 41 03.7	-0.3
	comp=Z,1.5nm,0.5s,baz=201,slow=6.7,SNR=2.1						
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	57.02	345	P	P	15 41 44.9	+1.0
	comp=Z,1.9nm,0.7s,baz=160,slow=8.7,SNR=12						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	57.02	345	P	P	15 41 43.4	-0.6
CASY	Casey	60.02	187	P	P	15 42 04.6	+1.0
CASY				IAmb	IAmb	15 43 32.4	
	comp=Z,20nm,1.5s						
MK31	Makanchi Array	65.60	329	P	P	15 42 40.7	+0.7
MK31				IAmb	IAmb	15 42 41.9	
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	65.60	329	P	P	15 42 41.2	+1.2
	comp=Z,3.9nm,0.5s,baz=127,slow=7.6,SNR=63						
	comp=Z,3.9nm,0.5s						
MKAR	Makanchi Array	65.60	329	P	P	15 42 41.0	+1.1
MAKZ	Makanchi	65.77	329	P	P	15 42 41.0	0.0
PETK	Petropavlovsk-	65.99	21	P	P	15 42 42.9	+0.7
	comp=Z,1.6nm,0.5s,baz=208,slow=4.3,SNR=7.9						
	comp=Z,1.6nm,0.5s						
PETK	Petropavlovsk-	65.99	21	P	P	15 42 42.7	+0.5
BOOM	Boomskoye usch	66.45	322	P	P	15 42 45.7	+0.2
BOOM				IAmb	IAmb	15 42 47.7	
	comp=Z,12nm,1.7s						
ZAA0	Zalesovo Array	69.48	336	P	P	15 43 03.1	-0.4
ZALV	Zalesovo Beam	69.48	336	P	P	15 43 03.7	+0.3
	comp=Z,2.9nm,0.6s,baz=144,slow=4.4,SNR=11						
	comp=Z,2.9nm,0.6s						
VNDA	Vanda	73.08	172	P	P	15 43 24.8	+0.7
	comp=Z,0.3nm,0.4s,baz=322,slow=1.2,SNR=1.9						
	comp=Z,0.3nm,0.4s						
TIXI	Tiksi	78.54	1	P	P	15 43 53.9	-0.4
TIXI				IAmb	IAmb	15 43 55.6	
	comp=Z,2.7nm,0.5s						
ABKAR	Akbulak array	79.47	323	P	P	15 44 00.2	+0.5
QSPA	South Pole Qui	82.97	180	P	P	15 44 18.3	+0.6
	comp=Z,0.3nm,0.5s,baz=123,slow=2.3,SNR=7.7						
	comp=Z,0.3nm,0.5s						
QSPA	South Pole Qui	82.97	180	P	P	15 44 18.7	+1.0
QSPA				IAmb	IAmb	15 47 22.0	
	comp=Z,22nm,1.9s						

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*CRAAG **20** 15:52:34.1,36°.34N×3°.50E,Ml3.2*

*MDD **20** 15:52:37.2±1.3,36°.25N×3°.61E,h24^{km}±24^{km},Mb3.8/8, Error ellipse: s-maj=22.2km s-min=7.2km az=141.0*

ISC 20 15:52:34.4±1.4,**36°.2N**±0°.1×**3°.57E**±0°.08,**h29**^{km}±12^{km},**n12,** σ**2**^{s}**.04**/15,**7C,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.10	273	P	Pb	15 52 39.4	-0.4
AKET	Djebel Ketaf	0.28	112	P	Pb	15 52 41.6	-0.1
EBNR	Beni Rached	1.65	275	P	Pn	15 52 53.0	-8.4
ECHA	Ech Chlef	1.78	271	P	Pn	15 52 58.0	-5.1
EANR	'Ain N'Sour	2.01	265	P	Pn	15 53 05.4	-1.0
EIBI	Ibiza	3.37	329	Pn	Pn	15 53 26.3	+1.3
EIBI				⇑*i*Vmb_V		15 53 28.8	
	238nm,SNR=1.3						
EIBI				Sn	Sn	15 54 02.1	-1.9
ETOS	Mallorca	3.66	351	Pn	Pn	15 53 29.7	+0.6
ETOS				⇑*i*Vmb_V		15 53 34.9	
	248nm,SNR=1.2						
ETOS				Sn	Sn	15 54 09.1	-2.0
EBEN2	Beniarda presa	3.91	311	Pn	Pn	15 53 35.0	+2.5
EBEN2				⇑*i*Vmb_V		15 53 40.0	
	55nm,SNR=2.4						
EBEN2				Sn	Sn	15 54 16.4	-1.0
ETOB	Tobarra	4.77	303	Pn	Pn	15 53 47.0	+2.6
ETOB				⇑*i*Vmb_V		15 53 51.1	
	83nm,SNR=1.7						
ETOB				Sn	Sn	15 54 38.1	-0.6
ECHE	Chera	4.96	315	Pn	Pn	15 53 49.1	+2.1
ECHE				⇑*i*Vmb_V		15 53 51.5	
	46nm,SNR=1.8						
EMOS	Mosqueruela	5.27	324	Pn	Pn	15 53 52.9	+1.6
EMOS				⇑*i*Vmb_V		15 53 56.0	
	78nm,SNR=3.8						
EMOS				Sn	Sn	15 54 48.3	-2.8
EQES	Quesada	5.56	289	Pn	Pn	15 53 57.6	+2.3
EQES				⇑*i*Vmb_V		15 54 04.4	
	58nm,SNR=3.5						

NOU 20 15:56:21.4,17°.32S×167°.89E,h16^{km}**,MLv4.2**/15, **Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.49	145	P	Pb	15 56 32.4	+0.7
RTV	Rentapao	0.69	133	P	Pb	15 56 35.1	0.0
LIFNC	LIFOU	3.49	190	P	Pn	15 57 14.1	-1.0
MARNC	Mare, Loyalty	4.14	178	P	Pn	15 57 23.4	-0.6
YATNC	Mamie plateau,	4.81	191	P	Pn	15 57 33.4	+0.2
DZM	Mont Dzumac	4.92	196	P	Pn	15 57 35.5	+0.7
OUENC	Ouen Island, N	5.17	191	P	Pn	15 57 37.7	-0.4
PINNC	Pines Island,	5.28	184	P	Pn	15 57 39.8	+0.1

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*KRSC **20** 16:03:37.1±1.1,56°.20N×162°.98E,h6^{km}±4^{km},ML3.7*

*IDC **20** 16:03:38.9±1.9,55°.32N×164°.10E,h0^{km},mb3.2/2, mbtmp3.1/3,ML2.0/1,Error ellipse: s-maj=143.3km s-min=32.5km az=149.0*

ISC 20 16:03:38.7±0.9,**56°.20N**±0°.05×**162°.85E**±0°.04,**h10**^{km}**,n34,** σ**1**^{s}**.97**/33,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.02	298	*i* P	Pg	16 03 40.5	0.0
KBG	Krutoberegovo	0.10	305	*e*P	Pg	16 03 40.7	-0.5
KBG				*e*S	Sg	16 03 42.8	-0.2
SMKR	Semkarok	0.86	297	*e*P	Pg	16 03 54.7	-0.5
BDR	Baidarnaya	0.98	293	*e*P	Pg	16 03 57.2	-0.4
SRKR	Sorokina	1.04	297	*e*P	Pg	16 03 58.2	-0.4
KLY	Klyuchi	1.23	276	*e*P	Pn	16 03 59.2	-2.7
KLY				*e*S	Sb	16 04 15.3	-2.6
BZGR	Bezymyannyi-Gr	1.23	259	*e*P	Pb	16 04 01.9	-0.2
BZWR	Bezymyannyi-We	1.34	261	*e*P	Pb	16 04 03.5	-0.5
KPT	Kopyto	1.49	262	*e*P	Pg	16 04 07.2	-0.1
KMNR	Kamenistaya	1.53	254	*e*P	Pb	16 04 07.2	0.0
KOZ	Kozyrevsk	1.67	266	*e*P	Pb	16 04 09.2	-0.3
TUMD	Tumrok D	1.71	235	*e*P	Pb	16 04 09.5	-0.7
MKZ	Mys Kozlova	1.77	202	*e*P	Pg	16 04 11.0	-1.5
TUMR	Tumrok	1.78	240	*e*P	Pb	16 04 11.2	-0.3
TUMR				*e*S	Sg	16 04 35.9	0.0
BKI	Bering	2.03	118	*e*P	Pb	16 04 13.4	-2.2
ESO	Esso	2.34	265	*e*P	Pb	16 04 20.5	-0.5
SPN	Mys Shipunski	3.51	209	*e*P	Pn	16 04 34.8	+1.5
SDLR	Sedlovina	3.72	220	*e*P	Pn	16 04 38.3	+2.0
SMAR	Somma	3.76	220	*e*P	Pn	16 04 39.8	+2.9
GNL	Ganaly	3.78	230	*e*P	Pn	16 04 39.9	+2.8
UGLR	Uglovaya	3.80	220	*e*P	Pn	16 04 39.5	+2.2
KOK	Koryaka	3.80	222	*e*P	Pb	16 04 41.4	-4.5
DALK	Dalny	3.97	219	*e*P	Pn	16 04 42.0	+2.5
PET	Petropavlovsk	4.01	219	*e*P	Pn	16 04 43.0	+2.9
PETK	Petropavlovsk-	4.30	226	Pn	Pn	16 04 46.4	+2.2
	0.4nm,0.3s,baz=60,slow=14,SNR=17						
	1.1nm,0.5s						
KRMR	Karymshinskiy	4.35	221	*e*P	Pb	16 04 49.9	-5.3
RUS	Russkaya	4.55	216	*e*P	Pn	16 04 49.6	+2.1
GRL	Gorelyy	4.60	219	*e*P	Pn	16 04 50.5	+2.2
ASAK	Asacha	4.80	219	*e*P	Pn	16 04 54.4	+3.4
H11N2	WAKE ISLAND Hy	36.54	174	T	T	16 49 34.8	
	baz=358						
H11N3	WAKE ISLAND Hy	36.55	174	T	T	16 49 36.0	
	baz=358						
H11N1	WAKE ISLAND Hy	36.56	174	T	T	16 49 36.2	
	baz=358						
YKA	Yellowknife Ar	39.82	46	P	P	16 11 13.9	+2.4
	0.2nm,0.7s,baz=299,slow=7.7,SNR=2.4						
	0.2nm,0.7s						
TXAR	Lajitas Array	68.01	70	P	P	16 14 37.7	-0.3
	0.2nm,0.7s,baz=304,slow=5.3,SNR=1.9						
	0.2nm,0.7s						

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*KRSC **20** 16:04:16.9±0.5,56°.24N×162°.95E,h11^{km}±3^{km},ML3.8*

*IDC **20** 16:04:19.1±2.0,56°.06N×163°.30E,h0^{km},mb3.4/2, mbtmp3.3/3,ML2.0/1,MS2.6/1,Error ellipse: s-maj=132.7km s-min=33.2km az=142.0*

ISC 20 16:04:18.4±2.6,**56°.2N**±0°.1×**162°.97E**±0°.09,**h0**^{km}±19^{km}, **n13,**σ**1**^{s}**.28**/10,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.09	251	*i* P	Pg	16 04 20.6	+0.5
KBG	Krutoberegovo	0.15	277	*e*P	Pg	16 04 20.8	-0.4
KBG				*e*S	Sg	16 04 23.1	0.0
TUMD	Tumrok D	1.79	236	*e*S	Sb	16 05 12.5	-2.4
BKI	Bering	1.99	120	*e*S	Sn	16 05 17.7	-1.0
SPN	Mys Shipunski	3.58	210	*e*S	Sn	16 05 57.6	-0.4
DALK	Dalny	4.04	219	*e*S	Sn	16 06 10.5	+1.2
PETK	Petropavlovsk-	4.38	226	Pn	Pn	16 05 26.9	+0.9
	0.4nm,0.3s,baz=61,slow=13,SNR=5.9						
	1.6nm,0.5s						
ASAJ	Asahikawa	17.73	235	LR	LR	16 16 18.9	
	comp=Z,19nm,19.5s,baz=322,slow=40						
H11N2	WAKE ISLAND Hy	36.57	174	T	T	16 50 07.9	
	baz=357,slow=76,SNR=60						
H11N3	WAKE ISLAND Hy	36.58	174	T	T	16 50 13.2	
	baz=357,slow=76,SNR=54						
H11N1	WAKE ISLAND Hy	36.59	174	T	T	16 50 11.3	
	baz=357,slow=76,SNR=56						
YKA	Yellowknife Ar	39.74	46	P	P	16 11 52.0	-0.1
	0.1nm,0.4s,baz=299,slow=7.5,SNR=3.1						
	0.1nm,0.4s						
TXAR	Lajitas Array	67.93	70	P	P	16 15 19.4	+0.6
	0.4nm,0.7s,baz=316,slow=5.0,SNR=5.5						
	0.4nm,0.7s						

MEX 20 16:05:29.5±0.5,**16°.27N**×**98°.00W,h11**^{km}±30^{km}**,MD3.4,** **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.17	315	*i* P	Pg	16 05 31.2	-2.1
PNIG				*e*S	Sg	16 05 33.8	-2.1
PNIG	Pinotepa	0.17	315	*i* P	Pg	16 05 31.2	-2.0
PNIG				*e*S	Sg	16 05 33.8	-2.1
YOIG	Yosondua	0.73	37	*e*P	Pg	16 05 41.6	-2.0
YOIG				*e*S	Sg	16 05 51.7	-1.5
YOIG	Yosondua	0.73	37	*i* P	Pg	16 05 41.7	-2.0
YOIG				*e*S	Sg	16 05 51.8	-1.4
TXIG	Tlaxiaco	1.00	13	*e*P	Pg	16 05 46.0	-2.8
TXIG				*e*S	Sg	16 05 59.2	-2.7
TXIG	Tlaxiaco	1.00	13	*i* P	Pg	16 05 46.1	-2.8
TXIG				*e*S	Sg	16 05 58.4	-3.5
CRIG	Cruz Grande	1.18	293	*i* P	Pb	16 05 48.2	-3.7
CRIG				*e*P	Pb	16 05 48.2	-3.7
CRIG				*e*S	Sb	16 06 02.4	-4.7
HLIG	Huajuapan de L	1.56	7	*e*P	Pn	16 05 54.9	-2.5
HLIG				*e*S	Sn	16 06 13.6	-4.1
HLIG	Huajuapan de L	1.56	7	*e*P	Pn	16 05 55.9	-1.5
HLIG				*e*S	Sn	16 06 15.8	-1.9
FTIG	Fresnillo de T	1.63	356	*e*P	Pn	16 05 56.1	-2.1
FTIG				*e*S	Sn	16 06 16.2	-3.1
FTIG	Fresnillo de T	1.63	356	*e*P	Pn	16 05 55.9	-2.4
FTIG				*e*S	Sn	16 06 16.5	-2.8
TOIG	Toxpalan	2.02	26	*e*P	Pn	16 05 60.0	-3.7
TOIG				*e*S	Sn	16 06 26.0	-3.0
TOIG	Toxpalan	2.02	26	*e*P	Pn	16 06 00.9	-2.8
TOIG				*e*S	Sn	16 06 23.6	-5.3

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*IDC **20** 16:20:48.8±4.0,6°.11N×125°.91E,h0^{km},mb3.6/3, mbtmp3.6/3,MS2.8/1,Error ellipse: s-maj=172.2km s-min=73.0km az=72.0*

*MAN **20** 16:20:57.5,6°.23N×126°.06E,h18^{km},mb4.6,ML3.5,MS3.4, Hypocentre not reviewed by the ISC*

ISC 20 16:20:56.3±1.0,**6°.06N**±0°.09×**126°.15E**±0°.09,**h50**^{km}**,n10,** σ**0**^{s}**.98**/10,**mb3.3**/3,**5D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.44	276	⇓*e*P	Pn	16 21 07.0	+0.2
MATI	Mati	0.89	7	⇓*e*P	Pn	16 21 11.1	-1.5
DAV	Davao City (W)	1.15	331	LR	LR	16 21 51.5	
	comp=Z,49nm,20.0s,baz=144,slow=62						
KCP	Kidapawan	1.41	312	⇓*i*P	Pn	16 21 19.1	-0.5
KCP				*i* S	Sn	16 21 36.7	-0.5
CTBH	Cotabato--PC H	2.21	301	⇓*i*P	Pn	16 21 39.6	+9.1
CTBH				*i* S	Sn	16 21 57.0	+0.2
GLSP	General Luna,	3.70	360	⇓*e*P	Pn	16 21 52.9	+1.9
WRA	Warramunga Arr	27.07	163	P	P	16 26 34.7	+0.4
	0.4nm,0.5s,baz=344,slow=10,SNR=11						
	0.4nm,0.5s						
ASAR	Alice Springs	30.50	166	P	P	16 27 04.5	-0.3
	0.3nm,0.7s,baz=340,slow=7.2,SNR=13						
ASAR				PcP	PcP	16 30 03.2	0.0
	0.8nm,1.1s,baz=348,slow=1.9,SNR=4.1						
	0.3nm,0.7s						
STKA	Stephens Creek	40.50	160	P	P	16 28 30.5	0.0
	0.6nm,0.4s,baz=349,slow=10,SNR=3.2						
	0.6nm,0.4s						
KVAR	Kislovodsk Arr	81.11	313	LR	LR	17 13 04.1	
	comp=Z,5.5nm,20.2s,baz=26,slow=39						

NOU 20 16:33:58.2,15°.83S×166°.98E,h13^{km}**,MLv4.1**/12, **Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.44	29	P	Pb	16 34 07.7	-0.1
DVP	Devils Point	2.21	149	P	Pn	16 34 34.1	-0.5
RTV	Rentapao	2.39	145	P	Pn	16 34 36.9	-0.2
YATNC	Mamie plateau,	6.20	181	P	Pn	16 35 28.5	-0.9
DZM	Mont Dzumac	6.23	185	P	Pn	16 35 29.1	-0.9
OUENC	Ouen Island, N	6.55	181	P	Pn	16 35 35.4	+1.0
PINNC	Pines Island,	6.76	176	P	Pn	16 35 37.8	+0.6

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*NOU **20** 16:35:13.4,33°.00S×176°.71W,h0^{km},mb4.8/15,South of Kermadec Islands*

*IDC **20** 16:35:21.2±0.9,32°.42S×178°.05W,h0^{km},mb4.4/7, mbtmp4.4/9,ML3.8/2,MS3.6/17,Error ellipse: s-maj=25.2km s-min=21.7km az=87.0*

*NEIC **20** 16:35:22.7±1.6,32°.46S±0°.08×178°.0W±0°.2,h10^{km}±1^{km}, mb4.8/18,Error ellipse: s-maj=27.0km s-min=13.0km az=100.0*

ISC 20 16:35:21.9±0.7,**32°.61S**±0°.05×**178°.0W**±0°.1,**h10**^{km}**,n95,** σ**2**^{s}**.32**/91,**mb4.7**/15,**MS3.6**/16,**1D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.33	1	P	Pn	16 36 12.6	-1.5
GLKZ				S	Sn	16 36 49.9	-3.9
RAO	Raoul Island	3.34	1	Pn	Pn	16 36 12.6	-1.6
	44nm,0.3s,baz=86,slow=23,SNR=2.0						
RAO				Sn	Sn	16 36 50.6	-3.4
	95nm,0.3s,baz=131,slow=21,SNR=2.5						
	180nm,0.3s						
RAO	Raoul Island	3.34	1		Pn	16 36 10.3	-3.9
RIZ	Raoul Island	3.35	1	P	Pn	16 36 13.4	-0.9
RIZ				S	Sn	16 36 50.4	-3.8
MXZ	Matakaoa Point	5.79	210	Pn	Pn	16 36 46.4	-1.5
WMGZ	Waiomatatini S	5.97	208	P	Pn	16 36 46.2	-4.1
WMGZ				S	Sn	16 37 57.2	-1.5
PKGZ	Pakihiroa	6.17	210	P	Pn	16 36 51.0	-2.1
PKGZ				S	Sn	16 37 59.4	-4.3
HAZ	Te Kaha	6.19	213	P	Pn	16 36 52.1	-1.2
HAZ				S	Sn	16 38 03.1	-1.0
PUZ	Puketiti	6.25	208	P	Pn	16 36 51.8	-2.3
PUZ				S	Sn	16 38 02.7	-2.9
RUGZ	Raukumara Rang	6.41	212	P	Pn	16 36 56.0	-0.4
RUGZ				S	Sn	16 38 08.3	-1.4
TWGZ	Tauwhareparae	6.45	209	P	Pn	16 36 55.6	-1.4
TWGZ				S	Sn	16 38 08.3	-2.4
CNGZ	Carnagh Statio	6.63	207	P	Pn	16 36 57.6	-1.7
CNGZ				S	Sn	16 38 12.1	-2.8
TKGZ	Te Karaka	6.73	209	P	Pn	16 36 59.0	-1.7
TKGZ				S	Sn	16 38 14.7	-2.7
MWZ	Matawai	6.78	211	P	Pn	16 36 59.8	-1.7
MWZ				S	Sn	16 38 15.9	-2.8
URZ	Urewera	6.91	214	Pn	Pn	16 37 01.2	-1.9
	6.2nm,0.3s,baz=308,slow=1.2,SNR=30						
URZ				Sn	Sn	16 38 18.7	-3.1
	20nm,0.3s,baz=28,slow=22,SNR=14						
URZ	Urewera	6.91	214		Pn	16 37 01.8	-1.3
URZ	Urewera	6.91	214	P	Pn	16 37 01.8	-1.3
RIGZ	Rimuhau	6.99	208	P	Pn	16 37 02.3	-2.1
RIGZ				S	Sn	16 38 21.3	-2.7
PRGZ	Paritu Road	7.13	207	P	Pn	16 37 03.6	-2.7
PRGZ				S	Sn	16 38 23.7	-3.7
OUZ	Omahuta	7.45	247	P	Pn	16 37 14.7	+4.1
BKZ	Black Stump Fm	7.92	213		Pn	16 37 14.4	-2.8
BKZ	Black Stump Fm	7.92	213	P	Pn	16 37 14.9	-2.2
HIZ	Hauiti	8.28	223	P	Pn	16 37 22.5	+0.5
KHZ	Kahutara	11.87	212	P	Pn	16 38 06.8	-4.3
RPZ	Rata Peaks	14.02	215	Pn	Pn	16 38 36.0	-4.6
	1.2nm,0.3s,baz=176,slow=18,SNR=1.5						
RPZ				Sn	Sn	16 40 59.7	-17
	1.6nm,0.3s,baz=353,slow=16,SNR=6.7						
RPZ	Rata Peaks	14.02	215	P	Pn	16 38 36.3	-4.3
ODZ	Otahua Downs	15.23	212	P	P	16 39 04.0	+2.1
ODZ				IAmb	IAmb	16 39 21.9	
	comp=Z,55nm,1.4s						
MSVF	Nonsavu	15.23	346	LR	LR	16 43 51.2	
	comp=Z,152nm,19.1s,baz=172,slow=34						
YATNC	Mamie plateau,	17.02	304	P	P	16 39 26.7	+4.7
DZM	Mont Dzumac	17.33	303	*e*P	P	16 39 30.7	+5.3
	comp=Z,63nm,1.4s						
DZM				*e*LR	LR	16 43 13.6	
	comp=Z,335nm,22.3s						
DZM	Mont Dzumac	17.33	303	P	Pn	16 39 23.7	-0.3
	comp=Z,0.1nm,0.3s,baz=112,slow=19,SNR=2.0						
DZM				LR	LR	16 45 00.2	
	comp=Z,499nm,18.8s,baz=193,slow=34						
	comp=Z,5.8nm,1.1s						
DZM	Mont Dzumac	17.33	303	P	P	16 39 29.9	+4.5
LIFNC	LIFOU	17.66	308	P	P	16 39 33.9	+4.9
RAR	Rarotonga	19.80	60	LR	LR	16 48 01.5	
	comp=Z,97nm,18.4s,baz=208,slow=38						
TBI	Tubuai	26.77	77	*e*LR	LR	16 47 32.5	
	comp=Z,90nm,38.2s						
EIDS	Eidsvold	27.92	277	P	P	16 41 12.6	+0.2
EIDS	Eidsvold	27.92	277	P	P	16 41 16.1	+3.8
RMQ	Roma	29.47	273	P	P	16 41 30.3	+4.1
PPT2	Papeete2	29.65	67	*e*LR	LR	16 49 06.9	
	comp=Z,55nm,20.2s,baz=229						
PPT	Papeete	29.66	67	LR	LR	16 52 38.7	
	comp=Z,73nm,18.1s,baz=295,slow=35						
CMSA	Cobar Meteorol	30.69	262	P	P	16 41 38.4	+1.5
STKA	Stephens Creek	34.04	260	P	P	16 42 07.5	+1.3
	comp=Z,0.8nm,0.4s,baz=96,slow=12,SNR=1.9						
STKA				LR	LR	16 55 38.1	
	comp=Z,183nm,18.1s,baz=38,slow=36						
	comp=Z,0.8nm,0.4s						
CTA	Charters Tower	34.21	282	P	P	16 42 09.2	+1.4
	comp=Z,12nm,0.6s,baz=118,slow=10.0,SNR=18						
CTA				LR	LR	16 54 40.6	
	comp=Z,111nm,18.3s,baz=138,slow=34						
	comp=Z,12nm,0.6s						
CTAO	Charters Tower	34.21	282		P	16 42 09.3	+1.5
CTAO				IAmb	IAmb	16 42 11.3	
	comp=Z,13nm,0.7s						
CTAO	Charters Tower	34.21	282	P	P	16 42 09.8	+2.0
INKA	Innaminka	35.83	267	P	P	16 42 23.7	+2.0
MTSU	Mount Surprise	36.76	284	P	P	16 42 31.7	+1.9
KRVT	Keravat (AS076	39.72	309	P	P	16 42 53.8	-0.9
	comp=Z,60nm,0.7s,baz=253,slow=0.8,SNR=11						
COEN	Coen	39.92	288	P	P	16 42 55.9	-0.4
COEN				IAmb	IAmb	16 43 17.9	
	comp=Z,11nm,1.0s						
AS31	Alice Springs	43.03	269	P	P	16 43 21.8	-0.2
ASAR	Alice Springs	43.03	269	P	P	16 43 21.8	-0.2
	comp=Z,9.3nm,0.8s,baz=107,slow=7.2,SNR=141						
	comp=Z,9.3nm,0.8s						
ASAR	Alice Springs	43.03	269	P	P	16 43 21.2	-0.7
WR0	Warramunga Arr	44.04	275	P	P	16 43 29.7	-0.3

WR0				IAmb	IAmb	16 43 31.2	
	comp=Z,13nm,1.1s						
WB2	**Warramunga Arr**	44.21	274	P	P	16 43 31.1	-0.3
WRAB	**Tennant Creek**	44.21	274	P	P	16 43 31.1	-0.4
WRAB				IAmb	IAmb	16 43 31.9	
	comp=Z,12nm,0.6s						
WRA	**Warramunga Arr**	44.22	274	P	P	16 43 31.2	-0.3
	comp=Z,6.8nm,0.3s,baz=112,slow=8.0,SNR=329						
WRA				LR	LR	17 01 55.6	
	comp=Z,73nm,18.4s,baz=176,slow=36						
	comp=Z,6.8nm,0.3s						
WRA	**Warramunga Arr**	44.22	274	P	P	16 43 30.2	-1.3
WB0	**Warramunga Arr**	44.25	275	P	P	16 43 31.5	-0.3
FORT	**Forrest**	45.52	257	P	P	16 43 40.8	-0.9
VNDA	**Vanda**	45.91	186	LR	LR	17 00 16.6	
	comp=Z,59nm,18.6s,baz=17,slow=32						
VNDA	**Vanda**	45.91	186	P	P	16 43 46.8	+2.7
MTN	**Manton Dam**	50.35	281	P	P	16 44 18.9	-0.5
MTN				IAmb	IAmb	16 44 19.6	
	comp=Z,9.8nm,0.7s						
KNRA	**Kununurra**	50.90	276	P	P	16 44 22.7	-0.7
KNRA				IAmb	IAmb	16 44 23.6	
	comp=Z,9.9nm,0.9s						
PSA00	**Pilbara Seismi**	55.73	265	P	P	16 44 56.2	-2.8
PSA00				IAmb	IAmb	16 45 04.2	
	comp=Z,7.0nm,1.1s						
SIJI	**Sorong**	57.16	293	LR	LR	17 08 59.7	
	comp=Z,40nm,20.4s,baz=50,slow=35						
QSPA	**South Pole Qui**	57.51	180	P	P	16 45 13.7	+2.6
	comp=Z,2.3nm,1.0s,baz=221,slow=1.1,SNR=6.0						
	comp=Z,2.3nm,1.0s						
QSPA	**South Pole Qui**	57.51	180	P	P	16 45 13.8	+2.7
QSPA				IAmb	IAmb	16 45 25.2	
	comp=Z,9.4nm,0.7s						
SOEI	**Soe**	57.69	280	P	P	16 45 13.2	+0.1
GUMO	**Guam**	58.05	316	LR	LR	17 09 29.6	
	comp=Z,19nm,18.3s,baz=82,slow=35						
KAPI	**Kappang**	64.01	281	LR	LR	17 13 14.5	
	comp=Z,74nm,18.8s,baz=84,slow=36						
LEM	**Lembang**	73.20	273	LR	LR	17 20 26.9	
	comp=Z,71nm,18.0s,baz=176,slow=37						
SNAA	**Sanae**	75.96	178	P	P	16 47 19.5	+11
SNAA	**Sanae**	75.96	178	P	P	16 47 10.1	+1.6
SNAA				IAmb	IAmb	16 47 27.6	
	comp=Z,6.3nm,1.1s						
VNA3	**Neumayer Olymp**	76.11	176	P	P	16 47 20.9	+11
VNA2	**Neumayer--Watz**	76.54	177	P	P	16 47 23.5	+12
	baz=171,slow=5.0						
VNA1	**Neumayer--Stat**	76.77	177	P	P	16 47 24.6	+12
LPIG	**La Paz**	85.70	58	LR	LR	17 21 06.1	
	comp=Z,41nm,18.0s,baz=279,slow=32						
KSRS	**Korea Array**	86.02	320	P	P	16 48 02.5	+0.1
	comp=Z,0.6nm,0.8s,baz=147,slow=4.9,SNR=3.2						
	comp=Z,0.6nm,0.8s						
PETK	**Petropavlovsk-**	87.94	346	P	P	16 48 11.8	+0.3
	comp=Z,3.4nm,0.9s,baz=136,slow=4.6,SNR=6.3						
	comp=Z,3.4nm,0.9s						
PETK	**Petropavlovsk-**	87.94	346	P	P	16 48 10.7	-0.7
KDAK	**Kodiak Island**	92.55	13	LR	LR	17 21 50.4	
	comp=Z,26nm,21.4s,baz=190,slow=30						
ATAH	**Atahualpa**	94.22	101	LR	LR	17 25 37.8	
	comp=Z,25nm,18.1s,baz=172,slow=32						
LPAZ	**La Paz**	97.24	114	LR	LR	17 28 15.3	
	comp=Z,11nm,18.3s,baz=159,slow=33						
CPUP	**Villa Florida**	98.62	129	LR	LR	17 27 19.8	
	comp=Z,13nm,18.1s,baz=142,slow=32						
MKAR	**Makanchi Array**	119.17	309	PKP	PKiKP	16 54 10.9	-0.1
	comp=Z,0.5nm,0.6s,baz=144,slow=0.9,SNR=5.6						
ARCES	**ARCESS Array B**	140.74	347	PKP	PKPdf	16 54 50.3	-0.6
	comp=Z,2.5nm,1.0s,baz=52,slow=1.5,SNR=1.3						
KBZ	**Khabaz**	146.29	301	PKPbc	PKPab	16 55 02.8	-0.5
	comp=Z,4.0nm,0.9s,baz=148,slow=4.8,SNR=6.3						
FINES	**FINESS Array B**	147.20	339	PKPbc	PKPab	16 55 05.5	-0.8
	comp=Z,12nm,0.8s,baz=40,slow=4.4,SNR=42						
FINES	**FINESS Array B**	147.20	339		PKPab	16 55 05.6	-0.7
NB2	**NORSAR Subarra**	150.92	351	PKP	PKiKP	16 55 14.9	+0.2
	comp=Z,14nm,1.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	150.92	351	PKPbc	PKPbc	16 55 14.2	+0.1
	comp=Z,1.5nm,0.9s,baz=16,slow=4.1,SNR=3.9						
NOA				PKPab	PKPab	16 55 21.1	-0.3
	comp=Z,2.0nm,0.7s,baz=18,slow=3.0,SNR=8.4						
AKASG	**Malin Array Be**	153.02	320	PKPbc	PKiKP	16 55 19.2	-0.1
	comp=Z,1.1nm,0.6s,baz=45,slow=2.3,SNR=6.9						
BRTR	**Keskin Array B**	153.58	295	PKPbc	PKiKP	16 55 21.8	+0.7
	comp=Z,2.1nm,0.7s,baz=134,slow=3.6,SNR=8.0						
CLL	**Collm**	159.64	340	⇓*i*PKPab	PKPab	16 55 59.7	+0.8
	comp=Z,9.0nm,1.4s						
TORD	**Torodi Ar. Bea**	160.63	179	PKPab	PKPab	16 56 04.9	+0.9
	comp=Z,0.5nm,0.7s,baz=164,slow=3.4,SNR=4.3						

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*JMA **20** 16:39:40.4±0.5, 32°N±2°×13°8E±°, h398^{km}±4^{km}, MV3.0/21, FAR S OFF TOKAI DISTRICT*

*IDC **20** 16:39:44.3±1.0, 32°.43N×138°.10E, h336^{km}±12^{km}, mb2.8/7, mbtmp3.7/13, Error ellipse: s-maj=21.0km s-min=10.1km az=69.0*

ISC 20 16:39:46.0±0.7**, 32°.44N**±0°.07×**138°.13E**±0°.07**, h376**^{km}**, n26,** σ**2^{s}45**/34**, mb3.0**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	1.53	348	P	Pn	16 40 35.1	-1.4
TTO3	**TONANKAI O.B.S**	1.54	337	P	Pn	16 40 35.3	-1.4
JHJ	**Hachijo jima 2**	1.55	64	P	Pn	16 40 36.5	-0.4
	169nm,0.9s,baz=254,slow=21,SNR=1.6						
JHJ				S	S	16 41 17.8	-0.2
	361nm,1.0s,baz=43,slow=22,SNR=2.1						
TTO1	**TONANKAI O.B.S**	1.63	317	P	Pn	16 40 35.3	-1.6
JIE	**Ise**	2.28	329	P	Pn	16 40 39.4	-2.0
JTNC	**Tanabenakahech**	2.52	304	P	Pn	16 40 40.7	-2.6
JWY	**Kouya**	2.76	311	P	Pn	16 40 43.2	-2.1
JOD2	**Odawara 2**	2.92	16	*e*P	Pn	16 40 45.1	-1.5
JOD2				*e*S	S	16 41 35.2	-0.3
BSO1	**Boso 1**	3.24	46	*e*P	Pn	16 40 46.6	-2.1
BSO1				*e*S	S	16 41 38.8	-0.8
JAI	**Aioi**	3.36	295	*e*P	Pn	16 40 47.8	-2.6
JRY	**Ryogami san**	3.62	10	P	Pn	16 40 52.0	-0.8
JRY				*e*S	S	16 41 46.9	-0.1
JWT	**Wachi**	3.63	322	P	Pn	16 40 50.6	-2.2
JMN	**Monobe**	3.79	291	P	Pn	16 40 52.2	-2.2
MJAR	**Matsushiro Arr**	4.09	1	P	Pn	16 40 54.5	-2.8
	3.2nm,0.8s,baz=182,slow=9.9,SNR=7.6						
MJAR				S	S	16 41 49.8	-5.3
	1.4nm,0.7s,baz=211,slow=22,SNR=4.2						
JCJ	**Chichijima**	6.39	145	P	Pn	16 41 19.3	-2.9
	21nm,0.4s,baz=0.3,slow=20,SNR=28						
JCJ				S	S	16 42 33.6	-6.8
	16nm,0.3s,baz=301,slow=23,SNR=5.6						
KSRS	**Korea Array**	9.75	304	P	Pn	16 42 00.1	-0.7
	2.2nm,0.4s,baz=116,slow=12,SNR=19						
KSRS				S	S	16 43 50.5	-1.1
	3.2nm,0.8s,baz=121,slow=39,SNR=11						
ASAJ	**Asahikawa**	12.17	15	P	P	16 42 29.4	+1.3
	1.1nm,0.4s,baz=131,slow=33,SNR=1.8						
ASAJ				S	S	16 44 38.3	-4.2
	1.4nm,0.7s,baz=88,slow=22,SNR=1.9						
USRK	**Ussuriysk Ar.**	12.68	339	P	P	16 42 34.3	+0.5
	9.2nm,0.7s,baz=158,slow=11,SNR=28						
KLR	**Kul'dur**	17.44	346	P	P	16 43 24.7	-0.6
	1.1nm,0.4s,baz=164,slow=8.9,SNR=4.8						
SONM	**Songino Array**	28.47	312	P	P	16 45 08.6	+0.6
	0.4nm,0.7s,baz=109,slow=7.8,SNR=2.2						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	43.17	316	P	P	16 47 12.1	+1.1
	0.4nm,0.3s,baz=89,slow=8.5,SNR=2.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	44.42	306	P	P	16 47 22.0	+1.0
	0.8nm,0.4s,baz=85,slow=10,SNR=17						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	52.22	185	P	P	16 48 22.4	+2.4
	0.3nm,0.3s,baz=0.1,slow=7.6,SNR=10						
	0.3nm,0.3s						
ILAR	**Eielson Array**	54.81	30	P	P	16 48 39.4	+1.4
	0.2nm,0.6s,baz=287,slow=7.2,SNR=1.5						
	0.2nm,0.6s						
ASAR	**Alice Springs**	55.94	185	P	P	16 48 48.7	+2.2
	0.2nm,0.7s,baz=14,slow=9.9,SNR=4.7						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	69.12	28	P	P	16 50 15.5	+3.3
	0.2nm,0.5s,baz=298,slow=6.4,SNR=3.1						
	0.2nm,0.5s						

IDC 20 16:57:36.7±1.3**, 11°.56S**×**165°.24E, h0**^{km}**, mb4.1**/2**, mbtmp4.1**/3**, ML3.2**/1**, Error ellipse: s-maj=49.3km s-min=28.4km az=110.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	10.52	174	Pn	Pn	17 00 09.3	+0.4
	0.2nm,0.3s,baz=44,slow=11,SNR=8.8						
DZM				Sn	Sn	17 02 07.7	+0.2
	baz=328,slow=18,SNR=1.4						
	4.4nm,0.9s						
ASAR	**Alice Springs**	32.12	244	P	P	17 04 06.0	-0.1
	1.4nm,0.7s,baz=80,slow=10.0,SNR=29						
	1.4nm,0.7s						
ILAR	**Eielson Array**	84.16	19	P	P	17 10 09.3	-0.1
	1.3nm,0.6s,baz=239,slow=5.5,SNR=16						
	1.3nm,0.6s						
ARCES	**ARCESS Array B**	116.70	345	PKP	PKPdf	17 16 22.4	-0.1
	1.8nm,0.8s,baz=64,slow=2.1,SNR=9.9						

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*HEL **20** 17:00:57.8, 67°.21N×20°.34E, h0^{km}, ML1.9, Explosion*

*UPP **20** 17:01:01.8±0.1, 67°.05N×20°.86E, h0^{km}, ML2.1, Explosion*

*IDC **20** 17:01:02.6±1.1, 67°.09N×20°.82E, h0^{km}, mbtmp2.6/3, ML1.9/3, Error ellipse: s-maj=14.0km s-min=7.5km az=134.0*

*KOLA **20** 17:01:04.0, 66°.98N×20°.68E, h0^{km}, ML2.4*

ISC 20 17:01:02.1±0.8**, 67°.05N**±0°.02×**20°.84E**±0°.03**, h0**^{km}**, n46,** σ**1^{s}57**/58**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	0.13	304	P	Pg	17 01 04.6	+0.1
DUNU	**Dundret**	0.13	304	*i* P	Pg	17 01 04.6	+0.1
MASU	**Masugnsbyn**	0.61	47	P	Pg	17 01 13.4	-0.4
MASU				S	Sg	17 01 21.4	-0.2
MASU	**Masugnsbyn**	0.61	47	*i* P	Pg	17 01 13.4	-0.4
MASU				*i* S	Sg	17 01 21.4	-0.2
ERTU	**Ertsjaerv**	0.73	132	P	Pg	17 01 15.4	-0.7
ERTU	**Ertsjaerv**	0.73	132	*e*P	Pg	17 01 15.6	-0.5
PAJU	**Pajala**	0.89	91	P	Pg	17 01 17.8	-1.4
PAJU	**Pajala**	0.89	91	*e*P	Pg	17 01 17.7	-1.4
	baz=282						
PAJU				*e*SB	Sb	17 01 32.9	0.0
HARU	**Harads**	0.89	177	P	Pg	17 01 18.9	-0.3
HARU	**Harads**	0.89	177	*i* P	Pg	17 01 18.9	-0.3
RATU	**Laukkuluspa**	0.91	329	P	Pg	17 01 19.2	-0.4
RATU	**Laukkuluspa**	0.91	329	*e*P	Pg	17 01 19.2	-0.4
NIKU	**Nikkaluokta**	1.08	320	P	Pg	17 01 21.8	-0.9
NIKU	**Nikkaluokta**	1.08	320	*e*P	Pg	17 01 21.8	-0.9
LANU	**Lannavaara**	1.09	23	P	Pg	17 01 22.2	-0.9
LANU	**Lannavaara**	1.09	23	*e*PN	Pg	17 01 21.5	-1.6
LANU				*e*SN	Sb	17 01 38.8	0.0
KLF	**Kolari**	1.23	80	*e*PG	Pg	17 01 24.0	-1.7
	baz=268						
KALU	**Kalix**	1.57	139	P	Pn	17 01 31.3	+0.1
KALU	**Kalix**	1.57	139	*e*PG	Pn	17 01 30.9	-0.3
KALU				*e*SN	Sg	17 01 56.4	+4.0
SJUU	**Sjulsmark**	1.58	168	P	Pn	17 01 31.1	-0.2
SJUU	**Sjulsmark**	1.58	168	*e*P	Pn	17 01 31.1	-0.2
TOF	**Tornio**	1.70	123	*e*PN	Pn	17 01 33.0	0.0
TOF				MSG		17 01 55.9	
	comp=Z,21nm,0.2s						
TOF				*e*SG	Sg	17 01 58.0	+1.3
HEF	**Hetta**	1.73	37	*e*P	Pn	17 01 32.9	-0.6
HEF	**Hetta**	1.73	37	MSG		17 01 49.9	
	comp=Z,5.8nm,0.2s						
KIF	**Kilpisjarvi**	1.96	360	*e*P	Pb	17 01 38.2	-0.5
KIF	**Kilpisjarvi**	1.96	360	*e*P	Pn	17 01 31.3	-5.3
KIF				MSG		17 01 53.0	
	comp=Z,3.6nm,0.2s						
RNF	**Rovaniemi**	2.09	100	*e*PB	Pn	17 01 38.6	+0.2
RNF				*e*SB	Sb	17 02 08.1	+0.7
I37NO	**I37NO**	2.20	339	*i*		17 14 37.9	
	comp=Z,0.1nm,0.6s,baz=157,slow=323,SNR=18						
SGF	**Sodankyl**	2.25	77	*e*PB	Pn	17 01 40.8	+0.3
SGF				*e*SG	Sb	17 02 12.9	+1.1
OUL	**Oulu**	2.85	131	*e*PB	Pb	17 01 52.2	-1.6
	baz=312						
OBF0	**Syolatti, Pyha**	2.92	150	*e*PG	Pb	17 01 54.0	-1.0
	baz=332						
ARCES	**ARCESS Array B**	3.04	33	Pn	Pn	17 01 50.9	-0.5
	comp=Z,0.2nm,0.3s,baz=214,slow=14,SNR=32						
ARCES				Sn	Sn	17 02 30.2	+1.7
	comp=Z,0.5nm,0.3s,baz=216,slow=21,SNR=10						
	comp=Z,1.3nm,0.7s						
ARCES	**ARCESS Array B**	3.04	33	P	Pn	17 01 52.8	+1.4
ARCES				S	Sn	17 02 31.2	+2.8
OUF	**Merijarvi**	3.14	147	*e*PB	Pb	17 01 56.0	-2.7
UMAU	**Umeaa**	3.18	181	*e*PB	Pn	17 01 55.1	+1.7
VRF	**Varrio**	3.46	74	*e*PG	Pb	17 02 02.1	-2.0
MSF	**Maaselka**	3.48	105	*e*PB	Pn	17 01 59.7	+2.3
OLKF	**Oulanka, Finla**	3.48	98	*e*PB	Pn	17 01 59.5	+2.0
KEV	**Kevo**	3.54	37	*e*PB	Pn	17 01 58.5	+0.2
KEV				*e*SB	Sn	17 02 42.6	+1.8
KU6	**Riekki**	3.76	102	*e*PB	Pn	17 02 04.3	+3.0
HUSU	**Husum**	3.79	191	*e*PB	Pb	17 02 05.6	-4.1
VAF	**Ylistaro**	4.10	168	*e*PB	Pn	17 02 09.2	+3.2
APA0	**Apatity Array**	4.74	78	P	Pn	17 02 16.4	+1.8
APA0				S	Sn	17 03 10.3	+0.1
PRVG	**Vayda Guba**	4.99	52	P	Pn	17 02 21.2	+3.1
PRVG				S	Sn	17 03 17.5	+1.1
FINES	**FINESS Array B**	6.07	156	Pn	Pn	17 02 34.6	+1.6
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=5.2						
FINES				Sn	Sn	17 03 43.3	+0.2
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=1.2						
FINES				Lg	Lg	17 04 10.8	
	comp=Z,0.1nm,0.3s,baz=346,slow=27,SNR=1.1						
	comp=Z,0.3nm,0.3s						
NOA	**NORSAR Array B**	7.36	219	Pn	Pn	17 02 50.3	-0.4
	baz=47,slow=19,SNR=1.4						
NOA				Sn	Sn	17 04 12.6	-2.1
	baz=22,slow=16,SNR=1.1						
	comp=Z,0.6nm,0.8s						

ASRS 20 17:03:18.4±0.2**, 52°N**±1°×**9°6E**±°**, h5**^{km}**, MLh3.2**/9**, Error ellipse: s-maj=3.3km s-min=2.1km az=23.8, confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZLR	**Kyzyl**	1.00	257	Pg	Pn	17 03 40.1	+1.1
KZLR				Sg	Sn	17 03 52.9	-0.6
KNGR	**Kungurtug, Tuv**	1.64	144	Pg	Pg	17 03 51.2	+1.4
KNGR				Sg	Sg	17 04 13.0	+2.1
ERNS	**Erzin**	1.77	198	Pg	Pb	17 03 51.6	+0.3
ERNS				Sg	Sb	17 04 14.0	+0.3
DJOS	**Djoyskaya Sosn**	2.96	289	Pg	Pg	17 04 18.1	+3.1
DJOS				Sg	Sg	17 04 56.6	+3.3
CERR	**Cheremushki**	2.96	290	Pg	Pg	17 04 15.8	+0.7
CERR				Sg	Sg	17 04 56.3	+2.8
DJO	**Djoy, Khakassi**	3.06	288	Pg	Pg	17 04 18.7	+1.8
DJO				Sg	Sg	17 04 58.6	+2.0
MOY	**Mondy**	3.10	93	Pg	Pg	17 04 16.9	-0.9
MOY				Sg	Sg	17 04 57.9	-0.1
MINR	**Mina**	3.16	341	Pg	Pg	17 04 22.5	+3.7
MINR				Sg	Sg	17 05 05.1	+5.4
GZLN	**Zheleznogorsk**	4.64	344	Pg	Pg	17 04 46.8	-0.4
GZLN				Sg	Sg	17 05 49.6	+2.3
LUZB	**Luzhba, Kemero**	4.65	295	Pn	Pb	17 04 35.5	-4.8
LUZB				Pg	Pg	17 04 48.1	+0.7
LUZB				Sg	Sg	17 05 45.4	-2.2
ZAK	**Zakamensk**	4.83	106	Pn	Pn	17 04 36.8	+5.0
ZAK				Pg	Pg	17 04 50.3	-0.6
ZAK				Sg	Sg	17 05 51.6	-1.8
TASR	**Tashtagol**	5.05	283	Sg	Sg	17 05 59.7	-0.9
CUR	**Chagan-Uzun**	5.18	252	Pn	Pn	17 04 42.1	+5.5
CUR				Pg	Pg	17 04 55.5	-2.0
CUR				Sg	Sg	17 06 02.3	-2.2
ULGR	**Ulagan, Altay**	5.22	259	Pn	Pb	17 04 43.7	-6.5
ULGR				Pg	Pg	17 04 59.7	+1.3
ULGR				Sg	Sg	17 06 10.4	+4.3

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*SFS **20** 17:08:46.0, 35°.51N×3°.80W, ML2.8, ALBORAN SUR*

*MDD **20** 17:08:46.9±0.4, 35°.51N×3°.80W, h0^{km}, mb_Lg2.8/12, Error ellipse: s-maj=3.3km s-min=2.4km az=7.0*

*INMG **20** 17:08:47.7±2.0, 35°.52N×3°.78W, h0^{km}±10^{km}, ML2.3, Error ellipse: s-maj=5.8km s-min=4.5km az=88.0*

*IGIL **20** 17:08:47.8, 35°.51N×3°.80W, h2^{km}, ML2.2*

*CNRM **20** 17:08:47.0, 35°.58N×3°.82W, h21^{km}, ml2.6*

ISC 20 17:08:46.7±1.1**, 35°.53N**±0°.02×**3°.80W**±0°.02**, h12**^{km}±9^{km}**, n52,** σ**1^{s}37**/92**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	0.33	200	P	Pb	17 08 54.2	-0.4
PALE				S	Sb	17 09 00.7	+0.7
PVLZ	**Peæn de**	0.54	229	P	Pb	17 08 58.5	+0.3
PVLZ				S	Sb	17 09 06.3	+0.3
GOG	**Mont Gurugu**	0.72	115	P	Pb	17 09 02.0	+0.6
GOG	**Mont Gurugu**	0.72	115	P	Pb	17 09 00.9	-0.5
GOG				S	Sb	17 09 11.8	+0.5
WMELI	**Melilla**	0.72	107	P	Pb	17 09 00.8	-0.5
WMELI				S	Sg	17 09 09.6	-0.6
EMEL	**Melilla**	0.72	108	Pg	Pg	17 09 00.1	-0.7
EMEL				Sg	Sg	17 09 10.0	-0.2
EALB	**Alboran**	0.74	56	Pg	Pg	17 09 01.1	-0.1
EALB				Sg	Sb	17 09 12.7	+0.9
EALB				*i* Vmb_Lg		17 09 14.1	
CHAS	**Isla Isabel II**	1.17	107	P	Pb	17 09 07.5	-1.4
CHAS				S	Sb	17 09 22.1	-1.9
SMIR	**Smir Dam**	1.30	277	P	Pn	17 09 09.0	-1.8
SMIR	**Smir Dam**	1.30	277	P	Pn	17 09 09.0	-1.8
SMIR				S	Sb	17 09 26.8	-1.0
EMIJ	**Mijas**	1.30	323	Pg	Pn	17 09 10.0	-0.8
EMIJ				Sg	Sb	17 09 27.9	+0.1
EMIJ				*i* Vmb_Lg		17 09 32.7	
CHEFC	**Chefchaouen**	1.33	252	P	Pg	17 09 14.0	+1.7
CHEFC	**Chefchaouen**	1.33	252	P	Pg	17 09 12.1	-0.2
CHEFC				S	Sb	17 09 27.1	-1.7
EMAL	**Malaga-Limoner**	1.33	338	P	Pn	17 09 10.3	-0.9
EMAL				S	Sb	17 09 27.3	-1.5
CEU	**Ceuta**	1.33	287	P	Pn	17 09 09.8	-1.4
CEU				S	Sb	17 09 25.1	-3.7
ECEU	**Ceuta**	1.34	286	Pg	Pn	17 09 11.2	-0.1
ECEU				Sg	Sb	17 09 27.7	-1.2
ECEU				*i* Vmb_Lg		17 09 33.2	
TAF	**Taforalt**	1.34	122	P	Pn	17 09 10.7	-0.7
TAF				S	Sb	17 09 28.7	-0.3
ELGU	**Los Guajares,**	1.34	6	Pg	Pn	17 09 10.0	-1.4
ELGU				Sg	Sg	17 09 30.1	+0.1
ELGU				*i* Vmb_Lg		17 09 32.2	
EBER	**Berja**	1.55	28	Pg	Pn	17 09 13.9	-0.5
EBER				Sg	Sb	17 09 35.2	-0.1
EBER				*i* Vmb_Lg		17 09 56.9	
JBK	**JBK**	1.56	139	P	Pn	17 09 14.7	+0.1
JBK	**JBK**	1.56	139	P	Pn	17 09 14.6	+0.1
JBK				S	Sn	17 09 34.8	0.0
EGOR	**Sierra Gorda,**	1.60	351	Pg	Pn	17 09 14.4	-0.6
EGOR				Sg	Sb	17 09 37.1	+0.5
EGOR				*i* Vmb_Lg		17 09 39.4	
LCRM	**LCR**	2.04	206	P	Pg	17 09 28.0	+2.2
EQES	**Quesada**	2.34	14	Pn	Pn	17 09 27.0	+1.7
EQES				Sn	Sn	17 09 55.5	+1.5
EQES				*i* Vmb_Lg		17 09 59.7	
EADA	**Adamuz**	2.71	347	Pn	Pn	17 09 31.8	+1.7
EADA				Sn	Sn	17 10 04.7	+1.8
EADA				*i* Vmb_Lg		17 10 11.2	
MD31	**MD31**	2.77	197	P	Pn	17 09 32.4	+1.3
MD31				S	Sn	17 10 05.0	+0.4
MDT	**Midelt**	2.79	194	P	Pn	17 09 32.3	+1.0
MDT				S	Sn	17 10 05.3	+0.2
ECAB	**El Cabril**	2.85	333	Pn	Pn	17 09 33.0	+0.8
ECAB				Sn	Sn	17 10 08.2	+1.6
TDRA	**Tendrara**	2.88	149	P	Pb	17 09 35.3	-2.9
TDRA				S	Sn	17 10 07.1	-0.4
ZHG	**ZHG**	3.14	229	P	Pn	17 09 38.3	+2.2
EMIN	**Mina Concepcio**	3.21	315	Pn	Pn	17 09 37.6	+0.5
EMIN				Sn	Sn	17 10 16.8	+1.4
EMIN				*i* Vmb_Lg		17 10 29.1	
EGRO	**El Granado**	3.58	305	Pn	Pn	17 09 42.4	+0.3
EGRO				Sn	Sn	17 10 25.4	+1.0
EGRO				*i* Vmb_Lg		17 11 01.4	
ETOB	**Tobarra**	3.59	29	Pn	Pn	17 09 44.2	+1.8
ETOB				*i* Vmb_Lg		17 10 03.2	
PVAQ	**Vaqueiros**	3.67	302	*e*Pn	Pn	17 09 44.2	+0.8
PVAQ				*e*Sn	Sn	17 10 24.8	-1.8
PVAQ				A	A	17 10 28.5	
	4.9nm,0.4s						
PBAR	**Barrancos**	3.71	316	*e*Pn	Pn	17 09 44.4	+0.5
PBAR				*e*Sn	Sn	17 10 26.6	-0.9
PBAR				A	A	17 10 31.4	
	2.9nm,0.5s						
PCVE	**Castro Verde**	4.01	303	*e*Pn	Pn	17 09 49.3	+1.3
PCVE				*e*Sn	Sn	17 10 33.5	-1.4
PCVE				A	A	17 10 40.5	
	4.0nm,0.5s						
PBEJ	**Beja**	4.11	309	*e*Sn	Sn	17 10 36.4	-1.0
EBAD	**Badajoz**	4.12	322	Pn	Pn	17 09 50.3	+0.7
EBAD				Sn	Sn	17 10 36.2	-1.5
EBAD				*i* Vmb_Lg		17 10 42.9	
MESJ	**Messejana**	4.24	304	*e*P	Pn	17 09 51.6	+0.5
MESJ				*e*S	Sn	17 10 38.1	-2.5
MESJ				IAML		17 10 45.3	
	comp=N,5.2nm,0.3s						
MESJ	**Messejana**	4.24	304	*e*Pn	Pn	17 09 52.2	+1.1
MESJ				*e*Sn	Sn	17 10 39.6	-1.0
MESJ				A	A	17 10 45.0	
	comp=N,4.3nm,0.3s						
MORF	**Marmelete**	4.30	296	*e*Pn	Pn	17 09 53.4	+1.4
MORF				*e*Sn	Sn	17 10 42.7	+0.6
MORF				A	A	17 10 58.1	
	comp=N,3.5nm,0.6s						
PFVI	**Vila Bisbo**	4.36	293	*e*Pn	Pn	17 09 54.5	+1.6
PFVI				*e*Sn	Sn	17 10 41.7	-2.0
PFVI				A	A	17 10 47.6	
	comp=N,5.0nm,0.7s						
PTEO	**Sao Teotonio**	4.45	298	*e*Pn	Pn	17 09 56.0	+2.0
PTEO				*e*Sn	Sn	17 10 44.9	-0.9
PTEO				A	A	17 10 51.7	
	comp=N,5.8nm,0.9s						
PESTR	**Estremoz**	4.50	319	*e*Pn	Pn	17 09 57.0	+2.2
PESTR				*e*Sn	Sn	17 10 47.3	+0.2
EVO	**Evora**	4.51	313	*e*Pn	Pn	17 09 56.4	+1.5
EVO				*e*Sn	Sn	17 10 47.1	-0.3
PNCL	**Nicolau / Gran**	4.59	306	*e*Pn	Pn	17 09 56.5	+0.5
PNCL				*e*Sn	Sn	17 10 47.6	-1.6
PNCL				A	A	17 10 59.1	
	comp=N,3.3nm,0.6s						
PMRV	**Marv??o**	4.83	325	*e*Pn	Pn	17 10 01.0	+1.7
PMRV				*e*Sn	Sn	17 10 54.9	-0.3
PMRV				A	A	17 11 15.8	
	comp=N,2.6nm,0.5s						
PMTG	**Montargil**	4.99	316	*e*Pn	Pn	17 10 03.1	+1.5
PMTG				*e*Sn	Sn	17 10 57.8	-1.4
PMTG				A	A	17 11 17.4	
	comp=N,2.5nm,0.6s						
PCBR	**Castelo Branco**	5.20	327	*e*Pn	Pn	17 10 07.1	+2.7
PSBE	**So Bento**	5.62	317	*e*Pn	Pn	17 10 12.7	+2.5
MVO	**Moncorvo**	6.17	337	*e*Pn	Pn	17 10 20.0	+2.2
PBRG	**Braganca**	6.68	341	*e*Pn	Pn	17 10 27.2	+2.5

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*IDC **20** 17:27:30.6±1.2, 6°.81N×72°.92W, h168^{km}±12^{km}, mb3.3/5, mbtmp3.9/8, Error ellipse: s-maj=22.9km s-min=12.7km az=113.0*

*NEIC **20** 17:27:30.6±2.7, 6°.87N±0°.05×73°.12W±0°.06, h153^{km}±6^{km}, mb4.2/11, Error ellipse: s-maj=9.1km s-min=6.4km az=115.0*

*RSNC **20** 17:27:31.2±1.1, 6°.81N×73°.14W, h149^{km}±3^{km}, ML3.9, Mw3.9, Fault plane solution: NP1:ϕ_s88.00000°, δ46.00000°, λ-104.00000°.*

ISC 20 17:27:29.8±0.6**, 6°.81N**±0°.02×**73°.09W**±0°.03**, h157**^{km}±5^{km}**, n79,** σ**1^{s}68**/126**, mb4.2**/11**, 7C-6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.24	203	⇓*i*P	Pn	17 27 51.5	+0.1
BARC				*e*S	Sn	17 28 07.3	-0.5
BARC				*i*		17 28 07.7	
	comp=Z,2µm,0.2s						
PAMC	**Pamplona, Colo**	0.65	36	⇓*i*P	Pn	17 27 54.3	+0.9
PAMC				*e*S	Sn	17 28 11.3	-0.1
PAMC				*i*		17 28 13.6	
	comp=Z,3µm,0.5s						
BRRC	**Barranca, Sant**	0.69	295	⇓*i*P	Pn	17 27 53.3	+0.3
BRRC				*e*S	Sn	17 28 10.1	-0.6
BRRC				*i*		17 28 14.2	
	comp=Z,2µm,0.5s						
RUSC	**La Rusia**	0.92	180	⇓*i*P	Pn	17 27 55.5	+0.3
RUSC				*e*S	Sn	17 28 13.5	-1.0
RUSC				*i*		17 28 15.3	
	comp=Z,1µm,0.3s						

TAMC	**Tame, Arauca**	**1.34**	**106**	⇓*i*P	**Pn**	**17 27 59.9**	**+1.5**
TAMC				*e*S	**Sn**	**17 28 21.1**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.39**	**259**	*e*P	**Pn**	**17 27 57.8**	**-1.0**
PTBC				*e*S	**Sn**	**17 28 19.1**	**-1.8**
PTBC				*i*		17 28 21.1	
	comp=Z,617nm,0.3s						
OCAC	**Ocana**	**1.44**	**351**		**Pn**	**17 27 59.4**	**-0.1**
OCAC				Sn	**Sn**	**17 28 21.1**	**-1.1**
OCAC	**Ocana**	**1.44**	**351**	⇑*i*P	**Pn**	**17 27 59.5**	**+0.1**
OCAC				*e*S	**Sn**	**17 28 21.5**	**-0.7**
OCAC				*i*		17 28 31.1	
	comp=Z,2µm,0.4s						
SPBC	**San Pablo de B**	**1.51**	**220**	*e*P	**Pn**	**17 28 00.4**	**+0.2**
SPBC				*e*S	**Sn**	**17 28 22.6**	**-0.8**
SPBC				*i*		17 28 24.9	
	comp=Z,2µm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.88**	**291**		**Pn**	**17 28 04.0**	**-0.1**
ZARC	**Zaragoza, Cauc**	**1.88**	**291**	*e*P	**Pn**	**17 28 04.4**	**+0.4**
ZARC				*i*		17 28 21.4	
	comp=Z,210nm,0.1s						
ZARC				*e*S	**Sn**	**17 28 29.4**	**-1.0**
NORC	**Norcasia**	**2.16**	**235**	⇑*e*P	**Pn**	**17 28 07.4**	**0.0**
NORC				*e*S	**Sn**	**17 28 35.1**	**-1.2**
NORC				*i*		17 28 41.1	
	comp=Z,606nm,0.2s						
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**17 28 09.7**	**+0.8**
CHIC				⇑*i*P		17 28 09.7	
CHIC				*e*S	**Sn**	**17 28 38.8**	**-0.2**
CHIC				*i*		17 28 42.5	
	comp=Z,649nm,0.4s						
ROSC	**El Rosal**	**2.31**	**212**	P	**Pn**	**17 28 11.3**	**+1.8**
	comp=Z,330nm,0.3s,baz=309,slow=23,SNR=225						
ROSC				S	**Sn**	**17 28 38.0**	**-2.0**
	comp=Z,562nm,0.5s,baz=96,slow=17,SNR=11						
ROSC	**El Rosal**	**2.31**	**212**		**Pn**	**17 28 11.0**	**+1.6**
ROSC				Sn	**Sn**	**17 28 37.2**	**-2.8**
ROSC	**El Rosal**	**2.31**	**212**	⇑*i*P	**Pn**	**17 28 11.2**	**+1.7**
ROSC				*e*S	**Sn**	**17 28 39.3**	**-0.7**
ROSC				*i*		17 28 45.3	
	comp=Z,1µm,0.4s						
HELC	**Santa Helena**	**2.50**	**256**	*e*P	**Pn**	**17 28 12.7**	**+1.0**
HELC				*e*S	**Sn**	**17 28 43.2**	**-0.7**
HELC				*i*		17 28 49.5	
	comp=Z,311nm,0.2s						
UREC	**San Jos de Ur**	**2.60**	**291**	*e*P	**Pn**	**17 28 12.1**	**-0.4**
UREC				*e*S	**Sn**	**17 28 42.4**	**-3.1**
UREC				*i*		17 28 54.5	
	comp=Z,630nm,0.2s						
LL1C	**La Loma 1 Cana**	**2.75**	**350**	*e*P	**Pn**	**17 28 15.9**	**+1.6**
LL1C				*e*S	**Sn**	**17 28 52.3**	**+3.4**
VILC	**Villavicencio,**	**2.75**	**193**	*e*P	**Pn**	**17 28 14.8**	**+0.2**
VILC				*e*S	**Sn**	**17 28 48.5**	**-0.6**
PTGC	**Puerto Gaitan,**	**2.77**	**160**	⇑*i*P	**Pn**	**17 28 14.7**	**+0.1**
PTGC				*e*S	**Sn**	**17 28 47.3**	**-2.0**
PTGC				*i*		17 28 52.9	
	comp=Z,661nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.91**	**356**	⇑*i*P	**Pn**	**17 28 16.0**	**-0.4**
LL6C				*e*S	**Sn**	**17 28 51.7**	**-0.8**
LL6C				*i*		17 28 58.4	
	comp=Z,245nm,0.4s						
LL5C	**La Loma 5 El P**	**2.98**	**348**	*e*P	**Pn**	**17 28 17.9**	**+0.6**
LL5C				*e*S	**Sn**	**17 28 54.4**	**+0.3**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*e*P	**Pn**	**17 28 19.5**	**+1.1**
CBOC				*e*S	**Sn**	**17 28 56.0**	**+0.1**
DBBC	**Dabeiba**	**3.11**	**274**	⇓*i*P	**Pn**	**17 28 18.9**	**-0.1**
DBBC				*e*S	**Sn**	**17 28 54.1**	**-2.8**
DBBC				*i*		17 28 59.1	
	comp=Z,948nm,0.7s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**17 28 21.2**	**+1.1**
	comp=Z,32nm,0.3s,baz=224,slow=9.2,SNR=22						
SDV				S	**Sn**	**17 28 58.0**	**-0.9**
	comp=Z,277nm,0.5s,baz=48,slow=21,SNR=43						
SDV	**Santo Domingo**	**3.19**	**50**		**Pn**	**17 28 20.6**	**+0.6**
SDV				Sn	**Sn**	**17 28 54.9**	**-4.1**
SDV	**Santo Domingo**	**3.19**	**50**	*e*P	**Pn**	**17 28 21.1**	**+1.1**
SDV				*e*S	**Sn**	**17 28 57.9**	**-1.1**
SDV				*i*		17 29 01.7	
	comp=Z,163nm,0.4s						
ARGC	**Ariguani, Magd**	**3.23**	**339**	*e*P	**Pn**	**17 28 21.5**	**+1.0**
ARGC				*e*S	**Sn**	**17 28 59.9**	**0.0**
ARGC				*i*		17 29 13.4	
	comp=Z,116nm,0.3s						
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**17 28 22.6**	**+1.6**
ANIL				*e*S	**Sn**	**17 29 02.0**	**+1.2**
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**17 28 24.5**	**-0.2**
PRAC				*e*S	**Sn**	**17 29 06.8**	**-0.6**
PRAC				*i*		17 29 12.5	
	comp=Z,384nm,0.5s						
ORTC	**Ortega, Tolima**	**3.60**	**217**	*e*P	**Pn**	**17 28 25.7**	**+0.5**
ORTC				*e*S	**Sn**	**17 29 09.7**	**+1.6**
ORTC				*i*		17 29 12.9	
	comp=Z,278nm,0.3s						
SJCC	**San Jacinto, C**	**3.70**	**326**		**Pn**	**17 28 25.3**	**-1.2**
SJCC				Sn	**Sn**	**17 29 06.6**	**-3.9**
SJCC	**San Jacinto, C**	**3.70**	**326**	*e*P	**Pn**	**17 28 25.2**	**-1.2**
SJCC				*e*S	**Sn**	**17 29 06.8**	**-3.7**
SJCC				*i*		17 29 11.2	
	comp=Z,170nm,0.5s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**17 28 27.2**	**+0.7**
PLMC				*e*S	**Sn**	**17 29 08.8**	**-1.7**
PLMC				*i*		17 29 13.9	
	comp=Z,103nm,0.2s						
LCBC	**Los crdobas,**	**3.83**	**302**	*e*P	**Pn**	**17 28 27.4**	**-0.7**
LCBC				*e*S	**Sn**	**17 29 14.1**	**+0.6**
LCBC				*i*		17 29 16.2	
	comp=Z,192nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	⇑*i*P	**Pn**	**17 28 31.7**	**-1.1**
CRJC				*e*S	**Sn**	**17 29 17.6**	**-4.3**
CRJC				*i*		17 29 26.6	
	comp=Z,189nm,0.4s						
GUVC	**San Jose del G**	**4.26**	**174**	*e*P	**Pn**	**17 28 34.2**	**+0.4**
GUVC				*e*S	**Sn**	**17 29 21.7**	**-2.0**
GUVC				*i*		17 29 27.6	
	comp=Z,346nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**17 28 34.0**	**-0.3**
YOTC				*e*S	**Sn**	**17 29 26.9**	**+2.5**
SMRC	**Santa Marta, M**	**4.47**	**346**	*e*P	**Pn**	**17 28 36.9**	**+0.5**
SMRC				*e*S	**Sn**	**17 29 24.4**	**-3.9**
SMRC				*i*		17 29 29.9	
	comp=Z,94nm,0.2s						
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**17 28 38.4**	**-1.1**
MACC				*e*S	**Sn**	**17 29 29.9**	**-4.0**
MACC				*i*		17 29 39.3	
	comp=Z,86nm,0.6s						
BETC	**Betania**	**4.73**	**210**	*e*P	**Pn**	**17 28 39.6**	**-0.3**
BETC				*e*S	**Sn**	**17 29 27.9**	**-6.7**
BETC				*i*		17 29 37.8	
	comp=Z,72nm,0.6s						
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P	**Pn**	**17 28 43.1**	**+1.2**
MARP				*e*S	**Sn**	**17 29 39.2**	**+1.0**
URIC	**Uribia, Colomb**	**4.98**	**12**	Pn	**Pn**	**17 28 42.1**	**-0.9**
MALC	**Bahia Malaga**	**5.06**	**237**	*e*P	**Pn**	**17 28 46.7**	**+2.5**
MALC				*i*		17 29 38.9	
	comp=Z,29nm,0.6s						
MALC				*e*S	**Sn**	**17 29 42.0**	**-0.4**
GARC	**Garzon, Huila**	**5.18**	**208**	*e*P	**Pn**	**17 28 45.5**	**-0.6**
GARC				*e*S	**Sn**	**17 29 42.8**	**-2.8**
GARC				*i*		17 29 47.9	
	comp=Z,130nm,0.2s						
BAUV	**El Baul**	**5.43**	**67**		**Pn**	**17 28 47.6**	**-1.4**
BAUV				Sn	**Sn**	**17 29 46.6**	**-4.5**
PCON	**Cinco Dias**	**5.54**	**217**	*e*P	**Pn**	**17 28 52.6**	**+1.4**
PCON				*e*S	**Sn**	**17 29 56.4**	**+1.8**
PCON				*i*		17 29 58.1	
	comp=Z,27nm,0.5s						
FLOC	**Florencia**	**5.79**	**206**	*e*P	**Pn**	**17 28 54.4**	**+0.5**
FLOC				*e*S	**Sn**	**17 29 59.9**	**+0.2**
FLOC				*i*		17 30 06.4	
	comp=Z,23nm,0.3s						
SOTA	**Rioblanco**	**5.82**	**217**	*e*P	**Pn**	**17 28 57.1**	**+2.3**
SOTA				*e*S	**Sn**	**17 29 57.4**	**-3.8**
SOTA				*i*		17 30 16.1	
	comp=Z,22nm,0.5s						
BCIP	**Isla Barro Col**	**7.08**	**290**	Pn	**Pn**	**17 29 08.9**	**-2.1**
BIRV	**Birongo**	**7.66**	**61**	Pn	**Pn**	**17 29 17.6**	**-1.2**
MTDJ	**Mount Denham**	**12.14**	**339**	Pn	**Pn**	**17 30 19.0**	**+1.1**
SDDR	**Presa de Saban**	**12.22**	**8**	Pn	**Pn**	**17 30 19.5**	**+0.6**
JTS	**Las Juntas de**	**12.23**	**287**	P	**P**	**17 30 24.7**	**-0.2**
	comp=Z,9.1nm,0.5s,baz=162,slow=5.3,SNR=6.5						
JTS	**Las Juntas de**	**12.23**	**287**		**Pn**	**17 30 18.4**	**-0.7**
ORTG	**Ortega, Santa**	**12.73**	**287**	P	**P**	**17 30 32.6**	**+2.0**
SJG	**San Juan**	**13.11**	**30**	P	**Pn**	**17 30 29.1**	**-1.1**
	comp=Z,5.0nm,0.3s,baz=56,slow=20,SNR=1.3						
MTP	**Monte Pirata**	**13.41**	**33**	Pn	**Pn**	**17 30 34.5**	**+0.4**
SAML	**Samuel**	**18.51**	**148**	P	**P**	**17 31 34.5**	**+0.1**
LPAZ	**La Paz**	**23.47**	**168**	P	**P**	**17 32 26.1**	**0.0**
	comp=Z,1.0nm,0.6s,baz=360,slow=3.4,SNR=4.1						
	comp=Z,1.0nm,0.6s						
LPAZ	**La Paz**	**23.47**	**168**	IAmb	IAmb	17 32 27.2	
	comp=Z,1.8nm,0.8s						
SIV	**San Ignacio**	**25.59**	**152**	P	**P**	**17 32 43.3**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=292,slow=16,SNR=2.5						
	comp=Z,0.7nm,0.3s						
PB11	**IPOC Station P**	**26.62**	**173**	P	**P**	**17 32 53.4**	**-0.7**
PB11				IAmb	IAmb	17 33 14.7	
	comp=Z,6.7nm,1.1s						
V48A	**Smith Brothers**	**31.43**	**338**	P	**P**	**17 33 37.9**	**+1.6**
V48A				IAmb	IAmb	17 33 49.8	
	comp=Z,14nm,1.6s						
WVT	**Waverly**	**32.15**	**337**	P	**P**	**17 33 44.3**	**+1.6**
WVT				IAmb	IAmb	17 33 45.1	
	comp=Z,5.0nm,1.2s						
U40A	**Yellville**	**34.52**	**331**	P	**P**	**17 34 04.4**	**+1.2**
U40A				IAmb	IAmb	17 34 05.0	
	comp=Z,5.6nm,0.8s						
CCM	**Cathedral Cave**	**35.19**	**335**	P	**P**	**17 34 10.1**	**+1.2**
CCM				IAmb	IAmb	17 34 10.7	
	comp=Z,5.4nm,0.7s						
SLBS	**Sierra La Lagu**	**39.15**	**299**	P	**P**	**17 34 43.8**	**+1.2**
RCBR	**Riachuelo**	**39.18**	**108**	P	**P**	**17 34 43.0**	**+0.1**
EYMN	**Ely**	**43.89**	**342**	P	**P**	**17 35 21.2**	**+0.5**
EYMN				IAmb	IAmb	17 35 21.8	
	comp=Z,2.6nm,0.6s						
PDAR	**Pinedale Array**	**48.10**	**324**	P	**P**	**17 35 54.5**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=130,slow=11,SNR=3.5						
	comp=Z,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**17 37 41.9**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=132,slow=6.8,SNR=38						
	comp=Z,1.8nm,0.6s						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**17 37 41.8**	**+0.2**
ILAR	**Eielson Array**	**76.98**	**335**	P	**P**	**17 39 03.8**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=91,slow=3.6,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**17 46 59.9**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=115,slow=3.7,SNR=25						
ASAR	**Alice Springs**	**149.13**	**234**	PKPdf	**PKPdf**	**17 46 55.8**	**-0.5**
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**17 47 03.1**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=106,slow=2.9,SNR=23						
CMAR	**Chiang Mai Arr**	**153.69**	**17**	PKPbc	**PKPbc**	**17 47 09.4**	**-1.7**
	comp=Z,0.6nm,0.9s,baz=302,slow=3.4,SNR=3.1						

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*TIR **20** 17:39:17.9, 39°.96N×19°.76E, h2^{km}±2^{km}, Md2.9, Ml2.9*
*THE **20** 17:39:20.3, 39°.92N×19°.77E, h0^{km}±2^{km}, ML2.6/15, Error ellipse: s-maj=2.5km s-min=1.0km az=293.0*
*ATH **20** 17:39:20.3, 39°.92N×19°.76E, h10^{km}±2^{km}, ML2.6/9, Error ellipse: s-maj=3.0km s-min=1.3km az=210.0*
ISC 20 17:39:18.2±1.0**, 39°.95N**±0°.02×**19°.73E**±0°.03**, h13**^{km}±7^{km}**, n71, σ1^{s}.47**/113**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.22**	**107**	P	**Pg**	**17 39 22.8**	**-0.3**
SRN				S	**Sg**	**17 39 26.1**	**-0.3**
	1µm,0.2s						
SRN	**Sarande**	**0.22**	**107**	P	**Pg**	**17 39 22.8**	**-0.3**
	baz=111						
SRN				S	**Sg**	**17 39 25.6**	**-0.8**
	baz=111						
SRN				AMP			
	comp=N,7.2nm,0.2s,baz=111						
KEK	**Kerkira**	**0.24**	**166**	P	**Pb**	**17 39 24.0**	**-0.4**
KEK				S	**Sb**	**17 39 28.6**	**+0.1**
KEK				AML	AML	17 39 30.4	
	comp=E,3922µm,0.2s						
KEK				AML	AML	17 39 33.4	
	comp=N,2910µm,0.3s						
KEK	**Kerkira**	**0.24**	**166**	P	**Pb**	**17 39 24.0**	**-0.4**
KEK				S	**Sb**	**17 39 28.6**	**+0.1**
	comp=N,2µm,0.2s						
KASA	**Kassiopi**	**0.26**	**141**	P	**Pb**	**17 39 23.9**	**-0.8**
KASA				S	**Sb**	**17 39 28.2**	**-0.8**
KASA				AML	AML	17 39 29.3	
	comp=N,3660µm,0.3s						
KASA				AML	AML	17 39 30.1	
	comp=E,4771µm,0.3s						
IGT	**Igoumenitsa**	**0.62**	**131**	P	**Pb**	**17 39 30.6**	**-0.5**
IGT				S	**Sb**	**17 39 40.0**	**+0.4**
IGT				AML	AML	17 39 44.6	
	comp=E,928µm,0.4s						
IGT				AML	AML	17 39 45.3	
	comp=N,919µm,0.4s						
IGT	**Igoumenitsa**	**0.62**	**131**	P	**Pb**	**17 39 30.5**	**-0.5**
IGT				S	**Sb**	**17 39 39.0**	**-0.6**
	comp=N,462nm,0.4s						
IGT	**Igoumenitsa**	**0.62**	**131**	P	**Pb**	**17 39 30.4**	**-0.6**
	baz=133						
IGT				S	**Sb**	**17 39 40.5**	**+0.9**
	baz=133						
LSK	**Leskovik**	**0.70**	**73**	P	**Pb**	**17 39 31.6**	**-0.8**
LSK				S	**Sb**	**17 39 43.1**	**+1.1**
	comp=N,745nm,0.6s						
LSK	**Leskovik**	**0.70**	**73**	P	**Pb**	**17 39 31.5**	**-0.8**
	baz=72						
LSK				S	**Sg**	**17 39 41.4**	**+0.2**
	baz=72						
LSK				AMP			
	comp=N,3.1nm,0.5s,baz=72						
JAN	**Janina**	**0.91**	**108**	P	**Pn**	**17 39 36.3**	**-0.5**
JAN				S	**Sn**	**17 39 49.4**	**-0.4**
JAN				AML	AML	17 39 53.2	
	comp=E,1005µm,0.3s						
JAN				AML	AML	17 39 54.2	
	comp=N,1178µm,0.4s						
JAN	**Janina**	**0.91**	**108**	P	**Pg**	**17 39 35.2**	**-0.7**
JAN				S	**Sn**	**17 39 49.1**	**-0.7**
	comp=N,548nm,0.4s						
SCTE	**Santa Cesarea**	**0.97**	**278**	P	**Pn**	**17 39 39.4**	**+1.9**
SCTE				S	**Sn**	**17 39 53.4**	**+2.2**
SCTE				AML	AML	17 39 54.8	
	comp=E,945µm,0.5s						
SCTE				AML	AML	17 39 55.2	
	comp=N,422µm,0.5s						
SCTE	**Santa Cesarea**	**0.97**	**278**	P	**Pn**	**17 39 39.1**	**+1.6**
	baz=278						
SCTE				S	**Sn**	**17 39 52.6**	**+1.4**
	baz=278						
KBN	**Korca**	**1.06**	**50**	P	**Pn**	**17 39 40.1**	**+1.3**
KBN				S	**Sn**	**17 39 56.9**	**+3.5**
	comp=N,292nm,0.5s						
KBN	**Korca**	**1.06**	**50**	P	**Pn**	**17 39 40.2**	**+1.4**
	baz=49						
KBN				S	**Sn**	**17 39 55.7**	**+2.3**
	baz=49						
KBN				AMP			
	comp=N,1.2nm,0.5s,baz=49						
PENT	**Pentalofos**	**1.11**	**77**	P	**Pg**	**17 39 39.8**	**+0.1**
PENT	**Pentalofos**	**1.11**	**77**	P	**Pg**	**17 39 39.6**	**-0.1**
NEST	**Nestorio**	**1.12**	**65**	P	**Pg**	**17 39 40.8**	**+1.0**
NEST				S	**Sn**	**17 39 56.2**	**+1.3**
NEST				AML	AML	17 40 02.0	
	comp=N,680µm,0.7s						
NEST				AML	AML	17 40 02.5	
	comp=E,585µm,0.5s						
NEST	**Nestorio**	**1.12**	**65**	P	**Pg**	**17 39 40.2**	**+0.4**
KPRO	**Kipourio**	**1.26**	**89**	P	**Pg**	**17 39 42.4**	**-0.1**
KPRO				AML	AML	17 40 05.1	
	comp=E,519µm,0.4s						
KPRO				AML	AML	17 40 06.7	
	comp=N,557µm,0.4s						
KPRO	**Kipourio**	**1.26**	**89**	P	**Pg**	**17 39 42.2**	**-0.3**
KPRO				S	**Sg**	**17 40 01.1**	**+2.2**
	comp=N,302nm,0.5s						
TSLK	**Tsoukalades, L**	**1.33**	**147**	P	**Pg**	**17 39 44.7**	**+0.8**
TSLK				AML	AML	17 40 06.8	
	comp=N,757µm,0.4s						
TSLK				AML	AML	17 40 09.7	
	comp=E,498µm,0.3s						
TSLK	**Tsoukalades, L**	**1.33**	**147**	P	**Pg**	**17 39 44.6**	**+0.8**
TSLK				S	**Sg**	**17 40 04.5**	**+3.3**
	comp=E,305nm,0.3s						
LKD2	**Lefkada island**	**1.36**	**148**	P	**Pg**	**17 39 45.3**	**+0.8**
LKD2	**Lefkada island**	**1.36**	**148**	P	**Pg**	**17 39 45.5**	**+1.0**
TIR	**Tirane**	**1.40**	**4**	P	**Pg**	**17 39 46.5**	**+1.3**
TIR				AML	AML	17 40 15.8	
	comp=N,586µm,0.6s						
TIR				AML	AML	17 40 20.0	
	comp=E,447µm,0.5s						
TIR	**Tirane**	**1.40**	**4**	P	**Pg**	**17 39 46.6**	**+1.3**
DRAG	**Dragano-Lefkad**	**1.42**	**152**	P	**Pg**	**17 39 45.8**	**+0.2**
DRAG				S	**Sg**	**17 40 05.1**	**+1.0**
OHR	**Ohrid**	**1.42**	**35**	*e*Pn	**Pg**	**17 39 46.6**	**+1.0**
OHR				*e*Sg	**Sg**	**17 40 08.3**	**+4.1**
NYDR	**Nydri-Lefkada**	**1.44**	**148**	P	**Pg**	**17 39 45.7**	**-0.2**
NYDR				S	**Sg**	**17 40 04.3**	**-0.4**
NYDR	**Nydri-Lefkada**	**1.44**	**148**	P	**Pg**	**17 39 45.8**	**-0.2**
NYDR				S	**Sg**	**17 40 05.8**	**+1.1**
	comp=E,150nm,0.6s						
EVGI	**Lefkada island**	**1.51**	**151**	P	**Pg**	**17 39 48.0**	**+0.8**
EVGI				S	**Sg**	**17 40 09.2**	**+2.4**
	comp=E,152nm,0.4s						
FNA	**Florina**	**1.51**	**56**	P	**Pg**	**17 39 47.3**	**0.0**
FNA				S	**Sg**	**17 40 09.5**	**+2.5**
	comp=E,300nm,0.6s						
FNA	**Florina**	**1.51**	**56**	P	**Pg**	**17 39 47.7**	**+0.4**
	baz=55						
FNA				S	**Sg**	**17 40 09.1**	**+2.1**
	baz=55						
KZN	**Kozani**	**1.61**	**76**	P	**Pg**	**17 39 49.8**	**+0.6**
KZN				S	**Sg**	**17 40 12.6**	**+2.5**
	comp=E,138nm,0.4s						
FSK	**Fiskardo**	**1.62**	**156**	P	**Pg**	**17 39 48.7**	**-0.7**
FSK				S	**Sg**	**17 40 11.2**	**+0.8**
	comp=E,180nm,0.4s						
THL	**Klokotos Trika**	**1.81**	**101**	P	**Pg**	**17 39 51.9**	**-0.9**
THL				S	**Sg**	**17 40 16.2**	**-0.1**
THL	**Klokotos Trika**	**1.81**	**101**	P	**Pg**	**17 39 52.0**	**-0.9**
THL				S	**Sg**	**17 40 16.5**	**+0.2**
	comp=E,72nm,0.5s						
KEF3	**Kipouria, Keph**	**1.81**	**164**	P	**Pb**	**17 39 50.4**	**-0.7**
KEF3	**Kipouria, Keph**	**1.81**	**164**	P	**Pb**	**17 39 50.4**	**-0.7**
PHP	**Peshkopia**	**1.82**	**17**	P	**Pg**	**17 39 51.6**	**-1.6**
PHP	**Peshkopia**	**1.82**	**17**	P	**Pg**	**17 39 52.7**	**-0.5**
	baz=16						
PHP				S	**Sg**	**17 40 19.3**	**+2.5**
	baz=16						
KTI	**Kastanea**	**1.89**	**76**	P	**Pb**	**17 39 52.9**	**+0.3**
EVR	**Evrytania**	**1.91**	**122**	P	**Pg**	**17 39 54.0**	**-0.9**
EVR	**Evrytania**	**1.91**	**122**	P	**Pg**	**17 39 53.7**	**-1.3**
TYRN	**Tyrnavos**	**1.94**	**96**	P	**Pg**	**17 39 54.1**	**-1.5**
MAKR	**Makrakomi, Fth**	**2.08**	**116**	P	**Pg**	**17 39 56.7**	**-1.5**
MAKR	**Makrakomi, Fth**	**2.08**	**116**	P	**Pg**	**17 39 56.6**	**-1.6**
LIT	**Litokhoron**	**2.13**	**85**	P	**Pb**	**17 39 56.7**	**0.0**
LIT				S	**Sg**	**17 40 25.2**	**-1.5**
	comp=E,65nm,0.3s						
ANX	**Ano Chora**	**2.17**	**128**	P	**Pb**	**17 39 57.6**	**+0.1**
AGG	**Agios Georgios**	**2.22**	**114**	P	**Pb**	**17 39 57.8**	**-0.4**
EFP	**Efpalio**	**2.27**	**131**	P	**Pb**	**17 39 58.7**	**-0.4**
GRG	**Griva**	**2.28**	**63**	P	**Pb**	**17 39 57.8**	**-1.4**
DRO	**Drossia**	**2.52**	**142**	P	**Pb**	**17 40 01.4**	**-2.0**
VAY	**Valandovo**	**2.56**	**57**	*e*Pn	**Pb**	**17 40 01.4**	**-2.6**
KLV	**Kalavryta, Ach**	**2.68**	**134**	P	**Pn**	**17 40 02.2**	**+1.1**
KNT	**Kendrikon**	**2.71**	**62**	P	**Pb**	**17 40 03.3**	**-3.2**
XOR	**Xorichti**	**2.74**	**101**	P	**Pb**	**17 40 04.4**	**-2.6**
PLG	**Polygyros**	**2.88**	**80**	P	**Pb**	**17 40 06.3**	**-3.2**
DBRK	**Dubrovnik**	**2.97**	**337**	*e*Pn	**Pn**	**17 40 05.0**	**0.0**
DBRK				Sn	**Sn**	**17 40 38.6**	**-1.8**
STON	**Ston**	**3.30**	**333**	*e*Pn	**Pn**	**17 40 09.6**	**+0.1**
STON				Sn	**Sn**	**17 40 46.6**	**-1.8**
LSTV	**Lastovo**	**3.54**	**324**	*e*Pn	**Pn**	**17 40 12.9**	**+0.1**
LSTV				Sn	**Sn**	**17 40 52.0**	**-2.4**
MAKA	**Makarska**	**3.91**	**330**	*e*Pn	**Pn**	**17 40 18.7**	**+0.8**
MAKA				Sn	**Sn**	**17 41 01.6**	**-1.9**
RICI	**Ricice**	**4.04**	**332**	*e*Pn	**Pn**	**17 40 20.2**	**+0.4**
RICI				Sn	**Sn**	**17 41 05.3**	**-1.6**
HVAR	**Hvar**	**4.06**	**324**	*e*Pn	**Pn**	**17 40 19.5**	**-0.4**
HVAR				Sn	**Sn**	**17 41 04.6**	**-2.7**
KTHA	**Kythira Island**	**4.53**	**143**	P	**Pn**	**17 40 29.0**	**+2.6**
ZIRJ	**Zirje**	**4.80**	**322**	*e*Pn	**Pn**	**17 40 30.2**	**0.0**
ZIRJ				Sn	**Sn**	**17 41 23.1**	**-2.4**
MORI	**Morici**	**4.93**	**324**	*e*Pn	**Pn**	**17 40 32.2**	**+0.2**
MORI				Sn	**Sn**	**17 41 26.9**	**-1.9**
DUGI	**Dugi Otok**	**5.33**	**321**	*e*Pn	**Pn**	**17 40 37.9**	**+0.5**
DUGI				Sn	**Sn**	**17 41 36.4**	**-2.3**
VIRC	**Vir**	**5.56**	**323**	*e*Pn	**Pn**	**17 40 40.5**	**0.0**
VIRC				Sn	**Sn**	**17 41 41.1**	**-3.2**

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*DJA **20** 17:49:25.9±0.6, 2°S±5°×13°9E±°, h10^{km}, M4.5/24, mB4.9/6, mb4.6/24, MLv4.8/8, Mw(mB)4.1/6*
*BJI **20** 17:49:26.4±0.0, 2°.02S×139°.21E, h44^{km}, mb4.6/24, mB5.1/13, Ms4.2/2, Ms7 4.1/3*
*IDC **20** 17:49:27.6±2.9, 2°.29S×139°.22E, h51^{km}±27^{km}, mb4.1/18, mbtmp4.4/22, ML4.3/3, MS3.7/9, Error ellipse: s-maj=23.3km s-min=12.7km az=78.0*
*NEIC **20** 17:49:27.2±1.7, 2°.32S±0°.08×139°.06E±0°.07, h46^{km}±7^{km}, mb4.8/91, Error ellipse: s-maj=12.3km s-min=9.5km az=191.0*
ISC 20 17:49:25.3±0.4**, 2°.27S**±0°.04×**139°.02E**±0°.05**, h29**^{km}**, n246, σ1^{s}.41**/243**, mb4.8**/63**, MS3.5**/4**, 1D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.41**	**311**	P	**Pb**	**17 49 34.7**	**+0.4**
WAMI	**Wamena**	**1.64**	**191**	P	**Pb**	**17 49 58.5**	**+3.7**
SRPI	**Serui, Papua**	**2.81**	**278**	P	**Pn**	**17 50 10.3**	**+2.0**
BAKI	**Biak**	**3.10**	**290**	P	**Pn**	**17 50 13.8**	**+1.5**
KMPI	**Kaimana, Papua**	**5.49**	**255**	P	**Pn**	**17 50 48.6**	**+3.5**
	0.4nm1µm103nm,0.7s						
MMPI	**Merauke**	**6.31**	**168**	P	**Pn**	**17 50 59.3**	**+2.9**
	1.4nm3µm314nm,0.7s						
FAKI	**Fak Fak**	**6.80**	**264**	Pn	**Pn**	**17 51 04.2**	**+1.0**
FAKI	**Fak Fak**	**6.80**	**264**	P	**Pn**	**17 51 05.3**	**+2.2**
	0.4nm1µm90nm,0.5s						
FAKI	**Fak Fak**	**6.80**	**264**	P	**Pn**	**17 51 06.1**	**+3.0**
SIJI	**Sorong**	**7.88**	**280**	P	**Pn**	**17 51 22.7**	**+4.7**
	3.7nm,0.3s,baz=234,slow=23,SNR=16						
SIJI				S	**Sn**	**17 52 43.4**	**-2.8**
	3.6nm,0.4s,baz=95,slow=23,SNR=0.7						
SIJI				LR	LR	17 54 54.6	
	comp=Z,783nm,18.7s,baz=94,slow=40						
	14nm,0.4s						
SWI	**Sorong**	**7.88**	**280**	P	Pn	17 51 23.4	+5.3
	0.1nm28nm,0.7s						
MANU	**Manus Island**	**8.34**	**89**	Pn	**Pn**	**17 51 24.9**	**+0.5**
MSAI	**Masohi**	**10.14**	**264**	P	Pn	17 51 53.9	+4.9
	144nm13nm,0.6s						
PMG	**Port Moresby**	**10.76**	**132**	P	**Pn**	**17 51 57.7**	**+0.2**
	6.2nm,0.8s,baz=352,slow=22,SNR=3.7						
PMG				LR	LR	17 57 40.5	
	comp=Z,582nm,18.7s,baz=321,slow=46						
AAI	**Ambon**	**10.90**	**262**	P	**Pn**	**17 52 00.4**	**+0.9**
	54nm,0.6s						
LBMI	**Labuha**	**11.63**	**278**	P	**Pn**	**17 52 13.9**	**+4.4**
	20nm,1.9s						
KDU	**Kakadu**	**12.22**	**212**	P	**Pn**	**17 52 17.0**	**-0.5**
COEN	**Coen**	**12.32**	**161**	Pn	**Pn**	**17 52 18.5**	**-0.4**
SANI	**Sanana**	**13.03**	**271**	P	**Pn**	**17 52 29.8**	**+1.3**
	24nm,0.6s						
SANI	**Sanana**	**13.03**	**271**	P	**Pn**	**17 52 30.5**	**+2.0**
MTN	**Manton Dam**	**13.09**	**216**	Pn	**Pn**	**17 52 29.1**	**-0.4**
MTN	**Manton Dam**	**13.09**	**216**	P	**Pn**	**17 52 29.7**	**+0.2**
KMSI	**Cibinong**	**15.30**	**280**	P	**P**	**17 53 06.4**	**+2.5**
	31nm,0.5s						
GTOI	**Gorontalo**	**16.27**	**280**	P	**P**	**17 53 17.3**	**+2.7**
	200nm14nm,0.8s						
LUWI	**Luwuk**	**16.29**	**274**		**Pn**	**17 53 10.7**	**-1.4**
LUWI				IAmb	IAmb	17 53 18.3	
	comp=Z,42nm,0.8s						
DAV	**Davao City (W)**	**16.31**	**305**	LR	LR	18 00 36.1	
	comp=Z,213nm,18.2s,baz=115,slow=41						
SOEI	**Soe**	**16.44**	**242**	P	**Pn**	**17 53 14.6**	**+0.4**
SOEI				IAmb	IAmb	17 53 34.2	
	comp=Z,75nm,0.8s						
SOEI	**Soe**	**16.44**	**242**	P	**P**	**17 53 17.5**	**+0.8**
	comp=Z,119nm,0.8s						
SOEI	**Soe**	**16.44**	**242**	P	**P**	**17 53 16.3**	**-0.4**
BBSI	**Bau Bau**	**16.72**	**258**	P	**P**	**17 53 22.7**	**+3.0**
	comp=Z,7.4nm,0.9s						
KNRA	**Kununurra**	**16.73**	**217**	Pn	**Pn**	**17 53 17.8**	**+0.2**
KNRA	**Kununurra**	**16.73**	**217**	P	**Pn**	**17 53 18.4**	**+0.7**
GUMO	**Guam**	**16.79**	**20**	LR	LR	18 00 00.1	
	comp=Z,107nm,18.3s,baz=194,slow=38						
BATI	**Baumata**	**17.17**	**242**	P	**P**	**17 53 26.3**	**+1.6**
	comp=Z,84nm,0.7s,baz=131,slow=1.0,SNR=17						
BATI	**Baumata**	**17.17**	**242**	P	**P**	**17 53 28.2**	**+3.5**
	comp=Z,61nm,0.7s						
WB0	**Warramunga Arr**	**17.97**	**194**	P	**Pn**	**17 53 31.7**	**-1.5**
WR0	**Warramunga Arr**	**18.12**	**194**	P	**Pn**	**17 53 34.0**	**-1.0**
WRAB	**Tennant Creek**	**18.14**	**194**	P	**Pn**	**17 53 33.4**	**-1.9**

WRAB	Tennant Creek	18.14	194	P	P	17 53 37.5	+2.1
WB2	Warramunga Arr	18.15	194	P	Pn	17 53 34.2	-1.2
WRA	Warramunga Arr	18.15	194	P	Pn	17 53 34.7	-0.7
	comp=Z,1.3nm,0.3s,baz=17,slow=13,SNR=32						
WRA				S	Sn	17 56 48.5	-8.8
	comp=Z,3.0nm,0.9s,baz=14,slow=19,SNR=4.0						
WRA				LR	LR	18 01 07.8	
	comp=Z,313nm,18.8s,baz=126,slow=38						
	comp=Z,2.4nm,0.4s						
WRA	Warramunga Arr	18.15	194	P	Pn	17 53 33.0	-2.4
QIS	Mount Isa	18.19	178	P	P	17 53 38.1	+2.2
EDFI	Ende, Flores	18.41	249	P	Pn	17 53 41.5	+2.9
	comp=Z,8.0nm,1.0s						
TOLI2	Tolitoli	18.54	280		P	17 53 36.5	-3.3
TOLI2	Tolitoli	18.54	280	P	Pn	17 53 42.7	+2.5
BNSI	Bone	19.00	263	P	Pn	17 53 48.5	+2.8
	comp=Z,22nm,1.2s						
CTA	Charters Tower	19.07	159	P	P	17 53 45.8	+0.2
	comp=Z,0.6nm,0.3s,baz=340,slow=10.0,SNR=8.4						
CTA				LR	LR	18 01 25.4	
	comp=Z,268nm,19.3s,baz=344,slow=38						
	comp=Z,5.5nm,0.6s						
CTAO	Charters Tower	19.07	159	P	Pn	17 53 46.8	+0.2
TTSI	Tana Toraja	19.20	267	P	Pn	17 53 49.9	+1.8
	comp=Z,27nm,0.8s						
MPSI	Mapaga	19.29	277	P	Pn	17 53 51.7	+2.5
	comp=Z,17nm,1.1s						
SPSI	Sidrap Palu	19.30	265	P	Pn	17 53 53.0	+3.7
	comp=Z,34nm,0.9s						
MYLDM	Lahad Datu	21.79	290	P	P	17 54 15.5	+0.3
AS31	Alice Springs	21.84	193	P	P	17 54 15.6	-0.1
ASAR	Alice Springs	21.84	193	P	P	17 54 16.1	+0.4
	comp=Z,4.4nm,0.5s,baz=21,slow=11,SNR=48						
ASAR				S	S	17 58 13.5	-2.2
	comp=Z,1.9nm,0.9s,baz=22,slow=22,SNR=6.2						
ASAR				LR	LR	18 03 21.6	
	comp=Z,282nm,20.6s,baz=23,slow=38						
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	21.84	193	P	P	17 54 14.0	-1.6
ASAR					S	17 58 11.8	-4.0
QLP	Quilpie	24.69	169	P	P	17 54 46.4	+2.5
WRKA	Warakurna	24.89	204	P	P	17 54 45.8	0.0
INKA	Innaminka	25.39	176	P	P	17 54 51.6	+1.4
JAGI	Jajag, Banyuwa	25.50	255	P	P	17 54 49.9	-1.6
JAGI				IAmb	IAmb	17 55 06.5	
	comp=Z,26nm,1.0s						
OOD	Oodnadatta	25.58	187	P	P	17 54 52.9	+0.9
EIDS	Eidsvold	25.74	154	P	P	17 54 53.5	0.0
EIDS				IAmb	IAmb	17 55 04.6	
	comp=Z,22nm,1.1s						
EIDS	Eidsvold	25.74	154	P	P	17 54 55.8	+2.3
RMQ	Roma	25.83	160	P	P	17 54 56.7	+2.4
PSA00	Pilbara Seismi	26.77	223	P	P	17 55 02.5	-0.3
PSA00	Pilbara Seismi	26.77	223	P	P	17 55 02.8	0.0
PSA00				IAmb	IAmb	17 55 06.5	
	comp=Z,3.5nm,0.7s						
SBUM	Sibu	27.20	280	P	P	17 55 05.3	-1.5
KSM	Kuching	28.95	277	P	P	17 55 20.2	-2.2
KSM				IAmb	IAmb	17 55 31.9	
	comp=Z,24nm,1.6s						
STKA	Stephens Creek	29.55	176	P	P	17 55 27.2	-0.3
	comp=Z,3.3nm,0.7s,baz=334,slow=10,SNR=7.5						
	comp=Z,3.3nm,0.7s						
STKA	Stephens Creek	29.55	176	P	P	17 55 27.6	0.0
CMSA	Cobar Meteorol	29.79	168	P	P	17 55 31.9	+2.3
FORT	Forrest	30.20	199	P	P	17 55 33.9	+0.6
FORT				IAmb	IAmb	17 55 49.4	
	comp=Z,20nm,0.8s						
ARMA	Armidale	30.44	158		P	17 55 34.5	-1.1
ARMA				IAmb	IAmb	17 55 37.6	
	comp=Z,25nm,1.4s						
BBOO	Buckleboo	30.51	185	P	P	17 55 35.7	-0.3
BBOO				IAmb	IAmb	17 56 10.4	
	comp=Z,32nm,1.5s						
JOW	Kunigami	30.73	341	LR	LR	18 05 50.9	
	comp=Z,92nm,19.4s,baz=120,slow=32						
GIRL	Giralia	31.45	228	P	P	17 55 46.1	+1.6
CAN	Canberra	34.17	165	P	P	17 56 09.2	+1.1
ARPS	Mount Arapiles	34.43	176	P	P	17 56 11.1	+0.8
MORW	Morawa	34.48	217	P	P	17 56 10.5	-0.4
JHJ	Hachijo jima 2	35.20	1	LR	LR	18 07 27.5	
	comp=Z,76nm,20.6s,baz=142,slow=31						
TOO	Toolangi	35.63	171	P	P	17 56 21.0	+0.2
TOO				IAmb	IAmb	17 56 32.7	
	comp=Z,18nm,1.2s						
UBPT	Khong Chiam	37.50	299	P	P	17 56 35.8	-1.1
UBPT				IAmb	IAmb	17 56 38.0	
	comp=Z,7.3nm,1.0s						
MJAR	Matsushiro Arr	38.62	359	P	P	17 56 45.3	-0.8
	comp=Z,1.8nm,0.7s,baz=177,slow=10.0,SNR=4.7						
	comp=Z,1.8nm,0.7s						
MAJO	Matsushiro	38.62	359	P	P	17 56 45.6	-0.5
MAJO				IAmb	IAmb	17 57 02.6	
	comp=Z,14nm,1.5s						
KULM	Kulim	39.06	281	P	P	17 56 50.0	-0.1
KULM				IAmb	IAmb	17 57 03.3	
	comp=Z,18nm,1.1s						
JMM	Marumori	39.97	2	P	P	17 56 56.6	-0.7
JMM				IAmb	IAmb	17 57 03.9	
	comp=Z,24nm,1.0s						
JSD	Sado	40.11	359	P	P	17 56 57.9	-0.6
KSRS	Korea Array	40.84	346	P	P	17 57 04.8	+0.3
	comp=Z,1.0nm,0.8s,baz=161,slow=10,SNR=6.3						
	comp=Z,1.0nm,0.8s						
MSVF	Nonsavu	41.26	114	P	P	17 57 07.6	-0.8
MSVF				IAmb	IAmb	17 57 39.8	
	comp=Z,18nm,1.2s						
GSI	Gunungsitoli	41.59	274	P	P	17 57 10.2	-0.9
GSI				IAmb	IAmb	17 57 19.8	
	comp=Z,26nm,1.2s						
CMAR	Chiang Mai Arr	44.49	299	P	P	17 57 35.8	+1.3
	comp=Z,4.7nm,0.6s,baz=119,slow=6.6,SNR=29						
	comp=Z,4.7nm,0.6s						
CMAR	Chiang Mai Arr	44.49	299	P	P	17 57 33.7	-0.8
CHTO	Chiang Mai	44.63	300	P	P	17 57 35.0	-0.6
USRK	Ussuriysk Ar.	46.69	353	P	P	17 57 50.0	-1.4
	comp=Z,1.9nm,0.7s,baz=186,slow=10.0,SNR=5.9						
	comp=Z,1.9nm,0.7s						
BNX	BinXian	48.90	349	⇓P	P	17 58 09.3	+0.8
BNX				pmax	pmax		
	comp=Z,12nm,1.0s						
BNX				pmax	pmax		
	comp=Z,170nm,5.7s						
HHC	Hu-ho-hao-te	49.68	333	*e*P	P	17 58 15.9	+1.1
HHC				pmax	pmax		
	comp=Z,44nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.5s						
KLR	Kul'dur	51.68	354	P	P	17 58 30.1	+0.5
	comp=Z,2.6nm,0.8s,baz=186,slow=2.8,SNR=6.6						
	comp=Z,2.6nm,0.8s						
SHL	Shillong	53.34	304	P	P	17 58 41.8	-0.8
SHL				IAmb	IAmb	17 58 44.2	
	comp=Z,14nm,1.0s						
GOMU	GeErMu	56.20	317	P	P	17 59 05.3	+2.0
GOMU				PcP	PcP	18 00 02.1	+1.2
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,53nm,5.2s						
YAK	Yakutsk	64.52	355	P	P	17 59 58.6	-0.6
	comp=Z,5.3nm,0.8s,baz=355,slow=3.2,SNR=9.9						
	comp=Z,5.3nm,0.8s						
YAK	Yakutsk	64.52	355	P	P	17 59 58.9	-0.3
YAK				IAmb	IAmb	18 00 01.2	
	comp=Z,11nm,0.8s						
WMQ	Urumqi	64.86	321	*e*P	P	18 00 03.4	+1.5
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				LR	LR		
	comp=Z,130nm,18.7s						
MKAR	Makanchi Array	69.63	322	P	P	18 00 33.2	+1.2
	comp=Z,8.4nm,0.7s,baz=202,slow=15,SNR=8.8						
	comp=Z,8.4nm,0.7s						
MAKZ	Makanchi	69.83	322	P	P	18 00 33.6	+0.3
PRZ	Przheval'sk	70.36	317	P	P	18 00 36.4	-0.4
KSH	Kashi	71.01	313	P	P	18 00 43.8	+3.0
KSH				pP	sP	18 00 55.4	+2.0
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KDJ	Kajisay	71.06	316	P	P	18 00 41.0	-0.1
KDJ				IAmb	IAmb	18 00 43.7	
	comp=Z,6.9nm,0.8s						
NIL	Nilore	71.31	307	P	P	18 00 42.2	-0.4
ZAA0	Zalesovo Array	71.71	330	P	P	18 00 44.1	-0.4
ZAA0				IAmb	IAmb	18 00 45.5	
	comp=Z,19nm,1.6s						
ZALV	Zalesovo Beam	71.71	330	P	P	18 00 44.7	+0.2
	comp=Z,3.7nm,0.6s,baz=114,slow=6.0,SNR=13						
	comp=Z,3.7nm,0.6s						
BOOM	Boomskoye usch	72.05	316	P	P	18 00 46.6	-0.4
BOOM				IAmb	IAmb	18 00 49.4	
	comp=Z,9.5nm,0.7s						
AAK	Ala-Archa	73.11	316	P	P	18 00 52.2	-1.1
KURK	Kurchatov	73.53	325	P	P	18 00 55.6	+0.2
KURK				IAmb	IAmb	18 00 57.3	
	comp=Z,15nm,1.1s						
KURK	Kurchatov	73.53	325	IAmb	IAmb	18 00 57.3	
	comp=Z,15nm,1.1s						
KURBB	Kurchatov Arra	73.55	325	P	P	18 00 55.9	+0.4
	comp=Z,9.7nm,1.0s,baz=114,slow=5.4,SNR=24						
	comp=Z,9.7nm,1.0s						
TIXI	Tiksi	74.08	357	P	P	18 00 58.5	+0.3
	comp=Z,1.2nm,0.6s,baz=92,slow=23,SNR=15						
	comp=Z,1.2nm,0.6s						
KBL	Kabul	74.92	307	P	P	18 01 03.0	-1.1
KBL				IAmb	IAmb	18 01 05.4	
	comp=Z,8.5nm,0.8s						
BTK	Batken	74.95	312	P	P	18 01 03.5	-0.5
BTK				IAmb	IAmb	18 01 06.4	
	comp=Z,16nm,1.4s						
GAR	Garm	75.04	311	P	P	18 01 04.0	-0.6
CHGR	Chuyangaron	75.83	311	P	P	18 01 08.0	-1.1
KK31	Karatay Array	76.03	315	P	P	18 01 08.9	-1.2
KKAR	Karatay Array	76.03	315	P	P	18 01 09.3	-0.8
KKAR	Karatay Array	76.03	315	P	P	18 01 09.1	-1.1
KKAR				IAmb	IAmb	18 01 12.1	
	comp=Z,9.0nm,1.4s						
VNDA	Vanda	76.19	175	P	P	18 01 09.3	-1.1
	comp=Z,0.7nm,0.5s,baz=338,slow=7.2,SNR=7.4						
	comp=Z,0.7nm,0.5s						
BRVK	Borovoye	79.20	325	P	P	18 01 27.7	+0.2
SII	Sitkinak Islan	79.32	31	P	P	18 01 28.4	+0.2
	baz=249						
NRIK	Noril'sk	79.39	344	P	P	18 01 28.5	+0.3
	comp=Z,7.9nm,1.0s,baz=125,slow=5.9,SNR=7.9						
	comp=Z,7.9nm,1.0s						
NRIK	Noril'sk	79.39	344	P	P	18 01 27.9	-0.3
NRIK				IAmb	IAmb	18 01 30.2	
	comp=Z,11nm,1.1s						
P18K	Big Mountain,	79.85	28	P	P	18 01 31.6	+0.6
	baz=248						
N18K	Kilae Creek	80.04	27	P	P	18 01 32.4	+0.4
	baz=247						
KDAK	Kodiak Island	80.57	30	P	P	18 01 36.1	+1.3
	baz=250						
O19K	Port Alsworth	80.58	28	P	P	18 01 35.8	+1.0
	baz=248						
N19K	Bonanza Creek	80.73	27	P	P	18 01 37.2	+1.4
	baz=248						
TTA	Tatalina	80.88	25	P	P	18 01 37.1	+0.6
TTA	Tatalina	80.88	25	P	P	18 01 37.7	+1.2
	baz=246,SNR=5.3						
L19K	White Mountain	81.08	26	P	P	18 01 38.7	+1.2
L19K				IAmb	IAmb	18 01 39.9	
	comp=Z,11nm,0.9s						
L19K	White Mountain	81.08	26	P	P	18 01 39.1	+1.5
	baz=248						
M19K	Big River Lodg	81.18	26	P	P	18 01 38.9	+0.9
M19K				IAmb	IAmb	18 01 44.1	
	comp=Z,9.2nm,1.2s						
M19K	Big River Lodg	81.18	26	P	P	18 01 39.3	+1.2
	baz=248						
GCSA	Galena City Sc	81.27	23	P	P	18 01 39.6	+1.2
	baz=245						
O20K	Slope Mountain	81.33	28	P	P	18 01 39.9	+1.0
	baz=250						
L20K	Farewell, AK	81.61	26	P	P	18 01 41.1	+0.7
	baz=248						
M20K	Styx River	81.73	26	P	P	18 01 42.6	+1.6
	baz=249						
K20K	Telida	81.86	25	P	P	18 01 41.7	+0.1
K20K				IAmb	IAmb	18 01 44.2	
	comp=Z,12nm,0.9s						
K20K	Telida	81.86	25	P	P	18 01 43.1	+1.5
	baz=248,SNR=6.1						
J20K	Nowinta River	82.13	24	P	P	18 01 43.9	+0.8
J20K				IAmb	IAmb	18 01 45.6	
	comp=Z,8.8nm,0.9s						
J20K	Nowinta River	82.13	24	P	P	18 01 44.2	+1.1
	baz=248,SNR=7.3						
PPLA	Purkeypile	82.49	26	P	P	18 01 45.4	+0.3
	baz=250						
MAW	Mawson	82.65	202	P	P	18 01 45.9	+0.3
	comp=Z,3.0nm,0.8s,baz=332,slow=6.4,SNR=2.9						
	comp=Z,3.0nm,0.8s						
CHUM	Lake Minchumin	82.78	25	P	P	18 01 47.4	+1.0
	baz=250,SNR=9.4						
O22K	Cooper Landing	82.83	28	P	P	18 01 47.4	+0.7
	baz=252						
SEW	Seward	82.84	29	P	P	18 01 47.1	+0.4
	baz=253						
RC01	Rabbit Creek A	83.00	28	P	P	18 01 48.1	+0.5
	baz=252						
M22K	Willow	83.03	27	P	P	18 01 48.2	+0.5
	baz=252						
CUT	Chulitna	83.17	26	P	P	18 01 48.3	-0.1
	baz=252						
H21K	Melozitna Rive	83.21	23	P	P	18 01 49.4	+0.8
H21K	Melozitna Rive	83.21	23	P	P	18 01 49.5	+0.8
	baz=249						
BPAW	Bear Paw Mtn.	83.40	25	P	P	18 01 49.9	+0.2
	baz=251						
PMR	Palmer	83.43	27	P	P	18 01 49.6	-0.2
	baz=253						
KNK	Knik Glacier	83.69	27	P	P	18 01 51.0	-0.2
	baz=253						
SML	Sawmill	83.86	27	P	P	18 01 52.7	+0.6
	baz=254						
WAT1	Susitna Watana	84.05	26	P	P	18 01 52.9	-0.2
	baz=253						
RND	Reindeer	84.09	26	P	P	18 01 52.8	-0.4
RND				IAmb	IAmb	18 01 54.0	
	comp=Z,8.0nm,0.8s						
M23K	Glacier View	84.13	27	P	P	18 01 53.4	-0.1
	baz=254						
GEYT	Alibeck	84.21	308	P	P	18 01 55.6	+1.2
	comp=Z,3.8nm,0.7s,baz=64,slow=6.8,SNR=5.7						
	comp=Z,3.8nm,0.7s						
GEYT	Alibeck	84.21	308	P	P	18 01 54.4	0.0
SCM	Sheep Creek Mo	84.33	27	P	P	18 01 54.5	0.0
SCM	Sheep Creek Mo	84.33	27	P	P	18 01 54.4	0.0
	baz=254						
WAT6	Susitna Watana	84.34	26	P	P	18 01 54.5	-0.1
	baz=254						
NEA2	Nenana	84.35	24	P	P	18 01 54.5	0.0
NEA2				IAmb	IAmb	18 01 57.4	
	comp=Z,5.5nm,1.1s						
NEA2	Nenana	84.35	24	P	P	18 01 54.6	+0.1
	baz=253						
I23K	Minto, Yukon-K	84.40	24	P	P	18 01 54.4	-0.2
I23K				IAmb	IAmb	18 01 56.5	
	comp=Z,5.9nm,0.8s						
I23K	Minto, Yukon-K	84.40	24	P	P	18 01 55.5	+0.8
	baz=252						
H23K	Yukon River	84.54	23	P	P	18 01 56.1	+0.6
H23K	Yukon River	84.54	23	P	P	18 01 56.0	+0.6
	baz=252						
ABKAR	Akbulak array	84.58	320	P	P	18 01 55.9	-0.1
ABKAR	Akbulak array	84.58	320	P	P	18 01 55.8	-0.2
ABKAR				IAmb	IAmb	18 01 57.5	
	comp=Z,6.5nm,0.8s						
DHY	Denali Highway	84.64	26	P	P	18 01 55.5	-0.7
DHY	Denali Highway	84.64	26	P	P	18 01 56.4	+0.2
	baz=254						
WRH	Wood River Hil	84.72	25	P	P	18 01 55.8	-0.6
WRH				IAmb	IAmb	18 01 58.8	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	84.73	22	P	P	18 01 56.3	0.0
COLD				IAmb	IAmb	18 01 58.7	
	comp=Z,4.8nm,0.7s						
COLD	Coldfoot	84.73	22	P	P	18 01 56.9	+0.6
	baz=251						
DIV	Divide	84.87	28	P	P	18 01 57.6	+0.4
KLU	Klutina	84.89	28	P	P	18 01 57.6	+0.3
	baz=256						
CCB	Clear Creek Bu	84.89	24	P	P	18 01 56.0	-1.1
HDA	Harding Lake	85.18	25	P	P	18 01 57.6	-1.0
HDA				IAmb	IAmb	18 02 00.0	
	comp=Z,5.7nm,0.8s						
HDA	Harding Lake	85.18	25	P	P	18 01 58.8	+0.2
	baz=254,SNR=5.3						
H24K	Noodor Dome	85.19	23	P	P	18 01 59.1	+0.3
H24K				IAmb	IAmb	18 02 01.7	
	comp=Z,6.1nm,0.9s						
H24K	Noodor Dome	85.19	23	P	P	18 01 60.0	+1.2
	baz=254						
IL31		85.30	24	P	P	18 01 58.1	-1.1
IL31				IAmb	IAmb	18 02 00.4	
	comp=Z,9.2nm,0.9s						
ILAR	Eielson Array	85.30	24	P	P	18 01 58.7	-0.6
	comp=Z,6.2nm,0.8s,baz=258,slow=4.7,SNR=37						
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	85.30	24	P	P	18 01 57.8	-1.4
BMRM	Bremner River	85.38	28	P	P	18 02 00.6	+0.8
	baz=257						
TOLK	Toolik Lake Re	85.40	20	P	P	18 02 00.2	+0.5
TOLK				IAmb	IAmb	18 02 02.4	
	comp=Z,9.7nm,1.2s						
TOLK	Toolik Lake Re	85.40	20	P	P	18 02 00.9	+1.1
	baz=252						
PAX	Paxson	85.45	26	P	P	18 01 59.6	-0.6
PAX				IAmb	IAmb	18 02 05.4	
	comp=Z,5.7nm,1.2s						
PAX	Paxson	85.45	26	P	P	18 02 00.2	0.0
	baz=256						
HARP	HAARP	85.46	27	P	P	18 02 00.1	0.0
	baz=256						
N25K	Chitina, Valde	85.53	28	P	P	18 02 00.6	0.0
	baz=257						
GLB	Gilahina Butte	85.86	28	P	P	18 02 01.6	-0.6
J25K	Salcha River,	85.89	25	P	P	18 02 02.0	-0.3
J25K				IAmb	IAmb	18 02 04.2	
	comp=Z,7.7nm,1.1s						
J25K	Salcha River,	85.89	25	P	P	18 02 01.9	-0.4
	baz=256,SNR=8.3						
RIDG	Independent Ri	85.91	26	P	P	18 02 03.0	+0.6
	baz=256						
L26K	Log Cabin Wild	86.41	27	P	P	18 02 05.1	+0.3
	baz=258						
MESA	MESA	86.50	29	P	P	18 02 06.1	+0.6
	baz=259						
ARU	Arti	86.60	327	P	P	18 02 04.7	-1.1
ARU				IAmb	IAmb	18 02 07.2	
	comp=Z,5.2nm,0.8s						
J26L	Joseph Creek	86.63	25	P	P	18 02 06.3	+0.4
	baz=258,SNR=9.4						
BARN	Barnard Glacie	86.80	29	P	P	18 02 06.8	-0.2
BMAR	Burnt Mountain	86.88	22	P	P	18 02 07.2	+0.2
CTG	Chitna Glacier	86.94	29	P	P	18 02 08.0	+0.4
	baz=260						
M27K	Edge Creek, AK	86.94	27	P	P	18 02 06.5	-1.1
M27K				IAmb	IAmb	18 02 09.8	
	comp=Z,5.7nm,0.9s						
M27K	Edge Creek, AK	86.94	27	P	P	18 02 07.7	+0.2
	baz=259						
CTGM	Chitina Glacie	86.94	29	P	P	18 02 07.6	0.0
L27K	Beaver Creek,	87.09	27	P	P	18 02 08.6	+0.4
L27K				IAmb	IAmb	18 02 19.8	
	comp=Z,11nm,1.6s						
L27K	Beaver Creek,	87.09	27	P	P	18 02 09.1	+0.9
	baz=259						
BCAR	Beaver Creek A	87.11	27	P	P	18 02 08.6	+0.3
K27K	Chicken	87.17	26	P	P	18 02 09.6	+1.1
	baz=259						
PINM	Pinnacle	87.32	30	P	P	18 02 09.9	+0.5
	baz=261						
YUK3	Moose Creek	87.50	28	P	P	18 02 10.9	+0.6
	baz=260						
PNL	Peninsula	87.69	30	P	P	18 02 11.6	+0.5
	baz=262						
EGAK	Eagle	87.70	25	P	P	18 02 11.5	+0.5
EGAK	Eagle	87.70	25	P	P	18 02 12.1	+1.2
	baz=260,SNR=7.5						
YUK4	Talbot Arm	88.29	29	P	P	18 02 14.9	+0.8
	baz=262						
DAWY	Dawson	88.34	26	P	P	18 02 14.7	+0.6
DAWY	Dawson	88.34	26	P	P	18 02 15.0	+0.9
	baz=261,SNR=7.4						
HYT	Haines Junctio	88.77	29	P	P	18 02 16.1	-0.3
HYT	Haines Junctio	88.77	29	P	P	18 02 17.5	+1.2
	baz=263						
N30M	Aishikik Lake	89.05	29	P	P	18 02 18.3	+0.8
	baz=264						
PLBC	Pleasant Camp	89.19	31	P	P	18 02 18.5	+0.4
	baz=264						
M30M	Minto, Yukon	89.31	27	P	P	18 02 18.9	+0.1
M30M				IAmb	IAmb	18 02 21.0	
	comp=Z,3.5nm,1.1s						
N31M	Braeburn, Yuko	89.68	29	P	P	18 02 21.0	+0.6
	baz=265						
WHY	Whitehorse	90.04	29	P	P	18 02 22.1	-0.1
WHY				IAmb	IAmb	18 02 24.3	
	comp=Z,7.2nm,1.0s						
WHY	Whitehorse	90.04	29	P	P	18 02 23.1	+0.8
	baz=265						
M31M	Drury Creek, Y	90.39	28	P	P	18 02 24.1	+0.3
	baz=266						
FARO	Faro, Yukon	90.88	28	P	P	18 02 26.6	+0.6
	baz=267						
P33M	Teslin, Yukon	91.03	30	P	P	18 02 27.3	+0.4
	baz=267						
INK	Inuvik	91.14	22	P	P	18 02 27.5	+0.4
	baz=267						
S34M	Telegraph Cree	91.82	32	P	P	18 02 31.2	+0.7
	baz=269						
MMPY	Sheldon Lake,	91.86	28	P	P	18 02 31.4	+0.7
	baz=269						
YKA	Yellowknife Ar	99.53	27	P	Pdif	18 03 05.4	0.0
	comp=Z,0.8nm,0.9s,baz=289,slow=4.6,SNR=2.8						
	comp=Z,0.8nm,0.9s						
ARCES	ARCESS Array B	100.19	341	P	Pdif	18 03 07.5	-0.7
	comp=Z,5.2nm,0.9s,baz=65,slow=4.6,SNR=5.3						
Q24A	Divide	111.35	49	P	PKiKP	18 07 56.3	-1.2
	baz=285						
T25A	Trinidad	112.38	51	P	PKiKP	18 07 58.8	-0.5
	baz=285						
MNTX	Cornudas Mount	112.86	57	P	PKiKP	18 07 59.9	-0.3
	baz=282						
TORD	Torodi Ar. Bea	136.43	287	PKP	PKPdf	18 08 45.5	0.0
	comp=Z,0.7nm,0.6s,baz=64,slow=1.3,SNR=6.1						
DBIC	Dimbokro	143.73	278	PKP	PKPab	18 08 55.5	-0.1
	comp=Z,5.8nm,1.1s,baz=290,slow=3.1,SNR=7.3						

NEIC ***20*** *17:51:10.1±1.9, 20°.1S±0°.1×177°.5W±0°.1, h501^{km}±6^{km}, mb4.5/88, Error ellipse: s-maj=17.0km s-min=13.8km az=146.0*

NOU ***20*** *17:51:12.4, 19°.92S×177°.28W, h589^{km}, mb5.0/11, Fiji Islands Region*

IDC ***20*** *17:51:13.4±1.4, 20°.22S×177°.51W, h549^{km}±15^{km}, mb3.8/19, mbtmp4.7/23, Error ellipse: s-maj=17.5km s-min=11.4km az=131.0*

ISC 20 17:51:13.4±0.4**, 20°.14S**±0°.08×**177°.52W**±0°.07**, h550**^{km}**,**
n251, σ1^{s}.18/276**, mb4.5**/63**, 27C-14D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.25	327	P	P	17 52 27.2	+2.8
DGTI	Dogotuki	4.62	325	P	P	17 52 41.9	+1.7
MSVF	Nonsavu	4.82	299	P	P	17 52 43.4	+1.5
	86nm,0.7s,baz=270,slow=22,SNR=53						
MSVF	Nonsavu	4.82	299		P	17 52 43.0	+1.0
MSVF	Nonsavu	4.82	299	P	P	17 52 44.0	+2.1
AFI	Afiamalu	8.28	42	P	P	17 53 13.5	-0.6
	54nm,0.5s,baz=201,slow=3.0,SNR=12						
AFI				S	S	17 54 48.6	-4.5
	38nm,0.5s,baz=48,slow=23,SNR=3.6						
AFI	Afiamalu	8.28	42		P	17 53 11.5	-2.6
AFI					S	17 54 47.0	-6.0
MARNC	Mare, Loyalty	13.57	262	P	P	17 54 06.9	-1.4
DVP	Devils Point	13.73	278	P	P	17 54 10.5	+0.6
PINNC	Pines Island,	14.22	257	P	P	17 54 14.7	-0.1
LIFNC	LIFOU	14.29	265	P	P	17 54 13.2	-2.4
OUENC	Ouen Island, N	14.75	258	P	P	17 54 18.7	-1.6
DZM	Mont Dzumac	15.09	260	P	P	17 54 22.9	-1.0
	15nm,0.5s,baz=224,slow=6.9,SNR=28						
DZM	Mont Dzumac	15.09	260	P	P	17 54 22.9	-1.0
ONTNC	Ouen Toro	15.10	259	P	P	17 54 21.0	-2.9
SANVU	Saraoutou	15.27	285	P	P	17 54 24.2	-1.6
RAR	Rarotonga	16.65	97	P	P	17 54 35.3	-3.7
	15nm,0.5s,baz=191,slow=21,SNR=2.7						
RAR	Rarotonga	16.65	97	P	P	17 54 36.5	-2.5
WMGZ	Waiomatatini S	17.97	190	P	P	17 54 52.7	+1.9
HAZ	Te Kaha	18.02	192	P	P	17 54 52.4	+1.1
MKAZ	Moumakai	18.07	199	P	P	17 54 53.6	+1.8
PKGZ	Pakihiroa	18.10	191	P	P	17 54 53.5	+1.5
PUZ	Puketiti	18.24	191	P	P	17 54 54.3	+0.9

TWGZ	Tauwhareparae	18.39	191	P	P	17 54 56.0	+1.2
TOZ	Tahuroa Road	18.55	198	P	P	17 54 57.8	+1.7
MWZ	Matawai	18.63	192	P	P	17 54 57.3	+0.3
URZ	Urewera	18.65	193	P	P	17 54 55.7	-1.3
	9.4nm,0.3s,baz=252,slow=2.1,SNR=28						
URZ	Urewera	18.65	193	P	P	17 54 55.5	-1.5
URZ	Urewera	18.65	193	P	P	17 54 55.8	-1.3
URZ	Urewera	18.65	193	P	P	17 54 56.8	-0.2
SNGZ	Shannon Statio	19.10	192	P	P	17 55 01.2	0.0
BKZ	Black Stump Fm	19.65	194	P	P	17 55 04.1	-2.1
BKZ	Black Stump Fm	19.65	194	P	P	17 55 05.0	-1.2
QRZ	Quartz Range	22.30	200	P	P	17 55 30.1	+0.1
NNZ	Nelson	22.39	198	P	P	17 55 29.9	-0.9
KHZ	Kahutara	23.46	197	P	P	17 55 39.6	-0.7
RPZ	Rata Peaks	25.38	200	P	P	17 55 56.7	-0.6
	16nm,0.8s,baz=355,slow=3.1,SNR=6.0						
	16nm,0.8s						
LBZ	Lake Benmore	26.26	200	P	P	17 56 04.0	-1.0
WHZ	Wether Hill Ro	28.33	202	P	P	17 56 22.9	-0.3
EIDS	Eidsvold	29.37	254	P	P	17 56 31.1	-1.4
EIDS				IAmb	IAmb	17 56 33.2	
	comp=Z,26nm,1.6s						
ARMA	Armidale	29.63	244	P	P	17 56 33.6	-1.2
ARMA				IAmb	IAmb	17 56 35.8	
	comp=Z,13nm,1.1s						
CAN	Canberra	33.08	236	P	P	17 57 04.7	+0.5
CTA	Charters Tower	33.97	264	P	P	17 57 11.7	-0.1
	comp=Z,13nm,0.4s,baz=89,slow=9.9,SNR=36						
	comp=Z,13nm,0.4s						
CTAO	Charters Tower	33.97	264	P	P	17 57 10.6	-1.3
CTAO				IAmb	IAmb	17 57 12.6	
	comp=Z,13nm,0.7s						
TOO	Toolangi	36.47	234	P	P	17 57 31.1	-1.2
TOO				IAmb	IAmb	17 57 33.1	
	comp=Z,8.3nm,0.8s						
COEN	Coen	38.01	273	P	P	17 57 45.1	-0.1
COEN				IAmb	IAmb	17 57 46.6	
	comp=Z,9.7nm,0.8s						
STKA	Stephens Creek	38.35	244	P	P	17 57 48.1	+0.4
	comp=Z,7.9nm,0.5s,baz=91,slow=9.4,SNR=16						
	comp=Z,7.9nm,0.5s						
STKA	Stephens Creek	38.35	244	P	P	17 57 47.8	+0.1
BBOO	Buckleboo	43.11	243	P	P	17 58 24.8	-0.8
BBOO				IAmb	IAmb	17 58 25.9	
	comp=Z,16nm,0.7s						
WR0	Warramunga Arr	44.90	262	P	P	17 58 39.0	-0.6
WR0				IAmb	IAmb	17 59 11.5	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	45.03	256	P	P	17 58 40.3	-0.4
ASAR	Alice Springs	45.04	256	P	P	17 58 40.5	-0.2
	comp=Z,15nm,0.5s,baz=95,slow=7.6,SNR=61						
ASAR				PcP	PcP	18 00 10.2	+0.3
	comp=Z,1.4nm,0.7s,baz=98,slow=4.8,SNR=2.3						
ASAR				S	S	18 04 36.5	-3.3
	comp=Z,3.5nm,1.0s,baz=98,slow=14,SNR=13						
	comp=Z,15nm,0.5s						
ASAR	Alice Springs	45.04	256	P	P	17 58 39.7	-1.0
WB0	Warramunga Arr	45.07	262	P	P	17 58 40.0	-0.9
WB0				IAmb	IAmb	17 58 41.2	
	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	45.08	262	P	P	17 58 40.1	-0.9
WB2				IAmb	IAmb	17 58 40.7	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	45.09	262	P	P	17 58 40.5	-0.7
	comp=Z,5.5nm,0.3s,baz=96,slow=7.7,SNR=67						
WRA				S	S	18 04 36.4	-4.3
	comp=Z,1.1nm,0.9s,baz=97,slow=13,SNR=6.3						
	comp=Z,5.5nm,0.3s						
WRA	Warramunga Arr	45.09	262	P	P	17 58 39.4	-1.7
MTN	Manton Dam	49.61	270	P	P	17 59 13.9	-1.1
MTN				IAmb	IAmb	17 59 15.6	
	comp=Z,18nm,0.7s						
FORT	Forrest	49.85	246	P	P	17 59 15.8	-0.8
KNRA	Kununurra	51.13	266	P	P	17 59 24.3	-1.8
KNRA				IAmb	IAmb	17 59 38.0	
	comp=Z,33nm,1.4s						
FAKI	Fak Fak	51.85	283	P	P	17 59 31.4	0.0
SOEI	Soe	56.94	271	P	P	18 00 06.9	-0.3
PSA00	Pilbara Seismi	58.18	257	P	P	18 00 14.8	-0.7
PSA00	Pilbara Seismi	58.18	257	P	P	18 00 15.0	-0.4
PSA00				IAmb	IAmb	18 00 16.0	
	comp=Z,11nm,0.8s						
VNDA	Vanda	58.31	185	P	P	18 00 17.5	+2.2
GIRL	Giralia	63.08	254	P	P	18 00 47.3	-0.3
TOLI2	Tolitoli	63.97	282	P	P	18 00 53.4	0.0
TOLI2				IAmb	IAmb	18 00 57.7	
	comp=Z,6.4nm,0.9s						
JGF	Kuroka	70.00	322	P	P	18 01 29.5	-0.6
JGF				IAmb	IAmb	18 01 38.8	
	comp=Z,12nm,1.3s						
MJAR	Matsushiro Arr	70.19	323	P	P	18 01 30.8	-0.4
	comp=Z,6.6nm,0.7s,baz=142,slow=6.3,SNR=18						
	comp=Z,6.6nm,0.7s						
MJAR	Matsushiro Arr	70.19	323	P	P	18 01 31.1	-0.1
MAJO	Matsushiro	70.19	323	P	P	18 01 31.2	0.0
MAJO				IAmb	IAmb	18 01 32.7	
	comp=Z,9.4nm,0.8s						
MJB9	Matsu-Tunnel	70.19	323	P	P	18 01 31.1	-0.1
MJB9				IAmb	IAmb	18 01 32.7	
	comp=Z,8.9nm,0.8s						
UGM	Wanagama	70.42	269	P	P	18 01 32.9	-0.2
JSD	Sado	71.23	324	P	P	18 01 37.4	+0.1
JSD				IAmb	IAmb	18 01 39.0	
	comp=Z,26nm,1.2s						
KIWB	Kanaga Island	71.68	0	P	P	18 01 39.8	+0.2
ADK	Adak	71.71	1	P	P	18 01 40.0	+0.3
JHS	Saijyo	72.12	319	P	P	18 01 42.9	+0.3
JHS				IAmb	IAmb	18 01 44.6	
	comp=Z,15nm,0.9s						
JEW	Eniwo	73.17	330	P	P	18 01 49.2	+0.8
JKA	Kamikawa-asahi	73.62	331	P	P	18 01 51.8	+0.8
JKA				IAmb	IAmb	18 01 54.0	
	comp=Z,21nm,0.9s						
ASAJ	Asahikawa	73.62	331	P	P	18 01 52.8	+1.8
	comp=Z,16nm,0.8s,baz=207,slow=7.3,SNR=18						
	comp=Z,16nm,0.8s						
KSM	Kuching	73.81	278	P	P	18 01 53.7	+1.0
KSM				IAmb	IAmb	18 01 56.1	
	comp=Z,17nm,1.4s						
SSLB	Suanglung	74.15	303	P	P	18 01 53.4	-1.0
SSLB				IAmb	IAmb	18 01 54.8	
	comp=Z,9.7nm,0.8s						
PEA0B	Petropavlovsk-	76.04	345	P	P	18 02 05.5	+1.2
PEA0B				IAmb	IAmb	18 02 05.9	
	comp=Z,13nm,0.9s						
PETK	Petropavlovsk-	76.04	345	P	P	18 02 04.0	-0.3
	comp=Z,10.0nm,0.9s,baz=161,slow=9.4,SNR=12						
	comp=Z,10.0nm,0.9s						
PETK	Petropavlovsk-	76.04	345	P	P	18 02 04.5	+0.2
KSRS	Korea Array	76.91	318	P	P	18 02 10.4	+1.0
	comp=Z,2.5nm,1.0s,baz=144,slow=6.3,SNR=11						
	comp=Z,2.5nm,1.0s						
KSAR	Wonju Array Be	76.93	318	P	P	18 02 09.4	-0.1
USRK	Ussuriysk Ar.	78.92	326	P	P	18 02 20.4	+0.4
	comp=Z,11nm,0.9s,baz=141,slow=3.6,SNR=14						
	comp=Z,11nm,0.9s						
NJ2	Nanjing	79.99	309	*e*P	P	18 02 25.6	-0.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NVAR	Mina Array Bea	80.46	43	P	P	18 02 28.7	+0.1
	comp=Z,2.9nm,0.8s,baz=228,slow=9.3,SNR=8.3						
	comp=Z,2.9nm,0.8s						
NVAR	Mina Array Bea	80.46	43	P	P	18 02 29.8	+1.2
MDJ	Mudanjiang	80.48	325	P	P	18 02 28.6	+0.3
MDJ				IAmb	IAmb	18 02 30.8	
	comp=Z,11nm,0.8s						
MDJ	Mudanjiang	80.48	325	P	P	18 02 29.6	+1.4
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,41nm,5.3s						
NV11	Mina Array Sit	80.55	43	P	P	18 02 29.8	+0.8
KVN	Kaiserville	80.94	43	P	P	18 02 31.6	+0.5
MOD	Modoc Plateau	81.26	39	P	P	18 02 33.4	+0.9
K05A	Summer Lake	81.40	38	P	P	18 02 34.8	+1.5
K05A				IAmb	IAmb	18 02 37.0	
	comp=Z,24nm,1.1s						
PINE	Pine Mountain	82.03	38	P	P	18 02 38.1	+1.7
PINE				IAmb	IAmb	18 02 40.3	
	comp=Z,12nm,0.8s						
O19K	Port Alsworth	82.25	11	P	P	18 02 37.3	+0.5
BMN	Battle Mountai	82.29	42	P	P	18 02 39.5	+1.7
BMN				IAmb	IAmb	18 02 41.1	
	comp=Z,8.3nm,1.0s						
TUC	Tucson	82.41	52	P	P	18 02 40.8	+2.3
KLR	Kul'dur	82.45	329	P	P	18 02 38.2	0.0
	comp=Z,2.8nm,0.9s,baz=107,slow=2.3,SNR=5.8						
	comp=Z,2.8nm,0.9s						
WVOR	Wild Horse Val	82.57	40	P	P	18 02 40.8	+1.6
I07A	Izee	83.03	38	P	P	18 02 43.0	+1.6
J08A	Circle Bar Ran	83.20	39	P	P	18 02 43.9	+1.6
ELK	Elko	83.71	43	P	P	18 02 46.2	+1.1
G08A	Pilot Rock	84.06	37	P	P	18 02 48.0	+1.5
GHO	Glory Hole Cre	84.77	13	P	P	18 02 50.3	+0.8
F10A	Beach Ranch, E	85.44	37	P	P	18 02 54.5	+1.2
F10A				IAmb	IAmb	18 02 55.9	
	comp=Z,10nm,0.8s						
PLID	Pearl Lake	85.65	39	P	P	18 02 56.2	+1.8
B08A	Colville Reser	85.68	35	P	P	18 02 55.1	+0.9
B08A				IAmb	IAmb	18 02 56.1	
	comp=Z,7.4nm,1.1s						
HLID	Hailey	85.76	41	P	P	18 02 56.1	+1.2
LOGN	Logan Glacier	85.89	17	P	P	18 02 55.6	+0.6
LOGN				IAmb	IAmb	18 02 57.9	
	comp=Z,16nm,1.3s						
TRF	Thorofare Moun	86.00	12	P	P	18 02 55.5	-0.1
TRF				IAmb	IAmb	18 02 56.6	
	comp=Z,14nm,1.0s						
SEY	Seymchan	86.13	347	P	P	18 02 56.5	+0.6
	comp=Z,11nm,0.9s,baz=150,slow=5.2,SNR=25						
	comp=Z,11nm,0.9s						
MNTX	Cornudas Mount	86.18	54	P	P	18 02 57.5	+0.5
RND	Reindeer	86.25	12	P	P	18 02 56.7	+0.1
TXAR	Lajitas Array	86.49	57	P	P	18 02 59.9	+1.3
	comp=Z,0.9nm,0.5s,baz=216,slow=5.6,SNR=2.6						
	comp=Z,0.9nm,0.5s						
M27K	Edge Creek, AK	86.94	16	P	P	18 03 00.2	+0.2
M27K				IAmb	IAmb	18 03 02.7	
	comp=Z,13nm,1.1s						
NEA2	Nenana	87.27	12	P	P	18 03 01.1	-0.2
NEA2				IAmb	IAmb	18 03 03.2	
	comp=Z,5.7nm,1.1s						
WRH	Wood River Hil	87.36	12	P	P	18 03 01.8	+0.1
MCMT	McKenzie Canyo	87.39	40	P	P	18 03 03.7	+1.0
HDA	Harding Lake	87.53	13	P	P	18 03 03.0	+0.5
HDA				IAmb	IAmb	18 03 03.9	
	comp=Z,6.7nm,0.7s						
L27K	Beaver Creek,	87.54	15	P	P	18 03 02.5	-0.1
H21K	Melozitna Rive	87.58	10	P	P	18 03 02.8	+0.1
IMAR	Indian Mountai	87.73	10	P	P	18 03 03.5	+0.1
MDM	Murphy Dome	87.76	12	P	P	18 03 03.5	-0.1
MDM				IAmb	IAmb	18 03 04.7	
	comp=Z,13nm,1.0s						
DLMT	Dillon	87.82	40	P	P	18 03 05.6	+1.1
DLMT				IAmb	IAmb	18 03 07.9	
	comp=Z,5.7nm,0.9s						
IL31		87.86	13	P	P	18 03 03.9	-0.1
IL31				IAmb	IAmb	18 03 05.3	
	comp=Z,6.8nm,1.0s						
ILAR	Eielson Array	87.86	13	P	P	18 03 04.1	0.0
	comp=Z,3.4nm,0.9s,baz=217,slow=5.5,SNR=10						
	comp=Z,3.4nm,0.9s						
ILAR	Eielson Array	87.86	13	P	P	18 03 03.9	-0.2
XAN	Xi'an	88.27	307	P	P	18 03 07.9	+1.2
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
PDAR	Pinedale Array	88.39	43	P	P	18 03 08.4	+1.1
	comp=Z,1.7nm,0.7s,baz=204,slow=3.3,SNR=7.6						
	comp=Z,1.7nm,0.7s						
YHL	Hebgen Lake	88.42	41	P	P	18 03 08.5	+1.0
YHL				IAmb	IAmb	18 03 11.5	
	comp=Z,9.1nm,1.0s						
M30M	Minto, Yukon	88.49	18	P	P	18 03 08.0	+0.9
M30M				IAmb	IAmb	18 03 09.3	
	comp=Z,6.7nm,0.8s						
BOZ	Bozeman (W)	88.53	40	P	P	18 03 09.3	+1.5
BOZ				IAmb	IAmb	18 03 11.2	
	comp=Z,5.6nm,1.0s						
BILL	Bilibino	88.72	354	P	P	18 03 08.1	+0.2
EGAK	Eagle	89.14	15	P	P	18 03 10.4	+0.4
EGAK				IAmb	IAmb	18 03 12.1	
	comp=Z,8.3nm,0.9s						
HHC	Hu-ho-hao-te	89.42	314	*e*P	P	18 03 15.1	+3.1
HHC				pmax	pmax		
	comp=Z,38nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,6.3s						
COLD	Coldfoot	89.44	10	P	P	18 03 11.2	-0.2
COLD				IAmb	IAmb	18 03 13.7	
	comp=Z,6.5nm,1.0s						
CMAR	Chiang Mai Arr	90.42	289	P	P	18 03 17.6	+0.6
	comp=Z,3.0nm,0.9s,baz=116,slow=2.7,SNR=13						
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	90.42	289	P	P	18 03 16.6	-0.4
CHTO	Chiang Mai	90.54	290	P	P	18 03 17.3	-0.3
CHTO				IAmb	IAmb	18 03 19.9	
	comp=Z,4.6nm,0.8s						
YAK	Yakutsk	91.95	338	P	P	18 03 22.7	-0.3
	comp=Z,1.0nm,0.3s,baz=312,slow=1.9,SNR=4.1						
	comp=Z,1.0nm,0.3s						
YKA	Yellowknife Ar	96.00	25	P	P	18 03 42.1	+0.7
	comp=Z,0.3nm,0.5s,baz=240,slow=4.9,SNR=2.9						
	comp=Z,0.3nm,0.5s						
AC02	Maricunga	96.39	121	P	P	18 03 45.6	+0.8
ZALV	Zalesovo Beam	110.49	321	PKiKP	PKiKP	18 08 42.6	-0.5
	comp=Z,0.6nm,0.4s,baz=96,slow=4.3,SNR=3.6						
MKAR	Makanchi Array	111.27	313	PKiKP	PKiKP	18 08 44.4	-0.6
	comp=Z,0.6nm,0.6s,baz=35,slow=0.9,SNR=10						
KURK	Kurchatov	114.03	317		PKiKP	18 08 49.2	-0.8
KURBB	Kurchatov Arra	114.08	317	PKP	PKiKP	18 08 49.2	-0.9
	comp=Z,1.1nm,0.7s,baz=96,slow=2.0,SNR=16						
ARCES	ARCESS Array B	128.65	350	PKP	PKPdf	18 09 17.6	0.0
	comp=Z,1.8nm,0.6s,baz=54,slow=2.1,SNR=8.6						
FINES	FINESS Array B	135.55	344	PKP	PKPdf	18 09 28.7	-2.0
	comp=Z,1.1nm,0.7s,baz=67,slow=4.7,SNR=2.1						
SUW	Suwalki	142.66	340	*e*PKPdf	PKPdf	18 09 41.9	-2.0
AKASG	Malin Array Be	142.91	332	PKP	PKPdf	18 09 42.2	-2.3
	comp=Z,6.6nm,0.6s,baz=42,slow=4.6,SNR=32						
AKASG	Malin Array Be	142.91	332		PKPpre	18 09 41.7	
AKBB	Malin Array Si	142.91	332		PKPpre	18 09 41.7	
LODK	Lodwar	143.90	247		PKPab	18 09 46.3	-0.4
DIKM	Dikmen	144.95	315	⇑P	PKiKP	18 10 04.5	+12
SORM	Soroca	145.13	329	⇑P	PKPbc	18 09 49.6	+0.4
MBAR	Mbarara	145.49	237		PKPbc	18 09 52.0	+0.4
BNN	Bunyan	145.74	310		PKPbc	18 09 52.1	+0.5
KWP	Kalwaria Pacla	146.44	336	*e*PKPdf	PKPdf	18 09 47.1	-3.5
BR131	Keskin Array S	146.92	313		PKPbc	18 09 54.2	-0.6
BRTR	Keskin Array B	146.92	313	PKPbc	PKPbc	18 09 55.2	+0.4
	comp=Z,3.1nm,0.8s,baz=143,slow=2.5,SNR=11						
BRTR	Keskin Array B	146.92	313		PKPbc	18 09 54.3	-0.5
BUR08	Bucovina Ar. S	146.95	331		PKPbc	18 09 54.9	+0.4
BURAR	Bucovina Array	146.96	331	⇓P	PKiKP	18 09 56.2	-0.3
BURAR	Bucovina Array	146.96	331	PKPdf	PKPbc	18 09 53.5	-1.0
OJC	Ojcow	146.98	339	*e*PKPbc	PKPbc	18 09 55.0	+0.5
OJC	Ojcow	146.98	339		PKPbc	18 09 53.9	-0.6
BIZ	Bicaz	147.05	330	⇑P	PKiKP	18 09 56.1	-0.4
TESR	Tescani	147.09	329	⇑P	PKPbc	18 09 55.8	+1.0
KOLS	Kolonicke sedl	147.17	336	*e*PKP	PKPbc	18 09 55.8	+0.8
CFR	Carcaliu	147.24	326	⇑P	PKPbc	18 09 56.1	+0.9
TPGR	Topolog	147.30	325	⇑P	PKPbc	18 09 56.4	+0.9
KSP	Ksiaz	147.47	344	*e*PKPbc	PKPbc	18 09 56.7	+1.0
NIE	Niedzica	147.50	338	*e*PKPbc	PKiKP	18 09 57.6	+0.1
CRVS	Cervenica-Dubn	147.50	336	*e*PKP	PKPab	18 10 00.8	+1.0
VRI	Vrincioaia	147.50	328	⇓P	PKPbc	18 09 56.9	+1.0
PLOR	Plostina	147.55	328	⇑P	PKPbc	18 09 56.9	+0.8
HARR	Harsova	147.67	325	⇑P	PKPbc	18 09 57.3	+0.9
OSTC	Ostas	147.75	344	⇑*e*PKP	PKiKP	18 09 57.9	0.0
CHVC	Chvalec	147.77	344	⇑*e*PKP	PKPbc	18 09 57.5	+1.0
OZUR		147.81	329	⇓P	PKiKP	18 09 58.4	+0.2
CLL	Collm	147.81	348		PKPbc	18 09 56.2	-0.3
CLL	Collm	147.81	348	⇓*i*PKPbc	PKPbc	18 09 57.2	+0.7
	comp=Z,19nm,0.7s						
CLL				*i* PKPab	PKPab	18 10 01.2	+0.3
	comp=Z,9.0nm,0.9s						
CLL				*e*pPKPab	pPKPdf	18 12 00.0	-0.9
CLL				*e*x	x	18 12 08.0	
OKC	Ostrava-Krasne	147.84	341	⇑*e*PKP	PKiKP	18 09 57.9	-0.2
UPC	Upice	147.85	344	⇑*e*PKP	PKiKP	18 09 58.0	-0.1
UPC				*e*PKPAB	PKPab	18 10 02.4	+1.2
DPC	Dobruska-Polom	147.91	343	⇑*e*PKP	PKPbc	18 09 57.8	+0.9
DPC				*e*PKPAB	PKPab	18 10 02.9	+1.4
LANS	Liptovska Anna	148.01	339	*e*PKP	PKiKP	18 09 59.1	+0.6
BRG	Berggiesshubel	148.02	346	*e*PKP	PKiKP	18 09 58.3	-0.1
BRG				Amp		18 09 59.1	
	comp=Z,15nm,1.1s						
BRG				*e*x	x	18 10 02.5	
BRG				Amp		18 10 03.6	
	comp=Z,4.0nm,0.7s						
KRLC	Kraliky	148.03	342	⇑*e*PKP	PKPbc	18 09 58.1	+0.9
KRLC				*e*PKPAB	PKPab	18 10 03.0	+1.0
MORC	Moravsky Berou	148.08	341	⇓P	PKiKP	18 09 59.0	+0.4
MORC	Moravsky Berou	148.08	341	PKPdf	PKPdf	18 09 55.3	+1.9
MORC	Moravsky Berou	148.08	341	*e*PKP	PKiKP	18 09 58.6	0.0
DOPR	Dopca	148.09	329	⇑P	PKiKP	18 09 58.8	0.0
MLR	Muntele Rosu	148.16	328	⇑P	PKPdf	18 09 55.8	+2.0
MLR	Muntele Rosu	148.16	328		PKPdf	18 09 56.1	+2.4
PVCC	Panska Ves	148.20	345	⇑*e*PKP	PKiKP	18 09 59.0	+0.2
MDUB	Mudurnu	148.20	316	PKPdf	PKPdf	18 09 56.0	+2.1
MDUB				PKPbc	PKPbc	18 09 58.1	+0.1
MAUC	Maruska	148.36	341	⇑*e*PKP	PKiKP	18 09 59.2	0.0
DRGR		148.69	333	⇑P	PKiKP	18 09 60.0	-0.1
PRU	Pruhonice	148.70	345	⇑*e*PKP	PKiKP	18 09 59.9	+0.1
VRAC	Vranov	148.78	342	⇓P	PKiKP	18 09 60.0	-0.1
VRAC	Vranov	148.78	342	*e*PKP	PKPbc	18 09 59.6	+0.6
VYHS	Vyhne	148.79	339	*e*PKP	PKiKP	18 10 00.2	+0.1
JAVC	Velka Javorina	148.85	340	*e*PKP	PKiKP	18 10 01.5	+1.2
KOLL	Kolacno	148.86	339	*e*PKP	PKiKP	18 10 00.8	+0.6
PSZ	Piszkesteto	148.90	337	⇑P	PKiKP	18 10 00.4	0.0
PSZ	Piszkesteto	148.90	337	PKPdf	PKPdf	18 09 56.7	+2.0
PSZ				PKPbc	PKPbc	18 10 00.1	+0.6
NKC	Novy Kostel	148.94	348	⇑*e*PKP	PKiKP	18 10 00.6	+0.2
BORA	Eskisehir	148.99	316	PKPdf	PKPdf	18 09 55.4	+0.2
BORA					PKPbc	18 09 59.3	-0.7
KRUC	Moravsky	149.06	342	*e*PKP	PKiKP	18 10 00.7	+0.1
CSS	Mathiatis	149.06	305	PKPdf	PKPdf	18 09 56.0	+0.7
CSS					PKPbc	18 09 60.0	-0.2
MODS	Modra-Piesok	149.40	340	*e*PKP	PKiKP	18 10 02.1	+0.7
MEM	Membach	149.47	356	*d*PKP	PKiKP	18 10 01.7	+0.3
BTNL	Ternell	149.48	355	*d*PKP	PKPbc	18 10 01.1	+0.4
KHC	Kasperske Hory	149.73	345	PKPdf	PKPdf	18 09 56.8	+0.8
KHC					PKPbc	18 10 01.7	+0.3
KHC				PKPab	PKPab	18 10 09.2	+0.2
KHC	Kasperske Hory	149.73	345	⇑*e*PKP	PKiKP	18 10 02.2	+0.1
KHC				*e*PKPAB	PKPab	18 10 07.2	-1.8
GZR	Gura Zlata	149.75	331	⇑P	PKPbc	18 10 01.3	-0.2
CKRC	Cesky Krumlov	149.84	344	⇑*e*PKP	PKiKP	18 10 02.6	+0.3
CKRC				*e*PKPAB	PKPab	18 10 09.8	+0.3
BMRD	Maredsous	149.84	357	*d*PKP	PKiKP	18 10 02.6	+0.5
RCHB	Rochefort	149.97	356	*d*PKP	PKPbc	18 10 02.3	+0.5
GEC2	GERESS Array S	149.97	345	PKPdf	PKPdf	18 09 57.7	+1.3
GEC2					PKPbc	18 10 02.4	+0.4
GERES	GERESS Array B	149.97	345	PKPbc	PKPbc	18 10 02.4	+0.4
	comp=Z,4.4nm,0.8s,baz=27,slow=1.5,SNR=30						
GERES	GERESS Array B	149.97	345	PKPdf	PKPdf	18 09 57.2	+0.7
GERES					PKPbc	18 10 01.8	-0.2
DOU	Dourbes	150.06	357	*d*PKP	PKPbc	18 10 02.7	+0.7
BZS	Buzias	150.09	333	⇑P	PKPbc	18 10 02.9	+0.6
CONA	Conrad Observa	150.23	342	*i* P	PKiKP	18 10 03.9	+0.7
	comp=Z,5.6nm,0.7s						
CONA				*i* P	PKPab	18 10 12.6	+1.4
	comp=Z,5.8nm,1.1s						
HERR	Herculane	150.30	331	⇓P	PKiKP	18 10 03.8	+0.6
RONA	Rosalia, Austr	150.31	341	*i* P	PKiKP	18 10 03.9	+0.6
WLF	Walferdange	150.39	355		PKPbc	18 10 03.3	+0.5
WLF	Walferdange	150.39	355	*d*PKP	PKiKP	18 10 04.3	+1.0
MOA	Molln	150.75	344	*e*P	PKPbc	18 10 04.3	+0.5
	comp=Z,5.7nm,1.3s						
MOA				*i* P	PKPab	18 10 14.5	+1.2
	comp=Z,8.1nm,1.7s						
ARSA	Arzberg	150.94	342	*e*P	PKiKP	18 10 05.1	+0.5
	comp=Z,2.5nm,0.8s						
BIOA	Bad Ischl, Aus	151.06	344	*i* P	PKPbc	18 10 04.9	+0.5
BIOA				*e*P	PKPab	18 10 15.8	+1.2
BLKB	Belogradchik	151.12	329	⇑P	PKiKP	18 10 05.4	+0.3
FRGS	Fruska Gora	151.22	334	⇓P	PKiKP	18 10 06.1	+0.9
RDO	Rodhopi	151.31	322		PKPbc	18 10 04.1	-1.1
SOKA	Soboth	151.60	342	*e*P	PKPbc	18 10 05.8	0.0
	comp=Z,3.9nm,0.8s						
SOKA				*e*P	PKPab	18 10 17.2	+0.2
	comp=Z,7.4nm,1.1s						
KBA	Koelnbreinsper	151.70	344	*e*P	PKiKP	18 10 07.1	+0.7
	comp=Z,3.8nm,0.9s						
KBA				*e*P	PKPab	18 10 18.5	+1.0
	comp=Z,8.4nm,1.2s						
WATA	Walderalm	151.88	347	*i* P	PKiKP	18 10 07.1	+0.4
	comp=Z,3.6nm,0.6s						
WATA				*i* P	PKPab	18 10 19.2	+1.0
	comp=Z,3.6nm,0.9s						
RETA	Reutte	151.90	348	*i* P	PKPab	18 10 19.2	+1.0
	comp=Z,5.3nm,1.0s						
WTTA	Wattenberg	151.93	347	*i* P	PKiKP	18 10 07.5	+0.7
	comp=Z,8.8nm,1.0s						
MOTA	Moosalm	151.97	347	*i* P	PKPbc	18 10 07.2	+0.5
	comp=Z,9.0nm,1.6s						
MOTA				*i* P	PKPab	18 10 19.1	+0.5
	comp=Z,6.6nm,0.9s						
SQTA	Sankt Quirin	152.06	347	*e*P	PKPbc	18 10 07.3	+0.4
	comp=Z,7.7nm,1.5s						
ABTA	Abfaltersbach	152.22	345	*e*P	PKPbc	18 10 07.2	0.0
	comp=Z,9.7nm,1.2s						
ABTA				*e*P	PKPab	18 10 19.8	+0.2
	comp=Z,6.5nm,1.1s						
DAVA	Damuels	152.25	349	*e*P	PKPbc	18 10 07.4	0.0
	comp=Z,6.2nm,1.0s						
FETA	Feichten	152.35	348	*e*P	PKiKP	18 10 08.5	+0.8
	comp=Z,3.3nm,1.0s						
FETA				*e*P	PKPab	18 10 20.8	+0.6
	comp=Z,3.1nm,0.8s						
ESDC	Sonseca Array	159.76	14	PKPab	PKPab	18 10 52.4	+0.1
	comp=Z,0.9nm,1.0s,baz=351,slow=6.5,SNR=6.0						
TORD	Torodi Ar. Bea	173.01	174	PKP	PKPdf	18 10 20.1	-0.4
	comp=Z,1.4nm,0.9s,baz=112,slow=3.9,SNR=4.8						

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*IDC **20** 17:55:02.4±0.8, 31°.53N×103°.46E, h0^{km}, mb3.9/13, mbtmp3.9/15, MS2.8/3, Error ellipse: s-maj=27.4km s-min=15.5km az=60.0*

*NEIC **20** 17:55:06.7±1.4, 31°.58N±0°.10×103°.4E±0°.2, h26^{km}±5^{km}, mb4.6/19, ML4.1(BJI), Error ellipse: s-maj=19.6km s-min=13.1km az=65.0*

ISC 20 17:55:04.5±0.5**, 31°.58N**±0°.06×**103°.45E**±0°.08**, h13^{km}, n42, σ1^{s}.47**/47**, mb4.2**/21**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	Enshi	5.35	103		Pn	17 56 25.6	+1.5
GYA	Guiyang	5.83	150	*e*Pn	Pn	17 56 31.0	+0.2
GYA				Pg	Pg	17 56 54.1	-2.0
GYA				Sn	Sn	17 57 44.9	+7.4
GYA				Sg	Sg	17 58 12.5	+0.9
GYA				smax	smax		
	comp=N,200nm,0.9s						
GYA				smax	smax		
	comp=E,240nm,0.9s						
GYA				LR	LR		
	comp=N,350nm,7.8s						
GYA				LR	LR		
	comp=E,350nm,7.6s						
GYA				LR	LR		
	comp=Z,510nm,10.3s						
GULI	GuiLin	8.73	134	P	Pn	17 57 09.8	-0.8
GULI				S	Sn	17 58 47.4	-1.5
GULI				LR	LR		
	comp=N,270nm,5.6s						
GULI				LR	LR		
	comp=E,190nm,4.9s						
GULI				LR	LR		
	comp=Z,310nm,11.1s						
CNSH	ChangSha	8.90	110	⇓P	Pn	17 57 11.1	-1.7
CNSH				S	Sn	17 58 52.4	-0.6
CNSH				smax	smax		
	comp=N,25nm,0.9s						
CNSH				smax	smax		
	comp=E,45nm,0.8s						
CMAR	Chiang Mai Arr	13.69	198	Pn	Pn	17 58 17.4	-1.0
	comp=E,0.3nm,0.6s,baz=6.7,slow=10,SNR=1.2						
CMAR				LR	LR	18 03 27.1	
	comp=E,25nm,18.9s,baz=170,slow=37						
UBPT	Khong Chiam	16.33	173	Pn	Pn	17 58 54.2	+0.7
SONM	Songino Array	16.39	7	Pn	Pn	17 58 54.7	+0.4
	comp=E,2.0nm,1.0s,baz=192,slow=12,SNR=9.5						
SONM				LR	LR	18 05 51.0	
	comp=E,58nm,20.7s,baz=233,slow=40						
SONM	Songino Array	16.39	7		Pn	17 58 55.5	+1.1
WMQ	Urumqi	17.42	319	*e*P	Pn	17 59 07.6	+0.3
KSRS	Korea Array	20.97	67	P	P	17 59 47.9	+0.5
	comp=E,3.5nm,0.7s,baz=257,slow=9.2,SNR=17						
	comp=E,3.5nm,0.7s						
MK31	Makanchi Array	22.25	319	P	P	18 00 00.2	-0.9
MK31				IAmb	IAmb	18 00 34.4	
	comp=Z,13nm,1.1s						
MKAR	Makanchi Array	22.25	319	P	P	18 00 02.0	+0.9
	comp=Z,1.3nm,0.6s,baz=122,slow=12,SNR=17						

	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**22.25**	**319**	P	**P**	**18 00 01.1**	**-0.1**
MAKZ	**Makanchi**	**22.44**	**319**	P	**P**	**18 00 02.6**	**-0.5**
MAKZ				IAmb	IAmb	18 00 35.5	
	comp=Z,16nm,0.7s						
ZALV	**Zalesovo Beam**	**26.05**	**335**	P	**P**	**18 00 38.1**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=143,slow=9.8,SNR=7.1						
ZALV				LR	LR	18 11 51.7	
	comp=Z,27nm,22.0s,baz=135,slow=39						
	comp=Z,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**26.05**	**335**	P	**P**	**18 00 37.6**	**+0.2**
KURBB	**Kurchatov Arra**	**26.52**	**323**	P	**P**	**18 00 42.3**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=128,slow=9.5,SNR=20						
	comp=Z,2.6nm,0.9s						
KURK	**Kurchatov**	**26.53**	**323**	P	**P**	**18 00 40.5**	**-1.2**
MYLDM	**Lahad Datu**	**29.82**	**149**	P	**P**	**18 01 12.5**	**+1.1**
JMM	**Marumori**	**31.18**	**68**	P	**P**	**18 01 22.9**	**-0.3**
NRIK	**Noril'sk**	**38.88**	**351**	P	**P**	**18 02 29.6**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=121,slow=5.9,SNR=2.6						
	comp=Z,2.7nm,0.5s						
TIXI	**Tiksi**	**42.40**	**12**	P	**P**	**18 02 58.7**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=269,slow=22,SNR=14						
	comp=Z,1.1nm,0.4s						
TIXI	**Tiksi**	**42.40**	**12**	P	**P**	**18 02 58.2**	**0.0**
KNRA	**Kununurra**	**52.90**	**149**	P	**P**	**18 04 20.0**	**-0.4**
KNRA				IAmb	IAmb	18 05 00.0	
	comp=Z,10nm,1.4s						
PSA00	**Pilbara Seismi**	**55.14**	**161**	P	**P**	**18 04 34.8**	**-1.9**
PSA00				IAmb	IAmb	18 05 09.0	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**56.60**	**336**	P	**P**	**18 04 46.8**	**+0.1**
	comp=Z,2.7nm,1.0s,baz=84,slow=9.2,SNR=1.9						
	comp=Z,2.7nm,1.0s						
AKASG	**Malin Array Be**	**56.65**	**313**	P	**P**	**18 04 46.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=95,slow=7.8,SNR=2.5						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**18 04 48.6**	**0.0**
	comp=Z,0.9nm,0.6s,baz=79,slow=9.9,SNR=4.7						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**59.05**	**146**	P	**P**	**18 05 03.0**	**-1.5**
WB0				IAmb	IAmb	18 05 04.8	
	comp=Z,7.3nm,1.0s						
WRA	**Warramunga Arr**	**59.18**	**146**	P	**P**	**18 05 04.7**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=313,slow=12,SNR=21						
	comp=Z,2.6nm,0.7s						
WB2	**Warramunga Arr**	**59.19**	**146**	P	**P**	**18 05 05.3**	**-0.1**
WR0	**Warramunga Arr**	**59.29**	**146**	P	**P**	**18 05 05.8**	**-0.3**
WR0				IAmb	IAmb	18 05 24.2	
	comp=Z,12nm,1.5s						
ASAR	**Alice Springs**	**62.19**	**148**	P	**P**	**18 05 25.9**	**0.0**
	comp=Z,1.1nm,0.8s,baz=333,slow=7.0,SNR=7.1						
	comp=Z,1.1nm,0.8s						
H23K	**Yukon River**	**68.16**	**25**	P	**P**	**18 06 04.7**	**+0.6**
H23K				IAmb	IAmb	18 06 06.5	
	comp=Z,4.2nm,1.1s						
BPAW	**Bear Paw Mtn.**	**68.43**	**27**	P	**P**	**18 06 06.7**	**+0.8**
BPAW				IAmb	IAmb	18 06 07.6	
	comp=Z,3.1nm,1.0s						
PPLA	**Purkeypile**	**68.51**	**28**	P	**P**	**18 06 08.4**	**+1.9**
BMAR	**Burnt Mountain**	**69.06**	**23**	P	**P**	**18 06 10.8**	**+1.2**
ILAR	**Eielson Array**	**69.65**	**25**	P	**P**	**18 06 12.1**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=288,slow=7.3,SNR=5.5						
	comp=Z,0.8nm,0.9s						
RIDG	**Independent Ri**	**70.95**	**26**	P	**P**	**18 06 20.8**	**-0.6**
RIDG				IAmb	IAmb	18 06 22.5	
	comp=Z,11nm,1.4s						
L27K	**Beaver Creek,**	**72.46**	**26**	P	**P**	**18 06 30.8**	**+0.3**
BCAR	**Beaver Creek A**	**72.47**	**26**	P	**P**	**18 06 32.3**	**+1.8**
YKA	**Yellowknife Ar**	**81.40**	**17**	P	**P**	**18 07 20.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=328,slow=4.9,SNR=5.6						
	comp=Z,0.6nm,0.7s						

*NNC **20** 17:59:18.9±1.2, 44°.27N×80°.79E, h0^{km}, mb2.5, mpv2.4, Error ellipse: s-maj=34.2km s-min=3.0km az=124.0*

*SOME **20** 17:59:19.1, 44°.13N×80°.88E, h10^{km}*

ISC 20 17:59:16.5±1.6**, 44°.17N**±0°.04×**81°.14E**±0°.06**, h6**^{km}±12^{km}**,**
n20, σ0^{s}50/38**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**0.92**	**219**	*e*P	**Pg**	**17 59 34.2**	**+0.1**
	28nm,0.1s						
KTMS				*e*S	**Sg**	**17 59 45.5**	**-0.5**
	26nm,0.1s						
DJR	**Jarkent**	**0.98**	**280**	*e*P	**Pn**	**17 59 36.0**	**-0.9**
	24nm,0.1s						
DJR				*e*S	**Sg**	**17 59 48.4**	**+0.4**
	47nm,0.2s						
PDGK	**Podgornoye**	**1.46**	**235**	⇑P	**Pn**	**17 59 43.8**	**+0.3**
	5.9nm,0.6s						
PDGK				⇑S	**Sn**	**18 00 02.2**	**-0.8**
	16nm,0.5s						
KAPS	**Kapalarasan**	**1.69**	**312**	*e*P	**Pg**	**17 59 49.3**	**+0.4**
	3.7nm,0.1s						
KAPS				*e*S	**Sg**	**18 00 11.4**	**+0.6**
	12nm,0.2s						
UZB	**Uzynbulak**	**1.84**	**237**	*e*P	**Pb**	**17 59 50.5**	**-0.2**
	22nm,0.2s						
UZB				*e*S	**Sn**	**18 00 13.0**	**+0.4**
	28nm,0.2s						
KPKS	**Kokpek**	**1.91**	**249**	*e*P	**Pb**	**17 59 51.5**	**-0.3**
	11nm,0.2s						
KPKS				*e*S	**Sn**	**18 00 14.6**	**+0.5**
	75nm,0.3s						
TDK	**Taldyqorghan**	**2.12**	**294**	*e*P	**Pg**	**17 59 56.8**	**-0.4**
	26nm,0.3s						
TDK				*e*S	**Sg**	**18 00 23.9**	**-0.7**
	35nm,0.4s						
ZHN	**Zhinishke**	**2.20**	**244**	*e*P	**Pb**	**17 59 57.2**	**+0.4**
	20nm,0.2s						
ZHN				*e*S	**Sb**	**18 00 24.4**	**+0.1**
	77nm,0.2s						
KURS	**Kuram**	**2.25**	**253**	*e*P	**Pb**	**17 59 57.1**	**-0.5**
	1.6nm,0.4s						
KURS				*e*S	**Sb**	**18 00 24.8**	**-1.0**
	9.7nm,0.3s						
SATY	**Saty**	**2.27**	**242**	*e*P	**Pb**	**17 59 58.0**	**0.0**
	3.8nm,0.1s						
SATY				*e*S	**Sb**	**18 00 26.4**	**0.0**
	71nm,0.2s						
MAKZ	**Makanchi**	**2.71**	**12**	⇓Pg	**Pg**	**18 00 08.3**	**0.0**
	1.4nm,0.8s						
MAKZ				⇑Lg	Lg	18 00 42.8	
	0.7nm,0.4s						
MK31	**Makanchi Array**	**2.75**	**17**	⇑Pg	**Pg**	**18 00 09.1**	**0.0**
	0.2nm,0.3s,baz=203,slow=15,SNR=13						
MK31				⇑Lg	Lg	18 00 45.1	
	0.4nm,0.2s,baz=198,slow=28,SNR=7.5						
CHKK	**Chushkaly**	**3.01**	**265**	*e*P	**Pb**	**18 00 10.6**	**+0.1**
	0.5nm,0.1s						
CHKK				*e*S	**Sb**	**18 00 47.7**	**+0.2**
	45nm,0.3s						
MDOK	**Medeo**	**3.13**	**253**	*e*P	**Pb**	**18 00 12.9**	**+0.2**
	0.9nm,0.2s						
MDOK				*e*S	**Sb**	**18 00 51.4**	**+0.2**
	12nm,0.7s						
TNSS	**Tian-Shan**	**3.25**	**251**	*e*P	**Pb**	**18 00 15.3**	**+0.5**
	0.5nm,0.2s						
TNSS				*e*S	**Sb**	**18 00 55.5**	**+0.8**
	3.5nm,0.2s						
KTBS	**Karatobe**	**3.25**	**263**	*e*P	**Pb**	**18 00 14.3**	**-0.3**
	0.3nm,0.2s						
KTBS				*e*S	**Sb**	**18 00 53.7**	**-0.8**
	12nm,0.5s						
KUU	**Kurty**	**3.47**	**267**	*e*P	**Pb**	**18 00 18.6**	**+0.3**
	1.1nm,0.4s						
KUU				*e*S	**Sb**	**18 01 01.3**	**+0.5**
	14nm,0.3s						
MTBS	**Maitube**	**3.57**	**255**	*e*P	**Pb**	**18 00 20.6**	**+0.5**
	4.3nm,0.1s						
MTBS				*e*S	**Sb**	**18 01 04.6**	**+0.9**
	13nm,0.3s						
KST	**Kastek**	**3.92**	**255**	*e*P	**Pb**	**18 00 26.1**	**0.0**
	0.9nm,0.2s						
KST				*e*S	**Sb**	**18 01 14.1**	**+0.2**
	8.4nm,0.9s						
KRBS	**Karabastau**	**3.98**	**265**	*e*P	**Pb**	**18 00 27.0**	**+0.1**
	0.1nm,0.1s						
KRBS				*e*S	**Sb**	**18 01 15.8**	**+0.5**
	3.8nm,0.3s						

*CNRM **20** 18:04:36.8, 35°.52N×3°.78W, h22^{km}, ml2.1*

*MDD **20** 18:04:37.3±0.4, 35°.52N×3°.81W, h0^{km}±3^{km}, mb_Lg2.4/15, Error ellipse: s-maj=3.1km s-min=2.4km az=0.0*

*SFS **20** 18:04:37.9, 35°.33N×3°.81W, h32^{km}, ML2.5, ALBORAN SUR*

*INMG **20** 18:04:39.0±1.3, 35°.51N×3°.96W, h0^{km}±8^{km}, ML2.0, Error ellipse: s-maj=4.6km s-min=3.2km az=81.0*

ISC 20 18:04:37.5±0.9**, 35°.49N**±0°.02×**3°.77W**±0°.02**, h22**^{km}±6^{km}**,**
n41, σ1^{s}00/76**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.31**	**208**	P	**Pb**	**18 04 44.2**	**-0.3**
PALE				S	**Sb**	**18 04 49.3**	**0.0**
GOG	**Mont Gurugu**	**0.68**	**113**	P	**Pb**	**18 04 50.7**	**-0.1**
GOG				S	**Sb**	**18 04 59.7**	**-0.2**
WMELI	**Melilla**	**0.69**	**104**	P	**Pn**	**18 04 51.2**	**-0.7**
WMELI				S	**Sb**	**18 04 59.3**	**-0.6**
EMEL	**Melilla**	**0.69**	**106**	Pg	**Pb**	**18 04 50.9**	**+0.1**
EMEL				Sg	**Sb**	**18 05 00.2**	**+0.3**
EALB	**Alboran**	**0.74**	**53**	Pg	**Pb**	**18 04 51.7**	**-0.1**
EALB				Sg	**Sb**	**18 05 02.0**	**+0.4**
EALB				*i* Vmb_Lg		18 05 04.5	
CHAS	**Isla Isabel II**	**1.13**	**105**	P	**Pn**	**18 04 57.0**	**-1.0**
CHAS				S	**Sn**	**18 05 11.2**	**-1.8**
TAF	**Taforalt**	**1.30**	**121**	P	**Pn**	**18 05 00.0**	**-0.4**
TAF				S	**Sb**	**18 05 17.9**	**+0.4**
SMIR	**Smir Dam**	**1.33**	**279**	P	**Pn**	**18 04 59.4**	**-1.4**
SMIR				S	**Sn**	**18 05 17.3**	**-0.6**
CHEFC	**Chefchaouen**	**1.34**	**254**	P	**Pb**	**18 05 02.1**	**0.0**
EMIJ	**Mijas**	**1.35**	**323**	Pg	**Pn**	**18 05 00.6**	**-0.5**
EMIJ				Sg	**Sb**	**18 05 18.7**	**-0.3**
EMIJ				*i* Vmb_Lg		18 05 22.8	
CEU	**Ceuta**	**1.37**	**288**	S	**Sn**	**18 05 15.1**	**-3.7**
ECEU	**Ceuta**	**1.37**	**288**	Pg	**Pb**	**18 05 02.0**	**-0.5**
ECEU				Sg	**Sb**	**18 05 19.2**	**-0.5**
ECEU				*i* Vmb_Lg		18 05 28.9	
EMAL	**Malaga-Limoner**	**1.38**	**337**	P	**Pn**	**18 05 01.2**	**-0.2**
EMAL				S	**Sb**	**18 05 19.1**	**-0.6**
ELGU	**Los Guajares,**	**1.38**	**5**	Pg	**Pn**	**18 05 01.9**	**+0.3**
ELGU				Sg	**Sb**	**18 05 20.4**	**+0.5**
ELGU				*i* Vmb_Lg		18 05 22.4	
JBK	**JBK**	**1.52**	**139**	P	**Pn**	**18 05 03.1**	**-0.5**
JBK				S	**Sn**	**18 05 22.6**	**-0.1**
EBER	**Berja**	**1.57**	**26**	Pn	**Pn**	**18 05 04.3**	**0.0**
EBER				Sg	**Sb**	**18 05 26.9**	**+1.4**
EBER				*i* Vmb_Lg		18 05 30.1	
EGOR	**Sierra Gorda,**	**1.64**	**350**	Pg	**Pb**	**18 05 06.1**	**-1.1**
EGOR				Sg	**Sb**	**18 05 28.7**	**+1.3**
EGOR				*i* Vmb_Lg		18 05 31.1	
EJIF	**Jimena Fronter**	**1.68**	**305**	Pg	**Pb**	**18 05 07.6**	**-0.3**
EJIF				Sg	**Sb**	**18 05 29.2**	**+0.7**
EQUE	**Quentar**	**1.73**	**9**	Sg	**Sb**	**18 05 31.7**	**+1.7**
EQUE				*i* Vmb_Lg		18 05 35.9	
EQES	**Quesada**	**2.37**	**13**	Pg	**Pb**	**18 05 19.5**	**-0.2**
EQES				Sn	**Sn**	**18 05 44.9**	**+1.2**
EQES				*i* Vmb_Lg		18 05 49.7	
MD31	**MD31**	**2.74**	**198**	P	**Pn**	**18 05 21.9**	**+1.5**
MD31				S	**Sn**	**18 05 53.1**	**+0.3**
EADA	**Adamuz**	**2.75**	**347**	Pn	**Pn**	**18 05 20.1**	**-0.3**
EADA				Sn	**Sn**	**18 05 53.0**	**+0.1**
EADA				*i* Vmb_Lg		18 06 03.3	
MDT	**Midelt**	**2.76**	**195**	P	**Pn**	**18 05 21.9**	**+1.3**
MDT				S	**Sn**	**18 05 53.9**	**+0.6**
ECAB	**El Cabril**	**2.90**	**333**	Pn	**Pn**	**18 05 22.3**	**-0.1**
ECAB				Pg	**Pb**	**18 05 28.4**	**-0.2**
ECAB				Sn	**Sn**	**18 05 56.9**	**+0.3**
ECAB				*i* Vmb_Lg		18 06 06.7	
ZHG	**ZHG**	**3.13**	**230**	P	**Pn**	**18 05 26.2**	**+0.6**
EMIN	**Mina Concepcio**	**3.26**	**315**	Pn	**Pn**	**18 05 27.1**	**-0.2**
EMIN				Sn	**Sn**	**18 06 04.8**	**-0.6**
EMIN				*i* Vmb_Lg		18 06 21.9	
ETOB	**Tobarra**	**3.61**	**29**	Pn	**Pn**	**18 05 33.3**	**+1.0**
ETOB				*i* Vmb_Lg		18 06 19.6	
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**18 05 32.6**	**+0.3**
EGRO				Sn	**Sn**	**18 06 12.9**	**-1.5**
EGRO				*i* Vmb_Lg		18 06 15.2	
PVAQ	**Vaqueiros**	**3.71**	**302**	*e*Pn	**Pn**	**18 05 34.4**	**+0.8**
PVAQ				*e*Sn	**Sn**	**18 06 16.3**	**-0.4**
PVAQ				A	A	18 06 21.5	
	2.2nm,0.3s						
PBAR	**Barrancos**	**3.75**	**317**	*e*Pn	**Pn**	**18 05 35.4**	**+1.3**
PBAR				*e*Sn	**Sn**	**18 06 17.5**	**-0.1**
PBAR				A	A	18 06 22.4	
	1.9nm,0.5s						
PCVE	**Castro Verde**	**4.05**	**303**	*e*Pn	**Pn**	**18 05 39.6**	**+1.4**
PCVE				*e*Sn	**Sn**	**18 06 24.4**	**-0.5**
PCVE				A	A	18 06 25.9	
	2.6nm,0.6s						
PAB	**San Pablo**	**4.08**	**354**	Pn	**Pn**	**18 05 38.9**	**+0.3**
PAB				Sn	**Sn**	**18 06 24.4**	**-1.3**
PAB				*i* Vmb_Lg		18 06 34.9	
EBAD	**Badajoz**	**4.17**	**322**	Pn	**Pn**	**18 05 40.4**	**+0.6**
EBAD				Sn	**Sn**	**18 06 27.1**	**-0.7**
EBAD				*i* Vmb_Lg		18 06 32.7	
MESJ	**Messejana**	**4.28**	**305**	*e*Pn	**Pn**	**18 05 42.7**	**+1.3**
MESJ				*e*Sn	**Sn**	**18 06 29.6**	**-1.0**
MESJ				A	A	18 06 38.4	
	1.8nm,0.3s						
MORF	**Marmelete**	**4.34**	**296**	*e*Sn	**Sn**	**18 06 31.5**	**-0.6**
MORF				A	A	18 06 50.3	
	2.2nm,0.3s						
PFVI	**Vila Bisbo**	**4.40**	**293**	*e*Pn	**Pn**	**18 05 45.6**	**+2.5**
PFVI				*e*Sn	**Sn**	**18 06 32.7**	**-1.0**
PFVI				A	A	18 06 36.7	
	3.6nm,0.8s						
PESTR	**Estremoz**	**4.55**	**319**	*e*Sn	**Sn**	**18 06 36.4**	**-0.9**
EVO	**Evora**	**4.56**	**313**	*e*Pn	**Pn**	**18 05 46.5**	**+1.3**
EVO				*e*Sn	**Sn**	**18 06 37.4**	**0.0**
PNCL	**Nicolau / Gran**	**4.63**	**306**	*e*Pn	**Pn**	**18 05 47.0**	**+0.8**
PNCL				*e*Sn	**Sn**	**18 06 37.7**	**-1.6**
PNCL				A	A	18 06 40.3	
	1.8nm,0.5s						
PMRV	**Marv??o**	**4.88**	**325**	*e*Pn	**Pn**	**18 05 50.9**	**+1.3**
PMRV				*e*Sn	**Sn**	**18 06 44.3**	**-1.0**
PMTG	**Montargil**	**5.04**	**316**	*e*Pn	**Pn**	**18 05 53.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**18 06 48.3**	**-1.0**

*IDC **20** 18:14:03.5±0.3, 25°.64S×129°.95E, h0^{km}, mb5.9/39, mbtmp5.9/42, ML6.0/3, MS5.9/51, Error ellipse: s-maj=10.8km s-min=8.4km az=91.0*

*BJI **20** 18:14:03.5±0.0, 25°.55S×130°.24E, h16^{km}, mb5.8/94, mB5.8/72, Ms5.8/99, Ms7 5.7/93*

*NOU **20** 18:14:03.8, 25°.69S×129°.78E, h0^{km}, ML6.4/149, Northern Territory, Australia*

*NEIC **20** 18:14:04.5, 25°.55S×129°.85E, h2^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.67; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-0.29; $M_{r\theta}$-0.58; $M_{\theta\phi}$0.68; $M_{\phi r}$0.11; Fault plane solution: $M_0$1.08000×10^{18} NP1:ϕ_s160.80000°, δ36.49000°, λ134.92000°. NP2:ϕ_s289.67000°, δ65.10000°, λ62.42000°. Principal axes: T 0.9606, Plg60.0000°, Azm159.0000°; N 0.2020, Plg25.0000°, Azm302.0000°; P -1.1626, Plg16.0000°, Azm40.0000°;*

*MOS **20** 18:14:04.1±1.0, 25°.50S×129°.92E, h10^{km}, mb6.2/47, MS5.7/53 Error ellipse: s-maj=8.3km s-min=5.1km az=98.0*

*NEIC **20** 18:14:04.7±2.7, 25°.57S±0°.02×129°.88E±0°.04, h10^{km}±1^{km}, mb6.2/187, Ms_20 6.2/447, Mwb6.0/37, Mww6.0, ML6.1(AUST), Error ellipse: s-maj=7.5km s-min=2.5km az=243.0*

*GCMT **20** 18:14:07.7±0.1, 25°.61S×129°.94E, h12^{km}, MW6.0/158, Moment Tensor Solution. s150,c336; s158,c592; Duration: 2^{s}5 Moment tensor: Scale 10^{18}Nm; M_{rr}1.31±.01; $M_{\theta\theta}$-0.59±.01; $M_{\phi\phi}$-0.72±.01; $M_{r\theta}$-0.07±.02; $M_{\theta\phi}$0.85±.01; $M_{\phi r}$-0.05±.02; Best double couple: $M_0$1.41300×10^{18} NP1:ϕ_s142.00000°, δ45.00000°, λ96.00000°. NP2:ϕ_s313.00000°, δ45.00000°, λ84.00000°. Principal axes: T 1.3170, Plg86.0000°, Azm140.0000°; N 0.1930, Plg4.0000°, Azm317.0000°; P -1.5100, Plg0.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 18:14:07, 25°.53S×129°.69E, h12^{km}, Moment Tensor Solution. Duration: 6^{s}6 Moment tensor: Scale 10^{18}Nm; M_{rr}1.05; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-0.54; $M_{r\theta}$-0.25; $M_{\theta\phi}$0.61; $M_{\phi r}$0.15; Fault plane solution: $M_0$1.13000×10^{18} NP1: ϕ_s140.00000°, δ38.00000°, λ97.00000°. NP2: ϕ_s312.00000°, δ52.00000°, λ85.00000°. Principal axes: T 1.0932, Plg82.0000°, Azm196.0000°; N 0.0749, Plg4.0000°, Azm315.0000°; P -1.1681, Plg7.0000°, Azm45.0000°;*

ISC 20 18:14:05.4±0.3**, 25°.63S**±0°.02×**129°.88E**±0°.03**, h16**^{km}±1^{km}**,**
h16^{km}:pP-P, n2174, σ1^{s}78/2191**, mb6.1**/290**, MS6.1**/336**,**
196C-76D, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.54**	**292**		**Pn**	**18 14 32.1**	**-0.3**
WRKA					**Sn**	**18 14 52.1**	**-0.1**
WRKA	**Warakurna**	**1.54**	**292**	P	**Pn**	**18 14 31.9**	**-0.5**
WRKA	**Warakurna**	**1.54**	**292**	⇓P	**Pn**	**18 14 31.7**	**-0.7**
ASAR	**Alice Springs**	**4.15**	**63**	Pn	**Pn**	**18 15 09.6**	**+1.3**
	592nm,0.3s,baz=242,slow=12,SNR=5512						
ASAR				Pg	**Pb**	**18 15 20.1**	**+1.9**
	918nm,0.3s,baz=241,slow=16,SNR=44						
ASAR				Sn	**Sn**	**18 15 57.9**	**+1.3**
	893nm,0.3s,baz=250,slow=16,SNR=5.6						
ASAR				Lg	Lg	18 16 12.8	
	2μm,0.3s,baz=243,slow=25,SNR=1.9						
ASAR				P3KPbc		18 53 23.3	
	1.8nm,0.8s,baz=66,slow=2.2,SNR=7.7						
	1μm,0.5s						
ASAR	**Alice Springs**	**4.15**	**63**	Pn	**Pn**	**18 15 09.2**	**+0.9**
ASAR					**Pb**	**18 15 21.0**	**+2.8**
ASAR				Sn	**Sn**	**18 15 58.5**	**+1.9**
ASAR				LR	LR	18 16 11.1	
ASAR	**Alice Springs**	**4.15**	**63**	P	**Pn**	**18 15 09.2**	**+0.9**
ASAR						18 15 58.5	
AS31	**Alice Springs**	**4.16**	**63**	Pn	**Pn**	**18 15 09.2**	**+0.9**
AS31				Pg	**Pb**	**18 15 21.0**	**+2.8**
AS31				Sn	**Sn**	**18 15 56.9**	**+0.2**
FORT	**Forrest**	**5.38**	**197**	Pn	**Pn**	**18 15 24.9**	**-0.1**
FORT				Pg	**Pb**	**18 15 42.9**	**+3.9**
FORT				Sn	**Sn**	**18 16 30.1**	**+3.4**
FORT	**Forrest**	**5.38**	**197**	P	**Pn**	**18 15 26.5**	**+1.5**
FORT	**Forrest**	**5.38**	**197**	⇓P	**Pn**	**18 15 25.9**	**+0.9**
OOD	**Oodnadatta**	**5.63**	**114**	P	**Pn**	**18 15 31.2**	**+2.7**
MULG	**Mulgathing**	**5.93**	**142**	P	**Pn**	**18 15 34.2**	**+1.5**
WRA	**Warramunga Arr**	**7.00**	**37**	Pn	**Pn**	**18 15 47.4**	**0.0**
	278nm,0.3s,baz=219,slow=14,SNR=2181						
WRA				Sn	**Sn**	**18 17 04.4**	**-2.3**
	295nm,0.3s,baz=214,slow=18,SNR=9.0						
WRA				Lg	Lg	18 17 37.8	
	684nm,0.3s,baz=210,slow=30,SNR=7.0						
WRA				LR	LR	18 18 50.5	
	comp=Z,406μm,20.7s,baz=212,slow=41						
	2μm,0.7s						
WRA	**Warramunga Arr**	**7.00**	**37**		**Pn**	**18 15 47.0**	**-0.3**
I07AU	**WARRAMUNGA INF**	**7.00**	**37**	Pn	**Pn**	**18 15 45.0**	**-2.4**
	baz=217,slow=20						
I07AU				*i*		18 52 30.0	
	0.1nm,0.7s,baz=214,slow=314,SNR=3.5						
WB2	**Warramunga Arr**	**7.00**	**37**	Pn	**Pn**	**18 15 46.6**	**-0.9**
WB2				Sn	**Sn**	**18 17 00.7**	**-6.2**
WRAB	**Tennant Creek**	**7.01**	**37**		**Pn**	**18 15 47.4**	**-0.1**
WRAB				Sn	**Sn**	**18 17 01.7**	**-5.4**
WRAB	**Tennant Creek**	**7.01**	**37**	*c i*P	**Pn**	**18 15 47.6**	**0.0**
WRAB	**Tennant Creek**	**7.01**	**37**	P	**Pn**	**18 15 48.3**	**+0.7**
WRAB	**Tennant Creek**	**7.01**	**37**	⇑P	**Pn**	**18 15 47.7**	**+0.2**
WR0	**Warramunga Arr**	**7.09**	**38**		**Pn**	**18 15 48.3**	**-0.4**
WB0	**Warramunga Arr**	**7.17**	**36**		**Pn**	**18 15 49.5**	**-0.2**
WB0				Sn	**Sn**	**18 17 05.6**	**-5.4**
LCRK	**Leigh Creek**	**8.79**	**125**		**Pn**	**18 16 12.2**	**+0.2**
LCRK	**Leigh Creek**	**8.79**	**125**	P	**Pn**	**18 16 13.0**	**+1.0**
BBOO	**Buckleboo**	**8.96**	**144**	Pn	**Pn**	**18 16 13.8**	**-0.5**
BBOO				Sn	**Sn**	**18 17 50.9**	**-4.1**
BBOO	**Buckleboo**	**8.96**	**144**	P	**Pn**	**18 16 15.1**	**+0.8**
INKA	**Innaminka**	**9.95**	**105**		**Pn**	**18 16 28.2**	**+0.4**
INKA					**Sn**	**18 18 17.3**	**-1.8**
INKA	**Innaminka**	**9.95**	**105**	P	**Pn**	**18 16 28.6**	**+0.8**
KNRA	**Kununurra**	**9.96**	**354**	Pn	**Pn**	**18 16 26.3**	**-1.7**
KNRA				Sn	**Sn**	**18 18 11.7**	**-7.7**
KNRA	**Kununurra**	**9.96**	**354**	P	**Pn**	**18 16 28.0**	**+0.1**
WHYH	**Whyalla**	**9.98**	**139**	P	**Pn**	**18 16 27.3**	**-0.8**
	10μm,0.7s						
PSA00	**Pilbara Seismi**	**10.04**	**292**	Pn	**Pn**	**18 16 24.4**	**-4.7**
PSA00	**Pilbara Seismi**	**10.04**	**292**		Pn	18 16 24.3	-4.8
PSA00	**Pilbara Seismi**	**10.04**	**292**	P	**Pn**	**18 16 27.7**	**-1.4**
MEEK	**Meekatharra**	**10.17**	**262**		**Pn**	**18 16 28.2**	**-2.7**
MEEK	**Meekatharra**	**10.17**	**262**	P	**Pn**	**18 16 29.5**	**-1.4**
QIS	**Mount Isa**	**10.28**	**63**	P	**Pn**	**18 16 32.8**	**+0.4**
MBWA	**Marble Bar**	**10.32**	**293**		**Pn**	**18 16 28.7**	**-4.3**
MBWA	**Marble Bar**	**10.32**	**293**	P	**Pn**	**18 16 31.2**	**-1.8**
MBWA	**Marble Bar**	**10.32**	**293**	⇓P	**Pn**	**18 16 29.6**	**-3.4**
PTPS	**Port Pirie**	**10.32**	**139**	P	**Pn**	**18 16 32.7**	**-0.2**
	6μm,0.7s						
NAPP	**Napperby**	**10.42**	**138**	P	**Pn**	**18 16 33.5**	**-0.8**
	7μm,0.9s						
HTT	**Hallett**	**11.06**	**137**	P	**Pn**	**18 16 42.4**	**-0.7**
HTT	**Hallett**	**11.06**	**137**	⇑P	**Pn**	**18 16 41.5**	**-1.7**
GHSS	**Government Hou**	**11.94**	**143**	P	**Pn**	**18 16 53.7**	**-1.3**
	3μm,0.7s						
TWOA	**Tennyson Woods**	**12.01**	**143**	P	**Pn**	**18 16 54.4**	**-1.6**
	931nm,1.1s						
STKA	**Stephens Creek**	**12.02**	**124**	Pn	**Pn**	**18 16 54.0**	**-2.1**
	88nm,0.3s,baz=304,slow=13,SNR=574						
STKA				Sn	**Sn**	**18 19 06.9**	**-3.0**
	460nm,0.3s,baz=209,slow=19,SNR=7.0						
STKA				Lg	Lg	18 20 20.0	
	baz=10,slow=23						
STKA				LR	LR	18 21 08.0	
	comp=Z,25μm,19.9s,baz=292,slow=36						
	2μm,0.7s						
STKA	**Stephens Creek**	**12.02**	**124**	Pn	**Pn**	**18 16 53.3**	**-2.8**
STKA	**Stephens Creek**	**12.02**	**124**	P	**Pn**	**18 16 55.5**	**-0.6**
KLBR	**Kellerberrin**	**12.19**	**238**	P	**Pn**	**18 16 56.0**	**-2.5**
BLDU	**Ballidu**	**12.63**	**244**	P	**Pn**	**18 17 01.5**	**-3.1**
MORW	**Morawa**	**12.76**	**251**		Pn	18 17 00.3	-6.1
MORW	**Morawa**	**12.76**	**251**	P	**Pn**	**18 17 02.6**	**-3.8**
MORW	**Morawa**	**12.76**	**251**	⇓P	Pn	18 17 00.8	-5.6
MTN	**Manton Dam**	**12.77**	**6**		Pn	18 17 01.2	-5.3
MTN	**Manton Dam**	**12.77**	**6**	P	**Pn**	**18 17 04.4**	**-2.1**
MTN	**Manton Dam**	**12.77**	**6**	⇑P	Pn	18 17 01.6	-4.9
MTN				⇑S	Sn	18 19 17.4	-11
QLP	**Quilpie**	**12.94**	**97**	P	**Pn**	**18 17 08.6**	**-0.2**
QLP	**Quilpie**	**12.94**	**97**	⇑P	**Pn**	**18 17 06.4**	**-2.4**
KDU	**Kakadu**	**13.10**	**11**	P	**Pn**	**18 17 08.2**	**-2.8**
KDU	**Kakadu**	**13.10**	**11**	⇑P	**Pn**	**18 17 06.7**	**-4.4**
KDU				⇑S	**Sn**	**18 19 28.9**	**-7.7**
NWAO	**Narrogin (SRO)**	**13.21**	**234**		Pn	18 17 06.7	-5.7
NWAO	**Narrogin (SRO)**	**13.21**	**234**	P	Pn	18 17 06.7	-5.7
NWAO	**Narrogin (SRO)**	**13.21**	**234**	P	**Pn**	**18 17 09.9**	**-2.5**
MUN	**Mundaring**	**13.54**	**239**	P	**Pn**	**18 17 13.0**	**-4.0**
MTKN	**Mount Kenneth**	**13.86**	**240**	P	**Pn**	**18 17 21.3**	**0.0**
	1μm,0.7s						
RKGY	**Rocky Gully**	**14.30**	**228**	P	**Pn**	**18 17 25.0**	**-2.2**
GIRL	**Giralia**	**14.59**	**278**		Pn	18 17 25.8	-5.4
GIRL	**Giralia**	**14.59**	**278**	P	**Pn**	**18 17 27.3**	**-4.0**
GIRL	**Giralia**	**14.59**	**278**	⇑P	Pn	18 17 25.0	-6.3
GIRL				⇑S	Sn	18 20 03.2	-9.5
CMSA	**Cobar Meteorol**	**15.09**	**117**	P	**Pn**	**18 17 35.5**	**-2.5**
ARPS	**Mount Arapiles**	**15.09**	**140**	P	**Pn**	**18 17 34.7**	**-3.3**
MTSU	**Mount Surprise**	**15.33**	**64**	P	**Pn**	**18 17 39.3**	**-2.0**
CTA	**Charters Tower**	**16.07**	**73**	Pn	**Pn**	**18 17 46.3**	**-4.5**
	9.0nm,0.3s,baz=242,slow=14,SNR=55						
CTA				Sn	**Sn**	**18 20 49.3**	**+0.5**
	20nm,0.3s,baz=207,slow=18,SNR=2.2						
CTA				Lg	Lg	18 22 35.7	
	62nm,0.3s,baz=328,slow=21,SNR=7.3						
CTAO	**Charters Tower**	**16.07**	**73**	Pn	**Pn**	**18 17 45.8**	**-5.0**
CTAO				IAmb	IAmb	18 17 59.5	
	comp=Z,3μm,1.9s						
CTAO	**Charters Tower**	**16.07**	**73**	P	**Pn**	**18 17 45.8**	**-5.0**
CTAO				pmax	pmax		
	comp=Z,3μm,1.9s						
CTAO	**Charters Tower**	**16.07**	**73**	⇑P	**Pn**	**18 17 46.2**	**-4.7**
H01W1	**Cape Leeuwin H**	**16.41**	**232**	Pn	**Pn**	**18 17 51.8**	**-3.1**
	baz=70,slow=11						
H01W3	**Cape Leeuwin H**	**16.41**	**232**	Pn	**Pn**	**18 17 51.7**	**-3.3**
	baz=70,slow=11						
H01W2	**Cape Leeuwin H**	**16.42**	**232**	Pn	**Pn**	**18 17 52.0**	**-3.0**
	baz=70,slow=11						
BATI	**Baumata**	**16.43**	**338**	Pn	**Pn**	**18 17 52.7**	**-2.8**
	comp=Z,42nm,0.3s,baz=190,slow=2.7,SNR=41						
BATI				Sn	**Sn**	**18 20 50.6**	**-7.1**
	comp=Z,26nm,0.3s,baz=176,slow=22,SNR=9.9						
BATI				Lg	Lg	18 22 48.0	
	baz=107,slow=22						
BATI				LR	LR	18 24 55.8	
	comp=Z,47μm,19.9s,baz=190,slow=40						
BATI	**Baumata**	**16.43**	**338**	P	**Pn**	**18 17 53.1**	**-2.4**
	comp=Z,7μmcomp=Z,8μmcomp=Z,689nm,0.9s						
SOEI	**Soe**	**16.66**	**340**		**Pn**	**18 17 54.6**	**-3.9**

SOEI				IAmb	IAmb	18 19 35.9	
	comp=Z,1µm,0.9s						
SOEI	Soe	16.66	340	P	Pn	18 17 56.7	-1.8
	comp=Z,14µmcomp=Z,11µmcomp=Z,1µm,0.8s						
SOEI	Soe	16.66	340	P	Pn	18 17 56.8	-1.8
SOEI	Soe	16.66	340	⇓P	Pn	18 17 55.3	-3.3
BRAT	Ballarat	16.85	138	P	Pn	18 17 57.9	-2.7
	comp=Z,701nm,1.1s						
RMQ	Roma	16.99	97	P	Pn	18 17 59.7	-2.9
COEN	Coen	17.05	50	P	Pn	18 17 57.9	-5.5
COEN				IAmb	IAmb	18 18 08.7	
	comp=Z,2µm,1.1s						
COEN	Coen	17.05	50	⇓P	Pn	18 17 58.5	-4.9
GEXS	Deakin Univers	17.49	139	P	Pn	18 18 08.2	-0.5
	comp=Z,2µm,1.0s						
SAUI	Saumlaki	17.60	5	P	Pn	18 18 06.0	-4.2
SAUI	Saumlaki	17.60	5	P	P	18 18 10.9	-0.2
SAUI	Saumlaki	17.60	5	⇓P	Pn	18 18 06.8	-3.4
MLBS	Spotswood, Mel	17.61	137	P	Pn	18 18 10.0	-0.2
	comp=Z,388nm,0.9s						
BASI	Baing, Sumba	17.68	328	P	P	18 18 14.7	+2.7
	comp=Z,5µmcomp=Z,7µmcomp=Z,649nm,1.4s						
TOO	Toolangi	17.82	136	P	Pn	18 18 10.1	-2.8
TOO				IAmb	IAmb	18 18 18.0	
	comp=Z,1µm,0.9s						
TOO	Toolangi	17.82	136	P	Pn	18 18 10.1	-2.8
TOO				pmax	pmax		
	comp=Z,1µm,0.9s						
TOO	Toolangi	17.82	136	P	Pn	18 18 12.1	-0.8
TOO	Toolangi	17.82	136	⇓P	Pn	18 18 10.2	-2.6
MMRI	Maumere	18.40	335	P	P	18 18 17.6	-2.3
MMRI				IAmb	IAmb	18 18 32.9	
	comp=Z,930nm,0.8s						
MMRI	Maumere	18.40	335	P	P	18 18 19.3	-0.6
	comp=Z,10µmcomp=Z,11µmcomp=Z,1µm,0.9s						
MMRI	Maumere	18.40	335	P	Pn	18 18 20.3	+0.3
MMRI	Maumere	18.40	335	⇓P	P	18 18 18.7	-1.3
EDFI	Ende, Flores	18.50	334	P	P	18 18 19.7	-1.5
	comp=Z,6µmcomp=Z,2µmcomp=Z,139nm,0.9s						
WBSI	Waikabubak, Su	18.76	326	P	Pn	18 18 24.9	+0.5
RK1H	Rockhampton Ha	18.90	88	P	Pn	18 18 26.0	0.0
	comp=Z,649nm,1.2s						
CAN	Canberra	19.08	125	P	P	18 18 26.6	-0.8
CAN				IAmb	IAmb	18 18 31.0	
	comp=Z,2µm,1.1s						
CAN	Canberra	19.08	125	P	P	18 18 26.6	-0.8
CAN				pmax	pmax		
	comp=Z,2µm,1.1s						
CAN	Canberra	19.08	125	P	Pn	18 18 28.7	+0.5
CAN	Canberra	19.08	125	⇑P	P	18 18 27.4	+0.1
EIDS	Eidsvold	19.15	94	P	P	18 18 28.3	+0.1
EIDS	Eidsvold	19.15	94	P	Pn	18 18 29.7	+0.7
EIDS	Eidsvold	19.15	94	⇓P	P	18 18 27.9	-0.2
CNB	Canberra Magne	19.34	125	P	Pn	18 18 31.7	+0.3
ARMA	Armidale	19.78	109	P	P	18 18 35.6	+0.4
ARMA	Armidale	19.78	109	P	Pn	18 18 36.9	+0.2
ARMA	Armidale	19.78	109	⇑P	P	18 18 35.4	+0.2
MMPI	Merauke	19.78	32	P	P	18 18 35.6	+0.5
	comp=Z,52µmcomp=Z,75µmcomp=Z,3µm,1.2s						
SYDH	Sydney Hard Ro	19.83	119	P	Pn	18 18 37.4	+0.2
	comp=Z,2µm,0.9s						
MGCD	Mangrove Creek	19.96	117	P	Pn	18 18 39.5	+0.8
RIV	Riverview	20.18	119	⇑P	Pn	18 18 41.3	0.0
PLAI	Plampang	20.29	323	P	Pn	18 18 41.8	-0.9
	comp=Z,7µmcomp=Z,7µmcomp=Z,625nm,1.0s						
PLAI	Plampang	20.29	323	P	Pn	18 18 42.6	-0.1
NTLH	Newcastle Hard	20.35	116	P	Pn	18 18 43.2	-0.1
	comp=Z,1µm,1.1s						
NTLS	Newcastle Soft	20.41	116	P	Pn	18 18 44.2	+0.2
	comp=Z,2µm,1.1s						
BNDI	Bandanaira	20.99	0	P	P	18 18 49.0	+0.8
BNDI	Bandanaira	20.99	0	⇑P	P	18 18 48.2	0.0
BBSI	Bau Bau	21.21	340	P	P	18 18 52.6	+1.9
	comp=Z,2µmcomp=Z,172nm,1.0s						
CORO	Coronation Par	21.30	142	P	P	18 18 53.5	+2.1
	comp=Z,747nm,1.1s						
BSSI	Bau Bau, Buton	21.35	334	P	P	18 18 53.0	+0.8
	comp=Z,5µmcomp=Z,7µmcomp=Z,690nm,1.3s						
GLAD	Gladstone	21.48	140	P	P	18 18 55.1	+1.8
	comp=Z,2µm,0.9s						
IGBI	Denpasar	21.81	317	P	P	18 18 56.6	-0.5
	comp=Z,6µmcomp=Z,458nm,1.1s						
AAI	Ambon	21.88	355	P	P	18 18 58.8	+1.0
	comp=Z,21µmcomp=Z,9µmcomp=Z,834nm,1.0s						
DNP	Denpasar	21.88	318	P	P	18 18 57.4	-0.4
	comp=Z,17µmcomp=Z,2µm,1.1s						
MOO	Moorlands	22.00	144	P	P	18 19 00.8	+1.9
KMPI	Kaimana, Papua	22.15	10	P	P	18 19 01.0	+0.3
	comp=Z,20µmcomp=Z,14µmcomp=Z,1µm,1.3s						
MSAI	Masohi	22.17	357	P	P	18 19 01.9	+0.9
	comp=Z,2µmcomp=Z,270nm,1.0s						
BKSI	Bulukumba	22.25	334	P	P	18 19 02.1	+0.3
	comp=Z,6µmcomp=Z,5µmcomp=Z,670nm,1.1s						
SRBI	Singaraja	22.35	319	P	P	18 19 03.3	+0.4
	comp=Z,5µmcomp=Z,9µmcomp=Z,1µm,0.9s						
TAU	Tasmania Unive	22.40	145	P	P	18 19 04.0	+0.8
TAU	Tasmania Unive	22.40	145	P	P	18 19 04.0	+0.8
TAU				pmax	pmax		
	comp=Z,2µm,1.2s						
TAU				MLR	MLR		
	comp=Z,22µm,20.0s						
TAU	Tasmania Unive	22.40	145	P	P	18 19 04.6	+1.4
TAU	Tasmania Unive	22.40	145	⇑P	P	18 19 04.7	+1.6
KAPI	Kappang	22.68	333	P	P	18 19 07.4	+1.0
	comp=Z,1µm,1.1s,baz=160,slow=6.7,SNR=71						
KAPI				LR	LR	18 30 20.5	
	comp=Z,16µm,18.2s,baz=142,slow=43						
	comp=Z,1µm,1.1s						
KAPI	Kappang	22.68	333	P	P	18 19 06.5	+0.1
KAPI	Kappang	22.68	333	*c i*P	P	18 19 07.1	+0.7
KAPI	Kappang	22.68	333	P	P	18 19 07.6	+1.2
KAPI	Kappang	22.68	333	⇑P	P	18 19 07.4	+1.0
FAKI	Fak Fak	22.69	6	P	P	18 19 06.0	-0.5
FAKI	Fak Fak	22.69	6	P	P	18 19 07.0	+0.5
	comp=Z,26µmcomp=Z,25µmcomp=Z,2µm,1.0s						
FAKI	Fak Fak	22.69	6	P	P	18 19 07.1	+0.5
FAKI	Fak Fak	22.69	6	⇑P	P	18 19 06.3	-0.2
JAGI	Jajag, Banyuwa	22.70	316	P	P	18 19 05.8	-0.8
JAGI				IAmb	IAmb	18 19 11.1	
	comp=Z,614nm,1.0s						
JAGI	Jajag, Banyuwa	22.70	316	P	P	18 19 05.6	-1.0
	comp=Z,6µmcomp=Z,7µmcomp=Z,736nm,1.0s						
JAGI	Jajag, Banyuwa	22.70	316	P	P	18 19 06.3	-0.2
JAGI	Jajag, Banyuwa	22.70	316	⇑P	P	18 19 06.4	-0.2
PMG	Port Moresby	23.02	49	P	P	18 19 10.6	+0.7
	comp=Z,387nm,0.6s,baz=194,slow=4.8,SNR=79						
PMG				LR	LR	18 28 35.6	
	comp=Z,160µm,19.2s,baz=212,slow=38						
	comp=Z,387nm,0.6s						
PMG	Port Moresby	23.02	49	P	P	18 19 09.3	-0.6
PMG	Port Moresby	23.02	49	*ce*P	P	18 19 10.9	+1.0
PMG				pmax	pmax		
	comp=Z,3µm,1.7s						
PMG				MLR	MLR		
	comp=Z,163µm,15.0s						
PMG	Port Moresby	23.02	49	P	P	18 19 11.1	+1.2
PMG	Port Moresby	23.02	49	⇑P	P	18 19 10.4	+0.5
BNSI	Bone	23.09	334	P	P	18 19 10.5	-0.2
	comp=Z,7µmcomp=Z,9µmcomp=Z,452nm,1.1s						
ABJI	Asem Bagus	23.17	317	P	P	18 19 12.6	+1.1
	comp=Z,10µmcomp=Z,834nm,1.1s						
WAMI	Wamena	23.23	23	P	P	18 19 12.1	+0.1
	comp=Z,36µmcomp=Z,35µmcomp=Z,2µm,0.8s						
GMJI	Gumukmas	23.30	315	P	P	18 19 12.2	-0.5
	comp=Z,5µmcomp=Z,256nm,0.9s						
BLJI	Banyuglugur	23.60	316	P	P	18 19 17.1	+1.3
	comp=Z,4µmcomp=Z,260nm,1.0s						
SPSI	Sidrap Palu	23.62	334	P	P	18 19 16.2	+0.2
	comp=Z,7µmcomp=Z,9µmcomp=Z,644nm,1.3s						
SANI	Sanana	23.74	350	P	P	18 19 16.2	-0.9
	comp=Z,9µmcomp=Z,11µmcomp=Z,681nm,1.4s						
SANI	Sanana	23.74	350	P	P	18 19 17.0	-0.1
SANI	Sanana	23.74	350	⇑P	P	18 19 15.9	-1.2
KMMI	Kalianget	23.91	318	P	P	18 19 16.9	-1.9
	comp=Z,7µmcomp=Z,8µmcomp=Z,431nm,1.1s						
SRPI	Serui, Papua	24.40	16	P	P	18 19 23.4	+0.1
	comp=Z,11µmcomp=Z,9µmcomp=Z,229nm,0.8s						
TTSI	Tana Toraja	24.45	335	P	P	18 19 23.0	-0.7
	comp=Z,5µmcomp=Z,6µmcomp=Z,365nm,0.8s						
PWJI	Pagerwojo	24.55	312	P	P	18 19 26.7	+2.0
	comp=Z,5µmcomp=Z,230nm,1.1s						
SIJI	Sorong	24.65	3	P	P	18 19 25.6	0.0
	comp=Z,346nm,1.0s,baz=172,slow=5.7,SNR=57						
SIJI				S	S	18 23 51.6	+5.1
	comp=Z,40nm,0.8s,baz=80,slow=23,SNR=7.8						
SIJI				LR	LR	18 30 32.7	
	comp=Z,16µm,20.2s,baz=192,slow=40						
	comp=Z,346nm,1.0s						
SWI	Sorong	24.66	3	P	P	18 19 25.8	+0.2
	comp=Z,17µmcomp=Z,14µmcomp=Z,380nm,1.0s						
PCJI	Pacitan	24.85	311	P	P	18 19 27.9	+0.5
	comp=Z,6µmcomp=Z,457nm,1.0s						
GRJI	Gresik	24.94	315	P	P	18 19 29.1	+0.9
	comp=Z,516nmcomp=Z,4µmcomp=Z,519nm,0.9s						
LBMI	Labuha	24.95	354	P	P	18 19 29.0	+0.7
	comp=Z,8µmcomp=Z,12µmcomp=Z,797nm,1.1s						
SMPI	Sarmi	25.00	21	P	P	18 19 29.1	+0.4
	comp=Z,14µmcomp=Z,10µmcomp=Z,324nm,1.7s						
WOJI	Wonogiri, Jawa	25.28	311	P	P	18 19 35.2	+3.9
	comp=Z,2µmcomp=Z,3µmcomp=Z,169nm,1.1s						
LUWI	Luwuk	25.39	343	P	P	18 19 29.6	-2.6
LUWI	Luwuk	25.39	343	P	P	18 19 35.4	+3.2
	comp=Z,8µmcomp=Z,9µmcomp=Z,932nm,1.3s						
LUWI	Luwuk	25.39	343	P	P	18 19 34.2	+2.0
LUWI	Luwuk	25.39	343	⇑P	P	18 19 32.8	+0.6
TBJI	Tambak Boyo	25.42	314	P	P	18 19 35.9	+3.4
	comp=Z,3µmcomp=Z,6µmcomp=Z,349nm,1.2s						
UGM	Wanagama	25.50	310	P	P	18 19 32.6	-0.7
UGM				IAmb	IAmb	18 20 31.0	
	comp=Z,696nm,1.3s						
UGM	Wanagama	25.50	310	P	P	18 19 35.8	+2.5
	comp=Z,329nm,1.0s						
YOGI	Yogyakarta	25.73	310	P	P	18 19 36.3	+1.0
	comp=Z,238nm,1.0s						
APSI	Ampana	25.82	341	P	P	18 19 37.6	+1.4
	comp=Z,4µmcomp=Z,4µmcomp=Z,365nm,1.2s						
SMRI	Semarang	26.18	312	P	P	18 19 38.0	-1.4
SMRI				IAmb	IAmb	18 19 46.8	
	comp=Z,652nm,0.9s						
SMRI	Semarang	26.18	312	P	P	18 19 40.1	+0.6
	comp=Z,7µmcomp=Z,836nm,0.9s						
SMRI	Semarang	26.18	312	P	P	18 19 41.8	+2.3
SMRI	Semarang	26.18	312	⇑P	P	18 19 41.6	+2.1
LHI	Lord Howe Isla	26.25	110	P	P	18 19 38.9	-1.0
LHI	Lord Howe Isla	26.25	110	P	P	18 19 44.6	+4.6
LHI	Lord Howe Isla	26.25	110	⇓P	P	18 19 41.7	+1.7
BBKI	Banjar Baru	26.35	324	P	P	18 19 43.2	+2.2
	comp=Z,5µmcomp=Z,540nm,1.1s						
KMSI	Cibinong	26.66	347	P	P	18 19 45.7	+1.9
	comp=Z,501nmcomp=Z,9µmcomp=Z,1µm,0.9s						
GTOI	Gorontalo	26.94	345	P	P	18 19 48.3	+2.0
	comp=Z,2µmcomp=Z,196nm,1.1s						
KPJI	Karang Pucung	27.02	309	P	P	18 19 47.5	+0.5
	comp=Z,3µmcomp=Z,265nm,0.9s						
MRSI	Marisa	27.06	342	P	P	18 19 48.1	+0.7
	comp=Z,4µmcomp=Z,5µmcomp=Z,427nm,1.1s						
BKB	Balikpapan	27.27	331	P	P	18 19 49.6	+0.4
BKB				IAmb	IAmb	18 19 57.2	
	comp=Z,366nm,0.8s						
BKB	Balikpapan	27.27	331	P	P	18 19 54.0	+4.8
	comp=Z,5µmcomp=Z,552nm,1.0s						
BKB	Balikpapan	27.27	331	P	P	18 19 50.8	+1.6
BKB	Balikpapan	27.27	331	⇑P	P	18 19 51.9	+2.7
XMIS	Christmas Isla	27.45	299	P	P	18 19 50.2	-0.7
MPSI	Mapaga	27.55	338	P	P	18 19 51.9	+0.1
	comp=Z,4µmcomp=Z,3µmcomp=Z,150nm,1.3s						
TOLI2	Tolitoli	28.00	340	P	P	18 19 54.8	-1.0
TOLI2				IAmb	IAmb	18 19 58.4	
	comp=Z,259nm,0.9s						
TOLI2	Tolitoli	28.00	340	P	P	18 19 56.2	+0.4
LEM	Lembang	28.30	308	P	P	18 20 00.4	+1.7
	comp=Z,194nm,1.0s,baz=157,slow=10,SNR=21						
LEM				LR	LR	18 31 20.6	
	comp=Z,12µm,21.5s,baz=135,slow=37						
	comp=Z,194nm,1.0s						
LEM	Lembang	28.30	308	P	P	18 19 58.8	+0.1
	comp=Z,2µmcomp=Z,115nm,1.3s						
CNJI	Cibinong	28.33	306	P	P	18 19 58.4	-0.3
	comp=Z,3µmcomp=Z,272nm,1.0s						
MTKI	Muara Teweh, K	28.48	327	P	P	18 20 00.6	+0.5
	comp=Z,3µmcomp=Z,249nm,1.0s						
PBKI	Pangkalan Bun	28.74	320	P	P	18 20 04.1	+1.7
	comp=Z,3µmcomp=Z,260nm,1.1s						
MANU	Manus Island	28.87	38	P	P	18 20 02.9	-0.7
DBJI	Dramaga	29.12	307	P	P	18 20 05.8	0.0
	comp=Z,3µmcomp=Z,120nm,0.9s						
SGSI	Sangihe	29.44	351	P	P	18 20 09.0	+0.4
	comp=Z,4µmcomp=Z,332nm,1.1s						
KRVT	Keravat (AS076	30.02	49	P	P	18 20 13.3	-0.4
	comp=Z,300nm,0.7s,baz=204,slow=3.0,SNR=62						
KRVT				LR	LR	18 32 51.5	
	comp=Z,35µm,18.8s,baz=349,slow=38						
	comp=Z,300nm,0.7s						
RABL	Rabaul	30.20	49	P	P	18 20 14.5	-0.8
RABL	Rabaul	30.20	49	P	P	18 20 15.2	-0.1
RABL	Rabaul	30.20	49	⇑P	P	18 20 14.7	-0.7
RABL				⇑S	S	18 25 14.2	-0.1
BLSI	Bandar Lampung	31.01	306	P	P	18 20 24.2	+1.6
	comp=Z,396nm,0.8s						
STKI	Sintang	31.12	322	P	P	18 20 24.9	+1.5
	comp=Z,2µmcomp=Z,154nm,1.3s						
TPI	Tanjungpandan	31.21	313	P	P	18 20 25.3	+1.0
	comp=Z,2µmcomp=Z,163nm,1.0s						
KASI	Kota Agung	31.46	305	P	P	18 20 27.1	+0.6
	comp=Z,3µmcomp=Z,238nm,0.7s						
KLI	Kotabumi	31.64	307	P	P	18 20 28.8	+0.7
	comp=Z,4µmcomp=Z,319nm,1.0s						
LWLI	Liwa	32.12	305	P	P	18 20 33.7	+1.3
	comp=Z,2µmcomp=Z,211nm,0.7s						
MYLDM	Lahad Datu	32.56	339	P	P	18 20 35.3	-0.8
MYLDM				IAmb	IAmb	18 20 53.3	
	comp=Z,251nm,1.0s						
MYLDM	Lahad Datu	32.56	339	⇑P	P	18 20 37.9	+1.9
PPBI	Pangkal Pinang	32.66	312	P	P	18 20 37.9	+0.9
	comp=Z,6µmcomp=Z,107nm,0.9s						
SBUM	Sibu	32.73	326	P	P	18 20 37.5	-0.1
SBUM	Sibu	32.73	326	⇑P	P	18 20 38.8	+1.2
DAV	Davao City (W)	32.77	352	P	P	18 20 38.8	+0.9
	comp=Z,218nm,0.4s,baz=126,slow=4.8,SNR=6.0						
	comp=Z,218nm,0.4s						
DAV	Davao City (W)	32.77	352	P	P	18 20 38.3	+0.4
HNR	Honiara	32.77	66	LR	LR	18 33 27.8	
	comp=Z,75µm,19.8s,baz=260,slow=36						
HNR	Honiara	32.77	66	P	P	18 20 37.3	-0.7
HNR	Honiara	32.77	66	IAMs_20	IAMs_20	18 33 16.7	
	comp=Z,70µm,20.0s						
HNR	Honiara	32.77	66	P	P	18 20 37.3	-0.7
HNR				pmax	pmax		
	comp=Z,1µm,0.9s						
HNR				MLR	MLR		
	comp=Z,70µm,20.0s						
HNR	Honiara	32.77	66	P	P	18 20 38.5	+0.5
HNR	Honiara	32.77	66	⇑P	P	18 20 37.9	-0.1
KSM	Kuching	32.93	322	P	P	18 20 39.5	+0.2
KSM	Kuching	32.93	322	P	P	18 20 40.6	+1.2
KSM	Kuching	32.93	322	⇑P	P	18 20 40.3	+0.9
MNAI	Manna	33.37	305	P	P	18 20 42.3	-1.0
MNAI				IAmb	IAmb	18 20 48.3	
	comp=Z,319nm,0.7s						
MNAI	Manna	33.37	305	P	P	18 20 45.7	+2.4
	comp=Z,4µmcomp=Z,449nm,0.9s						
MNAI	Manna	33.37	305	P	P	18 20 44.7	+1.4
MNAI	Manna	33.37	305	⇓P	P	18 20 44.9	+1.6
NOUC	Port Laguerre	33.43	92	P	P	18 20 44.7	+0.9
ONTNC	Ouen Toro	33.52	92	P	P	18 20 44.6	+0.1
ONTNC	Ouen Toro	33.52	92	P	P	18 20 45.5	+1.0
ONTNC	Ouen Toro	33.52	92	⇑P	P	18 20 45.1	+0.6
DZM	Mont Dzumac	33.57	92	*e*P	P	18 20 45.8	+0.7
	comp=Z,2µm,1.2s						
DZM				*e*S	S	18 26 10.9	+3.9
	comp=Z,9µm,28.6s						
DZM				*e*LR	LR	18 30 46.0	
	comp=Z,54µm,26.6s						
DZM	Mont Dzumac	33.57	92	LR	LR	18 35 15.6	
	comp=Z,46µm,18.1s,baz=266,slow=38						
DZM	Mont Dzumac	33.57	92	P	P	18 20 44.6	-0.4
DZM	Mont Dzumac	33.57	92	P	P	18 20 46.5	+1.4
DZM	Mont Dzumac	33.57	92	⇑P	P	18 20 45.8	+0.7
OUENC	Ouen Island, N	33.85	92	P	P	18 20 47.5	+0.1
OUENC	Ouen Island, N	33.85	92	P	P	18 20 49.3	+1.9
NFK	Norfolk Island	33.89	104	P	P	18 20 50.2	+2.5
NFK	Norfolk Island	33.89	104	⇑P	P	18 20 49.1	+1.5
YATNC	Mamie plateau,	33.97	92	P	P	18 20 50.4	+1.9
PINNC	Pines Island,	34.35	93	P	P	18 20 52.0	+0.3
PINNC	Pines Island,	34.35	93	P	P	18 20 53.0	+1.3
LIFNC	LIFOU	34.60	90	P	P	18 20 54.0	+0.1
LIFNC	LIFOU	34.60	90	P	P	18 20 57.1	+3.2
DSRI	Dabo	34.94	312	P	P	18 20 58.0	+1.1
	comp=Z,991nmcomp=Z,61nm,1.1s						
MARNC	Mare, Loyalty	35.14	91	P	P	18 20 58.4	-0.2
MARNC	Mare, Loyalty	35.14	91	P	P	18 21 00.0	+1.4
MARNC	Mare, Loyalty	35.14	91	⇑P	P	18 20 59.2	+0.7
DCZ	Deep Cove	35.79	133	P	P	18 21 03.4	-0.5
MCQ	Macquarie Isla	35.94	151	P	P	18 21 05.7	+0.6
MCQ	Macquarie Isla	35.94	151	P	P	18 21 05.7	+0.6
MCQ				pmax	pmax		
	comp=Z,1µm,1.3s						
MCQ	Macquarie Isla	35.94	151	P	P	18 21 05.9	+0.9
MCQ	Macquarie Isla	35.94	151	⇓P	P	18 21 07.2	+2.2
KRJI	Kerinci	35.99	306	P	P	18 21 07.4	+1.3
	comp=Z,4µmcomp=Z,317nm,0.9s						
TPRI	Tanjung Pinang	36.01	313	P	P	18 21 07.5	+1.4
	comp=Z,3µmcomp=Z,304nm,1.0s						
SANVU	Saraoutou	36.28	81	P	P	18 21 08.4	0.0
SANVU				IAMs_20	IAMs_20	18 35 15.1	
	comp=Z,37µm,20.0s						
SANVU	Saraoutou	36.28	81	P	P	18 21 09.1	+0.7
SANVU	Saraoutou	36.28	81	⇑P	P	18 21 09.2	+0.7
DVP	Devils Point	36.36	85	P	P	18 21 10.0	+0.9
MLZ	Mavora Lakes	36.40	133	P	P	18 21 09.1	-0.1
MLZ				IAmb	IAmb	18 21 12.8	
	comp=Z,402nm,1.2s						
WHZ	Wether Hill Ro	36.47	134	P	P	18 21 09.5	-0.2
WHZ				IAmb	IAmb	18 21 13.0	
	comp=Z,285nm,1.1s						
RTV	Rentapao	36.55	86	P	P	18 21 13.5	+2.8
	comp=Z,702nm,1.3s						
WKZ	Wanaka	36.83	131	P	P	18 21 12.3	-0.5
FOZ	Fox Glacier	37.00	129	P	P	18 21 14.1	-0.1
MYKOM	Kota Tinggi	37.11	313	P	P	18 21 15.1	-0.3
MYKOM	Kota Tinggi	37.11	313	⇑P	P	18 21 16.0	+0.6
LBZ	Lake Benmore	37.49	130	P	P	18 21 17.7	-0.7
LBZ				IAmb	IAmb	18 21 20.9	
	comp=Z,333nm,1.0s						
PPI	Padang Panjang	37.88	307	P	P	18 21 22.5	+0.5
	comp=Z,62nm,0.9s						
RPZ	Rata Peaks	37.92	129	P	P	18 21 22.4	+0.3
	comp=Z,204nm,0.9s,baz=306,slow=3.4,SNR=29						
RPZ				PcP	PcP	18 23 38.0	0.0
	comp=Z,102nm,0.9s,baz=63,slow=4.0,SNR=4.9						
RPZ				LR	LR	18 36 25.5	
	comp=Z,11µm,18.9s,baz=286,slow=35						
	comp=Z,204nm,0.9s						
RPZ	Rata Peaks	37.92	129	P	P	18 21 20.1	-2.0
RPZ				IAmb	IAmb	18 21 24.4	
	comp=Z,237nm,0.9s						
BKNI	Bangkinang	37.97	308	P	P	18 21 19.8	-3.0
BKNI	Bangkinang	37.97	308	P	P	18 21 24.1	+1.4
	comp=Z,1µmcomp=Z,153nm,1.1s						
BKNI	Bangkinang	37.97	308	P	P	18 21 24.3	+1.6
ODZ	Otahua Downs	37.99	131	P	P	18 21 22.0	-0.7
ODZ	Otahua Downs	37.99	131	⇓P	P	18 21 22.9	+0.3
DSZ	Denniston Nort	38.01	126	P	P	18 21 23.1	+0.3
DSZ				S	PcP	18 23 37.6	-0.7
SISI	Saibi	38.26	304	P	P	18 21 28.1	+2.9
	comp=Z,2µmcomp=Z,99nm,1.1s						
QRZ	Quartz Range	38.37	124	P	P	18 21 25.6	-0.3
QRZ	Quartz Range	38.37	124	P	P	18 21 27.3	+1.4
QRZ				S	PcP	18 23 40.1	+0.7
OXZ	Oxford	38.52	128	P	P	18 21 26.2	-0.9
OXZ				IAmb	IAmb	18 21 29.1	
	comp=Z,266nm,0.9s						
LTZ	Lake Taylor	38.56	127	P	P	18 21 26.1	-1.5
LTZ	Lake Taylor	38.56	127	P	P	18 21 26.5	-1.1
OUZ	Omahuta	38.63	115	P	P	18 21 27.2	-0.9
OUZ				IAmb	IAmb	18 21 32.2	
	comp=Z,388nm,1.2s						
OUZ				IAMs_20	IAMs_20	18 36 05.2	
	comp=Z,27µm,18.0s						
OUZ	Omahuta	38.63	115	⇑P	P	18 21 30.1	+1.9
THZ	Tophouse	38.82	125	P	P	18 21 28.8	-0.9
THZ	Tophouse	38.82	125	P	P	18 21 28.9	-0.8
MQZ	McQueen’s Vall	39.04	129	P	P	18 21 29.8	-1.7
MQZ				IAmb	IAmb	18 21 34.1	
	comp=Z,468nm,1.3s						
NNZ	Nelson	39.07	125	P	P	18 21 30.6	-1.2
NNZ				S	PcP	18 23 40.9	-0.6
MNSI	Mandailing Nat	39.33	307	P	P	18 21 33.6	-0.6
	comp=Z,39nm,0.8s						
KHZ	Kahutara	39.41	126	P	P	18 21 31.7	-2.8
KHZ				IAmb	IAmb	18 21 36.8	
	comp=Z,352nm,1.1s						
KHZ	Kahutara	39.41	126	P	P	18 21 32.3	-2.2
KHZ				S	PcP	18 23 42.6	0.0
KHZ	Kahutara	39.41	126	P	P	18 21 35.2	+0.7
KHZ	Kahutara	39.41	126	⇑P	P	18 21 34.7	+0.2
BSWZ	Blackbirch Sta	39.52	125	P	P	18 21 32.5	-3.1
TUWZ	Tuamarina	39.53	125	P	P	18 21 34.0	-1.5
TUWZ	Tuamarina	39.53	125	P	P	18 21 34.8	-0.8
CMWZ	Cape Campbell	39.78	125	P	P	18 21 35.8	-1.9
HIZ	Hauiti	39.85	120	P	P	18 21 38.9	+0.6
SNZO	South Karori	40.08	124	P	P	18 21 39.3	-0.8
SNZO	South Karori	40.08	124	P	P	18 21 40.8	+0.7
SNZO	South Karori	40.08	124	⇓P	P	18 21 40.0	-0.1
BHW	Baring Head	40.21	125	P	P	18 21 38.9	-2.4
CAW	Cannon Point	40.31	124	P	P	18 21 42.2	+0.1
CAW				S	PcP	18 23 47.6	+2.0
TWVZ	Taurewa	40.36	121	P	P	18 21 40.6	-2.1
TGY	Tagaytay City	40.44	347	P	P	18 21 42.7	-0.6
	comp=Z,187nm,0.6s,baz=182,slow=7.6,SNR=5.2						
	comp=Z,187nm,0.6s						
MSWZ	Moikau Station	40.50	124	P	P	18 21 41.5	-2.2
PLWZ	Palliser	40.52	125	P	P	18 21 42.5	-1.3
PLWZ	Palliser	40.52	125	P	P	18 21 42.2	-1.7
PLWZ				S	PcP	18 23 48.4	+2.1
IPM	Ipoh	40.98	313	P	P	18 21 46.5	-1.4
IPM	Ipoh	40.98	313	P	P	18 21 48.1	+0.2
IPM	Ipoh	40.98	313	⇑P	P	18 21 48.0	+0.1
RPSI	Rantau Prapat	41.13	309		PcP	18 23 49.6	+1.1
GSI	Gunungsitoli	41.14	306	P	P	18 21 46.4	-2.8
GSI	Gunungsitoli	41.14	306	P	P	18 21 50.3	+1.1
	comp=Z,131nm,1.1s						
GSI	Gunungsitoli	41.14	306	P	P	18 21 52.2	+3.0
GSI	Gunungsitoli	41.14	306	⇑P	P	18 21 50.2	+1.0
BFZ	Birch Farm	41.15	123	P	P	18 21 47.8	-1.2
BFZ				IAmb	IAmb	18 21 51.1	
	comp=Z,286nm,1.0s						
BFZ	Birch Farm	41.15	123	P	P	18 21 50.1	+1.1
BKZ	Black Stump Fm	41.18	121	P	P	18 21 47.7	-1.7
BKZ	Black Stump Fm	41.18	121	P	P	18 21 50.2	+0.8
PSI	Prapat	41.20	309	P	P	18 21 48.6	-1.2
	comp=Z,18nm,0.7s,baz=111,slow=8.7,SNR=13						
PSI				PcP	PcP	18 23 49.6	+0.6
	comp=Z,45nm,0.9s,baz=252,slow=2.9,SNR=6.3						
PSI				LR	LR	18 41 55.6	
	comp=Z,17µm,19.0s,baz=138,slow=41						
	comp=Z,18nm,0.7s						
URZ	Urewera	41.60	119	LR	LR	18 39 02.0	
	comp=Z,14µm,18.3s,baz=308,slow=36						
URZ	Urewera	41.60	119	P	P	18 21 51.3	-1.5
URZ				IAmb	IAmb	18 22 01.8	
	comp=Z,276nm,0.9s						
URZ	Urewera	41.60	119	P	P	18 21 53.0	+0.3
URZ	Urewera	41.60	119	⇑P	P	18 21 52.5	-0.2
GUMO	Guam	41.63	22	P	P	18 21 53.3	+0.2
	comp=Z,382nm,1.0s,baz=16,slow=1.4,SNR=16						
GUMO				LR	LR	18 40 04.5	
	comp=Z,24µm,18.1s,baz=206,slow=38						
	comp=Z,382nm,1.0s						
GUMO	Guam	41.63	22	P	P	18 21 51.6	-1.5
GUMO	Guam	41.63	22	IAMs_20	IAMs_20	18 39 34.9	
	comp=Z,23µm,19.0s						
GUMO	Guam	41.63	22	P	P	18 21 53.8	+0.7
GUMO	Guam	41.63	22	⇑P	P	18 21 53.1	0.0
KULM	Kulim	41.83	313	P	P	18 21 53.0	-1.8
KULM	Kulim	41.83	313	⇑P	P	18 21 54.4	-0.5
TSI	Tuntungan	41.95	309	P	P	18 21 58.1	+2.3
	comp=Z,51nm,0.9s						
CASY	Casey	42.44	191	P	P	18 21 59.4	+0.2
CASY	Casey	42.44	191	IAMs_20	IAMs_20	18 37 01.4	
	comp=Z,29µm,19.0s						
CASY	Casey	42.44	191	⇑P	P	18 21 59.5	+0.3
PATS	Pohnpei	42.49	44	P	P	18 21 58.7	-1.5
PATS				IAMs_20	IAMs_20	18 39 53.5	
	comp=Z,34µm,18.0s						
PATS	Pohnpei	42.49	44	P	P	18 22 03.1	+2.9
MXZ	Matakaoa Point	42.51	118	P	P	18 21 58.9	-1.3
KCSI	Kotacane, Aceh	42.52	308	P	P	18 21 59.9	-0.6
	comp=Z,1µmcomp=Z,82nm,1.0s						
LHMI	Lhok Sumawe	44.30	309	P	P	18 22 13.9	-1.0
LHMI				IAmb	IAmb	18 22 18.9	
	comp=Z,437nm,1.0s						
LHMI				IAMs_20	IAMs_20	18 43 41.6	
	comp=Z,15µm,18.0s						
LHMI	Lhok Sumawe	44.30	309	P	P	18 22 18.0	+3.2

	comp=Z,4µmcomp=Z,463nm,1.0s						
LHMI	**Lhok Sumawe**	**44.30**	**309**	P	**P**	**18 22 19.3**	**+4.5**
LHMI	**Lhok Sumawe**	**44.30**	**309**	⇓P	**P**	**18 22 15.6**	**+0.8**
SRIT	**Nakonsritamara**	**45.00**	**315**	P	**P**	**18 22 18.6**	**-1.8**
SRIT				IAmb	IAmb	18 22 24.6	
	comp=Z,251nm,1.0s						
MSVF	**Nonsavu**	**45.25**	**90**	LR	LR	18 41 40.7	
	comp=Z,47µm,18.6s,baz=257,slow=37						
MSVF	**Nonsavu**	**45.25**	**90**	P	**P**	**18 22 23.7**	**+1.1**
MSVF	**Nonsavu**	**45.25**	**90**	*c i*P	**P**	**18 22 24.1**	**+1.5**
MSVF				pmax	pmax		
	comp=Z,1µm,1.1s						
MSVF				MLR	MLR		
	comp=Z,45µm,18.0s						
MSVF	**Nonsavu**	**45.25**	**90**	P	**P**	**18 22 25.1**	**+2.5**
AIS	**Amsterdam Isla**	**45.59**	**241**	IAMs_20	IAMs_20	18 38 05.1	
	comp=Z,26µm,22.0s						
RAO	**Raoul Island**	**46.17**	**107**	LR	LR	18 40 15.8	
	comp=Z,11µm,21.6s,baz=261,slow=34						
RAO	**Raoul Island**	**46.17**	**107**	IAMs_20	IAMs_20	18 41 29.4	
	comp=Z,15µm,18.0s						
RAO	**Raoul Island**	**46.17**	**107**	P	**P**	**18 22 33.8**	**+4.2**
UBPT	**Khong Chiam**	**47.10**	**327**	P	**P**	**18 22 35.2**	**-1.7**
UBPT				IAmb	IAmb	18 22 40.7	
	comp=Z,300nm,1.1s						
UBPT	**Khong Chiam**	**47.10**	**327**	⇑P	**P**	**18 22 37.0**	**+0.1**
DGTI	**Dogotuki**	**47.25**	**89**	P	**P**	**18 22 39.1**	**+0.9**
LKBA	**Tubou, Lakemba**	**47.92**	**92**	P	**P**	**18 22 44.4**	**+1.0**
QIZ	**Qiongzhong**	**48.48**	**334**	P	**P**	**18 22 47.6**	**+0.1**
QIZ	**Qiongzhong**	**48.48**	**334**	P	**P**	**18 22 48.3**	**+0.8**
QIZ				PP	**PP**	**18 24 42.0**	**+1.5**
QIZ				S	**S**	**18 29 47.8**	**-0.3**
QIZ				sS	**sS**	**18 30 01.8**	**+5.1**
QIZ				SS	**SS**	**18 33 18.0**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,67nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,570nm,3.5s						
QIZ				LR	LR		
	comp=Z,4µm,17.5s						
QIZ				LR	LR		
	comp=Z,3µm,19.1s						
QIZ				LR	LR		
	comp=Z,4µm,25.5s						
QIZ	**Qiongzhong**	**48.48**	**334**	P	**P**	**18 22 49.1**	**+1.6**
TWG	**Pinlang**	**48.91**	**349**	P	**P**	**18 22 48.6**	**-2.2**
YULB	**Yu-li**	**49.43**	**350**	P	**P**	**18 22 52.8**	**-2.0**
YULB				IAmb	IAmb	18 22 57.6	
	comp=Z,123nm,0.8s						
TPUB	**Ta-pu**	**49.46**	**349**	P	**P**	**18 22 54.1**	**-0.9**
TPUB	**Ta-pu**	**49.46**	**349**	P	**P**	**18 22 55.4**	**+0.4**
TARA	**Tarawa**	**49.50**	**64**	P	**P**	**18 22 56.5**	**+0.9**
FUNA	**Funafuti**	**49.81**	**79**	P	**P**	**18 22 57.6**	**-0.3**
FUNA	**Funafuti**	**49.81**	**79**	IAMs_20	IAMs_20	18 41 50.8	
	comp=Z,26µm,18.0s						
FUNA	**Funafuti**	**49.81**	**79**	P	**P**	**18 23 00.4**	**+2.5**
SSLB	**Suanglung**	**49.88**	**349**	P	**P**	**18 22 56.5**	**-1.8**
SSLB	**Suanglung**	**49.88**	**349**	P	**P**	**18 22 58.2**	**0.0**
HKPS	**Hong Kong Po S**	**50.01**	**341**	P	**P**	**18 22 58.2**	**-0.9**
HKPS				IAmb	IAmb	18 23 03.0	
	comp=Z,285nm,0.9s						
NACB	**Ninganchiao**	**50.15**	**350**	P	**P**	**18 22 58.6**	**-1.7**
NACB				IAmb	IAmb	18 23 02.8	
	comp=Z,609nm,1.9s						
KWAJ	**Kwajalein Atol**	**50.19**	**52**	IAMs_20	IAMs_20	18 43 59.9	
	comp=Z,23µm,20.0s						
YOJ	**Yonaguni jima**	**50.24**	**352**	P	**P**	**18 22 59.2**	**-1.6**
YOJ				IAmb	IAmb	18 23 06.2	
	comp=Z,498nm,1.3s						
YOJ	**Yonaguni jima**	**50.24**	**352**	P	**P**	**18 22 59.3**	**-1.6**
YOJ				pmax	pmax		
	comp=Z,498nm,1.3s						
YOJ	**Yonaguni jima**	**50.24**	**352**	P	**P**	**18 23 02.1**	**+1.2**
YOJ	**Yonaguni jima**	**50.24**	**352**	⇑P	**P**	**18 23 01.9**	**+1.1**
JMJ	**Miyako jima 2**	**50.34**	**355**	P	**P**	**18 23 02.3**	**+0.6**
YHNB	**Yeheng**	**50.67**	**350**	P	**P**	**18 23 02.9**	**-1.4**
YHNB	**Yeheng**	**50.67**	**350**	P	**P**	**18 23 04.8**	**+0.5**
TATO	**Taipei**	**50.96**	**350**	P	**P**	**18 23 04.8**	**-1.6**
GZH	**Guangzhou**	**51.01**	**340**	P	**P**	**18 23 11.3**	**+4.6**
GZH				S	**S**	**18 30 30.5**	**+7.1**
GZH				LR	LR		
	comp=Z,2µm,18.5s						
GZH				LR	LR		
	comp=Z,2µm,16.8s						
KNMB	**Chin-men Tao**	**51.02**	**347**	P	**P**	**18 23 05.4**	**-1.4**
KNMB				IAmb	IAmb	18 23 10.3	
	comp=Z,141nm,0.8s						
PAF	**Port-aux-Franc**	**51.42**	**226**	IAMs_20	IAMs_20	18 40 15.6	
	comp=Z,36µm,22.0s						
QZH	**Quanzhou**	**51.45**	**347**	⇑*i*P	**P**	**18 23 10.4**	**+0.4**
QZH				S	**S**	**18 30 31.5**	**+2.1**
QZH				SS	**SS**	**18 34 02.8**	**-3.0**
QZH				pmax	pmax		
	comp=Z,76nm,0.9s						
QZH				pmax	pmax		
	comp=Z,530nm,5.8s						
QZH				LR	LR		
	comp=Z,1µm,15.7s						
QZH				LR	LR		
	comp=Z,1µm,15.4s						
QZH				LR	LR		
	comp=Z,2µm,15.0s						
JOW	**Kunigami**	**52.18**	**358**	P	**P**	**18 23 17.5**	**+2.0**
	comp=Z,151nm,1.0s,baz=197,slow=6.5,SNR=8.2						
JOW				LR	LR	18 44 52.5	
	comp=Z,7µm,20.9s,baz=161,slow=35						
	comp=Z,151nm,1.0s						
JOW	**Kunigami**	**52.18**	**358**	P	**P**	**18 23 13.7**	**-1.7**
JOW				IAmb	IAmb	18 23 21.2	
	comp=Z,201nm,1.1s						
JOW	**Kunigami**	**52.18**	**358**	P	**P**	**18 23 17.4**	**+2.0**
JOW	**Kunigami**	**52.18**	**358**	⇑P	**P**	**18 23 17.1**	**+1.7**
CM31	**Chiang Mai Arr**	**53.16**	**322**	P	**P**	**18 23 20.9**	**-1.9**
CM31	**Chiang Mai Arr**	**53.16**	**322**	P	**P**	**18 23 23.9**	**+1.1**
	SNR=32						
CMAR	**Chiang Mai Arr**	**53.16**	**322**	P	**P**	**18 23 23.8**	**+1.0**
	comp=Z,69nm,0.9s,baz=151,slow=5.7,SNR=142						
CMAR				PcP	**PcP**	**18 24 33.2**	**+2.3**
	comp=Z,31nm,0.8s,baz=172,slow=2.6,SNR=9.1						
CMAR				LR	LR	18 49 31.2	
	comp=Z,3µm,18.2s,baz=150,slow=40						
CMAR				PKP2bc		18 53 56.5	
	comp=Z,2.0nm,1.0s,baz=306,slow=3.0,SNR=4.5						
	comp=Z,69nm,0.9s						
CMAR	**Chiang Mai Arr**	**53.16**	**322**	P	**P**	**18 23 21.8**	**-1.1**
CMAR				PcP	**PcP**	**18 24 32.1**	**+1.2**
CHTO	**Chiang Mai**	**53.44**	**323**	P	**P**	**18 23 24.4**	**-0.5**
CHTO	**Chiang Mai**	**53.44**	**323**	P	**P**	**18 23 24.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,139nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,4µm,20.0s						
CHTO	**Chiang Mai**	**53.44**	**323**	P	**P**	**18 23 26.3**	**+1.3**
CHTO	**Chiang Mai**	**53.44**	**323**	⇑P	**P**	**18 23 25.9**	**+1.0**
JCJ	**Chichijima**	**53.74**	**14**	P	**P**	**18 23 25.7**	**-1.3**
	comp=Z,127nm,0.5s,baz=222,slow=4.1,SNR=17						
	comp=Z,127nm,0.5s						
JCJ	**Chichijima**	**53.74**	**14**	P	**P**	**18 23 25.2**	**-1.8**
JCJ				IAmb	IAmb	18 23 31.3	
	comp=Z,198nm,0.7s						
JCJ	**Chichijima**	**53.74**	**14**	P	**P**	**18 23 27.8**	**+0.8**
JCJ	**Chichijima**	**53.74**	**14**	⇑P	**P**	**18 23 25.5**	**-1.5**
GULI	**GuiLin**	**54.02**	**338**	P	**P**	**18 23 29.1**	**+0.1**
GULI				S	**S**	**18 31 01.3**	**-3.3**
GULI				pmax	pmax		
	comp=Z,100nm,0.9s						
GULI				LR	LR		
	comp=Z,3µm,23.8s						
GULI				LR	LR		
	comp=Z,2µm,18.4s						
GULI				LR	LR		
	comp=Z,4µm,20.6s						
VNDA	**Vanda**	**54.09**	**172**	P	**P**	**18 23 29.5**	**+0.5**
	comp=Z,81nm,1.0s,baz=322,slow=7.6,SNR=205						
VNDA				LR	LR	18 45 13.9	
	comp=Z,17µm,18.7s,baz=338,slow=35						
	comp=Z,81nm,1.0s						
VNDA	**Vanda**	**54.09**	**172**	P	**P**	**18 23 28.4**	**-0.6**
VNDA				IAmb	IAmb	18 23 33.1	
	comp=Z,694nm,1.8s						
SBA	**Scott Base**	**55.02**	**171**	P	**P**	**18 23 36.2**	**+0.5**
SBA	**Scott Base**	**55.02**	**171**	IAMs_20	IAMs_20	18 44 49.5	
	comp=Z,12µm,20.0s						
SBA	**Scott Base**	**55.02**	**171**	P	**P**	**18 23 36.2**	**+0.5**
SBA				pmax	pmax		
	comp=Z,1µm,2.3s						
SBA				MLR	MLR		
	comp=Z,12µm,20.0s						
AFI	**Afiamalu**	**55.75**	**90**	LR	LR	18 45 36.5	
	comp=Z,17µm,21.5s,baz=246,slow=34						
AFI	**Afiamalu**	**55.75**	**90**	P	**P**	**18 23 42.3**	**+0.3**
AFI				IAmb	IAmb	18 23 45.6	
	comp=Z,301nm,1.1s						
AFI	**Afiamalu**	**55.75**	**90**	IAMs_20	IAMs_20	18 45 14.1	
	comp=Z,17µm,22.0s						
AFI	**Afiamalu**	**55.75**	**90**	P	**P**	**18 23 42.3**	**+0.3**
AFI				pmax	pmax		
	comp=Z,301nm,1.2s						
AFI				MLR	MLR		
	comp=Z,17µm,22.0s						
AFI	**Afiamalu**	**55.75**	**90**	P	**P**	**18 23 42.8**	**+0.8**
AFI	**Afiamalu**	**55.75**	**90**	⇓P	**P**	**18 23 43.5**	**+1.5**
CNSH	**ChangSha**	**55.93**	**342**	⇑P	**P**	**18 23 43.1**	**+0.3**
CNSH				S	**S**	**18 31 26.3**	**-3.8**
CNSH				pmax	pmax		
	comp=Z,720nm,3.0s						
CNSH				LR	LR		
	comp=Z,2µm,15.9s						
CNSH				LR	LR		
	comp=Z,4µm,24.2s						
CNSH				LR	LR		
	comp=Z,3µm,19.0s						
GYA	**Guiyang**	**56.42**	**335**	⇑*i*P	**P**	**18 23 47.1**	**+0.6**
GYA				pP	pP	18 23 52.5	+0.7
GYA				S	**S**	**18 31 39.5**	**+2.5**
GYA				ScS	**ScS**	**18 33 36.4**	**+0.9**
GYA				SS	**SS**	**18 35 26.9**	**+2.3**
GYA				pmax	pmax		
	comp=Z,100nm,0.9s						
GYA				pmax	pmax		
	comp=Z,690nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,15.4s						
GYA				LR	LR		
	comp=Z,2µm,25.0s						
GYA				LR	LR		
	comp=Z,4µm,23.2s						
H11S3	**WAKE ISLAND Hy**	**56.62**	**43**	P	**P**	**18 23 48.6**	**+0.9**
	baz=227,slow=7.1,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**56.62**	**43**	P	**P**	**18 23 48.1**	**+0.3**
	baz=227,slow=7.1,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**56.63**	**43**	P	**P**	**18 23 48.5**	**+0.6**
	baz=227,slow=7.1,SNR=9.3						
JSU	**Suzuyama**	**56.82**	**1**	P	**P**	**18 23 48.0**	**-1.1**
KMI	**Kunming**	**56.86**	**330**	⇑P	**P**	**18 23 52.0**	**+2.2**
KMI				S	**S**	**18 31 45.9**	**+2.8**
KMI				pmax	pmax		
	comp=Z,240nm,1.0s						
KMI				pmax	pmax		
	comp=Z,670nm,4.1s						
KMI				LR	LR		
	comp=Z,4µm,19.9s						
KMI				LR	LR		
	comp=Z,7µm,19.2s						
KMI				LR	LR		
	comp=Z,3µm,23.2s						
SSE	**Sheshan**	**57.01**	**351**	P	**P**	**18 23 51.6**	**+1.2**
SSE				S	**S**	**18 31 47.4**	**+3.0**
SSE				pmax	pmax		
	comp=Z,42nm,0.8s						
SSE				pmax	pmax		
	comp=Z,430nm,3.9s						
SSE				LR	LR		
	comp=Z,590nm,23.1s						
SSE				LR	LR		
	comp=Z,1µm,23.7s						
WAKE	**Wake Island**	**57.20**	**42**	P	**P**	**18 23 50.9**	**-1.0**
WAKE	**Wake Island**	**57.20**	**42**	IAMs_20	IAMs_20	18 47 30.1	
	comp=Z,16µm,20.0s						
WAKE	**Wake Island**	**57.20**	**42**	P	**P**	**18 23 53.7**	**+1.7**
H08S2	**Diego Garcia H**	**57.37**	**278**	P	**P**	**18 23 55.2**	**+2.1**
	baz=68,slow=6.4,SNR=27						
H08S1	**Diego Carcia H**	**57.39**	**278**	P	**P**	**18 23 55.9**	**+2.6**
	baz=68,slow=6.4,SNR=11						
H08S3	**Diego Garcia H**	**57.39**	**278**	P	**P**	**18 23 54.9**	**+1.7**
	baz=68,slow=6.4,SNR=18						
DGAR	**Diego Garcia**	**57.51**	**278**	IAMs_20	IAMs_20	18 46 43.1	
	comp=Z,18µm,19.0s						
DGAR	**Diego Garcia**	**57.51**	**278**	*i* P	**P**	**18 23 54.0**	**-0.4**
DGAR				pmax	pmax		
	comp=Z,477nm,2.0s						
WHN	**Wuhan**	**57.80**	**344**	⇑P	**P**	**18 23 57.6**	**+1.6**
WHN				pP	**pP**	**18 23 59.9**	**-1.4**
WHN				S	**S**	**18 31 58.4**	**+3.7**
WHN				pmax	pmax		
	comp=Z,360nm,0.9s						
WHN				pmax	pmax		
	comp=Z,3µm,5.2s						
WHN				LR	LR		
	comp=Z,5µm,14.5s						
WHN				LR	LR		
	comp=Z,4µm,15.4s						
WHN				LR	LR		
	comp=Z,6µm,18.4s						
MAW	**Mawson**	**57.83**	**205**	P	**P**	**18 23 57.0**	**+1.1**
	comp=Z,62nm,0.9s,baz=68,slow=8.8,SNR=37						
MAW				LR	LR	18 45 22.8	
	comp=Z,27µm,18.6s,baz=78,slow=32						
MAW				PKP2bc		18 53 44.5	
	comp=Z,4.4nm,0.9s,baz=246,slow=4.7,SNR=2.7						
	comp=Z,62nm,0.9s						
MAW	**Mawson**	**57.83**	**205**	P	**P**	**18 23 56.0**	**+0.2**
MAW	**Mawson**	**57.83**	**205**	P	**P**	**18 23 57.0**	**+1.1**
MAW	**Mawson**	**57.83**	**205**	⇑P	**P**	**18 23 56.9**	**+1.1**
PALK	**Pallekele**	**57.90**	**298**	P	**P**	**18 23 58.8**	**+1.6**
	comp=Z,113nm,0.9s,baz=227,slow=6.5,SNR=36						
PALK				LR	LR	18 46 54.5	
	comp=Z,14µm,20.1s,baz=236,slow=34						
	comp=Z,113nm,0.9s						
PALK	**Pallekele**	**57.90**	**298**	P	**P**	**18 23 56.1**	**-1.0**
PALK				IAmb	IAmb	18 24 01.8	
	comp=Z,169nm,1.1s						
PALK	**Pallekele**	**57.90**	**298**	IAMs_20	IAMs_20	18 46 34.4	
	comp=Z,16µm,20.0s						
PALK	**Pallekele**	**57.90**	**298**	P	**P**	**18 23 59.0**	**+1.9**
PALK	**Pallekele**	**57.90**	**298**	⇑P	**P**	**18 23 58.8**	**+1.6**
NJ2	**Nanjing**	**58.31**	**349**	⇑*i*P	**P**	**18 24 00.6**	**+1.0**
NJ2				S	**S**	**18 32 05.3**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,64nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,790nm,3.7s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
NJ2				LR	LR		
	comp=Z,2µm,17.0s						
NJ2				LR	LR		
	comp=Z,4µm,19.4s						
JNU	**Nakatsue**	**58.43**	**1**	P	**P**	**18 24 01.3**	**+0.8**
PZH	**PanZhiHua**	**58.50**	**330**	P	**P**	**18 24 02.3**	**+1.1**
PZH				PcP	**PcP**	**18 24 53.3**	**+1.7**
PZH				ScP	**ScP**	**18 28 55.0**	**+3.5**
PZH				S	**S**	**18 32 04.9**	**+0.5**
PZH				ScS	**ScS**	**18 33 50.6**	**-0.1**
PZH				SS	**SS**	**18 36 00.5**	**+3.1**
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,500nm,4.1s						
PZH				LR	LR		
	comp=Z,3µm,20.1s						
PZH				LR	LR		
	comp=Z,4µm,19.6s						
PZH				LR	LR		
	comp=Z,4µm,20.1s						
ENH	**Enshi**	**58.92**	**339**	P	**P**	**18 24 04.4**	**+0.5**
JHJ	**Hachijo jima 2**	**59.18**	**10**	P	**P**	**18 24 05.0**	**-0.6**
	comp=Z,198nm,0.9s,baz=248,slow=18,SNR=1.4						
JHJ				LR	LR	18 47 56.3	
	comp=Z,13µm,20.1s,baz=185,slow=34						
	comp=Z,198nm,0.9s						
JTU	**Tsushima**	**59.83**	**360**	P	**P**	**18 24 09.8**	**-0.3**
JTU	**Tsushima**	**59.83**	**360**	⇓P	**P**	**18 24 11.1**	**+1.1**
JHS	**Saijyo**	**60.38**	**3**	P	**P**	**18 24 13.0**	**-0.9**
JHS				IAmb	IAmb	18 24 17.3	
	comp=Z,172nm,1.1s						
JHS	**Saijyo**	**60.38**	**3**	⇑P	**P**	**18 24 14.7**	**+0.8**
KNTN	**Kanton**	**60.46**	**78**	P	**P**	**18 24 15.0**	**+0.1**
KNTN	**Kanton**	**60.46**	**78**	P	**P**	**18 24 16.8**	**+1.9**
KAAM	**Kaadhehdhoo**	**60.69**	**286**	IAMs_20	IAMs_20	18 46 52.4	
	comp=Z,10µm,21.0s						
NAWB	**Namwon**	**60.76**	**358**	P	**P**	**18 24 16.6**	**+0.1**
NAWB				IAmb	IAmb	18 24 20.3	
	comp=Z,282nm,1.1s						
AZL	**Aizawl**	**60.87**	**321**	*e*P	**P**	**18 24 19.1**	**+1.6**
AZL				IAmb	IAmb	18 24 22.5	
	comp=Z,536nm,1.2s						
INU	**Inuyama**	**61.02**	**7**	P	**P**	**18 24 17.6**	**-0.7**
INU				IAmb	IAmb	18 24 21.5	
	comp=Z,149nm,1.2s						
INU				IAMs_20	IAMs_20	18 49 19.4	
	comp=Z,10µm,20.0s						
INU	**Inuyama**	**61.02**	**7**	P	**P**	**18 24 19.6**	**+1.4**
INU	**Inuyama**	**61.02**	**7**	⇑P	**P**	**18 24 18.9**	**+0.7**
JGF	**Kuroka**	**61.31**	**7**	P	**P**	**18 24 18.9**	**-1.3**
JGF				IAmb	IAmb	18 24 23.2	
	comp=Z,206nm,1.3s						
JGF	**Kuroka**	**61.31**	**7**	⇑P	**P**	**18 24 20.1**	**-0.2**
CD2	**Chengdu**	**61.52**	**335**	⇑P	**P**	**18 24 22.9**	**+1.1**
CD2				S	**S**	**18 32 45.9**	**+3.0**
CD2				ScS	**ScS**	**18 34 14.0**	**+1.1**
CD2				SS	**SS**	**18 36 40.1**	**-4.5**
CD2				pmax	pmax		
	comp=Z,180nm,0.9s						
CD2				pmax	pmax		
	comp=Z,650nm,4.0s						
CD2				LR	LR		
	comp=Z,3µm,19.4s						
CD2				LR	LR		
	comp=Z,4µm,16.1s						
TRD	**Trivandrum**	**61.63**	**296**	*e*P	**P**	**18 24 23.3**	**+0.5**
TRD				IAmb	IAmb	18 24 27.3	
	comp=Z,1µm,2.4s						
KOHI	**KOHIMA**	**61.63**	**323**	*e*P	**P**	**18 24 23.3**	**+0.6**
KOHI				IAmb	IAmb	18 24 27.9	
	comp=Z,454nm,1.0s						
TJN	**Taejon**	**61.72**	**358**	P	**P**	**18 24 21.4**	**-1.5**
TJN	**Taejon**	**61.72**	**358**	*ce*P	**P**	**18 24 23.5**	**+0.6**
TJN	**Taejon**	**61.72**	**358**	P	**P**	**18 24 24.2**	**+1.3**
AGT	**Agartala**	**61.81**	**320**	*e*P	**P**	**18 24 24.4**	**+0.6**
MOKO	**MOKOCHONG**	**61.90**	**324**	*e*P	**P**	**18 24 25.7**	**+1.2**
LKP	**Lekhapani**	**62.02**	**326**	*e*P	**P**	**18 24 25.7**	**+0.5**
LKP				IAmb	IAmb	18 24 29.1	
	comp=Z,303nm,1.0s						
LYN	**LuoYang**	**62.09**	**344**	⇑P	**P**	**18 24 26.1**	**+0.7**
LYN				S	**S**	**18 32 49.9**	**+0.1**
LYN				SS	**SS**	**18 36 50.0**	**-3.2**
LYN				pmax	pmax		
	comp=Z,150nm,0.8s						
LYN				pmax	pmax		
	comp=Z,1µm,3.9s						
LYN				LR	LR		
	comp=Z,3µm,17.1s						
LYN				LR	LR		
	comp=Z,3µm,19.4s						
LYN				LR	LR		
	comp=Z,4µm,18.4s						
KSCHJ	**Chungju**	**62.19**	**358**	P	**P**	**18 24 25.1**	**-1.0**
KOD	**Kodaikanal**	**62.22**	**298**	*e*P	**P**	**18 24 27.9**	**+0.9**
JYT	**Yasato**	**62.29**	**9**	P	**P**	**18 24 26.1**	**-0.6**
MJAR	**Matsushiro Arr**	**62.33**	**8**	P	**P**	**18 24 27.1**	**0.0**
	comp=Z,77nm,1.0s,baz=178,slow=7.9,SNR=107						
MJAR				LR	LR	18 50 11.3	
	comp=Z,7µm,19.4s,baz=177,slow=35						
MJAR				PKP2bc		18 53 40.5	
	comp=Z,8.6nm,1.1s,baz=34,slow=2.4,SNR=14						
	comp=Z,77nm,1.0s						
MJAR	**Matsushiro Arr**	**62.33**	**8**	P	**P**	**18 24 26.4**	**-0.7**
MJAR				IAmb	IAmb	18 24 29.8	
	comp=Z,166nm,1.3s						
MJAR					**P'P'bc**	**18 53 39.6**	**+5.0**
MAJO	**Matsushiro**	**62.34**	**8**	P	**P**	**18 24 26.3**	**-0.8**
MAJO				IAmb	IAmb	18 24 29.8	
	comp=Z,232nm,1.2s						
MAJO	**Matsushiro**	**62.34**	**8**	IAMs_20	IAMs_20	18 50 09.1	
	comp=Z,8µm,20.0s						
MAJO	**Matsushiro**	**62.34**	**8**	*c i*P	**P**	**18 24 26.9**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,240nm,1.2s						
MAJO	**Matsushiro**	**62.34**	**8**	P	**P**	**18 24 27.9**	**+0.8**
MAJO	**Matsushiro**	**62.34**	**8**	⇑P	**P**	**18 24 27.2**	**+0.1**
MJB9	**Matsu-Tunnel**	**62.34**	**8**	P	**P**	**18 24 26.3**	**-0.8**
MJB9				IAmb	IAmb	18 24 29.8	
	comp=Z,241nm,1.2s						
JORH	**JORHAT**	**62.38**	**324**	*e*P	**P**	**18 24 28.3**	**+0.8**
SALM	**Salem**	**62.48**	**300**	*e*P	**P**	**18 24 29.1**	**+0.6**
BWNR	**Bhubaneshwar**	**62.58**	**313**	*e*P	**P**	**18 24 28.8**	**-0.2**
XAN	**Xi'an**	**62.59**	**340**	⇑*i*P	**P**	**18 24 29.0**	**+0.1**
XAN				pP	sP	18 24 41.5	+5.4
XAN				PcP	**PcP**	**18 25 06.6**	**-1.2**
XAN				PP	**PP**	**18 26 48.3**	**+1.4**
XAN				ScP	**ScP**	**18 29 08.3**	**-1.1**
XAN				S	**S**	**18 32 56.8**	**+0.5**
XAN				sS	sS	18 33 07.8	+2.8
XAN				ScS	**SKSac**	**18 34 18.5**	**-2.3**
XAN				pmax	pmax		
	comp=Z,220nm,1.2s						
XAN				pmax	pmax		
	comp=Z,720nm,4.3s						
XAN				LR	LR		
	comp=Z,3µm,20.1s						
XAN				LR	LR		
	comp=Z,3µm,15.2s						
XAN				LR	LR		
	comp=Z,5µm,21.1s						
DIBR	**DIBRUGARH**	**62.61**	**325**	*e*P	**P**	**18 24 30.4**	**+1.3**
TIA	**Tai'an**	**62.67**	**348**	⇑*i*P	**P**	**18 24 29.4**	**+0.1**
TIA				pP	**pP**	**18 24 34.3**	**-0.3**
TIA				sP	**sP**	**18 24 36.6**	**0.0**
TIA				S	**S**	**18 32 59.8**	**+2.6**
TIA				sS	**sS**	**18 33 06.1**	**+0.2**
TIA				ScS	**ScS**	**18 34 21.8**	**+0.6**
TIA				pmax	pmax		
	comp=Z,73nm,0.9s						
TIA				pmax	pmax		
	comp=Z,690nm,3.5s						
TIA				LR	LR		
	comp=Z,2µm,20.0s						
TIA				LR	LR		
	comp=Z,1µm,27.6s						
TIA				LR	LR		
	comp=Z,3µm,22.9s						
SHL	**Shillong**	**62.74**	**321**	P	**P**	**18 24 29.9**	**-0.4**
SHL	**Shillong**	**62.74**	**321**	P	**P**	**18 24 29.9**	**-0.4**
SHL				pmax	pmax		
	comp=Z,546nm,1.0s						
SHL	**Shillong**	**62.74**	**321**	*e*P	**P**	**18 24 31.5**	**+1.3**
SHL				IAmb	IAmb	18 24 34.1	
	comp=Z,1µm,1.4s						
SHL	**Shillong**	**62.74**	**321**	P	**P**	**18 24 31.4**	**+1.1**
	SNR=65						
KSAR	**Wonju Array Be**	**62.76**	**358**	P	**P**	**18 24 30.3**	**+0.4**
KSAR	**Wonju Array Be**	**62.76**	**358**	P	**P**	**18 24 30.3**	**+0.4**
KSRS	**Korea Array**	**62.77**	**358**	P	**P**	**18 24 30.9**	**+0.9**
	comp=Z,74nm,0.9s,baz=179,slow=8.3,SNR=271						
KSRS				PKP2bc		18 53 36.0	
	comp=Z,3.3nm,1.0s,baz=351,slow=2.9,SNR=5.4						
	comp=Z,74nm,0.9s						
KS19	**Wonju Array Si**	**62.82**	**358**	P	**P**	**18 24 30.2**	**-0.1**
KS19				IAmb	IAmb	18 24 33.5	
	comp=Z,119nm,0.9s						
INCN	**Inchon**	**62.85**	**357**	P	**P**	**18 24 30.4**	**0.0**
INCN	**Inchon**	**62.85**	**357**	P	**P**	**18 24 30.5**	**0.0**
INCN				pmax	pmax		
	comp=Z,172nm,1.9s						
INCN				MLR	MLR		
	comp=Z,5µm,22.0s						
INCN	**Inchon**	**62.85**	**357**	P	**P**	**18 24 31.4**	**+0.9**
ITAN	**ITANAGAR**	**62.98**	**324**	*e*P	**P**	**18 24 32.4**	**+0.9**
TEZP	**TEZPUR**	**63.06**	**323**	*e*P	**P**	**18 24 33.1**	**+1.0**
TEZP				IAmb	IAmb	18 24 36.2	
	comp=Z,280nm,1.0s						
PCHI	**Peechi**	**63.28**	**298**	⇓*e*P	**P**	**18 24 35.3**	**+1.4**
PCHI				*e*S	**S**	**18 33 08.7**	**+3.1**
GUWA	**GUWAHATI**	**63.34**	**322**	*e*P	**P**	**18 24 35.1**	**+1.1**
RAGD	**RAYAGADA**	**63.45**	**310**	*e*P	**P**	**18 24 34.6**	**-0.2**
SEHB	**SEOHWA**	**63.58**	**359**	P	**P**	**18 24 34.5**	**-0.8**
SEHB				IAmb	IAmb	18 24 39.1	
	comp=Z,121nm,1.2s						
JSD	**Sado**	**63.82**	**7**	P	**P**	**18 24 36.4**	**-0.4**
JSD	**Sado**	**63.82**	**7**	⇑P	**P**	**18 24 37.5**	**+0.6**
CRZF	**Crozet Islands**	**63.87**	**229**	P	**P**	**18 24 35.2**	**-2.1**
CRZF				IAmb	IAmb	18 24 40.4	
	comp=Z,126nm,0.8s						
JMM	**Marumori**	**63.99**	**10**	P	**P**	**18 24 38.1**	**+0.2**

JMM				IAmb	IAmb	18 24 42.3	
	comp=Z,126nm,0.8s						
JMM	Marumori	63.99	10	⇑P	P	18 24 38.5	+0.6
RAR	Rarotonga	64.03	102	LR	LR	18 49 39.0	
	comp=Z,4µm,21.3s,baz=254,slow=33						
RAR	Rarotonga	64.03	102	P	P	18 24 38.2	-0.5
RAR	Rarotonga	64.03	102	P	P	18 24 38.2	-0.5
RAR				pmax	pmax		
	comp=Z,362nm,1.1s						
RAR				MLR	MLR		
	comp=Z,6µm,20.0s						
RAR	Rarotonga	64.03	102	P	P	18 24 39.5	+0.8
RAR	Rarotonga	64.03	102	⇑P	P	18 24 39.6	+0.9
DHUB	DHUBRI	64.17	320	*e*P	P	18 24 40.9	+1.5
HNS	HongShan	64.30	347	⇑P	P	18 24 40.8	+0.8
HNS				PP	PP	18 27 00.9	-0.9
HNS				S	S	18 33 17.9	+0.6
HNS				pmax	pmax		
	comp=Z,380nm,0.9s						
HNS				LR	LR		
	comp=Z,530nm,17.3s						
HNS				LR	LR		
	comp=Z,3µm,17.3s						
HNS				LR	LR		
	comp=Z,3µm,19.4s						
QSPA	South Pole Qui	64.45	180	P	P	18 24 41.7	+0.8
	comp=Z,152nm,0.9s,baz=334,slow=2.5,SNR=300						
QSPA				LR	LR	18 51 44.3	
	comp=Z,10µm,19.1s,baz=349,slow=35						
	comp=Z,152nm,0.9s						
QSPA	South Pole Qui	64.45	180	P	P	18 24 41.0	0.0
QSPA				IAmb	IAmb	18 24 48.4	
	comp=Z,304nm,1.1s						
QSPA	South Pole Qui	64.45	180	IAMs_20	IAMs_20	18 51 22.9	
	comp=Z,10µm,20.0s						
DL2	Dalian	64.66	353	⇑*i*P	P	18 24 42.8	+0.5
DL2				PP	PP	18 27 07.3	+2.3
DL2				S	S	18 33 22.4	+0.7
DL2				pmax	pmax		
	comp=Z,100nm,0.9s						
DL2				pmax	pmax		
	comp=Z,570nm,6.1s						
DL2				LR	LR		
	comp=Z,3µm,20.1s						
DL2				LR	LR		
	comp=Z,1µm,17.2s						
DL2				LR	LR		
	comp=Z,4µm,21.0s						
BOK	Bokaro	65.02	315	*e*P	P	18 24 46.0	+0.9
BOK				IAmb	IAmb	18 24 49.6	
	comp=Z,57nm,1.0s						
TIY	Taiyuan	65.10	345	P	P	18 24 46.1	+0.7
TIY				S	S	18 33 29.8	+2.4
TIY				pmax	pmax		
	comp=Z,180nm,0.8s						
TIY				pmax	pmax		
	comp=Z,700nm,4.5s						
TIY				LR	LR		
	comp=Z,2µm,13.8s						
TIY				LR	LR		
	comp=Z,1µm,35.7s						
HYBB	Hyderabad (bro	65.76	305	*e*P	P	18 24 49.6	-0.3
HYBB				IVmB_BB		18 24 53.8	
	comp=Z,1µm,1.2s						
HYBB				*e*PcP	PcP	18 25 19.3	-1.9
HYBB				*e*S	S	18 33 36.6	+0.5
HYBB				*e*ScS	ScS	18 34 46.4	+0.7
HYBB				IVMs_BB	IVMs_BB	18 53 16.7	
	comp=Z,1µm,17.2s						
GTK	Tadong	65.97	320	*e*P	P	18 24 52.2	+0.9
LZH	Lanzhou	66.12	337	⇑P	P	18 24 54.0	+1.9
LZH				sP	sP	18 25 00.9	+1.5
LZH				S	S	18 33 42.3	+2.1
LZH				SS	SS	18 37 57.0	+0.5
LZH				pmax	pmax		
	comp=Z,180nm,1.5s						
LZH				pmax	pmax		
	comp=Z,430nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,20.1s						
LZH				LR	LR		
	comp=Z,2µm,19.5s						
LZH				LR	LR		
	comp=Z,4µm,20.6s						
BLSP	Bilaspur	66.31	311	*e*P	P	18 24 52.7	-0.8
LSA	Lhasa	66.38	324	P	P	18 24 55.1	+0.8
LSA	Lhasa	66.38	324	P	P	18 24 55.1	+0.8
LSA				pmax	pmax		
	comp=Z,352nm,0.9s						
LSA				MLR	MLR		
	comp=Z,2µm,21.0s						
LSA	Lhasa	66.38	324	P	P	18 24 56.3	+2.0
LSA				S	S	18 33 33.4	-11
LSA				pmax	pmax		
	comp=Z,250nm,0.9s						
LSA				LR	LR		
	comp=Z,2µm,22.1s						
LSA				LR	LR		
	comp=Z,3µm,23.5s						
LSA				LR	LR		
	comp=Z,2µm,22.1s						
LSA	Lhasa	66.38	324	P	P	18 24 56.1	+1.8
TAPN	Taplejung	66.51	319	*e*P	P	18 24 56.6	+1.6
	comp=Z,1µm,0.9s						
BJT	Baijiatuau	66.55	349	P	P	18 24 54.7	+0.2
BJT				IAmb	IAmb	18 24 58.0	
	comp=Z,183nm,1.3s						
BJT	Baijiatuau	66.55	349	P	P	18 24 54.7	+0.2
BJT				pmax	pmax		
	comp=Z,183nm,1.3s						
BJT				MLR	MLR		
	comp=Z,4µm,21.0s						
BJI	Beijing	66.57	349	P	P	18 24 55.6	+1.0
BJI				pP	pP	18 25 00.3	+0.3
BJI				sP	sP	18 25 03.3	+1.4
BJI				PcP	PcP	18 25 22.9	-1.0
BJI				PP	PP	18 27 25.4	+3.7
BJI				ScP		18 29 28.6	
BJI				S	S	18 33 46.3	+1.3
BJI				ScS	SKSac	18 34 50.3	-0.2
BJI				pmax	pmax		
	comp=Z,120nm,1.0s						
BJI				pmax	pmax		
	comp=Z,920nm,4.1s						
BJI				LR	LR		
	comp=Z,2µm,19.1s						
BJI				LR	LR		
	comp=Z,2µm,18.2s						
BJI				LR	LR		
	comp=Z,4µm,20.2s						
RAMN	Ramite	66.87	318	*e*P	P	18 24 58.5	+1.3
	comp=Z,802nm,0.9s						
JTM	Tenmabayashi	66.89	9	P	P	18 24 56.9	+0.1
JTM				IAmb	IAmb	18 24 59.7	
	comp=Z,356nm,1.4s						
RER	Riviere de l'E	67.37	257	P	P	18 25 01.9	+1.5
RER				IAmb	IAmb	18 25 06.2	
	comp=Z,215nm,0.9s						
SNY	Shenyang	67.37	355	⇑P	P	18 25 00.3	+0.6
SNY				S	S	18 33 55.3	+0.7
SNY				pmax	pmax		
	comp=Z,160nm,0.9s						
SNY				LR	LR		
	comp=Z,2µm,16.6s						
SNY				LR	LR		
	comp=Z,1µm,14.9s						
SNY				LR	LR		
	comp=Z,4µm,21.3s						
MSHR	Mys Shultsa	67.88	1	*ce*P	P	18 25 03.1	+0.2
MSHR				pmax	pmax		
	comp=Z,85nm,1.0s						
PKI	Pulchoki	68.05	318	*e*P	P	18 25 05.5	+0.7
	comp=Z,327nm,0.9s						
PKIN	Phulchoki	68.06	318	*e*P	P	18 25 05.5	+0.7
	comp=Z,613nm,1.1s						
GOA	Goa	68.17	301	*e*P	P	18 25 06.9	+1.6
GOA				IAmb	IAmb	18 25 09.2	
	comp=Z,132nm,0.7s						
DMN	Daman	68.26	318	*e*P	P	18 25 07.0	+1.0
	comp=Z,541nm,0.9s						
KKN	Kakani	68.28	318	*e*P	P	18 25 07.1	+1.0
	comp=Z,781nm,1.0s						
HHC	Hu-ho-hao-te	68.29	345	⇑*i*P	P	18 25 07.0	+1.3
HHC				S	S	18 34 07.6	+1.6
HHC				sS	sS	18 34 17.8	+3.0
HHC				pmax	pmax		
	comp=Z,240nm,1.3s						
HHC				LR	LR		
	comp=Z,3µm,21.7s						
HHC				LR	LR		
	comp=Z,3µm,20.8s						
HHC				LR	LR		
	comp=Z,5µm,21.8s						
ERM	Erimo	68.42	11	P	P	18 25 06.2	-0.1
ERM				IAmb	IAmb	18 25 11.4	
	comp=Z,105nm,1.1s						
ERM	Erimo	68.42	11	IAMs_20	IAMs_20	18 56 19.0	
	comp=Z,8µm,20.0s						
ERM	Erimo	68.42	11	*ce*P	P	18 25 08.2	+2.0
ERM				pmax	pmax		
	comp=Z,201nm,1.7s						
ERM	Erimo	68.42	11	P	P	18 25 08.3	+2.0
VLA	Vladivostok	68.43	2	*c i*P	P	18 25 06.6	+0.2
VLA				pmax	pmax		
	comp=Z,111nm,1.0s						
VLA				MLR	MLR		
	comp=Z,5µm,20.0s						
BTO	Baotou	68.43	344	*e*P	P	18 25 08.3	+1.7
BTO				S	S	18 34 14.0	+6.3
BTO				LR	LR		
	comp=Z,6µm,17.5s						
BTO				LR	LR		
	comp=Z,7µm,19.8s						
ALBI	Allahabad	68.71	314	*e*P	P	18 25 08.1	-0.4
GKN	Gorkha	68.83	318	*e*P	P	18 25 10.3	+0.9
	comp=Z,581nm,0.9s						
AKL	Akola	68.95	307	*e*P	P	18 25 10.4	+0.2
KAD	Karad	68.97	302	*e*P	P	18 25 10.7	+0.3
CN2	Changchun	69.21	357	*e*P	P	18 25 11.3	+0.1
CN2				*e*PP	PP	18 27 42.3	-2.3
CN2				*e*S	S	18 34 17.8	+1.3
CN2				*e*sS	sS	18 34 25.5	+0.2
CN2				*e*SS	SS	18 38 47.1	+3.4
CN2				pmax	pmax		
	comp=Z,220nm,1.6s						
CN2				pmax	pmax		
	comp=Z,2µm,3.5s						
CN2				LR	LR		
	comp=Z,4µm,21.0s						
CN2				LR	LR		
	comp=Z,2µm,21.0s						
CN2				LR	LR		
	comp=Z,5µm,21.0s						
USA0B	Ussuriysk Arra	69.51	2	IAmb	IAmb	18 25 16.6	
	comp=Z,114nm,0.8s						
USA0B	Ussuriysk Arra	69.51	2	*c i*P	P	18 25 13.6	+0.5
USRK	Ussuriysk Ar.	69.51	2	P	P	18 25 14.1	+1.0
	comp=Z,96nm,0.8s,baz=191,slow=5.5,SNR=129						
USRK				PKPPKP	P'P'df	18 53 17.9	+3.0
	comp=Z,3.3nm,0.9s,baz=32,slow=12,SNR=4.4						
USRK				LR	LR	18 55 00.3	
	comp=Z,2µm,21.3s,baz=145,slow=35						
	comp=Z,96nm,0.8s						
DANN	Dangsing	69.61	317	*e*P	P	18 25 15.1	+0.6
	comp=Z,17nm,0.2s						
GOMU	GeErMu	69.83	330	P	P	18 25 17.6	+1.9
GOMU				pP	pP	18 25 19.3	-1.8
GOMU				S	S	18 34 29.5	+4.5
GOMU				ScS	SKSac	18 35 16.0	-0.4
GOMU				pmax	pmax		
	comp=Z,25nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.4s						
GOMU				LR	LR		
	comp=Z,1µm,19.4s						
GOMU				LR	LR		
	comp=Z,950nm,19.2s						
GOMU				LR	LR		
	comp=Z,1µm,19.6s						
MDJ	Mudanjiang	69.90	360	IAmb	IAmb	18 25 19.2	
	comp=Z,166nm,1.0s						
MDJ	Mudanjiang	69.90	360	P	P	18 25 16.3	+0.8
MDJ				pP	pP	18 25 18.9	-1.9
MDJ				sP	sP	18 25 21.1	-1.7
MDJ				S	S	18 34 26.4	+1.7
MDJ				sS	pS	18 34 31.3	0.0
MDJ				SS	SS	18 38 56.8	+2.4
MDJ				pmax	pmax		
	comp=Z,140nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.6s						
MDJ				LR	LR		
	comp=Z,5µm,23.0s						
MDJ				LR	LR		
	comp=Z,4µm,24.2s						
MDJ				LR	LR		
	comp=Z,9µm,24.1s						
MDJ	Mudanjiang	69.90	360	P	P	18 25 16.4	+0.9
POO	Poona	69.95	303	⇑*i*P	P	18 25 15.0	-1.5
	comp=Z,200nm,0.6s						
POO				*e*P	pP	18 25 17.7	-4.1
POO				IAmb	IAmb	18 25 19.7	
	comp=Z,109nm,0.7s						
BHPL	Bhopal	70.29	309	*e*P	P	18 25 18.7	+0.3
BHPL				IAmb	IAmb	18 25 24.2	
	comp=Z,278nm,1.7s						
XLT	XiLinHaoTe	70.33	349	⇑*i*P	P	18 25 19.3	+1.0
XLT				pP	pP	18 25 24.3	+0.7
XLT				sP	sP	18 25 28.9	+3.3
XLT				PcP	PcP	18 25 40.8	+1.0
XLT				S	S	18 34 30.4	+0.4
XLT				sS	sS	18 34 40.8	+2.0
XLT				SKS	SKSac	18 35 16.4	-2.8
XLT				pmax	pmax		
	comp=Z,130nm,1.5s						
XLT				pmax	pmax		
	comp=Z,1µm,3.6s						
XLT				LR	LR		
	comp=Z,4µm,20.2s						
XLT				LR	LR		
	comp=Z,4µm,22.7s						
ASAJ	Asahikawa	70.38	10	P	P	18 25 19.8	+1.4
	comp=Z,56nm,1.0s,baz=240,slow=15,SNR=37						
ASAJ				PKPPKP	P'P'df	18 53 20.0	+6.4
	comp=Z,14nm,1.1s,baz=266,slow=5.1,SNR=13						
ASAJ				LR	LR	18 57 51.6	
	comp=Z,4µm,18.9s,baz=202,slow=37						
	comp=Z,56nm,1.0s						
JKA	Kamikawa-asahi	70.38	10	P	P	18 25 19.3	+0.9
JKA				IAmb	IAmb	18 25 22.6	
	comp=Z,238nm,1.4s						
JKA					P'P'df	18 53 18.3	+4.8
GTA	Gaotai	70.53	336	⇑P	P	18 25 21.6	+1.9
GTA				pP	sP	18 25 27.4	+0.4
GTA				sP	pP	18 25 31.4	+6.4
GTA				S	S	18 34 33.9	+1.4
GTA				ScS	ScS	18 35 23.9	+1.6
GTA				pmax	pmax		
	comp=Z,170nm,1.0s						
GTA				pmax	pmax		
	comp=Z,980nm,5.6s						
GTA				LR	LR		
	comp=Z,2µm,20.7s						
GTA				LR	LR		
	comp=Z,3µm,21.9s						
GTA				LR	LR		
	comp=Z,3µm,24.7s						
TEY	Ternei	70.59	5	⇓*e*P	P	18 25 20.1	+0.4
TEY				*e*S	S	18 34 31.6	-1.0
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,800nm,4.6s						
TEY				pmax	pmax		
	comp=N,400nm,3.4s						
TEY				pmax	pmax		
	comp=E,100nm,3.2s						
TEY				smax	smax		
	comp=N,1µm,10.7s						
TEY				smax	smax		
	comp=E,700nm,11.5s						
TEY				MLR	MLR		
	comp=E,800nm,16.0s						
TEY				MLR	MLR		
	comp=N,2µm,18.0s						
TEY				MLR	MLR		
	comp=Z,2µm,19.0s						
YUK	Yuzh-Kuril'sk	70.86	12	P	P	18 25 17.7	-3.6
YUK				*e*		18 28 03.1	
YUK				*e*S	S	18 34 29.9	-5.8
YUK				MLR	MLR		
	comp=Z,5µm,19.0s						
YUK				MLR	MLR		
	comp=E,673nm,13.0s						
YUK				MLR	MLR		
	comp=N,4µm,17.0s						
JHNI	Jhansi	70.98	312	*e*P	P	18 25 22.4	-0.2
BNX	BinXian	71.06	358	⇑P	P	18 25 22.6	+0.1
BNX				sP	sP	18 25 33.0	+3.1
BNX				PP	PP	18 28 00.4	-0.1
BNX				S	S	18 34 37.8	-0.3
BNX				sS	sS	18 34 49.8	+2.8
BNX				SS	SS	18 39 09.0	-3.2
BNX				pmax	pmax		
	comp=N,390nm,1.0s						
BNX				pmax	pmax		
	comp=N,900nm,5.3s						
BNX				LR	LR		
	comp=N,6µm,18.1s						
BNX				LR	LR		
	comp=N,4µm,17.7s						
BNX				LR	LR		
	comp=N,14µm,21.8s						
TBI	Tubuai	72.30	108	*e*P	P	18 25 31.6	+1.0
	comp=N,549nm,1.2s						
TBI	Tubuai	72.30	108	*e*LR	LR	18 48 30.0	
	comp=N,12µm,25.5s,baz=243						
KUR	Kuril'sk	72.40	13	*c i*P	P	18 25 31.5	+0.9
KUR				PPP	PPP	18 29 55.3	
KUR				pmax	pmax		
	comp=Z,398nm,1.5s						
KUR				pmax	pmax		
	comp=Z,2µm,4.8s						
JOHN	Johnston Islan	72.45	61	P	P	18 25 32.2	+0.7
JOHN	Johnston Islan	72.45	61	⇓P	P	18 25 34.9	+3.4
LGTI	Lohaghat	72.57	316	*e*P	P	18 25 33.2	+1.3
PTH	Pithoragarh	72.66	316	*e*P	P	18 25 34.0	+1.3
YSS	Yuzh-Sakhalins	73.17	9	P	P	18 25 34.3	-0.9
YSS				IAmb	IAmb	18 25 39.4	
	comp=Z,127nm,0.9s						
YSS	Yuzh-Sakhalins	73.17	9	α*e*P	P	18 25 36.7	+1.6
YSS				*e*S	S	18 35 04.4	+2.1
YSS				*e*		18 35 42.8	
YSS				*e*SSS	SSS	18 42 58.5	
YSS				pmax	pmax		
	comp=Z,2µm,4.8s						
YSS				pmax	pmax		
	comp=N,600nm,4.4s						
YSS				pmax	pmax		
	comp=Z,140nm,1.0s						
YSS				smax	smax		
	comp=N,3µm,6.0s						
YSS				MLR	MLR		
	comp=Z,4µm,20.0s						
YSS				MLR	MLR		
	comp=N,3µm,18.0s						
YSS	Yuzh-Sakhalins	73.17	9	P	P	18 25 36.6	+1.5
MIDW	Midway	73.75	47	IAMs_20	IAMs_20	18 53 55.6	
	comp=Z,9µm,22.0s						
SONA	Sohna	73.80	313	*e*P	P	18 25 40.1	+0.8
AYAN	Aya Nagar	73.92	313	*e*P	P	18 25 39.9	-0.1
MSEY	Mahe Island	73.93	273	IAMs_20	IAMs_20	18 53 54.3	
	comp=Z,19µm,20.0s						
MSEY	Mahe Island	73.93	273	P	P	18 25 41.0	+0.5
MSEY	Mahe Island	73.93	273	P	P	18 25 41.5	+1.0
PAE	Paea	74.27	102	*e*P	P	18 25 43.6	+1.2
	comp=Z,38nm,0.9s						
AJM	Ajmer	74.30	310	⇑*i*P	P	18 25 42.0	-0.3
AJM				*e*P	pP	18 25 42.6	-5.1
PPT2	Papeete2	74.30	102	*e*P	P	18 25 44.2	+1.5
	comp=Z,363nm,1.3s						
PPT2	Papeete2	74.30	102	*e*LR	LR	18 49 33.2	
	comp=Z,15µm,24.8s,baz=248						
PPT	Papeete	74.31	102	P	P	18 25 43.7	+1.0
	comp=Z,232nm,0.9s,baz=191,slow=2.9,SNR=15						
PPT				LR	LR	18 58 36.9	
	comp=Z,3µm,18.2s,baz=250,slow=36						
	comp=Z,232nm,0.9s						
PPTF	Pamatai, Papee	74.31	102	IAmb	IAmb	18 25 48.9	
	comp=Z,284nm,0.9s						
PPTF	Pamatai, Papee	74.31	102	P	P	18 25 45.3	+2.6
PPTF	Pamatai, Papee	74.31	102	⇑P	P	18 25 44.7	+2.0
PPTF				⇓P	P	18 25 44.8	+2.0
KLR	Kul'dur	74.54	1	P	P	18 25 44.1	+1.0
	comp=Z,33nm,1.1s,baz=198,slow=4.1,SNR=56						
	comp=Z,33nm,1.1s						
KLR	Kul'dur	74.54	1	*ce*P	P	18 25 43.9	+0.8
KLR				pmax	pmax		
	comp=Z,108nm,1.5s						
DDI	Dehra Dun	74.55	315	*e*P	P	18 25 44.2	+0.5
DDI				IAmb	IAmb	18 25 46.9	
	comp=Z,644nm,1.2s						
NVL	N'lazarevskaya	74.62	198	⇑*i*P	P	18 25 44.1	+0.6
NVL				*e*PPP	PPP	18 30 13.6	
NVL				*e*S	S	18 35 13.9	-4.4
NVL				*e*SS	SS	18 40 04.8	+0.3
NVL				*e*		18 43 28.0	
NVL				pmax	pmax		
	comp=Z,77nm,0.7s						
NVL				MLR	MLR		
	comp=Z,10µm,16.0s						
VOI	Vohitsoka	74.90	253	P	P	18 25 45.1	-1.1
VOI	Vohitsoka	74.90	253	P	P	18 25 47.6	+1.5
	SNR=5.3						
VOI	Vohitsoka	74.90	253	P	P	18 25 48.0	+1.8
VOI	Vohitsoka	74.90	253	⇑P	P	18 25 47.4	+1.3
VOI				⇓P	P	18 25 47.6	+1.5
UGL	Uglegorsk	75.16	8	*e*P	P	18 25 48.5	+1.8
UGL				*e*S	S	18 35 29.8	+5.3
UGL				pmax	pmax		
	comp=Z,190nm,1.2s						
UGL				pmax	pmax		
	comp=Z,2µm,5.0s						
UGL				smax	smax		
	comp=E,3µm,4.0s						
UGL				smax	smax		
	comp=N,6µm,6.5s						
UGL				MLR	MLR		
	comp=E,5µm,18.0s						
UGL				MLR	MLR		
	comp=N,4µm,20.0s						
UGL				MLR	MLR		
	comp=Z,4µm,22.0s						
XMAS	Kiritimati	75.33	80	P	P	18 25 48.2	-0.3
XMAS	Kiritimati	75.33	80	IAMs_20	IAMs_20	19 00 32.8	
	comp=Z,9µm,18.0s						
XMAS	Kiritimati	75.33	80	P	P	18 25 51.3	+2.8
XMAS	Kiritimati	75.33	80	⇑P	P	18 25 49.8	+1.2
XMAS				⇓P	pP	18 25 50.6	-3.3
SBV	Sambava	75.36	262	P	P	18 25 52.4	+3.6
SBV	Sambava	75.36	262	⇑P	P	18 25 51.0	+2.3
ABPO	Ambohimpanom	75.60	256	P	P	18 25 51.3	+1.0
ABPO	Ambohimpanom	75.60	256	IAMs_20	IAMs_20	18 53 38.6	
	comp=Z,9µm,20.0s						
ABPO	Ambohimpanom	75.60	256	P	P	18 25 51.3	+1.0
ABPO				pmax	pmax		
	comp=Z,47nm,1.0s						
ABPO				MLR	MLR		
	comp=Z,9µm,20.0s						
SMLA	Simla	75.66	315	*e*P	P	18 25 51.1	+1.1
SMLA				IAmb	IAmb	18 25 53.5	
	comp=Z,496nm,0.7s						
OPO	Ambohidratompo	75.81	256	P	P	18 25 52.7	+1.2
	comp=Z,61nm,0.8s,baz=114,slow=7.2,SNR=31						
	comp=Z,61nm,0.8s						
ULN	Ulaanbaatar	75.98	344	P	P	18 25 52.4	+0.7
ULN				IAmb	IAmb	18 25 55.8	
	comp=Z,180nm,1.0s						
ULN	Ulaanbaatar	75.98	344	*ce*P	P	18 25 53.0	+1.3
ULN				pmax	pmax		
	comp=Z,363nm,1.7s						
ULN	Ulaanbaatar	75.98	344	P	P	18 25 53.3	+1.6
SONM	Songino Array	76.11	344	P	P	18 25 53.8	+1.4
	comp=Z,156nm,0.8s,baz=160,slow=6.3,SNR=360						
SONM				PKKPbc	PKKPbc	18 45 08.4	-1.7
	comp=Z,0.9nm,0.6s,baz=325,slow=2.4,SNR=5.0						
SONM				PKPPKP	P'P'df	18 53 12.3	+8.1
	comp=Z,3.3nm,1.1s,baz=150,slow=1.7,SNR=9.7						
	comp=Z,156nm,0.8s						
SONM	Songino Array	76.11	344	IAmb	IAmb	18 25 56.9	
	comp=Z,190nm,0.9s						
SONM					P'P'df	18 53 01.9	-2.3
TROLL	Troll, Antarti	76.19	195	P	P	18 25 53.8	+1.1
GRNR	Gornyy	76.28	4	⇑*i*P	P	18 25 54.9	+1.8
GRNR				*e*S	S	18 35 44.6	+7.7

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GRNR                                pmax      pmax
       comp=N,20nm,1.2s
GRNR                                pmax      pmax
       comp=Z,40nm,1.1s
GRNR                                smax      smax
       comp=N,3.0nm,0.6s
BELA   Belgrano 2         76.32 183  IAmb      IAmb      18 26 01.8
       comp=Z,227nm,1.2s
BHK    Bhakra             76.33 315 eP         P         18 25 54.4 +0.5
TYV    Tymovskoe          76.99   8 eP         P         18 25 59.1 +2.0
TYV                                 eS         S         18 35 50.3 +5.7
TYV                                  pmax      pmax
       comp=Z,131nm,1.0s
TYV                                  pmax      pmax
       comp=Z,2µm,4.3s
TYV                                  smax      smax
       comp=N,4µm,6.4s
TYV                                  smax      smax
       comp=E,1µm,6.4s
TYV                                  smax      smax
       comp=N,27nm,2.6s
TYV                                  smax      smax
       comp=E,18nm,2.6s
TYV                                  MLR       MLR
       comp=N,3µm,23.0s
TYV                                  MLR       MLR
       comp=E,3µm,23.0s
TYV                                  MLR       MLR
       comp=Z,6µm,21.0s
SNAA   Sanae              77.62 194  P         P         18 26 01.7 +1.1
SNAA   Sanae              77.62 194⇑iP         P         18 26 01.8 +1.1
SNAA   Sanae              77.62 194  PKKPbc    PKKPbc    18 45 00.9  -4.2
       comp=Z,0.9nm,0.7s,baz=240,slow=23,SNR=1.4
SNAA                                 LR        LR        18 58 25.1
       comp=Z,34µm,18.5s,baz=118,slow=34
SNAA   Sanae              77.62 194  P         P         18 26 01.2 +0.6
SNAA                                 IAmb      IAmb      18 26 04.3
       comp=Z,286nm,1.4s
SNAA   Sanae              77.62 194ceP         P         18 26 01.9 +1.2
SNAA                                 pmax      pmax
       comp=Z,313nm,1.7s
CIT    Chita              78.63 350 eP         P         18 26 08.0 +1.7
CIT                                 e                    18 26 21.5
CIT                                 e                    18 29 10.0
CIT                                 e                    18 36 06.9
CIT                                  pmax      pmax
       comp=Z,478nm,2.3s
NKL    Nikolayevsk        79.01   7 eP         P         18 26 08.0  -0.2
NKL                                 eS         S         18 36 06.0  -0.2
NKL                                  pmax      pmax
       comp=E,3.0nm,0.7s
NKL                                  pmax      pmax
       comp=N,1.0nm,0.8s
NKL                                  pmax      pmax
       comp=Z,143nm,1.2s
NKL                                  smax      smax
       comp=E,2.0nm,1.2s
NKL                                  smax      smax
       comp=N,40nm,1.8s
ZEA    Zeya               79.06 358 eP         P         18 26 10.0 +1.4
ZEA                                 eS         S         18 36 08.9 +2.0
ZEA                                  pmax      pmax
       comp=N,80nm,1.2s
ZEA                                  pmax      pmax
       comp=Z,140nm,1.4s
ZEA                                  pmax      pmax
       comp=E,100nm,3.1s
ZEA                                  pmax      pmax
       comp=N,500nm,4.6s
ZEA                                  pmax      pmax
       comp=Z,800nm,5.4s
ZEA                                  pmax      pmax
       comp=Z,200nm,2.8s
ZEA                                  smax      smax
       comp=N,1µm,8.9s
ZEA                                  smax      smax
       comp=E,2µm,8.2s
ZEA                                  MLR       MLR
       comp=E,1µm,20.0s
ZEA                                  MLR       MLR
       comp=N,1µm,21.0s
ZEA                                  MLR       MLR
       comp=Z,2µm,21.0s
VNA2   Neumayer--Watz     79.15 193  P         P         18 26 10.4 +1.3
       baz=137,slow=5.0
WMQ    Urumqi             79.20 330⇑iP         P         18 26 11.0 +1.4
WMQ                                  S         S         18 36 10.6 +1.7
WMQ                                  SKS       SKSac     18 36 22.3  -2.7
WMQ                                  ScS       ScS       18 36 29.8  -1.8
WMQ                                  SS        SS        18 41 13.0  -3.1
WMQ                                  pmax      pmax
       comp=Z,290nm,0.9s
WMQ                                  pmax      pmax
       comp=Z,2µm,3.7s
WMQ                                  LR        LR
       comp=Z,2µm,25.7s
WMQ                                  LR        LR
       comp=Z,2µm,18.1s
WMQ                                  LR        LR
       comp=Z,2µm,21.1s
ZAK    Zakamensk          79.26 343 eP         P         18 26 10.4 +0.5
ZAK                                  pmax      pmax
       comp=Z,168nm,1.0s
VNA3   Neumayer Olymp     79.35 192  P         P         18 26 11.2 +1.0
SKR    Severo-Kuril's     79.44  17 eP         P         18 26 12.0 +1.3
SKR                                 e                    18 29 07.8
SKR                                 eS         S         18 36 15.2 +4.2
SKR                                  pmax      pmax
       comp=Z,104nm,1.8s
SKR                                  pmax      pmax
       comp=Z,500nm,4.0s
SKR                                  MLR       MLR
       comp=Z,2µm,18.0s
VNA1   Neumayer--Stat     79.54 193  P         P         18 26 12.4 +1.2
NIL    Nilore             79.80 315  P         P         18 26 12.9  -0.3
NIL                                  IAmb      IAmb      18 26 17.7
       comp=Z,263nm,1.1s
NIL    Nilore             79.80 315  P         P         18 26 12.9  -0.3
NIL                                  pmax      pmax
       comp=Z,263nm,1.1s
IRK    Irkutsk            80.72 344 eP         P         18 26 18.5 +0.9
IRK                                 eS         S         18 36 29.0 +4.6
IRK                                  pmax      pmax
       comp=Z,350nm,2.3s
MOY    Mondy              81.04 342 eP         P         18 26 21.0 +1.5
MOY                                  pmax      pmax
       comp=Z,492nm,2.1s
KNGR   Kungurtug, Tuv     81.12 340c iP        P         18 26 20.7 +0.8
KSH    Kashi              82.02 321  P         P         18 26 25.8 +0.8
KSH                                  pP        PcP       18 26 31.3 +0.9
KSH                                  S         S         18 36 36.9  -1.9
KSH                                  pmax      pmax
       comp=Z,50nm,1.0s
KSH                                  pmax      pmax
       comp=Z,540nm,3.9s
KSH                                  LR        LR
       comp=Z,3µm,20.6s
KSH                                  LR        LR
       comp=Z,2µm,17.9s
KSH                                  LR        LR
       comp=Z,4µm,18.6s
PEA0B  Petropavlovsk-     82.06  17  IAmb      IAmb      18 26 28.8
       comp=Z,375nm,1.4s
PEA0B  Petropavlovsk-     82.06  17ceP         P         18 26 26.1 +1.4
PETK   Petropavlovsk-     82.06  17  P         P         18 26 25.5 +0.8
       comp=Z,77nm,1.1s,baz=130,slow=2.3,SNR=61
PETK                                 PKKPbc    PKKPbc    18 44 55.3  -1.4
       comp=Z,1.6nm,0.8s,baz=197,slow=4.5,SNR=4.4
PETK                                 LR        LR        19 02 37.4
       comp=Z,5µm,21.1s,baz=195,slow=36
       comp=Z,77nm,1.1s
PET    Petropavlovsk      82.23  17  P         P         18 26 26.2 +0.7
PET                                  IAmb      IAmb      18 26 29.5
       comp=Z,411nm,1.4s
PET    Petropavlovsk      82.23  17 eP         P         18 26 26.7 +1.2
PET                                 eS         S         18 36 39.4  -0.6
PET                                 ePS        PnS       18 37 29.0  -1.3
PET                                  pmax      pmax
       comp=Z,292nm,1.4s
PET                                  pmax      pmax
       comp=Z,2µm,5.0s
PET                                  pmax      pmax
       comp=Z,900nm,17.2s
PET                                  MLR       MLR
       comp=Z,5µm,19.0s
PET                                  MLR       MLR
       comp=Z,6µm,19.0s
PET    Petropavlovsk      82.23  17  P         P         18 26 26.9 +1.4
       comp=Z,843nm,1.8s
PRZ    Przheval'sk        82.73 324  IAmb      IAmb      18 26 33.3
       comp=Z,224nm,0.9s
SOCY   Socotra            82.82 287  IAMs_20   IAMs_20   19 00 15.2
       comp=Z,8µm,20.0s
UZB    Uzynbulak          82.88 325c iP        P         18 26 30.1 +0.8
UZB                                 i S        S         18 36 49.8 +2.4
UZB                                  pmax      pmax
       comp=Z,142nm,0.9s
UZB    Uzynbulak          82.88 325⇑iP         P         18 26 30.2 +0.8
       comp=Z,142nm,0.9s,baz=325
UZB                                 i S        S         18 36 49.8 +2.4
       baz=325
KBL    Kabul              83.08 313  P         P         18 26 30.8  0.0
KBL                                  IAmb      IAmb      18 26 34.4
       comp=Z,107nm,0.8s
KBL    Kabul              83.08 313  P         P         18 26 30.8  0.0
KBL                                  pmax      pmax
       comp=Z,107nm,0.8s
KBL    Kabul              83.08 313  P         P         18 26 31.2 +0.5
       SNR=48
SATY   Saty               83.14 325c iP        P         18 26 31.5 +0.8
SATY                                i S        S         18 36 52.0 +2.0
SATY                                 pmax      pmax
       comp=Z,86nm,0.9s
SATY   Saty               83.14 325⇑iP         P         18 26 31.5 +0.8
       comp=Z,86nm,0.9s,baz=325
SATY                                i S        S         18 36 52.1 +2.0
       baz=325
KDJ    Kajisay            83.14 323  IAmb      IAmb      18 26 34.6
       comp=Z,159nm,0.8s
JLN    Jalan Bani Buh     83.19 298  P         P         18 26 31.7 +0.4
ZHN    Zhinishke          83.20 325 eP         P         18 26 31.4 +0.4
       baz=325
ZHN                                 i S        S         18 36 52.2 +1.6
       baz=325
ZSN    Zaisan             83.27 331c iP        P         18 26 31.9 +0.8
ZSN                                 i S        S         18 36 52.6 +1.7
ZSN    Zaisan             83.27 331⇑iP         P         18 26 31.9 +0.8
       baz=331
ZSN                                 i S        S         18 36 52.7 +1.7
       baz=331
DQM    DQM                83.57 296  P         P         18 26 33.9 +0.6
ULHL   Ulahol             83.72 323  P         P         18 26 34.5 +0.6
       SNR=50
MHTO   MHTO               83.75 297  P         P         18 26 33.9  -0.3
       SNR=11
WBK    Wadi Bani Khal     83.77 299  P         P         18 26 34.9 +0.6
       SNR=7.3
TNSS   Tian-Shan          83.89 324 i P        P         18 26 35.6 +0.7
TNSS   Tian-Shan          83.89 324 i P        P         18 26 35.6 +0.7
       baz=324
MDOK   Medeo              83.92 324 i P        P         18 26 35.2 +0.5
MDOK                                i S        S         18 36 57.4  -0.6
MDOK   Medeo              83.92 324 i P        P         18 26 35.3 +0.5
       baz=324
MDOK                                i S        S         18 36 57.5  -0.6
       baz=324
MDOK                                 LR        LR        19 05 53.4
       baz=324
MK31   Makanchi Array     83.93 329 i P        P         18 26 35.0 +0.5
MK31                                 pmax      pmax
       comp=Z,73nm,0.7s
MKAR   Makanchi Array     83.93 329  P         P         18 26 35.0 +0.5
       comp=Z,86nm,0.8s,baz=141,slow=6.8,SNR=277
MKAR                                 PKKPbc    PKKPbc    18 44 50.5  -1.4
       comp=Z,2.2nm,0.6s,baz=351,slow=2.5,SNR=14
MKAR                                 PKPPKP    P'P'df    18 52 50.7  -0.5
       comp=Z,3.3nm,1.2s,baz=49,slow=1.4,SNR=7.5
       comp=Z,86nm,0.8s
MKAR   Makanchi Array     83.93 329  P         P         18 26 35.0 +0.5
AAA    Alma-Ata           84.02 324 eP         P         18 26 35.7 +0.5
AAA                                  pmax      pmax
       comp=Z,92nm,0.8s
AAA    Alma-Ata           84.02 324 eP         P         18 26 35.7 +0.5
       comp=Z,92nm,0.8s,baz=324
BOOM   Boomskoye usch     84.05 323  IAmb      IAmb      18 26 39.9
       comp=Z,186nm,0.9s
MAKZ   Makanchi           84.08 329  P         P         18 26 34.9  -0.4
MAKZ                                 IAmb      IAmb      18 26 38.2
       comp=Z,104nm,1.1s
MAKZ   Makanchi           84.08 329  P         P         18 26 34.9  -0.4
MAKZ                                 pmax      pmax
       comp=Z,104nm,1.1s
MAKZ                                 MLR       MLR
       comp=Z,2µm,21.0s
KIP    Kipapa             84.14  63 i P        P         18 26 35.7  -0.4
KIP                                  pmax      pmax
       comp=Z,732nm,1.5s
KIP    Kipapa             84.14  63  P         P         18 26 41.7 +5.6
KIP    Kipapa             84.14  63  P         P         18 26 41.3 +5.2
BOD    Bodaibo            84.19 352 eP         P         18 26 35.5  0.0
BOD                                  pmax      pmax
       comp=Z,221nm,1.6s
SHAO   Shalim             84.21 293  P         P         18 26 37.8 +1.2
SHAO   Shalim             84.21 293  P         P         18 26 37.1 +0.5
JMDO   Jabal Madar        84.34 298  P         P         18 26 37.6 +0.4
       SNR=5.3
WSAR   Wadi Sarin         84.36 299  LR        LR        19 02 54.4
       comp=Z,5µm,18.8s,baz=138,slow=35
WSAR   Wadi Sarin         84.36 299  P         P         18 26 38.0 +0.7
       SNR=12
CHKK   Chushkaly          84.43 325⇑iP         P         18 26 37.3 +0.2
CHKK   Chushkaly          84.43 325⇑iP         P         18 26 37.4 +0.2
       baz=324
TDK    Taldyqorghan       84.50 326c iP        P         18 26 38.0 +0.5
TDK                                 eS         S         18 37 01.1  -2.4
TDK                                  pmax      pmax
       comp=Z,140nm,1.1s
TDK    Taldyqorghan       84.50 326⇑iP         P         18 26 38.1 +0.5
       comp=Z,140nm,1.1s,baz=326
TDK                                 eS         S         18 37 01.1  -2.4
       baz=326
TDK                                  LR        LR        19 05 43.8
       baz=326
TKM2   Tokmak 2           84.53 323  P         P         18 26 38.3 +0.3
       SNR=48
TKM2   Tokmak 2           84.53 323 i P        P         18 26 37.8  -0.2
TKM2                                 pmax      pmax
       comp=Z,97nm,1.1s
DMTO   DMTO               84.63 292  P         P         18 26 39.3 +0.6
UCH    Uchtor             84.66 322  P         P         18 26 39.6 +0.7
       SNR=171
KBK    Karagaybulak       84.71 323  P         P         18 26 39.5 +0.7
       SNR=63
SMDO   Samad              84.73 299  P         P         18 26 39.7 +0.4
       SNR=9.6
KUU    Kurty              84.80 324c iP        P         18 26 39.4 +0.4
KUU                                  pmax      pmax
       comp=Z,301nm,1.0s
KUU    Kurty              84.80 324⇑iP         P         18 26 39.4 +0.4
       comp=Z,301nm,1.0s,baz=324
KUU                                  LR        LR        19 08 25.4
       baz=324
SQUM   Sultan Qaboos      84.90 299  P         P         18 26 42.0 +2.1
BIDO   Bidbid             84.91 299  P         P         18 26 40.6 +0.6
       SNR=14
AAK    Ala-Archa          84.94 322  P         P         18 26 40.7 +0.7
       SNR=131
AAK    Ala-Archa          84.94 322  PKPPKP              18 52 50.5
       comp=Z,3.1nm,1.0s,baz=243,slow=9.5,SNR=2.3
AAK                                  LR        LR        19 07 24.9
       comp=Z,2µm,21.8s,baz=133,slow=38
AAK    Ala-Archa          84.94 322  P         P         18 26 40.2 +0.3
AAK                                  IAmb      IAmb      18 26 44.0
       comp=Z,139nm,0.9s
AAK    Ala-Archa          84.94 322ceP         P         18 26 40.6 +0.7
AAK                                  pmax      pmax
       comp=Z,238nm,1.3s
AAK                                  MLR       MLR
       comp=Z,2µm,22.0s
AAK    Ala-Archa          84.94 322  P         P         18 26 41.2 +1.2
AAK    Ala-Archa          84.94 322 i P        P         18 26 40.6 +0.6
       SNR=158
KHLU   Kahalu`u           84.96  66  P         P         18 26 41.3 +0.8
KHLU                                 IAmb      IAmb      18 26 44.9
       comp=Z,218nm,1.1s
FRU1   Bishkek            84.98 323  IAmb      IAmb      18 26 43.9
       comp=Z,169nm,1.1s
GAR    Garm               85.02 318  IAmb      IAmb      18 26 43.9
       comp=Z,216nm,0.9s
CHMS   Chumysh            85.04 323  P         P         18 26 40.6 +0.3
       SNR=55
AML    Almayashu          85.05 322  P         P         18 26 41.6 +0.8
       SNR=199
AML    Almayashu          85.05 322 i P        P         18 26 41.6 +0.8
       SNR=203
RBK    Rabkut             85.15 292  P         P         18 26 41.6 +0.2
BSY    Bisya              85.25 298  P         P         18 26 42.2 +0.4
       SNR=6.9
POGA   Pongola            85.27 242 eP         P         18 26 42.6 +0.6
POGA                                 IAmb      IAmb      18 26 46.1
       comp=Z,89nm,0.8s
POHA   Pohakuloa          85.33  66  P         P         18 26 44.4 +1.9
CNG    Changalane         85.35 243 eP         P         18 26 43.5 +1.2
CNG                                  IAmb      IAmb      18 26 46.1
       comp=Z,18nm,0.8s
EKS2   Erkin-Say          85.36 322  P         P         18 26 42.9 +0.9
       SNR=169
USP    Ospenovka          85.36 323  P         P         18 26 42.5 +0.7
       SNR=60
SGDS   Sogindy            85.41 323c iP        P         18 26 42.4 +0.3
SGDS                                 pmax      pmax
       comp=Z,72nm,1.0s
SGDS   Sogindy            85.41 323⇑iP         P         18 26 42.5 +0.3
       comp=Z,72nm,1.0s,baz=323
HOQ    Hoqain             85.58 299  P         P         18 26 44.1 +0.7
       SNR=12
KSTD   Kokstad            85.68 238 eP         P         18 26 46.4 +2.2
KSTD                                 IAmb      IAmb      18 26 55.9
       comp=Z,868nm,3.3s
WHFO   Wadi Hawf          85.71 292  P         P         18 26 44.0  -0.2
DOK    Doka               85.74 293  P         P         18 26 44.1  -0.2
ABTO   Aybut              85.84 291  P         P         18 26 45.3 +0.5
ARQ    Araqi              86.09 298  P         P         18 26 46.3 +0.4
       SNR=7.3
TAOE   Nuku Hiva Isla     86.21  98 eP         P         18 26 47.6 +0.7
       comp=Z,1µm,1.5s
TAOE   Nuku Hiva Isla     86.21  98 eLR        LR        18 54 35.7
       comp=Z,12µm,26.0s
TAOE   Nuku Hiva Isla     86.21  98  P         P         18 26 47.3 +0.5
TAOE   Nuku Hiva Isla     86.21  98  P         P         18 26 50.5 +3.6
HAGI   HAGI               86.23 243 eP         P         18 26 48.7 +1.8
HAGI                                 IAmb      IAmb      18 26 50.5
       comp=Z,44nm,1.2s
MMAL   MMAL               86.25 243 eP         P         18 26 49.6 +2.6
MMAL                                 IAmb      IAmb      18 26 55.5
       comp=Z,34nm,1.1s
NWCL   Newcastle          86.53 241 eP         P         18 26 48.9 +0.6
NWCL                                 IAmb      IAmb      18 26 52.0
       comp=Z,56nm,0.9s
MA2    Magadan            86.62  10  P         P         18 26 48.3 +0.6
       comp=Z,46nm,0.7s,baz=161,slow=4.7,SNR=37
MA2                                  LR        LR        19 03 20.8
       comp=Z,4µm,21.9s,baz=195,slow=34
       comp=Z,46nm,0.7s
MA2    Magadan            86.62  10  P         P         18 26 47.6  0.0
MA2                                  IAmb      IAmb      18 26 50.9
       comp=Z,475nm,1.9s
MA2    Magadan            86.62  10ceP         P         18 26 48.2 +0.6
MA2                                  pmax      pmax
       comp=Z,229nm,1.7s
MA2    Magadan            86.62  10  P         P         18 26 48.7 +1.1
BTLS   Baital             86.78 324c iP        P         18 26 49.0 +0.2
BTLS                                eS         S         18 37 14.7   -11
BTLS                                 pmax      pmax
       comp=Z,60nm,0.9s
BTLS   Baital             86.78 324⇑iP         P         18 26 49.1 +0.2
       comp=Z,60nm,0.9s,baz=324
BTLS                                eS         S         18 37 14.8   -11
       baz=324
DZA    Taraz              86.88 321 eP         P         18 26 49.4 +0.1
DZA                                  pmax      pmax
       comp=Z,50nm,0.8s
DZA    Taraz              86.88 321 eP         P         18 26 49.5 +0.1
       comp=Z,50nm,0.8s,baz=321
SHEM   Shemya Is, Ala     87.02  25  P         P         18 26 50.8 +1.1
       comp=Z,166nm,1.0s,baz=345,slow=1.7,SNR=12
SHEM                                 LR        LR        19 02 58.0
       comp=Z,11µm,21.0s,baz=213,slow=34
       comp=Z,166nm,1.0s
SMY    Shemya             87.02  25  P         P         18 26 51.6 +1.9
SMY                                  IAmb      IAmb      18 26 52.5
       comp=Z,204nm,1.0s
SMY    Shemya             87.02  25  P         P         18 26 51.6 +1.9
SMY                                  pmax      pmax
       comp=Z,204nm,1.0s
ALNE   Al Ain             87.06 298  P         P         18 26 51.4 +0.7
       SNR=9.9
ALNE   Al Ain             87.06 298 i P        P         18 26 50.9 +0.2
       SNR=8.3
TAS    Tashkent           87.08 319  IAmb      IAmb      18 26 53.7
       comp=Z,172nm,0.8s
ASHO   Ashiyiah           87.12 299  P         P         18 26 51.4 +0.4
       SNR=23
ASHO   Ashiyiah           87.12 299 i P        P         18 26 51.0  0.0
       SNR=31
HATD   Hatta, Dubai       87.13 299  P         P         18 26 51.5 +0.5
       SNR=17
HATD   Hatta, Dubai       87.13 299 i P        P         18 26 51.3 +0.3
       SNR=24
UOSS   Minazif            87.14 299  P         P         18 26 50.5  -0.5
UOSS                                 IAmb      IAmb      18 26 53.4
       comp=Z,134nm,1.4s
UOSS   Minazif            87.14 299  P         P         18 26 50.9  -0.1
UOSS   Minazif            87.14 299 i P        P         18 26 50.5  -0.5
       SNR=17
IUG    Iuzhnay            87.15 320c iP        P         18 26 51.7 +0.9
IUG                                 i S        SKSac     18 37 18.4 +0.8
IUG    Iuzhnay            87.15 320⇑iP         P         18 26 51.7 +0.9
       baz=320
IUG                                 i S        SKSac     18 37 18.4 +0.8
       baz=320
MOPA   Mopani             87.22 245 eP         P         18 26 52.5 +0.9
MOPA                                 IAmb      IAmb      18 26 57.0
       comp=Z,26nm,0.7s
CRLN   Carolina, Mapu     87.22 243 eP         P         18 26 53.7 +1.9
CRLN                                 IAmb      IAmb      18 26 56.7
       comp=Z,15nm,0.6s
YAK    Yakutsk            87.35 360  P         P         18 26 51.6 +0.5
       comp=Z,52nm,0.7s,baz=359,slow=0.7,SNR=111
YAK                                  LR        LR        19 05 32.8
       comp=Z,4µm,21.6s,baz=167,slow=35
       comp=Z,52nm,0.7s
YAK    Yakutsk            87.35 360  P         P         18 26 51.0  -0.1
YAK                                  IAmb      IAmb      18 26 53.2
       comp=Z,150nm,0.9s
YAK    Yakutsk            87.35 360c iP        P         18 26 51.1  0.0
YAK                                 e*PP       PcP       18 26 54.4 +1.3
YAK                                 e                    18 30 11.9
YAK                                 eS         SKSac     18 37 18.4 +0.8
YAK                                 e*SS       pS        18 37 34.8  -2.7
YAK                                  pmax      pmax
       comp=Z,177nm,1.0s
YAK                                  pmax      pmax
       comp=E,5.0nm,0.9s
YAK                                  pmax      pmax
       comp=N,119nm,1.2s
YAK                                  pmax      pmax
       comp=Z,288nm,2.3s
YAK                                  pmax      pmax
       comp=N,129nm,2.3s
YAK                                  pmax      pmax
       comp=E,40nm,1.8s
YAK                                  smax      smax
       comp=E,2µm,4.0s
YAK                                  MLR       MLR
       comp=Z,3µm,20.0s
YAK                                  MLR       MLR
       comp=N,2µm,20.0s
YAK                                  MLR       MLR
       comp=E,1µm,20.0s
MSFE   Esma-Masafi        87.38 300 i P        P         18 26 53.0 +0.7
       SNR=11
MASF   Masafi             87.38 300  P         P         18 26 53.3 +1.0
       SNR=11
KK31   Karatay Array      87.48 321 i P        P         18 26 52.2  -0.1
SEM    Semipalatinsk      87.50 331c iP        P         18 26 52.2  -0.2
SEM                                  pmax      pmax
       comp=Z,82nm,0.8s
SEM    Semipalatinsk      87.50 331⇑iP         P         18 26 52.2  -0.2
       comp=Z,82nm,0.8s,baz=331
SEM                                  LR        LR        19 09 31.0
       baz=331
FAQ    Al Faqa, Dubai     87.52 299  P         P         18 26 53.0 +0.1
       SNR=8.8
FAQ    Al Faqa, Dubai     87.52 299 i P        P         18 26 52.8  -0.1
       SNR=12
SOE    Somerset East      87.52 235 eP         P         18 26 54.9 +1.9
SOE                                  IAmb      IAmb      18 26 57.2
       comp=Z,54nm,1.1s
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BANOM Banah             87.55 300   P        P        18 26 53.6 +0.6
      SNR=8.1
BANOM Banah             87.55 300 i P        P        18 26 53.4 +0.4
      SNR=17
HRA   Herat             87.58 310   P        P        18 26 52.3 -0.9
HRA                                 IAmb     IAmb     18 26 58.1
      comp=Z,118nm,0.8s
NAZ   Nazwa, Dubai      87.58 299   P        P        18 26 53.4 +0.2
      SNR=17
NAZ   Nazwa, Dubai      87.58 299 i P        P        18 26 52.9 -0.3
      SNR=18
ASUD  Al Ashush, Dub    87.67 299   P        P        18 26 54.2 +0.6
      SNR=5.2
ASUD  Al Ashush, Dub    87.67 299 i P        P        18 26 53.9 +0.3
      SNR=7.1
SHME  Shamm             87.73 300   P        P        18 26 54.9 +1.0
      SNR=5.3
SHME  Shamm             87.73 300 i P        P        18 26 53.8 -0.1
      SNR=6.2
AJN   Ajban             87.91 298   P        P        18 26 56.1 +1.4
      SNR=6.3
AJN   Ajban             87.91 298 i P        P        18 26 55.3 +0.5
      SNR=5.5
SNKL  Senekal, Frees    87.95 240  eP        P        18 26 55.7 +0.4
SNKL                                IAmb     IAmb     18 26 60.0
      comp=Z,1µm,2.4s
ZAA0  Zalesovo Array    88.28 335   P        P        18 26 55.1 -0.7
ZAA0                                IAmb     IAmb     18 26 58.0
      comp=Z,128nm,0.9s
ZALV  Zalesovo Beam     88.28 335   P        P        18 26 55.5 -0.3
      comp=Z,100nm,0.8s,baz=166,slow=3.6,SNR=131
ZALV                                PKKPbc   PKKPbc   18 44 40.2 -1.4
      comp=Z,7.4nm,0.9s,baz=316,slow=3.3,SNR=12
ZALV                                PKPPKP   P'P'df   18 52 43.7 +1.0
      comp=Z,2.2nm,0.8s,baz=270,slow=1.4,SNR=5.9
      comp=Z,100nm,0.8s
MZR   Muzera            88.37 296   P        P        18 26 57.8 +0.8
      SNR=16
MZR   Muzera            88.37 296 i P        P        18 26 57.4 +0.4
      SNR=31
KURBB Kurchatov Arra    88.42 330   P        P        18 26 57.2 +0.7
      comp=Z,105nm,0.7s,baz=144,slow=4.1,SNR=13
      comp=Z,105nm,0.7s
KURBB Kurchatov Arra    88.42 330   P        P        18 26 56.5  0.0
KURK  Kurchatov         88.45 330   P        P        18 26 56.3 -0.4
KURK                                IAmb     IAmb     18 27 00.2
      comp=Z,154nm,0.8s
KURK  Kurchatov         88.45 330ceP        P        18 26 56.7 +0.1
KURK                                pmax     pmax
      comp=Z,256nm,1.3s
KURK  Kurchatov         88.45 330   P        P        18 26 57.6 +1.0
HVD   Gariep Dam        88.59 237  eP        P        18 27 00.1 +1.8
HVD                                 IAmb     IAmb     18 27 02.6
      comp=Z,80nm,0.9s
SLR   Silverton         88.73 242  eP        P        18 26 59.2 +0.2
SLR                                 IAmb     IAmb     18 27 02.9
      comp=Z,69nm,1.2s
PRYS  Parys             88.91 241  eP        P        18 26 60.0 +0.2
PRYS                                IAmb     IAmb     18 27 04.0
      comp=Z,150nm,0.8s
WDLM  Western Deep L    89.09 241  eP        P        18 27 00.4 -0.3
WDLM                                IAmb     IAmb     18 27 04.8
      comp=Z,51nm,0.8s
PMSA  Palmer Station    89.25 174   LR       LR       19 03 59.5
      comp=Z,5µm,21.9s,baz=182,slow=34
PMSA  Palmer Station    89.25 174   IAMs_20  IAMs_20  19 04 27.2
      comp=Z,5µm,20.0s
PMSA  Palmer Station    89.25 174  eP        P        18 27 00.3 -0.1
BOSA  Boshof            89.73 238⇑iP        P        18 27 05.3 +1.7
BOSA                                IAmb     IAmb     18 27 07.7
      comp=Z,91nm,0.8s
BOSA  Boshof            89.73 238   P        P        18 27 05.4 +1.8
      comp=Z,70nm,0.7s,baz=125,slow=3.5,SNR=89
BOSA                                PKKPbc   PKKPbc   18 44 35.7 -0.4
      comp=Z,3.0nm,0.9s,baz=127,slow=5.7,SNR=2.4
BOSA                                LR       LR       19 01 04.4
      comp=Z,31µm,20.2s,baz=126,slow=31
      comp=Z,70nm,0.7s
KSR   Koster            89.78 241  eP        P        18 27 06.5 +2.5
KSR                                 IAmb     IAmb     18 27 09.8
      comp=Z,41nm,1.1s
JRN   Qarnain Island    89.79 298   P        P        18 27 04.6 +1.0
      SNR=7.8
KIWB  Kanaga Island     90.02  30   P        P        18 27 04.8 +0.8
SEY   Seymchan          90.06  10   P        P        18 27 04.7 +0.8
      comp=Z,9.1nm,0.7s,baz=222,slow=2.9,SNR=29
SEY                                 LR       LR       19 07 38.8
      comp=Z,2µm,20.9s,baz=185,slow=36
      comp=Z,9.1nm,0.7s
SEY   Seymchan          90.06  10ceP        P        18 27 04.9 +1.0
SEY                                 pmax     pmax
      comp=Z,104nm,1.7s
GRAN  Grantham          90.21 234  eP        P        18 27 08.2 +2.5
GRAN                                IAmb     IAmb     18 27 09.6
      comp=Z,95nm,1.9s
ADK   Adak              90.25  30   P        P        18 27 05.7 +0.7
ADK                                 IAmb     IAmb     18 27 09.3
      comp=Z,218nm,1.2s
ADK   Adak              90.25  30   IAMs_20  IAMs_20  19 05 01.5
      comp=Z,6µm,20.0s
ADK   Adak              90.25  30   P        P        18 27 05.7 +0.7
ADK                                 pmax     pmax
      comp=Z,218nm,1.3s
ADK                                 MLR      MLR
      comp=Z,6µm,20.0s
ADK   Adak              90.25  30   P        P        18 27 06.0 +1.0
SLWR  Sila              90.31 297   P        P        18 27 07.2 +1.2
SWZ   Schweizer         90.37 240  eP        P        18 27 07.9 +1.3
SWZ                                 IAmb     IAmb     18 27 11.3
      comp=Z,44nm,0.8s
KIBK  Kibwezi           90.65 267   P        P        18 27 07.2 -0.8
KIBK  Kibwezi           90.65 267   P        P        18 27 09.4 +1.4
      SNR=8.2
BRZS  Berezniki         90.73 327c iP        P        18 27 07.7 +0.3
BRZS                                pmax     pmax
      comp=Z,62nm,1.1s
BRZS  Berezniki         90.73 327⇑iP        P        18 27 07.8 +0.3
      comp=Z,62nm,1.1s,baz=327
ELIM  Elim              90.75 231  eP        P        18 27 09.6 +1.5
ELIM                                IAmb     IAmb     18 27 12.5
      comp=Z,58nm,0.8s
MATJ  Matjiesfontein    90.86 232  eP        P        18 27 10.2 +1.5
MATJ                                IAmb     IAmb     18 27 13.6
      comp=Z,770nm,2.3s
TRNA  Turayna           91.01 297   P        P        18 27 10.5 +1.2
MATP  Matopo            91.02 247   LR       LR       19 02 02.7
      comp=Z,14µm,21.0s,baz=106,slow=32
ESPZ  Base Esperanza    91.11 177   IAmb     IAmb     18 27 08.9
      comp=Z,272nm,1.6s
SUR   Sutherland        91.16 233   LR       LR       19 03 09.3
      comp=Z,11µm,18.1s,baz=121,slow=32
SUR   Sutherland        91.16 233   P        P        18 27 11.4 +1.2
SUR                                 IAmb     IAmb     18 27 15.2
      comp=Z,70nm,0.8s
SUR   Sutherland        91.16 233   IAMs_20  IAMs_20  19 03 17.8
      comp=Z,12µm,18.0s
KHOR  Al-Khor Airpor    91.18 298   P        P        18 27 12.7 +2.7
LBTB  Lobatse           91.21 242  eP        P        18 27 11.2 +0.7
LBTB                                IAmb     IAmb     18 27 14.7
      comp=Z,96nm,1.4s
LBTB  Lobatse           91.21 242   LR       LR       19 03 18.1
      comp=Z,20µm,18.7s,baz=128,slow=32
LBTB  Lobatse           91.21 242   P        P        18 27 11.8 +1.3
LBTB  Lobatse           91.21 242   P        P        18 27 11.8 +1.3
LBTB                                pmax     pmax
      comp=Z,35nm,0.9s
SMRA  Abu-Samra         91.33 297   P        P        18 27 12.0 +1.3
ATKA  Atka Island       91.59  31   P        P        18 27 12.6 +1.3
CER   Ceres             91.73 232  eP        P        18 27 13.3 +0.7
CER                                 IAmb     IAmb     18 27 17.0
      comp=Z,136nm,2.2s
KMBO  Kilima Mbogo      91.89 268   P        P        18 27 15.4 +1.4
      comp=Z,17nm,0.8s,baz=63,slow=8.0,SNR=20
KMBO                                LR       LR       19 04 47.5
      comp=Z,15µm,18.4s,baz=104,slow=33
      comp=Z,17nm,0.8s
KMBO  Kilima Mbogo      91.89 268   P        P        18 27 14.5 +0.6
KMBO  Kilima Mbogo      91.89 268   IAMs_20  IAMs_20  19 03 48.2
      comp=Z,13µm,20.0s
KMBO  Kilima Mbogo      91.89 268  eP        P        18 27 21.9 +7.9
KMBO  Kilima Mbogo      91.89 268  eP        P        18 27 21.9 +7.9
KMBO  Kilima Mbogo      91.89 268 i P        P        18 27 14.8 +0.8
      SNR=12
ATD   Arta Tunnel       92.27 282   LR       LR       19 05 26.9
      comp=Z,6µm,18.6s,baz=117,slow=33
ATD   Arta Tunnel       92.27 282   IAMs_20  IAMs_20  19 05 34.3
      comp=Z,9µm,19.0s
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GEYT  Alibeck           92.28 311   P        P        18 27 15.5 +0.5
      comp=Z,40nm,0.7s,baz=217,slow=7.2,SNR=35
GEYT                                PKKPbc   PKKPbc   18 44 31.4 +0.8
      comp=Z,4.6nm,0.7s,baz=281,slow=11,SNR=4.6
GEYT                                LR       LR       19 09 30.0
      comp=Z,4µm,22.0s,baz=142,slow=36
      comp=Z,40nm,0.7s
GYA0B ALIBECK ARRAY     92.28 311   P        P        18 27 15.2 +0.2
CVNA  Calvinia          92.39 233  eP        P        18 27 18.0 +2.1
CVNA                                IAmb     IAmb     18 27 27.0
      comp=Z,144nm,1.6s
UPI   Upington          92.91 237  eP        P        18 27 17.9 -0.4
UPI                                 IAmb     IAmb     18 27 23.1
      comp=Z,184nm,2.3s
KEIM  Keimoes           92.95 236  eP        P        18 27 20.3 +1.9
KEIM                                IAmb     IAmb     18 27 23.4
      comp=Z,28nm,0.8s
LSZ   Lusaka            93.66 251   LR       LR       19 05 26.2
      comp=Z,6µm,19.2s,baz=126,slow=33
LSZ   Lusaka            93.66 251   P        P        18 27 21.9 -0.1
LSZ   Lusaka            93.66 251   IAMs_20  IAMs_20  19 05 33.0
      comp=Z,7µm,19.0s
LSZ   Lusaka            93.66 251   P        P        18 27 21.9 -0.1
LSZ                                 pmax     pmax
      comp=Z,34nm,0.9s
LSZ                                 MLR      MLR
      comp=Z,7µm,19.0s
ORCD  Orcadas           93.83 183   P        P        18 27 21.0 -0.7
ORCD                                IAmb     IAmb     18 27 25.8
      comp=Z,480nm,2.9s
BRVK  Borovoye          93.85 329   P        P        18 27 21.4 -0.3
BRVK  Borovoye          93.85 329ceP        P        18 27 21.3 -0.4
BRVK                                pmax     pmax
      comp=Z,19nm,0.9s
NIKH  Nikolski High     94.60  32   P        P        18 27 26.6 +1.5
      baz=232
FURI  Furi              94.86 277   IAMs_20  IAMs_20  19 06 30.0
      comp=Z,12µm,20.0s
RAYN  Ar Rayn           95.13 293   P        P        18 27 27.8 -0.6
RAYN  Ar Rayn           95.13 293   IAMs_20  IAMs_20  19 08 42.1
      comp=Z,5µm,20.0s
RAYN  Ar Rayn           95.13 293   P        P        18 27 27.8 -0.6
RAYN                                pmax     pmax
      comp=Z,28nm,0.8s
RAYN                                MLR      MLR
      comp=Z,5µm,20.0s
RAYN  Ar Rayn           95.13 293 i P        P        18 27 28.1 -0.3
      SNR=33
LODK  Lodwar            95.53 271   P        P        18 27 31.9 +1.4
      SNR=10
UNV   Unalaska Valle    96.25  32   P        P        18 27 33.1 +0.5
      baz=234
SPIA  Saint Paul Isl    96.55  28   P        P        18 27 34.9 +0.9
      baz=232
AB31  Akbulak array     97.01 322 i P        P        18 27 35.8 -0.4
TIXI  Tiksi             97.02 360   P        P        18 27 35.0 -0.7
      comp=Z,6.8nm,0.9s,baz=270,slow=23,SNR=30
TIXI                                LR       LR       19 15 22.7
      comp=Z,2µm,19.1s,baz=180,slow=38
      comp=Z,6.8nm,0.9s
TIXI  Tiksi             97.02 360   P        P        18 27 34.2 -1.5
TIXI                                IAmb     IAmb     18 27 37.7
      comp=Z,89nm,2.0s
TIXI  Tiksi             97.02 360ceP        P        18 27 34.4 -1.3
TIXI                                pmax     pmax
      comp=Z,38nm,1.8s
TIXI                                MLR      MLR
      comp=Z,3µm,17.0s
BILL  Bilibino          97.20  13   P        P        18 27 36.5 -0.1
BILL                                IAmb     IAmb     18 27 40.0
      comp=Z,138nm,1.7s
BILL  Bilibino          97.20  13  eP        Pdif     18 27 37.3 +0.6
BILL                               e                  18 31 30.4
BILL                               ePPP      PPP      18 33 38.4
BILL                                pmax     pmax
      comp=Z,69nm,1.6s
BILL                                MLR      MLR
      comp=Z,2µm,20.0s
MBAR  Mbarara           97.98 265   LR       LR       19 08 18.9
      comp=Z,10µm,18.4s,baz=106,slow=33
MBAR  Mbarara           97.98 265   P        P        18 27 41.7 -0.1
MBAR  Mbarara           97.98 265   IAMs_20  IAMs_20  19 08 16.8
      comp=Z,11µm,18.0s
MBAR  Mbarara           97.98 265   P        P        18 27 41.7 -0.1
MBAR                                pmax     pmax
      comp=Z,9.0nm,0.8s
MBAR                                MLR      MLR
      comp=Z,11µm,18.0s
FALS  False Pass        98.31  32   P        Pdif     18 27 42.8 +0.9
      baz=237
USHA  Ushuaia           98.34 169   LR       LR       19 07 59.5
      comp=Z,4µm,19.7s,baz=196,slow=33
AKTO  Aktyubinsk        98.68 322   LR       LR       19 18 53.5
      comp=Z,2µm,18.3s,baz=110,slow=39
NRIK  Noril'sk          99.51 346   P        Pdif     18 27 47.4 +0.4
      comp=Z,15nm,0.8s,baz=139,slow=4.0,SNR=19
NRIK                                LR       LR       19 17 41.4
      comp=Z,2µm,19.9s,baz=134,slow=38
      comp=Z,15nm,0.8s
NRIK  Noril'sk          99.51 346c iP        Pdif     18 27 46.7 -0.3
NRIK                                pmax     pmax
      comp=Z,37nm,1.2s
NRIK                                MLR      MLR
      comp=Z,4µm,20.0s
SDPT  Sand Point       100.01  33   P        Pdif     18 27 50.2 +0.7
      baz=239
GAMB  Gambell          100.10  23   IAMs_20  IAMs_20  19 09 19.7
      comp=Z,9µm,22.0s
GAMB  Gambell          100.10  23   P        Pdif     18 27 51.3 +1.6
      baz=231
CNBA  Chernabura Isl   100.18  34   IAMs_20  IAMs_20  19 12 16.3
      comp=Z,7µm,20.0s
CHNA  Chernabura Isl   100.18  34   P        Pdif     18 27 51.3 +1.0
      baz=240
SVE   Sverdlovsk       100.57 328  eP        Pdif     18 27 54.0 +2.0
SVE                                eS        SKSac    18 38 31.9 +1.9
SVE                                 pmax     pmax
      comp=Z,13nm,1.0s
ARU   Arti             101.36 328   P        Pdif     18 27 56.3 +0.8
ARU                                                   18 32 06.8
ARU                                 PPP      PPP      18 34 13.4
ARU                                 S        SKSac    18 38 35.8 +1.9
ARU                                 SP       SP       18 41 11.2 +5.2
ARU                                 MLR      MLR
      comp=Z,2µm,21.0s
CHGN  Chignik          101.49  33   P        Pdif     18 27 57.0 +0.9
      baz=241
MAK   Makhachkala      101.78 312  eP        Pdif     18 27 52.5 -5.2
MAK                                i                  18 32 16.6
MAK                                e                  18 38 32.9
MAK                                eSS       SS       18 46 36.0 -6.4
MAK                                eSSS      SSS      18 50 31.6
MAK                                 pmax     pmax
      comp=Z,91nm,1.3s
TNA   Tin City         102.47  22   P        Pdif     18 28 01.9 +1.6
      baz=235
CHIR  Chirikof Islan   102.65  34   IAMs_20  IAMs_20  19 18 49.5
      comp=Z,5µm,19.0s
CHIR  Chirikof Islan   102.65  34   P        Pdif     18 28 02.4 +1.2
      baz=243
EFI   East Falkland    102.72 175   IAMs_20  IAMs_20  19 13 49.4
      comp=Z,4µm,19.0s
ANM   Nome             102.81  24   IAMs_20  IAMs_20  19 09 58.4
      comp=Z,8µm,22.0s
ANM   Nome             102.81  24   P        Pdif     18 28 02.8 +1.0
      baz=237
SII   Sitkinak Islan   103.70  34   IAMs_20  IAMs_20  19 11 31.5
      comp=Z,3µm,20.0s
ZEI   Tsey             104.15 311  eP        Pdif     18 28 08.2 -0.4
ZEI                                 pmax     pmax
      comp=Z,7.0nm,0.8s
OHAK  Old Harbor       104.43  33   P        Pdif     18 28 10.3 +1.2
      baz=245
P18K  Big Mountain,    104.43  31   IAMs_20  IAMs_20  19 10 37.7
      comp=Z,12µm,22.0s
P18K  Big Mountain,    104.43  31   P        Pdif     18 28 09.7 +0.6
      baz=244
N18K  Kilae Creek      104.70  29   IAMs_20  IAMs_20  19 14 06.7
      comp=Z,5µm,20.0s
N18K  Kilae Creek      104.70  29   P        Pdif     18 28 11.0 +0.7
      baz=244
Q19K  Cape Douglas,    104.97  31   IAMs_20  IAMs_20  19 09 57.0
      comp=Z,5µm,21.0s
Q19K  Cape Douglas,    104.97  31   P        PKiKP    18 32 26.7 +0.4
      baz=245
KDAK  Kodiak Island    105.01  33   IAMs_20  IAMs_20  19 10 42.0
      comp=Z,8µm,22.0s
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KDAK  Kodiak Island    105.01  33   P        PKiKP    18 32 26.7 +0.3
      baz=246
KBZ   Khabaz           105.18 311   Pdiff    Pdif     18 28 13.8 +1.1
      comp=Z,8.4nm,0.8s,baz=129,slow=3.2,SNR=16
KBZ                                 PKiKP    PKiKP    18 32 29.5 +2.4
      comp=Z,3.4nm,0.7s,baz=355,slow=7.4,SNR=2.1
KBZ                                 PKKPbc   PKKPbc   18 43 55.2 +0.8
      comp=Z,2.9nm,0.9s,baz=219,slow=3.5,SNR=5.6
O19K  Port Alsworth    105.19  30   IAMs_20  IAMs_20  19 11 24.8
      comp=Z,10µm,21.0s
O19K  Port Alsworth    105.19  30   P        PKiKP    18 32 27.6 +1.0
      baz=245
N19K  Bonanza Creek    105.38  30   IAMs_20  IAMs_20  19 11 34.7
      comp=Z,7µm,22.0s
KIV   Kislovodsk       105.40 312 ⇑P        PKiKP    18 32 34.4 +6.8
RDOG  Red Dog Mine     105.50  21   IAMs_20  IAMs_20  19 15 28.4
      comp=Z,4µm,21.0s
RDOG  Red Dog Mine     105.50  21   P        PKiKP    18 32 28.3 +1.2
      baz=240
TTA   Tatalina         105.63  27   P        PKiKP    18 32 28.2 +0.7
      baz=244
L19K  White Mountain   105.80  28   IAMs_20  IAMs_20  19 11 24.6
      comp=Z,7µm,22.0s
L19K  White Mountain   105.80  28   P        PKiKP    18 32 28.1 +0.4
      baz=245
M19K  Big River Lodg   105.88  28   IAMs_20  IAMs_20  19 14 59.8
      comp=Z,5µm,20.0s
M19K  Big River Lodg   105.88  28   P        PKiKP    18 32 28.3 +0.4
      baz=245
O20K  Slope Mountain   105.92  31   P        PKiKP    18 32 28.3 +0.3
      baz=246
GCSA  Galena City Sc   106.08  25   P        PKiKP    18 32 28.2 +0.1
      baz=244
HOM   Homer            106.21  31   IAMs_20  IAMs_20  19 12 17.5
      comp=Z,6µm,21.0s
HOM   Homer            106.21  31   P        PKiKP    18 32 28.8 +0.3
      baz=247
EIL   Elat             106.22 295   PKKPbc   PKKPbc   18 43 51.4 +0.7
      comp=Z,4.7nm,0.8s,baz=101,slow=7.0,SNR=5.6
GHAJ  Ghor Haditha     106.29 297   IAMs_20  IAMs_20  19 22 43.3
      comp=Z,4µm,18.0s
L20K  Farewell, AK     106.33  28   P        PKiKP    18 32 29.0 +0.3
      baz=246
CNPM  China Poot       106.35  31   IAMs_20  IAMs_20  19 11 15.3
      comp=Z,9µm,22.0s
COYC  Coyhaique        106.38 164   IAMs_20  IAMs_20  19 12 25.4
      comp=Z,4µm,21.0s
M20K  Styx River       106.41  29   P        PKiKP    18 32 29.6 +0.6
      baz=246
SPCR  Spurr Chakacha   106.55  30   P        PKiKP    18 32 29.8 +0.6
      baz=247
BRLK  Bradley Lake     106.60  31   IAMs_20  IAMs_20  19 12 07.7
      comp=Z,9µm,22.0s
K20K  Telida           106.61  27   IAMs_20  IAMs_20  19 16 18.1
      comp=Z,5µm,20.0s
K20K  Telida           106.61  27   P        PKiKP    18 32 29.4 +0.2
      baz=246
BRSE  Bradley Lake S   106.66  31   P        PKiKP    18 32 30.2 +0.8
      baz=248
CAPN  Captain Cook N   106.86  30   IAMs_20  IAMs_20  19 13 52.8
      comp=Z,9µm,20.0s
J20K  Nowinta River    106.91  26   IAMs_20  IAMs_20  19 15 00.0
      comp=Z,5µm,20.0s
J20K  Nowinta River    106.91  26   P        PKiKP    18 32 29.9 +0.2
      baz=246
PPLA  Purkeypile       107.22  28   P        PKiKP    18 32 31.3 +0.8
      baz=248
O22K  Cooper Landing   107.41  31   IAMs_20  IAMs_20  19 15 51.8
      comp=Z,7µm,20.0s
FIS   Fire Island      107.42  30   IAMs_20  IAMs_20  19 12 35.7
      comp=Z,11µm,22.0s
CHUM  Lake Minchumin   107.54  27   P        PKiKP    18 32 32.0 +1.2
      baz=248
RC01  Rabbit Creek A   107.62  30   IAMs_20  IAMs_20  19 12 40.9
      comp=Z,10µm,22.0s
RC01  Rabbit Creek A   107.62  30   P        PKiKP    18 32 31.3 +0.1
      baz=249
M22K  Willow           107.69  29   IAMs_20  IAMs_20  19 12 35.7
      comp=Z,8µm,22.0s
CUT   Chulitna         107.86  29   IAMs_20  IAMs_20  19 13 06.2
      comp=Z,7µm,22.0s
H21K  Melozitna Rive   108.02  25   IAMs_20  IAMs_20  19 12 47.2
      comp=Z,9µm,22.0s
H21K  Melozitna Rive   108.02  25   P        PKiKP    18 32 32.3 +0.6
      baz=248
PMR   Palmer           108.07  30   P        PKiKP    18 32 31.7 -0.3
      baz=250
I21K  Tanana           108.16  26   IAMs_20  IAMs_20  19 15 09.0
      comp=Z,7µm,21.0s
I21K  Tanana           108.16  26   P        PKiKP    18 32 31.8 -0.2
      baz=248
BPAW  Bear Paw Mtn.    108.17  27   IAMs_20  IAMs_20  19 19 00.6
      comp=Z,5µm,20.0s
BPAW  Bear Paw Mtn.    108.17  27   P        PKiKP    18 32 32.4 +0.3
      baz=249
TRF   Thorofare Moun   108.22  28   IAMs_20  IAMs_20  19 13 00.7
      comp=Z,9µm,22.0s
TRF   Thorofare Moun   108.22  28   P        PKiKP    18 32 32.5 +0.1
      baz=249
KNK   Knik Glacier     108.31  30   IAMs_20  IAMs_20  19 14 19.8
      comp=Z,7µm,22.0s
KNK   Knik Glacier     108.31  30   P        PKiKP    18 32 32.2 -0.2
      baz=250
SML   Sawmill          108.50  30   IAMs_20  IAMs_20  19 13 10.3
      comp=Z,10µm,22.0s
SML   Sawmill          108.50  30   P        PKiKP    18 32 33.1 +0.3
      baz=250
Q23K  Middleton Isla   108.64  32   IAMs_20  IAMs_20  19 14 42.1
      comp=Z,6µm,21.0s
WAT1  Susitna Watana   108.75  29   P        PKiKP    18 32 34.0 +0.7
      baz=251
GLI   Glacier Island   108.76  31   IAMs_20  IAMs_20  19 13 15.1
      comp=Z,7µm,21.0s
GLI   Glacier Island   108.76  31   P        PKiKP    18 32 34.3 +1.0
      baz=251
RND   Reindeer         108.81  28   IAMs_20  IAMs_20  19 13 09.3
      comp=Z,8µm,22.0s
BWN   Browne           108.82  27   IAMs_20  IAMs_20  19 19 01.6
      comp=Z,6µm,20.0s
HIN   Hinchinbrook I   108.88  31   IAMs_20  IAMs_20  19 15 45.8
      comp=Z,5µm,20.0s
A21K  Barrow           108.94  19   IAMs_20  IAMs_20  19 16 20.4
      comp=Z,6µm,22.0s
A21K  Barrow           108.94  19   P        PKiKP    18 32 34.3 +1.0
      baz=246
SCM   Sheep Creek Mo   108.96  30   IAMs_20  IAMs_20  19 14 41.9
      comp=Z,6µm,22.0s
SCM   Sheep Creek Mo   108.96  30   P        PKiKP    18 32 33.9 +0.2
      baz=251
FID   Port Fidalgo     109.00  31   IAMs_20  IAMs_20  19 12 34.0
      comp=Z,6µm,22.0s
WAT6  Susitna Watana   109.02  29   P        PKiKP    18 32 34.6 +0.6
      baz=251
NEA2  Nenana           109.12  27   IAMs_20  IAMs_20  19 18 42.8
      comp=Z,6µm,20.0s
NEA2  Nenana           109.12  27   P        PKiKP    18 32 34.4 +0.5
      baz=251
I23K  Minto, Yukon-K   109.19  26   IAMs_20  IAMs_20  19 17 00.6
      comp=Z,5µm,20.0s
I23K  Minto, Yukon-K   109.19  26   P        PKiKP    18 32 35.0 +1.1
      baz=251
CSS   Mathiatis        109.26 300   IAMs_20  IAMs_20  19 17 32.8
      comp=Z,5µm,20.0s
EYAK  Cordova Ski Ar   109.28  31   P        PKiKP    18 32 34.9 +0.7
      baz=252
DHY   Denali Highway   109.34  29   IAMs_20  IAMs_20  19 13 30.3
      comp=Z,8µm,22.0s
DHY   Denali Highway   109.34  29   P        PKiKP    18 32 35.5 +1.0
      baz=252
H23K  Yukon River      109.34  26   IAMs_20  IAMs_20  19 15 56.1
      comp=Z,6µm,20.0s
H23K  Yukon River      109.34  26   P        PKiKP    18 32 34.9 +0.7
      baz=251
WRH   Wood River Hil   109.48  27   IAMs_20  IAMs_20  19 19 48.4
      comp=Z,4µm,19.0s
KLU   Klutina          109.49  30   P        PKiKP    18 32 35.4 +0.7
      baz=252
COLD  Coldfoot         109.56  24   P        PKiKP    18 32 35.4 +0.8
      baz=251
PRGR  Permogore        109.56 330  eP        Pdif     18 28 29.3 -2.5
PRGR                               e                  18 33 05.3
PRGR                               e                  18 43 40.0
M24K  Tolsona, Glenn   109.57  30   IAMs_20  IAMs_20  19 15 00.8
      comp=Z,6µm,21.0s
M24K  Tolsona, Glenn   109.57  30   P        PKiKP    18 32 35.4 +0.5
      baz=252
MDM   Murphy Dome      109.58  27   IAMs_20  IAMs_20  19 19 06.9
      comp=Z,5µm,20.0s
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CCB	Clear Creek Bu	109.65	27	IAMs_20	IAMs_20	19 19 53.9	
	comp=Z,5µm,19.0s						
TCOL	CIGO, UAF Yank	109.70	27	IAMs_20	IAMs_20	19 19 48.2	
	comp=Z,6µm,20.0s						
TCOL	CIGO, UAF Yank	109.70	27	P	PKiKP	18 32 35.3	+0.4
	baz=252						
COLA	College	109.70	27	IAMs_20	IAMs_20	19 19 48.2	
	comp=Z,5µm,20.0s						
COLA	College	109.70	27	P	PKiKP	18 32 35.4	+0.5
	baz=252						
HMT	Hamilton	109.92	32	IAMs_20	IAMs_20	19 19 04.7	
	comp=Z,6µm,19.0s						
HDA	Harding Lake	109.93	27	IAMs_20	IAMs_20	19 18 56.3	
	comp=Z,4µm,20.0s						
HDA	Harding Lake	109.93	27	P	PKiKP	18 32 35.9	+0.5
	baz=252						
BMRM	Bremner River	109.94	31	IAMs_20	IAMs_20	19 14 56.9	
	comp=Z,6µm,21.0s						
BMRM	Bremner River	109.94	31	P	PKiKP	18 32 36.2	+0.6
	baz=253						
POKR	Poker Plat Res	109.95	27	IAMs_20	IAMs_20	19 19 27.7	
	comp=Z,5µm,20.0s						
POKR	Poker Plat Res	109.95	27	P	PKiKP	18 32 36.4	+1.0
	baz=252						
H24K	Noodor Dome	109.99	26	IAMs_20	IAMs_20	19 17 27.9	
	comp=Z,6µm,20.0s						
H24K	Noodor Dome	109.99	26	P	PKiKP	18 32 36.3	+0.7
	baz=252						
ILAR	Eielson Array	110.07	27	Pdiff	Pdif	18 28 35.8	+1.7
	comp=Z,1.0nm,0.8s,baz=258,slow=4.8,SNR=8.8						
ILAR				PKiKP	PKiKP	18 32 35.0	-0.7
	comp=Z,2.5nm,0.6s,baz=278,slow=2.9,SNR=9.3						
ILAR				PP	PP	18 33 07.5	-2.0
	comp=Z,4.9nm,1.1s,baz=254,slow=6.8,SNR=9.5						
ILAR				PKKPbc	PKKPbc	18 43 39.3	-0.3
	comp=Z,0.9nm,0.7s,baz=19,slow=2.4,SNR=4.7						
ILAR	Eielson Array	110.07	27	Pdif	Pdif	18 28 31.9	-2.1
ILAR					PKiKP	18 32 34.2	-1.4
SUCK	Suckling Hills	110.08	32	IAMs_20	IAMs_20	19 17 41.9	
	comp=Z,7µm,20.0s						
HARP	HAARP	110.11	30	P	PKiKP	18 32 36.5	+0.7
	baz=253						
N25K	Chitina, Valde	110.13	31	IAMs_20	IAMs_20	19 14 32.8	
	comp=Z,6µm,21.0s						
N25K	Chitina, Valde	110.13	31	P	PKiKP	18 32 35.8	-0.1
	baz=253						
PAX	Paxson	110.14	29	P	PKiKP	18 32 36.4	+0.5
	baz=253						
TOLK	Toolik Lake Re	110.24	23	IAMs_20	IAMs_20	19 19 22.3	
	comp=Z,7µm,20.0s						
TOLK	Toolik Lake Re	110.24	23	P	PKiKP	18 32 36.5	+0.6
	baz=252						
K24K	Donnelly Dome	110.24	28	P	PKiKP	18 32 36.2	+0.2
	baz=253						
GLB	Gilahina Butte	110.45	31	IAMs_20	IAMs_20	19 16 18.2	
	comp=Z,6µm,20.0s						
BRTR	Keskin Array B	110.45	305	Pdiff	Pdif	18 28 37.5	+0.9
	comp=Z,2.9nm,0.9s,baz=130,slow=5.0,SNR=11						
BRTR				PKiKP	PKiKP	18 32 38.0	+0.7
	comp=Z,6.9nm,0.7s,baz=140,slow=5.4,SNR=16						
BRTR				PKKPbc	PKKPbc	18 43 37.5	-0.3
	comp=Z,2.9nm,0.7s,baz=250,slow=2.5,SNR=7.8						
BRTR	Keskin Array B	110.45	305	Pdif	Pdif	18 28 34.3	-2.3
BRTR					PKiKP	18 32 36.6	-0.7
BRTR	Keskin Array B	110.45	305	i PKIKP	PKiKP	18 32 38.0	+0.7
LPSR	Galich'ya Gora	110.49	319	i PKIKP	PKiKP	18 32 35.2	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,990nm,20.0s						
VRDI	Verde Repeater	110.56	31	IAMs_20	IAMs_20	19 13 16.6	
	comp=Z,6µm,22.0s						
SNH	Sunshine Point	110.56	32	IAMs_20	IAMs_20	19 17 16.6	
	comp=Z,9µm,20.0s						
RIDG	Independent Ri	110.62	28	IAMs_20	IAMs_20	19 17 00.2	
	comp=Z,8µm,20.0s						
RIDG	Independent Ri	110.62	28	P	PKiKP	18 32 35.5	-1.3
	baz=254						
J25K	Salcha River,	110.64	27	IAMs_20	IAMs_20	19 14 37.7	
	comp=Z,4µm,20.0s						
J25K	Salcha River,	110.64	27	P	PKiKP	18 32 36.9	+0.1
	baz=254						
MCARA	McCarthy VSAT	110.80	31	IAMs_20	IAMs_20	19 15 14.4	
	comp=Z,5µm,21.0s						
MCARA	McCarthy VSAT	110.80	31	P	PKiKP	18 32 37.4	+0.3
	baz=255						
ISLE	Juniper Island	110.91	32	IAMs_20	IAMs_20	19 17 59.9	
	comp=Z,7µm,20.0s						
MESA	MESA	110.99	32	IAMs_20	IAMs_20	19 17 18.9	
	comp=Z,7µm,20.0s						
MESA	MESA	110.99	32	P	PKiKP	18 32 38.1	+0.4
	baz=255						
M26K	Nabesna, AK	111.08	30	P	PKiKP	18 32 38.1	+0.4
	baz=255						
L26K	Log Cabin Wild	111.08	29	IAMs_20	IAMs_20	19 17 54.8	
	comp=Z,7µm,20.0s						
L26K	Log Cabin Wild	111.08	29	P	PKiKP	18 32 38.4	+0.8
	baz=255						
YAH	Yahtse	111.14	32	IAMs_20	IAMs_20	19 17 24.4	
	comp=Z,8µm,20.0s						
GRNC	Granite Creek	111.23	32	IAMs_20	IAMs_20	19 18 20.1	
	comp=Z,6µm,20.0s						
PLCA	Paso Flores	111.30	163	Pdiff	Pdif	18 28 40.1	-0.4
	comp=Z,1.0nm,0.9s,baz=47,slow=20,SNR=1.8						
PLCA				PKiKP	PKiKP	18 32 39.5	+0.6
	comp=Z,3.3nm,0.7s,baz=184,slow=7.1,SNR=11						
PLCA				PKKPbc	PKKPbc	18 43 32.2	-2.8
	comp=Z,2.0nm,0.8s,baz=289,slow=1.4,SNR=5.1						
BARN	Barnard Glacie	111.35	31	IAMs_20	IAMs_20	19 17 06.1	
	comp=Z,6µm,21.0s						
J26L	Joseph Creek	111.37	28	P	PKiKP	18 32 38.6	+0.4
	baz=255						
TABL	Table Mountain	111.45	32	IAMs_20	IAMs_20	19 16 42.9	
	comp=Z,7µm,20.0s						
CTG	Chitna Glacier	111.48	32	P	PKiKP	18 32 38.6	0.0
	baz=256						
CTGM	Chitina Glacie	111.48	32	IAMs_20	IAMs_20	19 18 30.5	
	comp=Z,6µm,20.0s						
SIM	Simferopol'	111.54	311	i PKIKP	PKiKP	18 32 40.8	+1.8
SIM				e		18 33 26.2	
SIM				pmax	pmax		
	comp=Z,22nm,0.8s						
SIM				pmax	pmax		
	comp=Z,62nm,1.3s						
M27K	Edge Creek, AK	111.57	30	IAMs_20	IAMs_20	19 16 15.8	
	comp=Z,10µm,21.0s						
M27K	Edge Creek, AK	111.57	30	P	PKiKP	18 32 38.6	-0.2
	baz=256						
LOGN	Logan Glacier	111.61	32	IAMs_20	IAMs_20	19 18 22.1	
	comp=Z,5µm,20.0s						
L27K	Beaver Creek,	111.76	29	IAMs_20	IAMs_20	19 15 28.8	
	comp=Z,10µm,22.0s						
L27K	Beaver Creek,	111.76	29	P	PKiKP	18 32 38.3	-0.6
	baz=256						
PINM	Pinnacle	111.79	33	P	PKiKP	18 32 39.3	+0.2
	baz=256						
K27K	Chicken	111.88	28	IAMs_20	IAMs_20	19 15 19.5	
	comp=Z,8µm,22.0s						
K27K	Chicken	111.88	28	P	PKiKP	18 32 39.4	+0.3
	baz=256						
MOS	Moscow	112.01	322	i PKIKP	PKiKP	18 32 39.5	0.0
MOS				e		18 33 21.8	
MOS				e		18 39 21.0	
MOS				ePS	PS	18 42 59.7	+2.9
BVCY	Beaver Creek	112.04	30	P	PKiKP	18 32 39.8	+0.3
	baz=257						
BCPM	Bancas Point	112.06	33	IAMs_20	IAMs_20	19 15 33.3	
	comp=Z,6µm,22.0s						
YUK3	Moose Creek	112.08	31	P	PKiKP	18 32 39.8	-0.1
	baz=257						
PNL	Peninsula	112.11	33	P	PKiKP	18 32 40.0	+0.3
	baz=257						
KLMR	Klimovskoe	112.20	328	eP	Pdif	18 28 46.6	+3.0
KLMR				e		18 33 28.2	
KLMR				eSS	SS	18 49 09.3	+6.2
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLMR	Klimovskoe	112.20	328	ePdif	Pdif	18 28 46.6	+3.0
KLMR				AMP		18 29 01.6	
	comp=Z,10.0nm,1.2s						
KLMR				ePP	PP	18 33 28.2	+3.3
KLMR				ePKKPbc	PKKPbc	18 43 31.0	-1.4
KLMR				eSKKP		18 47 26.5	
KLMR				eSS	SS	18 49 09.3	+6.2
KLMR				eSS	SS	18 49 09.3	+6.2
KLMR				LQ	LQ	19 09 49.9	
KLMR				LQ	LQ	19 09 49.9	
KLMR				LR	LR	19 18 50.9	
KLMR				AMP		19 30 26.5	
	comp=Z,3µm,17.8s						
ISP	Isparta	112.26	302	IAMs_20	IAMs_20	19 21 25.4	
	comp=Z,4µm,20.0s						
EGAK	Eagle	112.44	28	IAMs_20	IAMs_20	19 19 05.6	
	comp=Z,3µm,20.0s						
EGAK	Eagle	112.44	28	P	PKiKP	18 32 40.1	0.0
	baz=258						
OBN	Obninsk	112.46	322	IAMs_20	IAMs_20	19 27 43.4	
	comp=Z,3µm,21.0s						
OBN	Obninsk	112.46	322	i PKIKP	PKiKP	18 32 40.8	+0.4
OBN				ePPP	PPP	18 35 48.8	
OBN				pmax	pmax		
	comp=Z,14nm,1.0s						
YUK4	Talbot Arm	112.84	32	P	PKiKP	18 32 41.1	-0.2
	baz=258						
YUK6	Outpost Mounta	112.89	32	P	PKiKP	18 32 40.8	-0.6
	baz=258						
DAWY	Dawson	113.04	29	P	PKiKP	18 32 41.7	+0.3
	baz=259						
PLBC	Pleasant Camp	113.58	34	P	PKiKP	18 32 42.8	+0.4
	baz=259						
N30M	Aishikik Lake	113.60	32	P	PKiKP	18 32 42.3	-0.2
	baz=260						
SIT	Sitka	113.68	36	P	PKiKP	18 32 42.9	+0.2
	baz=259						
I29M	Ogilvie Camp,	113.74	27	IAMs_20	IAMs_20	19 19 55.9	
	comp=Z,4µm,20.0s						
I29M	Ogilvie Camp,	113.74	27	P	PKiKP	18 32 43.0	+0.3
	baz=260						
M30M	Minto, Yukon	113.93	30	IAMs_20	IAMs_20	19 16 12.2	
	comp=Z,6µm,22.0s						
M30M	Minto, Yukon	113.93	30	P	PKiKP	18 32 42.8	-0.3
	baz=260						
N31M	Braeburn, Yuko	114.22	32	IAMs_20	IAMs_20	19 18 04.0	
	comp=Z,8µm,21.0s						
N31M	Braeburn, Yuko	114.22	32	P	PKiKP	18 32 43.9	+0.3
	baz=261						
KARP	Karpathos	114.27	299	P	PKiKP	18 32 45.2	+0.6
JIS	Juneau Island	114.39	35	IAMs_20	IAMs_20	19 13 11.0	
	comp=Z,4µm,22.0s						
WHY	Whitehorse	114.52	33	P	PKiKP	18 32 44.6	+0.3
	baz=261						
EPYK	Eagle Plains	114.54	26	IAMs_20	IAMs_20	19 16 59.5	
	comp=Z,6µm,22.0s						
EPYK	Eagle Plains	114.54	26	P	PKPdf	18 32 44.0	-0.2
	baz=262						
CRAG	Craig	114.60	38	P	PKiKP	18 32 45.4	+1.0
	baz=260						
ZKR	Zakros	114.90	299	P	PKiKP	18 32 47.1	+1.4
M31M	Drury Creek, Y	114.98	31	IAMs_20	IAMs_20	19 20 10.0	
	comp=Z,3µm,21.0s						
M31M	Drury Creek, Y	114.98	31	P	PKiKP	18 32 44.8	-0.3
	baz=262						
WRAK	Wrangell Islan	115.18	37	IAMs_20	IAMs_20	19 22 15.2	
	comp=Z,7µm,18.0s						
TLCR		115.25	310	⇑P	PKiKP	18 32 47.6	+1.6
TIRR	Tirgusor	115.39	309	⇓P	PKiKP	18 32 47.8	+1.5
TIRR	Tirgusor	115.39	309	⇓P	PKKPbc	18 43 22.0	+0.9
TIRR	Tirgusor	115.39	309		PKPdf	18 32 45.5	-0.8
TIRR				IAMs_20	IAMs_20	19 28 08.3	
	comp=Z,6µm,21.0s						
TIRR	Tirgusor	115.39	309	⇓PKIKP	PKiKP	18 32 47.8	+1.5
TPGR	Topolog	115.46	309	⇓P	PKiKP	18 32 47.2	+0.7
TPGR	Topolog	115.46	309	⇑P	PKKPbc	18 43 21.5	+0.6
P33M	Teslin, Yukon	115.47	33		PKiKP	18 32 45.8	-0.4
P33M				PP	PP	18 33 42.7	-5.6
P33M				IAMs_20	IAMs_20	19 19 20.5	
	comp=Z,4µm,20.0s						
P33M	Teslin, Yukon	115.47	33	P	PKPdf	18 32 46.3	+0.2
	baz=263						
MILM	Milestii Mici	115.59	312	ePKP	PKiKP	18 32 48.0	+1.3
MILM	Milestii Mici	115.59	312	ePP	PP	18 33 53.0	+3.6
MILM				eSKS	SKSdf	18 39 34.0	-24
MILM				eSKKS	SKKSac	18 40 46.0	-3.7
MILM	Milestii Mici	115.59	312	ePS	PS	18 43 28.0	-1.9
MILM				eL	L	19 20 06.0	
MILM				LRM	MLR	19 38 11.0	
	comp=Z,1µm,17.0s						
MILM	Milestii Mici	115.59	312	ePKIKP	PKiKP	18 32 48.0	+1.3
MILM				e		18 33 53.0	
MILM				e		18 39 34.0	
MILM				ePS	PS	18 43 28.0	-1.9
KIS	Kishinev	115.60	312	ePP	PP	18 33 52.0	+2.5
KIS				eL	L	19 19 22.0	
KIS				LRM	MLR	19 38 35.0	
	comp=Z,500nm,17.0s						
TRQA	Tornquist	115.68	170	IAMs_20	IAMs_20	19 22 10.5	
	comp=Z,6µm,20.0s						
CFR	Carcaliu	115.72	310	⇓P	PKiKP	18 32 47.0	+0.1
CFR	Carcaliu	115.72	310	⇓P	PKKPbc	18 43 21.2	+1.2
CFR	Carcaliu	115.72	310	⇓PKIKP	PKiKP	18 32 47.0	+0.1
HARR	Harsova	115.77	309	⇓P	PKiKP	18 32 48.2	+1.1
HARR	Harsova	115.77	309	⇓PKIKP	PKiKP	18 32 48.2	+1.1
SANT	Santorini	115.81	300	⇑P	PKiKP	18 32 47.7	+0.2
SANT	Santorini	115.81	300		PKPdf	18 32 45.9	-1.6
PRD	Provadia	115.85	307	P	PKiKP	18 32 48.3	+1.0
APA	Apatity	115.87	335	⇓i PKIKP	PKiKP	18 32 45.9	-0.7
APA				i		18 33 50.0	
APA				i		18 39 35.0	
APA				pmax	pmax		
	comp=Z,19nm,1.3s						
SCTR	Scanteiesti	115.91	310	⇑P	PKiKP	18 32 48.7	+1.4
SCTR	Scanteiesti	115.91	310	⇓P	PKKPbc	18 43 18.7	-0.6
INK	Inuvik	115.97	24	PKP	PKiKP	18 32 47.0	+0.2
	comp=Z,7.8nm,0.5s,baz=309,slow=4.4,SNR=38						
INK	Inuvik	115.97	24		PKPdf	18 32 46.2	-0.5
INK				PP	PP	18 33 43.8	-7.6
INK	Inuvik	115.97	24	PKIKP	PKiKP	18 32 47.0	+0.2
INK	Inuvik	115.97	24	P	PKiKP	18 32 46.9	+0.2
	baz=266						
AKASG	Malin Array Be	115.98	316	PKP	PKPdf	18 32 47.3	0.0
	comp=Z,18nm,0.7s,baz=71,slow=2.5,SNR=43						
AKASG				PKKPbc	PKKPbc	18 43 18.5	-0.7
	comp=Z,1.4nm,0.6s,baz=281,slow=3.3,SNR=7.4						
AKBB	Malin Array Si	115.98	316		PKPdf	18 32 46.2	-1.0
AKBB	Malin Array Si	115.98	316	PKIKP	PKPdf	18 32 46.3	-1.0
IDI	Anoyia	116.00	298	⇓P	PKiKP	18 32 49.2	+1.3
IDI	Anoyia	116.00	298	P	PKiKP	18 32 48.8	+0.9
S34M	Telegraph Cree	116.05	36	P	PKiKP	18 32 47.7	+0.4
	baz=263						
VARL	Varlezi	116.06	311	⇑P	PKiKP	18 32 49.8	+2.2
SORM	Soroca	116.12	313	⇑P	PKPdf	18 32 47.6	0.0
SORM	Soroca	116.12	313	⇑P	PKKPbc	18 43 17.3	-1.3
SORM	Soroca	116.12	313	⇑PKIKP	PKPdf	18 32 47.6	0.0
GVD	Gavdhos	116.53	298	P	PKiKP	18 32 49.2	+0.3
RAZG	Razgrad	116.56	308	⇓P	PKiKP	18 32 49.4	+0.7
SMTH	Samothraki Isl	116.66	304	P	PKPdf	18 32 48.9	-0.1
DLBC	Dease Lake	116.69	35		PKPdf	18 32 47.9	-0.7
MHLO	Agia Marina, M	116.71	300	P	PKiKP	18 32 49.2	0.0
IMMV	Iera Moni Meta	116.76	298	P	PKiKP	18 32 49.9	+0.6
BISRR	Bisoca	116.78	310	⇑P	PKiKP	18 32 49.9	+0.8
BISRR	Bisoca	116.78	310	⇓P	PKKPbc	18 43 16.4	0.0
LIA	Limnos Island	116.81	304	P	PKiKP	18 32 49.3	+0.1
ISR	Istrita	116.82	309	⇑P	PKiKP	18 32 49.8	+0.6
ISR	Istrita	116.82	309	⇑PKIKP	PKiKP	18 32 49.8	+0.6
VRI	Vrincioaia	116.82	310	⇑P	PKPdf	18 32 48.2	-0.9
VRI	Vrincioaia	116.82	310	⇑P	PKKPbc	18 43 21.8	+5.7
VRI	Vrincioaia	116.82	310	⇑PKIKP	PKPdf	18 32 48.2	-0.9
SZH	Strazhica	116.92	307	P	PKiKP	18 32 49.8	+0.4
KDZ	Kurdzhali	116.98	305	P	PKPdf	18 32 49.3	-0.3
TESR	Tescani	116.98	311	⇑P	PKiKP	18 32 50.2	+0.8
NEHR	Nehoiu	117.05	310	⇑P	PKiKP	18 32 50.1	+0.5
BO01	Tunca	117.08	161		PKPdf	18 32 49.5	-0.6
BO01					PP	18 33 49.0	-10
SECR		117.14	309	⇓P	PKiKP	18 32 50.0	+0.2
COVR	Voineasa-Covas	117.18	310	⇑P	PKiKP	18 32 50.4	+0.6
MLR	Muntele Rosu	117.30	310	⇑P	PKiKP	18 32 50.4	+0.2
MLR	Muntele Rosu	117.30	310	⇓P	PKKPbc	18 43 15.2	+0.6
MLR	Muntele Rosu	117.30	310	SKKPbc	SKKPbc	18 47 04.5	+2.2
	comp=Z,4.7nm,0.9s,baz=71,slow=1.1,SNR=4.6						
MLR	Muntele Rosu	117.30	310		PKPdf	18 32 49.2	-1.0
MLR				PP	PP	18 33 58.9	-2.7
MLR				IAMs_20	IAMs_20	19 28 39.6	
	comp=Z,3µm,21.0s						
MLR	Muntele Rosu	117.30	310	⇑PKIKP	PKiKP	18 32 50.4	+0.2
MNK	Minsk	117.31	320	i PKIKP	PKPdf	18 32 49.3	-0.4
MNK				i		18 34 00.3	
MNK				i PPP	PPP	18 36 29.0	
MNK				i SP	SP	18 43 44.2	+1.6
MNK				i SS	SS	18 50 06.5	-4.1
MNK				i SSS	SSS	18 54 32.5	
MNK				pmax	pmax		
	comp=N,21nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,38nm,0.8s						
MNK				MLR	MLR		
	comp=E,39nm,24.0s						
MNK				MLR	MLR		
	comp=Z,2µm,28.0s						
MNK	Minsk	117.31	320	i PKP	PKPdf	18 32 49.4	-0.4
	comp=E,5.0nm,1.4s						
MNK				i PKP	PKPdf	18 32 49.4	-0.4
	comp=N,21nm,0.9s						
MNK				i PKP	PKPdf	18 32 49.4	-0.4
	comp=Z,38nm,0.8s,baz=276						
MNK				i PP	PP	18 34 00.3	-0.8
MNK				i PPP	PPP	18 36 29.0	
MNK				i SKS	SKSdf	18 39 34.2	-27
MNK				i SP	SP	18 43 44.3	+1.7
MNK				i SS	SS	18 50 06.6	-4.1
MNK				i SSS	SSS	18 54 32.5	
MNK				i LQ	LQ	19 16 11.2	
MNK				i LR	LR	19 19 09.9	
MNK				i LRM	MLR	19 21 31.7	
	comp=N,981nm,19.1s						
MNK				i LRM	MLR	19 21 39.5	
	comp=E,39nm,24.5s						
MNK				i LRM	MLR	19 21 52.3	
	comp=Z,2µm,27.7s						
PRAR	RASCA	117.41	312	⇑P	PKKPbc	18 43 19.8	+5.7
BIZ	Bicaz	117.42	311	⇓P	PKiKP	18 32 51.4	+1.2
BIZ	Bicaz	117.42	311	⇑P	PKKPbc	18 43 15.2	+1.2
ATHU	Athens Univers	117.47	301	P	PKPdf	18 32 50.1	-0.5
RZN	Rozhen	117.50	305	P	PKiKP	18 32 51.2	+0.4
OZUR		117.51	310	⇓P	PKPdf	18 32 50.3	-0.2
MT01	Popeta	117.52	160		PKPdf	18 32 51.0	0.0
MT01					PP	18 33 54.1	-7.5
KTHA	Kythira Island	117.67	299	P	PKiKP	18 32 51.3	+0.2
MT09	Talagante	117.68	160		PKiKP	18 32 51.6	+0.1
MT09					PP	18 33 52.8	-10
DOPR	Dopca	117.76	310	⇑P	PKiKP	18 32 51.8	+0.8
DOPR	Dopca	117.76	310	⇑P	PKKPbc	18 43 13.7	+0.9
KRND	KRANIDI	117.84	300	P	PKPdf	18 32 51.0	-0.3
VLI	Veliai	117.87	300	P	PKiKP	18 32 51.9	+0.5
KOKK	Kokkinochori,	117.87	304	P	PKPdf	18 32 51.0	-0.3
VILL	Villia	117.88	301	P	PKPdf	18 32 50.7	-0.7
VOIR		117.91	310	⇓P	PKiKP	18 32 51.7	+0.3
VOIR		117.91	310	⇓P	PKKPbc	18 43 13.0	+0.7
VOIR		117.91	310	⇓PKIKP	PKiKP	18 32 51.7	+0.3
NACGM	Naroch	117.99	320	⇓ePKP	PKiKP	18 32 52.0	+1.0
	baz=96						
JCC	Jacoby Creek,	118.04	56	IAMs_20	IAMs_20	19 18 11.3	
	comp=Z,6µm,20.0s						
IDID	Didziasalis	118.05	321	eP	PKiKP	18 32 52.0	+0.9
MT02	Curacav	118.12	160		PKPdf	18 32 51.9	-0.3
MT02				PP	PP	18 33 55.8	-10
BUR01	Bucovina Ar. S	118.12	312	⇑P	PKKPbc	18 43 12.5	+0.9
BURAR	Bucovina Array	118.12	312	⇑P	PKiKP	18 32 54.1	+2.4
BURAR	Bucovina Array	118.12	312	⇑PKIKP	PKiKP	18 32 54.1	+2.4
VLAD	Vladila	118.14	308	⇓P	PKiKP	18 32 53.7	+2.0
HOPEN	Hopen	118.20	345	ePKPdf	PKPdf	18 32 50.0	-0.9
HOPEN				ePP	PP	18 34 04.4	-2.3
HOPEN				eSS	SS	18 50 25.5	+4.5
HOPEN				IVMs_BB	IVMs_BB	19 15 58.0	
	comp=Z,894nm,3.5s						
ATAL	Atalanti	118.20	302	P	PKPdf	18 32 51.7	-0.3
XOR	Xorichti	118.21	303	P	PKPdf	18 32 51.9	-0.1
MMB	Musomiste	118.22	305	P	PKiKP	18 32 52.6	+0.6
KEV	Kevo	118.25	337		PKPdf	18 32 51.0	-0.1
KEV				IAMs_20	IAMs_20	19 30 11.5	
	comp=Z,3µm,21.0s						
KEV	Kevo	118.25	337	PKIKP	PKPdf	18 32 51.0	-0.1
KEV				MLR	MLR		
	comp=Z,3µm,21.0s						
VSU	Vasula	118.28	324	eP	PKiKP	18 32 52.4	+0.9
IIGN	Ignalina	118.35	321	eP	PKiKP	18 32 52.8	+1.1
PEL	Peldehue	118.36	160		PKiKP	18 32 52.7	0.0
PEL				IAMs_20	IAMs_20	19 29 08.8	
	comp=Z,4µm,19.0s						
PEL	Peldehue	118.36	160	PKIKP	PKiKP	18 32 52.7	0.0
PEL				MLR	MLR		
	comp=Z,4µm,19.0s						
MCCM	Marconi Confer	118.40	59	IAMs_20	IAMs_20	19 15 37.1	
	comp=Z,8µm,22.0s						
HOPS	Hopland Field	118.42	58	IAMs_20	IAMs_20	19 17 46.5	
	comp=Z,7µm,20.0s						
ISAL	Salakas	118.42	321	eP	PKiKP	18 32 53.1	+1.3
MPEP	Malo Peshtene	118.51	307	P	PKiKP	18 32 53.1	+0.6
J01E	Myrtle Point	118.52	53	P	PKPdf	18 32 52.1	-0.3
	baz=261						
L02F	Cave Junction	118.61	54	P	PKPdf	18 32 52.5	-0.2
	baz=260						
K02D	Willamette Mer	118.63	54	P	PKPdf	18 32 52.3	-0.5
	baz=261						
I02E	Swisshome, OR	118.73	52	IAMs_20	IAMs_20	19 17 20.2	
	comp=Z,7µm,21.0s						
I02E	Swisshome, OR	118.73	52	P	PKiKP	18 32 52.9	+0.1
	baz=261						
FINES	FINESS Array B	118.73	328	PKP	PKiKP	18 32 52.4	+0.1
	comp=Z,28nm,0.6s,baz=98,slow=3.2,SNR=94						
FINES				PKKPbc	PKKPab	18 43 08.7	-0.2
	comp=Z,2.6nm,0.6s,baz=260,slow=1.8,SNR=11						
FINES				SKKPbc	SKKPbc	18 47 00.6	+1.9
	comp=Z,2.1nm,0.9s,baz=316,slow=8.0,SNR=3.1						
FINES	FINESS Array B	118.73	328		PKPdf	18 32 52.1	-0.1
KKB	Krupnik	118.74	305	P	PKiKP	18 32 53.5	+0.5
A36M	Sachs Harbour	118.75	20		PKPdf	18 32 51.2	-0.7
A36M				IAMs_20	IAMs_20	19 22 10.9	
	comp=Z,7µm,22.0s						
A36M	Sachs Harbour	118.75	20	P	PKPdf	18 32 51.3	-0.7
	baz=276						
KLV	Kalavryta, Ach	118.75	301	P	PKiKP	18 32 53.5	+0.3
VTS	Vitosha	118.75	306	⇑P	PKiKP	18 32 53.2	+0.1
VTS	Vitosha	118.75	306	⇓P	PKKPbc	18 43 10.1	+0.8
VTS	Vitosha	118.75	306		PKPdf	18 32 52.6	-0.6
VTS	Vitosha	118.75	306	⇑PKIKP	PKiKP	18 32 53.2	+0.1
VTS	Vitosha	118.75	306	P	PKPdf	18 32 53.1	0.0
ITM	Ithomi	118.75	300	P	PKiKP	18 32 53.8	+0.6
KNT	Kendrikon	118.75	305	P	PKPdf	18 32 52.6	-0.4
VA03	San Esteban	118.76	160		PKPdf	18 32 50.5	-3.1
ARA0	ARCESS Array S	118.78	337	ePKPdf	PKiKP	18 32 52.4	+0.2
ARCES	ARCESS Array B	118.78	337	PKP	PKiKP	18 32 52.5	+0.3
	comp=Z,23nm,0.6s,baz=148,slow=1.7,SNR=76						
ARCES				PKKPbc	PKKPab	18 43 05.3	-3.2
	comp=Z,3.6nm,0.8s,baz=289,slow=2.8,SNR=5.6						
AGG	Agios Georgios	118.80	302	P	PKPdf	18 32 52.9	-0.3
LOT	Lotru	118.80	309	⇓P	PKiKP	18 32 53.2	+0.1
LIT	Litokhoron	118.87	303	P	PKPdf	18 32 53.0	-0.3
MAKR	Makrakomi, Fth	118.95	302	P	PKiKP	18 32 54.2	+0.7
EFP	Efpalio	119.01	301	P	PKiKP	18 32 54.8	+1.2
I03D	Drain, OR	119.02	53	P	PKiKP	18 32 53.7	+0.3
	baz=261,SNR=5.5						
VAY	Valandovo	119.03	305	eP	PKPdf	18 32 52.6	-0.8
ANX	Ano Chora	119.03	302	P	PKiKP	18 32 55.0	+1.2
DRO	Drossia	119.07	301	P	PKPdf	18 32 53.6	-0.1
HUMO	Hull Mountain	119.14	54	IAMs_20	IAMs_20	19 19 02.2	
	comp=Z,7µm,20.0s						
THL	Klokotos Trika	119.14	303	P	PKiKP	18 32 53.8	0.0
LVV	L'vov	119.17	314	ePKIKP	PKiKP	18 32 54.0	+0.5
LVV				MLR	MLR		
	comp=Z,1µm,25.0s						
YBH	Yreka Blue Hor	119.18	55	PKP	PKPdf	18 32 53.9	0.0
	comp=Z,5.2nm,0.8s,baz=163,slow=3.7,SNR=8.6						
YBH	Yreka Blue Hor	119.18	55	IAMs_20	IAMs_20	19 21 04.3	
	comp=Z,5µm,20.0s						
COR	Corvallis	119.18	52	IAMs_20	IAMs_20	19 17 09.2	
	comp=Z,6µm,22.0s						
G03D	McMinnville, O	119.30	51	IAMs_20	IAMs_20	19 15 37.2	
	comp=Z,9µm,22.0s						
HAMF	Hammerfest	119.31	338	ePKPdf	PKPdf	18 32 53.0	-0.1
BLKB	Belogradchik	119.31	307	⇓P	PKiKP	18 32 54.3	+0.3
BLKB	Belogradchik	119.31	307	⇑P	PKKPbc	18 43 07.8	+0.7
LPA	La Plata	119.34	173	PKIKP	PKiKP	18 32 59.2	+4.7
LPA				PP	PP	18 34 11.1	-2.9
LPA				pPP		18 34 21.4	
LPA				SKIKS		18 36 30.2	
LPA				PPP	PPP	18 36 55.0	
LPA				SKS	SKSdf	18 39 49.7	-16
LPA				SDIFF	Sdif	18 42 05.5	-0.4
LPA				PS	PS	18 44 05.0	+2.2
LPA				PSP	PSP	18 45 27.0	
LPA				SS	SS	18 50 28.1	-6.5
LPA				SSS	SSS	18 54 53.3	

C36M	Paulatuk	119.39	23	IAMs_20	IAMs_20	19 25 35.1	
	comp=Z,3µm,20.0s						
C36M	Paulatuk	119.39	23	P	PKiKP	18 32 53.8	+0.4
	baz=275						
KZN	Kozani	119.45	303	P	PKPdf	18 32 54.2	-0.2
DEV	Deva	119.47	310	⇑P	PKiKP	18 32 54.3	+0.1
DEV	Deva	119.47	310	⇑PKIKP	PKiKP	18 32 54.3	+0.1
GZR	Gura Zlata	119.49	309	⇓P	PKiKP	18 32 54.6	+0.2
GZR	Gura Zlata	119.49	309	⇓P	PKKPbc	18 43 07.1	+0.6
GZR	Gura Zlata	119.49	309	⇓PKIKP	PKiKP	18 32 54.6	+0.2
MEF	Metsahovi	119.54	326	eP	PKPdf	18 32 53.7	-0.1
L04D	Klamath Falls	119.55	54	IAMs_20	IAMs_20	19 19 06.2	
	comp=Z,6µm,20.0s						
L04D	Klamath Falls	119.55	54	P	PKPdf	18 32 54.2	-0.5
	baz=261						
DJES	Djerdap	119.57	308	⇑P	PKiKP	18 32 55.0	+0.5
H04D	Lebanon	119.58	52	IAMs_20	IAMs_20	19 23 58.6	
	comp=Z,5µm,19.0s						
H04D	Lebanon	119.58	52	P	PKiKP	18 32 54.5	0.0
	baz=262,SNR=6.2						
KTK1	Kautokeino	119.63	337	ePKPdf	PKPdf	18 32 53.7	-0.1
KTK1				eSS	SS	18 50 40.8	+1.0
KTK1				IVMs_BB	IVMs_BB	19 23 47.3	
	comp=Z,468nm,4.0s						
PABE	Paberze	119.64	321	eP	PKiKP	18 32 54.8	+0.6
HERR	Herculane	119.67	309	⇓P	PKPdf	18 32 54.5	-0.1
HERR	Herculane	119.67	309	⇑P	PKKPbc	18 43 05.5	-0.3
SPA0	Spitsbergen Ar	119.68	347	ePKPdf	PKiKP	18 32 54.1	+0.3
SPA0				IVmB_BB		18 32 56.1	
	comp=Z,1µm,2.1s						
SPA0				ePP	PP	18 34 18.6	+1.7
SPA0				eSP	SP	18 44 03.3	+0.5
SPA0				eSS	SS	18 50 39.1	-1.0
SPA0				IVMs_BB	IVMs_BB	19 25 48.2	
	comp=Z,964nm,21.0s						
SPITS	Spitsbergen Ar	119.68	347	PKIKP	PKPdf	18 32 52.7	-1.0
KPRO	Kipourio	119.70	303	P	PKiKP	18 32 55.1	+0.1
D03D	Eldon	119.71	48	P	PKiKP	18 32 54.9	+0.2
	baz=264,SNR=6.1						
I04A	Tendick Farm,	119.71	53	P	PKPdf	18 32 54.8	0.0
	baz=262,SNR=6.7						
DRGR		119.71	311	⇑P	PKiKP	18 32 55.8	+1.0
DRGR		119.71	311	⇓P	PKKPbc	18 43 06.6	+0.8
DRGR		119.71	311	⇑PKIKP	PKiKP	18 32 55.8	+1.0
ORV	Oroville	119.72	58		PKPdf	18 32 53.4	-1.5
ORV					PP	18 34 10.4	-7.9
ORV				IAMs_20	IAMs_20	19 16 51.9	
	comp=Z,3µm,22.0s						
ORV	Oroville	119.72	58	PKIKP	PKPdf	18 32 53.4	-1.5
ORV				MLR	MLR		
	comp=Z,3µm,22.0s						
MTSE	Matsula	119.82	325	eP	PKiKP	18 32 55.0	+0.5
FNA	Florina	119.83	304	P	PKPdf	18 32 55.1	0.0
J04D	Umpqua Nationa	119.85	53	P	PKiKP	18 32 55.4	0.0
	baz=262,SNR=12						
D04E	Lakebay	119.88	49	P	PKPdf	18 32 54.8	-0.1
	baz=264						
E04D	Cinebar	119.95	49	P	PKPdf	18 32 55.0	-0.1
	baz=263						
SKO	Skopje	119.97	305	eP	PKiKP	18 32 55.4	+0.1
KWP	Kalwaria Pacla	120.00	314	ePKPdf	PKiKP	18 32 55.8	+0.6
KWP				eSKSac	SKSac	18 39 52.5	+1.3
KWP				eL	L	19 35 01.2	
	comp=Z,3µm,23.0s						
EVGI	Lefkada island	120.01	301	P	PKiKP	18 32 55.8	+0.3
BOVS	Bovan	120.01	307	⇑P	PKPdf	18 32 55.2	-0.1
BOVS	Bovan	120.01	307	⇑P	PKKPbc	18 43 05.4	+0.9
NEST	Nestorio	120.02	303	P	PKPdf	18 32 55.6	+0.1
K04D	Chiloquin, OR	120.02	54	P	PKPdf	18 32 54.8	-0.7
	baz=262						
SUW	Suwalki	120.02	319	ePKPdf	PKPdf	18 32 54.8	-0.2
SUW				eL	L	19 32 42.7	
	comp=Z,3µm,23.0s						
SUW	Suwalki	120.02	319	eP	PKiKP	18 32 55.6	+0.6
BJO1	Bjornoya	120.05	343	ePKPdf	PKiKP	18 32 54.6	0.0
BJO1				ePP	PP	18 34 17.4	-2.1
BJO1				IVMs_BB	IVMs_BB	19 21 43.3	
	comp=Z,1µm,3.0s						
CO02	Combarbal	120.07	159		PKPdf	18 32 55.9	-0.2
MDVR	Moldovita	120.16	308	⇓P	PKiKP	18 32 56.5	+0.8
UZH	Uzhgorod	120.18	313	i PKIKP	PKiKP	18 32 56.2	+0.7
UZH				e		18 39 47.0	
UZH				i PS	PS	18 44 06.0	-5.4
UZH				MLR	MLR		
	comp=N,300nm,19.0s						
UZH				MLR	MLR		
	comp=E,300nm,19.0s						
UZH				MLR	MLR		
	comp=Z,200nm,19.0s						
SHEL	Horse Pasture	120.21	231	IAMs_20	IAMs_20	19 20 12.2	
	comp=Z,4µm,18.0s						
HSPB	Hornsund (broa	120.21	346	ePKPdf	PKiKP	18 32 55.1	+0.2
HSPB	Hornsund (broa	120.21	346	ePKPdf	PKiKP	18 32 55.0	+0.2
KOLS	Kolonicke sedl	120.22	313	ePKIKP	PKiKP	18 32 57.3	+1.6
KOLS	Kolonicke sedl	120.22	313	ePKP	PKiKP	18 32 57.3	+1.6
KBN	Korca	120.25	304	P	PKiKP	18 32 56.3	+0.3
KBS	Kingsbay	120.25	349	i P	PKPdf	18 32 53.4	-1.4
KBS	Kingsbay	120.25	349	ePKPdf	PKiKP	18 32 55.9	+1.0
KBS				IVmB_BB		18 32 56.4	
	comp=Z,196nm,1.2s						
KBS				ePP	PP	18 34 22.8	+2.0
KBS				eSS	SS	18 50 50.4	+3.0
KBS				IVMs_BB	IVMs_BB	19 22 28.8	
	comp=Z,1µm,33.3s						
CMB	Columbia Colle	120.31	59	IAMs_20	IAMs_20	19 22 21.7	
	comp=Z,6µm,19.0s						
LSK	Leskovik	120.31	303	P	PKPdf	18 32 55.8	-0.3
OHR	Ohrid	120.31	304	eP	PKPdf	18 32 56.0	-0.1
BZS	Buzias	120.33	309	⇑P	PKKPbc	18 43 04.3	+0.9
SIRR	Siria	120.37	310	⇑P	PKiKP	18 32 56.3	+0.2
IGT	Igoumenitsa	120.41	302	P	PKiKP	18 32 56.7	+0.4
J05D	Fort Rock, OR	120.48	53	P	PKiKP	18 32 56.8	+0.3
	baz=262,SNR=21						
I05D	Terrebonne, OR	120.55	52	P	PKiKP	18 32 57.1	+0.6
	baz=263,SNR=7.9						
JETT	Jettan, Norway	120.56	337	ePKPdf	PKiKP	18 32 56.1	+0.4
SLIT	Slitere, Latvi	120.62	323	eP	PKPdf	18 32 55.7	-0.2
F05D	White Salmon	120.64	50	IAMs_20	IAMs_20	19 16 52.7	
	comp=Z,8µm,22.0s						
F05D	White Salmon	120.64	50	P	PKiKP	18 32 57.0	+0.4
	baz=264						
G05D	Wamic, OR	120.67	51	P	PKiKP	18 32 57.3	+0.6
	baz=264						
CRVS	Cervenica-Dubn	120.76	313	ePKIKP	PKiKP	18 32 57.5	+0.8
CRVS				e		18 34 29.6	
CRVS	Cervenica-Dubn	120.76	313	ePKP	PKiKP	18 32 57.5	+0.8
CRVS				ePP	PP	18 34 29.6	+4.4
PBUR	Paburge	120.81	322	eP	PKPdf	18 32 56.0	-0.3
RAF	Rauma	120.82	327	eP	PKPdf	18 32 55.3	-1.0
MOD	Modoc Plateau	120.98	55	IAMs_20	IAMs_20	19 19 33.1	
	comp=Z,4µm,20.0s						
TRO	Tromso	121.06	338	ePKPdf	PKPdf	18 32 56.0	-0.5
TRO				eSS	SS	18 50 58.2	+0.1
TRO				IVMs_BB	IVMs_BB	19 15 24.2	
	comp=Z,660nm,3.6s						
GO04	Tololo Observa	121.08	159		PKPdf	18 32 56.8	-1.5
SJES	Sjenica	121.22	307	⇑iP	PKiKP	18 32 58.6	+0.7
DIVS	Divibare	121.30	308	⇑iP	PKiKP	18 32 58.4	+0.4
BEL	Belsk	121.37	317	ePKPdf	PKiKP	18 32 59.0	+1.2
BEL				eSKSac	SKSac	18 39 54.3	-1.4
FRGS	Fruska Gora	121.54	309	⇓P	PKiKP	18 32 59.0	+0.6
FRGS	Fruska Gora	121.54	309	⇑iP	PKiKP	18 32 58.4	0.0
NIE	Niedzica	121.55	314	ePKPdf	PKiKP	18 32 59.8	+1.5
PDG	Podgorica	121.64	306	eP	PKPdf	18 32 56.6	-1.8
DRME	Dracevica, Mon	121.66	305	⇑iP	PKiKP	18 32 58.8	+0.1
TEKS	Tekeris	121.68	308	eP	PKPdf	18 32 57.6	-0.9
RUDO	Rudo	121.69	307	eP	PKPdf	18 32 58.4	-0.2
BBLS	Lazići	121.69	307	eP	PKiKP	18 32 59.2	+0.4
PSZ	Piszkesteto	121.72	312	⇓P	PKiKP	18 32 59.4	+0.7
PSZ	Piszkesteto	121.72	312	⇓PKIKP	PKiKP	18 32 59.4	+0.7
AAL	Aland	121.74	326	eP	PKPdf	18 32 58.0	0.0
OJC	Ojcow	121.92	315	ePKPdf	PKPdf	18 32 57.4	-1.4
OJC				eSKSac	SKSac	18 39 58.9	+1.2
OJC				eL	L	19 36 07.0	
	comp=Z,2µm,22.4s						
UPM	Unac-Piva	121.98	306	eP	PKPdf	18 32 58.6	-0.8
NVAR	Mina Array Bea	121.99	59	PKP	PKiKP	18 33 01.1	+1.4
	comp=Z,22nm,0.8s,baz=238,slow=3.0,SNR=46						
NVAR				PKKPbc	PKKPbc	18 42 57.9	+0.7
	comp=Z,2.0nm,0.7s,baz=102,slow=3.1,SNR=6.5						
LANS	Liptovska Anna	122.08	313	ePKIKP	PKiKP	18 33 00.8	+1.5
LANS	Liptovska Anna	122.08	313	ePKP	PKiKP	18 33 00.8	+1.5
LCO	Las Campanas	122.19	159	IAMs_20	IAMs_20	19 28 54.1	
	comp=Z,4µm,20.0s						
HCY	Herceg Novi	122.20	305	eP	PKPdf	18 32 59.0	-0.6
BRY	Bratogost	122.22	306	eP	PKPdf	18 32 59.7	-0.1
WVOR	Wild Horse Val	122.28	55	IAMs_20	IAMs_20	19 20 54.3	
	comp=Z,8µm,20.0s						
B08A	Colville Reser	122.29	48		PKPdf	18 32 57.6	-2.0
B08A				PP	PP	18 34 34.1	-1.5
TREB	Trebinje	122.33	306	eP	PKPdf	18 32 57.7	-2.1
NOR	Nord	122.43	354	i P	PKPdf	18 32 57.9	-1.1
MORH	Mrgy, Hungar	122.45	310	⇑P	PKiKP	18 33 01.2	+1.2
MORH	Mrgy, Hungar	122.45	310	eP	PKiKP	18 33 00.1	0.0
VYHS	Vyhne	122.46	313	ePKIKP	PKiKP	18 33 00.6	+0.5
VYHS				e		18 34 40.8	
VYHS	Vyhne	122.46	313	ePKP	PKiKP	18 33 00.6	+0.5
VYHS				ePP	PP	18 34 40.8	+4.0
MONP2	Monument Peak	122.54	66	P	PKiKP	18 33 01.8	+0.8
	baz=259,SNR=10						
PFO	Pinyon Flats O	122.64	65	P	PKiKP	18 33 02.0	+0.9
	baz=259,SNR=6.1						
TPFO	Pinon Flats	122.65	65	P	PKiKP	18 33 02.0	+0.9
	baz=259,SNR=6.2						
STEI	Steigen	122.72	336	ePKPdf	PKiKP	18 33 00.1	+0.2
STEI				ePP	PP	18 34 36.9	-0.8
KOLL	Kolacno	122.76	313	ePKP	PKiKP	18 33 01.4	+0.8
SRO	Srobarova	122.78	312	ePKIKP	PKiKP	18 33 02.3	+1.6
SRO	Srobarova	122.78	312	ePKP	PKiKP	18 33 02.3	+1.6
FAUS	Fauske	122.82	335	ePKPdf	PKiKP	18 33 00.2	+0.1
STON	Ston	122.83	306	eP	PKiKP	18 33 01.5	+0.6
PLTB	Pedras Altas	122.83	176	eP	PKiKP	18 33 01.7	+0.2
OKC	Ostrava-Krasne	122.97	314	ePKIKP	PKiKP	18 33 01.2	+0.2
OKC				MLR	MLR		
	comp=Z,800nm,25.6s						
OKC	Ostrava-Krasne	122.97	314	ePKPDF	PKiKP	18 33 01.2	+0.2
OKC				AMS	AMS	19 24 00.0	
	comp=Z,800nm,25.6s						
TIP	Timpagrande	123.10	301	⇑P	PKiKP	18 33 02.2	+0.5
MAUC	Maruska	123.17	314	ePKPDF	PKiKP	18 33 02.3	+0.8
MAUC				AMS	AMS	19 24 20.0	
	comp=Z,2µm,31.8s						
JAVC	Velka Javorina	123.25	313	ePKIKP	PKiKP	18 33 03.0	+1.3
LOF	Lofoten	123.29	336	ePKPdf	PKPdf	18 33 00.8	0.0
LOF				IVMs_BB	IVMs_BB	19 24 18.9	
	comp=Z,452nm,3.4s						
SRKY	Kupres RS	123.32	307	eP	PKiKP	18 33 02.1	+0.1
MATE	Matera	123.33	303	⇑P	PKPdf	18 32 51.7	-10
MORC	Moravsky Berou	123.36	314	⇑P	PKiKP	18 33 03.3	+1.4
MORC	Moravsky Berou	123.36	314	⇑PKIKP	PKiKP	18 33 03.3	+1.4
BLY	Banja Luka	123.36	308	⇑iP	PKiKP	18 33 02.1	+0.2
TPNV	Topopah Spring	123.38	61	P	PKiKP	18 33 02.6	+0.2
	baz=261						
MOR8	Moi Rana	123.41	334	ePKPdf	PKPdf	18 33 01.2	0.0
MGRS	Mrkonjic Grad	123.41	308	eP	PKPdf	18 33 01.7	-0.2
BMO	Blue Mountains	123.46	52	IAMs_20	IAMs_20	19 18 08.5	
	comp=Z,5µm,22.0s						
MODS	Modra-Piesok	123.50	312	ePKIKP	PKiKP	18 33 02.7	+0.6
MODS	Modra-Piesok	123.50	312	ePKP	PKiKP	18 33 02.7	+0.6
MODS				e		18 42 51.8	
GKP	Gorka Klasztor	123.55	318	ePKPdf	PKPdf	18 33 01.3	-0.5
GKP	Gorka Klasztor	123.55	318	eP	PKiKP	18 33 02.7	+0.7
VIKU	Vikbolandet	123.55	325	eP	PKiKP	18 33 02.1	+0.2
ZST	Bratislava	123.61	312	ePKIKP	PKiKP	18 33 02.8	+0.5
ZST	Bratislava	123.61	312	ePKP	PKiKP	18 33 02.8	+0.5
NEW	Newport	123.76	48	PKP	PKPdf	18 33 01.5	-1.0
	comp=Z,2.7nm,0.6s,baz=277,slow=4.9,SNR=6.8						
NEW	Newport	123.76	48	IAMs_20	IAMs_20	19 23 35.0	
	comp=Z,7µm,19.0s						
NEW	Newport	123.76	48	P	PKiKP	18 33 02.7	0.0
	baz=268						
KONS	Konsvik	123.85	334	ePKPdf	PKiKP	18 33 02.4	+0.2
KRLC	Kraliky	123.86	314	ePKIKP	PKiKP	18 33 03.0	+0.2
KRLC				MLR	MLR		
	comp=Z,1µm,18.9s						
KRLC	Kraliky	123.86	314	ePKPDF	PKiKP	18 33 03.0	+0.2
KRLC				AMS	AMS	19 28 00.0	
	comp=Z,1µm,18.9s						
CUC	Castrocucco	123.93	302		PKPdf	18 33 00.7	-2.3
VRAC	Vranov	123.97	314	⇑P	PKiKP	18 33 04.3	+1.3
VRAC	Vranov	123.97	314	⇑PKIKP	PKiKP	18 33 04.3	+1.3
VRAC	Vranov	123.97	314	ePKIKP	PKiKP	18 33 03.6	+0.6
VRAC				e		18 42 50.4	
KRUC	Moravsky	124.10	313	ePKIKP	PKiKP	18 33 03.7	+0.4
KRUC				e		18 42 49.3	
R11A	Troy Canyon, C	124.10	60	P	PKiKP	18 33 04.5	+0.7
	baz=263,SNR=15						
RONA	Rosalia, Austr	124.13	312	i P	PKiKP	18 33 03.3	-0.1
	SNR=14						
RONA				i P	PKKPbc	18 42 49.3	+0.5
RONA				i S	SKKPbc	18 46 37.8	-2.3
DPC	Dobruska-Polom	124.15	315	ePKIKP	PKiKP	18 33 04.2	+0.8
DPC				MLR	MLR		
	comp=Z,1µm,26.8s						
DPC	Dobruska-Polom	124.15	315	ePKPDF	PKiKP	18 33 04.2	+0.8
DPC				AMS	AMS	19 24 20.0	
	comp=Z,1µm,26.8s						
YKA	Yellowknife Ar	124.16	30	PKP	PKiKP	18 33 03.0	0.0
	comp=Z,43nm,0.9s,baz=284,slow=1.8,SNR=30						
YKA				PKKPbc	PKKPbc	18 42 47.8	-1.1
	comp=Z,1.6nm,0.6s,baz=93,slow=5.2,SNR=19						
YKA	Yellowknife Ar	124.16	30		PKPdf	18 33 01.0	-1.7
YKA	Yellowknife Ar	124.16	30	PKIKP	PKiKP	18 33 03.0	0.0
KSP	Ksiaz	124.17	315	ePKPdf	PKiKP	18 33 04.0	+0.7
KSP				eSKSac	SKSac	18 40 03.8	-1.3
KSP				eL	L	19 34 04.8	
CPSB	Cacapava Do Su	124.19	177	eP	PKiKP	18 33 04.4	+0.2
OSTC	Ostas	124.22	315	ePKPDF	PKiKP	18 33 03.8	+0.3
OSTC				AMS	AMS	19 28 10.0	
	comp=Z,1µm,21.3s						
CHVC	Chvalec	124.32	315	ePKPDF	PKiKP	18 33 04.3	+0.6
CHVC				AMS	AMS	19 28 20.0	
	comp=Z,1µm,19.2s						
UPC	Upice	124.35	315	ePKIKP	PKiKP	18 33 04.6	+0.9
UPC				MLR	MLR		
	comp=Z,2µm,21.5s						
UPC	Upice	124.35	315	ePKPDF	PKiKP	18 33 04.6	+0.9
UPC				AMS	AMS	19 28 10.0	
	comp=Z,2µm,21.5s						
MFID	Camas Ranch	124.42	54	IAMs_20	IAMs_20	19 19 51.0	
	comp=Z,8µm,21.0s						
CONA	Conrad Observa	124.43	312	i P	PKPdf	18 33 03.9	+0.1
	comp=Z,28nm,0.9s,SNR=14						
CONA				eP	PKKPbc	18 42 48.1	+0.4
	comp=Z,22nm,1.5s						
CONA				eS	SKKPbc	18 46 36.1	-3.1
	comp=Z,21nm,1.5s						
ELK	Elko	124.63	57	IAMs_20	IAMs_20	19 21 04.9	
	comp=Z,7µm,21.0s						
CRES	Cresnjev	124.64	309	⇑iP	PKiKP	18 33 06.0	+1.5
ARSA	Arzberg	124.64	311	i P	PKiKP	18 33 04.5	0.0
	comp=Z,34nm,0.8s,SNR=15						
ARSA				i P	PKKPab	18 42 45.4	+1.1
	comp=Z,4.8nm,1.0s						
ARSA				eS	SKKPbc	18 46 32.3	-6.0
	comp=Z,12nm,1.2s						
ITQB	Itaqui	124.66	173	eP	PKiKP	18 33 05.7	+0.6
TREC	Trest	124.69	314	ePKIKP	PKiKP	18 33 04.7	+0.2
TREC				MLR	MLR		
	comp=Z,2µm,26.6s						
TREC	Trest	124.69	314	ePKPDF	PKiKP	18 33 04.7	+0.2
TREC				AMS	AMS	19 24 30.0	
	comp=Z,2µm,26.6s						
NSS	Namsos	124.79	332	ePKPdf	PKiKP	18 33 04.1	0.0
BSD	Bornholm Skovb	124.82	321	eP	PKiKP	18 33 05.1	+0.7
BSD	Bornholm Skovb	124.82	321	i P	PKPdf	18 33 03.6	-0.5
PERS	Pernice	124.91	310	i PKPdf	PKiKP	18 33 05.1	+0.1
PERS				eSKSac	SKSac	18 40 06.8	-1.0
SOKA	Soboth	124.97	310	i P	PKiKP	18 33 05.2	0.0
	comp=Z,70nm,1.0s,SNR=33						
SOKA				eS	SKKPbc	18 46 28.7	-8.6
	comp=Z,12nm,1.6s						
PVCC	Panska Ves	125.27	315	ePKIKP	PKiKP	18 33 06.5	+1.0
PVCC				MLR	MLR		
	comp=Z,2µm,26.2s						
PVCC	Panska Ves	125.27	315	ePKPDF	PKiKP	18 33 06.5	+1.0
PVCC				AMS	AMS	19 25 30.0	
	comp=Z,2µm,26.2s						
DEL	Delary	125.28	322	eP	PKiKP	18 33 05.9	+0.6
OBKA	Obir	125.30	310	i P	PKiKP	18 33 05.9	0.0
	comp=Z,35nm,0.9s,SNR=9.6						
OBKA				eS	SKKPbc	18 46 29.0	-7.1
	comp=Z,12nm,1.6s						
LJU	Ljubljana	125.30	310	⇑iP	PKiKP	18 33 06.1	+0.3
LJU	Ljubljana	125.30	310	i PKPdf	PKiKP	18 33 06.3	+0.5
PRU	Pruhonice	125.30	314	ePKIKP	PKiKP	18 33 06.0	+0.4
PRU				MLR	MLR		
	comp=Z,1µm,20.7s						
PRU	Pruhonice	125.30	314	ePKPDF	PKiKP	18 33 06.0	+0.4
PRU				AMS	AMS	19 24 00.0	
	comp=Z,1µm,20.7s						
214A	Organ Pipe Nat	125.36	68	P	PKiKP	18 33 06.9	+0.5
	baz=260						
CEY	Cerknica	125.36	309	⇑iP	PKiKP	18 33 05.8	-0.1
CNLB	Canela	125.37	179	eP	PKiKP	18 33 06.6	0.0
HLID	Hailey	125.46	54	P	PKiKP	18 33 07.3	+0.9
	baz=267,SNR=31						
CKRC	Cesky Krumlov	125.47	313	ePKPDF	PKiKP	18 33 06.0	0.0
MOA	Molln	125.50	312	i P	PKPdf	18 33 05.7	0.0
	comp=Z,28nm,0.8s,SNR=23						
MOA				eS	SKKPbc	18 46 30.1	-5.3
	comp=Z,12nm,1.5s						
SKDS	Skadanscina	125.64	309	⇑iP	PKPdf	18 33 05.9	-0.2
BRG	Berggiesshubel	125.66	315	ePKP	PKiKP	18 33 07.1	+0.8
BRG				Amp		18 33 08.4	
	comp=Z,43nm,1.1s						
BRG				ex	x	18 34 05.3	
BRG				Amp		18 34 06.2	
	comp=Z,16nm,1.3s						
BRG				PP	PP	18 34 53.4	-4.7
BRG				Amp		18 34 54.4	
	comp=Z,17nm,1.2s						
BRG				SKP		18 36 25.9	
BRG				Amp		18 36 26.8	
	comp=Z,32nm,1.7s						
BRG				SKKP		18 46 22.5	
BRG				Amp		18 46 24.2	
	comp=Z,19nm,1.5s						
BRG	Berggiesshubel	125.66	315	ePKIKP	PKiKP	18 33 07.1	+0.8
BRG				e		18 46 34.0	
BRG				pmax	pmax		
	comp=Z,43nm,1.1s						
BRG				pmax	pmax		
	comp=Z,16nm,1.3s						
BRG				pmax	pmax		
	comp=Z,17nm,1.2s						
BRG				pmax	pmax		
	comp=Z,32nm,1.7s						
BRG				pmax	pmax		
	comp=Z,19nm,1.5s						
NC303	NORSAR Array S	125.80	328		PKPdf	18 33 04.0	-1.9
RES	Resolute Bay	125.80	13		PKPdf	18 33 04.9	-0.6
RES	Resolute Bay	125.80	13	PKIKP	PKPdf	18 33 04.9	-0.6
NC602	NORSAR Array S	125.82	328	ePKPdf	PKiKP	18 33 06.3	0.0
TBLU	Trondheim	125.84	331	ePKPdf	PKiKP	18 33 06.4	+0.1
CADS	Cadrg	125.85	310	i PKPdf	PKPdf	18 33 06.7	+0.2
CADS				eSKSac	SKSac	18 40 10.4	-0.3
GERES	GERESS Array B	125.87	313	PKP	PKiKP	18 33 07.2	+0.3
	comp=Z,21nm,0.7s,baz=90,slow=1.5,SNR=76						
GERES				PKKPbc	PKKPab	18 42 40.2	+1.1
	comp=Z,0.5nm,0.5s,baz=253,slow=3.0,SNR=5.0						
GERES				SKKPbc	SKKPbc	18 46 31.8	-2.6
	comp=Z,1.6nm,0.9s,baz=250,slow=2.9,SNR=4.6						
MSO	Missoula	125.89	50		PKPdf	18 33 04.7	-2.0
MSO	Missoula	125.89	50	P	PKiKP	18 33 07.1	0.0
	baz=270						
NB2	NORSAR Subarra	125.91	328	PKPdf	PKPdf	18 33 06.0	-0.1
	comp=Z,45nm,1.0s,baz=78,slow=2.0						
NB2	NORSAR Subarra	125.91	328	PKPdf	PKPdf	18 33 06.0	-0.1
	baz=78,slow=2.0						
NOA	NORSAR Array B	125.91	328	PKP	PKiKP	18 33 06.5	0.0
	comp=Z,21nm,0.9s,baz=262,slow=3.1,SNR=54						
NOA				PP	PP	18 35 00.2	+0.7
	comp=Z,2.2nm,0.8s,baz=77,slow=7.6,SNR=2.3						
NOA				SKKPbc	SKKPbc	18 46 31.6	-3.3
	comp=Z,2.5nm,1.1s,baz=245,slow=4.5,SNR=3.2						
MYKA	Terra Mystica	125.92	310	i P	PKPdf	18 33 06.8	+0.2
	comp=Z,26nm,0.7s,SNR=12						
MYKA				eS	SKKPbc	18 46 27.0	-7.0
	comp=Z,11nm,1.1s						
BIOA	Bad Ischl, Aus	125.93	312	i P	PKPdf	18 33 06.5	-0.1
	SNR=14						
BIOA				eS	SKKPbc	18 46 24.2	-10
KHC	Kasperske Hory	125.95	313	ePKIKP	PKiKP	18 33 07.7	+0.7
KHC				MLR	MLR		
	comp=Z,1µm,21.0s						
KHC	Kasperske Hory	125.95	313	ePKPDF	PKiKP	18 33 07.7	+0.7
KHC				AMS	AMS	19 28 00.0	
	comp=Z,1µm,21.0s						
SLBS	Sierra La Lagu	126.01	78	IAMs_20	IAMs_20	19 20 41.8	
	comp=Z,6µm,21.0s						
EDM	Edmonton	126.03	42		PKPdf	18 33 05.4	-1.2
EDM	Edmonton	126.03	42	PKIKP	PKPdf	18 33 05.4	-1.2
KBA	Koelnbreinsper	126.13	311	i P	PKPdf	18 33 06.8	-0.4
	comp=Z,38nm,1.0s,SNR=18						
KBA				eS	SKKPbc	18 46 27.4	-6.0
	comp=Z,11nm,1.4s						
TER01	Tubaro-SC	126.14	181	eP	PKiKP	18 33 08.7	+0.5
COP	Copenhagen	126.17	321	i P	PKiKP	18 33 07.4	+0.3
CLL	Collm	126.23	316	i PKIKP	PKiKP	18 33 07.3	-0.1
CLL				e		18 35 00.0	
CLL				pmax	pmax		
	comp=Z,38nm,0.9s						
CLL				MLR	MLR		
	comp=Z,2µm,18.5s						
CLL	Collm	126.23	316	i PKPdf	PKiKP	18 33 07.3	-0.1
	comp=Z,38nm,0.9s						
CLL				ePP	PP	18 35 00.0	-1.9
CLL				ex	x	18 36 10.0	
CLL				eSKPdf	SKPdf	18 36 42.0	+0.2
CLL				e(PPS)		18 46 25.0	
CLL				ex	x	18 49 54.0	
CLL				eSS	SS	18 51 54.0	-11
CLL				ex	x	18 53 18.0	
CLL				eSKSSKSac	S'S'ac	18 54 42.0	+52
CLL				eSSS	SSS	18 56 42.0	
CLL				ex	x	18 58 00.0	
CLL				ex	x	18 59 24.0	
CLL				ex	x	19 01 48.0	
CLL				Lmax		19 43 00.0	
CLL				LmV		19 56 00.0	
	comp=Z,2µm,18.5s						
LLD	Lille Linde	126.33	321	i P	PKPdf	18 33 06.7	-0.3
OSL	Oslo	126.38	327	ePKPdf	PKiKP	18 33 07.6	+0.2
DUG	Dugway, Tooele	126.43	58	IAMs_20	IAMs_20	19 21 27.5	
	comp=Z,7µm,22.0s						
DUG	Dugway, Tooele	126.43	58	P	PKiKP	18 33 09.0	+0.7
	baz=266						
DAG	Danmarks Havn	126.58	351	i P	PKPdf	18 33 06.0	-1.0
NKC	Novy Kostel	126.64	315	ePKIKP	PKiKP	18 33 08.6	+0.3
NKC				MLR	MLR		
	comp=Z,1µm,24.4s						
NKC	Novy Kostel	126.64	315	ePKPDF	PKiKP	18 33 08.6	+0.3
NKC				AMS	AMS	19 25 20.0	
	comp=Z,1µm,24.4s						
DOMB	Dombas	126.68	330	ePKPdf	PKiKP	18 33 08.5	+0.4
DOMB				ePP	PP	18 35 06.2	+1.7
DOMB				IVMs_BB	IVMs_BB	19 22 11.7	
	comp=Z,580nm,14.5s						
ABTA	Abfaltersbach	126.70	310	i P	PKPdf	18 33 08.0	-0.1
	comp=Z,108nm,0.9s,SNR=50						
ABTA				eS	SKKPbc	18 46 24.9	-6.4
	comp=Z,21nm,1.5s						
DLMT	Dillon	126.81	51	IAMs_20	IAMs_20	19 20 28.2	
	comp=Z,7µm,22.0s						
KONO	Kongsberg	126.99	327	IAMs_20	IAMs_20	19 33 57.6	
	comp=Z,3µm,22.0s						
KONO	Kongsberg	126.99	327	ePKPdf	PKiKP	18 33 08.5	-0.2
KONO				eSP	SP	18 45 06.7	-1.5
KONO				IVMs_BB	IVMs_BB	19 21 02.2	
	comp=Z,582nm,3.6s						
WUAZ	Wupatki	127.09	64	P	PKiKP	18 33 10.7	+0.8
	baz=263,SNR=8.8						
TUC	Tucson	127.11	68	IAMs_20	IAMs_20	19 22 58.5	
	comp=Z,5µm,20.0s						
TUC	Tucson	127.11	68	P	PKiKP	18 33 10.5	+0.6
	baz=261						
MOL	Molde	127.22	331	ePKPdf	PKiKP	18 33 09.0	0.0
WTTA	Wattenberg	127.29	311	i P	PKiKP	18 33 09.9	-0.1
	comp=Z,207nm,0.8s,SNR=81						
WTTA				eS	SKKPbc	18 46 19.9	-10
	comp=Z,16nm,1.6s						
WATA	Walderalm	127.33	311	i P	PKPdf	18 33 09.6	+0.1
	comp=Z,193nm,1.1s,SNR=59						
WATA				eS	SKKPbc	18 46 16.1	-13
	comp=Z,11nm,1.2s						
SKAR	Skarslia	127.38	328	ePKPdf	PKiKP	18 33 09.7	+0.2
SKAR				ePP	PP	18 35 08.1	-1.2
SKAR				IVMs_BB	IVMs_BB	19 25 00.8	
	comp=Z,535nm,3.8s						
ITAB	Concordia	127.41	178	eP	PKiKP	18 33 11.3	+0.7
HWUT	Hardware Ranch	127.46	56	IAMs_20	IAMs_20	19 26 49.7	

	comp=Z,3µm,20.0s						
BOZ	Bozeman (W)	127.50	51	IAMs_20	IAMs_20	19 21 00.1	
	comp=Z,8µm,22.0s						
BOZ	Bozeman (W)	127.50	51	P	PKiKP	18 33 10.8	+0.5
	baz=270,SNR=16						
AKN	Aaknes	127.58	330	ePKPdf	PKiKP	18 33 10.2	+0.4
AKN				IVMs_BB	IVMs_BB	19 21 53.7	
	comp=Z,2µm,3.4s						
OSSC	Osservatorio P	127.58	306		PKPdf	18 33 07.7	-2.2
SQTA	Sankt Quirin	127.58	311	i P	PKiKP	18 33 10.2	-0.3
	comp=Z,140nm,1.4s,SNR=43						
SQTA				i S	SKKPbc	18 46 18.5	-10
	comp=Z,14nm,1.3s						
MOTA	Moosalm	127.65	311	i P	PKPdf	18 33 10.1	+0.1
	comp=Z,74nm,0.9s,SNR=29						
MOTA				i S	SKKPbc	18 46 19.6	-8.5
	comp=Z,17nm,1.7s						
HOMB	Homborsund	127.85	325	ePKPdf	PKiKP	18 33 10.4	0.0
HOMB				ePP	PP	18 35 13.2	+0.9
HOMB				ePS	PS	18 45 18.0	-0.7
HOMB				eSS	SS	18 52 25.9	+1.8
HOMB				IVMs_BB	IVMs_BB	19 22 02.5	
	comp=Z,447nm,3.4s						
AHID	Auburn Hatcher	127.85	55	IAMs_20	IAMs_20	19 22 06.8	
	comp=Z,8µm,22.0s						
CPUP	Villa Florida	127.88	172	PKP	PKiKP	18 33 11.6	0.0
	comp=Z,26nm,1.0s,baz=166,slow=1.4,SNR=41						
CPUP	Villa Florida	127.88	172	eP	PKiKP	18 33 11.6	0.0
RETA	Reutte	127.88	311	i P	PKPdf	18 33 10.7	+0.3
	comp=Z,33nm,1.1s,SNR=16						
RETA				eS	SKKPbc	18 46 19.8	-7.5
	comp=Z,19nm,1.8s						
FETA	Feichten	127.92	311	i P	PKiKP	18 33 11.1	-0.1
	comp=Z,85nm,1.0s,SNR=31						
FETA				eS	SKKPbc	18 46 16.9	-10
	comp=Z,15nm,1.3s						
TPAW	Teton Pass	127.97	54	IAMs_20	IAMs_20	19 20 27.0	
	comp=Z,4µm,22.0s						
REDW	Red Top Meadow	128.04	54	IAMs_20	IAMs_20	19 26 02.9	
	comp=Z,4µm,20.0s						
SNOW	Snow King Moun	128.12	54	IAMs_20	IAMs_20	19 20 54.8	
	comp=Z,4µm,22.0s						
MOOW	Moose Ponds	128.12	53	IAMs_20	IAMs_20	19 22 01.0	
	comp=Z,5µm,21.0s						
FLWY	Flagg Ranch	128.16	53	IAMs_20	IAMs_20	19 22 21.9	
	comp=Z,7µm,21.0s						
TULEG	Thule	128.21	5	IAMs_20	IAMs_20	19 30 02.4	
	comp=Z,3µm,22.0s						
TULEG	Thule	128.21	5	i P	PKPdf	18 33 08.4	-1.7
LOHW	Long Hollow	128.23	54	IAMs_20	IAMs_20	19 21 53.7	
	comp=Z,4µm,22.0s						
HYA	Hoyanger	128.24	329	ePKPdf	PKiKP	18 33 11.5	+0.4
H17A	Grant Village	128.25	53	P	PKiKP	18 33 12.4	+0.3
	baz=270						
W18A	Petrified Fore	128.37	64	P	PKiKP	18 33 12.3	-0.2
	baz=263,SNR=8.4						
LKWY	Lake	128.37	52	IAMs_20	IAMs_20	19 29 15.5	
	comp=Z,7µm,18.0s						
ODD1	Odda	128.38	327	ePKPdf	PKiKP	18 33 11.9	+0.4
DAVA	Damuels	128.49	311	i P	PKPdf	18 33 12.0	+0.3
	comp=Z,111nm,1.0s,SNR=38						
DAVA				eS	SKKPbc	18 46 14.2	-11
	comp=Z,9.9nm,1.1s						
SNART	Snartemo	128.50	325	ePKPdf	PKiKP	18 33 12.0	+0.3
KEST	Kesra	128.55	296	PKP	PKiKP	18 33 14.2	+1.5
	comp=Z,18nm,0.7s,baz=262,slow=0.6,SNR=21						
KEST				SKPbc	SKiKP	18 36 33.0	-15
	comp=Z,33nm,1.0s,baz=249,slow=1.6,SNR=7.2						
BLS5	Blasjo	128.60	327	ePKPdf	PKiKP	18 33 12.1	+0.1
FOO	Floro	128.63	330	ePKPdf	PKiKP	18 33 12.4	+0.5
FOO				IVMs_BB	IVMs_BB	19 17 45.5	
	comp=Z,2µm,3.1s						
EGMT	Eagleton	128.70	48		PKPpre	18 32 55.4	
EGMT				PKPdf	PKPdf	18 33 11.7	-0.3
EGMT				IAMs_20	IAMs_20	19 21 14.7	
	comp=Z,8µm,22.0s						
EGMT	Eagleton	128.70	48	P	PKPdf	18 33 12.3	+0.3
	baz=274						
LVC	Limon Verde	128.71	158	PKP	PKiKP	18 33 14.7	+0.9
	comp=Z,26nm,0.9s,baz=251,slow=2.7,SNR=16						
LVC				SKPbc	SKiKP	18 36 34.8	-15
	comp=Z,19nm,1.1s,baz=236,slow=4.5,SNR=6.8						
LVC	Limon Verde	128.71	158	IAMs_20	IAMs_20	19 32 28.7	
	comp=Z,3µm,20.0s						
LVC	Limon Verde	128.71	158	eP	PKiKP	18 33 14.8	+0.9
DBG	Daneborg	128.82	350	i P	PKPdf	18 33 11.5	+0.2
BER	Bergen	128.87	328	ePKPdf	PKiKP	18 33 12.9	+0.5
BER				ePP	PP	18 35 19.0	+0.1
BER				e		18 36 34.2	
BER				eSS	SS	18 52 38.9	+2.3
BER				IVMs_BB	IVMs_BB	19 25 06.6	
	comp=Z,966nm,3.2s						
TUE	Stuetta	128.89	310	IAMs_20	IAMs_20	19 33 29.2	
	comp=Z,3µm,22.0s						
ASK	Askoy	128.91	328	ePKPdf	PKPdf	18 33 11.7	-0.1
SUE	Sulen	128.94	329	ePKPdf	PKiKP	18 33 12.4	-0.1
BW06	Boulder Array	128.98	55	IAMs_20	IAMs_20	19 26 46.9	
	comp=Z,6µm,20.0s						
BW06	Boulder Array	128.98	55	P	PKPdf	18 33 13.2	+0.3
	baz=270						
PDAR	Pinedale Array	128.98	55	PKP	PKiKP	18 33 13.9	+0.4
	comp=Z,12nm,0.8s,baz=222,slow=2.0,SNR=32						
PDAR				PP	PP	18 35 13.9	-6.8
	comp=Z,5.9nm,1.1s,baz=195,slow=2.2,SNR=2.9						
PDAR				SKPbc	SKiKP	18 36 34.0	-15
	comp=Z,13nm,0.7s,baz=259,slow=2.3,SNR=14						
RLMT	Red Lodge	129.17	52	IAMs_20	IAMs_20	19 21 54.5	
	comp=Z,5µm,22.0s						
RLMT	Red Lodge	129.17	52	P	PKiKP	18 33 13.9	0.0
	baz=272						
KMY	Karmoy	129.25	327	ePKPdf	PKiKP	18 33 13.4	+0.2
TIJ01	Guaruva-PR	129.34	181	eP	PKPdf	18 33 14.3	+0.3
BFO	Black Forest	129.46	313		PKPdf	18 33 10.7	-2.6
BFO	Black Forest	129.46	313	PKIKP	PKPdf	18 33 10.7	-2.6
BFO				MLR	MLR		
	comp=Z,2µm,21.0s						
MVCO	Mesa Verde	129.57	62	P	PKiKP	18 33 15.1	+0.2
	baz=266						
121A	Cookes Peak, D	129.66	68	P	PKiKP	18 33 15.0	-0.1
	baz=262,SNR=9.3						
121A	Cookes Peak, D	129.66	68	P	PKiKP	18 33 15.4	+0.3
	baz=262						
TORD	Torodi Ar. Bea	129.85	266	PKhKP	PKPpre	18 32 57.5	
	comp=Z,3.4nm,0.7s,baz=104,slow=3.1,SNR=7.1						
TORD				PKP	PKiKP	18 33 16.0	+0.3
	comp=Z,27nm,0.9s,baz=104,slow=3.1,SNR=7.9						
TORD				SKPbc	SKPbc	18 36 37.4	+0.5
	comp=Z,13nm,0.7s,baz=110,slow=3.0,SNR=8.1						
TORD				SKKPbc	SKKPbc	18 46 20.0	+2.3
	comp=Z,3.8nm,1.0s,baz=277,slow=4.4,SNR=4.7						
PATCX	Punta Patache	129.90	155		PKPdf	18 33 15.0	-0.1
PTGB	Pitanga	129.92	178	eP	PKiKP	18 33 15.9	+0.1
O20A	White River Ci	129.92	58		PKPpre	18 33 01.8	
O20A					PKiKP	18 33 15.3	-0.2
O20A	White River Ci	129.92	58	P	PKiKP	18 33 16.0	+0.5
	baz=268,SNR=6.9						
ABSA	Djebel Ababsia	130.11	297	P	PKPdf	18 33 14.9	-0.1
CMAH	Djebel Manchou	130.18	297	P	PKiKP	18 33 15.7	-0.2
PET01	Itanhaem-SP	130.30	183	eP	PKiKP	18 33 16.7	+0.1
Y22A	Socorro	130.51	66	P	PKiKP	18 33 17.3	+0.5
	baz=264,SNR=9.7						
LENM	Lemitar	130.53	66		PKPpre	18 33 00.4	
LENM					PKPdf	18 33 16.0	+0.1
Y22D	IRIS PASSCAL I	130.56	66	IAMs_20	IAMs_20	19 23 13.6	
	comp=Z,7µm,20.0s						
Y22D	IRIS PASSCAL I	130.56	66	P	PKiKP	18 33 17.5	+0.7
	baz=264						
BTNL	Ternell	130.62	316	dPKiKP	PKiKP	18 33 16.1	-0.2
BTNL				dpPKP	pPKPdf	18 33 18.7	-2.3
MEM	Membach	130.70	316	dpPKP	PKiKP	18 33 17.2	+0.8
RWWY	Rawlins	130.73	56	IAMs_20	IAMs_20	19 24 06.1	
	comp=Z,8µm,22.0s						
CKFL	Kef-Lekhel	130.73	297	P	PKPdf	18 33 16.3	+0.1
BHOU	Houvegnez	130.74	315	dPKP	PKPdf	18 33 15.1	-0.5
BHOU				dpPKP	PKiKP	18 33 18.1	+1.5
WLF	Walferdange	130.74	314	dpPKP	PKiKP	18 33 18.2	+1.7
CASM	Ain Smara	130.90	297	P	PKiKP	18 33 17.6	+0.2
S22A	4UR Ranch, Cre	130.93	61	P	PKiKP	18 33 17.5	-0.2
	baz=267						
CTEI	Djebel Teioual	130.96	296	P	PKiKP	18 33 18.2	+0.6
BSTI	Sart Tilman	130.98	316	dpPKP	pPKPdf	18 33 19.5	-2.2
ANMO	Albuquerque	131.03	65		PKPpre	18 33 02.7	
ANMO				PKPdf	PKiKP	18 33 17.7	-0.2
ANMO	Albuquerque	131.03	65	PKHKP	PKPpre	18 33 02.7	
ANMO						18 33 17.7	
ANMO				MLR	MLR		
	comp=Z,9µm,22.0s						
ANMO	Albuquerque	131.03	65	P	PKiKP	18 33 17.9	0.0
	baz=265,SNR=6.9						
ANMO	Albuquerque	131.03	65	P	PKiKP	18 33 17.9	0.0
	baz=265						
PB11	IPOC Station P	131.05	155	PKPdf	PKPdf	18 33 17.5	+0.1
PARB	Paraibuna	131.13	185	eP	PKiKP	18 33 18.4	+0.1
BCLA	Clavier	131.17	316	dPKP	PKiKP	18 33 18.8	+1.4
LAO	LASA Array	131.20	49	IAMs_20	IAMs_20	19 23 05.9	
	comp=Z,8µm,22.0s						
LAO	LASA Array	131.20	49	P	PKiKP	18 33 17.3	-0.3
	baz=275						
LAO	LASA Array	131.20	49	P	PKiKP	18 33 17.7	0.0
	baz=275,SNR=13						
K22A	Casper	131.22	55	P	PKPdf	18 33 17.2	+0.2
	baz=272						
K22A	Casper	131.22	55	P	PKPdf	18 33 17.5	+0.5
	baz=272						
RCHB	Rochefort	131.26	315	dpPKP	PKiKP	18 33 19.3	+1.8
RCHB				dpPKiKP	pPKPdf	18 33 20.2	-2.0
BGES	Gesves	131.31	316	dPKP	PKiKP	18 33 19.2	+1.5
FRTB	Fartura	131.31	181	eP	PKiKP	18 33 18.6	-0.1
DFRA	Djebel Bou Aff	131.42	297	P	PKiKP	18 33 18.8	+0.3
BMRD	Maredsous	131.53	316	dPKP	PKPdf	18 33 16.1	-1.0
BMRD				dpPKP	PKiKP	18 33 19.7	+1.6
BMRD				dpPKiKP	pPKPdf	18 33 20.7	-2.0
VAO	Valinhos	131.56	184	eP	PKiKP	18 33 19.4	+0.2
MNTX	Cornudas Mount	131.56	69		PKPpre	18 33 01.8	
MNTX	Cornudas Mount	131.56	69	P	PKiKP	18 33 19.4	+0.6
	baz=262,SNR=24						
MNTX	Cornudas Mount	131.56	69	P	PKiKP	18 33 18.9	+0.1
	baz=262						
DOU	Dourbes	131.67	315	dPKPdf	PKPdf	18 33 16.8	-0.6
CKHR	Kef el Ahmar	131.68	296	P	PKiKP	18 33 19.4	+0.4
N23A	Red Feather La	131.68	57		PKPpre	18 33 01.9	
N23A					PKPdf	18 33 17.9	-0.2
N23A	Red Feather La	131.68	57	P	PKiKP	18 33 18.9	-0.1
	baz=270,SNR=8.9						
SNF	Seneffe	131.80	316	dPKP	PKiKP	18 33 18.3	-0.3
TRCB	Terra Rica	131.80	177	eP	PKiKP	18 33 19.4	-0.3
ASCN	Ascension	131.81	231	IAMs_20	IAMs_20	19 21 23.6	
	comp=Z,6µm,20.0s						
PB12	IPOC Station P	131.83	154		PKPdf	18 33 18.8	-0.1
ISCO	Idaho Springs	131.94	59		PKPpre	18 33 01.8	
ISCO					PKPdf	18 33 18.1	-0.5
ISCO	Idaho Springs	131.94	59	PKHKP	PKPpre	18 33 01.8	
ISCO						18 33 18.1	
ISCO				MLR	MLR		
	comp=Z,10µm,19.0s						
ISCO	Idaho Springs	131.94	59	P	PKiKP	18 33 20.6	+0.9
	baz=270,SNR=11						
ISCO	Idaho Springs	131.94	59	P	PKiKP	18 33 19.4	-0.3
	baz=270,SNR=11						
SDCO	Great Sand Dun	131.98	61	P	PKiKP	18 33 20.2	+0.4
	baz=268						
SDCO	Great Sand Dun	131.98	61	P	PKiKP	18 33 19.8	0.0
	baz=268						
DUB01	Friburgo-RJ	131.98	190	eP	PKiKP	18 33 19.6	-0.5
PHWY	Pilot Hill	132.05	57	IAMs_20	IAMs_20	19 25 02.1	
	comp=Z,6µm,22.0s						
CAM01	Campos-RJ	132.12	191	eP	PKiKP	18 33 20.2	0.0
RCLB	Rio Claro- Sao	132.17	183	eP	PKiKP	18 33 20.2	-0.2
SCO	Scoresbysund	132.27	348		PKPdf	18 33 14.6	-3.3
SCO	Scoresbysund	132.27	348	PKIKP	PKPdf	18 33 14.6	-3.3
SCO				MLR	MLR		
	comp=Z,2µm,21.0s						
SCO	Scoresbysund	132.27	348	i P	PKPdf	18 33 17.6	-0.3
Q24A	Divide	132.29	60	P	PKiKP	18 33 20.1	-0.3
	baz=269						
DGMT	Dagmar	132.35	47	IAMs_20	IAMs_20	19 24 18.0	
	comp=Z,7µm,21.0s						
DGMT	Dagmar	132.35	47	P	PKiKP	18 33 20.0	+0.2
	baz=279						
SUMG	Summit	132.57	355	i P	PKPdf	18 33 19.3	+0.4
KIC	Kosan Boka	132.65	254	ePKP1	PKiKP	18 33 21.4	-0.1
	comp=Z,30nm,0.7s						
TX31	Lajitas Ar. Si	132.69	73		PKPpre	18 33 04.1	
TX31				PKPdf	PKPdf	18 33 15.3	-4.8
TXAR	Lajitas Array	132.69	73	PKhKP	PKPpre	18 33 05.4	
	comp=Z,1.5nm,0.6s,baz=210,slow=5.3,SNR=9.3						
TXAR				PKP	PKiKP	18 33 21.6	+0.3
	comp=Z,8.8nm,0.8s,baz=179,slow=5.0,SNR=20						
TXAR				PP	PP	18 35 40.9	-4.1
	comp=Z,12nm,1.2s,baz=256,slow=5.0,SNR=5.5						
TXAR				SKPbc	SKPab	18 36 49.4	+1.1
	comp=Z,18nm,1.1s,baz=238,slow=4.3,SNR=9.1						
T25A	Trinidad	132.82	62	P	PKiKP	18 33 21.4	0.0
	baz=268						
LIC	Lamto	132.83	254	eP	PKiKP	18 33 21.5	-0.3
	comp=Z,79nm,1.0s						
DBIC	Dimbokro	132.90	254	PKhKP	PKPpre	18 33 05.7	
	comp=Z,3.4nm,0.8s,baz=142,slow=5.0,SNR=1.7						
DBIC				PKP	PKiKP	18 33 21.5	-0.5
	comp=Z,32nm,0.7s,baz=155,slow=2.1,SNR=17						
DBIC				SKPbc	SKPbc	18 36 48.3	+0.4
	comp=Z,22nm,0.8s,baz=77,slow=3.1,SNR=9.4						
DBIC	Dimbokro	132.90	254	⇓PKIKP	PKiKP	18 33 21.8	-0.2
RSSD	Black Hills	132.95	53		PKPpre	18 33 02.8	
RSSD				PKPdf	PKPdf	18 33 20.0	-0.3
RSSD	Black Hills	132.95	53	IAMs_20	IAMs_20	19 24 46.7	
	comp=Z,4µm,22.0s						
RSSD	Black Hills	132.95	53	PKHKP	PKPpre	18 33 02.8	
RSSD						18 33 20.0	
RSSD				MLR	MLR		
	comp=Z,4µm,22.0s						
RSSD	Black Hills	132.95	53	P	PKPdf	18 33 20.7	+0.3
	baz=275						
TIC	Toumodi	133.03	254	ePKP1	PKiKP	18 33 22.2	-0.1
	comp=Z,76nm,0.7s						
PCMB	Pacaembu	133.03	179	eP	PKiKP	18 33 21.7	-0.4
ALF01	Guarapari-ES	133.13	192	eP	PKPdf	18 33 18.3	-2.8
PAYG	Puerto Ayora	133.22	118	IAMs_20	IAMs_20	19 24 28.6	
	comp=Z,3µm,20.0s						
CLF	Chambon-Foret	133.53	313	IAMs_20	IAMs_20	19 44 58.9	
	comp=Z,4µm,21.0s						
BB19B	Bebedouro	133.56	182	eP	PKiKP	18 33 22.8	-0.5
AQDB	Aquidauana	133.85	173	eP	PKiKP	18 33 24.2	+0.4
MSTX	Muleshoe	133.98	67	P	PKiKP	18 33 23.2	-0.5
	baz=266						
KSCO	Kaye Shedlock’	134.25	60	P	PKiKP	18 33 24.0	-0.1
	baz=271						
RIB01	Linhares ES	134.34	193	eP	PKPdf	18 33 23.9	+0.5
UNM	Universidad Na	134.44	88	IAMs_20	IAMs_20	19 26 44.6	
	comp=Z,5µm,19.0s						
NNA	Nana	134.45	142	PKP	PKiKP	18 33 24.6	-0.6
	comp=Z,33nm,0.7s,baz=292,slow=4.3,SNR=11						
NNA				SKPbc	SKPbc	18 36 53.7	+0.6
	comp=Z,5.3nm,0.3s,baz=243,slow=3.3,SNR=4.0						
NNA	Nana	134.45	142		PKiKP	18 33 25.1	-0.1
NNA	Nana	134.45	142	IAMs_20	IAMs_20	19 37 15.4	
	comp=Z,3µm,19.0s						
NNA	Nana	134.45	142	PKIKP	PKiKP	18 33 25.1	-0.1
NNA				MLR	MLR		
	comp=Z,2µm,19.0s						
OGNE	Ogallala	134.65	57	P	PKiKP	18 33 24.2	-0.6
	baz=273						
LPAZ	La Paz	134.80	155	PKhKP	PKPpre	18 33 13.6	
	comp=Z,9.3nm,0.7s,baz=144,slow=0.6,SNR=16						
LPAZ				SKPbc	SKPbc	18 36 56.2	+1.3
	comp=Z,36nm,0.8s,baz=154,slow=2.2,SNR=13						
LPAZ	La Paz	134.80	155	eP	PKiKP	18 33 27.1	+0.6
ESK	Eskdalemuir	134.86	324	IAMs_20	IAMs_20	19 36 46.0	
	comp=Z,3µm,22.0s						
AMTX	Amarillo	134.94	65	P	PKiKP	18 33 25.5	-0.2
	baz=267						
ITRB	Iturama	134.94	180	eP	PKPdf	18 33 25.1	+0.5
SJMB	Sao Joao De Ma	135.09	192	eP	PKPdf	18 33 23.6	-1.2
MDND	Maddock	135.48	47	P	PKiKP	18 33 25.5	-0.7
	baz=282						
KOWA	Kowa	135.50	265		PKPpre	18 33 10.6	
KOWA				PKPdf	PKPdf	18 33 18.7	-6.9
KOWA	Kowa	135.50	265	P	PKPdf	18 33 19.3	-6.3
DIAM	Diamantina, MG	135.89	189	eP	PKPdf	18 33 26.9	+0.4
SOEG	Soedalen	135.91	350	i P	PKPdf	18 33 25.5	+0.7
ICESG	Greenland Ices	136.07	355	i P	PKPdf	18 33 19.3	-6.2
JCT	Junction City	136.17	72	P	PKiKP	18 33 27.4	-0.8
	baz=264						
833A	Chaparral WMA,	136.25	75	P	PKiKP	18 33 27.7	-0.7
	baz=262,SNR=7.3						
ILULI	Ilulissat	136.39	1	IAMs_20	IAMs_20	19 44 20.5	
	comp=Z,3µm,20.0s						
ILULI	Ilulissat	136.39	1	i P	PKPdf	18 33 23.8	-1.9
ABTX	Abilene, Hawle	136.50	69	P	PKiKP	18 33 28.1	-0.7
	baz=266						
CBKS	Cedar Bluff	136.51	60	P	PKiKP	18 33 28.2	-0.4
	baz=272						
SUSD	Miller	136.54	52	P	PKPdf	18 33 27.3	+0.6
	baz=279						
IPMB	Ipameri, GO	136.61	183	eP	PKPdf	18 33 27.5	-0.3
CART	Cartagena	136.94	298	IAMs_20	IAMs_20	19 37 03.7	
	comp=Z,2µm,20.0s						
FIGM	Figuig	137.02	290	P	PKiKP	18 33 32.0	+2.0
FIGM	Figuig	137.02	290	P	PKiKP	18 33 32.0	+2.0
ULM	Lac du Bonnet	137.24	43	PKhKP	PKPpre	18 33 16.8	
	comp=Z,11nm,0.9s,baz=288,slow=3.8,SNR=11						
ULM				PKP	PKiKP	18 33 29.4	-0.2
	comp=Z,13nm,0.6s,baz=296,slow=2.8,SNR=13						
ULM				SKPbc	SKPbc	18 37 00.8	+0.3
	comp=Z,5.1nm,0.6s,baz=168,slow=11,SNR=4.1						
ULM	Lac du Bonnet	137.24	43		PKPpre	18 33 12.9	
ULM				PKPdf	PKPdf	18 33 25.6	-2.2
SIV	San Ignacio	137.28	164	PKhKP	PKPpre	18 33 17.9	
	comp=Z,2.7nm,0.6s,baz=186,slow=1.1,SNR=8.8						
SIV				PKP	PKiKP	18 33 30.0	-0.9
	comp=Z,18nm,1.0s,baz=191,slow=3.2,SNR=19						
SIV				PP	PP	18 36 12.8	+0.7
	comp=Z,4.8nm,0.8s,baz=184,slow=6.9,SNR=3.2						
SIV				SKPbc	SKPbc	18 37 01.5	-0.3
	comp=Z,20nm,0.8s,baz=177,slow=2.1,SNR=9.4						
WMOK	Wichita Mounta	137.32	66	IAMs_20	IAMs_20	19 25 30.5	
	comp=Z,7µm,22.0s						
WMOK	Wichita Mounta	137.32	66	P	PKPdf	18 33 28.6	+0.1
	baz=269						
ATAH	Atahualpa	137.38	136	PKhKP	PKPpre	18 33 22.0	
	comp=Z,6.6nm,0.6s,baz=208,slow=7.7,SNR=4.9						
ATAH				PKP	PKiKP	18 33 31.9	+0.2
	comp=Z,53nm,0.9s,baz=215,slow=0.9,SNR=20						
ATAH				PP	PP	18 36 16.6	+2.5
	comp=Z,14nm,1.1s,baz=226,slow=3.7,SNR=5.8						
ATAH				SKPbc	SKPbc	18 37 02.5	-0.2
	comp=Z,16nm,1.2s,baz=9.8,slow=3.3,SNR=2.1						
KVTX	Kingsville	137.45	76	IAMs_20	IAMs_20	19 36 05.7	
	comp=Z,4µm,18.0s						
BGNE	Belgrade	137.53	56	P	PKPdf	18 33 29.5	+0.8
	baz=276						
CMIG	Matias Romero	137.62	92	PP	PP	18 36 14.1	-2.1
	comp=Z,1.9nm,0.5s,baz=242,slow=6.3,SNR=6.7						
CMIG				SKPbc	SKPbc	18 37 03.6	+1.0
	comp=Z,8.6nm,0.8s,baz=45,slow=1.5,SNR=4.5						
AGMN	Agassiz Nation	137.81	45	IAMs_20	IAMs_20	19 27 22.5	
	comp=Z,8µm,22.0s						
AGMN	Agassiz Nation	137.81	45	P	PKiKP	18 33 30.0	-0.9
	baz=286						
CMC01	Camacan, BA	137.97	195	eP	PKPdf	18 33 30.5	+0.2
435B	Jarrell	138.10	72	P	PKiKP	18 33 31.2	-0.9
	baz=265						
F33A	5 Mile Ranch,	138.13	49	P	PKPdf	18 33 23.3	-6.3
	baz=283						
JBK	JBK	138.22	294	P	PKiKP	18 33 35.0	+2.5
PTLB	Pontes e Lacer	138.24	167	eP	PKiKP	18 33 32.8	0.0
WHTX	Lake Whitney,	138.31	70	P	PKiKP	18 33 31.6	-0.8
	baz=266,SNR=5.8						
ECSD	EROS Data Cent	138.32	52		PKPpre	18 33 19.0	
ECSD	EROS Data Cent	138.32	52	P	PKPdf	18 33 20.6	-9.4
	baz=280						
ECSD	EROS Data Cent	138.32	52	P	PKPdf	18 33 31.0	+1.0
	baz=280,SNR=8.4						
SALV	Santo Antonio	138.37	172	eP	PKPdf	18 33 31.5	+0.5
SFJD	Kangerlussuaq	138.62	0	IAMs_20	IAMs_20	19 44 41.4	
	comp=Z,3µm,21.0s						
SFJD	Kangerlussuaq	138.62	0	i P	PKPdf	18 33 28.5	-1.3
KSU1	Kansas State U	138.93	59	P	PKPdf	18 33 32.0	+0.7
	baz=275						
BDFB	Brasilia	138.93	183	PKP	PKPdf	18 33 32.7	+0.5
	comp=Z,29nm,0.7s,baz=165,slow=4.0,SNR=21						
BDFB				PP	PP	18 36 20.4	-1.8
	comp=Z,20nm,1.1s,baz=207,slow=7.9,SNR=4.3						
BDFB	Brasilia	138.93	183		PKPpre	18 33 19.0	
BDFB				PKPdf	PKPdf	18 33 24.4	-7.7
DY2G	Dye2	139.07	358	i P	PKPdf	18 33 23.1	-7.9
ESDC	Sonseca Array	139.12	302	PKhKP	PKPpre	18 33 22.4	
	comp=Z,9.7nm,0.7s,baz=53,slow=3.7,SNR=49						
ESDC				PP	PP	18 36 22.1	-2.9
	comp=Z,4.9nm,0.9s,baz=34,slow=2.4,SNR=2.0						
ESDC				SKPbc	SKiKP	18 37 08.7	-0.9
	comp=Z,12nm,0.9s,baz=47,slow=2.5,SNR=7.0						
T35B	Sooner Cattle	139.14	62	P	PKPdf	18 33 24.0	-7.8
	baz=272						
B35A	Bob, Littlefor	139.16	45	P	PKPdf	18 33 22.1	-9.3
	baz=288						
JANB	Januaria	139.16	189	eP	PKPdf	18 33 33.5	+1.0
ANGG	Ammassalik, Gr	139.22	352	IAMs_20	IAMs_20	19 39 35.6	
	comp=Z,2µm,20.0s						
ANGG	Ammassalik, Gr	139.22	352	i P	PKPdf	18 33 29.6	-1.4
PAB	San Pablo	139.43	302		PKPpre	18 33 21.4	
PAB	San Pablo	139.43	302	IAMs_20	IAMs_20	19 48 29.3	
	comp=Z,3µm,19.0s						
PAB	San Pablo	139.43	302	PKHKP	PKPpre	18 33 21.4	
PAB				MLR	MLR		
	comp=Z,3µm,19.0s						
PAB	San Pablo	139.43	302	P	PKiKP	18 33 36.3	+1.7
ISOG	Isortoq, Green	139.45	353	i P	PKPdf	18 33 25.5	-5.9
HKT	Hockley	139.53	73	P	PKPdf	18 33 26.9	-5.6
	baz=265						
GDU01	Guandu, BA	139.56	196	eP	PKPdf	18 33 33.8	+0.7
TUL1	Leonard	139.76	64		PKPpre	18 33 23.0	
TUL1	Leonard	139.76	64	P	PKPdf	18 33 26.2	-6.7
	baz=272						
TUL1	Leonard	139.76	64	P	PKPdf	18 33 33.2	+0.3
	baz=272						
MDT	Midelt	139.88	291	P	PKPpre	18 33 04.7	
MDT	Midelt	139.88	291	P	PKiKP	18 33 34.8	-0.9
MDT	Midelt	139.88	291	P	PKPpre	18 33 04.7	
F36A	Milaca	140.00	48	P	PKPdf	18 33 26.3	-6.8
	baz=285,SNR=35						
X37A	Clayton	140.13	66	P	PKPdf	18 33 26.6	-7.0
	baz=270						
CZSB	Cruzeiro do Su	140.23	144	eP	PKPdf	18 33 33.7	-0.7
VILB	Vilhena	140.42	164	eP	PKPdf	18 33 35.8	+1.0
I37A	Lemond, Waseca	140.54	51		PKPpre	18 33 23.9	
ZGR	Zagora	140.59	287	P	PKiKP	18 33 38.0	+0.7
ZGR	Zagora	140.59	287	P	PKPdf	18 33 33.0	-1.8
ZGR	Zagora	140.59	287	P	PKiKP	18 33 38.0	+0.7
TZRR	Tazzarine	140.59	288	P	PKPdf	18 33 30.0	-4.7
TZRR	Tazzarine	140.59	288	P	PKPdf	18 33 30.0	-4.7
SPMN	Marine on St.	140.66	49	P	PKPdf	18 33 27.5	-6.7
	baz=285,SNR=5.6						
SPMN	Marine on St.	140.66	49	P	PKPdf	18 33 35.4	+1.2
	baz=285						
NATX	Nacogdoches	140.67	70	P	PKPdf	18 33 35.6	+0.9
	baz=267						
EYMN	Ely	140.71	45	P	PKPdf	18 33 27.8	-6.5
	baz=290						
EYMN	Ely	140.71	45	P	PKPdf	18 33 35.2	+1.0
	baz=290						
PBRG	Braganca	140.91	305	ePKP	PKPdf	18 33 35.4	+0.5
PBRG				i		18 37 11.2	
E38A	The Farm, Brul	141.10	47		PKPpre	18 33 26.0	
E38A	The Farm, Brul	141.10	47	P	PKPdf	18 33 29.2	-5.8
	baz=288,SNR=24						
SCIA	State Center	141.11	54	P	PKPdf	18 33 29.6	-5.6
	baz=281						
SCIA	State Center	141.11	54	P	PKPdf	18 33 36.1	+1.0
	baz=281						
MVO	Moncorvo	141.24	305	ePKP	PKPdf	18 33 32.0	-3.5
MVO				i		18 37 14.4	
MVO	Moncorvo	141.24	305	eLQ	LQ	19 14 33.5	
MVO	Moncorvo	141.24	305	eLR	LR	19 26 39.8	
	comp=Z,2µm,20.0s						
P38A	Dawn	141.24	58	P	PKPdf	18 33 29.8	-5.7
	baz=278,SNR=9.0						
HHAR	Hobbs	141.24	63	P	PKPdf	18 33 30.0	-5.6
	baz=273						
K38A	Parkersburg	141.29	53	P	PKPdf	18 33 31.3	-4.1
	baz=282						
N38A	Joes South For	141.29	56		PKPpre	18 33 26.8	
N38A	Joes South For	141.29	56	P	PKPdf	18 33 30.4	-5.1
	baz=280						
W39A	Magazine	141.42	65	IAMs_20	IAMs_20	19 29 22.0	
	comp=Z,4µm,22.0s						
W39A	Magazine	141.42	65	P	PKPdf	18 33 31.2	-4.8
	baz=272,SNR=6.8						
W39A	Magazine	141.42	65	P	PKPdf	18 33 36.8	+0.8
	baz=272,SNR=6.8						
NUUK	Nuuk	141.44	1	i P	PKPdf	18 33 28.5	-6.5
SNET	Serv Nac Est T	141.44	100	IAMs_20	IAMs_20	19 27 23.1	
	comp=Z,3µm,20.0s						
ZHG	ZHG	141.59	292	P	PKPdf	18 33 33.0	-3.4
MIAR	Mount Ida	141.61	66	P	PKPdf	18 33 32.4	-3.9
	baz=272,SNR=15						
MIAR	Mount Ida	141.61	66	P	PKPdf	18 33 37.5	+1.3

	baz=272,SNR=15						
MTO3	Montecristo	141.61	99	IAMs_20	IAMs_20	19 26 08.5	
	comp=Z,3µm,22.0s						
OUZM	OUZ	141.62	288	P	PKPdf	18 33 33.1	-3.5
S39A	Bolivar	141.63	61	P	PKPdf	18 33 31.3	-5.0
	baz=276,SNR=37						
PBAR	Barrancos	141.66	300	ePKP	PKPdf	18 33 31.3	-5.0
PBAR				i		18 37 14.8	
NBLA	Lagarto - SE	141.67	200	eP	PKPdf	18 33 37.7	+0.7
MTE	Manteigas	141.75	303	ePKP	PKPdf	18 33 33.6	-2.9
MTE				i		18 37 15.1	
MTE	Manteigas	141.75	303	eLQ	LQ	19 17 57.4	
MTE	Manteigas	141.75	303	eLR	LR	19 30 01.5	
	comp=Z,4µm,20.0s						
MTE	Manteigas	141.75	303	IAMs_20	IAMs_20	19 41 06.6	
	comp=Z,5µm,20.0s						
POLO	Lamas de Olo	141.77	305	ePKP	PKPdf	18 33 33.4	-3.1
POLO				i		18 37 16.2	
PMRV	Marv??o	141.78	302	ePKP	PKPdf	18 33 32.3	-4.2
PMRV				i-		18 37 13.7	
PMRV	Marv??o	141.78	302	eLR	LR	19 25 13.8	
	comp=Z,4µm,22.0s						
PCBR	Castelo Branco	141.79	303	ePKP	PKPdf	18 33 32.7	-3.7
PCBR				i LQ	LQ	18 37 15.5	
SDBA	SAO DESIDERIO	141.85	188	eP	PKPdf	18 33 38.7	+1.3
PCAB	Cabril	141.88	306	ePKP	PKPdf	18 33 34.6	-2.0
PCAB				i		18 37 16.6	
PVIS	Viseu	141.96	304	ePKP	PKPdf	18 33 34.5	-2.3
PVIS				i		18 37 16.1	
PGAV	Gavieira, Arco	142.00	306	ePKP	PKPdf	18 33 32.9	-4.0
PGAV				i		18 37 16.4	
PGAV	Gavieira, Arco	142.00	306	eLQ	LQ	19 16 36.0	
PGAV	Gavieira, Arco	142.00	306	eLR	LR	19 30 58.8	
	comp=Z,4µm,18.0s						
PESTR	Estremoz	142.01	301	ePKP	PKPdf	18 33 34.9	-2.0
PESTR				i		18 37 15.6	
PESTR	Estremoz	142.01	301		PKPpre	18 33 28.8	
PESTR	Estremoz	142.01	301	P	PKPdf	18 33 35.3	-1.6
U40A	Yellville	142.11	63	P	PKPdf	18 33 32.8	-4.4
	baz=274,SNR=60						
U40A				P	PKPdf	18 33 32.8	-4.4
	baz=274,SNR=60						
U40A	Yellville	142.11	63	P	PKPdf	18 33 38.2	+1.0
	baz=274,SNR=60						
X40A	Basin Creek Fa	142.22	66		PKPpre	18 33 29.7	
X40A	Basin Creek Fa	142.22	66	P	PKPdf	18 33 33.1	-4.3
	baz=272,SNR=9.9						
X40A				P	PKPdf	18 33 33.1	-4.3
	baz=272,SNR=9.9						
X40A	Basin Creek Fa	142.22	66	P	PKPdf	18 33 38.3	+0.9
	baz=272,SNR=9.9						
Z41A	Richland Creek	142.27	68	P	PKPdf	18 33 33.8	-3.7
	baz=270						
Z41A				P	PKPdf	18 33 33.8	-3.7
	baz=270						
PVAQ	Vaqueiros	142.28	299	ePKP	PKPdf	18 33 35.6	-1.8
PVAQ				i		18 37 16.6	
PVAQ	Vaqueiros	142.28	299	eLQ	LQ	19 14 12.7	
PVAQ				eLR	LR	19 23 39.6	
	comp=Z,3µm,20.0s						
PVAQ	Vaqueiros	142.28	299	P	PKPdf	18 33 34.6	-2.8
PBEJ	Beja	142.33	300	ePKP	PKPdf	18 33 35.6	-1.9
PBEJ				i LQ	LQ	18 37 17.9	
EVO	Evora	142.38	300	ePKP	PKPdf	18 33 36.0	-1.5
EVO				i		18 37 15.2	
P40A	Paris	142.39	58	P	PKPdf	18 33 33.2	-4.3
	baz=279,SNR=71						
R40A	Maddies Statio	142.39	60	P	PKPdf	18 33 33.6	-4.0
	baz=277,SNR=52						
G40A	Rib Lake	142.41	48	P	PKPdf	18 33 34.3	-3.1
	baz=288,SNR=53						
NBAN	Anadia - AL	142.41	203	eP	PKPdf	18 33 39.8	+1.4
COI	Coimbra	142.44	303	ePKP	PKPdf	18 33 36.8	-0.8
COI				i		18 37 14.2	
COI	Coimbra	142.44	303	IAMs_20	IAMs_20	19 41 56.8	
	comp=Z,5µm,20.0s						
PEXB	Peixe	142.45	183	eP	PKPdf	18 33 35.9	-2.5
PBDV	Barranco-do-Ve	142.46	298	ePKP	PKPdf	18 33 35.3	-2.5
PMTG	Montargil	142.47	301	ePKP	PKPdf	18 33 34.2	-3.5
PMTG				i LQ	LQ	18 37 17.2	
NBPN	Ponto Novo - B	142.48	196	eP	PKPdf	18 33 37.4	-1.1
PCVE	Castro Verde	142.51	299	ePKP	PKPdf	18 33 36.2	-1.6
PCVE				i		18 37 16.9	
I40A	Norwalk	142.52	50	P	PKPdf	18 33 34.3	-3.4
	baz=286,SNR=12						
PCAS	Casmilo, Conde	142.53	303	ePKP	PKPdf	18 33 35.1	-2.7
PCAS				i		18 37 13.9	
L40A	Anamosa	142.53	54	P	PKPdf	18 33 33.7	-4.0
	baz=283,SNR=37						
UALR	University of	142.62	66		PKPdf	18 33 34.9	-3.2
MESJ	Messejana	142.63	299	ePKPdf	PKPdf	18 33 37.2	-0.8
MESJ				IAMs_20	IAMs_20	19 45 47.7	
	comp=Z,4µm,18.7s						
MESJ	Messejana	142.63	299	ePKP	PKPdf	18 33 36.2	-1.8
MESJ				i		18 37 17.3	
MESJ	Messejana	142.63	299	ePKIKP	PKPdf	18 33 37.2	-0.8
WHAR	Wooly Hollow	142.64	65		PKPdf	18 33 34.1	-4.0
342B	Flagon Creek P	142.64	71	P	PKPdf	18 33 36.6	-1.6
	baz=268						
W41B	Gary Mavity, V	142.68	65		PKPdf	18 33 34.6	-3.6
W41B	Gary Mavity, V	142.68	65	P	PKPdf	18 33 34.9	-3.2
	baz=273,SNR=52						
OTAV	Otavalo	142.79	128		PKPdf	18 33 36.0	-3.6
OTAV	Otavalo	142.79	128	IAMs_20	IAMs_20	19 46 56.4	
	comp=Z,2µm,21.0s						
OTAV	Otavalo	142.79	128	⇑PKIKP	PKPdf	18 33 36.6	-3.0
OTAV	Otavalo	142.79	128	eP	PKPdf	18 33 36.3	-3.3
OTAV	Otavalo	142.79	128	eP	PKPdf	18 33 37.4	-2.2
PNCL	Nicolau / Gran	142.84	300	ePKP	PKPdf	18 33 35.1	-3.2
PNCL				i		18 37 17.7	
PSBE	So Bento	142.84	302	ePKP	PKPdf	18 33 37.6	-0.8
PSBE				i		18 37 16.0	
COWI	Conover	142.85	46	P	PKPdf	18 33 34.4	-3.7
	baz=290						
D41A	Chassel	142.88	45		PKPdf	18 33 34.3	-3.8
D41A	Chassel	142.88	45	P	PKPdf	18 33 34.7	-3.4
	baz=292						
NBRF	Rio Formoso -	142.91	205	eP	PKPdf	18 33 38.3	-0.9
CRIN	San Cristobal	142.96	103		PKPdf	18 33 35.0	-4.3
CRIN				IAMs_20	IAMs_20	19 36 49.1	
	comp=Z,2µm,20.0s						
PACT	Alcochete	142.99	301	i		18 37 15.5	
MORF	Marmelete	143.03	299	ePKPdf	PKPdf	18 33 37.9	-0.9
MORF				IAMs_20	IAMs_20	19 52 18.6	
	comp=N,4µm,26.4s						
MORF	Marmelete	143.03	299	ePKP	PKPdf	18 33 37.5	-1.3
MORF				i		18 37 16.6	
MORF	Marmelete	143.03	299	ePKIKP	PKPdf	18 33 37.9	-0.9
JFWS	Jewell Farm	143.03	52	P	PKPbc	18 33 35.1	-0.3
	baz=285						
PTEO	Sao Teotonio	143.06	299	ePKP	PKPdf	18 33 37.6	-1.2
PTEO				i		18 37 20.5	
N41A	Harden Midland	143.09	56	P	PKPbc	18 33 35.4	-0.2
	baz=281,SNR=8.6						
CCAR	Cane Creek	143.12	67	P	PKPbc	18 33 37.1	+1.2
	baz=272						
PFVI	Vila Bisbo	143.19	298	ePKP	PKPab	18 33 34.7	+0.1
CCM	Cathedral Cave	143.22	60		PKPab	18 33 35.4	+0.6
CCM	Cathedral Cave	143.22	60	PKIKP	PKPab	18 33 35.4	+0.7
CCM	Cathedral Cave	143.22	60	P	PKPbc	18 33 36.5	+0.5
	baz=278,SNR=78						
CCM	Cathedral Cave	143.22	60	P	PKPdf	18 33 39.4	+0.4
	baz=278						
LIS	Lisbon	143.24	301	ePKPdf	PKPdf	18 33 38.3	-0.8
LIS				IAMs_20	IAMs_20	19 44 28.6	
	comp=Z,5µm,20.5s						
LIS	Lisbon	143.24	301	ePKIKP	PKPdf	18 33 38.2	-0.8
PMST	Lisbon--Monsan	143.26	301	ePKP	PKPdf	18 33 40.0	+0.9
ORTG	Ortega, Santa	143.27	108		PKPbc	18 33 38.1	+1.1
PMAFR	Mafra	143.31	301	ePKP	PKPdf	18 33 38.9	-0.3
PMAFR				i		18 37 18.9	
HZTE	Horizontes, Gu	143.32	107		PKPdf	18 33 39.3	-0.6
TGUH	Tegucigalpa,Un	143.33	101		PKPbc	18 33 37.7	+0.6
TGUH				IAMs_20	IAMs_20	19 36 57.1	
	comp=Z,4µm,20.0s						
TGUH	Tegucigalpa,Un	143.33	101	eP	PKPbc	18 33 37.0	-0.2
SAML	Samuel	143.36	158		PKPab	18 33 35.9	0.0
SAML				IAMs_20	IAMs_20	19 42 32.2	
	comp=Z,5µm,18.0s						
SAML	Samuel	143.36	158	PKHKP	PKPpre	18 33 35.9	
SAML				MLR	MLR		
	comp=Z,5µm,18.0s						
143A	Socs Landing,	143.45	69	P	PKPbc	18 33 38.0	+1.1
	baz=270						
LCAR	Lake Charles	143.50	63	P	PKPbc	18 33 37.0	+0.1
	baz=275,SNR=117						
JTS	Las Juntas de	143.67	108	PKP	PKPdf	18 33 40.0	-0.5
JTS	Las Juntas de	143.67	108		PKPbc	18 33 38.7	+0.7
JTS	Las Juntas de	143.67	108	IAMs_20	IAMs_20	19 29 09.7	
	comp=Z,2µm,21.0s						
JTS	Las Juntas de	143.67	108	eP	PKPbc	18 33 38.9	+0.9
L42A	Oliver, Polo	143.67	53	P	PKPbc	18 33 37.1	-0.1
	baz=284,SNR=19						
TUMC	Tumaco	143.69	126		PKPdf	18 33 40.0	-0.6
TUMC	Tumaco	143.69	126	eP	PKPdf	18 33 39.6	-1.0
I42A	Draeger Farm,	143.70	50		PKPbc	18 33 37.0	-0.2
I42A	Draeger Farm,	143.70	50	P	PKPbc	18 33 37.3	+0.1
	baz=287,SNR=80						
FVM	French Village	143.87	60	P	PKPbc	18 33 38.9	+1.0
	baz=278,SNR=116						
SLM	Saint Louis	143.92	59	P	PKPbc	18 33 38.9	+0.8
	baz=279,SNR=24						
HBAR	Harrisburg	143.95	64	P	PKPbc	18 33 38.7	+0.5
	baz=275,SNR=5.5						
344A	Westbrook Farm	144.01	71	P	PKPdf	18 33 40.1	-0.5
	baz=269						
PBMO	Poplar Bluff	144.02	62	P	PKPbc	18 33 39.1	+0.8
	baz=276,SNR=232						
MATN	Matagalpa	144.05	104		PKPab	18 33 38.5	-0.2
BOAB	BOACO BROADBAN	144.06	105	IAMs_20	IAMs_20	19 38 51.3	
	comp=Z,5µm,20.0s						
E43A	Lone Tree Farm	144.14	45	P	PKPbc	18 33 39.0	+0.5
	baz=292						
VBMS	Vicksburg	144.20	70	P	PKPdf	18 33 40.6	-0.3
	baz=270						
VBMS	Vicksburg	144.20	70	P	PKPdf	18 33 40.3	-0.7
	baz=270,SNR=16						
HDC	Heredia	144.24	110	IAMs_20	IAMs_20	19 32 49.9	
	comp=Z,3µm,21.0s						
GCUF	Volcan Galeras	144.27	128	⇑eP	PKPdf	18 33 41.9	-0.4
ACON	Acoyapa	144.27	106		PKPbc	18 33 40.5	+0.7
HDIL	Hopedale	144.28	56	P	PKPbc	18 33 39.5	+0.4
	baz=283,SNR=28						
HDIL	Hopedale	144.28	56	P	PKPdf	18 33 40.8	0.0
	baz=283,SNR=28						
P43A	Skaggs, Pawnee	144.29	57	P	PKPdf	18 33 40.1	-0.7
	baz=281,SNR=60						
H43A	Windswept, Lux	144.30	49	P	PKPbc	18 33 39.5	+0.4
	baz=289						
NRS	Narsarsuaq	144.34	356		PKPbc	18 33 38.5	0.0
NRS				IAMs_20	IAMs_20	19 47 04.6	
	comp=Z,3µm,19.0s						
NRS	Narsarsuaq	144.34	356	PKIKP	PKPbc	18 33 38.6	0.0
NRS				MLR	MLR		
	comp=Z,4µm,19.0s						
NRS	Narsarsuaq	144.34	356	i P	PKPab	18 33 37.4	-0.8
IVI	Ivigtut	144.41	358		PKPab	18 33 38.4	-0.1
IVI	Ivigtut	144.41	358	i P	PKPab	18 33 38.1	-0.4
K43A	Burlington	144.45	52	P	PKPbc	18 33 40.0	+0.5
	baz=286						
TBTG	Tabatinga, AM	144.69	144	eP	PKPab	18 33 40.9	-0.1
TBTG	Tabatinga, AM	144.69	144	eP	PKPbc	18 33 41.2	+0.1
CRUC	La Cruz	144.78	129	eP	PKPdf	18 33 43.4	+0.4
Q44A	Meyer Farm, Va	144.81	58	P	PKPdf	18 33 41.6	-0.2
	baz=280,SNR=36						
BRU2	Volcan	144.82	113	⇑eP	PKPdf	18 33 43.5	+0.8
S44A	Carbondale	144.83	60	P	PKPdf	18 33 41.9	+0.1
	baz=279,SNR=122						
LNXT	Lenox	144.84	63	P	PKPdf	18 33 42.0	+0.1
	baz=276,SNR=5.7						
L44A	Lake County Fo	144.89	52	P	PKPdf	18 33 41.6	-0.2
	baz=286						
L44A	Lake County Fo	144.89	52	P	PKPdf	18 33 41.7	-0.2
	baz=286						
GR1C	Gorgona, Isla	144.89	125	eP	PKPdf	18 33 42.4	-0.3
Y45A	Yeager Farm, C	144.97	67	P	PKPdf	18 33 43.1	+0.9
	baz=273,SNR=93						
O44A	Mansfield	144.98	56	P	PKPdf	18 33 42.5	+0.5
	baz=283,SNR=36						
M44A	Midewin, Midew	145.00	54	P	PKPdf	18 33 42.2	+0.2
	baz=285,SNR=98						
OXF	Oxford	145.05	66	IAMs_20	IAMs_20	19 34 58.1	
	comp=Z,5µm,20.0s						
OXF	Oxford	145.05	66	P	PKPdf	18 33 42.9	+0.6
	baz=274,SNR=118						
OXF	Oxford	145.05	66	P	PKPdf	18 33 42.9	+0.6
	baz=274						
346A	Big Creek Wild	145.09	71	P	PKPdf	18 33 43.8	+1.3
	baz=270						
ESPN	Las Esperanzas	145.14	106	IAMs_20	IAMs_20	19 36 25.7	
	comp=Z,2µm,20.0s						
W45A	Hickory Valley	145.18	65	P	PKPdf	18 33 43.4	+0.8
	baz=275,SNR=128						
NBMA	Muriti-CE	145.39	200	eP	PKPdf	18 33 45.1	+1.5
T45B	Paducah	145.41	61	P	PKPab	18 33 43.9	+0.9
	baz=278,SNR=14						
SOTA	Rioblanco	145.43	128	⇑eP	PKPab	18 33 45.6	+1.3
146A	Union	145.43	69	P	PKPab	18 33 44.6	+1.4
	baz=272						
I45A	Fountain	145.49	49	P	PKPab	18 33 43.0	0.0
	baz=290						
I45A				P	PKPab	18 33 43.0	0.0
	baz=290						
G45A	Suttons Bay	145.51	47	P	PKPab	18 33 43.6	+0.4
	baz=292						
G45A				P	PKPab	18 33 43.6	+0.4
	baz=292						
CACAO	El Cacao, Vera	145.52	116	eP	PKPab	18 33 44.4	+0.4
SMTB	Santa Maria do	145.63	184	eP	PKPab	18 33 45.1	+0.7
CFLOR	Florencia	145.70	130	eP	PKPab	18 33 45.9	+1.1
FLOC	Florencia	145.70	130	eP	PKPab	18 33 45.6	+0.8
PCON	Cinco Dias	145.71	128	⇑eP	PKPab	18 33 46.7	+1.2
RCBR	Riachuelo	145.81	206	PKPbc	PKPab	18 33 46.0	+0.9
	comp=Z,130nm,0.7s,baz=325,slow=4.9,SNR=43						
RCBR	Riachuelo	145.81	206	IAMs_20	IAMs_20	19 32 20.5	
	comp=Z,5µm,19.0s						
RCBR	Riachuelo	145.81	206	eP	PKPab	18 33 45.7	+0.5
E46A	Sault Ste Mari	145.84	44	P	PKPbc	18 33 43.9	0.0
	baz=296						
SFIN	Lafayette	145.95	55	P	PKPab	18 33 45.5	+0.6
	baz=284,SNR=47						
SFIN	Lafayette	145.95	55	P	PKPab	18 33 45.3	+0.4
	baz=284,SNR=47						
P46A	Rosedale	146.05	56	P	PKPab	18 33 46.2	+0.9
	baz=283,SNR=28						
L46A	Eue Claire	146.09	52	P	PKPab	18 33 45.4	0.0
	baz=287						
L46A				P	PKPab	18 33 45.4	0.0
	baz=287						
PLAL	Pickwick Lake	146.10	65	IAMs_20	IAMs_20	19 30 43.0	
	comp=Z,6µm,22.0s						
WVT	Waverly	146.18	63	P	PKPdf	18 33 44.5	+0.3
	baz=278,SNR=151						
WVT	Waverly	146.18	63	P	PKPbc	18 33 45.5	+0.3
	baz=278						
MALC	Bahia Malaga	146.18	125	eP	PKPab	18 33 46.8	+0.3
Z47A	Carrollton	146.24	68	P	PKPab	18 33 46.0	-0.2
	baz=273						
GARC	Garzon, Huila	146.25	130	⇑eP	PKPab	18 33 47.5	+0.4
AZU	Azuero	146.25	116	eP	PKPbc	18 33 45.6	-0.5
GLMI	Grayling	146.27	47	P	PKPab	18 33 46.1	+0.1
	baz=293						
GLMI	Grayling	146.27	47	P	PKPab	18 33 45.9	-0.1
	baz=293						
CGR1C	Isla Gorgona,	146.34	128	eP	PKPdf	18 33 43.1	-2.1
MARP	Paez Belalcaza	146.38	128	eP	PKPab	18 33 48.1	+0.4
PNME	Penonome	146.60	115	eP	PKPbc	18 33 47.3	+0.2
T47A	Sharon Grove	146.63	61		PKPdf	18 33 44.1	-0.9
T47A	Sharon Grove	146.63	61	P	PKPbc	18 33 45.8	-0.7
	baz=279,SNR=183						
BETC	Betania	146.63	129	eP	PKPab	18 33 48.9	+0.5
J47A	Sunmer	146.72	49	P	PKPbc	18 33 47.0	+0.4
	baz=291						
J47A				P	PKPbc	18 33 47.0	+0.4
	baz=291						
PIZC	Pizarro, Choco	146.79	124	eP	PKPab	18 33 48.7	-0.2
N47A	Urbana	146.85	54	P	PKPbc	18 33 47.6	+0.6
	baz=286						
N47A				P	PKPbc	18 33 47.6	+0.6
	baz=286						
YOTC	Yotoco, Valle	146.89	126	eP	PKPbc	18 33 48.3	+0.2
YOTC	Yotoco, Valle	146.89	126	eP	PKPdf	18 33 46.7	+0.4
X48A	Hartselle	147.00	66	P	PKPdf	18 33 45.5	-0.2
	baz=276,SNR=126						
V48A	Smith Brothers	147.04	63	P	PKPdf	18 33 45.9	+0.2
	baz=278,SNR=122						
LRAL	Lakeview Retre	147.14	68	P	PKPbc	18 33 48.4	+0.2
	baz=273						
LRAL	Lakeview Retre	147.14	68	P	PKPbc	18 33 48.8	+0.7
	baz=273,SNR=121						
BRAL	Brewton	147.16	72	IAMs_20	IAMs_20	19 34 45.5	
	comp=Z,5µm,20.0s						
BRAL	Brewton	147.16	72	P	PKPab	18 33 49.8	-0.1
	baz=270						
BRAL	Brewton	147.16	72	P	PKPab	18 33 49.6	-0.3
	baz=270						
MACC	Macarena, Meta	147.34	132	eP	PKPbc	18 33 49.7	+0.4
NBPB	Pedra_Branca-C	147.37	200	eP	PKPbc	18 33 48.4	-0.9
BCIP	Isla Barro Col	147.38	115		PKPdf	18 33 46.7	-0.2
BCIP				IAMs_20	IAMs_20	19 42 29.6	
	comp=Z,3µm,20.0s						
BCIP	Isla Barro Col	147.38	115	PKIKP	PKPdf	18 33 46.7	-0.2
BCIP				MLR	MLR		
	comp=Z,3µm,20.0s						
BCIP	Isla Barro Col	147.38	115	eP	PKPbc	18 33 49.6	+0.3
CLTN	Cedars of Leba	147.38	63		PKPdf	18 33 45.5	-0.8
O48B	Farmland	147.42	55	P	PKPdf	18 33 46.8	+0.6
	baz=286,SNR=51						
O48B	Farmland	147.42	55	P	PKPbc	18 33 49.2	+0.5
	baz=286,SNR=51						
P48A	Milroy	147.42	56	P	PKPdf	18 33 47.1	+0.9
	baz=284,SNR=51						
P48A				P	PKPdf	18 33 47.1	+0.9
	baz=284,SNR=51						
L48A	N Adams	147.43	51	P	PKPdf	18 33 47.0	+0.9
	baz=289,SNR=77						
L48A				P	PKPdf	18 33 47.0	+0.9
	baz=289,SNR=77						
UPA	Univ. de Panam	147.52	115	eP	PKPdf	18 33 47.7	+0.6
PLMC	San Jos del P	147.56	125	eP	PKPdf	18 33 45.0	-2.3
Y49A	Blount Mountai	147.57	67	P	PKPdf	18 33 47.9	+1.2
	baz=275,SNR=60						
ORTC	Ortega, Tolima	147.63	128	eP	PKPdf	18 33 48.1	+0.7
PRAC	Prado	147.75	128	eP	PKPdf	18 33 48.3	+0.7
U49A	Red Boiling Sp	147.76	62		PKPdf	18 33 46.2	-0.6
U49A	Red Boiling Sp	147.76	62	P	PKPdf	18 33 48.0	+1.1
	baz=280,SNR=148						
250A	Grady	147.81	70	P	PKPbc	18 33 49.1	-0.9
	baz=272						
AAM	Ann Arbor	147.86	50		PKPdf	18 33 46.1	-0.7
AAM	Ann Arbor	147.86	50	PKIKP	PKPdf	18 33 46.1	-0.7
AAM				MLR	MLR		
	comp=Z,9µm,20.0s						
AAM	Ann Arbor	147.86	50	P	PKPbc	18 33 48.9	-0.9
	baz=291						
AAM	Ann Arbor	147.86	50	P	PKPbc	18 33 50.2	+0.4
	baz=291						
R49A	Shelbyville	147.89	58	P	PKPbc	18 33 49.6	-0.4
	baz=283,SNR=67						
R49A				P	PKPbc	18 33 49.6	-0.4
	baz=283,SNR=67						
ANIL	Santa Ana	147.92	127	eP	PKPdf	18 33 48.9	+0.7
N49A	Columbus Grove	147.93	53	P	PKPdf	18 33 48.2	+1.2
	baz=288,SNR=92						
N49A				P	PKPdf	18 33 48.2	+1.2
	baz=288,SNR=92						
P49A	Miami Univ. Ec	147.93	56	P	PKPbc	18 33 49.5	-0.6
	baz=285,SNR=83						
P49A	Miami Univ. Ec	147.93	56	P	PKPbc	18 33 50.9	+0.8
	baz=285,SNR=83						
O49A	Covington	148.04	54	P	PKPdf	18 33 48.3	+1.0
	baz=287,SNR=56						
O49A				P	PKPdf	18 33 48.3	+1.0
	baz=287,SNR=56						
PRVC	Isla de Provid	148.22	107		PKPbc	18 33 51.7	+0.2
PRVC	Isla de Provid	148.22	107	eP	PKPbc	18 33 51.6	+0.1
451A	Vernon	148.28	73	P	PKPbc	18 33 50.9	-0.4
	baz=270						
W50A	Signal Mountai	148.33	64	P	PKPdf	18 33 48.6	+0.7
	baz=278,SNR=86						
SCHQ	Schefferville	148.33	18	PKPbc	PKPbc	18 33 51.2	+0.5
	comp=Z,84nm,0.7s,baz=3.9,slow=2.6,SNR=93						
SCHQ	Schefferville	148.33	18		PKPdf	18 33 46.5	-0.8
SCHQ				PKPbc	PKPbc	18 33 50.9	+0.2
CBOC	Ciudad Bolivar	148.39	124	eP	PKPdf	18 33 48.6	-0.2
PRPB	Parauapebas	148.39	181	eP	PKPdf	18 33 49.5	+0.9
K50A	Casco	148.40	49		PKPdf	18 33 47.2	-0.5
K50A	Casco	148.40	49	P	PKPdf	18 33 49.4	+1.7
	baz=292						
K50A				P	PKPdf	18 33 49.4	+1.7
	baz=292						
T50A	Nancy	148.41	60	P	PKPbc	18 33 50.0	-1.4
	baz=281						
T50A				P	PKPbc	18 33 50.0	-1.4
	baz=281						
GUVC	San Jose del G	148.45	133	eP	PKPbc	18 33 52.7	+0.4
R50A	Paris	148.54	58	P	PKPdf	18 33 49.0	+0.9
	baz=284,SNR=35						
R50A				P	PKPdf	18 33 49.0	+0.9
	baz=284,SNR=35						
M50A	Fremont	148.59	52		PKPdf	18 33 46.3	-1.8
M50A				PKPbc	PKPbc	18 33 52.1	+0.3
M50A	Fremont	148.59	52	P	PKPdf	18 33 49.0	+0.9
	baz=290,SNR=26						
M50A				P	PKPdf	18 33 49.0	+0.9
	baz=290,SNR=26						
Z51A	Franklin	148.65	68	P	PKPbc	18 33 51.0	-1.2
	baz=275						
X51A	Calhoun	148.78	65	P	PKPdf	18 33 49.7	+1.1
	baz=277,SNR=17						
X51A				P	PKPdf	18 33 49.7	+1.1
	baz=277,SNR=17						
VILC	Villavicencio,	148.87	130	eP	PKPbc	18 33 52.2	-1.2
ROSC	El Rosal	148.94	128	PKPbc	PKiKP	18 33 54.8	-0.5
	comp=Z,128nm,0.6s,baz=213,slow=3.5,SNR=12						
ROSC	El Rosal	148.94	128		PKPdf	18 33 51.5	+1.5
ROSC	El Rosal	148.94	128	eP	PKPdf	18 33 51.1	+1.1
VLDQ	Val d'Or	148.95	37		PKPdf	18 33 46.2	-2.2
VLDQ				PKPbc	PKPbc	18 33 51.4	-1.0
HELC	Santa Helena	148.97	124	eP	PKPdf	18 33 50.5	+0.5
352A	Blakely	148.97	71	P	PKPbc	18 33 52.0	-1.0
	baz=272						
DBBC	Dabeiba	148.98	122	eP	PKPdf	18 33 51.2	+1.5
NBPS	Pedro II - PI	148.99	197	eP	PKPdf	18 33 50.7	+1.0
V51A	Loudon	149.01	63	P	PKPdf	18 33 49.5	+0.5
	baz=280,SNR=54						
ACSO	Alum Creek Sta	149.02	54		PKPdf	18 33 48.3	-0.6
ACSO				PKPbc	PKPbc	18 33 52.9	0.0
ACSO	Alum Creek Sta	149.02	54	P	PKPdf	18 33 49.8	+0.9
	baz=288,SNR=37						
ACSO	Alum Creek Sta	149.02	54	P	PKPbc	18 33 53.5	+0.6
	baz=288,SNR=37						
NORC	Norcasia	149.03	126	eP	PKPdf	18 33 49.6	-0.1
152A	Waverly Hall	149.08	69		PKPdf	18 33 49.1	0.0
152A				PKPbc	PKPbc	18 33 53.5	+0.2
152A	Waverly Hall	149.08	69	P	PKPdf	18 33 49.9	+0.7
	baz=274						
Q51A	Peebles	149.09	56	P	PKPdf	18 33 49.0	0.0
	baz=286,SNR=34						
Q51A				P	PKPdf	18 33 49.0	0.0
	baz=286,SNR=34						
P51A	Williamsport	149.18	55	P	PKPbc	18 33 53.7	+0.4
	baz=287,SNR=8.3						
P51A				P	PKPbc	18 33 53.7	+0.4
	baz=287,SNR=8.3						
CHIC	Chingaza	149.21	129	eP	PKPdf	18 33 51.0	+0.6
N51A	Ashland	149.23	52	P	PKPdf	18 33 50.3	+1.1
	baz=290,SNR=31						
N51A				P	PKPdf	18 33 50.3	+1.1
	baz=290,SNR=31						
S51A	Beattyville	149.25	59	P	PKPdf	18 33 50.4	+1.1
	baz=283,SNR=174						
S51A				P	PKPdf	18 33 50.4	+1.1
	baz=283,SNR=174						
W52A	Murphy	149.47	64	P	PKPdf	18 33 51.2	+1.5
	baz=279,SNR=15						
TKL	Tuckaleechee C	149.50	63	P	PKPdf	18 33 51.0	+1.3
	baz=280,SNR=69						
TZTN	Tazewell	149.52	61	P	PKPdf	18 33 51.3	+1.5
	baz=282,SNR=41						
TZTN	Tazewell	149.52	61	P	PKPbc	18 33 54.5	+0.2
	baz=282						
Y52A	Lilburn	149.52	66		PKPdf	18 33 49.8	0.0
Y52A				PKPbc	PKPbc	18 33 54.7	+0.4
Y52A	Lilburn	149.52	66	P	PKPdf	18 33 51.7	+1.8
	baz=277						
Y52A				P	PKPdf	18 33 51.7	+1.8
	baz=277						
MACA	Manacapuru-AM	149.61	159	eP	PKPdf	18 33 51.6	+1.0
V52A	Sevierville	149.61	62		PKPdf	18 33 49.0	-0.9
V52A	Sevierville	149.61	62	P	PKPdf	18 33 51.1	+1.2
	baz=280,SNR=105						
NBMO	Morrinhos-CE	149.62	200	eP	PKPdf	18 33 51.6	+1.0
SPBC	San Pablo de B	149.67	127	eP	PKPdf	18 33 51.0	+0.3
ITTB	Itaituba	149.69	169	eP	PKPdf	18 33 51.6	+0.9
PMPST	Porto Santo, M	149.72	292	ePKP	PKPbc	18 33 55.1	+0.2

PMPS	Porto Santo	149.72	292	*e*PKP	PKPbc	18 33 55.1	+0.3
M52A	Chesterland	149.73	51	P	PKPdf	18 33 51.7	+1.7
	baz=292,SNR=25						
M52A				P	PKPdf	18 33 51.7	+1.7
	baz=292,SNR=25						
P52A	Corning	149.82	55	P	PKPbc	18 33 54.9	0.0
	baz=288,SNR=68						
O52A	Adamsville	149.88	53	P	PKPdf	18 33 50.9	+0.7
	baz=289,SNR=95						
O52A				P	PKPdf	18 33 50.9	+0.7
	baz=289,SNR=95						
Q52A	Bidwell	149.92	56	P	PKPdf	18 33 50.9	+0.6
	baz=287,SNR=70						
Q52A				P	PKPdf	18 33 50.9	+0.6
	baz=287,SNR=70						
UREC	San Jos de Ur	149.97	122	*e*P	PKPdf	18 33 51.8	+0.6
MACI	Morro de la Ar	149.97	283	PKPdf	PKPdf	18 33 49.1	-1.9
MACI					pPKPdf	18 33 56.5	-0.1
PTBC	PUERTO BERRIO,	149.99	125	*e*P	PKPdf	18 33 50.9	-0.2
LCBC	Los crdobas,	149.99	119	*e*P	PKiKP	18 33 57.0	0.0
PTGC	Puerto Gaitan,	150.00	132	*e*P	PKPdf	18 33 50.9	-0.3
GOGA	Godfrey	150.06	67	P	PKPdf	18 33 51.6	+1.0
	baz=276						
GOGA	Godfrey	150.06	67	P	PKPbc	18 33 56.0	+0.4
	baz=276,SNR=33						
TIGA	Tifton	150.11	71	P	PKPdf	18 33 52.3	+1.5
	baz=273						
TIGA	Tifton	150.11	71	P	PKiKP	18 33 57.0	+0.3
	baz=273						
FUL	Funchal	150.23	291	*e*PKP	PKiKP	18 33 57.7	+0.8
FUL				*i* LQ	LQ	18 37 31.8	
PMAR	Madeira	150.24	292	*e*PKP	PKiKP	18 33 58.6	+1.4
PMAR				*i* LQ	LQ	18 38 17.3	
M53A	WI Miller and	150.24	50	P	PKPbc	18 33 56.3	+0.4
	baz=293,SNR=77						
V53A	Saluda	150.27	62	P	PKPdf	18 33 52.5	+1.5
	baz=281,SNR=104						
V53A				P	PKPdf	18 33 52.5	+1.5
	baz=281,SNR=104						
CASEE	Lake Jocassee	150.29	64	P	PKPdf	18 33 52.3	+1.3
	baz=279						
O53A	New Philadelph	150.29	53	P	PKiKP	18 33 56.5	-0.3
	baz=290,SNR=152						
ZARC	Zaragoza, Cauc	150.31	123	*e*P	PKPdf	18 33 51.9	+0.2
R53A	Hurricane	150.33	57		PKPdf	18 33 46.7	-4.2
R53A				PKPbc	pPKPdf	18 33 56.7	+0.1
R53A	Hurricane	150.33	57	P	PKPdf	18 33 51.2	+0.2
	baz=286,SNR=29						
R53A				P	PKPdf	18 33 51.2	+0.2
	baz=286,SNR=29						
N53A	Lisbon	150.36	52	P	PKPdf	18 33 51.8	+0.8
	baz=291,SNR=216						
N53A				P	PKPdf	18 33 51.8	+0.8
	baz=291,SNR=216						
P53A	Whipple	150.41	54	P	PKPdf	18 33 51.8	+0.8
	baz=289,SNR=120						
P53A				P	PKPdf	18 33 51.8	+0.8
	baz=289,SNR=120						
154A	Montrose	150.44	69	P	PKPdf	18 33 53.2	+1.9
	baz=275						
ERPA	Erie	150.45	49	P	PKPdf	18 33 51.3	+0.2
	baz=294,SNR=12						
ERPA	Erie	150.45	49	P	PKPbc	18 33 56.4	0.0
	baz=294						
PMOZ	Porto Moniz, M	150.47	292	*e*PKP	PKiKP	18 33 58.5	+1.0
PMOZ	Porto Moniz, M	150.47	292	*e*LR	LR	19 31 02.6	
	comp=Z,6μm,18.0s						
PMOZ	Porto Moniz, M	150.47	292	P	PKiKP	18 33 58.7	+1.2
PMOZ	Porto Moniz, M	150.47	292	P	PKiKP	18 33 58.7	+1.2
ALLY	Alegheny Colle	150.53	50	P	PKPdf	18 33 51.5	+0.4
	baz=294,SNR=12						
RUSC	La Rusia	150.55	128	*e*P	PKPdf	18 33 52.8	+0.1
J54A	Appleton	150.83	46	P	PKPdf	18 33 52.5	+0.9
	baz=298						
J54A				P	PKPdf	18 33 52.5	+0.9
	baz=298						
U54A	Nelsons Funny	150.88	60	P	PKPdf	18 33 52.9	+0.9
	baz=283,SNR=35						
U54A				P	PKPdf	18 33 52.9	+0.9
	baz=283,SNR=35						
O54A	Avella	150.91	53	P	PKPdf	18 33 53.1	+1.3
	baz=291,SNR=85						
O54A				P	PKPdf	18 33 53.1	+1.3
	baz=291,SNR=85						
BRRC	Barranca, Sant	150.92	125	*e*P	PKPdf	18 33 53.2	+0.7
HODGE	Hodges	150.96	65	P	PKiKP	18 33 58.5	+0.1
	baz=279						
BARC	Barichara	150.96	127	*e*P	PKPdf	18 33 53.1	+0.2
S54A	Dingess, Beckl	150.96	58	P	PKiKP	18 33 58.2	-0.2
	baz=286,SNR=39						
S54A				P	PKiKP	18 33 58.2	-0.2
	baz=286,SNR=39						
Q54A	Coxs Mills	150.98	55	P	PKPdf	18 33 52.8	+0.9
	baz=288,SNR=167						
Q54A				P	PKPdf	18 33 52.8	+0.9
	baz=288,SNR=167						
255A	Hazlehurst	151.03	70	P	PKPdf	18 33 53.4	+1.2
	baz=274						
ROSB	Rosrio	151.05	192	*e*P	PKPdf	18 33 54.0	+1.2
656A	Willston	151.06	75	P	PKPdf	18 33 52.9	+0.6
	baz=270						
PAULI	Pauline	151.22	64	P	PKPdf	18 33 53.3	+0.9
	baz=280						
WVNY	West Valley, N	151.25	47	P	PKPdf	18 33 53.2	+1.0
	baz=297,SNR=7.6						
J55A	Hilton	151.36	45	P	PKPdf	18 33 52.6	+0.3
	baz=299,SNR=29						
J55A				P	PKPdf	18 33 52.6	+0.3
	baz=299,SNR=29						
MCWV	Mont Chateau	151.48	53	P	PKPdf	18 33 53.9	+1.2
	baz=291,SNR=12						
MCWV	Mont Chateau	151.48	53	P	PKiKP	18 33 59.3	0.0
	baz=291,SNR=12						
V55A	Taylorsville	151.51	62	P	PKPdf	18 33 53.8	+0.9
	baz=282						
V55A				P	PKPdf	18 33 53.8	+0.9
	baz=282						
M55A	Ridgway	151.55	49	P	PKPdf	18 33 53.4	+0.7
	baz=295,SNR=30						
M55A				P	PKPdf	18 33 53.4	+0.7
	baz=295,SNR=30						
SJCC	San Jacinto, C	151.55	119		PKPdf	18 33 54.9	+1.3
SJCC	San Jacinto, C	151.55	119	*e*P	PKPdf	18 33 54.8	+1.2
KMSC	Kings Mountain	151.56	63	P	PKPdf	18 33 54.3	+1.4
	baz=281						
KMSC	Kings Mountain	151.56	63	P	PKiKP	18 33 60.0	+0.4
	baz=281,SNR=73						
HAW	Hawthorne Fire	151.61	67	P	PKPdf	18 33 52.6	-0.5
	baz=278						
R55A	Marlinton	151.73	56	P	PKPdf	18 33 53.8	+0.6
	baz=288,SNR=78						
R55A				P	PKPdf	18 33 53.8	+0.6
	baz=288,SNR=78						
JSC	Jenkinsville	151.76	65	P	PKPdf	18 33 55.4	+2.1
	baz=280						
BLA	Blacksburg	151.80	58	P	PKPdf	18 33 54.3	+1.0
	baz=286,SNR=46						
BLA	Blacksburg	151.80	58	P	PKiKP	18 34 00.0	-0.1
	baz=286						
PAMC	Pamplona, Colo	151.82	126	*e*P	PKPdf	18 33 55.4	+0.8
TAMC	Tame, Arauca	151.84	129	*e*P	PKiKP	18 34 02.5	+1.6
OCAC	Ocana	151.95	124	*e*P	PKPdf	18 33 54.8	+0.4
J56A	Wolcott	151.97	44	P	PKPdf	18 33 52.7	-0.6
	baz=300,SNR=15						
J56A				P	PKPdf	18 33 52.7	-0.6
	baz=300,SNR=15						
DWPF	Disney Wildern	152.00	78	IAMs_20	IAMs_20	19 38 24.3	
	comp=Z,3μm,21.0s						
DWPF	Disney Wildern	152.00	78	P	PKiKP	18 34 01.2	+0.5
	baz=268						
U56A	King	152.05	60	P	PKPdf	18 33 54.6	+1.0
	baz=284,SNR=13						
U56A				P	PKPdf	18 33 54.6	+1.0
	baz=284,SNR=13						
L56A	Greenwood	152.06	47	P	PKPdf	18 33 53.7	+0.1
	baz=298,SNR=14						
L56A				P	PKPdf	18 33 53.7	+0.1
	baz=298,SNR=14						
TMAB	Tom-Au,PA,Br	152.10	184	*e*P	PKPdf	18 33 54.9	+0.5
ARGC	Ariguani, Magd	152.26	120	*e*P	PKPdf	18 33 57.5	+2.9
WCNY	West Carthage	152.34	42	P	PKPdf	18 33 53.7	-0.2
	baz=303,SNR=14						
MALB	Monte Alegre	152.39	171	*e*P	PKPdf	18 33 55.5	+0.6
J57A	Williamstown	152.44	43	P	PKPdf	18 33 54.5	+0.5
	baz=302,SNR=13						
J57A				P	PKPdf	18 33 54.5	+0.5
	baz=302,SNR=13						
K57A	Scipio Center	152.46	45	P	PKPdf	18 33 54.4	+0.3
	baz=300,SNR=15						
SSPA	Standing Stone	152.50	50	P	PKPdf	18 33 54.8	+0.7
	baz=295,SNR=21						
SSPA	Standing Stone	152.50	50	P	PKPbc	18 34 01.2	+0.1
	baz=295						
BMNY	Brushton-Moira	152.53	40	P	PKPdf	18 33 54.5	+0.4
	baz=306,SNR=22						
LL1C	La Loma 1 Cana	152.60	122	*e*P	PKPdf	18 33 57.0	+1.9
LONY	Lake Ozonia	152.62	40	P	PKiKP	18 34 01.6	+0.1
	baz=306						
W57A	Gilead	152.63	63	P	PKPdf	18 33 55.2	+0.7
	baz=282						
W57A				P	PKPdf	18 33 55.2	+0.7
	baz=282						
M57A	Sunshine Farm,	152.72	48	P	PKPdf	18 33 55.3	+0.8
	baz=297,SNR=16						
M57A				P	PKPdf	18 33 55.3	+0.8
	baz=297,SNR=16						
T57A	Hurt	152.76	58	P	PKPdf	18 33 54.3	-0.4
	baz=286,SNR=23						
T57A				P	PKPdf	18 33 54.3	-0.4
	baz=286,SNR=23						
S57A	Dark Hollow, R	152.76	57	P	PKPdf	18 33 55.0	+0.3
	baz=288,SNR=8.5						
S57A				P	PKPdf	18 33 55.0	+0.3
	baz=288,SNR=8.5						
NHSC	New Hope	152.84	67	P	PKiKP	18 34 02.7	+0.4
	baz=278						
P57A	Homestead Farm	152.87	53	P	PKPdf	18 33 55.6	+0.8
	baz=292,SNR=12						
P57A				P	PKPdf	18 33 55.6	+0.8
	baz=292,SNR=12						
J58A	Remsen	152.90	43	P	PKPdf	18 33 55.3	+0.6
	baz=303,SNR=17						
J58A				P	PKPdf	18 33 55.3	+0.6
	baz=303,SNR=17						
LL6C	La Loma 6 Bece	152.94	122	*e*P	PKPdf	18 33 56.7	+1.1
SACV	Santiago Islan	153.02	252	IAMs_20	IAMs_20	19 36 30.1	
	comp=Z,5μm,20.0s						
SMRC	Santa Marta, M	153.05	118	*e*P	PKPdf	18 33 58.3	+2.6
FRNY	Flat Rock	153.06	39	P	PKPdf	18 33 54.7	-0.2
	baz=308,SNR=15						
BINY	Binghamton	153.06	46	P	PKPdf	18 33 55.5	+0.6
	baz=300,SNR=14						
BINY	Binghamton	153.06	46	P	PKiKP	18 34 02.5	0.0
	baz=300,SNR=14						
NCB	Newcomb	153.20	41	P	PKPdf	18 33 55.7	+0.5
	baz=305,SNR=38						
N58A	Sunbury	153.22	49	P	PKPdf	18 33 55.8	+0.6
	baz=296,SNR=9.9						
N58A				P	PKPdf	18 33 55.8	+0.6
	baz=296,SNR=9.9						
J59A	Piesco	153.32	42	P	PKPdf	18 33 55.6	+0.3
	baz=304,SNR=20						
J59A				P	PKPdf	18 33 55.6	+0.3
	baz=304,SNR=20						
R58B	Mineral	153.50	56	P	PKPdf	18 33 56.2	+0.5
	baz=290,SNR=9.0						
R58B				P	PKPdf	18 33 56.2	+0.5
	baz=290,SNR=9.0						
KSPA	Keystone Colle	153.52	47	P	PKPdf	18 33 55.3	-0.3
	baz=299,SNR=11						
MTDJ	Mount Denham	153.56	101	IAMs_20	IAMs_20	19 58 15.2	
	comp=Z,4μm,21.0s						
L59A	Walton	153.67	45	P	PKPdf	18 33 55.8	-0.1
	baz=301,SNR=13						
L59A				P	PKPdf	18 33 55.8	-0.1
	baz=301,SNR=13						
CBN	Corbin Frederi	153.80	55	P	PKiKP	18 34 04.2	+0.1
	baz=291						
HCNY	Howe Caverns	153.81	43	P	PKPdf	18 33 57.1	+1.0
	baz=303						
VT1	Waterbury	153.84	39	P	PKPdf	18 33 57.0	+1.0
	baz=308						
D62A	Allapoint, All	153.85	30	P	PKPdf	18 33 55.6	-0.3
	baz=318,SNR=17						
D62A				P	PKPdf	18 33 55.6	-0.3
	baz=318,SNR=17						
ACCN	Adirondack Com	153.87	41	P	PKPdf	18 33 56.4	+0.3
	baz=305,SNR=7.8						
MCVT	Middlebury Col	153.93	40	P	PKPdf	18 33 56.6	+0.5
	baz=307,SNR=13						
CRJC	Cerrejon, Guaj	154.03	120	*e*P	PKPdf	18 33 58.1	+0.8
T59A	Double "B" Far	154.07	58	P	PKPdf	18 33 56.9	+0.4
	baz=288						
T59A				P	PKPdf	18 33 56.9	+0.4
	baz=288						
U59A	Littleton	154.07	59	P	PKPdf	18 33 57.3	+0.7
	baz=287						
U59A				P	PKPdf	18 33 57.3	+0.7
	baz=287						
MCPB	Macapa, AP	154.10	176	*e*P	PKPdf	18 33 58.4	+1.1
CNNC	Cliffs of the	154.29	62	P	PKiKP	18 34 05.5	+0.3
	baz=284						
LBNH	Lisbon	154.36	38	P	PKPdf	18 33 55.3	-1.4
	baz=309,SNR=8.3						
LBNH	Lisbon	154.36	38	P	PKiKP	18 34 05.6	+0.5
	baz=309,SNR=8.3						
SDV	Santo Domingo	154.36	127	PKP	PKPdf	18 33 58.5	+0.6
	comp=Z,19nm,0.8s,baz=139,slow=4.1,SNR=17						
SDV				PKPbc	PKiKP	18 34 06.3	+0.1
	comp=Z,41nm,0.7s,baz=235,slow=2.3,SNR=14						
SDV				PKPab	PKPab	18 34 20.1	-0.1
	comp=Z,116nm,0.9s,baz=226,slow=5.7,SNR=12						
SDV	Santo Domingo	154.36	127	IAMs_20	IAMs_20	19 51 34.0	
	comp=Z,4μm,21.0s						
SDV	Santo Domingo	154.36	127	*e*P	PKPdf	18 33 58.1	+0.3
SDV	Santo Domingo	154.36	127	*e*P	PKPdf	18 33 58.4	+0.6
GEDE	Greenville	154.41	50	P	PKPdf	18 33 57.5	+0.5
	baz=296,SNR=5.0						
G62A	West of Eustis	154.47	35	P	PKPdf	18 33 57.6	+0.7
	baz=313,SNR=16						
G62A				P	PKPdf	18 33 57.6	+0.7
	baz=313,SNR=16						
NPNY	Mohonk Preserv	154.47	45	P	PKPdf	18 33 57.9	+0.9
	baz=302,SNR=7.7						
HNH	Hanover	154.49	39	P	PKPdf	18 33 58.1	+1.1
	baz=308,SNR=8.6						
ODNJ	Ogdensburg	154.51	47	P	PKPdf	18 33 57.5	+0.4
	baz=300,SNR=8.8						
J61A	Chester	154.55	40	P	PKPdf	18 33 58.5	+1.5
	baz=307,SNR=12						
J61A				P	PKPdf	18 33 58.5	+1.5
	baz=307,SNR=12						
H62A	Milan	154.57	37	P	PKPdf	18 33 57.9	+0.9
	baz=311						
H62A				P	PKPdf	18 33 57.9	+0.9
	baz=311						
E63A	Oxbow	154.63	30	P	PKPdf	18 33 57.0	0.0
	baz=319,SNR=21						
E63A				P	PKPdf	18 33 57.0	0.0
	baz=319,SNR=21						
BRNY	Black Rk. Fore	154.73	46	P	PKPdf	18 33 58.3	+0.9
	baz=301,SNR=8.0						
BRNJ	Basking Ridge	154.74	47	P	PKPdf	18 33 58.1	+0.8
	baz=299						
PANJ	Princeton	154.79	48	P	PKPdf	18 33 58.4	+1.0
	baz=298						
BOAV	Boa Vista	154.83	155	*e*P	PKPdf	18 34 00.2	+1.9
F63A	Nahmakanta, Br	154.84	32	P	PKPdf	18 33 58.2	+0.8
	baz=316,SNR=17						
F63A				P	PKPdf	18 33 58.2	+0.8
	baz=316,SNR=17						
I62A	Tamworth	154.92	38	P	PKPdf	18 33 58.3	+0.8
	baz=310,SNR=8.1						
I62A				P	PKPdf	18 33 58.3	+0.8
	baz=310,SNR=8.1						
L61B	Northampton	155.00	42	P	PKPdf	18 33 58.4	+0.7
	baz=305,SNR=17						
L61B	Northampton	155.00	42	P		18 34 05.8	
	baz=305,SNR=17						
PAL	Palisades	155.01	46	P	PKPdf	18 33 58.3	+0.5
	baz=301,SNR=5.9						
PAL	Palisades	155.01	46	P	PKPdf	18 34 06.3	+8.6
	baz=301,SNR=5.9						
PKME	Peaks-Kenny Pk	155.06	33	P	PKPdf	18 33 58.4	+0.7
	baz=316,SNR=10						
PKME	Peaks-Kenny Pk	155.06	33	P	PKPdf	18 34 06.5	+8.9
	baz=316,SNR=10						
F64A	Sherman	155.08	31	P	PKPdf	18 33 57.6	0.0
	baz=318,SNR=13						
F64A				P	PKPdf	18 33 57.6	0.0
	baz=318,SNR=13						
URIC	Uribia, Colomb	155.13	120	*e*P	PKPab	18 34 24.5	+1.3
K62A	Royalston	155.14	41	P	PKPdf	18 33 58.6	+0.7
	baz=306,SNR=19						
K62A				P	PKPdf	18 33 58.6	+0.7
	baz=306,SNR=19						
I63A	Otisfield	155.22	37	P	PKPdf	18 33 58.7	+0.8
	baz=311,SNR=8.8						
I63A				P	PKPdf	18 33 58.7	+0.8
	baz=311,SNR=8.8						
QUA2	Belchertown	155.30	42	P	PKPdf	18 33 58.0	-0.1
	baz=305,SNR=13						
WVL	Waterville	155.37	35	P	PKPdf	18 33 58.2	+0.1
	baz=314,SNR=8.1						
YLE	Yale	155.47	45	IAMs_20	IAMs_20	19 47 35.6	
	comp=Z,5μm,19.0s						
HRV	Adam Dziewonsk	155.64	41	P	PKPdf	18 33 59.1	+0.5
	baz=307,SNR=6.7						
HRV	Adam Dziewonsk	155.64	41	P	PKPdf	18 34 07.4	+8.9
	baz=307						
UNH	University of	155.68	39	P	PKPdf	18 33 59.5	+1.0
	baz=309,SNR=7.9						
DRLN	Deer Lake	155.72	12	PKPdf	PKPdf	18 33 55.6	-2.8
WES	Weston	155.85	41	P	PKPdf	18 33 58.2	-0.6
	baz=307						
G65A	Princeton	155.94	31	P	PKPdf	18 33 58.9	+0.1
	baz=319,SNR=7.1						
G65A				P	PKPdf	18 33 58.9	+0.1
	baz=319,SNR=7.1						
M63A	Gales Ferry	155.98	44	P	PKPdf	18 33 59.3	+0.3
	baz=304						
M63A				P	PKPdf	18 33 59.3	+0.3
	baz=304						
GTBY	Guantanamo Bay	156.29	99	IAMs_20	IAMs_20	19 59 23.5	
	comp=Z,2μm,20.0s						
GTBY	Guantanamo Bay	156.29	99	*e*P	PKPab	18 34 30.5	+2.3
GGN	Saint George	156.34	30		PKPdf	18 33 56.4	-2.9
GGN					PKPab	18 34 26.4	-1.2
L64A	Middleborough	156.41	41	P	PKPdf	18 34 00.4	+0.8
	baz=307						
L64A				P	PKPdf	18 34 00.4	+0.8
	baz=307						
SDDR	Presa de Saban	159.35	104	IAMs_20	IAMs_20	19 49 42.3	
	comp=Z,6μm,22.0s						
SDDR	Presa de Saban	159.35	104	*e*P	PKPab	18 34 40.2	-1.3
MDP	Montagnes des	159.45	173	PKP	PKPdf	18 34 03.9	-0.3
	comp=Z,9.1nm,0.8s,baz=52,slow=3.3,SNR=4.1						
MDP				PKPab	PKPab	18 34 41.5	-0.2
	comp=Z,18nm,0.8s,baz=168,slow=2.8,SNR=4.3						
CRPR	Cabo Rojo, PR	162.51	112	PKPdf	PKPdf	18 34 04.2	-3.0
CRPR					PKPab	18 34 53.2	-2.0
MLPR	Magueyes Islan	162.55	113		PKPdf	18 34 04.2	-3.2
MLPR					PKPab	18 34 53.2	-2.1
OBIP	Obispado Ponce	162.95	113		PKPdf	18 34 06.9	-0.8
OBIP					PKPab	18 34 56.9	-0.3
CELP	Cerrillos	162.99	113		PKPdf	18 34 07.2	-0.5
CELP					PKPab	18 34 56.5	-0.9
SJG	San Juan	163.36	114	PKPab	PKPab	18 34 56.8	-2.1
	comp=Z,29nm,0.7s,baz=217,slow=4.3,SNR=6.1						
STVI	Saint Thomas	164.47	115		PKPdf	18 34 07.8	-1.3
STVI					PKPab	18 35 02.3	-1.5
SMRT	St. Maarten	165.81	120		PKPdf	18 34 07.9	-2.4
SMRT					PKPab	18 35 08.1	-1.7

TAP 20 18:21:09.9, 24°.40N×121°.43E, h9km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.05	310	*i* P	Pg	18 21 12.4	+0.6
	baz=309						
NNSB				*i* S	Sg	18 21 13.6	+0.3
	baz=309						
NNS	Nan Shan	0.07	312	*i* P	Pg	18 21 12.6	+0.6
	baz=315						
NNS				*i* S	Sg	18 21 13.9	+0.4
	baz=315						
LATG	Datong	0.17	33	P	Pg	18 21 14.2	+0.7
	baz=33						
LATG				*e*S	Sg	18 21 17.6	+1.6
	baz=33						
ETLH	Xiulin Townshi	0.19	165	*e*P	Pg	18 21 14.9	+1.0
	baz=164						
ETLH				*e*S	Sg	18 21 17.7	+1.0
	baz=164						
NDT	Datong Townshi	0.22	21	*e*P	Pg	18 21 15.2	+0.8
	baz=20						
NDT				*e*S	Sg	18 21 18.6	+1.2
	baz=20						
FUSS	Fushou	0.22	229	*e*P	Pg	18 21 14.9	+0.4
	baz=228						
FUSS				*e*S	Sg	18 21 20.0	+2.4
	baz=228						
NACB	Ninganchiao	0.27	145	*e*P	Pb	18 21 16.1	-0.8
	baz=145						
NACB				*e*S	Sg	18 21 19.9	+1.0
	baz=145						
ENTT	Nioudou	0.28	27	*e*P	Pb	18 21 16.4	-0.6
	baz=29						
ENTT				*e*S	Sb	18 21 20.6	-1.2
	baz=29						
YHNB	Yeheng	0.28	350	P	Pb	18 21 16.6	-0.5
	baz=350						
YHNB				*e*S	Sg	18 21 20.2	+1.0
	baz=350						
WHF	Hehuan Shan	0.29	211	*e*P	Pg	18 21 16.0	+0.2
	baz=209						

IDC 20 18:41:04.9±2.2, 6°.55S×129°.56E, h0km, mb3.9/1, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=159.6km s-min=30.8km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.10	161	Pn	Pn	18 44 26.8	+0.8
	0.5nm,0.3s,baz=344,slow=13,SNR=5.9						
WRA				Sn	Sn	18 46 46.9	-16
	1.3nm,0.3s,baz=334,slow=23,SNR=14						
	0.7nm,0.4s						
ASAR	Alice Springs	17.52	167	P	Pn	18 45 10.2	-0.7
	0.3nm,0.3s,baz=345,slow=11,SNR=10						
ASAR				S	Sn	18 48 10.7	-16
	1.0nm,0.6s,baz=352,slow=26,SNR=6.3						
	1.3nm,0.6s						
MKAR	Makanchi Array	67.61	327	P	P	18 52 03.6	0.0
	0.5nm,0.4s,baz=123,slow=8.0,SNR=11						
	0.5nm,0.4s						

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*IDC **20** 18:56:03.6±1.7, 32°.64N×130°.54E, h0km, mb3.3/3, mbtmp3.4/7, ML3.1/4, Error ellipse: s-maj=25.6km s-min=10.5km az=133.0*

*JMA **20** 18:56:04.6±0.0, 32°.6N±0°.1×130°.7E±0°.1, h12km, MV3.9/20, SOUTHERN KUMAMOTO PREF*

JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .

ISC 20 18:56:05.3±0.9, 32°.63N±0°.03×130°.66E±0°.07, h11km±8km, n12, σ1^{s}38/16, mb3.2/3, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU3	Izumi3	0.15	120	*i* P	Pg	18 56 08.1	-0.7
JIU3				S	Sg	18 56 10.6	-0.6
JTA	Tamana	0.35	343	*i* P	Pg	18 56 11.9	-0.5
JTA				S	Sg	18 56 16.9	-0.3
JZO	Okuchi	0.49	186	*i* P	Pg	18 56 14.2	-0.6
JZO				S	Sg	18 56 20.8	-0.4
JNU	Nakatsue	0.53	20	Pg	Pg	18 56 14.5	-1.2
	178nm,0.3s,baz=253,slow=20,SNR=746						
JNU				Lg	Lg	18 56 21.8	
	2μm,0.3s,baz=56,slow=17,SNR=76						
JTZ	Takazaki	0.81	153	*i* P	Pg	18 56 20.5	-0.4
KSRS	Korea Array	5.32	336	Pn	Pn	18 57 24.3	-0.2
	0.5nm,0.3s,baz=155,slow=15,SNR=4.6						
KSRS				Pg	Pb	18 57 41.4	+3.3
	2.0nm,0.3s,baz=153,slow=17,SNR=14						
KSRS				Lg	Lg	18 58 51.0	
	1.4nm,0.3s,baz=158,slow=29,SNR=5.4						
	0.8nm,0.3s						
JOW	Kunigami	6.13	200	Pn	Pn	18 57 36.9	+1.1
	1.3nm,0.3s,baz=120,slow=11,SNR=1.8						
	18nm,1.0s						
MJAR	Matsushiro Arr	7.35	56	Pn	Pn	18 57 54.0	+1.5
	0.1nm,0.3s,baz=237,slow=14,SNR=5.1						
	1.0nm,0.5s						
KLR	Kul'dur	16.61	3	Pn	P	18 59 59.7	-0.7
	0.1nm,0.3s,baz=165,slow=8.8,SNR=3.1						
	1.0nm,0.6s						
SONM	Songino Array	23.82	317	P	P	19 01 18.1	-0.2
	0.4nm,0.6s,baz=130,slow=13,SNR=1.7						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	41.96	311	P	P	19 03 54.6	-1.4

	0.2nm,0.7s,baz=100,slow=10,SNR=1.1						
	0.2nm,0.7s						
FINES	FINESS Array B	68.38	330	P	P	19 07 04.8	-1.7
	0.7nm,0.7s,baz=32,slow=5.4,SNR=3.7						
	0.7nm,0.7s						

NOU ***20*** *19:06:08.7, 25°.61S×129°.75E, h0km, mb4.5/35, Northern Territory, Australia*
IDC ***20*** *19:06:10.0±2.0, 25°.65S×129°.86E, h0km, mb3.7/2, mbtmp4.0/5, ML4.3/3, Error ellipse: s-maj=35.0km s-min=23.5km az=18.0*
NEIC ***20*** *19:06:10.5±4.7, 25°.55S±0°.07×129°.77E±0°.06, h10km±2km, Error ellipse: s-maj=12.6km s-min=9.1km az=187.0*
ISC 20 19:06:10.0±0.7**, 25°.61S**±0°.07×**129°.77E**±0°.06**, h10km, n65,** σ**1ˢ71**/69**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	Warakurna	1.45	293	P	Pn	19 06 36.6	+0.3
ASAR	Alice Springs	4.23	64	Pn	Pn	19 07 15.8	+1.2
	8.7nm,0.3s,baz=244,slow=12,SNR=396						
ASAR				Pg	Pb	19 07 26.2	+1.7
	8.2nm,0.3s,baz=235,slow=15,SNR=31						
ASAR				Sn	Sn	19 08 04.9	+0.8
	17nm,0.3s,baz=248,slow=22,SNR=17						
ASAR				Lg	Lg	19 08 18.0	
	26nm,0.3s,baz=246,slow=26,SNR=14						
	18nm,0.4s						
ASAR	Alice Springs	4.23	64		Pn	19 07 15.6	+1.0
ASAR					Pb	19 07 27.7	+3.1
ASAR				Sn	Sn	19 08 04.5	+0.4
ASAR				LR	LR	19 08 17.6	
AS31	Alice Springs	4.23	64		Pn	19 07 15.7	+1.0
FORT	Forrest	5.37	196		Pn	19 07 34.1	+3.9
FORT	Forrest	5.37	196	P	Pn	19 07 30.9	+0.7
OOD	Oodnadatta	5.72	114	P	Pn	19 07 37.3	+2.2
MULG	Mulgathing	6.00	142	P	Pn	19 07 41.0	+2.1
WRA	Warramunga Arr	7.04	38	Pn	Pn	19 07 54.4	+1.1
	4.9nm,0.3s,baz=218,slow=14,SNR=146						
WRA				Sn	Sn	19 09 10.1	-3.3
	5.6nm,0.3s,baz=217,slow=24,SNR=7.5						
WRA				Lg	Lg	19 09 45.5	
	8.7nm,0.3s,baz=214,slow=28,SNR=7.6						
	11nm,0.4s						
WB2	Warramunga Arr	7.05	38		Pn	19 07 54.0	+0.7
WRAB	Tennant Creek	7.05	38		Pn	19 07 54.5	+1.1
WRAB	Tennant Creek	7.05	38	P	Pn	19 07 54.9	+1.5
WR0	Warramunga Arr	7.14	39		Pn	19 07 55.5	+0.9
WB0	Warramunga Arr	7.21	37		Pn	19 07 56.1	+0.6
LCRK	Leigh Creek	8.88	125	P	Pn	19 08 19.3	+0.9
BBOO	Buckleboo	9.04	144		Pn	19 08 21.1	+0.6
BBOO	Buckleboo	9.04	144	P	Pn	19 08 21.2	+0.6
KNRA	Kununurra	9.93	354		Pn	19 08 34.1	+1.3
KNRA	Kununurra	9.93	354	P	Pn	19 08 33.7	+0.9
	11nm,1.3s						
PSA00	Pilbara Seismi	9.95	292	Pn	Pn	19 08 33.6	+0.5
PSA00	Pilbara Seismi	9.95	292	P	Pn	19 08 33.8	+0.7
INKA	Innaminka	10.04	105	P	Pn	19 08 35.9	+1.5
WHYH	Whyalla	10.05	139	P	Pn	19 08 35.0	+0.6
	32nm,0.6s						
MEEK	Meekatharra	10.08	262	P	Pn	19 08 35.0	+0.1
MBWA	Marble Bar	10.23	294	Pn	Pn	19 08 36.6	-0.3
MBWA	Marble Bar	10.23	294	P	Pn	19 08 37.7	+0.8
QIS	Mount Isa	10.36	63	P	Pn	19 08 38.5	-0.2
NAPP	Napperby	10.50	138	P	Pn	19 08 40.6	0.0
	37nm,0.6s						
HTT	Hallett	11.14	137	P	Pn	19 08 48.8	-0.7
STKA	Stephens Creek	12.11	124	Pn	Pn	19 09 01.4	-1.2
	2.0nm,0.3s,baz=298,slow=12,SNR=36						
STKA				Sn	Sn	19 11 08.0	-10
	0.6nm,0.3s,baz=190,slow=19,SNR=2.9						
STKA				Lg	Lg	19 12 31.0	
	0.5nm,0.3s,baz=68,slow=20,SNR=1.3						
	4.2nm,0.3s						
STKA	Stephens Creek	12.11	124		Pn	19 09 01.3	-1.3
STKA	Stephens Creek	12.11	124	P	Pn	19 09 02.2	-0.4
KLBR	Kellerberrin	12.12	238	P	Pn	19 09 01.8	-1.0
BLDU	Ballidu	12.56	244	P	Pn	19 09 08.3	-0.5
MORW	Morawa	12.68	251	Pn	Pn	19 09 08.4	-2.0
MORW	Morawa	12.68	251	P	Pn	19 09 08.2	-2.3
MTN	Manton Dam	12.76	6	Pn	Pn	19 09 09.3	-2.4
MTN	Manton Dam	12.76	6	P	Pn	19 09 10.9	-0.8
QLP	Quilpie	13.04	97	P	Pn	19 09 15.2	-0.1
KDU	Kakadu	13.11	12	P	Pn	19 09 15.0	-1.3
NWAO	Narrogin (SRO)	13.14	233	Pn	Pn	19 09 15.4	-1.4
NWAO	Narrogin (SRO)	13.14	233	P	Pn	19 09 16.3	-0.4
MUN	Mundaring	13.47	239	P	Pn	19 09 20.4	-0.9
	53nm,1.7s						
RKGY	Rocky Gully	14.24	228	P	Pn	19 09 31.1	-0.6
GIRL	Giralia	14.49	279	Pn	Pn	19 09 33.0	-2.2
GIRL	Giralia	14.49	279	P	Pn	19 09 32.2	-3.0
ARPS	Mount Arapiles	15.16	140	P	Pn	19 09 41.2	-3.1
CMSA	Cobar Meteorol	15.18	117	P	Pn	19 09 42.9	-1.6
MTSU	Mount Surprise	15.41	64	P	Pn	19 09 45.9	-1.7
	4.2nm,1.1s						
CTA	Charters Tower	16.15	73	Pn	Pn	19 09 53.8	-3.4
	0.1nm,0.3s,baz=228,slow=14,SNR=3.0						
CTA				Sn	Sn	19 12 45.7	-11
	0.2nm,0.3s,baz=296,slow=19,SNR=2.1						
CTA	Charters Tower	16.15	73	P	Pn	19 09 56.4	-0.9
CTAO	Charters Tower	16.15	73	Pn	Pn	19 09 53.1	-4.1
CTAO				IAmb	IAmb	19 10 23.7	
	comp=Z,23nm,1.3s						
CTAO	Charters Tower	16.15	73	P	Pn	19 09 57.0	-0.3
RMQ	Roma	17.09	97	P	Pn	19 10 08.7	-0.4
COEN	Coen	17.11	50	Pn	Pn	19 10 05.3	-4.1
COEN				IAmb	IAmb	19 10 13.0	
	comp=Z,26nm,1.3s						
COEN	Coen	17.11	50	P	Pn	19 10 08.9	-0.6
SAUI	Saumlaki	17.59	5	Pn	Pn	19 10 12.9	-2.4
TOO	Toolangi	17.90	136	Pn	Pn	19 10 16.6	-2.5
TOO				IAmb	IAmb	19 10 26.0	
	comp=Z,33nm,1.6s						
EIDS	Eidsvold	19.24	94	P	P	19 10 35.4	+0.8
EIDS				IAmb	IAmb	19 11 07.7	
	comp=Z,28nm,1.6s						
ARMA	Armidale	19.88	109		P	19 10 41.7	+0.1
ARMA				IAmb	IAmb	19 10 44.1	
	comp=Z,19nm,1.4s						
ARMA	Armidale	19.88	109	P	P	19 10 41.9	+0.3
SONM	Songino Array	76.07	344	P	P	19 18 00.3	+2.6
	comp=Z,0.5nm,0.6s,baz=144,slow=5.4,SNR=2.9						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	76.07	344	IAmb	IAmb	19 18 01.3	
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	83.86	329	P	P	19 18 41.5	+1.8
	comp=Z,0.2nm,0.4s,baz=144,slow=3.8,SNR=4.3						
	comp=Z,0.2nm,0.4s						
MKAR	Makanchi Array	83.86	329	P	P	19 18 39.8	+0.1

IDC ***20*** *19:13:01.6±1.0, 14°.17N×146°.76E, h0km, mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=25.1km s-min=18.4km az=127.0*
NEIC ***20*** *19:13:06.4±1.7, 14°.09N±0°.05×146°.78E±0°.09, h35km±7km, mb4.3/8, Error ellipse: s-maj=12.2km s-min=7.8km az=98.0*
ISC 20 19:13:05.7±0.7**, 14°.0N**±0°.1×**146°.86E**±0°.08**, h35km, n24,** σ**1ˢ35**/25**, mb3.9**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.98	258	Pn	Pn	19 13 36.5	-0.2
	94nm,0.3s,baz=110,slow=2.7,SNR=65						
GUMO				Sn	Sn	19 14 02.5	+2.2
	50nm,0.3s,baz=28,slow=21,SNR=9.1						
GUMO	Guam	1.98	258		Pn	19 13 36.3	-0.4
GUMO				Sn	Sn	19 13 59.0	-1.2
PATS	Pohnpei	13.33	121	Pn	Pn	19 16 10.2	-2.3
JOW	Kunigami	21.55	309	P	P	19 17 51.8	-0.3
KSRS	Korea Array	28.80	328	P	P	19 18 59.3	-1.1
	1.4nm,0.7s,baz=147,slow=11,SNR=9.6						
	1.4nm,0.7s						
WB0	Warramunga Arr	35.74	200	P	P	19 20 03.2	+1.8
WR0	Warramunga Arr	35.87	200	P	P	19 20 01.8	-0.7
WR0				IAmb	IAmb	19 20 09.9	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	35.92	200	P	P	19 20 04.7	+1.8
	comp=Z,1.0nm,0.9s,baz=22,slow=9.4,SNR=4.7						
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	35.92	200	IAmb	IAmb	19 20 11.1	
	comp=Z,0.4nm,1.4s						
ASAR	Alice Springs	39.53	199	P	P	19 20 35.2	+1.7
	comp=Z,0.5nm,0.8s,baz=19,slow=8.0,SNR=4.3						
	comp=Z,0.5nm,0.8s						
CMAR	Chiang Mai Arr	46.12	282	P	P	19 21 26.1	-0.9
	comp=Z,0.7nm,0.6s,baz=82,slow=6.5,SNR=6.8						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	47.52	324	P	P	19 21 39.1	+1.4
	comp=Z,1.1nm,0.8s,baz=136,slow=7.8,SNR=4.4						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	47.52	324	P	P	19 21 37.4	-0.3
SONM				IAmb	IAmb	19 21 40.8	
	comp=Z,1.1nm,0.8s						
ZALV	Zalesovo Beam	62.41	324	P	P	19 23 24.4	-0.7
	comp=Z,1.2nm,0.5s,baz=95,slow=6.9,SNR=5.3						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	62.53	316	P	P	19 23 26.4	+0.4
	comp=Z,0.5nm,0.5s,baz=91,slow=8.3,SNR=4.9						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	65.51	320	P	P	19 23 44.9	-0.6
KURK				IAmb	IAmb	19 23 50.7	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	67.36	25	P	P	19 23 57.2	+0.1
	comp=Z,0.4nm,0.4s,baz=251,slow=5.9,SNR=9.2						
	comp=Z,0.4nm,0.4s						
TOLK	Toolik Lake Re	67.53	21	P	P	19 23 59.4	+1.2
TOLK				IAmb	IAmb	19 24 35.2	
	comp=Z,6.9nm,1.6s						
BMAR	Burnt Mountain	68.97	23	P	P	19 24 07.6	+0.4
KKAR	Karatay Array	70.63	311	P	P	19 24 16.5	-1.4
ABKAR	Akbulak array	77.53	318	P	P	19 24 57.7	-0.3
ABKAR	Akbulak array	77.53	318	P	P	19 24 56.9	-1.1
ABKAR				IAmb	IAmb	19 25 18.1	
	comp=Z,1.2nm,0.8s						
YKA	Yellowknife Ar	81.59	28	P	P	19 25 20.8	+1.0
	comp=Z,0.3nm,0.5s,baz=282,slow=5.2,SNR=4.0						
	comp=Z,0.3nm,0.5s						
NVAR	Mina Array Bea	85.15	52	P	P	19 25 41.6	+2.7
	comp=Z,1.0nm,0.7s,baz=266,slow=7.2,SNR=2.2						
	comp=Z,1.0nm,0.7s						

NAO ***20*** *19:20:21.3±1.1, 74°.22N×14°.43E, ML3.7*
IDC ***20*** *19:20:22.1±0.8, 74°.27N×15°.37E, h0km, mb3.7/8, mbtmp3.6/13, ML3.1/5, Error ellipse: s-maj=21.5km s-min=8.7km az=73.0*
KOLA ***20*** *19:20:24.0, 74°.15N×14°.61E, h0km, ML3.3*
BER ***20*** *19:20:24.8±2.6, 74°.29N×14°.17E, h26km±15km, ML2.5, MW3.0, ML3.7(NAO), Confirmed Earthquake*
IEPN ***20*** *19:20:26.0, 74°.33N×14°.38E, h10km*
ISC 20 19:20:23.7±1.5**, 74°.26N**±0°.04×**14°.39E**±0°.05**, h31**km±11km**, n64,** σ**3ˢ04**/112**, mb3.5**/9**, 4D, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	1.27	77	Pg	Pb	19 20 47.0	+0.1
BJO1				Lg	Lg	19 21 03.0	
BJO1	Bjornoya	1.27	77	⇓iP	Pb	19 20 47.1	+0.1
BJO1				eS	Sb	19 21 02.8	-0.2
BJO1				IAML		19 21 11.3	
	comp=Z,157nm,0.4s						
BJO1	Bjornoya	1.27	77	⇓iP	Pb	19 20 47.0	+0.1
BJO1				eS	Sb	19 21 03.1	+0.2
HSPB	Hornsund (broa	2.77	5	Pn	Pn	19 21 05.6	-0.2
HSPB				Sn	Sn	19 21 35.0	-3.1
HSPB	Hornsund (broa	2.77	5	eP	Pn	19 21 05.7	-0.1
HSPB				eS	Sn	19 21 35.0	-3.1
HSPB				IAML		19 21 35.5	
	comp=Z,13nm,0.2s						
HSPB	Hornsund (broa	2.77	5	eP	Pn	19 21 05.7	-0.2
HSPB				eS	Sn	19 21 34.5	-3.6
HOPEN	Hopen	3.51	45	Pn	Pn	19 21 17.5	+1.5
HOPEN				Sn	Sn	19 21 56.6	+0.2
HOPEN	Hopen	3.51	45	eP	Pn	19 21 17.5	+1.5
HOPEN				eS	Sn	19 21 55.8	-0.6
HOPEN				IAML		19 21 59.7	
	comp=Z,45nm,0.3s						
HOPEN	Hopen	3.51	45	eP	Pn	19 21 17.4	+1.5
HOPEN				eS	Sn	19 21 56.0	-0.3
BRBA	Barentsburg A	3.82	359	Pn	Pn	19 21 21.5	+1.3
BRBA				Sn	Sn	19 22 00.0	-3.9
BRBA	Barentsburg A	3.82	359	eP	Pn	19 21 20.5	+0.3
BRBA				eS	Sn	19 22 00.5	-3.4
BRBA				IAML		19 22 02.6	
	comp=Z,22nm,0.8s						
BRBB	Barentsburg B	3.85	359	Pn	Pn	19 21 21.2	+0.5
BRBB				Sn	Sn	19 22 00.3	-4.5
BRBB	Barentsburg B	3.85	359	eP	Pn	19 21 19.7	-1.0
BRBB				eS	Sn	19 22 00.7	-4.2
SPA0	Spitsbergen Ar	3.97	6	Pn	Pn	19 21 23.5	+1.2
	baz=182,slow=16						
SPA0				Sn	Sn	19 22 05.2	-2.5
	baz=177,slow=37						
SPA0	Spitsbergen Ar	3.97	6	Pn	Pn	19 21 23.5	+1.2
	baz=182,slow=16						
SPA0				Sn	Sn	19 22 05.2	-2.5
	baz=177,slow=37						
SPA0	Spitsbergen Ar	3.97	6	⇓iP	Pn	19 21 23.3	+1.0
SPA0				eS	Sn	19 22 05.6	-2.0
SPITS	Spitsbergen Ar	3.97	6	Pn	Pn	19 21 23.4	+1.2
	baz=174,slow=16						
SPITS				Sn	Sn	19 22 04.9	-2.7
	baz=182,slow=29						
	comp=Z,4.7nm,0.3s						
HAMF	Hammerfest	4.59	138	Pn	Pn	19 21 31.1	+0.2
HAMF				Sn	Sn	19 22 20.6	-2.5
HAMF	Hammerfest	4.59	138	eP	Pn	19 21 31.1	+0.2
HAMF				eS	Sn	19 22 20.0	-3.1
HAMF				IAML		19 22 25.5	
	comp=Z,45nm,0.2s						
KBS	Kingsbay	4.72	354	Pn	Pn	19 21 32.6	0.0
KBS				Sn	Sn	19 22 20.9	-5.4
KBS	Kingsbay	4.72	354	eP	Pn	19 21 32.5	-0.2
KBS				eS	Sn	19 22 21.0	-5.2
KBS				IAML		19 22 26.5	
	comp=Z,13nm,0.6s						
KBS	Kingsbay	4.72	354	eP	Pn	19 21 32.3	-0.3
KBS				eS	Sn	19 22 20.8	-5.4
TRO	Tromso	4.86	161	Pn	Pn	19 21 34.5	0.0
TRO				Sn	Sn	19 22 26.2	-3.4
TRO	Tromso	4.86	161	eP	Pn	19 21 34.9	+0.3
TRO				eS	Sn	19 22 26.2	-3.4
TRO				IAML		19 22 30.0	
	comp=Z,17nm,0.4s						
JETT	Jettan, Norway	5.09	155	Pn	Pn	19 21 38.3	+0.6
JETT				Sn	Sn	19 22 33.3	-2.0
KIF	Kilpisjarvi	5.66	156	Pn	Pn	19 21 46.0	+0.5
KIF				Sn	Sn	19 22 45.9	-3.4
KIF	Kilpisjarvi	5.66	156	⇓iP	Pn	19 21 45.9	+0.5
KIF				eS	Sn	19 22 45.8	-3.4
ARA0	ARCESS Array S	5.87	138	Pn	Pn	19 21 48.4	0.0
	baz=329,slow=14						
ARA0				Sn	Sn	19 22 51.4	-3.1
	baz=326,slow=22						
ARA0	ARCESS Array S	5.87	138	Pn	Pn	19 21 48.4	0.0
	baz=329,slow=14						
ARA0				Sn	Sn	19 22 51.4	-3.1
	baz=326,slow=22						
ARA0				IAML		19 22 56.8	
	comp=Z,27nm,0.6s						
ARCES	ARCESS Array B	5.87	138	Pn	Pn	19 21 48.4	0.0
	comp=Z,2.6nm,0.3s,baz=326,slow=12,SNR=162						
ARCES				Sn	Sn	19 22 52.0	-2.5
	comp=Z,7.1nm,0.3s,baz=324,slow=19,SNR=12						
	comp=Z,5.5nm,0.2s						
ARCES	ARCESS Array B	5.87	138	P	Pn	19 21 48.4	0.0
ARCES				S	Sn	19 22 52.3	-2.2
KTK1	Kautokeino	5.96	148	eP	Pn	19 21 50.7	+1.0
KTK1				eS	Sn	19 22 54.3	-2.5
KTK1				IAML		19 23 00.4	
	comp=Z,16nm,0.3s						
KEV	Kevo	5.97	133	eP	Pn	19 21 50.0	+0.3
KEV				eS	Sn	19 22 54.1	-2.8
LOF	Lofoten	6.17	183	eP	Pn	19 21 52.5	0.0
LOF				eS	Sn	19 22 55.6	-6.2
LOF				IAML		19 23 01.7	
	comp=Z,4.5nm,0.2s						
STEI	Steigen	6.37	177	eP	Pn	19 21 55.6	+0.4
STEI				eS	Sn	19 23 02.2	-4.6
STEI				IAML		19 23 10.6	
	comp=Z,3.2nm,0.5s						
HEF	Hetta	6.58	149	eP	Pn	19 21 58.5	+0.4
HEF				eS	Sn	19 23 09.2	-2.9
FAUS	Fauske	6.92	177	eP	Pn	19 22 03.1	+0.3
FAUS				eS	Sn	19 23 15.7	-4.7
FAUS				IAML		19 23 41.0	
	comp=Z,3.0nm,0.4s						
PRVG	Vayda Guba	7.11	121	P	Pn	19 22 04.9	-0.5
PRVG				S	Sn	19 23 20.8	-4.2
JMIC	Jan Mayen	7.56	256	eP	Pn	19 22 09.3	-2.3
KONS	Konsvik	7.81	184	eP	Pn	19 22 14.9	-0.2
KONS				eS	Sn	19 23 34.9	-7.3
KONS				IAML		19 23 41.5	
	comp=Z,5.8nm,0.3s						
TERR	Teriberka	8.21	118	P	Pn	19 22 20.1	-0.3
TERR				S	Sn	19 23 48.1	-3.8
APA0	Apatity Array	8.99	129	Pn	Pn	19 22 30.1	-1.0
	baz=327,slow=11						
APA0				Sn	Sn	19 24 06.2	-4.9
	baz=322,slow=28						
APA0	Apatity Array	8.99	129	Pn	Pn	19 22 30.1	-1.0
	baz=327,slow=11						
APA0				Sn	Sn	19 24 06.2	-4.9
	baz=322,slow=28						
APA0	Apatity Array	8.99	129	P	Pn	19 22 30.6	-0.5
APA0				S	Sn	19 24 06.4	-4.7
APA	Apatity	9.11	128	S	Sn	19 24 08.7	-5.3
LVZ	Lovozero	9.11	124	P	Pn	19 22 33.0	+0.1
LVZ				S	Sn	19 24 09.2	-5.0
ZFI	Zemlya Franca-	9.53	32	eP	Pn	19 22 39.9	+1.5
ZFI				eS	Sn	19 24 18.8	-5.4
ZFI2	Zemlya Franca-	9.53	32	eP	Pn	19 22 39.9	+1.5
ZFI2				eS	Sn	19 24 18.5	-5.7
NOA	NORSAR Array B	13.34	187	Pn	Pn	19 23 32.2	+1.6
	baz=3.9,slow=14,SNR=1.3						
	comp=Z,0.2nm,0.5s						
FIA0	FINESS Array S	13.56	155	Pn	Pn	19 23 32.6	-1.0
	baz=354,slow=14						
FIA0				Sn	Sn	19 25 55.0	-7.9
	baz=2.0,slow=28						
FIA0	FINESS Array S	13.56	155	Pn	Pn	19 23 32.6	-1.0
	baz=354,slow=14						
FIA0				Sn	Sn	19 25 55.0	-7.9
	baz=2.0,slow=28						
FINES	FINESS Array B	13.56	155	Pn	Pn	19 23 32.6	-1.0
	comp=Z,0.5nm,0.3s,baz=357,slow=12,SNR=25						
FINES				Sn	Sn	19 25 54.4	-8.5
	comp=Z,0.3nm,0.3s,baz=356,slow=21,SNR=3.5						
	comp=Z,1.4nm,0.4s						
LSH	Leshukonskoye	14.19	115	eP	Pn	19 23 38.9	-3.2
	comp=Z,41nm,1.8s						
LSH				eS	Sn	19 26 01.0	-17
HFS	Hagfors	14.20	181	Pn	Pn	19 23 43.3	+1.0
	comp=Z,0.1nm,0.3s,baz=82,slow=20,SNR=1.7						
	comp=Z,0.3nm,0.5s						
KLMR	Klimovskoe	16.29	132	eP	Pn	19 24 06.7	-3.1
	comp=Z,21nm,1.9s						
KLMR				eS	Sn	19 26 50.9	-18
AKASG	Malin Array Be	24.46	157	P	P	19 25 41.4	+2.0
	comp=Z,1.0nm,0.5s,baz=348,slow=9.4,SNR=5.9						
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	25.51	181	P	P	19 25 52.2	+3.2
	comp=Z,0.5nm,0.6s,baz=18,slow=9.7,SNR=6.4						
	comp=Z,0.5nm,0.6s						
BELG	Belogornoye	25.83	130	P	P	19 25 53.0	+1.3
	comp=Z,4.4nm,0.8s,baz=68,slow=23,SNR=2.5						
	comp=Z,4.4nm,0.8s						
AKTO	Aktyubinsk	30.01	118	P	P	19 26 30.2	+1.0
	comp=Z,0.4nm,0.4s,baz=335,slow=15,SNR=1.7						
	comp=Z,0.4nm,0.4s						
YKA	Yellowknife Ar	39.44	325	P	P	19 27 52.3	+2.1
	comp=Z,0.2nm,0.6s,baz=14,slow=8.2,SNR=3.3						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	39.69	95	P	P	19 27 57.1	+4.6
	comp=Z,0.2nm,0.4s,baz=357,slow=6.5,SNR=4.5						
ILAR	Eielson Array	40.67	348	P	P	19 28 04.2	+3.8
	comp=Z,0.5nm,0.7s,baz=358,slow=6.0,SNR=5.4						
	comp=Z,0.5nm,0.7s						
AAK	Ala-Archa	41.44	105	P	P	19 28 07.7	+0.5
	comp=Z,1.7nm,0.5s,baz=164,slow=7.4						
	comp=Z,1.7nm,0.5s						
TORD	Torodi Ar. Bea	61.52	194	P	P	19 30 40.2	+2.8
	comp=Z,0.5nm,0.7s,baz=353,slow=7.2,SNR=5.9						
	comp=Z,0.5nm,0.7s						

DJA ***20*** *19:33:17.6±0.7, 13°N±7°×14°3E±°, h77km±11km, M4.6/16, mB5.3/6, mb4.7/16, MLv4.5/1, Mw(mB)4.7/6*
NEIC ***20*** *19:33:17.9±1.8, 12°.78N±0°.08×143°.36E±0°.09, h95km±6km, mb4.6/45, Error ellipse: s-maj=13.7km s-min=11.2km az=124.0*
IDC ***20*** *19:33:17.3±0.5, 12°.72N×143°.30E, h78km±5km, mb3.9/14, mbtmp4.4/16, Error ellipse: s-maj=10.4km s-min=7.0km az=146.0*
ISC 20 19:33:18.1±0.4**, 12°.75N**±0°.06×**143°.39E**±0°.06**, h100km, n96,** σ**1ˢ72**/98**, mb4.5**/48**, 1C, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.66	60	P	Pn	19 33 46.4	0.0
	2µm,0.8s,baz=191,slow=5.9,SNR=95						
GUMO				S	Sn	19 34 08.3	+0.5
	1µm,0.3s,baz=228,slow=23,SNR=11						
GUMO	Guam	1.66	60	Pn	Pn	19 33 46.2	-0.2
GUMO					Sn	19 34 05.5	-2.4
MANU	Manus Island	15.22	165	P	Pn	19 36 47.6	-0.1
MANU				IAmb	IAmb	19 36 53.9	
	comp=Z,33nm,1.0s						
SIJI	Sorong	18.11	223	P	Pn	19 37 25.7	+2.4
	comp=Z,5.8nm,0.6s,baz=44,slow=7.4,SNR=4.4						
DAV	Davao City (W)	18.43	254	P	Pn	19 37 27.5	+0.4
	comp=Z,153nm,0.3s,baz=249,slow=5.2,SNR=2.0						
DAV	Davao City (W)	18.43	254	IAmb	IAmb	19 37 31.0	
	comp=Z,190nm,0.4s						
RABL	Rabaul	18.95	152	P	P	19 37 31.0	-0.6
KRVT	Keravat (AS076	18.99	153	P	Pn	19 37 34.3	+0.6
	comp=Z,58nm,1.0s,baz=316,slow=4.9,SNR=15						
FAKI	Fak Fak	19.10	216	P	P	19 37 31.5	-1.7
FAKI				IAmb	IAmb	19 37 50.8	
	comp=Z,30nm,0.8s						
FAKI	Fak Fak	19.10	216	P	Pn	19 37 34.6	-0.4
	comp=Z,45nm,0.9s						
JHJ	Hachijo jima 2	20.54	351	P	P	19 37 49.9	+1.4
	comp=Z,286nm,0.9s,baz=52,slow=6.5,SNR=2.5						
LBMI	Labuha	20.63	231	P	P	19 37 48.1	-1.6
	comp=Z,19nm,0.9s						
MSAI	Masohi	21.50	223	P	P	19 37 59.7	+0.7
TGY	Tagaytay City	21.88	276	P	P	19 38 05.0	+1.8
	comp=Z,167nm,0.4s,baz=127,slow=1.8,SNR=10						
AAI	Ambon	22.24	224	P	P	19 38 05.0	-1.9
	comp=Z,46nm,0.9s						
PMG	Port Moresby	22.33	170	P	P	19 38 08.7	+1.0
	comp=Z,9.1nm,0.7s,baz=296,slow=13,SNR=2.0						
	comp=Z,9.1nm,0.7s						
PMG	Port Moresby	22.33	170	P	P	19 38 06.6	-1.1
SANI	Sanana	22.69	231	P	P	19 38 12.1	+0.6
	comp=Z,8.4nm,0.6s						
H11S3	WAKE ISLAND Hy	23.14	73	T	T	20 02 37.1	
	baz=250,slow=74						
H11S1	WAKE ISLAND Hy	23.15	73	T	T	20 02 36.9	
	baz=250						
H11S2	WAKE ISLAND Hy	23.15	73	T	T	20 02 05.2	
	baz=250,slow=74						
YULB	Yu-li	23.49	300		P	19 38 16.0	-3.1
YULB				IAmb	IAmb	19 38 39.0	
	comp=Z,23nm,1.0s						
GTOI	Gorontalo	23.52	241	P	P	19 38 20.5	+1.1
	comp=Z,10nm,0.7s						
H11N1	WAKE ISLAND Hy	23.58	70	T	T	20 03 26.5	
	baz=255						
H11N2	WAKE ISLAND Hy	23.59	70	T	T	20 03 26.6	
	baz=255,slow=74						
H11N3	WAKE ISLAND Hy	23.60	70	T	T	20 03 33.5	
	baz=255,slow=74						
SSLB	Suanglung	23.93	300	P	P	19 38 22.3	-0.8
SSLB				IAmb	IAmb	19 38 45.9	
	comp=Z,32nm,0.9s						
MJAR	Matsushiro Arr	24.14	350	P	P	19 38 24.9	+0.1
	comp=Z,2.0nm,1.0s,baz=180,slow=10,SNR=4.5						
MJAR				pP	pP	19 38 42.0	-3.3
	comp=Z,5.6nm,1.1s,baz=167,slow=10,SNR=3.9						
	comp=Z,2.0nm,1.0s						
MJAR	Matsushiro Arr	24.14	350		P	19 38 24.4	-0.4
MAJO	Matsushiro	24.14	350	P	P	19 38 24.2	-0.6
MRSI	Marisa	24.52	242	P	P	19 38 29.6	+1.2
	comp=Z,1µmcomp=Z,122nm,1.2s						
LUWI	Luwuk	24.63	238	P	P	19 38 27.5	-2.0
LUWI	Luwuk	24.63	238	P	P	19 38 30.3	+0.9
	comp=Z,2µmcomp=Z,204nm,1.1s						
TOLI2	Tolitoli	25.21	244	P	P	19 38 33.5	-1.3
JSD	Sado	25.59	351		P	19 38 41.0	+3.1

JSD				IAmb	IAmb	19 39 03.2	
	comp=Z,13nm,0.8s						
MYLDM	Lahad Datu	25.70	255	P	P	19 38 36.0	-3.1
MYLDM				IAmb	IAmb	19 39 05.7	
	comp=Z,24nm,1.1s						
MPSI	Mapaga	26.36	244	P	P	19 38 45.6	+0.5
	comp=Z,13nm,1.3s						
KSRS	Korea Array	28.22	333	pP	pP	19 39 20.8	-1.8
	comp=Z,3.4nm,1.1s,baz=145,slow=10,SNR=4.4						
BATI	Baumata	30.07	222	P	P	19 39 17.1	-1.1
	comp=Z,13nm,0.9s,baz=283,slow=14,SNR=2.8						
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	33.51	195	P	P	19 39 47.5	-0.7
WB0				IAmb	IAmb	19 39 50.0	
	comp=Z,5.0nm,0.7s						
WRAB	Tennant Creek	33.68	195	P	P	19 39 49.4	-0.2
WRAB				IAmb	IAmb	19 39 51.6	
	comp=Z,8.2nm,0.7s						
WB2	Warramunga Arr	33.69	195	P	P	19 39 49.7	0.0
WB2				IAmb	IAmb	19 39 51.7	
	comp=Z,7.7nm,0.8s						
WRA	Warramunga Arr	33.69	195	P	P	19 39 50.2	+0.4
	comp=Z,5.9nm,0.7s,baz=18,slow=9.6,SNR=38						
WRA				pP	pP	19 40 07.2	-4.1
	comp=Z,1.7nm,0.6s,baz=17,slow=9.6,SNR=4.0						
	comp=Z,5.9nm,0.7s						
WRA	Warramunga Arr	33.69	195	P	P	19 39 49.1	-0.7
ENH	Enshi	35.85	305		P	19 40 07.2	-1.2
GYA	Guiyang	37.04	297	⇑P	P	19 40 19.5	+0.8
GYA				pP	pP	19 40 40.0	-0.5
GYA				pmax	pmax		
	comp=Z,13nm,1.4s						
AS31	Alice Springs	37.36	194	P	P	19 40 20.9	-0.3
ASAR	Alice Springs	37.37	194	P	P	19 40 22.6	+1.4
	comp=Z,1.3nm,0.7s,baz=19,slow=12,SNR=26						
ASAR				pP	pP	19 40 39.0	-4.0
	comp=Z,1.4nm,0.6s,baz=19,slow=11,SNR=3.7						
ASAR				PcP	PcP	19 42 41.2	+2.8
	comp=Z,0.4nm,0.6s,baz=41,slow=3.0,SNR=2.3						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	37.37	194	P	P	19 40 20.9	-0.4
HHC	Hu-ho-hao-te	39.49	321	*e*P	P	19 40 42.4	+3.4
HHC				pmax	pmax		
	comp=Z,26nm,1.2s						
HHC				pmax	pmax		
	comp=Z,310nm,5.8s						
CD2	Chengdu	40.72	303	P	P	19 40 51.3	+2.0
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
DZM	Mont Dzumac	41.34	147	P	P	19 40 57.5	+3.1
	comp=Z,64nm,0.6s,baz=286,slow=4.9,SNR=73						
DZM	Mont Dzumac	41.34	147	P	P	19 40 54.7	+0.3
CM31	Chiang Mai Arr	43.10	283	P	P	19 41 10.8	+2.0
CM31				IAmb	IAmb	19 41 12.4	
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	43.10	283	P	P	19 41 10.6	+1.8
	comp=Z,6.4nm,1.1s,baz=82,slow=6.3,SNR=18						
CMAR				pP	pP	19 41 29.5	-1.4
	comp=Z,2.4nm,0.8s,baz=85,slow=6.5,SNR=4.9						
	comp=Z,6.4nm,1.1s						
STKA	Stephens Creek	44.41	182	P	P	19 41 19.7	+0.8
	comp=Z,2.5nm,0.6s,baz=6.4,slow=7.7,SNR=6.4						
	comp=Z,2.5nm,0.6s						
SONM	Songino Array	46.60	326	P	P	19 41 39.3	+3.1
	comp=Z,0.4nm,0.5s,baz=124,slow=4.4,SNR=2.6						
SONM				pP	pP	19 41 56.5	-2.3
	comp=Z,1.2nm,0.7s,baz=134,slow=8.5,SNR=5.7						
SONM				ScP	ScP	19 46 54.6	+1.3
	comp=Z,0.9nm,0.8s,baz=158,slow=4.2,SNR=3.9						
SONM	Songino Array	46.60	326	P	P	19 41 38.1	+1.8
GTA	Gaotai	46.67	313	*e*P	P	19 41 38.3	+1.4
GTA				pP	pP	19 41 57.6	-1.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GSI	Gunungsitoli	46.78	260	P	P	19 41 38.3	+0.3
TOO	Toolangi	50.09	178	P	P	19 42 03.8	+0.8
WMQ	Urumqi	56.68	314	*e*P	P	19 42 53.0	+1.7
MK31	Makanchi Array	61.10	317	P	P	19 43 19.7	-2.0
MKAR	Makanchi Array	61.10	317	P	P	19 43 23.9	+2.1
	comp=Z,0.4nm,0.6s,baz=86,slow=7.2,SNR=4.8						
MKAR				pP	pP	19 43 43.0	-2.4
	comp=Z,1.7nm,0.7s,baz=88,slow=8.6,SNR=6.7						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	61.10	317	P	P	19 43 20.4	-1.3
MAKZ	Makanchi	61.31	317	P	P	19 43 23.8	+0.7
MAKZ				IAmb	IAmb	19 43 49.8	
	comp=Z,6.2nm,1.0s						
ZALV	Zalesovo Beam	61.47	325	P	P	19 43 25.4	+1.4
	comp=Z,0.5nm,0.4s,baz=108,slow=8.2,SNR=2.5						
	comp=Z,0.5nm,0.4s						
PRZ	Przheval'sk	63.09	311	P	P	19 43 33.2	-2.1
PRZ				IAmb	IAmb	19 44 02.5	
	comp=Z,11nm,0.8s						
BOOM	Boomskoye usch	64.89	311	P	P	19 43 46.3	-0.8
NIL	Nilore	66.58	301	P	P	19 43 56.2	-1.8
KK31	Karatay Array	68.92	311	P	P	19 44 11.4	-1.0
KK31				IAmb	IAmb	19 44 38.6	
	comp=Z,7.0nm,1.1s						
KKAR	Karatay Array	68.92	311		P	19 44 12.4	-0.1
KKAR	Karatay Array	68.92	311	P	P	19 44 11.7	-0.8
KKAR				IAmb	IAmb	19 44 38.6	
	comp=Z,7.0nm,1.1s						
GAR	Garm	68.98	307	P	P	19 44 11.1	-2.0
GAR				IAmb	IAmb	19 44 39.1	
	comp=Z,11nm,0.9s						
ILAR	Eielson Array	69.94	25	P	P	19 44 19.4	+1.1
	comp=Z,1.7nm,0.6s,baz=252,slow=5.7,SNR=18						
	comp=Z,1.7nm,0.6s						
ILAR	Eielson Array	69.94	25	P	P	19 44 17.9	-0.3
KBL	Kabul	70.06	302	P	P	19 44 19.2	-0.6
KBL				IAmb	IAmb	19 44 42.6	
	comp=Z,9.9nm,1.1s						
ABKAR	Akbulak array	76.20	318	P	P	19 44 55.7	+0.3
ARU	Arti	76.63	325	P	P	19 44 58.0	+0.2
ARU				IAmb	IAmb	19 45 23.8	
	comp=Z,7.6nm,0.8s						
YKA	Yellowknife Ar	84.26	27	P	P	19 45 39.7	+1.3
	comp=Z,1.1nm,0.6s,baz=290,slow=5.1,SNR=16						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	84.26	27	P	P	19 45 38.1	-0.3
BEKR	Beckworth	86.66	50	P	P	19 45 50.5	-0.6
BEKR				IAmb	IAmb	19 45 54.5	
	comp=Z,4.5nm,0.9s						
BMO	Blue Mountains	87.59	45	P	P	19 45 54.6	-0.8
BMO				IAmb	IAmb	19 45 58.5	
	comp=Z,5.0nm,0.9s						
KVN	Kaiserville	88.56	50	P	P	19 46 01.8	+1.6
KVN				IAmb	IAmb	19 46 04.1	
	comp=Z,5.2nm,1.0s						
NVAR	Mina Array Bea	88.56	51	P	P	19 46 02.7	+2.5
	comp=Z,3.2nm,0.6s,baz=264,slow=6.0,SNR=10						
	comp=Z,3.2nm,0.6s						
NVAR	Mina Array Bea	88.56	51	P	P	19 45 59.6	-0.7
MFID	Camas Ranch	89.01	46	P	P	19 46 02.1	0.0
MFID				IAmb	IAmb	19 46 06.1	
	comp=Z,5.3nm,1.1s						
TPH	Tonopah	89.48	51	P	P	19 46 03.8	-0.8
ELK	Elko	90.20	48	P	P	19 46 07.3	-0.7
ELK				IAmb	IAmb	19 46 12.0	
	comp=Z,3.8nm,1.1s						
VNDA	Vanda	90.73	176	P	P	19 46 10.1	+0.9
	comp=Z,0.8nm,0.9s,baz=311,slow=5.3,SNR=4.9						
	comp=Z,0.8nm,0.9s						
VNDA	Vanda	90.73	176	IAmb	IAmb	19 46 12.1	
	comp=Z,2.6nm,1.2s						
FINES	FINESS Array B	91.31	335	P	P	19 46 12.0	-0.2
	comp=Z,2.7nm,1.0s,baz=11,slow=3.9,SNR=4.9						
FINES				pP	pP	19 46 31.3	-6.2
	comp=Z,1.2nm,0.7s,baz=101,slow=9.9,SNR=2.8						
	comp=Z,2.7nm,1.0s						
FINES	FINESS Array B	91.31	335	P	P	19 46 11.8	-0.5
LPAZ	La Paz	149.30	100	PKPbc	PKPbc	19 52 56.3	-0.7
	comp=Z,2.1nm,0.9s,baz=337,slow=4.2,SNR=4.8						
LPAZ	La Paz	149.30	100		PKPbc	19 52 55.3	-1.7
CPUP	Villa Florida	156.30	128	PKPab	PKPab	19 53 32.4	+2.1
	comp=Z,4.2nm,0.9s,baz=226,slow=5.3,SNR=6.6						

NEIC ***20*** *19:43:08.9±1.4, 57°.5S±0°.1×28°.0W±0°.1, h307km±8km, mb4.0/15, Error ellipse: s-maj=16.6km s-min=9.7km az=195.0*

IDC ***20*** *19:43:09.4±5.0, 57°.51S×28°.00W, h308km±50km, mb3.4/7, mbtmp4.2/8, Error ellipse: s-maj=23.2km s-min=17.8km az=71.0*

ISC 20 19:43:08.3±0.6**, 57°.50S**±0°.09×**28°.0W**±0°.1**, h300km, n34, σ0.70**/32**, mb4.0**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.76	300	Pn	Pn	19 44 35.3	+0.7
ORCD	Orcadas	9.19	242	Pn	Pn	19 45 16.4	+0.2
VNA1	Neumayer--Stat	15.63	155	P	P	19 46 31.7	-0.1
VNA3	Neumayer Olymp	15.79	158	P	P	19 46 33.2	-0.4
VNA2	Neumayer--Watz	16.03	155	P	P	19 46 36.2	0.0
	baz=316,slow=11						
SNAA	Sanae	17.61	154	P	P	19 46 52.9	-0.5
SNAA	Sanae	17.61	154	P	P	19 46 53.0	-0.4
	9.1nm,0.6s,baz=309,slow=10,SNR=58						
SNAA	Sanae	17.61	154	P	P	19 46 52.7	-0.7
SNAA				IAmb	IAmb	19 46 53.6	
	comp=Z,9.8nm,0.7s						
EFI	East Falkland	18.27	276	P	P	19 47 00.5	0.0
PMSA	Palmer Station	18.63	232	P	P	19 47 04.8	+0.6
TROLL	Troll, Antarti	19.16	151	P	P	19 47 11.5	+1.5
BELA	Belgrano 2	20.59	184	P	P	19 47 23.4	-1.2
BELA				IAmb	IAmb	19 47 25.5	
	comp=Z,8.4nm,1.3s						
PLCA	Paso Flores	31.86	283	P	P	19 49 05.7	0.0
	comp=Z,1.6nm,0.8s,baz=136,slow=16,SNR=3.2						
	comp=Z,1.6nm,0.8s						
PLCA	Paso Flores	31.86	283	IAmb	IAmb	19 49 18.3	
	comp=Z,4.0nm,1.3s						
QSPA	South Pole Qui	32.74	180	P	P	19 49 13.9	+0.7
	comp=Z,2.8nm,0.7s,baz=11,slow=9.8,SNR=30						
	comp=Z,2.8nm,0.7s						
QSPA	South Pole Qui	32.74	180	P	P	19 49 13.9	+0.7
QSPA				IAmb	IAmb	19 49 16.1	
	comp=Z,3.5nm,0.8s						
BI05	Punta Hualpn	36.19	285	P	P	19 49 42.3	-0.4
VA01	Torpederas	38.30	291	P	P	19 49 59.3	-1.1
VA01				IAmb	IAmb	19 50 00.2	
	comp=Z,20nm,1.1s						
MAW	Mawson	39.25	143	P	P	19 50 07.1	-0.6
	comp=Z,2.2nm,0.9s,baz=265,slow=12,SNR=1.5						
	comp=Z,2.2nm,0.9s						
MAW	Mawson	39.25	143	IAmb	IAmb	19 50 08.0	
	comp=Z,2.0nm,1.4s						
VNDA	Vanda	45.09	183	P	P	19 50 55.3	+0.9
	comp=Z,1.3nm,0.6s,baz=188,slow=7.0,SNR=16						
	comp=Z,1.3nm,0.6s						
VNDA	Vanda	45.09	183	P	P	19 50 54.8	+0.3
VNDA				IAmb	IAmb	19 51 01.5	
	comp=Z,4.7nm,1.6s						
LPAZ	La Paz	50.87	307	P	P	19 51 40.4	+0.5
	comp=Z,0.6nm,0.4s,baz=164,slow=7.4,SNR=3.9						
	comp=Z,0.6nm,0.4s						
LPAZ	La Paz	50.87	307	P	P	19 51 38.8	-1.0
SAML	Samuel	55.53	316	P	P	19 52 12.1	-0.7
DBIC	Dimbokro	66.68	25	P	P	19 53 27.4	+0.3
	comp=Z,1.8nm,0.6s,baz=173,slow=8.1,SNR=2.2						
	comp=Z,1.8nm,0.6s						
DBIC	Dimbokro	66.68	25	P	P	19 53 27.3	+0.1
DBIC				IAmb	IAmb	19 53 37.8	
	comp=Z,19nm,1.6s						
TOA0	Torodi Ar. Sit	74.54	30	P	P	19 54 14.4	+0.1
TOA0				IAmb	IAmb	19 54 21.6	
	comp=Z,3.7nm,1.1s						
TORD	Torodi Ar. Bea	74.54	30	P	P	19 54 15.2	+0.9
	comp=Z,2.2nm,0.5s,baz=199,slow=6.5,SNR=30						
	comp=Z,2.2nm,0.5s						
TORD	Torodi Ar. Bea	74.54	30	P	P	19 54 14.9	+0.6
TORD				IAmb	IAmb	19 54 15.9	
	comp=Z,2.1nm,0.8s						
FINES	FINESS Array B	125.88	29	PKP	PKPdf	20 01 32.2	-0.7
	comp=Z,0.8nm,0.8s,baz=180,slow=0.6,SNR=5.0						
YKA	Yellowknife Ar	136.94	317	PKP	PKPdf	20 01 53.2	-0.6
	comp=Z,0.2nm,0.4s,baz=124,slow=2.3,SNR=5.8						
INK	Inuvik	146.63	319	PKPbc	PKPdf	20 02 11.7	+0.9
	comp=Z,0.6nm,0.4s,baz=90,slow=2.7,SNR=4.8						
ILAR	Eielson Array	150.73	310	PKPbc	PKPbc	20 02 22.9	-0.5
	comp=Z,0.5nm,0.5s,baz=142,slow=5.3,SNR=7.6						

NOU ***20*** *19:49:39.4, 25°.64S×129°.79E, h0km, mb4.0/14, Northern Territory, Australia*

IDC ***20*** *19:49:41.5±4.9, 25°.58S×130°.08E, h0km, mbtmp3.5/3, ML3.6/3, Error ellipse: s-maj=44.4km s-min=34.1km az=100.0*

ISC 20 19:49:40.0±0.9**, 25°.60S**±0°.08×**129°.80E**±0°.07**, h10km, n17, σ1.17**/20**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	Warakurna	1.47	292	P	Pn	19 50 07.7	+1.0
ASAR	Alice Springs	4.20	64	Pn	Pn	19 50 45.0	+0.9
	1.3nm,0.3s,baz=244,slow=12,SNR=136						
ASAR				Pg	Pb	19 50 54.8	+0.8
	3.0nm,0.3s,baz=238,slow=16,SNR=32						
ASAR				Sn	Sn	19 51 33.0	-0.2
	4.9nm,0.3s,baz=250,slow=22,SNR=19						
ASAR				Lg	Lg	19 51 46.1	
	5.5nm,0.3s,baz=245,slow=26,SNR=9.9						
	4.5nm,0.5s						
FORT	Forrest	5.39	196	P	Pn	19 51 01.8	+1.3
OOD	Oodnadatta	5.70	114	P	Pn	19 51 06.0	+1.3
MULG	Mulgathing	6.00	142	P	Pn	19 51 09.7	+0.9
WRA	Warramunga Arr	7.01	38	Pn	Pn	19 51 23.5	+0.7
	0.9nm,0.3s,baz=214,slow=13,SNR=71						
WRA				Sn	Sn	19 52 39.8	-2.8
	1.7nm,0.3s,baz=212,slow=29,SNR=7.6						
WRA				Lg	Lg	19 53 15.6	
	2.6nm,0.3s,baz=210,slow=30,SNR=10						
	1.4nm,0.5s						
WRAB	Tennant Creek	7.02	38	P	Pn	19 51 23.9	+0.9
LCRK	Leigh Creek	8.87	125	P	Pn	19 51 48.2	0.0
BBOO	Buckleboo	9.03	144	P	Pn	19 51 50.2	-0.2
KNRA	Kununurra	9.92	354	P	Pn	19 52 03.7	+1.1
INKA	Innaminka	10.02	105	P	Pn	19 52 04.0	0.0
MEEK	Meekatharra	10.11	262	P	Pn	19 52 04.5	-0.8
MBWA	Marble Bar	10.25	293	P	Pn	19 52 07.5	+0.3
HTT	Hallett	11.13	137	P	Pn	19 52 19.0	-0.3
STKA	Stephens Creek	12.09	124	Pn	Pn	19 52 30.7	-1.6
	0.6nm,0.3s,baz=296,slow=13,SNR=10						
STKA				Sn	Sn	19 54 37.2	-10
	0.6nm,0.3s,baz=216,slow=12,SNR=5.0						
	1.1nm,0.3s						
STKA	Stephens Creek	12.09	124	P	Pn	19 52 32.3	0.0
KLBR	Kellerberrin	12.15	238	P	Pn	19 52 31.7	-1.5

PRU ***20*** *19:49:41.5±0.0, 40°.00N×19°.43E, h0km, M4.3*

MOS ***20*** *19:49:42.4±1.2, 40°.10N×19°.57E, h14km, mb4.5/7, Error ellipse: s-maj=5.5km s-min=3.7km az=78.7*

IDC ***20*** *19:49:42.9±0.8, 40°.16N×19°.68E, h0km, mb4.0/20, mbtmp4.0/33, ML3.5/11, MS4.7/3, Error ellipse: s-maj=13.5km s-min=11.2km az=13.0*

NEIC ***20*** *19:49:44.9±2.1, 40°.24N±0°.05×19°.70E±0°.06, h14km±5km, mb4.3/26, ML3.8(THE), ML4.3(TIR), Error ellipse: s-maj=7.3km s-min=6.7km az=168.0*

TIR ***20*** *19:49:44.1, 40°.11N×19°.69E, h30km±1km, Md4.4, Ml4.3*

PDG ***20*** *19:49:44.1±1.1, 40°.13N×19°.61E, h12km±2km, ML4.0/12, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*

BEO ***20*** *19:49:45.5±0.7, 40°.18N×19°.67E, h10km±3km, ML4.1/8*

LDG ***20*** *19:49:45.0±0.1, 40°.14N×19°.65E, h8km, Ml3.7/22, Error ellipse: s-maj=2.6km s-min=1.5km az=28.0*

THE ***20*** *19:49:45.1, 40°.17N×19°.75E, h0km±2km, ML3.8/12, Error ellipse: s-maj=2.2km s-min=0.7km az=321.0*

ISC 20 19:49:44.1±0.7**, 40°.13N**±0°.02×**19°.66E**±0°.02**, h12km**±4km**, n471, σ2.02**/579**, mb4.1**/37**, 44C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.36	340	P	Pb	19 49 52.7	+0.3
VLO	Vlora	0.36	340		Pb	19 49 52.6	+0.2
VLO				Sg	Sb	19 49 59.0	+0.9
VLO	Vlora	0.36	340	P	Pb	19 49 52.6	+0.2
VLO						19 49 59.0	
VLO	Vlora	0.36	340	P	Pb	19 49 52.6	+0.2
	baz=339						
VLO				S	Sb	19 50 00.6	+2.6
	baz=339						
KEK	Kerkira	0.43	166	P	Pg	19 49 53.0	+0.4
KEK				S	Sb	19 50 01.6	+1.4
	18µm,0.6s						
KEK	Kerkira	0.43	166	Pg	Pb	19 49 53.3	-0.4
KEK				Sg	Sb	19 50 00.9	+0.7
IGT	Igoumenitsa	0.79	139	P	Pg	19 49 58.7	-0.7
IGT				S	Sb	19 50 11.8	+1.2
	7µm,0.5s						
IGT	Igoumenitsa	0.79	139	P	Pg	19 49 59.1	-0.3
	baz=138						
IGT				S	Sb	19 50 11.8	+1.2
	baz=138						
SCTE	Santa Cesarea	0.92	267	Pg	Pn	19 50 04.2	+1.4
KBN	Korca	0.99	60	P	Pg	19 50 01.3	-1.9
KBN	Korca	0.99	60		Pg	19 50 01.5	-1.7
KBN	Korca	0.99	60	P	Pg	19 50 01.5	-1.7
KBN	Korca	0.99	60	P	Pb	19 50 03.4	+0.1
	baz=58						
KBN				S	Sb	19 50 17.1	+0.8
	baz=58						
KBN				AMP			
	comp=N,30nm,1.1s,baz=58						
JAN	Janina	1.03	117	P	Pg	19 50 02.6	-1.4
JAN				S	Sb	19 50 17.9	+0.4
	comp=N,9µm,0.4s						
NEST	Nestorio	1.10	75	P	Pg	19 50 03.6	-1.7
PENT	Pentalofos	1.14	86	P	Pb	19 50 04.7	-1.0
TIR	Tirane	1.22	7	*e*Pg	Pg	19 50 07.5	-0.1
TIR				*e*Sg	Sb	19 50 23.2	+0.2
TIR	Tirane	1.22	7	P	Pb	19 50 07.3	+0.1
TIR	Tirane	1.22	7		Pn	19 50 07.1	0.0
TIR	Tirane	1.22	7	P	Pn	19 50 07.1	0.0
TIR	Tirane	1.22	7	P	Pb	19 50 07.4	+0.1
	baz=6.0						
TIR				S	Sn	19 50 26.7	+3.1
	baz=6.0						
TIR				AMP			
	comp=N,12nm,1.8s,baz=6.0						
OHR	Ohrid	1.31	41	*e*Pg	Pn	19 50 08.3	0.0
OHR				*e*Sg	Sb	19 50 24.0	-1.4
OHR	Ohrid	1.31	41	*e*Pn	Pn	19 50 08.2	-0.1
OHR				*i* Sg	Sg	19 50 30.4	+4.2
KPRO	Kipourio	1.32	97	P	Pn	19 50 07.9	-0.6
FNA	Florina	1.46	63	*e*Pg	Pb	19 50 11.1	-0.2
FNA				*e*Sg	Sg	19 50 32.2	+1.0
FNA	Florina	1.46	63	P	Pn	19 50 10.8	+0.4
FNA				S	Sg	19 50 32.9	+1.7
FNA	Florina	1.46	63	P	Pn	19 50 09.9	-0.5
FNA	Florina	1.46	63		Pn	19 50 10.1	-0.3
FNA	Florina	1.46	63	P	Pn	19 50 10.1	-0.3
FNA	Florina	1.46	63	P	Pb	19 50 11.2	-0.1
	baz=61						
FNA				S	Sg	19 50 32.0	+0.9
	baz=61						
TSLK	Tsoukalades, L	1.52	149	P	Pb	19 50 12.3	+0.1
TSLK				S	Sg	19 50 33.5	+0.6
	comp=N,5µm,0.5s						
LKD2	Lefkada island	1.55	150	P	Pb	19 50 13.1	+0.4
DRAG	Dragano-Lefkad	1.61	154	P	Pb	19 50 14.1	+0.3
KZN	Kozani	1.63	83	P	Pb	19 50 13.8	-0.3
NYDR	Nydri-Lefkada	1.63	150	P	Pb	19 50 14.1	0.0
PHP	Peshkopia	1.66	21	P	Pb	19 50 14.4	-0.3
PHP	Peshkopia	1.66	21	P	Pn	19 50 13.6	+0.5
	baz=19						
PHP				S	Sb	19 50 36.1	+0.5
	baz=19						
PHP				AMP			
	comp=N,16nm,0.9s,baz=19						
EVGI	Lefkada island	1.70	153	P	Pb	19 50 15.4	+0.2
FSK	Fiskardo	1.81	157	P	Pb	19 50 16.5	-0.7
FSK				S	Sb	19 50 40.6	+0.7
	comp=N,2µm,0.7s						
ULC	Ulcinj	1.86	350	⇑*i*Pn	Pn	19 50 16.8	+1.0
ULC				*i* Sn	Sg	19 50 42.9	-0.9
KTI	Kastanea	1.90	81	P	Pb	19 50 18.5	-0.3
THL	Klokotos Trika	1.90	107	P	Pb	19 50 18.1	-0.6
THL				S	Sb	19 50 43.1	+0.7
	comp=N,2µm,0.6s						
DMLN	Damoulianata-K	1.97	163	P	Pn	19 50 17.6	+0.2
KEF3	Kipouria, Keph	2.00	164	P	Pn	19 50 18.7	+1.0
TYRN	Tyrnavos	2.02	101	P	Pb	19 50 19.7	-1.1
EVR	Evrytania	2.06	125	P	Pb	19 50 21.1	-0.4
DRME	Dracevica, Mon	2.08	350	*e*Pn	Pn	19 50 20.2	+1.4
DRME	Dracevica, Mon	2.08	350	⇑*i*Pn	Pn	19 50 20.3	+1.4
DRME				*i* Sn	Sb	19 50 48.4	+0.7
VLS	Valsamata	2.08	159	P	Pn	19 50 20.1	+1.2
LIT	Litokhoron	2.17	90	P	Pb	19 50 22.3	-1.1
LIT	Litokhoron	2.17	90		Pb	19 50 22.0	-1.4
LIT	Litokhoron	2.17	90	P	Pb	19 50 22.0	-1.4
BUM	Brajici-Budva	2.24	345	⇑*i*Pn	Pn	19 50 22.2	+1.1
BUM				*i* Sn	Sb	19 50 52.2	-0.1
GRG	Griva	2.25	68	P	Pn	19 50 21.9	+0.7
GRG	Griva	2.25	68	P	Pn	19 50 22.6	+1.4
GRG	Griva	2.25	68	P	Pn	19 50 22.6	+1.4
BCI	Bajram Curri	2.25	8	P	Pb	19 50 23.5	-1.3
	baz=7.0						
BCI				S	Sb	19 50 53.6	+1.0
	baz=7.0						
SKO	Skopje	2.28	36	*i* Pn	Pb	19 50 23.6	-1.6
SKO				*i* Sg	Sb	19 50 53.6	+0.3
MATE	Matera	2.31	284	⇓P	Pn	19 50 22.6	+0.6
MATE				⇓S	Sn	19 50 51.4	+0.9
PDG	Podgorica	2.31	353	⇑P	Pn	19 50 23.4	+1.4
PDG				⇑S	Sb	19 50 53.6	-0.8
PDG	Podgorica	2.31	353		Pn	19 50 22.5	+0.4
PDG	Podgorica	2.31	353	*e*Pn	Pn	19 50 23.1	+1.0
TTG	Podgorica	2.31	353	⇑*i*Pn	Pn	19 50 23.2	+1.1
TTG				*i* Sn	Sb	19 50 53.7	-0.7
ANX	Ano Chora	2.33	131	P	Pb	19 50 25.1	-1.0
AGG	Agios Georgios	2.34	117	P	Pn	19 50 23.6	+1.1
AGG				S	Sb	19 50 54.5	-0.7
AGG	Agios Georgios	2.34	117	P	Pb	19 50 24.6	-1.7
AGG				S	Sb	19 50 53.8	-1.4
	comp=N,2µm,0.7s						
AGG	Agios Georgios	2.34	117	Pn	Pb	19 50 25.0	-1.3
AGG	Agios Georgios	2.34	117	P	Pb	19 50 25.0	-1.3
TIP	Timpagrande	2.43	248	⇑P	Pn	19 50 24.3	+0.5
TIP				⇓S	Sn	19 50 54.1	+0.6
TIP	Timpagrande	2.43	248		Pn	19 50 25.8	+2.0
EFP	Efpalio	2.44	134	P	Pb	19 50 26.1	-1.8
PVY	Plav	2.47	5	⇑*i*Pn	Pn	19 50 25.8	+1.5
PVY				*i* Sn	Sb	19 50 58.3	-0.7
HCY	Herceg Novi	2.47	340	*e*Pn	Pn	19 50 24.7	+0.4
HCY	Herceg Novi	2.47	340	⇑*i*Pn	Pn	19 50 24.9	+0.6
HCY				*i* Sn	Sb	19 50 57.4	-1.5
CEME	Cevo	2.48	347	⇑*i*Pn	Pn	19 50 25.2	+0.9
CEME				*i* Sn	Sb	19 50 57.8	-1.3
RLS	Riolos of Patr	2.50	145	P	Pn	19 50 26.3	+1.6
VAY	Valandovo	2.51	61	*e*Pn	Pn	19 50 26.2	+1.4
VAY	Valandovo	2.51	61	*i* Pn	Pb	19 50 27.1	-2.1
VAY				*e*Sn	Sb	19 50 57.9	-2.1
THE	Thessaloniki	2.58	78	P	Pn	19 50 27.1	+1.5
ALIK	Aliki, Aigiali	2.67	134	P	Pn	19 50 29.4	+2.5
HORT	Hortiatis	2.67	79	*e*P	Pn	19 50 28.1	+1.1
HORT				S	Sn	19 51 01.7	+2.3
HORT	Hortiatis	2.67	79	P	Pn	19 50 28.5	+1.5
HORT				S	Sn	19 51 00.6	+1.2
	comp=N,642nm,1.3s						
KNT	Kendrikon	2.67	66	*e*P	Pn	19 50 28.2	+1.2
KNT	Kendrikon	2.67	66	P	Pn	19 50 28.6	+1.6
DRO	Drossia	2.70	143	P	Pn	19 50 29.0	+1.6
KOME	Kolasin	2.72	358	⇓*i*Pn	Pn	19 50 29.6	+1.9
KOME				*i* Sn	Sb	19 51 03.9	-2.2
NKY	Niksic	2.72	350	⇓*i*Pn	Pn	19 50 29.2	+1.4
NKY				*i* Sn	Sb	19 51 04.0	-2.3
IVA	Berane	2.74	4	⇑*i*Pn	Pn	19 50 29.5	+1.5
IVA				*i* Sn	Sn	19 51 04.0	+2.8
TREB	Trebinje	2.76	340	*e*Pn	Pn	19 50 28.7	+0.5
DBRK	Dubrovnik	2.78	336	*e*Pn	Pn	19 50 29.8	+1.3
DBRK				Sn	Sn	19 51 01.1	-0.8
XOR	Xorichti	2.83	105	P	Pn	19 50 30.9	+1.7
KLV	Kalavryta, Ach	2.85	136	P	Pn	19 50 31.5	+2.0
NEO	Neokhori	2.87	106	P	Pn	19 50 31.6	+1.9
BRY	Bratogost	2.89	343	*e*Pn	Pn	19 50 30.9	+0.8
BRY	Bratogost	2.89	343	⇑*i*Pn	Pn	19 50 31.2	+1.1
BRY				*i* Sn	Sn	19 51 07.6	+2.7
SOH	Sokhos	2.90	75	P	Pn	19 50 32.4	+2.2
SOH	Sokhos	2.90	75	P	Pn	19 50 32.4	+2.2
PLG	Polygyros	2.91	84	P	Pn	19 50 32.0	+1.7
PLG				S	Sn	19 51 07.5	+2.3
	comp=N,532nm,0.7s						
CUC	Castrocucco	2.95	269		Pn	19 50 32.6	+1.8
ATAL	Atalanti	2.98	118	P	Pn	19 50 33.3	+2.1
ATAL				S	Sn	19 51 08.0	+1.2
	comp=N,502nm,1.0s						
LKR	Lokris	2.98	119	P	Pn	19 50 32.2	+1.0
PAIG	Paliouri	3.09	93	P	Pn	19 50 32.7	-0.1
PAIG				S	Sn	19 51 10.0	+0.3
	comp=N,415nm,0.4s						
STON	Ston	3.11	332	*e*Pn	Pn	19 50 33.2	+0.3

STON	Ston	3.11	332	ePn	Pn	19 50 33.8	+0.9
STON				Sn	Sn	19 51 08.3	-1.7
UPM	Unac-Piva	3.12	350	ePn	Pb	19 50 37.0	-2.6
UPM	Unac-Piva	3.12	350	⇓iPn	Pn	19 50 34.6	+1.3
UPM				iSn	Sn	19 51 13.4	+2.8
BARS	Barje	3.13	30	ePn	Pn	19 50 34.8	+1.5
BARS	Barje	3.13	30	ePn	Pg	19 50 49.7	+5.6
BARS				eSn	Sn	19 51 11.1	+0.4
SJES	Sjenica	3.13	4	ePn	Pn	19 50 35.6	+2.1
SJES				eSn	Sn	19 51 11.3	+0.4
SJES	Sjenica	3.13	4	ePn	Pn	19 50 35.6	+2.1
THAL	Thalero	3.14	131	P	Pn	19 50 35.2	+1.8
SRS	Serrai	3.15	71	P	Pn	19 50 35.6	+2.0
SRS	Serrai	3.15	71	P	Pn	19 50 35.6	+2.0
BOSS	Bosilegrad	3.18	41	ePn	Pn	19 50 35.3	+1.4
BOSS				eSn	Sn	19 51 12.6	+0.8
PLE	Pljevlja	3.20	356	⇑iPn	Pn	19 50 35.6	+1.2
PLE				iSn	Sn	19 51 15.0	+2.5
SELS	Selova	3.27	19	ePn	Pn	19 50 35.9	+0.6
OUR	Ouranopolis	3.32	85	eP	Pn	19 50 37.2	+1.4
OUR	Ouranopolis	3.32	85	P	Pn	19 50 37.9	+2.1
OUR				S	Sn	19 51 18.0	+2.9
	comp=N,442nm,0.6s						
LSTV	Lastovo	3.35	323	ePn	Pn	19 50 37.0	+0.7
LSTV				Sn	Sn	19 51 14.8	-1.3
SGRT	San Giovanni R	3.38	300		Pn	19 50 38.1	+1.4
KOKK	Kokkinochori,	3.38	77	P	Pn	19 50 38.5	+1.8
NVR	Nevrokopi	3.42	68	P	Pn	19 50 40.1	+2.8
ITM	Ithomi	3.44	148	eP	Pn	19 50 38.5	+0.9
ITM	Ithomi	3.44	148	P	Pn	19 50 39.6	+2.0
ITM	Ithomi	3.44	148		Pn	19 50 39.0	+1.5
VILL	Villia	3.45	124	P	Pn	19 50 39.3	+1.5
IVAS	Ivanjica	3.46	6	ePn	Pn	19 50 38.5	+0.6
CEL	Celeste	3.47	239	Pn	Pn	19 50 39.5	+1.5
RUDO	Rudo	3.49	357	ePn	Pn	19 50 38.5	+0.3
PYL	PYLOS	3.62	153	P	Pn	19 50 41.2	+1.2
VTS	Vitosha	3.66	46	⇑P	Pn	19 50 42.7	+2.0
VTS	Vitosha	3.66	46	Pn	Pn	19 50 40.4	-0.3
VTS	Vitosha	3.66	46	P	Pn	19 50 40.4	-0.3
EPID	Epidavros	3.69	132	P	Pn	19 50 42.2	+1.2
MAKA	Makarska	3.72	329	ePn	Pn	19 50 43.0	+1.6
MAKA				Sn	Sn	19 51 24.1	-1.0
BBLS	Lazići	3.73	357	ePn	Pn	19 50 42.7	+1.1
BBLS	Lazići	3.73	357	ePn	Pn	19 50 42.8	+1.1
KYMI	Kymi, Euboea I	3.75	112	P	Pn	19 50 43.5	+1.7
KAVA	Kavala	3.80	75	P	Pn	19 50 43.7	+1.3
BOVS	Bovan	3.82	23	ePn	Pn	19 50 42.4	-0.3
BOVS				eSn	Sn	19 51 26.7	-0.9
GRUS	Gruza	3.83	12	ePn	Pn	19 50 44.5	+1.5
RICI	Ricice	3.85	331	ePn	Pn	19 50 44.5	+1.2
RICI				Sn	Sn	19 51 28.0	-0.4
KRND	KRANIDI	3.87	134	P	Pn	19 50 44.8	+1.3
ATHU	Athens Univers	3.87	123	P	Pn	19 50 44.9	+1.4
HVAR	Hvar	3.88	323	ePn	Pn	19 50 44.7	+1.2
HVAR				Sn	Sn	19 51 28.2	-0.8
PTL	Penteli	3.88	121	P	Pn	19 50 44.9	+1.3
THAS	Thassos island	3.90	81	P	Pn	19 50 44.8	+1.0
DION	Dionisos Attik	3.91	120	P	Pn	19 50 45.3	+1.3
VLY	Voula,Athens	3.95	124	P	Pn	19 50 45.8	+1.3
DIVS	Divibare	3.97	3	ePn	Pn	19 50 45.8	+0.8
DIVS	Divibare	3.97	3		Pn	19 50 44.3	-0.6
DIVS	Divibare	3.97	3	ePn	Pn	19 50 45.7	+0.8
PAOL	Paolisi	3.98	285		Pn	19 50 45.8	+0.8
TRUS	Trudelj	4.13	7	ePn	Pn	19 50 47.9	+0.9
ZAGS	Zajecar	4.15	27	ePn	Pn	19 50 48.1	+0.9
ZAGS				eSn	Sn	19 51 35.2	-0.5
LIA	Limnos Island	4.25	91	P	Pn	19 50 50.3	+1.7
KARY	Karystos	4.27	118	P	Pn	19 50 50.5	+1.6
VLI	Veliai	4.27	142	P	Pn	19 50 50.3	+1.3
SVIS	Svilajnac	4.29	15	ePn	Pn	19 50 50.3	+1.1
PLD	Plovdiv	4.29	61	eP	Pn	19 50 51.7	+2.5
SRKY	Kupres RS	4.35	336	ePn	Pn	19 50 50.1	0.0
TEKS	Tekeris	4.42	359	ePn	Pn	19 50 50.8	-0.1
TEKS	Tekeris	4.42	359	ePn	Pn	19 50 50.6	-0.3
SMTH	Samothraki Isl	4.50	84	P	Pn	19 50 54.3	+2.1
KUBS	Kucevo	4.53	19	ePn	Pn	19 50 52.2	-0.3
KIJV	Kijevo	4.56	329	ePn	Pn	19 50 54.5	+1.5
KIJV				Sn	Sn	19 51 45.4	-0.6
RDO	Rodhopi	4.59	75	eP	Pn	19 50 54.8	+1.6
RDO	Rodhopi	4.59	75	Pn	Pn	19 50 54.9	+1.6
ZIRJ	Zirje	4.62	321	ePn	Pn	19 50 55.0	+1.2
ZIRJ				Sn	Sn	19 51 46.0	-1.3
BLJ	Bijeljina	4.66	357	ePn	Pb	19 51 04.4	-1.3
KTHR	Kythira	4.68	145	P	Pn	19 50 57.2	+2.6
MGRS	Mrkonjic Grad	4.69	337	ePn	Pn	19 50 57.7	+3.0
KTHA	Kythira Island	4.71	144	P	Pn	19 50 57.8	+2.8
MORI	Morici	4.75	323	ePn	Pn	19 50 57.1	+1.5
MORI				Sn	Sn	19 51 49.9	-0.7
GADA	Gvkgeada	4.78	87	eP	Pn	19 50 57.5	+1.5
PUNG	Punghina	4.80	29	⇓P	Pn	19 50 58.3	+2.1
VAE	Valguarnera	4.88	239	Pn	Pn	19 51 00.4	+3.0
	comp=N,1.2nm,0.3s,baz=175,slow=19,SNR=1.5						
VAE				Sn	Sn	19 51 58.7	+4.9
	comp=N,1.4nm,0.3s,baz=34,slow=16,SNR=2.1						
	comp=N,8.1nm,0.5s						
ALN	Alexandroupoli	4.93	79	eP	Pn	19 51 00.5	+2.5
ALN	Alexandroupoli	4.93	79	Pn	Pn	19 50 59.2	+1.2
ALN	Alexandroupoli	4.93	79	P	Pn	19 50 59.2	+1.2
BLY	Banja Luka	4.96	339	ePn	Pn	19 50 58.1	-0.3
ENEZ	Enez	4.99	81	eP	Pn	19 51 01.7	+2.8
DJES	Djerdap	5.00	24	⇓P	Pn	19 51 01.1	+2.1
FRGS	Fruska Gora	5.02	1	ePn	Pn	19 50 59.2	-0.1
FRGS	Fruska Gora	5.02	1	ePn	Pn	19 50 59.3	-0.1
EZN	Ezine	5.13	91	eP	Pn	19 51 03.4	+2.7
DUGI	Dugi Otok	5.16	320	ePn	Pn	19 51 02.5	+1.3
DUGI				Sn	Sn	19 51 59.7	-0.9
AQU	L'Aquila	5.21	297	Pn	Pn	19 51 03.2	+1.3
AQU	L'Aquila	5.21	297	P	Pn	19 51 03.2	+1.3
GELI	Tayfur-Gelibol	5.22	85	eP	Pn	19 51 04.4	+2.4
VLAD	Vladila	5.23	41	⇑P	Pn	19 51 05.0	+2.9
UDBI	Udbina	5.25	328	ePn	Pn	19 51 04.2	+1.6
UDBI				Sn	Sn	19 52 02.0	-1.0
CHOS	Chios island	5.26	107	eP	Pn	19 51 04.5	+1.9
A252A	Venje	5.46	346	ePn	Pn	19 51 06.2	+0.8
A252A				Sn	Sn	19 52 06.1	-2.0
APE	Apeiranthos	5.52	122	⇑P	Pn	19 51 08.3	+2.1
APE	Apeiranthos	5.52	122	eP	Pn	19 51 08.0	+1.8
APE	Apeiranthos	5.52	122	iP	Pn	19 51 07.2	+1.0
A251A	Rujevac	5.58	335	iPn	Pn	19 51 08.6	+1.6
A251A				Sn	Sn	19 52 09.1	-2.0
PLIT	Plitvice	5.60	329	ePn	Pn	19 51 08.5	+1.2
PLIT				Sn	Sn	19 52 09.9	-1.7
NRCA	Norcia	5.61	301		Pn	19 51 08.1	+0.7
BZS	Buzias	5.67	14	⇓P	Pn	19 51 09.9	+1.8
BZS	Buzias	5.67	14	P	Pn	19 51 08.9	+0.8
GZR	Gura Zlata	5.74	23	⇓P	Pn	19 51 10.9	+1.8
COPA	Copaceanca	5.75	44	⇑P	Pn	19 51 11.7	+2.5
RABC	Rab	5.86	324	ePn	Pn	19 51 12.2	+1.5
RABC				Sn	Sn	19 52 15.5	-2.3
MOSL	Moslavina	5.88	340	ePn	Pn	19 51 12.2	+1.1
MOSL				Sn	Sn	19 52 16.0	-2.3
HUMR	Humele	5.90	40	⇓P	Pn	19 51 14.9	+3.6
SANT	Santorini	5.91	128		Pn	19 51 12.1	+0.6
KOVH	Kovagotottos	6.06	350	P	Pn	19 51 15.0	+1.5
A250A	Rusevo Krmpots	6.06	326	ePn	Pn	19 51 14.4	+0.8
A250A				Sn	Sn	19 52 21.6	-1.3
LOT	Lotru	6.11	28	⇑P	Pn	19 51 17.5	+3.1
MORH	Mrgy, Hungar	6.12	353	⇑P	Pn	19 51 16.6	+2.2
MORH	Mrgy, Hungar	6.12	353	ePn	Pn	19 51 14.0	-0.4
MORH	Mrgy, Hungar	6.12	353	P	Pn	19 51 16.2	+1.8
RAZG	Razgrad	6.16	54	⇓P	Pn	19 51 17.6	+2.7
MURB	Monte Urbino	6.19	303		Pn	19 51 16.1	+0.8
SGRR	Singureni	6.22	47	⇑P	Pn	19 51 18.0	+2.3
OZLJ	Ozalj	6.28	332	ePn	Pn	19 51 17.3	+0.7
OZLJ				Sn	Sn	19 52 26.2	-2.1
SMRN	Sveta Marina	6.36	322	ePn	Pn	19 51 18.6	+0.9
SMRN				Sn	Sn	19 52 28.6	-1.6
IDI	Anoyia	6.37	138	⇑P	Pn	19 51 20.2	+2.4
IDI	Anoyia	6.37	138	Pn	Pn	19 51 17.4	-0.5
	comp=N,0.7nm,0.3s,baz=272,slow=9.9,SNR=18						
IDI				Sn	Sn	19 52 25.6	-5.0
	comp=N,6.1nm,0.3s,baz=99,slow=21,SNR=10						
	comp=N,3.0nm,0.3s						
IDI	Anoyia	6.37	138	Pn	Pn	19 51 17.6	-0.3
PTJ	Puntijarka	6.37	336	ePn	Pn	19 51 19.1	+1.2
PTJ				Sn	Sn	19 52 28.6	-2.0
KALN	Kalnik	6.44	340	ePn	Pn	19 51 19.2	+0.5
KALN				Sn	Sn	19 52 29.4	-2.8
BRJN	Brijuni	6.46	319	ePn	Pn	19 51 20.1	+1.1
BRJN				Sn	Sn	19 52 30.3	-2.4
GBRS	Gornja Briga	6.46	328	iPn	Pn	19 51 20.7	+1.6
GBRS				iSn	Sn	19 52 34.5	+1.6
CRES	Cresnjev	6.47	333	ePn	Pn	19 51 19.8	+0.6
LOBO	Lobor	6.57	338	ePn	Pn	19 51 21.4	+0.9
LOBO				Sn	Sn	19 52 32.5	-2.8
VOIR		6.62	35	⇑P	Pn	19 51 24.8	+3.5
SULR		6.67	45	⇓P	Pn	19 51 24.7	+2.9
VISS	Visnje	6.68	330	ePn	Pn	19 51 23.0	+1.0
CEY	Cerknica	6.79	327	ePn	Pn	19 51 24.6	+1.0
SECR		6.81	42	⇑P	Pn	19 51 27.4	+3.6
SKDS	Skadanscina	6.82	324	ePn	Pn	19 51 24.4	+0.5
LJU	Ljubljana	7.00	329	ePn	Pn	19 51 27.4	+1.0
LJU	Ljubljana	7.00	329	iPn	Pn	19 51 27.4	+1.0
DRGR		7.02	17	⇑P	Pn	19 51 29.5	+2.8
MLR	Muntele Rosu	7.07	39	⇑P	Pn	19 51 30.7	+3.1
MLR	Muntele Rosu	7.07	39	Pn	Pn	19 51 30.4	+2.9
	comp=N,0.7nm,0.3s,baz=281,slow=14,SNR=11						
	comp=N,7.8nm,0.7s						
MLR	Muntele Rosu	7.07	39	Pn	Pn	19 51 29.5	+1.9
ISR	Istrita	7.11	43	⇑P	Pn	19 51 31.2	+3.2
CASP	Castiglione de	7.12	295	Pn	Pn	19 51 28.2	+0.1
OSSC	Osservatorio P	7.14	301		Pn	19 51 28.4	+0.1
BSZH	Besenyszg	7.18	3	P	Pn	19 51 31.5	+2.6
DOPR	Dopca	7.18	34	⇑P	Pn	19 51 32.1	+3.1
NEHR	Nehoiu	7.20	41	⇑P	Pn	19 51 32.5	+3.4
MPLH	Magyarpolny	7.20	348	P	Pn	19 51 32.8	+3.6
ICOR	Ion Corvin	7.24	54	⇓P	Pn	19 51 31.9	+2.2
CSKK	Cskako	7.30	352	P	Pn	19 51 33.1	+2.6
SOKA	Soboth	7.36	334	ePn	Pn	19 51 31.7	+0.3
	comp=N,4.8nm,0.3s,SNR=12						
SOKA				eSn	Sn	19 52 51.3	-3.5
	comp=N,10nm,0.5s						
BUD	Budapest	7.36	357	P	Pn	19 51 33.7	+2.3
OBKA	Obir	7.38	331	ePn	Pn	19 51 32.8	+1.1
	comp=N,13nm,0.5s,SNR=24						
OBKA				iSn	Sn	19 52 56.6	+1.1
	comp=N,42nm,0.7s						
LTVH	Ltavrtes, Hu	7.43	12	P	Pn	19 51 34.9	+2.6
COVR	Voineasa-Covas	7.46	38	⇓P	Pn	19 51 35.8	+3.1
OZUR		7.46	35	⇑P	Pn	19 51 35.8	+3.1
BISRR	Bisoca	7.49	41	⇑P	Pn	19 51 36.3	+3.1
KARP	Karpathos	7.50	125	Pn	Pn	19 51 33.8	+0.5
GRER		7.51	43	⇑P	Pn	19 51 36.4	+2.9
TLBR	Topalu	7.62	52	⇑P	Pn	19 51 38.0	+3.1
HARR	Harsova	7.63	51	⇑P	Pn	19 51 37.9	+2.9
PLOR	Plostina	7.67	40	⇑P	Pn	19 51 38.9	+3.2
ZCCA	Zocca	7.70	306		Pn	19 51 35.5	-0.5
ARSA	Arzberg	7.72	339	iPn	Pn	19 51 37.5	+1.2
	comp=N,3.2nm,0.5s						
ARSA				eSn	Sn	19 53 04.7	+1.1
	comp=N,4.1nm,0.5s						
VRI	Vrincioaia	7.72	40	⇑P	Pn	19 51 39.4	+3.1
ARG	Arkhangelos	7.73	118		Pn	19 51 36.3	-0.2
ARG	Arkhangelos	7.73	118	P	Pn	19 51 36.3	-0.2
PSZ	Piszkesteto	7.79	1	⇓P	Pn	19 51 39.5	+2.2
PSZ	Piszkesteto	7.79	1	Pn	Pn	19 51 34.8	-2.5
PSZ	Piszkesteto	7.79	1	P	Pn	19 51 34.8	-2.5
PSZ	Piszkesteto	7.79	1	P	Pn	19 51 37.8	+0.6
TIRR	Tirgusor	7.79	53	⇑P	Pn	19 51 39.8	+2.5
TIRR	Tirgusor	7.79	53	Pn	Pn	19 51 36.2	-1.1
TIRR	Tirgusor	7.79	53	P	Pn	19 51 36.2	-1.1
MYKA	Terra Mystica	7.83	328	eSn	Sn	19 53 05.2	-1.3
	comp=N,7.7nm,0.5s						
TEOL	Teolo	7.86	314		Pn	19 51 37.9	-0.4
SOP	Sopron	7.87	345	P	Pn	19 51 42.3	+3.9
VSL	Villasalto	7.94	269	Pn	Pn	19 51 38.0	-1.3
RONA	Rosalia, Austr	7.94	343	iPn	Pn	19 51 40.8	+1.3
STAL	STALIGIAL	7.95	323		Pn	19 51 39.7	+0.1
VLC	Villacollemand	7.98	303	Pn	Pn	19 51 38.9	-0.9
TPGR	Topolog	8.01	51	⇓P	Pn	19 51 42.7	+2.4
CFR	Carcaliu	8.03	48	⇑P	Pn	19 51 43.3	+2.8
TESR	Tescani	8.16	36	⇓P	Pn	19 51 45.3	+3.0
GHRR		8.20	41	⇑P	Pn	19 51 45.9	+3.1
CONA	Conrad Observa	8.26	342	iPn	Pn	19 51 46.0	+2.2
	comp=N,0.2nm,0.1s						
PRMA	PARMA	8.31	307	Pn	Pn	19 51 46.7	+2.3
KBA	Koelnbreinsper	8.31	329	ePn	Pn	19 51 46.5	+1.9
	comp=N,1.6nm,0.2s,SNR=7.7						
KBA				eSn	Sn	19 53 16.6	-2.0
	comp=N,7.6nm,0.5s						
KBA	Koelnbreinsper	8.31	329	P	Pn	19 51 47.5	+2.9
CTI	Castel Tesino	8.32	318	Pn	Pn	19 51 44.9	+0.3
CTI	Castel Tesino	8.32	318	P	Pn	19 51 44.9	+0.3
PGF	Pioggiola	8.37	290	eP	Pn	19 51 49.7	+4.3
PGF				eSn	Sn	19 53 13.5	-6.4
	comp=N,0.3nm,0.2s						
VYHS	Vyhne	8.38	356	eP	Pn	19 51 48.6	+3.2
VYHS				e		19 53 17.1	
VYHS	Vyhne	8.38	356	ePN	Pn	19 51 48.6	+3.2
VYHS				eSN	Sn	19 53 17.0	-2.9
VLDR	Vladesti	8.40	44	⇑P	Pn	19 51 48.4	+2.7
ABTA	Abfaltersbach	8.41	324	iPn	Pn	19 51 46.7	+0.9
	comp=N,2.7nm,0.3s,SNR=6.0						
ABTA				eSn	Sn	19 53 19.6	-1.1
	comp=N,23nm,0.7s						
TLCR		8.43	50	⇑P	Pn	19 51 49.1	+3.2
BURAR	Bucovina Array	8.49	26	⇑P	Pn	19 51 49.8	+2.9
BURAR	Bucovina Array	8.49	26	Pn	Pn	19 51 47.3	+0.4
KOLL	Kolacno	8.49	354	ePN	Pn	19 51 50.7	+3.8
BUR08	Bucovina Ar. S	8.51	26	Pn	Pn	19 51 45.7	-1.5
MSSA	Maissana	8.61	302	Pn	Pn	19 51 50.0	+1.4
MOA	Molln	8.64	335	ePn	Pn	19 51 50.3	+1.5
	comp=N,4.6nm,0.3s						
MOA				eSn	Sn	19 53 24.9	-1.3
	comp=N,7.1nm,0.4s						
SALO	Salr	8.66	312		Pn	19 51 48.4	-0.8
SALO					Sn	19 53 25.2	-1.5
UZH	Uzhgorod	8.70	12	eP	Pn	19 51 55.3	+5.6
BIOA	Bad Ischl, Aus	8.71	332	iPn	Pn	19 51 50.9	+1.0
BIOA				iSn	Sn	19 53 28.2	+0.1
JAVC	Velka Javorina	8.84	351	ePN	Pn	19 51 52.7	+1.0
CRVS	Cervenica-Dubn	8.86	8	eP	Pn	19 51 53.7	+1.7
CRVS	Cervenica-Dubn	8.86	8	ePN	Pn	19 51 53.7	+1.7
KOLS	Kolonicke sedl	8.99	11	eP	Pn	19 51 54.9	+1.1
KOLS	Kolonicke sedl	8.99	11	ePN	Pn	19 51 54.9	+1.1
LANS	Liptovska Anna	9.02	359	eP	Pn	19 52 03.4	+9.3
WTTA	Wattenberg	9.19	323	Pn	Pn	19 51 59.1	+2.4
	comp=N,6.3nm,0.3s,SNR=8.0						
WTTA				eSn	Sn	19 53 40.1	0.0
	comp=N,20nm,0.6s						
KEST	Kesra	9.25	245	Pn	Pn	19 51 56.6	-0.8
WATA	Walderalm	9.27	324	ePn	Pn	19 51 59.2	+1.5
	comp=N,16nm,0.7s,SNR=6.8						
WATA				iSn	Sn	19 53 41.5	-0.5
	comp=N,16nm,0.6s						
MAUC	Maruska	9.32	353	ePN	Pn	19 51 59.8	+1.5
SQTA	Sankt Quirin	9.36	322	ePn	Pn	19 52 01.2	+2.3
	comp=N,6.9nm,0.4s,SNR=6.8						
SQTA				iSn	Sn	19 53 44.0	-0.1
	comp=N,15nm,0.5s						
VRAC	Vranov	9.43	348	Pn	Pn	19 52 01.2	+1.5
	comp=N,0.2nm,0.3s,baz=160,slow=14,SNR=2.3						
	comp=N,1.7nm,0.6s						
FETA	Feichten	9.45	320	ePn	Pn	19 52 02.2	+2.1
	comp=N,6.4nm,0.6s,SNR=4.6						
FETA				eSn	Sn	19 53 46.5	+0.1
	comp=N,4.3nm,0.5s						
CKRC	Cesky Krumlov	9.49	338	ePN	Pn	19 52 00.7	+0.2
CKRC				eSN	Sn	19 53 44.5	-2.6
MOTA	Moosalm	9.50	322	ePn	Pn	19 52 02.6	+1.8
	comp=N,15nm,0.6s,SNR=20						
MOTA				eSn	Sn	19 53 47.9	+0.4
	comp=N,8.4nm,0.4s						
GEC2	GERESS Array S	9.69	336	Pn	Pn	19 52 02.2	-1.2
GERES	GERESS Array B	9.69	336	Pn	Pn	19 52 03.4	-0.1
	comp=N,0.6nm,0.3s,baz=150,slow=12,SNR=18						
GERES				Sn	Sn	19 53 49.2	-3.0
	comp=N,0.8nm,0.3s,baz=142,slow=22,SNR=5.5						
	comp=N,2.2nm,0.6s						
GERES	GERESS Array B	9.69	336	Pn	Pn	19 52 03.0	-0.4
DAVOX	Davos/Dischmat	9.73	316	Pn	Pn	19 52 05.6	+1.6
	comp=N,1.3nm,0.3s,baz=122,slow=20,SNR=9.1						
DAVOX				Sn	Sn	19 53 52.1	-1.1
	comp=N,0.5nm,0.3s,baz=107,slow=23,SNR=3.6						
DAVOX				LR	LR	19 56 13.1	
	comp=N,2µm,19.8s,baz=272,slow=40						
	comp=N,3.2nm,0.5s						
TUE	Stuetta	9.82	314	Pn	Pn	19 52 05.6	+0.2
SBF	Sospel	9.83	296	eP	Pn	19 52 09.7	+4.4
SBF				eSn	Sn	19 53 48.1	-7.6
	comp=N,1.0nm,0.2s						
KHC	Kasperske Hory	9.98	336		Pn	19 52 05.4	-1.9
KHC	Kasperske Hory	9.98	336	eP	Pn	19 52 07.1	-0.2
KHC				e		19 53 56.8	
KHC	Kasperske Hory	9.98	336	ePN	Pn	19 52 07.1	-0.2
KHC				eSN	Sn	19 53 56.8	-2.5
DAVA	Damuels	10.06	319	ePn	Pn	19 52 10.7	+2.3
	comp=N,5.7nm,0.7s						
DAVA				eSn	Sn	19 54 01.5	+0.2
	comp=N,7.7nm,0.4s						
SORM	Soroca	10.14	35	⇑P	Pn	19 52 12.7	+3.2
KRLC	Kraliky	10.15	349	eP	Pn	19 52 11.7	+2.1
KRLC				e		19 54 01.8	
KRLC	Kraliky	10.15	349	ePN	Pn	19 52 11.7	+2.1
KRLC				eSN	Sn	19 54 01.8	-1.5
LVV	L'vov	10.17	16	eP	Pn	19 52 12.6	+2.8
LVV				eS	Sn	19 54 09.8	+6.1
LVV				MLR	MLR		
	comp=Z,400nm,9.0s						
LMR	La Mourre	10.34	292	eP	Pn	19 52 16.8	+4.7
LMR				eSn	Sn	19 54 00.2	-7.7
	comp=Z,0.4nm,0.4s						
MBDF	Montbardon	10.57	300	eP	Pn	19 52 20.3	+4.8
MBDF				eSn	Sn	19 54 06.0	-7.9
	comp=Z,7.1nm,0.5s						
BR131	Keskin Array S	10.75	88	iP	Pn	19 52 19.4	+1.5
BRTR	Keskin Array B	10.75	88	Pn	Pn	19 52 19.6	+1.7
	comp=Z,0.1nm,0.3s,baz=309,slow=38,SNR=1.7						
	comp=Z,0.6nm,0.5s						
BNI	Bardonecchia	10.76	301	Pn	Pn	19 52 18.7	+0.7
BNI	Bardonecchia	10.76	301	P	Pn	19 52 18.7	+0.7
LPG	La Plagne	10.89	304	ePn	Pn	19 52 19.1	-0.9
LPG				eSn	Sn	19 54 14.1	-7.8
	comp=Z,27nm,0.8s						
LPL	La Plagne	10.91	304	ePn	Pn	19 52 18.9	-1.3
LPL				eSn	Sn	19 54 13.1	-9.2
	comp=Z,12nm,0.4s						
SENIN	Lac Senin/Sane	10.95	309	Pn	Pn	19 52 20.8	+0.1
SMRF	Simiane la Rot	11.15	295	eP	Pn	19 52 27.6	+4.2
SMRF				eSn	Sn	19 54 19.6	-8.4
	comp=Z,0.5nm,0.3s						
ORIF	Oris-en-Rattie	11.23	300	eP	Pn	19 52 28.3	+3.8
ORIF				eSn	Sn	19 54 22.0	-8.0
	comp=Z,0.8nm,0.2s						
BRG	Berggiesshubel	11.46	341	e(P)	Pn	19 52 29.1	+1.6
BRG				Amp		19 52 32.1	
	comp=Z,3.4nm,1.2s						
BRG				Amp		19 54 50.0	
	comp=N,1.2nm,18.9s						
BRG				Amp		19 54 57.0	
	comp=E,1.0nm,17.9s						
BRG				Amp		19 55 02.0	
	comp=Z,2.1nm,17.7s						
BRG				ex	x	19 56 27.4	
BRG				Amp		19 56 39.9	
	comp=Z,6.0nm,1.1s						
BRG	Berggiesshubel	11.46	341	eP	Pn	19 52 29.1	+1.6
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,1µm,18.9s						
BRG				MLR	MLR		
	comp=E,1µm,17.9s						
BRG				MLR	MLR		
	comp=Z,2µm,17.7s						
BFO	Black Forest	11.53	319	Pn	Pn	19 52 27.0	-1.5
BFO	Black Forest	11.53	319	P	Pn	19 52 27.0	-1.5
CABF	La Chapelle	11.80	308	ePn	Pn	19 52 31.4	-0.9
CABF				eSn	Sn	19 54 35.5	-8.4
	comp=Z,2.4nm,0.4s						
MOX	Moxa	11.93	334	P	Pn	19 52 36.6	+2.7
HINF	Hinteralfeld	11.99	314	ePn	Pn	19 52 34.7	-0.2
HINF				eSn	Sn	19 54 41.0	-7.5
	comp=Z,4.5nm,0.4s						
CSS	Mathiatis	12.01	111	Pn	Pn	19 52 34.3	-0.9
ECH	Echery	12.06	316	Pn	Pn	19 52 36.5	+0.7
ECH	Echery	12.06	316	P	Pn	19 52 36.5	+0.7
CDF	Champ du Feu	12.12	317	ePn	Pn	19 52 35.4	-1.3
CDF				eSn	Sn	19 54 42.9	-8.9
	comp=Z,3.7nm,0.6s						
HAU	Haudompre	12.38	314	ePn	Pn	19 52 40.3	+0.2
HAU				eSn	Sn	19 54 49.1	-8.9
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	12.51	29	Pn	Pn	19 52 42.4	+0.6
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=2.7						
	comp=Z,1.3nm,0.7s						
AKBB	Malin Array Si	12.51	29	iP	Pn	19 52 45.8	+4.0
PAGF	Fort de Pagny	13.04	315	ePn	Pn	19 52 48.8	-0.2
PAGF	Fort de Pagny	13.04	315	eP	P	19 52 55.2	-4.3
SMF	Signal de Mont	13.21	305	ePn	Pn	19 52 50.3	-1.1
SMF				eSn	Sn	19 55 09.1	-9.1
	comp=Z,5.8nm,0.6s						
SFTF	Sexfontaines	13.22	312	ePn	Pn	19 52 50.1	-1.5
SFTF				eSn	Sn	19 55 09.5	-9.0
	comp=Z,2.0nm,0.3s						
LOR	Lormes	13.46	307	ePn	Pn	19 52 54.2	-0.7
	baz=114						
LOR	Lormes	13.46	307	eP	Pn	19 52 57.9	+3.0
LOR				eSn	Sn	19 55 15.0	-9.4
	comp=Z,5.0nm,0.3s						
AVF	Avril sur Loir	13.57	305	ePn	Pn	19 52 55.6	-0.8
AVF	Avril sur Loir	13.57	305	eP	P	19 53 01.4	-4.0
AVF				eSn	Sn	19 55 17.8	-9.3
	comp=Z,3.3nm,0.7s						
SSF	Saint Saulge	13.59	306	ePn	Pn	19 52 55.8	-0.8
SSF				eSn	Sn	19 55 17.9	-10
	comp=Z,2.6nm,0.4s						
BGF	Bois d'Agland	13.80	303	ePn	Pn	19 52 58.3	-1.3
BGF				eSn	Sn	19 55 22.9	-10
	comp=Z,4.2nm,0.2s						
TCF	Toulx Ste Croi	14.12	302	eP	Pn	19 53 07.7	+3.8
TCF				eSn	Sn	19 55 31.4	-9.1
	comp=Z,1.0nm,0.4s						
MMAI	Mount Meron Ar	14.50	114	Sn	Sn	19 55 42.7	-7.2
	comp=Z,0.6nm,0.3s,baz=43,slow=28,SNR=2.6						
MNK	Minsk	15.40	18	iP	Pn	19 53 21.9	+0.9
MNK				iS	Sn	19 56 14.5	+3.0
MNK				pmax	pmax		
	comp=Z,47nm,0.8s						
MNK				pmax	pmax		
	comp=N,29nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,97nm,31.0s						
MNK				MLR	MLR		
	comp=Z,2µm,30.0s						
MNK				MLR	MLR		
	comp=N,487nm,21.0s						
MNK	Minsk	15.40	18	iP	Pn	19 53 22.0	+0.9
	comp=E,3.0nm,0.9s						
MNK				iP	Pn	19 53 22.0	+0.9
	comp=N,29nm,0.9s						
MNK				iP	Pn	19 53 22.0	+0.9
	comp=Z,47nm,0.8s,baz=25						
MNK				iPP	sP	19 53 30.2	-0.5
MNK				iS	Sn	19 56 14.5	+3.0
MNK				iSS	S	19 56 32.9	+5.2
MNK				iLQ	LQ	19 57 53.5	
MNK				iLR	LR	19 59 03.7	
MNK				iLRM	MLR	19 59 47.9	
	comp=E,97nm,31.3s						
MNK				iLRM	MLR	19 59 49.6	
	comp=Z,2µm,30.0s						
MNK				iLRM	MLR	20 00 01.8	
	comp=N,487nm,20.8s						
NACGM	Naroch	15.53	16	⇑eP	P	19 53 25.9	-1.2
	baz=201						
PABE	Paberze	15.65	9	Pn	Pn	19 53 21.8	-2.4
PABE				IAmb	IAmb	19 53 29.8	
	comp=Z,19nm,0.7s						
PABE	Paberze	15.65	9	eP	Pn	19 53 24.1	-0.1
IIGN	Ignalina	15.84	14	eP	P	19 53 31.1	+0.5
IIGN				IAmb	IAmb	19 53 37.5	
	comp=Z,8.7nm,0.6s						
IDID	Didziasalis	15.91	15	eP	P	19 53 31.4	+0.2
ISAL	Salakas	16.03	13	eP	P	19 53 33.7	+1.0
ISAL				IAmb	IAmb	19 53 37.7	
	comp=Z,7.3nm,0.5s						
VSVD	Vaisvydziai	16.11	9	eP	P	19 53 34.6	+1.1
EIL	Elat	16.30	125	Pn	Pn	19 53 31.2	-1.6
	comp=Z,0.2nm,0.3s,baz=62,slow=17,SNR=2.8						
EIL				Sn	Sn	19 56 19.2	-14
	comp=Z,0.4nm,0.3s,baz=100,slow=18,SNR=1.6						
	comp=Z,2.1nm,0.6s						
GURO	Guroymak-BITLI	17.38	88	Pn	Pn	19 53 45.5	-1.0
VSR	Storozhevoye	17.51	44	eP	P	19 53 51.0	+1.9
VSR				pmax	pmax		

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              comp=Z,20nm,1.5s
KIV   Kislovodsk       17.51  70  Pn     Pn      19 53 47.0 -1.1
KIV   Kislovodsk       17.51  70 eP      P       19 53 50.9 +1.6
KIV                               pmax   pmax
              comp=Z,6.0nm,1.1s
KBZ   Khabaz           17.65  71  P      Pn      19 53 48.9 -0.8
              comp=Z,0.1nm,0.3s,baz=281,slow=22,SNR=2.1
              comp=Z,1.1nm,0.8s
VORR  Voronezh         17.78  43 eP      Pn      19 53 49.1 -2.1
VORR                              pmax   pmax
              comp=Z,30nm,0.4s
GOF   Gofitskoye       17.88  66⇑eP      P       19 53 59.9 +6.6
ESDC  Sonseca Array    18.12 276  P      P       19 53 57.4 +1.4
              comp=Z,0.9nm,0.7s,baz=77,slow=10,SNR=4.7
LPSR  Galich'ya Gora   18.16  40 eP      P       19 53 58.5 +2.3
LPSR                              pmax   pmax
              comp=Z,20nm,1.0s
ZEI   Tsey             18.35  74 eP      P       19 54 02.0 +3.4
ZEI                               pmax   pmax
              comp=Z,4.0nm,1.0s
VIKU  Vikbolandet      18.48 355 eP      Pn      19 54 01.0 +1.1
OBN   Obninsk          18.75  31  P      P       19 54 02.1 -0.6
              comp=Z,0.3nm,0.3s,baz=197,slow=18,SNR=1.6
              comp=Z,1.5nm,0.4s
OBN   Obninsk          18.75  31 eP      P       19 54 02.5 -0.2
OBN                               pmax   pmax
              comp=Z,12nm,1.0s
MTSE  Matsula          18.79   7 eP      Pn      19 54 05.1 +1.6
VSU   Vasula           18.90  12 i P     P       19 54 04.6 +0.3
VSU                               pmax   pmax
              comp=Z,72nm,0.9s
VSU   Vasula           18.90  12 eP      Pn      19 54 05.7 +0.8
VRH   Novokhopyorsk    18.90  47 eP      P       19 54 04.2 -0.2
VRH                               pmax   pmax
              comp=Z,10.0nm,0.7s
GNI   Garni            19.16  82  P      Pn      19 54 08.5 +0.1
              comp=Z,6.1nm,0.8s,baz=1.3,slow=18,SNR=2.6
GNI   Garni            19.16  82 i P     Pn      19 54 09.0 +0.5
GNI                               pmax   pmax
              comp=Z,5.0nm,0.7s
MOS   Moscow           19.62  31 eP      P       19 54 12.4 +0.2
MOS                               pmax   pmax
              comp=Z,36nm,0.8s
HFS   Hagfors          20.37 351  P      P       19 54 21.2 +0.8
              comp=Z,1.2nm,0.5s,baz=129,slow=31,SNR=19
              comp=Z,1.2nm,0.5s
NC602 NORSAR Array S   21.23 349  P      P       19 54 28.4 -1.3
NAO01 NORSAR Array S   21.44 348  P      P       19 54 30.7 -1.1
EKA   Eskdalemuir Ar   21.46 323  P      P       19 54 31.9 -0.2
              comp=Z,3.3nm,0.8s,baz=119,slow=12,SNR=6.9
              comp=Z,3.3nm,0.8s
NB201 NORSAR Array S   21.57 349  P      P       19 54 32.7 -0.6
NC405 NORSAR Array S   21.57 349  P      P       19 54 31.2 -2.1
NB2   NORSAR Subarra   21.57 349  P      P       19 54 34.3 +0.9
              comp=Z,7.2nm,1.0s,baz=163,slow=10
NOA   NORSAR Array B   21.57 349  P      P       19 54 33.5 +0.1
              comp=Z,1.7nm,0.6s,baz=162,slow=9.9,SNR=12
              comp=Z,1.7nm,0.6s
NBO00 NORSAR Array S   21.63 348  P      P       19 54 32.8 -1.1
FINES FINESS Array B   21.70   8  P      P       19 54 33.9 -0.8
              comp=Z,4.2nm,0.7s,baz=171,slow=11,SNR=38
              comp=Z,4.2nm,0.7s
FINES FINESS Array B   21.70   8  P      P       19 54 33.2 -1.4
FIA1  FINESS Array S   21.70   8  P      P       19 54 33.1 -1.6
FIA1                              IAmb   IAmb    19 54 39.3
              comp=Z,15nm,0.9s
NC303 NORSAR Array S   21.73 349  P      P       19 54 33.4 -1.6
NC303                             IAmb   IAmb    19 54 40.9
              comp=Z,16nm,0.9s
NC204 NORSAR Array S   21.87 348  P      P       19 54 35.0 -1.5
NC204                             IAmb   IAmb    19 54 54.0
              comp=Z,17nm,1.1s
BELG  Belogornoye      22.73  48  P      P       19 54 47.2 +1.4
              comp=Z,9.9nm,0.6s,baz=93,slow=3.1,SNR=6.3
              comp=Z,9.9nm,0.6s
BELG  Belogornoye      22.73  48 i P     P       19 54 48.2 +2.4
BELG                              pmax   pmax
              comp=Z,6.0nm,0.9s
KLMR  Klimovskoe       24.10  24 eP      P       19 54 57.6 -1.7
KLMR                              pmax   pmax
              comp=Z,29nm,1.3s
KLMR  Klimovskoe       24.10  24 eP      P       19 54 57.7 -1.6
KLMR                              AMP            19 55 04.9
              comp=Z,29nm,1.3s
KIRV  Kirov            26.42  36  P      P       19 55 21.5 +1.1
              comp=Z,9.8nm,0.5s,baz=259,slow=12,SNR=4.9
              comp=Z,9.8nm,0.5s
PRGR  Permogore        26.72  28 eP      P       19 55 25.6 +2.6
AKTO  Aktyubinsk       28.59  56  P      P       19 55 39.7 -0.3
              comp=Z,1.4nm,0.5s,baz=237,slow=8.5,SNR=2.2
              comp=Z,1.4nm,0.5s
ARCES ARCESS Array B   29.63   4  P      P       19 55 47.7 -1.3
              comp=Z,3.0nm,0.9s,baz=194,slow=9.6,SNR=11
              comp=Z,3.0nm,0.9s
ARCES ARCESS Array B   29.63   4  P      P       19 55 48.0 -1.0
ABKAR Akbulak array    29.75  59  P      P       19 55 49.1 -1.1
GEYT  Alibeck          29.80  82  P      P       19 55 50.7 -0.2
              comp=Z,1.8nm,0.5s,baz=270,slow=3.0,SNR=3.6
              comp=Z,1.8nm,0.5s
GEYT  Alibeck          29.80  82  P      P       19 55 51.1 +0.2
ARU   Arti             30.08  44  P      P       19 55 52.5 -0.6
              comp=Z,0.4nm,0.5s,baz=317,slow=6.6,SNR=3.9
              comp=Z,0.4nm,0.5s
ARU   Arti             30.08  44d iP     P       19 55 54.3 +1.2
ARU                               S      S       20 00 52.3 +1.1
ARU                               pmax   pmax
              comp=Z,6.0nm,1.3s
TORD  Torodi Ar. Bea   31.18 215  P      P       19 56 04.5 +1.3
              comp=Z,0.6nm,0.5s,baz=28,slow=9.2,SNR=6.0
              comp=Z,0.6nm,0.5s
TORD  Torodi Ar. Bea   31.18 215  IAmb   IAmb    19 56 22.6
              comp=Z,3.6nm,1.1s
BRVK  Borovoye         36.34  52  P      P       19 56 46.6 -1.1
BRVK                              IAmb   IAmb    19 56 57.6
              comp=Z,3.9nm,0.9s
BRVK  Borovoye         36.34  52 i P     P       19 56 48.3 +0.6
BRVK                              pmax   pmax
              comp=Z,5.0nm,1.0s
KK31  Karatay Array    37.66  68  P      P       19 56 57.8 -1.3
KK31  Karatay Array    37.66  68  P      P       19 56 57.8 -1.3
KK31                              pmax   pmax
              comp=Z,2.0nm,0.8s
KKAR  Karatay Array    37.66  68  P      P       19 56 57.8 -1.3
KKAR  Karatay Array    37.66  68  P      P       19 56 58.3 -0.8
KKAR                              IAmb   IAmb    19 57 04.1
              comp=Z,2.1nm,0.8s
KKAR  Karatay Array    37.66  68  P      P       19 56 57.8 -1.3
KKAR                                             19 56 58.3
KKAR                              pmax   pmax
              comp=Z,2.0nm,0.8s
SPITS Spitsbergen Ar   38.18 359  P      P       19 57 02.8 -0.2
              comp=Z,4.8nm,1.0s,baz=162,slow=11,SNR=6.6
              comp=Z,4.8nm,1.0s
SPITS Spitsbergen Ar   38.18 359  P      P       19 57 02.1 -0.9
SPITS                             pmax   pmax
              comp=Z,61nm,1.5s
BTK   Batken           38.68  73  P      P       19 57 07.2 -0.6
BTK                               IAmb   IAmb    19 57 33.1
              comp=Z,9.3nm,1.4s
BTK   Batken           38.68  73  P      P       19 57 07.2 -0.6
BTK                               pmax   pmax
              comp=Z,9.0nm,1.5s
AAK   Ala-Archa        40.61  68 i P     P       19 57 24.7 +0.8
AAK                               pmax   pmax
              comp=Z,9.0nm,1.8s
BOOM  Boomskoye usch   41.68  68  P      P       19 57 31.8 -1.0
BOOM  Boomskoye usch   41.68  68  P      P       19 57 31.8 -1.0
BOOM                              pmax   pmax
              comp=Z,2.0nm,0.8s
KSH   Kashi            42.62  72  P      P       19 57 42.5 +2.1
KSH                               pmax   pmax
              comp=Z,4.0nm,1.1s
KDJ   Kajisay          42.66  68  P      P       19 57 40.6 -0.2
KDJ                               IAmb   IAmb    19 57 50.9
              comp=Z,4.1nm,0.9s
KDJ   Kajisay          42.66  68  P      P       19 57 40.6 -0.2
KDJ                               pmax   pmax
              comp=Z,4.0nm,1.0s
MAKZ  Makanchi         44.66  60  P      P       19 57 54.9 -1.7
MAKZ                              IAmb   IAmb    19 57 60.0
              comp=Z,3.0nm,1.0s
MAKZ  Makanchi         44.66  60  P      P       19 57 54.9 -1.7
MAKZ                              pmax   pmax
              comp=Z,3.0nm,1.0s
MK31  Makanchi Array   44.88  60  P      P       19 57 57.8 -0.5
MK31                              IAmb   IAmb    19 58 04.0
              comp=Z,3.9nm,0.9s
MK31  Makanchi Array   44.88  60  P      P       19 57 57.8 -0.5
MK31                              pmax   pmax
              comp=Z,4.0nm,1.0s
MKAR  Makanchi Array   44.88  60  P      P       19 57 58.1 -0.2
              comp=Z,3.5nm,0.5s,baz=280,slow=7.1,SNR=55
              comp=Z,3.5nm,0.5s
MKAR  Makanchi Array   44.88  60  P      P       19 57 57.5 -0.8
MKAR  Makanchi Array   44.88  60  P      P       19 57 57.5 -0.8
ZAA0  Zalesovo Array   44.91  49  P      P       19 57 57.7 -0.7
ZAA0                              IAmb   IAmb    19 57 58.9
              comp=Z,3.2nm,0.6s
ZALV  Zalesovo Beam    44.91  49  P      P       19 57 58.5 +0.1
              comp=Z,3.4nm,0.5s,baz=277,slow=8.7,SNR=12
              comp=Z,3.4nm,0.5s
ZALV  Zalesovo Beam    44.91  49  P      P       19 57 57.0 -1.4
WMQ   Urumqi           49.42  62 eP      P       19 58 35.8 +2.0
SCHQ  Schefferville    56.58 316  P      P       19 59 25.6 -0.8
              comp=Z,1.3nm,0.6s,baz=106,slow=19,SNR=1.8
              comp=Z,1.3nm,0.6s
TIXI  Tiksi            58.06  21  P      P       19 59 36.5  0.0
              comp=Z,0.2nm,0.2s,baz=271,slow=24,SNR=3.8
              comp=Z,0.2nm,0.2s
TSUM  Tsumeb           59.06 182  LR     LR      20 27 49.2
              comp=Z,558nm,18.5s,baz=322,slow=39
SONM  Songino Array    59.75  51  P      P       19 59 48.8 -0.1
              comp=Z,0.3nm,0.4s,baz=285,slow=13,SNR=5.3
              comp=Z,0.3nm,0.4s
HHC   Hu-ho-hao-te     66.49  56 eP      P       20 00 35.3 +1.6
HHC                               pmax   pmax
              comp=Z,32nm,0.9s
HHC                               pmax   pmax
              comp=Z,230nm,5.8s
PZH   PanZhiHua        67.69  74  P      P       20 00 43.0 +1.4
PZH                               pmax   pmax
              comp=Z,10.0nm,0.8s
BOSA  Boshof           68.59 175  LR     LR      20 34 43.2
              comp=Z,1µm,21.2s,baz=312,slow=39
BILL  Bilibino         69.26  13 eP      P       20 00 50.2 -0.3
BILL                             e               20 01 10.3
BILL                              pmax   pmax
              comp=Z,2.0nm,1.5s
YKA   Yellowknife Ar   71.33 339  P      P       20 01 04.2 +0.9
              comp=Z,0.4nm,0.6s,baz=38,slow=5.3,SNR=8.2
              comp=Z,0.4nm,0.6s
KSRS  Korea Array      78.61  50  P      P       20 01 46.0 +0.3
              comp=Z,0.9nm,0.6s,baz=307,slow=5.0,SNR=4.6
              comp=Z,0.9nm,0.6s
TXAR  Lajitas Array    93.14 313  P      P       20 03 01.0 +2.5
              comp=Z,0.8nm,0.9s,baz=12,slow=6.4,SNR=5.2
              comp=Z,0.8nm,0.9s
TXAR  Lajitas Array    93.14 313  P      P       20 03 01.0 +2.5
```

AUST ***20*** *19:57:50.8±0.8, 25°.61S×129°.95E, h0^{km}, Error ellipse: s-maj=10.0km s-min=8.9km az=24.0*

IDC ***20*** *19:57:52.4±5.0, 25°.65S×130°.09E, h0^{km}, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=44.4km s-min=34.0km az=98.0*

NOU ***20*** *19:57:54.6, 25°.78S×130°.18E, h0^{km}, mb3.9/9, Northern Territory, Australia*

ISC 20 19:57:51.7±1.0**, 25°.61S**±0°.06×**130°.01E**±0°.05**, h10^{km}, n26, σ2^{s}06**/32**, Northern Territory**

```
Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
WRKA  Warakurna        1.65 290    P      Pn      19 58 21.3 +0.5
              baz=1.6
WRKA                               S      Sn      19 58 42.2 +0.1
              baz=1.6
ASPA  Alice Springs    4.03  62    P      Pn      19 58 56.1 +2.6
              baz=4.1
ASPA                               S      Sn      19 59 43.4 +2.5
              baz=4.1
ASAR  Alice Springs    4.04  62    Pn     Pn      19 58 55.9 +2.3
              0.4nm,0.3s,baz=243,slow=12,SNR=9.2
ASAR                               Pg     Pg      19 59 07.1 -1.9
              1.7nm,0.3s,baz=238,slow=16,SNR=22
ASAR                               Sn     Sn      19 59 43.5 +2.5
              2.4nm,0.3s,baz=248,slow=21,SNR=16
ASAR                               Lg     Lg      19 59 57.5
              3.0nm,0.3s,baz=241,slow=26,SNR=11
              1.0nm,0.6s
FORT  Forrest          5.43 198    P      Pn      19 59 14.4 +1.7
              baz=5.4
FORT                               S      Sn      20 00 16.1 +0.8
              baz=5.4
FORT  Forrest          5.43 198    P      Pn      19 59 15.3 +2.6
OOD   Oodnadatta       5.53 114    P      Pn      19 59 16.7 +2.7
              baz=5.6,SNR=9.3
OOD                                S      Sn      20 00 20.7 +3.1
              baz=5.6
OOD   Oodnadatta       5.53 114    P      Pn      19 59 16.4 +2.4
MULG  Mulgathing       5.87 143    P      Pn      19 59 21.7 +3.0
              baz=5.9,SNR=4.3
MULG  Mulgathing       5.87 143    P      Pn      19 59 21.3 +2.5
WRA   Warramunga Arr   6.91  36    Pn     Pn      19 59 35.2 +2.1
              0.2nm,0.3s,baz=218,slow=14,SNR=6.7
WRA                                Sn     Sn      20 00 49.2 -2.6
              0.6nm,0.3s,baz=225,slow=16,SNR=3.1
WRA                                Lg     Lg      20 01 25.4
              0.9nm,0.3s,baz=214,slow=28,SNR=4.8
              0.7nm,0.6s
WB2   Warramunga Arr   6.92  36    P      Pn      19 59 33.9 +0.7
              baz=7.0
LCRK  Leigh Creek      8.71 125    P      Pn      19 59 58.7 +1.0
              baz=8.8
LCRK  Leigh Creek      8.71 125    P      Pn      19 59 58.8 +1.1
BBOO  Buckleboo        8.91 145    P      Pn      20 00 00.9 +0.4
              baz=9.0,SNR=7.8
BBOO  Buckleboo        8.91 145    P      Pn      20 00 00.7 +0.2
INKA  Innaminka        9.83 105    P      Pn      20 00 14.0 +0.8
              baz=9.9
INKA  Innaminka        9.83 105    P      Pn      20 00 14.5 +1.3
KNRA  Kununurra        9.95 353    P      Pn      20 00 15.8 +1.1
              baz=10.0
KNRA  Kununurra        9.95 353    P      Pn      20 00 21.3 +6.5
MEEK  Meekatharra     10.29 262    P      Pn      20 00 16.8 -2.7
              baz=10,SNR=4.1
HTT   Hallett         11.00 137    P      Pn      20 00 27.9 -1.2
              baz=11
HTT   Hallett         11.00 137    P      Pn      20 00 28.8 -0.3
STKA  Stephens Creek  11.93 124    Pn     Pn      20 00 40.8 -1.0
              0.3nm,0.3s,baz=301,slow=12,SNR=5.2
STKA                               Sn     Sn      20 02 50.0 -4.9
              0.3nm,0.3s,baz=306,slow=9.9,SNR=3.8
              1.7nm,0.6s
STKA  Stephens Creek  11.93 124    P      Pn      20 00 41.1 -0.8
              baz=12
STKA  Stephens Creek  11.93 124    P      Pn      20 00 41.2 -0.6
KDU   Kakadu          13.06  11    P      Pn      20 00 57.3  0.0
              baz=13
```

DDA ***20*** *20:00:15.9±0.0, 38°.65N×24°.38E, h7^{km}±2^{km}, MW4.0*

ISK ***20*** *20:00:18.5, 38°.67N×24°.49E, h8^{km}, ML3.9/31*

IDC ***20*** *20:00:18.9±0.7, 38°.58N×24°.42E, h0^{km}, mb4.0/12, mbtmp3.9/19, ML3.4/6, Error ellipse: s-maj=14.4km s-min=11.0km az=103.0*

NEIC ***20*** *20:00:19.8±1.7, 38°.64N±0°.05×24°.46E±0°.05, h10^{km}±1^{km}, mb4.3/16, ML4.0(THE), Error ellipse: s-maj=8.4km s-min=5.6km az=152.0*

THE ***20*** *20:00:19.8, 38°.60N×24°.48E, h5^{km}±1^{km}, ML4.0/14, Error ellipse: s-maj=1.2km s-min=0.5km az=272.0*

ATH ***20*** *20:00:20.1, 38°.59N×24°.47E, h15^{km}±1^{km}, ML3.9/20, Error ellipse: s-maj=1.5km s-min=0.7km az=352.0*

ISC 20 20:00:20.1±0.9**, 38°.60N**±0°.02×**24°.47E**±0°.02**, h12^{km}**±6^{km}**, n304, σ1^{s}14**/342**, mb4.3**/26**, 8C-7D, Aegean Sea**

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Code  Station Name      Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC      h  m  s   ISC
SKY   Skiros Island    0.28  13    P      Pg      20 00 25.8 -0.1
SKY                                S      Sg      20 00 30.9 +1.1
SKY                                AML    AML     20 00 32.5
              comp=N,42319µm,0.3s
SKY                                AML    AML     20 00 33.6
              comp=E,61058µm,0.3s
SKY   Skiros Island    0.28  13    P      Pg      20 00 25.9  0.0
SKY                                S      Sg      20 00 30.6 +0.8
              comp=E,26µm,0.3s
KYMI  Kymi, Euboea I   0.29 276    P      Pg      20 00 26.2 +0.1
KYMI                               S      Sg      20 00 30.4 +0.5
KYMI                               AML    AML     20 00 32.2
              comp=N,30215µm,0.4s
KYMI                               AML    AML     20 00 32.5
              comp=E,30829µm,0.5s
KYMI  Kymi, Euboea I   0.29 276    P      Pg      20 00 26.1 +0.1
KYMI                               S      Sg      20 00 30.8 +0.8
              comp=E,15µm,0.4s
KARY  Karystos         0.57 182    P      Pg      20 00 31.0 -0.2
KARY                               S      Sg      20 00 39.3 +0.6
KARY  Karystos         0.57 182    P      Pg      20 00 31.0 -0.2
DION  Dionisos Attik   0.67 219    P      Pg      20 00 32.9 -0.2
DION                               S      Sg      20 00 42.6 +0.7
DION                               AML    AML     20 00 46.0
DION                               AML    AML     20 00 46.2
              comp=N,97798µm,0.6s
DION  Dionisos Attik   0.67 219    P      Pg      20 00 32.9 -0.2
DION                               S      Sb      20 00 43.8 +0.8
              comp=N,95µm,0.5s
ALNA  Alonissos        0.72 320    P      Pg      20 00 33.7 -0.4
ALNA                               S      Sb      20 00 44.2 -0.2
ALNA                               AML    AML     20 00 47.6
              comp=N,38462µm,0.7s
ALNA                               AML    AML     20 00 47.7
              comp=E,33498µm,0.8s
PTL   Penteli          0.73 221    P      Pg      20 00 33.8 -0.4
PTL                                S      Sg      20 00 43.9 +0.2
PTL                                AML    AML     20 00 46.2
              comp=N,36470µm,0.6s
PTL                                AML    AML     20 00 47.3
              comp=E,35273µm,0.7s
ATHU  Athens Univers   0.83 221    P      Pg      20 00 35.6 -0.5
ATHU                               S      Sg      20 00 46.9  0.0
ATHU                               AML    AML     20 00 50.0
              comp=N,34962µm,0.5s
ATHU                               AML    AML     20 00 52.5
              comp=E,8417µm,0.5s
ATHU  Athens Univers   0.83 221    P      Pg      20 00 35.4 -0.7
ATHU                               S      Sg      20 00 46.7 -0.3
              comp=E,11µm,0.5s
PSRA  Psara            0.86  94    P      Pg      20 00 35.4 -1.3
PSRA                               AML    AML     20 00 53.7
              comp=N,5090µm,0.3s
PSRA                               AML    AML     20 00 57.7
              comp=E,6661µm,0.6s
ATH   Athens Observa   0.86 223    P      Pg      20 00 36.3 -0.4
ATH                                S      Sg      20 00 48.1 +0.1
ATH                                AML    AML     20 00 51.0
              comp=E,30061µm,0.6s
ATH                                AML    AML     20 00 51.9
              comp=N,29062µm,0.5s
ATH   Athens Observa   0.86 223    P      Pg      20 00 36.2 -0.5
ATH                                S      Sg      20 00 47.9 -0.1
              comp=N,15µm,0.5s
VLY   Voula,Athens     0.92 216    P      Pg      20 00 37.3 -0.4
VLY                                S      Sg      20 00 49.5 -0.2
VLY                                AML    AML     20 00 52.4
              comp=E,40348µm,0.4s
VLY                                AML    AML     20 00 53.6
              comp=N,33754µm,0.7s
VLY   Voula,Athens     0.92 216    P      Pg      20 00 37.2 -0.6
VLY                                S      Sg      20 00 49.4 -0.3
              comp=N,23µm,0.6s
VILL  Villia           1.01 245    P      Pg      20 00 38.9 -0.6
VILL                               S      Sn      20 00 54.6 +0.3
              comp=N,25µm,0.7s
VIL2  Platees          1.02 248    P      Pg      20 00 38.9 -0.9
VIL2                               S      Sg      20 00 52.2 -0.7
VIL2                               AML    AML     20 00 55.0
              comp=E,39288µm,0.6s
VIL2                               AML    AML     20 00 55.1
              comp=N,48068µm,0.6s
ATAL  Atalanti         1.14 275    P      Pg      20 00 40.7 -1.2
ATAL                               S      Sb      20 00 57.1 +0.7
ATAL                               AML    AML     20 01 01.7
              comp=E,5566µm,0.5s
ATAL                               AML    AML     20 01 01.7
              comp=N,6698µm,0.6s
ATAL  Atalanti         1.14 275    P      Pg      20 00 40.7 -1.2
ATAL                               S      Sn      20 00 57.7 +0.3
              comp=N,3µm,0.5s
LKR   Lokris           1.15 273    P      Pg      20 00 40.6 -1.6
LKR                                S      Sg      20 00 56.3 -0.9
LKR                                AML    AML     20 00 59.3
              comp=E,4411µm,0.3s
LKR                                AML    AML     20 01 01.2
              comp=N,3960µm,0.3s
LKR   Lokris           1.15 273    P      Pg      20 00 39.6 -2.6
TNSA  Tinos            1.19 152    P      Pb      20 00 42.1 -0.5
TNSA                               S      Sb      20 00 57.1 -0.9
TNSA                               AML    AML     20 00 59.5
              comp=N,4496µm,0.7s
TNSA                               AML    AML     20 01 02.1
              comp=E,3542µm,0.5s
NEO   Neokhori         1.20 306    P      Pg      20 00 42.1 -1.0
NEO                                AML    AML     20 01 02.3
              comp=E,9883µm,0.4s
NEO                                AML    AML     20 01 03.8
              comp=N,8952µm,0.5s
NEO   Neokhori         1.20 306    P      Pg      20 00 42.1 -1.0
NEO                                S      Sn      20 00 59.5 +0.5
              comp=N,5µm,0.4s
SIGR  SIGRI            1.24  60    P      Pb      20 00 42.4 -1.2
SIGR                               S      Sg      20 00 59.5 -0.6
SIGR                               AML    AML     20 01 02.9
              comp=E,4048µm,0.7s
SIGR                               AML    AML     20 01 03.0
              comp=N,7071µm,0.8s
SIGR  SIGRI            1.24  60    P      Pb      20 00 42.3 -1.2
SIGR                               S      Sn      20 01 00.6 +0.6
              comp=N,3µm,0.6s
XOR   Xorichti         1.25 308    P      Pb      20 00 42.8 -1.0
XOR                                S      Sn      20 01 00.8 +0.5
XOR                                AML    AML     20 01 05.1
              comp=E,7844µm,0.9s
XOR                                AML    AML     20 01 05.4
              comp=N,9621µm,0.7s
XOR   Xorichti         1.25 308    P      Pb      20 00 42.7 -1.0
XOR                                S      Sn      20 01 00.8 +0.5
              comp=N,4µm,0.8s
CHOS  Chios island     1.26  99    P      Pn      20 00 43.5 -0.2
CHOS                               AML    AML     20 01 14.1
              comp=E,5504µm,0.7s
CHOS                               AML    AML     20 01 15.5
              comp=N,4912µm,0.5s
CHOS  Chios island     1.26  99    P      Pn      20 00 43.7  0.0
CHOS  Chios island     1.26  99    PN     Pn      20 00 43.2 -0.5
CHOS                               SN     Sg      20 01 00.8  0.0
LTK   Loutraki         1.31 244    P      Pn      20 00 44.0 -0.4
LTK                                S      Sb      20 01 01.6  0.0
LIA   Limnos Island    1.41  23    P      Pn      20 00 44.3 -1.3
EPID  Epidavros        1.45 228    P      Pn      20 00 45.5 -0.7
EPID                               S      Sb      20 01 06.6 +1.1
              comp=N,5µm,0.3s
PAIG  Paliouri         1.46 335    P      Pn      20 00 45.5 -0.8
YDRA  Hydra            1.48 213    P      Pn      20 00 46.1 -0.4
YDRA                               S      Sn      20 01 05.7 -0.1
YDRA                               AML    AML     20 01 09.9
              comp=E,20568µm,0.5s
YDRA                               AML    AML     20 01 11.1
              comp=N,10265µm,0.8s
THAL  Thalero          1.53 249    P      Pn      20 00 47.1 -0.1
THAL                               S      Sg      20 01 09.8 +0.6
              comp=N,8µm,0.6s
PRK   Paraskevi        1.55  65    P      Pb      20 00 48.4 -0.3
PRK                                AML    AML     20 01 18.5
              comp=E,7776µm,0.8s
PRK                                AML    AML     20 01 22.3
              comp=N,6312µm,0.7s
PRK   Paraskevi        1.55  65    P      Pb      20 00 48.4 -0.3
KOCA  Canakkale, Ayv   1.58  55    P      Pn      20 00 47.5 -0.5
KRND  KRANIDI          1.60 221    P      Pn      20 00 47.7 -0.5
KRND                               S      Sn      20 01 08.6 -0.3
KRND                               AML    AML     20 01 18.6
              comp=N,6970µm,0.5s
KRND                               AML    AML     20 01 22.2
              comp=E,6837µm,0.7s
KRND  KRANIDI          1.60 221    P      Pn      20 00 47.7 -0.5
KRND                               S      Sn      20 01 09.3 +0.5
              comp=E,3µm,0.6s
ZEYE  Izmir, Urla-Ze   1.64 102    P      Pn      20 00 48.8 +0.1
URLA  Izmir            1.69  98    P      Pn      20 00 48.1 -1.4
AGG   Agios Georgios   1.72 285    P      Pn      20 00 49.6 -0.4
AGG   Agios Georgios   1.72 285    PN     Pn      20 00 49.8 -0.1
AGG   Agios Georgios   1.72 285    Pn     Pn      20 00 49.5 -0.4
APE   Apeiranthos      1.75 151    P      Pn      20 00 49.6 -0.7
APE   Apeiranthos      1.75 151    PN     Pn      20 00 49.9 -0.4
BOZC  Bozcaada         1.75  44    P      Pn      20 00 48.1 -2.2
BOZC                               S      Sn      20 01 10.5 -2.0
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BOZC				*i* AML	AML	20 01 18.0	
	comp=E,372nm,0.6s						
BOZC				*i* AML	AML	20 01 30.0	
	comp=E,478nm,0.8s						
OUR	Ouranopolis	1.77	348	P	Pn	20 00 49.9	-0.7
OUR	Ouranopolis	1.77	348	PN	Pn	20 00 49.4	-1.2
AYVA	Ayvalik	1.87	67	P	Pn	20 00 51.6	-0.3
AYVA				S	Sb	20 01 17.9	+0.4
AYVA				*i* AML	AML	20 01 28.0	
	comp=E,622nm,0.8s						
MAKR	Makrakomi, Fth	1.87	283	P	Pn	20 00 52.7	+0.7
ALIK	Aliki, Aigiali	1.88	260	P	Pn	20 00 51.8	-0.3
EZN	Ezine	1.89	49	PN	Pn	20 00 51.1	-1.1
KLV	Kalavryta, Ach	1.91	254	P	Pn	20 00 52.1	-0.4
MHLO	Agia Marina, M	1.91	182	P	Pn	20 00 52.3	-0.2
GADA	Gvkgeada	1.94	34	PN	Pn	20 00 51.6	-1.2
PLG	Polygyros	1.94	336	P	Pn	20 00 52.1	-0.8
GOKA	anakkale-Gk	1.94	35	P	Pn	20 00 51.7	-1.2
ECEA	Canakkale, Ece	1.96	42	P	Pn	20 00 53.2	+0.1
DKL	Dikili	1.96	75	PN	Pn	20 00 52.6	-0.6
BAYC	CANAKKALE_Bayr	1.98	54	P	Pn	20 00 51.7	-1.7
DGB	zmir	1.98	105	P	Pn	20 00 54.1	+0.8
ANX	Ano Chora	2.00	271	P	Pn	20 00 54.0	+0.2
THAS	Thassos island	2.01	5	P	Pn	20 00 52.5	-1.4
EFP	Efpalio	2.02	266	P	Pn	20 00 54.2	+0.3
BLCB	Balcova	2.03	95	PN	Pn	20 00 54.1	-0.1
SMTH	Samothraki Isl	2.04	23	P	Pn	20 00 52.4	-1.9
SMG	Samos	2.07	115	P	Pn	20 00 54.6	-0.1
ZEDA	zmir-Bergama	2.07	79	P	Pn	20 00 54.3	-0.4
UPR	University Cam	2.13	262	P	Pb	20 00 57.6	-1.0
THL	Klokotos Trika	2.14	298	P	Pn	20 00 55.8	+0.2
LIT	Litokhoron	2.14	315	P	Pn	20 00 55.5	-0.2
LIT	Litokhoron	2.14	315	Pn	Pn	20 00 54.7	-1.1
BUHA	Balikesir, Bur	2.22	65	P	Pn	20 00 58.2	+1.4
VLI	Veliai	2.24	213	P	Pn	20 00 56.7	-0.3
KOKK	Kokkinochori,	2.24	351	P	Pn	20 00 56.3	-0.8
HORT	Hortiatis	2.26	333	P	Pn	20 00 57.5	+0.2
HORT	Hortiatis	2.26	333	PN	Pn	20 00 56.5	-0.8
DRO	Drossia	2.26	254	P	Pn	20 00 57.7	+0.3
THR5	Thira Island,	2.29	162	P	Pn	20 00 57.6	-0.1
THE	Thessaloniki	2.34	331	P	Pn	20 00 58.3	0.0
THR9	Santorini-Faro	2.35	162	P	Pn	20 00 58.7	+0.2
GCAM	G?zelcaml?	2.36	112	P	Pn	20 00 58.2	-0.4
SANT	Santorini	2.36	160	P	Pn	20 00 58.7	0.0
SANT	Santorini	2.36	160	PN	Pn	20 00 59.4	+0.7
SANT	Santorini	2.36	160	Pn	Pn	20 00 58.3	-0.4
GELI	Tayfur-Gelibol	2.37	40	PN	Pn	20 00 57.9	-0.9
SOH	Sokhos	2.38	339	P	Pn	20 00 59.0	0.0
KAVA	Kavala	2.39	1	P	Pn	20 00 58.1	-1.0
RLS	Riolos of Patr	2.42	258	P	Pn	20 00 58.3	-1.2
ITM	Ithomi	2.46	236	P	Pn	20 01 01.0	+0.9
ITM	Ithomi	2.46	236	Pn	Pn	20 01 00.6	+0.6
CAVK	Edirne/Enez-Ca	2.47	32	P	Pn	20 00 59.8	-0.3
DDIM	Aydin, Didim	2.47	117	P	Pn	20 01 00.3	+0.1
ENEZ	Enez	2.50	31	PN	Pn	20 00 59.6	-1.0
KTHA	Kythira Island	2.59	206	P	Pn	20 01 01.7	-0.2
ALN	Alexandroupoli	2.60	27	P	Pn	20 01 00.5	-1.4
ALN	Alexandroupoli	2.60	27	PN	Pn	20 01 00.7	-1.2
ALN	Alexandroupoli	2.60	27	Pn	Pn	20 01 00.5	-1.4
ERIK	Erikli-Kesan	2.60	37	PN	Pn	20 01 00.8	-1.2
SRS	Serrai	2.60	345	P	Pn	20 01 01.5	-0.5
KTHR	Kythira	2.61	207	P	Pn	20 01 02.3	+0.2
STEP	BALIKESIR_Sava	2.65	72	P	Pn	20 01 04.2	+1.5
RDO	Rodhopi	2.67	18	P	Pn	20 01 01.5	-1.4
RDO	Rodhopi	2.67	18	PN	Pn	20 01 01.6	-1.4
RDO	Rodhopi	2.67	18	Pn	Pn	20 01 01.7	-1.3
KZN	Kozani	2.69	310	P	Pn	20 01 04.0	+0.7
BALY	Balya	2.70	64	P	Pb	20 01 06.6	-1.8
KOSK	Kos Island	2.72	132	PN	Pn	20 01 03.9	+0.3
BODT	Bodrum	2.73	123	P	Pn	20 01 03.9	+0.2
BODT	Bodrum	2.73	123	PN	Pn	20 01 04.1	+0.4
PYL	PYLOS	2.75	233	P	Pn	20 01 05.4	+1.4
KPRO	Kipourio	2.76	300	P	Pn	20 01 05.2	+0.9
AYDB	Zeytinkoy-Aydi	2.77	103	PN	Pn	20 01 04.7	+0.2
NVR	Nevrokopi	2.78	351	P	Pn	20 01 04.2	-0.4
KESN	Edirne-Kesan	2.80	37	P	Pn	20 01 02.6	-2.4
BDRM	Kayabasi	2.81	122	P	Pn	20 01 04.8	-0.1
KNT	Kendrikon	2.83	335	P	Pn	20 01 05.2	+0.1
KNT	Kendrikon	2.83	335	PN	Pn	20 01 04.9	-0.2
KRBG	Karabiga-Canak	2.83	50	PN	Pn	20 01 04.9	-0.2
GRG	Griva	2.84	327	P	Pn	20 01 05.5	+0.2
AYDN	Tasoluk	2.85	108	P	Pn	20 01 05.3	-0.2
GONE	Gonen-Balikesi	2.88	59	PN	Pn	20 01 05.8	-0.1
KNL	Balıkesir	2.90	54	P	Pn	20 01 06.5	+0.4
MLSB	Milas	2.92	115	PN	Pn	20 01 06.9	+0.5
NIS1	Nisyros Isl.	2.94	132	PN	Pn	20 01 07.5	+0.9
NYDR	Nydri-Lefkada	2.95	273	P	Pn	20 01 09.2	+2.4
RKY	Sarkoy-Tekirda	2.95	44	PN	Pn	20 01 05.9	-1.0
SART	Tekirdag	2.96	44	P	Pn	20 01 07.5	+0.6
LKD2	Lefkada island	2.99	275	P	Pn	20 01 10.0	+2.7
MAR6	Marsite Statio	3.01	45	PN	Pn	20 01 07.1	-0.6
UKOP	Uzunkopru-Edir	3.02	33	PN	Pn	20 01 07.5	-0.3
DRAG	Dragano-Lefkad	3.05	273	P	Pn	20 01 11.0	+2.8
MAR3	Marsite Statio	3.06	45	PN	Pn	20 01 07.6	-0.6
FSK	Fiskardo	3.07	269	P	Pn	20 01 10.8	+2.4
GZKV	Gazikoy-Tekird	3.08	45	PN	Pn	20 01 08.5	0.0
VAY	Valandovo	3.08	332	*i* Pn	Pn	20 01 10.1	+1.5
VAY				*e*Sn	Sg	20 02 00.8	+1.7
RODP	Rodopos	3.09	191	P	Pn	20 01 09.3	+0.6
DAT	Datca	3.10	126	P	Pn	20 01 08.3	-0.6
DAT	Datca	3.10	126	P	Pn	20 01 08.9	0.0
MRMT	Marmara Adasi	3.14	49	PN	Pn	20 01 09.4	0.0
EDC	Edincik	3.15	55	PN	Pn	20 01 09.2	-0.4
IMMV	Iera Moni Meta	3.16	187	P	Pn	20 01 09.8	+0.1
NEST	Nestorio	3.21	305	P	Pn	20 01 11.9	+1.5
FNA	Florina	3.23	313		Pn	20 01 10.9	+0.2
DMLN	Damoulianata-K	3.24	265	P	Pn	20 01 12.0	+1.3
DURS	Dursunbey	3.27	71	P	Pn	20 01 12.8	+1.5
KULA	Kula-Manisa	3.29	90	PN	Pn	20 01 11.2	-0.3
IDI	Anoyia	3.32	174	Pn	Pn	20 01 11.9	-0.1
	comp=E,4.9nm,0.3s,baz=339,slow=13,SNR=44						
IDI				Sn	Sn	20 01 47.1	-4.4
	comp=E,16nm,0.3s,baz=148,slow=22,SNR=7.2						
IDI				Lg	Lg	20 02 03.8	
	comp=E,9.2nm,0.3s,baz=120,slow=20,SNR=4.0						
	comp=E,16nm,0.3s						
IDI	Anoyia	3.32	174	P	Pn	20 01 11.7	-0.3
IDI	Anoyia	3.32	174	Pn	Pn	20 01 11.7	-0.3
MULA	Mugla, Merkez-	3.33	113	P	Pn	20 01 12.8	+0.7
IGT	Igoumenitsa	3.35	287	P	Pn	20 01 15.1	+2.8
YER	Yerkesik	3.35	115	P	Pn	20 01 13.1	+0.7
YER	Yerkesik	3.35	115	PN	Pn	20 01 12.9	+0.5
KBN	Korca	3.49	307		Pn	20 01 12.3	-1.9
PLD	Plovdiv	3.50	3	PN	Pn	20 01 14.1	-0.3
TURN	Turunc	3.51	120	P	Pn	20 01 13.2	-1.2
SIMA	Simav-Kutahya	3.56	81	PN	Pn	20 01 15.6	+0.4
CRLT	Corlu	3.56	44	PN	Pn	20 01 15.1	-0.1
USAK	Uak-Merkez	3.56	87	P	Pn	20 01 16.0	+0.7
EDRB	Edirne	3.68	28	P	Pn	20 01 15.6	-1.2
EDRB	Edirne	3.68	28	PN	Pn	20 01 15.9	-0.9
TAVA	DENIZLI_Tavas	3.69	107	P	Pn	20 01 19.0	+1.9
KARP	Karpathos	3.73	144	P	Pn	20 01 18.0	+0.4
KARP	Karpathos	3.73	144	Pn	Pn	20 01 17.8	+0.2
ZKR	Zakros	3.75	158	P	Pn	20 01 18.7	+0.9
ARG	Arkhangelos	3.76	128	Pn	Pn	20 01 18.1	+0.2
OHR	Ohrid	3.77	313	*i* Pn	Pb	20 01 22.9	-3.8
KEK	Kerkira	3.79	288	P	Pn	20 01 20.9	+2.5
KEK	Kerkira	3.79	288	Pn	Pn	20 01 17.3	-1.1
SLVT	Silivri	3.90	46	PN	Pn	20 01 19.2	-0.6
ARMT	Armutlu	3.92	59	PN	Pn	20 01 20.0	-0.2
ULDT	Uludag	3.93	66	P	Pn	20 01 23.8	+3.4
VIZE	Kirklareli, Vi	3.94	40	P	Pn	20 01 19.0	-1.5
PASA	Karahalli, USA	3.95	92	P	Pn	20 01 20.7	+0.1
ARMN	Kirklareli, Me	3.97	34	P	Pn	20 01 17.2	-3.6
TVSB	Tavsanli	3.98	76	PN	Pn	20 01 20.7	-0.4
IGD	Bursa	4.02	64	P	Pn	20 01 24.1	+2.6
CTKS	Kestanelik-??a	4.07	48	PN	Pn	20 01 22.2	0.0
CTYL	Yalikoy Yolu	4.10	44	PN	Pn	20 01 22.5	-0.1
VTS	Vitosha	4.12	347	⇓P	Pn	20 01 23.2	+0.1
VTS	Vitosha	4.12	347	Pn	Pn	20 01 22.5	-0.5
TRML	Termal-Yalova	4.15	60	PN	Pn	20 01 23.9	+0.6
VLO	Vlora	4.27	297	Pn	Pn	20 01 25.2	+0.2
ANDZ	Kutahya, Merke	4.32	76	P	Pn	20 01 27.1	+1.3
KZIL	AFYON_Kizioren	4.47	93	P	Pn	20 01 29.2	+1.4
TIR	Tirane	4.47	309	Pn	Pn	20 01 28.5	+0.7
AKAS	Kas	4.72	118		Pn	20 01 30.6	-0.7
AKAS	Kas	4.72	118	P	Pn	20 01 35.7	+4.4
BORA	Eskisehir	4.82	73	Pn	Pn	20 01 31.8	-0.7
SCTE	Santa Cesarea	4.88	289	Pn	Pn	20 01 32.2	-1.0
KAYN	Sakarya, Kayna	5.10	61	P	Pn	20 01 36.3	-0.1
BLKB	Belogradchik	5.20	345	⇑P	Pn	20 01 37.4	-0.3
YVAC	Isparta, Yalva	5.33	91	P	Pn	20 01 39.7	+0.1
SAHE	Sakarya_HENDEK	5.41	63	P	Pn	20 01 41.0	+0.4
PDG	Podgorica	5.51	316	Pn	Pn	20 01 40.8	-1.2
MDUB	Mudurnu	5.53	68	Pn	Pn	20 01 43.1	+0.8
YIGI	Dzce	5.87	64	P	Pn	20 01 48.8	+1.8
KEPZ	Antalya-Kepez	5.90	104	P	Pn	20 01 49.0	+1.5
KIBS	BOLU	5.99	70	P	Pn	20 01 50.4	+1.7
TIP	Timpagrande	6.04	278	⇓P	Pn	20 01 50.3	+1.0
TIP	Timpagrande	6.04	278	Pn	Pn	20 01 49.5	+0.1
DIVS	Divibare	6.44	330	Pn	Pn	20 01 54.4	-0.4
TIRR	Tirgusor	6.56	26	⇑P	Pn	20 01 57.3	+1.0
TIRR	Tirgusor	6.56	26		Pn	20 01 55.3	-1.0
CEL	Celeste	6.74	270	Pn	Pn	20 01 58.4	-0.5
VOIR		6.84	3	⇑P	Pn	20 02 00.1	-0.2
CUC	Castrocucco	6.85	284		Pn	20 02 00.5	0.0
LOT	Lotru	6.86	356	⇓P	Pn	20 02 01.0	+0.4
GZR	Gura Zlata	6.90	350	⇑P	Pn	20 02 00.5	-0.6
MLR	Muntele Rosu	6.97	9	⇓P	Pn	20 02 03.0	+0.8
MLR	Muntele Rosu	6.97	9	Pn	Pn	20 02 02.7	+0.6
	comp=E,1.2nm,0.3s,baz=189,slow=9.1,SNR=15						
MLR				Lg	Lg	20 04 12.2	
	comp=E,0.1nm,0.3s,baz=283,slow=19,SNR=2.1						
	comp=E,8.2nm,0.6s						
MLR	Muntele Rosu	6.97	9	Pn	Pn	20 02 01.1	-1.1
BR131	Keskin Array S	7.21	78	Pn	Pn	20 02 07.4	+1.9
BRTR	Keskin Array B	7.21	78	Pn	Pn	20 02 07.7	+2.2
	comp=E,0.3nm,0.3s,baz=255,slow=12,SNR=8.4						
BRTR				Pg	Pg	20 02 39.1	+0.9
	comp=E,0.1nm,0.3s,baz=261,slow=15,SNR=6.9						
BRTR				Lg	Lg	20 04 12.5	
	comp=E,0.1nm,0.3s,baz=263,slow=20,SNR=1.5						
	comp=E,2.3nm,0.7s						
BRTR	Keskin Array B	7.21	78	Pn	Pn	20 02 04.7	-0.8
TLCR		7.33	25	⇑P	Pn	20 02 08.6	+1.6
DEV	Deva	7.37	351	⇓P	Pn	20 02 08.3	+0.9
SGRT	San Giovanni R	7.38	298	Pn	Pn	20 02 07.9	+0.1
DOPR	Dopca	7.39	5	⇑P	Pn	20 02 07.7	-0.1
PLOR	Plostina	7.42	12	⇑P	Pn	20 02 09.6	+1.4
VRI	Vrincioaia	7.45	12	⇓P	Pn	20 02 09.4	+0.8
ILGA	Ilgaz	7.53	68	Pn	Pn	20 02 08.9	-1.0
CSS	Mathiatis	7.98	114	Pn	Pn	20 02 15.8	-0.2
PAOL	Paolisi	8.00	291		Pn	20 02 15.8	-0.4
VAE	Valguarnera	8.01	265	Pn	Pn	20 02 17.8	+1.3
	comp=E,0.5nm,0.3s,baz=21,slow=8.6,SNR=2.4						
	comp=E,13nm,0.7s						
BIZ	Bicaz	8.42	8	⇓P	Pn	20 02 22.4	+0.6
MORH	Mrgy, Hungar	8.74	332	⇑P	Pn	20 02 27.0	+0.7
MORH	Mrgy, Hungar	8.74	332	P	Pn	20 02 26.7	+0.5
KOVH	Kovagotottos	8.84	330	P	Pn	20 02 29.1	+1.5
BURAR	Bucovina Array	9.03	3	Pn	Pn	20 02 30.1	-0.2
BUR08	Bucovina Ar. S	9.05	3	Pn	Pn	20 02 30.4	-0.3
NRCA	Norcia	9.60	300		Pn	20 02 36.0	-2.1
MPLH	Magyarpolny	9.95	332	P	Pn	20 02 45.3	+2.4
SOKA	Soboth	10.64	322	*e*Pn	Pn	20 02 52.8	+0.3
	comp=E,2.3nm,0.6s						
OBKA	Obir	10.76	320	*e*Pn	Pn	20 02 55.4	+1.4
	comp=E,1.7nm,0.6s						
TEOL	Teolo	11.67	309	Pn	Pn	20 03 04.1	-2.3
CTI	Castel Tesino	12.05	312	Pn	Pn	20 03 09.1	-2.5
AKASG	Malin Array Be	12.56	14	Pn	Pn	20 03 16.9	-1.6
	comp=E,0.2nm,0.2s,baz=197,slow=13,SNR=1.7						
GERES	GERESS Array B	12.85	326	Pn	Pn	20 03 24.6	+2.0
	comp=E,0.1nm,0.3s,baz=138,slow=14,SNR=13						
	comp=E,1.5nm,0.8s						
GERES	GERESS Array B	12.85	326	Pn	Pn	20 03 23.8	+1.2
SQTA	Sankt Quirin	12.97	316	*i* Pn	Pn	20 03 25.1	+0.8
	comp=E,6.6nm,0.7s						
DPC	Dobruska-Polom	13.10	336	*e*P	P	20 03 36.1	-0.1
MOTA	Moosalm	13.10	316	*i* Pn	Pn	20 03 26.8	+0.7
	comp=E,4.7nm,0.7s						
KHC	Kasperske Hory	13.12	327		Pn	20 03 27.1	+0.9
KHC	Kasperske Hory	13.12	327	*e*P	Pn	20 03 28.0	+1.8
KHC				*e*x	x	20 03 38.3	
FETA	Feichten	13.12	314	*e*Pn	Pn	20 03 27.1	+0.8
	comp=E,2.6nm,0.7s						
OSTC	Ostas	13.31	337	*e*P	Pn	20 03 28.7	-0.1
DAVA	Damuels	13.75	314	*i* Pn	Pn	20 03 35.6	+0.7
	comp=E,1.3nm,0.5s						
KBZ	Khabaz	14.79	64	Pn	P	20 03 52.1	-2.8
	comp=E,0.1nm,0.3s,baz=290,slow=14,SNR=2.7						
	comp=E,1.2nm,0.8s						
SENIN	Lac Senin/Sane	14.83	307	P	P	20 03 53.7	-2.0
CLL	Collm	15.05	331	*e*PP	P	20 04 02.0	+4.2
BELG	Belogornoye	21.18	42	P	P	20 05 07.8	+2.7
	comp=E,10nm,0.9s,baz=236,slow=6.3,SNR=4.7						
	comp=E,10nm,0.9s						
ESBB	Sonseca Array	22.04	282	P	P	20 05 11.8	-2.9
ESBB				IAmb	IAmb	20 05 18.4	
	comp=Z,8.4nm,0.9s						
ESDC	Sonseca Array	22.05	282	P	P	20 05 14.9	+0.2
	comp=Z,5.6nm,0.8s,baz=77,slow=9.7,SNR=37						
	comp=Z,5.6nm,0.8s						
ESDC	Sonseca Array	22.05	282	P	P	20 05 13.6	-1.1
PAB	San Pablo	22.36	282	P	P	20 05 17.9	-0.1
PAB				IAmb	IAmb	20 05 20.8	
	comp=Z,7.3nm,0.8s						
HFS	Hagfors	22.61	346	P	P	20 05 22.1	+1.7
	comp=Z,1.1nm,0.8s,baz=143,slow=18,SNR=5.1						
	comp=Z,1.1nm,0.8s						
FINES	FINESS Array B	22.89	2	P	P	20 05 23.7	+0.4
	comp=Z,2.5nm,0.8s,baz=161,slow=13,SNR=8.4						
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	22.89	2	P	P	20 05 23.0	-0.4
FIA1	FINESS Array S	22.89	2		P	20 05 21.7	-1.6
FIA1				IAmb	IAmb	20 05 57.9	
	comp=Z,19nm,1.6s						
NC602	NORSAR Array S	23.59	344	P	P	20 05 30.4	-0.1
NAO01	NORSAR Array S	23.84	343	P	P	20 05 32.6	-0.2
NC405	NORSAR Array S	23.90	345	P	P	20 05 32.4	-1.1
NB2	NORSAR Subarra	23.94	344	P	P	20 05 33.6	-0.3
	comp=Z,1.9nm,0.9s,baz=141,slow=9.3						
NOA	NORSAR Array B	23.94	344	P	P	20 05 34.1	+0.2
	comp=Z,3.8nm,1.0s,baz=153,slow=11,SNR=8.8						
	comp=Z,3.8nm,1.0s						
PBRG	Braganca	23.98	288	*e*P	P	20 05 31.5	-3.0
	comp=Z,14nm,1.9s						
KLMR	Klimovskoe	24.19	18	*e*P	P	20 05 37.0	+0.9
KLMR				AMP		20 05 40.9	
	comp=Z,11nm,1.0s						
MVO	Moncorvo	24.24	286	*e*P	P	20 05 36.0	-0.9
MTE	Manteigas	24.70	284	*e*P	P	20 05 42.6	+1.5
PCBR	Castelo Branco	24.71	283	*e*P	P	20 05 41.5	+0.4
EKA	Eskdalemuir Ar	24.96	321	P	P	20 05 43.9	+0.7
	comp=Z,4.8nm,0.9s,baz=116,slow=9.4,SNR=7.8						
	comp=Z,4.8nm,0.9s						
PBEJ	Beja	25.31	279	*e*P	P	20 05 47.6	+1.0
PVAQ	Vaqueiros	25.32	277	*e*P	P	20 05 45.9	-0.8
	comp=Z,27nm,1.8s						
PVAQ	Vaqueiros	25.32	277	P	P	20 05 46.2	-0.5
PMTG	Montargil	25.40	281	*e*P	P	20 05 48.5	+1.2
	comp=Z,22nm,1.8s						
PCAS	Casmilo, Conde	25.46	284	*e*P	P	20 05 47.7	-0.3
	comp=Z,28nm,1.8s						
PCVE	Castro Verde	25.52	278	*e*P	P	20 05 47.9	-0.6
MESJ	Messejana	25.62	279	*e*P	P	20 05 49.5	+0.1
	comp=Z,27nm,1.7s						
TOA0	Torodi Ar. Sit	32.41	225	P	P	20 06 49.4	-0.6
TOA0				IAmb	IAmb	20 06 51.5	
	comp=Z,3.1nm,0.8s						
TORD	Torodi Ar. Bea	32.41	225	P	P	20 06 50.1	+0.1
	comp=Z,2.8nm,0.8s,baz=37,slow=9.7,SNR=19						
TORD				PcP	PcP	20 09 37.4	0.0
	comp=Z,0.3nm,0.7s,baz=324,slow=3.4,SNR=2.3						
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	32.41	225	P	P	20 06 49.7	-0.3
TORD				IAmb	IAmb	20 07 32.9	
	comp=Z,8.2nm,1.6s						
KOWA	Kowa	34.75	234	P	P	20 07 10.6	+0.2
KOWA				IAmb	IAmb	20 07 12.9	
	comp=Z,3.9nm,0.8s						
KK31	Karatay Array	34.78	68	P	P	20 07 09.4	-1.0
KKAR	Karatay Array	34.78	68	P	P	20 07 09.4	-1.0
GAR	Garm	35.44	75	P	P	20 07 15.7	-0.6
GAR				IAmb	IAmb	20 07 22.8	
	comp=Z,6.3nm,1.0s						
DBIC	Dimbokro	41.39	227	P	P	20 08 06.5	+0.1
	comp=Z,4.6nm,0.7s,baz=50,slow=8.2,SNR=4.7						
	comp=Z,4.6nm,0.7s						
MK31	Makanchi Array	42.43	60	P	P	20 08 14.0	-0.6
MKAR	Makanchi Array	42.43	60	P	P	20 08 15.5	+0.9
	comp=Z,0.9nm,0.6s,baz=285,slow=6.5,SNR=9.9						
	comp=Z,0.9nm,0.6s						
MKAR	Makanchi Array	42.43	60	P	P	20 08 13.8	-0.8
ZALV	Zalesovo Beam	43.09	49	P	P	20 08 22.8	+2.9
	comp=Z,1.1nm,0.5s,baz=281,slow=8.5,SNR=6.5						
WMQ	Urumqi	46.83	62	*e*P	P	20 08 51.0	+1.2
SCHQ	Schefferville	60.23	318	P	P	20 10 28.6	+0.7
	comp=Z,2.2nm,0.7s,baz=72,slow=3.8,SNR=4.4						
	comp=Z,2.2nm,0.7s						
SCHQ	Schefferville	60.23	318	IAmb	IAmb	20 10 30.5	
	comp=Z,2.9nm,0.8s						
HHC	Hu-ho-hao-te	64.22	57	*e*P	P	20 10 55.1	+0.1
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,6.7s						
HHC				LR	LR		
	comp=N,1μm,21.3s						
HHC				LR	LR		
	comp=Z,2μm,18.4s						
PZH	PanZhiHua	64.50	76	P	P	20 10 58.0	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BOSA	Boshof	66.87	179	P	P	20 11 12.9	+0.9
	comp=Z,2.6nm,0.8s,baz=3.9,slow=4.3,SNR=5.3						
	comp=Z,2.6nm,0.8s						
YKA	Yellowknife Ar	74.01	342	P	P	20 11 55.2	0.0
	comp=Z,0.3nm,0.5s,baz=24,slow=6.1,SNR=3.5						
	comp=Z,0.3nm,0.5s						

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*IDC **20** 20:12:51.7±2.9, 43.°46N×105.°34W, h0^{km}, mbtmp3.3/3, ML2.8/2, Error ellipse: s-maj=69.5km s-min=10.1km az=154.0*

*NEIC **20** 20:12:52.5±1.7, 43.°68N±0.°05×105.°31W±0.°04, h0^{km}±2^{km}, ML3.2/60, Error ellipse: s-maj=9.4km s-min=3.1km az=154.0*

ISC 20 20:12:51.9±1.0**, 43.°65N**±0.°05×**105.°33W**±0.°06**, h0^{km}, n38, σ1.^{s}10**/38**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.05	63		Pg	20 13 12.1	+0.2
K22A	Casper	1.33	222		Pn	20 13 18.7	+0.8
K22A				IAML		20 13 41.1	
	comp=E,278nm,0.9s						
K22A				IAML		20 13 41.4	
	comp=N,249nm,0.7s						
PHWY	Pilot Hill	2.35	182		Pb	20 13 34.9	-0.4
RWWY	Rawlins	2.40	216	Pn	Pn	20 13 31.4	-1.3
N23A	Red Feather La	2.79	190		Pn	20 13 40.0	+2.0
N23A				IAML		20 14 23.9	
	comp=N,108nm,0.7s						
N23A				IAML		20 14 32.1	
	comp=E,74nm,0.8s						
LAO	LASA Array	3.10	349		Pn	20 13 42.4	+0.2
RLMT	Red Lodge	3.18	299		Pn	20 13 43.7	+0.3
RLMT				IAML		20 14 36.9	
	comp=E,41nm,1.5s						
RLMT				IAML		20 14 40.1	
	comp=E,50nm,1.6s						
BW06	Boulder Array	3.21	256		Pn	20 13 45.9	+2.0
PD31	Pinedale Array	3.21	256		Pn	20 13 46.0	+2.1
PDAR	Pinedale Array	3.21	256	Pn	Pn	20 13 46.3	+2.5
	comp=E,4.1nm,0.4s,baz=68,slow=17,SNR=27						
PDAR				Lg	Lg	20 14 30.3	
	comp=E,5.8nm,0.3s,baz=70,slow=32,SNR=6.2						
YMP	Mirror Lake Pl	3.64	289	Pn	Pn	20 13 48.7	-1.1
YMP				IAML		20 15 45.6	
	comp=N,59nm,0.6s						
OGNE	Ogallala	3.64	137		Pn	20 13 50.7	+1.1
GCMT	Greycliff	3.76	306		Pn	20 13 51.2	-0.1
LKWY	Lake	3.77	286		Pn	20 13 51.5	+0.1
LKWY				IAML		20 15 31.0	
	comp=N,31nm,1.5s						
LKWY				IAML		20 15 53.4	
	comp=N,46nm,1.6s						
LOHW	Long Hollow	3.83	271		Pn	20 13 52.5	+0.2
ISCO	Idaho Springs	3.85	183		Pn	20 13 53.3	+0.6
FLWY	Flagg Ranch	3.91	278		Pn	20 13 53.8	+0.4
FLWY				IAML		20 15 10.2	
	comp=N,46nm,1.7s						
MOOW	Moose Ponds	3.93	273		Pn	20 13 54.3	+0.6
SNOW	Snow King Moun	3.95	269		Pn	20 13 54.1	+0.1
SNOW				IAML		20 15 10.3	
	comp=N,46nm,1.5s						
SNOW				IAML		20 15 17.0	
	comp=N,36nm,1.1s						
YNR	Norris Junctio	3.99	287		Pn	20 13 54.7	+0.1
YNR				IAML		20 15 04.0	
	comp=E,20nm,0.7s						
YPP	Pitchstone Pla	4.00	281		Pn	20 13 53.9	-0.8
REDW	Red Top Meadow	4.03	268		Pn	20 13 55.7	+0.6
REDW				IAML		20 15 30.8	
	comp=E,44nm,1.6s						
REDW				IAML		20 15 39.5	
	comp=E,36nm,1.4s						
YFT	Old Faithful	4.05	283		Pn	20 13 57.4	+2.0
YFT				IAML		20 15 03.8	
	comp=E,18nm,1.9s						
YFT				IAML		20 16 23.3	
	comp=N,20nm,0.1s						
TPAW	Teton Pass	4.09	270		Pn	20 13 58.0	+2.1
TPAW				IAML		20 15 13.0	
	comp=N,26nm,0.7s						
TPAW				IAML		20 15 22.5	
	comp=N,22nm,1.7s						
O20A	White River Ci	4.13	213		Pn	20 13 55.0	-1.4
O20A				IAML		20 15 32.8	
	comp=E,38nm,1.8s						
AHID	Auburn Hatcher	4.31	260		Pn	20 13 58.6	-0.3
AHID				IAML		20 15 29.9	
	comp=E,25nm,1.6s						
YHL	Hebgen Lake	4.37	288		Pn	20 14 00.6	+0.8
YHL				IAML		20 15 21.8	
	comp=N,26nm,2.0s						
YHL				IAML		20 15 31.5	
	comp=E,25nm,1.7s						
E28A	Huff	4.40	47		Pn	20 14 00.8	+0.9
SMCO	Snowmass	4.63	196		Pn	20 14 03.3	-0.2
SMCO				IAML		20 15 30.6	
	comp=E,14nm,1.2s						
SMCO				IAML		20 15 32.4	
	comp=E,17nm,1.3s						
Q24A	Divide	4.68	178		Pn	20 14 02.8	-1.3
Q24A				IAML		20 15 24.6	
	comp=E,21nm,0.7s						
Q24A				IAML		20 15 30.3	
	comp=N,14nm,0.6s						
DGMT	Dagmar	4.89	9		Pn	20 14 06.1	-0.5
BOZ	Bozeman (W)	4.90	296		Pn	20 14 07.5	+0.5
BOZ				IAML		20 15 27.4	
	comp=N,16nm,1.5s						
BOZ				IAML		20 15 28.8	
	comp=N,12nm,1.4s						
HWUT	Hardware Ranch	5.03	248		Pn	20 14 08.7	-0.1
HWUT				IAML		20 15 50.8	
	comp=N,18nm,1.1s						
EGMT	Eagleton	5.36	326		Pn	20 14 12.7	-0.5
HRY	Holter Researc	5.52	306		Pn	20 14 16.8	+1.4
MCMT	McKenzie Canyo	5.53	285		Pn	20 14 16.1	+0.4
ULM	Lac du Bonnet	9.24	41	Pn	Pn	20 15 05.7	-0.6
	comp=N,0.9nm,0.3s,baz=231,slow=12,SNR=8.5						
ULM				Pg		20 15 39.5	
	comp=N,0.4nm,0.3s,baz=224,slow=16,SNR=5.2						
ULM				Lg	Lg	20 17 34.0	
	comp=N,0.4nm,0.3s,baz=138,slow=20,SNR=1.7						
	comp=N,2.6nm,0.2s						
YKA	Yellowknife Ar	19.64	347	P	Pn	20 17 23.3	+0.1
	baz=155,slow=12,SNR=4.3						
	comp=N,0.2nm,0.6s						

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*IDC **20** 20:16:49.2±1.0, 38.°08N×21.°57E, h0^{km}, mb3.8/9, mbtmp3.7/13, ML3.5/4, Error ellipse: s-maj=19.5km s-min=17.3km az=32.0*

*NEIC **20** 20:16:50.9±2.3, 38.°01N±0.°04×21.°62E±0.°02, h10^{km}±1^{km}, mb4.0/17, ML3.8(THE), Error ellipse: s-maj=7.1km s-min=3.0km az=162.0*

*ATH **20** 20:16:51.6, 38.°00N×21.°57E, h25^{km}±2^{km}, ML3.7/22, Error ellipse: s-maj=2.3km s-min=0.6km az=339.0*

*THE **20** 20:16:52.0, 37.°97N×21.°57E, h12^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=1.1km s-min=0.7km az=351.0*

ISC 20 20:16:51.8±0.8**, 38.°00N**±0.°02×**21.°57E**±0.°02**, h18^{km}**±3^{km}**, n236, σ1.^{s}34**/282**, mb3.9**/15**, 9C-7D, Southern Greece**

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

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RLS   Riolos of Patr   0.10 307  P     Pg    20 16 55.8 +0.3
RLS                              S     Sg    20 16 59.2 +1.2
RLS                              AML   AML   20 16 59.7
RLS                              AML   AML   20 17 00.0
RLS   Riolos of Patr   0.10 307  P     Pg    20 16 55.8 +0.3
RLS                              S     Sg    20 16 58.9 +0.9
      108µm,0.3s
UPR   University Cam   0.33  31  P     Pb    20 16 59.2  0.0
UPR                              S     Sb    20 17 05.7 +1.4
LAKA  Lakka            0.41  53  P     Pg    20 16 59.9 -0.2
LAKA                             S     Sb    20 17 06.2 -0.2
LAKA                             AML   AML   20 17 07.3
LAKA                             AML   AML   20 17 08.5
LAKA  Lakka            0.41  53  P     Pg    20 17 00.0 -0.2
LAKA                             S     Sb    20 17 06.4  0.0
KLV   Kalavryta, Ach   0.46  84  P     Pg    20 17 00.6 -0.6
KLV                              S     Sb    20 17 07.7 -0.3
KLV                              AML   AML   20 17 09.7
      comp=N,15886µm,0.4s
KLV                              AML   AML   20 17 12.5
      comp=E,11793µm,0.5s
KLV   Kalavryta, Ach   0.46  84  P     Pg    20 17 00.6 -0.6
KLV                              S     Sb    20 17 08.4 +0.4
      comp=E,7µm,0.4s
ALIK  Aliki, Aigiali   0.50  58  P     Pb    20 17 01.8 -0.2
ALIK                             S     Sb    20 17 10.0 +1.0
EFP   Efpalio          0.51  32  P     Pg    20 17 01.4 -0.5
EFP                              S     Sb    20 17 09.2 +0.1
EFP                              AML   AML   20 17 10.7
      comp=N,25520µm,0.6s
EFP                              AML   AML   20 17 11.8
      comp=E,27308µm,0.4s
EFP   Efpalio          0.51  32  P     Pg    20 17 01.5 -0.5
EFP                              S     Sb    20 17 10.0 +0.9
      comp=E,14µm,0.5s
ZAK2  Zakynthos        0.57 249  P     Pb    20 17 03.2 +0.1
ZAK2                             S     Sb    20 17 12.4 +1.6
      comp=E,26µm,0.8s
PVO   Paravola         0.62 357  P     Pg    20 17 03.6 -0.5
PVO                              S     Sb    20 17 12.7 +0.4
ANX   Ano Chora        0.66  25  P     Pg    20 17 03.9 -0.8
ANX                              S     Sb    20 17 13.4 -0.1
ANX                              AML   AML   20 17 19.5
      comp=N,18962µm,0.6s
ANX                              AML   AML   20 17 19.9
      comp=E,12356µm,0.9s
ANX   Ano Chora        0.66  25  P     Pg    20 17 04.0 -0.8
ANX                              S     Sb    20 17 13.5 -0.1
      comp=E,8µm,0.5s
PSDA  Pessada-Kefalo   0.79 279  P     Pg    20 17 05.9 -1.3
PSDA  Pessada-Kefalo   0.79 279  P     Pg    20 17 05.8 -1.3
VLS   Valsamata        0.79 283  P     Pg    20 17 05.8 -1.5
VLS                              S     Sb    20 17 18.1 +0.7
VLS                              AML   AML   20 17 26.0
      comp=E,5076µm,0.4s
VLS                              AML   AML   20 17 26.9
      comp=N,9277µm,0.4s
VLS   Valsamata        0.79 283  P     Pg    20 17 05.8 -1.5
ITM   Ithomi           0.86 161  P     Pg    20 17 07.7 -1.0
ITM                              S     Sg    20 17 19.3 -0.7
ITM                              AML   AML   20 17 23.6
      comp=E,9353µm,0.5s
ITM                              AML   AML   20 17 24.4
      comp=N,11650µm,0.6s
ITM   Ithomi           0.86 161  P     Pg    20 17 08.0 -0.6
ITM                              S     Sb    20 17 21.1 +1.7
ITM   Ithomi           0.86 161  P     Pg    20 17 07.2 -1.4
ITM                              S     Sb    20 17 20.6 +1.2
      comp=N,5µm,0.6s
ITM   Ithomi           0.86 161  Pg    Pg    20 17 07.0 -1.6
THAL  Thalero          0.86  87  P     Pg    20 17 07.6 -1.0
THAL                             S     Sg    20 17 19.1 -1.0
THAL                             AML   AML   20 17 24.3
      comp=E,33315µm,0.4s
THAL                             AML   AML   20 17 29.7
      comp=N,24480µm,0.6s
THAL  Thalero          0.86  87  P     Pg    20 17 07.6 -1.0
DLFA  Delphi           0.87  56  P     Pg    20 17 07.7 -1.2
DLFA                             S     Sg    20 17 19.0 -1.4
DLFA                             AML   AML   20 17 21.4
      comp=E,9491µm,0.7s
DLFA                             AML   AML   20 17 23.3
      comp=N,12511µm,0.8s
ARGA  Argostoli. Kep   0.88 282  P     Pg    20 17 08.4 -0.5
FSK   Fiskardo         0.92 301  P     Pg    20 17 09.0 -0.6
FSK                              S     Sg    20 17 20.9 -0.9
FSK                              AML   AML   20 17 25.4
      comp=N,8632µm,0.3s
FSK                              AML   AML   20 17 25.7
      comp=E,10089µm,0.2s
FSK   Fiskardo         0.92 301  P     Pg    20 17 09.1 -0.6
FSK                              S     Sn    20 17 24.2 +1.7
      comp=E,5µm,0.3s
EVR   Evrytania        0.94  12  P     Pg    20 17 08.8 -1.3
EVR                              S     Sg    20 17 21.7 -0.8
EVR                              AML   AML   20 17 34.0
      comp=E,6702µm,1.2s
EVR                              AML   AML   20 17 35.0
      comp=N,5909µm,0.6s
EVR   Evrytania        0.94  12  P     Pg    20 17 08.9 -1.2
KEF4  Livadi, Kephal   0.94 286  P     Pg    20 17 08.8 -1.3
KEF4  Livadi, Kephal   0.94 286  P     Pg    20 17 08.4 -1.7
KEF4                             S     Sn    20 17 24.5 +1.5
DMLN  Damoulianata-K   0.97 285  P     Pb    20 17 09.4 -0.7
DMLN  Damoulianata-K   0.97 285  P     Pb    20 17 09.1 -1.0
KEF3  Kipouria, Keph   0.98 282  P     Pb    20 17 09.2 -1.0
KEF3  Kipouria, Keph   0.98 282  P     Pb    20 17 09.0 -1.3
KEF3                             S     Sn    20 17 25.0 +0.9
      comp=N,13µm,0.6s
LKD2  Lefkada island   1.07 318  P     Pb    20 17 11.0 -0.7
LKD2                             S     Sb    20 17 25.3 -0.1
LKD2                             AML   AML   20 17 34.7
      comp=E,6725µm,0.5s
LKD2                             AML   AML   20 17 37.6
      comp=N,6874µm,0.8s
LKD2  Lefkada island   1.07 318  P     Pb    20 17 10.9 -0.8
TSLK  Tsoukalades, L   1.09 319  P     Pb    20 17 10.9 -1.2
LTK   Loutraki         1.10  88  P     Pb    20 17 11.8 -0.5
LTK                              S     Sb    20 17 26.3 -0.1
LTK                              AML   AML   20 17 39.2
      comp=N,11389µm,0.5s
LTK                              AML   AML   20 17 39.9
      comp=E,20961µm,1.1s
MAKR  Makrakomi, Fth   1.11  23  P     Pb    20 17 12.2 -0.3
MAKR                             S     Sb    20 17 26.1 -0.4
MAKR                             AML   AML   20 17 34.6
      comp=N,6433µm,1.0s
MAKR                             AML   AML   20 17 35.6
      comp=E,4778µm,1.1s
PYL   PYLOS            1.11 173  P     Pb    20 17 11.7 -0.7
PYL                              S     Sb    20 17 26.8 +0.4
PYL                              AML   AML   20 17 38.5
      comp=E,5574µm,0.8s
PYL                              AML   AML   20 17 40.4
      comp=N,5176µm,0.6s
PYL   PYLOS            1.11 173  P     Pb    20 17 11.6 -0.7
AGG   Agios Georgios   1.19  30  P     Pb    20 17 13.2 -0.5
AGG                              S     Sb    20 17 28.6 -0.1
AGG                              AML   AML   20 17 38.4
      comp=E,4401µm,0.6s
AGG                              AML   AML   20 17 40.4
      comp=N,4767µm,0.8s
AGG   Agios Georgios   1.19  30  P     Pb    20 17 13.3 -0.5
AGG                              S     Sn    20 17 31.1 +1.9
AGG   Agios Georgios   1.19  30  P     Pb    20 17 13.1 -0.6
AGG                              S     Sn    20 17 30.9 +1.7
      comp=N,2µm,0.7s
AGG   Agios Georgios   1.19  30        Pb    20 17 13.5 -0.2
EPID  Epidavros        1.29 107  P     Pn    20 17 15.1 +0.3
EPID  Epidavros        1.29 107  P     Pn    20 17 15.4 +0.6
LKR   Lokris           1.30  59  P     Pn    20 17 14.4 -0.6
LKR   Lokris           1.30  59  P     Pn    20 17 14.2 -0.8
LKR                              S     Sg    20 17 34.2 +0.3
      comp=N,2µm,0.6s
ATAL  Atalanti         1.34  58  P     Pn    20 17 15.5  0.0
ATAL                             S     Sb    20 17 32.9 -0.2
ATAL                             AML   AML   20 17 38.7
      comp=E,3670µm,1.3s
ATAL                             AML   AML   20 17 40.0
      comp=N,3748µm,0.7s
ATAL  Atalanti         1.34  58  P     Pn    20 17 15.5  0.0
ATAL                             S     Sn    20 17 33.8 +1.0
      comp=N,2µm,0.8s
VIL2  Platees          1.36  80  P     Pn    20 17 16.2 +0.4
VIL2                             S     Sn    20 17 34.6 +1.2
VIL2                             AML   AML   20 17 42.1
      comp=N,5345µm,0.8s
VIL2                             AML   AML   20 17 45.0
      comp=E,7247µm,0.7s
VILL  Villia           1.39  83  P     Pn    20 17 16.1 -0.1
KRND  KRANIDI          1.40 116  P     Pn    20 17 17.0 +0.7
KRND                             S     Sn    20 17 34.6 +0.3
KRND                             AML   AML   20 17 41.7
      comp=E,8545µm,1.0s
KRND                             AML   AML   20 17 43.6
      comp=N,8258µm,0.6s
KRND  KRANIDI          1.40 116  P     Pn    20 17 17.1 +0.8
KRND                             S     Sg    20 17 36.3 -0.6
      comp=N,4µm,0.8s
THL   Klokotos Trika   1.60  12  P     Pb    20 17 20.7 -0.1
THL   Klokotos Trika   1.60  12  P     Pb    20 17 20.8 -0.1
VLI   Veliai           1.68 139  P     Pb    20 17 22.6 +0.5
ATH   Athens Observa   1.70  90  P     Pn    20 17 21.3 +0.9
ATH                              S     Sb    20 17 43.7 +0.3
ATH                              AML   AML   20 17 50.3
      comp=N,3843µm,0.8s
ATH                              AML   AML   20 17 52.6
      comp=E,3418µm,0.6s
ATH   Athens Observa   1.70  90  P     Pn    20 17 21.0 +0.6
JAN   Janina           1.75 342  P     Pb    20 17 23.0 -0.4
ATHU  Athens Univers   1.75  90  P     Pn    20 17 21.5 +0.3
ATHU                             S     Sn    20 17 44.2 +1.2
ATHU                             AML   AML   20 17 49.7
      comp=N,882µm,0.4s
ATHU                             AML   AML   20 17 51.3
      comp=E,645µm,0.5s
ATHU  Athens Univers   1.75  90  P     Pn    20 17 21.5 +0.3
VLY   Voula,Athens     1.77  94  P     Pn    20 17 21.6 +0.2
VLY   Voula,Athens     1.77  94  P     Pn    20 17 21.6 +0.2
IGT   Igoumenitsa      1.81 328  P     Pn    20 17 23.3 +1.3
PTL   Penteli          1.81  88  P     Pn    20 17 22.6 +0.5
PTL   Penteli          1.81  88  P     Pn    20 17 22.2 +0.1
NEO   Neokhori         1.84  44  P     Pn    20 17 23.1 +0.6
NEO   Neokhori         1.84  44  P     Pn    20 17 23.1 +0.6
XOR   Xorichti         1.87  42  P     Pn    20 17 23.4 +0.6
XOR   Xorichti         1.87  42  P     Pn    20 17 23.3 +0.5
DION  Dionisos Attik   1.87  87  P     Pn    20 17 23.4 +0.6
DION                             S     Sb    20 17 48.6 +0.2
DION                             AML   AML   20 17 54.9
      comp=N,3923µm,0.5s
DION                             AML   AML   20 17 58.2
      comp=E,3722µm,0.5s
DION  Dionisos Attik   1.87  87  P     Pn    20 17 23.1 +0.3
KPRO  Kipourio         1.96 355  P     Pb    20 17 27.9 +0.9
KYMI  Kymi, Euboea I   2.09  72  P     Pn    20 17 25.7 -0.2
KEK   Kerkira          2.20 322  P     Pn    20 17 28.7 +1.3
KEK   Kerkira          2.20 322        Pn    20 17 28.8 +1.3
LIT   Litokhoron       2.22  19  P     Pb    20 17 29.9 -1.5
LIT   Litokhoron       2.22  19  P     Pn    20 17 29.3 +1.6
LIT   Litokhoron       2.22  19  Pn    Pn    20 17 29.6 +1.9
PENT  Pentalofos       2.22 351  P     Pb    20 17 31.7 +0.3
SRN   Sarande          2.24 327  P     Pn    20 17 29.9 +1.9
KARY  Karystos         2.27  88  P     Pn    20 17 28.8 +0.5
KZN   Kozani           2.31   4  P     Pb    20 17 31.6 -1.4
NEST  Nestorio         2.45 351  P     Pb    20 17 34.1 -1.2
PAIG  Paliouri         2.54  40  P     Pn    20 17 32.7 +0.7
KBN   Korca            2.69 347        Pn    20 17 35.7 +1.4
FNA   Florina          2.79 357  P     Pn    20 17 36.7 +1.2
FNA   Florina          2.79 357  P     Pn    20 17 37.5 +2.0
FNA   Florina          2.79 357        Pn    20 17 37.6 +2.0
HORT  Hortiatis        2.86  24  eP    Pn    20 17 37.7 +1.2
VLO   Vlora            2.95 328        Pn    20 17 38.7 +1.1
OUR   Ouranopolis      3.00  38  eP    Pn    20 17 39.5 +1.2
RODP  Rodopos          3.00 143  eP    Pn    20 17 39.9 +1.5
GRG   Griva            3.03  12  eP    Pn    20 17 39.8 +1.0
GRG   Griva            3.03  12  P     Pn    20 17 40.7 +1.9
SOH   Sokhos           3.14  26  P     Pn    20 17 42.3 +1.9
OHR   Ohrid            3.17 349  i Pn  Pn    20 17 44.1 +3.4
OHR                              eSg   Sg    20 18 36.6 +3.0
SCTE  Santa Cesarea    3.18 312  Pn    Pn    20 17 41.0 +0.1
IMMV  Iera Moni Meta   3.19 142  eP    Pn    20 17 42.8 +1.8
KNDR  Palaiochora Ch   3.24 148  eP    Pn    20 17 43.3 +1.6
APE   Apeiranthos      3.28 105  eP    Pn    20 17 43.5 +1.2
APE   Apeiranthos      3.28 105  P     Pn    20 17 42.6 +0.3
KNT   Kendrikon        3.32  18  eP    Pn    20 17 44.6 +1.8
KNT   Kendrikon        3.32  18  P     Pn    20 17 44.9 +2.0
KOKK  Kokkinochori,    3.39  33  P     Pn    20 17 44.3 +0.6
LIA   Limnos Island    3.40  55  P     Pn    20 17 44.0 +0.2
VAY   Valandovo        3.41  13  i Pn  Pn    20 17 47.7 +3.7
VAY                              eSg   Sn    20 18 27.9 +4.0
SRS   Serrai           3.49  26  P     Pn    20 17 46.5 +1.4
SANT  Santorini        3.50 116  ⇓P    Pn    20 17 48.2 +2.9
SANT  Santorini        3.50 116  eP    Pn    20 17 47.1 +1.7
SANT  Santorini        3.50 116  Pn    Pn    20 17 45.4  0.0
CHOS  Chios island     3.56  82  P     Pn    20 17 46.7 +0.6
SIGR  SIGRI            3.57  69  P     Pn    20 17 46.2  0.0
TIR   Tirane           3.60 339        Pn    20 17 47.3 +0.7
GVD   Gavdhos          3.75 146  eP    Pn    20 17 50.8 +2.1
IDI   Anoyia           3.80 134  ⇓P    Pn    20 17 51.0 +1.5
IDI   Anoyia           3.80 134  Pn    Pn    20 17 50.5 +1.0
      comp=E,1.9nm,0.3s,baz=320,slow=16,SNR=18
IDI                              Sn    Sn    20 18 35.3 +1.6
      comp=E,6.6nm,0.3s,baz=111,slow=22,SNR=5.8
      comp=E,10nm,0.6s
IDI   Anoyia           3.80 134  eP    Pn    20 17 51.4 +2.0
IDI   Anoyia           3.80 134  Pn    Pn    20 17 48.9 -0.5
HRKL  Herakleio        3.91 132  eP    Pn    20 17 53.1 +2.3
SMTH  Samothraki Isl   3.95  50  P     Pn    20 17 51.4  0.0
TIP   Timpagrande      3.95 289  Pn    Pn    20 17 51.3 -0.2
MMB   Musomiste        3.96  24  P     Pn    20 17 53.3 +1.8
KKB   Krupnik          4.04  16  P     Pn    20 17 54.8 +2.1
SMG   Samos            4.18  92  P     Pn    20 17 55.4 +0.8
RDO   Rodhopi          4.39  43  Pn    Pn    20 17 57.0 -0.5
RZN   Rozhen           4.41  32  P     Pn    20 18 00.7 +2.8
CEL   Celeste          4.48 275  Pn    Pn    20 17 57.0 -1.8
ALN   Alexandroupoli   4.52  49  P     Pn    20 18 02.3 +3.1
ALN   Alexandroupoli   4.52  49  Pn    Pn    20 17 59.3 +0.1
DRME  Dracevica, Mon   4.57 337  ePn   Pn    20 17 59.6 -0.3
PDG   Podgorica        4.77 339  ⇑P    Pn    20 18 00.9 -1.7
PDG   Podgorica        4.77 339  Pn    Pn    20 18 02.1 -0.5
PDG   Podgorica        4.77 339  ePn   Pn    20 18 02.2 -0.5
VTS   Vitosha          4.79  15  ⇑P    Pn    20 18 05.8 +2.7
VTS   Vitosha          4.79  15  Pn    Pn    20 18 02.1 -1.0
VTS   Vitosha          4.79  15  P     Pn    20 18 05.8 +2.7
CUC   Castrocucco      4.91 296        Pn    20 18 04.6  0.0
HCY   Herceg Novi      5.03 333  ePn   Pn    20 18 06.1 -0.2
KARP  Karpathos        5.11 117  Pn    Pn    20 18 09.0 +1.6
TREB  Trebinje         5.32 333  ePn   Pn    20 18 09.6 -0.6
SJES  Sjenica          5.40 348  ePn   Pn    20 18 12.2 +0.8
ARG   Arkhangelos      5.53 107        Pn    20 18 12.4 -0.8
MPEP  Malo Peshtene    5.60  16  P     Pn    20 18 17.1 +3.0
BOVS  Bovan            5.63   1  ⇓P    Pn    20 18 16.4 +1.8
BLKB  Belogradchik     5.68   8  ⇓P    Pn    20 18 17.5 +2.3
STON  Ston             5.69 330  ePn   Pn    20 18 14.4 -1.0
VAE   Valguarnera      5.70 267  Pn    Pb    20 18 23.9 -6.8
      comp=E,1.3nm,0.3s,baz=84,slow=9.2,SNR=2.2
VAE                              Sn    Sn    20 19 22.6 +2.2
      comp=E,0.8nm,0.3s,baz=150,slow=22,SNR=2.1
SGRT  San Giovanni R   5.84 312  Pn    Pn    20 18 17.7 +0.2
RUDO  Rudo             5.86 344  ePn   Pn    20 18 16.9 -0.8
BBLS  Lazi&#263;i      6.09 345  ePn   Pn    20 18 20.2 -0.7
PAOL  Paolisi          6.20 301        Pn    20 18 23.3 +0.8
DIVS  Divibare         6.21 349        Pn    20 18 22.1 -0.5
DIVS  Divibare         6.21 349  ePn   Pn    20 18 22.2 -0.4
AKAS  Kas              6.66 103  Pn    Pn    20 18 27.6 -1.2
MDVR  Moldovita        6.78   1  ⇑P    Pn    20 18 31.5 +1.2
HERR  Herculane        6.91   5  ⇑P    Pn    20 18 33.1 +1.1
SRKY  Kupres RS        6.92 333  ePn   Pn    20 18 30.8 -1.5
MGRS  Mrkonjic Grad    7.25 334  ePn   Pn    20 18 34.6 -2.2
FRGS  Fruska Gora      7.28 350  ⇓P    Pn    20 18 36.4 -0.7
FRGS  Fruska Gora      7.28 350  ePn   Pn    20 18 36.8 -0.3
GZR   Gura Zlata       7.45   7  ⇓P    Pn    20 18 40.7 +1.2
BZS   Buzias           7.62   0  ⇓P    Pn    20 18 42.6 +0.8
MDUB  Mudurnu          7.87  69        Pn    20 18 45.8 +0.4
VOIR                   7.88  18  ⇑P    Pn    20 18 48.5 +3.1
NRCA  Norcia           8.06 309        Pn    20 18 49.0 +1.1
MLR   Muntele Rosu     8.17  22  ⇑P    Pn    20 18 53.8 +4.4
MLR   Muntele Rosu     8.17  22  Pn    Pn    20 18 54.3 +4.8
      comp=E,0.6nm,0.3s,baz=202,slow=9.5,SNR=4.2
MLR   Muntele Rosu     8.17  22  Pn    Pn    20 18 50.7 +1.2
TIRR  Tirgusor         8.26  36  Pn    Pn    20 18 51.5 +0.9
MORH  Mrgy, Hungar     8.49 346  ⇑P    Pn    20 18 52.0 -1.8
MORH  Mrgy, Hungar     8.49 346  ePn   Pn    20 18 51.7 -2.1
PLOR  Plostina         8.71  24  ⇑P    Pn    20 19 00.6 +3.8
VRI   Vrincioaia       8.75  24  ⇑P    Pn    20 19 00.9 +3.5
CRES  Cresnjev         9.05 332  ePn   Pn    20 18 59.2 -2.2
CEY   Cerknica         9.39 328  ePn   Pn    20 19 04.6 -1.5
SKDS  Skadanscina      9.42 326  ePn   Pn    20 19 05.5 -1.0
BR131 Keskin Array S   9.57  76  Pn    Pn    20 19 09.8 +1.1
BRTR  Keskin Array B   9.57  76  Pn    Pn    20 19 11.4 +2.6
      comp=E,0.1nm,0.3s,baz=312,slow=39,SNR=1.9
      comp=E,1.1nm,0.5s
LJU   Ljubljana        9.59 329  ePn   Pn    20 19 08.2 -0.7
SOKA  Soboth           9.93 333  i Pn  Pn    20 19 13.2 -0.3
      comp=E,1.2nm,0.4s
SOKA                             i Sn  Sn    20 21 00.4 -4.1
      comp=E,1.1nm,0.5s
CSS   Mathiatis        9.94 104  Pn    Pn    20 19 13.2 -0.6
OBKA  Obir             9.97 331  i Pn  Pn    20 19 14.6 +0.5
      comp=E,0.7nm,0.2s
OBKA                             i Sn  Sn    20 21 06.8 +1.4
      comp=E,3.7nm,0.4s
PSZ   Piszkesteto      9.99 353  Pn    Pn    20 19 14.8 +0.4
KBA   Koelnbreinsper  10.91 329  i Pn  Pn    20 19 27.1  0.0
      comp=E,1.2nm,0.5s
KBA                              eSn   Sn    20 21 24.4 -4.3
      comp=E,1.1nm,0.5s
ABTA  Abfaltersbach   11.01 325  eSn   Sn    20 21 30.4 -0.5
      comp=E,2.6nm,0.7s
MOA   Molln           11.20 334  i Pn  Pn    20 19 31.9 +0.9
      comp=E,1.0nm,0.3s
FETA  Feichten        12.04 322  i Pn  Pn    20 19 44.2 +1.6
      comp=E,0.6nm,0.4s
FETA                             eSn   Sn    20 21 57.8 +1.4
      comp=E,0.4nm,0.3s
MOTA  Moosalm         12.10 324  i Pn  Pn    20 19 45.5 +2.2
      comp=E,1.3nm,0.5s
MOTA                             eSn   Sn    20 21 57.9 +0.2
      comp=E,3.0nm,0.7s
GERES GERESS Array B  12.25 335  Pn    Pn    20 19 44.6 -0.8
      comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=2.1
      comp=E,0.2nm,0.3s
SENIN Lac Senin/Sane  13.47 313  Pn    Pn    20 20 01.9 -0.2
SUW   Suwalki         16.06   3  eP    P     20 20 38.7 -1.0
PABE  Paberze         17.59   5  P     Pn    20 20 52.6 -3.2
PABE                             IAmb  IAmb  20 20 55.4
      comp=Z,20nm,1.0s
PABE  Paberze         17.59   5  eP    Pn    20 20 54.8 -0.9
IIGN  Ignalina        17.64   9  IAmb  IAmb  20 21 11.5
      comp=Z,4.7nm,1.0s
ISAL  Salakas         17.85   8  IAmb  IAmb  20 20 59.4
      comp=Z,4.4nm,0.6s
ESBB  Sonseca Array   19.94 283  P     P     20 21 22.0 -0.7
ESBB                             IAmb  IAmb  20 21 25.2
      comp=Z,7.0nm,1.1s
ESDC  Sonseca Array   19.94 283  P     P     20 21 23.7 +0.9
      comp=Z,0.1nm,0.3s,baz=77,slow=10,SNR=22
      comp=Z,3.4nm,0.9s
ESDC  Sonseca Array   19.94 283  P     P     20 21 23.0 +0.3
VSU   Vasula          20.75   8  eP    P     20 21 29.9 -1.3
MTSE  Matsula         20.79   3  eP    P     20 21 31.4 -0.1
UPP   Uppsala         22.03 355  eP    P     20 21 44.2 -0.7
HFS   Hagfors         22.72 350  P     P     20 21 51.9 -0.4
      comp=Z,1.3nm,0.6s,baz=137,slow=26,SNR=4.1
      comp=Z,1.3nm,0.6s
BELG  Belogornoye     23.16  43  P     P     20 21 57.2 +0.2
      comp=Z,8.4nm,0.9s,baz=283,slow=4.0,SNR=4.9
      comp=Z,8.4nm,0.9s
NC602 NORSAR Array S  23.62 348  P     P     20 22 01.0 -0.5
FINES FINESS Array B  23.64   5  P     P     20 22 00.5 -1.2
      comp=Z,1.3nm,0.7s,baz=170,slow=12,SNR=6.8
      comp=Z,1.3nm,0.7s
FINES FINESS Array B  23.64   5  P     P     20 21 59.9 -1.8
NAO01 NORSAR Array S  23.84 347  P     P     20 22 02.1 -1.5
NC405 NORSAR Array S  23.95 348  P     P     20 22 04.4 -0.2
NB201 NORSAR Array S  23.96 348  P     P     20 22 03.8 -1.0
NB2   NORSAR Subarra  23.97 348  P     P     20 22 03.7 -1.1
      comp=Z,16nm,1.7s,baz=159,slow=9.3
NOA   NORSAR Array B  23.97 348  P     P     20 22 04.2 -0.7
      comp=Z,1.5nm,0.8s,baz=157,slow=8.7,SNR=5.9
      comp=Z,1.5nm,0.8s
NBO00 NORSAR Array S  24.03 347  P     P     20 22 04.6 -0.8
EKA   Eskdalemuir Ar  24.06 324  P     P     20 22 05.5 -0.2
      comp=Z,1.7nm,0.6s,baz=122,slow=9.3,SNR=8.7
      comp=Z,1.7nm,0.6s
NC204 NORSAR Array S  24.27 347  P     P     20 22 09.5 +1.9
TOA0  Torodi Ar. Sit  30.42 221  P     P     20 23 02.7 -0.4
TOA0                             IAmb  IAmb  20 23 32.8
      comp=Z,7.6nm,1.4s
TORD  Torodi Ar. Bea  30.42 221  P     P     20 23 03.5 +0.4
      comp=Z,0.7nm,0.5s,baz=36,slow=9.2,SNR=11
      comp=Z,0.7nm,0.5s
TORD  Torodi Ar. Bea  30.42 221  P     P     20 23 03.3 +0.2
TORD                             IAmb  IAmb  20 23 32.8
      comp=Z,3.8nm,1.4s
KK31  Karatay Array   37.11  66  P     P     20 24 02.3 +1.2
KKAR  Karatay Array   37.11  66  P     P     20 24 01.3 +0.2
KKAR  Karatay Array   37.11  66  P     P     20 24 00.8 -0.3
KKAR                             IAmb  IAmb  20 24 03.5
      comp=Z,1.7nm,0.9s
BOOM  Boomskoye usch  41.15  66  P     P     20 24 36.4 +1.3
MK31  Makanchi Array  44.69  58  P     P     20 25 02.3 -1.2
MK31                             IAmb  IAmb  20 25 07.3
      comp=Z,1.7nm,0.9s
MKAR  Makanchi Array  44.69  58  P     P     20 25 03.1 -0.4
      comp=Z,0.8nm,0.5s,baz=274,slow=7.0,SNR=17
      comp=Z,0.8nm,0.5s
MKAR  Makanchi Array  44.69  58  P     P     20 25 02.0 -1.5
ZAA0  Zalesovo Array  45.20  48  P     P     20 25 05.9 -1.5
ZAA0                             IAmb  IAmb  20 25 19.6
      comp=Z,2.6nm,0.8s
ZALV  Zalesovo Beam   45.20  48  P     P     20 25 06.9 -0.5
      comp=Z,2.2nm,0.5s,baz=268,slow=9.0,SNR=9.5
      comp=Z,2.2nm,0.5s
ZALV  Zalesovo Beam   45.20  48  P     P     20 25 06.0 -1.3
WMQ   Urumqi          49.12  61  eP    P     20 25 40.3 +2.1
HHC   Hu-ho-hao-te    66.45  56  eP    P     20 27 41.1 +1.0
HHC                              pmax  pmax
      comp=Z,54nm,0.8s
HHC                              pmax  pmax
      comp=Z,130nm,6.9s
PZH   PanZhiHua       66.86  74  P     P     20 27 44.3 +1.3
PZH                              pmax  pmax
      comp=Z,10.0nm,0.6s
PZH                              pmax  pmax
      comp=Z,100nm,4.9s
YKA   Yellowknife Ar  73.84 340  P     P     20 28 24.9 +0.1
      comp=Z,0.1nm,0.4s,baz=35,slow=5.5,SNR=2.4
      comp=Z,0.1nm,0.4s
```

IDC ***20*** *20:31:06.1±1.7, 62°.44N×151°.25W, h91^{km}±27^{km}, mb3.2/2, mbtmp3.3/5, Error ellipse: s-maj=26.8km s-min=14.3km az=110.0*

NEIC ***20*** *20:31:06.6±1.3, 62°.54N±0°.03×151°.19W±0°.07, h100^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=4.5km az=121.0*

ANF ***20*** *20:31:06.1±0.3, 62°.54N×151°.18W, h99^{km}±3^{km}, ML3.4/65, ML3.4/66, Error ellipse: s-maj=1.8km s-min=1.5km az=35.0*

AEIC ***20*** *20:31:07.2±1.6, 62°.56N±0°.03×151°.19W±0°.07, h91^{km}±5^{km}, ML3.0/130, ML3.3/156(NEIC), Error ellipse: s-maj=4.7km s-min=4.5km az=63.0*

ISC 20 20:31:06.5±0.9**, 62°.54N**±0°.02×**151°.21W**±0°.02**, h101^{km}**±6^{km}**, n224,** σ0^{s}.**90**/292**, Central Alaska**

```
Code  Station Name      Δ°   AZ°   Phase ID       Time      Res
                                  Op    ISC     h  m  s     ISC
CUT   Chulitna         0.46 107        Pn    20 31 22.1  0.0
CUT                               Sn    Sn    20 31 32.7 -1.1
CUT   Chulitna         0.46 107   P     Pn    20 31 22.1  0.0
      baz=290,SNR=43
CUT                               S     Sn    20 31 33.1 -0.7
      baz=290
PPLA  Purkeypile       0.57 309         Pn    20 31 23.3 +0.2
PPLA  Purkeypile       0.57 309         Sn    20 31 35.5 -0.1
PPLA  Purkeypile       0.57 309   P     Pn    20 31 23.4 +0.2
      baz=126,SNR=30
PPLA                              S     Sn    20 31 35.0 -0.6
      baz=126
M22K  Willow           0.94 147         Pn    20 31 26.3  0.0
M22K                              Sn    Sn    20 31 40.0 -1.2
M22K                              IAML        20 31 45.3
      comp=E,1µm,0.5s
M22K                              IAML        20 31 46.6
      comp=N,1µm,0.4s
M22K  Willow           0.94 147   P     Pn    20 31 26.4  0.0
      baz=329
M22K                              S     Sn    20 31 40.8 -0.5
      baz=329
```

CAST	Castle Rocks	0.97	336		Pn	20 31 26.5	-0.2
CAST				Sn	Sn	20 31 40.9	-1.0
CAST	Castle Rocks	0.97	336	P	Pn	20 31 26.8	+0.1
	baz=154						
CAST				S	Sn	20 31 41.4	-0.5
	baz=154						
TRF	Thorofare Moun	1.01	24		Pn	20 31 27.5	+0.3
TRF				Sn	Sn	20 31 42.6	-0.3
TRF				IAML		20 31 43.8	
	comp=E,532nm,0.6s						
TRF	Thorofare Moun	1.01	24	P	Pn	20 31 27.6	+0.4
	baz=205,SNR=175						
TRF				S	Sn	20 31 42.7	-0.1
	baz=205						
KTH	Kantishna Hill	1.02	7		Pn	20 31 27.8	+0.4
KTH					Sn	20 31 42.3	-0.8
STLK	Strandline Lak	1.09	196		Pn	20 31 28.1	+0.1
M20K	Styx River	1.12	235		Pn	20 31 28.2	-0.1
M20K				Sn	Sn	20 31 43.6	-1.3
M20K				IAML		20 31 45.2	
	comp=N,369nm,0.3s						
M20K				IAML		20 31 49.1	
	comp=E,335nm,0.2s						
M20K	Styx River	1.12	235	P	Pn	20 31 28.4	0.0
	baz=52						
M20K				S	Sn	20 31 43.9	-0.9
	baz=52						
L20K	Farewell, AK	1.24	268		Pn	20 31 29.8	+0.1
L20K					Sn	20 31 46.9	-0.3
L20K	Farewell, AK	1.24	268	P	Pn	20 31 29.8	+0.1
	baz=85,SNR=11						
L20K				S	Sn	20 31 46.7	-0.6
	baz=85						
WAT1	Susitna Watana	1.26	76		Pn	20 31 30.1	+0.1
WAT1	Susitna Watana	1.26	76	P	Pn	20 31 30.1	+0.1
	baz=258						
WAT1				S	Sn	20 31 47.2	-0.5
	baz=258						
SPCG	Spurr Capps Gl	1.31	197		Pn	20 31 30.6	0.0
SPCG					Sn	20 31 48.9	0.0
GHO	Glory Hole Cre	1.32	125		Pn	20 31 30.7	0.0
GHO				Sn	Sn	20 31 48.6	-0.5
GHO				IAML		20 31 51.1	
	comp=E,491nm,0.2s						
GHO				IAML		20 31 54.5	
	comp=N,346nm,0.4s						
PMR	Palmer	1.37	133		Pn	20 31 30.9	-0.2
PMR				Sn	Sn	20 31 49.4	-0.4
PMR	Palmer	1.37	133	P	Pn	20 31 31.0	-0.2
	baz=316,SNR=50						
PMR				S	Sn	20 31 49.4	-0.4
	baz=316						
RND	Reindeer	1.39	50		Pn	20 31 31.6	+0.2
RND				Sn	Sn	20 31 49.9	-0.5
RND				IAML		20 31 51.1	
	comp=N,368nm,0.4s						
RND				IAML		20 31 51.6	
	comp=E,296nm,0.5s						
SPBG	Spurr Blockage	1.40	204		Pn	20 31 32.2	+0.6
CKN	Chakachatna No	1.40	200		Pn	20 31 32.2	+0.6
SPU	Mount Spurr	1.42	197		Pn	20 31 31.9	0.0
SPWE	Spurr West	1.42	207		Pn	20 31 32.6	+0.7
SPCR	Spurr Chakacha	1.43	200		Pn	20 31 32.1	+0.2
SPCR	Spurr Chakacha	1.43	200	P	Pn	20 31 32.1	+0.2
	baz=19,SNR=23						
SPCR				S	Sn	20 31 50.8	-0.5
	baz=19						
CHUM	Lake Minchumin	1.44	340		Pn	20 31 32.6	+0.6
CHUM					Sn	20 31 51.2	-0.1
CHUM	Lake Minchumin	1.44	340	P	Pn	20 31 32.6	+0.6
	baz=159,SNR=51						
CHUM				S	Sn	20 31 51.0	-0.3
	baz=159						
FIS	Fire Island	1.48	161	Pn	Pn	20 31 33.8	+1.3
SML	Sawmill	1.54	117	Pn	Pn	20 31 33.3	0.0
SML				Sn	Sn	20 31 53.4	-0.3
SML				IAML		20 31 56.1	
	comp=E,499nm,0.7s						
SML				IAML		20 31 58.9	
	comp=N,378nm,0.4s						
SML	Sawmill	1.54	117	P	Pn	20 31 33.4	0.0
	baz=301,SNR=59						
SML				S	Sn	20 31 54.4	+0.7
	baz=301						
K20K	Telida	1.54	303		Pn	20 31 33.7	+0.4
K20K				Sn	Sn	20 31 52.9	-0.8
K20K				IAML		20 31 54.1	
	comp=N,191nm,0.6s						
K20K				IAML		20 31 54.2	
	comp=E,181nm,0.7s						
K20K	Telida	1.54	303	P	Pn	20 31 33.8	+0.4
	baz=120,SNR=88						
K20K				S	Sn	20 31 52.9	-0.8
	baz=120						
BPAW	Bear Paw Mtn.	1.57	4		Pn	20 31 33.7	+0.1
BPAW				Sn	Sn	20 31 52.5	-1.8
BPAW				IAML		20 31 54.7	
	comp=N,347nm,0.6s						
BPAW				IAML		20 31 54.8	
	comp=E,283nm,0.5s						
BPAW	Bear Paw Mtn.	1.57	4	P	Pn	20 31 33.8	+0.1
	baz=184,SNR=38						
BPAW				S	Sn	20 31 53.1	-1.1
	baz=184						
WAT6	Susitna Watana	1.61	87		Pn	20 31 34.2	-0.1
WAT6	Susitna Watana	1.61	87	P	Pn	20 31 34.2	-0.1
	baz=271,SNR=28						
WAT6				S	Sn	20 31 54.5	-0.9
	baz=271						
RC01	Rabbit Creek A	1.62	154		Pn	20 31 33.6	-0.6
RC01				Sn	Sn	20 31 54.8	-0.5
RC01				IAML		20 31 55.9	
	comp=N,442nm,0.3s						
RC01				IAML		20 31 56.3	
	comp=E,267nm,0.1s						
RC01	Rabbit Creek A	1.62	154	P	Pn	20 31 33.9	-0.3
	baz=336,SNR=14						
RC01				S	Sn	20 31 54.7	-0.5
	baz=336						
M19K	Big River Lodg	1.62	248		Pn	20 31 34.4	+0.1
M19K				Sn	Sn	20 31 55.2	-0.2
M19K	Big River Lodg	1.62	248	P	Pn	20 31 34.4	+0.1
	baz=65						
M19K				S	Sn	20 31 55.2	-0.2
	baz=65						
KNK	Knik Glacier	1.72	130	Pn	Pn	20 31 35.5	-0.1
KNK				Sn	Sn	20 31 57.0	-0.7
KNK				IAML		20 32 00.5	
	comp=E,378nm,0.4s						
KNK				IAML		20 32 00.7	
	comp=N,294nm,0.4s						
KNK	Knik Glacier	1.72	130	P	Pn	20 31 35.5	-0.1
	baz=313,SNR=50						
KNK				S	Sn	20 31 57.5	-0.3
	baz=313						
L19K	White Mountain	1.74	260		Pn	20 31 36.1	+0.3
L19K				Sn	Sn	20 31 56.3	-1.7
L19K				IAML		20 31 58.9	
	comp=E,167nm,0.8s						
L19K				IAML		20 31 59.0	
	comp=N,161nm,1.1s						
L19K	White Mountain	1.74	260	P	Pn	20 31 36.1	+0.3
	baz=76,SNR=85						
L19K				S	Sn	20 31 57.6	-0.4
	baz=76						
CAPN	Captain Cook N	1.78	179	Pn	Pn	20 31 38.6	+2.4
CAPN	Captain Cook N	1.78	179	P	Pn	20 31 38.6	+2.4
	baz=359						
CAPN				S	Sn	20 31 59.9	+1.0
	baz=359						
M23K	Glacier View	1.80	113	P	Pn	20 31 36.1	-0.4
	baz=297,SNR=73						
BWN	Browne	1.82	25		Pn	20 31 37.2	+0.5
BWN				Sn	Sn	20 31 59.2	-0.6
BWN				IAML		20 32 01.7	
	comp=N,168nm,1.3s						
BWN				IAML		20 32 05.3	
	comp=E,154nm,0.5s						
DHY	Denali Highway	1.84	71		Pn	20 31 37.2	0.0
DHY				Sn	Sn	20 31 57.9	-2.6
DHY				IAML		20 32 01.5	
	comp=E,211nm,0.8s						
DHY				IAML		20 32 02.6	
	comp=N,233nm,0.5s						
DHY	Denali Highway	1.84	71	P	Pn	20 31 37.4	+0.3
	baz=255,SNR=48						
DHY				S	Sn	20 31 59.7	-0.9
	baz=255						
SCM	Sheep Creek Mo	1.96	110		Pn	20 31 38.4	-0.1
SCM				Sn	Sn	20 32 03.0	0.0
SCM				IAML		20 32 04.5	
	comp=N,328nm,0.5s						
SCM				IAML		20 32 10.3	
	comp=E,343nm,0.4s						
SCM	Sheep Creek Mo	1.96	110	P	Pn	20 31 38.3	-0.3
	baz=294,SNR=20						
SCM				S	Sn	20 32 03.6	+0.6
	baz=294						
DFR	Drift River	2.08	200		Pn	20 31 40.3	+0.1
SLKM	Skilak Lake	2.10	166		Pn	20 31 40.8	+0.4
RDJH	Redoubt Jeurge	2.10	202		Pn	20 31 41.1	+0.6
J20K	Nowinta River	2.11	322		Pn	20 31 40.8	+0.3
J20K				Sn	Sn	20 32 04.4	-2.0
J20K				IAML		20 32 07.5	
	comp=E,119nm,0.5s						
J20K				IAML		20 32 08.1	
	comp=N,103nm,0.4s						
J20K	Nowinta River	2.11	322	P	Pn	20 31 40.9	+0.5
	baz=139,SNR=51						
J20K				S	Sn	20 32 05.4	-1.1
	baz=139						
NCT	North Crescent	2.15	203		Pn	20 31 41.9	+0.8
O22K	Cooper Landing	2.19	160		Pn	20 31 40.4	-1.1
O22K				Sn	Sn	20 32 06.2	-1.9
O22K	Cooper Landing	2.19	160	P	Pn	20 31 41.4	-0.1
	baz=342,SNR=5.9						
O22K				S	Sn	20 32 06.3	-1.9
	baz=342						
RDWB	Redoubt West	2.20	201		Pn	20 31 42.5	+0.6
RSO	Redoubt South	2.21	200		Pn	20 31 42.5	+0.4
TTA	Tatalina	2.24	282		Pn	20 31 42.4	+0.1
TTA				Sn	Sn	20 32 07.0	-2.7
TTA	Tatalina	2.24	282	P	Pn	20 31 42.6	+0.4
	baz=98,SNR=9.8						
TTA				S	Sn	20 32 08.4	-1.3
	baz=98						
RED	Redoubt Volcan	2.26	200		Pn	20 31 43.0	+0.6
NEA2	Nenana	2.27	24		Pn	20 31 43.0	+0.4
NEA2	Nenana	2.27	24	P	Pn	20 31 42.6	0.0
	baz=206,SNR=6.0						
NEA2				S	Sn	20 32 09.0	-1.2
	baz=206						
N19K	Bonanza Creek	2.33	223		Pn	20 31 44.1	+0.6
N19K	Bonanza Creek	2.33	223	P	Pn	20 31 44.2	+0.8
	baz=40						
WRH	Wood River Hil	2.39	34		Pn	20 31 44.4	+0.3
WRH				Sn	Sn	20 32 11.6	-1.4
M24K	Tolsona, Glenn	2.39	98		Pn	20 31 44.4	+0.2
M24K				Sn	Sn	20 32 14.4	+1.2
M24K	Tolsona, Glenn	2.39	98	P	Pn	20 31 44.7	+0.5
	baz=283,SNR=5.8						
SVW2	Sparrevohn	2.53	237	Pn	Pn	20 31 46.4	+0.4
O20K	Slope Mountain	2.56	196		Pn	20 31 46.9	+0.4
O20K	Slope Mountain	2.56	196	P	Pn	20 31 46.6	+0.2
	baz=15						
GLI	Glacier Island	2.57	129		Pn	20 31 46.0	-0.5
GLI				Sn	Sn	20 32 15.7	-1.6
GLI				IAML		20 32 19.2	
	comp=E,174nm,0.3s						
GLI	Glacier Island	2.57	129	P	Pn	20 31 46.1	-0.5
	baz=313,SNR=7.7						
GLI				S	Sn	20 32 16.4	-0.9
	baz=313						
SEW	Seward	2.59	160		Pn	20 31 46.4	-0.3
SEW	Seward	2.59	160	P	Pn	20 31 46.9	+0.2
	baz=342						
CCB	Clear Creek Bu	2.61	34		Pn	20 31 46.6	-0.3
JPK	Jack Peak	2.65	122		Pn	20 31 47.4	-0.2
I21K	Tanana	2.67	353		Pn	20 31 48.2	+0.4
I21K				IAML		20 32 19.6	
	comp=E,63nm,1.1s						
I21K	Tanana	2.67	353	P	Pn	20 31 48.6	+0.8
	baz=172						
PAX	Paxson	2.68	78		Pn	20 31 48.8	+0.8
PAX	Paxson	2.68	78	P	Pn	20 31 48.8	+0.8
	baz=264,SNR=42						
HDA	Harding Lake	2.68	44		Pn	20 31 48.1	+0.1
HDA				IAML		20 32 20.0	
	comp=E,64nm,0.4s						
HDA				IAML		20 32 21.1	
	comp=N,70nm,0.5s						
HDA	Harding Lake	2.68	44	P	Pn	20 31 48.3	+0.3
	baz=228,SNR=167						
KLU	Klutina	2.71	111		Pn	20 31 47.6	-0.7
KLU				IAML		20 32 29.9	
	comp=E,126nm,0.4s						
KLU				IAML		20 32 32.5	
	comp=N,167nm,0.3s						
KLU	Klutina	2.71	111	P	Pn	20 31 47.7	-0.7
	baz=296,SNR=6.7						
KLU				S	Sn	20 32 19.2	-1.4
	baz=296						
I23K	Minto, Yukon-K	2.74	17		Pn	20 31 49.1	+0.4
I23K	Minto, Yukon-K	2.74	17	P	Pn	20 31 49.5	+0.7
	baz=198,SNR=24						
I23K				S	Sn	20 32 19.7	-1.5
	baz=198						
MDM	Murphy Dome	2.77	27		Pn	20 31 49.4	+0.3
K24K	Donnelly Dome	2.77	60	P	Pn	20 31 50.6	+1.4
	baz=245,SNR=14						
TCOL	CIGO, UAF Yank	2.78	31		Pn	20 31 49.6	+0.4
TCOL				IAML		20 32 26.3	
	comp=N,138nm,0.5s						
TCOL				IAML		20 32 27.5	
	comp=E,161nm,0.6s						
TCOL	CIGO, UAF Yank	2.78	31	P	Pn	20 31 49.8	+0.6
	baz=214,SNR=26						
COLA	College	2.78	31		Pn	20 31 49.8	+0.6
COLA				IAML		20 32 27.5	
	comp=E,172nm,0.6s						
COLA	College	2.78	31	P	Pn	20 31 49.7	+0.4
	baz=214						
O19K	Port Alsworth	2.79	214		Pn	20 31 49.3	-0.1
O19K				IAML		20 32 22.8	
	comp=E,102nm,0.5s						
O19K				IAML		20 32 45.9	
	comp=N,116nm,0.4s						
O19K	Port Alsworth	2.79	214	P	Pn	20 31 50.1	+0.7
	baz=31						
BRLK	Bradley Lake	2.79	177	Pn	Pn	20 31 50.9	+1.4
BRLK				IAML		20 32 32.5	
	comp=N,152nm,0.5s						
PS08	TAPS Pump Stn8	2.81	42		Pn	20 31 50.0	+0.3
HARP	HAARP	2.82	90		Pn	20 31 50.7	+0.9
HARP	HAARP	2.82	90	P	Pn	20 31 50.3	+0.5
	baz=276,SNR=9.7						
BRSE	Bradley Lake S	2.82	175		Pn	20 31 50.0	+0.2
BRSE	Bradley Lake S	2.82	175	P	Pn	20 31 50.1	+0.3
	baz=356						
FID	Port Fidalgo	2.89	126		Pn	20 31 49.8	-0.9
HOM	Homer	2.90	184	Pn	Pn	20 31 50.9	+0.1
HOM	Homer	2.90	184	P	Pn	20 31 50.8	-0.1
	baz=4.2						
N18K	Kilae Creek	2.91	232	Pn	Pn	20 31 51.6	+0.6
N18K	Kilae Creek	2.91	232	P	Pn	20 31 51.7	+0.6
	baz=48,SNR=26						
DIV	Divide	2.94	116		Pn	20 31 50.8	-0.8
IL31		2.96	39		Pn	20 31 51.8	+0.2
ILAR	Eielson Array	2.96	39	P	Pn	20 31 51.8	+0.2
	comp=N,37nm,0.3s,baz=222,slow=14,SNR=318						
ILAR				S	Sn	20 32 24.3	-2.0
	comp=N,9.5nm,0.5s,baz=216,slow=16,SNR=3.5						
CNPM	China Poot	3.02	180	Pn	Pn	20 31 53.3	+0.7
CNPM				IAML		20 32 37.0	
	comp=N,124nm,0.4s						
PS07	TAPS Pump Stn7	3.07	24		Pn	20 31 53.8	+0.8
POKR	Poker Plat Res	3.08	31		Pn	20 31 53.7	+0.4
POKR	Poker Plat Res	3.08	31	P	Pn	20 31 53.9	+0.6
	baz=215,SNR=11						
RIDG	Independent Ri	3.13	65		Pn	20 31 55.3	+1.3
RIDG				IAML		20 32 36.9	
	comp=N,61nm,1.2s						
RIDG				IAML		20 32 38.1	
	comp=E,91nm,0.5s						
RIDG	Independent Ri	3.13	65	P	Pn	20 31 55.3	+1.3
	baz=250						
H21K	Melozitna Rive	3.21	348		Pn	20 31 55.7	+0.8
H21K				IAML		20 32 33.1	
	comp=E,40nm,1.1s						
H21K				IAML		20 32 34.2	
	comp=N,49nm,0.6s						
H21K	Melozitna Rive	3.21	348	P	Pn	20 31 55.8	+0.8
	baz=166,SNR=40						
N25K	Chitina, Valde	3.25	104	Pn	Pn	20 31 55.3	-0.3
N25K				IAML		20 32 44.4	
	comp=E,77nm,0.6s						
N25K				IAML		20 32 46.0	
	comp=N,66nm,0.5s						
N25K	Chitina, Valde	3.25	104	P	Pn	20 31 55.1	-0.5
	baz=290						
EYAK	Cordova Ski Ar	3.29	125		Pn	20 31 53.8	-2.3
EYAK	Cordova Ski Ar	3.29	125	P	Pn	20 31 55.4	-0.6
	baz=310						
EYAK				S	Sn	20 32 34.4	+0.1
	baz=310						
J25K	Salcha River,	3.34	49		Pn	20 31 56.6	-0.2
J25K				IAML		20 32 48.1	
	comp=N,35nm,0.3s						
J25K	Salcha River,	3.34	49	P	Pn	20 31 57.1	+0.3
	baz=234,SNR=41						
GCSA	Galena City Sc	3.36	314		Pn	20 31 58.0	+1.0
GCSA	Galena City Sc	3.36	314	P	Pn	20 31 57.9	+1.0
	baz=128,SNR=16						
GCSA				S	Sn	20 32 34.8	-1.1
	baz=128						
H23K	Yukon River	3.38	12		Pn	20 31 58.1	+0.8
H23K				IAML		20 32 36.6	
	comp=E,43nm,1.1s						
H23K	Yukon River	3.38	12	P	Pn	20 31 58.0	+0.8
	baz=193,SNR=24						
PS06	TAPS Pump Stn6	3.39	10		Pn	20 31 58.2	+0.8
DOT	Dot Lake	3.44	68		Pn	20 31 57.6	-0.4
MENT	Mentasta	3.47	80		Pn	20 31 57.5	-1.0
MENT				IAML		20 32 53.2	
	comp=E,86nm,0.7s						
MENT				IAML		20 33 04.5	
	comp=N,73nm,0.6s						
BMRM	Bremner River	3.52	114		Pn	20 31 58.1	-1.0
BMRM	Bremner River	3.52	114	P	Pn	20 31 58.2	-0.9
	baz=300						
BMRM				S	Sn	20 32 38.9	-1.0
	baz=300						
H24K	Noodor Dome	3.62	22	Pn	Pn	20 32 00.1	-0.4
H24K	Noodor Dome	3.62	22	P	Pn	20 32 00.9	+0.4
	baz=205,SNR=15						
IMAR	Indian Mountai	3.63	343	Pn	Pn	20 32 01.0	+0.4
L26K	Log Cabin Wild	3.65	79		Pn	20 32 00.2	-0.7
L26K				IAML		20 32 56.6	
	comp=N,79nm,0.5s						
L26K	Log Cabin Wild	3.65	79	P	Pn	20 32 00.7	-0.1
	baz=266,SNR=32						
GLB	Gilahina Butte	3.66	104	Pn	Pn	20 31 59.4	-1.7
GLB				IAML		20 32 57.5	
	comp=N,62nm,0.9s						
GLB				IAML		20 32 59.1	
	comp=E,50nm,0.7s						
P18K	Big Mountain,	3.72	214	Pn	Pn	20 32 01.0	-0.8
P18K				IAML		20 32 44.7	
	comp=E,23nm,2.9s						
Q19K	Cape Douglas,	3.82	199	Pn	Pn	20 32 04.9	+1.7
Q19K	Cape Douglas,	3.82	199	P	Pn	20 32 04.7	+1.5
	baz=17						
M26K	Nabesna, AK	3.82	88	Pn	Pn	20 32 02.5	-0.7
M26K				IAML		20 33 11.2	
	comp=E,38nm,0.4s						
M26K				IAML		20 33 13.3	
	comp=N,41nm,0.6s						
M26K	Nabesna, AK	3.82	88	P	Pn	20 32 02.9	-0.3
	baz=276						
VRDI	Verde Repeater	3.90	106	Pn	Pn	20 32 03.8	-0.7
VRDI				IAML		20 33 04.0	
	comp=N,61nm,0.8s						
VRDI				IAML		20 33 05.8	
	comp=E,31nm,0.9s						
Q23K	Middleton Isla	3.92	141	Pn	Pn	20 32 05.0	+0.6
Q23K	Middleton Isla	3.92	141	P	Pn	20 32 05.1	+0.6
	baz=325						
MID	Middleton Isla	3.92	141	Pn	Pn	20 32 05.3	+0.7
J26L	Joseph Creek	3.95	57	P	Pn	20 32 05.8	+0.8
	baz=244,SNR=66						
HMT	Hamilton	4.00	120		Pn	20 32 04.6	-1.1
MCARA	McCarthy VSAT	4.04	103		Pn	20 32 05.7	-0.4
MCARA	McCarthy VSAT	4.04	103	P	Pn	20 32 06.0	-0.1
	baz=291						
MCARA				S	Sn	20 32 52.0	-0.4
	baz=291						
NICHA	Nichawak Mount	4.18	120		Pn	20 32 07.3	-0.7
L27K	Beaver Creek,	4.34	79	Pn	Pn	20 32 10.1	-0.1
L27K	Beaver Creek,	4.34	79	P	Pn	20 32 10.2	0.0
	baz=267,SNR=12						
M27K	Edge Creek, AK	4.34	88	Pn	Pn	20 32 10.7	+0.4
M27K				IAML		20 33 21.5	
	comp=N,18nm,1.0s						
M27K	Edge Creek, AK	4.34	88	P	Pn	20 32 10.8	+0.5
	baz=277						
SUCK	Suckling Hills	4.36	121	Pn	Pn	20 32 07.1	-3.4
KHIT	Khitrov Hills	4.36	115		Pn	20 32 10.1	-0.4
PTPK	Patty Peak	4.36	104		Pn	20 32 10.2	-0.4
BCAR	Beaver Creek A	4.36	79	Pn	Pn	20 32 09.9	-0.6
K27K	Chicken	4.39	66		Pn	20 32 09.8	-1.0
K27K				IAML		20 33 06.3	
	comp=N,18nm,0.7s						
K27K	Chicken	4.39	66	P	Pn	20 32 10.9	+0.1
	baz=254						
BALM	Baldy	4.47	106		Pn	20 32 11.5	-0.6
KIAG	Kiagna River	4.51	107		Pn	20 32 11.9	-0.7
ISLE	Juniper Island	4.67	111		Pn	20 32 12.4	-2.3
SNH	Sunshine Point	4.67	117	Pn	Pn	20 32 14.2	-0.5
SNH				IAML		20 33 08.6	
	comp=N,34nm,1.4s						
SNH				IAML		20 33 32.2	
	comp=E,31nm,1.0s						
COLD	Coldfoot	4.73	5	Pn	Pn	20 32 15.1	-0.3
COLD	Coldfoot	4.73	5	P	Pn	20 32 16.3	+0.9
	baz=186,SNR=16						
COLD				S	Sn	20 33 07.4	-1.5
	baz=186						
BARN	Barnard Glacie	4.77	104		Pn	20 32 15.6	-0.5
BARN				IAML		20 33 29.8	
	comp=E,33nm,0.7s						
BARN				IAML		20 33 30.5	
	comp=N,35nm,1.0s						
KDAK	Kodiak Island	4.82	189	P	Pn	20 32 15.6	-1.1
	comp=N,3.4nm,0.6s,baz=51,slow=5.6,SNR=17						
KDAK				S	Sn	20 33 08.6	-2.7
	comp=N,7.7nm,0.3s,baz=202,slow=20,SNR=17						
KDAK	Kodiak Island	4.82	189		Pn	20 32 15.3	-1.3
KDAK	Kodiak Island	4.82	189	P	Pn	20 32 15.4	-1.3
	baz=7.7						
KDAK				S	Sn	20 33 08.5	-2.8
	baz=7.7						
BAGL	Bagley Icefiel	4.83	111		Pn	20 32 16.0	-0.7
GRNC	Granite Creek	4.86	108		Pn	20 32 16.5	-0.9
GRNC				IAML		20 33 32.6	
	comp=E,20nm,0.8s						
GRNC				IAML		20 33 34.8	
	comp=N,25nm,0.7s						
YUK2	White River	4.92	94		Pn	20 32 18.0	-0.1
CTG	Chitna Glacier	4.95	104	P	Pn	20 32 18.2	-0.3
	baz=293						
CTG				S	Sn	20 33 14.3	-0.3
	baz=293						
CTGM	Chitina Glacie	4.95	104		Pn	20 32 17.9	-0.7
CTGM				IAML		20 33 38.0	
	comp=E,17nm,0.8s						
CTGM				IAML		20 33 39.0	
	comp=N,24nm,1.0s						
EGAK	Eagle	5.01	59		Pn	20 32 19.1	0.0
EGAK				IAML		20 33 58.0	
	comp=N,17nm,0.6s						
EGAK				IAML		20 34 00.2	
	comp=N,23nm,0.7s						
EGAK	Eagle	5.01	59	P	Pn	20 32 19.2	0.0
	baz=248,SNR=12						
YAH	Yahtse	5.04	111	Pn	Pn	20 32 19.4	-0.4
YAH				IAML		20 33 41.7	
	comp=E,25nm,1.0s						
MESA	MESA	5.05	114		Pn	20 32 19.5	-0.4
MESA	MESA	5.05	114	P	Pn	20 32 19.5	-0.4
	baz=302						
YUK3	Moose Creek	5.10	94		Pn	20 32 20.5	-0.1
YUK3	Moose Creek	5.10	94	P	Pn	20 32 20.8	+0.1
	baz=284						
YUK3				S	Sn	20 33 16.5	-1.9
	baz=284						
LOGN	Logan Glacier	5.16	105		Pn	20 32 20.2	-1.1
LOGN				IAML		20 33 41.3	

	comp=E,26nm,0.9s						
LOGN				IAML		20 33 43.1	
	comp=N,21nm,0.9s						
TABL	Table Mountain	5.26	109	Pn	Pn	20 32 22.2	-0.7
TABL				IAML		20 33 43.6	
	comp=E,20nm,0.9s						
DAWY	Dawson	5.55	69		Pn	20 32 26.0	-0.5
DAWY	Dawson	5.55	69	P	Pn	20 32 26.6	+0.1
	baz=259,SNR=7.1						
BMAR	Burnt Mountain	5.66	27	Pn	Pn	20 32 28.5	+0.6
PCA	Pinnacle	5.82	110	Pn	Pn	20 32 29.8	-0.5
PINM	Pinnacle	5.82	110	P	Pn	20 32 30.1	-0.2
	baz=300						
PINM				S	Sn	20 33 34.0	-1.6
	baz=300						
BCPM	Bancas Point	6.16	110	Pn	Pn	20 32 34.2	-0.6
TOLK	Toolik Lake Re	6.16	6	Pn	Pn	20 32 35.8	+0.9
TOLK	Toolik Lake Re	6.16	6	P	Pn	20 32 37.2	+2.3
	baz=187						
SII	Sitkinak Islan	6.19	195	Pn	Pn	20 32 35.6	+0.4
SII	Sitkinak Islan	6.19	195	P	Pn	20 32 36.3	+1.1
	baz=13						
YUK6	Outpost Mounta	6.31	99		Pn	20 32 37.6	+0.5
YUK6	Outpost Mounta	6.31	99	S	Sn	20 33 46.8	-1.0
	baz=290						
I29M	Ogilvie Camp,	6.35	58	Pn	Pn	20 32 37.7	+0.3
PNL	Peninsula	6.41	111		Pn	20 32 38.2	0.0
PNL	Peninsula	6.41	111	P	Pn	20 32 38.3	0.0
	baz=302						
ANM	Nome	6.64	294	Pn	Pn	20 32 39.5	-1.9
M30M	Minto, Yukon	6.67	83	Pn	Pn	20 32 39.8	-1.9
HYT	Haines Junctio	6.75	99	S	Sn	20 33 56.1	-2.1
	baz=291						
EPYK	Eagle Plains	7.34	52		Pn	20 32 51.3	+0.4
EPYK	Eagle Plains	7.34	52	P	Pn	20 32 50.9	0.0
	baz=245						
RDOG	Red Dog Mine	7.38	324	P	Pn	20 32 51.5	+0.2
	baz=133						
MMPY	Sheldon Lake,	9.20	81	P	Pn	20 33 16.4	+0.3
	baz=278						
INK	Inuvik	9.34	44	P	Pn	20 33 18.9	+1.1
	comp=E,1.5nm,0.6s,baz=224,slow=14,SNR=6.3						
INK	Inuvik	9.34	44	Pn	Pn	20 33 18.7	+0.8
INK	Inuvik	9.34	44	P	Pn	20 33 18.3	+0.4
	baz=240						
C36M	Paulatuk	12.90	46	P	Pn	20 34 03.2	-2.4
	baz=251						
YKA	Yellowknife Ar	16.76	74	P	Pn	20 34 54.9	+0.3
	comp=E,0.1nm,0.3s,baz=285,slow=10,SNR=3.4						
SEY	Seymchan	25.14	296	P	P	20 36 24.2	+2.6
	comp=E,0.8nm,0.7s,baz=28,slow=6.8,SNR=2.2						
	comp=E,0.8nm,0.7s						
MKAR	Makanchi Array	62.98	322	P	P	20 41 22.1	+0.2
	comp=E,0.2nm,0.5s,baz=33,slow=8.0,SNR=6.0						
	comp=E,0.2nm,0.5s						

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*IDC **20** 20:35:36.0±3.3, 24°.44N×100°.10W, h0^{km}, mb3.5/2, mbtmp3.3/4, ML3.7/2, Error ellipse: s-maj=118.0km s-min=35.5km az=55.0*

*MEX **20** 20:35:35.6±1.4, 23°.71N×100°.81W, h20^{km}, MD4.2*

ISC 20 20:35:34.4±2.8**, 23°.68N**±0°.04×**100°.76W**±0°.05**, h27^{km}**±25^{km}**, n10,** σ1^{s}**40**/16**, 1C, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTIG	Gomez Farias	1.58	112	⇑iP	Pn	20 35 59.2	-1.6
	baz=287,slow=18						
GTIG				eS	Sn	20 36 20.6	+0.2
ZAIG	Zacatecas	1.90	242	eP	Pn	20 36 04.4	-0.8
ZAIG				eS	Sn	20 36 26.7	-1.7
RPIG	Rio Verde	1.93	158	eP	Pn	20 36 04.5	-1.0
RPIG				eS	Sb	20 36 33.8	+1.2
MNIG	Monterrey	1.96	12	eP	Pn	20 36 04.6	-1.4
MNIG				i S	Sn	20 36 27.8	-2.0
AAIG	Aguscalientes	2.27	222	eP	Pn	20 36 09.3	-1.0
AAIG				eS	Sn	20 36 36.8	-0.8
DEIG	Demacu	3.73	154	eP	Pn	20 36 28.8	-1.6
DEIG				eS	Sn	20 37 13.7	+0.1
TXAR	Lajitas Array	6.20	336	Pn	Pn	20 37 03.7	-0.5
	0.1nm,0.3s,baz=154,slow=17,SNR=4.3						
TXAR				Pg		20 37 23.4	
	0.3nm,0.3s,baz=164,slow=16,SNR=7.4						
TXAR				Sn	Sn	20 38 15.7	+1.4
	0.2nm,0.3s,baz=8.9,slow=40,SNR=0.7						
TXAR				Lg	Lg	20 38 37.9	
	0.4nm,0.3s,baz=161,slow=25,SNR=4.3						
	0.2nm,0.6s						
PDAR	Pinedale Array	20.38	341	P	P	20 40 09.5	+0.3
	0.1nm,0.3s,baz=134,slow=9.1,SNR=4.1						
	0.3nm,0.4s						
NVAR	Mina Array Bea	20.97	319	P	Pn	20 40 20.9	+2.6
	0.7nm,0.3s,baz=136,slow=13,SNR=6.1						
	0.7nm,0.3s						
ILAR	Eielson Array	50.71	336	P	P	20 44 33.0	+1.6
	0.5nm,0.6s,baz=126,slow=5.2,SNR=5.0						
	0.5nm,0.6s						

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*NEIC **20** 20:38:06.9±2.6, 5°.84S±0°.09×151°.1E±0°.1, h24^{km}±8^{km}, mb4.2/9, Error ellipse: s-maj=20.1km s-min=9.1km az=120.0*

*IDC **20** 20:38:11.2±1.6, 6°.84S×151°.09E, h0^{km}, mb4.0/3, mbtmp4.2/5, ML3.2/2, Error ellipse: s-maj=59.4km s-min=19.1km az=120.0*

ISC 20 20:38:14.7±1.2**, 6°.9S**±0°.1×**151°.3E**±0°.2**, h35^{km}, n19,** σ1^{s}**24**/20**, mb3.9**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.70	16	Pn	Pn	20 38 55.9	+0.1
	27nm,0.3s,baz=266,slow=1.7,SNR=23						
KRVT				Sn	Sn	20 39 28.2	+0.9
	95nm,0.3s,baz=250,slow=21,SNR=5.5						
	64nm,0.2s						
PMG	Port Moresby	4.75	238	Pn	Pn	20 39 24.6	+0.7
	23nm,0.3s,baz=62,slow=11,SNR=32						
PMG				Sn	Sn	20 40 18.0	+0.2
	21nm,0.3s,baz=111,slow=17,SNR=11						
	85nm,0.5s						
PMG	Port Moresby	4.75	238		Pn	20 39 24.0	+0.1
PMG				Sn	Sn	20 40 17.9	+0.1
COEN	Coen	10.59	228	Pn	Pn	20 40 42.2	-1.8
FAKI	Fak Fak	19.35	281	P	P	20 42 25.1	-12
MTN	Manton Dam	20.67	252		P	20 42 53.1	+1.3
WB0	Warramunga Arr	20.77	230	P	P	20 42 52.0	-0.9
WB0				IAmb	IAmb	20 42 53.1	
	comp=Z,9.2nm,0.8s						
WR0	Warramunga Arr	20.77	230		P	20 42 52.2	-0.7
WR0				IAmb	IAmb	20 42 53.1	
	comp=Z,8.9nm,0.8s						
WB2	Warramunga Arr	20.90	230	P	P	20 42 54.0	-0.3
WB2				IAmb	IAmb	20 42 54.9	
	comp=Z,9.0nm,1.0s						
WRA	Warramunga Arr	20.91	230	P	P	20 42 53.5	-0.9
	comp=Z,5.8nm,0.7s,baz=56,slow=11,SNR=47						
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	20.91	230	P	P	20 42 52.1	-2.3
AS31	Alice Springs	23.56	223	P	P	20 43 21.9	-0.3
AS31				IAmb	IAmb	20 43 23.1	
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	23.56	223	P	P	20 43 22.0	-0.3
	comp=Z,1.5nm,0.4s,baz=54,slow=9.3,SNR=58						
	comp=Z,1.5nm,0.4s						
ASAR	Alice Springs	23.56	223	P	P	20 43 21.3	-1.0
KNRA	Kununurra	23.69	247	P	P	20 43 21.6	-1.9
KNRA				IAmb	IAmb	20 43 34.2	
	comp=Z,8.7nm,0.8s						
STKA	Stephens Creek	26.42	199	P	P	20 43 50.3	+2.1
	comp=Z,1.8nm,0.4s,baz=13,slow=8.2,SNR=8.6						
	comp=Z,1.8nm,0.4s						
STKA	Stephens Creek	26.42	199	P	P	20 43 49.7	+1.4
TORD	Torodi Ar. Bea	149.41	284	PKPbc	PKiKP	20 58 03.5	+1.1
	comp=Z,0.3nm,0.5s,baz=84,slow=4.1,SNR=2.2						
TORD	Torodi Ar. Bea	149.41	284		PKPpre	20 57 46.5	

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*TUL **20** 21:00:04.5±1.8, 36°.458N±0°.006×98°.19W±0°.01, h8^{km}±6^{km}, ML2.6, mb_Lg2.2/17(NEIC), Error ellipse: s-maj=1.4km s-min=0.7km az=58.0*

NEIC 20 21:00:04.5±1.6**, 36°.450N**±0°.010×**98°.171W**±0°.008**, h5^{km}**±2^{km}**, Error ellipse: s-maj=3.0km s-min=1.9km az=312.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.67	264	Pg	Pg	21 00 16.8	-0.7
U32A				Sg	Sg	21 00 26.6	+0.5
FNO	Franklin	1.34	152	Pn	Pn	21 00 28.6	-1.3
T35A	Sooner Cattle	1.41	70	Pn	Pn	21 00 30.0	-0.8
WMOK	Wichita Mounta	1.78	196	Pn	Pn	21 00 35.3	-0.6
X34A	Smith Ranch, M	1.86	171	Pn	Pn	21 00 37.5	+0.4
X34A				IAmb_Lg		21 01 07.6	
	comp=Z,11nm,0.8s						
TUL1	Leonard	2.00	105	Pn	Pn	21 00 38.7	-0.2
TUL1				IAmb_Lg		21 01 12.2	
	comp=Z,9.6nm,0.8s						
R32A	Long Quarter,	2.02	348	Pn	Pn	21 00 38.3	-0.9
X37A	Clayton	2.94	128	IAmb_Lg		21 01 45.7	
	comp=Z,8.0nm,0.7s						
AMTX	Amarillo	3.26	242	IAmb_Lg		21 01 55.7	
	comp=Z,6.6nm,0.8s						
S39A	Bolivar	4.07	71	IAmb_Lg		21 02 17.6	
	comp=Z,4.2nm,0.9s						
U40A	Yellville	4.29	90	IAmb_Lg		21 02 32.5	
	comp=Z,3.6nm,0.9s						
T25A	Trinidad	5.05	280	IAmb_Lg		21 02 44.4	
	comp=Z,3.9nm,0.8s						
CCM	Cathedral Cave	5.75	72	IAmb_Lg		21 03 09.0	
	comp=Z,3.6nm,0.8s						
JCT	Junction City	6.11	193	IAmb_Lg		21 03 34.1	
	comp=Z,4.0nm,0.8s						

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*NEIC **20** 21:09:38.6±2.1, 43°.61N±0°.04×105°.47W±0°.07, h0^{km}±2^{km}, ML3.2/62, Error ellipse: s-maj=9.5km s-min=4.7km az=57.0*

*IDC **20** 21:09:39.7±3.0, 43°.59N×105°.54W, h0^{km}, mbtmp2.6/2, ML3.5/2, Error ellipse: s-maj=32.0km s-min=15.2km az=126.0*

ISC 20 21:09:38.7±0.9**, 43°.60N**±0°.04×**105°.47W**±0°.03**, h0^{km}, n53,** σ1^{s}**31**/56**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.16	63	Pg	Pg	21 09 58.9	-2.0
K22A	Casper	1.23	220	Pg	Pn	21 10 03.2	-0.1
PHWY	Pilot Hill	2.30	180	Pn	Pn	21 10 18.0	-0.1
RWWY	Rawlins	2.31	215		Pg	21 10 21.9	-1.0
N23A	Red Feather La	2.73	188	Pn	Pn	21 10 23.7	-0.4
N23A				IAML		21 11 23.6	
	comp=N,54nm,1.0s						
BW06	Boulder Array	3.11	256		Pg	21 10 41.0	+2.8
PD31	Pinedale Array	3.11	256	Pn	Pn	21 10 30.4	+1.2
PD31				Pg	Pg	21 10 41.5	+3.2
PDAR	Pinedale Array	3.11	256	Pn	Pb	21 10 33.0	-2.0
	comp=N,2.4nm,0.3s,baz=71,slow=15,SNR=14						
PDAR				Pg	Pg	21 10 38.5	+0.2
	comp=N,2.6nm,0.3s,baz=71,slow=19,SNR=15						
PDAR				Lg	Lg	21 11 14.4	
	comp=N,2.9nm,0.3s,baz=74,slow=30,SNR=2.7						
PDAR				Rg	Rg	21 11 28.9	
	comp=N,14nm,0.7s,baz=72,slow=35,SNR=4.7						
	comp=N,1.7nm,0.5s						
PDAR	Pinedale Array	3.11	256	Pn	Pn	21 10 28.9	-0.3
PDAR				Pg	Pg	21 10 41.1	+2.9
RLMT	Red Lodge	3.12	300		Pn	21 10 29.4	+0.1
RLMT				IAML		21 11 32.0	
	comp=N,48nm,1.3s						
RLMT				IAML		21 11 32.9	
	comp=N,37nm,1.2s						
LAO	LASA Array	3.13	350	Pn	Pn	21 10 29.6	+0.2
OGNE	Ogallala	3.68	135	Pn	Pn	21 10 37.5	+0.6
OGNE				Pg	Pg	21 10 49.8	+0.6
LKWY	Lake	3.68	287	Pn	Pn	21 10 34.6	-2.6
LKWY				IAML		21 12 55.7	
	comp=N,34nm,3.1s						
GCMT	Greycliff	3.71	308		Pn	21 10 37.9	+0.5
LOHW	Long Hollow	3.73	272	Pn	Pn	21 10 37.9	+0.1
LOHW				Pg	Pg	21 10 51.9	+1.7
H17A	Grant Village	3.77	284		Pg	21 10 50.0	-1.0
H17A				IAML		21 11 45.9	
	comp=N,22nm,1.6s						
H17A				IAML		21 11 50.2	
	comp=E,25nm,2.1s						
FLWY	Flagg Ranch	3.82	279		Pg	21 10 50.9	-1.0
FLWY				IAML		21 11 47.5	
	comp=E,52nm,2.2s						
FLWY				IAML		21 12 02.1	
	comp=E,42nm,1.8s						
MOOW	Moose Ponds	3.83	274		Pg	21 10 51.6	-0.5
SNOW	Snow King Moun	3.85	270	Pn	Pn	21 10 39.1	-0.3
SNOW				IAML		21 11 55.2	
	comp=E,39nm,1.4s						
SNOW				IAML		21 12 12.9	
	comp=E,42nm,1.4s						
YPP	Pitchstone Pla	3.92	282		Pg	21 10 53.9	+0.1
YPP				IAML		21 12 02.4	
	comp=E,20nm,1.6s						
REDW	Red Top Meadow	3.93	268		Pg	21 10 53.2	-0.8
REDW				IAML		21 11 49.1	
	comp=E,46nm,1.5s						
REDW				IAML		21 12 00.9	
	comp=E,37nm,2.2s						
YFT	Old Faithful	3.97	284	Pg	Pg	21 10 54.3	-0.4
YFT				IAML		21 11 06.3	
	comp=E,22nm,2.1s						
YFT				IAML		21 12 01.1	
	comp=N,26nm,1.8s						
TPAW	Teton Pass	3.99	270		Pg	21 10 55.4	+0.3
TPAW				IAML		21 12 23.8	
	comp=N,28nm,1.5s						
O20A	White River Ci	4.04	212		Pg	21 10 57.1	+1.0
O20A				IAML		21 12 09.4	
	comp=N,47nm,1.1s						
O20A				IAML		21 12 17.1	
	comp=E,47nm,2.3s						
AHID	Auburn Hatcher	4.21	260		Pg	21 10 59.1	-0.2
AHID				IAML		21 12 00.1	
	comp=E,22nm,1.6s						
AHID				IAML		21 12 05.1	
	comp=E,28nm,1.6s						
YHL	Hebgen Lake	4.29	289		Pg	21 10 59.3	-1.7
YHL				IAML		21 12 17.3	
	comp=E,32nm,2.2s						
YHL				IAML		21 12 23.3	
	comp=N,31nm,1.3s						
QLMT	Earthquake Lak	4.46	288		Pg	21 11 03.5	-0.7
E28A	Huff	4.50	47	Pn	Pn	21 10 47.5	-0.7
SMCO	Snowmass	4.56	195	Pg	Pg	21 11 08.5	+2.3
SMCO				IAML		21 12 25.0	
	comp=N,21nm,1.2s						
SMCO				IAML		21 12 29.4	
	comp=N,25nm,1.3s						
BOZ	Bozeman (W)	4.83	297		Pn	21 10 52.4	-0.4
BOZ				IAML		21 12 12.3	
	comp=N,15nm,2.2s						
BOZ				IAML		21 12 32.8	
	comp=N,14nm,2.0s						
HWUT	Hardware Ranch	4.92	248		Pn	21 10 52.7	-1.4
HWUT				IAML		21 12 50.1	
	comp=N,20nm,1.2s						
DGMT	Dagmar	4.95	10	Pn	Pn	21 10 53.4	-0.9
K31A	O'Neill	5.01	99	Pn	Pn	21 10 55.1	-0.1
KSCO	Kaye Shedlock'	5.06	154		Pn	21 10 55.7	-0.2
EGMT	Eagleton	5.34	327	Pn	Pn	21 11 00.2	+0.5
P18A	Preston Nutter	5.35	224		Pn	21 10 59.0	-1.0
P18A				IAML		21 12 41.3	
	comp=N,18nm,2.0s						
P18A				IAML		21 12 50.0	
	comp=E,16nm,1.2s						
DLMT	Dillon	5.40	291	Pg	Pg	21 11 20.7	-1.4
DLMT				IAML		21 12 57.5	
	comp=E,15nm,1.9s						
DLMT				IAML		21 13 18.2	
	comp=E,17nm,2.6s						
MCMT	McKenzie Canyo	5.45	286	Pg	Pg	21 11 21.5	-1.6
LRM	Limekiln Ridge	5.45	296	Pn	Pn	21 11 00.2	-1.2
HRY	Holter Researc	5.47	307	Pg	Pg	21 11 23.2	-0.3
PV07	Paradox Valley	5.69	206	Pn	Pn	21 11 04.3	-0.4
P17A	Butcher Ranch,	5.72	226	Pg	Pg	21 11 29.0	+0.8
PV15	Paradox Valley	5.73	204	Pg	Pg	21 11 27.6	-0.9
PV23	Carpenter Ridg	5.80	209	Pn	Pn	21 11 06.1	-0.2
MPU	Maple Canyon	5.84	234	Pn	Pn	21 11 06.0	-0.7
MDND	Maddock	5.90	42	Pn	Pn	21 11 08.0	+0.6
MDND				Pg	Pb	21 11 26.2	+3.7
NLU	North Lily Min	6.14	236	Pn	Pn	21 11 10.3	-0.5
CBKS	Cedar Bluff	6.44	136		Pg	21 11 40.3	-1.9
DUG	Dugway, Tooele	6.45	241	Pn	Pn	21 11 14.2	-0.9
ULM	Lac du Bonnet	9.34	41	Pg	Pn	21 12 29.4	+35
	comp=E,0.5nm,0.3s,baz=228,slow=14,SNR=2.5						
ULM				Lg	Lg	21 14 31.1	
	comp=E,0.5nm,0.3s,baz=320,slow=19,SNR=3.6						
I56US	NEWPORT INFRAS	9.37	304	i		22 02 30.0	
	baz=113,slow=318,SNR=2.0						
TXAR	Lajitas Array	14.31	174	Pg		21 14 12.0	
	baz=359,slow=13,SNR=3.4						
TXAR				Lg	Lg	21 17 23.4	
	baz=11,slow=25,SNR=2.6						
YKA	Yellowknife Ar	19.67	347	P	P	21 14 08.8	-0.1
	baz=162,slow=12,SNR=2.2						
YKA				Lg	Lg	21 19 54.5	
	baz=155,slow=28,SNR=3.3						
	comp=E,0.1nm,0.3s						

IDC 20 21:32:29.6±6.0**, 4°.58S**×**133°.61E, h0^{km}, mb3.6**/1**, mbtmp3.4**/3**, ML3.2**/2**, Error ellipse: s-maj=351.1km s-min=31.2km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.29	177	Pn	Pn	21 36 05.4	-1.6
	0.1nm,0.3s,baz=356,slow=13,SNR=2.0						
WRA				Sn	Sn	21 38 49.4	-7.8
	0.1nm,0.3s,baz=360,slow=23,SNR=1.4						
	0.2nm,0.5s						
ASAR	Alice Springs	18.98	179	P	Pn	21 36 53.5	0.0
	0.1nm,0.3s,baz=4.0,slow=11,SNR=18						
	1.2nm,0.6s						
MKAR	Makanchi Array	68.25	325	P	P	21 43 32.4	0.0
	0.3nm,0.4s,baz=120,slow=7.2,SNR=5.4						
	0.3nm,0.4s						

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*TUL **20** 21:36:30.1±1.3, 35°.80N±0°.01×97°.59W±0°.02, h6^{km}±6^{km}, ML2.8, mb_Lg2.4/39(NEIC), Error ellipse: s-maj=2.4km s-min=1.8km az=105.0*

NEIC 20 21:36:30.2±1.0**, 35°.810N**±0°.010×**97°.61W**±0°.02**, h7^{km}**±6^{km}**, Error ellipse: s-maj=2.5km s-min=1.3km az=108.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.25	129	Pg	Pg	21 36 34.3	-0.7
ADOK				Sg	Sg	21 36 38.8	+0.4
OKCFA	Oklahoma City	0.41	162	Pg	Pg	21 36 37.8	-0.3
OKCFA				Sg	Sg	21 36 44.0	+0.4
OKCSW	OKLAHOMA CITY	0.43	161	Pg	Pg	21 36 37.9	-0.5
OKCSW				Sg	Sg	21 36 44.6	+0.6
FNO	Franklin	0.58	163	Pg	Pg	21 36 41.0	-0.3
FNO				IAmb_Lg		21 36 47.5	
	comp=Z,67nm,1.1s						
FNO				Sg	Sg	21 36 49.3	+0.5
X34A	Smith Ranch, M	1.22	189		Pg	21 36 53.3	-0.3
U32A	Winter Ranch,	1.27	297	Pn	Pn	21 36 53.8	-0.6
T35A	Sooner Cattle	1.41	38		Pn	21 36 56.3	-0.1
WMOK	Wichita Mounta	1.44	222		Pn	21 36 56.4	-0.4
TUL1	Leonard	1.48	86	Pn	Pn	21 36 56.3	-0.9
TUL1				IAmb_Lg		21 37 18.1	
	comp=Z,23nm,0.8s						
X37A	Clayton	2.20	123		Pn	21 37 07.6	+0.4
X37A				IAmb_Lg		21 37 41.5	
	comp=Z,14nm,0.8s						
Z35A	Perchaven, San	2.49	173	Pn	Pn	21 37 10.9	-0.3
Z35A				IAmb_Lg		21 37 52.7	
	comp=Z,8.8nm,0.8s						
R32A	Long Quarter,	2.75	342	Pg	Pg	21 37 21.8	-1.1
HHAR	Hobbs	3.01	80		Pn	21 37 18.7	+0.4
W39A	Magazine	3.18	100		Pn	21 37 20.8	+0.2
KSU1	Kansas State U	3.38	13	Pg	Pg	21 37 33.1	-1.8
KSU1				IAmb_Lg		21 38 20.2	
	comp=Z,9.0nm,0.9s						
AMTX	Amarillo	3.46	256	Pn	Pn	21 37 24.2	-0.4
AMTX				IAmb_Lg		21 38 20.6	
	comp=Z,15nm,1.1s						
MIAR	Mount Ida	3.53	110	Pn	Pn	21 37 26.1	+0.6
MIAR				IAmb_Lg		21 38 27.6	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	3.60	209	Pg	Pg	21 37 37.0	-2.2
ABTX				IAmb_Lg		21 38 25.2	
	comp=Z,6.9nm,0.8s						
WHTX	Lake Whitney,	3.81	178	Pg	Pb	21 37 39.2	+1.5
U40A	Yellville	3.89	81		Pn	21 37 30.5	+0.1
U40A				IAmb_Lg		21 38 43.8	
	comp=Z,7.0nm,0.8s						
S39A	Bolivar	3.92	60	Pg	Pb	21 37 40.5	+0.9
237A	Washetta, Mont	4.08	158	Pn	Pn	21 37 33.7	+0.7
237A				Pg	Pg	21 37 49.9	+1.5
X40A	Basin Creek Fa	4.13	107	Pn	Pn	21 37 33.1	-0.5
X40A				IAmb_Lg		21 38 41.2	
	comp=Z,9.7nm,0.8s						
WHAR	Wooly Hollow	4.37	95	Pn	Pn	21 37 36.9	-0.1
WHAR				IAmb_Lg		21 38 46.5	
	comp=Z,8.3nm,0.9s						
W41B	Gary Mavity, V	4.42	97	Pn	Pn	21 37 38.0	+0.4
UALR	University of	4.43	102	Pg	Pg	21 37 52.1	-2.8
FCAR	Ozark Folk Cen	4.45	87		Pn	21 37 37.4	-0.7
FCAR				IAmb_Lg		21 38 57.6	
	comp=Z,3.8nm,0.7s						
MGMO	Mountain Grove	4.50	71	IAmb_Lg		21 38 50.4	
	comp=Z,9.9nm,0.8s						
MSTX	Muleshoe	4.63	248	IAmb_Lg		21 39 01.4	
	comp=Z,3.7nm,0.8s						
P38A	Dawn	4.99	39	IAmb_Lg		21 39 13.5	
	comp=Z,8.0nm,0.8s						
KSCO	Kaye Shedlock'	5.12	310	IAmb_Lg		21 39 20.2	
	comp=Z,7.5nm,0.7s						
LCAR	Lake Charles	5.24	85	IAmb_Lg		21 39 18.4	
	comp=Z,7.6nm,1.3s						
CCM	Cathedral Cave	5.57	64	IAmb_Lg		21 39 31.0	
	comp=Z,6.1nm,0.7s						
T25A	Trinidad	5.64	286	IAmb_Lg		21 39 39.6	
	comp=Z,6.5nm,0.8s						
PBMO	Poplar Bluff	5.88	78	IAmb_Lg		21 39 37.5	
	comp=Z,7.4nm,0.8s						
FVM	French Village	6.15	67	IAmb_Lg		21 39 44.7	
	comp=Z,7.2nm,1.1s						

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*SCB **20** 22:18:30.6±0.8, 20°.75S×67°.85W, h155^{km}±11^{km}, ML2.3/1, MW4.5, Error ellipse: s-maj=4.2km s-min=3.0km az=0.0*

*GUC **20** 22:18:31.3±0.6, 20°.74S×67°.94W, h174^{km}±7^{km}, ML3.1*

ISC 20 22:18:29.6±2.1**, 20°.75S**±0°.05×**67°.91W**±0°.06**, h175^{km}**±18^{km}**, n24,** σ1^{s}**02**/37**, 3C-2D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.31	297	⇑iP	Pn	22 19 00.7	+0.8
PB08				eS	Sn	22 19 23.4	+0.3
PB08				IAML		22 19 26.4	
	comp=N,54nm,0.3s						
PB08	IPOC Station P	1.31	297	P	Pn	22 19 00.6	+0.7
PB08				S	Sn	22 19 22.3	-0.9
PB08				IAML		22 19 25.0	
	comp=N,26nm,0.3s						
PB01	IPOC Station P	1.50	259	⇑eP	Pn	22 19 01.6	+0.3
PB01				eS	Sn	22 19 25.6	-0.1
PB01				IAML		22 19 27.1	
	comp=E,103nm,0.3s						
PB01	IPOC Station P	1.50	259	P	Pn	22 19 01.6	+0.3
PB09	IPOC Station P	1.62	230	P	Pn	22 19 04.0	+1.5
HMBC	Humberstone	1.91	284	⇑eP	Pn	22 19 05.5	0.0
HMBC				eS	Sn	22 19 32.3	-1.0
HMBC				IAML		22 19 35.5	
	comp=N,106nm,0.3s						
PB11	IPOC Station P	1.91	301	eP	Pn	22 19 06.2	+0.6
PB11				eS	Sn	22 19 32.5	-0.8
PB11				IAML		22 19 35.0	
	comp=N,174nm,0.2s						
PB11	IPOC Station P	1.91	301	P	Pn	22 19 06.3	+0.7
PB02	IPOC Station P	1.94	253	⇓eP	Pn	22 19 06.4	+0.7
PB02				eS	Sn	22 19 33.2	-0.6
PB02				IAML		22 19 34.2	
	comp=N,339nm,0.2s						
LVC	Limon Verde	2.07	206	P	Pn	22 19 08.1	+0.6
PB07	IPOC Station P	2.08	242	eP	Pn	22 19 08.0	+0.6
PB07				eS	Sn	22 19 36.1	-0.6
PB07				IAML		22 19 38.2	
	comp=N,94nm,0.2s						
PB07	IPOC Station P	2.08	242	P	Pn	22 19 08.6	+1.2
PATCX	Punta Patache	2.10	268	eP	Pn	22 19 08.0	+0.5
PATCX				eS	Sn	22 19 36.1	-0.8

PATCX				IAML		22 19 38.0	
	comp=N,148nm,0.2s						
TA01	**Diego Aracena**	2.13	275	*e*P	Pn	22 19 07.9	+0.1
TA01				*i* S	Sn	22 19 36.0	-1.4
TA01				IAML		22 19 37.2	
	comp=E,80nm,0.2s						
MOCB	**Mochara**	2.18	104	P	Pn	22 19 08.7	-0.2
PB06	**IPOC Station P**	2.48	218	*e*P	Pn	22 19 12.7	+0.7
PB06				*e*S	Sn	22 19 44.8	-0.2
PB06	**IPOC Station P**	2.48	218	P	Pn	22 19 13.1	+1.1
PB04	**IPOC Station P**	2.61	232	*e*P	Pn	22 19 14.2	+0.7
PB04				*e*S	Sn	22 19 45.7	-1.9
PB04	**IPOC Station P**	2.61	232	P	Pn	22 19 14.9	+1.4
YJA	**Yavi**	2.65	123	P	Pn	22 19 14.4	+0.2
PB16	**IPOC Station P**	2.83	328⇓	*e*P	Pn	22 19 18.1	+1.5
PB16				*e*S	Sn	22 19 54.8	+1.7
PB16	**IPOC Station P**	2.83	328	P	Pn	22 19 17.9	+1.2
PB15	**IPOC Station P**	2.84	210	P	Pn	22 19 17.2	+0.9
PB12	**IPOC Station P**	3.11	313	*e*P	Pn	22 19 18.8	-0.8
PB12				*e*S	Sn	22 19 56.1	-2.4

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*IDC **20** 22:38:49.0±6.4, 6°.77N×72°.86W, h164^{km}±40^{km}, mb2.9/2, mbtmp3.5/3, Error ellipse: s-maj=119.2km s-min=35.2km az=77.0*

*RSNC **20** 22:38:50.1±1.1, 6°.82N×73°.14W, h150^{km}±4^{km}, ML3.4, Mw3.7*

ISC 20 22:38:48.7±0.9**, 6°.82N**±0°.03×**73°.11W**±0°.04**, h155**^{km}±6^{km}**, n41, σ1^{s}44**/78**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.24	197	*e*P	Pn	22 39 10.2	+0.2
BARC				*e*S	Sn	22 39 25.4	-0.9
BARC				*i*		22 39 26.5	
	comp=Z,546nm,0.2s						
BRRC	**Barranca, Sant**	0.66	296	*e*P	Pn	22 39 12.0	+0.5
BRRC				*e*S	Sn	22 39 29.3	+0.4
BRRC				*i*		22 39 33.2	
	comp=Z,374nm,0.1s						
PAMC	**Pamplona, Colo**	0.66	39⇓	*i*P	Pn	22 39 13.0	+0.9
PAMC				*e*S	Sn	22 39 30.1	+0.1
PAMC				*i*		22 39 32.4	
	comp=Z,770nm,0.5s						
RUSC	**La Rusia**	0.92	178	*e*P	Pn	22 39 14.2	+0.3
RUSC				*e*S	Sn	22 39 33.0	-0.2
RUSC				*i*		22 39 34.2	
	comp=Z,421nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.36	258	*e*P	Pn	22 39 16.6	-0.7
PTBC				*e*S	Sn	22 39 38.0	-1.2
PTBC				*i*		22 39 45.0	
	comp=Z,237nm,0.6s						
TAMC	**Tame, Arauca**	1.37	106	*e*P	Pn	22 39 18.6	+1.2
TAMC				*e*S	Sn	22 39 40.4	+1.1
OCAC	**Ocana**	1.43	352	*e*P	Pn	22 39 19.4	+1.3
OCAC				*e*S	Sn	22 39 40.2	-0.4
OCAC				*i*		22 39 45.1	
	comp=Z,558nm,0.5s						
SPBC	**San Pablo de B**	1.50	219	*e*P	Pn	22 39 19.1	+0.3
SPBC				*e*S	Sn	22 39 41.5	-0.4
SPBC				*i*		22 39 43.9	
	comp=Z,475nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.85	291	*e*P	Pn	22 39 22.8	+0.3
ZARC				*e*S	Sn	22 39 48.2	-0.3
ZARC				*i*		22 39 55.0	
	comp=Z,165nm,0.4s						
NORC	**Norcasia**	2.15	235	*e*P	Pn	22 39 26.0	+0.1
NORC				*e*S	Sn	22 39 54.4	-0.2
NORC				*i*		22 39 59.4	
	comp=Z,238nm,0.4s						
CHIC	**Chingaza**	2.26	196	*e*P	Pn	22 39 28.4	+0.8
CHIC				*e*S	Sn	22 39 57.7	0.0
CHIC				*i*		22 40 01.2	
	comp=Z,143nm,0.5s						
ROSC	**El Rosal**	2.30	211	P	Pn	22 39 30.1	+1.9
	comp=Z,146nm,0.3s,baz=291,slow=18,SNR=101						
ROSC				S	Sn	22 39 56.5	-2.1
	comp=Z,205nm,0.3s,baz=32,slow=22,SNR=10						
ROSC	**El Rosal**	2.30	211	*e*P	Pn	22 39 29.9	+1.7
ROSC				*e*S	Sn	22 40 01.5	+3.0
ROSC				*i*		22 40 08.4	
	comp=Z,210nm,0.4s						
HELC	**Santa Helena**	2.48	256	*e*P	Pn	22 39 31.9	+1.7
HELC				*e*S	Sn	22 40 01.4	-0.8
HELC				*i*		22 40 09.1	
	comp=Z,132nm,0.4s						
UREC	**San Jos de Ur**	2.57	291	*e*P	Pn	22 39 30.1	-0.9
UREC				*e*S	Sn	22 40 02.0	-1.6
UREC				*i*		22 40 13.3	
	comp=Z,126nm,0.2s						
LL1C	**La Loma 1 Cana**	2.74	351	*e*P	Pn	22 39 35.6	+2.6
LL1C				*e*S	Sn	22 40 10.6	+3.2
VILC	**Villavicencio,**	2.75	192	*e*P	Pn	22 39 33.9	+0.5
VILC				*e*S	Sn	22 40 08.4	+0.5
PTGC	**Puerto Gaitan,**	2.78	159	*e*P	Pn	22 39 33.4	-0.2
PTGC				*e*S	Sn	22 40 06.7	-1.6
PTGC				*i*		22 40 11.7	
	comp=Z,178nm,0.3s						
LL6C	**La Loma 6 Bece**	2.90	357	*e*P	Pn	22 39 34.8	-0.3
LL6C				*e*S	Sn	22 40 09.6	-1.4
LL6C				*i*		22 40 17.2	
	comp=Z,56nm,0.4s						
CBOC	**Ciudad Bolivar**	3.03	252	*e*P	Pn	22 39 38.1	+1.2
CBOC				*e*S	Sn	22 40 14.7	+0.6
CBOC				*i*		22 40 31.1	
	comp=Z,50nm,0.7s						
DBBC	**Dabeiba**	3.08	274	*e*P	Pn	22 39 37.7	+0.3
DBBC				*e*S	Sn	22 40 13.0	-2.0
SDV	**Santo Domingo**	3.20	50	*e*P	Pn	22 39 40.0	+1.0
SDV				*e*S	Sn	22 40 17.1	-1.0
SDV				*i*		22 40 20.4	
	comp=Z,57nm,0.3s						
ARGC	**Ariguani, Magd**	3.22	340	*e*P	Pn	22 39 41.3	+2.2
ARGC				*e*S	Sn	22 40 19.9	+1.7
ARGC				*i*		22 40 25.6	
	comp=Z,37nm,0.2s						
ANIL	**Santa Ana**	3.25	225	*e*P	Pn	22 39 41.5	+1.7
ANIL				*e*S	Sn	22 40 22.6	+3.4
ANIL				*i*		22 40 24.7	
	comp=Z,269nm,0.3s						
PRAC	**Prado**	3.55	210	*e*P	Pn	22 39 43.3	-0.1
PRAC				*e*S	Sn	22 40 26.8	+0.8
PRAC				*i*		22 40 32.5	
	comp=Z,117nm,0.6s						
ORTC	**Ortega, Tolima**	3.59	216	*e*P	Pn	22 39 44.5	+0.7
ORTC				*e*S	Sn	22 40 28.2	+1.5
ORTC				*i*		22 40 34.1	
	comp=Z,97nm,0.5s						
SJCC	**San Jacinto, C**	3.68	326	*e*P	Pn	22 39 44.5	-0.6
SJCC				*e*S	Sn	22 40 25.6	-3.2
SJCC				*i*		22 40 30.0	
	comp=Z,44nm,0.5s						
PLMC	**San Jos del P**	3.68	239	*e*P	Pn	22 39 45.9	+0.8
PLMC				*e*S	Sn	22 40 29.8	+0.9
PLMC				*i*		22 40 31.9	
	comp=Z,44nm,0.2s						
CRJC	**Cerrejon, Guaj**	4.18	3	*e*P	Pn	22 39 50.6	-1.0
CRJC				*e*S	Sn	22 40 39.5	-1.0
CRJC				*i*		22 40 42.7	
	comp=Z,64nm,0.2s						
GUVC	**San Jose del G**	4.27	173	*e*P	Pn	22 39 52.6	-0.1
GUVC				*e*S	Sn	22 40 41.9	-0.7
GUVC				*i*		22 40 45.4	
	comp=Z,133nm,0.3s						
YOTC	**Yotoco, Valle**	4.28	229	*e*P	Pn	22 39 52.9	0.0
YOTC				*e*S	Sn	22 40 44.0	+1.2
YOTC				*i*		22 40 54.8	
	comp=N,14nm,0.5s						
SMRC	**Santa Marta, M**	4.45	346	*e*P	Pn	22 39 56.0	+0.9
SMRC				*e*S	Sn	22 40 43.5	-3.3
SMRC				*i*		22 40 46.7	
	comp=Z,48nm,0.2s						
MACC	**Macarena, Meta**	4.70	189	*e*P	Pn	22 39 57.3	-1.1
MACC				*e*S	Sn	22 40 49.8	-2.9
MACC				*i*		22 40 52.6	
	comp=Z,25nm,0.4s						
URIC	**Uribia, Colomb**	4.98	13	*e*P	Pn	22 40 00.9	-1.0
URIC				*e*S	Sn	22 40 59.2	+0.1
MALC	**Bahia Malaga**	5.04	237	*e*P	Pn	22 40 04.8	+1.9
MALC				*e*S	Sn	22 41 00.1	-0.6
MALC				*i*		22 41 18.4	
	comp=Z,18nm,0.6s						
GARC	**Garzon, Huila**	5.18	207	*e*P	Pn	22 40 04.3	-0.5
GARC				*e*S	Sn	22 41 01.5	-2.8
GARC				*i*		22 41 06.6	
	comp=Z,40nm,0.2s						
FLOC	**Florencia**	5.79	206	*e*P	Pn	22 40 12.7	0.0
FLOC				*e*S	Sn	22 41 16.9	-1.6
FLOC				*i*		22 41 49.4	
	comp=Z,8.7nm,0.5s						
TXAR	**Lajitas Array**	36.47	312	P	P	22 45 40.1	+0.9
	comp=Z,0.2nm,0.5s,baz=133,slow=7.6,SNR=4.7						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	63.27	340	P	P	22 49 01.1	+0.5
	comp=Z,0.2nm,0.6s,baz=116,slow=7.9,SNR=2.8						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	149.12	234	PKPbc	PKiKP	22 58 18.8	-2.1
	comp=Z,0.2nm,0.7s,baz=125,slow=2.6,SNR=1.9						
WRA	**Warramunga Arr**	150.34	241	PKPbc	PKiKP	22 58 21.9	-1.5
	comp=Z,0.1nm,0.4s,baz=108,slow=2.7,SNR=6.3						

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*IDC **20** 22:41:51.5±1.0, 34°.25N×23°.88E, h0^{km}, mb3.7/11, mbtmp3.7/20, ML3.4/9, MS2.8/1, Error ellipse: s-maj=21.1km s-min=15.0km az=6.0*

*THE **20** 22:41:52.6, 34°.15N×23°.57E, h9^{km}±5^{km}, ML3.0/2, Error ellipse: s-maj=7.7km s-min=2.3km az=250.0*

*ISK **20** 22:41:53.7, 34°.27N×23°.89E, h7^{km}, ML3.4/13*

*ATH **20** 22:41:56.2, 34°.41N×23°.77E, h14^{km}±2^{km}, ML3.3/5, Error ellipse: s-maj=3.6km s-min=2.1km az=21.0*

*DDA **20** 22:42:11.0±0.0, 35°.34N×24°.68E, h42^{km}, MW3.5*

ISC 20 22:41:53.2±1.7**, 34°.23N**±0°.06×**23°.86E**±0°.04**, h10**^{km}±9^{km}**, n81, σ1^{s}39**/92**, mb3.7**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.64	17	P	Pg	22 42 05.5	0.0
GVD				S	Sg	22 42 13.4	-0.5
GVD				AML	AML	22 42 20.5	
	comp=E,6155µm,0.4s						
GVD				AML	AML	22 42 21.1	
	comp=N,7868µm,0.6s						
GVD	**Gavdhos**	0.64	17	PG	Pg	22 42 05.6	0.0
KNDR	**Palaiochora Ch**	1.01	352	P	Pg	22 42 12.4	-0.3
KNDR				S	Sg	22 42 23.6	-2.2
KNDR				AML	AML	22 42 32.7	
	comp=N,5876µm,0.7s						
KNDR				AML	AML	22 42 39.0	
	comp=E,5639µm,0.7s						
KNDR	**Palaiochora Ch**	1.01	352	P	Pg	22 42 12.6	-0.1
KNDR				S	Sn	22 42 28.6	+1.0
	comp=E,975nm,0.7s						
KNDR	**Palaiochora Ch**	1.01	352	PG	Pg	22 42 12.9	+0.2
KNDR				SG	Sb	22 42 27.3	+1.2
SIVA	**Sivas**	1.11	45	P	Pn	22 42 16.5	+1.8
TMBK	**Timbaki Herakl**	1.12	41	P	Pn	22 42 16.3	+1.3
TMBK				S	Sb	22 42 30.3	+1.0
TMBK				AML	AML	22 42 50.6	
	comp=N,3946µm,0.7s						
TMBK				AML	AML	22 42 54.1	
	comp=E,2998µm,0.8s						
TMBK	**Timbaki Herakl**	1.12	41	P	Pn	22 42 16.5	+1.6
IMMV	**Iera Moni Meta**	1.23	5	P	Pn	22 42 15.7	-0.7
IMMV				S	Sg	22 42 30.2	-2.6
IMMV				AML	AML	22 42 42.7	
	comp=N,3638µm,1.2s						
IMMV				AML	AML	22 42 44.3	
	comp=E,3100µm,0.6s						
IMMV	**Iera Moni Meta**	1.23	5	P	Pn	22 42 15.3	-1.1
IMMV	**Iera Moni Meta**	1.23	5	PN	Pn	22 42 16.4	0.0
IMMV				SN	Sg	22 42 33.6	+0.8
PRNS	**Prines Rethymn**	1.25	25	P	Pn	22 42 16.1	-0.6
PRNS				S	Sn	22 42 36.0	+2.5
	comp=E,362nm,1.0s						
CHAN	**Chania**	1.29	7	P	Pn	22 42 16.6	-0.7
RODP	**Rodopos**	1.33	356	P	Pb	22 42 18.6	+0.4
RODP	**Rodopos**	1.33	356	PN	Pb	22 42 18.6	+0.4
RODP				SN	Sn	22 42 36.8	+1.3
IDI	**Anoyia**	1.35	39	Pg	Pn	22 42 18.4	+0.2
	comp=E,10nm,0.3s,baz=246,slow=7.2,SNR=66						
IDI				Lg	Lg	22 42 36.3	
	comp=E,12nm,0.3s,baz=309,slow=14,SNR=6.8						
IDI	**Anoyia**	1.35	39	P	Pg	22 42 19.5	+0.3
IDI				S	Sb	22 42 36.0	0.0
IDI				AML	AML	22 42 49.4	
	comp=N,756µm,0.8s						
IDI				AML	AML	22 42 52.4	
	comp=E,636µm,1.1s						
IDI	**Anoyia**	1.35	39	P	Pb	22 42 18.9	+0.2
IDI	**Anoyia**	1.35	39	PN	Pb	22 42 19.1	+0.4
KSTL	**Kastelli Herak**	1.46	43	P	Pg	22 42 23.8	+2.6
KSTL	**Kastelli Herak**	1.46	43	P	Pg	22 42 22.8	+1.5
HRKL	**Herakleio**	1.48	43	P	Pb	22 42 20.7	-0.1
HRKL	**Herakleio**	1.48	43	PN	Pb	22 42 20.8	-0.1
FRMA	**Ierapetra Chan**	1.73	63	P	Pg	22 42 26.9	+0.5
NPS	**Neapolis**	1.77	54	P	Pb	22 42 26.5	+0.8
NPS	**Neapolis**	1.77	54	P	Pb	22 42 26.4	+0.6
ZKR	**Zakros**	2.13	65	P	Pb	22 42 31.7	-0.2
ZKR	**Zakros**	2.13	65	PN	Pb	22 42 30.6	-1.3
KTHR	**Kythira**	2.14	341	P	Pb	22 42 31.6	-0.5
SANT	**Santorini**	2.50	31	PN	Pn	22 42 35.5	+1.5
KARP	**Karpathos**	3.01	63	P	Pn	22 42 43.8	+2.8
KARP	**Karpathos**	3.01	63	PN	Pn	22 42 42.8	+1.8
APE	**Apeiranthos**	3.14	25	PN	Pn	22 42 42.2	-0.5
KRND	**KRANIDI**	3.20	350	P	Pn	22 42 43.6	+0.1
ITM	**Ithomi**	3.34	332	PN	Pn	22 42 47.7	+2.3
KARY	**Karystos**	3.82	7	P	Pn	22 42 52.5	+0.4
DAT	**Datca**	3.93	50	PN	Pn	22 42 54.7	+1.1
DAT	**Datca**	3.93	50	P	Pn	22 42 53.2	-0.4
BODT	**Bodrum**	3.98	44	PN	Pn	22 42 56.0	+1.7
ARG	**Arkhangelos**	4.01	59	PN	Pn	22 42 56.6	+1.9
BDRM	**Kayabasi**	4.06	45	P	Pn	22 42 53.9	-1.5
TURN	**Turunc**	4.38	53	P	Pn	22 42 58.5	-1.3
YER	**Yerkesik**	4.62	50	P	Pn	22 43 05.1	+2.0
MULA	**Mugla, Merkez-**	4.72	49	P	Pn	22 43 05.4	+0.9
AYDN	**Tasoluk**	4.73	42	P	Pn	22 43 02.7	-1.8
FETY	**Fethiye**	4.89	59	P	Pn	22 43 08.4	+1.6
AKAS	**Kas**	5.11	65	P	Pn	22 43 06.8	-3.1
AKAS				S	Sn	22 44 05.2	-3.7
TAVA	**DENIZLI_Tavas**	5.22	50	P	Pn	22 43 11.7	+0.3
CAEL	**Denizli, Camel**	5.30	55	P	Pn	22 43 11.7	-0.8
GOLH	**Golhisar**	5.52	55	P	Pn	22 43 13.3	-2.2
AKUM	**Antalya-Kumluc**	5.70	67	P	Pn	22 43 14.1	-3.7
KORT	**Korkueli**	5.96	61	P	Pn	22 43 22.7	+1.1
KORT				S	Sn	22 44 18.7	-11
KORT				*i* AML	AML	22 44 34.0	
	comp=E,13nm,0.9s						
USAK	**Uak-Merkez**	6.11	41	P	Pn	22 43 21.5	-2.0
KEPZ	**Antalya-Kepez**	6.85	65	P	Pn	22 43 32.1	-1.6
VAE	**Valguarnera**	8.33	296	Pn	Pn	22 43 56.1	+2.2
	comp=E,0.6nm,0.3s,baz=139,slow=20,SNR=1.3						
	comp=E,8.6nm,0.9s						
BRTR	**Keskin Array B**	9.55	52	Pn	Pn	22 44 11.6	+0.8
	comp=E,0.1nm,0.3s,baz=216,slow=13,SNR=6.0						
	comp=E,1.4nm,0.8s						
MMAI	**Mount Meron Ar**	9.70	94	Pn	Pn	22 44 12.8	-0.1
	comp=E,0.6nm,0.3s,baz=284,slow=5.8,SNR=5.6						
MMAI				Sn	Sn	22 45 59.6	-2.3
	comp=E,0.6nm,0.3s,baz=72,slow=32,SNR=2.1						
	comp=E,0.3nm,0.3s						
EIL	**Elat**	10.46	113	Pn	Pn	22 44 23.9	+0.7
	comp=E,0.2nm,0.3s,baz=248,slow=5.4,SNR=1.3						
EIL				Sn	Sn	22 46 20.6	+0.2
	comp=E,0.3nm,0.3s,baz=56,slow=23,SNR=1.2						
	comp=E,1.6nm,0.8s						
ASF	**Jabal al Asfar**	11.11	97	Pn	Pn	22 44 31.8	-0.4
	comp=E,0.1nm,0.3s,baz=335,slow=9.3,SNR=1.6						
	comp=E,2.5nm,0.6s						
MAUC	**Maruska**	15.77	345	*e*P	P	22 45 39.7	+0.5
VRAC	**Vranov**	16.00	343	Pn	Pn	22 45 40.3	+2.1
	comp=E,0.2nm,0.3s,baz=191,slow=10,SNR=2.1						
	comp=E,1.4nm,0.5s						
CKRC	**Cesky Krumlov**	16.21	337	*e*P	P	22 45 43.6	-0.5
GERES	**GERESS Array B**	16.44	336	Pn	P	22 45 46.2	-0.5
	comp=E,0.1nm,0.3s,baz=165,slow=12,SNR=7.5						
	comp=E,0.8nm,0.8s						
KRLC	**Kraliky**	16.67	344	*e*P	Pn	22 45 48.3	+1.5
KHC	**Kasperske Hory**	16.73	336	*e*P	P	22 45 49.1	-0.7
AKASG	**Malin Array Be**	16.92	12	Pn	Pn	22 45 48.4	-1.5
	comp=E,0.2nm,0.3s,baz=202,slow=9.6,SNR=3.0						
	comp=E,0.2nm,0.4s						
DPC	**Dobruska-Polom**	17.03	343	*e*P	Pn	22 45 42.9	-8.4
OSTC	**Ostas**	17.25	343	*e*P	P	22 45 56.7	+1.2
KBZ	**Khabaz**	17.55	52	P	Pn	22 45 58.5	+0.7
	comp=E,0.1nm,0.3s,baz=258,slow=8.9,SNR=7.1						
	comp=E,3.1nm,0.8s						
ESDC	**Sonseca Array**	22.84	292	P	P	22 46 55.4	-1.1
	comp=E,0.4nm,0.7s,baz=82,slow=10.0,SNR=4.2						
	comp=E,0.4nm,0.7s						
HFS	**Hagfors**	26.75	349	P	P	22 47 31.5	-1.3
	comp=E,0.4nm,0.5s,baz=116,slow=9.7,SNR=2.1						
	comp=E,0.4nm,0.5s						
FINES	**FINESS Array B**	27.27	2	P	P	22 47 36.1	-1.2
	comp=E,1.1nm,0.8s,baz=168,slow=9.8,SNR=4.0						
	comp=E,1.1nm,0.8s						
NOA	**NORSAR Array B**	28.04	347	LR	LR	23 02 17.2	
	comp=E,18nm,18.9s,baz=10.0,slow=44						
EKA	**Eskdalemuir Ar**	28.20	327	P	P	22 47 46.1	+0.3
	comp=E,0.7nm,0.5s,baz=123,slow=7.7,SNR=2.3						
	comp=E,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	29.07	229	P	P	22 47 54.2	+0.3
	comp=E,0.4nm,0.5s,baz=31,slow=9.1,SNR=5.3						
	comp=E,0.4nm,0.5s						
AKTO	**Aktyubinsk**	29.66	47	P	P	22 47 57.6	-1.2
	comp=E,1.3nm,0.6s,baz=268,slow=12,SNR=4.8						
	comp=E,1.3nm,0.6s						
MKAR	**Makanchi Array**	45.18	56	P	P	22 50 09.6	-0.5
	comp=E,1.8nm,0.8s,baz=280,slow=7.0,SNR=15						
	comp=E,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	46.42	46	P	P	22 50 18.6	-1.1
	comp=E,0.6nm,0.4s,baz=281,slow=8.7,SNR=3.5						
	comp=E,0.6nm,0.4s						
SONM	**Songino Array**	60.90	50	P	P	22 52 05.6	-0.5
	comp=E,0.3nm,0.6s,baz=302,slow=8.3,SNR=1.9						
	comp=E,0.3nm,0.6s						
CMAR	**Chiang Mai Arr**	67.75	82	P	P	22 52 51.2	-0.1
	comp=E,0.4nm,0.4s,baz=298,slow=9.8,SNR=1.6						
	comp=E,0.4nm,0.4s						
KSRS	**Korea Array**	79.70	52	P	P	22 54 01.0	-0.2
	comp=E,0.4nm,0.3s,baz=342,slow=5.1,SNR=1.9						
	comp=E,0.4nm,0.3s						

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*IDC **20** 22:52:05.7±1.4, 19°.43S×177°.55W, h562^{km}±16^{km}, mb3.1/6, mbtmp4.0/8, Error ellipse: s-maj=21.3km s-min=16.4km az=133.0*

*NEIC **20** 22:52:05.6±1.7, 19°.31S±0°.10×177°.5W±0°.1, h570^{km}±9^{km}, mb4.2/28, Error ellipse: s-maj=16.5km s-min=12.1km az=52.0*

ISC 20 22:52:03.9±0.5**, 19°.39S**±0°.09×**177°.43W**±0°.08**, h550**^{km}**, n62, σ1^{s}50**/66**, mb4.1**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.59	290	P	P	22 53 34.0	+3.5
	5.8nm,0.4s,baz=137,slow=19,SNR=17						
MSVF				S	S	22 54 45.6	+4.5
	1.5nm,0.3s,baz=275,slow=23,SNR=1.1						
MSVF	**Nonsavu**	4.59	290	P	P	22 53 33.7	+3.2
AFI	**Afiamalu**	7.68	46	P	P	22 54 00.1	+1.3
	11nm,0.3s,baz=116,slow=14,SNR=1.6						
AFI				S	S	22 55 30.7	-2.0
	17nm,0.4s,baz=292,slow=20,SNR=1.9						
AFI	**Afiamalu**	7.68	46	P	P	22 53 58.4	-0.3
MARNC	**Mare, Loyalty**	13.79	259	P	P	22 55 00.9	0.0
LIFNC	**LIFOU**	14.47	262	P	P	22 55 05.2	-2.7
PINNC	**Pines Island,**	14.48	255	P	P	22 55 07.6	-0.5
OUENC	**Ouen Island, N**	15.00	256	P	P	22 55 14.3	+0.9
SANVU	**Saraoutou**	15.18	283	P	P	22 55 15.9	+0.6
DZM	**Mont Dzumac**	15.32	257	P	P	22 55 18.6	+1.8
	4.4nm,0.7s,baz=91,slow=17,SNR=2.0						
DZM	**Mont Dzumac**	15.32	257	P	P	22 55 18.0	+1.1
DZM				IAmb	IAmb	22 55 19.5	
	comp=Z,7.9nm,1.0s						
OUZ	**Omahuta**	17.65	205	P	P	22 55 39.9	+1.5
OUZ				IAmb	IAmb	22 55 47.5	
	comp=Z,19nm,1.1s						
URZ	**Urewera**	19.39	193	P	P	22 55 53.0	-1.3
	comp=Z,4.0nm,0.3s,baz=309,slow=14,SNR=2.0						
URZ	**Urewera**	19.39	193	IAmb	IAmb	22 56 01.4	
	comp=Z,17nm,0.9s						
LTZ	**Lake Taylor**	24.89	198	P	P	22 56 44.2	+0.6
OXZ	**Oxford**	25.46	198	P	P	22 56 49.7	+1.2
LBZ	**Lake Benmore**	26.99	200	P	P	22 57 01.4	-0.6
LBZ				IAmb	IAmb	22 57 05.9	
	comp=Z,12nm,1.0s						
MLZ	**Mavora Lakes**	28.54	202	P	P	22 57 15.8	+0.2
MLZ				IAmb	IAmb	22 57 26.6	
	comp=Z,11nm,1.1s						
WHZ	**Wether Hill Ro**	29.06	201	P	P	22 57 20.3	+0.3
WHZ				IAmb	IAmb	22 57 32.5	
	comp=Z,13nm,1.2s						
CTAO	**Charters Tower**	34.15	263	P	P	22 58 02.0	-1.8
CTAO				IAmb	IAmb	22 58 18.2	
	comp=Z,8.1nm,1.0s						
TOO	**Toolangi**	36.99	233	P	P	22 58 27.6	+0.5
TOO				IAmb	IAmb	22 58 32.1	
	comp=Z,8.3nm,1.1s						
COEN	**Coen**	38.06	272	P	P	22 58 36.4	+0.3
COEN				IAmb	IAmb	22 58 53.5	
	comp=Z,8.7nm,1.1s						
STKA	**Stephens Creek**	38.76	243	P	P	22 58 42.9	+1.3
BBOO	**Buckleboo**	43.52	243	P	P	22 59 19.4	0.0
BBOO				IAmb	IAmb	22 59 25.7	
	comp=Z,7.7nm,1.1s						
WR0	**Warramunga Arr**	45.10	261	P	P	22 59 31.1	-0.6
WB0	**Warramunga Arr**	45.27	261	P	P	22 59 32.3	-0.7
WB0				IAmb	IAmb	22 59 33.1	
	comp=Z,3.3nm,0.7s						
WB2	**Warramunga Arr**	45.28	261	P	P	22 59 32.1	-0.9
WB2				IAmb	IAmb	22 59 42.4	
	comp=Z,2.4nm,1.0s						
WRA	**Warramunga Arr**	45.29	261	P	P	22 59 32.5	-0.7
	comp=Z,1.4nm,0.5s,baz=96,slow=7.7,SNR=27						
WRA				PcP	PcP	23 01 01.4	+0.1
	comp=Z,0.2nm,0.4s,baz=97,slow=3.4,SNR=2.2						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	45.29	261	IAmb	IAmb	22 59 35.3	
	comp=Z,0.1nm,1.1s						
AS31	**Alice Springs**	45.30	256	P	P	22 59 33.2	0.0
ASAR	**Alice Springs**	45.30	256	P	P	22 59 33.1	-0.1
	comp=Z,1.3nm,0.5s,baz=87,slow=8.0,SNR=22						
ASAR				PcP	PcP	23 01 01.2	-0.2
	comp=Z,0.4nm,0.4s,baz=112,slow=4.0,SNR=3.0						
ASAR				PP	PP	23 01 25.0	-3.5
	comp=Z,0.6nm,0.7s,baz=90,slow=8.3,SNR=3.1						
ASAR				S	S	23 05 31.7	-2.4
	comp=Z,1.5nm,0.8s,baz=94,slow=15,SNR=14						
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	45.30	256	P	P	22 59 32.8	-0.4
PSA00	**Pilbara Seismi**	58.44	256	P	P	23 01 03.8	-3.9
PSA00				IAmb	IAmb	23 01 05.3	
	comp=Z,2.7nm,0.8s						
SBA	**Scott Base**	59.01	184	P	P	23 01 13.2	+2.6
VNDA	**Vanda**	59.06	185	P	P	23 01 12.2	+1.4
	comp=Z,0.8nm,0.6s,baz=7.8,slow=6.7,SNR=9.2						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	70.67	180	P	P	23 02 25.4	+1.1
QSPA				IAmb	IAmb	23 02 26.3	
	comp=Z,5.5nm,0.8s						
CNBA	**Chernabura Isl**	75.47	11	P	P	23 02 51.9	+0.4
MAW	**Mawson**	82.78	200	P	P	23 03 30.5	+0.3
	comp=Z,3.4nm,0.9s,baz=108,slow=3.2,SNR=2.6						
	comp=Z,3.4nm,0.9s						
MAW	**Mawson**	82.78	200	P	P	23 03 29.7	-0.5
SUCK	**Suckling Hills**	83.77	16	P	P	23 03 33.3	-1.8
TXAR	**Lajitas Array**	86.01	57	P	P	23 03 49.2	+2.4
	comp=Z,0.7nm,0.7s,baz=218,slow=6.4,SNR=11						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	86.01	57	P	P	23 03 48.8	+2.0
PV10	**Paradox Valley**	86.03	47	P	P	23 03 46.4	-0.6
RDMU	**Red Mountain**	86.72	45	P	P	23 03 47.2	-2.9
RDMU				IAmb	IAmb	23 03 48.8	
	comp=Z,5.2nm,0.7s						
ILAR	**Eielson Array**	87.12	13	P	P	23 03 50.8	-0.3
	comp=Z,0.3nm,0.6s,baz=232,slow=5.5,SNR=2.5						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	127.93	350	PKP	PKPdf	23 10 06.8	0.0
	comp=Z,2.2nm,0.9s,baz=14,slow=2.5,SNR=9.5						
FINES	**FINESS Array B**	134.86	344	PKP	PKiKP	23 10 21.2	-0.4
	comp=Z,0.8nm,0.8s,baz=7.6,slow=4.2,SNR=1.6						
BRTR	**Keskin Array B**	146.47	314	PKPbc	PKPbc	23 10 44.0	-0.1
	comp=Z,1.2nm,0.5s,baz=107,slow=2.8,SNR=4.0						
CLL	**Collm**	147.10	348	*i* PKPbc	PKPbc	23 10 45.5	+0.3
GERES	**GERESS Array B**	149.27	346	PKPbc	PKPbc	23 10 51.0	+0.2
	comp=Z,0.8nm,0.6s,baz=18,slow=4.1,SNR=10						
CONA	**Conrad Observa**	149.55	342	*i* P	PKiKP	23 10 52.4	+0.1
	comp=Z,2.1nm,0.7s						
RONA	**Rosalia, Austr**	149.63	342	*i* P	PKiKP	23 10 52.5	+0.1
MOA	**Molln**	150.06	344	*i* P	PKiKP	23 10 52.9	-0.4
	comp=Z,1.1nm,0.6s						
BIOA	**Bad Ischl, Aus**	150.36	345	*i* P	PKPbc	23 10 53.4	0.0

KBA	Koelnbreinsper	151.01	345	*i* P	PKiKP	23 10 55.5	0.0
	comp=Z,3.1nm,1.1s						
WATA	Walderalm	151.17	347	*i* P	PKiKP	23 10 55.5	-0.2
	comp=Z,1.5nm,0.5s						
WTTA	Wattenberg	151.22	347	*i* P	PKiKP	23 10 56.0	+0.1
	comp=Z,1.8nm,0.5s						
MYKA	Terra Mystica	151.35	344	*i* P	PKiKP	23 10 55.8	-0.2
	comp=Z,1.5nm,0.4s						
SQTA	Sankt Quirin	151.35	348	*i* P	PKiKP	23 10 56.2	+0.1
	comp=Z,1.2nm,0.4s						
ABTA	Abfaltersbach	151.52	346	*i* P	PKPbc	23 10 55.8	-0.3
	comp=Z,2.8nm,0.6s						
FETA	Feichten	151.64	348	*e*P	PKiKP	23 10 56.7	-0.1
	comp=Z,1.6nm,0.7s						
TORD	Torodi Ar. Bea	173.74	172	PKPab	PKPab	23 12 44.5	-0.4
	comp=Z,0.2nm,0.4s,baz=152,slow=3.7,SNR=1.5						

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*IDC **20** 22:59:27.2±0.6, 13°.83N×144°.92E, h122km±5km, mb3.8/14, mbtmp4.2/14, MS3.2/1, Error ellipse: s-maj=25.4km s-min=12.0km az=95.0*

*NEIC **20** 22:59:27.9±1.7, 13°.83N±0°.08×144°.8E±0°.1, h123km±5km, mb4.4/76, Error ellipse: s-maj=17.7km s-min=10.4km az=104.0*

ISC 20 22:59:27.6±0.4**, 13°.81N**±0°.07×**144°.9E**±0°.1**, h125**km**, n106, σ0s.83**/102**, mb4.4**/50**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.22	175	P	Pn	22 59 44.8	-0.1
	3µm,0.3s,baz=311,slow=1.0,SNR=128						
GUMO				S	Sn	22 59 57.0	-0.9
	7µm,0.3s,baz=39,slow=1.2,SNR=25						
GUMO	Guam	0.22	175		Pn	22 59 44.8	-0.1
GUMO				Sn	Sn	22 59 57.4	-0.6
PATS	Pohnpei	14.94	116	Pn	Pn	23 02 52.8	+0.2
SIJI	Sorong	19.85	224	P	Pn	23 03 52.8	+1.1
	6.4nm,0.6s,baz=75,slow=14,SNR=3.6						
FAKI	Fak Fak	20.80	218	P	Pn	23 04 02.2	-0.7
FAKI				IAmb	IAmb	23 04 10.8	
	comp=Z,19nm,1.0s						
H11S3	WAKE ISLAND Hy	21.48	75	T	T	23 26 06.2	
	baz=262,slow=74						
H11S1	WAKE ISLAND Hy	21.50	75	T	T	23 25 50.3	
	baz=262,SNR=17						
H11S2	WAKE ISLAND Hy	21.50	75	T	T	23 26 14.7	
	baz=262,slow=74						
H11N1	WAKE ISLAND Hy	21.90	71	T	T	23 27 20.8	
	baz=257,slow=75,SNR=7.8						
H11N2	WAKE ISLAND Hy	21.91	71	T	T	23 27 22.8	
	baz=257,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	21.91	71	T	T	23 27 22.1	
	baz=257,slow=75,SNR=20						
MJAR	Matsushiro Arr	23.40	346	P	P	23 04 26.3	+0.9
	comp=Z,0.6nm,0.3s,baz=162,slow=10,SNR=2.0						
	comp=Z,0.6nm,0.3s						
MJAR	Matsushiro Arr	23.40	346	P	P	23 04 25.5	+0.1
MAJO	Matsushiro	23.41	346	P	P	23 04 24.7	-0.7
KSRS	Korea Array	27.96	330	P	P	23 05 07.3	+0.9
	comp=Z,0.4nm,0.5s,baz=143,slow=11,SNR=2.0						
	comp=Z,0.4nm,0.5s						
MTN	Manton Dam	29.77	208	P	P	23 05 22.0	-0.6
MTN				IAmb	IAmb	23 05 24.0	
	comp=Z,4.8nm,0.7s						
KNRA	Kununurra	33.34	209	P	P	23 05 53.9	0.0
KNRA				IAmb	IAmb	23 05 54.2	
	comp=Z,4.6nm,0.6s						
CTA	Charters Tower	33.72	178	LR	LR	23 20 14.8	
	comp=Z,35nm,18.4s,baz=82,slow=37						
CTAO	Charters Tower	33.72	178	P	P	23 05 57.6	+0.5
CTAO				IAmb	IAmb	23 05 59.2	
	comp=Z,4.3nm,1.1s						
WB0	Warramunga Arr	34.92	197	P	P	23 06 07.2	-0.3
WB0				IAmb	IAmb	23 06 07.4	
	comp=Z,4.6nm,0.6s						
WR0	Warramunga Arr	35.06	197	P	P	23 06 08.4	-0.3
WR0				IAmb	IAmb	23 06 09.3	
	comp=Z,9.9nm,1.1s						
WB2	Warramunga Arr	35.10	197	P	P	23 06 08.8	-0.2
WB2				IAmb	IAmb	23 06 10.5	
	comp=Z,7.5nm,0.9s						
WRA	Warramunga Arr	35.10	197	P	P	23 06 08.5	-0.6
	comp=Z,4.1nm,0.6s,baz=19,slow=9.4,SNR=40						
WRA				PcP	PcP	23 08 38.5	+0.4
	comp=Z,0.4nm,0.7s,baz=28,slow=3.8,SNR=2.1						
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	35.10	197	P	P	23 06 07.8	-1.2
AS31	Alice Springs	38.75	196	P	P	23 06 40.2	+0.2
AS31				IAmb	IAmb	23 06 42.3	
	comp=Z,2.7nm,0.4s						
ASAR	Alice Springs	38.76	196	P	P	23 06 39.7	-0.3
	comp=Z,1.6nm,0.7s,baz=20,slow=13,SNR=38						
ASAR				PcP	PcP	23 08 50.4	+1.2
	comp=Z,0.5nm,0.6s,baz=45,slow=3.2,SNR=2.5						
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	38.76	196	P	P	23 06 40.1	+0.1
DZM	Mont Dzumac	41.48	149	P	P	23 07 03.3	+0.8
	comp=Z,14nm,0.5s,baz=306,slow=8.7,SNR=26						
	comp=Z,14nm,0.5s						
DZM	Mont Dzumac	41.48	149	P	P	23 07 03.5	+1.0
OUENC	Ouen Island, N	41.97	149	P	P	23 07 07.0	+0.6
OUENC				IAmb	IAmb	23 07 08.9	
	comp=Z,12nm,0.8s						
PINNC	Pines Island,	42.44	148	P	P	23 07 11.3	+1.1
MBWA	Marble Bar	42.62	216	P	P	23 07 11.5	-0.3
PSA00	Pilbara Seismi	42.88	215	P	P	23 07 14.3	+0.4
PSA00				IAmb	IAmb	23 07 14.8	
	comp=Z,6.4nm,0.8s						
STKA	Stephens Creek	45.53	184	P	P	23 07 34.2	-0.6
	comp=Z,3.7nm,0.4s,baz=2.7,slow=9.1,SNR=10.0						
	comp=Z,3.7nm,0.4s						
STKA	Stephens Creek	45.53	184	P	P	23 07 34.4	-0.4
XMIS	Christmas Isla	45.77	240	P	P	23 07 34.7	-2.3
BBOO	Buckleboo	47.11	190	P	P	23 07 47.3	+0.2
FORT	Forrest	47.18	200	P	P	23 07 47.7	0.0
KIWB	Kanaga Island	48.63	31	P	P	23 07 59.2	+0.6
ADK	Adak	48.88	31	P	P	23 08 01.1	+0.6
CAN	Canberra	49.02	176	P	P	23 08 02.2	+0.3
CAN				IAmb	IAmb	23 08 20.3	
	comp=Z,9.1nm,1.1s						
TOO	Toolangi	51.11	179	P	P	23 08 18.9	+1.4
TOO				IAmb	IAmb	23 08 19.6	
	comp=Z,4.6nm,0.6s						
QRZ	Quartz Range	60.11	156	P	P	23 09 20.6	-1.1
CHGN	Chignik	60.40	32	P	P	23 09 22.7	-0.9
MKAR	Makanchi Array	61.32	316	P	P	23 09 31.1	+1.0
	comp=Z,0.3nm,0.7s,baz=100,slow=9.1,SNR=5.1						
MKAR				pP	pP	23 09 59.7	+0.7
	comp=Z,0.5nm,0.6s,baz=89,slow=7.4,SNR=3.0						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	61.32	316	P	P	23 09 32.9	+2.9
KDAK	Kodiak Island	63.89	32	P	P	23 09 46.7	-0.1
	comp=Z,5.8nm,0.8s,baz=300,slow=8.1,SNR=1.5						
	comp=Z,5.8nm,0.8s						
KDAK	Kodiak Island	63.89	32	P	P	23 09 47.5	+0.7
TTA	Tatalina	63.97	26	P	P	23 09 47.1	-0.3
L19K	White Mountain	64.19	27	P	P	23 09 48.2	-0.6
L19K				IAmb	IAmb	23 10 07.7	
	comp=Z,3.3nm,1.1s						
K20K	Telida	64.94	26	P	P	23 09 53.8	+0.1
K20K				IAmb	IAmb	23 10 01.8	
	comp=Z,3.3nm,1.1s						
CNPM	China Poot	65.05	30	P	P	23 09 54.2	-0.2
J20K	Nowinta River	65.20	25	P	P	23 09 55.8	+0.6
J20K				IAmb	IAmb	23 09 57.9	
	comp=Z,3.0nm,1.1s						
PPLA	Purkeypile	65.60	27	P	P	23 09 57.6	-0.4
PPLA				IAmb	IAmb	23 09 58.3	
	comp=Z,10.0nm,1.2s						
IMAR	Indian Mountai	66.00	23	P	P	23 10 00.0	-0.4
BPAW	Bear Paw Mtn.	66.48	26	P	P	23 10 03.0	-0.6
BPAW				IAmb	IAmb	23 10 03.5	
	comp=Z,2.8nm,1.1s						
SCM	Sheep Creek Mo	67.49	28	P	P	23 10 10.1	+0.1
SCM				IAmb	IAmb	23 10 11.1	
	comp=Z,13nm,1.2s						
H23K	Yukon River	67.58	24	P	P	23 10 09.5	-0.9
FID	Port Fidalgo	67.66	30	P	P	23 10 10.8	-0.2
DHY	Denali Highway	67.76	27	P	P	23 10 11.7	-0.1
DHY				IAmb	IAmb	23 10 26.3	
	comp=Z,2.7nm,1.0s						
WRH	Wood River Hil	67.80	26	P	P	23 10 11.1	-0.7
H24K	Noodor Dome	68.24	24	P	P	23 10 14.8	+0.1
ILAR	Eielson Array	68.38	25	P	P	23 10 13.2	-2.2
	comp=Z,0.8nm,0.4s,baz=248,slow=6.1,SNR=14						
	comp=Z,0.8nm,0.4s						
ILAR	Eielson Array	68.38	25	P	P	23 10 14.1	-1.4
TOLK	Toolik Lake Re	68.42	21	P	P	23 10 15.6	-0.1
PAX	Paxson	68.58	27	P	P	23 10 15.6	-1.2
PAX				IAmb	IAmb	23 10 17.2	
	comp=Z,1.7nm,0.6s						
BMRM	Bremner River	68.60	30	P	P	23 10 17.7	+0.8
BMRM				IAmb	IAmb	23 10 20.0	
	comp=Z,10.0nm,1.1s						
J25K	Salcha River,	68.98	26	P	P	23 10 18.1	-1.1
RIDG	Independent Ri	69.02	27	P	P	23 10 18.7	-0.7
RIDG				IAmb	IAmb	23 10 30.7	
	comp=Z,3.6nm,1.1s						
GLB	Gilahina Butte	69.06	29	P	P	23 10 20.0	+0.2
GLB				IAmb	IAmb	23 10 20.6	
	comp=Z,3.9nm,1.1s						
VRDI	Verde Repeater	69.19	29	P	P	23 10 20.7	-0.1
VRDI				IAmb	IAmb	23 10 26.3	
	comp=Z,6.2nm,1.2s						
SNH	Sunshine Point	69.33	31	P	P	23 10 21.4	-0.1
MCARA	McCarthy VSAT	69.42	29	P	P	23 10 24.5	+2.5
MCARA				IAmb	IAmb	23 10 43.4	
	comp=Z,8.0nm,1.2s						
ISLE	Juniper Island	69.64	30	P	P	23 10 23.3	-0.2
ISLE				IAmb	IAmb	23 10 27.2	
	comp=Z,5.7nm,0.9s						
YAH	Yahtse	69.90	30	P	P	23 10 25.2	+0.1
YAH				IAmb	IAmb	23 10 30.7	
	comp=Z,11nm,1.2s						
BMAR	Burnt Mountain	69.91	23	P	P	23 10 25.6	+0.7
GRNC	Granite Creek	69.94	30	P	P	23 10 26.1	+0.7
GRNC				IAmb	IAmb	23 10 35.1	
	comp=Z,7.3nm,1.1s						
M27K	Edge Creek, AK	70.11	28	P	P	23 10 26.3	0.0
TABL	Table Mountain	70.20	30	P	P	23 10 26.8	-0.2
TABL				IAmb	IAmb	23 10 34.8	
	comp=Z,5.2nm,1.0s						
L27K	Beaver Creek,	70.24	28	P	P	23 10 27.1	+0.2
BCAR	Beaver Creek A	70.26	28	P	P	23 10 26.7	-0.4
K27K	Chicken	70.28	27	P	P	23 10 28.2	+1.1
HYT	Haines Junctio	72.03	30	P	P	23 10 39.0	+1.2
M30M	Minto, Yukon	72.48	28	P	P	23 10 40.9	+0.5
EPYK	Eagle Plains	72.81	24	P	P	23 10 42.1	-0.2
EPYK				IAmb	IAmb	23 10 43.1	
	comp=Z,2.6nm,0.4s						
M31M	Drury Creek, Y	73.58	29	P	P	23 10 46.7	-0.2
INK	Inuvik	74.17	22	P	P	23 10 50.5	+0.4
	comp=Z,0.8nm,0.6s,baz=255,slow=5.7,SNR=3.5						
	comp=Z,0.8nm,0.6s						
INK	Inuvik	74.17	22	IAmb	IAmb	23 10 51.3	
	comp=Z,1.0nm,0.7s						
DIB	Dawson Inlet,	74.69	38	P	P	23 10 52.7	-0.7
DIB				IAmb	IAmb	23 11 05.0	
	comp=Z,14nm,1.1s						
DLBC	Dease Lake	75.81	33	P	P	23 11 00.1	+0.3
	comp=Z,1.5nm,0.5s,baz=254,slow=3.8,SNR=5.4						
	comp=Z,1.5nm,0.5s						
DLBC	Dease Lake	75.81	33	P	P	23 11 00.7	+0.8
A36M	Sachs Harbour	76.94	19	P	P	23 11 05.2	-0.7
A36M				IAmb	IAmb	23 11 06.1	
	comp=Z,2.9nm,1.0s						
HEBO	Mount Hebo	81.31	46	P	P	23 11 29.5	-0.8
I02E	Swisshome, OR	81.45	47	P	P	23 11 31.6	+0.7
J01E	Myrtle Point	81.57	48	P	P	23 11 32.4	+0.8
KRPM	Rodgers	81.89	50	P	P	23 11 34.2	+0.7
HUMO	Hull Mountain	82.38	48	P	P	23 11 37.3	+1.4
HUMO				IAmb	IAmb	23 11 39.7	
	comp=Z,2.4nm,0.8s						
H04A	Detroit Lake	82.51	46	P	P	23 11 36.0	-0.5
H04A				IAmb	IAmb	23 11 37.3	
	comp=Z,4.5nm,0.7s						
YKA	Yellowknife Ar	82.67	27	P	P	23 11 36.0	-0.9
	comp=Z,0.4nm,0.5s,baz=286,slow=5.1,SNR=6.8						
	comp=Z,0.4nm,0.5s						
J04D	Umpqua Nationa	82.86	47	P	P	23 11 39.2	+0.6
L04D	Klamath Falls	82.94	48	P	P	23 11 39.7	+0.7
L04D				IAmb	IAmb	23 11 40.0	
	comp=Z,5.4nm,0.5s						
K05A	Summer Lake	83.85	48	P	P	23 11 44.3	+0.6
K05A				IAmb	IAmb	23 11 45.0	
	comp=Z,5.9nm,0.9s						
BEKR	Beckworth	84.89	50	P	P	23 11 49.6	+0.6
BEKR				IAmb	IAmb	23 11 50.0	
	comp=Z,3.4nm,0.6s						
NVAR	Mina Array Bea	86.80	51	P	P	23 11 58.9	+0.4
	comp=Z,1.2nm,0.5s,baz=265,slow=6.8,SNR=6.3						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	90.95	335	P	P	23 12 16.2	-1.0
	comp=Z,1.1nm,0.9s,baz=46,slow=4.0,SNR=5.0						
	comp=Z,1.1nm,0.9s						
TORD	Torodi Ar. Bea	134.72	305	PKP	PKPdf	23 18 31.7	-0.8
	comp=Z,0.6nm,1.0s,baz=117,slow=2.7,SNR=1.6						

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*GCG **20** 23:06:31.7±0.4, 13°.86N×91°.43W, h16km, MD3.7*

*SNET **20** 23:06:32.0±1.9, 13°.80N×91°.27W, h12km±27km, ML3.3*

ISC 20 23:06:29.2±2.9**, 13°.8N**±0°.1×**91°.3W**±0°.1**, h1**km±16km**, n9, σ0s.64**/14**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.83	33	*e*P	Pb	23 06 46.9	+0.3
PCG	Pacaya	0.94	47	*e*P	Pn	23 06 49.8	0.0
STG3	Santiaguito 3,	0.99	345	*e*P	Pg	23 06 47.9	-0.3
NBG	Las Nubes	1.25	48	*e*S	Sn	23 07 11.9	0.0
NUBE	Las Nubes	1.50	84	*e*P	Pn	23 06 57.5	+0.1
NUBE				*e*S	Sn	23 07 16.9	-0.8
NUBE				IAML		23 07 17.9	
	comp=Z,297nm,0.3s						
SLOZ	Alcaldia de Sa	1.51	79	*e*P	Pn	23 06 58.2	+0.7
SLOZ				*e*S	Sn	23 07 18.1	+0.2
SLOZ				IAML		23 07 22.1	
	comp=Z,196nm,0.3s						
CEVE	Cerro Verde	1.64	87	*e*P	Pn	23 07 00.3	+0.8
CEVE				*e*S	Sg	23 07 22.1	+0.1
CEVE				IAML		23 07 28.9	
	comp=Z,2µm,0.3s						
JAYA	Jayaque - finc	1.81	93	*e*P	Pn	23 07 01.2	-0.6
JAYA				*e*S	Sn	23 07 24.8	-0.7
JAYA				IAML		23 07 27.5	
	comp=Z,841nm,0.2s						
SJTE	Alcalda de S	2.24	93	*e*P	Pn	23 07 08.6	+1.0
SJTE				*e*S	Sb	23 07 38.7	-0.3
SJTE				IAML		23 07 42.6	
	comp=Z,93nm,0.2s						

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*IDC **20** 23:07:26.9±45.0, 15°.88S×175°.18W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=846.3km s-min=173.1km az=78.0*

*NEIC **20** 23:07:46.6±1.2, 16°.9S±0°.1×174°.1W±0°.1, h222km±6km, mb4.2/19, Error ellipse: s-maj=23.7km s-min=14.7km az=127.0*

ISC 20 23:07:44.6±0.8**, 16°.9S**±0°.1×**174°.3W**±0°.2**, h200**km**, n26, σ1s.18**/25**, mb4.2**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.81	39	Pn	Pn	23 08 46.2	+2.0
KNTN	Kanton	14.25	10		P	23 10 59.7	+0.4
MARNC	Mare, Loyalty	17.34	252	P	Pn	23 11 35.9	+1.0
SANVU	Saraoutou	17.87	272	P	Pn	23 11 40.5	-0.7
SANVU				IAmb	IAmb	23 11 56.2	
	comp=Z,22nm,1.1s						
BFZ	Birch Farm	25.09	197	P	P	23 12 51.7	+0.8
TOO	Toolangi	40.89	232	P	P	23 15 08.6	+1.2
TOO				IAmb	IAmb	23 15 10.8	
	comp=Z,4.8nm,1.1s						
STKA	Stephens Creek	42.59	241	P	P	23 15 22.8	+1.6
	comp=Z,1.3nm,0.4s,baz=103,slow=7.1,SNR=3.5						
	comp=Z,1.3nm,0.4s						
STKA	Stephens Creek	42.59	241	P	P	23 15 22.2	+1.0
MCQ	Macquarie Isla	42.85	203	P	P	23 15 22.1	-0.7
BBOO	Buckleboo	47.36	241	P	P	23 15 58.4	-0.4
BBOO				IAmb	IAmb	23 16 07.9	
	comp=Z,5.6nm,0.9s						
WR0	Warramunga Arr	48.53	258	P	P	23 16 07.6	-0.3
WR0				IAmb	IAmb	23 16 18.6	
	comp=Z,3.0nm,1.1s						
WB0	Warramunga Arr	48.68	258	P	P	23 16 08.5	-0.6
WB2	Warramunga Arr	48.70	258	P	P	23 16 08.7	-0.6
WRAB	Tennant Creek	48.71	258	P	P	23 16 14.2	+4.9
WRAB				IAmb	IAmb	23 16 16.8	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	48.72	258	P	P	23 16 08.3	-1.0
	comp=Z,1.1nm,0.5s,baz=94,slow=7.1,SNR=26						
	comp=Z,1.1nm,0.5s						
WRA	Warramunga Arr	48.72	258	P	P	23 16 08.5	-0.8
AS31	Alice Springs	48.88	253	P	P	23 16 10.2	-0.3
AS31				IAmb	IAmb	23 16 10.9	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	48.88	253	P	P	23 16 10.5	-0.1
	comp=Z,6.9nm,0.6s,baz=87,slow=8.6,SNR=98						
	comp=Z,6.9nm,0.6s						
ASAR	Alice Springs	48.88	253	P	P	23 16 10.1	-0.5
MTN	Manton Dam	52.80	267	P	P	23 16 39.4	-0.5
MTN				IAmb	IAmb	23 16 45.9	
	comp=Z,6.9nm,1.1s						
FORT	Forrest	54.02	244	P	P	23 16 48.2	-0.3
KNRA	Kununurra	54.54	263	P	P	23 16 52.5	0.0
KNRA				IAmb	IAmb	23 17 08.0	
	comp=Z,6.3nm,1.1s						
PAGB	Antelope Grade	73.15	43	P	P	23 18 49.8	-3.7
PAGB				IAmb	IAmb	23 18 51.3	
	comp=Z,7.5nm,0.6s						
C03A	Quillayute Air	78.31	32	P	P	23 19 21.2	-1.2
HG4B	Hotspring	78.36	25	P	P	23 19 22.7	+0.1
HG4B				IAmb	IAmb	23 19 27.8	
	comp=Z,21nm,0.9s						
PSUT	Pine Spring	78.95	44	P	P	23 19 26.9	+0.4
PSUT				IAmb	IAmb	23 19 28.2	
	comp=Z,9.1nm,0.8s						

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*TUL **20** 23:10:11.5±0.7, 36°.343N±0°.006×97°.67W±0°.02, h6km±6km, ML2.6, mb_Lg2.2/18(NEIC), Error ellipse: s-maj=1.8km s-min=0.7km az=71.0*

NEIC 20 23:10:11.4±0.7**, 36°.341N**±0°.009×**97°.67W**±0°.02**, h7**km±6km**, Error ellipse: s-maj=1.8km s-min=1.4km az=76.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.94	169	Pg	Pg	23 10 29.3	-0.2
OKCSW	OKLAHOMA CITY	0.95	169	Pg	Pg	23 10 29.2	-0.4
U32A	Winter Ranch,	1.07	272		Pg	23 10 31.2	-0.9
T35A	Sooner Cattle	1.09	58	Pg	Pg	23 10 31.7	-0.7
FNO	Franklin	1.10	168	Pg	Pg	23 10 31.8	-0.8
TUL1	Leonard	1.58	105	Pn	Pn	23 10 38.7	-1.1
X34A	Smith Ranch, M	1.74	184	Pn	Pn	23 10 42.6	+0.6
X34A				IAmb_Lg		23 11 07.9	
	comp=Z,14nm,1.0s						
WMOK	Wichita Mounta	1.84	210		Pn	23 10 44.0	+0.6
WMOK				IAmb_Lg		23 11 08.8	
	comp=Z,3.9nm,0.9s						
R32A	Long Quarter,	2.24	339	Pn	Pn	23 10 48.1	-0.8
X37A	Clayton	2.56	132	Pn	Pn	23 10 53.5	+0.1
X37A				IAmb_Lg		23 11 37.8	
	comp=Z,6.6nm,0.8s						
W39A	Magazine	3.36	109	IAmb_Lg		23 12 06.2	
	comp=Z,6.7nm,0.8s						
AMTX	Amarillo	3.58	247	IAmb_Lg		23 12 13.0	
	comp=Z,9.3nm,0.8s						
S39A	Bolivar	3.73	68	IAmb_Lg		23 12 10.9	
	comp=Z,5.4nm,0.7s						
X40A	Basin Creek Fa	4.36	114	IAmb_Lg		23 12 30.5	
	comp=Z,5.3nm,1.2s						
MGMO	Mountain Grove	4.41	78	IAmb_Lg		23 12 32.1	
	comp=Z,4.7nm,0.7s						
CCM	Cathedral Cave	5.41	70	IAmb_Lg		23 13 10.7	
	comp=Z,5.4nm,0.8s						
JCT	Junction City	6.11	198	IAmb_Lg		23 13 38.7	
	comp=Z,4.7nm,1.0s						

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*IDC **20** 23:12:33.6±1.5, 38°.07N×21°.66E, h0km, mb3.5/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=46.7km s-min=24.7km az=143.0*

*THE **20** 23:12:38.0, 38°.02N×21°.58E, h10km, ML3.0/16, Error ellipse: s-maj=1.5km s-min=1.0km az=259.0*

ISC 20 23:12:37.0±0.9**, 38°.01N**±0°.03×**21°.56E**±0°.04**, h18**km±3km**, n35, σ0s.76**/53**, mb3.3**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.09	302	P	Pg	23 12 41.0	+0.5
RLS				S	Sg	23 12 43.8	+0.8
	14µm,0.3s						
DRO	Drossia	0.13	117	P	Pg	23 12 41.2	+0.1
DRO				S	Sg	23 12 44.1	+0.3
	40µm,0.4s						
UPR	University Cam	0.33	33	P	Pb	23 12 45.1	+0.8
UPR				S	Sb	23 12 49.9	+0.8
LAKA	Lakka	0.40	55	P	Pg	23 12 45.1	-0.2
KLV	Kalavryta, Ach	0.47	86	P	Pb	23 12 45.8	-0.9
KLV				S	Sb	23 12 53.5	+0.2
	1µm,0.3s						
EFP	Efpalio	0.50	33	P	Pb	23 12 46.7	-0.4
EFP				S	Sg	23 12 54.9	+1.2
	3µm,0.4s						
ALIK	Aliki, Aigiali	0.50	60	P	Pb	23 12 46.9	-0.3
ALIK				S	Sb	23 12 54.8	+0.6
ANX	Ano Chora	0.65	26	P	Pb	23 12 49.3	-0.4
ANX				S	Sg	23 12 59.8	+1.3
	2µm,0.6s						
THAL	Thalero	0.87	88	P	Pb	23 12 52.8	-0.7
THAL				S	Sb	23 13 06.2	+1.4
	3µm,0.4s						
ITM	Ithomi	0.88	161	P	Pb	23 12 53.2	-0.5
EVR	Evrytania	0.92	12	P	Pb	23 12 54.2	-0.3
MAKR	Makrakomi, Fth	1.10	24	P	Pn	23 12 57.3	-0.1
AGG	Agios Georgios	1.18	31	P	Pg	23 12 59.7	0.0
AGG				S	Sg	23 13 15.8	+0.7
	532nm,0.5s						
EPID	Epidavros	1.30	107	P	Pb	23 13 01.4	+0.6
EPID				S	Sg	23 13 19.8	+0.8
	628nm,0.3s						
LKR	Lokris	1.30	60	P	Pn	23 12 59.5	-0.7
LKR				S	Sg	23 13 19.8	+0.8
	425nm,0.5s						
ATAL	Atalanti	1.33	59	P	Pn	23 13 00.7	0.0
ATAL				S	Sb	23 13 20.1	+1.9
	312nm,0.9s						
VILL	Villia	1.39	83	P	Pn	23 13 01.4	-0.1
KRND	KRANIDI	1.41	116	P	Pn	23 13 02.3	+0.6
KRND				S	Sg	23 13 22.8	+0.3
	678nm,0.5s						
THL	Klokotos Trika	1.59	13	P	Pb	23 13 06.6	+0.8
VLI	Veliai	1.69	139	P	Pb	23 13 08.0	+0.4
ATH	Athens Observa	1.71	91	P	Pb	23 13 08.0	+0.3
ATH				S	Sb	23 13 29.7	+0.9
	385nm,0.5s						
ATHU	Athens Univers	1.76	91	P	Pn	23 13 06.7	+0.2
ATHU				S	Sb	23 13 31.4	+1.0
	68nm,0.5s						
VLY	Voula,Athens	1.77	94	P	Pn	23 13 06.7	0.0
PTL	Penteli	1.82	88	P	Pn	23 13 07.5	+0.1
PTL				S	Sb	23 13 33.1	+0.9
	315nm,0.5s						
NEO	Neokhori	1.83	45	P	Pn	23 13 07.9	+0.3
NEO				S	Sb	23 13 32.4	-0.2
	245nm,0.6s						
XOR	Xorichti	1.86	43	P	Pn	23 13 08.7	+0.8
DION	Dionisos Attik	1.88	87	P	Pn	23 13 08.4	+0.3
DION				S	Sb	23 13 34.0	+0.2
	695nm,0.5s						
KYMI	Kymi, Euboea I	2.09	72	P	Pn	23 13 11.3	+0.2
KTHR	Kythira	2.10	146	P	Pb	23 13 15.3	+0.9
LIT	Litokhoron	2.21	19	P	Pb	23 13 16.4	+0.1
ESDC	Sonseca Array	19.93	283	P	P	23 17 07.6	-0.2
	baz=81,slow=12,SNR=4.8						
	0.4nm,0.6s						
FINES	FINESS Array B	23.62	5	P	P	23 17 45.3	-1.4
	0.8nm,0.8s,baz=195,slow=13,SNR=3.3						
	0.8nm,0.8s						
TORD	Torodi Ar. Bea	30.43	221	P	P	23 18 48.8	+0.4
	0.3nm,0.7s,baz=31,slow=8.7,SNR=4.1						
	0.3nm,0.7s						
MKAR	Makanchi Array	44.69	58	P	P	23 20 46.9	-1.8
	0.2nm,0.5s,baz=282,slow=6.0,SNR=4.2						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	45.19	48	P	P	23 20 51.4	-1.1
	0.7nm,0.5s,baz=268,slow=7.2,SNR=4.0						
	0.7nm,0.5s						

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*IDC **20** 23:18:41.8±1.5, 34°.00N×24°.17E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=45.3km s-min=22.0km*

az=129.0

ISC 20 23:18:46.9±1.3, 34°.9N±0°.3×23°.2E±0°.2, h35^{km}, n6, σ0^s.75/7, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.45**	**74**	Pn	**Pn**	**23 19 10.2**	**-0.4**
	7.4nm,0.3s,baz=207,slow=19,SNR=12						
IDI				Sn	**Sn**	**23 19 29.1**	**+0.7**
	6.5nm,0.3s,baz=132,slow=23,SNR=3.4						
BELG	**Belogornoye**	**24.67**	**37**	P	**P**	**23 24 05.0**	**+0.8**
	5.2nm,0.8s,baz=243,slow=2.3,SNR=4.2						
	5.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.11**	**227**	P	**P**	**23 24 44.7**	**+0.2**
	0.1nm,0.4s,baz=42,slow=8.0,SNR=1.6						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**42.53**	**51**	P	**P**	**23 26 38.4**	**-0.5**
	0.3nm,0.5s,baz=279,slow=8.2,SNR=5.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**45.26**	**56**	P	**P**	**23 27 00.2**	**-0.7**
	0.5nm,0.6s,baz=276,slow=7.0,SNR=6.2						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**46.34**	**46**	P	**P**	**23 27 08.9**	**-0.3**
	0.4nm,0.5s,baz=288,slow=9.4,SNR=1.9						
	0.4nm,0.5s						

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*TAP **20** 23:31:02.1, 24°.34N×121°.81E, h14^{km}, ML3.5, B*

*JMA **20** 23:31:02.1±0.1, 24°.3N±0°.8×12°2E±°, h19^{km}±4^{km}, MV3.0/10, TAIWAN REGION*

ISC 20 23:31:02.3±0.8, 24°.36N±0°.02×121°.83E±0°.02, h13^{km}±4^{km}, n73, σ0^s.64/136, 16C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**236**	*i*P	**Pg**	**23 31 05.0**	**-0.3**
	baz=239						
EHP				S	**Sg**	**23 31 07.1**	**-0.2**
	baz=239						
EWUT	**Wuta**	**0.09**	**332**	P	**Pg**	**23 31 05.2**	**0.0**
	baz=345						
EWUT				S	**Sg**	**23 31 07.2**	**-0.1**
	baz=345						
ENA	**Nanau**	**0.10**	**310**	⇑*i*P	**Pg**	**23 31 05.4**	**0.0**
	baz=327						
ENA				*e*S	**Sg**	**23 31 07.4**	**-0.1**
	baz=327						
TWC	**Suao**	**0.25**	**5**	*i*P	**Pg**	**23 31 08.0**	**+0.4**
	baz=10.0						
TWC				*i*S	**Sg**	**23 31 11.6**	**+0.5**
	baz=10.0						
ETL	**Fush Village**	**0.28**	**222**	*i*P	**Pg**	**23 31 07.5**	**-0.5**
	baz=223						
ETL				*e*S	**Sg**	**23 31 11.8**	**-0.1**
	baz=223						
NACB	**Ninganchiao**	**0.28**	**228**	⇓*i*P	**Pg**	**23 31 07.6**	**-0.5**
	baz=230						
NACB				*i*S	**Sg**	**23 31 11.5**	**-0.7**
	baz=230						
NDS	**Dongshan**	**0.29**	**340**	⇑*i*P	**Pb**	**23 31 08.8**	**-0.5**
	baz=344						
NDS				*i*S	**Sb**	**23 31 12.9**	**-1.1**
	baz=344						
LATG	**Datong**	**0.32**	**302**	⇑*i*P	**Pb**	**23 31 09.3**	**-0.6**
	baz=307						
LATG				*i*S	**Sb**	**23 31 13.8**	**-1.3**
	baz=307						
ETLH	**Xiulin Townshi**	**0.35**	**244**	⇓*i*P	**Pg**	**23 31 09.0**	**-0.4**
	baz=246						
ETLH				*e*S	**Sg**	**23 31 13.8**	**-0.4**
	baz=246						
TWD	**Chiawan**	**0.35**	**217**	⇓*i*P	**Pg**	**23 31 08.8**	**-0.6**
	baz=216						
TWD				*e*S	**Sg**	**23 31 13.6**	**-0.6**
	baz=216						
ENTT	**Nioudou**	**0.36**	**319**	⇑*i*P	**Pb**	**23 31 10.2**	**-0.4**
	baz=324						
ENTT				S	**Sb**	**23 31 15.2**	**-1.0**
	baz=324						
NDT	**Datong Townshi**	**0.37**	**310**	⇑*e*P	**Pb**	**23 31 10.1**	**-0.6**
	baz=314						
NDT				*e*S	**Sb**	**23 31 15.6**	**-0.9**
	baz=314						
TWE	**Neicheng**	**0.39**	**338**	⇑*i*P	**Pb**	**23 31 10.7**	**-0.3**
	baz=343						
TWE				*e*S	**Sb**	**23 31 16.0**	**-0.8**
	baz=343						
ILA	**Ilan**	**0.41**	**350**	*e*P	**Pb**	**23 31 11.4**	**+0.1**
	baz=354						
ILA				*e*S	**Sb**	**23 31 17.3**	**-0.1**
	baz=354						
NNSB	**Datong**	**0.41**	**279**	⇑*i*P	**Pg**	**23 31 10.7**	**+0.2**
	baz=283						
NNSB				*e*S	**Sg**	**23 31 16.2**	**+0.2**
	baz=283						
NNS	**Nan Shan**	**0.42**	**281**	*e*P	**Pg**	**23 31 10.8**	**+0.2**
	baz=284						
NNS				*e*S	**Sg**	**23 31 16.4**	**0.0**
	baz=284						
HWA	**Hwalien**	**0.43**	**208**	*e*P	**Pg**	**23 31 11.1**	**+0.2**
	baz=206						
FUSB	**Fushanzhiwuyua**	**0.45**	**331**	⇑*i*P	**Pb**	**23 31 11.9**	**-0.2**
	baz=334						
FUSB				*e*S	**Sb**	**23 31 18.1**	**-0.7**
	baz=334						
NTC	**Toucheng**	**0.49**	**0**	⇑*e*P	**Pb**	**23 31 12.6**	**-0.1**
	baz=2.0						
NTC				*e*S	**Sb**	**23 31 18.9**	**-0.9**
	baz=2.0						
EGS		**0.49**	**11**	*e*P	**Pb**	**23 31 13.0**	**+0.2**
	baz=14						
EGS				*e*S	**Sb**	**23 31 19.4**	**-0.4**
	baz=14						
ETM	**Tongmen**	**0.50**	**218**	P	**Pg**	**23 31 11.5**	**-0.6**
	baz=218						
ETM				*e*S	**Sg**	**23 31 18.1**	**-0.7**
	baz=218						
NWLT	**Wulai**	**0.51**	**325**	⇑*i*P	**Pb**	**23 31 12.9**	**-0.1**
	baz=327						
NWLT				*e*S	**Sb**	**23 31 19.5**	**-0.8**
	baz=327						
YHNB	**Yeheng**	**0.51**	**307**	⇑*i*P	**Pb**	**23 31 13.0**	**-0.1**
	baz=310						
YHNB				*e*S	**Sb**	**23 31 19.6**	**-0.9**
	baz=310						
NSK	**Sanguang**	**0.53**	**306**	⇑*i*P	**Pb**	**23 31 13.2**	**-0.2**
	baz=309						
NSK				S	**Sb**	**23 31 20.2**	**-0.7**
	baz=309						
TEYL	**Yanliau Villag**	**0.54**	**203**	*e*P	**Pg**	**23 31 12.8**	**0.0**
	baz=203						
TEYL				*e*S	**Sb**	**23 31 22.9**	**+1.9**
	baz=203						
FUSS	**Fushou**	**0.54**	**258**	⇓*i*P	**Pg**	**23 31 13.0**	**0.0**
	baz=260						
FUSS				S	**Sg**	**23 31 20.2**	**-0.1**
	baz=260						
WHF	**Hehuan Shan**	**0.56**	**247**	⇓*i*P	**Pg**	**23 31 13.0**	**-0.3**
	baz=248						
WHF				S	**Sg**	**23 31 20.4**	**-0.4**
	baz=248						
TWT	**Tachien**	**0.60**	**260**	*e*P	**Pb**	**23 31 14.7**	**-0.1**
	baz=261						
TWT				*e*S	**Sg**	**23 31 22.5**	**+0.3**
	baz=261						
TIPB	**Shuangxi**	**0.61**	**360**	⇑*i*P	**Pb**	**23 31 14.8**	**0.0**
	baz=1.0						
TIPB				S	**Sb**	**23 31 22.5**	**-0.7**
	baz=1.0						
TDCB	**Techi**	**0.62**	**260**	*e*P	**Pg**	**23 31 14.5**	**+0.1**
	baz=262						
TDCB				*e*S	**Sg**	**23 31 22.1**	**-0.5**
	baz=262						
TWA	**Mucha**	**0.65**	**340**	*e*P	**Pb**	**23 31 15.9**	**+0.4**
	baz=343						
TWA				*e*S	**Sb**	**23 31 24.1**	**-0.5**
	baz=343						
ESL	**Shilin**	**0.65**	**213**	⇑P	**Pg**	**23 31 14.2**	**-0.8**
	baz=213						
ESL				*e*S	**Sg**	**23 31 23.8**	**+0.2**
	baz=213						
NHDH	**Xindian Distri**	**0.66**	**335**	*e*P	**Pb**	**23 31 16.1**	**+0.6**
	baz=337						
NHDH				*e*S	**Sb**	**23 31 24.2**	**-0.4**
	baz=337						
TWB1	**Santiao Chiao**	**0.66**	**13**	*e*P	**Pb**	**23 31 15.7**	**0.0**
	baz=14						
TWB1				*e*S	**Sg**	**23 31 23.9**	**+0.1**
	baz=14						
NFF	**Wufeng Townshi**	**0.70**	**293**	*e*P	**Pb**	**23 31 16.4**	**+0.1**
	baz=295						
NFF				*e*S	**Sg**	**23 31 25.1**	**0.0**
	baz=295						
NWF	**Wu-fen Shan**	**0.71**	**357**	*e*P	**Pb**	**23 31 17.0**	**+0.5**
	baz=358						
NWF				*e*S	**Sb**	**23 31 26.1**	**0.0**
	baz=358						
WFSB	**Wu-fen Shan**	**0.71**	**357**	*e*P	**Pb**	**23 31 17.0**	**+0.6**
	baz=358						
WFSB				*e*S	**Sb**	**23 31 26.1**	**0.0**
	baz=358						
OWD	**Renai**	**0.72**	**236**	⇓P	**Pg**	**23 31 15.7**	**-0.6**
	baz=236						
OWD				*e*S	**Sg**	**23 31 25.4**	**-0.4**
	baz=236						
SXI1	**Grass Mountain**	**0.73**	**4**	⇑*e*P	**Pb**	**23 31 17.3**	**+0.4**
	baz=5.0						
SXI1				*e*S	**Sb**	**23 31 26.6**	**-0.2**
	baz=5.0						
WUSB	**Renai**	**0.74**	**240**	⇓P	**Pg**	**23 31 16.5**	**-0.3**
	baz=241						
WUSB				*e*S	**Sg**	**23 31 26.4**	**-0.2**
	baz=241						
EGFH	**Guangfu**	**0.78**	**208**	*e*P	**Pg**	**23 31 16.6**	**-0.8**
	baz=208						
EGFH				*e*S	**Sg**	**23 31 28.6**	**+0.9**
	baz=208						
TNOU	**National Taiwa**	**0.79**	**357**	*e*P	**Pb**	**23 31 18.5**	**+0.7**
	baz=358						
LIOB	**Emei**	**0.79**	**291**	*e*P	**Pb**	**23 31 18.5**	**+0.7**
	baz=293						
LIOB				*e*S	**Sb**	**23 31 28.9**	**+0.4**
	baz=293						
NSTT	**Nanjuang**	**0.80**	**290**	*e*P	**Pb**	**23 31 17.8**	**-0.1**
	baz=292						
NSTT				*e*S	**Sb**	**23 31 28.6**	**-0.1**
	baz=292						
WHP	**Taichung City**	**0.81**	**264**	*e*P	**Pb**	**23 31 18.4**	**+0.2**
	baz=265						
WHP				*e*S	**Sg**	**23 31 28.6**	**0.0**
	baz=265						
YM01	**YM01**	**0.81**	**343**	⇑*e*P	**Pn**	**23 31 19.3**	**-0.2**
	baz=345						
YM01				*e*S	**Sb**	**23 31 29.6**	**+0.4**
	baz=345						
TWS1	**Kuangyinshan**	**0.82**	**333**	*e*P	**Pn**	**23 31 19.7**	**+0.2**
	baz=335						
TWS1				*e*S	**Sn**	**23 31 32.5**	**+0.9**
	baz=335						
NCUH	**Zhongli**	**0.84**	**316**	*e*P	**Pn**	**23 31 19.4**	**-0.3**
	baz=318						
YM08	**YM08**	**0.85**	**345**	*e*P	**Pn**	**23 31 19.6**	**-0.3**
	baz=347						
WPL	**Puli Township**	**0.87**	**246**	*e*P	**Pg**	**23 31 19.1**	**0.0**
	baz=247						
WPL				*e*S	**Sg**	**23 31 30.0**	**-0.4**
	baz=247						
VWDT	**VWDT**	**0.87**	**226**	*e*P	**Pg**	**23 31 18.6**	**-0.5**
	baz=226						
VWDT				*e*S	**Sg**	**23 31 30.5**	**0.0**
	baz=226						
DPDB	**Guoxing**	**0.88**	**248**	*e*P	**Pg**	**23 31 19.4**	**0.0**
	baz=249						
DPDB				*e*S	**Sg**	**23 31 30.6**	**-0.3**
	baz=249						
WCS	**Beigang Elemen**	**0.89**	**250**	*e*P	**Pg**	**23 31 19.3**	**-0.2**
	baz=251						
WCS				*e*S	**Sg**	**23 31 30.4**	**-0.7**
	baz=251						
HGSD	**Ruisui**	**0.94**	**203**	*e*P	**Pg**	**23 31 20.5**	**+0.1**
	baz=203						
HGSD				*e*S	**Sn**	**23 31 36.5**	**+2.1**
	baz=203						
EHY	**Hungye**	**0.97**	**208**	*e*P	**Pg**	**23 31 19.8**	**-1.2**
	baz=208						
EHY				*e*S	**Sg**	**23 31 33.7**	**0.0**
	baz=208						
SMLT	**Sun Moon Lake**	**0.97**	**241**	*e*P	**Pg**	**23 31 20.6**	**-0.4**
	baz=241						
SMLT				*e*S	**Sg**	**23 31 33.1**	**-0.6**
	baz=241						
SSLB	**Suanglung**	**0.98**	**234**	*e*P	**Pg**	**23 31 20.4**	**-0.9**
	baz=235						
SSLB				*e*S	**Sg**	**23 31 32.9**	**-1.1**
	baz=235						
JYNG	**Yonagunijimaku**	**1.02**	**85**	*e*P	**Pg**	**23 31 21.7**	**-0.3**
JYNG				S	**Sg**	**23 31 35.4**	**-0.1**
YULB	**Yu-li**	**1.08**	**207**	*e*P	**Pg**	**23 31 21.1**	**-2.0**
	baz=206						
YULB				*e*S	**Sg**	**23 31 37.5**	**+0.3**
	baz=206						
YOJ	**Yonaguni jima**	**1.08**	**85**	⇓*i*P	**Pg**	**23 31 22.6**	**-0.6**
	baz=83						
YOJ				*e*S	**Sg**	**23 31 37.1**	**-0.2**
	baz=83						
YOJ	**Yonaguni jima**	**1.08**	**85**	P	**Pg**	**23 31 22.6**	**-0.6**
YOJ				S	**Sg**	**23 31 37.0**	**-0.3**
EYUL	**Yuli**	**1.11**	**205**	*e*P	**Pb**	**23 31 23.0**	**-0.4**
	baz=204						
TWF1	**Yuli**	**1.12**	**206**	*e*P	**Pb**	**23 31 22.1**	**-1.3**
	baz=205						
TWF1				*e*S	**Sg**	**23 31 38.0**	**-0.3**
	baz=205						
FULB	**Fuli**	**1.26**	**203**	*e*P	**Pn**	**23 31 25.5**	**-0.1**
	baz=203						
FULB				*e*S	**Sn**	**23 31 44.3**	**+2.0**
	baz=203						
ELDTW	**Lidau**	**1.38**	**213**	*e*P	**Pn**	**23 31 26.6**	**-0.8**
	baz=212						
TPUB	**Ta-pu**	**1.52**	**226**	*e*P	**Pb**	**23 31 31.3**	**+1.0**
	baz=226						
STYH	**Taoyuan**	**1.53**	**219**	*e*P	**Pn**	**23 31 30.1**	**+0.9**
	baz=219						
TWK	**Hsinying**	**1.64**	**229**	*e*P	**Pb**	**23 31 32.4**	**0.0**
	baz=228						
TWK				*e*S	**Sb**	**23 31 54.5**	**+1.5**
	baz=228						
IRIF	**Iriomote-Funau**	**1.74**	**91**	P	**Pn**	**23 31 32.0**	**-0.1**
IRIF				*e*S	**Sn**	**23 31 53.9**	**-0.2**
HATJ	**Hateruma jima**	**1.83**	**99**	P	**Pn**	**23 31 34.1**	**+0.7**
JKRS	**Kuro-shima**	**2.00**	**93**	P	**Pn**	**23 31 36.3**	**+0.6**
JKRS				S	**Sn**	**23 32 01.2**	**+0.7**
JIJ	**Ishigaki jima**	**2.11**	**90**	P	**Pn**	**23 31 37.1**	**-0.2**
JIJ				S	**Sn**	**23 32 02.0**	**-1.4**
JTJ	**Tarama**	**2.63**	**83**	P	**Pn**	**23 31 45.1**	**+0.7**

IDC 20 23:36:09.1±1.9, 3°.14S×151°.88E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=88.2km s-min=27.6km az=121.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.91**	**224**	P	P	23 41 25.6	+0.7
	0.5nm,0.4s,baz=51,slow=9.6,SNR=6.8						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.80**	**219**	P	P	23 41 51.1	-0.1
	0.3nm,0.6s,baz=43,slow=7.3,SNR=2.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**78.48**	**319**	P	P	23 48 11.6	-0.6
	0.1nm,0.5s,baz=118,slow=6.2,SNR=1.7						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**80.98**	**22**	P	P	23 48 25.4	+0.1
	0.6nm,0.6s,baz=250,slow=5.4,SNR=7.4						
	0.6nm,0.6s						

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*IDC **20** 23:53:26.2±1.4, 16°.92N×145°.70E, h258^{km}±14^{km}, mb3.3/13, mbtmp4.0/14, Error ellipse: s-maj=24.5km s-min=11.6km az=90.0*

*NEIC **20** 23:53:28±1.7, 16°.93N±0°.09×145°.6E±0°.2, h268^{km}±7^{km}, mb4.0/28, Error ellipse: s-maj=22.1km s-min=12.9km az=86.0*

ISC 20 23:53:25.7±0.5, 16°.95N±0°.06×145°.7E±0°.1, h250^{km}, n57, σ0^s.86/51, mb3.9/26, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.43**	**193**	P	**Pn**	**23 54 25.1**	**+2.1**
	122nm,0.3s,baz=27,slow=4.5,SNR=15						
GUMO				S	**S**	**23 55 08.6**	**+0.2**
	63nm,0.3s,baz=339,slow=21,SNR=2.6						
JCJ	**Chichijima**	**10.60**	**343**	P	**P**	**23 55 57.4**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**20.08**	**82**	T	T	00 19 31.5	
	baz=264,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**20.09**	**82**	T	T	00 19 32.4	
	baz=264,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**20.10**	**82**	T	T	00 19 33.2	
	baz=264,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**20.33**	**79**	T	T	00 19 38.3	
	baz=261,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hy**	**20.34**	**79**	T	T	00 19 38.3	
	baz=261,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**20.35**	**79**	T	T	00 19 39.0	
	baz=261,slow=74,SNR=14						
JHS	**Saijyo**	**21.19**	**330**	P	**P**	**23 57 51.8**	**-0.4**
JHS				IAmb	IAmb	23 58 01.6	
	comp=Z,4.7nm,1.0s						
FAKI	**Fak Fak**	**23.77**	**215**	P	**P**	**23 58 17.1**	**+1.1**
YHNB	**Yeheng**	**23.95**	**293**	P	**P**	**23 58 18.0**	**+0.4**
KSRS	**Korea Array**	**25.73**	**326**	P	**P**	**23 58 33.6**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=143,slow=10,SNR=21						
	comp=Z,4.0nm,0.8s						
COEN	**Coen**	**30.80**	**185**	P	**P**	**23 59 16.1**	**-2.5**
MTN	**Manton Dam**	**32.90**	**207**	P	**P**	**23 59 35.9**	**-0.9**
MTN				IAmb	IAmb	23 59 43.9	
	comp=Z,9.1nm,1.1s						
KNRA	**Kununurra**	**36.45**	**208**	P	**P**	**00 00 06.7**	**-0.4**
KNRA				IAmb	IAmb	00 00 07.6	
	comp=Z,8.3nm,0.8s						
PEA0B	**Petropavlovsk-**	**37.30**	**12**	P	**P**	**00 00 14.4**	**+0.5**
PEA0B				IAmb	IAmb	00 00 24.6	
	comp=Z,8.1nm,1.1s						
PETK	**Petropavlovsk-**	**37.30**	**12**	P	**P**	**00 00 14.7**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=168,slow=7.4,SNR=12						
	comp=Z,0.6nm,0.6s						
WB0	**Warramunga Arr**	**38.13**	**197**	P	**P**	**00 00 21.3**	**+0.1**
WB0				IAmb	IAmb	00 00 21.6	
	comp=Z,4.5nm,0.9s						
WR0	**Warramunga Arr**	**38.27**	**197**	P	**P**	**00 00 22.0**	**-0.3**
WR0				IAmb	IAmb	00 00 27.3	
	comp=Z,2.9nm,0.8s						
WB2	**Warramunga Arr**	**38.31**	**197**	P	**P**	**00 00 22.9**	**+0.2**
WB2				IAmb	IAmb	00 00 24.4	
	comp=Z,3.8nm,0.7s						
WRA	**Warramunga Arr**	**38.31**	**197**	P	**P**	**00 00 22.1**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=19,slow=8.3,SNR=12						
WRA				PcP	**PcP**	**00 02 30.7**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=17,slow=3.6,SNR=1.8						
	comp=Z,2.1nm,0.4s						
WRA	**Warramunga Arr**	**38.31**	**197**	IAmb	IAmb	00 00 23.9	
	comp=Z,0.2nm,1.1s						
AS31	**Alice Springs**	**41.97**	**196**	P	**P**	**00 00 53.6**	**+1.0**
ASAR	**Alice Springs**	**41.97**	**196**	P	**P**	**00 00 52.2**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=19,slow=7.1,SNR=7.2						
	comp=Z,0.6nm,0.4s						
DZM	**Mont Dzumac**	**43.79**	**152**	P	**P**	**00 01 08.2**	**+0.9**
DZM				IAmb	IAmb	00 01 25.2	
	comp=Z,12nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.44**	**279**	P	**P**	**00 01 13.2**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=75,slow=7.4,SNR=5.0						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**44.50**	**323**	P	**P**	**00 01 11.8**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=103,slow=3.1,SNR=5.1						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**44.50**	**323**	IAmb	IAmb	00 01 15.1	
	comp=Z,0.9nm,0.6s						
STKA	**Stephens Creek**	**48.70**	**185**	P	**P**	**00 01 44.9**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=16,slow=7.4,SNR=4.9						
	comp=Z,1.1nm,0.3s						
BBOO	**Buckleboo**	**50.32**	**191**	P	**P**	**00 01 57.2**	**-0.1**
FORT	**Forrest**	**50.38**	**200**	P	**P**	**00 01 57.4**	**-0.3**
MK31	**Makanchi Array**	**59.66**	**315**	P	**P**	**00 03 04.5**	**+0.6**
MKAR	**Makanchi Array**	**59.66**	**315**	P	**P**	**00 03 04.4**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=90,slow=9.1,SNR=13						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**59.66**	**315**	P	**P**	**00 03 05.0**	**+1.1**
J20K	**Nowinta River**	**62.04**	**25**	P	**P**	**00 03 21.1**	**+1.5**
J20K				IAmb	IAmb	00 03 21.4	
	comp=Z,2.4nm,1.0s						
KURK	**Kurchatov**	**62.55**	**319**	P	**P**	**00 03 22.8**	**-0.3**
KURK				IAmb	IAmb	00 03 24.1	
	comp=Z,5.2nm,1.1s						
H21K	**Melozitna Rive**	**63.08**	**24**	P	**P**	**00 03 27.4**	**+1.0**
NRIK	**Noril'sk**	**63.24**	**340**	P	**P**	**00 03 26.8**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=123,slow=7.2,SNR=6.2						
	comp=Z,2.3nm,0.5s						
NRIK	**Noril'sk**	**63.24**	**340**	P	**P**	**00 03 27.0**	**-0.3**
NRIK				IAmb	IAmb	00 03 27.7	
	comp=Z,2.5nm,0.6s						
BOOM	**Boomskoye usch**	**63.88**	**309**	P	**P**	**00 03 32.9**	**+0.7**
BOOM				IAmb	IAmb	00 03 43.1	
	comp=Z,3.2nm,1.1s						
BSWZ	**Blackbirch Sta**	**63.93**	**157**	P	**P**	**00 03 31.8**	**-0.4**
ILAR	**Eielson Array**	**65.22**	**26**	P	**P**	**00 03 39.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=246,slow=6.0,SNR=2.0						
	comp=Z,0.1nm,0.3s						
J25K	**Salcha River,**	**65.83**	**26**	P	**P**	**00 03 44.6**	**+0.4**
BMAR	**Burnt Mountain**	**66.73**	**23**	P	**P**	**00 03 51.0**	**+1.2**
BCAR	**Beaver Creek A**	**67.13**	**28**	P	**P**	**00 03 53.2**	**+0.8**
KKAR	**Karatay Array**	**67.86**	**310**	P	**P**	**00 03 57.8**	**+0.5**
BRVK	**Borovoye**	**67.87**	**321**	P	**P**	**00 03 57.1**	**0.0**
BRVK				IAmb	IAmb	00 03 58.1	
	comp=Z,2.7nm,1.1s						
GAR	**Garm**	**68.27**	**306**	P	**P**	**00 04 00.2**	**+0.1**
A36M	**Sachs Harbour**	**73.74**	**19**	P	**P**	**00 04 31.3**	**-0.7**
A36M				IAmb	IAmb	00 04 50.4	
	comp=Z,2.6nm,1.0s						
ARU	**Arti**	**74.47**	**325**	P	**P**	**00 04 35.7**	**-0.9**
ABKAR	**Akbulak array**	**74.60**	**317**	P	**P**	**00 04 37.0**	**-0.5**
ABKAR	**Akbulak array**	**74.60**	**317**	P	**P**	**00 04 36.7**	**-0.8**
EUNU	**Eureka**	**79.45**	**8**	P	**P**	**00 05 04.3**	**+0.3**
YKA	**Yellowknife Ar**	**79.54**	**28**	P	**P**	**00 05 04.3**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=285,slow=5.8,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ARCES	**ARCESS Array B**	**84.14**	**342**	P	**P**	**00 05 27.7**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=49,slow=7.3,SNR=3.8						
	comp=Z,2.8nm,0.8s						
ARCES	**ARCESS Array B**	**84.14**	**342**	P	**P**	**00 05 27.2**	**-1.3**
FINES	**FINESS Array B**	**88.46**	**335**	P	**P**	**00 05 47.7**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=64,slow=3.2,SNR=7.3						
	comp=Z,0.6nm,0.6s						

IDC 21 00:04:01.8±4.3, 18°.83S×177°.76W, h434^{km}±35^{km}, mb2.8/3, mbtmp3.7/4, Error ellipse: s-maj=102.0km s-min=27.1km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.13**	**285**	P	P	00 05 17.1	-0.1
	21nm,0.5s,baz=111,slow=8.6,SNR=46						
MSVF				S	S	00 06 18.7	+0.2
	7.1nm,1.0s,baz=122,slow=21,SNR=6.1						
WRA	**Warramunga Arr**	**45.08**	**260**	P	P	00 11 37.6	-0.1
	0.2nm,0.6s,baz=90,slow=6.8,SNR=1.1						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**45.15**	**255**	P	P	00 11 38.5	+0.3
	1.0nm,0.5s,baz=90,slow=8.2,SNR=12						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**85.97**	**57**	P	P	00 15 55.9	+0.6
	0.7nm,0.9s,baz=226,slow=6.1,SNR=7.2						
	0.7nm,0.9s						
GERES	**GERESS Array B**	**148.66**	**345**	PKPbc	PKPbc	00 22 57.0	-1.9
	0.1nm,0.3s,baz=43,slow=1.7,SNR=3.9						

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*NEIC **21** 00:23:08.7±2.6, 81°.3N±0°.1×2°.8W±0°.6, h10^{km}±2^{km}, mb4.0/3, Error ellipse: s-maj=24.9km s-min=12.5km az=18.0*

*BER **21** 00:23:11.8±3.7, 80°.91N×3°.47W, h10^{km}, ML2.4, ML3.7(NAO), Confirmed Earthquake*

*IDC **21** 00:23:11.8±1.1, 80°.82N×3°.60W, h0^{km}, mb3.3/6, mbtmp3.5/8, ML4.2/3, MS3.1/21, Error ellipse: s-maj=31.2km s-min=19.6km az=27.0*

*DNK **21** 00:23:12.7±5.2, 80°.99N×2°.84W, h36^{km}±41^{km}, ML2.6*

*IEPN **21** 00:23:16.0, 80°.99N×1°.65W, h10^{km}*

ISC 21 00:23:11.4±0.6, 80°.83N±0°.06×3°.26W±0°.05, h10^{km}, n75, σ3^s.07/74, mb3.4/6, MS3.2/18, 4C-1D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	**Nord**	**2.20**	**297**	*i*P	**Pn**	**00 23 45.7**	**-2.2**
NOR				IAML		00 24 17.3	
	comp=Z,48nm,0.9s						
NOR	**Nord**	**2.20**	**297**	⇑*i*P	**Pn**	**00 23 45.6**	**-2.2**
NOR				*e*S	**Sn**	**00 24 10.1**	**-4.9**
KBS	**Kingsbay**	**3.29**	**118**	Pn	**Pn**	**00 24 01.9**	**-0.8**
KBS				Sn	**Sn**	**00 24 36.8**	**-5.0**
KBS	**Kingsbay**	**3.29**	**118**		**Pn**	**00 24 02.2**	**-0.6**
KBS	**Kingsbay**	**3.29**	**118**	*i*P	**Pn**	**00 24 02.1**	**-0.6**

KBS				*i* S	Sn	00 24 36.8	-5.0
KBS	**Kingsbay**	3.29	118	⇑*i*P	Pn	00 24 02.1	-0.6
KBS				*e*		00 24 36.7	
KBS				IAML		00 24 42.7	
	comp=Z,27nm,0.7s						
KBS	**Kingsbay**	3.29	118	⇑*i*P	Pn	00 24 02.1	-0.6
KBS				*i* S	Sn	00 24 37.0	-4.9
BRBB	**Barentsburg B**	4.21	122	Pn	Pn	00 24 16.1	+0.7
BRBB				Sn	Sn	00 25 01.1	-3.3
BRBB	**Barentsburg B**	4.21	122	*e*P	Pn	00 24 15.4	0.0
BRBB				*e*S	Sn	00 25 00.1	-4.3
BRBA	**Barentsburg A**	4.23	122	Pn	Pn	00 24 16.6	+0.8
BRBA				Sn	Sn	00 25 02.2	-2.9
BRBA	**Barentsburg A**	4.23	122	*e*P	Pn	00 24 16.7	+0.9
BRBA				*e*S	Sn	00 25 00.9	-4.1
BRBA				IAML		00 25 06.5	
	comp=Z,17nm,0.5s						
SPA0	**Spitsbergen Ar**	4.45	117	Pn	Pn	00 24 18.4	-0.3
	baz=341,slow=11						
SPA0				Sn	Sn	00 25 06.0	-4.3
	baz=330,slow=16						
SPA0	**Spitsbergen Ar**	4.45	117	Pn	Pn	00 24 18.4	-0.3
	baz=341,slow=11						
SPA0				Sn	Sn	00 25 06.0	-4.3
	baz=330,slow=16						
SPA0	**Spitsbergen Ar**	4.45	117	⇓*i*P	Pn	00 24 18.5	-0.3
SPA0				*e*S	Sn	00 25 05.6	-4.8
SPITS	**Spitsbergen Ar**	4.45	117	Pn	Pn	00 24 18.6	-0.1
	baz=330,slow=7.7						
SPITS				Sn	Sn	00 25 06.5	-3.8
	baz=322,slow=16						
	comp=Z,63nm,0.3s						
SPB2	**Spitsbergen Ar**	4.45	117		Pn	00 24 18.6	-0.1
DAG	**Danmarks Havn**	5.04	224	*i* P	Pn	00 24 26.2	-0.7
DAG				*i* S	Sn	00 25 18.7	-6.3
DAG				IAML		00 25 22.7	
	comp=Z,28nm,0.6s						
DAG	**Danmarks Havn**	5.04	224	⇑*i*P	Pn	00 24 26.2	-0.7
DAG				*e*S	Sn	00 25 18.9	-6.1
HSPB	**Hornsund (broa**	5.25	127	Pn	Pn	00 24 30.4	+0.7
HSPB				Sn	Sn	00 25 28.6	-1.6
HSPB	**Hornsund (broa**	5.25	127	*e*P	Pn	00 24 30.3	+0.5
HSPB				*e*S	Sn	00 25 27.3	-2.8
HSPB				IAML		00 25 30.4	
	comp=Z,7.6nm,0.5s						
HSPB	**Hornsund (broa**	5.25	127	*e*P	Pn	00 24 30.2	+0.5
HSPB				*e*S	Sn	00 25 25.2	-5.0
HOPEN	**Hopen**	6.96	113	Pn	Pn	00 24 52.4	-0.8
HOPEN				Sn	Sn	00 26 06.4	-5.8
HOPEN	**Hopen**	6.96	113	*e*P	Pn	00 24 52.4	-0.8
HOPEN				*e*S	Sn	00 26 06.4	-5.8
HOPEN				IAML		00 26 06.4	
	comp=Z,9.8nm,0.7s						
HOPEN	**Hopen**	6.96	113	*e*P	Pn	00 24 52.0	-1.2
HOPEN				*e*S	Sn	00 26 05.2	-7.0
DBG	**Daneborg**	7.46	218	*i* P	Pn	00 24 58.8	-1.1
DBG				*i* S	Sn	00 26 16.6	-7.8
DBG				IAML		00 26 29.9	
	comp=Z,15nm,0.7s						
DBG	**Daneborg**	7.46	218	*e*P	Pn	00 24 58.8	-1.1
DBG				*e*S	Sn	00 26 16.1	-8.3
BJO1	**Bjornoya**	7.86	132	*e*P	Pn	00 25 04.2	-1.3
ZFI2	**Zemlya Franca-**	7.92	65	*e*P	Pn	00 25 04.9	-1.3
ZFI2				*e*S	Sn	00 26 24.1	-12
ZFI	**Zemlya Franca-**	7.92	65	*e*P	Pn	00 25 04.9	-1.3
ZFI				*e*S	Sn	00 26 24.2	-11
	comp=Z,18nm,1.2s						
JMIC	**Jan Mayen**	9.98	190	Pn	Pn	00 25 36.0	+1.5
	comp=Z,3.1nm,0.3s,baz=24,slow=12,SNR=2.1						
SCO	**Scoresbysund**	11.28	213	Pn	Pn	00 25 56.0	+3.8
SCO	**Scoresbysund**	11.28	213	*i* P	Pn	00 25 51.9	-0.3
SUMG	**Summit**	11.28	243	Pn	Pn	00 25 50.8	-1.8
SUMG	**Summit**	11.28	243	*i* P	Pn	00 25 50.5	-2.1
SUMG				*i* S	Sn	00 27 47.3	-11
EUNU	**Eureka**	12.75	309	Pn	Pn	00 26 08.6	-3.8
TULEG	**Thule**	12.81	286	Pn	Pn	00 26 07.8	-5.3
TULEG	**Thule**	12.81	286	*i* P	Pn	00 26 03.4	-10
TULEG				*i* S	Sn	00 28 17.1	-18
KEV	**Kevo**	13.21	130	Pn	Pn	00 26 19.3	+0.7
ARA0	**ARCESS Array S**	13.23	132	P	Pn	00 26 21.6	+2.6
	baz=355,slow=8.6						
ARCES	**ARCESS Array B**	13.23	132	Pn	Pn	00 26 20.8	+1.8
	comp=Z,0.1nm,0.3s,baz=348,slow=7.2,SNR=9.7						
	comp=Z,3.9nm,1.0s						
ARCES	**ARCESS Array B**	13.23	132		Pn	00 26 21.5	+2.5
BORG	**Borgarnes**	16.86	207	LR	LR	00 33 47.7	
	comp=Z,12nm,18.6s,baz=271,slow=38						
BORG	**Borgarnes**	16.86	207	Pn	P	00 27 09.7	+0.6
BORG				IAmb	IAmb	00 27 22.1	
	comp=Z,18nm,1.1s						
RES	**Resolute Bay**	18.13	301	P	Pn	00 27 20.0	-2.7
	comp=Z,2.7nm,0.7s,baz=17,slow=12,SNR=11						
RES				S	Sn	00 30 26.9	-18
	comp=Z,2.2nm,0.7s,baz=351,slow=19,SNR=1.7						
RES				LR	LR	00 34 21.8	
	comp=Z,72nm,20.4s,baz=120,slow=37						
RES	**Resolute Bay**	18.13	301	P	Pn	00 27 16.9	-5.9
RES				IAmb	IAmb	00 27 24.2	
	comp=Z,6.1nm,1.0s						
SFJD	**Kangerlussuaq**	18.14	248	P	Pn	00 27 19.8	-3.0
	comp=Z,12nm,0.8s,baz=42,slow=9.2,SNR=3.0						
SFJD				LR	LR	00 34 40.4	
	comp=Z,90nm,18.4s,baz=22,slow=38						
SFJD	**Kangerlussuaq**	18.14	248	P	P	00 27 24.1	+1.0
SFJD				IAmb	IAmb	00 27 28.2	
	comp=Z,27nm,1.2s						
NBO00	**NORSAR Array S**	20.29	160	P	Pn	00 27 50.1	+1.4
NOA	**NORSAR Array B**	20.31	159	LR	LR	00 34 04.8	
	comp=Z,10nm,22.0s,baz=340,slow=32						
FIA0	**FINESS Array S**	21.12	139	P	P	00 27 58.9	+3.2
	baz=354,slow=14						
FIA0	**FINESS Array S**	21.12	139	P	P	00 27 58.9	+3.2
	baz=354,slow=14						
FINES	**FINESS Array B**	21.12	139	P	P	00 27 58.4	+2.7
	comp=Z,1.1nm,0.7s,baz=0.7,slow=12,SNR=5.2						
	comp=Z,1.1nm,0.7s						
NRIK	**Noril'sk**	22.78	66	LR	LR	00 38 25.8	
	comp=Z,51nm,18.7s,baz=306,slow=40						
KLMR	**Klimovskoe**	23.32	123	*e*P	P	00 28 22.7	+3.8
KLMR	**Klimovskoe**	23.32	123	*e*P	P	00 28 22.8	+3.8
KLMR				AMP		00 28 26.6	
	comp=Z,11nm,1.1s						
FRB	**Frobisher Bay**	23.95	264	LR	LR	00 37 16.3	
	comp=Z,35nm,20.9s,baz=66,slow=35						
INK	**Inuvik**	28.63	324	LR	LR	00 42 46.1	
	comp=Z,12nm,18.7s,baz=208,slow=41						
ARU	**Arti**	30.37	104	LR	LR	00 44 33.3	
	comp=Z,24nm,19.5s,baz=303,slow=42						
AKASG	**Malin Array Be**	32.03	140	LR	LR	00 42 13.7	
	comp=Z,21nm,21.4s,baz=82,slow=36						
YKA	**Yellowknife Ar**	32.10	306	LR	LR	00 42 26.2	
	comp=Z,51nm,19.2s,baz=296,slow=36						
SCHQ	**Schefferville**	32.18	257	LR	LR	00 42 18.7	
	comp=Z,42nm,21.1s,baz=151,slow=36						
AKTO	**Aktyubinsk**	36.09	108	LR	LR	00 48 30.3	
	comp=Z,22nm,18.0s,baz=340,slow=42						
ZALV	**Zalesovo Beam**	36.93	79	LR	LR	00 48 57.7	
	comp=Z,37nm,18.4s,baz=358,slow=42						
ULM	**Lac du Bonnet**	41.23	283	LR	LR	00 48 27.1	
	comp=Z,50nm,20.4s,baz=100,slow=37						
MKAR	**Makanchi Array**	43.47	85	P	P	00 31 17.6	+3.4
	comp=Z,0.3nm,0.7s,baz=340,slow=7.1,SNR=2.8						
	comp=Z,0.3nm,0.7s						
SADO	**Sadowa**	43.89	265	LR	LR	00 48 32.7	
	comp=Z,40nm,18.1s,baz=67,slow=35						
SONM	**Songino Array**	46.13	62	P	P	00 31 36.9	+1.5
	comp=Z,0.5nm,0.7s,baz=13,slow=7.6,SNR=2.1						
SONM				LR	LR	00 51 50.7	
	comp=Z,53nm,19.6s,baz=259,slow=37						
	comp=Z,0.5nm,0.7s						
AAK	**Ala-Archa**	46.27	94	LR	LR	00 54 04.5	
	comp=Z,36nm,19.1s,baz=318,slow=40						
NEW	**Newport**	46.29	302	LR	LR	00 50 55.4	
	comp=Z,60nm,18.2s,baz=76,slow=36						
SHEM	**Shemya Is, Ala**	46.68	2	LR	LR	00 52 57.6	
	comp=Z,23nm,18.3s,baz=93,slow=38						
PDAR	**Pinedale Array**	50.61	294	P	P	00 32 12.4	+2.3
	comp=Z,0.1nm,0.3s,baz=27,slow=8.1,SNR=1.6						
	comp=Z,0.1nm,0.3s						
TKL	**Tuckaleechee C**	53.53	267	LR	LR	00 53 15.7	
	comp=Z,25nm,19.2s,baz=8.0,slow=34						
ANMO	**Albuquerque**	57.81	289	LR	LR	01 00 43.1	
	comp=Z,26nm,19.3s,baz=30,slow=39						
TXAR	**Lajitas Array**	62.88	285	P	P	00 33 38.5	+1.2
	comp=Z,0.2nm,0.6s,baz=24,slow=4.3,SNR=2.2						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	67.74	175	P	P	00 34 10.2	+1.5
	comp=Z,0.3nm,0.9s,baz=8.7,slow=5.2,SNR=1.3						
	comp=Z,0.3nm,0.9s						

ISK ***21*** *00:39:31.6, 36°.33N×31°.86E, h88^{km}, ML2.4/17*
DDA ***21*** *00:39:33.8±0.0, 36°.38N×31°.83E, h58^{km}±1^{km}, ML2.5*
NIC ***21*** *00:39:33.6±0.0, 36°.31N×32°.03E, h31^{km}±4^{km}, Ml2.6/5*
GII ***21*** *00:39:36.2±0.3, 35°.96N×31°.90E, h40^{km}, Mm2.4/4*
ISC 21 00:39:31.7±1.2**, 36°.29N**±0°.03×**31°.89E**±0°.03**, h89**^{km}±8^{km}**,**
n64, σ1ˢ.32/92**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	0.35	100	P	Pn	00 39 45.4	+0.1
GAZI				S	Sn	00 39 54.5	-0.9
GAZI				*i* AML	AML	00 39 55.0	
	comp=N,266nm,0.3s						
GAZI				*i* AML	AML	00 39 56.0	
	comp=E,285nm,0.3s						
KEPZ	**Antalya-Kepez**	0.65	339	P	Pn	00 39 47.3	-0.4
KEPZ				S	Sn	00 39 58.4	-1.2
HDMB	**Hadim**	0.82	36	PG	Pn	00 39 49.7	+0.1
ERMK	**Ermenek**	0.90	67	P	Pn	00 39 51.8	+1.5
ERMK				S	Sn	00 40 05.1	+0.8
ERMK				*i* AML	AML	00 40 06.0	
	comp=E,104nm,0.3s						
TEKE	**Tekeli-Mersin**	1.00	98	PG	Pn	00 39 52.3	+1.0
TEKE				SG	Sn	00 40 07.4	+1.3
BERE	**Bereket-Mersin**	1.08	87	PN	Pn	00 39 53.2	+0.8
BERE				SN	Sn	00 40 08.8	+0.9
SEDI	**Konya, Seydise**	1.16	355	P	Pn	00 39 53.5	+0.2
SEDI				S	Sn	00 40 07.8	-1.8
SEDI				*i* AML	AML	00 40 10.0	
	comp=E,51nm,0.4s						
ANTB	**Antalya**	1.16	302	PN	Pn	00 39 53.4	+0.2
AKUM	**Antalya-Kumluc**	1.25	272	P	Pn	00 39 56.1	+1.9
KKBE	**Karaman, Kazim**	1.25	42	P	Pn	00 39 55.0	+0.6
KKBE				S	Sn	00 40 10.7	-0.8
TEVE	**Tevekalti-Mers**	1.26	83	PN	Pn	00 39 55.4	+0.9
ALFC	**Alefka**	1.27	153	⇑*e*P	Pn	00 39 54.4	-0.2
ALFC				S	Sn	00 40 11.5	-0.4
ALFC				AML	AML	00 40 12.7	
	0.3nm,0.2s						
ALFC				AML	AML	00 40 12.7	
	0.3nm,0.2s						
ALFC				AML	AML	00 40 18.5	
	0.4nm,0.4s						
ALFC				AML	AML	00 40 18.5	
	0.4nm,0.4s						
AKMS	**Akamas**	1.32	164	P	Pn	00 39 55.4	+0.2
AKMS				S	Sn	00 40 12.7	-0.3
AKMS				AML	AML	00 40 19.2	
	0.7nm,0.3s						
AKMS				AML	AML	00 40 19.2	
	0.7nm,0.3s						
AKMS				AML	AML	00 40 19.3	
	0.5nm,0.3s						
AKMS				AML	AML	00 40 19.3	
	0.5nm,0.3s						
GULN	**MERSIN_Gulnar**	1.34	94	P	Pn	00 39 56.5	+1.1
GULN				S	Sn	00 40 12.3	-1.0
AKKU	**Akkuyu-Mersin**	1.35	95	PN	Pn	00 39 56.8	+1.3
AKKU				SN	Sn	00 40 14.9	+1.4
AKK2	**Akkuyu-Mersin**	1.35	96	PN	Pn	00 39 56.4	+0.9
KORT	**Korkueli**	1.42	300	P	Pn	00 39 55.5	-1.0
LEF	**Lefka**	1.43	145	P	Pn	00 39 55.5	-1.0
LEF				S	Sn	00 40 13.8	-1.4
IKL	**Isikli**	1.45	92	PN	Pn	00 39 57.9	+1.1
TISA	**Tisan-Mersin**	1.45	95	PN	Pn	00 39 57.8	+1.0
KARG	**Kargicak-Mersi**	1.47	93	PN	Pn	00 39 58.4	+1.3
KEBE	**Keben-Mersin**	1.48	84	PN	Pn	00 39 58.3	+1.1
BUCA	**Burdur, Bucak-**	1.48	314	P	Pn	00 39 56.1	-1.1
NATA	**Nata**	1.61	160	P	Pn	00 40 00.2	+1.3
NATA				S	Sn	00 40 19.1	-0.3
NATA				AML	AML	00 40 32.1	
	0.4nm,0.6s						
NATA				AML	AML	00 40 32.1	
	0.4nm,0.6s						
NATA				AML	AML	00 40 35.8	
	0.3nm,1.0s						
NATA				AML	AML	00 40 35.8	
	0.3nm,1.0s						
ELL	**Elmali**	1.66	286	PN	Pn	00 39 59.9	+0.4
ELL	**Elmali**	1.66	286	P	Pn	00 40 01.2	+1.6
ELL				S	Sn	00 40 24.4	+3.8
LFK	**Lefkose**	1.68	127	PN	Pn	00 40 01.2	+1.5
ATHAL	**Athalassa**	1.68	133	S	Sn	00 40 20.5	-0.5
KONT	**Konya--Tatoy**	1.69	13	PN	Pn	00 40 00.6	+0.7
KONT	**Konya--Tatoy**	1.69	13	P	Pn	00 40 00.4	+0.5
SZAC	**Souni**	1.74	152	P	Pn	00 40 02.0	+1.5
SZAC				AML	AML	00 40 35.0	
	0.2nm,0.3s						
SZAC				AML	AML	00 40 35.9	
	0.2nm,0.5s						
CSS	**Mathiatis**	1.77	138	P	Pn	00 40 00.5	-0.4
CSS				S	Sn	00 40 21.6	-1.6
DOGA	**KONYA_Doganhis**	1.82	355	P	Pn	00 40 02.1	+0.5
DOGA				S	Sn	00 40 21.6	-2.7
ASGA	**Asgata**	1.87	143	P	Pn	00 40 03.3	+1.2
BAGO	**Egridir - ISPA**	1.91	333	P	Pn	00 40 02.8	0.0
MVOU	**Mavrovouni**	1.91	131	P	Pn	00 40 02.6	-0.1
MVOU				AML	AML	00 40 25.8	
	0.1nm,0.3s						
MVOU				AML	AML	00 40 26.2	
	0.1nm,0.2s						
LADK	**Ladik-KONYA**	1.94	11	PN	Pn	00 40 03.7	+0.5
BRDR	**BURDUR-Merkez**	2.02	314	P	Pn	00 40 04.9	+0.7
YVAC	**Isparta, Yalva**	2.04	346	P	Pn	00 40 04.2	-0.3
YVAC				S	Sn	00 40 28.0	-1.5
GOLH	**Golhisar**	2.09	297	P	Pn	00 40 06.8	+1.6
YESY	**Yesilyurt**	2.10	44	PN	Pn	00 40 06.2	+0.9
KERG	**Konya-Eregli**	2.11	57	P	Pn	00 40 06.7	+1.2
KERG				S	Sn	00 40 30.1	-1.2
KERG				*i* AML	AML	00 40 39.0	
	comp=N,25nm,0.6s						
MERS	**Mersin**	2.20	74	PN	Pn	00 40 07.9	+1.4
CAEL	**Denizli, Camel**	2.22	293	P	Pn	00 40 09.5	+2.6
CHBY	**Cihanbeyli**	2.42	19	PN	Pn	00 40 10.2	+0.7
KIZT	**Kizilcal**	2.58	360	PN	Pn	00 40 12.2	+0.5
CIFT	**Cifteler, Eski**	3.13	348	PN	Pn	00 40 19.7	+0.7
AFSR	**Afar-Bala (An**	3.28	16	PN	Pn	00 40 21.9	+0.8
HNTI	**Hanita**	4.19	139	Pn	Pn	00 40 34.1	+0.7
HNTI				Sn	Sn	00 41 19.5	-1.7
MMC7	**Mount Meron ar**	4.36	137	Pn	Pn	00 40 37.6	+1.9
MMA0B	**Mount Meron ar**	4.37	137	Pn	Pn	00 40 37.3	+1.5
GEM	**Giv'at Ha'Em**	4.37	134	Pn	Pn	00 40 37.5	+1.7
GEM				Sn	Sn	00 41 24.6	-0.9
NATI	**Neve Ativ**	4.38	133	Pn	Pn	00 40 37.9	+2.0
NATI				Sn	Sn	00 41 25.4	-0.3
OFRI	**`Ofer**	4.47	144	Pn	Pn	00 40 37.7	+0.6
OFRI				Sn	Sn	00 41 26.0	-1.9
SLTI	**Sal'it**	4.81	146	Pn	Pn	00 40 42.4	+0.6
SLTI				Sn	Sn	00 41 33.9	-2.4
MMLI	**Mount Malkishu**	4.83	142	Pn	Pn	00 40 43.2	+1.1
MMLI				Sn	Sn	00 41 35.4	-1.4
HMDT	**Nahal Hemdat**	5.03	142	Pn	Pn	00 40 46.8	+2.1
AMAZ	**Amatzia**	5.37	151	Pn	Pn	00 40 50.0	+0.6
AMAZ				Sn	Sn	00 41 48.2	-1.8
DSI	**Dead Sea**	5.53	147	Pn	Pn	00 40 52.7	+1.1
YTIR	**Yattir**	5.60	150	Pn	Pn	00 40 53.9	+1.3
KZIT	**Kziot**	5.77	158	Pn	Pn	00 40 55.4	+0.6
KZIT				Sn	Sn	00 41 57.2	-2.3
PRNI	**Paran**	6.47	155	Pn	Pn	00 41 05.1	+0.7
KRMI	**Paran Flat**	6.60	158	Pn	Pn	00 41 07.4	+1.2
KRMI				Sn	Sn	00 42 17.5	-2.5
HRFI	**Mount Harif**	6.78	156	Pn	Pn	00 41 09.3	+0.8
HRFI				Sn	Sn	00 42 21.8	-2.4

DDA ***21*** *01:12:50.4±0.0, 34°.98N×34°.42E, h2^{km}±2^{km}, ML2.4*
ISK ***21*** *01:12:50.9, 34°.71N×34°.47E, h44^{km}±2^{km}, ML2.8/11*
NIC ***21*** *01:12:52.2±0.0, 34°.75N×34°.29E, h12^{km}±1^{km}, Ml2.8/9*
GII ***21*** *01:12:53.5±0.0, 34°.77N×34°.36E, h20^{km}, MD2.8/1,*
Mm2.6/5
ISC 21 01:12:51.3±1.1**, 34°.82N**±0°.03×**34°.39E**±0°.03**, h12**^{km}±9^{km}**,**
n56, σ0ˢ.87/82**, 1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARAL	**Paralimni**	0.33	301	⇓*e*P	Pg	01 12 58.4	+0.4
PARAL				AML	AML	01 13 02.5	
	6.2nm,0.4s						
PARAL				AML	AML	01 13 02.5	
	6.2nm,0.4s						
PARAL				S	Sg	01 13 02.8	+0.3
PARAL				AML	AML	01 13 08.1	
	4.9nm,0.4s						
PARAL				AML	AML	01 13 08.1	
	4.9nm,0.4s						
MVOU	**Mavrovouni**	0.65	288	P	Pg	01 13 03.6	-0.3
MVOU				S	Sb	01 13 13.8	+0.2
MVOU				AML	AML	01 13 14.7	
	2.3nm,0.4s						
MVOU				AML	AML	01 13 14.7	
	2.3nm,0.4s						
MVOU				AML	AML	01 13 16.6	
	2.7nm,0.7s						
MVOU				AML	AML	01 13 16.6	
	2.7nm,0.7s						
EREN	**Erenkoy**	0.73	346	P	Pn	01 13 07.9	+0.5
LFK	**Lefkose**	0.84	303	PG	Pb	01 13 08.5	+0.7
LFK				SG	Sn	01 13 21.4	+0.1
ATHAL	**Athalassa**	0.87	292	P	Pg	01 13 08.1	0.0
ATHAL				S	Sb	01 13 20.5	+0.4
ATHAL				AML	AML	01 13 26.1	
	2.0nm,0.6s						
ATHAL				AML	AML	01 13 26.1	
	2.0nm,0.6s						
ATHAL				AML	AML	01 13 28.2	
	1.9nm,0.8s						
ATHAL				AML	AML	01 13 28.2	
	1.9nm,0.8s						
CSS	**Mathiatis**	0.88	279	P	Pg	01 13 08.1	-0.2
CSS				S	Sg	01 13 19.7	-0.1
CSS				AML	AML	01 13 23.2	
	0.3nm,0.5s						
CSS				AML	AML	01 13 23.2	
	0.3nm,0.5s						
CSS				AML	AML	01 13 27.2	
	0.2nm,0.8s						
CSS				AML	AML	01 13 27.2	
	0.2nm,0.8s						
ASGA	**Asgata**	0.94	268	P	Pg	01 13 08.9	-0.5
ASGA				S	Sg	01 13 21.0	-0.6
ASGA				AML	AML	01 13 29.5	
	0.8nm,0.4s						
ASGA				AML	AML	01 13 29.5	
	0.8nm,0.4s						
ASGA				AML	AML	01 13 29.5	
	0.6nm,0.4s						
ASGA				AML	AML	01 13 29.5	
	0.6nm,0.4s						
SZAC	**Souni**	1.24	267	⇑*e*P	Pg	01 13 14.3	-0.9
SZAC				S	Sg	01 13 30.7	-0.6
SZAC				AML	AML	01 13 32.6	
	0.6nm,0.3s						
SZAC				AML	AML	01 13 32.6	
	0.6nm,0.3s						
SZAC				AML	AML	01 13 32.7	
	0.8nm,0.4s						
SZAC				AML	AML	01 13 32.7	
	0.8nm,0.4s						
LEF	**Lefka**	1.26	284	PN	Pg	01 13 14.8	-0.8
LEF	**Lefka**	1.26	284	P	Pg	01 13 15.4	-0.3
HWQ	**Hawqa**	1.40	112	*e*P	Pg	01 13 17.1	-1.1
NATA	**Nata**	1.50	269	S	Sn	01 13 37.1	-0.4
NATA				AML	AML	01 13 41.9	
	1.1nm,0.6s						
NATA				AML	AML	01 13 54.5	
	0.8nm,0.7s						
AKKU	**Akkuyu-Mersin**	1.50	333	PN	Pn	01 13 18.1	+0.1
AKKU				SN	Sn	01 13 37.9	+0.4
ALFC	**Alefka**	1.50	283	P	Pn	01 13 18.0	-0.2
ALFC				S	Sn	01 13 38.0	+0.3
ALFC				AML	AML	01 13 52.2	
	0.3nm,0.3s						
ALFC				AML	AML	01 13 52.2	
	0.3nm,0.3s						
ALFC				AML	AML	01 13 52.8	
	0.5nm,0.7s						
ALFC				AML	AML	01 13 52.8	
	0.5nm,0.7s						
GULN	**MERSIN_Gulnar**	1.52	333	P	Pn	01 13 17.2	-1.1
GULN				S	Sn	01 13 36.6	-1.5
IKL	**Isikli**	1.52	338	PN	Pn	01 13 18.5	+0.1
IKL				SN	Sn	01 13 38.5	+0.3
TEKE	**Tekeli-Mersin**	1.68	322	PN	Pn	01 13 20.7	+0.2
TEKE				SN	Sn	01 13 42.3	+0.4
AKMS	**Akamas**	1.70	277	P	Pn	01 13 21.5	+0.7
AKMS				S	Sn	01 13 43.4	+0.9
AKMS				AML	AML	01 13 53.1	
	0.3nm,0.9s						
AKMS				AML	AML	01 13 53.1	
	0.3nm,0.9s						
AKMS				AML	AML	01 13 53.4	
	0.3nm,0.5s						
AKMS				AML	AML	01 13 53.4	
	0.3nm,0.5s						
KEBE	**Keben-Mersin**	1.71	342	PN	Pn	01 13 21.1	+0.1
TEVE	**Tevekalti-Mers**	1.78	335	PN	Pn	01 13 22.2	+0.2
TEVE				SN	Sn	01 13 44.9	+0.2
BERE	**Bereket-Mersin**	1.79	328	PN	Pn	01 13 22.3	+0.1
SHBL	**Chebaa**	1.85	142	*e*P	Pn	01 13 23.4	+0.4
HNTI	**Hanita**	1.85	159	Pn	Pn	01 13 23.8	+0.9
NATI	**Neve Ativ**	1.92	144	Pn	Pn	01 13 24.0	+0.2
NATI				Sn	Sn	01 13 47.7	-0.1
GEM	**Giv'at Ha'Em**	1.93	146	Pn	Pn	01 13 24.1	+0.2
GEM				Sn	Sn	01 13 48.1	0.0
MMA0B	**Mount Meron ar**	1.99	155	Pn	Pn	01 13 25.3	+0.4
MERS	**Mersin**	2.04	3	PN	Pn	01 13 25.6	0.0
DED	**Mersin**	2.16	9	P	Pn	01 13 27.7	+0.5
ERMK	**Ermenek**	2.17	327	P	Pn	01 13 28.5	+0.9
ERMK				*i* AML	AML	01 14 02.0	
	comp=E,24nm,1.0s						
ERMK				*i* AML	AML	01 14 10.0	
	comp=N,28nm,0.6s						
BLGI	**Bet Lehem HaGe**	2.19	162	Pn	Pn	01 13 28.0	+0.5
GAZI	**Gazipasa**	2.20	310	P	Pn	01 13 27.2	-0.5
GAZI				S	Sn	01 13 51.7	-3.2
GAZI				*i* AML	AML	01 13 56.0	
	comp=E,22nm,0.4s						
YURE	**YUREGIR**	2.24	27	P	Pn	01 13 28.5	+0.2
OFRI	**`Ofer**	2.25	167	Pn	Pn	01 13 28.5	+0.1
GULE	**Gulek**	2.48	7	P	Pn	01 13 30.7	-1.0
GULE				*i* AML	AML	01 14 17.0	
	comp=N,25nm,0.8s						
GULE				*i* AML	AML	01 14 17.0	
	comp=E,38nm,0.5s						
OSC2	**CSNet OBS 4**	2.48	226	P	Pn	01 13 30.6	-0.9
OSC2				S	Sn	01 14 01.1	-0.6
MMLI	**Mount Malkishu**	2.53	160	Pn	Pn	01 13 33.2	+0.9
MMLI				Sn	Sn	01 14 02.8	-0.2
KERG	**Konya-Eregli**	2.59	355	P	Pn	01 13 34.3	+1.0
SLTI	**Sal'it**	2.63	168	Pn	Pn	01 13 33.8	+0.2
SLTI				Sn	Sn	01 14 05.5	0.0
HDMB	**Hadim**	2.64	325	PN	Pn	01 13 34.4	+0.5
KKBE	**Karaman, Kazim**	2.66	334	P	Pn	01 13 35.9	+1.8
KKBE				S	Sb	01 14 10.1	-1.7
HMDT	**Nahal Hemdat**	2.73	159	Pn	Pn	01 13 36.6	+1.6
HMDT				Sn	Sn	01 14 08.3	+0.3
OSC1	**CSNet OBS 1**	2.90	244	S	Sn	01 14 10.9	-1.0
KOZT	**Kozan**	2.90	23	PN	Pn	01 13 37.4	+0.1
YESY	**Yesilyurt**	3.00	350	PN	Pn	01 13 39.5	+0.7
KEPZ	**Antalya-Kepez**	3.07	313	P	Pn	01 13 41.8	+2.1
AMAZ	**Amatzia**	3.31	172	Pn	Pn	01 13 43.9	+0.9
AMAZ				Sn	Sn	01 14 22.7	+0.4
DSI	**Dead Sea**	3.35	165	Pn	Pn	01 13 44.9	+1.4
YAHY	**KAYSERI_Yahyal**	3.36	13	P	Pn	01 13 45.3	+1.5
SEDI	**Konya, Seydise**	3.38	322	P	Pn	01 13 46.1	+2.0
YTIR	**Yattir**	3.50	170	Pn	Pn	01 13 46.5	+0.8
YTIR				Sn	Sn	01 14 27.5	+0.3
KZIT	**Kziot**	3.91	180	Pn	Pn	01 13 51.5	+0.3
PRNI	**Paran**	4.49	173	Pn	Pn	01 14 00.2	+1.0
KRMI	**Paran Flat**	4.70	176	Pn	Pn	01 14 02.7	+0.6
KRMI				Sn	Sn	01 14 55.2	-1.4
HRFI	**Mount Harif**	4.80	173	Pn	Pn	01 14 04.4	+0.9
HRFI				Sn	Sn	01 14 59.0	-0.1
MBRI	**Mt Berech**	5.03	175	Pn	Pn	01 14 07.9	+1.2
EIL	**Elat**	5.16	175	Pn	Pn	01 14 09.3	+0.9

JMA ***21*** *01:28:07.1±0.2, 31°.0N±0°.4×129°.0E±0°.7, h12^{km}±2^{km},*
MD4.4/25, MW4.4/25, SW OFF KYUSHU
NIED ***21*** *01:28:07.1, 31°.02N×129°.00E, h12^{km}, MW4.4, Moment*

Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.90; M$_{\theta\theta}$2.76; M$_{\phi\phi}$-1.87; M$_{r\theta}$-0.26; M$_{\theta\phi}$1.64; M$_{\phi r}$2.45; Fault plane solution: M$_0$3.77000×10^{15} NP1: ϕ_s110.00000°,δ58.00000°,λ-22.00000°. NP2: ϕ_s212.00000°,δ72.00000°,λ-146.00000°.

*IDC **21** 01:28:17.4±2.0, 30.°99N×129.°33E, h64^{km}±20^{km}, mb3.3/9, mbtmp3.7/14, MS3.4/26 Error ellipse: s-maj=26.1km s-min=15.6km az=86.0*

ISC 21 01:28:10.2±1.9**, 31.°04N**±0.°05×**129.°21E**±0.°06**, h7**^{km}±12^{km}**, n45, σ1^{s}87**/28**, mb3.5**/9**, MS3.5**/21**, 4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.77	34	i P	Pg	01 28 23.7	-1.3
JSJ				S	Sg	01 28 36.0	+1.1
JSJ	Shimokoshiki	0.77	34	A	A	01 28 23.7	
	comp=E,20nm,1.5s,comp=E,23nm,1.5s						
JKC	Kuchinoerabu	1.03	124	i P	Pb	01 28 29.0	-1.4
JKC				S	Sb	01 28 44.5	+0.4
JKC	Kuchinoerabu	1.03	124	A	A	01 28 29.0	
	comp=E,18nm,1.1s,comp=E,18nm,1.0s						
JSU	Suzuyama	1.16	66	⇓iP	Pn	01 28 32.1	-0.9
JSU				⇓S	Sg	01 28 49.7	+2.1
JSU	Suzuyama	1.16	66	A	A	01 28 32.1	
	comp=E,8.0nm,0.6s,comp=E,10.0nm,1.7s						
JNN	Nakanoshima	1.33	154	eP	Pn	01 28 32.6	-2.6
JNN	Nakanoshima	1.33	154	A	A	01 28 32.6	
	comp=E,13nm,1.3s,comp=E,11nm,1.9s						
JYAK	Yakushimahirau	1.38	125	P	Pn	01 28 33.9	-2.1
JTN	Tanegashima 3	1.57	104	⇓P	Pn	01 28 37.3	-1.3
JTN				⇓eS	Sb	01 28 59.8	+0.1
JMTN	Minamitane	1.59	113	eP	Pn	01 28 37.4	-1.4
JMTN				eS	Sn	01 28 59.9	+0.2
JFU	Fukue jima 2	1.65	346	P	Pn	01 28 36.1	-3.6
JNU	Nakatsue	2.51	34	P	Pb	01 28 56.0	+0.3
	116nm,0.5s,baz=292,slow=6.7,SNR=50						
JNU				S	Sb	01 29 29.0	+2.2
	200nm,0.5s,baz=256,slow=21,SNR=11						
JOW	Kunigami	4.28	191	P	Pn	01 29 19.4	+3.6
	6.7nm,0.3s,baz=44,slow=8.6,SNR=4.5						
JOW				LR	LR	01 31 08.5	
	comp=Z,534nm,19.6s,baz=116,slow=40						
KSRS	Korea Array	6.48	351	P	Pn	01 29 52.5	+6.4
	9.5nm,0.5s,baz=175,slow=15,SNR=22						
KSRS				S	Sn	01 30 57.8	-2.5
	2.6nm,0.6s,baz=167,slow=32,SNR=2.6						
KSRS				LR	LR	01 32 13.4	
	comp=Z,377nm,21.8s,baz=180,slow=36						
JHJ	Hachijo jima 2	9.21	74	LR	LR	01 32 43.7	
	comp=Z,36nm,21.4s,baz=244,slow=29						
MJAR	Matsushiro Arr	9.28	51	P	Pn	01 30 27.2	+2.7
	0.8nm,0.3s,baz=244,slow=14,SNR=1.5						
USRK	Ussuriysk Ar.	13.32	9	LR	LR	01 35 59.0	
	comp=Z,127nm,21.1s,baz=175,slow=35						
KLR	Kul'dur	18.27	5	P	P	01 32 26.8	+2.4
	1.8nm,0.7s,baz=196,slow=9.3,SNR=6.9						
KLR				LR	LR	01 38 43.6	
	comp=Z,73nm,21.3s,baz=224,slow=34						
DAV	Davao City (W)	24.09	189	LR	LR	01 45 04.0	
	comp=Z,93nm,18.1s,baz=333,slow=42						
SONM	Songino Array	24.18	320	P	P	01 33 27.0	-0.4
	0.9nm,0.7s,baz=132,slow=9.9,SNR=4.0						
SONM				LR	LR	01 43 20.8	
	comp=Z,213nm,21.0s,baz=115,slow=37 0.9nm,0.7s						
CMAR	Chiang Mai Arr	30.10	253	LR	LR	01 47 50.7	
	comp=Z,115nm,19.4s,baz=65,slow=39						
PETK	Petropavlovsk-	30.21	35	LR	LR	01 46 35.4	
	comp=Z,48nm,18.3s,baz=188,slow=36						
YAK	Yakutsk	31.00	0	LR	LR	01 46 33.0	
	comp=Z,56nm,18.1s,baz=94,slow=35						
SIJI	Sorong	31.80	176	LR	LR	01 46 59.7	
	comp=Z,66nm,19.2s,baz=92,slow=35						
MA2	Magadan	32.01	21	LR	LR	01 47 35.6	
	comp=Z,63nm,18.4s,baz=231,slow=36						
KAPI	Kappang	36.98	196	LR	LR	01 50 00.1	
	comp=Z,45nm,20.8s,baz=314,slow=35						
ZALV	Zalesovo Beam	39.06	319	LR	LR	01 53 32.0	
	comp=Z,48nm,21.9s,baz=109,slow=39						
MKAR	Makanchi Array	39.14	307	P	P	01 35 38.4	-0.1
	0.5nm,0.8s,baz=95,slow=11,SNR=3.7						
MKAR				LR	LR	01 52 46.3	
	comp=Z,63nm,19.0s,baz=96,slow=37 0.5nm,0.8s						
KURBB	Kurchatov Arra	42.10	313	LR	LR	01 54 54.8	
	comp=Z,153nm,18.2s,baz=78,slow=38						
PMG	Port Moresby	43.75	154	LR	LR	01 51 42.8	
	comp=Z,71nm,20.4s,baz=324,slow=32						
AAK	Ala-Archa	44.59	301	LR	LR	01 55 41.5	
	comp=Z,71nm,18.9s,baz=108,slow=37						
WRA	Warramunga Arr	50.93	174	P	P	01 37 10.9	-1.5
	0.3nm,0.6s,baz=353,slow=8.0,SNR=5.6 0.3nm,0.6s						
PALK	Pallekele	51.05	253	LR	LR	01 59 36.9	
	comp=Z,49nm,20.6s,baz=158,slow=37						
CTA	Charters Tower	53.41	160	LR	LR	02 01 18.6	
	comp=Z,27nm,18.5s,baz=354,slow=37						
ARU	Arti	54.22	320	LR	LR	02 02 56.6	
	comp=Z,74nm,20.4s,baz=86,slow=38						
ASAR	Alice Springs	54.59	175	P	P	01 37 39.5	+0.2
	0.2nm,0.4s,baz=4.8,slow=14,SNR=6.7						
ASAR				LR	LR	02 03 01.0	
	comp=Z,17nm,19.4s,baz=290,slow=38 0.2nm,0.4s						
AKTO	Aktyubinsk	55.15	312	LR	LR	02 03 08.7	
	comp=Z,116nm,18.1s,baz=83,slow=38						
KDAK	Kodiak Island	58.18	38	LR	LR	02 03 55.5	
	comp=Z,36nm,20.3s,baz=251,slow=37						
ILAR	Eielson Array	59.82	30	P	P	01 38 14.2	-1.7
	0.3nm,0.7s,baz=280,slow=7.9,SNR=2.9						
ILAR				LR	LR	02 04 21.8	
	comp=Z,29nm,19.8s,baz=301,slow=36 0.3nm,0.7s						
KBZ	Khabaz	66.83	308	P	P	01 39 04.1	+1.4
	2.5nm,0.9s,baz=109,slow=2.4,SNR=5.0 2.5nm,0.9s						
FINES	FINESS Array B	69.12	330	P	P	01 39 16.9	+0.1
	0.5nm,0.7s,baz=75,slow=7.4,SNR=6.2 0.5nm,0.7s						
YKA	Yellowknife Ar	73.82	26	P	P	01 39 45.9	+0.7
	0.6nm,1.0s,baz=316,slow=5.3,SNR=2.6 0.6nm,1.0s						
BRTR	Keskin Array B	74.79	307	P	P	01 39 52.6	+1.2
	1.5nm,1.1s,baz=48,slow=2.1,SNR=7.6 1.5nm,1.1s						
NOA	NORSAR Array B	75.39	334	LR	LR	02 16 41.8	
	comp=Z,32nm,18.1s,baz=55,slow=38						

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*SSNC **21** 01:29:21.7±2.7, 19.°85N×74.°47W, h5^{km}±12^{km}, MD3.0, ML2.1, MW2.7*

*OSPL **21** 01:29:23.3±1.4, 20.°02N×74.°55W, h15^{km}±89^{km}, ML1.9*

ISC 21 01:29:20.6±1.5**, 19.°94N**±0.°07×**74.°51W**±0.°03**, h4**^{km}±13^{km}**, n10, σ0^{s}93**/18**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	Masc	0.35	48	eP	Pb	01 29 29.6	+0.2
MASC				eS	Sb	01 29 35.9	+0.5
MASC				IAML		01 29 36.0	
	comp=N,70nm,0.3s						
MASC				IAML		01 29 36.6	
	comp=E,81nm,0.1s						
MASC	Masc	0.35	48	i P	Pb	01 29 29.6	+0.2
MASC				eS	Sb	01 29 34.6	-0.8
MASC				IAML		01 29 37.2	
	comp=Z,135nm,0.3s						
GTBY	Guantanamo Bay	0.56	269	eP	Pb	01 29 33.4	+0.4
GTBY				eS	Sb	01 29 42.7	+1.3
GTBY	Guantanamo Bay	0.56	269	i P	Pn	01 29 34.0	-1.4
GTBY				eS	Sg	01 29 39.4	+0.6
GTBY				IAML		01 29 44.6	
	comp=Z,48nm,0.1s						
MOAC	Moa	0.83	330	eP	Pb	01 29 37.7	+0.1
MOAC				eS	Sn	01 29 52.7	+0.9
RCC	Rio Carpintero	1.12	273	eP	Pg	01 29 41.5	-0.5
RCC				eS	Sg	01 29 56.1	-0.4
HLGC	Holguin	1.73	303	eP	Pg	01 29 53.7	-0.2
LMGC	Las Mercedes	2.35	274	eP	Pn	01 29 59.9	-0.1
LMGC				eS	Sn	01 30 29.3	0.0
LMGC				IAML		01 30 30.5	
	comp=E,7.9nm,0.1s						
LMGC				IAML		01 30 30.7	
	comp=N,12nm,0.4s						
LONE2	Loma La Sidra	3.18	115	i P	Pn	01 30 12.4	+0.9
SDDR	Presa de Saban	3.19	107	i P	Pn	01 30 12.5	+1.0
SDDR				eS	Sn	01 30 48.0	-2.0
SDDR				IAML		01 30 51.8	
	comp=Z,10nm,2.0s						

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*IDC **21** 02:20:51.9±4.7, 25.°57S×130.°04E, h0^{km}, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=38.3km s-min=26.8km az=87.0*

*NOU **21** 02:20:51.3, 25.°66S×129.°73E, h10^{km}, mb4.2/16, Northern Territory, Australia*

ISC 21 02:20:50.1±0.9**, 25.°68S**±0.°07×**129.°87E**±0.°06**, h10**^{km}**, n19, σ2^{s}53**/23**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.56	294	P	Pn	02 21 18.6	+0.6
ASAR	Alice Springs	4.18	62	Pn	Pn	02 21 56.2	+2.2
	1.8nm,0.3s,baz=240,slow=12,SNR=56						
ASAR				Pg	Pg	02 22 08.2	-1.9
	4.2nm,0.3s,baz=239,slow=16,SNR=19						
ASAR				Sn	Sn	02 22 44.4	+1.5
	4.7nm,0.3s,baz=255,slow=16,SNR=5.7						
ASAR				Lg	Lg	02 22 58.4	
	7.7nm,0.3s,baz=251,slow=27,SNR=6.6 4.2nm,0.5s						
OOD	Oodnadatta	5.61	113	P	Pn	02 22 17.9	+4.3
MULG	Mulgathing	5.89	142	P	Pn	02 22 21.6	+4.2
WRA	Warramunga Arr	7.04	37	Pn	Pn	02 22 34.4	+1.1
	1.7nm,0.3s,baz=214,slow=13,SNR=75						
WRA				Sn	Sn	02 23 52.3	-1.2
	2.0nm,0.3s,baz=220,slow=24,SNR=8.7						
WRA				Lg	Lg	02 24 28.6	
	3.4nm,0.3s,baz=212,slow=28,SNR=7.8 1.9nm,0.3s						
WRAB	Tennant Creek	7.05	37	P	Pn	02 22 34.8	+1.3
LCRK	Leigh Creek	8.77	125	P	Pn	02 22 58.5	+1.6
BBOO	Buckleboo	8.92	144	P	Pn	02 23 01.1	+2.0
INKA	Innaminka	9.94	104	P	Pn	02 23 16.3	+3.4
KNRA	Kununurra	10.01	354	P	Pn	02 23 14.6	+0.6
MEEK	Meekatharra	10.16	262	P	Pn	02 23 15.0	-1.1
QIS	Mount Isa	10.30	62	P	Pn	02 23 20.4	+2.3
MBWA	Marble Bar	10.34	294	P	Pn	02 23 18.0	-0.6
NAPP	Napperby	10.38	138	P	Pn	02 23 22.3	+3.2
HTT	Hallett	11.03	137	P	Pn	02 23 29.3	+1.4
STKA	Stephens Creek	11.99	124	Pn	Pn	02 23 41.3	+0.2
	0.5nm,0.3s,baz=302,slow=12,SNR=5.0						
STKA				Sn	Sn	02 25 49.5	-5.4
	0.6nm,0.3s,baz=201,slow=14,SNR=4.1						
STKA				Lg	Lg	02 27 11.8	
	0.2nm,0.3s,baz=9.5,slow=21,SNR=1.4 1.1nm,0.3s						
KLBR	Kellerberrin	12.16	238	P	Pn	02 23 42.9	-0.5
BLDU	Ballidu	12.61	244	P	Pn	02 23 48.4	-1.2
QLP	Quilpie	12.93	97	P	Pn	02 23 56.8	+2.8

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*IDC **21** 02:53:27.0±5.7, 7.°29S×154.°35E, h55^{km}±46^{km}, mb3.6/8, mbtmp3.9/9, ML3.9/1, MS3.5/4, Error ellipse: s-maj=43.6km s-min=20.3km az=104.0*

ISC 21 02:53:26.4±1.0**, 7.°3S**±0.°1×**154.°4E**±0.°2**, h50**^{km}**, n14, σ0^{s}97**/11**, mb3.8**/8**, MS3.8**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.83	322	P	Pn	02 54 24.2	+1.3
	8.4nm,0.3s,baz=107,slow=8.0,SNR=4.6						
KRVT				S	Sn	02 55 05.5	-1.1
	76nm,0.6s,baz=227,slow=21,SNR=7.9 34nm,0.4s						
PMG	Port Moresby	7.45	254	LR	LR	02 57 53.4	
	comp=Z,70nm,20.5s,baz=38,slow=36						
WRA	Warramunga Arr	23.14	235	P	P	02 58 27.8	-0.8
	2.7nm,1.0s,baz=58,slow=9.2,SNR=7.9 2.7nm,1.0s						
ASAR	Alice Springs	25.50	228	P	P	02 58 50.6	+0.3
	0.8nm,0.8s,baz=65,slow=8.3,SNR=5.6 0.8nm,0.8s						
DAV	Davao City (W)	32.11	296	LR	LR	03 12 00.0	
	comp=Z,211nm,20.2s,baz=162,slow=35						
KAPI	Kappang	34.52	272	LR	LR	03 16 20.0	
	comp=Z,155nm,18.5s,baz=64,slow=40						
LEM	Lembang	46.41	268	LR	LR	03 23 07.8	
	comp=Z,42nm,18.5s,baz=106,slow=38						
SONM	Songino Array	69.31	328	P	P	03 04 29.0	+0.3
	0.9nm,0.7s,baz=134,slow=6.2,SNR=1.9 0.9nm,0.7s						
MKAR	Makanchi Array	83.27	319	P	P	03 05 48.2	+0.4
	0.5nm,0.8s,baz=101,slow=7.5,SNR=3.7 0.5nm,0.8s						
ILAR	Eielson Array	83.91	22	P	P	03 05 49.2	-1.5
	0.6nm,0.8s,baz=248,slow=5.9,SNR=8.7 0.6nm,0.8s						
ZALV	Zalesovo Beam	84.14	326	P	P	03 05 51.1	-1.0
	1.1nm,0.5s,baz=112,slow=6.6,SNR=3.9 1.1nm,0.5s						
NVAR	Mina Array Bea	92.40	52	P	P	03 06 32.7	+0.4
	0.5nm,0.6s,baz=249,slow=7.6,SNR=2.2 0.5nm,0.6s						
YKA	Yellowknife Ar	96.92	28	P	P	03 06 52.6	+0.5
	0.2nm,0.6s,baz=267,slow=4.7,SNR=2.6 0.2nm,0.6s						
TORD	Torodi Ar. Bea	152.54	284	PKPbc	PKPbc	03 13 18.6	+0.2
	0.7nm,0.9s,baz=104,slow=1.8,SNR=2.9						

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*IDC **21** 03:04:02.5±0.6, 2.°00N×126.°39E, h0^{km}, mb4.2/17, mbtmp4.1/17, Error ellipse: s-maj=34.4km s-min=11.4km az=75.0*

*NEIC **21** 03:04:09.7±1.1, 1.°99N±0.°09×126.°69E±0.°04, h51^{km}±8^{km}, mb4.4/29, Error ellipse: s-maj=13.9km s-min=2.8km az=203.0*

*DJA **21** 03:04:10.3±0.3, 2°N±3°×12°7E±°, h45^{km}±5^{km}, M4.7/13, mb4.8/12, mB5.6/5, MLv4.5/13, Mw(mB)5.1/5*

ISC 21 03:04:08.2±0.4**, 2.°11N**±0.°04×**126.°80E**±0.°07**, h35**^{km}**, n84, σ2^{s}20**/78**, mb4.4**/35**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.45	157		Pn	03 04 32.4	+0.6
TNTI	Ternate	1.45	157	P	Pn	03 04 34.2	+2.3
SGSI	Sangihe	2.02	321	P	Pn	03 04 41.2	+1.5
LBMI	Labuha	2.82	166	P	Pn	03 04 54.4	+3.6
KMSI	Cibinong	3.20	242	P	Pn	03 04 58.6	+2.6
GTOI	Gorontalo	4.06	249	P	Pn	03 05 10.4	+2.6
DDMP	Don Marcelino,	4.11	345	⇓eP	Pn	03 05 09.7	+1.2
DDMP				eS	Sn	03 05 59.4	+3.9
SANI	Sanana	4.21	191	P	Pn	03 05 13.8	+3.9
LUWI	Luwuk	5.10	232	Pn	Pn	03 05 22.5	+0.3
LUWI	Luwuk	5.10	232	P	Pn	03 05 24.8	+2.7
	1.5nm6μm166nm,0.6s						
MRSI	Marisa	5.12	252	P	Pn	03 05 23.7	+1.3
	0.8nm91nm,0.6s						
KCP	Kidapawan	5.16	341	⇑eP	Pn	03 05 26.9	+3.9
APSI	Ampana	5.96	240	P	Pn	03 05 37.8	+3.8
	0.6nm1μm154nm,0.8s						
TOLI2	Tolitoli	6.10	261	Pn	Pn	03 05 34.1	-1.7
MPSI	Mapaga	7.12	256	P	Pn	03 05 52.3	+2.4
	0.1nm50nm,0.9s						
TTSI	Tana Toraja	8.65	234	P	Pn	03 06 16.3	+5.3
	0.2nm2μm37nm,0.9s						
MYLDM	Lahad Datu	8.82	290	Pn	Pn	03 06 14.2	+0.9
SPSI	Sidrap Palu	9.26	229	P	Pn	03 06 27.0	+7.7
SBUM	Sibu	14.57	272	Pn	Pn	03 07 32.6	+0.6
MTN	Manton Dam	15.47	164	Pn	Pn	03 07 43.1	-0.8
JAGI	Jajag, Banyuwa	16.42	230	P	P	03 08 04.6	+6.1
KSM	Kuching	16.50	268		Pn	03 07 57.6	+0.6
MMPI	Merauke	17.14	128	P	P	03 08 22.0	+15
KNRA	Kununurra	17.78	174		Pn	03 08 10.6	-2.4
KNRA				IAmb	IAmb	03 08 16.7	
	comp=Z,30nm,0.9s						
TNG	Tangerang	21.74	248	P	P	03 08 50.2	-6.6
TNG				P	P	03 08 48.0	-8.8
WB0	Warramunga Arr	22.98	161	P	P	03 09 08.8	-1.2
WB0				IAmb	IAmb	03 09 12.8	
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	23.13	162	P	P	03 09 10.5	-0.9
WRAB				IAmb	IAmb	03 09 14.3	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	23.13	162	P	P	03 09 10.2	-1.3
	comp=Z,7.6nm,0.7s,baz=337,slow=11,SNR=68						
WRA				S	S	03 13 26.3	+5.7
	comp=Z,2.7nm,0.5s,baz=333,slow=22,SNR=3.6 comp=Z,7.6nm,0.7s						
WRA	Warramunga Arr	23.13	162	P	P	03 09 09.9	-1.6
WB2	Warramunga Arr	23.14	162	P	P	03 09 11.3	-0.2
WB2				IAmb	IAmb	03 09 15.8	
	comp=Z,13nm,0.8s						
WR0	Warramunga Arr	23.21	161	P	P	03 09 11.3	-0.9
WR0				IAmb	IAmb	03 09 17.6	
	comp=Z,11nm,1.0s						
MDSI	Maura Dua	23.53	254	P	P	03 09 20.6	+5.1
PSA00	Pilbara Seismi	24.50	196	P	P	03 09 22.3	-2.1
AS31	Alice Springs	26.54	165	P	P	03 09 42.2	-0.7
ASAR	Alice Springs	26.54	165	P	P	03 09 42.5	-0.4
	comp=Z,1.0nm,0.4s,baz=346,slow=10,SNR=17 comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	31.77	303	P	P	03 10 27.6	-1.8
	comp=Z,1.1nm,0.4s,baz=134,slow=7.7,SNR=2.1 comp=Z,1.1nm,0.4s						
PZH	PanZhiHua	34.16	317	P	P	03 10 52.3	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.9s						
KSRS	Korea Array	35.19	2	P	P	03 10 59.9	+1.0
	comp=Z,1.0nm,0.5s,baz=182,slow=10,SNR=4.4 comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	35.85	16	P	P	03 11 06.6	+2.0
	comp=Z,2.1nm,0.7s,baz=184,slow=9.0,SNR=6.7 comp=Z,2.1nm,0.7s						
MAJO	Matsushiro	35.85	16	P	P	03 11 05.4	+0.7
MAJO				IAmb	IAmb	03 11 28.4	
	comp=Z,5.7nm,1.1s						
STKA	Stephens Creek	36.60	159	P	P	03 11 09.7	-1.5
	comp=Z,1.7nm,0.4s,baz=345,slow=11,SNR=5.2 comp=Z,1.7nm,0.4s						
LZH	Lanzhou	39.93	331	eP	P	03 11 39.3	0.0
LZH				pP	pP	03 11 44.1	-4.8
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
SHL	Shillong	40.90	308	P	P	03 11 45.6	-1.9
HHC	Hu-ho-hao-te	40.95	342	eP	P	03 11 51.0	+3.4
HHC				pmax	pmax		
	comp=Z,41nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.2s						
HHC				LR	LR		
	comp=N,230nm,16.5s						
HHC				LR	LR		
	comp=E,240nm,15.9s						
HHC				LR	LR		
	comp=Z,250nm,16.5s						
USRK	Ussuriysk Ar.	42.16	6	P	P	03 11 58.5	+1.2
	comp=Z,4.7nm,0.9s,baz=205,slow=8.4,SNR=6.1 comp=Z,4.7nm,0.9s						
USRK	Ussuriysk Ar.	42.16	6	P	P	03 11 58.7	+1.4
H11S3	WAKE ISLAND Hy	42.34	65	T	T	03 57 30.4	
	baz=252,slow=75						
H11S2	WAKE ISLAND Hy	42.35	65	T	T	03 57 32.0	
	baz=252,slow=75						
H11S1	WAKE ISLAND Hy	42.35	65	T	T	03 57 30.1	
	baz=252,slow=75						
XLT	XiLinHaoTe	42.69	349	eP	P	03 12 09.4	+7.7
XLT				pP	sP	03 12 22.1	+6.9
XLT				sP	pwP	03 12 26.3	+12
XLT				pmax	pmax		
	comp=Z,11nm,1.1s						
XLT				pmax	pmax		
	comp=Z,72nm,4.3s						
ULN	Ulaanbaatar	48.67	342	P	P	03 12 49.4	+0.4
ULN				IAmb	IAmb	03 12 53.5	
	comp=Z,4.3nm,1.0s						
SONM	Songino Array	48.85	342	P	P	03 12 51.0	+0.6
	comp=Z,0.6nm,0.3s,baz=161,slow=9.4,SNR=3.7 comp=Z,0.6nm,0.3s						
WMQ	Urumqi	54.09	326	eP	P	03 13 32.4	+2.8
PETK	Petropavlovsk-	56.90	22	P	P	03 13 51.5	+2.0
	comp=Z,1.9nm,0.8s,baz=205,slow=6.6,SNR=4.3 comp=Z,1.9nm,0.8s						
MK31	Makanchi Array	58.92	326	P	P	03 14 03.0	-0.9
MK31				IAmb	IAmb	03 14 04.9	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	58.92	326	P	P	03 14 03.0	-0.9
	comp=Z,3.9nm,0.6s,baz=119,slow=7.9,SNR=41 comp=Z,3.9nm,0.6s						
MAKZ	Makanchi	59.10	326	P	P	03 14 04.2	-1.0
KSH	Kashi	59.24	316	P	P	03 14 07.3	+0.9
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KDJ	Kajisay	59.60	319	P	P	03 14 08.1	-0.8
ZALV	Zalesovo Beam	62.05	333	P	P	03 14 22.7	-2.4
	comp=Z,0.7nm,0.4s,baz=122,slow=7.9,SNR=3.2 comp=Z,0.7nm,0.4s						
ZALV	Zalesovo Beam	62.05	333	P	P	03 14 24.9	-0.2
KBL	Kabul	62.56	308	P	P	03 14 28.5	-0.7
KURK	Kurchatov	63.14	328	P	P	03 14 31.6	-0.7
KK31	Karatay Array	64.46	318	IAmb	IAmb	03 14 42.0	
	comp=Z,5.8nm,1.2s						
KKAR	Karatay Array	64.46	318	P	P	03 14 40.3	-1.0
BRVK	Borovoye	68.78	327	P	P	03 15 08.1	-0.5
BRVK				IAmb	IAmb	03 15 20.7	
	comp=Z,5.4nm,1.1s						
TIXI	Tiksi	69.45	1	P	P	03 15 12.6	+0.2
NRIK	Noril'sk	72.01	346	P	P	03 15 26.1	-1.9
	comp=Z,2.6nm,0.7s,baz=91,slow=4.0,SNR=4.3 comp=Z,2.6nm,0.7s						
ABKAR	Akbulak array	73.44	321	P	P	03 15 36.0	-0.9
ARU	Arti	76.33	328	P	P	03 15 52.3	-1.2
RAYN	Ar Rayn	81.18	293	P	P	03 16 18.1	-2.9
RAYN				IAmb	IAmb	03 16 21.8	
	comp=Z,3.3nm,0.9s						
VNDA	Vanda	81.82	173	P	P	03 16 23.4	+0.2
	comp=Z,1.6nm,0.8s,baz=322,slow=6.6,SNR=12 comp=Z,1.6nm,0.8s						
VNDA	Vanda	81.82	173	P	P	03 16 22.1	-1.0
VNDA				IAmb	IAmb	03 16 26.3	
	comp=Z,2.3nm,0.9s						
KIV	Kislovodsk	84.30	314	P	P	03 16 37.8	+1.0
KIV				IAmb	IAmb	03 16 40.6	
	comp=Z,6.2nm,1.1s						
IL31		86.53	25	P	P	03 16 46.1	-1.2
ILAR	Eielson Array	86.53	25	P	P	03 16 47.1	-0.2
	comp=Z,0.1nm,0.4s,baz=245,slow=5.5,SNR=1.8 comp=Z,0.1nm,0.4s						
KLMR	Klimovskoe	86.84	331	eP	P	03 16 47.0	-1.9
KLMR				AMP		03 16 55.3	
	comp=Z,9.0nm,1.0s						
EGAK	Eagle	88.98	25	P	P	03 16 59.9	+0.8
EGAK				IAmb	IAmb	03 17 16.1	
	comp=Z,2.5nm,0.9s						
BRTR	Keskin Array B	91.10	310	P	P	03 17 08.0	-1.7
	comp=Z,0.3nm,0.6s,baz=45,slow=4.8,SNR=2.8 comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	91.98	340	P	P	03 17 12.1	-0.8
	comp=Z,3.3nm,1.0s,baz=88,slow=6.5,SNR=1.9 comp=Z,3.3nm,1.0s						
FINES	FINESS Array B	93.28	332	P	P	03 17 18.3	-0.8
	comp=Z,0.9nm,0.7s,baz=59,slow=5.4,SNR=5.0 comp=Z,0.9nm,0.7s						
BURAR	Bucovina Array	96.25	318	P	P	03 17 32.4	-0.8
BURAR				IAmb	IAmb	03 17 34.5	
	comp=Z,1.5nm,0.8s						
TORD	Torodi Ar. Bea	123.47	287	PKP	PKPdf	03 23 02.0	-0.9
	comp=Z,0.7nm,1.1s,baz=64,slow=3.4,SNR=2.4						
TORD	Torodi Ar. Bea	123.47	287		PKPdf	03 23 00.8	-2.1

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*IDC **21** 03:06:44.4±0.6, 1.°96N×126.°48E, h0^{km}, mb4.3/19, mbtmp4.3/19, MS3.5/20, Error ellipse: s-maj=30.7km s-min=13.1km az=78.0*

*BJI **21** 03:06:50.5±0.0, 1.°83N×126.°29E, h54^{km}, mb4.6/40, mB5.0/21, Ms4.4/5, Ms7 4.2/4*

*DJA **21** 03:06:50.0±1.2, 2°N±3°×12°7E±°, h29^{km}±11^{km}, M4.8/12, mb4.9/12, mB5.3/7, MLv4.7/11, Mw(mB)4.8/7*

*NEIC **21** 03:06:51.5±1.3, 2.°02N±0.°05×126.°59E±0.°07, h44^{km}±6^{km}, mb4.6/44, Error ellipse: s-maj=10.4km s-min=7.1km az=84.0*

ISC 21 03:06:51.3±0.4**, 2.°06N**±0.°05×**126.°70E**±0.°07**, h47**^{km}**, n130, σ1^{s}29**/102**, mb4.5**/47**, MS3.5**/19**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.44	152	Pn	Pn	03 07 15.2	+0.1
TNTI	Ternate	1.44	152	P	Pn	03 07 15.1	+0.1
SGSI	Sangihe	2.00	324	P	Pn	03 07 19.8	-2.8
LBMI	Labuha	2.80	163	P	Pn	03 07 41.3	+7.7
KMSI	Cibinong	3.09	242	P	Pn	03 07 39.3	+1.6

GTOI	**Gorontalo**	**3.95**	**249**	P	**Pn**	**03 07 49.6**	**+0.2**
DDMP	**Don Marcelino,**	**4.14**	**346**	⇓eP	**Pn**	**03 07 53.2**	**+1.2**
SANI	**Sanana**	**4.14**	**190**	P	**Pn**	**03 07 53.6**	**+1.5**
LUWI	**Luwuk**	**4.99**	**232**	Pn	**Pn**	**03 08 01.9**	**-1.8**
LUWI	**Luwuk**	**4.99**	**232**	P	**Pn**	**03 08 04.8**	**+1.1**
	2.9nm261nm,0.6s						
MRSI	**Marisa**	**5.01**	**252**	P	**Pn**	**03 08 05.2**	**+1.2**
	0.8nm2µm197nm,1.0s						
KCP	**Kidapawan**	**5.17**	**342**	i S	Pn	03 08 13.1	+6.8
SIJI	**Sorong**	**5.41**	**122**	LR	LR	03 10 37.7	
	comp=Z,1µm,21.6s,baz=301,slow=42						
APSI	**Ampana**	**5.85**	**240**	P	**Pn**	**03 08 18.2**	**+2.7**
	1.0nm2µm302nm,1.0s						
TOLI2	**Tolitoli**	**5.99**	**261**	Pn	**Pn**	**03 08 16.5**	**-0.9**
MPSI	**Mapaga**	**7.01**	**256**	P	**Pn**	**03 08 33.6**	**+2.1**
	0.2nm701nm49nm,0.9s						
TTSI	**Tana Toraja**	**8.55**	**234**	P	Pn	03 08 58.8	+6.3
MYLDM	**Lahad Datu**	**8.75**	**291**	Pn	**Pn**	**03 08 56.1**	**+0.8**
SPSI	**Sidrap Palu**	**9.15**	**229**	P	Pn	03 09 08.4	+7.5
BKSI	**Bulukumba**	**9.85**	**222**	P	Pn	03 09 22.3	+12
KAPI	**Kappang**	**9.88**	**225**	Pn	**Pn**	**03 09 10.5**	**-0.3**
	1.3nm,0.3s,baz=49,slow=17,SNR=3.1						
EDFI	**Ende, Flores**	**11.84**	**205**	P	Pn	03 09 56.4	+19
SOEI	**Soe**	**11.98**	**192**	Pn	**Pn**	**03 09 40.2**	**+0.5**
SOEI	**Soe**	**11.98**	**192**	P	Pn	03 09 45.8	+6.1
BATI	**Baumata**	**12.55**	**194**	LR	LR	03 16 04.3	
	comp=Z,282nm,18.9s,baz=18,slow=45						
BATI	**Baumata**	**12.55**	**194**	P	**P**	**03 09 59.4**	**+1.6**
PLAI	**Plampang**	**14.00**	**219**	P	P	03 10 24.3	+10
SBUM	**Sibu**	**14.47**	**272**	Pn	**Pn**	**03 10 13.6**	**+0.1**
MTN	**Manton Dam**	**15.45**	**164**	Pn	**Pn**	**03 10 25.7**	**-0.5**
KSM	**Kuching**	**16.39**	**268**		**Pn**	**03 10 38.6**	**+0.2**
GMJI	**Gumukmas**	**16.74**	**232**	P	**P**	**03 10 48.4**	**+4.1**
KNRA	**Kununurra**	**17.74**	**173**	Pn	**Pn**	**03 10 52.8**	**-2.2**
KNRA				IAmb	IAmb	03 10 58.3	
	comp=Z,35nm,0.9s						
KPJI	**Karang Pucung**	**20.04**	**242**	P	**P**	**03 11 20.8**	**+0.2**
	comp=Z,31nm,0.9s						
TWG	**Pinlang**	**21.35**	**346**	P	**P**	**03 11 34.3**	**-0.4**
WB0	**Warramunga Arr**	**22.97**	**161**	P	**P**	**03 11 51.8**	**-0.2**
WB0				IAmb	IAmb	03 12 02.6	
	comp=Z,24nm,0.9s						
WRAB	**Tennant Creek**	**23.11**	**161**	P	**P**	**03 11 52.6**	**-0.7**
WRAB				IAmb	IAmb	03 11 59.8	
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**23.11**	**161**	P	**P**	**03 11 51.9**	**-1.6**
	comp=Z,17nm,0.9s,baz=339,slow=11,SNR=13						
WRA				PcP	**PcP**	**03 15 42.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=317,slow=2.3,SNR=2.7						
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**23.11**	**161**	P	**P**	**03 11 52.2**	**-1.3**
WB2	**Warramunga Arr**	**23.12**	**161**	P	**P**	**03 11 52.7**	**-0.8**
WB2				IAmb	IAmb	03 11 59.9	
	comp=Z,21nm,0.7s						
WR0	**Warramunga Arr**	**23.20**	**161**	P	**P**	**03 11 54.1**	**-0.1**
WR0				IAmb	IAmb	03 12 04.4	
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	**23.35**	**120**	LR	LR	03 22 43.4	
	comp=Z,168nm,21.6s,baz=316,slow=41						
MDSI	**Maura Dua**	**23.43**	**254**	P	**P**	**03 12 00.0**	**+3.5**
	comp=Z,1µmcomp=Z,6.5nm,0.9s						
JOW	**Kunigami**	**24.68**	**3**	P	**P**	**03 12 11.4**	**+3.5**
	comp=Z,18nm,0.7s,baz=152,slow=9.8,SNR=5.9						
JOW	**Kunigami**	**24.68**	**3**	IAmb	IAmb	03 12 14.2	
	comp=Z,26nm,0.8s						
AS31	**Alice Springs**	**26.51**	**165**	P	**P**	**03 12 25.4**	**+0.7**
ASAR	**Alice Springs**	**26.52**	**165**	P	**P**	**03 12 22.9**	**-1.7**
	comp=Z,3.4nm,0.7s,baz=346,slow=12,SNR=2.0						
ASAR				PcP	**PcP**	**03 15 49.3**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=348,slow=2.6,SNR=7.7						
	comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**26.52**	**165**	P	**P**	**03 12 24.6**	**-0.1**
PSI	**Prapat**	**27.76**	**272**	LR	LR	03 24 53.8	
	comp=Z,103nm,20.4s,baz=118,slow=40						
JCJ	**Chichijima**	**28.98**	**29**	LR	LR	03 25 48.1	
	comp=Z,15nm,18.7s,baz=274,slow=39						
CTA	**Charters Tower**	**29.20**	**140**	LR	LR	03 26 59.5	
	comp=Z,133nm,18.4s,baz=288,slow=42						
NJ2	**Nanjing**	**30.73**	**347**	eP	**P**	**03 13 04.4**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**03 13 09.1**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=112,slow=6.8,SNR=5.1						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**03 13 10.4**	**-0.5**
CHTO	**Chiang Mai**	**31.88**	**303**	P	**P**	**03 13 11.3**	**-1.0**
CHTO				IAmb	IAmb	03 13 15.7	
	comp=Z,5.8nm,0.8s						
FORT	**Forrest**	**32.68**	**178**	P	**P**	**03 13 18.7**	**-0.5**
JHJ	**Hachijo jima 2**	**33.25**	**20**	LR	LR	03 25 57.9	
	comp=Z,27nm,19.2s,baz=6.5,slow=34						
PZH	**PanZhiHua**	**34.13**	**318**	P	**P**	**03 13 33.3**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
KSAR	**Wonju Array Be**	**35.23**	**2**	P	**P**	**03 13 40.8**	**-0.4**
KSRS	**Korea Array**	**35.24**	**2**	P	**P**	**03 13 42.5**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=183,slow=9.3,SNR=8.1						
	comp=Z,1.7nm,0.6s						
XAN	**Xi'an**	**35.89**	**334**	P	**P**	**03 13 46.8**	**-0.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	**Matsushiro Arr**	**35.92**	**16**	P	**P**	**03 13 46.8**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=178,slow=9.7,SNR=5.7						
MJAR				LR	LR	03 28 17.3	
	comp=Z,84nm,21.7s,baz=200,slow=36						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**03 13 53.4**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=321,slow=7.3,SNR=4.3						
STKA				LR	LR	03 30 32.6	
	comp=Z,118nm,18.3s,baz=5.7,slow=39						
	comp=Z,4.1nm,0.6s						
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**03 13 53.2**	**+0.2**
BJT	**Baijiatuau**	**38.98**	**347**	P	**P**	**03 14 12.9**	**-0.1**
BJT				IAmb	IAmb	03 14 17.6	
	comp=Z,9.3nm,0.8s						
LZH	**Lanzhou**	**39.93**	**331**	eP	**P**	**03 14 22.1**	**+0.9**
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
SHL	**Shillong**	**40.85**	**308**	P	**P**	**03 14 27.2**	**-1.9**
HHC	**Hu-ho-hao-te**	**40.97**	**342**	eP	**P**	**03 14 32.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.0s						
HHC				LR	LR		
	comp=Z,170nm,17.1s						
HHC				LR	LR		
	comp=Z,240nm,16.5s						
HHC				LR	LR		
	comp=Z,310nm,17.8s						
USRK	**Ussuriysk Ar.**	**42.22**	**6**	P	**P**	**03 14 39.8**	**0.0**
	comp=Z,3.4nm,0.8s,baz=195,slow=5.1,SNR=5.0						
	comp=Z,3.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**42.22**	**6**	P	**P**	**03 14 39.9**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**42.45**	**65**	T	T	04 00 12.2	
	baz=252,slow=75						
H11S2	**WAKE ISLAND Hy**	**42.46**	**65**	T	T	04 00 14.3	
	baz=252,slow=75						
H11S1	**WAKE ISLAND Hy**	**42.46**	**65**	T	T	04 00 19.7	
	baz=252,slow=75						
XLT	**XiLinHaoTe**	**42.72**	**349**	eP	**P**	**03 14 46.8**	**+2.9**
XLT				pP	pwP	03 14 58.4	-0.2
XLT				sP	sP	03 15 02.6	+1.3
XLT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,89nm,3.9s						
ASAJ	**Asahikawa**	**44.19**	**16**	LR	LR	03 33 31.0	
	comp=Z,47nm,21.8s,baz=176,slow=36						
GTA	**Gaotai**	**44.51**	**330**	eP	**P**	**03 14 58.0**	**-0.5**
GTA				pP	pP	03 15 08.6	-2.0
GTA				sP	pwP	03 15 13.5	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GOMU	**GeErMu**	**44.98**	**323**	P	**P**	**03 15 02.3**	**-0.2**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,51nm,6.1s						
PALK	**Pallekele**	**46.12**	**278**	LR	LR	03 35 38.1	
	comp=Z,80nm,21.9s,baz=210,slow=38						
ULN	**Ulaanbaatar**	**48.69**	**342**	P	**P**	**03 15 30.9**	**-0.2**
ULN				IAmb	IAmb	03 15 35.5	
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**48.86**	**342**	P	**P**	**03 15 32.3**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=157,slow=8.0,SNR=7.5						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**48.86**	**342**	P	**P**	**03 15 32.8**	**+0.4**
WMQ	**Urumqi**	**54.07**	**326**	eP	**P**	**03 16 14.3**	**+2.9**
MSVF	**Nonsavu**	**54.26**	**114**	LR	LR	03 38 19.9	
	comp=Z,74nm,21.5s,baz=257,slow=35						
PETK	**Petropavlovsk-**	**56.98**	**22**	P	**P**	**03 16 33.4**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=193,slow=7.7,SNR=7.5						
PETK				LR	LR	03 41 12.3	
	comp=Z,18nm,20.6s,baz=221,slow=36						
	comp=Z,2.0nm,0.8s						
MK31	**Makanchi Array**	**58.91**	**326**	P	**P**	**03 16 45.1**	**-0.6**
MK31				IAmb	IAmb	03 16 46.9	
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**03 16 44.8**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=120,slow=8.4,SNR=19						
	comp=Z,2.6nm,0.5s						
NIL	**Nilore**	**58.93**	**309**	P	**P**	**03 16 45.4**	**-0.6**
KSH	**Kashi**	**59.20**	**316**	P	**P**	**03 16 50.3**	**+2.3**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KDJ	**Kajisay**	**59.57**	**319**	P	**P**	**03 16 50.1**	**-0.4**
KDJ				IAmb	IAmb	03 16 52.1	
	comp=Z,5.1nm,0.7s						
MA2	**Magadan**	**60.32**	**14**	LR	LR	03 43 05.2	
	comp=Z,17nm,21.7s,baz=174,slow=36						
RPZ	**Rata Peaks**	**60.42**	**144**	LR	LR	03 45 10.0	
	comp=Z,91nm,18.4s,baz=298,slow=38						
BOOM	**Boomskoye usch**	**60.55**	**319**	P	**P**	**03 16 56.7**	**-0.6**
BOOM				IAmb	IAmb	03 17 00.4	
	comp=Z,7.2nm,1.4s						
AAK	**Ala-Archa**	**61.57**	**318**	P	**P**	**03 17 04.6**	**+0.5**
ZALV	**Zalesovo Beam**	**62.06**	**333**	P	**P**	**03 17 06.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=108,slow=4.8,SNR=5.2						
	comp=Z,1.1nm,0.5s						
ZALV	**Zalesovo Beam**	**62.06**	**333**	P	**P**	**03 17 06.6**	**-0.4**
KBL	**Kabul**	**62.52**	**308**	P	**P**	**03 17 09.7**	**-1.0**
KBL				IAmb	IAmb	03 17 11.5	
	comp=Z,7.6nm,0.8s						
GAR	**Garm**	**63.03**	**313**	P	**P**	**03 17 13.1**	**-0.9**
BTK	**Batken**	**63.06**	**315**	IAmb	IAmb	03 17 17.2	
	comp=Z,5.7nm,1.0s						
KURK	**Kurchatov**	**63.13**	**328**	P	**P**	**03 17 13.5**	**-0.6**
KK31	**Karatay Array**	**64.43**	**318**	P	**P**	**03 17 22.3**	**-0.7**
KK31				IAmb	IAmb	03 17 24.1	
	comp=Z,5.6nm,1.1s						
BRVK	**Borovoye**	**68.77**	**327**	P	**P**	**03 17 50.7**	**+0.3**
BRVK				IAmb	IAmb	03 17 56.1	
	comp=Z,5.5nm,1.0s						
WSAR	**Wadi Sarin**	**69.06**	**294**	LR	LR	03 53 00.2	
	comp=Z,12nm,18.2s,baz=127,slow=40						
TIXI	**Tiksi**	**69.50**	**1**	LR	LR	03 49 50.5	
	comp=Z,40nm,19.3s,baz=180,slow=37						
TIXI	**Tiksi**	**69.50**	**1**	P	**P**	**03 17 55.6**	**+1.1**
NRIK	**Noril'sk**	**72.03**	**346**	P	**P**	**03 18 10.2**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=116,slow=5.2,SNR=4.0						
	comp=Z,3.0nm,0.6s						
NRIK	**Noril'sk**	**72.03**	**346**	P	**P**	**03 18 10.6**	**+0.6**
NRIK				IAmb	IAmb	03 18 28.0	
	comp=Z,4.4nm,0.8s						
ABKAR	**Akbulak array**	**73.42**	**321**	P	**P**	**03 18 18.0**	**-0.6**
RAR	**Rarotonga**	**75.43**	**112**	LR	LR	03 51 60.0	
	comp=Z,25nm,18.2s,baz=204,slow=36						
ARU	**Arti**	**76.33**	**328**	P	**P**	**03 18 34.3**	**-0.9**
ARU				IAmb	IAmb	03 18 37.7	
	comp=Z,8.3nm,0.7s						
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**03 19 01.5**	**-0.9**
VNDA	**Vanda**	**81.78**	**173**	P	**P**	**03 19 03.1**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=303,slow=7.0,SNR=11						
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**81.78**	**173**	P	**P**	**03 19 05.2**	**+0.5**
VNDA				IAmb	IAmb	03 19 09.8	
	comp=Z,7.4nm,1.4s						
MAW	**Mawson**	**82.19**	**200**	P	**P**	**03 19 06.7**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=116,slow=12,SNR=6.4						
	comp=Z,2.3nm,0.7s						
L19K	**White Mountain**	**82.79**	**28**	IAmb	IAmb	03 19 17.6	
	comp=Z,16nm,1.4s						
KDAK	**Kodiak Island**	**83.31**	**32**	LR	LR	03 50 39.6	
	comp=Z,54nm,21.6s,baz=247,slow=32						
KARS	**Kars**	**83.82**	**310**	P	**P**	**03 19 16.3**	**0.0**
IMAR	**Indian Mountai**	**83.87**	**24**	P	**P**	**03 19 16.3**	**+0.5**
KBZ	**Khabaz**	**84.10**	**314**	P	**P**	**03 19 16.4**	**-1.0**
	comp=Z,3.2nm,1.0s,baz=51,slow=0.6,SNR=4.0						
	comp=Z,3.2nm,1.0s						
GURO	**Guroymak-BITLI**	**84.55**	**308**	P	**P**	**03 19 19.8**	**-0.2**
ILAR	**Eielson Array**	**86.61**	**25**	P	**P**	**03 19 29.5**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=230,slow=5.6,SNR=5.4						
	comp=Z,0.2nm,0.7s						
KLMR	**Klimovskoe**	**86.84**	**331**	eP	**P**	**03 19 29.8**	**-0.8**
KLMR				AMP		03 19 46.2	
	comp=Z,14nm,1.2s						
BMAR	**Burnt Mountain**	**87.62**	**23**	P	**P**	**03 19 33.2**	**-1.1**
LOGN	**Logan Glacier**	**89.34**	**29**	P	**P**	**03 19 41.3**	**-1.5**
BRTR	**Keskin Array B**	**91.06**	**310**	P	**P**	**03 19 50.2**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=115,slow=5.7,SNR=3.3						
BRTR				LR	LR	04 07 35.3	
	comp=Z,16nm,18.0s,baz=117,slow=40						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**92.00**	**340**	P	**P**	**03 19 54.1**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=62,slow=6.2,SNR=1.8						
	comp=Z,3.5nm,1.0s						
FINES	**FINESS Array B**	**93.28**	**332**	P	**P**	**03 20 00.9**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=85,slow=1.7,SNR=5.2						
	comp=Z,2.0nm,0.9s						
BURAR	**Bucovina Array**	**96.22**	**318**	P	**P**	**03 20 14.2**	**-0.5**
BURAR				IAmb	IAmb	03 20 16.0	
	comp=Z,2.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**123.39**	**287**	PKP	**PKPdf**	**03 25 44.1**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=39,slow=2.4,SNR=2.9						
PLCA	**Paso Flores**	**138.46**	**160**	PKP	**PKPdf**	**03 26 13.1**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=322,slow=5.7,SNR=3.8						
PLCA	**Paso Flores**	**138.46**	**160**		**PKPdf**	**03 26 11.0**	**-1.3**
VA03	**San Esteban**	**145.42**	**154**		**PKPbc**	**03 26 23.4**	**-1.5**

IDC 21 03:23:04.7±2.6,6°.14S×131°.03E,h0^{km},mb3.4/1, mbtmp3.4/3,ML3.7/1,Error ellipse: s-maj=138.1km s-min=34.1km az=71.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.09**	**167**	Pn	Pn	03 26 25.8	+0.1
	0.4nm,0.3s,baz=349,slow=13,SNR=6.5						
WRA				Sn	Sn	03 28 49.2	-14
	0.1nm,0.3s,baz=351,slow=24,SNR=2.2						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**17.64**	**171**	P	Pn	03 27 12.2	+0.1
	0.3nm,0.5s,baz=8.9,slow=13,SNR=1.5						
ASAR				S	Sn	03 30 19.3	-10
	0.4nm,0.7s,baz=0.4,slow=28,SNR=2.3						
MKAR	**Makanchi Array**	**68.08**	**326**	P	P	03 34 06.3	0.0
	0.2nm,0.4s,baz=129,slow=5.9,SNR=1.9						
	0.2nm,0.4s						

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*IDC **21** 04:11:46.3±1.3,22°.96S×66°.65W,h220^{km}±26^{km},mb3.1/1, mbtmp3.6/6,Error ellipse: s-maj=36.2km s-min=16.6km az=115.0*

ISC 21 04:11:45.6±1.0,23°.14S±0°.06×66°.68W±0°.08,h222^{km},n17, σ1^{s}.23/27,3C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.12**	**284**	P	**Pn**	**04 12 27.8**	**+0.3**
	11nm,0.4s,baz=138,slow=4.4,SNR=44						
LVC				S	**S**	**04 13 00.2**	**+0.2**
	16nm,0.3s,baz=350,slow=20,SNR=26						
LVC	**Limon Verde**	**2.12**	**284**	eP	**Pn**	**04 12 27.8**	**+0.3**
LVC				eS	**S**	**04 13 00.1**	**+0.2**
PB15	**IPOC Station P**	**2.57**	**268**	⇑iP	**Pn**	**04 12 32.5**	**+0.6**
PB15				i S	**S**	**04 13 07.4**	**-0.5**
PB06	**IPOC Station P**	**2.70**	**279**	eP	**Pn**	**04 12 34.1**	**+0.8**
PB06				eS	**S**	**04 13 09.7**	**-0.7**
PB06				IAML		04 13 14.3	
	comp=N,178nm,0.3s						
PB09	**IPOC Station P**	**2.72**	**299**	eP	**Pn**	**04 12 34.9**	**+1.3**
PB09				IAML		04 13 18.1	
	comp=E,48nm,0.4s						
PB07	**IPOC Station P**	**3.28**	**295**	eP	**Pn**	**04 12 40.5**	**+0.5**
PB07				i S	**S**	**04 13 20.5**	**-1.9**
PB04	**IPOC Station P**	**3.30**	**283**	eP	**Pn**	**04 12 40.4**	**+0.3**
GO02	**Mina Guanaco**	**3.33**	**232**	⇑iP	**Pn**	**04 12 40.5**	**-0.1**
GO02				i S	**S**	**04 13 22.3**	**-1.3**
PB01	**IPOC Station P**	**3.34**	**308**	eP	**Pn**	**04 12 41.4**	**+0.8**
PB01				eS	**S**	**04 13 22.8**	**-0.6**
PB02	**IPOC Station P**	**3.49**	**301**	eP	**Pn**	**04 12 42.7**	**+0.4**
PB10	**IPOC Station P**	**3.58**	**263**	⇑iP	**Pn**	**04 12 43.4**	**+0.2**
PB10				eS	**S**	**04 13 25.4**	**-2.9**
PB08	**IPOC Station P**	**3.77**	**322**	eP	**Pn**	**04 12 47.6**	**+1.7**
PB08				eS	**S**	**04 13 34.4**	**+1.3**
LPAZ	**La Paz**	**6.96**	**348**	P	**Pn**	**04 13 26.4**	**+0.3**
	comp=E,1.4nm,0.3s,baz=176,slow=9.3,SNR=24						
LPAZ				S	**S**	**04 14 44.8**	**-1.3**
	comp=E,0.5nm,0.6s,baz=307,slow=20,SNR=1.0						
SIV	**San Ignacio**	**8.86**	**38**	P	**Pn**	**04 13 47.9**	**-2.2**
	comp=E,2.5nm,0.5s,baz=217,slow=11,SNR=17						
PLCA	**Paso Flores**	**17.84**	**190**	P	**Pn**	**04 15 43.0**	**+2.4**
	comp=E,0.5nm,0.5s,baz=16,slow=9.4,SNR=4.8						
BDFB	**Brasilia**	**19.11**	**70**	P	**P**	**04 15 52.6**	**+0.3**
	comp=E,1.8nm,0.5s,baz=234,slow=8.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**75.99**	**69**	P	**P**	**04 23 08.1**	**-0.7**
	comp=E,0.5nm,0.8s,baz=260,slow=6.2,SNR=6.8						
	comp=E,0.5nm,0.8s						

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*IDC **21** 04:18:23.6±1.9,3°.66N×126°.70E,h0^{km},mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=180.3km s-min=22.2km az=66.0*

ISC 21 04:18:28.7±1.9,4°.1N±0°.4×128°.0E±0°.5,h50^{km},n6,σ1^{s}.52/7, mb3.7/4,1C-1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.98**	**311**	⇓eP	**Pn**	**04 19 11.7**	**-1.9**
KCP	**Kidapawan**	**4.05**	**315**	⇑iP	**Pn**	**04 19 29.6**	**+1.3**
KCP				i S	**Sn**	**04 20 15.4**	**+1.0**
WRA	**Warramunga Arr**	**24.73**	**166**	P	**P**	**04 23 44.9**	**-0.8**
	1.7nm,0.7s,baz=342,slow=10,SNR=23						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**28.23**	**168**	P	**P**	**04 24 18.2**	**+1.1**
	0.2nm,0.4s,baz=345,slow=12,SNR=5.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**04 28 15.0**	**-1.0**
	0.4nm,0.6s,baz=114,slow=8.3,SNR=3.9						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**62.07**	**327**	P	**P**	**04 28 44.3**	**0.0**
	0.4nm,0.6s,baz=131,slow=6.4,SNR=6.5						
	0.4nm,0.6s						

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*DNK **21** 04:33:10.9±2.7,80°.86N×3°.82W,h20^{km}±30^{km},ML2.6*

*IDC **21** 04:33:11.5±1.2,80°.77N×3°.69W,h0^{km},mb3.3/5, mbtmp3.7/8,ML4.0/3,MS2.9/13,Error ellipse: s-maj=35.8km s-min=19.6km az=41.0*

*BER **21** 04:33:13.9±3.0,80°.90N×3°.65W,h26^{km}±28^{km},ML2.3, Confirmed Earthquake*

*IEPN **21** 04:33:15.0,80°.84N×1°.74W,h10^{km}*

ISC 21 04:33:10.4±0.7,80°.76N±0°.06×3°.73W±0°.04,h10^{km},n45, σ3^{s}.04/54,mb3.3/5,MS3.1/11,2C,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.17**	**299**	i P	**Pn**	**04 33 45.5**	**-0.8**
NOR				i S	**Sn**	**04 34 10.0**	**-3.2**
NOR				IAML		04 34 12.7	
	comp=Z,60nm,0.6s						
NOR	**Nord**	**2.17**	**299**	⇑iP	**Pn**	**04 33 45.5**	**-0.8**
NOR				eS	**Sn**	**04 34 10.5**	**-2.7**
KBS	**Kingsbay**	**3.32**	**116**	i P	**Pn**	**04 34 02.0**	**-0.2**
KBS				i S	**Sn**	**04 34 35.8**	**-5.9**
KBS	**Kingsbay**	**3.32**	**116**	eP	**Pn**	**04 34 02.0**	**-0.2**
KBS				e		04 34 35.8	
KBS				IAML		04 34 42.5	
	comp=Z,13nm,0.2s						
KBS	**Kingsbay**	**3.32**	**116**	eP	**Pn**	**04 34 01.6**	**-0.6**
KBS				eS	**Sn**	**04 34 36.2**	**-5.5**
BRBB	**Barentsburg B**	**4.23**	**120**	eP	**Pn**	**04 34 15.9**	**+1.2**
BRBB				eS	**Sn**	**04 35 01.4**	**-2.6**
BRBA	**Barentsburg A**	**4.26**	**120**	eP	**Pn**	**04 34 16.4**	**+1.3**
BRBA				eS	**Sn**	**04 35 01.5**	**-3.2**
BRBA				IAML		04 35 06.5	
	comp=Z,15nm,0.6s						
SPA0	**Spitsbergen Ar**	**4.48**	**115**	eP	**Pn**	**04 34 18.5**	**+0.3**
SPA0				eS	**Sn**	**04 35 05.8**	**-4.4**
SPA0				IAML		04 35 15.1	
	comp=Z,8.9nm,0.6s						
SPA0	**Spitsbergen Ar**	**4.48**	**115**	⇑iP	**Pn**	**04 34 18.4**	**+0.2**
SPA0				i S	**Sn**	**04 35 05.9**	**-4.4**
SPITS	**Spitsbergen Ar**	**4.48**	**115**	Pn	**Pn**	**04 34 18.5**	**+0.3**
	baz=329,slow=9.0						
SPITS				Sn	**Sn**	**04 35 05.5**	**-4.7**
	baz=323,slow=12						
	comp=Z,40nm,0.4s						
DAG	**Danmarks Havn**	**4.94**	**224**	i P	**Pn**	**04 34 26.0**	**+1.6**
DAG				i P	**Pn**	**04 34 26.0**	**+1.6**
DAG				i S	**Sn**	**04 35 18.3**	**-3.1**
DAG				IAML		04 35 22.4	
	comp=Z,44nm,0.3s						
DAG	**Danmarks Havn**	**4.94**	**224**	eP	**Pn**	**04 34 25.9**	**+1.6**
DAG				eS	**Sn**	**04 35 18.1**	**-3.3**
HSPB	**Hornsund (broa**	**5.27**	**126**	eP	**Pn**	**04 34 30.1**	**+1.2**
HSPB				eS	**Sn**	**04 35 28.6**	**-1.0**
HSPB				IAML		04 35 31.7	
	comp=Z,7.7nm,0.6s						
HSPB	**Hornsund (broa**	**5.27**	**126**	eP	**Pn**	**04 34 30.2**	**+1.3**
HSPB				eS	**Sn**	**04 35 26.0**	**-3.6**
HOPEN	**Hopen**	**7.00**	**112**	eP	**Pn**	**04 34 52.4**	**-0.3**
HOPEN				eS	**Sn**	**04 36 06.2**	**-6.0**
HOPEN				IAML		04 36 17.2	
	comp=Z,8.5nm,1.0s						
HOPEN	**Hopen**	**7.00**	**112**	eP	**Pn**	**04 34 52.2**	**-0.5**
HOPEN				eS	**Sn**	**04 36 03.7**	**-8.5**
DBG	**Daneborg**	**7.35**	**217**	i P	**Pn**	**04 34 57.6**	**+0.1**
DBG				i S	Sn	04 36 11.1	-10
DBG				IAML		04 36 27.6	
	comp=Z,14nm,0.7s						
DBG	**Daneborg**	**7.35**	**217**	eP	**Pn**	**04 34 59.0**	**+1.5**
DBG				eS	**Sn**	**04 36 15.5**	**-5.3**
BJO1	**Bjornoya**	**7.86**	**131**	eP	**Pn**	**04 35 06.9**	**+2.4**
BJO1	**Bjornoya**	**7.86**	**131**	P	**Pn**	**04 35 07.7**	**+3.2**
ZFI2	**Zemlya Franca-**	**8.01**	**64**	eP	**Pn**	**04 35 04.6**	**-2.0**
ZFI2				eS	Sn	04 36 24.6	-12
	comp=Z,24nm,1.1s						
ZFI	**Zemlya Franca-**	**8.02**	**64**	eP	**Pn**	**04 35 04.6**	**-2.0**
ZFI				eS	Sn	04 36 24.6	-12
	comp=Z,22nm,1.6s						
JMIC	**Jan Mayen**	**9.89**	**189**	Pn	**Pn**	**04 35 34.6**	**+2.3**
	comp=Z,1.7nm,0.3s,baz=112,slow=4.8,SNR=2.4						
	comp=Z,23nm,0.6s						
JMIC	**Jan Mayen**	**9.89**	**189**	e	**Pn**	**04 35 35.9**	**+3.6**
SUMG	**Summit**	**11.18**	**242**	eP	**Pn**	**04 35 48.4**	**-1.9**
SUMG				i P	**Pn**	**04 35 50.5**	**+0.2**
SUMG				i S	Sn	04 37 45.3	-10
ARCES	**ARCESS Array B**	**13.24**	**131**	Pn	**Pn**	**04 36 19.7**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=350,slow=6.2,SNR=5.3						
	comp=Z,3.1nm,0.9s						
ICESG	**Greenland Ices**	**14.52**	**237**	i P	**Pn**	**04 36 33.1**	**-2.8**
DY2G	**Dye2**	**17.89**	**242**	i P	**Pn**	**04 37 17.8**	**-1.3**
SFJD	**Kangerlussuaq**	**18.04**	**248**	P	**Pn**	**04 37 18.0**	**-2.7**
	comp=Z,3.7nm,0.3s,baz=14,slow=11,SNR=12						
SFJD				S	Sn	04 40 26.4	-15
	comp=Z,4.1nm,0.5s,baz=113,slow=19,SNR=1.9						
SFJD				LR	LR	04 44 51.7	
	comp=Z,41nm,21.2s,baz=23,slow=39						
SFJD	**Kangerlussuaq**	**18.04**	**248**	i P	**Pn**	**04 37 19.1**	**-1.6**
RES	**Resolute Bay**	**18.11**	**301**	P	**Pn**	**04 37 17.9**	**-3.5**
	comp=Z,3.1nm,0.5s,baz=33,slow=12,SNR=16						
RES				S	Sn	04 40 27.4	-16
	comp=Z,2.5nm,0.7s,baz=299,slow=22,SNR=1.5						
RES				LR	LR	04 44 21.5	
	comp=Z,56nm,20.8s,baz=314,slow=37						
NOA	**NORSAR Array B**	**20.27**	**159**	LR	LR	04 44 26.0	
	comp=Z,13nm,18.2s,baz=345,slow=33						
FINES	**FINESS Array B**	**21.12**	**138**	P	**P**	**04 37 58.3**	**+3.6**
	comp=Z,1.1nm,0.9s,baz=342,slow=13,SNR=1.5						
FINES				LR	LR	04 46 06.5	
	comp=Z,10nm,20.7s,baz=62,slow=37						
	comp=Z,1.1nm,0.9s						
FRB	**Frobisher Bay**	**23.87**	**264**	LR	LR	04 48 15.8	
	comp=Z,10nm,20.5s,baz=1.0,slow=38						
SCHQ	**Schefferville**	**32.09**	**256**	LR	LR	04 54 03.6	
	comp=Z,9.1nm,18.8s,baz=99,slow=39						
ILAR	**Eielson Array**	**33.26**	**332**	P	**P**	**04 39 49.0**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=8.5,slow=7.3,SNR=3.8						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**37.02**	**79**	LR	LR	04 57 05.7	
	comp=Z,20nm,21.6s,baz=6.5,slow=39						
MKAR	**Makanchi Array**	**43.55**	**84**	P	**P**	**04 41 16.7**	**+2.9**

	comp=Z,0.3nm,0.5s,baz=346,slow=10,SNR=2.1						
MKAR				LR	LR	05 02 03.4	
	comp=Z,27nm,19.0s,baz=161,slow=40						
	comp=Z,0.3nm,0.5s						
SADO	**Sadowa**	**43.81**	**265**	LR	LR	04 57 37.7	
	comp=Z,28nm,18.6s,baz=31,slow=34						
AAK	**Ala-Archa**	**46.34**	**93**	LR	LR	05 03 45.7	
	comp=Z,24nm,18.2s,baz=164,slow=40						
PDAR	**Pinedale Array**	**50.57**	**293**	P	**P**	**04 42 12.1**	**+3.3**
	comp=Z,0.1nm,0.4s,baz=8.9,slow=6.4,SNR=1.6						
	comp=Z,0.1nm,0.4s						
YBH	**Yreka Blue Hor**	**53.43**	**305**	LR	LR	05 05 39.7	
	comp=Z,32nm,19.2s,baz=3.0,slow=36						
TKL	**Tuckaleechee C**	**53.45**	**267**	LR	LR	05 03 16.1	
	comp=Z,17nm,18.8s,baz=38,slow=34						
ANMO	**Albuquerque**	**57.76**	**289**	LR	LR	05 09 37.1	
	comp=Z,25nm,18.8s,baz=52,slow=38						
TORD	**Torodi Ar. Bea**	**67.68**	**174**	P	**P**	**04 44 09.5**	**+2.2**
	comp=Z,0.2nm,0.8s,baz=31,slow=6.4,SNR=2.0						
	comp=Z,0.2nm,0.8s						

*IDC **21** 04:42:30.4±4.6, 25°.56S×129°.92E, h0^{km}, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=37.2km s-min=26.7km az=83.0*

*AUST **21** 04:42:30.1±0.6, 25°.59S×129°.79E, h0^{km}, Error ellipse: s-maj=8.8km s-min=7.0km az=9.0*

*NOU **21** 04:42:31.7, 25°.60S×129°.79E, h10^{km}, MLv4.3/9, Northern Territory, Australia*

ISC 21 04:42:30.9±0.9, 25°.68S±0°.07×129°.85E±0°.05, h10^{km}, n19, σ1^{s}.91/25, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.54**	**294**	P	**Pn**	**04 42 58.5**	**0.0**
	baz=1.4						
WRKA				S	**Sn**	**04 43 17.9**	**-0.8**
	baz=1.4						
WRKA	**Warakurna**	**1.54**	**294**	P	**Pn**	**04 42 58.5**	**0.0**
ASPA	**Alice Springs**	**4.19**	**62**	P	**Pn**	**04 43 35.9**	**+1.0**
	baz=4.2						
ASAR	**Alice Springs**	**4.19**	**62**	Pn	**Pn**	**04 43 36.3**	**+1.3**
	0.8nm,0.3s,baz=240,slow=11,SNR=39						
ASAR				Pg	**Pb**	**04 43 45.4**	**+0.6**
	0.7nm,0.3s,baz=241,slow=17,SNR=11						
ASAR				Sn	**Sn**	**04 44 25.1**	**+1.0**
	1.1nm,0.3s,baz=244,slow=17,SNR=5.4						
ASAR				Lg	Lg	04 44 37.7	
	3.9nm,0.3s,baz=237,slow=29,SNR=6.1						
	2.7nm,0.5s						
FORT	**Forrest**	**5.32**	**197**	P	**Pn**	**04 43 54.0**	**+3.5**
	baz=5.5						
FORT	**Forrest**	**5.32**	**197**	P	**Pn**	**04 43 52.3**	**+1.8**
OOD	**Oodnadatta**	**5.63**	**113**	P	**Pn**	**04 43 57.2**	**+2.5**
	baz=5.7						
OOD	**Oodnadatta**	**5.63**	**113**	P	**Pn**	**04 43 57.2**	**+2.5**
MULG	**Mulgathing**	**5.91**	**142**	P	**Pn**	**04 44 00.9**	**+2.4**
	baz=6.1						
MULG	**Mulgathing**	**5.91**	**142**	P	**Pn**	**04 44 00.9**	**+2.4**
WRA	**Warramunga Arr**	**7.05**	**37**	Pn	**Pn**	**04 44 14.3**	**+0.1**
	0.6nm,0.3s,baz=223,slow=14,SNR=39						
WRA				Pg	**Pb**	**04 44 34.8**	**+1.3**
	0.3nm,0.3s,baz=212,slow=16,SNR=5.7						
WRA				Sn	**Sn**	**04 45 33.1**	**-1.4**
	1.0nm,0.3s,baz=217,slow=24,SNR=8.6						
WRA				Lg	Lg	04 46 09.8	
	1.3nm,0.3s,baz=221,slow=31,SNR=7.5						
	0.9nm,0.3s						
WC3	**Warramunga Arr**	**7.05**	**37**	P	**Pn**	**04 44 14.9**	**+0.6**
	baz=7.0						
WB2	**Warramunga Arr**	**7.05**	**37**	P	**Pn**	**04 44 14.2**	**-0.1**
	baz=7.0						
WRAB	**Tennant Creek**	**7.06**	**37**	P	**Pn**	**04 44 14.6**	**+0.2**
LCRK	**Leigh Creek**	**8.78**	**125**	P	**Pn**	**04 44 39.7**	**+1.7**
BBOO	**Buckleboo**	**8.94**	**144**	P	**Pn**	**04 44 41.4**	**+1.3**
KNRA	**Kununurra**	**10.00**	**354**	P	**Pn**	**04 44 54.4**	**-0.3**
MEEK	**Meekatharra**	**10.14**	**262**	P	**Pn**	**04 44 55.9**	**-0.8**
STKA	**Stephens Creek**	**12.01**	**124**	Pn	**Pn**	**04 45 21.5**	**-0.6**
	0.3nm,0.3s,baz=292,slow=10.0,SNR=5.3						
STKA				Sn	**Sn**	**04 47 31.1**	**-5.0**
	0.4nm,0.3s,baz=190,slow=20,SNR=3.9						
	1.8nm,0.7s						

*NOU **21** 04:52:19.2, 37°.29S×177°.87E, h246^{km}, mb4.1/5, Off E. Coast of N. Island, N.Z.*

*WEL **21** 04:52:20.4±1.0, 37°S±9°×17°7E±°, h221^{km}±8^{km}, M3.1/29, ML3.0/8, MLv3.1/29, Error ellipse: s-maj=0.0km s-min=0.0km az=30.0*

ISC 21 04:52:15.9±2.8, 37°.0S±0°.1×177°.24E±0°.09, h257^{km}±14^{km}, n103, σ1^{s}.44/109, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**0.92**	**152**	P	**Pn**	**04 52 51.5**	**+0.3**
MXZ	**Matakaoa Point**	**1.05**	**126**	P	**Pn**	**04 52 52.5**	**+0.6**
OPRZ	**Ohinepanea**	**1.05**	**211**	P	**Pn**	**04 52 52.6**	**+0.8**
RUGZ	**Raukumara Rang**	**1.07**	**161**	P	**Pn**	**04 52 52.3**	**+0.1**
RUGZ				S	**S**	**04 53 17.1**	**-3.8**
TGRZ	**Tauranga**	**1.10**	**225**	P	**Pn**	**04 52 53.4**	**+1.2**
MARZ	**Manawahe**	**1.13**	**203**	P	**Pn**	**04 52 53.6**	**+1.2**
PKGZ	**Pakihiroa**	**1.15**	**145**	P	**Pn**	**04 52 53.8**	**+1.2**
PKGZ				S	**S**	**04 53 21.0**	**-0.6**
KUZ	**Kuaotunu**	**1.24**	**279**	P	**Pn**	**04 52 53.1**	**+0.1**
WMGZ	**Waiomatatini S**	**1.28**	**133**	P	**Pn**	**04 52 54.6**	**+1.3**
URZ	**Urewera**	**1.31**	**184**	P	**Pn**	**04 52 54.2**	**+0.7**
URZ	**Urewera**	**1.31**	**184**	P	**Pn**	**04 52 54.6**	**+1.1**
TWGZ	**Tauwhareparae**	**1.36**	**155**	P	**Pn**	**04 52 55.7**	**+1.8**
TWGZ				S	**S**	**04 53 24.1**	**+0.1**
KMRZ	**Kaimai**	**1.37**	**229**	P	**Pn**	**04 52 55.5**	**+1.5**
PUZ	**Puketiti**	**1.38**	**145**	P	**Pn**	**04 52 55.3**	**+1.3**
MWZ	**Matawai**	**1.40**	**171**	P	**Pn**	**04 52 55.3**	**+1.2**
MWZ				S	**S**	**04 53 23.1**	**-1.4**
TARZ	**Mount Tarawera**	**1.41**	**204**	P	**Pn**	**04 52 56.1**	**+1.8**
RRRZ	**Republican Roa**	**1.50**	**202**	P	**Pn**	**04 52 56.4**	**+1.6**
RAGZ	**Rawiri**	**1.55**	**175**	P	**Pn**	**04 52 56.7**	**+1.4**
RAGZ				S	**S**	**04 53 25.4**	**-1.2**
TKGZ	**Te Karaka**	**1.56**	**162**	P	**Pn**	**04 52 56.9**	**+1.6**
TKGZ				S	**S**	**04 53 25.2**	**-1.3**
MUGZ	**Murupara**	**1.57**	**194**	P	**Pn**	**04 52 56.4**	**+1.1**
TOZ	**Tahuroa Road**	**1.59**	**240**	P	**Pn**	**04 52 57.2**	**+1.7**
HRRZ	**Handcock Road**	**1.63**	**208**	P	**Pn**	**04 52 57.6**	**+1.7**
GRRZ	**Galatos Road**	**1.66**	**212**	P	**Pn**	**04 52 58.1**	**+2.0**
MKAZ	**Moumakai**	**1.67**	**264**	P	**Pn**	**04 52 57.4**	**+1.3**
RTZ	**Ruatahuna**	**1.68**	**187**	P	**Pn**	**04 52 57.4**	**+1.1**
RTZ				S	**S**	**04 53 26.6**	**-1.7**
PRRZ	**Plateau Road**	**1.69**	**203**	P	**Pn**	**04 52 57.8**	**+1.5**
CNGZ	**Carnagh Statio**	**1.71**	**154**	P	**Pn**	**04 52 58.6**	**+2.1**
ALRZ	**Allen Road**	**1.76**	**204**	P	**Pn**	**04 52 58.4**	**+1.6**
RIGZ	**Rimuhau**	**1.80**	**167**	P	**Pn**	**04 52 59.1**	**+1.9**
SNGZ	**Shannon Statio**	**1.83**	**178**	P	**Pn**	**04 52 59.2**	**+1.7**
ETAZ	**East Tamaki Re**	**1.85**	**269**	P	**Pn**	**04 52 58.8**	**+1.2**
MBAZ	**Motutapu North**	**1.89**	**275**	P	**Pn**	**04 52 59.2**	**+1.3**
KUTZ	**Kaahu Road**	**1.91**	**216**	P	**Pn**	**04 53 00.1**	**+2.0**
MTHZ	**Maungataniwha**	**1.93**	**189**	P	**Pn**	**04 52 59.6**	**+1.3**
TLZ	**Tolley Road**	**1.93**	**224**	P	**Pn**	**04 53 00.5**	**+2.2**
RAHZ	**Arahi**	**1.97**	**184**	P	**Pn**	**04 53 00.5**	**+1.9**
MRHZ	**Matea Rd**	**1.99**	**199**	P	**Pn**	**04 53 00.1**	**+1.2**
PRGZ	**Paritu Road**	**2.04**	**166**	P	**Pn**	**04 53 00.8**	**+1.5**
KNZ	**Kokohu**	**2.10**	**171**	P	**Pn**	**04 53 01.3**	**+1.6**
WATZ	**Wairara**	**2.12**	**214**	P	**Pn**	**04 53 02.1**	**+2.0**
NMHZ	**Naumai**	**2.17**	**189**	P	**Pn**	**04 53 02.5**	**+2.0**
MHGZ	**Mahia Peninsul**	**2.26**	**167**	P	**Pn**	**04 53 03.5**	**+2.2**
BKZ	**Black Stump Fm**	**2.29**	**195**	P	**Pn**	**04 53 02.7**	**+1.1**
BKZ	**Black Stump Fm**	**2.29**	**195**	P	**Pn**	**04 53 02.7**	**+1.1**
RITZ	**Rihia Road**	**2.30**	**208**	P	**Pn**	**04 53 03.7**	**+2.0**
ARHZ	**Aropaoanui**	**2.32**	**185**	P	**Pn**	**04 53 03.7**	**+1.9**
KATZ	**Kakaramea**	**2.36**	**211**	P	**Pn**	**04 53 03.9**	**+1.5**
HIZ	**Hauiti**	**2.45**	**230**	P	**Pn**	**04 53 05.8**	**+2.7**
HIZ	**Hauiti**	**2.45**	**230**	P	Pn	04 53 08.1	+5.0
NTVZ	**North Tongarir**	**2.48**	**209**	P	**Pn**	**04 53 05.3**	**+1.8**
TMVZ	**Te Maari**	**2.48**	**209**	P	**Pn**	**04 53 05.1**	**+1.6**
ETVZ	**East Tongariro**	**2.50**	**208**	P	**Pn**	**04 53 05.3**	**+1.7**
MCHZ	**McNeill Hill**	**2.53**	**190**	P	**Pn**	**04 53 05.9**	**+2.0**
NNVZ	**North Ngauruho**	**2.53**	**210**	P	**Pn**	**04 53 06.0**	**+1.9**
OTVZ	**Oturere**	**2.54**	**209**	P	**Pn**	**04 53 05.8**	**+1.7**
TWVZ	**Taurewa**	**2.55**	**213**	P	**Pn**	**04 53 05.9**	**+1.7**
KWHZ	**Kaweka Forest**	**2.56**	**194**	P	**Pn**	**04 53 05.8**	**+1.6**
SNVZ	**South Ngauruho**	**2.57**	**209**	P	**Pn**	**04 53 06.2**	**+1.7**
NGZ	**Ngauruhoe**	**2.57**	**210**	P	**Pn**	**04 53 06.2**	**+1.7**
TUVZ	**Tukino**	**2.63**	**208**	P	**Pn**	**04 53 06.6**	**+1.5**
FWVZ	**Far West T-bar**	**2.66**	**210**	P	**Pn**	**04 53 07.0**	**+1.5**
WHVZ	**Whangaehu Hut**	**2.67**	**209**	P	**Pn**	**04 53 07.0**	**+1.4**
TRVZ	**Turoa**	**2.70**	**209**	P	**Pn**	**04 53 07.4**	**+1.6**
BHHZ	**Black Hill Sta**	**2.70**	**200**	P	**Pn**	**04 53 06.8**	**+1.1**
WNVZ	**Wahianoa**	**2.71**	**208**	P	**Pn**	**04 53 07.2**	**+1.4**
CKHZ	**Cape Kidnapper**	**2.71**	**183**	P	**Pn**	**04 53 07.4**	**+1.7**
MOVZ	**Moawhango**	**2.72**	**205**	P	**Pn**	**04 53 06.9**	**+1.0**
PKVZ	**Pokaka**	**2.77**	**212**	P	**Pn**	**04 53 08.0**	**+1.6**
KRHZ	**Kereru**	**2.78**	**194**	P	**Pn**	**04 53 07.8**	**+1.4**
KAHZ	**Kahuranaki**	**2.86**	**186**	P	**Pn**	**04 53 09.1**	**+1.8**
PNHZ	**Pukenui**	**3.07**	**195**	P	**Pn**	**04 53 10.6**	**+1.1**
PXZ	**Pawanui**	**3.09**	**185**	P	**Pn**	**04 53 11.0**	**+1.3**
WPHZ	**Waipukurau**	**3.17**	**191**	P	**Pn**	**04 53 11.8**	**+1.2**
TSZ	**Takapari Road**	**3.26**	**198**	P	**Pn**	**04 53 12.6**	**+1.0**
WAZ	**Wanganui**	**3.32**	**212**	P	**Pn**	**04 53 13.8**	**+1.6**
PRHZ	**Porangahau**	**3.35**	**188**	P	**Pn**	**04 53 13.8**	**+1.3**
DVHZ	**Dannevirke**	**3.45**	**194**	P	**Pn**	**04 53 14.5**	**+0.8**
ANWZ	**Angora Road**	**3.56**	**189**	P	**Pn**	**04 53 16.2**	**+1.4**
POWZ	**Post Office Ro**	**3.63**	**198**	P	**Pn**	**04 53 16.5**	**+0.9**
PRWZ	**Pori Road**	**3.74**	**195**	P	**Pn**	**04 53 18.2**	**+1.3**
BFZ	**Birch Farm**	**3.81**	**191**	P	**Pn**	**04 53 18.5**	**+0.8**
BFZ	**Birch Farm**	**3.81**	**191**	P	**Pn**	**04 53 18.5**	**+0.8**
MRZ	**Mangatainoka R**	**3.93**	**199**	P	**Pn**	**04 53 19.6**	**+0.5**
TIWZ	**Tintock**	**3.97**	**195**	P	**Pn**	**04 53 20.4**	**+0.9**
CPWZ	**Castlepoint**	**4.04**	**191**	P	**Pn**	**04 53 22.1**	**+1.7**
HOWZ	**Holdsworth Sta**	**4.17**	**198**	P	**Pn**	**04 53 22.2**	**+0.3**
OGWZ	**Otaki Gorge**	**4.19**	**202**	P	**Pn**	**04 53 22.6**	**+0.5**
TMWZ	**Te Maipa**	**4.28**	**194**	P	**Pn**	**04 53 24.2**	**+0.9**
KIW	**Kapiti Island**	**4.31**	**204**	P	**Pn**	**04 53 23.7**	**+0.2**
MTW	**Mount Morrison**	**4.42**	**197**	P	**Pn**	**04 53 24.9**	**+0.1**
CAW	**Cannon Point**	**4.49**	**202**	P	**Pn**	**04 53 25.7**	**+0.1**
TRWZ	**Traveller**	**4.61**	**195**	P	**Pn**	**04 53 27.5**	**+0.5**
DUWZ	**D'Urville Isla**	**4.64**	**213**	P	**Pn**	**04 53 27.5**	**+0.1**
PAWZ	**Paruwai Farm**	**4.65**	**197**	P	**Pn**	**04 53 27.6**	**+0.1**
MSWZ	**Moikau Station**	**4.72**	**199**	P	**Pn**	**04 53 28.4**	**-0.1**
BHW	**Baring Head**	**4.82**	**202**	P	**Pn**	**04 53 29.4**	**-0.2**
TCW	**Tory Channel**	**4.84**	**208**	P	**Pn**	**04 53 29.9**	**0.0**
PLWZ	**Palliser**	**4.87**	**198**	P	**Pn**	**04 53 30.2**	**0.0**
TUWZ	**Tuamarina**	**5.16**	**209**	P	**Pn**	**04 53 33.9**	**+0.2**
THZ	**Tophouse**	**5.87**	**214**	P	**Pn**	**04 53 42.9**	**+0.4**
KHZ	**Kahutara**	**6.16**	**206**	P	**Pn**	**04 53 48.3**	**+2.3**
GVZ	**Greta Valley S**	**6.82**	**207**	P	**Pn**	**04 53 54.4**	**+0.1**
LTZ	**Lake Taylor**	**6.97**	**212**	P	**Pn**	**04 53 56.0**	**-0.1**

*AUST **21** 04:57:28.1±0.9, 25°.57S×129°.84E, h0^{km}, Error ellipse: s-maj=11.8km s-min=8.7km az=11.0*

*NOU **21** 04:57:30.8, 25°.53S×129°.83E, h10^{km}, mb3.9/8, Northern Territory, Australia*

*IDC **21** 04:57:31.2±4.5, 25°.46S×130°.12E, h0^{km}, mbtmp3.1/3, ML3.1/3, Error ellipse: s-maj=36.9km s-min=27.7km az=86.0*

ISC 21 04:57:29.4±0.8, 25°.55S±0°.06×129°.88E±0°.04, h10^{km}, n17, σ1^{s}.85/24, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.52**	**289**	P	**Pb**	**04 57 57.1**	**-0.7**
	baz=1.5						
WRKA				S	**Sn**	**04 58 16.2**	**-0.5**
	baz=1.5						
WRKA	**Warakurna**	**1.52**	**289**	P	**Pb**	**04 57 57.1**	**-0.7**
ASPA	**Alice Springs**	**4.11**	**64**	P	**Pn**	**04 58 33.5**	**+1.1**
	baz=4.2						
ASAR	**Alice Springs**	**4.11**	**64**	Pn	**Pn**	**04 58 33.5**	**+1.1**
	0.9nm,0.3s,baz=244,slow=12,SNR=30						
ASAR				Pg	**Pb**	**04 58 42.9**	**+0.9**
	1.0nm,0.3s,baz=243,slow=16,SNR=9.2						
ASAR				Sn	**Sn**	**04 59 19.9**	**-0.8**
	1.7nm,0.3s,baz=250,slow=22,SNR=5.4						
ASAR				Lg	Lg	04 59 34.3	
	1.4nm,0.3s,baz=242,slow=27,SNR=5.1						
	1.5nm,0.3s						
FORT	**Forrest**	**5.46**	**197**	P	**Pn**	**04 58 52.4**	**+1.7**
	baz=5.5						
FORT				S	**Sn**	**04 59 53.6**	**0.0**
	baz=5.5						
FORT	**Forrest**	**5.46**	**197**	P	**Pn**	**04 58 52.5**	**+1.7**
OOD	**Oodnadatta**	**5.66**	**115**	P	**Pn**	**04 58 53.9**	**+0.3**
	baz=5.7						
OOD				S	**Sn**	**04 59 59.8**	**+1.2**
	baz=5.7						
OOD	**Oodnadatta**	**5.66**	**115**	P	**Pn**	**04 58 55.9**	**+2.3**
MULG	**Mulgathing**	**5.99**	**143**	P	**Pn**	**04 58 59.6**	**+1.4**
	baz=6.0						
MULG	**Mulgathing**	**5.99**	**143**	P	**Pn**	**04 58 59.6**	**+1.4**
WRA	**Warramunga Arr**	**6.93**	**37**	Pn	**Pn**	**04 59 11.9**	**+0.8**
	0.2nm,0.3s,baz=216,slow=14,SNR=30						
WRA				Pg	Pb	04 59 34.5	+4.5
	0.2nm,0.3s,baz=213,slow=14,SNR=5.5						
WRA				Sn	**Sn**	**05 00 28.2**	**-1.9**
	0.6nm,0.3s,baz=217,slow=24,SNR=7.7						
WRA				Lg	Lg	05 01 02.9	
	0.7nm,0.3s,baz=213,slow=28,SNR=8.2						
	0.3nm,0.4s						
WB2	**Warramunga Arr**	**6.94**	**37**	P	**Pn**	**04 59 11.9**	**+0.7**
	baz=7.0						
WRAB	**Tennant Creek**	**6.94**	**37**	P	**Pn**	**04 59 13.8**	**+2.5**
LCRK	**Leigh Creek**	**8.84**	**125**	P	**Pn**	**04 59 38.8**	**+1.6**
	21nm,2.6s						
KNRA	**Kununurra**	**9.88**	**354**	P	**Pn**	**04 59 51.9**	**+0.4**
MEEK	**Meekatharra**	**10.19**	**261**	P	**Pn**	**04 59 56.7**	**+0.9**
STKA	**Stephens Creek**	**12.06**	**124**	Pn	**Pn**	**05 00 20.4**	**-0.9**
	0.2nm,0.3s,baz=305,slow=16,SNR=1.2						
STKA				Sn	**Sn**	**05 02 29.9**	**-6.0**
	0.5nm,0.3s,baz=203,slow=7.6,SNR=6.0						
	0.5nm,0.4s						

*JMA **21** 05:40:35.0±0.2, 24°.1N±0°.8×12°2E±°, h20^{km}, MV3.1/10, TAIWAN REGION*

*TAP **21** 05:40:36.8, 24°.24N×121°.70E, h10^{km}, ML3.8, B*

ISC 21 05:40:36.7±0.8, 24°.24N±0°.01×121°.73E±0°.02, h9^{km}±5^{km}, n110, σ0^{s}.90/204, 2C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.07**	**7**	⇓*i*P	**Pg**	**05 40 39.4**	**+0.5**
	baz=32						
EHP				*i* S	**Sg**	**05 40 41.4**	**+1.0**
	baz=32						
ETL	**Fush Village**	**0.13**	**231**	*i* P	**Pg**	**05 40 39.8**	**+0.1**
	baz=223						
ETL				*i* S	**Sg**	**05 40 41.9**	**+0.2**
	baz=223						
NACB	**Ninganchiao**	**0.14**	**243**	⇓*i*P	**Pg**	**05 40 39.9**	**0.0**
	baz=238						
NACB				*e*S	**Sg**	**05 40 42.3**	**+0.3**
	baz=238						
ENA	**Nanau**	**0.19**	**3**	⇓*i*P	**Pg**	**05 40 41.1**	**+0.4**
	baz=13						
ENA				*i* S	**Sg**	**05 40 44.4**	**+1.0**
	baz=13						
TWD	**Chiawan**	**0.20**	**218**	⇑*i*P	**Pg**	**05 40 40.7**	**-0.2**
	baz=210						
TWD				*i* S	**Sg**	**05 40 43.5**	**-0.2**
	baz=210						
EWUT	**Wuta**	**0.21**	**12**	⇓*i*P	**Pg**	**05 40 41.5**	**+0.4**
	baz=19						
EWUT				*i* S	**Sg**	**05 40 44.8**	**+0.8**
	baz=19						
ETLH	**Xiulin Townshi**	**0.23**	**262**	⇓*i*P	**Pg**	**05 40 41.5**	**+0.1**
	baz=262						
ETLH				*i* S	**Sg**	**05 40 45.0**	**+0.4**
	baz=262						
HWA	**Hwalien**	**0.28**	**204**	P	**Pg**	**05 40 42.8**	**+0.4**
	baz=197						
HWA				*e*S	**Sg**	**05 40 47.5**	**+1.3**
	baz=197						
ETM	**Tongmen**	**0.35**	**219**	P	**Pg**	**05 40 43.3**	**-0.4**
	baz=215						
ETM				*e*S	**Sg**	**05 40 48.4**	**+0.1**
	baz=215						
LATG	**Datong**	**0.35**	**328**	⇓*i*P	**Pg**	**05 40 44.2**	**+0.5**
	baz=332						
LATG				S	**Sb**	**05 40 49.7**	**-1.2**
	baz=332						
NNSB	**Datong**	**0.37**	**301**	⇓*i*P	**Pg**	**05 40 44.6**	**+0.5**
	baz=304						
NNSB				*i* S	**Sg**	**05 40 49.8**	**+0.8**
	baz=304						
NNS	**Nan Shan**	**0.38**	**302**	⇓*i*P	**Pg**	**05 40 44.8**	**+0.4**
	baz=305						
NNS				*i* S	**Sg**	**05 40 50.3**	**+0.9**
	baz=305						
TWC	**Suao**	**0.38**	**16**	⇓*i*P	**Pg**	**05 40 44.7**	**+0.4**
	baz=21						
TWC				*e*S	**Sb**	**05 40 50.2**	**-1.5**
	baz=21						
TEYL	**Yanliau Villag**	**0.39**	**198**	*e*P	**Pg**	**05 40 44.4**	**0.0**
	baz=195						
TEYL				*e*S	**Sb**	**05 40 52.8**	**+1.0**
	baz=195						
NDS	**Dongshan**	**0.39**	**358**	⇓*i*P	**Pg**	**05 40 45.0**	**+0.5**
	baz=2.0						
NDS				*i* S	**Sb**	**05 40 50.5**	**-1.5**
	baz=2.0						
NDT	**Datong Townshi**	**0.41**	**331**	⇓P	**Pg**	**05 40 45.4**	**+0.5**
	baz=335						
NDT				*e*S	**Sb**	**05 40 51.2**	**-1.4**
	baz=335						
ENTT	**Nioudou**	**0.43**	**339**	⇓*i*P	**Pb**	**05 40 45.8**	**-0.6**
	baz=344						
ENTT				*e*S	**Sb**	**05 40 52.0**	**-1.0**
	baz=344						
WHF	**Hehuan Shan**	**0.44**	**258**	⇓*i*P	**Pg**	**05 40 45.4**	**0.0**
	baz=257						
WHF				*e*S	**Sg**	**05 40 51.4**	**+0.3**
	baz=257						
FUSS	**Fushou**	**0.45**	**271**	⇓*i*P	**Pg**	**05 40 45.8**	**+0.3**
	baz=272						
FUSS				*e*S	**Sg**	**05 40 51.9**	**+0.5**
	baz=272						
TWE	**Neicheng**	**0.48**	**353**	⇓P	**Pb**	**05 40 46.8**	**-0.6**
	baz=358						
TWE				*e*S	**Sb**	**05 40 53.9**	**-0.7**
	baz=358						
ESL	**Shilin**	**0.50**	**213**	*e*P	**Pg**	**05 40 46.1**	**-0.4**
	baz=209						
ESL				*e*S	**Sg**	**05 40 54.1**	**+0.9**
	baz=209						
TWT	**Tachien**	**0.51**	**272**	P	**Pg**	**05 40 47.2**	**+0.6**
	baz=272						
TWT				*e*S	**Sg**	**05 40 54.3**	**+0.9**
	baz=272						
TDCB	**Techi**	**0.52**	**272**	P	**Pg**	**05 40 47.3**	**+0.3**
	baz=272						
TDCB				*e*S	**Sg**	**05 40 54.1**	**+0.3**
	baz=272						
ILA	**Ilan**	**0.53**	**2**	*e*P	**Pb**	**05 40 47.6**	**-0.5**
	baz=6.0						
ILA				*e*S	**Sb**	**05 40 55.7**	**-0.1**
	baz=6.0						
FUSB	**Fushanzhiwuyua**	**0.54**	**346**	⇓P	**Pb**	**05 40 47.8**	**-0.5**
	baz=349						
FUSB				*e*S	**Sb**	**05 40 55.1**	**-1.0**
	baz=349						
YHNB	**Yeheng**	**0.54**	**323**	⇓*i*P	**Pb**	**05 40 47.9**	**-0.4**
	baz=326						
YHNB				*e*S	**Sb**	**05 40 55.5**	**-0.8**
	baz=326						
CHGB	**Renai**	**0.54**	**251**	⇓*i*P	**Pg**	**05 40 47.5**	**+0.2**
	baz=250						
CHGB				*e*S	**Sg**	**05 40 54.6**	**+0.2**
	baz=250						
NSK	**Sanguang**	**0.55**	**322**	⇓*i*P	**Pb**	**05 40 48.1**	**-0.5**
	baz=325						
NSK				*e*S	**Sb**	**05 40 55.8**	**-0.9**
	baz=325						
TEGC	**Jichi Village**	**0.56**	**198**	*e*P	**Pg**	**05 40 48.1**	**+0.6**
	baz=195						
TEGC				*e*S	**Sb**	**05 40 57.9**	**+1.3**
	baz=195						
NWLT	**Wulai**	**0.58**	**339**	⇓*i*P	**Pb**	**05 40 48.5**	**-0.5**
	baz=342						
NWLT				S	**Sb**	**05 40 56.2**	**-1.0**
	baz=342						
OWD	**Renai**	**0.58**	**241**	⇓*i*P	**Pg**	**05 40 47.8**	**-0.3**
	baz=240						
OWD				*e*S	**Sg**	**05 40 55.3**	**-0.4**
	baz=240						
WUSB	**Renai**	**0.61**	**247**	⇓P	**Pg**	**05 40 48.7**	**+0.1**
	baz=246						
WUSB				S	**Sg**	**05 40 57.4**	**+0.7**
	baz=246						
NTC	**Toucheng**	**0.62**	**8**	*e*P	**Pb**	**05 40 49.1**	**-0.6**
	baz=11						
NTC				*e*S	**Sg**	**05 40 57.0**	**+0.1**
	baz=11						
EGFH	**Guangfu**	**0.63**	**206**	*e*P	**Pg**	**05 40 48.6**	**-0.3**
	baz=204						
EGFH				*e*S	**Sg**	**05 40 58.3**	**+1.0**
	baz=204						
NFF	**Wufeng Townshi**	**0.68**	**305**	⇓P	**Pb**	**05 40 50.5**	**-0.4**
	baz=307						
NFF				*e*S	**Sb**	**05 40 59.6**	**-0.8**
	baz=307						
WHP	**Taichung City**	**0.72**	**273**	*e*P	**Pg**	**05 40 51.2**	**+0.6**
	baz=273						
WHP				*e*S	**Sg**	**05 41 00.7**	**+0.7**
	baz=273						
VWDT	**VWDT**	**0.72**	**228**	⇓P	**Pg**	**05 40 50.4**	**-0.3**
	baz=227						
VWDT				*e*S	**Sg**	**05 41 00.9**	**+0.8**
	baz=227						
TIPB	**Shuangxi**	**0.73**	**7**	⇓P	**Pb**	**05 40 51.3**	**-0.4**
	baz=9.0						
TIPB				*e*S	**Sb**	**05 41 00.6**	**-1.3**
	baz=9.0						
WPL	**Puli Township**	**0.74**	**252**	*e*P	**Pg**	**05 40 51.2**	**+0.1**
	baz=252						
WPL				*e*S	**Sg**	**05 41 00.7**	**-0.1**
	baz=252						
NHDH	**Xindian Distri**	**0.74**	**345**	*e*P	**Pn**	**05 40 52.1**	**-1.3**
	baz=348						
NHDH				*e*S	**Sb**	**05 41 01.9**	**-0.2**
	baz=348						
TWA	**Mucha**	**0.75**	**350**	*e*P	**Pn**	**05 40 52.1**	**-1.4**
	baz=352						
DPDB	**Guoxing**	**0.76**	**255**	⇓*e*P	**Pb**	**05 40 51.8**	**-0.4**
	baz=254						
DPDB				*e*S	**Sg**	**05 41 01.6**	**+0.2**
	baz=254						
TATO	**Taipei**	**0.77**	**343**	*e*P	**Pb**	**05 40 52.1**	**-0.1**
	baz=346						
TATO				*e*S	**Sb**	**05 41 02.4**	**-0.4**
	baz=346						
LIOB	**Emei**	**0.77**	**302**	*e*P	**Pb**	**05 40 52.4**	**+0.2**
	baz=303						
LIOB				*e*S	**Sb**	**05 41 02.7**	**-0.1**
	baz=303						
WCS	**Beigang Elemen**	**0.77**	**257**	⇓P	**Pb**	**05 40 51.7**	**-0.6**
	baz=256						
WCS				*e*S	**Sb**	**05 41 01.8**	**-1.1**
	baz=256						
NSTT	**Nanjuang**	**0.77**	**301**	*e*P	**Pg**	**05 40 52.3**	**+0.7**
	baz=302						
NSTT				*e*S	**Sb**	**05 41 02.6**	**-0.3**
	baz=302						
HGSD	**Ruisui**	**0.80**	**201**	*e*P	**Pb**	**05 40 52.0**	**-0.6**
	baz=199						
HGSD				*e*S	**Sn**	**05 41 06.8**	**+0.7**
	baz=199						
TWB1	**Santiao Chiao**	**0.80**	**17**	⇓*e*P	**Pg**	**05 40 52.4**	**+0.3**
	baz=19						
TWB1				*e*S	**Sg**	**05 41 02.9**	**+0.3**
	baz=19						
NWF	**Wu-fen Shan**	**0.83**	**3**	⇓*e*P	**Pn**	**05 40 53.5**	**-1.2**
	baz=5.0						
NWF				*e*S	**Sg**	**05 41 04.2**	**+0.6**
	baz=5.0						
WFSB	**Wu-fen Shan**	**0.83**	**3**	*e*P	**Pg**	**05 40 53.2**	**+0.5**
	baz=5.0						
WFSB				*e*S	**Sg**	**05 41 04.2**	**+0.7**
	baz=5.0						
SMLT	**Sun Moon Lake**	**0.84**	**245**	*e*P	**Pb**	**05 40 52.9**	**-0.7**
	baz=244						
SMLT				*e*S	**Sb**	**05 41 03.8**	**-1.1**
	baz=244						
SSLB	**Suanglung**	**0.84**	**238**	⇓P	**Pb**	**05 40 52.5**	**-1.0**
	baz=237						
SSLB				*e*S	**Sb**	**05 41 03.2**	**-1.7**
	baz=237						
SXI1	**Grass Mountain**	**0.86**	**9**	⇓*e*P	**Pg**	**05 40 53.9**	**+0.6**
	baz=11						
SXI1				*e*S	**Sg**	**05 41 04.9**	**+0.3**
	baz=11						
TYC	**Yuchr**	**0.87**	**248**	*e*P	**Pb**	**05 40 53.2**	**-0.7**
	baz=247						
TYC				*e*S	**Sb**	**05 41 04.7**	**-0.9**
	baz=247						
SBCB	**Hsinchu**	**0.88**	**309**	*e*P	**Pn**	**05 40 55.1**	**-0.1**
	baz=310						
NCUH	**Zhongli**	**0.88**	**326**	*e*P	**Pn**	**05 40 54.7**	**-0.6**
	baz=327						

NCU	National Centr baz=328	0.88	326	eP	Pn	05 40 55.4	+0.1
NCU	baz=328			eS	Sn	05 41 07.9	-0.3
TWQ1	Liyutan baz=277	0.88	277	eP	Pb	05 40 53.9	-0.3
NSY	Sanyi baz=282	0.90	281	eP	Pn	05 40 55.1	-0.5
TWS1	Kuangyinshan baz=344	0.91	342	eP	Pn	05 40 54.7	-0.8
NMLH	Miaoli baz=290	0.91	289	eP	Pn	05 40 55.9	+0.3
TNOU	National Taiwa baz=4.0	0.91	2	eP	Pn	05 40 54.9	-0.7
TNOU	baz=4.0			eS	Sn	05 41 07.4	-1.5
YM01	YM01 baz=353	0.92	351	⇑eP	Pn	05 40 55.6	-0.2
YM01	baz=353			eS	Sn	05 41 08.4	-0.7
YULB	Yu-li baz=204	0.93	205	eP	Pb	05 40 52.8	-2.3
YULB	baz=204			eS	Sb	05 41 05.8	-1.7
YM08	YM08 baz=354	0.95	352	eP	Pn	05 40 55.9	-0.4
EYUL	Yuli baz=202	0.96	203	eP	Pb	05 40 55.0	-0.6
TCU	Taichung baz=264	0.97	265	eP	Pn	05 40 57.0	+0.6
TWF1	Yuli baz=202	0.97	204	eP	Pb	05 40 53.5	-2.1
TWF1	baz=202			eS	Sb	05 41 08.6	+0.1
NHW	Xinwu Township baz=322	0.99	321	eP	Pb	05 40 55.7	-0.3
WDJ	Dajia District baz=277	1.00	276	eP	Pg	05 40 57.6	+1.6
WDJ	baz=277			eS	Sn	05 41 12.1	+0.9
WJS	Zhushan baz=245	1.01	246	eP	Pb	05 40 56.0	-0.3
WJS	baz=245			eS	Sn	05 41 10.7	-0.6
WNT	Mingjian baz=249	1.02	250	eP	Pg	05 40 57.5	+1.1
WNT	baz=249			eS	Sn	05 41 12.3	+0.6
YUS	Yu-Shan baz=222	1.03	224	eP	Pb	05 40 56.5	-0.5
YUS	baz=222			eS	Sb	05 41 11.2	+0.4
TWY	Chenhua baz=355	1.04	353	eP	Pg	05 40 58.2	+1.4
WCHH	Zhanghua baz=262	1.08	262	eP	Pg	05 40 59.0	+1.5
WCHH	baz=262			eS	Sg	05 41 15.3	+3.7
FULB	Fuli baz=200	1.11	201	eP	Pn	05 40 56.6	-1.8
FULB	baz=200			eS	Sb	05 41 13.2	+0.6
ALS	Alishan baz=228	1.12	230	eP	Pb	05 40 57.8	-0.5
ALS	baz=228			eS	Sn	05 41 13.9	-0.5
JYNG	Yonagunijimaku	1.13	79	P	Pb	05 40 58.1	-0.2
JYNG				S	Sg	05 41 14.6	+1.6
CHN5	Tsauling baz=236	1.16	237	eP	Pb	05 40 59.3	+0.3
CHN5	baz=236			eS	Sg	05 41 16.1	+2.1
CHKT	Chengkung baz=195	1.18	197	eP	Pn	05 40 58.0	-1.4
CHKT	baz=195			eS	Sn	05 41 15.4	-0.2
YOJ	Yonaguni jima baz=79	1.19	79	i P	Pb	05 40 59.4	-0.1
YOJ	baz=79			eS	Sg	05 41 16.4	+1.4
YOJ	Yonaguni jima	1.19	79	P	Pb	05 40 59.3	-0.1
YOJ				S	Sg	05 41 15.7	+0.7
WGK	Gukeng baz=242	1.20	243	eP	Pn	05 40 57.7	-2.0
WDLH	Douliu baz=243	1.22	244	eP	Pg	05 41 01.0	+0.8
WDLH	baz=243			eS	Sg	05 41 18.0	+2.0
ELDTW	Lidau baz=211	1.23	212	eP	Pn	05 40 58.0	-2.3
ELDTW	baz=211			eS	Sb	05 41 16.0	-0.3
WRL	Guolierlin Hig baz=255	1.28	255	eP	Pb	05 41 01.3	+0.3
WRL	baz=255			eS	Sg	05 41 19.8	+1.8
EDH	Donghe baz=196	1.32	197	eP	Pn	05 40 59.6	-1.6
EDH	baz=196			eS	Sn	05 41 17.2	-1.8
WTK	Tuku baz=246	1.35	246	eP	Pb	05 41 02.5	+0.5
WTK	baz=246			eS	Sg	05 41 21.9	+1.9
CHN4	Tsaushan baz=229	1.37	230	eP	Pb	05 41 03.0	+0.5
CHN4	baz=229			eS	Sg	05 41 22.8	+2.1
TPUB	Ta-pu baz=227	1.38	227	eP	Pb	05 41 02.7	0.0
TPUB	baz=227			eS	Sg	05 41 21.8	+0.8
STYH	Taoyuan baz=219	1.38	220	eP	Pn	05 41 01.9	-0.2
STYH	baz=219			eS	Sn	05 41 19.9	-0.5
STYT	Tauyuan baz=219	1.40	220	eP	Pn	05 41 02.1	-0.3
STYT	baz=219			eS	Sn	05 41 20.9	0.0
WTP	Ta-pu baz=225	1.42	226	eP	Pb	05 41 03.4	-0.1
WTP	baz=225			eS	Sg	05 41 24.6	+2.0
LONT	Longtian baz=202	1.44	203	eP	Pn	05 41 01.6	-1.3
LONT	baz=202			eS	Sb	05 41 23.4	+1.4
TWK	Hsinying baz=229	1.50	230	eP	Pb	05 41 04.5	-0.1
TWK	baz=229			eS	Sg	05 41 25.7	+0.9
SNST	Tainan City baz=227	1.52	228	eP	Pb	05 41 04.9	-0.2
SNST	baz=227			eS	Sg	05 41 26.3	+0.7
CHN1	Nanshi baz=226	1.52	227	eP	Pb	05 41 04.8	-0.3
CHN1	baz=226			eS	Sg	05 41 26.6	+0.9
WSL	Shuilin Townsh baz=242	1.55	243	eP	Pb	05 41 05.6	+0.1
WSL	baz=242			eS	Sg	05 41 27.9	+1.3
ICHU	Yijhu baz=236	1.59	237	eP	Pb	05 41 06.2	-0.1
SCST	Cishan baz=219	1.76	220	eP	Pb	05 41 08.8	-0.3
SSD	Sandimen baz=213	1.80	214	eP	Pb	05 41 09.1	-0.7
SSD	baz=213			eS	Sb	05 41 33.1	+0.7
IRIF	Iriomote-Funau	1.83	87	eP	Pn	05 41 08.1	-0.1
HATJ	Hateruma jima	1.90	95	eP	Pn	05 41 09.2	-0.1
HATJ				eS	Sn	05 41 33.5	+0.2
MASBT	Mashibuluo baz=211	1.91	212	eP	Pn	05 41 09.6	+0.2
MASBT	baz=211			eS	Sb	05 41 36.0	+0.4
EAST	Anshuo baz=203	2.02	204	eP	Pn	05 41 10.1	-0.8
EAST	baz=203			eS	Sn	05 41 36.2	-0.1
JKRS	Kuro-shima	2.08	90	P	Pn	05 41 11.2	-0.5
JKRS				S	Sn	05 41 37.7	0.0
WDGT	Dungji baz=242	2.13	243	eP	Pn	05 41 13.1	+0.6
WDGT	baz=242			eS	Sb	05 41 40.4	-1.7
JIJ	Ishigaki jima	2.20	86	P	Pn	05 41 13.1	-0.3
JIJ				S	Sn	05 41 40.3	-0.6
VWUC	VWUC baz=290	2.21	290	eP	Pn	05 41 13.0	-0.5
VWUC	baz=290			eS	Sn	05 41 40.6	-0.4
JTJ	Tarama	2.74	81	P	Pn	05 41 21.7	+0.9
JTJ				S	Sn	05 41 55.1	+1.2

NIED **21** *05:47:45.1, 24.°05N×121.°54E, h22^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.11; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$-0.33; $M_{r\theta}$4.01; $M_{\theta\phi}$-0.71; $M_{\phi r}$1.90; Fault plane solution: $M_0$4.60000×10^{15} NP1: ϕ_s220.00000°, δ8.00000°, λ66.00000°. NP2: ϕ_s64.00000°, δ83.00000°, λ93.00000°.*

IDC **21** *05:47:45.1±0.9, 24.°17N×122.°02E, h0^{km}, mb3.8/10, mbtmp3.8/10, MS3.0/4 Error ellipse: s-maj=38.2km s-min=17.9km az=73.0*

JMA **21** *05:47:45.1±0.1, 24.°1N±0.°6×121.°5E±0.°8, h22^{km}, MD4.3/11, MV4.1/11, TAIWAN REGION*

TAP **21** *05:47:47.5, 24.°23N×121.°71E, h11^{km}, ML4.5, B*

NEIC **21** *05:47:47.2±2.0, 24.°19N±0.°01×121.°76E±0.°04, h10^{km}±4^{km}, mb4.2/10, ML4.2(TAP), Error ellipse: s-maj=5.5km s-min=1.2km az=106.0*

ASIES **21** *05:47:47.2, 24.°23N×121.°72E, h17^{km}, MW4.0*

BJI **21** *05:47:47.2±0.0, 24.°20N×121.°74E, h6^{km}, mb4.1/6, mB4.4/5, ML4.1/7, Ms4.2/7, Ms7 4.0/7*

ISC 21 05:47:47.5±0.7, **24.°20N**±0.°01×**121.°76E**±0.°02, **h10**^{km}±4^{km}, **n185, σ1.^{s}00**/286, **mb4.0**/17, **MS3.4**/3, **16C-36D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village baz=25	0.11	350	⇓iP	Pg	05 47 50.2	-0.1
EHP	baz=25			i S	Sg	05 47 52.4	+0.1
ETL	Fush Village baz=229	0.13	253	⇓iP	Pg	05 47 50.4	-0.1
ETL	baz=229			i S	Sg	05 47 52.7	0.0
NACB	Ninganchiao	0.15	261		Pg	05 47 50.6	-0.3
NACB				Sg	Sg	05 47 53.0	-0.3
NACB	Ninganchiao baz=243	0.15	261	⇓iP	Pg	05 47 50.6	-0.3
NACB	baz=243			i S	Sg	05 47 53.1	-0.1
TWD	Chiawan baz=213	0.19	232	⇓iP	Pg	05 47 51.3	-0.2
TWD	baz=213			i S	Sg	05 47 54.3	0.0
ENA	Nanau baz=11	0.23	355	⇓iP	Pg	05 47 52.0	-0.3
ENA	baz=11			i S	Sg	05 47 55.2	-0.2
EWUT	Wuta baz=16	0.25	4	⇓iP	Pg	05 47 52.3	-0.2
EWUT	baz=16			eS	Sg	05 47 55.6	-0.3
ETLH	Xiulin Townshi baz=264	0.26	272	⇓iP	Pg	05 47 52.2	-0.5
ETLH	baz=264			S	Sg	05 47 55.6	-0.6
HWA	Hwalien baz=199	0.26	213	i P	Pg	05 47 53.5	+0.7
HWA	baz=199			eS	Sb	05 47 58.1	-0.8
ETM	Tongmen baz=217	0.34	227	⇓P	Pg	05 47 53.9	-0.3
ETM	baz=217			eS	Sg	05 47 58.5	-0.2
TEYL	Yanliau Villag baz=197	0.36	205	eP	Pg	05 47 54.4	-0.2
TEYL	baz=197			eS	Sb	05 48 03.4	+1.7
LATG	Datong baz=332	0.40	327	⇓iP	Pg	05 47 55.0	-0.4
LATG	baz=332			eS	Sg	05 48 00.3	-0.4
NNSB	Datong baz=304	0.41	304	⇓iP	Pg	05 47 55.4	-0.3
NNSB	baz=304			S	Sg	05 48 00.6	-0.6
TWC	Suao baz=20	0.42	11	⇓iP	Pg	05 47 55.6	-0.1
TWC	baz=20			i S	Sg	05 48 00.8	-0.4
NNS	Nan Shan baz=305	0.43	304	⇓iP	Pg	05 47 55.5	-0.4
NNS	baz=305			eS	Sg	05 48 01.1	-0.5
NDS	Dongshan baz=1.0	0.44	355	⇓iP	Pg	05 47 55.9	-0.2
NDS	baz=1.0			S	Sg	05 48 01.5	-0.3
WHF	Hehuan Shan baz=258	0.46	263	⇓iP	Pg	05 47 56.1	-0.4
WHF	baz=258			S	Sg	05 48 02.0	-0.6
NDT	Datong Townshi baz=334	0.46	331	⇓eP	Pg	05 47 56.5	0.0
NDT	baz=334			eS	Sg	05 48 02.8	+0.1
ENTT	Nioudou baz=343	0.47	338	P	Pg	05 47 56.7	-0.1
ENTT	baz=343			eS	Sg	05 48 03.0	0.0
FUSS	Fushou baz=273	0.47	276	⇓iP	Pg	05 47 56.5	-0.3
FUSS	baz=273			S	Sg	05 48 02.7	-0.4
ESL	Shilin baz=211	0.49	218	P	Pg	05 47 56.5	-0.4
ESL	baz=211			eS	Sg	05 48 03.7	+0.4
TEGC	Jichi Village baz=196	0.53	203	eP	Pb	05 47 58.8	0.0
TEGC	baz=196			eS	Sn	05 48 09.8	-0.2
TWE	Neicheng baz=357	0.53	351	⇑iP	Pg	05 47 57.7	-0.1
TWE	baz=357			eS	Sg	05 48 04.7	0.0
TWT	Tachien baz=273	0.54	276	⇓iP	Pg	05 47 58.1	+0.2
TWT	baz=273			eS	Sg	05 48 04.9	-0.2
TDCB	Techi baz=273	0.55	276	⇓iP	Pg	05 47 58.2	-0.1
TDCB	baz=273			eS	Sg	05 48 04.7	-0.9
CHGB	Renai baz=251	0.55	256	⇓iP	Pg	05 47 58.1	-0.2
CHGB	baz=251			eS	Sg	05 48 05.3	-0.4
ILA	Ilan baz=5.0	0.56	359	eP	Pg	05 47 58.7	+0.2
ILA	baz=5.0			eS	Sg	05 48 06.6	+0.7
FUSB	Fushanzhiwuyua baz=348	0.58	344	⇑P	Pg	05 47 58.6	-0.2
FUSB	baz=348			eS	Sg	05 48 06.1	-0.4
YHNB	Yeheng	0.59	323		Pg	05 47 58.6	-0.2
YHNB				Sg	Sg	05 48 05.9	-0.7
YHNB	Yeheng baz=325	0.59	323	⇑iP	Pg	05 47 58.8	-0.1
YHNB	baz=325			eS	Sg	05 48 06.2	-0.4
OWD	Renai baz=241	0.59	246	⇓iP	Pg	05 47 58.5	-0.4
OWD	baz=241			eS	Sg	05 48 06.1	-0.5
NSK	Sanguang baz=325	0.60	322	⇑iP	Pg	05 47 59.0	-0.2
NSK	baz=325			eS	Sg	05 48 06.5	-0.6
EGFH	Guangfu baz=205	0.61	210	⇓P	Pg	05 47 59.0	-0.3
EGFH	baz=205			eS	Sn	05 48 10.4	-1.6
NWLT	Wulai baz=341	0.62	338	⇑iP	Pg	05 47 59.2	-0.4
NWLT	baz=341			eS	Sg	05 48 07.2	-0.6
WUSB	Renai baz=247	0.62	251	⇓iP	Pg	05 47 59.4	-0.2
WUSB	baz=247			eS	Sg	05 48 07.2	-0.6
NTC	Toucheng baz=10.0	0.66	5	⇑P	Pg	05 48 00.1	-0.1
NTC	baz=10.0			eS	Sg	05 48 08.2	-0.6
EGS	baz=19	0.66	14	eP	Pb	05 48 00.7	-0.4
EGS	baz=19			eS	Sb	05 48 10.2	-0.2
VWDT	VWDT baz=228	0.72	232	⇓iP	Pg	05 48 01.1	-0.3
VWDT	baz=228			eS	Sb	05 48 11.6	-0.4
NFF	Wufeng Townshi baz=307	0.73	306	⇑P	Pg	05 48 01.2	-0.3
NFF	baz=307			eS	Sg	05 48 10.3	-0.8
WHP	Taichung City baz=274	0.75	276	P	Pg	05 48 01.9	0.0
WHP	baz=274			eS	Sg	05 48 11.4	-0.3
WPL	Puli Township baz=253	0.76	256	⇓eP	Pg	05 48 01.9	-0.1
WPL	baz=253			eS	Sg	05 48 11.3	-0.7
HGSD	Ruisui baz=200	0.77	204	⇓eP	Pb	05 48 02.6	-0.3
TIPB	Shuangxi baz=8.0	0.77	4	⇑P	Pg	05 48 02.2	-0.2
TIPB	baz=8.0			eS	Sg	05 48 11.7	-0.8
DPDB	Guoxing baz=255	0.78	258	⇓eP	Pg	05 48 02.5	-0.1
DPDB	baz=255			eS	Sg	05 48 12.4	-0.3
WCS	Beigang Elemen baz=257	0.79	260	⇓eP	Pg	05 48 02.4	-0.2
WCS	baz=257			eS	Sg	05 48 12.2	-0.8
NHDH	Xindian Distri baz=347	0.79	344	⇑eP	Pg	05 48 02.6	-0.2
NHDH	baz=347			eS	Sg	05 48 12.8	-0.3
TWA	Mucha baz=352	0.80	348	⇑eP	Pg	05 48 02.6	-0.2
TWA	baz=352			eS	Sg	05 48 12.0	-1.2
EHY	Hungye baz=206	0.80	210	eP	Pg	05 48 02.8	0.0
LIOB	Emei baz=304	0.81	303	eP	Pg	05 48 02.6	-0.5
LIOB	baz=304			eS	Sg	05 48 13.5	-0.3
TATO	Taipei	0.81	342		Pg	05 48 02.7	-0.4
TATO	Taipei baz=345	0.81	342	eP	Pg	05 48 02.4	-0.8
TATO	baz=345			eS	Sg	05 48 13.2	-0.6
NJD	Zhudong baz=312	0.81	311	eP	Pb	05 48 04.0	+0.2
NJD	baz=312			eS	Sb	05 48 15.1	+0.3
NSTT	Nanjuang baz=302	0.82	302	eP	Pg	05 48 03.2	0.0
NSTT	baz=302			eS	Sg	05 48 13.4	-0.5
TWB1	Santiao Chiao baz=19	0.83	14	eP	Pg	05 48 03.0	-0.5
TWB1	baz=19			eS	Sg	05 48 13.5	-0.9
SSLB	Suanglung	0.84	241		Pg	05 48 03.1	-0.6
SSLB				Sg	Sg	05 48 13.6	-1.2
SSLB	Suanglung baz=238	0.84	241	⇓eP	Pg	05 48 03.1	-0.6
SSLB	baz=238			eS	Sg	05 48 13.4	-1.4
SMLT	Sun Moon Lake baz=245	0.85	248	⇓P	Pg	05 48 03.5	-0.3
SMLT	baz=245			eS	Sg	05 48 14.4	-0.5
TAP1	Taipei baz=348	0.86	346	eP	Pn	05 48 05.1	-0.6
NWF	Wu-fen Shan baz=5.0	0.87	1	eP	Pg	05 48 03.8	-0.5
NWF	baz=5.0			eS	Sg	05 48 15.1	-0.5
TAP	Taipei baz=348	0.87	345	eP	Pb	05 48 04.8	+0.1
TAP	baz=348			eS	Sg	05 48 15.7	+0.1
WFSB	Wu-fen Shan baz=4.0	0.87	1	⇑eP	Pg	05 48 04.0	-0.2
WFSB	baz=4.0			eS	Sg	05 48 15.1	-0.5
TYC	Yuchr baz=247	0.88	251	eP	Pg	05 48 03.8	-0.6
TYC	baz=247			eS	Sg	05 48 14.8	-1.0
SXI1	Grass Mountain baz=10.0	0.90	7	⇑eP	Pg	05 48 04.7	-0.1
SXI1	baz=10.0			eS	Sg	05 48 15.7	-0.9
NTY	Taoyuan baz=334	0.90	332	eP	Pn	05 48 06.1	-0.1
YULB	Yu-li	0.91	208		Pg	05 48 03.9	-1.0
YULB	Yu-li baz=204	0.91	208	eP	Pg	05 48 03.5	-1.4
YULB	baz=204			eS	Sb	05 48 18.2	+0.8
TWQ1	Liyutan baz=278	0.91	280	eP	Pb	05 48 05.4	0.0
SBCB	Hsinchu baz=311	0.92	310	eP	Pn	05 48 05.9	-0.6
SBCB	baz=311			eS	Sb	05 48 18.3	+0.5
NCUH	Zhongli baz=327	0.93	326	eP	Pb	05 48 05.9	+0.2
NCUH	baz=327			eS	Sb	05 48 18.2	+0.2
NCU	National Centr baz=328	0.93	326	eP	Pb	05 48 06.0	+0.3
NCU	baz=328			eS	Sb	05 48 18.3	+0.2
NSY	Sanyi baz=282	0.94	284	eP	Pn	05 48 06.3	-0.5
EYUL	Yuli baz=202	0.94	206	eP	Pg	05 48 04.5	-1.0
HSN	Hsinchu baz=313	0.94	310	eP	Pb	05 48 05.6	-0.2
HSN	baz=313			eS	Sn	05 48 19.7	-0.5
TWF1	Yuli baz=203	0.94	207	eP	Pg	05 48 04.2	-1.5
TWF1	baz=203			eS	Sb	05 48 19.0	+0.5
NMLH	Miaoli baz=290	0.95	291	eP	Pn	05 48 06.7	-0.2
NMLH	baz=290			eS	Sg	05 48 18.0	-0.1
TNOU	National Taiwa baz=4.0	0.95	1	eP	Pg	05 48 05.8	+0.1
TNOU	baz=4.0			eS	Sg	05 48 18.2	+0.2
TWS1	Kuangyinshan baz=343	0.95	341	eP	Pb	05 48 06.2	+0.1
TWS1	baz=343			eS	Sn	05 48 19.7	-0.9
YM01	YM01 baz=352	0.96	350	⇑eP	Pg	05 48 05.8	-0.1
TCU	Taichung baz=265	0.99	267	eP	Pn	05 48 07.8	+0.3
YM08	YM08 baz=354	1.00	351	eP	Pg	05 48 06.2	-0.5
NTST	Danshui baz=346	1.00	344	eP	Pb	05 48 06.9	0.0
WJS	Zhushan baz=246	1.02	249	eP	Pb	05 48 07.3	+0.2
WJS	baz=246			eS	Sb	05 48 21.0	+0.4
YUS	Yu-Shan baz=223	1.02	227	eP	Pg	05 48 07.0	-0.3
WDJ	Dajia District baz=277	1.03	279	eP	Pn	05 48 08.3	+0.2
WDJ				eS	Sb	05 48 21.2	+0.2

	baz=277						
WNT	**Mingjian**	**1.03**	**252**	eP	**Pn**	**05 48 08.1**	**0.0**
	baz=249						
FULB	**Fuli**	**1.08**	**203**	eP	**Pb**	**05 48 07.2**	**-1.1**
	baz=200						
FULB				eS	**Sn**	**05 48 25.6**	**+1.8**
	baz=200						
WCHH	**Zhanghua**	**1.11**	**264**	eP	**Pn**	**05 48 09.4**	**+0.4**
	baz=262						
WCHH				eS	**Sn**	**05 48 25.6**	**+1.3**
	baz=262						
JYNG	**Yonagunijimaku**	**1.11**	**77**	P	**Pn**	**05 48 09.0**	**0.0**
JYNG				S	**Sn**	**05 48 26.0**	**+1.6**
JYNG	**Yonagunijimaku**	**1.11**	**77**	A	A	05 48 09.0	
	comp=E,6.0nm,1.2s,comp=E,9.0nm,3.2s						
ALS	**Alishan**	**1.11**	**232**	⇓eP	**Pg**	**05 48 08.5**	**-0.4**
	baz=229						
ALS				eS	**Sn**	**05 48 24.9**	**0.0**
	baz=229						
CHKT	**Chengkung**	**1.15**	**198**	eP	**Pb**	**05 48 07.7**	**-1.8**
	baz=195						
CHN5	**Tsauling**	**1.16**	**239**	⇓eP	**Pn**	**05 48 09.8**	**0.0**
	baz=236						
CHN5				eS	**Sn**	**05 48 26.7**	**+0.9**
	baz=236						
YOJ	**Yonaguni jima**	**1.17**	**77**		**Pb**	**05 48 09.6**	**-0.2**
YOJ	**Yonaguni jima**	**1.17**	**77**	⇓iP	**Pb**	**05 48 09.8**	**+0.1**
	baz=78						
YOJ				eS	**Sn**	**05 48 27.1**	**+1.3**
	baz=78						
YOJ	**Yonaguni jima**	**1.17**	**77**	P	**Pb**	**05 48 09.9**	**+0.1**
YOJ				eS	**Sn**	**05 48 27.2**	**+1.3**
YOJ	**Yonaguni jima**	**1.17**	**77**	A	A	05 48 09.9	
	comp=E,8.0nm,8.4s,comp=E,10.0nm,1.7s						
ECS	**Chishang**	**1.21**	**204**	eP	**Pg**	**05 48 10.5**	**-0.1**
	baz=202						
WGK	**Gukeng**	**1.21**	**245**	eP	**Pn**	**05 48 10.0**	**-0.5**
	baz=243						
ELDTW	**Lidau**	**1.21**	**214**	eP	**Pb**	**05 48 08.4**	**-2.2**
	baz=211						
ELDTW				eS	**Sg**	**05 48 26.5**	**-0.1**
	baz=211						
WDLH	**Douliu**	**1.23**	**246**	eP	**Pg**	**05 48 11.1**	**0.0**
	baz=243						
WDLH				eS	**Sn**	**05 48 28.5**	**+1.1**
	baz=243						
EDH	**Donghe**	**1.29**	**199**	eP	**Pn**	**05 48 09.7**	**-1.8**
	baz=197						
EDH				eS	**Sg**	**05 48 29.7**	**+0.7**
	baz=197						
WRL	**Guolierlin Hig**	**1.30**	**257**	eP	**Pb**	**05 48 11.8**	**-0.2**
	baz=255						
WRL				eS	**Sg**	**05 48 29.7**	**+0.4**
	baz=255						
CHN2	**Minshiung**	**1.35**	**241**	eP	**Pg**	**05 48 13.8**	**+0.4**
	baz=238						
WTK	**Tuku**	**1.35**	**248**	eP	**Pb**	**05 48 13.0**	**+0.1**
	baz=246						
WTK				eS	**Sg**	**05 48 31.4**	**+0.3**
	baz=246						
CHN4	**Tsaushan**	**1.36**	**232**	eP	**Pg**	**05 48 13.6**	**0.0**
	baz=229						
CHN4				eS	**Sg**	**05 48 34.0**	**+2.7**
	baz=229						
STYH	**Taoyuan**	**1.36**	**222**	⇓eP	**Pn**	**05 48 12.1**	**-0.4**
	baz=219						
STYH				eS	**Sg**	**05 48 31.5**	**+0.1**
	baz=219						
TPUB	**Ta-pu**	**1.37**	**229**		**Pb**	**05 48 12.8**	**-0.4**
TPUB	**Ta-pu**	**1.37**	**229**	eP	**Pb**	**05 48 13.1**	**-0.1**
	baz=227						
TPUB				eS	**Sg**	**05 48 32.7**	**+1.2**
	baz=227						
STYT	**Tauyuan**	**1.38**	**222**	eP	**Pn**	**05 48 12.5**	**-0.3**
	baz=219						
WTCT	**Ta-ch'eng**	**1.39**	**257**	eP	**Pg**	**05 48 14.5**	**+0.3**
	baz=254						
WTCT				eS	**Sg**	**05 48 33.0**	**+0.7**
	baz=254						
CHY	**Chiayi**	**1.41**	**241**	eP	**Pg**	**05 48 14.4**	**-0.1**
	baz=238						
CHY				eS	**Sg**	**05 48 33.2**	**+0.4**
	baz=238						
LONT	**Longtian**	**1.41**	**204**	eP	**Pn**	**05 48 12.1**	**-1.1**
	baz=202						
WTP	**Ta-pu**	**1.42**	**228**	eP	**Pb**	**05 48 13.7**	**-0.3**
	baz=225						
PCYT	**Pengchaiyu**	**1.45**	**11**	eP	**Pb**	**05 48 14.3**	**-0.3**
	baz=14						
TWK	**Hsinying**	**1.49**	**232**	⇓eP	**Pb**	**05 48 15.2**	**0.0**
	baz=229						
TWK				eS	**Sg**	**05 48 37.5**	**+2.1**
	baz=229						
TWG	**Pinlang**	**1.51**	**205**		**Pn**	**05 48 14.0**	**-0.6**
TWG	**Pinlang**	**1.51**	**205**	eP	**Pn**	**05 48 12.5**	**-2.1**
	baz=202						
TWGBT	**Beinan**	**1.51**	**205**	eP	**Pn**	**05 48 13.0**	**-1.6**
	baz=202						
TWGBT				eS	**Sb**	**05 48 35.0**	**+0.2**
	baz=202						
SNST	**Tainan City**	**1.51**	**230**	eP	**Pb**	**05 48 15.8**	**+0.1**
	baz=228						
CHN1	**Nanshi**	**1.52**	**229**	eP	**Pb**	**05 48 15.6**	**-0.1**
	baz=226						
CHN1				eS	**Sg**	**05 48 37.6**	**+1.4**
	baz=226						
WSF	**Szhu**	**1.52**	**249**	eP	**Pb**	**05 48 15.9**	**+0.3**
	baz=246						
WSF				eS	**Sg**	**05 48 36.4**	**+0.2**
	baz=246						
LDUT	**Ludao**	**1.54**	**190**	eP	**Pn**	**05 48 12.7**	**-2.3**
	baz=188						
WSL	**Shuilin Townsh**	**1.56**	**245**	eP	**Pb**	**05 48 16.6**	**+0.2**
	baz=243						
WSL				eS	**Sg**	**05 48 38.0**	**+0.5**
	baz=243						
ICHU	**Yijhu**	**1.59**	**239**	eP	**Pb**	**05 48 16.8**	**-0.2**
	baz=237						
ICHU				eS	**Sg**	**05 48 38.7**	**0.0**
	baz=237						
CHN8	**Yiju**	**1.65**	**239**	eP	**Pb**	**05 48 18.0**	**0.0**
	baz=237						
SCST	**Cishan**	**1.75**	**222**	eP	**Pb**	**05 48 19.2**	**-0.4**
	baz=220						
SCST				eS	**Sg**	**05 48 42.9**	**-0.8**
	baz=220						
SSD	**Sandimen**	**1.78**	**216**	eP	**Pb**	**05 48 19.6**	**-0.6**
	baz=214						
SSD				eS	**Sg**	**05 48 44.5**	**-0.2**
	baz=214						
IRIF	**Iriomote-Funau**	**1.80**	**85**	P	**Pn**	**05 48 18.4**	**-0.2**
IRIF				eS	**Sb**	**05 48 43.3**	**+0.1**
HATJ	**Hateruma jima**	**1.87**	**94**	P	**Pn**	**05 48 19.7**	**+0.2**
HATJ				eS	**Sb**	**05 48 45.6**	**+0.4**
HATJ	**Hateruma jima**	**1.87**	**94**	A	A	05 48 19.7	
	comp=E,6.0nm,2.7s,comp=E,5.0nm,7.1s						
MASBT	**Mashibuluo**	**1.89**	**214**	eP	**Pn**	**05 48 20.0**	**+0.2**
	baz=212						
MASBT				eS	**Sb**	**05 48 46.5**	**+0.8**
	baz=212						
EAST	**Anshuo**	**1.99**	**205**	eP	**Pn**	**05 48 19.0**	**-2.3**
	baz=203						
JKRS	**Kuro-shima**	**2.05**	**88**	P	**Pn**	**05 48 22.4**	**+0.4**
JKRS				eS	**Sb**	**05 48 49.8**	**-0.6**
JKRS	**Kuro-shima**	**2.05**	**88**	A	A	05 48 22.4	
	comp=E,6.0nm,3.3s,comp=E,7.0nm,3.5s						
PHUB	**P'eng-hu**	**2.12**	**252**	eP	**Pn**	**05 48 22.9**	**0.0**
	baz=250						
PHUB				eS	**Sn**	**05 48 49.1**	**-0.2**
	baz=250						
WDGT	**Dungji**	**2.14**	**245**	eP	**Pn**	**05 48 23.8**	**+0.5**
	baz=243						
WDGT				eS	**Sb**	**05 48 51.2**	**-1.7**
	baz=243						
LAY	**Lan-yu**	**2.16**	**185**	eP	**Pn**	**05 48 21.4**	**-2.1**
	baz=184						
JIJ	**Ishigaki jima**	**2.18**	**85**	P	**Pn**	**05 48 23.8**	**0.0**
JIJ				eS	**Sn**	**05 48 51.0**	**+0.2**
VWUC	**VWUC**	**2.25**	**291**	⇑eP	**Pn**	**05 48 23.8**	**-1.0**
	baz=290						
VWUC				eS	**Sn**	**05 48 51.0**	**-1.5**
	baz=290						
JISG	**Ishigakijimahi**	**2.36**	**80**	P	**Pn**	**05 48 25.9**	**-0.3**
PTMZ	**Houxiangcun**	**2.55**	**290**	⇑eP	**Pn**	**05 48 28.1**	**-0.7**
	baz=289						
PTMZ				eS	**Sn**	**05 48 57.4**	**-2.5**
	baz=289						
MATB	**Ma-tsu**	**2.55**	**320**	eP	**Pn**	**05 48 28.1**	**-0.7**
	baz=320						
MATB				eS	**Sn**	**05 48 58.3**	**-1.6**
	baz=320						
JTJ	**Tarama**	**2.72**	**80**	P	**Pn**	**05 48 31.8**	**+0.6**
JTJ				eS	**Sn**	**05 49 05.6**	**+1.5**
QZH	**Quanzhou**	**2.98**	**285**	⇓iPn	**Pn**	**05 48 34.3**	**-0.5**
QZH				Sn	**Sn**	**05 49 07.8**	**-2.8**
QZH				smax	smax		
	comp=N,240nm,1.0s						
QZH				smax	smax		
	comp=E,160nm,0.9s						
KNMB	**Chin-men Tao**	**3.09**	**276**		**Pn**	**05 48 35.5**	**-0.8**
MHZQ	**Yeshan**	**3.12**	**308**	eP	**Pn**	**05 48 35.6**	**-1.1**
	baz=308						
MHZQ				eS	**Sn**	**05 49 12.3**	**-1.7**
	baz=308						
JOW	**Kunigami**	**6.44**	**65**	Pn	**Pn**	**05 49 26.0**	**+3.6**
	4.1nm,0.3s,baz=265,slow=12,SNR=3.7						
JOW	**Kunigami**	**6.44**	**65**		**Pn**	**05 49 21.7**	**-0.7**
NJ2	**Nanjing**	**8.23**	**342**	eP	**Pn**	**05 49 50.5**	**+3.5**
NJ2				S	**Sn**	**05 51 16.8**	**-3.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				smax	smax		
	comp=N,44nm,0.6s						
NJ2				smax	smax		
	comp=E,64nm,0.8s						
NJ2				LR	LR		
	comp=N,860nm,7.6s						
NJ2				LR	LR		
	comp=E,770nm,10.0s						
NJ2				LR	LR		
	comp=Z,710nm,8.5s						
CNSH	**ChangSha**	**8.87**	**298**	⇑P	**Pn**	**05 49 57.5**	**+1.8**
CNSH				S	**Sn**	**05 51 40.4**	**+4.7**
CNSH				smax	smax		
	comp=N,140nm,1.1s						
CNSH				smax	smax		
	comp=E,78nm,0.9s						
WHN	**Wuhan**	**9.13**	**315**	eP	Pn	05 50 05.8	+6.6
QIZ	**Qiongzhong**	**12.22**	**247**	P	**Pn**	**05 50 42.9**	**+1.3**
QIZ				S	**Sn**	**05 52 59.6**	**+1.6**
QIZ				LR	LR		
	comp=N,330nm,19.6s						
QIZ				LR	LR		
	comp=E,160nm,11.3s						
QIZ				LR	LR		
	comp=Z,84nm,11.2s						
KSRS	**Korea Array**	**14.23**	**20**	Pn	**Pn**	**05 51 11.6**	**+2.6**
	0.3nm,0.3s,baz=198,slow=14,SNR=4.8						
KSRS				LR	LR	05 57 29.0	
	comp=Z,54nm,21.1s,baz=200,slow=41						
HNS	**HongShan**	**14.48**	**337**	eP	**P**	**05 51 17.9**	**-1.3**
HNS				eS	Sn	05 54 02.3	+9.2
HNS				LR	LR		
	comp=N,310nm,12.7s						
HNS				LR	LR		
	comp=E,310nm,11.2s						
HNS				LR	LR		
	comp=Z,410nm,14.3s						
XAN	**Xi'an**	**14.89**	**314**	P	**P**	**05 51 26.8**	**+2.9**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				LR	LR		
	comp=N,310nm,8.2s						
XAN				LR	LR		
	comp=E,600nm,10.5s						
XAN				LR	LR		
	comp=Z,720nm,10.0s						
DAV	**Davao City (W)**	**17.42**	**167**	LR	LR	05 59 06.6	
	comp=Z,51nm,18.6s,baz=340,slow=39						
MJAR	**Matsushiro Arr**	**18.75**	**45**	LR	LR	06 00 14.0	
	comp=Z,78nm,18.4s,baz=205,slow=40						
MYLDM	**Lahad Datu**	**19.17**	**190**	P	**P**	**05 52 08.0**	**-3.2**
MYLDM				IAmb	IAmb	05 52 28.6	
	comp=Z,7.8nm,0.9s						
LZH	**Lanzhou**	**19.47**	**312**	⇓P	**Pn**	**05 52 16.5**	**+0.7**
LZH				pP	sP	05 52 22.3	+3.7
LZH				sP	pP	05 52 25.8	+8.4
LZH				pmax	pmax		
	comp=Z,12nm,1.4s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
LZH				LR	LR		
	comp=Z,300nm,10.8s						
LZH				LR	LR		
	comp=Z,410nm,10.3s						
LZH				LR	LR		
	comp=Z,620nm,10.8s						
CMAR	**Chiang Mai Arr**	**22.00**	**259**	LR	LR	06 00 41.1	
	comp=Z,32nm,19.0s,baz=250,slow=35						
GTA	**Gaotai**	**23.95**	**314**	eP	P	05 53 09.6	+7.6
GTA				sS	sS	05 57 32.3	+7.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,42nm,4.4s						
GTA				LR	LR		
	comp=N,130nm,11.3s						
GTA				LR	LR		
	comp=E,280nm,11.6s						
GTA				LR	LR		
	comp=Z,310nm,11.6s						
ERM	**Erimo**	**25.12**	**40**	P	**P**	**05 53 12.7**	**+0.2**
ERM				IAmb	IAmb	05 53 31.0	
	comp=Z,19nm,1.4s						
GOMU	**GeErMu**	**26.09**	**304**	P	**P**	**05 53 20.5**	**-1.3**
GOMU				pP	pP	05 53 23.6	-1.3
GOMU				sP	sP	05 53 24.5	-1.6
GOMU				S	S	05 58 09.8	+16
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,100nm,5.2s						
GOMU				LR	LR		
	comp=N,60nm,10.4s						
GOMU				LR	LR		
	comp=E,56nm,10.8s						
GOMU				LR	LR		
	comp=Z,56nm,14.4s						
KLR	**Kul'dur**	**26.19**	**15**	P	**P**	**05 53 23.0**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=194,slow=4.2,SNR=4.8						
	comp=Z,1.6nm,0.7s						
ULN	**Ulaanbaatar**	**26.35**	**337**	P	**P**	**05 53 23.7**	**-0.1**
ULN				IAmb	IAmb	05 53 35.0	
	comp=Z,6.2nm,1.1s						
SONM	**Songino Array**	**26.56**	**336**	P	**P**	**05 53 27.6**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=151,slow=8.6,SNR=6.6						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**26.56**	**336**	P	**P**	**05 53 26.1**	**+0.5**
SONM				IAmb	IAmb	05 53 38.0	
	comp=Z,5.5nm,1.0s						
SAUI	**Saumlaki**	**33.31**	**163**	P	**P**	**05 54 25.9**	**+0.4**
WMQ	**Urumqi**	**34.03**	**314**	eP	**P**	**05 54 32.9**	**+1.2**
MK31	**Makanchi Array**	**38.70**	**316**	P	**P**	**05 55 10.3**	**-1.2**
MKAR	**Makanchi Array**	**38.70**	**316**	P	**P**	**05 55 11.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=112,slow=11,SNR=4.5						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**40.52**	**327**	P	**P**	**05 55 26.1**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=119,slow=8.9,SNR=2.3						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**40.52**	**327**	P	**P**	**05 55 25.6**	**-1.0**
KURK	**Kurchatov**	**42.42**	**320**	P	**P**	**05 55 43.5**	**+1.3**
KURK	**Kurchatov**	**42.42**	**320**	IAmb	IAmb	05 55 57.4	
	comp=Z,5.3nm,1.3s						
KURBB	**Kurchatov Arra**	**42.44**	**320**	P	**P**	**05 55 43.5**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=112,slow=7.3,SNR=5.4						
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**45.55**	**163**	P	**P**	**05 56 05.2**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=345,slow=8.7,SNR=11						
	comp=Z,0.6nm,0.5s						
WB2	**Warramunga Arr**	**45.56**	**163**	P	**P**	**05 56 07.4**	**-0.3**
TIXI	**Tiksi**	**47.65**	**3**	P	**P**	**05 56 21.3**	**-2.2**
	comp=Z,2.2nm,0.3s,baz=88,slow=23,SNR=6.5						
	comp=Z,2.2nm,0.3s						
TIXI	**Tiksi**	**47.65**	**3**	P	**P**	**05 56 21.1**	**-2.4**
TIXI				IAmb	IAmb	05 56 27.6	
	comp=Z,3.1nm,1.1s						
ASAR	**Alice Springs**	**49.02**	**165**	P	**P**	**05 56 34.3**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=339,slow=6.9,SNR=6.6						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**68.96**	**27**	P	**P**	**05 58 50.8**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=270,slow=5.4,SNR=2.6						
	comp=Z,0.2nm,0.5s						
FINES	**FINESS Array B**	**71.70**	**330**	P	**P**	**05 59 12.5**	**+3.1**
	comp=Z,1.3nm,0.9s,baz=37,slow=5.8,SNR=3.4						
CLL	**Collm**	**82.36**	**323**	iP	**P**	**06 00 09.6**	**+0.1**
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**82.75**	**23**	P	**P**	**06 00 09.8**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=311,slow=5.2,SNR=12						
	comp=Z,0.6nm,0.7s						

BJI **21** *06:06:37.6±0.0, 31°.03N×140°.35E, h137^{km}, mb5.2/88, mB5.3/71*

KEA **21** *06:06:37.8, 30°.96N×140°.33E, h28^{km}, MS4.4/4*

MOS **21** *06:06:39.9±1.0, 30°.97N×139°.80E, h126^{km}, mb5.4/83, MS4.7/8, Error ellipse: s-maj=6.4km s-min=3.3km az=109.5*

NEIC **21** *06:06:42.2, 30°.93N×140°.07E, h125^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.43; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.36; $M_{\theta\phi}$0.16; $M_{\phi r}$-2.04; Fault plane solution: $M_0$2.12000×10^{17} NP1:ϕ_s189.00000°, δ85.22000°, λ94.99000°. NP2:ϕ_s322.68000°, δ6.90000°, λ43.89000°. Principal axes: T 2.1971, Plg50.0000°, Azm104.0000°; N -0.1684, Plg5.0000°, Azm9.0000°; P -2.0287, Plg40.0000°, Azm274.0000°;*

NIED **21** *06:06:42.6, 31°.02N×140°.22E, h143^{km}, MW5.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.07; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-0.10; $M_{r\theta}$-0.44; $M_{\theta\phi}$-0.70; $M_{\phi r}$-1.67; Fault plane solution: $M_0$1.83000×10^{17} NP1: ϕ_s95.00000°, δ20.00000°, λ177.00000°. NP2: ϕ_s188.00000°, δ89.00000°, λ70.00000°.*

NEIC **21** *06:06:42.1±2.4, 30°.96N±0°.06×140°.08E±0°.09, h125^{km}±5^{km}, mb5.6/201, Mwb5.5/45, Mww5.5 Error ellipse: s-maj=11.5km s-min=8.2km az=74.0*

JMA **21** *06:06:42.6±0.3, 31°N±2°×14°0E±°, h143^{km}, MD5.2/39, MW5.5/39, NEAR TORISHIMA IS*

IDC **21** *06:06:43.0±0.6, 30°.99N×139°.82E, h139^{km}±5^{km}, mb5.0/35, mbtmp5.4/42, MS4.1/61, Error ellipse: s-maj=9.0km s-min=5.2km az=87.0*

GCMT **21** *06:06:45.2±0.1, 30°.98N±0°.01×140°.07E±0°.01, h144^{km}, MW5.5/160, Moment Tensor Solution. s128, c208; s160, c318; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.84±.03; $M_{\theta\theta}$-0.12±.04; $M_{\phi\phi}$-0.72±.04; $M_{r\theta}$-0.43±.02; $M_{\theta\phi}$-1.05±.03; $M_{\phi r}$-2.24±.02; Best double couple: $M_0$2.61900×10^{17} NP1:ϕ_s71.00000°, δ22.00000°, λ148.00000°. NP2:ϕ_s192.00000°, δ79.00000°, λ71.00000°. Principal axes: T 2.4620, Plg53.0000°, Azm80.0000°; N 0.3150, Plg18.0000°, Azm195.0000°; P -2.7760, Plg31.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **21** *06:06:45, 31°.03N×140°.29E, h140^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.81; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.83; $M_{r\theta}$-0.54; $M_{\theta\phi}$-0.65; $M_{\phi r}$-1.51; Fault plane solution: $M_0$1.91000×10^{17} NP1:ϕ_s44.00000°, δ17.00000°, λ113.00000°. NP2:ϕ_s200.00000°, δ74.00000°, λ83.00000°. Principal axes: T 1.7174, Plg60.0000°, Azm100.0000°; N 0.3412, Plg7.0000°, Azm201.0000°; P -2.0586, Plg29.0000°, Azm295.0000°;*

ISC 21 06:06:42.6±0.2, **31°.04N**±0°.02×**139°.95E**±0°.03, **h137**^{km}±1^{km}, **h137**^{km}**:pP-P, n1695, σ1^{s}66**/1899, **mb5.4**/281, **268C-229D, Fault plane solution: NP1:**ϕ_s329.50324°, δ35.11019°, λ35.00268°. **NP2:**ϕ_s209.69658°, δ70.73639°, λ119.93800°. **Principal axes:** T Plg54.2655°, Azm156.8703°; N Plg28.1071°, Azm18.9386°; P Plg20.1917°, Azm277.6106°; **Fault plane solution: NP1:** ϕ_s217.86195°, δ69.36351°, λ63.07319°. **NP2:**ϕ_s93.10564°, δ33.44894°, λ140.25229°. **Principal axes:** T Plg57.0563°, Azm91.7879°; N Plg25.0744°, Azm228.0109°; P Plg19.9246°, Azm327.7755°;

Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.43**	**354**	P	**Pn**	**06 07 11.7**	**+1.3**
JAOM				eS	**Sn**	**06 07 34.2**	**+2.5**
JAOM	**Aogashimamukai**	**1.43**	**354**	A	A	06 07 11.7	
	comp=E,140nm,2.2s,comp=E,161nm,2.5s						
JHCJ	**Hachijojimakas**	**2.03**	**356**	P	**Pn**	**06 07 18.5**	**+1.2**
JHCJ				eS	**Sn**	**06 07 44.5**	**+0.6**
JHCJ	**Hachijojimakas**	**2.03**	**356**	A	A	06 07 18.5	
	comp=E,34nm,3.8s,comp=E,29nm,3.8s						
JHJ2	**Mitsune**	**2.06**	**357**	Pn	**Pn**	**06 07 19.1**	**+1.4**
JHJ2	**Mitsune**	**2.06**	**357**	P	**Pn**	**06 07 20.0**	**+2.3**
JHJ2	**Mitsune**	**2.06**	**357**	P	**Pn**	**06 07 19.4**	**+1.6**
JHJ2	**Mitsune**	**2.06**	**357**	A	A	06 07 19.4	
	comp=E,39nm,2.5s,comp=E,31nm,4.5s						
JHJ	**Hachijo jima 2**	**2.07**	**356**	P	**Pn**	**06 07 19.4**	**+1.6**
	2µm,0.3s,baz=173,slow=22,SNR=137						
JHJ				S	**Sn**	**06 07 45.5**	**+0.6**
	3µm,0.3s,baz=304,slow=23,SNR=6.3						
JHJ	**Hachijo jima 2**	**2.07**	**356**		**Pn**	**06 07 19.4**	**+1.6**
JMKN	**Mikurajimanish**	**2.86**	**354**	P	**Pn**	**06 07 28.9**	**+1.2**
JMKN	**Mikurajimanish**	**2.86**	**354**	A	A	06 07 28.9	
	comp=E,28nm,8.4s,comp=E,19nm,3.9s						
JKO	**Kozu shima**	**3.21**	**348**	⇓P	**Pn**	**06 07 34.2**	**+2.0**
JKO				⇓eS	**Sn**	**06 08 14.5**	**+4.0**
JKO	**Kozu shima**	**3.21**	**348**	A	A	06 07 34.2	
	comp=E,88nm,3.4s,comp=E,41nm,2.6s						
JSKK	**Shikinejimakit**	**3.34**	**349**	A	A	06 07 35.5	
	comp=E,23nm,2.2s,comp=E,18nm,3.4s						
JNIO	**Niijimaoohara**	**3.35**	**350**	A	A	06 07 35.6	
	comp=E,32nm,4.6s,comp=E,32nm,2.8s						
JTHY	**Toshimahigashi**	**3.52**	**351**	A	A	06 07 37.7	
	comp=E,25nm,4.1s,comp=E,23nm,9.0s						
TTO3	**TONANKAI O.B.S**	**3.54**	**323**	A	A	06 07 39.4	
	comp=E,142nm,4.0s,comp=E,78nm,4.5s						
JIM2	**Oshima 3**	**3.69**	**353**	A	A	06 07 40.0	
	comp=E,23nm,3.4s,comp=E,18nm,2.6s						
BSO1	**Boso 1**	**3.70**	**13**	P	**Pn**	**06 07 37.6**	**-0.5**
TTO1	**TONANKAI O.B.S**	**3.71**	**315**	⇓iP	**Pn**	**06 07 41.3**	**+2.8**
JIZS	**Izushimoda**	**3.77**	**346**	A	A	06 07 41.4	
	comp=E,12nm,4.6s,comp=E,10.0nm,2.3s						
JSG	**Sagara**	**3.91**	**338**	A	A	06 07 43.7	
	comp=E,18nm,4.8s,comp=E,24nm,3.7s						
TATJ	**Tateyama 2**	**3.98**	**359**	A	A	06 07 43.5	
	comp=E,21nm,1.9s,comp=E,15nm,9.5s						
JHTM	**Izuhatsuma**	**3.98**	**349**	A	A	06 07 44.1	
	comp=E,17nm,2.0s,comp=E,19nm,3.8s						
JKKS	**Kakegawashinom**	**4.05**	**336**	A	A	06 07 45.5	
	comp=E,18nm,4.6s,comp=E,22nm,3.3s						
JKUC	**kamogawauchiur**	**4.11**	**3**	A	A	06 07 45.0	
	comp=E,11nm,2.8s,comp=E,11nm,3.8s						
JYO	**Yokosk**	**4.18**	**357**	A	A	06 07 46.2	
	comp=E,18nm,1.4s,comp=E,17nm,6.2s						
HMMJ	**Hamamatsu 2**	**4.24**	**334**	A	A	06 07 48.2	
	comp=E,4.0nm,5.9s,comp=E,8.0nm,2.7s						
SHZ3	**Shizuoka 3**	**4.27**	**340**	A	A	06 07 48.3	
	comp=E,9.0nm,3.2s,comp=E,7.0nm,2.6s						
JOD2	**Odawara 2**	**4.27**	**350**	⇓P	**Pn**	**06 07 47.3**	**+1.2**
JOD2				⇓eS	**Sn**	**06 08 37.5**	**+2.1**
JOD2	**Odawara 2**	**4.27**	**350**	A	A	06 07 47.3	
	comp=E,9.0nm,2.7s,comp=E,8.0nm,2.9s						
JFNN	**Fujinakano**	**4.27**	**346**	A	A	06 07 48.1	
	comp=E,19nm,3.4s,comp=E,14nm,6.1s						
JAA	**Atsumi**	**4.29**	**327**	A	A	06 07 49.2	
	comp=E,6.0nm,2.9s,comp=E,7.0nm,2.6s						
JWKM	**Wakayamakushim**	**4.29**	**305**	A	A	06 07 49.9	
	comp=E,17nm,2.0s,comp=E,10.0nm,4.0s						
JIE	**Ise**	**4.32**	**322**	⇓iP	**Pn**	**06 07 49.3**	**+2.6**
JIE	**Ise**	**4.32**	**322**	A	A	06 07 49.3	
	comp=E,11nm,3.2s,comp=E,6.0nm,2.5s						
JMMH	**Miemihama**	**4.32**	**311**	A	A	06 07 50.2	
	comp=E,9.0nm,3.2s,comp=E,6.0nm,3.6s						
JCN	**Nagara**	**4.37**	**3**	A	A	06 07 48.5	
	comp=E,24nm,5.0s,comp=E,14nm,4.1s						
CBIJ	**Chichi jima**	**4.39**	**153**	⇓P	**Pn**	**06 07 44.1**	**-3.7**
CBIJ				⇓eS	**Sn**	**06 08 33.0**	**-5.4**
CBIJ	**Chichi jima**	**4.39**	**153**	A	A	06 07 44.1	
	comp=E,21nm,4.2s,comp=E,13nm,2.8s						
JCJ	**Chichijima**	**4.39**	**153**	P	**Pn**	**06 07 44.1**	**-3.7**
	948nm,0.6s,baz=5.7,slow=10,SNR=205						
JCJ				S	**Sn**	**06 08 32.1**	**-6.2**
	2µm,0.5s,baz=303,slow=20,SNR=13						
JCJ	**Chichijima**	**4.39**	**153**		**Pn**	**06 07 43.9**	**-3.9**
JCJ	**Chichijima**	**4.39**	**153**	P	**Pn**	**06 07 47.9**	**+0.1**
JKN2	**Miekihoku**	**4.45**	**317**	A	A	06 07 51.7	
	comp=E,5.0nm,2.5s,comp=E,7.0nm,3.8s						
JTNC	**Tanabenakahech**	**4.60**	**308**	⇓iP	**Pn**	**06 07 53.1**	**+2.7**
JYN	**Shimob**	**4.60**	**346**	A	A	06 07 52.4	
	comp=E,12nm,4.2s,comp=E,7.0nm,4.8s						
TOK	**Tokyo**	**4.63**	**358**	A	A	06 07 52.3	

	comp=E,16nm,1.2s,comp=E,15nm,0.4s						
JNY	**Yasuok**	**4.65**	**338**	A	A	06 07 53.5	
	comp=E,13nm,3.3s,comp=E,6.0nm,2.6s						
JNTK	**Naratenkawa**	**4.70**	**314**	A	A	06 07 55.2	
	comp=E,9.0nm,7.3s,comp=E,6.0nm,2.9s						
CHOJ	**Chosi**	**4.71**	**9**	A	A	06 07 52.7	
	comp=E,8.0nm,3.3s,comp=E,6.0nm,4.7s						
TSUJ	**Tsu 2**	**4.71**	**322**	A	A	06 07 55.1	
	comp=E,13nm,3.3s,comp=E,13nm,3.4s						
JAO	**Obara**	**4.78**	**333**	A	A	06 07 55.5	
	comp=E,8.0nm,2.5s,comp=E,9.0nm,3.9s						
JWM	**Minabe**	**4.79**	**307**	A	A	06 07 56.6	
	comp=E,12nm,3.5s,comp=E,8.0nm,3.8s						
JHH2	**Haha-jima-NKT2**	**4.81**	**156**	A	A	06 07 52.6	
	comp=E,22nm,3.7s,comp=E,15nm,0.4s						
JHU	**Hanno**	**4.83**	**354**	A	A	06 07 55.1	
	comp=E,5.0nm,2.8s,comp=E,5.0nm,2.7s						
JWY	**Kouya**	**4.85**	**312**	A	A	06 07 57.3	
	comp=E,12nm,2.9s,comp=E,12nm,2.9s						
INU	**Inuyama**	**4.95**	**331**	Pn	**Pn**	**06 07 57.4**	**+2.3**
INU	**Inuyama**	**4.95**	**331**	P	**Pn**	**06 07 58.4**	**+3.3**
JICN	**Ichinomiyachia**	**4.98**	**329**	A	A	06 07 58.3	
	comp=E,15nm,2.6s,comp=E,13nm,2.5s						
JGF	**Kuroka**	**5.04**	**335**	Pn	**Pn**	**06 07 58.3**	**+2.0**
JGF	**Kuroka**	**5.04**	**335**	A	A	06 07 58.9	
	comp=E,9.0nm,3.5s,comp=E,6.0nm,3.9s						
JRY	**Ryogami san**	**5.04**	**350**	⇓P	**Pn**	**06 07 57.3**	**+1.0**
JRY				⇓*e*S	**Sn**	**06 08 53.8**	**+0.1**
JNT	**Takato**	**5.05**	**343**	A	A	06 07 58.7	
	comp=E,7.0nm,3.7s,comp=E,6.0nm,6.9s						
JEG	**Eigenji**	**5.06**	**325**	A	A	06 07 59.6	
	comp=E,6.0nm,2.3s,comp=E,12nm,6.0s						
JHE	**Heguri**	**5.08**	**316**	A	A	06 08 00.2	
	comp=E,8.0nm,6.3s,comp=E,4.0nm,4.4s						
JYT	**Yasato**	**5.17**	**2**	Pn	**Pn**	**06 07 57.5**	**-0.6**
JYT	**Yasato**	**5.17**	**2**	A	A	06 07 59.3	
	comp=E,6.0nm,8.9s,comp=E,6.0nm,2.1s						
JHYU	**Hitachinakayam**	**5.31**	**6**	A	A	06 08 00.9	
	comp=E,7.0nm,2.8s,comp=E,6.0nm,1.1s						
JAG	**Ashikaga**	**5.38**	**356**	A	A	06 08 02.5	
	comp=E,3.0nm,8.2s,comp=E,3.0nm,2.4s						
JAI	**Aioi**	**5.40**	**302**	A	A	06 08 04.9	
	comp=E,6.0nm,3.2s,comp=E,8.0nm,3.5s						
MRT2	**Murotomisaki 2**	**5.45**	**297**	A	A	06 08 05.7	
	comp=E,8.0nm,3.4s,comp=E,7.0nm,3.0s						
JAWN	**Awajishima-nag**	**5.46**	**310**	A	A	06 08 05.5	
	comp=E,11nm,3.2s,comp=E,9.0nm,4.6s						
JNG	**Nsakai**	**5.57**	**344**	A	A	06 08 05.5	
	comp=E,5.0nm,5.5s,comp=E,3.0nm,4.9s						
JFM	**Mihama**	**5.57**	**324**	A	A	06 08 06.5	
	comp=E,4.0nm,2.9s,comp=E,5.0nm,4.1s						
JMIK	**Miki**	**5.57**	**314**	A	A	06 08 06.9	
	comp=E,11nm,2.4s,comp=E,10.0nm,1.3s						
JGK	**Kuni**	**5.61**	**349**	A	A	06 08 05.9	
	comp=E,5.0nm,4.7s,comp=E,5.0nm,4.2s						
MJAR	**Matsushiro Arr**	**5.67**	**346**	P	**Pn**	**06 08 05.3**	**+0.5**
	27nm,0.4s,baz=172,slow=11,SNR=80						
MJAR	**Matsushiro Arr**	**5.67**	**346**	Pn	**Pn**	**06 08 06.1**	**+1.3**
MJAR	**Matsushiro Arr**	**5.67**	**346**	P	**Pn**	**06 08 06.1**	**+1.3**
MAJO	**Matsushiro**	**5.67**	**346**	Pn	**Pn**	**06 08 05.8**	**+1.0**
MAJO	**Matsushiro**	**5.67**	**346**	P	**Pn**	**06 08 05.8**	**+1.0**
MAJO	**Matsushiro**	**5.67**	**346**	P	**Pn**	**06 08 07.1**	**+2.3**
MJB9	**Matsu-Tunnel**	**5.68**	**346**		**Pn**	**06 08 06.0**	**+1.2**
JWT	**Wachi**	**5.69**	**319**	A	A	06 08 08.3	
	comp=E,7.0nm,2.8s,comp=E,6.0nm,2.7s						
JMAF	**Mimaanabuki**	**5.74**	**303**	A	A	06 08 09.4	
	comp=E,6.0nm,3.7s,comp=E,5.0nm,4.3s						
JMN	**Monobe**	**5.79**	**299**	Pn	**Pn**	**06 08 09.0**	**+2.6**
JMN	**Monobe**	**5.79**	**299**	A	A	06 08 10.3	
	comp=E,5.0nm,2.7s,comp=E,4.0nm,4.7s						
JSB	**Shiboa**	**5.91**	**360**	A	A	06 08 09.3	
	comp=E,8.0nm,2.4s,comp=E,7.0nm,2.8s						
JTT	**Ttatey**	**5.96**	**339**	A	A	06 08 11.0	
	comp=E,8.0nm,2.8s,comp=E,5.0nm,2.9s						
JFFD	**Fukushimafurud**	**6.05**	**5**	A	A	06 08 10.9	
	comp=E,4.0nm,0.8s,comp=E,6.0nm,2.0s						
ONAJ	**Iwakimizuishiy**	**6.08**	**6**	A	A	06 08 11.3	
	comp=E,11nm,0.3s,comp=E,8.0nm,0.2s						
JKY	**Yasaka**	**6.11**	**320**	A	A	06 08 13.9	
	comp=E,6.0nm,2.4s,comp=E,8.0nm,3.2s						
JKU	**Kubokawa**	**6.26**	**293**	A	A	06 08 16.7	
	comp=E,5.0nm,2.5s,comp=E,4.0nm,3.3s						
JKSM	**Kasumi**	**6.33**	**317**	A	A	06 08 17.0	
	comp=E,5.0nm,2.3s,comp=E,6.0nm,5.7s						
JTO	**Tosashimizu**	**6.34**	**288**	⇓*i*P	**Pn**	**06 08 16.9**	**+3.2**
JFY	**Yanaizu**	**6.35**	**358**	A	A	06 08 15.3	
	comp=E,3.0nm,2.8s,comp=E,2.0nm,1.5s						
JFK	**Kawauchi**	**6.35**	**7**	A	A	06 08 14.9	
	comp=E,3.0nm,1.8s,comp=E,2.0nm,1.1s						
JJH	**Hakui**	**6.43**	**337**	A	A	06 08 17.5	
	comp=E,4.0nm,3.1s,comp=E,3.0nm,2.8s						
JET	**Tanbara**	**6.44**	**297**	A	A	06 08 19.0	
	comp=E,5.0nm,3.4s,comp=E,4.0nm,3.1s						
JIZZ	**Izumozaki**	**6.55**	**351**	A	A	06 08 18.4	
	comp=E,9.0nm,6.6s,comp=E,12nm,5.8s						
UWA2	**Uwa jima 2**	**6.58**	**291**	A	A	06 08 21.0	
	comp=E,6.0nm,3.7s,comp=E,4.0nm,4.5s						
JMST	**Minamisoumatoc**	**6.71**	**6**	A	A	06 08 19.6	
	comp=E,5.0nm,0.7s,comp=E,6.0nm,0.3s						
JKR	**Kurayoshi**	**6.71**	**312**	A	A	06 08 22.3	
	comp=E,7.0nm,2.5s,comp=E,5.0nm,2.3s						
JJG	**Jouge**	**6.75**	**304**	A	A	06 08 23.0	
	comp=E,5.0nm,7.0s,comp=E,5.0nm,6.7s						
JNA	**Nagahama**	**6.80**	**294**	A	A	06 08 24.0	
	comp=E,7.0nm,3.3s,comp=E,4.0nm,2.9s						
JMM	**Marumori**	**6.84**	**6**		**Pn**	**06 08 19.3**	**-1.1**
JMM	**Marumori**	**6.84**	**6**	A	A	06 08 21.5	
	comp=E,8.0nm,0.8s,comp=E,8.0nm,1.0s						
JYAR	**Yonezawaarcadi**	**6.85**	**1**	A	A	06 08 21.8	
	comp=E,5.0nm,1.5s,comp=E,8.0nm,1.5s						
JHS	**Saijyo**	**6.96**	**306**	Pn	**Pn**	**06 08 24.8**	**+2.6**
JHS	**Saijyo**	**6.96**	**306**	⇓P	**Pn**	**06 08 25.4**	**+3.3**
JHM	**Kurahashi**	**6.98**	**298**	A	A	06 08 26.2	
	comp=E,5.0nm,2.2s,comp=E,3.0nm,3.7s						
JSD	**Sado**	**7.11**	**349**	Pn	**Pn**	**06 08 22.6**	**-1.5**
JYS	**Shirataka**	**7.16**	**1**	A	A	06 08 26.0	
	comp=E,7.0nm,1.6s,comp=E,6.0nm,2.0s						
JHT	**Toyohira**	**7.29**	**302**	A	A	06 08 30.3	
	comp=E,4.0nm,3.0s,comp=E,4.0nm,8.5s						
JNM	**Ikuma**	**7.30**	**309**	A	A	06 08 30.2	
	comp=E,9.0nm,4.4s,comp=E,7.0nm,6.4s						
JOU	**Okura**	**7.33**	**4**	A	A	06 08 28.1	
	comp=E,5.0nm,2.2s,comp=E,5.0nm,2.3s						
JGT2	**ShimaneMisato**	**7.42**	**305**	A	A	06 08 32.0	
	comp=E,8.0nm,2.8s,comp=E,5.0nm,5.8s						
JISK	**Izumosakaura**	**7.42**	**309**	A	A	06 08 31.9	
	comp=E,8.0nm,2.4s,comp=E,6.0nm,2.2s						
JYA	**Atsumi**	**7.53**	**359**	A	A	06 08 31.1	
	comp=E,3.0nm,2.1s,comp=E,2.0nm,1.0s						
JKI	**Kunimi**	**7.55**	**292**	A	A	06 08 33.9	
	comp=E,10.0nm,5.2s,comp=E,4.0nm,3.1s						
JOFO	**Osakifurukawao**	**7.58**	**6**	A	A	06 08 31.3	
	comp=E,18nm,3.1s,comp=E,14nm,4.0s						
JBEP	**Beppuamama**	**7.59**	**290**	A	A	06 08 34.5	
	comp=E,14nm,2.9s,comp=E,9.0nm,1.0s						
JOI	**OKI**	**7.65**	**315**	⇓P	**Pn**	**06 08 34.2**	**+2.8**
JTN	**Tanegashima 3**	**7.72**	**269**	A	A	06 08 36.4	
	comp=E,4.0nm,3.7s,comp=E,2.0nm,3.3s						
JYK	**Kaneyama**	**7.86**	**2**	A	A	06 08 35.3	
	comp=E,2.0nm,3.5s,comp=E,2.0nm,2.0s						
JMK	**Ichinoseki**	**7.96**	**7**	*e*P	**Pn**	**06 08 33.8**	**-1.6**
JMK				*e*S	**Sn**	**06 09 57.5**	**-6.4**
JNU	**Nakatsue**	**7.97**	**287**	P	**Pn**	**06 08 36.1**	**+0.4**
	1µm,0.8s,baz=91,slow=12,SNR=44						
JNU				LR	LR	06 11 53.6	
	comp=Z,2µm,18.2s,baz=160,slow=39						
JNU	**Nakatsue**	**7.97**	**287**		**Pn**	**06 08 36.0**	**+0.3**
JNU	**Nakatsue**	**7.97**	**287**	P	**Pn**	**06 08 37.1**	**+1.4**
JSU	**Suzuyama**	**8.14**	**276**		**Pn**	**06 08 40.9**	**+2.9**
JTY	**Toyota**	**8.15**	**296**	A	A	06 08 41.9	
	comp=E,6.0nm,3.0s,comp=E,4.0nm,6.7s						
JRG	**Rokugo**	**8.35**	**4**	A	A	06 08 41.8	
	comp=E,4.0nm,4.7s,comp=E,3.0nm,3.4s						
JSJ	**Shimokoshiki**	**8.78**	**277**	P	**Pn**	**06 08 49.2**	**+2.7**
JMZ	**Minamidaito 2**	**9.28**	**238**	P	**Pn**	**06 08 54.5**	**+1.2**
JTU	**Tsushima**	**9.54**	**294**		**Pn**	**06 08 59.8**	**+3.2**
JTU	**Tsushima**	**9.54**	**294**	*e*P	**Pn**	**06 08 59.0**	**+2.5**
JTM	**Tenmabayashi**	**9.76**	**5**		**Pn**	**06 08 57.0**	**-2.6**
JAMN	**Amaminishikomi**	**9.78**	**256**	P	**Pn**	**06 09 03.9**	**+4.0**
JOT	**Ohata**	**10.36**	**5**	P	**Pn**	**06 09 05.0**	**-2.4**
JOW	**Kunigami**	**11.05**	**251**	P	**Pn**	**06 09 17.5**	**+0.6**
	35nm,0.2s,baz=82,slow=11,SNR=9.9						
JOW	**Kunigami**	**11.05**	**251**	P	**Pn**	**06 09 18.9**	**+2.0**
	169nm,0.9s						
ERM	**Erimo**	**11.25**	**12**		**Pn**	**06 09 16.6**	**-2.6**
ERM	**Erimo**	**11.25**	**12**	P	**Pn**	**06 09 16.7**	**-2.6**
NAWB	**Namwon**	**11.38**	**296**		**Pn**	**06 09 24.6**	**+3.4**
KSCHJ	**Chungju**	**11.52**	**304**		**Pn**	**06 09 26.2**	**+3.3**
TJN	**Taejon**	**11.75**	**300**		**P**	**06 09 30.1**	**-3.4**
TJN	**Taejon**	**11.75**	**300**	P	**P**	**06 09 30.1**	**-3.4**
TJN	**Taejon**	**11.75**	**300**	P	**Pn**	**06 09 29.5**	**+3.5**
KSRS	**Korea Array**	**11.82**	**306**	P	**P**	**06 09 30.9**	**-3.4**
	94nm,1.0s,baz=118,slow=13,SNR=170						
KSRS				LR	LR	06 13 50.5	
	comp=Z,1µm,20.5s,baz=150,slow=36						
KSRS				ScP	**ScP**	**06 18 23.2**	**+0.5**
	9.6nm,1.0s,baz=140,slow=1.8,SNR=17						
KSRS	**Korea Array**	**11.82**	**306**		**P**	**06 09 30.9**	**-3.4**
KSRS					**ScP**	**06 18 23.2**	**+0.5**
KSRS	**Korea Array**	**11.82**	**306**	P	**P**	**06 09 30.9**	**-3.4**
JEW	**Eniwo**	**11.84**	**5**		**Pn**	**06 09 23.7**	**-3.3**
KSAR	**Wonju Array Be**	**11.85**	**306**		**Pn**	**06 09 30.1**	**+2.9**
KSAR	**Wonju Array Be**	**11.85**	**306**	P	**Pn**	**06 09 30.1**	**+2.9**
KS19	**Wonju Array Si**	**11.89**	**306**		**Pn**	**06 09 30.6**	**+2.8**
SEHB	**SEOHWA**	**12.02**	**310**		**Pn**	**06 09 32.0**	**+2.5**
INCN	**Inchon**	**12.75**	**304**		**P**	**06 09 42.2**	**-2.4**
INCN	**Inchon**	**12.75**	**304**	P	**P**	**06 09 42.2**	**-2.4**
INCN	**Inchon**	**12.75**	**304**	P	**P**	**06 09 42.5**	**-2.2**
INCN	**Inchon**	**12.75**	**304**	P	**P**	**06 09 42.7**	**-1.9**
NMR	**Nemuro--Hokkai**	**13.13**	**19**	*e*P	**Pn**	**06 09 40.6**	**-3.2**
ASAJ	**Asahikawa**	**13.22**	**8**	P	**Pn**	**06 09 42.1**	**-2.8**
	48nm,0.5s,baz=218,slow=11,SNR=62						
ASAJ				S	**Sn**	**06 12 02.4**	**-8.4**
	53nm,0.6s,baz=111,slow=30,SNR=3.9						
ASAJ				LR	LR	06 15 52.9	
	comp=Z,347nm,19.8s,baz=165,slow=41						
ASAJ				ScP	**ScP**	**06 18 24.6**	**-0.1**
	5.7nm,0.7s,baz=282,slow=12,SNR=5.1						
GLVR	**Golovnino**	**13.42**	**18**	*e*P	**Pn**	**06 09 45.4**	**-2.1**
GLVR				pmax	pmax		
	comp=Z,163nm,0.6s						
GLVR				pmax	pmax		
	comp=E,106nm,0.8s						
GLVR				pmax	pmax		
	comp=N,98nm,0.6s						
HHU	**Hamhung**	**13.44**	**315**	P	**Pn**	**06 09 50.4**	**+2.5**
HHU				sP	P	06 09 59.6	+7.3
HHU				S	**S**	**06 12 28.6**	**-1.1**
HHU				AMS	AMS		
	comp=N,313nm,4.5s						
HHU				AMS	AMS		
	comp=E,367nm,5.3s						
HHU				AMS	AMS		
	comp=Z,683nm,9.8s						
MSHR	**Mys Shultsa**	**13.49**	**331**	*ce*P	**Pn**	**06 09 47.5**	**-0.9**
MSHR				pmax	pmax		
	comp=Z,49nm,1.3s						
HJU	**Haeju**	**13.64**	**305**	P	**Pn**	**06 09 53.5**	**+3.2**
HJU				pP	P	06 10 01.4	+6.9
HJU				S	**Sn**	**06 12 27.0**	**+6.0**
HJU				AMS	AMS		
	comp=N,3µm,7.8s						
HJU				AMS	AMS		
	comp=E,1µm,3.6s						
HJU				AMS	AMS		
	comp=Z,3µm,8.4s						
VLA	**Vladivostok**	**13.65**	**334**	*i* P	**Pn**	**06 09 49.6**	**-0.9**
VLA				pmax	pmax		
	comp=Z,342nm,2.1s						
RUSJ	**Misakicho**	**13.69**	**16**	*i* P	**Pn**	**06 09 49.4**	**-1.6**
YUK	**Yuzh-Kuril'sk**	**13.78**	**18**	*e*P	**Pn**	**06 09 50.5**	**-1.6**
YUK				pmax	pmax		
	comp=Z,226nm,0.5s						
YUK				pmax	pmax		
	comp=N,165nm,0.6s						
YUK				pmax	pmax		
	comp=E,140nm,0.6s						
SHO	**Shikotan**	**13.91**	**21**	*e*P	**Pn**	**06 09 52.7**	**-1.1**
SHO				pmax	pmax		
	comp=Z,72nm,0.6s						
SHO				pmax	pmax		
	comp=N,65nm,0.3s						
PYAG	**Pyongyang**	**14.10**	**308**	P	**Pn**	**06 10 00.2**	**+4.1**
PYAG				pP	P	06 10 05.9	+6.4
PYAG				S	**S**	**06 12 40.1**	**-2.9**
PYAG				AMS	AMS		
	comp=N,3µm,6.6s						
PYAG				AMS	AMS		
	comp=E,5µm,10.2s						
PYAG				AMS	AMS		
	comp=Z,4µm,7.6s						
TEY	**Ternei**	**14.21**	**350**	⇑*e*P	**Pn**	**06 09 55.7**	**-1.9**
TEY				*e*		06 12 41.5	
TEY				pmax	pmax		
	comp=N,20nm,0.5s						
TEY				pmax	pmax		
	comp=Z,20nm,0.5s						
TEY				pmax	pmax		
	comp=E,100nm,1.1s						
TEY				pmax	pmax		
	comp=N,200nm,1.6s						
TEY				pmax	pmax		
	comp=Z,300nm,1.6s						
TEY				pmax	pmax		
	comp=N,100nm,8.3s						
TEY				pmax	pmax		
	comp=Z,100nm,8.1s						
TEY				pmax	pmax		
	comp=E,100nm,5.6s						
TEY				MLR	MLR		
	comp=E,100nm,12.0s						
USA0B	**Ussuriysk Arra**	**14.56**	**337**		**Pn**	**06 10 01.1**	**-0.9**
USA0B	**Ussuriysk Arra**	**14.56**	**337**	P	**Pn**	**06 10 01.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**14.56**	**337**	P	**Pn**	**06 10 01.0**	**-1.0**
	comp=E,42nm,0.8s,baz=152,slow=12,SNR=43						
USRK				LR	LR	06 15 32.5	
	comp=E,731nm,18.2s,baz=144,slow=36						
USRK	**Ussuriysk Ar.**	**14.56**	**337**		**Pn**	**06 10 01.2**	**-0.7**
USRK	**Ussuriysk Ar.**	**14.56**	**337**	P	**Pn**	**06 10 01.2**	**-0.7**
KUR	**Kuril'sk**	**15.46**	**21**	P	**P**	**06 10 14.6**	**0.0**
KUR				*e*S	**Sn**	**06 12 54.0**	**-11**
KUR				pmax	pmax		
	comp=Z,145nm,0.8s						
KUR				pmax	pmax		
	comp=Z,800nm,3.3s						
KUR				smax	smax		
	comp=N,218nm,0.5s						
KUR				smax	smax		
	comp=E,166nm,0.4s						
KUR				smax	smax		
	comp=E,5µm,6.7s						
KUR				smax	smax		
	comp=N,4µm,4.1s						
SUJ	**Sinuiju**	**15.47**	**310**	P	**Pn**	**06 10 16.9**	**+3.5**
SUJ				sP	P	06 10 26.7	+12
SUJ				S	**Sn**	**06 13 06.9**	**+1.8**
SUJ				AMS	AMS		
	comp=N,484nm,3.7s						
SUJ				AMS	AMS		
	comp=E,630nm,4.8s						
SUJ				AMS	AMS		
	comp=Z,500nm,3.8s						
MDJ	**Mudanjiang**	**15.81**	**332**		**Pn**	**06 10 16.9**	**-0.5**
MDJ	**Mudanjiang**	**15.81**	**332**	P	**Pn**	**06 10 17.0**	**-0.5**
MDJ				S	**S**	**06 13 17.3**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,21nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,940nm,8.3s						
MDJ				LR	LR		
	comp=Z,940nm,10.7s						
MDJ				LR	LR		
	comp=Z,1µm,10.0s						
MDJ				LR	LR		
	comp=Z,1µm,10.8s						
MDJ	**Mudanjiang**	**15.81**	**332**	P	**P**	**06 10 19.9**	**+1.4**
YSS	**Yuzh-Sakhalins**	**16.03**	**7**	P	**Pn**	**06 10 19.8**	**-0.4**
YSS				IAmb	IAmb	06 10 23.3	
	comp=Z,289nm,0.6s						
YSS	**Yuzh-Sakhalins**	**16.03**	**7**	*e*P	**Pn**	**06 10 18.8**	**-1.4**
YSS				*e*S	**Sn**	**06 13 10.6**	**-7.9**
YSS				pmax	pmax		
	comp=Z,350nm,0.8s						
YSS				pmax	pmax		
	comp=Z,900nm,3.0s						
YSS				pmax	pmax		
	comp=N,800nm,3.1s						
YSS				pmax	pmax		
	comp=E,300nm,3.2s						
YSS				smax	smax		
	comp=N,3µm,4.4s						
YSS				smax	smax		
	comp=E,2µm,4.4s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**16.03**	**7**	P	**P**	**06 10 21.2**	**+0.2**
SSE	**Sheshan**	**16.08**	**275**	P	**P**	**06 10 23.3**	**+1.6**
SSE				S	**S**	**06 13 22.4**	**+1.1**
SSE				pmax	pmax		
	comp=Z,96nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,6.0s						
SSE				LR	LR		
	comp=Z,590nm,11.8s						
YOJ	**Yonaguni jima**	**16.36**	**251**	P	**P**	**06 10 26.7**	**+2.0**
YOJ	**Yonaguni jima**	**16.36**	**251**	P	**P**	**06 10 26.7**	**+2.0**
YOJ				pmax	pmax		
	comp=Z,632nm,1.0s						
YOJ	**Yonaguni jima**	**16.36**	**251**	P	**P**	**06 10 27.9**	**+3.1**
DL2	**Dalian**	**16.93**	**303**	P	**Pn**	**06 10 33.3**	**+2.1**
DL2				sP	**sP**	**06 11 12.5**	**+1.5**
DL2				S	**S**	**06 13 41.8**	**+1.6**
DL2				ScS	**ScS**	**06 22 05.8**	**-5.3**
DL2				pmax	pmax		
	comp=Z,340nm,0.7s						
DL2				pmax	pmax		
	comp=Z,2µm,5.5s						
SNY	**Shenyang**	**16.98**	**314**	⇑P	**Pn**	**06 10 31.8**	**0.0**
SNY				S	**Sn**	**06 13 34.8**	**-6.5**
SNY				pmax	pmax		
	comp=Z,38nm,1.0s						
SNY				pmax	pmax		
	comp=Z,1µm,12.2s						
SNY				LR	LR		
	comp=Z,2µm,9.6s						
SNY				LR	LR		
	comp=Z,2µm,9.8s						
SNY				LR	LR		
	comp=Z,4µm,21.8s						
CN2	**Changchun**	**17.14**	**322**	*e*P	**P**	**06 10 33.1**	**-0.1**
CN2				*e*S	**S**	**06 13 34.3**	**-10**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				pmax	pmax		
	comp=Z,900nm,13.0s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
TATO	**Taipei**	**17.38**	**254**	P	**Pn**	**06 10 38.2**	**+1.4**
TATO	**Taipei**	**17.38**	**254**	P	**Pn**	**06 10 39.4**	**+2.6**
YHNB	**Yeheng**	**17.60**	**253**	P	**Pn**	**06 10 39.1**	**-0.4**
YHNB				IAmb	IAmb	06 10 44.5	
	comp=Z,405nm,1.0s						
YHNB	**Yeheng**	**17.60**	**253**	P	**Pn**	**06 10 41.8**	**+2.3**
BNX	**BinXian**	**17.63**	**330**	⇑P	**P**	**06 10 37.8**	**-0.8**
BNX				S	**S**	**06 13 46.0**	**-8.7**
BNX				ScS	**ScS**	**06 22 11.4**	**-1.6**
BNX				pmax	pmax		
	comp=Z,170nm,0.9s						
BNX				pmax	pmax		
	comp=Z,2µm,8.0s						
BNX				LR	LR		
	comp=Z,2µm,9.5s						
BNX				LR	LR		
	comp=Z,770nm,8.8s						
BNX				LR	LR		
	comp=Z,2µm,11.8s						
NACB	**Ninganchiao**	**17.64**	**252**	P	**Pn**	**06 10 40.2**	**+0.3**
GUMO	**Guam**	**17.95**	**164**	P	**Pn**	**06 10 43.2**	**-0.5**
	comp=Z,447nm,0.9s,baz=0.0,slow=8.1,SNR=12						
GUMO				S	**S**	**06 14 00.9**	**-0.6**
	comp=Z,44nm,0.5s,baz=56,slow=19,SNR=2.4						
GUMO	**Guam**	**17.95**	**164**	P	**P**	**06 10 41.8**	**-0.5**
GUMO				IAmb	IAmb	06 11 13.1	
	comp=Z,455nm,0.9s						
GUMO	**Guam**	**17.95**	**164**	P	**Pn**	**06 10 43.2**	**-0.5**
GUMO				S	**S**	**06 14 00.9**	**-0.6**
GUMO	**Guam**	**17.95**	**164**	P	**Pn**	**06 10 43.2**	**-0.5**
NJ2	**Nanjing**	**18.01**	**279**	⇓*i*P	**Pn**	**06 10 44.4**	**+0.1**
NJ2				sP	**sP**	**06 11 27.0**	**+4.2**
NJ2				S	**Sn**	**06 14 04.8**	**-1.4**
NJ2				ScP	**ScP**	**06 18 34.8**	**+0.9**
NJ2				ScS	**ScS**	**06 22 15.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,220nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,2µm,7.1s						
UGL	**Uglegorsk**	**18.08**	**4**	*e*P	**Pn**	**06 10 46.4**	**+1.5**
UGL				*e*S	**S**	**06 14 03.8**	**+0.2**
UGL				pmax	pmax		
	comp=Z,2µm,2.4s						
UGL				pmax	pmax		
	comp=Z,503nm,0.8s						
UGL				smax	smax		
	comp=E,4µm,9.9s						
UGL				smax	smax		
	comp=N,8µm,4.9s						
YULB	**Yu-li**	**18.24**	**250**	P	**Pn**	**06 10 46.9**	**-0.2**
YULB				IAmb	IAmb	06 10 56.7	
	comp=Z,195nm,0.7s						
SSLB	**Suanglung**	**18.34**	**251**	P	**Pn**	**06 10 48.6**	**+0.4**
SSLB				IAmb	IAmb	06 10 51.8	
	comp=Z,560nm,1.2s						
SSLB	**Suanglung**	**18.34**	**251**	P	**Pn**	**06 10 50.0**	**+1.8**
TWG	**Pinlang**	**18.70**	**249**	P	**Pn**	**06 10 52.2**	**-0.3**
TWG				IAmb	IAmb	06 10 57.3	
	comp=Z,403nm,1.1s						
TPUB	**Ta-pu**	**18.83**	**251**	P	**Pn**	**06 10 54.4**	**+0.4**
TPUB				IAmb	IAmb	06 10 57.5	
	comp=Z,415nm,1.0s						
TPUB	**Ta-pu**	**18.83**	**251**	P	**Pn**	**06 10 55.1**	**+1.1**
KLR	**Kul'dur**	**19.20**	**343**	P	**P**	**06 10 54.8**	**-0.8**
	comp=Z,106nm,0.8s,baz=138,slow=10.0,SNR=88						
KLR				S	**S**	**06 14 27.4**	**+1.7**
	comp=Z,6.9nm,0.9s,baz=29,slow=11,SNR=1.6						
KLR				ScP	**ScP**	**06 18 36.2**	**0.0**
	comp=Z,7.4nm,0.9s,baz=154,slow=3.2,SNR=7.1						
KLR				LR	LR	06 18 47.2	
	comp=Z,330nm,19.3s,baz=161,slow=38						
KLR				ScS	**ScS**	**06 22 16.7**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=33,slow=23,SNR=10						
KLR	**Kul'dur**	**19.20**	**343**	P	**P**	**06 10 54.8**	**-0.8**
KLR	**Kul'dur**	**19.20**	**343**	P	**P**	**06 10 54.8**	**-0.8**
KLR				S	**S**	**06 14 27.4**	**+1.7**
TIA	**Tai'an**	**19.68**	**291**	P	**P**	**06 11 01.9**	**+0.9**
TIA				S	**S**	**06 14 37.3**	**+1.8**
TIA				SS	**PcP**	**06 15 11.4**	**-2.9**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,760nm,3.9s						
TIA				LR	LR		
	comp=Z,1µm,15.7s						
TIA				LR	LR		
	comp=Z,950nm,7.1s						
TIA				LR	LR		
	comp=Z,870nm,11.4s						
QZH	**Quanzhou**	**19.80**	**257**	⇓*i*P	**P**	**06 11 03.6**	**+1.2**
QZH				sP	**sP**	**06 11 43.3**	**+0.3**
QZH				S	**S**	**06 14 39.8**	**+1.7**
QZH				SS	**PcP**	**06 15 18.6**	**+4.0**
QZH				pmax	pmax		
	comp=Z,180nm,1.0s						
QZH				pmax	pmax		
	comp=Z,880nm,5.0s						
QZH				LR	LR		
	comp=Z,880nm,13.3s						
QZH				LR	LR		
	comp=Z,720nm,15.2s						
TYV	**Tymovskoe**	**19.90**	**5**	*e*P	**Pn**	**06 11 06.7**	**+0.5**
TYV				pmax	pmax		
	comp=Z,127nm,0.8s						
TYV				pmax	pmax		
	comp=Z,800nm,4.5s						
BJT	**Baijiatuau**	**21.28**	**301**	P	**P**	**06 11 17.8**	**-0.3**
BJT	**Baijiatuau**	**21.28**	**301**	P	**P**	**06 11 17.8**	**-0.3**
BJT				pmax	pmax		
	comp=Z,118nm,1.3s						
BJI	**Beijing**	**21.28**	**301**	P	**P**	**06 11 17.8**	**-0.3**
BJI				pP	**pP**	**06 11 42.3**	**+0.3**
BJI				S	**S**	**06 15 03.4**	**-3.1**
BJI				ScP	**ScP**	**06 18 41.6**	**+0.3**
BJI				pmax	pmax		
	comp=Z,40nm,1.1s						
BJI				pmax	pmax		
	comp=Z,800nm,8.2s						
BJI				LR	LR		

	comp=Z,840nm,13.5s						
BJI				LR	LR		
	comp=Z,920nm,11.9s						
BJI				LR	LR		
	comp=Z,980nm,11.2s						
HNS	**HongShan**	**21.78**	**294**	⇓P	**P**	**06 11 20.8**	**-2.7**
HNS				pP	**pP**	**06 11 48.5**	**+1.1**
HNS				S	**S**	**06 15 12.0**	**-3.4**
HNS				ScP	**ScP**	**06 18 43.5**	**+0.9**
HNS				ScS	**ScS**	**06 22 28.0**	**+0.8**
HNS				pmax	pmax		
	comp=Z,51nm,0.7s						
HNS				pmax	pmax		
	comp=Z,820nm,8.8s						
HNS				LR	LR		
	comp=Z,1µm,13.9s						
HNS				LR	LR		
	comp=Z,1µm,13.9s						
HNS				LR	LR		
	comp=Z,1µm,14.3s						
WHN	**Wuhan**	**21.99**	**275**	⇓P	**P**	**06 11 26.1**	**+0.4**
WHN				sP	**sP**	**06 12 11.4**	**+5.1**
WHN				S	**S**	**06 15 21.6**	**+2.5**
WHN				ScP	**ScP**	**06 18 45.3**	**+2.0**
WHN				ScS	**ScS**	**06 22 28.1**	**-0.1**
WHN				pmax	pmax		
	comp=Z,370nm,1.3s						
WHN				pmax	pmax		
	comp=Z,2µm,3.8s						
NKL	**Nikolayevsk**	**22.10**	**1**	*e*P	**P**	**06 11 26.0**	**-0.5**
NKL				*e*S	**S**	**06 15 23.1**	**+2.7**
NKL				pmax	pmax		
	comp=E,3.0nm,0.6s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.5s						
NKL				pmax	pmax		
	comp=Z,240nm,0.9s						
NKL				smax	smax		
	comp=E,2.0nm,0.6s						
NKL				smax	smax		
	comp=N,10.0nm,1.4s						
NKL				MLR	MLR		
	comp=N,3.0nm,15.0s						
NKL				MLR	MLR		
	comp=E,22nm,12.0s						
NKL				MLR	MLR		
	comp=Z,158nm,12.0s						
XLT	**XiLinHaoTe**	**22.79**	**311**	⇑*i*P	**P**	**06 11 34.4**	**+0.9**
XLT				pP	pwP	06 12 00.3	-1.5
XLT				sP	sP	06 12 14.8	-0.6
XLT				S	**S**	**06 15 27.3**	**-4.8**
XLT				sS	sS	06 16 21.3	+3.5
XLT				pmax	pmax		
	comp=Z,66nm,0.8s						
XLT				pmax	pmax		
	comp=Z,1µm,3.6s						
SKR	**Severo-Kuril's**	**23.02**	**27**	*e*P	**P**	**06 11 35.6**	**+0.1**
SKR				*e*S	**S**	**06 15 31.5**	**-3.9**
SKR				pmax	pmax		
	comp=Z,500nm,2.7s						
SKR				pmax	pmax		
	comp=Z,59nm,1.0s						
LYN	**LuoYang**	**23.34**	**286**	*e*P	**P**	**06 11 36.1**	**-2.5**
LYN				pP	pwP	06 12 08.3	-0.9
LYN				PP	**PnPn**	**06 12 16.4**	**+2.5**
LYN				S	**S**	**06 15 38.1**	**-2.8**
LYN				sS	sS	06 16 28.3	-0.4
LYN				ScP	**ScP**	**06 18 48.3**	**+1.5**
LYN				ScS	**ScS**	**06 22 31.8**	**-1.4**
LYN				pmax	pmax		
	comp=Z,30nm,0.9s						
LYN				pmax	pmax		
	comp=Z,910nm,6.5s						
TIY	**Taiyuan**	**23.61**	**294**	*e*P	**P**	**06 11 41.8**	**+0.6**
TIY				pP	**pwP**	**06 12 12.3**	**+0.2**
TIY				PP	**sP**	**06 12 24.8**	**+1.0**
TIY				S	**S**	**06 15 41.3**	**-4.2**
TIY				sS	**sS**	**06 16 36.1**	**+1.9**
TIY				pmax	pmax		
	comp=Z,87nm,0.6s						
TIY				pmax	pmax		
	comp=Z,710nm,5.2s						
CNSH	**ChangSha**	**23.64**	**270**	⇑P	**P**	**06 11 43.3**	**+1.9**
CNSH				S	**S**	**06 15 52.6**	**+6.6**
CNSH				pmax	pmax		
	comp=Z,96nm,0.9s						
CNSH				LR	LR		
	comp=Z,2µm,12.2s						
CNSH				LR	LR		
	comp=Z,1µm,10.5s						
CNSH				LR	LR		
	comp=Z,1µm,10.5s						
HIA	**Hailar**	**23.75**	**326**	P	**P**	**06 11 42.4**	**+0.2**
HIA				IAmb	IAmb	06 11 44.9	
	comp=Z,184nm,1.0s						
HIA	**Hailar**	**23.75**	**326**	P	**P**	**06 11 42.4**	**+0.2**
HIA				pmax	pmax		
	comp=Z,184nm,1.0s						
TGY	**Tagaytay City**	**24.28**	**230**	P	**P**	**06 11 49.0**	**+1.6**
	comp=Z,182nm,0.3s,baz=117,slow=1.1,SNR=22						
TGY	**Tagaytay City**	**24.28**	**230**	P	**P**	**06 11 49.0**	**+1.6**
TGY	**Tagaytay City**	**24.28**	**230**	P	**P**	**06 11 49.0**	**+1.6**
ZEA	**Zeya**	**24.47**	**342**	*de*P	**P**	**06 11 49.9**	**+1.3**
ZEA				*e*S	**S**	**06 15 58.9**	**+0.3**
ZEA				pmax	pmax		
	comp=N,800nm,2.7s						
ZEA				pmax	pmax		
	comp=Z,1µm,2.6s						
ZEA				pmax	pmax		
	comp=E,200nm,0.7s						
ZEA				pmax	pmax		
	comp=N,610nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,1µm,0.8s						
ZEA				smax	smax		
	comp=Z,700nm,10.2s						
ZEA				smax	smax		
	comp=E,1µm,9.1s						
ZEA				smax	smax		
	comp=N,1µm,8.4s						
ZEA				MLR	MLR		
	comp=N,400nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
HHC	**Hu-ho-hao-te**	**24.89**	**301**	*e*P	**P**	**06 11 52.6**	**-0.1**
HHC				pP	pP	06 12 19.6	-1.6
HHC				sP	sP	06 12 32.3	-4.3
HHC				S	**S**	**06 16 01.4**	**-4.4**
HHC				sS	sS	06 16 52.5	-3.4
HHC				pmax	pmax		
	comp=Z,110nm,0.8s						
HHC				LR	LR		
	comp=Z,1µm,14.6s						
HHC				LR	LR		
	comp=Z,2µm,14.6s						
HHC				LR	LR		
	comp=Z,2µm,14.6s						
PEA0B	**Petropavlovsk-**	**25.55**	**25**	P	**P**	**06 11 58.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**25.55**	**25**	*ce*P	**P**	**06 11 59.7**	**+1.3**
PETK	**Petropavlovsk-**	**25.55**	**25**	P	**P**	**06 11 58.4**	**0.0**
	comp=Z,14nm,0.9s,baz=228,slow=8.1,SNR=25						
PETK				ScP	**ScP**	**06 18 51.0**	**-1.5**
	comp=Z,6.4nm,0.8s,baz=201,slow=7.8,SNR=6.5						
	comp=Z,14nm,0.9s						
PETK	**Petropavlovsk-**	**25.55**	**25**	P	**P**	**06 11 58.5**	**+0.1**
PETK	**Petropavlovsk-**	**25.55**	**25**	P	**P**	**06 11 58.4**	**0.0**
PET	**Petropavlovsk**	**25.84**	**26**	P	**P**	**06 12 00.8**	**-0.2**
PET	**Petropavlovsk**	**25.84**	**26**	α*i*P	**P**	**06 12 01.7**	**+0.7**
PET				*e**SP	**sP**	**06 12 50.1**	**+5.1**
PET				*e*S	**S**	**06 16 19.4**	**-0.8**
PET				pmax	pmax		
	comp=Z,62nm,0.7s						
PET				pmax	pmax		
	comp=Z,500nm,7.0s						
PET				pmax	pmax		
	comp=Z,300nm,12.1s						
BTO	**Baotou**	**25.97**	**300**	*e*P	**P**	**06 12 03.4**	**+0.9**
ENH	**Enshi**	**26.18**	**276**	P	**P**	**06 12 04.2**	**-0.2**
ENH				IAmb	IAmb	06 12 06.9	
	comp=Z,121nm,0.6s						
XAN	**Xi'an**	**26.28**	**285**	P	**P**	**06 12 04.3**	**-1.0**
XAN				pP	pP	06 12 34.9	+1.4
XAN				sP	sP	06 12 50.6	+1.4
XAN				S	**S**	**06 16 26.8**	**-1.0**
XAN				sS	sS	06 17 19.5	+1.1
XAN				SS	**SnSn**	**06 17 51.8**	**+7.6**
XAN				pmax	pmax		
	comp=Z,63nm,0.8s						
XAN				pmax	pmax		
	comp=Z,750nm,6.7s						
XAN				LR	LR		
	comp=Z,570nm,12.4s						
XAN				LR	LR		
	comp=Z,680nm,10.8s						
XAN				LR	LR		
	comp=Z,980nm,11.2s						
GULI	**GuiLin**	**26.66**	**265**	⇑P	**P**	**06 12 08.5**	**-0.2**
GULI				S	**S**	**06 16 27.9**	**-6.0**
GULI				pmax	pmax		
	comp=Z,40nm,0.8s						
GULI				LR	LR		
	comp=Z,2µm,18.4s						
GULI				LR	LR		
	comp=Z,610nm,17.3s						
GULI				LR	LR		
	comp=Z,900nm,13.0s						
H11N2	**WAKE ISLAND Hy**	**26.75**	**109**	T	T	06 39 48.7	
	baz=305,slow=74						
H11N1	**WAKE ISLAND Hy**	**26.76**	**109**	T	T	06 40 36.0	
	baz=305,slow=74						
H11N3	**WAKE ISLAND Hy**	**26.77**	**109**	T	T	06 42 09.7	
	baz=305						
DAV	**Davao City (W)**	**27.39**	**212**	LR	LR	06 23 12.4	
	comp=Z,265nm,20.2s,baz=66,slow=36						
MA2	**Magadan**	**29.45**	**11**	P	**P**	**06 12 33.9**	**+0.8**
	comp=Z,44nm,0.7s,baz=182,slow=7.6,SNR=23						
MA2				S	**S**	**06 17 16.5**	**-0.5**
	comp=Z,17nm,1.1s,baz=168,slow=20,SNR=8.3						
MA2				LR	LR	06 24 59.4	
	comp=Z,271nm,18.1s,baz=191,slow=37						
	comp=Z,44nm,0.7s						
MA2	**Magadan**	**29.45**	**11**	P	**P**	**06 12 33.8**	**+0.6**
MA2	**Magadan**	**29.45**	**11**	P	**P**	**06 12 33.9**	**+0.8**
MA2				S	**S**	**06 17 16.5**	**-0.5**
MA2	**Magadan**	**29.45**	**11**	P	**P**	**06 12 34.8**	**+1.7**
MA2	**Magadan**	**29.45**	**11**	P	**P**	**06 12 34.2**	**+1.1**
MA2				pP	**pP**	**06 13 02.8**	**+0.8**
GYA	**Guiyang**	**29.47**	**270**	⇑P	**P**	**06 12 30.3**	**-3.6**
GYA				sP	sP	06 13 19.9	+2.0
GYA				S	**S**	**06 17 20.8**	**+2.4**
GYA				ScP	**ScP**	**06 19 05.5**	**+0.3**
GYA				pmax	pmax		
	comp=Z,420nm,5.9s						
GYA				LR	LR		
	comp=Z,840nm,13.0s						
GYA				LR	LR		
	comp=Z,680nm,16.9s						
GYA				LR	LR		
	comp=Z,670nm,11.1s						
QIZ	**Qiongzhong**	**29.69**	**253**	P	**P**	**06 12 37.4**	**+1.7**
QIZ				pP	**pwP**	**06 13 05.9**	**-0.9**
QIZ				sP	**sP**	**06 13 20.5**	**+0.4**
QIZ				S	**S**	**06 17 21.0**	**-0.6**
QIZ				sS	**sS**	**06 18 14.4**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,290nm,5.8s						
QIZ				LR	LR		
	comp=Z,1µm,19.1s						
QIZ				LR	LR		
	comp=Z,670nm,15.9s						
QIZ				LR	LR		
	comp=Z,1µm,20.7s						
ULN	**Ulaanbaatar**	**30.16**	**313**	P	**P**	**06 12 39.9**	**+0.2**
ULN				IAmb	IAmb	06 13 14.7	
	comp=Z,69nm,1.0s						
ULN	**Ulaanbaatar**	**30.16**	**313**	*ce*P	**P**	**06 12 39.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,84nm,1.3s						
ULN	**Ulaanbaatar**	**30.16**	**313**	P	**P**	**06 12 40.5**	**+0.7**
ULN	**Ulaanbaatar**	**30.16**	**313**	P	**P**	**06 12 40.3**	**+0.5**
ULN				pP	**pwP**	**06 13 10.9**	**-0.1**
LZH	**Lanzhou**	**30.39**	**289**	*e*P	**P**	**06 12 41.3**	**-0.6**
LZH				pP	pP	06 13 09.3	-1.5
LZH				sP	sP	06 13 29.8	+3.4
LZH				PP	**PnPn**	**06 13 47.8**	**+1.2**
LZH				PcP	**PcP**	**06 15 40.5**	**+2.1**
LZH				S	**S**	**06 17 26.8**	**-5.8**
LZH				sS	sS	06 18 24.5	+1.1
LZH				ScP	**ScP**	**06 19 09.3**	**+1.2**
LZH				pmax	pmax		
	comp=Z,26nm,1.5s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,760nm,15.7s						
LZH				LR	LR		
	comp=Z,740nm,14.1s						
SONM	**Songino Array**	**30.56**	**313**	P	**P**	**06 12 43.3**	**0.0**
	comp=Z,30nm,0.8s,baz=116,slow=8.1,SNR=103						
SONM				PcP	**PcP**	**06 15 39.5**	**+0.9**
	comp=Z,6.8nm,0.7s,baz=124,slow=3.2,SNR=3.7						
SONM				ScP	**ScP**	**06 19 08.2**	**-0.2**
	comp=Z,12nm,0.9s,baz=131,slow=3.2,SNR=15						
SONM				ScS	**ScS**	**06 23 04.7**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=160,slow=4.7,SNR=6.9						
	comp=Z,30nm,0.8s						
SONM	**Songino Array**	**30.56**	**313**	P	**P**	**06 12 43.3**	**0.0**
SONM	**Songino Array**	**30.56**	**313**	P	**P**	**06 12 43.3**	**0.0**
SONM						06 15 39.5	
CD2	**Chengdu**	**30.95**	**279**	P	**P**	**06 12 47.0**	**+0.2**
CD2				S	**S**	**06 17 43.0**	**+1.8**
CD2				pmax	pmax		
	comp=Z,80nm,0.7s						
CD2				pmax	pmax		
	comp=Z,260nm,11.8s						
CD2				LR	LR		
	comp=Z,950nm,11.4s						
CD2				LR	LR		
	comp=Z,990nm,11.8s						
YAK	**Yakutsk**	**31.71**	**351**	LR	LR	06 25 44.5	
	comp=Z,426nm,18.4s,baz=114,slow=36						
YAK	**Yakutsk**	**31.71**	**351**	P	**P**	**06 12 52.8**	**-0.2**
YAK	**Yakutsk**	**31.71**	**351**	*d i*P	**P**	**06 12 53.3**	**+0.3**
YAK				*e**PP	**pP**	**06 13 21.3**	**-0.8**
YAK				*e*		06 14 10.4	
YAK				*e*S	**S**	**06 17 48.7**	**-3.5**
YAK				*e*		06 23 05.8	
YAK				pmax	pmax		
	comp=Z,379nm,0.9s						
YAK				pmax	pmax		
	comp=N,74nm,1.1s						
YAK				pmax	pmax		
	comp=E,36nm,0.9s						
YAK				pmax	pmax		
	comp=Z,163nm,1.8s						
YAK				pmax	pmax		
	comp=E,16nm,0.6s						
YAK				pmax	pmax		
	comp=N,152nm,1.5s						
YAK				smax	smax		
	comp=E,358nm,2.8s						
YAK				smax	smax		
	comp=N,79nm,1.1s						
YAK	**Yakutsk**	**31.71**	**351**	P	**P**	**06 12 53.6**	**+0.6**
BOD	**Bodaibo**	**32.17**	**334**	*e*P	**P**	**06 12 56.9**	**-0.1**
BOD				pmax	pmax		
	comp=Z,92nm,1.5s						
TNTI	**Ternate**	**32.38**	**204**	P	**P**	**06 12 58.8**	**-0.6**
TNTI				IAmb	IAmb	06 13 01.5	
	comp=Z,85nm,1.1s						
TNTI	**Ternate**	**32.38**	**204**	P	**P**	**06 12 59.0**	**-0.4**
	comp=Z,2µmcomp=Z,78nm,1.0s						
TNTI	**Ternate**	**32.38**	**204**	P	**P**	**06 13 00.2**	**+0.8**
	comp=Z,76nm,1.0s						
MYLDM	**Lahad Datu**	**32.69**	**222**	P	**P**	**06 13 03.5**	**+1.5**
MYLDM				IAmb	IAmb	06 13 38.6	
	comp=Z,140nm,1.1s						
SWI	**Sorong**	**32.79**	**196**	P	**P**	**06 13 02.9**	**0.0**
	comp=Z,73nm,0.9s						
SIJI	**Sorong**	**32.79**	**196**	P	**P**	**06 13 01.9**	**-1.1**
	comp=Z,43nm,0.6s,baz=33,slow=6.7,SNR=13						
SIJI				ScP	**ScP**	**06 19 14.8**	**-1.4**
	comp=Z,31nm,0.2s,baz=334,slow=3.8,SNR=8.4						
	comp=Z,43nm,0.6s						
SEY	**Seymchan**	**32.89**	**10**	P	**P**	**06 13 04.7**	**+1.5**
	comp=Z,32nm,1.0s,baz=198,slow=6.9,SNR=42						
SEY				LR	LR	06 26 51.4	
	comp=Z,443nm,18.3s,baz=191,slow=37						
	comp=Z,32nm,1.0s						
SEY	**Seymchan**	**32.89**	**10**	P	**P**	**06 13 04.7**	**+1.5**
SEY	**Seymchan**	**32.89**	**10**	P	**P**	**06 13 04.7**	**+1.5**
SHEM	**Shemya Is, Ala**	**32.93**	**39**	P	**P**	**06 13 06.2**	**+2.5**
	comp=Z,46nm,0.5s,baz=14,slow=2.3,SNR=21						
SHEM				PcP	**PcP**	**06 15 45.2**	**+0.5**
	comp=Z,30nm,0.8s,baz=291,slow=3.9,SNR=4.1						
SHEM				LR	LR	06 24 14.6	
	comp=Z,147nm,21.9s,baz=276,slow=32						
	comp=Z,46nm,0.5s						
KMI	**Kunming**	**33.25**	**269**	⇓P	**P**	**06 13 05.0**	**-2.1**
KMI				pP	pwP	06 13 39.5	+1.1
KMI				PP	**PP**	**06 14 25.5**	**+0.5**
KMI				S	**S**	**06 18 11.8**	**-5.6**
KMI				ScP	**ScP**	**06 19 15.3**	**-2.7**
KMI				SS	**SnSn**	**06 20 36.1**	**+2.5**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,320nm,7.4s						
KMI				LR	LR		
	comp=Z,1µm,23.1s						
KMI				LR	LR		
	comp=Z,430nm,11.8s						
KMI				LR	LR		
	comp=Z,580nm,15.5s						
ZAK	**Zakamensk**	**33.39**	**316**	*e*P	**P**	**06 13 07.2**	**-0.7**
ZAK				*e*		06 23 17.8	
ZAK				pmax	pmax		
	comp=Z,66nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,11nm,1.2s						
IRK	**Irkutsk**	**33.55**	**320**	*e*P	**P**	**06 13 09.6**	**+0.4**
IRK				pmax	pmax		
	comp=Z,150nm,2.5s						
GTA	**Gaotai**	**33.61**	**296**	⇑P	**P**	**06 13 09.9**	**-0.1**
GTA				pP	pP	06 13 37.3	-2.0
GTA				sP	sP	06 13 54.3	-0.6
GTA				PP	**PnPn**	**06 14 25.3**	**-1.6**
GTA				PcP	**PcP**	**06 15 48.8**	**+1.7**
GTA				S	**S**	**06 18 18.3**	**-4.3**
GTA				sS	sS	06 19 12.3	-1.4
GTA				ScP	**ScP**	**06 19 18.6**	**-0.4**
GTA				PcS	**PcS**	**06 19 33.8**	**+0.6**
GTA				ScS	**ScS**	**06 23 20.3**	**-0.3**
GTA				pmax	pmax		
	comp=Z,29nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,6.4s						
GTA				LR	LR		
	comp=Z,1µm,17.4s						
GTA				LR	LR		
	comp=Z,630nm,18.2s						
GTA				LR	LR		
	comp=Z,740nm,17.8s						
LBMI	**Labuha**	**33.66**	**203**	P	**P**	**06 13 11.2**	**+0.8**
	comp=Z,860nmcomp=Z,46nm,0.9s						
PZH	**PanZhiHua**	**33.69**	**272**	P	**P**	**06 13 11.5**	**+0.7**
PZH				pP	**pwP**	**06 13 42.8**	**+2.7**
PZH				sP	**sP**	**06 13 55.1**	**-0.5**
PZH				S	**S**	**06 18 17.1**	**-6.8**
PZH				sS	**sS**	**06 19 12.8**	**-2.3**
PZH				ScP	**ScP**	**06 19 21.4**	**+2.0**
PZH				ScS	**ScS**	**06 23 17.9**	**-3.5**
PZH				pmax	pmax		
	comp=Z,60nm,0.9s						
PZH				pmax	pmax		
	comp=Z,200nm,5.2s						
PZH				LR	LR		
	comp=Z,1µm,19.4s						
PZH				LR	LR		
	comp=Z,2µm,20.6s						
PZH				LR	LR		
	comp=Z,2µm,22.4s						
GTOI	**Gorontalo**	**34.24**	**211**	P	**P**	**06 13 15.5**	**0.0**
	comp=Z,434nmcomp=Z,25nm,0.9s						
FAKI	**Fak Fak**	**34.56**	**194**	P	**P**	**06 13 16.6**	**-1.6**
FAKI	**Fak Fak**	**34.56**	**194**	P	**P**	**06 13 16.6**	**-1.6**
	comp=Z,548nmcomp=Z,43nm,0.9s						
FAKI	**Fak Fak**	**34.56**	**194**	P	**P**	**06 13 18.0**	**-0.2**
MRSI	**Marisa**	**34.87**	**213**	P	**P**	**06 13 20.9**	**0.0**
	comp=Z,2µmcomp=Z,202nm,1.0s						
TOLI2	**Tolitoli**	**34.87**	**215**	P	**P**	**06 13 20.4**	**-0.5**
TOLI2				IAmb	IAmb	06 13 22.4	
	comp=Z,58nm,1.0s						
TOLI2	**Tolitoli**	**34.87**	**215**	P	**P**	**06 13 21.7**	**+0.8**
UBPT	**Khong Chiam**	**35.20**	**251**	P	**P**	**06 13 23.8**	**0.0**
MOY	**Mondy**	**35.20**	**317**	*e*P	**P**	**06 13 23.6**	**+0.1**
MOY				pmax	pmax		
	comp=Z,54nm,2.3s						
SANI	**Sanana**	**35.49**	**205**	P	**P**	**06 13 24.5**	**-1.7**
SANI	**Sanana**	**35.49**	**205**	P	**P**	**06 13 25.4**	**-0.8**
MSAI	**Masohi**	**35.78**	**199**	P	**P**	**06 13 32.2**	**+3.6**
MPSI	**Mapaga**	**35.98**	**216**	P	**P**	**06 13 32.2**	**+1.8**
	comp=Z,22nm,1.1s						
APSI	**Ampana**	**36.23**	**212**	P	**P**	**06 13 32.6**	**+0.1**
	comp=Z,1µmcomp=Z,139nm,1.1s						
BNDI	**Bandanaira**	**36.65**	**197**	P	**P**	**06 13 37.4**	**+1.4**
	comp=Z,160nm,1.1s						
KRVT	**Keravat (AS076**	**36.99**	**160**	P	**P**	**06 13 39.9**	**+0.9**
	comp=Z,51nm,0.6s,baz=109,slow=3.0,SNR=6.2						
	comp=Z,51nm,0.6s						
KRVT	**Keravat (AS076**	**36.99**	**160**	P	**P**	**06 13 39.9**	**+0.9**
KIWB	**Kanaga Island**	**37.58**	**44**	P	**P**	**06 13 44.2**	**+0.6**
GOMU	**GeErMu**	**37.68**	**290**	P	**P**	**06 13 44.5**	**-0.6**
GOMU				PP	**PP**	**06 15 12.8**	**-1.0**
GOMU				PcP	**PcP**	**06 16 01.3**	**+1.7**
GOMU				S	**S**	**06 19 25.0**	**-0.2**
GOMU				sS	sS	06 20 18.9	+2.0
GOMU				pmax	pmax		
	comp=Z,22nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,120nm,4.4s						
GOMU				LR	LR		
	comp=Z,480nm,15.5s						
GOMU				LR	LR		
	comp=Z,250nm,13.4s						
GOMU				LR	LR		
	comp=Z,230nm,14.1s						
ADK	**Adak**	**37.87**	**44**	P	**P**	**06 13 46.6**	**+0.7**
ADK				IAmb	IAmb	06 13 48.0	
	comp=Z,67nm,0.7s						
ADK	**Adak**	**37.87**	**44**	P	**P**	**06 13 46.6**	**+0.7**
ADK				pmax	pmax		
	comp=Z,67nm,0.7s						
ADK	**Adak**	**37.87**	**44**	P	**P**	**06 13 46.9**	**+0.9**
ADK	**Adak**	**37.87**	**44**	P	**P**	**06 13 46.9**	**+0.9**
ADK				pP	**pwP**	**06 14 18.9**	**+0.1**
SBUM	**Sibu**	**38.66**	**228**	P	**P**	**06 13 53.0**	**-0.1**
CHTO	**Chiang Mai**	**38.92**	**262**	P	**P**	**06 13 55.1**	**-0.1**
CHTO				IAmb	IAmb	06 13 58.5	
	comp=Z,70nm,0.9s						
CHTO	**Chiang Mai**	**38.92**	**262**	P	**P**	**06 13 55.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,71nm,0.9s						
CHTO	**Chiang Mai**	**38.92**	**262**	P	**P**	**06 13 57.4**	**+2.1**
CHTO	**Chiang Mai**	**38.92**	**262**	P	**P**	**06 13 56.5**	**+1.3**
CHTO	**Chiang Mai**	**38.92**	**262**	P	**P**	**06 13 56.1**	**+0.9**
CHTO				pP	**pwP**	**06 14 26.7**	**-0.3**
CHTO				sP	**sP**	**06 14 43.5**	**+3.3**
CM31	**Chiang Mai Arr**	**39.08**	**261**	P	**P**	**06 13 58.1**	**+1.6**
	SNR=6.3						
CMAR	**Chiang Mai Arr**	**39.08**	**261**	P	**P**	**06 13 56.8**	**+0.2**
	comp=Z,18nm,0.8s,baz=49,slow=7.8,SNR=55						
CMAR				PcP	**PcP**	**06 16 04.2**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=47,slow=2.1,SNR=5.1						
CMAR				ScP	**ScP**	**06 19 40.2**	**+0.9**
	comp=Z,11nm,1.0s,baz=28,slow=3.2,SNR=13						
CMAR				LR	LR	06 29 34.5	
	comp=Z,317nm,20.8s,baz=65,slow=35						
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.08**	**261**	P	**P**	**06 13 58.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**39.08**	**261**	P	**P**	**06 13 56.8**	**+0.2**
CMAR						06 16 04.3	
CMAR						06 19 40.2	
ATKA	**Atka Island**	**39.43**	**44**	P	**P**	**06 14 00.1**	**+1.1**
MTKI	**Muara Teweh, K**	**39.73**	**221**	P	**P**	**06 14 04.8**	**+2.9**
	comp=Z,30nm,0.8s						
SPSI	**Sidrap Palu**	**39.78**	**213**	P	**P**	**06 14 02.6**	**+0.3**
	comp=Z,28nm,0.8s						
BNSI	**Bone**	**40.02**	**212**	P	**P**	**06 14 06.4**	**+2.2**
	comp=Z,1µmcomp=Z,62nm,1.2s						
BILL	**Bilibino**	**40.11**	**15**	P	**P**	**06 14 04.9**	**+0.5**
BILL	**Bilibino**	**40.11**	**15**	*d i*P	**P**	**06 14 05.3**	**+0.9**
BILL				*e*		06 15 36.4	
BILL				*i* S	**S**	**06 19 56.0**	**-4.1**

BILL				pmax	pmax		
	comp=Z,47nm,1.0s						
BILL	**Bilibino**	40.11	15	P	P	06 14 05.5	+1.1
BILL				ScP	ScP	06 19 42.9	+0.5
KSM	**Kuching**	40.64	229	P	P	06 14 09.9	+0.5
KSM				IAmb	IAmb	06 14 12.8	
	comp=Z,133nm,1.2s						
KSM	**Kuching**	40.64	229	P	P	06 14 11.2	+1.8
KAPI	**Kappang**	40.72	212	P	P	06 14 09.3	-0.7
	comp=Z,22nm,0.9s,baz=14,slow=6.5,SNR=8.7						
KAPI				ScP	ScP	06 19 44.8	-0.8
	comp=Z,17nm,0.9s,baz=289,slow=5.1,SNR=4.5						
	comp=Z,22nm,0.9s						
KAPI	**Kappang**	40.72	212	P	P	06 14 10.2	+0.2
KAPI	**Kappang**	40.72	212	P	P	06 14 10.2	+0.2
KAPI				pmax	pmax		
	comp=Z,70nm,1.2s						
KAPI	**Kappang**	40.72	212	P	P	06 14 11.3	+1.3
PMG	**Port Moresby**	40.81	169	P	P	06 14 09.6	-1.1
	comp=Z,19nm,0.5s,baz=360,slow=6.6,SNR=6.2						
PMG				PcP	PcP	06 16 10.4	+1.2
	comp=Z,41nm,0.9s,baz=52,slow=1.7,SNR=5.2						
	comp=Z,19nm,0.5s						
PMG	**Port Moresby**	40.81	169	P	P	06 14 09.4	-1.2
PMG	**Port Moresby**	40.81	169	P	P	06 14 09.6	-1.1
PMG						06 16 10.4	
PMG	**Port Moresby**	40.81	169	P	P	06 14 09.6	-1.1
BKSI	**Bulukumba**	40.83	211	P	P	06 14 14.5	+3.6
STKI	**Sintang**	40.97	227	P	P	06 14 14.2	+2.1
	comp=Z,13µmcomp=Z,30nm,0.9s						
TIXI	**Tiksi**	41.10	355	P	P	06 14 12.7	+0.2
	comp=Z,92nm,0.7s,baz=269,slow=22,SNR=182						
	comp=Z,92nm,0.7s						
TIXI	**Tiksi**	41.10	355	P	P	06 14 12.6	+0.1
TIXI				IAmb	IAmb	06 14 14.5	
	comp=Z,84nm,0.6s						
TIXI	**Tiksi**	41.10	355	*ce*P	P	06 14 13.0	+0.5
TIXI				pmax	pmax		
	comp=Z,68nm,0.6s						
TIXI	**Tiksi**	41.10	355	P	P	06 14 13.0	+0.5
BBKI	**Banjar Baru**	41.84	219	P	P	06 14 20.0	+0.8
	comp=Z,7µmcomp=Z,37nm,0.8s						
LSA	**Lhasa**	41.86	281	P	P	06 14 21.1	+1.3
LSA				pmax	pmax		
	comp=Z,15nm,0.7s						
LSA	**Lhasa**	41.86	281	P	P	06 14 20.5	+0.7
LSA	**Lhasa**	41.86	281	P	P	06 14 21.6	+1.8
LSA	**Lhasa**	41.86	281	P	P	06 14 21.8	+2.0
LSA				sP	sP	06 15 04.6	-0.2
SHL	**Shillong**	42.41	275	P	P	06 14 23.6	-0.5
SHL	**Shillong**	42.41	275	P	P	06 14 23.6	-0.5
SHL				pmax	pmax		
	comp=Z,39nm,0.7s						
SHL	**Shillong**	42.41	275	*e*P	P	06 14 24.6	+0.6
SHL				IAmb	IAmb	06 14 26.5	
	comp=Z,26nm,0.7s						
SHL	**Shillong**	42.41	275	P	P	06 14 24.8	+0.7
WMQ	**Urumqi**	42.75	303	*e*P	P	06 14 28.0	+1.6
WMQ				pP	pP	06 14 58.4	+1.6
WMQ				PcP	PcP	06 16 17.3	+1.9
WMQ				S	S	06 20 38.8	-1.0
WMQ				sS	sS	06 21 36.6	+4.2
WMQ				pmax	pmax		
	comp=Z,87nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,370nm,5.5s						
WMQ				LR	LR		
	comp=Z,650nm,20.7s						
WMQ				LR	LR		
	comp=Z,490nm,20.7s						
WMQ				LR	LR		
	comp=Z,530nm,21.3s						
NIKH	**Nikolski High**	42.78	44	P	P	06 14 26.3	0.0
NIKH	**Nikolski High**	42.78	44	P	P	06 14 26.7	+0.3
	baz=260,SNR=16						
SPIA	**Saint Paul Isl**	42.94	38	P	P	06 14 28.9	+1.3
	baz=254						
MMRI	**Maumere**	42.95	206	P	P	06 14 30.2	+2.0
	comp=Z,92nm,1.0s						
MMRI	**Maumere**	42.95	206	P	P	06 14 28.8	+0.6
PBKI	**Pangkalan Bun**	43.03	224	P	P	06 14 32.4	+3.6
SOEI	**Soe**	43.27	203	P	P	06 14 29.2	-1.6
SOEI				IAmb	IAmb	06 15 31.8	
	comp=Z,113nm,0.9s						
SOEI	**Soe**	43.27	203	P	P	06 14 30.9	+0.1
	comp=Z,123nm,1.0s						
SOEI	**Soe**	43.27	203	P	P	06 14 29.4	-1.4
EDFI	**Ende, Flores**	43.27	207	P	P	06 14 29.8	-1.0
	comp=Z,33nm,0.9s						
SRIT	**Nakonsritamara**	43.69	248	P	P	06 14 34.7	+0.5
SRIT				IAmb	IAmb	06 15 11.6	
	comp=Z,82nm,0.9s						
BATI	**Baumata**	43.89	203	P	P	06 14 35.1	-0.6
	comp=Z,55nm,0.4s,baz=335,slow=2.5,SNR=6.3						
	comp=Z,55nm,0.4s						
BATI	**Baumata**	43.89	203	P	P	06 14 36.4	+0.7
	comp=Z,53nm,1.0s						
KDU	**Kakadu**	44.07	191	P	P	06 14 35.6	-1.4
UNV	**Unalaska Valle**	44.31	43	P	P	06 14 38.9	+0.3
	baz=261						
MTN	**Manton Dam**	44.45	192	P	P	06 14 38.5	-1.6
MTN				IAmb	IAmb	06 14 40.7	
	comp=Z,110nm,1.1s						
MTN	**Manton Dam**	44.45	192	P	P	06 14 38.6	-1.5
GAMB	**Gambell**	44.51	28	P	P	06 14 40.9	+0.9
GAMB	**Gambell**	44.51	28	P	P	06 14 41.9	+1.9
	baz=246,SNR=9.6						
GAMB				S	S	06 21 07.0	+2.4
	baz=246						
ZSN	**Zaisan**	44.74	308	*d i*P	P	06 14 42.3	+0.1
ZSN	**Zaisan**	44.74	308	⇓*i*P	P	06 14 42.4	+0.1
	baz=308						
COEN	**Coen**	44.85	176	P	P	06 14 41.9	-1.3
COEN	**Coen**	44.85	176	P	P	06 14 43.5	+0.2
KULM	**Kulim**	44.90	243	P	P	06 14 44.0	+0.3
PLAI	**Plampang**	44.98	212	P	P	06 14 44.6	+0.2
	comp=Z,85nm,0.9s						
PLAI	**Plampang**	44.98	212	P	P	06 14 43.9	-0.5
IPM	**Ipoh**	45.13	242	P	P	06 14 45.4	-0.2
IPM	**Ipoh**	45.13	242	P	P	06 14 46.3	+0.7
ZAA0	**Zalesovo Array**	45.26	317	P	P	06 14 45.0	-1.1
ZAA0				IAmb	IAmb	06 16 25.5	
	comp=Z,70nm,0.8s						
ZALV	**Zalesovo Beam**	45.26	317	P	P	06 14 45.1	-0.9
	comp=Z,22nm,0.4s,baz=93,slow=7.5,SNR=86						
ZALV				PcP	PcP	06 16 24.0	+0.4
	comp=Z,95nm,0.8s,baz=100,slow=3.3,SNR=28						
ZALV				ScP	ScP	06 20 02.7	-0.8
	comp=Z,6.8nm,0.6s,baz=108,slow=4.8,SNR=7.1						
ZALV				ScS	ScS	06 24 25.1	-3.2
	comp=Z,6.6nm,1.0s,baz=101,slow=6.2,SNR=8.5						
ZALV				LR	LR	06 34 10.5	
	comp=Z,357nm,18.5s,baz=102,slow=36						
	comp=Z,22nm,0.4s						
ZALV	**Zalesovo Beam**	45.26	317	P	P	06 14 44.8	-1.3
ZALV	**Zalesovo Beam**	45.26	317	*i* P	P	06 14 45.2	-0.9
ZALV				pmax	pmax		
	comp=Z,23nm,0.4s						
TAPN	**Taplejung**	45.41	279	*e*P	P	06 14 47.6	-0.5
	comp=Z,78nm,0.4s						
SRBI	**Singaraja**	45.56	215	P	P	06 14 51.6	+2.7
	comp=Z,87nm,1.0s						
TPI	**Tanjungpandan**	45.56	228	P	P	06 14 50.4	+1.5
	comp=Z,433nmcomp=Z,44nm,1.1s						
PPBI	**Pangkal Pinang**	46.10	231	P	P	06 14 55.8	+2.6
FALS	**False Pass**	46.24	42	P	P	06 14 54.5	+0.8
	baz=263						
JAGI	**Jajag, Banyuwa**	46.42	216	P	P	06 14 58.8	+3.1
JAGI	**Jajag, Banyuwa**	46.42	216	P	P	06 14 56.3	+0.6
RAMN	**Ramite**	46.48	279	*e*P	P	06 14 55.7	-0.7
	comp=Z,242nm,0.9s						
MK31	**Makanchi Array**	46.50	307	P	P	06 14 55.6	-0.4
MK31	**Makanchi Array**	46.50	307	*i* P	P	06 14 55.6	-0.4
MK31				pmax	pmax		
	comp=Z,43nm,0.6s						
MKAR	**Makanchi Array**	46.50	307	P	P	06 14 55.5	-0.5
	comp=Z,51nm,0.7s,baz=88,slow=9.5,SNR=276						
MKAR				PcP	PcP	06 16 28.9	+0.7
	comp=Z,65nm,0.9s,baz=76,slow=5.1,SNR=13						
MKAR				ScP	ScP	06 20 08.0	-0.9
	comp=Z,34nm,0.8s,baz=78,slow=5.2,SNR=32						
MKAR				ScS	ScS	06 24 31.9	-4.9
	comp=Z,2.6nm,0.9s,baz=91,slow=12,SNR=5.7						
MKAR				LR	LR	06 35 09.2	
	comp=Z,496nm,19.2s,baz=91,slow=37						
	comp=Z,51nm,0.7s						
MKAR	**Makanchi Array**	46.50	307	P	P	06 14 55.6	-0.5
MKAR	**Makanchi Array**	46.50	307	P	P	06 14 55.6	-0.5
TNA	**Tin City**	46.70	27	P	P	06 14 59.3	+2.2
	baz=248,SNR=5.6						
TNA				S	S	06 21 39.6	+3.6
	baz=248						
MAKZ	**Makanchi**	46.72	307	P	P	06 14 56.9	-0.8
MAKZ	**Makanchi**	46.72	307	P	P	06 14 56.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,32nm,0.5s						
MAKZ	**Makanchi**	46.72	307	P	P	06 14 57.4	-0.3
MAKZ				sP	sP	06 15 42.9	-0.9
MAKZ				ScP	ScP	06 20 08.9	-0.9
PWJI	**Pagerwojo**	47.29	219	P	P	06 15 02.6	+0.2
	comp=Z,63nm,0.8s						
PKI	**Pulchoki**	47.29	280	*e*P	P	06 15 02.0	-0.8
	comp=Z,54nm,0.7s						
PKIN	**Phulchoki**	47.30	280	*e*P	P	06 15 02.0	-0.8
	comp=Z,46nm,0.6s						
KKN	**Kakani**	47.34	281	*e*P	P	06 15 02.9	-0.1
	comp=Z,148nm,1.0s						
ANM	**Nome**	47.38	29	P	P	06 15 04.5	+2.0
ANM				IAmb	IAmb	06 15 06.1	
	comp=Z,94nm,0.7s						
ANM	**Nome**	47.38	29	P	P	06 15 04.5	+2.0
ANM				pmax	pmax		
	comp=Z,94nm,0.7s						
ANM	**Nome**	47.38	29	P	P	06 15 04.8	+2.3
	baz=252						
ANM				S	S	06 21 49.3	+3.5
	baz=252						
DMN	**Daman**	47.54	280	*e*P	P	06 15 03.8	-0.8
	comp=Z,106nm,1.0s						
KNRA	**Kununurra**	47.68	195	P	P	06 15 04.3	-1.1
KNRA				IAmb	IAmb	06 15 06.5	
	comp=Z,50nm,0.7s						
KNRA	**Kununurra**	47.68	195	P	P	06 15 05.0	-0.3
PSI	**Prapat**	47.81	242	P	P	06 15 06.8	+0.2
	comp=Z,15nm,0.8s,baz=63,slow=4.5,SNR=5.1						
	comp=Z,15nm,0.8s						
PSI	**Prapat**	47.81	242	P	P	06 15 06.8	+0.2
GKN	**Gorkha**	47.81	281	*e*P	P	06 15 06.6	0.0
	comp=Z,199nm,1.0s						
SEM	**Semipalatinsk**	47.82	312	*i* P	P	06 15 05.3	-1.1
SEM				pmax	pmax		
	comp=Z,30nm,0.7s						
SEM	**Semipalatinsk**	47.82	312	*i* P	P	06 15 05.4	-1.1
	comp=Z,30nm,0.7s,baz=312						
SDPT	**Sand Point**	47.97	42	P	P	06 15 06.5	-0.6
SDPT	**Sand Point**	47.97	42	P	P	06 15 07.5	+0.3
	baz=265,SNR=16						
BOK	**Bokaro**	48.15	275	*e*P	P	06 15 09.4	+0.4
BOK				IAmb	IAmb	06 15 12.2	
	comp=Z,30nm,0.4s						
NRIK	**Noril'sk**	48.27	338	P	P	06 15 09.9	+0.6
	comp=Z,210nm,0.9s,baz=111,slow=9.4,SNR=168						
NRIK				ScP	ScP	06 20 15.3	-0.5
	comp=Z,26nm,0.9s,baz=90,slow=5.1,SNR=9.3						
NRIK				S	S	06 21 57.0	-1.2
	comp=Z,4.5nm,0.8s,baz=10,slow=23,SNR=6.9						
NRIK				LR	LR	06 36 12.2	
	comp=Z,367nm,18.2s,baz=121,slow=37						
	comp=Z,210nm,0.9s						
NRIK	**Noril'sk**	48.27	338	P	P	06 15 09.7	+0.4
NRIK	**Noril'sk**	48.27	338	P	P	06 15 09.9	+0.6
NRIK				S	S	06 21 57.0	-1.2
KPJI	**Karang Pucung**	48.35	223	P	P	06 15 11.4	+0.8
	comp=Z,54nm,1.1s						
CHNA	**Chernabura Isl**	48.44	42	P	P	06 15 11.6	+0.8
	baz=266,SNR=20						
CNBA	**Chernabura Isl**	48.44	42	P	P	06 15 10.6	-0.2
DANN	**Dangsing**	48.45	282	*e*P	P	06 15 11.9	+0.3
	comp=Z,30nm,0.3s						
MNSI	**Mandailing Nat**	48.63	240	P	P	06 15 13.9	+1.1
	comp=Z,1µmcomp=Z,37nm,1.0s						
PDGK	**Podgornoye**	48.73	302	P	P	06 15 11.4	-2.0
LEM	**Lembang**	48.73	225	LR	LR	06 34 23.2	
	comp=Z,134nm,21.4s,baz=40,slow=34						
KURK	**Kurchatov**	48.86	312	P	P	06 15 13.0	-1.0
KURK	**Kurchatov**	48.86	312	*d i*P	P	06 15 13.1	-1.0
KURK				pmax	pmax		
	comp=Z,158nm,0.9s						
KURK	**Kurchatov**	48.86	312	P	P	06 15 13.3	-0.8
KURK	**Kurchatov**	48.86	312	P	P	06 15 13.4	-0.8
KURK				pP	pP	06 15 47.3	+2.1
PPI	**Padang Panjang**	48.88	238	P	P	06 15 17.3	+2.6
KURBB	**Kurchatov Arra**	48.92	312	LR	LR	06 36 50.0	
	comp=Z,649nm,19.3s,baz=43,slow=37						
KURBB	**Kurchatov Arra**	48.92	312	P	P	06 15 12.8	-1.8
KLI	**Kotabumi**	48.96	229	P	P	06 15 18.1	+2.8
	comp=Z,82nm,0.6s						
MTSU	**Mount Surprise**	49.07	175	P	P	06 15 16.5	+0.5
UZB	**Uzynbulak**	49.09	302	*d i*P	P	06 15 15.3	-0.8
UZB				pmax	pmax		
	comp=Z,13nm,0.6s						
UZB	**Uzynbulak**	49.09	302	⇓*i*P	P	06 15 15.4	-0.8
	comp=Z,13nm,0.6s,baz=302						
MDSI	**Maura Dua**	49.13	230	P	P	06 15 16.9	+0.4
	comp=Z,1µmcomp=Z,44nm,1.1s						
CHGN	**Chignik**	49.21	40	P	P	06 15 16.7	+0.1
	baz=266						
KPKS	**Kokpek**	49.30	303	*d i*P	P	06 15 16.9	-0.7
KPKS	**Kokpek**	49.30	303	⇓*i*P	P	06 15 17.0	-0.7
	baz=303						
TDK	**Taldyqorghan**	49.33	305	*e*P	P	06 15 16.6	-1.1
TDK				pmax	pmax		
	comp=Z,14nm,0.5s						
TDK	**Taldyqorghan**	49.33	305	*e*P	P	06 15 16.7	-1.1
	comp=Z,14nm,0.5s,baz=305						
RDOG	**Red Dog Mine**	49.41	25	P	P	06 15 16.9	-1.2
RDOG				IAmb	IAmb	06 15 18.4	
	comp=Z,101nm,0.9s						
RDOG	**Red Dog Mine**	49.41	25	P	P	06 15 17.6	-0.5
	baz=252,SNR=12						
RDOG				S	S	06 22 14.5	+0.2
	baz=252						
SATY	**Saty**	49.55	302	*e*P	P	06 15 18.9	-0.7
SATY	**Saty**	49.55	302	*e*P	P	06 15 19.0	-0.7
	baz=302						
PRZ	**Przheval'sk**	49.63	301	P	P	06 15 20.9	+0.6
PRZ	**Przheval'sk**	49.63	301	P	P	06 15 20.9	+0.6
PRZ				pmax	pmax		
	comp=Z,103nm,0.7s						
GSI	**Gunungsitoli**	49.80	242	P	P	06 15 21.0	-0.7
GSI	**Gunungsitoli**	49.80	242	P	P	06 15 23.8	+2.1
	comp=Z,170nm,1.0s						
GSI	**Gunungsitoli**	49.80	242	P	P	06 15 22.1	+0.4
TARG	**Taragay, Kyrgy**	50.18	300	P	P	06 15 24.4	-0.3
TARG				IAmb	IAmb	06 15 26.7	
	comp=Z,37nm,0.8s						
TARG	**Taragay, Kyrgy**	50.18	300	P	P	06 15 24.4	-0.3
TARG				pmax	pmax		
	comp=Z,37nm,0.8s						
CHKK	**Chushkaly**	50.47	303	*e*P	P	06 15 25.0	-1.4
CHKK	**Chushkaly**	50.47	303	*e*P	P	06 15 25.1	-1.4
	baz=304						
MDOK	**Medeo**	50.52	302	*i* P	P	06 15 26.9	-0.1
MDOK	**Medeo**	50.52	302	*i* P	P	06 15 26.9	-0.1
	baz=303						
KDJ	**Kajisay**	50.58	301	P	P	06 15 26.6	-0.8
KDJ	**Kajisay**	50.58	301	P	P	06 15 26.6	-0.8
KDJ				pmax	pmax		
	comp=Z,22nm,0.8s						
AAA	**Alma-Ata**	50.61	303	*e*P	P	06 15 27.3	-0.2
AAA				pmax	pmax		
	comp=Z,56nm,0.6s						
AAA	**Alma-Ata**	50.61	303	*e*P	P	06 15 27.3	-0.2
	comp=Z,56nm,0.6s,baz=303						
TNSS	**Tian-Shan**	50.61	302	*i* P	P	06 15 28.1	+0.1
TNSS	**Tian-Shan**	50.61	302	*i* P	P	06 15 28.1	+0.1
	baz=302						
CHIR	**Chirikof Islan**	50.75	41	P	P	06 15 29.8	+1.5
	baz=269						
WB0	**Warramunga Arr**	50.80	187	P	P	06 15 27.4	-1.6
WB0				IAmb	IAmb	06 15 29.6	
	comp=Z,62nm,0.8s						
N18K	**Kilae Creek**	50.89	35	P	P	06 15 31.4	+2.1
	baz=264,SNR=16						
KUU	**Kurty**	50.93	303	*d i*P	P	06 15 29.3	-0.6
KUU				pmax	pmax		
	comp=Z,54nm,0.7s						
KUU	**Kurty**	50.93	303	⇓*i*P	P	06 15 29.3	-0.6
	comp=Z,54nm,0.7s,baz=304						
WRAB	**Tennant Creek**	50.97	187	P	P	06 15 28.6	-1.7
WRAB				IAmb	IAmb	06 15 30.9	
	comp=Z,64nm,0.9s						
WRAB	**Tennant Creek**	50.97	187	P	P	06 15 28.6	-1.7
WRAB				pmax	pmax		
	comp=Z,64nm,1.0s						
WRAB	**Tennant Creek**	50.97	187	P	P	06 15 29.0	-1.3
WRAB	**Tennant Creek**	50.97	187	P	P	06 15 28.7	-1.6
WRAB				pP	pP	06 15 51.5	-10
WRAB				sP	pwP	06 16 05.1	+1.4
WRAB				ScP	ScP	06 20 26.7	-1.4
GCSA	**Galena City Sc**	50.97	30	P	P	06 15 30.8	+1.1
	baz=260,SNR=5.2						
WR0	**Warramunga Arr**	50.98	187	P	P	06 15 28.3	-2.0
WR0				IAmb	IAmb	06 15 31.0	
	comp=Z,53nm,0.8s						
WRA	**Warramunga Arr**	50.98	187	P	P	06 15 28.7	-1.7
	comp=Z,42nm,0.7s,baz=2.4,slow=7.7,SNR=488						
WRA				ScP	ScP	06 20 26.8	-1.2
	comp=Z,33nm,0.9s,baz=2.2,slow=4.5,SNR=25						
WRA				S	S	06 22 29.9	-7.0
	comp=Z,8.4nm,1.0s,baz=7.3,slow=13,SNR=8.0						
	comp=Z,42nm,0.7s						
WRA	**Warramunga Arr**	50.98	187	P	P	06 15 28.5	-1.9
WRA	**Warramunga Arr**	50.98	187	*i* P	P	06 15 28.7	-1.7
WRA				pmax	pmax		
	comp=Z,43nm,0.6s						
PTH	**Pithoragarh**	51.05	285	*e*P	P	06 15 30.5	-0.6
LGTI	**Lohaghat**	51.05	284	*e*P	P	06 15 32.1	+1.2
SVW2	**Sparrevohn**	51.08	34	P	P	06 15 31.9	+1.2
SVW2				IAmb	IAmb	06 15 33.8	
	comp=Z,60nm,0.7s						
TTA	**Tatalina**	51.08	32	P	P	06 15 31.7	+0.9
TTA				IAmb	IAmb	06 15 33.4	
	comp=Z,41nm,0.8s						
TTA	**Tatalina**	51.08	32	P	P	06 15 31.7	+0.9
TTA				pmax	pmax		
	comp=Z,41nm,0.8s						
TTA	**Tatalina**	51.08	32	P	P	06 15 32.3	+1.5
	baz=262,SNR=44						
TTA				S	S	06 22 39.4	+1.8
	baz=262						
ALBI	**Allahabad**	51.08	279	*e*P	P	06 15 30.4	-0.8
ALBI				*i* x	x	06 16 05.4	
P18K	**Big Mountain,**	51.12	37	P	P	06 15 32.5	+1.5
	baz=266						
CTA	**Charters Tower**	51.20	172	P	P	06 15 31.2	-0.8
	comp=Z,17nm,0.5s,baz=358,slow=7.7,SNR=28						
CTA				LR	LR	06 36 46.5	
	comp=Z,137nm,19.9s,baz=343,slow=35						
	comp=Z,17nm,0.5s						
CTA	**Charters Tower**	51.20	172	P	P	06 15 31.2	-0.8
CTA	**Charters Tower**	51.20	172	P	P	06 15 32.1	+0.1
CTAO	**Charters Tower**	51.20	172	P	P	06 15 30.1	-1.9
CTAO	**Charters Tower**	51.20	172	P	P	06 15 30.1	-1.9
CTAO				pmax	pmax		
	comp=Z,50nm,1.3s						
CTAO	**Charters Tower**	51.20	172	P	P	06 15 32.1	+0.1
ULHL	**Ulahol**	51.24	301	P	P	06 15 32.2	-0.3
	SNR=38						
QIS	**Mount Isa**	51.31	180	P	P	06 15 31.8	-1.0
BOOM	**Boomskoye usch**	51.43	302	P	P	06 15 33.0	-0.8
BOOM				IAmb	IAmb	06 16 48.8	
	comp=Z,39nm,0.8s						
BOOM	**Boomskoye usch**	51.43	302	P	P	06 15 33.0	-0.8
BOOM				pmax	pmax		
	comp=Z,39nm,0.8s						
L19K	**White Mountain**	51.53	33	P	P	06 15 35.3	+1.3
L19K				IAmb	IAmb	06 15 38.6	
	comp=Z,66nm,1.0s						
L19K	**White Mountain**	51.53	33	P	P	06 15 36.0	+1.9
	baz=264,SNR=26						
L19K				S	S	06 22 46.3	+2.6
	baz=264						
SII	**Sitkinak Islan**	51.56	40	P	P	06 15 35.4	+1.0
	baz=269						
N19K	**Bonanza Creek**	51.59	35	P	P	06 15 35.7	+1.1
N19K				IAmb	IAmb	06 15 37.9	
	comp=Z,79nm,0.8s						
N19K	**Bonanza Creek**	51.59	35	P	P	06 15 36.5	+1.9
	baz=266,SNR=30						
TKM2	**Tokmak 2**	51.61	302	P	P	06 15 35.3	+0.1
	SNR=37						
TKM2	**Tokmak 2**	51.61	302	*i* P	P	06 15 34.8	-0.4
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
O19K	**Port Alsworth**	51.63	36	P	P	06 15 36.0	+1.3
O19K	**Port Alsworth**	51.63	36	P	P	06 15 36.6	+1.9
	baz=266,SNR=14						
O19K				S	S	06 22 47.5	+2.6
	baz=266						
M19K	**Big River Lodg**	51.72	33	P	P	06 15 37.5	+2.1
	baz=265						
Q19K	**Cape Douglas,**	51.91	37	P	P	06 15 37.1	+0.2
	baz=268,SNR=5.1						
KSH	**Kashi**	51.94	298	P	P	06 15 41.0	+3.4
KSH				ScP	ScP	06 20 33.8	+1.5
KSH				S	S	06 22 54.1	+3.9
KSH				pmax	pmax		
	comp=Z,50nm,0.9s						
KSH				pmax	pmax		
	comp=Z,340nm,7.1s						
KSH				LR	LR		
	comp=Z,580nm,18.1s						
KSH				LR	LR		
	comp=Z,400nm,17.9s						
KSH				LR	LR		
	comp=Z,630nm,18.7s						
BLSP	**Bilaspur**	51.97	275	*e*P	P	06 15 37.8	-0.2
BLSP				*i* pP	pwP	06 16 11.5	-0.2
K20K	**Telida**	52.01	32	P	P	06 15 39.2	+1.6
K20K	**Telida**	52.01	32	P	P	06 15 39.8	+2.3
	baz=264,SNR=126						
K20K				S	S	06 22 53.4	+3.2
	baz=264						
L20K	**Farewell, AK**	52.01	33	P	P	06 15 39.7	+2.0
	baz=265,SNR=9.6						
L20K				S	S	06 22 53.4	+3.1
	baz=265						
J20K	**Nowinta River**	52.06	30	P	P	06 15 39.3	+1.4
J20K				IAmb	IAmb	06 15 41.0	
	comp=Z,92nm,0.8s						
J20K	**Nowinta River**	52.06	30	P	P	06 15 40.1	+2.1
	baz=263,SNR=88						
J20K				S	S	06 22 54.2	+3.3
	baz=263						
OHAK	**Old Harbor**	52.06	39	P	P	06 15 38.5	+0.5
	baz=269,SNR=9.8						
KBK	**Karagaybulak**	52.12	302	P	P	06 15 38.7	-0.3
	SNR=11						
P19K	**Oil Pt**	52.15	36	P	P	06 15 39.9	+1.2
	baz=268						
CHMS	**Chumysh**	52.21	303	P	P	06 15 39.0	-0.5
	SNR=5.6						
CHMS	**Chumysh**	52.21	303	*i* P	P	06 15 38.9	-0.5
CHMS				pmax	pmax		
	comp=Z,22nm,1.2s						
M20K	**Styx River**	52.31	33	P	P	06 15 42.1	+2.1
	baz=266						
USP	**Ospenovka**	52.34	303	P	P	06 15 40.0	-0.5
	SNR=9.4						
BTLS	**Baital**	52.39	305	*d i*P	P	06 15 40.0	-0.6
BTLS				pmax	pmax		
	comp=Z,20nm,0.6s						
BTLS	**Baital**	52.39	305	⇓*i*P	P	06 15 40.0	-0.6
	comp=Z,20nm,0.6s,baz=305						
RSO	**Redoubt South**	52.42	35	P	P	06 15 41.4	+0.5
KDAK	**Kodiak Island**	52.45	39	LR	LR	06 37 12.1	
	comp=Z,183nm,21.1s,baz=270,slow=35						
KDAK	**Kodiak Island**	52.45	39	P	P	06 15 41.7	+0.9
	baz=270						
KDAK	**Kodiak Island**	52.45	39	P	P	06 15 41.8	+1.0
A21K	**Barrow**	52.45	21	P	P	06 15 42.4	+1.8
	baz=255,SNR=6.7						
A21K				S	S	06 22 57.6	+1.7
	baz=255						
IMAR	**Indian Mountai**	52.45	28	P	P	06 15 41.8	+1.0
AAK	**Ala-Archa**	52.45	302	P	P	06 15 41.0	-0.4
	SNR=27						
AAK	**Ala-Archa**	52.45	302	LR	LR	06 39 12.6	
	comp=Z,394nm,20.6s,baz=84,slow=37						
AAK	**Ala-Archa**	52.45	302	*d i*P	P	06 15 40.6	-0.8
AAK				pmax	pmax		
	comp=Z,24nm,0.7s						
AAK	**Ala-Archa**	52.45	302	P	P	06 15 40.9	-0.5
AAK	**Ala-Archa**	52.45	302	*i* P	P	06 15 41.0	-0.4
	SNR=31						
AAK	**Ala-Archa**	52.45	302	P	P	06 15 41.0	-0.4
AAK				pP	pP	06 16 10.5	-2.3

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AAK                                   x      x       06 16 50.5
O20K  Slope Mountain     52.47  36    P      P       06 15 42.2 +1.1
      baz=268
UCH   Uchtor             52.51 302    P      P       06 15 42.3 +0.1
      SNR=27
BRZS  Berezniki          52.70 312d iP     P       06 15 42.3  -0.6
BRZS                                  pmax   pmax
      comp=Z,18nm,0.7s
BRZS  Berezniki          52.70 312⇓iP     P       06 15 42.4  -0.6
      comp=Z,18nm,0.7s,baz=312
SPCR  Spurr Chakacha     52.72  34    P      P       06 15 44.7 +1.8
      baz=267,SNR=43
SPCR                                  S      S       06 23 04.4 +4.4
      baz=267
SPU   Mount Spurr        52.79  34    P      P       06 15 44.9 +1.5
H21K  Melozitna Rive     52.80  29    P      P       06 15 44.6 +1.3
H21K                                  IAmb   IAmb    06 15 46.3
      comp=Z,64nm,0.8s
H21K  Melozitna Rive     52.80  29    P      P       06 15 45.4 +2.0
      baz=263,SNR=89
H21K                                  S      S       06 23 01.6 +0.7
      baz=263
PPLA  Purkeypile         52.82  32    P      P       06 15 45.3 +1.6
PPLA  Purkeypile         52.82  32    P      P       06 15 45.8 +2.1
      baz=266,SNR=31
PPLA                                  S      S       06 23 04.2 +2.7
      baz=266
CHUM  Lake Minchumin     52.84  31    P      P       06 15 45.8 +2.2
      baz=265,SNR=42
CHUM                                  S      S       06 23 03.8 +2.4
      baz=265
EKS2  Erkin-Say          52.97 302    P      P       06 15 44.8  -0.4
      SNR=24
SMLA  Simla              53.09 287   eP      P       06 15 45.0  -1.0
SMLA                                  IAmb   IAmb    06 15 48.3
      comp=Z,189nm,0.2s
I21K  Tanana             53.09  29    P      P       06 15 47.3 +1.9
I21K                                  IAmb   IAmb    06 15 48.2
      comp=Z,36nm,0.8s
I21K  Tanana             53.09  29    P      P       06 15 47.6 +2.1
      baz=264,SNR=29
I21K                                  S      S       06 23 08.2 +3.4
      baz=264
OTUK  Ortayu             53.12 309    P      P       06 15 44.8  -1.2
AML   Almayashu          53.13 302    P      P       06 15 47.0 +0.4
      SNR=104
AML   Almayashu          53.13 302    P      P       06 15 47.1 +0.4
AML   Almayashu          53.13 302  i P      P       06 15 47.0 +0.4
      SNR=105
SANVU Saraoutou          53.13 146    P      P       06 15 46.0  -0.3
SANVU Saraoutou          53.13 146    P      P       06 15 47.1 +0.8
SANVU Saraoutou          53.13 146    P      P       06 15 47.1 +0.8
SANVU                                 pP     pP      06 16 18.0  0.0
SANVU                                 pwP    sP      06 16 23.0  -10
SANVU                                 sP     PcP     06 16 34.3  -18
CNPM  China Poot         53.16  36    P      P       06 15 46.4 +0.3
BRSE  Bradley Lake S     53.41  36    P      P       06 15 48.6 +0.6
      baz=270,SNR=12
BPAW  Bear Paw Mtn.      53.44  31    P      P       06 15 49.3 +1.2
BPAW  Bear Paw Mtn.      53.44  31    P      P       06 15 49.7 +1.6
      baz=266,SNR=26
BPAW                                  S      S       06 23 10.6 +1.1
      baz=266
BHK   Bhakra             53.62 288   eP      P       06 15 50.3 +0.4
CUT   Chulitna           53.68  33    P      P       06 15 50.6 +0.8
      baz=268,SNR=9.8
TRF   Thorofare Moun     53.71  32    P      P       06 15 51.3 +1.1
      baz=267,SNR=20
M22K  Willow             53.74  34    P      P       06 15 50.1  -0.1
M22K  Willow             53.74  34    P      P       06 15 50.8 +0.6
      baz=269,SNR=30
THN   Thein Dam          53.89 289   eP      P       06 15 51.4  -0.4
BRVK  Borovoye           53.91 316    P      P       06 15 51.4  -0.2
BRVK                                  IAmb   IAmb    06 16 57.5
      comp=Z,62nm,0.7s
BRVK  Borovoye           53.91 316    P      P       06 15 51.4  -0.2
BRVK                                  pmax   pmax
      comp=Z,62nm,0.7s
BRVK  Borovoye           53.91 316    P      P       06 15 51.5  -0.1
BRVK  Borovoye           53.91 316    P      P       06 15 51.2  -0.4
BRVK                                  x      x       06 16 56.0
BRVK                                  ScP    ScP     06 20 40.0  -0.5
RC01  Rabbit Creek A     53.91  34    P      P       06 15 52.1 +0.5
RC01                                  IAmb   IAmb    06 15 53.3
      comp=Z,85nm,0.9s
RC01  Rabbit Creek A     53.91  34    P      P       06 15 52.1 +0.5
      baz=270,SNR=9.0
O22K  Cooper Landing     53.92  35    P      P       06 15 52.1 +0.5
      baz=270
COLD  Coldfoot           54.00  27    P      P       06 15 53.0 +0.9
COLD  Coldfoot           54.00  27    P      P       06 15 53.7 +1.6
      baz=265,SNR=6.6
COLD                                  S      S       06 23 17.8 +0.8
      baz=265
SEW   Seward             54.06  36    P      P       06 15 53.1 +0.6
SEW   Seward             54.06  36    P      P       06 15 53.2 +0.6
      baz=271,SNR=16
SONA  Sohna              54.06 284   eP      P       06 15 52.4  -0.7
H23K  Yukon River        54.16  29    P      P       06 15 54.7 +1.4
H23K                                  IAmb   IAmb    06 15 56.6
      comp=Z,42nm,0.8s
H23K  Yukon River        54.16  29    P      P       06 15 55.5 +2.2
      baz=266,SNR=74
H23K                                  S      S       06 23 22.5 +3.2
      baz=266
I23K  Minto, Yukon-K     54.20  29    P      P       06 15 54.2 +0.7
I23K  Minto, Yukon-K     54.20  29    P      P       06 15 55.2 +1.7
      baz=267,SNR=27
I23K                                  S      S       06 23 21.6 +2.0
      baz=267
PMR   Palmer             54.21  34    P      P       06 15 54.3 +0.6
      baz=270,SNR=54
NEA2  Nenana             54.29  30    P      P       06 15 55.1 +0.8
NEA2  Nenana             54.29  30    P      P       06 15 55.9 +1.6
      baz=268,SNR=123
NEA2                                  S      S       06 23 22.7 +1.6
      baz=268
GHO   Glory Hole Cre     54.30  34    P      P       06 15 55.0 +0.5
TOLK  Toolik Lake Re     54.37  25    P      P       06 15 56.5 +1.7
      baz=264,SNR=86
TOLK                                  S      S       06 23 23.9 +1.8
      baz=264
WAT1  Susitna Watana     54.48  32    P      P       06 15 56.4 +0.6
      baz=269
KNK   Knik Glacier       54.53  34    P      P       06 15 57.1 +1.0
      baz=270,SNR=50
KNK                                   S      S       06 23 24.8 +0.4
      baz=270
SML   Sawmill            54.59  34    P      P       06 15 57.1 +0.6
SML   Sawmill            54.59  34    P      P       06 15 57.5 +1.0
      baz=270,SNR=68
SML                                   S      S       06 23 26.1 +0.9
      baz=270
KUDL  Kundal             54.59 284   eP      P       06 15 55.8  -1.2
MDM   Murphy Dome        54.67  30    P      P       06 15 58.2 +1.2
MDM                                   IAmb   IAmb    06 15 59.7
      comp=Z,100nm,1.0s
DZA   Taraz              54.69 303   eP      P       06 15 57.1  -0.5
DZA                                   pmax   pmax
      comp=Z,17nm,0.7s
DZA   Taraz              54.69 303   eP      P       06 15 57.1  -0.5
      comp=Z,17nm,0.7s,baz=303
ASAR  Alice Springs      54.71 187    P      P       06 15 56.0  -1.7
      comp=Z,12nm,0.5s,baz=17,slow=14,SNR=225
ASAR                                  ScP    ScP     06 20 43.5  -0.8
      comp=Z,7.2nm,0.8s,baz=8.9,slow=4.7,SNR=10.0
ASAR                                  S      S       06 23 21.4  -6.1
      comp=Z,3.8nm,0.9s,baz=18,slow=16,SNR=12
ASAR                                  LR     LR      06 40 01.2
      comp=Z,104nm,18.8s,baz=10.0,slow=37
ASAR                                  PKP2bc P'P'bc  06 46 20.1 +1.5
      comp=Z,1.1nm,0.8s,baz=164,slow=2.1,SNR=5.0
      comp=Z,12nm,0.5s
ASAR  Alice Springs      54.71 187    P      P       06 15 56.0  -1.7
ASAR                                  S      S       06 23 21.4  -6.1
WRH   Wood River Hil     54.71  30    P      P       06 15 57.7 +0.4
WRH                                   IAmb   IAmb    06 16 00.4
      comp=Z,43nm,0.6s
TCOL  CIGO, UAF Yank     54.82  30    P      P       06 15 59.3 +1.3
      baz=268,SNR=25
TCOL                                  S      S       06 23 30.3 +2.2
      baz=268
COLA  College            54.83  30    P      P       06 15 59.0 +1.0
COLA  College            54.83  30    P      P       06 15 59.0 +1.0
COLA                                  pmax   pmax
      comp=Z,92nm,0.8s
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COLA  College            54.83  30    P      P       06 15 59.1 +1.0
CCB   Clear Creek Bu     54.84  30    P      P       06 15 58.2  0.0
H24K  Noodor Dome        54.84  29    P      P       06 16 00.3 +2.0
      baz=268,SNR=54
H24K                                  S      S       06 23 31.6 +3.1
      baz=268
WAT6  Susitna Watana     54.86  33    P      P       06 15 59.5 +0.9
      baz=270,SNR=41
WAT6                                  S      S       06 23 29.2 +0.2
      baz=270
M23K  Glacier View       54.88  34    P      P       06 15 59.5 +0.9
      baz=271,SNR=32
POKR  Poker Plat Res     55.01  30    P      P       06 16 00.4 +1.0
POKR                                  IAmb   IAmb    06 16 02.4
      comp=Z,77nm,0.8s
POKR  Poker Plat Res     55.01  30    P      P       06 16 00.8 +1.4
      baz=269,SNR=35
POKR                                  S      S       06 23 32.5 +1.8
      baz=269
DHY   Denali Highway     55.02  32    P      P       06 16 00.4 +0.7
      baz=270,SNR=32
DHY                                   S      S       06 23 31.5 +0.4
      baz=270
RK1H  Rockhampton Ha     55.06 168    P      P       06 15 59.8  -0.4
SCM   Sheep Creek Mo     55.06  34    P      P       06 16 00.8 +0.9
SCM   Sheep Creek Mo     55.06  34    P      P       06 16 00.8 +0.9
SCM                                   pmax   pmax
      comp=Z,188nm,0.8s
SCM   Sheep Creek Mo     55.06  34    P      P       06 16 01.3 +1.4
      baz=271,SNR=56
DRK   Karamyk            55.10 299    P      P       06 16 00.2  -0.7
DRK                                   IAmb   IAmb    06 16 02.5
      comp=Z,35nm,0.7s
GLI   Glacier Island     55.20  35    P      P       06 16 01.4 +0.5
GLI   Glacier Island     55.20  35    P      P       06 16 01.9 +1.0
      baz=272,SNR=37
HDA   Harding Lake       55.21  30    P      P       06 16 01.3 +0.5
      baz=270,SNR=94
HDA                                   S      S       06 23 33.7 +0.4
      baz=270
HDA                                   S      S       06 23 33.7 +0.4
      baz=270
IL31                     55.24  30    P      P       06 16 01.0  0.0
IL31                                  IAmb   IAmb    06 16 02.5
      comp=Z,45nm,0.8s
ILAR  Eielson Array      55.24  30    P      P       06 16 01.4 +0.3
      comp=Z,35nm,0.8s,baz=275,slow=6.1,SNR=341
ILAR                                  ScP    ScP     06 20 44.8  -1.3
      comp=Z,1.8nm,1.0s,baz=270,slow=3.6,SNR=3.4
      comp=Z,35nm,0.8s
ILAR  Eielson Array      55.24  30    P      P       06 16 01.4 +0.3
KK31  Karatay Array      55.24 303    P      P       06 16 00.9  -0.5
KK31                                  IAmb   IAmb    06 16 02.7
      comp=Z,62nm,0.6s
KK31  Karatay Array      55.24 303    P      P       06 16 00.9  -0.5
KK31                                  pmax   pmax
      comp=Z,62nm,0.6s
KKAR  Karatay Array      55.24 303    P      P       06 16 00.9  -0.5
KKAR                                  IAmb   IAmb    06 16 02.7
      comp=Z,62nm,0.6s
KKAR  Karatay Array      55.24 303    P      P       06 16 00.9  -0.5
KKAR                                  pmax   pmax
      comp=Z,62nm,0.6s
MBWA  Marble Bar         55.42 203    P      P       06 16 02.9 +0.1
MBWA  Marble Bar         55.42 203    P      P       06 16 03.1 +0.3
MBWA  Marble Bar         55.42 203    P      P       06 16 02.5  -0.3
MBWA                                  pP     pP      06 16 34.9 +0.4
FID   Port Fidalgo       55.51  35    P      P       06 16 03.6 +0.5
NIL   Nilore             55.51 292    P      P       06 16 03.0  -0.5
NIL   Nilore             55.51 292    P      P       06 16 03.0  -0.5
NIL                                   pmax   pmax
      comp=Z,96nm,0.6s
NIL   Nilore             55.51 292    P      P       06 16 03.1  -0.5
BHPL  Bhopal             55.56 278   eP      P       06 16 02.9  -1.2
BHPL                                  IAmb   IAmb    06 16 05.5
      comp=Z,20nm,0.7s
BHPL                                i pP     sP      06 16 47.9  -2.6
M24K  Tolsona, Glenn     55.60  33    P      P       06 16 05.6 +1.8
      baz=272,SNR=14
K24K  Donnelly Dome      55.73  31    P      P       06 16 05.8 +1.2
      baz=271,SNR=5.6
KLU   Klutina            55.74  34    P      P       06 16 05.8 +0.9
KLU   Klutina            55.74  34    P      P       06 16 06.3 +1.4
      baz=273,SNR=45
KLU                                   S      S       06 23 41.4 +0.7
      baz=273
PSA00 Pilbara Seismi     55.76 203    P      P       06 16 04.8  -0.5
IUG   Iuzhnay            55.79 302d iP     P       06 16 05.5  0.0
IUG   Iuzhnay            55.79 302⇓iP     P       06 16 05.5  0.0
      baz=302
KIP   Kipapa             55.85  84    P      P       06 16 08.8 +2.7
KIP   Kipapa             55.85  84    P      P       06 16 08.0 +1.9
EYAK  Cordova Ski Ar     55.88  35    P      P       06 16 06.7 +1.0
EYAK                                  IAmb   IAmb    06 16 08.3
      comp=Z,96nm,0.9s
EYAK  Cordova Ski Ar     55.88  35    P      P       06 16 07.3 +1.6
      baz=273
J25K  Salcha River,      55.89  30    P      P       06 16 05.5  -0.3
      baz=271
PAX   Paxson             55.89  32    P      P       06 16 06.7 +0.8
PAX                                   IAmb   IAmb    06 16 09.0
      comp=Z,30nm,0.7s
PAX   Paxson             55.89  32    P      P       06 16 06.7 +0.8
PAX                                   pmax   pmax
      comp=Z,30nm,0.7s
PAX   Paxson             55.89  32    P      P       06 16 07.0 +1.1
      baz=272,SNR=36
PAX                                   S      S       06 23 42.5  -0.1
      baz=272
HARP  HAARP              56.06  33    P      P       06 16 08.8 +1.8
      baz=273,SNR=26
RIDG  Independent Ri     56.14  31    P      P       06 16 08.3 +0.7
      baz=272
RIDG                                  S      S       06 23 44.1  -1.7
      baz=272
BMAR  Burnt Mountain     56.19  27    P      P       06 16 10.0 +2.1
N25K  Chitina, Valde     56.37  34    P      P       06 16 10.9 +1.6
      baz=274,SNR=22
N25K                                  S      S       06 23 51.0 +2.0
      baz=274
BMRM  Bremner River      56.41  35    P      P       06 16 10.7 +1.2
BMRM  Bremner River      56.41  35    P      P       06 16 11.2 +1.7
      baz=274,SNR=62
BMRM                                  S      S       06 23 51.6 +2.2
      baz=274
DOT   Dot Lake           56.50  31    P      P       06 16 10.7 +0.6
DOT                                   IAmb   IAmb    06 16 11.9
      comp=Z,76nm,0.8s
SCRK  Sand Creek         56.52  31    P      P       06 16 11.1 +0.8
      baz=273
SCRK                                  S      S       06 23 51.0 +0.1
      baz=273
J26L  Joseph Creek       56.67  30    P      P       06 16 11.8 +0.4
      baz=273,SNR=184
J26L                                  S      S       06 23 52.8  0.0
      baz=273
GLB   Gilahina Butte     56.76  34    P      P       06 16 13.3 +1.3
GLB                                   IAmb   IAmb    06 16 14.7
      comp=Z,55nm,0.8s
L26K  Log Cabin Wild     56.86  32    P      P       06 16 14.2 +1.6
L26K  Log Cabin Wild     56.86  32    P      P       06 16 14.5 +1.9
      baz=274,SNR=94
L26K                                  S      S       06 23 58.2 +3.0
      baz=274
WRKA  Warakurna          56.87 193    P      P       06 16 12.8  -0.3
AKL   Akola              56.91 276   eP      P       06 16 13.9 +0.3
VRDI  Verde Repeater     56.95  34    P      P       06 16 14.8 +1.3
VRDI                                  IAmb   IAmb    06 16 16.0
      comp=Z,53nm,0.8s
KNTN  Kanton             56.95 117    P      P       06 16 16.4 +2.5
HYBB  Hyderabad (bro     56.98 271   eP      P       06 16 14.0  -0.2
HYBB                                  IVmB_BB        06 16 15.6
      comp=Z,131nm,1.1s
HYBB                                 epP     pP      06 16 45.7  -0.2
HYBB                                 ePcP    PcP     06 17 07.5  -0.4
HYBB                                 eScP    ScP     06 20 56.0 +1.4
HYBB                                 eS      S       06 23 58.3 +0.2
M26K  Nabesna, AK        57.07  33    P      P       06 16 15.9 +1.7
      baz=274,SNR=38
M26K                                  S      S       06 24 00.9 +2.9
      baz=274
EIDS  Eidsvold           57.10 168    P      P       06 16 14.8 +0.2
MCARA McCarthy VSAT      57.14  34    P      P       06 16 15.3 +0.7
MCARA McCarthy VSAT      57.14  34    P      P       06 16 16.4 +1.8
      baz=275,SNR=63
CHGR  Chuyangaron        57.30 299    P      P       06 16 15.3  -0.9
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CHGR  Chuyangaron        57.30 299    P      P       06 16 15.3  -0.9
CHGR                                  pmax   pmax
      comp=Z,390nm,0.7s
K27K  Chicken            57.35  31    P      P       06 16 17.7 +1.6
      baz=274
K27K                                  S      S       06 24 04.1 +2.6
      baz=274
QLP   Quilpie            57.45 175    P      P       06 16 16.2  -0.9
L27K  Beaver Creek,      57.55  32    P      P       06 16 19.3 +1.8
      baz=275,SNR=93
L27K                                  S      S       06 24 07.1 +2.8
      baz=275
ISLE  Juniper Island     57.55  35    P      P       06 16 18.3 +0.6
ISLE                                  IAmb   IAmb    06 16 20.0
      comp=Z,73nm,0.9s
BCAR  Beaver Creek A     57.56  32    P      P       06 16 19.0 +1.4
M27K  Edge Creek, AK     57.59  33    P      P       06 16 18.9 +1.0
M27K                                  IAmb   IAmb    06 16 20.6
      comp=Z,58nm,0.8s
M27K  Edge Creek, AK     57.59  33    P      P       06 16 19.6 +1.7
      baz=276,SNR=58
M27K                                  S      S       06 24 07.7 +2.7
      baz=276
EGAK  Eagle              57.69  30    P      P       06 16 19.1 +0.7
      baz=275,SNR=33
EGAK                                  S      S       06 24 06.7 +0.8
      baz=275
MESA  MESA               57.80  35    P      P       06 16 21.0 +1.6
      baz=277
RMQ   Roma               57.82 171    P      P       06 16 19.7  0.0
GRNC  Granite Creek      57.83  35    P      P       06 16 20.4 +0.7
CTG   Chitna Glacier     58.00  34    P      P       06 16 22.3 +1.5
      baz=277,SNR=38
BVCY  Beaver Creek       58.05  33    P      P       06 16 22.6 +1.6
      baz=276,SNR=24
YUK3  Moose Creek        58.32  33    P      P       06 16 24.5 +1.4
      baz=277,SNR=66
YUK3                                  S      S       06 24 16.3 +1.7
      baz=277
INKA  Innaminka          58.46 179    P      P       06 16 23.8  -0.3
DAWY  Dawson             58.52  31    P      P       06 16 25.6 +1.4
      baz=277,SNR=31
KBL   Kabul              58.58 294    P      P       06 16 24.6  -0.7
KBL                                   IAmb   IAmb    06 16 26.4
      comp=Z,59nm,0.8s
KBL   Kabul              58.58 294    P      P       06 16 24.7  -0.7
KBL                                   pmax   pmax
      comp=Z,59nm,0.9s
KBL   Kabul              58.58 294    P      P       06 16 24.9  -0.4
      SNR=16
NOUC  Port Laguerre      58.58 151    P      P       06 16 26.9 +1.9
NOUC  Port Laguerre      58.58 151    P      P       06 16 26.2 +1.1
DZM   Mont Dzumac        58.61 151   eP      P       06 16 26.6 +1.2
DZM   Mont Dzumac        58.61 151   eLR     LR      06 33 52.0
      comp=Z,889nm,33.0s
DZM   Mont Dzumac        58.61 151    LR     LR      06 40 17.5
      comp=Z,125nm,19.3s,baz=13,slow=34
DZM   Mont Dzumac        58.61 151    P      P       06 16 26.4 +1.0
DZM   Mont Dzumac        58.61 151    P      P       06 16 27.1 +1.7
DZM   Mont Dzumac        58.61 151    P      P       06 16 26.7 +1.3
DZM                                   pP     pP      06 16 59.7 +2.1
PINM  Pinnacle           58.65  35    P      P       06 16 26.7 +1.4
      baz=278,SNR=12
POHA  Pohakuloa          58.65  85    P      P       06 16 28.7 +2.6
POHA  Pohakuloa          58.65  85    P      P       06 16 28.2 +2.1
OOD   Oodnadatta         58.65 184    P      P       06 16 24.7  -0.7
HMH   Humu‘ula Sheep     58.76  85    P      P       06 16 25.9  -1.0
YATNC Mamie plateau,     58.79 151    P      P       06 16 28.6 +2.1
ONTNC Ouen Toro          58.83 151    P      P       06 16 26.3  -0.4
ONTNC                                 IAmb   IAmb    06 16 28.9
      comp=Z,60nm,0.9s
ONTNC Ouen Toro          58.83 151    P      P       06 16 28.3 +1.6
I29M  Ogilvie Camp,      58.83  29    P      P       06 16 27.0 +0.7
I29M                                  IAmb   IAmb    06 16 28.9
      comp=Z,44nm,0.9s
I29M  Ogilvie Camp,      58.83  29    P      P       06 16 27.8 +1.5
      baz=277,SNR=73
I29M                                  S      S       06 24 23.1 +2.3
      baz=277
SVE   Sverdlovsk         58.93 321ceP     P       06 16 27.2 +0.1
SVE                                  eS      S       06 24 20.8  -1.4
SVE                                   pmax   pmax
      comp=Z,83nm,0.9s
BCPM  Bancas Point       58.98  35    P      P       06 16 28.6 +1.2
BCPM                                  IAmb   IAmb    06 16 30.2
      comp=Z,54nm,0.8s
OUENC Ouen Island, N     59.09 151    P      P       06 16 28.1  -0.4
OUENC                                 IAmb   IAmb    06 16 31.4
      comp=Z,83nm,1.1s
OUENC Ouen Island, N     59.09 151    P      P       06 16 29.6 +1.1
PNL   Peninsula          59.14  36    P      P       06 16 30.1 +1.5
      baz=279,SNR=14
YUK4  Talbot Arm         59.24  34    P      P       06 16 31.6 +2.2
      baz=279,SNR=35
EPYK  Eagle Plains       59.35  28    P      P       06 16 31.0 +1.1
EPYK  Eagle Plains       59.35  28    P      P       06 16 31.7 +1.8
      baz=278,SNR=186
EPYK                                  S      S       06 24 29.4 +1.9
      baz=278
YUK6  Outpost Mounta     59.44  34    P      P       06 16 33.1 +2.2
      baz=279,SNR=23
YUK6                                  S      S       06 24 33.3 +4.1
      baz=279
HYT   Haines Junctio     59.87  34    P      P       06 16 35.9 +2.2
      baz=280,SNR=37
HYT                                   S      S       06 24 38.5 +4.0
      baz=280
M30M  Minto, Yukon       59.90  32    P      P       06 16 35.2 +1.4
M30M                                  IAmb   IAmb    06 16 37.3
      comp=Z,26nm,0.6s
M30M  Minto, Yukon       59.90  32    P      P       06 16 35.8 +2.1
      baz=280,SNR=56
M30M                                  S      S       06 24 39.5 +4.8
      baz=280
N30M  Aishikik Lake      59.96  33    P      P       06 16 36.1 +1.9
      baz=280,SNR=15
N30M                                  S      S       06 24 39.7 +4.2
      baz=280
PALK  Pallekele          60.01 260    LR     LR      06 45 15.8
      comp=Z,207nm,18.2s,baz=161,slow=39
ARU   Arti               60.13 321    P      P       06 16 34.5  -0.8
ARU                                   IAmb   IAmb    06 16 36.7
      comp=Z,128nm,1.3s
ARU   Arti               60.13 321d iP     P       06 16 34.9  -0.4
ARU                                   *PP    pP      06 17 02.1  -5.5
ARU                                                  06 17 18.1
ARU                                                  06 18 47.7
ARU                                   S      S       06 24 41.0 +3.4
ARU                                                  06 26 05.0
ARU                                   pmax   pmax
      comp=Z,105nm,1.3s
ARU                                   MLR    MLR
      comp=Z,254nm,15.0s
ARU   Arti               60.13 321    P      P       06 16 35.0  -0.4
INK   Inuvik             60.28  25    LR     LR      06 44 48.0
      comp=Z,42nm,21.8s,baz=249,slow=38
INK   Inuvik             60.28  25    P      P       06 16 36.5 +0.3
INK                                   IAmb   IAmb    06 16 37.6
      comp=Z,43nm,0.5s
INK   Inuvik             60.28  25    P      P       06 16 36.5 +0.3
INK                                   pmax   pmax
      comp=Z,43nm,0.5s
INK   Inuvik             60.28  25    P      P       06 16 37.1 +1.0
      baz=279,SNR=52
INK                                   S      S       06 24 40.2 +1.0
      baz=279
N31M  Braeburn, Yuko     60.57  33    P      P       06 16 40.6 +2.3
      baz=281,SNR=38
N31M                                  S      S       06 24 47.4 +4.1
      baz=281
DGTI  Dogotuki           60.64 135    P      P       06 16 41.9 +2.6
PLBC  Pleasant Camp      60.70  36    P      P       06 16 41.2 +2.0
      baz=282,SNR=53
MSVF  Nonsavu            60.77 138    LR     LR      06 39 08.2
      comp=Z,80nm,21.5s,baz=315,slow=32
MSVF  Nonsavu            60.77 138  i P      P       06 16 39.6  -0.6
MSVF                                  pmax   pmax
      comp=Z,44nm,1.4s
MSVF  Nonsavu            60.77 138    P      P       06 16 42.9 +2.7
MSVF  Nonsavu            60.77 138    P      P       06 16 42.6 +2.4
AB31  Akbulak array      60.97 312   eP      P       06 16 40.1  -1.1
ABKAR Akbulak array      60.97 312    P      P       06 16 40.8  -0.4
ABKAR Akbulak array      60.97 312    P      P       06 16 40.2  -0.9
ABKAR                                 IAmb   IAmb    06 16 42.7
      comp=Z,86nm,1.1s
M31M  Drury Creek, Y     61.07  32    P      P       06 16 43.4 +1.8
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	baz=282,SNR=114						
M31M				S	S	06 24 52.9	+3.3
	baz=282						
WHY	Whitehorse	61.17	34	P	P	06 16 44.5	+2.0
	baz=282,SNR=74						
WHY				S	S	06 24 55.3	+4.3
	baz=282						
LCRK	Leigh Creek	61.18	182	P	P	06 16 42.1	-0.5
SKAG	Skagway	61.21	35	P	P	06 16 44.8	+2.1
	baz=283,SNR=18						
SKAG				S	S	06 24 55.8	+4.5
	baz=283						
MULG	Mulgathing	61.24	186	P	P	06 16 43.2	+0.1
KOD	Kodaikanal	61.26	265	*i* x	x	06 17 18.4	
SIT	Sitka	61.78	38	P	P	06 16 48.4	+2.0
	baz=284,SNR=6.1						
AKTO	Aktyubinsk	61.87	314	LR	LR	06 44 26.7	
	comp=Z,242nm,20.1s,baz=70,slow=37						
AKTO	Aktyubinsk	61.87	314	P	P	06 16 46.5	-0.7
PCHI	Peechi	62.07	266	*e*P	P	06 16 49.5	+0.4
PCHI				*e*S	S	06 25 03.0	-0.4
ARMA	Armidale	62.12	169	P	P	06 16 48.9	-0.2
A36M	Sachs Harbour	62.27	21	P	P	06 16 50.8	+1.4
	baz=285,SNR=46						
A36M				S	S	06 25 06.0	+1.8
	baz=285						
P33M	Teslin, Yukon	62.27	34	P	P	06 16 51.6	+1.8
	baz=284,SNR=42						
P33M				S	S	06 25 08.7	+3.9
	baz=284						
CMSA	Cobar Meteorol	62.48	174	P	P	06 16 51.0	-0.3
FORT	Forrest	62.51	192	P	P	06 16 51.1	-0.5
TRD	Trivandrum	62.55	263	*e*x	x	06 17 26.7	
STKA	Stephens Creek	62.60	178	P	P	06 16 50.8	-1.3
	comp=Z,24nm,1.0s,baz=352,slow=8.4,SNR=22						
STKA				LR	LR	06 43 21.1	
	comp=Z,115nm,21.7s,baz=8.2,slow=35						
	comp=Z,24nm,1.0s						
STKA	Stephens Creek	62.60	178	P	P	06 16 50.8	-1.3
STKA	Stephens Creek	62.60	178	P	P	06 16 51.8	-0.3
C36M	Paulatuk	63.38	23	P	P	06 16 57.7	+0.9
	baz=287,SNR=119						
C36M				S	S	06 25 17.9	-0.2
	baz=287						
CRAG	Craig	63.38	39	P	P	06 16 59.1	+2.0
	baz=286						
WRAK	Wrangell Islan	63.53	38	P	P	06 17 00.1	+2.1
	baz=286,SNR=10						
BBOO	Buckleboo	63.62	184	P	P	06 16 58.3	-0.5
S34M	Telegraph Cree	63.73	37	P	P	06 17 01.7	+2.3
	baz=287,SNR=21						
WHYH	Whyalla	63.77	182	P	P	06 16 59.9	+0.1
NAPP	Napperby	63.90	182	P	P	06 17 00.6	-0.1
TGTN	Hyland Airport	64.05	32	P	P	06 17 03.5	+2.0
	baz=287,SNR=31						
DLBC	Dease Lake	64.13	36	LR	LR	06 46 30.8	
	comp=Z,42nm,18.5s,baz=289,slow=37						
HTT	Hallett	64.14	181	P	P	06 17 02.6	+0.3
KIRV	Kirov	64.35	324	*d i*P	P	06 17 03.3	0.0
PRGR	Permogore	65.17	328	⇓*i*P	P	06 17 08.8	+0.2
HOPEN	Hopen	65.55	346	*e*P	P	06 17 12.3	+1.4
XMAS	Kiritimati	65.61	103	P	P	06 17 13.7	+1.5
XMAS	Kiritimati	65.61	103	P	P	06 17 13.8	+1.5
TWOA	Tennyson Woods	65.74	181	P	P	06 17 13.3	+0.8
GEYT	Alibeck	65.76	301	P	P	06 17 12.8	-0.2
	comp=Z,28nm,0.9s,baz=70,slow=4.9,SNR=24						
GEYT				LR	LR	06 46 21.9	
	comp=Z,196nm,21.7s,baz=101,slow=36						
	comp=Z,28nm,0.9s						
GEYT	Alibeck	65.76	301	P	P	06 17 12.7	-0.3
GYA0	ALIBECK ARRAY	65.76	301	P	P	06 17 12.4	-0.6
GYA0B	ALIBECK ARRAY	65.76	301	P	P	06 17 13.1	+0.1
ALE	Alert	66.14	3	P	P	06 17 16.5	+1.9
ALE				pP	pP	06 17 48.9	+1.5
SPA0	Spitsbergen Ar	66.16	349	*e*P	P	06 17 15.8	+1.0
SPB2	Spitsbergen Ar	66.16	349	P	P	06 17 16.1	+1.3
SPB2				IAmb	IAmb	06 17 17.5	
	comp=Z,38nm,0.8s						
SPITS	Spitsbergen Ar	66.16	349	LR	LR	06 48 36.0	
	comp=Z,140nm,19.2s,baz=9.5,slow=38						
SPITS	Spitsbergen Ar	66.16	349	P	P	06 17 15.5	+0.7
SPITS				pmax	pmax		
	comp=Z,43nm,0.9s						
KBS	Kingsbay	66.34	350	P	P	06 17 17.1	+1.2
KBS				IAmb	IAmb	06 17 19.1	
	comp=Z,59nm,0.8s						
KBS	Kingsbay	66.34	350	P	P	06 17 17.1	+1.2
KBS				pmax	pmax		
	comp=Z,59nm,0.9s						
KBS	Kingsbay	66.34	350	*i* P	P	06 17 16.6	+0.7
KBS	Kingsbay	66.34	350	*e*P	P	06 17 17.3	+1.3
NOR	Nord	66.94	356	*i* P	P	06 17 20.4	+0.8
NOR				IAmb	IAmb	06 17 21.3	
	comp=Z,8.5nm,0.8s						
HSPB	Hornsund (broa	67.04	348	*e*P	P	06 17 21.6	+1.2
HSPB				*e*S	S	06 26 03.2	+0.5
HSPB	Hornsund (broa	67.04	348	*e*P	P	06 17 21.4	+1.0
LVZ	Lovozero	67.09	337	*i* P	P	06 17 21.2	+0.3
LVZ				pmax	pmax		
	comp=Z,66nm,1.2s						
BBB	Bella Bella	67.26	42	LR	LR	06 44 18.7	
	comp=Z,44nm,19.5s,baz=290,slow=34						
BELG	Belogornoye	67.41	318	LR	LR	06 48 32.3	
	comp=Z,230nm,21.0s,baz=79,slow=37						
BELG	Belogornoye	67.41	318	*d i*P	P	06 17 22.5	-0.6
BELG				pmax	pmax		
	comp=Z,43nm,0.9s						
ARPS	Mount Arapiles	67.48	178	P	P	06 17 23.1	-0.5
APA	Apatity	67.66	337	⇓*i*P	P	06 17 23.6	-0.8
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJO1	Bjornoya	67.94	346	*e*P	P	06 17 26.4	+0.3
KLMR	Klimovskoe	68.20	329	*e*P	P	06 17 26.9	-0.9
KLMR				*e*		06 17 51.8	
KLMR				pmax	pmax		
	comp=Z,60nm,0.7s						
KLMR	Klimovskoe	68.20	329	*e*P	P	06 17 27.0	-0.9
KLMR				AMP		06 17 29.4	
	comp=Z,60nm,0.7s						
KLMR				*e*PcP	PcP	06 17 51.9	-0.8
BRAT	Ballarat	68.34	177	P	P	06 17 30.3	+1.4
TOO	Toolangi	68.46	175	P	P	06 17 30.3	+0.6
KEV	Kevo	68.62	340	P	P	06 17 30.9	+0.6
KEV				PP	PP	06 20 02.4	-0.6
HAMF	Hammerfest	69.08	341	*e*P	P	06 17 33.5	+0.3
ARA0	ARCESS Array S	69.18	340	*e*P	P	06 17 34.6	+0.8
ARCES	ARCESS Array B	69.18	340	P	P	06 17 34.5	+0.7
	comp=Z,52nm,0.8s,baz=75,slow=6.4,SNR=81						
ARCES				PP	PP	06 20 07.7	-0.2
	comp=Z,13nm,0.8s,baz=50,slow=8.1,SNR=5.2						
ARCES				LR	LR	06 52 26.9	
	comp=Z,223nm,19.1s,baz=66,slow=40						
	comp=Z,52nm,0.8s						
ARCES	ARCESS Array B	69.18	340	P	P	06 17 34.3	+0.4
ARCES				IAmb	IAmb	06 17 36.3	
	comp=Z,58nm,0.9s						
ARCES	ARCESS Array B	69.18	340	P	P	06 17 34.5	+0.7
YKA	Yellowknife Ar	69.61	29	P	P	06 17 37.0	+0.4
	comp=Z,20nm,0.8s,baz=296,slow=6.1,SNR=178						
YKA				LR	LR	06 48 30.0	
	comp=Z,26nm,21.9s,baz=268,slow=36						
	comp=Z,20nm,0.8s						
YKA	Yellowknife Ar	69.61	29	*i* P	P	06 17 37.0	+0.4
YKA				pmax	pmax		
	comp=Z,20nm,0.8s						
CBB	Campbell River	69.70	43	P	P	06 17 38.9	+1.5
KTK1	Kautokeino	70.14	340	*e*P	P	06 17 40.6	+0.9
JETT	Jettan, Norway	70.63	341	*e*P	P	06 17 43.6	+0.9
TRO	Tromso	70.99	341	*e*P	P	06 17 45.0	+0.2
JLN	Jalan Bani Buh	71.15	285	P	P	06 17 46.4	-0.2
TULEG	Thule	71.18	7	*i* P	P	06 17 46.0	+0.1
TULEG				IAmb	IAmb	06 17 47.5	
	comp=Z,43nm,0.7s						
VRH	Novokhopyorsk	71.24	319	*e*P	P	06 17 45.9	-0.8
VRH				pmax	pmax		
	comp=Z,140nm,0.6s						
MAK	Makhachkala	71.24	309	*e*P	P	06 17 45.8	-1.0
MAK				*e**PP	pP	06 18 13.6	-6.5
MAK				*e**SP	sP	06 18 28.7	-6.1
MAK				*e*PPP	PPP	06 22 09.5	
MAK				*e*S	S	06 26 55.2	+2.2
MAK				*e*SS	SS	06 31 23.1	-6.0
MAK				pmax	pmax		
	comp=Z,103nm,1.1s						
MAK				MLR	MLR		
	comp=Z,291nm,13.0s						
WBK	Wadi Bani Khal	71.31	286	P	P	06 17 47.6	-0.1
WSAR	Wadi Sarin	71.31	286	P	P	06 17 48.3	+0.7
MOS	Moscow	71.36	324	*e*P	P	06 17 45.8	-1.5
MOS				*i* S	S	06 26 51.6	-2.4
MOS				pmax	pmax		
	comp=Z,164nm,1.0s						
MOS				pmax	pmax		
	comp=Z,200nm,1.1s						
MOS				smax	smax		
	comp=N,500nm,3.5s						
MOS				smax	smax		
	comp=E,700nm,3.5s						
BIDO	Bidbid	71.60	287	P	P	06 17 49.7	+0.4
DAG	Danmarks Havn	71.62	355	*i* P	P	06 17 49.0	+0.5
DAG				IVmB_BB		06 17 50.5	
	comp=Z,579nm,0.9s						
SMDO	Samad	71.87	286	P	P	06 17 51.7	+0.6
BANOM	Banah	72.03	290	P	P	06 17 52.4	+0.5
BANOM	Banah	72.03	290	*i* P	P	06 17 52.2	+0.3
	SNR=8.5						
SHME	Shamm	72.10	290	P	P	06 17 52.5	+0.2
	SNR=5.4						
SHME	Shamm	72.10	290	*i* P	P	06 17 52.5	+0.2
	SNR=16						
D03D	Eldon	72.13	45	P	P	06 17 54.6	+2.5
	baz=296,SNR=24						
JMDO	Jabal Madar	72.13	286	P	P	06 17 52.4	-0.1
LPSR	Galich'ya Gora	72.15	321	*e*P	P	06 17 51.3	-0.8
LPSR				pmax	pmax		
	comp=Z,170nm,0.8s						
OBN	Obninsk	72.19	324	LR	LR	06 51 36.1	
	comp=Z,61nm,20.6s,baz=44,slow=37						
OBN	Obninsk	72.19	324	P	P	06 17 52.2	0.0
OBN	Obninsk	72.19	324	*d i*P	P	06 17 52.1	-0.1
OBN				*e**PP	pP	06 18 25.2	-0.3
OBN				*e*		06 20 29.2	
OBN				pmax	pmax		
	comp=Z,147nm,0.8s						
HOQ	Hoqain	72.24	287	P	P	06 17 53.4	+0.2
	SNR=5.8						
GROC	Groznyy	72.27	310	*e*P	P	06 17 52.8	-0.2
GROC				*e*		06 18 09.5	
GROC				*e*		06 20 36.7	
GROC				*e*S	S	06 26 58.8	-6.0
GROC				pmax	pmax		
	comp=Z,52nm,0.8s						
MASF	Masafi	72.39	289	P	P	06 17 54.3	+0.3
MSFE	Esma-Masafi	72.39	289	*i* P	P	06 17 54.0	0.0
	SNR=6.7						
VORR	Voronezh	72.43	320	⇓*i*P	P	06 17 54.0	+0.2
VORR				pmax	pmax		
	comp=Z,96nm,1.5s						
D04E	Lakebay	72.48	45	P	P	06 17 56.9	+2.8
	baz=297,SNR=7.0						
UOSS	Minazif	72.54	289	P	P	06 17 55.0	0.0
UOSS	Minazif	72.54	289	*i* P	P	06 17 54.7	-0.2
	SNR=5.4						
SOHO	SOHO	72.63	288	P	P	06 17 55.5	0.0
SOHO	SOHO	72.63	288	*i* P	P	06 17 55.1	-0.3
	SNR=39						
B06A	Marblemount	72.64	44	P	P	06 17 56.6	+1.5
HATD	Hatta, Dubai	72.65	289	P	P	06 17 55.8	+0.2
HATD	Hatta, Dubai	72.65	289	*i* P	P	06 17 55.6	0.0
	SNR=18						
VSR	Storozhevoye	72.67	320	*e*P	P	06 17 55.1	-0.1
VSR				pmax	pmax		
	comp=Z,160nm,0.6s						
BSY	Bisya	72.71	286	P	P	06 17 55.9	-0.1
	SNR=5.9						
UMQ	Umm Al-Quwin	72.72	290	P	P	06 17 56.0	+0.1
ASHO	Ashiyiah	72.77	289	P	P	06 17 56.4	+0.1
ASHO	Ashiyiah	72.77	289	*i* P	P	06 17 56.1	-0.2
	SNR=14						
F04D	Rainier, OR	72.83	46	P	P	06 17 58.6	+2.4
	baz=297						
MHTO	MHTO	72.87	284	P	P	06 17 56.6	-0.3
E04D	Cinebar	72.89	46	P	P	06 17 58.7	+2.2
	baz=297,SNR=13						
NAZ	Nazwa, Dubai	72.96	289	P	P	06 17 57.5	+0.1
ARQ	Araqi	73.00	287	P	P	06 17 58.0	+0.3
	SNR=5.7						
G03D	McMinnville, O	73.06	47	P	P	06 17 59.4	+1.8
	baz=297						
STEI	Steigen	73.12	341	*e*P	P	06 17 57.8	+0.2
FAQ	Al Faqa, Dubai	73.12	289	P	P	06 17 58.2	-0.2
FAQ	Al Faqa, Dubai	73.12	289	*i* P	P	06 17 58.0	-0.4
	SNR=14						
GOF	Gofitskoye	73.21	313	⇑*e*P	P	06 17 58.3	-0.2
GOF				pmax	pmax		
	comp=Z,81nm,0.6s						
ALNE	Al Ain	73.31	288	P	P	06 18 00.6	+1.1
	SNR=7.3						
ALNE	Al Ain	73.31	288	*i* P	P	06 17 59.3	-0.2
	SNR=7.5						
ASUD	Al Ashush, Dub	73.39	289	P	P	06 18 00.2	+0.2
ASUD	Al Ashush, Dub	73.39	289	*i* P	P	06 17 59.7	-0.2
	SNR=10						
LOF	Lofoten	73.45	342	*e*P	P	06 17 59.3	-0.1
FAUS	Fauske	73.48	341	*e*P	P	06 18 00.5	+0.9
FINES	FINESS Array B	73.55	333	P	P	06 18 00.2	+0.1
	comp=Z,42nm,0.5s,baz=71,slow=5.1,SNR=432						
FINES				PP	PP	06 20 47.5	+2.1
	comp=Z,12nm,0.8s,baz=60,slow=11,SNR=5.4						
FINES				S	S	06 27 18.6	-0.1
	comp=Z,3.4nm,0.8s,baz=51,slow=15,SNR=4.7						
FINES				LR	LR	06 52 37.3	
	comp=Z,120nm,18.9s,baz=56,slow=37						
	comp=Z,42nm,0.5s						
FINES	FINESS Array B	73.55	333	*i* P	P	06 18 00.3	+0.1
FINES				pmax	pmax		
	comp=Z,42nm,0.5s						
J01E	Myrtle Point	73.57	49	P	P	06 18 02.3	+1.7
	baz=297						
NCK	Nalchik	73.57	311	*i* P	P	06 18 00.1	-0.6
NCK				pmax	pmax		
	comp=Z,47nm,0.5s						
AJN	Ajban	73.70	289	P	P	06 18 01.9	+0.2
ZEI	Tsey	73.70	310	*e*P	P	06 18 00.3	-1.4
ZEI				pmax	pmax		
	comp=Z,22nm,0.6s						
I03D	Drain, OR	73.70	49	P	P	06 18 03.8	+2.4
	baz=297,SNR=7.4						
DQM	DQM	73.71	284	P	P	06 18 01.9	+0.1
H04D	Lebanon	73.71	48	P	P	06 18 03.5	+2.1
	baz=297						
KBZ	Khabaz	73.92	312	P	P	06 18 03.0	+0.4
	comp=Z,54nm,0.7s,baz=87,slow=3.6,SNR=121						
KBZ				LR	LR	06 53 20.3	
	comp=Z,222nm,18.8s,baz=65,slow=38						
	comp=Z,54nm,0.7s						
KBZ	Khabaz	73.92	312	*d i*P	P	06 18 03.0	+0.4
KBZ				pmax	pmax		
	comp=Z,62nm,0.9s						
KIV	Kislovodsk	73.95	312	⇓P	P	06 18 03.4	+0.4
KIV	Kislovodsk	73.95	312	P	P	06 18 03.7	+0.7
KIV	Kislovodsk	73.95	312	P	P	06 18 03.0	0.0
KIV				IAmb	IAmb	06 18 06.9	
	comp=Z,71nm,0.8s						
KIV	Kislovodsk	73.95	312	*e*P	P	06 18 03.3	+0.3
KIV				*e*S	S	06 27 25.2	+1.2
KIV				*e*SS	SS	06 32 15.1	+4.6
KIV				pmax	pmax		
	comp=Z,95nm,1.1s						
KIV				pmax	pmax		
	comp=Z,87nm,3.7s						
KIV				MLR	MLR		
	comp=Z,224nm,18.0s						
KIV	Kislovodsk	73.95	312	*i* P	P	06 18 03.4	+0.4
	SNR=15						
K02D	Willamette Mer	73.96	50	P	P	06 18 04.9	+1.8
	baz=297,SNR=5.8						
H04A	Detroit Lake	73.99	47	P	P	06 18 03.8	+0.7
H04A				IAmb	IAmb	06 18 05.8	
	comp=Z,48nm,0.8s						
SHA1	Shidzhatmaz	74.07	312	*d i*P	P	06 18 04.0	+0.1
DBG	Daneborg	74.10	354	*i* P	P	06 18 02.9	-0.2
DBG				IAmb	IAmb	06 18 04.9	
	comp=Z,13nm,0.8s						
I04A	Tendick Farm,	74.26	48	P	P	06 18 06.4	+1.7
	baz=298,SNR=14						
G05D	Wamic, OR	74.27	47	P	P	06 18 06.7	+2.0
	baz=298,SNR=12						
L02F	Cave Junction	74.28	50	P	P	06 18 06.7	+1.8
	baz=298,SNR=5.6						
GNI	Garni	74.35	308	LR	LR	06 52 52.8	
	comp=Z,185nm,19.4s,baz=80,slow=37						
GNI	Garni	74.35	308	P	P	06 18 05.7	+0.2
GNI	Garni	74.35	308	*d i*P	P	06 18 05.9	+0.4
GNI				pmax	pmax		
	comp=Z,93nm,1.8s						
GNI	Garni	74.35	308	P	P	06 18 04.7	-0.8
UMZA	Um Al Zommool	74.40	287	P	P	06 18 05.3	-0.5
E07A	Sunnyside	74.54	45	P	P	06 18 07.0	+0.8
MOR8	Moi Rana	74.55	340	*e*P	P	06 18 05.2	-0.7
AKH	Akhalkalaki	74.60	309	⇓P	P	06 18 08.1	+1.2
AKH	Akhalkalaki	74.60	309	P	P	06 18 08.1	+1.2
I05D	Terrebonne, OR	74.68	47	P	P	06 18 09.0	+1.8
	baz=298,SNR=20						
KONS	Konsvik	74.71	341	*e*P	P	06 18 07.6	+0.8
J04D	Umpqua Nationa	74.71	49	P	P	06 18 08.7	+1.1
J04D				IAmb	IAmb	06 18 10.5	
	comp=Z,102nm,0.7s						
J04D	Umpqua Nationa	74.71	49	P	P	06 18 09.5	+2.0
	baz=298,SNR=20						
CHVG	Ch'k'valeri	74.91	311	⇓P	P	06 18 09.4	+0.9
MEF	Metsahovi	74.94	332	*e*P	P	06 18 08.3	+0.1
MZWR	Madinat Zayed	74.96	289	P	P	06 18 08.4	-0.6
VSU	Vasula	75.01	330	*d i*P	P	06 18 08.7	+0.1
VSU	Vasula	75.01	330	*e*P	P	06 18 09.1	+0.4
YBH	Yreka Blue Hor	75.03	50	LR	LR	06 43 55.6	
	comp=Z,284nm,21.9s,baz=298,slow=30						
E08A	Dider Farm, El	75.05	45	P	P	06 18 10.6	+1.4
L04D	Klamath Falls	75.07	50	P	P	06 18 10.6	+1.0
L04D	Klamath Falls	75.07	50	P	P	06 18 11.4	+1.8
	baz=298,SNR=12						
PINE	Pine Mountain	75.20	48	P	P	06 18 12.1	+1.7
K04D	Chiloquin, OR	75.23	49	P	P	06 18 12.5	+2.0
	baz=298						
JRN	Qarnain Island	75.25	290	P	P	06 18 09.8	-0.9
J05D	Fort Rock, OR	75.25	48	P	P	06 18 12.8	+2.2
	baz=299,SNR=45						
NEW	Newport	75.31	42	P	P	06 18 11.4	+0.7
NEW	Newport	75.31	42	P	P	06 18 11.4	+0.7
NEW				pmax	pmax		
	comp=Z,42nm,1.1s						
NEW	Newport	75.31	42	P	P	06 18 12.1	+1.4
	baz=300,SNR=28						
CLDR	Caldiran	75.38	307	P	P	06 18 12.2	+0.7
RAF	Rauma	75.48	334	*e*P	P	06 18 11.7	+0.5
E09A	Wood Farm, Sta	75.59	44	P	P	06 18 13.3	+1.1
E09A				IAmb	IAmb	06 18 15.0	
	comp=Z,65nm,0.9s						
MZR	Muzera	75.64	288	P	P	06 18 12.5	-0.4
MZR	Muzera	75.64	288	*i* P	P	06 18 12.4	-0.6
	SNR=7.6						
GHWR	Ruwais	75.68	289	P	P	06 18 12.6	-0.6
BATM	Batumi	75.70	310	P	P	06 18 14.2	+1.2
K05A	Summer Lake	75.74	49	P	P	06 18 14.9	+1.4
K05A				IAmb	IAmb	06 18 17.5	
	comp=Z,112nm,0.9s						
AGRB	Hanur-Agry	75.80	308	P	P	06 18 13.7	-0.2
JMIC	Jan Mayen	75.81	350	LR	LR	06 52 02.5	
	comp=Z,34nm,21.8s,baz=72,slow=36						
KHOR	Al-Khor Airpor	76.01	292	P	P	06 18 14.3	-0.7
SOC	Sochi	76.01	313	*e*P	P	06 18 14.1	-0.6
SOC				*e**PP	pP	06 18 41.8	-6.6
SOC				*e**SP	sP	06 18 55.5	-7.4
SOC				*e*		06 21 06.0	
SOC				*e*S	S	06 27 50.0	+3.4
SOC				*e*SS	SS	06 32 44.3	+2.7
SOC				*e*SSS	SSS	06 36 05.3	
SOC				pmax	pmax		
	comp=Z,31nm,0.5s						
TOZ	Tahuroa Road	76.06	152	P	P	06 18 16.8	+2.1
MTSE	Matsula	76.09	331	*e*P	P	06 18 15.1	+0.3
SHMA	Al-Shehemyia	76.33	292	P	P	06 18 16.2	-0.7
KOPR	Koprukoy-ERZUR	76.37	308	P	P	06 18 18.6	+1.5
NSS	Namsos	76.45	339	*e*P	P	06 18 17.0	+0.3
HIZ	Hauiti	76.47	153	P	P	06 18 19.3	+2.2
CHOM	Cayeli-Rize	76.56	310	P	P	06 18 18.6	+0.7
TLZ	Tolley Road	76.58	152	P	P	06 18 19.9	+2.1
OPRZ	Ohinepanea	76.59	151	P	P	06 18 19.2	+1.4
SLWR	Sila	76.59	290	P	P	06 18 17.9	-0.4
SAKB	Bahrain	76.62	292	P	P	06 18 17.8	-0.6
SUMG	Summit	76.65	360	*i* P	P	06 18 20.0	+1.7
SUMG				IAmb	IAmb	06 18 22.3	
	comp=Z,35nm,0.8s						
TRNA	Turayna	76.66	291	P	P	06 18 17.9	-0.8
AAL	Aland	76.69	334	*e*P	P	06 18 17.8	-0.4
OMRZ	Omania	76.73	151	P	P	06 18 20.5	+1.8
MNK	Minsk	76.78	326	*i* P	P	06 18 16.8	-2.0
MNK				*i* *PP	pP	06 18 47.0	-5.4
MNK				*i*		06 21 11.3	
MNK				*i* PPP	PPP	06 22 59.1	
MNK				*i* S	S	06 27 55.3	+0.8
MNK				*i* *SS	sS	06 28 48.0	-4.5
MNK				*i* SS	SS	06 32 56.2	+3.8
MNK				pmax	pmax		
	comp=Z,185nm,0.8s						
MNK				pmax	pmax		
	comp=E,13nm,1.0s						
MNK				pmax	pmax		
	comp=N,75nm,1.0s						
MNK				MLR	MLR		
	comp=E,91nm,15.0s						
MNK				MLR	MLR		
	comp=N,672nm,15.0s						
MNK				MLR	MLR		
	comp=Z,311nm,14.0s						
MNK	Minsk	76.78	326	*i* P	P	06 18 16.9	-2.0
	comp=E,13nm,1.0s						
MNK				*i* P	P	06 18 16.9	-2.0
	comp=N,75nm,1.0s						
MNK				*i* P	P	06 18 16.9	-2.0
	comp=Z,185nm,0.8s,baz=55						
MNK				*i* pP	pP	06 18 47.0	-5.4
MNK				*i* PP	PP	06 21 11.3	-1.4
MNK				*i* PPP	PPP	06 22 59.1	
MNK				*i* S	S	06 27 55.4	+0.8
MNK				*i* sS	sS	06 28 48.1	-4.5
MNK				*i* SS	SS	06 32 56.2	+3.8
MNK				*i* SSS	SSS	06 36 22.5	
MNK				*i* LRM	MLR	06 54 53.6	
	comp=E,91nm,15.4s						
MNK				*i* LRM	MLR	06 55 11.0	
	comp=N,672nm,15.5s						
MNK				*i* LRM	MLR	06 55 12.0	
	comp=Z,311nm,13.8s						
ANN	Anapa	76.83	314	*e*P	P	06 18 17.9	-1.3
ANN				*e*		06 18 26.9	
ANN				*e**PP	pP	06 18 48.1	-4.9
ANN				*e*S	S	06 27 57.5	+2.1
ANN				*e*SS	SS	06 32 56.7	+3.0
ANN				pmax	pmax		
	comp=Z,212nm,1.0s						
IDID	Didziasalis	76.84	327	*e*P	P	06 18 19.9	+0.8
DMTO	DMTO	76.91	283	P	P	06 18 20.2	0.0
BMO	Blue Mountains	76.94	45	P	P	06 18 21.2	+1.2
BMO	Blue Mountains	76.94	45	P	P	06 18 21.2	+1.2
BMO				pmax	pmax		
	comp=Z,52nm,1.0s						
GURO	Guroymak-BITLI	76.95	307	P	P	06 18 21.9	+1.6
GURO	Guroymak-BITLI	76.95	307	P	P	06 18 20.7	+0.4
VRZ	Vera Road	76.96	153	P	P	06 18 21.8	+1.9
SMRA	Abu-Samra	76.97	291	P	P	06 18 19.7	-0.7
ISAL	Salakas	76.97	328	*e*P	P	06 18 20.9	+1.1
IIGN	Ignalina	77.06	328	*e*P	P	06 18 21.4	+1.0
NACGM	Naroch	77.06	327	⇓*e*P	P	06 18 21.1	+0.7
	baz=54						
DOK	Doka	77.17	284	P	P	06 18 20.8	-0.8
URZ	Urewera	77.17	151	LR	LR	06 50 56.3	
	comp=Z,146nm,19.2s,baz=211,slow=34						
URZ	Urewera	77.17	151	P	P	06 18 20.4	-0.6
JTMT	Jette	77.22	42	P	P	06 18 22.7	+1.1
JTMT				IAmb	IAmb	06 18 24.3	
	comp=Z,78nm,1.0s						
NUUG	Nuugaatsiaq	77.28	4	*i* P	P	06 18 22.6	+1.3
NNVZ	North Ngauruho	77.30	152	P	P	06 18 23.5	+1.5
NGZ	Ngauruhoe	77.33	152	P	P	06 18 23.6	+1.5
OTVZ	Oturere	77.35	152	P	P	06 18 23.6	+1.4
SNVZ	South Ngauruho	77.36	152	P	P	06 18 23.8	+1.5
FWVZ	Far West T-bar	77.38	152	P	P	06 18 24.0	+1.5
SLIT	Slitere, Latvi	77.40	331	*e*P	P	06 18 21.8	-0.4
MWZ	Matawai	77.41	151	P	P	06 18 22.2	-0.3
RTZ	Ruatahuna	77.42	151	P	P	06 18 15.2	-7.3
TRVZ	Turoa	77.42	152	P	P	06 18 24.4	+1.7
WNVZ	Wahianoa	77.46	152	P	P	06 18 25.3	+2.5
RAGZ	Rawiri	77.50	151	P	P	06 18 23.6	+0.6

BEKR	Beckworth	77.50	51	P	P	06 18 24.1	+0.8
BEKR				IAmb	IAmb	06 18 26.1	
	comp=Z,82nm,0.8s						
PUZ	Puketiti	77.50	150	P	P	06 18 22.7	-0.2
MTHZ	Maungataniwha	77.56	151	P	P	06 18 23.8	+0.5
WAZ	Wanganui	77.59	153	P	P	06 18 24.8	+1.5
MOVZ	Moawhango	77.59	152	P	P	06 18 24.1	+0.6
RBK	Rabkut	77.64	283	P	P	06 18 23.5	-0.8
BKZ	Black Stump Fm	77.68	152	P	P	06 18 23.9	0.0
BKZ	Black Stump Fm	77.68	152	P	P	06 18 24.1	+0.1
SNGZ	Shannon Statio	77.71	151	P	P	06 18 24.3	+0.2
VSVD	Vaisvydziai	77.71	329	*e*P	P	06 18 24.3	+0.4
RAHZ	Arahi	77.72	151	P	P	06 18 24.7	+0.6
SVAN	Silvan-Diyarba	77.72	307	P	P	06 18 24.8	+0.3
NMHZ	Naumai	77.75	151	P	P	06 18 25.6	+1.2
BHHZ	Black Hill Sta	77.79	152	P	P	06 18 24.8	+0.2
UPP	Uppsala	77.80	334	*e*P	P	06 18 24.6	+0.3
WHFO	Wadi Hawf	77.80	284	P	P	06 18 24.1	-1.1
RIGZ	Rimuhau	77.82	151	P	P	06 18 24.8	+0.1
KWHZ	Kaweka Forest	77.88	152	P	P	06 18 26.0	+1.0
TBLU	Trondheim	77.90	339	*e*P	P	06 18 24.6	-0.3
MSO	Missoula	77.90	42	P	P	06 18 25.8	+0.4
MSO	Missoula	77.90	42	P	P	06 18 26.3	+0.9
	baz=302,SNR=32						
MSO				S	S	06 28 08.0	+0.7
	baz=302						
SCO	Scoresbysund	77.93	354	P	P	06 18 26.8	+1.9
SCO				IAmb	IAmb	06 18 28.4	
	comp=Z,69nm,0.9s						
SCO	Scoresbysund	77.93	354	P	P	06 18 26.8	+1.9
SCO				pmax	pmax		
	comp=Z,69nm,0.9s						
SCO	Scoresbysund	77.93	354	*i* P	P	06 18 25.7	+0.8
SCO				IAmb	IAmb	06 18 27.5	
	comp=Z,38nm,0.8s						
ESPY	Espiye-Giresun	77.98	311	P	P	06 18 26.3	+0.5
PABE	Paberze	77.99	328	*e*P	P	06 18 26.1	+0.7
MCHZ	McNeill Hill	78.00	152	P	P	06 18 26.5	+0.9
KRHZ	Kereru	78.04	152	P	P	06 18 26.2	+0.3
KNZ	Kokohu	78.05	151	P	P	06 18 25.8	-0.1
EMB	Emerald Bay	78.12	52	P	P	06 18 28.0	+1.1
EMB				IAmb	IAmb	06 18 29.4	
	comp=Z,77nm,0.8s						
PNHZ	Pukenui	78.20	152	P	P	06 18 27.3	+0.5
TSZ	Takapari Road	78.23	153	P	P	06 18 27.3	+0.4
MHGZ	Mahia Peninsul	78.26	151	P	P	06 18 27.8	+0.7
AKASG	Malin Array Be	78.30	323	P	P	06 18 27.2	0.0
	comp=Z,150nm,0.7s,baz=50,slow=6.1,SNR=440						
AKASG				S	S	06 28 10.7	-0.4
	comp=Z,0.7nm,0.5s,baz=60,slow=12,SNR=2.3						
AKASG				LR	LR	06 55 49.4	
	comp=Z,393nm,18.3s,baz=60,slow=38						
	comp=Z,150nm,0.7s						
AKASG	Malin Array Be	78.30	323	P	P	06 18 27.3	0.0
AKASG				S	S	06 28 10.7	-0.4
AKBB	Malin Array Si	78.30	323	P	P	06 18 27.3	0.0
AKBB	Malin Array Si	78.30	323	P	P	06 18 27.3	0.0
AKBB				pmax	pmax		
	comp=Z,186nm,0.7s						
KAHZ	Kahuranaki	78.37	152	P	P	06 18 28.4	+0.6
PNTR	Pine Nut	78.40	51	P	P	06 18 29.7	+1.3
PNTR				IAmb	IAmb	06 18 31.5	
	comp=Z,95nm,0.7s						
MARD	Mardin	78.42	307	P	P	06 18 28.8	+0.4
MARD				IAmb	IAmb	06 18 30.5	
	comp=Z,123nm,1.3s						
WPHZ	Waipukurau	78.43	152	P	P	06 18 28.6	+0.6
ABTO	Aybut	78.47	283	P	P	06 18 28.1	-0.8
KIW	Kapiti Island	78.52	154	P	P	06 18 29.0	+0.6
DVHZ	Dannevirke	78.52	153	P	P	06 18 29.0	+0.5
DYBB	Diyarbakir	78.54	307	P	P	06 18 29.8	+0.8
PBUR	Paburge	78.56	330	*e*P	P	06 18 29.0	+0.3
MRZ	Mangatainoka R	78.60	153	P	P	06 18 29.2	+0.3
PRHZ	Porangahau	78.68	152	P	P	06 18 29.9	+0.6
BBGB	Big Mountain B	78.68	54	P	P	06 18 30.9	+1.0
BBGB				IAmb	IAmb	06 18 34.3	
	comp=Z,101nm,1.0s						
SIM	Simferopol'	78.76	316	*e*P	P	06 18 29.1	-0.9
SIM				*e*S	S	06 28 15.2	-1.0
SIM				pmax	pmax		
	comp=Z,91nm,0.7s						
HOWZ	Holdsworth Sta	78.78	153	P	P	06 18 30.3	+0.4
ANWZ	Angora Road	78.78	152	P	P	06 18 30.5	+0.7
CAW	Cannon Point	78.79	154	P	P	06 18 30.0	+0.1
TIWZ	Tintock	78.82	153	P	P	06 18 30.5	+0.4
SNZO	South Karori	78.83	154	P	P	06 18 29.7	-0.4
ILIC	ilic-Erzincan	78.84	309	P	P	06 18 31.8	+1.1
BFZ	Birch Farm	78.88	153	P	P	06 18 30.3	-0.1
BFZ	Birch Farm	78.88	153	P	P	06 18 30.7	+0.3
SVRC	Sivrice-ELAZID	78.89	308	P	P	06 18 33.6	+2.5
MTW	Mount Morrison	79.00	153	P	P	06 18 31.0	0.0
HFS	Hagfors	79.04	336	LR	LR	06 53 59.1	
	comp=Z,171nm,21.6s,baz=47,slow=36						
VIKU	Vikbolandet	79.07	333	*e*P	P	06 18 31.2	-0.1
MSWZ	Moikau Station	79.12	154	P	P	06 18 31.7	0.0
PAWZ	Paruwai Farm	79.16	154	P	P	06 18 32.1	+0.1
RSDY	Resadiye-TOKAT	79.16	311	P	P	06 18 32.7	+0.4
DOMB	Dombas	79.17	339	*e*P	P	06 18 32.2	+0.3
ARPR	Arapgir-MALATY	79.18	309	P	P	06 18 35.6	+3.0
HRY	Holter Researc	79.18	42	P	P	06 18 33.4	+1.0
NB201	NORSAR Array S	79.20	337	P	P	06 18 32.0	-0.1
NB201				IAmb	IAmb	06 18 34.0	
	comp=Z,186nm,1.1s						
NB2	NORSAR Subarra	79.23	337	P	P	06 18 32.1	-0.2
	comp=Z,46nm,0.7s,baz=43,slow=5.3						
NB2	NORSAR Subarra	79.23	337	P	P	06 18 32.1	-0.2
	baz=43,slow=5.3						
NOA	NORSAR Array B	79.23	337	P	P	06 18 32.3	0.0
	comp=Z,43nm,0.8s,baz=43,slow=5.4,SNR=162						
NOA				PP	PP	06 21 30.4	-2.7
	comp=Z,11nm,0.9s,baz=43,slow=8.7,SNR=7.7						
NOA				LR	LR	06 55 15.0	
	comp=Z,136nm,21.5s,baz=45,slow=37						
	comp=Z,43nm,0.8s						
NOA	NORSAR Array B	79.23	337	P	P	06 18 32.3	0.0
MOL	Molde	79.24	340	*e*P	P	06 18 32.8	+0.6
PLWZ	Palliser	79.26	154	P	P	06 18 32.8	+0.2
TRWZ	Traveller	79.28	153	P	P	06 18 31.7	-0.9
SUW	Suwalki	79.28	328	*e*P	P	06 18 32.7	+0.1
SUW				*e*S	S	06 28 19.1	-2.2
SUW	Suwalki	79.28	328	*e*P	P	06 18 33.2	+0.6
BMN	Battle Mountai	79.28	49	P	P	06 18 33.9	+0.8
BMN	Battle Mountai	79.28	49	P	P	06 18 33.9	+0.8
BMN				pmax	pmax		
	comp=Z,49nm,0.9s						
NC602	NORSAR Array S	79.34	337	*e*P	P	06 18 32.5	-0.3
RYN	Ryan	79.36	51	P	P	06 18 34.5	+0.9
RYN				IAmb	IAmb	06 18 37.0	
	comp=Z,60nm,0.8s						
HLID	Hailey	79.38	45	P	P	06 18 35.5	+1.9
	baz=303,SNR=114						
HLID				S	S	06 28 24.1	+0.8
	baz=303						
DLMT	Dillon	79.49	43	P	P	06 18 35.2	+1.0
DLMT				IAmb	IAmb	06 18 36.7	
	comp=Z,49nm,0.8s						
MDPB	Devils Postpil	79.49	52	P	P	06 18 35.2	+0.7
EGMT	Eagleton	79.60	40	P	P	06 18 35.1	+0.5
EGMT				IAmb	IAmb	06 18 37.4	
	comp=Z,66nm,0.9s						
EGMT	Eagleton	79.60	40	P	P	06 18 35.8	+1.2
	baz=305,SNR=53						
EGMT				S	S	06 28 25.5	+0.2
	baz=305						
NVAR	Mina Array Bea	79.61	51	P	P	06 18 36.6	+1.6
	comp=Z,59nm,0.8s,baz=282,slow=5.7,SNR=298						
NVAR				LR	LR	06 47 24.9	
	comp=Z,296nm,21.9s,baz=280,slow=31						
	comp=Z,59nm,0.8s						
NVAR	Mina Array Bea	79.61	51	P	P	06 18 35.7	+0.7
SVSK	Karacayir	79.63	310	P	P	06 18 36.5	+1.7
MCMT	McKenzie Canyo	79.63	44	P	P	06 18 35.5	+0.5
MLAC	Mammoth, Mammo	79.66	52	P	P	06 18 37.2	+1.9
	baz=301						
AKN	Aaknes	79.70	340	*e*P	P	06 18 35.9	+1.1
ILULI	Ilulissat	79.71	4	*i* P	P	06 18 34.2	-0.4
ILULI				IAmb	IAmb	06 18 36.5	
	comp=Z,11nm,0.7s						
DIKM	Dikmen	79.83	313	⇓P	P	06 18 37.4	+1.5
DIKM	Dikmen	79.83	313	P	P	06 18 36.8	+0.9
BOZ	Bozeman (W)	79.92	43	P	P	06 18 38.0	+1.5
	baz=304,SNR=92						
BOZ				S	S	06 28 28.8	0.0
	baz=304						
DARE	Darende-Malaty	80.02	309	P	P	06 18 38.6	+1.5
SMMC	Simmler	80.05	55	P	P	06 18 39.0	+1.8
	baz=301						
ICESG	Greenland Ices	80.16	360	*i* P	P	06 18 38.9	+1.3
ICESG				IAmb	IAmb	06 18 40.0	
	comp=Z,45nm,0.7s						
OSL	Oslo	80.21	337	*e*P	P	06 18 38.4	+0.9
SORM	Soroca	80.25	321	⇓P	P	06 18 37.6	-0.4
PURM	Purcari	80.34	319	⇓P	P	06 18 38.9	+0.4
TIN	Tinemaha, Big	80.37	53	P	P	06 18 41.1	+2.1
	baz=302,SNR=12						
ELK	Elko	80.39	48	LR	LR	06 47 59.5	
	comp=Z,155nm,21.6s,baz=292,slow=31						
ELK	Elko	80.39	48	P	P	06 18 40.4	+1.2
ELK	Elko	80.39	48	P	P	06 18 40.4	+1.2
ELK				pmax	pmax		
	comp=Z,50nm,1.0s						
PKM	Mcpherson Peak	80.40	55	P	P	06 18 41.0	+1.8
	baz=301,SNR=13						
SOCY	Socotra	80.41	278	P	P	06 18 38.2	-1.3
VES	Vestal, Richgr	80.42	54	P	P	06 18 39.9	+0.8
	baz=301,SNR=38						
SKAR	Skarslia	80.45	338	*e*P	P	06 18 39.4	+0.6
BZK	Bozkurt	80.45	313	⇓P	P	06 18 39.5	+0.3
KIS	Kishinev	80.66	320	*e*P	P	06 18 40.0	-0.2
	comp=Z,130nm,2.9s						
KIS				*e*pP	pP	06 19 12.0	-2.1
KIS				*e*L	L	06 53 20.0	
KIS				LRM	MLR	06 57 08.0	
	comp=Z,100nm,15.0s						
KIS	Kishinev	80.66	320	*de*P	P	06 18 40.0	-0.2
KIS				*e**PP	pP	06 19 12.0	-2.1
KIS				pmax	pmax		
	comp=Z,130nm,2.9s						
KIS				MLR	MLR		
	comp=Z,100nm,15.0s						
MILM	Milestii Mici	80.71	320	⇓*i*P	P	06 18 40.0	-0.4
	comp=Z,110nm,0.9s						
MILM				*e*pP	pP	06 19 16.0	+1.6
MILM				*e*S	S	06 28 32.0	-4.6
MILM	Milestii Mici	80.71	320	⇑P	P	06 18 40.3	-0.1
MILM	Milestii Mici	80.71	320	*d i*P	P	06 18 40.0	-0.4
MILM				*e**PP	pP	06 19 16.0	+1.6
MILM				*e*		06 19 26.0	
MILM				*e*S	S	06 28 32.0	-4.6
MILM				*e*PS	PnS	06 29 28.0	-13
MILM				pmax	pmax		
	comp=Z,110nm,0.9s						
MILM				MLR	MLR		
	comp=Z,300nm,18.0s						
HYA	Hoyanger	80.73	339	*e*P	P	06 18 40.7	+0.4
FOO	Floro	80.74	340	*e*P	P	06 18 39.4	-0.9
CWC	Cottonwood Cre	80.80	53	P	P	06 18 42.4	+1.1
	baz=302						
KONO	Kongsberg	80.80	337	*e*P	P	06 18 41.0	+0.3
SARI	SarD1z-Kayseri	80.81	309	P	P	06 18 42.5	+1.1
SOEG	Soedalen	80.84	357	*i* P	P	06 18 40.8	+0.1
SOEG				IAmb	IAmb	06 18 42.8	
	comp=Z,28nm,0.6s						
ISA	Isabella, Lake	80.93	54	P	P	06 18 42.5	+0.6
	baz=302,SNR=29						
ARVC	Arvin	80.96	55	P	P	06 18 43.5	+1.5
	baz=302,SNR=15						
KMRS	Kahramanmaras	80.97	308	P	P	06 18 43.3	+1.2
GRAC	Grapevine Rang	80.99	52	P	P	06 18 44.0	+1.8
	baz=302,SNR=26						
CORM	Corum	81.03	312	P	P	06 18 43.6	+1.2
H17A	Grant Village	81.22	43	P	P	06 18 47.1	+3.6
	baz=305,SNR=123						
SUE	Sulen	81.25	340	*e*P	P	06 18 43.9	+0.9
OSI	Osito Audit: C	81.31	55	P	P	06 18 45.7	+1.7
	baz=302,SNR=9.2						
CANT	Cankiri	81.44	312	P	P	06 18 45.6	+1.1
R11A	Troy Canyon, C	81.46	50	P	P	06 18 46.4	+1.5
	baz=303,SNR=79						
LVV	L'vov	81.49	324	*e*P	P	06 18 45.1	+0.6
LVV				*e*		06 21 57.7	
LVV				*e*S	S	06 28 42.4	-2.3
LVV				MLR	MLR		
	comp=N,300nm,16.0s						
LVV				MLR	MLR		
	comp=E,400nm,16.0s						
LVV				MLR	MLR		
	comp=Z,500nm,16.0s						
RLMT	Red Lodge	81.56	42	P	P	06 18 47.1	+1.9
	baz=306,SNR=56						
ASK	Askoy	81.57	339	*e*P	P	06 18 45.2	+0.5
ODD1	Odda	81.57	338	*e*P	P	06 18 45.5	+0.7
LRMC	Laurel Mtn Rad	81.58	54	P	P	06 18 46.8	+1.3
	baz=302,SNR=21						
DEL	Delary	81.58	333	*e*P	P	06 18 44.5	-0.4
BER	Bergen	81.61	339	*e*P	P	06 18 45.7	+0.8
FURC	Furnace Creek,	81.61	52	P	P	06 18 47.0	+1.7
	baz=302,SNR=26						
EDW2	Edwards Air Fo	81.68	54	P	P	06 18 47.5	+1.6
	baz=302,SNR=77						
KOZT	Kozan	81.70	309	P	P	06 18 46.7	+0.8
BIR	Birlad	81.75	320	⇓P	P	06 18 47.5	+1.5
DECC	Green Verdugo	81.77	55	P	P	06 18 47.5	+1.2
	baz=302,SNR=9.1						
TPNV	Topopah Spring	81.77	52	P	P	06 18 47.9	+1.4
	baz=303,SNR=70						
BEL	Belsk	81.78	327	*e*P	P	06 18 47.0	+0.9
BEL				*e*S	S	06 28 47.4	-0.1
RAYN	Ar Rayn	81.81	292	P	P	06 18 47.1	+0.4
RAYN	Ar Rayn	81.81	292	*i* P	P	06 18 46.8	0.0
	SNR=81						
SCTR	Scanteiesti	81.90	319	⇑P	P	06 18 47.9	+1.1
BR131	Keskin Array S	81.91	312	P	P	06 18 47.7	+0.5
	SNR=44						
BRTR	Keskin Array B	81.91	312	P	P	06 18 47.4	+0.3
	comp=Z,36nm,0.7s,baz=108,slow=4.0,SNR=157						
	comp=Z,36nm,0.7s						
BRTR	Keskin Array B	81.91	312	P	P	06 18 47.6	+0.5
BRTR	Keskin Array B	81.91	312	*i* P	P	06 18 47.4	+0.3
BRTR				pmax	pmax		
	comp=Z,37nm,0.7s						
JURR	Jurilovca	81.94	318	⇑P	P	06 18 47.6	+0.6
SFJD	Kangerlussuaq	81.94	4	LR	LR	06 54 31.8	
	comp=Z,48nm,21.7s,baz=345,slow=35						
SFJD	Kangerlussuaq	81.94	4	*i* P	P	06 18 47.0	+0.5
SFJD				IAmb	IAmb	06 18 48.7	
	comp=Z,17nm,0.8s						
BLS5	Blasjo	82.01	338	*e*P	P	06 18 47.6	+0.5
CEYT	Ceyhan	82.01	308	P	P	06 18 48.5	+1.0
TAHT	Tahtakopru-Hat	82.06	308	P	P	06 18 49.4	+1.6
KAMT	Kaman	82.06	311	P	P	06 18 47.9	0.0
FMP	Fort Macarthur	82.08	55	P	P	06 18 49.3	+1.4
	baz=302						
BSD	Bornholm Skovb	82.13	332	*e*P	P	06 18 47.6	-0.2
BSD	Bornholm Skovb	82.13	332	*i* P	P	06 18 46.2	-1.5
BSD				IVmB_BB		06 18 49.0	
	comp=Z,716nm,1.9s						
TESR	Tescani	82.15	320	⇑P	P	06 18 48.3	+0.3
CIS	Catalina Islan	82.16	56	P	P	06 18 49.1	+0.7
	baz=302						
CMRD	Camardi-Nigde	82.16	309	P	P	06 18 49.7	+1.2
BIZ	Bicaz	82.19	321	⇓P	P	06 18 49.0	+0.7
HOMB	Homborsund	82.22	336	*e*P	P	06 18 48.1	0.0
YAYX	Yaylak	82.23	311	P	P	06 18 49.1	+0.3
DUG	Dugway, Tooele	82.24	48	P	P	06 18 50.6	+1.8
	baz=304,SNR=73						
DUG				S	S	06 28 55.6	+2.6
	baz=304						
BUR01	Bucovina Ar. S	82.25	322	⇓P	P	06 18 49.4	+0.7
BURAR	Bucovina Array	82.25	322	⇓P	P	06 18 49.3	+0.6
BFSC	Mount Baldy Ra	82.25	55	P	P	06 18 50.0	+1.0
	baz=302,SNR=15						
PANC	Panciu	82.26	319	⇓P	P	06 18 49.9	+1.2
GSC	Goldstone, Bar	82.28	53	P	P	06 18 50.4	+1.4
	baz=302,SNR=47						
KWP	Kalwaria Pacla	82.28	324	*e*P	P	06 18 49.4	+0.7
KWP				*e*S	S	06 28 48.9	-3.9
KWP	Kalwaria Pacla	82.28	324	P	P	06 18 49.1	+0.4
KWP	Kalwaria Pacla	82.28	324	P	P	06 18 49.1	+0.4
KWP				pmax	pmax		
	comp=Z,3µm,0.9s						
DGMT	Dagmar	82.30	37	P	P	06 18 49.6	+0.8
	baz=309						
DGMT	Dagmar	82.30	37	P	P	06 18 49.6	+0.8
	baz=309,SNR=10						
SHOC	Shoshone, Teco	82.32	53	P	P	06 18 50.6	+1.4
	baz=303,SNR=7.0						
LAO	LASA Array	82.33	39	P	P	06 18 50.6	+1.6
	baz=308						
LAO	LASA Array	82.33	39	P	P	06 18 50.6	+1.6
	baz=308,SNR=12						
LAO				S	S	06 28 53.5	0.0
	baz=308						
KARA	Karaisali	82.34	309	P	P	06 18 49.7	+0.5
ANTO	Ankara	82.37	312	P	P	06 18 50.4	+1.0
RRX	Edison Barstow	82.37	54	P	P	06 18 51.4	+1.9
	baz=302,SNR=5.6						
ODBI	Odobesti	82.38	319	⇓P	P	06 18 50.9	+1.7
LOD	Lodumlu	82.38	312	P	P	06 18 50.3	+0.8
TIRR	Tirgusor	82.39	318	⇓P	P	06 18 49.6	+0.4
TIRR	Tirgusor	82.39	318	P	P	06 18 49.2	0.0
TIRR				IAmb	IAmb	06 18 51.6	
	comp=Z,123nm,1.1s						
TIRR	Tirgusor	82.39	318	P	P	06 18 49.3	0.0
TIRR				pmax	pmax		
	comp=Z,123nm,1.1s						
SERE	Sereflikochisa	82.39	311	P	P	06 18 50.3	+0.7
AFSR	Afar-Bala (An	82.43	312	P	P	06 18 50.6	+0.8
GKP	Gorka Klasztor	82.44	329	*e*P	P	06 18 49.6	+0.3
GKP	Gorka Klasztor	82.44	329	*e*P	P	06 18 49.3	0.0
PSUT	Pine Spring	82.49	49	P	P	06 18 50.6	+0.3
VRI	Vrincioaia	82.50	320	⇓P	P	06 18 50.6	+0.7
HARR	Harsova	82.52	318	⇓P	P	06 18 50.7	+0.7
PLOR	Plostina	82.55	320	⇑P	P	06 18 51.1	+0.9
PLOR				⇓P	PcP	06 18 51.3	-3.6
SNART	Snartemo	82.61	337	*e*P	P	06 18 50.7	+0.5
GRER		82.65	319	⇓P	P	06 18 52.8	+2.1
MANR	Mangalia	82.66	317	⇑P	P	06 18 51.6	+0.9
DY2G	Dye2	82.68	3	*i* P	P	06 18 51.2	+0.5
DY2G				IAmb	IAmb	06 18 52.5	
	comp=Z,15nm,0.7s						
BISRR	Bisoca	82.70	319	⇓P	P	06 18 52.4	+1.4
KULU	Kulu	82.70	311	P	P	06 18 52.4	+1.2
COP	Copenhagen	82.71	333	*i* P	P	06 18 50.1	-0.6
COP				IVmB_BB		06 18 52.0	
	comp=Z,2µm,0.7s						
ELS	Elsinore Mount	82.73	55	P	P	06 18 52.3	+0.9
BBRC	Big Bear Solar	82.75	54	P	P	06 18 53.0	+1.2
	baz=303,SNR=6.8						
BW06	Boulder Array	82.77	44	P	P	06 18 52.2	+0.6
BW06	Boulder Array	82.77	44	P	P	06 18 52.6	+1.0
	baz=306,SNR=37						
PDAR	Pinedale Array	82.77	44	P	P	06 18 52.2	+0.6
	comp=Z,18nm,0.8s,baz=282,slow=3.2,SNR=119						
PDAR				LR	LR	06 54 08.2	
	comp=Z,62nm,18.9s,baz=320,slow=34						
	comp=Z,18nm,0.8s						
COVR	Voineasa-Covas	82.80	320	⇓P	P	06 18 52.1	+0.6
TUQ	Turquoise Moun	82.81	53	P	P	06 18 53.5	+1.6
	baz=303,SNR=14						
SULT	Sultanhani-AKS	82.84	310	P	P	06 18 52.7	+0.8
HEC	Hector,Ludlow	82.86	54	P	P	06 18 53.6	+1.5
	baz=303,SNR=14						
FRB	Frobisher Bay	82.87	12	LR	LR	07 00 29.1	
	comp=Z,76nm,19.3s,baz=0.0,slow=39						
OZUR		82.88	320	⇓P	P	06 18 53.1	+1.2
GOET	G??ttrup	82.91	335	*i* P	P	06 18 51.6	-0.1
GOET				IAmb	IAmb	06 18 52.5	
	comp=Z,55nm,0.6s						
MERS	Mersin	82.91	309	P	P	06 18 51.8	-0.5
AMRR	Amara	82.91	318	⇓P	P	06 18 52.4	+0.4
MURC	Murrieta	82.92	55	P	P	06 18 53.4	+1.1
	baz=302,SNR=15						
YESY	Yesilyurt	82.92	310	P	P	06 18 53.2	+0.8
ICOR	Ion Corvin	82.94	318	⇑P	P	06 18 53.6	+1.4
KOLS	Kolonicke sedl	82.94	324	*e*P	P	06 18 52.7	+0.6
KOLS				pmax	pmax		
	comp=Z,59nm,0.9s						
KOLS	Kolonicke sedl	82.94	324	*e*P	P	06 18 52.7	+0.6
PSN	Preselentsi	82.98	317	P	P	06 18 53.4	+1.0
PMOR	Pomariorio Ree	82.98	112	*e*P	P	06 18 54.0	+1.3
	comp=Z,97nm,0.9s						
PMOR	Pomariorio Ree	82.98	112	*e*T	T	07 49 28.8	
	comp=Z,6.3nm,0.2s						
NEHR	Nehoiu	83.00	319	⇑P	P	06 18 53.5	+1.0
CHBY	Cihanbeyli	83.03	311	P	P	06 18 53.2	+0.3
MDUB	Mudurnu	83.04	313	P	P	06 18 53.5	+0.6
ARCR	ARCALIA	83.04	322	⇑P	P	06 18 53.3	+0.6
LLD	Lille Linde	83.05	333	*i* P	P	06 18 52.4	-0.1
LLD				IAmb	IAmb	06 18 53.5	
	comp=Z,61nm,0.6s						
ISR	Istrita	83.05	319	⇑P	P	06 18 54.2	+1.4
PPT	Papeete	83.12	115	LR	LR	06 48 39.3	
	comp=Z,77nm,20.6s,baz=308,slow=30						
UZH	Uzhgorod	83.13	324	*c i*P	P	06 18 52.7	-0.3
UZH				*e**PP	pP	06 19 26.5	-0.6
UZH				*e*		06 24 07.9	
UZH				*i* S	S	06 28 57.6	-3.7
PPT2	Papeete2	83.14	115	*e*LR	LR	06 44 07.1	
	comp=Z,5µm,61.5s,baz=322						
MLR	Muntele Rosu	83.16	320	⇑P	P	06 18 54.1	+0.6
MLR	Muntele Rosu	83.16	320	LR	LR	06 57 43.5	
	comp=Z,242nm,18.8s,baz=58,slow=37						
MLR	Muntele Rosu	83.16	320	P	P	06 18 53.2	-0.3
MLR				IAmb	IAmb	06 18 56.4	
	comp=Z,101nm,1.3s						
MLR	Muntele Rosu	83.16	320	P	P	06 18 53.2	-0.3
MLR				pmax	pmax		
	comp=Z,101nm,1.3s						
DOPR	Dopca	83.17	320	⇓P	P	06 18 54.7	+1.3
PAE	Paea	83.17	115	*e*P	P	06 18 51.4	-2.3
	comp=Z,7.9nm,0.8s						
LEHL	Lehliu	83.29	318	⇑P	P	06 18 55.3	+1.3
OJC	Ojcow	83.32	326	*e*P	P	06 18 54.4	+0.3
OJC				*e*S	S	06 28 59.5	-3.7
OJC	Ojcow	83.32	326	P	P	06 18 54.3	+0.3
OJC				IAmb	IAmb	06 18 56.2	
	comp=Z,119nm,1.0s						
OJC	Ojcow	83.32	326	P	P	06 18 54.3	+0.3
OJC				pmax	pmax		
	comp=Z,119nm,1.0s						
VAH	Vaihoa	83.33	112	*e*P	P	06 18 54.0	-0.5
	comp=Z,32nm,0.8s						
GMRC	Granite Mounta	83.35	53	P	P	06 18 56.0	+1.4
	baz=303,SNR=45						
109C	Camp Elliot, M	83.36	56	P	P	06 18 55.7	+1.2
	baz=303,SNR=5.6						
MUD	Monsted U'grnd	83.36	335	*i* P	P	06 18 53.9	-0.1
MUD				IAmb	IAmb	06 18 55.5	
	comp=Z,15nm,0.8s						
SECR		83.37	319	⇑P	P	06 18 55.2	+0.8
CRVS	Cervenica-Dubn	83.37	324	*e*P	P	06 18 55.1	+0.8
CRVS				pmax	pmax		
	comp=Z,199nm,1.7s						
CRVS	Cervenica-Dubn	83.37	324	*e*P	P	06 18 55.1	+0.8
SVRH	Sivrihisar-ESK	83.42	312	P	P	06 18 55.1	+0.2
SAUV	Serdivan-Sakar	83.42	314	P	P	06 18 56.2	+1.5
PFO	Pinyon Flats O	83.43	55	LR	LR	06 49 44.5	
	comp=Z,338nm,20.2s,baz=277,slow=31						
PFO	Pinyon Flats O	83.43	55	P	P	06 18 56.2	+1.2
	baz=303,SNR=39						
GULT	Gulveren	83.48	314	P	P	06 18 55.6	+0.4
KIZT	Kizilcal	83.51	312	P	P	06 18 55.9	+0.5
BELC	Belle Mtn. Jos	83.54	54	P	P	06 18 56.5	+0.9
	baz=303,SNR=61						
LADK	Ladik-KONYA	83.59	311	P	P	06 18 56.0	+0.2
SILI	Silifke-Mersin	83.59	309	P	P	06 18 55.9	+0.2
SILT	Sile	83.60	315	P	P	06 18 56.7	+1.1
ANGG	Ammassalik, Gr	83.64	359	*i* P	P	06 18 55.5	+0.2
ANGG				IAmb	IAmb	06 18 56.4	
	comp=Z,12nm,0.8s						
CBBR	Cluj-Babes-Bol	83.67	322	⇑P	P	06 18 57.0	+1.2
CJR	Cluj-Napoca	83.67	322	⇑P	P	06 18 57.4	+1.4
KEBE	Keben-Mersin	83.69	309	P	P	06 18 56.6	+0.4
PRD	Provadia	83.72	317	P	P	06 18 57.3	+1.1
KONT	Konya--Tatoy	83.73	311	P	P	06 18 57.3	+0.9
LCMT	Little Creek M	83.74	50	P	P	06 18 57.7	+1.1
LCMT				IAmb	IAmb	06 18 59.3	
	comp=Z,44nm,0.9s						
CIFT	Cifteler, Eski	83.76	312	P	P	06 18 57.0	+0.4
MTUR	Matau	83.81	320	⇑P	P	06 18 57.9	+1.1
IKL	Isikli	83.82	309	P	P	06 18 56.9	+0.1
MONP2	Monument Peak	83.84	55	P	P	06 18 58.5	+1.2
	baz=303,SNR=16						
TEVE	Tevekalti-Mers	83.87	309	P	P	06 18 57.6	+0.4
EREN	Erenkoy	83.89	308	P	P	06 18 56.5	-0.7
AKKU	Akkuyu-Mersin	83.95	309	P	P	06 18 57.6	+0.1
P17A	Butcher Ranch,	83.96	47	P	P	06 18 59.0	+1.2
ADVT	Abdulvahap	83.96	314	P	P	06 18 57.9	+0.4
ISK	Istanbul-Kandi	84.01	315	P	P	06 18 58.1	+0.4
KAVV	Kandilli-Istan	84.01	315	P	P	06 18 57.9	+0.2
RAZG	Razgrad	84.02	318	⇑P	P	06 18 58.5	+0.8

IRM	Iron Mountain	84.05	54	P	P	06 18 59.4	+1.3
	baz=304,SNR=32						
RDMU	Red Mountain	84.05	46	P	P	06 18 59.2	+0.9
BERE	Bereket-Mersin	84.07	309	P	P	06 18 58.6	+0.3
NEE2	Needles Airpor	84.07	53	P	P	06 18 59.2	+1.1
	baz=304,SNR=7.5						
DRGR		84.09	322	⇓P	P	06 18 58.6	+0.4
BC3	Big Chuckawall	84.11	54	P	P	06 18 59.8	+1.3
	baz=303,SNR=27						
YLV	Yalova	84.11	314	P	P	06 18 58.5	+0.2
KECS	Kecovo	84.14	324	*e*P	P	06 18 59.0	+0.8
KECS				pmax	pmax		
	comp=Z,41nm,0.9s						
KECS	Kecovo	84.14	324	*e*P	P	06 18 59.0	+0.8
LANS	Liptovska Anna	84.19	325	*e*P	P	06 18 59.9	+1.3
LANS				pmax	pmax		
	comp=Z,15nm,0.7s						
LANS	Liptovska Anna	84.19	325	*e*P	P	06 18 59.9	+1.3
IKP	In-Ko-Pah, Jac	84.20	55	P	P	06 19 00.3	+1.3
	baz=303,SNR=17						
HDMB	Hadim	84.21	310	P	P	06 18 58.2	-0.9
CTYL	Yalikoy Yolu	84.23	315	P	P	06 18 58.5	-0.3
CTKS	Kestanelik-??a	84.24	315	P	P	06 18 59.1	+0.2
TEKE	Tekeli-Mersin	84.26	309	P	P	06 18 59.4	+0.3
GEMT	Gemlik	84.30	314	P	P	06 18 58.5	-0.7
YUH	Yuha Desert	84.33	55	P	P	06 18 59.9	+0.4
YUH				IAmb	IAmb	06 19 01.7	
	comp=Z,46nm,0.9s						
OKC	Ostrava-Krasne	84.37	326	*e*SKS	SKSac	06 29 10.7	+0.5
SEYD	Seydisehir-KON	84.38	310	P	P	06 19 00.3	+0.5
LOT	Lotru	84.38	321	⇓P	P	06 18 60.0	+0.3
COPA	Copaceanca	84.41	319	⇑P	P	06 19 00.6	+0.9
ARMT	Armutlu	84.43	314	P	P	06 19 00.0	+0.1
SLVT	Silivri	84.43	315	P	P	06 19 00.3	+0.5
LFK	Lefkose	84.46	308	P	P	06 19 00.4	+0.2
MDNY	Mudanya-Bursa	84.53	314	P	P	06 19 00.6	+0.3
SZH	Strazhica	84.53	318	P	P	06 19 02.2	+1.9
KSP	Ksiaz	84.53	328	*e*P	P	06 19 00.8	+0.6
KSP				*e*S	SKSac	06 29 06.4	-4.8
SHUT	Suhut-Afyon	84.55	312	P	P	06 19 01.2	+0.5
K22A	Casper	84.62	43	P	P	06 19 02.1	+1.1
	baz=308						
K22A	Casper	84.62	43	P	P	06 19 02.0	+1.0
	baz=308,SNR=20						
K22A				S	S	06 29 15.9	-1.0
	baz=308						
JMB	Yambol	84.65	317	P	P	06 19 02.1	+1.2
NUUK	Nuuk	84.65	5	*i* P	P	06 19 00.1	-0.3
NUUK				IAmb	IAmb	06 19 00.2	
	comp=Z,671nm,4.2s						
PDMCI	Parker Dam,Lak	84.66	53	P	P	06 19 02.4	+1.3
	baz=304,SNR=25						
MORC	Moravsky Berou	84.69	327	⇓P	P	06 19 01.3	+0.2
MORC	Moravsky Berou	84.69	327	*e*P	P	06 19 01.2	+0.2
TVSB	Tavsanli	84.71	313	P	P	06 19 01.7	+0.3
MMLI	Mount Malkishu	84.73	305	P	P	06 19 01.1	-0.5
OSTC	Ostas	84.77	328	*e*P	P	06 19 01.6	+0.2
OSTC				*e*SKS	SKSac	06 29 13.5	+0.7
CSS	Mathiatis	84.77	308	P	P	06 19 01.9	+0.2
CSS	Mathiatis	84.77	308	P	P	06 19 01.0	-0.7
CSS				IAmb	IAmb	06 19 05.1	
	comp=Z,94nm,0.8s						
PSZ	Piszkesteto	84.81	324	⇓P	P	06 19 02.0	+0.3
PSZ	Piszkesteto	84.81	324	P	P	06 19 01.6	-0.1
RWWY	Rawlins	84.81	44	P	P	06 19 02.0	-0.1
RWWY				IAmb	IAmb	06 19 03.2	
	comp=Z,72nm,0.8s						
CHVC	Chvalec	84.82	328	*e*P	P	06 19 02.0	+0.3
MAUC	Maruska	84.84	326	*e*P	P	06 19 02.3	+0.5
MAUC				*e*SKS	SKSac	06 29 15.9	+2.6
KRLC	Kraliky	84.84	327	*e*P	P	06 19 02.0	+0.2
KRLC				*e*		06 29 10.4	
KRLC	Kraliky	84.84	327	*e*P	P	06 19 02.0	+0.2
KRLC				*e*SKS	SKSac	06 29 10.4	-3.0
DPC	Dobruska-Polom	84.86	328	*e*P	P	06 19 02.1	+0.2
DPC				*e*		06 29 12.0	
DPC	Dobruska-Polom	84.86	328	*e*P	P	06 19 02.1	+0.2
DPC				*e*SKS	SKSac	06 29 12.0	-1.5
GLA	Glamis	84.88	54	P	P	06 19 03.8	+1.5
	baz=304						
UPC	Upice	84.90	328	*e*P	P	06 19 02.6	+0.6
UPC	Upice	84.90	328	*e*P	P	06 19 02.6	+0.6
VYHS	Vyhne	84.94	325	*e*P	P	06 19 03.1	+0.8
VYHS				pmax	pmax		
	comp=Z,34nm,0.9s						
VYHS	Vyhne	84.94	325	*e*P	P	06 19 03.1	+0.8
GZR	Gura Zlata	84.96	321	⇑P	P	06 19 02.6	+0.1
LEF	Lefka	84.98	308	P	P	06 19 02.6	-0.1
SIRR	Siria	84.99	322	⇑P	P	06 19 03.3	+0.7
ISP	Isparta	84.99	311	P	P	06 19 04.1	+1.2
MDND	Maddock	85.05	36	P	P	06 19 03.8	+1.0
	baz=312						
MDND	Maddock	85.05	36	P	P	06 19 03.8	+1.0
	baz=312,SNR=7.5						
KOLL	Kolacno	85.10	325	*e*P	P	06 19 03.9	+0.9
O20A	White River Ci	85.12	46	P	P	06 19 04.0	+0.4
O20A	White River Ci	85.12	46	P	P	06 19 04.8	+1.2
	baz=307,SNR=96						
RSSD	Black Hills	85.13	41	P	P	06 19 04.2	+0.7
	baz=309						
RSSD	Black Hills	85.13	41	P	P	06 19 04.1	+0.6
	baz=309						
RSSD				S	S	06 29 19.0	-3.0
	baz=309						
ULM	Lac du Bonnet	85.19	32	P	P	06 19 02.9	-0.5
	comp=Z,6.0nm,0.4s,baz=305,slow=5.4,SNR=11						
ULM				LR	LR	06 59 36.5	
	comp=Z,31nm,20.1s,baz=324,slow=37						
	comp=Z,6.0nm,0.4s						
ULM	Lac du Bonnet	85.19	32	P	P	06 19 02.9	-0.5
GZKV	Gazikoy-Tekird	85.25	315	P	P	06 19 04.9	+1.0
JAVC	Velka Javorina	85.26	326	*e*P	P	06 19 05.3	+1.4
E28A	Huff	85.34	37	P	P	06 19 04.9	+0.5
	baz=311						
RKY	Sarkoy-Tekirda	85.38	315	P	P	06 19 04.7	0.0
BZS	Buzias	85.43	322	⇓P	P	06 19 04.4	-0.4
VRAC	Vranov	85.47	327	LR	LR	06 58 49.9	
	comp=Z,184nm,18.3s,baz=60,slow=37						
VRAC	Vranov	85.47	327	*e*P	P	06 19 05.2	+0.3
HERR	Herculane	85.48	321	⇑P	P	06 19 05.0	0.0
KRBG	Karabiga-Canak	85.48	315	P	P	06 19 06.4	+1.3
DIM	Dimitrovgrad	85.52	317	P	P	06 19 05.8	+0.6
PVCC	Panska Ves	85.53	329	*e*P	P	06 19 05.9	+0.7
PVCC	Panska Ves	85.53	329	*e*P	P	06 19 05.9	+0.7
BRG	Berggiesshubel	85.57	329	*e*P	P	06 19 05.5	+0.2
BRG				Amp		06 19 08.6	
	comp=Z,22nm,0.8s						
BRG				*e*x	x	06 19 27.3	
BRG				Amp		06 19 29.7	
	comp=Z,8.0nm,0.8s						
BRG				PP	PP	06 22 24.1	-1.0
BRG				Amp		06 22 27.1	
	comp=Z,9.1nm,1.0s						
BRG	Berggiesshubel	85.57	329	SS	SS	06 34 53.0	-10
BRG				Amp		07 04 18.0	
	comp=Z,0.3nm,13.7s						
BRG				Amp		07 04 20.0	
	comp=N,0.2nm,13.1s						
BRG				Amp		07 04 21.0	
	comp=E,0.2nm,15.4s						
BRG	Berggiesshubel	85.57	329	*e*P	P	06 19 05.5	+0.2
BRG						06 22 24.0	
BRG				S	SKSac	06 29 18.0	+0.2
BRG				SS	SPn	06 30 21.0	+0.2
BRG				pmax	pmax		
	comp=Z,22nm,0.8s						
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,320nm,13.7s						
SMOL	Smolenice	85.62	326	*e*P	P	06 19 06.7	+1.1
SMOL				pmax	pmax		
	comp=Z,30nm,0.9s						
SMOL	Smolenice	85.62	326	*e*P	P	06 19 06.6	+1.0
PV23	Carpenter Ridg	85.65	47	P	P	06 19 07.2	+0.8
CLL	Collm	85.66	330	⇓*i*P	P	06 19 05.6	-0.2
CLL				*e**PP	pP	06 19 43.0	+2.9
CLL				*e*		06 29 17.0	
CLL				*e*S	SKKSac	06 29 24.0	-1.6
CLL				pmax	pmax		
	comp=Z,49nm,1.1s						
CLL	Collm	85.66	330	⇓*i*P	P	06 19 05.6	-0.2
	comp=Z,49nm,1.1s						
CLL				*e*(pP)	pP	06 19 43.0	+2.9
CLL				*e*PP	PP	06 22 26.0	+0.2
	comp=Z,14nm,1.2s						
CLL				*e*pPP		06 23 00.0	
CLL				*e*PPP	PPP	06 24 18.0	
CLL				*e*SKSac	SKSac	06 29 17.0	-1.3
CLL				*e*S	SKKSac	06 29 24.0	-1.6
CLL				*e*pS	pS	06 30 17.0	+7.6
CLL				*e*PPS	PPS	06 31 06.0	
CLL				*e*SS	SS	06 35 00.0	-4.4
CLL				*e*SSS	SSS	06 38 30.0	
CLL				*e*x	x	06 40 30.0	
CLL				LmV		07 01 00.0	
	comp=Z,200nm,18.8s						
MPEP	Malo Peshtene	85.73	319	P	P	06 19 06.7	+0.4
KRUC	Moravsky	85.73	327	*e*P	P	06 19 06.3	+0.1
KULA	Kula-Manisa	85.77	313	P	P	06 19 06.4	-0.3
113A	Mohawk Valley,	85.77	54	P	P	06 19 07.3	+0.6
113A				IAmb	IAmb	06 19 09.3	
	comp=Z,59nm,0.8s						
MODS	Modra-Piesok	85.79	326	*e*P	P	06 19 07.2	+0.7
MODS				pmax	pmax		
	comp=Z,83nm,1.1s						
MODS	Modra-Piesok	85.79	326	*e*P	P	06 19 07.2	+0.7
KDZ	Kurdzhali	85.83	317	P	P	06 19 07.7	+0.9
WUAZ	Wupatki	85.84	51	P	P	06 19 08.6	+1.4
	baz=305,SNR=32						
WUAZ				S	S	06 29 24.2	-5.0
	baz=305						
PV07	Paradox Valley	85.89	47	P	P	06 19 08.2	+0.8
MDVR	Moldovita	85.93	321	⇓P	P	06 19 06.8	-0.4
PRU	Pruhonice	85.93	328	*e*P	P	06 19 06.6	-0.5
PRU				*e*		06 29 27.9	
PRU				MLR	MLR		
	comp=Z,300nm,15.5s						
PRU	Pruhonice	85.93	328	*e*P	P	06 19 06.6	-0.5
PRU				*e*SKS	S	06 29 27.9	-1.2
PRU				AMS	AMS	07 00 50.0	
	comp=Z,300nm,15.5s						
PLD	Plovdiv	85.97	318	P	P	06 19 08.5	+1.1
TAOE	Nuku Hiva Isla	85.97	103	*e*LR	LR	06 45 23.7	
	comp=Z,690nm,37.0s						
TREC	Trest	85.99	327	*e*P	P	06 19 07.7	+0.2
TREC	Trest	85.99	327	*e*P	P	06 19 07.7	+0.2
ZST	Bratislava	85.99	326	*e*P	P	06 19 08.9	+1.4
ZST	Bratislava	85.99	326	*e*P	P	06 19 08.9	+1.4
CSKK	Cskako	86.00	325	P	P	06 19 07.6	+0.1
N23A	Red Feather La	86.05	44	P	P	06 19 10.0	+1.8
	baz=308,SNR=49						
N23A				S	S	06 29 32.8	+1.6
	baz=308						
PHWY	Pilot Hill	86.08	43	P	P	06 19 09.2	+0.8
BLKB	Belogradchik	86.15	320	⇑P	P	06 19 08.4	0.0
RZN	Rozhen	86.22	317	P	P	06 19 09.4	+0.4
VTS	Vitosha	86.48	319	⇓P	P	06 19 10.4	+0.2
VTS	Vitosha	86.48	319	P	P	06 19 10.0	-0.2
VTS				IAmb	IAmb	06 19 12.3	
	comp=Z,38nm,0.8s						
VTS	Vitosha	86.48	319	P	P	06 19 10.0	-0.2
VTS				pmax	pmax		
	comp=Z,38nm,0.8s						
VTS	Vitosha	86.48	319	P	P	06 19 10.1	-0.1
TBI	Tubuai	86.56	120	*e*LR	LR	06 46 19.6	
	comp=Z,1µm,61.0s,baz=303						
AGMN	Agassiz Nation	86.56	34	P	P	06 19 10.2	0.0
	baz=315						
AGMN	Agassiz Nation	86.56	34	P	P	06 19 10.2	0.0
	baz=315,SNR=13						
AGMN				S	S	06 29 31.0	-4.3
	baz=315						
MORH	Mrgy, Hungar	86.58	324	⇓*i*P	P	06 19 10.3	-0.1
MORH	Mrgy, Hungar	86.58	324	P	P	06 19 09.8	-0.6
AYDB	Zeytinkoy-Aydi	86.60	313	P	P	06 19 10.5	-0.3
EIL	Elat	86.60	303	LR	LR	07 02 51.4	
	comp=Z,90nm,18.7s,baz=81,slow=39						
EIL	Elat	86.60	303	P	P	06 18 58.1	-13
FETY	Fethiye	86.62	311	P	P	06 19 09.9	-0.9
BOVS	Bovan	86.68	320	⇑P	P	06 19 10.1	-0.8
NKC	Novy Kostel	86.69	329	*e*P	P	06 19 10.8	-0.1
NKC	Novy Kostel	86.69	329	*e*P	P	06 19 10.8	-0.1
FRGS	Fruska Gora	86.69	322	⇑P	P	06 19 11.3	+0.3
FRGS	Fruska Gora	86.69	322	⇓*i*P	P	06 19 10.2	-0.8
MVCO	Mesa Verde	86.71	48	P	P	06 19 12.5	+1.0
	baz=307,SNR=17						
RONA	Rosalia, Austr	86.73	326	*e*P	P	06 19 11.4	+0.2
	SNR=7.5						
CONA	Conrad Observa	86.78	326	*e*P	P	06 19 11.9	+0.5
	comp=Z,23nm,0.8s,SNR=16						
CONA				*e*P	PP	06 22 38.6	+3.5
	comp=Z,3.7nm,0.9s						
DALY	Dalyan (Mula)	86.79	312	P	P	06 19 10.8	-0.8
D32B	Dogwood Acres,	86.82	35	P	P	06 19 11.8	+0.3
	baz=314						
D32A	Dogwood Acres,	86.82	35	P	P	06 19 11.5	0.0
D32A				IAmb	IAmb	06 19 12.8	
	comp=Z,46nm,0.9s						
YER	Yerkesik	86.84	312	P	P	06 19 12.2	+0.3
MMB	Musomiste	86.86	318	P	P	06 19 11.7	-0.2
BLCB	Balcova	86.86	314	P	P	06 19 11.4	-0.5
CKRC	Cesky Krumlov	86.87	327	*e*P	P	06 19 11.6	-0.2
CKRC				*e*SKS	SKSac	06 29 23.1	-2.9
CKRC				AMS	AMS	07 01 40.0	
	comp=Z,300nm,14.7s						
214A	Organ Pipe Nat	86.90	54	P	P	06 19 13.6	+1.4
	baz=305,SNR=18						
214A				S	S	06 29 40.1	+0.9
	baz=305						
ISCO	Idaho Springs	86.92	45	P	P	06 19 13.6	+1.0
ISCO	Idaho Springs	86.92	45	P	P	06 19 13.6	+1.0
ISCO				pmax	pmax		
	comp=Z,16nm,0.9s						
ISCO	Idaho Springs	86.92	45	P	P	06 19 14.0	+1.4
	baz=308						
ISCO				S	S	06 29 40.8	+1.0
	baz=308						
ISCO	Idaho Springs	86.92	45	P	P	06 19 14.1	+1.5
	baz=308,SNR=34						
ISCO				S	S	06 29 40.0	+0.2
	baz=308						
KHC	Kasperske Hory	86.99	328	*e*P	P	06 19 12.4	0.0
KHC				MLR	MLR		
	comp=Z,500nm,15.4s						
KHC	Kasperske Hory	86.99	328	*e*P	P	06 19 12.4	0.0
KHC				AMS	AMS	07 01 20.0	
	comp=Z,500nm,15.4s						
KKB	Krupnik	87.05	318	P	P	06 19 12.2	-0.6
MLSB	Milas	87.06	312	P	P	06 19 13.2	+0.3
GERES	GERESS Array B	87.14	328	P	P	06 19 12.8	-0.4
	comp=Z,8.5nm,0.8s,baz=46,slow=5.8,SNR=67						
GERES				PKKPbc	PKKPbc	06 37 04.0	-0.1
	comp=Z,1.6nm,0.9s,baz=150,slow=2.9,SNR=8.1						
GERES				LR	LR	07 01 26.4	
	comp=Z,217nm,19.1s,baz=58,slow=38						
	comp=Z,8.5nm,0.8s						
GERES	GERESS Array B	87.14	328	P	P	06 19 12.8	-0.4
TEKS	Tekeris	87.25	322	*e*P	P	06 19 12.4	-1.3
DIVS	Divibare	87.30	321	⇓*i*P	P	06 19 13.4	-0.7
ARSA	Arzberg	87.42	326	*e*P	P	06 19 14.3	-0.2
	comp=Z,14nm,1.0s,SNR=7.5						
ARSA				*i* P	PP	06 22 43.5	+3.4
	comp=Z,2.5nm,0.6s						
S22A	4UR Ranch, Cre	87.44	47	P	P	06 19 16.7	+1.6
	baz=308,SNR=23						
S22A				S	S	06 29 46.6	+1.8
	baz=308						
B35A	Bob, Littlefor	87.52	33	P	P	06 19 15.3	+0.5
	baz=316,SNR=26						
B35A				S	S	06 29 39.8	-4.7
	baz=316						
MOA	Molln	87.59	327	*e*P	P	06 19 15.2	0.0
	comp=Z,11nm,1.1s						
SUSD	Miller	87.67	38	P	P	06 19 16.1	+0.4
SUSD	Miller	87.67	38	P	P	06 19 16.1	+0.4
	baz=313						
SUSD				S	S	06 29 44.0	-2.1
	baz=313						
SUSD	Miller	87.67	38	P	P	06 19 16.4	+0.6
	baz=313,SNR=12						
SUSD				S	S	06 29 44.1	-2.1
	baz=313						
VAY	Valandovo	87.70	318	*i* P	P	06 19 15.4	-0.5
Q24A	Divide	87.73	45	P	P	06 19 17.7	+1.2
	baz=309						
Q24A				S	S	06 29 47.9	+0.4
	baz=309						
BBLS	Lazići	87.77	321	⇑*i*P	P	06 19 16.5	+0.2
SJES	Sjenica	87.87	321	*e*P	P	06 19 11.8	-5.0
SKO	Skopje	87.92	319	*i* P	P	06 19 16.9	+0.1
RUDO	Rudo	87.96	321	*e*P	P	06 19 15.4	-1.7
BIOA	Bad Ischl, Aus	88.00	327	*e*P	P	06 19 17.0	-0.2
	SNR=7.7						
PERS	Pernice	88.05	326	*i* P	P	06 19 17.1	-0.4
PERS				IAMb		06 19 18.7	
	comp=Z,28nm,0.7s						
SOKA	Soboth	88.06	326	*i* P	P	06 19 17.3	-0.3
	comp=Z,24nm,0.6s,SNR=17						
F33A	5 Mile Ranch,	88.08	36	P	P	06 19 18.5	+0.9
	baz=314						
F33A				S	S	06 29 47.9	-2.0
	baz=314						
TUC	Tucson	88.10	53	P	P	06 19 19.1	+1.1
	baz=306						
SDCO	Great Sand Dun	88.27	46	P	P	06 19 20.4	+1.4
	baz=309						
SDCO				S	S	06 29 52.7	+0.1
	baz=309						
SDCO	Great Sand Dun	88.27	46	P	P	06 19 20.2	+1.1
	baz=309,SNR=22						
SDCO				S	S	06 29 53.6	+0.9
	baz=309						
OGNE	Ogallala	88.30	42	P	P	06 19 19.6	+0.8
	baz=311						
OGNE	Ogallala	88.30	42	P	P	06 19 19.6	+0.8
	baz=311,SNR=8.0						
BLY	Banja Luka	88.34	323	*e*P	P	06 19 18.6	-0.2
EKA	Eskdalemuir Ar	88.34	340	LR	LR	07 03 28.8	
	comp=Z,116nm,19.3s,baz=12,slow=38						
OBKA	Obir	88.41	326	*i* P	P	06 19 18.7	-0.6
	comp=Z,14nm,0.8s						
CRES	Cresnjev	88.46	325	⇑*i*P	P	06 19 18.1	-1.3
KBA	Koelnbreinsper	88.58	327	*e*P	P	06 19 19.4	-0.7
	comp=Z,9.1nm,0.6s,SNR=10						
KBA				*e*P	PP	06 22 51.4	+1.8
	comp=Z,12nm,1.1s						
MGRS	Mrkonjic Grad	88.62	323	⇑*i*P	P	06 19 20.8	+0.6
LJU	Ljubljana	88.76	325	⇓*i*P	P	06 19 19.7	-1.1
LJU	Ljubljana	88.76	325	*i* P	P	06 19 19.8	-1.1
LJU				IAMb		06 19 21.6	
	comp=Z,27nm,0.7s						
MYKA	Terra Mystica	88.76	326	*i* P	P	06 19 19.6	-1.3
	comp=Z,11nm,0.6s						
PDG	Podgorica	88.82	320	⇑P	P	06 19 20.9	-0.2
PDG	Podgorica	88.82	320	⇑*i*P	P	06 19 20.7	-0.4
EYMN	Ely	88.84	32	P	P	06 19 21.8	+0.6
	baz=318,SNR=45						
EYMN				S	S	06 29 53.0	-4.0
	baz=318						
EYMN	Ely	88.84	32	P	P	06 19 21.7	+0.6
	baz=318,SNR=45						
EYMN				S	S	06 29 52.8	-4.3
	baz=318						
OHR	Ohrid	88.84	319	*i* P	P	06 19 21.0	-0.3
K31A	O'Neill	89.02	39	P	P	06 19 22.8	+0.8
	baz=313						
K31A				S	S	06 29 57.8	-1.1
	baz=313						
CEY	Cerknica	89.03	325	⇓*i*P	P	06 19 20.9	-1.2
CEY	Cerknica	89.03	325	*i* P	P	06 19 21.3	-0.8
DRME	Dracevica, Mon	89.03	320	⇑*i*P	P	06 19 20.7	-1.4
BTNL	Ternell	89.05	333	*d*P	P	06 19 22.3	+0.2
	comp=Z,9.7nm,0.9s						
MEM	Membach	89.08	333	*d*P	P	06 19 22.5	+0.3
	comp=Z,12nm,0.9s						
ABTA	Abfaltersbach	89.21	327	*i* P	P	06 19 21.4	-1.6
	comp=Z,37nm,0.8s,SNR=22						
ABTA				*i* P	PP	06 22 53.1	-1.4
	comp=Z,5.8nm,1.4s						
KSCO	Kaye Shedlock’	89.21	44	P	P	06 19 23.9	+0.7
	baz=310,SNR=7.0						
WATA	Walderalm	89.21	328	*i* P	P	06 19 23.1	+0.1
	comp=Z,13nm,0.8s,SNR=5.9						
WATA				*e*P	PP	06 22 55.8	+1.3
	comp=Z,18nm,1.6s						
WTTA	Wattenberg	89.24	328	*e*P	P	06 19 22.7	-0.6
	comp=Z,15nm,1.0s,SNR=6.3						
WTTA				*i* P	PP	06 22 56.0	+1.2
	comp=Z,16nm,1.1s						
BSTI	Sart Tilman	89.28	333	*d*P	P	06 19 23.1	0.0
	comp=Z,4.4nm,0.8s						
BHOU	Houvegnez	89.28	333	*d*P	P	06 19 23.3	+0.1
	comp=Z,8.1nm,0.9s						
T25A	Trinidad	89.33	46	P	P	06 19 25.2	+1.3
	baz=309,SNR=32						
T25A				S	S	06 30 03.2	+0.7
	baz=309						
SKDS	Skadanscina	89.36	325	⇑*i*P	P	06 19 21.7	-2.0
ECSD	EROS Data Cent	89.39	37	P	P	06 19 24.4	+0.6
	baz=314,SNR=50						
ECSD				S	S	06 29 58.4	-3.8
	baz=314						
ECSD	EROS Data Cent	89.39	37	P	P	06 19 24.3	+0.6
	baz=314,SNR=50						
ECSD				S	S	06 29 58.9	-3.4
	baz=314						
ANMO	Albuquerque	89.40	49	LR	LR	06 53 49.9	
	comp=Z,323nm,21.3s,baz=310,slow=32						
ANMO	Albuquerque	89.40	49*c*	*i*P	P	06 19 24.7	+0.4
ANMO				pmax	pmax		
	comp=Z,18nm,1.0s						
ANMO	Albuquerque	89.40	49	P	P	06 19 25.3	+1.0
	baz=308,SNR=29						
ANMO	Albuquerque	89.40	49	P	P	06 19 25.4	+1.1
	baz=308						
F36A	Milaca	89.42	34	P	P	06 19 24.2	+0.3
	baz=316,SNR=14						
MOTA	Moosalm	89.42	328	*e*P	P	06 19 23.5	-0.6
	comp=Z,16nm,0.9s,SNR=11						
MOTA				*i* P	PP	06 22 56.5	+0.3
	comp=Z,8.0nm,0.8s						
SQTA	Sankt Quirin	89.47	328	*e*P	P	06 19 23.8	-0.5
	comp=Z,12nm,0.7s,SNR=6.9						
SQTA				*e*P	PP	06 22 56.5	0.0
	comp=Z,7.1nm,0.8s						
RETA	Reutte	89.47	328	*i* P	P	06 19 23.9	-0.3
	comp=Z,19nm,1.1s,SNR=8.1						
RETA				*i* P	PP	06 22 57.0	+0.5
	comp=Z,4.8nm,0.9s						
BCLA	Clavier	89.51	333	*d*P	P	06 19 24.1	-0.1
BGES	Gesves	89.62	333	*d*P	P	06 19 24.8	0.0
BGES				*d*PcP	PcP	06 19 26.1	+0.2
Y22A	Socorro	89.69	50	P	P	06 19 26.9	+1.3
	baz=308,SNR=12						
RCHB	Rochefort	89.75	333	*d*P	P	06 19 24.9	-0.3
WLF	Walferdange	89.77	332	*d*PcP	PcP	06 19 26.5	-0.1
E38A	The Farm, Brul	89.81	33	P	P	06 19 25.4	-0.3
E38A				IAmb	IAmb	06 19 27.1	
	comp=Z,62nm,0.8s						
E38A	The Farm, Brul	89.81	33	P	P	06 19 26.1	+0.5
	baz=318,SNR=57						
BMRD	Maredsous	89.81	333	*d*PcP	PcP	06 19 26.2	-0.5
FETA	Feichten	89.83	328	*i* P	P	06 19 25.6	-0.4
	comp=Z,30nm,1.0s,SNR=17						
121A	Cookes Peak, D	90.00	51	P	P	06 19 27.6	+0.5
121A	Cookes Peak, D	90.00	51	P	P	06 19 28.6	+1.6
	baz=307,SNR=18						
121A	Cookes Peak, D	90.00	51	P	P	06 19 28.7	+1.6
	baz=307,SNR=18						
DAVA	Damuels	90.02	329	*i* P	P	06 19 26.6	-0.2
	comp=Z,51nm,1.1s,SNR=15						
DOU	Dourbes	90.04	333	*d*P	P	06 19 26.8	+0.2
DOU				*d*PcP	PcP	06 19 28.0	+0.2
BGNE	Belgrade	90.17	40	P	P	06 19 27.8	+0.3
	baz=313,SNR=6.8						
BGNE				S	S	06 30 09.0	-0.7
	baz=313						
BGNE	Belgrade	90.17	40	P	P	06 19 27.9	+0.3
	baz=313,SNR=6.8						
BGNE				S	S	06 30 08.7	-1.0
	baz=313						
SPMN	Marine on St.	90.23	34	P	P	06 19 28.4	+0.7
	baz=317,SNR=14						
SPMN				S	S	06 30 06.2	-3.7
	baz=317						
SPMN	Marine on St.	90.23	34	P	P	06 19 28.3	+0.7
	baz=317,SNR=14						
L34A	Svendsen Farm,	90.75	38	P	P	06 19 30.8	+0.7
	baz=314,SNR=9.4						
D41A	Chassel	90.81	31	P	P	06 19 31.2	+0.9
	baz=320,SNR=21						
D41A				S	S	06 30 12.5	-2.8

	baz=320						
I37A	Lemond, Waseca	90.82	35	P	P	06 19 31.0	+0.6
I37A				IAmb	IAmb	06 19 34.3	
	comp=Z,48nm,0.9s						
I37B	Waseca	90.82	35	P	P	06 19 31.4	+1.0
	baz=316,SNR=17						
I37B				S	S	06 30 12.3	-3.1
	baz=316						
N33A	J Bar K, Exete	91.02	40	P	P	06 19 31.5	0.0
N33A				IAmb	IAmb	06 19 33.3	
	comp=Z,42nm,0.9s						
CBKS	Cedar Bluff	91.04	42	P	P	06 19 31.9	+0.4
	baz=312,SNR=8.9						
CBKS	Cedar Bluff	91.04	42	P	P	06 19 32.0	+0.4
	baz=312,SNR=8.9						
COWI	Conover	91.29	32	P	P	06 19 33.0	+0.4
	baz=320						
SCHQ	Schefferville	91.42	15	P	P	06 19 33.5	+0.5
	comp=Z,7.6nm,0.9s,baz=341,slow=5.2,SNR=12						
SCHQ				LR	LR	07 05 33.2	
	comp=Z,62nm,18.4s,baz=358,slow=39						
	comp=Z,7.6nm,0.9s						
G40A	Rib Lake	91.43	33	P	P	06 19 34.0	+0.7
	baz=319,SNR=18						
ZCCA	Zocca	91.71	326	P	P	06 19 35.0	+0.4
ZCCA				IAmb	IAmb	06 19 41.0	
	comp=Z,20nm,0.8s						
R32A	Long Quarter,	91.89	42	P	P	06 19 36.1	+0.5
	baz=313,SNR=6.1						
N35A	Tabor	91.92	39	P	P	06 19 36.3	+0.8
N35A	Tabor	91.92	39	P	P	06 19 36.5	+0.9
	baz=315,SNR=6.6						
E43A	Lone Tree Farm	92.03	30	P	P	06 19 36.8	+0.8
	baz=321,SNR=25						
MNTX	Cornudas Mount	92.12	51	P	P	06 19 38.0	+1.3
	baz=309,SNR=46						
MNTX	Cornudas Mount	92.12	51	P	P	06 19 38.0	+1.3
	baz=309,SNR=46						
K38A	Parkersburg	92.13	36	P	P	06 19 37.2	+0.7
	baz=317						
I40A	Norwalk	92.27	34	P	P	06 19 37.6	+0.5
	baz=318						
MSTX	Muleshoe	92.38	48	P	P	06 19 38.5	+0.5
	baz=310						
MSTX	Muleshoe	92.38	48	P	P	06 19 38.7	+0.7
	baz=310						
SCIA	State Center	92.44	37	P	P	06 19 38.7	+0.7
SCIA				IAmb	IAmb	06 19 40.2	
	comp=Z,36nm,0.8s						
SCIA	State Center	92.44	37	P	P	06 19 39.1	+1.1
	baz=316,SNR=8.4						
SCIA	State Center	92.44	37	P	P	06 19 39.1	+1.1
	baz=316,SNR=8.4						
AMTX	Amarillo	92.47	46	P	P	06 19 39.7	+1.3
	baz=311,SNR=36						
AMTX	Amarillo	92.47	46	P	P	06 19 39.8	+1.3
	baz=311						
KSU1	Kansas State U	92.62	41	P	P	06 19 39.0	+0.1
KSU1	Kansas State U	92.62	41	P	P	06 19 39.3	+0.4
	baz=314,SNR=21						
KSU1	Kansas State U	92.62	41	P	P	06 19 39.4	+0.6
	baz=314,SNR=21						
I42A	Draeger Farm,	93.08	33	P	P	06 19 41.5	+0.7
	baz=320,SNR=12						
U32A	Winter Ranch,	93.11	44	P	P	06 19 42.7	+1.5
	baz=313						
H43A	Windswept, Lux	93.16	32	P	P	06 19 41.5	+0.2
	baz=320,SNR=5.6						
E46A	Sault Ste Mari	93.18	29	P	P	06 19 42.2	+0.9
	baz=323						
JFWS	Jewell Farm	93.18	34	P	P	06 19 41.7	+0.4
	baz=319,SNR=8.1						
JFWS	Jewell Farm	93.18	34	P	P	06 19 41.5	+0.2
	baz=319,SNR=8.1						
N38A	Joes South For	93.24	38	P	P	06 19 42.2	+0.5
	baz=316,SNR=6.1						
LPIG	La Paz	93.24	59	LR	LR	06 55 41.5	
	comp=Z,165nm,19.6s,baz=242,slow=32						
L40A	Anamosa	93.34	36	P	P	06 19 42.6	+0.5
	baz=318,SNR=16						
G45A	Suttons Bay	93.66	31	P	P	06 19 44.2	+0.7
	baz=322						
G45A				P	P	06 19 44.2	+0.7
	baz=322						
P38A	Dawn	93.93	38	P	P	06 19 45.4	+0.5
	baz=316,SNR=18						
L42A	Oliver, Polo	94.15	35	P	P	06 19 45.8	0.0
	baz=319						
I45A	Fountain	94.19	31	P	P	06 19 47.2	+1.2
	baz=322						
I45A				P	P	06 19 47.2	+1.2
	baz=322						
T35B	Sooner Cattle	94.19	42	P	P	06 19 46.9	+0.7
	baz=314,SNR=10						
K43A	Burlington	94.26	33	P	P	06 19 46.2	-0.1
	baz=320						
GLMI	Grayling	94.28	30	P	P	06 19 47.3	+1.0
	baz=323						
GLMI	Grayling	94.28	30	P	P	06 19 47.4	+1.0
	baz=323,SNR=5.8						
WMOK	Wichita Mounta	94.35	45	P	P	06 19 47.3	+0.3
	baz=313						
WMOK	Wichita Mounta	94.35	45	P	P	06 19 47.6	+0.7
	baz=313						
N41A	Harden Midland	94.53	36	P	P	06 19 48.1	+0.5
	baz=318,SNR=6.3						
TX31	Lajitas Ar. Si	94.75	52	P	P	06 19 50.0	+1.0
TX31	Lajitas Ar. Si	94.75	52	P	P	06 19 50.6	+1.6
	baz=310,SNR=119						
TXAR	Lajitas Array	94.75	52	P	P	06 19 50.4	+1.4
	comp=Z,44nm,0.8s,baz=295,slow=3.1,SNR=294						
TXAR				LR	LR	06 56 42.0	
	comp=Z,220nm,20.7s,baz=319,slow=32						
TXAR	Lajitas Array	94.75	52	P	P	06 19 50.4	+1.4
TXAR	Lajitas Array	94.75	52	P	P	06 19 50.4	+1.4
P40A	Paris	94.78	38	P	P	06 19 49.5	+0.7
	baz=317,SNR=16						
ABTX	Abilene, Hawle	95.23	47	P	P	06 19 52.0	+0.9
	baz=312						
TUL1	Leonard	95.31	42	P	P	06 19 51.9	+0.7
	baz=315,SNR=7.4						
TUL1	Leonard	95.31	42	P	P	06 19 51.9	+0.7
	baz=315,SNR=7.4						
HDIL	Hopedale	95.43	35	P	P	06 19 52.1	+0.5
	baz=319,SNR=6.7						
HDIL	Hopedale	95.43	35	P	P	06 19 52.2	+0.5
	baz=319,SNR=6.7						
S39A	Bolivar	95.44	40	P	P	06 19 51.6	-0.2
	baz=316,SNR=13						
R40A	Maddies Statio	95.57	39	P	P	06 19 52.5	+0.1
	baz=317,SNR=21						
L46A	Eue Claire	95.75	33	P	P	06 19 53.5	+0.4
	baz=321						
L46A				P	P	06 19 53.5	+0.4
	baz=321						
P43A	Skaggs, Pawnee	96.00	36	P	P	06 19 55.0	+0.6
	baz=319						
HHAR	Hobbs	96.11	41	P	P	06 19 54.8	-0.1
	baz=316						
Z35A	Perchaven, San	96.23	45	P	P	06 19 56.2	+0.7
	baz=314,SNR=11						
CCM	Cathedral Cave	96.29	38	P	P	06 19 56.0	+0.4
	baz=318,SNR=18						
CCM	Cathedral Cave	96.29	38	P	P	06 19 55.9	+0.2
	baz=318						
X37A	Clayton	96.48	43	P	P	06 19 57.1	+0.5
	baz=315,SNR=5.6						
JCT	Junction City	96.56	49	P	P	06 19 57.5	+0.4
	baz=312,SNR=6.3						
JCT	Junction City	96.56	49	P	P	06 19 57.6	+0.5
	baz=312,SNR=6.3						
SADO	Sadowa	96.56	27	LR	LR	07 08 10.7	
	comp=Z,38nm,19.3s,baz=34,slow=38						
SFIN	Lafayette	96.64	34	P	P	06 19 57.6	+0.5
	baz=321						
SFIN	Lafayette	96.64	34	P	P	06 19 57.6	+0.5
	baz=321						
L48A	N Adams	96.66	32	P	P	06 19 58.0	+0.7
	baz=323						
L48A				P	P	06 19 58.0	+0.7
	baz=323						
U40A	Yellville	96.66	40	P	P	06 19 57.6	+0.2
	baz=316,SNR=11						
U40A				P	P	06 19 57.6	+0.2
	baz=316,SNR=11						
U40A	Yellville	96.66	40	P	P	06 19 57.5	+0.1
	baz=316,SNR=11						
FVM	French Village	96.78	38	P	P	06 19 58.3	+0.4
	baz=318						
N47A	Urbana	96.92	33	P	P	06 19 58.6	+0.2
	baz=322						
N47A				P	P	06 19 58.6	+0.2
	baz=322						
W39A	Magazine	96.97	42	P	P	06 19 58.9	+0.2
	baz=316						
WHTX	Lake Whitney,	97.03	46	P	Pdif	06 20 00.0	+0.9
	baz=313						
P46A	Rosedale	97.17	35	P	Pdif	06 20 00.4	+0.7
	baz=321						
MIAR	Mount Ida	97.56	42	P	Pdif	06 20 01.6	+0.2
MIAR				IAmb	IAmb	06 20 03.9	
	comp=Z,20nm,0.9s						
MIAR	Mount Ida	97.56	42	P	Pdif	06 20 01.6	+0.1
MIAR				pmax	pmax		
	comp=Z,20nm,1.0s						
MIAR	Mount Ida	97.56	42	P	Pdif	06 20 02.1	+0.6
	baz=316,SNR=13						
MIAR	Mount Ida	97.56	42	P	Pdif	06 20 02.0	+0.5
	baz=316,SNR=13						
PBMO	Poplar Bluff	97.67	39	P	Pdif	06 20 02.5	+0.5
	baz=318						
W41B	Gary Mavity, V	97.86	41	P	Pdif	06 20 03.2	+0.4
	baz=317						
X40A	Basin Creek Fa	98.02	42	P	Pdif	06 20 04.0	+0.4
	baz=316						
ACSO	Alum Creek Sta	98.68	32	P	Pdif	06 20 06.8	+0.4
	baz=324						
KEST	Kesra	98.98	321	P	Pdif	06 20 08.4	+0.4
	comp=Z,6.8nm,0.8s,baz=39,slow=6.5,SNR=4.6						
	comp=Z,6.8nm,0.8s						
T47A	Sharon Grove	99.25	36	P	Pdif	06 20 09.9	+0.9
	baz=320						
O53A	New Philadelph	99.46	31	P	Pdif	06 20 10.3	+0.4
	baz=325						
Q51A	Peebles	99.48	33	P	Pdif	06 20 10.3	+0.3
	baz=323						
Q51A				P	Pdif	06 20 10.3	+0.3
	baz=323						
ESDC	Sonseca Array	102.07	332	P	Pdif	06 20 20.9	-0.7
	comp=Z,0.6nm,0.7s,baz=14,slow=4.3,SNR=5.6						
ESDC				PKKPbc	PKKPbc	06 36 25.2	+0.5
	comp=Z,1.4nm,1.0s,baz=252,slow=2.9,SNR=6.5						
ESDC	Sonseca Array	102.07	332		PKKPdf	06 36 25.2	-4.8
CMLA	Cha da Macela	110.22	348	*i* PKIKP	PKiKP	06 24 58.2	-0.2
TORD	Torodi Ar. Bea	120.52	311	PKP	PKPdf	06 25 18.4	-0.2
	comp=Z,2.5nm,0.4s,baz=58,slow=1.0,SNR=57						
TORD				PKKPbc	PKKPab	06 35 26.1	-1.8
	comp=Z,3.2nm,0.9s,baz=228,slow=3.3,SNR=11						
QSPA	South Pole Qui	120.80	180	PKP	PKPdf	06 25 17.6	0.0
QSPA				SKP	SKPdf	06 28 39.7	-0.6
	comp=Z,13nm,1.0s,baz=63,slow=0.9,SNR=5.2						
BOSA	Boshof	124.04	255	PKP	PKiKP	06 25 25.4	0.0
	comp=Z,5.7nm,0.7s,baz=87,slow=2.1,SNR=17						
BOSA	Boshof	124.04	255	PKIKP	PKiKP	06 25 25.4	0.0
UREC	San Jos de Ur	128.60	47	*e*P	PKPdf	06 25 33.5	-0.6
DBBC	Dabeiba	128.72	49	*e*P	PKiKP	06 25 36.4	+1.2
ZARC	Zaragoza, Cauc	129.22	47	*e*P	PKiKP	06 25 35.8	-0.3
OCAC	Ocana	129.59	45	*e*P	PKPdf	06 25 33.7	-2.6
DBIC	Dimbokro	129.61	312	PKP	PKiKP	06 25 36.5	-0.3
	comp=Z,5.6nm,0.5s,baz=34,slow=3.2,SNR=10						
DBIC				SKPbc	SKPab	06 28 42.5	-2.4
	comp=Z,33nm,0.8s,baz=44,slow=4.8,SNR=17						
DBIC	Dimbokro	129.61	312		PKiKP	06 25 36.5	-0.3
DBIC	Dimbokro	129.61	312	PKIKP	PKiKP	06 25 36.5	-0.3
CBOC	Ciudad Bolivar	129.72	49	*e*P	PKiKP	06 25 36.9	-0.4
TIC	Toumodi	129.73	312	*e*PKIKP	PKiKP	06 25 37.5	+0.4
	comp=Z,7.8nm,0.3s						
KIC	Kosan Boka	129.77	312	*e*PKIKP	PKiKP	06 25 36.9	-0.3
	comp=Z,8.7nm,0.4s						
LIC	Lamto	130.06	312	*e*P	PKPdf	06 25 36.7	-0.2
	comp=Z,44nm,1.8s						
PTBC	PUERTO BERRIO,	130.21	47	*e*P	PKPdf	06 25 35.8	-1.4
BRRC	Barranca, Sant	130.23	46	*e*P	PKiKP	06 25 38.1	0.0
PLMC	San Jos del P	130.26	51	*e*P	PKPdf	06 25 37.1	-0.3
SDV	Santo Domingo	130.65	42	*e*P	PKPdf	06 25 36.8	-1.5
SDV	Santo Domingo	130.65	42	*e*P	PKPdf	06 25 38.6	+0.3
YOTC	Yotoco, Valle	130.90	51	*e*P	PKPdf	06 25 37.7	-1.0
BARC	Barichara	130.96	46	*e*P	PKiKP	06 25 40.3	+0.5
SPBC	San Pablo de B	131.13	48	*e*P	PKPdf	06 25 38.5	-0.6
RUSC	La Rusia	131.56	46	*e*P	PKPdf	06 25 39.2	-1.2
ROSC	El Rosal	131.59	49	PKP	PKiKP	06 25 41.1	-0.2
	comp=Z,2.9nm,0.3s,baz=208,slow=1.6,SNR=5.7						
ROSC				SKPbc	SKPbc	06 28 53.0	-0.2
	comp=Z,6.0nm,0.6s,baz=174,slow=20,SNR=2.2						
ROSC	El Rosal	131.59	49	PKIKP	PKiKP	06 25 41.1	-0.2
ORTC	Ortega, Tolima	131.68	50	*e*P	PKPpre	06 25 27.8	
OTAV	Otavalo	132.10	57	*e*P	PKiKP	06 25 42.3	-0.2
CHIC	Chingaza	132.13	48	*e*P	PKPdf	06 25 40.8	-0.6
TROLL	Troll, Antarti	133.17	197	PKPdf	PKiKP	06 25 42.2	-0.2
TROLL	Troll, Antarti	133.17	197	SKPbc	SKPbc	06 28 56.1	-0.4
SNAA	Sanae	134.67	196	PKPdf	PKPdf	06 25 43.9	-0.1
SNAA	Sanae	134.67	196	SKPbc	SKPbc	06 29 01.4	0.0
SNAA	Sanae	134.67	196	SKPbc	SKPbc	06 29 01.3	0.0
	comp=Z,35nm,1.1s,baz=110,slow=3.8,SNR=5.6						
VNA2	Neumayer--Watz	136.24	195	PKPdf	PKPdf	06 25 46.8	0.0
	baz=103,slow=1.0						
VNA2	Neumayer--Watz	136.24	195	SKPbc	SKPbc	06 29 05.9	-0.3
VNA3	Neumayer Olymp	136.48	194	PKPdf	PKPdf	06 25 47.7	+0.5
VNA3	Neumayer Olymp	136.48	194	SKPbc	SKPbc	06 29 06.1	-0.8
VNA1	Neumayer--Stat	136.63	195	PKPdf	PKPdf	06 25 47.5	0.0
VNA1	Neumayer--Stat	136.63	195	SKPbc	SKPbc	06 29 07.1	-0.2
ATAH	Atahualpa	137.00	65	PKP	PKPdf	06 25 51.3	+0.9
	comp=Z,11nm,1.0s,baz=236,slow=7.3,SNR=4.5						
ATAH				SKPbc	SKPbc	06 29 10.9	+0.1
	comp=Z,4.4nm,0.8s,baz=312,slow=10,SNR=4.6						
ATAH	Atahualpa	137.00	65		PKPdf	06 25 51.3	+0.9
ATAH					SKPbc	06 29 10.9	+0.1
NNA	Nana	141.12	69	PKhKP	PKPpre	06 25 50.1	
	comp=Z,11nm,0.7s,baz=230,slow=18,SNR=4.0						
NNA				SKPbc	SKPbc	06 29 21.6	0.0
	comp=Z,7.9nm,0.7s,baz=315,slow=7.1,SNR=2.9						
BOAV	Boa Vista	141.45	34	*e*P	PKPdf	06 25 59.0	+0.9
ESPZ	Base Esperanza	145.88	166		PKPdf	06 26 02.9	-1.3
MACA	Manacapuru-AM	146.11	39	*e*P	PKPbc	06 26 07.0	-0.4
H03N2	Juan Fernandez	147.15	105	T	T	09 11 11.9	
	baz=281,slow=75,SNR=5.2						
H03N3	Juan Fernandez	147.16	105	T	T	09 10 59.1	
	baz=281,slow=75,SNR=5.2						
H03N1	Juan Fernandez	147.17	105	T	T	09 10 41.3	
	baz=281,slow=75,SNR=6.1						
MCPB	Macapa, AP	147.43	23	*e*P	PKPdf	06 26 09.6	+1.2
ETMB	Extrema	147.79	55	*e*P	PKPdf	06 26 09.6	+0.6
MALB	Monte Alegre	148.00	28	*e*P	PKPbc	06 26 12.3	-0.3
USHA	Ushuaia	148.81	148	PKPbc	PKiKP	06 26 14.1	-0.6
	comp=Z,113nm,0.8s,baz=261,slow=1.3,SNR=34						
ITTB	Itaituba	149.63	32	*e*P	PKPdf	06 26 13.0	+1.0
TMAB	Tom-Au,PA,Br	150.48	16	*e*P	PKPdf	06 26 13.6	+0.3
LPAZ	La Paz	150.49	67	PKPbc	PKiKP	06 26 20.0	-0.1
	comp=Z,101nm,0.8s,baz=13,slow=5.5,SNR=85						
LPAZ	La Paz	150.49	67	PKIKP	PKiKP	06 26 20.0	-0.1
LPAZ	La Paz	150.49	67	*e*P	PKPdf	06 26 15.6	+1.6
LPAZ	La Paz	150.49	67	*e*P	PKPdf	06 26 14.6	+0.6
ROSB	Rosrio	151.74	9	*e*P	PKPdf	06 26 16.0	+0.7
LVC	Limon Verde	152.97	79	PKPbc	PKiKP	06 26 25.8	+1.0
	comp=Z,12nm,0.8s,baz=296,slow=2.6,SNR=13						
LVC				PKPab	PKPab	06 26 38.8	+2.4
	comp=Z,31nm,0.9s,baz=304,slow=3.6,SNR=15						
LVC	Limon Verde	152.97	79	PKIKP	PKiKP	06 26 25.8	+1.0
LVC	Limon Verde	152.97	79	*e*P	PKPdf	06 26 17.4	+0.2
NBPS	Pedro II - PI	153.46	3	*e*P	PKPdf	06 26 18.9	+1.0
PLCA	Paso Flores	153.58	120	PKPbc	PKiKP	06 26 26.0	+0.8
	comp=Z,9.4nm,0.8s,baz=229,slow=3.9,SNR=27						
PLCA				PKPab	PKPab	06 26 39.9	+1.7
	comp=Z,9.5nm,0.8s,baz=238,slow=5.4,SNR=11						
PLCA	Paso Flores	153.58	120	PKIKP	PKiKP	06 26 26.0	+0.8
PLCA	Paso Flores	153.58	120	*e*P	PKPdf	06 26 18.5	+1.2
PRPB	Parauapebas	153.62	22	*e*P	PKPdf	06 26 19.2	+1.2
VILB	Vilhena	154.13	50	*e*P	PKPdf	06 26 19.8	+1.1
RCBR	Riachuelo	154.61	350	*e*P	PKPdf	06 26 20.2	+0.8
NBPB	Pedra_Branca-C	154.63	359	*e*P	PKPdf	06 26 20.7	+1.2
CLDB	Colider	155.18	39	*e*P	PKPdf	06 26 20.5	+0.4
PDRB	Porto dos Gac	155.26	42	*e*P	PKPdf	06 26 20.5	+0.3
SIV	San Ignacio	155.65	57	PKP	PKPdf	06 26 22.3	+1.6
	comp=Z,1.0nm,0.6s,baz=257,slow=1.6,SNR=8.8						
SIV				PKPab	PKPab	06 26 47.9	+0.4
	comp=Z,8.1nm,0.8s,baz=289,slow=6.7,SNR=12						
NBMA	Muriti-CE	156.41	357	*e*P	PKPdf	06 26 23.3	+1.5
PTLB	Pontes e Lacer	156.64	53	*e*P	PKPdf	06 26 22.8	+0.8
SMTB	Santa Maria do	156.84	19	*e*P	PKPdf	06 26 22.9	+0.5
NBRF	Rio Formoso -	157.28	347	*e*P	PKPdf	06 26 23.6	+0.8
SNDB	Serra Nova Dou	158.36	31	*e*P	PKPdf	06 26 25.3	+1.1
NBAN	Anadia - AL	158.44	350	*e*P	PKPdf	06 26 25.4	+1.1
SALV	Santo Antonio	159.23	47	*e*P	PKPdf	06 26 25.9	+0.7
PEXB	Peixe	159.67	24	*e*P	PKPdf	06 26 26.3	+0.5
NBPN	Ponto Novo - B	159.90	0	*e*P	PKPdf	06 26 26.4	+0.4
NBLA	Lagarto - SE	159.94	354	*e*P	PKPdf	06 26 26.7	+0.7
SDBA	SAO DESIDERIO	160.92	15	*e*P	PKPdf	06 26 27.8	+0.6
GDU01	Guandu, BA	162.75	358	*e*P	PKPdf	06 26 29.5	+0.6
BDFB	Brasilia	163.02	27	PKPab	PKPab	06 27 18.6	-0.9
	comp=Z,7.8nm,0.8s,baz=329,slow=3.1,SNR=9.0						
BDFB	Brasilia	163.02	27	PKP2	PKPab	06 27 18.6	-0.9
BDFB	Brasilia	163.02	27	*e*P	PKPdf	06 26 30.0	+0.7
CPUP	Villa Florida	164.13	77	PKP	PKPdf	06 26 29.9	0.0
	comp=Z,3.7nm,1.0s,baz=225,slow=5.7,SNR=4.2						
CPUP				PKPab	PKPab	06 27 24.1	-0.1
	comp=Z,7.8nm,0.9s,baz=283,slow=5.8,SNR=7.2						
CPUP	Villa Florida	164.13	77	PKIKP	PKPdf	06 26 29.9	0.0
CPUP						06 27 24.2	
CPUP	Villa Florida	164.13	77	*e*P	PKPdf	06 26 30.7	+0.8
CMC01	Camacan, BA	164.38	358	*e*P	PKPdf	06 26 31.6	+1.2
IPMB	Ipameri, GO	165.03	32	*e*P	PKPdf	06 26 31.8	+0.7
TRCB	Terra Rica	166.10	57	*e*P	PKPdf	06 26 32.6	+0.9
PCMB	Pacaembu	166.25	50	*e*P	PKPdf	06 26 32.5	+0.6
NAN01	Guarapari, ES	166.86	0	*e*P	PKPdf	06 26 33.2	+0.8
DIAM	Diamantina, MG	166.89	15	*e*P	PKPdf	06 26 33.5	+0.9
SJMB	Sao Joao De Ma	167.67	5	*e*P	PKPdf	06 26 34.0	+1.0
RIB01	Linhares ES	168.32	2	*e*P	PKPdf	06 26 34.1	+0.7
PLTB	Pedras Altas	168.39	97	*e*P	PKPdf	06 26 34.3	+1.1
CPSB	Cacapava Do Su	168.46	90	*e*P	PKPdf	06 26 34.4	+1.2
FRTB	Fartura	168.58	50	*e*P	PKPdf	06 26 34.4	+0.9
ITAB	Concordia	168.78	73	*e*P	PKPdf	06 26 34.1	+0.6

JMA 21 06:08:29.7±0.1**,32°.8N**±0°.1×**130°.7E**±0°.2**,h11**^{km}**,MV2.4**/19**,**
NW KUMAMOTO PREF,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JIU3	Izumi3	0.25	166	*i* P	Pg	06 08 35.0	+0.2
JIU3				S	Sg	06 08 38.9	+0.7
JTA	Tamana	0.25	314	*i* P	Pg	06 08 35.0	+0.1

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*TIR **21** 06:23:34.7,41°.82N×19°.42E,h28^{km},Md2.9,Ml2.4*
*PDG **21** 06:23:34.4±0.1,41°.78N×19°.40E,h18^{km},MD2.5/1,*
ML2.5/10,Error ellipse: s-maj=0.3km s-min=0.4km az=0.0
*BEO **21** 06:23:35.4±0.4,41°.79N×19°.32E,h13^{km}±2^{km},ML2.2/10*
*RHSSO **21** 06:23:35.2±0.9,41°.80N×19°.45E,h11^{km}±2^{km},ML2.4/6*
*ATH **21** 06:23:38.0,41°.49N×19°.38E,h39^{km}±4^{km},ML2.0/2,Error*
ellipse: s-maj=8.4km s-min=2.2km az=9.0
ISC 21 06:23:35.0±0.9**,41°.79N**±0°.02×**19°.38E**±0°.02**,h16**^{km}±7^{km}**,**
n54,σ**0**^{s}**.78**/100**,7C-3D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ULC	Ulcinj	0.20	330	⇑ *i*Pg	Pg	06 23 39.0	-0.7
ULC				*i* Sg	Sg	06 23 43.5	+0.6
DRME	Dracevica, Mon	0.42	340	*e*Pg	Pg	06 23 43.1	-0.4
DRME				*e*Sg	Sb	06 23 50.4	+0.2
DRME	Dracevica, Mon	0.42	340	⇓ *i*Pg	Pg	06 23 43.1	-0.4
DRME				*i* Sg	Sg	06 23 50.1	+0.8
TIR	Tirane	0.57	140	*e*Pg	Pg	06 23 46.3	0.0
TIR				*e*Sg	Sn	06 23 56.2	-1.4
TIR	Tirane	0.57	140	P	Pb	06 23 46.6	-0.1
TIR				S	Sb	06 23 54.5	-0.1
TIR				AML	AML	06 23 57.5	
	comp=E,310µm,0.4s						
TIR				AML	AML	06 24 03.2	
	comp=N,328µm,0.2s						
TIR	Tirane	0.57	140	P	Pb	06 23 46.5	-0.1
	baz=144						
TIR				S	Sn	06 23 55.8	-1.8
	baz=144						
TIR				AMP			
	comp=E,0.2nm,0.4s,baz=144						
BUM	Brajici-Budva	0.62	325	⇓ *i*Pg	Pg	06 23 46.6	-0.7
BUM				*i* Sg	Sb	06 23 57.1	+1.0
PDG	Podgorica	0.65	352	*e*Pg	Pg	06 23 46.7	-1.0
PDG				*e*Sg	Sb	06 23 57.0	+0.3
PDG	Podgorica	0.65	352	*e*Pg	Pg	06 23 46.7	-1.0
PDG				*e*Sg	Sg	06 23 56.3	0.0
TTG	Podgorica	0.65	352	⇑ *i*Pg	Pg	06 23 46.7	-1.0
TTG				*i* Sg	Sb	06 23 57.4	+0.7
BCI	Bajram Curri	0.77	41	P	Pb	06 23 48.9	-1.2
	baz=40						
BCI				S	Sg	06 24 00.5	+0.2
	baz=40						
BCI				AMP			
	comp=N,0.7nm,0.4s,baz=40						
PHP	Peshkopia	0.80	97	P	Pb	06 23 50.1	-0.5
	baz=99						
PHP				S	Sg	06 24 01.7	+0.5
	baz=99						
PHP				AMP			
	comp=N,0.7nm,0.2s,baz=99						
CEME	Cevo	0.83	336	⇑ *i*Pg	Pb	06 23 49.7	-1.4
CEME				*i* Sg	Sn	06 24 03.9	-0.2
PVY	Plav	0.91	28	⇓ *i*Pg	Pb	06 23 51.3	-1.2
PVY				*i* Sg	Sn	06 24 05.5	-0.7
HCY	Herceg Novi	0.93	315	*e*Pg	Pb	06 23 52.2	-0.5
HCY				*e*Sg	Sg	06 24 06.1	+0.9
HCY	Herceg Novi	0.93	315	⇑ *i*Pg	Pb	06 23 52.0	-0.7
HCY				*i* Sg	Sn	06 24 07.3	+0.9
KOME	Kolasin	1.06	5	⇑ *i*Pg	Pb	06 23 54.4	-0.7
KOME				*i* Sg	Sg	06 24 11.3	+1.8
IVA	Berane	1.15	19	⇑ *i*Pg	Pn	06 23 55.5	-1.0
IVA				*i* Sg	Sg	06 24 13.8	+1.7
TREB	Trebinje	1.20	321	*e*Pg	Pb	06 23 57.7	+0.4
TREB				*e*Sg	Sg	06 24 14.5	+0.7
OHR	Ohrid	1.27	122	*e*Pg	Pb	06 23 58.4	-0.1
OHR				*e*Sg	Sg	06 24 17.3	+1.4
DBRK	Dubrovnik	1.27	314	*e*Pg	Pb	06 23 58.5	0.0
DBRK				Sg	Sg	06 24 16.8	+0.8
BRY	Bratogost	1.27	331	*e*Pg	Pn	06 23 57.9	-0.4
BRY				*e*Sg	Sg	06 24 16.3	+0.1
UPM	Unac-Piva	1.46	346	⇑ *i*Pg	Pn	06 24 01.2	+0.4
UPM				*i* Sg	Sg	06 24 22.3	+0.3
SJES	Sjenica	1.54	16	*e*Pg	Pb	06 24 03.4	+0.3
SJES				*e*Sg	Sg	06 24 24.9	+0.4
SJES	Sjenica	1.54	16	*e*Pg	Pb	06 24 02.7	-0.4
SJES				*e*Sg	Sb	06 24 23.2	+0.8
PLE	Pljevlja	1.54	0	*e*Pg	Pn	06 24 02.0	+0.1
PLE				*i* Sg	Sg	06 24 24.2	-0.4
STON	Ston	1.65	312	*e*Pn	Pn	06 24 03.7	+0.5
STON				*e*Sn	Sn	06 24 24.7	+0.6
STON	Ston	1.65	312	*e*Pn	Pn	06 24 03.7	+0.5
STON				*e*Sn	Sb	06 24 25.9	+0.4
STON	Ston	1.65	312	*e*Pn	Pn	06 24 03.3	+0.1
STON				Sn	Sb	06 24 25.3	-0.2
FNA	Florina	1.81	123	P	Pb	06 24 07.4	-0.3
FNA				S	Sb	06 24 30.0	-0.3
FNA				AML	AML	06 24 35.0	
	comp=N,108µm,0.4s						
FNA				AML	AML	06 24 36.3	
	comp=E,102µm,0.7s						
FNA	Florina	1.81	123	P	Pb	06 24 07.8	0.0
	baz=124						
FNA				S	Sg	06 24 31.9	-1.4
	baz=124						
RUDO	Rudo	1.83	360	*e*Pn	Pn	06 24 06.6	+0.8
RUDO				*e*Sn	Sb	06 24 29.6	-1.1
NEST	Nestorio	1.87	137	P	Pb	06 24 07.9	-0.8
IVAS	Ivanjica	1.88	17	*e*Pn	Pn	06 24 07.1	+0.6
IVAS				*e*Sn	Sb	06 24 31.4	-0.7
SELS	Selova	1.92	41	*e*Pn	Pn	06 24 08.2	+1.1
SELS				*e*Sn	Sb	06 24 32.6	-0.9
NOCI	Noci	2.01	241	P	Pb	06 24 11.7	+0.6
NOCI	Noci	2.01	241	P	Pb	06 24 11.0	-0.1
	baz=241						
BBLS	Lazići	2.08	1	*e*Pn	Pn	06 24 09.7	+0.5
BBLS				*e*Sn	Sn	06 24 35.1	+0.3
BBLS	Lazići	2.08	1	*e*Pn	Pn	06 24 10.2	+1.0
BBLS				*e*Sn	Sn	06 24 35.7	+0.9
BARS	Barje	2.08	60	*e*Pn	Pn	06 24 10.3	+1.1
LSTV	Lastovo	2.09	299	*e*Pn	Pn	06 24 09.2	-0.1
LSTV				Sn	Sn	06 24 34.7	-0.3
KEK	Kerkira	2.10	171	P	Pn	06 24 09.6	+0.1
DIVS	Divibare	2.35	11	*e*Pn	Pn	06 24 14.1	+1.1
DIVS				*e*Sn	Sn	06 24 42.7	+1.1
DIVS	Divibare	2.35	11	*e*Pn	Pn	06 24 13.8	+0.8
DIVS				*e*Sn	Sn	06 24 41.8	+0.2
IGT	Igoumenitsa	2.37	162	P	Pn	06 24 14.3	+1.2
RICI	Ricice	2.38	317	*e*Pn	Pn	06 24 13.6	+0.3
RICI				Sn	Sn	06 24 42.2	+0.1
BOSS	Bosilegrad	2.41	72	*e*Pn	Pn	06 24 14.9	+1.1

BOSS				*e*Sn	**Sn**	**06 24 44.3**	**+1.3**
TRUS	**Trudelj**	**2.55**	**17**	*e*Pn	**Pn**	**06 24 16.1**	**+0.5**
HVAR	**Hvar**	**2.57**	**304**	*e*Pn	**Pn**	**06 24 15.4**	**-0.5**
HVAR				Sn	**Sn**	**06 24 47.0**	**+0.1**
ZAGS	**Zajecar**	**2.92**	**45**	*e*Pn	**Pn**	**06 24 22.1**	**+1.4**
ZIRJ	**Zirje**	**3.32**	**305**	*e*Pn	**Pn**	**06 24 26.0**	**-0.2**
ZIRJ				Sn	**Sn**	**06 25 04.8**	**-0.6**
MORI	**Morici**	**3.41**	**309**	*e*Pn	**Pn**	**06 24 28.1**	**+0.7**
MORI				Sn	**Sn**	**06 25 06.8**	**-0.6**
DUGI	**Dugi Otok**	**3.86**	**306**	*e*Pn	**Pn**	**06 24 33.8**	**+0.1**
DUGI				Sn	**Sn**	**06 25 18.2**	**-0.6**
BRJN	**Brijuni**	**5.15**	**309**	*e*Pn	**Pn**	**06 24 51.9**	**+0.5**
BRJN				Sn	**Sn**	**06 25 49.2**	**-1.2**

WBNET 21 06:33:32.8, 50°.26N×12°.45E, h9^{km}, Ml0.1, 8C-13D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.03**	**281**	⇓P	Pg	06 33 34.0	-0.5
LBCW				S	Sg	06 33 35.3	-0.4
LBCW	**Luby**	**0.03**	**281**	⇓P	Pg	06 33 34.6	+0.2
LBCW				S	Sg	06 33 35.8	+0.1
NKC	**Novy Kostel**	**0.03**	**183**	⇓P	Pg	06 33 34.1	-0.4
NKC				S	Sg	06 33 35.2	-0.5
NKC	**Novy Kostel**	**0.03**	**183**	⇓P	Pg	06 33 34.7	+0.2
NKC				S	Sg	06 33 35.8	+0.1
STCW	**Studenec**	**0.04**	**92**	⇑P	Pg	06 33 34.2	-0.5
STCW				S	Sg	06 33 35.3	-0.6
STCW	**Studenec**	**0.04**	**92**	⇑P	Pg	06 33 34.8	+0.1
STCW				S	Sg	06 33 36.0	0.0
VAC	**Vackov**	**0.05**	**241**	⇓P	Pg	06 33 34.2	-0.5
VAC				S	Sg	06 33 35.4	-0.6
VAC	**Vackov**	**0.05**	**241**	⇓P	Pg	06 33 34.8	+0.1
VAC				S	Sg	06 33 36.0	0.0
POCW	**Potky**	**0.06**	**346**	⇓P	Pg	06 33 34.3	-0.5
POCW				S	Sg	06 33 35.7	-0.6
POCW	**Potky**	**0.06**	**346**	⇓P	Pg	06 33 34.9	+0.1
POCW				S	Sg	06 33 36.4	0.0
KVC	**Kvetna**	**0.07**	**143**	⇓P	Pg	06 33 34.6	-0.3
KRCW	**Kraslice**	**0.09**	**36**	⇑P	Pg	06 33 34.6	-0.5
KRCW				S	Sg	06 33 36.2	-0.7
KRCW	**Kraslice**	**0.09**	**36**	⇑P	Pg	06 33 35.2	+0.1
KRCW				S	Sg	06 33 36.8	-0.1
SKC	**Skalna**	**0.11**	**212**	⇑P	Pg	06 33 34.9	-0.4
SKC				S	Sg	06 33 36.7	-0.5
SKC	**Skalna**	**0.11**	**212**	⇑P	Pg	06 33 35.5	+0.2
SKC				S	Sg	06 33 37.3	+0.1
KOCW	**Kopaniny**	**0.14**	**272**	⇓P	Pg	06 33 35.3	-0.6
KOCW				S	Sg	06 33 37.3	-0.7
KOCW	**Kopaniny**	**0.14**	**272**	⇓P	Pg	06 33 35.9	0.0
KOCW				S	Sg	06 33 37.9	-0.1
TRCW	**Trojmez**	**0.20**	**282**	⇓P	Pg	06 33 36.3	-0.6
TRCW				S	Sg	06 33 39.0	-0.7
TRCW	**Trojmez**	**0.20**	**282**	⇓P	Pg	06 33 36.9	0.0
TRCW				S	Sg	06 33 39.6	-0.1
ZHC	**Zelena Hora**	**0.21**	**206**	⇑P	Pg	06 33 36.7	-0.4
ZHC				S	Sg	06 33 39.6	-0.4
ZHC	**Zelena Hora**	**0.21**	**206**	⇑P	Pg	06 33 37.3	+0.2
ZHC				S	Sg	06 33 40.2	+0.2

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*DJA **21** 07:01:11.3±0.5, 1°N±4°×12°3E±°, h13^{km}±4^{km}, M4.3/12, mb4.6/4, mB4.2/1, MLv4.2/12, Mw(mB)3.3/1*

ISC 21 07:01:10.0±1.1**, 0°.95N**±0°.08×**122°.60E**±0°.06**, h10^{km}, n13, σ1^s.29**/14**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.52**	**128**	P	**Pg**	**07 01 19.8**	**-0.2**
MRSI	**Marisa**	**0.81**	**234**	P	**Pb**	**07 01 26.3**	**+0.1**
KMSI	**Cibinong**	**1.43**	**105**	P	**Pn**	**07 01 35.7**	**-0.3**
LUWI	**Luwuk**	**1.99**	**175**	P	**Pn**	**07 01 43.1**	**-0.6**
APSI	**Ampana**	**2.08**	**207**	P	**Pn**	**07 01 44.1**	**-0.9**
MPSI	**Mapaga**	**2.77**	**257**	P	**Pn**	**07 01 55.5**	**+1.0**
PCI	**Palu**	**3.33**	**236**	P	**Pn**	**07 02 03.4**	**+1.3**
SGSI	**Sangihe**	**3.99**	**47**	P	**Pn**	**07 02 13.0**	**+1.8**
SANI	**Sanana**	**4.51**	**131**	P	**Pn**	**07 02 20.9**	**+2.5**
TTSI	**Tana Toraja**	**4.85**	**215**	P	**Pn**	**07 02 23.3**	**+0.2**
SPSI	**Sidrap Palu**	**5.65**	**210**	P	**Pn**	**07 02 34.0**	**0.0**
	0.1nm37nm,0.7s						
BNSI	**Bone**	**5.87**	**205**	P	**Pn**	**07 02 37.9**	**+0.8**
	0.1nm39nm,0.7s						
DDMP	**Don Marcelino,**	**5.99**	**31**	⇓*e*P	**Pn**	**07 02 39.0**	**+0.4**
DDMP				*e*S	**Sn**	**07 03 45.3**	**-2.0**

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*IDC **21** 07:12:31.6±1.7, 25°.43S×129°.91E, h0^{km}, mb3.7/1, mbtmp4.1/5, ML4.3/4, MS3.5/1, Error ellipse: s-maj=26.5km s-min=19.4km az=158.0*

*NOU **21** 07:12:32.7, 25°.57S×129°.85E, h10^{km}, mb4.5/23, Northern Territory, Australia*

*NEIC **21** 07:12:33.5±1.7, 25°.56S±0°.06×129°.80E±0°.09, h14^{km}±4^{km}, Error ellipse: s-maj=11.3km s-min=8.5km az=85.0*

ISC 21 07:12:32.4±0.6**, 25°.54S**±0°.07×**129°.85E**±0°.05**, h10^{km}, n53, σ1^s.44**/55**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.49**	**289**	P	**Pb**	**07 13 01.0**	**+0.8**
ASAR	**Alice Springs**	**4.13**	**64**	Pn	**Pn**	**07 13 36.6**	**+0.9**
	11nm,0.3s,baz=244,slow=12,SNR=443						
ASAR				Pg	**Pb**	**07 13 46.0**	**+0.7**
	6.8nm,0.3s,baz=246,slow=15,SNR=15						
ASAR				Sn	**Sn**	**07 14 24.8**	**+0.7**
	21nm,0.3s,baz=246,slow=22,SNR=9.3						
ASAR				Lg	Lg	07 14 37.9	
	35nm,0.3s,baz=245,slow=26,SNR=14						
	19nm,0.3s						
ASAR	**Alice Springs**	**4.13**	**64**	Pn	**Pn**	**07 13 37.0**	**+1.3**
AS31	**Alice Springs**	**4.14**	**64**	Pn	**Pn**	**07 13 36.7**	**+1.1**
FORT	**Forrest**	**5.45**	**196**	Pn	**Pn**	**07 13 57.5**	**+3.8**
FORT	**Forrest**	**5.45**	**196**	P	**Pn**	**07 13 55.5**	**+1.8**
OOD	**Oodnadatta**	**5.69**	**115**	P	**Pn**	**07 13 59.1**	**+2.2**
MULG	**Mulgathing**	**6.01**	**143**	P	**Pn**	**07 14 01.4**	**0.0**
WRA	**Warramunga Arr**	**6.94**	**38**	Pn	**Pn**	**07 14 14.7**	**+0.4**
	5.6nm,0.3s,baz=222,slow=14,SNR=206						
WRA				Sn	**Sn**	**07 15 34.0**	**+0.7**
	6.8nm,0.3s,baz=219,slow=22,SNR=7.1						
WRA				Lg	Lg	07 16 06.5	
	9.7nm,0.3s,baz=212,slow=29,SNR=5.6						
	8.2nm,0.3s						
WRA	**Warramunga Arr**	**6.94**	**38**		**Pn**	**07 14 15.2**	**+1.0**
WB2	**Warramunga Arr**	**6.95**	**38**	Pn	**Pn**	**07 14 15.2**	**+0.9**
WRAB	**Tennant Creek**	**6.96**	**38**		**Pn**	**07 14 14.9**	**+0.5**
WRAB	**Tennant Creek**	**6.96**	**38**	P	**Pn**	**07 14 15.4**	**+1.0**
WR0	**Warramunga Arr**	**7.04**	**39**	Pn	**Pn**	**07 14 16.4**	**+0.9**
WB0	**Warramunga Arr**	**7.11**	**37**	Pn	**Pn**	**07 14 16.9**	**+0.3**
LCRK	**Leigh Creek**	**8.86**	**125**	P	**Pn**	**07 14 41.7**	**+1.1**
BBOO	**Buckleboo**	**9.05**	**145**	P	**Pn**	**07 14 43.8**	**+0.7**
KNRA	**Kununurra**	**9.87**	**354**	Pn	**Pn**	**07 14 54.2**	**-0.1**
KNRA	**Kununurra**	**9.87**	**354**	P	**Pn**	**07 14 55.2**	**+0.9**
PSA00	**Pilbara Seismi**	**9.99**	**291**	Pn	**Pn**	**07 14 55.9**	**-0.1**
PSA00	**Pilbara Seismi**	**9.99**	**291**	P	**Pn**	**07 14 56.0**	**0.0**
INKA	**Innaminka**	**9.99**	**105**	P	**Pn**	**07 14 56.2**	**+0.2**
WHYH	**Whyalla**	**10.06**	**140**	P	**Pn**	**07 14 58.0**	**+1.1**
QIS	**Mount Isa**	**10.26**	**63**	P	**Pn**	**07 14 59.8**	**+0.1**
MBWA	**Marble Bar**	**10.27**	**293**	Pn	**Pn**	**07 14 58.6**	**-1.2**
MBWA	**Marble Bar**	**10.27**	**293**	P	**Pn**	**07 15 00.0**	**+0.2**
NAPP	**Napperby**	**10.50**	**138**	P	**Pn**	**07 15 03.0**	**0.0**
HTT	**Hallett**	**11.14**	**137**	P	**Pn**	**07 15 10.9**	**-1.0**
STKA	**Stephens Creek**	**12.09**	**124**	Pn	**Pn**	**07 15 23.7**	**-1.0**
	1.7nm,0.3s,baz=306,slow=13,SNR=15						
	5.1nm,0.4s						
STKA	**Stephens Creek**	**12.09**	**124**	Pn	**Pn**	**07 15 22.2**	**-2.5**
STKA	**Stephens Creek**	**12.09**	**124**	P	**Pn**	**07 15 23.2**	**-1.5**
KLBR	**Kellerberrin**	**12.22**	**238**	P	**Pn**	**07 15 24.4**	**-2.1**
	28nm,0.6s						
BLDU	**Ballidu**	**12.65**	**243**	P	**Pn**	**07 15 31.9**	**-0.6**
MTN	**Manton Dam**	**12.69**	**6**		**Pn**	**07 15 31.9**	**-1.1**
MORW	**Morawa**	**12.77**	**251**	Pn	**Pn**	**07 15 30.0**	**-4.1**
NWAO	**Narrogin (SRO)**	**13.24**	**233**	P	**Pn**	**07 15 39.1**	**-1.4**
MUN	**Mundaring**	**13.57**	**239**	P	**Pn**	**07 15 47.1**	**+2.1**
GIRL	**Giralia**	**14.55**	**278**	Pn	**Pn**	**07 15 56.5**	**-2.0**
GIRL	**Giralia**	**14.55**	**278**	P	**Pn**	**07 15 58.8**	**+0.4**
	178nm,1.5s						
CMSA	**Cobar Meteorol**	**15.14**	**117**	P	**Pn**	**07 16 04.5**	**-1.9**
ARPS	**Mount Arapiles**	**15.17**	**140**	P	**Pn**	**07 16 05.4**	**-1.3**
	9.1nm,0.7s						
CTA	**Charters Tower**	**16.06**	**74**	Pn	**Pn**	**07 16 18.3**	**-0.2**
	0.4nm,0.3s,baz=251,slow=12,SNR=1.9						
	2.3nm,0.5s						
CTAO	**Charters Tower**	**16.06**	**74**	Pn	**Pn**	**07 16 17.7**	**-0.7**
CTAO				IAmb	IAmb	07 16 55.3	
	comp=Z,21nm,1.2s						
COEN	**Coen**	**17.01**	**50**	Pn	**Pn**	**07 16 26.5**	**-4.1**
COEN				IAmb	IAmb	07 17 02.5	
	comp=Z,37nm,1.5s						
TOO	**Toolangi**	**17.90**	**136**	P	**Pn**	**07 16 41.2**	**-0.3**
EIDS	**Eidsvold**	**19.18**	**94**		**P**	**07 16 56.8**	**+0.6**
ARMA	**Armidale**	**19.83**	**109**	P	**P**	**07 17 03.5**	**+0.1**
ARMA				IAmb	IAmb	07 17 08.0	
	comp=Z,12nm,1.1s						
FAKI	**Fak Fak**	**22.61**	**6**	P	**P**	**07 17 34.7**	**+1.3**
CHTO	**Chiang Mai**	**53.36**	**323**	P	**P**	**07 21 52.9**	**+0.7**
CHTO				IAmb	IAmb	07 21 56.5	
	comp=Z,2.8nm,0.8s						
PALK	**Pallekele**	**57.84**	**298**	LR	LR	07 46 10.4	
	comp=Z,43nm,19.3s,baz=248,slow=35						
QSPA	**South Pole Qui**	**64.54**	**180**	P	**P**	**07 23 10.1**	**+0.6**
MKAR	**Makanchi Array**	**83.84**	**329**	P	**P**	**07 25 03.1**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=156,slow=5.6,SNR=2.8						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**124.10**	**30**	PKP	**PKPdf**	**07 31 30.0**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=288,slow=2.3,SNR=5.8						

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*IDC **21** 07:14:36.9±2.5, 25°.61S×129°.85E, h0^{km}, mbtmp4.3/3, ML4.3/3, Error ellipse: s-maj=43.8km s-min=34.9km az=161.0*

*AUST **21** 07:14:38.1±1.2, 25°.54S×129°.88E, h0^{km}, Error ellipse: s-maj=15.4km s-min=10.8km az=6.0*

ISC 21 07:14:39.9±1.1**, 25°.40S**±0°.08×**129°.82E**±0°.05**, h10^{km}, n10, σ1^s.00**/12**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.43**	**284**	P	**Pn**	**07 15 06.5**	**+0.6**
	baz=1.4						
WRKA				S	**Sn**	**07 15 24.8**	**+0.1**
	baz=1.4						
ASPA	**Alice Springs**	**4.10**	**66**	P	**Pn**	**07 15 43.8**	**+1.1**
	baz=4.1						
ASAR	**Alice Springs**	**4.10**	**66**	Pn	**Pn**	**07 15 43.5**	**+0.8**
	11nm,0.3s,baz=244,slow=12,SNR=4.7						
ASAR				Pg	**Pb**	**07 15 53.1**	**+0.9**
	25nm,0.3s,baz=240,slow=17,SNR=15						
ASAR				Sn	**Sn**	**07 16 31.1**	**+0.3**
	27nm,0.3s,baz=247,slow=22,SNR=5.9						
ASAR				Lg	Lg	07 16 44.3	
	48nm,0.3s,baz=249,slow=26,SNR=9.5						
	23nm,0.3s						
FORT	**Forrest**	**5.58**	**196**	P	**Pn**	**07 16 03.8**	**+0.8**
	baz=5.6						
OOD	**Oodnadatta**	**5.77**	**116**	P	**Pn**	**07 16 06.2**	**+0.6**
	baz=5.8						
MULG	**Mulgathing**	**6.14**	**143**	P	**Pn**	**07 16 10.8**	**+0.1**
	baz=6.2						
WRA	**Warramunga Arr**	**6.85**	**38**	Sn	**Sn**	**07 17 37.4**	**-1.2**
	5.6nm,0.3s,baz=219,slow=23,SNR=3.1						
WRA				Lg	Lg	07 18 12.5	
	19nm,0.3s,baz=212,slow=30,SNR=11						
STKA	**Stephens Creek**	**12.19**	**125**	Pn	Pn	07 17 27.8	-5.8
	2.0nm,0.3s,baz=302,slow=14,SNR=6.6						
	7.2nm,0.4s						
CTA	**Charters Tower**	**16.05**	**74**	Pn	**Pn**	**07 18 24.2**	**-1.6**
	0.4nm,0.3s,baz=238,slow=13,SNR=1.5						
	1.4nm,0.3s						
YKA	**Yellowknife Ar**	**123.99**	**30**	PKP	**PKPdf**	**07 33 36.8**	**-1.0**
	0.3nm,0.6s,baz=295,slow=1.8,SNR=5.9						

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*IDC **21** 07:45:43.0±0.6, 15°.31S×173°.33W, h0^{km}, mb4.4/13, mbtmp4.4/13, MS4.1/54, Error ellipse: s-maj=27.4km s-min=15.4km az=128.0*

*NEIC **21** 07:45:46.0±2.9, 15°.14S±0°.05×172°.86W±0°.07, h10^{km}±1^{km}, mb4.9/62, Error ellipse: s-maj=13.0km s-min=7.6km az=120.0*

*NOU **21** 07:45:45.0, 15°.13S×172°.78W, h0^{km}, mb4.8/16, Samoa Islands Region*

*GCMT **21** 07:45:52.0±0.3, 15°.27S±0°.03×173°.15W±0°.02, h24^{km}±1^{km}, MW4.9/74, Moment Tensor Solution. s23,c28; s74,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.36±.21; M$_{\theta\theta}$-0.48±.13; M$_{\phi\phi}$-1.87±.13; M$_{r\theta}$-1.72±.20; M$_{\theta\phi}$1.13±.07; M$_{\phi r}$1.10±.16; Best double couple: M$_0$3.17600×10^{16} NP1:ϕ_s167.00000°, δ29.00000°, λ120.00000°. NP2: ϕ_s313.00000°, δ65.00000°, λ75.00000°. Principal axes: T 3.2280, Plg66.0000°, Azm196.0000°; N -0.0940, Plg14.0000°, Azm320.0000°; P -3.1250, Plg19.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 07:45:47.7±0.3**, 15°.21S**±0°.06×**172°.84W**±0°.06**, h29^{km}, n305, σ1^s.35**/242**, mb4.9**/43**, MS4.3**/53**, 14C-5D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.66**	**39**	Pn	**Pn**	**07 46 13.3**	**-1.7**
	374nm,0.3s,baz=204,slow=2.6,SNR=405						
AFI				Sn	**Sn**	**07 46 32.0**	**-3.3**
	1µm,0.3s,baz=70,slow=17,SNR=21						
AFI				LR	LR	07 46 48.1	
	comp=Z,3µm,21.9s,baz=224,slow=32						
AFI	**Afiamalu**	**1.66**	**39**		**Pn**	**07 46 13.2**	**-1.7**
AFI				Sn	**Sn**	**07 46 32.6**	**-2.7**
AFI	**Afiamalu**	**1.66**	**39**	P	**Pn**	**07 46 13.5**	**-1.4**
NIUE	**Niue**	**4.75**	**144**	Pn	**Pn**	**07 46 56.4**	**-1.0**
NIUE	**Niue**	**4.75**	**144**	P	**Pn**	**07 46 56.5**	**-0.9**
DGTI	**Dogotuki**	**7.23**	**260**	P	**Pn**	**07 47 32.7**	**+1.2**
	214nm,1.4s						
MSVF	**Nonsavu**	**9.09**	**253**	Pn	**Pn**	**07 47 58.3**	**+1.2**
	0.9nm,0.3s,baz=93,slow=14,SNR=26						
MSVF				LR	LR	07 50 51.3	
	comp=Z,5µm,18.1s,baz=72,slow=36						
MSVF	**Nonsavu**	**9.09**	**253**	Pn	**Pn**	**07 47 58.1**	**+1.0**
MSVF	**Nonsavu**	**9.09**	**253**	P	**Pn**	**07 47 59.7**	**+2.6**
	57nm,1.0s						
FUNA	**Funafuti**	**10.24**	**310**	Pn	**Pn**	**07 48 09.8**	**-3.0**
RAR	**Rarotonga**	**13.77**	**118**	Pn	**Pn**	**07 49 00.1**	**-1.0**
	2.7nm,0.3s,baz=262,slow=8.4,SNR=4.6						
RAR				LR	LR	07 52 58.4	
	comp=Z,378nm,21.9s,baz=297,slow=31						
RAR	**Rarotonga**	**13.77**	**118**	Pn	**Pn**	**07 48 59.2**	**-1.9**
RAR	**Rarotonga**	**13.77**	**118**	P	**Pn**	**07 49 01.0**	**-0.1**
	52nm,1.4s						
RAO	**Raoul Island**	**14.74**	**198**	LR	LR	07 53 49.4	
	comp=Z,954nm,21.1s,baz=1.0,slow=34						
RAO	**Raoul Island**	**14.74**	**198**	Pn	**Pn**	**07 49 12.2**	**-2.0**
MARNC	**Mare, Loyalty**	**19.19**	**248**	P	**P**	**07 50 06.8**	**-2.5**
LIFNC	**LIFOU**	**19.73**	**251**	P	**P**	**07 50 12.7**	**-2.5**
LIFNC				IAmb	IAmb	07 50 39.5	
	comp=Z,84nm,0.9s						
PINNC	**Pines Island,**	**20.03**	**245**	P	**P**	**07 50 16.0**	**-2.5**
YATNC	**Mamie plateau,**	**20.36**	**247**	P	**P**	**07 50 22.4**	**+0.3**
	comp=Z,31nm,1.9s						
OUENC	**Ouen Island, N**	**20.51**	**246**	P	**P**	**07 50 24.9**	**+1.2**
	comp=Z,43nm,1.1s						
DZM	**Mont Dzumac**	**20.77**	**248**	*e*P	**P**	**07 50 27.0**	**+0.4**
	comp=Z,151nm,1.4s						
DZM				*e*LR	LR	07 56 09.0	
	comp=Z,2µm,24.8s						
DZM	**Mont Dzumac**	**20.77**	**248**	P	P	07 50 16.7	-10
	comp=Z,6.5nm,0.8s,baz=82,slow=15,SNR=2.4						
DZM				LR	LR	07 57 05.7	
	comp=Z,1µm,19.6s,baz=40,slow=34						
DZM	**Mont Dzumac**	**20.77**	**248**	P	**P**	**07 50 24.9**	**-1.7**
DZM				IAmb	IAmb	07 50 28.9	
	comp=Z,81nm,1.3s						
DZM	**Mont Dzumac**	**20.77**	**248**	P	Pn	07 50 28.4	-0.7
	comp=Z,52nm,1.4s						
ONTNC	**Ouen Toro**	**20.82**	**247**	P	**P**	**07 50 25.2**	**-1.8**
ONTNC				IAmb	IAmb	07 50 52.9	
	comp=Z,56nm,1.1s						
NOUC	**Port Laguerre**	**20.90**	**248**	P	Pn	07 50 30.1	-0.4
	comp=Z,37nm,1.0s						
PPT	**Papeete**	**22.44**	**99**	LR	LR	07 57 09.1	
	comp=Z,287nm,20.9s,baz=272,slow=30						
PAE	**Paea**	**22.44**	**99**	*e*T	T	08 13 49.9	
	comp=Z,4.0nm,0.2s						
PPT2	**Papeete2**	**22.44**	**99**	*e*LR	LR	07 56 03.4	
	comp=Z,934nm,25.2s						
PPT2	**Papeete2**	**22.44**	**99**	*e*T	T	08 13 50.8	
	comp=Z,3.9nm,0.2s						
TBI	**Tubuai**	**23.48**	**114**	*e*LR	LR	07 56 25.9	
	comp=Z,845nm,28.5s						
TBI	**Tubuai**	**23.48**	**114**	*e*T	T	08 15 11.8	
	comp=Z,10nm,0.2s						
MXZ	**Matakaoa Point**	**23.60**	**198**	P	**P**	**07 50 54.8**	**-1.3**
PMOR	**Pomariorio Ree**	**24.09**	**93**	*e*T	T	08 16 05.2	
	comp=Z,5.0nm,0.3s						
URZ	**Urewera**	**24.61**	**199**	P	**P**	**07 51 03.6**	**-2.0**
	comp=Z,15nm,0.9s,baz=31,slow=12,SNR=1.7						
URZ				LR	LR	07 59 19.7	
	comp=Z,1µm,19.3s,baz=31,slow=34						
	comp=Z,15nm,0.9s						
URZ	**Urewera**	**24.61**	**199**	P	**P**	**07 51 04.4**	**-1.1**
URZ	**Urewera**	**24.61**	**199**	P	**P**	**07 51 09.7**	**+4.2**
	comp=Z,140nm,1.4s						
BKZ	**Black Stump Fm**	**25.64**	**199**	P	**P**	**07 51 17.4**	**+2.5**
	comp=Z,90nm,2.7s						
BFZ	**Birch Farm**	**27.10**	**198**	P	**P**	**07 51 31.8**	**+3.8**
	comp=Z,68nm,2.2s						
HNR	**Honiara**	**27.18**	**279**	LR	LR	08 00 30.9	
	comp=Z,486nm,18.9s,baz=124,slow=33						
TUWZ	**Tuamarina**	**28.52**	**201**	P	**P**	**07 51 40.4**	**-0.3**
LTZ	**Lake Taylor**	**30.30**	**202**	P	**P**	**07 51 55.8**	**-0.8**
RPZ	**Rata Peaks**	**31.56**	**203**	LR	LR	08 03 06.9	
	comp=Z,734nm,21.8s,baz=18,slow=33						
TAOE	**Nuku Hiva Isla**	**32.57**	**83**	*e*LR	LR	08 00 33.5	
	comp=Z,972nm,25.4s						
TAOE	**Nuku Hiva Isla**	**32.57**	**83**	*e*T	T	08 26 49.9	
	comp=Z,42nm,0.2s						
WHZ	**Wether Hill Ro**	**34.58**	**204**	P	**P**	**07 52 33.6**	**-0.3**
KRVT	**Keravat (AS076**	**36.22**	**284**	LR	LR	08 07 10.8	
	comp=Z,108nm,18.8s,baz=258,slow=36						
H11S2	**WAKE ISLAND Hy**	**39.08**	**328**	T	T	08 34 31.0	
	baz=149,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**39.10**	**328**	T	T	08 34 32.5	
	baz=149,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**39.10**	**328**	T	T	08 34 15.0	
	baz=149,slow=76,SNR=24						
CTA	**Charters Tower**	**39.21**	**257**	LR	LR	08 06 37.1	
	comp=Z,406nm,21.0s,baz=81,slow=32						
PMG	**Port Moresby**	**39.46**	**274**	LR	LR	08 07 39.0	
	comp=Z,67nm,18.1s,baz=0.5,slow=34						
H11N3	**WAKE ISLAND Hy**	**40.02**	**330**	T	T	08 35 47.7	
	baz=149,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**40.02**	**330**	T	T	08 35 49.4	
	baz=149,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**40.04**	**330**	T	T	08 35 44.9	
	baz=149,slow=76,SNR=26						
COEN	**Coen**	**42.53**	**266**	P	**P**	**07 53 39.1**	**-2.0**
STKA	**Stephens Creek**	**44.59**	**240**	P	P	07 53 52.4	-5.2
	comp=Z,4.8nm,0.7s,baz=98,slow=10,SNR=6.3						
STKA				LR	LR	08 09 53.2	
	comp=Z,301nm,21.6s,baz=64,slow=33						
	comp=Z,4.8nm,0.7s						
WRA	**Warramunga Arr**	**50.41**	**257**	P	P	07 54 37.4	-5.6
	comp=Z,1.5nm,0.4s,baz=91,slow=6.9,SNR=36						
WRA				PcP	**PcP**	**07 56 00.3**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=96,slow=3.8,SNR=1.6						
WRA				LR	LR	08 13 48.8	
	comp=Z,321nm,21.4s,baz=64,slow=34						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**50.68**	**252**	P	P	07 54 39.5	-5.5
	comp=Z,6.4nm,0.4s,baz=87,slow=7.9,SNR=67						
ASAR				LR	LR	08 13 59.2	
	comp=Z,882nm,21.9s,baz=102,slow=34						
	comp=Z,6.4nm,0.4s						
SIJI	**Sorong**	**56.96**	**279**	LR	LR	08 18 24.2	
	comp=Z,152nm,20.9s,baz=94,slow=35						
BATI	**Baumata**	**61.96**	**266**	LR	LR	08 20 45.3	
	comp=Z,174nm,20.7s,baz=144,slow=34						
SBA	**Scott Base**	**63.48**	**185**	P	**P**	**07 56 15.7**	**+1.1**
SBA				IAmb	IAmb	07 56 17.5	
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**63.62**	**186**	P	**P**	**07 56 14.9**	**-0.6**
	comp=Z,4.6nm,1.0s,baz=19,slow=6.9,SNR=12						
VNDA				LR	LR	08 18 54.4	
	comp=Z,68nm,21.9s,baz=12,slow=31						
	comp=Z,4.6nm,1.0s						
VNDA	**Vanda**	**63.62**	**186**	P	**P**	**07 56 16.0**	**+0.5**
VNDA				IAmb	IAmb	07 56 17.4	
	comp=Z,8.3nm,1.1s						
KAPI	**Kappang**	**66.91**	**271**	LR	LR	08 23 51.8	
	comp=Z,97nm,20.1s,baz=102,slow=34						
SHEM	**Shemya Is, Ala**	**68.60**	**352**	LR	LR	08 21 02.3	
	comp=Z,178nm,20.2s,baz=125,slow=31						
MJAR	**Matsushiro Arr**	**69.14**	**319**	P	**P**	**07 56 49.8**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=152,slow=6.7,SNR=3.4						
	comp=Z,0.5nm,0.3s						
PFO	**Pinyon Flats O**	**72.40**	**47**	LR	LR	08 23 09.8	
	comp=Z,369nm,18.4s,baz=240,slow=31						
LPIG	**La Paz**	**72.48**	**58**	LR	LR	08 20 59.5	
	comp=Z,195nm,20.9s,baz=206,slow=29						
PETK	**Petropavlovsk-**	**72.62**	**342**	P	**P**	**07 57 13.6**	**+1.4**
	comp=Z,4.6nm,0.8s,baz=130,slow=7.8,SNR=9.5						
PETK				LR	LR	08 24 34.7	
	comp=Z,38nm,20.1s,baz=145,slow=32						
	comp=Z,4.6nm,0.8s						
YBH	**Yreka Blue Hor**	**73.13**	**37**	LR	LR	08 23 38.5	
	comp=Z,235nm,19.4s,baz=244,slow=31						
NVAR	**Mina Array Bea**	**73.83**	**42**	P	**P**	**07 57 21.8**	**+1.8**
	comp=Z,1.1nm,0.8s,baz=226,slow=9.1,SNR=8.0						
NVAR				LR	LR	08 22 45.6	
	comp=Z,325nm,20.9s,baz=264,slow=30						
	comp=Z,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**73.83**	**42**	P	**P**	**07 57 21.6**	**+1.6**
KVN	**Kaiserville**	**74.32**	**41**	P	**P**	**07 57 23.3**	**+0.5**
TPH	**Tonopah**	**74.33**	**43**	P	**P**	**07 57 24.6**	**+1.6**
J04D	**Umpqua Nationa**	**74.42**	**36**	P	**P**	**07 57 25.7**	**+2.3**
	baz=231						
KDAK	**Kodiak Island**	**74.64**	**11**	LR	LR	08 23 08.4	
	comp=Z,231nm,21.9s,baz=218,slow=30						
K05A	**Summer Lake**	**74.80**	**37**	P	**P**	**07 57 26.6**	**+1.0**
K05A				IAmb	IAmb	07 57 28.6	
	comp=Z,23nm,1.2s						
QSPA	**South Pole Qui**	**74.83**	**180**	LR	LR	08 25 41.1	
	comp=Z,67nm,22.0s,baz=40,slow=32						
QSPA	**South Pole Qui**	**74.83**	**180**	P	**P**	**07 57 25.6**	**+0.2**
SHPR	**Sheep Range**	**74.85**	**45**	P	**P**	**07 57 27.4**	**+1.5**
J05D	**Fort Rock, OR**	**74.95**	**36**	P	**P**	**07 57 28.8**	**+2.4**
	baz=232						
I05D	**Terrebonne, OR**	**75.55**	**35**	P	**P**	**07 57 31.5**	**+1.9**
	baz=231						
R11A	**Troy Canyon, C**	**75.56**	**43**	P	**P**	**07 57 31.9**	**+1.9**
	baz=237						
TUC	**Tucson**	**75.86**	**50**	P	**P**	**07 57 33.9**	**+2.2**
	baz=242						
WVOR	**Wild Horse Val**	**75.95**	**38**	P	**P**	**07 57 33.8**	**+1.7**
WVOR				IAmb	IAmb	07 57 35.4	
	comp=Z,15nm,1.4s						
KSAR	**Wonju Array Be**	**76.42**	**315**	P	**P**	**07 57 33.7**	**-1.0**
I07A	**Izee**	**76.43**	**36**	P	**P**	**07 57 36.1**	**+1.4**
CCUT	**Cedar City**	**76.62**	**45**	P	**P**	**07 57 35.0**	**-1.2**
CCUT				IAmb	IAmb	07 57 40.1	
	comp=Z,11nm,1.4s						
ELK	**Elko**	**77.09**	**41**	LR	LR	08 23 40.0	
	comp=Z,236nm,22.0s,baz=228,slow=29						
ELK	**Elko**	**77.09**	**41**	P	**P**	**07 57 39.2**	**+0.5**
G08A	**Pilot Rock**	**77.47**	**36**	P	**P**	**07 57 42.2**	**+1.7**
G08A				IAmb	IAmb	07 57 43.7	
	comp=Z,15nm,1.2s						
BBB	**Bella Bella**	**77.48**	**26**	LR	LR	08 25 55.1	
	comp=Z,151nm,18.9s,baz=210,slow=31						
BMO	**Blue Mountains**	**78.15**	**37**	P	**P**	**07 57 45.4**	**+1.0**
BMO				IAmb	IAmb	07 57 47.2	
	comp=Z,16nm,1.5s						
LEM	**Lembang**	**78.18**	**266**	LR	LR	08 31 48.8	
	comp=Z,122nm,20.6s,baz=220,slow=36						
MFID	**Camas Ranch**	**78.20**	**39**	P	**P**	**07 57 45.2**	**+0.5**
MFID				IAmb	IAmb	07 57 47.7	
	comp=Z,11nm,1.2s						
121A	**Cookes Peak, D**	**78.21**	**51**	P	**P**	**07 57 47.9**	**+2.8**
	baz=243						
DUG	**Dugway, Tooele**	**78.36**	**43**	P	**P**	**07 57 47.2**	**+1.5**
DUG	**Dugway, Tooele**	**78.36**	**43**	P	**P**	**07 57 48.4**	**+2.7**
	baz=239						
PMR	**Palmer**	**78.83**	**11**	P	**P**	**07 57 47.4**	**-0.1**
	baz=203						
F10A	**Beach Ranch, E**	**78.85**	**36**	P	**P**	**07 57 48.1**	**-0.1**
F10A				IAmb	IAmb	07 57 50.7	
	comp=Z,24nm,1.5s						
TMUT	**Trail Mountain**	**78.97**	**44**	P	**P**	**07 57 49.9**	**+0.7**
TMUT				IAmb	IAmb	07 57 53.2	
	comp=Z,19nm,1.3s						
TTA	**Tatalina**	**79.00**	**8**	P	**P**	**07 57 50.0**	**+1.4**
	baz=197						
MPU	**Maple Canyon**	**79.04**	**43**	P	**P**	**07 57 50.6**	**+1.1**
PLID	**Pearl Lake**	**79.05**	**37**	P	**P**	**07 57 50.3**	**+0.8**

DIV	Divide	79.09	13	P	P	07 57 48.9	-0.2
HLID	Hailey	79.14	39	P	P	07 57 50.9	+1.0
HLID				IAmb	IAmb	07 57 53.4	
	comp=Z,14nm,1.2s						
HLID	Hailey	79.14	39	P	P	07 57 52.3	+2.4
	baz=237						
BMRM	Bremner River	79.21	14	P	P	07 57 49.8	+0.1
	baz=208						
SRU	San Rafael Swe	79.33	45	P	P	07 57 52.9	+1.8
SRU				IAmb	IAmb	07 57 54.6	
	comp=Z,16nm,1.2s						
P17A	Butcher Ranch,	79.37	44	P	P	07 57 53.1	+1.8
P17A				IAmb	IAmb	07 57 55.1	
	comp=Z,22nm,1.5s						
SCM	Sheep Creek Mo	79.41	12	P	P	07 57 51.4	+0.6
	baz=205						
K20K	Telida	79.67	8	P	P	07 57 53.7	+1.5
	baz=198						
MNTX	Cornudas Mount	79.68	53	P	P	07 57 54.2	+1.2
MNTX				IAmb	IAmb	07 57 56.7	
	comp=Z,18nm,1.4s						
MNTX	Cornudas Mount	79.68	53	P	P	07 57 55.0	+2.0
	baz=245,SNR=8.5						
N25K	Chitina, Valde	79.78	13	P	P	07 57 53.5	+0.6
	baz=208						
BNM	Barren Site	79.79	50	P	P	07 57 55.4	+1.6
GLB	Gilahina Butte	79.81	14	P	P	07 57 53.9	+0.8
GLB				IAmb	IAmb	07 57 55.5	
	comp=Z,12nm,1.2s						
LOGN	Logan Glacier	79.95	15	P	P	07 57 54.1	+0.2
LOGN				IAmb	IAmb	07 57 55.9	
	comp=Z,21nm,1.4s						
CTG	Chitna Glacier	79.98	15	P	P	07 57 54.8	+0.7
	baz=211						
WAT6	Susitna Watana	80.00	12	P	P	07 57 54.4	+0.2
	baz=205						
TX31	Lajitas Ar. Si	80.06	56	P	P	07 57 56.4	+1.2
TX32	Lajitas Array	80.06	56	P	P	07 57 55.0	-0.2
TX32				IAmb	IAmb	07 57 59.9	
	comp=Z,18nm,1.4s						
TXAR	Lajitas Array	80.06	56	P	P	07 57 57.0	+1.8
	comp=Z,6.0nm,1.1s,baz=234,slow=4.2,SNR=24						
TXAR				LR	LR	08 27 38.4	
	comp=Z,191nm,18.4s,baz=236,slow=31						
	comp=Z,6.0nm,1.1s						
TXAR	Lajitas Array	80.06	56	P	P	07 57 53.8	-1.4
PLBC	Pleasant Camp	80.08	18	P	P	07 57 56.1	+1.6
	baz=216						
MA2	Magadan	80.15	342	LR	LR	08 28 38.7	
	comp=Z,38nm,20.5s,baz=118,slow=32						
BCYI	Bear Canyon	80.16	39	P	P	07 57 56.6	+1.0
NEW	Newport	80.25	34	LR	LR	08 26 16.2	
	comp=Z,151nm,20.3s,baz=222,slow=30						
ANMO	Albuquerque	80.27	50	LR	LR	08 26 10.4	
	comp=Z,202nm,21.1s,baz=239,slow=30						
ANMO	Albuquerque	80.27	50	P	P	07 57 58.6	+2.3
	baz=244						
TRF	Thorofare Moun	80.35	10	P	P	07 57 56.5	+0.5
	baz=202						
CHUM	Lake Minchumin	80.43	9	P	P	07 57 56.3	+0.1
	baz=200						
J20K	Nowinta River	80.44	8	P	P	07 57 56.5	+0.3
J20K				IAmb	IAmb	07 57 58.4	
	comp=Z,20nm,1.3s						
J20K	Nowinta River	80.44	8	P	P	07 57 56.7	+0.5
	baz=198,SNR=9.9						
S34M	Telegraph Cree	80.55	21	P	P	07 57 58.8	+1.8
	baz=221						
KLR	Kul'dur	80.66	327	LR	LR	08 26 57.2	
	comp=Z,36nm,21.9s,baz=301,slow=31						
YUK6	Outpost Mounta	80.74	16	P	P	07 57 59.7	+1.4
	baz=214						
PAX	Paxson	80.81	12	P	P	07 57 58.3	-0.1
	baz=207						
BPAW	Bear Paw Mtn.	80.84	10	P	P	07 57 57.8	-0.6
	baz=201						
M26K	Nabesna, AK	80.84	14	P	P	07 57 59.6	+1.1
	baz=209,SNR=7.8						
HYT	Haines Junctio	80.88	17	P	P	07 58 00.4	+1.5
	baz=214,SNR=7.2						
YUK3	Moose Creek	80.90	15	P	P	07 57 60.0	+0.9
	baz=212,SNR=7.0						
YUK4	Talbot Arm	81.00	16	P	P	07 58 00.4	+0.7
	baz=213						
M27K	Edge Creek, AK	81.06	14	P	P	07 58 01.3	+1.5
	baz=210,SNR=14						
MSO	Missoula	81.21	37	P	P	07 58 02.1	+1.2
	baz=237,SNR=11						
S22A	4UR Ranch, Cre	81.25	47	P	P	07 58 04.3	+2.7
	baz=243,SNR=12						
L26K	Log Cabin Wild	81.31	13	P	P	07 58 02.0	+1.0
	baz=209						
DLBC	Dease Lake	81.33	21	LR	LR	08 28 12.3	
	comp=Z,126nm,18.6s,baz=252,slow=31						
BVCY	Beaver Creek	81.35	14	P	P	07 58 02.4	+1.2
	baz=211,SNR=5.6						
O20A	White River Ci	81.37	44	P	P	07 58 04.3	+2.2
	baz=242						
WHY	Whitehorse	81.49	18	P	P	07 58 03.5	+1.4
	baz=217						
NEA2	Nenana	81.61	10	P	P	07 58 02.9	+0.4
	baz=203						
RIDG	Independent Ri	81.62	12	P	P	07 58 03.3	+0.6
	baz=207						
QLMT	Earthquake Lak	81.64	39	P	P	07 58 05.0	+1.6
L27K	Beaver Creek,	81.68	14	P	P	07 58 01.1	-1.9
	baz=210						
I21K	Tanana	81.70	9	P	P	07 58 03.2	+0.3
	baz=200						
BW06	Boulder Array	81.77	42	P	P	07 58 05.1	+0.9
BW06				IAmb	IAmb	07 58 06.8	
	comp=Z,20nm,1.5s						
BW06	Boulder Array	81.77	42	P	P	07 58 05.7	+1.5
	baz=241,SNR=8.2						
PD31	Pinedale Array	81.77	42	P	P	07 58 05.0	+0.8
PD31				IAmb	IAmb	07 58 06.8	
	comp=Z,18nm,1.5s						
PDAR	Pinedale Array	81.77	42	P	P	07 58 05.2	+1.0
	comp=Z,5.9nm,1.2s,baz=210,slow=2.9,SNR=16						
PDAR				LR	LR	08 29 26.2	
	comp=Z,222nm,19.1s,baz=243,slow=32						
	comp=Z,5.9nm,1.2s						
PDAR	Pinedale Array	81.77	42	P	P	07 58 05.0	+0.8
SMCO	Snowmass	81.80	46	P	P	07 58 06.0	+1.4
SMCO				IAmb	IAmb	07 58 08.2	
	comp=Z,21nm,1.4s						
HDA	Harding Lake	81.82	11	P	P	07 58 03.8	+0.1
	baz=205,SNR=5.7						
CCB	Clear Creek Bu	81.88	11	P	P	07 58 04.1	+0.2
CCB				IAmb	IAmb	07 58 05.2	
	comp=Z,15nm,1.2s						
N31M	Braeburn, Yuko	81.90	17	P	P	07 58 04.6	+0.4
N31M	Braeburn, Yuko	81.90	17	P	P	07 58 05.5	+1.4
	baz=216,SNR=5.2						
BOZ	Bozeman (W)	81.91	38	P	P	07 58 06.1	+1.4
BOZ				IAmb	IAmb	07 58 07.9	
	comp=Z,22nm,1.5s						
BOZ	Bozeman (W)	81.91	38	P	P	07 58 06.3	+1.5
	baz=239,SNR=13						
H17A	Grant Village	81.94	40	P	P	07 58 07.8	+2.8
	baz=240,SNR=5.6						
SCRK	Sand Creek	82.01	12	P	P	07 58 05.3	+0.5
	baz=208						
H21K	Melozitna Rive	82.03	8	P	P	07 58 05.1	+0.4
	baz=200,SNR=5.8						
I23K	Minto, Yukon-K	82.08	10	P	P	07 58 05.2	+0.3
	baz=203,SNR=5.3						
TCOL	CIGO, UAF Yank	82.08	10	P	P	07 58 04.7	-0.2
TCOL				IAmb	IAmb	07 58 06.3	
	comp=Z,12nm,0.8s						
TCOL	CIGO, UAF Yank	82.08	10	P	P	07 58 05.5	+0.5
	baz=204						
IL31		82.16	11	P	P	07 58 05.0	-0.3
ILAR	Eielson Array	82.16	11	P	P	07 58 05.0	-0.5
	comp=Z,1.6nm,0.7s,baz=200,slow=5.4,SNR=14						
ILAR				LR	LR	08 27 48.8	
	comp=Z,105nm,21.6s,baz=210,slow=31						
	comp=Z,1.6nm,0.7s						
SDCO	Great Sand Dun	82.19	48	P	P	07 58 08.3	+1.7
	baz=244,SNR=9.0						
IMAR	Indian Mountai	82.22	8	P	P	07 58 05.9	+0.2
J25K	Salcha River,	82.30	12	P	P	07 58 06.5	+0.2
J25K	Salcha River,	82.30	12	P	P	07 58 07.0	+0.7
	baz=207						
POKR	Poker Plat Res	82.38	11	P	P	07 58 06.9	+0.3
POKR	Poker Plat Res	82.38	11	P	P	07 58 06.9	+0.3
	baz=205						
K27K	Chicken	82.47	13	P	P	07 58 08.8	+1.7
K27K	Chicken	82.47	13	P	P	07 58 07.8	+0.8
	baz=210						
SEY	Seymchan	82.48	345	LR	LR	08 30 09.1	
	comp=Z,73nm,19.8s,baz=154,slow=32						
M30M	Minto, Yukon	82.52	16	P	P	07 58 08.1	+0.7
	baz=215						
J26L	Joseph Creek	82.56	12	P	P	07 58 08.7	+1.1
	baz=208,SNR=9.5						
MSTX	Muleshoe	82.62	52	P	P	07 58 10.7	+2.1
	baz=246						
T25A	Trinidad	82.71	49	P	P	07 58 11.0	+1.8
	baz=245,SNR=5.3						
RWWY	Rawlins	82.79	43	P	P	07 58 10.1	+0.5
Q24A	Divide	82.97	47	P	P	07 58 11.6	+1.0
Q24A	Divide	82.97	47	P	P	07 58 13.2	+2.6
	baz=244,SNR=10						
ISCO	Idaho Springs	83.02	46	P	P	07 58 12.8	+1.9
	baz=244,SNR=6.3						
RLMT	Red Lodge	83.11	40	P	P	07 58 13.5	+2.5
	baz=240,SNR=9.2						
DAWY	Dawson	83.11	14	P	P	07 58 11.3	+0.9
	baz=212,SNR=11						
GCMT	Greycliff	83.19	39	P	P	07 58 13.4	+2.0
N23A	Red Feather La	83.28	45	P	P	07 58 14.3	+2.2
	baz=243,SNR=5.7						
CMIG	Matias Romero	83.31	70	LR	LR	08 27 18.0	
	comp=Z,184nm,19.7s,baz=220,slow=30						
EGAK	Eagle	83.32	13	P	P	07 58 12.0	+0.6
	baz=211						
K22A	Casper	83.68	43	P	P	07 58 15.8	+1.7
	baz=243						
AMTX	Amarillo	83.81	52	P	P	07 58 16.0	+1.2
AMTX	Amarillo	83.81	52	P	P	07 58 16.5	+1.8
	baz=247						
COLD	Coldfoot	83.88	9	P	P	07 58 16.4	+2.2
	baz=202						
PMSA	Palmer Station	84.13	156	LR	LR	08 33 08.2	
	comp=Z,76nm,18.1s,baz=247,slow=34						
EGMT	Eagleton	84.26	37	P	P	07 58 18.0	+1.3
	baz=240						
I29M	Ogilvie Camp,	84.45	14	P	P	07 58 17.8	+0.6
	baz=213						
ABTX	Abilene, Hawle	84.52	54	P	P	07 58 19.6	+1.3
ABTX	Abilene, Hawle	84.52	54	P	P	07 58 20.4	+2.1
	baz=248						
H03S2	Juan Fernandez	84.86	124	T	T	09 33 00.0	
	baz=250						
H03S1	Juan Fernandez	84.87	124	T	T	09 33 01.0	
	baz=250						
H03S3	Juan Fernandez	84.87	124	T	T	09 32 59.8	
	baz=250						
H03N2	Juan Fernandez	84.95	123	T	T	09 33 57.6	
	baz=261						
H03N3	Juan Fernandez	84.95	123	T	T	09 34 38.3	
	baz=261						
H03N1	Juan Fernandez	84.97	123	T	T	09 34 37.5	
	baz=261						
TOLK	Toolik Lake Re	85.28	8	P	P	07 58 22.7	+1.3
	baz=202						
EPYK	Eagle Plains	85.66	14	P	P	07 58 24.1	+0.8
	baz=215						
RSSD	Black Hills	85.96	42	P	P	07 58 26.1	+0.5
RSSD				IAmb	IAmb	07 58 27.7	
	comp=Z,9.5nm,1.2s						
RSSD	Black Hills	85.96	42	P	P	07 58 27.2	+1.7
	baz=244						
WHTX	Lake Whitney,	86.02	56	P	P	07 58 28.1	+2.3
	baz=249						
HKT	Hockley	86.63	58	P	P	07 58 29.7	+0.9
HKT				IAmb	IAmb	07 58 33.4	
	comp=Z,13nm,1.5s						
Z35A	Perchaven, San	86.64	54	P	P	07 58 30.5	+1.6
INK	Inuvik	87.96	14	LR	LR	08 30 48.1	
	comp=Z,145nm,21.9s,baz=198,slow=31						
MAW	Mawson	88.14	198	P	P	07 58 34.6	-0.9
	comp=Z,8.6nm,1.0s,baz=103,slow=6.6,SNR=8.6						
MAW				LR	LR	08 35 30.2	
	comp=Z,191nm,19.6s,baz=118,slow=34						
	comp=Z,8.6nm,1.0s						
MAW	Mawson	88.14	198	P	P	07 58 34.3	-1.2
YAK	Yakutsk	89.16	337	LR	LR	08 30 29.8	
	comp=Z,42nm,21.9s,baz=104,slow=30						
HHC	Hu-ho-hao-te	89.30	313	*e*P	P	07 58 42.5	+1.0
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
YKA	Yellowknife Ar	89.71	23	P	P	07 58 43.0	+0.2
	comp=Z,1.9nm,1.0s,baz=235,slow=4.5,SNR=19						
YKA				LR	LR	08 33 27.9	
	comp=Z,171nm,19.4s,baz=263,slow=32						
	comp=Z,1.9nm,1.0s						
JTS	Las Juntas de	90.65	80	LR	LR	08 30 18.9	
	comp=Z,188nm,19.9s,baz=323,slow=29						
MT01	Popeta	90.96	125	P	P	07 58 50.5	+1.0
MT01				IAmb	IAmb	07 58 53.3	
	comp=Z,9.2nm,1.1s						
W41B	Gary Mavity, V	91.16	54	P	P	07 58 52.5	+2.3
	baz=252						
ATAH	Atahualpa	92.41	98	LR	LR	08 30 37.5	
	comp=Z,183nm,21.9s,baz=252,slow=29						
NNA	Nana	92.58	103	LR	LR	08 32 24.3	
	comp=Z,57nm,19.6s,baz=250,slow=30						
A36M	Sachs Harbour	92.59	13	P	P	07 58 55.8	-0.2
A36M				IAmb	IAmb	07 59 09.3	
	comp=Z,6.1nm,0.9s						
PZH	PanZhiHua	92.67	297	P	P	07 58 58.4	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,4.8s						
CCM	Cathedral Cave	92.79	51	P	P	07 58 58.3	+0.7
	baz=253						
TROLL	Troll, Antarti	92.93	179	PcP	PcP	07 58 58.9	+0.3
VNA3	Neumayer Olymp	92.99	175	PcP	P	07 58 58.8	+0.7
SNAA	Sanae	93.06	177	PcP	PcP	07 58 59.4	+0.3
SNAA	Sanae	93.06	177	LR	LR	08 37 30.7	
	comp=Z,58nm,19.3s,baz=192,slow=33						
CMAR	Chiang Mai Arr	93.07	288	LR	LR	08 35 42.6	
	comp=Z,23nm,21.8s,baz=245,slow=32						
ULM	Lac du Bonnet	93.45	39	LR	LR	08 36 14.3	
	comp=Z,297nm,19.6s,baz=285,slow=32						
VNA2	Neumayer--Watz	93.49	175	PcP	PcP	07 59 01.3	+0.4
	baz=194,slow=3.0						
LVC	Limon Verde	96.61	115	LR	LR	08 33 08.1	
	comp=Z,44nm,21.2s,baz=244,slow=29						
LPAZ	La Paz	99.37	110	LR	LR	08 36 47.2	
	comp=Z,32nm,19.0s,baz=248,slow=31						
ROSC	El Rosal	99.46	88	LR	LR	08 35 09.8	
	comp=Z,97nm,20.4s,baz=241,slow=30						
ARCES	ARCESS Array B	124.50	352	PKP	PKiKP	08 04 43.9	0.0
	comp=Z,2.5nm,0.8s,baz=25,slow=2.4,SNR=4.6						
AKTO	Aktyubinsk	126.17	322	PKP	PKPdf	08 04 47.4	+0.1
	comp=Z,0.9nm,0.7s,baz=60,slow=3.9,SNR=3.6						
KLMR	Klimovskoe	128.80	340	*e*PKPdf	PKPdf	08 04 51.5	-0.5
KLMR				AMP		08 04 55.1	
	comp=Z,8.0nm,1.2s						
CLL	Collm	143.69	354	*e*PKiKP	PKiKP	08 05 25.0	+1.7
	comp=Z,4.0nm,1.0s						
DPC	Dobruska-Polom	144.18	350	*e*PKP	PKPbc	08 05 19.8	+0.9
BURAR	Bucovina Array	144.39	339	⇑P	PKPdf	08 05 21.4	0.0
CRVS	Cervenica-Dubn	144.41	344	*e*PKP	PKPdf	08 05 20.7	-0.5
MORC	Moravsky Berou	144.50	348	⇑P	PKPdf	08 05 21.2	-0.2
MORC	Moravsky Berou	144.50	348	*e*PKP	PKPbc	08 05 20.4	+0.4
BIZ	Bicaz	144.65	337	⇑P	PKPdf	08 05 21.3	-0.4
LANS	Liptovska Anna	144.68	346	*e*PKP	PKPdf	08 05 23.1	+1.4
PRU	Pruhonice	144.80	352	*e*PKP	PKPdf	08 05 21.6	-0.2
MAUC	Maruska	144.84	348	*e*PKP	PKPdf	08 05 22.1	+0.1
VRAC	Vranov	145.13	349	⇓P	PKPdf	08 05 23.5	+1.0
VRAC	Vranov	145.13	349	PKPbc	PKPdf	08 05 23.3	+0.8
	comp=Z,5.0nm,1.0s,baz=46,slow=5.5,SNR=5.9						
VRAC	Vranov	145.13	349	*e*PKP	PKPbc	08 05 19.9	-2.1
VRI	Vrincioaia	145.30	336	⇓P	PKPdf	08 05 22.9	0.0
PLOR	Plostina	145.34	336	⇑P	PKPdf	08 05 23.2	+0.3
JAVC	Velka Javorina	145.35	348	*e*PKP	PKPdf	08 05 24.3	+1.4
KRUC	Moravsky	145.40	349	*e*PKP	PKPbc	08 05 22.1	-0.7
TPGR	Topolog	145.41	333	⇓P	PKPdf	08 05 23.5	+0.4
VYHS	Vyhne	145.45	346	*e*PKP	PKPab	08 05 24.2	+1.0
OZUR		145.47	337	⇑P	PKPab	08 05 24.3	+0.9
COVR	Voineasa-Covas	145.52	336	⇓P	PKPab	08 05 23.6	0.0
TIRR	Tirgusor	145.72	333	⇑P	PKPab	08 05 24.7	+0.4
DOPR	Dopca	145.73	337	⇓P	PKPab	08 05 25.1	+0.7
KHC	Kasperske Hory	145.77	352	*e*PKP	PKPab	08 05 24.8	+0.4
MODS	Modra-Piesok	145.90	348	*e*PKP	PKPab	08 05 26.1	+1.2
MLR	Muntele Rosu	145.92	336	⇑P	PKPdf	08 05 24.4	+0.3
MLR	Muntele Rosu	145.92	336	PKPbc	PKPab	08 05 25.6	+0.4
	comp=Z,11nm,0.9s,baz=146,slow=3.7,SNR=13						
DRGR		145.94	341	⇑P	PKPab	08 05 25.1	-0.1
CKRC	Cesky Krumlov	145.97	352	*e*PKP	PKPab	08 05 24.9	-0.3
GERES	GERESS Array B	146.03	352	PKPbc	PKPbc	08 05 24.8	-0.2
	comp=Z,1.8nm,0.7s,baz=5.7,slow=1.3,SNR=17						
KMBO	Kilima Mbogo	146.10	244	PKPbc	PKPdf	08 05 25.3	-0.2
	comp=Z,2.9nm,0.6s,baz=27,slow=2.3,SNR=2.8						
VOIR		146.31	337	⇑P	PKPab	08 05 26.9	+0.3
BRTR	Keskin Array B	146.35	322	PKPbc	PKPbc	08 05 25.7	-0.6
	comp=Z,5.7nm,0.9s,baz=106,slow=1.9,SNR=18						
CONA	Conrad Observa	146.59	349	*i* P	PKPab	08 05 27.3	-0.4
	comp=Z,6.5nm,1.0s						
RONA	Rosalia, Austr	146.73	349	*i* P	PKPab	08 05 27.5	-0.6
MOA	Molln	146.93	351	*i* P	PKPbc	08 05 27.6	+0.1
	comp=Z,14nm,1.4s						
GZR	Gura Zlata	147.16	340	⇑P	PKPbc	08 05 28.8	+0.5
BIOA	Bad Ischl, Aus	147.17	352	*i* P	PKPbc	08 05 28.1	-0.1
ARSA	Arzberg	147.31	349	*i* P	PKPbc	08 05 28.3	-0.2
	comp=Z,11nm,1.2s						
BZS	Buzias	147.34	341	⇑P	PKPbc	08 05 29.4	+0.8
RETA	Reutte	147.68	355	*i* P	PKPbc	08 05 28.6	-1.1
	comp=Z,7.7nm,1.2s						
HERR	Herculane	147.73	339	⇑P	PKPbc	08 05 30.4	+0.6
WATA	Walderalm	147.76	354	*e*P	PKPbc	08 05 28.7	-1.2
	comp=Z,3.6nm,0.6s						
MOTA	Moosalm	147.79	355	*i* P	PKPbc	08 05 28.9	-1.2
	comp=Z,7.8nm,1.0s						
KBA	Koelnbreinsper	147.81	352	*i* P	PKPdf	08 05 28.6	+1.4
	comp=Z,3.8nm,0.9s						
WTTA	Wattenberg	147.83	354	*i* P	PKPbc	08 05 29.4	-0.8
	comp=Z,6.8nm,0.7s						
SQTA	Sankt Quirin	147.91	355	*i* P	PKPbc	08 05 29.2	-1.1
	comp=Z,4.2nm,1.0s						
DAVA	Damuels	147.94	357	*i* P	PKPbc	08 05 30.1	-0.4
	comp=Z,10nm,1.2s						
SOKA	Soboth	147.95	350	*e*P	PKPbc	08 05 30.1	-0.3
	comp=Z,9.6nm,1.2s						
FETA	Feichten	148.15	355	*e*P	PKPbc	08 05 30.8	-0.2
	comp=Z,9.6nm,1.3s						
OBKA	Obir	148.19	350	*i* P	PKPdf	08 05 29.1	+1.3
	comp=Z,7.3nm,1.3s						
MYKA	Terra Mystica	148.21	352	*i* P	PKPbc	08 05 31.4	+0.2
	comp=Z,9.1nm,1.0s						
ABTA	Abfaltersbach	148.24	353	*e*P	PKPdf	08 05 29.5	+1.6
	comp=Z,6.2nm,0.9s						
BLKB	Belogradchik	148.74	338	⇑P	PKPbc	08 05 32.6	+0.1
BOVS	Bovan	149.07	339	⇑P	PKPbc	08 05 33.2	-0.1
ESDC	Sonseca Array	153.75	20	PKPab	PKPab	08 05 56.5	-0.6
	comp=Z,0.2nm,0.3s,baz=330,slow=4.1,SNR=3.2						

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*DMN **21** 07:58:56.5±0.3, 28°.46N×87°.66E, h25^{km}, Ml4.7/6, Error ellipse: s-maj=5.9km s-min=2.7km az=34.0*

*NDI **21** 07:58:58.9±2.4, 28°.83N×87°.52E, h10^{km}, ML4.1, mb4.0(NEIC)*

*IDC **21** 07:58:58.4±0.7, 28°.33N×87°.50E, h0^{km}, mb4.0/21, mbtmp4.0/24, ML3.9/3, MS3.4/13, Error ellipse: s-maj=22.0km s-min=14.1km az=42.0*

*NEIC **21** 07:59:00.1±2.1, 28°.28N±0°.05×87°.35E±0°.06, h10^{km}±1^{km}, mb4.0/21, ML4.1(BJI), Error ellipse: s-maj=10.8km s-min=6.7km az=224.0*

ISC 21 07:59:00.8±1.3, **28°.29N**±0°.04×**87°.42E**±0°.04, **h15**^{km}±9^{km}, **n86**, σ**1^{s}.91**/90, **mb4.0**/22, **MS3.5**/12, **1D**, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	0.97	164	*e*Pg	Pg	07 59 17.9	-1.7
TAPN				*e*Sg	Sb	07 59 32.6	+0.3
	2μm,0.4s						
GTK	Tadong	1.43	132	*e*P	Pn	07 59 24.7	-1.7
GTK				*e*S	Sn	07 59 41.9	-3.1
RAMN	Ramite	1.52	209	*e*Pg	Pg	07 59 30.1	+0.1
RAMN				*e*Sg	Sg	07 59 53.4	+3.6
	1μm,0.4s						
PKI	Pulchoki	1.92	249	*e*Pg	Pg	07 59 37.5	-0.1
PKI				*e*Sg	Sg	08 00 05.6	+3.1
	2μm,0.7s						
PKIN	Phulchoki	1.92	249	*e*Pg	Pg	07 59 37.4	-0.3
PKIN				*e*Sg	Sg	08 00 05.7	+3.0
	711nm,0.4s						
DMN	Daman	2.15	252	*e*Pg	Pg	07 59 41.5	-0.6
DMN				*e*Sg	Sg	08 00 13.0	+2.9
	4μm,1.1s						
GKN	Gorkha	2.47	264	*e*Pg	Pg	07 59 47.6	-0.6
GKN				*e*Sg	Sg	08 00 22.5	+2.3
	1μm,0.4s						
DHUB	DHUBRI	3.22	134	*e*P	Pb	07 59 55.0	-2.7
DHUB				*e*S	Sb	08 00 35.7	-1.1
VLK	Valmikinagar	3.29	254	*e*P	Pn	07 59 53.2	+1.4
LSA	Lhasa	3.56	66		Pn	07 59 55.1	-0.9
LSA	Lhasa	3.56	66	P	Pn	07 59 58.0	+2.0
LSA				S	Sb	08 00 48.3	+1.3
LSA				LR	LR		
	comp=N,740nm,3.9s						
LSA				LR	LR		
	comp=E,610nm,4.6s						
LSA				LR	LR		
	comp=Z,880nm,4.6s						
GUWA	GUWAHATI	4.34	118	*e*P	Pn	08 00 05.8	-0.4
BOK	Bokaro	4.68	197	*e*P	Pn	08 00 15.3	+4.3
SHL	Shillong	4.82	123		Pn	08 00 13.3	+0.3
SHL	Shillong	4.82	123	*e*P	Pn	08 00 13.7	+0.6
TEZP	TEZPUR	5.07	108	*e*P	Pn	08 00 16.8	+0.6
ITAN	ITANAGAR	5.71	100	*e*x	Sn	08 01 34.0	+3.7
PTH	Pithoragarh	6.43	283	*e*P	Pn	08 00 35.0	-0.2
KOHI	KOHIMA	6.49	112	*e*P	Pn	08 00 36.1	+0.1
KOHI				IAML		08 02 26.5	
	comp=E,367nm,0.4s						
KOHI				IAML		08 02 29.9	
	comp=N,260nm,0.7s						
KOHI				IAML		08 02 32.8	
	comp=Z,89nm,1.1s						
AZL	Aizawl	6.56	133	*e*P	Pn	08 00 38.5	+1.6
AZL				*e*S	Sn	08 01 54.2	+2.6
MOKO	MOKOCHONG	6.61	106	*e*P	Pn	08 00 37.1	-0.5
MOKO				*e*x	Sn	08 01 53.5	+0.6
MOKO				IAML		08 02 36.6	
	comp=E,136nm,2.2s						
MOKO				IAML		08 02 48.6	
	comp=N,111nm,1.1s						
LKP	Lekhapani	7.53	95	IAML		08 03 08.7	
	comp=N,282nm,1.4s						
SMLA	Simla	9.35	290	*e*x	Pn	08 01 15.4	+0.4
GOMU	GeErMu	10.07	37	P	Pn	08 01 22.0	-3.2
GOMU				pP		08 01 25.3	
GOMU				sP		08 01 26.6	
GOMU				S	Sn	08 03 24.0	+5.9
GOMU				sS		08 03 26.3	
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,60nm,5.0s						
GOMU				LR	LR		
	comp=N,300nm,11.4s						
GOMU				LR	LR		
	comp=E,330nm,10.0s						
GOMU				LR	LR		
	comp=Z,93nm,7.2s						
NIL	Nilore	13.27	297	Pn	Pn	08 02 07.9	-0.8
CMAR	Chiang Mai Arr	14.40	130	Pn	Pn	08 02 22.4	-1.9
	comp=Z,0.4nm,0.3s,baz=309,slow=13,SNR=12						
CMAR				LR	LR	08 09 15.6	
	comp=Z,133nm,18.5s,baz=305,slow=43						
	comp=Z,2.1nm,0.7s						
KSH	Kashi	14.67	323	P	Pn	08 02 25.3	-2.6
KSH				sP	P	08 02 31.6	-2.5
KSH				PP	PnPn	08 02 37.3	+1.4
KSH				S	Sn	08 05 03.0	-7.3
KSH				pmax	pmax		
	comp=Z,17nm,0.9s						
KSH				LR	LR		
	comp=N,170nm,7.2s						
KSH				LR	LR		
	comp=E,200nm,7.2s						
WMQ	Urumqi	15.50	1	*e*P	Pn	08 02 38.3	-0.6
TARG	Taragay, Kyrgy	15.53	332	Pn	Pn	08 02 39.7	0.0
TARG				IAmb	IAmb	08 02 42.3	
	comp=Z,12nm,1.0s						
PRZ	Przheval'sk	15.94	335	Pn	Pn	08 02 45.2	+0.5
PRZ				IAmb	IAmb	08 02 51.8	
	comp=Z,12nm,0.8s						
KDJ	Kajisay	16.13	332		Pn	08 02 47.0	-0.1
ULHL	Ulahol	16.62	330	P	P	08 02 55.9	0.0

	SNR=20						
KBL	**Kabul**	**16.87**	**296**		**Pn**	**08 02 54.7**	**-1.9**
KBL				IAmb	IAmb	08 03 01.3	
	comp=Z,7.9nm,0.7s						
BOOM	**Boomskoye usch**	**16.95**	**330**		**Pn**	**08 02 58.0**	**+0.4**
BOOM				IAmb	IAmb	08 03 03.8	
	comp=Z,20nm,1.1s						
UCH	**Uchtor**	**17.42**	**326**	P	**Pn**	**08 03 03.1**	**-0.6**
	SNR=16						
TKM2	**Tokmak 2**	**17.45**	**330**	P	**P**	**08 03 05.2**	**+0.2**
	SNR=6.5						
AAK	**Ala-Archa**	**17.74**	**327**	P	**P**	**08 03 08.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=142,slow=15,SNR=12						
	comp=Z,1.1nm,0.3s						
AAK	**Ala-Archa**	**17.74**	**327**	P	**P**	**08 03 08.0**	**-0.2**
AML	**Almayashu**	**17.75**	**325**	P	**P**	**08 03 09.2**	**+0.6**
	SNR=6.0						
BTK	**Batken**	**18.03**	**315**	P	**Pn**	**08 03 10.0**	**-0.9**
BTK				IAmb	IAmb	08 03 13.3	
	comp=Z,8.1nm,0.8s						
EKS2	**Erkin-Say**	**18.10**	**326**	P	**P**	**08 03 14.4**	**+2.2**
	SNR=9.0						
CHGR	**Chuyangaron**	**18.38**	**309**		**Pn**	**08 03 14.2**	**-1.0**
MK31	**Makanchi Array**	**18.91**	**349**	P	**P**	**08 03 20.1**	**-0.8**
MKAR	**Makanchi Array**	**18.91**	**349**	P	**P**	**08 03 20.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=15						
MKAR				LR	LR	08 12 03.0	
	comp=Z,71nm,18.4s,baz=120,slow=42						
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**18.91**	**349**	P	**P**	**08 03 20.1**	**-0.8**
MAKZ	**Makanchi**	**18.97**	**348**	P	**P**	**08 03 20.6**	**-1.0**
KK31	**Karatay Array**	**20.12**	**322**		**P**	**08 03 34.3**	**+0.2**
KK31				IAmb	IAmb	08 03 38.8	
	comp=Z,6.6nm,1.0s						
KKAR	**Karatay Array**	**20.12**	**322**	P	Pn	08 03 34.7	-1.2
KKAR	**Karatay Array**	**20.12**	**322**	P	Pn	08 03 35.3	-0.7
KKAR				IAmb	IAmb	08 03 38.7	
	comp=Z,6.6nm,1.0s						
UBPT	**Khong Chiam**	**21.14**	**124**	P	**P**	**08 03 44.4**	**-1.0**
LYN	**LuoYang**	**22.24**	**67**	⇓P	**P**	**08 03 59.6**	**+2.5**
LYN				S	**S**	**08 08 08.5**	**+7.0**
LYN				LR	LR		
	comp=E,140nm,5.3s						
LYN				LR	LR		
	comp=Z,230nm,12.9s						
KURBB	**Kurchatov Arra**	**23.30**	**346**	P	**P**	**08 04 07.8**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=163,slow=9.6,SNR=25						
	comp=Z,4.8nm,0.9s						
KURK	**Kurchatov**	**23.37**	**346**	P	**P**	**08 04 08.4**	**-0.2**
SONM	**Songino Array**	**24.46**	**32**	P	**P**	**08 04 18.4**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=220,slow=10.0,SNR=11						
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**24.46**	**32**	IAmb	IAmb	08 04 21.0	
	comp=Z,2.4nm,1.0s						
ZALV	**Zalesovo Beam**	**25.71**	**356**	P	**P**	**08 04 29.4**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=185,slow=10,SNR=7.2						
ZALV				LR	LR	08 15 52.7	
	comp=Z,33nm,19.8s,baz=149,slow=40						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**25.71**	**356**	P	**P**	**08 04 29.8**	**-0.5**
GEYT	**Alibeck**	**26.27**	**299**	P	**P**	**08 04 37.0**	**+1.4**
	comp=Z,3.8nm,0.8s,baz=334,slow=20,SNR=1.9						
GEYT				LR	LR	08 16 53.6	
	comp=Z,164nm,18.9s,baz=158,slow=41						
	comp=Z,3.8nm,0.8s						
WSAR	**Wadi Sarin**	**26.37**	**266**	LR	LR	08 15 55.5	
	comp=Z,57nm,18.2s,baz=131,slow=38						
ABKAR	**Akbulak array**	**29.68**	**322**	P	**P**	**08 05 04.7**	**-1.2**
ABKAR				IAmb	IAmb	08 05 08.6	
	comp=Z,2.7nm,0.9s						
AKTO	**Aktyubinsk**	**31.37**	**323**	P	**P**	**08 05 20.2**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=92,slow=12,SNR=4.8						
AKTO				LR	LR	08 19 25.8	
	comp=Z,84nm,18.9s,baz=138,slow=39						
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**35.01**	**64**	LR	LR	08 21 40.8	
	comp=Z,36nm,18.9s,baz=265,slow=39						
BELG	**Belogornoye**	**38.02**	**320**	LR	LR	08 25 03.5	
	comp=Z,82nm,20.6s,baz=128,slow=41						
KBZ	**Khabaz**	**38.69**	**306**	P	**P**	**08 06 25.4**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=90,slow=4.0,SNR=6.6						
	comp=Z,1.9nm,0.7s						
KLR	**Kul'dur**	**39.69**	**46**	P	**P**	**08 06 31.3**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=269,slow=12,SNR=5.5						
	comp=Z,2.3nm,0.9s						
NRIK	**Noril'sk**	**41.08**	**0**	P	**P**	**08 06 44.8**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=210,slow=5.0,SNR=4.4						
	comp=Z,1.4nm,0.5s						
AKASG	**Malin Array Be**	**48.74**	**314**	P	**P**	**08 07 43.9**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=75,slow=8.4,SNR=10						
AKASG				LR	LR	08 30 45.8	
	comp=Z,35nm,18.4s,baz=71,slow=39						
	comp=Z,1.3nm,0.7s						
AKASG	**Malin Array Be**	**48.74**	**314**	IAmb	IAmb	08 08 12.7	
	comp=Z,2.3nm,1.2s						
MLR	**Muntele Rosu**	**50.85**	**307**	P	**P**	**08 08 02.6**	**+1.6**
	comp=Z,6.7nm,0.8s,baz=137,slow=5.4,SNR=7.9						
	comp=Z,6.7nm,0.8s						
MLR	**Muntele Rosu**	**50.85**	**307**	P	**P**	**08 08 02.3**	**+1.3**
FINES	**FINESS Array B**	**51.92**	**328**	P	**P**	**08 08 08.2**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=122,slow=10,SNR=5.2						
FINES				LR	LR	08 33 05.8	
	comp=Z,87nm,20.5s,baz=44,slow=39						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**54.03**	**337**	P	**P**	**08 08 24.7**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=112,slow=6.9,SNR=4.1						
	comp=Z,0.9nm,0.6s						
MORC	**Moravsky Berou**	**56.24**	**313**	*e*P	**P**	**08 08 41.9**	**+1.4**
VRAC	**Vranov**	**56.90**	**312**	P	**P**	**08 08 46.5**	**+1.4**
	comp=Z,2.5nm,0.6s,baz=101,slow=9.0,SNR=4.5						
VRAC				LR	LR	08 37 27.6	
	comp=Z,37nm,19.2s,baz=67,slow=41						
	comp=Z,2.5nm,0.6s						
VRAC	**Vranov**	**56.90**	**312**	*e*P	**P**	**08 08 45.7**	**+0.6**
KRUC	**Moravsky**	**57.06**	**312**	*e*P	**P**	**08 08 46.6**	**+0.4**
HFS	**Hagfors**	**57.87**	**325**	LR	LR	08 36 12.4	
	comp=Z,64nm,21.0s,baz=74,slow=39						
GERES	**GERESS Array B**	**58.85**	**312**	P	**P**	**08 08 58.8**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=79,slow=6.9,SNR=9.7						
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**59.05**	**327**	P	**P**	**08 08 59.0**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=86,slow=6.9,SNR=4.5						
NOA				LR	LR	08 37 23.1	
	comp=Z,55nm,19.0s,baz=95,slow=39						
	comp=Z,1.4nm,0.9s						
WRA	**Warramunga Arr**	**66.00**	**131**	P	**P**	**08 09 47.2**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=320,slow=6.7,SNR=8.3						
	comp=Z,3.4nm,0.9s						
WRA	**Warramunga Arr**	**66.00**	**131**	IAmb	IAmb	08 09 52.9	
	comp=Z,0.3nm,1.4s						
ASAR	**Alice Springs**	**68.38**	**134**	P	**P**	**08 10 02.5**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=321,slow=6.5,SNR=20						
	comp=Z,3.4nm,0.8s						
ESDC	**Sonseca Array**	**73.54**	**306**	P	**P**	**08 10 32.7**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=54,slow=6.6,SNR=9.6						
	comp=Z,1.3nm,0.9s						
ILAR	**Eielson Array**	**78.15**	**21**	P	**P**	**08 10 57.5**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=324,slow=4.5,SNR=3.6						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**80.17**	**280**	P	**P**	**08 11 10.0**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=55,slow=3.9,SNR=9.3						
	comp=Z,2.7nm,1.0s						
YKA	**Yellowknife Ar**	**87.82**	**10**	P	**P**	**08 11 48.1**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=340,slow=4.8,SNR=3.7						
	comp=Z,0.3nm,0.8s						

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*IDC **21** 08:02:21.9±9.8, 25°.79S×129°.36E, h0^{km}, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=108.0km s-min=46.1km az=80.0*

*AUST **21** 08:02:27.7±0.6, 25°.55S×129°.87E, h0^{km}, Error ellipse: s-maj=9.1km s-min=7.1km az=11.0*

ISC 21 08:02:29.0±0.8**, 25°.57S**±0°.06×**129°.87E**±0°.05**, h10^{km}, n19, σ2^{s}.00**/26**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.52**	**290**	P	**Pn**	**08 02 56.8**	**+0.4**
	baz=1.5						
WRKA				S	**Sb**	**08 03 16.8**	**0.0**
	baz=1.5						
ASPA	**Alice Springs**	**4.12**	**64**	P	**Pn**	**08 03 33.8**	**+1.6**
	baz=4.1						
ASPA				S	**Sn**	**08 04 20.8**	**+0.3**
	baz=4.1						
ASAR	**Alice Springs**	**4.13**	**64**	Pn	**Pn**	**08 03 33.8**	**+1.5**
	1.9nm,0.3s,baz=245,slow=12,SNR=59						
ASAR				Pg	**Pb**	**08 03 46.2**	**+4.4**
	2.7nm,0.3s,baz=241,slow=16,SNR=24						
ASAR				Sn	**Sn**	**08 04 20.9**	**+0.3**
	1.4nm,0.3s,baz=251,slow=16,SNR=5.6						
ASAR				Lg	Lg	08 04 33.9	
	3.4nm,0.3s,baz=243,slow=26,SNR=3.1						
	3.0nm,0.3s						
FORT	**Forrest**	**5.43**	**197**	P	**Pn**	**08 03 51.4**	**+1.3**
	baz=5.5						
FORT				S	**Sn**	**08 04 55.4**	**+2.7**
	baz=5.5						
OOD	**Oodnadatta**	**5.65**	**114**	P	**Pn**	**08 03 53.2**	**0.0**
	baz=5.7						
OOD				S	**Sn**	**08 04 58.9**	**+0.8**
	baz=5.7						
MULG	**Mulgathing**	**5.98**	**143**	P	**Pn**	**08 03 59.3**	**+1.7**
	baz=6.0						
WRA	**Warramunga Arr**	**6.95**	**37**	Pn	**Pn**	**08 04 11.2**	**+0.1**
	0.5nm,0.3s,baz=217,slow=14,SNR=26						
WRA				Sn	**Sn**	**08 05 27.5**	**-2.7**
	1.1nm,0.3s,baz=220,slow=20,SNR=9.1						
WRA				Lg	Lg	08 06 02.7	
	1.3nm,0.3s,baz=214,slow=30,SNR=2.4						
	0.6nm,0.3s						
WB2	**Warramunga Arr**	**6.96**	**37**	P	**Pn**	**08 04 11.5**	**+0.4**
	baz=7.0						
LCRK	**Leigh Creek**	**8.83**	**125**	P	**Pn**	**08 04 36.8**	**+0.1**
	baz=8.8						
BBOO	**Buckleboo**	**9.01**	**145**	P	**Pn**	**08 04 39.1**	**-0.1**
	baz=9.1						
KNRA	**Kununurra**	**9.90**	**354**	P	**Pn**	**08 04 51.9**	**+0.4**
	baz=9.9						
INKA	**Innaminka**	**9.96**	**105**	P	**Pn**	**08 04 53.5**	**+1.2**
	baz=10.0						
MEEK	**Meekatharra**	**10.18**	**262**	P	**Pn**	**08 04 53.2**	**-2.1**
	baz=10						
QIS	**Mount Isa**	**10.25**	**63**	P	**Pn**	**08 04 56.8**	**+0.5**
	baz=10						
STKA	**Stephens Creek**	**12.05**	**124**	Pn	Pn	08 05 18.4	-2.5
	0.2nm,0.3s,baz=302,slow=11,SNR=1.9						
STKA				Sn	**Sn**	**08 07 29.8**	**-5.6**
	0.7nm,0.3s,baz=9.2,slow=7.2,SNR=5.8						
	0.7nm,0.3s						
STKA	**Stephens Creek**	**12.05**	**124**	P	**Pn**	**08 05 19.2**	**-1.7**
	baz=12						
KDU	**Kakadu**	**13.05**	**11**	P	**Pn**	**08 05 34.3**	**-0.2**
	baz=13						
GIRL	**Giralia**	**14.58**	**278**	P	**Pn**	**08 05 55.4**	**0.0**
	baz=15						
COEN	**Coen**	**17.02**	**50**	P	**Pn**	**08 06 24.6**	**-2.7**
	baz=17						

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*BJI **21** 08:10:51.2±0.0, 27°.76N×87°.19E, h12^{km}, mb4.3/10, mB4.6/2, Ms3.8/3, Ms7 3.6/2*

*IDC **21** 08:10:56.2±0.8, 28°.28N×87°.28E, h0^{km}, mb3.8/15, mbtmp3.8/17, ML3.6/2, MS3.6/3, Error ellipse: s-maj=26.7km s-min=15.5km az=49.0*

*DMN **21** 08:10:56.0±0.3, 28°.39N×87°.59E, h10^{km}, Ml4.8/6, Error ellipse: s-maj=4.5km s-min=2.0km az=34.0*

ISC 21 08:10:57.1±0.5**, 28°.38N**±0°.04×**87°.55E**±0°.03**, h10^{km}, n31, σ1^{s}.69**/35**, mb3.9**/16**, MS4.1**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**1.04**	**172**	*e*Pg	**Pg**	**08 11 15.9**	**-1.2**
TAPN				*e*Sg	**Sg**	**08 11 29.4**	**-1.2**
	5µm,0.4s						
RAMN	**Ramite**	**1.65**	**211**	*e*Pg	**Pb**	**08 11 27.5**	**-0.3**
RAMN				*e*Sg	**Sg**	**08 11 49.7**	**-0.7**
	3µm,0.4s						
PKI	**Pulchoki**	**2.06**	**247**	*e*Pg	**Pg**	**08 11 35.3**	**-1.3**
PKI				*e*Sg	**Sg**	**08 12 02.0**	**-1.2**
	2µm,0.6s						
PKIN	**Phulchoki**	**2.06**	**248**	*e*Pg	**Pg**	**08 11 35.2**	**-1.5**
PKIN				*e*Sg	**Sg**	**08 12 02.0**	**-1.5**
	1µm,0.4s						
DMN	**Daman**	**2.29**	**251**	*e*Pg	**Pg**	**08 11 39.3**	**-1.8**
DMN				*e*Sg	**Sg**	**08 12 09.8**	**-1.0**
	1µm,0.4s						
GKN	**Gorkha**	**2.59**	**262**	*e*Pg	**Pg**	**08 11 45.4**	**-1.5**
GKN				*e*Sg	**Sg**	**08 12 18.9**	**-1.6**
	2µm,0.4s						
LSA	**Lhasa**	**3.42**	**67**	Pn	**Pb**	**08 11 56.4**	**-1.7**
LSA				Sn	**Sg**	**08 12 43.6**	**-3.4**
LSA				LR	LR		
	comp=N,280nm,5.0s						
LSA				LR	LR		
	comp=E,280nm,3.6s						
LSA				LR	LR		
	comp=Z,380nm,4.6s						
CMAR	**Chiang Mai Arr**	**14.38**	**131**	Pn	**Pn**	**08 14 19.4**	**-1.4**
	baz=308,slow=13						
KSH	**Kashi**	**14.67**	**322**	P	**Pn**	**08 14 23.0**	**-1.8**
KSH				pP	P	08 14 28.3	-2.8
KSH				sP		08 14 34.0	
KSH				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ	**Urumqi**	**15.41**	**0**	*e*P	**P**	**08 14 36.6**	**-2.7**
WMQ				pP	pP	08 14 41.6	-1.7
WMQ				sP	sP	08 14 45.6	+0.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
AAK	**Ala-Archa**	**17.72**	**327**	P	**P**	**08 15 05.9**	**+0.8**
	0.3nm,0.3s,baz=194,slow=7.3,SNR=2.5						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**18.84**	**349**	P	**Pn**	**08 15 18.6**	**+1.0**
	0.1nm,0.3s,baz=169,slow=13,SNR=10						
	2.4nm,1.0s						
KURBB	**Kurchatov Arra**	**23.24**	**345**	P	**P**	**08 16 05.6**	**+1.2**
	3.8nm,1.0s,baz=166,slow=8.6,SNR=15						
	3.8nm,1.0s						
SONM	**Songino Array**	**24.32**	**32**	P	**P**	**08 16 17.0**	**+1.9**
	0.8nm,0.6s,baz=226,slow=12,SNR=2.7						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**25.62**	**356**	P	**P**	**08 16 27.5**	**+0.9**
	0.8nm,0.3s,baz=187,slow=9.4,SNR=6.0						
	0.8nm,0.3s						
AKTO	**Aktyubinsk**	**31.37**	**323**	LR	LR	08 30 38.1	
	comp=Z,12nm,19.3s,baz=160,slow=38						
KBZ	**Khabaz**	**38.73**	**305**	P	**P**	**08 18 24.0**	**+2.7**
	2.0nm,0.8s,baz=135,slow=6.4,SNR=5.5						
KLR	**Kul'dur**	**39.54**	**46**	P	**P**	**08 18 31.6**	**+3.4**
	0.7nm,0.5s,baz=223,slow=19,SNR=2.7						
	0.7nm,0.5s						
BRTR	**Keskin Array B**	**45.47**	**299**	P	**P**	**08 19 14.9**	**-1.8**
	0.2nm,0.3s,baz=288,slow=35,SNR=1.9						
	0.2nm,0.3s						
AKASG	**Malin Array Be**	**48.76**	**314**	P	**P**	**08 19 40.2**	**-1.8**
	0.4nm,0.5s,baz=73,slow=8.2,SNR=6.2						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**51.91**	**328**	P	**P**	**08 20 05.6**	**-0.1**
	2.2nm,0.9s,baz=97,slow=10.0,SNR=7.2						
	2.2nm,0.9s						
ARCES	**ARCESS Array B**	**53.99**	**337**	P	**P**	**08 20 21.7**	**+0.8**
	1.8nm,0.9s,baz=108,slow=7.8,SNR=5.0						
	1.8nm,0.9s						
GERES	**GERESS Array B**	**58.87**	**312**	P	**P**	**08 20 55.1**	**-1.0**
	1.1nm,0.8s,baz=78,slow=7.4,SNR=8.5						
	1.1nm,0.8s						
NOA	**NORSAR Array B**	**59.04**	**327**	P	**P**	**08 20 56.6**	**-0.4**
	0.8nm,0.9s,baz=90,slow=6.7,SNR=2.5						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**65.97**	**131**	P	**P**	**08 21 45.0**	**+1.1**
	1.6nm,0.7s,baz=326,slow=6.5,SNR=31						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**68.36**	**134**	P	**P**	**08 22 00.2**	**+1.2**
	2.0nm,0.7s,baz=318,slow=6.4,SNR=33						
	2.0nm,0.7s						
BORG	**Borgarnes**	**72.25**	**335**	LR	LR	08 54 37.9	
	comp=Z,164nm,20.6s,baz=316,slow=36						
ESDC	**Sonseca Array**	**73.57**	**306**	P	**P**	**08 22 32.6**	**+2.0**
	0.7nm,0.8s,baz=62,slow=6.5,SNR=6.2						
	0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.27**	**280**	P	**P**	**08 23 09.4**	**+0.7**
	2.2nm,1.1s,baz=10,slow=3.8,SNR=6.5						
	2.2nm,1.1s						
BOSA	**Boshof**	**82.24**	**232**	LR	LR	08 55 52.6	
	comp=Z,90nm,20.2s,baz=186,slow=33						
YKA	**Yellowknife Ar**	**87.71**	**10**	P	**P**	**08 23 47.4**	**+1.6**
	0.2nm,0.8s,baz=337,slow=5.2,SNR=2.7						
	0.2nm,0.8s						

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*IDC **21** 08:17:18.4±9.5, 5°.16S×104°.49E, h0^{km}, mb3.6/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=226.2km s-min=119.0km az=6.0*

*DJA **21** 08:17:32.2±1.6, 6°S±8°×10°5E±°, h11^{km}±14^{km}, M3.9/10, MLv3.9/10*

ISC 21 08:17:30.5±1.0**, 6°.18S**±0°.08×**105°.23E**±0°.07**, h10^{km}, n19, σ1^{s}.08**/18**, mb3.5**/3**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.81**	**1**	P	**Pg**	**08 17 46.2**	**0.0**
KASI	**Kota Agung**	**0.98**	**312**	P	**Pg**	**08 17 49.0**	**-0.4**
KLI	**Kotabumi**	**1.36**	**344**	P	**Pn**	**08 17 56.7**	**+1.1**
TNG	**Tangerang**	**1.41**	**90**	P	**Pn**	**08 17 56.4**	**+0.1**
TNG				P	**Pn**	**08 17 57.5**	**+1.2**
SKJI	**Sukabumi**	**1.55**	**122**	P	**Pn**	**08 17 59.2**	**+1.0**
DBJI	**Dramaga**	**1.56**	**104**	P	**Pn**	**08 17 58.2**	**-0.1**
LWLI	**Liwa**	**1.64**	**315**	P	**Pn**	**08 18 00.8**	**+1.2**
MDSI	**Maura Dua**	**1.98**	**328**	P	**Pn**	**08 18 05.2**	**+1.0**
CNJI	**Cibinong**	**2.19**	**121**	P	**Pn**	**08 18 08.9**	**+1.8**
LEM	**Lembang**	**2.46**	**105**	Pn	**Pb**	**08 18 14.3**	**-0.7**
	5.6nm,0.3s,baz=292,slow=19,SNR=2.6						
LEM				Sn	**Sg**	**08 18 50.6**	**+1.0**
	6.9nm,0.3s,baz=284,slow=20,SNR=3.5						
	51nm,1.0s						
LEM	**Lembang**	**2.46**	**105**	P	**Pn**	**08 18 12.0**	**+1.1**
KPJI	**Karang Pucung**	**3.85**	**107**	P	**Pn**	**08 18 31.3**	**+1.4**
PPBI	**Pangkal Pinang**	**4.09**	**13**	P	**Pn**	**08 18 33.8**	**+0.6**
WRA	**Warramunga Arr**	**31.41**	**119**	P	**P**	**08 23 51.5**	**-0.6**
	0.5nm,0.8s,baz=294,slow=10,SNR=3.3						
	0.5nm,0.8s						
H08S2	**Diego Garcia H**	**32.52**	**265**	T	T	08 58 20.5	
	baz=90						
H08S3	**Diego Garcia H**	**32.53**	**266**	T	T	08 58 18.7	
	baz=90						
H08S1	**Diego Carcia H**	**32.54**	**265**	T	T	08 58 23.3	
	baz=90						
ASAR	**Alice Springs**	**32.59**	**125**	P	**P**	**08 24 03.0**	**+0.5**
	0.5nm,0.8s,baz=297,slow=7.9,SNR=2.3						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**42.49**	**132**	P	**P**	**08 25 24.9**	**-1.4**
	1.1nm,0.6s,baz=311,slow=10,SNR=2.0						
	1.1nm,0.6s						

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*NEIC **21** 08:17:35.5±1.4, 19°.53N±0°.07×146°.3E±0°.1, h34^{km}±6^{km}, mb4.5/31, Error ellipse: s-maj=20.5km s-min=10.4km az=84.0*

*IDC **21** 08:17:37.1±3.3, 19°.37N×146°.28E, h65^{km}±31^{km}, mb4.0/19, mbtmp4.3/21, ML4.1/2, MS3.1/4, Error ellipse: s-maj=23.0km s-min=14.5km az=85.0*

ISC 21 08:17:35.0±0.5**, 19°.51N**±0°.06×**146°.3E**±0°.1**, h35^{km}, n69, σ0^{s}.99**/68**, mb4.5**/37**, MS3.1**/3**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.04**	**193**	P	**Pn**	**08 19 03.4**	**+1.6**
	22nm,0.3s,baz=147,slow=10,SNR=10						
GUMO				S	**Sn**	**08 20 07.5**	**-2.2**
	28nm,0.3s,baz=161,slow=20,SNR=1.3						
GUMO				LR	LR	08 20 10.3	
	comp=Z,22nm,19.4s,baz=58,slow=26						
	68nm,0.5s						
JCJ	**Chichijima**	**8.44**	**334**	S	**Sn**	**08 21 07.8**	**-0.9**
	45nm,0.6s,baz=297,slow=23,SNR=1.8						
JCJ	**Chichijima**	**8.44**	**334**	Pn	**Pn**	**08 19 34.7**	**-0.1**
JHJ2	**Mitsune**	**14.73**	**338**	Pn	**Pn**	**08 20 59.6**	**-1.1**
JMZ	**Minamidaito 2**	**15.24**	**297**	Pn	**Pn**	**08 21 07.1**	**-0.5**
PATS	**Pohnpei**	**17.19**	**136**	P	**P**	**08 21 34.6**	**+0.9**
JGF	**Kuroka**	**17.86**	**336**	P	**Pn**	**08 21 40.2**	**-0.5**
MJAR	**Matsushiro Arr**	**18.39**	**339**	P	**P**	**08 21 47.9**	**+1.0**
	0.1nm,0.3s,baz=162,slow=10,SNR=2.8						
	2.3nm,0.5s						
MJAR	**Matsushiro Arr**	**18.39**	**339**	P	**P**	**08 21 47.7**	**+0.8**
JHS	**Saijyo**	**19.33**	**326**	P	**P**	**08 21 58.5**	**+1.2**
JHS				IAmb	IAmb	08 22 02.8	
	comp=Z,12nm,0.7s						
KSRS	**Korea Array**	**24.00**	**322**	P	**P**	**08 22 46.6**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=149,slow=8.7,SNR=12						
	comp=Z,2.1nm,0.6s						
KSAR	**Wonju Array Be**	**24.02**	**322**	P	**P**	**08 22 46.5**	**-0.1**
JKA	**Kamikawa-asahi**	**24.73**	**354**	P	**P**	**08 22 54.1**	**+1.1**
ASAJ	**Asahikawa**	**24.73**	**354**	LR	LR	08 32 31.3	
	comp=Z,56nm,20.2s,baz=180,slow=36						
KLR	**Kul'dur**	**31.87**	**342**	P	**P**	**08 23 57.6**	**+0.9**
	comp=Z,7.0nm,0.4s,baz=162,slow=10,SNR=18						
	comp=Z,7.0nm,0.4s						
XLT	**XiLinHaoTe**	**35.04**	**321**	*e*P	**P**	**08 24 26.1**	**+1.6**
XLT				pP	pP	08 24 35.3	+1.6
XLT				sP	pwP	08 24 39.0	+1.1
XLT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,89nm,4.1s						
MTN	**Manton Dam**	**35.44**	**206**	P	**P**	**08 24 29.2**	**+1.2**
MTN				IAmb	IAmb	08 24 52.0	
	comp=Z,18nm,1.2s						
HHC	**Hu-ho-hao-te**	**36.44**	**313**	*e*P	**P**	**08 24 38.3**	**+1.8**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
SBUM	**Sibu**	**37.35**	**247**	P	**P**	**08 24 45.7**	**+1.2**
SBUM				IAmb	IAmb	08 24 52.9	
	comp=Z,3.3nm,0.5s						
KNRA	**Kununurra**	**38.98**	**207**	P	**P**	**08 24 59.5**	**+1.5**
KNRA				IAmb	IAmb	08 25 14.9	
	comp=Z,6.5nm,0.8s						
SHEM	**Shemya Is, Ala**	**39.57**	**26**	LR	LR	08 38 10.0	
	comp=Z,30nm,20.4s,baz=117,slow=31						
WRAB	**Tennant Creek**	**40.90**	**197**	P	**P**	**08 25 13.7**	**-0.3**
WRAB				IAmb	IAmb	08 25 26.6	
	comp=Z,7.6nm,1.2s						
WB2	**Warramunga Arr**	**40.91**	**197**	P	**P**	**08 25 13.2**	**-0.8**
WB2				IAmb	IAmb	08 25 30.7	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**40.91**	**197**	P	**P**	**08 25 12.6**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=21,slow=8.3,SNR=26						
	comp=Z,1.8nm,0.6s						
PZH	**PanZhiHua**	**41.42**	**288**	P	**P**	**08 25 18.5**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,5.1s						
SONM	**Songino Array**	**42.86**	**321**	P	**P**	**08 25 29.9**	**0.0**
	comp=Z,2.6nm,0.6s,baz=135,slow=8.4,SNR=12						
SONM				PcP	**PcP**	**08 27 20.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=117,slow=5.0,SNR=2.9						
	comp=Z,2.6nm,0.6s						
SONM	**Songino Array**	**42.86**	**321**	P	**P**	**08 25 31.4**	**+1.4**
AS31	**Alice Springs**	**44.57**	**196**	P	**P**	**08 25 43.9**	**+0.2**
ASAR	**Alice Springs**	**44.57**	**196**	P	**P**	**08 25 41.6**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=15,slow=6.4,SNR=9.9						
	comp=Z,0.6nm,0.5s						
DZM	**Mont Dzumac**	**45.78**	**153**	LR	LR	08 44 46.3	
	comp=Z,71nm,18.3s,baz=214,slow=36						
GOMU	**GeErMu**	**47.89**	**301**	P	**P**	**08 26 10.6**	**+0.3**
GOMU				pP	pP	08 26 15.5	-4.1
GOMU				sP	sP	08 26 16.3	-7.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,22nm,4.4s						
WMQ	**Urumqi**	**54.20**	**310**	*e*P	**P**	**08 26 59.8**	**+2.6**
ZAA0	**Zalesovo Array**	**57.71**	**322**	P	**P**	**08 27 21.6**	**-0.4**
ZAA0				IAmb	IAmb	08 27 22.5	
	comp=Z,4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**57.71**	**322**	P	**P**	**08 27 21.9**	**-0.2**
	comp=Z,5.9nm,0.8s,baz=95,slow=7.3,SNR=15						
	comp=Z,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**57.71**	**322**	P	**P**	**08 27 22.1**	**0.0**
MK31	**Makanchi Array**	**58.30**	**313**	P	**P**	**08 27 26.6**	**+0.2**
MK31				IAmb	IAmb	08 27 27.6	
	comp=Z,4.1nm,0.7s						
MKAR	**Makanchi Array**	**58.30**	**313**	P	**P**	**08 27 26.6**	**+0.3**
	comp=Z,4.5nm,0.5s,baz=91,slow=9.1,SNR=36						
MKAR				PcP	**PcP**	**08 28 16.3**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=91,slow=5.5,SNR=1.8						
	comp=Z,4.5nm,0.5s						
MKAR	**Makanchi Array**	**58.30**	**313**	P	**P**	**08 27 26.2**	**-0.2**
MAKZ	**Makanchi**	**58.52**	**313**	P	**P**	**08 27 28.1**	**+0.2**
KURK	**Kurchatov**	**61.04**	**318**	P	**P**	**08 27 44.8**	**-0.3**
KURK				IAmb	IAmb	08 27 45.9	
	comp=Z,9.1nm,0.9s						
KURBB	**Kurchatov Arra**	**61.09**	**318**	P	**P**	**08 27 45.3**	**-0.1**
	comp=Z,6.2nm,0.4s,baz=95,slow=7.5,SNR=53						
	comp=Z,6.2nm,0.4s						
BWN	**Browne**	**61.46**	**27**	P	**P**	**08 27 49.9**	**+2.2**
I23K	**Minto, Yukon-K**	**61.75**	**26**	P	**P**	**08 27 49.6**	**0.0**
I23K				IAmb	IAmb	08 28 10.9	

	comp=Z,4.3nm,1.4s						
KDJ	Kajisay	61.82	308	P	P	08 27 51.1	+0.3
SCM	Sheep Creek Mo	61.88	30	P	P	08 27 51.2	+0.5
H24K	Noodor Dome	62.52	25	P	P	08 27 55.5	+0.6
H24K				IAmb	IAmb	08 28 08.3	
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	62.68	26	P	P	08 27 54.8	-1.1
	comp=Z,0.9nm,0.7s,baz=255,slow=5.5,SNR=7.1						
	comp=Z,0.9nm,0.7s						
BOOM	Boomskoye usch	62.73	308	P	P	08 27 56.8	-0.1
AAK	Ala-Archa	63.79	309	P	P	08 28 03.6	-0.3
	comp=Z,1.4nm,0.3s,baz=65,slow=1.3,SNR=2.9						
	comp=Z,1.4nm,0.3s						
AAK	Ala-Archa	63.79	309	IAmb	IAmb	08 28 05.1	
	comp=Z,6.7nm,1.4s						
BMAR	Burnt Mountain	64.16	24	P	P	08 28 04.9	-0.8
BCAR	Beaver Creek A	64.62	29	P	P	08 28 09.1	+0.3
HYT	Haines Junctio	66.46	31	P	P	08 28 22.0	+1.2
HYT				IAmb	IAmb	08 28 22.9	
	comp=Z,3.5nm,0.9s						
KK31	Karatay Array	66.68	309	P	P	08 28 22.4	0.0
KK31				IAmb	IAmb	08 28 23.4	
	comp=Z,2.9nm,0.6s						
KKAR	Karatay Array	66.68	309	P	P	08 28 22.3	-0.1
KKAR				IAmb	IAmb	08 28 23.4	
	comp=Z,2.9nm,0.6s						
INK	Inuvik	68.42	23	P	P	08 28 32.8	0.0
	comp=Z,2.3nm,0.7s,baz=257,slow=5.4,SNR=7.9						
	comp=Z,2.3nm,0.7s						
INK	Inuvik	68.42	23	P	P	08 28 32.6	-0.3
INK				IAmb	IAmb	08 28 33.6	
	comp=Z,2.5nm,0.8s						
C36M	Paulatuk	71.80	22	P	P	08 28 53.1	-0.4
ABKAR	Akbulak array	73.12	317	P	P	08 29 01.6	-0.2
ABKAR	Akbulak array	73.12	317	P	P	08 29 01.8	-0.1
ABKAR				IAmb	IAmb	08 29 02.3	
	comp=Z,9.5nm,0.6s						
EUNU	Eureka	76.85	8	P	P	08 29 23.1	+0.2
EUNU				IAmb	IAmb	08 29 40.5	
	comp=Z,7.9nm,1.4s						
YKA	Yellowknife Ar	77.02	28	P	P	08 29 23.6	-0.4
	comp=Z,1.3nm,0.5s,baz=287,slow=5.6,SNR=18						
	comp=Z,1.3nm,0.5s						
ARCES	ARCESS Array B	81.89	342	P	P	08 29 50.3	-0.2
	comp=Z,2.1nm,0.7s,baz=79,slow=7.1,SNR=8.2						
	comp=Z,2.1nm,0.7s						
NVAR	Mina Array Bea	82.22	52	P	P	08 29 53.1	0.0
	comp=Z,0.8nm,0.8s,baz=262,slow=6.2,SNR=4.2						
	comp=Z,0.8nm,0.8s						
KBZ	Khabaz	85.96	315	P	P	08 30 10.8	-0.9
	comp=Z,1.2nm,0.5s,baz=80,slow=7.6,SNR=3.9						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	86.38	335	P	P	08 30 12.0	-1.4
	comp=Z,2.5nm,0.4s,baz=72,slow=4.6,SNR=23						
	comp=Z,2.5nm,0.4s						
AKASG	Malin Array Be	90.95	325	P	P	08 30 33.8	-1.5
	comp=Z,0.7nm,0.5s,baz=52,slow=6.1,SNR=4.2						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	92.01	340	P	P	08 30 39.0	-1.0
	comp=Z,0.4nm,0.6s,baz=51,slow=6.2,SNR=1.2						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	93.94	314	P	P	08 30 47.7	-1.9
	comp=Z,1.5nm,0.9s,baz=101,slow=1.3,SNR=5.7						
	comp=Z,1.5nm,0.9s						

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*IDC **21** 08:17:39.5±1.0, 30°.90N×139°.83E, h122^{km}±8^{km}, mb3.7/18, mbtmp4.1/22, Error ellipse: s-maj=16.0km s-min=8.3km az=77.0*

*JMA **21** 08:17:39.7±0.1, 31°.0N±0°.6×14°0E±°, h157^{km}±1^{km}, MV4.1/29, NEAR TORISHIMA IS*

*NEIC **21** 08:17:40.7±2.4, 30°.89N±0°.07×140°.1E±0°.1, h125^{km}±3^{km}, mb4.4/16, Error ellipse: s-maj=16.4km s-min=9.4km az=77.0*

ISC 21 08:17:41.8±0.6**, 30°.99N**±0°.05×**140°.25E**±0°.08**, h150**^{km}**, n75, σ1^{s}.68**/69**, mb3.9**/23**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.53	344	P	Pn	08 18 10.4	-1.2
JAOM				*e*S	Sn	08 18 33.5	-1.1
JHCJ	Hachijojimakas	2.11	350	P	Pn	08 18 16.7	-1.5
JHJ2	Mitsune	2.15	350		Pn	08 18 17.9	-0.8
JHJ2	Mitsune	2.15	350	P	Pn	08 18 17.4	-1.2
JHJ	Hachijo jima 2	2.16	350	P	Pn	08 18 17.6	-1.2
	211nm,0.3s,baz=261,slow=23,SNR=16						
JHJ				S	Sn	08 18 43.8	-3.6
	394nm,0.3s,baz=226,slow=21,SNR=11						
JMKN	Mikurajimanish	2.95	349	P	Pn	08 18 27.3	-1.2
JKO	Kozu shima	3.32	344	*e*P	Pn	08 18 32.0	-1.3
JKO				S	Sn	08 19 12.2	-1.0
BSO1	Boso 1	3.70	9	P	Pn	08 18 36.1	-1.6
TTO1	TONANKAI O.B.S	3.94	313	P	Pn	08 18 40.0	-1.0
CBIJ	Chichi jima	4.23	156	P	Pn	08 18 43.1	-2.0
CBIJ				*e*S	Sn	08 19 32.6	-1.8
JCJ	Chichijima	4.23	156	P	Pn	08 18 43.2	-1.9
	48nm,0.4s,baz=359,slow=20,SNR=31						
JCJ				S	Sn	08 19 31.9	-2.5
	94nm,0.3s,baz=252,slow=21,SNR=3.0						
JCJ	Chichijima	4.23	156	Pn	Pn	08 18 42.9	-2.3
JOD2	Odawara 2	4.37	347	P	Pn	08 18 45.5	-1.5
JOD2				*e*S	Sn	08 19 36.4	-1.3
JIE	Ise	4.52	320	P	Pn	08 18 48.0	-0.8
JTNC	Tanabenakahech	4.83	307	P	Pn	08 18 52.0	-1.0
INU	Inuyama	5.12	329	Pn	Pn	08 18 55.4	-1.4
JRY	Ryogami san	5.14	348	P	Pn	08 18 56.1	-1.0
JGF	Kuroka	5.20	333	Pn	Pn	08 18 57.2	-0.6
JYT	Yasato	5.22	359	Pn	Pn	08 18 55.7	-2.4
MJAR	Matsushiro Arr	5.79	343	P	Pn	08 19 04.5	-1.2
	3.2nm,0.4s,baz=155,slow=11,SNR=14						
MJAR	Matsushiro Arr	5.79	343	Pn	Pn	08 19 04.4	-1.4
MAJO	Matsushiro	5.79	343	Pn	Pn	08 19 05.6	-0.2
MJB9	Matsu-Tunnel	5.80	343		Pn	08 19 05.8	+0.1
JTO	Tosashimizu	6.60	288	*e*P	Pn	08 19 15.8	-0.7
JMM	Marumori	6.87	4		Pn	08 19 16.3	-3.8
JHS	Saijyo	7.20	306	Pn	Pn	08 19 23.2	-1.4
JHS	Saijyo	7.20	306	P	Pn	08 19 24.3	-0.2
JSD	Sado	7.22	347	Pn	Pn	08 19 22.8	-2.0
JOI	OKI	7.88	314	P	Pn	08 19 33.0	-0.5
JMK	Ichinoseki	7.98	5	P	Pn	08 19 31.7	-3.2
JNU	Nakatsue	8.23	287	P	Pn	08 19 38.0	-0.4
	32nm,0.9s,baz=80,slow=8.0,SNR=12						
JNU	Nakatsue	8.23	287		Pn	08 19 38.5	+0.1
JTM	Tenmabayashi	9.80	4	Pn	Pn	08 19 56.6	-2.4
ERM	Erimo	11.25	11	Pn	Pn	08 20 15.2	-3.0
KSRS	Korea Array	12.06	306	P	P	08 20 29.6	-5.7
	1.8nm,0.9s,baz=124,slow=13,SNR=11						
ASAJ	Asahikawa	13.23	7	P	Pn	08 20 40.9	-3.0
	3.9nm,0.4s,baz=232,slow=8.3,SNR=8.3						
USRK	Ussuriysk Ar.	14.71	336	P	P	08 21 04.4	-0.3
	2.6nm,0.5s,baz=133,slow=8.5,SNR=5.7						
KLR	Kul'dur	19.32	343	P	P	08 21 53.6	-1.6
	3.1nm,0.7s,baz=150,slow=11,SNR=13						
ZALV	Zalesovo Beam	45.47	317	P	P	08 25 43.6	-2.1
	0.7nm,0.4s,baz=94,slow=8.4,SNR=3.1						
	0.7nm,0.4s						
MK31	Makanchi Array	46.74	307	P	P	08 25 54.8	-1.0
MKAR	Makanchi Array	46.74	307	P	P	08 25 54.0	-1.8
	0.7nm,0.4s,baz=89,slow=10,SNR=8.3						
	0.7nm,0.4s						
MKAR	Makanchi Array	46.74	307	P	P	08 25 54.7	-1.1
MAKZ	Makanchi	46.96	307	P	P	08 25 56.6	-0.9
ANM	Nome	47.30	29	P	P	08 26 03.1	+3.3
KNRA	Kununurra	47.70	195	P	P	08 26 02.8	-0.6
KURK	Kurchatov	49.09	312	P	P	08 26 12.6	-1.1
KURK	Kurchatov	49.09	312	IAmb	IAmb	08 26 13.8	
	comp=Z,1.9nm,0.6s						
KURBB	Kurchatov Arra	49.15	312	P	P	08 26 12.6	-1.6
	comp=Z,1.0nm,0.5s,baz=90,slow=9.4,SNR=12						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	50.96	187	P	P	08 26 27.7	-0.4
	comp=Z,3.1nm,0.5s,baz=1.9,slow=7.8,SNR=24						
	comp=Z,3.1nm,0.5s						
KDAK	Kodiak Island	52.33	39	P	P	08 26 40.5	+2.7
	comp=Z,5.9nm,0.6s,baz=275,slow=1.6,SNR=9.6						
	comp=Z,5.9nm,0.6s						
NEA2	Nenana	54.21	30	P	P	08 26 54.0	+2.5
NEA2				IAmb	IAmb	08 26 55.4	
	comp=Z,4.4nm,0.8s						
TOLK	Toolik Lake Re	54.31	25	P	P	08 26 54.9	+2.7
TOLK				IAmb	IAmb	08 26 57.3	
	comp=Z,6.3nm,1.3s						
ASAR	Alice Springs	54.69	187	P	P	08 26 55.4	0.0
	comp=Z,1.2nm,0.5s,baz=14,slow=13,SNR=25						
	comp=Z,1.2nm,0.5s						
ILAR	Eielson Array	55.15	30	P	P	08 27 00.1	+1.8
	comp=Z,1.0nm,0.7s,baz=276,slow=6.6,SNR=12						
	comp=Z,1.0nm,0.7s						
INK	Inuvik	60.22	25	P	P	08 27 35.9	+2.3
	comp=Z,1.4nm,0.3s,baz=276,slow=5.4,SNR=18						
	comp=Z,1.4nm,0.3s						
INK	Inuvik	60.22	25	IAmb	IAmb	08 27 36.2	
	comp=Z,1.9nm,0.4s						
C36M	Paulatuk	63.33	23	P	P	08 27 56.2	+1.9
C36M				IAmb	IAmb	08 27 57.1	
	comp=Z,2.9nm,0.7s						
ARCES	ARCESS Array B	69.32	340	P	P	08 28 33.1	+0.6
	comp=Z,1.4nm,0.8s,baz=63,slow=8.6,SNR=4.5						
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	69.54	29	P	P	08 28 35.8	+1.9
	comp=Z,0.5nm,0.6s,baz=290,slow=5.8,SNR=7.7						
	comp=Z,0.5nm,0.6s						
FINES	FINESS Array B	73.72	333	P	P	08 28 59.4	+0.5
	comp=Z,0.8nm,0.4s,baz=71,slow=3.7,SNR=15						
	comp=Z,0.8nm,0.4s						
KBZ	Khabaz	74.14	312	P	P	08 29 02.1	+0.4
	comp=Z,1.4nm,0.7s,baz=106,slow=5.1,SNR=3.6						
	comp=Z,1.4nm,0.7s						
AKASG	Malin Array Be	78.50	323	P	P	08 29 26.0	-0.2
	comp=Z,0.8nm,0.3s,baz=50,slow=6.1,SNR=7.7						
	comp=Z,0.8nm,0.3s						
LRM	Limekiln Ridge	79.18	43	P	P	08 29 33.5	+3.1
NOA	NORSAR Array B	79.38	337	P	P	08 29 31.5	+0.7
	comp=Z,0.2nm,0.5s,baz=48,slow=5.2,SNR=2.2						
	comp=Z,0.2nm,0.5s						
NVAR	Mina Array Bea	79.44	52	P	P	08 29 35.3	+3.5
	comp=Z,2.0nm,0.8s,baz=282,slow=5.1,SNR=14						
	comp=Z,2.0nm,0.8s						
BOZ	Bozeman (W)	79.79	43	P	P	08 29 35.9	+2.4
R11A	Troy Canyon, C	81.29	50	P	P	08 29 45.0	+3.2
BRTR	Keskin Array B	82.14	312	P	P	08 29 46.6	+0.5
	comp=Z,0.4nm,0.4s,baz=64,slow=2.9,SNR=3.9						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	82.62	44	P	P	08 29 51.5	+2.9
	comp=Z,0.5nm,0.5s,baz=274,slow=3.9,SNR=4.3						
	comp=Z,0.5nm,0.5s						
RDMU	Red Mountain	83.90	46	P	P	08 29 58.1	+2.9
RDMU				IAmb	IAmb	08 29 59.4	
	comp=Z,5.8nm,0.7s						
TX31	Lajitas Ar. Si	94.58	52	P	P	08 30 49.2	+3.3
TXAR	Lajitas Array	94.59	52	P	P	08 30 49.4	+3.5
	comp=Z,1.3nm,0.7s,baz=300,slow=3.2,SNR=19						
	comp=Z,1.3nm,0.7s						
TXAR	Lajitas Array	94.59	52	P	P	08 30 48.8	+2.9
TORD	Torodi Ar. Bea	120.75	311	PKP	PKiKP	08 36 17.3	+0.4
	comp=Z,0.5nm,0.9s,baz=24,slow=0.9,SNR=5.2						
LPAZ	La Paz	150.27	67	PKPbc	PKiKP	08 37 17.4	+0.1
	comp=Z,3.0nm,0.7s,baz=28,slow=1.1,SNR=15						

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*IDC **21** 08:22:10.6±3.5, 19°.40N×146°.42E, h54^{km}±31^{km}, mb3.5/11, mbtmp3.8/14, ML3.5/3, Error ellipse: s-maj=36.7km s-min=16.7km az=87.0*

ISC 21 08:22:08.8±0.9**, 19°.44N**±0°.06×**146°.5E**±0°.2**, h35**^{km}**, n14, σ1^{s}.06**/16**, mb3.6**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.01	195	P	Pn	08 23 37.0	+1.7
	5.5nm,0.3s,baz=17,slow=21,SNR=1.7						
GUMO				S	Sn	08 24 41.7	-1.3
	48nm,0.8s,baz=206,slow=11,SNR=1.9						
	47nm,0.8s						
JCJ	Chichijima	8.58	334	P	Pn	08 24 11.8	+1.3
	0.5nm,0.3s,baz=298,slow=20,SNR=1.8						
JCJ				S	Sn	08 25 44.7	-1.4
	9.6nm,0.4s,baz=260,slow=22,SNR=1.0						
	28nm,0.7s						
MJAR	Matsushiro Arr	18.52	339	P	Pn	08 26 22.8	+0.2
	baz=158,slow=10,SNR=2.5						
	0.8nm,0.5s						
KSRS	Korea Array	24.17	322	P	P	08 27 21.6	-0.2
	0.5nm,0.3s,baz=155,slow=9.7,SNR=2.7						
	0.5nm,0.3s						
KLR	Kul'dur	31.99	342	P	P	08 28 31.7	+0.1
	1.5nm,0.3s,baz=156,slow=11,SNR=8.3						
	1.5nm,0.3s						
WRA	Warramunga Arr	40.90	198	P	P	08 29 46.8	-1.0
	0.5nm,0.6s,baz=17,slow=8.3,SNR=6.4						
	0.5nm,0.6s						
SONM	Songino Array	43.03	321	P	P	08 30 05.9	+0.7
	0.3nm,0.3s,baz=142,slow=7.7,SNR=2.4						
	0.3nm,0.3s						
ASAR	Alice Springs	44.56	197	P	P	08 30 17.0	-0.5
	0.4nm,0.9s,baz=15,slow=6.8,SNR=2.4						
	0.4nm,0.9s						
ZALV	Zalesovo Beam	57.88	322	P	P	08 31 56.2	-0.9
	1.1nm,0.6s,baz=103,slow=6.4,SNR=4.5						
	1.1nm,0.6s						
MKAR	Makanchi Array	58.48	313	P	P	08 32 01.6	+0.1
	1.0nm,0.6s,baz=88,slow=9.6,SNR=11						
	1.0nm,0.6s						
ILAR	Eielson Array	62.67	26	P	P	08 32 28.7	-1.0
	0.2nm,0.4s,baz=280,slow=5.4,SNR=2.8						
	0.2nm,0.4s						
YKA	Yellowknife Ar	77.00	28	P	P	08 33 58.6	+0.8
	0.3nm,0.5s,baz=285,slow=5.8,SNR=7.2						
	0.3nm,0.5s						
ARCES	ARCESS Array B	82.02	342	P	P	08 34 25.4	+0.4
	0.7nm,0.6s,baz=61,slow=7.3,SNR=1.0						
	0.7nm,0.6s						
FINES	FINESS Array B	86.52	335	P	P	08 34 46.6	-1.3
	0.7nm,0.4s,baz=71,slow=6.0,SNR=10						
	0.7nm,0.4s						

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*ATH **21** 08:31:37.7, 37°.54N×23°.59E, h20^{km}±5^{km}, ML3.2/3, Error ellipse: s-maj=5.9km s-min=1.0km az=158.0*

*THE **21** 08:31:38.1, 37°.57N×23°.58E, h13^{km}, ML3.1/12, Error ellipse: s-maj=1.0km s-min=0.5km az=313.0*

ISC 21 08:31:37.9±0.9**, 37°.57N**±0°.02×**23°.57E**±0°.03**, h16**^{km}±7^{km}**, n28, σ0^{s}.46**/49**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YDRA	Hydra	0.23	200	P	Pg	08 31 42.8	-0.3
YDRA				S	Sb	08 31 47.2	-0.3
YDRA				AML	AML	08 31 48.4	
	comp=E,26540µm,0.2s						
YDRA				AML	AML	08 31 48.9	
	comp=N,24329µm,0.2s						
VLY	Voula,Athens	0.34	32	P	Pg	08 31 44.7	-0.3
VLY				S	Sg	08 31 50.3	+0.5
VLY				AML	AML	08 31 51.1	
	comp=E,5921µm,0.2s						
VLY				AML	AML	08 31 52.2	
	comp=N,4995µm,0.3s						
VLY	Voula,Athens	0.34	32	P	Pg	08 31 44.7	-0.3
VLY				S	Sg	08 31 50.0	+0.2
	comp=N,3µm,0.2s						
EPID	Epidavros	0.36	278	P	Pg	08 31 45.1	-0.2
EPID				S	Sg	08 31 51.2	+0.8
EPID	Epidavros	0.36	278	P	Pg	08 31 45.2	-0.1
EPID				S	Sb	08 31 51.5	+0.2
	comp=N,7µm,0.2s						
KRND	KRANIDI	0.38	241	P	Pg	08 31 45.1	-0.5
KRND				S	Sb	08 31 51.7	-0.2
KRND				AML	AML	08 31 51.8	
	comp=E,11003µm,0.3s						
KRND				AML	AML	08 31 52.9	
	comp=N,8587µm,0.3s						
KRND	KRANIDI	0.38	241	P	Pg	08 31 45.2	-0.5
KRND				S	Sg	08 31 51.4	+0.5
	comp=N,5µm,0.3s						
ATH	Athens Observa	0.42	16	P	Pg	08 31 46.2	-0.2
ATH				S	Sb	08 31 53.3	+0.2
ATH	Athens Observa	0.42	16	P	Pg	08 31 46.5	0.0
ATH				S	Sb	08 31 53.4	+0.2
	comp=N,4µm,0.4s						
ATHU	Athens Univers	0.44	23	P	Pg	08 31 46.4	-0.3
ATHU	Athens Univers	0.44	23	P	Pg	08 31 46.4	-0.3
ATHU				S	Sg	08 31 52.8	+0.1
	comp=N,522nm,0.2s						
PTL	Penteli	0.54	26	P	Pg	08 31 48.0	-0.6
DION	Dionisos Attik	0.59	30	P	Pg	08 31 49.2	-0.4
DION	Dionisos Attik	0.59	30	P	Pg	08 31 49.2	-0.4
DION				S	Sb	08 31 58.1	+0.1
	comp=N,2µm,0.2s						
VILL	Villia	0.63	342	P	Pg	08 31 50.2	-0.1
VILL				S	Sb	08 32 00.0	+0.8
	comp=N,3µm,0.3s						
LTK	Loutraki	0.66	314	P	Pg	08 31 50.7	-0.1
VIL2	Platees	0.69	340	P	Pg	08 31 50.0	-1.3
VIL2				S	Sg	08 31 59.6	-0.9
KARY	Karystos	0.83	56	P	Pb	08 31 53.8	-0.2
KARY	Karystos	0.83	56	P	Pb	08 31 53.9	-0.1
KARY				S	Sg	08 32 05.4	+0.3
THAL	Thalero	0.86	304	P	Pn	08 31 55.4	+0.1
VLI	Veliai	0.98	211	P	Pb	08 31 56.0	-0.6
VLI				S	Sn	08 32 11.0	+0.4
	comp=N,942nm,0.3s						
MHLO	Agia Marina, M	1.10	142	P	Pg	08 31 59.0	-0.2
MHLO				S	Sn	08 32 13.9	+0.4
KYMI	Kymi, Euboea I	1.15	21	P	Pb	08 31 59.5	+0.2
KYMI				S	Sb	08 32 14.4	+0.4
	comp=N,1µm,0.4s						
LKR	Lokris	1.17	338	P	Pn	08 31 58.6	-1.0
LKR				S	Sb	08 32 15.1	+0.4
	comp=N,1µm,0.2s						
ATAL	Atalanti	1.20	339	P	Pn	08 32 00.3	+0.2
ATAL				S	Sg	08 32 17.6	+0.7
	comp=N,502nm,0.5s						
KLV	Kalavryta, Ach	1.22	293	P	Pn	08 32 00.5	+0.1
KTHR	Kythira	1.38	199	P	Pb	08 32 03.2	-0.1
KTHR				S	Sb	08 32 21.3	+0.6
	comp=N,742nm,0.4s						
SKY	Skiros Island	1.52	30	P	Pn	08 32 04.4	-0.1
SKY				S	Sb	08 32 24.7	-0.1

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*NEIC **21** 08:41:10.3±2.6, 40°.37N±0°.09×127°.6W±0°.2, h10^{km}±2^{km}, ML3.4/36, ML3.3/11(NCEDC), Error ellipse: s-maj=21.7km s-min=14.6km az=257.0*

ISC 21 08:41:13.4±2.9**, 40°.39N**±0°.06×**127°.1W**±0°.2**, h10**^{km}**, n43, σ1^{s}.53**/47**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMM	Slide Mountain	2.27	94		Pn	08 41 50.5	-0.6
KMPM	Mount Pierce	2.30	88		Pn	08 41 51.9	+0.4
KMPM				IAML		08 42 19.7	
	comp=E,280nm,0.4s						
JCC	Jacoby Creek,	2.40	79	Pn	Pn	08 41 53.0	+0.2
KCRM	Chalk Rock	2.53	88		Pn	08 41 55.4	+0.7
KMRM	Mail Ridge	2.63	93		Pn	08 41 56.8	+0.8
KMRM				IAML		08 42 29.6	
	comp=E,155nm,0.7s						
KMRM				IAML		08 42 30.0	
	comp=N,157nm,0.9s						
KHMM	Horse Mountain	2.64	78	Pn	Pn	08 41 54.9	-1.3
KHMM				IAML		08 42 28.9	
	comp=N,97nm,0.8s						
KBSM	Bell Springs	2.75	99		Pn	08 41 58.1	+0.3
KCPM	Cahto Peak	2.82	103	Pn	Pn	08 41 58.5	-0.1
KBO	Bosley Butte	2.85	49	Pn	Pn	08 41 58.9	-0.1
KBO				IAML		08 42 31.6	
	comp=N,99nm,2.8s						
KBO				IAML		08 42 35.6	
	comp=E,117nm,2.5s						
KSXB	Camp Six Broad	2.85	59	Pn	Pn	08 41 59.1	0.0
KOMM	Orleans Mounta	2.93	71		Pn	08 42 00.1	-0.1
GNAM	Navarro Ridge	2.95	113		Pn	08 42 00.5	+0.1
L02F	Cave Junction	3.19	56	P	Pn	08 42 04.6	+0.9
	baz=240						
L02F				S	Sn	08 42 39.1	-2.7
	baz=240						
KEBM	Edson Butte	3.25	39	Pn	Pn	08 42 04.3	-0.2
KEBM				IAML		08 42 59.5	
	comp=N,116nm,4.3s						
KEBM				IAML		08 43 57.8	
	comp=E,103nm,3.3s						
HOPS	Hopland Field	3.43	113	Pn	Pn	08 42 06.9	-0.1
HOPS				IAML		08 42 50.5	
	comp=N,70nm,2.6s						
HOPS				IAML		08 44 03.1	
	comp=E,45nm,3.6s						
K02D	Willamette Mer	3.48	47	P	Pn	08 42 08.2	+0.5
	baz=232,SNR=52						
K02D				S	Sn	08 42 45.5	-3.5
	baz=232						
YBH	Yreka Blue Hor	3.60	67		Pn	08 42 10.5	+1.1
J01E	Myrtle Point	3.66	40	Pn	Pn	08 42 09.7	-0.4
J01E				IAML		08 43 20.8	
	comp=E,53nm,4.0s						
J01E				IAML		08 44 38.5	
	comp=N,42nm,3.8s						
J01E	Myrtle Point	3.66	40	P	Pn	08 42 10.4	+0.3
	baz=224,SNR=9.3						
J01E				S	Sn	08 42 50.7	-2.6
	baz=224						
HUMO	Hull Mountain	3.84	53		Pn	08 42 13.8	+1.2
DBO	Dodson Butte	3.99	46	Pn	Pn	08 42 15.7	+1.0
DBO				IAML		08 43 11.2	
	comp=N,48nm,3.9s						
DBO				IAML		08 43 17.6	
	comp=E,39nm,4.0s						
MCCM	Marconi Confer	3.99	123		Pn	08 42 14.8	+0.1
MCCM				IAML		08 43 02.8	
	comp=E,55nm,1.6s						
MCCM				IAML		08 43 25.8	
	comp=N,64nm,3.2s						
L04D	Klamath Falls	4.07	62		Pn	08 42 18.2	+2.3
L04D				IAML		08 45 08.6	
	comp=E,38nm,4.5s						
L04D				IAML		08 45 09.0	
	comp=N,32nm,4.4s						
L04D	Klamath Falls	4.07	62	P	Pn	08 42 18.5	+2.6
	baz=246,SNR=13						
L04D				S	Sn	08 43 05.5	+1.8
	baz=246						
I03D	Drain, OR	4.34	39	P	Pn	08 42 20.8	+1.4
	baz=224						
J04D	Umpqua Nationa	4.71	51		Pn	08 42 26.4	+1.7
J04D	Umpqua Nationa	4.71	51	P	Pn	08 42 27.1	+2.3
	baz=236,SNR=5.9						
I04A	Tendick Farm,	4.89	44	P	Pn	08 42 28.9	+1.9
	baz=229						
BUCK	Buck Mountain	4.89	38	Pn	Pn	08 42 28.7	+1.6
BEKR	Beckworth	5.22	94		Pn	08 42 33.9	+2.1
K05A	Summer Lake	5.23	62		Pn	08 42 33.6	+1.7
J05D	Fort Rock, OR	5.27	55	P	Pn	08 42 34.3	+1.9
	baz=240,SNR=14						
SAO	San Andreas Ge	5.74	127		Pn	08 42 38.6	-0.2
CMB	Columbia Colle	5.75	112		Pn	08 42 41.3	+2.4
BBGB	Big Mountain B	6.11	127	Pn	Pn	08 42 44.8	+0.9
PMPB	Monarch Peak	6.50	128	Pn	Pn	08 42 49.5	+0.3
I07A	Izee	6.76	54	Pn	Pn	08 42 55.0	+2.2
MDPB	Devils Postpil	6.85	111		Pn	08 42 55.8	+1.6
OMMB	Old Mammoth Mi	6.92	111		Pn	08 42 57.0	+1.8
LHV	Little Huntoon	7.03	105	Pn	Pn	08 42 56.7	+0.4
PAGB	Antelope Grade	7.15	128		Pn	08 42 58.3	+0.2
ISA	Isabella, Lake	8.31	122	Pn	Pn	08 43 16.0	+2.0
BMO	Blue Mountains	8.51	55	Pn	Pn	08 43 18.8	+2.1

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*IDC **21** 08:46:18.6±0.7, 25°.59S×129°.86E, h0^{km}, mb4.0/9, mbtmp4.1/12, ML4.3/3, Error ellipse: s-maj=22.6km s-min=17.8km az=91.0*

*NOU **21** 08:46:19.0, 25°.55S×129°.81E, h10^{km}, mb4.7/31, Northern Territory, Australia*

*NEIC **21** 08:46:20.2±2.5, 25°.57S±0°.07×129°.89E±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=12.0km s-min=7.5km az=200.0*

ISC 21 08:46:19.6±0.4**, 25°.59S**±0°.05×**129°.87E**±0°.04**, h10**^{km}**, n100, σ1^{s}.87**/88**, mb4.3**/15**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.53	291		Pb	08 46 48.4	+0.3
WRKA					Sg	08 47 09.4	+0.7
WRKA	Warakurna	1.53	291	P	Pb	08 46 47.7	-0.4
ASAR	Alice Springs	4.14	63	Pn	Pn	08 47 23.9	+0.8
	9.5nm,0.3s,baz=242,slow=12,SNR=182						
ASAR				Pg	Pb	08 47 35.8	+3.1
	18nm,0.3s,baz=238,slow=16,SNR=66						
ASAR				Sn	Sn	08 48 11.5	-0.1
	16nm,0.3s,baz=236,slow=15,SNR=7.3						
ASAR				Lg	Lg	08 48 25.0	
	23nm,0.3s,baz=244,slow=25,SNR=5.4						
	41nm,0.5s						
ASAR	Alice Springs	4.14	63	Pn	Pn	08 47 23.2	+0.1
AS31	Alice Springs	4.15	63	Pn	Pn	08 47 23.7	+0.6
FORT	Forrest	5.41	197	Pn	Pn	08 47 42.6	+2.3
FORT	Forrest	5.41	197	Pn	Pg	08 48 04.6	+1.4
FORT	Forrest	5.41	197	P	Pn	08 47 44.0	+3.6
OOD	Oodnadatta	5.65	114	P	Pn	08 47 46.0	+2.3
MULG	Mulgathing	5.96	143	P	Pn	08 47 50.9	+2.9

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WRA   Warramunga Arr    6.97  37  Pn      Pn       08 48 02.0 +0.1
      4.3nm,0.3s,baz=216,slow=13,SNR=40
WRA                               Sn      Sn       08 49 17.2 -4.2
      7.3nm,0.3s,baz=220,slow=23,SNR=8.8
WRA                               Lg      Lg       08 49 55.0
      14nm,0.3s,baz=209,slow=26,SNR=6.9
      31nm,0.8s
WRA   Warramunga Arr    6.97  37          Pn       08 48 02.2 +0.2
WB2   Warramunga Arr    6.98  37  Pn      Pn       08 48 02.0 -0.1
WB2   Warramunga Arr    6.98  37  Pn      Pb       08 48 27.0 +5.9
WRAB  Tennant Creek     6.99  37          Pn       08 48 02.1  0.0
WRAB  Tennant Creek     6.99  37  P       Pn       08 48 02.6 +0.5
WR0   Warramunga Arr    7.07  38  Pn      Pn       08 48 03.1 -0.2
WR0   Warramunga Arr    7.07  38  Pn      Pb       08 48 28.0 +5.4
WB0   Warramunga Arr    7.15  37  Pn      Pn       08 48 04.2 -0.1
WB0   Warramunga Arr    7.15  37  Pn      Pb       08 48 28.9 +5.0
LCRK  Leigh Creek       8.82 125  P       Pn       08 48 27.5 +0.3
BBOO  Buckleboo         9.00 144          Pn       08 48 30.5 +0.8
BBOO  Buckleboo         9.00 144  P       Pn       08 48 30.4 +0.8
KNRA  Kununurra         9.92 354  Pn      Pn       08 48 42.0 -0.4
KNRA  Kununurra         9.92 354  P       Pn       08 48 41.8 -0.6
INKA  Innaminka         9.96 105  P       Pn       08 48 43.2 +0.3
WHYH  Whyalla          10.01 140  P       Pn       08 48 44.2 +0.7
PSA00 Pilbara Seismi   10.02 291  Pn      Pn       08 48 40.8 -2.9
PSA00 Pilbara Seismi   10.02 291  Pn      Pn       08 48 43.4 -0.3
PSA00 Pilbara Seismi   10.02 291  P       Pn       08 48 43.2 -0.6
QIS   Mount Isa        10.27  63  P       Pn       08 48 48.0 +0.8
MBWA  Marble Bar       10.30 293  Pn      Pn       08 48 46.6 -0.9
MBWA  Marble Bar       10.30 293  P       Pn       08 48 46.5 -1.1
NAPP  Napperby         10.45 138  P       Pn       08 48 49.7 +0.1
HTT   Hallett          11.09 137  P       Pn       08 48 57.6 -0.8
TWOA  Tennyson Woods   12.04 143  P       Pn       08 49 12.8 +1.5
STKA  Stephens Creek   12.04 124  Pn      Pn       08 49 09.7 -1.6
      2.0nm,0.3s,baz=306,slow=15,SNR=30
STKA                              Sn      Sn       08 51 17.6 -8.1
      1.9nm,0.3s,baz=316,slow=20,SNR=2.2
STKA                              Lg      Lg       08 52 36.4
      3.0nm,0.3s,baz=243,slow=22,SNR=1.5
      8.4nm,0.5s
STKA  Stephens Creek   12.04 124  P       Pn       08 49 10.0 -1.4
KLBR  Kellerberrin     12.20 238  P       Pn       08 49 11.7 -1.9
BLDU  Ballidu          12.64 244  P       Pn       08 49 17.4 -2.2
MTN   Manton Dam       12.74   6  Pn      Pn       08 49 17.2 -3.8
MORW  Morawa           12.77 251  Pn      Pn       08 49 18.1 -3.2
MORW  Morawa           12.77 251  P       Pn       08 49 18.1 -3.2
QLP   Quilpie          12.95  97  P       Pn       08 49 22.0 -1.8
NWAO  Narrogin (SRO)   13.22 234  Pn      Pn       08 49 25.8 -1.7
NWAO  Narrogin (SRO)   13.22 234  P       Pn       08 49 25.9 -1.6
MUN   Mundaring        13.56 239  P       Pn       08 49 30.0 -2.1
GIRL  Giralia          14.57 278  Pn      Pn       08 49 43.5 -2.5
GIRL  Giralia          14.57 278  P       Pn       08 49 43.5 -2.5
CMSA  Cobar Meteorol   15.11 117  P       Pn       08 49 50.6 -2.6
ARPS  Mount Arapiles   15.12 140  P       Pn       08 49 51.0 -2.3
CTA   Charters Tower   16.06  73  Pn      Pn       08 50 03.0 -2.8
      0.2nm,0.3s,baz=19,slow=18,SNR=1.6
CTA                               Sn      Sn       08 53 06.8 +2.8
      0.2nm,0.3s,baz=191,slow=18,SNR=1.8
CTA                               Lg      Lg       08 54 41.7
      1.3nm,0.3s,baz=142,slow=14,SNR=3.3
CTA   Charters Tower   16.06  73  P       Pn       08 50 05.3 -0.5
CTAO  Charters Tower   16.06  73  Pn      Pn       08 50 04.0 -1.7
CTAO                              IAmb    IAmb     08 50 25.8
      comp=Z,28nm,1.4s
CTAO  Charters Tower   16.06  73  P       Pn       08 50 05.6 -0.2
RMQ   Roma             17.00  97  P       Pn       08 50 17.4 -0.3
COEN  Coen             17.04  50  Pn      Pn       08 50 15.6 -2.5
COEN  Coen             17.04  50  P       Pn       08 50 15.8 -2.3
TOO   Toolangi         17.85 136          Pn       08 50 28.4 +0.2
TOO   Toolangi         17.85 136  P       P        08 50 30.1 +1.2
EIDS  Eidsvold         19.16  94  P       Pn       08 50 44.4 +0.2
EIDS  Eidsvold         19.16  94  IAmb    IAmb     08 51 12.4
      comp=Z,12nm,0.9s
ARMA  Armidale         19.80 109  P       P        08 50 51.1 +0.7
ARMA                              IAmb    IAmb     08 50 55.2
      comp=Z,25nm,0.9s
ARMA  Armidale         19.80 109  IAmb    IAmb     08 51 20.1
      comp=Z,21nm,0.8s
TAU   Tasmania Unive   22.43 145  P       P        08 51 16.5 -2.0
KAPI  Kappang          22.64 333  P       P        08 51 21.9 +0.9
      comp=Z,6.7nm,0.7s,baz=152,slow=15,SNR=1.8
      comp=Z,6.7nm,0.7s
KAPI  Kappang          22.64 333  IAmb    IAmb     08 51 41.4
      comp=Z,22nm,1.2s
FAKI  Fak Fak          22.66   6  P       P        08 51 20.4 -0.8
FAKI                              IAmb    IAmb     08 51 47.0
      comp=Z,16nm,0.8s
FAKI  Fak Fak          22.66   6  IAmb    IAmb     08 51 47.0
      comp=Z,16nm,0.8s
SBUM  Sibu             32.70 326  P       P        08 52 52.4 -0.1
SBUM                              IAmb    IAmb     08 53 21.6
      comp=Z,8.6nm,1.5s
MSVF  Nonsavu          45.26  90  P       P        08 54 38.0 +0.2
VNDA  Vanda            54.13 172  P       P        08 55 44.9 +0.5
      comp=Z,0.6nm,0.7s,baz=333,slow=4.3,SNR=6.4
      comp=Z,0.6nm,0.7s
VNDA  Vanda            54.13 172  P       P        08 55 44.9 +0.5
VNDA                              IAmb    IAmb     08 55 52.1
      comp=Z,3.2nm,1.3s
PZH   PanZhiHua        58.47 330  P       P        08 56 19.3 +3.2
PZH   PanZhiHua        58.47 330  pmax    pmax
      comp=Z,80nm,5.3s
PZH   PanZhiHua        58.47 330  pmax    pmax
      comp=Z,10.0nm,0.5s
MJAR  Matsushiro Arr   62.30   8  P       P        08 56 42.3 +0.3
      comp=Z,2.3nm,1.0s,baz=197,slow=10,SNR=2.9
      comp=Z,2.3nm,1.0s
KSRS  Korea Array      62.74 358  P       P        08 56 46.1 +1.3
      comp=Z,0.7nm,0.5s,baz=190,slow=8.5,SNR=4.2
      comp=Z,0.7nm,0.5s
QSPA  South Pole Qui   64.49 180  P       P        08 56 57.4 +1.1
      comp=Z,1.8nm,0.6s,baz=291,slow=1.2,SNR=12
      comp=Z,1.8nm,0.6s
QSPA  South Pole Qui   64.49 180  P       P        08 56 57.1 +0.7
QSPA  South Pole Qui   64.49 180  IAmb    IAmb     08 57 35.4
      comp=Z,2.1nm,1.1s
HHC   Hu-ho-hao-te     68.26 345  pmax    pmax
      comp=Z,48nm,1.0s
HHC   Hu-ho-hao-te     68.26 345  pmax    pmax
      comp=Z,170nm,5.7s
HHC   Hu-ho-hao-te     68.26 345 eP       P        08 57 23.0 +2.3
XLT   XiLinHaoTe       70.30 349  pmax    pmax
      comp=Z,10.0nm,1.1s
XLT   XiLinHaoTe       70.30 349  pmax    pmax
      comp=Z,110nm,4.2s
XLT   XiLinHaoTe       70.30 349 eP       P        08 57 35.0 +1.8
XLT   XiLinHaoTe       70.30 349  pP      pP       08 57 38.9 +2.2
XLT   XiLinHaoTe       70.30 349  sP      sP       08 57 41.0 +3.0
SONM  Songino Array    76.08 344  P       P        08 58 08.1 +0.7
      comp=Z,0.6nm,0.6s,baz=160,slow=4.6,SNR=4.3
      comp=Z,0.6nm,0.6s
WMQ   Urumqi           79.17 330  pmax    pmax
      comp=Z,32nm,0.7s
WMQ   Urumqi           79.17 330  pP      pP       08 58 30.3 +2.1
WMQ   Urumqi           79.17 330 eP       P        08 58 26.3 +1.7
MKAR  Makanchi Array   83.89 329  P       P        08 58 49.2 -0.4
      comp=Z,0.5nm,0.5s,baz=146,slow=6.2,SNR=6.4
      comp=Z,0.5nm,0.5s
ZALV  Zalesovo Beam    88.25 335  P       P        08 59 10.2 -0.5
      comp=Z,0.5nm,0.4s,baz=108,slow=4.8,SNR=3.7
      comp=Z,0.5nm,0.4s
KURBB Kurchatov Arra   88.39 330  P       P        08 59 12.1 +0.6
      comp=Z,0.8nm,0.5s,baz=144,slow=3.9,SNR=8.3
      comp=Z,0.8nm,0.5s
FINES FINESS Array B  118.70 328  PKP     PKiKP    09 05 07.6 +0.2
      comp=Z,0.4nm,0.5s,baz=33,slow=4.5,SNR=4.8
NVAR  Mina Array Bea  121.98  59  PKP     PKiKP    09 05 15.3 +0.3
      comp=Z,0.2nm,0.5s,baz=289,slow=3.6,SNR=2.3
YKA   Yellowknife Ar  124.14  30  PKP     PKPdf    09 05 17.9  0.0
      comp=Z,0.5nm,0.7s,baz=289,slow=1.9,SNR=8.5
TORD  Torodi Ar. Bea  129.85 266  PKP     PKiKP    09 05 31.5 +0.6
      comp=Z,0.2nm,0.4s,baz=94,slow=0.9,SNR=4.9
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*IDC **21** 08:46:42.7±1.1, 25°.61S×129°.80E, h0^{km}, mb4.0/4, mbtmp4.2/7, ML4.3/3, MS3.3/1, Error ellipse: s-maj=29.7km s-min=24.6km az=132.0*

*NEIC **21** 08:46:44.6±1.3, 25°.58S±0°.06×129°.81E±0°.08, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=13.6km s-min=7.3km az=237.0*

ISC 21 08:46:44.2±0.6**, 25°.57S**±0°.07×**129°.89E**±0°.07**, h10^{km}, n27, σ1ˢ.83**/30**, mb4.2**/4**, Northern Territory**

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Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
ASAR  Alice Springs     4.11  63  Pn      Pn       08 47 49.3 +2.0
      10nm,0.3s,baz=243,slow=12,SNR=4.3
ASAR                              Pg      Pb       08 48 00.8 +4.0
      21nm,0.3s,baz=241,slow=11,SNR=8.7
ASAR                              Lg      Lg       08 48 49.6
      96nm,0.3s,baz=245,slow=26,SNR=14
      40nm,0.6s
ASAR  Alice Springs     4.11  63          Pn       08 47 49.3 +2.0
AS31  Alice Springs     4.12  63  Pn      Pn       08 47 49.2 +2.0
WRA   Warramunga Arr    6.94  37  Pn      Pn       08 48 25.5 -0.6
      4.8nm,0.3s,baz=216,slow=13,SNR=11
WRA                               Pg      Pb       08 48 50.4 +5.4
      4.4nm,0.3s,baz=222,slow=13,SNR=4.7
WRA                               Sn      Sn       08 49 41.7 -3.5
      12nm,0.3s,baz=228,slow=14,SNR=1.6
WRA                               Lg      Lg       08 50 19.7
      24nm,0.3s,baz=211,slow=29,SNR=5.0
      29nm,0.8s
WRA   Warramunga Arr    6.94  37          Pn       08 48 25.5 -0.6
BBOO  Buckleboo         9.01 145  Pn      Pn       08 48 55.0 +0.6
PSA00 Pilbara Seismi   10.03 291  Pn      Pn       08 49 07.9 -0.6
STKA  Stephens Creek   12.04 124  Pn      Pn       08 49 34.9 -1.1
      1.9nm,0.3s,baz=306,slow=13,SNR=7.8
STKA                              Sn      Sn       08 51 44.4 -5.9
      2.7nm,0.3s,baz=129,slow=15,SNR=3.8
STKA                              Lg      Lg       08 53 02.0
      0.5nm,0.3s,baz=7.2,slow=23,SNR=2.4
STKA                              LR      LR       08 53 45.9
      comp=Z,141nm,21.1s,baz=37,slow=35
      12nm,0.6s
STKA  Stephens Creek   12.04 124          Pn       08 49 34.9 -1.1
MTN   Manton Dam       12.71   6  Pn      Pn       08 49 42.5 -2.7
EIDS  Eidsvold         19.14  94  P       P        08 51 08.3 +0.7
ARMA  Armidale         19.79 109  P       P        08 51 15.7 +0.9
FAKI  Fak Fak          22.63   6  P       P        08 51 45.0 -0.5
SBUM  Sibu             32.69 326  P       P        08 53 17.0  0.0
OUENC Ouen Island, N   33.84  93  P       P        08 53 26.6 -0.4
SANVU Saraoutou        36.26  81  P       P        08 53 48.5 +0.6
VNDA  Vanda            54.15 172  P       P        08 56 10.1 +0.9
KSRS  Korea Array      62.71 358  P       P        08 57 09.2 -0.1
      0.8nm,0.6s,baz=183,slow=5.8,SNR=2.4
      0.8nm,0.6s
KSRS  Korea Array      62.71 358  P       P        08 57 09.2 -0.1
QSPA  South Pole Qui   64.51 180  P       P        08 57 21.2 +0.1
      1.7nm,0.8s,baz=275,slow=12,SNR=2.7
      1.7nm,0.8s
QSPA  South Pole Qui   64.51 180  P       P        08 57 21.2 +0.1
MKAR  Makanchi Array   83.88 329  P       P        08 59 15.0 +1.0
      0.5nm,0.6s,baz=149,slow=6.7,SNR=3.9
      0.5nm,0.6s
MKAR  Makanchi Array   83.88 329  P       P        08 59 15.0 +1.0
KURBB Kurchatov Arra   88.37 330  P       P        08 59 35.9 -0.2
      0.5nm,0.2s,baz=144,slow=4.2,SNR=5.3
      0.5nm,0.2s
NVAR  Mina Array Bea  121.95  59  PKP     PKPdf    09 05 39.7 +0.4
      0.4nm,0.6s,baz=274,slow=3.4,SNR=2.8
YKA   Yellowknife Ar  124.11  30  PKP     PKPdf    09 05 42.1 -0.2
      0.4nm,0.7s,baz=281,slow=2.1,SNR=6.4
YKA   Yellowknife Ar  124.11  30          PKPdf    09 05 42.1 -0.2
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*MAN **21** 08:48:24.1, 10°.90N×124°.72E, h1^{km}, mb4.1, ML2.8, MS2.5, Hypocentre not reviewed by the ISC*

ISC 21 08:48:25.1±1.4**, 10°.92N**±0°.05×**124°.70E**±0°.06**, h4^{km}**±13^{km}**, n6, σ0ˢ.76**/11**, 1C-3D, Leyte**

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Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
OCLP  Ormoc             0.16 326⇓eP       Pg       08 48 27.9 -0.5
OCLP                             eS       Sg       08 48 31.3 +0.8
MSLP  Maasin            0.79 169⇑iP       Pg       08 48 40.0 -0.3
MSLP                             i S      Sb       08 48 53.8 +1.2
LLP   Lapu-Lapu         0.94 231 eP       Pg       08 48 42.5 -0.6
LLP                              eS       Sb       08 48 57.1 +0.3
TBP   Tagbilaran        1.47 214 eP       Pn       08 48 51.8 -0.7
TBP                              i S      Sg       08 49 13.1 +0.7
GLSP  General Luna,     1.80 129⇓eP       Pn       08 48 56.5 -0.5
GLSP                             eS       Sn       08 49 20.3 +0.1
RCP   Roxas             2.02 289⇓eP       Pn       08 48 60.0 -0.1
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*SOME **21** 08:54:04.2, 41°.75N×72°.83E, h5^{km}*

*KRNET **21** 08:54:06.4±0.1, 41°.90N×72°.83E, h14^{km}, mb2.3*

*NNC **21** 08:54:09.3±1.7, 41°.91N×72°.74E, h1^{km}±7^{km}, mb3.6, mpv3.0, Error ellipse: s-maj=13.1km s-min=5.7km az=169.0*

ISC 21 08:54:06.0±1.2**, 41°.86N**±0°.05×**72°.84E**±0°.02**, h8^{km}**±11^{km}**, n18, σ0ˢ.96**/32**, 10C-9D, Kyrgyzstan**

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Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
ARK   Arkit             0.66 265⇓iP       Pg       08 54 19.0 +0.3
      baz=62
ARK                             ⇓iS       Sg       08 54 27.9 +0.6
      baz=62
MRKS  Merke             0.93  18 eP       Pn       08 54 24.9 -0.5
      1.6nm,0.3s
MRKS                             eS       Sn       08 54 39.8 +0.8
      8.6nm,0.1s
MRKS  Merke             0.93  18  P       Pn       08 54 27.6 +2.2
      1.9nm,0.1s
MRKS                              S       Sn       08 54 39.7 +0.8
      8.6nm,0.1s
EKS2  Erkin-Say         1.06  41⇑eP       Pb       08 54 26.2 -0.4
      baz=42
EKS2                            ⇑eS       Sg       08 54 40.2 +0.1
      baz=42
ARLS  Aral              1.11  89⇑iP       Pb       08 54 27.6 +0.2
      baz=92
ARLS                            ⇑eS       Sg       08 54 42.6 +1.0
      baz=92
UCH   Uchtor            1.30  73⇑iP       Pn       08 54 30.7 -0.1
      baz=75
UCH                             ⇑iS       Sn       08 54 48.1 -0.4
      baz=75
TRKS  Terek-Say         1.32 256⇓iP       Pn       08 54 30.8 +0.1
      baz=51
TRKS                            ⇓iS       Sg       08 54 48.7 +0.4
      baz=51
IUG   Iuzhnay           2.11 279 eP       Pb       08 54 44.4 -0.1
      30nm,0.1s
IUG                              eS       Sg       08 55 13.5 -0.4
      9.2nm,0.1s
IUG   Iuzhnay           2.11 279  Pg      Pg       08 54 47.4 +1.0
      125nm,0.3s
IUG                               Lg      Lg       08 55 13.5
      34nm,0.2s
KK31  Karatay Array     2.12 307  Pn      Pb       08 54 43.9 -0.8
      1.6nm,0.3s,baz=123,slow=17,SNR=16
KK31                            ⇓Sn       Sg       08 55 12.2 -2.0
      1.3nm,0.2s,baz=122,slow=27,SNR=8.6
KKAR  Karatay Array     2.12 307⇓eP       Pb       08 54 44.0 -0.7
      baz=6.0
KKAR                            ⇓eS       Sb       08 55 11.2  0.0
      baz=6.0
TKM2  Tokmak 2          2.30  62 ⇑Pn      Pb       08 54 48.3 +0.5
      2.2nm,0.5s
TKM2                             ⇑Sn      Sg       08 55 20.0 +0.1
      2.8nm,0.5s
BOOM  Boomskoye usch    2.39  74⇓eP       Pb       08 54 48.0 -1.3
      baz=74
BOOM                            ⇓iS       Sb       08 55 17.9 -1.0
      baz=74
BRLS  Borolday          2.51 299 eP       Pb       08 54 50.4 -0.9
      0.8nm,0.2s
BRLS                             eS       Sb       08 55 23.5 +1.2
      2.8nm,0.3s
BRLS  Borolday          2.51 299  Pg      Pg       08 54 53.2 -0.9
      0.8nm,0.2s
BRLS                              Lg      Lg       08 55 23.5
      2.8nm,0.3s
ULHL  Ulahol            2.56  80⇑eP       Pb       08 54 50.7 -1.5
      baz=81
ULHL                            ⇑eS       Sb       08 55 22.5 -1.4
      baz=81
KST   Kastek            2.59  62 eP       Pb       08 54 53.6 +0.9
      1.8nm,0.5s
KST                              eS       Sg       08 55 29.4 +0.1
      3.5nm,0.4s
KST   Kastek            2.59  62  Pg      Pg       08 55 04.8 +9.1
      1.6nm,0.3s
KST                               Lg      Lg       08 55 43.2
      9.6nm,0.4s
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*IDC **21** 08:55:28.8±0.8, 84°.40N×107°.94E, h0^{km}, mb3.6/12, mbtmp3.7/13, ML3.5/1, MS3.3/29, Error ellipse: s-maj=25.8km s-min=15.0km az=152.0*

ISC 21 08:55:29.7±0.7**, 84°.4N**±0°.1×**106°.46E**±0°.07**, h10^{km}, n38, σ2ˢ.42**/17**, mb3.6**/11**, MS3.2**/28**, North of Severnaya Zemlya**

```
Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
ZFI2  Zemlya Franca-    7.95 276 eP       Pn       08 57 25.5 +0.5
ZFI2                             eS       Sn       08 58 49.6 -5.2
ZFI   Zemlya Franca-    7.95 276 eP       Pn       08 57 25.5 +0.5
ZFI                              eS       Sn       08 58 49.7 -5.1
TIXI  Tiksi            13.39 149  Pn      Pn       08 58 36.6 -2.8
      15nm,0.3s,baz=270,slow=24,SNR=1.6
NRIK  Noril'sk         15.53 205  Pn      Pn       08 59 07.8 -0.4
      0.2nm,0.3s,baz=31,slow=9.5,SNR=6.4
NRIK                              LR      LR       09 05 25.0
      comp=Z,135nm,20.0s,baz=354,slow=38
      2.7nm,0.8s
ARCES ARCESS Array B   20.45 276  P       Pn       09 00 09.0 +0.1
      2.6nm,0.8s,baz=25,slow=15,SNR=2.4
ARCES                             LR      LR       09 07 24.5
      comp=Z,44nm,21.6s,baz=96,slow=35
      2.6nm,0.8s
RES   Resolute Bay     20.79  16  LR      LR       09 08 02.2
      comp=Z,87nm,19.8s,baz=254,slow=36
YAK   Yakutsk          23.02 152  LR      LR       09 09 33.3
      comp=Z,48nm,20.0s,baz=271,slow=37
SEY   Seymchan         23.61 125  P       P        09 00 39.6 -0.5
      0.6nm,0.5s,baz=106,slow=22,SNR=1.4
      0.6nm,0.5s
INK   Inuvik           25.12  49  P       P        09 00 54.4 +0.3
      2.2nm,0.8s,baz=346,slow=12,SNR=6.9
INK                               LR      LR       09 11 28.0
      comp=Z,51nm,20.9s,baz=315,slow=38
      2.2nm,0.8s
MA2   Magadan          26.80 128  LR      LR       09 12 08.6
      comp=Z,23nm,19.4s,baz=246,slow=37
ILAR  Eielson Array    27.51  63  P       P        09 01 15.5 -0.2
      0.8nm,0.9s,baz=347,slow=11,SNR=9.5
ILAR                              LR      LR       09 11 44.1
      comp=Z,42nm,20.4s,baz=310,slow=36
      0.8nm,0.9s
FINES FINESS Array B   28.28 271  P       P        09 01 23.9 +1.3
      1.2nm,0.8s,baz=46,slow=11,SNR=4.4
      1.2nm,0.8s
KIRV  Kirov            28.86 246  LR      LR       09 14 10.5
      comp=Z,52nm,19.7s,baz=39,slow=39
NOA   NORSAR Array B   30.13 285  LR      LR       09 14 53.8
      comp=Z,18nm,20.3s,baz=290,slow=38
ARU   Arti             30.21 235  LR      LR       09 14 59.2
      comp=Z,125nm,21.1s,baz=40,slow=39
ZALV  Zalesovo Beam    31.03 205  LR      LR       09 15 04.8
      comp=Z,48nm,19.9s,baz=22,slow=38
FRB   Frobisher Bay    32.06 356  LR      LR       09 13 32.3
      comp=Z,31nm,19.2s,baz=202,slow=34
YKA   Yellowknife Ar   32.14  35  P       P        09 01 55.6 -1.1
      0.2nm,0.7s,baz=349,slow=8.8,SNR=3.1
YKA                               LR      LR       09 15 37.9
      comp=Z,45nm,18.8s,baz=319,slow=38
      0.2nm,0.7s
KDAK  Kodiak Island    33.88  71  LR      LR       09 16 48.2
      comp=Z,34nm,18.4s,baz=28,slow=38
KURBB Kurchatov Arra   34.64 212  P       P        09 02 19.9 +1.4
      0.3nm,0.7s,baz=32,slow=9.0,SNR=1.8
KURBB                             LR      LR       09 19 40.5
      comp=Z,43nm,18.9s,baz=93,slow=42
      0.3nm,0.7s
DLBC  Dease Lake       35.15  50  LR      LR       09 18 28.8
      comp=Z,42nm,18.1s,baz=310,slow=39
AKTO  Aktyubinsk       36.20 234  LR      LR       09 18 26.8
      comp=Z,68nm,21.9s,baz=3.7,slow=38
MKAR  Makanchi Array   38.28 207  P       P        09 02 51.0 +1.3
      0.9nm,0.7s,baz=350,slow=6.2,SNR=9.6
      0.9nm,0.7s
AKASG Malin Array Be   38.57 264  P       P        09 02 54.1 +2.1
      0.4nm,0.4s,baz=5.3,slow=8.3,SNR=5.3
      0.4nm,0.4s
AAK   Ala-Archa        42.83 215  LR      LR       09 23 00.1
      comp=Z,68nm,21.9s,baz=10.0,slow=38
ULM   Lac du Bonnet    45.23  20  LR      LR       09 22 49.4
      comp=Z,33nm,18.6s,baz=202,slow=36
NEW   Newport          46.17  40  LR      LR       09 23 15.5
      comp=Z,59nm,20.2s,baz=355,slow=36
BRTR  Keskin Array B   49.01 257  P       P        09 04 18.2 +2.0
      0.5nm,0.8s,baz=18,slow=5.2,SNR=2.4
      0.5nm,0.8s
SADO  Sadowa           51.07   5  LR      LR       09 26 07.5
      comp=Z,26nm,19.7s,baz=42,slow=36
YBH   Yreka Blue Hor   52.30  46  LR      LR       09 27 35.0
      comp=Z,14nm,21.6s,baz=338,slow=37
ELK   Elko             53.77  39  LR      LR       09 27 57.7
      comp=Z,52nm,20.1s,baz=334,slow=36
ANMO  Albuquerque      60.05  31  LR      LR       09 31 49.9
      comp=Z,44nm,19.6s,baz=338,slow=36
TKL   Tuckaleechee C   60.11  10  LR      LR       09 31 25.1
      comp=Z,57nm,19.4s,baz=7.0,slow=36
TXAR  Lajitas Array    65.77  29  P       P        09 06 13.3 -1.1
      0.3nm,0.6s,baz=345,slow=3.9,SNR=4.0
TXAR                              LR      LR       09 35 53.3
      comp=Z,33nm,18.0s,baz=332,slow=37
      0.3nm,0.6s
CMAR  Chiang Mai Arr   66.04 188  LR      LR       09 36 34.0
      comp=Z,25nm,19.4s,baz=235,slow=37
LPIG  La Paz           70.62  35  LR      LR       09 40 11.6
      comp=Z,22nm,18.4s,baz=224,slow=38
CMIG  Matias Romero    78.31  21  LR      LR       09 46 33.3
      comp=Z,13nm,18.3s,baz=354,slow=39
TORD  Torodi Ar. Bea   78.44 286  P       P        09 07 32.1 +1.8
      2.0nm,0.7s,baz=358,slow=6.0,SNR=12
      2.0nm,0.7s
```

AUST 21 09:01:53.9±0.0**, 25°.45S×129°.95E, h5^{km}, Error ellipse: s-maj=0.1km s-min=0.1km az=354.0, Northern Territory**

```
Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
WRKA  Warakurna         1.56 285  P       Pn       09 02 21.5 -0.8
      baz=1.6
FORT  Forrest           5.57 197  P       Pn       09 03 17.6 +0.2
      baz=5.6
OOD   Oodnadatta        5.64 116  P       Pn       09 03 18.3 -0.1
      baz=5.6
MULG  Mulgathing        6.03 144  P       Pn       09 03 25.1 +1.3
      baz=6.0
WC3   Warramunga Arr    6.82  38  P       Pn       09 03 34.2 -0.4
      baz=6.8
WB2   Warramunga Arr    6.82  37  P       Pn       09 03 34.5 -0.1
      baz=6.8
```

IDC 21 09:02:22.0±9.8**, 25°.64S×129°.46E, h0^{km}, mbtmp3.0**/3**, ML2.9**/3**, Error ellipse: s-maj=107.4km s-min=47.0km az=81.0, Northern Territory**

```
Code  Station Name       Δ°  AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s     ISC
ASAR  Alice Springs     4.50  65  Pn      Pn       09 03 31.6 +0.2
      0.3nm,0.3s,baz=244,slow=12,SNR=5.9
ASAR                              Pg      Pb       09 03 44.0 +2.1
      0.5nm,0.3s,baz=239,slow=16,SNR=12
ASAR                              Sn      Sn       09 04 17.8 -6.8
      0.7nm,0.3s,baz=248,slow=22,SNR=6.3
ASAR                              Lg      Lg       09 04 31.8
      0.6nm,0.3s,baz=241,slow=26,SNR=2.3
      0.6nm,0.3s
WRA   Warramunga Arr    7.24  39  Pn      Pn       09 04 08.9 -0.3
      0.1nm,0.3s,baz=219,slow=14,SNR=1.7
WRA                               Sn      Sn       09 05 25.4 -6.8
      0.2nm,0.3s,baz=208,slow=30,SNR=1.8
WRA                               Lg      Lg       09 05 59.5
      0.4nm,0.3s,baz=218,slow=28,SNR=5.3
      0.2nm,0.3s
STKA  Stephens Creek   12.32 123  Pn      Pn       09 05 19.1 +0.3
      0.1nm,0.3s,baz=321,slow=14,SNR=1.2
STKA                              Sn      Sn       09 07 27.9 -9.0
      0.1nm,0.3s,baz=132,slow=19,SNR=1.5
      0.7nm,0.6s
```

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*IDC **21** 09:08:34.5±1.0, 25°.65S×129°.86E, h0^{km}, mb3.8/5, mbtmp4.0/8, ML4.3/3, Error ellipse: s-maj=26.7km s-min=21.6km az=129.0*

*NOU **21** 09:08:36.1, 25°.56S×129°.88E, h10^{km}, mb4.6/21, Northern Territory, Australia*

*NEIC **21** 09:08:37.6±1.2, 25°.56S±0°.06×129°.92E±0°.04, h15^{km}±2^{km}, Error ellipse: s-maj=8.8km s-min=5.0km az=200.0*

ISC 21 09:08:35.8±0.5**, 25°.55S**±0°.05×**129°.97E**±0°.04**, h10^{km}, n59,**

σ1^{s}94/65, mb4.1/9, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	Warakurna	1.60	288		Pb	09 09 04.7	-0.8
WRKA					Sg	09 09 25.8	-1.7
WRKA	Warakurna	1.60	288	P	Pb	09 09 04.3	-1.3
ASAR	Alice Springs	4.04	63	Pn	Pn	09 09 40.0	+2.3
	9.7nm,0.3s,baz=243,slow=12,SNR=306						
ASAR				Pg	Pg	09 09 52.6	-0.7
	18nm,0.3s,baz=242,slow=16,SNR=40						
ASAR				Sn	Sn	09 10 28.1	+2.9
	29nm,0.3s,baz=248,slow=22,SNR=13						
ASAR				Lg	Lg	09 10 40.9	
	56nm,0.3s,baz=242,slow=26,SNR=3.7						
	36nm,0.6s						
AS31	Alice Springs	4.04	63	Pn	Pn	09 09 40.4	+2.6
FORT	Forrest	5.47	198	Pn	Pn	09 09 58.4	+0.9
FORT				Sn	Sn	09 11 02.6	+2.1
FORT	Forrest	5.47	198	P	Pn	09 10 00.1	+2.6
OOD	Oodnadatta	5.58	115	P	Pn	09 10 01.9	+3.0
MULG	Mulgathing	5.94	143	P	Pn	09 10 06.8	+3.0
WRA	Warramunga Arr	6.88	37	Pn	Pn	09 10 18.3	+1.4
	3.8nm,0.3s,baz=222,slow=14,SNR=119						
WRA				Pg	Pb	09 10 42.3	+6.7
	2.9nm,0.3s,baz=219,slow=14,SNR=3.0						
WRA				Sn	Sn	09 11 36.2	+0.9
	7.9nm,0.3s,baz=219,slow=23,SNR=9.4						
WRA				Lg	Lg	09 12 09.9	
	16nm,0.3s,baz=210,slow=29,SNR=12						
	19nm,0.8s						
WRA	Warramunga Arr	6.88	37		Pn	09 10 18.1	+1.2
WB2	Warramunga Arr	6.89	37	Pn	Pn	09 10 18.2	+1.3
WRAB	Tennant Creek	6.90	37		Pn	09 10 18.6	+1.5
WRAB	Tennant Creek	6.90	37	P	Pn	09 10 18.8	+1.7
WR0	Warramunga Arr	6.98	38	Pn	Pn	09 10 19.7	+1.5
WB0	Warramunga Arr	7.06	36	Pn	Pn	09 10 20.7	+1.4
LCRK	Leigh Creek	8.76	126	P	Pn	09 10 43.9	+1.3
BBOO	Buckleboo	8.97	145	Pn	Pn	09 10 46.4	+0.9
BBOO	Buckleboo	8.97	145	P	Pn	09 10 46.7	+1.2
INKA	Innaminka	9.88	105	P	Pn	09 10 59.2	+1.3
KNRA	Kununurra	9.89	353	Pn	Pn	09 10 58.4	+0.3
KNRA	Kununurra	9.89	353	P	Pn	09 10 58.1	0.0
WHYH	Whyalla	9.97	140	P	Pn	09 11 00.2	+1.0
	32nm,0.6s						
PSA00	Pilbara Seismi	10.10	291	Pn	Pn	09 10 59.7	-1.3
PSA00	Pilbara Seismi	10.10	291	P	Pn	09 11 01.8	+0.8
	15nm,2.4s						
QIS	Mount Isa	10.16	63	P	Pn	09 11 02.4	+0.5
MBWA	Marble Bar	10.38	293	Pn	Pn	09 11 02.9	-1.9
MBWA	Marble Bar	10.38	293	P	Pn	09 11 02.9	-1.9
NAPP	Napperby	10.42	139	P	Pn	09 11 05.5	+0.2
	30nm,0.6s						
HTT	Hallett	11.06	137	P	Pn	09 11 13.4	-0.7
STKA	Stephens Creek	11.98	124	Pn	Pn	09 11 25.8	-0.9
	2.6nm,0.3s,baz=306,slow=12,SNR=35						
STKA				Sn	Sn	09 13 35.5	-5.0
	6.3nm,0.3s,baz=21,slow=22,SNR=10						
STKA				Lg	Lg	09 14 51.4	
	1.2nm,0.3s,baz=286,slow=18,SNR=1.5						
	6.5nm,0.3s						
STKA	Stephens Creek	11.98	124	P	Pn	09 11 26.5	-0.2
KLBR	Kellerberrin	12.31	238	P	Pn	09 11 29.2	-2.0
	55nm,0.8s						
MTN	Manton Dam	12.69	5		Pn	09 11 33.0	-3.4
BLDU	Ballidu	12.75	244	P	Pn	09 11 34.8	-2.4
QLP	Quilpie	12.86	98	P	Pn	09 11 39.7	+1.0
MORW	Morawa	12.87	251	Pn	Pn	09 11 33.9	-5.0
NWAO	Narrogin (SRO)	13.32	234	Pn	Pn	09 11 42.5	-2.6
NWAO	Narrogin (SRO)	13.32	234	P	Pn	09 11 43.9	-1.2
MUN	Mundaring	13.66	239	P	Pn	09 11 47.8	-1.9
CTA	Charters Tower	15.96	73	Pn	Pn	09 12 18.8	-1.7
	0.2nm,0.3s,baz=18,slow=21,SNR=1.9						
CTA				Sn	Sn	09 15 12.2	-5.4
	0.2nm,0.3s,baz=126,slow=10,SNR=1.6						
CTA				Lg	Lg	09 16 58.1	
	0.6nm,0.3s,baz=160,slow=21,SNR=2.2						
CTAO	Charters Tower	15.96	73	Pn	Pn	09 12 19.2	-1.4
COEN	Coen	16.94	50		Pn	09 12 29.7	-3.3
COEN				IAmb	IAmb	09 12 37.4	
	comp=Z,42nm,1.4s						
TOO	Toolangi	17.82	136		Pn	09 12 43.6	-0.3
EIDS	Eidsvold	19.06	94	P	Pn	09 13 01.0	+1.8
EIDS				IAmb	IAmb	09 13 04.6	
	comp=Z,13nm,1.1s						
ARMA	Armidale	19.72	109	P	Pn	09 13 08.0	+0.9
ARMA				IAmb	IAmb	09 13 10.3	
	comp=Z,21nm,1.2s						
VNDA	Vanda	54.16	172	P	P	09 18 01.6	+0.9
VNDA				IAmb	IAmb	09 18 22.5	
	comp=Z,2.4nm,1.4s						
PZH	PanZhiHua	58.48	330	P	P	09 18 34.5	+2.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.5s						
KSRS	Korea Array	62.70	358	P	P	09 19 01.1	+0.4
	comp=Z,0.5nm,0.5s,baz=179,slow=11,SNR=4.9						
	comp=Z,0.5nm,0.5s						
QSPA	South Pole Qui	64.53	180	P	P	09 19 12.8	0.0
	comp=Z,0.9nm,0.6s,baz=163,slow=0.6,SNR=6.5						
	comp=Z,0.9nm,0.6s						
QSPA	South Pole Qui	64.53	180	P	P	09 19 13.4	+0.6
HHC	Hu-ho-hao-te	68.24	345	*e*P	P	09 19 40.3	+3.6
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,98nm,5.5s						
XLT	XiLinHaoTe	70.28	349	*e*P	P	09 19 51.9	+2.6
XLT				pP	sP	09 20 02.5	+8.5
XLT				sP	PcP	09 20 09.9	-1.0
XLT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,130nm,4.9s						
SONM	Songino Array	76.07	344	P	P	09 20 25.0	+1.6
	comp=Z,0.2nm,0.3s,baz=204,slow=3.2,SNR=2.1						
	comp=Z,0.2nm,0.3s						
WMQ	Urumqi	79.18	330	*e*P	P	09 20 43.3	+2.4
KBL	Kabul	83.10	313	P	P	09 21 02.2	0.0
MKAR	Makanchi Array	83.91	329	P	P	09 21 06.1	+0.4
	comp=Z,0.3nm,0.6s,baz=155,slow=5.8,SNR=2.3						
	comp=Z,0.3nm,0.6s						
ZALV	Zalesovo Beam	88.25	335	P	P	09 21 27.4	+0.4
	comp=Z,0.7nm,0.7s,baz=143,slow=2.9,SNR=2.2						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	124.05	30	PKP	PKPdf	09 27 33.7	-0.1
	comp=Z,0.2nm,0.6s,baz=279,slow=4.8,SNR=4.9						
YKA	Yellowknife Ar	124.05	30		PKPdf	09 27 34.3	+0.5

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*DDA **21** 09:13:47.2±0.0, 40.°11N×27.°01E, h7^{km}±3^{km}, ML2.2*
*ISK **21** 09:13:47.2, 40.°14N×27.°00E, h5^{km}, ML2.5/9*
ISC 21 09:13:47.3±1.1, **40.°12N**±0.°03×**27.°00E**±0.°03, **h14**^{km}±13^{km}, **n19, σ0^{s}31**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBG	Karabiga-Canak	0.35	40	PG	Pg	09 13 54.3	-0.3
KRBG				SG	Sg	09 13 59.6	+0.1
KNL	Balıkesir	0.43	69	P	Pg	09 13 56.0	+0.1
KNL				S	Sg	09 14 01.8	+0.1
KNL				*i* AML	AML	09 14 03.0	
	comp=E,191nm,0.2s						
KNL				*i* AML	AML	09 14 03.0	
	comp=N,270nm,0.3s						
GELI	Tayfur-Gelibol	0.49	304	PG	Pg	09 13 57.2	+0.1
GELI				SG	Sg	09 14 04.1	+0.5
BAYC	CANAKKALE_Bayr	0.52	223	P	Pg	09 13 57.4	-0.2
BAYC				*i* AML	AML	09 14 05.0	
	comp=N,124nm,0.2s						
GONE	Gonen-Balikesi	0.53	98	PG	Pg	09 13 58.1	+0.3
RKY	Sarkoy-Tekirda	0.58	13	PG	Pg	09 13 57.9	-0.9
RKY				SG	Sg	09 14 06.1	-0.5
SART	Tekirdag	0.58	13	P	Pg	09 13 58.7	-0.2
SART				*i* AML	AML	09 14 06.0	
	comp=E,187nm,0.3s						
SART				*i* AML	AML	09 14 07.0	
	comp=N,128nm,0.2s						
EZN	Ezine	0.60	241	PG	Pg	09 13 58.9	-0.2
BALY	Balya	0.61	129	P	Pg	09 13 59.2	-0.1
MAR6	Marsite Statio	0.62	19	PG	Pg	09 13 59.4	0.0
ECEA	Canakkale, Ece	0.64	263	P	Pb	09 14 00.2	-0.1
ECEA				S	Sb	09 14 09.2	+0.2
ECEA				*i* AML	AML	09 14 11.0	
	comp=E,108nm,0.2s						
ECEA				*i* AML	AML	09 14 12.0	
	comp=N,167nm,0.8s						
MAR3	Marsite Statio	0.66	20	PG	Pg	09 14 00.3	0.0
ERIK	Erikli-Kesan	0.67	326	PG	Pg	09 14 00.3	0.0
GZKV	Gazikoy-Tekird	0.67	21	PG	Pg	09 14 00.5	0.0
EDC	Edincik	0.70	71	PG	Pb	09 14 01.2	0.0
ENEZ	Enez	0.89	314	PG	Pg	09 14 04.6	-0.1
STEP	BALIKESIR_Sava	0.93	143	P	Pg	09 14 04.8	-0.4
STEP				*i* AML	AML	09 14 20.0	
	comp=E,74nm,0.3s						
STEP				*i* AML	AML	09 14 21.0	
	comp=N,54nm,0.5s						
TKR	Tekirdag	0.96	25	PG	Pb	09 14 05.9	+0.2
UKOP	Uzunkopru-Edir	1.04	344	PG	Pg	09 14 07.2	-0.3

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*IDC **21** 09:29:33.2±7.2, 25.°74S×129.°94E, h0^{km}, mbtmp3.6/3, ML3.6/3, Error ellipse: s-maj=74.1km s-min=39.6km az=79.0*
*NOU **21** 09:29:35.4, 25.°47S×129.°95E, h0^{km}, MLv4.4/8, Northern Territory, Australia*
ISC 21 09:29:35.6±1.1, **25.°63S**±0.°08×**129.°98E**±0.°07, **h10**^{km}, **n11, σ2^{s}85**/15, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	Warakurna	1.64	291	P	Pn	09 30 03.4	-1.1
ASAR	Alice Springs	4.07	62	Pn	Pn	09 30 38.7	+0.8
	2.1nm,0.3s,baz=242,slow=12,SNR=82						
ASAR				Pg	Pb	09 30 49.9	+2.5
	3.2nm,0.3s,baz=239,slow=16,SNR=30						
ASAR				Sn	Sn	09 31 26.3	+0.7
	2.1nm,0.3s,baz=237,slow=24,SNR=5.7						
ASAR				Lg	Lg	09 31 39.0	
	5.9nm,0.3s,baz=243,slow=26,SNR=2.8						
	3.8nm,0.3s						
FORT	Forrest	5.41	198	P	Pn	09 30 59.5	+3.2
OOD	Oodnadatta	5.54	114	P	Pn	09 31 01.0	+2.9
MULG	Mulgathing	5.87	143	P	Pn	09 31 07.1	+4.4
WRA	Warramunga Arr	6.94	36	Pn	Pn	09 31 16.9	-0.5
	1.0nm,0.3s,baz=215,slow=13,SNR=77						
WRA				Sn	Sn	09 32 34.3	-2.1
	1.1nm,0.3s,baz=219,slow=22,SNR=3.1						
WRA				Lg	Lg	09 33 08.2	
	1.6nm,0.3s,baz=208,slow=29,SNR=8.0						
	3.3nm,0.9s						
WRAB	Tennant Creek	6.95	36	P	Pn	09 31 17.4	-0.2
LCRK	Leigh Creek	8.71	125	P	Pn	09 31 43.3	+1.5
BBOO	Buckleboo	8.91	145	P	Pn	09 31 45.3	+0.9
KNRA	Kununurra	9.96	353	P	Pn	09 31 57.4	-1.5
STKA	Stephens Creek	11.94	124	Pn	Pn	09 32 24.1	-1.8
	0.3nm,0.3s,baz=301,slow=15,SNR=2.3						
STKA				Sn	Sn	09 34 33.0	-6.2
	0.6nm,0.3s,baz=12,slow=23,SNR=5.6						
	1.4nm,0.4s						

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*OSPL **21** 09:38:39.5±2.2, 18.°09N×68.°69W, h118^{km}±32^{km}, ML2.6*
*RSPR **21** 09:38:42.6, 17.°93N×68.°79W, h151^{km}±2^{km}, MD3.6/13*
*NEIC **21** 09:38:43.1±1.0, 18.°3N±0.°2×68.°91W±0.°06, h110^{km}±12^{km}, ML2.5/17, Md3.7/25(RSPR), Error ellipse: s-maj=26.2km s-min=8.3km az=185.0*
ISC 21 09:38:42.5±1.2, **18.°1N**±0.°1×**68.°98W**±0.°03, **h110**^{km}, **n43, σ1^{s}15**/47, **11C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.75	329	⇓*e*P	Pn	09 39 00.2	-1.2
DR12	Loma Pena Alta	0.75	329		Pn	09 39 00.5	-1.0
DR12				Sn	Sn	09 39 14.7	-0.9
SDD	Santo Domingo	0.94	290	Pn	Pn	09 39 05.9	+2.8
SDD				IAML		09 39 24.6	
	comp=N,161nm,1.8s						
SDD				IAML		09 39 36.0	
	comp=E,123nm,2.3s						
BANI	BANI	1.33	281	⇑*e*P	Pn	09 39 07.5	0.0
BANI	BANI	1.33	281	Pn	Pn	09 39 08.2	+0.7
BANI	BANI	1.33	281	*i* P	Pn	09 39 07.6	0.0
BANI				*e*S	Sn	09 39 28.5	+2.1
BANI				IAML		09 39 28.9	
	comp=Z,52nm,0.2s						
IDE	Isla Desecheo	1.45	80	⇑*e*P	Pn	09 39 10.0	+1.3
IDE	Isla Desecheo	1.45	80	*e*S	Sn	09 39 31.8	+3.1
PRSN	Puerto Rico Se	1.75	87	Pn	Pn	09 39 11.9	-0.4
PRSN				IAML		09 39 48.6	
	comp=E,74nm,0.3s						
CRPR	Cabo Rojo, PR	1.78	94	⇑*e*P	Pn	09 39 12.7	-0.2
CRPR	Cabo Rojo, PR	1.78	94	*e*S	Sn	09 39 34.2	-1.6
CRPR	Cabo Rojo, PR	1.78	94		Pn	09 39 12.6	-0.2
CRPR				IAML		09 39 58.8	
	comp=N,32nm,2.1s						
LSP	Las Mesas	1.80	89	⇑*e*P	Pn	09 39 13.1	0.0
LSP	Las Mesas	1.80	89	*e*S	Sn	09 39 37.4	+1.1
AGPR	Aguadilla, PR	1.80	79	⇓*e*P	Pn	09 39 14.9	+1.8
AGPR	Aguadilla, PR	1.80	79	*e*S	Sn	09 39 38.8	+2.4
AGPR	Aguadilla, PR	1.80	79		Pn	09 39 13.2	+0.2
AGPR				IAML		09 39 52.5	
	comp=N,87nm,1.8s						
MLPR	Magueyes Islan	1.85	95	⇑*e*P	Pn	09 39 13.8	+0.1
MLPR	Magueyes Islan	1.85	95	*e*S	Sn	09 39 35.1	-2.3
MLPR	Magueyes Islan	1.85	95		Pn	09 39 13.6	-0.1
LOBA2	Hotel Casa Bon	2.01	269	*i* P	Pn	09 39 15.2	-0.5
LOBA2				*e*S	Sn	09 39 39.4	-1.6
LOBA2				IAML		09 39 40.8	
	comp=Z,32nm,0.8s						
SC01	Santiago de lo	2.09	308	*i* P	Pn	09 39 15.3	-1.4
AOPR	Arecibo Observ	2.12	84	⇑*e*P	Pn	09 39 17.6	+0.4
AOPR	Arecibo Observ	2.12	84	*e*S	Sn	09 39 44.5	+0.9
AOPR	Arecibo Observ	2.12	84		Pn	09 39 17.4	+0.3
OBIP	Obispado Ponce	2.26	92	⇑*e*P	Pn	09 39 18.9	0.0
OBIP	Obispado Ponce	2.26	92	*e*S	Sn	09 39 47.4	+0.7
OBIP	Obispado Ponce	2.26	92		Pn	09 39 18.6	-0.2
OBIP				IAML		09 39 51.1	
	comp=N,18nm,2.4s						
CELP	Cerrillos	2.28	91	⇑*e*P	Pn	09 39 19.2	+0.1
CELP	Cerrillos	2.28	91	*e*S	Sn	09 39 47.6	+0.3
CELP	Cerrillos	2.28	91		Pn	09 39 18.5	-0.7
CELP				IAML		09 39 49.7	
	comp=N,19nm,2.8s						
SDDR	Presa de Saban	2.34	291	Pn	Pn	09 39 20.6	+0.6
SDDR				IAML		09 40 31.3	
	comp=N,20nm,2.6s						
SDDR				IAML		09 40 43.4	
	comp=N,21nm,2.8s						
LONE2	Loma La Sidra	2.40	280	*i* P	Pn	09 39 20.3	-0.5
LONE2				IAML		09 39 50.7	
	comp=Z,18nm,3.0s						
LONE2				*e*S	Sn	09 39 50.8	+0.7
GCPR	Guaynabo City	2.76	86	Pn	Pn	09 39 24.9	-0.5
CBYP	Canovanas	2.97	87	⇑*e*P	Pn	09 39 27.9	-0.3
CBYP	Canovanas	2.97	87	*e*S	Sn	09 40 03.2	-0.2
CBYP	Canovanas	2.97	87	Pn	Pn	09 39 28.2	0.0
HUMP	Col San Antoni	2.98	89	⇑*e*P	Pn	09 39 28.3	+0.1
HUMP	Col San Antoni	2.98	89	*e*S	Sn	09 40 02.9	-0.5
MTP	Monte Pirata	3.26	90	⇑*e*P	Pn	09 39 31.8	-0.2
SJVI	Gifft Hill Sch	4.00	87	⇓*e*P	Pn	09 39 40.8	-1.2
SJVI	Gifft Hill Sch	4.00	87	*e*S	Sn	09 40 27.1	-0.9
SJVI	Gifft Hill Sch	4.00	87		Pn	09 39 40.8	-1.2

WBNET 21 09:41:51.4, 50.°27N×12.°44E, h8^{km}, Ml0.2, 5C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	Luby	0.02	269	⇓P	Pg	09 41 53.2	+0.2
NKC	Novy Kostel	0.03	176	⇓P	Pg	09 41 53.2	+0.1
NKC				S	Sg	09 41 54.3	+0.1
STCW	Studenec	0.05	98	⇑P	Pg	09 41 53.3	+0.1
STCW				S	Sg	09 41 54.5	-0.1
VAC	Vackov	0.05	234	⇓P	Pg	09 41 53.3	+0.1
VAC				S	Sg	09 41 54.6	0.0
POCW	Potky	0.06	349	⇑P	Pg	09 41 53.4	+0.1
POCW				S	Sg	09 41 54.8	+0.1
KVC	Kvetna	0.08	143	⇓P	Pg	09 41 53.6	+0.1
KRCW	Kraslice	0.09	40	⇑P	Pg	09 41 53.7	0.0
KRCW				S	Sg	09 41 55.3	0.0
SKC	Skalna	0.11	209	⇑P	Pg	09 41 54.1	+0.1
SKC				S	Sg	09 41 55.9	+0.1
KOCW	Kopaniny	0.14	270	⇓P	Pg	09 41 54.5	+0.1
KOCW				S	Sg	09 41 56.4	-0.1
TRCW	Trojmez	0.20	281	⇓P	Pg	09 41 55.5	0.0
TRCW				S	Sg	09 41 58.1	0.0
ZHC	Zelena Hora	0.21	204	⇑P	Pg	09 41 55.9	+0.1
ZHC				S	Sg	09 41 58.8	+0.1

WBNET 21 09:41:52.4, 50.°27N×12.°45E, h9^{km}, Ml0.1, 2C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	Luby	0.02	271	⇓P	Pg	09 41 54.2	+0.2
LBCW				S	Sg	09 41 55.4	+0.2
LBCW	Luby	0.02	271	S	Pg	09 41 54.3	+0.3
STCW	Studenec	0.05	97	S	Sg	09 41 55.5	0.0
VAC	Vackov	0.05	236	S	Sg	09 41 55.6	0.0
POCW	Potky	0.06	348	S	Sg	09 41 55.9	+0.1
KVC	Kvetna	0.07	143	⇓P	Pg	09 41 54.7	+0.1
KVC				S	Sg	09 41 56.0	0.0
KVC	Kvetna	0.07	143	S	Pg	09 41 55.0	+0.5
KRCW	Kraslice	0.09	39	⇑P	Pg	09 41 54.8	0.0
KRCW				S	Sg	09 41 56.3	0.0
SKC	Skalna	0.11	210	S	Sg	09 41 56.9	+0.1
KOCW	Kopaniny	0.14	270	⇓P	Pg	09 41 55.5	+0.1
KOCW				S	Sg	09 41 57.5	0.0
ZHC	Zelena Hora	0.21	204	⇑P	Pg	09 41 56.9	+0.2

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*PRU **21** 09:41:56.2±0.0, 50.°29N×12.°47E, h3^{km}, West Bohemia*
WBNET 21 09:41:55.8, 50.°27N×12.°44E, h9^{km}, Ml0.4, 6C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	Luby	0.02	263	⇓P	Pg	09 41 57.6	+0.1
LBCW				S	Sg	09 41 58.8	+0.1
NKC	Novy Kostel	0.04	176	*e*SG	Sg	09 41 58.7	-0.1
	comp=Z,5.0nm,0.2s						
NKC	Novy Kostel	0.04	176	⇑P	Pg	09 41 57.6	+0.1
NKC				S	Sg	09 41 58.8	0.0
STCW	Studenec	0.05	100	⇑P	Pg	09 41 57.7	+0.1
STCW				S	Sg	09 41 58.9	-0.1
POCW	Potky	0.05	348	⇑P	Pg	09 41 57.8	0.0
POCW				S	Sg	09 41 59.3	+0.1
VAC	Vackov	0.05	233	⇓P	Pg	09 41 57.8	+0.1
VAC				S	Sg	09 41 59.0	-0.1
KVC	Kvetna	0.08	144	⇓P	Pg	09 41 58.0	+0.1
KVC				S	Sg	09 41 59.4	-0.1
KRCW	Kraslice	0.08	41	⇑P	Pg	09 41 58.2	0.0
KRCW				S	Sg	09 41 59.7	-0.1
SKC	Skalna	0.11	208	⇑P	Pg	09 41 58.5	+0.1
SKC				S	Sg	09 42 00.3	0.0
KACW	Kaceov	0.13	159	S	Sg	09 42 01.0	+0.2
KOCW	Kopaniny	0.14	269	⇓P	Pg	09 41 58.9	0.0
KOCW				S	Sg	09 42 00.8	-0.1
TRCW	Trojmez	0.20	281	⇓P	Pg	09 41 59.9	0.0
TRCW				S	Sg	09 42 02.6	0.0
ZHC	Zelena Hora	0.22	204	⇑P	Pg	09 42 00.3	+0.1
ZHC				S	Sg	09 42 03.2	0.0
LACW	Lazy	0.25	152	S	Sg	09 42 04.3	+0.1

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*HEL **21** 09:45:59.7, 67.°66N×20.°79E, h0^{km}, ML1.6, Explosion*
UPP 21 09:46:03.0±0.0, **67.°63N×21.°02E, h0^{km}, ML2.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.42	114	P	Pg	09 46 08.6	-2.4
MASU				S	Sg	09 46 14.6	-1.7
MASU	Masugnsbyn	0.42	114	P	Pg	09 46 10.8	-0.1
MASU				S	Sg	09 46 16.8	+0.5
MASU	Masugnsbyn	0.42	114	*i* P	Pg	09 46 08.6	-2.4
MASU				*i* S	Sg	09 46 14.6	-1.7
DUNU	Dundret	0.54	199	P	Pg	09 46 10.9	-2.4
DUNU	Dundret	0.54	199	P	Pg	09 46 13.3	0.0
DUNU	Dundret	0.54	199	*i* P	Pg	09 46 10.9	-2.4
LANU	Lannavaara	0.56	41	P	Pg	09 46 11.0	-2.7
LANU	Lannavaara	0.56	41	P	Pg	09 46 13.7	0.0
LANU	Lannavaara	0.56	41	*e*P	Pg	09 46 11.0	-2.7
RATU	Laukkuluspa	0.58	290	P	Pg	09 46 11.3	-2.7
RATU	Laukkuluspa	0.58	290	P	Pg	09 46 13.7	-0.3
RATU	Laukkuluspa	0.58	290	*i* P	Pg	09 46 11.3	-2.7
KOVU	Salmi	0.68	332	P	Pg	09 46 13.3	-2.7
KOVU	Salmi	0.68	332	P	Pg	09 46 15.7	-0.3
KOVU	Salmi	0.68	332	*i* P	Pg	09 46 13.3	-2.7
NIKU	Nikkaluokta	0.79	288	P	Pg	09 46 15.2	-2.9
NIKU	Nikkaluokta	0.79	288	P	Pg	09 46 18.0	-0.2
NIKU	Nikkaluokta	0.79	288	*i* P	Pg	09 46 15.2	-2.9
PAJU	Pajala	1.02	126	P	Pg	09 46 19.2	-3.2
PAJU	Pajala	1.02	126	P	Pg	09 46 22.1	-0.4
PAJU	Pajala	1.02	126	*e*P	Pg	09 46 19.3	-3.2
PAJU				*e*SB	Sg	09 46 33.8	-1.7
ERTU	Ertsjaerv	1.17	156	P	Pg	09 46 22.3	-3.2
ERTU	Ertsjaerv	1.17	156	*e*P	Pg	09 46 22.1	-3.3
	baz=332						
ERTU				*e*SB	Sg	09 46 38.6	-2.0
KLF	Kolari	1.21	108	*e*PB	Pg	09 46 23.0	-3.1
HEF	Hetta	1.27	51	*e*P	Pg	09 46 24.8	-2.5
HEF	Hetta	1.27	51	*e*P	Pg	09 46 23.1	-4.1
	baz=237						
HEF				MSG		09 46 39.4	
	comp=Z,2.9nm,0.2s						
KIF	Kilpisjarvi	1.38	357	*e*P	Pg	09 46 26.1	-3.4
KIF	Kilpisjarvi	1.38	357	*e*P	Pg	09 46 26.1	-3.3
KIF				MSG		09 46 41.7	
	comp=Z,6.0nm,0.2s						
KIF				*e*SN	Sn	09 46 48.6	+0.2
HARU	Harads	1.47	181	P	Pn	09 46 27.5	-3.2
HARU	Harads	1.47	181	*e*P	Pn	09 46 27.5	-3.2
KALU	Kalix	2.01	151	*e*PB	Pn	09 46 36.6	-1.5
	baz=327						
KALU				*e*SG	Sn	09 47 03.3	-0.5
TOF	Tornio	2.03	138	*e*PG	Pn	09 46 37.4	-1.0
TOF				MSG		09 47 02.4	
	comp=Z,4.6nm,0.2s						
TOF				*e*SG	Sn	09 47 05.0	+0.6
SGF	Sodankyl	2.12	93	*e*PG	Pn	09 46 39.1	-0.6
SGF				*e*SG	Sn	09 47 06.8	+0.1
RNF	Rovaniemi	2.21	115	*e*PB	Pn	09 46 39.8	-1.0
RNF				*e*SG	Sn	09 47 08.8	+0.1
ARA0	ARCESS Array S	2.52	39	*e*P	Pn	09 46 43.8	-1.4
ARA0				*e*SG	Sb	09 47 19.6	-1.1
KEV	Kevo	3.06	43	*e*PB	Pn	09 46 53.5	+1.0
	baz=227						
KEV				MSG		09 47 30.6	
	comp=Z,1.1nm,0.2s						
UMAU	Umeaa	3.77	182	*e*PB	Pn	09 47 04.2	+2.0

IDC 21 09:53:51.0±6.8, **28.°04N×86.°99E, h0^{km}, mb3.8**/3, **mbtmp3.6**/4, **ML3.1**/1, **MS2.6**/1, **Error ellipse: s-maj=387.4km s-min=28.1km az=67.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.54	128	LR	LR	10 03 10.6	
	comp=Z,20nm,18.1s,baz=185,slow=38						
MKAR	Makanchi Array	19.08	350	P	P	09 58 15.0	-0.2
	0.1nm,0.3s,baz=156,slow=11,SNR=3.7						
	0.4nm,0.8s						
KURBB	Kurchatov Arra	23.45	346	P	P	09 59 01.7	-0.2
	1.5nm,0.3s,baz=161,slow=9.6,SNR=1.7						
	1.5nm,0.3s						
ZALV	Zalesovo Beam	25.93	357	P	P	09 59 25.1	+0.3
	0.5nm,0.5s,baz=183,slow=9.7,SNR=2.0						
	0.5nm,0.5s						
ASAR	Alice Springs	68.47	134	P	P	10 04 55.3	0.0
	0.6nm,0.7s,baz=319,slow=6.9,SNR=4.1						
	0.6nm,0.7s						

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*NOU **21** 10:06:48.2, 24.°19S×179.°30E, h299^{km}, mb4.4/9, South of Fiji Islands*
*IDC **21** 10:07:00.7±2.4, 24.°42S×179.°74E, h534^{km}±26^{km}, mb3.4/9, mbtmp4.3/10, Error ellipse: s-maj=24.3km s-min=18.5km az=140.0*
ISC 21 10:06:57.1±0.6, **24.°57S**±0.°09×**180.°0W**±0.°1, **h500**^{km}, **n25, σ1^{s}81**/24, **mb3.9**/8, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.05	344	P	P	10 08 45.9	+1.8
	1.1nm,0.3s,baz=152,slow=22,SNR=2.7						
DZM	Mont Dzumac	12.74	279	P	P	10 09 31.0	-13

AFI	Afiamalu	13.12	38	P	P	10 09 44.7	-3.0
	23nm,0.5s,baz=304,slow=4.6,SNR=4.6						
AFI	Afiamalu	13.12	38	P	P	10 09 45.4	-2.4
URZ	Urewera	13.87	190	P	P	10 09 55.6	+0.3
	11nm,0.5s,baz=98,slow=4.2,SNR=9.1						
URZ				S	S	10 12 20.4	-1.8
	19nm,1.0s,baz=40,slow=22,SNR=6.8						
URZ	Urewera	13.87	190	P	P	10 09 56.2	+0.9
BKZ	Black Stump Fm	14.86	191	P	P	10 10 06.3	+0.6
BFZ	Birch Farm	16.37	190	P	P	10 10 22.0	+0.5
QRZ	Quartz Range	17.38	199	P	P	10 10 33.4	+1.8
KHZ	Kahutara	18.59	195	P	P	10 10 46.5	+3.8
RAR	Rarotonga	18.90	84	P	P	10 10 54.5	+8.7
RPZ	Rata Peaks	20.47	199	P	P	10 11 03.0	+3.1
	15nm,0.9s,baz=56,slow=16,SNR=2.0						
	15nm,0.9s						
CTA	Charters Tower	31.52	271	P	P	10 12 37.5	-0.3
	9.2nm,0.4s,baz=96,slow=9.8,SNR=29						
	9.2nm,0.4s						
STKA	Stephens Creek	34.51	249	P	P	10 13 02.8	-0.2
	2.6nm,0.6s,baz=97,slow=11,SNR=10						
	2.6nm,0.6s						
ASAR	Alice Springs	41.97	261	P	P	10 14 03.0	-0.9
	2.7nm,0.9s,baz=89,slow=6.6,SNR=19						
ASAR				PcP	PcP	10 15 46.6	-1.2
	0.2nm,0.6s,baz=111,slow=5.1,SNR=1.6						
	2.7nm,0.9s						
WRA	Warramunga Arr	42.40	267	P	P	10 14 06.0	-1.4
	5.5nm,0.5s,baz=103,slow=7.9,SNR=93						
	5.5nm,0.5s						
SIJI	Sorong	52.68	289	P	P	10 15 23.7	-1.1
	6.3nm,0.3s,baz=50,slow=3.5,SNR=4.3						
	6.3nm,0.3s						
MAW	Mawson	77.13	200	P	P	10 17 58.4	+0.2
	1.0nm,0.5s,baz=136,slow=5.7,SNR=7.3						
	1.0nm,0.5s						
SNAA	Sanae	84.00	179	P	P	10 18 29.9	-4.1
VNA3	Neumayer Olymp	84.20	177	P	P	10 18 34.6	-0.4
NVAR	Mina Array Bea	85.21	44	P	P	10 18 41.5	+0.9
	0.1nm,0.4s,baz=231,slow=5.7,SNR=2.4						
	0.1nm,0.4s						
TXAR	Lajitas Array	90.76	58	P	P	10 19 08.2	+1.4
	0.3nm,0.6s,baz=201,slow=6.7,SNR=4.4						
	0.3nm,0.6s						
ARCES	ARCESS Array B	132.55	348	PKP	PKPdf	10 25 13.5	-0.2
	0.9nm,0.7s,baz=42,slow=2.7,SNR=1.3						
AKASG	Malin Array Be	145.55	327	PKPbc	PKPdf	10 25 37.6	-0.1
	0.7nm,0.5s,baz=44,slow=4.1,SNR=4.1						
BRTR	Keskin Array B	148.01	306	PKPbc	PKPdf	10 25 45.5	+3.1
	1.0nm,0.6s,baz=107,slow=3.0,SNR=3.8						

WBNET 21 10:18:43.6, 50°.26N×12°.45E, h8^{km}, Ml0.0, 4C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBCW	Luby	0.02	279	S	Sg	10 18 46.6	+0.2
NKC	Novy Kostel	0.03	176	⇑P	Pg	10 18 45.4	+0.2
NKC				S	Sg	10 18 46.5	+0.1
STCW	Studenec	0.05	93	S	Sg	10 18 46.7	-0.1
VAC	Vackov	0.05	239	S	Sg	10 18 46.8	0.0
POCW	Potky	0.06	349	⇑P	Pg	10 18 45.7	+0.1
POCW				S	Sg	10 18 47.1	+0.1
KVC	Kvetna	0.07	141	⇓P	Pg	10 18 45.8	+0.1
KVC				S	Sg	10 18 47.2	0.0
KRCW	Kraslice	0.09	38	⇑P	Pg	10 18 46.0	0.0
KRCW				S	Sg	10 18 47.6	-0.1
KOCW	Kopaniny	0.14	271	⇓P	Pg	10 18 46.7	+0.1
KOCW				S	Sg	10 18 48.7	0.0
TRCW	Trojmez	0.20	282	⇑P	Pg	10 18 47.7	0.0

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*PRU **21** 10:19:10.5±0.0, 50°.28N×12°.46E, h2^{km}, West Bohemia*

WBNET 21 10:19:09.8, 50°.26N×12°.45E, h8^{km}, Ml0.1, 6C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBCW	Luby	0.02	274	⇓P	Pg	10 19 11.5	+0.2
LBCW				S	Sg	10 19 12.7	+0.2
NKC	Novy Kostel	0.03	177	eSG	Sg	10 19 12.6	0.0
	3.7nm,0.3s						
NKC	Novy Kostel	0.03	177	⇑P	Pg	10 19 11.6	+0.1
NKC				S	Sg	10 19 12.7	+0.1
STCW	Studenec	0.05	96	⇑P	Pg	10 19 11.7	+0.1
STCW				S	Sg	10 19 12.8	-0.1
VAC	Vackov	0.05	237	⇓P	Pg	10 19 11.7	+0.1
VAC				S	Sg	10 19 12.9	0.0
POCW	Potky	0.06	348	⇑P	Pg	10 19 11.8	+0.1
POCW				S	Sg	10 19 13.2	+0.1
KVC	Kvetna	0.07	142	⇓P	Pg	10 19 12.0	+0.1
KVC				S	Sg	10 19 13.3	0.0
KRCW	Kraslice	0.09	39	⇑P	Pg	10 19 12.1	0.0
KRCW				S	Sg	10 19 13.7	0.0
SKC	Skalna	0.11	210	⇑P	Pg	10 19 12.5	+0.1
SKC				S	Sg	10 19 14.3	+0.2
KOCW	Kopaniny	0.14	271	⇓P	Pg	10 19 12.8	0.0
KOCW				S	Sg	10 19 14.8	0.0
TRCW	Trojmez	0.20	282	⇓P	Pg	10 19 13.9	0.0
TRCW				S	Sg	10 19 16.6	0.0
ZHC	Zelena Hora	0.21	204	⇑P	Pg	10 19 14.2	+0.1
ZHC				S	Sg	10 19 17.1	+0.1
LACW	Lazy	0.24	151	⇓P	Pg	10 19 14.9	+0.2
LACW				S	Sg	10 19 18.3	+0.3

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*BJI **21** 10:35:33.9±0.0, 27°.99N×87°.34E, h19^{km}, mb4.3/8, mB4.7/2*

*DMN **21** 10:35:34.9±0.4, 28°.47N×87°.65E, h10^{km}, Ml4.9/6, Error ellipse: s-maj=6.7km s-min=3.1km az=34.0*

*IDC **21** 10:35:36.1±0.7, 28°.46N×87°.57E, h0^{km}, mb3.9/21, mbtmp3.9/23, ML3.6/1, MS3.3/8, Error ellipse: s-maj=23.6km s-min=13.9km az=44.0*

ISC 21 10:35:37.0±0.5, **28°.44N**±0°.04×**87°.58E**±0°.03, **h10^{km}, n40, σ1^{s}.42**/42, **mb3.9**/21, **MS3.3**/8, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	1.10	174	ePg	Pg	10 35 56.2	-1.9
TAPN				eSg	Sg	10 36 11.2	-1.2
	4μm,0.6s						
RAMN	Ramite	1.72	210	ePg	Pb	10 36 07.9	-1.0
RAMN				eSg	Sb	10 36 31.6	+0.9
	2μm,0.5s						
PKI	Pulchoki	2.10	246	ePg	Pb	10 36 15.6	+0.1
PKI				eSg	Sg	10 36 43.3	-1.4
	3μm,0.6s						
PKIN	Phulchoki	2.11	246	ePg	Pb	10 36 15.7	+0.1
PKIN				eSg	Sb	10 36 43.3	+1.4
	2μm,0.5s						
DMN	Daman	2.34	250	ePg	Pb	10 36 19.6	+0.2
DMN				eSg	Sg	10 36 51.1	-1.1
	2μm,0.4s						
GKN	Gorkha	2.63	261	ePg	Pg	10 36 25.6	-1.9
GKN				eSg	Sg	10 37 00.1	-1.5
	5μm,0.7s						
LSA	Lhasa	3.37	67	Pn	Pb	10 36 35.8	-1.4
LSA				Sn	Sg	10 37 24.6	-0.8
CMAR	Chiang Mai Arr	14.40	131	Pn	Pn	10 39 00.8	-0.2
	0.9nm,0.7s,baz=315,slow=13,SNR=4.5						
KSH	Kashi	14.63	322	P	Pn	10 39 03.4	-0.9
KSH				pP	P	10 39 05.5	-5.2
KSH				S	Sn	10 41 41.5	-5.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WMQ	Urumqi	15.35	0	eP	Pn	10 39 13.3	-0.4
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
AAK	Ala-Archa	17.68	327	P	P	10 39 47.1	+2.6
	1.7nm,0.6s,baz=153,slow=12,SNR=5.4						
MKAR	Makanchi Array	18.78	349	P	Pn	10 39 58.0	+1.1
	0.2nm,0.3s,baz=158,slow=13,SNR=13						
	1.4nm,0.6s						
KURBB	Kurchatov Arra	23.19	345	P	P	10 40 45.2	+1.4
	2.6nm,0.9s,baz=163,slow=10,SNR=11						
	2.6nm,0.9s						
SONM	Songino Array	24.25	32	P	P	10 40 55.6	+1.2
	0.7nm,0.4s,baz=209,slow=12,SNR=5.0						
	0.7nm,0.4s						
ZALV	Zalesovo Beam	25.56	356	P	P	10 41 07.1	+1.1
	1.8nm,0.6s,baz=185,slow=10.0,SNR=6.7						
	1.8nm,0.6s						
GEYT	Alibeck	26.32	299	LR	LR	10 53 30.4	
	comp=Z,75nm,18.5s,baz=166,slow=41						
AKTO	Aktyubinsk	31.34	323	P	P	10 41 57.0	-0.5
	0.8nm,0.4s,baz=137,slow=4.9,SNR=2.5						
	0.8nm,0.4s						
ARU	Arti	34.73	332	P	P	10 42 26.3	-0.8
	0.6nm,0.3s,baz=250,slow=22,SNR=1.8						
	0.6nm,0.3s						
KSRS	Korea Array	34.81	64	P	P	10 42 27.4	-0.6
	0.5nm,0.5s,baz=284,slow=11,SNR=3.7						
KSRS				LR	LR	10 58 10.8	
	comp=Z,27nm,19.3s,baz=230,slow=39						
	0.5nm,0.5s						
KBZ	Khabaz	38.71	305	P	P	10 43 02.9	+1.7
	1.5nm,0.7s,baz=10.0,slow=6.6,SNR=3.8						
	1.5nm,0.7s						
MJAR	Matsushiro Arr	43.05	66	LR	LR	11 01 51.5	
	comp=Z,18nm,19.0s,baz=276,slow=37						
JHJ	Hachijo jima 2	44.72	70	LR	LR	11 03 12.0	
	comp=Z,40nm,18.0s,baz=168,slow=37						
AKASG	Malin Array Be	48.74	314	P	P	10 44 20.4	-1.4
	0.6nm,0.5s,baz=81,slow=6.8,SNR=5.2						
	0.6nm,0.5s						
TIXI	Tiksi	48.78	16	P	P	10 44 21.8	0.0
	1.7nm,0.6s,baz=274,slow=23,SNR=7.4						
	1.7nm,0.6s						
MLR	Muntele Rosu	50.87	307	P	P	10 44 40.2	+1.9
	3.4nm,0.7s,baz=22,slow=6.6,SNR=7.1						
	3.4nm,0.7s						
FINES	FINESS Array B	51.87	328	P	P	10 44 46.0	+0.7
	0.8nm,0.4s,baz=105,slow=9.4,SNR=11						
	0.8nm,0.4s						
SEY	Seymchan	53.64	31	LR	LR	11 08 24.2	
	comp=Z,47nm,20.1s,baz=88,slow=37						
ARCES	ARCESS Array B	53.94	337	P	P	10 45 01.5	+1.0
	2.4nm,0.8s,baz=108,slow=7.9,SNR=5.2						
	2.4nm,0.8s						
VRAC	Vranov	56.90	312	P	P	10 45 22.7	+0.6
	1.9nm,0.6s,baz=82,slow=7.3,SNR=3.5						
	1.9nm,0.6s						
HFS	Hagfors	57.82	325	LR	LR	11 13 01.8	
	comp=Z,27nm,20.1s,baz=74,slow=39						
GERES	GERESS Array B	58.85	312	P	P	10 45 35.9	-0.1
	0.7nm,0.7s,baz=87,slow=5.5,SNR=5.8						
	0.7nm,0.7s						
NOA	NORSAR Array B	59.00	327	P	P	10 45 36.8	0.0
	0.5nm,0.7s,baz=90,slow=6.3,SNR=1.9						
NOA				LR	LR	11 14 00.5	
	comp=Z,23nm,20.3s,baz=100,slow=39						
	0.5nm,0.7s						
WRA	Warramunga Arr	65.99	131	P	P	10 46 25.0	+1.1
	1.4nm,0.8s,baz=327,slow=6.5,SNR=16						
	1.4nm,0.8s						
EKA	Eskdalemuir Ar	67.52	322	LR	LR	11 17 15.7	
	comp=Z,47nm,18.9s,baz=189,slow=37						
ASAR	Alice Springs	68.38	134	P	P	10 46 40.2	+1.2
	2.0nm,0.8s,baz=316,slow=6.2,SNR=20						
	2.0nm,0.8s						
ESDC	Sonseca Array	73.56	306	P	P	10 47 10.8	+0.3
	0.8nm,1.0s,baz=58,slow=6.8,SNR=4.1						
	0.8nm,1.0s						
ILAR	Eielson Array	77.95	21	P	P	10 47 35.0	-0.1
	0.5nm,0.9s,baz=302,slow=4.1,SNR=3.6						
	0.5nm,0.9s						
TORD	Torodi Ar. Bea	80.29	280	P	P	10 47 48.9	+0.2
	1.2nm,0.9s,baz=16,slow=3.7,SNR=5.6						
	1.2nm,0.9s						
YKA	Yellowknife Ar	87.65	10	P	P	10 48 24.6	-0.8
	0.2nm,0.7s,baz=335,slow=5.6,SNR=3.7						
	0.2nm,0.7s						
TXAR	Lajitas Array	121.55	12	PKP	PKiKP	10 54 33.4	+1.8
	0.2nm,0.8s,baz=46,slow=2.6,SNR=2.6						

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*IDC **21** 10:47:17.8±10.0, 6°.90S×129°.27E, h127^{km}±107^{km}, mb3.7/2, mbtmp4.2/4, ML4.1/2, Error ellipse: s-maj=111.9km s-min=36.1km az=61.0*

ISC 21 10:47:20.9±1.4, **7°.1S**±0°.1×**129°.5E**±0°.2, **h150^{km}, n12, σ2^{s}.49**/14, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	Manton Dam	5.95	164	P	Pn	10 48 50.1	+3.0
KDU	Kakadu	6.31	152	P	Pn	10 48 53.9	+2.1
KNRA	Kununurra	8.56	184	P	Pn	10 49 25.0	+3.1
WRAB	Tennant Creek	13.62	160	P	Pn	10 50 27.8	-0.4
WRA	Warramunga Arr	13.63	160	P	Pn	10 50 27.8	-0.5
	0.7nm,0.3s,baz=338,slow=14,SNR=24						
WRA				S	Sn	10 52 56.5	-2.8
	3.7nm,0.5s,baz=328,slow=22,SNR=9.6						
	1.7nm,0.4s						
COEN	Coen	15.11	118	P	P	10 50 50.0	+1.5
QIS	Mount Isa	16.61	145	P	Pn	10 51 06.0	+0.8
ASAR	Alice Springs	17.03	166	P	Pn	10 51 12.2	+2.0
	1.1nm,0.3s,baz=344,slow=9.2,SNR=122						
ASAR				S	S	10 54 15.7	-4.0
	0.8nm,0.8s,baz=347,slow=25,SNR=1.3						
	5.8nm,0.6s						
WRKA	Warakurna	17.89	183	P	Pn	10 51 23.0	+2.5
OOD	Oodnadatta	21.43	165	P	P	10 51 58.8	+1.6
STKA	Stephens Creek	27.14	157	P	P	10 52 51.0	+0.9
	1.3nm,0.5s,baz=337,slow=10,SNR=5.9						
	1.3nm,0.5s						
MKAR	Makanchi Array	68.00	327	P	P	10 58 01.8	-2.2
	0.7nm,0.3s,baz=115,slow=7.9,SNR=16						
	0.7nm,0.3s						

TAP 21 10:52:47.8, 24°.90N×122°.30E, h10^{km}±1^{km}, ML1.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.30	291	i P	Pg	10 52 53.5	-0.5
	baz=290						
TWB1				S	Sg	10 52 57.8	-0.2
	baz=290						
SXI1	Grass Mountain	0.43	297	i P	Pg	10 52 56.2	-0.1
	baz=296						
SXI1				S	Sg	10 53 02.2	+0.2
	baz=296						
TIPB	Shuangxi	0.44	279	i P	Pg	10 52 56.4	-0.1
	baz=279						
TIPB				S	Sg	10 53 03.0	+0.8
	baz=279						
NWF	Wu-fen Shan	0.50	290	eP	Pg	10 52 57.7	0.0
	baz=289						
NWF				eS	Sg	10 53 04.3	+0.1
	baz=289						
TWC	Suao	0.50	235	eP	Pg	10 52 57.4	-0.2
	baz=233						
NDS	Dongshan	0.59	244	eS	Sg	10 53 07.5	+0.3
	baz=243						
EWUT	Wuta	0.66	226	eP	Pg	10 53 00.3	-0.2
	baz=226						
EWUT				eS	Sb	10 53 10.0	-0.6
	baz=226						
FUSB	Fushanzhiwuyua	0.66	258	eP	Pg	10 53 00.5	-0.2
	baz=257						
ENA	Nanau	0.69	227	P	Pg	10 53 00.9	-0.4
	baz=226						
YM01	YM01	0.71	290	P	Pg	10 53 01.3	-0.2
	baz=290						
YM01				eS	Sb	10 53 11.9	-0.2
	baz=290						
NWLT	Wulai	0.74	261	eP	Pg	10 53 01.9	-0.1
	baz=260						
NWLT				S	Sg	10 53 12.0	+0.3
	baz=260						
TWY	Chenhua	0.74	301	P	Pg	10 53 01.7	-0.4
	baz=300						
TWY				eS	Sb	10 53 12.4	-0.5
	baz=300						
LATG	Datong	0.79	243	P	Pg	10 53 03.2	+0.1
	baz=242						
LATG				S	Sg	10 53 13.5	-0.1
	baz=242						
YHNB	Yeheng	0.87	255	eS	Sg	10 53 16.4	+0.3
	baz=254						
NNSB	Datong	0.96	241	P	Pg	10 53 06.0	-0.3
	baz=240						
NNSB				S	Sg	10 53 18.5	-0.3
	baz=240						
NACB	Ninganchiao	0.97	222	P	Pg	10 53 05.5	-1.0
	baz=221						
NACB				S	Sg	10 53 17.7	-1.4
	baz=221						
ETLH	Xiulin Townshi	1.02	227	P	Pg	10 53 06.5	-0.9
	baz=227						
FUSS	Fushou	1.16	236	eP	Pb	10 53 09.8	-0.3
	baz=235						

JMA 21 10:53:45.3±0.8, **23°N**±4°×**12°4E**±°, **h45^{km}, MV1.6**/8, **NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	0.73	8	eP	Pn	10 53 59.2	0.0
JKRS	Kuro-shima	0.94	18	P	Pn	10 54 02.9	+0.7
JKRS				eS	Sn	10 54 15.3	+0.8
IRIF	Iriomote-Funau	1.00	2	eP	Pn	10 54 03.2	+0.3
JIJ	Ishigaki jima	1.10	22	eP	Pn	10 54 04.7	+0.4
JISG	Ishigakijimahi	1.37	24	eP	Pn	10 54 08.0	+0.1
JTJ	Tarama	1.59	35	eP	Pn	10 54 11.9	+0.9
JTJ				eS	Sn	10 54 31.1	+0.7

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*KRSC **21** 11:04:56.2±0.8, 53°.06N×158°.96E, h140^{km}±6^{km}, ML4.2*

*MOS **21** 11:04:56.3±0.8, 53°.19N×158°.59E, h146^{km}, mb3.9/6, Error ellipse: s-maj=14.9km s-min=6.0km az=72.5*

*IDC **21** 11:04:57.4±0.4, 53°.37N×158°.28E, h138^{km}±4^{km}, mb3.3/12, mbtmp3.7/14, Error ellipse: s-maj=22.6km s-min=13.5km az=154.0*

ISC 21 11:04:57.2±0.6, **53°.13N**±0°.03×**158°.78E**±0°.04, **h144^{km}**±4^{km}, **n103, σ1^{s}.12**/144, **mb3.6**/17, **4C-5D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGLR	Uglovaya	0.08	18	PN	Pn	11 05 17.0	+0.3
UGLR				S	Sn	11 05 31.6	0.0
UGLR	Uglovaya	0.08	18	eP	Pn	11 05 17.0	+0.3
UGLR				eS	Sn	11 05 31.6	0.0
DALK	Dalny	0.10	190	PN	Pn	11 05 16.3	-0.2
DALK				S	Sn	11 05 30.6	-0.6
DALK	Dalny	0.10	190	eP	Pn	11 05 16.3	-0.2
DALK				eS	Sn	11 05 30.6	-0.6
PET	Petropavlovsk	0.13	216d	iPN	Pn	11 05 16.3	-0.3
PET	Petropavlovsk	0.13	216	eP	Pn	11 05 16.4	-0.2
PET				eS	Sn	11 05 30.7	-0.5
SMAR	Somma	0.13	5	PN	Pn	11 05 17.1	+0.2
SMAR				S	Sn	11 05 31.8	-0.1
SMAR	Somma	0.13	5	eP	Pn	11 05 17.1	+0.2
SMAR				eS	Sn	11 05 31.8	-0.1
AVH	Avacha	0.14	349	PN	Pn	11 05 17.0	+0.3
AVH	Avacha	0.14	349	eP	Pn	11 05 17.0	+0.3
SDLR	Sedlovina	0.16	22	PN	Pn	11 05 16.5	-0.3
SDLR	Sedlovina	0.16	22	eP	Pn	11 05 16.5	-0.3
KRER	Koryakskii	0.17	353	PN	Pn	11 05 17.1	+0.2
KRER				S	Sn	11 05 32.0	0.0
KRER	Koryakskii	0.17	353	eP	Pn	11 05 17.1	+0.2
KRER				eS	Sn	11 05 32.0	0.0
KOK	Koryaka	0.18	331	PN	Pn	11 05 17.1	+0.3
KOK				S	Sn	11 05 31.9	+0.1
KOK	Koryaka	0.18	331	eP	Pn	11 05 17.1	+0.3
KOK				eS	Sn	11 05 31.9	+0.1
KRX	Arik	0.24	341	PN	Pn	11 05 17.0	0.0
KRX				S	Sn	11 05 31.8	-0.3
KRX	Arik	0.24	341	eP	Pn	11 05 17.0	0.0
KRX				eS	Sn	11 05 31.8	-0.3
NLC	Nalytchevo	0.34	83	PN	Pn	11 05 17.2	+0.1
NLC	Nalytchevo	0.34	83	eP	Pn	11 05 17.2	+0.1
KRMR	Karymshinskiy	0.50	233	PN	Pn	11 05 17.5	-0.3
KRMR				S	Sn	11 05 32.9	-0.5
KRMR	Karymshinskiy	0.50	233	eP	Pn	11 05 17.5	-0.3
KRMR				eS	Sn	11 05 32.9	-0.5
PEA0B	Petropavlovsk-	0.65	268c	iPN	Pn	11 05 18.3	-0.4
PETK	Petropavlovsk-	0.65	268	P	Pn	11 05 17.4	-1.3
	230nm,0.4s,baz=95,slow=9.7,SNR=1999						
PETK				S	Sn	11 05 33.4	-1.7
	68nm,0.6s,baz=64,slow=9.9,SNR=15						
RUS	Russkaya	0.72	193	PN	Pn	11 05 18.7	-0.4
RUS				S	Sn	11 05 34.9	-0.9
RUS	Russkaya	0.72	193	eP	Pn	11 05 18.7	-0.4
RUS				eS	Sn	11 05 34.9	-0.9
GRL	Gorelyy	0.72	217	PN	Pn	11 05 19.8	+0.5
GRL				S	Sn	11 05 37.6	+1.5
GRL	Gorelyy	0.72	217	eP	Pn	11 05 19.8	+0.5
GRL				eS	Sn	11 05 37.6	+1.5
MTVR	Mutnovka	0.74	210	PN	Pn	11 05 19.8	+0.3
MTVR				S	Sn	11 05 37.3	+0.9
MTVR	Mutnovka	0.74	210	eP	Pn	11 05 19.8	+0.3
MTVR				eS	Sn	11 05 37.3	+0.9
SPN	Mys Shipunski	0.75	92	PN	Pn	11 05 19.2	-0.1
SPN				S	Sn	11 05 35.4	-0.8
SPN	Mys Shipunski	0.75	92	eP	Pn	11 05 19.2	-0.1
SPN				eS	Sn	11 05 35.4	-0.8
GNL	Ganaly	0.76	319	PN	Pn	11 05 19.2	-0.3
GNL				S	Sn	11 05 35.9	-0.7
GNL	Ganaly	0.76	319	eP	Pn	11 05 19.2	-0.3
GNL				eS	Sn	11 05 35.9	-0.7
ASAK	Asacha	0.92	216	PN	Pn	11 05 21.2	+0.4
ASAK				S	Sn	11 05 39.4	+0.7
ASAK	Asacha	0.92	216	eP	Pn	11 05 21.2	+0.4
ASAK				eS	Sn	11 05 39.4	+0.7
KII	Karymskiy	0.99	23	PN	Pn	11 05 21.8	+0.5
KII				S	Sn	11 05 40.4	+0.6
KII	Karymskiy	0.99	23	eP	Pn	11 05 21.8	+0.5
KII				eS	Sn	11 05 40.4	+0.6
APC	Apacha	1.00	259	PN	Pn	11 05 21.3	0.0
APC				S	Sn	11 05 39.4	-0.3
APC	Apacha	1.00	259	eP	Pn	11 05 21.3	0.0
APC				eS	Sn	11 05 39.4	-0.3
KDTR	Khodutka, Kamc	1.39	198	PN	Pn	11 05 24.7	-0.4
KDTR				S	Sn	11 05 45.1	-1.3
KDTR	Khodutka, Kamc	1.39	198	eP	Pn	11 05 24.7	-0.4
KDTR				eS	Sn	11 05 45.1	-1.3
MIPR	Malaya Ipel'ka	1.50	236	PN	Pn	11 05 26.6	+0.3
MIPR	Malaya Ipel'ka	1.50	236	eP	Pn	11 05 26.6	+0.3
PAU	Pauzhetka	2.06	217	PN	Pn	11 05 33.1	+0.5
PAU	Pauzhetka	2.06	217	eP	Pn	11 05 33.1	+0.5
MKZ	Mys Kozlova	2.26	50	PN	Pn	11 05 35.0	+0.1
MKZ				S	Sn	11 06 02.0	-1.9
MKZ	Mys Kozlova	2.26	50	eP	Pn	11 05 35.0	+0.1
MKZ				eS	Sn	11 06 02.0	-1.9
TUMD	Tumrok D	2.28	24	eP	Pn	11 05 36.0	+0.7
TUMD				eS	Sn	11 06 04.8	+0.1
TUMR	Tumrok	2.30	20	PN	Pn	11 05 36.7	+1.1
TUMR				S	Sn	11 06 06.1	+0.9
TUMR	Tumrok	2.30	20	eP	Pn	11 05 36.7	+1.1
TUMR				eS	Sn	11 06 06.1	+0.9
KMNR	Kamenistaya	2.76	17	PN	Pn	11 05 42.3	+1.0
KMNR	Kamenistaya	2.76	17	eP	Pn	11 05 42.3	+1.0
ESO	Esso	2.80	359	PN	Pn	11 05 43.3	+1.6
ESO				S	Sn	11 06 18.0	+1.9
ESO	Esso	2.80	359	eP	Pn	11 05 43.3	+1.6
ESO				eS	Sn	11 06 18.0	+1.9
SKR	Severo-Kuril's	2.96	215	PN	Pn	11 05 43.9	+0.2
SKR				S	Sn	11 06 19.3	-0.3
SKR	Severo-Kuril's	2.96	215	eP	Pn	11 05 43.9	+0.2
SKR				eS	Sn	11 06 19.3	-0.3
KOZ	Kozyrevsk	3.00	12	PN	Pn	11 05 44.9	+0.7
KOZ	Kozyrevsk	3.00	12	eP	Pn	11 05 44.9	+0.7
KBG	Krutoberegovo	3.87	34	PN	Pn	11 05 56.6	+1.2
KBG				S	Sn	11 06 38.1	-2.6
KBG	Krutoberegovo	3.87	34	eP	Pn	11 05 56.6	+1.2
KBG				eS	Sn	11 06 38.1	-2.6
KBTR	Krutoberegovo	3.87	36	PN	Pn	11 05 55.9	+0.4
KBTR				S	Sn	11 06 37.7	-3.1
KBTR	Krutoberegovo	3.87	36	eP	Pn	11 05 55.9	+0.4
KBTR				eS	Sn	11 06 37.7	-3.1
BKI	Bering	4.71	61	PN	Pn	11 06 06.4	0.0
BKI				S	Sn	11 06 57.7	-2.7
BKI	Bering	4.71	61	eP	Pn	11 06 06.4	0.0
BKI				eS	Sn	11 06 57.7	-2.7
SHEM	Shemya Is, Ala	9.26	86	P	Pn	11 07 07.5	+0.3
	27nm,0.9s,baz=310,slow=4.6,SNR=2.0						
SHEM				S	Sn	11 08 48.8	-1.0
	16nm,0.4s,baz=217,slow=20,SNR=2.0						
SEY	Seymchan	10.39	344	⇑ePN	Pn	11 07 19.5	-2.7
SEY				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ASAJ	Asahikawa	13.97	236	P	Pn	11 08 09.3	+0.5
	comp=Z,1.9nm,0.7s,baz=80,slow=12,SNR=2.3						
KLR	Kul'dur	17.35	268	P	P	11 08 47.4	-2.1
	comp=Z,1.4nm,0.7s,baz=55,slow=9.9,SNR=4.2						
MJA0	Matsu Arr-Jizo	21.94	229	eP	P	11 09 39.2	+0.1
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAJO	Matsushiro	21.96	229c	eP	P	11 09 38.9	-0.4
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						

MJAR	**Matsushiro Arr**	21.96	229	P	**P**	**11 09 38.1**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=28,slow=10,SNR=15						
	comp=Z,3.3nm,0.7s						
TIXI	**Tiksi**	22.72	336	⇓*e*P	**P**	**11 09 45.0**	**-1.3**
KDAK	**Kodiak Island**	27.47	61	P	**P**	**11 10 29.6**	**+0.2**
	comp=Z,12nm,0.9s,baz=297,slow=18,SNR=2.7						
ILAR	**Eielson Array**	29.35	45	P	**P**	**11 10 46.6**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=267,slow=5.3,SNR=4.1						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	29.35	45	*e*P	**P**	**11 10 46.8**	**+0.8**
H11N2	**WAKE ISLAND Hy**	33.92	166	T	T	11 47 27.8	
	baz=352,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	33.94	166	T	T	11 47 28.8	
	baz=352,slow=76,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	33.94	166	T	T	11 47 28.5	
	baz=352,slow=76,SNR=5.3						
INK	**Inuvik**	34.32	38	P	**P**	**11 11 30.7**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=300,slow=9.3,SNR=12						
	comp=Z,0.4nm,0.3s						
H11S1	**WAKE ISLAND Hy**	35.10	167	T	T	11 48 44.5	
	baz=352						
H11S3	**WAKE ISLAND Hy**	35.11	167	T	T	11 48 36.2	
	baz=352						
H11S2	**WAKE ISLAND Hy**	35.12	167	T	T	11 48 55.7	
	baz=352						
YKA	**Yellowknife Ar**	43.67	42	P	**P**	**11 12 48.2**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=301,slow=7.2,SNR=4.7						
	comp=Z,0.2nm,0.6s						
SPITS	**Spitsbergen Ar**	46.96	350	P	**P**	**11 13 11.3**	**-1.4**
	comp=Z,11nm,1.0s,baz=47,slow=6.7,SNR=2.3						
KURK	**Kurchatov**	47.04	301	⇓*i*P	**P**	**11 13 13.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	47.42	295	⇓*e*P	**P**	**11 13 14.3**	**-2.5**
MKAR	**Makanchi Array**	47.42	295	P	**P**	**11 13 14.2**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=56,slow=6.8,SNR=8.6						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	47.42	295	*e*P	**P**	**11 13 14.4**	**-2.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	54.35	295	⇑*e*P	**P**	**11 14 07.1**	**-1.7**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NVAR	**Mina Array Bea**	56.47	69	P	**P**	**11 14 26.6**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=299,slow=7.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	58.19	60	P	**P**	**11 14 37.9**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=318,slow=2.0,SNR=3.7						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	59.77	336	P	**P**	**11 14 44.9**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=17,slow=10.0,SNR=7.1						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	59.77	336	*i* P	**P**	**11 14 45.2**	**-1.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	63.28	343	P	**P**	**11 15 09.1**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=22,slow=6.9						
NOA	**NORSAR Array B**	63.28	343	P	**P**	**11 15 09.2**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=32,slow=9.0,SNR=4.3						
	comp=Z,0.7nm,0.7s						
NCK	**Nalchik**	68.85	315	⇓*e*P	**P**	**11 15 45.8**	**0.0**
TXAR	**Lajitas Array**	71.35	66	P	**P**	**11 16 03.4**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=298,slow=5.1,SNR=16						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	75.79	204	P	**P**	**11 16 29.6**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=76,slow=12,SNR=1.4						
	comp=Z,0.4nm,0.5s						
ESDC	**Sonseca Array**	86.37	347	P	**P**	**11 17 21.5**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=0.7,slow=5.1,SNR=4.8						
	comp=Z,0.6nm,0.7s						
H03N2	**Juan Fernandez**	134.98	88	T	T	13 55 00.5	
	baz=314,slow=77,SNR=5.1						
H03N1	**Juan Fernandez**	134.99	88	T	T	13 54 58.9	
	baz=314,slow=77,SNR=6.6						
H03N3	**Juan Fernandez**	135.00	88	T	T	13 55 01.1	
	baz=314,slow=77,SNR=7.3						

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*IDC **21** 11:06:23.1±1.7, 28°.26N×87°.35E, h0^{km}, mb3.6/4, mbtmp3.5/6, ML3.8/2, MS3.9/2, Error ellipse: s-maj=64.3km s-min=24.5km az=61.0*

ISC 21 11:06:24.5±1.6**, 28°.3N**±0°.2×**87°.4E**±0°.3**, h10**^{km}**, n8,** σ**0**^{s}**.97**/6**,** **mb3.8**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	14.42	130	Pn	**Pn**	**11 09 48.4**	**-0.3**
	0.3nm,0.3s,baz=307,slow=12,SNR=2.3						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	18.92	349	P	**P**	**11 10 44.5**	**-0.9**
	0.1nm,0.3s,baz=163,slow=12,SNR=3.5						
	0.3nm,0.5s						
SONM	**Songino Array**	24.50	32	P	**P**	**11 11 44.6**	**+0.5**
	0.7nm,0.7s,baz=211,slow=10,SNR=2.5						
	0.7nm,0.7s						
MJAR	**Matsushiro Arr**	43.29	66	LR	LR	11 33 45.4	
	comp=Z,229nm,20.1s,baz=224,slow=38						
FINES	**FINESS Array B**	51.93	328	P	**P**	**11 15 33.5**	**+0.3**
	0.6nm,0.6s,baz=104,slow=8.0,SNR=5.3						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	66.01	131	P	**P**	**11 17 12.6**	**+1.0**
	0.6nm,0.7s,baz=330,slow=6.7,SNR=1.8						
	0.6nm,0.7s						
SHEM	**Shemya Is, Ala**	66.14	42	LR	LR	11 49 12.3	
	comp=Z,64nm,19.2s,baz=307,slow=39						
ASAR	**Alice Springs**	68.38	134	P	**P**	**11 17 26.0**	**-0.6**
	0.6nm,0.7s,baz=320,slow=7.0,SNR=2.3						
	0.6nm,0.7s						

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*IDC **21** 11:08:32.8±3.5, 25°.50S×130°.14E, h0^{km}, mbtmp4.4/4, ML4.2/4, Error ellipse: s-maj=30.3km s-min=23.9km az=65.0*

*NEIC **21** 11:08:32.4±3.7, 25°.56S±0°.06×129°.91E±0°.05, h10^{km}±2^{km}, Error ellipse: s-maj=10.4km s-min=7.8km az=13.0*

*NOU **21** 11:08:32.2, 25°.55S×129°.84E, h10^{km}, mb4.4/17, Northern Territory, Australia*

ISC 21 11:08:31.8±0.6**, 25°.54S**±0°.06×**129°.86E**±0°.05**, h10**^{km}**, n47,** σ**1**^{s}**.66**/51**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	1.50	289		**Pg**	**11 09 01.9**	**+1.4**
WRKA					**Sg**	**11 09 23.0**	**+2.9**
WRKA	**Warakurna**	1.50	289	P	**Pg**	**11 09 00.1**	**-0.5**
ASAR	**Alice Springs**	4.13	64	Pn	**Pn**	**11 09 35.9**	**+0.9**
	5.5nm,0.3s,baz=245,slow=12,SNR=134						
ASAR				Pg	**Pb**	**11 09 49.0**	**+4.4**
	11nm,0.3s,baz=243,slow=16,SNR=37						
ASAR				Sn	**Sn**	**11 10 23.9**	**+0.4**
	13nm,0.3s,baz=246,slow=23,SNR=13						
ASAR				Lg	Lg	11 10 37.3	
	21nm,0.3s,baz=240,slow=26,SNR=4.2						
	10nm,0.3s						
ASAR	**Alice Springs**	4.13	64		**Pn**	**11 09 36.1**	**+1.1**
AS31	**Alice Springs**	4.13	64		**Pn**	**11 09 36.0**	**+1.0**
FORT	**Forrest**	5.46	196		**Pn**	**11 09 56.9**	**+3.7**
FORT	**Forrest**	5.46	196	P	**Pn**	**11 09 55.3**	**+2.0**
OOD	**Oodnadatta**	5.68	115	P	**Pn**	**11 09 58.1**	**+1.8**
MULG	**Mulgathing**	6.01	143	P	**Pn**	**11 10 03.2**	**+2.3**
WRA	**Warramunga Arr**	6.93	38	Pn	**Pn**	**11 10 13.7**	**+0.1**
	2.2nm,0.3s,baz=218,slow=14,SNR=127						
WRA				Sn	**Sn**	**11 11 30.2**	**-2.4**
	3.4nm,0.3s,baz=219,slow=23,SNR=8.2						
WRA				Lg	Lg	11 12 04.0	
	5.6nm,0.3s,baz=210,slow=27,SNR=11						
	3.4nm,0.2s						
WRA	**Warramunga Arr**	6.93	38		**Pn**	**11 10 14.2**	**+0.6**
WB2	**Warramunga Arr**	6.94	38		**Pn**	**11 10 14.2**	**+0.6**
WRAB	**Tennant Creek**	6.95	38		**Pn**	**11 10 14.0**	**+0.2**
WRAB	**Tennant Creek**	6.95	38	P	**Pn**	**11 10 14.5**	**+0.7**
WR0	**Warramunga Arr**	7.03	39		**Pn**	**11 10 15.5**	**+0.6**
WB0	**Warramunga Arr**	7.11	37		**Pn**	**11 10 15.9**	**-0.1**
LCRK	**Leigh Creek**	8.86	125	P	**Pn**	**11 10 40.1**	**+0.1**
BBOO	**Buckleboo**	9.05	145	Pn	**Pn**	**11 10 42.2**	**-0.4**
BBOO	**Buckleboo**	9.05	145	P	**Pn**	**11 10 42.6**	**0.0**
KNRA	**Kununurra**	9.86	354	Pn	**Pn**	**11 10 53.6**	**-0.1**
KNRA	**Kununurra**	9.86	354	P	**Pn**	**11 10 54.3**	**+0.6**
INKA	**Innaminka**	9.99	105	P	**Pn**	**11 10 55.4**	**0.0**
PSA00	**Pilbara Seismi**	9.99	291	Pn	**Pn**	**11 10 53.7**	**-1.9**
QIS	**Mount Isa**	10.25	63	P	**Pn**	**11 10 59.8**	**+0.7**
MBWA	**Marble Bar**	10.27	293	Pn	**Pn**	**11 10 58.4**	**-0.9**
MBWA	**Marble Bar**	10.27	293	P	**Pn**	**11 10 59.2**	**-0.1**
NAPP	**Napperby**	10.50	138	P	**Pn**	**11 11 01.9**	**-0.6**
HTT	**Hallett**	11.14	137	P	**Pn**	**11 11 10.5**	**-0.8**
STKA	**Stephens Creek**	12.08	124	Pn	**Pn**	**11 11 21.6**	**-2.5**
	1.2nm,0.3s,baz=302,slow=15,SNR=24						
STKA				Sn	Sn	11 13 27.6	-11
	0.6nm,0.3s,baz=326,slow=18,SNR=1.9						
STKA				Lg	Lg	11 14 50.5	
	0.2nm,0.3s,baz=322,slow=18,SNR=1.2						
	3.7nm,0.4s						
STKA	**Stephens Creek**	12.08	124		**Pn**	**11 11 22.2**	**-1.9**
STKA	**Stephens Creek**	12.08	124	P	**Pn**	**11 11 23.8**	**-0.3**
KLBR	**Kellerberrin**	12.22	238	P	**Pn**	**11 11 25.4**	**-0.7**
BLDU	**Ballidu**	12.66	243	P	**Pn**	**11 11 31.9**	**-0.1**
MTN	**Manton Dam**	12.68	6	Pn	**Pn**	**11 11 29.4**	**-3.0**
MORW	**Morawa**	12.78	251	Pn	**Pn**	**11 11 30.2**	**-3.5**
MORW	**Morawa**	12.78	251	P	**Pn**	**11 11 32.1**	**-1.6**
NWAO	**Narrogin (SRO)**	13.25	233	Pn	**Pn**	**11 11 37.2**	**-2.8**
GIRL	**Giralia**	14.56	278	Pn	**Pn**	**11 11 56.8**	**-1.2**
CTAO	**Charters Tower**	16.06	74		**Pn**	**11 12 15.9**	**-1.9**
CTAO				IAmb	IAmb	11 12 29.5	
	comp=Z,21nm,1.3s						
BATI	**Baumata**	16.34	338	Pn	**P**	**11 12 24.9**	**+0.5**
	comp=Z,4.7nm,0.3s,baz=137,slow=20,SNR=2.3						
	comp=Z,20nm,0.4s						
COEN	**Coen**	17.01	50		**Pn**	**11 12 26.9**	**-3.1**
COEN				IAmb	IAmb	11 12 42.9	
	comp=Z,34nm,1.4s						
TOO	**Toolangi**	17.90	136	P	**Pn**	**11 12 41.3**	**+0.3**
EIDS	**Eidsvold**	19.17	94	P	**P**	**11 12 56.0**	**+0.4**
EIDS				IAmb	IAmb	11 13 13.5	
	comp=Z,15nm,1.3s						
ARMA	**Armidale**	19.83	109	P	**P**	**11 13 03.7**	**+0.8**
ARMA				IAmb	IAmb	11 13 07.9	
	comp=Z,6.3nm,0.7s						
VNDA	**Vanda**	54.19	172	P	**P**	**11 17 56.6**	**-0.4**
QSPA	**South Pole Qui**	64.54	180	P	**P**	**11 19 09.5**	**+0.6**
SNAA	**Sanae**	77.71	194	P	**P**	**11 20 27.4**	**-1.1**

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*IDC **21** 11:14:41.1±0.5, 14°.88N×122°.18E, h0^{km}, mb4.3/22, mbtmp4.4/23, ML4.4/1, MS4.1/65, Error ellipse: s-maj=16.3km s-min=12.0km az=102.0*

*MAN **21** 11:14:43.5, 14°.91N×121°.96E, h0^{km}, mb5.3, ML4.2, MS4.4, Hypocentre not reviewed by the ISC*

MAN INTENSITY V - POLILIO & PANUKULAN QUEZON; INTENSITY IV - INFANTA & JOMALIG QUEZON; INTENSITY III - CAPALONGA CAMARINES NORTE; QUEZON CITY; BINANGONAN AND BARAS RIZAL; INTENSITY II - MALOLOS BULACAN; MAKATI CITY; PARANAQUE CITY; ANTIPOLO CITY; BAY LAGUNA; PLARIDEL QUEZON.

*BJI **21** 11:14:43.1±0.0, 14°.75N×122°.08E, h24^{km}, mb4.6/57, mB4.9/43, Ms4.6/55, Ms7 4.4/52*

*GCMT **21** 11:14:45.8±0.2, 14°.99N±0°.01×122°.04E±0°.01, h27^{km}±1^{km}, MW5.0/101, Moment Tensor Solution. s23,c25; s101,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.90±.16; $M_{\theta\theta}$2.33±.11; $M_{\phi\phi}$-3.23±.12; $M_{r\theta}$1.13±.20; $M_{\theta\phi}$1.90±.08; $M_{\phi r}$1.72±.24; Best double couple: $M_0$4.01200×10^{16} NP1:ϕ_s120.00000°, δ57.00000°, λ11.00000°. NP2:ϕ_s24.00000°, δ80.00000°, λ147.00000°. Principal axes: T 3.8430, Plg30.0000°, Azm337.0000°; N 0.3350, Plg55.0000°, Azm190.0000°; P -4.1800, Plg15.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 11:14:48.8±1.6, 15°.01N±0°.06×122°.0E±0°.1, h39^{km}±6^{km}, mb4.8/94 Error ellipse: s-maj=14.7km s-min=8.2km az=94.0*

ISC 21 11:14:46.2±0.6**, 14°.96N**±0°.03×**122°.06E**±0°.03**, h27**^{km}±4^{km}**, n279,** σ**1**^{s}**.77**/242**, mb4.7**/81**, MS4.2**/77**, 33C-28D, Fault plane solution: NP1:**ϕ_s102.07780°**,** δ49.06424°**,** λ6.22503°. **NP2:**ϕ_s7.98990°**,** δ85.30132°**,** λ138.89645°. **Principal axes:** T Plg31.4147°**,** Azm316.6235°**;** N Plg48.6762°**,** Azm182.6261°**;** P Plg23.9151°**,** Azm62.3379°**; Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	0.91	329	⇓*e*P	**Pn**	**11 15 01.3**	**-1.9**
BALP				*e*S	**Sn**	**11 15 17.4**	**+1.9**
JCNP	**Jose Panganiba**	0.91	137	⇓*i*P	**Pn**	**11 15 00.3**	**-3.0**
LQP	**Lukban**	0.98	211	⇓*e*P	**Pn**	**11 15 01.1**	**-3.4**
LQP				*i* S	**Sb**	**11 15 13.9**	**-3.5**
QVP	**Quezon City--P**	1.07	252	⇓*e*P	**Pn**	**11 15 01.4**	**-4.1**
QVP				*e*S	Sb	11 15 55.2	+35
PCPH	**Palayan**	1.10	303	⇑*i*P	**Pn**	**11 15 04.0**	**-2.0**
PCPH				*i* S	**Sn**	**11 15 19.3**	**-1.1**
TGY	**Tagaytay City**	1.38	232	Pn	**Pn**	**11 15 08.8**	**-1.1**
	12μm,0.3s,baz=49,slow=2.7,SNR=345						
TGY				Sn	**Sb**	**11 15 28.6**	**0.0**
	4μm,0.3s,baz=332,slow=19,SNR=19						
TGY	**Tagaytay City**	1.38	232	⇑*e*P	**Pn**	**11 15 08.8**	**-1.1**
TGY				*e*S	**Sb**	**11 15 29.4**	**+0.7**
MACP	**Maragondon, Ca**	1.47	242	⇓*e*P	**Pn**	**11 15 09.6**	**-1.4**
MACP				*e*S	**Sn**	**11 15 30.2**	**+0.8**
BOAC	**Boac**	1.51	188	⇓*e*P	**Pn**	**11 15 10.0**	**-1.5**
SMPP	**San Manuel, Pa**	1.78	312	⇓*e*P	**Pn**	**11 15 14.7**	**-0.6**
PGP	**Puerto Galera**	1.80	217	⇓*i*P	**Pn**	**11 15 14.1**	**-1.5**
PGP				*i* S	**Sn**	**11 15 37.7**	**+0.1**
LUBP	**Lubang**	2.14	235	⇓*i*P	**Pn**	**11 15 18.2**	**-2.0**
SCZP	**Santa Cruz**	2.22	292	⇓*e*P	**Pn**	**11 15 21.3**	**-0.1**
SCZP				*e*S	**Sb**	**11 15 58.8**	**+5.9**
SAMP	**Sagada Mountai**	2.38	332	⇓*e*P	**Pn**	**11 15 24.3**	**+0.7**
SAMP				*e*S	**Sn**	**11 15 52.5**	**+0.5**
PVCP	**Virac**	2.44	123	⇓*e*P	**Pn**	**11 15 25.7**	**+1.3**
PVCP				*e*S	**Sb**	**11 15 57.5**	**-1.6**
SJMP	**San Jose**	2.65	200	⇓*e*P	**Pn**	**11 15 27.2**	**0.0**
SJMP				*e*S	Sn	11 15 38.3	-20
APYP	**Conner**	2.99	345	⇓*i*P	**Pn**	**11 15 33.0**	**+1.1**
APYP				*i* S	**Sb**	**11 16 10.0**	**-4.9**
SIPP	**Brgy, Tapao**	3.32	333	⇓*i*P	**Pn**	**11 15 38.6**	**+2.1**
SIPP				*i* S	Sb	11 16 44.5	+20
RCP	**Roxas**	3.44	169	⇑*e*P	**Pn**	**11 15 41.2**	**+3.0**
CUYO	**Cuyo Island**	4.21	194	⇓*e*P	**Pn**	**11 15 47.4**	**-1.3**
ENPP	**El Nido**	4.53	215	⇓*e*P	**Pn**	**11 15 52.0**	**-1.1**
LLP	**Lapu-Lapu**	4.98	158	*e*P	**Pb**	**11 16 11.1**	**-1.6**
LLP				*e*S	**Sb**	**11 17 18.4**	**+6.3**
TBP	**Tagbilaran**	5.53	161	*e*P	**Pn**	**11 16 04.1**	**-2.7**
TWG	**Pinlang**	7.88	353		**Pn**	**11 16 40.0**	**+1.0**
TPUB	**Ta-pu**	8.41	351		**Pn**	**11 16 46.8**	**+0.4**
YULB	**Yu-li**	8.42	355		**Pn**	**11 16 47.6**	**+1.0**
KCP	**Kidapawan**	8.44	159	⇑*i*P	Pn	11 16 56.4	+9.5
DAV	**Davao City (W)**	8.57	156	LR	LR	11 20 21.9	
	comp=Z,2μm,19.5s,baz=341,slow=40						
SSLB	**Suanglung**	8.84	353	Pn	**Pn**	**11 16 53.1**	**+0.8**
NACB	**Ninganchiao**	9.18	357	Pn	**Pn**	**11 16 57.1**	**+0.2**
YOJ	**Yonaguni jima**	9.49	5	Pn	**Pn**	**11 17 02.5**	**+1.2**
YHNB	**Yeheng**	9.68	356		**Pn**	**11 17 04.2**	**+0.3**
MYLDM	**Lahad Datu**	10.33	200		**Pn**	**11 17 15.3**	**+2.5**
HKPS	**Hong Kong Po S**	10.45	315	Pn	**Pn**	**11 17 14.2**	**-0.2**
QZH	**Quanzhou**	10.45	342	*e*P	Pn	11 17 18.8	+4.4
QZH				S	**Sn**	**11 19 13.9**	**+3.2**
QZH				LR	LR		
	comp=N,1μm,14.7s						
QZH				LR	LR		
	comp=E,650nm,12.3s						
QZH				LR	LR		
	comp=Z,730nm,12.3s						
SGSI	**Sangihe**	11.71	163	P	Pn	11 17 38.8	+7.1
	71nm,0.8s						
QIZ	**Qiongzhong**	12.36	291	P	**Pn**	**11 17 39.8**	**-0.8**
QIZ				S	**Sn**	**11 19 57.6**	**0.0**
QIZ				LR	LR		
	comp=N,1μm,16.7s						
QIZ				LR	LR		
	comp=E,640nm,15.2s						
QIZ				LR	LR		
	comp=Z,810nm,14.3s						
JOW	**Kunigami**	13.16	25	Pn	**Pn**	**11 17 50.2**	**-1.2**
GTOI	**Gorontalo**	14.26	176	P	**Pn**	**11 18 06.5**	**-0.1**
	312nm10.0nm,1.1s						
MRSI	**Marisa**	14.39	180	P	**P**	**11 18 13.4**	**-1.6**
	594nm15nm,0.6s						
KMSI	**Cibinong**	14.42	172	P	P	11 18 21.2	+5.9
MPSI	**Mapaga**	14.69	189	P	**P**	**11 18 19.0**	**+0.7**
	14nm,0.8s						
SBUM	**Sibu**	15.77	219	Pn	**Pn**	**11 18 27.5**	**+0.8**
SBUM				IAmb	IAmb	11 18 37.7	
	comp=Z,61nm,0.7s						
LUWI	**Luwuk**	15.91	177	P	**P**	**11 18 32.8**	**+0.9**
	comp=Z,2μmcomp=Z,49nm,0.9s						
PCI	**Palu**	15.92	188	P	**Pn**	**11 18 23.5**	**-5.0**
NJ2	**Nanjing**	17.26	351	*e*P	**P**	**11 18 46.9**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,250nm,4.3s						
NJ2				LR	LR		
	comp=Z,350nm,10.9s						
NJ2				LR	LR		
	comp=Z,1μm,15.6s						
NJ2				LR	LR		
	comp=Z,900nm,14.2s						
MTKI	**Muara Teweh, K**	17.32	205	P	P	11 18 54.8	+7.3
SANI	**Sanana**	17.34	167	P	**P**	**11 18 48.9**	**+1.1**
	comp=Z,18nm,0.8s						
KSM	**Kuching**	17.73	222		**P**	**11 18 52.3**	**+0.3**
TTSI	**Tana Toraja**	18.03	187	P	**P**	**11 18 57.0**	**+1.7**
	comp=Z,23nm,0.9s						
STKI	**Sintang**	18.12	216	P	**P**	**11 18 58.5**	**+2.1**
	comp=Z,6μmcomp=Z,33nm,0.8s						
SIJI	**Sorong**	18.18	149	LR	LR	11 27 22.6	
	comp=Z,463nm,18.3s,baz=18,slow=42						
GYA	**Guiyang**	18.37	311	⇓P	**Pn**	**11 19 01.4**	**+2.1**
GYA				pP	sP	11 19 12.5	+2.7
GYA				pmax	pmax		
	comp=Z,14nm,0.7s						
GYA				pmax	pmax		
	comp=Z,400nm,4.2s						
GYA				LR	LR		
	comp=Z,1μm,15.9s						
GYA				LR	LR		
	comp=Z,760nm,13.6s						
GYA				LR	LR		
	comp=Z,1μm,15.1s						
ENH	**Enshi**	19.13	325		**Pn**	**11 19 09.6**	**+1.2**
KAPI	**Kappang**	19.98	187	P	**P**	**11 19 16.1**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=9.8,slow=6.5,SNR=4.8						
KAPI				LR	LR	11 28 11.2	
	comp=Z,231nm,18.6s,baz=12,slow=41						
	comp=Z,17nm,0.7s						
KMI	**Kunming**	20.75	302	⇑P	Pn	11 19 27.8	0.0
KMI				S	**S**	**11 23 16.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,9.0s						
KMI				LR	LR		
	comp=Z,750nm,13.5s						
KMI				LR	LR		
	comp=Z,660nm,17.0s						
KMI				LR	LR		
	comp=Z,830nm,16.4s						
NAWB	**Namwon**	20.93	12	P	Pn	11 19 28.2	-1.4
NAWB				IAmb	IAmb	11 19 31.9	
	comp=Z,34nm,1.0s						
LYN	**LuoYang**	21.34	338	⇑P	**P**	**11 19 32.9**	**+1.6**
LYN				S	Sn	11 23 30.4	-4.7
LYN				pmax	pmax		
	comp=Z,60nm,1.0s						
LYN				pmax	pmax		
	comp=Z,220nm,6.1s						
LYN				LR	LR		
	comp=Z,730nm,18.9s						
LYN				LR	LR		
	comp=Z,970nm,20.9s						
LYN				LR	LR		
	comp=Z,850nm,18.4s						
TIA	**Tai'an**	21.62	349	⇓P	**P**	**11 19 35.6**	**+1.3**
TIA				S	Sn	11 23 38.8	-3.0
TIA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIA				LR	LR		
	comp=Z,200nm,15.7s						
TIA				LR	LR		
	comp=Z,580nm,16.4s						
TIA				LR	LR		
	comp=Z,260nm,12.8s						
TJN	**Taejon**	21.85	12	P	**P**	**11 19 37.9**	**+1.1**
GUMO	**Guam**	22.15	91	LR	LR	11 28 15.2	
	comp=Z,122nm,18.3s,baz=329,slow=37						
PZH	**PanZhiHua**	22.16	304	P	**P**	**11 19 41.6**	**+1.2**
PZH				S	**S**	**11 23 40.3**	**-3.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,180nm,5.5s						
PZH				LR	LR		
	comp=Z,680nm,14.7s						
PZH				LR	LR		
	comp=Z,710nm,15.5s						
PZH				LR	LR		
	comp=Z,850nm,15.0s						
JCJ	**Chichijima**	22.29	54	LR	LR	11 26 42.0	
	comp=Z,372nm,20.9s,baz=278,slow=32						
JHS	**Saijyo**	22.30	25	P	**P**	**11 19 42.4**	**+0.8**
JHS				IAmb	IAmb	11 19 46.2	
	comp=Z,63nm,1.3s						
XAN	**Xi'an**	22.40	330	⇑P	**P**	**11 19 43.0**	**+0.2**
XAN				pP	pP	11 19 47.4	-2.6
XAN				PP	**PnPn**	**11 20 05.8**	**-0.4**
XAN				S	**S**	**11 23 51.5**	**+4.0**
XAN				sS	sS	11 23 58.8	-0.6
XAN				pmax	pmax		
	comp=Z,34nm,1.1s						
XAN				pmax	pmax		
	comp=Z,370nm,4.0s						
XAN				LR	LR		
	comp=Z,670nm,14.8s						
XAN				LR	LR		
	comp=Z,930nm,15.1s						
XAN				LR	LR		
	comp=Z,970nm,17.2s						
CM31	**Chiang Mai Arr**	22.41	282	P	**P**	**11 19 43.9**	**+0.9**
CMAR	**Chiang Mai Arr**	22.41	282	P	**P**	**11 19 43.7**	**+0.7**
	comp=Z,8.0nm,0.8s,baz=95,slow=7.9,SNR=46						
CMAR				LR	LR	11 28 30.4	
	comp=Z,452nm,20.1s,baz=95,slow=37						
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	22.41	282	P	**P**	**11 19 43.6**	**+0.6**
INCN	**Inchon**	22.80	9	P	**P**	**11 19 47.1**	**+0.1**
INCN				IAmb	IAmb	11 19 57.6	
	comp=Z,20nm,0.8s						
KSAR	**Wonju Array Be**	22.98	12	P	**P**	**11 19 49.6**	**+0.8**
KSRS	**Korea Array**	23.00	12	P	**P**	**11 19 49.0**	**0.0**
	comp=Z,6.3nm,0.8s,baz=198,slow=10,SNR=22						
	comp=Z,6.3nm,0.8s						
KS19	**Wonju Array Si**	23.04	12	P	**P**	**11 19 49.5**	**+0.1**
CD2	**Chengdu**	23.10	317	P	**P**	**11 19 50.8**	**+0.7**
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,200nm,3.8s						
CD2				LR	LR		
	comp=Z,1μm,14.7s						
CD2				LR	LR		
	comp=Z,1μm,15.9s						
DSRI	**Dabo**	23.11	230	P	**P**	**11 19 53.4**	**+3.0**
	comp=Z,16nm,0.9s						
HNS	**HongShan**	23.28	345	⇑P	**P**	**11 19 52.3**	**+0.4**
HNS				S	**S**	**11 24 01.0**	**-1.6**
HNS				SS	**SnSn**	**11 24 46.6**	**+8.4**
HNS				pmax	pmax		
	comp=Z,31nm,1.0s						
HNS				pmax	pmax		
	comp=Z,310nm,5.2s						
HNS				LR	LR		
	comp=Z,340nm,19.0s						
HNS				LR	LR		
	comp=Z,510nm,17.5s						
HNS				LR	LR		
	comp=Z,470nm,14.1s						
MMRI	**Maumere**	23.44	180	P	**P**	**11 19 55.5**	**+1.9**
MMRI				IAmb	IAmb	11 20 01.6	
	comp=Z,30nm,0.9s						
MMRI	**Maumere**	23.44	180	P	P	11 20 01.4	+7.8
EDFI	**Ende, Flores**	23.56	181	P	**P**	**11 19 56.5**	**+1.6**
	comp=Z,344nmcomp=Z,13nm,0.6s						
PLAI	**Plampang**	24.01	190	P	**P**	**11 20 04.3**	**+5.3**
	comp=Z,48nm,0.9s						
JHJ	**Hachijo jima 2**	24.20	39	LR	LR	11 28 15.5	
	comp=Z,208nm,19.7s,baz=260,slow=34						
TIY	**Taiyuan**	24.22	341	*e*P	**P**	**11 20 02.4**	**+1.5**
TIY				sS	**sS**	**11 24 31.0**	**+0.4**
TIY				pmax	pmax		
	comp=Z,220nm,4.7s						
TIY				LR	LR		
	comp=Z,870nm,17.9s						
TIY				LR	LR		

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         comp=Z,540nm,15.5s
TIY                                LR     LR
         comp=Z,500nm,15.4s
INU      Inuyama          24.34  31 P      P       11 20 02.2 +0.3
INU                                IAmb   IAmb    11 20 04.1
         comp=Z,33nm,1.4s
SOEI     Soe              24.65 175 P      P       11 20 05.7 +0.7
SOEI                               IAmb   IAmb    11 20 16.5
         comp=Z,26nm,0.7s
SOEI     Soe              24.65 175 P      P       11 20 15.1  +10
JGF      Kuroka           24.71  31 P      P       11 20 03.8 -1.6
JGF                                IAmb   IAmb    11 20 11.0
         comp=Z,16nm,1.1s
BATI     Baumata          25.05 176 LR     LR      11 33 15.7
         comp=Z,304nm,18.4s,baz=28,slow=45
WOJI     Wonogiri, Jawa   25.20 207 P      P       11 20 25.0  +15
BJT      Baijiatuau       25.49 349 P      P       11 20 12.8 +0.5
BJT                                IAmb   IAmb    11 20 16.1
         comp=Z,22nm,1.1s
BJI      Beijing          25.51 349 P      P       11 20 12.8 +0.3
BJI                                pP     sP      11 20 23.8 +0.3
BJI                                S      S       11 24 32.4 -5.9
BJI                                pmax   pmax
         comp=Z,16nm,0.8s
BJI                                pmax   pmax
         comp=Z,200nm,4.1s
BJI                                LR     LR
         comp=Z,240nm,17.5s
BJI                                LR     LR
         comp=Z,290nm,18.5s
BJI                                LR     LR
         comp=Z,440nm,18.2s
PSI      Prapat           25.81 244 P      P       11 20 16.4 +0.8
         comp=Z,8.8nm,0.9s,baz=50,slow=7.1,SNR=3.8
PSI                                LR     LR      11 30 28.1
         comp=Z,304nm,20.8s,baz=79,slow=36
         comp=Z,8.8nm,0.9s
MJAR     Matsushiro Arr   25.88  31 P      P       11 20 14.0 -1.9
         comp=Z,0.6nm,0.7s,baz=176,slow=7.9,SNR=4.7
         comp=Z,0.6nm,0.7s
MDSI     Maura Dua        26.21 224 P      P       11 20 26.7 +7.6
LZH      Lanzhou          26.61 326 ⇓P     P       11 20 23.8 +1.1
LZH                                PP     PP      11 21 13.3  -10
LZH                                pmax   pmax
         comp=Z,19nm,1.5s
LZH                                pmax   pmax
         comp=Z,120nm,5.4s
LZH                                LR     LR
         comp=Z,1µm,16.8s
LZH                                LR     LR
         comp=Z,830nm,16.3s
LZH                                LR     LR
         comp=Z,1µm,15.7s
HHC      Hu-ho-hao-te     27.36 343 eP     P       11 20 31.8 +2.4
HHC                                S      S       11 25 13.0 +5.2
HHC                                sS     sS      11 25 28.4 +7.7
HHC                                pmax   pmax
         comp=Z,39nm,0.9s
HHC                                pmax   pmax
         comp=Z,160nm,5.0s
HHC                                LR     LR
         comp=Z,960nm,14.9s
HHC                                LR     LR
         comp=Z,1µm,14.3s
HHC                                LR     LR
         comp=Z,1µm,15.4s
XLT      XiLinHaoTe       29.29 351 eP     P       11 20 51.8 +5.3
XLT                                pmax   pmax
         comp=Z,10.0nm,1.0s
XLT                                pmax   pmax
         comp=Z,120nm,5.1s
USRK     Ussuriysk Ar.    30.35  14 P      P       11 20 55.7  0.0
         comp=Z,3.5nm,0.7s,baz=202,slow=8.0,SNR=6.2
USRK                               LR     LR      11 33 41.8
         comp=Z,79nm,18.2s,baz=192,slow=38
         comp=Z,3.5nm,0.7s
USRK     Ussuriysk Ar.    30.35  14 P      P       11 20 56.4 +0.7
GTA      Gaotai           31.21 326 eP     P       11 21 05.0 +1.4
GTA                                pP     sP      11 21 15.8 +1.3
GTA                                sP     pP      11 21 21.3  +10
GTA                                pmax   pmax
         comp=Z,6.0nm,1.0s
GTA                                pmax   pmax
         comp=Z,48nm,5.3s
GTA                                LR     LR
         comp=Z,730nm,20.0s
GTA                                LR     LR
         comp=Z,540nm,19.6s
GTA                                LR     LR
         comp=Z,840nm,18.5s
GOMU     GeErMu           32.23 316 P      P       11 21 09.1 -3.8
GOMU                               pmax   pmax
         comp=Z,3.0nm,0.4s
GOMU                               pmax   pmax
         comp=Z,45nm,4.5s
GOMU                               LR     LR
         comp=Z,830nm,13.7s
GOMU                               LR     LR
         comp=Z,500nm,14.4s
GOMU                               LR     LR
         comp=Z,840nm,16.9s
JKA      Kamikawa-asahi   33.92  27 P      P       11 21 27.4 +0.4
JKA                                IAmb   IAmb    11 21 30.5
         comp=Z,8.6nm,0.8s
ULN      Ulaanbaatar      35.09 342 P      P       11 21 37.8 +0.5
ULN                                IAmb   IAmb    11 21 38.5
         comp=Z,6.6nm,0.9s
SONM     Songino Array    35.26 342 P      P       11 21 39.2 +0.5
         comp=Z,3.5nm,0.7s,baz=158,slow=9.9,SNR=16
SONM                               PcP    PcP     11 24 08.6 -0.6
         comp=Z,1.2nm,0.7s,baz=165,slow=6.2,SNR=3.0
SONM                               LR     LR      11 37 45.5
         comp=Z,549nm,20.6s,baz=140,slow=39
         comp=Z,3.5nm,0.7s
SONM     Songino Array    35.26 342 P      P       11 21 38.6 -0.1
KRVT     Keravat (AS076   35.33 121 LR     LR      11 34 52.2
         comp=Z,142nm,20.5s,baz=68,slow=34
COEN     Coen             35.52 143 P      P       11 21 41.2  0.0
WB0      Warramunga Arr   36.58 160 P      P       11 21 50.6 +0.4
WB0                                IAmb   IAmb    11 21 55.0
         comp=Z,7.3nm,0.7s
WRAB     Tennant Creek    36.72 160 P      P       11 21 48.5 -2.9
WRAB                               IAmb   IAmb    11 21 59.0
         comp=Z,8.6nm,0.9s
WRA      Warramunga Arr   36.73 160 P      P       11 21 48.6 -2.8
         comp=Z,2.3nm,0.5s,baz=339,slow=9.4,SNR=17
WRA                                LR     LR      11 37 09.9
         comp=Z,227nm,20.0s,baz=6.5,slow=37
         comp=Z,2.3nm,0.5s
WRA      Warramunga Arr   36.73 160 P      P       11 21 48.6 -2.8
WB2      Warramunga Arr   36.73 160 P      P       11 21 48.9 -2.6
WB2                                IAmb   IAmb    11 21 59.0
         comp=Z,10nm,0.9s
WR0      Warramunga Arr   36.81 160 P      P       11 21 49.3 -2.8
WR0                                IAmb   IAmb    11 22 04.2
         comp=Z,16nm,1.4s
AS31     Alice Springs    40.10 163 P      P       11 22 20.0 +0.2
ASAR     Alice Springs    40.10 163 P      P       11 22 18.1 -1.8
         comp=Z,1.2nm,0.5s,baz=343,slow=7.2,SNR=15
ASAR                               PcP    PcP     11 24 23.6 -0.6
         comp=Z,1.0nm,0.7s,baz=338,slow=3.6,SNR=2.9
ASAR                               LR     LR      11 40 18.1
         comp=Z,191nm,21.6s,baz=339,slow=38
         comp=Z,1.2nm,0.5s
ASAR     Alice Springs    40.10 163 P      P       11 22 20.4 +0.6
WMQ      Urumqi           41.02 322 eP     P       11 22 28.3 +1.0
WMQ                                pP     sP      11 22 41.1 +2.8
WMQ                                pmax   pmax
         comp=Z,41nm,0.9s
WMQ                                LR     LR
         comp=Z,1µm,18.9s
WMQ                                LR     LR
         comp=Z,570nm,19.3s
WMQ                                LR     LR
         comp=Z,450nm,19.3s
PALK     Pallekele        41.23 264 LR     LR      11 40 12.6
         comp=Z,225nm,18.1s,baz=176,slow=37
CTAO     Charters Tower   42.18 145 P      P       11 22 36.8 -0.1
CTAO                               IAmb   IAmb    11 22 40.0
         comp=Z,25nm,1.4s
H11S3    WAKE ISLAND Hy   42.81  79 T      T       12 08 26.4
         baz=273,slow=75,SNR=2074
H11S1    WAKE ISLAND Hy   42.82  79 T      T       12 08 26.4
         baz=273,slow=75,SNR=1281
H11S2    WAKE ISLAND Hy   42.82  79 T      T       12 08 26.4
         baz=273,slow=75,SNR=1262
H11N1    WAKE ISLAND Hy   42.97  77 T      T       12 08 34.7
         baz=271,slow=75,SNR=156
H11N2    WAKE ISLAND Hy   42.97  77 T      T       12 08 37.8
         baz=271,slow=75,SNR=387
H11N3    WAKE ISLAND Hy   42.98  77 T      T       12 08 42.6
         baz=271,slow=75,SNR=203
MORW     Morawa           44.15 188 P      P       11 22 53.0 +0.3
MORW                               IAmb   IAmb    11 23 02.9
         comp=Z,32nm,1.2s
HNR      Honiara          44.70 121 LR     LR      11 39 45.5
         comp=Z,137nm,20.9s,baz=276,slow=34
MK31     Makanchi Array   45.83 322 P      P       11 23 06.7 +0.7
MKAR     Makanchi Array   45.83 322 P      P       11 23 06.6 +0.6
         comp=Z,23nm,0.8s,baz=120,slow=8.4,SNR=136
MKAR                               PcP    PcP     11 24 42.8 -0.3
         comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=1.5
MKAR                               LR     LR      11 43 14.3
         comp=Z,388nm,20.7s,baz=116,slow=37
         comp=Z,23nm,0.8s
FORT     Forrest          45.84 173 P      P       11 23 06.6 +0.4
MAKZ     Makanchi         46.02 322 P      P       11 23 08.4 +0.9
MAKZ                               IAmb   IAmb    11 23 09.3
         comp=Z,12nm,0.8s
PRZ      Przheval'sk      46.38 315 P      P       11 23 12.2 +1.6
TARG     Taragay, Kyrgy   46.50 314 P      P       11 23 12.9 +1.0
TARG                               IAmb   IAmb    11 23 28.5
         comp=Z,13nm,0.9s
KSH      Kashi            47.07 310 P      P       11 23 18.9 +2.9
KSH                                sP     sP      11 23 25.3 -2.0
KSH                                pmax   pmax
         comp=Z,11nm,1.0s
KSH                                LR     LR
         comp=Z,410nm,17.4s
KSH                                LR     LR
         comp=Z,510nm,16.0s
KSH                                LR     LR
         comp=Z,580nm,16.6s
KDJ      Kajisay          47.09 314 P      P       11 23 16.6 +0.5
KDJ                                IAmb   IAmb    11 23 19.2
         comp=Z,14nm,0.9s
PETK     Petropavlovsk-   47.30  29 P      P       11 23 18.0 +0.7
         comp=Z,4.0nm,0.7s,baz=204,slow=6.5,SNR=7.9
PETK                               LR     LR      11 44 08.8
         comp=Z,54nm,19.4s,baz=217,slow=37
         comp=Z,4.0nm,0.7s
PETK     Petropavlovsk-   47.30  29 P      P       11 23 18.7 +1.3
YAK      Yakutsk          47.32   5 LR     LR      11 46 05.8
         comp=Z,230nm,18.1s,baz=105,slow=40
YAK      Yakutsk          47.32   5 P      P       11 23 17.9 +0.6
NIL      Nilore           47.74 302 P      P       11 23 20.2 -1.0
BOOM     Boomskoye usch   48.07 314 P      P       11 23 24.4 +0.6
BOOM                               IAmb   IAmb    11 23 32.9
         comp=Z,8.0nm,1.0s
ZAA0     Zalesovo Array   48.57 332 P      P       11 23 27.2  0.0
ZAA0                               IAmb   IAmb    11 23 29.5
         comp=Z,13nm,0.9s
ZALV     Zalesovo Beam    48.57 332 P      P       11 23 26.5 -0.7
         comp=Z,14nm,0.9s,baz=120,slow=5.8,SNR=34
ZALV                               LR     LR      11 45 03.9
         comp=Z,266nm,18.5s,baz=122,slow=37
         comp=Z,14nm,0.9s
ZALV     Zalesovo Beam    48.57 332 P      P       11 23 26.2 -0.9
AAK      Ala-Archa        49.13 314 LR     LR      11 45 46.0
         comp=Z,356nm,20.3s,baz=86,slow=38
AAK      Ala-Archa        49.13 314 P      P       11 23 32.9 +1.0
AAK                                IAmb   IAmb    11 23 52.0
         comp=Z,4.9nm,0.9s
BBOO     Buckleboo        49.35 164 P      P       11 23 32.2 -1.2
BBOO                               IAmb   IAmb    11 23 36.0
         comp=Z,9.8nm,0.7s
KURK     Kurchatov        49.90 325 P      P       11 23 37.1 -0.2
KURBB    Kurchatov Arra   49.90 325 LR     LR      11 46 18.8
         comp=Z,205nm,18.4s,baz=108,slow=38
DRK      Karamyk          50.16 309 P      P       11 23 40.8 +0.9
STKA     Stephens Creek   50.20 158 LR     LR      11 48 01.2
         comp=Z,86nm,19.6s,baz=13,slow=40
STKA     Stephens Creek   50.20 158 P      P       11 23 41.1 +1.2
BTK      Batken           51.03 310 P      P       11 23 46.5 +0.2
BTK                                IAmb   IAmb    11 23 49.4
         comp=Z,16nm,1.4s
GAR      Garm             51.16 308 P      P       11 23 47.2 -0.1
KBL      Kabul            51.33 302 P      P       11 23 48.9 +0.1
KBL                                IAmb   IAmb    11 23 49.9
         comp=Z,13nm,0.8s
CHGR     Chuyangaron      51.97 308 P      P       11 23 53.2 -0.1
KK31     Karatay Array    52.06 313 P      P       11 23 54.1 +0.3
KK31                               IAmb   IAmb    11 23 55.8
         comp=Z,5.1nm,0.8s
KKAR     Karatay Array    52.06 313 P      P       11 23 53.7 -0.1
KKAR     Karatay Array    52.06 313 P      P       11 23 54.2 +0.4
KKAR                               IAmb   IAmb    11 23 55.9
         comp=Z,5.1nm,0.8s
SEY      Seymchan         52.43  17 LR     LR      11 47 12.4
         comp=Z,86nm,19.4s,baz=133,slow=37
BRVK     Borovoye         55.56 325 P      P       11 24 19.9 +0.6
BRVK                               IAmb   IAmb    11 24 22.2
         comp=Z,11nm,0.9s
TOO      Toolangi         56.71 158 P      P       11 24 28.9 +1.3
TOO                                IAmb   IAmb    11 24 45.3
         comp=Z,21nm,1.4s
TIXI     Tiksi            56.82   3 LR     LR      11 49 09.6
         comp=Z,342nm,18.9s,baz=180,slow=36
TIXI     Tiksi            56.82   3 P      P       11 24 27.1 -0.8
HRA      Herat            56.90 301 P      P       11 24 29.0 -0.4
HRA                                IAmb   IAmb    11 24 37.6
         comp=Z,6.0nm,0.8s
DZM      Mont Dzumac      56.98 129 LR     LR      11 49 08.8
         comp=Z,76nm,19.1s,baz=212,slow=36
DZM      Mont Dzumac      56.98 129 P      P       11 24 31.1 +1.2
DZM                                IAmb   IAmb    11 24 42.2
         comp=Z,15nm,1.0s
NRIK     Noril'sk         58.50 346 P      P       11 24 39.9 +0.1
         comp=Z,18nm,0.9s,baz=136,slow=7.0,SNR=20
NRIK                               LR     LR      11 52 30.2
         comp=Z,316nm,19.7s,baz=154,slow=39
         comp=Z,18nm,0.9s
NRIK     Noril'sk         58.50 346 P      P       11 24 40.1 +0.3
WSAR     Wadi Sarin       60.11 288 LR     LR      11 53 49.2
         comp=Z,81nm,18.8s,baz=108,slow=39
GEYT     Alibeck          60.48 305 P      P       11 24 54.5 +0.4
         comp=Z,10nm,0.8s,baz=167,slow=7.3,SNR=11
GEYT                               PcP    PcP     11 25 37.9 -0.8
         comp=Z,2.3nm,0.6s,baz=232,slow=1.7,SNR=1.3
GEYT                               LR     LR      11 53 55.0
         comp=Z,258nm,20.3s,baz=88,slow=39
         comp=Z,10nm,0.8s
GEYT     Alibeck          60.48 305 P      P       11 24 54.3 +0.3
GEYT                               IAmb   IAmb    11 24 55.8
         comp=Z,9.0nm,0.8s
GYA0B    ALIBECK ARRAY    60.48 305 P      P       11 24 54.7 +0.7
ABKAR    Akbulak array    60.66 318 P      P       11 24 54.8 -0.2
ABKAR    Akbulak array    60.66 318 P      P       11 24 54.9 -0.2
ABKAR                              IAmb   IAmb    11 24 55.8
         comp=Z,6.6nm,0.8s
AKTO     Aktyubinsk       62.11 319 LR     LR      11 54 03.6
         comp=Z,487nm,18.8s,baz=106,slow=38
ARU      Arti             63.07 326 LR     LR      11 54 59.8
         comp=Z,169nm,18.1s,baz=106,slow=38
ARU      Arti             63.07 326 P      P       11 25 10.0 -1.1
ARU                                IAmb   IAmb    11 25 11.4
         comp=Z,11nm,1.0s
MSVF     Nonsavu          64.05 119 LR     LR      11 51 43.9
         comp=Z,74nm,19.2s,baz=243,slow=35
BELG     Belogornoye      68.80 321 LR     LR      11 57 25.2
         comp=Z,131nm,18.1s,baz=118,slow=37
GNI      Garni            70.89 308 LR     LR      12 01 15.6
         comp=Z,173nm,20.8s,baz=90,slow=39
AFI      Afiamalu         71.46 110 LR     LR      11 53 46.6
         comp=Z,48nm,18.7s,baz=261,slow=33
KBZ      Khabaz           72.03 312 P      P       11 26 07.7 -0.2
         comp=Z,5.4nm,0.9s,baz=177,slow=3.8,SNR=9.4
KBZ                                LR     LR      12 02 31.5
         comp=Z,201nm,19.0s,baz=70,slow=40
         comp=Z,5.4nm,0.9s
RAYN     Ar Rayn          72.06 290 P      P       11 26 08.5  0.0
KIV      Kislovodsk       72.17 312 P      P       11 26 08.9  0.0
KIV                                IAmb   IAmb    11 26 09.8
         comp=Z,9.2nm,0.7s
GURO     Guroymak-BITLI   73.11 306 P      P       11 26 14.6 -0.1
GURO                               IAmb   IAmb    11 26 15.8
         comp=Z,9.3nm,1.3s
KLMR     Klimovskoe       73.43 330 eP     P       11 26 14.0 -1.9
KLMR                               AMP            11 26 16.0
         comp=Z,14nm,1.3s
RPZ      Rata Peaks       73.55 145 LR     LR      11 59 02.0
         comp=Z,99nm,19.5s,baz=312,slow=36
J20K     Nowinta River    73.96  27 P      P       11 26 20.3 +1.3
IMAR     Indian Mountai   74.09  25 P      P       11 26 20.1 +0.3
H21K     Melozitna Rive   74.49  25 P      P       11 26 23.1 +1.0
OBN      Obninsk          75.31 324 LR     LR      12 01 58.8
         comp=Z,41nm,20.0s,baz=180,slow=38
BPAW     Bear Paw Mtn.    75.34  27 P      P       11 26 26.5 -0.6
BPAW                               IAmb   IAmb    11 26 54.6
         comp=Z,6.5nm,1.0s
NEA2     Nenana           76.14  26 P      P       11 26 31.9 +0.3
ATD      Arta Tunnel      76.80 279 LR     LR      12 01 02.8
         comp=Z,36nm,19.0s,baz=350,slow=36
ILAR     Eielson Array    77.05  26 P      P       11 26 35.2 -1.5
         comp=Z,0.3nm,0.6s,baz=234,slow=6.1,SNR=11
         comp=Z,0.3nm,0.6s
ILAR     Eielson Array    77.05  26 P      P       11 26 35.5 -1.2
SCM      Sheep Creek Mo   77.24  29 P      P       11 26 37.9 -0.1
SCM                                IAmb   IAmb    11 27 01.1
         comp=Z,11nm,0.9s
BMAR     Burnt Mountain   77.60  23 P      P       11 26 41.1 +1.3
M24K     Tolsona, Glenn   77.74  29 P      P       11 26 41.5 +0.8
KEV      Kevo             77.83 339 P      P       11 26 40.3 -0.6
RIDG     Independent Ri   78.08  27 P      P       11 26 42.8 +0.2
RIDG                               IAmb   IAmb    11 26 48.9
         comp=Z,10nm,1.3s
ARA0     ARCESS Array S   78.38 339 eP     P       11 26 44.2 +0.1
ARCES    ARCESS Array B   78.38 339 P      P       11 26 42.7 -1.4
         comp=Z,3.7nm,0.8s,baz=76,slow=6.5,SNR=24
         comp=Z,3.7nm,0.8s
ARCES    ARCESS Array B   78.38 339 P      P       11 26 43.4 -0.7
ARCES                              IAmb   IAmb    11 27 10.7
         comp=Z,14nm,1.4s
SCRK     Sand Creek       78.42  27 P      P       11 26 44.6 +0.1
SPB2     Spitsbergen Ar   78.63 348 P      P       11 26 44.8 -0.5
SPA0     Spitsbergen Ar   78.63 348 eP     P       11 26 45.6 +0.3
SPITS    Spitsbergen Ar   78.63 348 P      P       11 26 45.5 +0.2
         comp=Z,4.0nm,0.5s,baz=88,slow=7.6,SNR=23
SPITS                              LR     LR      12 06 19.4
         comp=Z,260nm,19.3s,baz=33,slow=39
         comp=Z,4.0nm,0.5s
HAMF     Hammerfest       78.76 340 eP     P       11 26 47.1 +1.1
MMAI     Mount Meron Ar   79.25 301 LR     LR      12 05 00.9
         comp=Z,106nm,21.4s,baz=234,slow=38
KTK1     Kautokeino       79.29 339 eP     P       11 26 49.5 +0.5
BRTR     Keskin Array B   79.41 308 LR     LR      12 07 15.3
         comp=Z,100nm,21.3s,baz=82,slow=40
EGAK     Eagle            79.46  26 P      P       11 26 50.2 +0.1
L27K     Beaver Creek,    79.54  27 P      P       11 26 51.9 +1.3
BCAR     Beaver Creek A   79.56  27 P      P       11 26 51.1 +0.4
FIA1     FINESS Array S   79.83 331 P      P       11 26 50.2 -1.8
FIA1                               IAmb   IAmb    11 26 54.3
         comp=Z,17nm,1.4s
FINES    FINESS Array B   79.83 331 P      P       11 26 51.0 -1.0
         comp=Z,1.3nm,0.5s,baz=60,slow=4.7,SNR=16
FINES                              LR     LR      12 04 57.4
         comp=Z,192nm,18.7s,baz=75,slow=38
         comp=Z,1.3nm,0.5s
FINES    FINESS Array B   79.83 331 P      P       11 26 51.5 -0.5
JETT     Jettan, Norway   80.12 340 eP     P       11 26 53.7 +0.1
CTGM     Chitina Glacie   80.23  29 P      P       11 26 55.8 +1.3
CTGM                               IAmb   IAmb    11 26 56.7
         comp=Z,5.6nm,1.1s
EIL      Elat             80.28 298 LR     LR      12 06 21.8
         comp=Z,137nm,21.3s,baz=332,slow=39
AKASG    Malin Array Be   80.35 320 P      P       11 26 53.9 -1.2
         comp=Z,0.2nm,0.3s,baz=63,slow=7.8,SNR=4.7
AKASG                              LR     LR      12 02 46.1
         comp=Z,186nm,21.9s,baz=65,slow=36
         comp=Z,0.2nm,0.3s
DAWY     Dawson           80.38  26 P      P       11 26 56.0 +0.9
CSS      Mathiatis        80.56 304 P      P       11 26 56.5 -0.2
CSS                                IAmb   IAmb    11 26 57.2
         comp=Z,9.3nm,0.8s
TRO      Tromso           80.59 340 eP     P       11 26 56.9 +0.8
EPYK     Eagle Plains     80.86  24 P      P       11 26 58.0 +0.4
INK      Inuvik           81.45  21 LR     LR      12 05 49.5
         comp=Z,46nm,18.6s,baz=295,slow=38
INK      Inuvik           81.45  21 P      P       11 26 59.3 -1.3
STEI     Steigen          82.42 339 eP     P       11 27 05.0 -0.7
FAUS     Fauske           82.61 338 eP     P       11 27 06.2 -0.5
LOF      Lofoten          82.94 339 eP     P       11 27 08.3 -0.2
TESR     Tescani          82.96 316 ⇑P     P       11 27 08.6 -0.4
VRI      Vrincioaia       83.06 316 ⇑P     P       11 27 10.2 +0.6
M31M     Drury Creek, Y   83.08  27 P      P       11 27 09.6 +0.2
PLOR     Plostina         83.12 316 ⇓P     P       11 27 09.7 -0.2
WHY      Whitehorse       83.36  29 P      P       11 27 11.2 +0.3
MOR8     Moi Rana         83.36 337 eP     P       11 27 10.0 -0.7
BURAR    Bucovina Array   83.63 317 ⇑P     P       11 27 12.1 -0.5
BURAR    Bucovina Array   83.63 317 P      P       11 27 12.1 -0.5
BUR08    Bucovina Ar. S   83.63 318 P      P       11 27 12.5 -0.1
MLR      Muntele Rosu     83.69 315 ⇑P     P       11 27 13.5 +0.6
MLR      Muntele Rosu     83.69 315 LR     LR      12 09 01.4
         comp=Z,260nm,20.5s,baz=64,slow=39
STOK     Stokkvaagen      83.83 337 eP     P       11 27 12.5 -0.5
DOPR     Dopca            83.94 316 ⇓P     P       11 27 14.8 +0.6
EUNU     Eureka           83.98   5 P      P       11 27 13.7 -0.1
C36M     Paulatuk         84.20  19 P      P       11 27 15.2 +0.3
C36M                               IAmb   IAmb    11 27 36.8
         comp=Z,4.2nm,0.9s
RAR      Rarotonga        84.69 113 LR     LR      11 59 16.4
         comp=Z,47nm,20.4s,baz=266,slow=32
NSS      Namsos           84.97 336 eP     P       11 27 18.4 -0.4
KOLS     Kolonicke sedl   85.15 319 eP     P       11 27 20.8 +0.6
KMBO     Kilima Mbogo     85.27 268 LR     LR      12 03 10.7
         comp=Z,98nm,18.5s,baz=93,slow=34
DRGR                      85.50 317 ⇑P     P       11 27 21.8 -0.3
CRVS     Cervenica-Dubn   85.67 319 eP     P       11 27 23.6 +0.8
DLBC     Dease Lake       86.46  30 LR     LR      12 07 38.6
         comp=Z,36nm,19.9s,baz=296,slow=37
NC405    NORSAR Array S   86.50 333 P      P       11 27 26.0 -0.6
NB2      NORSAR Subarra   86.75 333 P      P       11 27 26.4 -1.4
         comp=Z,1.6nm,0.6s,baz=67,slow=4.8
NB2      NORSAR Subarra   86.75 333 P      P       11 27 26.4 -1.4
         baz=67,slow=4.8
NOA      NORSAR Array B   86.75 333 P      P       11 27 26.4 -1.4
         comp=Z,1.5nm,0.6s,baz=67,slow=4.9,SNR=9.8
NOA                                LR     LR      12 09 25.1
         comp=Z,254nm,19.7s,baz=60,slow=38
         comp=Z,1.5nm,0.6s
IDI      Anoyia           87.20 306 LR     LR      12 12 24.8
         comp=Z,82nm,20.9s,baz=86,slow=40
RES      Resolute Bay     87.59   9 LR     LR      12 08 33.7
         comp=Z,74nm,20.5s,baz=24,slow=37
RES      Resolute Bay     87.59   9 P      P       11 27 31.8 +0.2
RES                                IAmb   IAmb    11 27 44.0
         comp=Z,7.4nm,0.9s
JMIC     Jan Mayen        87.92 346 LR     LR      12 12 19.2
         comp=Z,99nm,18.8s,baz=71,slow=39
VRAC     Vranov           88.55 321 LR     LR      12 09 46.4
         comp=Z,154nm,20.9s,baz=68,slow=37
CLL      Collm            89.91 324 ePP    PP      11 31 18.0 +2.6
CLL                                e(SSS)         11 48 42.0
CLL                                LmV            12 13 00.0
         comp=Z,200nm,19.9s
GERES    GERESS Array B   90.49 321 P      P       11 27 46.6 +0.8
         comp=Z,0.3nm,0.4s,baz=329,slow=5.0,SNR=3.7
GERES                              LR     LR      12 10 44.1
         comp=Z,142nm,20.3s,baz=71,slow=37
         comp=Z,0.3nm,0.4s
YKA      Yellowknife Ar   91.11  23 P      P       11 27 48.8 +0.4
         comp=Z,0.7nm,0.6s,baz=305,slow=4.4,SNR=22
YKA                                PKiKP  PKiKP   11 32 40.5 -0.6
         comp=Z,0.4nm,1.0s,baz=276,slow=2.5,SNR=3.7
         comp=Z,0.7nm,0.6s
YKA      Yellowknife Ar   91.11  23 P      P       11 27 48.4  0.0
MBAR     Mbarara          91.43 270 LR     LR      12 06 24.5
         comp=Z,98nm,20.7s,baz=69,slow=34
SUMG     Summit           91.71 354 P      P       11 27 51.9 +0.5
DAVOX    Davos/Dischmat   93.69 320 LR     LR      12 15 34.0
         comp=Z,158nm,18.6s,baz=81,slow=39
VNDA     Vanda            95.10 172 LR     LR      12 13 15.6
         comp=Z,67nm,19.1s,baz=320,slow=37
BORG     Borgarnes        95.80 345 LR     LR      12 14 34.0
         comp=Z,117nm,21.4s,baz=29,slow=38
EKA      Eskdalemuir Ar   96.20 332 LR     LR      12 17 29.9
         comp=Z,156nm,18.5s,baz=22,slow=39
LSZ      Lusaka           97.48 256 LR     LR      12 10 14.8
         comp=Z,82nm,18.4s,baz=247,slow=34
YBH      Yreka Blue Hor   97.95  43 LR     LR      12 04 43.1
         comp=Z,58nm,21.2s,baz=288,slow=31
NEW      Newport          98.05  35 LR     LR      12 08 58.6
         comp=Z,22nm,19.8s,baz=318,slow=33
SFJD     Kangerlussuaq    98.10 357 LR     LR      12 12 41.6
         comp=Z,51nm,21.4s,baz=10,slow=35
TORD     Torodi Ar. Bea  114.70 292 PKP    PKPdf   11 33 22.6 -2.6
         comp=Z,1.5nm,1.3s,baz=113,slow=5.2,SNR=3.0
TXAR     Lajitas Array   117.66  45 PKP    PKPdf   11 33 29.3 -1.5
         comp=Z,0.1nm,0.4s,baz=235,slow=4.4,SNR=2.3
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TXAR	Lajitas Array	117.66	45		PKPdf	11 33 30.0	-0.7
PLCA	Paso Flores	152.07	159	PKPbc	PKPbc	11 34 38.2	-1.3
	comp=Z,1.6nm,0.8s,baz=195,slow=2.4,SNR=3.6						

NDI 21 11:30:24.5±3.4, 17°.48N×73°.92E, h12km±20km, ML3.6, 1C, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.30	124	⇑*i*PG	Pg	11 30 30.6	-0.2
KAD				*i* SG	Sg	11 30 35.7	+0.8
POO	Poona	1.05	356	*e*P	Pn	11 30 45.5	+0.4
POO				*i* S	Sb	11 30 57.0	-1.3
POO				IAML		11 31 03.3	
	comp=N,615nm,0.1s						
POO				IAML		11 31 03.8	
	comp=E,723nm,0.1s						
BOM	Bombay	1.76	323	*e*P	Pb	11 30 56.0	-0.7
BOM				*i* P	Pn	11 30 56.1	+1.3
BOM				*e*S	Sb	11 31 19.0	+0.2
BOM				*e*S	Sg	11 31 19.8	-1.4
GOA	Goa	1.98	183	*e*P	Pn	11 30 56.1	-1.6
GOA				*e*S	Sn	11 31 21.4	-1.0
GOA				IAML		11 31 25.8	
	comp=E,2µm,0.4s						
GOA				IAML		11 31 26.1	
	comp=N,1µm,0.3s						
LATR	Latur	2.68	69	*e*P	Pb	11 31 12.8	+0.5
LATR				*i* x	Pg	11 31 15.1	-0.8
LATR				*e*S	Sg	11 31 50.3	-0.3
SALM	Salem	7.12	144	*e*x	x	11 33 20.8	
SALM				*e*x	Sb	11 33 50.7	-2.4
PCHI	Peechi	7.30	161	*e*P	Pn	11 32 11.2	+0.3
PCHI				*e*S	Sn	11 33 29.1	-4.7
KOD	Kodaikanal	7.98	154	*e*x	Sb	11 34 16.3	-1.9
JBP	Jabalpur	8.02	44	*e*x	x	11 33 38.2	

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*MOS **21** 11:34:07.7±0.7, 62°.46N×152°.60W, h147km, mb4.8/63, MS4.3/4, Error ellipse: s-maj=9.7km s-min=4.8km az=105.2*

*IDC **21** 11:34:08.5±1.1, 62°.52N×152°.55W, h143km±9km, mb4.3/29, mbtmp4.8/34, MS3.4/5, Error ellipse: s-maj=10.6km s-min=6.8km az=13.0*

*AEIC **21** 11:34:09±2.6, 62°.36N±0°.04×152°.46W±0°.08, h144km±4km, ML4.5, mb4.9/216(NEIC), ML4.7/154(NEIC), Mwr4.4/33(SLM), Error ellipse: s-maj=5.7km s-min=5.2km az=205.0*

*NEIC **21** 11:34:09.0±2.2, 62°.39N±0°.03×152°.54W±0°.08, h145km±3km, Error ellipse: s-maj=5.4km s-min=3.7km az=113.0*

*NEIC **21** 11:34:09, 62°.40N×152°.49W, h146km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.77; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.53; $M_{\theta\phi}$-0.25; $M_{\phi r}$5.67; Fault plane solution: $M_0$5.75000×10^{15} NP1:ϕ_s215.00000°, δ5.00000°, λ130.00000°. NP2:ϕ_s355.00000°, δ86.00000°, λ87.00000°. Principal axes: T 5.7546, Plg49.0000°, Azm261.0000°; N 0.0003, Plg3.0000°, Azm355.0000°; P -5.7549, Plg41.0000°, Azm88.0000°;*

ISC 21 11:34:09.0±0.4, **62°.38N**±0°.03×**152°.53W**±0°.03, **h150**km±3km, **n873**, σ1.^{s}**25**/898, **mb4.8**/200, **144C-193D, Fault plane solution: NP1:**ϕ_s180.44888°, δ83.93119°, λ-91.70093°. **NP2:**ϕ_s16.13791°, δ6.30181°, λ-74.40115°. **Principal axes:** T Plg38.9084°, Azm271.9945°; N Plg1.6914°, Azm180.6288°; P Plg51.0406°, Azm88.5360°;

Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPLA	Purkeypile	0.54	17		Pn	11 34 30.4	-0.3
PPLA					Sn	11 34 46.4	-0.9
PPLA	Purkeypile	0.54	17	P	Pn	11 34 30.4	-0.3
	baz=195,SNR=1000						
M20K	Styx River	0.57	210		Pn	11 34 29.6	-1.3
M20K	Styx River	0.57	210	IAML		11 34 33.0	
	comp=E,2µm,0.7s						
M20K				IAML		11 34 34.7	
	comp=N,2µm,0.5s						
M20K	Styx River	0.57	210	P	Pn	11 34 29.6	-1.3
	baz=31						
L20K	Farewell, AK	0.64	280		Pn	11 34 30.1	-1.0
L20K					Sn	11 34 46.3	-1.7
L20K	Farewell, AK	0.64	280	P	Pn	11 34 30.1	-1.0
	baz=99,SNR=1000						
STLK	Strandline Lak	0.94	159		Pn	11 34 32.6	-0.8
M19K	Big River Lodg	1.00	242		Pn	11 34 32.5	-1.3
M19K				IAML		11 34 34.0	
	comp=N,8µm,0.5s						
M19K	Big River Lodg	1.00	242	P	Pn	11 34 33.2	-0.6
	baz=62						
CUT	Chulitna	1.05	88		Pn	11 34 33.6	-0.6
CUT					Sn	11 34 53.3	-0.1
CUT	Chulitna	1.05	88	IAML		11 34 53.4	
	comp=E,28µm,0.4s						
CUT	Chulitna	1.05	88	P	Pn	11 34 33.6	-0.6
	baz=269,SNR=1000						
CAST	Castle Rocks	1.06	11		Pn	11 34 33.9	-0.5
CAST					Sn	11 34 52.2	-1.5
CAST	Castle Rocks	1.06	11	P	Pn	11 34 33.8	-0.5
	baz=190,SNR=238						
L19K	White Mountain	1.10	261	Pn	Pn	11 34 33.7	-1.0
L19K	White Mountain	1.10	261	P	Pn	11 34 33.5	-1.2
	baz=79,SNR=1000						
SPWE	Spurr West	1.11	181		Pn	11 34 34.4	-0.5
SPCG	Spurr Capps Gl	1.12	167		Pn	11 34 34.2	-0.8
BGL	Barrier Glacie	1.12	177		Pn	11 34 34.4	-0.5
SPBG	Spurr Blockage	1.13	176		Pn	11 34 34.4	-0.6
SPBG					Sn	11 34 54.1	-0.7
CRP	Crater Peak	1.13	171		Pn	11 34 34.5	-0.6
CKN	Chakachatna No	1.17	172		Pn	11 34 34.9	-0.5
SPCR	Spurr Chakacha	1.19	173		Pn	11 34 34.8	-0.8
SPCR	Spurr Chakacha	1.19	173	P	Pn	11 34 34.8	-0.8
	baz=354,SNR=200						
K20K	Telida	1.21	325		Pn	11 34 34.7	-0.9
K20K					Sn	11 34 54.7	-1.4
K20K	Telida	1.21	325	IAML		11 34 55.6	
	comp=N,6µm,1.0s						
K20K	Telida	1.21	325	P	Pn	11 34 34.7	-0.9
	baz=143,SNR=1000						
SPU	Mount Spurr	1.22	169		Pn	11 34 34.9	-1.0
M22K	Willow	1.30	118		Pn	11 34 35.6	-0.8
M22K	Willow	1.30	118	P	Pn	11 34 35.6	-0.8
	baz=300,SNR=1000						
KTH	Kantishna Hill	1.39	31		Pn	11 34 36.9	-0.6
TRF	Thorofare Moun	1.48	43		Pn	11 34 37.7	-0.9
TRF					Sn	11 35 01.1	-0.1
TRF	Thorofare Moun	1.48	43	IAML		11 35 03.8	
	comp=N,4µm,0.6s						
TRF	Thorofare Moun	1.48	43	P	Pn	11 34 37.7	-0.9
	baz=224,SNR=1000						
CHUM	Lake Minchumin	1.51	4		Pn	11 34 38.4	-0.2
CHUM					Sn	11 35 00.4	-1.0
CHUM	Lake Minchumin	1.51	4	P	Pn	11 34 38.4	-0.2
	baz=183,SNR=1000						
FIS	Fire Island	1.66	137		Pn	11 34 40.5	+0.3
FIS	Fire Island	1.66	137	IAML		11 35 07.9	
	comp=E,15µm,0.7s						
TTA	Tatalina	1.70	291		Pn	11 34 40.2	-0.6
TTA	Tatalina	1.70	291	P	Pn	11 34 40.2	-0.6
TTA	Tatalina	1.70	291	P	Pn	11 34 40.2	-0.6
	baz=108,SNR=1000						
CAPN	Captain Cook N	1.75	157		Pn	11 34 41.7	+0.5
CAPN	Captain Cook N	1.75	157	IAML		11 35 12.1	
	comp=E,13µm,0.7s						
CAPN				IAML		11 35 28.5	
	comp=N,10µm,0.8s						
CAPN	Captain Cook N	1.75	157	P	Pn	11 34 41.6	+0.5
	baz=339,SNR=9.9						
PMR	Palmer	1.79	115	Pn	Pn	11 34 40.1	-1.5
PMR				IAML		11 35 10.3	
	comp=E,4µm,0.6s						
PMR				IAML		11 35 10.6	
	comp=N,5µm,0.6s						
PMR	Palmer	1.79	115	P	Pn	11 34 40.1	-1.5
PMR	Palmer	1.79	115	P	Pn	11 34 39.9	-1.8
	baz=298,SNR=1000						
DFR	Drift River	1.79	182		Pn	11 34 41.2	-0.7
RDJH	Redoubt Jeurge	1.80	184		Pn	11 34 41.5	-0.5
GHO	Glory Hole Cre	1.80	108		Pn	11 34 40.7	-1.2
GHO					Sn	11 35 06.1	-1.0
N19K	Bonanza Creek	1.83	212		Pn	11 34 41.3	-0.9
N19K	Bonanza Creek	1.83	212	P	Pn	11 34 41.3	-0.9
	baz=30,SNR=804						
NCT	North Crescent	1.83	186		Pn	11 34 41.8	-0.6
RC01	Rabbit Creek A	1.85	133	Pn	Pn	11 34 41.7	-0.8
RC01				IAML		11 35 06.0	
	comp=N,8µm,0.4s						
RC01				IAML		11 35 12.0	
	comp=E,6µm,0.4s						
RC01	Rabbit Creek A	1.85	133	P	Pn	11 34 41.2	-1.2
	baz=316,SNR=1000						
BPAW	Bear Paw Mtn.	1.86	21		Pn	11 34 42.1	-0.5
BPAW	Bear Paw Mtn.	1.86	21	IAML		11 35 07.8	
	comp=N,4µm,0.9s						
BPAW	Bear Paw Mtn.	1.86	21	P	Pn	11 34 42.0	-0.5
	baz=202,SNR=1000						
WAT1	Susitna Watana	1.89	74		Pn	11 34 41.9	-1.0
WAT1	Susitna Watana	1.89	74	P	Pn	11 34 41.8	-1.0
	baz=258						
RDWB	Redoubt West	1.90	185		Pn	11 34 42.7	-0.4
RSO	Redoubt South	1.93	183		Pn	11 34 43.2	-0.3
SVW2	Sparrevohn	1.94	230		Pn	11 34 42.6	-0.8
J20K	Nowinta River	1.95	339		Pn	11 34 42.9	-0.6
J20K	Nowinta River	1.95	339	IAML		11 35 09.2	
	comp=E,3µm,0.8s						
J20K				IAML		11 35 09.8	
	comp=N,3µm,1.0s						
J20K	Nowinta River	1.95	339	P	Pn	11 34 42.8	-0.6
	baz=157,SNR=1000						
RED	Redoubt Volcan	1.97	184		Pn	11 34 43.3	-0.5
RND	Reindeer	1.97	57		Pn	11 34 43.0	-0.8
RND	Reindeer	1.97	57	IAML		11 35 10.9	
	comp=N,3µm,0.6s						
RND	Reindeer	1.97	57	P	Pn	11 34 43.0	-0.8
SML	Sawmill	2.06	104		Pn	11 34 43.4	-1.4
SML	Sawmill	2.06	104	IAML		11 35 13.4	
	comp=E,8µm,0.8s						
SML				IAML		11 35 16.0	
	comp=N,7µm,0.8s						
SML	Sawmill	2.06	104	P	Pn	11 34 43.4	-1.4
	baz=288,SNR=704						
KNK	Knik Glacier	2.16	115		Pn	11 34 44.5	-1.5
KNK				IAML		11 35 14.0	
	comp=N,9µm,0.4s						
KNK	Knik Glacier	2.16	115	P	Pn	11 34 44.5	-1.5
	baz=298,SNR=539						
SLKM	Skilak Lake	2.18	148		Pn	11 34 44.6	-1.7
WAT6	Susitna Watana	2.23	83		Pn	11 34 45.5	-1.5
WAT6	Susitna Watana	2.23	83	P	Pn	11 34 45.5	-1.5
	baz=267,SNR=491						
BWN	Browne	2.27	36		Pn	11 34 47.3	0.0
BWN	Browne	2.27	36	IAML		11 35 24.3	
	comp=N,2µm,0.8s						
BWN				IAML		11 35 25.0	
	comp=E,2µm,0.7s						
O20K	Slope Mountain	2.31	181		Pn	11 34 47.8	-0.1
O20K	Slope Mountain	2.31	181	P	Pn	11 34 47.5	-0.3
	baz=1.5,SNR=7.5						
O22K	Cooper Landing	2.33	143		Pn	11 34 47.2	-0.8
O22K	Cooper Landing	2.33	143	P	Pn	11 34 47.2	-0.8
	baz=326,SNR=394						
M23K	Glacier View	2.33	102	P	Pn	11 34 46.4	-1.7
	baz=287,SNR=1000						
N18K	Kilae Creek	2.34	225		Pn	11 34 47.3	-0.9
N18K	Kilae Creek	2.34	225	P	Pn	11 34 47.6	-0.7
	baz=42,SNR=513						
O19K	Port Alsworth	2.36	202		Pn	11 34 47.8	-0.6
O19K	Port Alsworth	2.36	202	IAML		11 35 19.4	
	comp=E,2µm,0.5s						
O19K	Port Alsworth	2.36	202	P	Pn	11 34 47.7	-0.6
	baz=21,SNR=183						
DHY	Denali Highway	2.47	71		Pn	11 34 48.9	-1.0
DHY	Denali Highway	2.47	71	IAML		11 35 22.8	
	comp=E,4µm,0.8s						
DHY				IAML		11 35 23.0	
	comp=N,4µm,0.6s						
DHY	Denali Highway	2.47	71	P	Pn	11 34 48.9	-1.0
	baz=256,SNR=626						
SCM	Sheep Creek Mo	2.51	100		Pn	11 34 48.5	-1.6
SCM	Sheep Creek Mo	2.51	100	P	Pn	11 34 48.6	-1.6
SCM	Sheep Creek Mo	2.51	100	P	Pn	11 34 48.6	-1.6
	baz=285,SNR=447						
NEA2	Nenana	2.71	33		Pn	11 34 51.6	-1.0
NEA2	Nenana	2.71	33	P	Pn	11 34 51.6	-1.0
	baz=216,SNR=578						
SEW	Seward	2.72	146	Pn	Pn	11 34 51.5	-1.4
SEW	Seward	2.72	146	P	Pn	11 34 51.5	-1.4
	baz=328,SNR=124						
BRLK	Bradley Lake	2.74	162		Pn	11 34 51.4	-1.8
BRLK	Bradley Lake	2.74	162	IAML		11 35 28.9	
	comp=N,2µm,0.6s						
BRLK				IAML		11 35 29.3	
	comp=E,1µm,0.6s						
OPT	Oil Point	2.76	187		Pn	11 34 53.3	0.0
P19K	Oil Pt	2.76	187		Pn	11 34 53.2	-0.1
P19K				IAML		11 35 36.6	
	comp=E,1µm,0.4s						
P19K	Oil Pt	2.76	187	P	Pn	11 34 53.1	-0.2
	baz=7.2						
HOM	Homer	2.76	171		Pn	11 34 52.6	-0.8
HOM				IAML		11 35 30.4	
	comp=E,3µm,0.7s						
HOM				IAML		11 35 47.5	
	comp=N,3µm,0.7s						
HOM	Homer	2.76	171	P	Pn	11 34 52.7	-0.6
	baz=352,SNR=8.2						
BRSE	Bradley Lake S	2.79	161		Pn	11 34 51.8	-1.9
BRSE	Bradley Lake S	2.79	161	P	Pn	11 34 52.2	-1.5
	baz=343,SNR=27						
I21K	Tanana	2.82	5		Pn	11 34 53.8	-0.2
I21K				IAML		11 35 29.5	
	comp=E,1µm,1.1s						
I21K	Tanana	2.82	5	P	Pn	11 34 54.2	+0.2
	baz=185,SNR=768						
WRH	Wood River Hil	2.90	42		Pn	11 34 54.1	-0.9
CNPM	China Poot	2.93	167		Pn	11 34 53.8	-1.7
CNPM	China Poot	2.93	167	IAML		11 35 29.1	
	comp=N,1µm,0.4s						
CNPM				IAML		11 35 33.5	
	comp=E,1µm,0.7s						
M24K	Tolsona, Glenn	2.99	92		Pn	11 34 55.4	-0.8
M24K	Tolsona, Glenn	2.99	92	P	Pn	11 34 55.5	-0.8
	baz=278,SNR=435						
GLI	Glacier Island	3.00	118		Pn	11 34 54.2	-2.0
GLI	Glacier Island	3.00	118	P	Pn	11 34 54.3	-2.0
	baz=302,SNR=110						
AUH	Augustine H	3.06	189		Pn	11 34 57.7	+0.6
AUCH	Augustine Cone	3.06	189		Pn	11 34 57.0	-0.1
GCSA	Galena City Sc	3.07	323	P	Pn	11 34 57.1	0.0
	baz=139,SNR=425						
CCB	Clear Creek Bu	3.11	41		Pn	11 34 56.7	-0.9
CCB				IAML		11 35 33.4	
	comp=E,1µm,0.7s						
I23K	Minto, Yukon-K	3.12	25		Pn	11 34 57.0	-0.7
I23K				IAML		11 35 35.8	
	comp=N,1µm,1.1s						
I23K				IAML		11 35 35.9	
	comp=E,1µm,1.3s						
I23K	Minto, Yukon-K	3.12	25	P	Pn	11 34 57.5	-0.2
	baz=208,SNR=1000						
MDM	Murphy Dome	3.22	35		Pn	11 34 58.2	-0.9
HDA	Harding Lake	3.23	48		Pn	11 34 58.2	-1.0
HDA				IAML		11 35 39.1	
	comp=E,3µm,0.5s						
HDA				IAML		11 35 39.7	
	comp=N,2µm,0.6s						
HDA	Harding Lake	3.23	48	P	Pn	11 34 58.2	-1.0
	baz=233,SNR=659						
KLU	Klutina	3.25	103		Pn	11 34 57.2	-2.4
KLU	Klutina	3.25	103	P	Pn	11 34 57.8	-1.7
	baz=289,SNR=223						
TCOL	CIGO, UAF Yank	3.26	38		Pn	11 34 58.7	-0.8
TCOL				IAML		11 35 39.3	
	comp=E,3µm,0.6s						
TCOL				IAML		11 35 51.9	
	comp=N,3µm,0.6s						
TCOL	CIGO, UAF Yank	3.26	38	P	Pn	11 34 58.8	-0.8
	baz=222,SNR=182						
COLA	College	3.26	38		Pn	11 34 58.7	-0.8
COLA				IAML		11 35 39.3	
	comp=N,3µm,0.6s						
COLA				IAML		11 35 51.8	
	comp=N,3µm,0.6s						
COLA	College	3.26	38	P	Pn	11 34 58.7	-0.8
P18K	Big Mountain,	3.27	205		Pn	11 34 59.2	-0.7
P18K	Big Mountain,	3.27	205	P	Pn	11 34 59.5	-0.4
	baz=23,SNR=74						
H21K	Melozitna Rive	3.29	358		Pn	11 35 00.1	+0.1
H21K	Melozitna Rive	3.29	358	P	Pn	11 35 00.1	+0.1
	baz=178,SNR=221						
PAX	Paxson	3.31	77	Pn	Pn	11 34 59.5	-0.8
PAX	Paxson	3.31	77	P	Pn	11 34 59.5	-0.8
PAX	Paxson	3.31	77	P	Pn	11 34 59.5	-0.8
	baz=263,SNR=688						
FID	Port Fidalgo	3.32	117		Pn	11 34 58.3	-2.2
K24K	Donnelly Dome	3.39	62	P	Pn	11 35 01.2	-0.1
	baz=248,SNR=138						
HARP	HAARP	3.43	86	P	Pn	11 35 01.4	-0.5
	baz=273,SNR=242						
DIV	Divide	3.45	108		Pn	11 35 00.7	-1.4
IL31		3.48	44		Pn	11 35 01.4	-0.9
ILAR	Eielson Array	3.48	44	P	Pn	11 35 00.7	-1.7
	comp=N,190nm,0.4s,baz=225,slow=13,SNR=1874						
ILAR				S	Sn	11 35 40.3	-3.5
	comp=N,70nm,0.4s,baz=229,slow=16,SNR=6.7						
ILAR	Eielson Array	3.48	44	Pn	Pn	11 35 01.3	-1.1
ILAR	Eielson Array	3.48	44	P	Pn	11 35 01.3	-1.1
Q19K	Cape Douglas,	3.51	190		Pn	11 35 02.7	-0.1
Q19K				IAML		11 36 26.3	
	comp=N,886nm,0.8s						
Q19K				IAML		11 36 51.5	
	comp=E,1µm,1.0s						
Q19K	Cape Douglas,	3.51	190	P	Pn	11 35 03.1	+0.3
	baz=8.8						
HIN	Hinchinbrook I	3.52	122		Pn	11 35 01.4	-1.5
POKR	Poker Plat Res	3.56	37		Pn	11 35 02.4	-1.0
POKR	Poker Plat Res	3.56	37	P	Pn	11 35 02.8	-0.7
	baz=222,SNR=134						
IMAR	Indian Mountai	3.66	352		Pn	11 35 04.3	-0.4
H23K	Yukon River	3.70	19	Pn	Pn	11 35 04.8	-0.5
H23K				IAML		11 35 49.3	
	comp=E,664nm,1.5s						
H23K				IAML		11 35 50.2	
	comp=N,626nm,0.7s						
H23K	Yukon River	3.70	19	P	Pn	11 35 05.2	-0.1
	baz=202,SNR=145						
EYAK	Cordova Ski Ar	3.73	116	Pn	Pn	11 35 04.0	-1.7
EYAK	Cordova Ski Ar	3.73	116	P	Pn	11 35 03.9	-1.8
	baz=302						
RIDG	Independent Ri	3.75	65		Pn	11 35 05.5	-0.5
RIDG	Independent Ri	3.75	65	P	Pn	11 35 05.8	-0.2
	baz=252,SNR=806						
N25K	Chitina, Valde	3.82	98	Pn	Pn	11 35 05.8	-1.2
N25K				IAML		11 35 53.5	
	comp=E,1µm,0.7s						
N25K	Chitina, Valde	3.82	98	P	Pn	11 35 05.7	-1.2
	baz=285,SNR=249						
J25K	Salcha River,	3.91	52		Pn	11 35 06.9	-1.2
J25K				IAML		11 35 54.2	
	comp=N,2µm,0.5s						
J25K	Salcha River,	3.91	52	P	Pn	11 35 07.1	-1.0
	baz=238						
H24K	Noodor Dome	4.03	28		Pn	11 35 08.6	-0.9
H24K				IAML		11 35 55.1	
	comp=N,388nm,0.9s						
H24K	Noodor Dome	4.03	28	P	Pn	11 35 08.9	-0.6
	baz=212,SNR=124						
BMRM	Bremner River	4.03	107		Pn	11 35 08.0	-1.7
BMRM				IAML		11 35 58.2	
	comp=E,1µm,0.6s						
BMRM				IAML		11 35 59.3	
	comp=N,1µm,0.6s						
BMRM	Bremner River	4.03	107	P	Pn	11 35 07.9	-1.8
	baz=294,SNR=99						
DOT	Dot Lake	4.06	68		Pn	11 35 08.8	-1.2
MENT	Mentasta	4.10	78		Pn	11 35 09.6	-0.9
MENT				IAML		11 36 07.2	
	comp=N,2µm,0.7s						
SCRK	Sand Creek	4.19	64		Pn	11 35 10.8	-1.0
SCRK				IAML		11 35 59.4	
	comp=N,2µm,0.5s						
SCRK	Sand Creek	4.19	64	P	Pn	11 35 10.8	-1.0
	baz=251,SNR=1000						
Q23K	Middleton Isla	4.22	132		Pn	11 35 11.8	-0.3
Q23K				IAML		11 36 01.6	
	comp=N,2µm,0.8s						
Q23K				IAML		11 36 18.3	
	comp=E,1µm,0.6s						
Q23K	Middleton Isla	4.22	132	P	Pn	11 35 10.6	-1.5
	baz=317,SNR=5.7						
GLB	Gilahina Butte	4.23	99		Pn	11 35 10.1	-2.1
GLB				IAML		11 36 02.8	
	comp=N,1µm,0.6s						
GLB				IAML		11 36 03.0	
	comp=E,1µm,0.6s						
MID	Middleton Isla	4.23	132	Pn	Pn	11 35 11.6	-0.6
MID				IAML		11 36 01.2	
	comp=N,2µm,0.8s						
MID				IAML		11 36 18.3	
	comp=E,1µm,0.6s						
MID	Middleton Isla	4.23	132	P	Pn	11 35 11.6	-0.6
L26K	Log Cabin Wild	4.28	77		Pn	11 35 12.6	-0.3
L26K				IAML		11 36 05.0	
	comp=E,1µm,0.7s						
L26K				IAML		11 36 07.8	
	comp=N,1µm,0.5s						
L26K	Log Cabin Wild	4.28	77	P	Pn	11 35 12.5	-0.3
	baz=265,SNR=497						
M26K	Nabesna, AK	4.44	85		Pn	11 35 14.0	-0.9
M26K				IAML		11 36 22.9	
	comp=N,824nm,0.5s						
M26K				IAML		11 36 27.1	
	comp=E,567nm,0.4s						
M26K	Nabesna, AK	4.44	85	P	Pn	11 35 13.9	-1.0
	baz=274,SNR=224						
VRDI	Verde Repeater	4.46	101		Pn	11 35 13.7	-1.6
VRDI				IAML		11 36 27.2	
	comp=E,500nm,1.0s						
VRDI				IAML		11 36 27.4	
	comp=N,1µm,0.7s						
HMT	Hamilton	4.48	114		Pn	11 35 14.0	-1.5
J26L	Joseph Creek	4.55	58	P	Pn	11 35 15.9	-0.5
	baz=246,SNR=1000						
MCARA	McCarthy VSAT	4.61	98		Pn	11 35 16.4	-0.9
MCARA	McCarthy VSAT	4.61	98	P	Pn	11 35 16.3	-0.9
	baz=287,SNR=232						
KDAK	Kodiak Island	4.61	180	P	Pn	11 35 14.2	-3.0
	comp=N,23nm,0.2s,baz=53,slow=7.0,SNR=277						
KDAK				S	Sn	11 36 04.8	-5.5
	comp=N,61nm,0.4s,baz=50,slow=8.2,SNR=3.6						
KDAK	Kodiak Island	4.61	180		Pn	11 35 18.9	+1.7
KDAK				IAML		11 36 09.2	
	comp=N,258nm,0.5s						
KDAK	Kodiak Island	4.61	180	P	Pn	11 35 18.9	+1.7
KDAK	Kodiak Island	4.61	180	P	Pn	11 35 14.4	-2.8
	baz=0.5						
SUCK	Suckling Hills	4.82	115		Pn	11 35 19.1	-0.9
SUCK				IAML		11 36 15.9	
	comp=N,997nm,0.5s						
SUCK				IAML		11 36 19.5	
	comp=E,664nm,0.8s						
TGL	Tana Glacier	4.91	105		Pn	11 35 19.9	-1.4
M27K	Edge Creek, AK	4.96	86		Pn	11 35 21.4	-0.5
M27K				IAML		11 36 21.9	
	comp=E,341nm,1.0s						
M27K				IAML		11 36 24.1	
	comp=N,513nm,1.0s						
M27K	Edge Creek, AK	4.96	86	P	Pn	11 35 21.8	-0.2
	baz=275,SNR=325						
COLD	Coldfoot	4.97	11	Pn	Pn	11 35 21.4	-0.4
COLD	Coldfoot	4.97	11	P	Pn	11 35 22.1	+0.2
	baz=192,SNR=36						
L27K	Beaver Creek,	4.97	77	Pn	Pn	11 35 21.0	-1.0
L27K				IAML		11 36 19.6	
	comp=E,387nm,0.7s						
L27K				IAML		11 36 41.5	
	comp=N,279nm,0.8s						
L27K	Beaver Creek,	4.97	77	P	Pn	11 35 21.0	-1.0
	baz=267,SNR=1000						
BCAR	Beaver Creek A	4.99	77		Pn	11 35 21.5	-0.8
BGLC	Bering Glacier	5.00	113	P	Pn	11 35 21.5	-0.9
	baz=301						
K27K	Chicken	5.01	66		Pn	11 35 21.3	-1.2
K27K				IAML		11 36 20.2	
	comp=N,636nm,0.5s						
K27K	Chicken	5.01	66	P	Pn	11 35 21.4	-1.1
	baz=255						
SNH	Sunshine Point	5.17	111		Pn	11 35 24.2	-0.4
SNH				IAML		11 36 26.3	
	comp=N,631nm,0.7s						
OHAK	Old Harbor	5.19	185		Pn	11 35 24.6	-0.3
OHAK	Old Harbor	5.19	185	P	Pn	11 35 21.4	-3.4

	baz=4.1						
ISLE	Juniper Island	5.20	106		Pn	11 35 24.1	-1.0
ISLE				IAML		11 36 26.3	
	comp=E,792nm,0.7s						
BARN	Barnard Glacie	5.34	100		Pn	11 35 26.3	-0.7
BARN				IAML		11 36 30.1	
	comp=N,625nm,0.6s						
GRNC	Granite Creek	5.41	103		Pn	11 35 26.6	-1.4
GRNC				IAML		11 36 30.7	
	comp=N,527nm,0.7s						
GRNC				IAML		11 36 55.4	
	comp=E,363nm,0.6s						
BVCY	Beaver Creek	5.43	84	P	Pn	11 35 27.6	-0.4
	baz=275,SNR=149						
CTG	Chitna Glacier	5.51	100	P	Pn	11 35 28.6	-0.7
	baz=290,SNR=269						
CTGM	Chitina Glacie	5.52	100		Pn	11 35 28.7	-0.6
MESA	MESA	5.56	109		Pn	11 35 29.5	-0.4
MESA	MESA	5.56	109	P	Pn	11 35 29.4	-0.5
	baz=298						
YAH	Yahtse	5.57	106		Pn	11 35 29.4	-0.7
EGAK	Eagle	5.62	60		Pn	11 35 29.3	-1.1
EGAK	Eagle	5.62	60	P	Pn	11 35 29.3	-1.1
	baz=250,SNR=237						
YUK3	Moose Creek	5.71	91	P	Pn	11 35 31.4	-0.5
	baz=281,SNR=726						
LOGN	Logan Glacier	5.72	101		Pn	11 35 31.3	-0.7
TABL	Table Mountain	5.80	105		Pn	11 35 32.6	-0.6
SII	Sitkinak Islan	5.90	189	Pn	Pn	11 35 33.7	-0.6
BMAR	Burnt Mountain	6.09	30		Pn	11 35 35.8	-1.0
ANM	Nome	6.16	296		Pn	11 35 38.5	+0.9
ANM	Nome	6.16	296	P	Pn	11 35 38.5	+0.9
ANM	Nome	6.16	296	P	Pn	11 35 38.1	+0.5
	baz=105						
DAWY	Dawson	6.17	68		Pn	11 35 37.1	-0.9
DAWY	Dawson	6.17	68	P	Pn	11 35 37.0	-0.9
	baz=260,SNR=1000						
PCA	Pinnacle	6.35	106		Pn	11 35 39.8	-0.5
PINM	Pinnacle	6.35	106	P	Pn	11 35 39.8	-0.6
	baz=296,SNR=157						
TOLK	Toolik Lake Re	6.41	10	Pn	Pn	11 35 41.1	+0.1
TOLK	Toolik Lake Re	6.41	10	P	Pn	11 35 42.3	+1.3
	baz=192,SNR=60						
YUK4	Talbot Arm	6.65	93	P	Pn	11 35 44.0	-0.4
	baz=284,SNR=111						
BCPM	Bancas Point	6.69	106		Pn	11 35 44.2	-0.6
J29M	Klondike Camp	6.75	66	P	Pn	11 35 47.6	+2.0
	baz=258,SNR=6.9						
CHGN	Chignik	6.80	209	Pn	Pn	11 35 45.6	-0.6
CHGN	Chignik	6.80	209	P	Pn	11 35 45.3	-0.9
	baz=24						
YUK6	Outpost Mounta	6.90	96	P	Pn	11 35 47.0	-0.7
	baz=288,SNR=123						
PNL	Peninsula	6.93	107	P	Pn	11 35 46.8	-1.2
	baz=299,SNR=79						
I29M	Ogilvie Camp,	6.95	58		Pn	11 35 46.8	-1.4
I29M	Ogilvie Camp,	6.95	58	P	Pn	11 35 46.9	-1.4
	baz=251,SNR=159						
RDOG	Red Dog Mine	7.17	327		Pn	11 35 49.7	-1.3
M30M	Minto, Yukon	7.29	81		Pn	11 35 51.9	-1.0
M30M	Minto, Yukon	7.29	81	P	Pn	11 35 52.2	-0.7
	baz=275,SNR=59						
HYT	Haines Junctio	7.33	96	Pn	Pn	11 35 52.7	-0.9
HYT	Haines Junctio	7.33	96	P	Pn	11 35 52.6	-0.9
	baz=289,SNR=111						
N30M	Aishikik Lake	7.35	90	P	Pn	11 35 52.7	-0.9
	baz=284,SNR=197						
TNA	Tin City	7.48	302	Pn	Pn	11 35 56.7	+1.4
TNA	Tin City	7.48	302	P	Pn	11 35 56.1	+0.8
	baz=108						
EPYK	Eagle Plains	7.93	53		Pn	11 36 00.4	-0.9
EPYK	Eagle Plains	7.93	53	P	Pn	11 35 59.1	-2.2
	baz=247,SNR=47						
N31M	Braeburn, Yuko	7.95	89		Pn	11 36 01.5	-0.1
N31M	Braeburn, Yuko	7.95	89	P	Pn	11 36 01.8	+0.2
	baz=284,SNR=37						
SDPT	Sand Point	8.16	214		Pn	11 36 05.6	+1.3
SDPT	Sand Point	8.16	214	P	Pn	11 36 05.7	+1.3
	baz=27						
PLBC	Pleasant Camp	8.40	103	P	Pn	11 36 06.9	-0.6
	baz=297,SNR=42						
M31M	Drury Creek, Y	8.45	83		Pn	11 36 08.2	-0.1
M31M	Drury Creek, Y	8.45	83	P	Pn	11 36 08.2	-0.1
	baz=279,SNR=40						
WHY	Whitehorse	8.61	94		Pn	11 36 09.7	-0.7
WHY	Whitehorse	8.61	94	P	Pn	11 36 09.4	-1.0
	baz=289,SNR=48						
GAMB	Gambell	8.81	288		Pn	11 36 13.1	+0.2
GAMB	Gambell	8.81	288	P	Pn	11 36 13.4	+0.5
	baz=90,SNR=6.1						
SKAG	Skagway	8.87	102		Pn	11 36 13.4	-0.4
SKAG	Skagway	8.87	102	P	Pn	11 36 13.3	-0.4
	baz=297,SNR=52						
FALS	False Pass	9.43	222		Pn	11 36 22.5	+1.3
FALS	False Pass	9.43	222	P	Pn	11 36 22.2	+0.9
	baz=33,SNR=13						
BESE	Bessie Mountai	9.51	106	Pn	Pn	11 36 22.2	-0.1
P33M	Teslin, Yukon	9.72	94		Pn	11 36 24.2	-1.0
P33M	Teslin, Yukon	9.72	94	P	Pn	11 36 24.2	-1.0
	baz=291,SNR=20						
JIS	Juneau Island	9.88	106		Pn	11 36 27.3	+0.1
INK	Inuvik	9.88	45	P	Pn	11 36 24.9	-2.3
	comp=E,11nm,0.4s,baz=242,slow=14,SNR=80						
INK				S	Sn	11 38 13.3	-3.0
	comp=E,16nm,0.9s,baz=177,slow=22,SNR=2.0						
INK				LR	LR	11 40 18.0	
	comp=E,129nm,18.1s,baz=170,slow=38						
INK	Inuvik	9.88	45		Pn	11 36 25.6	-1.6
INK	Inuvik	9.88	45	P	Pn	11 36 25.6	-1.6
INK	Inuvik	9.88	45	P	Pn	11 36 24.9	-2.3
	baz=242,SNR=38						
SIT	Sitka	10.18	114		Pn	11 36 31.2	0.0
SIT	Sitka	10.18	114	P	Pn	11 36 31.2	0.0
SIT	Sitka	10.18	114	P	Pn	11 36 31.4	+0.2
	baz=309,SNR=26						
UNV	Unalaska Valle	11.28	227	Pn	Pn	11 36 46.8	+1.1
UNV	Unalaska Valle	11.28	227	P	Pn	11 36 46.4	+0.7
	baz=35						
TGTN	Hyland Airport	11.43	83	P	Pn	11 36 48.3	+0.6
	baz=285,SNR=10						
S34M	Telegraph Cree	11.54	103	P	Pn	11 36 49.9	+0.8
	baz=302,SNR=14						
DLBC	Dease Lake	11.78	99	P	Pn	11 36 51.4	-0.8
	comp=E,11nm,0.5s,baz=283,slow=11,SNR=35						
DLBC				S	Sn	11 39 00.7	-1.6
	comp=E,12nm,0.9s,baz=241,slow=19,SNR=2.5						
DLBC	Dease Lake	11.78	99	Pn	Pn	11 36 52.6	+0.4
WRAK	Wrangell Islan	11.86	111		Pn	11 36 53.1	-0.1
WRAK	Wrangell Islan	11.86	111	P	Pn	11 36 55.9	+2.7
	baz=309,SNR=9.4						
CRAG	Craig	12.15	116		Pn	11 36 56.9	-0.1
CRAG	Craig	12.15	116	P	Pn	11 36 58.4	+1.4
	baz=313,SNR=8.0						
C36M	Paulatuk	13.45	47	P	Pn	11 37 09.6	-4.0
	baz=253,SNR=292						
DIB	Dawson Inlet,	14.04	122	P	P	11 37 23.3	-1.0
A36M	Sachs Harbour	14.14	36	P	Pn	11 37 19.3	-2.9
	baz=241,SNR=90						
RUBB	Prince Rupert	14.14	115	P	P	11 37 25.4	0.0
GRNB	Grenville Isla	14.60	116	P	P	11 37 29.6	-1.0
GSTR	Great Sitkin T	16.27	242	P	P	11 37 50.2	+1.1
BBB	Bella Bella	16.57	117	P	Pn	11 37 52.5	+0.1
	comp=E,15nm,0.7s,baz=311,slow=11,SNR=9.1						
BBB				S	Sn	11 40 58.0	+0.8
	comp=E,7.5nm,0.9s,baz=310,slow=17,SNR=1.5						
BBB	Bella Bella	16.57	117	P	Pn	11 37 53.9	+1.5
ADK	Adak	16.69	242	P	Pn	11 37 54.2	+0.4
ADK	Adak	16.69	242	P	Pn	11 37 54.2	+0.4
ADK				pmax	pmax		
	comp=Z,167nm,0.6s						
KIWB	Kanaga Island	16.90	243	P	Pn	11 37 56.8	+0.3
YKA	Yellowknife Ar	17.39	73	P	P	11 38 01.2	0.0
	comp=Z,58nm,0.6s,baz=284,slow=11,SNR=499						
YKA				S	S	11 41 10.4	-3.9
	comp=Z,11nm,1.1s,baz=289,slow=22,SNR=5.2						
YKA				PcP	PcP	11 42 33.7	-0.5
	comp=Z,0.3nm,0.3s,baz=292,slow=1.3,SNR=4.2						
YKA				ScP	ScP	11 45 54.0	-0.8
	comp=Z,3.0nm,0.6s,baz=292,slow=2.1,SNR=21						
YKA	Yellowknife Ar	17.39	73	P	P	11 38 01.7	+0.5
YKA	Yellowknife Ar	17.39	73	P	P	11 38 01.7	+0.5
BILL	Bilibino	17.88	306		P	11 38 06.8	+0.2
BILL	Bilibino	17.88	306	*d* *i*P	P	11 38 06.5	-0.1
BILL				*e*S	S	11 41 14.8	-9.2
BILL				pmax	pmax		
	comp=Z,12nm,0.8s						
CBB	Campbell River	19.33	117	P	Pn	11 38 24.2	-0.9
SHEM	Shemya Is, Ala	20.11	257	P	P	11 38 30.9	+0.1
	comp=Z,12nm,0.4s,baz=52,slow=4.8,SNR=10						
	comp=Z,12nm,0.4s						
LLLB	Lillooet	20.38	111	P	P	11 38 34.9	+1.1
LLLB				IAmb	IAmb	11 38 41.2	
	comp=Z,25nm,0.7s						
CLRS	Cowichan Lake	20.78	118	P	P	11 38 39.6	+1.6
B06A	Marblemount	22.13	114	P	P	11 38 53.5	+1.4
B06A				IAmb	IAmb	11 38 55.5	
	comp=Z,39nm,0.9s						
D03D	Eldon	22.23	118	P	P	11 38 55.3	+2.1
	baz=323,SNR=7.1						
EDM	Edmonton	22.46	96	P	P	11 38 56.0	+0.6
EDM				IAmb	IAmb	11 38 57.8	
	comp=Z,53nm,0.6s						
EDM	Edmonton	22.46	96	P	P	11 38 56.0	+0.6
EDM				pmax	pmax		
	comp=Z,53nm,0.6s						
E03A	Lebam	22.83	121	P	P	11 39 00.6	+1.7
E03A				IAmb	IAmb	11 39 02.0	
	comp=Z,41nm,0.8s						
D05A	Enumclaw	22.96	117	P	P	11 39 01.6	+1.6
D05A				IAmb	IAmb	11 39 03.5	
	comp=Z,40nm,0.9s						
B08A	Colville Reser	23.17	112	P	P	11 39 03.5	+1.4
RES	Resolute Bay	23.18	35	P	P	11 39 01.4	-0.4
	comp=Z,8.8nm,0.6s,baz=269,slow=11,SNR=27						
	comp=Z,8.8nm,0.6s						
RES	Resolute Bay	23.18	35	P	P	11 39 01.8	-0.1
RES	Resolute Bay	23.18	35	P	P	11 39 01.8	-0.1
RES				pmax	pmax		
	comp=Z,11nm,0.7s						
E04D	Cinebar	23.22	119	P	P	11 39 03.9	+1.4
E04D				IAmb	IAmb	11 39 06.0	
	comp=Z,67nm,1.4s						
E04D	Cinebar	23.22	119	P	P	11 39 04.9	+2.4
	baz=324,SNR=5.3						
LTY	Liberty	23.45	115	P	P	11 39 05.5	+0.8
LTY				IAmb	IAmb	11 39 06.6	
	comp=Z,25nm,0.6s						
F04A	Amboy	23.79	120	P	P	11 39 08.9	+1.2
HEBO	Mount Hebo	23.85	123	P	P	11 39 09.6	+1.3
G03D	McMinnville, O	24.05	122	P	P	11 39 11.8	+1.8
G03D				IAmb	IAmb	11 39 35.4	
	comp=Z,83nm,1.4s						
G03D	McMinnville, O	24.05	122	P	P	11 39 12.3	+2.3
	baz=326						
NEW	Newport	24.21	109	P	P	11 39 10.8	-0.7
	comp=Z,20nm,0.8s,baz=321,slow=8.1,SNR=28						
NEW				LR	LR	11 48 57.2	
	comp=Z,51nm,18.7s,baz=302,slow=37						
	comp=Z,20nm,0.8s						
NEW	Newport	24.21	109	P	P	11 39 12.9	+1.4
NEW				IAmb	IAmb	11 39 15.7	
	comp=Z,21nm,0.8s						
NEW	Newport	24.21	109	P	P	11 39 12.9	+1.4
NEW				pmax	pmax		
	comp=Z,21nm,0.8s						
NEW	Newport	24.21	109	P	P	11 39 12.8	+1.4
	baz=319,SNR=24						
F05D	White Salmon	24.22	119	P	P	11 39 12.6	+1.0
F05D				IAmb	IAmb	11 39 14.6	
	comp=Z,29nm,0.6s						
F05D	White Salmon	24.22	119	P	P	11 39 13.8	+2.3
	baz=324,SNR=11						
E07A	Sunnyside	24.35	115	P	P	11 39 14.7	+2.0
E07A				IAmb	IAmb	11 39 15.3	
	comp=Z,34nm,0.8s						
D08A	Wollman Farm,	24.35	113	P	P	11 39 14.1	+1.4
D08A				IAmb	IAmb	11 39 14.9	
	comp=Z,38nm,0.7s						
HOOD	Mount Hood Mea	24.60	120	P	P	11 39 17.3	+2.1
HAWA	Hanford	24.61	115	P	P	11 39 16.4	+1.2
SEY	Seymchan	24.66	296	P	P	11 39 13.2	-2.3
	comp=Z,9.9nm,0.7s,baz=78,slow=7.7,SNR=16						
	comp=Z,9.9nm,0.7s						
SEY	Seymchan	24.66	296	⇑*e*P	P	11 39 15.4	0.0
SEY				pmax	pmax		
	comp=Z,18nm,0.9s						
E08A	Dider Farm, El	24.74	114	P	P	11 39 17.9	+1.7
I02E	Swisshome, OR	24.74	124	P	P	11 39 18.1	+1.8
I02E				IAmb	IAmb	11 39 25.3	
	comp=Z,78nm,1.3s						
I02E	Swisshome, OR	24.74	124	P	P	11 39 18.7	+2.4
	baz=328						
G05D	Wamic, OR	24.80	119	P	P	11 39 18.9	+2.0
	baz=325						
H04D	Lebanon	24.83	122	P	P	11 39 18.0	+1.0
H04D	Lebanon	24.83	122	P	P	11 39 19.2	+2.2
	baz=327						
F07A	Phinny Hill Vi	24.84	116	P	P	11 39 19.3	+2.1
F07A				IAmb	IAmb	11 39 20.1	
	comp=Z,40nm,0.7s						
H04A	Detroit Lake	24.91	121	P	P	11 39 19.6	+1.7
H04A				IAmb	IAmb	11 39 20.6	
	comp=Z,76nm,1.5s						
BUCK	Buck Mountain	25.00	123	P	P	11 39 19.4	+0.7
BUCK				IAmb	IAmb	11 39 24.1	
	comp=Z,33nm,1.2s						
WALA	Waterton Lakes	25.05	104	P	P	11 39 20.2	+1.0
WALA				IAmb	IAmb	11 39 23.8	
	comp=Z,21nm,0.8s						
E09A	Wood Farm, Sta	25.11	113	P	P	11 39 21.1	+1.5
I03D	Drain, OR	25.28	124	P	P	11 39 23.5	+2.3
	baz=328						
EUNU	Eureka	25.30	22	P	P	11 39 22.2	+1.1
J01E	Myrtle Point	25.51	126	P	P	11 39 26.0	+2.7
	baz=329						
I05D	Terrebonne, OR	25.54	120	P	P	11 39 25.5	+2.0
	baz=326,SNR=6.8						
I04A	Tendick Farm,	25.57	123	P	P	11 39 25.7	+1.9
	baz=327						
G08A	Pilot Rock	25.74	116	P	P	11 39 26.9	+1.5
DBO	Dodson Butte	25.81	125	P	P	11 39 28.3	+2.2
JTMT	Jette	25.85	107	P	P	11 39 28.1	+1.6
JTMT				IAmb	IAmb	11 39 31.7	
	comp=Z,15nm,0.7s						
F10A	Beach Ranch, E	25.93	113	P	P	11 39 28.1	+1.0
K02D	Willamette Mer	26.01	126	P	P	11 39 30.4	+2.5
	baz=329,SNR=6.0						
J04D	Umpqua Nationa	26.15	123	P	P	11 39 29.7	+0.5
J04D	Umpqua Nationa	26.15	123	P	P	11 39 31.6	+2.3
	baz=328,SNR=8.7						
PINE	Pine Mountain	26.15	121	P	P	11 39 30.6	+1.3
PINE				IAmb	IAmb	11 39 33.2	
	comp=Z,31nm,1.1s						
HUMO	Hull Mountain	26.36	125	P	P	11 39 32.7	+1.8
J05D	Fort Rock, OR	26.46	122	P	P	11 39 34.4	+2.4
	baz=327,SNR=12						
I07A	Izee	26.49	118	P	P	11 39 32.8	+0.6
L02F	Cave Junction	26.54	126	P	P	11 39 34.8	+2.2
	baz=330						
MSO	Missoula	26.70	108	P	P	11 39 35.0	+0.9
MSO	Missoula	26.70	108	P	P	11 39 35.0	+0.9
	baz=320,SNR=16						
BMO	Blue Mountains	26.79	114	P	P	11 39 36.5	+1.7
BMO				IAmb	IAmb	11 39 37.4	
	comp=Z,20nm,0.9s						
BMO	Blue Mountains	26.79	114	P	P	11 39 36.5	+1.7
BMO				pmax	pmax		
	comp=Z,21nm,0.9s						
K04D	Chiloquin, OR	26.81	123	P	P	11 39 37.0	+1.9
	baz=328						
L04D	Klamath Falls	26.94	124	P	P	11 39 37.6	+1.3
L04D				IAmb	IAmb	11 39 39.0	
	comp=Z,17nm,0.8s						
L04D	Klamath Falls	26.94	124	P	P	11 39 38.3	+2.0
	baz=329						
K05A	Summer Lake	27.06	122	P	P	11 39 39.7	+2.2
K05A				IAmb	IAmb	11 39 40.6	
	comp=Z,20nm,0.6s						
PET	Petropavlovsk	27.07	272	⇓*e*P	P	11 39 38.4	+1.3
PET				pmax	pmax		
	comp=Z,16nm,1.1s						
PLID	Pearl Lake	27.16	113	P	P	11 39 39.5	+1.2
PLID				IAmb	IAmb	11 39 40.2	
	comp=Z,18nm,0.8s						
YBH	Yreka Blue Hor	27.20	126	P	P	11 39 39.9	+1.3
	comp=Z,12nm,0.8s,baz=298,slow=3.6,SNR=30						
	comp=Z,12nm,0.8s						
YBH	Yreka Blue Hor	27.20	126	P	P	11 39 39.9	+1.3
YBH	Yreka Blue Hor	27.20	126	P	P	11 39 39.9	+1.3
YBH				pmax	pmax		
	comp=Z,13nm,0.8s						
PEA0B	Petropavlovsk-	27.46	273	P	P	11 39 39.9	-0.7
PEA0B	Petropavlovsk-	27.46	273	⇑*e*P	P	11 39 40.6	0.0
PETK	Petropavlovsk-	27.46	273	P	P	11 39 39.6	-1.0
	comp=Z,8.0nm,0.8s,baz=96,slow=7.6,SNR=14						
	comp=Z,8.0nm,0.8s						
PETK	Petropavlovsk-	27.46	273	P	P	11 39 40.1	-0.5
PETK	Petropavlovsk-	27.46	273	P	P	11 39 40.1	-0.5
J08A	Circle Bar Ran	27.51	118	P	P	11 39 43.4	+2.1
EGMT	Eagleton	27.70	101	P	P	11 39 43.8	+0.9
EGMT				IAmb	IAmb	11 39 45.5	
	comp=Z,36nm,0.8s						
EGMT	Eagleton	27.70	101	P	P	11 39 44.0	+1.1
	baz=317,SNR=14						
HRY	Holter Researc	27.73	105	P	P	11 39 44.7	+1.4
FCC	Fort Churchill	28.09	71	P	P	11 39 46.9	+0.8
FCC	Fort Churchill	28.09	71	P	P	11 39 46.9	+0.8
FCC				pmax	pmax		
	comp=Z,17nm,1.2s						
LRM	Limekiln Ridge	28.14	107	P	P	11 39 48.5	+1.5
WVOR	Wild Horse Val	28.21	119	P	P	11 39 49.2	+1.6
WVOR				IAmb	IAmb	11 39 50.8	
	comp=Z,23nm,0.9s						
WVOR	Wild Horse Val	28.21	119	P	P	11 39 49.2	+1.6
WVOR				pmax	pmax		
	comp=Z,23nm,1.0s						
DLMT	Dillon	28.43	108	P	P	11 39 51.1	+1.6
MFID	Camas Ranch	28.57	114	P	P	11 39 52.3	+1.6
BOZ	Bozeman (W)	28.68	107	P	P	11 39 53.2	+1.5
BOZ	Bozeman (W)	28.68	107	P	P	11 39 53.2	+1.5
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOZ	Bozeman (W)	28.68	107	P	P	11 39 53.1	+1.4
	baz=321,SNR=28						
MCMT	McKenzie Canyo	28.73	109	P	P	11 39 53.8	+1.5
HLID	Hailey	29.06	113	P	P	11 39 56.5	+1.4
HLID				IAmb	IAmb	11 39 58.3	
	comp=Z,14nm,0.8s						
HLID	Hailey	29.06	113	P	P	11 39 56.6	+1.5
	baz=324,SNR=34						
QLMT	Earthquake Lak	29.36	107	P	P	11 39 59.4	+1.6
GCMT	Greycliff	29.41	104	P	P	11 39 59.4	+1.3
YHL	Hebgen Lake	29.45	107	P	P	11 40 00.6	+1.9
YHL				IAmb	IAmb	11 40 01.9	
	comp=Z,16nm,0.7s						
ORV	Oroville	29.55	126	P	P	11 40 00.0	+0.7
ORV	Oroville	29.55	126	P	P	11 40 00.0	+0.7
ORV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BEKR	Beckworth	29.71	124	P	P	11 40 02.7	+1.8
BEKR				IAmb	IAmb	11 40 03.5	
	comp=Z,19nm,0.7s						
TIXI	Tiksi	29.73	321	P	P	11 39 59.4	-1.1
	comp=Z,1.0nm,0.3s,baz=270,slow=23,SNR=8.4						
TIXI				PcP	PcP	11 43 00.1	-0.1
	comp=Z,3.4nm,0.6s,baz=296,slow=8.7,SNR=6.5						
	comp=Z,1.0nm,0.3s						
TIXI	Tiksi	29.73	321	⇑*e*P	P	11 39 59.8	-0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YNR	Norris Junctio	29.78	107	P	P	11 40 03.1	+1.6
YNR				IAmb	IAmb	11 40 05.2	
	comp=Z,18nm,0.9s						
DGMT	Dagmar	29.94	95	P	P	11 40 03.5	+0.9
DGMT				IAmb	IAmb	11 40 04.2	
	comp=Z,14nm,0.8s						
LKWY	Lake	30.03	107	P	P	11 40 06.5	+2.8
LKWY				IAmb	IAmb	11 40 08.0	
	comp=Z,25nm,0.8s						
LKWY	Lake	30.03	107	P	P	11 40 06.6	+2.8
LKWY				pmax	pmax		
	comp=Z,25nm,0.8s						
YPP	Pitchstone Pla	30.08	107	P	P	11 40 06.2	+2.0
H17A	Grant Village	30.08	107	P	P	11 40 07.0	+2.8
H17A	Grant Village	30.08	107	P	P	11 40 07.7	+3.5
	baz=322,SNR=15						
RLMT	Red Lodge	30.10	105	P	P	11 40 06.0	+1.6
RLMT	Red Lodge	30.10	105	P	P	11 40 06.7	+2.3
	baz=320,SNR=55						
PAHR	Pah Rah Range	30.23	123	P	P	11 40 06.8	+1.4
FLWY	Flagg Ranch	30.27	108	P	P	11 40 07.4	+1.6
FLWY				IAmb	IAmb	11 40 09.6	
	comp=Z,25nm,0.8s						
LAO	LASA Array	30.30	99	P	P	11 40 07.8	+1.9
LAO				IAmb	IAmb	11 40 08.7	
	comp=Z,50nm,1.2s						
LAO	LASA Array	30.30	99	P	P	11 40 07.5	+1.6
	baz=318,SNR=6.8						
BMN	Battle Mountai	30.47	120	P	P	11 40 09.2	+1.6
BMN	Battle Mountai	30.47	120	P	P	11 40 09.2	+1.6
BMN				pmax	pmax		
	comp=Z,20nm,1.5s						
VCNR	Virginia City	30.48	124	P	P	11 40 08.7	+1.0
VCNR				IAmb	IAmb	11 40 10.6	
	comp=Z,15nm,0.7s						
MOOW	Moose Ponds	30.51	108	P	P	11 40 09.6	+1.6
TPAW	Teton Pass	30.63	109	P	P	11 40 11.1	+2.0
TPAW				IAmb	IAmb	11 40 12.6	
	comp=Z,30nm,0.8s						
PNTR	Pine Nut	30.68	124	P	P	11 40 11.0	+1.5
PNTR				IAmb	IAmb	11 40 18.5	
	comp=Z,18nm,0.8s						
LOHW	Long Hollow	30.68	108	P	P	11 40 10.7	+1.2
LOHW				IAmb	IAmb	11 40 13.7	
	comp=Z,41nm,1.4s						
SNOW	Snow King Moun	30.74	108	P	P	11 40 11.8	+1.8
SNOW				IAmb	IAmb	11 40 13.6	
	comp=Z,25nm,0.7s						
REDW	Red Top Meadow	30.77	109	P	P	11 40 11.3	+1.0
REDW				IAmb	IAmb	11 40 13.2	
	comp=Z,18nm,0.7s						
ECR	Eagle Creek	30.79	110	P	P	11 40 11.4	+0.9
YERR	Yerington	30.91	124	P	P	11 40 12.5	+1.0
ELK	Elko	31.02	117	P	P	11 40 14.5	+2.0
ELK				IAmb	IAmb	11 40 16.0	
	comp=Z,25nm,0.9s						
ELK	Elko	31.02	117	P	P	11 40 14.5	+2.0
ELK				pmax	pmax		
	comp=Z,25nm,0.9s						
AHID	Auburn Hatcher	31.14	110	P	P	11 40 15.2	+1.7
AHID				IAmb	IAmb	11 40 16.8	
	comp=Z,26nm,1.1s						
KVN	Kaiserville	31.30	122	P	P	11 40 16.0	+1.1
KVN				IAmb	IAmb	11 40 17.5	
	comp=Z,9.8nm,0.6s						
KVN	Kaiserville	31.30	122	P	P	11 40 16.0	+1.1
KVN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMB	Columbia Colle	31.30	126	P	P	11 40 16.7	+2.0
CMB	Columbia Colle	31.30	126	P	P	11 40 16.7	+2.0
CMB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RYN	Ryan	31.50	123	P	P	11 40 18.6	+2.0
RYN				IAmb	IAmb	11 40 19.4	
	comp=Z,11nm,0.7s						
NVAR	Mina Array Bea	31.75	123	P	P	11 40 20.6	+1.6
	comp=Z,11nm,0.7s,baz=316,slow=9.4,SNR=106						
NVAR				PcP	PcP	11 43 07.4	+1.0
	comp=Z,0.6nm,0.5s,baz=279,slow=3.2,SNR=3.5						
NVAR				ScP	ScP	11 46 34.6	-0.7
	comp=Z,1.6nm,0.8s,baz=270,slow=3.4,SNR=10						
	comp=Z,11nm,0.7s						
NVAR	Mina Array Bea	31.75	123	P	P	11 40 20.7	+1.8
NV11	Mina Array Sit	31.81	123	P	P	11 40 21.1	+1.8
NV11				IAmb	IAmb	11 40 22.4	
	comp=Z,12nm,0.8s						
BW06	Boulder Array	31.82	108	P	P	11 40 21.2	+1.8
BW06	Boulder Array	31.82	108	P	P	11 40 21.3	+1.8
	baz=323,SNR=52						
PD31	Pinedale Array	31.82	108	P	P	11 40 21.1	+1.6
PDAR	Pinedale Array	31.82	108	P	P	11 40 20.9	+1.4
	comp=Z,17nm,0.5s,baz=322,slow=3.8,SNR=134						
PDAR				PcP	PcP	11 43 06.6	0.0
	comp=Z,0.6nm,0.4s,baz=48,slow=1.8,SNR=1.8						
PDAR				ScP	ScP	11 46 34.4	-1.2
	comp=Z,1.0nm,0.5s,baz=24,slow=1.8,SNR=7.7						
	comp=Z,17nm,0.5s						
PDAR	Pinedale Array	31.82	108	P	P	11 40 20.8	+1.3
LHV	Little Huntoon	31.83	123	P	P	11 40 20.9	+1.6
LHV				IAmb	IAmb	11 40 22.8	
	comp=Z,19nm,1.1s						
HWUT	Hardware Ranch	31.87	111	P	P	11 40 21.8	+1.9
HWUT				IAmb	IAmb	11 40 23.9	
	comp=Z,22nm,0.7s						
MDPB	Devils Postpil	32.15	125	P	P	11 40 24.2	+1.8
OMMB	Old Mammoth Mi	32.20	125	P	P	11 40 24.5	+1.6

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OMMB                                     IAmb   IAmb   11 40 26.3
       comp=Z,13nm,0.8s
TPH    Tonopah          32.49 122   P      P      11 40 27.1 +1.8
TPH    Tonopah          32.49 122   P      P      11 40 27.1 +1.8
TPH                                 pmax   pmax
       comp=Z,145nm,1.5s
DUG    Dugway, Tooele   32.50 114   P      P      11 40 27.2 +1.9
DUG    Dugway, Tooele   32.50 114   P      P      11 40 27.3 +1.9
DUG                                 pmax   pmax
       comp=Z,33nm,0.8s
DUG    Dugway, Tooele   32.50 114   P      P      11 40 27.3 +1.9
       baz=326,SNR=34
MDND   Maddock          32.52  92   P      P      11 40 26.4 +1.2
MDND   Maddock          32.52  92   P      P      11 40 26.8 +1.5
       baz=316
ULM    Lac du Bonnet    32.56  85   P      P      11 40 26.3 +0.8
       comp=Z,20nm,0.6s,baz=310,slow=8.6,SNR=30
ULM                                 PcP    PcP    11 43 07.8 -0.4
       comp=Z,4.3nm,0.4s,baz=254,slow=4.9,SNR=4.2
ULM                                 ScP    ScP    11 46 36.8 -0.8
       comp=Z,2.2nm,0.7s,baz=287,slow=4.8,SNR=3.0
ULM                                 LR     LR     11 55 06.6
       comp=Z,29nm,19.1s,baz=310,slow=39
       comp=Z,20nm,0.6s
ULM    Lac du Bonnet    32.56  85   P      P      11 40 25.5 -0.1
ULM                                 IAmb   IAmb   11 40 27.2
       comp=Z,22nm,0.8s
ULM    Lac du Bonnet    32.56  85   P      P      11 40 25.5 -0.1
ULM                                 pmax   pmax
       comp=Z,22nm,0.8s
JLU    Jordanelle       32.75 112   P      P      11 40 29.5 +1.9
JLU                                 IAmb   IAmb   11 40 30.4
       comp=Z,18nm,0.8s
R11A   Troy Canyon, C   32.91 120   P      P      11 40 30.6 +1.7
R11A                                IAmb   IAmb   11 40 31.8
       comp=Z,23nm,1.2s
R11A   Troy Canyon, C   32.91 120   P      P      11 40 30.7 +1.7
       baz=329,SNR=34
E28A   Huff             32.95  94   P      P      11 40 30.3 +1.3
NLU    North Lily Min   33.02 114   P      P      11 40 31.2 +1.3
NLU                                 IAmb   IAmb   11 40 32.6
       comp=Z,35nm,0.9s
LCH    Last Change Ra   33.05 123   P      P      11 40 31.8 +1.6
RSSD   Black Hills      33.25 100   P      P      11 40 33.5 +1.6
RSSD                                IAmb   IAmb   11 40 34.3
       comp=Z,21nm,0.7s
RSSD   Black Hills      33.25 100   P      P      11 40 33.5 +1.6
RSSD                                pmax   pmax
       comp=Z,21nm,0.7s
RSSD   Black Hills      33.25 100   P      P      11 40 33.3 +1.4
       baz=321
K22A   Casper           33.27 105   P      P      11 40 33.3 +1.3
K22A                                IAmb   IAmb   11 40 34.4
       comp=Z,32nm,1.0s
K22A   Casper           33.27 105   P      P      11 40 33.3 +1.3
       baz=322,SNR=12
GRAC   Grapevine Rang   33.37 123   P      P      11 40 34.3 +1.5
GRAC   Grapevine Rang   33.37 123   P      P      11 40 35.3 +2.5
       baz=331,SNR=6.9
PAGB   Antelope Grade   33.39 128   P      P      11 40 34.9 +2.0
PAGB                                IAmb   IAmb   11 40 36.0
       comp=Z,22nm,0.7s
S11A   Rachel           33.45 120   P      P      11 40 34.4 +0.9
S11A                                IAmb   IAmb   11 40 36.6
       comp=Z,24nm,0.6s
PSUT   Pine Spring      33.46 117   P      P      11 40 35.4 +1.7
PSUT                                IAmb   IAmb   11 40 36.9
       comp=Z,24nm,1.0s
RDMU   Red Mountain     33.59 110   P      P      11 40 36.2 +1.3
RWWY   Rawlins          33.73 106   P      P      11 40 36.1  0.0
TPNV   Topopah Spring   33.85 122   P      P      11 40 38.9 +1.8
TPNV                                IAmb   IAmb   11 40 39.4
       comp=Z,12nm,0.5s
TPNV   Topopah Spring   33.85 122   P      P      11 40 38.9 +1.8
TPNV                                pmax   pmax
       comp=Z,12nm,0.5s
TPNV   Topopah Spring   33.85 122   P      P      11 40 38.9 +1.8
       baz=330,SNR=20
SMMC   Simmler          33.85 128   P      P      11 40 39.2 +2.3
       baz=333
PRN    Pahroc Range     33.93 120   P      P      11 40 39.4 +1.6
TMUT   Trail Mountain   33.93 113   P      P      11 40 39.2 +1.2
TMUT                                IAmb   IAmb   11 40 42.5
       comp=Z,20nm,0.9s
AGMN   Agassiz Nation   33.94  88   P      P      11 40 38.4 +0.8
AGMN                                IAmb   IAmb   11 40 39.9
       comp=Z,31nm,1.1s
AGMN   Agassiz Nation   33.94  88   P      P      11 40 38.5 +0.9
       baz=316,SNR=13
TCRU   Three Creeks R   33.98 116   P      P      11 40 39.5 +1.2
P17A   Butcher Ranch,   33.99 113   P      P      11 40 40.1 +1.8
P17A                                IAmb   IAmb   11 40 41.2
       comp=Z,16nm,0.8s
FURC   Furnace Creek,   34.02 123   P      P      11 40 40.8 +2.5
       baz=331,SNR=12
P18A   Preston Nutter   34.07 112   P      P      11 40 40.0 +0.9
P18A                                IAmb   IAmb   11 40 43.5
       comp=Z,44nm,1.2s
ISA    Isabella, Lake   34.11 126   P      P      11 40 40.9 +1.7
ISA    Isabella, Lake   34.11 126   P      P      11 40 40.9 +1.7
ISA                                 pmax   pmax
       comp=Z,12nm,0.9s
ISA    Isabella, Lake   34.11 126   P      P      11 40 40.9 +1.7
       baz=332,SNR=7.4
MSU    Marysvale        34.18 115   P      P      11 40 41.7 +1.7
MSU    Marysvale        34.18 115   P      P      11 40 41.7 +1.7
YAK    Yakutsk          34.24 305   P      P      11 40 39.7 -0.2
YAK    Yakutsk          34.24 305c iP      P      11 40 39.2 -0.7
YAK                                 pmax   pmax
       comp=Z,48nm,1.0s
D32A   Dogwood Acres,   34.24  90   P      P      11 40 41.4 +1.2
PKM    Mcpherson Peak   34.30 128   P      P      11 40 43.5 +2.5
       baz=334,SNR=7.5
NOR    Nord             34.31  10 i P      P      11 40 39.6 -0.8
NOR                                 IAmb   IAmb   11 40 41.8
       comp=Z,3.0nm,0.5s
GWY    Greenwater Val   34.34 123   P      P      11 40 42.8 +1.4
GWY                                 IAmb   IAmb   11 40 43.8
       comp=Z,9.1nm,0.6s
O20A   White River Ci   34.53 109   P      P      11 40 44.6 +1.6
       baz=325,SNR=35
B35A   Bob, Littlefor   34.89  86   P      P      11 40 46.1 +0.4
B35A                                IAmb   IAmb   11 40 47.2
       comp=Z,37nm,1.1s
N23A   Red Feather La   34.93 106   P      P      11 40 47.9 +1.4
       baz=324,SNR=9.1
EDW2   Edwards Air Fo   34.98 126   P      P      11 40 48.1 +1.4
       baz=333
GSC    Goldstone, Bar   35.07 124   P      P      11 40 48.3 +0.8
GSC                                 IAmb   IAmb   11 40 50.5
       comp=Z,22nm,0.9s
GSC    Goldstone, Bar   35.07 124   P      P      11 40 48.3 +0.8
GSC                                 pmax   pmax
       comp=Z,22nm,0.9s
GSC    Goldstone, Bar   35.07 124   P      P      11 40 49.8 +2.3
       baz=332,SNR=15
TUQ    Turquoise Moun   35.29 123   P      P      11 40 51.8 +2.4
       baz=331,SNR=13
RRX    Edison Barstow   35.37 124   P      P      11 40 52.5 +2.5
       baz=332
PV23   Carpenter Ridg   35.58 112   P      P      11 40 53.8 +1.8
BFSC   Mount Baldy Ra   35.68 126   P      P      11 40 54.7 +2.0
       baz=333,SNR=6.5
GMRC   Granite Mounta   35.97 123   P      P      11 40 57.3 +2.1
       baz=332,SNR=7.9
ISCO   Idaho Springs    35.97 107   P      P      11 40 57.0 +1.6
ISCO   Idaho Springs    35.97 107   P      P      11 40 57.0 +1.6
ISCO                                pmax   pmax
       comp=Z,22nm,1.5s
ISCO   Idaho Springs    35.97 107   P      P      11 40 57.5 +2.1
       baz=325,SNR=12
EYMN   Ely              36.23  84   P      P      11 40 58.0 +0.9
       baz=316,SNR=46
NEE2   Needles Airpor   36.39 122   P      P      11 41 00.6 +2.0
       baz=331,SNR=6.7
BELC   Belle Mtn. Jos   36.52 124   P      P      11 41 01.8 +1.8
       baz=332,SNR=10.0
OGNE   Ogallala         36.66 102   P      P      11 41 02.6 +1.7
OGNE                                IAmb   IAmb   11 41 04.2
       comp=Z,22nm,0.8s
OGNE   Ogallala         36.66 102   P      P      11 41 02.5 +1.5
       baz=323
TPFO   Pinon Flats      36.70 125   P      P      11 41 02.3 +0.9
       baz=333
IRM    Iron Mountain    36.72 123   P      P      11 41 03.9 +2.4
       baz=332,SNR=6.8
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F36A   Milaca           36.81  89   P      P      11 41 03.0 +0.9
F36A                                IAmb   IAmb   11 41 04.4
       comp=Z,29nm,0.8s
MVCO   Mesa Verde       36.84 112   P      P      11 41 04.3 +1.6
       baz=327,SNR=33
Q24A   Divide           36.86 107   P      P      11 41 04.9 +1.9
       baz=325,SNR=13
ECSD   EROS Data Cent   36.98  94   P      P      11 41 04.1 +0.5
ECSD   EROS Data Cent   36.98  94   P      P      11 41 04.1 +0.5
       baz=320,SNR=43
WUAZ   Wupatki          37.06 117   P      P      11 41 06.0 +1.5
WUAZ   Wupatki          37.06 117   P      P      11 41 06.8 +2.3
       baz=330,SNR=22
S22A   4UR Ranch, Cre   37.12 110   P      P      11 41 07.6 +2.5
       baz=327,SNR=52
MONP2  Monument Peak    37.34 125   P      P      11 41 09.1 +2.2
       baz=333,SNR=7.2
SWSC   Sam W. Stewart   37.54 124   P      P      11 41 10.2 +1.9
       baz=333
SPMN   Marine on St.    37.63  89   P      P      11 41 10.2 +1.3
SPMN   Marine on St.    37.63  89   P      P      11 41 10.1 +1.1
       baz=319,SNR=30
IKP    In-Ko-Pah, Jac   37.68 125   P      P      11 41 11.7 +2.1
       baz=333
SDCO   Great Sand Dun   37.70 108   P      P      11 41 11.7 +1.6
SDCO                                IAmb   IAmb   11 41 13.1
       comp=Z,45nm,1.2s
SDCO   Great Sand Dun   37.70 108   P      P      11 41 12.2 +2.1
       baz=326,SNR=48
Y14A   Wickenburg       37.76 120   P      P      11 41 12.2 +1.9
Y14A                                IAmb   IAmb   11 41 13.0
       comp=Z,9.2nm,0.6s
GLA    Glamis           37.82 123   P      P      11 41 12.6 +1.8
       baz=332
KSCO   Kaye Shedlock'   37.95 104   P      P      11 41 13.8 +1.9
KSCO   Kaye Shedlock'   37.95 104   P      P      11 41 13.8 +1.9
       baz=325,SNR=28
DAG    Danmarks Havn    38.13  16 i P      P      11 41 11.1 -1.7
DAG                                 IAmb   IAmb   11 41 12.8
       comp=Z,24nm,0.4s
SUMG   Summit           38.15  26   P      P      11 41 13.5  0.0
SUMG                                IAmb   IAmb   11 41 15.3
       comp=Z,9.4nm,0.6s
SUMG   Summit           38.15  26   P      P      11 41 13.5  0.0
SUMG                                pmax   pmax
       comp=Z,9.0nm,0.6s
SUMG   Summit           38.15  26 i P      P      11 41 12.9 -0.6
SUMG                                IAmb   IAmb   11 41 14.8
       comp=Z,8.1nm,0.5s
I37A   Lemond, Waseca   38.26  90   P      P      11 41 15.9 +1.6
X18A   Snowflake        38.51 116   P      P      11 41 18.4 +1.8
X18A                                IAmb   IAmb   11 41 19.9
       comp=Z,35nm,1.1s
YSS    Yuzh-Sakhalins   38.66 277⇑iP      P      11 41 17.3 -0.2
YSS                                 pmax   pmax
       comp=Z,26nm,0.9s
T25A   Trinidad         38.69 108   P      P      11 41 19.8 +1.6
       baz=326,SNR=10
SHO    Shikotan         39.08 271  eP      P      11 41 18.8 -2.3
SHO                                 pmax   pmax
       comp=Z,16nm,0.6s
SHO                                 pmax   pmax
       comp=N,7.0nm,0.4s
SHO                                 pmax   pmax
       comp=E,7.0nm,0.4s
SFJD   Kangerlussuaq    39.13  38  eP      P      11 41 20.5 -0.7
SFJD                                IAmb   IAmb   11 41 23.0
       comp=Z,4.7nm,1.0s
CBKS   Cedar Bluff      39.42 102   P      P      11 41 25.6 +1.6
       baz=324,SNR=8.5
214A   Organ Pipe Nat   39.58 122   P      P      11 41 27.3 +1.9
       baz=332
ANMO   Albuquerque      39.63 112   P      P      11 41 27.9 +1.9
ANMO   Albuquerque      39.63 112   P      P      11 41 27.9 +1.9
ANMO                                pmax   pmax
       comp=Z,7.0nm,0.8s
ANMO   Albuquerque      39.63 112   P      P      11 41 28.0 +2.0
       baz=328
SCIA   State Center     39.98  92   P      P      11 41 29.5 +0.9
       baz=322
DBG    Daneborg         40.01  18 i P      P      11 41 27.2 -1.2
DBG                                 IAmb   IAmb   11 41 28.3
       comp=Z,12nm,0.6s
TUC    Tucson           40.09 119   P      P      11 41 31.8 +2.1
       baz=331
ICESG  Greenland Ices   40.47  31 i P      P      11 41 31.3 -1.4
ICESG                               IAmb   IAmb   11 41 33.0
       comp=Z,14nm,0.7s
JFWS   Jewell Farm      40.58  89   P      P      11 41 33.8 +0.3
       baz=321,SNR=29
KSU1   Kansas State U   40.63  98   P      P      11 41 34.8 +0.8
       baz=324,SNR=33
ZEA    Zeya             40.65 296  eP      P      11 41 33.4 -0.5
ZEA                                 pmax   pmax
       comp=N,10.0nm,0.8s
ZEA                                 pmax   pmax
       comp=Z,20nm,0.9s
DY2G   Dye2             40.72  36 i P      P      11 41 33.8 -0.8
DY2G                                IAmb   IAmb   11 41 36.6
       comp=Z,4.0nm,0.6s
N38A   Joes South For   40.84  93   P      P      11 41 36.0 +0.4
G45A   Suttons Bay      41.09  83   P      P      11 41 38.1 +0.5
121A   Cookes Peak, D   41.14 115   P      P      11 41 40.9 +2.5
       baz=330,SNR=12
GLMI   Grayling         41.73  82   P      P      11 41 43.6 +0.8
       baz=320,SNR=6.7
AMTX   Amarillo         41.79 107   P      P      11 41 45.2 +1.7
       baz=327
NRIK   Noril'sk         41.87 333   P      P      11 41 43.1 -0.5
       comp=Z,13nm,0.4s,baz=49,slow=7.3,SNR=16
       comp=Z,13nm,0.4s
NRIK   Noril'sk         41.87 333   P      P      11 41 43.9 +0.2
NRIK                                IAmb   IAmb   11 41 44.6
       comp=Z,15nm,0.6s
NRIK   Noril'sk         41.87 333   P      P      11 41 43.9 +0.2
NRIK                                pmax   pmax
       comp=Z,15nm,0.6s
KLR    Kul'dur          41.97 288ceP      P      11 41 44.2 -0.5
KLR                                 pmax   pmax
       comp=Z,9.0nm,0.6s
MSTX   Muleshoe         42.07 109   P      P      11 41 47.5 +1.6
       baz=328,SNR=49
SCHQ   Schefferville    42.11  59   P      P      11 41 45.9  0.0
       comp=Z,16nm,0.6s,baz=315,slow=7.2,SNR=66
SCHQ                                PcP    PcP    11 43 36.9 -0.5
       comp=Z,5.0nm,0.5s,baz=337,slow=7.7,SNR=3.6
       comp=Z,16nm,0.6s
SCHQ   Schefferville    42.11  59   P      P      11 41 46.2 +0.4
SCHQ                                IAmb   IAmb   11 41 46.6
       comp=Z,16nm,0.6s
ERM    Erimo            42.22 272ceP      P      11 41 46.6 -0.2
ERM                                 pmax   pmax
       comp=Z,23nm,1.3s
VLDQ   Val d'Or         42.51  73   P      P      11 41 47.6 -1.5
VLDQ                                IAmb   IAmb   11 41 48.2
       comp=Z,14nm,0.6s
HDIL   Hopedale         42.87  90   P      P      11 41 52.4 +0.3
       baz=322,SNR=13
MNTX   Cornudas Mount   42.88 113   P      P      11 41 54.4 +2.1
       baz=330,SNR=24
BOD    Bodaibo          42.92 308  eP      P      11 41 51.6 -0.7
BOD                                 pmax   pmax
       comp=Z,16nm,1.1s
SCO    Scoresbysund     43.00  22  eP      P      11 41 50.1 -2.6
SCO                                 IAmb   IAmb   11 41 56.0
       comp=Z,1.4nm,0.6s
SOEG   Soedalen         43.06  28 i P      P      11 41 51.8 -1.4
SOEG                                IAmb   IAmb   11 41 53.1
       comp=Z,12nm,0.7s
WMOK   Wichita Mounta   43.21 104   P      P      11 41 56.1 +1.2
       baz=327,SNR=9.8
TUL1   Leonard          43.60 100   P      P      11 41 58.4 +0.4
       baz=326,SNR=7.5
ANGG   Ammassalik, Gr   43.66  33 i P      P      11 41 55.9 -2.1
ANGG                                IAmb   IAmb   11 41 57.4
       comp=Z,10nm,1.1s
CCM    Cathedral Cave   43.95  94   P      P      11 42 00.5 -0.3
CCM                                 IAmb   IAmb   11 42 01.3
       comp=Z,19nm,0.7s
CCM    Cathedral Cave   43.95  94   P      P      11 42 00.5 -0.3
CCM                                 pmax   pmax
       comp=Z,19nm,0.7s
CCM    Cathedral Cave   43.95  94   P      P      11 42 00.5 -0.3
       baz=324
SFIN   Lafayette        44.03  88   P      P      11 42 01.8 +0.4
       baz=322,SNR=14
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MGMO   Mountain Grove   44.21  96   P      P      11 42 02.6 -0.3
U40A   Yellville        44.59  97   P      P      11 42 05.5 -0.4
       baz=325,SNR=37
ABTX   Abilene, Hawle   44.60 107   P      P      11 42 06.6 +0.6
       baz=328,SNR=10
O48B   Farmland         45.03  87   P      P      11 42 08.8 -0.6
       baz=323,SNR=27
W39A   Magazine         45.11  99   P      P      11 42 10.0  0.0
       baz=326,SNR=6.6
TRQ    Mont Tremblant   45.24  73   P      P      11 42 10.8 -0.2
TRQ                                 IAmb   IAmb   11 42 11.2
       comp=Z,22nm,0.5s
FCAR   Ozark Folk Cen   45.31  97   P      P      11 42 11.2 -0.4
FCAR                                IAmb   IAmb   11 42 11.6
       comp=Z,30nm,0.9s
LCAR   Lake Charles     45.61  96   P      P      11 42 13.2 -0.7
LCAR                                IAmb   IAmb   11 42 14.4
       comp=Z,14nm,0.5s
TX31   Lajitas Ar. Si   45.66 113   P      P      11 42 16.2 +1.7
TX31                                IAmb   IAmb   11 42 16.7
       comp=Z,34nm,0.7s
TX32   Lajitas Array    45.66 113   P      P      11 42 16.2 +1.7
TXAR   Lajitas Array    45.66 113   P      P      11 42 15.5 +1.0
       comp=Z,10.0nm,0.7s,baz=331,slow=5.7,SNR=155
TXAR                                PcP    PcP    11 43 50.3 +0.3
       comp=Z,0.6nm,0.5s,baz=10.0,slow=0.9,SNR=2.2
TXAR                                ScP    ScP    11 47 28.1 -0.3
       comp=Z,1.4nm,0.9s,baz=293,slow=3.5,SNR=9.5
       comp=Z,10.0nm,0.7s
TXAR   Lajitas Array    45.66 113   P      P      11 42 15.9 +1.4
TXAR   Lajitas Array    45.66 113   P      P      11 42 15.9 +1.4
USRK   Ussuriysk Ar.    45.68 283   P      P      11 42 12.8 -1.5
       comp=Z,2.3nm,0.4s,baz=38,slow=7.2,SNR=6.6
       comp=Z,2.3nm,0.4s
MIAR   Mount Ida        45.75  99   P      P      11 42 14.9 -0.1
MIAR                                IAmb   IAmb   11 42 16.3
       comp=Z,36nm,0.8s
MIAR   Mount Ida        45.75  99   P      P      11 42 14.9 -0.1
MIAR                                pmax   pmax
       comp=Z,36nm,0.9s
MIAR   Mount Ida        45.75  99   P      P      11 42 15.3 +0.3
       baz=326,SNR=23
P49A   Miami Univ. Ec   45.81  87   P      P      11 42 14.7 -0.8
       baz=323
W41B   Gary Mavity, V   45.84  97   P      P      11 42 15.2 -0.5
       baz=326,SNR=10
ERPA   Erie             45.96  81   P      P      11 42 16.9 +0.3
       baz=322,SNR=6.4
ACSO   Alum Creek Sta   46.06  85   P      P      11 42 17.7 +0.2
ACSO                                IAmb   IAmb   11 42 18.4
       comp=Z,35nm,0.7s
ACSO   Alum Creek Sta   46.06  85   P      P      11 42 17.6 +0.2
       baz=323,SNR=8.7
WHTX   Lake Whitney,    46.12 105   P      P      11 42 18.7 +0.8
       baz=328,SNR=8.3
X40A   Basin Creek Fa   46.14  98   P      P      11 42 18.0  0.0
       baz=326,SNR=12
M53A   WI Miller and    46.17  82   P      P      11 42 18.9 +0.7
       baz=322,SNR=22
MNTQ   Montreal, Queb   46.21  73   P      P      11 42 17.7 -0.7
MNTQ                                IAmb   IAmb   11 42 18.4
       comp=Z,15nm,0.5s
ALLY   Alegheny Colle   46.25  81   P      P      11 42 19.4 +0.5
JCT    Junction City    46.35 108   P      P      11 42 21.1 +1.3
JCT    Junction City    46.35 108   P      P      11 42 21.1 +1.3
JCT                                 pmax   pmax
       comp=Z,52nm,0.9s
JCT    Junction City    46.35 108   P      P      11 42 21.1 +1.3
       baz=329,SNR=27
LONY   Lake Ozonia      46.46  74   P      P      11 42 19.7 -0.8
       baz=321,SNR=6.2
BNX    BinXian          46.54 288  ⇓P      P      11 42 20.8 -0.3
BNX                                 pmax   pmax
       comp=Z,20nm,0.6s
BNX                                 pmax   pmax
       comp=Z,180nm,4.8s
VLA    Vladivostok      46.56 282⇑iP      P      11 42 21.8 +0.5
VLA                                 pmax   pmax
       comp=Z,12nm,0.7s
WLAR   White Oak Lake   46.67  99   P      P      11 42 23.0 +0.8
O53A   New Philadelph   46.87  83   P      P      11 42 23.4 -0.3
       baz=323
P52A   Corning          46.93  85   P      P      11 42 24.0 -0.2
       baz=323,SNR=8.5
435B   Jarrell          47.08 106   P      P      11 42 26.6 +1.2
       baz=329
CCAR   Cane Creek       47.10  98   P      P      11 42 26.5 +0.9
WVT    Waverly          47.11  93   P      P      11 42 26.0 +0.4
       baz=325
HIA    Hailar           47.11 297   P      P      11 42 25.9 +0.4
HIA                                 IAmb   IAmb   11 42 26.3
       comp=Z,20nm,0.9s
HIA    Hailar           47.11 297   P      P      11 42 25.9 +0.4
HIA                                 pmax   pmax
       comp=Z,20nm,0.9s
Z41A   Richland Creek   47.17  99   P      P      11 42 27.1 +1.0
       baz=327
W45A   Hickory Valley   47.27  95   P      P      11 42 27.8 +0.9
OXF    Oxford           47.70  95   P      P      11 42 31.1 +1.0
       baz=326,SNR=36
BINY   Binghamton       47.72  78   P      P      11 42 30.4 +0.1
       baz=322,SNR=7.2
S51A   Beattyville      47.85  88   P      P      11 42 31.4  0.0
LBNH   Lisbon           47.95  73   P      P      11 42 31.9  0.0
       baz=322
MCWV   Mont Chateau     47.97  83   P      P      11 42 32.5 +0.3
       baz=323,SNR=6.3
SSPA   Standing Stone   48.09  80   P      P      11 42 33.4 +0.3
       baz=323
BATG   Bathurst New B   48.12  66   P      P      11 42 33.3  0.0
BATG                                IAmb   IAmb   11 42 34.0
       comp=Z,16nm,0.5s
PKME   Peaks-Kenny Pk   48.31  70   P      P      11 42 34.8 +0.1
       baz=322,SNR=6.6
ARCES  ARCESS Array B   48.36   1   P      P      11 42 34.2 -0.6
       comp=Z,3.4nm,0.5s,baz=5.3,slow=7.6,SNR=8.2
ARCES                               PcP    PcP    11 44 00.3 +1.4
       comp=Z,1.9nm,0.6s,baz=3.8,slow=3.6,SNR=2.3
       comp=Z,3.4nm,0.5s
ARCES  ARCESS Array B   48.36   1   P      P      11 42 34.8 -0.1
ARCES  ARCESS Array B   48.36   1   P      P      11 42 34.8 -0.1
ARCES                               pmax   pmax
       comp=Z,6.0nm,0.7s
833A   Chaparral WMA,   48.39 109   P      P      11 42 36.9 +1.3
       baz=330
HKT    Hockley          48.58 105   P      P      11 42 38.5 +1.6
HKT                                 IAmb   IAmb   11 42 40.3
       comp=Z,18nm,1.1s
HKT    Hockley          48.58 105   P      P      11 42 38.5 +1.6
HKT                                 pmax   pmax
       comp=Z,18nm,1.1s
SWET   Sewanee          48.74  92   P      P      11 42 38.2  0.0
TZTN   Tazewell         48.76  88   P      P      11 42 38.8 +0.5
       baz=325,SNR=6.3
Q56A   Snyder Ridge,    48.77  83   P      P      11 42 38.9 +0.5
MAJO   Matsushiro       48.90 272c iP      P      11 42 39.2 -0.2
MAJO                                pmax   pmax
       comp=Z,18nm,0.8s
MJAR   Matsushiro Arr   48.90 272   P      P      11 42 38.5 -0.9
       comp=Z,7.1nm,0.9s,baz=22,slow=6.9,SNR=18
       comp=Z,7.1nm,0.9s
CN2    Changchun        48.92 288  eP      P      11 42 39.0 -0.4
CN2                                 pmax   pmax
       comp=Z,10.0nm,0.4s
L61B   Northampton      49.02  75   P      P      11 42 39.9 -0.3
       baz=323
VBMS   Vicksburg        49.09  98   P      P      11 42 41.6 +0.8
       baz=327
CPCT   Cooper Cave      49.20  90   P      P      11 42 41.9 +0.2
LUPA   Lehigh Univers   49.28  78   P      P      11 42 42.3 +0.2
Z47A   Carrollton       49.41  95   P      P      11 42 43.6 +0.4
FPAL   Fort Paine       49.44  92   P      P      11 42 44.0 +0.5
PAL    Palisades        49.62  77   P      P      11 42 44.0 -0.7
       baz=323
BLA    Blacksburg       49.68  85   P      P      11 42 45.6 +0.3
       baz=324,SNR=9.7
WUPA   West Chester U   49.70  79   P      P      11 42 45.8 +0.4
LRAL   Lakeview Retre   50.04  94   P      P      11 42 47.8 -0.2
LRAL                                IAmb   IAmb   11 42 48.6
       comp=Z,18nm,0.6s
LRAL   Lakeview Retre   50.04  94   P      P      11 42 47.9 -0.2
       baz=326,SNR=10
JGF    Kuroka           50.06 272   P      P      11 42 48.5 +0.3
JGF                                 IAmb   IAmb   11 42 50.3
       comp=Z,24nm,0.8s
DRLN   Deer Lake        50.09  58   P      P      11 42 48.3 +0.1
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DRLN				IAmb	IAmb	11 42 49.1	
	comp=Z,20nm,0.7s						
CBN	**Corbin Frederi**	**50.28**	**82**	P	**P**	**11 42 50.6**	**+0.9**
CBN	**Corbin Frederi**	**50.28**	**82**	P	**P**	**11 42 50.4**	**+0.6**
	baz=324,SNR=6.1						
BG3	**Lake Jocassee**	**50.32**	**89**	P	**P**	**11 42 50.6**	**+0.5**
JSRW	**J. Sargeant Re**	**50.46**	**83**	P	**P**	**11 42 51.6**	**+0.5**
KMSC	**Kings Mountain**	**50.94**	**88**	P	**P**	**11 42 54.7**	**-0.1**
	baz=326,SNR=7.9						
PAULI	**Pauline**	**50.98**	**88**	P	**P**	**11 42 55.4**	**+0.4**
HODGE	**Hodges**	**51.26**	**89**	P	**P**	**11 42 57.6**	**+0.5**
GOGA	**Godfrey**	**51.38**	**91**	P	**P**	**11 42 58.1**	**+0.1**
	baz=326,SNR=9.0						
BRAL	**Brewton**	**51.58**	**95**	P	**P**	**11 42 60.0**	**+0.5**
	baz=327						
JSC	**Jenkinsville**	**51.68**	**88**	P	**P**	**11 43 00.6**	**+0.3**
JSC	**Jenkinsville**	**51.68**	**88**	P	**P**	**11 43 00.6**	**+0.3**
SEHB	**SEOHWA**	**52.10**	**281**	P	**P**	**11 43 03.8**	**+0.5**
SEHB				IAmb	IAmb	11 43 04.8	
	comp=Z,22nm,0.8s						
MOY	**Mondy**	**52.42**	**311**	*e*P	**P**	**11 43 07.1**	**+1.5**
MOY				pmax	pmax		
	comp=Z,14nm,1.6s						
ZAK	**Zakamensk**	**52.66**	**309**	*e*P	**P**	**11 43 07.6**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KS19	**Wonju Array Si**	**52.90**	**281**	P	**P**	**11 43 10.1**	**+0.8**
KS19				IAmb	IAmb	11 43 10.8	
	comp=Z,16nm,0.7s						
XLT	**XiLinHaoTe**	**52.90**	**295**	⇑P	**P**	**11 43 08.5**	**-0.8**
XLT				sP	sP	11 43 56.4	-3.9
XLT				pmax	pmax		
	comp=Z,23nm,0.8s						
XLT				pmax	pmax		
	comp=Z,180nm,5.2s						
KSRS	**Korea Array**	**52.91**	**281**	P	**P**	**11 43 10.0**	**+0.7**
	comp=Z,18nm,0.7s,baz=29,slow=6.9,SNR=112						
KSRS				PcP	**PcP**	**11 44 16.3**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=25,slow=4.2,SNR=3.1						
	comp=Z,18nm,0.7s						
KSAR	**Wonju Array Be**	**52.94**	**281**	P	**P**	**11 43 09.4**	**-0.1**
KSAR	**Wonju Array Be**	**52.94**	**281**	P	**P**	**11 43 09.4**	**-0.1**
TIGA	**Tifton**	**52.96**	**92**	P	**P**	**11 43 09.4**	**-0.3**
	baz=327						
NHSC	**New Hope**	**53.16**	**88**	P	**P**	**11 43 11.9**	**+0.7**
	baz=326						
ULN	**Ulaanbaatar**	**53.32**	**304**	P	**P**	**11 43 13.2**	**+0.8**
ULN				IAmb	IAmb	11 43 13.8	
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**53.32**	**304**	P	**P**	**11 43 13.2**	**+0.8**
ULN				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	**Songino Array**	**53.60**	**305**	P	**P**	**11 43 15.5**	**+1.1**
	comp=Z,16nm,0.7s,baz=35,slow=7.4,SNR=73						
SONM				PcP	**PcP**	**11 44 20.6**	**+1.8**
	comp=Z,0.9nm,0.4s,baz=65,slow=1.1,SNR=1.3						
	comp=Z,16nm,0.7s						
SONM	**Songino Array**	**53.60**	**305**	P	**P**	**11 43 15.4**	**+1.1**
SONM				IAmb	IAmb	11 43 16.4	
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**53.60**	**305**	P	**P**	**11 43 15.4**	**+1.1**
SONM				pmax	pmax		
	comp=Z,18nm,0.7s						
TJN	**Taejon**	**54.05**	**281**	*c i*P	**P**	**11 43 17.9**	**+0.3**
KNGR	**Kungurtug, Tuv**	**54.51**	**313**	⇑*i*P	**P**	**11 43 22.6**	**+1.7**
NAWB	**Namwon**	**54.82**	**280**	P	**P**	**11 43 23.3**	**+0.1**
PRGR	**Permogore**	**55.54**	**350**	*e*P	**P**	**11 43 28.4**	**+0.5**
ZAA0	**Zalesovo Array**	**55.60**	**323**	P	**P**	**11 43 28.1**	**-0.3**
ZALV	**Zalesovo Beam**	**55.60**	**323**	P	**P**	**11 43 28.1**	**-0.3**
	comp=Z,15nm,0.5s,baz=31,slow=6.9,SNR=62						
	comp=Z,15nm,0.5s						
ZALV	**Zalesovo Beam**	**55.60**	**323**	P	**P**	**11 43 28.0**	**-0.5**
BJT	**Baijiatuau**	**56.05**	**292**	P	**P**	**11 43 32.7**	**+0.8**
BJT	**Baijiatuau**	**56.05**	**292**	P	**P**	**11 43 32.7**	**+0.8**
BJT				pmax	pmax		
	comp=Z,19nm,0.5s						
NB2	**NORSAR Subarra**	**56.28**	**9**	P	**P**	**11 43 32.1**	**-1.2**
	comp=Z,5.9nm,0.8s,baz=353,slow=7.4						
NOA	**NORSAR Array B**	**56.28**	**9**	P	**P**	**11 43 32.4**	**-0.9**
	comp=Z,4.0nm,0.7s,baz=352,slow=7.0,SNR=17						
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**56.49**	**1**	P	**P**	**11 43 34.2**	**-0.5**
	comp=Z,5.7nm,0.6s,baz=8.6,slow=8.7,SNR=34						
FINES				ScP	**ScP**	**11 48 14.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=46,slow=11,SNR=3.7						
	comp=Z,5.7nm,0.6s						
FINES	**FINESS Array B**	**56.49**	**1**	P	**P**	**11 43 34.5**	**-0.1**
FINES	**FINESS Array B**	**56.49**	**1**	P	**P**	**11 43 34.6**	**-0.1**
KLMR	**Klimovskoe**	**56.75**	**353**	*e*P	**P**	**11 43 36.4**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KLMR	**Klimovskoe**	**56.75**	**353**	*e*P	**P**	**11 43 36.4**	**-0.1**
KLMR				AMP		11 43 37.7	
	comp=Z,9.0nm,0.6s						
RAF	**Rauma**	**56.84**	**3**	*e*P	**P**	**11 43 36.4**	**-0.8**
HHC	**Hu-ho-hao-te**	**57.31**	**296**	*e*P	**P**	**11 43 41.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,41nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.9s						
AAL	**Aland**	**57.63**	**4**	*e*P	**P**	**11 43 41.8**	**-0.8**
UPP	**Uppsala**	**57.85**	**6**	*e*P	**P**	**11 43 44.0**	**-0.2**
PUL	**Pulkovo**	**58.15**	**358**	⇓*e*P	**P**	**11 43 48.2**	**+1.9**
KIRV	**Kirov**	**58.18**	**347**	*de*P	**P**	**11 43 46.9**	**+0.4**
SVE	**Sverdlovsk**	**58.36**	**339**	*e*P	**P**	**11 43 47.8**	**0.0**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s						
HNS	**HongShan**	**58.86**	**292**	⇑P	**P**	**11 43 51.9**	**+0.4**
HNS				pmax	pmax		
	comp=Z,19nm,0.7s						
ARU	**Arti**	**59.07**	**340**	P	**P**	**11 43 52.4**	**-0.4**
ARU				IAmb	IAmb	11 43 53.7	
	comp=Z,11nm,0.7s						
ARU	**Arti**	**59.07**	**340**	*c i*P	**P**	**11 43 52.5**	**-0.3**
ARU				*PP	**pP**	**11 44 28.6**	**+0.7**
ARU				S	**S**	**11 51 47.2**	**-0.2**
ARU				pmax	pmax		
	comp=Z,14nm,0.9s						
VIKU	**Vikbolandet**	**59.16**	**7**	*e*P	**P**	**11 43 53.4**	**+0.1**
MTSE	**Matsula**	**59.20**	**2**	*e*P	**P**	**11 43 53.7**	**+0.1**
VSU	**Vasula**	**59.49**	**0**	*c i*P	**P**	**11 43 55.8**	**+0.3**
VSU				pmax	pmax		
	comp=Z,58nm,0.7s						
VSU	**Vasula**	**59.49**	**0**	*e*P	**P**	**11 43 55.9**	**+0.3**
BRVK	**Borovoye**	**60.06**	**332**	P	**P**	**11 43 59.2**	**-0.4**
BRVK				IAmb	IAmb	11 44 00.0	
	comp=Z,10nm,0.9s						
BRVK	**Borovoye**	**60.06**	**332**	P	**P**	**11 43 59.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURK	**Kurchatov**	**60.19**	**325**	P	**P**	**11 44 00.1**	**-0.4**
KURK				IAmb	IAmb	11 44 00.6	
	comp=Z,12nm,0.5s						
KURK	**Kurchatov**	**60.19**	**325**	P	**P**	**11 44 00.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,12nm,0.5s						
SLIT	**Slitere, Latvi**	**60.26**	**3**	*e*P	**P**	**11 44 01.0**	**+0.2**
KURBB	**Kurchatov Arra**	**60.30**	**325**	P	**P**	**11 44 00.2**	**-1.0**
DEL	**Delary**	**61.01**	**9**	*e*P	**P**	**11 44 05.5**	**-0.4**
JOW	**Kunigami**	**61.62**	**274**	P	**P**	**11 44 10.8**	**+0.3**
	comp=Z,11nm,0.6s,baz=82,slow=7.1,SNR=6.2						
	comp=Z,11nm,0.6s						
LYN	**LuoYang**	**62.23**	**292**	⇑P	**P**	**11 44 14.8**	**+0.4**
LYN				pmax	pmax		
	comp=Z,50nm,0.6s						
PABE	**Paberze**	**62.42**	**2**	*e*P	**P**	**11 44 15.9**	**+0.5**
OBN	**Obninsk**	**62.63**	**354**	*d i*P	**P**	**11 44 16.9**	**+0.2**
OBN				*e**PP	**PcP**	**11 44 53.8**	**-0.4**
OBN				*e*		11 46 36.5	
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
MK31	**Makanchi Array**	**62.72**	**321**	P	**P**	**11 44 16.8**	**-0.7**
MK31	**Makanchi Array**	**62.72**	**321**	P	**P**	**11 44 16.8**	**-0.7**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	**Makanchi Array**	**62.72**	**321**	P	**P**	**11 44 16.9**	**-0.7**
	comp=Z,8.6nm,0.4s,baz=36,slow=7.0,SNR=129						
MKAR				PP	**PP**	**11 46 33.7**	**-3.0**
	comp=Z,0.9nm,0.6s,baz=10,slow=7.6,SNR=3.6						
	comp=Z,8.6nm,0.4s						
MKAR	**Makanchi Array**	**62.72**	**321**	P	**P**	**11 44 16.7**	**-0.8**
MKAR	**Makanchi Array**	**62.72**	**321**	*i* P	**P**	**11 44 16.8**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,12nm,0.5s						
MAKZ	**Makanchi**	**62.80**	**321**	P	**P**	**11 44 17.5**	**-0.6**
MAKZ	**Makanchi**	**62.80**	**321**	P	**P**	**11 44 17.5**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,19nm,0.5s						
NACGM	**Naroch**	**63.05**	**0**	⇓*e*P	**P**	**11 44 19.5**	**-0.1**
	baz=360						
GTA	**Gaotai**	**63.26**	**304**	⇑P	**P**	**11 44 21.8**	**+0.4**
GTA				pP	PcP	11 44 57.8	+0.5
GTA				sP	sP	11 45 15.3	+2.1
GTA				pmax	pmax		
	comp=Z,32nm,0.9s						
MNK	**Minsk**	**63.46**	**360**	*i* P	**P**	**11 44 23.2**	**+1.0**
MNK				*i* *PP	**pP**	**11 44 58.8**	**+0.9**
MNK				*i*		11 46 44.2	
MNK				*i* PPP	PPP	11 48 15.5	
MNK				*i* S	**S**	**11 52 45.0**	**+2.2**
MNK				*i* SS	**SS**	**11 56 53.7**	**+2.5**
MNK				pmax	pmax		
	comp=Z,19nm,0.9s						
MNK				pmax	pmax		
	comp=N,27nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,624nm,13.0s						
MNK				MLR	MLR		
	comp=Z,147nm,13.0s						
MNK				MLR	MLR		
	comp=E,117nm,14.0s						
MNK	**Minsk**	**63.46**	**360**	*i* P	**P**	**11 44 23.2**	**+1.0**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**11 44 23.2**	**+1.0**
	comp=N,27nm,0.9s						
MNK				*i* P	**P**	**11 44 23.2**	**+1.0**
	comp=Z,19nm,0.9s,baz=180						
MNK				*i* pP	**pP**	**11 44 58.9**	**+0.9**
MNK				*i* PP	**PP**	**11 46 44.3**	**+1.3**
MNK				*i* PPP	PPP	11 48 15.6	
MNK				*i* S	**S**	**11 52 45.0**	**+2.2**
MNK				*i* sS	**sS**	**11 53 46.4**	**+2.2**
MNK				*i* SS	**SS**	**11 56 53.7**	**+2.5**
MNK				*i* SSS	SSS	11 59 56.0	
MNK				*i* LRM	MLR	12 15 09.1	
	comp=N,624nm,13.3s						
MNK				*i* LRM	MLR	12 15 12.3	
	comp=Z,147nm,12.7s						
MNK				*i* LRM	MLR	12 15 12.6	
	comp=E,117nm,13.7s						
WMQ	**Urumqi**	**63.71**	**316**	*e*P	**P**	**11 44 27.3**	**+3.1**
OTUK	**Ortayu**	**64.07**	**328**	P	**P**	**11 44 25.4**	**-1.0**
XAN	**Xi'an**	**64.19**	**294**	P	**P**	**11 44 26.9**	**-0.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BELG	**Belogornoye**	**64.47**	**346**	⇓*e*P	**P**	**11 44 29.0**	**+0.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LZH	**Lanzhou**	**64.54**	**299**	⇓P	**P**	**11 44 30.3**	**+0.5**
LZH				pP	pP	11 45 06.0	+0.5
LZH				pmax	pmax		
	comp=Z,24nm,1.5s						
WHN	**Wuhan**	**64.82**	**288**	⇓P	**P**	**11 44 31.5**	**0.0**
AB31	**Akbulak array**	**65.75**	**337**	*i* P	**P**	**11 44 36.5**	**-0.7**
ABKAR	**Akbulak array**	**65.75**	**337**	P	**P**	**11 44 37.2**	**0.0**
ABKAR	**Akbulak array**	**65.75**	**337**	P	**P**	**11 44 37.2**	**0.0**
ABKAR				IAmb	IAmb	11 44 37.8	
	comp=Z,11nm,0.8s						
CLL	**Collm**	**66.08**	**10**	*e*P	**P**	**11 44 39.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CLL	**Collm**	**66.08**	**10**	*e*P	**P**	**11 44 39.0**	**-0.3**
	comp=Z,3.0nm,0.6s						
BRG	**Berggiesshubel**	**66.58**	**9**	*e*P	**P**	**11 44 42.5**	**0.0**
BRG				Amp		11 44 44.1	
	comp=Z,2.5nm,0.8s						
BRG	**Berggiesshubel**	**66.58**	**9**	*e*P	**P**	**11 44 42.5**	**0.0**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDGK	**Podgornoye**	**66.69**	**321**	P	**P**	**11 44 42.9**	**-0.6**
CHVC	**Chvalec**	**67.02**	**8**	*e*P	**P**	**11 44 45.6**	**+0.3**
OSTC	**Ostas**	**67.06**	**8**	*e*P	**P**	**11 44 46.3**	**+0.8**
OSTC				AMS	AMS	12 09 10.0	
	comp=Z,200nm,16.4s						
UPC	**Upice**	**67.09**	**8**	AMS	AMS	12 09 30.0	
	comp=Z,200nm,12.1s						
NKC	**Novy Kostel**	**67.10**	**10**	AMS	AMS	12 11 00.0	
	comp=Z,200nm,14.4s						
AKASG	**Malin Array Be**	**67.26**	**359**	P	**P**	**11 44 46.4**	**-0.3**
	comp=Z,7.2nm,0.4s,baz=2.9,slow=6.2,SNR=46						
	comp=Z,7.2nm,0.4s						
AKASG	**Malin Array Be**	**67.26**	**359**	P	**P**	**11 44 46.7**	**0.0**
AKASG	**Malin Array Be**	**67.26**	**359**	P	**P**	**11 44 46.7**	**0.0**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKBB	**Malin Array Si**	**67.26**	**359**	P	**P**	**11 44 46.4**	**-0.3**
AKBB				IAmb	IAmb	11 44 47.1	
	comp=Z,13nm,0.7s						
AKBB	**Malin Array Si**	**67.26**	**359**	P	**P**	**11 44 46.4**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,13nm,0.7s						
DPC	**Dobruska-Polom**	**67.27**	**8**	*e*P	**P**	**11 44 47.4**	**+0.5**
DPC				MLR	MLR		
	comp=Z,200nm,16.9s						
DPC	**Dobruska-Polom**	**67.27**	**8**	*e*P	**P**	**11 44 47.4**	**+0.5**
DPC				AMS	AMS	12 09 30.0	
	comp=Z,200nm,16.9s						
PRU	**Pruhonice**	**67.51**	**9**	AMS	AMS	12 10 00.0	
	comp=Z,200nm,14.7s						
KRLC	**Kraliky**	**67.57**	**7**	*e*P	**P**	**11 44 48.7**	**-0.1**
KRLC	**Kraliky**	**67.57**	**7**	*e*P	**P**	**11 44 48.7**	**-0.1**
MATN	**Matagalpa**	**67.84**	**105**	P	**P**	**11 44 51.0**	**0.0**
MATN				IAmb	IAmb	11 44 51.5	
	comp=Z,19nm,0.7s						
MORC	**Moravsky Berou**	**67.91**	**7**	⇑P	**P**	**11 44 51.3**	**+0.4**
MORC	**Moravsky Berou**	**67.91**	**7**	P	**P**	**11 44 51.0**	**+0.1**
MORC	**Moravsky Berou**	**67.91**	**7**	P	**P**	**11 44 51.0**	**+0.1**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	**Moravsky Berou**	**67.91**	**7**	*e*P	**P**	**11 44 50.8**	**-0.1**
GOMU	**GeErMu**	**67.97**	**306**	P	**P**	**11 44 52.6**	**+0.7**
GOMU				pP	P	11 44 56.6	+4.7
GOMU				sP	P	11 44 57.6	+5.7
GOMU				pmax	pmax		
	comp=Z,19nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,56nm,5.0s						
TKM2	**Tokmak 2**	**68.17**	**324**	P	**P**	**11 44 53.1**	**+0.2**
	SNR=13						
TKM2	**Tokmak 2**	**68.17**	**324**	*i* P	**P**	**11 44 52.9**	**0.0**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TREC	**Trest**	**68.27**	**8**	AMS	AMS	12 09 50.0	
	comp=Z,200nm,15.8s						
KHC	**Kasperske Hory**	**68.29**	**10**	*e*P	**P**	**11 44 53.9**	**+0.6**
KHC				MLR	MLR		
	comp=Z,200nm,18.6s						
KHC	**Kasperske Hory**	**68.29**	**10**	*e*P	**P**	**11 44 53.9**	**+0.6**
KHC				AMS	AMS	12 13 40.0	
	comp=Z,200nm,18.6s						
VRAC	**Vranov**	**68.32**	**8**	*e*P	**P**	**11 44 52.8**	**-0.7**
CHMS	**Chumysh**	**68.33**	**325**	P	**P**	**11 44 54.1**	**+0.5**
	SNR=7.0						
CHMS	**Chumysh**	**68.33**	**325**	P	**P**	**11 44 53.8**	**+0.1**
KDJ	**Kajisay**	**68.46**	**322**	P	**P**	**11 44 55.0**	**+0.3**
KDJ				IAmb	IAmb	11 44 55.7	
	comp=Z,15nm,0.9s						
KDJ	**Kajisay**	**68.46**	**322**	P	**P**	**11 44 55.0**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
BOOM	**Boomskoye usch**	**68.48**	**323**	P	**P**	**11 44 55.3**	**+0.6**
BOOM	**Boomskoye usch**	**68.48**	**323**	P	**P**	**11 44 55.3**	**+0.6**
BOOM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KRUC	**Moravsky**	**68.56**	**8**	*e*P	**P**	**11 44 54.2**	**-0.7**
GERES	**GERESS Array B**	**68.58**	**10**	P	**P**	**11 44 54.8**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=3.6,slow=7.2,SNR=8.7						
	comp=Z,0.9nm,0.5s						
KBK	**Karagaybulak**	**68.60**	**324**	P	**P**	**11 44 56.0**	**+0.5**
	SNR=12						
LANS	**Liptovska Anna**	**68.64**	**6**	*e*P	**P**	**11 44 56.6**	**+1.2**
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	**Liptovska Anna**	**68.64**	**6**	*e*P	**P**	**11 44 56.6**	**+1.2**
CKRC	**Cesky Krumlov**	**68.65**	**9**	AMS	AMS	12 12 30.0	
	comp=Z,200nm,20.5s						
TARG	**Taragay, Kyrgy**	**68.65**	**322**	P	**P**	**11 44 56.0**	**-0.1**
TARG	**Taragay, Kyrgy**	**68.65**	**322**	P	**P**	**11 44 56.0**	**-0.1**
TARG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	**Ala-Archa**	**68.74**	**325**	P	**P**	**11 44 56.9**	**+0.5**
	SNR=9.4						
AAK	**Ala-Archa**	**68.74**	**325**	P	**P**	**11 44 56.8**	**+0.5**
AAK				IAmb	IAmb	11 44 57.5	
	comp=Z,12nm,0.8s						
AAK	**Ala-Archa**	**68.74**	**325**	P	**P**	**11 44 56.8**	**+0.5**
AAK				pmax	pmax		
	comp=Z,12nm,0.9s						
EKS2	**Erkin-Say**	**68.91**	**325**	P	**P**	**11 44 57.9**	**+0.6**
	SNR=6.0						
KOLS	**Kolonicke sedl**	**68.96**	**4**	*e*P	**P**	**11 44 58.4**	**+1.0**
KOLS	**Kolonicke sedl**	**68.96**	**4**	*e*P	**P**	**11 44 58.4**	**+1.0**
VYHS	**Vyhne**	**69.26**	**6**	*e*P	**P**	**11 44 59.6**	**+0.3**
VYHS	**Vyhne**	**69.26**	**6**	*e*P	**P**	**11 44 59.6**	**+0.3**
KK31	**Karatay Array**	**69.33**	**328**	P	**P**	**11 44 59.8**	**0.0**
KK31	**Karatay Array**	**69.33**	**328**	P	**P**	**11 44 59.8**	**0.0**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KKAR	**Karatay Array**	**69.33**	**328**	P	**P**	**11 44 59.4**	**-0.5**
KKAR	**Karatay Array**	**69.33**	**328**	P	**P**	**11 44 59.8**	**0.0**
KKAR				IAmb	IAmb	11 45 00.4	
	comp=Z,7.7nm,0.7s						
KKAR	**Karatay Array**	**69.33**	**328**	P	**P**	**11 44 59.8**	**0.0**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AML	**Almayashu**	**69.42**	**325**	P	**P**	**11 45 01.6**	**+0.8**
	SNR=18						
CONA	**Conrad Observa**	**69.65**	**8**	*i* P	**P**	**11 45 02.4**	**+0.6**
	comp=Z,3.5nm,0.7s						
BIOA	**Bad Ischl, Aus**	**69.72**	**10**	*i* P	**P**	**11 45 01.6**	**-0.6**
SORM	**Soroca**	**69.83**	**359**	⇓P	**P**	**11 45 02.2**	**-0.5**
PSZ	**Piszkesteto**	**69.89**	**5**	⇓P	**P**	**11 45 03.8**	**+0.6**
WTTA	**Wattenberg**	**69.97**	**11**	*i* P	**P**	**11 45 04.4**	**+0.5**
	comp=Z,3.3nm,0.5s						
SQTA	**Sankt Quirin**	**69.98**	**12**	*i* P	**P**	**11 45 04.3**	**+0.5**
	comp=Z,4.5nm,0.6s						
KBA	**Koelnbreinsper**	**70.31**	**10**	*i* P	**P**	**11 45 06.8**	**+0.9**
	comp=Z,7.2nm,0.6s						
BUR08	**Bucovina Ar. S**	**70.31**	**2**	P	**P**	**11 45 06.1**	**+0.3**
BURAR	**Bucovina Array**	**70.34**	**2**	⇑P	**P**	**11 45 06.0**	**0.0**
BURAR	**Bucovina Array**	**70.34**	**2**	P	**P**	**11 45 06.3**	**+0.3**
SOKA	**Soboth**	**70.84**	**9**	*i* P	**P**	**11 45 10.1**	**+1.1**
	comp=Z,2.3nm,0.7s						
OBKA	**Obir**	**70.97**	**9**	*i* P	**P**	**11 45 10.3**	**+0.5**
	comp=Z,10nm,0.6s						
BIZ	**Bicaz**	**71.03**	**1**	⇑P	**P**	**11 45 10.2**	**+0.2**
DRGR		**71.11**	**3**	⇑P	**P**	**11 45 10.8**	**+0.1**
KSH	**Kashi**	**71.23**	**322**	P	**P**	**11 45 14.9**	**+3.4**
KSH				pP	pP	11 45 49.5	+1.6
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
TESR	**Tescani**	**71.46**	**1**	⇓P	**P**	**11 45 12.2**	**-0.4**
DOPR	**Dopca**	**71.99**	**2**	⇓P	**P**	**11 45 16.4**	**+0.5**
VRI	**Vrincioaia**	**72.10**	**1**	⇓P	**P**	**11 45 16.2**	**-0.3**
PLOR	**Plostina**	**72.12**	**1**	⇑P	**P**	**11 45 17.0**	**+0.4**
BTK	**Batken**	**72.12**	**326**	P	**P**	**11 45 17.3**	**+0.5**
BTK				IAmb	IAmb	11 45 17.7	
	comp=Z,11nm,0.6s						
BTK	**Batken**	**72.12**	**326**	P	**P**	**11 45 17.3**	**+0.5**
BTK				pmax	pmax		
	comp=Z,11nm,0.6s						
BZS	**Buzias**	**72.25**	**4**	⇑P	**P**	**11 45 17.5**	**+0.1**
DRK	**Karamyk**	**72.41**	**325**	P	**P**	**11 45 19.7**	**+1.0**
DRK				IAmb	IAmb	11 45 20.1	
	comp=Z,18nm,0.7s						
MLR	**Muntele Rosu**	**72.47**	**1**	⇑P	**P**	**11 45 18.9**	**0.0**
GZR	**Gura Zlata**	**72.51**	**3**	⇓P	**P**	**11 45 18.8**	**-0.2**
VOIR		**72.52**	**2**	⇑P	**P**	**11 45 18.7**	**-0.3**
TPGR	**Topolog**	**73.11**	**359**	⇑P	**P**	**11 45 22.8**	**+0.4**
GAR	**Garm**	**73.25**	**326**	P	**P**	**11 45 23.7**	**+0.2**
GAR				IAmb	IAmb	11 45 24.4	
	comp=Z,23nm,0.7s						
KIV	**Kislovodsk**	**73.31**	**349**	*e*P	**P**	**11 45 24.6**	**+0.8**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	**Khabaz**	**73.52**	**348**	P	**P**	**11 45 23.7**	**-1.1**
	comp=Z,4.6nm,0.8s,baz=343,slow=6.4,SNR=11						
	comp=Z,4.6nm,0.8s						
KBZ	**Khabaz**	**73.52**	**348**	⇑*i*P	**P**	**11 45 25.7**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NCK	**Nalchik**	**73.68**	**348**	⇑*i*P	**P**	**11 45 26.9**	**+1.1**
NCK				pmax	pmax		
	comp=Z,13nm,0.3s						
PZH	**PanZhiHua**	**73.77**	**296**	P	**P**	**11 45 26.4**	**-0.3**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
CHGR	**Chuyangaron**	**73.86**	**327**	P	**P**	**11 45 27.4**	**+0.3**
CHGR	**Chuyangaron**	**73.86**	**327**	P	**P**	**11 45 27.4**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,88nm,0.7s						
BLKB	**Belogradchik**	**74.28**	**4**	⇑P	**P**	**11 45 28.8**	**-0.6**
ZEI	**Tsey**	**74.35**	**348**	*e*P	**P**	**11 45 29.8**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ESDC	**Sonseca Array**	**75.19**	**25**	P	**P**	**11 45 34.2**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=344,slow=5.8,SNR=11						
ESDC				LR	LR	12 22 44.4	
	comp=Z,55nm,19.1s,baz=50,slow=39						
	comp=Z,1.8nm,0.9s						
PESTR	**Estremoz**	**75.22**	**28**	*e*P	**P**	**11 45 35.8**	**+1.0**
	comp=Z,16nm,1.6s						
PNCL	**Nicolau / Gran**	**75.74**	**29**	*e*P	**P**	**11 45 38.1**	**+0.4**
	comp=Z,28nm,1.7s						
PVAQ	**Vaqueiros**	**76.60**	**28**	*e*P	**P**	**11 45 42.5**	**-0.1**
	comp=Z,46nm,1.9s						
GNI	**Garni**	**76.87**	**346**	⇓*e*P	**P**	**11 45 45.4**	**+1.1**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
NIL	**Nilore**	**77.48**	**322**	P	**P**	**11 45 46.9**	**-0.7**
NIL				IAmb	IAmb	11 45 47.7	
	comp=Z,16nm,0.6s						
NIL	**Nilore**	**77.48**	**322**	P	**P**	**11 45 46.9**	**-0.7**
NIL				pmax	pmax		
	comp=Z,16nm,0.6s						
ZARC	**Zaragoza, Cauc**	**77.69**	**97**	P	**P**	**11 45 47.7**	**-1.2**
ZARC				IAmb	IAmb	11 45 48.9	
	comp=Z,11nm,0.6s						
BR131	**Keskin Array S**	**78.12**	**355**	P	**P**	**11 45 51.1**	**-0.1**
BR131	**Keskin Array S**	**78.12**	**355**	⇓*e*P	**P**	**11 45 51.8**	**+0.6**
BRTR	**Keskin Array B**	**78.12**	**355**	P	**P**	**11 45 50.1**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=29,slow=2.8,SNR=9.6						
	comp=Z,2.1nm,0.8s						
BRTR	**Keskin Array B**	**78.12**	**355**	P	**P**	**11 45 51.3**	**+0.1**
BRTR	**Keskin Array B**	**78.12**	**355**	*i* P	**P**	**11 45 51.5**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BAUV	**El Baul**	**79.58**	**91**	P	**P**	**11 45 59.0**	**-0.3**
MDT	**Midelt**	**81.68**	**27**	LR	LR	12 24 38.5	
	comp=Z,58nm,20.4s,baz=80,slow=37						
CM31	**Chiang Mai Arr**	**82.08**	**295**	P	**P**	**11 46 12.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**82.08**	**295**	P	**P**	**11 46 12.1**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=5.5,slow=5.5,SNR=19						
	comp=Z,4.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**82.08**	**295**	P	**P**	**11 46 12.1**	**-0.4**
OTAV	**Otavalo**	**82.44**	**104**	P	**P**	**11 46 14.5**	**-0.5**
OTAV	**Otavalo**	**82.44**	**104**	P	**P**	**11 46 14.5**	**-0.5**
OTAV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**146.20**	**4**	PKPbc	**PKPab**	**11 53 32.1**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=22,slow=2.9,SNR=12						
BOSA	**Boshof**	**146.20**	**4**		**PKPab**	**11 53 33.0**	**+0.8**
BOSA	**Boshof**	**146.20**	**4**	PKP2	**PKPab**	**11 53 33.0**	**+0.8**

KOLA 21 11:39:33.1, 67°.61N×30°.69E, h0^{km}, ML2.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.88**	**89**	P	Pg	11 39 48.3	-1.7
APA0				S	Sg	11 40 00.8	-0.6
APA	**Apatity**	**1.04**	**91**	S	Sg	11 40 05.8	-0.8
LVZ	**Lovozero**	**1.54**	**77**	P	Pn	11 40 00.1	-1.7
LVZ				S	Sg	11 40 21.1	-1.4
ARCES	**ARCESS Array B**	**2.71**	**318**	P	Pn	11 40 17.4	-0.6
ARCES				S	Sn	11 40 49.9	-1.6

HEL 21 11:40:20.2±0.3, 67°.58N×30°.48E, h0^{km}, ML2.0,

Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.38**	**298**	PG	Pg	11 40 27.3	-0.1
	baz=121						
VRF				SG	Sg	11 40 31.9	-0.3
OLKF	**Oulanka, Finla**	**1.33**	**199**	PN	Pg	11 40 45.1	-0.6
	baz=15						
OLKF				SN	Sn	11 41 04.8	+0.3
SGF	**Sodankyl**	**1.53**	**267**	PG	Pn	11 40 47.9	-0.8
SGF				SG	Sg	11 41 07.8	-1.4
KU6	**Riekki**	**1.58**	**189**	PG	Pn	11 40 49.0	-0.3
KU6				MSG		11 41 07.4	
	comp=Z,5.6nm,0.2s						
KU6				SN	Sn	11 41 09.9	-0.5
MSF	**Maaselka**	**1.77**	**200**	PG	Pn	11 40 52.1	+0.1
	baz=23						
MSF				SG	Sn	11 41 14.7	-0.5
RNF	**Rovaniemi**	**2.00**	**243**	PG	Pn	11 40 55.7	+0.5
RNF				SG	Sb	11 41 22.5	-0.3
KEV	**Kevo**	**2.53**	**331**	*e*P	Pn	11 41 04.1	+1.7
KEV	**Kevo**	**2.53**	**331**	PG	Pn	11 41 04.1	+1.6
KEV				MSG		11 41 34.8	
	comp=Z,14nm,0.2s						
KEV				SG	Sb	11 41 36.9	-1.2
KLF	**Kolari**	**2.54**	**265**	PB	Pn	11 41 04.5	+1.9
KLF				SG	Sb	11 41 37.5	-0.8
ARA0	**ARCESS Array S**	**2.69**	**319**	*e*P	Pb	11 41 07.5	-1.6
ARA0	**ARCESS Array S**	**2.69**	**319**	PB	Pn	11 41 06.8	+2.2
	baz=132						
ARA0				SB	Sb	11 41 40.9	-1.6
HEF	**Hetta**	**2.70**	**291**	MSG		11 41 39.8	
	comp=Z,7.7nm,0.2s						
HEF				SG	Sb	11 41 41.6	-1.4
TOF	**Tornio**	**2.86**	**241**	MSG		11 41 44.4	
	comp=Z,5.4nm,0.2s						
TOF				SG	Sb	11 41 46.7	-0.8
PAJU	**Pajala**	**2.91**	**262**	PN	Pn	11 41 08.0	+0.3
PAJU				SN	Sn	11 41 43.6	+0.2
ERTU	**Ertsjaerv**	**3.41**	**256**	PN	Pn	11 41 14.8	+0.4
	baz=72						
KIF	**Kilpisjarvi**	**3.87**	**296**	SG	Sg	11 42 22.1	-2.2
OUF	**Merijarvi**	**3.99**	**219**	PN	Pn	11 41 22.0	-0.5
	baz=31						

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*FUNV **21** 12:03:28.4, 11°.38N×62°.99W, h83km, MW3.2*
*TRN **21** 12:03:29.9, 10°.72N×62°.50W, h88km, MD3.1*
ISC 21 12:03:25.2±2.0**, 10°.65N**±0°.09×**62°.63W**±0°.06**,**
h122km±16km**, n8, σ2s.00**/13**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.60**	**273**	*e*P	**Pn**	**12 03 46.1**	**+2.1**
CRUV				*e*S	**Sn**	**12 03 56.9**	**-1.4**
TRN	**Trinidad (W)**	**1.20**	**90**	*e*P	**Pn**	**12 03 50.8**	**+1.3**
TRN				*e*S	**Sn**	**12 04 05.6**	**-2.3**
GRFF	**Grenada Fort F**	**1.64**	**32**	*e*P	**Pn**	**12 03 55.8**	**+1.2**
GRFF				*e*S	**Sn**	**12 04 14.6**	**-2.3**
GRGR	**Grenville**	**1.76**	**33**	*e*P	**Pn**	**12 03 57.2**	**+1.3**
GRGR				*e*S	**Sn**	**12 04 17.9**	**-1.3**
TOSP	**Speyside**	**2.15**	**72**	*e*P	**Pn**	**12 04 03.0**	**+2.3**
TOSP				*e*S	**Sn**	**12 04 25.7**	**-2.2**
GCMP	**Grenada, Carri**	**2.17**	**33**	*e*P	**Pn**	**12 04 02.3**	**+1.3**
GCMP				*e*S	**Sn**	**12 04 27.5**	**-0.8**
CACV	**CAICARA DEL OR**	**4.93**	**232**	*e*P	Pn	12 04 37.7	+0.4
CACV				*e*S	Sn	12 05 28.5	-4.9
BAUV	**El Baul**	**5.60**	**253**	*e*P	**Pn**	**12 04 46.5**	**+0.1**
BAUV				*e*S	Sn	12 05 44.6	-5.0

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*SOME **21** 12:09:37.5, 41°.00N×72°.43E, h5km*
*KRNET **21** 12:09:39.5±0.1, 41°.03N×72°.81E, h28km, mb2.1*
*NNC **21** 12:09:40.1±1.8, 41°.09N×72°.37E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=14.1km s-min=5.4km az=164.0
ISC 21 12:09:38.4±1.2**, 41°.10N**±0°.03×**72°.58E**±0°.04**, h8**km±11km**,**
n14, σ1s.80/25**, 9C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**0.60**	**165**	⇑*e*P	**Pg**	**12 09 49.7**	**-0.2**
	baz=82						
OHH				⇑*e*S	**Sg**	**12 09 57.5**	**-0.2**
	baz=82						
ARK	**Arkit**	**0.84**	**327**	⇑*i*P	**Pn**	**12 09 58.1**	**+1.5**
	baz=21						
ARK				⇑*i*S	**Sn**	**12 10 11.6**	**+2.5**
	baz=21						
ARLS	**Aral**	**1.52**	**59**	⇑*i*P	**Pn**	**12 10 05.2**	**-0.8**
	baz=54						
ARLS				⇑*i*S	**Sn**	**12 10 23.8**	**-2.2**
	baz=54						
BTK	**Batken**	**1.70**	**233**	⇑*e*P	**Pg**	**12 10 11.1**	**+0.2**
	baz=38						
BTK				⇑*e*S	**Sg**	**12 10 34.4**	**+1.5**
	baz=38						
MRKS	**Merke**	**1.71**	**16**	*e*P	**Pg**	**12 10 11.9**	**+0.7**
	2.4nm,0.3s						
MRKS				*e*S	**Sg**	**12 10 36.1**	**+2.6**
	4.4nm,0.2s						
MRKS	**Merke**	**1.71**	**16**	P	**Pg**	**12 10 12.2**	**+1.0**
	2.4nm,0.3s						
MRKS				S	**Sg**	**12 10 36.1**	**+2.6**
	4.4nm,0.2s						
DRK	**Karamyk**	**1.72**	**200**	⇓*e*P	**Pn**	**12 10 10.1**	**+1.2**
	baz=7.0						
DRK				⇓*e*S	**Sn**	**12 10 32.5**	**+1.2**
	baz=7.0						
UCH	**Uchtor**	**1.84**	**52**	⇓*i*P	**Pn**	**12 10 10.4**	**-0.2**
	baz=46						
UCH				⇓*e*S	**Sn**	**12 10 33.1**	**-1.2**
	baz=46						
AAK	**Ala-Archa**	**2.10**	**42**	⇓*e*P	**Pn**	**12 10 14.3**	**+0.3**
	baz=38						
AAK				⇓*e*S	**Sn**	**12 10 39.8**	**-0.6**
	baz=38						
IUG	**Iuzhnay**	**2.18**	**300**	*e*P	**Pb**	**12 10 17.3**	**-0.7**
	2.8nm,0.2s						
IUG				*e*S	**Sg**	**12 10 45.5**	**-2.8**
	5.6nm,0.2s						
IUG	**Iuzhnay**	**2.18**	**300**	Pg	**Pb**	**12 10 17.3**	**-0.7**
	400nm,0.3s						
IUG				Lg	Lg	12 10 45.5	
	32nm,0.3s						
KK31	**Karatay Array**	**2.52**	**323**	⇑Pg	**Pb**	**12 10 23.5**	**-0.4**
	0.7nm,0.4s,baz=138,slow=16,SNR=4.8						
KK31				Lg	Lg	12 10 58.3	
	3.1nm,0.4s,baz=135,slow=28,SNR=7.7						
BRLS	**Borolday**	**2.81**	**314**	*e*P	**Pb**	**12 10 28.0**	**-0.8**
	8.0nm,0.5s						
BRLS				*e*S	**Sg**	**12 11 03.9**	**-4.6**
	2.4nm,0.4s						
BRLS	**Borolday**	**2.81**	**314**	Pg	**Pb**	**12 10 28.0**	**-0.8**
	8.0nm,0.5s						
BRLS				Lg	Lg	12 11 03.9	
	2.4nm,0.4s						

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*IDC **21** 12:11:09.6±2.3, 12°.84S×72°.99W, h45km±27km, mb3.2/2,*
mbtmp3.6/5, ML3.6/3, Error ellipse: s-maj=47.3km
s-min=17.9km az=26.0
ISC 21 12:11:08.9±1.0**, 12°.9S**±0°.2×**73°.0W**±0°.1**, h35**km**, n6, σ1s.25**/8**,**
Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.86**	**283**	P	**Pn**	**12 12 05.1**	**-0.8**
	9.7nm,0.3s,baz=98,slow=8.4,SNR=8.7						
NNA				S	**Sn**	**12 12 51.3**	**+1.2**
	38nm,0.4s,baz=135,slow=1.4,SNR=7.4						
	20nm,0.3s						
LPAZ	**La Paz**	**5.80**	**126**	P	**Pn**	**12 12 34.5**	**+1.4**
	0.3nm,0.3s,baz=309,slow=11,SNR=4.3						
	1.6nm,0.4s						
ATAH	**Atahualpa**	**7.80**	**316**	P	**Pn**	**12 13 01.0**	**+0.7**
	1.6nm,0.3s,baz=142,slow=4.4,SNR=6.8						
ATAH				S	**Sn**	**12 14 28.6**	**+1.0**
	5.7nm,0.8s,baz=63,slow=11,SNR=3.5						
	5.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**78.41**	**74**	P	**P**	**12 23 05.7**	**-1.0**
	0.6nm,0.8s,baz=253,slow=4.0,SNR=4.9						
	0.6nm,0.8s						
YKA	**Yellowknife Ar**	**81.81**	**342**	P	**P**	**12 23 22.9**	**-1.0**
	0.1nm,0.6s,baz=134,slow=5.3,SNR=2.3						
	0.1nm,0.6s						
SONM	**Songino Array**	**145.14**	**1**	PKPbc	**PKPab**	**12 30 42.2**	**-0.4**
	0.3nm,0.4s,baz=40,slow=2.5,SNR=3.6						

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*AUST **21** 12:22:39.5±0.0, 25°.48S×129°.91E, h0km, Error ellipse:*
s-maj=0.1km s-min=0.1km az=349.0
*IDC **21** 12:22:46.6±4.5, 25°.06S×130°.21E, h0km, mbtmp2.8/3,*
ML2.7/3, Error ellipse: s-maj=35.0km s-min=25.3km
az=79.0
ISC 21 12:22:39.2±1.1**, 25°.47S**±0°.06×**129°.91E**±0°.05**, h10**km**, n10,**
σ1s.43/18**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.53**	**286**	P	**Pn**	**12 23 07.1**	**+0.5**
	baz=1.5						
WRKA				S	**Sn**	**12 23 27.7**	**+1.2**
	baz=1.5						
ASPA	**Alice Springs**	**4.05**	**65**	P	**Pn**	**12 23 43.5**	**+2.2**
	baz=4.1						
ASPA				S	**Sn**	**12 24 30.1**	**+1.2**
	baz=4.1						
ASAR	**Alice Springs**	**4.05**	**65**	Pn	**Pn**	**12 23 42.7**	**+1.3**
	0.2nm,0.3s,baz=245,slow=11,SNR=16						
ASAR				Pg	**Pg**	**12 23 55.0**	**-1.8**
	0.4nm,0.3s,baz=244,slow=16,SNR=16						
ASAR				Sn	**Sn**	**12 24 30.0**	**+1.1**
	0.5nm,0.3s,baz=248,slow=22,SNR=10						
ASAR				Lg	Lg	12 24 43.2	
	0.5nm,0.3s,baz=245,slow=28,SNR=8.4						
	0.4nm,0.3s						
FORT	**Forrest**	**5.54**	**197**	P	**Pn**	**12 24 03.1**	**+1.4**
	baz=5.5						
FORT				S	**Sn**	**12 25 05.0**	**-0.5**
	baz=5.5						
OOD	**Oodnadatta**	**5.66**	**115**	P	**Pn**	**12 24 04.8**	**+1.3**
	baz=5.7						
MULG	**Mulgathing**	**6.04**	**144**	P	**Pn**	**12 24 10.6**	**+2.0**
	baz=6.0						
MULG				S	**Sn**	**12 25 17.4**	**-0.4**
	baz=6.0						
WRA	**Warramunga Arr**	**6.85**	**37**	Pn	**Pn**	**12 24 20.5**	**+0.6**
	0.1nm,0.3s,baz=220,slow=14,SNR=9.8						
WRA				Sn	**Sn**	**12 25 36.7**	**-1.2**
	0.1nm,0.3s,baz=214,slow=31,SNR=1.5						
WRA				Lg	Lg	12 26 07.9	
	0.1nm,0.3s,baz=216,slow=25,SNR=1.3						
	0.3nm,0.5s						
WC3	**Warramunga Arr**	**6.85**	**38**	P	**Pn**	**12 24 21.1**	**+1.2**
	baz=6.9						
WC3				S	**Sn**	**12 25 36.4**	**-1.6**
	baz=6.9						
WB2	**Warramunga Arr**	**6.86**	**38**	P	**Pn**	**12 24 21.4**	**+1.5**
	baz=6.9						
WB2				S	**Sn**	**12 25 37.9**	**-0.2**
	baz=6.9						
STKA	**Stephens Creek**	**12.08**	**125**	Pn	Pn	12 25 42.0	+11
	0.1nm,0.3s,baz=328,slow=19,SNR=1.5						
	0.7nm,0.7s						

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*NOU **21** 12:41:01.9, 38°.98S×175°.63E, h133km, MLv3.9/8, North*
Island, New Zealand
*WEL **21** 12:41:06.5±0.5, 39°S±3°×17°6E±°, h84km±4km, M2.9/53,*
ML2.8/31, MLv2.9/53, Error ellipse: s-maj=0.0km
s-min=0.0km az=114.2
ISC 21 12:41:03.1±1.4**, 39°.04S**±0°.03×**175°.63E**±0°.04**, h117**km±7km**,**
n137, σ1s.11/153**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTVZ	**North Tongarir**	**0.07**	**149**	P	**Pn**	**12 41 19.9**	**+0.6**
KATZ	**Kakaramea**	**0.08**	**37**	P	**Pn**	**12 41 19.5**	**+0.2**
WTVZ	**West Tongariro**	**0.08**	**203**	P	**Pn**	**12 41 19.8**	**+0.6**
NNVZ	**North Ngauruho**	**0.09**	**188**	P	**Pn**	**12 41 19.8**	**+0.5**
TMVZ	**Te Maari**	**0.09**	**143**	P	**Pn**	**12 41 19.9**	**+0.6**
TMVZ				S	**Sn**	**12 41 30.8**	**-0.7**
ETVZ	**East Tongariro**	**0.11**	**147**	P	**Pn**	**12 41 20.0**	**+0.7**
ETVZ				S	**Sn**	**12 41 30.8**	**-0.7**
OTVZ	**Oturere**	**0.13**	**168**	P	**Pn**	**12 41 20.0**	**+0.6**
NGZ	**Ngauruhoe**	**0.14**	**190**	P	**Pn**	**12 41 20.1**	**+0.7**
NGZ				S	**Sn**	**12 41 30.8**	**-0.8**
SNVZ	**South Ngauruho**	**0.15**	**177**	P	**Pn**	**12 41 19.9**	**+0.5**
TWVZ	**Taurewa**	**0.15**	**258**	P	**Pn**	**12 41 19.8**	**+0.5**
TWVZ				S	**Sn**	**12 41 30.3**	**-1.2**
RITZ	**Rihia Road**	**0.19**	**71**	P	**Pn**	**12 41 19.9**	**+0.6**
RATZ	**Rangitukua**	**0.20**	**32**	P	**Pn**	**12 41 19.5**	**+0.1**
FWVZ	**Far West T-bar**	**0.22**	**196**	P	**Pn**	**12 41 20.4**	**+0.7**
FWVZ				S	**Sn**	**12 41 31.3**	**-0.9**
TUVZ	**Tukino**	**0.23**	**176**	P	**Pn**	**12 41 20.4**	**+0.8**
TUVZ				S	**Sn**	**12 41 31.5**	**-0.5**
WHVZ	**Whangaehu Hut**	**0.24**	**188**	P	**Pn**	**12 41 20.6**	**+0.8**
WHVZ				S	**Sn**	**12 41 31.6**	**-0.7**
TRVZ	**Turoa**	**0.27**	**194**	P	**Pn**	**12 41 20.8**	**+1.0**
TRVZ				S	**Sn**	**12 41 31.8**	**-0.7**
WNVZ	**Wahianoa**	**0.29**	**185**	P	**Pn**	**12 41 20.7**	**+0.8**
WNVZ				S	**Sn**	**12 41 31.6**	**-0.8**
PKVZ	**Pokaka**	**0.33**	**222**	P	**Pn**	**12 41 20.7**	**+0.8**
PKVZ				S	**Sn**	**12 41 32.5**	**-0.1**
WATZ	**Wairara**	**0.34**	**13**	P	**Pn**	**12 41 20.2**	**+0.3**
MTVZ	**Mangateitei**	**0.37**	**200**	P	**Pn**	**12 41 21.0**	**+1.0**
MOVZ	**Moawhango**	**0.38**	**166**	P	**Pn**	**12 41 20.7**	**+0.6**
MOVZ				S	**Sn**	**12 41 31.8**	**-1.1**
HATZ	**Hinemaiaia**	**0.39**	**68**	P	**Pn**	**12 41 20.2**	**+0.1**
WHTZ	**Whakaora**	**0.45**	**34**	P	**Pn**	**12 41 21.1**	**+0.6**
BHHZ	**Black Hill Sta**	**0.56**	**143**	P	**Pn**	**12 41 21.8**	**+0.7**
BHHZ				S	**Sn**	**12 41 33.7**	**-1.0**
KUTZ	**Kaahu Road**	**0.57**	**15**	P	**Pn**	**12 41 21.7**	**+0.5**
MRHZ	**Matea Rd**	**0.65**	**72**	P	**Pn**	**12 41 21.9**	**+0.2**
MRHZ				S	**Sn**	**12 41 34.3**	**-1.5**
WPRZ	**Whakapapatarin**	**0.67**	**39**	P	**Pn**	**12 41 22.2**	**+0.3**
BKZ	**Black Stump Fm**	**0.68**	**101**	P	**Pn**	**12 41 22.5**	**+0.5**
BKZ	**Black Stump Fm**	**0.68**	**101**	P	**Pn**	**12 41 22.5**	**+0.5**
VRZ	**Vera Road**	**0.69**	**263**	P	**Pn**	**12 41 23.2**	**+1.3**
TLZ	**Tolley Road**	**0.71**	**354**	P	**Pn**	**12 41 22.8**	**+0.6**
TLZ				S	**Sn**	**12 41 36.0**	**-0.8**
KWHZ	**Kaweka Forest**	**0.72**	**122**	P	**Pn**	**12 41 23.3**	**+1.0**
ALRZ	**Allen Road**	**0.73**	**50**	P	**Pn**	**12 41 22.6**	**+0.2**
GRRZ	**Galatos Road**	**0.78**	**29**	P	**Pn**	**12 41 23.6**	**+0.7**
HIZ	**Hauiti**	**0.80**	**311**	P	**Pn**	**12 41 23.9**	**+0.9**
HIZ	**Hauiti**	**0.80**	**311**	P	**Pn**	**12 41 23.8**	**+0.9**
PRRZ	**Plateau Road**	**0.80**	**48**	P	**Pn**	**12 41 23.3**	**+0.3**
HRRZ	**Handcock Road**	**0.82**	**38**	P	**Pn**	**12 41 23.9**	**+0.7**
KRHZ	**Kereru**	**0.83**	**137**	P	**Pn**	**12 41 24.7**	**+1.4**
KRHZ				S	**Sn**	**12 41 38.9**	**+0.4**
HSRZ	**Hossack Road**	**0.87**	**34**	P	**Pn**	**12 41 24.3**	**+0.7**
WAZ	**Wanganui**	**0.87**	**215**	P	**Pn**	**12 41 25.5**	**+1.9**
NMHZ	**Naumai**	**0.92**	**94**	P	**Pn**	**12 41 25.6**	**+1.5**
MCHZ	**McNeill Hill**	**0.92**	**116**	P	**Pn**	**12 41 25.9**	**+1.9**
MTHZ	**Maungataniwha**	**0.96**	**79**	P	**Pn**	**12 41 25.0**	**+0.5**
UTU	**Utuhina**	**0.97**	**27**	P	**Pn**	**12 41 25.5**	**+1.0**
PNHZ	**Pukenui**	**0.98**	**153**	P	**Pn**	**12 41 26.1**	**+1.5**
RRRZ	**Republican Roa**	**0.98**	**45**	P	**Pn**	**12 41 25.2**	**+0.6**
MHEZ	**Mangahewa**	**1.02**	**268**	P	**Pn**	**12 41 27.2**	**+2.3**
LREZ	**Lake Rotokare**	**1.04**	**246**	P	**Pn**	**12 41 27.2**	**+2.0**
TSZ	**Takapari Road**	**1.05**	**166**	P	**Pn**	**12 41 27.0**	**+1.6**
MUGZ	**Murupara**	**1.05**	**58**	P	**Pn**	**12 41 25.7**	**+0.3**
TARZ	**Mount Tarawera**	**1.05**	**41**	P	**Pn**	**12 41 26.4**	**+1.0**
ARHZ	**Aropaoanui**	**1.08**	**102**	P	**Pn**	**12 41 27.6**	**+1.9**
OMRZ	**Omania**	**1.10**	**32**	P	**Pn**	**12 41 26.6**	**+0.8**
DREZ	**Durham Road**	**1.12**	**262**	P	**Pn**	**12 41 28.1**	**+2.1**
KARZ	**Kaharoa**	**1.13**	**25**	P	**Pn**	**12 41 26.9**	**+0.8**
RTZ	**Ruatahuna**	**1.14**	**69**	P	**Pn**	**12 41 26.7**	**+0.4**
RAHZ	**Arahi**	**1.14**	**84**	P	**Pn**	**12 41 27.4**	**+1.2**
OHWZ	**Ohakea**	**1.19**	**192**	P	**Pn**	**12 41 29.2**	**+2.5**
WPHZ	**Waipukurau**	**1.20**	**149**	P	**Pn**	**12 41 28.5**	**+1.6**
NEZ	**North Egmont**	**1.22**	**259**	P	**Pn**	**12 41 29.3**	**+2.2**
KMRZ	**Kaimai**	**1.22**	**12**	P	**Pn**	**12 41 28.1**	**+1.0**
KAHZ	**Kahuranaki**	**1.22**	**128**	P	**Pn**	**12 41 29.0**	**+1.8**
CKHZ	**Cape Kidnapper**	**1.28**	**119**	P	**Pn**	**12 41 29.6**	**+1.9**
KHEZ	**Kahui Hut**	**1.28**	**258**	P	**Pn**	**12 41 30.1**	**+2.2**
PKE	**Pukeiti**	**1.29**	**263**	P	**Pn**	**12 41 29.8**	**+1.9**
TOZ	**Tahuroa Road**	**1.31**	**355**	P	**Pn**	**12 41 29.2**	**+1.1**
TOZ				S	**Sn**	**12 41 47.0**	**0.0**
DVHZ	**Dannevirke**	**1.32**	**162**	P	**Pn**	**12 41 29.7**	**+1.4**
MARZ	**Manawahe**	**1.33**	**38**	P	**Pn**	**12 41 29.5**	**+1.1**
POWZ	**Post Office Ro**	**1.35**	**176**	P	**Pn**	**12 41 30.0**	**+1.4**
SNGZ	**Shannon Statio**	**1.36**	**80**	P	**Pn**	**12 41 29.6**	**+1.0**
PXZ	**Pawanui**	**1.37**	**137**	P	**Pn**	**12 41 30.3**	**+1.5**
URZ	**Urewera**	**1.40**	**57**	P	**Pn**	**12 41 29.4**	**+0.3**
URZ	**Urewera**	**1.40**	**57**	P	**Pn**	**12 41 29.4**	**+0.3**
OPRZ	**Ohinepanea**	**1.40**	**32**	P	**Pn**	**12 41 29.9**	**+0.9**
TGRZ	**Tauranga**	**1.40**	**21**	P	**Pn**	**12 41 30.1**	**+1.0**
PRHZ	**Porangahau**	**1.45**	**148**	P	**Pn**	**12 41 31.4**	**+1.7**
PRWZ	**Pori Road**	**1.54**	**170**	P	**Pn**	**12 41 32.4**	**+1.7**
ANWZ	**Angora Road**	**1.56**	**156**	P	**Pn**	**12 41 32.7**	**+1.8**
KNZ	**Kokohu**	**1.59**	**90**	P	**Pn**	**12 41 32.4**	**+1.1**
MRZ	**Mangatainoka R**	**1.62**	**181**	P	**Pn**	**12 41 33.0**	**+1.3**
MWZ	**Matawai**	**1.64**	**65**	P	**Pn**	**12 41 32.5**	**+0.5**
RIGZ	**Rimuhau**	**1.70**	**79**	P	**Pn**	**12 41 33.8**	**+1.2**
BFZ	**Birch Farm**	**1.71**	**164**	P	**Pn**	**12 41 34.1**	**+1.4**
BFZ	**Birch Farm**	**1.71**	**164**	P	**Pn**	**12 41 34.1**	**+1.4**
TIWZ	**Tintock**	**1.75**	**174**	P	**Pn**	**12 41 34.6**	**+1.4**
MHGZ	**Mahia Peninsul**	**1.77**	**94**	P	**Pn**	**12 41 34.7**	**+1.2**
OGWZ	**Otaki Gorge**	**1.81**	**191**	P	**Pn**	**12 41 35.4**	**+1.5**
MYRZ	**Mayor Island**	**1.82**	**15**	P	**Pn**	**12 41 35.6**	**+1.5**
TKGZ	**Te Karaka**	**1.83**	**72**	P	**Pn**	**12 41 35.5**	**+1.3**
HOWZ	**Holdsworth Sta**	**1.86**	**183**	P	**Pn**	**12 41 35.6**	**+1.0**
KIW	**Kapiti Island**	**1.90**	**197**	P	**Pn**	**12 41 36.2**	**+1.1**
CPWZ	**Castlepoint**	**1.92**	**167**	P	**Pn**	**12 41 37.0**	**+1.7**
RUGZ	**Raukumara Rang**	**1.93**	**57**	P	**Pn**	**12 41 35.6**	**0.0**
MKAZ	**Moumakai**	**1.97**	**349**	P	**Pn**	**12 41 37.0**	**+1.1**
TWGZ	**Tauwhareparae**	**2.03**	**66**	P	**Pn**	**12 41 38.0**	**+1.2**
TMWZ	**Te Maipa**	**2.07**	**175**	P	**Pn**	**12 41 38.3**	**+1.0**
CNGZ	**Carnagh Statio**	**2.09**	**75**	P	**Pn**	**12 41 38.6**	**+1.2**
CAW	**Cannon Point**	**2.11**	**192**	P	**Pn**	**12 41 38.6**	**+0.9**
MTW	**Mount Morrison**	**2.12**	**183**	P	**Pn**	**12 41 38.6**	**+0.8**
HAZ	**Te Kaha**	**2.12**	**53**	P	**Pn**	**12 41 38.0**	**+0.2**
ETAZ	**East Tamaki Re**	**2.16**	**345**	P	**Pn**	**12 41 39.5**	**+1.2**
DUWZ	**D’Urville Isla**	**2.20**	**216**	P	**Pn**	**12 41 39.8**	**+1.0**
PKGZ	**Pakihiroa**	**2.24**	**60**	P	**Pn**	**12 41 40.2**	**+0.8**
EPAZ	**Eden Park BICE**	**2.27**	**342**	P	**Pn**	**12 41 41.1**	**+1.3**
PUZ	**Puketiti**	**2.27**	**66**	P	**Pn**	**12 41 40.3**	**+0.4**
WIAZ	**Waiheke Island**	**2.28**	**350**	P	**Pn**	**12 41 41.1**	**+1.2**
KUZ	**Kuaotunu**	**2.29**	**2**	P	**Pn**	**12 41 41.1**	**+1.1**
HBAZ	**Herne Bay Bore**	**2.30**	**342**	P	**Pn**	**12 41 41.3**	**+1.2**
WEL	**Wellington**	**2.34**	**196**	P	**Pn**	**12 41 41.2**	**+0.6**
MBAZ	**Motutapu North**	**2.34**	**345**	P	**Pn**	**12 41 41.3**	**+0.6**
TRWZ	**Traveller**	**2.36**	**179**	P	**Pn**	**12 41 41.4**	**+0.6**
SNZO	**South Karori**	**2.38**	**197**	P	**Pn**	**12 41 41.6**	**+0.5**
MSWZ	**Moikau Station**	**2.39**	**187**	P	**Pn**	**12 41 41.8**	**+0.5**
TCW	**Tory Channel**	**2.40**	**205**	P	**Pn**	**12 41 42.1**	**+0.6**
RVAZ	**Riverhead Bore**	**2.41**	**340**	P	**Pn**	**12 41 43.2**	**+1.6**
BHW	**Baring Head**	**2.44**	**194**	P	**Pn**	**12 41 42.2**	**+0.3**
WMGZ	**Waiomatatini S**	**2.50**	**62**	P	**Pn**	**12 41 43.2**	**+0.5**
PLWZ	**Palliser**	**2.54**	**186**	P	**Pn**	**12 41 43.6**	**+0.3**
MXZ	**Matakaoa Point**	**2.57**	**56**	P	**Pn**	**12 41 45.0**	**+1.4**
TUWZ	**Tuamarina**	**2.71**	**208**	P	**Pn**	**12 41 45.9**	**+0.4**
NNZ	**Nelson**	**2.78**	**218**	P	**Pn**	**12 41 46.7**	**+0.5**
GRZ	**Great Barrier**	**2.79**	**357**	P	**Pn**	**12 41 47.7**	**+1.3**
TKNZ	**Takaka Hill**	**2.86**	**225**	P	**Pn**	**12 41 47.9**	**+0.5**
QRZ	**Quartz Range**	**2.98**	**232**	P	**Pn**	**12 41 49.7**	**+0.8**
QRZ	**Quartz Range**	**2.98**	**232**	P	**Pn**	**12 41 49.6**	**+0.7**
BSWZ	**Blackbirch Sta**	**2.99**	**206**	P	**Pn**	**12 41 49.3**	**+0.2**
MRNZ	**Matariki Terra**	**3.22**	**222**	P	**Pn**	**12 41 52.5**	**+0.3**
THZ	**Tophouse**	**3.42**	**217**	P	**Pn**	**12 41 55.0**	**+0.1**
KHZ	**Kahutara**	**3.73**	**205**	P	**Pn**	**12 41 58.6**	**-0.2**
KHZ	**Kahutara**	**3.73**	**205**	P	**Pn**	**12 41 58.5**	**-0.3**
GVZ	**Greta Valley S**	**4.39**	**206**	P	**Pn**	**12 42 06.8**	**-0.9**
LTZ	**Lake Taylor**	**4.52**	**213**	P	**Pn**	**12 42 08.2**	**-1.3**
OKCZ	**Okains Bay**	**5.06**	**202**	P	**Pn**	**12 42 15.4**	**-1.4**
TMZ	**Timaru**	**6.36**	**211**	P	**Pn**	**12 42 33.0**	**-1.2**
ODZ	**Otahua Downs**	**7.05**	**210**	P	**Pn**	**12 42 42.3**	**-1.3**
CTZ	**Chatham Island**	**7.48**	**131**	P	**Pn**	**12 42 52.6**	**+3.2**

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*AUST **21** 12:58:52.7±0.0, 25°.43S×129°.86E, h0km, Error ellipse:*
s-maj=0.1km s-min=0.1km az=18.0
*IDC **21** 12:58:54.8±4.6, 25°.54S×130°.23E, h0km, mbtmp3.3/3,*
ML3.2/3, Error ellipse: s-maj=37.3km s-min=27.4km
az=87.0
ISC 21 12:58:52.0±0.9**, 25°.52S**±0°.06×**129°.89E**±0°.05**, h10**km**, n10,**
σ2s.08/18**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.52**	**288**	P	**Pb**	**12 59 19.6**	**-0.7**
	baz=1.5						
WRKA				S	**Sg**	**12 59 40.0**	**-0.9**
	baz=1.5						
ASPA	**Alice Springs**	**4.09**	**64**	P	**Pn**	**12 59 56.7**	**+2.0**
	baz=4.1						
ASPA				S	**Sn**	**13 00 44.2**	**+1.6**
	baz=4.1						
ASAR	**Alice Springs**	**4.09**	**64**	Pn	**Pn**	**12 59 56.6**	**+2.0**
	0.8nm,0.3s,baz=245,slow=12,SNR=31						
ASAR				Pg	**Pg**	**13 00 08.9**	**-1.4**
	1.0nm,0.3s,baz=240,slow=16,SNR=14						
ASAR				Sn	**Sn**	**13 00 43.8**	**+1.2**
	1.5nm,0.3s,baz=240,slow=25,SNR=11						
ASAR				Lg	Lg	13 00 57.6	
	2.0nm,0.3s,baz=238,slow=25,SNR=9.5						
	1.5nm,0.3s						
FORT	**Forrest**	**5.48**	**197**	P	**Pn**	**13 00 15.9**	**+2.2**
	baz=5.6						
FORT				S	**Sn**	**13 01 17.6**	**+0.7**
	baz=5.6						
OOD	**Oodnadatta**	**5.66**	**115**	P	**Pn**	**13 00 18.8**	**+2.6**
	baz=5.7						
MULG	**Mulgathing**	**6.01**	**143**	P	**Pn**	**13 00 24.1**	**+3.1**
	baz=6.1						
MULG				S	**Sn**	**13 01 30.1**	**+0.2**
	baz=6.1						
WRA	**Warramunga Arr**	**6.90**	**37**	Pn	**Pn**	**13 00 34.2**	**+0.9**
	0.4nm,0.3s,baz=219,slow=13,SNR=14						
WRA				Sn	**Sn**	**13 01 52.8**	**+0.8**
	0.6nm,0.3s,baz=211,slow=26,SNR=5.9						
WRA				Lg	Lg	13 02 26.2	
	1.0nm,0.3s,baz=212,slow=27,SNR=7.3						
	0.6nm,0.4s						
WC3	**Warramunga Arr**	**6.91**	**38**	P	**Pn**	**13 00 34.4**	**+1.0**
	baz=6.9						
WB2	**Warramunga Arr**	**6.91**	**37**	P	**Pn**	**13 00 34.4**	**+1.0**
	baz=6.9						
STKA	**Stephens Creek**	**12.06**	**124**	Pn	**Pn**	**13 01 43.5**	**-0.5**
	0.2nm,0.3s,baz=307,slow=20,SNR=1.2						
STKA				Sn	**Sn**	**13 03 53.8**	**-4.8**
	0.4nm,0.3s,baz=298,slow=13,SNR=5.3						
	1.1nm,0.5s						

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*IDC **21** 13:02:56.2±4.7, 25°.59S×129°.92E, h0km, mbtmp3.8/3,*
ML3.7/3, Error ellipse: s-maj=38.9km s-min=27.5km
az=90.0
*NOU **21** 13:02:57.5, 25°.53S×129°.81E, h0km, mb3.9/8, Northern*
Territory, Australia
ISC 21 13:02:58.5±1.3**, 25°.66S**±0°.08×**129°.92E**±0°.08**, h10**km**, n11,**
σ2s.60/15**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.60**	**292**	P	**Pn**	**13 03 23.3**	**-3.6**
ASAR	**Alice Springs**	**4.13**	**62**	Pn	**Pn**	**13 04 02.0**	**+0.2**
	2.9nm,0.3s,baz=240,slow=11,SNR=36						
ASAR				Pg	**Pb**	**13 04 14.0**	**+2.7**
	3.0nm,0.3s,baz=243,slow=16,SNR=14						
ASAR				Sn	**Sn**	**13 04 51.4**	**+1.2**
	4.5nm,0.3s,baz=241,slow=25,SNR=11						
ASAR				Lg	Lg	13 05 06.1	
	5.3nm,0.3s,baz=244,slow=24,SNR=8.9						
	7.3nm,0.4s						
FORT	**Forrest**	**5.36**	**197**	P	**Pn**	**13 04 20.6**	**+2.0**
	35nm,0.8s						
OOD	**Oodnadatta**	**5.58**	**114**	P	**Pn**	**13 04 23.8**	**+2.2**
	19nm,2.0s						
MULG	**Mulgathing**	**5.88**	**142**	P	**Pn**	**13 04 29.0**	**+3.3**
	25nm,2.7s						
WRA	**Warramunga Arr**	**7.00**	**36**	Pn	**Pn**	**13 04 40.2**	**-0.9**
	0.8nm,0.3s,baz=220,slow=14,SNR=7.2						
WRA				Sn	**Sn**	**13 05 59.6**	**-1.3**
	1.8nm,0.3s,baz=218,slow=23,SNR=11						
WRA				Lg	Lg	13 06 35.0	
	2.6nm,0.3s,baz=213,slow=27,SNR=8.3						
	2.0nm,0.5s						
WRAB	**Tennant Creek**	**7.01**	**37**	P	**Pn**	**13 04 41.2**	**-0.1**
	5.5nm,1.1s						
LCRK	**Leigh Creek**	**8.74**	**125**	P	**Pn**	**13 05 05.9**	**+0.9**
	16nm,1.2s						
INKA	**Innaminka**	**9.90**	**104**	P	**Pn**	**13 05 22.3**	**+1.4**
KNRA	**Kununurra**	**9.99**	**354**	P	**Pn**	**13 05 20.7**	**-1.5**
	11nm,2.3s						
STKA	**Stephens Creek**	**11.96**	**124**	Pn	**Pn**	**13 05 46.5**	**-2.6**
	0.7nm,0.3s,baz=304,slow=13,SNR=8.9						
STKA				Sn	**Sn**	**13 07 57.7**	**-5.0**
	0.7nm,0.3s,baz=228,slow=12,SNR=5.1						
	1.4nm,0.3s						

*MEX **21** 13:53:07.0±1.9,16.°49N×101.°14W,h16^{km}±46^{km},MD4.2*
*IDC **21** 13:53:10.3±7.3,17.°30N×100.°60W,h0^{km},mb3.4/3, mbtmp3.4/4,ML3.3/1,MS2.7/5,Error ellipse: s-maj=178.6km s-min=29.3km az=21.0*
ISC 21 13:53:06.0±1.6,**16.°74N**±0.°06×**100.°94W**±0.°03,**h5**^{km}±10^{km}, **n42,**σ**1^{s}61**/73,**mb3.5**/3,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.71**	**65**	*i* P	**Pn**	**13 53 22.5**	**-0.2**
CAIG				*e*S	**Sn**	**13 53 34.7**	**+0.6**
CAIG	**El Cayaco**	**0.71**	**65**	*i* P	**Pn**	**13 53 22.5**	**-0.2**
CAIG				*e*S	**Sn**	**13 53 34.7**	**+0.6**
ZIIG	**Zihuatanejo**	**1.00**	**330**	*i* P	**Pg**	**13 53 24.9**	**-0.2**
ZIIG				*e*S	**Sg**	**13 53 37.6**	**-0.5**
ZIIG	**Zihuatanejo**	**1.00**	**330**	*i* P	**Pg**	**13 53 24.9**	**-0.2**
ZIIG				*e*S	**Sg**	**13 53 37.6**	**-0.5**
ACP2	**Acapulco**	**1.02**	**82**	*e*P	**Pg**	**13 53 26.4**	**+0.9**
ACP2				*e*S	**Sn**	**13 53 41.1**	**-0.6**
ACP2	**Acapulco**	**1.02**	**82**	*e*P	**Pg**	**13 53 26.4**	**+0.9**
ACP2				*e*S	**Sn**	**13 53 41.1**	**-0.6**
DAIG	**Los Arroyos**	**1.27**	**77**	*i* P	**Pb**	**13 53 30.2**	**-0.1**
DAIG				*e*S	**Sb**	**13 53 47.2**	**+0.2**
DAIG	**Los Arroyos**	**1.27**	**77**	*i* P	**Pb**	**13 53 30.2**	**-0.1**
DAIG				*e*S	**Sb**	**13 53 47.2**	**+0.2**
ARIG	**Puente Sto Nin**	**1.63**	**20**	*i* P	**Pb**	**13 53 36.5**	**-0.2**
ARIG				*e*S	**Sg**	**13 53 59.5**	**+1.0**
ARIG	**Puente Sto Nin**	**1.63**	**20**	*i* P	**Pb**	**13 53 36.5**	**-0.2**
ARIG				*e*S	**Sg**	**13 53 59.5**	**+1.0**
MEIG	**Mezcala**	**1.73**	**47**	*i* P	**Pb**	**13 53 38.1**	**-0.1**
MEIG				*e*S	**Sg**	**13 54 02.7**	**+1.2**
MEIG	**Mezcala**	**1.73**	**47**	*i* P	**Pb**	**13 53 38.1**	**-0.1**
MEIG				*e*S	**Sg**	**13 54 02.7**	**+1.2**
CRIG	**Cruz Grande**	**1.73**	**90**	*i* P	**Pn**	**13 53 36.4**	**-0.4**
CRIG				*e*S	**Sn**	**13 53 56.9**	**-2.5**
CRIG	**Cruz Grande**	**1.73**	**90**	*i* P	**Pn**	**13 53 36.4**	**-0.4**
CRIG				*e*S	**Sn**	**13 53 56.9**	**-2.5**
PLIG	**Platanillo**	**2.14**	**40**	*i* P	**Pb**	**13 53 44.0**	**-1.3**
PLIG				*e*S	**Sg**	**13 54 12.0**	**-2.8**
PLIG	**Platanillo**	**2.14**	**40**	*i* P	**Pb**	**13 53 44.0**	**-1.3**
PLIG				*e*S	**Sg**	**13 54 12.0**	**-2.8**
TLIG	**Tlapa**	**2.41**	**70**	*i* P	**Pn**	**13 53 47.5**	**+1.3**
TLIG				*e*S	**Sb**	**13 54 18.3**	**-1.8**
TLIG	**Tlapa**	**2.41**	**70**	*i* P	**Pn**	**13 53 47.5**	**+1.3**
TLIG				*e*S	**Sb**	**13 54 18.3**	**-1.8**
PNIG	**Pinotepa**	**2.72**	**97**	*i* P	**Pn**	**13 53 50.1**	**-0.3**
PNIG				*e*S	**Sn**	**13 54 19.7**	**-4.0**
PNIG	**Pinotepa**	**2.72**	**97**	*i* P	**Pn**	**13 53 50.1**	**-0.3**
PNIG				*e*S	**Sn**	**13 54 19.7**	**-4.0**
YAIG	**Yautepec**	**2.76**	**40**	*e*P	**Pn**	**13 53 52.1**	**+0.9**
YAIG				*e*S	**Sb**	**13 54 28.1**	**-2.2**
YAIG	**Yautepec**	**2.76**	**40**	*e*P	**Pn**	**13 53 52.1**	**+0.9**
YAIG				*e*S	**Sb**	**13 54 28.1**	**-2.2**
MMIG	**Aquila**	**2.76**	**304**	*e*P	**Pn**	**13 53 50.7**	**-0.3**
MMIG				*e*S	**Sn**	**13 54 23.5**	**-1.3**
MMIG	**Aquila**	**2.76**	**304**	*e*P	**Pn**	**13 53 50.7**	**-0.3**
MMIG				*e*S	**Sn**	**13 54 23.5**	**-1.3**
FTIG	**Fresnillo de T**	**2.92**	**66**	*i* P	**Pn**	**13 53 54.8**	**+1.5**
FTIG				*e*S	**Sn**	**13 54 27.6**	**-1.2**
FTIG	**Fresnillo de T**	**2.92**	**66**	*i* P	**Pn**	**13 53 54.8**	**+1.5**
FTIG				*e*S	**Sn**	**13 54 27.6**	**-1.2**
TXIG	**Tlaxiaco**	**3.08**	**80**	*i* P	**Pn**	**13 53 56.9**	**+1.3**
TXIG				*e*S	**Sn**	**13 54 33.7**	**+0.8**
TXIG	**Tlaxiaco**	**3.08**	**80**	*i* P	**Pn**	**13 53 56.9**	**+1.3**
TXIG				*e*S	**Sn**	**13 54 33.7**	**+0.8**
HLIG	**Huajuapan de L**	**3.19**	**70**	*i* P	**Pn**	**13 53 58.4**	**+1.4**
HLIG				*e*S	**Sb**	**13 54 38.9**	**-3.6**
HLIG	**Huajuapan de L**	**3.19**	**70**	*i* P	**Pn**	**13 53 58.4**	**+1.4**
HLIG				*e*S	**Sb**	**13 54 38.9**	**-3.6**
YOIG	**Yosondua**	**3.25**	**88**	*i* P	**Pn**	**13 53 59.2**	**+1.3**
YOIG				*e*S	**Sn**	**13 54 35.9**	**-1.4**
YOIG	**Yosondua**	**3.25**	**88**	*i* P	**Pn**	**13 53 59.2**	**+1.3**
YOIG				*e*S	**Sn**	**13 54 35.9**	**-1.4**
VHO	**Vista Hermosa**	**4.04**	**85**	*e*P	**Pn**	**13 54 10.4**	**+1.6**
VHO				*e*S	**Sn**	**13 54 56.2**	**-0.4**
VHO	**Vista Hermosa**	**4.04**	**85**	*e*P	**Pn**	**13 54 10.4**	**+1.6**
VHO				*e*S	**Sn**	**13 54 56.2**	**-0.4**
CMIG	**Matias Romero** 0.9nm,0.3s,baz=266,slow=12,SNR=5.5	**5.81**	**86**	Pn	**Pn**	**13 54 34.3**	**+1.5**
CMIG	0.5nm,0.3s,baz=86,slow=18,SNR=1.9			Sn	**Sn**	**13 55 36.3**	**-3.6**
CMIG	comp=Z,17nm,20.0s,baz=303,slow=34 2.2nm,0.3s			LR	LR	13 56 17.4	
TXAR	**Lajitas Array** comp=Z,41nm,20.7s,baz=160,slow=41	**12.78**	**349**	LR	LR	14 01 29.4	
ANMO	**Albuquerque** comp=Z,33nm,21.0s,baz=165,slow=38	**18.79**	**346**	LR	LR	14 04 50.3	
NVAR	**Mina Array Bea** 0.9nm,1.0s,baz=130,slow=11,SNR=3.6 0.9nm,1.0s	**26.43**	**328**	P	**P**	**13 58 47.3**	**+3.2**
PDAR	**Pinedale Array** comp=Z,32nm,20.4s,baz=126,slow=38	**26.96**	**346**	LR	LR	14 10 05.5	
SADO	**Sadowa** comp=Z,31nm,19.2s,baz=74,slow=38	**33.42**	**29**	LR	LR	14 13 51.2	
YKA	**Yellowknife Ar** 0.6nm,0.9s,baz=161,slow=7.0,SNR=5.3 0.6nm,0.9s	**46.70**	**351**	P	**P**	**14 01 36.3**	**+0.8**
ILAR	**Eielson Array** 0.3nm,0.8s,baz=115,slow=4.1,SNR=2.3 0.3nm,0.8s	**57.03**	**338**	P	**P**	**14 02 53.9**	**+1.2**

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*KRNET **21** 14:00:23.1±0.1,41.°04N×70.°56E,h9^{km},mb2.6*
ISC 21 14:00:25.1±1.1,**40.°99N**±0.°04×**70.°73E**±0.°08,**h10**^{km}**,n7,** σ**1^{s}83**/14,**7C-7D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say** baz=48	**0.62**	**30**	⇑*i*P	**Pg**	**14 00 35.1**	**-2.0**
TRKS	baz=48			⇑*i*S	**Sg**	**14 00 43.6**	**-1.7**
BTK	**Batken** baz=69	**0.94**	**176**	⇓*i*P	**Pg**	**14 00 42.1**	**-1.1**
BTK	baz=69			⇓*e*S	**Sb**	**14 00 56.2**	**+0.2**
ARK	**Arkit** baz=54	**1.23**	**49**	⇓*i*P	**Pn**	**14 00 47.7**	**-0.7**
ARK	baz=54			⇓*i*S	**Sn**	**14 01 05.4**	**+0.3**
GAR	**Garm** baz=85	**2.02**	**189**	⇑*i*P	**Pb**	**14 01 00.8**	**-1.2**
GAR	baz=85			⇑*i*S	**Sb**	**14 01 27.6**	**+0.4**
KK31	**Karatay Array** 0.6nm,0.5s,baz=163,slow=16,SNR=26	**2.12**	**356**	⇓Pn	**Pb**	**14 01 02.9**	**-0.7**
KK31	3.5nm,0.5s,baz=163,slow=15,SNR=14			⇑Pg	**Pg**	**14 01 06.6**	**+0.9**
KK31	7.6nm,0.5s,baz=165,slow=28,SNR=18			Lg	Lg	14 01 35.0	
ARLS	**Aral** baz=73	**2.83**	**71**	⇑*i*P	**Pn**	**14 01 13.1**	**+2.5**
ARLS	baz=73			⇑*e*S	**Sb**	**14 01 49.5**	**-1.2**
UCH	**Uchtor** baz=67	**3.09**	**65**	⇓*e*P	**Pn**	**14 01 16.4**	**+2.0**
UCH	baz=67			⇓*e*S	**Sn**	**14 01 55.3**	**+3.7**

IDC 21 14:38:48.5±63.0,**16.°53S**×**175.°84W,h558**^{km}±100^{km}, **mb3.1**/3,**mbtmp4.0**/4,**Error ellipse: s-maj=1002.0km s-min=132.2km az=77.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 8.6nm,0.7s,baz=125,slow=12,SNR=14	**5.96**	**258**	P	P	14 40 27.3	0.0
STKA	**Stephens Creek** 0.8nm,0.5s,baz=76,slow=9.7,SNR=4.1 0.8nm,0.5s	**41.44**	**240**	P	P	14 45 46.8	-0.3
WRA	**Warramunga Arr** 0.3nm,0.2s,baz=93,slow=6.9,SNR=30 0.3nm,0.2s	**47.30**	**258**	P	P	14 46 32.2	-0.2
ASAR	**Alice Springs** 3.5nm,0.4s,baz=90,slow=7.8,SNR=104 3.5nm,0.4s	**47.53**	**253**	P	P	14 46 34.1	0.0

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*ANF **21** 14:46:06.5±0.3,36.°51N×97.°04W,h6^{km},ML3.6/12,Error ellipse: s-maj=3.3km s-min=2.5km az=149.0*
*TUL **21** 14:46:06.1±0.6,36.°547N±0.°008×97.°07W±0.°02,h5^{km}±7^{km}, ML3.2,mb_Lg3.0/92(NEIC),Error ellipse: s-maj=2.4km s-min=1.0km az=81.0*
*NEIC **21** 14:46:06.1±0.5,36.°55N±0.°01×97.°08W±0.°02,h6^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=1.6km az=63.0*
*IDC **21** 14:46:09.2±2.4,36.°43N×97.°06W,h0^{km},mbtmp3.3/2, ML2.7/2,Error ellipse: s-maj=34.4km s-min=15.7km az=105.0*
ISC 21 14:46:06.2±0.7,**36.°52N**±0.°03×**97.°08W**±0.°02,**h10**^{km}**,n81,** σ**1^{s}53**/51,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.60**	**49**	Pg	**Pg**	**14 46 17.4**	**-0.5**
T35A				Sg	**Sg**	**14 46 24.8**	**-1.0**
T35B	**Sooner Cattle** baz=231,SNR=112	**0.60**	**49**	P	**Pg**	**14 46 17.4**	**-0.5**
T35B	baz=231			S	**Sg**	**14 46 25.0**	**-0.8**
OKCFA	**Oklahoma City**	**1.15**	**195**		**Pb**	**14 46 28.0**	**0.0**
OKCFA	**Oklahoma City** baz=15	**1.15**	**195**	S	**Sg**	**14 46 44.0**	**+1.0**
OKCSW	**OKLAHOMA CITY**	**1.15**	**195**		**Pb**	**14 46 28.0**	**-0.2**
TUL1	**Leonard**	**1.21**	**120**		**Pn**	**14 46 28.7**	**-0.4**
TUL1	**Leonard** baz=302	**1.21**	**120**	P	**Pn**	**14 46 28.7**	**-0.4**
TUL1	baz=302			S	**Sg**	**14 46 45.2**	**+0.2**
TUL1	**Leonard** baz=302	**1.21**	**120**	P	**Pn**	**14 46 28.7**	**-0.4**
TUL1	baz=302			S	**Sb**	**14 46 45.1**	**+0.3**
FNO	**Franklin**	**1.29**	**192**		**Pn**	**14 46 30.4**	**+0.2**
U32A	**Winter Ranch,**	**1.56**	**265**		**Pb**	**14 46 34.6**	**-0.5**
U32A	**Winter Ranch,** baz=83	**1.56**	**265**	P	**Pb**	**14 46 34.9**	**-0.2**
U32A	baz=83			S	**Sg**	**14 46 56.1**	**-0.2**
X34A	**Smith Ranch, M**	**2.01**	**198**		**Pb**	**14 46 42.2**	**-0.7**
X34A	comp=Z,80nm,0.9s			IAmb_Lg		14 47 15.8	
WMOK	**Wichita Mounta**	**2.26**	**218**		**Pn**	**14 46 45.1**	**+1.4**
WMOK	**Wichita Mounta** baz=37,SNR=39	**2.26**	**218**	P	**Pn**	**14 46 45.0**	**+1.4**
WMOK	**Wichita Mounta** baz=37	**2.26**	**218**	P	**Pb**	**14 46 45.5**	**-1.5**
WMOK	baz=37			S	**Sb**	**14 47 15.7**	**+0.7**
R32A	**Long Quarter,** comp=Z,58nm,0.8s	**2.30**	**326**	IAmb_Lg		14 47 23.8	
R32A	**Long Quarter,** baz=145	**2.30**	**326**	S	**Sb**	**14 47 16.7**	**+0.4**
X37A	**Clayton**	**2.38**	**144**	Pn	**Pn**	**14 46 46.7**	**+1.5**
X37A	**Clayton** baz=325,SNR=47	**2.38**	**144**	P	**Pn**	**14 46 46.9**	**+1.7**
HHAR	**Hobbs** baz=277	**2.54**	**94**	Sb	**Sb**	**14 47 24.7**	**+1.4**
KSU1	**Kansas State U** baz=188	**2.60**	**8**	S	**Sb**	**14 47 25.9**	**+0.9**
W39A	**Magazine** comp=Z,70nm,0.9s	**2.98**	**115**	IAmb_Lg		14 47 48.4	
W39A	**Magazine** baz=298	**2.98**	**115**	Sb	**Sb**	**14 47 37.5**	**+1.6**
W39A	**Magazine** baz=298	**2.98**	**115**	P	**Pb**	**14 46 57.5**	**-2.0**
W39A	baz=298			S	**Sb**	**14 47 37.7**	**+1.7**
CBKS	**Cedar Bluff** baz=136	**3.11**	**318**	P	**Pg**	**14 47 03.9**	**-1.9**
CBKS	baz=136			S	**Sb**	**14 47 41.2**	**+1.5**
S39A	**Bolivar**	**3.22**	**68**		**Pn**	**14 46 57.8**	**+1.0**
S39A	**Bolivar** baz=250,SNR=36	**3.22**	**68**	P	**Pn**	**14 46 58.1**	**+1.3**
U40A	**Yellville**	**3.41**	**92**		**Pn**	**14 47 00.6**	**+1.1**
U40A	comp=Z,58nm,0.8s			IAmb_Lg		14 47 55.4	
U40A	**Yellville** baz=274,SNR=8.1	**3.41**	**92**	P	**Pn**	**14 47 00.8**	**+1.4**
U40A	baz=274,SNR=8.1			P	**Pn**	**14 47 00.8**	**+1.4**
U40A	**Yellville** baz=274	**3.41**	**92**	S	**Sb**	**14 47 50.2**	**+2.0**
MIAR	**Mount Ida**	**3.47**	**124**		**Pn**	**14 47 02.0**	**+1.7**
MIAR	comp=Z,42nm,1.1s			IAmb_Lg		14 48 00.7	
MIAR	**Mount Ida** baz=306	**3.47**	**124**	P	**Pn**	**14 47 01.7**	**+1.5**
MGMO	**Mountain Grove** comp=Z,31nm,0.7s	**3.91**	**79**	IAmb_Lg		14 48 13.8	
X40A	**Basin Creek Fa**	**4.01**	**119**		**Pn**	**14 47 09.2**	**+1.5**
X40A	comp=Z,36nm,0.7s			IAmb_Lg		14 48 17.1	
X40A	**Basin Creek Fa** baz=302	**4.01**	**119**	P	**Pn**	**14 47 09.5**	**+1.7**
X40A	baz=302			P	**Pn**	**14 47 09.5**	**+1.7**
X40A	**Basin Creek Fa** baz=302	**4.01**	**119**	P	**Pn**	**14 47 09.4**	**+1.7**
FCAR	**Ozark Folk Cen** comp=Z,44nm,0.8s	**4.06**	**97**	IAmb_Lg		14 48 16.6	
WHAR	**Wooly Hollow** comp=Z,51nm,1.1s	**4.08**	**106**	IAmb_Lg		14 48 26.0	
AMTX	**Amarillo** comp=Z,30nm,0.7s	**4.09**	**248**	IAmb_Lg		14 48 23.4	
AMTX	**Amarillo** baz=65	**4.09**	**248**	S	**Sg**	**14 48 13.8**	**-3.6**
W41B	**Gary Mavity, V**	**4.15**	**107**	Pn	**Pn**	**14 47 10.5**	**+1.0**
W41B	comp=Z,38nm,0.7s			IAmb_Lg		14 48 21.5	
W41B	**Gary Mavity, V** baz=291	**4.15**	**107**	Sb	**Sg**	**14 48 15.4**	**-4.0**
W41B	**Gary Mavity, V** baz=291	**4.15**	**107**	S	**Sg**	**14 48 15.4**	**-4.0**
P38A	**Dawn** comp=Z,31nm,0.8s	**4.17**	**41**	IAmb_Lg		14 48 20.4	
R40A	**Maddies Statio**	**4.22**	**64**		**Pn**	**14 47 11.2**	**+0.7**
R40A	comp=Z,50nm,0.9s			IAmb_Lg		14 48 20.1	
R40A	**Maddies Statio** baz=247,SNR=18	**4.22**	**64**	P	**Pn**	**14 47 11.5**	**+1.0**
UALR	**University of** comp=Z,33nm,0.7s	**4.23**	**113**	IAmb_Lg		14 48 21.9	
WLAR	**White Oak Lake** comp=Z,22nm,0.8s	**4.31**	**130**	IAmb_Lg		14 48 25.4	
ABTX	**Abilene, Hawle** comp=Z,21nm,0.7s	**4.43**	**209**	IAmb_Lg		14 48 25.8	
237A	**Washetta, Mont** comp=Z,24nm,0.8s	**4.63**	**167**	IAmb_Lg		14 48 44.7	
Z41A	**Richland Creek** comp=Z,19nm,0.9s	**4.79**	**132**	IAmb_Lg		14 48 46.7	
LCAR	**Lake Charles** comp=Z,35nm,1.0s	**4.81**	**94**	IAmb_Lg		14 48 36.9	
CCM	**Cathedral Cave** comp=Z,29nm,0.8s	**4.90**	**70**	IAmb_Lg		14 48 40.0	
P40A	**Paris** comp=Z,22nm,0.8s	**4.98**	**51**	IAmb_Lg		14 48 48.5	
KSCO	**Kaye Shedlock'** comp=Z,21nm,0.7s	**5.05**	**301**	IAmb_Lg		14 48 54.2	
CCAR	**Cane Creek** comp=Z,29nm,0.7s	**5.06**	**119**	IAmb_Lg		14 48 55.9	
N38A	**Joes South For** comp=Z,38nm,0.9s	**5.22**	**34**	IAmb_Lg		14 49 03.6	
MSTX	**Muleshoe** comp=Z,19nm,1.0s	**5.31**	**243**	IAmb_Lg		14 49 09.7	
FVM	**French Village** comp=Z,27nm,0.7s	**5.50**	**73**	IAmb_Lg		14 49 06.8	
435B	**Jarrell** comp=Z,24nm,0.7s	**5.74**	**184**	IAmb_Lg		14 49 20.2	
OGNE	**Ogallala** comp=Z,28nm,0.8s	**5.87**	**320**	IAmb_Lg		14 49 20.2	
SCIA	**State Center** comp=Z,24nm,0.7s	**6.16**	**28**	IAmb_Lg		14 49 31.6	
N41A	**Harden Midland** comp=Z,26nm,0.9s	**6.42**	**47**	IAmb_Lg		14 49 33.9	
JCT	**Junction City** comp=Z,22nm,0.8s	**6.44**	**201**	IAmb_Lg		14 49 48.0	
Q24A	**Divide** comp=Z,14nm,0.7s	**6.84**	**293**	IAmb_Lg		14 50 00.8	
K38A	**Parkersburg** comp=Z,26nm,0.8s	**6.96**	**27**	IAmb_Lg		14 49 58.6	
L40A	**Anamosa** comp=Z,15nm,0.8s	**7.16**	**38**	IAmb_Lg		14 49 51.5	
ECSD	**EROS Data Cent** comp=Z,12nm,1.0s	**7.21**	**3**	IAmb_Lg		14 50 05.0	
HDIL	**Hopedale** comp=Z,23nm,0.7s	**7.31**	**54**	IAmb_Lg		14 50 14.0	
WVT	**Waverly** comp=Z,12nm,0.8s	**7.48**	**90**	IAmb_Lg		14 50 17.9	
PLAL	**Pickwick Lake** comp=Z,12nm,0.8s	**7.48**	**99**	IAmb_Lg		14 50 08.0	
L42A	**Oliver, Polo** comp=Z,16nm,0.8s	**7.94**	**44**	IAmb_Lg		14 50 26.4	
I37A	**Lemond, Waseca** comp=Z,12nm,0.8s	**7.99**	**19**	IAmb_Lg		14 50 35.4	
N23A	**Red Feather La** comp=Z,18nm,1.0s	**8.19**	**305**	IAmb_Lg		14 50 38.7	
JFWS	**Jewell Farm** comp=Z,13nm,0.8s	**8.27**	**37**	IAmb_Lg		14 50 29.2	
SFIN	**Lafayette** comp=Z,15nm,0.8s	**8.72**	**61**	IAmb_Lg		14 50 45.1	
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=49,slow=8.4,SNR=4.0	**9.05**	**220**	Pn	**Pn**	**14 48 17.6**	**+0.5**
TXAR	comp=Z,0.2nm,0.3s,baz=48,slow=14,SNR=2.6			Pg		14 48 47.5	
TXAR	comp=Z,0.3nm,0.3s,baz=47,slow=28,SNR=3.3 comp=Z,0.2nm,0.5s			Lg	Lg	14 50 50.5	
RSSD	**Black Hills** comp=Z,8.4nm,1.2s	**9.26**	**327**	IAmb_Lg		14 51 01.4	
F33A	**5 Mile Ranch,** comp=Z,7.6nm,0.9s	**9.33**	**3**	IAmb_Lg		14 51 18.0	
PDAR	**Pinedale Array** comp=Z,0.1nm,0.3s,baz=117,slow=16,SNR=3.0	**11.46**	**307**	Pg	Pn	14 49 37.7	+48
PDAR	comp=Z,0.2nm,0.3s,baz=120,slow=28,SNR=1.8			Lg	Lg	14 52 06.7	
ULM	**Lac du Bonnet** comp=Z,0.3nm,0.3s,baz=180,slow=4.0,SNR=1.4	**13.75**	**3**	Pn	**Pn**	**14 49 22.4**	**+1.3**
ULM	comp=Z,0.3nm,0.3s,baz=194,slow=14,SNR=1.9 comp=Z,0.9nm,0.4s			Lg	Lg	14 53 14.2	

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*JMA **21** 14:52:50.9±0.1,23.°7N±0.°5×121.°6E±0.°6,h31^{km}±1^{km}, MV2.4/11,TAIWAN REGION*
*TAP **21** 14:52:52.2,23.°78N×121.°58E,h27^{km},ML2.8,B*
ISC 21 14:52:50.6±0.9,**23.°73N**±0.°02×**121.°74E**±0.°02,**h32**^{km}±6^{km}, **n88,**σ**1^{s}11**/127,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village** baz=199	**0.18**	**264**	P	**Pb**	**14 52 57.3**	**+0.5**
TEGC	baz=199			S	**Sb**	**14 53 01.1**	**+0.1**
HWA	**Hwalien** baz=10.0	**0.28**	**334**	*e*P	**Pn**	**14 52 58.7**	**+0.3**
EGFH	**Guangfu** baz=230	**0.29**	**258**	*e*P	**Pb**	**14 52 58.1**	**0.0**
EGFH	baz=230			S	**Sb**	**14 53 02.6**	**-0.5**
ESL	**Shilin** baz=284	**0.29**	**287**	*e*P	**Pb**	**14 52 57.8**	**-0.3**
ESL	baz=284			*e*S	**Sb**	**14 53 01.9**	**-1.3**
TWD	**Chiawan** baz=5.0	**0.37**	**340**	*e*P	**Pn**	**14 52 59.8**	**0.0**
TWD	baz=5.0			*i* S	**Sn**	**14 53 05.8**	**-0.2**
HGSD	**Ruisui** baz=205	**0.37**	**231**	*e*P	**Pn**	**14 53 00.1**	**+0.3**
HGSD	baz=205			S	**Sn**	**14 53 06.3**	**+0.4**
ETL	**Fush Village** baz=6.0	**0.44**	**346**	*e*P	**Pn**	**14 53 01.4**	**+0.6**
ETL	baz=6.0			*e*S	**Sn**	**14 53 07.7**	**0.0**
EHY	**Hungye** baz=219	**0.44**	**240**	*e*P	**Pb**	**14 52 59.9**	**-0.3**
NACB	**Ninganchiao** baz=2.0	**0.46**	**344**	P	**Pn**	**14 53 01.0**	**0.0**
NACB	baz=2.0			*e*S	**Sn**	**14 53 07.6**	**-0.6**
YULB	**Yu-li** baz=213	**0.53**	**230**	*e*P	**Pb**	**14 53 01.3**	**-0.2**
ETLH	**Xiulin Townshi** baz=348	**0.53**	**334**	*e*P	**Pb**	**14 53 01.7**	**+0.1**
EYUL	**Yuli** baz=208	**0.54**	**225**	*e*P	**Pb**	**14 53 01.9**	**+0.1**
VWDT	**VWDT** baz=266	**0.55**	**273**	*e*P	**Pb**	**14 53 01.7**	**-0.2**
VWDT	baz=266			S	**Sb**	**14 53 08.1**	**-1.4**
OWD	**Renai** baz=295	**0.56**	**294**	*e*P	**Pb**	**14 53 01.6**	**-0.5**
OWD	baz=295			S	**Sb**	**14 53 08.0**	**-2.1**
WHF	**Hehuan Shan** baz=322	**0.60**	**314**	*e*P	**Pb**	**14 53 02.4**	**-0.6**
WHF	baz=322			*e*S	**Sb**	**14 53 09.8**	**-1.7**
CHGB	**Renai** baz=307	**0.61**	**303**	*e*P	**Pb**	**14 53 02.8**	**-0.3**
CHGB	baz=307			*e*S	**Sb**	**14 53 09.9**	**-1.7**
WUSB	**Renai** baz=296	**0.62**	**295**	*e*P	**Pb**	**14 53 02.9**	**-0.4**
WUSB	baz=296			*i* S	**Sb**	**14 53 10.1**	**-1.7**
FULB	**Fuli** baz=203	**0.67**	**218**	*e*P	**Pn**	**14 53 04.6**	**+0.7**
FULB	baz=203			*e*S	**Sn**	**14 53 14.8**	**+1.5**
FUSS	**Fushou** baz=326	**0.69**	**319**	*e*P	**Pb**	**14 53 04.1**	**-0.2**
FUSS	baz=326			*e*S	**Sb**	**14 53 12.6**	**-1.0**
ENA	**Nanau** baz=13	**0.69**	**0**	*e*P	**Pn**	**14 53 05.3**	**+1.0**
ENA	baz=13			*e*S	**Sn**	**14 53 14.9**	**+1.0**
EWUT	**Wuta** baz=15	**0.71**	**3**	*e*P	**Pn**	**14 53 05.7**	**+1.3**
CHKT	**Chengkung** baz=195	**0.71**	**209**	*e*P	**Pn**	**14 53 05.5**	**+1.1**
SSLB	**Suanglung** baz=270	**0.72**	**275**	*e*P	**Pb**	**14 53 04.0**	**-0.8**
SSLB	baz=270			*e*S	**Sb**	**14 53 11.7**	**-2.7**
TWT	**Tachien** baz=321	**0.73**	**316**	*e*P	**Pb**	**14 53 05.0**	**-0.1**
TWT	baz=321			*e*S	**Sb**	**14 53 13.6**	**-1.3**
TDCB	**Techi** baz=320	**0.74**	**315**	*e*P	**Pb**	**14 53 05.2**	**+0.1**
TDCB	baz=320			*e*S	**Sb**	**14 53 13.7**	**-1.4**
YUS	**Yu-Shan** baz=242	**0.76**	**252**	*e*P	**Pb**	**14 53 05.4**	**-0.3**
YUS	baz=242			*e*S	**Sb**	**14 53 14.8**	**-1.2**
NNSB	**Datong** baz=344	**0.77**	**335**	*e*P	**Pn**	**14 53 05.6**	**+0.2**
NNSB	baz=344			*e*S	**Sb**	**14 53 15.2**	**-0.6**
NNS	**Nan Shan** baz=344	**0.78**	**335**	*e*P	**Pn**	**14 53 05.9**	**+0.3**
NNS	baz=344			S	**Sb**	**14 53 15.6**	**-0.6**
SMLT	**Sun Moon Lake** baz=279	**0.78**	**281**	*e*P	**Pb**	**14 53 05.3**	**-0.5**
SMLT	baz=279			*e*S	**Sb**	**14 53 14.1**	**-2.1**
WCS	**Beigang Elemen** baz=294	**0.82**	**293**	*e*P	**Pb**	**14 53 06.0**	**-0.4**
WCS	baz=294			*e*S	**Sb**	**14 53 15.5**	**-1.8**
LATG	**Datong** baz=356	**0.82**	**346**	*e*P	**Pn**	**14 53 06.7**	**+0.6**
LATG	baz=356			*e*S	**Sn**	**14 53 17.9**	**+0.6**
TYC	**Yuchr** baz=280	**0.82**	**282**	*e*S	**Sb**	**14 53 15.2**	**-2.1**
EDH	**Donghe** baz=197	**0.85**	**208**	*e*P	**Pb**	**14 53 06.8**	**-0.1**
ELDTW	**Lidau** baz=220	**0.85**	**231**	*e*P	**Pb**	**14 53 06.1**	**-0.9**
TWC	**Suao** baz=17	**0.88**	**7**	*e*P	**Pn**	**14 53 08.8**	**+2.0**
TWC	baz=17			*e*S	**Sn**	**14 53 20.9**	**+2.4**
ALS	**Alishan** baz=248	**0.88**	**256**	*e*P	**Pb**	**14 53 07.5**	**-0.1**
ALS	baz=248			*e*S	**Sb**	**14 53 17.7**	**-1.5**
NDS	**Dongshan**	**0.90**	**359**	*e*P	**Pn**	**14 53 08.5**	**+1.5**

	baz=8.0						
NDS				eS	Sn	14 53 20.9	+1.9
	baz=8.0						
WHP	Taichung City	0.91	307	eP	Pn	14 53 08.1	+0.9
	baz=310						
ENTT	Nioudou	0.92	350	eP	Pn	14 53 08.4	+1.1
	baz=359						
ENTT				eS	Sn	14 53 20.2	+0.7
	baz=359						
WJS	Zhushan	0.93	276	eP	Pb	14 53 07.5	-0.7
	baz=273						
WNT	Mingjian	0.98	279	eP	Pn	14 53 09.3	+1.2
	baz=276						
WNT				eS	Sb	14 53 21.6	0.0
	baz=276						
CHN5	Tsauling	0.98	262	eP	Pb	14 53 09.2	+0.1
	baz=257						
TWE	Neicheng	0.99	356	eP	Pn	14 53 09.7	+1.5
	baz=6.0						
YHNB	Yeheng	0.99	341	eP	Pn	14 53 09.5	+1.1
	baz=348						
YHNB				eS	Sb	14 53 21.6	-0.6
	baz=348						
NSK	Sanguang	1.00	340	P	Pn	14 53 09.7	+1.1
	baz=347						
NSK				S	Sn	14 53 22.2	+0.6
	baz=347						
FUSB	Fushanzhiwuyua	1.03	352	eP	Pn	14 53 10.1	+1.2
STYH	Taoyuan	1.04	238	eP	Pb	14 53 09.7	-0.4
	baz=230						
NFF	Wufeng Townshi	1.06	328	eP	Pn	14 53 10.4	+1.0
	baz=333						
NWLT	Wulai	1.06	348	eP	Pn	14 53 10.5	+1.2
	baz=356						
TWQ1	Liyutan	1.08	305	eP	Pb	14 53 11.0	+0.4
	baz=307						
TWGBT	Beinan	1.09	214	eP	Pb	14 53 11.3	+0.4
	baz=205						
TWG	Pinlang	1.09	214	eP	Pb	14 53 11.5	+0.5
	baz=205						
WDLH	Douliu	1.10	268	eP	Pn	14 53 10.4	+0.7
	baz=264						
TPUB	Ta-pu	1.10	247	eP	Pn	14 53 10.9	+1.0
	baz=241						
TPUB				eS	Sb	14 53 25.3	+0.1
	baz=241						
NSTT	Nanjuang	1.12	323	eP	Pb	14 53 11.7	+0.2
	baz=328						
NTC	Toucheng	1.12	4	eP	Pb	14 53 12.5	+1.0
	baz=12						
NSY	Sanyi	1.12	308	eP	Pb	14 53 11.8	+0.4
	baz=310						
LIOB	Emei	1.13	324	eP	Pb	14 53 12.0	+0.5
	baz=329						
WTP	Ta-pu	1.14	245	eP	Pb	14 53 11.7	-0.1
	baz=238						
WDJ	Dajia District	1.18	302	eP	Pb	14 53 12.2	-0.2
	baz=303						
NMLH	Miaoli	1.18	313	eP	Pb	14 53 12.6	+0.1
	baz=316						
CHN1	Nanshi	1.24	244	eP	Pb	14 53 13.6	+0.2
	baz=238						
TWK	Hsinying	1.24	248	eP	Pb	14 53 13.3	-0.1
	baz=242						
TIPB	Shuangxi	1.24	4	eP	Pb	14 53 13.9	+0.5
	baz=10.0						
SGST	Jiashian	1.24	239	eP	Pb	14 53 13.7	+0.2
	baz=232						
NHDH	Xindian Distri	1.24	351	eP	Pb	14 53 13.2	-0.2
	baz=357						
SNST	Tainan City	1.25	246	eP	Pb	14 53 13.2	-0.3
	baz=240						
WRL	Guolierlin Hig	1.26	278	eP	Pn	14 53 12.6	+0.7
	baz=276						
WRL				eS	Sn	14 53 28.4	+0.6
	baz=276						
JYNG	Yonagunijimaku	1.32	57	P	Pb	14 53 15.4	+0.7
JYNG				eS	Sb	14 53 32.5	+1.3
NWF	Wu-fen Shan	1.34	2	eP	Pb	14 53 16.2	+1.1
	baz=8.0						
ECL	Taimali	1.34	213	eP	Pb	14 53 15.0	0.0
	baz=205						
SXI1	Grass Mountain	1.36	5	eP	Pb	14 53 15.6	0.0
	baz=11						
YOJ	Yonaguni jima	1.37	58	eP	Pb	14 53 16.2	+0.6
	baz=62						
YOJ	Yonaguni jima	1.37	58	P	Pb	14 53 16.6	+0.9
WSL	Shuilin Townsh	1.40	262	eP	Pn	14 53 14.7	+0.8
	baz=258						
SSD	Sandimen	1.41	226	eP	Pn	14 53 15.7	+1.6
	baz=219						
SCST	Cishan	1.42	234	eP	Pb	14 53 16.9	+0.5
	baz=228						
YM01	YM01	1.42	354	eP	Pb	14 53 16.1	-0.4
	baz=359						
TSMG	Majia	1.43	225	eP	Pb	14 53 16.6	-0.1
	baz=218						
MASBT	Mashibuluo	1.51	223	eP	Pn	14 53 16.9	+1.5
	baz=216						
EAST	Anshuo	1.57	212	eP	Pb	14 53 18.7	-0.4
	baz=205						
IRIF	Iriomote-Funau	1.92	71	P	Pb	14 53 24.4	-0.5
IRIF				eS	Sb	14 53 48.8	+0.3
HATJ	Hateruma jima	1.92	80	S	Sb	14 53 48.3	-0.2
JKRS	Kuro-shima	2.14	76	P	Pb	14 53 28.0	-0.7
JKRS				eS	Sb	14 53 54.8	0.0
JIJ	Ishigaki jima	2.29	73	P	Pb	14 53 29.1	-2.1
JIJ				S	Sb	14 53 56.6	-2.5
JISG	Ishigakijimahi	2.50	70	P	Pb	14 53 32.0	-2.7
JISG				eS	Sb	14 54 02.7	-2.5
PTMZ	Houxiangcun	2.72	299	eP	Pn	14 53 32.3	+0.2
	baz=299						
JTJ	Tarama	2.85	71	P	Pb	14 53 37.6	-3.3
JTJ				eS	Sb	14 54 11.6	-3.7

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*IDC **21** 14:53:32.9±1.3, 29°.99S×178°.97W, h327km±16km, mb2.9/3, mbtmp3.7/5, Error ellipse: s-maj=49.2km s-min=21.2km az=109.0*

ISC 21 14:53:33.8±0.9**, 29°.86S**±0°.10×**179°.5W**±0°.1**, h300**km**, n7, σ1s.47**/9**, mb3.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.54	67	P	Pn	14 54 17.0	-0.2
	169nm,0.4s,baz=143,slow=20,SNR=1.4						
RAO				S	S	14 54 52.4	+0.7
	128nm,0.2s,baz=79,slow=22,SNR=1.2						
URZ	Urewera	8.83	197	P	Pn	14 55 38.7	+1.3
	7.2nm,1.0s,baz=49,slow=11,SNR=1.2						
URZ				S	S	14 57 16.9	-1.0
	5.6nm,0.4s,baz=79,slow=20,SNR=10.0						
MSVF	Nonsavu	12.27	349	P	Pn	14 56 20.3	+0.5
	1.6nm,0.4s,baz=229,slow=9.0,SNR=6.4						
STKA	Stephens Creek	33.30	256	P	P	14 59 43.2	-0.8
	1.7nm,0.8s,baz=96,slow=8.3,SNR=1.5						
	1.7nm,0.8s						
ASAR	Alice Springs	41.80	267	P	P	15 00 55.5	+0.6
	0.3nm,0.8s,baz=102,slow=6.8,SNR=4.1						
	0.3nm,0.8s						
WRA	Warramunga Arr	42.74	272	P	P	15 01 03.5	+1.1
	0.5nm,0.4s,baz=110,slow=6.6,SNR=13						
	0.5nm,0.4s						
FINES	FINESS Array B	144.17	339	PKP	PKPab	15 12 29.2	-2.7
	1.1nm,0.8s,baz=54,slow=3.3,SNR=8.1						

IDC 21 15:15:58.9±6.9**, 3°.18N**×**96°.69E, h0**km**, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=355.8km s-min=31.1km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W3	Cape Leeuwin H	41.26	158	T	T	16 07 05.3	
	baz=332						
H01W2	Cape Leeuwin H	41.27	158	T	T	16 07 14.6	
	baz=332						
H01W1	Cape Leeuwin H	41.27	158	T	T	16 07 08.4	
	baz=332						
WRA	Warramunga Arr	43.52	123	P	P	15 24 05.2	+0.6
	0.4nm,0.9s,baz=303,slow=9.0,SNR=1.5						
	0.4nm,0.9s						
ASAR	Alice Springs	45.00	128	P	P	15 24 15.8	-0.7
	0.5nm,0.8s,baz=298,slow=7.7,SNR=4.8						
	0.5nm,0.8s						
MKAR	Makanchi Array	45.21	346	P	P	15 24 17.7	-0.1
	0.3nm,0.7s,baz=157,slow=6.1,SNR=4.0						
	0.3nm,0.7s						

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*IDC **21** 15:30:24.1±2.5, 5°.41S×148°.64E, h175km±31km, mb3.2/4, mbtmp3.7/6, Error ellipse: s-maj=63.5km s-min=10.7km az=133.0*

ISC 21 15:30:23.7±0.8**, 5°.3S**±0°.1×**148°.5E**±0°.1**, h163**km**, n13, σ1s.19**/15**, mb3.6**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.63	75	P	Pn	15 31 19.5	-0.1
	11nm,0.4s,baz=200,slow=3.8,SNR=6.2						
KRVT				S	Sn	15 32 03.2	+0.1
	6.9nm,0.4s,baz=156,slow=19,SNR=1.3						
PMG	Port Moresby	4.32	198	P	Pn	15 31 29.2	+0.7
	24nm,0.4s,baz=19,slow=5.3,SNR=18						
PMG				S	Sn	15 32 17.2	-1.9
	26nm,0.7s,baz=40,slow=6.3,SNR=3.5						
PMG	Port Moresby	4.32	198	P	Pn	15 31 29.2	+0.7
COEN	Coen	10.10	211	P	Pn	15 32 47.9	+2.9
KDU	Kakadu	17.46	244	P	Pn	15 34 17.6	+0.1
MTN	Manton Dam	18.73	245	P	Pn	15 34 32.5	0.0
WRAB	Tennant Creek	20.05	222	P	P	15 34 44.6	+0.1
WRA	Warramunga Arr	20.07	222	P	P	15 34 44.4	-0.3
	1.2nm,0.5s,baz=49,slow=10,SNR=18						
	1.2nm,0.5s						
KNRA	Kununurra	21.97	240	P	P	15 35 05.6	+0.8
ASAR	Alice Springs	23.08	216	P	P	15 35 14.7	-0.5
	0.7nm,0.3s,baz=47,slow=8.5,SNR=41						
	0.7nm,0.3s						
MKAR	Makanchi Array	77.90	320	P	P	15 42 03.6	-0.1
	0.1nm,0.3s,baz=94,slow=7.3,SNR=1.6						
	0.1nm,0.3s						
ILAR	Eielson Array	84.23	23	P	P	15 42 35.4	-1.3
	0.7nm,0.6s,baz=251,slow=5.2,SNR=14						
	0.7nm,0.6s						
TORD	Torodi Ar. Bea	146.35	286	PKPbc	PKPbc	15 49 45.4	-1.1
	0.3nm,0.4s,baz=98,slow=3.9,SNR=5.9						

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*IDC **21** 16:04:59.2±0.9, 21°.09S×67°.50W, h176km±8km, mb3.8/9, mbtmp4.3/13, Error ellipse: s-maj=18.5km s-min=10.2km az=99.0*

*NEIC **21** 16:04:59.8±2.1, 21°.18S±0°.05×67°.6W±0°.1, h178km±5km, mb4.4/13, Error ellipse: s-maj=14.3km s-min=7.6km az=83.0*

*GUC **21** 16:05:01.0±0.8, 21°.14S×67°.69W, h192km±8km, ML4.6*

*SCB **21** 16:05:01.7±1.4, 21°.14S×67°.59W, h157km±24km, ML4.2/10, MW3.9, Error ellipse: s-maj=6.3km s-min=5.3km az=0.0*

*VAO **21** 16:05:06.9±0.6, 20°.57S×67°.15W, h206km±6km, mb4.1*

ISC 21 16:04:59.4±0.6**, 21°.10S**±0°.04×**67°.58W**±0°.04**, h181**km±6km**, n126, σ1s.62**/141**, mb4.3**/14**, 7C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.69	246		Pn	16 05 34.9	+1.4
PB09	IPOC Station P	1.69	246	⇑iP	Pn	16 05 35.0	+1.4
PB09				iS	Sn	16 06 01.0	+1.0
PB09				IAML		16 06 02.7	
	comp=N,2μm,0.3s						
PB09	IPOC Station P	1.69	246	P	Pn	16 05 35.5	+1.9
PB09				IAML		16 06 03.3	
	comp=N,2μm,0.4s						
PB08	IPOC Station P	1.76	303		Pn	16 05 35.7	+1.3
PB08	IPOC Station P	1.76	303	⇓iP	Pn	16 05 36.0	+1.5
PB08				iS	Sn	16 06 02.9	+1.4
PB08	IPOC Station P	1.76	303	P	Pn	16 05 36.2	+1.7
PB08				IAML		16 06 04.2	
	comp=N,399nm,0.3s						
PB01	IPOC Station P	1.78	272		Pn	16 05 35.2	+0.8
PB01	IPOC Station P	1.78	272	eP	Pn	16 05 34.9	+0.6
PB01				iS	Sn	16 06 01.1	-0.3
PB01				IAML		16 06 03.4	
	comp=N,4μm,0.2s						
PB01	IPOC Station P	1.78	272	P	Pn	16 05 35.2	+0.8
PB01				IAML		16 06 03.3	
	comp=N,2μm,0.5s						
MOCB	Mochara	1.82	95	P	Pn	16 05 37.0	+1.8
MOCB				S	Sn	16 06 01.8	-1.0
MOCB				IAML		16 06 05.4	
	comp=N,2μm,0.6s						
AF01	San Pedro de A	1.92	197		Pn	16 05 38.2	+2.1
LVC	Limon Verde	1.94	219	P	Pn	16 05 37.3	+0.9
	comp=N,142nm,0.4s,baz=30,slow=7.3,SNR=542						
LVC				S	Sn	16 06 05.0	0.0
	comp=N,451nm,0.3s,baz=210,slow=18,SNR=6.0						
LVC	Limon Verde	1.94	219	⇑iP	Pn	16 05 37.2	+0.9
LVC				iS	Sn	16 06 05.0	0.0
LVC	Limon Verde	1.94	219	P	Pn	16 05 37.6	+1.3
PB02	IPOC Station P	2.17	264		Pn	16 05 38.8	+0.2
PB02	IPOC Station P	2.17	264	⇓iP	Pn	16 05 39.3	+0.7
PB02				iS	Sn	16 06 08.2	-0.7
PB02	IPOC Station P	2.17	264	P	Pn	16 05 39.5	+0.9
PB02				IAML		16 06 10.8	
	comp=N,6μm,0.3s						
YJA	Yavi	2.20	119	P	Pn	16 05 40.9	+1.7
YJA				IAML		16 06 13.4	
	comp=N,132nm,0.5s						
PB07	IPOC Station P	2.23	253		Pn	16 05 39.5	+0.2
PB07	IPOC Station P	2.23	253	eP	Pn	16 05 40.1	+0.8
PB07				iS	Sn	16 06 09.5	-0.9
PB07				IAML		16 06 11.5	
	comp=N,5μm,0.3s						
PB07	IPOC Station P	2.23	253	P	Pn	16 05 40.2	+0.8
PB07				IAML		16 06 09.9	
	comp=N,5μm,0.4s						
HMBC	Humberstone	2.31	290	⇓iP	Pn	16 05 40.4	+0.3
HMBC				iS	Sn	16 06 10.7	-1.1
HMBC				IAML		16 06 13.8	
	comp=N,2μm,0.2s						
PB11	IPOC Station P	2.36	304		Pn	16 05 41.5	+0.8
PATCX	Punta Patache	2.42	276	Pn	Pn	16 05 41.8	+0.5
PATCX	Punta Patache	2.42	276	⇓iP	Pn	16 05 41.8	+0.5
PATCX				iS	Sn	16 06 12.9	-1.0
PATCX				IAML		16 06 15.9	
	comp=N,2μm,0.4s						
PB06	IPOC Station P	2.44	229		Pn	16 05 42.2	+0.6
PB06	IPOC Station P	2.44	229	⇑iP	Pn	16 05 42.3	+0.6
PB06				iS	Sn	16 06 13.9	-0.7
PB06	IPOC Station P	2.44	229	P	Pn	16 05 42.7	+1.0
PB06				IAML		16 06 18.4	
	comp=N,1μm,0.3s						
TA01	Diego Aracena	2.49	282		Pn	16 05 42.2	+0.2
TA01	Diego Aracena	2.49	282	eP	Pn	16 05 42.1	+0.1
TA01				iS	Sn	16 06 13.5	-1.7
TA01				IAML		16 06 16.4	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	2.68	242		Pn	16 05 44.7	+0.2
PB04	IPOC Station P	2.68	242	⇑iP	Pn	16 05 44.9	+0.3
PB04				iS	Sn	16 06 18.0	-1.6
PB04				IAML		16 06 23.3	
	comp=N,1μm,0.4s						
PB04	IPOC Station P	2.68	242	P	Pn	16 05 45.2	+0.7
PB04				IAML		16 06 23.0	
	comp=N,825nm,0.3s						
PB15	IPOC Station P	2.73	220		Pn	16 05 45.6	+0.5
PB15	IPOC Station P	2.73	220	⇑iP	Pn	16 05 45.8	+0.7
PB15				iS	Sn	16 06 20.2	-0.6
PB16	IPOC Station P	3.30	326	Pn	Pn	16 05 54.1	+1.7
PB16	IPOC Station P	3.30	326	⇑iP	Pn	16 05 54.1	+1.7
PB16				iS	Sn	16 06 34.8	+1.2
PB16	IPOC Station P	3.30	326	P	Pn	16 05 54.5	+2.1
PB16				IAML		16 06 36.7	
	comp=N,171nm,0.9s						
PB12	IPOC Station P	3.58	313	Pn	Pn	16 05 54.6	-0.8
PB12	IPOC Station P	3.58	313	eP	Pn	16 05 54.6	-0.8
PB12				iS	Sn	16 06 35.7	-3.4
PB10	IPOC Station P	3.65	228	Pn	Pn	16 05 55.7	-0.5
PB10	IPOC Station P	3.65	228	⇑iP	Pn	16 05 55.7	-0.5
PB10				iS	Sn	16 06 36.5	-4.1
AP01	Chacalluta	3.76	316	Pn	Pn	16 05 57.7	+0.1
BBOE	La Paz, Chanca	4.29	355	P	Pn	16 06 07.8	+3.0
PB14	IPOC Station P	4.37	216		Pn	16 06 04.9	-0.6
GO02	Mina Guanaco	4.44	204	Pn	Pn	16 06 06.4	-0.2
BBOD	La Paz, Gloria	4.54	348	P	Pn	16 06 10.7	+2.6
LPAZ	La Paz	4.82	354	P	Pn	16 06 12.9	+1.2
	comp=N,49nm,0.4s,baz=152,slow=6.4,SNR=287						
LPAZ				S	Sn	16 07 08.2	-0.2
	comp=N,17nm,0.8s,baz=326,slow=15,SNR=1.8						
LPAZ	La Paz	4.82	354	Pn	Pn	16 06 13.4	+1.7
LPAZ	La Paz	4.82	354	P	Pn	16 06 13.6	+1.9
LPAZ	La Paz	4.82	354	eP	Pn	16 06 13.5	+1.8
AC01	Pan de Azucar	5.73	208	Pn	Pn	16 06 21.2	-1.7
AC02	Maricunga	5.88	194	Pn	Pn	16 06 24.9	-0.4
AC06	Mina Casimiro	6.72	202		Pn	16 06 32.9	-3.0
GO03	Copiap	6.90	200		Pn	16 06 35.6	-2.7
AC04	Llanos de Chal	7.75	203	Pn	Pn	16 06 45.6	-3.8
SIV	San Ignacio	8.00	52	P	Pn	16 06 50.8	-2.0
	comp=N,93nm,0.4s,baz=254,slow=11,SNR=278						
SIV				S	Sn	16 08 16.7	-6.0
	comp=N,4.7nm,0.4s,baz=294,slow=20,SNR=4.6						
LCO	Las Campanas	8.37	199	Pn	Pn	16 06 53.9	-3.9
CO01	Juntas del Tor	9.12	194		Pn	16 07 06.2	-1.4
GO04	Tololo Observa	9.48	197		Pn	16 07 08.3	-4.1
PTLB	Pontes e Lacer	9.79	56	eP	Pn	16 07 14.7	-1.7
CO06	Fray Jorge	10.20	200	Pn	Pn	16 07 16.6	-4.9
CO02	Combarbal	10.52	196	Pn	Pn	16 07 21.4	-4.4
VILB	Vilhena	10.74	42	eP	Pn	16 07 28.2	-0.6
ETMB	Extrema	11.30	7	eP	Pn	16 07 34.4	-1.5
VA06	Catapilco	11.88	195		Pn	16 07 39.4	-3.8
SALV	Santo Antonio	12.40	67	eP	Pn	16 07 49.8	-0.3
MT02	Curacav	12.51	194		Pn	16 07 49.8	-1.5
SAML	Samuel	12.81	20	Pn	Pn	16 07 54.6	-0.6
MT09	Talagante	12.98	193		Pn	16 07 55.5	-1.9
BO04	La Punta	13.11	191		Pn	16 07 58.2	-0.7
MT01	Popeta	13.12	194	Pn	Pn	16 07 57.8	-1.2
BO01	Tunca	13.60	192	Pn	Pn	16 08 03.9	-1.1
TRCB	Terra Rica	13.97	100	eP	P	16 08 13.1	+0.9
PDRB	Porto dos Gac	14.05	49	eP	Pn	16 08 09.0	-1.8
GO05	Huala	14.37	195	Pn	Pn	16 08 14.0	-0.7
PTGB	Pitanga	14.74	107	eP	P	16 08 24.0	+3.2
CLDB	Colider	15.21	50	eP	Pn	16 08 24.0	-1.3
PCMB	Pacaembu	15.21	95	eP	P	16 08 26.9	+0.9
ITAB	Concordia	15.36	116	eP	P	16 08 32.9	+5.3
ITRB	Iturama	16.21	88	eP	Pn	16 08 39.6	+2.3
FRTB	Fartura	16.83	101	eP	Pn	16 08 45.1	+0.3
TRQA	Tornquist	17.58	165	P	P	16 08 51.5	-0.4
BB19B	Bebedouro	17.78	93	eP	Pn	16 08 54.5	-1.6
SNDB	Serra Nova Dou	18.05	62	eP	P	16 08 56.6	-0.5
IPMB	Ipameri, GO	18.52	84	eP	Pn	16 09 03.1	-1.6
MACA	Manacapuru-AM	19.06	22	eP	P	16 09 07.0	-1.1
PLCA	Paso Flores	19.73	187	P	Pn	16 09 16.2	-2.7
	comp=N,0.7nm,0.6s,baz=355,slow=13,SNR=7.3						
PLCA	Paso Flores	19.73	187	P	P	16 09 16.0	+0.8
PLCA	Paso Flores	19.73	187	eP	Pn	16 09 27.5	+8.6
ITTB	Itaituba	20.23	36	eP	P	16 09 20.0	-0.7
PEXB	Peixe	20.51	67	eP	P	16 09 24.1	+0.3
DIAM	Diamantina, MG	22.68	87	eP	P	16 09 46.2	+0.4
PRPB	Parauapebas	22.73	52	eP	P	16 09 45.4	-0.7
SMTB	Santa Maria do	22.79	61	eP	P	16 09 47.0	+0.3
JANB	Januaria	22.91	79	eP	P	16 09 47.3	-0.5
MALB	Monte Alegre	23.12	36	eP	P	16 09 49.9	+0.2
SDBA	SAO DESIDERIO	23.35	72	eP	P	16 09 52.1	+0.3
MCPB	Macapa, AP	25.59	38	eP	P	16 10 11.7	-0.4
BIRV	Birongo	31.41	2	P	P	16 11 04.3	+0.7
SJCC	San Jacinto, C	31.70	346	P	P	16 11 07.1	+0.9
SJCC				IAmb	IAmb	16 11 25.0	
	comp=Z,9.9nm,1.1s						
TXAR	Lajitas Array	61.02	324	P	P	16 14 54.1	+0.1
	comp=Z,0.5nm,0.6s,baz=147,slow=8.0,SNR=6.6						
	comp=Z,0.5nm,0.6s						
SNAA	Sanae	62.25	161	P	P	16 15 02.2	+0.5
	comp=Z,3.2nm,0.8s,baz=270,slow=7.9,SNR=8.6						
	comp=Z,3.2nm,0.8s						
SNAA	Sanae	62.25	161	P	P	16 15 01.9	+0.2
SNAA				IAmb	IAmb	16 15 03.6	
	comp=Z,4.2nm,0.8s						
U38A	Gravette	62.59	336	IAmb	IAmb	16 15 20.3	
	comp=Z,4.3nm,0.6s						
ANMO	Albuquerque	66.86	326	P	P	16 15 33.8	+1.6
SDCO	Great Sand Dun	68.55	328	IAmb	IAmb	16 15 45.2	
	comp=Z,4.1nm,0.7s						
QSPA	South Pole Qui	69.09	180	P	P	16 15 47.1	+1.6
SRU	San Rafael Swe	72.13	326	IAmb	IAmb	16 16 06.8	
	comp=Z,5.6nm,0.6s						
PDAR	Pinedale Array	74.39	329	P	P	16 16 18.4	+0.8
	comp=Z,0.7nm,0.4s,baz=122,slow=8.6,SNR=7.7						
	comp=Z,0.7nm,0.4s						
PDAR	Pinedale Array	74.39	329	P	P	16 16 19.0	+1.4
ULM	Lac du Bonnet	75.32	342	P	P	16 16 22.5	+0.1
	comp=Z,3.0nm,0.6s,baz=155,slow=9.0,SNR=4.4						
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	75.95	321	P	P	16 16 26.8	+0.2
	comp=Z,0.5nm,0.7s,baz=165,slow=7.3,SNR=4.0						
	comp=Z,0.5nm,0.7s						
TOA0	Torodi Ar. Sit	76.06	70	P	P	16 16 27.1	-0.3
TOA0				IAmb	IAmb	16 16 27.7	
	comp=Z,7.0nm,0.7s						
TORD	Torodi Ar. Bea	76.06	70	P	P	16 16 26.8	-0.6
	comp=Z,6.9nm,0.5s,baz=257,slow=5.7,SNR=74						
	comp=Z,6.9nm,0.5s						
TORD	Torodi Ar. Bea	76.06	70	P	P	16 16 27.0	-0.4
TORD				IAmb	IAmb	16 16 27.7	
	comp=Z,4.8nm,0.7s						
MDT	Midelt	80.55	50	P	P	16 16 52.5	+0.7
	comp=Z,3.3nm,0.8s,baz=250,slow=4.7,SNR=5.3						
	comp=Z,3.3nm,0.8s						
ESDC	Sonseca Array	84.69	44	P	P	16 17 13.2	+0.3
	comp=Z,0.9nm,0.9s,baz=252,slow=4.8,SNR=5.1						
	comp=Z,0.9nm,0.9s						
YKA	Yellowknife Ar	91.23	340	P	P	16 17 44.4	+0.9
	comp=Z,3.2nm,0.7s,baz=132,slow=4.5,SNR=42						
	comp=Z,3.2nm,0.7s						
YKA	Yellowknife Ar	91.23	340	P	P	16 17 44.2	+0.7
ASAR	Alice Springs	130.83	206	PKP	PKiKP	16 23 50.2	-0.6
	comp=Z,1.0nm,0.9s,baz=130,slow=1.6,SNR=5.8						
WRA	Warramunga Arr	133.91	209	PKP	PKiKP	16 23 56.6	-0.5
	comp=Z,1.1nm,0.8s,baz=157,slow=1.5,SNR=8.7						
ZALV	Zalesovo Beam	141.06	26	PKP	PKiKP	16 24 08.4	-2.2
	comp=Z,2.2nm,0.6s,baz=328,slow=5.2,SNR=7.1						
MKAR	Makanchi Array	144.58	37	PKP	PKPdf	16 24 14.5	+0.2
	comp=Z,13nm,1.0s,baz=313,slow=3.4,SNR=66						
MKAR	Makanchi Array	144.58	37	PKPdf	PKPdf	16 24 14.7	+0.4
SONM	Songino Array	152.89	9	PKPbc	PKiKP	16 24 34.8	-0.5
	comp=Z,0.9nm,0.6s,baz=294,slow=1.4,SNR=6.0						
SONM				PKPab	PKPab	16 24 46.9	+0.1
	comp=Z,0.6nm,0.6s,baz=329,slow=2.5,SNR=4.3						

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*IDC **21** 16:05:16.1±0.6, 38°.18N×21°.92E, h0km, mb4.0/19, mbtmp4.0/28, ML3.8/9, MS3.0/17, Error ellipse: s-maj=13.2km s-min=12.1km az=86.0*

*ATH **21** 16:05:17.1, 38°.18N×21°.88E, h10km±1km, ML3.9/22, Error ellipse: s-maj=1.1km s-min=0.5km az=43.0*

*UPSL **21** 16:05:17.1, 38°.19N×21°.90E, h9km, Mw3.9, Moment Tensor Solution. s6 Moment tensor: M_{rr}-9.07; $M_{\theta\theta}$3.61; $M_{\phi\phi}$5.46; $M_{r\theta}$3.34; $M_{\theta\phi}$2.51; $M_{\phi r}$0.70; Fault plane solution: NP1:ϕ_s26.00000°, δ37.00000°, λ-107.00000°. NP2: ϕ_s228.00000°, δ55.00000°, λ-77.00000°.*

*MOS **21** 16:05:17.0±1.2, 38°.21N×21°.79E, h14km, mb4.5/10 Error ellipse: s-maj=8.5km s-min=4.8km az=85.2*

*THE **21** 16:05:17.2, 38°.18N×21°.88E, h0km±1km, ML4.0/8, Error ellipse: s-maj=1.5km s-min=0.4km az=194.0*

*PDG **21** 16:05:17.1±0.2, 38°.19N×21°.88E, h13km, ML4.2/9, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*

*MED_RC **21** 16:05:18.0±0.5, 38°.18N×21°.86E, h11km±2km, MW4.0/21, Moment Tensor Solution.Mantle waves: s21,c24; Duration: 1s.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.62±.29; $M_{\theta\theta}$0.84±.17; $M_{\phi\phi}$0.78±.18; $M_{r\theta}$0.04±.28; $M_{\theta\phi}$0.45±.13; $M_{\phi r}$0.37±.28; Best double couple: $M_0$1.48000×10^{15} NP1:ϕ_s219.00000°, δ51.00000°, λ-98.00000°. NP2:ϕ_s53.00000°, δ40.00000°, λ-80.00000°. Principal axes: T 1.2900, Plg6.0000°, Azm316.0000°; N 0.3800, Plg7.0000°, Azm225.0000°; P -1.6800, Plg81.0000°, Azm86.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **21** 16:05:18.9±2.4, 38°.21N±0°.01×21°.85E±0°.08, h10km±1km, mb4.6/33, ML4.2(THE), ML3.9(ISK), ML4.0(ATH) Error ellipse: s-maj=10.0km s-min=2.9km az=269.0*

ISC 21 16:05:17.8±0.8**, 38°.19N**±0°.02×**21°.87E**±0°.01**, h8**km±4km**, n299, σ1s.37**/365**, mb4.4**/41**, MS2.9**/11**, 16C-34D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAKA	Lakka	0.10	61	P	Pg	16 05 19.4	-0.7
LAKA				S	Sg	16 05 21.2	-0.6
LAKA	Lakka	0.10	61	P	Pg	16 05 19.5	-0.6
LAKA				S	Sg	16 05 21.0	-0.8
	332μm,0.3s						
UPR	University Cam	0.11	325	P	Pg	16 05 20.1	-0.2
UPR				S	Sg	16 05 22.5	+0.4
ALIK	Aliki, Aigiali	0.20	70	P	Pg	16 05 21.6	-0.3
ALIK				S	Sg	16 05 24.2	-0.4

EFP	**Efpalio**	0.24	7	P	Pg	16 05 22.3	-0.2
EFP				S	Sg	16 05 25.6	-0.2
EFP				AML	AML	16 05 26.4	
	comp=E,77692µm,0.2s						
EFP				AML	AML	16 05 30.4	
	comp=N,69542µm,0.7s						
EFP	**Efpalio**	0.24	7	P	Pg	16 05 22.3	-0.2
EFP				S	Sg	16 05 25.9	+0.2
	comp=N,36µm,0.2s						
KLV	**Kalavryta, Ach**	0.27	124	P	Pg	16 05 22.4	-0.7
KLV				S	Sg	16 05 26.0	-0.7
KLV				AML	AML	16 05 27.5	
KLV				AML	AML	16 05 28.3	
	comp=E,96964µm,0.6s						
KLV	**Kalavryta, Ach**	0.27	124	P	Pg	16 05 22.4	-0.7
KLV				S	Sg	16 05 25.7	-1.0
	comp=E,51µm,0.4s						
DRO	**Drossia**	0.27	208	P	Pg	16 05 22.8	-0.3
DRO				S	Sg	16 05 26.9	+0.2
DRO				AML	AML	16 05 28.2	
DRO				AML	AML	16 05 28.2	
DRO	**Drossia**	0.27	208	P	Pg	16 05 23.0	-0.1
DRO				S	Sg	16 05 26.3	-0.4
	comp=E,125µm,0.3s						
RLS	**Riolos of Patr**	0.34	247	P	Pg	16 05 24.2	-0.2
RLS				S	Sg	16 05 29.5	+0.5
RLS				AML	AML	16 05 36.9	
	comp=N,29975µm,0.4s						
RLS				AML	AML	16 05 36.9	
	comp=E,29662µm,0.5s						
RLS	**Riolos of Patr**	0.34	247	P	Pg	16 05 24.3	-0.2
RLS				S	Sg	16 05 29.6	+0.5
	comp=E,15µm,0.4s						
ANX	**Ano Chora**	0.40	6	P	Pg	16 05 25.2	-0.5
ANX				S	Sg	16 05 31.2	+0.2
ANX				AML	AML	16 05 34.2	
	comp=E,83439µm,0.4s						
ANX				AML	AML	16 05 36.6	
	comp=N,67637µm,0.4s						
ANX	**Ano Chora**	0.40	6	P	Pg	16 05 25.2	-0.5
ANX				S	Sg	16 05 31.4	+0.4
PVO	**Paravola**	0.50	328	P	Pg	16 05 26.9	-0.6
DLFA	**Delphi**	0.57	60	P	Pg	16 05 27.9	-0.9
DLFA				S	Sg	16 05 35.9	-0.4
DLFA				AML	AML	16 05 42.1	
	comp=E,10970µm,0.7s						
DLFA				AML	AML	16 05 43.7	
	comp=N,8614µm,0.4s						
THAL	**Thalero**	0.65	104	P	Pg	16 05 29.0	-1.1
THAL				S	Sg	16 05 37.6	-1.1
THAL				AML	AML	16 05 44.8	
	comp=E,64546µm,0.3s						
THAL				AML	AML	16 05 47.0	
	comp=N,44095µm,0.3s						
THAL	**Thalero**	0.65	104	P	Pg	16 05 29.1	-1.1
THAL				S	Sg	16 05 38.2	-0.4
	comp=N,31µm,0.3s						
EVR	**Evrytania**	0.73	356	P	Pg	16 05 30.8	-1.0
EVR				S	Sg	16 05 41.5	+0.3
EVR				AML	AML	16 05 46.0	
	comp=E,15762µm,0.4s						
EVR				AML	AML	16 05 50.4	
	comp=N,15494µm,0.8s						
EVR	**Evrytania**	0.73	356	P	Pg	16 05 30.8	-1.0
EVR				S	Sb	16 05 42.1	-0.8
MAKR	**Makrakomi, Fth**	0.85	14	P	Pg	16 05 33.4	-0.6
MAKR				S	Sg	16 05 45.4	+0.3
MAKR				AML	AML	16 05 49.6	
	comp=E,16134µm,0.4s						
MAKR				AML	AML	16 05 51.7	
	comp=N,10160µm,0.5s						
MAKR	**Makrakomi, Fth**	0.85	14	P	Pg	16 05 33.0	-1.0
MAKR				S	Sb	16 05 46.5	+0.2
LTK	**Loutraki**	0.88	101	P	Pg	16 05 33.4	-1.3
AGG	**Agios Georgios**	0.91	23	P	Pg	16 05 34.0	-1.2
AGG				S	Sg	16 05 46.7	-0.2
AGG				AML	AML	16 05 48.9	
	comp=E,16239µm,0.3s						
AGG				AML	AML	16 05 52.9	
	comp=N,10945µm,0.4s						
AGG	**Agios Georgios**	0.91	23	P	Pg	16 05 33.9	-1.2
AGG				S	Sg	16 05 47.3	+0.4
	comp=N,7µm,0.4s						
AGG	**Agios Georgios**	0.91	23	Pg	Pg	16 05 33.8	-1.4
AGG				Sg	Sg	16 05 43.0	-3.9
AGG	**Agios Georgios**	0.91	23	P	Pg	16 05 33.8	-1.4
AGG						16 05 43.0	
LKR	**Lokris**	1.00	62	P	Pg	16 05 34.7	-2.3
LKR				S	Sg	16 05 49.3	-0.7
LKR				AML	AML	16 05 53.7	
	comp=E,9227µm,0.5s						
LKR				AML	AML	16 05 54.6	
	comp=N,10270µm,0.3s						
VLS	**Valsamata**	1.01	270	P	Pg	16 05 35.9	-1.3
VLS				S	Sg	16 05 49.8	-0.4
VLS				AML	AML	16 05 55.4	
	comp=N,18271µm,0.3s						
VLS				AML	AML	16 05 56.1	
	comp=E,11187µm,0.3s						
VLS	**Valsamata**	1.01	270	P	Pg	16 05 36.1	-1.0
VLS				S	Sb	16 05 51.2	+0.2
	comp=E,7µm,0.4s						
ITM	**Ithomi**	1.01	177	P	Pg	16 05 36.2	-1.0
ITM				S	Sg	16 05 49.5	-0.8
ITM				AML	AML	16 05 55.5	
	comp=N,15476µm,0.6s						
ITM				AML	AML	16 05 57.5	
	comp=E,13489µm,0.5s						
ITM	**Ithomi**	1.01	177	P	Pg	16 05 36.2	-1.0
ITM	**Ithomi**	1.01	177	Pg	Pg	16 05 35.9	-1.3
ITM				Sg	Sn	16 05 52.1	-0.7
PSDA	**Pessada-Kefalo**	1.02	266	P	Pg	16 05 36.3	-1.0
PSDA	**Pessada-Kefalo**	1.02	266	P	Pg	16 05 36.3	-1.0
PSDA				S	Sb	16 05 51.8	+0.7
ATAL	**Atalanti**	1.03	61	P	Pg	16 05 36.2	-1.4
ATAL				S	Sg	16 05 50.6	-0.4
ATAL				AML	AML	16 05 58.6	
	comp=N,9607µm,0.8s						
ATAL				AML	AML	16 06 00.6	
	comp=E,5085µm,0.5s						
ATAL	**Atalanti**	1.03	61	P	Pg	16 05 36.3	-1.4
EVGI	**Lefkada island**	1.04	295	P	Pg	16 05 36.4	-1.5
EVGI	**Lefkada island**	1.04	295	P	Pg	16 05 36.5	-1.3
NYDR	**Nydri-Lefkada**	1.06	300	P	Pg	16 05 36.7	-1.3
NYDR	**Nydri-Lefkada**	1.06	300	P	Pg	16 05 36.8	-1.3
FSK	**Fiskardo**	1.06	285	P	Pg	16 05 37.4	-0.8
FSK				S	Sg	16 05 51.5	-0.5
FSK				AML	AML	16 06 02.4	
	comp=E,12091µm,0.3s						
FSK				AML	AML	16 06 02.6	
	comp=N,8387µm,0.6s						
VIL2	**Platees**	1.10	89	P	Pg	16 05 38.5	-0.4
LKD2	**Lefkada island**	1.12	302	P	Pg	16 05 38.1	-1.1
LKD2				S	Sg	16 05 53.1	-0.8
LKD2				AML	AML	16 06 03.5	
	comp=E,14151µm,0.4s						
LKD2				AML	AML	16 06 03.9	
	comp=N,12852µm,0.4s						
LKD2	**Lefkada island**	1.12	302	P	Pg	16 05 38.2	-1.1
LXRA	**Lixouri, Kepha**	1.13	271	P	Pg	16 05 38.6	-0.9
DRAG	**Dragano-Lefkad**	1.13	296	P	Pg	16 05 37.9	-1.6
DRAG	**Dragano-Lefkad**	1.13	296	P	Pg	16 05 38.1	-1.3
VILL	**Villia**	1.14	91	P	Pg	16 05 39.1	-0.5
KEF4	**Livadi, Kephal**	1.14	274	P	Pg	16 05 38.5	-1.1
KEF4	**Livadi, Kephal**	1.14	274	P	Pg	16 05 38.5	-1.1
TSLK	**Tsoukalades, L**	1.14	304	P	Pg	16 05 38.7	-1.1
TSLK				S	Sg	16 05 54.4	-0.1
TSLK				AML	AML	16 06 06.1	
	comp=E,12187µm,0.5s						
TSLK				AML	AML	16 06 09.1	
	comp=N,13704µm,0.7s						
TSLK	**Tsoukalades, L**	1.14	304	P	Pg	16 05 38.6	-1.1
EPID	**Epidavros**	1.15	120	P	Pg	16 05 38.4	-1.4
EPID	**Epidavros**	1.15	120	P	Pg	16 05 38.2	-1.5
DMLN	**Damoulianata-K**	1.18	273	P	Pg	16 05 38.9	-1.5
DMLN	**Damoulianata-K**	1.18	273	P	Pg	16 05 39.1	-1.3
KEF3	**Kipouria, Keph**	1.20	271	P	Pb	16 05 39.0	-1.7
KRND	**KRANIDI**	1.30	128	P	Pn	16 05 41.2	-1.0
KRND	**KRANIDI**	1.30	128	P	Pn	16 05 41.0	-1.2
PYL	**PYLOS**	1.30	184	P	Pn	16 05 40.8	-1.4
PYL				S	Sb	16 05 57.8	-1.5
PYL				AML	AML	16 06 06.4	
	comp=E,11702µm,0.7s						
PYL				AML	AML	16 06 06.6	
	comp=N,9474µm,1.2s						
PYL	**PYLOS**	1.30	184	P	Pn	16 05 41.1	-1.1
THL	**Klokotos Trika**	1.38	5	P	Pn	16 05 42.5	-0.8
THL				S	Sb	16 06 01.0	-0.5
THL				AML	AML	16 06 04.3	
	comp=E,4705µm,0.5s						
THL				AML	AML	16 06 11.7	
	comp=N,3026µm,0.5s						
THL	**Klokotos Trika**	1.38	5	P	Pn	16 05 43.0	-0.3
ATH	**Athens Observa**	1.48	98	P	Pn	16 05 44.1	-0.6
ATH				S	Sn	16 06 03.5	-0.7
ATH				AML	AML	16 06 09.4	
	comp=N,7160µm,0.5s						
ATH				AML	AML	16 06 11.0	
	comp=E,6877µm,1.0s						
ATH	**Athens Observa**	1.48	98	P	Pn	16 05 44.1	-0.6
ATHU	**Athens Univers**	1.53	98	P	Pn	16 05 44.9	-0.5
ATHU				S	Sn	16 06 04.6	-0.9
ATHU				AML	AML	16 06 07.9	
	comp=N,2783µm,0.6s						
ATHU				AML	AML	16 06 09.3	
	comp=E,1695µm,0.5s						
ATHU	**Athens Univers**	1.53	98	P	Pn	16 05 44.8	-0.6
NEO	**Neokhori**	1.54	43	P	Pn	16 05 45.1	-0.5
TYRN	**Tyrnavos**	1.54	10	P	Pn	16 05 45.8	+0.2
TYRN	**Tyrnavos**	1.54	10	P	Pn	16 05 45.9	+0.2
VLY	**Voula,Athens**	1.56	102	P	Pn	16 05 45.5	-0.4
VLY	**Voula,Athens**	1.56	102	P	Pn	16 05 45.4	-0.4
XOR	**Xorichti**	1.56	41	P	Pn	16 05 45.9	-0.1
XOR	**Xorichti**	1.56	41	P	Pn	16 05 45.8	-0.1
PTL	**Penteli**	1.58	95	P	Pn	16 05 45.5	-0.7
DION	**Dionisos Attik**	1.63	93	P	Pn	16 05 46.6	-0.3
VLI	**Veliai**	1.70	150	P	Pn	16 05 47.8	+0.1
VLI				S	Sn	16 06 09.8	+0.1
VLI				AML	AML	16 06 18.6	
	comp=E,6199µm,1.1s						
VLI				AML	AML	16 06 23.3	
	comp=N,9025µm,0.7s						
IGT	**Igoumenitsa**	1.80	319	P	Pb	16 05 50.6	-0.4
KPRO	**Kipourio**	1.80	348	P	Pb	16 05 50.2	-0.9
KARY	**Karystos**	2.03	94	P	Pn	16 05 52.3	0.0
KEK	**Kerkira**	2.22	314	P	Pn	16 05 56.2	+1.3
KEK	**Kerkira**	2.22	314		Pn	16 05 56.0	+1.1
FNA	**Florina**	2.62	352		Pn	16 06 01.4	+0.9
FNA	**Florina**	2.62	352	P	Pn	16 06 01.4	+0.9
OHR	**Ohrid**	3.03	345	*i* Pn	Pb	16 06 09.1	-3.0
APE	**Apeiranthos**	3.12	110	⇓P	Pn	16 06 07.6	+0.3
APE	**Apeiranthos**	3.12	110*c*	*i*P	Pn	16 06 07.4	+0.1
VAY	**Valandovo**	3.17	10	*i* Pn	Pn	16 06 08.6	+0.6
SCTE	**Santa Cesarea**	3.24	306		Pn	16 06 07.6	-1.4
SANT	**Santorini**	3.39	121	⇓P	Pn	16 06 11.8	+0.8
SANT	**Santorini**	3.39	121	Pn	Pn	16 06 10.1	-1.0
IDI	**Anoyia**	3.78	139	⇑P	Pn	16 06 16.9	+0.4
IDI				⇑S	Sn	16 07 02.0	+0.9
IDI	**Anoyia**	3.78	139	Pn	Pn	16 06 14.6	-1.8
	comp=N,6.2nm,0.3s,baz=348,slow=15,SNR=25						
IDI				Sn	Sn	16 07 03.0	+1.8
	comp=N,15nm,0.3s,baz=312,slow=21,SNR=5.9						
	comp=N,32nm,0.5s						
IDI	**Anoyia**	3.78	139	Pn	Pn	16 06 17.1	+0.7
SKO	**Skopje**	3.79	355	*i* Pn	Pn	16 06 18.0	+1.5
RDO	**Rodhopi**	4.09	43	Pn	Pn	16 06 20.5	-0.1
TIP	**Timpagrande**	4.12	285	Pn	Pn	16 06 21.8	+0.7
ALN	**Alexandroupoli**	4.21	49		Pn	16 06 22.3	0.0
ALN	**Alexandroupoli**	4.21	49	P	Pn	16 06 22.3	0.0
ULC	**Ulcinj**	4.27	333	⇓*i*Pn	Pn	16 06 23.2	0.0
ULC				*i* Sn	Sn	16 07 13.4	+0.2
DRME	**Dracevica, Mon**	4.49	334	*e*Pn	Pn	16 06 26.2	+0.1
DRME	**Dracevica, Mon**	4.49	334	⇓*i*Pn	Pn	16 06 27.0	+0.9
DRME				*i* Sn	Sn	16 07 18.8	+0.3
VTS	**Vitosha**	4.54	13	⇑P	Pn	16 06 27.4	+0.4
VTS	**Vitosha**	4.54	13	Pn	Pn	16 06 28.1	+1.1
VTS	**Vitosha**	4.54	13	P	Pn	16 06 28.1	+1.1
PDG	**Podgorica**	4.68	336	⇑P	Pn	16 06 29.2	+0.5
PDG	**Podgorica**	4.68	336		Pn	16 06 28.9	+0.2
PDG	**Podgorica**	4.68	336	*e*Pn	Pn	16 06 28.5	-0.2
TTG	**Podgorica**	4.68	336	⇑*i*Pn	Pn	16 06 28.9	+0.2
TTG				*i* Sn	Sn	16 07 23.4	+0.2
MATE	**Matera**	4.69	303	⇓P	Pn	16 06 29.2	+0.3
MATE				⇓S	Sn	16 07 21.9	-1.6
BUM	**Brajici-Budva**	4.69	332	⇑*i*Pn	Pn	16 06 29.0	0.0
BUM				*i* Sn	Sn	16 07 23.7	0.0
CEME	**Cevo**	4.90	334	⇓*i*Pn	Pn	16 06 31.9	+0.1
CEME				*i* Sn	Sn	16 07 28.7	0.0
IVA	**Berane**	4.91	343	⇓*i*Pn	Pn	16 06 32.0	0.0
IVA				*i* Sn	Sn	16 07 28.9	-0.2
HCY	**Herceg Novi**	4.97	330	*e*Pn	Pn	16 06 32.1	-0.7
HCY	**Herceg Novi**	4.97	330	⇓*i*Pn	Pn	16 06 32.3	-0.5
HCY				*i* Sn	Sn	16 07 30.2	-0.3
KOME	**Kolasin**	4.99	340	⇓*i*Pn	Pn	16 06 33.6	+0.5
KOME				*i* Sn	Sn	16 07 31.0	0.0
KARP	**Karpathos**	5.00	120	Pn	Pn	16 06 34.6	+1.4
CUC	**Castrocucco**	5.04	293		Pn	16 06 35.5	+1.8
TREB	**Trebinje**	5.26	330	*e*Pn	Pn	16 06 35.7	-1.0
SJES	**Sjenica**	5.26	345	*e*Pn	Pn	16 06 37.8	+0.9
BRY	**Bratogost**	5.34	333	⇓*i*Pn	Pn	16 06 38.1	+0.1
BRY				*i* Sn	Sn	16 07 39.5	-0.3
BOVS	**Bovan**	5.44	359	⇑P	Pn	16 06 39.9	+0.7
BLKB	**Belogradchik**	5.46	6	⇓P	Pn	16 06 40.6	+1.1
PLE	**Pljevlja**	5.47	341	*e*Pn	Pn	16 06 40.1	+0.4
PLE				*i* Sn	Sn	16 07 42.6	-0.2
UPM	**Unac-Piva**	5.49	337	*e*Pn	Pn	16 06 40.3	+0.3
RUDO	**Rudo**	5.74	342	*e*Pn	Pn	16 06 42.4	-0.9
SGRT	**San Giovanni R**	5.90	309		Pn	16 06 45.6	0.0
BBLS	**Lazići**	5.97	343	*e*Pn	Pn	16 06 46.1	-0.4
DIVS	**Divibare**	6.07	347	Pn	Pn	16 06 48.2	+0.3
DIVS	**Divibare**	6.07	347	*e*Pn	Pn	16 06 47.8	-0.1
PAOL	**Paolisi**	6.31	299		Pn	16 06 52.3	+1.1
RAZG	**Razgrad**	6.42	32	⇑P	Pn	16 06 53.7	+1.1
AKAS	**Kas**	6.48	105		Pn	16 06 56.2	+2.6
MDVR	**Moldovita**	6.58	359	⇓P	Pn	16 06 55.1	+0.2
HERR	**Herculane**	6.70	3	⇓P	Pn	16 06 56.7	+0.2
ISP	**Isparta**	6.84	90	Pn	Pn	16 06 58.9	+0.3
ISP	**Isparta**	6.84	90	⇓*e*P	Pn	16 07 00.8	+2.2
SRKY	**Kupres RS**	6.86	330	*e*Pn	Pn	16 06 58.8	0.0
BORA	**Eskisehir**	6.89	73	Pn	Pn	16 07 00.4	+1.2
FRGS	**Fruska Gora**	7.13	348	⇓P	Pn	16 07 02.1	-0.3
FRGS	**Fruska Gora**	7.13	348	*e*Pn	Pn	16 07 02.1	-0.3
MGRS	**Mrkonjic Grad**	7.19	331	*e*Pn	Pn	16 07 03.2	0.0
BZS	**Buzias**	7.42	359	⇑P	Pn	16 07 07.2	+0.9
BLY	**Banja Luka**	7.43	333	*e*Pn	Pn	16 07 06.2	-0.4
MDUB	**Mudurnu**	7.58	70	Pn	Pn	16 07 10.3	+1.6
VOIR		7.62	17	⇑P	Pn	16 07 10.8	+1.6
ISR	**Istrita**	7.75	25	⇑P	Pn	16 07 12.0	+1.0
MLR	**Muntele Rosu**	7.90	21	⇓P	Pn	16 07 14.7	+1.6
MLR	**Muntele Rosu**	7.90	21	Pn	Pn	16 07 14.9	+1.8
	comp=N,0.6nm,0.3s,baz=168,slow=8.0,SNR=8.8						
MLR				LR	LR	16 11 12.7	
	comp=N,74nm,20.5s,baz=226,slow=45						
	comp=N,7.0nm,0.8s						
MLR	**Muntele Rosu**	7.90	21	Pn	Pn	16 07 15.1	+2.0
MLR	**Muntele Rosu**	7.90	21	P	Pn	16 07 15.1	+2.0
NEHR	**Nehoiu**	7.95	23	⇓P	Pn	16 07 15.9	+2.3
NRCA	**Norcia**	8.12	308	Pn	Pn	16 07 17.5	+1.5
DOPR	**Dopca**	8.20	17	⇓P	Pn	16 07 18.9	+1.8
TPGR	**Topolog**	8.27	34	⇑P	Pn	16 07 19.5	+1.4
MORH	**Mrgy, Hungar**	8.37	344	⇓P	Pn	16 07 18.3	-1.0
MORH	**Mrgy, Hungar**	8.37	344	*e*Pn	Pn	16 07 17.8	-1.5
MORH	**Mrgy, Hungar**	8.37	344	P	Pn	16 07 18.3	-1.0
PLOR	**Plostina**	8.44	23	⇓P	Pn	16 07 21.8	+1.5
VRI	**Vrincioaia**	8.48	24	⇓P	Pn	16 07 23.0	+2.1
DRGR		8.62	4	⇑P	Pn	16 07 24.5	+1.6
MURB	**Monte Urbino**	8.71	308		Pn	16 07 25.7	+1.5
CRES	**Cresnjev**	8.99	330	*e*Pn	Pn	16 07 26.0	-2.0
GBRS	**Gornja Briga**	9.03	327	*i* Pn	Pn	16 07 27.6	-0.8
GBRS				*e*Sn	Sn	16 09 05.4	-4.9
TESR	**Tescani**	9.03	22	⇑P	Pn	16 07 30.1	+1.6
BR131	**Keskin Array S**	9.30	77	Pn	Pn	16 07 34.5	+2.2
BR131	**Keskin Array S**	9.30	77*d*	*i*P	Pn	16 07 34.6	+2.3
BRTR	**Keskin Array B**	9.30	77	Pn	Pn	16 07 34.3	+2.0
	comp=N,1.9nm,0.3s,baz=261,slow=12,SNR=56						
BRTR				LR	LR	16 11 51.0	
	comp=N,64nm,19.9s,baz=261,slow=43						
	comp=N,7.2nm,0.5s						
BRTR	**Keskin Array B**	9.30	77	Pn	Pn	16 07 34.5	+2.2
BRTR	**Keskin Array B**	9.30	77	*i* P	Pn	16 07 34.5	+2.2
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CEY	**Cerknica**	9.36	326	*e*Pn	Pn	16 07 31.5	-1.4
SKDS	**Skadanscina**	9.39	324	*e*Pn	Pn	16 07 31.4	-2.1
MPLH	**Magyarpolny**	9.52	342	P	Pn	16 07 34.0	-1.1
LJU	**Ljubljana**	9.55	328	*e*Pn	Pn	16 07 34.4	-1.2
ILGA	**Ilgaz**	9.58	69	Pn	Pn	16 07 37.6	+1.5
BURAR	**Bucovina Array**	9.73	14	⇓P	Pn	16 07 39.1	+0.9
BURAR	**Bucovina Array**	9.73	14	Pn	Pn	16 07 38.2	+0.1
BUR08	**Bucovina Ar. S**	9.76	13	Pn	Pn	16 07 37.6	-0.8
CSS	**Mathiatis**	9.77	106	Pn	Pn	16 07 41.2	+2.7
PSZ	**Piszkesteto**	9.83	352	⇓P	Pn	16 07 40.0	+0.6
PSZ	**Piszkesteto**	9.83	352		Pn	16 07 40.3	+0.8
PSZ	**Piszkesteto**	9.83	352	P	Pn	16 07 40.3	+0.8
PSZ	**Piszkesteto**	9.83	352	P	Pn	16 07 41.7	+2.3
SOKA	**Soboth**	9.87	331	*e*Pn	Pn	16 07 39.4	-0.6
	comp=Z,6.1nm,0.4s,SNR=14						
SOKA				*e*Sn	Sn	16 09 27.1	-3.9
	comp=Z,5.7nm,0.6s						
OBKA	**Obir**	9.92	329	*e*Pn	Pn	16 07 40.5	-0.2
	comp=Z,7.6nm,0.7s,SNR=8.0						
OBKA				*i* Sn	Sn	16 09 31.5	-0.7
	comp=Z,15nm,0.6s						
ARSA	**Arzberg**	10.18	335	*e*Pn	Pn	16 07 44.6	+0.4
	comp=Z,2.1nm,0.4s						
ARSA				*i* Sn	Sn	16 09 37.1	-1.5
	comp=Z,1.2nm,0.3s						
KEST	**Kesra**	10.32	260	LR	LR	16 12 40.3	
	comp=Z,51nm,19.8s,baz=234,slow=43						
TEOL	**Teolo**	10.45	316	Pn	Pn	16 07 46.0	-1.9
VYHS	**Vyhne**	10.53	349	*e*P	Pn	16 07 49.9	+0.9
VYHS	**Vyhne**	10.53	349	*e*PN	Pn	16 07 49.9	+0.9
STAL	**STALIGIAL**	10.53	323		Pn	16 07 48.1	-1.0
CONA	**Conrad Observa**	10.67	338	*i* Pn	Pn	16 07 50.1	-0.9
	comp=Z,0.7nm,0.5s						
MODS	**Modra-Piesok**	10.71	343	*e*P	Pn	16 07 51.1	-0.4
MODS	**Modra-Piesok**	10.71	343	*e*PN	Pn	16 07 51.1	-0.4
KBA	**Koelnbreinsper**	10.87	328	*i* Pn	Pn	16 07 53.4	-0.4
	comp=Z,1.8nm,0.4s						
KBA				*i* Sn	Sn	16 09 50.4	-5.3
	comp=Z,4.2nm,0.7s						
CTI	**Castel Tesino**	10.91	319	Pn	Pn	16 07 52.6	-1.7
CTI	**Castel Tesino**	10.91	319	P	Pn	16 07 52.6	-1.7
ABTA	**Abfaltersbach**	10.98	324	*e*Pn	Pn	16 07 54.2	-1.1
	comp=Z,6.6nm,0.8s,SNR=8.3						
ABTA				*e*Sn	Sn	16 09 54.9	-3.5
	comp=Z,12nm,0.7s						
MSSA	**Maissana**	11.12	307	Pn	Pn	16 07 58.7	+1.5
MOA	**Molln**	11.13	333	*e*Pn	Pn	16 07 58.0	+0.7
	comp=Z,1.8nm,0.3s,SNR=4.5						
MOA				*e*Sn	Sn	16 10 02.0	0.0
	comp=Z,3.0nm,0.5s						
BIOA	**Bad Ischl, Aus**	11.24	330	*i* Pn	Pn	16 07 59.3	+0.5
BIOA				*e*Sn	Sn	16 10 04.7	+0.2
WTTA	**Wattenberg**	11.77	324	*i* Pn	Pn	16 08 06.6	+0.4
	comp=Z,4.6nm,0.4s,SNR=8.7						
WTTA				*e*Sn	Sn	16 10 12.0	-5.8
	comp=Z,16nm,0.8s						
SQTA	**Sankt Quirin**	11.94	322	*i* Pn	Pn	16 08 08.5	+0.1
	comp=Z,6.4nm,0.4s						
FETA	**Feichten**	12.04	321	*i* Pn	Pn	16 08 11.4	+1.6
	comp=Z,1.8nm,0.5s						
FETA				*e*Sn	Sn	16 10 19.3	-5.0
	comp=Z,2.6nm,0.6s						
MOTA	**Moosalm**	12.08	323	*i* Pn	Pn	16 08 09.9	-0.5
	comp=Z,9.6nm,0.5s,SNR=8.2						
MOTA				*i* Sn	Sn	16 10 20.9	-4.4
	comp=Z,8.2nm,0.7s						
MMAI	**Mount Meron Ar**	12.16	111	Pn	Pn	16 08 11.0	-0.5
	comp=Z,1.0nm,0.3s,baz=214,slow=49,SNR=1.2						
	comp=Z,1.6nm,0.7s						
GERES	**GERESS Array B**	12.18	334	Pn	Pn	16 08 11.2	-0.5
	comp=Z,0.3nm,0.3s,baz=154,slow=13,SNR=8.4						
GERES				Sn	Sn	16 10 24.4	-3.2
	comp=Z,0.3nm,0.3s,baz=153,slow=24,SNR=7.0						
GERES				LR	LR	16 14 03.1	
	comp=Z,173nm,20.8s,baz=142,slow=43						
	comp=Z,0.7nm,0.5s						
DAVOX	**Davos/Dischmat**	12.32	318	Pn	Pn	16 08 14.2	+0.6
	comp=Z,0.4nm,0.3s,baz=131,slow=18,SNR=4.2						
DAVOX				Sn	Sn	16 10 27.8	-3.3
	comp=Z,0.3nm,0.3s,baz=332,slow=19,SNR=2.3						
DAVOX				LR	LR	16 14 03.5	
	comp=Z,57nm,18.3s,baz=82,slow=43						
	comp=Z,3.5nm,0.8s						
TUE	**Stuetta**	12.41	316	Pn	Pn	16 08 14.7	-0.2
KHC	**Kasperske Hory**	12.46	334	*e*P	Pn	16 08 15.9	+0.4
KHC				*e*		16 10 31.9	
KHC	**Kasperske Hory**	12.46	334	*e*PN	Pn	16 08 15.9	+0.4
KHC				*e*SN	Sn	16 10 31.9	-2.6
ANN	**Anapa**	13.39	56	*e*P	Pn	16 08 25.2	-2.9
ANN				*e*S	Sn	16 10 53.2	-4.0
ANN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SENIN	**Lac Senin/Sane**	13.51	312	Pn	Pn	16 08 31.2	+1.2
AKBB	**Malin Array Si**	13.55	20	⇓*e*P	Pn	16 08 29.8	-0.5
AKASG	**Malin Array Be**	13.56	20	Pn	Pn	16 08 30.8	+0.5
	comp=Z,0.2nm,0.3s,baz=206,slow=10,SNR=2.9						
	comp=Z,1.2nm,0.8s						
EIL	**Elat**	13.78	124	Pn	Pn	16 08 32.8	-0.7
	comp=Z,0.6nm,0.3s,baz=249,slow=4.5,SNR=4.3						
	comp=Z,1.7nm,0.5s						
CLL	**Collm**	14.53	337	*e*P	Pn	16 08 46.0	+2.4
CLL	**Collm**	14.53	337	*e*Px	Pn	16 08 46.0	+2.4
CLL				*e*x	P	16 08 51.0	+0.7
CLL				*e*PP	PnPn	16 08 55.0	+3.4
CLL				Lm	MLR	16 14 00.0	
	comp=Z,200nm,18.8s						
KBZ	**Khabaz**	16.80	64	Pn	Pn	16 09 13.9	+0.5
	comp=Z,0.1nm,0.3s,baz=299,slow=13,SNR=1.6						
	comp=Z,0.3nm,0.3s						
KBZ	**Khabaz**	16.80	64	⇑*e*P	P	16 09 21.4	+5.8
MNK	**Minsk**	16.82	12	*i* P	Pn	16 09 12.6	-0.9
MNK				*i* S	Sn	16 12 19.9	-0.6
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,142nm,17.0s						
MNK				MLR	MLR		
	comp=E,6.0nm,16.0s						
MNK	**Minsk**	16.82	12	*i* P	Pn	16 09 12.6	-0.9
	comp=E,2.0nm,0.9s						
MNK				*i* P	Pn	16 09 12.6	-0.9
	comp=N,15nm,0.9s						
MNK				*i* P	Pn	16 09 12.6	-0.9
	comp=Z,7.0nm,0.9s,baz=197						
MNK				*i* PP	PnPn	16 09 22.3	-0.6
MNK				*i* PPP	PPP	16 09 29.9	
MNK				*i* S	Sn	16 12 20.0	-0.6
MNK				*i* SS	SnSn	16 12 34.8	+1.1
MNK				*i* SSS	SSS	16 12 48.0	
MNK				*i* LQ	LQ	16 13 59.0	
MNK				*i* LR	LR	16 15 43.3	
MNK				*i* LRM	MLR	16 17 21.9	
	comp=Z,142nm,16.9s						
MNK				*i* LRM	MLR	16 17 24.4	
	comp=E,6.0nm,16.2s						
GNI	**Garni**	17.84	77	LR	LR	16 17 29.7	
	comp=E,42nm,19.1s,baz=258,slow=41						
ESDC	**Sonseca Array**	20.13	282	P	P	16 09 52.5	+0.2
	comp=E,4.3nm,0.8s,baz=75,slow=11,SNR=28						
ESDC				LR	LR	16 17 38.9	
	comp=E,36nm,19.1s,baz=110,slow=37						
	comp=E,4.3nm,0.8s						
VSU	**Vasula**	20.53	7	⇓*e*P	P	16 09 57.2	+0.8
VSU				pmax	pmax		
	comp=Z,58nm,0.8s						
VSU	**Vasula**	20.53	7	*e*P	P	16 09 56.8	+0.5
VIKU	**Vikbolandet**	20.60	352	*e*P	P	16 09 56.7	-0.4
UPP	**Uppsala**	21.85	354	*e*P	P	16 10 09.3	-1.3
AAL	**Aland**	22.04	358	*e*P	P	16 10 12.4	-0.2
MDT	**Midelt**	22.18	264	P	P	16 10 13.6	-0.8
	comp=Z,0.9nm,0.6s,baz=143,slow=13,SNR=2.0						
	comp=Z,0.9nm,0.6s						
HFS	**Hagfors**	22.57	349	P	P	16 10 16.9	-1.4
	comp=Z,1.0nm,0.4s,baz=132,slow=30,SNR=6.8						
HFS				LR	LR	16 19 38.4	
	comp=Z,38nm,21.4s,baz=156,slow=38						
	comp=Z,1.0nm,0.4s						
BELG	**Belogornoye**	22.86	43	LR	LR	16 19 23.5	
	comp=Z,34nm,21.5s,baz=142,slow=37						
BELG	**Belogornoye**	22.86	43	⇓*e*P	P	16 10 23.6	+2.2
BELG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	**FINESS Array B**	23.43	5	P	P	16 10 25.7	-1.4
	comp=Z,2.0nm,0.5s,baz=164,slow=10,SNR=29						

FINES				PcP	PcP	16 14 12.7	-0.4
	comp=Z,1.0nm,0.7s,baz=111,slow=3.6,SNR=4.5						
FINES				LR	LR	16 20 27.9	
	comp=Z,39nm,18.6s,baz=188,slow=39						
	comp=Z,2.0nm,0.5s						
NC405	NORSAR Array S	23.81	348	P	P	16 10 30.4	-0.5
NC405				IAmb	IAmb	16 10 37.7	
	comp=Z,13nm,0.8s						
NB201	NORSAR Array S	23.82	347	P	P	16 10 30.1	-1.0
NB201				IAmb	IAmb	16 10 53.1	
	comp=Z,17nm,1.1s						
NB2	NORSAR Subarra	23.83	347	P	P	16 10 30.0	-1.1
	comp=Z,1.7nm,0.6s,baz=153,slow=10						
NOA	NORSAR Array B	23.83	347	P	P	16 10 30.1	-1.1
	comp=Z,1.2nm,0.6s,baz=160,slow=10,SNR=9.9						
NOA				LR	LR	16 21 02.7	
	comp=Z,24nm,19.6s,baz=160,slow=40						
	comp=Z,1.2nm,0.6s						
NC303	NORSAR Array S	23.97	347		P	16 10 31.8	-0.6
NC303				IAmb	IAmb	16 10 47.2	
	comp=Z,24nm,1.4s						
EKA	Eskdalemuir Ar	24.04	324	P	P	16 10 32.8	-0.4
	comp=Z,3.4nm,0.6s,baz=123,slow=9.7,SNR=11						
EKA				LR	LR	16 21 44.9	
	comp=Z,50nm,18.4s,baz=195,slow=41						
	comp=Z,3.4nm,0.6s						
KLMR	Klimovskoe	25.25	20	*e*P	P	16 10 46.7	+2.7
KLMR				pmax	pmax		
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	25.25	20	*e*P	P	16 10 46.7	+2.7
KLMR				AMP		16 10 51.2	
	comp=Z,11nm,0.9s						
KIRV	Kirov	27.07	32⇓	*e*P	P	16 11 00.0	-0.5
AKTO	Aktyubinsk	28.33	53	LR	LR	16 24 04.0	
	comp=Z,27nm,18.2s,baz=195,slow=40						
TORD	Torodi Ar. Bea	30.72	221	P	P	16 11 33.5	+0.1
	comp=Z,2.2nm,0.6s,baz=32,slow=9.1,SNR=22						
TORD				LR	LR	16 25 48.9	
	comp=Z,90nm,19.7s,baz=198,slow=40						
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	30.72	221	IAmb	IAmb	16 11 36.7	
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	31.46	2	P	P	16 11 38.5	-1.0
	comp=Z,1.4nm,0.5s,baz=185,slow=8.1,SNR=11						
ARCES				LR	LR	16 25 19.5	
	comp=Z,27nm,19.6s,baz=270,slow=38						
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	31.46	2	IAmb	IAmb	16 11 54.1	
	comp=Z,12nm,1.4s						
BRVK	Borovoye	36.24	50	d*e*P	P	16 12 22.5	+1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BORG	Borgarnes	36.62	331	LR	LR	16 30 52.7	
	comp=Z,37nm,18.4s,baz=100,slow=42						
KK31	Karatay Array	36.82	67	P	P	16 12 26.2	-0.1
KK31	Karatay Array	36.82	67	P	P	16 12 26.2	-0.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	36.82	67	P	P	16 12 26.4	+0.1
KKAR	Karatay Array	36.82	67	P	P	16 12 25.7	-0.5
KKAR	Karatay Array	36.82	67	P	P	16 12 26.4	+0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	39.63	224	P	P	16 12 50.0	-0.1
	comp=Z,3.6nm,0.8s,baz=52,slow=15,SNR=1.7						
	comp=Z,3.6nm,0.8s						
DBIC	Dimbokro	39.63	224	IAmb	IAmb	16 13 06.4	
	comp=Z,28nm,1.4s						
AAK	Ala-Archa	39.78	66⇓	*e*P	P	16 12 53.5	+2.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOOM	Boomskoye usch	40.86	66	P	P	16 13 00.9	+0.6
BOOM	Boomskoye usch	40.86	66	P	P	16 13 00.9	+0.6
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	41.42	53⇓	*e*P	P	16 13 06.8	+2.3
MK31	Makanchi Array	44.39	59	P	P	16 13 27.9	-0.9
MK31				IAmb	IAmb	16 13 31.6	
	comp=Z,4.1nm,0.6s						
MK31	Makanchi Array	44.39	59	P	P	16 13 27.9	-0.9
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	44.39	59	P	P	16 13 27.7	-1.0
	comp=Z,5.7nm,0.6s,baz=280,slow=7.1,SNR=32						
MKAR				PcP	PcP	16 15 13.1	+0.6
	comp=Z,0.4nm,0.6s,baz=293,slow=4.2,SNR=2.1						
	comp=Z,5.7nm,0.6s						
ZAA0	Zalesovo Array	44.89	48	P	P	16 13 31.2	-1.4
ZALV	Zalesovo Beam	44.89	48	P	P	16 13 31.4	-1.2
	comp=Z,3.5nm,0.5s,baz=277,slow=8.5,SNR=21						
	comp=Z,3.5nm,0.5s						
ZALV	Zalesovo Beam	44.89	48	P	P	16 13 30.9	-1.7
ZALV	Zalesovo Beam	44.89	48	*i* P	P	16 13 31.7	-0.9
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NRIK	Noril'sk	46.31	27	IAmb	IAmb	10 01 08.6	
	comp=Z,6.7nm,1.1s						
NRIK	Noril'sk	46.31	27⇓	*e*P	P	16 13 44.2	+0.6
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SFJD	Kangerlussuaq	48.75	330	LR	LR	16 35 07.9	
	comp=Z,26nm,18.2s,baz=41,slow=37						
WMQ	Urumqi	48.82	61	*e*P	P	16 14 07.1	+3.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
GTA	Gaotai	58.88	62	*e*P	P	16 15 17.1	-0.3
GTA				pP	sP	16 15 21.0	-0.1
GTA				sP	pP	16 15 23.9	+3.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	59.63	51	P	P	16 15 20.6	-1.8
	comp=Z,0.6nm,0.5s,baz=276,slow=5.8,SNR=3.8						
	comp=Z,0.6nm,0.5s						
HHC	Hu-ho-hao-te	66.15	56	*e*P	P	16 16 05.3	-0.6
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
BOSA	Boshof	66.53	177	P	P	16 16 06.6	-1.7
	comp=Z,1.4nm,0.6s,baz=0.5,slow=7.2,SNR=4.8						
	comp=Z,1.4nm,0.6s						
PZH	PanZhiHua	66.58	74	P	P	16 16 09.9	+1.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.0s						
KLR	Kul'dur	73.18	40⇓	*e*P	P	16 16 49.5	+0.5
KLR				pmax	pmax		
	comp=Z,8.0nm,2.5s						
TOLK	Toolik Lake Re	73.29	357	P	P	16 16 49.3	-0.1
YKA	Yellowknife Ar	73.73	341	P	P	16 16 51.9	0.0
	comp=Z,1.4nm,0.7s,baz=34,slow=5.3,SNR=22						
	comp=Z,1.4nm,0.7s						
H23K	Yukon River	76.10	356	P	P	16 17 06.7	+1.1
H23K				IAmb	IAmb	16 17 09.7	
	comp=Z,5.8nm,1.1s						
IMAR	Indian Mountai	76.10	358	P	P	16 17 06.3	+0.7
ULM	Lac du Bonnet	76.31	324	P	P	16 17 08.2	+1.1
	comp=Z,3.1nm,0.6s,baz=41,slow=4.9,SNR=3.9						
	comp=Z,3.1nm,0.6s						
H21K	Melozitna Rive	76.40	358	P	P	16 17 08.9	+1.6
H21K				IAmb	IAmb	16 17 11.9	
	comp=Z,5.9nm,0.8s						
I21K	Tanana	76.85	357	P	P	16 17 11.1	+1.2
MDM	Murphy Dome	76.89	356	P	P	16 17 10.9	+0.7
MDM				IAmb	IAmb	16 17 13.8	
	comp=Z,8.5nm,1.3s						
ILAR	Eielson Array	76.99	355	P	P	16 17 11.3	+0.6
	comp=Z,1.2nm,0.7s,baz=349,slow=3.2,SNR=18						
	comp=Z,1.2nm,0.7s						
HDA	Harding Lake	77.36	355	P	P	16 17 13.3	+0.5
HDA				IAmb	IAmb	16 17 15.8	
	comp=Z,7.0nm,1.0s						
WRH	Wood River Hil	77.37	356	P	P	16 17 13.8	+1.0
SCRK	Sand Creek	77.55	354	IAmb	IAmb	09 58 12.2	
	comp=Z,3.1nm,0.6s						
M31M	Drury Creek, Y	78.13	349	P	P	16 17 18.7	+1.6
M31M				IAmb	IAmb	16 17 20.9	
	comp=Z,2.7nm,0.7s						
BCAR	Beaver Creek A	78.24	352	P	P	16 17 19.8	+2.1
L27K	Beaver Creek,	78.25	352	P	P	16 17 19.6	+1.8
KSRS	Korea Array	78.50	51	P	P	16 17 18.5	-1.0
	comp=Z,0.5nm,0.7s,baz=318,slow=4.8,SNR=2.4						
	comp=Z,0.5nm,0.7s						
PDAR	Pinedale Array	88.13	326	P	P	16 18 09.7	+0.3
	comp=Z,0.7nm,0.7s,baz=56,slow=6.7,SNR=4.4						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	95.73	314	P	P	16 18 44.9	+0.3
	comp=Z,0.5nm,0.9s,baz=63,slow=4.2,SNR=3.9						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	119.48	93	PKP	PKPdf	16 24 07.1	-1.3
	comp=Z,0.8nm,0.9s,baz=312,slow=1.5,SNR=6.6						
ASAR	Alice Springs	121.12	97	PKP	PKPdf	16 24 10.3	-1.1
	comp=Z,0.2nm,0.3s,baz=310,slow=1.9,SNR=6.6						

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*KEA **21** 16:22:43.8, 40°.70N×127°.06E, h18^{km}, ML3.7/7*

*IDC **21** 16:22:46.5±1.7, 40°.67N×127°.34E, h0^{km}, mb3.2/1, mbtmp3.2/3, ML2.4/2, MS2.5/1, Error ellipse: s-maj=25.4km s-min=15.0km az=102.0*

*KMA **21** 16:22:47.4±1.6, 40°.68N×127°.15E, h20^{km}±51^{km}, Error ellipse: s-maj=47.8km s-min=11.9km az=178.0*

ISC 21 16:22:43.9±0.8**, 40°.71N**±0°.02×**127°.03E**±0°.03**, h10^{km}, n25,** σ1^{s}**79**/47**, 1C, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGE	Kanggye	0.40	306	Pg	Pb	16 22 53.0	0.0
KGE				Sg	Sg	16 22 58.6	+1.6
KGE				AML	AML		
	comp=N,6µm,0.5s						
KGE				AML	AML		
	comp=E,11µm,0.2s						
KGE				AML	AML		
	comp=Z,7µm,0.8s						
HHU	Hamhung	0.87	154	Pg	Pg	16 22 60.0	-0.7
HHU				Sg	Sg	16 23 10.7	-1.3
HHU				AML	AML		
	comp=N,3µm,0.2s						
HHU				AML	AML		
	comp=E,4µm,0.4s						
HHU				AML	AML		
	comp=Z,2µm,0.3s						
WOSN	Wonsan	1.57	169	Pg	Pg	16 23 13.4	-0.7
WOSN				Sg	Sg	16 23 34.2	-0.3
WOSN				AML	AML		
	comp=N,1µm,0.3s						
WOSN				AML	AML		
	comp=E,1µm,0.4s						
WOSN				AML	AML		
	comp=Z,1µm,0.3s						
PYS	Pyongsong	1.72	212	Pg	Pg	16 23 16.3	-0.5
PYS				Sg	Sg	16 23 38.5	-0.6
PYS				AML	AML		
	comp=N,2µm,0.4s						
PYS				AML	AML		
	comp=E,4µm,0.5s						
PYS				AML	AML		
	comp=Z,3µm,0.3s						
PYAG	Pyongyang	1.93	211	Pg	Pg	16 23 20.0	-0.9
PYAG				Sg	Sg	16 23 45.0	-0.8
PYAG				AML	AML		
	comp=N,1µm,0.6s						
PYAG				AML	AML		
	comp=E,2µm,0.7s						
PYAG				AML	AML		
	comp=Z,2µm,0.5s						
SUJ	Sinuiju	2.03	253	Pg	Pb	16 23 21.5	+0.6
SUJ				Sg	Sg	16 23 48.4	-0.8
SUJ				AML	AML		
	comp=N,1µm,0.3s						
SUJ				AML	AML		
	comp=E,930nm,0.7s						
SUJ				AML	AML		
	comp=Z,969nm,0.2s						
CHJN	Chongjin	2.35	61	Sg	Sg	16 23 58.3	-1.2
HWCB	Hwacheon	2.54	169	P	Pb	16 23 26.9	-2.6
	SNR=37						
HWCB				P	Pb	16 23 26.9	-2.6
	SNR=37						
SEHB	SEOHWA	2.62	158	P	Pn	16 23 27.7	+1.5
	SNR=47						
SEHB				P	Pn	16 23 27.7	+1.5
	SNR=47						
SEHB				S	Sn	16 23 58.2	+0.1
SEHB				S	Sn	16 23 58.2	+0.1
KSSKC	Sokcho	2.68	154	P	Pn	16 23 28.1	+1.0
	SNR=9.6						
KSSKC				P	Pn	16 23 28.1	+1.0
	SNR=9.6						
KSMUS	Musan	2.83	184	P	Pn	16 23 31.1	+2.0
	SNR=50						
KSMUS				P	Pn	16 23 31.1	+2.0
	SNR=50						
HJU	Haeju	2.85	201	Pg	Pg	16 23 37.1	-1.5
HJU				Sg	Sg	16 24 13.8	-1.7
HJU				AML	AML		
	comp=N,508nm,0.4s						
HJU				AML	AML		
	comp=E,873nm,0.5s						
HJU				AML	AML		
	comp=Z,973nm,0.7s						
GAPB	Gapyeong	2.89	173	P	Pn	16 23 31.8	+1.8
	SNR=14						
GAPB				P	Pn	16 23 31.8	+1.8
	SNR=14						
KSCHC	Chuncheon	2.99	168	P	Pn	16 23 33.1	+1.6
	SNR=21						
KSCHC				P	Pn	16 23 33.1	+1.6
	SNR=21						
KSJMJ	Jumunjin	3.13	154	P	Pn	16 23 34.2	+1.0
	SNR=5.6						
KSJMJ				P	Pn	16 23 34.2	+1.0
	SNR=5.6						
KSJMJ				S	Sn	16 24 13.0	+2.4
KSJMJ				S	Sn	16 24 13.0	+2.4
YPDB	Yeonpyeongdo	3.27	199	P	Pn	16 23 37.4	+2.2
	SNR=37						
YPDB				P	Pn	16 23 37.4	+2.2
	SNR=37						
CN2	Changchun	3.30	340	*e*Pg	Pg	16 23 46.1	-1.1
CN2				Sg	Sg	16 24 27.3	-2.7
CN2				smax	smax		
	comp=N,300nm,1.0s						
CN2				smax	smax		
	comp=E,300nm,1.0s						
KSRS	Korea Array	3.33	168	Pn	Pn	16 23 37.6	+1.7
	comp=E,2.4nm,0.3s,baz=352,slow=13,SNR=60						
KSRS				Pg	Pg	16 23 47.0	-0.6
	comp=E,12nm,0.3s,baz=354,slow=18,SNR=67						
KSRS				Lg	Lg	16 24 28.7	
	comp=E,44nm,0.3s,baz=350,slow=30,SNR=33						
	comp=E,8.8nm,0.4s						
MDJ	Mudanjiang	4.33	25	Pg	Pg	16 24 04.3	-2.6
MDJ				Sg	Sg	16 24 59.8	-3.3
MDJ				smax	smax		
	comp=N,180nm,1.0s						
MDJ				smax	smax		
	comp=E,310nm,0.9s						
DL2	Dalian	4.54	248	Pg	Pg	16 24 08.3	-2.5
DL2				Sg	Sg	16 25 08.5	-1.1
DL2				smax	smax		
	comp=N,290nm,0.6s						
DL2				smax	smax		
	comp=E,190nm,0.7s						
DL2				LR	LR		
	comp=N,520nm,4.6s						
DL2				LR	LR		
	comp=E,350nm,4.3s						
DL2				LR	LR		
	comp=Z,110nm,4.9s						
BNX	BinXian	5.03	3	⇑Pg	Pg	16 24 17.9	-2.4
BNX				Sg	Sg	16 25 23.9	-1.6
BNX				smax	smax		
	comp=N,110nm,0.5s						
BNX				smax	smax		
	comp=E,140nm,0.6s						
USRK	Ussuriysk Ar.	5.06	45	Pn	Pn	16 24 02.4	+2.6
	comp=E,0.3nm,0.3s,baz=232,slow=14,SNR=6.3						
USRK				Pg	Pb	16 24 15.9	+3.4
	comp=E,1.0nm,0.3s,baz=226,slow=13,SNR=10						
USRK				Lg	Lg	16 25 22.1	
	comp=E,7.0nm,0.3s,baz=230,slow=27,SNR=14						
	comp=E,0.7nm,0.3s						
KLR	Kul'dur	9.15	20	LR	LR	16 28 39.6	
	comp=E,29nm,20.6s,baz=196,slow=39						
WMQ	Urumqi	29.09	289	*e*P	P	16 28 49.9	+5.3
MKAR	Makanchi Array	32.54	296	P	P	16 29 21.4	+6.5
	comp=E,0.3nm,0.7s,baz=94,slow=8.7,SNR=2.5						
	comp=E,0.3nm,0.7s						

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*TIR **21** 16:33:06.9, 41°.27N×21°.06E, h22^{km}±1^{km}, Ml5.2*

*SKO **21** 16:33:06.0, 41°.21N×21°.00E, h15^{km}*

*ATH **21** 16:33:07.8, 41°.28N×21°.06E, h9^{km}±2^{km}, ML4.7/13, Error ellipse: s-maj=2.1km s-min=0.8km az=340.0*

*PDG **21** 16:33:08.0±0.5, 41°.26N×21°.04E, h14^{km}, MD4.7/13, ML4.7/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*BEO **21** 16:33:08.6±0.2, 41°.23N×21°.05E, h13^{km}±2^{km}, ML4.6/13*

*NEIC **21** 16:33:08.9, 41°.26N×21°.00E, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-5.12; M$_{\theta\theta}$-2.20; M$_{\phi\phi}$7.33; M$_{r\theta}$4.25; M$_{\theta\phi}$5.79; M$_{\phi r}$-1.77; Fault plane solution: M$_0$9.85000×10^{15} NP1:ϕ_s240.22000°, δ60.37000°, λ-36.41000°. NP2:ϕ_s350.26000°, δ58.94000°, λ-144.75000°. Principal axes: T 10.0633, Plg1.0000°, Azm296.0000°; N -0.4360, Plg44.0000°, Azm26.0000°; P -9.6273, Plg46.0000°, Azm205.0000°;*

*THE **21** 16:33:08.0, 41°.28N×21°.07E, h0^{km}±1^{km}, ML4.8/9 Error ellipse: s-maj=1.9km s-min=0.6km az=42.0*

*MOS **21** 16:33:09.2±1.0, 41°.25N×20°.96E, h33^{km}, mb4.7/12, Error ellipse: s-maj=5.2km s-min=3.1km az=92.9*

*MED_RC **21** 16:33:09.0±0.3, 41°.31N×21°.00E, h24^{km}, MW4.8/23, Moment Tensor Solution.Mantle waves: s23,c41; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.98±.16; M$_{\theta\theta}$0.31±.10; M$_{\phi\phi}$1.67±.09; M$_{r\theta}$0.70±.08; M$_{\theta\phi}$0.67±.05; M$_{\phi r}$-0.47±.06; Best double couple: M$_0$2.12000×10^{16} NP1:ϕ_s3.00000°, δ51.00000°, λ-116.00000°. NP2:ϕ_s220.00000°, δ46.00000°, λ-62.00000°. Principal axes: T 1.9500, Plg3.0000°, Azm111.0000°; N 0.3300, Plg20.0000°, Azm20.0000°; P -2.2800, Plg70.0000°, Azm209.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*GII **21** 16:33:09.3±0.0, 41°.28N×20°.98E, h23^{km}*

*NEIC **21** 16:33:10.1±1.5, 41°.26N±0°.03×21°.02E±0°.05, h24^{km}±5^{km}, mb4.7/41, Mwr4.6/34, ML4.7(SKO), Error ellipse: s-maj=5.8km s-min=4.1km az=61.0*

*LDG **21** 16:33:10.0±0.2, 41°.44N×21°.05E, h10^{km}, Ml4.6/30, Error ellipse: s-maj=6.4km s-min=3.7km az=9.0*

*MCSM **21** 16:33:10.4±0.4, 41°N±3°×2°1E±°, h13^{km}±3^{km}, mb4.7*

*PRU **21** 16:33:11.5±0.0, 41°.33N×21°.21E, h9^{km}, M4.7*

*IDC **21** 16:33:11.6±1.0, 41°.25N×20°.99E, h43^{km}±10^{km}, mb4.1/29, mbtmp4.3/45, ML4.0/15, MS3.9/12, Error ellipse: s-maj=10.1km s-min=8.0km az=145.0*

ISC 21 16:33:09.2±0.7**, 41°.24N**±0°.01×**21°.02E**±0°.01**, h20^{km}**±3^{km}**, n758,** σ1^{s}**54**/927**, mb4.7**/79**, MS4.1**/8**, 183C-116D, Fault plane solution: NP1:**ϕ_s230.20326°, δ67.32097°, λ-40.12452°. **NP2:**ϕ_s338.20538°, δ53.51435°, λ-151.34338°. **Principal axes:** T Plg8.5008°, Azm287.0629°; N Plg44.8718°, Azm25.6201°; P Plg43.8759°, Azm188.8002°; **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.21	232	*e*Pg	Pg	16 33 13.5	-1.0
OHR				*e*Sg	Sg	16 33 17.5	-0.6
OHR	Ohrid	0.21	232	*i* Pg	Pg	16 33 13.3	-1.2
OHR				*i* Sg	Sg	16 33 17.6	-0.6
OHR				*e*Lg	Lg	16 33 17.7	
	comp=N,268µm,0.5s						
OHR				*e*Lg	Lg	16 33 17.8	
	comp=E,141µm,0.6s						
FNA	Florina	0.53	149	*e*Pg	Pb	16 33 18.6	-1.3
FNA				*e*Sg	Sb	16 33 26.6	-0.6
FNA	Florina	0.53	149	P	Pb	16 33 18.6	-1.3
FNA				S	Sb	16 33 26.1	-1.0
FNA				AML	AML	16 33 27.9	
FNA				AML	AML	16 33 28.4	
FNA	Florina	0.53	149	P	Pg	16 33 18.4	-1.5
FNA				S	Sb	16 33 26.5	-0.6
	comp=E,211µm,0.5s						
FNA	Florina	0.53	149		Pg	16 33 18.4	-1.5
FNA				Sg	Sb	16 33 26.2	-1.0
FNA	Florina	0.53	149	*i* Pg	Pg	16 33 18.5	-1.5
FNA				*i* Sg	Sb	16 33 26.9	-0.2
FNA	Florina	0.53	149	P	Pg	16 33 18.4	-1.5
	baz=152						
FNA				S	Sb	16 33 26.4	-0.7
	baz=152						
FNA	Florina	0.53	149	P	Pg	16 33 18.5	-1.5
	baz=149						
PHP	Peshkopia	0.62	316	P	Pg	16 33 18.9	-2.7
PHP				S	Sb	16 33 29.8	+0.1
	comp=E,187µm,0.2s						
PHP	Peshkopia	0.62	316	P	Pg	16 33 19.1	-2.5
	baz=313						
PHP				S	Sb	16 33 29.1	-0.6
	baz=313						
PHP				AMP			
	comp=N,483nm,0.2s,baz=313						
PHP	Peshkopia	0.62	316	P	Pg	16 33 19.4	-2.2
	baz=316						
PHP				S	Sg	16 33 28.1	-1.9
	baz=316						
PHP				AMP			
	comp=N,483nm,0.2s,baz=316						
KBN	Korca	0.64	196	P	Pg	16 33 20.2	-1.8
KBN				S	Sb	16 33 30.3	0.0
	comp=N,62µm,0.2s						
KBN	Korca	0.64	196		Pg	16 33 20.2	-1.8
KBN				Sg	Sb	16 33 30.4	+0.1
KBN	Korca	0.64	196	P	Pb	16 33 20.8	-1.0
	baz=198						
KBN				S	Sb	16 33 30.4	+0.1
	baz=198						
KBN	Korca	0.64	196	P	Pb	16 33 20.7	-1.0
	baz=196						
KBN				S	Sb	16 33 29.9	-0.4
	baz=196						
KBN				AMP			
	comp=N,278nm,0.2s,baz=196						
SKO	Skopje	0.80	23	*e*Pg	Pb	16 33 23.7	-0.7
SKO				*e*Sg	Sb	16 33 34.8	+0.1
SKO	Skopje	0.80	23	*i* Pg	Pb	16 33 23.3	-1.1
SKO				*i* Sg	Sn	16 33 36.0	-0.6
NEST	Nestorio	0.83	178	P	Pg	16 33 23.7	-1.8
NEST				S	Sb	16 33 35.7	0.0
NEST				AML	AML	16 33 40.3	
NEST				AML	AML	16 33 40.4	
NEST	Nestorio	0.83	178	P	Pg	16 33 23.6	-1.8
NEST				S	Sb	16 33 36.5	+0.8
	comp=N,73µm,0.6s						
TIR	Tirane	0.88	277	⇑P	Pg	16 33 24.4	-1.9
TIR				⇓S	Sg	16 33 36.5	-1.4
TIR	Tirane	0.88	277	*e*Pg	Pb	16 33 25.0	-0.7
TIR				*e*Sg	Sn	16 33 38.4	-0.2
TIR	Tirane	0.88	277	P	Pg	16 33 24.8	-1.5
TIR				S	Sb	16 33 36.8	-0.2
TIR				AML	AML	16 33 43.9	
TIR				AML	AML	16 33 45.0	
	comp=N,97375µm,0.9s						
TIR	Tirane	0.88	277	P	Pg	16 33 24.2	-2.1
TIR				S	Sb	16 33 37.7	+0.7
	comp=N,19µm,0.5s						
TIR	Tirane	0.88	277		Pg	16 33 24.2	-2.1
TIR	Tirane	0.88	277	P	Pg	16 33 24.2	-2.1
TIR	Tirane	0.88	277	*i* Pg	Pg	16 33 24.2	-2.1
TIR	Tirane	0.88	277	P	Pg	16 33 24.6	-1.7
	baz=276						
TIR				S	Sb	16 33 37.1	+0.1
	baz=276						
TIR				AMP			
	comp=N,75nm,0.9s,baz=276						
TIR	Tirane	0.88	277	P	Pg	16 33 24.8	-1.5
	baz=277						
TIR				S	Sb	16 33 37.5	+0.5
	baz=277						
TIR				AMP			
	comp=E,89nm,0.5s,baz=277						
PENT	Pentalofos	1.05	175	P	Pb	16 33 28.1	-0.6
PENT				S	Sn	16 33 43.0	0.0
PENT				AML	AML	16 33 46.7	
	comp=E,99081µm,1.1s						
PENT				AML	AML	16 33 48.6	
	comp=N,37180µm,0.4s						
PENT	Pentalofos	1.05	175	P	Pg	16 33 27.6	-2.0
PENT				S	Sn	16 33 43.9	+0.9
	comp=N,34µm,0.7s						
GRG	Griva	1.08	105	P	Pb	16 33 28.3	-0.9
GRG				S	Sg	16 33 42.3	-2.2
GRG				AML	AML	16 33 47.8	

	comp=N,56178µm,0.7s						
GRG				AML	AML	16 33 49.3	
	comp=E,67931µm,0.9s						
GRG	Griva	1.08	105	P	Pb	16 33 28.4	-0.9
GRG	Griva	1.08	105	*i* Pg	Pb	16 33 28.4	-0.9
GRG				*i* Sg	Sn	16 33 44.6	+0.9
KZN	Kozani	1.09	148	P	Pb	16 33 29.1	-0.5
KZN				S	Sn	16 33 44.3	+0.2
KZN				AML	AML	16 33 49.0	
KZN				AML	AML	16 33 49.3	
	comp=N,94644µm,0.5s						
KZN	Kozani	1.09	148	P	Pg	16 33 28.0	-2.5
KZN				S	Sn	16 33 45.8	+1.7
	comp=N,50µm,0.5s						
LSK	Leskovik	1.14	196	P	Pb	16 33 29.8	-0.4
LSK				S	Sn	16 33 46.8	+1.7
	comp=N,73µm,0.8s						
LSK	Leskovik	1.14	196	P	Pb	16 33 29.8	-0.4
	baz=198						
LSK				S	Sn	16 33 46.0	+0.8
	baz=198						
LSK				AMP			
	comp=N,333nm,0.9s,baz=198						
LSK	Leskovik	1.14	196	P	Pn	16 33 30.4	+0.3
	baz=196						
LSK				S	Sn	16 33 46.3	+1.2
	baz=196						
LSK				AMP			
	comp=E,225nm,0.6s,baz=196						
VAY	Valandovo	1.17	86	*e*Pg	Pn	16 33 30.1	-0.4
VAY				*e*Sg	Sb	16 33 45.6	+0.1
VAY	Valandovo	1.17	86	*i* Pg	Pb	16 33 29.9	-0.8
VAY				*i* Sg	Sn	16 33 48.1	+2.2
VAY				*e*Lg	Lg	16 33 48.8	
	comp=N,18µm,0.8s						
VAY				*e*Lg	Lg	16 33 49.3	
	comp=E,12µm,0.6s						
KPRO	Kipourio	1.31	168	P	Pb	16 33 32.5	-0.7
KPRO				S	Sn	16 33 50.3	+0.8
KPRO				AML	AML	16 33 57.5	
	comp=E,61409µm,0.8s						
KPRO				AML	AML	16 33 57.6	
	comp=N,87046µm,0.6s						
KPRO	Kipourio	1.31	168	P	Pg	16 33 33.3	-1.3
KPRO				S	Sn	16 33 52.5	+3.0
	comp=N,37µm,0.7s						
BCI	Bajram Curri	1.33	328	P	Pn	16 33 31.9	-0.8
	baz=327						
BCI				S	Sn	16 33 50.7	+0.9
	baz=327						
BCI				AMP			
	comp=N,233nm,0.9s,baz=327						
BCI	Bajram Curri	1.33	328	P	Pn	16 33 32.1	-0.6
	baz=328						
BCI				S	Sn	16 33 52.5	+2.6
	baz=328						
BCI				AMP			
	comp=E,212nm,0.8s,baz=328						
VLO	Vlora	1.39	237	P	Pg	16 33 34.8	-1.2
VLO				S	Sg	16 33 55.9	+1.7
VLO	Vlora	1.39	237		Pg	16 33 35.0	-1.0
VLO	Vlora	1.39	237	P	Pg	16 33 35.0	-1.0
VLO	Vlora	1.39	237	P	Pg	16 33 35.4	-0.6
	baz=237						
KNT	Kendrikon	1.42	93	P	Pb	16 33 33.9	-1.1
KNT				S	Sb	16 33 51.8	-1.0
KNT	Kendrikon	1.42	93	P	Pn	16 33 33.5	-0.4
KNT	Kendrikon	1.42	93	*e*Pn	Pn	16 33 33.6	-0.3
ULC	Ulcinj	1.51	299	⇓*i*Pg	Pn	16 33 35.2	0.0
ULC				*i* Sg	Sg	16 33 58.0	-0.2
PVY	Plav	1.57	330	⇓*i*Pg	Pb	16 33 36.8	-0.8
PVY				*i* Sg	Sg	16 33 59.2	-0.7
SRN	Sarande	1.57	210	P	Pg	16 33 38.1	-1.3
SRN				S	Sg	16 33 59.7	-0.1
SRN	Sarande	1.57	210	P	Pg	16 33 38.2	-1.3
	baz=211						
SRN				S	Sg	16 33 59.6	-0.2
	baz=211						
SRN				AMP			
	comp=E,61nm,0.8s,baz=211						
SRN	Sarande	1.57	210	P	Pg	16 33 38.1	-1.3
	baz=210						
SRN				S	Sg	16 34 00.2	+0.4
	baz=210						
SRN				AMP			
	comp=N,48nm,1.4s,baz=210						
JAN	Janina	1.59	185	P	Pb	16 33 37.1	-0.8
JAN				S	Sg	16 33 59.0	-1.6
JAN				AML	AML	16 34 02.3	
	comp=N,39705µm,0.6s						
JAN				AML	AML	16 34 06.1	
	comp=E,35902µm,0.5s						
JAN	Janina	1.59	185	P	Pb	16 33 36.9	-1.0
THE	Thessaloniki	1.59	112	P	Pn	16 33 36.0	-0.3
THE	Thessaloniki	1.59	112	*e*Pn	Pn	16 33 36.1	-0.3
THE	Thessaloniki	1.59	112	P	Pn	16 33 36.3	0.0
	baz=113						
THE	Thessaloniki	1.59	112	P	Pn	16 33 36.1	-0.2
	baz=112						
BOSS	Bosilegrad	1.66	41	*e*Pg	Pb	16 33 37.9	-1.3
BOSS				*e*Sg	Sg	16 34 01.3	-1.6
DRME	Dracevica, Mon	1.67	305	*e*Pn	Pb	16 33 38.3	-0.9
DRME	Dracevica, Mon	1.67	305	⇑*i*Pn	Pb	16 33 38.4	-0.8
DRME				*i* Sn	Sg	16 34 01.8	-1.2
BARS	Barje	1.68	20	*e*Pg	Pb	16 33 38.0	-1.5
BARS	Barje	1.68	20	*e*Pn	Pg	16 33 53.5	+12
BARS				*e*Sg	Sg	16 34 02.3	-1.2
BARS	Barje	1.68	20	*i* Pn	Pn	16 33 37.8	+0.3
HORT	Hortiatis	1.70	112	P	Pn	16 33 37.8	-0.1
HORT				S	Sb	16 34 00.3	-0.6
HORT				AML	AML	16 34 13.6	
	comp=E,5722µm,1.3s						
HORT				AML	AML	16 34 15.0	
	comp=N,8590µm,1.2s						
HORT	Hortiatis	1.70	112	P	Pn	16 33 37.7	-0.2
KASA	Kassiopi	1.71	209	P	Pb	16 33 39.7	-0.2
KASA				S	Sg	16 34 03.0	-1.3
KASA				AML	AML	16 34 10.4	
	comp=N,25611µm,1.2s						
KASA				AML	AML	16 34 12.2	
	comp=E,24896µm,0.6s						
PDG	Podgorica	1.77	313	⇓P	Pb	16 33 39.9	-1.2
PDG				⇑S	Sn	16 34 02.0	+1.3
PDG	Podgorica	1.77	313	*e*Pg	Pg	16 33 41.2	-2.1
PDG				*e*Sg	Sg	16 34 06.1	-0.3
PDG	Podgorica	1.77	313		Pn	16 33 39.2	+0.5
PDG	Podgorica	1.77	313	⇑*i*Pn	Pn	16 33 39.2	+0.5
TTG	Podgorica	1.77	313	⇑*i*Pn	Pb	16 33 39.9	-1.2
TTG				*i* Sn	Sg	16 34 04.5	-1.9
IGT	Igoumenitsa	1.79	197	P	Pb	16 33 41.1	-0.2
IGT				S	Sg	16 34 04.5	-2.3
IGT				AML	AML	16 34 08.1	
	comp=E,40784µm,0.8s						
IGT				AML	AML	16 34 10.9	
	comp=N,34759µm,0.5s						
IGT	Igoumenitsa	1.79	197	P	Pb	16 33 41.2	0.0
IGT				S	Sg	16 34 06.4	-0.4
IGT	Igoumenitsa	1.79	197	P	Pb	16 33 41.2	0.0
	baz=198						
IGT				S	Sg	16 34 05.3	-1.5
	baz=198						
IGT	Igoumenitsa	1.79	197	P	Pb	16 33 41.3	0.0
	baz=198						
IGT				S	Sg	16 34 05.7	-1.1
	baz=198						
TYRN	Tyrnavos	1.79	148	P	Pb	16 33 40.1	-1.2
KEK	Kerkira	1.79	212	P	Pb	16 33 40.6	-0.7
KEK				S	Sg	16 34 04.6	-2.2
KEK				AML	AML	16 34 14.1	
	comp=N,19492µm,1.2s						
KEK				AML	AML	16 34 16.6	
	comp=E,28388µm,0.8s						
KEK	Kerkira	1.79	212	P	Pb	16 33 40.3	-1.0
KEK	Kerkira	1.79	212		Pb	16 33 40.4	-0.9
SOH	Sokhos	1.82	103	P	Pn	16 33 39.8	+0.4
SOH				S	Sb	16 34 03.0	-1.1
SOH				AML	AML	16 34 12.5	
	comp=E,31226µm,0.5s						
SOH				AML	AML	16 34 12.6	
	comp=N,26118µm,0.7s						
SOH	Sokhos	1.82	103	P	Pn	16 33 39.2	-0.2
SOH	Sokhos	1.82	103	*i* Pn	Pn	16 33 39.4	0.0
BEY	Berane	1.83	333	*i* Pn	Pb	16 33 41.0	-1.1
IVA	Berane	1.83	333	*e*Pn	Pb	16 33 41.2	-0.9
IVA				*i* Sn	Sg	16 34 05.5	-2.8
THL	Klokotos Trika	1.84	155	P	Pb	16 33 40.8	-1.4
THL	Klokotos Trika	1.84	155	P	Pb	16 33 40.5	-1.7
THL	Klokotos Trika	1.84	155	Pn	Pn	16 33 40.3	+0.6
BUM	Brajici-Budva	1.91	304	⇓*i*Pn	Pb	16 33 43.0	-0.4
BUM				*i* Sn	Sb	16 34 07.3	+0.4
SRS	Serrai	1.95	93	P	Pn	16 33 41.0	-0.2
SRS	Serrai	1.95	93	*i* Pn	Pn	16 33 41.0	-0.2
KOME	Kolasin	1.96	326	⇓*i*Pn	Pb	16 33 42.9	-1.4
KOME				*i* Sn	Sb	16 34 08.8	+0.5
SELS	Selova	1.98	2	*e*Pn	Pn	16 33 42.3	+0.7
SELS				*e*Sn	Sn	16 34 07.1	+1.3
PLG	Polygyros	2.04	114	P	Pn	16 33 42.8	+0.4
CEME	Cevo	2.04	310	⇓*i*Pn	Pb	16 33 44.0	-1.6
CEME				*i* Sn	Sb	16 34 11.0	+0.4
NVR	Nevrokopi	2.15	86	P	Pn	16 33 44.4	+0.5
NVR	Nevrokopi	2.15	86	P	Pn	16 33 43.8	-0.1
VTS	Vitosha	2.15	50	⇓P	Pn	16 33 44.6	+0.5
VTS				⇑S	Sb	16 34 12.7	-1.2
VTS	Vitosha	2.15	50		Pn	16 33 44.1	0.0
VTS	Vitosha	2.15	50	P	Pn	16 33 44.1	0.0
VTS	Vitosha	2.15	50	*i* Pn	Pn	16 33 44.3	+0.2
SJES	Sjenica	2.16	339	*e*Pg	Pb	16 33 46.1	-1.6
SJES				*e*Sg	Sg	16 34 18.4	-0.4
SJES	Sjenica	2.16	339	*e*Pn	Pb	16 33 45.5	-2.2
NKY	Niksic	2.18	317	⇓*i*Pn	Pn	16 33 44.9	+0.5
NKY				*i* Sn	Sb	16 34 14.2	-0.4
HCY	Herceg Novi	2.24	303	*e*Pn	Pb	16 33 47.5	-1.5
HCY	Herceg Novi	2.24	303	⇑*i*Pn	Pn	16 33 46.2	+1.0
HCY				*i* Sn	Sb	16 34 15.3	-0.9
SCTE	Santa Cesarea	2.27	240	P	Pn	16 33 45.9	+0.3
SCTE	Santa Cesarea	2.27	240		Pn	16 33 45.8	+0.3
KOKK	Kokkinochori,	2.29	100	P	Pn	16 33 45.5	-0.4
MAKR	Makrakomi, Fth	2.38	159	P	Pn	16 33 48.3	+1.1
EVR	Evrytania	2.40	165	P	Pb	16 33 49.9	-1.9
PLE	Pljevlja	2.41	330	⇑*i*Pn	Pn	16 33 48.6	+0.9
PLE				*i* Sn	Sb	16 34 19.5	-1.9
PAIG	Paliouri	2.42	122	P	Pn	16 33 47.5	-0.1
IVAS	Ivanjica	2.42	345	*e*Pn	Pn	16 33 47.6	-0.1
OUR	Ouranopolis	2.43	111	P	Pn	16 33 48.0	+0.3
AGG	Agios Georgios	2.44	155	P	Pn	16 33 48.6	+0.7
AGG	Agios Georgios	2.44	155		Pn	16 33 48.6	+0.7
AGG	Agios Georgios	2.44	155	P	Pn	16 33 48.6	+0.7
AGG	Agios Georgios	2.44	155	Pn	Pn	16 33 48.5	+0.7
BOVS	Bovan	2.44	12	⇓P	Pn	16 33 47.5	-0.6
BOVS	Bovan	2.44	12	*e*Pn	Pn	16 33 47.4	-0.6
BOVS				*e*Sn	Sn	16 34 18.9	+1.6
LKD2	Lefkada island	2.47	187	P	Pn	16 33 50.2	+1.9
LKD2	Lefkada island	2.47	187	P	Pn	16 33 50.0	+1.7
LKD2	Lefkada island	2.47	187	P	Pn	16 33 50.0	+1.7
	baz=188						
TREB	Trebinje	2.48	307	*e*Pn	Pb	16 33 50.5	-2.5
BRY	Bratogost	2.48	313	*e*Pn	Pb	16 33 50.9	-2.3
BRY	Bratogost	2.48	313	⇑*i*Pn	Pn	16 33 49.7	+1.1
BRY				*i* Sn	Sb	16 34 21.6	-1.8
XOR	Xorichti	2.50	138	P	Pn	16 33 48.9	+0.1
UPM	Unac-Piva	2.51	322	*e*Pn	Pb	16 33 52.9	-0.8
UPM	Unac-Piva	2.51	322	⇑*i*Pn	Pb	16 33 52.0	-1.7
UPM				*i* Sn	Sn	16 34 22.0	+2.8
NEO	Neokhori	2.56	138	P	Pn	16 33 49.6	-0.1
DBRK	Dubrovnik	2.57	305	*e*Pn	Pb	16 33 52.3	-2.4
DBRK				Sn	Sn	16 34 21.3	+0.8
KAVA	Kavala	2.65	94	P	Pn	16 33 50.9	+0.1
GRUS	Gruza	2.65	355	*e*Pn	Pn	16 33 52.1	+1.2
GRUS				*e*Sn	Sn	16 34 24.3	+1.8
RUDO	Rudo	2.67	333	*e*Pn	Pn	16 33 51.1	0.0
BLKB	Belogradchik	2.68	27	⇓P	Pn	16 33 52.0	+0.8
BLKB				⇓S	Sn	16 34 24.8	+1.8
ZAGS	Zajecar	2.72	19	*e*Pn	Pn	16 33 51.5	-0.3
ANX	Ano Chora	2.73	165	P	Pn	16 33 54.1	+2.0
FSK	Fiskardo	2.80	187	P	Pn	16 33 54.6	+1.7
BBLS	Lazići	2.88	336	*e*Pn	Pn	16 33 55.4	+1.3
BBLS				*e*Sn	Sn	16 34 28.4	+0.2
BBLS	Lazići	2.88	336	*e*Pn	Pn	16 33 54.7	+0.6
EFP	Efpalio	2.89	166	P	Pb	16 33 57.0	-3.1
DIVS	Divibare	2.95	345	*e*Pn	Pn	16 33 55.7	+0.6
DIVS				*e*Sn	Sn	16 34 31.2	+1.2
DIVS	Divibare	2.95	345	Pn	Pn	16 33 55.2	+0.1
DIVS	Divibare	2.95	345	*e*Pn	Pn	16 33 54.1	-1.0
STON	Ston	2.96	304	*e*Pn	Pn	16 33 57.1	+2.0
STON				Sn	Sn	16 34 30.4	+0.4
ATAL	Atalanti	2.98	148	P	Pn	16 33 56.9	+1.6
LKR	Lokris	3.00	149	P	Pn	16 33 55.7	0.0
TRUS	Trudelj	3.01	352	*e*Pn	Pn	16 33 56.2	+0.4
SVIS	Svilajnac	3.02	3	*e*Pn	Pn	16 33 58.1	+2.1
KEF3	Kipouria, Keph	3.08	190	P	Pn	16 33 57.1	+0.4
VLS	Valsamata	3.08	186	P	Pn	16 33 57.4	+0.7
VLS	Valsamata	3.08	186	Pn	Pn	16 33 57.2	+0.5
KUBS	Kucevo	3.21	8	*e*Pn	Pn	16 33 57.2	-1.3
BAIL	Bailesti	3.26	31	⇓P	Pn	16 34 00.7	+1.5
MATE	Matera	3.32	261	⇑P	Pn	16 34 00.5	+0.5
PUNG	Punghina	3.35	24	⇓P	Pn	16 34 01.0	+0.7
RDO	Rodhopi	3.41	90	P	Pn	16 34 01.5	+0.3
RDO	Rodhopi	3.41	90		Pn	16 34 01.6	+0.3
LSTV	Lastovo	3.43	298	*e*Pn	Pn	16 34 03.2	+1.7
LSTV				Sn	Sn	16 34 42.4	+0.7
MDVR	Moldovita	3.57	8	⇓P	Pn	16 34 03.6	0.0
DJES	Djerdap	3.59	17	⇓P	Pn	16 34 05.1	+1.3
MAKA	Makarska	3.60	306	*e*Pn	Pn	16 34 05.3	+1.4
MAKA				Sn	Sn	16 34 45.7	-0.1
RMGR	Halanga-Turnu	3.63	19	⇑P	Pn	16 34 06.0	+1.7
RICI	Ricice	3.65	309	*e*Pn	Pn	16 34 06.6	+2.0
RICI				Sn	Sn	16 34 47.3	+0.1
VLAD	Vladila	3.72	41	⇑P	Pn	16 34 07.5	+2.0
BLJ	Bijeljina	3.77	341	*e*Pn	Pn	16 34 06.8	+0.7
ALN	Alexandroupoli	3.82	94	Pn	Pn	16 34 07.3	+0.5
ALN	Alexandroupoli	3.82	94	P	Pn	16 34 07.3	+0.5
HVAR	Hvar	3.91	301	*i* Pn	Pn	16 34 09.5	+1.4
HVAR				Sn	Sn	16 34 54.7	+1.3
SGRT	San Giovanni R	4.00	279	Pn	Pn	16 34 09.2	-0.2
SRKY	Kupres RS	4.01	316	*e*Pn	Pn	16 34 12.4	+2.8
FRGS	Fruska Gora	4.01	348	⇓P	Pn	16 34 09.7	+0.1
FRGS	Fruska Gora	4.01	348	*e*Pn	Pn	16 34 09.9	+0.3
FRGS	Fruska Gora	4.01	348	*e*Pn	Pn	16 34 09.2	-0.4
ZIMR		4.02	52	⇑P	Pn	16 34 11.6	+2.0
DOB	Doboj	4.09	329	*e*Pn	Pn	16 34 12.0	+1.4
ITM	Ithomi	4.12	170		Pn	16 34 13.6	+2.6
BANR	Banloc	4.14	1	⇑P	Pn	16 34 11.9	+0.6
CUC	Castrocucco	4.15	254		Pn	16 34 12.5	+1.0
CUC	Castrocucco	4.15	254	Pn	Pn	16 34 12.0	+0.5
COPA	Copaceanca	4.23	46	⇓P	Pn	16 34 14.3	+1.7
MGRS	Mrkonjic Grad	4.29	319	*e*Pn	Pn	16 34 16.3	+2.9
GZR	Gura Zlata	4.34	17	⇓P	Pn	16 34 14.6	+0.5
KIJV	Kijevo	4.38	311	*e*Pn	Pn	16 34 16.9	+2.2
KIJV				Sn	Sn	16 35 05.5	+0.4
HUMR	Humele	4.39	40	⇑P	Pn	16 34 15.6	+0.9
BZS	Buzias	4.39	5	⇑P	Pn	16 34 13.9	-0.9
BLY	Banja Luka	4.49	323	*e*Pn	Pn	16 34 18.3	+2.2
ZIRJ	Zirje	4.65	303	*e*Pn	Pn	16 34 19.7	+1.4
ZIRJ				Sn	Sn	16 35 11.9	+0.2
LOT	Lotru	4.66	25	⇑P	Pn	16 34 18.5	0.0
RAZG	Razgrad	4.68	58	⇓P	Pn	16 34 19.9	+1.2
MORI	Morici	4.72	306	*i* Pn	Pn	16 34 21.1	+1.9
MORI				Sn	Sn	16 35 14.2	+0.9
A252A	Venje	4.79	332	*e*Pn	Pn	16 34 20.6	+0.5
A252A				Sn	Sn	16 35 13.1	-2.0
PAOL	Paolisi	4.88	270		Pn	16 34 23.0	+1.5
PRIJ	Prijedor	4.88	321	*e*Pn	Pn	16 34 19.2	-2.3
CEL	Celeste	4.95	235	Pn	Pn	16 34 22.5	+0.1
CEL	Celeste	4.95	235	Pn	Pn	16 34 22.4	0.0
SIRR	Siria	5.04	5	⇓P	Pn	16 34 23.9	+0.2
UDBI	Udbina	5.07	312	*e*Pn	Pn	16 34 26.1	+2.0
UDBI				Sn	Sn	16 35 21.2	-0.9
VOIR		5.12	34	⇑P	Pn	16 34 26.8	+2.0
SULR		5.15	46	⇓P	Pn	16 34 26.9	+1.7
DUGI	Dugi Otok	5.19	304	*e*Pn	Pn	16 34 26.9	+1.2
DUGI				Sn	Sn	16 35 25.8	+0.9
A251A	Rujevac	5.21	320	*e*Pn	Pn	16 34 27.7	+1.7
A251A				Sn	Sn	16 35 24.8	-0.7
MORH	Mrgy, Hungar	5.26	342	⇑P	Pn	16 34 27.2	+0.5
MORH	Mrgy, Hungar	5.26	342	*e*Pn	Pn	16 34 27.2	+0.5
MORH	Mrgy, Hungar	5.26	342	P	Pn	16 34 26.6	-0.1
MORH				S	Sn	16 35 22.4	-4.3
VIRC	Vir	5.34	307	*e*Pn	Pn	16 34 28.9	+1.1
VIRC				Sn	Sn	16 35 27.6	-1.2
MOSL	Moslavina	5.36	326	*e*Pn	Pn	16 34 29.7	+1.6
MOSL				Sn	Sn	16 35 26.9	-2.3
PLIT	Plitvice	5.37	314	*e*Pn	Pn	16 34 30.0	+1.8
PLIT				Sn	Sn	16 35 29.0	-0.5
MLR	Muntele Rosu	5.56	39	⇑P	Pn	16 34 32.9	+1.9
MLR	Muntele Rosu	5.56	39	P	Pn	16 34 32.3	+1.4
	comp=N,3.2nm,0.3s,baz=258,slow=18,SNR=32						
MLR				S	Sn	16 35 37.2	+2.9
	comp=N,58nm,0.7s,baz=273,slow=22,SNR=4.1						
MLR				LR	LR	16 37 16.0	
	comp=N,1µm,19.4s,baz=228,slow=44						
	comp=N,16nm,0.5s						
MLR	Muntele Rosu	5.56	39	Pn	Pn	16 34 31.9	+1.0
ISR	Istrita	5.60	44	⇑P	Pn	16 34 33.9	+2.5
DRGR		5.68	12	⇑P	Pn	16 34 32.7	+0.1
NEHR	Nehoiu	5.68	41	⇑P	Pn	16 34 34.8	+2.3
DOPR	Dopca	5.69	32	⇑P	Pn	16 34 33.7	+1.1
AMRR	Amara	5.73	52	⇓P	Pn	16 34 34.8	+1.7
ICOR	Ion Corvin	5.76	58	⇑P	Pn	16 34 34.9	+1.3
CJR	Cluj-Napoca	5.78	18	⇑P	Pn	16 34 34.6	+0.7
AQU	L'Aquila	5.80	284	Pn	Pn	16 34 35.5	+1.4
AQU	L'Aquila	5.80	284	P	Pn	16 34 35.5	+1.4
AQU	L'Aquila	5.80	284	Pn	Pn	16 34 35.6	+1.4
BORR	Bors	5.87	5	⇑P	Pn	16 34 35.7	+0.7
A250A	Rusevo Krmpots	5.89	313	*e*Pn	Pn	16 34 36.8	+1.5
A250A				Sn	Sn	16 35 40.8	-1.5
KALN	Kalnik	5.90	327	*e*Pn	Pn	16 34 36.1	+0.6
KALN				Sn	Sn	16 35 40.5	-2.0
PTJ	Puntijarka	5.93	324	*e*Pn	Pn	16 34 36.1	+0.1
PTJ				Sn	Sn	16 35 42.1	-1.3
COVR	Voineasa-Covas	5.95	38	⇑P	Pn	16 34 38.1	+1.9
OZLJ	Ozalj	5.95	319	*e*Pn	Pn	16 34 37.3	+1.1
OZLJ				Sn	Sn	16 35 42.5	-1.2
OZUR		5.96	34	⇑P	Pn	16 34 37.6	+1.3
SANT	Santorini	5.97	143	⇓P	Pn	16 34 39.3	+2.8
BOJS	Bojanci	5.98	317	*i* Pn	Pn	16 34 38.0	+1.4
BOJS				*i* Pg	Pg	16 35 04.0	+0.4
BOJS				*i* Sn	Sn	16 35 45.2	+0.7
BOJS				*e*		16 36 29.5	
BOJS				IAML		16 36 48.3	
	comp=Z,3µm,2.7s						
GRER		6.00	44	⇓P	Pn	16 34 39.1	+2.3
BSZH	Besenyszg	6.08	355	⇑P	Pn	16 34 39.1	+1.2
BSZH	Besenyszg	6.08	355	P	Pn	16 34 39.7	+1.8
TIH	Tihany	6.09	339	P	Pn	16 34 38.7	+0.7
TIH				S	Sn	16 35 50.3	+3.2
NRCA	Norcia	6.10	288		Pn	16 34 38.8	+0.5
CRES	Cresnjev	6.11	320	*e*Pn	Pn	16 34 39.6	+1.2
TLBR	Topalu	6.13	55	⇑P	Pn	16 34 40.2	+1.7
HARR	Harsova	6.13	54	⇑P	Pn	16 34 40.1	+1.5
PLOR	Plostina	6.16	40	⇑P	Pn	16 34 41.3	+2.2
LTVH	Ltavrtes, Hu	6.17	6	⇑P	Pn	16 34 40.2	+1.0
LTVH	Ltavrtes, Hu	6.17	6	P	Pn	16 34 44.2	+5.0
VRI	Vrincioaia	6.21	40	⇑P	Pn	16 34 41.9	+2.1
RIY	Rijeka	6.28	313	*e*Pn	Pn	16 34 41.5	+0.9
RIY				Sn	Sn	16 35 50.7	-1.0
EFOR	EFORIE	6.29	61	⇓P	Pn	16 34 42.0	+1.2
SMRN	Sveta Marina	6.29	309	*e*Pn	Pn	16 34 42.2	+1.4
SMRN				Sn	Sn	16 35 50.8	-1.2
ODBI	Odobesti	6.30	42	⇓P	Pn	16 34 42.0	+1.0
TIRR	Tirgusor	6.31	57	Pn	Pn	16 34 41.9	+0.8
TIRR	Tirgusor	6.31	57	P	Pn	16 34 41.9	+0.8
VAE	Valguarnera	6.35	236	P	Pn	16 34 43.6	+1.9
	comp=Z,2.4nm,0.3s,baz=270,slow=2.9,SNR=4.0						
VAE				S	Sn	16 35 57.0	+3.3
	comp=Z,47nm,0.6s,baz=249,slow=17,SNR=2.8						
	comp=Z,13nm,0.7s						
BUD	Budapest	6.40	348	P	Pn	16 34 43.1	+0.8
BUD				S	Sn	16 35 53.3	-1.5
CSKK	Cskako	6.43	343	P	Pn	16 34 44.4	+1.6
CSKK				S	Sn	16 35 56.5	+1.0
MPLH	Magyarpolny	6.43	338	P	Pn	16 34 43.7	+1.0
MPLH				S	Sn	16 35 53.6	-1.9
BRJN	Brijuni	6.46	307	*i* Pn	Pn	16 34 44.1	+0.9
BRJN				Sn	Sn	16 35 54.8	-1.4
TUDR		6.51	46	⇓P	Pn	16 34 44.7	+0.9
TPGR	Topolog	6.51	54	⇑P	Pn	16 34 45.3	+1.4
CEY	Cerknica	6.57	315	*e*Pn	Pn	16 34 45.5	+0.8
MURB	Monte Urbino	6.62	291		Pn	16 34 45.8	+0.4
TESR	Tescani	6.65	36	⇓P	Pn	16 34 48.0	+2.2
SKDS	Skadanscina	6.67	312	*e*Pn	Pn	16 34 46.6	+0.5
IDI	Anoyia	6.68	152	P	Pn	16 34 45.9	-0.4
	comp=Z,1.8nm,0.3s,baz=271,slow=7.5,SNR=10						
IDI				S	Sn	16 36 00.4	-1.4
	comp=Z,25nm,0.3s,baz=287,slow=19,SNR=2.0						
IDI				LR	LR	16 37 33.3	
	comp=Z,359nm,19.8s,baz=337,slow=39						
	comp=Z,3.6nm,0.3s						
IDI	Anoyia	6.68	152	Pn	Pn	16 34 46.7	+0.4
EGYH	Egyhazaskeszo	6.71	338	P	Pn	16 34 48.4	+1.7
LJU	Ljubljana	6.72	318	*e*Pn	Pn	16 34 46.5	-0.3
PSZ	Piszkesteto	6.72	354	⇑P	Pn	16 34 47.7	+0.9
PSZ	Piszkesteto	6.72	354	Pn	Pn	16 34 47.2	+0.4
PSZ	Piszkesteto	6.72	354	P	Pn	16 34 47.2	+0.4
PSZ	Piszkesteto	6.72	354	P	Pn	16 34 47.5	+0.7
PSZ				S	Sn	16 36 02.4	-0.5
BIZ	Bicaz	6.77	31	⇓P	Pn	16 34 48.6	+1.2
SRO2	Moca	6.78	345	*e*P	Pn	16 34 48.6	+1.0
SRO2				*e*		16 36 01.0	
SRO2	Moca	6.78	345	*e*PN	Pn	16 34 48.6	+1.0
SRO2				*e*SN	Sn	16 36 01.0	-3.2
SRO	Srobarova	6.85	345	*e*P	Pn	16 34 51.0	+2.5
SRO				*e*		16 36 05.3	
SRO	Srobarova	6.85	345	*e*PN	Pn	16 34 51.0	+2.5
SRO				*e*SN	Sn	16 36 05.3	-0.5
VLDR	Vladesti	6.89	46	⇑P	Pn	16 34 50.5	+1.5
SOKA	Soboth	6.94	324	*e*Pn	Pn	16 34 51.3	+1.5
	comp=Z,122nm,0.7s,SNR=148						
SOKA				*i* Sn	Sn	16 36 06.5	-1.7
	comp=Z,58nm,0.8s						
OBKA	Obir	7.04	321	*e*Pn	Pn	16 34 52.5	+1.3
	comp=Z,108nm,0.5s,SNR=55						
BUR01	Bucovina Ar. S	7.04	24	⇑P	Pn	16 34 52.7	+1.5
BURAR	Bucovina Array	7.04	24	Pn	Pn	16 34 52.3	+1.1
CLTB	Caltabellotta	7.06	241	Pn	Pn	16 34 52.2	+0.7
BUR08	Bucovina Ar. S	7.06	24	Pn	Pn	16 34 52.9	+1.4
ARSA	Arzberg	7.18	329	*e*Pn	Pn	16 34 55.0	+1.9
	comp=Z,83nm,0.5s,SNR=63						
ARSA				*e*Sn	Sn	16 36 12.8	-1.4
	comp=Z,49nm,0.5s						
SOP	Sopron	7.19	335	P	Pn	16 34 53.7	+0.6
KECS	Kecovo	7.25	357	*e*P	Pn	16 34 55.6	+1.6
KECS				*e*		16 36 17.6	
KECS	Kecovo	7.25	357	*e*PN	Pn	16 34 55.6	+1.6
KECS				*e*SN	Sn	16 36 17.6	+1.9
RONA	Rosalia, Austr	7.29	334	*e*Pn	Pn	16 34 55.5	+1.0
	SNR=46						
RONA				*e*Sn	Sn	16 36 14.1	-2.5
BORA	Eskisehir	7.31	98	Pn	Pn	16 34 56.2	+1.3
VYHS	Vyhne	7.42	349	*e*P	Pn	16 34 57.1	+0.8
VYHS				*e*		16 36 16.7	
VYHS	Vyhne	7.42	349	*e*PN	Pn	16 34 57.1	+0.8
VYHS				*e*SN	Sn	16 36 16.7	-3.1
UZHM	Uzhgorod	7.44	7	Pn	Pn	16 34 59.4	+2.8
UZHM				pP	Pb	16 35 02.8	-15
UZH	Uzhgorod	7.44	7	*e*P	Pn	16 35 00.2	+3.6
UZH				*e*S	Sn	16 36 25.8	+5.4
UZH				MLR	MLR		
	comp=N,300nm,11.0s						
UZH				MLR	MLR		
	comp=E,150nm,11.0s						
UZH				MLR	MLR		
	comp=Z,270nm,11.0s						
KARP	Karpathos	7.45	138	Pn	Pn	16 34 59.5	+2.7
ZST	Bratislava	7.49	339	*e*P	Pn	16 34 59.3	+2.0
ZST				*e*		16 36 16.6	
ZST	Bratislava	7.49	339	*e*PN	Pn	16 34 59.3	+2.0
ZST				*e*SN	Sn	16 36 16.6	-5.0
KOLL	Kolacno	7.57	347	*e*PN	Pn	16 35 00.1	+1.8
MYKA	Terra Mystica	7.57	318	*e*Pn	Pn	16 34 59.9	+1.5
	comp=Z,50nm,0.5s,SNR=40						
MYKA				*i* Sn	Sn	16 36 24.9	+1.2
	comp=Z,31nm,0.4s						
OSSC	Osservatorio P	7.59	291		Pn	16 34 59.7	+1.1
MODS	Modra-Piesok	7.61	341	*e*P	Pn	16 35 00.5	+1.6
MODS				*e*		16 36 20.7	
MODS	Modra-Piesok	7.61	341	*e*PN	Pn	16 35 00.5	+1.6
MODS				*e*SN	Sn	16 36 20.7	-3.9
MODS	Modra-Piesok	7.61	341	Pn	Pn	16 35 01.4	+2.5
CONA	Conrad Observa	7.63	333	*i* Pn	Pn	16 35 00.2	+0.9
	comp=Z,47nm,1.0s,SNR=48						
CONA				*e*Sn	Sn	16 36 24.0	-1.2
	comp=Z,45nm,0.7s						
CRVS	Cervenica-Dubn	7.67	2	*e*P	Pn	16 35 01.3	+1.6
CRVS	Cervenica-Dubn	7.67	2	*e*PN	Pn	16 35 01.3	+1.6
SMOL	Smolenice	7.70	342	*e*P	Pn	16 35 02.7	+2.5

SMOL				e		16 36 23.1	
SMOL	Smolenice	7.70	342	ePN	Pn	16 35 02.7	+2.5
SMOL				eSN	Sn	16 36 23.1	-3.8
CASP	Castiglione de	7.72	285	Pn	Pn	16 35 00.8	+0.4
KOLS	Kolonicke sedl	7.74	6	eP	Pn	16 35 06.1	+5.4
KOLS	Kolonicke sedl	7.74	6	ePN	Pn	16 35 06.1	+5.4
MDUB	Mudurnu	7.75	92	Pn	Pn	16 35 02.4	+1.3
STAL	STALIGIAL	7.83	313		Pn	16 35 02.3	+0.3
TEOL	Teolo	7.96	304		Pn	16 35 04.0	+0.2
JAVC	Velka Javorina	7.98	344	ePN	Pn	16 35 06.3	+2.3
MILM	Milestii Mici	7.98	42	eP	Pn	16 35 04.0	+0.1
MILM				eS	Sn	16 36 34.0	+0.5
MILM				eLq	LQ	16 37 09.0	
	comp=Z,1µm,16.5s						
MILM				LRM	MLR	16 39 10.0	
	comp=Z,600nm,11.0s						
MILM	Milestii Mici	7.98	42	⇓P	Pn	16 35 06.4	+2.5
MILM	Milestii Mici	7.98	42	eP	Pn	16 35 04.0	+0.1
MILM				eS	Sn	16 36 34.0	+0.5
MILM				MLR	MLR		
	comp=Z,600nm,11.0s						
LANS	Liptovska Anna	7.98	353	eP	Pn	16 35 07.1	+3.0
LANS				e		16 36 36.1	
LANS	Liptovska Anna	7.98	353	ePN	Pn	16 35 07.1	+3.0
LANS				eSN	Sn	16 36 36.1	+2.3
KBA	Koelnbreinsper	8.03	319	i Pn	Pn	16 35 06.0	+1.2
	comp=Z,86nm,0.7s,SNR=89						
KIS	Kishinev	8.03	42	eP	Pn	16 35 07.0	+2.3
KIS				eL	L	16 37 54.0	
KIS				LRM	MLR	16 39 09.0	
	comp=Z,300nm,10.4s						
KIS	Kishinev	8.03	42	eP	Pn	16 35 07.0	+2.3
KIS				MLR	MLR		
	comp=Z,300nm,10.0s						
MOA	Molln	8.18	326	ePn	Pn	16 35 09.6	+2.9
	comp=Z,36nm,0.5s,SNR=51						
MOA				eSn	Sn	16 36 40.4	+1.8
	comp=Z,30nm,0.3s						
NIE	Niedzica	8.19	357	eP	Pn	16 35 10.3	+3.4
NIE				eS	Sn	16 36 42.9	+4.0
ABTA	Abfaltersbach	8.24	315	i Pn	Pn	16 35 08.5	+0.9
	comp=Z,87nm,0.4s,SNR=106						
ABTA				eSn	Sn	16 36 37.2	-2.9
	comp=Z,88nm,0.7s						
KMPD	K-Podol'skiy	8.27	26	Pn	Pn	16 35 11.2	+3.2
	comp=Z,26nm,1.1s						
CTI	Castel Tesino	8.32	308	Pn	Pn	16 35 08.3	-0.5
CTI	Castel Tesino	8.32	308	P	Pn	16 35 08.3	-0.5
BIOA	Bad Ischl, Aus	8.33	323	i Pn	Pn	16 35 10.8	+2.0
	SNR=55						
VLC	Villacollemand	8.36	294	Pn	Pn	16 35 09.3	+0.1
AKAS	Kas	8.37	124	Pn	Pn	16 35 10.6	+1.2
MAUC	Maruska	8.43	346	ePN	Pn	16 35 12.3	+2.1
KRUC	Moravsky	8.47	339	ePN	Pn	16 35 11.7	+0.9
KRUC				eSN	Sn	16 36 41.6	-4.1
KWP	Kalwaria Pacla	8.47	7	eS	Sb	16 37 42.4	+27
KWP	Kalwaria Pacla	8.47	7	eP	Pn	16 35 17.6	+6.8
PRMA	PARMA	8.60	298		Pn	16 35 13.2	+0.7
SORM	Soroca	8.64	35	⇑P	Pn	16 35 13.9	+0.8
VRAC	Vranov	8.65	340	⇑P	Pn	16 35 14.1	+1.0
VRAC	Vranov	8.65	340	P	Pn	16 35 14.0	+0.8
	comp=Z,1.9nm,0.3s,baz=170,slow=12,SNR=44						
VRAC				S	Sn	16 36 46.3	-3.7
	comp=Z,17nm,0.7s,baz=245,slow=19,SNR=1.8						
VRAC				LR	LR	16 38 57.7	
	comp=Z,555nm,20.7s,baz=169,slow=40						
	comp=Z,25nm,0.8s						
VRAC	Vranov	8.65	340	P	Pn	16 35 14.0	+0.8
VRAC	Vranov	8.65	340	ePN	Pn	16 35 14.4	+1.2
VRAC				eSN	Sn	16 36 45.0	-5.0
SALO	Salr	8.80	303	Pn	Pn	16 35 15.9	+0.7
OKC	Ostrava-Krasne	8.83	348	eP	Pn	16 35 16.9	+1.3
OKC	Ostrava-Krasne	8.83	348	ePN	Pn	16 35 16.9	+1.3
LVV	L'vov	8.83	13	eP	Pn	16 35 16.6	+0.9
LVV				e		16 36 54.3	
LVV				pmax	pmax		
	comp=Z,30nm,0.6s						
LVV				pmax	pmax		
	comp=Z,60nm,1.0s						
MORC	Moravsky Berou	8.88	345	⇑P	Pn	16 35 16.9	+0.6
MORC	Moravsky Berou	8.88	345	Pn	Pn	16 35 17.3	+1.0
MORC	Moravsky Berou	8.88	345	P	Pn	16 35 17.3	+1.0
MORC	Moravsky Berou	8.88	345	ePN	Pn	16 35 19.0	+2.7
MORC				eSN	Sn	16 36 50.8	-4.9
MORC	Moravsky Berou	8.88	345	Pn	Pn	16 35 18.6	+2.3
CKRC	Cesky Krumlov	8.94	330	ePN	Pn	16 35 19.5	+2.3
MSSA	Maissana	9.00	294		Pn	16 35 18.6	+0.5
OJC	Ojcow	9.02	355	eS	Sn	16 36 59.2	0.0
OJC	Ojcow	9.02	355	Pn	Pn	16 35 18.6	+0.4
OJC	Ojcow	9.02	355	P	Pn	16 35 18.7	+0.4
OJC	Ojcow	9.02	355	Pn	Pn	16 35 20.6	+2.4
OJC	Ojcow	9.02	355	eP	Pn	16 35 20.5	+2.2
WTTA	Wattenberg	9.03	315	i Pn	Pn	16 35 20.2	+1.7
	comp=Z,112nm,0.5s,SNR=81						
WTTA				eSn	Sn	16 36 57.6	-2.0
	comp=Z,182nm,0.7s						
VSL	Villasalto	9.06	263	Pn	Pn	16 35 17.5	-1.3
PGF	Pioggiola	9.06	282	ePn	Pn	16 35 18.1	-0.8
PGF	Pioggiola	9.06	282	eP	Pn	16 35 23.6	+4.7
WATA	Walderalm	9.10	315	i Pn	Pn	16 35 21.7	+2.2
	comp=Z,157nm,0.4s,SNR=87						
WATA				i Sn	Sn	16 37 01.2	-0.3
	comp=Z,35nm,0.5s						
GEC2	GERESS Array S	9.19	328	Pn	Pn	16 35 22.7	+1.9
GERES	GERESS Array B	9.19	328	P	Pn	16 35 22.8	+2.0
	comp=Z,1.9nm,0.3s,baz=150,slow=14,SNR=108						
GERES				S	Sn	16 37 03.7	+0.1
	comp=Z,6.3nm,0.5s,baz=146,slow=21,SNR=1.2						
GERES				LR	LR	16 39 47.9	
	comp=Z,992nm,18.6s,baz=142,slow=43						
	comp=Z,12nm,0.7s						
GERES	GERESS Array B	9.19	328	Pn	Pn	16 35 22.3	+1.6
SQTA	Sankt Quirin	9.23	314	i Pn	Pn	16 35 23.3	+2.0
	comp=Z,272nm,0.5s,SNR=154						
SQTA				i Sn	Sn	16 37 05.6	+1.0
	comp=Z,90nm,0.6s						
KRLC	Kraliky	9.32	343	eP	Pn	16 35 24.9	+2.5
KRLC	Kraliky	9.32	343	ePN	Pn	16 35 24.9	+2.5
MOTA	Moosalm	9.36	314	ePn	Pn	16 35 24.6	+1.5
	comp=Z,116nm,0.8s,SNR=57						
MOTA				eSn	Sn	16 37 07.7	-0.2
	comp=Z,122nm,0.9s						
FETA	Feichten	9.38	311	i Pn	Pn	16 35 24.8	+1.4
	comp=Z,54nm,0.5s,SNR=53						
FETA				Sn	Sn	16 37 05.5	-2.8
	comp=Z,58nm,0.8s						
KHC	Kasperske Hory	9.47	329		Pn	16 35 26.2	+1.7
KHC	Kasperske Hory	9.47	329	eP	Pn	16 35 25.9	+1.4
KHC				e		16 37 09.3	
KHC	Kasperske Hory	9.47	329	ePN	Pn	16 35 25.9	+1.4
KHC				eSN	Sn	16 37 09.3	-1.1
RETA	Reutte	9.63	314	ePn	Pn	16 35 28.0	+1.2
	comp=Z,61nm,0.8s,SNR=34						
RETA				eSn	Sn	16 37 12.6	-1.8
	comp=Z,53nm,0.5s						
DPC	Dobruska-Polom	9.68	342	eP	Pn	16 35 28.6	+1.3
DPC				e		16 37 11.5	
DPC	Dobruska-Polom	9.68	342	ePN	Pn	16 35 28.6	+1.3
DPC				eSN	Sn	16 37 11.5	-3.9
BR131	Keskin Array S	9.73	95	Pn	Pn	16 35 28.5	+0.2
BR131	Keskin Array S	9.73	95c	iP	Pn	16 35 29.6	+1.4
BR131	Keskin Array S	9.73	95	P	Pn	16 35 29.5	+1.3
BRTR	Keskin Array B	9.74	95	P	Pn	16 35 29.4	+1.1
	comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=18						
BRTR				LR	LR	16 39 40.4	
	comp=Z,1µm,18.7s,baz=292,slow=40						
	comp=Z,2.2nm,0.6s						
BRTR	Keskin Array B	9.74	95	Pn	Pn	16 35 28.6	+0.4
BRTR	Keskin Array B	9.74	95	P	Pn	16 35 28.7	+0.4
DAVOX	Davos/Dischmat	9.74	308	P	Pn	16 35 29.4	+1.0
	comp=Z,109nm,0.6s,baz=128,slow=13,SNR=131						
DAVOX				S	Sn	16 37 16.7	-0.6
	comp=Z,41nm,0.5s,baz=334,slow=17,SNR=3.0						
PRU	Pruhonice	9.85	335	eP	Pn	16 35 31.3	+1.7
PRU	Pruhonice	9.85	335	ePN	Pn	16 35 31.3	+1.7
LUBAR	Lubar, Ukraine	9.88	26	Pn	Pn	16 35 32.6	+2.6
LUBAR				pP		16 35 37.5	
OSTC	Ostas	9.90	342	ePN	Pn	16 35 32.2	+1.9
TUE	Stuetta	9.92	306	Pn	Pn	16 35 31.4	+0.7
CHVC	Chvalec	9.96	341	ePN	Pn	16 35 32.8	+1.6
DAVA	Damuels	10.01	311	ePn	Pn	16 35 33.5	+1.5
	comp=Z,48nm,0.6s,SNR=36						
DAVA				eSn	Sn	16 37 21.1	-2.7
	comp=Z,97nm,0.5s						
KSP	Ksiaz	10.15	343	eP	Pn	16 35 36.1	+2.5
KSP				eS	Sn	16 37 35.9	+9.1
KSP	Ksiaz	10.15	343	Pn	Pn	16 35 36.0	+2.3
SIM	Simferopol'	10.27	64	P	Pn	16 35 35.9	+0.5
SIM				pmax	pmax		
	comp=Z,25nm,1.1s						
SBF	Sospel	10.36	289	ePn	Pn	16 35 37.0	+0.3
SBF				eSn	Sn	16 37 25.7	-6.5
	comp=Z,73nm,0.6s						
KEST	Kesra	10.67	243	P	Pn	16 35 42.1	+1.1
	comp=Z,0.5nm,0.3s,baz=282,slow=3.0,SNR=8.6						
KEST				LR	LR	16 40 08.7	
	comp=Z,447nm,20.4s,baz=356,slow=39						
	comp=Z,8.4nm,0.8s						
KEST	Kesra	10.67	243	Pn	Pn	16 35 42.4	+1.4
BRG	Berggiesshubel	10.81	335	eP	Pn	16 35 44.5	+1.7
BRG				Amp		16 35 52.0	
	comp=Z,11nm,1.1s						
BRG				ex	x	16 38 20.1	
BRG				Amp		16 39 32.4	
	comp=Z,52nm,1.4s						
BRG				Amp		16 40 33.0	
	comp=Z,2.7nm,9.4s						
BRG				Amp		16 40 36.0	
	comp=N,1.7nm,9.2s						
BRG				Amp		16 40 37.0	
	comp=E,1.4nm,8.3s						
BRG	Berggiesshubel	10.81	335	eP	Pn	16 35 44.4	+1.7
BRG				pmax	pmax		
	comp=Z,11nm,1.1s						
BRG				pmax	pmax		
	comp=Z,52nm,1.4s						
BRG				MLR	MLR		
	comp=Z,3µm,9.4s						
BRG				MLR	MLR		
	comp=N,2µm,9.2s						
BRG				MLR	MLR		
	comp=E,1µm,8.3s						
GRFO	Grafenberg	10.89	324	Pn	Pn	16 35 43.8	0.0
GRFO	Grafenberg	10.89	324	P	Pn	16 35 43.8	0.0
LMR	La Mourre	10.95	286	ePn	Pn	16 35 43.6	-1.1
LMR				eSn	Sn	16 37 38.8	-7.8
	comp=E,18nm,0.7s						
AK05	Malin Array Si	10.97	28	Pn	Pn	16 35 47.4	+2.5
AK10	Malin Array Si	10.97	29	Pn	Pn	16 35 47.5	+2.6
AK17	Malin Array Si	10.97	28	Pn	Pn	16 35 47.0	+2.1
AK16	Malin Array Si	10.97	28	Pn	Pn	16 35 46.8	+1.8
AK09	Malin Array Si	10.99	29	Pn	Pn	16 35 47.4	+2.2
AK08	Malin Array Si	11.00	29	Pn	Pn	16 35 47.5	+2.2
MBDF	Montbardon	11.00	293	ePn	Pn	16 35 44.3	-1.3
MBDF	Montbardon	11.00	293	eP	Pn	16 35 49.6	+4.0
MBDF				eSn	Sn	16 37 39.6	-8.5
	comp=E,60nm,0.7s						
AK18	Malin Array Si	11.00	28	Pn	Pn	16 35 47.5	+2.1
AKASG	Malin Array Be	11.04	28	P	Pn	16 35 47.4	+1.5
	comp=E,0.7nm,0.3s,baz=212,slow=12,SNR=4.4						
	comp=E,1.1nm,0.6s						
SENIN	Lac Senin/Sane	11.15	302	Pn	Pn	16 35 47.7	0.0
LPG	La Plagne	11.22	297	ePn	Pn	16 35 48.3	-0.4
LPG	La Plagne	11.22	297	eP	Pn	16 35 50.8	+2.1
LPG				eSn	Sn	16 37 41.6	-12
	comp=E,167nm,0.8s						
LPL	La Plagne	11.24	297	ePn	Pn	16 35 47.1	-1.8
LPL	La Plagne	11.24	297	eP	Pn	16 35 50.8	+1.9
LPL				eSn	Sn	16 37 45.2	-8.8
	comp=E,172nm,0.9s						
STU	Stuttgart	11.25	316		Pn	16 35 48.8	0.0
STU	Stuttgart	11.25	316	P	Pn	16 35 48.8	0.0
BFO	Black Forest	11.46	312	Pn	Pn	16 35 50.9	-0.8
BFO	Black Forest	11.46	312	P	Pn	16 35 50.9	-0.8
CLL	Collm	11.49	334	Pn	Pn	16 35 51.4	-0.5
CLL	Collm	11.49	334	eP	Pn	16 35 53.0	+1.0
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
CLL	Collm	11.49	334	ePn	Pn	16 35 53.0	+1.0
	comp=Z,15nm,1.2s						
CLL				ex	x	16 36 03.0	
CLL				ex	x	16 36 09.0	
CLL				ex	x	16 37 02.0	
CLL				eSn	Sn	16 37 41.0	-19
CLL				ex	x	16 38 14.0	
CLL				eSb		16 38 34.0	
CLL				eSg		16 39 16.0	
CLL				Lmax		16 40 00.0	
CSS	Mathiatis	11.54	119	Pn	Pn	16 35 53.5	+0.6
ORIF	Oris-en-Rattie	11.66	293	ePn	Pn	16 35 53.5	-1.1
ORIF	Oris-en-Rattie	11.66	293	eP	Pn	16 35 58.5	+3.9
ORIF				eSn	Sn	16 37 54.7	-9.5
	comp=Z,64nm,0.6s						
SMRF	Simiane la Rot	11.71	289	eP	Pn	16 35 58.6	+3.5
SMRF				eSn	Sn	16 37 56.2	-8.9
	comp=Z,19nm,0.8s						
CABF	La Chapelle	12.02	301	ePn	Pn	16 35 58.8	-0.7
CABF				eSn	Sn	16 38 02.8	-10
	comp=Z,62nm,0.8s						
HINF	Hinteralfeld	12.05	308	ePn	Pn	16 35 58.5	-1.3
HINF				eSn	Sn	16 38 03.5	-10
	comp=Z,72nm,0.9s						
ECH	Echery	12.06	310	Pn	Pn	16 35 59.1	-0.8
ECH	Echery	12.06	310	P	Pn	16 35 59.1	-0.8
CDF	Champ du Feu	12.10	311	ePn	Pn	16 36 01.8	+1.4
CDF				eSn	Sn	16 38 04.6	-10
	comp=Z,46nm,1.0s						
HAU	Haudompre	12.44	308	ePn	Pn	16 36 03.2	-1.8
HAU				eSn	Sn	16 38 12.7	-10
	comp=Z,80nm,0.8s						
VIVF	Saint-Julien-l	12.49	292	ePn	Pn	16 36 04.4	-1.4
VIVF				eSn	Sn	16 38 15.0	-9.3
	comp=Z,19nm,0.8s						
ANN	Anapa	12.53	68	eP	Pn	16 36 02.6	-3.6
ANN				eS	Sn	16 38 20.6	-4.5
ANN				pmax	pmax		
	comp=Z,16nm,0.9s						
SSB	Saint Sauveur	12.67	294	Pn	Pn	16 36 07.3	-0.9
SSB	Saint Sauveur	12.67	294	P	Pn	16 36 07.3	-0.9
SUW	Suwalki	12.86	6	eP	Pn	16 36 11.6	+0.9
SUW	Suwalki	12.86	6	eP	Pn	16 36 17.4	+6.6
LASF	Ste Croix	12.95	288	ePn	Pn	16 36 11.7	-0.3
PAGF	Fort de Pagny	13.06	309	ePn	Pn	16 36 14.4	+0.8
PAGF	Fort de Pagny	13.06	309	eP	P	16 36 20.2	-3.6
	baz=128						
PAGF				eSn	Sn	16 38 29.9	-8.3
	comp=Z,236nm,1.5s						
SFTF	Sexfontaines	13.31	307	ePn	Pn	16 36 15.0	-2.0
	baz=127						
SFTF	Sexfontaines	13.31	307	eP	P	16 36 22.7	-3.8
	baz=128						
SFTF				eSn	Sn	16 38 35.2	-9.1
WLF	Walferdange	13.39	314	Pn	Pn	16 36 17.6	-0.4
WLF	Walferdange	13.39	314	P	Pn	16 36 17.6	-0.4
WLF	Walferdange	13.39	314	dP	Pn	16 36 19.1	+1.1
	comp=Z,21nm,0.9s						
MEZF	Maizieres J'vi	13.44	308	ePn	Pn	16 36 16.8	-1.8
	baz=108						
MEZF	Maizieres J'vi	13.44	308	eP	P	16 36 23.3	-4.6
SAVF	Savonnieres en	13.44	309	ePn	Pn	16 36 19.4	+0.7
	baz=54						
SAVF				eSn	Sn	16 38 38.0	-9.5
	comp=Z,7.3nm,0.5s						
SMF	Signal de Mont	13.50	299	ePn	Pn	16 36 17.2	-2.3
SMF				eSn	Sn	16 38 38.4	-10
	comp=Z,38nm,0.5s						
LOR	Lormes	13.68	302	ePn	Pn	16 36 20.6	-1.5
	baz=120						
LOR				eSn	Sn	16 38 40.0	-13
	comp=Z,42nm,0.5s						
SSF	Saint Saulge	13.84	301	ePn	Pn	16 36 22.9	-1.3
SSF				eSn	Sn	16 38 45.1	-12
	comp=Z,18nm,0.6s						
AVF	Avril sur Loir	13.86	299	ePn	Pn	16 36 22.2	-2.2
AVF				eSn	Sn	16 38 45.1	-13
	comp=Z,20nm,0.7s						
HNTI	Hanita	13.91	121	Pn	Pn	16 36 26.8	+1.7
BTNL	Ternell	13.93	317	dP	Pn	16 36 27.3	+1.9
	comp=Z,11nm,1.0s						
MEM	Membach	14.01	317	dP	Pn	16 36 26.5	+0.1
SOC	Sochi	14.01	74	eP	P	16 36 36.3	+2.0
SOC				e		16 39 12.6	
SOC				pmax	pmax		
	comp=Z,73nm,1.0s						
SOC				MLR	MLR		
	comp=Z,83nm,13.0s						
MNK	Minsk	14.03	17	i P	Pn	16 36 25.0	-1.7
MNK				i S	Sn	16 39 00.7	-1.1
MNK				pmax	pmax		
	comp=N,17nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,803nm,17.0s						
MNK				MLR	MLR		
	comp=E,69nm,13.0s						
MNK				MLR	MLR		
	comp=N,316nm,11.0s						
MNK	Minsk	14.03	17	i P	Pn	16 36 25.0	-1.7
	comp=E,3.0nm,0.9s						
MNK				i P	Pn	16 36 25.0	-1.7
	comp=N,17nm,0.9s						
MNK				i P	Pn	16 36 25.0	-1.7
	comp=Z,5.0nm,0.9s,baz=202						
MNK				i PP	PnPn	16 36 33.4	-1.2
MNK				i PPP	PPP	16 36 41.0	
MNK				i S	Sn	16 39 00.7	-1.1
MNK				i SS	SnSn	16 39 15.2	+0.9
MNK				i SSS	SSS	16 39 27.9	
MNK				i LQ	LQ	16 40 31.4	
MNK				i LR	LR	16 41 30.0	
MNK				i LRM	MLR	16 42 05.0	
	comp=Z,803nm,16.5s						
MNK				i LRM	MLR	16 42 15.2	
	comp=E,69nm,12.7s						
MNK				i LRM	MLR	16 42 20.9	
	comp=N,316nm,11.2s						
MTLF	Montolieu	14.08	285	ePn	Pn	16 36 26.1	-1.3
MTLF	Montolieu	14.08	285	eP	Pn	16 36 30.5	+3.1
MMAI	Mount Meron Ar	14.10	121	P	Pn	16 36 28.1	+0.2
	comp=N,0.8nm,0.3s,baz=7.3,slow=20,SNR=3.6						
MMAI				LR	LR	16 42 50.6	
	comp=N,311nm,18.9s,baz=76,slow=41						
	comp=N,5.7nm,0.9s						
BGF	Bois d'Agland	14.13	298	ePn	Pn	16 36 25.4	-2.7
BGF				eSn	Sn	16 38 54.4	-10
	comp=N,57nm,0.8s						
GEM	Giv'at Ha'Em	14.14	120	Pn	Pn	16 36 29.2	+0.8
NATI	Neve Ativ	14.16	120	Pn	Pn	16 36 29.4	+0.8
RCHB	Rochefort	14.16	314	dP	Pn	16 36 28.1	-0.4
	comp=Z,26nm,0.8s						
NACGM	Naroch	14.20	14	⇑eP	P	16 36 39.6	+3.3
	baz=199						
BCLA	Clavier	14.27	315	dP	Pn	16 36 31.3	+1.3
	comp=Z,14nm,0.7s						
CAF	Calviac	14.33	291	ePn	Pn	16 36 29.7	-1.2
GIVF	Givet	14.35	314	ePn	Pn	16 36 29.0	-2.1
BGES	Gesves	14.36	315	dP	Pn	16 36 32.7	+1.4
	comp=Z,37nm,0.7s						
SLTI	Sal'it	14.38	124	Pn	Pn	16 36 33.0	+1.4
PABE	Paberze	14.40	7	Pn	Pn	16 36 32.5	+0.7
PABE	Paberze	14.40	7	eP	Pn	16 36 33.1	+1.3
HYF	Humbligny	14.47	301	ePn	Pn	16 36 30.6	-2.2
HYF				eSn	Sn	16 39 02.0	-11
DOU	Dourbes	14.47	313	dP	Pn	16 36 33.9	+1.1
	comp=Z,16nm,0.8s						
TCF	Toulx Ste Croi	14.49	297	ePn	Pn	16 36 31.5	-1.6
TCF				eSn	Sn	16 39 02.8	-10
	comp=Z,27nm,0.9s						
BMRD	Maredsous	14.49	314	dP	Pn	16 36 34.2	+1.2
	comp=Z,22nm,0.8s						
IIGN	Ignalina	14.53	12	eP	P	16 36 41.2	+1.2
IIGN				IAmb	IAmb	16 36 53.1	
	comp=Z,13nm,0.9s						
IDID	Didziasalis	14.58	13	eP	P	16 36 41.6	+1.0
BAIF	Baives	14.67	313	ePn	Pn	16 36 35.4	-0.1
BAIF				eSn	Sn	16 39 07.3	-10
	comp=Z,5.2nm,0.7s						
HMDT	Nahal Hemdat	14.67	123	Pn	P	16 36 38.9	-2.8
ISAL	Salakas	14.73	11	eP	P	16 36 42.7	+0.5
RJF	Les Rejaudoux	14.77	292	ePn	Pn	16 36 34.0	-2.9
PBUR	Paburge	14.81	2	eP	P	16 36 44.2	+1.2
SNF	Seneffe	14.86	314	dP	Pn	16 36 40.1	+2.0
	comp=Z,28nm,0.7s						
VSVD	Vaisvydziai	14.87	6	eP	P	16 36 48.6	+4.9
VSVD				IAmb	IAmb	16 36 49.9	
	comp=Z,16nm,0.5s						
KZIT	Kziot	14.93	129	Pn	Pn	16 36 38.3	-0.8
CLF	Chambon-Foret	14.96	303		Pn	16 36 38.8	-0.6
YTIR	Yattir	15.03	127	Pn	Pn	16 36 40.9	+0.4
DSI	Dead Sea	15.04	125	Pn	Pn	16 36 41.3	+0.7
LFF	La Frestale	15.26	291	eP	P	16 36 47.8	-0.4
LFF				eSn	Sn	16 39 24.5	-7.4
	comp=Z,4.4nm,0.4s						
EPF	Esparros	15.45	284	ePn	Pn	16 36 45.2	-0.7
BLEU	Blekinge	15.45	349	i P	P	16 36 50.0	-0.2
BLEU				IAmb	IAmb	16 36 53.9	
	comp=Z,5.2nm,0.7s						
ASF	Jabal al Asfar	15.60	120	P	Pn	16 36 49.4	+1.3
	comp=Z,0.4nm,0.3s,baz=288,slow=2.9,SNR=5.5						
	comp=Z,16nm,0.9s						
PRNI	Paran	15.69	129	Pn	Pn	16 36 50.4	+1.3
KRMI	Paran Flat	15.70	131	Pn	Pn	16 36 48.9	-0.4
BJUU	Bjuv	15.74	343	i P	P	16 36 53.2	-0.2
DEL	Delary	15.94	345	eP	P	16 36 56.4	+0.8
DEL	Delary	15.94	345	i P	P	16 36 55.0	-0.6
HRFI	Mount Harif	15.94	130	Pn	Pn	16 36 52.2	-0.2
VSR	Storozhevoye	15.99	45	eP	Pn	16 36 53.1	+0.2
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
ETSF	Etsaut	16.11	283	eP	P	16 36 59.0	+1.3
MFF	Saint Martin d	16.15	296	ePn	Pn	16 36 53.4	-1.5
MFF				eSn	Sn	16 39 42.1	-11
	comp=Z,8.7nm,0.7s						
EIL	Elat	16.17	131	P	Pn	16 36 55.5	+0.2
	comp=Z,1.0nm,0.3s,baz=266,slow=2.3,SNR=17						
	comp=Z,22nm,0.9s						
EIL	Elat	16.17	131	Pn	Pn	16 36 56.6	+1.4
KIV	Kislovodsk	16.18	73	eP	P	16 36 58.6	+0.1
KIV				eS	Sn	16 39 59.4	+5.1
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,65nm,13.0s						
KIV	Kislovodsk	16.18	73	P	Pn	16 36 55.2	-0.2
KIV				P	Pn	16 36 55.2	-0.2
KVAR	Kislovodsk Arr	16.18	73	P	P	16 36 57.0	-1.6
	baz=266,slow=19						
	comp=Z,1.2nm,0.5s						
VORR	Voronezh	16.26	44	eP	Pn	16 36 53.2	-3.1
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
KBZ	Khabaz	16.32	74	P	P	16 37 00.9	+0.9
	comp=Z,14nm,1.0s,baz=299,slow=7.1,SNR=24						
KBZ	Khabaz	16.32	74	⇓iP	P	16 37 01.8	+1.8
GOF	Gofitskoye	16.51	69	⇑eP	P	16 37 03.6	+1.6
GOF				pmax	pmax		
	comp=Z,56nm,0.9s						
SJPF	Ste Jean	16.59	284	ePn	Pn	16 37 00.1	-0.5
SJPF	Ste Jean	16.59	284	eP	P	16 37 05.0	+2.0
LPSR	Galich'ya Gora	16.64	41	eP	P	16 37 02.4	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LDF	La Druitiere	16.65	303	ePn	Pn	16 37 00.0	-1.2
LDF				eSn	Sn	16 39 54.7	-11
	comp=Z,3.9nm,0.4s						
NCK	Nalchik	16.83	75	⇑eP	P	16 37 07.7	+2.1
FLN	La Foliniere	16.93	304	ePn	Pn	16 37 05.3	+0.5
	baz=123						
FLN				eSn	Sn	16 40 01.2	-11
	comp=Z,3.2nm,0.4s						
GRR	Gorron	17.05	302	ePn	Pn	16 37 07.2	+0.9
GRR				eSn	Sn	16 40 03.5	-12
	comp=Z,1.1nm,0.3s						
MUD	Monsted U'grnd	17.06	337	i P	P	16 37 08.0	0.0
MUD				IAmb	IAmb	16 37 10.3	
	comp=Z,16nm,0.8s						
ZEI	Tsey	17.07	77	eP	P	16 37 09.3	+0.8
ZEI				pmax	pmax		
	comp=Z,41nm,1.4s						
BORU	Boraas	17.24	345	i P	P	16 37 10.7	+0.7
OBN	Obninsk	17.27	31	P	P	16 37 10.6	+0.3
	comp=Z,0.6nm,0.3s,baz=54,slow=22,SNR=3.4						
	comp=Z,2.4nm,0.3s						
OBN	Obninsk	17.27	31	⇑eP	P	16 37 12.1	+1.8
OBN				pmax	pmax		
	comp=Z,33nm,1.3s						
OBN				MLR	MLR		
	comp=Z,267nm,16.0s						
VRH	Novokhopyorsk	17.39	48	eP	Pn	16 37 08.3	-2.2
VRH				pmax	pmax		

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      comp=Z,10.0nm,0.9s
VIKU  Vikbolandet      17.49 352 eP     P      16 37 14.7 +1.9
MTSE  Matsula          17.58   5 eP     P      16 37 15.2 +1.5
VSU   Vasula           17.62 10c iP     P      16 37 14.8 +0.7
VSU   Vasula           17.62  10 eP     P      16 37 15.4 +1.2
GNI   Garni            18.02  86  P     P      16 37 20.1 +1.2
      comp=Z,54nm,1.1s,baz=277,slow=1.6,SNR=18
GNI   Garni            18.02  86  P     Pn     16 37 17.1 -1.4
GNI                               IAmb  IAmb   16 37 24.5
      comp=Z,70nm,1.1s
GNI   Garni            18.02  86  P     Pn     16 37 17.1 -1.4
GNI                               pmax  pmax
      comp=Z,70nm,1.2s
GNI   Garni            18.02  86  P     P      16 37 19.0 +0.1
SGMF  Saint Gilles     18.11 301 ePn    P      16 37 20.3 +0.6
SGMF                             eSn    Sn     16 40 27.5  -13
      comp=Z,187nm,1.7s
MOS   Moscow           18.14  31 eP     Pn     16 37 18.7 -1.0
MOS                               pmax  pmax
      comp=Z,50nm,1.1s
QUIF  Quistinic        18.43 299 ePn    Pn     16 37 25.1 +1.8
QUIF                             eSn    Sn     16 40 49.4 +0.8
      comp=Z,5.2nm,0.5s
GROC  Groznyy          18.44  76 eP     Pn     16 37 24.8 +1.3
GROC                             eS     Sn     16 40 50.0 +1.1
GROC                              pmax  pmax
      comp=Z,19nm,0.6s
ROSF  Rostrenen        18.60 301 ePn    Pn     16 37 27.3 +1.9
UPP   Uppsala          18.76 355 eP     Pn     16 37 29.0 +1.8
AAL   Aland            18.97 358 eP     Pn     16 37 30.6 +0.9
ESBB  Sonseca Array    19.06 274  P     P      16 37 30.7 +0.4
ESDC  Sonseca Array    19.06 274  P     P      16 37 29.9 -0.4
      comp=Z,0.1nm,0.3s,baz=72,slow=11,SNR=36
      comp=Z,6.0nm,0.9s
ESDC  Sonseca Array    19.06 274  P     P      16 37 30.5 +0.2
MEF   Metsahovi        19.11   5 eP     Pn     16 37 32.7 +1.2
SNART Snartemo         19.23 338 eP     Pn     16 37 33.3 +0.5
PAB   San Pablo        19.38 273  P     P      16 37 33.6 -0.2
PAB   San Pablo        19.38 273  P     P      16 37 33.6 -0.2
PAB                               pmax  pmax
      comp=Z,19nm,1.1s
PAB   San Pablo        19.38 273  P     P      16 37 34.1 +0.3
HFS   Hagfors          19.45 349  P     P      16 37 34.2 -0.2
      comp=Z,1.9nm,0.3s,baz=241,slow=46,SNR=32
HFS                               LR    LR     16 45 39.5
      comp=Z,238nm,19.2s,baz=165,slow=38
      comp=Z,9.2nm,0.6s
TAF   Taforalt         19.51 258  P     Pn     16 37 37.0 +0.4
MAK   Makhachkala      19.70  76 eP     P      16 37 33.9 -3.3
MAK                              eS     S      16 41 14.1 -4.4
MAK                               pmax  pmax
      comp=Z,160nm,1.3s
KONO  Kongsberg        19.76 343 eP     P      16 37 38.4 +0.7
OSL   Oslo             19.78 345 eP     P      16 37 38.5 +0.6
RAF   Rauma            19.81   1 eP     P      16 37 38.5 +0.2
JBK   JBK              19.84 257  P     Pn     16 37 41.0 +0.4
FIGM  Figuig           20.00 250  P     Pn     16 37 42.0 -0.5
BLS5  Blasjo           20.35 338 eP     Pn     16 37 45.3 -1.0
NC602 NORSAR Array S   20.37 347  P     P      16 37 43.9 -0.4
NC602                             IAmb  IAmb   16 37 51.7
      comp=Z,28nm,0.8s
NC602 NORSAR Array S   20.37 347 eP     P      16 37 44.1 -0.2
FINES FINESS Array B   20.46   7  P     P      16 37 44.2 -1.0
      comp=Z,6.9nm,0.7s,baz=187,slow=10,SNR=22
      comp=Z,6.9nm,0.7s
FINES FINESS Array B   20.46   7  P     P      16 37 44.6 -0.7
FINES FINESS Array B   20.46   7  P     P      16 37 44.6 -0.7
FIA1  FINESS Array S   20.46   7  P     P      16 37 44.7 -0.6
FIA1                              IAmb  IAmb   16 37 53.8
      comp=Z,30nm,0.9s
KMY   Karmoy           20.53 337 eP     Pn     16 37 47.3 -0.9
NAO01 NORSAR Array S   20.59 346  P     P      16 37 46.6 -0.1
NAO01                             IAmb  IAmb   16 37 55.3
      comp=Z,39nm,0.8s
NC405 NORSAR Array S   20.69 347  P     P      16 37 47.8 -0.1
NB201 NORSAR Array S   20.71 347  P     P      16 37 48.1 +0.1
NB201                             IAmb  IAmb   16 37 51.8
      comp=Z,39nm,0.8s
NB2   NORSAR Subarra   20.71 346  P     P      16 37 47.0 -1.1
      comp=Z,16nm,1.0s,baz=159,slow=11
NB2   NORSAR Subarra   20.71 346  P     P      16 37 47.0 -1.1
      baz=159,slow=11
NOA   NORSAR Array B   20.71 346  P     P      16 37 47.0 -1.1
      comp=Z,3.7nm,0.6s,baz=155,slow=10,SNR=38
NOA                               LR    LR     16 45 58.4
      comp=Z,122nm,21.6s,baz=165,slow=37
      comp=Z,3.7nm,0.6s
PBRG  Braganca         20.76 281 eP     P      16 37 49.3 +0.5
      comp=Z,34nm,1.6s
NBO00 NORSAR Array S   20.78 346  P     P      16 37 48.6 -0.2
NC303 NORSAR Array S   20.86 347  P     P      16 37 49.3 -0.3
NC303                             IAmb  IAmb   16 37 51.5
      comp=Z,31nm,0.7s
SKAR  Skarslia         20.97 342 eP     P      16 37 50.9  0.0
NC204 NORSAR Array S   21.01 346  P     P      16 37 51.9 +0.6
MVO   Moncorvo         21.07 279 eP     P      16 37 53.8 +1.6
      comp=Z,28nm,1.2s
MVO                              eLR    LR     16 41 42.4
BELG  Belogornoye      21.22  49  P     P      16 37 53.5  0.0
      comp=Z,144nm,1.2s,baz=71,slow=6.3,SNR=18
      comp=Z,144nm,1.2s
EKA   Eskdalemuir Ar   21.24 320  P     P      16 37 52.9 -0.9
      comp=Z,28nm,0.7s,baz=118,slow=11,SNR=74
      comp=Z,28nm,0.7s
ESK   Eskdalemuir      21.25 320  P     P      16 37 54.3 +0.4
ESK   Eskdalemuir      21.25 320  P     P      16 37 54.3 +0.4
ESK                               pmax  pmax
      comp=Z,71nm,0.9s
SMIR  Smir Dam         21.36 264  P     P      16 37 57.0 +1.7
BER   Bergen           21.47 338 eP     P      16 37 56.9 +0.8
CHEFC Chefchaouen      21.56 262  P     P      16 37 58.0 +0.5
ASK   Askoy            21.59 338 eP     P      16 37 58.7 +1.2
MTE   Manteigas        21.60 277 eP     P      16 37 58.6 +0.8
      comp=Z,57nm,1.6s
MTE                              eLR    LR     16 41 48.9
POLO  Lamas de Olo     21.61 280 eP     P      16 38 00.4 +2.5
PCBR  Castelo Branco   21.66 276 eP     P      16 37 58.9 +0.4
      comp=Z,32nm,1.6s
PMRV  Marv??o          21.70 275 eP     P      16 38 01.1 +2.3
      comp=Z,31nm,1.4s
PMRV                             eLR    LR     16 42 08.1
PBAR  Barrancos        21.76 271 eP     P      16 37 58.8 -0.7
      comp=Z,68nm,1.7s
PVIS  Viseu            21.80 278 eP     P      16 38 00.7 +0.8
      comp=Z,48nm,1.4s
PGAV  Gavieira, Arco   21.87 282 eP     P      16 38 02.3 +1.5
      comp=Z,62nm,1.2s
PGAV                             eLR    LR     16 42 03.3
HYA   Hoyanger         21.91 341 eP     P      16 38 01.9 +1.1
PESTR Estremoz         21.99 273 eP     P      16 38 02.0  0.0
      comp=Z,40nm,1.8s
DOMB  Dombas           22.04 345 eP     P      16 38 04.0 +1.7
MDT   Midelt           22.06 256  P     P      16 38 01.5 -1.4
      comp=Z,8.7nm,0.9s,baz=91,slow=12,SNR=14
      comp=Z,8.7nm,0.9s
MDT   Midelt           22.06 256  P     P      16 38 03.6 +0.8
SUE   Sulen            22.19 339 eP     P      16 38 04.7 +0.9
COI   Coimbra          22.29 277 eP     P      16 38 08.2 +3.1
      comp=Z,79nm,1.4s
PCAS  Casmilo, Conde   22.38 277 eP     P      16 38 08.6 +2.4
      comp=Z,64nm,1.4s
EVO   Evora            22.40 273 eP     P      16 38 04.9 -1.4
      comp=Z,36nm,1.3s
PMTG  Montargil        22.41 274 eP     P      16 38 05.3 -1.2
      comp=Z,42nm,1.8s
PBEJ  Beja             22.43 271 eP     P      16 38 08.0 +1.3
      comp=Z,38nm,1.8s
PVAQ  Vaqueiros        22.51 270 eP     P      16 38 06.9 -0.7
      comp=Z,65nm,1.6s
PVAQ                             eLR    LR     16 42 14.0
PVAQ  Vaqueiros        22.51 270  P     P      16 38 05.9 -1.6
PVAQ                              IAmb  IAmb   16 38 13.1
      comp=Z,19nm,0.9s
FOO   Floro            22.57 340 eP     P      16 38 09.3 +1.5
AKN   Aaknes           22.60 343 eP     P      16 38 10.0 +1.7
KLMR  Klimovskoe       22.67  24 eP     P      16 38 08.1 -0.9
KLMR                             eS     S      16 42 16.5 +0.6
KLMR                              pmax  pmax
      comp=Z,37nm,1.1s
KLMR  Klimovskoe       22.67  24 eP     P      16 38 08.2 -0.8
KLMR                              AMP          16 38 12.3
      comp=Z,37nm,1.1s
KLMR                             eS     S      16 42 16.5 +0.6
KLMR                             eS     S      16 42 16.5 +0.6
KLMR                              LQ    LQ     16 45 16.5
KLMR                              LQ    LQ     16 45 16.5
KLMR                              LR    LR     16 47 06.7
PCVE  Castro Verde     22.68 270 eP     P      16 38 09.6 +0.2
      comp=Z,48nm,1.6s
PSBE  So Bento         22.73 276 eP     P      16 38 12.3 +2.4
      comp=Z,58nm,1.6s
MESJ  Messejana        22.75 271 eP     P      16 38 10.0 -0.1
MESJ                              IAmb  IAmb   16 38 11.0
      comp=Z,23nm,1.1s
MESJ                             eS     S      16 42 19.9 +2.0
MESJ  Messejana        22.75 271 eP     P      16 38 09.8 -0.3
      comp=Z,45nm,1.7s
MESJ  Messejana        22.75 271 eP     P      16 38 10.0 -0.1
MESJ                             eS     S      16 42 19.9 +2.0
MOL   Molde            22.82 344 eP     P      16 38 12.3 +1.7
PNCL  Nicolau / Gran   22.91 272 eP     P      16 38 11.8 +0.1
      comp=Z,35nm,1.9s
PTEO  Sao Teotonio     23.23 271 eP     P      16 38 17.1 +2.1
PFVI  Vila Bisbo       23.44 270 eP     P      16 38 17.9 +0.8
      comp=Z,110nm,1.7s
KIRV  Kirov            24.92  36  P     P      16 38 30.6  0.0
      comp=Z,19nm,0.8s,baz=280,slow=9.0,SNR=12
      comp=Z,19nm,0.8s
MOR8  Moi Rana         25.25 354 eP     P      16 38 35.4 +1.8
PRGR  Permogore        25.25  28 eP     P      16 38 34.7 +1.1
PRGR                             e             16 38 43.2
PRGR                             e             16 39 05.6
FAUS  Fauske           26.38 355 eP     P      16 38 45.1 +1.2
STEI  Steigen          26.93 355 eP     P      16 38 50.1 +1.4
AKTO  Aktyubinsk       27.12  58  P     P      16 38 50.6 -0.1
      comp=Z,5.3nm,0.9s,baz=267,slow=11,SNR=12
      comp=Z,5.3nm,0.9s
AKTO  Aktyubinsk       27.12  58  P     P      16 38 50.1 -0.6
KTK1  Kautokeino       27.86   2 eP     P      16 38 59.3 +2.2
AB31  Akbulak array    28.29  60 iP     P      16 39 01.3 +0.1
ABKAR Akbulak array    28.29  60  P     P      16 39 01.5 +0.4
ABKAR Akbulak array    28.29  60  P     P      16 39 01.3 +0.1
ABKAR                             IAmb  IAmb   16 39 03.6
      comp=Z,5.8nm,0.9s
ARCES ARCESS Array B   28.45   3  P     P      16 39 00.9 -1.5
      comp=Z,4.0nm,1.0s,baz=187,slow=8.6,SNR=13
      comp=Z,4.0nm,1.0s
TRO   Tromso           28.48 358 eP     P      16 39 04.0 +1.4
ARU   Arti             28.57  45  P     P      16 39 01.9 -1.7
      comp=Z,0.4nm,0.3s,baz=227,slow=11,SNR=4.8
      comp=Z,0.4nm,0.3s
ARU   Arti             28.57 45d iP     P      16 39 04.4 +0.9
ARU                                            16 39 52.0
ARU                               S     S      16 43 53.4 +2.9
ARU                               pmax  pmax
      comp=Z,7.0nm,1.0s
ARU                               MLR   MLR
      comp=Z,146nm,12.0s
GEYT  Alibeck          28.64  84  P     P      16 39 03.1 -1.4
      comp=Z,3.1nm,0.7s,baz=23,slow=13,SNR=2.7
      comp=Z,3.1nm,0.7s
SVE   Sverdlovsk       29.78  45 eP     P      16 39 15.5 +1.2
SVE                               pmax  pmax
      comp=Z,19nm,1.4s
SVE                               MLR   MLR
      comp=Z,249nm,12.0s
SHME  Shamm            32.68 107  P     P      16 39 38.5 -1.6
SHME                              P     P      16 39 38.5 -1.6
SHME  Shamm            32.68 107  P     P      16 39 38.0 -2.2
SHME  Shamm            32.68 107  P     P      16 39 38.0 -2.2
TOA0  Torodi Ar. Sit   32.69 217  P     P      16 39 40.7 +0.5
TOA0  Torodi Ar. Sit   32.69 217  P     P      16 39 41.2 +0.9
TOA0                              P     P      16 39 41.2 +0.9
TORD  Torodi Ar. Bea   32.69 217  P     P      16 39 40.0 -0.2
      comp=Z,9.9nm,1.0s,baz=24,slow=7.5,SNR=26
TORD                              ScP   ScP    16 46 06.3 -2.2
      comp=Z,3.1nm,1.1s,baz=2.2,slow=2.3,SNR=6.0
      comp=Z,9.9nm,1.0s
TORD  Torodi Ar. Bea   32.69 217  P     P      16 39 39.8 -0.4
TORD                              IAmb  IAmb   16 39 48.3
      comp=Z,9.2nm,0.9s
BANOM Banah            32.87 107  P     P      16 39 41.7 -0.1
BANOM Banah            32.87 107  P     P      16 39 41.4 -0.5
BANOM Banah            32.87 107  P     P      16 39 41.4 -0.5
NAZ   Nazwa, Dubai     32.97 109  P     P      16 39 42.9 +0.1
NAZ                               P     P      16 39 42.9 +0.1
NAZ   Nazwa, Dubai     32.97 109⇓P      P      16 39 42.2 -0.5
NAZ   Nazwa, Dubai     32.97 109⇓P      P      16 39 42.2 -0.5
FAQ   Al Faqa, Dubai   33.07 109  P     P      16 39 44.1 +0.5
MASF  Masafi           33.10 108  P     P      16 39 44.1 +0.2
MSFE  Esma-Masafi      33.10 108  P     P      16 39 43.9  0.0
MSFE  Esma-Masafi      33.10 108  P     P      16 39 43.9  0.0
UOSS  Minazif          33.39 108  P     P      16 39 45.9 -0.5
UOSS  Minazif          33.39 108  P     P      16 39 45.9 -0.5
UOSS                              P     P      16 39 45.9 -0.5
UOSS  Minazif          33.39 108  P     P      16 39 45.6 -0.8
UOSS  Minazif          33.39 108  P     P      16 39 45.6 -0.8
HATD  Hatta, Dubai     33.41 108  P     P      16 39 46.4 -0.2
      SNR=7.4
HATD                              P     P      16 39 46.4 -0.2
      SNR=7.4
HATD  Hatta, Dubai     33.41 108  P     P      16 39 46.1 -0.4
HATD  Hatta, Dubai     33.41 108  P     P      16 39 46.1 -0.4
ASHO  Ashiyiah         33.45 109  P     P      16 39 46.3 -0.6
      SNR=8.2
ASHO  Ashiyiah         33.45 109  P     P      16 39 45.5 -1.4
ASHO  Ashiyiah         33.45 109  P     P      16 39 45.5 -1.4
ARQ   Araqi            34.62 110  P     P      16 39 57.1 +0.1
ARQ                               P     P      16 39 57.1 +0.1
BRVK  Borovoye         34.85  53  P     P      16 39 59.3 +0.6
BRVK  Borovoye         34.85  53  P     P      16 39 58.7  0.0
BRVK  Borovoye         34.85  53  P     P      16 39 58.4 -0.4
HOQ   Hoqain           35.02 109  P     P      16 40 01.3 +0.7
HOQ                               P     P      16 40 01.3 +0.7
BSY   Bisya            35.47 110  P     P      16 40 04.6 +0.1
BIDO  Bidbid           35.65 108  P     P      16 40 05.8 -0.1
BIDO                              P     P      16 40 05.8 -0.1
SMDO  Samad            35.88 109  P     P      16 40 08.4 +0.4
      SNR=5.0
SMDO                              P     P      16 40 08.4 +0.4
      SNR=5.0
WSAR  Wadi Sarin       36.18 108  P     P      16 40 10.6 +0.1
JMDO  Jabal Madar      36.35 110  P     P      16 40 13.0 +1.0
JMDO                              P     P      16 40 13.0 +1.0
OTUK  Ortayu           36.53  61  P     P      16 40 14.0 +0.7
WBK   Wadi Bani Khal   36.82 109  P     P      16 40 15.4 -0.6
WBK                               P     P      16 40 15.4 -0.6
SPITS Spitsbergen Ar   37.10 358  P     P      16 40 16.8 -0.9
      comp=Z,1.7nm,0.5s,baz=160,slow=8.8,SNR=7.0
SPITS                             LR    LR     16 57 18.9
      comp=Z,311nm,19.0s,baz=140,slow=39
      comp=Z,1.7nm,0.5s
AAK   Ala-Archa        39.25 70⇓eP     P      16 40 38.3 +1.9
AAK                               pmax  pmax
      comp=Z,11nm,1.8s
DAG   Danmarks Havn    39.40 347 iP     P      16 40 36.0 -1.0
DAG                               IAmb  IAmb   16 40 42.2
      comp=Z,3.9nm,0.7s
KURBB Kurchatov Arra   40.16  56  ScP   ScP    16 46 33.2 -2.4
      comp=Z,0.7nm,0.8s,baz=267,slow=4.6,SNR=4.2
KURBB Kurchatov Arra   40.16  56  P     P      16 40 43.3 -0.4
KURK  Kurchatov        40.20  56  P     P      16 40 43.4 -0.6
KURK  Kurchatov        40.20  56  P     P      16 40 43.4 -0.6
KURK                              pmax  pmax
      comp=Z,16nm,1.4s
DBIC  Dimbokro         41.43 221  P     P      16 40 53.8 -0.7
      comp=Z,2.7nm,0.4s,baz=40,slow=10.0,SNR=9.4
      comp=Z,2.7nm,0.4s
DBIC  Dimbokro         41.43 221  P     P      16 40 53.9 -0.7
DBIC                              IAmb  IAmb   16 41 04.9
      comp=Z,14nm,1.1s
DBIC  Dimbokro         41.43 221  P     P      16 40 53.9 -0.6
DBIC                              pmax  pmax
      comp=Z,14nm,1.1s
TIC   Toumodi          41.53 221 eP     P      16 40 57.3 +1.9
      comp=Z,20nm,0.7s
KIC   Kosan Boka       41.64 221 eP     P      16 40 55.8 -0.5
      comp=Z,6.2nm,0.4s
ICESG Greenland Ices   41.79 332 iP     P      16 40 56.2 -1.2
ICESG                             IAmb  IAmb   16 41 20.5
      comp=Z,6.3nm,0.8s
LIC   Lamto            41.90 221 eP     P      16 40 58.5 +0.1
      comp=Z,39nm,1.5s
PDGK  Podgornoye       42.54  67  P     P      16 41 04.5 +1.0
MAKZ  Makanchi         43.22  61  P     P      16 41 08.3 -0.5
MAKZ  Makanchi         43.22  61  P     P      16 41 09.7 +0.9
ZAA0  Zalesovo Array   43.40  51  P     P      16 41 10.4 +0.2
ZAA0                              IAmb  IAmb   16 41 12.2
      comp=Z,12nm,0.8s
ZALV  Zalesovo Beam    43.40  51  P     P      16 41 09.8 -0.4
      comp=Z,10nm,0.7s,baz=280,slow=8.4,SNR=42
      comp=Z,10nm,0.7s
ZALV  Zalesovo Beam    43.40  51  P     P      16 41 10.1 -0.1
ZALV  Zalesovo Beam    43.40  51 iP     P      16 41 10.1 -0.1
ZALV                              pmax  pmax
      comp=Z,10.0nm,0.7s
MK31  Makanchi Array   43.43  61  P     P      16 41 10.9 +0.4
MK31  Makanchi Array   43.43  61 iP     P      16 41 11.0 +0.4
MKAR  Makanchi Array   43.43  61  P     P      16 41 10.1 -0.4
      comp=Z,3.9nm,0.6s,baz=297,slow=5.3,SNR=37
MKAR                              PcP   PcP    16 42 58.6  0.0
      comp=Z,2.5nm,0.9s,baz=279,slow=4.7,SNR=3.1
MKAR                              ScP   ScP    16 46 46.5 -2.4
      comp=Z,1.0nm,1.0s,baz=264,slow=2.9,SNR=4.4
      comp=Z,3.9nm,0.6s
MKAR  Makanchi Array   43.43  61  P     P      16 41 11.0 +0.5
NRIK  Noril'sk         43.90 28⇑eP     P      16 41 17.9 +3.9
NRIK                              pmax  pmax
      comp=Z,9.0nm,1.8s
WMQ   Urumqi           47.99  63 eP     P      16 41 49.6 +2.9
WMQ                               pP    sP     16 41 54.9 -0.9
WMQ                               pmax  pmax
      comp=Z,12nm,0.8s
WMQ                               LR    LR
      comp=N,150nm,12.1s
WMQ                               LR    LR
      comp=Z,110nm,19.7s
KNGR  Kungurtug, Tuv   51.81 52⇑eP     P      16 42 18.1 +2.5
ZAK   Zakamensk        55.28  51 eP     P      16 42 40.4 -0.7
ZAK                               pmax  pmax
      comp=Z,6.0nm,1.5s
SCHQ  Schefferville    56.49 316  P     P      16 42 48.6 -1.0
      comp=Z,5.5nm,0.8s,baz=64,slow=5.9,SNR=8.7
      comp=Z,5.5nm,0.8s
SCHQ  Schefferville    56.49 316  P     P      16 42 48.3 -1.3
SCHQ                              IAmb  IAmb   16 43 01.7
      comp=Z,6.0nm,0.8s
TIXI  Tiksi            56.65 21⇑eP     P      16 42 53.2 +2.8
TIXI                              pmax  pmax
      comp=Z,5.0nm,2.2s
GTA   Gaotai           58.08  64 eP     P      16 43 12.4  +11
GTA                               pP    sP     16 43 19.4 +9.0
GTA                               pmax  pmax
      comp=Z,2.0nm,1.0s
SONM  Songino Array    58.25  52  P     P      16 43 01.8 -0.5
      comp=Z,2.8nm,1.2s,baz=292,slow=7.8,SNR=7.7
      comp=Z,2.8nm,1.2s
YAK   Yakutsk          62.26 30⇓eP     P      16 43 34.0 +4.7
YAK                               pmax  pmax
      comp=Z,4.0nm,0.6s
A36M  Sachs Harbour    64.59 349  P     P      16 43 44.2 -0.3
HHC   Hu-ho-hao-te     65.01  57 eP     P      16 43 48.3 +0.4
HHC                               pmax  pmax
      comp=Z,18nm,0.9s
HHC                               pmax  pmax
      comp=Z,58nm,4.0s
LBTB  Lobatse          66.06 175  P     P      16 43 55.0 +0.4
LBTB  Lobatse          66.06 175  P     P      16 43 55.0 +0.4
LBTB                              pmax  pmax
      comp=Z,15nm,0.9s
PZH   PanZhiHua        66.39  75  P     P      16 43 58.9 +1.8
PZH                               pmax  pmax
      comp=Z,10.0nm,0.7s
PZH                               pmax  pmax
      comp=Z,80nm,4.8s
FCC   Fort Churchill   66.81 329  P     P      16 43 58.4 -0.6
FCC                               IAmb  IAmb   16 44 13.7
      comp=Z,7.1nm,0.9s
FCC   Fort Churchill   66.81 329  P     P      16 43 58.4 -0.6
FCC                               pmax  pmax
      comp=Z,7.0nm,0.9s
BILL  Bilibino         67.95 13⇑eP     P      16 44 09.3 +3.2
BILL                             i             16 44 34.8
BILL                              pmax  pmax
      comp=Z,5.0nm,1.6s
INK   Inuvik           69.11 350  P     P      16 44 12.3 -1.0
      comp=Z,1.4nm,0.5s,baz=50,slow=4.4,SNR=7.2
      comp=Z,1.4nm,0.5s
INK   Inuvik           69.11 350  P     P      16 44 13.2 -0.2
INK                               IAmb  IAmb   16 44 14.8
      comp=Z,7.8nm,1.2s
INK   Inuvik           69.11 350  P     P      16 44 13.2 -0.2
INK                               pmax  pmax
      comp=Z,8.0nm,1.3s
CMAR  Chiang Mai Arr   69.12  83  P     P      16 44 12.8 -1.4
      comp=Z,1.1nm,0.8s,baz=295,slow=7.4,SNR=5.6
      comp=Z,1.1nm,0.8s
BOSA  Boshof           69.61 176  P     P      16 44 15.8 -1.2
      comp=Z,6.9nm,0.8s,baz=359,slow=7.6,SNR=9.6
BOSA                              LR    LR     17 17 36.5
      comp=Z,161nm,18.2s,baz=3.5,slow=38
      comp=Z,6.9nm,0.8s
BOSA  Boshof           69.61 176  P     P      16 44 15.5 -1.5
YKA   Yellowknife Ar   70.65 340  P     P      16 44 21.8 -1.1
      comp=Z,1.4nm,0.5s,baz=34,slow=6.3,SNR=22
      comp=Z,1.4nm,0.5s
YKA   Yellowknife Ar   70.65 340  P     P      16 44 22.8 -0.1
YKA   Yellowknife Ar   70.65 340  P     P      16 44 22.8 -0.1
BMAR  Burnt Mountain   71.10 354  P     P      16 44 25.7  0.0
KLR   Kul'dur          71.28 40⇑eP     P      16 44 27.8 +0.8
KLR                               pmax  pmax
      comp=Z,15nm,2.7s
MA2   Magadan          71.34  24  LR    LR     17 19 17.0
      comp=Z,98nm,18.6s,baz=306,slow=39
CN2   Changchun        71.52  48 eP     P      16 44 28.3 -0.3
CN2                              eS     S      16 53 43.6 -2.7
CN2                               pmax  pmax
      comp=Z,10.0nm,0.9s
CN2                               pmax  pmax
      comp=Z,100nm,3.0s
CN2                               LR    LR
      comp=N,100nm,14.4s
CN2                               LR    LR
      comp=E,100nm,14.4s
CN2                               LR    LR
      comp=Z,100nm,16.0s
I29M  Ogilvie Camp,    72.52 351  P     P      16 44 33.4 -0.8
I29M                              IAmb  IAmb   16 44 40.5
      comp=Z,5.9nm,0.8s
H23K  Yukon River      73.02 356  P     P      16 44 36.9 -0.2
IMAR  Indian Mountai   73.03 358  P     P      16 44 37.4 +0.2
COWI  Conover          73.09 317  P     P      16 44 37.2 -0.7
COWI                              IAmb  IAmb   16 44 45.3
      comp=Z,5.5nm,0.7s
H21K  Melozitna Rive   73.33 357  P     P      16 44 39.9 +0.9
H21K                              IAmb  IAmb   16 44 46.9
      comp=Z,9.9nm,0.9s
ULM   Lac du Bonnet    73.47 323  P     P      16 44 39.0 -1.0
      comp=Z,3.0nm,0.6s,baz=47,slow=4.7,SNR=2.8
      comp=Z,3.0nm,0.6s
COLA  College          73.86 355⇓eP    P      16 44 47.2 +5.2
COLA                              pmax  pmax
      comp=Z,5.0nm,1.1s
ILAR  Eielson Array    73.90 355  P     P      16 44 42.1 -0.2
      comp=Z,0.5nm,0.6s,baz=351,slow=5.1,SNR=9.3
      comp=Z,0.5nm,0.6s
HDA   Harding Lake     74.26 355  P     P      16 44 43.5 -0.9
HDA                               IAmb  IAmb   16 44 50.3
      comp=Z,8.3nm,0.9s
USA0B Ussuriysk Arra   74.80 44⇓eP     P      16 44 51.6 +3.7
USRK  Ussuriysk Ar.    74.80  44  P     P      16 44 47.6 -0.3
      comp=Z,1.1nm,0.8s,baz=310,slow=3.9,SNR=3.0
      comp=Z,1.1nm,0.8s
BCAR  Beaver Creek A   75.13 352  P     P      16 44 49.4 -0.1
VLA   Vladivostok      75.49 45⇑eP     P      16 44 53.3 +1.4
VLA                               pmax  pmax
      comp=Z,26nm,0.6s
P33M  Teslin, Yukon    76.64 347  P     P      16 44 58.2  0.0
L19K  White Mountain   76.87 358  P     P      16 44 59.7 +0.2
L19K                              IAmb  IAmb   16 45 06.8
      comp=Z,12nm,1.1s
KSRS  Korea Array      77.10  51  P     P      16 45 00.1 -1.0
      comp=Z,0.7nm,0.6s,baz=316,slow=4.0,SNR=4.4
      comp=Z,0.7nm,0.6s
KUR   Kuril'sk         81.65  35 eP     P      16 45 26.6 +0.8
KUR                              eS     PcP    16 45 32.2 +0.6
KUR                               pmax  pmax
      comp=Z,16nm,0.5s
MJAR  Matsushiro Arr   83.58  46  P     P      16 45 35.5 -0.5
      comp=Z,4.1nm,1.0s,baz=310,slow=4.5,SNR=9.0
      comp=Z,4.1nm,1.0s
MIAR  Mount Ida        83.59 311  P     P      16 45 35.9 -0.2
MIAR                              IAmb  IAmb   16 45 44.0
      comp=Z,8.0nm,0.9s
MIAR  Mount Ida        83.59 311  P     P      16 45 35.9 -0.2
```

MIAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BDFB	Brasilia	85.18	245	P	P	16 45 44.0	-0.4
	comp=Z,7.4nm,0.8s,baz=73,slow=3.4,SNR=9.7						
	comp=Z,7.4nm,0.8s						
BDFB	Brasilia	85.18	245	P	P	16 45 44.0	-0.4
PDAR	Pinedale Array	85.23	326	P	P	16 45 44.2	-0.4
	comp=Z,0.3nm,0.4s,baz=222,slow=2.0,SNR=3.6						
	comp=Z,0.3nm,0.4s						
TXAR	Lajitas Array	93.13	314	P	P	16 46 21.8	-0.3
	comp=Z,0.5nm,0.7s,baz=57,slow=4.6,SNR=3.9						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	122.08	95	PKP	PKPdf	16 52 01.1	-1.5
	comp=Z,1.7nm,0.9s,baz=318,slow=1.3,SNR=10						

VIE 21 16:33:24.0±0.3**,46°.85N**×**11°.27E,h8**^{km}±3^{km}**,mb0.6**/2, **ml1.0**/6 **Error ellipse: s-maj=1.7km s-min=0.9km az=87.0 5 km WNW of Jaufenpass,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SQTA	Sankt Quirin	0.37	354	ePg	Pg	16 33 31.6	+0.3
	0.5nm,0.1s						
SQTA				i Sg	Sg	16 33 36.5	+0.3
	4.0nm,0.1s						
FETA	Feichten	0.40	295	i Pg	Pg	16 33 32.3	+0.3
	0.2nm,0.1s						
FETA				i Sg	Sg	16 33 37.6	+0.4
	1.0nm,0.1s						
WTTA	Wattenberg	0.48	32	ePg	Pg	16 33 33.6	+0.2
	0.2nm,0.1s						
WTTA				eSg	Sg	16 33 39.9	+0.2
	0.8nm,0.1s						
MOTA	Moosalm	0.50	347	ePg	Pg	16 33 34.1	+0.3
	0.3nm,0.1s						
MOTA				eSg	Sg	16 33 41.0	+0.6
	0.5nm,0.1s						

AUST ***21*** *16:35:38.3±0.7,25°.54S×129°.88E,h0^{km},Error ellipse: s-maj=9.5km s-min=7.7km az=27.0*

NOU ***21*** *16:35:39.7,25°.43S×129°.93E,h0^{km},mb4.0/8,Northern Territory, Australia*

IDC ***21*** *16:35:39.2±4.7,25°.32S×129°.86E,h0^{km},mbtmp3.3/3, ML3.1/3,Error ellipse: s-maj=36.9km s-min=26.7km az=82.0*

ISC 21 16:35:40.0±0.9**,25°.47S**±0°.06×**129°.82E**±0°.06**,h10**^{km}**,n18,** σ**1^{s}08**/24**,Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	Warakurna	1.44	287	P	Pg	16 36 07.0	-0.7
	baz=1.5						
WRKA	Warakurna	1.44	287	P	Pg	16 36 07.3	-0.4
ASPA	Alice Springs	4.13	65	P	Pn	16 36 43.9	+0.7
	baz=4.1						
ASPA				S	Sn	16 37 31.9	+0.4
	baz=4.1						
ASAR	Alice Springs	4.13	65	Pn	Pn	16 36 43.1	-0.1
	0.6nm,0.3s,baz=244,slow=12,SNR=28						
ASAR				Pg	Pb	16 36 54.6	+1.8
	1.0nm,0.3s,baz=245,slow=16,SNR=18						
ASAR				Sn	Sn	16 37 30.9	-0.7
	1.3nm,0.3s,baz=248,slow=22,SNR=10						
ASAR				Lg	Lg	16 37 43.9	
	2.2nm,0.3s,baz=242,slow=28,SNR=7.9						
	1.1nm,0.3s						
FORT	Forrest	5.51	196	P	Pn	16 37 03.8	+1.7
	baz=5.6						
FORT				S	Sn	16 38 05.1	-0.5
	baz=5.6						
FORT	Forrest	5.51	196	P	Pn	16 37 04.5	+2.3
OOD	Oodnadatta	5.74	115	P	Pn	16 37 05.6	+0.4
	baz=5.7						
OOD	Oodnadatta	5.74	115	P	Pn	16 37 05.6	+0.4
MULG	Mulgathing	6.09	143	P	Pn	16 37 11.3	+1.2
	baz=6.1						
MULG				S	Sn	16 38 17.8	-2.0
	baz=6.1						
MULG	Mulgathing	6.09	143	P	Pn	16 37 11.1	+1.1
WRA	Warramunga Arr	6.90	38	Pn	Pn	16 37 20.8	-0.5
	0.3nm,0.3s,baz=217,slow=13,SNR=17						
WRA				Sn	Sn	16 38 38.6	-1.4
	0.5nm,0.3s,baz=222,slow=27,SNR=6.0						
WRA				Lg	Lg	16 39 14.2	
	0.8nm,0.3s,baz=217,slow=29,SNR=7.1						
	0.6nm,0.4s						
WC3	Warramunga Arr	6.91	38	P	Pn	16 37 21.4	+0.1
	baz=6.9						
WB2	Warramunga Arr	6.91	38	P	Pn	16 37 21.3	-0.1
	baz=6.9						
WRAB	Tennant Creek	6.92	38	P	Pn	16 37 21.3	-0.2
LCRK	Leigh Creek	8.93	126	P	Pn	16 37 48.3	-0.7
BBOO	Buckleboo	9.12	145	P	Pn	16 37 51.3	-0.4
INKA	Innaminka	10.04	105	P	Pn	16 38 03.9	-0.3
STKA	Stephens Creek	12.15	124	Pn	Pn	16 38 32.3	-0.8
	0.1nm,0.3s,baz=297,slow=16,SNR=1.7						
	0.8nm,0.4s						

SKO ***21*** *16:41:26.7,41°.23N×20°.99E,h15^{km}*

BJI ***21*** *16:41:26.8±0.0,40°.83N×20°.84E,h15^{km},mb4.5/40, mB4.9/19,Ms4.7/11,Ms7 4.3/12*

MOS ***21*** *16:41:27.9±1.2,41°.23N×20°.98E,h11^{km},mb4.9/19, MS4.1/17,Error ellipse: s-maj=5.0km s-min=3.0km az=90.4*

TIR ***21*** *16:41:28.1,41°.25N×21°.05E,h17^{km}±1^{km},Ml4.9*

GCMT ***21*** *16:41:29.1±0.3,41°.11N±0°.03×20°.98E±0°.04,h23^{km}±1^{km}, MW4.9/71,Moment Tensor Solution. s13,c14; s71,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.24±.23; M$_{\theta\theta}$0.70±.14; M$_{\phi\phi}$1.54±.15; M$_{r\theta}$0.33±.18; M$_{\theta\phi}$1.12±.09; M$_{\phi r}$-2.33±.21; Best double couple: M$_0$3.24600×10^{16} NP1:φ$_s$233.00000°,δ29.00000°,λ-48.00000°. NP2: φ$_s$8.00000°,δ69.00000°,λ-110.00000°. Principal axes: T 2.9940, Plg21.0000°, Azm113.0000°; N 0.5020, Plg19.0000°, Azm16.0000°; P -3.4980, Plg61.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

THE ***21*** *16:41:29.4,41°.23N×21°.04E,h0^{km}±1^{km},ML4.6/9 Error ellipse: s-maj=1.6km s-min=0.6km az=17.0*

PDG ***21*** *16:41:29.3±0.5,41°.22N×21°.02E,h12^{km},MD4.7/12, ML4.8/12,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

BEO ***21*** *16:41:29.8±0.2,41°.21N×21°.04E,h11^{km}±2^{km},ML4.7/13*

ATH ***21*** *16:41:29.4,41°.24N×21°.05E,h11^{km}±2^{km},ML4.6/12,Error ellipse: s-maj=2.4km s-min=1.0km az=318.0*

GII ***21*** *16:41:29.3±0.0,41°.23N×20°.95E,h16^{km}*

NEIC ***21*** *16:41:29.9±1.7,41°.23N±0°.03×20°.98E±0°.06,h15^{km}±4^{km}, mb4.8/62,Mwr4.7/34,ML4.8(SKO),Error ellipse: s-maj=7.0km s-min=4.0km az=103.0*

NEIC ***21*** *16:41:30.1,41°.22N×20°.97E,h17^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.26; M$_{\theta\theta}$0.13; M$_{\phi\phi}$0.13; M$_{r\theta}$-0.14; M$_{\theta\phi}$0.85; M$_{\phi r}$-0.94; Fault plane solution: M$_0$1.29000×10^{16} NP1:φ$_s$6.72000°, δ82.90000°,λ-129.62000°. NP2:φ$_s$268.22000°, δ40.15000°,λ-11.06000°. Principal axes: T 1.3755, Plg27.0000°, Azm127.0000°; N -0.1808, Plg39.0000°, Azm13.0000°; P -1.1947, Plg39.0000°, Azm241.0000°;*

MED_RC ***21*** *16:41:30.0±0.2,41°.21N×20°.97E,h23^{km},MW4.8/31, Moment Tensor Solution.Mantle waves: s31,c49; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.47±.11; M$_{\theta\theta}$0.86±.07; M$_{\phi\phi}$0.61±.06; M$_{r\theta}$0.06±.06; M$_{\theta\phi}$0.94±.03; M$_{\phi r}$-1.22±.06; Best double couple: M$_0$1.99000×10^{16} NP1:φ$_s$23.00000°,δ64.00000°, λ-117.00000°. NP2:φ$_s$252.00000°,δ37.00000°, λ-47.00000°. Principal axes: T 1.8800, Plg14.0000°, Azm132.0000°; N 0.2200, Plg24.0000°, Azm35.0000°; P -2.1100, Plg61.0000°, Azm250.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

MCSM ***21*** *16:41:31.2±0.3,41°N±3°×2°1E±°,h13^{km}±2^{km},mb4.8*

ROM ***21*** *16:41:31.1,41°.23N×20°.97E,h13^{km},mb5.0/38,Mw4.5, Mw4.5,Mw4.5,Mwp4.9/9,Error ellipse: s-maj=1.6km s-min=0.3km az=30.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.39; M$_{\theta\theta}$1.53; M$_{\phi\phi}$2.86; M$_{r\theta}$-0.17; M$_{\theta\phi}$3.84; M$_{\phi r}$-5.15; Fault plane solution: M$_0$7.48847×10^{15} NP1:φ$_s$248.00000°,δ33.00000°, λ-41.00000°. NP2:φ$_s$14.00000°,δ69.00000°, λ-116.00000°.*

LDG ***21*** *16:41:31.3±0.2,41°.30N×21°.12E,h20^{km},Ml4.7/30 Error ellipse: s-maj=6.7km s-min=5.0km az=13.0*

IDC ***21*** *16:41:32.1±1.5,41°.23N×20°.96E,h33^{km}±12^{km},mb4.4/28, mbtmp4.5/45,ML4.0/16,MS4.0/55,Error ellipse: s-maj=8.5km s-min=7.4km az=11.0*

PRU ***21*** *16:41:32.0±0.0,41°.34N×20°.70E,h0^{km},M4.8*

ISC 21 16:41:30.1±0.6**,41°.23N**±0°.01×**20°.99E**±0°.01**,h19**^{km}±2^{km}**, n820,**σ**1^{s}80**/955**,mb4.7**/107**,MS4.1**/52**,206C-166D,Fault plane solution: NP1:**φ$_s$303.83899°,δ18.59982°, λ-19.85233°. **NP2:**φ$_s$52.72973°,δ83.78172°, λ-107.56434°. **Principal axes:** T Plg36.4117°, Azm158.1058°**;** N Plg17.4577°**,** Azm54.6934°**;** P Plg48.3110°**,** Azm304.0158°**; Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.18	231	⇑iPg	Pb	16 41 34.4	+0.2
OHR				eSg	Sg	16 41 38.0	-0.2
OHR	Ohrid	0.18	231	⇑iPg	Pb	16 41 34.5	+0.3
OHR				eLg	Lg	16 41 38.3	
	comp=N,272μm,0.5s						
OHR				i Sg	Sg	16 41 38.3	+0.1
OHR				eLg	Lg	16 41 38.4	
	comp=E,132μm,0.5s						
FNA	Florina	0.53	146	ePg	Pg	16 41 39.5	-1.3
FNA				eSg	Sg	16 41 47.2	-0.9
FNA	Florina	0.53	146	P	Pg	16 41 39.5	-1.3
FNA				S	Sg	16 41 47.2	-0.9
FNA				AML	AML	16 41 50.2	
FNA				AML	AML	16 41 51.1	
FNA	Florina	0.53	146	P	Pg	16 41 39.5	-1.3
FNA				S	Sg	16 41 47.2	-0.9
	comp=E,143μm,0.5s						
FNA	Florina	0.53	146		Pg	16 41 39.6	-1.3
FNA				Sg	Sg	16 41 47.1	-0.9
FNA	Florina	0.53	146	⇑iPg	Pg	16 41 39.5	-1.3
FNA				i Sg	Sg	16 41 47.6	-0.5
FNA	Florina	0.53	146	P	Pg	16 41 39.5	-1.3
	baz=151						
FNA				S	Sg	16 41 47.4	-0.6
	baz=151						
PHP	Peshkopia	0.61	318	P	Pb	16 41 40.8	-1.5
PHP				S	Sb	16 41 50.8	+0.2
PHP	Peshkopia	0.61	318	P	Pb	16 41 40.8	-1.5
	baz=314						
PHP				S	Sb	16 41 50.3	-0.3
	baz=314						
PHP				AMP			
	comp=N,245nm,0.4s,baz=314						
KBN	Korca	0.62	194	P	Pb	16 41 41.0	-1.4
KBN				S	Sb	16 41 50.3	-0.4
	comp=N,45μm,1.1s						
KBN	Korca	0.62	194		Pb	16 41 41.4	-1.0
KBN				Sg	Sb	16 41 50.2	-0.4
KBN	Korca	0.62	194	P	Pb	16 41 41.0	-1.4
	baz=198						
KBN				S	Sb	16 41 49.9	-0.8
	baz=198						
KBN				AMP			
	comp=N,152nm,1.1s,baz=198						
NEST	Nestorio	0.81	177	P	Pb	16 41 44.4	-1.3
NEST				S	Sb	16 41 56.6	+0.2
NEST				AML	AML	16 42 01.7	
NEST				AML	AML	16 42 02.0	
	comp=E,98780μm,0.5s						
NEST	Nestorio	0.81	177	P	Pb	16 41 44.3	-1.4
NEST				S	Sb	16 41 56.3	-0.1
	comp=E,37μm,0.4s						
SKO	Skopje	0.82	24	ePg	Pb	16 41 45.7	-0.1
SKO				eSg	Sb	16 41 56.1	-0.4
SKO	Skopje	0.82	24	i Pg	Pb	16 41 45.4	-0.5
SKO				i Sg	Sb	16 41 56.7	+0.2
TIR	Tirane	0.85	279	⇑P	Pb	16 41 45.8	-0.6
TIR				⇓S	Sn	16 41 58.9	-0.3
TIR	Tirane	0.85	279	ePg	Pb	16 41 45.9	-0.5
TIR				eSg	Sn	16 41 59.3	+0.1
TIR	Tirane	0.85	279	P	Pb	16 41 45.9	-0.5
TIR				S	Sn	16 41 58.9	-0.3
TIR				AML	AML	16 42 04.9	
TIR				AML	AML	16 42 06.1	
	comp=E,85027μm,0.7s						
TIR	Tirane	0.85	279	P	Pb	16 41 45.6	-0.8
TIR	Tirane	0.85	279		Pb	16 41 45.7	-0.6
TIR	Tirane	0.85	279	P	Pb	16 41 45.7	-0.6
TIR	Tirane	0.85	279	i Pg	Pb	16 41 45.7	-0.8
TIR	Tirane	0.85	279	P	Pb	16 41 45.7	-0.6
	baz=277						
TIR				S	Sn	16 41 59.8	+0.6
	baz=277						
TIR				AMP			
	comp=N,85nm,0.5s,baz=277						
TIR	Tirane	0.85	279	⇑P	Pb	16 41 45.7	-0.6
PENT	Pentalofos	1.04	174	P	Pb	16 41 49.1	-0.4
PENT				S	Sb	16 42 03.1	+0.3
PENT				AML	AML	16 42 07.2	
	comp=E,66653μm,0.8s						
PENT				AML	AML	16 42 11.3	
	comp=N,21337μm,1.0s						
PENT	Pentalofos	1.04	174	P	Pb	16 41 48.4	-1.2
PENT				S	Sb	16 42 03.1	+0.3
	comp=N,22μm,0.9s						
KZN	Kozani	1.09	147	P	Pb	16 41 50.1	-0.5
KZN				S	Sb	16 42 04.3	-0.2
KZN				AML	AML	16 42 08.0	
	comp=E,65330μm,0.6s						
KZN				AML	AML	16 42 10.1	
	comp=N,58438μm,0.9s						
KZN	Kozani	1.09	147	P	Pb	16 41 49.0	-1.6
KZN				S	Sg	16 42 06.6	+0.8
	comp=N,31μm,0.7s						
GRG	Griva	1.10	104	P	Pb	16 41 49.7	-1.0
GRG				S	Sb	16 42 03.7	-1.0
GRG				AML	AML	16 42 09.0	
	comp=N,84190μm,0.7s						
GRG				AML	AML	16 42 12.9	
	comp=E,47058μm,1.2s						
GRG	Griva	1.10	104	P	Pb	16 41 49.8	-0.9
GRG				S	Sb	16 42 05.2	+0.5
	comp=E,34μm,1.0s						
GRG	Griva	1.10	104	⇑iPg	Pb	16 41 49.9	-0.8
GRG				i Sg	Sg	16 42 06.3	+0.3
LSK	Leskovik	1.11	195	P	Pb	16 41 49.7	-1.2
LSK				S	Sn	16 42 06.0	+0.3
	comp=E,75μm,0.8s						
LSK	Leskovik	1.11	195	P	Pb	16 41 49.9	-1.0
	baz=198						
LSK				S	Sg	16 42 07.0	+0.7
	baz=198						
LSK				AMP			
	comp=N,328nm,0.8s,baz=198						
VAY	Valandovo	1.20	85	ePg	Pn	16 41 51.8	-0.1
VAY				eSg	Sb	16 42 07.2	-0.2
VAY	Valandovo	1.20	85	i Pg	Pn	16 41 51.7	-0.3
VAY				i Sg	Sn	16 42 08.4	+0.8
VAY				eLg	Lg	16 42 12.1	
	comp=N,38μm,1.0s						
KPRO	Kipourio	1.30	167	P	Pn	16 41 53.2	-0.2
KPRO				S	Sb	16 42 11.2	+0.8
KPRO				AML	AML	16 42 18.0	
	comp=E,69590μm,0.8s						
KPRO				AML	AML	16 42 19.6	
	comp=N,53448μm,0.6s						
KPRO	Kipourio	1.30	167	P	Pn	16 41 52.7	-0.7
KPRO				S	Sg	16 42 12.4	+0.1
	comp=N,31μm,0.7s						
BCI	Bajram Curri	1.33	329	P	Pn	16 41 53.6	-0.2
	baz=328						
BCI				S	Sg	16 42 12.9	-0.4
	baz=328						
BCI				AMP			
	comp=N,281nm,0.8s,baz=328						
VLO	Vlora	1.36	237	P	Pg	16 41 56.5	+0.1
VLO				S	Sg	16 42 16.4	+2.2
VLO	Vlora	1.36	237		Pn	16 41 53.5	-0.6
VLO	Vlora	1.36	237	P	Pn	16 41 53.5	-0.6
KNT	Kendrikon	1.44	92	P	Pn	16 41 55.5	+0.1
KNT	Kendrikon	1.44	92	P	Pn	16 41 55.0	-0.3
KNT				S	Sb	16 42 15.0	+0.5
	comp=N,21μm,0.6s						
KNT	Kendrikon	1.44	92	⇑iPg	Pn	16 41 55.3	0.0
KNT				i Sg	Sg	16 42 16.2	-0.7
ULC	Ulcinj	1.50	300	⇑iPg	Pn	16 41 57.0	+0.9
ULC				eSg	Sg	16 42 19.9	+1.3
SRN	Sarande	1.54	210	P	Pb	16 41 58.8	+0.7
SRN				S	Sg	16 42 20.0	+0.1
SRN	Sarande	1.54	210	P	Pb	16 41 59.0	+0.9
	baz=211						
SRN				S	Sg	16 42 20.2	+0.4
	baz=211						
SRN				AMP			
	comp=N,57nm,1.3s,baz=211						
PVY	Plav	1.57	331	ePn	Pn	16 41 58.1	+0.9
PVY				i Sn	Sg	16 42 20.9	+0.1
JAN	Janina	1.57	184	P	Pb	16 41 58.0	-0.6
JAN				S	Sb	16 42 18.6	+0.5
JAN				AML	AML	16 42 19.7	
	comp=E,30974μm,1.4s						
JAN				AML	AML	16 42 24.7	
	comp=N,28110μm,1.0s						
JAN	Janina	1.57	184	P	Pn	16 41 57.8	+0.7
JAN				S	Sb	16 42 18.3	+0.1
THE	Thessaloniki	1.61	111	P	Pn	16 41 57.7	+0.1
THE	Thessaloniki	1.61	111	P	Pn	16 41 57.4	-0.2
THE	Thessaloniki	1.61	111	⇑iPg	Pn	16 41 57.5	-0.2
THE				i Sg	Sg	16 42 25.9	+3.7
THE	Thessaloniki	1.61	111	P	Pn	16 41 57.5	-0.2
	baz=112						
DRME	Dracevica, Mon	1.66	306	ePn	Pn	16 41 59.2	+1.0
DRME	Dracevica, Mon	1.66	306	⇑iPn	Pn	16 41 59.3	+1.0
DRME				i Sn	Sg	16 42 23.1	-0.5
KASA	Kassiopi	1.68	209	P	Pb	16 42 00.7	+0.2
KASA				S	Sb	16 42 22.5	+1.3
KASA				AML	AML	16 42 29.6	
	comp=N,23718μm,1.3s						
KASA				AML	AML	16 42 30.2	
	comp=E,21059μm,0.9s						
BOSS	Bosilegrad	1.69	41	ePg	Pn	16 41 59.4	+0.7
BOSS				eSg	Sb	16 42 22.8	+1.2
BARS	Barje	1.71	21	ePg	Pn	16 41 59.7	+0.8
BARS	Barje	1.71	21	ePn	Sn	16 42 15.2	-5.1
BARS				eSg	Sg	16 42 24.5	-0.7
BARS	Barje	1.71	21	⇑iPn	Pn	16 41 59.7	+0.8
BARS				i Sg	Sg	16 42 25.1	-0.1
HORT	Hortiatis	1.72	111	P	Pn	16 41 59.2	0.0
HORT				S	Sn	16 42 21.8	+1.1
HORT				AML	AML	16 42 29.6	
	comp=N,13144μm,0.6s						
HORT				AML	AML	16 42 33.6	
	comp=E,11208μm,0.7s						
HORT	Hortiatis	1.72	111	P	Pn	16 41 59.0	-0.2
KEK	Kerkira	1.76	211	P	Pb	16 42 01.4	-0.5
KEK				S	Sg	16 42 25.4	-1.6
KEK				AML	AML	16 42 34.5	
	comp=E,22176μm,1.0s						
KEK				AML	AML	16 42 35.0	
	comp=N,18248μm,1.3s						
KEK	Kerkira	1.76	211	P	Pb	16 42 01.4	-0.5
KEK	Kerkira	1.76	211		Pb	16 42 01.4	-0.5
KEK	Kerkira	1.76	211	⇑P	Pb	16 42 01.6	-0.3
IGT	Igoumenitsa	1.76	197	P	Pb	16 42 02.1	+0.2
IGT				S	Sb	16 42 24.6	+0.9
IGT				AML	AML	16 42 28.8	
	comp=E,30594μm,0.8s						
IGT				AML	AML	16 42 33.3	
	comp=N,20179μm,0.6s						
IGT	Igoumenitsa	1.76	197	P	Pb	16 42 02.1	+0.2
IGT				S	Sg	16 42 26.7	-0.3
IGT	Igoumenitsa	1.76	197	P	Pb	16 42 02.1	+0.2
	baz=198						
IGT				S	Sg	16 42 26.7	-0.3
	baz=198						
PDG	Podgorica	1.77	314	⇑P	Pb	16 42 02.0	0.0
PDG	Podgorica	1.77	314	ePg	Pb	16 42 02.2	+0.3
PDG				eSg	Sg	16 42 27.7	+0.6
PDG	Podgorica	1.77	314		Pb	16 42 01.2	-0.7
PDG	Podgorica	1.77	314	ePn	Pn	16 42 00.8	+1.1
PDG	Podgorica	1.77	314	⇓P	Pb	16 42 02.3	+0.3
TTG	Podgorica	1.77	314	⇑iPn	Pb	16 42 01.4	-0.6
TTG				eSn	Sg	16 42 25.9	-1.2
TYRN	Tyrnavos	1.79	147	P	Pn	16 42 00.9	+0.9
BEY	Berane	1.83	334	i Pn	Pb	16 42 02.8	-0.4
IVA	Berane	1.83	334	⇑iPn	Pb	16 42 02.6	-0.6
IVA				i Sn	Sb	16 42 27.7	+1.9
SOH	Sokhos	1.84	102	P	Pn	16 42 01.2	+0.4
SOH	Sokhos	1.84	102	P	Pn	16 42 00.9	+0.1
SOH	Sokhos	1.84	102	i Sg	Sg	16 42 29.4	0.0
THL	Klokotos Trika	1.84	154	P	Pn	16 42 01.6	+0.9
THL	Klokotos Trika	1.84	154	P	Pn	16 42 01.2	+0.6
THL	Klokotos Trika	1.84	154	Pn	Pn	16 42 01.3	+0.6
BUM	Brajici-Budva	1.90	305	⇑iPn	Pb	16 42 04.4	+0.1
BUM				i Sn	Sb	16 42 29.3	+1.7
KOME	Kolasin	1.96	326	ePn	Pn	16 42 03.6	+1.1
KOME				i Sn	Sb	16 42 31.0	+1.6
SRS	Serrai	1.97	92	P	Pn	16 42 02.6	0.0
SRS	Serrai	1.97	92	⇑iPn	Pn	16 42 02.6	0.0
SELS	Selova	2.00	3	ePn	Pn	16 42 03.2	+0.3
SELS				eSn	Sn	16 42 29.2	+1.8
CEME	Cevo	2.03	311	ePn	Pn	16 42 04.8	+1.3
CEME				i Sn	Sb	16 42 32.2	+0.7
PLG	Polygyros	2.05	114	P	Pn	16 42 04.3	+0.6
SJES	Sjenica	2.17	340	ePg	Pb	16 42 08.1	-0.8
SJES				eSg	Sg	16 42 40.1	+0.1
SJES	Sjenica	2.17	340	ePn	Pn	16 42 07.2	+1.8
NVR	Nevrokopi	2.17	86	P	Pn	16 42 05.7	+0.3
NKY	Niksic	2.17	318	ePn	Pb	16 42 07.5	-1.5
NKY				i Sn	Sb	16 42 35.9	+0.3
VTS	Vitosha	2.18	50	⇑P	Pn	16 42 06.3	+0.7
VTS				⇑S	Sn	16 42 34.2	+2.0
VTS	Vitosha	2.18	50		Pn	16 42 06.1	+0.5
VTS	Vitosha	2.18	50	P	Pn	16 42 06.1	+0.5
VTS	Vitosha	2.18	50	⇑iPn	Pn	16 42 06.2	+0.7
VTS				i Sg	Sg	16 42 38.5	-1.8
VTS	Vitosha	2.18	50	⇑P	Pn	16 42 06.3	+0.7
HCY	Herceg Novi	2.23	304	ePn	Pb	16 42 08.5	-1.3
HCY	Herceg Novi	2.23	304	ePn	Pn	16 42 08.0	+1.9
HCY				i Sn	Sb	16 42 37.4	+0.4
SCTE	Santa Cesarea	2.24	240	Pn	Pn	16 42 06.9	+0.7
KOKK	Kokkinochori,	2.32	99	P	Pn	16 42 07.3	0.0
MAKR	Makrakomi, Fth	2.38	158	P	Pn	16 42 09.1	+0.9
EVR	Evrytania	2.39	164	P	Pn	16 42 09.3	+0.9
PLE	Pljevlja	2.41	331	⇑iPn	Pn	16 42 10.6	+1.8
PLE				i Sn	Sb	16 42 41.9	-0.6
PAIG	Paliouri	2.43	121	P	Pn	16 42 08.9	+0.1
IVAS	Ivanjica	2.43	346	ePn	Pn	16 42 09.6	+0.7
IVAS				eSn	Sn	16 42 40.6	+2.4
AGG	Agios Georgios	2.43	154	P	Pn	16 42 09.6	+0.6
AGG	Agios Georgios	2.43	154	Pn	Pn	16 42 09.8	+0.9
AGG	Agios Georgios	2.43	154	P	Pn	16 42 09.8	+0.9
AGG	Agios Georgios	2.43	154	Pn	Pn	16 42 09.5	+0.6
AGG	Agios Georgios	2.43	154	⇓P	Pn	16 42 09.8	+0.9
OUR	Ouranopolis	2.44	110	P	Pn	16 42 09.4	+0.4
LKD2	Lefkada island	2.45	186	P	Pn	16 42 11.0	+1.9
LKD2	Lefkada island	2.45	186	P	Pn	16 42 11.1	+1.9
	baz=188						
BOVS	Bovan	2.47	12	⇑P	Pn	16 42 09.4	+0.1
BOVS				⇓S	Sb	16 42 42.7	-1.2
BOVS	Bovan	2.47	12	ePn	Pn	16 42 09.3	-0.1
BOVS				eSn	Sn	16 42 39.5	+0.5
TREB	Trebinje	2.47	308	ePn	Pn	16 42 11.9	+2.5
BRY	Bratogost	2.48	313	ePn	Pb	16 42 12.5	-1.7
BRY	Bratogost	2.48	313	⇓iPn	Pb	16 42 12.4	-1.7
BRY				i Sn	Sb	16 42 43.2	-1.1
UPM	Unac-Piva	2.51	323	ePn	Pb	16 42 14.1	-0.6
UPM	Unac-Piva	2.51	323	⇓iPn	Pb	16 42 14.2	-0.5
UPM				i Sn	Sb	16 42 44.5	-0.8
XOR	Xorichti	2.51	137	P	Pn	16 42 10.0	0.0
DBRK	Dubrovnik	2.56	305	ePn	Pn	16 42 12.7	+2.0
DBRK				Sn	Sn	16 42 42.1	+0.8
NEO	Neokhori	2.57	138	P	Pn	16 42 10.9	+0.1
GRUS	Gruza	2.67	356	ePn	Pn	16 42 13.3	+1.1
RUDO	Rudo	2.67	334	ePn	Pn	16 42 13.1	+0.9
KAVA	Kavala	2.67	94	P	Pn	16 42 12.3	+0.1
BLKB	Belogradchik	2.70	27	⇑P	Pn	16 42 13.9	+1.2
BLKB				⇑S	Sn	16 42 46.9	+2.0
ANX	Ano Chora	2.73	164	P	Pn	16 42 14.5	+1.5
ZAGS	Zajecar	2.74	19	ePn	Pn	16 42 13.5	+0.3
FSK	Fiskardo	2.78	187	P	Pn	16 42 15.8	+2.1
EFP	Efpalio	2.88	165	P	Pn	16 42 17.3	+2.2
BBLS	Lazići	2.88	337	ePn	Pn	16 42 16.6	+1.4
BBLS				eSn	Sn	16 42 51.3	+1.8
BBLS	Lazići	2.88	337	ePn	Pn	16 42 16.2	+1.0
THAS	Thassos island	2.90	101	P	Pn	16 42 14.9	-0.4

STON	Ston	2.95	305	i Pn	Pn	16 42 17.9	+1.9
STON				Sn	Sn	16 42 51.4	+0.5
DIVS	Divibare	2.96	346	ePn	Pn	16 42 17.3	+1.0
DIVS				eSn	Sn	16 42 53.3	+1.9
DIVS	Divibare	2.96	346		Pn	16 42 17.1	+0.8
DIVS	Divibare	2.96	346	ePn	Pn	16 42 16.8	+0.5
DIVS	Divibare	2.96	346	⇑P	Pn	16 42 17.3	+1.0
ATAL	Atalanti	2.98	148	P	Pn	16 42 16.8	+0.4
KEF4	Livadi, Kephal	3.00	188	P	Pn	16 42 17.5	+0.9
LKR	Lokris	3.00	148	P	Pn	16 42 16.3	-0.4
UPR	University Cam	3.00	168	P	Pn	16 42 16.9	+0.2
TRUS	Trudelj	3.03	352	ePn	Pn	16 42 17.9	+0.8
SVIS	Svilajnac	3.04	3	ePn	Pn	16 42 18.2	+0.9
KEF3	Kipouria, Keph	3.06	189	P	Pn	16 42 18.2	+0.7
VLS	Valsamata	3.06	186	P	Pn	16 42 18.6	+1.0
VLS	Valsamata	3.06	186	Pn	Pn	16 42 18.6	+1.0
RLS	Riolos of Patr	3.19	173	P	Pn	16 42 21.6	+2.3
KUBS	Kucevo	3.23	9	ePn	Pn	16 42 19.2	-0.6
BAIL	Bailesti	3.29	31	⇑P	Pn	16 42 21.0	+0.3
MATE	Matera	3.29	261	⇑P	Pn	16 42 21.1	+0.3
MATE	Matera	3.29	261	⇑P	Pn	16 42 21.4	+0.7
KLV	Kalavryta, Ach	3.30	164	P	Pn	16 42 22.3	+1.4
KLV	Kalavryta, Ach	3.30	164	Pn	Pn	16 42 22.1	+1.2
DRO	Drossia	3.32	170	P	Pn	16 42 22.9	+1.8
PUNG	Punghina	3.37	25	⇑P	Pn	16 42 22.1	+0.3
LSTV	Lastovo	3.42	298	i Pn	Pn	16 42 24.4	+1.9
LSTV				Sn	Sn	16 43 02.8	+0.4
RDO	Rodhopi	3.44	90	P	Pn	16 42 22.7	0.0
RDO	Rodhopi	3.44	90	Pn	Pn	16 42 22.8	+0.1
RDO	Rodhopi	3.44	90	⇑P	Pn	16 42 22.8	+0.1
THAL	Thalero	3.44	157	P	Pn	16 42 23.4	+0.7
LIA	Limnos Island	3.46	111	P	Pn	16 42 23.2	+0.2
KYMI	Kymi, Euboea I	3.53	136	P	Pn	16 42 24.4	+0.4
VILL	Villia	3.54	149	P	Pn	16 42 24.7	+0.4
MAKA	Makarska	3.59	306	i Pn	Pn	16 42 26.6	+1.8
MAKA				Sn	Sn	16 43 06.4	-0.4
MDVR	Moldovita	3.59	8	⇑P	Pn	16 42 25.0	0.0
SKY	Skiros Island	3.60	129	P	Pn	16 42 25.3	+0.3
DJES	Djerdap	3.62	18	⇑P	Pn	16 42 25.8	+0.6
RICI	Ricice	3.65	310	ePn	Pn	16 42 28.0	+2.4
RICI				Sn	Sn	16 43 08.1	-0.1
VLAD	Vladila	3.75	41	⇓P	Pn	16 42 27.9	+0.9
BLJ	Bijeljina	3.77	341	ePn	Pn	16 42 28.0	+0.7
HERR	Herculane	3.80	16	⇑P	Pn	16 42 28.3	+0.6
ALN	Alexandroupoli	3.84	93	P	Pn	16 42 28.2	0.0
ALN	Alexandroupoli	3.84	93	Pn	Pn	16 42 28.4	+0.1
ALN	Alexandroupoli	3.84	93	P	Pn	16 42 28.4	+0.1
ALN	Alexandroupoli	3.84	93	⇑P	Pn	16 42 28.5	+0.3
ATH	Athens Observa	3.87	146	P	Pn	16 42 29.4	+0.7
PTL	Penteli	3.87	144	P	Pn	16 42 29.7	+0.9
DION	Dionisos Attik	3.88	143	P	Pn	16 42 29.1	+0.3
HVAR	Hvar	3.89	302	ePn	Pn	16 42 30.7	+1.7
HVAR				Sn	Sn	16 43 14.9	+0.7
ATHU	Athens Univers	3.91	146	P	Pn	16 42 29.6	+0.4
SGRT	San Giovanni R	3.97	279	Pn	Pn	16 42 30.3	+0.1
SRKY	Kupres RS	4.00	316	ePn	Pn	16 42 34.4	+3.8
VLY	Voula,Athens	4.01	146	P	Pn	16 42 31.4	+0.8
FRGS	Fruska Gora	4.02	348	⇑P	Pn	16 42 31.5	+0.7
FRGS	Fruska Gora	4.02	348	ePn	Pn	16 42 31.4	+0.7
FRGS	Fruska Gora	4.02	348	ePn	Pn	16 42 30.5	-0.3
ITM	Ithomi	4.11	169	Pn	Pn	16 42 33.9	+1.9
ITM	Ithomi	4.11	169	⇑P	Pn	16 42 34.0	+2.1
CUC	Castrocucco	4.12	254	Pn	Pn	16 42 32.9	+0.7
CUC	Castrocucco	4.12	254	Pn	Pn	16 42 33.2	+1.0
BANR	Banloc	4.16	1	⇑P	Pn	16 42 33.9	+1.3
KARY	Karystos	4.16	139	P	Pn	16 42 33.4	+0.8
KRND	KRANIDI	4.19	156	P	Pn	16 42 34.1	+1.1
SIGR	SIGRI	4.24	117	P	Pn	16 42 34.8	+1.1
COPA	Copaceanca	4.26	46	⇑P	Pn	16 42 35.0	+0.9
MGRS	Mrkonjic Grad	4.29	319	ePn	Pn	16 42 37.9	+3.4
EZN	Ezine	4.30	107	P	Pn	16 42 35.1	+0.5
GZR	Gura Zlata	4.37	17	⇑P	Pn	16 42 36.2	+0.7
EDRB	Edirne	4.37	80	P	Pn	16 42 35.5	0.0
KIJV	Kijevo	4.38	311	i Pn	Pn	16 42 38.1	+2.5
KIJV				Sn	Sn	16 43 25.1	-1.0
BZS	Buzias	4.41	6	⇑P	Pn	16 42 35.7	-0.4
HUMR	Humele	4.42	40	⇑P	Pn	16 42 36.9	+0.8
BLY	Banja Luka	4.49	323	ePn	Pn	16 42 39.0	+1.8
BLY	Banja Luka	4.49	323	⇑P	Pn	16 42 40.0	+2.8
ZIRJ	Zirje	4.64	303	ePn	Pn	16 42 40.5	+1.3
ZIRJ				Sn	Sn	16 43 31.9	-0.7
STFAR	Stefanesti-Arg	4.66	37	⇓P	Pn	16 42 41.2	+1.7
LOT	Lotru	4.68	25	⇑P	Pn	16 42 40.1	+0.1
MORI	Morici	4.71	306	i Pn	Pn	16 42 42.0	+1.8
MORI				Sn	Sn	16 43 33.2	-1.1
RAZG	Razgrad	4.71	58	⇑P	Pn	16 42 41.3	+1.0
SGRR	Singureni	4.74	49	⇑P	Pn	16 42 41.5	+0.9
A252A	Venje	4.79	333	ePn	Pn	16 42 42.9	+1.6
A252A				Sn	Sn	16 43 33.9	-2.4
PAOL	Paolisi	4.85	270		Pn	16 42 43.9	+1.6
DEV	Deva	4.86	16	⇓P	Pn	16 42 44.1	+1.9
CEL	Celeste	4.92	235	Pn	Pn	16 42 42.9	-0.2
CEL	Celeste	4.92	235	⇑P	Pn	16 42 43.2	+0.1
MTUR	Matau	4.99	35	⇓P	Pn	16 42 45.2	+1.2
DKL	Dikili	5.02	113	⇑P	Pn	16 42 45.9	+1.4
UDBI	Udbina	5.06	312	ePn	Pn	16 42 47.7	+2.6
UDBI				Sn	Sn	16 43 42.6	-0.4
SIRR	Siria	5.06	5	⇓P	Pn	16 42 45.8	+0.7
VOIR		5.15	34	⇑P	Pn	16 42 47.1	+0.8
DUGI	Dugi Otok	5.17	304	ePn	Pn	16 42 48.0	+1.4
DUGI				Sn	Sn	16 43 45.3	-0.5
SULR		5.18	47	⇓P	Pn	16 42 48.2	+1.6
A251A	Rujevac	5.21	320	ePn	Pn	16 42 48.9	+1.9
A251A				Sn	Sn	16 43 45.2	-1.3
MORH	Mrgy, Hungar	5.27	342	⇑P	Pn	16 42 48.2	+0.3
MORH	Mrgy, Hungar	5.27	342	ePn	Pn	16 42 48.2	+0.3
MORH	Mrgy, Hungar	5.27	342	P	Pn	16 42 48.7	+0.8
MORH				S	Sn	16 43 46.3	-1.7
VIRC	Vir	5.33	307	i Pn	Pn	16 42 50.5	+1.8
VIRC				Sn	Sn	16 43 49.7	+0.1
MOSL	Moslavina	5.36	326	ePn	Pn	16 42 50.9	+1.8
MOSL				Sn	Sn	16 43 48.2	-2.1
PLIT	Plitvice	5.36	315	ePn	Pn	16 42 51.5	+2.3
PLIT				Sn	Sn	16 43 49.3	-1.1
LEHL	Lehliu	5.38	51	⇑P	Pn	16 42 50.5	+1.2
RASA	Rasa	5.43	55	⇑P	Pn	16 42 51.5	+1.3
APE	Apeiranthos	5.45	138	⇑eP	Pn	16 42 51.9	+1.5
MDB	Medias	5.50	25	⇑P	Pn	16 42 53.1	+2.1
MLR	Muntele Rosu	5.59	39	⇓P	Pn	16 42 53.9	+1.5
MLR	Muntele Rosu	5.59	39	Pn	Pn	16 42 53.9	+1.5
	comp=N,5.8nm,0.3s,baz=219,slow=1.9,SNR=42						
MLR				Sn	Sn	16 43 58.5	+2.3
	comp=N,7.0nm,0.3s,baz=159,slow=23,SNR=3.8						
MLR				LR	LR	16 45 36.2	
	comp=N,2µm,20.0s,baz=224,slow=44						
	comp=N,18nm,0.3s						
ISR	Istrita	5.62	44	⇓P	Pn	16 42 55.0	+2.2
DRGR		5.70	12	⇓P	Pn	16 42 54.1	+0.2
NEHR	Nehoiu	5.71	41	⇑P	Pn	16 42 56.1	+2.1
DOPR	Dopca	5.72	33	⇓P	Pn	16 42 55.8	+1.7
AMRR	Amara	5.76	52	⇑P	Pn	16 42 56.0	+1.4
AQU	L'Aquila	5.78	284	Pn	Pn	16 42 56.3	+1.3
AQU	L'Aquila	5.78	284	P	Pn	16 42 56.3	+1.3
AQU	L'Aquila	5.78	284	Pn	Pn	16 42 56.2	+1.2
AQU	L'Aquila	5.78	284	⇑P	Pn	16 42 56.5	+1.5
ICOR	Ion Corvin	5.79	58	⇑P	Pn	16 42 56.3	+1.2
CJR	Cluj-Napoca	5.80	18	⇓P	Pn	16 42 56.7	+1.5
A250A	Rusevo Krmpots	5.88	313	ePn	Pn	16 42 58.2	+1.8
A250A				Sn	Sn	16 44 02.9	-0.4
BORR	Bors	5.89	5	⇑P	Pn	16 42 57.5	+1.1
KALN	Kalnik	5.90	328	ePn	Pn	16 42 57.8	+1.2
KALN				Sn	Sn	16 44 02.0	-1.7
PTJ	Puntijarka	5.93	324	ePn	Pn	16 42 58.9	+1.9
PTJ				Sn	Sn	16 44 02.7	-1.8
OZLJ	Ozalj	5.95	319	ePn	Pn	16 42 59.2	+2.0
OZLJ				Sn	Sn	16 44 03.3	-1.5
COVR	Voineasa-Covas	5.97	38	⇑P	Pn	16 42 59.7	+2.1
SANT	Santorini	5.97	143	⇑P	Pn	16 42 59.4	+1.8
SANT	Santorini	5.97	143	⇓P	Pn	16 43 00.5	+2.9
BOJS	Bojanci	5.98	318	i Pn	Pn	16 42 59.3	+1.7
BOJS				i Pg	Pg	16 43 22.2	-2.3
BOJS				i Sn	Sn	16 44 05.0	-0.5
BOJS				e		16 44 48.3	
BOJS				IAML		16 44 58.2	
	comp=Z,3µm,1.9s						
OZUR		5.98	34	⇓P	Pn	16 42 59.3	+1.5
BISRR	Bisoca	6.00	42	⇓P	Pn	16 42 59.4	+1.4
GRER		6.03	44	⇑P	Pn	16 43 01.0	+2.7
NRCA	Norcia	6.08	288		Pn	16 43 00.1	+1.0
BSZH	Besenyszg	6.09	355	⇑P	Pn	16 43 00.9	+1.7
BSZH	Besenyszg	6.09	355	P	Pn	16 43 00.9	+1.7
TIH	Tihany	6.09	340	P	Pn	16 43 00.5	+1.3
CRES	Cresnjev	6.11	321	ePn	Pn	16 43 01.0	+1.6
TLBR	Topalu	6.16	55	⇑P	Pn	16 43 01.7	+1.6
HARR	Harsova	6.16	53	⇓P	Pn	16 43 01.2	+1.2
PLOR	Plostina	6.19	40	⇑P	Pn	16 43 02.7	+2.1
LTVH	Ltavrtes, Hu	6.19	6	P	Pn	16 43 03.4	+2.8
MFTR	Murfatlar	6.22	59	⇑P	Pn	16 43 02.4	+1.4
VRI	Vrincioaia	6.24	40	⇓P	Pn	16 43 03.2	+2.0
RIY	Rijeka	6.27	313	ePn	Pn	16 43 03.8	+2.1
RIY				Sn	Sn	16 44 11.0	-1.7
SMRN	Sveta Marina	6.28	310	ePn	Pn	16 43 03.1	+1.3
SMRN				Sn	Sn	16 44 11.6	-1.4
VAE	Valguarnera	6.32	236	Pn	Pn	16 43 04.9	+2.5
	comp=Z,3.0nm,0.3s,baz=144,slow=7.9,SNR=5.1						
VAE				Sn	Sn	16 44 13.9	-0.2
	comp=Z,3.5nm,0.3s,baz=136,slow=19,SNR=4.4						
	comp=Z,13nm,0.7s						
ODBI	Odobesti	6.33	42	⇑P	Pn	16 43 05.3	+2.9
TIRR	Tirgusor	6.34	57	⇑P	Pn	16 43 03.0	+0.4
TIRR	Tirgusor	6.34	57	⇑P	Pn	16 43 03.0	+0.4
TIRR	Tirgusor	6.34	57	Pn	Pn	16 43 03.0	+0.4
TIRR	Tirgusor	6.34	57	P	Pn	16 43 03.0	+0.4
TIRR	Tirgusor	6.34	57	⇑P	Pn	16 43 03.5	+0.9
BUD	Budapest	6.41	348	P	Pn	16 43 05.0	+1.5
BUD				S	Sn	16 44 19.7	+3.5
MPLH	Magyarpolny	6.44	339	P	Pn	16 43 05.8	+1.9
MPLH				S	Sn	16 44 19.5	+2.7
CSKK	Cskako	6.44	343	P	Pn	16 43 06.7	+2.7
CSKK				S	Sn	16 44 18.8	+1.9
BRJN	Brijuni	6.45	307	ePn	Pn	16 43 05.2	+1.1
BRJN				Sn	Sn	16 44 16.3	-0.8
PANC	Panciu	6.45	42	⇓P	Pn	16 43 06.3	+2.3
TPGR	Topolog	6.54	54	⇓P	Pn	16 43 06.4	+1.0
CEY	Cerknica	6.56	316	ePn	Pn	16 43 06.9	+1.2
MURB	Monte Urbino	6.60	291		Pn	16 43 07.0	+0.8
SKDS	Skadanscina	6.67	313	ePn	Pn	16 43 07.2	+0.1
IDI	Anoyia	6.68	151	⇑P	Pn	16 43 07.6	+0.3
IDI	Anoyia	6.68	151	Pn	Pn	16 43 07.3	0.0
	comp=Z,4.4nm,0.3s,baz=336,slow=14,SNR=23						
IDI				Sn	Sn	16 44 20.3	-2.6
	comp=Z,4.1nm,0.3s,baz=324,slow=18,SNR=1.5						
	comp=Z,10nm,0.3s						
IDI	Anoyia	6.68	151	Pn	Pn	16 43 07.5	+0.3
IDI	Anoyia	6.68	151	⇑P	Pn	16 43 07.6	+0.3
TESR	Tescani	6.68	36	⇓P	Pn	16 43 08.6	+1.3
LJU	Ljubljana	6.72	318	ePn	Pn	16 43 07.5	-0.3
EGYH	Egyhazaskeszo	6.72	338	P	Pn	16 43 10.5	+2.7
PSZ	Piszkesteto	6.74	354	⇓P	Pn	16 43 08.9	+0.7
PSZ	Piszkesteto	6.74	354	Pn	Pn	16 43 08.8	+0.7
PSZ	Piszkesteto	6.74	354	P	Pn	16 43 08.8	+0.7
PSZ	Piszkesteto	6.74	354	P	Pn	16 43 09.0	+1.0
PSZ				S	Sn	16 44 23.0	-1.3
PSZ	Piszkesteto	6.74	354	⇑P	Pn	16 43 09.1	+1.0
SCTR	Scanteiesti	6.76	47	⇑P	Pn	16 43 09.2	+0.8
JURR	Jurilovca	6.78	56	⇑P	Pn	16 43 08.7	+0.1
SRO2	Moca	6.79	345	eP	Pn	16 43 11.3	+2.5
SRO2				e		16 44 28.1	
SRO2	Moca	6.79	345	ePN	Pn	16 43 11.3	+2.5
SRO2				eSN	Sn	16 44 28.1	+2.5
BIZ	Bicaz	6.80	31	⇑P	Pn	16 43 10.2	+1.3
MGAB	Montegabbione	6.81	287	⇑P	Pn	16 43 10.3	+1.1
SRO	Srobarova	6.86	345	eP	Pn	16 43 12.1	+2.4
SRO				e		16 44 28.8	
SRO	Srobarova	6.86	345	ePN	Pn	16 43 12.1	+2.4
SRO				eSN	Sn	16 44 28.8	+1.6
VLDR	Vladesti	6.92	46	⇓P	Pn	16 43 11.6	+1.1
SOKA	Soboth	6.94	324	ePn	Pn	16 43 12.8	+1.9
	comp=Z,151nm,0.7s,SNR=74						
SOKA				eSn	Sn	16 44 29.5	+0.2
	comp=Z,44nm,0.5s						
TLCR		6.96	53	⇑P	Pn	16 43 12.4	+1.4
CLTB	Caltabellotta	7.03	241	⇑P	Pn	16 43 14.9	+2.7
OBKA	Obir	7.04	321	ePn	Pn	16 43 14.4	+2.2
	comp=Z,120nm,0.7s,SNR=58						
OBKA				eSn	Sn	16 44 33.6	+1.9
	comp=Z,166nm,0.6s						
BURAR	Bucovina Array	7.07	24	⇑P	Pn	16 43 14.5	+1.8
BURAR	Bucovina Array	7.07	24	Pn	Pn	16 43 13.7	+1.0
BUR08	Bucovina Ar. S	7.09	24	Pn	Pn	16 43 14.2	+1.2
ARSA	Arzberg	7.19	329	ePn	Pn	16 43 16.5	+2.3
	comp=Z,47nm,0.4s,SNR=32						
ARSA				eSn	Sn	16 44 38.3	+3.0
	comp=Z,69nm,0.5s						
ARSA	Arzberg	7.19	329	⇑P	Pn	16 43 16.6	+2.3
SOP	Sopron	7.19	335	P	Pn	16 43 16.6	+2.4
KECS	Kecovo	7.26	357	eP	Pn	16 43 17.5	+2.2
KECS				e		16 44 38.4	
KECS	Kecovo	7.26	357	ePN	Pn	16 43 17.5	+2.2
KECS				eSN	Sn	16 44 38.4	+1.2
RONA	Rosalia, Austr	7.29	334	i Pn	Pn	16 43 17.7	+2.0
	SNR=18						
RONA				eSn	Sn	16 44 36.8	-1.0
BORA	Eskisehir	7.33	97	Pn	Pn	16 43 17.4	+1.1
VYHS	Vyhne	7.43	349	eP	Pn	16 43 18.9	+1.4
VYHS				e		16 44 39.2	
VYHS	Vyhne	7.43	349	ePN	Pn	16 43 18.9	+1.4
VYHS				eSN	Sn	16 44 39.2	-2.0
KARP	Karpathos	7.46	137	Pn	Pn	16 43 20.1	+2.1
KARP	Karpathos	7.46	137	⇑P	Pn	16 43 20.2	+2.1
UZHM	Uzhgorod	7.46	7	Pn	Pn	16 43 19.4	+1.5
UZH	Uzhgorod	7.46	7	c iP	Pn	16 43 22.1	+4.1
UZH				eS	Sn	16 44 47.9	+5.9
UZH				MLR	MLR		
	comp=N,200nm,11.0s						
UZH				MLR	MLR		
	comp=E,400nm,11.0s						
UZH				MLR	MLR		
	comp=Z,200nm,11.0s						
ZST	Bratislava	7.50	340	eP	Pn	16 43 20.8	+2.4
ZST				e		16 44 39.8	
ZST	Bratislava	7.50	340	ePN	Pn	16 43 20.8	+2.4
ZST				eSN	Sn	16 44 39.8	-3.1
MYKA	Terra Mystica	7.57	318	ePn	Pn	16 43 20.8	+1.4
	comp=Z,22nm,0.4s,SNR=19						
MYKA				eSn	Sn	16 44 44.7	-0.1
	comp=Z,69nm,0.6s						
PTCC	Patocco-Chiusa	7.57	316	⇓P	Pn	16 43 21.1	+1.7
OSSC	Osservatorio P	7.57	291		Pn	16 43 20.8	+1.3
KOLL	Kolacno	7.58	347	ePN	Pn	16 43 21.6	+2.0
MODS	Modra-Piesok	7.62	341	eP	Pn	16 43 22.7	+2.6
MODS				e		16 44 43.4	
MODS	Modra-Piesok	7.62	341	ePN	Pn	16 43 22.7	+2.6
MODS				eSN	Sn	16 44 43.4	-2.5
CONA	Conrad Observa	7.63	333	ePn	Pn	16 43 22.3	+1.9
	comp=Z,30nm,0.8s,SNR=10						
CONA				eSn	Sn	16 44 48.0	+1.6
	comp=Z,112nm,0.8s						
CRVS	Cervenica-Dubn	7.68	2	eP	Pn	16 43 22.5	+1.5
CRVS	Cervenica-Dubn	7.68	2	ePN	Pn	16 43 22.5	+1.5
SMOL	Smolenice	7.71	342	eP	Pn	16 43 24.0	+2.6
SMOL				e		16 44 46.7	
SMOL	Smolenice	7.71	342	ePN	Pn	16 43 24.0	+2.6
SMOL				eSN	Sn	16 44 46.7	-1.5
KOLS	Kolonicke sedl	7.76	6	eP	Pn	16 43 24.9	+2.8
KOLS	Kolonicke sedl	7.76	6	ePN	Pn	16 43 24.9	+2.8
MDUB	Mudurnu	7.78	92	Pn	Pn	16 43 23.6	+1.2
MDUB	Mudurnu	7.78	92	⇓P	Pn	16 43 23.9	+1.5
STAL	STALIGIAL	7.82	313		Pn	16 43 23.4	+0.5
JAVC	Velka Javorina	7.99	344	ePN	Pn	16 43 28.2	+3.0
LANS	Liptovska Anna	8.00	353	eP	Pn	16 43 28.1	+2.7
LANS				e		16 45 00.0	
LANS	Liptovska Anna	8.00	353	ePN	Pn	16 43 28.1	+2.7
LANS				eSN	Sn	16 45 00.0	+4.7
MILM	Milestii Mici	8.01	42	⇓iP	Pn	16 43 26.0	+0.6
	comp=Z,600nm,0.7s						
MILM				eLq	LQ	16 46 10.0	
	comp=Z,1µm,12.0s						
MILM				LRM	MLR	16 47 54.0	
	comp=Z,1µm,10.0s						
MILM				eL	L	17 21 47.0	
	comp=Z,200nm,10.0s						
MILM	Milestii Mici	8.01	42	⇑P	Pn	16 43 26.0	+0.6
MILM	Milestii Mici	8.01	42	i P	Pn	16 43 26.0	+0.6
MILM				e		16 44 50.0	
MILM				pmax	pmax		
	comp=Z,60nm,0.7s						
MILM				MLR	MLR		
	comp=Z,1µm,10.0s						
KBA	Koelnbreinsper	8.02	319	ePn	Pn	16 43 27.6	+1.8
	comp=Z,141nm,0.8s,SNR=107						
KBA				i Sn	Sn	16 44 56.3	+0.2
	comp=Z,57nm,0.6s						
KBA	Koelnbreinsper	8.02	319	⇑P	Pn	16 43 27.6	+1.8
KIS	Kishinev	8.06	42	eP	Pn	16 43 27.0	+0.8
KIS				eL	L	16 45 42.0	
KIS				LqM		16 47 09.0	
	comp=Z,900nm,16.0s						
KIS				LRM	MLR	16 47 55.0	
	comp=Z,500nm,10.0s						
KIS	Kishinev	8.06	42	eP	Pn	16 43 27.0	+0.8
KIS				MLR	MLR		
	comp=Z,500nm,10.0s						
ISP	Isparta	8.12	112	⇓iP	Pn	16 43 29.4	+2.3
MOA	Molln	8.18	326	ePn	Pn	16 43 30.8	+3.0
	comp=Z,32nm,0.6s,SNR=19						
MOA				eSn	Sn	16 45 01.0	+1.4
	comp=Z,80nm,0.7s						
NIE	Niedzica	8.21	357	eP	Pn	16 43 31.2	+3.0
NIE				eS	Sn	16 45 07.5	+7.0
NIE	Niedzica	8.21	357	Pn	Pn	16 43 30.7	+2.5
ABTA	Abfaltersbach	8.23	315	ePn	Pn	16 43 30.0	+1.4
	comp=Z,149nm,0.9s,SNR=85						
ABTA				i Sn	Sn	16 45 04.2	+3.1
	comp=Z,216nm,0.7s						
KMPD	K-Podol'skiy	8.30	26	Pn	Pn	16 43 30.6	+1.2
	comp=Z,29nm,0.9s						
KMPD				pP	Pn	16 43 35.5	+6.1
	comp=Z,29nm,0.9s						
CTI	Castel Tesino	8.31	309	Pn	Pn	16 43 29.6	-0.1
CTI	Castel Tesino	8.31	309	P	Pn	16 43 29.6	-0.1
BIOA	Bad Ischl, Aus	8.33	323	ePn	Pn	16 43 32.0	+2.2
	SNR=47						
VLC	Villacollemand	8.34	294	⇓P	Pn	16 43 32.1	+2.0
MAUC	Maruska	8.44	346	ePN	Pn	16 43 32.7	+1.3
KRUC	Moravsky	8.48	339	ePN	Pn	16 43 33.8	+1.9
KWP	Kalwaria Pacla	8.49	8	eP	Pn	16 43 38.2	+6.1
PRMA	PARMA	8.58	298		Pn	16 43 34.8	+1.4
VRAC	Vranov	8.65	341	⇑P	Pn	16 43 36.1	+1.8
VRAC	Vranov	8.65	341	Pn	Pn	16 43 35.4	+1.1
	comp=Z,0.7nm,0.3s,baz=168,slow=12,SNR=22						
VRAC				Sn	Sn	16 45 08.5	-2.9
	comp=Z,1.0nm,0.3s,baz=16,slow=20,SNR=1.4						
	comp=Z,21nm,0.9s						
VRAC	Vranov	8.65	341	ePN	Pn	16 43 36.1	+1.8
SORM	Soroca	8.67	35	⇓P	Pn	16 43 34.6	+0.1
SALO	Salr	8.79	303	Pn	Pn	16 43 36.3	+0.1
SALO	Salr	8.79	303	⇑P	Pn	16 43 36.5	+0.3
OKC	Ostrava-Krasne	8.84	348	eP	Pn	16 43 39.5	+2.7
OKC				MLR	MLR		
	comp=Z,2µm,10.2s						
OKC	Ostrava-Krasne	8.84	348	ePN	Pn	16 43 39.5	+2.7
OKC				AMS	AMS	16 47 30.0	
	comp=Z,2µm,10.2s						
LVV	L'vov	8.85	13	eP	Pn	16 43 36.6	-0.5
LVV				e		16 45 15.0	
LVV				pmax	pmax		
	comp=Z,40nm,1.0s						
LVV				MLR	MLR		
	comp=E,700nm,7.0s						
LVV				MLR	MLR		
	comp=N,600nm,6.0s						
LVV				MLR	MLR		
	comp=Z,700nm,8.0s						
MORC	Moravsky Berou	8.88	345	Pn	Pn	16 43 39.6	+2.0
MORC	Moravsky Berou	8.88	345	P	Pn	16 43 39.6	+2.0
MORC	Moravsky Berou	8.88	345	ePN	Pn	16 43 40.0	+2.5
MORC	Moravsky Berou	8.88	345	⇓P	Pn	16 43 40.5	+2.9
CKRC	Cesky Krumlov	8.94	330	ePN	Pn	16 43 41.3	+3.0
CKRC				AMS	AMS	16 47 30.0	
	comp=Z,4µm,12.9s						
MSSA	Maissana	8.98	294		Pn	16 43 39.6	+0.7
WTTA	Wattenberg	9.02	315	ePn	Pn	16 43 41.7	+2.2
	comp=Z,63nm,0.5s,SNR=48						
WTTA				i Sn	Sn	16 45 17.9	-2.7
	comp=Z,196nm,0.8s						
VSL	Villasalto	9.03	263	Pn	Pn	16 43 39.1	-0.4
VSL	Villasalto	9.03	263	⇓P	Pn	16 43 38.8	-0.7
OJC	Ojcow	9.03	355	eP	Pn	16 43 41.9	+2.5
OJC				eS	Sn	16 45 25.0	+4.4
OJC	Ojcow	9.03	355	Pn	Pn	16 43 40.6	+1.1
OJC	Ojcow	9.03	355	P	Pn	16 43 40.6	+1.1
OJC	Ojcow	9.03	355	⇓P	Pn	16 43 42.0	+2.5
PGF	Pioggiola	9.04	282	ePn	Pn	16 43 39.6	-0.1
PGF				eSn	Sn	16 45 14.7	-6.3
	comp=Z,4.4nm,0.5s						
WATA	Walderalm	9.10	315	i Pn	Pn	16 43 43.1	+2.6
	comp=Z,84nm,0.6s,SNR=32						
WATA				i Sn	Sn	16 45 21.5	-1.0
	comp=Z,102nm,0.7s						
BOB	Bobbio (Coli)	9.16	297	⇓P	Pn	16 43 42.9	+1.5
GEC2	GERESS Array S	9.20	328	Pn	Pn	16 43 44.0	+2.2
GERES	GERESS Array B	9.20	328	Pn	Pn	16 43 44.0	+2.2
	comp=Z,1.7nm,0.3s,baz=147,slow=13,SNR=47						
GERES				Sn	Sn	16 45 22.2	-2.6
	baz=174,slow=19						
	comp=Z,15nm,0.8s						
GERES	GERESS Array B	9.20	328	Pn	Pn	16 43 43.4	+1.6
SQTA	Sankt Quirin	9.22	314	ePn	Pn	16 43 44.7	+2.4
	comp=Z,76nm,0.5s,SNR=67						
SQTA				eSn	Sn	16 45 25.4	-0.1
	comp=Z,130nm,0.7s						
KRLC	Kraliky	9.32	343	eP	Pn	16 43 47.0	+3.4
KRLC				e		16 45 24.7	
KRLC	Kraliky	9.32	343	ePN	Pn	16 43 47.0	+3.4
KRLC				eSN	Sn	16 45 24.7	-3.2
MOTA	Moosalm	9.36	314	ePn	Pn	16 43 46.1	+2.0
	comp=Z,64nm,0.7s,SNR=42						
MOTA				i Sn	Sn	16 45 28.2	-0.7
	comp=Z,401nm,0.9s						
FETA	Feichten	9.38	312	ePn	Pn	16 43 45.6	+1.2
	comp=Z,45nm,0.7s,SNR=29						
FETA				eSn	Sn	16 45 26.3	-3.0
	comp=Z,71nm,0.7s						
KHC	Kasperske Hory	9.47	329		Pn	16 43 47.6	+2.1
KHC	Kasperske Hory	9.47	329	eP	Pn	16 43 47.7	+2.1
KHC				e		16 45 26.8	
KHC				MLR	MLR		
	comp=Z,4µm,9.7s						
KHC	Kasperske Hory	9.47	329	ePN	Pn	16 43 47.7	+2.1
KHC				ex	x	16 44 06.0	
KHC				eSN	Sn	16 45 26.8	-4.7
KHC				AMS	AMS	16 47 50.0	
	comp=Z,4µm,9.7s						
KHC	Kasperske Hory	9.47	329	⇑P	Pn	16 43 48.2	+2.6
RETA	Reutte	9.63	314	ePn	Pn	16 43 49.4	+1.7
	comp=Z,12nm,0.4s,SNR=13						
RETA				eSn	Sn	16 45 33.6	-1.8
	comp=Z,52nm,0.5s						
DPC	Dobruska-Polom	9.69	342	eP	Pn	16 43 51.9	+3.4
DPC				e		16 45 33.7	
DPC				MLR	MLR		
	comp=Z,2µm,10.4s						
DPC	Dobruska-Polom	9.69	342	ePN	Pn	16 43 51.9	+3.4
DPC				eSN	Sn	16 45 33.7	-3.1
DPC				AMS	AMS	16 48 00.0	
	comp=Z,2µm,10.4s						
DAVOX	Davos/Dischmat	9.74	308	Pn	Pn	16 43 50.3	+0.9
	comp=Z,2.0nm,0.3s,baz=126,slow=13,SNR=32						
DAVOX				Sn	Sn	16 45 34.2	-4.0
	comp=Z,1.9nm,0.3s,baz=277,slow=19,SNR=1.5						
	comp=Z,58nm,0.6s						
BR131	Keskin Array S	9.76	95	Pn	Pn	16 43 50.4	+0.8
BR131	Keskin Array S	9.76	95	d iP	Pn	16 43 50.6	+1.0
BRTR	Keskin Array B	9.76	95	Pn	Pn	16 43 50.8	+1.1
	comp=Z,0.6nm,0.3s,baz=274,slow=11,SNR=36						
	comp=Z,6.7nm,0.7s						
BRTR	Keskin Array B	9.76	95	Pn	Pn	16 43 49.8	+0.2
PRU	Pruhonice	9.85	335	eP	Pn	16 43 53.1	+2.4
PRU				MLR	MLR		
	comp=Z,3µm,9.2s						
PRU	Pruhonice	9.85	335	ePN	Pn	16 43 53.1	+2.4
PRU				AMS	AMS	16 48 00.0	
	comp=Z,3µm,9.2s						
LUBAR	Lubar, Ukraine	9.90	26	Pn	Pn	16 43 52.8	+1.4
	comp=Z,22nm,1.1s						
LUBAR				pP		16 43 56.8	
	comp=Z,22nm,1.1s						
LUBAR				sP		16 43 58.7	
	comp=Z,22nm,1.1s						
OSTC	Ostas	9.90	342	ePN	Pn	16 43 54.3	+2.8
TUE	Stuetta	9.90	306	Pn	Pn	16 43 52.7	+1.0
TUE	Stuetta	9.90	306	⇑P	Pn	16 43 53.4	+1.7
UPC	Upice	9.91	341	eP	Pn	16 43 54.9	+3.4
UPC	Upice	9.91	341	ePN	Pn	16 43 54.9	+3.4
DAVA	Damuels	10.00	311	i Pn	Pn	16 43 54.0	+1.1
	comp=Z,63nm,0.7s,SNR=27						

DAVA				eSn	Sn	16 45 43.0	-1.7
	comp=Z,120nm,0.8s						
DAVA	Damuels	10.00	311	⇑P	Pn	16 43 54.9	+1.9
KSP	Ksiaz	10.15	343	eP	Pn	16 43 59.5	+4.6
KSP				eS	Sn	16 45 52.8	+4.6
MONC	Moncucco Torin	10.29	296	⇓P	Pn	16 43 58.8	+2.0
SIM	Simferopol'	10.30	64	eP	Pn	16 43 56.1	-0.8
SIM				eS	Sn	16 45 46.6	-5.2
SIM				pmax	pmax		
	comp=Z,44nm,1.0s						
PVCC	Panska Ves	10.32	337	AMS	AMS	16 48 20.0	
	comp=Z,3µm,9.4s						
SBF	Sospel	10.34	289	ePn	Pn	16 43 58.3	+0.8
SBF				eSn	Sn	16 45 45.8	-7.1
	comp=Z,80nm,0.7s						
MI29	MI29, Kamyanyy	10.36	25	Pn	Pn	16 43 58.3	+0.6
KEST	Kesra	10.64	243	Pn	Pn	16 44 01.9	+0.2
	comp=Z,0.4nm,0.3s,baz=301,slow=7.4,SNR=14						
KEST				LR	LR	16 48 56.9	
	comp=Z,670nm,19.2s,baz=2.5,slow=42						
	comp=Z,16nm,0.8s						
NKC	Novy Kostel	10.80	329	AMS	AMS	16 48 40.0	
	comp=Z,3µm,10.4s						
BRG	Berggiesshubel	10.81	336	eP	Pn	16 44 05.7	+1.8
BRG				Amp		16 44 22.9	
	comp=Z,26nm,1.4s						
BRG				ex	x	16 46 56.0	
BRG				Amp		16 47 42.6	
	comp=Z,67nm,1.4s						
BRG				Amp		16 48 51.0	
	comp=Z,3.1nm,9.3s						
BRG				Amp		16 48 54.0	
	comp=E,1.3nm,14.5s						
BRG				Amp		16 48 55.0	
	comp=N,1.7nm,9.1s						
BRG	Berggiesshubel	10.81	336	eP	Pn	16 44 05.7	+1.8
BRG				pmax	pmax		
	comp=Z,26nm,1.4s						
BRG				pmax	pmax		
	comp=Z,67nm,1.4s						
BRG				MLR	MLR		
	comp=Z,3µm,9.3s						
BRG				MLR	MLR		
	comp=E,1µm,14.5s						
BRG				MLR	MLR		
	comp=N,2µm,9.1s						
LMR	La Mourre	10.93	286	ePn	Pn	16 44 05.9	+0.3
LMR				eSn	Sn	16 46 00.3	-7.0
	comp=N,39nm,1.1s						
MBDF	Montbardon	10.99	293	ePn	Pn	16 44 06.8	+0.4
MBDF				eSn	Sn	16 46 03.1	-5.7
	comp=N,72nm,0.7s						
AK09	Malin Array Si	11.02	29	Pn	Pn	16 44 08.0	+1.3
AK09				pP		16 44 11.5	
AK02	Malin Array Si	11.03	28	Pn	Pn	16 44 08.0	+1.2
AKASG	Malin Array Be	11.07	28	Pn	Pn	16 44 08.1	+0.7
	comp=N,0.9nm,0.3s,baz=214,slow=13,SNR=8.5						
AKASG				LR	LR	16 48 57.8	
	comp=N,467nm,22.0s,baz=214,slow=40						
	comp=N,2.7nm,0.7s						
AKASG	Malin Array Be	11.07	28	i P	Pn	16 44 09.6	+2.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	11.07	28	⇑eP	Pn	16 44 10.1	+2.8
SENIN	Lac Senin/Sane	11.14	302	Pn	Pn	16 44 08.9	+0.3
LPG	La Plagne	11.21	297	ePn	Pn	16 44 08.3	-1.3
LPG				eSn	Sn	16 46 05.9	-8.5
	comp=Z,215nm,1.0s						
LPL	La Plagne	11.22	297	ePn	Pn	16 44 09.8	+0.1
LPL				eSn	Sn	16 46 07.0	-7.8
	comp=Z,222nm,0.9s						
BFO	Black Forest	11.45	313	Pn	Pn	16 44 12.4	-0.3
BFO	Black Forest	11.45	313	P	Pn	16 44 12.4	-0.3
BFO	Black Forest	11.45	313	⇑P	Pn	16 44 12.4	-0.3
CLL	Collm	11.49	334	eP	Pn	16 44 17.0	+3.9
CLL	Collm	11.49	334	ePn	Pn	16 44 17.0	+3.9
CLL				ex	x	16 44 30.0	
CLL				eSn	Sn	16 45 55.0	-26
CLL				ex	x	16 46 18.0	
CLL				ex	x	16 46 39.0	
CLL				ex	x	16 46 52.0	
CLL				eSb		16 47 01.0	
CLL				e(Sg)		16 47 34.0	
CLL				Lmax		16 49 00.0	
CSS	Mathiatis	11.56	119		Pn	16 44 16.4	+2.2
CSS	Mathiatis	11.56	119	⇑P	Pn	16 44 17.1	+2.9
ORIF	Oris-en-Rattie	11.65	293	ePn	Pn	16 44 16.2	+0.8
ORIF				eSn	Sn	16 46 17.2	-7.8
	comp=Z,68nm,0.7s						
SMRF	Simiane la Rot	11.69	289	ePn	Pn	16 44 16.5	+0.6
SMRF	Simiane la Rot	11.69	289	eP	Pn	16 44 20.6	+4.7
SMRF				eSn	Sn	16 46 17.1	-8.7
	comp=Z,43nm,1.0s						
CABF	La Chapelle	12.01	302	ePn	Pn	16 44 20.3	-0.1
CABF				eSn	Sn	16 46 25.3	-8.5
	comp=Z,84nm,0.7s						
HINF	Hinteralfeld	12.04	308	ePn	Pn	16 44 21.3	+0.6
HINF				eSn	Sn	16 46 25.3	-9.1
	comp=Z,111nm,0.9s						
ECH	Echery	12.05	310	Pn	Pn	16 44 20.0	-0.9
ECH	Echery	12.05	310	P	Pn	16 44 20.0	-0.9
ECH	Echery	12.05	310	⇑P	Pn	16 44 20.4	-0.5
CDF	Champ du Feu	12.09	311	ePn	Pn	16 44 20.8	-0.6
CDF				eSn	Sn	16 46 24.9	-11
	comp=Z,75nm,1.0s						
HAU	Haudompre	12.43	308	ePn	Pn	16 44 24.9	-1.1
HAU				eSn	Sn	16 46 33.9	-10
	comp=Z,89nm,0.7s						
VIVF	Saint-Julien-l	12.47	292	ePn	Pn	16 44 26.5	-0.1
VIVF				eSn	Sn	16 46 37.1	-8.0
	comp=Z,55nm,1.2s						
ANN	Anapa	12.56	68	eP	Pn	16 44 25.3	-2.4
ANN				eS	Sn	16 46 44.7	-2.3
ANN				pmax	pmax		
	comp=Z,11nm,0.9s						
SSB	Saint Sauveur	12.65	294	Pn	Pn	16 44 28.9	-0.2
SSB	Saint Sauveur	12.65	294	P	Pn	16 44 28.9	-0.2
SSB	Saint Sauveur	12.65	294	⇓P	Pn	16 44 28.8	-0.3
SUW	Suwalki	12.88	6	eP	P	16 44 41.5	-1.2
SUW	Suwalki	12.88	6	eP	P	16 44 40.8	-2.0
LASF	Ste Croix	12.93	288	ePn	Pn	16 44 34.5	+1.6
PAGF	Fort de Pagny	13.05	309	ePn	Pn	16 44 32.7	-1.8
PAGF	Fort de Pagny	13.05	309	eP	P	16 44 40.0	-4.8
PAGF				eSn	Sn	16 46 49.3	-10
	comp=Z,47nm,0.8s						
SFTF	Sexfontaines	13.30	307	ePn	Pn	16 44 38.5	+0.6
	baz=136						
SFTF				eSn	Sn	16 46 56.5	-8.7
	comp=Z,15nm,0.8s						
WLF	Walferdange	13.38	314	dP	Pn	16 44 42.5	+3.5
	comp=Z,19nm,0.9s						
MEZF	Maizieres J'vi	13.43	308	ePn	Pn	16 44 39.8	+0.2
	baz=111						
MEZF				eSn	Sn	16 46 58.4	-10
	comp=Z,44nm,0.8s						
SAVF	Savonnieres en	13.44	309	ePn	Pn	16 44 39.2	-0.5
SAVF	Savonnieres en	13.44	309	eP	Pn	16 44 43.9	+4.2
SMF	Signal de Mont	13.48	299	ePn	Pn	16 44 38.3	-2.1
SMF				eSn	Sn	16 46 59.4	-10
	comp=Z,61nm,0.6s						
LOR	Lormes	13.67	302	ePn	Pn	16 44 42.2	-0.8
	baz=118						
LOR				eSn	Sn	16 47 04.4	-10
	comp=Z,47nm,0.7s						
SSF	Saint Saulge	13.83	301	ePn	Pn	16 44 43.6	-1.5
SSF				eSn	Sn	16 47 08.4	-10
	comp=Z,67nm,1.0s						
AVF	Avril sur Loir	13.85	300	ePn	Pn	16 44 44.2	-1.1
AVF				eSn	Sn	16 47 09.1	-9.4
	comp=Z,56nm,1.0s						
BHOU	Houvegnez	13.85	316	dP	Pn	16 44 45.6	+0.2
	comp=Z,11nm,0.9s						
HNTI	Hanita	13.92	121	Pn	Pn	16 44 46.8	+0.4
BTNL	Ternell	13.93	317	dP	Pn	16 44 50.0	+3.6
	comp=Z,17nm,0.9s						
MEM	Membach	14.00	317	dP	Pn	16 44 50.6	+3.2
	comp=Z,17nm,0.9s						
SOC	Sochi	14.04	74	eP	Pn	16 44 48.0	0.0
SOC				e		16 47 25.9	
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
SOC				MLR	MLR		
	comp=Z,217nm,16.0s						
MNK	Minsk	14.06	17	i P	Pn	16 44 45.1	-3.0
MNK				i S	Sn	16 47 19.7	-3.8
MNK				pmax	pmax		
	comp=Z,17nm,0.9s						
MNK				pmax	pmax		
	comp=N,17nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,469nm,14.0s						
MNK				MLR	MLR		
	comp=N,334nm,11.0s						
MNK				MLR	MLR		
	comp=E,73nm,11.0s						
MNK	Minsk	14.06	17	i P	Pn	16 44 45.2	-3.0
	comp=E,3.0nm,0.9s						
MNK				i P	Pn	16 44 45.2	-3.0
	comp=N,17nm,0.9s,baz=202						
MNK				i P	Pn	16 44 45.2	-3.0
	comp=Z,17nm,0.9s						
MNK				i PP	P	16 44 52.4	-3.4
MNK				i PPP	PPP	16 45 01.0	
MNK				i S	Sn	16 47 19.8	-3.8
MNK				i SS	SnSn	16 47 35.7	-0.3
MNK				i SSS	SSS	16 47 47.9	
MNK				i LQ	LQ	16 48 49.1	
MNK				i LR	LR	16 49 40.1	
MNK				i LRM	MLR	16 50 19.7	
	comp=Z,469nm,14.2s						
MNK				i LRM	MLR	16 50 21.3	
	comp=N,334nm,11.0s						
MNK				i LRM	MLR	16 50 26.9	
	comp=E,73nm,11.1s						
MTLF	Montolieu	14.06	285	ePn	Pn	16 44 47.7	-0.5
MTLF	Montolieu	14.06	285	eP	P	16 44 52.7	-3.2
MMA0B	Mount Meron ar	14.11	121	Pn	Pn	16 44 50.6	+1.5
MMAI	Mount Meron Ar	14.11	121	Pn	Pn	16 44 48.8	-0.3
	comp=E,1.5nm,0.3s,baz=40,slow=53,SNR=3.6						
MMAI				LR	LR	16 51 16.0	
	comp=E,766nm,20.2s,baz=77,slow=41						
	comp=E,3.9nm,0.8s						
BGF	Bois d'Agland	14.12	298	ePn	Pn	16 44 48.2	-0.8
BGF	Bois d'Agland	14.12	298	eP	Pn	16 44 51.7	+2.7
BGF				eSn	Sn	16 47 15.3	-10
	comp=E,67nm,0.9s						
RCHB	Rochefort	14.15	314	dP	Pn	16 44 51.1	+1.6
	comp=Z,18nm,0.9s						
GEM	Giv'at Ha'Em	14.16	120	Pn	Pn	16 44 50.2	+0.5
NATI	Neve Ativ	14.17	119	Pn	Pn	16 44 50.3	+0.5
NACGM	Naroch	14.22	14	⇑eP	P	16 44 57.8	+0.2
	baz=199						
BCLA	Clavier	14.26	315	dP	Pn	16 44 53.0	+2.0
	comp=Z,12nm,0.9s						
CAF	Calviac	14.31	291	ePn	Pn	16 44 51.3	-0.5
GIVF	Givet	14.35	314	ePn	Pn	16 44 53.1	+1.0
BGES	Gesves	14.36	315	dP	Pn	16 44 54.5	+2.2
	comp=Z,15nm,0.8s						
PABE	Paberze	14.42	7	eP	P	16 44 59.4	-0.5
PABE				IAmb	IAmb	16 45 10.3	
	comp=Z,39nm,0.7s						
HYF	Humbligny	14.46	301	ePn	Pn	16 44 52.0	-1.7
HYF				eSn	Sn	16 47 22.1	-11
DOU	Dourbes	14.47	313	dP	Pn	16 44 55.3	+1.5
	comp=Z,12nm,0.9s						
TCF	Toulx Ste Croi	14.47	297	ePn	Pn	16 44 52.2	-1.8
TCF				eSn	Sn	16 47 24.1	-10
	comp=Z,11nm,0.6s						
BMRD	Maredsous	14.48	314	dP	Pn	16 44 55.9	+1.9
MMLI	Mount Malkishu	14.50	123	Pn	P	16 45 00.2	-0.7
IIGN	Ignalina	14.55	12	eP	P	16 45 02.1	+0.8
IDID	Didziasalis	14.60	13	eP	P	16 45 02.6	+0.7
IDID				IAmb	IAmb	16 45 08.6	
	comp=Z,11nm,0.6s						
BAIF	Baives	14.66	313	ePn	Pn	16 44 55.8	-0.6
BAIF				eSn	Sn	16 47 27.5	-11
	comp=Z,1.9nm,0.3s						
ISAL	Salakas	14.75	12	eP	P	16 45 03.9	+0.3
RJF	Les Rejaudoux	14.75	293	ePn	Pn	16 44 56.5	-1.3
PBUR	Paburge	14.82	2	eP	P	16 45 04.8	+0.5
VSVD	Vaisvydziai	14.89	6	eP	P	16 45 06.5	+1.4
KZIT	Kziot	14.94	129	Pn	Pn	16 44 59.1	-1.2
YTIR	Yattir	15.04	126	Pn	Pn	16 45 01.7	0.0
LUNU	Lund	15.24	344	i P	P	16 45 10.0	+1.0
LFF	La Frestale	15.25	291	eSn	Sn	16 47 46.2	-6.4
	comp=Z,5.1nm,0.5s						
EPF	Esparros	15.42	284	ePn	Pn	16 45 06.7	0.0
BLEU	Blekinge	15.46	349	i P	P	16 45 11.2	-0.2
ASF	Jabal al Asfar	15.62	120	Pn	Pn	16 45 11.3	+2.0
	comp=Z,0.4nm,0.3s,baz=307,slow=5.8,SNR=29						
	comp=Z,25nm,0.9s						
PRNI	Paran	15.70	129	Pn	Pn	16 45 09.6	-0.7
BJUU	Bjuv	15.75	343	eP	P	16 45 13.6	-0.9
DEL	Delary	15.94	346	eP	P	16 45 17.1	+0.4
DEL	Delary	15.94	346	i P	Pn	16 45 15.0	+1.7
HRFI	Mount Harif	15.95	130	Pn	Pn	16 45 13.8	+0.2
VSR	Storozhevoye	16.02	45	eP	Pn	16 45 12.7	-1.6
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR				MLR	MLR		
	comp=Z,1µm,12.0s						
ETSF	Etsaut	16.09	283	ePn	P	16 45 19.1	+0.5
MFF	Saint Martin d	16.13	297	ePn	Pn	16 45 15.1	-0.7
MFF				eSn	Sn	16 48 05.2	-8.9
	comp=Z,2.0nm,0.4s						
EIL	Elat	16.18	131	Pn	Pn	16 45 14.9	-1.5
	comp=Z,0.7nm,0.3s,baz=315,slow=2.9,SNR=5.2						
EIL				Sn	Sn	16 48 07.3	-8.0
	comp=Z,0.3nm,0.3s,baz=33,slow=17,SNR=1.6						
EIL				LR	LR	16 52 54.6	
	comp=Z,185nm,18.9s,baz=302,slow=42						
	comp=Z,7.0nm,0.8s						
EIL	Elat	16.18	131	Pn	Pn	16 45 16.5	+0.1
EIL	Elat	16.18	131	⇑P	Pn	16 45 16.8	+0.3
KIV	Kislovodsk	16.21	73	eP	P	16 45 21.0	+1.1
KIV				eS	Sn	16 48 21.7	+5.6
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,141nm,13.0s						
VORR	Voronezh	16.29	44	eP	Pn	16 45 13.0	-4.7
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
KBZ	Khabaz	16.35	74	Pn	P	16 45 20.4	-1.0
	comp=Z,0.2nm,0.3s,baz=296,slow=6.7,SNR=20						
	comp=Z,18nm,1.1s						
KBZ	Khabaz	16.35	74	c iP	P	16 45 23.5	+2.1
GOF	Gofitskoye	16.54	69	⇑eP	P	16 45 24.7	+1.2
GOF				pmax	pmax		
	comp=Z,75nm,1.0s						
SJPF	Ste Jean	16.57	284	ePn	Pn	16 45 22.1	+0.7
LDF	La Druitiere	16.64	303	ePn	P	16 45 23.7	-0.8
LDF				eSn	Sn	16 48 15.7	-11
	comp=Z,73nm,1.4s						
LPSR	Galich'ya Gora	16.67	41	eP	Pn	16 45 20.6	-2.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,690nm,14.0s						
NCK	Nalchik	16.86	75	⇓eP	P	16 45 28.5	+1.5
FLN	La Foliniere	16.92	304	ePn	Pn	16 45 26.9	+1.2
	baz=118						
GRR	Gorron	17.04	302	ePn	P	16 45 29.0	0.0
GRR				eSn	Sn	16 48 27.1	-9.0
	comp=Z,1.9nm,0.3s						
MUD	Monsted U'grnd	17.07	337	i P	P	16 45 30.0	+0.8
MUD				IAmb	IAmb	16 45 34.8	
	comp=Z,14nm,0.7s						
ZEI	Tsey	17.10	77	eP	P	16 45 30.3	+0.4
ZEI				pmax	pmax		
	comp=Z,51nm,1.5s						
BORU	Boraas	17.25	345	i P	Pn	16 45 29.1	-0.7
OBN	Obninsk	17.29	31	P	P	16 45 31.9	+0.2
	comp=Z,1.0nm,0.3s,baz=31,slow=11,SNR=7.6						
	comp=Z,10nm,0.8s						
OBN	Obninsk	17.29	31	⇑eP	Pn	16 45 29.0	-1.3
OBN				pmax	pmax		
	comp=Z,62nm,1.1s						
OBN				MLR	MLR		
	comp=Z,569nm,16.0s						
VRH	Novokhopyorsk	17.42	48	eP	Pn	16 45 30.4	-1.6
VRH				pmax	pmax		
	comp=Z,50nm,1.0s						
VRH				MLR	MLR		
	comp=Z,960nm,13.0s						
VIKU	Vikbolandet	17.51	353	eP	P	16 45 34.4	+0.4
MTSE	Matsula	17.60	5	eP	P	16 45 36.0	+0.9
VSU	Vasula	17.64	10	⇓eP	P	16 45 35.4	-0.1
VSU	Vasula	17.64	10	eP	P	16 45 36.6	+1.1
GNI	Garni	18.04	86	P	P	16 45 41.7	+1.4
	comp=Z,38nm,0.9s,baz=226,slow=1.4,SNR=17						
GNI				LR	LR	16 52 51.7	
	comp=Z,244nm,20.5s,baz=262,slow=38						
GNI	Garni	18.04	86	c iP	P	16 45 42.6	+2.3
GNI				pmax	pmax		
	comp=Z,88nm,1.3s						
GNI	Garni	18.04	86	⇑P	P	16 45 42.9	+2.6
SGMF	Saint Gilles	18.10	301	ePn	P	16 45 41.9	+1.2
MOS	Moscow	18.16	31	eP	Pn	16 45 40.6	-0.5
MOS				pmax	pmax		
	comp=Z,88nm,1.1s						
QUIF	Quistinic	18.42	299	ePn	Pn	16 45 45.6	+1.3
GROC	Groznyy	18.47	76	eP	Pn	16 45 46.0	+1.1
GROC				eS	S	16 49 16.1	+1.3
GROC				pmax	pmax		
	comp=Z,18nm,0.4s						
ROSF	Rostrenen	18.58	301	ePn	Pn	16 45 51.0	+4.7
STRU	Stroemstad	18.87	344	i P	P	16 45 49.4	+0.4
AAL	Aland	18.99	358	eP	P	16 45 50.5	+0.2
ESBB	Sonseca Array	19.04	274	P	Pn	16 45 51.9	0.0
ESDC	Sonseca Array	19.04	274	P	P	16 45 50.9	-0.3
	comp=Z,0.1nm,0.3s,baz=72,slow=11,SNR=29						
ESDC				LR	LR	16 53 38.1	
	comp=Z,679nm,18.1s,baz=84,slow=38						
	comp=Z,7.6nm,1.0s						
ESDC	Sonseca Array	19.04	274	P	Pn	16 45 52.2	+0.3
MEF	Metsahovi	19.13	5	eP	P	16 45 51.3	-0.6
PAB	San Pablo	19.36	273	P	P	16 45 54.3	-0.3
PAB	San Pablo	19.36	273	P	P	16 45 54.3	-0.3
PAB				pmax	pmax		
	comp=Z,19nm,1.0s						
PAB	San Pablo	19.36	273	⇓P	Pn	16 45 55.5	-0.3
HFS	Hagfors	19.46	349	P	P	16 45 55.1	-0.5
	comp=Z,1.3nm,0.3s,baz=243,slow=43,SNR=16						
HFS				LR	LR	16 54 04.0	
	comp=Z,225nm,18.4s,baz=164,slow=39						
	comp=Z,5.9nm,0.6s						
TAF	Taforalt	19.49	258	P	Pn	16 45 58.0	+0.6
MCH1	Michaelchurch	19.59	311	⇓P	Pn	16 45 58.1	-0.3
MAK	Makhachkala	19.73	76	eP	P	16 45 54.7	-3.9
MAK				eS	S	16 49 35.9	-4.3
MAK				pmax	pmax		
	comp=Z,107nm,0.7s						
MAK				MLR	MLR		
	comp=Z,307nm,15.0s						
KONO	Kongsberg	19.77	343	eP	P	16 45 59.7	+0.9
JBK	JBK	19.81	257	P	Pn	16 46 02.0	+0.6
RAF	Rauma	19.83	1	eP	P	16 45 59.6	+0.1
FIGM	Figuig	19.98	250	P	Pn	16 46 03.0	-0.3
TDRA	Tendrara	20.05	253	P	Pn	16 46 06.0	+1.9
BLS5	Blasjo	20.36	338	eP	Pn	16 46 06.9	-0.5
NC602	NORSAR Array S	20.38	347	P	P	16 46 05.2	-0.4
NC602				IAmb	IAmb	16 46 10.2	
	comp=Z,29nm,0.8s						
NC602	NORSAR Array S	20.38	347	eP	P	16 46 05.1	-0.4
PALE	Palemas	20.45	261	P	Pn	16 46 09.0	+0.3
FINES	FINESS Array B	20.48	7	P	P	16 46 05.7	-0.9
	comp=Z,5.8nm,0.6s,baz=176,slow=11,SNR=26						
	comp=Z,5.8nm,0.6s						
FINES	FINESS Array B	20.48	7	P	P	16 46 06.0	-0.5
FINES	FINESS Array B	20.48	7	i P	P	16 46 06.1	-0.5
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FIA1	FINESS Array S	20.48	7	P	P	16 46 05.7	-0.9
NAO01	NORSAR Array S	20.60	346	P	P	16 46 06.9	-1.0
NAO01				IAmb	IAmb	16 46 27.0	
	comp=Z,54nm,1.2s						
NAO01	NORSAR Array S	20.60	346	eP	P	16 46 07.3	-0.6
NC405	NORSAR Array S	20.70	347	P	P	16 46 08.5	-0.5
NB201	NORSAR Array S	20.72	347	P	P	16 46 09.4	+0.2
NB201				IAmb	IAmb	16 46 18.3	
	comp=Z,42nm,0.8s						
NB2	NORSAR Subarra	20.72	346	P	P	16 46 08.4	-0.9
	comp=Z,8.7nm,0.8s,baz=159,slow=11						
NB2	NORSAR Subarra	20.72	346	P	P	16 46 08.4	-0.9
	baz=159,slow=11						
NOA	NORSAR Array B	20.72	346	P	P	16 46 08.3	-0.9
	comp=Z,5.0nm,0.6s,baz=162,slow=10,SNR=26						
	comp=Z,5.0nm,0.6s						
PBRG	Braganca	20.74	281	eP	P	16 46 09.8	+0.1
	comp=Z,47nm,1.7s						
NC303	NORSAR Array S	20.87	347	P	P	16 46 10.2	-0.6
NC303				IAmb	IAmb	16 46 16.8	
	comp=Z,34nm,0.8s						
SKAR	Skarslia	20.98	342	eP	P	16 46 12.8	+0.7
NC204	NORSAR Array S	21.02	346	P	P	16 46 12.7	+0.2
MVO	Moncorvo	21.05	279	eP	P	16 46 14.6	+1.6
	comp=Z,54nm,1.4s						
EKA	Eskdalemuir Ar	21.24	320	P	P	16 46 14.5	-0.3
	comp=Z,26nm,0.8s,baz=114,slow=11,SNR=57						
EKA				LR	LR	16 55 42.2	
	comp=Z,951nm,20.1s,baz=128,slow=40						
	comp=Z,26nm,0.8s						
ESK	Eskdalemuir	21.25	320	P	P	16 46 15.2	+0.2
ESK				IAmb	IAmb	16 46 15.8	
	comp=Z,40nm,0.8s						
ESK	Eskdalemuir	21.25	320	P	P	16 46 15.2	+0.2
ESK				pmax	pmax		
	comp=Z,40nm,0.8s						
ESK	Eskdalemuir	21.25	320	⇑P	P	16 46 14.7	-0.3
BELG	Belogornoye	21.25	49	P	P	16 46 15.2	+0.2
	comp=Z,88nm,0.9s,baz=73,slow=4.9,SNR=17						
BELG				LR	LR	16 55 46.2	
	comp=Z,132nm,19.6s,baz=296,slow=40						
	comp=Z,88nm,0.9s						
BELG	Belogornoye	21.25	49	c iP	P	16 46 15.3	+0.2
BELG				pmax	pmax		
	comp=Z,35nm,1.0s						
SMIR	Smir Dam	21.34	264	P	P	16 46 17.0	+1.0
BER	Bergen	21.47	339	eP	P	16 46 19.4	+2.1
CHEFC	Chefchaouen	21.54	262	P	P	16 46 19.0	+0.6
PVRL	Vila Real	21.54	280	eP	P	16 46 19.9	+1.6
	comp=Z,46nm,1.3s						
MTE	Manteigas	21.57	277	eP	P	16 46 19.3	+0.6
	comp=Z,68nm,1.4s						
MTE	Manteigas	21.57	277	P	P	16 46 18.7	0.0
MTE				IAmb	IAmb	16 46 27.2	
	comp=Z,53nm,1.2s						
MTE	Manteigas	21.57	277	⇑P	P	16 46 21.0	+2.3
POLO	Lamas de Olo	21.59	280	eP	P	16 46 21.5	+2.7
	comp=Z,18nm,1.7s						
PCBR	Castelo Branco	21.64	276	eP	P	16 46 19.5	+0.2
	comp=Z,45nm,1.9s						
PMRV	Marv??o	21.67	275	eP	P	16 46 21.6	+1.9
	comp=Z,39nm,1.9s						
PBAR	Barrancos	21.74	271	eP	P	16 46 19.9	-0.5
	comp=Z,90nm,1.5s						
PVIS	Viseu	21.77	278	eP	P	16 46 21.2	+0.4
	comp=Z,40nm,1.4s						
PGAV	Gavieira, Arco	21.85	282	eP	P	16 46 23.5	+1.8
	comp=Z,100nm,1.5s						
HYA	Hoyanger	21.91	341	eP	P	16 46 23.9	+1.9
PESTR	Estremoz	21.96	273	eP	P	16 46 23.9	+1.1
	comp=Z,44nm,1.6s						
PESTR	Estremoz	21.96	273	P	P	16 46 21.0	-1.8
PESTR	Estremoz	21.96	273	P	P	16 46 23.9	+1.1
PESTR	Estremoz	21.96	273	⇓P	P	16 46 24.1	+1.3
MDT	Midelt	22.03	256	P	P	16 46 23.1	-0.6
	comp=Z,11nm,0.9s,baz=100,slow=11,SNR=17						
MDT				LR	LR	16 54 39.8	
	comp=Z,301nm,21.8s,baz=68,slow=36						
	comp=Z,11nm,0.9s						
MDT	Midelt	22.03	256	P	P	16 46 26.1	+2.4
DOMB	Dombas	22.05	345	eP	P	16 46 25.4	+1.8
COI	Coimbra	22.26	277	eP	P	16 46 28.8	+2.8
	comp=Z,59nm,1.6s						
PCAS	Casmilo, Conde	22.36	277	eP	P	16 46 29.7	+2.6
	comp=Z,49nm,1.2s						
EVO	Evora	22.37	273	eP	P	16 46 25.7	-1.5
	comp=Z,40nm,1.4s						
PMTG	Montargil	22.39	274	eP	P	16 46 28.0	+0.6
	comp=Z,60nm,1.7s						
PBEJ	Beja	22.41	271	eP	P	16 46 27.9	+0.3
	comp=Z,35nm,2.2s						
PVAQ	Vaqueiros	22.49	270	eP	P	16 46 28.5	+0.1
	comp=Z,53nm,1.7s						
AKN	Aaknes	22.60	343	eP	P	16 46 31.0	+1.5
PCVE	Castro Verde	22.66	270	eP	P	16 46 29.7	-0.5
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	22.69	24	eP	P	16 46 28.1	-2.3
KLMR				eS	S	16 50 37.5	0.0
KLMR				pmax	pmax		
	comp=Z,50nm,1.0s						

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KLMR  Klimovskoe        22.69  24 eP      P       16 46 28.2 -2.2
KLMR                               AMP            16 46 40.0
      comp=Z,50nm,1.0s
KLMR                              eS      S       16 50 37.6  0.0
KLMR                              eS      S       16 50 37.6  0.0
KLMR                               LQ     LQ      16 53 08.5
KLMR                               LQ     LQ      16 53 08.5
KLMR                               LR     LR      16 55 09.4
PBDV  Barranco-do-Ve    22.70 269 eP      P       16 46 31.0 +0.3
      comp=Z,89nm,1.7s
PSBE  So Bento          22.71 276 eP      P       16 46 33.0 +2.2
      comp=Z,62nm,1.5s
MESJ  Messejana         22.73 271 eP      P       16 46 31.5 +0.5
MESJ                               IAmb   IAmb    16 46 33.1
      comp=Z,15nm,0.9s
MESJ  Messejana         22.73 271 eP      P       16 46 31.4 +0.4
      comp=Z,45nm,1.6s
MESJ  Messejana         22.73 271 eP      P       16 46 31.5 +0.5
PNCL  Nicolau / Gran    22.88 272 eP      P       16 46 31.6 -1.0
      comp=Z,58nm,1.6s
PFVI  Vila Bisbo        23.41 270 eP      P       16 46 38.5 +0.5
      comp=Z,103nm,1.6s
NSS   Namsos            23.92 350 eP      P       16 46 41.0 -1.6
KIRV  Kirov             24.95  36  P      P       16 46 51.3 -0.7
      comp=Z,68nm,1.0s,baz=169,slow=1.4,SNR=5.8
      comp=Z,68nm,1.0s
KIRV  Kirov             24.95  36diP      P       16 46 53.0 +1.0
MOR8  Moi Rana          25.26 354 eP      P       16 46 56.9 +2.1
PRGR  Permogore         25.28  28 eP      P       16 46 56.4 +1.4
PRGR                              e               16 47 27.1
TTIG  Tnine Tigouga,    26.00 255  P      P       16 47 05.0 +2.9
STEI  Steigen           26.94 355 eP      P       16 47 09.5 -0.4
AKTO  Aktyubinsk        27.15  58  P      P       16 47 12.3 +0.2
      comp=Z,6.1nm,0.8s,baz=258,slow=8.4,SNR=14
AKTO                               LR     LR      16 59 39.6
      comp=Z,320nm,18.6s,baz=263,slow=40
      comp=Z,6.1nm,0.8s
KTK1  Kautokeino        27.87   2 eP      P       16 47 20.2 +1.9
ABKAR Akbulak array     28.32  60  P      P       16 47 22.8 +0.2
ABKAR Akbulak array     28.32  60  P      P       16 47 22.6 +0.1
ABKAR                              IAmb   IAmb    16 47 37.9
      comp=Z,8.4nm,0.9s
ABKAR Akbulak array     28.32  60 ⇓P      P       16 47 23.2 +0.6
ARCES ARCESS Array B    28.47   3  P      P       16 47 22.4 -1.3
      comp=Z,1.1nm,0.5s,baz=187,slow=5.9,SNR=11
      comp=Z,1.1nm,0.5s
TRO   Tromso            28.49 358 eP      P       16 47 23.4 -0.4
ARU   Arti              28.60  45  P      P       16 47 25.1 +0.1
      comp=Z,2.3nm,0.7s,baz=238,slow=10.0,SNR=9.1
ARU                                LR     LR      16 59 31.6
      comp=Z,264nm,20.0s,baz=239,slow=38
      comp=Z,2.3nm,0.7s
ARU   Arti              28.60  45diP      P       16 47 25.7 +0.8
ARU                                               16 50 30.4
ARU                                S      S       16 52 15.2 +3.0
ARU                                pmax   pmax
      comp=Z,17nm,1.0s
ARU                                MLR    MLR
      comp=Z,352nm,12.0s
GEYT  Alibeck           28.67  84  P      P       16 47 26.6 +0.7
      comp=Z,10nm,0.8s,baz=258,slow=7.0,SNR=9.9
GEYT                               LR     LR      17 02 04.0
      comp=Z,182nm,18.5s,baz=319,slow=43
      comp=Z,10nm,0.8s
SVE   Sverdlovsk        29.81  45 eP      P       16 47 37.6 +1.9
SVE                                pmax   pmax
      comp=Z,36nm,1.3s
SVE                                MLR    MLR
      comp=Z,513nm,12.0s
TOA0  Torodi Ar. Sit    32.66 217  P      P       16 48 01.2 +0.1
TORD  Torodi Ar. Bea    32.66 217  P      P       16 48 01.3 +0.2
      comp=Z,11nm,0.8s,baz=31,slow=9.1,SNR=42
      comp=Z,11nm,0.8s
TORD  Torodi Ar. Bea    32.66 217  P      P       16 48 01.0 -0.1
TORD                               IAmb   IAmb    16 48 02.6
      comp=Z,17nm,1.1s
UOSS  Minazif           33.41 108  P      P       16 48 07.3 -0.3
UOSS  Minazif           33.41 108 ⇑P      P       16 48 07.3 -0.3
BORG  Borgarnes         33.66 329  LR     LR      17 03 53.7
      comp=Z,186nm,18.3s,baz=129,slow=40
BRVK  Borovoye          34.88  53ceP      P       16 48 21.1 +1.0
BRVK                               pmax   pmax
      comp=Z,41nm,1.0s
BRVK  Borovoye          34.88  53 ⇑P      P       16 48 21.2 +1.0
WSAR  Wadi Sarin        36.20 108  LR     LR      17 05 33.2
      comp=Z,143nm,20.2s,baz=330,slow=40
SCO   Scoresbysund      36.49 337  P      P       16 48 33.4 -0.3
SCO   Scoresbysund      36.49 337  P      P       16 48 33.4 -0.3
SCO                                pmax   pmax
      comp=Z,9.0nm,1.2s
SCO   Scoresbysund      36.49 337 ⇑P      P       16 48 34.6 +0.9
SPA0  Spitsbergen Ar    37.11 358 eP      P       16 48 38.6 -0.4
SOEG  Soedalen          38.64 332 i P     P       16 48 48.3 -3.7
SOEG                               IAmb   IAmb    16 48 52.5
      comp=Z,4.3nm,0.5s
AAK   Ala-Archa         39.28  70  LR     LR      17 09 52.7
      comp=Z,183nm,18.5s,baz=295,slow=43
AAK   Ala-Archa         39.28  70⇓eP      P       16 48 59.2 +1.4
AAK                                pmax   pmax
      comp=Z,14nm,1.7s
DAG   Danmarks Havn     39.41 347 i P     P       16 48 57.0 -1.2
DAG                                IAmb   IAmb    16 48 57.7
      comp=Z,3.4nm,0.7s
DAG   Danmarks Havn     39.41 347 ⇑P      P       16 48 57.8 -0.5
KURBB Kurchatov Arra    40.19  56  P      P       16 49 05.5 +0.5
      comp=Z,3.9nm,0.9s,baz=286,slow=9.9,SNR=19
KURBB                              LR     LR      17 09 25.1
      comp=Z,256nm,18.1s,baz=252,slow=42
      comp=Z,3.9nm,0.9s
KURK  Kurchatov         40.23  56  P      P       16 49 04.4 -1.0
KURK  Kurchatov         40.23  56  P      P       16 49 05.6 +0.2
KURK  Kurchatov         40.23  56 ⇑P      P       16 49 06.1 +0.7
DBIC  Dimbokro          41.40 221  P      P       16 49 15.5 +0.1
      comp=Z,21nm,1.2s,baz=38,slow=8.0,SNR=6.4
DBIC                               LR     LR      17 08 03.4
      comp=Z,176nm,20.0s,baz=32,slow=38
      comp=Z,21nm,1.2s
TIC   Toumodi           41.51 221 eP      P       16 49 16.4 +0.1
      comp=Z,83nm,1.4s
KIC   Kosan Boka        41.61 221 eP      P       16 49 16.7 -0.4
      comp=Z,5.0nm,0.4s
ICESG Greenland Ices    41.79 332 i P     P       16 49 15.5 -3.0
ICESG                              IAmb   IAmb    16 49 52.5
      comp=Z,5.4nm,0.7s
ICESG Greenland Ices    41.79 332 ⇑P      P       16 49 18.4 -0.1
LIC   Lamto             41.87 221 eP      P       16 49 19.3  0.0
      comp=Z,27nm,1.0s
NOR   Nord              42.51 352 i P     P       16 49 21.2 -2.5
NOR                                IAmb   IAmb    16 49 48.4
      comp=Z,3.6nm,0.7s
MAKZ  Makanchi          43.25  61  P      P       16 49 31.1 +1.0
MAKZ  Makanchi          43.25  61  P      P       16 49 31.2 +1.0
MAKZ                               pmax   pmax
      comp=Z,9.0nm,0.9s
MAKZ  Makanchi          43.25  61 ⇓P      P       16 49 31.9 +1.7
ZAA0  Zalesovo Array    43.43  51  P      P       16 49 31.7 +0.2
ZALV  Zalesovo Beam     43.43  51  P      P       16 49 31.8 +0.3
      comp=Z,16nm,0.7s,baz=278,slow=8.4,SNR=44
ZALV                               LR     LR      17 09 19.4
      comp=Z,216nm,19.4s,baz=276,slow=38
      comp=Z,16nm,0.7s
MK31  Makanchi Array    43.46  61  P      P       16 49 32.2 +0.3
MK31                               IAmb   IAmb    16 49 38.7
      comp=Z,11nm,0.8s
MK31  Makanchi Array    43.46  61⇑eP      P       16 49 32.3 +0.4
MKAR  Makanchi Array    43.46  61  P      P       16 49 31.9  0.0
      comp=Z,7.9nm,0.7s,baz=283,slow=6.7,SNR=60
MKAR                               ScP    ScP     16 55 07.1 -3.1
      comp=Z,1.5nm,1.1s,baz=298,slow=3.1,SNR=4.7
MKAR                               LR     LR      17 10 25.4
      comp=Z,212nm,20.1s,baz=289,slow=40
      comp=Z,7.9nm,0.7s
MKAR  Makanchi Array    43.46  61  P      P       16 49 32.1 +0.2
NRIK  Noril'sk          43.93  28  P      P       16 49 35.7 +0.4
      comp=Z,2.0nm,0.4s,baz=157,slow=3.8,SNR=4.4
NRIK                               LR     LR      17 10 23.0
      comp=Z,177nm,18.2s,baz=250,slow=39
      comp=Z,2.0nm,0.4s
NRIK  Noril'sk          43.93  28⇑eP      P       16 49 36.2 +0.9
NRIK                               pmax   pmax
      comp=Z,5.0nm,0.7s
DY2G  Dye2              44.08 328 i P     P       16 49 34.8 -2.1
DY2G                               IAmb   IAmb    16 49 48.6
      comp=Z,3.8nm,0.6s
KMBO  Kilima Mbogo      44.67 157  LR     LR      17 09 18.8
      comp=Z,130nm,19.8s,baz=94,slow=37
SFJD  Kangerlussuaq     45.80 329  LR     LR      17 09 36.1
      comp=Z,247nm,19.4s,baz=88,slow=37
WMQ   Urumqi            48.02  63 eP      P       16 50 09.0 +1.0
WMQ                                pP     pP      16 50 15.4 +1.1
WMQ                                pmax   pmax
      comp=Z,17nm,0.6s
KNGR  Kungurtug, Tuv    51.84  52⇓eP      P       16 50 40.5 +3.5
MOY   Mondy             53.48  50 eP      P       16 50 52.3 +3.2
MOY                                pmax   pmax
      comp=Z,18nm,1.9s
DRLN  Deer Lake         53.52 307  P      P       16 50 48.8 -0.5
FRB   Frobisher Bay     53.79 327  LR     LR      17 14 39.2
      comp=Z,208nm,18.7s,baz=52,slow=37
ZAK   Zakamensk         55.31  50 eP      P       16 51 04.1 +1.6
ZAK                                pmax   pmax
      comp=Z,12nm,1.6s
GOMU  GeErMu            56.22  69  P      P       16 51 15.6 +6.1
GOMU                               pP     sP      16 51 20.4 +2.2
GOMU                               sP     pP      16 51 21.4 +5.6
GOMU                               pmax   pmax
      comp=Z,1.0nm,0.8s
GOMU                               pmax   pmax
      comp=Z,46nm,4.4s
SCHQ  Schefferville     56.49 316  P      P       16 51 09.4 -1.3
      comp=Z,3.2nm,0.6s,baz=40,slow=5.1,SNR=8.6
SCHQ                               LR     LR      17 15 02.0
      comp=Z,175nm,19.3s,baz=98,slow=36
      comp=Z,3.2nm,0.6s
SCHQ  Schefferville     56.49 316  P      P       16 51 09.6 -1.1
SCHQ                               IAmb   IAmb    16 51 21.4
      comp=Z,13nm,1.3s
TIXI  Tiksi             56.68  21⇓eP      P       16 51 12.4 +0.7
TIXI                               pmax   pmax
      comp=Z,2.0nm,0.8s
BOD   Bodaibo           57.77  39 eP      P       16 51 19.3 -0.4
BOD                                pmax   pmax
      comp=Z,11nm,1.3s
GTA   Gaotai            58.10  64 eP      P       16 51 27.3 +4.8
GTA                                pP     sP      16 51 33.0 +1.9
GTA                                sP     pP      16 51 36.8 +8.0
GTA                                pmax   pmax
      comp=Z,2.0nm,1.2s
SONM  Songino Array     58.28  52  P      P       16 51 23.8 +0.2
      comp=Z,2.5nm,0.8s,baz=293,slow=8.3,SNR=18
SONM                               LR     LR      17 18 02.1
      comp=Z,163nm,19.4s,baz=298,slow=38
      comp=Z,2.5nm,0.8s
ULN   Ulaanbaatar       58.65  52⇑eP      P       16 51 28.2 +2.0
ULN                                pmax   pmax
      comp=Z,9.0nm,1.7s
YAK   Yakutsk           62.29  30  LR     LR      17 21 43.3
      comp=Z,247nm,18.9s,baz=272,slow=39
YAK   Yakutsk           62.29  30⇑eP      P       16 51 53.4 +2.8
YAK                                pmax   pmax
      comp=Z,9.0nm,0.7s
LZH   Lanzhou           62.55  65 eP      P       16 51 53.9 +0.9
LZH                                pP     pP      16 51 57.4 -2.0
LZH                                sP     sP      16 52 00.9 -1.0
LZH                                pmax   pmax
      comp=Z,17nm,1.5s
PALK  Pallekele         62.62 105  LR     LR      17 22 59.4
      comp=Z,93nm,18.1s,baz=60,slow=40
A36M  Sachs Harbour     64.61 349  P      P       16 52 05.5 -0.3
HHC   Hu-ho-hao-te      65.04  57 eP      P       16 52 09.5 +0.2
HHC                                pmax   pmax
      comp=Z,19nm,0.9s
HHC                                pmax   pmax
      comp=Z,96nm,5.0s
HHC                                LR     LR
      comp=Z,270nm,12.7s
HHC                                LR     LR
      comp=Z,310nm,11.7s
HHC                                LR     LR
      comp=Z,420nm,12.7s
HIA   Hailar            65.11  46⇓eP      P       16 52 11.6 +2.1
HIA                                pmax   pmax
      comp=Z,8.0nm,0.9s
XLT   XiLinHaoTe        66.09  52 eP      P       16 52 18.9 +2.9
XLT                                pP     pP      16 52 23.3 +0.9
XLT                                sP     sP      16 52 25.0 +0.1
XLT                                pmax   pmax
      comp=Z,9.0nm,1.0s
XLT                                pmax   pmax
      comp=Z,86nm,4.2s
PZH   PanZhiHua         66.42  75  P      P       16 52 21.6 +3.2
PZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,90nm,5.3s
FCC   Fort Churchill    66.81 329  P      P       16 52 19.6 -0.6
FCC   Fort Churchill    66.81 329  P      P       16 52 19.6 -0.6
FCC                                pmax   pmax
      comp=Z,9.0nm,0.7s
BILL  Bilibino          67.97  13⇓eP      P       16 52 28.3 +0.9
BILL                              e               16 52 55.2
BILL                              e               16 54 54.8
BILL                               pmax   pmax
      comp=Z,4.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,247nm,21.0s
SADO  Sadowa            68.51 311  LR     LR      17 20 30.7
      comp=Z,137nm,20.7s,baz=51,slow=34
INK   Inuvik            69.13 350  P      P       16 52 33.9 -0.7
INK                                IAmb   IAmb    16 52 34.4
      comp=Z,3.3nm,0.7s
INK   Inuvik            69.13 350  P      P       16 52 33.9 -0.7
INK                                pmax   pmax
      comp=Z,3.0nm,0.7s
CMAR  Chiang Mai Arr    69.15  83  P      P       16 52 34.0 -1.5
      comp=Z,3.4nm,0.9s,baz=308,slow=7.3,SNR=4.3
CMAR                               LR     LR      17 29 15.6
      comp=Z,39nm,20.1s,baz=305,slow=41
      comp=Z,3.4nm,0.9s
SEY   Seymchan          69.17  22  LR     LR      17 26 59.1
      comp=Z,123nm,19.0s,baz=319,slow=39
SEY   Seymchan          69.17  22⇓eP      P       16 52 36.1 +1.2
SEY                                pmax   pmax
      comp=Z,17nm,1.7s
BOSA  Boshof            69.60 176  P      P       16 52 37.4 -0.6
      comp=Z,3.0nm,0.8s,baz=12,slow=6.5,SNR=2.8
      comp=Z,3.0nm,0.8s
RCBR  Riachuelo         69.89 243  LR     LR      17 25 38.9
      comp=Z,63nm,18.2s,baz=178,slow=38
TOLK  Toolik Lake Re    70.23 356  P      P       16 52 41.4  0.0
TOLK                               IAmb   IAmb    16 53 09.7
      comp=Z,4.2nm,0.8s
SSPA  Standing Stone    70.28 307  P      P       16 52 41.5 -0.7
SSPA                               IAmb   IAmb    16 52 56.4
      comp=Z,10nm,0.9s
YKA   Yellowknife Ar    70.65 340  P      P       16 52 43.5 -0.5
      comp=Z,5.0nm,0.7s,baz=36,slow=5.4,SNR=72
      comp=Z,5.0nm,0.7s
KLR   Kul'dur           71.31  40  LR     LR      17 27 17.7
      comp=Z,182nm,18.5s,baz=310,slow=38
KLR   Kul'dur           71.31  40⇓eP      P       16 52 48.5 +0.2
KLR                                pmax   pmax
      comp=Z,19nm,2.5s
CN2   Changchun         71.55  48 eP      P       16 52 53.5 +3.6
CN2                               eS      S       17 02 10.9 +3.0
CN2                                pmax   pmax
      comp=Z,10.0nm,0.8s
CN2                                pmax   pmax
      comp=Z,100nm,3.0s
CN2                                LR     LR
      comp=Z,200nm,14.0s
CN2                                LR     LR
      comp=Z,200nm,14.0s
CN2                                LR     LR
      comp=Z,400nm,14.4s
COLD  Coldfoot          71.67 356  P      P       16 52 49.5 -0.7
COLD                               IAmb   IAmb    16 52 51.8
      comp=Z,6.1nm,0.8s
E43A  Lone Tree Farm    71.79 316  P      P       16 52 50.7 -0.5
E43A                               IAmb   IAmb    16 52 57.3
      comp=Z,7.3nm,0.8s
I29M  Ogilvie Camp,     72.53 351  P      P       16 52 55.1 -0.3
H24K  Noodor Dome       72.92 355  P      P       16 52 57.8 +0.1
H23K  Yukon River       73.03 356  P      P       16 52 59.0 +0.7
H23K                               IAmb   IAmb    16 53 00.1
      comp=Z,4.8nm,0.8s
IMAR  Indian Mountai    73.05 358  P      P       16 52 58.9 +0.5
COWI  Conover           73.08 317  P      P       16 52 58.5 -0.6
COWI                               IAmb   IAmb    16 53 05.5
      comp=Z,8.6nm,0.8s
H21K  Melozitna Rive    73.34 357  P      P       16 53 01.0 +0.9
H21K                               IAmb   IAmb    16 53 07.7
      comp=Z,11nm,0.9s
ULM   Lac du Bonnet     73.47 323  P      P       16 53 00.7 -0.4
      comp=Z,6.2nm,0.6s,baz=44,slow=6.1,SNR=8.2
      comp=Z,6.2nm,0.6s
I23K  Minto, Yukon-K    73.69 356  P      P       16 53 02.1 -0.1
I23K                               IAmb   IAmb    16 53 17.7
      comp=Z,11nm,1.4s
I21K  Tanana            73.79 357  P      P       16 53 03.2 +0.4
MDM   Murphy Dome       73.82 355  P      P       16 53 03.0  0.0
MDM                                IAmb   IAmb    16 53 17.7
      comp=Z,10nm,1.2s
COLA  College           73.88 355⇓eP      P       16 53 04.0 +0.7
COLA                               pmax   pmax
      comp=Z,17nm,2.2s
ILAR  Eielson Array     73.91 355  P      P       16 53 03.5  0.0
      comp=Z,1.9nm,0.7s,baz=0.4,slow=5.4,SNR=28
      comp=Z,1.9nm,0.7s
ILAR  Eielson Array     73.91 355  P      P       16 53 03.1 -0.4
HDA   Harding Lake      74.28 355  P      P       16 53 05.3 -0.3
HDA                                IAmb   IAmb    16 53 11.1
      comp=Z,7.1nm,0.8s
MDP   Montagnes des     74.35 263  LR     LR      17 22 52.0
      comp=Z,98nm,19.8s,baz=46,slow=33
SCRK  Sand Creek        74.46 353  P      P       16 53 06.8 -0.2
RIDG  Independent Ri    74.77 354  P      P       16 53 08.2 -0.5
RIDG                               IAmb   IAmb    16 53 24.3
      comp=Z,17nm,1.3s
BPAW  Bear Paw Mtn.     74.82 356  P      P       16 53 08.3 -0.6
BPAW                               IAmb   IAmb    16 53 23.5
      comp=Z,7.0nm,1.1s
USA0B Ussuriysk Arra    74.83  44⇑eP      P       16 53 12.2 +3.0
USRK  Ussuriysk Ar.     74.83  44  LR     LR      17 31 47.5
      comp=Z,74nm,18.2s,baz=317,slow=40
J20K  Nowinta River     74.87 358  P      P       16 53 08.9 -0.2
J20K                               IAmb   IAmb    16 53 19.0
      comp=Z,12nm,1.5s
BCAR  Beaver Creek A    75.14 352  P      P       16 53 10.9 +0.2
L27K  Beaver Creek,     75.15 352  P      P       16 53 11.1 +0.3
SJG   San Juan          76.19 282  LR     LR      17 27 03.9
      comp=Z,23nm,18.1s,baz=218,slow=36
P33M  Teslin, Yukon     76.65 347  P      P       16 53 18.5 -1.0
HYT   Haines Junctio    76.79 349  P      P       16 53 19.9 -0.4
L19K  White Mountain    76.89 358  P      P       16 53 20.6  0.0
L19K                               IAmb   IAmb    16 53 27.6
      comp=Z,9.4nm,0.8s
TKL   Tuckaleechee C    77.03 306  LR     LR      17 29 30.5
      comp=Z,153nm,18.3s,baz=69,slow=37
KSRS  Korea Array       77.13  51  P      P       16 53 22.3 -0.1
      comp=Z,2.0nm,0.8s,baz=311,slow=4.9,SNR=6.2
KSRS                               LR     LR      17 30 00.3
      comp=Z,70nm,20.6s,baz=310,slow=38
      comp=Z,2.0nm,0.8s
CTGM  Chitina Glacie    77.14 351  P      P       16 53 22.5 +0.2
CTGM                               IAmb   IAmb    16 53 28.1
      comp=Z,5.3nm,0.9s
GRNC  Granite Creek     77.42 351  P      P       16 53 24.2 +0.3
YSS   Yuzh-Sakhalins    78.10  37 eP      P       16 53 27.9 +0.2
YSS                                pmax   pmax
      comp=Z,30nm,1.1s
YSS                                MLR    MLR
      comp=Z,500nm,14.0s
PEA0B Petropavlovsk-    78.89  25⇓eP      P       16 53 34.9 +3.0
PETK  Petropavlovsk-    78.89  25  LR     LR      17 32 43.7
      comp=Z,78nm,18.6s,baz=320,slow=39
PSI   Prapat            79.09  96  LR     LR      17 32 21.2
      comp=Z,122nm,18.1s,baz=267,slow=38
CCM   Cathedral Cave    79.76 312  P      P       16 53 36.1 -0.9
CCM   Cathedral Cave    79.76 312  P      P       16 53 36.1 -0.9
CCM                                pmax   pmax
      comp=Z,11nm,0.7s
R40A  Maddies Statio    80.17 313  P      P       16 53 38.4 -0.7
R40A                               IAmb   IAmb    16 53 45.2
      comp=Z,10nm,0.8s
LRAL  Lakeview Retre    80.76 306  P      P       16 53 41.8 -0.7
WALA  Waterton Lakes    81.70 332  P      P       16 53 46.5 -0.8
WALA                               IAmb   IAmb    16 53 52.2
      comp=Z,8.1nm,1.1s
WHAR  Wooly Hollow      82.31 311  P      P       16 53 50.8 +0.1
X40A  Basin Creek Fa    83.20 310  P      P       16 53 55.3  0.0
X40A                               IAmb   IAmb    16 54 01.4
      comp=Z,5.6nm,0.8s
MAJO  Matsushiro        83.61  46⇓eP      P       16 53 59.9 +2.6
MAJO                               pmax   pmax
      comp=Z,12nm,1.1s
MJAR  Matsushiro Arr    83.61  46  P      P       16 53 57.9 +0.5
      comp=Z,8.9nm,1.0s,baz=318,slow=4.5,SNR=12
MJAR                               LR     LR      17 35 27.9
      comp=Z,92nm,18.2s,baz=338,slow=39
      comp=Z,8.9nm,1.0s
JOW   Kunigami          84.58  59  LR     LR      17 38 11.2
      comp=Z,50nm,18.1s,baz=334,slow=40
BDFB  Brasilia          85.15 245  P      P       16 54 07.1 +1.7
      comp=Z,12nm,0.7s,baz=55,slow=7.5,SNR=21
BDFB                               LR     LR      17 29 44.6
      comp=Z,81nm,22.0s,baz=1.3,slow=34
      comp=Z,12nm,0.7s
BDFB  Brasilia          85.15 245  P      P       16 54 05.0 -0.4
PDAR  Pinedale Array    85.23 326  P      P       16 54 05.3 -0.4
      comp=Z,0.6nm,0.5s,baz=126,slow=3.8,SNR=8.9
PDAR                               LR     LR      17 32 20.6
      comp=Z,120nm,19.7s,baz=32,slow=36
      comp=Z,0.6nm,0.5s
BMO   Blue Mountains    86.51 332  P      P       16 54 11.4 -0.4
BMO                                IAmb   IAmb    16 54 17.1
      comp=Z,5.8nm,1.2s
BMO   Blue Mountains    86.51 332  P      P       16 54 11.5 -0.4
BMO                                pmax   pmax
      comp=Z,6.0nm,1.2s
DUG   Dugway, Tooele    88.73 326  P      P       16 54 21.3 -1.4
DUG                                IAmb   IAmb    16 54 28.5
      comp=Z,5.1nm,0.8s
DUG   Dugway, Tooele    88.73 326  P      P       16 54 21.3 -1.4
DUG                                pmax   pmax
      comp=Z,5.0nm,0.9s
ELK   Elko              89.25 328  LR     LR      17 34 31.7
      comp=Z,138nm,20.8s,baz=40,slow=36
ANMO  Albuquerque       90.14 319  LR     LR      17 36 16.8
      comp=Z,108nm,18.1s,baz=44,slow=36
YBH   Yreka Blue Hor    91.12 334  LR     LR      17 38 00.2
      comp=Z,119nm,18.9s,baz=24,slow=37
TXAR  Lajitas Array     93.12 314  P      P       16 54 43.7 +0.5
      comp=Z,2.5nm,0.9s,baz=83,slow=3.9,SNR=12
TXAR                               LR     LR      17 37 21.8
      comp=Z,105nm,19.9s,baz=33,slow=36
      comp=Z,2.5nm,0.9s
JTS   Las Juntas de     95.01 288  LR     LR      17 35 00.4
      comp=Z,47nm,18.3s,baz=100,slow=34
PFO   Pinyon Flats O    95.85 325  LR     LR      17 39 31.9
      comp=Z,133nm,18.4s,baz=82,slow=36
DAV   Davao City (W)    96.22  75  LR     LR      17 46 19.3
      comp=Z,53nm,18.4s,baz=336,slow=40
CPUP  Villa Florida     98.77 243  LR     LR      17 42 01.8
      comp=Z,76nm,18.1s,baz=48,slow=37
KAPI  Kappang           99.88  88  LR     LR      17 46 23.0
      comp=Z,25nm,19.9s,baz=262,slow=39
LPAZ  La Paz            99.89 257  LR     LR      17 39 44.9
      comp=Z,41nm,20.9s,baz=56,slow=35
PLCA  Paso Flores      116.24 238  PKP    PKPdf   17 00 12.1 +0.1
      comp=Z,1.3nm,0.9s,baz=354,slow=2.2,SNR=3.6
ASAR  Alice Springs    122.10  95  PKP    PKPdf   17 00 22.2 -1.5
      comp=Z,1.9nm,0.8s,baz=330,slow=1.6,SNR=4.0
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*IDC **21** 16:48:51.5±1.2, 7°.61S×146°.72E, h182^{km}±21^{km}, mb3.4/5, mbtmp3.9/6 Error ellipse: s-maj=45.4km s-min=15.2km az=112.0*

ISC 21 16:48:49.4±0.9, **7°.32S**±0°.09×**146°.5E**±0°.1, **h150**^{km}, **n20**, σ**1^s.47**/21, **mb3.5**/4, **Eastern New Guinea region**

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Code  Station Name         Δ°  AZ°  Phase ID        Time     Res
                                    Op     ISC     h  m  s   ISC
PMG   Port Moresby       2.18 162  P      Pn      16 49 27.3 +0.6
      24nm,0.3s,baz=7.7,slow=5.7,SNR=48
PMG                                S      Sn      16 49 54.8 -0.6
      91nm,0.6s,baz=264,slow=22,SNR=31
PMG   Port Moresby       2.18 162  P      Pn      16 49 27.8 +1.1
COEN  Coen               7.35 206  P      Pn      16 50 36.3 +2.1
QIS   Mount Isa         14.75 206  P      P       16 52 12.9  0.0
KDU   Kakadu            14.79 248  P      Pn      16 52 09.5 -1.8
WRA   Warramunga Arr    17.21 222  P      P       16 52 38.3 -1.8
      0.7nm,0.3s,baz=46,slow=11,SNR=7.9
RMQ   Roma              19.18 174  P      Pn      16 53 04.0 -0.2
KNRA  Kununurra         19.23 243  P      P       16 53 01.2 -1.0
ASAR  Alice Springs     20.25 215  P      P       16 53 11.9 -1.2
      4.1nm,0.4s,baz=49,slow=8.4,SNR=48
ASAR                               S      S       16 56 48.9 -3.3
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	0.7nm,0.8s,baz=32,slow=21,SNR=4.1						
	4.1nm,0.4s						
INKA	**Innaminka**	**21.02**	**194**	P	**P**	**16 53 23.6**	**+2.3**
OOD	**Oodnadatta**	**22.79**	**205**	P	**P**	**16 53 39.4**	**+0.2**
LCRK	**Leigh Creek**	**24.28**	**198**	P	**P**	**16 53 54.0**	**+1.2**
WRKA	**Warakurna**	**24.75**	**223**	P	**P**	**16 53 56.4**	**-0.8**
HTT	**Hallett**	**26.91**	**194**	P	**P**	**16 54 18.6**	**+2.0**
BBOO	**Buckleboo**	**27.15**	**200**	P	**P**	**16 54 19.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**53.43**	**299**	P	**P**	**16 57 55.6**	**+1.4**
	1.2nm,0.5s,baz=123,slow=5.8,SNR=10						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**78.18**	**321**	P	**P**	**17 00 32.7**	**+0.4**
	0.5nm,0.5s,baz=109,slow=6.2,SNR=8.8						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**79.85**	**328**	P	**P**	**17 00 40.8**	**-0.3**
	0.4nm,0.4s,baz=99,slow=8.9,SNR=2.4						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**86.89**	**23**	P	**P**	**17 01 15.7**	**-1.2**
	0.5nm,0.9s,baz=255,slow=6.5,SNR=3.0						
	0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**144.89**	**282**	PKPbc	**PKPbc**	**17 08 08.3**	**-0.9**
	2.2nm,0.6s,baz=73,slow=4.6,SNR=16						

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*TIR **21** 17:12:02.3, 41°.24N×21°.03E, h24^{km}±1^{km}, Md2.6, Ml1.9*

*SKO **21** 17:12:03.1, 41°.21N×21°.02E, h20^{km}*

*ATH **21** 17:12:03.3, 41°.25N×21°.01E, h12^{km}±5^{km}, ML2.1/2, Error ellipse: s-maj=5.8km s-min=1.8km az=220.0*

*THE **21** 17:12:03.5, 41°.26N×21°.04E, h0^{km}±2^{km}, ML2.1/2, Error ellipse: s-maj=2.8km s-min=0.8km az=245.0*

*BEO **21** 17:12:04.6±0.4, 41°.19N×21°.02E, h4^{km}±4^{km}, ML2.0/4*

ISC 21 17:12:03.5±0.9, **41°.23N**±0°.02×**21°.00E**±0°.02, **h17**^{km}±6^{km}, **n38**, σ**1^{s}.32**/66, **2C**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.20**	**231**	*e*Pg	**Pg**	**17 12 08.0**	**-0.2**
OHR				*e*Sg	**Sg**	**17 12 11.5**	**+0.1**
OHR	**Ohrid**	**0.20**	**231**	⇑*i*Pg	**Pb**	**17 12 08.5**	**-0.1**
OHR				*i* Sg	**Sg**	**17 12 12.1**	**+0.7**
OHR				*e*Lg	Lg	17 12 12.2	
	comp=N,377nm,0.5s						
FNA	**Florina**	**0.53**	**147**	P	**Pg**	**17 12 13.5**	**-0.6**
FNA				S	**Sb**	**17 12 21.4**	**-0.4**
FNA				AML	AML	17 12 25.5	
	comp=N,744µm,0.3s						
FNA				AML	AML	17 12 27.2	
	comp=E,638µm,0.3s						
FNA	**Florina**	**0.53**	**147**	P	**Pg**	**17 12 13.5**	**-0.6**
FNA				S	**Sg**	**17 12 21.3**	**+0.1**
	comp=E,345nm,0.3s						
FNA	**Florina**	**0.53**	**147**	⇑*i*Pg	**Pg**	**17 12 13.5**	**-0.6**
FNA				*i* Sg	**Sg**	**17 12 20.2**	**-1.0**
FNA	**Florina**	**0.53**	**147**	P	**Pg**	**17 12 13.5**	**-0.6**
	baz=149						
FNA				S	**Sg**	**17 12 21.1**	**-0.1**
	baz=149						
PHP	**Peshkopia**	**0.61**	**317**	P	**Pg**	**17 12 14.9**	**-0.7**
PHP				S	**Sg**	**17 12 24.4**	**+0.5**
PHP	**Peshkopia**	**0.61**	**317**	P	**Pg**	**17 12 14.6**	**-1.1**
	baz=316						
PHP				S	**Sg**	**17 12 24.3**	**+0.5**
	baz=316						
PHP				AMP			
	comp=N,0.3nm,0.2s,baz=316						
KBN	**Korca**	**0.63**	**195**	P	**Pg**	**17 12 15.2**	**-0.7**
	baz=197						
KBN				S	**Sb**	**17 12 24.8**	**+0.1**
	baz=197						
KBN				AMP			
	comp=N,0.2nm,0.5s,baz=197						
NEST	**Nestorio**	**0.82**	**177**	P	**Pg**	**17 12 18.8**	**-0.7**
NEST				S	**Sb**	**17 12 30.8**	**+0.7**
NEST				AML	AML	17 12 36.4	
	comp=N,221µm,0.4s						
NEST				AML	AML	17 12 36.6	
	comp=E,246µm,0.5s						
NEST	**Nestorio**	**0.82**	**177**	P	**Pg**	**17 12 18.8**	**-0.7**
NEST				S	**Sn**	**17 12 32.5**	**+0.4**
	comp=E,98nm,0.3s						
TIR	**Tirane**	**0.86**	**278**	*e*Pg	**Pg**	**17 12 20.0**	**-0.2**
TIR				*e*Sg	**Sb**	**17 12 33.1**	**+1.8**
TIR	**Tirane**	**0.86**	**278**	P	**Pg**	**17 12 19.8**	**-0.4**
TIR	**Tirane**	**0.86**	**278**	P	**Pg**	**17 12 20.1**	**-0.2**
TIR	**Tirane**	**0.86**	**278**	*i* Pg	**Pg**	**17 12 20.3**	**+0.1**
TIR	**Tirane**	**0.86**	**278**	P	**Pg**	**17 12 19.8**	**-0.4**
	baz=278						
TIR				S	**Sg**	**17 12 31.3**	**-0.3**
	baz=278						
GRG	**Griva**	**1.10**	**104**	P	**Pb**	**17 12 23.6**	**-0.4**
GRG				S	**Sb**	**17 12 38.1**	**0.0**
GRG	**Griva**	**1.10**	**104**	P	**Pb**	**17 12 24.0**	**0.0**
GRG	**Griva**	**1.10**	**104**	*i* Pg	**Pn**	**17 12 24.2**	**+0.1**
GRG				*i* Sg	**Sn**	**17 12 39.3**	**+0.4**
KZN	**Kozani**	**1.10**	**147**	P	**Pb**	**17 12 23.6**	**-0.4**
KZN	**Kozani**	**1.10**	**147**	P	**Pn**	**17 12 25.1**	**+1.0**
LSK	**Leskovik**	**1.12**	**196**	P	**Pg**	**17 12 25.2**	**-0.1**
	baz=197						
LSK				S	**Sn**	**17 12 41.6**	**+1.9**
	baz=197						
LSK				AMP			
	comp=N,0.4nm,0.6s,baz=197						
VAY	**Valandovo**	**1.19**	**85**	*e*Pg	**Pn**	**17 12 25.6**	**+0.3**
VAY				*e*Sg	**Sn**	**17 12 42.1**	**+1.0**
VAY	**Valandovo**	**1.19**	**85**	*i* Pg	**Pg**	**17 12 26.3**	**-0.1**
VAY				*i* Sg	**Sn**	**17 12 41.9**	**+0.8**
VAY				*e*Lg	Lg	17 12 42.1	
	comp=N,6.7nm,0.4s						
BCI	**Bajram Curri**	**1.33**	**329**	P	**Pn**	**17 12 27.9**	**+0.6**
	baz=328						
KNT	**Kendrikon**	**1.44**	**92**	P	**Pb**	**17 12 29.4**	**-0.3**
KNT	**Kendrikon**	**1.44**	**92**	P	**Pb**	**17 12 29.5**	**-0.3**
KNT				S	**Sg**	**17 12 49.9**	**+0.1**
KNT	**Kendrikon**	**1.44**	**92**	*i* Pg	**Pb**	**17 12 29.6**	**-0.2**
KNT				*i* Sg	**Sg**	**17 12 50.0**	**+0.1**
BOSS	**Bosilegrad**	**1.68**	**41**	*e*Pg	**Pg**	**17 12 35.5**	**-0.2**
BOSS				*e*Sg	**Sg**	**17 12 57.9**	**+0.4**
PDG	**Podgorica**	**1.77**	**313**	*e*Pg	**Pg**	**17 12 37.6**	**+0.2**
PDG				*e*Sg	**Sg**	**17 13 02.1**	**+1.7**
IGT	**Igoumenitsa**	**1.77**	**197**	P	**Pb**	**17 12 34.9**	**-0.6**
	baz=198						
IGT				S	**Sg**	**17 12 59.6**	**-1.0**
	baz=198						
SELS	**Selova**	**1.99**	**3**	*e*Pn	**Pb**	**17 12 39.9**	**+0.7**
SJES	**Sjenica**	**2.16**	**340**	*e*Pn	**Pb**	**17 12 41.5**	**-0.8**
STON	**Ston**	**2.95**	**305**	*e*Pn	**Pn**	**17 12 52.2**	**+2.7**
STON				Sn	**Sn**	**17 13 23.6**	**-0.9**
LSTV	**Lastovo**	**3.42**	**298**	*e*Pn	**Pn**	**17 12 59.6**	**+3.6**
LSTV				Sn	**Sn**	**17 13 36.9**	**+0.7**
RICI	**Ricice**	**3.65**	**310**	*e*Pn	**Pn**	**17 12 59.5**	**+0.3**
RICI				Sn	**Sn**	**17 13 37.7**	**-4.2**
KIJV	**Kijevo**	**4.38**	**311**	*e*Pn	**Pn**	**17 13 09.0**	**-0.2**
KIJV				Sn	**Sn**	**17 13 54.1**	**-5.7**
MORI	**Morici**	**4.71**	**306**	*e*Pn	**Pn**	**17 13 14.4**	**+0.6**
MORI				Sn	**Sn**	**17 14 04.6**	**-3.4**

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*IDC **21** 17:16:37.9±0.9, 41°.14N×20°.99E, h0^{km}, mb3.6/8, mbtmp3.6/17, ML3.6/8, MS3.3/32, Error ellipse: s-maj=14.3km s-min=11.9km az=20.0*

*NEIC **21** 17:16:37.9±2.6, 41°.21N±0°.03×21°.08E±0°.04, h13^{km}±4^{km}, mb4.3/16, Mwr4.2/30, ML4.0(SKO), Error ellipse: s-maj=5.6km s-min=2.5km az=136.0*

*NEIC **21** 17:16:37.8, 41°.20N×21°.09E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.43; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-0.51; M$_{r\theta}$-0.36; M$_{\theta\phi}$1.12; M$_{\phi r}$-1.90; Fault plane solution: M$_{0}$2.29000×10^{15} NP1:φ$_{s}$184.36000°, δ83.93000°, λ120.83000°. NP2:φ$_{s}$284.40000°, δ31.36000°, λ11.72000°. Principal axes: T 2.3559, Plg43.0000°, Azm124.0000°; N -0.1452, Plg31.0000°, Azm1.0000°; P -2.2107, Plg32.0000°, Azm249.0000°;*

*SKO **21** 17:16:38.0, 41°.20N×20°.99E, h15^{km}*

*BEO **21** 17:16:39.5±0.3, 41°.17N×21°.01E, h15^{km}±2^{km}, ML3.8/11*

*THE **21** 17:16:39.1, 41°.23N×21°.06E, h0^{km}±2^{km}, ML4.0/9, Error ellipse: s-maj=2.0km s-min=0.8km az=22.0*

*PDG **21** 17:16:39.3±0.6, 41°.22N×21°.04E, h12^{km}, MD4.1/8, ML4.0/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*ATH **21** 17:16:39.0, 41°.24N×21°.03E, h9^{km}±2^{km}, ML4.0/11, Error ellipse: s-maj=2.2km s-min=0.9km az=41.0*

*LDG **21** 17:16:40.3±0.1, 41°.17N×21°.12E, h10^{km}, Ml4.0/17, Error ellipse: s-maj=4.5km s-min=3.1km az=39.0*

ISC 21 17:16:39.3±0.8, **41°.19N**±0°.01×**21°.00E**±0°.01, **h19**^{km}±3^{km}, **n352**, σ**1^{s}.94**/437, **mb4.2**/11, **MS3.3**/22, **28C-15D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.17**	**242**	*e*Pg	**Pg**	**17 16 44.0**	**-0.1**
OHR				*e*Sg	**Sg**	**17 16 47.3**	**0.0**
OHR	**Ohrid**	**0.17**	**242**	⇑*i*Pg	**Pg**	**17 16 44.0**	**-0.1**
OHR				*i* Sg	**Sg**	**17 16 47.2**	**0.0**
OHR				*e*Lg	Lg	17 16 47.4	
	comp=N,88µm,0.4s						
OHR				*e*Lg	Lg	17 16 49.2	
	comp=E,39µm,0.5s						
FNA	**Florina**	**0.50**	**144**	*e*Pg	**Pg**	**17 16 49.0**	**-0.5**
FNA				*e*Sg	**Sb**	**17 16 56.7**	**+0.4**
FNA	**Florina**	**0.50**	**144**	P	**Pg**	**17 16 49.0**	**-0.5**
FNA				S	**Sb**	**17 16 56.8**	**+0.4**
FNA				AML	AML	17 16 59.9	
	comp=E,66805µm,0.5s						
FNA				AML	AML	17 17 01.4	
	comp=N,73298µm,0.4s						
FNA	**Florina**	**0.50**	**144**	P	**Pg**	**17 16 48.9**	**-0.5**
FNA				S	**Sb**	**17 16 56.6**	**+0.3**
	comp=N,33µm,0.4s						
FNA	**Florina**	**0.50**	**144**		**Pg**	**17 16 48.6**	**-0.9**
FNA				Sg	**Sg**	**17 16 55.6**	**-0.6**
FNA	**Florina**	**0.50**	**144**	⇑*i*Pg	**Pg**	**17 16 49.1**	**-0.5**
FNA				*i* Sg	**Sb**	**17 16 56.9**	**+0.6**
KBN	**Korca**	**0.59**	**196**	P	**Pb**	**17 16 50.3**	**-0.6**
KBN				S	**Sg**	**17 16 59.5**	**+0.5**
	comp=N,12µm,0.5s						
KBN	**Korca**	**0.59**	**196**		**Pb**	**17 16 50.2**	**-0.6**
KBN				Sg	**Sb**	**17 16 57.3**	**-1.5**
PHP	**Peshkopia**	**0.65**	**320**	P	**Pb**	**17 16 50.6**	**-1.4**
PHP				S	**Sg**	**17 17 00.9**	**0.0**
NEST	**Nestorio**	**0.78**	**177**	P	**Pb**	**17 16 54.0**	**-0.2**
NEST				S	**Sn**	**17 17 06.1**	**-0.3**
NEST				AML	AML	17 17 11.2	
	comp=N,46842µm,0.4s						
NEST				AML	AML	17 17 12.1	
	comp=E,37455µm,0.4s						
NEST	**Nestorio**	**0.78**	**177**	P	**Pb**	**17 16 53.6**	**-0.6**
NEST				S	**Sn**	**17 17 06.3**	**-0.1**
	comp=E,16µm,0.3s						
SKO	**Skopje**	**0.85**	**23**	*e*Pg	**Pg**	**17 16 55.7**	**-0.3**
SKO				*e*Sg	**Sg**	**17 17 07.2**	**-0.1**
SKO	**Skopje**	**0.85**	**23**	*i* Pg	**Pb**	**17 16 55.4**	**-0.1**
SKO				*i* Sg	**Sg**	**17 17 07.1**	**-0.1**
TIR	**Tirane**	**0.87**	**281**	⇑S	**Sn**	**17 17 08.7**	**+0.2**
TIR	**Tirane**	**0.87**	**281**	*e*Pg	**Pb**	**17 16 55.6**	**-0.1**
TIR				*e*Sg	**Sn**	**17 17 08.6**	**+0.1**
TIR	**Tirane**	**0.87**	**281**	P	**Pb**	**17 16 55.5**	**-0.1**
TIR				S	**Sg**	**17 17 07.8**	**0.0**
TIR				AML	AML	17 17 11.8	
	comp=E,13684µm,0.4s						
TIR				AML	AML	17 17 13.9	
	comp=N,14056µm,0.4s						
TIR	**Tirane**	**0.87**	**281**	P	**Pb**	**17 16 55.2**	**-0.5**
TIR	**Tirane**	**0.87**	**281**		**Pb**	**17 16 55.1**	**-0.6**
TIR				Sg	**Sg**	**17 17 07.7**	**0.0**
TIR	**Tirane**	**0.87**	**281**	*i* Pg	**Pb**	**17 16 55.5**	**-0.2**
PENT	**Pentalofos**	**1.00**	**174**	P	**Pn**	**17 16 58.5**	**+0.2**
PENT				S	**Sn**	**17 17 12.5**	**+0.6**
PENT				AML	AML	17 17 17.2	
	comp=E,13432µm,0.4s						
PENT				AML	AML	17 17 19.6	
	comp=N,5111µm,0.5s						
PENT	**Pentalofos**	**1.00**	**174**	P	**Pn**	**17 16 58.4**	**+0.1**
PENT				S	**Sn**	**17 17 12.9**	**+1.0**
	comp=N,4µm,0.5s						
KZN	**Kozani**	**1.06**	**146**	P	**Pn**	**17 16 59.5**	**+0.3**
KZN				S	**Sg**	**17 17 14.7**	**+0.8**
KZN				AML	AML	17 17 19.0	
	comp=E,12315µm,0.6s						
KZN				AML	AML	17 17 20.9	
	comp=N,9188µm,0.8s						
KZN	**Kozani**	**1.06**	**146**	P	**Pb**	**17 16 59.2**	**+0.1**
LSK	**Leskovik**	**1.08**	**196**	P	**Pg**	**17 17 00.0**	**-0.3**
GRG	**Griva**	**1.09**	**102**	P	**Pb**	**17 16 59.6**	**0.0**
GRG				S	**Sn**	**17 17 13.9**	**-0.2**
GRG				AML	AML	17 17 18.5	
	comp=N,4573µm,0.4s						
GRG				AML	AML	17 17 18.8	
	comp=E,6411µm,0.7s						
GRG	**Griva**	**1.09**	**102**	P	**Pb**	**17 16 59.5**	**0.0**
GRG	**Griva**	**1.09**	**102**	⇑*i*Pg	**Pb**	**17 16 59.5**	**0.0**
GRG				*i* Sg	**Sg**	**17 17 15.4**	**+0.7**
VAY	**Valandovo**	**1.20**	**83**	*e*Pg	**Pb**	**17 17 01.4**	**+0.1**
VAY				*e*Sg	**Sg**	**17 17 18.3**	**+0.1**
VAY	**Valandovo**	**1.20**	**83**	*i* Pg	**Pb**	**17 17 01.4**	**+0.1**
VAY				*i* Sg	**Sg**	**17 17 18.3**	**+0.1**
VAY				*e*Lg	Lg	17 17 21.8	
	comp=E,7µm,1.0s						
VAY				*e*Lg	Lg	17 17 22.1	
	comp=N,2µm,0.7s						
KPRO	**Kipourio**	**1.26**	**167**	P	**Pb**	**17 17 03.0**	**+0.5**
KPRO				S	**Sg**	**17 17 21.0**	**+0.6**
KPRO				AML	AML	17 17 27.9	
	comp=E,12990µm,0.4s						
KPRO				AML	AML	17 17 29.1	
	comp=N,18086µm,0.5s						
KPRO	**Kipourio**	**1.26**	**167**	P	**Pg**	**17 17 03.8**	**0.0**
KPRO				S	**Sg**	**17 17 22.2**	**+1.8**
	comp=N,8µm,0.5s						
VLO	**Vlora**	**1.35**	**238**	P	**Pg**	**17 17 06.0**	**+0.7**
VLO	**Vlora**	**1.35**	**238**		**Pg**	**17 17 05.5**	**+0.2**
KNT	**Kendrikon**	**1.44**	**90**	P	**Pb**	**17 17 05.3**	**-0.2**
KNT	**Kendrikon**	**1.44**	**90**	P	**Pb**	**17 17 05.5**	**+0.1**
KNT				S	**Sg**	**17 17 24.7**	**-1.1**
	comp=N,2µm,0.7s						
KNT	**Kendrikon**	**1.44**	**90**	⇑*i*Pn	**Pb**	**17 17 05.0**	**-0.4**
KNT				*i* Sg	**Sg**	**17 17 27.2**	**+1.3**
SRN	**Sarande**	**1.51**	**210**	P	**Pg**	**17 17 08.3**	**-0.2**
SRN				S	**Sg**	**17 17 30.0**	**+1.8**
ULC	**Ulcinj**	**1.52**	**301**	*i* Pn	**Pb**	**17 17 07.0**	**+0.1**
ULC	**Ulcinj**	**1.52**	**301**	*e*Pg	**Pb**	**17 17 06.9**	**0.0**
ULC				*i* Sg	**Sg**	**17 17 30.1**	**+1.5**
JAN	**Janina**	**1.54**	**184**	P	**Pb**	**17 17 07.5**	**+0.4**
JAN				S	**Sg**	**17 17 28.2**	**-0.8**
JAN				AML	AML	17 17 32.5	
	comp=E,12278µm,0.4s						
JAN				AML	AML	17 17 35.7	
	comp=N,15354µm,0.4s						
JAN	**Janina**	**1.54**	**184**	P	**Pb**	**17 17 07.2**	**+0.1**
JAN				S	**Sg**	**17 17 30.4**	**+1.5**
	comp=N,7µm,0.4s						
THE	**Thessaloniki**	**1.59**	**110**	P	**Pb**	**17 17 07.4**	**-0.7**
THE	**Thessaloniki**	**1.59**	**110**	P	**Pn**	**17 17 07.1**	**+0.7**
THE	**Thessaloniki**	**1.59**	**110**	*i* Sg	**Sb**	**17 17 28.4**	**+0.6**
PVY	**Plav**	**1.60**	**332**	⇑*i*Pn	**Pb**	**17 17 08.6**	**+0.2**
PVY				*i* Sn	**Sg**	**17 17 31.9**	**+0.7**
KASA	**Kassiopi**	**1.65**	**210**	P	**Pb**	**17 17 10.0**	**+0.9**
KASA				S	**Sg**	**17 17 32.0**	**-0.6**
KASA				AML	AML	17 17 39.6	
	comp=E,6287µm,1.0s						
KASA				AML	AML	17 17 40.6	
	comp=N,6290µm,0.4s						
DRME	**Dracevica, Mon**	**1.68**	**307**	*e*Pn	**Pb**	**17 17 09.7**	**+0.1**
DRME	**Dracevica, Mon**	**1.68**	**307**	⇓*i*Pn	**Pb**	**17 17 10.1**	**+0.5**
DRME				*i* Sn	**Sg**	**17 17 33.8**	**+0.2**
HORT	**Hortiatis**	**1.70**	**110**	P	**Pb**	**17 17 09.1**	**-0.9**
HORT	**Hortiatis**	**1.70**	**110**	P	**Pn**	**17 17 08.7**	**+0.7**
BOSS	**Bosilegrad**	**1.71**	**40**	*e*Pg	**Pb**	**17 17 09.6**	**-0.6**
BOSS				*e*Sg	**Sg**	**17 17 34.3**	**-0.3**
IGT	**Igoumenitsa**	**1.73**	**197**	P	**Pg**	**17 17 11.7**	**-0.9**
IGT				S	**Sg**	**17 17 34.1**	**-1.1**
IGT				AML	AML	17 17 38.8	
	comp=N,8206µm,1.2s						
IGT				AML	AML	17 17 39.2	
	comp=E,10579µm,0.5s						
IGT	**Igoumenitsa**	**1.73**	**197**	P	**Pg**	**17 17 11.7**	**-0.9**
IGT				S	**Sg**	**17 17 36.5**	**+1.3**
	comp=E,4µm,0.8s						
KEK	**Kerkira**	**1.73**	**212**	P	**Pb**	**17 17 11.1**	**+0.6**
KEK				S	**Sg**	**17 17 35.0**	**-0.2**
KEK				AML	AML	17 17 38.8	
	comp=N,3105µm,0.4s						
KEK				AML	AML	17 17 40.9	
	comp=E,4258µm,0.4s						
KEK	**Kerkira**	**1.73**	**212**	P	**Pb**	**17 17 10.9**	**+0.4**
KEK				S	**Sg**	**17 17 35.2**	**-0.1**
	comp=E,2µm,0.5s						
KEK	**Kerkira**	**1.73**	**212**		**Pb**	**17 17 10.5**	**0.0**
BARS	**Barje**	**1.74**	**20**	*e*Pg	**Pb**	**17 17 09.6**	**-1.0**
BARS	**Barje**	**1.74**	**20**	*e*Pn	Pg	17 17 25.4	+13
BARS				*e*Sg	**Sg**	**17 17 35.6**	**+0.2**
BARS	**Barje**	**1.74**	**20**	*i* Pn	**Pb**	**17 17 09.7**	**-1.0**
BARS				*i* Sg	**Sg**	**17 17 34.6**	**-0.8**
TYRN	**Tyrnavos**	**1.75**	**147**	P	**Pb**	**17 17 10.4**	**-0.4**
PDG	**Podgorica**	**1.80**	**314**	⇓P	**Pb**	**17 17 12.1**	**+0.5**
PDG				⇓S	**Sb**	**17 17 32.8**	**-0.8**
PDG	**Podgorica**	**1.80**	**314**	*e*Pg	**Pb**	**17 17 12.1**	**+0.5**
PDG				*e*Sg	**Sg**	**17 17 38.0**	**+0.7**
PDG	**Podgorica**	**1.80**	**314**		**Pb**	**17 17 11.2**	**-0.3**
PDG					**Sb**	**17 17 34.8**	**+1.2**
PDG	**Podgorica**	**1.80**	**314**	*e*Pn	**Pb**	**17 17 11.7**	**+0.1**
TTG	**Podgorica**	**1.80**	**314**	⇑*i*Pn	**Pb**	**17 17 11.3**	**-0.3**
TTG				*i* Sn	**Sg**	**17 17 36.9**	**-0.4**
THL	**Klokotos Trika**	**1.80**	**154**	P	**Pb**	**17 17 10.7**	**-0.9**
SOH	**Sokhos**	**1.82**	**101**	P	**Pb**	**17 17 11.3**	**-0.7**
SOH	**Sokhos**	**1.82**	**101**	P	**Pn**	**17 17 10.6**	**+1.0**
SOH	**Sokhos**	**1.82**	**101**	*i* Pn	**Pb**	**17 17 12.0**	**-0.1**
SOH				*i* Sg	**Sg**	**17 17 41.2**	**+3.1**
IVA	**Berane**	**1.87**	**334**	⇑*i*Pn	**Pb**	**17 17 12.3**	**-0.6**
IVA				*i* Sn	**Sg**	**17 17 37.9**	**-1.8**
BUM	**Brajici-Budva**	**1.93**	**306**	⇓*i*Pn	**Pb**	**17 17 13.9**	**+0.1**
BUM				*i* Sn	**Sg**	**17 17 40.4**	**-1.0**
SRS	**Serrai**	**1.96**	**91**	P	**Pn**	**17 17 12.4**	**+0.9**
SRS	**Serrai**	**1.96**	**91**	P	**Pn**	**17 17 12.3**	**+0.8**
SRS	**Serrai**	**1.96**	**91**	*i* Pn	**Pn**	**17 17 12.3**	**+0.8**
KOME	**Kolasin**	**1.99**	**327**	⇑*i*Pn	**Pb**	**17 17 15.1**	**+0.1**
KOME				*i* Sn	**Sb**	**17 17 41.0**	**+1.6**
SELS	**Selova**	**2.03**	**3**	*e*Pn	**Pn**	**17 17 13.5**	**+1.0**
CEME	**Cevo**	**2.06**	**312**	⇓*i*Pn	**Pb**	**17 17 16.0**	**-0.1**
CEME				*i* Sn	**Sb**	**17 17 43.4**	**+2.1**
NVR	**Nevrokopi**	**2.17**	**85**	P	**Pn**	**17 17 15.6**	**+1.2**
VTS	**Vitosha**	**2.20**	**49**	⇓P	**Pn**	**17 17 16.4**	**+1.5**
VTS	**Vitosha**	**2.20**	**49**	Pn	**Pn**	**17 17 15.8**	**+0.9**
VTS				Sn	**Sn**	**17 17 41.8**	**+0.2**
VTS	**Vitosha**	**2.20**	**49**	*i* Pn	**Pn**	**17 17 16.2**	**+1.3**
NKY	**Niksic**	**2.20**	**318**	⇓*i*Pn	**Pb**	**17 17 17.3**	**-1.3**
NKY				*i* Sn	**Sb**	**17 17 46.5**	**+1.0**
SJES	**Sjenica**	**2.21**	**340**	*e*Pn	**Pb**	**17 17 17.4**	**-1.2**
SJES				*e*Sn	**Sn**	**17 17 42.3**	**+0.6**
SJES	**Sjenica**	**2.21**	**340**	*e*Pn	**Pb**	**17 17 17.1**	**-1.5**
SCTE	**Santa Cesarea**	**2.22**	**241**		**Pn**	**17 17 16.2**	**+1.1**
SCTE				Sn	**Sn**	**17 17 43.3**	**+1.3**
HCY	**Herceg Novi**	**2.25**	**305**	*e*Pn	**Pb**	**17 17 18.1**	**-1.2**
HCY	**Herceg Novi**	**2.25**	**305**	⇑*i*Pn	**Pb**	**17 17 17.8**	**-1.5**
HCY				*i* Sn	**Sb**	**17 17 47.8**	**+1.0**
MAKR	**Makrakomi, Fth**	**2.34**	**158**	P	**Pn**	**17 17 18.7**	**+1.9**
MAKR				S	**Sb**	**17 17 47.7**	**-1.7**
EVR	**Evrytania**	**2.35**	**164**	P	**Pb**	**17 17 19.3**	**-1.8**
AGG	**Agios Georgios**	**2.40**	**154**	P	**Pn**	**17 17 19.3**	**+1.8**
AGG	**Agios Georgios**	**2.40**	**154**		**Pn**	**17 17 18.7**	**+1.2**
AGG				Sn	**Sn**	**17 17 48.0**	**+1.7**
LKD2	**Lefkada island**	**2.41**	**186**	P	**Pb**	**17 17 20.6**	**-1.5**
PLE	**Pljevlja**	**2.45**	**331**	⇑*i*Pn	**Pb**	**17 17 20.7**	**-2.1**
PLE				*i* Sn	**Sb**	**17 17 52.1**	**-0.5**
IVAS	**Ivanjica**	**2.47**	**346**	*e*Pn	**Pn**	**17 17 19.2**	**+0.7**
IVAS				*e*Sn	**Sn**	**17 17 49.3**	**+1.2**
TREB	**Trebinje**	**2.49**	**309**	*e*Pn	**Pb**	**17 17 21.6**	**-1.9**
BOVS	**Bovan**	**2.50**	**12**	⇓P	**Pn**	**17 17 19.8**	**+0.9**
BOVS	**Bovan**	**2.50**	**12**	*e*Pn	**Pn**	**17 17 19.5**	**+0.6**
BOVS				*e*Sn	**Sn**	**17 17 50.6**	**+1.8**
BRY	**Bratogost**	**2.50**	**314**	*e*Pn	**Pb**	**17 17 22.4**	**-1.3**
BRY	**Bratogost**	**2.50**	**314**	⇑*i*Pn	**Pn**	**17 17 21.3**	**+2.2**
BRY				*i* Sn	**Sb**	**17 17 54.1**	**-0.1**
UPM	**Unac-Piva**	**2.54**	**323**	*e*Pn	**Pb**	**17 17 23.8**	**-0.6**
UPM	**Unac-Piva**	**2.54**	**323**	⇓*i*Pn	**Pn**	**17 17 21.9**	**+2.2**
UPM				*i* Sn	**Sb**	**17 17 54.1**	**-1.2**
DBRK	**Dubrovnik**	**2.59**	**306**	*e*Pn	**Pn**	**17 17 22.3**	**+2.1**
DBRK				Sn	**Sn**	**17 17 51.5**	**+0.5**
GRUS	**Gruza**	**2.71**	**356**	*e*Pn	**Pn**	**17 17 23.4**	**+1.7**
RUDO	**Rudo**	**2.71**	**334**	*e*Pn	**Pn**	**17 17 24.4**	**+2.6**
BLKB	**Belogradchik**	**2.73**	**27**	⇑P	**Pn**	**17 17 23.8**	**+1.7**
ZAGS	**Zajecar**	**2.78**	**19**	*e*Pn	**Pn**	**17 17 23.4**	**+0.7**
EFP	**Efpalio**	**2.85**	**165**	P	**Pn**	**17 17 26.4**	**+2.7**
BBLS	**Lazići**	**2.92**	**337**	*e*Pn	**Pn**	**17 17 27.2**	**+2.4**
BBLS	**Lazići**	**2.92**	**337**	*e*Pn	**Pn**	**17 17 26.3**	**+1.5**
STON	**Ston**	**2.98**	**306**	*e*Pn	**Pn**	**17 17 27.7**	**+2.3**
STON				Sn	**Sn**	**17 18 00.1**	**-0.4**
DIVS	**Divibare**	**3.00**	**346**	*e*Pn	**Pn**	**17 17 27.2**	**+1.3**
DIVS				*e*Sn	**Sn**	**17 18 01.7**	**+0.4**
DIVS	**Divibare**	**3.00**	**346**	Pn	**Pn**	**17 17 27.1**	**+1.2**
DIVS				Sn	**Sn**	**17 18 02.5**	**+1.2**
DIVS	**Divibare**	**3.00**	**346**	*e*Pn	**Pn**	**17 17 26.3**	**+0.4**
TRUS	**Trudelj**	**3.06**	**352**	*e*Pn	**Pn**	**17 17 27.9**	**+1.2**
SVIS	**Svilajnac**	**3.08**	**3**	*e*Pn	**Pn**	**17 17 28.3**	**+1.5**
KUBS	**Kucevo**	**3.26**	**9**	*e*Pn	**Pn**	**17 17 29.1**	**-0.3**
MATE	**Matera**	**3.29**	**262**	⇓P	**Pn**	**17 17 31.2**	**+1.4**
RDO	**Rodhopi**	**3.43**	**89**	Pn	**Pn**	**17 17 32.5**	**+0.8**
RDO					**Sb**	**17 18 16.9**	**-3.7**
LSTV	**Lastovo**	**3.44**	**299**	*e*Pn	**Pn**	**17 17 33.5**	**+1.7**
LSTV				Sn	**Sn**	**17 18 11.2**	**-0.8**
MAKA	**Makarska**	**3.62**	**307**	*e*Pn	**Pn**	**17 17 36.1**	**+1.9**
MAKA				Sn	**Sn**	**17 18 17.0**	**+0.6**
MDVR	**Moldovita**	**3.63**	**8**	⇑P	**Pn**	**17 17 35.5**	**+1.0**
RICI	**Ricice**	**3.67**	**310**	*e*Pn	**Pn**	**17 17 37.4**	**+2.4**
RICI				Sn	**Sn**	**17 18 17.4**	**-0.4**
TIP	**Timpagrande**	**3.82**	**240**	⇑P	**Pn**	**17 17 38.4**	**+1.4**
TIP	**Timpagrande**	**3.82**	**240**		**Pn**	**17 17 37.7**	**+0.6**
ALN	**Alexandroupoli**	**3.83**	**93**		**Pn**	**17 17 35.0**	**-2.2**
HERR	**Herculane**	**3.83**	**15**	⇑P	**Pn**	**17 17 38.4**	**+1.2**
HVAR	**Hvar**	**3.92**	**302**	*e*Pn	**Pn**	**17 17 40.2**	**+1.9**
HVAR				Sn	**Sn**	**17 18 24.3**	**+0.5**
SGRT	**San Giovanni R**	**3.99**	**280**	Pn	**Pn**	**17 17 39.9**	**+0.5**
SGRT				Sn	**Sn**	**17 18 23.8**	**-1.8**
SRKY	**Kupres RS**	**4.03**	**317**	*e*Pn	**Pn**	**17 17 43.9**	**+3.8**
FRGS	**Fruska Gora**	**4.06**	**348**	⇓P	**Pn**	**17 17 41.6**	**+1.3**
FRGS	**Fruska Gora**	**4.06**	**348**	*e*Pn	**Pn**	**17 17 41.4**	**+1.0**
FRGS	**Fruska Gora**	**4.06**	**348**	*e*Pn	**Pn**	**17 17 41.3**	**+0.9**
ITM	**Ithomi**	**4.07**	**169**		**Pn**	**17 17 41.8**	**+1.3**
CUC	**Castrocucco**	**4.12**	**255**	Pn	**Pn**	**17 17 42.7**	**+1.5**
CUC				Sn	**Sn**	**17 18 29.3**	**+0.4**
MGRS	**Mrkonjic Grad**	**4.32**	**320**	*e*Pn	**Pn**	**17 17 47.3**	**+3.3**
GZR	**Gura Zlata**	**4.40**	**17**	⇑P	**Pn**	**17 17 46.7**	**+1.7**
KIJV	**Kijevo**	**4.40**	**311**	*e*Pn	**Pn**	**17 17 47.8**	**+2.7**
KIJV				Sn	**Sn**	**17 18 36.3**	**+0.5**
BZS	**Buzias**	**4.45**	**6**	⇑P	**Pn**	**17 17 46.3**	**+0.6**
BLY	**Banja Luka**	**4.53**	**323**	*e*Pn	**Pn**	**17 17 50.4**	**+3.7**
ZIRJ	**Zirje**	**4.66**	**304**	*e*Pn	**Pn**	**17 17 50.5**	**+1.9**
ZIRJ				Sn	**Sn**	**17 18 41.5**	**-0.6**
LOT	**Lotru**	**4.71**	**25**	⇓P	**Pn**	**17 17 50.5**	**+1.1**
MORI	**Morici**	**4.74**	**306**	*e*Pn	**Pn**	**17 17 52.2**	**+2.7**
MORI				Sn	**Sn**	**17 18 43.7**	**-0.2**
A252A	**Venje**	**4.83**	**333**	*e*Pn	**Pn**	**17 17 52.9**	**+2.0**
A252A				Sn	**Sn**	**17 18 47.3**	**+1.1**
PAOL	**Paolisi**	**4.86**	**270**		**Pn**	**17 17 53.2**	**+1.8**
PAOL				Sn	**Sn**	**17 18 47.0**	**-0.1**
CEL	**Celeste**	**4.90**	**235**		**Pn**	**17 17 52.6**	**+0.6**
CEL				Sn	**Sn**	**17 18 46.7**	**-1.4**
UDBI	**Udbina**	**5.09**	**313**	*e*Pn	**Pn**	**17 17 57.2**	**+2.7**
UDBI				Sn	**Sn**	**17 18 52.4**	**-0.4**
VOIR		**5.17**	**34**	⇑P	**Pn**	**17 17 58.5**	**+2.8**
DUGI	**Dugi Otok**	**5.20**	**305**	*e*Pn	**Pn**	**17 17 57.7**	**+1.7**
DUGI				Sn	**Sn**	**17 18 54.7**	**-0.7**
MORH	**Mrgy, Hungar**	**5.30**	**342**	⇑P	**Pn**	**17 17 59.0**	**+1.6**
MORH	**Mrgy, Hungar**	**5.30**	**342**	*e*Pn	**Pn**	**17 17 58.5**	**+1.1**
MORH	**Mrgy, Hungar**	**5.30**	**342**	P	**Pn**	**17 17 58.8**	**+1.4**
VIRC	**Vir**	**5.36**	**307**	*e*Pn	**Pn**	**17 17 59.7**	**+1.5**
VIRC				Sn	**Sn**	**17 18 59.2**	**-0.2**
PLIT	**Plitvice**	**5.39**	**315**	*e*Pn	**Pn**	**17 18 01.0**	**+2.3**
PLIT				Sn	**Sn**	**17 19 00.9**	**+0.7**
MOSL	**Moslavina**	**5.39**	**326**	*e*Pn	**Pn**	**17 18 00.2**	**+1.6**
MOSL				Sn	**Sn**	**17 18 59.8**	**-0.4**
MLR	**Muntele Rosu**	**5.61**	**38**	⇑P	**Pn**	**17 18 03.9**	**+2.1**
MLR	**Muntele Rosu**	**5.61**	**38**	Pn	**Pn**	**17 18 04.7**	**+2.9**
	comp=E,0.8nm,0.3s,baz=195,slow=12,SNR=6.9						
MLR				Sn	**Sn**	**17 19 09.1**	**+3.4**
	comp=E,0.7nm,0.3s,baz=195,slow=12,SNR=2.1						
MLR				LR	LR	17 20 46.5	
	comp=E,304nm,19.3s,baz=222,slow=44						
	comp=E,1.8nm,0.4s						
MLR	**Muntele Rosu**	**5.61**	**38**		**Pn**	**17 18 03.1**	**+1.3**
DRGR		**5.74**	**12**	⇑P	**Pn**	**17 18 04.9**	**+1.5**
DOPR	**Dopca**	**5.74**	**32**	⇑P	**Pn**	**17 18 05.6**	**+2.1**
RABC	**Rab**	**5.78**	**310**	*e*Pn	**Pn**	**17 18 05.7**	**+1.7**
RABC				Sn	**Sn**	**17 19 08.6**	**-1.0**
AQU	**L'Aquila**	**5.79**	**284**	Pn	**Pn**	**17 18 04.2**	**-0.1**
A250A	**Rusevo Krmpots**	**5.91**	**313**	*e*Pn	**Pn**	**17 18 08.0**	**+2.1**
A250A				Sn	**Sn**	**17 19 13.4**	**+0.4**
COVR	**Voineasa-Covas**	**6.00**	**37**	⇑P	**Pn**	**17 18 10.0**	**+3.0**

NRCA	**Norcia**	**6.10**	**288**		**Pn**	**17 18 10.3**	**+1.9**
TIH	**Tihany**	**6.13**	**340**	P	**Pn**	**17 18 11.6**	**+2.9**
CRES	**Cresnjev**	**6.14**	**321**	ePn	**Pn**	**17 18 10.8**	**+1.9**
HARR	**Harsova**	**6.18**	**53**	⇑P	**Pn**	**17 18 12.2**	**+2.8**
PLOR	**Plostina**	**6.21**	**40**	⇓P	**Pn**	**17 18 13.1**	**+3.2**
VRI	**Vrincioaia**	**6.26**	**40**	⇑P	**Pn**	**17 18 13.2**	**+2.6**
SMRN	**Sveta Marina**	**6.31**	**310**	ePn	**Pn**	**17 18 12.9**	**+1.7**
SMRN				Sn	**Sn**	**17 19 21.7**	**-1.0**
TIRR	**Tirgusor**	**6.36**	**57**	⇑P	**Pn**	**17 18 14.7**	**+2.8**
TIRR	**Tirgusor**	**6.36**	**57**	⇑P	**Pn**	**17 18 14.7**	**+2.8**
TIRR	**Tirgusor**	**6.36**	**57**		**Pn**	**17 18 09.6**	**-2.2**
MPLH	**Magyarpolny**	**6.47**	**339**	P	**Pn**	**17 18 17.1**	**+3.7**
BRJN	**Brijuni**	**6.48**	**307**	ePn	**Pn**	**17 18 14.8**	**+1.3**
BRJN				Sn	**Sn**	**17 19 25.5**	**-1.3**
CEY	**Cerknica**	**6.59**	**316**	ePn	**Pn**	**17 18 17.4**	**+2.2**
MURB	**Monte Urbino**	**6.62**	**291**		**Pn**	**17 18 16.8**	**+1.2**
IDI	**Anoyia**	**6.64**	**151**	Pn	**Pn**	**17 18 17.1**	**+1.2**
	comp=E,0.7nm,0.3s,baz=321,slow=10,SNR=0.8						
IDI				Sn	**Sn**	**17 19 33.5**	**+2.5**
	comp=E,2.2nm,0.3s,baz=316,slow=20,SNR=2.5						
	comp=E,2.4nm,0.3s						
IDI	**Anoyia**	**6.64**	**151**	Pn	**Pn**	**17 18 15.7**	**-0.2**
SKDS	**Skadanscina**	**6.70**	**313**	ePn	**Pn**	**17 18 18.2**	**+1.6**
LJU	**Ljubljana**	**6.75**	**318**	ePn	**Pn**	**17 18 19.1**	**+1.8**
EGYH	**Egyhazaskeszo**	**6.76**	**338**	P	**Pn**	**17 18 20.9**	**+3.5**
PSZ	**Piszkesteto**	**6.77**	**354**	⇓P	**Pn**	**17 18 19.6**	**+2.0**
PSZ	**Piszkesteto**	**6.77**	**354**	Pn	**Pn**	**17 18 18.7**	**+1.1**
PSZ	**Piszkesteto**	**6.77**	**354**	P	**Pn**	**17 18 19.2**	**+1.6**
SOKA	**Soboth**	**6.97**	**324**	ePn	**Pn**	**17 18 22.6**	**+2.2**
	comp=E,7.4nm,0.5s,SNR=11						
SOKA				i Sn	**Sn**	**17 19 39.6**	**+0.5**
	comp=E,6.4nm,0.6s						
CLTB	**Caltabellotta**	**7.02**	**242**	Pn	**Pn**	**17 18 22.5**	**+1.4**
OBKA	**Obir**	**7.07**	**321**	ePn	**Pn**	**17 18 25.0**	**+3.3**
	comp=E,9.2nm,0.6s						
OBKA				eSn	**Sn**	**17 19 46.6**	**+5.1**
	comp=E,14nm,0.5s						
BUR09	**Bucovina Ar. S**	**7.09**	**24**	Pn	**Pn**	**17 18 20.8**	**-1.3**
BUR03	**Bucovina Ar. S**	**7.09**	**24**	Pn	**Pn**	**17 18 19.5**	**-2.6**
BUR01	**Bucovina Ar. S**	**7.10**	**24**	⇓P	**Pn**	**17 18 24.7**	**+2.6**
BUR01	**Bucovina Ar. S**	**7.10**	**24**	Pn	**Pn**	**17 18 21.1**	**-1.0**
BURAR	**Bucovina Array**	**7.10**	**24**	Pn	**Pn**	**17 18 21.3**	**-0.9**
BUR04	**Bucovina Ar. S**	**7.10**	**24**	Pn	**Pn**	**17 18 21.8**	**-0.4**
BUR02	**Bucovina Ar. S**	**7.10**	**24**	Pn	**Pn**	**17 18 22.6**	**+0.4**
BUR05	**Bucovina Ar. S**	**7.12**	**24**	Pn	**Pn**	**17 18 23.8**	**+1.4**
BUR08	**Bucovina Ar. S**	**7.12**	**24**		**Pn**	**17 18 20.9**	**-1.6**
BUR08	**Bucovina Ar. S**	**7.12**	**24**	Pn	**Pn**	**17 18 20.6**	**-1.9**
BUR07	**Bucovina Ar. S**	**7.13**	**24**	Pn	**Pn**	**17 18 19.3**	**-3.3**
ARSA	**Arzberg**	**7.22**	**329**	i Pn	**Pn**	**17 18 28.3**	**+4.6**
	comp=E,3.7nm,0.5s						
ARSA				i Sn	**Sn**	**17 19 44.8**	**-0.4**
	comp=E,4.6nm,0.5s						
KECS	**Kecovo**	**7.30**	**357**	ePN	**Pn**	**17 18 27.2**	**+2.3**
BORA	**Eskisehir**	**7.32**	**97**	Pn	Pn	17 18 19.4	-5.8
KARP	**Karpathos**	**7.43**	**137**	Pn	**Pn**	**17 18 24.5**	**-2.1**
VYHS	**Vyhne**	**7.46**	**349**	ePN	**Pn**	**17 18 30.0**	**+2.9**
VYHS				eSN	**Sn**	**17 19 50.3**	**-0.8**
ARG	**Arkhangelos**	**7.46**	**129**	Pn	**Pn**	**17 18 24.2**	**-2.9**
OSSC	**Osservatorio P**	**7.59**	**291**		**Pn**	**17 18 28.9**	**+0.1**
MODS	**Modra-Piesok**	**7.65**	**341**	ePN	**Pn**	**17 18 33.5**	**+3.8**
MODS				eSN	**Sn**	**17 19 55.6**	**-0.2**
CONA	**Conrad Observa**	**7.67**	**333**	ePn	Pn	17 18 34.7	+4.7
	comp=E,1.6nm,0.5s						
CASP	**Castiglione de**	**7.71**	**285**	Pn	**Pn**	**17 18 29.3**	**-1.2**
CRVS	**Cervenica-Dubn**	**7.72**	**2**	ePN	**Pn**	**17 18 32.7**	**+2.1**
KOLS	**Kolonicke sedl**	**7.80**	**6**	ePN	Pn	17 18 36.7	+5.1
STAL	**STALIGIAL**	**7.85**	**313**		**Pn**	**17 18 33.3**	**+0.9**
TEOL	**Teolo**	**7.98**	**305**		**Pn**	**17 18 33.5**	**-0.6**
JAVC	**Velka Javorina**	**8.02**	**344**	ePN	**Pn**	**17 18 37.9**	**+3.1**
MOA	**Molln**	**8.21**	**326**	ePn	**Pn**	**17 18 40.6**	**+3.2**
	comp=E,2.5nm,0.3s						
MOA				eSn	**Sn**	**17 20 13.2**	**+3.7**
	comp=E,5.3nm,0.6s						
ABTA	**Abfaltersbach**	**8.26**	**315**	ePn	**Pn**	**17 18 40.6**	**+2.6**
	comp=E,2.3nm,0.2s,SNR=8.0						
ABTA				eSn	**Sn**	**17 20 10.3**	**-0.5**
	comp=E,30nm,0.9s						
CTI	**Castel Tesino**	**8.34**	**309**	Pn	**Pn**	**17 18 38.8**	**-0.4**
VLC	**Villacollemand**	**8.36**	**294**	Pn	**Pn**	**17 18 37.7**	**-1.7**
BIOA	**Bad Ischl, Aus**	**8.36**	**323**	ePn	Pn	17 18 44.2	+4.8
	SNR=8.9						
KRUC	**Moravsky**	**8.52**	**339**	ePN	**Pn**	**17 18 44.4**	**+2.9**
PRMA	**PARMA**	**8.61**	**298**	Pn	**Pn**	**17 18 42.0**	**-0.7**
VRAC	**Vranov**	**8.69**	**341**	Pn	**Pn**	**17 18 47.4**	**+3.5**
	comp=E,0.3nm,0.3s,baz=149,slow=10,SNR=3.9						
	comp=E,1.6nm,0.5s						
VRAC	**Vranov**	**8.69**	**341**	ePN	**Pn**	**17 18 47.1**	**+3.2**
SALO	**Salr**	**8.81**	**304**	Pn	**Pn**	**17 18 45.1**	**-0.4**
MORC	**Moravsky Berou**	**8.92**	**345**	Pn	**Pn**	**17 18 45.9**	**-1.3**
MORC	**Moravsky Berou**	**8.92**	**345**	ePN	**Pn**	**17 18 50.8**	**+3.7**
MSSA	**Maissana**	**9.00**	**294**	Pn	**Pn**	**17 18 49.5**	**+1.2**
VSL	**Villasalto**	**9.03**	**263**	Pn	**Pn**	**17 18 46.5**	**-2.1**
WTTA	**Wattenberg**	**9.05**	**315**	ePn	**Pn**	**17 18 51.5**	**+2.5**
	comp=E,2.1nm,0.2s,SNR=5.9						
WTTA				eSn	**Sn**	**17 20 30.2**	**-0.2**
	comp=E,24nm,0.8s						
PGF	**Pioggiola**	**9.05**	**283**	ePn	**Pn**	**17 18 52.2**	**+3.2**
PGF				eSn	**Sn**	**17 20 24.6**	**-5.8**
	comp=E,8.5nm,0.8s						
OJC	**Ojcow**	**9.07**	**355**	Pn	**Pn**	**17 18 48.1**	**-0.9**
WATA	**Walderalm**	**9.13**	**315**	i Pn	**Pn**	**17 18 53.6**	**+3.5**
	comp=E,10nm,0.4s						
WATA				eSn	**Sn**	**17 20 33.8**	**+1.6**
	comp=E,17nm,0.7s						
GED7	**GERESS Array S**	**9.21**	**328**	Pn	**Pn**	**17 18 50.1**	**-0.9**
GED6	**GERESS Array S**	**9.21**	**328**	Pn	**Pn**	**17 18 50.3**	**-0.8**
GED8	**GERESS Array S**	**9.21**	**329**	Pn	**Pn**	**17 18 50.4**	**-0.7**
GEC6	**GERESS Array S**	**9.21**	**328**	Pn	**Pn**	**17 18 50.0**	**-1.1**
GEC7	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 50.4**	**-0.8**
GEB5	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.9**	**-1.4**
GEC5	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.7**	**-1.5**
GED9	**GERESS Array S**	**9.22**	**329**	Pn	**Pn**	**17 18 49.7**	**-1.5**
GEB4	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.7**	**-1.5**
GEA1	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 50.2**	**-1.1**
GEA3	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.6**	**-1.7**
GED5	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.9**	**-1.4**
GEA0	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 50.6**	**-0.7**
GEB1	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.7**	**-1.5**
GEC1	**GERESS Array S**	**9.22**	**328**	Pn	**Pn**	**17 18 49.9**	**-1.4**
GEC2	**GERESS Array S**	**9.23**	**328**		**Pn**	**17 18 51.0**	**-0.4**
GERES	**GERESS Array B**	**9.23**	**328**	Pn	**Pn**	**17 18 54.4**	**+3.1**
	comp=E,0.3nm,0.3s,baz=151,slow=14,SNR=11						
	comp=E,0.9nm,0.6s						
GERES	**GERESS Array B**	**9.23**	**328**		**Pn**	**17 18 50.1**	**-1.2**
SQTA	**Sankt Quirin**	**9.26**	**314**	ePn	**Pn**	**17 18 54.7**	**+3.0**
	comp=E,12nm,0.5s,SNR=13						
SQTA				eSn	**Sn**	**17 20 38.6**	**+3.2**
	comp=E,8.6nm,0.5s						
MOTA	**Moosalm**	**9.39**	**314**	i Pn	**Pn**	**17 18 56.4**	**+2.8**
	comp=E,5.6nm,0.4s,SNR=5.8						
MOTA				i Sn	**Sn**	**17 20 38.2**	**-0.4**
	comp=E,45nm,1.0s						
FETA	**Feichten**	**9.40**	**312**	i Pn	**Pn**	**17 18 56.3**	**+2.5**
	comp=E,4.9nm,0.6s						
FETA				eSn	**Sn**	**17 20 38.7**	**-0.3**
	comp=E,9.9nm,0.8s						
KHC	**Kasperske Hory**	**9.51**	**329**	Pn	**Pn**	**17 18 52.7**	**-2.4**
KHC	**Kasperske Hory**	**9.51**	**329**	ePN	**Pn**	**17 18 58.1**	**+3.0**
KHC				eSN	**Sn**	**17 20 39.9**	**-1.5**
BR106	**Keskin Array S**	**9.73**	**94**		**Pn**	**17 18 55.4**	**-2.9**
BR105	**Keskin Array S**	**9.73**	**95**	Pn	**Pn**	**17 18 57.8**	**-0.5**
BRTR	**Keskin Array B**	**9.75**	**94**	Pn	**Pn**	**17 19 00.4**	**+1.8**
	comp=E,0.6nm,0.7s,baz=300,slow=12,SNR=2.6						
BRTR				LR	LR	17 22 53.7	
	comp=E,176nm,20.3s,baz=295,slow=39						
BR103	**Keskin Array S**	**9.76**	**95**	Pn	**Pn**	**17 18 57.4**	**-1.4**
DAVOX	**Davos/Dischmat**	**9.76**	**309**	Pn	**Pn**	**17 19 01.3**	**+2.5**
	comp=E,0.9nm,0.3s,baz=151,slow=14,SNR=12						
DAVOX				Sn	**Sn**	**17 20 47.5**	**-0.4**
	comp=E,0.5nm,0.3s,baz=106,slow=17,SNR=4.0						
DAVOX				LR	LR	17 23 18.5	
	comp=E,189nm,18.0s,baz=81,slow=41						
	comp=E,2.1nm,0.3s						
TUE	**Stuetta**	**9.93**	**306**	Pn	**Pn**	**17 19 01.5**	**+0.4**
SBF	**Sospel**	**10.36**	**289**	ePn	**Pn**	**17 19 09.3**	**+2.5**
SBF				eSn	**Sn**	**17 20 56.5**	**-5.9**
	comp=E,7.8nm,0.7s						
KEST	**Kesra**	**10.63**	**243**	LR	LR	17 24 16.1	
	comp=E,155nm,18.7s,baz=322,slow=43						
LMR	**La Mourre**	**10.95**	**286**	eP	Pn	17 19 21.3	+6.5
MBDF	**Montbardon**	**11.01**	**293**	ePn	**Pn**	**17 19 19.2**	**+3.4**
MBDF				eSn	**Sn**	**17 21 12.2**	**-6.1**
	comp=E,10nm,0.7s						
AKASG	**Malin Array Be**	**11.10**	**28**	LR	LR	17 23 57.2	
	comp=E,58nm,18.4s,baz=217,slow=39						
SENIN	**Lac Senin/Sane**	**11.17**	**302**	Pn	**Pn**	**17 19 17.4**	**-0.7**
LPG	**La Plagne**	**11.23**	**297**	ePn	**Pn**	**17 19 21.9**	**+3.0**
LPG				eSn	**Sn**	**17 21 18.2**	**-5.8**
	comp=E,22nm,0.8s						
LPL	**La Plagne**	**11.25**	**297**	ePn	**Pn**	**17 19 21.2**	**+2.1**
LPL	**La Plagne**	**11.25**	**297**	eP	Pn	17 19 27.8	+8.7
LPL				eSn	**Sn**	**17 21 17.3**	**-7.0**
	comp=E,18nm,0.8s						
STU	**Stuttgart**	**11.27**	**316**	Pn	**Pn**	**17 19 17.6**	**-1.7**
BFO	**Black Forest**	**11.48**	**313**	Pn	**Pn**	**17 19 21.3**	**-0.9**
CLL	**Collm**	**11.53**	**334**	Pn	**Pn**	**17 19 23.6**	**+1.0**
CLL	**Collm**	**11.53**	**334**	ePn	Pn	17 19 28.0	+5.3
CLL				eSn	Sn	17 21 08.0	-23
CLL				eSg		17 22 56.0	
CLL				Lmax		17 24 00.0	
CSS	**Mathiatis**	**11.53**	**119**	Pn	**Pn**	**17 19 24.2**	**+1.3**
ORIF	**Oris-en-Rattie**	**11.67**	**294**	ePn	**Pn**	**17 19 27.8**	**+3.0**
ORIF				eSn	**Sn**	**17 21 29.1**	**-5.4**
	comp=E,9.3nm,0.8s						
SMRF	**Simiane la Rot**	**11.71**	**289**	eP	Pn	17 19 34.8	+10
CABF	**La Chapelle**	**12.04**	**302**	ePn	**Pn**	**17 19 32.7**	**+2.9**
CABF				eSn	**Sn**	**17 21 37.2**	**-6.2**
	comp=E,12nm,0.9s						
HINF	**Hinteralfeld**	**12.07**	**308**	ePn	**Pn**	**17 19 33.8**	**+3.7**
HINF				eSn	**Sn**	**17 21 37.1**	**-7.0**
	comp=E,13nm,0.9s						
HINF				eSg		17 22 56.9	
	comp=E,1.6nm,0.5s						
ECH	**Echery**	**12.08**	**310**	Pn	**Pn**	**17 19 28.7**	**-1.7**
CDF	**Champ du Feu**	**12.12**	**311**	ePn	**Pn**	**17 19 33.9**	**+3.0**
CDF				eSn	**Sn**	**17 21 38.1**	**-7.3**
CDF				eSg		17 22 59.4	
	comp=E,9.8nm,0.8s						
HAU	**Haudompre**	**12.46**	**308**	ePn	**Pn**	**17 19 38.5**	**+3.1**
HAU				eSn	**Sn**	**17 21 46.8**	**-6.8**
	comp=E,59nm,1.6s						
HAU				eSg		17 23 09.4	
	comp=E,0.8nm,0.2s						
VIVF	**Saint-Julien-l**	**12.49**	**292**	eSn	**Sn**	**17 21 49.2**	**-5.3**
	comp=E,20nm,1.3s						
SSB	**Saint Sauveur**	**12.67**	**294**	Pn	**Pn**	**17 19 36.8**	**-1.7**
PAGF	**Fort de Pagny**	**13.08**	**309**	ePn	**Pn**	**17 19 47.0**	**+3.0**
MEZF	**Maizieres J'vi**	**13.45**	**308**	ePn	**Pn**	**17 19 52.5**	**+3.5**
SMF	**Signal de Mont**	**13.51**	**300**	ePn	**Pn**	**17 19 51.3**	**+1.5**
SMF				eSn	Sn	17 22 10.5	-8.7
	comp=E,3.4nm,0.4s						
LOR	**Lormes**	**13.70**	**302**	ePn	**Pn**	**17 19 55.6**	**+3.2**
	baz=119						
LOR				eSn	**Sn**	**17 22 16.1**	**-7.8**
	comp=E,1.9nm,0.4s						
SSF	**Saint Saulge**	**13.86**	**301**	ePn	**Pn**	**17 19 57.3**	**+2.8**
AVF	**Avril sur Loir**	**13.87**	**300**	ePn	**Pn**	**17 19 57.6**	**+2.9**
MMAI	**Mount Meron Ar**	**14.09**	**121**	LR	LR	17 26 24.7	
	comp=E,153nm,19.4s,baz=76,slow=42						
BGF	**Bois d'Agland**	**14.14**	**298**	ePn	**P**	**17 20 02.8**	**-3.1**
TCF	**Toulx Ste Croi**	**14.49**	**297**	eP	**P**	**17 20 12.2**	**+2.3**
ASF	**Jabal al Asfar**	**15.59**	**120**	Pn	**P**	**17 20 23.0**	**+0.8**
	comp=E,0.2nm,0.3s,baz=281,slow=11,SNR=6.7						
EIL	**Elat**	**16.15**	**131**	Pn	**P**	**17 20 29.4**	**+1.1**
	comp=E,0.4nm,0.3s,baz=88,slow=8.8,SNR=5.0						
KBZ	**Khabaz**	**16.36**	**74**	Pn	**P**	**17 20 31.1**	**+0.6**
	comp=E,0.1nm,0.3s,baz=302,slow=8.0,SNR=2.1						
KBZ				LR	LR	17 28 19.7	
	comp=E,43nm,21.0s,baz=245,slow=43						
	comp=E,2.2nm,1.0s						
LDF	**La Druitiere**	**16.66**	**303**	ePn	**P**	**17 20 36.6**	**+2.8**
GNI	**Garni**	**18.04**	**85**	LR	LR	17 27 49.2	
	comp=E,41nm,18.4s,baz=264,slow=37						
ESDC	**Sonseca Array**	**19.05**	**274**	P	**Pn**	**17 21 01.5**	**+0.4**
	comp=E,0.1nm,0.3s,baz=78,slow=9.5,SNR=5.0						
ESDC				LR	LR	17 28 48.3	
	comp=E,136nm,18.4s,baz=112,slow=38						
	comp=E,0.7nm,0.8s						
ESDC	**Sonseca Array**	**19.05**	**274**	P	**P**	**17 21 00.5**	**+0.2**
HFS	**Hagfors**	**19.50**	**349**	P	**Pn**	**17 21 07.6**	**+1.3**
	comp=E,0.2nm,0.3s,baz=204,slow=12,SNR=1.8						
HFS				LR	LR	17 29 04.6	
	comp=E,50nm,18.8s,baz=156,slow=38						
	comp=E,0.4nm,0.5s						
NC602	**NORSAR Array S**	**20.42**	**347**	P	**P**	**17 21 13.7**	**-1.3**
NC602				IAmb	IAmb	17 21 47.7	
	comp=Z,12nm,1.2s						
NC605	**NORSAR Array S**	**20.48**	**346**	P	**P**	**17 21 15.4**	**-0.2**
FINES	**FINESS Array B**	**20.52**	**7**	P	**P**	**17 21 17.1**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=180,slow=11,SNR=6.8						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**20.52**	**7**	P	**P**	**17 21 16.4**	**+0.4**
FIA1	**FINESS Array S**	**20.52**	**7**	P	**P**	**17 21 14.1**	**-2.0**
FIA1				IAmb	IAmb	17 21 36.9	
	comp=Z,12nm,1.3s						
NC405	**NORSAR Array S**	**20.74**	**347**	P	**P**	**17 21 18.1**	**-0.4**
NC405				IAmb	IAmb	17 21 51.9	
	comp=Z,45nm,1.6s						
NB2	**NORSAR Subarra**	**20.76**	**347**	P	**P**	**17 21 17.7**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=159,slow=11						
NOA	**NORSAR Array B**	**20.76**	**347**	P	**P**	**17 21 18.9**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=162,slow=10,SNR=2.3						
NOA				LR	LR	17 30 32.0	
	comp=Z,21nm,20.1s,baz=180,slow=40						
	comp=Z,0.2nm,0.4s						
EKR4	**Eskdalemuir Ar**	**21.26**	**320**	P	**P**	**17 21 22.6**	**-1.5**
EKR4				IAmb	IAmb	17 21 49.0	
	comp=Z,26nm,1.4s						
EKA	**Eskdalemuir Ar**	**21.27**	**320**	P	**P**	**17 21 24.6**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=125,slow=11,SNR=5.7						
EKA				LR	LR	17 31 02.4	
	comp=Z,254nm,18.6s,baz=181,slow=40						
	comp=Z,2.4nm,0.7s						
BELG	**Belogornoye**	**21.27**	**49**	P	**P**	**17 21 26.6**	**+2.3**
	comp=Z,15nm,0.9s,baz=270,slow=12,SNR=2.5						
BELG				LR	LR	17 30 23.7	
	comp=Z,111nm,18.4s,baz=319,slow=39						
	comp=Z,15nm,0.9s						
EKB	**Eskdalemuir**	**21.29**	**320**	P	**P**	**17 21 25.0**	**+0.6**
EKB				IAmb	IAmb	17 21 32.5	
	comp=Z,33nm,1.3s						
MDT	**Midelt**	**22.03**	**256**	LR	LR	17 29 50.7	
	comp=Z,64nm,19.6s,baz=58,slow=36						
KLMR	**Klimovskoe**	**22.72**	**24**	eP	**P**	**17 21 39.3**	**-0.4**
KLMR				AMP		17 21 56.8	
	comp=Z,14nm,1.4s						
AKTO	**Aktyubinsk**	**27.16**	**58**	LR	LR	17 35 43.6	
	comp=Z,45nm,18.1s,baz=265,slow=42						
ARCES	**ARCESS Array B**	**28.51**	**3**	LR	LR	17 33 50.1	
	comp=Z,29nm,19.4s,baz=124,slow=36						
ARU	**Arti**	**28.62**	**45**	LR	LR	17 33 36.8	
	comp=Z,33nm,18.5s,baz=162,slow=36						
GEYT	**Alibeck**	**28.66**	**84**	LR	LR	17 36 28.1	
	comp=Z,35nm,19.3s,baz=344,slow=42						
GEYT	**Alibeck**	**28.66**	**84**	P	**P**	**17 22 33.5**	**-1.4**
GYB1	**ALIBECK ARRAY**	**28.67**	**84**	P	**P**	**17 22 34.6**	**-0.3**
GYB1				IAmb	IAmb	17 22 43.5	
	comp=Z,8.0nm,1.5s						
PMOZ	**Porto Moniz, M**	**31.42**	**267**	P	**P**	**17 22 57.4**	**-1.9**
TOC1	**Torodi Ar. Sit**	**32.61**	**217**	P	**P**	**17 23 09.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**32.63**	**217**	P	**P**	**17 23 10.8**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=22,slow=8.3,SNR=3.9						
	comp=Z,0.8nm,0.8s						
HRA	**Herat**	**33.06**	**88**	P	**P**	**17 23 12.4**	**-1.4**
BORG	**Borgarnes**	**33.70**	**329**	LR	LR	17 40 07.8	
	comp=Z,38nm,18.8s,baz=140,slow=42						
WSAR	**Wadi Sarin**	**36.18**	**108**	LR	LR	17 40 42.9	
	comp=Z,44nm,19.9s,baz=238,slow=40						
KK03	**Karatay Array**	**36.33**	**70**	P	**P**	**17 23 39.2**	**-2.6**
KKAR	**Karatay Array**	**36.34**	**70**	P	**P**	**17 23 41.3**	**-0.5**
KKAR				IAmb	IAmb	17 23 46.2	
	comp=Z,6.0nm,1.6s						
AAK	**Ala-Archa**	**39.28**	**70**	LR	LR	17 45 02.5	
	comp=Z,40nm,19.4s,baz=246,slow=43						
DBIC	**Dimbokro**	**41.38**	**221**	LR	LR	17 43 54.6	
	comp=Z,39nm,19.6s,baz=148,slow=40						
ZALV	**Zalesovo Beam**	**43.45**	**50**	P	**P**	**17 24 42.1**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=298,slow=10.0,SNR=4.1						
ZALV				LR	LR	17 44 28.6	
	comp=Z,46nm,19.5s,baz=334,slow=38						
	comp=Z,1.3nm,0.6s						
MK09	**Makanchi Array**	**43.47**	**61**	P	**P**	**17 24 40.4**	**-0.7**
MKAR	**Makanchi Array**	**43.47**	**61**	P	**P**	**17 24 43.2**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=282,slow=6.9,SNR=6.7						
	comp=Z,0.7nm,0.7s						
SFJD	**Kangerlussuaq**	**45.83**	**329**	LR	LR	17 44 26.3	
	comp=Z,65nm,19.1s,baz=92,slow=36						
EUNU	**Eureka**	**52.64**	**348**	P	**P**	**17 25 50.0**	**-1.5**
FRB	**Frobisher Bay**	**53.82**	**327**	LR	LR	17 50 17.5	
	comp=Z,57nm,18.5s,baz=204,slow=38						
SONB5	**Songino Array**	**58.27**	**52**	P	**P**	**17 26 30.8**	**-1.8**
C36M	**Paulatuk**	**66.81**	**347**	P	**P**	**17 27 29.1**	**+0.1**
FCC	**Fort Churchill**	**66.85**	**329**	P	**P**	**17 27 30.1**	**+0.7**
FCC				IAmb	IAmb	17 28 01.0	
	comp=Z,3.0nm,1.0s						
SADO	**Sadowa**	**68.54**	**311**	LR	LR	17 55 40.8	
	comp=Z,35nm,20.4s,baz=140,slow=34						
CM15	**Chiang Mai Arr**	**69.13**	**83**	P	**P**	**17 27 42.8**	**-1.7**
BOSA	**Boshof**	**69.56**	**176**	LR	LR	18 03 55.0	
	comp=Z,42nm,21.1s,baz=12,slow=41						
YKAB0	**New Yellowknif**	**70.60**	**340**	P	**P**	**17 27 51.7**	**-1.0**
YKA	**Yellowknife Ar**	**70.69**	**340**	P	**P**	**17 27 53.4**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=37,slow=5.4,SNR=5.2						
	comp=Z,0.4nm,0.6s						
TKL	**Tuckaleechee C**	**77.05**	**306**	LR	LR	18 04 02.4	
	comp=Z,45nm,18.2s,baz=104,slow=37						
KSRS	**Korea Array**	**77.15**	**51**	LR	LR	18 06 15.1	
	comp=Z,20nm,18.4s,baz=295,slow=39						
PDAR	**Pinedale Array**	**85.27**	**326**	LR	LR	18 08 01.8	
	comp=Z,40nm,18.5s,baz=46,slow=36						
ELK	**Elko**	**89.29**	**328**	LR	LR	18 10 02.7	
	comp=Z,34nm,19.0s,baz=62,slow=36						
ANMO	**Albuquerque**	**90.17**	**319**	LR	LR	18 10 29.6	
	comp=Z,34nm,18.4s,baz=42,slow=36						
ASAR	**Alice Springs**	**122.09**	**95**	PKP	**PKiKP**	**17 35 35.8**	**+2.9**
	comp=Z,0.4nm,1.0s,baz=306,slow=1.8,SNR=1.7						

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*NEIC **21** 17:30:33.3±2.4, 21°.22S±0°.04×68°.49W±0°.08, h133^{km}±6^{km}, mb4.7/45, ML4.2(GUC), Error ellipse: s-maj=10.3km s-min=6.0km az=83.0*

*IDC **21** 17:30:33.4±0.7, 21°.26S×68°.13W, h118^{km}±9^{km}, mb4.0/3, mbtmp4.3/7, MS3.6/1, Error ellipse: s-maj=23.8km s-min=10.0km az=111.0*

*GUC **21** 17:30:34.1±0.6, 21°.22S×68°.47W, h132^{km}±4^{km}, ML4.2*

*VAO **21** 17:30:34.0±0.4, 21°.24S×68°.47W, h136^{km}, mb4.3*

ISC 21 17:30:32.8±0.6, **21°.21S**±0°.03×**68°.44W**±0°.06, **h130**^{km}±6^{km}, **n127,** σ**1^{s}38**/150, **mb4.7**/22, **9C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.95**	**232**		**Pn**	**17 30 56.6**	**+1.2**
PB09				Sn	**Sn**	**17 31 13.7**	**+1.1**
PB09	**IPOC Station P**	**0.95**	**232**	⇑iP	**Pn**	**17 30 56.6**	**+1.2**
PB09				i S	**Sn**	**17 31 13.9**	**+1.4**
PB01	**IPOC Station P**	**0.99**	**279**		**Pn**	**17 30 56.3**	**+0.5**
PB01				Sn	**Sn**	**17 31 13.4**	**+0.3**
PB01	**IPOC Station P**	**0.99**	**279**	⇑iP	**Pn**	**17 30 56.2**	**+0.5**
PB01				i S	**Sn**	**17 31 13.0**	**-0.1**
PB01				IAML		17 31 15.5	
	comp=E,4µm,0.3s						
PB08	**IPOC Station P**	**1.26**	**328**		**Pn**	**17 30 59.9**	**+1.2**
PB08				Sn	**Sn**	**17 31 20.0**	**+1.7**
PB08	**IPOC Station P**	**1.26**	**328**	⇓iP	**Pn**	**17 31 00.1**	**+1.4**
PB08				i S	**Sn**	**17 31 19.7**	**+1.4**
PB08				IAML		17 31 21.4	
	comp=E,2µm,0.2s						
PB02	**IPOC Station P**	**1.36**	**265**		**Pn**	**17 31 00.0**	**+0.5**
PB02				Sn	**Sn**	**17 31 19.8**	**0.0**
PB02	**IPOC Station P**	**1.36**	**265**	⇑iP	**Pn**	**17 31 00.1**	**+0.6**
PB02				i S	**Sn**	**17 31 19.7**	**-0.1**
PB02				IAML		17 31 21.2	
	comp=E,6µm,0.5s						
PB07	**IPOC Station P**	**1.44**	**249**		**Pn**	**17 31 00.9**	**+0.5**
PB07				Sn	**Sn**	**17 31 21.3**	**-0.2**
PB07	**IPOC Station P**	**1.44**	**249**	⇑iP	**Pn**	**17 31 01.0**	**+0.5**
PB07				i S	**Sn**	**17 31 21.6**	**+0.1**
PB07				IAML		17 31 22.6	
	comp=N,3µm,0.3s						
LVC	**Limon Verde**	**1.46**	**197**	P	**Pn**	**17 31 01.6**	**+0.8**
	comp=N,802nm,0.4s,baz=21,slow=8.2,SNR=1348						
LVC				S	**Sn**	**17 31 22.5**	**+0.4**
	comp=N,827nm,0.5s,baz=125,slow=21,SNR=65						
LVC	**Limon Verde**	**1.46**	**197**	eP	**Pn**	**17 31 01.4**	**+0.6**
HMBC	**Humberstone**	**1.65**	**304**	⇓iP	**Pn**	**17 31 03.1**	**+0.4**
HMBC				i S	**Sn**	**17 31 25.4**	**0.0**
HMBC				IAML		17 31 27.4	
	comp=E,3µm,0.4s						
PATCX	**Punta Patache**	**1.65**	**283**	Pn	**Pn**	**17 31 03.3**	**+0.6**
PATCX				Sn	**Sn**	**17 31 25.5**	**+0.1**
PATCX	**Punta Patache**	**1.65**	**283**	⇑iP	**Pn**	**17 31 03.4**	**+0.8**
PATCX				i S	**Sn**	**17 31 25.2**	**-0.2**
PATCX				IAML		17 31 27.2	
	comp=E,5µm,0.4s						
AF01	**San Pedro de A**	**1.75**	**172**		**Pn**	**17 31 06.1**	**+2.0**
TA01	**Diego Aracena**	**1.75**	**291**		**Pn**	**17 31 04.3**	**+0.5**
TA01				Sn	**Sn**	**17 31 26.8**	**-0.6**
TA01	**Diego Aracena**	**1.75**	**291**	eP	**Pn**	**17 31 04.0**	**+0.3**
TA01				i S	**Sn**	**17 31 27.0**	**-0.4**
TA01				IAML		17 31 29.2	
	comp=N,3µm,0.6s						
PB06	**IPOC Station P**	**1.82**	**215**		**Pn**	**17 31 05.6**	**+0.8**
PB06				Sn	**Sn**	**17 31 29.2**	**0.0**
PB06	**IPOC Station P**	**1.82**	**215**	⇑iP	**Pn**	**17 31 05.4**	**+0.6**
PB06				i S	**Sn**	**17 31 29.4**	**+0.2**
PB06				IAML		17 31 30.5	
	comp=E,4µm,0.2s						
PB11	**IPOC Station P**	**1.84**	**321**		**Pn**	**17 31 05.2**	**+0.2**
PB11				Sn	**Sn**	**17 31 29.4**	**-0.2**
PB11	**IPOC Station P**	**1.84**	**321**	⇓iP	**Pn**	**17 31 05.6**	**+0.6**
PB11				i S	**Sn**	**17 31 29.7**	**+0.1**
PB11				IAML		17 31 32.4	
	comp=E,2µm,0.1s						
PB04	**IPOC Station P**	**1.94**	**235**		**Pn**	**17 31 06.3**	**+0.1**
PB04				Sn	**Sn**	**17 31 31.1**	**-0.7**
PB04	**IPOC Station P**	**1.94**	**235**	⇑iP	**Pn**	**17 31 06.4**	**+0.1**
PB04				IAML		17 31 39.5	
	comp=N,1µm,0.5s						
PB15	**IPOC Station P**	**2.21**	**206**		**Pn**	**17 31 10.0**	**+0.5**
PB15				Sn	**Sn**	**17 31 37.9**	**+0.2**
PB15	**IPOC Station P**	**2.21**	**206**	⇑iP	**Pn**	**17 31 10.1**	**+0.6**
PB15				i S	**Sn**	**17 31 37.7**	**0.0**
PB10	**IPOC Station P**	**3.02**	**220**	Pn	**Pn**	**17 31 18.9**	**-0.7**
PB16	**IPOC Station P**	**3.03**	**340**	Pn	**Pn**	**17 31 21.5**	**+1.1**
PB16	**IPOC Station P**	**3.03**	**340**	⇓iP	**Pn**	**17 31 21.7**	**+1.3**
PB16				i S	**Sn**	**17 31 56.4**	**-0.7**
PB12	**IPOC Station P**	**3.14**	**325**	Pn	**Pn**	**17 31 20.5**	**-0.8**
PB12	**IPOC Station P**	**3.14**	**325**	⇑eP	**Pn**	**17 31 20.2**	**-1.1**
PB12				IAML		17 32 06.4	
	comp=N,405nm,0.2s						
AP01	**Chacalluta**	**3.35**	**327**	Pn	**Pn**	**17 31 23.5**	**-0.4**
PB14	**IPOC Station P**	**3.85**	**208**		**Pn**	**17 31 30.2**	**-0.6**
GO02	**Mina Guanaco**	**4.07**	**195**	Pn	**Pn**	**17 31 33.3**	**-0.5**
LPAZ	**La Paz**	**4.91**	**3**	P	**Pn**	**17 31 47.5**	**+2.3**
	comp=N,4.7nm,0.3s,baz=176,slow=5.9,SNR=80						
LPAZ				S	**Sn**	**17 32 43.3**	**+1.8**
	comp=N,5.4nm,0.5s,baz=30,slow=14,SNR=1.5						
LPAZ	**La Paz**	**4.91**	**3**	Pn	**Pn**	**17 31 45.5**	**+0.3**
LPAZ	**La Paz**	**4.91**	**3**	eP	**Pn**	**17 31 47.1**	**+1.9**
AC01	**Pan de Azucar**	**5.30**	**202**	Pn	**Pn**	**17 31 47.9**	**-2.0**
AC02	**Maricunga**	**5.63**	**186**	Pn	**Pn**	**17 31 54.3**	**-0.6**
AC06	**Mina Casimiro**	**6.36**	**196**		**Pn**	**17 32 01.3**	**-2.9**
GO03	**Copiap**	**6.56**	**194**		**Pn**	**17 32 04.5**	**-2.5**
AC04	**Llanos de Chal**	**7.36**	**198**	Pn	**Pn**	**17 32 13.3**	**-4.4**
LCO	**Las Campanas**	**8.03**	**194**	Pn	**Pn**	**17 32 22.4**	**-4.6**
SIV	**San Ignacio**	**8.70**	**55**	P	**Pn**	**17 32 33.3**	**-2.5**
	comp=N,19nm,0.7s,baz=242,slow=12,SNR=73						
SIV				S	**Sn**	**17 34 05.5**	**-6.8**
	comp=N,1.2nm,0.4s,baz=254,slow=22,SNR=4.4						
CO01	**Juntas del Tor**	**8.86**	**189**		**Pn**	**17 32 35.0**	**-3.0**
GO04	**Tololo Observa**	**9.18**	**193**	Pn	**Pn**	**17 32 37.9**	**-4.3**
CO06	**Fray Jorge**	**9.85**	**196**	Pn	**Pn**	**17 32 47.6**	**-3.5**
CO02	**Combarbal**	**10.21**	**192**	Pn	Pn	17 32 51.3	-4.8
VA03	**San Esteban**	**11.66**	**189**	Pn	**Pn**	**17 33 12.4**	**-2.9**
MT02	**Curacav**	**12.24**	**191**		**Pn**	**17 33 20.8**	**-2.0**
MT09	**Talagante**	**12.72**	**190**		**Pn**	**17 33 27.5**	**-1.7**
MT01	**Popeta**	**12.85**	**191**	Pn	**Pn**	**17 33 28.9**	**-1.8**
BO04	**La Punta**	**12.87**	**188**	Pn	**Pn**	**17 33 29.9**	**-1.1**
BO01	**Tunca**	**13.34**	**190**	Pn	**Pn**	**17 33 35.2**	**-1.8**
GO05	**Huala**	**14.09**	**192**	Pn	**Pn**	**17 33 45.1**	**-1.6**
CLDB	**Colider**	**15.90**	**52**	eP	**P**	**17 34 10.6**	**+0.1**
ITAB	**Concordia**	**16.03**	**115**	Pn	**Pn**	**17 34 09.8**	**-1.2**
CPSB	**Cacapava Do Su**	**16.30**	**127**	eP	**P**	**17 34 14.6**	**-0.2**
PLTB	**Pedras Altas**	**16.91**	**131**		**P**	**17 34 19.8**	**-1.8**
PLTB	**Pedras Altas**	**16.91**	**131**	eP	**Pn**	**17 34 21.9**	**+0.1**
FRTB	**Fartura**	**17.60**	**100**	eP	**Pn**	**17 34 30.1**	**0.0**
TRQA	**Tornquist**	**17.69**	**163**	P	**P**	**17 34 29.3**	**-0.8**
BB19B	**Bebedouro**	**18.57**	**93**	eP	**P**	**17 34 40.1**	**+0.2**
LR04	**Corral**	**19.09**	**192**	P	**P**	**17 34 44.8**	**-0.5**
LR04				IAmb	IAmb	17 35 08.0	

	comp=Z,33nm,1.2s						
IPMB	Ipameri, GO	19.32	84	eP	P	17 34 48.1	0.0
RCLB	Rio Claro- Sao	19.45	97	eP	P	17 34 49.1	-0.3
MACA	Manacapuru-AM	19.46	24	eP	P	17 34 49.7	+0.1
PLCA	Paso Flores	19.54	185	P	Pn	17 34 51.7	-1.2
	comp=Z,6.6nm,0.8s,baz=3.5,slow=13,SNR=25						
PLCA	Paso Flores	19.54	185	P	P	17 34 49.5	-0.8
PLCA	Paso Flores	19.54	185	eP	P	17 34 50.8	+0.5
PET01	Itanhaem-SP	19.75	103	eP	P	17 34 53.2	+0.5
LL04	Puerto Octay	19.93	189	P	P	17 34 55.1	+0.8
LL04				IAmb	IAmb	17 34 56.2	
	comp=Z,36nm,1.4s						
BDFB	Brasilia	20.14	77	P	P	17 34 56.8	-0.3
	comp=Z,7.0nm,0.4s,baz=253,slow=10.0,SNR=19						
BDFB	Brasilia	20.14	77	P	P	17 34 56.3	-0.7
BDFB				IAmb	IAmb	17 34 57.8	
	comp=Z,8.9nm,0.5s						
BDFB	Brasilia	20.14	77	eP	P	17 34 56.9	-0.2
PEXB	Peixe	21.29	68	eP	P	17 35 08.5	-0.8
GO07	Milladeo Hill,	22.27	190	P	P	17 35 18.8	-0.4
GO07				IAmb	IAmb	17 35 21.7	
	comp=Z,23nm,0.6s						
AY01	Puyuhuapi	23.41	188	P	P	17 35 30.5	+0.6
PRPB	Parauapebas	23.43	53	eP	P	17 35 29.8	-0.7
DIAM	Diamantina, MG	23.48	87	eP	P	17 35 30.8	-0.3
SMTB	Santa Maria do	23.54	62	eP	P	17 35 31.7	+0.2
MALB	Monte Alegre	23.69	38	eP	P	17 35 32.8	0.0
JANB	Januaria	23.71	79	eP	P	17 35 32.2	-1.0
SDBA	SAO DESIDERIO	24.14	73	eP	P	17 35 37.5	+0.5
BOAV	Boa Vista	24.71	19	eP	P	17 35 43.1	+1.0
MCPB	Macapa, AP	26.18	40	eP	P	17 35 56.6	+1.2
BAUV	El Baul	29.97	1	P	P	17 36 27.9	-1.2
BAUV				IAmb	IAmb	17 36 30.1	
	comp=Z,16nm,0.9s						
BIRV	Birongo	31.56	4	P	P	17 36 41.8	-1.3
SJCC	San Jacinto, C	31.61	347	P	P	17 36 43.0	-0.6
SJCC				IAmb	IAmb	17 37 05.6	
	comp=Z,18nm,1.3s						
MG04	Isla Riesco	31.68	184	P	P	17 36 42.1	-1.7
TOSP	Speyside	33.23	14	P	P	17 36 58.6	+1.0
RPN	Rapa Nui	37.65	253	LR	LR	17 49 07.8	
	comp=Z,84nm,19.3s,baz=204,slow=29						
GDSD	La Dsirade Is	37.98	12	P	P	17 37 38.8	+0.5
MLPR	Magueyes Islan	38.96	2	P	P	17 37 46.5	+0.1
PDPR	Patillas Dam,	39.06	4	P	P	17 37 45.8	-1.4
PDPR				IAmb	IAmb	17 37 46.6	
	comp=Z,14nm,1.0s						
CELP	Cerrillos	39.09	3	P	P	17 37 46.3	-1.1
V55A	Taylorsville	58.03	348	P	P	17 40 13.6	+1.5
TKL	Tuckaleechee C	58.40	345	P	P	17 40 15.0	+0.4
TKL				IAmb	IAmb	17 40 23.5	
	comp=Z,15nm,1.2s						
T59A	Double "B" Far	58.51	351	P	P	17 40 15.9	+0.6
BELA	Belgrano 2	58.97	172	P	P	17 40 20.0	+1.8
WVT	Waverly	59.91	342	P	P	17 40 25.4	+0.3
WVT				IAmb	IAmb	17 40 26.1	
	comp=Z,4.5nm,0.8s						
S54A	Dingess, Beckl	59.93	348	P	P	17 40 26.4	+1.1
R55A	Marlinton	60.19	349	P	P	17 40 28.6	+1.6
Q54A	Coxs Mills	60.99	349	P	P	17 40 33.1	+0.7
Q54A				IAmb	IAmb	17 40 33.4	
	comp=Z,13nm,1.2s						
P53A	Whipple	61.58	349	P	P	17 40 37.6	+1.3
P53A				IAmb	IAmb	17 40 38.4	
	comp=Z,8.5nm,0.8s						
P52A	Corning	61.87	348	P	P	17 40 38.2	0.0
P52A				IAmb	IAmb	17 40 59.8	
	comp=Z,18nm,1.4s						
O52A	Adamsville	62.28	348	P	P	17 40 41.4	+0.4
O52A				IAmb	IAmb	17 40 42.4	
	comp=Z,6.9nm,0.6s						
SNAA	Sanae	62.41	161	P	P	17 40 42.3	+0.7
SNAA				IAmb	IAmb	17 40 56.7	
	comp=Z,9.8nm,1.6s						
M57A	Sunshine Farm,	62.75	353	P	P	17 40 44.4	+0.3
KSPA	Keystone Colle	62.82	354	P	P	17 40 45.2	+0.7
KSPA				IAmb	IAmb	17 41 19.3	
	comp=Z,23nm,1.6s						
M55A	Ridgway	63.09	351	P	P	17 40 46.2	-0.2
M55A				IAmb	IAmb	17 41 09.8	
	comp=Z,19nm,1.6s						
S39A	Bolivar	63.10	338	P	P	17 40 46.0	-0.5
R40A	Maddies Statio	63.28	339	P	P	17 40 47.0	-0.6
L56A	Greenwood	63.59	352	P	P	17 40 49.7	0.0
L56A				IAmb	IAmb	17 40 51.9	
	comp=Z,8.1nm,1.1s						
WVNY	West Valley, N	63.99	352	P	P	17 40 53.5	+1.3
WVNY				IAmb	IAmb	17 40 54.7	
	comp=Z,17nm,1.4s						
J59A	Piesco	64.59	355	P	P	17 40 57.2	+1.0
J59A				IAmb	IAmb	17 40 58.2	
	comp=Z,4.0nm,0.8s						
LMN	Caledonia Moun	66.82	3	P	P	17 41 08.2	-2.2
LMN				IAmb	IAmb	17 41 08.9	
	comp=Z,16nm,1.4s						
D62A	Allapoint, All	67.97	360	P	P	17 41 18.6	+1.0
D62A				IAmb	IAmb	17 41 42.4	
	comp=Z,14nm,1.5s						
QSPA	South Pole Qui	68.98	180	P	P	17 41 25.8	+1.8
QSPA				IAmb	IAmb	17 41 55.6	
	comp=Z,13nm,1.6s						
TORD	Torodi Ar. Bea	76.84	70	P	P	17 42 11.1	+0.1
	comp=Z,4.8nm,0.4s,baz=256,slow=5.7,SNR=55						
	comp=Z,4.8nm,0.4s						
TORD	Torodi Ar. Bea	76.84	70	P	P	17 42 10.9	0.0
ESDC	Sonseca Array	85.32	44	P	P	17 42 57.1	+1.7
	comp=Z,0.8nm,1.0s,baz=210,slow=7.4,SNR=3.5						
	comp=Z,0.8nm,1.0s						
ESDC	Sonseca Array	85.32	44	IAmb	IAmb	17 42 57.7	
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	91.06	340	P	P	17 43 23.4	+1.4
	comp=Z,1.0nm,0.6s,baz=134,slow=4.4,SNR=19						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	141.50	25	PKP	PKPdf	17 49 49.1	+0.9
	comp=Z,0.5nm,0.4s,baz=319,slow=8.4,SNR=2.5						
MKAR	Makanchi Array	145.14	36	PKPbc	PKPab	17 49 56.2	+1.3
	comp=Z,3.0nm,0.7s,baz=322,slow=3.7,SNR=31						
MKAR	Makanchi Array	145.14	36		PKPab	17 49 55.2	+0.3

TIR **21** *17:37:21.2, 41.°20N×21.°00E, h14^{km}±1^{km}, Md3.3, Ml3.2*
SKO **21** *17:37:21.3, 41.°17N×20.°99E, h24^{km}*
ATH **21** *17:37:22.2, 41.°20N×21.°01E, h7^{km}±2^{km}, ML3.1/9, Error ellipse: s-maj=2.8km s-min=1.0km az=32.0*
BEO **21** *17:37:22.4±0.3, 41.°16N×21.°02E, h12^{km}±2^{km}, ML3.0/9*
THE **21** *17:37:22.0, 41.°23N×21.°03E, h2^{km}±1^{km}, ML3.1/9, Error ellipse: s-maj=1.8km s-min=0.7km az=238.0*
PDG **21** *17:37:22.1±0.3, 41.°21N×21.°06E, h12^{km}, ML3.3/12, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
ISC 21 17:37:22.2±0.9**, 41.°18N**±0.°01×**21.°00E**±0.°01**, h14**^{km}±8^{km}**,**
n124, σ0.ˢ93/200**, 11C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.16	247	ePg	Pb	17 37 26.7	-0.4
OHR				eSg	Sb	17 37 29.9	-0.3
OHR	Ohrid	0.16	247	⇑iPg	Pb	17 37 26.6	-0.4
OHR				iSg	Sb	17 37 30.0	-0.3
OHR				eLg	Lg	17 37 30.1	
	comp=N,11µm,0.4s						
OHR				eLg	Lg	17 37 30.5	
	comp=E,4µm,0.5s						
FNA	Florina	0.48	144	ePg	Pg	17 37 31.6	-0.2
FNA				eSg	Sb	17 37 39.4	-0.2
FNA	Florina	0.48	144	P	Pg	17 37 31.7	-0.2
FNA				S	Sb	17 37 39.2	-0.2
FNA				AML	AML	17 37 41.0	
	comp=E,8960µm,0.4s						
FNA				AML	AML	17 37 43.1	
	comp=N,8697µm,0.3s						
FNA	Florina	0.48	144	P	Pg	17 37 31.6	-0.2
FNA				S	Sb	17 37 39.3	-0.2
	comp=N,4µm,0.3s						
FNA	Florina	0.48	144	iPg	Pg	17 37 31.6	-0.2
FNA				iSg	Sb	17 37 39.8	+0.3
FNA	Florina	0.48	144	P	Pg	17 37 31.6	-0.2
	baz=144						
FNA				S	Sb	17 37 39.3	-0.2
	baz=144						
KBN	Korca	0.57	196	P	Pb	17 37 33.5	-0.6
KBN				S	Sb	17 37 42.0	-0.1
	comp=N,2µm,0.6s						
KBN	Korca	0.57	196	P	Pb	17 37 33.3	-0.8
	baz=196						
KBN				S	Sb	17 37 41.9	-0.1
	baz=196						
KBN				AMP			
	comp=N,6.2nm,0.7s,baz=196						
PHP	Peshkopia	0.66	321	P	Pg	17 37 33.7	-1.5
PHP				S	Sg	17 37 43.5	-0.4
PHP	Peshkopia	0.66	321	P	Pg	17 37 33.6	-1.5
	baz=320						
PHP				S	Sg	17 37 43.9	0.0
	baz=320						
PHP				AMP			
	comp=N,4.6nm,0.6s,baz=320						
NEST	Nestorio	0.76	177	P	Pb	17 37 36.7	-0.6
NEST				S	Sb	17 37 47.8	+0.3
NEST				AML	AML	17 37 52.6	
	comp=E,4318µm,0.4s						
NEST				AML	AML	17 37 53.1	
	comp=N,5052µm,0.4s						
NEST	Nestorio	0.76	177	P	Pb	17 37 36.9	-0.4
NEST				S	Sn	17 37 49.6	-0.3
	comp=N,2µm,0.5s						
SKO	Skopje	0.86	22	ePg	Pg	17 37 38.7	-0.3
SKO				eSg	Sg	17 37 50.5	+0.2
SKO	Skopje	0.86	22	iPg	Pg	17 37 38.7	-0.3
SKO				iSg	Sg	17 37 50.6	+0.2
TIR	Tirane	0.87	282	⇓P	Pg	17 37 38.7	-0.4
TIR				⇓S	Sb	17 37 51.5	+0.9
TIR	Tirane	0.87	282	ePg	Pg	17 37 38.5	-0.6
TIR				eSg	Sb	17 37 51.5	+0.9
TIR	Tirane	0.87	282	P	Pg	17 37 38.7	-0.4
TIR				S	Sb	17 37 50.9	+0.4
TIR				AML	AML	17 37 58.1	
	comp=E,2399µm,0.5s						
TIR				AML	AML	17 37 59.9	
	comp=N,2469µm,0.7s						
TIR	Tirane	0.87	282	P	Pg	17 37 38.6	-0.4
TIR				S	Sb	17 37 51.2	+0.6
	comp=N,475nm,0.6s						
TIR	Tirane	0.87	282	iPg	Pg	17 37 38.7	-0.4
TIR	Tirane	0.87	282	P	Pg	17 37 38.7	-0.4
	baz=281						
TIR				S	Sb	17 37 51.0	+0.5
	baz=281						
TIR				AMP			
	comp=N,2.0nm,0.3s,baz=281						
PENT	Pentalofos	0.98	174	P	Pn	17 37 41.2	-0.5
KZN	Kozani	1.05	146	P	Pn	17 37 42.8	+0.2
KZN				S	Sn	17 37 56.8	-0.2
KZN				AML	AML	17 38 01.9	
	comp=N,1630µm,0.4s						
KZN				AML	AML	17 38 02.1	
	comp=E,2893µm,0.6s						
KZN	Kozani	1.05	146	P	Pg	17 37 41.9	-0.6
KZN				S	Sn	17 37 58.4	+1.4
	comp=E,1µm,0.5s						
LSK	Leskovik	1.07	197	P	Pn	17 37 43.6	+0.8
LSK				S	Sn	17 37 59.0	+1.6
	comp=E,2µm,0.8s						
LSK	Leskovik	1.07	197	P	Pn	17 37 42.9	+0.1
	baz=197						
LSK				S	Sn	17 37 57.9	+0.5
	baz=197						
LSK				AMP			
	comp=E,6.3nm,0.8s,baz=197						
GRG	Griva	1.08	101	P	Pb	17 37 42.5	-0.3
GRG				S	Sg	17 37 56.8	-0.5
GRG				AML	AML	17 38 01.6	
	comp=E,988µm,0.6s						
GRG				AML	AML	17 38 04.4	
	comp=N,736µm,0.4s						
GRG	Griva	1.08	101	P	Pb	17 37 42.5	-0.3
GRG	Griva	1.08	101	iPg	Pb	17 37 42.5	-0.3
GRG				iSg	Sn	17 37 58.1	+0.3
VAY	Valandovo	1.20	82	ePg	Pn	17 37 43.6	-0.9
VAY				eSg	Sn	17 38 00.6	+0.1
VAY	Valandovo	1.20	82	iPg	Pn	17 37 44.3	-0.2
VAY				iSg	Sg	17 38 00.9	+0.1
VAY				eLg	Lg	17 38 01.8	
	comp=N,306nm,0.8s						
VAY				eLg	Lg	17 38 02.6	
	comp=E,557nm,1.0s						
KPRO	Kipourio	1.25	167	P	Pg	17 37 46.0	-0.3
KPRO				S	Sg	17 38 03.2	+0.6
KPRO				AML	AML	17 38 12.0	
	comp=E,1304µm,0.5s						
KPRO				AML	AML	17 38 12.3	
	comp=N,1193µm,0.5s						
KPRO	Kipourio	1.25	167	P	Pg	17 37 45.6	-0.7
KPRO				S	Sg	17 38 05.4	+2.8
	comp=N,690nm,0.5s						
BCI	Bajram Curri	1.38	330	P	Pn	17 37 47.2	+0.2
	baz=330						
BCI				S	Sg	17 38 06.5	-0.3
	baz=330						
BCI				AMP			
	comp=E,2.5nm,0.7s,baz=330						
KNT	Kendrikon	1.44	90	P	Pb	17 37 48.4	-0.3
KNT	Kendrikon	1.44	90	P	Pn	17 37 47.8	0.0
KNT				S	Sb	17 38 07.4	+0.6
KNT	Kendrikon	1.44	90	iPg	Pn	17 37 47.9	0.0
KNT				iSg	Sg	17 38 08.9	+0.4
SRN	Sarande	1.50	211	P	Pg	17 37 51.4	+0.3
	baz=211						
SRN				S	Sg	17 38 11.5	+1.0
	baz=211						
SRN				AMP			
	comp=E,1.4nm,0.7s,baz=211						
JAN	Janina	1.52	184	P	Pg	17 37 50.3	-1.2
JAN				S	Sg	17 38 11.2	0.0
JAN				AML	AML	17 38 15.7	
	comp=E,1131µm,0.5s						
JAN				AML	AML	17 38 16.5	
	comp=N,1453µm,0.4s						
ULC	Ulcinj	1.53	302	⇑iPg	Pb	17 37 50.3	-0.1
ULC				eSg	Sg	17 38 13.6	+2.0
THE	Thessaloniki	1.59	109	iPn	Pn	17 37 50.2	+0.4
THE	Thessaloniki	1.59	109	P	Pn	17 37 50.4	+0.5
	baz=110						
PVY	Plav	1.62	332	⇓iPn	Pb	17 37 51.4	-0.5
PVY				iSn	Sg	17 38 14.6	+0.3
DRME	Dracevica, Mon	1.69	307	ePn	Pb	17 37 52.9	-0.2
DRME	Dracevica, Mon	1.69	307	⇓iPn	Pb	17 37 52.9	-0.2
DRME				iSn	Sg	17 38 16.9	+0.2
KKB	Krupnik	1.71	66	iP	Pn	17 37 52.4	+0.8
IGT	Igoumenitsa	1.72	197	P	Pg	17 37 54.1	-1.1
IGT				S	Sg	17 38 16.8	-0.7
IGT				AML	AML	17 38 21.5	
	comp=E,1288µm,0.5s						
IGT				AML	AML	17 38 23.4	
	comp=N,837µm,0.9s						
IGT	Igoumenitsa	1.72	197	P	Pg	17 37 54.1	-1.1
IGT	Igoumenitsa	1.72	197	P	Pg	17 37 54.1	-1.1
	baz=198						
IGT				S	Sg	17 38 18.4	+0.9
	baz=198						
KEK	Kerkira	1.72	212	P	Pb	17 37 53.6	0.0
KEK				S	Sg	17 38 17.2	-0.5
KEK				AML	AML	17 38 21.1	
	comp=N,534µm,0.3s						
KEK				AML	AML	17 38 22.5	
	comp=E,670µm,0.7s						
KEK	Kerkira	1.72	212	P	Pb	17 37 53.8	+0.2
KEK				S	Sg	17 38 18.3	+0.6
	comp=E,322nm,0.7s						
BOSS	Bosilegrad	1.72	40	ePg	Pn	17 37 52.3	+0.5
BOSS				eSg	Sg	17 38 17.5	-0.2
BARS	Barje	1.75	20	ePg	Pn	17 37 52.7	+0.5
BARS	Barje	1.75	20	ePn	Pg	17 38 08.6	+13
BARS				eSg	Sg	17 38 18.5	-0.1
BARS	Barje	1.75	20	ePn	Pn	17 37 52.6	+0.5
BARS				eSn	Sb	17 38 15.8	-0.1
BARS				iSg	Sg	17 38 19.6	+1.0
THL	Klokotos Trika	1.79	154	P	Pb	17 37 53.6	-1.1
THL				S	Sb	17 38 17.5	+0.6
	comp=E,192nm,0.7s						
PDG	Podgorica	1.81	315	⇓P	Pb	17 37 55.0	-0.1
PDG				⇑S	Sg	17 38 19.3	-1.1
PDG	Podgorica	1.81	315	ePg	Pb	17 37 55.8	+0.7
PDG				eSg	Sg	17 38 21.1	+0.7
PDG	Podgorica	1.81	315	ePn	Pb	17 37 55.4	+0.3
TTG	Podgorica	1.81	315	⇑iPn	Pb	17 37 54.4	-0.7
TTG				iSn	Sg	17 38 19.8	-0.6
SOH	Sokhos	1.82	100	ePn	Pb	17 37 54.1	-1.2
SOH				eSg	Sg	17 38 21.9	+1.1
IVA	Berane	1.89	334	⇑iPn	Pn	17 37 55.2	+1.1
IVA				iSn	Sb	17 38 21.2	+1.3
BUM	Brajici-Budva	1.94	306	⇓iPn	Pb	17 37 56.3	-1.0
BUM				iSn	Sg	17 38 23.1	-1.4
SRS	Serrai	1.96	91	iPn	Pn	17 37 55.2	+0.2
SRS				eSn	Sn	17 38 20.0	+0.6
SRS				eSg	Sg	17 38 25.0	-0.3
KOME	Kolasin	2.01	327	⇓iPn	Pb	17 37 57.3	-1.2
KOME				iSn	Sb	17 38 24.3	+0.9
SELS	Selova	2.04	3	ePn	Pn	17 37 56.5	+0.3
SELS				eSn	Sn	17 38 22.3	+0.8
CEME	Cevo	2.07	312	⇑iPn	Pn	17 37 58.1	+1.5
CEME				iSn	Sb	17 38 26.3	+1.1
VTS	Vitosha	2.21	48	⇑P	Pn	17 37 58.4	-0.2
VTS				⇓S	Sn	17 38 26.1	+0.5
VTS	Vitosha	2.21	48	iPn	Pn	17 37 59.2	+0.7
VTS				eSn	Sn	17 38 26.2	+0.5
VTS	Vitosha	2.21	48	iP	Pn	17 37 59.0	+0.5
SJES	Sjenica	2.22	340	ePn	Pn	17 38 00.1	+1.4
SJES				eSn	Sn	17 38 27.8	+1.9
SJES	Sjenica	2.22	340	ePn	Pn	17 38 00.2	+1.5
HCY	Herceg Novi	2.26	305	ePn	Pn	17 38 01.0	+1.8
HCY	Herceg Novi	2.26	305	⇓iPn	Pn	17 38 00.9	+1.8
HCY				iSn	Sb	17 38 31.0	+0.4
LKD2	Lefkada island	2.40	186	P	Pb	17 38 03.2	-1.9
	baz=187						
PLE	Pljevlja	2.46	332	⇑iPn	Pn	17 38 03.2	+1.2
PLE				iSn	Sb	17 38 35.4	-1.1
IVAS	Ivanjica	2.48	346	ePn	Pn	17 38 02.2	0.0
TREB	Trebinje	2.50	309	ePn	Pn	17 38 04.0	+1.5
BOVS	Bovan	2.51	12	⇓P	Pn	17 38 03.0	+0.4
BOVS	Bovan	2.51	12	ePn	Pn	17 38 02.8	+0.2
BRY	Bratogost	2.52	314	ePn	Pn	17 38 01.1	-1.7
BRY	Bratogost	2.52	314	⇓iPn	Pn	17 38 04.3	+1.5
BRY				iSn	Sb	17 38 36.8	-1.3
UPM	Unac-Piva	2.55	323	ePn	Pb	17 38 06.5	-1.4
UPM	Unac-Piva	2.55	323	ePn	Pn	17 38 04.7	+1.4
UPM				iSn	Sb	17 38 37.6	-1.6
DBRK	Dubrovnik	2.60	306	ePn	Pn	17 38 05.2	+1.5
DBRK				Sn	Sn	17 38 37.1	+2.0
GRUS	Gruza	2.72	356	ePn	Pn	17 38 06.8	+1.4
RUDO	Rudo	2.72	334	ePn	Pn	17 38 05.3	-0.2
BLKB	Belogradchik	2.74	26	⇓P	Pn	17 38 06.2	+0.3
ZAGS	Zajecar	2.79	19	ePn	Pn	17 38 07.0	+0.6
BBLS	Lazići	2.94	337	ePn	Pn	17 38 09.1	+0.6
BBLS	Lazići	2.94	337	ePn	Pn	17 38 10.7	+2.2
STON	Ston	2.98	306	ePn	Pn	17 38 10.5	+1.4
STON				Sn	Sn	17 38 45.1	+0.6
DIVS	Divibare	3.01	346	ePn	Pn	17 38 10.0	+0.4
DIVS	Divibare	3.01	346	ePn	Pn	17 38 10.9	+1.3
DIVS	Divibare	3.01	346	ePn	Pn	17 38 10.3	+0.7
MATE	Matera	3.29	262	⇓P	Pn	17 38 11.8	-1.5
MATE				⇓S	Sn	17 38 51.0	-1.2
LSTV	Lastovo	3.45	299	ePn	Pn	17 38 16.3	+0.9
LSTV				Sn	Sn	17 38 53.8	-2.3
MAKA	Makarska	3.63	307	ePn	Pn	17 38 18.9	+1.0
MAKA				Sn	Sn	17 39 00.9	+0.4
MDVR	Moldovita	3.64	8	⇓P	Pn	17 38 18.0	-0.2
RICI	Ricice	3.68	310	ePn	Pn	17 38 20.2	+1.5
RICI				Sn	Sn	17 39 03.6	+1.7
HERR	Herculane	3.85	15	⇑P	Pn	17 38 20.8	-0.2
HVAR	Hvar	3.93	302	ePn	Pn	17 38 23.0	+0.9
HVAR				Sn	Sn	17 39 07.2	-0.6
SRKY	Kupres RS	4.04	317	ePn	Pn	17 38 26.3	+2.6
FRGS	Fruska Gora	4.07	348	⇓P	Pn	17 38 24.6	+0.6
FRGS	Fruska Gora	4.07	348	ePn	Pn	17 38 24.2	+0.1
FRGS	Fruska Gora	4.07	348	ePn	Pn	17 38 24.5	+0.4
GZR	Gura Zlata	4.41	17	⇓P	Pn	17 38 29.6	+0.9
KIJV	Kijevo	4.41	311	ePn	Pn	17 38 30.1	+1.4
KIJV				Sn	Sn	17 39 20.5	+0.6
BZS	Buzias	4.46	6	⇑P	Pn	17 38 29.1	-0.3
BLY	Banja Luka	4.54	323	ePn	Pn	17 38 32.0	+1.6
ZIRJ	Zirje	4.67	304	iPn	Pn	17 38 32.5	+0.2
ZIRJ				Sn	Sn	17 39 25.6	-0.6
MORI	Morici	4.75	306	ePn	Pn	17 38 34.5	+1.2
MORI				Sn	Sn	17 39 27.9	0.0
DUGI	Dugi Otok	5.21	305	ePn	Pn	17 38 39.6	0.0
DUGI				Sn	Sn	17 39 39.1	-0.3
MORH	Mrgy, Hungar	5.32	342	⇑P	Pn	17 38 41.7	+0.6
MORH	Mrgy, Hungar	5.32	342	ePn	Pn	17 38 41.5	+0.4
VIRC	Vir	5.37	307	ePn	Pn	17 38 42.9	+1.1
VIRC				Sn	Sn	17 39 42.3	-1.1
CRES	Cresnjev	6.15	321	ePn	Pn	17 38 54.1	+1.5
CEY	Cerknica	6.61	316	ePn	Pn	17 38 58.6	-0.3
SKDS	Skadanscina	6.71	313	ePn	Pn	17 39 00.7	+0.5
SOKA	Soboth	6.98	324	ePn	Pn	17 39 05.3	+1.2
	comp=E,2.9nm,0.7s						
ABTA	Abfaltersbach	8.27	315	iPn	Pn	17 39 23.4	+1.6
	comp=E,0.9nm,0.2s						
SQTA	Sankt Quirin	9.27	314	iPn	Pn	17 39 37.4	+2.0
	comp=E,1.8nm,0.3s						
MOTA	Moosalm	9.40	314	iPn	Pn	17 39 39.3	+2.0
	comp=E,0.8nm,0.3s						
FETA	Feichten	9.41	312	iPn	Pn	17 39 38.8	+1.3
	comp=E,0.4nm,0.3s						

SKO **21** *17:40:27.7, 41.°32N×20.°92E, h15^{km}*
PDG **21** *17:40:28.2±0.3, 41.°27N×21.°03E, h0^{km}±11^{km}, ML2.9/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
BEO **21** *17:40:28.5±0.3, 41.°19N×21.°03E, h6^{km}±2^{km}, ML2.5/7*
ATH **21** *17:40:28.2, 41.°23N×21.°05E, h9^{km}±4^{km}, ML2.6/3, Error ellipse: s-maj=4.9km s-min=1.8km az=325.0*
THE **21** *17:40:28.0, 41.°23N×21.°04E, h4^{km}±4^{km}, ML2.8/1, Error ellipse: s-maj=4.1km s-min=0.7km az=342.0*
TIR **21** *17:40:33.1, 41.°21N×21.°05E, h10^{km}±2^{km}, Md2.8, Ml2.7*
ISC 21 17:40:29.1±0.8**, 41.°24N**±0.°02×**21.°04E**±0.°02**, h16**^{km}±6^{km}**,**
n71, σ1.ˢ93/115**, 7C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.22	235	ePg	Pg	17 40 32.5	-1.7
OHR				eSg	Sg	17 40 35.7	-1.9
OHR	Ohrid	0.22	235	⇑iPg	Pg	17 40 35.9	+1.7
OHR				iSg	Sg	17 40 43.0	+5.4
OHR				eLg	Lg	17 40 43.2	
	comp=N,3µm,0.3s						
OHR				eLg	Lg	17 40 43.3	
	comp=E,1µm,0.3s						
FNA	Florina	0.52	150	ePg	Pg	17 40 36.6	-2.9
FNA				eSg	Sg	17 40 44.5	-2.0
FNA	Florina	0.52	150	P	Pg	17 40 37.7	-1.7
FNA				S	Sg	17 40 45.0	-1.4
FNA				AML	AML	17 40 53.2	
	comp=E,2683µm,0.2s						
FNA				AML	AML	17 40 55.4	
	comp=N,3030µm,0.3s						
FNA	Florina	0.52	150	P	Pg	17 40 37.6	-1.9
FNA				S	Sg	17 40 45.2	-1.3
	comp=N,1µm,0.2s						
FNA	Florina	0.52	150	ePg	Pn	17 40 41.6	-0.2
FNA	Florina	0.52	150	P	Pn	17 40 43.0	+1.1
	baz=149						
FNA				S	Sn	17 40 51.4	+0.9
	baz=149						
PHP	Peshkopia	0.63	315	P	Pg	17 40 39.4	-2.1
PHP				S	Sg	17 40 49.2	-0.8
PHP	Peshkopia	0.63	315	P	Pn	17 40 46.0	+2.5
	baz=316						
PHP				S	Sn	17 40 56.6	+3.4
	baz=316						
PHP				AMP			
	comp=N,1.5nm,0.6s,baz=316						
KBN	Korca	0.64	197	P	Pg	17 40 39.6	-2.1
KBN	Korca	0.64	197	P	Pn	17 40 45.4	+1.9
	baz=199						
KBN				S	Sn	17 40 54.6	+1.2
	baz=199						
KBN				AMP			
	comp=E,1.8nm,0.5s,baz=199						
SKO	Skopje	0.79	22	ePg	Pg	17 40 43.5	-1.0
SKO				eSg	Sb	17 40 55.0	0.0
SKO	Skopje	0.79	22	iPg	Pg	17 40 43.9	-0.7
SKO				iSg	Sb	17 40 55.6	+0.6
NEST	Nestorio	0.82	179	P	Pg	17 40 42.7	-2.3
NEST	Nestorio	0.82	179	P	Pg	17 40 42.8	-2.3
TIR	Tirane	0.89	277	ePg	Pg	17 40 44.4	-1.9
TIR				eSg	Sb	17 40 57.4	-0.3
TIR	Tirane	0.89	277	P	Pg	17 40 44.3	-1.9
TIR				S	Sb	17 40 58.3	+0.5

TIR				AML	AML	17 41 08.9	
	comp=E,776µm,0.3s						
TIR				AML	AML	17 41 09.1	
	comp=N,821µm,0.5s						
TIR	**Tirane**	0.89	277	P	Pg	17 40 44.5	-1.9
TIR				S	Sb	17 40 58.2	+0.5
TIR	**Tirane**	0.89	277	*i* Pg	Pg	17 40 44.5	-1.9
TIR	**Tirane**	0.89	277	P	Pn	17 40 51.6	+4.8
	baz=279						
TIR				S	Sn	17 41 04.5	+5.0
	baz=279						
TIR				AMP			
	comp=N,0.7nm,0.5s,baz=279						
PENT	**Pentalofos**	1.04	176	P	Pb	17 40 48.7	-0.1
PENT	**Pentalofos**	1.04	176	P	Pg	17 40 47.9	-1.4
GRG	**Griva**	1.07	105	P	Pg	17 40 48.1	-1.6
GRG	**Griva**	1.07	105	P	Pg	17 40 48.3	-1.5
GRG	**Griva**	1.07	105	*i* Pg	Pg	17 40 48.3	-1.5
KZN	**Kozani**	1.08	149	P	Pb	17 40 49.2	-0.3
KZN				S	Sg	17 41 03.1	-1.1
KZN				AML	AML	17 41 10.3	
	comp=E,491µm,0.4s						
KZN				AML	AML	17 41 16.6	
	comp=N,486µm,0.5s						
KZN	**Kozani**	1.08	149	P	Pg	17 40 49.0	-1.0
LSK	**Leskovik**	1.14	197	P	Pn	17 40 56.0	+5.6
	baz=199						
LSK				S	Sn	17 41 11.8	+6.2
	baz=199						
LSK				AMP			
	comp=N,2.7nm,0.6s,baz=199						
VAY	**Valandovo**	1.16	85	*e*Pg	Pb	17 40 50.0	-0.7
VAY				*e*Sg	Sn	17 41 06.8	+0.7
VAY	**Valandovo**	1.16	85	*i* Pg	Pb	17 40 50.0	-0.7
VAY				*i* Sg	Sn	17 41 13.9	+7.9
VAY				*e*Lg	Lg	17 41 16.0	
	comp=N,96nm,0.5s						
VAY				*e*Lg	Lg	17 41 17.3	
	comp=E,125nm,0.9s						
KPRO	**Kipourio**	1.30	169	P	Pn	17 40 52.7	0.0
KPRO	**Kipourio**	1.30	169	P	Pn	17 40 52.0	-0.7
BCI	**Bajram Curri**	1.34	328	P	Pg	17 41 00.5	+5.6
	baz=328						
BCI				S	Sg	17 41 19.0	+6.6
	baz=328						
BCI				AMP			
	comp=E,0.8nm,0.8s,baz=328						
KNT	**Kendrikon**	1.41	92	P	Pn	17 40 53.8	-0.2
KNT	**Kendrikon**	1.41	92	*i* Pg	Pn	17 40 53.9	-0.1
KNT				*i* Sg	Sg	17 41 20.5	+6.0
ULC	**Ulcinj**	1.53	299	*i* Pg	Pn	17 40 55.6	-0.1
ULC	**Ulcinj**	1.53	299	⇑*i*Pg	Pn	17 40 56.0	+0.3
ULC				*i* Sg	Sg	17 41 19.3	+1.0
PVY	**Plav**	1.58	330	⇓*i*Pg	Pn	17 40 56.8	+0.3
PVY				*i* Sg	Sg	17 41 20.7	+0.8
BOSS	**Bosilegrad**	1.66	40	*e*Pg	Pb	17 40 58.4	-0.8
BOSS				*e*Sg	Sg	17 41 22.1	-0.4
DRME	**Dracevica, Mon**	1.68	305	⇑*i*Pn	Pb	17 40 58.9	-0.7
DRME				*i* Sn	Sg	17 41 24.4	+1.2
BARS	**Barje**	1.68	20	*e*Pn	Pn	17 40 58.1	+0.3
BARS				*e*Sn	Sg	17 41 21.8	-1.4
BARS	**Barje**	1.68	20	*e*Pn	Pn	17 40 58.1	+0.3
IGT	**Igoumenitsa**	1.79	198	P	Pb	17 41 00.6	-0.8
PDG	**Podgorica**	1.79	312	*e*Pg	Pb	17 41 01.3	-0.1
PDG				*e*Sg	Sg	17 41 26.3	-0.3
TTG	**Podgorica**	1.79	312	⇑*i*Pn	Pb	17 41 00.6	-0.8
TTG				*i* Sn	Sg	17 41 26.8	+0.2
KEK	**Kerkira**	1.79	212	P	Pn	17 40 59.5	+0.2
SOH	**Sokhos**	1.80	103	*e*Pn	Pg	17 41 02.2	-1.5
THL	**Klokotos Trika**	1.83	156	P	Pn	17 40 59.8	0.0
BEY	**Berane**	1.84	333	*e*Pn	Pb	17 41 02.0	-0.4
IVA	**Berane**	1.84	333	⇓*i*Pn	Pb	17 41 01.7	-0.7
IVA				*i* Sn	Sg	17 41 28.3	-0.1
BUM	**Brajici-Budva**	1.92	304	⇑*i*Pn	Pb	17 41 02.9	-0.9
BUM				*i* Sn	Sg	17 41 30.3	-0.7
SRS	**Serrai**	1.93	93	*e*Pn	Pb	17 41 03.7	-0.2
KOME	**Kolasin**	1.97	325	⇓*i*Pn	Pb	17 41 03.3	-1.3
KOME				*i* Sn	Sg	17 41 31.6	-0.9
SELS	**Selova**	1.98	2	*e*Pn	Pb	17 41 04.7	0.0
CEME	**Cevo**	2.05	310	⇑*i*Pn	Pb	17 41 04.5	-1.5
CEME				*i* Sn	Sg	17 41 33.3	-1.8
VTS	**Vitosha**	2.14	49	*e*Pn	Pn	17 41 04.8	+0.5
VTS				*e*Sg	Sg	17 41 38.2	+0.1
SJES	**Sjenica**	2.17	339	*e*Pn	Pn	17 41 05.8	+1.2
SJES				*e*Sn	Sb	17 41 33.4	-1.3
NKY	**Niksic**	2.19	317	⇑*i*Pn	Pn	17 41 06.5	+1.6
NKY				*i* Sn	Sb	17 41 36.8	+1.5
HCY	**Herceg Novi**	2.25	303	⇓*i*Pn	Pb	17 41 07.4	-1.9
HCY				*i* Sn	Sb	17 41 38.4	+1.5
PLE	**Pljevlja**	2.42	330	⇓*i*Pn	Pn	17 41 09.5	+1.4
PLE				*i* Sn	Sb	17 41 42.3	+0.3
IVAS	**Ivanjica**	2.43	345	*e*Pn	Pn	17 41 08.1	0.0
DIVS	**Divibare**	2.96	345	*e*Pn	Pn	17 41 16.1	+0.6
STON	**Ston**	2.97	304	*e*Pn	Pn	17 41 15.3	-0.2
STON				Sn	Sn	17 41 50.3	-0.5
LSTV	**Lastovo**	3.45	298	*e*Pn	Pn	17 41 22.3	+0.3
LSTV				Sn	Sn	17 42 03.4	+0.9
RICI	**Ricice**	3.67	309	*e*Pn	Pn	17 41 24.5	-0.6
RICI				Sn	Sn	17 42 06.9	-1.1
HVAR	**Hvar**	3.92	301	*e*Pn	Pn	17 41 28.9	+0.4
HVAR				Sn	Sn	17 42 14.8	+0.6
KIJV	**Kijevo**	4.40	311	*e*Pn	Pn	17 41 34.8	-0.3
KIJV				Sn	Sn	17 42 24.8	-1.2
ZIRJ	**Zirje**	4.66	303	*e*Pn	Pn	17 41 39.2	+0.5
ZIRJ				Sn	Sn	17 42 31.9	-0.6
MORI	**Morici**	4.73	305	*e*Pn	Pn	17 41 39.2	-0.5
MORI				Sn	Sn	17 42 32.6	-1.6
DUGI	**Dugi Otok**	5.20	304	*e*Pn	Pn	17 41 45.6	-0.5
DUGI				Sn	Sn	17 42 44.6	-1.1
VIRC	**Vir**	5.36	307	*e*Pn	Pn	17 41 47.7	-0.5
VIRC				Sn	Sn	17 42 47.7	-1.9

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*IDC **21** 17:58:51.8±1.1, 5°.48S×127°.30E, h391^{km}±13^{km}, mb4.0/1, mbtmp4.8/5, Error ellipse: s-maj=20.2km s-min=11.1km az=97.0*

*NEIC **21** 17:58:52.6±1.5, 5°.40S±0°.08×127°.23E±0°.05, h404^{km}±10^{km}, mb4.5/19, Error ellipse: s-maj=12.8km s-min=4.9km az=207.0*

*DJA **21** 17:58:53.6±0.3, 5°S±3°×12°7E±°, h382^{km}±5^{km}, M4.1/13, mb4.3/13, mB4.6/5, MLv4.2/13, Mw(mB)3.8/5*

ISC 21 17:58:52.3±0.5**, 5°.44S**±0°.05×**127°.32E**±0°.05**, h400**^{km}**, n77, σ1**^{s}**.40**/87**, mb4.3**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	1.95	27	P	Pn	17 59 48.9	+0.9
AAI				S	S	18 00 33.4	+0.5
MSAI	**Masohi**	2.63	38	P	Pn	17 59 52.3	-0.3
MSAI				S	S	18 00 38.6	-2.8
SANI	**Sanana**	3.62	338	P	Pn	18 00 00.4	-0.5
SANI	**Sanana**	3.62	338	P	Pn	18 00 00.7	-0.2
SAUI	**Saumlaki**	4.69	123	Pn	Pn	18 00 13.1	+2.0
SAUI				Sn	S	18 01 11.9	-3.3
SAUI	**Saumlaki**	4.69	123	P	Pn	18 00 12.9	+1.7
LBMI	**Labuha**	4.78	2	P	Pn	18 00 14.0	+1.9
SOEI	**Soe**	5.24	215		Pn	18 00 17.6	+0.5
SOEI				Sn	S	18 01 20.9	-5.0
SOEI	**Soe**	5.24	215	P	Pn	18 00 17.5	+0.5
	0.5nm31nm,0.8s						
SOEI	**Soe**	5.24	215	P	Pn	18 00 17.7	+0.7
FAKI	**Fak Fak**	5.52	63		Pn	18 00 20.2	+0.4
FAKI				Sn	S	18 01 27.3	-3.7
FAKI	**Fak Fak**	5.52	63	P	Pn	18 00 20.5	+0.7
	0.7nm2µm196nm,0.7s						
FAKI	**Fak Fak**	5.52	63	P	Pn	18 00 20.7	+0.9
MMRI	**Maumere**	5.96	238	Pn	Pn	18 00 24.5	+0.1
MMRI				Sn	S	18 01 40.0	+0.5
MMRI	**Maumere**	5.96	238	P	Pn	18 00 25.3	+0.8
	0.1nm7.9nm,1.2s						
BATI	**Baumata**	5.96	217	P	Pn	18 00 24.9	+0.4
	33nm,0.3s,baz=53,slow=2.4,SNR=24						
BATI				S	S	18 01 36.0	-3.6
	43nm,0.5s,baz=65,slow=4.7,SNR=4.5						
BATI	**Baumata**	5.96	217	P	Pn	18 00 25.2	+0.7
	0.4nm30nm,0.5s						
SIJI	**Sorong**	6.01	41	P	Pn	18 00 26.1	+0.9
	20nm,0.3s,baz=142,slow=23,SNR=47						
SIJI				S	S	18 01 38.5	-2.3
	15nm,0.3s,baz=78,slow=21,SNR=13						
SWI	**Sorong**	6.01	41	P	Pn	18 00 26.4	+1.3
	0.3nm91nm,0.7s						
TNTI	**Ternate**	6.17	0	Pn	Pn	18 00 26.8	-0.1
LUWI	**Luwuk**	6.30	314	Pn	Pn	18 00 27.6	-0.6
EDFI	**Ende, Flores**	6.48	239	P	Pn	18 00 31.1	+0.8
	0.0nm8.6nm,0.6s						
KMSI	**Cibinong**	6.84	331	P	P	18 00 35.3	+0.4
	0.2nm73nm,0.7s						
MRSI	**Marisa**	7.96	317	P	Pn	18 00 46.7	-0.2
	0.3nm709nm72nm,0.7s						
MTN	**Manton Dam**	8.26	153	P	P	18 00 50.6	+0.1
MTN	**Manton Dam**	8.26	153	P	P	18 00 51.6	+1.0
KDU	**Kakadu**	8.81	145	P	P	18 00 57.9	+1.2
TOLI2	**Tolitoli**	9.22	315	P	Pn	18 01 01.4	0.0
TOLI2	**Tolitoli**	9.22	315	P	Pn	18 01 02.1	+0.7
SRPI	**Serui, Papua**	9.58	69	P	Pn	18 01 08.1	+2.5
	51nm,0.6s						
PLAI	**Plampang**	10.05	250	P	Pn	18 01 12.4	+1.5
KNRA	**Kununurra**	10.27	172	P	Pn	18 01 13.3	-0.1
KNRA	**Kununurra**	10.27	172	P	Pn	18 01 14.0	+0.6
JAGI	**Jajag, Banyuwa**	13.41	256	P	P	18 01 45.9	-1.7
JAGI	**Jajag, Banyuwa**	13.41	256	P	P	18 01 47.5	-0.1
MYLDM	**Lahad Datu**	13.74	320	P	P	18 01 48.1	-3.1
WB0	**Warramunga Arr**	15.81	155	P	P	18 02 13.7	0.0
WRAB	**Tennant Creek**	15.95	155	P	P	18 02 15.0	0.0
WRAB				IAmb	IAmb	18 02 15.8	
	comp=Z,19nm,1.1s						
WRAB	**Tennant Creek**	15.95	155	P	P	18 02 15.4	+0.4
WRA	**Warramunga Arr**	15.95	155	P	P	18 02 15.0	-0.1
	comp=Z,13nm,0.5s,baz=330,slow=11,SNR=212						
WRA				S	S	18 05 00.8	-2.1
	comp=Z,1.5nm,0.5s,baz=328,slow=21,SNR=5.8						
WRA	**Warramunga Arr**	15.95	155	P	P	18 02 13.8	-1.3
WB2	**Warramunga Arr**	15.95	155	P	P	18 02 15.1	0.0
WB2				IAmb	IAmb	18 02 15.9	
	comp=Z,16nm,1.0s						
WR0	**Warramunga Arr**	16.05	155	P	P	18 02 16.1	0.0
PSA00	**Pilbara Seismi**	17.59	204	P	P	18 02 31.9	-0.6
PSA00				IAmb	IAmb	18 02 40.2	
	comp=Z,37nm,1.5s						
COEN	**Coen**	17.76	120	P	P	18 02 35.0	+0.6
COEN				IAmb	IAmb	18 02 54.0	
	comp=Z,39nm,1.5s						
COEN	**Coen**	17.76	120	P	P	18 02 35.0	+0.6
KSM	**Kuching**	18.33	292	P	P	18 02 39.4	-1.1
QIS	**Mount Isa**	19.19	143	P	P	18 02 49.7	+0.5
AS31	**Alice Springs**	19.20	161	P	P	18 02 49.2	-0.1
ASAR	**Alice Springs**	19.20	161	P	P	18 02 49.2	-0.1
	comp=Z,12nm,0.4s,baz=345,slow=11,SNR=537						
ASAR				S	S	18 06 03.5	-0.1
	comp=Z,1.2nm,0.6s,baz=350,slow=23,SNR=6.6						
WRKA	**Warakurna**	19.50	177	P	P	18 02 53.1	+0.9
PMG	**Port Moresby**	20.06	102	P	P	18 02 57.0	-0.4
PMG				IAmb	IAmb	18 03 17.0	
	comp=Z,24nm,1.2s						
MTSU	**Mount Surprise**	20.85	129	P	P	18 03 06.7	+2.0
OOD	**Oodnadatta**	23.61	161	P	P	18 03 30.2	+0.7
FORT	**Forrest**	25.21	179	P	P	18 03 43.6	-0.2
FORT				IAmb	IAmb	18 03 53.9	
	comp=Z,30nm,1.0s						
FORT	**Forrest**	25.21	179	P	P	18 03 44.3	+0.5
MULG	**Mulgathing**	25.51	166	P	P	18 03 47.2	+0.7
INKA	**Innaminka**	25.59	152	P	P	18 03 48.4	+1.2
LCRK	**Leigh Creek**	26.91	159	P	P	18 04 00.2	+1.4
BBOO	**Buckleboo**	28.42	164	P	P	18 04 12.4	+0.2
BBOO				IAmb	IAmb	18 04 31.8	
	comp=Z,40nm,1.4s						
BBOO	**Buckleboo**	28.42	164	P	P	18 04 12.1	-0.1
	comp=Z,22nm,2.7s						
KULM	**Kulim**	28.68	291	P	P	18 04 14.2	-0.6
KULM				IAmb	IAmb	18 04 39.5	
	comp=Z,44nm,1.6s						
STKA	**Stephens Creek**	29.50	155	P	P	18 04 22.4	+0.7
	comp=Z,4.4nm,0.3s,baz=329,slow=7.9,SNR=35						
	comp=Z,4.4nm,0.3s						
STKA	**Stephens Creek**	29.50	155	P	P	18 04 22.1	+0.4
STKA	**Stephens Creek**	29.50	155	P	P	18 04 22.7	+1.0
HTT	**Hallett**	29.87	160	P	P	18 04 26.4	+1.5
CMSA	**Cobar Meteorol**	31.16	149	P	P	18 04 37.5	+1.4
HNR	**Honiara**	32.59	99	P	P	18 04 46.8	-1.9
ARMA	**Armidale**	33.78	140	P	P	18 04 56.8	-2.0
ARPS	**Mount Arapiles**	33.90	159	P	P	18 05 01.3	+1.7
CAN	**Canberra**	35.83	149	P	P	18 05 17.9	+1.9
CAN				IAmb	IAmb	18 05 22.6	
	comp=Z,33nm,1.6s						
CAN	**Canberra**	35.83	149	P	P	18 05 17.7	+1.7
	comp=Z,11nm,1.1s						
PINNC	**Pines Island,**	42.32	118	P	P	18 06 10.9	+1.8
KSRS	**Korea Array**	42.68	1	P	P	18 06 12.0	+0.4
	comp=Z,0.4nm,0.5s,baz=180,slow=9.1,SNR=4.2						
BKZ	**Black Stump Fm**	55.58	135	P	P	18 07 48.6	+0.4
BKZ				IAmb	IAmb	18 08 08.4	
	comp=Z,36nm,1.5s						
MKAR	**Makanchi Array**	65.48	328	P	P	18 08 54.1	0.0
	comp=Z,0.1nm,0.4s,baz=144,slow=5.2,SNR=1.8						
MKAR	**Makanchi Array**	65.48	328	P	P	18 08 53.5	-0.7

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*JMA **21** 18:05:31.7±0.1, 24°.8N±0°.8×122°.3E±0°.3, h0^{km}, MV2.6/10, TAIWAN REGION*

*TAP **21** 18:05:32.1, 24°.89N×122°.29E, h13^{km}, ML3.2, C*

ISC 21 18:05:31.4±1.4**, 24°.87N**±0°.03×**122°.31E**±0°.02**, h6**^{km}±12^{km}**, n34, σ0**^{s}**.55**/51**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.32	296	P	Pb	18 05 38.6	-1.0
	baz=288						
TWB1				S	Sb	18 05 43.1	-2.0
	baz=288						
TIPB	**Shuangxi**	0.45	283	P	Pb	18 05 41.5	-0.3
	baz=274						
SXI1	**Grass Mountain**	0.45	300	P	Pb	18 05 41.4	-0.5
	baz=294						
SXI1				S	Sb	18 05 48.3	-0.7
	baz=294						
TWC	**Suao**	0.49	238	P	Pb	18 05 41.6	-0.9
	baz=225						
NWF	**Wu-fen Shan**	0.52	293	P	Pb	18 05 43.2	+0.2
	baz=290						
NWF				S	Sb	18 05 50.3	-0.6
	baz=290						
EWUT	**Wuta**	0.64	229	P	Pb	18 05 45.1	+0.1
	baz=217						
EWUT				S	Sb	18 05 54.1	-0.1
	baz=217						
FUSB	**Fushanzhiwuyua**	0.66	261	P	Pb	18 05 45.3	-0.1
	baz=249						
TWA	**Mucha**	0.67	280	P	Pb	18 05 45.6	+0.1
	baz=277						
ENA	**Nanau**	0.68	230	P	Pb	18 05 45.3	-0.4
	baz=220						
ENTT	**Nioudou**	0.71	252	P	Pb	18 05 46.0	-0.2
	baz=240						
JYNG	**Yonagunijimaku**	0.71	125	P	Pg	18 05 45.4	+0.3
JYNG				S	Sb	18 05 55.4	-0.9
NHDH	**Xindian Distri**	0.72	278	P	Pb	18 05 46.6	+0.3
	baz=276						
YM01	**YM01**	0.72	293	P	Pb	18 05 46.7	+0.2
	baz=290						
YM01				S	Sb	18 05 56.5	-0.2
	baz=290						
NWLT	**Wulai**	0.74	263	P	Pb	18 05 46.5	-0.2
	baz=261						
YOJ	**Yonaguni jima**	0.76	122	*e*P	Pb	18 05 46.4	-0.6
	baz=110						
YOJ				*e*S	Sb	18 05 56.6	-1.0
	baz=110						
YOJ	**Yonaguni jima**	0.76	122	P	Pg	18 05 45.9	-0.1
YOJ				S	Sg	18 05 56.2	+0.5
TWY	**Chenhua**	0.76	302	P	Pb	18 05 47.0	-0.1
	baz=287						
TWY				S	Sb	18 05 58.0	+0.3
	baz=287						
ANP	**Anpu**	0.78	294	*e*P	Pb	18 05 47.7	+0.2
	baz=292						
LATG	**Datong**	0.78	245	P	Pb	18 05 47.5	0.0
	baz=243						
PCYT	**Pengchaiyu**	0.79	344	P	Pb	18 05 47.4	-0.2
	baz=346						
YHNB	**Yeheng**	0.87	257	*e*P	Pb	18 05 48.9	-0.1
	baz=265						
ETL	**Fush Village**	0.94	222	*e*P	Pb	18 05 50.4	+0.2
	baz=220						
ETL				*e*S	Sb	18 06 03.1	+0.1
	baz=220						
NACB	**Ninganchiao**	0.95	223	P	Pb	18 05 49.9	-0.4
	baz=222						
NACB				*e*S	Sb	18 06 02.5	-0.6
	baz=222						
ETLH	**Xiulin Townshi**	1.00	229	P	Pb	18 05 50.8	-0.4
	baz=217						
ETLH				*e*S	Sb	18 06 04.5	-0.2
	baz=217						
FUSS	**Fushou**	1.15	238	P	Pb	18 05 53.5	-0.4
	baz=237						
WHF	**Hehuan Shan**	1.19	233	P	Pn	18 05 54.8	-0.3
	baz=232						
WHF				*e*S	Sn	18 06 11.9	+0.1
	baz=232						
LIOB	**Emei**	1.20	260	P	Pb	18 05 54.0	-0.5
	baz=258						
TWT	**Tachien**	1.20	240	*e*P	Pn	18 05 55.5	+0.6
	baz=229						
TWT				*e*S	Sn	18 06 12.0	+0.4
	baz=229						
CHGB	**Renai**	1.31	232	*e*P	Pn	18 05 56.8	+0.3
	baz=232						
IRIF	**Iriomote-Funau**	1.40	112	*e*P	Pb	18 05 58.4	+0.5
IRIF				S	Sn	18 06 16.7	+0.4
HATJ	**Hateruma jima**	1.59	120	P	Pg	18 06 02.0	+0.2
HATJ				S	Sg	18 06 22.0	-0.4
JKRS	**Kuro-shima**	1.67	112	P	Pb	18 06 01.9	-0.7
JIJ	**Ishigaki jima**	1.74	106	P	Pb	18 06 03.1	-0.7
JIJ				S	Sb	18 06 25.8	-0.2
JISG	**Ishigakijimahi**	1.84	98	P	Pn	18 06 04.6	+0.9

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*JMA **21** 18:17:44.7±0.1, 24°N±2°×123°.0E±0°.6, h50^{km}±1^{km}, MV2.3/12, NW OFF ISHIGAKIJIMA IS*

*TAP **21** 18:17:44.9, 24°.33N×122°.94E, h42^{km}, ML2.7, C*

ISC 21 18:17:44.7±1.2**, 24°.29N**±0°.05×**122°.96E**±0°.02**, h45**^{km}±7^{km}**, n44, σ0**^{s}**.81**/74**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.16	355	*i* P	Pn	18 17 52.3	0.0
JYNG				S	Sn	18 17 57.7	+0.1
YOJ	**Yonaguni jima**	0.17	16	*i* P	Pn	18 17 52.4	0.0
	baz=21						
YOJ				*i* S	Sn	18 17 57.6	-0.1
	baz=21						
YOJ	**Yonaguni jima**	0.17	16	P	Pn	18 17 52.4	0.0
YOJ				S	Sn	18 17 57.9	+0.1
IRIF	**Iriomote-Funau**	0.70	87	P	Pn	18 17 58.0	-0.3
IRIF				S	Sn	18 18 08.5	+0.3
HATJ	**Hateruma jima**	0.81	107	P	Pn	18 18 00.5	+0.8
HATJ				S	Sn	18 18 11.6	+0.9
JKRS	**Kuro-shima**	0.96	93	P	Pn	18 18 02.5	+0.7
JKRS				S	Sn	18 18 15.1	+0.8
TWC	**Suao**	1.06	287	P	Pn	18 18 02.5	-0.7
	baz=296						
TWC				*e*S	Sn	18 18 15.9	-0.8
	baz=296						
JIJ	**Ishigaki jima**	1.08	86	P	Pn	18 18 01.9	-1.5
JIJ				S	Sn	18 18 16.4	-0.9
EWUT	**Wuta**	1.09	278	*e*P	Pn	18 18 03.2	-0.3
	baz=287						
ENA	**Nanau**	1.12	277	P	Pn	18 18 04.2	+0.2
	baz=275						
TWB1	**Santiao Chiao**	1.13	309	*e*P	Pn	18 18 03.9	-0.3
	baz=319						
TWB1				*e*S	Sn	18 18 17.4	-1.2
	baz=319						
NDS	**Dongshan**	1.18	287	*e*P	Pn	18 18 04.9	+0.1
	baz=295						
NDS				*e*S	Sn	18 18 18.9	-0.9
	baz=295						
TIPB	**Shuangxi**	1.23	303	P	Pn	18 18 05.7	+0.1
	baz=296						
NACB	**Ninganchiao**	1.25	265	P	Pn	18 18 06.1	+0.3
	baz=263						
TWE	**Neicheng**	1.25	290	P	Pn	18 18 06.1	+0.3
	baz=289						
TWE				*e*S	Sn	18 18 20.9	-0.6
	baz=289						
TWD	**Chiawan**	1.26	261	*e*P	Pn	18 18 06.0	+0.1
	baz=259						
JISG	**Ishigakijimahi**	1.27	76	*e*P	Pn	18 18 05.9	-0.1
JISG				S	Sn	18 18 21.1	-0.7
SXI1	**Grass Mountain**	1.27	309	*e*P	Pn	18 18 06.2	+0.1
	baz=317						
SXI1				*e*S	Sn	18 18 21.2	-0.7
	baz=317						
ENTT	**Nioudou**	1.32	285	P	Pn	18 18 07.7	+1.0
	baz=293						
NWF	**Wu-fen Shan**	1.32	306	P	Pn	18 18 06.6	-0.2
	baz=293						
WFSB	**Wu-fen Shan**	1.32	306	P	Pn	18 18 06.7	-0.1
	baz=314						
WFSB				S	Sn	18 18 22.8	-0.4
	baz=314						
LATG	**Datong**	1.33	281	P	Pn	18 18 07.8	+0.9
	baz=289						
FUSB	**Fushanzhiwuyua**	1.33	291	P	Pn	18 18 07.0	0.0
	baz=299						
FUSB				*e*S	Sn	18 18 23.3	-0.3
	baz=299						
ETLH	**Xiulin Townshi**	1.35	267	*e*P	Pn	18 18 08.3	+1.1
	baz=265						
ETLH				*e*S	Sn	18 18 25.0	+0.9
	baz=265						
NDT	**Datong Townshi**	1.35	283	*e*P	Pn	18 18 07.5	+0.3
	baz=290						
NWLT	**Wulai**	1.41	290	*e*P	Pn	18 18 08.8	+0.8
	baz=289						
NNSB	**Datong**	1.44	276	P	Pn	18 18 10.1	+1.6
	baz=274						
ESL	**Shilin**	1.48	251	*e*P	Pn	18 18 08.3	-0.5
	baz=249						
ESL				*e*S	Sn	18 18 26.6	-0.3
	baz=249						
YHNB	**Yeheng**	1.49	285	P	Pn	18 18 10.2	+1.1
	baz=293						
YHNB				S	Sn	18 18 28.2	+0.7
	baz=293						
EGFH	**Guangfu**	1.53	246	*e*P	Pn	18 18 09.2	-0.4
	baz=244						
EGFH				*e*S	Sn	18 18 28.1	-0.3
	baz=244						
PCYT	**Pengchaiyu**	1.56	329	*e*P	Pn	18 18 09.8	-0.1
	baz=318						
HGSD	**Ruisui**	1.62	241	*e*P	Pn	18 18 10.1	-0.7
	baz=239						
JTJ	**Tarama**	1.62	77	P	Pn	18 18 11.1	+0.2
JTJ				S	Sn	18 18 30.5	-0.1
EHY	**Hungye**	1.69	243	*e*P	Pn	18 18 11.6	-0.2
	baz=241						
EHY				*e*S	Sn	18 18 30.5	-1.8
	baz=241						
WUSB	**Renai**	1.71	260	P	Pn	18 18 13.0	+0.8
	baz=259						
WUSB				*e*S	Sn	18 18 33.3	+0.4
	baz=259						
VWDT	**VWDT**	1.75	252	P	Pn	18 18 13.3	+0.7
	baz=251						
VWDT				*e*S	Sn	18 18 34.0	+0.4
	baz=251						
YULB	**Yu-li**	1.77	240	*e*P	Pn	18 18 12.6	-0.3
	baz=238						
YULB				*e*S	Sn	18 18 33.3	-0.8
	baz=238						
EYUL	**Yuli**	1.77	238	*e*P	Pn	18 18 12.9	-0.1
	baz=236						
EYUL				*e*S	Sn	18 18 34.2	-0.1
	baz=236						
FULB	**Fuli**	1.88	235	*e*P	Pn	18 18 13.5	-0.9
	baz=221						
FULB				*e*S	Sn	18 18 35.2	-1.6
	baz=221						
CHKT	**Chengkung**	1.88	231	*e*P	Pn	18 18 13.2	-1.2
	baz=219						
SSLB	**Suanglung**	1.90	255	P	Pn	18 18 15.9	+1.2
	baz=253						
SSLB				S	Sn	18 18 37.4	-0.1
	baz=253						
SMLT	**Sun Moon Lake**	1.93	258	*e*P	Pn	18 18 16.3	+1.1
	baz=257						
SMLT				*e*S	Sn	18 18 39.4	+1.2
	baz=257						
TYC	**Yuchr**	1.96	259	*e*P	Pn	18 18 18.1	+2.6
	baz=247						
TYC				*e*S	Sn	18 18 40.4	+1.5

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      baz=247
JIRB  Irabujima          2.08  75  P       Pn     18 18 17.4 +0.2
JIRB                               S       Sn     18 18 42.2 +0.3
```

IDC 21 18:21:19.6±2.1, 8°.81S×127°.87E, h0km, mb3.3/1, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=40.0km s-min=26.5km az=52.0, Timor region

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Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op      ISC     h  m  s    ISC
BATI  Baumata            4.37 251   Pn      Pn     18 22 27.4  0.0
      1.0nm,0.3s,baz=101,slow=5.2,SNR=2.6
BATI                                Sn      Sn     18 23 18.7 -0.4
      2.8nm,0.3s,baz=92,slow=18,SNR=7.1
      4.5nm,0.3s
WRA   Warramunga Arr    12.71 151   Pn      Pn     18 24 21.4 -0.4
      0.3nm,0.3s,baz=324,slow=14,SNR=23
WRA                                 Sn      Sn     18 26 43.4 -0.9
      0.2nm,0.3s,baz=336,slow=21,SNR=2.8
      0.4nm,0.4s
ASAR  Alice Springs     15.86 159   Pn      Pn     18 25 05.0 +0.5
      0.1nm,0.3s,baz=337,slow=11,SNR=16
ASAR                                Sn      Sn     18 28 05.2 +4.1
      0.1nm,0.3s,baz=326,slow=22,SNR=1.4
      0.6nm,0.5s
MKAR  Makanchi Array    68.61 328   P       P      18 32 24.7 +0.2
      0.3nm,0.8s,baz=149,slow=6.2,SNR=2.6
      0.3nm,0.8s
```

IDC 21 18:23:34.6±0.7, 21°.47S×71°.75W, h0km, mb4.0/6, mbtmp4.2/11, ML4.4/5, MS3.2/12, Error ellipse: s-maj=25.5km s-min=18.8km az=36.0
SJA 21 18:23:35.0, 21°.58S×71°.78W, h10km, ML4.3
NEIC 21 18:23:36.0±2.6, 21°.59S±0°.03×71°.62W±0°.06, h10km±1km, mb4.5/10, ML4.4(GUC), Error ellipse: s-maj=9.5km s-min=4.7km az=290.0
GUC 21 18:23:41.5±0.6, 21°.59S×71°.45W, h34km, ML4.4
VAO 21 18:23:42.0±0.8, 21°.72S×71°.35W, h10km, mb4.5
ISC 21 18:23:36.3±3.1, 21°.57S±0°.03×71°.75W±0°.05, h14km±20km, n147, σ1s.91/164, mb4.5/7, MS3.3/6, 13C-2D, Off coast of northern Chile

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Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op      ISC     h  m  s    ISC
PATCX Punta Patache      1.67  64           Pn     18 24 04.3 -0.9
PATCX                               Sn      Sn     18 24 22.8 -3.7
PATCX Punta Patache      1.67  64⇑ iP      Pn     18 24 04.7 -0.5
PATCX                              i S      Sn     18 24 22.8 -3.7
PATCX Punta Patache      1.67  64  i P      Pn     18 24 04.0 -1.2
PATCX                              eS       Sn     18 24 23.2 -3.3
PATCX                               IAML           18 24 24.2
      comp=Z,3μm,0.6s
PB04  IPOC Station P     1.67 117           Pn     18 24 04.1 -1.1
PB04                                Sn      Sn     18 24 23.6 -3.0
PB04  IPOC Station P     1.67 117⇑ iP      Pn     18 24 05.0 -0.3
PB04                               i S      Sn     18 24 23.3 -3.3
PB04                                IAML           18 24 24.5
      comp=E,8μm,0.6s
PB04  IPOC Station P     1.67 117  i P      Pn     18 24 05.0 -0.3
PB04                               eS       Sn     18 24 24.0 -2.6
PB04                                IAML           18 24 27.0
      comp=Z,3μm,0.5s
PB07  IPOC Station P     1.74  95           Pn     18 24 05.0 -1.3
PB07                                Sn      Sn     18 24 25.6 -2.8
PB07  IPOC Station P     1.74  95⇑ iP      Pn     18 24 05.9 -0.4
PB07                               i S      Sn     18 24 24.6 -3.8
PB07  IPOC Station P     1.74  95  i P      Pn     18 24 05.0 -1.3
PB07                                IAML           18 24 31.1
      comp=Z,1μm,0.4s
PB02  IPOC Station P     1.75  82           Pn     18 24 05.0 -1.3
PB02                                Sn      Sn     18 24 25.0 -3.5
PB02  IPOC Station P     1.75  82⇑ iP      Pn     18 24 05.9 -0.4
PB02                               i S      Sn     18 24 24.8 -3.6
PB02                                IAML           18 24 27.1
      comp=E,17μm,0.6s
PB02  IPOC Station P     1.75  82  i P      Pn     18 24 05.0 -1.3
PB02                               eS       Sn     18 24 24.9 -3.5
TA01  Diego Aracena      1.78  56           Pn     18 24 06.0 -0.6
TA01                                Sn      Sn     18 24 25.0 -4.0
TA01  Diego Aracena      1.78  56⇑ iP      Pn     18 24 06.0 -0.6
TA01                               i S      Sn     18 24 25.0 -4.0
TA01                                IAML           18 24 26.1
      comp=N,9μm,0.5s
TA01  Diego Aracena      1.78  56  i P      Pn     18 24 06.0 -0.6
TA01                                IAML           18 24 31.8
      comp=Z,922nm,0.5s
HMBC  Humberstone        2.17  54⇑ iP      Pn     18 24 11.7 -0.4
HMBC                               i S      Sn     18 24 35.1 -3.7
HMBC                                IAML           18 24 36.5
      comp=N,5μm,0.5s
PB01  IPOC Station P     2.18  76           Pn     18 24 11.2 -1.0
PB01                                Sn      Sn     18 24 35.9 -3.1
PB01  IPOC Station P     2.18  76⇑ iP      Pn     18 24 12.3 +0.1
PB01                               i S      Sn     18 24 35.8 -3.1
PB01                                IAML           18 24 37.5
      comp=N,10μm,0.3s
PB01  IPOC Station P     2.18  76  i P      Pn     18 24 12.0 -0.2
PB01                                IAML           18 24 42.1
      comp=Z,1μm,0.2s
PB10  IPOC Station P     2.23 150   Pn      Pn     18 24 11.8 -1.0
PB10                                Sn      Sn     18 24 36.8 -3.3
PB10  IPOC Station P     2.23 150⇓ iP      Pn     18 24 12.4 -0.3
PB10                               i S      Sn     18 24 36.6 -3.5
PB10                                IAML           18 24 38.3
      comp=N,4μm,0.4s
PB10  IPOC Station P     2.23 150  i P      Pn     18 24 12.5 -0.3
PB10                               eS       Sn     18 24 36.8 -3.3
PB10                                IAML           18 24 37.5
      comp=Z,2μm,0.8s
PB06  IPOC Station P     2.31 120           Pn     18 24 13.8 -0.3
PB06  IPOC Station P     2.31 120⇑ iP      Pn     18 24 14.0 -0.1
PB06                               i S      Sn     18 24 39.7 -2.9
PB06                                IAML           18 24 41.1
      comp=E,3μm,0.2s
PB06  IPOC Station P     2.31 120  i P      Pn     18 24 14.0 -0.1
PB06                                IAML           18 24 48.1
      comp=Z,1μm,0.6s
PB09  IPOC Station P     2.34  96           Pn     18 24 14.5  0.0
PB09  IPOC Station P     2.34  96⇑ iP      Pn     18 24 15.6 +1.0
PB09                               i S      Sn     18 24 41.8 -1.5
PB09                                IAML           18 24 44.0
      comp=E,3μm,0.4s
PB09  IPOC Station P     2.34  96  i P      Pn     18 24 15.5 +1.0
PB09                                IAML           18 24 52.6
      comp=Z,982nm,0.8s
PB11  IPOC Station P     2.67  48           Pn     18 24 18.4 -0.6
PB11  IPOC Station P     2.67  48⇑ iP      Pn     18 24 19.1 +0.1
PB11                               i S      Sn     18 24 47.6 -3.6
PB11                                IAML           18 24 49.1
      comp=N,4μm,0.4s
PB11  IPOC Station P     2.67  48  i P      Pn     18 24 19.0 +0.1
PB11                                IAML           18 24 54.7
      comp=Z,856nm,0.5s
PB15  IPOC Station P     2.67 128           Pn     18 24 18.2 -0.8
PB15  IPOC Station P     2.67 128⇑ iP      Pn     18 24 19.2 +0.1
PB15                               i S      Sn     18 24 48.6 -2.6
PB15  IPOC Station P     2.67 128  i P      Pn     18 24 19.0  0.0
PB15                               eS       Sn     18 24 49.3 -2.0
PB08  IPOC Station P     2.82  60           Pn     18 24 20.9 -0.3
PB08  IPOC Station P     2.82  60⇑ iP      Pn     18 24 21.9 +0.6
PB08                               i S      Sn     18 24 52.5 -2.8
PB08                                IAML           18 24 55.3
      comp=N,3μm,0.4s
PB08  IPOC Station P     2.82  60  i P      Pn     18 24 21.0 -0.3
PB08                                IAML           18 24 58.1
      comp=Z,1μm,0.5s
LVC   Limon Verde        2.83 112   Pn      Pn     18 24 22.5 +1.1
      comp=Z,129nm,0.3s,baz=302,slow=9.3,SNR=795
LVC                                 Sn      Sn     18 24 53.8 -1.7
      comp=Z,220nm,0.3s,baz=36,slow=22,SNR=15
LVC                                 LR      LR     18 25 30.7
      comp=Z,496nm,20.2s,baz=202,slow=40
      comp=Z,316nm,0.3s
LVC   Limon Verde        2.83 112           Pn     18 24 22.1 +0.7
LVC   Limon Verde        2.83 112  i P      Pn     18 24 22.5 +1.1
LVC                                 IAML           18 25 01.3
      comp=Z,261nm,0.7s
LVC   Limon Verde        2.83 112  eP       Pn     18 24 22.5 +1.1
PB12  IPOC Station P     3.23  25   Pn      Pn     18 24 26.3 -0.4
PB12  IPOC Station P     3.23  25⇓ iP      Pn     18 24 26.8 +0.1
PB12                               i S      Sn     18 25 00.6 -4.5
PB12                                IAML           18 25 01.6
      comp=N,552nm,0.2s
PB12  IPOC Station P     3.23  25  i P      Pn     18 24 26.9 +0.1
PB12                                IAML           18 25 19.1
      comp=Z,266nm,0.6s
PB14  IPOC Station P     3.28 158           Pn     18 24 26.5 -1.1
PB14  IPOC Station P     3.28 158⇑ iP      Pn     18 24 27.0 -0.6
PB14                               i S      Sn     18 25 02.2 -4.4
PB14                                IAML           18 25 05.1
      comp=N,523nm,0.4s
PB14  IPOC Station P     3.28 158  i P      Pn     18 24 27.0 -0.6
PB14                                IAML           18 25 09.8
      comp=Z,448nm,0.2s
AP01  Chacalluta         3.45  23   Pn      Pn     18 24 29.7 +0.1
AP01  Chacalluta         3.45  23  i P      Pn     18 24 30.0 +0.4
AP01                                IAML           18 25 23.1
      comp=Z,443nm,0.6s
AF01  San Pedro de A     3.58 113           Pn     18 24 34.9 +3.1
PB16  IPOC Station P     3.85  34   Pn      Pn     18 24 36.1 +0.4
PB16  IPOC Station P     3.85  34  i P      Pn     18 24 36.0 +0.4
PB16                                IAML           18 25 27.5
      comp=Z,182nm,0.6s
GO02  Mina Guanaco       4.09 151   Pn      Pn     18 24 39.0 +0.3
GO02  Mina Guanaco       4.09 151  i P      Pn     18 24 39.0 +0.3
AC01  Pan de Azucar      4.67 167   Pn      Pn     18 24 45.4 -1.1
AC01  Pan de Azucar      4.67 167  i P      Pn     18 24 45.5 -0.9
AC01                                IAML           18 25 43.6
      comp=Z,144nm,0.2s
AC02  Maricunga          5.76 156   Pn      Pn     18 25 02.5 +0.7
AC06  Mina Casimiro      5.90 168           Pn     18 25 02.7 -0.6
GO03  Copiap             6.15 167           Pn     18 25 04.2 -2.6
LPAZ  La Paz             6.28  34   Pn      Pn     18 25 12.1 +3.0
      comp=Z,1.5nm,0.3s,baz=253,slow=2.0,SNR=23
LPAZ                                LR      LR     18 27 46.9
      comp=Z,178nm,18.7s,baz=226,slow=41
LPAZ  La Paz             6.28  34           Pn     18 25 12.2 +3.1
LPAZ  La Paz             6.28  34  eP       Pn     18 25 12.7 +3.7
AC04  Llanos de Chal     6.63 175   Pn      Pn     18 25 11.4 -2.0
LCO   Las Campanas       7.47 173   Pn      Pn     18 25 23.7 -1.4
CO05  La Serena          8.32 177   Pn      Pn     18 25 36.5 -0.1
CO01  Juntas del Tor     8.50 170   Pn      Pn     18 25 38.7 -0.6
GO04  Tololo Observa     8.61 174           Pn     18 25 39.5 -1.2
CO06  Fray Jorge         9.06 179   Pn      Pn     18 25 45.1 -1.7
CO02  Combarbal          9.62 176   Pn      Pn     18 25 53.1 -1.4
NNA   Nana              10.71 332   Pn      Pn     18 26 09.3 -0.1
      comp=Z,2.2nm,0.3s,baz=149,slow=12,SNR=1.9
NNA                                 Sn      Sn     18 28 05.8 -3.3
      comp=Z,13nm,0.3s,baz=217,slow=16,SNR=9.6
NNA                                 LR      LR     18 29 55.9
      comp=Z,96nm,20.0s,baz=176,slow=36
      comp=Z,5.2nm,0.3s
VA06  Catapilco         10.95 178   Pn      Pn     18 26 09.9 -2.7
VA03  San Esteban       11.20 175   Pn      Pn     18 26 13.4 -2.7
ROC1  El Roble          11.38 177           Pn     18 26 17.9 -0.7
SIV   San Ignacio       11.54  63   Pn      Pn     18 26 19.5 -1.2
      comp=Z,0.2nm,0.3s,baz=250,slow=12,SNR=38
      comp=Z,10nm,0.6s
MT02  Curacav           11.65 177   Pn      Pn     18 26 18.9 -3.3
MT09  Talagante         12.18 177   Pn      Pn     18 26 26.4 -3.1
MT01  Popeta            12.25 178   Pn      Pn     18 26 28.1 -2.3
GO05  Huala             13.39 181           Pn     18 26 42.7 -3.2
H03N1 Juan Fernandez    13.41 207   Pn      Pn     18 26 45.8 -0.2
      baz=109,slow=14
H03N1                               T       T      18 40 37.2
      baz=30,slow=72,SNR=30
H03N2 Juan Fernandez    13.42 207   Pn      Pn     18 26 45.9 -0.2
      baz=109,slow=14
H03N2                               T       T      18 40 39.3
      baz=30,slow=72,SNR=23
PTLB  Pontes e Lacer    13.42  65  eP       Pn     18 26 46.5 +0.1
H03N3 Juan Fernandez    13.43 207   Pn      Pn     18 26 45.7 -0.6
      baz=109,slow=14
H03N3                               T       T      18 40 36.9
      baz=30,slow=72,SNR=24
H03S3 Juan Fernandez    13.75 206   Pn      Pn     18 26 49.5 -1.0
      baz=273
H03S1 Juan Fernandez    13.76 206   Pn      Pn     18 26 49.5 -1.3
      baz=273
H03S2 Juan Fernandez    13.76 206   Pn      Pn     18 26 50.0 -0.8
      baz=273
VILB  Vilhena           13.96  54  eP       Pn     18 26 55.2 +1.3
CPUP  Villa Florida     14.01 113   Pn      Pn     18 26 53.0 -1.4
      comp=Z,0.2nm,0.3s,baz=288,slow=12,SNR=13
CPUP                                LR      LR     18 32 55.3
      comp=Z,108nm,18.5s,baz=284,slow=40
      comp=Z,6.7nm,0.8s
CPUP  Villa Florida     14.01 113           Pn     18 26 52.2 -2.2
CPUP  Villa Florida     14.01 113  eP       Pn     18 26 53.3 -1.1
ML02  Panimavida        14.14 179   Pn      Pn     18 26 54.9 -1.4
ATAH  Atahualpa         15.72 335   LR      LR     18 32 59.5
      comp=Z,51nm,21.7s,baz=156,slow=36
ITQB  Itaqui            15.84 124  eP       Pn     18 27 17.7 -1.2
SALV  Santo Antonio     16.22  72  eP       Pn     18 27 23.7 -0.1
TRCB  Terra Rica        17.75  98  eP       P      18 27 44.2 +0.2
PTGB  Pitanga           18.37 104  eP       P      18 27 50.4 -0.4
TRQA  Tornquist         18.46 155   P       Pn     18 27 51.8  0.0
ITAB  Concordia         18.73 111   P       P      18 27 52.9 -1.8
ITAB                                IAmb    IAmb   18 28 00.3
      comp=Z,61nm,1.6s
ITAB  Concordia         18.73 111  eP       P      18 27 53.9 -0.8
PCMB  Pacaembu          19.06  94  eP       Pn     18 27 58.9 -0.2
PLTB  Pedras Altas      19.11 126  eP       P      18 27 58.8  0.0
PLCA  Paso Flores       19.13 177   P       Pn     18 28 01.4 +1.5
      comp=Z,0.3nm,0.3s,baz=0.5,slow=11,SNR=15
PLCA                                PcP     PcP    18 32 24.4 +1.4
      comp=Z,1.1nm,0.9s,baz=36,slow=3.4,SNR=3.4
PLCA                                LR      LR     18 35 47.1
      comp=Z,23nm,19.4s,baz=358,slow=38
      comp=Z,1.1nm,0.5s
PLCA  Paso Flores       19.13 177   P       Pn     18 28 00.1 +0.2
PLCA  Paso Flores       19.13 177  eP       Pn     18 28 01.4 +1.5
LL04  Puerto Octay      19.29 182   P       P      18 27 59.2 -1.4
LL04                                IAmb    IAmb   18 28 03.8
      comp=Z,11nm,1.1s
ITRB  Iturama           20.11  89  eP       Pn     18 28 11.3 -0.4
CNLB  Canela            20.37 116  eP       Pn     18 28 13.9 -0.8
TER01 Tubaro-SC         21.61 113  eP       P      18 28 27.5 +1.5
BB19B Bebedouro         21.64  93  eP       P      18 28 28.0 +1.6
RCLB  Rio Claro- Sao    22.47  97  eP       P      18 28 37.2 +1.9
BDFB  Brasilia          23.24  79   P       P      18 28 45.5 +2.0
      comp=Z,12nm,0.5s,baz=262,slow=10,SNR=18
      comp=Z,12nm,0.5s
BDFB  Brasilia          23.24  79   P       P      18 28 43.0 -0.5
BDFB                                IAmb    IAmb   18 28 49.8
      comp=Z,12nm,0.6s
BDFB  Brasilia          23.24  79  eP       P      18 28 45.8 +2.3
COYC  Coyhaique         23.94 181   P       P      18 28 50.2 +0.3
COYC                                IAmb    IAmb   18 29 18.7
      comp=Z,18nm,1.2s
PEXB  Peixe             24.31  71  eP       P      18 28 54.6 +0.9
ROSC  El Rosal          26.37 354   LR      LR     18 40 08.6
      comp=Z,54nm,21.1s,baz=231,slow=38
DIAM  Diamantina, MG    26.58  88  eP       P      18 29 17.1 +2.7
SDBA  SAO DESIDERIO     27.21  75  eP       P      18 29 23.2 +3.3
GUA01 Guaratinga, BA    30.56  86  eP       P      18 29 52.5 +2.7
GDU01 Guandu, BA        31.59  81  eP       P      18 30 02.1 +3.3
MDP   Montagnes des     32.46  37   LR      LR     18 43 50.8
      comp=Z,54nm,18.7s,baz=119,slow=38
NBPS  Pedro II - PI     33.99  64  eP       P      18 30 24.6 +4.6
JTS   Las Juntas de     34.22 336   LR      LR     18 43 42.4
      comp=Z,24nm,18.3s,baz=216,slow=35
RPN   Rapa Nui          34.59 253   LR      LR     18 38 56.3
      comp=Z,51nm,20.4s,baz=205,slow=27
NBPB  Pedra_Branca-C    34.98  68  eP       P      18 30 32.6 +4.1
RCBR  Riachuelo         38.05  71  eP       P      18 30 57.4 +2.7
TX31  Lajitas Ar. Si    59.22 328   P       P      18 33 38.3 +0.9
TXAR  Lajitas Array     59.22 328   P       P      18 33 38.1 +0.8
      comp=Z,0.2nm,0.5s,baz=156,slow=10,SNR=5.2
      comp=Z,0.2nm,0.5s
TXAR  Lajitas Array     59.22 328   P       P      18 33 38.5 +1.1
VNA3  Neumayer Olymp    60.86 161   pP      pP     18 33 49.4 -1.6
VNA2  Neumayer--Watz    61.47 160   pP      pP     18 33 53.4 -1.7
      baz=279,slow=9.0
S39A  Bolivar           62.35 341   P       P      18 33 57.6 -0.7
SNAA  Sanae             63.08 161   pP      pP     18 34 04.1 -1.9
G62A  West of Eustis    66.48   1   P       P      18 34 26.4 +1.2
PDAR  Pinedale Array    72.89 332   LR      LR     19 08 39.3
      comp=Z,17nm,18.9s,baz=162,slow=37
NVAR  Mina Array Bea    73.95 324   P       P      18 35 12.2 +0.8
      comp=Z,0.2nm,0.5s,baz=176,slow=5.9,SNR=2.5
      comp=Z,0.2nm,0.5s
ULM   Lac du Bonnet     74.63 344   LR      LR     19 10 10.9
      comp=Z,15nm,19.7s,baz=232,slow=38
TORD  Torodi Ar. Bea    79.88  72   P       P      18 35 44.8 -0.3
      comp=Z,3.3nm,0.5s,baz=253,slow=5.4,SNR=32
      comp=Z,3.3nm,0.5s
TORD  Torodi Ar. Bea    79.88  72   P       P      18 35 44.1 -1.1
TORD                                IAmb    IAmb   18 35 59.1
      comp=Z,5.1nm,0.9s
MAW   Mawson            85.00 164   P       P      18 36 12.2 +1.3
      comp=Z,3.0nm,0.7s,baz=211,slow=5.6,SNR=7.1
      comp=Z,3.0nm,0.7s
YKA   Yellowknife Ar    90.40 342   P       P      18 36 37.0 +0.2
      comp=Z,0.3nm,0.7s,baz=141,slow=4.6,SNR=5.2
      comp=Z,0.3nm,0.7s
ASAR  Alice Springs    128.56 211   PKP     PKPdf  18 42 44.0 +0.3
      comp=Z,0.9nm,0.7s,baz=128,slow=2.9,SNR=8.3
WRA   Warramunga Arr   131.49 214   PKP     PKPdf  18 42 49.5 +0.2
      comp=Z,1.2nm,0.7s,baz=151,slow=1.7,SNR=8.5
ZALV  Zalesovo Beam    143.10  23   PKP     PKPbc  18 43 07.3 +0.9
      comp=Z,1.6nm,0.5s,baz=305,slow=5.1,SNR=6.4
MKAR  Makanchi Array   147.20  34   PKPbc   PKPdf  18 43 17.7 +0.7
      comp=Z,3.7nm,0.9s,baz=326,slow=2.3,SNR=25
MJAR  Matsushiro Arr   150.01 306   PKPbc   PKPbc  18 43 25.8 -0.9
      comp=Z,3.3nm,0.8s,baz=92,slow=1.0,SNR=14
MJAR  Matsushiro Arr   150.01 306           PKiKP  18 43 27.4 -0.2
SONM  Songino Array    153.76   3   PKP     PKPdf  18 43 28.4 +1.2
      comp=Z,0.4nm,0.6s,baz=18,slow=5.0,SNR=1.9
SONM                                PKPbc   PKiKP  18 43 35.8 +0.6
      comp=Z,0.5nm,0.5s,baz=313,slow=1.4,SNR=4.5
```

SKO 21 18:40:53.7, 41°.22N×21°.03E, h15km
TIR 21 18:40:54.0, 41°.20N×21°.01E, h6km±2km, Md2.6, Ml2.1
THE 21 18:40:54.1, 41°.24N×21°.02E, h2km±2km, ML2.1/4, Error ellipse: s-maj=2.6km s-min=0.7km az=234.0
BEO 21 18:40:55.4±0.3, 41°.21N×21°.03E, h1km±3km, ML2.1/6
ISC 21 18:40:54.4±0.9, 41°.22N±0°.02×21°.02E±0°.02, h11km±7km, n35, σ0s.74/67, 2C, Northwestern Balkan Peninsula

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Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op      ISC     h  m  s    ISC
OHR   Ohrid              0.20 236  ePg      Pg     18 40 58.7 -0.1
OHR                                eSg      Sg     18 41 02.1 +0.4
OHR   Ohrid              0.20 236⇑ iPg     Pg     18 40 58.9 +0.1
OHR                                i Sg     Sg     18 41 02.1 +0.4
FNA   Florina            0.52 149  ePg      Pg     18 41 03.9 -0.5
FNA                                eSg      Sg     18 41 11.5 +0.2
FNA   Florina            0.52 149   P       Pg     18 41 04.0 -0.5
FNA                                 S       Sg     18 41 11.4 +0.2
      408nm,0.2s
FNA   Florina            0.52 149⇑ iPg     Pg     18 41 04.0 -0.5
FNA                                i Sg     Sg     18 41 11.6 +0.4
FNA   Florina            0.52 149   P       Pg     18 41 04.0 -0.5
      baz=145
FNA                                 S       Sg     18 41 11.8 +0.5
      baz=145
KBN   Korca              0.63 197   P       Pg     18 41 06.1 -0.5
KBN                                 S       Sg     18 41 14.7 -0.1
      130nm,0.4s
KBN   Korca              0.63 197   P       Pg     18 41 06.1 -0.5
      baz=197
KBN                                 S       Sb     18 41 15.7 -0.6
      baz=197
KBN                                 AMP
      comp=E,0.5nm,0.4s,baz=197
PHP   Peshkopia          0.64 317   P       Pg     18 41 05.8 -1.0
PHP                                 S       Sg     18 41 14.5 -0.6
PHP   Peshkopia          0.64 317   P       Pg     18 41 05.8 -1.0
      baz=319
PHP                                 S       Sb     18 41 16.1 -0.4
      baz=319
PHP                                 AMP
      comp=N,0.4nm,0.2s,baz=319
NEST  Nestorio           0.81 179   P       Pg     18 41 09.2 -0.8
NEST                                S       Sb     18 41 20.9 -0.6
      comp=N,130nm,0.4s
SKO   Skopje             0.81  23  ePg      Pb     18 41 10.3 -0.2
SKO                                eSg      Sg     18 41 20.8 +0.2
TIR   Tirane             0.88 278  ePg      Pg     18 41 10.9 -0.5
TIR                                eSg      Sb     18 41 24.3 +0.8
TIR   Tirane             0.88 278  i Pg     Pg     18 41 11.1 -0.3
TIR   Tirane             0.88 278   P       Pg     18 41 10.9 -0.5
      baz=280
TIR                                 S       Sb     18 41 24.1 +0.5
      baz=280
GRG   Griva              1.07 104   P       Pg     18 41 14.1 -1.0
GRG                                 S       Sb     18 41 29.4 +0.2
GRG   Griva              1.07 104  i Pg     Pg     18 41 14.7 -0.4
KZN   Kozani             1.08 148   P       Pb     18 41 15.2 +0.1
KZN                                 S       Sn     18 41 30.7 +0.1
      comp=N,72nm,0.3s
LSK   Leskovik           1.12 197   P       Pg     18 41 15.7 -0.3
LSK   Leskovik           1.12 197   P       Pb     18 41 15.9  0.0
      baz=197
LSK                                 S       Sn     18 41 31.7 +0.1
      baz=197
LSK                                 AMP
      comp=E,0.5nm,0.7s,baz=197
VAY   Valandovo          1.17  85  ePg      Pg     18 41 16.5 -0.4
VAY                                eSg      Sn     18 41 33.2 +0.5
VAY   Valandovo          1.17  85  i Pg     Pg     18 41 16.3 -0.6
VAY                                i Sg     Sn     18 41 33.2 +0.5
VAY                                eLg      Lg     18 41 33.4
      comp=N,12nm,0.4s
BCI   Bajram Curri       1.35 328   P       Pg     18 41 20.8 +0.5
      baz=330
BCI                                 S       Sn     18 41 40.7 +3.5
      baz=330
KNT   Kendrikon          1.42  92   P       Pn     18 41 19.8 -0.4
KNT                                 S       Sg     18 41 40.3 +0.3
KNT   Kendrikon          1.42  92  i Pg     Pb     18 41 20.9 +0.1
KNT                                i Sg     Sg     18 41 40.9 +0.9
SRN   Sarande            1.55 210   P       Pg     18 41 24.3 +0.1
      baz=211
SRN                                 S       Sg     18 41 45.1 +0.8
      baz=211
SRN                                 AMP
      comp=E,0.1nm,0.8s,baz=211
BOSS  Bosilegrad         1.67  40  ePg      Pn     18 41 24.3 +0.6
BOSS                               eSg      Sg     18 41 48.9 +0.7
BARS  Barje              1.70  20  ePg      Pb     18 41 26.2 +0.5
BARS                               eSg      Sg     18 41 49.1 +0.1
IGT   Igoumenitsa        1.77 198   P       Pb     18 41 27.4 +0.5
      baz=198
IGT                                 S       Sg     18 41 50.8 -0.5
      baz=198
PDG   Podgorica          1.79 313  ePg      Pg     18 41 28.0 -0.7
PDG                                eSg      Sg     18 41 52.6 +0.7
SJES  Sjenica            2.18 339  ePn      Pb     18 41 33.1 -0.9
SJES                               eSn      Sb     18 42 00.3 -0.7
STON  Ston               2.97 305  ePn      Pn     18 41 41.9 +0.4
STON                                Sn      Sn     18 42 17.5 +0.3
RICI  Ricice             3.67 309  ePn      Pn     18 41 49.9 -1.2
RICI                                Sn      Sn     18 42 32.5 -1.9
HVAR  Hvar               3.92 301  ePn      Pn     18 41 54.6 +0.1
HVAR                                Sn      Sn     18 42 41.6 +1.1
ZIRJ  Zirje              4.66 303  ePn      Pn     18 42 04.6 -0.2
ZIRJ                                Sn      Sn     18 42 58.3 -0.5
```

NEIC 21 18:48:19.4±2.1, 22°.0S±0°.1×178°.8W±0°.2, h560km±11km, mb4.4/24, Error ellipse: s-maj=23.0km s-min=17.6km az=47.0
IDC 21 18:48:21.0±2.3, 21°.87S×178°.97W, h574km±24km, mb3.2/5, mbtmp4.2/8, Error ellipse: s-maj=42.8km s-min=19.2km az=146.0
ISC 21 18:48:20.6±0.8, 21°.98S±0°.09×178°.9W±0°.1, h576km, n38, σ1s.13/39, mb4.3/17, Fiji Islands region

```
Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op      ISC     h  m  s    ISC
MSVF  Nonsavu            5.10 325   P       P      18 49 51.9 -1.1
      41nm,0.7s,baz=131,slow=17,SNR=38
MSVF                                S       S      18 51 07.5 -0.9
      8.5nm,1.0s,baz=344,slow=20,SNR=1.7
MSVF  Nonsavu            5.10 325   P       P      18 49 51.6 -1.4
RAO   Raoul Island       7.30 173   P       P      18 50 10.2 -2.1
MARNC Mare, Loyalty     12.15 270   P       P      18 51 00.8  0.0
ONTNC Ouen Toro         13.57 266   P       P      18 51 12.3 -3.1
DZM   Mont Dzumac       13.59 267   P       P      18 51 15.0 -0.7
      6.3nm,0.9s,baz=163,slow=11,SNR=2.1
DZM   Mont Dzumac       13.59 267   P       P      18 51 14.3 -1.4
URZ   Urewera           16.59 191   P       P      18 51 44.0 -0.2
      3.7nm,0.6s,baz=304,slow=18,SNR=1.5
URZ   Urewera           16.59 191   P       P      18 51 43.0 -1.2
BKZ   Black Stump Fm    17.58 192   P       P      18 51 52.2 -1.1
NNZ   Nelson            20.26 197   P       P      18 52 18.5 +1.0
EIDS  Eidsvold          27.66 257   P       P      18 53 24.1 +0.7
```

```
EIDS                                 IAmb     IAmb        18 53 26.1
           comp=Z,25nm,1.6s
ARMA  Armidale           27.68 246   P        P           18 53 25.5 +1.8
ARMA                                 IAmb     IAmb        18 53 26.2
           comp=Z,6.7nm,0.7s
CTAO  Charters Tower     32.53 267   P        P           18 54 05.7 +0.3
TOO   Toolangi           34.35 235   P        P           18 54 21.7 +1.2
TOO                                  IAmb     IAmb        18 54 47.4
           comp=Z,22nm,1.6s
PATS  Pohnpei            36.31 320   P        P           18 54 38.8 +1.9
STKA  Stephens Creek     36.40 246   P        P           18 54 38.6 +1.1
           comp=Z,2.5nm,0.5s,baz=86,slow=10,SNR=10
           comp=Z,2.5nm,0.5s
COEN  Coen               36.86 276   P        P           18 54 41.5 +0.1
COEN                                 IAmb     IAmb        18 54 43.8
           comp=Z,30nm,1.5s
BBOO  Buckleboo          41.15 245   P        P           18 55 16.0 +0.3
AS31  Alice Springs      43.37 258   P        P           18 55 33.1 -0.2
ASAR  Alice Springs      43.38 258   P        P           18 55 33.5 +0.1
           comp=Z,6.9nm,0.8s,baz=97,slow=8.0,SNR=59
           comp=Z,6.9nm,0.8s
ASAR  Alice Springs      43.38 258   P        P           18 55 33.1 -0.2
WR0   Warramunga Arr     43.39 264   P        P           18 55 32.7 -0.7
WR0                                  IAmb     IAmb        18 55 36.0
           comp=Z,13nm,1.3s
WRAB  Tennant Creek      43.57 264   P        P           18 55 34.2 -0.6
WRAB                                 IAmb     IAmb        18 55 35.0
           comp=Z,7.4nm,1.0s
WRA   Warramunga Arr     43.58 264   P        P           18 55 34.3 -0.6
           comp=Z,3.7nm,0.5s,baz=96,slow=7.9,SNR=94
           comp=Z,3.7nm,0.5s
WRA   Warramunga Arr     43.58 264   P        P           18 55 34.2 -0.8
FORT  Forrest            47.95 248   P        P           18 56 08.0 +0.2
MTN   Manton Dam         48.35 272   P        P           18 56 10.5 -0.6
MTN                                  IAmb     IAmb        18 56 19.5
           comp=Z,16nm,1.3s
KNRA  Kununurra          49.74 268   P        P           18 56 21.1 -0.2
KNRA                                 IAmb     IAmb        18 56 21.5
           comp=Z,6.4nm,0.6s
SOEI  Soe                55.72 273   P        P           18 57 04.8 +0.8
SOEI                                 IAmb     IAmb        18 57 11.0
           comp=Z,33nm,1.5s
PSA00 Pilbara Seismi     56.52 258   P        P           18 57 09.4 +0.1
PSA00                                IAmb     IAmb        18 57 16.8
           comp=Z,30nm,1.4s
MBWA  Marble Bar         56.72 259   P        P           18 57 10.5 -0.2
MBWA                                 IAmb     IAmb        18 57 10.6
           comp=Z,39nm,1.6s
TOLI2 Tolitoli           63.10 283   P        P           18 57 53.1  0.0
QSPA  South Pole Qui     68.10 180   P        P           18 58 25.3 +1.8
QSPA                                 IAmb     IAmb        18 58 26.3
           comp=Z,4.5nm,0.9s
BELA  Belgrano 2         78.21 173   P        P           18 59 21.6 +0.8
NVAR  Mina Array Bea     82.67  44   P        P           18 59 45.3 +0.5
           comp=Z,0.3nm,0.6s,baz=229,slow=8.2,SNR=2.1
           comp=Z,0.3nm,0.6s
TXAR  Lajitas Array      88.56  58   P        P           19 00 13.7 +0.6
           comp=Z,0.5nm,0.9s,baz=205,slow=4.0,SNR=4.2
           comp=Z,0.5nm,0.9s
TXAR  Lajitas Array      88.56  58   P        P           19 00 11.2 -1.9
```

DMN ***21*** *18:53:08.8±0.5, 28°.47N×88°.22E, h30km, Ml4.7/5, Error ellipse: s-maj=9.4km s-min=5.8km az=33.0*

IDC ***21*** *18:53:10.3±1.0, 28°.62N×87°.99E, h0km, mb3.6/9, mbtmp3.6/11, ML3.3/2, MS3.1/4, Error ellipse: s-maj=39.1km s-min=17.7km az=58.0*

ISC 21 18:53:09.9±0.7**, 28°.34N**±0°.06×**87°.93E**±0°.08**, h10km, n20,**
σ**1ˢ70**/23**, mb3.6**/9**, MS3.0**/4**, Xizang**

```
Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s   ISC
TAPN  Taplejung          1.00 191    ePg      Pb          18 53 29.0 -0.5
TAPN                                 eSg      Sb          18 53 43.6 +0.7
           2μm,0.3s
RAMN  Ramite             1.81 221    ePg      Pn          18 53 40.6 -0.9
RAMN                                 eSg      Sn          18 54 04.7  0.0
           716nm,0.4s
PKI   Pulchoki           2.36 252    ePg      Pn          18 53 48.5 -0.5
PKI                                  eSg      Sn          18 54 17.0 -1.1
           1μm,0.7s
PKIN  Phulchoki          2.36 252    ePg      Pn          18 53 48.5 -0.5
PKIN                                 eSg      Sn          18 54 17.1 -1.2
           1μm,0.4s
DMN   Daman              2.60 255    ePg      Pn          18 53 52.6 +0.3
DMN                                  eSg      Sn          18 54 23.7 -0.4
           874nm,0.5s
GKN   Gorkha             2.92 264    ePg      Pn          18 53 55.1 -1.6
GKN                                  eSg      Sn          18 54 31.5 -0.5
CMAR  Chiang Mai Arr    14.09 132    Pn       P           18 56 33.6 -3.9
           0.1nm,0.3s,baz=306,slow=12,SNR=2.4
           0.7nm,0.9s
MKAR  Makanchi Array    18.95 348    P        Pn          18 57 30.6 -1.2
           0.1nm,0.3s,baz=150,slow=12,SNR=7.8
           0.8nm,0.7s
KURBB Kurchatov Arra    23.37 345    P        P           18 58 18.7 +0.1
           0.9nm,0.8s,baz=161,slow=9.9,SNR=7.7
           0.9nm,0.8s
SONM  Songino Array     24.18  31    P        P           18 58 26.3 -0.2
           0.3nm,0.6s,baz=238,slow=4.9,SNR=1.4
SONM                                 LR       LR          19 09 17.3
           comp=Z,32nm,19.4s,baz=242,slow=40
           0.3nm,0.6s
ZALV  Zalesovo Beam     25.69 356    P        P           18 58 39.6 -0.4
           0.7nm,0.5s,baz=187,slow=12,SNR=4.1
           0.7nm,0.5s
AKTO  Aktyubinsk        31.61 323    LR       LR          19 14 31.1
           comp=Z,28nm,19.8s,baz=141,slow=41
KLR   Kul'dur           39.33  46    LR       LR          19 19 58.7
           comp=Z,20nm,19.0s,baz=227,slow=41
FINES FINESS Array B    52.13 328    P        P           19 02 19.1 -1.0
           0.7nm,0.7s,baz=105,slow=12,SNR=5.5
           0.7nm,0.7s
ARCES ARCESS Array B    54.16 337    P        P           19 02 34.3 -0.7
           2.0nm,1.0s,baz=104,slow=7.5,SNR=1.4
           2.0nm,1.0s
GERES GERESS Array B    59.15 312    P        P           19 03 11.4 +0.4
           0.3nm,0.7s,baz=84,slow=7.2,SNR=2.8
           0.3nm,0.7s
WRA   Warramunga Arr    65.69 132    P        P           19 03 57.9 +3.0
           0.9nm,0.9s,baz=326,slow=6.6,SNR=5.9
           0.9nm,0.9s
ASAR  Alice Springs     68.08 135    P        P           19 04 13.0 +2.9
           0.7nm,0.7s,baz=315,slow=6.0,SNR=7.8
           0.7nm,0.7s
SFJD  Kangerlussuaq     79.95 345    LR       LR          19 45 06.6
           comp=Z,17nm,19.0s,baz=57,slow=39
TORD  Torodi Ar. Bea    80.61 280    P        P           19 05 27.1 +3.7
           0.4nm,0.7s,baz=56,slow=4.4,SNR=1.8
           0.4nm,0.7s
```

IDC ***21*** *18:57:38.8±3.0, 18°.04S×178°.18W, h604km±24km, mb2.9/5, mbtmp3.8/6, Error ellipse: s-maj=110.4km s-min=23.8km az=152.0*

ISC 21 18:57:38.1±1.8**, 18°.2S**±0°.6×**178°.1W**±0°.3**, h600km, n6,**
σ**0ˢ69**/8**, mb3.5**/5**, Fiji Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s   ISC
MSVF  Nonsavu            3.67 276    P        P           18 59 02.3 +0.8
           2.2nm,0.3s,baz=146,slow=20,SNR=7.8
CTA   Charters Tower    33.68 261    P        P           19 03 30.0 -1.2
           7.7nm,1.0s,baz=101,slow=5.2,SNR=2.3
           7.7nm,1.0s
WRA   Warramunga Arr    44.86 260    P        P           19 05 00.9 +0.2
           0.9nm,0.5s,baz=96,slow=7.4,SNR=8.3
WRA                                  PcP      PcP         19 06 29.6 +0.3
           0.7nm,1.2s,baz=99,slow=3.7,SNR=1.6
           0.9nm,0.5s
ASAR  Alice Springs     44.99 254    P        P           19 05 02.0 +0.4
           1.1nm,0.5s,baz=94,slow=7.3,SNR=22
ASAR                                 PcP      PcP         19 06 29.8 +0.1
           0.3nm,0.5s,baz=108,slow=4.1,SNR=4.7
           1.1nm,0.5s
TXAR  Lajitas Array     85.90  58    P        P           19 09 16.0  0.0
           0.3nm,0.8s,baz=216,slow=7.7,SNR=3.5
           0.3nm,0.8s
ILAR  Eielson Array     86.07  13    P        P           19 09 15.6 -0.2
           0.2nm,0.4s,baz=214,slow=5.4,SNR=4.4
           0.2nm,0.4s
```

JMA ***21*** *19:12:26.4±0.1, 24°.0N±0°.3×121°.6E±0°.5, h18km, MV2.5/10, TAIWAN REGION*

TAP ***21*** *19:12:28.7, 24°.22N×121°.73E, h11km, ML3.0, B*

ISC 21 19:12:28.9±0.8**, 24°.19N**±0°.02×**121°.76E**±0°.02**, h10km**±5km**,**
n106, σ**0ˢ85**/166**, 7C-14D, Taiwan**

```
Code  Station Name        Δ°  AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s   ISC
EHP   Heping Village     0.12 351  i P        Pg          19 12 31.6 -0.3
           baz=10.0
EHP                                i S        Sg          19 12 33.7 -0.3
           baz=10.0
ETL   Fush Village       0.13 257⇑ iP       Pg          19 12 31.9 -0.1
           baz=231
ETL                                i S        Sg          19 12 34.1 -0.1
           baz=231
NACB  Ninganchiao        0.15 264⇑ iP       Pg          19 12 32.1 -0.2
           baz=243
NACB                               i S        Sg          19 12 34.3 -0.4
           baz=243
TWD   Chiawan            0.19 234⇑ iP       Pg          19 12 32.8 -0.1
           baz=221
TWD                                i S        Sg          19 12 35.9 +0.2
           baz=221
ENA   Nanau              0.24 355⇓ iP       Pg          19 12 33.4 -0.5
           baz=4.0
ENA                                  S        Sg          19 12 36.6 -0.6
           baz=4.0
EWUT  Wuta               0.26   3⇓ iP       Pg          19 12 33.8 -0.3
           baz=11
EWUT                                 S        Sg          19 12 37.4 -0.3
           baz=11
HWA   Hwalien            0.26 214    P        Pg          19 12 35.0 +0.9
           baz=214
HWA                                 eS        Sg          19 12 39.7 +2.1
           baz=214
ETLH  Xiulin Townshi     0.26 274    P        Pg          19 12 33.8 -0.4
           baz=267
ETLH                                eS        Sg          19 12 37.5 -0.3
           baz=267
LATG  Datong             0.41 328⇓ iP       Pg          19 12 36.5 -0.5
           baz=329
LATG                                eS        Sg          19 12 41.9 -0.5
           baz=329
NNSB  Datong             0.42 305⇓ iP       Pg          19 12 36.9 -0.3
           baz=303
NNSB                               i S        Sg          19 12 41.9 -0.9
           baz=303
TWC   Suao               0.42  11⇓ iP       Pg          19 12 36.9 -0.3
           baz=9.0
TWC                                i S        Sg          19 12 42.8 -0.2
           baz=9.0
NNS   Nan Shan           0.43 305⇓ iP       Pg          19 12 37.0 -0.4
           baz=304
NNS                                i S        Sg          19 12 42.4 -0.9
           baz=304
NDS   Dongshan           0.44 355⇓ iP       Pg          19 12 37.3 -0.3
           baz=358
NDS                                  S        Sg          19 12 42.8 -0.7
           baz=358
WHF   Hehuan Shan        0.46 265⇑ iP       Pg          19 12 37.7 -0.2
           baz=260
WHF                                 eS        Sg          19 12 43.4 -0.7
           baz=260
FUSS  Fushou             0.48 277⇓ iP       Pg          19 12 38.1 -0.2
           baz=274
FUSS                                 S        Sg          19 12 44.4 -0.2
           baz=274
ESL   Shilin             0.48 219⇑ iP       Pg          19 12 38.0 -0.3
           baz=223
ESL                                 eS        Sb          19 12 45.5 -1.1
           baz=223
ENTT  Nioudou            0.48 338⇓ iP       Pg          19 12 38.0 -0.3
           baz=340
ENTT                               i S        Sg          19 12 44.3 -0.4
           baz=340
TWE   Neicheng           0.54 351⇓ iP       Pg          19 12 39.1 -0.3
           baz=355
TWE                                 eS        Sg          19 12 46.2 -0.3
           baz=355
TWT   Tachien            0.54 277   eP        Pg          19 12 39.7 +0.2
           baz=274
TWT                                 eS        Sg          19 12 45.9 -0.8
           baz=274
CHGB  Renai              0.55 257⇑ iP       Pg          19 12 39.7  0.0
           baz=246
CHGB                               i S        Sg          19 12 46.6 -0.5
           baz=246
TDCB  Techi              0.56 277⇓ iP       Pg          19 12 39.7 -0.1
           baz=274
TDCB                                eS        Sg          19 12 46.4 -0.7
           baz=274
ILA   Ilan               0.57 359  i P        Pg          19 12 40.0 -0.1
           baz=2.0
ILA                                 eS        Sg          19 12 47.5 -0.2
           baz=2.0
OWD   Renai              0.58 247    P        Pg          19 12 40.1 -0.2
           baz=243
OWD                                 eS        Sg          19 12 48.1  0.0
           baz=243
FUSB  Fushanzhiwuyua     0.59 344⇓ iP       Pg          19 12 40.1 -0.3
           baz=346
FUSB                                eS        Sg          19 12 47.0 -1.2
           baz=346
YHNB  Yeheng             0.59 324⇓ iP       Pg          19 12 40.2 -0.2
           baz=324
YHNB                                eS        Sg          19 12 46.8 -1.5
           baz=324
EGFH  Guangfu            0.60 211    P        Pb          19 12 40.8 -0.7
           baz=215
EGFH                                eS        Sb          19 12 49.4 -0.6
           baz=215
NSK   Sanguang           0.61 323⇓ iP       Pg          19 12 40.4 -0.3
           baz=323
NSK                                 eS        Sg          19 12 48.1 -0.6
           baz=323
WUSB  Renai              0.62 252⇑ iP       Pg          19 12 40.9 -0.1
           baz=241
WUSB                                 S        Sg          19 12 48.7 -0.5
           baz=241
NWLT  Wulai              0.63 338    P        Pg          19 12 40.9 -0.3
           baz=339
NWLT                                eS        Sg          19 12 48.6 -0.9
           baz=339
NTC   Toucheng           0.67   5   eP        Pg          19 12 41.4 -0.4
           baz=8.0
NTC                                 eS        Sb          19 12 52.4 +0.5
           baz=8.0
VWDT  VWDT               0.71 233    P        Pg          19 12 42.5 -0.2
           baz=230
VWDT                                eS        Sb          19 12 52.7 -0.6
           baz=230
NFF   Wufeng Townshi     0.73 307    P        Pg          19 12 43.0 -0.2
           baz=306
NFF                                 eS        Sg          19 12 52.3 -0.4
           baz=306
WHP   Taichung City      0.75 277   eP        Pg          19 12 43.3 -0.1
           baz=275
WHP                                 eS        Sg          19 12 53.2 -0.1
           baz=275
HGSD  Ruisui             0.76 204   eP        Pb          19 12 44.4 +0.2
           baz=189
HGSD                                 S        Sb          19 12 56.0 +1.5
           baz=189
TIPB  Shuangxi           0.78   4   eP        Pg          19 12 43.7 -0.3
           baz=6.0
TIPB                                eS        Sg          19 12 53.7 -0.5
           baz=6.0
WCS   Beigang Elemen     0.79 261   eP        Pg          19 12 43.9 -0.2
           baz=258
WCS                                 eS        Sg          19 12 53.9 -0.6
           baz=258
EHY   Hungye             0.79 211   eP        Pg          19 12 43.6 -0.6
           baz=216
EHY                                 eS        Sg          19 12 54.3 -0.2
           baz=216
NHDH  Xindian Distri     0.80 344   eP        Pg          19 12 44.1 -0.3
           baz=346
TWA   Mucha              0.80 348   eP        Pg          19 12 44.2 -0.3
           baz=350
TWA                                 eS        Sg          19 12 54.2 -0.8
           baz=350
LIOB  Emei               0.82 304   eP        Pb          19 12 45.0 -0.2
           baz=303
LIOB                                eS        Sg          19 12 54.6 -0.8
           baz=303
NSTT  Nanjuang           0.82 302   eP        Pg          19 12 44.8  0.0
           baz=302
NSTT                                eS        Sg          19 12 55.1 -0.4
           baz=302
SSLB  Suanglung          0.84 242    P        Pg          19 12 44.7 -0.5
           baz=240
SSLB                                eS        Sg          19 12 54.8 -1.4
           baz=240
TWB1  Santiao Chiao      0.84  14   eP        Pg          19 12 44.0 -1.1
           baz=17
TWB1                                eS        Sg          19 12 54.6 -1.5
           baz=17
SMLT  Sun Moon Lake      0.85 249   eP        Pb          19 12 45.4 -0.4
           baz=237
SMLT                                eS        Sb          19 12 56.6 -0.6
           baz=237
TYC   Yuchr              0.88 251   eP        Pb          19 12 45.7 -0.4
           baz=240
TYC                                 eS        Sg          19 12 56.5 -0.7
           baz=240
NWF   Wu-fen Shan        0.88   1   eP        Pg          19 12 45.7 -0.2
           baz=354
NWF                                 eS        Sg          19 12 56.3 -1.0
           baz=354
YULB  Yu-li              0.90 208   eP        Pg          19 12 45.6 -0.7
           baz=217
YULB                                eS        Sg          19 12 57.8 -0.2
           baz=217
SXI1  Grass Mountain     0.91   6   eP        Pg          19 12 45.7 -0.7
           baz=353
TWQ1  Liyutan            0.92 280   eP        Pn          19 12 48.3 +0.4
           baz=279
TWQ1                                eS        Sb          19 12 58.9 -0.2
           baz=279
SBCB  Hsinchu            0.93 310   eP        Pg          19 12 45.1 -1.7
           baz=310
EYUL  Yuli               0.93 206   eP        Pb          19 12 47.4 +0.3
           baz=218
NCUH  Zhongli            0.94 326   eP        Pg          19 12 47.1 +0.1
           baz=321
NCU   National Centr     0.94 326   eP        Pg          19 12 47.1 +0.1
           baz=326
NCU                                 eS        Sg          19 12 59.9 +0.7
           baz=326
NSY   Sanyi              0.94 284   eP        Pb          19 12 47.4 +0.1
           baz=283
NSY                                 eS        Sb          19 13 00.8 +1.0
           baz=283
NMLH  Miaoli             0.95 292   eP        Pn          19 12 48.8 +0.5
           baz=290
TWS1  Kuangyinshan       0.96 341   eP        Pb          19 12 48.0 +0.4
           baz=350
TWS1                                eS        Sb          19 13 01.6 +1.2
           baz=350
YM01  YM01               0.97 350   eP        Pg          19 12 47.0 -0.6
           baz=351
TCU   Taichung           0.99 268   eP        Pn          19 12 49.6 +0.7
           baz=266
TCU                                 eS        Sn          19 13 03.9 +1.0
           baz=266
NTST  Danshui            1.01 344   eP        Pg          19 12 48.4  0.0
           baz=345
WJS   Zhushan            1.01 249   eP        Pn          19 12 49.6 +0.5
           baz=243
WJS                                 eS        Sn          19 13 04.0 +0.6
           baz=243
YUS   Yu-Shan            1.02 227   eP        Pb          19 12 48.7 -0.2
           baz=217
YUS                                 eS        Sb          19 13 02.3 -0.2
           baz=217
WNT   Mingjian           1.03 253   eP        Pn          19 12 49.5 +0.1
           baz=246
WNT                                 eS        Sn          19 13 04.0  0.0
           baz=246
WDJ   Dajia District     1.04 279   eP        Pn          19 12 50.2 +0.7
           baz=278
FULB  Fuli               1.08 204   eP        Pb          19 12 49.4 -0.2
           baz=217
TWY   Chenhua            1.09 352   eP        Pg          19 12 50.0 +0.1
           baz=338
WCHH  Zhanghua           1.11 265   eP        Pn          19 12 50.8 +0.4
           baz=263
ALS   Alishan            1.11 233   eP        Pb          19 12 50.2  0.0
           baz=217
JYNG  Yonagunijimaku     1.11  76    P        Pb          19 12 50.7 +0.5
JYNG                                 S        Sn          19 13 07.7 +1.9
CHKT  Chengkung          1.15 199   eP        Pg          19 12 48.9 -2.0
           baz=183
CHN5  Tsauling           1.16 239   eP        Pn          19 12 52.0 +0.8
           baz=239
YOJ   Yonaguni jima      1.17  76   eP        Pg          19 12 49.5 -1.9
           baz=66
YOJ   Yonaguni jima      1.17  76    P        Pg          19 12 51.4  0.0
YOJ                                  S        Sn          19 13 08.7 +1.4
ELDTW Lidau              1.21 215   eP        Pg          19 12 50.4 -1.7
           baz=214
WDLH  Douliu             1.23 246   eP        Pn          19 12 52.6 +0.5
           baz=245
EDH   Donghe             1.28 199   eP        Pg          19 12 51.3 -2.2
           baz=184
WRL   Guolierlin Hig     1.30 258   eP        Pn          19 12 53.5 +0.4
           baz=257
CHN2  Minshiung          1.35 241   eP        Pb          19 12 56.3 +2.1
           baz=226
WTK   Tuku               1.35 249   eP        Pb          19 12 54.9 +0.6
           baz=234
STYH  Taoyuan            1.36 222   eP        Pn          19 12 53.7 -0.1
           baz=222
TPUB  Ta-pu              1.36 230   eP        Pb          19 12 54.6 +0.1
           baz=230
LONT  Longtian           1.40 205   eP        Pn          19 12 52.3 -2.2
           baz=206
CHY   Chiayi             1.41 241   eP        Pn          19 12 55.0 +0.5
           baz=240
WTP   Ta-pu              1.41 228   eP        Pg          19 12 55.7 -0.3
           baz=229
WTP                                 eS        Sn          19 13 16.5 +3.2
           baz=229
TWK   Hsinying           1.49 232   eP        Pg          19 12 56.8 -0.6
           baz=232
TWG   Pinlang            1.50 205   eP        Pn          19 12 55.5 -0.3
           baz=189
TWGBT Beinan             1.50 205   eP        Pn          19 12 54.0 -1.9
           baz=189
SNST  Tainan City        1.51 230   eP        Pg          19 12 58.1 +0.2
           baz=231
CHN1  Nanshi             1.51 229   eP        Pg          19 12 57.4 -0.5
           baz=229
SGST  Jiashian           1.54 225   eP        Pn          19 12 57.1 +0.6
           baz=225
WSL   Shuilin Townsh     1.55 245   eP        Pb          19 12 57.4 -0.3
           baz=244
ECL   Taimali            1.75 205   eP        Pn          19 12 57.7 -1.6
           baz=192
SSD   Sandimen           1.77 216   eP        Pb          19 13 01.1 -0.3
           baz=217
TSMG  Majia              1.80 215   eP        Pn          19 13 00.9 +0.9
           baz=228
IRIF  Iriomote-Funau     1.80  85    P        Pn          19 13 00.1 +0.1
IRIF                                 S        Sn          19 13 24.4 +1.5
HATJ  Hateruma jima      1.87  94    S        Sn          19 13 26.3 +1.7
MASBT Mashibuluo         1.88 214   eP        Pn          19 13 01.5 +0.4
           baz=217
EAST  Anshuo             1.98 205   eP        Pn          19 13 03.6 +1.0
           baz=194
TAWH  Dawu Township      2.01 204   eP        Pn          19 13 02.5 -0.3
           baz=193
SSPT  Xinbi              2.02 213   eP        Pb          19 13 04.7 -1.0
           baz=217
JKRS  Kuro-shima         2.05  88   eS        Sn          19 13 30.8 +1.7
JIJ   Ishigaki jima      2.18  85    P        Pn          19 13 06.0 +0.9
JIJ                                  S        Sn          19 13 32.4 +0.2
VWUC  VWUC               2.25 291   eP        Pn          19 13 04.7 -1.4
           baz=277
JISG  Ishigakijimahi     2.36  80    P        Pn          19 13 08.4 +0.8
JISG                                 S        Sn          19 13 37.0 +0.5
PTMZ  Houxiangcun        2.55 290   eP        Pn          19 13 08.6 -1.7
           baz=289
MATB  Ma-tsu             2.56 320   eP        Pn          19 13 08.8 -1.5
           baz=319
XPSS  Dashiqiu           3.08 333   eP        Pn          19 13 16.5 -1.0
           baz=333
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SKO ***21*** *19:15:47.9, 41°.18N×21°.00E, h15km*

TIR ***21*** *19:15:48.1, 41°.20N×21°.00E, h10km±1km, Md2.8, Ml3.1*

BEO ***21*** *19:15:49.8±0.3, 41°.19N×21°.02E, h9km±2km, ML2.8/7*

ATH ***21*** *19:15:49.6, 41°.18N×21°.00E, h12km±3km, ML2.9/5, Error ellipse: s-maj=3.9km s-min=1.4km az=243.0*

THE ***21*** *19:15:49.0, 41°.23N×21°.04E, h2km±3km, ML2.7/6, Error ellipse: s-maj=3.4km s-min=0.6km az=228.0*

PDG ***21*** *19:15:49.3±0.6, 41°.22N×21°.04E, h10km±1km, ML3.1/12,* *Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ISC 21 19:15:49.5±0.8**, 41°.21N**±0°.01×**21°.02E**±0°.01**, h13**^{km}±6^{km}**, n114,** σ**0^{s}89**/182**, 16C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.19	241	ePg	Pg	19 15 53.7	-0.2
OHR				eSg	Sg	19 15 57.2	+0.3
OHR	Ohrid	0.19	241	⇑iPg	Pg	19 15 53.7	-0.2
OHR				iSg	Sg	19 15 56.9	+0.1
OHR				eLg	Lg	19 15 57.3	
	comp=N,5µm,0.3s						
OHR				eLg	Lg	19 15 57.5	
	comp=E,2µm,0.3s						
FNA	Florina	0.50	147	ePg	Pg	19 15 58.7	-0.6
FNA				eSg	Sg	19 16 06.4	+0.5
FNA	Florina	0.50	147	P	Pg	19 15 58.8	-0.5
FNA				S	Sg	19 16 06.5	+0.5
FNA				AML	AML	19 16 08.1	
	comp=E,4246µm,0.4s						
FNA				AML	AML	19 16 09.5	
	comp=N,4736µm,0.3s						
FNA	Florina	0.50	147	P	Pg	19 15 58.7	-0.6
FNA				S	Sg	19 16 06.4	+0.5
	comp=N,2µm,0.3s						
FNA	Florina	0.50	147	⇑iPg	Pg	19 15 58.8	-0.6
FNA				iSg	Sg	19 16 06.5	+0.5
FNA	Florina	0.50	147	P	Pg	19 15 58.7	-0.6
	baz=144						
FNA				S	Sg	19 16 06.1	+0.1
	baz=144						
KBN	Korca	0.61	197	P	Pg	19 16 00.9	-0.5
KBN				S	Sb	19 16 09.8	-0.6
	comp=N,875nm,0.8s						
KBN	Korca	0.61	197	P	Pg	19 16 00.6	-0.8
	baz=196						
KBN				S	Sg	19 16 09.0	-0.4
	baz=196						
KBN				AMP			
	comp=E,4.3nm,1.0s,baz=196						
PHP	Peshkopia	0.65	318	P	Pg	19 16 00.7	-1.4
PHP				S	Sg	19 16 09.7	-1.0
PHP	Peshkopia	0.65	318	P	Pg	19 16 00.6	-1.5
	baz=320						
PHP				S	Sg	19 16 10.0	-0.7
	baz=320						
PHP				AMP			
	comp=N,0.2nm,0.2s,baz=320						
NEST	Nestorio	0.79	178	P	Pg	19 16 03.8	-0.9
NEST				S	Sg	19 16 15.1	-0.1
NEST				AML	AML	19 16 19.8	
	comp=E,2240µm,0.4s						
NEST				AML	AML	19 16 20.7	
	comp=N,2801µm,0.3s						
NEST	Nestorio	0.79	178	P	Pg	19 16 03.9	-0.9
NEST				S	Sb	19 16 15.6	-0.1
	comp=N,930nm,0.3s						
SKO	Skopje	0.83	22	ePg	Pb	19 16 05.7	0.0
SKO				eSg	Sg	19 16 16.5	+0.1
SKO	Skopje	0.83	22	iPg	Pg	19 16 05.6	+0.1
SKO				iSg	Sb	19 16 17.4	+0.7
TIR	Tirane	0.88	280	⇓P	Pg	19 16 05.6	-0.9
TIR				⇓S	Sb	19 16 18.6	+0.3
TIR	Tirane	0.88	280	ePg	Pg	19 16 05.4	-1.1
TIR				eSg	Sb	19 16 18.8	+0.5
TIR	Tirane	0.88	280	P	Pg	19 16 05.4	-1.1
TIR				S	Sb	19 16 19.0	+0.7
TIR				AML	AML	19 16 21.5	
	comp=E,1383µm,0.6s						
TIR				AML	AML	19 16 23.2	
	comp=N,1440µm,0.4s						
TIR	Tirane	0.88	280	P	Pg	19 16 05.9	-0.6
TIR				S	Sb	19 16 19.0	+0.7
	comp=N,272nm,0.5s						
TIR	Tirane	0.88	280	iPg	Pg	19 16 05.4	-1.1
TIR	Tirane	0.88	280	P	Pg	19 16 05.5	-1.0
	baz=281						
TIR				S	Sb	19 16 18.4	+0.1
	baz=281						
TIR				AMP			
	comp=N,1.1nm,0.4s,baz=281						
KZN	Kozani	1.06	147	P	Pg	19 16 09.6	-0.4
KZN				S	Sg	19 16 23.5	-0.4
KZN				AML	AML	19 16 29.3	
	comp=E,1008µm,0.4s						
KZN				AML	AML	19 16 29.8	
	comp=N,966µm,0.3s						
KZN	Kozani	1.06	147	P	Pg	19 16 09.3	-0.7
KZN				S	Sn	19 16 25.2	+0.4
	comp=N,495nm,0.3s						
GRG	Griva	1.07	103	P	Pg	19 16 09.6	-0.5
GRG				S	Sg	19 16 23.6	-0.5
	comp=N,322nm,0.4s						
GRG	Griva	1.07	103	iPg	Pg	19 16 09.5	-0.7
GRG				iSg	Sn	19 16 25.3	+0.3
LSK	Leskovik	1.10	197	P	Pg	19 16 10.1	-0.6
LSK				S	Sn	19 16 27.0	+1.3
LSK	Leskovik	1.10	197	P	Pg	19 16 10.1	-0.6
	baz=197						
LSK				S	Sn	19 16 25.9	+0.2
	baz=197						
LSK				AMP			
	comp=N,5.4nm,0.7s,baz=197						
VAY	Valandovo	1.17	84	ePg	Pb	19 16 11.4	-0.2
VAY				eSg	Sn	19 16 28.0	+0.7
VAY	Valandovo	1.17	84	iPg	Pb	19 16 11.3	-0.2
VAY				iSg	Sn	19 16 28.3	+0.9
VAY				eLg	Lg	19 16 29.8	
	comp=N,177nm,0.5s						
VAY				eLg	Lg	19 16 31.5	
	comp=E,314nm,0.9s						
KPRO	Kipourio	1.28	168	P	Pb	19 16 13.4	+0.1
KPRO				S	Sb	19 16 28.8	-0.9
KPRO				AML	AML	19 16 35.7	
	comp=E,798µm,0.3s						
KPRO				AML	AML	19 16 38.4	
	comp=N,796µm,0.7s						
BCI	Bajram Curri	1.36	329	P	Pn	19 16 14.4	+0.2
	baz=330						
BCI				S	Sg	19 16 34.0	+0.6
	baz=330						
BCI				AMP			
	comp=N,2.1nm,1.4s,baz=330						
KNT	Kendrikon	1.42	91	P	Pn	19 16 15.4	+0.5
KNT				S	Sg	19 16 34.8	-0.3
KNT	Kendrikon	1.42	91	P	Pn	19 16 15.1	+0.2
KNT	Kendrikon	1.42	91	iPg	Pn	19 16 15.2	+0.3
KNT				iSg	Sg	19 16 35.6	+0.5
ULC	Ulcinj	1.53	300	⇓iPg	Pb	19 16 17.7	0.0
ULC				iSg	Sg	19 16 40.7	+1.9
SRN	Sarande	1.54	211	P	Pg	19 16 18.8	-0.2
	baz=211						
SRN				S	Sg	19 16 38.8	-0.1
	baz=211						
SRN				AMP			
	comp=E,0.8nm,1.3s,baz=211						
JAN	Janina	1.55	185	P	Pn	19 16 17.3	+0.5
THE	Thessaloniki	1.58	111	iPg	Pn	19 16 17.4	+0.3
THE				iSg	Sb	19 16 38.6	+0.2
PVY	Plav	1.60	331	⇓iPn	Pb	19 16 18.7	-0.2
PVY				iSn	Sg	19 16 42.1	+1.2
KKB	Krupnik	1.68	66	iP	Pn	19 16 19.5	+0.9
BOSS	Bosilegrad	1.69	40	ePg	Pn	19 16 19.3	+0.7
BOSS				eSg	Sg	19 16 43.4	-0.4
DRME	Dracevica, Mon	1.69	306	ePn	Pb	19 16 19.8	-0.6
DRME	Dracevica, Mon	1.69	306	⇓iPn	Pb	19 16 20.1	-0.3
DRME				iSn	Sg	19 16 44.8	+1.0
BARS	Barje	1.71	20	ePg	Pn	19 16 20.1	+1.1
BARS				eSg	Sg	19 16 44.8	+0.2
BARS	Barje	1.71	20	iPn	Pn	19 16 19.9	+0.9
BARS				iSg	Sg	19 16 44.9	+0.2
IGT	Igoumenitsa	1.75	198	P	Pg	19 16 22.4	-0.7
	baz=198						
IGT				S	Sg	19 16 45.7	-0.2
	baz=198						
TYRN	Tyrnavos	1.76	148	P	Pb	19 16 20.7	-0.8
PDG	Podgorica	1.80	313	⇓S	Sb	19 16 44.5	-0.2
PDG	Podgorica	1.80	313	ePg	Pb	19 16 23.0	+0.8
PDG				eSg	Sg	19 16 47.3	-0.1
PDG	Podgorica	1.80	313	ePn	Pb	19 16 22.6	+0.4
TTG	Podgorica	1.80	313	⇑iPn	Pb	19 16 21.6	-0.6
TTG				iSn	Sg	19 16 46.8	-0.6
SOH	Sokhos	1.81	102	P	Pb	19 16 22.4	0.0
SOH	Sokhos	1.81	102	iPn	Pn	19 16 21.4	+1.1
SOH				eSn	Sb	19 16 45.3	+0.3
BEY	Berane	1.86	334	iPn	Pb	19 16 22.6	-0.8
IVA	Berane	1.86	334	⇑iPn	Pn	19 16 22.4	+1.3
IVA				iSn	Sg	19 16 48.7	-0.8
BUM	Brajici-Budva	1.93	305	⇑iPn	Pb	19 16 23.5	-1.0
BUM				iSn	Sg	19 16 50.4	-1.2
SRS	Serrai	1.94	92	iPn	Pn	19 16 22.4	+0.3
SRS				eSn	Sn	19 16 47.1	+0.7
KOME	Kolasin	1.99	326	⇑iPn	Pn	19 16 24.3	+1.4
KOME				iSn	Sb	19 16 51.7	+1.4
SELS	Selova	2.01	2	ePn	Pb	19 16 25.9	0.0
CEME	Cevo	2.06	311	⇑iPn	Pn	19 16 25.4	+1.5
CEME				iSn	Sb	19 16 53.4	+1.0
MMB	Musomiste	2.07	78	eP	Pg	19 16 28.4	-0.8
VTS	Vitosha	2.17	49	⇓P	Pn	19 16 25.8	+0.3
VTS	Vitosha	2.17	49	iPn	Pn	19 16 26.4	+0.9
VTS				iSg	Sg	19 16 58.7	-0.6
VTS	Vitosha	2.17	49	iP	Pb	19 16 27.3	-1.4
SJES	Sjenica	2.20	340	ePn	Pn	19 16 27.4	+1.7
SJES				eSg	Sg	19 17 00.8	+0.7
SJES	Sjenica	2.20	340	ePn	Pn	19 16 26.2	+0.5
HCY	Herceg Novi	2.26	304	ePn	Pn	19 16 28.3	+1.8
HCY	Herceg Novi	2.26	304	⇑iPn	Pn	19 16 28.4	+1.9
HCY				eSn	Sb	19 16 59.0	+1.1
LKD2	Lefkada island	2.43	187	P	Pn	19 16 30.1	+1.3
	baz=187						
PLE	Pljevlja	2.44	331	ePn	Pn	19 16 30.8	+1.7
PLE				eSn	Sb	19 17 04.6	+1.2
IVAS	Ivanjica	2.46	345	ePn	Pn	19 16 29.5	+0.3
BOVS	Bovan	2.48	12	⇑P	Pn	19 16 29.8	+0.3
BOVS	Bovan	2.48	12	ePn	Pn	19 16 31.1	+1.6
TREB	Trebinje	2.50	308	ePn	Pn	19 16 31.8	+2.0
BRY	Bratogost	2.51	313	ePn	Pb	19 16 32.7	-1.7
BRY	Bratogost	2.51	313	ePn	Pn	19 16 31.3	+1.3
BRY				eSn	Sb	19 17 05.2	0.0
UPM	Unac-Piva	2.54	322	ePn	Pn	19 16 32.3	+1.8
UPM	Unac-Piva	2.54	322	ePn	Pn	19 16 31.8	+1.3
UPM				eSn	Sb	19 17 06.3	+0.1
GRUS	Gruza	2.69	355	ePn	Pn	19 16 33.0	+0.6
RUDO	Rudo	2.70	334	ePn	Pb	19 16 36.7	-0.9
BLKB	Belogradchik	2.71	26	⇓P	Pn	19 16 33.8	+1.1
ZAGS	Zajecar	2.75	19	ePn	Pn	19 16 33.7	+0.4
BBLS	Lazići	2.91	336	ePn	Pn	19 16 37.3	+1.8
BBLS	Lazići	2.91	336	ePn	Pn	19 16 36.9	+1.4
STON	Ston	2.98	305	ePn	Pn	19 16 37.2	+0.9
STON				Sn	Sn	19 17 10.8	-1.2
DIVS	Divibare	2.99	346	ePn	Pn	19 16 37.4	+0.8
DIVS				eSn	Sn	19 17 13.0	+0.7
DIVS	Divibare	2.99	346	ePn	Pn	19 16 36.3	-0.3
TRUS	Trudelj	3.05	352	ePn	Pn	19 16 38.0	+0.7
LSTV	Lastovo	3.45	298	iPn	Pn	19 16 43.8	+1.0
LSTV				Sn	Sn	19 17 21.9	-1.7
MDVR	Moldovita	3.61	8	⇓P	Pn	19 16 45.7	+0.6
MAKA	Makarska	3.63	306	ePn	Pn	19 16 45.4	+0.2
MAKA				Sn	Sn	19 17 26.6	-1.2
RICI	Ricice	3.68	310	ePn	Pn	19 16 47.3	+1.3
RICI				Sn	Sn	19 17 29.6	+0.4
HERR	Herculane	3.81	15	⇑P	Pn	19 16 48.4	+0.6
HVAR	Hvar	3.93	302	ePn	Pn	19 16 49.8	+0.5
HVAR				Sn	Sn	19 17 33.6	-1.7
FRGS	Fruska Gora	4.05	348	⇑P	Pn	19 16 51.7	+0.7
FRGS	Fruska Gora	4.05	348	ePn	Pn	19 16 51.3	+0.2
FRGS	Fruska Gora	4.05	348	ePn	Pn	19 16 51.5	+0.4
GZR	Gura Zlata	4.38	16	⇑P	Pn	19 16 55.7	0.0
KIJV	Kijevo	4.41	311	ePn	Pn	19 16 57.8	+1.7
KIJV				Sn	Sn	19 17 47.4	+0.2
BZS	Buzias	4.43	5	⇑P	Pn	19 16 57.2	+0.9
BLY	Banja Luka	4.52	323	ePn	Pb	19 17 11.0	+2.3
ZIRJ	Zirje	4.67	303	ePn	Pn	19 16 59.6	0.0
ZIRJ				Sn	Sn	19 17 52.4	-1.3
MORI	Morici	4.74	306	ePn	Pn	19 17 01.4	+0.9
MORI				Sn	Sn	19 17 54.4	-0.9
UDBI	Udbina	5.09	312	ePn	Pn	19 17 06.8	+1.3
UDBI				Sn	Sn	19 18 03.9	-0.3
DUGI	Dugi Otok	5.21	304	iPn	Pn	19 17 07.7	+0.7
DUGI				Sn	Sn	19 18 06.0	-0.9
MORH	Mrgy, Hungar	5.29	342	⇑P	Pn	19 17 08.5	+0.3
MORH	Mrgy, Hungar	5.29	342	ePn	Pn	19 17 07.9	-0.3
VIRC	Vir	5.37	307	ePn	Pn	19 17 09.1	0.0
VIRC				Sn	Sn	19 18 09.8	-0.9
MLR	Muntele Rosu	5.59	38	⇑P	Pn	19 17 11.8	-0.5
CRES	Cresnjev	6.14	321	ePn	Pn	19 17 21.3	+1.5
PLOR	Plostina	6.19	39	⇑P	Pn	19 17 20.3	-0.2
VRI	Vrincioaia	6.24	40	⇓P	Pn	19 17 21.0	-0.1
BRJN	Brijuni	6.48	307	ePn	Pn	19 17 25.1	+0.6
BRJN				Sn	Sn	19 18 36.6	-1.6
CEY	Cerknica	6.60	316	ePn	Pn	19 17 28.0	+1.9

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*NEIC **21** 19:18:21.5±1.7, 21°.9S±0°.2×173°.98W±0°.04, h10^{km}±1^{km}, mb4.7/13, Error ellipse: s-maj=28.3km s-min=6.8km az=176.0*

*IDC **21** 19:18:24.2±3.9, 20°.90S×175°.84W, h80^{km}±33^{km}, mb3.3/7, mbtmp3.7/9, Error ellipse: s-maj=42.6km s-min=21.4km az=147.0*

ISC 21 19:18:26.7±0.8**, 20°.8S**±0°.2×**175°.9W**±0°.1**, h100**^{km}**, n23,** σ**1^{s}95**/15**, mb3.4**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.90	75	Pn	Pn	19 19 34.6	-17
MSVF	Nonsavu	6.42	297	P	Pn	19 19 58.1	-0.8
	5.3nm,0.7s,baz=112,slow=17,SNR=3.9						
AFI	Afiamalu	7.89	31	P	Pn	19 20 18.0	-0.8
	5.7nm,0.3s,baz=127,slow=5.1,SNR=1.5						
ASAR	Alice Springs	46.33	257	P	P	19 26 42.7	-0.3
	1.4nm,1.0s,baz=95,slow=7.6,SNR=7.6						
	1.4nm,1.0s						
WRA	Warramunga Arr	46.47	262	P	P	19 26 43.9	-0.1
	0.7nm,1.0s,baz=97,slow=6.2,SNR=1.4						
	0.7nm,1.0s						
QSPA	South Pole Qui	69.31	180	P	P	19 29 22.3	-0.8
	2.7nm,1.0s,baz=121,slow=5.3,SNR=3.2						
	2.7nm,1.0s						
QSPA	South Pole Qui	69.31	180	P	P	19 29 21.9	-1.2
QSPA				IAmb	IAmb	19 29 34.0	
	comp=Z,9.6nm,1.5s						
NVAR	Mina Array Bea	79.91	42	P	P	19 30 23.6	-1.3
	comp=Z,0.1nm,0.5s,baz=261,slow=9.5,SNR=2.0						
	comp=Z,0.1nm,0.5s						
NVAR	Mina Array Bea	79.91	42	P	P	19 30 29.2	+4.3
H03S2	Juan Fernandez	84.25	124	T	T	21 03 21.0	
	baz=247						
H03S1	Juan Fernandez	84.26	124	T	T	21 03 21.6	
	baz=247						
H03S3	Juan Fernandez	84.27	124	T	T	21 03 35.4	
	baz=247						
H03N2	Juan Fernandez	84.39	123	T	T	21 03 47.5	
	baz=248,slow=71						
H03N3	Juan Fernandez	84.39	124	T	T	21 03 46.1	
	baz=248,slow=71						
H03N1	Juan Fernandez	84.40	124	T	T	21 03 45.3	
	baz=248,slow=71						
TXAR	Lajitas Array	85.58	57	P	P	19 30 53.7	-0.6
	comp=Z,0.2nm,0.8s,baz=219,slow=6.9,SNR=3.1						
	comp=Z,0.2nm,0.8s						
TXAR	Lajitas Array	85.58	57	P	P	19 30 54.6	+0.3
ILAR	Eielson Array	88.16	12	P	P	19 31 05.3	-0.5
	comp=Z,0.3nm,0.9s,baz=194,slow=7.2,SNR=1.2						
	comp=Z,0.3nm,0.9s						
YKA	Yellowknife Ar	95.95	24	P	P	19 31 43.3	+1.4
	comp=Z,0.2nm,0.8s,baz=251,slow=4.3,SNR=1.5						
	comp=Z,0.2nm,0.8s						
AKASG	Malin Array Be	144.16	332		PKiKP	19 37 59.7	+5.5
BRTR	Keskin Array B	148.43	313	PKPbc	PKiKP	19 38 01.5	-2.1
	comp=Z,0.3nm,0.6s,baz=138,slow=3.7,SNR=1.6						
BRTR	Keskin Array B	148.43	313		PKPab	19 38 06.3	+0.8
GERES	GERESS Array B	150.93	347	PKPbc	PKiKP	19 38 09.9	+1.5
	comp=Z,0.1nm,0.3s,baz=18,slow=3.4,SNR=1.8						

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*IDC **21** 19:18:45.6±4.6, 20°.87S×175°.83W, h92^{km}±39^{km}, mb3.9/10, mbtmp4.3/12, MS4.1/5, Error ellipse: s-maj=29.1km s-min=23.3km az=150.0*

ISC 21 19:18:46.0±0.6**, 21°.0S**±0°.1×**175°.96W**±0°.10**, h100**^{km}**, n56,** σ**2^{s}01**/39**, mb4.1**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.50	298	P	Pn	19 20 17.9	-1.3
	39nm,0.7s,baz=114,slow=14,SNR=8.8						
MSVF				LR	LR	19 22 35.3	
	comp=Z,768nm,21.4s,baz=122,slow=35						
OUENC	Ouen Island, N	16.05	262	IAmb	IAmb	19 22 36.0	
	comp=Z,69nm,1.1s						
OUENC	Ouen Island, N	16.05	262		P	19 22 30.6	+3.1
ONTNC	Ouen Toro	16.41	262	IAmb	IAmb	19 22 40.6	
	comp=Z,42nm,0.9s						
ONTNC	Ouen Toro	16.41	262	P	P	19 22 32.9	+1.5
DZM	Mont Dzumac	16.42	263	eP	P	19 22 39.5	+7.9
	comp=Z,99nm,1.2s						
DZM				eLR	LR	19 27 41.8	
	comp=Z,2µm,23.1s						
DZM	Mont Dzumac	16.42	263	P	P	19 22 33.2	+1.6
	comp=Z,13nm,0.8s,baz=77,slow=17,SNR=5.2						
DZM	Mont Dzumac	16.42	263	IAmb	IAmb	19 22 40.3	
	comp=Z,49nm,0.9s						
DZM	Mont Dzumac	16.42	263		P	19 22 33.4	+1.8
SANVU	Saraoutou	16.90	286	IAmb	IAmb	19 22 51.9	
	comp=Z,56nm,1.1s						
SANVU	Saraoutou	16.90	286		P	19 22 40.5	+3.6
TBI	Tubuai	24.65	100	eLR	LR	19 29 35.7	
	comp=Z,1µm,31.8s						
TBI	Tubuai	24.65	100	eT	T	19 48 07.7	
	comp=Z,12nm,0.3s						
PAE	Paea	25.10	87	eT	T	19 48 45.6	
	comp=Z,7.4nm,0.3s						
PPT2	Papeete2	25.12	87	eLR	LR	19 29 41.6	
	comp=Z,2µm,29.8s						
PPT2	Papeete2	25.12	87	eT	T	19 48 52.3	
	comp=Z,6.4nm,0.2s						
KRVT	Keravat (AS076	35.23	294	P	P	19 25 33.1	+2.1
	comp=Z,13nm,0.8s,baz=103,slow=10,SNR=3.9						
	comp=Z,13nm,0.8s						
KRVT	Keravat (AS076	35.23	294	P	P	19 25 33.1	+2.1
CTAO	Charters Tower	35.35	265	IAmb	IAmb	19 25 50.1	
	comp=Z,27nm,1.4s						
CTAO	Charters Tower	35.35	265	P	P	19 25 33.5	+1.4
TAOE	Nuku Hiva Isla	36.54	76	eLR	LR	19 35 00.7	
	comp=Z,1µm,30.6s						
STKA	Stephens Creek	39.32	245	P	P	19 26 01.6	-4.0
COEN	Coen	39.52	273	P	P	19 26 06.8	-0.5
MANU	Manus Island	40.38	293	P	P	19 26 15.7	+1.3
WR0	Warramunga Arr	46.24	262	IAmb	IAmb	19 27 16.0	
	comp=Z,10nm,1.2s						
WR0	Warramunga Arr	46.24	262	P	P	19 26 59.3	-2.3
ASAR	Alice Springs	46.28	257	P	P	19 27 03.3	+1.4
	comp=Z,4.0nm,1.0s,baz=86,slow=7.5,SNR=11						
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	46.43	262	P	P	19 27 03.6	+0.5
	comp=Z,1.3nm,1.0s,baz=98,slow=5.9,SNR=3.2						
WRA				LR	LR	19 46 25.7	
	comp=Z,366nm,18.2s,baz=352,slow=36						
	comp=Z,1.3nm,1.0s						
WRA	Warramunga Arr	46.43	262	P	P	19 27 00.5	-2.6
SIJI	Sorong	55.20	284	P	P	19 28 11.4	+2.5
	comp=Z,8.8nm,0.8s,baz=108,slow=9.8,SNR=4.3						
	comp=Z,8.8nm,0.8s						
SIJI	Sorong	55.20	284	P	P	19 28 11.4	+2.5
SOEI	Soe	58.42	271	P	P	19 28 30.0	-1.9
TNTI	Ternate	59.42	284	P	P	19 28 37.2	-1.5
QSPA	South Pole Qui	69.12	180	P	P	19 29 43.6	+2.3
	comp=Z,2.6nm,0.8s,baz=18,slow=4.3,SNR=1.8						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	80.06	42	P	P	19 30 45.1	+0.2
	comp=Z,1.0nm,0.8s,baz=235,slow=9.8,SNR=3.7						
	comp=Z,1.0nm,0.8s						
MAW	Mawson	81.78	199	P	P	19 30 53.1	-0.3
	comp=Z,1.9nm,0.7s,baz=36,slow=8.6,SNR=2.4						
	comp=Z,1.9nm,0.7s						
USHA	Ushuaia	82.70	146	LR	LR	20 03 30.4	
	comp=Z,125nm,18.0s,baz=356,slow=32						
TXAR	Lajitas Array	85.70	57	P	P	19 31 14.7	+0.5
	comp=Z,0.9nm,0.8s,baz=217,slow=6.0,SNR=7.7						
	comp=Z,0.9nm,0.8s						
SEY	Seymchan	87.26	346	LR	LR	20 06 17.3	
	comp=Z,130nm,19.7s,baz=138,slow=33						
PLCA	Paso Flores	87.57	133	P	P	19 31 23.8	+0.6
	comp=Z,1.7nm,1.1s,baz=241,slow=5.6,SNR=3.2						
	comp=Z,1.7nm,1.1s						
DLBC	Dease Lake	87.73	22	LR	LR	20 04 42.4	
	comp=Z,60nm,18.2s,baz=268,slow=32						
ILAR	Eielson Array	88.34	12	P	P	19 31 26.5	+0.5
	comp=Z,0.3nm,0.6s,baz=194,slow=7.2,SNR=2.7						
	comp=Z,0.3nm,0.6s						
AKASG	Malin Array Be	144.32	332	PKP	PKPbc	19 38 08.3	-0.4
	comp=Z,0.8nm,0.5s,baz=42,slow=4.1,SNR=6.4						
BRTR	Keskin Array B	148.55	313	PKPbc	PKPbc	19 38 21.2	-0.4
	comp=Z,0.7nm,0.7s,baz=149,slow=2.9,SNR=3.4						
CLL	Collm	148.90	349	ePKPab	PKPbc	19 38 20.0	-1.9
CLL				ix	x	19 38 22.7	
CLL				ix	x	19 38 35.9	
	comp=Z,8.0nm,1.2s						
CLL				ex	x	19 39 00.0	
OSTC	Ostas	148.93	345	ePKP	PKPdf	19 38 12.7	-5.3
DPC	Dobruska-Polom	149.10	345	ePKP	PKiKP	19 38 24.1	+0.3
DPC				ex	x	19 39 03.0	
MORC	Moravsky Berou	149.30	343	ePKP	PKPab	19 38 27.2	-0.7
MAUC	Maruska	149.59	342	ePKP	PKPdf	19 38 17.5	-1.6
PRU	Pruhonice	149.85	346	ePKP	PKPab	19 38 30.4	+0.3
PRU				AMS	AMS	20 35 50.0	
	comp=Z,100nm,22.9s						
VRAC	Vranov	149.99	343	ePKP	PKPab	19 38 31.5	+0.8
JAVC	Velka Javorina	150.09	342	eP	PKPab	19 38 30.0	-1.2
KRUC	Moravsky	150.26	344	ePKP	PKPab	19 38 32.0	+0.2
KHC	Kasperske Hory	150.87	347	ePKP	PKiKP	19 38 29.9	+2.5
KHC				ex	x	19 39 04.9	
CKRC	Cesky Krumlov	151.00	346	ePKP	PKPbc	19 38 26.9	-0.3
GERES	GERESS Array B	151.11	347	PKPbc	PKPbc	19 38 25.9	-1.6
	comp=Z,0.2nm,0.4s,baz=357,slow=2.7,SNR=5.0						

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*IDC **21** 19:19:26.3±4.6, 20°.73S×176°.00W, h143^{km}±39^{km}, mb3.9/8, mbtmp4.4/10, MS4.3/3, Error ellipse: s-maj=33.2km s-min=24.0km az=149.0*

ISC 21 19:19:22.3±1.0**, 20°.8S**±0°.2×**175°.8W**±0°.1**, h100**^{km}**, n17,** σ**1^{s}78**/13**, mb4.2**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.56	297	P	Pn	19 20 57.8	+1.5
	49nm,0.9s,baz=68,slow=7.4,SNR=3.7						
RAO	Raoul Island	8.65	192	LR	LR	19 23 53.7	
	comp=Z,2µm,18.9s,baz=300,slow=31						
DZM	Mont Dzumac	16.59	262	P	Pn	19 23 09.7	+0.6
	26nm,0.9s,baz=95,slow=18,SNR=2.2						
HNR	Honiara	25.96	292	P	P	19 24 44.0	-1.6
	17nm,0.3s,baz=132,slow=12,SNR=1.2						
	17nm,0.3s						
ASAR	Alice Springs	46.47	257	P	P	19 27 37.8	-1.9
	4.9nm,0.9s,baz=88,slow=8.3,SNR=5.5						
	4.9nm,0.9s						
WRA	Warramunga Arr	46.61	262	P	P	19 27 38.1	-2.6
	1.9nm,1.0s,baz=98,slow=5.8,SNR=2.8						
	1.9nm,1.0s						
PETK	Petropavlovsk-	77.10	344	P	P	19 31 03.2	-1.2
	4.2nm,0.9s,baz=162,slow=12,SNR=3.7						
PETK				LR	LR	20 05 19.8	
	comp=Z,170nm,18.0s,baz=152,slow=36						
	4.2nm,0.9s						
NVAR	Mina Array Bea	79.83	42	P	P	19 31 19.9	-0.2
	1.2nm,0.7s,baz=230,slow=8.9,SNR=4.4						
	1.2nm,0.7s						
USRK	Ussuriysk Ar.	80.38	325	LR	LR	20 03 51.8	
	comp=Z,171nm,19.5s,baz=131,slow=33						
TXAR	Lajitas Array	85.48	56	P	P	19 31 48.4	-1.0
	4.4nm,1.2s,baz=207,slow=5.3,SNR=5.4						
	4.4nm,1.2s						
PLCA	Paso Flores	87.57	133	P	P	19 31 59.0	-0.4
	1.9nm,1.0s,baz=35,slow=8.7,SNR=2.4						
	1.9nm,1.0s						
ILAR	Eielson Array	88.15	12	P	P	19 32 00.6	-0.8
	1.0nm,0.9s,baz=239,slow=5.4,SNR=4.4						
	1.0nm,0.9s						
AKASG	Malin Array Be	144.24	333	PKP	PKPab	19 38 43.2	-1.2
	0.6nm,0.4s,baz=39,slow=3.9,SNR=1.5						
BRTR	Keskin Array B	148.55	313	PKPbc	PKPdf	19 38 56.1	+1.9
	0.8nm,0.7s,baz=90,slow=2.5,SNR=1.7						
GERES	GERESS Array B	150.99	347	PKPbc	PKPdf	19 39 01.0	+3.3
	1.0nm,0.8s,baz=46,slow=2.8,SNR=1.5						
ESDC	Sonseca Array	159.91	19	PKP	PKPdf	19 39 09.5	-0.4
	0.3nm,0.7s,baz=318,slow=1.7,SNR=2.3						
ESDC				PKPab	sPKPdf	19 39 49.0	+2.2
	0.9nm,1.1s,baz=344,slow=4.3,SNR=2.3						
TORD	Torodi Ar. Bea	172.03	162	PKPab	PKPab	19 40 43.4	0.0
	1.8nm,1.1s,baz=137,slow=5.2,SNR=3.6						

*IDC **21** 19:40:14.9±1.1,36°.34N×141°.20E,h0^{km},mb3.5/6, mbtmp3.6/11,ML3.1/4,MS2.4/2,Error ellipse: s-maj=24.0km s-min=18.2km az=82.0*
*JMA **21** 19:40:19.9±0.1,36°.4N±0°.3×141°.1E±0°.7,h44^{km}±1^{km}, MV3.6/39,E OFF IBARAKI PREF*
JMA Felt I J1 at E OFF IBARAKI PREF .
ISC 21 19:40:18.4±1.6,**36°.40N**±0°.04×**141°.19E**±0°.06,**h25**^{km}±11^{km}, **n28**,σ**0^{s}.79**/33,**mb3.5**/6,**12D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.49	264	⇓iP	Pn	19 40 29.6	-0.2
JHYU				⇓S	Sb	19 40 36.3	+1.0
JHO	Hitachi	0.55	293	⇓iP	Pn	19 40 30.0	-0.6
JHO				⇓S	Sb	19 40 37.2	+0.3
JIHU	Itakohorinouch	0.69	232	P	Pn	19 40 33.1	+0.6
JIHU				S	Sn	19 40 42.6	+0.2
ONAJ	Iwakimizuishiy	0.77	336	⇓iP	Pn	19 40 33.4	-0.4
JYT	Yasato	0.82	259	i P	Pb	19 40 33.9	-0.1
JYT				S	Sb	19 40 43.6	-1.1
JFK	Kawauchi	1.00	345	⇓iP	Pb	19 40 36.6	-0.5
JFT	Otama	1.31	329	⇓iP	Pb	19 40 42.1	-0.3
JFT				⇓eS	Sn	19 40 58.0	0.0
JAG	Ashikaga	1.40	272	⇓iP	Pn	19 40 42.2	-0.3
JAG				⇓S	Sn	19 40 58.4	-1.8
JMM	Marumori	1.50	348	⇓iP	Pn	19 40 44.2	+0.4
JMM				⇓S	Sn	19 41 01.9	-0.7
JFY	Yanaizu	1.56	311	P	Pn	19 40 45.1	+0.5
JKT	Katashina	1.61	284	i P	Pn	19 40 45.8	+0.5
JKT				S	Sn	19 41 04.4	-0.9
MJAR	Matsushiro Arr	2.41	274	Pn	Pn	19 40 56.6	+0.4
	1.3nm,0.3s,baz=104,slow=9.8,SNR=104						
MJAR				Sn	Sn	19 41 26.6	+1.7
	2.2nm,0.3s,baz=86,slow=34,SNR=3.8						
MJAR				LR	LR	19 42 12.2	
	comp=Z,58nm,20.4s,baz=208,slow=48						
	7.3nm,0.3s						
JHJ	Hachijo jima 2	3.47	200	Pn	Pn	19 41 10.7	-0.1
	9.3nm,0.3s,baz=18,slow=9.6,SNR=1.7						
JHJ				Sn	Sn	19 41 51.5	+0.4
	20nm,0.3s,baz=330,slow=7.7,SNR=2.0						
	193nm,0.8s						
ASAJ	Asahikawa	7.79	7	Pn	Pn	19 42 11.3	+1.2
	0.3nm,0.3s,baz=185,slow=11,SNR=1.5						
ASAJ				Sn	Sn	19 43 36.1	-1.3
	0.1nm,0.3s,baz=349,slow=29,SNR=1.4						
	1.9nm,0.6s						
JCJ	Chichijima	9.31	175	Pn	Pn	19 42 30.1	-1.0
	31nm,0.8s,baz=280,slow=15,SNR=2.4						
KSRS	Korea Array	10.68	280	Pn	Pn	19 42 50.2	+0.5
	0.1nm,0.3s,baz=103,slow=14,SNR=1.7						
KSRS				LR	LR	19 46 33.9	
	comp=Z,25nm,19.3s,baz=195,slow=35						
	0.2nm,0.3s						
H11N2	WAKE ISLAND Hy	27.98	119	T	T	20 15 34.6	
	baz=313,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	27.99	119	T	T	20 15 49.3	
	baz=313,slow=75,SNR=13						
SONM	Songino Array	28.00	305	P	P	19 46 07.0	-0.3
	0.5nm,0.7s,baz=98,slow=8.2,SNR=4.5						
	0.5nm,0.7s						
H11N3	WAKE ISLAND Hy	28.00	119	T	T	20 15 49.0	
	baz=313,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	28.67	122	T	T	20 16 23.2	
	baz=314,slow=75,SNR=43						
H11S3	WAKE ISLAND Hy	28.67	122	T	T	20 16 24.0	
	baz=314,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	28.69	122	T	T	20 16 25.2	
	baz=314,slow=75,SNR=20						
ZALV	Zalesovo Beam	42.22	313	P	P	19 48 09.2	+0.1
	0.6nm,0.5s,baz=87,slow=5.9,SNR=2.3						
	0.6nm,0.5s						
MKAR	Makanchi Array	44.31	303	P	P	19 48 26.2	-0.1
	0.3nm,0.7s,baz=95,slow=8.2,SNR=2.7						
	0.3nm,0.7s						
ILAR	Eielson Array	50.13	32	P	P	19 49 12.2	+1.0
	0.4nm,0.7s,baz=289,slow=5.6,SNR=4.6						
	0.4nm,0.7s						
WRA	Warramunga Arr	56.41	188	P	P	19 49 57.8	0.0
	0.9nm,1.2s,baz=4.1,slow=7.3,SNR=2.1						
	0.9nm,1.2s						
ASAR	Alice Springs	60.13	188	P	P	19 50 23.1	-0.8
	0.5nm,0.9s,baz=7.7,slow=9.7,SNR=2.0						
	0.5nm,0.9s						

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*IDC **21** 19:48:10.2±2.2,28°.60N×142°.03E,h0^{km},mb3.7/7, mbtmp3.7/8,ML3.0/1,MS3.2/2,Error ellipse: s-maj=97.5km s-min=14.3km az=76.0*
ISC 21 19:48:15.0±1.6,**28°.7N**±0°.1×**142°.0E**±0°.4,**h36**^{km},**n12**, σ**1^{s}.44**/12,**mb3.6**/7,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.57	175	Pn	Pn	19 48 39.5	-0.9
	6.2nm,0.3s,baz=289,slow=21,SNR=15						
JCJ				Sn	Sn	19 48 59.5	0.0
	54nm,0.3s,baz=296,slow=23,SNR=8.0						
JHJ	Hachijo jima 2	4.84	337	LR	LR	19 51 06.8	
	comp=Z,98nm,20.2s,baz=251,slow=36						
MJAR	Matsushiro Arr	8.48	339	Pn	Pn	19 50 14.1	-1.3
	0.2nm,0.3s,baz=272,slow=15,SNR=17						
MJAR				Sn	Sn	19 51 47.2	-2.6
	0.1nm,0.3s,baz=245,slow=20,SNR=4.1						
	2.3nm,0.5s						
KSRS	Korea Array	14.71	310	Pn	P	19 51 46.0	-0.1
	0.2nm,0.3s,baz=115,slow=11,SNR=13						
KLR	Kul'dur	21.99	342	P	P	19 53 08.2	+2.3
	1.2nm,0.6s,baz=140,slow=12,SNR=3.4						
	1.2nm,0.6s						
SONM	Songino Array	33.50	315	P	P	19 54 51.5	+0.5
	0.9nm,1.0s,baz=94,slow=8.8,SNR=4.8						
	0.9nm,1.0s						
ZALV	Zalesovo Beam	48.22	318	P	P	19 56 53.0	+1.0
	0.7nm,0.4s,baz=91,slow=9.2,SNR=4.5						
	0.7nm,0.4s						
WRA	Warramunga Arr	48.90	190	P	P	19 56 57.0	-0.5
	1.6nm,0.6s,baz=12,slow=8.8,SNR=11						
	1.6nm,0.6s						
MKAR	Makanchi Array	49.38	309	P	P	19 57 02.4	+1.3
	1.0nm,0.7s,baz=89,slow=9.4,SNR=10						
	1.0nm,0.7s						
ASAR	Alice Springs	52.62	189	P	P	19 57 25.0	-0.5
	0.5nm,0.7s,baz=0.5,slow=7.5,SNR=5.2						
	0.5nm,0.7s						
ARU	Arti	63.10	322	LR	LR	20 28 34.7	
	comp=Z,54nm,20.7s,baz=44,slow=38						
FINES	FINESS Array B	76.48	334	P	P	20 00 01.5	+0.7
	0.7nm,0.9s,baz=76,slow=5.9,SNR=5.2						
	0.7nm,0.9s						

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*IDC **21** 19:49:16.1±1.0,1°.81N×128°.37E,h0^{km},mb3.7/6, mbtmp3.8/6,MS3.9/3,Error ellipse: s-maj=72.4km s-min=18.3km az=75.0*
*DJA **21** 19:49:17.3±0.9,2°N±4°×12°8E±°,h10^{km},M3.6/6,mb3.6/1, MLv3.6/6*
*NEIC **21** 19:49:18.3±0.9,1°.63N±0°.06×127°.73E±0°.09,h9^{km}±4^{km}, mb4.3/14,Error ellipse: s-maj=13.1km s-min=8.5km az=107.0*
ISC 21 19:49:17.9±0.6,**1°.68N**±0°.05×**127°.73E**±0°.06,**h10**^{km},**n39**, σ**1^{s}.58**/37,**mb4.3**/13,**MS3.9**/3,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.97	202		Pg	19 49 35.9	-0.7
TNTI	Ternate	0.97	202	P	Pg	19 49 36.2	-0.5
LBMI	Labuha	2.31	186	P	Pn	19 49 56.7	+0.6
LBMI				S	Sb	19 50 28.3	-0.1
KMSI	Cibinong	3.91	254	P	Pb	19 50 23.0	-4.0
SANI	Sanana	4.09	205	P	Pn	19 50 20.9	+0.3
SWI	Sorong	4.34	126	P	Pb	19 50 32.7	-1.6
GTOI	Gorontalo	4.83	258	P	Pn	19 50 35.0	+4.2
FAKI	Fak Fak	6.42	135	Pn	Pn	19 50 52.3	-0.3
TOLI2	Tolitoli	6.97	265	Pn	Pn	19 51 00.6	+0.4
MTN	Manton Dam	14.82	167	Pn	Pn	19 52 50.4	+2.7
WB0	Warramunga Arr	22.29	163	P	P	19 54 15.4	-0.2
WB0				IAmb	IAmb	19 54 42.3	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	22.44	164	P	P	19 54 16.9	-0.3
	comp=Z,2.3nm,0.9s,baz=343,slow=11,SNR=5.3						
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	22.44	164	P	P	19 54 16.4	-0.9
YULB	Yu-li	22.47	344	P	P	19 54 17.3	-0.1
YULB				IAmb	IAmb	19 54 29.7	
	comp=Z,17nm,1.2s						
TPUB	Ta-pu	22.57	343	P	P	19 54 18.9	+0.4
RGRI	Rengat	25.48	266	P	P	19 54 50.7	+4.2
AS31	Alice Springs	25.90	167	P	P	19 54 50.3	0.0
ASAR	Alice Springs	25.90	167	P	P	19 54 50.7	+0.4
	comp=Z,0.5nm,0.7s,baz=347,slow=10,SNR=11						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	25.90	167	P	P	19 54 50.5	+0.2
STKA	Stephens Creek	35.87	160	P	P	19 56 15.3	-2.8
	comp=Z,2.5nm,0.9s,baz=323,slow=7.3,SNR=3.1						
	comp=Z,2.5nm,0.9s						
STKA	Stephens Creek	35.87	160	P	P	19 56 17.2	-1.0
STKA				IAmb	IAmb	19 56 42.5	
	comp=Z,2.4nm,1.4s						
MJAR	Matsushiro Arr	36.02	14	P	P	19 56 16.6	-2.7
	comp=Z,0.4nm,0.5s,baz=196,slow=9.0,SNR=4.1						
	comp=Z,0.4nm,0.5s						
PALK	Pallekele	47.19	278	LR	LR	20 22 03.4	
	comp=Z,159nm,18.6s,baz=226,slow=41						
SONM	Songino Array	49.55	341	P	P	19 58 10.1	+1.0
	comp=Z,0.5nm,0.6s,baz=151,slow=6.8,SNR=3.1						
	comp=Z,0.5nm,0.6s						
SONM	Songino Array	49.55	341	P	P	19 58 09.8	+0.7
MK31	Makanchi Array	59.80	325	P	P	19 59 23.8	+0.4
MK31				IAmb	IAmb	19 59 25.1	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	59.80	325	P	P	19 59 24.6	+1.2
	comp=Z,2.9nm,0.6s,baz=119,slow=8.5,SNR=30						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	59.80	325	P	P	19 59 23.8	+0.4
MAKZ	Makanchi	59.99	325	P	P	19 59 24.1	-0.6
MAKZ				IAmb	IAmb	19 59 26.4	
	comp=Z,2.8nm,0.7s						
YAK	Yakutsk	60.22	1	P	P	19 59 26.1	+0.2
KDJ	Kajisay	60.54	319	P	P	19 59 29.6	+0.8
KDJ				IAmb	IAmb	19 59 30.6	
	comp=Z,4.0nm,1.2s						
KURK	Kurchatov	64.00	328	P	P	19 59 51.6	+0.1
KK31	Karatay Array	65.41	317	P	P	20 00 01.0	+0.1
KK31				IAmb	IAmb	20 00 03.2	
	comp=Z,2.1nm,1.0s						
KKAR	Karatay Array	65.41	317	P	P	20 00 01.0	0.0
BRVK	Borovoye	69.65	327	P	P	20 00 27.7	+0.2
BRVK				IAmb	IAmb	20 00 28.4	
	comp=Z,2.8nm,0.8s						
WSAR	Wadi Sarin	70.16	294	LR	LR	20 37 34.7	
	comp=Z,58nm,18.1s,baz=138,slow=41						
ABKAR	Akbulak array	74.36	321	P	P	20 00 55.8	-0.1
GNI	Garni	83.56	310	LR	LR	20 44 33.8	
	comp=Z,49nm,19.4s,baz=30,slow=40						
IMAR	Indian Mountai	83.80	24	P	P	20 01 48.1	+0.9

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*IDC **21** 19:55:19.5±0.7,3°.86N×31°.59W,h0^{km},mb3.9/17, mbtmp3.9/18,ML3.9/1,MS3.7/18,Error ellipse: s-maj=27.2km s-min=15.0km az=132.0*
*NEIC **21** 19:55:21.3±0.8,3°.7N±0°.1×31°.5W±0°.2,h10^{km}±1^{km}, mb4.6/14,Error ellipse: s-maj=31.7km s-min=14.7km az=132.0*
ISC 21 19:55:20.7±0.5,**3°.81N**±0°.08×**31°.54W**±0°.09,**h10**^{km},**n78**, σ**1^{s}.48**/64,**mb4.2**/31,**MS3.7**/17,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	10.52	205	Pn	Pn	19 57 50.7	-1.0
	0.9nm,0.3s,baz=147,slow=13,SNR=5.1						
RCBR				Sn	Sn	19 59 43.7	-6.0
	0.6nm,0.3s,baz=47,slow=6.0,SNR=2.9						
RCBR				LR	LR	20 00 57.3	
	comp=Z,741nm,21.8s,baz=157,slow=32						
	6.9nm,0.7s						
RCBR	Riachuelo	10.52	205		Pn	19 57 48.4	-3.3
RCBR	Riachuelo	10.52	205	eP	Pn	19 57 51.3	-0.4
NBMO	Morrinhos-CE	11.05	230	eP	Pn	19 57 57.4	-1.6
NBPB	Pedra_Branca-C	12.28	221	eP	Pn	19 58 15.9	+0.1
NBPS	Pedro II - PI	12.82	231	eP	Pn	19 58 21.9	-1.4
NBRF	Rio Formoso -	12.91	196	eP	Pn	19 58 25.7	+1.3
NBMA	Muriti-CE	13.24	213	eP	Pn	19 58 29.4	+0.5
SACV	Santiago Islan	13.57	35	Pn	Pn	19 58 30.1	-3.2
NBAN	Anadia - AL	14.20	199	eP	Pn	19 58 44.5	+2.5
ROSB	Rosrio	14.23	242	eP	Pn	19 58 41.3	-1.2
NBPN	Ponto Novo - B	16.92	211	eP	P	19 59 19.1	-0.6
GDU01	Guandu, BA	19.15	204	eP	Pn	19 59 46.4	+1.1
SMTB	Santa Maria do	20.36	232	eP	P	19 59 58.3	+0.7
H10N3	ASCENSION HYDR	20.56	124	T	T	20 21 26.6	
	baz=303,slow=74,SNR=446						
H10N2	ASCENSION HYDR	20.57	124	T	T	20 21 23.3	
	baz=303,slow=74,SNR=677						
H10N1	ASCENSION HYDR	20.58	124	T	T	20 21 25.1	
	baz=303,slow=74,SNR=575						
CMC01	Camacan, BA	20.62	202	eP	Pn	20 00 02.8	+0.1
PRPB	Parauapebas	20.77	242	eP	P	20 00 02.1	0.0
SDBA	SAO DESIDERIO	20.88	219	eP	P	20 00 03.8	+0.5
MCPB	Macapa, AP	20.92	259	eP	P	20 00 04.3	+0.6
GUA01	Guaratinga, BA	21.85	202	eP	P	20 00 17.2	+3.6
JANB	Januaria	22.62	214	eP	P	20 00 24.1	+2.1
PEXB	Peixe	22.97	226	eP	P	20 00 26.6	+1.0
SJMB	Sao Joao De Ma	24.30	203	eP	P	20 00 42.6	+4.0
SNDB	Serra Nova Dou	25.13	231	eP	P	20 00 48.1	+1.9
BDFB	Brasilia	25.29	220	P	P	20 00 48.7	+1.0
	1.3nm,0.4s,baz=46,slow=10,SNR=4.2						
BDFB				LR	LR	20 09 57.7	
	comp=Z,204nm,18.8s,baz=336,slow=35						
	1.3nm,0.4s						
ITTB	Itaituba	25.50	252	eP	P	20 00 50.2	+0.7
DBIC	Dimbokro	26.72	83	LR	LR	20 09 05.6	
	comp=Z,66nm,20.2s,baz=270,slow=31						
DBIC	Dimbokro	26.72	83	P	P	20 00 59.9	-0.7
DBIC				IAmb	IAmb	20 01 10.5	
	comp=Z,9.6nm,0.9s						
KOWA	Kowa	29.13	67	P	P	20 01 21.9	-0.3
TOA0	Torodi Ar. Sit	34.11	72	P	P	20 02 05.7	-0.3
TOA0				IAmb	IAmb	20 02 08.9	
	comp=Z,5.9nm,0.8s						
TORD	Torodi Ar. Bea	34.11	72	P	P	20 02 05.9	-0.1
	comp=Z,4.3nm,0.8s,baz=262,slow=9.3,SNR=14						
	comp=Z,4.3nm,0.8s						
TORD	Torodi Ar. Bea	34.11	72	P	P	20 02 05.8	-0.2
BIRV	Birongo	35.07	283	P	P	20 02 13.7	-0.6
BAUV	El Baul	36.62	280	P	P	20 02 27.9	+0.3
BAUV				IAmb	IAmb	20 02 47.7	
	comp=Z,14nm,1.0s						
SJG	San Juan	36.73	295	LR	LR	20 14 37.2	
	comp=Z,76nm,20.4s,baz=262,slow=32						
MDT	Midelt	38.31	38	LR	LR	20 16 32.2	
	comp=Z,279nm,21.8s,baz=234,slow=33						
CPUP	Villa Florida	39.00	218	P	P	20 02 47.9	+0.4
	comp=Z,2.3nm,0.8s,baz=26,slow=10,SNR=4.6						
CPUP				LR	LR	20 18 43.3	
	comp=Z,285nm,19.1s,baz=45,slow=36						
	comp=Z,2.3nm,0.8s						
CPUP	Villa Florida	39.00	218	P	P	20 02 46.6	-0.9
CPUP	Villa Florida	39.00	218	eP	P	20 02 48.8	+1.2
LPAZ	La Paz	41.32	240	P	P	20 03 08.3	+0.6
	comp=Z,1.4nm,0.9s,baz=80,slow=18,SNR=3.7						
LPAZ				LR	LR	20 19 35.1	
	comp=Z,130nm,20.5s,baz=58,slow=35						
	comp=Z,1.4nm,0.9s						
LPAZ	La Paz	41.32	240	eP	P	20 03 08.8	+1.1
ESDC	Sonseca Array	43.57	31	P	P	20 03 26.3	+1.3
	comp=Z,1.2nm,0.8s,baz=226,slow=9.4,SNR=9.4						
ESDC				LR	LR	20 19 12.3	
	comp=Z,62nm,19.2s,baz=205,slow=33						
	comp=Z,1.2nm,0.8s						
LVC	Limon Verde	44.97	233	LR	LR	20 23 13.8	
	comp=Z,210nm,18.4s,baz=42,slow=37						
NNA	Nana	47.69	250	LR	LR	20 23 37.7	
	comp=Z,36nm,18.3s,baz=38,slow=36						
ATAH	Atahualpa	48.01	257	LR	LR	20 24 10.6	
	comp=Z,93nm,18.4s,baz=67,slow=36						
AQU	L'Aquila	55.40	40	P	P	20 04 56.8	+1.4
AQU				IAmb	IAmb	20 04 59.8	
	comp=Z,12nm,1.1s						
FETA	Feichten	56.41	34	eP	P	20 05 03.1	+0.5
	comp=Z,6.2nm,1.1s						
SQTA	Sankt Quirin	56.79	34	eP	P	20 05 05.7	+0.4
	comp=Z,6.3nm,1.1s						
MOTA	Moosalm	56.80	33	i P	P	20 05 05.1	-0.3
	comp=Z,3.6nm,1.1s						
PLCA	Paso Flores	56.89	215	LR	LR	20 29 13.6	
	comp=Z,192nm,19.9s,baz=60,slow=36						
WTTA	Wattenberg	57.05	34	eP	P	20 05 07.7	+0.5
	comp=Z,4.7nm,1.2s						
WATA	Walderalm	57.06	34	eP	P	20 05 07.6	+0.4
	comp=Z,3.1nm,0.9s						
ABTA	Abfaltersbach	57.24	35	i P	P	20 05 08.9	+0.4
	comp=Z,5.7nm,1.2s						
TKL	Tuckaleechee C	57.59	310	LR	LR	20 26 13.6	
	comp=Z,38nm,19.9s,baz=136,slow=32						
GRFO	Grafenberg	58.27	31	P	P	20 05 16.2	+0.7
GRFO				IAmb	IAmb	20 05 45.5	
	comp=Z,5.4nm,0.8s						
GRA1	Grafenberg Arr	58.27	31	P	P	20 05 16.3	+0.8
GRA1				IAmb	IAmb	20 05 45.5	
	comp=Z,5.8nm,0.8s						
SADO	Sadowa	58.30	322	LR	LR	20 25 58.3	
	comp=Z,76nm,18.3s,baz=134,slow=32						
SCHQ	Schefferville	58.33	337	P	P	20 05 16.1	+0.3
	comp=Z,0.9nm,0.4s,baz=194,slow=4.2,SNR=1.7						
	comp=Z,0.9nm,0.4s						
SOKA	Soboth	58.66	36	i P	P	20 05 18.8	+0.4
	comp=Z,2.6nm,0.8s						
GERES	GERESS Array B	59.09	33	P	P	20 05 22.0	+0.6
	comp=Z,0.4nm,0.7s,baz=231,slow=7.5,SNR=3.7						
	comp=Z,0.4nm,0.7s						
IDI	Anoyia	60.70	51	LR	LR	20 33 18.8	
	comp=Z,42nm,19.3s,baz=358,slow=38						
KONO	Kongsberg	63.99	22	P	P	20 05 53.7	-0.5
NOA	NORSAR Array B	65.53	21	P	P	20 06 04.3	+0.1
	comp=Z,1.3nm,0.9s,baz=230,slow=6.3,SNR=3.8						
	comp=Z,1.3nm,0.9s						
SUW	Suwalki	66.83	32	P	P	20 06 13.5	+0.9
CSS	Mathiatis	67.31	54	P	P	20 06 16.6	+0.4
CSS				IAmb	IAmb	20 06 29.2	
	comp=Z,4.4nm,1.0s						
BRTR	Keskin Array B	68.59	49	P	P	20 06 25.1	+0.8
	comp=Z,0.7nm,0.8s,baz=236,slow=4.8,SNR=4.2						
	comp=Z,0.7nm,0.8s						
BRTR	Keskin Array B	68.59	49	P	P	20 06 23.1	-1.1
AKASG	Malin Array Be	68.85	37	P	P	20 06 24.7	-0.7
	comp=Z,0.3nm,0.5s,baz=249,slow=6.8,SNR=2.1						
	comp=Z,0.3nm,0.5s						
FINES	FINESS Array B	71.66	25	P	P	20 06 42.5	+0.1
	comp=Z,1.4nm,0.8s,baz=205,slow=8.4,SNR=4.3						
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	72.57	299	P	P	20 06 48.0	-0.7
	comp=Z,0.8nm,0.9s,baz=95,slow=5.5,SNR=5.0						
TXAR				LR	LR	20 33 16.2	
	comp=Z,33nm,22.0s,baz=58,slow=31						
	comp=Z,0.8nm,0.9s						
ANMO	Albuquerque	75.47	305	LR	LR	20 35 34.3	
	comp=Z,76nm,21.6s,baz=90,slow=32						
KBZ	Khabaz	76.14	46	P	P	20 07 10.1	+1.0
	comp=Z,0.7nm,0.7s,baz=226,slow=4.8,SNR=1.7						
	comp=Z,0.7nm,0.7s						
SNAA	Sanae	77.62	171	P	P	20 07 18.1	+1.2
	comp=Z,1.6nm,1.1s,baz=281,slow=10,SNR=1.4						
	comp=Z,1.6nm,1.1s						
PDAR	Pinedale Array	78.63	313	P	P	20 07 24.1	+0.7
	comp=Z,0.3nm,0.6s,baz=88,slow=7.3,SNR=2.2						
PDAR				LR	LR	20 40 48.8	
	comp=Z,27nm,18.3s,baz=66,slow=35						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	83.43	332	P	P	20 07 47.6	-0.6
	comp=Z,0.4nm,0.7s,baz=93,slow=4.4,SNR=4.0						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	97.09	337	P	P	20 08 52.4	-0.5
	comp=Z,0.3nm,0.8s,baz=38,slow=3.4,SNR=2.6						
	comp=Z,0.3nm,0.8s						

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*IDC **21** 20:11:20.8±1.2,13°.95N×93°.07E,h0^{km},mb3.7/8, mbtmp3.7/9,ML3.4/1,MS3.0/1,Error ellipse: s-maj=33.7km s-min=26.0km az=53.0*
ISC 21 20:11:25.8±1.1,**14°.0N**±0°.2×**93°.2E**±0°.1,**h32**^{km},**n10**, σ**0^{s}.75**/10,**mb3.8**/8,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.05	51	Pn	Pn	20 13 07.7	+0.7
	0.2nm,0.3s,baz=241,slow=15,SNR=5.4						
CMAR				Sn	Sn	20 14 24.9	-1.2
	0.5nm,0.3s,baz=226,slow=30,SNR=5.1						
	0.9nm,0.7s						
DAV	Davao City (W)	32.56	99	LR	LR	20 30 00.3	
	comp=Z,25nm,21.2s,baz=226,slow=34						
MKAR	Makanchi Array	33.91	347	P	P	20 18 06.3	+0.4
	1.1nm,0.8s,baz=161,slow=8.7,SNR=8.1						
	1.1nm,0.8s						
SONM	Songino Array	35.44	15	P	P	20 18 19.9	+0.7
	0.5nm,0.8s,baz=200,slow=5.3,SNR=4.2						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	40.36	352	P	P	20 19 00.7	+0.2
	1.0nm,0.6s,baz=179,slow=8.1,SNR=5.4						
	1.0nm,0.6s						
ASAR	Alice Springs	54.67	133	P	P	20 20 52.0	-0.2
	0.4nm,0.7s,baz=305,slow=7.0,SNR=6.3						
	0.4nm,0.7s						
BRTR	Keskin Array B	57.81	308	P	P	20 21 13.8	-0.7
	0.9nm,0.9s,baz=91,slow=5.8,SNR=2.4						
	0.9nm,0.9s						
FINES	FINESS Array B	66.87	331	P	P	20 22 13.9	-0.6
	1.4nm,0.9s,baz=98,slow=8.6,SNR=2.2						
	1.4nm,0.9s						
GERES	GERESS Array B	72.67	317	P	P	20 22 50.5	-0.2
	0.3nm,0.5s,baz=90,slow=2.7,SNR=4.3						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	88.29	283	P	P	20 24 15.4	+0.5
	1.1nm,0.9s,baz=73,slow=6.2,SNR=4.6						
	1.1nm,0.9s						

WEL 21 20:12:23.5±0.8,**34°S**±10°×**17°9W**±1°6,**h225**^{km}±13^{km}, **M4.0**/19,**mB4.5**/6,**ML4.6**/31,**MLv4.3**/19,**Mw(mB)3.7**/6, **Error ellipse: s-maj=0.0km s-min=0.0km az=116.9, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.82	210	P	Pn	20 13 24.1	+0.1
MXZ				S	S	20 14 11.8	+0.1
WMGZ	Waiomatatini S	4.00	207	P	Pn	20 13 25.7	-0.5
WMGZ				S	S	20 14 17.2	+1.7
PKGZ	Pakihiroa	4.20	210	P	Pn	20 13 28.0	-0.6
PKGZ				S	S	20 14 18.7	-1.2
HAZ	Te Kaha	4.21	213	P	Pn	20 13 28.5	-0.2
HAZ				S	S	20 14 22.2	+2.1
PUZ	Puketiti	4.28	207	P	Pn	20 13 28.8	-0.8
PUZ				S	S	20 14 21.4	-0.4
RUGZ	Raukumara Rang	4.43	213	P	Pn	20 13 30.6	-0.9
RUGZ				S	S	20 14 24.1	-1.1
TWGZ	Tauwhareparae	4.48	209	P	Pn	20 13 31.3	-0.7
TWGZ				S	S	20 14 27.1	+0.9
CNGZ	Carnagh Statio	4.67	205	P	Pn	20 13 34.7	+0.4
KUZ	Kuaotunu	4.76	237	P	Pn	20 13 34.4	-1.0
TKGZ	Te Karaka	4.76	208	P	Pn	20 13 36.3	+0.8
TKGZ				S	S	20 14 32.1	-0.3
MWZ	Matawai	4.80	211	P	Pn	20 13 35.3	-0.7
MWZ				S	S	20 14 33.1	-0.3
OPRZ	Ohinepanea	4.90	222	P	Pn	20 13 38.1	+0.8
URZ	Urewera	4.93	215	P	Pn	20 13 36.8	-0.8
URZ				S	S	20 14 36.2	+0.1
MARZ	Manawahe	4.94	220	P	Pn	20 13 39.4	+1.7
RAGZ	Rawiri	4.99	211	P	Pn	20 13 38.6	+0.3
RAGZ				S	S	20 14 38.1	+0.5
RIGZ	Rimuhau	5.03	207	P	Pn	20 13 38.8	0.0
RIGZ				S	S	20 14 39.3	+0.9
KARZ	Kaharoa	5.20	223	P	Pn	20 13 43.2	+2.2
SNGZ	Shannon Statio	5.26	210	P	Pn	20 13 42.2	+0.5
SNGZ				S	S	20 14 44.9	+1.2
MUGZ	Murupara	5.27	216	P	Pn	20 13 41.0	-0.8
MUGZ				S	S	20 14 42.8	-1.0
RTZ	Ruatahuna	5.28	214	P	Pn	20 13 41.8	-0.2
MHGZ	Mahia Peninsul	5.37	204	P	Pn	20 13 44.1	+1.1
MHGZ				S	S	20 14 47.7	+1.5
RAHZ	Arahi	5.48	211	P	Pn	20 13 45.4	+0.9
MTHZ	Maungataniwha	5.53	213	P	Pn	20 13 45.8	+0.6
MTHZ				S	S	20 14 50.6	+0.6
MRHZ	Matea Rd	5.72	216	P	Pn	20 13 47.2	-0.3
NMHZ	Naumai	5.75	212	P	Pn	20 13 48.6	+0.7
NMHZ				S	S	20 14 57.3	+2.3
ARHZ	Aropaoanui	5.81	210	P	Pn	20 13 49.1	+0.6
BKZ	Black Stump Fm	5.95	213	P	Pn	20 13 50.0	-0.4
BKZ				S	S	20 15 00.6	+1.1
MCHZ	McNeill Hill	6.08	211	P	Pn	20 13 54.5	+2.4
TMVZ	Te Maari	6.29	218	P	Pn	20 13 55.4	+0.6
ETVZ	East Tongariro	6.30	218	P	Pn	20 13 56.0	+1.0
KAHZ	Kahuranaki	6.31	208	P	Pn	20 13 55.0	0.0
KRHZ	Kereru	6.39	212	P	Pn	20 13 54.9	-1.1

KRHZ				S	S	20 15 09.4	-0.3
BHHZ	Black Hill Sta	6.40	214	P	Pn	20 13 56.0	-0.2
MOVZ	Moawhango	6.49	216	P	Pn	20 13 57.3	0.0
MOVZ				S	S	20 15 12.4	+0.4
PNHZ	Pukenui	6.69	211	P	Pn	20 13 58.8	-1.1
PNHZ				S	S	20 15 17.1	+0.5
PRHZ	Porangahau	6.81	207	P	Pn	20 14 01.0	-0.3
PRHZ				S	S	20 15 20.3	+0.8
TSZ	Takapari Road	6.91	212	P	Pn	20 14 01.4	-1.3
BFZ	Birch Farm	7.32	208	P	Pn	20 14 07.3	-0.5
BFZ				S	S	20 15 29.1	-2.2
TIWZ	Tintock	7.54	209	P	Pn	20 14 10.4	-0.3
TIWZ				S	S	20 15 37.2	+0.6
TMWZ	Te Maipa	7.82	208	P	Pn	20 14 13.3	-1.0
TMWZ				S	S	20 15 45.4	+2.3
OGWZ	Otaki Gorge	7.88	212	P	Pn	20 14 13.7	-1.4
KIW	Kapiti Island	8.03	213	P	Pn	20 14 15.6	-1.4

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*REY **21** 20:41:51.7, 62°.45N×25°.05W, h10^{km}*

*IDC **21** 20:41:55.8±1.3, 62°.90N×25°.15W, h0^{km}, mb3.3/4, mbtmp3.4/7, ML3.0/3, MS3.7/1, Error ellipse: s-maj=35.6km s-min=22.4km az=49.0*

ISC 21 20:41:58.4±2.5**, 62°.91N**±0°.08×**24°.85W**±0°.08**, h16**^{km}±14^{km}**, n37, σ1^{s}65**/48**, mb3.3**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	Reykjanes	1.33	46	S	Sg	20 42 41.6	+0.3
	baz=37						
IRNE				P	Pn	20 42 20.7	-1.5
	baz=37						
INYL	Nylenda	1.43	41	P	Pn	20 42 21.7	-1.9
	baz=33						
INYL				S	Sg	20 42 44.6	+0.1
	baz=33						
IGRV	Grindav??k	1.44	47	P	Pn	20 42 21.7	-2.0
	baz=39						
IGRV				S	Sg	20 42 44.8	0.0
	baz=39						
IVOG	Vogar	1.53	45	P	Pn	20 42 23.4	-1.7
	baz=37						
IVOG				S	Sg	20 42 48.4	+0.6
	baz=37						
IKRI	Krysuvik	1.58	51	P	Pn	20 42 23.5	-2.3
	baz=42						
IKRI				S	Sg	20 42 48.5	-0.9
	baz=42						
IVOS	Vogsosar	1.70	55	P	Pn	20 42 24.9	-2.5
	baz=46						
IVOS				S	Sb	20 42 51.2	+0.8
	baz=46						
IKAS	Kald??rsel	1.75	49	P	Pn	20 42 26.3	-1.8
	baz=41						
IKAS				S	Sg	20 42 53.5	-1.3
	baz=41						
ISAN	Sandskeio	1.87	50	P	Pn	20 42 27.7	-1.9
	baz=43						
ISAN				S	Sb	20 42 56.7	+1.5
	baz=43						
IBJA	Bjarnastaoir	1.90	55	P	Pn	20 42 27.8	-2.3
	baz=47						
IBJA				S	Sb	20 42 56.9	+0.7
	baz=47						
ISOL	Solvholt	2.03	58	P	Pn	20 42 29.4	-2.5
	baz=50						
ISOL				S	Sn	20 42 56.3	-0.6
	baz=50						
IKRO	Krokur	2.06	53	P	Pn	20 42 30.2	-2.1
	baz=45						
IKRO				S	Sb	20 43 01.4	+0.9
	baz=45						
IHEI	Heioarbar	2.07	50	P	Pn	20 42 30.8	-1.7
	baz=43						
IHEI				S	Sb	20 43 02.2	+1.2
	baz=43						
IASM	Asmuli	2.12	62	P	Pn	20 42 30.4	-2.7
	baz=53						
IASM				S	Sn	20 42 57.6	-1.4
	baz=53						
BORG	Borgarnes	2.42	39	Pn	Pn	20 42 36.8	-0.4
	24nm,0.3s,baz=221,slow=8.0,SNR=111						
	205nm,0.6s						
IASB	`sbjarnarst	2.42	39	P	Pn	20 42 36.6	-0.6
	baz=34						
IESK	Eystri-Skogar	2.52	73	P	Pn	20 42 35.7	-2.9
	baz=65						
IMJO	Mjoaskard	2.54	64	P	Pn	20 42 37.1	-1.9
	baz=56						
IFED	Fedgar	2.57	62	P	Pn	20 42 37.7	-1.6
	baz=54						
IGOD	Go??abunga	2.61	71	P	Pn	20 42 37.1	-2.9
	baz=62						
IALF	Alftagrof	2.63	75	P	Pn	20 42 37.0	-3.2
	baz=66						
ISLY	Slysaalda	2.74	68	P	Pn	20 42 40.4	-1.3
	baz=60						
IVAT	Vatnsfell	2.95	62	P	Pn	20 42 43.4	-1.2
	baz=55						
ISTE	Stelbrattur	3.03	47	P	Pn	20 42 45.4	-0.2
	baz=43						
IIEY	Innrieyrar	3.24	65	P	Pn	20 42 47.4	-1.2
	baz=59						
IJOK	Jokulheimar	3.28	62	P	Pn	20 42 48.0	-1.0
	baz=56						
ISKR	Skrokkalda	3.32	57	P	Pn	20 42 49.1	-0.5
	baz=52						
IHUS	Husbondi	3.50	63	P	Pn	20 42 51.2	-1.0
	baz=58						
IVON	Vonarskard	3.61	57	P	Pn	20 42 52.6	-1.1
	baz=52						
EKA	Eskdalemuir Ar	13.42	115	Pn	Pn	20 45 09.8	+1.9
	baz=312,slow=11						
	1.3nm,0.8s						
NOA	NORSAR Array B	16.91	80	P	P	20 45 57.0	+1.0
	baz=294,slow=12,SNR=2.3						
	0.5nm,0.8s						
CLL	Collm	23.22	102	*e*P	P	20 47 06.0	+1.7
KHC	Kasperske Hory	25.05	105	*e*P	P	20 47 30.0	+8.4
KHC				*e*x	x	20 48 02.5	
KHC				AMS	AMS	20 57 50.0	
	200nm,19.7s						
ESDC	Sonseca Array	26.43	142	P	P	20 47 33.8	-0.4
	0.5nm,0.8s,baz=340,slow=9.9,SNR=4.3						
	0.5nm,0.8s						
YKA	Yellowknife Ar	37.97	311	P	P	20 49 13.4	-1.4
	0.3nm,0.6s,baz=46,slow=9.0,SNR=2.5						
	0.3nm,0.6s						
KVAR	Kislovodsk Arr	42.16	84	LR	LR	21 08 55.2	
	comp=Z,82nm,18.5s,baz=278,slow=38						
ILAR	Eielson Array	45.64	329	P	P	20 50 17.3	-0.1
	0.2nm,0.7s,baz=28,slow=8.1,SNR=2.5						
	0.2nm,0.7s						
TORD	Torodi Ar. Bea	53.13	147	P	P	20 51 15.9	+0.8
	0.5nm,0.8s,baz=349,slow=7.7,SNR=2.2						
	0.5nm,0.8s						

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*REY **21** 20:42:29.0, 62°.45N×25°.00W, h10^{km}*

*IDC **21** 20:42:32.0±1.0, 62°.78N×25°.41W, h0^{km}, mb3.6/11, mbtmp3.6/14, ML3.0/2, MS3.7/8, Error ellipse: s-maj=27.0km s-min=16.7km az=34.0*

ISC 21 20:42:32.3±1.1**, 62°.7N**±0°.1×**25°.01W**±0°.08**, h10**^{km}**, n54, σ1^{s}54**/47**, mb3.6**/12**, MS3.7**/8**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	Reykjanes	1.53	42	S	Sn	20 43 18.8	-0.7
	baz=36						
IGRV	Grindav??k	1.63	44	P	Pn	20 42 58.7	-2.4
	baz=38						
IGRV				S	Sn	20 43 21.7	-0.4
	baz=38						
INYL	Nylenda	1.63	38	P	Pn	20 42 59.0	-2.1
	baz=33						
INYL				S	Sn	20 43 21.9	-0.2
	baz=33						
IVOG	Vogar	1.73	42	S	Sn	20 43 25.0	+0.4
	baz=37						
IKRI	Krysuvik	1.77	47	P	Pn	20 43 00.7	-2.3
	baz=42						
IKRI				S	Sn	20 43 25.7	+0.2
	baz=42						
IVOS	Vogsosar	1.89	51	P	Pn	20 43 02.0	-2.5
	baz=45						
IVOS				S	Sn	20 43 28.5	+0.2
	baz=45						
IKAS	Kald??rsel	1.94	46	P	Pn	20 43 03.7	-1.6
	baz=41						
IKAS				S	Sn	20 43 30.8	+1.1
	baz=41						
ISAN	Sandskeio	2.06	47	P	Pn	20 43 04.6	-2.4
	baz=42						
ISAN				S	Sn	20 43 33.2	+0.6
	baz=42						
IBJA	Bjarnastaoir	2.08	52	P	Pn	20 43 05.1	-2.2
	baz=46						
IBJA				S	Sn	20 43 34.1	+0.9
	baz=46						
ISOL	Solvholt	2.21	54	P	Pn	20 43 06.4	-2.6
	baz=49						
ISOL				S	Sn	20 43 32.8	-3.4
	baz=49						
IKRO	Krokur	2.24	50	P	Pn	20 43 07.2	-2.2
	baz=45						
IKRO				S	Sn	20 43 38.1	+1.0
	baz=45						
IHEI	Heioarbar	2.26	47	P	Pn	20 43 08.5	-1.2
	baz=42						
IHEI				S	Sn	20 43 39.0	+1.3
	baz=42						
IASM	Asmuli	2.29	58	P	Pn	20 43 07.5	-2.5
	baz=53						
ISAU	Saurbar	2.44	56	P	Pn	20 43 09.4	-2.8
	baz=51						
BORG	Borgarnes	2.62	37	Pn	Pn	20 43 14.2	-0.4
	382nm,0.5s,baz=238,slow=7.1,SNR=24						
BORG				Sn	Sn	20 43 46.0	-0.5
	baz=16,slow=18						
IASB	`sbjarnarst	2.62	37	P	Pn	20 43 13.9	-0.8
	baz=34						
IASB				S	Sn	20 43 48.5	+2.0
	baz=34						
IMJO	Mjoaskard	2.70	61	P	Pn	20 43 14.4	-1.4
	baz=56						
IFED	Fedgar	2.74	59	P	Pn	20 43 14.5	-1.7
	baz=54						
IFED				S	Sn	20 43 49.4	0.0
	baz=54						
IVAT	Vatnsfell	3.11	59	P	Pn	20 43 20.4	-1.1
	baz=55						
IVAT				S	Sn	20 43 58.8	+0.2
	baz=55						
ISTE	Stelbrattur	3.22	46	P	Pn	20 43 22.3	-0.6
	baz=42						
IIEY	Innrieyrar	3.40	63	P	Pn	20 43 24.4	-0.9
	baz=59						
IJOK	Jokulheimar	3.44	59	P	Pn	20 43 25.1	-0.9
	baz=56						
ISKR	Skrokkalda	3.49	55	P	Pn	20 43 26.2	-0.4
	baz=52						
IKAL	Kalfafell	3.53	66	P	Pn	20 43 26.0	-1.1
	baz=62						
IVON	Vonarskard	3.78	55	P	Pn	20 43 29.3	-1.4
	baz=52						
IHAE	Haedir	3.85	66	P	Pn	20 43 30.5	-1.0
	baz=63						
IDYN	Dyngjuhals	3.99	55	P	Pn	20 43 33.1	-0.5
	baz=52						
JMIC	Jan Mayen	10.50	31	LR	LR	20 48 18.9	
	comp=Z,156nm,20.0s,baz=254,slow=33						
EKA	Eskdalemuir Ar	13.40	113	Pn	P	20 45 44.3	-7.6
	baz=316,slow=13						
	2.8nm,0.9s						
NOA	NORSAR Array B	17.02	79	Pn	P	20 46 32.9	+0.9
	baz=294,slow=12,SNR=2.4						
	0.3nm,0.6s						
CLL	Collm	23.25	102	*i* PP	P	20 47 43.8	+4.3
	comp=Z,6.0nm,1.0s						
CLL	Collm	23.25	102	*i* x	x	20 47 48.3	
	comp=Z,21nm,1.9s						
CLL	Collm	23.25	102	*e*SS	Sn	20 52 24.0	+15
CLL	Collm	23.25	102	Lm	MLR	20 56 00.0	
	comp=E,200nm,20.9s						
CLL	Collm	23.25	102	Lm	MLR	20 56 00.0	
	comp=N,200nm,21.5s						
CLL	Collm	23.25	102	Lm	MLR	20 56 00.0	
	comp=Z,300nm,19.8s						
DAVOX	Davos/Dischmat	25.24	113	P	P	20 48 02.1	+3.7
	comp=Z,1.5nm,0.8s,baz=322,slow=17,SNR=2.7						
	comp=Z,1.5nm,0.8s						
GERES	GERESS Array B	25.33	105	P	P	20 48 02.5	+3.4
	comp=Z,0.7nm,0.8s,baz=304,slow=9.5,SNR=5.7						
	comp=Z,0.7nm,0.8s						
ESDC	Sonseca Array	26.32	141	P	P	20 48 10.8	+2.8
	comp=Z,1.7nm,0.9s,baz=337,slow=9.8,SNR=8.9						
	comp=Z,1.7nm,0.9s						
AKASG	Malin Array Be	31.11	87	P	P	20 48 51.5	+1.0
	comp=Z,0.6nm,0.6s,baz=314,slow=9.4,SNR=5.1						
	comp=Z,0.6nm,0.6s						
YKA	Yellowknife Ar	38.05	311	P	P	20 49 49.5	-0.8
	comp=Z,0.6nm,0.7s,baz=44,slow=9.6,SNR=4.3						
	comp=Z,0.6nm,0.7s						
KBZ	Khabaz	42.53	84	P	P	20 50 32.0	+4.5
	comp=Z,1.5nm,1.0s,baz=308,slow=8.3,SNR=2.3						
	comp=Z,1.5nm,1.0s						
ILAR	Eielson Array	45.78	329	P	P	20 50 53.5	+0.1
	comp=Z,0.7nm,0.9s,baz=28,slow=5.4,SNR=5.4						
	comp=Z,0.7nm,0.9s						
PDAR	Pinedale Array	50.76	289	P	P	20 51 31.7	-0.7
	comp=Z,0.5nm,0.6s,baz=29,slow=5.7,SNR=2.3						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	53.00	147	P	P	20 51 50.6	+1.5
	comp=Z,0.3nm,0.7s,baz=326,slow=8.1,SNR=1.6						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	56.59	52	P	P	20 52 17.6	+2.7
	comp=Z,0.7nm,0.9s,baz=320,slow=11,SNR=4.4						
	comp=Z,0.7nm,0.9s						
NVAR	Mina Array Bea	58.10	293	LR	LR	21 17 08.4	
	comp=Z,278nm,18.5s,baz=14,slow=36						
SONM	Songino Array	63.23	34	P	P	20 53 02.6	+2.1
	comp=Z,0.4nm,0.9s,baz=337,slow=6.9,SNR=2.5						
	comp=Z,0.4nm,0.9s						
CMIG	Matias Romero	65.74	260	LR	LR	21 24 39.4	
	comp=Z,40nm,18.1s,baz=20,slow=38						
LPIG	La Paz	66.74	278	LR	LR	21 21 56.0	
	comp=Z,299nm,18.9s,baz=36,slow=36						
JTS	Las Juntas de	67.37	247	LR	LR	21 21 48.4	
	comp=Z,16nm,18.5s,baz=52,slow=35						
RCBR	Riachuelo	68.85	192	LR	LR	21 15 26.7	
	comp=Z,37nm,21.4s,baz=248,slow=29						
MBAR	Mbarara	75.51	121	LR	LR	21 28 20.9	
	comp=Z,42nm,20.2s,baz=16,slow=36						
NNA	Nana	84.51	231	LR	LR	21 31 19.4	
	comp=Z,18nm,20.2s,baz=3.5,slow=35						

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*ANF **21** 20:51:15.6±0.3, 36°.98N×104°.85W, h0^{km}, ML3.5/11, Error ellipse: s-maj=2.6km s-min=2.2km az=152.0*

*NEIC **21** 20:51:16.8±2.0, 36°.94N±0°.04×104°.81W±0°.05, h2^{km}±7^{km}, mb_Lg3.1/92, ML3.2/42, Error ellipse: s-maj=6.0km s-min=5.3km az=91.0*

ISC 21 20:51:16.8±0.8**, 36°.97N**±0°.03×**104°.82W**±0°.03**, h10**^{km}**, n49, σ1^{s}05**/48**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T25A	Trinidad	0.37	63	Pg	Pg	20 51 23.0	-1.2
T25A				Sg	Sg	20 51 28.6	-0.5
T25A				IAML		20 51 29.0	
	comp=N,4µm,0.2s						
T25A	Trinidad	0.37	63	P	Pg	20 51 23.2	-1.0
	baz=235						
T25A				S	Sg	20 51 28.8	-0.4
	baz=235						
SDCO	Great Sand Dun	0.94	325		Pg	20 51 33.3	-1.7
SDCO					Sg	20 51 46.0	-1.3
SDCO	Great Sand Dun	0.94	325	P	Pg	20 51 33.4	-1.6
	baz=145						
SDCO				S	Sg	20 51 46.0	-1.3
	baz=145						
S22A	4UR Ranch, Cre	1.78	296	Pn	Pn	20 51 48.8	+1.0
S22A				IAML		20 52 16.6	
	comp=N,210nm,0.3s						
S22A				IAML		20 52 17.1	
	comp=E,198nm,0.6s						
S22A	4UR Ranch, Cre	1.78	296	Pb	Pn	20 51 49.0	+1.1
	baz=116						
S22A				S	Sn	20 52 11.6	+0.9
	baz=116						
Q24A	Divide	2.01	353	Pn	Pn	20 51 52.6	+1.6
Q24A				IAML		20 52 19.9	
	comp=E,156nm,0.4s						
Q24A				IAML		20 52 23.4	
	comp=N,92nm,0.3s						
Q24A	Divide	2.01	353	Pb	Pb	20 51 52.9	-0.7
	baz=172						
Q24A				S	Sb	20 52 19.2	+0.5
	baz=172						
ANMO	Albuquerque	2.42	214	Pn	Pn	20 51 56.4	-0.1
ANMO	Albuquerque	2.42	214	P	Pn	20 51 56.2	-0.4
	baz=34						
ANMO				S	Sn	20 52 27.7	+1.4
	baz=34						
KSCO	Kaye Shedlock'	2.67	40		Pn	20 52 01.4	+1.3
KSCO	Kaye Shedlock'	2.67	40	Sb	Sb	20 52 38.8	+1.0
	baz=220						
ISCO	Idaho Springs	2.89	348		Pn	20 52 03.9	+0.7
ISCO	Idaho Springs	2.89	348	Pb	Pb	20 52 09.5	+0.9
	baz=167						
MVCO	Mesa Verde	2.95	276		Pn	20 52 05.0	+1.1
MVCO				IAML		20 52 47.2	
	comp=N,102nm,0.4s						
MVCO	Mesa Verde	2.95	276	Pb	Pb	20 52 09.6	+0.1
	baz=94						
MVCO				Sb	Sb	20 52 46.6	+0.8
	baz=94						
BNM	Barren Site	3.18	208	Pn	Pn	20 52 06.5	-0.5
PV15	Paradox Valley	3.21	296	Pn	Pn	20 52 08.4	+0.9
AMTX	Amarillo	3.29	128		Pn	20 52 07.3	-1.2
Y22D	IRIS PASSCAL I	3.36	211	Pb	Pb	20 52 16.2	-0.3
	baz=31						
PV07	Paradox Valley	3.37	297		Pn	20 52 09.8	+0.1
PV07				IAML		20 53 08.3	
	comp=N,46nm,1.2s						
PV07				IAML		20 53 12.6	
	comp=E,41nm,0.7s						
CRNM	Carthage	3.39	208	Pn	Pn	20 52 09.2	-0.7
MSTX	Muleshoe	3.43	150		Pn	20 52 09.8	-0.6
PV11	David Mesa, Pa	3.48	294		Pn	20 52 11.6	+0.4
N23A	Red Feather La	4.01	348	Pn	Pn	20 52 21.2	+2.6
N23A				IAML		20 53 35.6	
	comp=E,27nm,0.7s						
N23A				IAML		20 53 45.5	
	comp=N,26nm,0.9s						
CBKS	Cedar Bluff	4.42	64	Pn	Pn	20 52 23.7	-0.3
OGNE	Ogallala	4.53	28		Pn	20 52 25.6	+0.2
U32A	Winter Ranch,	4.72	95	IAmb_Lg		20 53 56.2	
	comp=Z,43nm,0.7s						
121A	Cookes Peak, D	5.05	210		Pn	20 52 32.5	-0.3
121A				IAML		20 53 52.9	
	comp=N,15nm,0.6s						
121A				IAML		20 54 00.9	
	comp=E,13nm,1.0s						
121A	Cookes Peak, D	5.05	210	P	Pn	20 52 32.5	-0.3
	baz=28						
R32A	Long Quarter,	5.06	72		Pn	20 52 33.6	+0.9
R32A				IAmb_Lg		20 54 04.5	
	comp=Z,39nm,0.7s						
MNTX	Cornudas Mount	5.28	185	Pb	Pb	20 52 49.8	+0.6
	baz=5.1						
WMOK	Wichita Mounta	5.39	113	Pn	Pn	20 52 36.4	-0.9
U15A	North Rim	6.03	267		Pn	20 52 47.1	+0.9
ABTX	Abilene, Hawle	6.08	134		Pn	20 52 44.4	-2.4
X34A	Smith Ranch, M	6.15	111	IAmb_Lg		20 54 40.7	
	comp=Z,32nm,1.1s						
OKCFA	Oklahoma City	6.16	102	IAmb_Lg		20 54 36.3	
	comp=Z,30nm,0.7s						
FNO	Franklin	6.25	104	IAmb_Lg		20 54 43.6	
	comp=Z,21nm,0.7s						
T35A	Sooner Cattle	6.66	88	Pn	Pn	20 52 53.9	-0.8
KSU1	Kansas State U	6.82	69	IAmb_Lg		20 55 02.2	
	comp=Z,27nm,0.8s						
RSSD	Black Hills	7.17	5		Pn	20 53 02.3	+0.5
JCT	Junction City	7.71	146	IAmb_Lg		20 55 25.7	
	comp=Z,15nm,1.0s						
X37A	Clayton	8.04	104	IAmb_Lg		20 55 39.9	
	comp=Z,25nm,0.8s						
435B	Jarrell	8.62	134	IAmb_Lg		20 55 53.3	
	comp=Z,25nm,1.0s						
237A	Washetta, Mont	8.94	121	IAmb_Lg		20 56 16.5	
	comp=Z,22nm,0.9s						
S39A	Bolivar	9.19	82	Pn	Pn	20 53 28.9	-0.5
ECSD	EROS Data Cent	9.21	40	Pn	Pn	20 53 31.3	+1.6
ECSD				IAmb_Lg		20 56 10.8	
	comp=Z,12nm,0.8s						
P38A	Dawn	9.26	70	Pn	Pn	20 53 29.7	-0.7
MIAR	Mount Ida	9.46	101	Pn	Pn	20 53 32.4	-0.6

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*JMA **21** 20:51:38.6±0.4, 23°N±1°×12°0E±°, h25^{km}, MD4.9/10, MV5.6/10, TAIWAN REGION*

*MOS **21** 20:51:38.7±1.0, 22°.78N×120°.80E, h17^{km}, mb5.0/29, MS4.1/7, Error ellipse: s-maj=13.1km s-min=7.3km az=107.7*

*NIED **21** 20:51:38.6, 22°.75N×120°.43E, h25^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.62; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-1.01; $M_{r\theta}$-0.14; $M_{\theta\phi}$0.43; $M_{\phi r}$-0.36; Fault plane solution: $M_0$1.01000×10^{16} NP1: ϕ_s311.00000°, δ46.00000°, λ38.00000°. NP2: ϕ_s193.00000°, δ63.00000°, λ129.00000°.*

*IDC **21** 20:51:38.3±0.4, 22°.85N×120°.76E, h0^{km}, mb4.5/34, mbtmp4.6/38, ML4.4/4, MS3.9/46 Error ellipse: s-maj=12.4km s-min=9.8km az=68.0*

*NEIC **21** 20:51:40.4±1.3, 22°.80N±0°.05×120°.64E±0°.06, h14^{km}±4^{km}, mb4.9/162, Mww4.8, ML5.2(TAP), Error ellipse: s-maj=9.3km s-min=5.1km az=134.0*

*TAP **21** 20:51:40.9, 22°.90N×120°.61E, h18^{km}, ML5.3, B*

*BJI **21** 20:51:40.1±0.0, 22°.95N×120°.58E, h6^{km}, mb4.4/63, mB4.6/41, ML4.7/8, Ms4.5/75, Ms7 4.4/70*

*IASPEI **21** 20:51:41.1±0.8, 22°.92N±0°.01×120°.61E±0°.01, h17^{km}±1^{km}, mb4.9/190, MS4.0/58, Error ellipse: s-maj=1.9km s-min=1.5km az=88.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ASIES **21** 20:51:41.9, 22°.92N×120°.62E, h21^{km}, MW4.5*

*NEIC **21** 20:51:43, 22°.98N×120°.45E, h20^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.75; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.81; $M_{r\theta}$-0.53; $M_{\theta\phi}$0.05; $M_{\phi r}$-1.66; Fault plane solution: $M_0$1.91000×10^{16} NP1: ϕ_s339.00000°, δ14.00000°, λ54.00000°. NP2: ϕ_s196.00000°, δ79.00000°, λ98.00000°. Principal axes: T 1.9287, Plg56.0000°, Azm116.0000°; N -0.0326, Plg8.0000°, Azm14.0000°; P -1.8961, Plg33.0000°, Azm279.0000°;*

ISC 21 20:51:41.1±0.4**, 22°.92N**±0°.01×**120°.62E**±0°.01**, h17**^{km}±2^{km}**, h17**^{km}**:pP-P, n767, σ1^{s}43**/916**, mb4.9**/190**, MS4.0**/58**, 110C-60D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLGT	Liugui	0.08	20	⇓*i*P	Pg	20 51 45.3	+0.8
	baz=20						
SLGT				*i* S	Sg	20 51 48.3	+1.5
	baz=20						
SCST	Cishan	0.12	255	⇑*i*P	Pg	20 51 44.9	+0.1
	baz=261						
SCST				S	Sg	20 51 48.6	+1.3
	baz=261						
SGST	Jiashian	0.17	350	⇑*e*P	Pb	20 51 45.3	-0.6
	baz=354						
SGST				*e*S	Sg	20 51 49.2	+0.7
	baz=354						
SSD	Sandimen	0.17	175	⇑*i*P	Pg	20 51 45.8	+0.3
	baz=170						
SSD				*i* S	Sg	20 51 49.1	+0.7
	baz=170						
TWM1	Shoushan	0.20	243	⇑*i*P	Pg	20 51 46.8	+0.8
	baz=244						
TWM1				*e*S	Sg	20 51 52.0	+2.8
	baz=244						
TSMG	Majia	0.21	173	*i* P	Pg	20 51 46.3	+0.2
	baz=171						
TSMG				*i* S	Sg	20 51 49.8	+0.3
	baz=171						
SGLT	Jiouru	0.22	211	⇑*i*P	Pg	20 51 47.5	+1.2
	baz=210						
SGLT				S	Sg	20 51 52.7	+2.9
	baz=210						
TSPT	Pingtung City	0.26	205	P	Pb	20 51 48.2	+0.8
	baz=207						
TSPT				*e*S	Sb	20 51 54.2	+2.6
	baz=207						

SHHT	**Tainan City** baz=296	0.27	293	⇓*i*P	Pn	20 51 48.7	-1.6
SHHT	baz=296			*i* S	Sn	20 51 54.9	-1.2
STYT	**Tauyuan** baz=29	0.28	28	⇓*i*P	Pb	20 51 48.2	+0.4
STYT	baz=29			*e*S	Sb	20 51 53.3	+1.1
CHN1	**Nanshi** baz=345	0.28	343	⇑*i*P	Pb	20 51 48.4	+0.6
CHN1	baz=345			*e*S	Sb	20 51 53.9	+1.6
CHN3	**Shinhua** baz=307	0.28	305	⇓*i*P	Pn	20 51 49.0	-1.5
CHN3	baz=307			*e*S	Sn	20 51 56.1	-0.3
STYH	**Taoyuan** baz=30	0.29	30	⇓*i*P	Pb	20 51 48.5	+0.6
STYH	baz=30			S	Sb	20 51 53.9	+1.3
MASBT	**Mashibuluo** baz=176	0.30	177	⇓*i*P	Pb	20 51 47.9	-0.3
MASBT	baz=176			S	Sb	20 51 52.4	-0.4
SNJT	**Kaohsiung City** baz=240	0.30	238	⇓*i*P	Pb	20 51 48.5	+0.3
SNJT	baz=240			*e*S	Sn	20 51 55.8	-1.2
SNST	**Tainan City** baz=342	0.32	340	*i* P	Pb	20 51 49.0	+0.6
SNST	baz=342			*i* S	Sb	20 51 54.7	+1.2
WTP	**Ta-pu** baz=2.0	0.33	360	⇑*i*P	Pb	20 51 49.1	+0.5
WTP	baz=2.0			S	Sb	20 51 55.2	+1.5
TWK	**Hsinying** baz=344	0.37	341	⇑*i*P	Pb	20 51 49.7	+0.4
TWK	baz=344			S	Sb	20 51 56.2	+1.4
TAI1	**Yung-k'ang** baz=291	0.38	289	⇓P	Pb	20 51 50.0	+0.6
TAI1	baz=291			*e*S	Sn	20 51 56.7	-2.1
TPUB	**Ta-pu**	0.38	2		Pb	20 51 49.7	+0.1
TPUB				Sg	Sb	20 51 56.2	+0.9
TPUB	**Ta-pu**	0.38	2	P	Pb	20 51 49.7	+0.1
TPUB	**Ta-pu** baz=3.0	0.38	2	⇑*i*P	Pb	20 51 49.8	+0.3
TPUB	baz=3.0			S	Sb	20 51 56.3	+1.1
TAI	**Tainan** baz=284	0.39	282	*e*P	Pb	20 51 49.9	+0.2
TAI	baz=284			*e*S	Sb	20 51 56.6	+1.1
WSSB	**Gushan** baz=231	0.43	230	⇓P	Pn	20 51 51.3	-1.2
WSSB	baz=231			*e*S	Sn	20 51 60.0	0.0
TWG	**Pinlang**	0.43	103		Pb	20 51 50.2	-0.2
TWG				Sg	Sn	20 51 58.2	-1.9
TWG	**Pinlang** baz=101	0.43	103	⇓*i*P	Pb	20 51 51.0	+0.6
TWG	baz=101			*e*S	Sn	20 51 58.4	-1.7
SSPT	**Xinbi** baz=185	0.43	186	⇑*i*P	Pb	20 51 50.6	+0.3
SSPT	baz=185			*e*S	Sb	20 51 57.2	+0.7
CHN4	**Tsaushan** baz=358	0.43	357	⇑P	Pb	20 51 50.7	+0.3
CHN4	baz=358			*e*S	Sb	20 51 58.1	+1.4
TWGBT	**Beinan** baz=101	0.44	103	⇓*i*P	Pb	20 51 51.0	+0.5
TWGBT	baz=101			*i* S	Sn	20 51 58.4	-1.9
ECL	**Taimali** baz=133	0.45	135	⇓*i*P	Pb	20 51 50.6	+0.1
ECL	baz=133			*i* S	Sb	20 51 56.7	-0.2
KAU	**Kaohsiung** baz=219	0.45	219	⇓*i*P	Pn	20 51 51.7	-1.1
KAU	baz=219			*e*S	Sn	20 51 58.5	-2.0
ELDTW	**Lidau** baz=53	0.46	54	⇑*i*P	Pb	20 51 51.6	+0.7
ELDTW	baz=53			S	Sb	20 51 58.8	+1.3
SCLT	**Jiali** baz=306	0.47	304	⇓*i*P	Pb	20 51 51.3	+0.4
SCLT	baz=306			*e*S	Sn	20 52 00.4	-0.5
LONT	**Longtian** baz=90	0.47	91	⇓*i*P	Pb	20 51 51.7	+0.6
LONT	baz=90			S	Sn	20 51 59.2	-2.0
TTN	**Taitung** baz=107	0.52	108	⇓*i*P	Pn	20 51 53.1	-0.6
TTN	baz=107			*e*S	Sn	20 52 02.1	-0.1
ICHU	**Yijhu** baz=326	0.54	325	⇓*i*P	Pb	20 51 52.5	+0.3
ICHU	baz=326			*e*S	Sn	20 52 01.3	-1.5
SCZT	**Fangliau** baz=178	0.54	180	*i* P	Pb	20 51 52.1	-0.1
SCZT	baz=178			*e*S	Sn	20 52 01.6	-1.2
CHN8	**Yiju** baz=321	0.57	319	⇓*i*P	Pb	20 51 53.0	+0.3
CHN8	baz=321			*e*S	Sn	20 52 03.0	-0.5
EAST	**Anshuo** baz=156	0.57	158	⇓*i*P	Pb	20 51 52.9	+0.2
EAST	baz=156			*e*S	Sb	20 52 00.9	+0.3
ECS	**Chishang** baz=71	0.58	72	⇑P	Pn	20 51 54.0	-0.7
ECS	baz=71			*e*S	Sn	20 52 03.4	-0.5
WLCH	**Liuqiu** baz=201	0.60	201	⇓P	Pn	20 51 55.5	+0.6
WLCH	baz=201			*e*S	Sn	20 52 06.9	+2.6
CHY	**Chiayi** baz=345	0.61	343	⇑P	Pg	20 51 53.9	+0.7
CHY	baz=345			*e*S	Sn	20 52 03.2	-1.2
TAW	**Tawu** baz=154	0.61	155	⇓*i*P	Pg	20 51 53.7	+0.4
TAW	baz=154			*e*S	Sb	20 52 02.4	+0.6
TWP	**Hsiaoliuchiu** baz=202	0.61	203	⇓*i*P	Pn	20 51 55.6	+0.5
TWP	baz=202			*e*S	Sn	20 52 07.7	+3.1
ALS	**Alishan** baz=17	0.62	16	⇑*i*P	Pb	20 51 54.0	+0.2
ALS	baz=17			*e*S	Sn	20 52 03.8	-1.4
TAWH	**Dawu Township** baz=155	0.63	156	⇓*i*P	Pg	20 51 53.7	+0.2
TAWH	baz=155			*e*S	Sg	20 52 02.3	+0.5
CHN2	**Minshiung** baz=349	0.63	348	⇑*i*P	Pn	20 51 54.6	-0.7
CHN2	baz=349			*e*S	Sn	20 52 04.7	-0.3
EDH	**Donghe** baz=84	0.64	85	⇑*i*P	Pn	20 51 54.7	-0.7
EDH	baz=84			*e*S	Sn	20 52 04.3	-0.8
YUS	**Yu-Shan** baz=29	0.65	28	⇑*i*P	Pb	20 51 54.8	+0.5
YUS	baz=29			*e*S	Sn	20 52 05.3	-0.9
CHN5	**Tsauling** baz=5.0	0.68	5	⇑*i*P	Pg	20 51 54.9	+0.3
CHN5	baz=5.0			*e*S	Sn	20 52 06.0	-0.5
FULB	**Fuli** baz=65	0.69	66	⇑*i*P	Pn	20 51 56.0	-0.1
FULB	baz=65			*e*S	Sn	20 52 07.1	+0.7
WSL	**Shuilin Townsh** baz=330	0.70	329	⇓P	Pg	20 51 55.2	+0.2
WSL	baz=330			*e*S	Sg	20 52 05.4	+1.2
CHKT	**Chengkung** baz=75	0.71	75	⇑P	Pn	20 51 56.3	-0.2
CHKT	baz=75			*e*S	Sn	20 52 08.2	+1.1
SLIU	**Shizi** baz=166	0.72	166	⇓*i*P	Pg	20 51 55.3	+0.1
SLIU	baz=166			*e*S	Sg	20 52 04.9	+0.2
TWF1	**Yuli** baz=55	0.76	55	⇑*i*P	Pn	20 51 56.7	-0.5
TWF1	baz=55			*i* S	Sn	20 52 07.6	-0.7
WGK	**Gukeng** baz=357	0.77	356	⇑P	Pn	20 51 56.8	-0.5
WGK	baz=357			*e*S	Sn	20 52 09.0	+0.5
WDLH	**Douliu** baz=355	0.77	355	⇑P	Pg	20 51 56.7	+0.4
WDLH	baz=355			*e*S	Sn	20 52 08.8	+0.2
EYUL	**Yuli** baz=56	0.78	56	⇑*i*P	Pn	20 51 56.9	-0.4
EYUL	baz=56			*e*S	Sn	20 52 07.9	-0.7
YULB	**Yu-li**	0.79	53		Pg	20 51 56.5	-0.1
YULB				Sg	Sg	20 52 07.5	+0.5
YULB	**Yu-li** baz=52	0.79	53	⇑*i*P	Pn	20 51 56.9	-0.6
YULB	baz=52			S	Sg	20 52 07.9	+1.0
WTK	**Tuku** baz=345	0.80	345	P	Pg	20 51 56.6	-0.1
WTK	baz=345			*e*S	Sn	20 52 08.6	-0.6
WSF	**Szhu** baz=334	0.81	333	⇓P	Pg	20 51 56.8	-0.1
WSF	baz=334			*e*S	Sn	20 52 09.2	-0.1
LDUT	**Ludao** baz=106	0.82	107	⇑*i*P	Pn	20 51 57.4	-0.6
LDUT	baz=106			*e*S	Sn	20 52 10.0	+0.2
EHY	**Hungye** baz=48	0.88	48	⇑P	Pn	20 51 58.5	-0.2
EHY	baz=48			*e*S	Sn	20 52 10.7	-0.4
WJS	**Zhushan** baz=7.0	0.91	6	⇑*e*P	Pg	20 51 58.8	-0.1
WJS	baz=7.0			*e*S	Sn	20 52 12.6	+0.7
HEN	**Hengchun** baz=172	0.91	173	⇑P	Pn	20 51 59.6	+0.4
HEN	baz=172			*e*S	Sn	20 52 13.3	+1.4
SMST	**Manzhou Townsh** baz=167	0.91	167	⇑*e*P	Pn	20 51 59.3	0.0
SMST	baz=167			*e*S	Sn	20 52 13.1	+1.1
SSLB	**Suanglung**	0.92	20		Pg	20 51 59.0	-0.1
SSLB				Sg	Sg	20 52 11.6	+0.3
SSLB	**Suanglung**	0.92	20	P	Pn	20 52 00.3	+0.9
SSLB	**Suanglung** baz=20	0.92	20	⇑P	Pg	20 51 59.0	-0.1
SSLB	baz=20			*e*S	Sn	20 52 13.5	+1.2
HGSD	**Ruisui** baz=52	0.94	52	⇑P	Pg	20 52 00.3	+0.9
HGSD	baz=52			*e*S	Sn	20 52 14.5	+1.9
WDGT	**Dungji** baz=292	0.94	291	⇓P	Pb	20 51 58.2	-0.9
WDGT	baz=292			*e*S	Sb	20 52 10.9	-0.5
WMLT	**Mailiao** baz=338	0.95	338	*e*P	Pn	20 51 59.5	-0.3
WMLT	baz=338			*e*S	Sn	20 52 13.2	+0.2
WNT	**Mingjian** baz=4.0	0.96	4	⇑*e*P	Pn	20 51 59.7	-0.2
WNT	baz=4.0			*e*S	Sn	20 52 14.6	+1.4
VWDT	**VWDT** baz=30	0.96	30	⇑P	Pg	20 51 59.9	0.0
VWDT	baz=30			*e*S	Sn	20 52 14.8	+1.5
TWK1	**Hengchun** baz=169	0.98	170	⇑P	Pg	20 52 00.5	+0.2
TWK1	baz=169			*e*S	Sn	20 52 14.5	+0.8
TWKBT	**Hengchun** baz=169	0.99	169	⇑*e*P	Pg	20 52 00.4	+0.1
TWKBT	baz=169			*e*S	Sn	20 52 14.5	+0.7
WNT1	**Nantou City** baz=4.0	0.99	3	*e*P	Pg	20 52 00.4	0.0
WNT1	baz=4.0			*e*S	Sn	20 52 15.1	+1.2
WTCT	**Ta-ch'eng** baz=343	0.99	342	⇓*e*P	Pb	20 51 59.9	-0.1
WTCT	baz=343			*e*S	Sn	20 52 14.2	+0.2
SMLT	**Sun Moon Lake** baz=16	1.00	15	⇑*e*P	Pg	20 52 00.5	0.0
SMLT	baz=16			*e*S	Sn	20 52 15.9	+1.7
WRL	**Guolierlin Hig** baz=348	1.01	347	⇑*e*P	Pb	20 51 59.9	-0.2
WRL	baz=348			*e*S	Sg	20 52 13.9	0.0
TYC	**Yuchr** baz=13	1.01	13	*e*P	Pg	20 52 00.6	-0.1
TYC	baz=13			*e*S	Sg	20 52 16.1	+2.2
WYL	**Yuanlin Townsh** baz=359	1.04	358	*e*P	Pn	20 52 00.8	-0.2
WYL	baz=359			*e*S	Sg	20 52 16.6	+1.5
TSEB	**Hengchuen, Pin** baz=167	1.04	165	⇑*e*P	Pg	20 52 01.3	-0.1
TSEB	baz=167			*e*S	Sg	20 52 16.4	+1.4
EGFH	**Guangfu** baz=45	1.06	45	⇑P	Pg	20 52 01.4	-0.3
EGFH	baz=45			*e*S	Sg	20 52 16.0	+0.5
WWF	**Wufeng** baz=4.0	1.12	4	*e*P	Pb	20 52 02.4	+0.2
WWF	baz=4.0			*e*S	Sg	20 52 18.8	+1.1
PHUB	**P'eng-hu** baz=303	1.13	302	⇓*e*P	Pn	20 52 00.7	-1.5
PHUB	baz=303			*e*S	Sb	20 52 15.3	-1.4
VCHM	**Qimei** baz=286	1.13	285	⇓*e*P	Pn	20 52 00.7	-1.5
VCHM	baz=286			*e*S	Sb	20 52 15.7	-1.0
WPL	**Puli Township** baz=16	1.14	16	*e*P	Pb	20 52 02.7	+0.3
WPL	baz=16			*e*S	Sg	20 52 18.9	+0.8
DPDB	**Guoxing** baz=14	1.15	14	⇑*e*P	Pg	20 52 03.0	-0.4
DPDB	baz=14			*e*S	Sg	20 52 19.6	+1.2
OWD	**Renai** baz=26	1.16	26	⇑*i*P	Pb	20 52 02.9	+0.1
OWD	baz=26			*e*S	Sg	20 52 19.6	+1.0
TEGC	**Jichi Village** baz=47	1.16	47	*e*P	Pg	20 52 04.0	+0.4
WCHH	**Zhanghua** baz=358	1.16	357	⇑*e*P	Pb	20 52 02.6	-0.2
WCHH	baz=358			*e*S	Sg	20 52 18.7	-0.1
WUSB	**Renai** baz=23	1.17	23	⇑*e*P	Pb	20 52 03.2	+0.2
WUSB	baz=23			*e*S	Sg	20 52 19.3	+0.3
ESL	**Shilin** baz=40	1.17	40	⇑*e*P	Pg	20 52 03.5	-0.3
ESL	baz=40			*e*S	Sg	20 52 20.8	+1.8
WCS	**Beigang Elemen** baz=14	1.17	13	⇑*e*P	Pb	20 52 03.3	+0.3
WCS	baz=14			*e*S	Sg	20 52 19.2	+0.1
PNG	**Penghu** baz=304	1.17	304	⇓*e*P	Pn	20 52 01.4	-1.4
PNG	baz=304			*e*S	Sb	20 52 16.9	-1.0
TCU	**Taichung** baz=3.0	1.23	3	⇑*e*P	Pb	20 52 04.0	0.0
TCU	baz=3.0			*e*S	Sg	20 52 21.2	+0.3
LAY	**Lan-yu** baz=134	1.23	135	*e*P	Pn	20 52 03.0	-0.5
LAY	baz=134			*e*S	Sg	20 52 20.2	-0.7
CHGB	**Renai** baz=24	1.25	24	⇑*e*P	Pb	20 52 04.7	+0.3
CHGB	baz=24			*e*S	Sg	20 52 21.9	+0.2
LYUB	**Lan-yu** baz=135	1.28	135	⇑*e*P	Pn	20 52 02.4	-1.8
LYUB	baz=135			*e*S	Sb	20 52 18.6	-2.3
TEYL	**Yanliau Villag** baz=42	1.31	43	*e*P	Pg	20 52 06.4	-0.1
TEYL	baz=42			*e*S	Sg	20 52 26.4	+2.9
ETM	**Tongmen** baz=37	1.32	37	*e*P	Pb	20 52 06.0	+0.5
ETM	baz=37			*e*S	Sg	20 52 23.4	-0.5
WHF	**Hehuan Shan** baz=26	1.36	26	⇑*e*P	Pb	20 52 06.7	+0.2
WHP	**Taichung City** baz=13	1.39	13	⇑*e*P	Pb	20 52 06.6	-0.1
WHP	baz=13			*e*S	Sg	20 52 25.8	-0.3
HWA	**Hwalien** baz=41	1.39	40	*e*P	Pb	20 52 07.1	+0.3
HWA	baz=41			*e*S	Sg	20 52 27.9	+1.7
TDCB	**Techi** baz=21	1.42	20	⇑*e*P	Pb	20 52 07.1	-0.2
TDCB	baz=21			*e*S	Sb	20 52 26.3	+1.1
WDJ	**Dajia District** baz=1.0	1.43	1	⇑*e*P	Pb	20 52 06.8	-0.6
WDJ	baz=1.0			*e*S	Sg	20 52 26.4	-0.9
TWT	**Tachien** baz=21	1.43	21	*e*P	Pb	20 52 07.2	-0.3
TWT	baz=21			*e*S	Sg	20 52 26.8	-0.5
TWQ1	**Liyutan** baz=6.0	1.43	6	⇑*e*P	Pb	20 52 07.0	-0.4
TWQ1	baz=6.0			*e*S	Sg	20 52 27.1	-0.4
FUSS	**Fushou** baz=23	1.45	23	⇑*e*P	Pb	20 52 07.5	-0.3
FUSS	baz=23			*e*S	Sg	20 52 27.2	-0.8
TWD	**Chiawan** baz=38	1.47	38	⇑*e*P	Pb	20 52 07.8	-0.2
TWD	baz=38			*e*S	Sg	20 52 28.4	-0.2
NSY	**Sanyi** baz=6.0	1.50	5	⇑*e*P	Pb	20 52 08.0	-0.5
NSY	baz=6.0			*e*S	Sg	20 52 29.2	-0.4
ETLH	**Xiulin Townshi** baz=32	1.51	32	⇑*e*P	Pb	20 52 08.5	-0.3
ETLH	baz=32			*e*S	Sg	20 52 30.8	+0.8
NACB	**Ninganchiao**	1.54	35		Pb	20 52 08.7	-0.6
NACB				Sn	Sg	20 52 30.5	-0.4
NACB	**Ninganchiao** baz=36	1.54	35	⇑*e*P	Pb	20 52 08.7	-0.6
NACB	baz=36			*e*S	Sg	20 52 30.7	-0.2
ETL	**Fush Village** baz=37	1.54	37	*e*P	Pb	20 52 09.1	-0.3
ETL	baz=37			*e*S	Sg	20 52 30.3	-0.7
NMLH	**Miaoli** baz=6.0	1.62	6	⇑*e*P	Pn	20 52 09.2	+0.2
NMLH	baz=6.0			*e*S	Sg	20 52 33.6	+0.1
NNSB	**Datong** baz=25	1.66	25	⇑*e*P	Pb	20 52 10.8	-0.6
NNSB	baz=25			*e*S	Sg	20 52 34.0	-0.8
NNS	**Nan Shan** baz=25	1.67	24	⇑*e*P	Pb	20 52 11.0	-0.5
NNS	baz=25			*e*S	Sg	20 52 36.9	+1.9
NSTT	**Nanjuang** baz=12	1.74	12	⇑*e*P	Pn	20 52 11.0	+0.3
NSTT	baz=12			*e*S	Sb	20 52 35.6	+1.2
LIOB	**Emei** baz=12	1.76	12	⇑*e*P	Pn	20 52 11.3	+0.4
LIOB	baz=12			*e*S	Sg	20 52 36.9	-1.1
NFF	**Wufeng Townshi** baz=15	1.77	15	⇑*e*P	Pn	20 52 11.5	+0.4
NFF	baz=15			*e*S	Sb	20 52 36.3	+1.1
NJN	**Zhunan** baz=8.0	1.77	7	*e*P	Pn	20 52 11.7	+0.6
LATG	**Datong** baz=27	1.82	27	⇑*e*P	Pb	20 52 13.3	-0.7
LATG	baz=27			*e*S	Sg	20 52 38.3	-1.4
ENA	**Nanau** baz=35	1.82	34	⇑*e*P	Pb	20 52 12.9	-1.2
EWUT	**Wuta** baz=35	1.86	35	⇑*e*P	Pb	20 52 13.3	-1.4
EWUT	baz=35			*e*S	Sb	20 52 38.1	+0.4
NJD	**Zhudong** baz=13	1.86	13	*e*P	Pn	20 52 13.3	+1.0
NDT	**Datong Townshi** baz=26	1.87	26	*e*P	Pb	20 52 13.8	-1.1
NDT	baz=26			*e*S	Sg	20 52 41.1	-0.3
NSK	**Sanguang** baz=21	1.88	21	⇑*e*P	Pn	20 52 13.7	+1.1
NSK	baz=21			*e*S	Sb	20 52 39.4	+1.0
YHNB	**Yeheng**	1.88	22		Pn	20 52 13.6	+1.0
YHNB	**Yeheng**	1.88	22	P	Pb	20 52 14.1	-1.0
YHNB	**Yeheng** baz=22	1.88	22	⇑*e*P	Pn	20 52 13.7	+1.0
YHNB	baz=22			*e*S	Sg	20 52 43.6	+1.8
HSN1	**Hsinchu** baz=11	1.89	11	*e*P	Pn	20 52 13.5	+0.8
SBCB	**Hsinchu** baz=10.0	1.90	10	*e*P	Pn	20 52 13.4	+0.6
HSN	**Hsinchu** baz=11	1.91	10	*e*P	Pb	20 52 14.1	-1.4
HSN	baz=11			*e*S	Sg	20 52 42.0	-0.5
ENTT	**Nioudou** baz=27	1.93	27	*e*P	Pb	20 52 14.7	-1.1
ENTT	baz=27			*e*S	Sb	20 52 40.5	+1.0
NDS	**Dongshan** baz=30	1.98	30	*e*P	Pb	20 52 15.6	-1.2
NDS	baz=30			*e*S	Sg	20 52 44.1	-1.0
NWLT	**Wulai** baz=24	2.02	23	⇑*e*P	Pn	20 52 15.7	+1.2
NWLT	baz=24			*e*S	Sg	20 52 45.8	-0.5
TWC	**Suao** baz=34	2.03	34	*e*P	Pb	20 52 16.0	-1.6
TWC	baz=34			*e*S	Sb	20 52 42.3	-0.3
TWE	**Neicheng** baz=29	2.04	28	*e*P	Pb	20 52 17.0	-0.8
TWE	baz=29			*e*S	Sb	20 52 44.8	+1.9
FUSB	**Fushanzhiwuyua** baz=26	2.04	26	⇑*e*P	Pb	20 52 16.4	-1.5
FUSB	baz=26			*e*S	Sg	20 52 45.3	-1.5
NCUH	**Zhongli** baz=14	2.11	14	*e*P	Pn	20 52 16.1	+0.4
NCUH	baz=14			*e*S	Sb	20 52 45.9	+1.0

NCU	**National Centr**	**2.11**	**14**	*e*P	**Pb**	**20 52 17.7**	**-1.3**
	baz=15						
ILA	**Ilan**	**2.11**	**29**	*e*P	**Pb**	**20 52 18.2**	**-0.8**
	baz=30						
ILA				*e*S	**Sg**	**20 52 48.0**	**-1.2**
	baz=30						
NHW	**Xinwu Township**	**2.12**	**11**	*e*P	**Pn**	**20 52 16.1**	**+0.2**
	baz=11						
TATO	**Taipei**	**2.20**	**21**		**Pn**	**20 52 17.8**	**+0.8**
TATO	**Taipei**	**2.20**	**21**	*e*P	**Pn**	**20 52 17.7**	**+0.7**
	baz=21						
TATO				*e*S	**Sb**	**20 52 49.6**	**+2.1**
	baz=21						
NHDH	**Xindian Distri**	**2.20**	**22**	*e*P	**Pn**	**20 52 17.8**	**+0.9**
	baz=22						
NHDH				*e*S	**Sg**	**20 52 50.2**	**-1.8**
	baz=22						
NTC	**Toucheng**	**2.23**	**30**	*e*P	**Pb**	**20 52 19.2**	**-1.7**
	baz=30						
NTC				*e*S	**Sb**	**20 52 49.2**	**+0.9**
	baz=30						
TWA	**Mucha**	**2.24**	**23**	*e*P	**Pn**	**20 52 18.6**	**+1.1**
	baz=24						
TWA				*e*S	**Sb**	**20 52 50.0**	**+1.4**
	baz=24						
EGS		**2.27**	**32**	*e*P	**Pb**	**20 52 21.3**	**-0.3**
	baz=32						
EGS				*e*S	**Sb**	**20 52 51.7**	**+2.2**
	baz=32						
TWS1	**Kuangyinshan**	**2.30**	**18**	*e*P	**Pn**	**20 52 19.2**	**+1.0**
	baz=19						
TWS1				*e*S	**Sb**	**20 52 48.9**	**-1.4**
	baz=19						
VWUC	**VWUC**	**2.33**	**333**⇓	*e*P	**Pn**	**20 52 17.4**	**-1.3**
	baz=333						
VWUC				*e*S	**Sb**	**20 52 50.9**	**-0.2**
	baz=333						
TIPB	**Shuangxi**	**2.33**	**28**⇑	*e*P	**Pn**	**20 52 20.3**	**+1.6**
	baz=28						
TIPB				*e*S	**Sb**	**20 52 52.1**	**+0.9**
	baz=28						
YM01	**YM01**	**2.39**	**21**⇑	*e*P	**Pn**	**20 52 20.1**	**+0.6**
	baz=21						
NWF	**Wu-fen Shan**	**2.40**	**26**	*e*P	**Pn**	**20 52 20.9**	**+1.2**
	baz=26						
NWF				*e*S	**Sb**	**20 52 54.9**	**+1.7**
	baz=26						
WFSB	**Wu-fen Shan**	**2.40**	**26**⇑	*e*P	**Pn**	**20 52 20.9**	**+1.3**
	baz=26						
WFSB				*e*S	**Sb**	**20 52 54.9**	**+1.7**
	baz=26						
ANP	**Anpu**	**2.41**	**20**	*e*P	**Pn**	**20 52 20.3**	**+0.4**
	baz=20						
YM08	**YM08**	**2.43**	**21**	*e*P	**Pn**	**20 52 20.9**	**+0.7**
	baz=21						
TWB1	**Santiao Chiao**	**2.43**	**31**	*e*P	**Pb**	**20 52 22.2**	**-2.3**
	baz=31						
TWB1				*e*S	**Sb**	**20 52 54.0**	**-0.2**
	baz=31						
SXI1	**Grass Mountain**	**2.46**	**28**⇑	*e*P	**Pn**	**20 52 21.8**	**+1.2**
	baz=28						
SXI1				*e*S	**Sb**	**20 52 56.7**	**+1.8**
	baz=28						
TNOU	**National Taiwa**	**2.46**	**25**	*e*P	**Pb**	**20 52 22.7**	**-2.3**
	baz=25						
KNM	**Kinmen**	**2.50**	**307**	*e*P	**Pn**	**20 52 21.2**	**+0.1**
	baz=305						
KNM				*e*S	**Sn**	**20 52 52.1**	**+1.0**
	baz=305						
TWY	**Chenhua**	**2.52**	**21**	*e*P	**Pn**	**20 52 22.4**	**+1.1**
	baz=21						
PTMZ	**Houxiangcun**	**2.52**	**327**	*e*P	**Pn**	**20 52 20.4**	**-0.9**
	baz=327						
PTMZ				*e*S	**Sb**	**20 52 57.4**	**+0.7**
	baz=327						
KNMB	**Chin-men Tao**	**2.56**	**307**		**Pn**	**20 52 20.1**	**-1.7**
KNMB	**Chin-men Tao**	**2.56**	**307**	*e*P	**Pn**	**20 52 20.6**	**-1.3**
	baz=307						
JYNG	**Yonagunijimaku**	**2.63**	**54**	P	**Pn**	**20 52 24.7**	**+1.9**
JYNG				*e*S	**Sb**	**20 52 58.3**	**-1.5**
JYNG	**Yonagunijimaku**	**2.63**	**54**	A	A	20 52 24.7	
	comp=E,17nm,1.4s,comp=E,13nm,1.6s						
YOJ	**Yonaguni jima**	**2.68**	**54**	Pn	**Pn**	**20 52 25.4**	**+1.9**
YOJ	**Yonaguni jima**	**2.68**	**54**	P	**Pn**	**20 52 25.8**	**+2.2**
YOJ	**Yonaguni jima**	**2.68**	**54**⇑	*e*P	**Pn**	**20 52 25.2**	**+1.7**
	baz=55						
YOJ				*e*S	**Sb**	**20 52 58.5**	**-2.8**
	baz=55						
YOJ	**Yonaguni jima**	**2.68**	**54**	P	**Pn**	**20 52 25.6**	**+2.1**
YOJ				S	**Sb**	**20 52 58.5**	**-2.8**
YOJ	**Yonaguni jima**	**2.68**	**54**	A	A	20 52 25.6	
	comp=E,7.0nm,1.6s,comp=E,12nm,1.8s						
QZH	**Quanzhou**	**2.74**	**318**⇓	*i*Pn	**Pn**	**20 52 22.8**	**-1.6**
QZH				Sn	**Sn**	**20 52 54.3**	**-2.8**
QZH				smax	smax		
	comp=N,1µm,0.8s						
QZH				smax	smax		
	comp=E,1µm,0.7s						
ZPLA	**Ao Xicun**	**2.82**	**292**⇓	*e*P	**Pn**	**20 52 24.4**	**-1.1**
	baz=291						
ZPLA				*e*S	**Sn**	**20 52 57.8**	**-1.3**
	baz=291						
PCYT	**Pengchaiyu**	**3.01**	**26**	*e*P	**Pn**	**20 52 29.1**	**+1.0**
	baz=26						
DSXP	**Dongshan**	**3.04**	**286**⇓	*e*P	**Pn**	**20 52 27.2**	**-1.2**
	baz=285						
DSXP				*e*S	**Sn**	**20 53 02.8**	**-1.6**
	baz=285						
AXDP	**Jialang**	**3.12**	**310**	*e*P	**Pn**	**20 52 28.6**	**-1.0**
	baz=309						
HATJ	**Hateruma jima**	**3.14**	**68**	P	**Pn**	**20 52 31.2**	**+1.4**
HATJ				S	**Sn**	**20 53 09.7**	**+2.7**
HATJ	**Hateruma jima**	**3.14**	**68**	A	A	20 52 31.2	
	comp=E,10.0nm,1.0s,comp=E,6.0nm,0.8s						
IRIF	**Iriomote-Funau**	**3.19**	**63**	P	**Pn**	**20 52 32.1**	**+1.6**
IRIF				*e*S	**Sn**	**20 53 11.0**	**+2.9**
IRIF	**Iriomote-Funau**	**3.19**	**63**	A	A	20 52 32.1	
	comp=E,8.0nm,1.3s,comp=E,15nm,1.7s						
MATB	**Ma-tsu**	**3.28**	**349**	*e*P	**Pn**	**20 52 30.8**	**-1.0**
	baz=349						
MATB				*e*S	**Sn**	**20 53 09.4**	**-1.0**
	baz=349						
MSUT	**Lienchiang**	**3.30**	**349**	*e*P	**Pn**	**20 52 31.9**	**-0.2**
	baz=349						
MSUT				*e*S	**Sn**	**20 53 09.8**	**-1.2**
	baz=349						
JKRS	**Kuro-shima**	**3.38**	**66**	P	**Pn**	**20 52 34.8**	**+1.6**
JKRS				S	**Sn**	**20 53 15.4**	**+2.5**
JKRS	**Kuro-shima**	**3.38**	**66**	A	A	20 52 34.8	
	comp=E,7.0nm,3.9s,comp=E,8.0nm,2.1s						
MHZQ	**Yeshan**	**3.48**	**336**	*e*P	**Pn**	**20 52 34.2**	**-0.4**
	baz=336						
MHZQ				*e*S	**Sn**	**20 53 14.7**	**-0.8**
	baz=336						
JIJ	**Ishigaki jima**	**3.54**	**65**	P	**Pn**	**20 52 36.5**	**+1.1**
JIJ				S	**Sn**	**20 53 17.8**	**+0.9**
JIJ	**Ishigaki jima**	**3.54**	**65**	A	A	20 52 36.5	
	comp=N,3.0nm,1.0s						
LYJJ	**Jianjiangzhen**	**3.70**	**348**	*e*P	**Pn**	**20 52 36.9**	**-0.7**
	baz=348						
LYJJ				*e*S	**Sn**	**20 53 20.1**	**-0.8**
	baz=348						
XPSS	**Dashiqiu**	**4.02**	**355**	*e*P	**Pn**	**20 52 41.2**	**-0.7**
	baz=355						
XPSS				*e*S	**Sn**	**20 53 26.5**	**-2.1**
	baz=355						
JTJ	**Tarama**	**4.12**	**65**	P	**Pn**	**20 52 44.7**	**+1.4**
JTJ				S	**Sn**	**20 53 32.4**	**+1.3**
JTJ	**Tarama**	**4.12**	**65**	A	A	20 52 44.7	
	comp=E,4.0nm,2.9s,comp=E,4.0nm,1.5s						
VDOS	**Pratas Island**	**4.23**	**239**	*e*P	**Pn**	**20 52 44.9**	**0.0**
	baz=239						
VDOS				*e*S	**Sn**	**20 53 30.5**	**-3.4**
	baz=239						
JIRB	**Irabujima**	**4.58**	**65**	A	A	20 52 51.7	
	comp=E,3.0nm,4.4s,comp=E,4.0nm,8.4s						
JMJ	**Miyako jima 2**	**4.68**	**65**	P	**Pn**	**20 52 52.9**	**+1.8**
JMJ	**Miyako jima 2**	**4.68**	**65**	*e*P	**Pn**	**20 52 52.5**	**+1.4**
	baz=66						
JMJ				*e*S	**Sn**	**20 53 47.3**	**+2.3**
	baz=66						
JMJ2	**Miyako jima3**	**4.68**	**66**	A	A	20 52 53.0	
	comp=E,4.0nm,3.8s						
JIKM	**Ikemajima**	**4.69**	**64**	A	A	20 52 53.1	
	comp=N,5.0nm,4.6s						
SGCP	**Gonzaga**	**4.84**	**164**⇓	*e*P	**Pn**	**20 52 52.2**	**-1.1**
SAMP	**Sagada Mountai**	**5.81**	**177**⇓	*e*P	**Pn**	**20 53 07.5**	**+0.9**
HKPS	**Hong Kong Po S**	**6.02**	**265**	Pn	**Pn**	**20 53 08.9**	**-0.5**
MCO	**Taipa Grande**	**6.57**	**264**	P	**Pn**	**20 53 16.0**	**-1.1**
GZH	**Guangzhou**	**6.70**	**273**	Pn	**Pn**	**20 53 15.3**	**-3.5**
GZH				Sn	**Sn**	**20 54 31.3**	**-3.5**
GZH				smax	smax		
	comp=N,800nm,1.7s						
GZH				smax	smax		
	comp=E,590nm,1.1s						
SMPP	**San Manuel, Pa**	**6.73**	**179**⇓	*e*P	**Pn**	**20 53 20.5**	**+1.2**
SMPP				*e*S	**Pb**	**20 53 41.5**	**+3.7**
BALP	**Baler**	**7.19**	**173**⇓	*e*P	**Pn**	**20 53 27.0**	**+1.4**
JOW	**Kunigami**	**7.97**	**59**	Pn	**Pn**	**20 53 35.6**	**-0.6**
	23nm,0.3s,baz=168,slow=10,SNR=58						
JOW				Sn	**Sn**	**20 55 03.8**	**-2.4**
	baz=314,slow=27						
	47nm,0.4s						
JOW	**Kunigami**	**7.97**	**59**	Pn	**Pn**	**20 53 35.3**	**-1.0**
JOW	**Kunigami**	**7.97**	**59**	P	**Pn**	**20 53 35.5**	**-0.8**
	70nm,1.3s						
MACP	**Maragondon, Ca**	**8.61**	**179**⇓	*e*P	Pn	20 53 54.5	+9.5
CNSH	**ChangSha**	**8.70**	**309** ⇑	P	**Pn**	**20 53 43.4**	**-2.8**
CNSH				S	**Sn**	**20 55 16.1**	**-7.8**
CNSH				smax	smax		
	comp=N,430nm,0.8s						
CNSH				smax	smax		
	comp=E,540nm,1.0s						
LQP	**Lukban**	**8.80**	**174**⇑	*e*P	**Pn**	**20 53 48.3**	**+0.5**
LUBP	**Lubang**	**9.14**	**182**⇓	*e*P	**Pn**	**20 53 54.9**	**+2.5**
NJ2	**Nanjing**	**9.23**	**351**	*e*P	**Pn**	**20 53 52.8**	**-0.8**
NJ2				pP		20 53 56.9	
NJ2				pmax	pmax		
	comp=E,13nm,0.5s						
NJ2				smax	smax		
	comp=E,400nm,1.0s						
NJ2				smax	smax		
	comp=E,360nm,1.0s						
NJ2				LR	LR		
	comp=E,2µm,8.5s						
NJ2				LR	LR		
	comp=E,730nm,5.7s						
NJ2				LR	LR		
	comp=E,1µm,7.6s						
WHN	**Wuhan**	**9.44**	**325** ⇓	P	**Pn**	**20 53 55.8**	**-0.5**
WHN				sP		20 54 00.8	
WHN				S	**Sn**	**20 55 42.8**	**+0.7**
WHN				pmax	pmax		
	comp=E,68nm,0.6s						
WHN				LR	LR		
	comp=E,4µm,12.1s						
WHN				LR	LR		
	comp=E,3µm,14.1s						
WHN				LR	LR		
	comp=E,5µm,11.7s						
GULI	**GuiLin**	**9.66**	**286**	P	**Pn**	**20 54 02.5**	**+3.1**
GULI				S	Sn	20 55 58.5	+11
GULI				pmax	pmax		
	comp=E,10.0nm,0.8s						
GULI				LR	LR		
	comp=E,2µm,11.4s						
GULI				LR	LR		
	comp=E,2µm,13.0s						
QIZ	**Qiongzhong**	**10.78**	**251**	Pn	**Pn**	**20 54 15.1**	**+0.3**
QIZ	**Qiongzhong**	**10.78**	**251**⇑	*i*P	**Pn**	**20 54 15.3**	**+0.5**
QIZ				S	**Sn**	**20 56 16.3**	**+1.1**
QIZ				pmax	pmax		
	comp=E,25nm,0.8s						
QIZ				LR	LR		
	comp=E,2µm,16.2s						
QIZ				LR	LR		
	comp=E,2µm,13.5s						
QIZ				LR	LR		
	comp=E,3µm,14.9s						
QIZ	**Qiongzhong**	**10.78**	**251**	P	**Pn**	**20 54 15.5**	**+0.7**
	comp=E,75nm,0.9s						
ENH	**Enshi**	**12.36**	**309**	Pn	**Pn**	**20 54 38.1**	**+1.7**
GYA	**Guiyang**	**13.16**	**288** ⇑	P	**Pn**	**20 54 47.5**	**0.0**
GYA				pP	P	20 54 50.5	-7.1
GYA				S	**Sn**	**20 57 14.3**	**+0.6**
GYA				pmax	pmax		
	comp=E,30nm,0.6s						
GYA				LR	LR		
	comp=E,810nm,8.4s						
GYA				LR	LR		
	comp=E,2µm,12.4s						
GYA				LR	LR		
	comp=E,3µm,12.5s						
TIA	**Tai'an**	**13.59**	**348**	P	P	20 55 07.1	+5.0
TIA				S	**Sn**	**20 57 32.0**	**+8.1**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
TIA				pmax	pmax		
	comp=Z,14nm,2.2s						
TIA				LR	LR		
	comp=N,590nm,6.7s						
TIA				LR	LR		
	comp=E,670nm,8.4s						
TIA				LR	LR		
	comp=Z,1µm,10.3s						
JNU	**Nakatsue**	**13.61**	**39**	Pn	**Pn**	**20 54 54.2**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=219,slow=6.5,SNR=1.8						
	comp=Z,4.3nm,0.6s						
LYN	**LuoYang**	**13.61**	**330**	*e*P	**Pn**	**20 54 53.5**	**0.0**
LYN				PP	**P**	**20 55 05.6**	**+3.3**
LYN				S	**Sn**	**20 57 28.3**	**+4.0**
LYN				pmax	pmax		
	comp=Z,170nm,3.7s						
LYN				LR	LR		
	comp=Z,1µm,9.8s						
LYN				LR	LR		
	comp=Z,1µm,12.0s						
NAWB	**Namwon**	**13.79**	**24**	Pn	**Pn**	**20 54 59.3**	**+3.4**
JTU	**Tsushima**	**13.89**	**32**	Pn	**Pn**	**20 54 59.0**	**+1.8**
TJN	**Taejon**	**14.63**	**22**⇓	*e*P	**Pn**	**20 55 10.2**	**+2.8**
XAN	**Xi'an**	**15.10**	**320**	P	**Pn**	**20 55 14.1**	**+0.2**
XAN				pP	P	20 55 17.6	-1.4
XAN				sP	pP	20 55 20.0	-3.8
XAN				PP	**sP**	**20 55 26.3**	**+0.3**
XAN				S	**Sn**	**20 58 02.4**	**+1.6**
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				LR	LR		
	comp=Z,2µm,10.5s						
XAN				LR	LR		
	comp=Z,1µm,11.0s						
XAN				LR	LR		
	comp=Z,2µm,12.5s						
KSCHJ	**Chungju**	**15.29**	**23**		**P**	**20 55 18.6**	**-2.5**
HNS	**HongShan**	**15.31**	**342** ⇓	P	**P**	**20 55 23.8**	**+2.7**
HNS				*e*S	**S**	**20 58 17.3**	**-4.7**
HNS				pmax	pmax		
	comp=Z,36nm,1.0s						
HNS				LR	LR		
	comp=N,1µm,11.1s						
HNS				LR	LR		
	comp=E,880nm,12.2s						
HNS				LR	LR		
	comp=Z,1µm,12.6s						
KSAR	**Wonju Array Be**	**15.77**	**22**	P	**Pn**	**20 55 23.4**	**+0.8**
KSRS	**Korea Array**	**15.80**	**22**	Pn	**Pn**	**20 55 23.8**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=197,slow=12,SNR=31						
KSRS				LR	LR	21 02 12.0	
	comp=Z,528nm,20.3s,baz=200,slow=40						
	comp=Z,4.2nm,0.6s						
KS19	**Wonju Array Si**	**15.82**	**22**		**Pn**	**20 55 23.2**	**+0.1**
DL2	**Dalian**	**15.96**	**3**	P	**P**	**20 55 30.3**	**+1.9**
DL2				pmax	pmax		
	comp=Z,24nm,1.2s						
DL2				pmax	pmax		
	comp=Z,170nm,3.8s						
DL2				LR	LR		
	comp=Z,460nm,16.2s						
DL2				LR	LR		
	comp=Z,1µm,13.2s						
DL2				LR	LR		
	comp=Z,810nm,13.1s						
UBPT	**Khong Chiam**	**16.20**	**245**	P	**Pn**	**20 55 28.8**	**+0.7**
JHS	**Saijyo**	**16.25**	**39**	P	**P**	**20 55 31.6**	**-0.1**
DAV	**Davao City (W)**	**16.46**	**162**	LR	LR	21 02 42.4	
	comp=Z,591nm,18.5s,baz=342,slow=41						
KMI	**Kunming**	**16.48**	**281** ⇑	P	**P**	**20 55 37.3**	**+2.8**
KMI				pP	pP	20 55 40.3	+1.0
KMI				S	**Sn**	**20 58 36.0**	**+1.3**
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				LR	LR		
	comp=Z,290nm,13.2s						
KMI				LR	LR		
	comp=Z,1µm,13.9s						
KMI				LR	LR		
	comp=Z,1µm,13.7s						
SEHB	**SEOHWA**	**16.64**	**21**	P	**P**	**20 55 35.6**	**-0.5**
CD2	**Chengdu**	**17.00**	**302**	P	**P**	**20 55 39.3**	**-0.8**
CD2				S	**S**	**20 58 53.5**	**-3.3**
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
CD2				LR	LR		
	comp=Z,1µm,13.1s						
CD2				LR	LR		
	comp=Z,2µm,13.9s						
BJT	**Baijiatuau**	**17.46**	**349**		**P**	**20 55 45.0**	**0.0**
BJI	**Beijing**	**17.48**	**349**	P	**P**	**20 55 45.3**	**+0.1**
BJI				pP	**pP**	**20 55 48.4**	**-1.8**
BJI				sP	**sP**	**20 55 51.5**	**-0.9**
BJI				PP	**PnPn**	**20 55 58.3**	**+3.7**
BJI				S	**Sn**	**20 59 00.1**	**+1.7**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,110nm,5.1s						
BJI				LR	LR		
	comp=Z,580nm,14.3s						
BJI				LR	LR		
	comp=Z,280nm,13.7s						
BJI				LR	LR		
	comp=Z,730nm,15.0s						
PZH	**PanZhiHua**	**17.52**	**286**	P	**P**	**20 55 47.0**	**+1.1**
PZH				S	**Sn**	**20 59 02.3**	**+2.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,120nm,4.4s						
PZH				LR	LR		
	comp=Z,980nm,16.5s						
PZH				LR	LR		
	comp=Z,2µm,14.5s						
PZH				LR	LR		
	comp=Z,3µm,14.3s						
MYLDM	**Lahad Datu**	**17.75**	**187**		**Pn**	**20 55 45.3**	**-2.3**
INU	**Inuyama**	**18.91**	**45**	P	**Pn**	**20 56 01.6**	**-0.1**
INU				IAmb	IAmb	20 56 08.8	
	comp=Z,51nm,0.9s						
INU	**Inuyama**	**18.91**	**45**	P	**Pn**	**20 56 03.2**	**+1.5**
	comp=Z,65nm,0.9s						
SNY	**Shenyang**	**19.02**	**7** ⇑	P	**Pn**	**20 56 03.5**	**+0.6**
SNY				pmax	pmax		
	comp=Z,30nm,0.7s						
SNY				pmax	pmax		
	comp=Z,130nm,3.5s						
SNY				LR	LR		
	comp=Z,820nm,11.6s						
SNY				LR	LR		
	comp=Z,930nm,11.6s						
SNY				LR	LR		
	comp=Z,1µm,12.2s						
JGF	**Kuroka**	**19.28**	**45**	P	**P**	**20 56 04.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**19.44**	**339**	*e*P	Pn	20 56 15.5	+7.3
HHC				S	**S**	**20 59 49.4**	**+3.2**
HHC				sS	pS	21 00 00.5	-1.2
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
HHC				LR	LR		
	comp=N,2µm,11.1s						
HHC				LR	LR		
	comp=E,650nm,11.1s						
HHC				LR	LR		
	comp=Z,2µm,12.7s						
LZH	**Lanzhou**	**19.59**	**316** ⇑	P	**Pn**	**20 56 13.1**	**+3.0**
LZH				pP	sP	20 56 16.8	+1.1
LZH				sP	pP	20 56 19.0	+5.5
LZH				S	**Sn**	**20 59 49.6**	**-0.2**
LZH				SS	**SnSn**	**21 00 15.5**	**+11**
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,780nm,13.6s						
LZH				LR	LR		
	comp=Z,870nm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
JHJ	**Hachijo jima 2**	**19.71**	**55**	LR	LR	21 04 07.2	
	comp=Z,130nm,18.2s,baz=254,slow=38						
BTO	**Baotou**	**19.78**	**336**	*e*P	Pn	20 56 20.0	+7.9
JCJ	**Chichijima**	**19.98**	**74**	P	**P**	**20 56 12.3**	**-0.6**
	comp=Z,3.2nm,0.3s,baz=285,slow=15,SNR=2.3						
JCJ				LR	LR	21 03 38.9	
	comp=Z,193nm,19.1s,baz=313,slow=36						
	comp=Z,49nm,0.7s						
JCJ	**Chichijima**	**19.98**	**74**	P	**P**	**20 56 12.5**	**-0.4**
JCJ				IAmb	IAmb	20 56 18.9	
	comp=Z,126nm,1.1s						
MAJO	**Matsushiro**	**20.39**	**44**	P	**P**	**20 56 17.0**	**-0.2**
MAJO				IAmb	IAmb	20 56 21.3	
	comp=Z,30nm,0.8s						
MAJO	**Matsushiro**	**20.39**	**44***c*	*i*P	**P**	**20 56 17.1**	**-0.2**
MAJO	**Matsushiro**	**20.39**	**44**	P	Pn	20 56 19.8	+0.4
	comp=Z,41nm,0.9s						
MJB9	**Matsu-Tunnel**	**20.39**	**44**	P	**P**	**20 56 17.3**	**0.0**
MJB9				IAmb	IAmb	20 56 21.2	
	comp=Z,30nm,0.8s						
MJAR	**Matsushiro Arr**	**20.39**	**44**	P	**P**	**20 56 17.9**	**+0.7**
	comp=Z,28nm,0.8s,baz=229,slow=8.1,SNR=54						
MJAR				LR	LR	21 05 07.6	
	comp=Z,113nm,21.4s,baz=224,slow=40						
	comp=Z,28nm,0.8s						
MJAR	**Matsushiro Arr**	**20.39**	**44**	P	**P**	**20 56 16.9**	**-0.4**
MJAR				IAmb	IAmb	20 56 21.3	
	comp=Z,32nm,0.8s						
CHTO	**Chiang Mai**	**20.65**	**263**		**P**	**20 56 19.9**	**-0.3**
CHTO	**Chiang Mai**	**20.65**	**263**	P	Pn	20 56 23.1	+0.5
	comp=Z,12nm,1.1s						
CM31	**Chiang Mai Arr**	**20.75**	**262**	P	**P**	**20 56 20.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.75**	**262**	P	Pn	20 56 23.0	-0.7
	comp=Z,5.2nm,0.8s,baz=66,slow=9.2,SNR=25						
CMAR				PcP	**PcP**	**21 00 31.9**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=38,slow=0.5,SNR=6.5						
CMAR				LR	LR	21 05 25.2	
	comp=Z,617nm,19.9s,baz=85,slow=40						
	comp=Z,5.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.75**	**262**	P	**P**	**20 56 20.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**20.75**	**262**	*i* P	Pn	20 56 23.0	-0.7
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CN2	**Changchun**	**21.21**	**10**	*e*P	**P**	**20 56 26.1**	**+0.1**
CN2				*e*S	**S**	**21 00 16.6**	**-4.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,5.5s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
XLT	**XiLinHaoTe**	**21.26**	**351**	*e*P	**P**	**20 56 27.8**	**+1.1**
XLT				pP	pP	20 56 31.3	-0.3
XLT				sP	sP	20 56 34.0	+0.2
XLT				S	**S**	**21 00 25.6**	**+3.2**
XLT				PcP	**PcP**	**21 00 31.5**	**+0.3**
XLT				sS	pS	21 00 33.3	+1.5
XLT				pmax	pmax		
	comp=Z,21nm,1.2s						
XLT				pmax	pmax		
	comp=Z,160nm,3.7s						
XLT				LR	LR		
	comp=Z,500nm,20.6s						
XLT				LR	LR		
	comp=Z,570nm,15.6s						
JSD	**Sado**	**21.35**	**41**	P	**P**	**20 56 26.4**	**-1.2**
TOLI2	**Tolitoli**	**21.68**	**180**	P	**P**	**20 56 28.7**	**-2.4**
TOLI2				IAmb	IAmb	20 56 47.3	
	comp=Z,44nm,1.2s						
TOLI2	**Tolitoli**	**21.68**	**180**	P	**P**	**20 56 30.7**	**-0.5**
	comp=Z,22nm,0.8s						
GTOI	**Gorontalo**	**22.27**	**174**	P	**P**	**20 56 36.8**	**-0.7**
	comp=Z,309nmcomp=Z,42nm,0.8s						
MRSI	**Marisa**	**22.34**	**177**	P	**P**	**20 56 41.6**	**+3.3**
	comp=Z,898nmcomp=Z,107nm,0.6s						

KMSI	Cibinong	22.45	171	P	P	20 56 39.2	-0.3
	comp=Z,89nm,0.8s						
MPSI	Mapaga	22.45	182	P	P	20 56 39.8	+0.3
	comp=Z,14nm,1.2s						
JMM	Marumori	22.84	45	P	P	20 56 40.6	-2.9
JMM				IAmb	IAmb	20 56 41.9	
	comp=Z,33nm,0.7s						
MDJ	Mudanjiang	22.87	17	P	P	20 56 44.5	+0.8
MDJ				pmax	pmax		
	comp=Z,27nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.6s						
MDJ				LR	LR		
	comp=Z,720nm,13.5s						
MDJ				LR	LR		
	comp=Z,930nm,13.5s						
MDJ				LR	LR		
	comp=Z,1µm,14.2s						
TNTI	Ternate	22.97	162	P	P	20 56 41.7	-3.2
TNTI				IAmb	IAmb	20 56 45.7	
	comp=Z,58nm,1.1s						
TNTI	Ternate	22.97	162	P	P	20 56 43.5	-1.5
	comp=Z,1µmcomp=Z,35nm,0.8s						
TNTI	Ternate	22.97	162	P	P	20 56 44.6	-0.4
	comp=Z,44nm,0.5s						
USRK	Ussuriysk Ar.	23.20	21	P	P	20 56 47.3	+0.2
	comp=Z,4.3nm,0.7s,baz=222,slow=9.9,SNR=6.5						
	comp=Z,4.3nm,0.7s						
USRK	Ussuriysk Ar.	23.20	21	P	P	20 56 47.6	+0.4
BNX	BinXian	23.43	12	⇓P	P	20 56 55.9	+6.5
BNX				pmax	pmax		
	comp=Z,22nm,1.3s						
BNX				pmax	pmax		
	comp=Z,86nm,6.7s						
APSI	Ampana	23.70	177	P	P	20 56 52.9	+0.6
	comp=Z,651nmcomp=Z,61nm,1.2s						
LUWI	Luwuk	23.91	175	P	P	20 56 52.7	-1.6
LUWI	Luwuk	23.91	175	P	P	20 56 53.6	-0.6
	comp=Z,7µmcomp=Z,108nm,0.8s						
GTA	Gaotai	24.14	318	⇑P	P	20 56 57.3	+0.8
GTA				pP	sP	20 57 03.3	-0.5
GTA				sP	pP	20 57 06.5	+4.8
GTA				S	S	21 01 12.3	-1.5
GTA				sS	sS	21 01 22.3	-0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,66nm,4.7s						
GTA				LR	LR		
	comp=Z,390nm,13.8s						
GTA				LR	LR		
	comp=Z,520nm,14.9s						
GTA				LR	LR		
	comp=Z,670nm,16.0s						
BKB	Balikpapan	24.30	189	P	P	20 56 56.7	-1.2
BKB	Balikpapan	24.30	189	P	P	20 56 59.1	+1.2
	comp=Z,157nm,0.9s						
LBMI	Labuha	24.35	163	P	P	20 56 57.9	-0.5
	comp=Z,978nmcomp=Z,102nm,1.0s						
MTKI	Muara Teweh, K	24.36	194	P	P	20 56 58.7	+0.2
	comp=Z,2µmcomp=Z,30nm,0.9s						
STKI	Sintang	24.39	203	P	P	20 56 58.6	-0.2
	comp=Z,2µmcomp=Z,15nm,0.5s						
JTM	Tenmabayashi	24.78	39	P	P	20 56 58.6	-3.5
JTM				IAmb	IAmb	20 57 11.3	
	comp=Z,74nm,1.6s						
GUMO	Guam	24.80	108	P	P	20 57 00.8	-1.6
	comp=Z,144nm,0.7s,baz=174,slow=15,SNR=12						
GUMO				LR	LR	21 05 39.3	
	comp=Z,269nm,19.0s,baz=298,slow=34						
GUMO	Guam	24.80	108	P	P	20 57 00.2	-2.2
GUMO	Guam	24.80	108	P	P	20 57 03.8	+1.3
	comp=Z,268nm,0.8s						
SANI	Sanana	25.36	167	P	P	20 57 04.3	-3.2
	comp=Z,50nm,0.9s						
SANI	Sanana	25.36	167	P	P	20 57 06.8	-0.7
	comp=Z,50nm,0.9s						
SWI	Sorong	25.81	155	P	P	20 57 10.5	-1.1
	comp=Z,45nm,0.9s						
SIJI	Sorong	25.82	155	P	P	20 57 10.3	-1.4
	comp=Z,21nm,0.4s,baz=337,slow=16,SNR=17						
	comp=Z,21nm,0.4s						
GOMU	GeErMu	25.96	306	P	P	20 57 14.5	+1.2
GOMU				pP	pP	20 57 19.4	+0.9
GOMU				sP	sP	20 57 21.6	+0.9
GOMU				S	S	21 01 42.5	-0.9
GOMU				sS	pS	21 01 50.1	+1.0
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,82nm,4.9s						
GOMU				LR	LR		
	comp=Z,270nm,11.6s						
GOMU				LR	LR		
	comp=Z,880nm,13.6s						
GOMU				LR	LR		
	comp=Z,960nm,14.4s						
KULM	Kulim	26.05	231	P	P	20 57 12.2	-1.6
KULM				IAmb	IAmb	20 57 33.5	
	comp=Z,26nm,1.4s						
HIA	Hailar	26.31	359	P	P	20 57 13.6	-2.3
JEW	Eniwo	26.35	36	P	P	20 57 16.3	0.0
IPM	Ipoh	26.36	229	P	P	20 57 15.3	-1.3
IPM				IAmb	IAmb	20 57 25.6	
	comp=Z,70nm,1.8s						
SPSI	Sidrap Palu	26.73	182	P	P	20 57 23.7	+3.8
	comp=Z,23nm,1.2s						
ERM	Erimo	26.78	39	P	P	20 57 19.6	-0.6
ERM				IAmb	IAmb	20 57 36.9	
	comp=Z,15nm,0.8s						
ERM	Erimo	26.78	39	⇑*e*P	P	20 57 19.7	-0.5
ERM	Erimo	26.78	39	P	P	20 57 23.1	+3.0
	comp=Z,27nm,1.0s						
BBKI	Banjar Baru	26.82	193	P	P	20 57 22.3	+1.6
	comp=Z,28nm,1.0s						
ULN	Ulaanbaatar	27.16	340	P	P	20 57 24.0	+0.3
ULN	Ulaanbaatar	27.16	340	⇓*e*P	P	20 57 24.3	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LSA	Lhasa	27.22	291	P	P	20 57 24.9	+0.1
LSA				IAmb	IAmb	20 57 30.6	
	comp=Z,20nm,0.7s						
LSA	Lhasa	27.22	291	P	P	20 57 26.3	+1.5
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	Songino Array	27.34	339	P	P	20 57 25.8	+0.4
	comp=Z,3.0nm,0.7s,baz=152,slow=10,SNR=16						
SONM				PcP	PcP	21 00 45.5	+1.1
	comp=Z,0.3nm,0.3s,baz=176,slow=2.8,SNR=5.3						
SONM				LR	LR	21 09 37.2	
	comp=Z,369nm,20.7s,baz=149,slow=39						
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	27.34	339	P	P	20 57 25.1	-0.3
AAI	Ambon	27.46	163	P	P	20 57 25.0	-1.5
	comp=Z,42nm,0.8s						
KLR	Kul'dur	27.70	16	P	P	20 57 29.0	+0.6
	comp=Z,2.0nm,0.6s,baz=236,slow=9.4,SNR=6.7						
KLR				LR	LR	21 09 26.1	
	comp=Z,463nm,18.9s,baz=200,slow=38						
	comp=Z,2.0nm,0.6s						
KLR	Kul'dur	27.70	16	*de*P	P	20 57 29.5	+1.1
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAJ	Asahikawa	27.82	35	P	P	20 57 29.3	-0.2
	comp=Z,6.1nm,0.6s,baz=203,slow=8.6,SNR=11						
ASAJ				LR	LR	21 09 12.8	
	comp=Z,663nm,19.2s,baz=234,slow=38						
	comp=Z,6.1nm,0.6s						
JKA	Kamikawa-asahi	27.82	35	P	P	20 57 28.4	-1.1
JKA				IAmb	IAmb	20 57 45.1	
	comp=Z,12nm,0.8s						
FAKI	Fak Fak	28.07	155	P	P	20 57 29.2	-2.8
FAKI				IAmb	IAmb	20 57 33.4	
	comp=Z,25nm,0.6s						
FAKI	Fak Fak	28.07	155	P	P	20 57 30.8	-1.2
	comp=Z,41nm,0.8s						
PSI	Prapat	29.01	230	P	P	20 57 41.4	+0.8
	comp=Z,3.6nm,0.5s,baz=28,slow=7.8,SNR=4.2						
PSI				LR	LR	21 09 40.0	
	comp=Z,339nm,19.0s,baz=63,slow=37						
	comp=Z,3.6nm,0.5s						
MNSI	Mandailing Nat	30.02	226	P	P	20 57 50.1	+0.7
	comp=Z,18nm,0.8s						
GSI	Gunungsitoli	31.02	229	P	P	20 57 57.2	-1.0
GSI				IAmb	IAmb	20 57 58.3	
	comp=Z,20nm,1.1s						
ZEA	Zeya	31.18	8	*e*P	P	20 58 05.5	+6.3
ZEA				*e*		21 08 33.1	
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,100nm,12.0s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,14.0s						
MMRI	Maumere	31.40	177	P	P	20 57 59.8	-1.7
MMRI	Maumere	31.40	177	P	P	20 58 00.9	-0.5
	comp=Z,34nm,1.1s						
EDFI	Ende, Flores	31.49	178	P	P	20 58 01.0	-1.4
	comp=Z,27nm,0.7s						
IRK	Irkutsk	31.86	341	*e*P	P	20 58 07.3	+2.1
IRK				pmax	pmax		
	comp=Z,27nm,3.1s						
PWJI	Pagerwojo	31.93	197	P	P	20 58 13.4	+7.2
LWLI	Liwa	32.13	212	P	P	20 58 09.3	+1.2
	comp=Z,52nm,0.8s						
MOY	Mondy	32.46	337	*e*P	P	20 58 17.7	+7.1
SOEI	Soe	32.66	173	P	P	20 58 09.8	-2.9
SOEI				IAmb	IAmb	20 58 23.4	
	comp=Z,17nm,0.8s						
SOEI	Soe	32.66	173	P	P	20 58 10.4	-2.3
	comp=Z,26nm,0.8s						
SOEI	Soe	32.66	173	P	P	20 58 12.3	-0.4
	comp=Z,27nm,0.8s						
KNGR	Kungurtug, Tuv	32.99	333	⇓*e*P	P	20 58 18.0	+2.7
BATI	Baumata	33.05	174	P	P	20 58 13.3	-2.7
	comp=Z,21nm,0.8s						
WMQ	Urumqi	34.17	316	*e*P	P	20 58 28.6	+3.0
WMQ				LR	LR		
	comp=Z,470nm,13.5s						
WMQ				LR	LR		
	comp=Z,430nm,11.7s						
WMQ				LR	LR		
	comp=Z,240nm,14.5s						
MTN	Manton Dam	37.00	163	P	P	20 58 46.9	-3.1
MTN				IAmb	IAmb	20 58 47.6	
	comp=Z,23nm,0.6s						
MTN	Manton Dam	37.00	163	P	P	20 58 48.0	-2.0
	comp=Z,39nm,0.7s						
MK31	Makanchi Array	38.90	317	P	P	20 59 06.6	+0.8
MK31	Makanchi Array	38.90	317	*c i*P	P	20 59 06.7	+0.8
MKAR	Makanchi Array	38.90	317	P	P	20 59 06.8	+0.9
	comp=Z,3.9nm,0.7s,baz=115,slow=9.8,SNR=42						
MKAR				PcP	PcP	21 01 16.7	+0.2
	comp=Z,1.9nm,0.8s,baz=122,slow=2.2,SNR=4.1						
	comp=Z,3.9nm,0.7s						
MKAR	Makanchi Array	38.90	317	P	P	20 59 06.2	+0.4
MAKZ	Makanchi	39.10	317	P	P	20 59 07.6	+0.1
KNRA	Kununurra	39.17	168	P	P	20 59 05.4	-2.9
KNRA				IAmb	IAmb	20 59 07.3	
	comp=Z,55nm,1.2s						
YAK	Yakutsk	39.58	7	LR	LR	21 17 29.3	
	comp=Z,381nm,18.1s,baz=249,slow=39						
YAK	Yakutsk	39.58	7	P	P	20 59 10.1	-1.2
YAK	Yakutsk	39.58	7	*d i*P	P	20 59 10.5	-0.8
YAK				pmax	pmax		
	comp=Z,16nm,1.7s						
TARG	Taragay, Kyrgy	40.27	308	P	P	20 59 17.6	-0.2
KDJ	Kajisay	40.82	309	P	P	20 59 22.3	+0.3
ZAA0	Zalesovo Array	41.03	328	P	P	20 59 23.5	+0.1
ZALV	Zalesovo Beam	41.03	328	P	P	20 59 23.8	+0.4
	comp=Z,2.3nm,0.4s,baz=108,slow=8.3,SNR=9.7						
ZALV				PcP	PcP	21 01 22.4	-0.7
	comp=Z,1.1nm,0.6s,baz=111,slow=3.2,SNR=1.8						
	comp=Z,2.3nm,0.4s						
ZALV	Zalesovo Beam	41.03	328	P	P	20 59 23.1	-0.4
KSH	Kashi	41.17	304	P	P	20 59 27.8	+2.9
KSH				sP	sP	20 59 35.6	+3.3
KSH				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KSH				LR	LR		
	comp=Z,310nm,17.1s						
KSH				LR	LR		
	comp=Z,340nm,14.0s						
KSH				LR	LR		
	comp=Z,470nm,14.3s						
PETK	Petropavlovsk-	41.21	33	P	P	20 59 24.1	-0.7
	comp=Z,2.9nm,0.7s,baz=74,slow=28,SNR=6.1						
PETK				LR	LR	21 17 23.4	
	comp=Z,240nm,19.5s,baz=226,slow=38						
	comp=Z,2.9nm,0.7s						
PALK	Pallekele	41.39	254	LR	LR	21 16 58.8	
	comp=Z,174nm,20.1s,baz=158,slow=37						
PET	Petropavlovsk	41.65	34	*e*P	P	20 59 27.8	-0.7
PET				*e*S	S	21 05 43.2	-1.0
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
BOOM	Boomskoye usch	41.80	309	P	P	20 59 30.3	+0.1
KURK	Kurchatov	42.74	321	P	P	20 59 37.8	+0.4
KURK	Kurchatov	42.74	321	⇓*e*P	P	20 59 37.7	+0.3
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
NIL	Nilore	42.74	295	P	P	20 59 37.5	-0.3
NIL				IAmb	IAmb	20 59 54.9	
	comp=Z,15nm,0.9s						
COEN	Coen	42.79	147	P	P	20 59 36.4	-1.8
COEN	Coen	42.79	147	P	P	20 59 37.2	-1.0
	comp=Z,41nm,1.1s						
AAK	Ala-Archa	42.87	309	LR	LR	21 20 17.0	
	comp=Z,250nm,18.5s,baz=90,slow=40						
AAK	Ala-Archa	42.87	309	P	P	20 59 38.8	-0.1
AAK	Ala-Archa	42.87	309	⇓*e*P	P	20 59 40.0	+1.2
AAK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
H11N1	WAKE ISLAND Hy	43.09	85	T	T	21 44 56.7	
	baz=282,slow=74,SNR=35						
H11N2	WAKE ISLAND Hy	43.10	85	T	T	21 44 57.7	
	baz=282,slow=74,SNR=68						
H11N3	WAKE ISLAND Hy	43.11	85	T	T	21 44 58.1	
	baz=282,slow=74,SNR=57						
H11S3	WAKE ISLAND Hy	43.19	87	T	T	21 45 24.2	
	baz=284,slow=75,SNR=104						
H11S1	WAKE ISLAND Hy	43.20	87	T	T	21 45 07.3	
	baz=284,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	43.21	87	T	T	21 45 19.1	
	baz=284,slow=75,SNR=55						
MBWA	Marble Bar	43.82	181	P	P	20 59 44.7	-1.7
MBWA				IAmb	IAmb	20 59 54.7	
	comp=Z,70nm,1.8s						
PSA00	Pilbara Seismi	44.23	181	P	P	20 59 47.8	-1.8
PSA00				IAmb	IAmb	20 59 58.5	
	comp=Z,19nm,1.5s						
PSA00	Pilbara Seismi	44.23	181	P	P	20 59 47.6	-2.0
PSA00				IAmb	IAmb	20 59 58.4	
	comp=Z,62nm,1.5s						
PSA00	Pilbara Seismi	44.23	181	P	P	20 59 49.1	-0.5
	comp=Z,20nm,1.3s						
WB0	Warramunga Arr	44.50	161	P	P	20 59 49.7	-2.2
WRAB	Tennant Creek	44.65	161	P	P	20 59 51.2	-1.9
WRAB	Tennant Creek	44.65	161	*ce*P	P	20 59 51.2	-1.9
WRAB				pmax	pmax		
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	44.65	161	P	P	20 59 51.7	-1.4
	comp=Z,42nm,0.8s						
WRA	Warramunga Arr	44.65	161	P	P	20 59 51.1	-2.1
	comp=Z,26nm,0.6s,baz=344,slow=8.7,SNR=161						
WRA				PcP	PcP	21 01 35.0	-0.8
	comp=Z,4.7nm,0.9s,baz=343,slow=3.7,SNR=4.9						
	comp=Z,26nm,0.6s						
WRA	Warramunga Arr	44.65	161	P	P	20 59 49.8	-3.3
WRA	Warramunga Arr	44.65	161	*i* P	P	20 59 51.0	-2.1
WRA				pmax	pmax		
	comp=Z,27nm,0.6s						
WR0	Warramunga Arr	44.73	161	P	P	20 59 51.7	-2.0
GAR	Garm	45.45	303	P	P	20 59 59.5	0.0
GAR				IAmb	IAmb	21 00 17.2	
	comp=Z,18nm,1.1s						
GIRL	Giralia	45.71	188	P	P	21 00 01.9	+0.5
	comp=Z,250nm,2.3s						
KK31	Karatay Array	45.84	308	P	P	21 00 02.5	+0.1
KKAR	Karatay Array	45.84	308	P	P	21 00 02.4	+0.1
KBL	Kabul	46.25	296	P	P	21 00 05.8	-0.1
KBL				IAmb	IAmb	21 00 25.4	
	comp=Z,20nm,1.2s						
CHGR	Chuyangaron	46.32	302	P	P	21 00 05.8	-0.6
CHGR				IAmb	IAmb	21 00 28.9	
	comp=Z,23nm,1.1s						
MTSU	Mount Surprise	46.92	148	P	P	21 00 11.0	-0.1
	comp=Z,26nm,0.9s						
QIS	Mount Isa	47.01	155	P	P	21 00 10.7	-1.1
	comp=Z,77nm,0.6s						
AS31	Alice Springs	48.07	164	P	P	21 00 18.5	-1.5
ASAR	Alice Springs	48.07	164	P	P	21 00 18.8	-1.2
	comp=Z,12nm,0.5s,baz=342,slow=7.5,SNR=285						
ASAR				PcP	PcP	21 01 46.7	-1.0
	comp=Z,6.2nm,0.8s,baz=353,slow=2.8,SNR=8.0						
ASAR				LR	LR	21 21 22.6	
	comp=Z,89nm,18.7s,baz=328,slow=37						
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	48.07	164	P	P	21 00 18.1	-1.9
ASAR					PcP	21 01 46.5	-1.2
WRKA	Warakurna	48.25	171	P	P	21 00 20.8	-0.5
	comp=Z,40nm,2.3s						
BRVK	Borovoye	48.40	322	P	P	21 00 22.9	+0.7
BRVK				IAmb	IAmb	21 00 34.7	
	comp=Z,10nm,1.1s						
BRVK	Borovoye	48.40	322	*c i*P	P	21 00 23.2	+1.0
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIXI	Tiksi	48.99	3	P	P	21 00 25.1	-1.3
TIXI				IAmb	IAmb	21 00 26.3	
	comp=Z,12nm,0.8s						
TIXI	Tiksi	48.99	3	*ce*P	P	21 00 25.2	-1.2
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
MEEK	Meekatharra	49.30	182	P	P	21 00 29.2	-0.2
	comp=Z,30nm,2.2s						
CTA	Charters Tower	49.53	148	P	P	21 00 30.3	-0.9
	comp=Z,8.7nm,0.6s,baz=320,slow=7.0,SNR=13						
CTA				LR	LR	21 20 18.8	
	comp=Z,215nm,20.7s,baz=293,slow=35						
	comp=Z,8.7nm,0.6s						
CTA	Charters Tower	49.53	148	P	P	21 00 31.1	-0.1
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	49.53	148	P	P	21 00 30.2	-1.0
CTAO				IAmb	IAmb	21 00 42.5	
	comp=Z,32nm,1.4s						
CTAO	Charters Tower	49.53	148	P	P	21 00 31.0	-0.1
	comp=Z,16nm,0.8s						
NRIK	Noril'sk	50.49	345	P	P	21 00 37.5	-0.4
	comp=Z,2.9nm,0.5s,baz=64,slow=5.7,SNR=3.9						
NRIK				LR	LR	21 24 20.9	
	comp=Z,228nm,18.9s,baz=171,slow=39						
	comp=Z,2.9nm,0.5s						
NRIK	Noril'sk	50.49	345	P	P	21 00 37.4	-0.5
NRIK	Noril'sk	50.49	345	⇓*i*P	P	21 00 37.7	-0.2
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OOD	Oodnadatta	52.47	163	P	P	21 00 52.8	-0.4
	comp=Z,48nm,0.8s						
BILL	Bilibino	53.05	20	⇑*e*P	P	21 00 56.2	-0.8
BILL				*e*		21 03 01.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,266nm,16.0s						
FORT	Forrest	53.86	172	P	P	21 01 01.7	-1.7
FORT	Forrest	53.86	172	P	P	21 01 04.1	+0.7
	comp=Z,92nm,1.1s						
ABKAR	Akbulak array	53.96	315	P	P	21 01 04.5	+0.5
ABKAR	Akbulak array	53.96	315	P	P	21 01 04.6	+0.6
ABKAR				IAmb	IAmb	21 01 13.8	
	comp=Z,22nm,1.7s						
INKA	Innaminka	53.98	158	P	P	21 01 05.9	+1.6
	comp=Z,53nm,0.6s						
QLP	Quilpie	54.26	154	P	P	21 01 07.0	+0.7
	comp=Z,30nm,1.0s						
KLBR	Kellerberrin	54.27	183	P	P	21 01 05.6	-0.7
	comp=Z,27nm,1.3s						
MULG	Mulgathing	54.45	166	P	P	21 01 07.4	-0.3
	comp=Z,74nm,1.2s						
SVE	Sverdlovsk	54.76	324	*e*P	P	21 01 13.4	+3.7
SVE				pmax	pmax		
	comp=Z,28nm,1.0s						
GEYT	Alibeck	54.99	301	P	P	21 01 13.7	+1.9
	comp=Z,3.5nm,0.8s,baz=71,slow=27,SNR=4.3						
GEYT				LR	LR	21 28 28.5	
	comp=Z,137nm,18.8s,baz=136,slow=40						
	comp=Z,3.5nm,0.8s						
GEYT	Alibeck	54.99	301	P	P	21 01 11.8	0.0
GEYT				IAmb	IAmb	21 01 29.5	
	comp=Z,7.8nm,0.9s						
GYA0B	ALIBECK ARRAY	54.99	301	P	P	21 01 11.7	-0.1
GYA0B				IAmb	IAmb	21 01 29.5	
	comp=Z,11nm,0.8s						
AKTO	Aktyubinsk	55.32	316	LR	LR	21 26 37.3	
	comp=Z,182nm,18.5s,baz=105,slow=38						
NWAO	Narrogin (SRO)	55.62	183	P	P	21 01 17.4	+1.3
	comp=Z,62nm,1.8s						
LCRK	Leigh Creek	55.69	162	P	P	21 01 16.5	-0.1
	comp=Z,75nm,1.6s						
ARU	Arti	55.81	324	P	P	21 01 18.2	+1.0
	comp=Z,1.2nm,0.4s,baz=136,slow=4.1,SNR=10						
	comp=Z,1.2nm,0.4s						
ARU	Arti	55.81	324	P	P	21 01 17.5	+0.2
ARU				IAmb	IAmb	21 01 24.9	
	comp=Z,15nm,0.8s						
ARU	Arti	55.81	324	*c i*P	P	21 01 17.7	+0.4
ARU				S	S	21 09 09.2	+5.7
ARU				SS	SS	21 12 50.3	+1.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
EIDS	Eidsvold	56.36	147	P	P	21 01 19.2	-2.3
EIDS				IAmb	IAmb	21 01 40.0	
	comp=Z,37nm,1.8s						
BBOO	Buckleboo	57.34	165	P	P	21 01 27.0	-1.4
BBOO	Buckleboo	57.34	165	P	P	21 01 28.1	-0.3
	comp=Z,70nm,0.9s						
STKA	Stephens Creek	58.06	159	P	P	21 01 32.6	-0.9
	comp=Z,7.7nm,0.5s,baz=338,slow=7.2,SNR=54						
	comp=Z,7.7nm,0.5s						
STKA	Stephens Creek	58.06	159	P	P	21 01 32.2	-1.3
STKA	Stephens Creek	58.06	159	P	P	21 01 32.7	-0.8
	comp=Z,3.0nm,0.6s						
NAPP	Napperby	58.24	163	P	P	21 01 33.8	-0.9
	comp=Z,35nm,0.7s						
HTT	Hallett	58.69	162	P	P	21 01 38.1	+0.2
	comp=Z,26nm,2.9s						
CMSA	Cobar Meteorol	59.23	155	P	P	21 01 41.7	+0.1
	comp=Z,28nm,0.7s						
SANVU	Saraoutou	59.43	126	P	P	21 01 41.5	-1.8
ARMA	Armidale	60.82	149	P	P	21 01 51.6	-1.0
ARMA				IAmb	IAmb	21 01 53.0	
	comp=Z,8.9nm,0.9s						
KIRV	Kirov	60.96	325	⇑*e*P	P	21 01 55.8	+2.6
BELG	Belogornoye	61.89	318	LR	LR	21 30 16.6	
	comp=Z,59nm,18.2s,baz=154,slow=37						
BELG	Belogornoye	61.89	318	⇓*e*P	P	21 02 04.3	+4.8
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARPS	Mount Arapiles	62.65	161	P	P	21 02 04.3	-0.5
	comp=Z,25nm,0.7s						
MGCD	Mangrove Creek	62.93	151	P	P	21 02 08.2	+1.5
	comp=Z,18nm,1.4s						
PRGR	Permogore	62.99	329	*e*P	P	21 02 11.0	+4.3
DZM	Mont Dzumac	63.17	132	P	P	21 02 06.8	-1.8
FALS	False Pass	63.57	39	P	P	21 02 09.2	-1.5
OUENC	Ouen Island, N	63.68	132	P	P	21 02 10.8	-1.1
OUENC	Ouen Island, N	63.68	132	P	P	21 02 11.9	0.0
	comp=Z,24nm,1.1s						
CAN	Canberra	63.86	154	P	P	21 02 11.7	-1.2
CAN	Canberra	63.86	154	P	P	21 02 13.1	+0.2
	comp=Z,18nm,1.9s						
CNB	Canberra Magne	64.00	154	P	P	21 02 14.0	+0.1
	comp=Z,20nm,1.3s						
TOO	Toolangi	64.56	158	P	P	21 02 17.0	-0.4
TOO	Toolangi	64.56	158	P	P	21 02 17.8	+0.4
	comp=Z,32nm,0.8s						
GNI	Garni	65.09	305	LR	LR	21 34 31.4	
	comp=Z,76nm,20.0s,baz=90,slow=39						
ZEI	Tsey	65.29	308	*e*P	P	21 02 23.2	+0.7
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s						
NCK	Nalchik	65.40	309	⇑*e*P	P	21 02 27.7	+4.7
NCK				pmax	pmax		
	comp=Z,5.0nm,0.2s						
VRH	Novokhopyorsk	65.63	317	*e*P	P	21 02 24.6	+0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ	Khabaz	65.87	309	P	P	21 02 27.8	+1.8
	comp=Z,2.6nm,0.8s,baz=109,slow=4.7,SNR=9.9						
KBZ				LR	LR	21 36 51.4	
	comp=Z,49nm,18.4s,baz=72,slow=41						
	comp=Z,2.6nm,0.8s						
KBZ	Khabaz	65.87	309	⇑*e*P	P	21 02 27.0	+1.1

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KIV    Kislovodsk        65.98 309 ⇑P      P        21 02 28.4 +1.5
KIV    Kislovodsk        65.98 309  P      P        21 02 27.3 +0.5
KIV                                 IAmb   IAmb     21 02 35.2
       comp=Z,18nm,1.1s
KIV    Kislovodsk        65.98 309 eP      P        21 02 28.3 +1.5
KIV                                 pmax   pmax
       comp=Z,17nm,1.1s
KIV                                 MLR    MLR
       comp=Z,69nm,17.0s
GEVA   Gevas             66.72 303  P      P        21 02 31.9 +0.2
TTA    Tatalina          66.86  30  P      P        21 02 32.0 -0.1
TTA                                 IAmb   IAmb     21 02 33.1
       comp=Z,9.6nm,1.2s
TTA    Tatalina          66.86  30  P      P        21 02 32.4 +0.3
       baz=275
VORR   Voronezh          67.13 318 eP      P        21 02 37.9 +4.1
VORR                                pmax   pmax
       comp=Z,10.0nm,0.3s
LPSR   Galich'ya Gora    67.16 319 eP      P        21 02 34.7 +0.6
LPSR                                pmax   pmax
       comp=Z,20nm,1.5s
VSR    Storozhevoye      67.22 318 eP      P        21 02 31.9 -2.5
VSR                                 pmax   pmax
       comp=Z,7.0nm,0.5s
SVW2   Sparrevohn        67.25  32  P      P        21 02 35.0 +0.5
SVW2                                IAmb   IAmb     21 02 41.6
       comp=Z,7.9nm,0.6s
GURO   Guroymak-BITLI    67.46 304  P      P        21 02 37.1 +0.7
L19K   White Mountain    67.47  30  P      P        21 02 36.5 +0.6
L19K                                IAmb   IAmb     21 02 58.1
       comp=Z,13nm,1.3s
L19K   White Mountain    67.47  30  P      P        21 02 36.4 +0.5
       baz=276
MOS    Moscow            67.48 323 eP      P        21 02 47.6  +12
IMAR   Indian Mountai    67.54  26  P      P        21 02 36.5 +0.2
J20K   Nowinta River     67.57  28  P      P        21 02 37.0 +0.6
J20K                                IAmb   IAmb     21 02 38.2
       comp=Z,10nm,0.9s
J20K   Nowinta River     67.57  28  P      P        21 02 37.4 +0.9
       baz=276
K20K   Telida            67.69  29  P      P        21 02 38.0 +0.7
K20K                                IAmb   IAmb     21 02 39.1
       comp=Z,10nm,1.1s
K20K   Telida            67.69  29  P      P        21 02 38.2 +0.9
       baz=277
M19K   Big River Lodg    67.72  31  P      P        21 02 38.0 +0.5
M19K                                IAmb   IAmb     21 02 41.2
       comp=Z,12nm,1.2s
M19K   Big River Lodg    67.72  31  P      P        21 02 38.3 +0.9
       baz=277
H21K   Melozitna Rive    67.97  27  P      P        21 02 39.6 +0.6
H21K   Melozitna Rive    67.97  27  P      P        21 02 40.2 +1.2
       baz=277,SNR=19
OBN    Obninsk           68.17 322⇑eP      P        21 02 41.4 +1.0
OBN                                e                21 05 12.2
OBN                                eS      S        21 11 31.8 -7.9
OBN                                 pmax   pmax
       comp=Z,23nm,1.6s
OBN                                 MLR    MLR
       comp=Z,58nm,15.0s
RAYN   Ar Rayn           68.22 287  P      P        21 02 41.6 +0.3
RAYN                                IAmb   IAmb     21 02 49.8
       comp=Z,8.3nm,1.4s
I21K   Tanana            68.37  27  P      P        21 02 41.7 +0.3
I21K                                IAmb   IAmb     21 02 43.3
       comp=Z,6.8nm,0.7s
CHUM   Lake Minchumin    68.41  28  P      P        21 02 42.5 +0.8
       baz=278
MARD   Mardin            68.69 303  P      P        21 02 44.2  0.0
MARD                                IAmb   IAmb     21 02 58.3
       comp=Z,9.0nm,0.7s
COLD   Coldfoot          68.79  25  P      P        21 02 43.9 -0.2
COLD                                IAmb   IAmb     21 02 45.7
       comp=Z,14nm,1.4s
COLD   Coldfoot          68.79  25  P      P        21 02 44.9 +0.9
       baz=278
TOLK   Toolik Lake Re    68.82  23  P      P        21 02 43.6 -0.6
TOLK                                IAmb   IAmb     21 02 45.7
       comp=Z,13nm,0.9s
TOLK   Toolik Lake Re    68.82  23  P      P        21 02 44.4 +0.1
       baz=278
SPU    Mount Spurr       68.93  31  P      P        21 02 44.3 -0.8
BPAW   Bear Paw Mtn.     68.95  28  P      P        21 02 45.3 +0.2
BPAW                                IAmb   IAmb     21 02 46.4
       comp=Z,12nm,1.2s
BPAW   Bear Paw Mtn.     68.95  28  P      P        21 02 45.4 +0.2
       baz=279,SNR=6.9
MSVF   Nonsavu           69.16 121  P      P        21 02 46.1 -1.1
       comp=Z,23nm,0.9s,baz=282,slow=6.3,SNR=16
       comp=Z,23nm,0.9s
MSVF   Nonsavu           69.16 121  P      P        21 02 46.1 -1.1
MSVF   Nonsavu           69.16 121  P      P        21 02 46.5 -0.7
       comp=Z,34nm,1.0s
KDAK   Kodiak Island     69.24  35  P      P        21 02 46.4 -0.5
       comp=Z,11nm,0.7s,baz=275,slow=5.4,SNR=9.9
KDAK                                LR     LR       21 33 38.0
       comp=Z,102nm,21.9s,baz=248,slow=36
       comp=Z,11nm,0.7s
KDAK   Kodiak Island     69.24  35  P      P        21 02 46.1 -0.9
H23K   Yukon River       69.28  26  P      P        21 02 48.2 +1.1
H23K   Yukon River       69.28  26  P      P        21 02 48.6 +1.4
       baz=280,SNR=18
TRF    Thorofare Moun    69.36  29  P      P        21 02 49.1 +1.2
       baz=280
I23K   Minto, Yukon-K    69.47  27  P      P        21 02 48.7 +0.5
       baz=280
ANN    Anapa             69.53 311 eP      P        21 02 46.9 -2.1
ANN                                e*PP    pP       21 02 49.1 -5.4
ANN                                e                21 03 09.7
ANN                                eS      S        21 11 55.8 -0.3
ANN                                 pmax   pmax
       comp=Z,16nm,0.9s
NEA2   Nenana            69.69  27  P      P        21 02 49.9 +0.2
       baz=280,SNR=8.8
H24K   Noodor Dome       69.95  26  P      P        21 02 52.1 +0.8
H24K                                IAmb   IAmb     21 02 53.0
       comp=Z,7.1nm,0.9s
H24K   Noodor Dome       69.95  26  P      P        21 02 52.2 +0.9
       baz=281,SNR=8.4
KEV    Kevo              69.96 338  P      P        21 02 53.2 +2.0
TAU    Tasmania Unive    69.97 159         P        21 02 50.9 -0.7
TAU    Tasmania Unive    69.97 159  P      P        21 02 51.8 +0.3
       comp=Z,25nm,2.9s
COLA   College           70.15  27⇑eP      P        21 02 51.8 -0.7
COLA                                pmax   pmax
       comp=Z,9.0nm,0.9s
POKR   Poker Plat Res    70.27  27  P      P        21 02 54.0 +0.7
       baz=282,SNR=5.1
ARA0   ARCESS Array S    70.52 338 eP      P        21 02 56.1 +1.5
ARCES  ARCESS Array B    70.52 338  P      P        21 02 55.7 +1.0
       comp=Z,5.6nm,0.6s,baz=75,slow=7.6,SNR=26
ARCES                               LR     LR       21 37 03.8
       comp=Z,57nm,18.1s,baz=39,slow=39
       comp=Z,5.6nm,0.6s
ARCES  ARCESS Array B    70.52 338  P      P        21 02 56.8 +2.1
ARCES                               IAmb   IAmb     21 02 58.4
       comp=Z,9.5nm,0.8s
IL31                     70.57  27  P      P        21 02 54.3 -0.8
ILAR   Eielson Array     70.57  27  P      P        21 02 53.9 -1.3
       comp=Z,2.2nm,0.6s,baz=277,slow=4.4,SNR=32
ILAR                                LR     LR       21 37 45.7
       comp=Z,59nm,18.2s,baz=337,slow=39
       comp=Z,2.2nm,0.6s
ILAR   Eielson Array     70.57  27  P      P        21 02 54.2 -0.9
SPB2   Spitsbergen Ar    70.61 348  P      P        21 02 55.5 +0.4
SPA0   Spitsbergen Ar    70.61 348 eP      P        21 02 55.6 +0.5
SPITS  Spitsbergen Ar    70.61 348  LR     LR       21 37 23.6
       comp=Z,85nm,18.8s,baz=34,slow=39
HDA    Harding Lake      70.63  27  P      P        21 02 54.4 -1.0
       baz=282,SNR=6.2
WAT6   Susitna Watana    70.67  29  P      P        21 02 55.7 -0.3
       baz=282
HAMF   Hammerfest        70.86 339 eP      P        21 02 57.9 +1.2
BMAR   Burnt Mountain    70.89  24  P      P        21 02 57.9 +0.8
SCM    Sheep Creek Mo    71.03  30  P      P        21 02 57.7 -0.3
SCM                                 IAmb   IAmb     21 02 58.5
       comp=Z,12nm,0.7s
SCM    Sheep Creek Mo    71.03  30  P      P        21 02 57.7 -0.3
       baz=283
BJO1   Bjornoya          71.16 344 eP      P        21 02 59.9 +1.5
J25K   Salcha River,     71.25  27  P      P        21 02 58.0 -1.2
J25K   Salcha River,     71.25  27  P      P        21 02 57.8 -1.5
       baz=284
K24K   Donnelly Dome     71.27  28  P      P        21 02 59.4  0.0
       baz=284,SNR=7.6
KTK1   Kautokeino        71.43 338 eP      P        21 03 02.0 +1.8
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M24K   Tolsona, Glenn    71.49  30  P      P        21 03 00.6 -0.2
       baz=284
PAX    Paxson            71.60  29  P      P        21 03 01.3 -0.1
       baz=284
RIDG   Independent Ri    71.68  28  P      P        21 03 01.3 -0.6
RIDG                                IAmb   IAmb     21 03 02.7
       comp=Z,15nm,1.0s
RIDG   Independent Ri    71.68  28  P      P        21 03 01.5 -0.4
       baz=284,SNR=7.3
KLU    Klutina           71.76  30  P      P        21 03 02.2 -0.2
       baz=284
SCRK   Sand Creek        71.99  28  P      P        21 03 03.2 -0.7
SCRK   Sand Creek        71.99  28  P      P        21 03 03.1 -0.7
       baz=285,SNR=7.4
J26L   Joseph Creek      72.03  27  P      P        21 03 03.5 -0.5
       baz=285,SNR=15
JETT   Jettan, Norway    72.24 339 eP      P        21 03 06.2 +1.1
FIA1   FINESS Array S    72.27 330  P      P        21 03 05.6 +0.2
FIA1                                IAmb   IAmb     21 03 14.8
       comp=Z,10nm,1.1s
FINES  FINESS Array B    72.27 330  P      P        21 03 05.7 +0.3
       comp=Z,2.6nm,0.5s,baz=53,slow=6.5,SNR=30
       comp=Z,2.6nm,0.5s
FINES  FINESS Array B    72.27 330  P      P        21 03 05.5 +0.2
FINES  FINESS Array B    72.27 330 i P     P        21 03 05.6 +0.2
FINES                               pmax   pmax
       comp=Z,3.0nm,0.6s
N25K   Chitina, Valde    72.34  30  P      P        21 03 05.9 -0.1
       baz=285
L26K   Log Cabin Wild    72.52  28  P      P        21 03 07.3 +0.3
       baz=286
TRO    Tromso            72.71 339 eP      P        21 03 08.4 +0.6
VSU    Vasula            72.75 327⇓eP      P        21 03 09.4 +1.1
VSU                                 pmax   pmax
       comp=Z,28nm,1.0s
VSU    Vasula            72.75 327 eP      P        21 03 09.7 +1.4
GLB    Gilahina Butte    72.75  30  P      P        21 03 08.1 -0.3
GLB                                 IAmb   IAmb     21 03 09.3
       comp=Z,22nm,1.4s
K27K   Chicken           72.78  27  P      P        21 03 08.7 +0.3
       baz=287
M26K   Nabesna, AK       72.85  29  P      P        21 03 08.9 -0.1
M26K                                IAmb   IAmb     21 03 10.4
       comp=Z,21nm,1.1s
M26K   Nabesna, AK       72.85  29  P      P        21 03 09.2 +0.3
       baz=286,SNR=12
EGAK   Eagle             72.94  26  P      P        21 03 08.8 -0.5
EGAK                                IAmb   IAmb     21 03 09.8
       comp=Z,9.2nm,0.7s
EGAK   Eagle             72.94  26  P      P        21 03 09.2 -0.1
       baz=287,SNR=6.2
VRDI   Verde Repeater    72.98  30  P      P        21 03 09.4 -0.5
VRDI                                IAmb   IAmb     21 03 10.6
       comp=Z,13nm,1.2s
MCARA  McCarthy VSAT     73.13  30  P      P        21 03 11.7 +1.1
       baz=287
L27K   Beaver Creek,     73.17  28  P      P        21 03 11.4 +0.6
L27K                                IAmb   IAmb     21 03 12.4
       comp=Z,19nm,1.1s
L27K   Beaver Creek,     73.17  28  P      P        21 03 11.7 +0.9
       baz=287,SNR=20
BCAR   Beaver Creek A    73.19  28  P      P        21 03 11.3 +0.4
MNK    Minsk             73.21 323 i P     P        21 03 11.8 +0.7
MNK                                i                21 05 54.7
MNK                                i PPP   PPP      21 07 38.9
MNK                                i S     SKiKP    21 12 42.3  0.0
MNK                                i SS    SS       21 17 24.4 +5.0
MNK                                 pmax   pmax
       comp=Z,3.0nm,0.7s
MNK                                 pmax   pmax
       comp=N,8.0nm,0.8s
MNK                                 pmax   pmax
       comp=E,1.0nm,0.8s
MNK                                 MLR    MLR
       comp=Z,97nm,17.0s
MNK                                 MLR    MLR
       comp=N,58nm,11.0s
MNK                                 MLR    MLR
       comp=E,10.0nm,12.0s
MNK    Minsk             73.21 323 i P     P        21 03 11.8 +0.7
       comp=E,1.0nm,0.8s
MNK                                i P     P        21 03 11.8 +0.7
       comp=N,8.0nm,0.8s
MNK                                i P     P        21 03 11.8 +0.7
       comp=Z,3.0nm,0.7s,baz=74
MNK                                i PP    PP       21 05 54.8 +0.9
MNK                                i PPP   PPP      21 07 39.0
MNK                                i S     SKiKP    21 12 42.3  0.0
MNK                                i SS    SS       21 17 24.4 +5.0
MNK                                i SSS   SSS      21 20 48.9
MNK                                i LQ    LQ       21 30 32.1
MNK                                i LR    LR       21 36 07.5
MNK                                i LRM   MLR      21 37 53.7
       comp=Z,97nm,17.2s
MNK                                i LRM   MLR      21 38 15.3
       comp=N,58nm,10.8s
MNK                                i LRM   MLR      21 38 19.2
       comp=E,10.0nm,12.1s
M27K   Edge Creek, AK    73.36  29  P      P        21 03 12.0  0.0
       baz=287,SNR=5.5
AKASG  Malin Array Be    73.47 318  P      P        21 03 12.1 -0.6
       comp=E,0.6nm,0.5s,baz=60,slow=6.7,SNR=4.2
       comp=E,0.6nm,0.5s
AKASG  Malin Array Be    73.47 318  P      P        21 03 13.2 +0.5
AKBB   Malin Array Si    73.47 318⇓eP      P        21 03 17.4 +4.7
AKBB                                pmax   pmax
       comp=Z,6.0nm,1.1s
BR131  Keskin Array S    73.50 307  P      P        21 03 12.9 -0.5
BR131                               IAmb   IAmb     21 03 29.3
       comp=Z,9.0nm,1.2s
BRTR   Keskin Array B    73.50 307  P      P        21 03 13.9 +0.6
       comp=Z,0.6nm,0.7s,baz=95,slow=5.6,SNR=3.2
       comp=Z,0.6nm,0.7s
BRTR   Keskin Array B    73.50 307  P      P        21 03 12.8 -0.5
NOR    Nord              73.54 354 i P     P        21 03 10.8 -1.9
NOR                                 IAmb   IAmb     21 03 21.1
       comp=Z,1.7nm,0.7s
IDID   Didziasalis       73.62 324 eP      P        21 03 14.1 +0.6
NACGM  Naroch            73.71 323 eP      P        21 03 21.5 +7.4
       baz=72
BVCY   Beaver Creek      73.80  29  P      P        21 03 15.4 +0.9
       baz=288
BARN   Barnard Glacie    73.86  30  P      P        21 03 14.9 -0.1
BARN                                IAmb   IAmb     21 03 15.6
       comp=Z,8.4nm,1.0s
ISAL   Salakas           73.88 324 eP      P        21 03 15.6 +0.5
IIGN   Ignalina          73.89 324 eP      P        21 03 15.8 +0.8
DAWY   Dawson            73.90  27  P      P        21 03 14.6 -0.4
DAWY                                IAmb   IAmb     21 03 16.3
       comp=Z,12nm,0.9s
DAWY   Dawson            73.90  27  P      P        21 03 15.0  0.0
       baz=289,SNR=9.0
I29M   Ogilvie Camp,     73.91  25  P      P        21 03 14.4 -0.7
I29M   Ogilvie Camp,     73.91  25  P      P        21 03 15.0  0.0
       baz=290
CTG    Chitna Glacier    74.04  30  P      P        21 03 16.6 +0.5
       baz=288,SNR=5.0
CTGM   Chitina Glacie    74.04  30  P      P        21 03 15.9 -0.2
CTGM                                IAmb   IAmb     21 03 17.1
       comp=Z,28nm,1.3s
MMAI   Mount Meron Ar    74.06 299  LR     LR       21 42 24.6
       comp=Z,56nm,18.1s,baz=248,slow=41
YUK3   Moose Creek       74.18  29  P      P        21 03 17.1 +0.2
       baz=289
RAF    Rauma             74.39 330 eP      P        21 03 18.5 +0.7
ATD    Arta Tunnel       74.44 276  LR     LR       21 35 33.4
       comp=Z,33nm,19.0s,baz=347,slow=35
STEI   Steigen           74.57 338 eP      P        21 03 19.2 +0.5
INK    Inuvik            74.59  22  P      P        21 03 18.4 -0.5
       comp=Z,14nm,0.9s,baz=304,slow=8.1,SNR=14
       comp=Z,14nm,0.9s
INK    Inuvik            74.59  22  P      P        21 03 18.1 -0.8
INK                                 IAmb   IAmb     21 03 19.4
       comp=Z,14nm,0.8s
INK    Inuvik            74.59  22  P      P        21 03 18.1 -0.8
       baz=293
SORM   Soroca            74.75 316 ⇑P      P        21 03 20.3 +0.1
FAUS   Fauske            74.77 337 eP      P        21 03 20.1 +0.1
VSVD   Vaisvydziai       74.94 325 eP      P        21 03 21.5 +0.4
PABE   Paberze           75.07 324  P      P        21 03 22.5 +0.5
PABE                                IAmb   IAmb     21 03 37.3
       comp=Z,17nm,1.0s
PABE   Paberze           75.07 324 eP      P        21 03 22.4 +0.5
CSS    Mathiatis         75.12 302  P      P        21 03 23.0 +0.3
CSS                                 IAmb   IAmb     21 03 37.4
       comp=Z,7.1nm,0.9s
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YUK6   Outpost Mounta    75.41  30  P      P        21 03 24.8 +0.7
       baz=291
A36M   Sachs Harbour     75.48  17  P      P        21 03 23.8 -0.2
       baz=300
M30M   Minto, Yukon      75.52  28  P      P        21 03 24.6 +0.1
M30M                                IAmb   IAmb     21 03 26.0
       comp=Z,19nm,1.1s
M30M   Minto, Yukon      75.52  28  P      P        21 03 25.0 +0.6
       baz=292,SNR=19
MOR8   Moi Rana          75.56 336 eP      P        21 03 25.0 +0.5
TPGR   Topolog           75.70 313 ⇑P      P        21 03 26.3 +0.5
N30M   Aishikik Lake     75.80  29  P      P        21 03 26.7 +0.6
       baz=292,SNR=6.0
HYT    Haines Junctio    75.85  30  P      P        21 03 26.5  0.0
HYT                                 IAmb   IAmb     21 03 27.9
       comp=Z,15nm,1.2s
HYT    Haines Junctio    75.85  30  P      P        21 03 27.1 +0.6
       baz=291,SNR=6.7
SUW    Suwalki           75.99 323 eP      P        21 03 33.1 +5.9
SUW    Suwalki           75.99 323 eP      P        21 03 27.9 +0.7
HARR   Harsova           76.08 313 ⇑P      P        21 03 31.3 +3.4
EUNU   Eureka            76.20   5  P      P        21 03 27.6 -0.5
TESR   Tescani           76.35 315 ⇑P      P        21 03 29.6 +0.1
N31M   Braeburn, Yuko    76.37  29  P      P        21 03 28.8 -0.5
N31M                                IAmb   IAmb     21 03 31.4
       comp=Z,12nm,0.9s
N31M   Braeburn, Yuko    76.37  29  P      P        21 03 30.0 +0.6
       baz=293,SNR=7.0
VRI    Vrincioaia        76.51 314 ⇓P      P        21 03 31.3 +0.9
PLOR   Plostina          76.57 314 ⇓P      P        21 03 37.0 +6.3
BIZ    Bicaz             76.57 315 ⇓P      P        21 03 31.3 +0.6
M31M   Drury Creek, Y    76.69  28  P      P        21 03 31.2 +0.1
       baz=294,SNR=7.4
UPP    Uppsala           76.72 330 eP      P        21 03 31.7 +0.5
PLBC   Pleasant Camp     76.89  31  P      P        21 03 32.6 +0.3
       baz=293
BURAR  Bucovina Array    76.92 316 ⇑P      P        21 03 33.3 +0.6
BURAR  Bucovina Array    76.92 316  P      P        21 03 32.5 -0.2
BUR08  Bucovina Ar. S    76.92 316  P      P        21 03 32.4 -0.3
WHY    Whitehorse        77.10  29  P      P        21 03 33.3 -0.3
WHY                                 IAmb   IAmb     21 03 34.9
       comp=Z,15nm,1.2s
WHY    Whitehorse        77.10  29  P      P        21 03 34.0 +0.5
       baz=294,SNR=7.4
MLR    Muntele Rosu      77.15 314 ⇑P      P        21 03 35.0 +0.9
MLR    Muntele Rosu      77.15 314  LR     LR       21 39 40.0
       comp=Z,69nm,20.2s,baz=50,slow=37
MLR    Muntele Rosu      77.15 314  P      P        21 03 34.4 +0.2
MLR                                 IAmb   IAmb     21 03 47.8
       comp=Z,5.7nm,0.8s
C36M   Paulatuk          77.17  19  P      P        21 03 32.4 -1.2
C36M   Paulatuk          77.17  19  P      P        21 03 32.8 -0.7
       baz=301
NSS    Namsos            77.20 335 eP      P        21 03 33.9 +0.1
DAG    Danmarks Havn     77.53 351 i P     P        21 03 34.1 -1.4
DAG                                 IAmb   IAmb     21 03 42.9
       comp=Z,2.1nm,0.8s
VIKU   Vikbolandet       77.70 329 eP      P        21 03 36.4 -0.4
KWP    Kalwaria Pacla    77.78 319 eP      P        21 03 38.2 +0.7
KWP    Kalwaria Pacla    77.78 319  P      P        21 03 37.4 -0.1
P33M   Teslin, Yukon     78.22  29  P      P        21 03 39.9 +0.1
       baz=295,SNR=6.3
HFS    Hagfors           78.41 331  LR     LR       21 41 30.9
       comp=Z,104nm,18.0s,baz=68,slow=38
TBLU   Trondheim         78.45 334 eP      P        21 03 41.0 +0.1
DRGR                     78.80 316 ⇑P      P        21 03 43.9 +0.6
NC405  NORSAR Array S    78.85 332  P      P        21 03 43.2 +0.1
NC405                               IAmb   IAmb     21 04 00.7
       comp=Z,17nm,0.8s
NB2    NORSAR Subarra    79.10 332  P      P        21 03 44.6 +0.1
       comp=Z,1.3nm,0.6s,baz=59,slow=5.6
NB2    NORSAR Subarra    79.10 332  P      P        21 03 44.6 +0.1
       baz=59,slow=5.6
NOA    NORSAR Array B    79.10 332  P      P        21 03 44.4 -0.2
       comp=Z,1.7nm,0.7s,baz=59,slow=5.6,SNR=12
NOA                                 LR     LR       21 42 37.8
       comp=Z,142nm,18.4s,baz=60,slow=39
       comp=Z,1.7nm,0.7s
OJC    Ojcow             79.31 320 eP      P        21 03 45.5 -0.3
OJC    Ojcow             79.31 320  P      P        21 03 45.5 -0.3
OJC                                 IAmb   IAmb     21 04 00.0
       comp=Z,8.3nm,0.8s
NIE    Niedzica          79.32 319 eP      P        21 03 47.5 +1.5
DOMB   Dombas            79.52 334 eP      P        21 03 47.3 +0.5
TGTN   Hyland Airport    79.59  27  P      P        21 03 47.3  0.0
       baz=299
HERR   Herculane         79.70 314 ⇑P      P        21 03 44.1 -4.0
DBG    Daneborg          79.75 350 i P     P        21 03 47.6 -0.2
DBG                                 IAmb   IAmb     21 03 48.2
       comp=Z,4.6nm,1.1s
JMIC   Jan Mayen         79.92 345  LR     LR       21 42 18.8
       comp=Z,43nm,20.0s,baz=76,slow=38
RES    Resolute Bay      79.99   9  LR     LR       21 40 20.3
       comp=Z,38nm,21.7s,baz=43,slow=36
RES    Resolute Bay      79.99   9  P      P        21 03 49.4 +0.3
RES                                 IAmb   IAmb     21 03 49.9
       comp=Z,14nm,1.1s
VTS    Vitosha           79.99 312 ⇑P      P        21 03 50.9 +0.9
VTS    Vitosha           79.99 312  P      P        21 03 49.5 -0.4
VTS                                 IAmb   IAmb     21 04 04.0
       comp=Z,9.5nm,0.9s
S34M   Telegraph Cree    80.02  31  P      P        21 03 50.4 +0.9
       baz=297
MDVR   Moldovita         80.20 314 ⇓P      P        21 03 55.2 +4.4
DLBC   Dease Lake        80.30  30  P      P        21 03 50.1 -1.0
       comp=Z,4.9nm,0.8s,baz=287,slow=6.0,SNR=9.9
       comp=Z,4.9nm,0.8s
DLBC   Dease Lake        80.30  30  P      P        21 03 50.9 -0.2
NNZ    Nelson            80.40 142  P      P        21 03 50.2 -1.5
KONO   Kongsberg         80.47 331 eP      P        21 03 52.7 +0.7
VYHS   Vyhne             80.57 319 eP      P        21 03 53.9 +1.2
VYHS   Vyhne             80.57 319 eP      P        21 03 53.9 +1.2
URZ    Urewera           80.68 138  LR     LR       21 42 00.1
       comp=Z,32nm,18.0s,baz=31,slow=38
KOLL   Kolacno           80.80 319 eP      P        21 03 55.2 +1.3
MORC   Moravsky Berou    80.82 320 ⇓P      P        21 04 01.4 +7.3
MORC   Moravsky Berou    80.82 320 eP      P        21 04 00.5 +6.4
RPZ    Rata Peaks        80.84 146  LR     LR       21 38 23.2
       comp=Z,45nm,18.8s,baz=302,slow=35
BKZ    Black Stump Fm    80.88 139  P      P        21 03 53.8 -0.6
       comp=Z,109nm,1.2s
KSP    Ksiaz             81.09 322 eP      P        21 03 48.1 -7.4
JAVC   Velka Javorina    81.12 319 eP      P        21 03 57.6 +1.8
KRLC   Kraliky           81.14 321 eP      P        21 03 55.9 +0.1
KRLC   Kraliky           81.14 321 eP      P        21 03 55.9 +0.1
OSTC   Ostas             81.26 321 eP      P        21 03 59.4 +3.0
OSTC                                AMS    AMS      21 43 20.0
       comp=Z,100nm,16.1s
DPC    Dobruska-Polom    81.29 321 eP      P        21 03 57.3 +0.7
DPC    Dobruska-Polom    81.29 321 eP      P        21 03 57.3 +0.7
UPC    Upice             81.40 321  AMS    AMS      21 43 30.0
       comp=Z,100nm,14.8s
VRAC   Vranov            81.58 320 eP      P        21 04 02.3 +4.2
MORH   Mrgy, Hungar      81.62 317 ⇑P      P        21 04 06.2 +7.9
BFZ    Birch Farm        81.69 141  P      P        21 03 57.0 -1.7
BFZ    Birch Farm        81.69 141  P      P        21 03 59.7 +1.1
       comp=Z,74nm,1.3s
KRUC   Moravsky          81.80 320 eP      P        21 04 02.5 +3.3
RONA   Rosalia, Austr    82.45 319 eP      P        21 04 04.0 +1.2
PRU    Pruhonice         82.48 321  AMS    AMS      21 43 00.0
       comp=Z,100nm,18.7s
CONA   Conrad Observa    82.61 319 eP      P        21 04 04.9 +1.3
       comp=Z,4.4nm,1.3s
CLL    Collm             82.75 323 eP      P        21 04 05.0 +0.9
CLL                                i *PP   pP       21 04 10.8 +0.9
CLL    Collm             82.75 323 eP      P        21 04 05.0 +0.9
CLL                                i sP    pP       21 04 10.8 +0.9
CLL                                 LmV             21 46 00.0
       comp=Z,100nm,18.0s
CKRC   Cesky Krumlov     83.14 320 eP      P        21 04 07.2 +0.9
SCO    Scoresbysund      83.19 348  P      P        21 04 06.4 +0.3
SCO                                 IAmb   IAmb     21 04 09.1
       comp=Z,12nm,1.3s
KHC    Kasperske Hory    83.43 321 eP      P        21 04 00.6 -7.2
KHC                                e                21 04 08.1
KHC    Kasperske Hory    83.43 321 eP      P        21 04 08.1 +0.3
GEC2   GERESS Array S    83.49 320  P      P        21 04 08.2  0.0
GEC2                                IAmb   IAmb     21 04 22.4
       comp=Z,6.8nm,1.2s
GERES  GERESS Array B    83.49 320  P      P        21 04 08.6 +0.4
       comp=Z,0.9nm,0.8s,baz=54,slow=6.8,SNR=6.9
       comp=Z,0.9nm,0.8s
GERES  GERESS Array B    83.49 320  P      P        21 04 08.2  0.0
MOA    Molln             83.61 319 i P     P        21 04 10.0 +1.3
       comp=Z,4.3nm,1.4s
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SOKA	Soboth	83.67	318	eP	P	21 04 09.4	+0.2
	comp=Z,4.1nm,1.8s						
SUMG	Summit	83.70	354	P	P	21 04 09.0	-0.2
SUMG				IAmb	IAmb	21 04 11.8	
	comp=Z,13nm,0.9s						
SUMG	Summit	83.70	354	iP	P	21 04 09.0	-0.2
SUMG				IAmb	IAmb	21 04 10.8	
	comp=Z,7.8nm,0.8s						
OBKA	Obir	84.05	318	iP	P	21 04 10.6	-0.5
	comp=Z,4.3nm,0.9s						
BIOA	Bad Ischl, Aus	84.06	319	iP	P	21 04 12.4	+1.4
YKA	Yellowknife Ar	84.33	23	P	P	21 04 11.4	-0.6
	comp=Z,7.1nm,0.7s,baz=311,slow=4.8,SNR=48						
	comp=Z,7.1nm,0.7s						
YKA	Yellowknife Ar	84.33	23	P	P	21 04 10.7	-1.3
YKA	Yellowknife Ar	84.33	23	iP	P	21 04 11.3	-0.8
YKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBA	Koelnbreinsper	84.52	319	iP	P	21 04 14.3	+0.8
	comp=Z,1.6nm,0.6s						
ABTA	Abfaltersbach	85.18	319	eP	P	21 04 17.0	+0.2
	comp=Z,5.1nm,1.6s						
WTTA	Wattenberg	85.45	320	eP	P	21 04 18.0	-0.2
	comp=Z,2.7nm,0.6s						
WATA	Walderalm	85.46	320	eP	P	21 04 17.8	-0.4
	comp=Z,3.7nm,1.3s						
MOTA	Moosalm	85.73	320	eP	P	21 04 19.8	+0.1
	comp=Z,3.9nm,1.2s						
DAVA	Damuels	86.48	320	eP	P	21 04 23.9	+0.6
	comp=Z,3.1nm,1.1s						
DAVOX	Davos/Dischmat	86.74	320	LR	LR	21 46 07.9	
	comp=Z,57nm,18.1s,baz=68,slow=38						
ICESG	Greenland Ices	87.15	353	iP	P	21 04 25.9	-0.5
ICESG				IAmb	IAmb	21 04 27.7	
	comp=Z,6.6nm,0.8s						
BORG	Borgarnes	87.80	345	LR	LR	21 47 12.4	
	comp=Z,54nm,19.2s,baz=37,slow=38						
LLLB	Lillooet	88.45	34	P	P	21 04 32.8	+0.2
EKA	Eskdalemuir Ar	88.58	332	LR	LR	21 48 34.5	
	comp=Z,132nm,19.4s,baz=45,slow=38						
CASY	Casey	89.25	184	P	P	21 04 34.9	-0.7
D03D	Eldon	89.54	37	P	P	21 04 38.6	+0.9
	baz=304						
DY2G	Dye2	90.34	355	iP	P	21 04 40.3	-1.0
DY2G				IAmb	IAmb	21 04 42.3	
	comp=Z,4.9nm,0.7s						
D05A	Enumclaw	90.36	37	P	P	21 04 41.2	-0.3
EDM	Edmonton	90.96	29	P	P	21 04 44.1	-0.2
I03D	Drain, OR	91.55	41	P	P	21 04 47.4	+0.3
	baz=304						
I04A	Tendick Farm,	92.05	40	P	P	21 04 49.2	-0.4
	baz=305						
NEW	Newport	92.34	34	P	P	21 04 51.0	+0.3
	comp=Z,7.3nm,0.8s,baz=285,slow=4.6,SNR=15						
NEW				LR	LR	21 46 48.4	
	comp=Z,34nm,20.6s,baz=336,slow=36						
	comp=Z,7.3nm,0.8s						
NEW	Newport	92.34	34	P	P	21 04 50.5	-0.3
NEW				IAmb	IAmb	21 04 51.9	
	comp=Z,8.7nm,0.9s						
NEW	Newport	92.34	34	P	P	21 04 51.0	+0.3
	baz=309						
I05D	Terrebonne, OR	92.37	39	P	P	21 04 51.3	+0.2
	baz=306						
J04D	Umpqua Nationa	92.55	41	P	P	21 04 51.8	-0.2
J04D	Umpqua Nationa	92.55	41	P	P	21 04 52.2	+0.1
	baz=305						
PINE	Pine Mountain	92.92	40	P	P	21 04 53.5	-0.3
L04D	Klamath Falls	93.02	41	P	P	21 04 53.6	-0.5
L04D	Klamath Falls	93.02	41	P	P	21 04 54.3	+0.2
	baz=305						
YBH	Yreka Blue Hor	93.04	42	P	P	21 04 54.5	+0.3
	comp=Z,3.8nm,0.9s,baz=286,slow=3.1,SNR=6.0						
YBH				LR	LR	21 43 48.4	
	comp=Z,19nm,21.6s,baz=334,slow=34						
	comp=Z,3.8nm,0.9s						
J05D	Fort Rock, OR	93.05	40	P	P	21 04 54.2	-0.1
	baz=306						
FRB	Frobisher Bay	93.33	4	LR	LR	21 50 42.0	
	comp=Z,64nm,20.0s,baz=4.0,slow=38						
WALA	Waterton Lakes	93.46	32	P	P	21 04 55.8	-0.3
WALA				IAmb	IAmb	21 04 57.5	
	comp=Z,9.4nm,1.0s						
MSO	Missoula	94.91	34	P	P	21 05 02.6	-0.2
	baz=311						
PPT	Papeete	96.50	106	LR	LR	21 42 06.2	
	comp=Z,38nm,19.6s,baz=0.5,slow=31						
DLMT	Dillon	96.59	35	P	P	21 05 10.0	-0.4
DLMT				IAmb	IAmb	21 05 12.1	
	comp=Z,6.9nm,1.2s						
HLID	Hailey	96.79	37	P	P	21 05 11.2	-0.2
HLID				IAmb	IAmb	21 05 12.8	
	comp=Z,3.3nm,1.0s						
HLID	Hailey	96.79	37	P	P	21 05 11.8	+0.3
	baz=310						
NVAR	Mina Array Bea	97.71	43	P	P	21 05 15.3	-0.5
	comp=Z,0.4nm,0.5s,baz=275,slow=5.4,SNR=5.1						
	comp=Z,0.4nm,0.5s						
LSZ	Lusaka	97.99	257	LR	LR	21 47 13.2	
	comp=Z,61nm,20.0s,baz=120,slow=34						
ELK	Elko	98.13	39	LR	LR	21 45 12.3	
	comp=Z,31nm,20.2s,baz=351,slow=33						
PDAR	Pinedale Array	99.96	35	LR	LR	21 53 47.1	
	comp=Z,25nm,18.3s,baz=346,slow=37						
UREC	San Jos de Ur	145.67	29	eP	PKPdf	21 11 18.6	-1.0
OCAC	Ocana	146.16	25	eP	PKPbc	21 11 20.9	-0.7
ZARC	Zaragoza, Cauc	146.20	28	eP	PKPdf	21 11 19.5	-1.0
SDV	Santo Domingo	146.53	20	eP	PKPbc	21 11 22.0	-0.7
CBOC	Ciudad Bolivar	147.10	32	eP	PKPbc	21 11 23.2	-1.1
PTBC	PUERTO BERRIO,	147.22	29	eP	PKPdf	21 11 22.9	+0.6
BARC	Barichara	147.72	26	eP	PKPbc	21 11 25.7	-0.4
PLMC	San Jos del P	147.79	33	eP	PKPdf	21 11 24.1	+0.7
NORC	Norcasia	147.90	30	eP	PKPbc	21 11 24.9	-1.5
SPBC	San Pablo de B	148.18	29	eP	PKPbc	21 11 26.3	-0.9
RUSC	La Rusia	148.39	27	eP	PKPbc	21 11 27.3	-1.0
YOTC	Yotoco, Valle	148.55	34	eP	PKPbc	21 11 26.3	-1.9
ANIL	Santa Ana	148.59	32	eP	PKPbc	21 11 28.2	-0.3
ORTC	Ortega, Tolima	149.17	32	eP	PKPbc	21 11 27.9	-1.8
PRAC	Prado	149.51	32	eP	PKPbc	21 11 29.4	-1.2
VILC	Villavicencio,	149.72	29	eP	PKPbc	21 11 29.2	-2.0
SOTA	Rioblanco	149.97	36	eP	PKPbc	21 11 32.1	-0.2
OTAV	Otavalo	150.44	41	eP	PKPbc	21 11 33.1	-0.3
LPAZ	La Paz	169.45	53	PKP	PKPdf	21 11 50.2	+0.9
	comp=Z,1.9nm,1.0s,baz=22,slow=4.7,SNR=4.5						

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*IDC **21** 20:53:28.1±1.4, 5°.55S×152°.91E, h0^{km}, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=41.7km s-min=25.0km az=98.0*

ISC 21 20:53:33.9±1.2**, 5°.48S**±0°.09×**152°.8E**±0°.1**, h37^{km}, n9, σ1^{s}.18**/10**, mb3.4**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.40	326	Pn	Pn	20 53 56.1	-0.8
	209nm,0.3s,baz=277,slow=2.3,SNR=116						
KRVT				Sn	Sn	20 54 14.3	+0.2
	375nm,0.3s,baz=219,slow=24,SNR=19						
PMG	Port Moresby	6.83	235	Sn	Sn	20 56 28.4	+0.4
	2.7nm,0.3s,baz=60,slow=23,SNR=7.9						
WRA	Warramunga Arr	23.01	230	P	P	20 58 35.0	-0.8
	0.6nm,0.7s,baz=52,slow=10,SNR=2.8						
	0.6nm,0.7s						
ASAR	Alice Springs	25.66	223	P	P	20 58 59.7	-0.8
	0.9nm,0.9s,baz=54,slow=10.0,SNR=6.6						
	0.9nm,0.9s						
SONM	Songino Array	66.90	328	P	P	21 04 21.9	-0.6
	0.2nm,0.5s,baz=142,slow=7.3,SNR=1.7						
	0.2nm,0.5s						
MKAR	Makanchi Array	80.84	319	P	P	21 05 46.0	+2.0
	0.2nm,0.6s,baz=107,slow=9.7,SNR=2.0						
	0.2nm,0.6s						
ILAR	Eielson Array	82.78	22	P	P	21 05 53.7	-0.2
	0.3nm,0.7s,baz=254,slow=5.5,SNR=3.1						
	0.3nm,0.7s						
PLCA	Paso Flores	119.23	143	PKP	PKPdf	21 12 18.5	-1.1
	0.8nm,0.8s,baz=219,slow=6.5,SNR=3.0						
TORD	Torodi Ar. Bea	150.52	287	PKPbc	PKiKP	21 13 24.9	+1.4
	0.5nm,0.9s,baz=101,slow=4.4,SNR=1.6						

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*IASPEI **21** 20:56:31.5±0.8, 22°.91N±0°.01×120°.58E±0°.02, h18^{km}±4^{km}, Error ellipse: s-maj=2.4km s-min=1.7km az=76.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*JMA **21** 20:56:31.8±0.6, 23°N±2°×12°1E±°, h0^{km}, MV3.5/11, TAIWAN REGION*

*TAP **21** 20:56:31.0, 22°.92N×120°.60E, h15^{km}, ML3.8, B*

ISC 21 20:56:31.8±0.8**, 22°.91N**±0°.01×**120°.58E**±0°.01**, h18^{km}**±2^{km}**, n125, σ0^{s}.98**/220**, 10C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCST	Cishan	0.09	256	⇑iP	Pg	20 56 35.0	-0.3
	baz=253						
SCST				iS	Sg	20 56 38.2	+0.5
	baz=253						
SSD	Sandimen	0.17	164	⇑iP	Pb	20 56 35.9	-0.1
	baz=166						
SSD				iS	Sb	20 56 39.2	+0.6
	baz=166						
TWM1	Shoushan	0.17	241	⇓iP	Pb	20 56 36.8	+0.7
	baz=240						
TWM1				iS	Sg	20 56 41.9	+2.5
	baz=240						
SGST	Jiashian	0.17	360	⇑iP	Pb	20 56 35.2	-1.0
	baz=358						
SGST				iS	Sb	20 56 38.9	-0.2
	baz=358						
TSMG	Majia	0.21	164	⇑iP	Pb	20 56 36.4	-0.5
	baz=167						
TSMG				iS	Sb	20 56 40.1	-0.2
	baz=167						
SHHT	Tainan City	0.24	298	⇓iP	Pb	20 56 38.8	+1.1
	baz=302						
SHHT				S	Sb	20 56 45.2	+3.7
	baz=302						
CHN3	Shinhua	0.26	310	⇓iP	Pb	20 56 38.9	+0.9
	baz=317						
CHN3				S	Sn	20 56 45.9	-0.6
	baz=317						
SNJT	Kaohsiung City	0.28	236	P	Pg	20 56 38.5	+0.6
	baz=237						
SNJT				eS	Sn	20 56 45.5	-1.2
	baz=237						
CHN1	Nanshi	0.28	350	⇑iP	Pg	20 56 38.3	+0.2
	baz=352						
CHN1				iS	Sb	20 56 43.4	+0.6
	baz=352						
MASBT	Mashibuluo	0.30	171	⇑iP	Pg	20 56 37.9	-0.4
	baz=173						
MASBT				iS	Sg	20 56 42.3	-0.4
	baz=173						
STYH	Taoyuan	0.32	34	⇓iP	Pg	20 56 38.4	-0.3
	baz=37						
STYH				iS	Sb	20 56 44.3	+0.5
	baz=37						
SNST	Tainan City	0.32	346	⇑iP	Pg	20 56 39.1	+0.3
	baz=344						
SNST				iS	Sb	20 56 44.6	+0.7
	baz=344						
WTP	Ta-pu	0.34	5	⇓iP	Pg	20 56 39.1	0.0
	baz=8.0						
WTP				eS	Sb	20 56 45.3	+0.8
	baz=8.0						
TAI1	Yung-k'ang	0.35	292	eP	Pg	20 56 39.9	+0.7
	baz=292						
TAI1				eS	Sg	20 56 45.0	+0.7
	baz=292						
TWK	Hsinying	0.37	346	⇑iP	Pg	20 56 39.7	+0.1
	baz=346						
TWK				S	Sb	20 56 46.1	+0.7
	baz=346						
TPUB	Ta-pu	0.40	6	⇓iP	Pg	20 56 39.8	-0.2
	baz=5.0						
TPUB				iS	Sg	20 56 46.1	+0.5
	baz=5.0						
SSPT	Xinbi	0.42	182	eP	Pg	20 56 40.4	0.0
	baz=171						
SSPT				eS	Sg	20 56 47.4	+1.1
	baz=171						
KAU	Kaohsiung	0.42	217	eP	Pb	20 56 41.7	+0.9
	baz=226						
SCLT	Jiali	0.45	307	iP	Pg	20 56 41.4	+0.4
	baz=307						
SCLT				eS	Sb	20 56 49.6	+2.0
	baz=307						
TWG	Pinlang	0.46	101	⇓iP	Pg	20 56 41.0	-0.1
	baz=104						
TWG				S	Sb	20 56 48.5	+0.7
	baz=104						
ECL	Taimali	0.46	132	⇑iP	Pg	20 56 40.7	-0.5
	baz=138						
ECL				S	Sg	20 56 46.9	-0.5
	baz=138						
TWGBT	Beinan	0.47	101	iP	Pg	20 56 41.0	-0.3
	baz=104						
TWGBT				iS	Sg	20 56 48.4	+0.8
	baz=104						
ELDTW	Lidau	0.49	55	⇓iP	Pg	20 56 41.6	-0.2
	baz=55						
ELDTW				eS	Sg	20 56 48.9	+0.5
	baz=55						
LONT	Longtian	0.50	90	iP	Pg	20 56 41.9	-0.1
	baz=79						
LONT				iS	Sb	20 56 49.9	+0.7
	baz=79						
ICHU	Yijhu	0.53	328	eP	Pg	20 56 42.7	+0.2
	baz=328						
ICHU				eS	Sn	20 56 52.3	-0.8
	baz=328						
SCZT	Fangliau	0.53	176	⇑iP	Pg	20 56 42.0	-0.4
	baz=168						
SCZT				S	Sg	20 56 49.5	-0.2
	baz=168						
TTN	Taitung	0.54	106	P	Pg	20 56 43.4	+0.7
	baz=109						
TTN				eS	Sn	20 56 53.2	-0.1
	baz=109						
CHN8	Yiju	0.56	322	eP	Pg	20 56 43.2	+0.2
	baz=323						
CHN8				S	Sb	20 56 52.6	+2.0
	baz=323						
EAST	Anshuo	0.57	155	P	Pg	20 56 42.8	-0.5
	baz=150						
EAST				eS	Sb	20 56 53.2	+2.0
	baz=150						
WLCH	Liuqiu	0.58	199	⇓iP	Pn	20 56 45.8	+0.6
	baz=200						
WLCH				S	Sn	20 56 57.3	+3.0
	baz=200						
CHY	Chiayi	0.61	346	eP	Pb	20 56 43.8	-0.1
	baz=346						
CHY				eS	Sb	20 56 53.9	+1.8
	baz=346						
TAW	Tawu	0.62	152	eP	Pb	20 56 43.6	-0.4
	baz=147						
TAW				eS	Sb	20 56 53.0	+0.6
	baz=147						
TAWH	Dawu Township	0.63	153	iP	Pb	20 56 43.0	-1.2
	baz=149						
TAWH				eS	Sb	20 56 51.5	-1.2
	baz=149						
CHN2	Minshiung	0.63	351	eP	Pb	20 56 44.6	+0.3
	baz=350						
CHN2				eS	Sn	20 56 54.9	-0.6
	baz=350						
ALS	Alishan	0.64	19	eP	Pg	20 56 44.0	-0.6
	baz=19						
ALS				eS	Sg	20 56 53.4	+0.3
	baz=19						
EDH	Donghe	0.67	84	eP	Pb	20 56 45.2	+0.3
	baz=84						
EDH				eS	Sg	20 56 55.3	+1.4
	baz=84						
YUS	Yu-Shan	0.67	30	iP	Pg	20 56 44.7	-0.5
	baz=41						
YUS				eS	Sb	20 56 54.8	+0.4
	baz=41						
CHN5	Tsauling	0.69	7	eP	Pb	20 56 45.6	+0.2
	baz=6.0						
CHN5				eS	Sg	20 56 55.6	+0.9
	baz=6.0						
WSL	Shuilin Townsh	0.69	332	P	Pb	20 56 44.5	-0.9
	baz=332						
WSL				S	Sg	20 56 55.9	+1.1
	baz=332						
SLIU	Shizi	0.71	164	eP	Pb	20 56 45.7	-0.1
	baz=171						
SLIU				eS	Sg	20 56 56.9	+1.5
	baz=171						
FULB	Fuli	0.72	66	P	Pb	20 56 46.1	+0.4
	baz=66						
FULB				eS	Sn	20 56 57.1	-0.5
	baz=66						
CHKT	Chengkung	0.75	75	P	Pb	20 56 46.5	+0.2
	baz=90						
CHKT				eS	Sg	20 56 57.7	+1.4
	baz=90						
WDLH	Douliu	0.78	357	P	Pb	20 56 47.0	+0.1
	baz=356						
WDLH				S	Sn	20 56 59.5	+0.3
	baz=356						
WTK	Tuku	0.80	347	P	Pb	20 56 47.2	0.0
	baz=347						
WTK				eS	Sn	20 56 59.6	-0.1
	baz=347						
WSF	Szhu	0.80	336	iP	Pb	20 56 47.0	-0.3
	baz=336						
WSF				iS	Sg	20 56 59.4	+1.3
	baz=336						
EYUL	Yuli	0.81	57	iP	Pb	20 56 47.1	-0.2
	baz=64						
EYUL				iS	Sb	20 56 57.7	-0.2
	baz=64						
YULB	Yu-li	0.82	54	⇓iP	Pb	20 56 47.0	-0.5
	baz=62						
YULB				iS	Sb	20 56 57.9	-0.3
	baz=62						
LDUT	Ludao	0.85	106	eP	Pb	20 56 46.9	-1.1
	baz=106						
LDUT				eS	Sn	20 57 01.7	+0.8
	baz=106						
EHY	Hungye	0.91	49	iP	Pb	20 56 48.5	-0.5
	baz=48						
EHY				eS	Sb	20 57 00.6	-0.1
	baz=48						
HEN	Hengchun	0.91	171	eP	Pb	20 56 49.5	+0.5
	baz=159						
HEN				eS	Sn	20 57 03.7	+1.3
	baz=159						
SMST	Manzhou Townsh	0.91	165	eP	Pb	20 56 49.3	+0.2
	baz=165						
SMST				eS	Sn	20 57 03.5	+1.1
	baz=165						
WDGT	Dungji	0.92	293	P	Pb	20 56 48.0	-1.2
	baz=294						
WDGT				eS	Sb	20 57 00.9	-0.3
	baz=294						
WJS	Zhushan	0.92	8	eP	Pb	20 56 49.1	-0.1
	baz=354						
WJS				eS	Sn	20 57 02.8	+0.1
	baz=354						
SSLB	Suanglung	0.94	21	iP	Pb	20 56 49.0	-0.6
	baz=21						
SSLB				eS	Sb	20 57 02.2	+0.4
	baz=21						
HGSD	Ruisui	0.97	53	P	Pb	20 56 50.0	-0.1
	baz=46						
HGSD				eS	Sg	20 57 03.7	+0.3
	baz=46						
WNT	Mingjian	0.97	5	P	Pb	20 56 49.9	-0.3
	baz=352						
WNT				eS	Sn	20 57 04.2	+0.3
	baz=352						
TWK1	Hengchun	0.98	168	eP	Pb	20 56 50.4	+0.1
	baz=167						
TWKBT	Hengchun	0.98	168	eP	Pb	20 56 50.0	-0.3
	baz=167						
TWKBT				eS	Sn	20 57 05.1	+0.8
	baz=167						
VWDT	VWDT	0.99	31	eP	Pb	20 56 49.7	-0.7
	baz=31						
VWDT				eS	Sg	20 57 04.0	0.0
	baz=31						
WTCT	Ta-ch'eng	0.99	344	eP	Pb	20 56 49.4	-1.1
	baz=344						
WTCT				eS	Sb	20 57 04.2	+1.0
	baz=344						
WRL	Guolierlin Hig	1.01	349	eP	Pb	20 56 49.8	-0.9
	baz=349						
WRL				eS	Sb	20 57 04.0	+0.3
	baz=349						
SMLT	Sun Moon Lake	1.01	17	eP	Pb	20 56 50.9	-0.1
	baz=16						
SMLT				eS	Sn	20 57 06.1	+1.0
	baz=16						
TYC	Yuchr	1.02	14	eP	Pb	20 56 51.1	+0.1
	baz=14						
TYC				eS	Sn	20 57 05.7	+0.5
	baz=14						
TSEB	Hengchuen, Pin	1.04	164	eP	Pb	20 56 51.6	+0.3
	baz=169						
TSEB				eS	Sg	20 57 06.7	+0.9
	baz=169						
EGFH	Guangfu	1.09	45	eP	Pb	20 56 51.8	-0.3
	baz=35						
EGFH				eS	Sb	20 57 06.5	+0.6
	baz=35						
VCHM	Qimei	1.10	286	eP	Pn	20 56 50.4	-2.0
	baz=288						
PHUB	P'eng-hu	1.11	303	P	Pn	20 56 50.2	-2.2
	baz=317						
PHUB				eS	Sb	20 57 05.2	-1.4
	baz=317						
PNG	Penghu	1.15	305	P	Pn	20 56 51.3	-1.7
	baz=307						
PNG				eS	Sb	20 57 05.9	-1.9
	baz=307						
WCHH	Zhanghua	1.17	359	eP	Pn	20 56 52.7	-0.6
	baz=359						
WCHH				eS	Sn	20 57 09.2	+0.4
	baz=359						
OWD	Renai	1.18	27	P	Pn	20 56 53.6	+0.1
	baz=14						
OWD				eS	Sn	20 57 09.7	+0.5
	baz=14						
WCS	Beigang Elemen	1.19	15	P	Pn	20 56 53.5	0.0
	baz=14						
WCS				eS	Sn	20 57 09.8	+0.6
	baz=14						
WUSB	Renai	1.19	24	P	Pn	20 56 53.2	-0.5
	baz=12						
WUSB				eS	Sb	20 57 09.4	+0.4
	baz=12						
ESL	Shilin	1.19	41	P	Pn	20 56 53.6	-0.1
	baz=40						
ESL				eS	Sg	20 57 10.6	0.0
	baz=40						
TCU	Taichung	1.24	4	P	Pn	20 56 53.9	-0.3
	baz=353						
TCU				eS	Sn	20 57 11.5	+1.0
	baz=353						
LAY	Lan-yu	1.24	134	eP	Pn	20 56 53.1	-1.3
	baz=122						
CHGB	Renai	1.27	25	iP	Pn	20 56 55.1	+0.2
	baz=13						
CHGB				eS	Sn	20 57 12.4	+0.8
	baz=13						
LYUB	Lan-yu	1.29	134	eP	Pn	20 56 52.7	-2.3
	baz=123						
WHF	Hehuan Shan	1.38	27	P	Pn	20 56 57.5	+0.9
	baz=16						
WHF				eS	Sg	20 57 17.4	+0.6
	baz=16						
WHP	Taichung City	1.41	14	P	Pn	20 56 56.6	0.0
	baz=13						
WHP				eS	Sb	20 57 16.5	+1.3
	baz=13						
HWA	Hwalien	1.42	41	eP	Pb	20 56 58.4	+0.6
	baz=33						
HWA				eS	Sg	20 57 17.9	+0.1
	baz=33						
WDJ	Dajia District	1.44	2	eP	Pn	20 56 56.8	-0.2
	baz=2.0						
WDJ				eS	Sb	20 57 17.1	+1.0
	baz=2.0						
TDCB	Techi	1.44	21	P	Pn	20 56 57.4	+0.2
	baz=21						
TDCB				eS	Sn	20 57 15.9	+0.2
	baz=21						
TWQ1	Liyutan	1.45	7	eP	Pn	20 56 57.4	+0.3
	baz=7.0						
TWQ1				eS	Sb	20 57 17.6	+1.3
	baz=7.0						
FUSS	Fushou	1.47	24	eP	Pb	20 56 59.0	+0.3
	baz=24						
FUSS				eS	Sb	20 57 17.9	+0.7
	baz=24						

TWD	Chiawan	1.49	38	eP	Pn	20 56 58.2	+0.5
	baz=38						
TWD				eS	Sb	20 57 17.8	+0.1
	baz=38						
NSY	Sanyi	1.51	6	eP	Pn	20 56 58.6	+0.6
	baz=7.0						
NSY				eS	Sb	20 57 19.0	+0.7
	baz=7.0						
ETLH	Xiulin Townshi	1.54	32	eP	Pn	20 56 59.7	+1.2
	baz=40						
ETLH				eS	Sb	20 57 19.9	+0.9
	baz=40						
NACB	Ninganchiao	1.57	36	eP	Pn	20 56 59.1	+0.4
	baz=36						
NACB				eS	Sb	20 57 20.8	+1.0
	baz=36						
ETL	Fush Village	1.57	37	eP	Pn	20 56 59.7	+0.8
	baz=36						
NMLH	Miaoli	1.64	7	eP	Pb	20 57 01.8	+0.3
	baz=7.0						
NMLH				eS	Sb	20 57 22.8	+1.1
	baz=7.0						
NNSB	Datong	1.68	26	P	Pn	20 57 01.1	+0.6
	baz=13						
NNSB				eS	Sb	20 57 23.2	0.0
	baz=13						
NNS	Nan Shan	1.69	25	P	Pn	20 57 01.5	+0.9
	baz=13						
NNS				eS	Sb	20 57 23.5	+0.1
	baz=13						
NSTT	Nanjuang	1.76	12	eP	Pn	20 57 01.7	+0.2
	baz=355						
LIOB	Emei	1.78	13	eP	Pn	20 57 01.8	+0.1
	baz=356						
NFF	Wufeng Townshi	1.79	16	eP	Pb	20 57 03.6	-0.5
	baz=358						
LATG	Datong	1.84	28	eP	Pn	20 57 03.4	+0.8
	baz=27						
LATG				eS	Sb	20 57 27.4	-0.3
	baz=27						
ENA	Nanau	1.85	35	eP	Pn	20 57 03.4	+0.8
	baz=33						
EWUT	Wuta	1.88	35	eP	Pn	20 57 03.9	+0.8
	baz=34						
NSK	Sanguang	1.90	22	eP	Pn	20 57 04.8	+1.4
	baz=21						
YHNB	Yeheng	1.90	22	eP	Pn	20 57 03.0	-0.4
	baz=21						
ENTT	Nioudou	1.95	27	eP	Pn	20 57 05.8	+1.8
	baz=10.0						
NDS	Dongshan	2.01	31	eP	Pn	20 57 06.7	+1.9
	baz=30						
NDS				eS	Sb	20 57 32.6	+0.1
	baz=30						
NWLT	Wulai	2.04	24	eP	Pb	20 57 08.2	-0.2
	baz=24						
NWLT				eS	Sn	20 57 31.4	+1.0
	baz=24						
TWC	Suao	2.05	34	eP	Pb	20 57 08.2	-0.4
	baz=33						
FUSB	Fushanzhiwuyua	2.06	26	eP	Pn	20 57 07.0	+1.4
	baz=26						
FUSB				eS	Sn	20 57 32.5	+1.5
	baz=26						
TWE	Neicheng	2.06	29	eP	Pn	20 57 07.3	+1.8
	baz=27						
NTC	Toucheng	2.25	30	eP	Pb	20 57 11.2	-0.7
	baz=44						
TWA	Mucha	2.26	24	eP	Pn	20 57 10.4	+2.1
	baz=23						
VWUC	VWUC	2.32	334	eP	Pn	20 57 07.5	-1.7
	baz=335						
TIPB	Shuangxi	2.35	29	eP	Pn	20 57 11.6	+2.1
	baz=9.0						
SXI1	Grass Mountain	2.48	28	eP	Pn	20 57 13.9	+2.5
	baz=10.0						
KNM	Kinmen	2.48	308	eP	Pn	20 57 11.0	-0.3
	baz=309						
PTMZ	Houxiangcun	2.51	328	eP	Pn	20 57 09.8	-1.9
	baz=343						
KNMB	Chin-men Tao	2.54	308	eP	Pn	20 57 10.3	-1.8
	baz=311						
JYNG	Yonagunijimaku	2.66	54	P	Pn	20 57 15.3	+1.5
YOJ	Yonaguni jima	2.71	55	eP	Pn	20 57 15.3	+0.9
	baz=53						
YOJ	Yonaguni jima	2.71	55	eP	Pn	20 57 15.9	+1.4
YOJ				S	Sn	20 57 48.6	+1.7
HATJ	Hateruma jima	3.17	68	eP	Pn	20 57 21.9	+1.0
HATJ				eS	Sn	20 57 59.1	+0.9
IRIF	Iriomote-Funau	3.22	63	eP	Pn	20 57 22.5	+1.1
IRIF				eS	Sn	20 58 01.3	+1.9
JKRS	Kuro-shima	3.41	66	P	Pn	20 57 25.9	+1.8
JKRS				eS	Sn	20 58 05.5	+1.4
MHZQ	Yeshan	3.48	336	eP	Pn	20 57 23.7	-1.4
	baz=337						
JIJ	Ishigaki jima	3.57	65	P	Pn	20 57 25.7	-0.7
JIJ				eS	Sn	20 58 07.8	-0.3
LYJJ	Jianjiangzhen	3.70	349	eP	Pn	20 57 26.5	-1.6
	baz=348						
JISG	Ishigakijimahi	3.80	63	eS	Sn	20 58 14.0	+0.2
JTJ	Tarama	4.15	65	eS	Sn	20 58 23.4	+1.1

IDC 21 21:07:08.4±4.9**,6°.50S×147°.65E,h0^{km},mb3.1**/2,
mbtmp3.1/3**,ML2.7**/1**,Error ellipse: s-maj=144.3km**
s-min=38.4km az=104.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.59	223	P	P	21 11 26.4	-0.9
	baz=47,slow=11,SNR=1.5						
	0.5nm,1.1s						
ASAR	Alice Springs	21.59	216	P	P	21 12 00.2	+0.2
	0.3nm,0.9s,baz=51,slow=8.5,SNR=4.4						
	0.3nm,0.9s						
MKAR	Makanchi Array	78.29	320	P	P	21 19 10.7	+0.2
	0.4nm,0.8s,baz=116,slow=6.6,SNR=2.9						
	0.4nm,0.8s						

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*DSN **21** 21:14:24.3±1.9,26°.63N×58°.02E,h10^{km},ML3.3/10,Error ellipse: s-maj=26.1km s-min=12.4km az=175.0*
*TEH **21** 21:14:26.6,26°.72N×57°.72E,h9^{km},ML3.7*
*IDC **21** 21:14:29.4±3.0,26°.85N×57°.00E,h0^{km},mb3.5/6, mbtmp3.5/6,MS3.7/1,Error ellipse: s-maj=62.1km s-min=34.4km az=154.0*
*OMAN **21** 21:14:30.2±0.1,26°.61N×57°.99E,h40^{km}±18^{km},mb4.4/1, ml3.5/17,Error ellipse: s-maj=2.5km s-min=1.4km az=343.0*
ISC 21 21:14:26.6±1.5**,26°.68N**±0°.03×**57°.80E**±0°.04**,h12**^{km}±10^{km},
n69,σ**1^{s}61**/91**,mb3.5**/6**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JASK	Jask - Hormozg	0.81	176	ePg	Pb	21 14 43.5	+0.9
JASK				eSg	Sb	21 14 56.0	+2.5
JASK				e		21 15 13.3	
	comp=Z,48µm,0.5s						
KHNJ	Kahnooj	1.26	356	ePg	Pn	21 14 49.3	-0.8
KHNJ				eSg	Sn	21 15 06.6	-0.4
IBND	Bandar-abas	1.36	305	ePg	Pg	21 14 52.3	-0.3
IBND				e		21 15 22.1	
	comp=Z,17µm,0.4s						
BANOM	Banah	1.54	241	ePn	Pn	21 14 53.8	-0.1
BANOM	Banah	1.54	241	P	Pb	21 14 55.1	0.0
	SNR=24						
BANOM				S	Sg	21 15 17.4	+1.2
	SNR=8.0						
BANOM	Banah	1.54	241	P	Pn	21 14 53.7	-0.1
BANOM				S	Sg	21 15 15.9	-0.3
SHME	Shamm	1.61	247	ePn	Pb	21 14 55.7	-0.5
SHME	Shamm	1.61	247	P	Pb	21 14 56.0	-0.2
	SNR=42						
SHME				S	Sg	21 15 18.1	-0.4
SHME	Shamm	1.61	247	P	Pb	21 14 55.3	-0.9
SHME				S	Sg	21 15 19.1	+0.6
GENO	Geno	1.62	297	ePg	Pg	21 14 56.7	-0.9
GENO				e		21 15 25.1	
	comp=Z,13µm,0.5s						
MASF	Masafi	1.97	229	P	Pn	21 14 58.7	-1.0
MASF				S	Sb	21 15 27.2	+0.4
MSFE	Esma-Masafi	1.98	229	ePn	Pn	21 14 58.5	-1.3
MSFE	Esma-Masafi	1.98	229	P	Pn	21 14 58.7	-1.1
MSFE				S	Sb	21 15 27.0	0.0
UOSS	Minazif	2.25	220	ePn	Pn	21 15 01.6	-1.9
UOSS	Minazif	2.25	220	P	Pn	21 15 01.8	-1.8
UOSS				S	Sb	21 15 33.3	-1.5
UOSS	Minazif	2.25	220	P	Pn	21 15 01.3	-2.2
HATD	Hatta, Dubai	2.38	219	ePn	Pn	21 15 03.9	-1.5
HATD	Hatta, Dubai	2.38	219	P	Pn	21 15 07.2	+1.8
HATD				S	Sn	21 15 35.9	+1.4
HATD	Hatta, Dubai	2.38	219	P	Pn	21 15 04.8	-0.5
KBAM	BAM	2.51	13	e		21 15 24.9	
	comp=Z,2µm,0.4s						
KBAM				ePn	Pb	21 15 09.7	-2.0
ASHO	Ashiyiah	2.53	219	ePn	Pn	21 15 07.5	0.0
ASHO	Ashiyiah	2.53	219	P	Pn	21 15 09.8	+2.3
	SNR=13						
ASHO				S	Sb	21 15 43.6	+0.5
ASHO	Ashiyiah	2.53	219	P	Pn	21 15 08.0	+0.5
NAZ	Nazwa, Dubai	2.56	229	ePn	Pn	21 15 10.0	+2.2
NAZ	Nazwa, Dubai	2.56	229	P	Pn	21 15 09.5	+1.7
FAQ	Al Faqa, Dubai	2.77	226	ePn	Pn	21 15 12.2	+1.5
FAQ	Al Faqa, Dubai	2.77	226	P	Pb	21 15 17.0	+1.0
FAQ				S	Sb	21 15 50.2	+0.3
FAQ	Al Faqa, Dubai	2.77	226	P	Pn	21 15 08.4	-2.4
ASUD	Al Ashush, Dub	3.02	228	ePn	Pn	21 15 16.2	+2.0
ASUD	Al Ashush, Dub	3.02	228	P	Pn	21 15 16.5	+2.2
	SNR=10						
ASUD				S	Sb	21 15 55.8	-1.4
ASUD	Al Ashush, Dub	3.02	228	P	Pn	21 15 15.1	+0.9
NGRK	Negar Kerman	3.10	343	ePn	Pn	21 15 17.9	+2.3
NGRK				e		21 16 14.7	
	comp=Z,2µm,0.9s						
HOQ	Hoqain	3.12	188	P	Pn	21 15 14.0	-1.5
	SNR=14						
HOQ				S	Sn	21 15 51.1	-1.6
BIDO	Bidbid	3.16	174	ePn	Pn	21 15 16.2	+0.1
BIDO	Bidbid	3.16	174	P	Pn	21 15 16.4	+0.3
	SNR=6.5						
BIDO				S	Sn	21 15 53.4	-0.3
ALNE	Al Ain	3.20	216	ePn	Pn	21 15 18.1	+1.4
ALNE	Al Ain	3.20	216	P	Pn	21 15 18.5	+1.8
ALNE				S	Sn	21 15 57.6	+2.8
LAR1	LAR	3.20	289	ePn	Pn	21 15 17.2	+0.4
LAR1				e		21 16 28.0	
	comp=Z,3µm,0.5s						
AJN	Ajban	3.30	231	ePn	Pn	21 15 19.6	+1.6
TVBK	TV Kerman	3.42	345	ePn	Pn	21 15 21.9	+2.0
TVBK				e		21 16 32.2	
	comp=Z,2µm,0.6s						
ARQ	Araqi	3.52	199	P	Pn	21 15 22.6	+1.4
	SNR=35						
ARQ				S	Sn	21 16 05.9	+3.1
SMDO	Samad	3.61	176	P	Pn	21 15 23.5	+1.1
	SNR=7.9						
SMDO				S	Sn	21 16 02.6	-2.4
ZHDN	Zahedan	3.80	44	ePn	Pn	21 15 27.6	+2.6
KHGB	Koh Gabri	3.86	343	ePn	Pn	21 15 28.4	+2.5
KHGB				e		21 16 40.4	
	comp=Z,908nm,1.0s						
BSY	Bisya	3.96	188	P	Pn	21 15 28.4	+1.3
BSY				S	Sn	21 16 16.5	+3.0
SRVN	Saravan	4.17	79	ePn	Pn	21 15 33.7	+3.6
WBK	Wadi Bani Khal	4.19	165	P	Pn	21 15 31.0	+0.7
	SNR=20						
WBK				S	Sn	21 16 16.3	-2.9
JMDO	Jabal Madar	4.30	176	P	Pn	21 15 33.6	+1.8
JMDO				S	Sn	21 16 20.6	-1.3
UMZA	Um Al Zommool	4.62	212	ePn	Pn	21 15 35.9	-0.3
UMZA	Um Al Zommool	4.62	212	P	Pn	21 15 35.8	-0.4
UMZA				S	Sn	21 16 28.8	-0.9
JLN	Jalan Bani Buh	4.74	162	P	Pn	21 15 38.1	+0.3
JLN				S	Sn	21 16 30.6	-2.2
NHDN	Nehbandan	5.09	22	ePn	Pn	21 15 45.2	+2.4
MZR	Muzera	5.37	228	ePn	Pn	21 15 46.9	+0.5
MZR	Muzera	5.37	228	P	Pn	21 15 46.0	-0.4
IMEH	Mehriz	5.46	330	ePn	Pn	21 15 50.9	+3.0
MHTO	MHTO	5.67	178	P	Pn	21 15 51.5	+0.9
MHTO				S	Sn	21 16 53.7	-1.9
TPRV	Parvadeh(Tabas	6.40	352	ePn	Pn	21 16 03.6	+2.9
KLNJ	Kolanjah	6.94	310	ePn	Pn	21 16 08.8	+0.4
IRAM	Ramesheh	6.96	318	ePn	Pn	21 16 09.6	+1.0
IGAR	Gharneh	7.59	320	ePn	Pn	21 16 19.9	+2.7
IBRJ	Brojen	7.72	314	ePn	Pn	21 16 20.5	+1.4
IPIR	Pirpir	8.47	317	ePn	Pn	21 16 31.7	+2.3
BRTR	Keskin Array B	23.95	309	P	P	21 19 40.2	-0.6
	comp=Z,0.7nm,0.7s,baz=128,slow=9.5,SNR=4.9						
	comp=Z,0.7nm,0.7s						
MKAR	Makanchi Array	27.88	38	P	P	21 20 24.2	+8.0
	comp=Z,0.3nm,0.7s,baz=242,slow=9.0,SNR=2.0						
	comp=Z,0.3nm,0.7s						
AKASG	Malin Array Be	32.40	325	P	P	21 20 56.2	+0.2
	comp=Z,0.7nm,0.6s,baz=131,slow=8.1,SNR=1.8						
	comp=Z,0.7nm,0.6s						
GERES	GERESS Array B	40.55	315	P	P	21 22 05.1	-0.6
	comp=Z,0.3nm,0.6s,baz=95,slow=12,SNR=2.1						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	40.77	337	P	P	21 22 07.0	-0.1
	comp=Z,0.9nm,0.8s,baz=134,slow=9.8,SNR=1.4						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	54.05	267	P	P	21 23 50.8	-0.5
	comp=Z,0.4nm,0.5s,baz=63,slow=7.4,SNR=6.7						
	comp=Z,0.4nm,0.5s						
TSUM	Tsumeb	60.02	225	LR	LR	21 53 30.3	
	comp=Z,67nm,20.3s,baz=147,slow=39						

IDC 21 21:20:45.2±1.7**,4°.63N×123°.83E,h0^{km},mb3.6**/4,
mbtmp3.6/4**,Error ellipse: s-maj=253.8km**
s-min=21.7km az=65.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.51	157	P	P	21 26 25.3	+0.6
	0.5nm,0.3s,baz=336,slow=9.6,SNR=22						
	0.5nm,0.3s						
ASAR	Alice Springs	29.79	161	P	P	21 26 53.3	-0.7
	0.4nm,0.5s,baz=336,slow=7.8,SNR=14						
	0.4nm,0.5s						
MKAR	Makanchi Array	55.19	326	P	P	21 30 20.4	+0.6
	0.3nm,0.5s,baz=127,slow=7.6,SNR=6.0						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	58.50	334	P	P	21 30 42.2	-0.9
	0.3nm,0.4s,baz=116,slow=6.6,SNR=1.7						
	0.3nm,0.4s						

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*WEL **21** 21:43:45.6±0.5,42°S±3°×17°1E±°,h5^{km},M3.6/14, ML3.7/15,MLv3.6/14,Error ellipse: s-maj=0.0km s-min=0.0km az=112.6*
*NOU **21** 21:43:46.4,42°.32S×171°.24E,h17^{km},MLv4.2/8,South Island, New Zealand*
ISC 21 21:43:46.3±0.9**,42°.36S**±0°.03×**171°.39E**±0°.04**,h14**^{km}**,n73,**
σ**0^{s}97**/76**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.36	174	P	Pg	21 43 54.1	+0.4
INZ				S	Sg	21 43 59.0	+0.3
DSZ	Denniston Nort	0.69	27	P	Pg	21 43 59.3	-0.5
DSZ				S	Sg	21 44 08.0	-0.9
LTZ	Lake Taylor	0.77	123	P	Pg	21 44 01.1	-0.2
WVZ	Waitaha Valley	0.86	214	P	Pb	21 44 03.3	+0.3
WVZ				S	Sb	21 44 15.0	+0.6
OXZ	Oxford	1.07	154	P	Pb	21 44 06.2	-0.4
OXZ				S	Sb	21 44 21.1	+0.5
GCSZ	Gaunt Creek Bo	1.23	219	P	Pn	21 44 08.7	-0.4
AMCZ	Amberley	1.23	132	P	Pn	21 44 08.7	-0.4
THZ	Tophouse	1.28	62	P	Pn	21 44 08.7	-1.1
GVZ	Greta Valley S	1.35	117	P	Pn	21 44 10.4	-0.4
RPZ	Rata Peaks	1.37	190	P	Pn	21 44 11.4	+0.3
RPZ	Rata Peaks	1.37	190	P	Pn	21 44 11.6	+0.5
MRNZ	Matariki Terra	1.40	47	P	Pn	21 44 10.6	-0.9
RACZ	Rakaia	1.47	158	P	Pn	21 44 11.6	-0.7
ARCZ	Arundel	1.59	186	P	Pn	21 44 13.9	-0.2
KHZ	Kahutara	1.59	93	P	Pn	21 44 14.4	+0.4
KHZ	Kahutara	1.59	93	P	Pn	21 44 14.6	+0.6
WACZ	Wakanui South	1.61	168	P	Pn	21 44 14.0	-0.3
MQZ	McQueen’s Vall	1.63	146	P	Pn	21 44 13.3	-1.3
FOZ	Fox Glacier	1.64	224	P	Pn	21 44 14.8	0.0
QRZ	Quartz Range	1.76	29	P	Pn	21 44 15.6	-0.7
QRZ	Quartz Range	1.76	29	P	Pn	21 44 15.7	-0.7
TKNZ	Takaka Hill	1.77	42	P	Pn	21 44 16.2	-0.4
AKCZ	Akaroa Harbour	1.87	144	P	Pn	21 44 17.0	-0.9
NNZ	Nelson	1.88	53	P	Pn	21 44 17.6	-0.3
BSWZ	Blackbirch Sta	1.96	72	P	Pn	21 44 20.3	+1.2
TMZ	Timaru	2.04	188	P	Pn	21 44 20.0	-0.2
TUWZ	Tuamarina	2.12	65	P	Pn	21 44 21.4	+0.1
LBZ	Lake Benmore	2.20	203	P	Pn	21 44 22.5	0.0
TCW	Tory Channel	2.45	63	P	Pn	21 44 26.6	+0.8
DUWZ	D’Urville Isla	2.46	51	P	Pn	21 44 26.3	+0.3
JCZ	Jackson Bay	2.56	227	P	Pn	21 44 26.6	-0.8
SNZO	South Karori	2.69	68	P	Pn	21 44 30.8	+1.7
ODZ	Otahua Downs	2.73	191	P	Pn	21 44 29.0	-0.7
ODZ	Otahua Downs	2.73	191	P	Pn	21 44 29.3	-0.4
WKZ	Wanaka	3.00	214	P	Pn	21 44 33.1	-0.4
CAW	Cannon Point	3.02	67	P	Pn	21 44 33.0	-0.7
KIW	Kapiti Island	3.04	62	P	Pn	21 44 34.0	+0.1
OGWZ	Otaki Gorge	3.23	63	P	Pn	21 44 38.2	+1.6
EAZ	Earnscleugh	3.24	207	P	Pn	21 44 35.5	-1.2
MTW	Mount Morrison	3.30	70	P	Pn	21 44 35.7	-1.9
HOWZ	Holdsworth Sta	3.42	66	P	Pn	21 44 38.5	-0.7
MRZ	Mangatainoka R	3.58	63	P	Pn	21 44 40.1	-1.3
KHEZ	Kahui Hut	3.66	34	P	Pn	21 44 43.0	+0.5
LREZ	Lake Rotokare	3.69	39	P	Pn	21 44 42.9	0.0
NEZ	North Egmont	3.71	34	P	Pn	21 44 44.1	+0.9
PKE	Pukeiti	3.73	33	P	Pn	21 44 44.2	+0.7
WAZ	Wanganui	3.77	47	P	Pn	21 44 45.4	+1.4
TUZ	Tuapeka	3.81	199	P	Pn	21 44 43.9	-0.6
MLZ	Mavora Lakes	3.82	217	P	Pn	21 44 44.4	-0.3
BFZ	Birch Farm	4.01	67	P	Pn	21 44 48.8	+1.4
VRZ	Vera Road	4.12	39	P	Pn	21 44 49.5	+0.7
TSZ	Takapari Road	4.15	58	P	Pn	21 44 47.8	-1.4
PKVZ	Pokaka	4.29	46	P	Pn	21 44 51.9	+0.6
PNHZ	Pukenui	4.38	58	P	Pn	21 44 57.9	+5.5
WNVZ	Wahianoa	4.40	48	P	Pn	21 44 54.2	+1.4
FWVZ	Far West T-bar	4.43	47	P	Pn	21 44 54.6	+1.3
MOVZ	Moawhango	4.43	50	P	Pn	21 44 54.4	+1.2
TWVZ	Taurewa	4.50	44	P	Pn	21 44 54.7	+0.5
NGZ	Ngauruhoe	4.51	46	P	Pn	21 44 55.4	+1.1
SNVZ	South Ngauruho	4.53	47	P	Pn	21 44 56.5	+2.0
WTVZ	West Tongariro	4.55	46	P	Pn	21 44 56.2	+1.3
NNVZ	North Ngauruho	4.55	46	P	Pn	21 44 56.3	+1.4
BHHZ	Black Hill Sta	4.56	52	P	Pn	21 44 54.1	-0.8
ETVZ	East Tongariro	4.60	47	P	Pn	21 44 56.8	+1.3
TMVZ	Te Maari	4.61	47	P	Pn	21 44 57.7	+2.1
KRHZ	Kereru	4.64	56	P	Pn	21 44 59.3	+3.3
HIZ	Hauiti	4.67	36	P	Pn	21 44 56.3	-0.1
HIZ	Hauiti	4.67	36	P	Pn	21 44 57.0	+0.7
BKZ	Black Stump Fm	5.02	52	P	Pn	21 45 01.5	+0.2
TLZ	Tolley Road	5.13	40	P	Pn	21 45 02.6	-0.1
TOZ	Tahuroa Road	5.60	36	P	Pn	21 45 08.9	-0.2
MKAZ	Moumakai	6.00	30	P	Pn	21 45 15.1	+0.5
WIAZ	Waiheke Island	6.27	29	P	Pn	21 45 19.1	+0.8

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*IDC **21** 21:43:56.7±1.3,6°.91N×73°.08W,h156^{km}±13^{km},mb3.0/3, mbtmp3.6/5,MS2.6/1,Error ellipse: s-maj=30.5km s-min=14.2km az=136.0*
*RSNC **21** 21:43:57.5±0.8,6°.82N×73°.13W,h149^{km}±3^{km},ML3.5, Mw3.9,Fault plane solution: NP1:ϕ_s82.00000°, δ47.00000°,λ-88.00000°.*
ISC 21 21:43:56.3±0.8**,6°.81N**±0°.03×**73°.09W**±0°.04**,h155**^{km}±6^{km},
n43,σ**1^{s}24**/75**,mb3.3**/3**,2C-6D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	204	⇓iP	Pn	21 44 17.7	0.0
BARC				i		21 44 33.9	
	comp=Z,495nm,0.4s						
PAMC	Pamplona, Colo	0.65	36	⇓iP	Pn	21 44 20.5	+0.9
PAMC				eS	Sn	21 44 37.3	-0.3
PAMC				i		21 44 39.6	
	comp=Z,1µm,0.5s						
BRRC	Barranca, Sant	0.69	296	⇓iP	Pn	21 44 19.6	+0.3
BRRC				eS	Sn	21 44 36.4	-0.5
BRRC				i		21 44 39.6	
	comp=Z,286nm,0.4s						
RUSC	La Rusia	0.91	180	⇓eP	Pn	21 44 21.6	+0.2
RUSC				eS	Sn	21 44 40.4	-0.2
RUSC				i		21 44 41.2	
	comp=Z,450nm,0.3s						
TAMC	Tame, Arauca	1.34	106	⇓iP	Pn	21 44 26.0	+1.3
TAMC				eS	Sn	21 44 47.4	+0.9
PTBC	PUERTO BERRIO,	1.39	259	eP	Pn	21 44 24.2	-0.9
PTBC				eS	Sn	21 44 46.2	-1.0
PTBC				i		21 44 48.6	
	comp=Z,278nm,0.5s						
OCAC	Ocana	1.44	351	eP	Pn	21 44 25.9	+0.1
OCAC				eS	Sn	21 44 47.5	-1.1
OCAC				i		21 44 51.1	
	comp=Z,847nm,0.3s						
SPBC	San Pablo de B	1.51	221	eP	Pn	21 44 26.6	+0.2
SPBC				eS	Sn	21 44 48.9	-0.8
SPBC				i		21 44 51.1	
	comp=Z,412nm,0.3s						
ZARC	Zaragoza, Cauc	1.88	291	eP	Pn	21 44 30.8	+0.4
ZARC				eS	Sn	21 44 57.1	+0.4
ZARC				i		21 45 01.8	
	comp=Z,263nm,0.3s						
NORC	Norcasia	2.16	235	⇓eP	Pn	21 44 34.3	+0.7
NORC				eS	Sn	21 45 01.3	-1.1
NORC				i		21 45 06.8	
	comp=Z,157nm,0.4s						
CHIC	Chingaza	2.26	197	eP	Pn	21 44 36.0	+0.8
CHIC				eS	Sn	21 45 05.0	-0.1
CHIC				i		21 45 08.6	
	comp=Z,115nm,0.5s						
ROSC	El Rosal	2.31	212	P	Pn	21 44 37.4	+1.6
	comp=Z,154nm,0.3s,baz=52,slow=18,SNR=69						
ROSC				S	Sn	21 45 05.0	-1.1
	comp=Z,303nm,0.5s,baz=116,slow=20,SNR=12						
ROSC	El Rosal	2.31	212	⇑eP	Pn	21 44 37.5	+1.8
ROSC				eS	Sn	21 45 06.3	+0.2
ROSC				i		21 45 12.4	
	comp=Z,271nm,0.5s						
HELC	Santa Helena	2.50	256	eP	Pn	21 44 39.6	+1.5
HELC				eS	Sn	21 45 09.8	-0.4
HELC				i		21 45 17.0	
	comp=Z,157nm,0.4s						
UREC	San Jos de Ur	2.60	291	eP	Pn	21 44 37.9	-1.0
UREC				i		21 45 26.1	
	comp=Z,95nm,0.3s						
VILC	Villavicencio,	2.74	193	eP	Pn	21 44 41.1	+0.3
VILC				eS	Sn	21 45 15.0	-0.3
LL1C	La Loma 1 Cana	2.76	350	eP	Pn	21 44 42.7	+1.8
LL1C				eS	Sn	21 45 16.9	+1.5
LL1C				i		21 45 30.3	
	comp=Z,324nm,0.4s						
PTGC	Puerto Gaitan,	2.76	160	⇑eP	Pn	21 44 41.0	+0.1
PTGC				eS	Sn	21 45 13.9	-1.5
PTGC				i		21 45 16.5	
	comp=Z,275nm,0.3s						
LL6C	La Loma 6 Bece	2.92	356	eP	Pn	21 44 42.6	-0.3
LL6C				eS	Sn	21 45 18.2	-0.7
LL6C				i		21 45 19.4	
	comp=Z,65nm,0.4s						
CBOC	Ciudad Bolivar	3.05	252	eP	Pn	21 44 46.2	+1.5
CBOC				eS	Sn	21 45 22.2	0.0
CBOC				i		21 45 25.4	
	comp=Z,60nm,0.7s						
SDV	Santo Domingo	3.19	49	P	Pn	21 44 47.1	+0.7
	comp=Z,48nm,0.3s,baz=236,slow=10,SNR=31						
SDV				S	Sn	21 45 24.1	-1.2
	comp=Z,171nm,0.6s,baz=250,slow=21,SNR=39						
SDV	Santo Domingo	3.19	49	eP	Pn	21 44 47.5	+1.0
SDV				eS	Sn	21 45 24.5	-0.9
SDV				i		21 45 29.4	
	comp=Z,138nm,0.7s						
ARGC	Ariguani, Magd	3.24	339	eP	Pn	21 44 49.2	+2.3
ARGC				eS	Sn	21 45 27.5	+1.2
ARGC				i		21 45 35.0	
	comp=Z,50nm,0.4s						
ANIL	Santa Ana	3.26	225	eP	Pn	21 44 49.3	+1.9
ANIL				eS	Sn	21 45 27.7	+0.7
ANIL				i		21 45 33.8	
	comp=Z,304nm,0.3s						
PRAC	Prado	3.56	210	eP	Pn	21 44 51.1	+0.1
PRAC				eS	Sn	21 45 34.2	+0.7
PRAC				i		21 45 42.2	
	comp=Z,82nm,0.4s						
ORTC	Ortega, Tolima	3.59	217	eP	Pn	21 44 52.5	+1.0
ORTC				eS	Sn	21 45 36.1	+1.7
ORTC				i		21 45 40.8	
	comp=Z,109nm,0.5s						
PLMC	San Jos del P	3.70	239	eP	Pn	21 44 53.9	+1.0
PLMC				eS	Sn	21 45 36.3	-0.5
PLMC				i		21 45 42.6	
	comp=Z,94nm,0.4s						

SJCC	San Jacinto, C	3.70	326	eP	Pn	21 44 52.5	-0.4
SJCC				eS	Sn	21 45 33.6	-3.3
SJCC				i		21 45 37.4	
	comp=Z,128nm,0.5s						
CRJC	Cerrejon, Guaj	4.19	3	eP	Pn	21 44 58.3	-1.0
CRJC				eS	Sn	21 45 45.5	-2.9
CRJC				i		21 45 50.3	
	comp=Z,60nm,0.6s						
GUVC	San Jose del G	4.26	174	eP	Pn	21 45 00.6	+0.4
GUVC				eS	Sn	21 45 49.0	-0.9
GUVC				i		21 45 53.8	
	comp=Z,106nm,0.3s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	21 45 00.6	0.0
YOTC				eS	Sn	21 45 50.6	0.0
SMRC	Santa Marta, M	4.47	346	eP	Pn	21 45 02.8	-0.1
SMRC				eS	Sn	21 45 51.6	-3.3
SMRC				i		21 45 57.3	
	comp=Z,26nm,0.7s						
MACC	Macarena, Meta	4.69	189	eP	Pn	21 45 03.9	-1.9
MACC				eS	Sn	21 45 57.7	-2.4
MACC				i		21 46 03.4	
	comp=Z,29nm,0.4s						
BETC	Betania	4.72	210	eP	Pn	21 45 06.4	+0.1
BETC				eS	Sn	21 45 59.4	-1.4
BETC				i		21 46 21.9	
	comp=Z,26nm,0.5s						
GARC	Garzon, Huila	5.18	208	eP	Pn	21 45 12.3	-0.1
GARC				eS	Sn	21 46 08.8	-3.1
FLOC	Florencia	5.79	206	eP	Pn	21 45 21.2	+0.9
FLOC				i		21 46 31.5	
	comp=Z,12nm,0.7s						
SOTA	Rioblanco	5.82	217	eP	Pn	21 45 22.8	+1.7
SOTA				i		21 46 41.3	
	comp=Z,14nm,0.6s						
MDP	Montagnes des	20.41	94	LR	LR	21 57 10.2	
	comp=Z,16nm,19.4s,baz=184,slow=39						
TXAR	Lajitas Array	36.50	312	P	P	21 50 46.6	-0.3
	comp=Z,0.4nm,0.7s,baz=128,slow=8.1,SNR=5.9						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	63.29	340	P	P	21 54 08.3	+0.1
	comp=Z,0.3nm,0.6s,baz=132,slow=6.5,SNR=2.5						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	73.71	78	P	P	21 55 14.5	+0.7
	comp=Z,0.4nm,1.0s,baz=270,slow=4.1,SNR=1.3						
	comp=Z,0.4nm,1.0s						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	22 03 26.9	-0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=3.6,SNR=6.8						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	22 03 30.2	0.0
	comp=Z,0.4nm,0.4s,baz=106,slow=2.8,SNR=12						

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*NDI **21** 21:57:38.2±2.0, 23°.92N×94°.55E, h80^{km}, ML3.8, mb4.0(NEIC)*

*NEIC **21** 21:57:39.4±1.6, 23°.9N±0°.1×94°.6E±0°.1, h84^{km}±8^{km}, mb4.0/20, Error ellipse: s-maj=25.7km s-min=11.2km az=223.0*

*IDC **21** 21:57:39.4±2.5, 23°.81N×94°.51E, h95^{km}±23^{km}, mb3.5/13, mbtmp3.8/14, Error ellipse: s-maj=39.3km s-min=12.8km az=56.0*

ISC 21 21:57:39.7±0.6, **23°.94N**±0°.07×**94°.46E**±0°.06, **h96**^{km}, **n52**, σ1.^{s}**69**/64, **mb3.9**/22, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZL	Aizawl	1.63	263	eP	Pn	21 58 06.7	-0.9
AZL				eS	Sn	21 58 28.4	-0.2
AZL				IAML		21 58 29.9	
	comp=E,702nm,0.3s						
AZL				IAML		21 58 30.5	
	comp=N,487nm,0.5s						
SHL	Shillong	2.85	305	Pn	Pn	21 58 22.9	-0.7
SHL				Sn	Sn	21 58 53.7	-3.6
SHL	Shillong	2.85	305	eP	Pn	21 58 22.9	-0.7
SHL				eS	Sn	21 58 53.8	-3.4
SHL				IAML		21 58 54.6	
	comp=E,439nm,0.1s						
SHL				IAML		21 58 56.6	
	comp=E,450nm,0.1s						
TEZP	TEZPUR	3.06	331	eP	Pn	21 58 24.5	-1.8
ITAN	ITANAGAR	3.26	348	eP	Pn	21 58 27.4	-1.5
ITAN				eS	Sn	21 59 05.0	-1.9
ITAN				IAML		21 59 19.6	
	comp=N,430nm,0.1s						
GUWA	GUWAHATI	3.37	312	eP	Pn	21 58 28.8	-1.5
GUWA				eS	Sn	21 59 06.7	-2.8
GUWA				IAML		21 59 07.4	
	comp=E,325nm,0.2s						
GUWA				IAML		21 59 07.6	
	comp=N,281nm,0.3s						
TURI	Tura	4.08	294	eP	Pn	21 58 39.8	-0.2
TURI				eS	Sn	21 59 25.5	-1.1
TURI				IAML		21 59 27.8	
	comp=E,1µm,0.2s						
TURI				IAML		21 59 28.5	
	comp=N,1µm,0.1s						
GTK	Tadong	6.27	304	eP	Pn	21 59 10.8	+1.1
GTK				eS	Sn	22 00 17.6	-2.4
LSA	Lhasa	6.46	333	Pn	Pn	21 59 13.3	+0.7
CHTO	Chiang Mai	6.59	140	Pn	Pn	21 59 12.1	-2.0
CMAR	Chiang Mai Arr	6.87	142	P	Pn	21 59 16.1	-1.8
	comp=N,1.3nm,0.3s,baz=317,slow=13,SNR=8.3						
RAMN	Ramite	7.71	295	eP	Pn	21 59 29.3	-0.2
	comp=N,18nm,0.3s						
PKI	Pulchoki	8.92	296	eP	Pn	21 59 45.5	-0.6
	comp=N,7.0nm,0.3s						
PKI				eS	Sn	22 01 21.4	-3.7
PKIN	Phulchoki	8.94	296	eP	Pn	21 59 45.8	-0.4
	comp=N,12nm,0.3s						
PKIN				eS	Sn	22 01 21.6	-3.7
DMN	Daman	9.19	295	eP	Pn	21 59 49.1	-0.6
	comp=N,3.7nm,0.2s						
DMN				eS	Sn	22 01 27.9	-3.5
GKN	Gorkha	9.72	297	eP	Pn	21 59 55.6	-1.2
	comp=N,28nm,0.3s						
GKN				eS	Sn	22 01 39.7	-4.5
DANN	Dangsing	10.57	297	eP	Pn	22 00 07.3	-1.2
	comp=N,4.5nm,0.2s						
TARG	Taragay, Kyrgy	22.53	326	P	P	22 02 33.4	+1.4
TARG				IAmb	IAmb	22 02 43.1	
	comp=Z,7.4nm,1.4s						
KDJ	Kajisay	23.14	326	P	P	22 02 39.0	+1.2
BOOM	Boomskoye usch	24.04	325	P	P	22 02 47.8	+1.7
MK31	Makanchi Array	24.81	340	P	P	22 02 53.8	+1.0
MK31				IAmb	IAmb	22 02 54.8	
	comp=Z,3.9nm,0.6s						
MKAR	Makanchi Array	24.81	340	P	P	22 02 54.4	+1.5
	comp=Z,5.1nm,0.5s,baz=151,slow=9.3,SNR=96						
	comp=Z,5.1nm,0.5s						
AAK	Ala-Archa	24.92	323	P	P	22 02 54.5	+0.5
	comp=Z,1.4nm,0.5s,baz=117,slow=7.4,SNR=5.2						
	comp=Z,1.4nm,0.5s						
AAK	Ala-Archa	24.92	323	P	P	22 02 55.1	+1.0
GAR	Garm	25.38	312	P	P	22 02 59.4	+1.2
BTK	Batken	25.58	315	P	P	22 03 01.7	+1.8
BTK				IAmb	IAmb	22 03 02.6	
	comp=Z,2.5nm,0.6s						
SONM	Songino Array	25.67	19	P	P	22 03 01.3	+0.6
	comp=Z,0.2nm,0.4s,baz=198,slow=8.7,SNR=2.1						
	comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	29.37	339	P	P	22 03 34.6	+1.1
	comp=Z,1.4nm,0.6s,baz=149,slow=9.9,SNR=10						
KURBB				ScP	ScP	22 10 10.7	+0.1
	comp=Z,0.4nm,0.5s,baz=143,slow=2.9,SNR=8.1						
	comp=Z,1.4nm,0.6s						
KURK	Kurchatov	29.42	339	P	P	22 03 35.0	+1.0
KURK				IAmb	IAmb	22 03 35.8	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	30.84	349	P	P	22 03 47.1	+0.6
	comp=Z,0.3nm,0.3s,baz=191,slow=14,SNR=2.5						
	comp=Z,0.3nm,0.3s						
GEYT	Alibeck	33.92	303	P	P	22 04 16.4	+2.6
GEYT				IAmb	IAmb	22 04 23.3	
	comp=Z,2.0nm,0.8s						
GYA0B	ALIBECK ARRAY	33.92	303	P	P	22 04 16.1	+2.3
BRVK	Borovoye	34.36	334	P	P	22 04 18.2	+1.0
BRVK				IAmb	IAmb	22 04 25.0	
	comp=Z,1.3nm,0.8s						
ABKAR	Akbulak array	36.99	322	P	P	22 04 41.4	+1.6
ABKAR				IAmb	IAmb	22 04 41.8	
	comp=Z,1.6nm,0.5s						
ABKAR	Akbulak array	36.99	322	P	P	22 04 41.3	+1.6
ARU	Arti	41.65	331	P	P	22 05 19.6	+1.2
	comp=Z,0.7nm,0.3s,baz=32,slow=23,SNR=4.3						
	comp=Z,0.7nm,0.3s						
ARU	Arti	41.65	331	P	P	22 05 19.4	+1.0
ARU				IAmb	IAmb	22 05 20.2	
	comp=Z,1.8nm,0.7s						
RAYN	Ar Rayn	44.63	280	P	P	22 05 43.9	+0.9
RAYN				IAmb	IAmb	22 05 48.4	
	comp=Z,6.1nm,1.5s						
TIXI	Tiksi	51.55	13	P	P	22 06 34.8	-0.7
BRTR	Keskin Array B	53.07	303	P	P	22 06 48.2	+0.8
	comp=Z,0.4nm,0.6s,baz=105,slow=3.4,SNR=2.4						
	comp=Z,0.4nm,0.6s						
WB0	Warramunga Arr	58.32	135	P	P	22 07 23.6	-1.4
WRA	Warramunga Arr	58.41	135	P	P	22 07 24.2	-1.4
	comp=Z,0.5nm,0.5s,baz=321,slow=7.4,SNR=21						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	58.41	135	P	P	22 07 24.2	-1.4
FINES	FINESS Array B	58.95	329	P	P	22 07 28.4	-0.3
	comp=Z,0.8nm,0.7s,baz=52,slow=9.9,SNR=4.7						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	58.95	329	P	P	22 07 28.7	-0.1
ARCES	ARCESS Array B	60.45	338	P	P	22 07 39.6	+0.6
	comp=Z,2.9nm,0.9s,baz=91,slow=7.4,SNR=2.4						
	comp=Z,2.9nm,0.9s						
KWP	Kalwaria Pacla	60.47	315	P	P	22 07 39.7	+0.3
AS31	Alice Springs	60.87	138	P	P	22 07 41.5	-1.0
AS31				IAmb	IAmb	22 07 54.7	
	comp=Z,1.5nm,1.2s						
ASAR	Alice Springs	60.87	138	P	P	22 07 41.5	-1.0
	comp=Z,0.6nm,0.5s,baz=320,slow=6.8,SNR=10						
	comp=Z,0.6nm,0.5s						
GERES	GERESS Array B	66.42	315	P	P	22 08 19.4	+0.6
	comp=Z,0.2nm,0.5s,baz=60,slow=5.3,SNR=4.3						
	comp=Z,0.2nm,0.5s						
GERES	GERESS Array B	66.42	315	P	P	22 08 19.1	+0.3
TORD	Torodi Ar. Bea	87.24	283	P	P	22 10 16.1	0.0
	comp=Z,0.2nm,0.4s,baz=87,slow=4.8,SNR=1.7						
	comp=Z,0.2nm,0.4s						

IDC 21 22:15:00.5±4.2, **2°.87S**×**100°.48E**, **h0**^{km}, **mb3.3**/4, **mbtmp3.3**/4, **Error ellipse: s-maj=179.4km s-min=26.8km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	28.27	259	T	T	22 50 07.7	
	baz=82,slow=75,SNR=38						
H08S3	Diego Garcia H	28.27	259	T	T	22 50 03.9	
	baz=82,slow=75,SNR=64						
H08S1	Diego Carcia H	28.28	259	T	T	22 50 04.8	
	baz=82,slow=75,SNR=45						
WRA	Warramunga Arr	37.14	120	P	P	22 22 13.2	-0.2
	0.3nm,0.7s,baz=298,slow=8.8,SNR=1.4						
	0.3nm,0.7s						
ASAR	Alice Springs	38.36	126	P	P	22 22 22.9	-0.7
	0.2nm,0.6s,baz=300,slow=7.4,SNR=1.5						
	0.2nm,0.6s						
SONM	Songino Array	50.76	5	P	P	22 24 02.9	+0.5
	0.5nm,0.7s,baz=189,slow=8.5,SNR=2.8						
	0.5nm,0.7s						
MKAR	Makanchi Array	51.99	344	P	P	22 24 10.6	-0.9
	0.2nm,0.4s,baz=168,slow=9.2,SNR=5.8						
	0.2nm,0.4s						
TXAR	Lajitas Array	145.08	39	PKPbc	PKPbc	22 34 40.1	-0.1
	0.4nm,0.4s,baz=217,slow=0.9,SNR=16						

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*SKO **21** 22:33:56.2, 41°.17N×20°.97E, h15^{km}*

*ATH **21** 22:33:57.0, 41°.22N×20°.95E, h8^{km}±4^{km}, ML2.1/4, Error ellipse: s-maj=4.1km s-min=1.4km az=107.0*

*TIR **21** 22:33:56.8, 41°.22N×21°.05E, h22^{km}±5^{km}, Md2.5, Ml2.1*

*THE **21** 22:33:57.7, 41°.20N×20°.96E, h3^{km}±4^{km}, ML2.1/4, Error ellipse: s-maj=4.4km s-min=0.7km az=241.0*

*BEO **21** 22:33:58.1±0.4, 41°.17N×21°.03E, h10^{km}±4^{km}, ML2.0/8*

ISC 21 22:33:57.8±0.9, **41°.20N**±0°.02×**20°.99E**±0°.02, **h18**^{km}±5^{km}, **n51**, σ0.^{s}**88**/88, **2C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.17	240	ePg	Pg	22 34 02.2	-0.1
OHR				eSg	Sg	22 34 05.4	+0.1
OHR	Ohrid	0.17	240	⇑iPg	Pg	22 34 02.3	+0.1
OHR				i Sg	Sg	22 34 05.6	+0.3
OHR				eLg	Lg	22 34 05.7	
	comp=N,621nm,0.4s						
OHR				eLg	Lg	22 34 05.8	
	comp=E,332nm,0.5s						
FNA	Florina	0.51	144	ePg	Pg	22 34 07.3	-0.6
FNA				eSg	Sb	22 34 14.9	-0.4
FNA	Florina	0.51	144	P	Pg	22 34 07.4	-0.6
FNA				S	Sg	22 34 14.7	-0.1
FNA				AML	AML	22 34 15.7	
	comp=E,854µm,0.2s						
FNA				AML	AML	22 34 18.0	
	comp=N,880µm,0.3s						
FNA	Florina	0.51	144	P	Pg	22 34 07.5	-0.5
FNA				S	Sb	22 34 15.3	+0.1
	comp=N,435nm,0.2s						
FNA	Florina	0.51	144	⇑iPg	Pg	22 34 07.5	-0.5
FNA				i Sg	Sb	22 34 15.4	+0.1
FNA	Florina	0.51	144	P	Pg	22 34 07.4	-0.5
	baz=149						
FNA				S	Sb	22 34 15.1	-0.2
	baz=149						
KBN	Korca	0.59	195	P	Pb	22 34 09.3	-0.4
KBN				S	Sb	22 34 17.8	+0.1
	comp=N,115nm,0.5s						
KBN	Korca	0.59	195	P	Pb	22 34 09.1	-0.5
	baz=199						
KBN				S	Sb	22 34 18.8	+1.1
	baz=199						
KBN				AMP			
	comp=E,0.4nm,0.5s,baz=199						
PHP	Peshkopia	0.64	320	P	Pg	22 34 09.2	-1.2
PHP				S	Sb	22 34 18.5	-0.6
PHP	Peshkopia	0.64	320	P	Pb	22 34 09.7	-0.8
	baz=316						
PHP				S	Sb	22 34 20.1	+0.9
	baz=316						
PHP				AMP			
	comp=N,0.4nm,0.3s,baz=316						
NEST	Nestorio	0.78	177	P	Pg	22 34 12.2	-0.9
NEST				S	Sb	22 34 23.2	0.0
NEST				AML	AML	22 34 28.7	
	comp=N,386µm,0.3s						
NEST				AML	AML	22 34 30.3	
	comp=E,418µm,0.3s						
NEST	Nestorio	0.78	177	P	Pb	22 34 12.6	-0.3
NEST				S	Sb	22 34 24.1	+0.8
	comp=E,155nm,0.4s						
SKO	Skopje	0.85	23	ePg	Pg	22 34 13.0	-1.3
SKO				eSg	Sb	22 34 26.0	+0.9
TIR	Tirane	0.86	281	ePg	Pg	22 34 12.5	-2.1
TIR				eSg	Sn	22 34 27.7	+0.5
TIR	Tirane	0.86	281	P	Pg	22 34 12.2	-2.4
TIR				AML	AML	22 34 31.7	
	comp=N,215µm,0.5s						
TIR				AML	AML	22 34 33.7	
	comp=E,215µm,0.6s						
TIR	Tirane	0.86	281	i Pg	Pg	22 34 12.9	-1.7
TIR	Tirane	0.86	281	P	Pn	22 34 14.3	-0.7
	baz=279						
TIR				S	Sn	22 34 27.7	+0.5
	baz=279						
TIR				AMP			
	comp=E,0.2nm,0.6s,baz=279						
KZN	Kozani	1.07	146	P	Pn	22 34 18.7	+0.7
KZN				S	Sn	22 34 32.9	+0.5
KZN				AML	AML	22 34 37.7	
	comp=E,164µm,0.4s						
KZN				AML	AML	22 34 39.1	
	comp=N,134µm,0.5s						
KZN	Kozani	1.07	146	P	Pn	22 34 18.8	+0.8
LSK	Leskovik	1.09	196	P	Pn	22 34 18.6	+0.4
LSK				S	Sn	22 34 33.0	+0.1
	comp=N,170nm,0.7s						
LSK	Leskovik	1.09	196	P	Pn	22 34 18.6	+0.4
	baz=199						
LSK				S	Sn	22 34 33.8	+0.9
	baz=199						
LSK				AMP			
	comp=E,0.5nm,0.7s,baz=199						
GRG	Griva	1.09	102	P	Pb	22 34 17.9	-0.4
GRG				S	Sn	22 34 33.4	+0.4
GRG	Griva	1.09	102	P	Pb	22 34 18.2	-0.1
GRG	Griva	1.09	102	i Pg	Pb	22 34 18.2	-0.1
GRG				i Sg	Sn	22 34 33.7	+0.7
VAY	Valandovo	1.20	83	ePg	Pn	22 34 19.5	-0.2
VAY				eSg	Sn	22 34 36.3	+0.8
VAY	Valandovo	1.20	83	i Pg	Pn	22 34 19.1	-0.6
VAY				i Sg	Sb	22 34 35.7	+0.5
VAY				eLg	Lg	22 34 37.3	
	comp=N,25nm,0.6s						
VAY				eLg	Lg	22 34 38.2	
	comp=E,22nm,0.6s						
KPRO	Kipourio	1.27	167	P	Pb	22 34 21.3	0.0
BCI	Bajram Curri	1.36	330	S	Sg	22 34 41.7	0.0
	baz=328						
BCI				AMP			
	comp=E,0.3nm,0.6s,baz=328						
KNT	Kendrikon	1.44	91	P	Pb	22 34 24.0	-0.1
KNT	Kendrikon	1.44	91	P	Pb	22 34 24.1	-0.1
KNT	Kendrikon	1.44	91	i Pg	Pb	22 34 24.4	+0.2
KNT				i Sg	Sb	22 34 42.8	+0.6
SRN	Sarande	1.51	210	P	Pg	22 34 26.5	-0.4
	baz=212						
BOSS	Bosilegrad	1.71	40	ePg	Pn	22 34 27.5	+0.7
BOSS				eSg	Sg	22 34 51.6	-1.4
BARS	Barje	1.73	21	ePg	Pb	22 34 29.5	+0.4
BARS				eSg	Sg	22 34 52.9	-0.8
BARS	Barje	1.73	21	ePn	Pn	22 34 26.9	-0.1
BARS				i Sg	Sg	22 34 54.6	+1.0
IGT	Igoumenitsa	1.73	197	P	Pg	22 34 29.6	-1.5
KEK	Kerkira	1.74	212	P	Pb	22 34 28.7	-0.5
KEK				S	Sb	22 34 51.1	+0.4
PDG	Podgorica	1.79	314	ePg	Pg	22 34 31.6	-0.6
PDG				eSg	Sg	22 34 56.9	+1.5
THL	Klokotos Trika	1.81	154	P	Pb	22 34 29.4	-1.0
SELS	Selova	2.02	3	ePg	Pg	22 34 35.2	-1.5
SJES	Sjenica	2.20	340	ePg	Pg	22 34 38.9	-1.1
SJES				eSg	Sg	22 35 08.3	-0.2
VTS	Vitosha	2.20	49	ePn	Pn	22 34 34.2	+0.6
MAKR	Makrakomi, Fth	2.35	158	P	Pb	22 34 38.0	-1.7
IVAS	Ivanjica	2.46	346	ePn	Pn	22 34 37.5	+0.4
IVAS				eSg	Sg	22 35 18.2	+1.3
STON	Ston	2.97	305	ePn	Pn	22 34 44.5	+0.5
STON				Sn	Sn	22 35 20.9	+1.7
LSTV	Lastovo	3.43	299	ePn	Pn	22 34 51.7	+1.2
LSTV				Sn	Sn	22 35 29.9	-0.8
MAKA	Makarska	3.61	307	ePn	Pn	22 34 53.1	+0.2
MAKA				Sn	Sn	22 35 36.3	+1.3
RICI	Ricice	3.67	310	ePn	Pn	22 34 55.8	+2.1
RICI				Sn	Sn	22 35 37.1	+0.7
ZIRJ	Zirje	4.66	304	ePn	Pn	22 35 08.3	+1.1
ZIRJ				Sn	Sn	22 36 00.5	-0.2
MORI	Morici	4.73	306	ePn	Pn	22 35 09.2	+1.1
MORI				Sn	Sn	22 36 03.5	+0.9

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*NOU **21** 22:38:03.7, 38°.49S×175°.72E, h196^{km}, MLv3.6/6, North Island, New Zealand*

*WEL **21** 22:38:10.4, 39°S±7°×17°6E±1°1, h142^{km}±13^{km}, M2.7/43, ML2.3/8, MLv2.7/43, Error ellipse: s-maj=0.0km s-min=0.0km az=102.4*

ISC 21 22:38:04.3±2.1, **38°.54S**±0°.08×**175°.68E**±0°.07, **h193**^{km}±14^{km}, **n83**, σ0.^{s}**46**/83, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.24	332	P	Pn	22 38 28.4	-1.5
TWVZ	Taurewa	0.56	200	P	Pn	22 38 30.9	-0.1
TMVZ	Te Maari	0.57	178	P	Pn	22 38 31.2	+0.1
WTVZ	West Tongariro	0.58	187	P	Pn	22 38 31.0	0.0
NNVZ	North Ngauruho	0.59	185	P	Pn	22 38 31.1	0.0
ETVZ	East Tongariro	0.59	178	P	Pn	22 38 31.1	0.0
OTVZ	Oturere	0.62	181	P	Pn	22 38 31.6	+0.3
NGZ	Ngauruhoe	0.64	186	P	Pn	22 38 31.1	-0.2
SNVZ	South Ngauruho	0.64	183	P	Pn	22 38 31.4	0.0
MRHZ	Matea Rd	0.65	117	P	Pn	22 38 30.7	-0.6
HIZ	Hauiti	0.65	272	P	Pn	22 38 31.8	+0.5
HIZ	Hauiti	0.65	272	P	Pn	22 38 32.0	+0.8
FWVZ	Far West T-bar	0.72	188	P	Pn	22 38 31.7	-0.1
TUVZ	Tukino	0.72	182	P	Pn	22 38 31.9	+0.1
WHVZ	Whangaehu Hut	0.74	186	P	Pn	22 38 32.0	0.0
TRVZ	Turoa	0.76	188	P	Pn	22 38 32.2	+0.1
WNVZ	Wahianoa	0.79	185	P	Pn	22 38 32.2	0.0
PKVZ	Pokaka	0.79	199	P	Pn	22 38 32.2	+0.1
MTVZ	Mangateitei	0.86	191	P	Pn	22 38 32.7	+0.2
MUGZ	Murupara	0.86	86	P	Pn	22 38 31.7	-0.6
MOVZ	Moawhango	0.86	176	P	Pn	22 38 32.2	-0.3
BKZ	Black Stump Fm	0.89	135	P	Pn	22 38 32.4	-0.2
BKZ	Black Stump Fm	0.89	135	P	Pn	22 38 32.4	-0.2
VRZ	Vera Road	0.93	231	P	Pn	22 38 33.5	+0.7
MTHZ	Maungataniwha	0.96	109	P	Pn	22 38 33.0	-0.1
BHHZ	Black Hill Sta	0.99	163	P	Pn	22 38 33.1	-0.3
RTZ	Ruatahuna	1.02	95	P	Pn	22 38 33.3	-0.3
KWHZ	Kaweka Forest	1.05	147	P	Pn	22 38 33.9	+0.1
URZ	Urewera	1.16	76	P	Pn	22 38 34.0	-0.5
URZ	Urewera	1.16	76	P	Pn	22 38 34.0	-0.5
RAHZ	Arahi	1.16	109	P	Pn	22 38 34.9	+0.4
MCHZ	McNeill Hill	1.20	139	P	Pn	22 38 35.3	+0.5
KRHZ	Kereru	1.22	154	P	Pn	22 38 35.2	+0.1
ARHZ	Aropaoanui	1.25	125	P	Pn	22 38 35.8	+0.6
SNGZ	Shannon Statio	1.32	101	P	Pn	22 38 36.1	+0.3
WAZ	Wanganui	1.33	204	P	Pn	22 38 36.4	+0.6
LREZ	Lake Rotokare	1.35	227	P	Pn	22 38 37.5	+1.5
RAGZ	Rawiri	1.36	89	P	Pn	22 38 36.2	0.0
PNHZ	Pukenui	1.43	164	P	Pn	22 38 36.8	+0.1
MWZ	Matawai	1.47	82	P	Pn	22 38 37.1	0.0
TSZ	Takapari Road	1.53	172	P	Pn	22 38 37.8	+0.2
KAHZ	Kahuranaki	1.56	144	P	Pn	22 38 38.5	+0.6
WPHZ	Waipukurau	1.63	159	P	Pn	22 38 38.8	+0.3
RIGZ	Rimuhau	1.64	96	P	Pn	22 38 39.1	+0.4
RUGZ	Raukumara Rang	1.67	71	P	Pn	22 38 38.5	-0.6
TKGZ	Te Karaka	1.70	87	P	Pn	22 38 38.5	-0.7
PXZ	Pawanui	1.75	149	P	Pn	22 38 39.9	+0.3
DVHZ	Dannevirke	1.79	168	P	Pn	22 38 40.1	-0.1
HAZ	Te Kaha	1.83	65	P	Pn	22 38 40.2	-0.4
MHGZ	Mahia Peninsul	1.84	110	P	Pn	22 38 41.3	+0.7
TWGZ	Tauwhareparae	1.84	79	P	Pn	22 38 41.6	+0.8
POWZ	Post Office Ro	1.85	178	P	Pn	22 38 40.6	0.0
PRHZ	Porangahau	1.87	157	P	Pn	22 38 41.3	+0.4
CNGZ	Carnagh Statio	1.98	89	P	Pn	22 38 42.9	+0.8
PKGZ	Pakihiroa	2.00	72	P	Pn	22 38 42.6	+0.3
ANWZ	Angora Road	2.01	162	P	Pn	22 38 42.7	+0.3
PRWZ	Pori Road	2.02	174	P	Pn	22 38 42.8	+0.3
PUZ	Puketiti	2.08	78	P	Pn	22 38 43.2	0.0
MRZ	Mangatainoka R	2.12	182	P	Pn	22 38 43.3	-0.2
BFZ	Birch Farm	2.18	169	P	Pn	22 38 44.1	-0.1
BFZ	Birch Farm	2.18	169	P	Pn	22 38 44.3	+0.1
TIWZ	Tintock	2.24	176	P	Pn	22 38 44.7	-0.1
WMGZ	Waiomatatini S	2.27	72	P	Pn	22 38 45.4	+0.2
MXZ	Matakaoa Point	2.29	66	P	Pn	22 38 46.0	+0.6
OGWZ	Otaki Gorge	2.31	190	P	Pn	22 38 45.6	+0.1
HOWZ	Holdsworth Sta	2.36	183	P	Pn	22 38 45.7	-0.4
KIW	Kapiti Island	2.39	194	P	Pn	22 38 46.2	-0.3
TMWZ	Te Maipa	2.57	176	P	Pn	22 38 48.1	-0.4
CAW	Cannon Point	2.60	190	P	Pn	22 38 48.7	-0.2
MTW	Mount Morrison	2.62	183	P	Pn	22 38 48.4	-0.6
DUWZ	D’Urville Isla	2.63	210	P	Pn	22 38 49.2	-0.1
WEL	Wellington	2.83	194	P	Pn	22 38 51.3	-0.2
TRWZ	Traveller	2.85	180	P	Pn	22 38 51.4	-0.3
SNZO	South Karori	2.87	195	P	Pn	22 38 52.5	+0.6
TCW	Tory Channel	2.88	202	P	Pn	22 38 51.9	-0.2
MSWZ	Moikau Station	2.89	186	P	Pn	22 38 51.5	-0.7
PLWZ	Palliser	3.04	186	P	Pn	22 38 53.2	-0.9
TUWZ	Tuamarina	3.18	204	P	Pn	22 38 55.1	-0.5
NNZ	Nelson	3.21	213	P	Pn	22 38 55.7	-0.2
BSWZ	Blackbirch Sta	3.46	203	P	Pn	22 38 59.1	0.0
KHZ	Kahutara	4.20	202	P	Pn	22 39 08.1	-0.1
KHZ	Kahutara	4.20	202	P	Pn	22 39 08.3	+0.1
GVZ	Greta Valley S	4.86	204	P	Pn	22 39 16.1	-0.6

KRSC 21 22:41:28.9±2.4, **52°.21N**×**169°.73E**, **h40**^{km}±81^{km}, **ML3.7, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	5.33	299	eP	Pn	22 42 49.8	+3.9
MKZ				eS	Sn	22 43 49.1	+3.1
KBTR	Krutoberegovo	5.70	317	eP	Pn	22 42 54.0	+3.0
KBTR				eS	Sn	22 43 59.4	+4.4
TUMD	Tumrok D	6.30	302	eS	Sn	22 44 15.9	+6.1
TUMR	Tumrok	6.46	302	eP	Pn	22 43 06.9	+5.3
SDLR	Sedlovina	6.67	284	eP	Pn	22 43 09.5	+5.1
SMAR	Somma	6.72	283	eP	Pn	22 43 11.4	+6.2
KRER	Koryakskii	6.76	284	eP	Pn	22 43 10.8	+5.2

AVH	**Avacha**	**6.76**	**283**	*e*P	Pn	22 43 10.7	+5.1
KRX	**Arik**	**6.82**	**284**	*e*P	Pn	22 43 11.1	+4.6
KOK	**Koryaka**	**6.82**	**284**	*e*P	Pn	22 43 11.3	+4.9
RUS	**Russkaya**	**6.88**	**276**	*e*P	Pn	22 43 10.9	+3.8
KRMR	**Karymshinskiy**	**7.11**	**280**	*e*P	Pn	22 43 15.7	+5.5
GNL	**Ganaly**	**7.28**	**286**	*e*P	Pn	22 43 18.2	+5.5

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*IDC **21** 22:42:31.2±0.7, 22°.89S×175°.11W, h0km, mb4.3/12, mbtmp4.2/13, ML4.7/1, MS3.6/25, Error ellipse: s-maj=25.1km s-min=18.8km az=145.0*

*NEIC **21** 22:42:32.9±2.9, 22°.8S±0°.1×174°.83W±0°.09, h10km±1km, mb4.8/19, Error ellipse: s-maj=18.5km s-min=14.1km az=171.0*

*NOU **21** 22:42:36.8, 22°.68S×174°.32W, h40km, mb4.9/9, Tonga Islands Region*

ISC 21 22:42:32.2±0.5, 22°.85S±0°.09×174°.79W±0°.08, h10km, n80, σ1s.77/55, mb4.5/22, MS3.6/24, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.89**	**51**		**Pn**	**22 43 55.8**	**-3.8**
NIUE	**Niue**	**5.89**	**51**	P	**Pn**	**22 43 56.0**	**-3.6**
LKBA	**Tubou, Lakemba**	**5.94**	**320**	P	**Pn**	**22 44 04.1**	**+3.8**
DGTI	**Dogotuki**	**8.31**	**321**	P	Pn	22 44 37.6	+4.7
MSVF	**Nonsavu**	**8.43**	**306**	Pn	**Pn**	**22 44 32.9**	**-1.7**
	0.3nm,0.3s,baz=129,slow=19,SNR=1.6						
MSVF				LR	LR	22 47 21.1	
	comp=Z,336nm,18.0s,baz=184,slow=35						
	3.8nm,0.9s						
MSVF	**Nonsavu**	**8.43**	**306**	P	Pn	22 44 39.9	+5.3
AFI	**Afiamalu**	**9.34**	**18**	Pn	**Pn**	**22 44 43.8**	**-3.2**
	5.5nm,0.3s,baz=74,slow=20,SNR=10						
AFI	**Afiamalu**	**9.34**	**18**		**Pn**	**22 44 44.0**	**-3.0**
RAR	**Rarotonga**	**14.02**	**86**	Pn	Pn	22 45 46.6	-4.4
	0.9nm,0.3s,baz=272,slow=7.4,SNR=3.2						
RAR	**Rarotonga**	**14.02**	**86**		Pn	22 45 47.3	-3.7
RAR	**Rarotonga**	**14.02**	**86**	P	Pn	22 45 46.9	-4.1
DZM	**Mont Dzumac**	**17.37**	**269**	P	**P**	**22 46 38.5**	**+2.2**
	10nm,0.9s,baz=83,slow=21,SNR=5.5						
DZM	**Mont Dzumac**	**17.37**	**269**	P	**P**	**22 46 37.6**	**+1.3**
PPT	**Papeete**	**24.22**	**82**	LR	LR	22 56 39.3	
	comp=Z,74nm,18.4s,baz=182,slow=35						
FOZ	**Fox Glacier**	**24.25**	**208**	P	**P**	**22 47 49.7**	**+0.4**
CTA	**Charters Tower**	**36.29**	**267**	P	**P**	**22 49 34.5**	**-1.7**
	6.5nm,0.6s,baz=105,slow=10,SNR=3.2						
CTA				LR	LR	23 02 24.6	
	comp=Z,59nm,20.2s,baz=86,slow=33						
	6.5nm,0.6s						
CTAO	**Charters Tower**	**36.29**	**267**	P	**P**	**22 49 35.1**	**-1.1**
CTAO				IAmb	IAmb	22 49 37.6	
	comp=Z,38nm,1.5s						
TOO	**Toolangi**	**37.05**	**237**	P	**P**	**22 49 41.5**	**-1.0**
TOO				IAmb	IAmb	22 49 55.8	
	comp=Z,19nm,1.2s						
PMG	**Port Moresby**	**38.79**	**284**	LR	LR	23 04 39.0	
	comp=Z,85nm,18.6s,baz=120,slow=34						
STKA	**Stephens Creek**	**39.55**	**247**	P	**P**	**22 50 01.2**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=100,slow=6.1,SNR=1.4						
STKA				LR	LR	23 03 44.6	
	comp=Z,116nm,20.5s,baz=28,slow=32						
	comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	**39.55**	**247**	P	**P**	**22 50 02.0**	**-1.7**
AS31	**Alice Springs**	**46.94**	**258**	P	**P**	**22 51 01.9**	**-1.6**
AS31				IAmb	IAmb	22 51 14.5	
	comp=Z,1.9nm,0.8s						
ASAR	**Alice Springs**	**46.94**	**258**	P	**P**	**22 51 01.1**	**-2.4**
	comp=Z,2.8nm,0.6s,baz=100,slow=7.1,SNR=32						
ASAR				PcP	**PcP**	**22 52 35.0**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=107,slow=4.4,SNR=1.1						
ASAR				LR	LR	23 08 21.8	
	comp=Z,85nm,18.7s,baz=132,slow=33						
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**46.94**	**258**	P	**P**	**22 51 01.4**	**-2.1**
WB0	**Warramunga Arr**	**47.26**	**264**	P	**P**	**22 51 03.5**	**-2.5**
WB0				IAmb	IAmb	22 51 15.1	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**47.27**	**263**	P	**P**	**22 51 03.2**	**-2.9**
	comp=Z,2.5nm,0.6s,baz=104,slow=7.4,SNR=27						
WRA				LR	LR	23 08 40.1	
	comp=Z,71nm,18.5s,baz=121,slow=33						
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**47.27**	**263**	P	**P**	**22 51 03.4**	**-2.7**
FORT	**Forrest**	**51.16**	**248**	P	**P**	**22 51 34.4**	**-1.4**
KNRA	**Kununurra**	**53.51**	**267**	P	**P**	**22 51 52.0**	**-1.4**
KNRA				IAmb	IAmb	22 52 06.3	
	comp=Z,10nm,0.9s						
VNDA	**Vanda**	**55.87**	**186**	P	**P**	**22 52 09.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=11,slow=5.2,SNR=2.4						
	comp=Z,0.8nm,0.6s						
BATI	**Baumata**	**59.96**	**271**	LR	LR	23 18 24.7	
	comp=Z,160nm,18.3s,baz=254,slow=36						
MORW	**Morawa**	**61.72**	**248**	P	**P**	**22 52 49.8**	**-1.3**
TOLI2	**Tolitoli**	**67.01**	**282**		**P**	**22 53 25.8**	**-0.2**
TOLI2				IAmb	IAmb	22 53 36.3	
	comp=Z,4.4nm,0.9s						
QSPA	**South Pole Qui**	**67.24**	**180**	P	**P**	**22 53 28.1**	**+1.4**
QSPA				IAmb	IAmb	22 53 55.0	
	comp=Z,3.1nm,0.9s						
MJAR	**Matsushiro Arr**	**73.87**	**322**	P	**P**	**22 54 08.4**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=115,slow=9.3,SNR=4.8						
MJAR				LR	LR	23 26 40.8	
	comp=Z,12nm,18.0s,baz=189,slow=36						
	comp=Z,0.9nm,0.7s						
SHEM	**Shemya Is, Ala**	**75.87**	**353**	LR	LR	23 22 06.7	
	comp=Z,38nm,19.6s,baz=245,slow=31						
ASAJ	**Asahikawa**	**77.22**	**330**	LR	LR	23 21 25.1	
	comp=Z,28nm,20.4s,baz=126,slow=30						
LPIG	**La Paz**	**78.09**	**57**	LR	LR	23 19 58.2	
	comp=Z,34nm,21.4s,baz=222,slow=29						
PFO	**Pinyon Flats O**	**78.96**	**46**	LR	LR	23 26 37.5	
	comp=Z,37nm,19.0s,baz=213,slow=33						
PETK	**Petropavlovsk-**	**79.32**	**344**	LR	LR	23 22 05.6	
	comp=Z,22nm,20.9s,baz=132,slow=30						
YBH	**Yreka Blue Hor**	**80.31**	**37**	LR	LR	23 25 49.7	
	comp=Z,28nm,18.3s,baz=187,slow=32						
MAW	**Mawson**	**80.36**	**199**	P	**P**	**22 54 44.5**	**+1.1**
	comp=Z,2.6nm,0.5s,baz=137,slow=7.6,SNR=11						
	comp=Z,2.6nm,0.5s						
MAW	**Mawson**	**80.36**	**199**	P	**P**	**22 54 44.5**	**+1.1**
NVAR	**Mina Array Bea**	**80.73**	**42**	P	**P**	**22 54 48.3**	**+2.2**
	comp=Z,2.8nm,0.9s,baz=221,slow=9.7,SNR=17						
NVAR				LR	LR	23 29 15.4	
	comp=Z,29nm,18.8s,baz=158,slow=35						
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**80.73**	**42**	P	**P**	**22 54 47.3**	**+1.2**
H03S2	**Juan Fernandez**	**82.21**	**123**	T	T	00 25 24.1	
	baz=246						
H03S1	**Juan Fernandez**	**82.22**	**123**	T	T	00 25 28.6	
	baz=246						
H03S3	**Juan Fernandez**	**82.23**	**123**	T	T	00 25 24.0	
	baz=246						
USRK	**Ussuriysk Ar.**	**82.59**	**324**	P	**P**	**22 54 55.9**	**+0.5**
	comp=Z,4.0nm,0.9s,baz=150,slow=1.5,SNR=8.0						
	comp=Z,4.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**82.59**	**324**	P	**P**	**22 54 56.3**	**+0.8**
ELK	**Elko**	**84.02**	**41**	LR	LR	23 31 18.5	
	comp=Z,35nm,18.8s,baz=245,slow=35						
BBB	**Bella Bella**	**85.09**	**27**	LR	LR	23 24 52.4	
	comp=Z,26nm,20.8s,baz=116,slow=30						
SNAA	**Sanae**	**85.57**	**177**	LR	LR	23 29 15.5	
	comp=Z,28nm,21.0s,baz=189,slow=33						
TX31	**Lajitas Ar. Si**	**85.84**	**56**	P	**P**	**22 55 13.2**	**+0.7**
TX31				IAmb	IAmb	22 55 15.7	
	comp=Z,8.7nm,1.1s						
TXAR	**Lajitas Array**	**85.84**	**56**	P	**P**	**22 55 13.9**	**+1.4**
	comp=Z,2.0nm,1.0s,baz=206,slow=7.7,SNR=15						
TXAR				LR	LR	23 29 30.4	
	comp=Z,21nm,18.7s,baz=241,slow=33						
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**85.84**	**56**	P	**P**	**22 55 12.9**	**+0.4**
IPM	**Ipoh**	**86.38**	**276**	P	**P**	**22 55 15.8**	**+0.3**
IPM				IAmb	IAmb	22 55 42.7	
	comp=Z,16nm,1.4s						
ANMO	**Albuquerque**	**86.58**	**50**	LR	LR	23 29 47.9	
	comp=Z,47nm,18.4s,baz=252,slow=33						
MA2	**Magadan**	**86.85**	**343**	LR	LR	23 26 33.2	
	comp=Z,27nm,20.9s,baz=148,slow=30						
NEW	**Newport**	**87.56**	**34**	LR	LR	23 28 55.1	
	comp=Z,28nm,18.8s,baz=236,slow=32						
CMIG	**Matias Romero**	**87.60**	**70**	LR	LR	23 28 55.1	
	comp=Z,14nm,18.4s,baz=198,slow=32						
TRF	**Thorofare Moun**	**88.14**	**11**		**P**	**22 55 23.8**	**+0.8**
TRF				IAmb	IAmb	22 55 36.2	
	comp=Z,17nm,1.5s						
GSI	**Gunungsitoli**	**88.32**	**272**	P	**P**	**22 55 25.4**	**+0.6**
PDAR	**Pinedale Array**	**88.66**	**42**	LR	LR	23 36 34.6	
	comp=Z,26nm,18.0s,baz=285,slow=36						
BCAR	**Beaver Creek A**	**89.50**	**14**	P	**P**	**22 55 30.4**	**+1.1**
ILAR	**Eielson Array**	**89.96**	**12**	P	**P**	**22 55 31.8**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=217,slow=4.7,SNR=9.2						
	comp=Z,1.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.70**	**288**	P	**P**	**22 55 52.0**	**+2.3**
	comp=Z,1.1nm,0.3s,baz=123,slow=3.3,SNR=1.9						
YKA	**Yellowknife Ar**	**97.41**	**24**	P	**P**	**22 56 05.7**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=234,slow=2.9,SNR=3.8						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**114.98**	**312**	PKP	PKPdf	23 01 12.6	-0.9
	comp=Z,0.2nm,0.6s,baz=91,slow=0.9,SNR=2.8						
AKASG	**Malin Array Be**	**146.49**	**332**	PKPbc	**PKPbc**	**23 02 13.6**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=39,slow=4.1,SNR=8.5						
AKASG	**Malin Array Be**	**146.49**	**332**		**PKPbc**	**23 02 13.5**	**-0.1**
BRTR	**Keskin Array B**	**150.62**	**312**	PKPbc	**PKPbc**	**23 02 24.3**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=145,slow=4.5,SNR=5.6						
BRTR	**Keskin Array B**	**150.62**	**312**		**PKPbc**	**23 02 23.6**	**-1.3**
OSTC	**Ostas**	**151.03**	**345**	*e*PKP	**PKiKP**	**23 02 27.0**	**+1.1**
OSTC				*e*x	x	23 02 33.2	
DPC	**Dobruska-Polom**	**151.20**	**345**	*e*PKP	**PKiKP**	**23 02 27.6**	**+1.3**
KRLC	**Kraliky**	**151.34**	**344**	*e*PKP	**PKiKP**	**23 02 27.0**	**+0.4**
MAUC	**Maruska**	**151.72**	**342**	*e*PKP	**PKiKP**	**23 02 28.1**	**+0.7**
MAUC				*e*x	x	23 02 38.9	
KHC	**Kasperske Hory**	**152.94**	**348**	*e*PKP	**PKPbc**	**23 02 29.7**	**0.0**
KHC				*e*x	x	23 02 42.8	
CKRC	**Cesky Krumlov**	**153.09**	**347**	*e*PKP	**PKPbc**	**23 02 27.5**	**-2.6**
TORD	**Torodi Ar. Bea**	**169.79**	**160**	PKPab	**PKPab**	**23 03 55.9**	**+0.9**
	comp=Z,1.2nm,1.2s,baz=182,slow=3.9,SNR=2.1						

IDC 21 22:48:04.1±2.1, 7°.92S×118°.84E, h0km, mb3.4/2, mbtmp3.5/4, ML3.4/2, MS3.2/1, Error ellipse: s-maj=68.6km s-min=25.8km az=64.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.03**	**18**	Pn	Pn	22 48 53.4	+0.1
	4.7nm,0.3s,baz=195,slow=6.0,SNR=13						
KAPI				Sn	Sn	22 49 25.2	-5.2
	5.7nm,0.3s,baz=183,slow=23,SNR=8.1						
	12nm,0.3s						
SIJI	**Sorong**	**14.23**	**61**	LR	LR	22 57 16.9	
	comp=Z,88nm,19.4s,baz=267,slow=39						
WRA	**Warramunga Arr**	**19.19**	**130**	P	P	22 52 29.5	-0.2
	0.1nm,0.3s,baz=310,slow=11,SNR=2.2						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**21.30**	**139**	P	P	22 52 52.8	+0.1
	1.4nm,0.7s,baz=314,slow=8.7,SNR=12						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**63.43**	**333**	P	P	22 58 35.7	0.0
	0.3nm,0.6s,baz=125,slow=7.2,SNR=2.7						
	0.3nm,0.6s						

TRN 21 23:07:59.2, 11°.21N×61°.87W, h53km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.72**	**141**	*e*P	Pn	23 08 15.3	+1.9
TRN				*e*S	Sn	23 08 25.6	+1.9
GRFF	**Grenada Fort F**	**0.84**	**9**	*e*P	Pn	23 08 16.4	+1.5
GRFF				*e*S	Sn	23 08 28.9	+2.5
GRGR	**Grenville**	**0.94**	**13**	*e*P	Pn	23 08 17.9	+1.7
GRGR				*e*S	Sn	23 08 31.2	+2.5
TPP	**Pointe-a-Pierr**	**0.98**	**155**	*e*	Pn	23 08 21.7	+5.0
TOSP	**Speyside**	**1.31**	**86**	*e*P	Pn	23 08 23.2	+2.0
TOSP				*e*S	Sn	23 08 40.2	+2.6
GCMP	**Grenada, Carri**	**1.34**	**19**	*e*P	Pn	23 08 22.9	+1.4
GCMP				*e*S	Sn	23 08 39.9	+1.7
SVOC	**Richmond Hill,**	**2.03**	**18**	*e*P	Pn	23 08 32.1	+1.1
SVOC				*e*S	Sn	23 08 57.4	+2.2
SVB	**Belmont**	**2.13**	**16**	*e*P	Pn	23 08 34.4	+2.0
SVB				*e*S	Sn	23 08 59.9	+2.1
MCLT	**Moule a Chique**	**2.64**	**20**	*e*P	Pn	23 08 41.2	+1.8
MCLT				*e*S	Sn	23 09 12.2	+2.0
SLBI	**Saint Lucia, B**	**2.92**	**17**	*e*P	Pn	23 08 44.4	+1.1
SLBI				*e*S	Sn	23 09 18.7	+1.5
MPOM	**Morne Pois Mar**	**3.36**	**17**	*e*P	Pn	23 08 50.7	+1.5
MPOM				*e*S	Sn	23 09 28.7	+0.8
BIM	**Bigot**	**3.37**	**13**	*e*P	Pn	23 08 50.5	+1.0
BIM				*e*S	Sn	23 09 29.0	+0.7
DSLB	**Salisbury**	**4.22**	**6**	*e*P	Pn	23 09 02.7	+1.6
MAGL	**Barre de l'ile**	**4.74**	**7**	*e*P	Pn	23 09 09.7	+1.5
MAGL	**Barre de l'ile**	**4.74**	**7**	*e*S	Sn	23 10 02.7	+0.8
CBE	**Ff, Capester**	**4.83**	**3**	*e*P	Pn	23 09 11.8	+2.4
ABD	**La Joyeuse, An**	**5.24**	**4**	*e*P	Pn	23 09 17.2	+2.1
BAUV	**El Baul**	**6.48**	**250**	*e*P	Pn	23 09 33.7	+1.6
BAUV	**El Baul**	**6.48**	**250**	*e*S	Sn	23 10 44.2	-0.6

TAP 21 23:26:38.0, 22°.90N×120°.60E, h18km, ML3.6, 21C-15D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCST	**Cishan**	**0.10**	**264**	⇑*i*P	Pg	23 26 42.1	+0.4
	baz=264						
SCST				S	Sg	23 26 45.6	+1.5
	baz=264						
SLGT	**Liugui**	**0.10**	**22**	⇑*i*P	Pg	23 26 42.5	+0.7
	baz=22						
SLGT				*i* S	Sg	23 26 45.5	+1.3
	baz=22						
SSD	**Sandimen**	**0.15**	**170**	⇑*i*P	Pg	23 26 42.9	+0.6
	baz=168						
SSD				*i* S	Sg	23 26 46.0	+0.9
	baz=168						
TWM1	**Shoushan**	**0.18**	**246**	⇑*i*P	Pg	23 26 43.8	+1.2
	baz=245						
TWM1				*e*S	Sg	23 26 49.0	+3.1
	baz=245						
SGST	**Jiashian**	**0.18**	**354**	⇑*e*P	Pg	23 26 42.5	-0.3
	baz=356						
SGST				*e*S	Sg	23 26 46.3	+0.3
	baz=356						
TSMG	**Majia**	**0.19**	**169**	⇑*i*P	Pb	23 26 43.3	+0.4
	baz=169						
TSMG				S	Sb	23 26 46.8	+0.6
	baz=169						
SGLT	**Jiouru**	**0.20**	**211**	P	Pb	23 26 44.5	+1.5
	baz=209						
SGLT				*e*S	Sb	23 26 49.8	+3.5
	baz=209						
TSPT	**Pingtung City**	**0.24**	**204**	*e*P	Pb	23 26 45.3	+1.5
	baz=206						
TSPT				*e*S	Sb	23 26 51.3	+3.6
	baz=206						
SHHT	**Tainan City**	**0.27**	**298**	⇓*i*P	Pn	23 26 45.9	-1.2
	baz=298						
SHHT				S	Sn	23 26 52.1	-0.6
	baz=298						
CHN3	**Shinhua**	**0.28**	**309**	*e*P	Pn	23 26 46.2	-1.1
	baz=309						
CHN3				*e*S	Sn	23 26 53.4	+0.3
	baz=309						
MASBT	**Mashibuluo**	**0.28**	**175**	⇑*i*P	Pb	23 26 44.9	+0.3
	baz=175						
MASBT				S	Sb	23 26 49.5	+0.4
	baz=175						
SNJT	**Kaohsiung City**	**0.29**	**240**	*e*P	Pb	23 26 45.7	+1.1
	baz=240						
SNJT				*e*S	Sn	23 26 52.8	-0.4
	baz=240						
CHN1	**Nanshi**	**0.29**	**346**	⇓*i*P	Pb	23 26 45.5	+0.7
	baz=346						
CHN1				*e*S	Sb	23 26 51.0	+1.6
	baz=346						
STYT	**Tauyuan**	**0.30**	**28**	⇓*i*P	Pb	23 26 45.4	+0.4
	baz=30						
STYT				*e*S	Sb	23 26 50.6	+1.0
	baz=30						
STYH	**Taoyuan**	**0.32**	**30**	⇓*i*P	Pb	23 26 45.7	+0.6
	baz=30						
STYH				*i* S	Sb	23 26 51.1	+1.1
	baz=30						
SNST	**Tainan City**	**0.34**	**343**	⇓P	Pb	23 26 46.3	+0.8
	baz=343						
SNST				*e*S	Sb	23 26 52.2	+1.6
	baz=343						
WTP	**Ta-pu**	**0.35**	**2**	⇑*i*P	Pb	23 26 46.3	+0.6
	baz=3.0						
WTP				*e*S	Sb	23 26 52.4	+1.4
	baz=3.0						
TAI1	**Yung-k'ang**	**0.38**	**292**	*e*P	Pb	23 26 47.3	+1.2
	baz=292						
TAI1				*e*S	Sn	23 26 54.3	-1.1
	baz=292						
TWK	**Hsinying**	**0.38**	**344**	⇓*i*P	Pb	23 26 46.9	+0.6
	baz=345						
TWK				*e*S	Sn	23 26 54.2	-1.5
	baz=345						
TPUB	**Ta-pu**	**0.40**	**3**	⇑P	Pb	23 26 47.0	+0.4
	baz=3.0						
TPUB				*e*S	Sb	23 26 53.7	+1.1
	baz=3.0						
WSSB	**Gushan**	**0.41**	**231**	*e*P	Pn	23 26 48.2	-0.8
	baz=231						
SSPT	**Xinbi**	**0.41**	**185**	⇑*e*P	Pb	23 26 47.6	+0.7
	baz=185						
SSPT				*e*S	Sb	23 26 54.4	+1.6
	baz=185						
KAU	**Kaohsiung**	**0.43**	**220**	*e*P	Pn	23 26 48.9	-0.4
	baz=219						
TWG	**Pinlang**	**0.44**	**100**	⇓*i*P	Pb	23 26 48.0	+0.8
	baz=100						
TWG				*i* S	Sn	23 26 55.4	-1.6
	baz=100						
ECL	**Taimali**	**0.44**	**133**	⇓*i*P	Pb	23 26 47.7	+0.5
	baz=132						
ECL				*i* S	Sb	23 26 53.8	+0.2
	baz=132						
TWGBT	**Beinan**	**0.45**	**100**	⇓*i*P	Pb	23 26 48.0	+0.7
	baz=100						
TWGBT				*e*S	Sb	23 26 55.4	+1.7
	baz=100						
CHN4	**Tsaushan**	**0.45**	**359**	*e*P	Pb	23 26 47.9	+0.4
	baz=359						
SCLT	**Jiali**	**0.47**	**306**	*e*P	Pb	23 26 48.7	+1.0
	baz=307						
SCLT				*e*S	Sn	23 26 57.5	-0.2
	baz=307						
ELDTW	**Lidau**	**0.48**	**53**	⇓*i*P	Pb	23 26 48.8	+0.8
	baz=53						
ELDTW				S	Sb	23 26 55.6	+0.8
	baz=53						
LONT	**Longtian**	**0.48**	**89**	⇓*i*P	Pb	23 26 48.8	+0.8
	baz=89						
LONT				S	Sb	23 26 56.4	+1.6
	baz=89						
TTN	**Taitung**	**0.52**	**106**	⇓P	Pn	23 26 50.2	-0.3
	baz=106						
TTN				*e*S	Sn	23 26 59.3	+0.3
	baz=106						
SCZT	**Fangliau**	**0.52**	**178**	⇑*i*P	Pb	23 26 49.1	+0.4
	baz=178						
ICHU	**Yijhu**	**0.55**	**327**	*e*P	Pb	23 26 49.8	+0.7
	baz=327						
ICHU				*e*S	Sn	23 26 59.3	-0.4
	baz=327						
EAST	**Anshuo**	**0.56**	**156**	⇑P	Pb	23 26 50.0	+0.7
	baz=156						
EAST				*e*S	Sb	23 26 57.9	+0.9
	baz=156						
CHN8	**Yiju**	**0.57**	**321**	*e*P	Pn	23 26 50.5	-0.8
	baz=322						
CHN8				*e*S	Sn	23 27 00.2	-0.1
	baz=322						
WLCH	**Liuqiu**	**0.58**	**201**	⇓*e*P	Pn	23 26 52.9	+1.4
	baz=201						
WLCH				*e*S	Sn	23 27 04.2	+3.7
	baz=201						
TWP	**Hsiaoliuchiu**	**0.59**	**202**	⇓*e*P	Pn	23 26 52.9	+1.3
	baz=202						
TWP				*e*S	Sn	23 27 04.5	+3.8
	baz=202						
ECS	**Chishang**	**0.60**	**71**	*e*P	Pn	23 26 51.2	-0.5
	baz=71						
ECS				*e*S	Sn	23 27 00.3	-0.7
	baz=71						
TAW	**Tawu**	**0.60**	**153**	*e*P	Pb	23 26 50.8	+0.8
	baz=153						
TAWH	**Dawu Township**	**0.61**	**155**	⇑P	Pb	23 26 50.8	+0.6
	baz=155						
TAWH				*e*S	Sb	23 26 59.5	+1.1
	baz=155						
CHY	**Chiayi**	**0.62**	**345**	*e*P	Pn	23 26 51.4	-0.5
	baz=345						
CHY				*e*S	Sn	23 27 00.9	-0.6
	baz=345						
ALS	**Alishan**	**0.64**	**17**	⇑*e*P	Pb	23 26 51.2	+0.4
	baz=18						
ALS				*e*S	Sn	23 27 01.5	-0.8
	baz=18						
CHN2	**Minshiung**	**0.64**	**349**	*e*P	Pn	23 26 51.9	-0.4
	baz=349						
CHN2				*e*S	Sn	23 27 02.0	0.0
	baz=349						
EDH	**Donghe**	**0.65**	**83**	⇑*e*P	Pn	23 26 51.9	-0.5
	baz=83						
EDH				*e*S	Sn	23 27 01.5	-0.7
	baz=83						
YUS	**Yu-Shan**	**0.67**	**28**	*e*P	Pb	23 26 52.1	+0.6
	baz=29						
SLIU	**Shizi**	**0.70**	**165**	⇑P	Pg	23 26 52.3	+0.5
	baz=165						
SLIU				*e*S	Sn	23 27 03.9	+0.4
	baz=165						
FULB	**Fuli**	**0.70**	**65**	⇑*e*P	Pn	23 26 53.2	+0.1
	baz=65						
FULB				*e*S	Sn	23 27 04.1	+0.5
	baz=65						
WSL	**Shuilin Townsh**	**0.71**	**331**	*e*P	Pg	23 26 52.5	+0.5
	baz=331						
WSL				*e*S	Sn	23 27 03.4	-0.3
	baz=331						
CHKT	**Chengkung**	**0.73**	**74**	*e*P	Pn	23 26 53.4	0.0
	baz=74						
CHKT				*e*S	Sn	23 27 05.1	+1.0
	baz=74						
TWF1	**Yuli**	**0.78**	**54**	⇑*e*P	Pn	23 26 53.9	-0.3
	baz=55						
TWF1				*e*S	Sn	23 27 04.8	-0.7
	baz=55						
WGK	**Gukeng**	**0.79**	**357**	*e*P	Pn	23 26 54.5	+0.2
	baz=358						
WDLH	**Douliu**	**0.79**	**356**	*e*P	Pn	23 26 54.2	-0.1
	baz=356						
WDLH				*e*S	Sn	23 27 06.1	+0.4
	baz=356						
EYUL	**Yuli**	**0.80**	**56**	⇑*e*P	Pn	23 26 54.1	-0.2
	baz=56						
EYUL				*e*S	Sn	23 27 05.1	-0.7
	baz=56						
YULB	**Yu-li**	**0.81**	**52**	⇑*e*P	Pg	23 26 54.1	+0.3
	baz=52						
YULB				*e*S	Sg	23 27 05.0	+0.5
	baz=52						
WTK	**Tuku**	**0.81**	**346**	*e*P	Pg	23 26 54.1	+0.2
	baz=346						
WTK				*e*S	Sn	23 27 06.2	0.0
	baz=346						
WSF	**Szhu**	**0.82**	**335**	*e*P	Pg	23 26 54.2	+0.2
	baz=335						
WSF				*e*S	Sn	23 27 06.8	+0.5
	baz=335						
LDUT	**Ludao**	**0.83**	**105**	*e*P	Pg	23 26 54.5	+0.3
	baz=106						
LDUT				*e*S	Sn	23 27 06.8	+0.2
	baz=106						
HEN	**Hengchun**	**0.90**	**172**	*e*P	Pn	23 26 56.7	+1.0
	baz=172						
HEN				*e*S	Sn	23 27 10.3	+2.1
	baz=172						
WJS	**Zhushan**	**0.93**	**7**	*e*P	Pn	23 26 56.3	+0.1
	baz=7.0						
WJS				*e*S	Sn	23 27 10.0	+0.9
	baz=7.0						
WDGT	**Dungji**	**0.94**	**293**	⇓*e*P	Pb	23 26 55.3	-0.5
	baz=293						
WDGT				*e*S	Sb	23 27 08.2	+0.3
	baz=293						
SSLB	**Suanglung**	**0.94**	**20**	*e*P	Pg	23 26 56.2	-0.1
	baz=20						
SSLB				*e*S	Sn	23 27 10.4	+0.9
	baz=20						
HGSD	**Ruisui**	**0.96**	**52**	⇑*e*P	Pg	23 26 57.5	+0.8
	baz=52						
TWK1	**Hengchun**	**0.97**	**169**	*e*P	Pg	23 26 57.5	+0.7
	baz=168						
TWK1				*e*S	Sn	23 27 12.3	+2.3
	baz=168						
WNT	**Mingjian**	**0.98**	**4**	*e*P	Pg	23 26 57.2	+0.1
	baz=5.0						

WNT				eS	Sn	23 27 12.0	+1.7
	baz=5.0						
VWDT	VWDT	0.98	30	eP	Pn	23 26 57.0	+0.1
	baz=30						
VWDT				eS	Sn	23 27 11.7	+1.2
	baz=30						
WTCT	Ta-ch'eng	1.01	343	eP	Pg	23 26 57.6	0.0
	baz=343						
WTCT				eS	Sn	23 27 11.4	+0.4
	baz=343						
SMLT	Sun Moon Lake	1.02	15	eP	Pg	23 26 58.1	+0.3
	baz=16						
SMLT				eS	Sn	23 27 13.3	+1.8
	baz=16						
WRL	Guolierlin Hig	1.02	348	eP	Pn	23 26 57.4	-0.1
	baz=348						
WRL				eS	Sn	23 27 11.7	+0.3
	baz=348						
TSEB	Hengchuen, Pin	1.03	165	eP	Pg	23 26 59.5	+1.5
	baz=167						
TSEB				eS	Sn	23 27 13.6	+2.0
	baz=167						
TYC	Yuchr	1.03	13	eP	Pg	23 26 58.4	+0.4
	baz=14						
TYC				eS	Sn	23 27 13.1	+1.6
	baz=14						
EGFH	Guangfu	1.08	44	eP	Pg	23 26 58.9	0.0
	baz=45						
EGFH				eS	Sg	23 27 13.2	+0.1
	baz=45						
VCHM	Qimei	1.12	286	eP	Pn	23 26 57.8	-1.1
	baz=286						
VCHM				eS	Sb	23 27 13.2	-0.1
	baz=286						
WWF	Wufeng	1.14	4	eP	Pg	23 27 00.1	-0.1
	baz=4.0						
WWF				eS	Sg	23 27 16.0	+0.8
	baz=4.0						
WPL	Puli Township	1.16	16	eP	Pg	23 27 00.0	-0.4
	baz=16						
WPL				eS	Sg	23 27 16.3	+0.7
	baz=16						
PNG	Penghu	1.17	305	eP	Pn	23 26 58.6	-0.9
	baz=305						
PNG				eS	Sb	23 27 14.0	-0.7
	baz=305						
OWD	Renai	1.18	26	eP	Pg	23 27 00.4	-0.4
	baz=27						
OWD				eS	Sg	23 27 16.9	+0.6
	baz=27						
WCHH	Zhanghua	1.18	358	eP	Pg	23 27 00.6	-0.2
	baz=358						
WCHH				eS	Sg	23 27 17.3	+1.0
	baz=358						
WUSB	Renai	1.19	23	eP	Pg	23 27 00.7	-0.3
	baz=23						
WUSB				eS	Sg	23 27 17.2	+0.6
	baz=23						
ESL	Shilin	1.19	40	eP	Pg	23 27 00.9	-0.1
	baz=40						
ESL				eS	Sg	23 27 17.0	+0.4
	baz=40						
WCS	Beigang Elemen	1.19	14	eP	Pg	23 27 00.6	-0.4
	baz=14						
WCS				eS	Sg	23 27 17.1	+0.5
	baz=14						
LAY	Lan-yu	1.22	134	eP	Pb	23 27 00.6	0.0
	baz=134						
LAY				eS	Sg	23 27 18.3	+0.6
	baz=134						
TCU	Taichung	1.25	3	eP	Pb	23 27 01.5	+0.5
	baz=3.0						
TCU				eS	Sg	23 27 18.8	+0.3
	baz=3.0						
CHGB	Renai	1.27	24	eP	Pg	23 27 02.5	-0.1
	baz=24						
CHGB				eS	Sg	23 27 19.1	-0.2
	baz=24						
LYUB	Lan-yu	1.27	134	eP	Pn	23 26 59.7	-1.2
	baz=135						
LYUB				eS	Sb	23 27 17.0	-0.4
	baz=135						
WHF	Hehuan Shan	1.38	26	eP	Pg	23 27 04.3	-0.5
	baz=26						
WHP	Taichung City	1.41	13	eP	Pb	23 27 04.0	+0.2
	baz=13						
WHP				eS	Sg	23 27 23.4	-0.2
	baz=13						
TDCB	Techi	1.44	21	eP	Pb	23 27 04.7	+0.2
	baz=21						
TWQ1	Liyutan	1.45	6	eP	Pb	23 27 04.6	+0.1
	baz=6.0						
TWQ1				eS	Sg	23 27 24.4	-0.6
	baz=6.0						
FUSS	Fushou	1.47	23	eP	Pb	23 27 05.0	0.0
	baz=24						
FUSS				eS	Sg	23 27 26.2	+0.7
	baz=24						
TWD	Chiawan	1.49	38	eP	Pb	23 27 05.3	+0.1
	baz=38						
TWD				eS	Sg	23 27 26.0	-0.1
	baz=38						
NSY	Sanyi	1.52	5	eP	Pb	23 27 05.8	+0.1
	baz=6.0						
NSY				eS	Sg	23 27 26.1	-1.0
	baz=6.0						
ETLH	Xiulin Townshi	1.53	32	eP	Pb	23 27 06.6	+0.7
	baz=32						
NFF	Wufeng Townshi	1.79	15	eP	Pb	23 27 09.3	-1.1
	baz=15						
YHNB	Yeheng	1.90	22	eP	Pb	23 27 11.5	-0.8
	baz=22						

IDC 21 23:30:24.8±1.9,6°.62S×129°.02E,h180km±23km,mb3.2/1, mbtmp3.8/5,Error ellipse: s-maj=27.2km s-min=18.7km az=117.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.14	22	P	Pn	23 31 53.8	+0.1
	3.8nm,0.3s,baz=184,slow=6.3,SNR=12						
SIJI				S	Sn	23 32 57.8	-5.8
	21nm,0.3s,baz=301,slow=22,SNR=7.8						
BATI	Baumata	6.38	236	P	Pn	23 31 57.2	+0.4
	21nm,0.5s,baz=115,slow=5.4,SNR=4.7						
BATI				S	Sn	23 33 09.8	+0.3
	11nm,0.4s,baz=355,slow=17,SNR=4.2						
WRA	Warramunga Arr	14.22	159	P	Pn	23 33 37.1	-1.2
	0.3nm,0.4s,baz=338,slow=12,SNR=19						
WRA				S	Sn	23 36 07.2	-10
	0.3nm,0.3s,baz=333,slow=23,SNR=6.2						
ASAR	Alice Springs	17.59	165	P	P	23 34 18.3	+0.7
	0.8nm,0.5s,baz=337,slow=9.7,SNR=14						
MKAR	Makanchi Array	67.38	327	P	P	23 41 00.7	0.0
	0.4nm,0.6s,baz=117,slow=7.4,SNR=6.6						
	0.4nm,0.6s						

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*GUC **21** 23:33:04.8±0.6,21°.89S×67°.33W,h208km±8km,ML3.6*
*SCB **21** 23:33:05.1±1.2,21°.84S×67°.22W,h174km±21km,ML3.2/11, MW3.2,Error ellipse: s-maj=9.0km s-min=6.9km az=0.0*
ISC 21 23:33:03.5±2.1,21°.85S±0°.05×67°.24W±0°.06, h196km±17km,n30,σ1s.06/44,7C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.60	68	P	Pn	23 33 38.7	+0.4
MOCB				S	Sn	23 34 03.2	-2.1
MOCB				IAML		23 34 04.4	
	119nm,0.3s						
MOCB				IAML		23 34 05.1	
	104nm,0.4s						
LVC	Limon Verde	1.73	244	⇑iP	Pn	23 33 40.3	+0.9
LVC				eS	Sn	23 34 07.6	+0.4
LVC	Limon Verde	1.73	244	P	Pn	23 33 40.7	+1.3
PB09	IPOC Station P	1.86	271	eP	Pn	23 33 41.7	+1.2
PB09	IPOC Station P	1.86	271	P	Pn	23 33 42.0	+1.4
PB09				IAML		23 34 15.1	
	98nm,0.3s						
PB01	IPOC Station P	2.25	291	iP	Pn	23 33 45.1	+0.6
PB01				iS	Sn	23 34 15.8	-0.5
PB01				IAML		23 34 18.1	
	comp=E,123nm,0.2s						
PB01	IPOC Station P	2.25	291	P	Pn	23 33 45.5	+1.0
PB01				IAML		23 34 19.0	
	comp=E,56nm,0.2s						
PB06	IPOC Station P	2.33	248	eP	Pn	23 33 45.9	+0.5
PB06				iS	Sn	23 34 17.7	-0.3
PB06				IAML		23 34 19.6	
	comp=E,118nm,0.2s						
PB06	IPOC Station P	2.33	248	P	Pn	23 33 46.2	+0.8
PB06				IAML		23 34 20.2	
	comp=E,80nm,0.2s						
PB07	IPOC Station P	2.47	272	eP	Pn	23 33 47.8	+0.8
PB07				iS	Sn	23 34 19.7	-1.1
PB07				IAML		23 34 20.9	
	comp=N,190nm,0.5s						
PB07	IPOC Station P	2.47	272	P	Pn	23 33 47.9	+0.9
PB07				IAML		23 34 21.7	
	comp=N,103nm,0.4s						
PB15	IPOC Station P	2.47	236	eP	Pn	23 33 47.8	+0.8
PB15				eS	Sn	23 34 20.6	-0.3
PB15	IPOC Station P	2.47	236	P	Pn	23 33 48.3	+1.3
PB15				IAML		23 34 26.2	
	comp=N,103nm,0.5s						
PB08	IPOC Station P	2.47	313	⇑iP	Pn	23 33 48.8	+1.6
PB08				iS	Sn	23 34 21.9	+0.6
PB02	IPOC Station P	2.53	282	⇑iP	Pn	23 33 48.1	+0.5
PB02				iS	Sn	23 34 20.9	-1.1
PB02				IAML		23 34 21.9	
	comp=N,226nm,0.5s						
PB02	IPOC Station P	2.53	282	P	Pn	23 33 48.6	+0.9
PB02				IAML		23 34 24.8	
	comp=N,139nm,0.1s						
PB04	IPOC Station P	2.75	259	eP	Pn	23 33 50.5	+0.3
PB04				iS	Sn	23 34 24.9	-1.6
PB04				IAML		23 34 26.7	
	comp=N,91nm,0.1s						
PB04	IPOC Station P	2.75	259	P	Pn	23 33 50.9	+0.8
PB04				IAML		23 34 27.6	
	comp=N,72nm,0.1s						
PATCX	Punta Patache	2.91	290	eP	Pn	23 33 52.2	+0.3
PATCX				iS	Sn	23 34 28.5	-1.2
PATCX				IAML		23 34 30.7	
	comp=E,146nm,0.6s						
HMBC	Humberstone	2.93	302	⇑iP	Pn	23 33 52.2	-0.1
HMBC				eS	Sn	23 34 28.9	-1.5
TA01	Diego Aracena	3.03	294	⇑iP	Pn	23 33 53.2	-0.1
TA01				iS	Sn	23 34 30.4	-1.8
TA01				IAML		23 34 32.6	
	comp=N,96nm,0.3s						
PB11	IPOC Station P	3.07	312	⇑iP	Pn	23 33 54.2	+0.2
PB11				eS	Sn	23 34 32.8	-0.7
PB11	IPOC Station P	3.07	312	P	Pn	23 33 54.4	+0.4
PB11				IAML		23 34 34.8	
	comp=N,70nm,0.6s						
PB10	IPOC Station P	3.48	241	eP	Pn	23 33 58.7	-0.1
PB10	IPOC Station P	3.48	241	P	Pn	23 34 00.0	+1.2
PB10				IAML		23 34 45.4	
	comp=N,71nm,2.5s						
GO02	Mina Guanaco	3.94	213	iP	Pn	23 34 05.1	+0.3
PB16	IPOC Station P	4.10	328	⇑iP	Pn	23 34 08.2	+1.2
PB16				iS	Sn	23 34 56.6	-0.2
PB16	IPOC Station P	4.10	328	P	Pn	23 34 08.9	+1.9
PB12	IPOC Station P	4.34	317	eP	Pn	23 34 08.2	-1.3
LPAZ	La Paz	5.60	351	P	Pn	23 34 27.8	+1.6

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*IDC **21** 23:34:35.1±2.1,2°.38S×101°.88E,h192km±17km,mb3.8/11, mbtmp4.3/13,Error ellipse: s-maj=37.1km s-min=10.4km az=52.0*
*DJA **21** 23:34:36.2±0.4,2°S±4°×10°2E±°,h203km±4km,M4.5/13, mb4.9/2,mB5.2/1,MLv4.2/13,Mw(mB)4.6/1*
*NEIC **21** 23:34:37.4±1.5,2°.15S±0°.07×102°.17E±0°.09,h198km±7km, mb4.2/30,Error ellipse: s-maj=14.3km s-min=7.7km az=61.0*
ISC 21 23:34:37.1±0.5,2°.16S±0°.05×102°.16E±0°.05,h200km,n77, σ1s.20/83,mb4.1/24,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.70	276	P	Pn	23 35 05.5	+0.3
KRJI				S	Sn	23 35 28.4	+1.5
JMBI	JAMBI	1.57	70	P	Pn	23 35 11.0	-0.4
PPSI	Pulau Pagai	2.23	254	P	Pn	23 35 17.7	-0.3
MNAI	Manna	2.32	160	Pn	Pn	23 35 19.1	+0.1
MNAI				Sn	Sn	23 35 51.7	-0.1
MNAI	Manna	2.32	160	P	Pn	23 35 17.6	-1.5
MNAI				S	Sn	23 35 51.6	-0.3
PMBI	Palembang	2.71	106	Pn	Pn	23 35 22.4	-1.1
BKNI	Bangkinang	2.72	336	Pn	Pn	23 35 23.7	+0.3
BKNI				Sn	Sn	23 35 59.0	-0.7
BKNI	Bangkinang	2.72	336	P	Pn	23 35 22.9	-0.6
DSRI	Dabo	2.94	55	P	Pn	23 35 25.5	-0.5
SISI	Saibi	3.18	285	P	Pn	23 35 29.0	+0.1
LWLI	Liwa	3.41	146	P	Pn	23 35 29.8	-2.0
KLI	Kotabumi	3.80	135	P	Pn	23 35 34.2	-2.2
MNSI	Mandailing Nat	3.91	319	P	Pn	23 35 38.2	+0.4
KASI	Kota Agung	4.07	145	P	Pn	23 35 39.0	-0.8
MYKOM	Kota Tinggi	4.27	23	Pn	Pn	23 35 42.0	-0.3
GSI	Gunungsitoli	5.74	307	Pn	Pn	23 36 01.3	+0.3
GSI	Gunungsitoli	5.74	307	P	Pn	23 36 01.4	+0.4
	1.4nm4µm285nm,0.5s						
RPSI	Rantau Prapat	5.81	326		Pn	23 36 01.2	-0.7
RPSI					Sn	23 37 06.8	-2.3
PSI	Prapat	5.90	327	P	Pn	23 36 01.2	-2.0
	4.5nm,0.4s,baz=171,slow=7.6,SNR=6.3						
PSI				S	Sn	23 37 06.8	-4.6
	3.3nm,0.3s,baz=21,slow=16,SNR=1.3						
IPM	Ipoh	6.70	350	Pn	Pn	23 36 13.6	+0.1
KCSI	Kotacane, Aceh	7.15	322	P	Pn	23 36 18.2	-1.2
KULM	Kulim	7.56	348	Pn	Pn	23 36 25.1	+0.4
XMIS	Christmas Isla	8.96	157	Pn	Pn	23 36 42.8	-0.2
UGM	Wanagama	10.10	125	Pn	Pn	23 36 56.3	-1.4
UGM	Wanagama	10.10	125	P	Pn	23 36 56.7	-1.0
JAGI	Jajag, Banyuwa	13.48	118	Pn	Pn	23 37 40.5	-0.2
UBPT	Khong Chiam	17.64	11		P	23 38 29.9	+0.8
UBPT				IAmb	IAmb	23 38 31.4	
	comp=Z,19nm,1.0s						
KAPI	Kappang	17.78	100	P	P	23 38 31.8	+1.1
	comp=Z,17nm,0.4s,baz=319,slow=2.7,SNR=21						
KAPI	Kappang	17.78	100		P	23 38 31.4	+0.8
TOLI2	Tolitoli	18.90	80	P	P	23 38 43.0	+0.2
TOLI2				IAmb	IAmb	23 38 44.6	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	20.73	351	P	P	23 39 02.0	-0.4
	comp=Z,2.1nm,0.6s,baz=183,slow=9.3,SNR=11						
	comp=Z,2.1nm,0.6s						
CHTO	Chiang Mai	21.09	351	P	P	23 39 06.7	+0.5
CHTO				IAmb	IAmb	23 39 07.5	
	comp=Z,6.1nm,1.1s						
PZH	PanZhiHua	28.50	359	P	P	23 40 18.8	+4.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,60nm,4.1s						
KNRA	Kununurra	29.45	119	P	P	23 40 21.2	-1.3
KNRA				IAmb	IAmb	23 40 26.6	
	comp=Z,15nm,1.3s						
FAKI	Fak Fak	30.07	92	P	P	23 40 28.1	+0.1
MTN	Manton Dam	30.58	112	P	P	23 40 30.8	-1.6
WB0	Warramunga Arr	36.03	121	P	P	23 41 18.4	-1.1
WB0				IAmb	IAmb	23 41 19.4	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	36.06	122	P	P	23 41 18.8	-1.0
	comp=Z,1.3nm,0.5s,baz=298,slow=12,SNR=61						
	comp=Z,1.3nm,0.5s						
WRA	Warramunga Arr	36.06	122	P	P	23 41 18.7	-1.1
AS31	Alice Springs	37.42	127	P	P	23 41 31.2	-0.2
AS31				IAmb	IAmb	23 41 32.3	
	comp=Z,3.7nm,0.5s						
ASAR	Alice Springs	37.42	127	P	P	23 41 31.0	-0.3
	comp=Z,7.0nm,0.5s,baz=302,slow=8.0,SNR=111						
ASAR				PcP	PcP	23 43 45.8	0.0
	comp=Z,0.2nm,0.3s,baz=300,slow=2.9,SNR=1.9						
ASAR				ScP	ScP	23 47 11.7	-2.4
	comp=Z,0.3nm,0.7s,baz=303,slow=4.0,SNR=2.1						
	comp=Z,7.0nm,0.5s						
ASAR	Alice Springs	37.42	127	P	P	23 41 31.2	-0.1
FORT	Forrest	37.55	142	P	P	23 41 32.2	0.0
BBOO	Buckleboo	44.05	138	P	P	23 42 24.7	-0.6
STKA	Stephens Creek	47.44	133	P	P	23 42 51.6	-0.2
	comp=Z,1.8nm,0.3s,baz=316,slow=8.9,SNR=4.4						
	comp=Z,1.8nm,0.3s						
STKA	Stephens Creek	47.44	133	P	P	23 42 52.0	+0.1
WMQ	Urumqi	47.58	346	eP	P	23 42 55.6	+2.8
TARG	Taragay, Kyrgy	48.96	336	P	P	23 43 04.3	+0.5
KDJ	Kajisay	49.55	336	P	P	23 43 08.3	+0.3
KDJ				IAmb	IAmb	23 43 19.1	
	comp=Z,3.7nm,0.9s						
SONM	Songino Array	49.93	4	P	P	23 43 12.0	+1.3
	comp=Z,5.1nm,0.6s,baz=187,slow=9.2,SNR=33						
	comp=Z,5.1nm,0.6s						
SONM	Songino Array	49.93	4	P	P	23 43 11.8	+1.1
SONM				IAmb	IAmb	23 43 12.9	
	comp=Z,3.7nm,0.6s						
GAR	Garm	50.36	328	P	P	23 43 13.5	-0.6
GAR				IAmb	IAmb	23 43 39.5	
	comp=Z,3.5nm,0.9s						
MJAR	Matsushiro Arr	51.06	38	P	P	23 43 19.9	+0.7
MK31	Makanchi Array	51.80	343	P	P	23 43 24.2	-0.3
MK31				IAmb	IAmb	23 43 25.6	
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	51.80	343	P	P	23 43 24.4	-0.1
	comp=Z,2.0nm,0.3s,baz=157,slow=9.1,SNR=47						
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	51.80	343	P	P	23 43 24.0	-0.4
EIDS	Eidsvold	52.41	121	P	P	23 43 28.8	-0.5
EIDS				IAmb	IAmb	23 43 56.7	
	comp=Z,11nm,1.2s						
KK31	Karatay Array	53.31	331	P	P	23 43 35.8	+0.2
KKAR	Karatay Array	53.31	331	P	P	23 43 34.7	-0.9
USRK	Ussuriysk Ar.	53.31	26	P	P	23 43 36.5	+1.0
	comp=Z,3.7nm,0.8s,baz=252,slow=2.9,SNR=4.2						
	comp=Z,3.7nm,0.8s						
USRK	Ussuriysk Ar.	53.31	26	P	P	23 43 35.8	+0.2
CAN	Canberra	54.51	133	P	P	23 43 44.2	-0.3
CAN				IAmb	IAmb	23 43 46.0	
	comp=Z,25nm,1.5s						
ARMA	Armidale	54.56	126	P	P	23 43 45.3	+0.3
ARMA				IAmb	IAmb	23 43 56.8	
	comp=Z,14nm,1.4s						
ZAA0	Zalesovo Array	57.75	348	P	P	23 44 06.5	-0.4
ZAA0				IAmb	IAmb	23 44 08.7	
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	57.75	348	P	P	23 44 06.4	-0.6
	comp=Z,1.4nm,0.3s,baz=172,slow=5.0,SNR=11						
	comp=Z,1.4nm,0.3s						
ZALV	Zalesovo Beam	57.75	348	P	P	23 44 06.6	-0.3
BRVK	Borovoye	61.16	339	P	P	23 44 29.5	-0.9
ABKAR	Akbulak array	62.84	330	P	P	23 44 40.7	-0.9
ABKAR	Akbulak array	62.84	330	P	P	23 44 40.8	-0.7
ABKAR				IAmb	IAmb	23 44 41.4	
	comp=Z,1.6nm,0.7s						
BRTR	Keskin Array B	75.03	312	P	P	23 45 55.2	-1.8
	comp=Z,0.4nm,0.7s,baz=133,slow=6.1,SNR=2.9						
	comp=Z,0.4nm,0.7s						
BRTR	Keskin Array B	75.03	312	P	P	23 45 58.2	+1.1
BKZ	Black Stump Fm	76.50	130	P	P	23 46 04.6	-0.8
FINES	FINESS Array B	85.26	332	P	P	23 46 50.0	-1.0
	comp=Z,1.8nm,1.0s,baz=166,slow=24,SNR=2.2						
	comp=Z,1.8nm,1.0s						
ARCES	ARCESS Array B	87.36	340	P	P	23 47 00.7	-0.4
	comp=Z,2.0nm,0.8s,baz=104,slow=5.7,SNR=4.7						
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	87.80	180	P	P	23 47 03.9	+0.5
QSPA				IAmb	IAmb	23 47 33.5	
	comp=Z,8.7nm,1.4s						
TXAR	Lajitas Array	143.48	40	PKP	PKPbc	23 53 47.0	+0.4
	comp=Z,0.3nm,0.4s,baz=172,slow=0.9,SNR=11						
TXAR	Lajitas Array	143.48	40		PKPbc	23 53 46.8	+0.2

IDC 21 23:48:30.2±2.9,7°.10N×134°.73E,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=168.5km s-min=15.9km az=75.0,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I39PW	PALAU INFRASON	0.47	338	Pn	Pn	23 48 43.4	-0.8
	baz=171,slow=30						
I39PW				Sn	Sb	23 48 52.9	+4.1
	baz=176,slow=31						
WRA	Warramunga Arr	26.88	181	P	P	23 54 12.2	-0.8
	1.0nm,0.6s,baz=0.7,slow=11,SNR=20						
	1.0nm,0.6s						
H11S3	WAKE ISLAND Hy	33.09	67	T	T	00 30 10.4	
	baz=254						
H11S1	WAKE ISLAND Hy	33.11	67	T	T	00 30 09.6	
	baz=254						
H11S2	WAKE ISLAND Hy	33.11	67	T	T	00 30 19.3	
	baz=254						
SONM	Songino Array	47.21	334	P	P	23 57 06.0	+1.0
	1.3nm,0.9s,baz=137,slow=8.7,SNR=5.3						
	1.3nm,0.9s						
MKAR	Makanchi Array	59.67	321	P	P	23 58 37.4	+0.9
	1.7nm,0.7s,baz=110,slow=8.4,SNR=17						
	1.7nm,0.7s						
ZALV	Zalesovo Beam	61.52	329	P	P	23 58 48.7	-0.2
	0.6nm,0.5s,baz=120,slow=8.5,SNR=2.1						
	0.6nm,0.5s						

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*IDC **21** 23:52:40.3±1.7,13°.01N×87°.42W,h0km,mb3.8/3, mbtmp3.7/5,ML3.0/2,MS2.8/2,Error ellipse: s-maj=54.2km s-min=20.0km az=49.0*
*INET **21** 23:52:43.8±0.9,12°.42N×87°.89W,h15km±11km,MW3.4*
*UCR **21** 23:52:44.8±1.5,12°.46N×87°.94W,h33km±13km,ML4.0, mb4.0(NEIC)*
*SNET **21** 23:52:45.4±0.9,12°.50N×88°.01W,h27km±4km,ML4.0*
*NEIC **21** 23:52:46.2±2.0,12°.51N±0°.06×87°.82W±0°.07,h60km±10km, mb4.0/4,Md4.0(SNET),Error ellipse: s-maj=12.9km s-min=4.2km az=47.0*
ISC 21 23:52:45.6±1.0,12°.55N±0°.05×87°.85W±0°.04,h63km±9km, n101,σ1s.09/128,mb3.8/5,4C,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.73	1	⇑eP	Pn	23 53 00.2	-0.3
CNCH				eS	Sn	23 53 12.3	+0.9
CNCH				IAML		23 53 16.1	
	comp=Z,19µm,0.3s						
CNCH	Conchagua	0.73	1	⇑eP	Pn	23 53 00.2	-0.3
CNCH				eS	Sn	23 53 12.3	+0.9
CNCH				IAML		23 53 16.1	
	comp=Z,19µm,0.3s						
CNCH	Conchagua	0.73	1	eP	Pn	23 53 00.2	-0.3
CNCH				eS	Sn	23 53 12.0	+0.5
LCND	La Caada	0.76	357	⇑eP	Pn	23 53 00.5	-0.3
LCND				eS	Sn	23 53 12.4	+0.5
LCND				IAML		23 53 16.6	
	comp=Z,7µm,0.3s						
LCND	La Caada	0.76	357	eP	Pn	23 53 00.2	-0.5
LCND				⇑eP	Pn	23 53 00.5	-0.3
LCND				eS	Sn	23 53 12.4	+0.5
LCND				eS	Sn	23 53 12.4	+0.5
LCND				IAML		23 53 16.3	
	comp=Z,8µm,0.3s						
LCND				IAML		23 53 16.6	
	comp=Z,7µm,0.3s						
CRIN	San Cristobal	0.79	79	Pn	Pn	23 53 00.7	-0.6
CRIN				Sn	Sn	23 53 13.2	+0.5
CRIN	San Cristobal	0.79	79	eP	Pn	23 53 00.7	-0.6
CRIN				eS	Sn	23 53 13.4	+0.6
VSM	San Miguel	0.97	335	eP	Pn	23 53 03.9	+0.3
VSM	San Miguel	0.97	335	eP	Pn	23 53 03.9	+0.3
LCY	Lacayo	0.97	334	eP	Pn	23 53 03.5	-0.1
LCY				eS	Sn	23 53 16.8	-0.1
LCY	Lacayo	0.97	334	eP	Pn	23 53 03.5	-0.1
LCY				eS	Sn	23 53 16.8	-0.1
CNRM	Centro Naciona	0.97	341	eP	Pn	23 53 03.0	-0.5
CNRM				eS	Sn	23 53 17.0	+0.3
CNRM	Centro Naciona	0.97	341	eP	Pn	23 53 03.0	-0.5
CNRM				eS	Sn	23 53 17.0	+0.3
RANC	El Ranchito	0.98	334	eP	Pn	23 53 03.4	-0.3
RANC				eS	Sn	23 53 17.1	0.0
RANC				IAML		23 53 26.1	
	comp=Z,2µm,0.3s						
RANC	El Ranchito	0.98	334	eP	Pn	23 53 03.4	-0.3
RANC				eS	Sn	23 53 17.1	0.0
RANC				IAML		23 53 26.1	
	comp=Z,2µm,0.3s						
PACA	Pacayal	1.03	333	eP	Pn	23 53 04.1	-0.2
PACA				eS	Sn	23 53 18.1	0.0
PACA				IAML		23 53 20.5	
	comp=Z,18µm,0.2s						
PACA	Pacayal	1.03	333	eP	Pn	23 53 04.1	-0.2
PACA				eS	Sn	23 53 18.1	0.0
PACA				IAML		23 53 20.5	
	comp=Z,18µm,0.2s						
PACA	Pacayal	1.03	333	eP	Pn	23 53 04.2	-0.2
CNGN	Cerro Negro	1.12	92		Pn	23 53 04.0	-1.5

CNGN				Sn	Sn	23 53 19.3	-0.9
CNGN	Cerro Negro	1.12	92	eP	Pn	23 53 03.9	-1.5
CNGN				eS	Sn	23 53 21.3	+1.1
COEB	Comit de Eme	1.16	325	eP	Pn	23 53 05.3	-0.6
COEB				IAML		23 53 26.7	
	comp=Z,1μm,0.4s						
COEB	Comit de Eme	1.16	325	eP	Pn	23 53 05.3	-0.6
COEB				IAML		23 53 26.7	
	comp=Z,1μm,0.4s						
COEB	Comit de Eme	1.16	325	eP	Pn	23 53 05.4	-0.6
COEB				eS	Sn	23 53 20.4	-0.6
FAGO	Alcalda de S	1.17	348	eP	Pn	23 53 02.3	-3.7
FAGO				eS	Sn	23 53 18.7	-2.6
FAGO	Alcalda de S	1.17	348	eP	Pn	23 53 02.3	-3.7
FAGO				eS	Sn	23 53 18.7	-2.6
FAGO	Alcalda de S	1.17	348	eP	Pn	23 53 02.4	-3.7
PQSS	Presa 15 de Se	1.28	327	eP	Pn	23 53 07.2	-0.2
PQSS	Presa 15 de Se	1.28	327	eP	Pn	23 53 07.2	-0.2
MOMN	Momotombo	1.28	96	eP	Pn	23 53 06.1	-1.4
UESV	Universidad de	1.42	320	eP	Pn	23 53 09.1	-0.3
UESV	Universidad de	1.42	320	eP	Pn	23 53 09.1	-0.3
SCLA	Alcaldia de Sa	1.43	323	eP	Pn	23 53 09.6	0.0
SCLA				eS	Sn	23 53 28.2	+0.7
SCLA	Alcaldia de Sa	1.43	323	eP	Pn	23 53 09.6	0.0
SCLA				eS	Sn	23 53 28.2	+0.7
COEG	Centro de Oper	1.47	317	eP	Pn	23 53 09.2	-0.8
COEG				IAML		23 53 31.1	
	comp=Z,1μm,0.3s						
COEG	Centro de Oper	1.47	317	eP	Pn	23 53 09.2	-0.8
COEG				IAML		23 53 31.1	
	comp=Z,1μm,0.3s						
COEG	Centro de Oper	1.47	317	eP	Pn	23 53 09.5	-0.6
APYN	Apoyeque	1.50	102	eP	Pn	23 53 08.9	-1.5
APYN				eS	Sn	23 53 28.2	-0.8
SJTE	Alcalda de S	1.55	313	eP	Pn	23 53 10.3	-0.8
SJTE				IAML		23 53 31.4	
	comp=Z,785nm,0.3s						
SJTE	Alcalda de S	1.55	313	eP	Pn	23 53 10.3	-0.8
SJTE				IAML		23 53 31.4	
	comp=Z,785nm,0.3s						
PAVA	Las Pavas	1.57	318	eP	Pn	23 53 11.6	+0.2
PAVA				IAML		23 53 38.3	
	comp=Z,867nm,0.4s						
PAVA	Las Pavas	1.57	318	eP	Pn	23 53 11.6	+0.2
PAVA				IAML		23 53 38.3	
	comp=Z,867nm,0.4s						
LFRS	El Faro	1.59	312	eP	Pn	23 53 11.1	-0.7
LFRS	El Faro	1.59	312	eP	Pn	23 53 11.1	-0.7
TGUH	Tegucigalpa,Un	1.60	20		Pn	23 53 12.5	+0.6
TGUH				Sn	Sn	23 53 32.7	+1.0
TGUH	Tegucigalpa,Un	1.60	20	eP	Pn	23 53 12.5	+0.6
TGUH	Tegucigalpa,Un	1.60	20	eP	Pn	23 53 12.5	+0.6
MGAN	Managua	1.61	104	eP	Pn	23 53 10.5	-1.4
HUEN		1.65	97	eP	Pn	23 53 11.3	-1.1
HUEN				eS	Sn	23 53 32.3	-0.3
LALI	Alcalda de L	1.71	303	eP	Pn	23 53 11.8	-1.4
LALI	Alcalda de L	1.71	303	eP	Pn	23 53 11.8	-1.4
SNET	Serv Nac Est T	1.76	310	Pn	Pn	23 53 12.2	-1.7
BOQS	Boqueron	1.83	310	eP	Pn	23 53 14.7	-0.3
BOQS	Boqueron	1.83	310	eP	Pn	23 53 14.7	-0.3
JAYA	Jayaque - finc	1.91	305	eP	Pn	23 53 14.2	-1.9
JAYA				IAML		23 53 41.1	
	comp=Z,948nm,0.2s						
JAYA	Jayaque - finc	1.91	305	eP	Pn	23 53 14.2	-1.9
JAYA				IAML		23 53 41.1	
	comp=Z,948nm,0.2s						
MATN	Matagalpa	1.91	78		Pn	23 53 14.8	-1.3
MATN	Matagalpa	1.91	78	eP	Pn	23 53 14.7	-1.3
BOAB	BOACO BROADBAN	2.13	92		Pn	23 53 17.7	-1.2
NUBE	Las Nubes	2.31	306	eP	Pn	23 53 21.1	-0.4
NUBE	Las Nubes	2.31	306	eP	Pn	23 53 21.1	-0.4
MTO3	Montecristo	2.36	322	Pn	Pn	23 53 22.3	0.0
MTO3	Montecristo	2.36	322	eP	Pn	23 53 22.2	0.0
MTO3	Montecristo	2.36	322	eP	Pn	23 53 22.2	0.0
ESQI	Esquipulas	2.47	324	Pn	Pn	23 53 25.7	+2.0
ACON	Acoyapa	2.68	102		Pn	23 53 23.8	-2.5
ACON	Acoyapa	2.68	102	eP	Pn	23 53 24.6	-1.8
HZTE	Horizontes, Gu	2.86	129		Pn	23 53 28.6	-0.3
HZTE	Horizontes, Gu	2.86	129	eP	Pn	23 53 28.6	-0.3
GBS3	Finca Las Img	2.93	127	eP	Pn	23 53 28.6	-1.2
BUEV	Buena Vista	2.96	126	eP	Pn	23 53 29.1	-1.2
ORTG	Ortega, Santa	3.19	133		Pn	23 53 32.7	-0.8
GUAI	GUAI	3.22	134	eP	Pn	23 53 33.1	-0.7
CUI	Cuipilapa	3.23	125	eP	Pn	23 53 33.6	-0.3
SAJU	San Juanillo,	3.23	139	eP	Pn	23 53 32.6	-1.4
PLVR	Palo Verde	3.28	131	eP	Pn	23 53 34.3	-0.4
ACAL	Aguas Claras	3.35	124	eP	Pn	23 53 34.9	-0.7
GRZA	Playa Garza	3.40	140	eP	Pn	23 53 34.8	-1.4
JTS	Las Juntas de	3.62	128	Pn	Pn	23 53 38.4	-0.8
	comp=Z,1.7nm,0.3s,baz=359,slow=23,SNR=10						
JTS				Pg	Pn	23 53 45.8	+6.5
	comp=Z,23nm,0.3s,baz=319,slow=19,SNR=26						
JTS				Sn	Sn	23 54 18.5	-2.3
	comp=Z,2.3nm,0.3s,baz=360,slow=21,SNR=1.3						
JTS				Lg	Lg	23 54 29.7	
	comp=Z,19nm,0.3s,baz=208,slow=22,SNR=9.5						
JTS				LR	LR	23 55 00.9	
	comp=Z,47nm,20.5s,baz=5.5,slow=39						
	comp=Z,4.1nm,0.3s						
JTS	Las Juntas de	3.62	128		Pn	23 53 39.3	+0.1
JACO	JACO, Garabito	4.24	132	Pn	Pn	23 53 47.7	-0.1
JACO	JACO, Garabito	4.24	132	eP	Pn	23 53 48.2	+0.4
LCR2	La Lucha 2	4.69	126	eP	Pn	23 53 56.1	+2.0
RIMA	Rio Macho	4.79	125		Pn	23 53 55.4	-0.1
CDM	Cerro de Muert	4.99	126	eP	Pn	23 53 59.7	+1.2
PEZE	Perez Zeledon,	5.16	127	Pn	Pn	23 54 01.2	+0.8
SRBA	San Rafael, Bu	5.50	126		Pn	23 54 05.4	+0.3
SRBA	San Rafael, Bu	5.50	126	eP	Pn	23 54 05.8	+0.7
DRK0	Durika	5.58	125		Pn	23 54 06.7	+0.5
BRU2	Volcan	6.29	126	Pn	Pn	23 54 16.5	+0.5
CMIG	Matias Romero	8.17	304	Pn	Pn	23 54 42.1	+0.7
	comp=Z,0.1nm,0.3s,baz=126,slow=12,SNR=2.0						
CMIG				Sn	Sn	23 56 12.8	+0.5
	comp=Z,0.2nm,0.3s,baz=346,slow=18,SNR=1.3						
	comp=Z,0.7nm,0.3s						
TX32	Lajitas Array	22.25	321	P	P	23 57 38.1	+0.6
TXAR	Lajitas Array	22.25	321	P	P	23 57 37.9	+0.5
	comp=Z,2.3nm,0.9s,baz=141,slow=12,SNR=17						
	comp=Z,2.3nm,0.9s						
TXAR	Lajitas Array	22.25	321	P	P	23 57 38.3	+0.8
MIAR	Mount Ida	22.51	348	P	P	23 57 40.6	+0.5
MIAR				IAmb	IAmb	23 57 43.5	
	comp=Z,4.1nm,1.1s						
PDAR	Pinedale Array	35.51	332	P	P	23 59 37.1	+0.5
	comp=Z,0.3nm,0.3s,baz=130,slow=9.6,SNR=2.7						
	comp=Z,0.3nm,0.3s						
TPAW	Teton Pass	36.71	331	P	P	23 59 48.0	+1.1
TPAW				IAmb	IAmb	23 59 49.3	
	comp=Z,2.8nm,1.1s						
MCMT	McKenzie Canyo	38.61	331	P	P	00 00 04.0	+1.0
SCHQ	Schefferville	45.30	17	P	P	00 00 55.3	-1.7
	comp=Z,1.8nm,0.5s,baz=211,slow=6.9,SNR=11						
	comp=Z,1.8nm,0.5s						
EKA	Eskdalemuir Ar	76.78	36	LR	LR	00 33 05.1	
	comp=Z,18nm,20.1s,baz=204,slow=32						
WRA	Warramunga Arr	138.92	254	PKhKP	PKPpre	00 12 06.0	
	comp=Z,0.6nm,0.8s,baz=90,slow=2.6,SNR=4.9						
WRA	Warramunga Arr	138.92	254		PKPdf	00 12 04.9	-0.9

RSNC 21 23:57:18.6±1.0,5°.59N×75°.57W,h8^{km}±8^{km},ML1.3,2D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBOC	Ciudad Bolivar	0.52	302	⇓iP	Pg	23 57 27.9	-0.7
CBOC				eS	Sg	23 57 35.0	-0.4
CBOC				i		23 57 35.4	
	comp=Z,24nm,0.2s						
HELC	Santa Helena	0.60	4	eP	Pg	23 57 30.1	-0.2
NORC	Norcasia	0.70	92	eP	Pg	23 57 31.1	-1.0
NORC				eS	Sg	23 57 40.4	-0.9
NORC				i		23 57 41.0	
	comp=Z,15nm,0.3s						
PLMC	San Jos del P	0.98	226	⇓eP	Pg	23 57 36.2	-1.3
PLMC				eS	Sg	23 57 48.6	-1.6
PLMC				i		23 57 50.5	
	comp=Z,5.1nm,0.2s						

RSNC 21 23:57:18.8±1.0,6°.78N×73°.13W,h145^{km}±7^{km},ML1.8,1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	Barranca, Sant	0.67	300	⇑eP	Pn	23 57 39.9	-0.6
BRRC				eS	Sn	23 57 56.9	-0.1
BRRC				i		23 57 57.5	
	comp=Z,11nm,0.1s						
PAMC	Pamplona, Colo	0.70	37	eP	Pn	23 57 41.0	-0.3
PAMC				eS	Sn	23 57 58.0	-0.5
PAMC				i		23 57 58.5	
	comp=Z,9.2nm,0.3s						
RUSC	La Rusia	0.88	177	eP	Pn	23 57 42.3	-0.4
RUSC				eS	Sn	23 58 00.8	-0.1
RUSC				i		23 58 01.4	
	comp=Z,6.3nm,0.2s						
PTBC	PUERTO BERRIO,	1.34	260	eP	Pn	23 57 45.1	-1.2
PTBC				eS	Sn	23 58 06.1	-1.2
PTBC				i		23 58 07.8	
	comp=Z,7.4nm,0.1s						
SPBC	San Pablo de B	1.46	220	eP	Pn	23 57 47.0	-0.6
SPBC				eS	Sn	23 58 09.9	+0.1
SPBC				i		23 58 12.5	
	comp=Z,11nm,0.2s						
ZARC	Zaragoza, Cauc	1.86	293	eP	Pn	23 57 52.2	+0.2
ZARC				eS	Sn	23 58 17.1	-0.3
ZARC				i		23 58 22.4	
	comp=Z,8.7nm,0.4s						
ZARC	Zaragoza, Cauc	1.86	293	eP	Pn	23 57 52.2	+0.2
ZARC				eS	Sn	23 58 17.1	-0.3
NORC	Norcasia	2.11	235	eP	Pn	23 57 52.7	-2.3
NORC				eS	Sn	23 58 22.1	-0.7
HELC	Santa Helena	2.46	256	eS	Sn	23 58 30.5	-0.2
CBOC	Ciudad Bolivar	3.01	253	eS	Sn	23 58 38.3	-4.6

PRU ***22*** *00:17:31.0±0.0, 44°.22N×17°.07E, h0^{km}*
BEO ***22*** *00:17:31.7±0.6, 44°.32N×17°.13E, h12^{km}±3^{km}, ML2.2/7*
RHSSO ***22*** *00:17:31.8±0.2, 44°.27N×17°.23E, h3^{km}±1^{km}, ML2.4/17*
VIE ***22*** *00:17:32.5±1.0, 44°.38N×17°.42E, h6^{km}, mb2.5/7, ml2.1/6, Error ellipse: s-maj=11.2km s-min=8.0km az=59.0 98 km SSW of Slavonski Brod*
ISC 22 00:17:31.8±1.0,44°.29N±0°.01×17°.24E±0°.02,h5^{km}±8^{km}, n85,σ0^{s}.86/150,2C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGRS	Mrkonjic Grad	0.17	320	⇓iPg	Pg	00 17 35.3	+0.1
MGRS				eSg	Sg	00 17 37.8	+0.3
SRKY	Kupres RS	0.23	194	⇓iPg	Pg	00 17 35.6	-0.6
SRKY				eSg	Sg	00 17 39.1	0.0
BLY	Banja Luka	0.46	355	ePg	Pg	00 17 40.8	+0.1
BLY				eSg	Sb	00 17 48.1	-1.5
BLY	Banja Luka	0.46	355	⇓iPg	Pg	00 17 40.8	+0.1
BLY				eSg	Sg	00 17 47.7	+0.9
A050A	Klekovaca	0.54	291	ePg	Pg	00 17 41.4	-0.8
A050A				eSg	Sg	00 17 48.8	-0.5
KIJV	Kijevo	0.66	245	ePg	Pg	00 17 44.4	-0.1
KIJV				Sg	Sg	00 17 53.5	+0.4
DOB	Doboj	0.76	54	ePg	Pg	00 17 45.7	-0.7
DOB				eSg	Sg	00 17 56.0	-0.2
A051A	Mrakovica	0.76	342	ePg	Pg	00 17 46.5	+0.1
A051A				eSg	Sg	00 17 56.5	+0.2
PRIJ	Prijedor	0.78	332	ePg	Pg	00 17 45.6	-1.2
PRIJ				eSg	Sg	00 17 57.1	+0.1
RICI	Ricice	0.80	186	ePg	Pg	00 17 45.7	-1.3
RICI				Sg	Sg	00 17 57.1	-0.2
A052A	Srbac	0.84	13	ePg	Pg	00 17 47.3	-0.6
A052A				eSg	Sb	00 17 59.6	-0.8
MAKA	Makarska	1.01	189	ePg	Pg	00 17 49.7	-1.4
MAKA				Sg	Sg	00 18 05.0	+0.7
UDBI	Udbina	1.08	283	i Pg	Pg	00 17 51.0	-1.5
UDBI				Sg	Sg	00 18 07.1	+0.5
A251A	Rujevac	1.09	321	ePg	Pg	00 17 51.8	-0.8
A251A				Sg	Sg	00 18 06.8	0.0
MORI	Morici	1.18	250	ePg	Pg	00 17 53.1	-1.2
MORI				Sg	Sg	00 18 09.7	0.0
A252A	Venje	1.23	20	ePg	Pg	00 17 54.7	-0.6
A252A				Sg	Sg	00 18 10.8	-0.4
HVAR	Hvar	1.25	208	ePg	Pn	00 17 54.1	-1.7
HVAR				Sg	Sg	00 18 12.1	+0.3
PLIT	Plitvice	1.30	298	ePg	Pn	00 17 55.7	-0.9
PLIT				Sg	Sb	00 18 13.2	-0.4
ZIRJ	Zirje	1.31	242	ePg	Pn	00 17 55.8	-0.9
ZIRJ				Sg	Sb	00 18 14.3	+0.3
MOSL	Moslavina	1.37	346	ePg	Pn	00 17 56.9	-0.7
MOSL				Sg	Sb	00 18 15.6	-0.1
STON	Ston	1.45	167	ePg	Pn	00 17 57.8	-0.9
STON				Sg	Sg	00 18 19.2	+0.8
LSTV	Lastovo	1.54	190	ePn	Pn	00 17 59.2	-0.6
LSTV				Sg	Sb	00 18 21.2	+0.7
VIRC	Vir	1.57	271	ePg	Pn	00 18 00.8	+0.6
VIRC				Sg	Sg	00 18 22.6	+0.4
DUGI	Dugi Otok	1.60	260	ePn	Pn	00 18 00.7	0.0
DUGI				Sg	Sg	00 18 24.0	+0.9
BBLS	Lazići	1.62	104	ePg	Pb	00 18 01.8	-0.3
BBLS				eSg	Sg	00 18 26.1	+2.4
BBLS	Lazići	1.62	104	ePn	Pn	00 18 01.0	0.0
BBLS				eSn	Sb	00 18 22.9	+0.1
BRY	Bratogost	1.68	145	ePn	Pn	00 18 02.4	+0.5
BRY				eSn	Sn	00 18 24.3	+0.5
RUDO	Rudo	1.68	113	ePn	Pn	00 18 01.3	-0.5
RUDO				eSn	Sn	00 18 24.0	+0.3
TREB	Trebinje	1.77	152	ePg	Pb	00 18 04.3	-0.3
TREB				eSg	Sg	00 18 30.5	+2.1
TREB	Trebinje	1.77	152	ePn	Pn	00 18 03.5	+0.5
TREB				eSn	Sb	00 18 26.8	-0.2
RABC	Rab	1.82	286	ePn	Pn	00 18 04.4	+0.8
RABC				Sn	Sb	00 18 29.3	+0.8
OZLJ	Ozalj	1.83	317	ePn	Pn	00 18 04.0	+0.2
OZLJ				Sn	Sb	00 18 28.9	+0.1
A250A	Rusevo Krmpots	1.84	296	ePn	Pn	00 18 04.5	+0.5
A250A				Sn	Sb	00 18 30.3	+1.0
PTJ	Puntijarka	1.85	331	ePn	Pn	00 18 04.0	-0.2
PTJ				Sn	Sb	00 18 29.9	+0.2
BOJS	Bojanci	1.86	311	i Pn	Pn	00 18 05.0	+0.7
BOJS				i Sn	Sn	00 18 28.8	+0.5
BOJS				IAML		00 18 31.0	
	comp=Z,17nm,0.4s						
KALN	Kalnik	1.93	344	ePn	Pn	00 18 04.6	-0.7
KALN				Sn	Sn	00 18 30.4	+0.5
GCIS	Gornji Cirnik	1.95	325	ePn	Pn	00 18 05.8	+0.2
GCIS				i Sn	Sg	00 18 34.0	-0.4
DIVS	Divibare	1.99	94	ePn	Pn	00 18 05.7	-0.4
DIVS	Divibare	1.99	94	ePn	Pn	00 18 05.6	-0.5
DIVS				eSn	Sn	00 18 32.0	+0.5
CRES	Cresnjev	1.99	321	ePn	Pn	00 18 06.2	+0.1
CRES				eSn	Sn	00 18 31.2	-0.2
FRGS	Fruska Gora	2.03	64	ePn	Pn	00 18 06.9	+0.3
FRGS				eSn	Sn	00 18 32.8	+0.4
FRGS	Fruska Gora	2.03	64	ePn	Pn	00 18 06.6	0.0
FRGS				eSn	Sn	00 18 32.7	+0.4
HCY	Herceg Novi	2.05	153	ePn	Pn	00 18 06.3	-0.6
HCY				eSn	Sn	00 18 33.1	+0.2
GBRS	Gornja Briga	2.13	307	ePn	Pn	00 18 08.9	+0.9
GBRS				eSn	Sb	00 18 38.3	+0.8
MORH	Mrgy, Hungar	2.17	27	ePn	Pn	00 18 09.0	+0.5
MORH				eSn	Sn	00 18 36.0	+0.3
RIY	Rijeka	2.22	299	ePn	Pn	00 18 09.6	+0.4
RIY				Sn	Sn	00 18 38.6	+1.6
IVAS	Ivanjica	2.22	108	ePn	Pn	00 18 09.1	-0.2
IVAS				eSn	Sn	00 18 37.3	+0.1
SJES	Sjenica	2.23	116	ePn	Pn	00 18 10.2	+0.7
SJES				eSn	Sn	00 18 37.5	+0.1
SJES	Sjenica	2.23	116	ePn	Pn	00 18 09.8	+0.3
SJES				eSn	Sn	00 18 37.0	-0.4
TRUS	Trudelj	2.28	90	ePn	Pn	00 18 10.7	+0.7
SMRN	Sveta Marina	2.33	290	ePn	Pn	00 18 11.2	+0.6
SMRN				Sn	Sn	00 18 40.9	+1.3
PDG	Podgorica	2.37	141	⇑P	Pb	00 18 13.6	-1.2
PDG				⇓S	Sb	00 18 46.2	+1.9
PDG	Podgorica	2.37	141	ePn	Pn	00 18 11.9	+0.7
PDG	Podgorica	2.37	141	ePn	Pn	00 18 12.1	+0.9
PDG				eSn	Sn	00 18 41.1	+0.5
CEY	Cerknica	2.47	307	ePn	Pn	00 18 12.8	+0.2
CEY				eSn	Sn	00 18 44.2	+1.0
DRME	Dracevica, Mon	2.54	145	ePn	Pn	00 18 14.0	+0.5
DRME				eSn	Sn	00 18 44.5	-0.3
BRJN	Brijuni	2.57	285	ePn	Pn	00 18 13.8	-0.1
BRJN				Sn	Sn	00 18 47.0	+1.4
LJU	Ljubljana	2.60	313	ePn	Pn	00 18 14.8	+0.3
SKDS	Skadanscina	2.61	300	ePn	Pn	00 18 15.5	+0.8
SKDS				eSn	Sn	00 18 46.9	+0.1
SOKA	Soboth	2.85	328	Pn	Pn	00 18 17.9	-0.1
	comp=Z,0.8nm,0.3s						
SOKA				eSn	Sn	00 18 53.3	+0.6
	comp=Z,1.5nm,0.4s						
OBKA	Obir	2.92	320	Pn	Pn	00 18 19.8	+0.9
	comp=Z,0.3nm,0.2s						
OBKA	Obir	2.92	320	ePn	Pn	00 18 19.9	+0.9
OBKA				eSn	Sn	00 18 55.3	+0.9
SELS	Selova	3.01	109	ePn	Pn	00 18 19.9	-0.2
ARSA	Arzberg	3.20	339	ePn	Pn	00 18 23.0	+0.3
	comp=Z,3.7nm,0.4s,SNR=8.1						
ARSA	Arzberg	3.20	339	ePn	Pn	00 18 23.2	+0.5
MDVR	Moldovita	3.24	80	⇑P	Pb	00 18 31.6	+1.9
BZS	Buzias	3.38	65	⇓P	Pg	00 18 35.5	-1.0
RONA	Rosalia, Austr	3.48	349	i Pn	Pn	00 18 27.0	+0.4
	SNR=16						
SRO	Srobarova	3.61	12	ePN	Pn	00 18 29.0	+0.8
SRO				eSN	Sn	00 19 10.9	-0.3
ZAGS	Zajecar	3.63	96	ePn	Pn	00 18 28.4	-0.2
CONA	Conrad Observa	3.77	346	i Pn	Pn	00 18 31.1	+0.5
	comp=Z,2.9nm,0.3s,SNR=20						
CONA				i Sn	Sn	00 19 15.2	-0.1
	comp=Z,1.4nm,0.5s						
ZST	Bratislava	3.91	359	ePN	Pn	00 18 32.3	-0.2
BLKB	Belogradchik	3.98	98	⇓P	Pn	00 18 33.3	-0.2
BLKB				⇓S	Sn	00 19 18.8	-1.7
MODS	Modra-Piesok	4.09	0	ePN	Pn	00 18 34.9	0.0
MODS				eSN	Sn	00 19 23.3	+0.2
MOA	Molln	4.12	331	i Pn	Pn	00 18 36.6	+1.3
	comp=Z,1.7nm,0.2s,SNR=13						
MOA				eSn	Sn	00 19 24.0	0.0
	comp=Z,0.6nm,0.2s						
VYHS	Vyhne	4.35	14	ePN	Pn	00 18 38.9	+0.4
VYHS				eSN	Sn	00 19 27.3	-2.3
KOLL	Kolacno	4.37	10	ePN	Pn	00 18 39.2	+0.5
KOLL				eSN	Sn	00 19 27.5	-2.5
KRUC	Moravsky	4.81	353	eSN	Sn	00 19 39.5	-1.4
WTTA	Wattenberg	4.92	309	ePn	Pn	00 18 49.0	+2.4
	comp=Z,0.6nm,0.4s						
CKRC	Cesky Krumlov	4.96	337	ePN	Pn	00 18 46.4	-0.5
VRAC	Vranov	5.04	355	eSN	Sn	00 19 44.1	-2.5
MAUC	Maruska	5.10	4	eSN	Sn	00 19 48.9	+0.9
KHC	Kasperske Hory	5.46	334	ePN	Pn	00 18 53.3	-0.5
KHC				eSN	Sn	00 19 55.1	-1.9
MORC	Moravsky Berou	5.50	2	eSN	Sn	00 19 57.4	-0.5
KRLC	Kraliky	5.80	357	eSN	Sn	00 20 04.8	-0.5

UPP ***22*** *00:31:15.9±0.0, 67°.83N×20°.21E, h0^{km}, ML2.6, Explosion*
KOLA ***22*** *00:31:16.2, 67°.74N×20°.15E, h0^{km}, ML2.4*
NAO ***22*** *00:31:16.0±1.1, 67°.83N×20°.34E, ML2.9*
IDC ***22*** *00:31:17.2±0.8, 67°.79N×20°.76E, h0^{km}, mbtmp3.2/5, ML2.4/5, Error ellipse: s-maj=13.8km s-min=6.4km az=114.0*
HEL ***22*** *00:31:17.3, 67°.85N×20°.27E, h1^{km}, ML1.9, Confirmed Induced event*
BER ***22*** *00:31:18.2±1.6, 67°.78N×20°.45E, h0^{km}, ML2.1, ML2.9(NAO), Suspected explosion*
ISC 22 00:31:15.1±0.7,67°.79N±0°.02×20°.34E±0°.02,h0^{km},n50, σ1^{s}.02/83,7D,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.29	278	⇓P	Pg	00 31 20.6	0.0
RATU				S	Sg	00 31 23.9	-0.4
RATU	Laukkuluspa	0.29	278	⇓iP	Pg	00 31 20.6	0.0
RATU				i S	Sg	00 31 23.9	-0.4
KOVU	Salmi	0.45	351	⇓P	Pg	00 31 23.6	-0.1
KOVU				S	Sg	00 31 29.1	-0.2
KOVU	Salmi	0.45	351	⇓iP	Pg	00 31 23.6	-0.1
KOVU				i S	Sg	00 31 29.1	-0.2
NIKU	Nikkaluokta	0.50	280	⇓P	Pg	00 31 24.5	-0.3
NIKU				S	Sg	00 31 30.6	-0.6
NIKU	Nikkaluokta	0.50	280	⇓iP	Pg	00 31 24.5	-0.3
NIKU				i S	Sg	00 31 30.6	-0.6
DUNU	Dundret	0.67	172	P	Pb	00 31 29.4	-0.3
DUNU	Dundret	0.67	172	i P	Pb	00 31 29.4	-0.3
LANU	Lannavaara	0.68	66	⇓P	Pb	00 31 29.3	-0.5
LANU	Lannavaara	0.68	66	eP	Pb	00 31 29.2	-0.7
LANU				eS	Sb	00 31 38.6	-1.1
MASU	Masugnsbyn	0.72	117	P	Pb	00 31 30.6	+0.2
MASU				S	Sb	00 31 41.2	+0.4
MASU	Masugnsbyn	0.72	117	i P	Pb	00 31 30.6	+0.2
MASU				i S	Sb	00 31 41.2	+0.4
KIF	Kilpisjarvi	1.24	8	Pg	Pg	00 31 38.4	-0.4
KIF				Lg	Lg	00 31 55.9	
KIF	Kilpisjarvi	1.24	8	eP	Pg	00 31 39.0	+0.2
KIF				eS	Sg	00 31 54.8	0.0
PAJU	Pajala	1.32	124	P	Pn	00 31 41.1	+0.4
PAJU				S	Sn	00 31 60.0	+0.9
PAJU	Pajala	1.32	124	eP	Pn	00 31 41.1	+0.4
PAJU				eS	Sn	00 31 60.0	+0.9
HEF	Hetta	1.39	62	Pn	Pb	00 31 42.1	+0.1
HEF				Lg	Lg	00 32 00.8	
HEF	Hetta	1.39	62	Pn	Pb	00 31 42.1	+0.1
HEF				Sg	Sn	00 32 00.8	-0.1
HEF	Hetta	1.39	62	eP	Pn	00 31 41.8	0.0
HEF				eS	Sg	00 31 59.6	-0.2
HEF				MSG		00 32 06.1	
	comp=Z,14nm,0.1s						
ERTU	Ertsjaerv	1.43	149	P	Pb	00 31 43.3	+0.6
ERTU	Ertsjaerv	1.43	149	eP	Pb	00 31 43.3	+0.6
KLF	Kolari	1.50	110	eP	Pg	00 31 44.2	+0.4
KLF				eS	Sn	00 32 04.3	+0.8
KLF				MSG		00 32 10.1	
	comp=Z,12nm,0.2s						
KTK1	Kautokeino	1.63	40	eP	Pb	00 31 45.8	-0.3
KTK1				eS	Sg	00 32 07.9	+0.4
KTK1				IAML		00 32 10.3	
	comp=Z,28nm,0.5s						
HARU	Harads	1.65	171	P	Pg	00 31 46.8	+0.1
HARU	Harads	1.65	171	eP	Pg	00 31 46.8	+0.1
JETT	Jettan, Norway	1.78	1	Pn	Pn	00 31 47.5	+0.4
JETT				Sn	Sn	00 32 10.3	-0.1
TRO	Tromso	1.93	345	eP	Pn	00 31 49.5	+0.4
TRO				eS	Sn	00 32 14.5	+0.6
TRO				IAML		00 32 17.5	
	comp=Z,22nm,0.3s						
STEI	Steigen	1.94	277	eP	Pb	00 31 50.4	-0.8
STEI				eS	Sb	00 32 15.8	-0.1
STEI				IAML		00 32 18.3	
	comp=Z,28nm,0.8s						
FAUS	Fauske	1.98	261	eP	Pb	00 31 51.1	-0.8
FAUS				eS	Sb	00 32 17.1	0.0
FAUS				IAML		00 32 19.7	
	comp=Z,38nm,0.4s						
TOF	Tornio	2.32	136	eP	Pb	00 31 57.4	-0.4
TOF				eS	Sb	00 32 27.6	+0.6
SGF	Sodankyl	2.39	95	eP	Pb	00 31 57.7	-1.3
SGF				eS	Sb	00 32 28.3	-0.7
RNF	Rovaniemi	2.51	115	eP	Pb	00 32 00.3	-0.6
RNF				eS	Sb	00 32 31.4	-0.9
ARA0	ARCESS Array S	2.58	45	Pn	Pn	00 31 59.4	+1.3
	baz=227,slow=16						
ARA0				Sn	Sn	00 32 32.1	+2.0
	baz=228,slow=22						
ARA0	ARCESS Array S	2.58	45	eP	Pb	00 32 00.3	-1.9
ARA0				eS	Sn	00 32 31.1	+1.0
ARCES	ARCESS Array B	2.58	45	Pn	Pn	00 31 59.6	+1.5
	comp=Z,1.2nm,0.3s,baz=226,slow=14,SNR=94						
ARCES				Lg	Lg	00 32 34.0	
	comp=Z,3.7nm,0.3s,baz=225,slow=24,SNR=6.5						
	comp=Z,2.4nm,0.3s						
ARCES	ARCESS Array B	2.58	45	P	Pn	00 31 59.8	+1.7
ARCES				S	Sb	00 32 33.1	-1.4
KEV	Kevo	3.13	48	eS	Sn	00 32 44.9	+1.2
VRF	Varrio	3.52	86	eS	Sn	00 32 54.7	+1.3
APA0	Apatity Array	4.82	86	Pn	Pn	00 32 29.1	+0.2
	baz=273,slow=12						
APA0				Sn	Sn	00 33 25.7	+0.3
	baz=280,slow=28						
APA0				Lg	Lg	00 33 44.7	
	baz=281,slow=28						
APA0	Apatity Array	4.82	86	P	Pn	00 32 29.6	+0.7
APA0				S	Sn	00 33 25.3	-0.1
LVZ	Lovozero	5.42	82	S	Sn	00 33 40.2	+0.2
TERR	Teriberka	5.61	69	P	Pn	00 32 40.5	+0.8
TERR				S	Sn	00 33 42.0	-2.8
FIA0	FINESS Array S	6.83	156	Pn	Pn	00 32 58.8	+2.5
	baz=351,slow=16						

FIA0				Sn	**Sn**	**00 34 14.0**	**-0.6**
	baz=346,slow=28						
FIA0				Lg	Lg	00 34 50.0	
	baz=340,slow=37						
FIA0	**FINESS Array S**	**6.83**	**156**	Sg	**Sg**	**00 34 50.0**	**-4.1**
	baz=340,slow=37						
FINES	**FINESS Array B**	**6.83**	**156**	Pn	**Pn**	**00 32 58.4**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=346,slow=13,SNR=13						
FINES				Sn	**Sn**	**00 34 14.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=348,slow=21,SNR=5.9						
FINES				Lg	Lg	00 34 49.6	
	comp=Z,0.4nm,0.3s,baz=345,slow=28,SNR=8.2						
	comp=Z,0.6nm,0.4s						
NOA	**NORSAR Array B**	**7.83**	**215**	Pn	**Pn**	**00 33 12.6**	**+2.4**
	baz=24,slow=12,SNR=1.7						
NOA				Sn	**Sn**	**00 34 39.6**	**+0.2**
	baz=57,slow=16,SNR=1.7						
NOA				Lg	Lg	00 35 23.8	
	baz=34,slow=22,SNR=1.8						
	comp=Z,0.4nm,0.7s						
NRA0	**NORESS Array S**	**8.04**	**213**	Sn	**Sn**	**00 34 45.0**	**+0.6**
	baz=21,slow=22						
NRA0				Lg	Lg	00 35 25.6	
	baz=12,slow=28						
HFS	**Hagfors**	**8.21**	**204**	Pn	**Pn**	**00 33 15.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=106,slow=15,SNR=1.5						
HFS				Sn	**Sn**	**00 34 46.4**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=38,slow=44,SNR=1.7						
HFS				Lg	Lg	00 35 32.6	
	comp=Z,0.2nm,0.3s,baz=73,slow=36,SNR=2.6						
	comp=Z,0.6nm,0.8s						
SPA0	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**00 33 46.6**	**-0.1**
	baz=157,slow=12						
SPITS	**Spitsbergen Ar**	**10.51**	**356**	Pn	**Pn**	**00 33 46.8**	**+0.1**
	baz=159,slow=14						
	comp=Z,9.6nm,1.1s						

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*IDC **22** 00:42:21.5±3.5, 35°.96N×71°.58E, h0^{km}, mb3.4/3, mbtmp3.7/6, ML3.8/3, MS4.3/1, Error ellipse: s-maj=69.1km s-min=29.0km az=137.0*

ISC 22 00:42:38.8±2.7**, 36°.8N**±0°.2×**71°.4E**±0°.1**, h100^{km}, n7, σ0^{s}.41**/9**, 3C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.33**	**21**	Pn	**Pn**	**00 44 10.0**	**+0.3**
	1.8nm,0.3s,baz=196,slow=7.3,SNR=5.9						
AAK				Sn	**Sn**	**00 45 20.6**	**-0.1**
	0.2nm,0.3s,baz=139,slow=22,SNR=1.4						
	3.6nm,0.3s						
KK31	**Karatay Array**	**6.36**	**354**	P	**Pn**	**00 44 10.1**	**+0.2**
	2.0nm,0.3s,baz=182,slow=12,SNR=36						
KK31				⇑S	**Sn**	**00 45 20.8**	**-0.3**
	4.2nm,0.6s,baz=185,slow=16,SNR=6.1						
TKM2	**Tokmak 2**	**6.95**	**27**	⇑P	**Pn**	**00 44 17.4**	**-0.7**
	0.9nm,0.4s						
TKM2				⇑S	**Sn**	**00 45 36.2**	**+0.5**
	1.2nm,0.7s						
GEYT	**Alibeck**	**10.61**	**280**	Pn	Pn	00 45 00.6	-7.3
	0.7nm,0.3s,baz=97,slow=12,SNR=13						
GEYT				Sn	Sn	00 46 54.4	-10
	0.8nm,0.3s,baz=138,slow=14,SNR=3.9						
	1.3nm,0.2s						
AKTO	**Aktyubinsk**	**16.70**	**329**	P	**Pn**	**00 46 26.2**	**-0.3**
	0.2nm,0.3s,baz=141,slow=12,SNR=3.6						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**19.55**	**24**	P	**P**	**00 46 58.5**	**+0.2**
	0.4nm,0.3s,baz=212,slow=10,SNR=2.7						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**00 49 42.0**	**+0.1**
	0.8nm,0.9s,baz=123,slow=9.4,SNR=4.6						
	0.8nm,0.9s						

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*IDC **22** 01:02:59.1±3.2, 5°.90S×147°.34E, h75^{km}±31^{km}, mb3.9/5, mbtmp4.2/8, MS2.7/1, Error ellipse: s-maj=32.4km s-min=17.8km az=131.0*

*NEIC **22** 01:03:00.3±1.5, 5°.8S±0°.1×147°.4E±0°.1, h87^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=20.3km s-min=11.6km az=121.0*

ISC 22 01:02:59.0±0.8**, 5°.83S**±0°.09×**147°.3E**±0°.1**, h77^{km}, n19, σ0^{s}.81**/18**, mb3.9**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.56**	**182**	P	**Pn**	**01 03 52.0**	**+0.1**
	19nm,0.3s,baz=39,slow=11,SNR=10						
PMG				S	**Sn**	**01 04 30.7**	**-2.1**
	45nm,0.3s,baz=324,slow=10.0,SNR=4.3						
PMG				LR	LR	01 04 56.3	
	comp=Z,102nm,19.7s,baz=296,slow=34						
PMG	**Port Moresby**	**3.56**	**182**		**Pn**	**01 03 52.3**	**+0.4**
KRVT	**Keravat (AS076**	**4.94**	**72**	P	**Pn**	**01 04 10.8**	**+0.1**
	12nm,0.5s,baz=206,slow=22,SNR=1.9						
COEN	**Coen**	**9.04**	**206**	Pn	**Pn**	**01 05 07.7**	**+0.9**
WB0	**Warramunga Arr**	**18.70**	**221**	P	**Pn**	**01 07 12.6**	**0.0**
WB0				IAmb	IAmb	01 07 14.4	
	comp=Z,10.0nm,0.7s						
WRAB	**Tennant Creek**	**18.85**	**221**	P	**P**	**01 07 14.0**	**+1.0**
WRAB				IAmb	IAmb	01 07 16.8	
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	**18.86**	**221**	P	**P**	**01 07 13.5**	**+0.4**
WB2				IAmb	IAmb	01 07 17.4	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**18.86**	**221**	P	**P**	**01 07 13.5**	**+0.3**
	comp=Z,6.9nm,0.6s,baz=41,slow=12,SNR=74						
KNRA	**Kununurra**	**20.66**	**240**	P	Pn	01 07 34.9	-0.8
KNRA				IAmb	IAmb	01 08 16.1	
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**21.93**	**215**	P	**P**	**01 07 47.3**	**+1.0**
ASAR	**Alice Springs**	**21.93**	**215**	P	**P**	**01 07 47.0**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=53,slow=8.6,SNR=50						
	comp=Z,2.6nm,0.5s						
BATI	**Baumata**	**23.81**	**258**	P	**P**	**01 08 04.9**	**-0.2**
	comp=Z,15nm,0.6s,baz=96,slow=19,SNR=2.4						
	comp=Z,15nm,0.6s						
ARMA	**Armidale**	**24.80**	**171**	P	**P**	**01 08 14.2**	**+0.2**
STKA	**Stephens Creek**	**26.46**	**191**	P	**P**	**01 08 28.9**	**0.0**
	comp=Z,2.2nm,0.6s,baz=351,slow=13,SNR=4.5						
	comp=Z,2.2nm,0.6s						
STKA	**Stephens Creek**	**26.46**	**191**	IAmb	IAmb	01 08 45.9	
	comp=Z,7.9nm,1.8s						
MSVF	**Nonsavu**	**32.27**	**114**	P	**P**	**01 09 21.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=248,slow=19,SNR=2.4						
	comp=Z,1.3nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.68**	**346**	P	**P**	**01 11 57.2**	**-0.9**
ILAR	**Eielson Array**	**85.20**	**23**	P	**P**	**01 15 26.1**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=251,slow=4.9,SNR=7.2						
	comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.35**	**285**	PKPbc	**PKPdf**	**01 22 29.2**	**+0.2**
	comp=Z,1.0nm,1.1s,baz=73,slow=4.9,SNR=2.3						

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*IDC **22** 01:03:12.9±2.1, 15°.11N×104°.88W, h0^{km}, mb3.6/4, mbtmp3.7/7, ML3.3/3, MS3.5/19, Error ellipse: s-maj=45.4km s-min=29.1km az=39.0*

*MEX **22** 01:03:14.0±0.6, 15°.18N×104°.55W, h24^{km}, MD4.4*

*NEIC **22** 01:03:18.7±2.2, 15°.34N±0°.03×104°.07W±0°.10, h10^{km}±2^{km}, mb4.5/65, Md4.4/12(MEX), Error ellipse: s-maj=16.4km s-min=4.7km az=284.0*

ISC 22 01:03:15.7±1.2**, 15°.3N**±0°.1×**104°.3W**±0°.1**, h10^{km}, n112, σ1^{s}.65**/66**, mb4.4**/23**, MS3.7**/18**, Off coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**3.15**	**17**		**Pn**	**01 04 02.2**	**-3.3**
MMIG	**Aquila**	**3.15**	**17**	*e*P	**Pn**	**01 04 02.2**	**-3.3**
ZIIG	**Zihuatanejo**	**3.61**	**49**		**Pn**	**01 04 09.1**	**-2.6**
ZIIG	**Zihuatanejo**	**3.61**	**49**	*e*P	**Pn**	**01 04 09.1**	**-2.6**
CJM	**Chamela**	**4.27**	**351**	*e*P	**Pn**	**01 04 18.0**	**-2.8**
ARIG	**Puente Sto Nin**	**4.86**	**51**		**Pn**	**01 04 27.4**	**-1.6**
ARIG	**Puente Sto Nin**	**4.86**	**51**	*i* P	**Pn**	**01 04 27.4**	**-1.6**
MEIG	**Mezcala**	**5.24**	**59**		**Pn**	**01 04 32.6**	**-1.7**
MEIG	**Mezcala**	**5.24**	**59**	*e*P	**Pn**	**01 04 32.6**	**-1.7**
PLIG	**Platanillo**	**5.58**	**55**		**Pn**	**01 04 38.1**	**-0.8**
PLIG	**Platanillo**	**5.58**	**55**	*i* P	**Pn**	**01 04 38.0**	**-1.0**
PLIG				*e*P	**Pn**	**01 04 38.1**	**-0.8**
MGIG	**Malinaltepec**	**5.81**	**70**	*e*P	**Pn**	**01 04 41.0**	**-1.3**
TLIG	**Tlapa**	**5.99**	**67**	Pn	**Pn**	**01 04 42.7**	**-1.9**
PNIG	**Pinotepa**	**6.08**	**79**		**Pn**	**01 04 44.0**	**-1.8**
PNIG	**Pinotepa**	**6.08**	**79**	*e*P	**Pn**	**01 04 44.0**	**-1.8**
FTIG	**Fresnillo de T**	**6.50**	**65**	*e*P	**Pn**	**01 04 48.6**	**-3.1**
TXIG	**Tlaxiaco**	**6.61**	**72**	*e*P	**Pn**	**01 04 52.7**	**-0.6**
HLIG	**Huajuapan de L**	**6.76**	**67**	*e*P	**Pn**	**01 04 54.2**	**-1.2**
H06E1	**SOCORRO T-PHAS**	**7.21**	**300**	T	T	01 12 09.9	
	SNR=128						
ZAIG	**Zacatecas**	**7.65**	**12**	Pn	**Pn**	**01 05 09.2**	**+1.6**
CMIG	**Matias Romero**	**9.26**	**77**	Pn	Pn	01 05 35.4	+6.0
	0.1nm,0.3s,baz=270,slow=10,SNR=1.8						
CMIG				LR	LR	01 08 40.1	
	comp=Z,346nm,19.4s,baz=261,slow=33						
	0.7nm,0.3s						
SLBS	**Sierra La Lagu**	**9.90**	**329**	Pn	Pn	01 05 41.6	+3.2
HPIG		**11.68**	**354**		**Pn**	**01 06 04.2**	**+1.5**
833A	**Chaparral WMA,**	**13.78**	**19**	Pn	**Pn**	**01 06 32.9**	**+1.7**
TX32	**Lajitas Array**	**14.02**	**2**		**Pn**	**01 06 36.5**	**+1.9**
TXAR	**Lajitas Array**	**14.02**	**2**	Pn	**Pn**	**01 06 36.7**	**+2.1**
	0.1nm,0.3s,baz=179,slow=12,SNR=23						
TXAR				LR	LR	01 11 25.9	
	comp=Z,124nm,21.1s,baz=181,slow=35						
	2.0nm,0.8s						
TXAR	**Lajitas Array**	**14.02**	**2**	Pn	**Pn**	**01 06 35.9**	**+1.3**
TX31	**Lajitas Ar. Si**	**14.02**	**2**		**Pn**	**01 06 37.0**	**+2.4**
MTO3	**Montecristo**	**14.51**	**91**		**P**	**01 06 45.9**	**-2.3**
735A	**Kenedy**	**14.81**	**23**	Pn	**Pn**	**01 06 46.0**	**+0.7**
JCT	**Junction City**	**15.71**	**15**	Pn	**Pn**	**01 06 58.1**	**+0.9**
MNTX	**Cornudas Mount**	**16.39**	**357**	Pn	**P**	**01 07 08.2**	**-0.6**
HKT	**Hockley**	**16.58**	**27**		**P**	**01 07 09.9**	**-0.9**
435B	**Jarrell**	**16.64**	**21**	Pn	**P**	**01 07 10.6**	**-1.0**
435B				IAmb	IAmb	01 07 14.9	
	comp=Z,47nm,0.9s						
319A	**Douglas**	**16.66**	**345**	Pn	**P**	**01 07 11.4**	**-0.6**
121A	**Cookes Peak, D**	**17.48**	**350**	Pn	**P**	**01 07 21.0**	**0.0**
ABTX	**Abilene, Hawle**	**17.80**	**13**	Pn	**P**	**01 07 24.0**	**-0.5**
237A	**Washetta, Mont**	**18.39**	**24**		**P**	**01 07 30.9**	**0.0**
237A				IAmb	IAmb	01 07 40.6	
	comp=Z,25nm,0.9s						
NATX	**Nacogdoches**	**18.64**	**27**		**Pn**	**01 07 34.7**	**+0.7**
NATX				IAmb	IAmb	01 07 40.4	
	comp=Z,32nm,0.9s						
MSTX	**Muleshoe**	**18.68**	**4**		**Pn**	**01 07 35.0**	**+0.5**
BNM	**Barren Site**	**18.92**	**354**	P	**Pn**	**01 07 37.0**	**-0.6**
113A	**Mohawk Valley,**	**19.42**	**335**	P	**Pn**	**01 07 43.1**	**-0.3**
342A	**Flagon Creek P**	**19.44**	**32**		**Pn**	**01 07 43.8**	**+0.2**
JTS	**Las Juntas de**	**19.53**	**102**	P	**Pn**	**01 07 47.7**	**+2.8**
	comp=Z,4.9nm,0.8s,baz=315,slow=11,SNR=3.8						
JTS				LR	LR	01 13 33.9	
	comp=Z,66nm,21.7s,baz=66,slow=31						
	comp=Z,4.9nm,0.8s						
AMTX	**Amarillo**	**19.68**	**6**	P	**Pn**	**01 07 45.7**	**-0.9**
ANMO	**Albuquerque**	**19.69**	**355**	P	**Pn**	**01 07 46.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=161,slow=12,SNR=10.0						
ANMO				LR	LR	01 14 46.0	
	comp=Z,112nm,20.6s,baz=181,slow=35						
	comp=Z,3.5nm,1.0s						
ANMO	**Albuquerque**	**19.69**	**355**		**Pn**	**01 07 47.8**	**+1.0**
Z38A	**Mt. Pleasant**	**19.82**	**24**	P	**Pn**	**01 07 47.7**	**-0.4**
Z38A				IAmb	IAmb	01 07 51.3	
	comp=Z,24nm,0.9s						
X34A	**Smith Ranch, M**	**20.12**	**16**	P	**P**	**01 07 50.2**	**+0.3**
X34A				IAmb	IAmb	01 07 54.6	
	comp=Z,42nm,1.3s						
344A	**Westbrook Farm**	**20.35**	**35**	P	**P**	**01 07 53.4**	**+1.0**
344A				IAmb	IAmb	01 08 00.6	
	comp=Z,25nm,0.9s						
Z41A	**Richland Creek**	**20.74**	**28**	P	**P**	**01 07 57.8**	**+1.2**
X37A	**Clayton**	**20.87**	**21**	P	**P**	**01 07 59.8**	**+1.8**
X37A				IAmb	IAmb	01 08 04.2	
	comp=Z,21nm,1.1s						
WLAR	**White Oak Lake**	**20.96**	**27**	P	**P**	**01 08 01.0**	**+1.9**
VBMS	**Vicksburg**	**21.05**	**34**	P	**P**	**01 08 02.6**	**+2.6**
PFO	**Pinyon Flats O**	**21.31**	**331**	LR	LR	01 14 53.5	
	comp=Z,194nm,21.2s,baz=162,slow=33						
MIAR	**Mount Ida**	**21.51**	**25**	IAmb	IAmb	01 08 06.8	
	comp=Z,15nm,1.0s						
T25A	**Trinidad**	**21.79**	**360**	P	**P**	**01 08 09.2**	**+1.1**
TUL1	**Leonard**	**21.93**	**19**	IAmb	IAmb	01 08 17.6	
	comp=Z,30nm,0.9s						
UALR	**University of**	**22.22**	**27**	IAmb	IAmb	01 08 16.6	
	comp=Z,20nm,1.2s						
SDCO	**Great Sand Dun**	**22.42**	**358**	P	**P**	**01 08 16.0**	**+1.0**
W41B	**Gary Mavity, V**	**22.60**	**27**	IAmb	IAmb	01 08 20.6	
	comp=Z,31nm,1.1s						
T35A	**Sooner Cattle**	**22.66**	**16**	IAmb	IAmb	01 08 29.2	
	comp=Z,9.4nm,0.8s						
HHAR	**Hobbs**	**22.90**	**22**	IAmb	IAmb	01 08 27.9	
	comp=Z,16nm,1.0s						
FCAR	**Ozark Folk Cen**	**23.26**	**26**	IAmb	IAmb	01 08 34.1	
	comp=Z,11nm,0.9s						
U40A	**Yellville**	**23.37**	**24**	IAmb	IAmb	01 08 33.5	
	comp=Z,14nm,1.1s						
250A	**Grady**	**23.41**	**42**	P	**P**	**01 08 27.1**	**+2.1**
LRAL	**Lakeview Retre**	**23.67**	**39**	IAmb	IAmb	01 08 33.0	
	comp=Z,14nm,1.1s						
LCAR	**Lake Charles**	**23.83**	**27**	IAmb	IAmb	01 08 31.9	
	comp=Z,11nm,1.0s						
SMCO	**Snowmass**	**23.93**	**355**	P	**P**	**01 08 31.5**	**+1.0**
352A	**Blakely**	**23.98**	**44**	P	**P**	**01 08 31.2**	**+0.7**
S39A	**Bolivar**	**24.38**	**22**	IAmb	IAmb	01 08 47.3	
	comp=Z,9.3nm,0.8s						
X48A	**Hartselle**	**24.65**	**36**	IAmb	IAmb	01 08 38.6	
	comp=Z,7.7nm,0.8s						
PBMO	**Poplar Bluff**	**24.75**	**27**	IAmb	IAmb	01 08 40.2	
	comp=Z,17nm,1.0s						
R40A	**Maddies Statio**	**25.29**	**23**	IAmb	IAmb	01 08 45.2	
	comp=Z,10nm,0.9s						
WVT	**Waverly**	**25.48**	**32**	P	**P**	**01 08 44.8**	**+0.6**
WVT				IAmb	IAmb	01 08 46.7	
	comp=Z,6.4nm,0.9s						
FPAL	**Fort Paine**	**25.55**	**38**	IAmb	IAmb	01 08 48.1	
	comp=Z,15nm,0.9s						
P38A	**Dawn**	**26.05**	**19**	IAmb	IAmb	01 08 54.1	
	comp=Z,8.4nm,1.0s						
GOGA	**Godfrey**	**26.14**	**43**	P	**P**	**01 08 51.4**	**+1.2**
GOGA				IAmb	IAmb	01 08 53.3	
	comp=Z,16nm,1.2s						
NVAR	**Mina Array Bea**	**26.16**	**335**	P	**P**	**01 08 48.7**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=153,slow=6.1,SNR=1.7						
	comp=Z,0.1nm,0.3s						
T47A	**Sharon Grove**	**26.51**	**32**	IAmb	IAmb	01 08 55.3	
	comp=Z,16nm,1.1s						
ELK	**Elko**	**27.10**	**342**	LR	LR	01 18 25.7	
	comp=Z,44nm,20.2s,baz=214,slow=34						
TKL	**Tuckaleechee C**	**27.41**	**38**	LR	LR	01 22 38.0	
	comp=Z,88nm,18.7s,baz=201,slow=42						
N49A	**Columbus Grove**	**30.98**	**30**	IAmb	IAmb	01 09 37.3	
	comp=Z,11nm,1.0s						
ROSC	**El Rosal**	**31.27**	**106**	LR	LR	01 19 33.2	
	comp=Z,82nm,19.2s,baz=40,slow=31						
ATAH	**Atahualpa**	**34.00**	**129**	LR	LR	01 20 56.6	
	comp=Z,131nm,18.6s,baz=337,slow=31						
NNA	**Nana**	**38.40**	**133**	LR	LR	01 22 48.5	
	comp=Z,143nm,21.4s,baz=304,slow=30						
RPN	**Rapa Nui**	**42.42**	**187**	LR	LR	01 24 30.7	
	comp=Z,92nm,21.2s,baz=213,slow=30						
TAOE	**Nuku Hiva Isla**	**42.82**	**238**	*e*LR	LR	01 22 25.3	
	comp=Z,172nm,26.2s						
LPAZ	**La Paz**	**47.55**	**130**	LR	LR	01 29 17.0	
	comp=Z,126nm,21.8s,baz=272,slow=33						
YKA	**Yellowknife Ar**	**47.73**	**354**	P	**P**	**01 11 51.1**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=170,slow=7.1,SNR=3.7						
	comp=Z,0.4nm,0.6s						
SCHQ	**Schefferville**	**48.97**	**28**	P	**P**	**01 12 03.6**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=229,slow=5.5,SNR=3.9						
	comp=Z,2.1nm,0.8s						
LVC	**Limon Verde**	**51.19**	**137**	LR	LR	01 29 59.9	
	comp=Z,17nm,21.6s,baz=300,slow=31						
PMOR	**Pomariorio Ree**	**52.51**	**237**	*e*T	T	02 08 29.6	
	comp=Z,3.1nm,0.2s						
H03N2	**Juan Fernandez**	**54.16**	**154**	T	T	02 11 10.6	
	baz=340						
H03N1	**Juan Fernandez**	**54.17**	**154**	T	T	02 11 12.8	
	baz=340						
H03N3	**Juan Fernandez**	**54.18**	**154**	T	T	02 11 12.4	
	baz=340						
KLU	**Klutina**	**54.84**	**337**	P	**P**	**01 12 48.8**	**+2.7**
PPT	**Papeete**	**55.26**	**236**	LR	LR	01 29 48.9	
	comp=Z,52nm,19.1s,baz=71,slow=29						
PPT2	**Papeete2**	**55.27**	**235**	*e*LR	LR	01 27 23.8	
	comp=Z,189nm,27.8s						
TBI	**Tubuai**	**58.48**	**230**	*e*LR	LR	01 29 39.3	
	comp=Z,198nm,28.2s						
RES	**Resolute Bay**	**59.65**	**3**	LR	LR	01 37 21.9	
	comp=Z,90nm,19.8s,baz=169,slow=34						
CPUP	**Villa Florida**	**61.62**	**132**	LR	LR	01 39 43.5	
	comp=Z,35nm,18.1s,baz=318,slow=35						
SFJD	**Kangerlussuaq**	**62.28**	**21**	LR	LR	01 41 31.9	
	comp=Z,65nm,20.6s,baz=240,slow=37						
PLCA	**Paso Flores**	**63.93**	**152**	LR	LR	01 35 13.8	
	comp=Z,32nm,20.8s,baz=300,slow=30						
BORG	**Borgarnes**	**73.34**	**26**	LR	LR	01 46 56.1	
	comp=Z,46nm,18.6s,baz=326,slow=36						
H11S1	**WAKE ISLAND Hy**	**84.31**	**288**	T	T	02 48 31.0	
	baz=76,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**84.31**	**288**	T	T	02 48 33.0	
	baz=76,slow=75,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**84.33**	**288**	T	T	02 48 33.6	
	baz=76,slow=75,SNR=9.0						
LZH	**Lanzhou**	**122.39**	**333**	*e*PKP	PKiKP	01 22 18.9	+6.7
LZH				pPKP	sPKPdf	01 22 21.8	+6.6
WRA	**Warramunga Arr**	**124.11**	**256**	PKP	**PKPdf**	**01 22 13.0**	**-2.5**
	comp=Z,0.2nm,0.8s,baz=87,slow=2.3,SNR=1.1						
PZH	**PanZhiHua**	**131.35**	**328**	PKP	**PKiKP**	**01 22 31.3**	**+1.0**
PZH	**PanZhiHua**	**131.35**	**328**	PKP	**PKiKP**	**01 22 31.3**	**+1.0**

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*IDC **22** 01:06:18.8±0.5, 84°.39N×107°.05E, h0^{km}, mb3.8/30, mbtmp3.9/33, ML4.3/3, MS3.9/65, Error ellipse: s-maj=14.9km s-min=10.3km az=145.0*

*MOS **22** 01:06:20.8±1.6, 84°.52N×107°.26E, h10^{km}, mb4.7/42, MS3.9/14, Error ellipse: s-maj=66.0km s-min=6.8km az=88.3*

*GCMT **22** 01:06:20.8±0.2, 84°.45N±0°.02×106°.8E±0°.2, h12^{km}, MW4.9/117, Moment Tensor Solution. s20,c22; s117,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69±.06; $M_{\theta\theta}$1.23±.07; $M_{\phi\phi}$1.47±.06; $M_{r\theta}$-0.83±.28; $M_{\theta\phi}$-1.11±.05; $M_{\phi r}$0.28±.31; Best double couple: $M_0$2.72000×10^{16} NP1:ϕ_s326.00000°, δ37.00000°, λ-77.00000°. NP2:ϕ_s130.00000°, δ54.00000°, λ-100.00000°. Principal axes: T 2.5790, Plg8.0000°, Azm227.0000°; N 0.2920, Plg8.0000°, Azm135.0000°; P -2.8610, Plg79.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 01:06:22.8±1.6, 84°.52N±0°.09×10°7E±°, h10^{km}±1^{km}, mb4.7/110 Error ellipse: s-maj=18.0km s-min=14.0km az=124.0*

*IEPN **22** 01:06:23.0, 84°.37N×107°.00E, h10^{km}*

ISC 22 01:06:21.4±1.4**, 84°.54N**±0°.04×**107°.26E**±0°.04**, h8^{km}**±8^{km}**, n330, σ2^{s}.27**/232**, mb4.5**/120**, MS3.9**/86**, 10C-19D, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZFI2	**Zemlya Franca-**	**8.01**	**276**	*e*P	**Pn**	**01 08 15.1**	**-2.7**
ZFI2				*e*S	Sn	01 09 40.5	-7.8
ZFI	**Zemlya Franca-**	**8.01**	**276**	*e*P	**Pn**	**01 08 15.1**	**-2.8**
ZFI				*e*S	Sn	01 09 40.5	-7.9
NOR	**Nord**	**12.39**	**325**	*i* P	**Pn**	**01 09 17.8**	**+0.2**
NOR	**Nord**	**12.39**	**325**	*e*P	**Pn**	**01 09 19.8**	**+2.1**
NOR				*e*S	Sn	01 11 04.7	-31
KBS	**Kingsbay**	**12.86**	**300**	*e*P	**Pn**	**01 09 22.3**	**-1.9**
KBS				IAML		01 11 14.8	
	comp=Z,3.4nm,0.9s						
KBS	**Kingsbay**	**12.86**	**300**	*e*P	**Pn**	**01 09 22.7**	**-1.4**
KBS				S	Sn	01 11 38.6	-8.5
SPA0	**Spitsbergen Ar**	**13.17**	**295**	*e*P	**Pn**	**01 09 25.1**	**-3.2**
SPA0	**Spitsbergen Ar**	**13.17**	**295**	*e*P	**Pn**	**01 09 25.3**	**-3.1**
SPA0				*e*S	Sn	01 11 45.4	-9.3
SPITS	**Spitsbergen Ar**	**13.17**	**295**	Pn	**Pn**	**01 09 25.7**	**-2.6**
	baz=43,slow=11						
	comp=Z,5.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**13.17**	**295**	P	**Pn**	**01 09 25.0**	**-3.3**
SPB2	**Spitsbergen Ar**	**13.17**	**295**	Pn	**Pn**	**01 09 25.8**	**-2.5**
TIXI	**Tiksi**	**13.50**	**150**	Pn	**Pn**	**01 09 30.8**	**-2.1**
	comp=Z,25nm,0.3s,baz=74,slow=20,SNR=6.9						
TIXI				Sn	Sn	01 11 40.2	-23
	comp=Z,99nm,0.3s,baz=268,slow=7.9,SNR=9.5						
	comp=Z,1.3nm,0.5s						
TIXI	**Tiksi**	**13.50**	**150**		**Pn**	**01 09 29.9**	**-3.0**
TIXI	**Tiksi**	**13.50**	**150**	⇓*e*P	**Pn**	**01 09 35.3**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HOPEN	**Hopen**	**13.92**	**285**	*e*P	**Pn**	**01 09 37.2**	**-1.4**
HOPEN	**Hopen**	**13.92**	**285**	*e*P	**Pn**	**01 09 37.5**	**-1.1**
HOPEN				*e*S	Sn	01 12 03.1	-10
HSPB	**Hornsund (broa**	**14.32**	**294**	*e*P	Pn	01 09 39.4	-4.7
HSPB	**Hornsund (broa**	**14.32**	**294**	*e*P	**Pn**	**01 09 45.0**	**+0.9**
EUNU	**Eureka**	**15.41**	**9**		**Pn**	**01 09 59.4**	**+0.8**
EUNU	**Eureka**	**15.41**	**9**	*e*P	**Pn**	**01 09 56.9**	**-1.7**
EUNU				*e*S	**Sn**	**01 12 40.3**	**-8.9**
NRIK	**Noril'sk**	**15.72**	**206**	Pn	**Pn**	**01 09 58.8**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=56,slow=12,SNR=5.4						
NRIK				LR	LR	01 16 25.8	
	comp=Z,1µm,20.5s,baz=358,slow=39						
	comp=Z,2.6nm,0.6s						
NRIK	**Noril'sk**	**15.72**	**206**	Pn	**Pn**	**01 10 03.0**	**+0.3**
NRIK	**Noril'sk**	**15.72**	**206**	*ce*P	**Pn**	**01 10 05.1**	**+2.4**
NRIK				pmax	pmax		
	comp=Z,14nm,0.7s						
AMDE	**Amderma**	**16.96**	**238**	*e*P	**Pn**	**01 10 16.6**	**-1.9**
	comp=Z,5.7nm,0.6s						
AMDE				*e*S	Sn	01 13 11.3	-15
DAG	**Danmarks Havn**	**17.12**	**321**	*i* P	**Pn**	**01 10 21.7**	**+1.3**
DAG	**Danmarks Havn**	**17.12**	**321**	*e*P	**Pn**	**01 10 21.8**	**+1.3**
TULEG	**Thule**	**19.04**	**357**	P	**P**	**01 10 43.6**	**+0.3**
TULEG				IAmb	IAmb	01 10 53.8	
	comp=Z,97nm,1.4s						
DBG	**Daneborg**	**19.62**	**320**	*i* P	**Pn**	**01 10 54.8**	**+3.8**
DBG	**Daneborg**	**19.62**	**320**	*e*P	**Pn**	**01 10 52.1**	**+1.1**
BILL	**Bilibino**	**19.80**	**108**	P	**P**	**01 10 50.3**	**-1.5**
BILL	**Bilibino**	**19.80**	**108**	*i* P	**Pn**	**01 10 54.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,228nm,19.0s						
ARCES	**ARCESS Array B**	**20.50**	**276**	P	**P**	**01 10 56.4**	**-3.0**
	comp=Z,1.4nm,0.6s,baz=22,slow=10,SNR=1.1						
ARCES				PcP	**PcP**	**01 15 09.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=22,slow=1.3,SNR=4.7						
ARCES				LR	LR	01 19 17.6	
	comp=Z,196nm,18.9s,baz=9.5,slow=38						
	comp=Z,1.4nm,0.6s						
ARCES	**ARCESS Array B**	**20.50**	**276**	P	**P**	**01 11 00.1**	**+0.7**
ARCES				IAmb	IAmb	01 11 12.4	
	comp=Z,32nm,1.2s						
RES	**Resolute Bay**	**20.60**	**17**	P	**P**	**01 11 00.8**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=67,slow=14,SNR=2.6						
RES				LR	LR	01 19 02.9	
	comp=Z,600nm,20.2s,baz=339,slow=37						
	comp=Z,2.6nm,0.8s						
RES	**Resolute Bay**	**20.60**	**17**	P	**P**	**01 11 02.0**	**+1.6**
RES	**Resolute Bay**	**20.60**	**17**	P	**P**	**01 11 02.0**	**+1.6**
RES				pmax	pmax		
	comp=Z,15nm,1.3s						
RES	**Resolute Bay**	**20.60**	**17**	*e*P	Pn	01 11 07.8	+5.2
RES				*e*S	**S**	**01 14 45.5**	**-4.8**
APA	**Apatity**	**21.66**	**267**	⇓*i*P	**P**	**01 11 14.9**	**+3.2**
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JMIC	**Jan Mayen**	**22.06**	**308**	LR	LR	01 17 34.5	
	comp=Z,83nm,19.1s,baz=66,slow=30						
SUMG	**Summit**	**22.28**	**333**	P	**P**	**01 11 21.3**	**+2.4**
SUMG				IAmb	IAmb	01 11 41.8	
	comp=Z,28nm,1.3s						
SUMG	**Summit**	**22.28**	**333**	P	**P**	**01 11 21.3**	**+2.4**
SUMG				pmax	pmax		
	comp=Z,28nm,1.3s						
RDOG	**Red Dog Mine**	**22.70**	**77**	P	**P**	**01 11 23.3**	**+0.3**
RDOG				IAmb	IAmb	01 11 31.6	
	comp=Z,43nm,1.3s						
LSH	**Leshukonskoye**	**23.13**	**253**	*e*P	**P**	**01 11 25.2**	**-2.1**
	comp=Z,78nm,1.6s						
LSH				*e*S	**S**	**01 15 32.9**	**-5.5**
YAK	**Yakutsk**	**23.14**	**153**	LR	LR	01 20 46.3	
	comp=Z,233nm,21.7s,baz=60,slow=38						
YAK	**Yakutsk**	**23.14**	**153**	⇓*e*P	**P**	**01 11 28.3**	**+0.8**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
TOLK	**Toolik Lake Re**	**23.33**	**64**	P	**P**	**01 11 31.4**	**+1.9**
SCO	**Scoresbysund**	**23.49**	**319**	P	**P**	**01 11 32.8**	**+1.9**
SCO	**Scoresbysund**	**23.49**	**319**	P	**P**	**01 11 32.8**	**+1.9**
SCO				pmax	pmax		
	comp=Z,19nm,1.3s						
SCO	**Scoresbysund**	**23.49**	**319**	*i* P	**P**	**01 11 31.4**	**+0.5**
SEY	**Seymchan**	**23.64**	**126**	P	**P**	**01 11 29.9**	**-2.6**
	comp=Z,3.2nm,0.7s,baz=343,slow=19,SNR=1.3						
SEY				LR	LR	01 21 12.1	
	comp=Z,173nm,19.4s,baz=354,slow=38						
	comp=Z,3.2nm,0.7s						
SEY	**Seymchan**	**23.64**	**126**	⇓*e*P	**P**	**01 11 33.8**	**+1.3**
SEY				pmax	pmax		
	comp=Z,11nm,1.3s						

SLVR	**Solovky**	**23.92**	**263**	P	P	01 11 42.5	+7.4
C36M	**Paulatuk**	**24.57**	**42**	P	**P**	**01 11 42.6**	**+1.4**
ADZR	**Andozero**	**24.75**	**260**	*e*P	**P**	**01 11 45.5**	**+2.8**
	comp=Z,18nm,0.8s						
BMAR	**Burnt Mountain**	**24.94**	**60**	P	**P**	**01 11 45.4**	**+0.8**
INK	**Inuvik**	**24.95**	**50**	P	**P**	**01 11 44.0**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=333,slow=9.0,SNR=3.3						
INK				LR	LR	01 22 39.0	
	comp=Z,322nm,20.2s,baz=18,slow=39						
	comp=Z,3.5nm,0.8s						
INK	**Inuvik**	**24.95**	**50**	P	**P**	**01 11 45.0**	**+0.4**
INK	**Inuvik**	**24.95**	**50**	P	**P**	**01 11 45.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,43nm,1.4s						
IMAR	**Indian Mountai**	**25.57**	**70**	P	**P**	**01 11 51.8**	**+1.6**
H21K	**Melozitna Rive**	**25.97**	**69**	P	**P**	**01 11 54.7**	**+0.8**
H21K				IAmb	IAmb	01 12 08.5	
	comp=Z,15nm,1.1s						
H23K	**Yukon River**	**26.09**	**66**	P	**P**	**01 11 56.1**	**+1.1**
H24K	**Noodor Dome**	**26.23**	**64**	P	**P**	**01 11 58.0**	**+1.8**
H24K				IAmb	IAmb	01 12 10.6	
	comp=Z,23nm,1.3s						
PRGR	**Permogore**	**26.32**	**251**	*e*P	**P**	**01 11 57.7**	**+0.7**
PRGR				*e*		01 12 56.4	
PRGR	**Permogore**	**26.32**	**251**	*e*P	**P**	**01 11 56.8**	**-0.3**
I21K	**Tanana**	**26.51**	**68**	P	**P**	**01 12 00.1**	**+1.4**
MA2	**Magadan**	**26.85**	**129**	LR	LR	01 23 22.9	
	comp=Z,70nm,18.9s,baz=343,slow=38						
MDM	**Murphy Dome**	**27.06**	**65**	P	**P**	**01 12 05.5**	**+1.8**
MDM				IAmb	IAmb	01 12 19.2	
	comp=Z,12nm,1.0s						
COLA	**College**	**27.18**	**65**	⇓*e*P	**P**	**01 12 08.5**	**+3.8**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
J20K	**Nowinta River**	**27.30**	**71**	P	**P**	**01 12 07.7**	**+1.9**
J20K				IAmb	IAmb	01 12 20.8	
	comp=Z,22nm,1.5s						
IL31		**27.36**	**64**	P	**P**	**01 12 07.7**	**+1.4**
IL31				IAmb	IAmb	01 12 18.0	
	comp=Z,22nm,1.5s						
ILAR	**Eielson Array**	**27.36**	**64**	P	**P**	**01 12 06.1**	**-0.3**
	comp=Z,2.6nm,1.1s,baz=348,slow=8.5,SNR=13						
ILAR				LR	LR	01 22 04.2	
	comp=Z,309nm,21.9s,baz=328,slow=34						
	comp=Z,2.6nm,1.1s						
I29M	**Ogilvie Camp,**	**27.49**	**56**	IAmb	IAmb	01 12 22.9	
	comp=Z,11nm,1.1s						
KLMR	**Klimovskoe**	**27.66**	**257**	*e*P	**P**	**01 12 10.6**	**+1.6**
KLMR				*e*S	**S**	**01 16 52.3**	**+1.7**
KLMR				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	**Klimovskoe**	**27.66**	**257**	*e*P	**P**	**01 12 11.3**	**+2.3**
	comp=Z,33nm,1.4s						
KLMR				*i* S	**S**	**01 16 51.6**	**+1.0**
KLMR	**Klimovskoe**	**27.66**	**257**	*e*P	**P**	**01 12 10.6**	**+1.6**
KLMR				AMP		01 12 29.1	
	comp=Z,17nm,1.1s						
KLMR				*e*S	**S**	**01 16 52.4**	**+1.8**
KLMR				*e*S	**S**	**01 16 52.4**	**+1.8**
KLMR				LQ	LQ	01 20 48.9	
KLMR				LQ	LQ	01 20 48.9	
KLMR				LR	LR	01 21 52.2	
SFJD	**Kangerlussuaq**	**28.30**	**342**	LR	LR	01 22 54.7	
	comp=Z,217nm,19.4s,baz=1.0,slow=35						
FIA1	**FINESS Array S**	**28.36**	**271**	P	**P**	**01 12 16.5**	**+1.3**
FIA1				IAmb	IAmb	01 12 25.2	
	comp=Z,18nm,1.2s						
FINES	**FINESS Array B**	**28.36**	**271**	P	**P**	**01 12 14.1**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=16,slow=9.6,SNR=16						
FINES				PcP	**PcP**	**01 15 26.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=46,slow=6.3,SNR=3.3						
	comp=Z,1.6nm,0.7s						
BORG	**Borgarnes**	**29.13**	**316**	LR	LR	01 23 36.2	
	comp=Z,64nm,18.6s,baz=341,slow=36						
SVE	**Sverdlovsk**	**29.81**	**233**	*e*P	**P**	**01 12 30.1**	**+1.9**
SVE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SVE				MLR	MLR		
	comp=Z,566nm,18.0s						
NOA	**NORSAR Array B**	**30.16**	**286**	P	**P**	**01 12 29.7**	**-1.7**
	comp=Z,0.9nm,0.9s,baz=2.7,slow=8.5,SNR=2.0						
NOA				ScP	**ScP**	**01 19 13.5**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=10,slow=2.9,SNR=3.3						
NOA				LR	LR	01 24 40.6	
	comp=Z,63nm,20.7s,baz=0.0,slow=36						
	comp=Z,0.9nm,0.9s						
M30M	**Minto, Yukon**	**30.36**	**55**	IAmb	IAmb	01 12 44.1	
	comp=Z,12nm,1.4s						
ARU	**Arti**	**30.37**	**236**	P	**P**	**01 12 30.3**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=14,slow=11,SNR=3.7						
ARU				LR	LR	01 26 10.0	
	comp=Z,1µm,19.8s,baz=18,slow=39						
	comp=Z,0.4nm,0.3s						
ARU	**Arti**	**30.37**	**236**	P	**P**	**01 12 35.0**	**+1.9**
ARU	**Arti**	**30.37**	**236**	*d i*P	**P**	**01 12 32.9**	**-0.3**
ARU						01 13 29.3	
ARU						01 15 30.7	
ARU				S	**S**	**01 17 34.4**	**+1.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ARU				MLR	MLR		
	comp=Z,973nm,18.0s						
HFS	**Hagfors**	**30.82**	**283**	LR	LR	01 24 49.5	
	comp=Z,146nm,21.3s,baz=11,slow=36						
M31M	**Drury Creek, Y**	**30.92**	**53**	IAmb	IAmb	01 12 49.5	
	comp=Z,15nm,1.4s						
ZAA0	**Zalesovo Array**	**31.22**	**206**	P	**P**	**01 12 41.5**	**+0.9**
ZALV	**Zalesovo Beam**	**31.22**	**206**	P	**P**	**01 12 36.9**	**-3.7**
	comp=Z,1.4nm,0.7s,baz=0.0,slow=8.0,SNR=5.2						
ZALV				LR	LR	01 26 17.0	
	comp=Z,383nm,19.9s,baz=356,slow=39						
	comp=Z,1.4nm,0.7s						
ZEA	**Zeya**	**31.33**	**157**	*e*P	P	01 12 49.4	+7.8
ZEA				MLR	MLR		
	comp=Z,100nm,12.0s						
FRB	**Frobisher Bay**	**31.89**	**356**	LR	LR	01 25 33.9	
	comp=Z,179nm,20.0s,baz=12,slow=36						
YKA	**Yellowknife Ar**	**31.95**	**36**	P	**P**	**01 12 45.4**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=353,slow=9.0,SNR=2.0						
YKA				PcP	**PcP**	**01 15 35.3**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=328,slow=3.2,SNR=4.3						
YKA				LR	LR	01 26 18.7	
	comp=Z,539nm,18.8s,baz=330,slow=37						
	comp=Z,0.2nm,0.6s						
BRVK	**Borovoye**	**32.88**	**222**	P	**P**	**01 12 56.2**	**+0.9**
BRVK	**Borovoye**	**32.88**	**222**	⇓*e*P	**P**	**01 12 56.4**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,16nm,2.9s						
MOS	**Moscow**	**32.88**	**258**	*e*P	P	01 13 03.3	+8.1
MOS				*e*		01 14 18.1	
P33M	**Teslin, Yukon**	**33.01**	**53**	IAmb	IAmb	01 13 12.7	
	comp=Z,13nm,1.2s						
OBN	**Obninsk**	**33.60**	**258**	LR	LR	01 28 14.8	
	comp=Z,79nm,21.7s,baz=357,slow=39						
OBN	**Obninsk**	**33.60**	**258**	⇓*e*P	**P**	**01 13 02.3**	**+0.8**
OBN				*i*		01 14 15.0	
OBN				*i* S	**S**	**01 18 22.9**	**-0.7**
OBN				pmax	pmax		
	comp=Z,23nm,1.9s						
OBN				MLR	MLR		
	comp=Z,332nm,23.0s						
KDAK	**Kodiak Island**	**33.75**	**72**	LR	LR	01 27 28.8	
	comp=Z,153nm,18.0s,baz=23,slow=38						
PETK	**Petropavlovsk-**	**33.80**	**123**	LR	LR	01 27 22.1	
	comp=Z,112nm,18.8s,baz=350,slow=37						
KNGR	**Kungurtug, Tuv**	**34.18**	**191**	⇑*e*P	**P**	**01 13 09.6**	**+2.9**
KURK	**Kurchatov**	**34.73**	**212**	P	**P**	**01 13 13.1**	**+1.7**
KURK	**Kurchatov**	**34.73**	**212**	P	**P**	**01 13 13.1**	**+1.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NACGM	**Naroch**	**34.74**	**268**	⇑*e*P	P	01 13 20.3	+9.0
	baz=9.3						
KURBB	**Kurchatov Arra**	**34.83**	**212**	LR	LR	01 30 23.4	
	comp=Z,274nm,19.0s,baz=331,slow=42						
DLBC	**Dease Lake**	**34.98**	**51**	LR	LR	01 30 24.3	
	comp=Z,142nm,18.1s,baz=315,slow=41						
MNK	**Minsk**	**35.03**	**267**	*i* P	P	01 13 21.1	+7.2
MNK				*i*		01 14 38.2	
MNK				*i* PPP	PPP	01 14 50.8	
MNK				*i*		01 15 53.0	
MNK				*i* S	**S**	**01 18 52.8**	**+7.2**
MNK				*i* SS	**SnSn**	**01 21 06.5**	**+5.9**
MNK				*i* SSS	SSS	01 21 26.8	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,21nm,0.9s						
MNK				MLR	MLR		
	comp=N,99nm,19.0s						
MNK				MLR	MLR		
	comp=E,34nm,19.0s						
MNK				MLR	MLR		
	comp=Z,142nm,20.0s						
MNK	**Minsk**	**35.03**	**267**	*i* P	P	01 13 21.2	+7.3
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	01 13 21.2	+7.3
	comp=N,15nm,0.9s						
MNK				*i* P	P	01 13 21.2	+7.3
	comp=Z,21nm,0.9s,baz=189						
MNK				*i* PP	**PP**	**01 14 38.2**	**+5.2**
MNK				*i* PPP	PPP	01 14 50.8	
MNK				*i* S	**S**	**01 18 52.9**	**+7.2**
MNK				*i* SS	**SnSn**	**01 21 06.5**	**+5.9**
MNK				*i* SSS	SSS	01 21 26.9	
MNK				*i* LQ	LQ	01 24 25.4	
MNK				*i* LR	LR	01 27 10.3	
MNK				*i* LRM	MLR	01 28 58.8	
	comp=E,34nm,18.7s						
MNK				*i* LRM	MLR	01 28 58.8	
	comp=N,99nm,18.7s						
MNK				*i* LRM	MLR	01 28 58.8	
	comp=Z,142nm,20.0s						
BELG	**Belogornoye**	**35.29**	**246**	LR	LR	01 29 46.3	
	comp=Z,244nm,18.2s,baz=6.9,slow=40						
BELG	**Belogornoye**	**35.29**	**246**	⇓*e*P	**P**	**01 13 18.6**	**+2.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SHEM	**Shemya Is, Ala**	**35.60**	**106**	LR	LR	01 28 36.9	
	comp=Z,92nm,19.3s,baz=326,slow=38						
KLR	**Kul'dur**	**36.02**	**152**	LR	LR	01 28 59.9	
	comp=Z,132nm,18.2s,baz=14,slow=38						
KLR	**Kul'dur**	**36.02**	**152**	⇓*e*P	**P**	**01 13 26.4**	**+4.0**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.8s						
KLR				MLR	MLR		
	comp=Z,189nm,23.0s						
AKTO	**Aktyubinsk**	**36.37**	**235**	P	**P**	**01 13 22.6**	**-2.9**
	comp=Z,1.8nm,0.7s,baz=27,slow=9.0,SNR=3.3						
AKTO				LR	LR	01 29 39.4	
	comp=Z,531nm,21.0s,baz=7.2,slow=39						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**36.86**	**181**	P	**P**	**01 13 26.9**	**-2.9**
	comp=Z,0.6nm,0.5s,baz=347,slow=6.9,SNR=5.2						
SONM				LR	LR	01 29 16.8	
	comp=Z,154nm,18.8s,baz=5.5,slow=38						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**36.86**	**181**	P	**P**	**01 13 29.6**	**-0.2**
SONM	**Songino Array**	**36.86**	**181**	P	**P**	**01 13 29.6**	**-0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**37.08**	**297**	LR	LR	01 25 43.5	
	comp=Z,62nm,20.5s,baz=24,slow=31						
ABKAR	**Akbulak array**	**37.39**	**232**	P	**P**	**01 13 34.8**	**+0.7**
MK31	**Makanchi Array**	**38.47**	**208**	⇑*e*P	**P**	**01 13 41.5**	**-1.8**
MKAR	**Makanchi Array**	**38.47**	**208**	P	**P**	**01 13 41.2**	**-2.1**
	comp=Z,2.8nm,0.8s,baz=352,slow=7.1,SNR=12						
MKAR				LR	LR	01 30 60.0	
	comp=Z,212nm,18.1s,baz=354,slow=39						
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**38.47**	**208**	P	**P**	**01 13 41.8**	**-1.5**
MKAR	**Makanchi Array**	**38.47**	**208**	P	**P**	**01 13 41.8**	**-1.5**
AKASG	**Malin Array Be**	**38.66**	**265**	P	**P**	**01 13 43.0**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=9.9,slow=8.5,SNR=6.2						
AKASG				LR	LR	01 32 06.6	
	comp=Z,290nm,20.8s,baz=12,slow=40						
	comp=Z,0.7nm,0.5s						
AKASG	**Malin Array Be**	**38.66**	**265**	*i* P	**P**	**01 13 44.4**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**38.66**	**265**	⇓*e*P	**P**	**01 13 43.7**	**-1.1**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CLL	**Collm**	**39.61**	**281**	*e*P	P	01 13 59.0	+6.3
CLL				*e*S	**S**	**01 20 04.0**	**+8.7**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CLL	**Collm**	**39.61**	**281**	*e*Px	Px	01 13 59.0	
CLL				*e*S	**S**	**01 20 04.0**	**+8.7**
KSP	**Ksiaz**	**39.76**	**278**	*e*P	P	01 14 02.2	+8.3
BRG	**Berggiesshubel**	**39.95**	**280**	*e*P	P	01 14 05.3	+10
BRG				Amp		01 14 08.5	
	comp=Z,4.8nm,1.2s						
BRG				*e*x	x	01 14 18.0	
BRG				Amp		01 14 20.6	
	comp=Z,8.3nm,1.4s						
BRG	**Berggiesshubel**	**39.95**	**280**	*e*P	P	01 14 05.2	+10
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CHVC	**Chvalec**	**40.03**	**278**	*e*P	P	01 14 03.3	+7.0
CHVC				AMS	AMS	01 34 20.0	
	comp=Z,200nm,18.1s						
OJC	**Ojcow**	**40.04**	**274**	*e*P	**P**	**01 13 57.5**	**+1.2**
OJC	**Ojcow**	**40.04**	**274**	P	**P**	**01 13 57.7**	**+1.3**
OJC	**Ojcow**	**40.04**	**274**	P	**P**	**01 13 57.7**	**+1.3**
OJC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OSTC	**Ostas**	**40.05**	**278**	*e*P	**P**	**01 14 00.1**	**+3.7**
OSTC				*e*x	x	01 14 06.9	
OSTC				AMS	AMS	01 34 10.0	
	comp=Z,200nm,18.8s						
UPC	**Upice**	**40.12**	**278**	AMS	AMS	01 34 00.0	
	comp=Z,200nm,15.8s						
PVCC	**Panska Ves**	**40.23**	**279**	AMS	AMS	01 34 20.0	
	comp=Z,200nm,20.4s						
DPC	**Dobruska-Polom**	**40.24**	**277**	*e*P	**P**	**01 13 55.9**	**-2.2**
DPC				MLR	MLR		
	comp=Z,200nm,21.4s						
DPC	**Dobruska-Polom**	**40.24**	**277**	*e*P	**P**	**01 13 55.9**	**-2.2**
DPC				*e*x	x	01 14 06.4	
DPC				AMS	AMS	01 34 10.0	
	comp=Z,200nm,21.4s						
KWP	**Kalwaria Pacla**	**40.34**	**271**	*e*P	P	01 14 05.9	+7.1
KRLC	**Kraliky**	**40.47**	**277**	*e*P	**P**	**01 14 00.3**	**+0.3**
KRLC				*e*		01 14 08.9	
KRLC				MLR	MLR		
	comp=Z,200nm,17.5s						
KRLC	**Kraliky**	**40.47**	**277**	*e*P	**P**	**01 14 00.3**	**+0.3**
KRLC				*e*x	x	01 14 08.9	
KRLC				AMS	AMS	01 36 20.0	
	comp=Z,200nm,17.5s						
OKC	**Ostrava-Krasne**	**40.58**	**276**	*e*P	P	01 14 09.0	+8.2
OKC				MLR	MLR		
	comp=Z,200nm,12.8s						
OKC	**Ostrava-Krasne**	**40.58**	**276**	*e*P	P	01 14 09.0	+8.2
OKC				AMS	AMS	01 33 50.0	
	comp=Z,200nm,12.8s						
MORC	**Moravsky Berou**	**40.69**	**276**	⇓P	P	01 14 10.9	+9.1
MORC	**Moravsky Berou**	**40.69**	**276**	*e*P	P	01 14 11.5	+10
MORC				*e*		01 14 19.2	
NKC	**Novy Kostel**	**40.73**	**281**	AMS	AMS	01 31 00.0	
	comp=Z,200nm,15.8s						
PRU	**Pruhonice**	**40.77**	**279**	AMS	AMS	01 35 10.0	
	comp=Z,300nm,14.8s						
SCHQ	**Schefferville**	**40.82**	**355**	LR	LR	01 31 33.6	
	comp=Z,138nm,20.8s,baz=20,slow=37						
USRK	**Ussuriysk Ar.**	**41.05**	**153**	LR	LR	01 31 59.2	
	comp=Z,97nm,19.6s,baz=348,slow=38						
MAUC	**Maruska**	**41.08**	**276**	*e*P	P	01 14 14.7	+10
MAUC				*e*x	x	01 14 23.3	
KOLS	**Kolonicke sedl**	**41.08**	**271**	*e*P	P	01 14 14.5	+10
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KOLS	**Kolonicke sedl**	**41.08**	**271**	*e*P	P	01 14 14.5	+10
LANS	**Liptovska Anna**	**41.13**	**274**	*e*P	P	01 14 15.0	+10
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	**Liptovska Anna**	**41.13**	**274**	*e*P	P	01 14 15.0	+10
CRVS	**Cervenica-Dubn**	**41.19**	**272**	*e*P	P	01 14 12.7	+6.9
CRVS	**Cervenica-Dubn**	**41.19**	**272**	*e*P	P	01 14 12.7	+6.9
WMQ	**Urumqi**	**41.23**	**202**	*e*P	**P**	**01 14 08.9**	**+2.6**
WMQ				pP	pwP	01 14 15.1	+2.3
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				LR	LR		
	comp=N,530nm,13.3s						
WMQ				LR	LR		
	comp=E,190nm,15.5s						
WMQ				LR	LR		
	comp=Z,350nm,19.1s						
VRAC	**Vranov**	**41.25**	**277**	LR	LR	01 32 30.0	
	comp=Z,106nm,20.2s,baz=12,slow=38						
VRAC	**Vranov**	**41.25**	**277**	*e*P	P	01 14 15.9	+10
EDM	**Edmonton**	**41.27**	**36**	P	**P**	**01 14 07.6**	**+1.1**
EDM	**Edmonton**	**41.27**	**36**	P	**P**	**01 14 07.6**	**+1.1**
EDM				pmax	pmax		
	comp=Z,12nm,1.3s						
SORM	**Soroca**	**41.29**	**265**	⇓P	**P**	**01 14 06.1**	**-0.5**
BBB	**Bella Bella**	**41.34**	**50**	LR	LR	01 32 11.4	
	comp=Z,110nm,21.1s,baz=0.5,slow=38						
TREC	**Trest**	**41.37**	**278**	AMS	AMS	01 34 50.0	
	comp=Z,200nm,14.0s						
KRUC	**Moravsky**	**41.51**	**277**	*e*P	P	01 14 18.0	+10
JAVC	**Velka Javorina**	**41.59**	**276**	*e*P	P	01 14 19.3	+10
ASAJ	**Asahikawa**	**41.69**	**141**	LR	LR	01 32 02.3	
	comp=Z,108nm,20.9s,baz=6.0,slow=37						
KECS	**Kecovo**	**41.70**	**273**	*e*P	P	01 14 15.3	+5.3
KECS	**Kecovo**	**41.70**	**273**	*e*P	P	01 14 15.2	+5.3
KHC	**Kasperske Hory**	**41.71**	**280**	*e*P	**P**	**01 14 11.2**	**+1.1**
KHC				*e*		01 14 20.3	
KHC				MLR	MLR		
	comp=Z,200nm,14.9s						
KHC	**Kasperske Hory**	**41.71**	**280**	*e*P	**P**	**01 14 11.2**	**+1.1**
KHC				*e*x	x	01 14 20.3	
KHC				AMS	AMS	01 37 30.0	
	comp=Z,200nm,14.9s						
VYHS	**Vyhne**	**41.84**	**275**	*e*P	P	01 14 20.4	+9.2
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VYHS	**Vyhne**	**41.84**	**275**	*e*P	P	01 14 20.4	+9.2
CKRC	**Cesky Krumlov**	**41.95**	**279**	*e*P	P	01 14 21.4	+9.3
SMOL	**Smolenice**	**41.96**	**276**	*e*P	P	01 14 21.2	+9.1
SMOL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SMOL	**Smolenice**	**41.96**	**276**	*e*P	P	01 14 21.2	+9.1
GERES	**GERESS Array B**	**41.98**	**280**	P	**P**	**01 14 09.2**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=347,slow=8.1,SNR=3.9						
GERES				PcP	**PcP**	**01 16 06.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=21,slow=5.7,SNR=2.7						
	comp=Z,0.1nm,0.3s						
GERES	**GERESS Array B**	**41.98**	**280**	P	**P**	**01 14 14.2**	**+1.8**
GERES	**GERESS Array B**	**41.98**	**280**	P	**P**	**01 14 14.2**	**+1.8**
GERES						01 16 06.3	
BURAR	**Bucovina Array**	**42.10**	**268**	⇓P	P	01 14 18.4	+5.0
BURAR	**Bucovina Array**	**42.10**	**268**	P	**P**	**01 14 14.3**	**+0.9**
MODS	**Modra-Piesok**	**42.11**	**276**	*e*P	P	01 14 23.2	+10
MODS				pmax	pmax		
	comp=Z,17nm,1.2s						
MODS	**Modra-Piesok**	**42.11**	**276**	*e*P	P	01 14 23.2	+10
ZST	**Bratislava**	**42.30**	**276**	*e*P	P	01 14 23.1	+8.2
ZST	**Bratislava**	**42.30**	**276**	*e*P	P	01 14 23.1	+8.2
PSZ	**Piszkesteto**	**42.31**	**273**	⇑P	P	01 14 25.1	+10
PSZ	**Piszkesteto**	**42.31**	**273**	P	**P**	**01 14 17.6**	**+2.5**
CONA	**Conrad Observa**	**42.69**	**277**	*e*P	**P**	**01 14 21.3**	**+3.1**
	comp=Z,4.2nm,0.9s						
BIZ	**Bicaz**	**42.69**	**267**	⇓P	**P**	**01 14 18.8**	**+0.7**
KKAR	**Karatay Array**	**42.78**	**220**	P	**P**	**01 14 20.6**	**+1.7**
KKAR	**Karatay Array**	**42.78**	**220**	P	**P**	**01 14 20.6**	**+1.7**
RONA	**Rosalia, Austr**	**42.87**	**277**	*e*P	**P**	**01 14 21.3**	**+1.7**
MOA	**Molln**	**42.91**	**279**	*e*P	**P**	**01 14 22.4**	**+2.5**
	comp=Z,5.1nm,1.6s						
AAK	**Ala-Archa**	**43.01**	**216**	P	**P**	**01 14 17.1**	**-3.8**
	comp=Z,0.6nm,0.3s,baz=197,slow=21,SNR=1.7						
	comp=Z,0.6nm,0.3s						
AAK	**Ala-Archa**	**43.01**	**216**	P	**P**	**01 14 23.0**	**+2.0**
AAK	**Ala-Archa**	**43.01**	**216**	⇑*e*P	**P**	**01 14 24.1**	**+3.1**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TESR	**Tescani**	**43.06**	**266**	⇑P	P	01 14 29.8	+8.7
DRGR		**43.16**	**270**	⇑P	**P**	**01 14 22.9**	**+0.9**
MPLH	**Magyarpolny**	**43.28**	**276**	P	P	01 14 32.5	+10
KDJ	**Kajisay**	**43.37**	**213**	P	**P**	**01 14 24.4**	**+0.5**
KDJ	**Kajisay**	**43.37**	**213**	P	**P**	**01 14 24.4**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WATA	**Walderalm**	**43.68**	**281**	*e*P	**P**	**01 14 29.3**	**+3.1**
	comp=Z,4.7nm,1.5s						
MOTA	**Moosalm**	**43.71**	**282**	*e*P	**P**	**01 14 29.4**	**+2.8**
	comp=Z,3.9nm,1.3s						
WTTA	**Wattenberg**	**43.74**	**281**	*e*P	**P**	**01 14 30.7**	**+3.9**
	comp=Z,5.8nm,1.2s						
KBA	**Koelnbreinsper**	**43.77**	**280**	*e*P	P	01 14 32.5	+5.5
	comp=Z,10nm,1.4s						
SIRR	**Siria**	**43.78**	**271**	⇑P	P	01 14 36.8	+10
HHC	**Hu-ho-hao-te**	**43.86**	**175**	*e*P	**P**	**01 14 28.4**	**+0.6**
HHC				pmax	pmax		
	comp=Z,41nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.4s						
HHC				LR	LR		
	comp=N,260nm,18.8s						
HHC				LR	LR		
	comp=E,280nm,16.1s						
HHC				LR	LR		
	comp=Z,310nm,15.8s						
DAVA	**Damuels**	**43.88**	**283**	*e*P	P	01 14 32.8	+4.8
	comp=Z,4.7nm,1.3s						
SOKA	**Soboth**	**44.00**	**278**	*e*P	**P**	**01 14 32.4**	**+3.6**
	comp=Z,3.0nm,1.1s						
KVAR	**Kislovodsk Arr**	**44.09**	**250**	LR	LR	01 34 35.7	
	comp=Z,110nm,21.2s,baz=261,slow=38						
KIV	**Kislovodsk**	**44.09**	**250**	⇓P	**P**	**01 14 30.5**	**+0.9**
KIV	**Kislovodsk**	**44.09**	**250**	P	**P**	**01 14 31.4**	**+1.8**
KIV				IAmb	IAmb	01 14 40.2	
	comp=Z,17nm,1.2s						
KIV	**Kislovodsk**	**44.09**	**250**	*e*P	**P**	**01 14 32.4**	**+2.8**
KIV				*e*		01 16 18.2	
KIV				*e*S	**S**	**01 21 03.1**	**+1.2**
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,88nm,16.0s						
MORH	**Mrgy, Hungar**	**44.12**	**274**	P	**P**	**01 14 32.6**	**+3.0**
MLR	**Muntele Rosu**	**44.14**	**267**	⇑P	P	01 14 39.7	+10
MLR	**Muntele Rosu**	**44.14**	**267**	LR	LR	01 35 45.9	
	comp=Z,225nm,20.3s,baz=22,slow=40						
OBKA	**Obir**	**44.22**	**278**	*e*P	P	01 14 35.8	+5.2
	comp=Z,8.5nm,0.9s						
KBZ	**Khabaz**	**44.30**	**249**	P	**P**	**01 14 28.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=302,slow=17,SNR=1.6						
KBZ				PcP	**PP**	**01 16 13.5**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=353,slow=8.1,SNR=2.1						
KBZ				LR	LR	01 35 14.7	
	comp=Z,57nm,19.3s,baz=1.5,slow=39						
	comp=Z,0.3nm,0.3s						
DAVOX	**Davos/Dischmat**	**44.39**	**283**	P	**P**	**01 14 30.7**	**-1.3**
	comp=Z,1.9nm,0.8s,baz=0.4,slow=17,SNR=4.1						
DAVOX				LR	LR	01 33 39.4	
	comp=Z,86nm,20.2s,baz=9.0,slow=37						
	comp=Z,1.9nm,0.8s						
GZR	**Gura Zlata**	**44.54**	**270**	⇓P	P	01 14 41.3	+8.2
SOC	**Sochi**	**44.73**	**253**	*e*P	**P**	**01 14 32.6**	**-1.9**
SOC				*e*		01 16 20.7	
SOC				*e*PPP	PPP	01 16 56.6	
SOC				*e*S	**S**	**01 21 09.3**	**-1.7**
SOC				*e*SS	**ScS**	**01 24 34.8**	**+3.1**
SOC				*e*SSS	SSS	01 25 15.3	
SOC				MLR	MLR		
	comp=Z,421nm,20.0s						
TUE	**Stuetta**	**44.74**	**283**	P	**P**	**01 14 36.0**	**+1.1**
TUE				IAmb	IAmb	01 14 46.7	
	comp=Z,15nm,1.2s						
ULM	**Lac du Bonnet**	**45.04**	**21**	P	**P**	**01 14 36.6**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=343,slow=8.4,SNR=1.4						
ULM				LR	LR	01 33 48.8	
	comp=Z,299nm,19.4s,baz=16,slow=36						
	comp=Z,1.1nm,0.4s						
ZEI	**Tsey**	**45.14**	**248**	*e*P	P	01 14 43.6	+5.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDVR	**Moldovita**	**45.24**	**271**	⇓P	P	01 14 47.4	+8.7
GTA	**Gaotai**	**45.33**	**188**	*e*P	**P**	**01 14 39.8**	**+0.3**
GTA				sP	pwP	01 14 48.3	+2.2
GTA				S	**S**	**01 21 17.6**	**-2.5**
GTA				sS	sS	01 21 26.5	+4.4
GTA	**Gaotai**	**45.33**	**188**	SS	SS	01 24 43.1	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,42nm,4.7s						
GTA				LR	LR		
	comp=N,420nm,17.1s						
GTA				LR	LR		
	comp=E,400nm,16.4s						
GTA				LR	LR		
	comp=Z,560nm,17.8s						

WALA	Waterton Lakes	45.39	37	P	P	01 14 41.9	+2.0
WALA				IAmb	IAmb	01 14 50.4	
	comp=Z,17nm,1.5s						
B08A	Colville Reser	45.75	43	P	P	01 14 44.0	+1.3
B08A				IAmb	IAmb	01 14 53.3	
	comp=Z,15nm,1.2s						
BTK	Batken	45.80	219	P	P	01 14 44.0	+0.9
BTK				IAmb	IAmb	01 14 54.2	
	comp=Z,9.9nm,1.1s						
BTK	Batken	45.80	219	P	P	01 14 44.0	+0.9
BTK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEW	Newport	45.98	41	P	P	01 14 44.3	-0.2
	comp=Z,0.8nm,0.5s,baz=352,slow=14,SNR=1.7						
NEW				LR	LR	01 34 37.3	
	comp=Z,423nm,20.2s,baz=350,slow=37						
	comp=Z,0.8nm,0.5s						
KSH	Kashi	46.04	214	P	P	01 14 51.8	+6.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BLKB	Belogradchik	46.30	270	⇓P	P	01 14 55.7	+8.7
JTMT	Jette	46.67	38	P	P	01 14 51.8	+1.7
JTMT				IAmb	IAmb	01 14 52.6	
	comp=Z,8.8nm,1.0s						
ZCCA	Zocca	46.69	281	P	P	01 14 50.3	+0.2
ZCCA				IAmb	IAmb	01 14 57.3	
	comp=Z,8.2nm,0.8s						
GAR	Garm	46.88	220	P	P	01 14 52.5	+0.8
B35A	Bob, Littlefor	47.00	19	P	P	01 14 54.4	+2.0
B35A				IAmb	IAmb	01 15 01.7	
	comp=Z,11nm,1.1s						
OSSC	Osservatorio P	47.49	281	P	P	01 14 57.6	+1.3
MSO	Missoula	47.61	38	P	P	01 14 59.3	+2.0
MSO				IAmb	IAmb	01 15 07.7	
	comp=Z,12nm,1.2s						
KSRS	Korea Array	47.62	158	P	P	01 14 52.3	-5.0
	comp=Z,0.7nm,0.7s,baz=359,slow=6.1,SNR=1.9						
KSRS				LR	LR	01 36 32.2	
	comp=Z,89nm,19.1s,baz=0.0,slow=38						
GNI	Garni	47.69	247	LR	LR	01 39 39.4	
	comp=Z,127nm,18.0s,baz=14,slow=42						
HAWA	Hanford	47.70	43	P	P	01 14 59.2	+1.3
HAWA				IAmb	IAmb	01 15 07.8	
	comp=Z,6.8nm,1.1s						
LRM	Limekiln Ridge	48.70	36	P	P	01 15 07.7	+1.8
GEYT	Alibeck	48.79	233	P	P	01 15 05.3	-1.1
	comp=Z,1.3nm,0.8s,baz=23,slow=7.8,SNR=2.7						
GEYT				LR	LR	01 38 14.7	
	comp=Z,299nm,20.1s,baz=38,slow=39						
	comp=Z,1.3nm,0.8s						
GEYT	Alibeck	48.79	233	P	P	01 15 07.9	+1.5
G08A	Pilot Rock	48.83	43	P	P	01 15 08.6	+1.8
G08A				IAmb	IAmb	01 15 17.9	
	comp=Z,12nm,1.2s						
MJB9	Matsu-Tunnel	48.98	147	P	P	01 15 08.1	+0.2
MJB9				IAmb	IAmb	01 15 09.4	
	comp=Z,6.8nm,1.1s						
MAJO	Matsushiro	48.98	147	P	P	01 15 08.6	+0.7
MAJO				IAmb	IAmb	01 15 09.5	
	comp=Z,6.9nm,1.1s						
MAJO	Matsushiro	48.98	147	P	P	01 15 08.6	+0.7
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	Matsushiro Arr	48.99	147	P	P	01 15 06.4	-1.5
	comp=Z,0.6nm,0.3s,baz=4.9,slow=6.4,SNR=1.7						
MJAR				LR	LR	01 35 41.0	
	comp=Z,55nm,20.7s,baz=14,slow=36						
	comp=Z,0.6nm,0.3s						
BRTR	Keskin Array B	49.12	258	P	P	01 15 07.5	-1.6
	comp=Z,0.9nm,0.8s,baz=7.6,slow=5.8,SNR=5.3						
BRTR				LR	LR	01 39 50.2	
	comp=Z,117nm,19.2s,baz=22,slow=41						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	49.12	258	P	P	01 15 10.3	+1.2
BRTR	Keskin Array B	49.12	258	P	P	01 15 10.3	+1.2
E43A	Lone Tree Farm	49.16	13	IAmb	IAmb	01 15 19.2	
	comp=Z,9.1nm,0.9s						
PLID	Pearl Lake	49.22	40	IAmb	IAmb	01 15 35.9	
	comp=Z,7.9nm,1.2s						
BMO	Blue Mountains	49.37	41	IAmb	IAmb	01 15 22.2	
	comp=Z,13nm,1.2s						
YHL	Hebgen Lake	49.74	35	P	P	01 15 15.2	+1.2
YHL				IAmb	IAmb	01 15 25.1	
	comp=Z,13nm,1.5s						
I07A	Izee	50.00	43	IAmb	IAmb	01 15 28.3	
	comp=Z,8.5nm,1.2s						
G40A	Rib Lake	50.19	16	IAmb	IAmb	01 15 26.6	
	comp=Z,17nm,1.4s						
RSSD	Black Hills	50.83	29	P	P	01 15 22.9	+0.8
RSSD	Black Hills	50.83	29	P	P	01 15 22.9	+0.8
MARD	Mardin	50.85	250	P	P	01 15 23.7	+1.5
SADO	Sadowa	50.89	6	LR	LR	01 37 17.1	
	comp=Z,197nm,18.4s,baz=11,slow=36						
MFID	Camas Ranch	50.90	40	IAmb	IAmb	01 15 34.2	
	comp=Z,6.7nm,1.1s						
LOHW	Long Hollow	51.00	35	P	P	01 15 24.2	+0.8
ECSD	EROS Data Cent	51.52	22	IAmb	IAmb	01 15 36.3	
	comp=Z,18nm,1.4s						
I42A	Draeger Farm,	51.60	15	IAmb	IAmb	01 15 37.4	
	comp=Z,10nm,0.9s						
WVOR	Wild Horse Val	51.70	43	P	P	01 15 28.8	+0.3
WVOR				IAmb	IAmb	01 15 43.2	
	comp=Z,9.7nm,1.3s						
WVOR	Wild Horse Val	51.70	43	P	P	01 15 28.8	+0.3
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PDAR	Pinedale Array	51.90	34	P	P	01 15 29.6	-0.6
	comp=Z,0.2nm,0.4s,baz=10,slow=5.7,SNR=1.5						
PDAR				LR	LR	01 39 06.2	
	comp=Z,61nm,19.0s,baz=8.0,slow=38						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	51.90	34	P	P	01 15 31.5	+1.3
NIL	Nilore	52.03	216	P	P	01 15 30.7	-0.2
NIL	Nilore	52.03	216	P	P	01 15 30.7	-0.2
NIL				pmax	pmax		
	comp=Z,15nm,0.9s						
YBH	Yreka Blue Hor	52.12	47	LR	LR	01 40 09.9	
	comp=Z,109nm,18.5s,baz=348,slow=39						
ESDC	Sonseca Array	52.69	295	P	P	01 15 35.6	-0.2
	comp=Z,0.8nm,0.6s,baz=4.1,slow=7.3,SNR=10						
	comp=Z,0.8nm,0.6s						
HWUT	Hardware Ranch	52.95	36	IAmb	IAmb	01 15 54.0	
	comp=Z,15nm,1.3s						
L40A	Anamosa	53.36	17	IAmb	IAmb	01 15 47.2	
	comp=Z,5.3nm,0.8s						
ELK	Elko	53.59	40	LR	LR	01 38 57.8	
	comp=Z,321nm,20.4s,baz=341,slow=36						
ELK	Elko	53.59	40	P	P	01 15 44.7	+2.0
ELK	Elko	53.59	40	P	P	01 15 44.7	+2.0
ELK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BEKR	Beckworth	54.14	45	IAmb	IAmb	01 15 57.5	
	comp=Z,15nm,1.4s						
IDI	Anoyia	54.35	266	LR	LR	01 41 04.4	
	comp=Z,88nm,21.0s,baz=52,slow=38						
PAHR	Pah Rah Range	54.36	44	IAmb	IAmb	01 16 04.9	
	comp=Z,9.0nm,1.3s						
KVN	Kaiserville	55.10	42	P	P	01 15 54.9	+1.3
KVN	Kaiserville	55.10	42	P	P	01 15 54.9	+1.3
KVN				pmax	pmax		
	comp=Z,17nm,1.5s						
P17A	Butcher Ranch,	55.12	36	P	P	01 15 54.8	+1.1
KEST	Kesra	55.39	282	P	P	01 15 54.4	-1.2
	comp=Z,6.7nm,1.1s,baz=319,slow=5.1,SNR=5.5						
	comp=Z,6.7nm,1.1s						
RYN	Ryan	55.49	43	IAmb	IAmb	01 16 09.4	
	comp=Z,12nm,1.2s						
MMAI	Mount Meron Ar	55.61	255	LR	LR	01 42 30.9	
	comp=Z,64nm,21.7s,baz=197,slow=39						
SMCO	Snowmass	55.62	32	P	P	01 15 59.2	+1.6
SMCO				IAmb	IAmb	01 16 08.2	
	comp=Z,7.5nm,1.2s						
NVAR	Mina Array Bea	55.70	43	P	P	01 15 56.6	-1.4
	comp=Z,0.5nm,0.8s,baz=330,slow=5.6,SNR=4.1						
NVAR				LR	LR	01 40 08.3	
	comp=Z,140nm,21.9s,baz=27,slow=36						
	comp=Z,0.5nm,0.8s						
NV11	Mina Array Sit	55.71	43	P	P	01 15 59.3	+1.3
NV11				IAmb	IAmb	01 16 08.9	
	comp=Z,7.0nm,1.2s						
R11A	Troy Canyon, C	55.96	40	IAmb	IAmb	01 16 10.6	
	comp=Z,16nm,1.4s						
LCH	Last Change Ra	56.94	42	IAmb	IAmb	01 16 17.8	
	comp=Z,7.0nm,1.3s						
MVCO	Mesa Verde	57.50	34	P	P	01 16 11.9	+1.1
S39A	Bolivar	57.66	19	IAmb	IAmb	01 16 20.1	
	comp=Z,11nm,1.1s						
PZH	PanZhiHua	58.18	186	P	P	01 16 16.5	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,40nm,4.7s						
T35A	Sooner Cattle	58.33	22	P	P	01 16 17.9	+1.6
EIL	Elat	58.97	255	LR	LR	01 46 48.5	
	comp=Z,71nm,19.0s,baz=52,slow=41						
ANMO	Albuquerque	59.86	32	P	P	01 16 25.9	-1.3
	comp=Z,1.3nm,1.0s,baz=6.7,slow=17,SNR=2.1						
ANMO				LR	LR	01 42 40.2	
	comp=Z,340nm,19.8s,baz=350,slow=36						
	comp=Z,1.3nm,1.0s						
ANMO	Albuquerque	59.86	32	P	P	01 16 29.0	+1.8
ANMO				IAmb	IAmb	01 16 37.2	
	comp=Z,8.7nm,1.2s						
ANMO	Albuquerque	59.86	32	P	P	01 16 29.0	+1.8
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TKL	Tuckaleechee C	59.92	10	LR	LR	01 42 15.1	
	comp=Z,412nm,19.5s,baz=4.5,slow=36						
PFO	Pinyon Flats O	60.61	41	LR	LR	01 44 39.4	
	comp=Z,159nm,18.9s,baz=326,slow=38						
MNTX	Cornudas Mount	63.14	31	P	P	01 16 50.4	+1.2
RAYN	Ar Rayn	64.11	244	P	P	01 16 56.1	+0.4
RAYN				IAmb	IAmb	01 17 05.9	
	comp=Z,6.3nm,1.1s						
RAYN	Ar Rayn	64.11	244	P	P	01 16 56.1	+0.4
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
JCT	Junction City	64.61	26	P	P	01 16 58.8	-0.1
JCT	Junction City	64.61	26	P	P	01 16 58.8	-0.1
JCT				pmax	pmax		
	comp=Z,14nm,1.3s						
TX32	Lajitas Array	65.58	30	IAmb	IAmb	01 17 14.9	
	comp=Z,7.0nm,1.2s						
TXAR	Lajitas Array	65.58	30	P	P	01 17 05.2	-0.1
	comp=Z,1.0nm,1.0s,baz=316,slow=3.5,SNR=6.0						
TXAR				LR	LR	01 47 12.6	
	comp=Z,232nm,18.5s,baz=344,slow=37						
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	65.58	30	P	P	01 17 06.4	+1.1
TXAR	Lajitas Array	65.58	30	P	P	01 17 06.4	+1.1
LPIG	La Paz	70.44	36	LR	LR	01 50 40.1	
	comp=Z,81nm,20.3s,baz=14,slow=38						
SJG	San Juan	77.46	354	LR	LR	01 52 54.5	
	comp=Z,31nm,19.1s,baz=106,slow=36						
CMIG	Matias Romero	78.12	22	LR	LR	01 55 17.4	
	comp=Z,53nm,21.9s,baz=343,slow=38						
TOA0	Torodi Ar. Sit	78.47	287	P	P	01 18 22.5	0.0
TOA0				IAmb	IAmb	01 18 23.9	
	comp=Z,8.2nm,1.1s						
TORD	Torodi Ar. Bea	78.47	287	P	P	01 18 21.9	-0.6
	comp=Z,3.5nm,0.8s,baz=11,slow=5.3,SNR=22						
	comp=Z,3.5nm,0.8s						
TORD	Torodi Ar. Bea	78.47	287	P	P	01 18 22.3	-0.2
TORD				IAmb	IAmb	01 18 32.3	
	comp=Z,11nm,1.4s						
JTS	Las Juntas de	85.15	12	LR	LR	01 58 28.0	
	comp=Z,73nm,18.3s,baz=96,slow=37						
SDV	Santo Domingo	86.66	358	LR	LR	02 00 28.6	
	comp=Z,33nm,18.1s,baz=358,slow=37						
MDP	Montagnes des	90.09	340	LR	LR	01 53 30.8	
	comp=Z,41nm,20.7s,baz=350,slow=31						
ROSC	El Rosal	90.69	2	LR	LR	02 01 29.7	
	comp=Z,51nm,20.6s,baz=33,slow=36						
TAOE	Nuku Hiva Isla	100.87	68	*e*LR	LR	01 53 20.5	
	comp=Z,76nm,26.0s						
PPT2	Papeete2	108.65	79	*e*LR	LR	01 57 03.5	
	comp=Z,169nm,23.0s						
TBI	Tubuai	114.36	79	*e*LR	LR	01 59 45.4	
	comp=Z,183nm,45.8s						
PLCA	Paso Flores	136.03	358	PKP	PKPdf	01 25 40.4	-1.3
	comp=Z,1.7nm,0.9s,baz=265,slow=1.7,SNR=3.7						

*IDC **22** 01:09:13.6±1.5, 1.°33N×126.°81E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=143.3km s-min=21.7km az=69.0*

*DJA **22** 01:09:28.3±0.6, 1°N±3°×12°7E±°, h111km±8km, M4.1/7, MLv4.1/7*

ISC 22 01:09:26.8±0.9**, 1.°35N**±0.°07×**126.°8E**±0.°2**, h103km, n10, σ2.s49**/10**, mb3.6**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.81	135	P	Pn	01 09 48.1	+2.6
LBMI	Labuha	2.09	160	P	Pn	01 10 03.7	+2.9
SGSI	Sangihe	2.65	331	P	Pn	01 10 10.7	+2.7
SANI	Sanana	3.47	194	P	Pn	01 10 21.2	+2.2
SANI				S	Sn	01 10 59.4	+0.1
GTOI	Gorontalo	3.85	259	P	Pn	01 10 30.2	+6.1
WRA	Warramunga Arr	22.41	161	P	P	01 14 14.6	-2.6
	1.3nm,0.4s,baz=340,slow=11,SNR=29						
	1.3nm,0.4s						
ASAR	Alice Springs	25.81	165	P	P	01 14 45.7	-2.9
	0.2nm,0.3s,baz=345,slow=11,SNR=5.9						
	0.2nm,0.3s						
NJ2	Nanjing	31.45	347	*e*P	P	01 15 38.4	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SONM	Songino Array	49.57	342	P	P	01 18 06.7	-0.8
	comp=Z,0.4nm,0.6s,baz=152,slow=6.5,SNR=2.4						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	59.55	326	P	P	01 19 19.0	-0.6
	comp=Z,0.6nm,0.6s,baz=115,slow=7.7,SNR=8.0						
	comp=Z,0.6nm,0.6s						

*MAN **22** 01:22:58.9, 9.°89N×124.°06E, h4km, mb4.3, ML3.1, MS2.9, Hypocentre not reviewed by the ISC*

MAN INTENSITY II - BASAY CEBU CITY.

ISC 22 01:22:59.8±1.2**, 9.°90N**±0.°03×**124.°01E**±0.°04**, h4km**±11km**, n10, σ1.s15**/14**, 6C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.26	215	⇓*e*P	Pg	01 23 05.1	+0.3
TBP				*i* S	Sg	01 23 09.0	+0.8
LLP	Lapu-Lapu	0.41	353	⇓*i*P	Pg	01 23 07.7	-0.1
LLP				*e*S	Sg	01 23 14.0	+0.8
MSLP	Maasin	0.86	75	⇓*e*P	Pg	01 23 15.8	-0.6
MSLP				*e*S	Sg	01 23 29.1	+1.5
OCLP	Ormoc	1.28	27	⇑*e*P	Pg	01 23 23.2	-1.2
OCLP				*e*S	Sg	01 23 42.0	+0.9
CNOP	Candoni, Negro	1.36	267	⇑*e*P	Pn	01 23 24.4	-1.1
DCPH	Dipolog City	1.47	206	⇑*e*P	Pn	01 23 25.4	-1.6
DCPH				*i* S	Sg	01 23 45.7	-1.3
RCP	Roxas	2.06	323	⇑*e*P	Pn	01 23 34.8	-0.5
RCP				*e*S	Sn	01 24 01.9	+0.4
PAGZ	Pagadian	2.14	197	⇑*e*P	Pn	01 23 35.9	-0.3
BUKP	Musuan	2.26	153	⇑*e*P	Pn	01 23 36.8	-1.2
BUKP				*e*S	Sn	01 24 08.3	+1.9
CTBH	Cotabato--PC H	2.68	175	*e*P	Pn	01 23 42.5	-1.1

*IDC **22** 01:24:09.4±1.1, 84.°35N×107.°17E, h0km, mb3.6/9, mbtmp3.7/10, ML3.2/1, MS3.1/1, Error ellipse: s-maj=38.6km s-min=18.8km az=156.0*

ISC 22 01:24:11.3±0.9**, 84.°5N**±0.°1×**104.°59E**±0.°10**, h10km, n13, σ1.s80**/12**, mb3.5**/8**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	7.76	273	*e*P	Pn	01 26 03.3	-0.7
ZFI2				*e*S	Sn	01 27 28.0	-3.7
ZFI	Zemlya Franca-	7.76	273	*e*P	Pn	01 26 03.3	-0.7
ZFI				*e*S	Sn	01 27 28.4	-3.3
NRIK	Noril'sk	15.57	203	Pn	Pn	01 27 49.8	-0.6
	0.1nm,0.3s,baz=10,slow=12,SNR=1.3						
	1.3nm,0.3s						
ARCES	ARCESS Array B	20.25	274	P	Pn	01 28 49.3	+1.1
	12nm,1.2s,baz=11,slow=9.6,SNR=2.6						
	12nm,1.2s						
INK	Inuvik	25.18	48	P	P	01 29 35.8	-0.4
	1.0nm,0.7s,baz=268,slow=6.7,SNR=2.0						
	1.0nm,0.7s						
ILAR	Eielson Array	27.61	61	P	P	01 29 55.5	-2.7
	1.4nm,1.3s,baz=350,slow=9.6,SNR=3.2						
	1.4nm,1.3s						
FINES	FINESS Array B	28.10	269	P	P	01 30 04.1	+1.5
	1.1nm,0.8s,baz=39,slow=12,SNR=4.1						
	1.1nm,0.8s						
PETK	Petropavlovsk-	34.00	120	LR	LR	01 43 47.5	
	comp=Z,34nm,19.4s,baz=98,slow=35						
MKAR	Makanchi Array	38.32	205	P	P	01 31 31.0	-0.6
	0.4nm,0.6s,baz=4.7,slow=10,SNR=2.4						
	0.4nm,0.6s						
AKASG	Malin Array Be	38.40	262	P	P	01 31 33.9	+1.7
	0.2nm,0.4s,baz=46,slow=1.1,SNR=4.2						
	0.2nm,0.4s						
ESDC	Sonseca Array	52.47	293	P	P	01 33 25.0	+1.3
	0.5nm,0.8s,baz=8.9,slow=7.1,SNR=3.0						
	0.5nm,0.8s						
NVAR	Mina Array Bea	55.91	40	P	P	01 33 48.5	-0.6
	0.1nm,0.4s,baz=340,slow=7.8,SNR=0.9						
	0.1nm,0.4s						
TORD	Torodi Ar. Bea	78.23	284	P	P	01 36 12.0	+1.2
	1.2nm,0.7s,baz=353,slow=6.6,SNR=7.7						
	1.2nm,0.7s						

*IDC **22** 01:27:36.5±1.1, 84.°33N×107.°57E, h0km, mb3.7/7, mbtmp3.8/8, ML3.5/1, MS4.7/1, Error ellipse: s-maj=37.0km s-min=20.6km az=157.0*

*NEIC **22** 01:27:38.0±1.8, 84.°3N±0.°1×10°8E±°, h10km±1km, mb4.0/11, Error ellipse: s-maj=21.7km s-min=16.9km az=52.0*

ISC 22 01:27:37.6±0.8**, 84.°3N**±0.°1×**107.°46E**±0.°10**, h10km, n24, σ1.s32**/21**, mb3.9**/9**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	8.05	277	*e*P	Pn	01 29 32.6	-1.7
ZFI2				*e*S	Sn	01 30 56.5	-8.8
ZFI	Zemlya Franca-	8.05	277	*e*P	Pn	01 29 32.6	-1.7
ZFI				*e*S	Sn	01 30 56.6	-8.7
NRIK	Noril'sk	15.53	207	Pn	Pn	01 31 14.8	-1.4
	0.2nm,0.3s,baz=292,slow=8.5,SNR=2.2						
NRIK				LR	LR	01 37 30.2	
	comp=Z,66nm,18.6s,baz=334,slow=38						
	1.0nm,0.5s						
NRIK	Noril'sk	15.53	207	Pn	Pn	01 31 15.9	-0.2
NRIK				IAmb	IAmb	01 31 24.8	
	comp=Z,5.8nm,0.8s						
BILL	Bilibino	19.72	108	P	P	01 32 04.7	-2.0
ARCES	ARCESS Array B	20.55	277	P	P	01 32 15.9	+0.2
	comp=Z,3.1nm,0.8s,baz=20,slow=11,SNR=1.1						
	comp=Z,3.1nm,0.8s						
INK	Inuvik	25.08	50	P	P	01 33 00.8	-0.8
	comp=Z,2.5nm,1.1s,baz=356,slow=8.8,SNR=2.6						
	comp=Z,2.5nm,1.1s						
INK	Inuvik	25.08	50	P	P	01 33 01.7	+0.1
INK				IAmb	IAmb	01 33 02.3	
	comp=Z,7.0nm,1.3s						
H23K	Yukon River	26.17	65	P	P	01 33 13.3	+1.8
H23K				IAmb	IAmb	01 33 17.3	
	comp=Z,6.2nm,1.2s						
I21K	Tanana	26.58	68	P	P	01 33 15.1	0.0
IL31		27.44	64	P	P	01 33 22.1	-0.8
IL31				IAmb	IAmb	01 33 33.0	
	comp=Z,5.1nm,1.4s						
ILAR	Eielson Array	27.44	64	P	P	01 33 23.8	+0.9
	comp=Z,0.8nm,1.0s,baz=346,slow=8.0,SNR=7.4						
	comp=Z,0.8nm,1.0s						
FIA0	FINESS Array S	28.38	272	P	P	01 33 30.6	-0.8
FINES	FINESS Array B	28.38	272	P	P	01 33 31.4	+0.1
	comp=Z,1.8nm,1.0s,baz=1.4,slow=7.6,SNR=5.1						
	comp=Z,1.8nm,1.0s						
MK31	Makanchi Array	38.29	208	P	P	01 34 57.7	+0.1
MK31				IAmb	IAmb	01 35 07.8	
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	38.29	208	P	P	01 34 58.5	+0.9
	comp=Z,0.6nm,0.7s,baz=19,slow=7.7,SNR=4.5						
	comp=Z,0.6nm,0.7s						
MAKZ	Makanchi	38.29	208	P	P	01 34 58.0	+0.4
KK31	Karatay Array	42.63	221	P	P	01 35 36.2	+2.7
KKAR	Karatay Array	42.63	221	P	P	01 35 35.4	+1.9
ESDC	Sonseca Array	52.80	296	P	P	01 36 53.7	+1.3
	comp=Z,0.3nm,0.6s,baz=1.5,slow=7.7,SNR=2.2						
	comp=Z,0.3nm,0.6s						
ESDC	Sonseca Array	52.80	296	IAmb	IAmb	01 37 02.5	
	comp=Z,2.7nm,1.4s						
TGY	Tagaytay City	70.44	166	LR	LR	02 11 22.9	
	comp=Z,467nm,18.7s,baz=256,slow=37						
TORD	Torodi Ar. Bea	78.55	287	P	P	01 39 39.3	+0.5
	comp=Z,1.1nm,0.6s,baz=3.6,slow=6.6,SNR=11						
	comp=Z,1.1nm,0.6s						
TORD	Torodi Ar. Bea	78.55	287	IAmb	IAmb	01 39 42.6	
	comp=Z,1.6nm,1.1s						

*IDC **22** 01:32:29.7±0.5, 28.°36N×87.°44E, h0km, mb4.2/25, mbtmp4.2/28, ML3.9/2, MS3.8/7, Error ellipse: s-maj=16.9km s-min=11.5km az=43.0*

*MOS **22** 01:32:30.0±1.0, 28.°33N×87.°38E, h12km, mb4.8/38, Error ellipse: s-maj=8.2km s-min=4.0km az=121.1*

*BJI **22** 01:32:31.3±0.0, 28.°51N×87.°57E, h8km, mb4.5/51, mB4.7/27, Ms4.4/49, Ms7 4.1/46*

*DMN **22** 01:32:31.2±0.3, 28.°44N×87.°47E, h10km, Ml5.3/7, Error ellipse: s-maj=5.7km s-min=2.2km az=34.0*

*NEIC **22** 01:32:31.7±1.5, 28.°48N±0.°08×87.°51E±0.°06, h7km±4km, mb4.5/66, ML4.2(BJI), Error ellipse: s-maj=11.3km s-min=7.1km az=170.0*

*NDI **22** 01:32:33.1±5.2, 28.°48N×87.°55E, h10km, ML4.1, mb4.5(NEIC)*

*GCMT **22** 01:32:36.7±0.4, 28.°26N±0.°04×87.°66E±0.°02, h23km±1km, MW4.8/61, Moment Tensor Solution. s11,c11; s61,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.13±.23; $M_{\theta\theta}$-0.08±.13; $M_{\phi\phi}$2.21±.13; $M_{r\theta}$0.68±.26; $M_{\theta\phi}$-0.26±.07; $M_{\phi r}$-0.40±.14; Best double couple: $M_0$2.32500×10^{16} NP1:ϕ_s189.00000°,δ41.00000°,λ-66.00000°. NP2: ϕ_s338.00000°,δ53.00000°,λ-109.00000°. Principal axes: T 2.2910, Plg6.0000°, Azm82.0000°; N 0.0650, Plg15.0000°, Azm350.0000°; P -2.3580, Plg73.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 01:32:30.9±1.3**, 28.°43N**±0.°03×**87.°49E**±0.°02**, h5km**±8km**, n322, σ1.s51**/343**, mb4.5**/86**, MS4.0**/14**, 17C-25D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODAN	Odare	1.56	183	*e*Pg	Pb	01 33 00.5	0.0
ODAN	Odare	1.56	183	*e*Pg	Pb	01 33 00.7	+0.2
ODAN	Odare	1.56	183	*e*Pg	Pb	01 33 00.8	+0.2
ODAN				*e*Sg	Sg	01 33 21.8	+0.6
	4μm,0.6s						
RAMN	Ramite	1.67	208	*e*Pg	Pb	01 33 02.4	+0.1
RAMN				*e*Sg	Sb	01 33 24.2	+0.5
	12μm,0.6s						
SLGI	Shiliguri	1.91	154	*e*P	Pb	01 33 05.9	-0.4
SLGI				*e*S	Sb	01 33 30.6	+0.2
PKI	Pulchoki	2.02	246	*e*Pg	Pb	01 33 09.3	+0.8
PKI				*e*Sg	Sb	01 33 35.2	+1.1
	12μm,0.5s						
PKIN	Phulchoki	2.03	246	*e*Pg	Pb	01 33 09.4	+0.9
PKIN				*e*Sg	Sb	01 33 35.5	+1.2
	7μm,0.5s						
DMN	Daman	2.25	249	*e*Pg	Pb	01 33 13.3	+0.9
DMN				*e*Sg	Sb	01 33 41.4	+0.7
	7μm,0.6s						
GKN	Gorkha	2.55	261	*e*Pg	Pb	01 33 18.7	+1.4
GKN				*e*Sg	Sb	01 33 50.2	+1.2
	8μm,0.4s						
VLK	Valmikinagar	3.39	252	*e*P	Pn	01 33 26.7	+2.2
LSA	Lhasa	3.45	68	Pn	Pn	01 33 28.5	+2.7
LSA	Lhasa	3.45	68	P	Pn	01 33 28.5	+2.7
LSA	Lhasa	3.45	68	Pn	Pb	01 33 29.3	-3.6
LSA				LR	LR		
	comp=N,2μm,4.6s						
LSA				LR	LR		
	comp=E,2μm,4.3s						
LSA				LR	LR		
	comp=Z,4μm,5.0s						
KOLN	Koldanda	3.49	260	*e*Pg	Pb	01 33 35.6	+2.1
KOLN				*e*Sg	Sg	01 34 20.5	-2.7
	1μm,0.4s						
BOK	Bokaro	4.83	198	*e*P	Pn	01 33 46.4	+2.0
BOK				*e*S	Sn	01 34 43.5	+2.6
SHL	Shillong	4.85	125		Pn	01 33 44.9	+0.1
SHL	Shillong	4.85	125	P	Pn	01 33 44.9	+0.1
SHL	Shillong	4.85	125	*e*P	Pn	01 33 45.0	+0.2
SHL				*e*S	Sn	01 34 41.7	+0.2
ALBI	Allahabad	5.95	240	*e*P	Pn	01 34 01.3	+1.6
LGTI	Lohaghat	6.42	281	*e*P	Pn	01 34 09.9	+3.6
PTH	Pithoragarh	6.46	282	*e*P	Pn	01 34 09.3	+2.3

JHSG	**JHARSUGUGA**	**7.44**	**208**	*e*P	**Pn**	**01 34 22.4**	**+2.1**
BLSP	**Bilaspur**	**7.92**	**219**	*e*P	**Pn**	**01 34 28.4**	**+1.5**
BWNR	**Bhubaneshwar**	**8.24**	**191**	*e*P	**Pn**	**01 34 32.1**	**+0.9**
JHNI	**Jhansi**	**8.51**	**252**	*e*P	**Pn**	**01 34 32.8**	**-2.1**
SMLA	**Simla**	**9.36**	**289**	*e*P	**Pn**	**01 34 47.4**	**+0.8**
SMLA				*e*S	**Sn**	**01 36 32.9**	**+0.6**
SMLA				IAML		01 36 36.3	
	comp=N,85nm,0.3s						
SMLA				IAML		01 36 39.6	
	comp=E,74nm,0.6s						
SMLA				IAML		01 36 46.3	
	comp=E,81nm,0.0s						
SMLA				IAML		01 36 48.8	
	comp=N,53nm,0.0s						
SMLA				IAML		01 36 53.6	
	comp=N,75nm,0.1s						
SMLA				IAML		01 36 58.2	
	comp=E,88nm,1.0s						
KUDL	**Kundal**	**9.70**	**271**	*e*P	**Pn**	**01 34 51.7**	**+0.5**
RAGD	**RAYAGADA**	**9.85**	**203**	*e*P	**Pn**	**01 34 53.9**	**+0.5**
GOMU	**GeErMu**	**9.92**	**37**	P	**Pn**	**01 34 57.3**	**+2.7**
GOMU				pP		01 35 02.5	
GOMU				sP		01 35 05.8	
GOMU				S	**Sn**	**01 36 55.0**	**+8.4**
GOMU				pmax	pmax		
	comp=E,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=E,62nm,4.9s						
GOMU				LR	LR		
	comp=E,570nm,11.6s						
GOMU				LR	LR		
	comp=E,890nm,8.8s						
GOMU				LR	LR		
	comp=E,250nm,8.6s						
BHK	**Bhakra**	**10.05**	**290**	*e*x	x	01 37 08.5	
BHPL	**Bhopal**	**10.43**	**243**	*e*P	**Pn**	**01 35 00.2**	**-1.1**
AJM	**Ajmer**	**11.57**	**263**	*e*P	**Pn**	**01 35 16.0**	**-0.9**
AJM				*e*P	**Pn**	**01 35 17.0**	**+0.1**
AJM				*i* S	**Sn**	**01 37 20.0**	**-6.6**
AKL	**Akola**	**12.24**	**233**	*e*P	**Pn**	**01 35 24.9**	**-1.2**
PZH	**PanZhiHua**	**12.80**	**95**	P	**Pn**	**01 35 37.8**	**+3.9**
PZH				S	**Sn**	**01 38 02.8**	**+5.8**
PZH				pmax	pmax		
	comp=E,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=E,80nm,4.9s						
PZH				LR	LR		
	comp=E,2µm,17.1s						
PZH				LR	LR		
	comp=E,2µm,18.2s						
PZH				LR	LR		
	comp=E,3µm,18.6s						
CHCP	**Chirah Chowk**	**13.26**	**297**	P	**Pn**	**01 35 39.0**	**-1.0**
NIL	**Nilore**	**13.26**	**297**		**Pn**	**01 35 38.0**	**-2.0**
NIL	**Nilore**	**13.26**	**297**	P	**Pn**	**01 35 38.0**	**-2.0**
HYBB	**Hyderabad (bro**	**13.70**	**219**	*e*P	**Pn**	**01 35 44.1**	**-1.8**
HYBB				*e*S	**Sn**	**01 38 20.6**	**+1.9**
HYBB				IVMs_BB	IVMs_BB	01 39 59.9	
	comp=Z,389nm,3.0s						
KMI	**Kunming**	**14.02**	**100**	⇓P	**Pn**	**01 35 51.4**	**+0.8**
KMI				pP	P	01 35 55.3	-3.4
KMI				sP		01 35 58.8	
KMI				S	**Sn**	**01 38 32.0**	**+5.2**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,77nm,6.6s						
KMI				LR	LR		
	comp=Z,1µm,14.9s						
KMI				LR	LR		
	comp=Z,700nm,12.6s						
KMI				LR	LR		
	comp=Z,2µm,16.0s						
CHTO	**Chiang Mai**	**14.20**	**130**	Pn	**Pn**	**01 35 53.8**	**+0.9**
CHTO	**Chiang Mai**	**14.20**	**130**	P	**Pn**	**01 35 53.8**	**+0.9**
THW	**Thamme Wali**	**14.24**	**292**	P	**Pn**	**01 35 51.5**	**-1.8**
CD2	**Chengdu**	**14.36**	**76**	P	**Pn**	**01 35 54.0**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				LR	LR		
	comp=Z,1µm,16.2s						
CD2				LR	LR		
	comp=Z,2µm,17.3s						
CEP	**Cherat**	**14.38**	**296**	P	**Pn**	**01 35 54.4**	**-1.0**
CM31	**Chiang Mai Arr**	**14.45**	**131**	Pn	**Pn**	**01 35 55.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.45**	**131**	Pn	**Pn**	**01 35 53.5**	**-2.7**
	comp=Z,1.9nm,0.7s,baz=310,slow=13,SNR=6.4						
CMAR				LR	LR	01 42 56.9	
	comp=Z,438nm,19.5s,baz=350,slow=44						
CMAR	**Chiang Mai Arr**	**14.45**	**131**	Pn	**Pn**	**01 35 56.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.45**	**131**	P	**Pn**	**01 35 56.0**	**-0.3**
KSH	**Kashi**	**14.60**	**322**	P	**Pn**	**01 35 56.6**	**-1.7**
KSH				PP	**PnPn**	**01 36 13.4**	**+7.1**
KSH				S	**Sn**	**01 38 34.1**	**-6.5**
KSH				pmax	pmax		
	comp=Z,16nm,0.9s						
KSH				LR	LR		
	comp=Z,640nm,17.5s						
KSH				LR	LR		
	comp=Z,1µm,17.9s						
KSH				LR	LR		
	comp=Z,440nm,10.2s						
GTA	**Gaotai**	**14.98**	**40**	*e*P	**Pn**	**01 36 02.4**	**-1.1**
GTA				pP	P	01 36 07.0	-2.1
GTA				sP		01 36 10.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,4.4s						
GTA				LR	LR		
	comp=Z,920nm,15.6s						
GTA				LR	LR		
	comp=Z,810nm,16.0s						
GTA				LR	LR		
	comp=Z,370nm,14.2s						
WMQ	**Urumqi**	**15.36**	**1**	*e*P	**Pn**	**01 36 09.9**	**+1.4**
WMQ				sP	sP	01 36 17.3	+0.1
WMQ				pmax	pmax		
	comp=Z,69nm,0.7s						
WMQ				LR	LR		
	comp=Z,500nm,8.1s						
WMQ				LR	LR		
	comp=Z,430nm,10.7s						
WMQ				LR	LR		
	comp=Z,150nm,12.7s						
TARG	**Taragay, Kyrgy**	**15.44**	**332**	Pn	**Pn**	**01 36 09.0**	**-0.9**
TARG				IAmb	IAmb	01 36 30.2	
	comp=Z,35nm,1.2s						
TARG	**Taragay, Kyrgy**	**15.44**	**332**	P	**Pn**	**01 36 09.0**	**-0.9**
TARG				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH	**Lanzhou**	**15.79**	**57**	*e*P	**Pn**	**01 36 14.3**	**0.0**
LZH				sP	pP	01 36 19.6	-1.3
LZH				sS	S	01 39 17.8	-7.0
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=Z,730nm,12.1s						
LZH				LR	LR		
	comp=Z,600nm,12.0s						
LZH				LR	LR		
	comp=Z,1µm,14.3s						
POO	**Poona**	**15.91**	**235**	*e*P	**P**	**01 36 21.0**	**+1.5**
KDJ	**Kajisay**	**16.04**	**331**	Pn	**Pn**	**01 36 17.1**	**-0.3**
KDJ	**Kajisay**	**16.04**	**331**	P	**Pn**	**01 36 17.1**	**-0.3**
KDJ				pmax	pmax		
	comp=Z,19nm,1.4s						
PDGK	**Podgornoye**	**16.21**	**339**	P	**Pn**	**01 36 20.3**	**+0.7**
KAD	**Karad**	**16.50**	**231**	*e*P	**P**	**01 36 27.6**	**+1.5**
ULHL	**Ulahol**	**16.54**	**329**	P	**P**	**01 36 25.6**	**-1.0**
	SNR=24						
KBL	**Kabul**	**16.86**	**296**	Pn	**Pn**	**01 36 26.2**	**-1.8**
KBL	**Kabul**	**16.86**	**296**	P	**Pn**	**01 36 26.2**	**-1.8**
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
MDOK	**Medeo**	**16.95**	**333**	P	**P**	**01 36 31.7**	**+0.7**
GYA	**Guiyang**	**17.14**	**92**	⇓P	**Pn**	**01 36 30.3**	**-1.2**
GYA				S	**Sn**	**01 39 44.3**	**+1.7**
GYA				pmax	pmax		
	comp=Z,180nm,4.7s						
GYA				LR	LR		
	comp=Z,260nm,10.0s						
GYA				LR	LR		
	comp=Z,470nm,14.2s						
GYA				LR	LR		
	comp=Z,780nm,17.5s						
UCH	**Uchtor**	**17.34**	**326**	P	**P**	**01 36 36.4**	**+0.8**
	SNR=35						
TKM2	**Tokmak 2**	**17.36**	**330**	P	**P**	**01 36 36.2**	**+0.5**
	SNR=13						
TKM2	**Tokmak 2**	**17.36**	**330**	*i* P	**P**	**01 36 35.7**	**0.0**
TKM2				pmax	pmax		
	comp=Z,22nm,1.2s						
KBK	**Karagaybulak**	**17.45**	**328**	P	**P**	**01 36 39.5**	**+2.8**
	SNR=21						
AAK	**Ala-Archa**	**17.66**	**327**	P	**P**	**01 36 41.6**	**+2.7**
	SNR=10.0						
AAK	**Ala-Archa**	**17.66**	**327**	P	**P**	**01 36 39.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=144,slow=13,SNR=23						
	comp=Z,3.1nm,0.7s						
AAK	**Ala-Archa**	**17.66**	**327**		**P**	**01 36 39.5**	**+0.7**
AAK				IAmb	IAmb	01 36 45.3	
	comp=Z,43nm,1.3s						
AAK	**Ala-Archa**	**17.66**	**327**	*c i*P	**P**	**01 36 41.6**	**+2.7**
AAK				pmax	pmax		
	comp=Z,55nm,1.7s						
AML	**Almayashu**	**17.68**	**324**	P	**P**	**01 36 40.0**	**+0.7**
	SNR=15						
FRU1	**Bishkek**	**17.72**	**327**		**Pn**	**01 36 38.4**	**-0.2**
FRU1	**Bishkek**	**17.72**	**327**	P	**Pn**	**01 36 38.4**	**-0.2**
FRU1				pmax	pmax		
	comp=Z,23nm,1.1s						
GAR	**Garm**	**17.73**	**311**	Pn	**Pn**	**01 36 37.4**	**-1.3**
GAR				IAmb	IAmb	01 36 48.3	
	comp=Z,44nm,1.5s						
CHMS	**Chumysh**	**17.81**	**328**	*i* P	**P**	**01 36 40.5**	**+0.1**
CHMS				pmax	pmax		
	comp=Z,21nm,1.5s						
BTK	**Batken**	**17.98**	**315**	Pn	**Pn**	**01 36 39.2**	**-2.6**
BTK				IAmb	IAmb	01 37 02.5	
	comp=Z,51nm,1.4s						
BTK	**Batken**	**17.98**	**315**	P	**Pn**	**01 36 39.2**	**-2.6**
BTK				pmax	pmax		
	comp=Z,51nm,1.4s						
EKS2	**Erkin-Say**	**18.02**	**326**	P	**P**	**01 36 44.9**	**+2.0**
	SNR=9.7						
USP	**Ospenovka**	**18.13**	**328**	P	**P**	**01 36 46.2**	**+2.2**
	SNR=6.1						
CHGR	**Chuyangaron**	**18.34**	**309**		**Pn**	**01 36 45.0**	**-1.2**
CHGR	**Chuyangaron**	**18.34**	**309**	P	**Pn**	**01 36 45.0**	**-1.2**
CHGR				pmax	pmax		
	comp=Z,153nm,1.5s						
MK31	**Makanchi Array**	**18.78**	**349**		**P**	**01 36 50.1**	**-1.0**
MK31	**Makanchi Array**	**18.78**	**349**	*d i*P	**Pn**	**01 36 52.1**	**+0.6**
MKAR	**Makanchi Array**	**18.78**	**349**	P	**Pn**	**01 36 51.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=162,slow=12,SNR=32						
MKAR				LR	LR	01 45 32.4	
	comp=Z,270nm,18.6s,baz=154,slow=42						
	comp=Z,7.1nm,0.9s						
MKAR	**Makanchi Array**	**18.78**	**349**	P	**P**	**01 36 50.6**	**-0.5**
MKAR	**Makanchi Array**	**18.78**	**349**	*i* P	**Pn**	**01 36 52.2**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAKZ	**Makanchi**	**18.85**	**348**	P	**P**	**01 36 50.8**	**-1.1**
MAKZ	**Makanchi**	**18.85**	**348**	P	**P**	**01 36 51.3**	**-0.5**
XAN	**Xi'an**	**19.15**	**68**	P	**P**	**01 36 54.8**	**-0.5**
XAN				S	**Sn**	**01 40 31.1**	**0.0**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XAN				LR	LR		
	comp=Z,370nm,12.9s						
XAN				LR	LR		
	comp=Z,580nm,12.9s						
XAN				LR	LR		
	comp=Z,680nm,14.3s						
ENH	**Enshi**	**19.27**	**79**	P	**P**	**01 36 54.7**	**-1.9**
ENH				IAmb	IAmb	01 37 11.9	
	comp=Z,17nm,1.0s						
KK31	**Karatay Array**	**20.05**	**321**		**P**	**01 37 04.8**	**-0.1**
KK31	**Karatay Array**	**20.05**	**321**	P	**P**	**01 37 04.9**	**-0.1**
KK31				pmax	pmax		
	comp=Z,16nm,1.2s						
KKAR	**Karatay Array**	**20.05**	**321**	P	Pn	01 37 06.5	-0.2
KKAR	**Karatay Array**	**20.05**	**321**	P	**P**	**01 37 04.6**	**-0.4**
KKAR				IAmb	IAmb	01 37 09.5	
	comp=Z,16nm,1.2s						
KKAR	**Karatay Array**	**20.05**	**321**	P	Pn	01 37 06.5	-0.2
UBPT	**Khong Chiam**	**21.17**	**124**	P	**P**	**01 37 16.8**	**-0.5**
UBPT				IAmb	IAmb	01 37 17.5	
	comp=Z,55nm,1.5s						
LYN	**LuoYang**	**22.13**	**68**	⇓P	**P**	**01 37 31.9**	**+4.4**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LYN				pmax	pmax		
	comp=Z,110nm,4.6s						
LYN				LR	LR		
	comp=Z,420nm,15.8s						
LYN				LR	LR		
	comp=Z,300nm,11.8s						
LYN				LR	LR		
	comp=Z,610nm,21.4s						
HRA	**Herat**	**22.32**	**292**	P	**P**	**01 37 28.1**	**-1.7**
CNSH	**ChangSha**	**22.40**	**85**	⇓P	**P**	**01 37 29.8**	**-0.6**
CNSH				S	**S**	**01 41 39.0**	**+2.0**
CNSH				pmax	pmax		
	comp=Z,25nm,1.0s						
CNSH				LR	LR		
	comp=Z,600nm,13.0s						
CNSH				LR	LR		
	comp=Z,610nm,10.1s						
CNSH				LR	LR		
	comp=Z,520nm,10.6s						
QIZ	**Qiongzhong**	**22.47**	**110**	P	**P**	**01 37 30.1**	**-1.2**
QIZ				S	**S**	**01 41 37.5**	**-1.1**
QIZ				LR	LR		
	comp=Z,380nm,17.5s						
QIZ				LR	LR		
	comp=Z,350nm,16.7s						
QIZ				LR	LR		
	comp=Z,220nm,15.9s						
OTUK	**Ortayu**	**23.00**	**333**	P	**P**	**01 37 37.7**	**+1.1**
KURBB	**Kurchatov Arra**	**23.18**	**345**	P	**P**	**01 37 38.9**	**+0.5**
	comp=Z,16nm,1.0s,baz=164,slow=9.2,SNR=55						
KURBB				LR	LR	01 48 37.9	
	comp=Z,107nm,18.0s,baz=107,slow=42						
	comp=Z,16nm,1.0s						
KURBB	**Kurchatov Arra**	**23.18**	**345**	P	**P**	**01 37 38.7**	**+0.3**
KURK	**Kurchatov**	**23.25**	**346**	P	**P**	**01 37 38.7**	**-0.5**
KURK	**Kurchatov**	**23.25**	**346**	⇓*e*P	**P**	**01 37 39.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,54nm,1.3s						
HHC	**Hu-ho-hao-te**	**23.28**	**52**	*e*P	**P**	**01 37 40.8**	**+1.1**
HHC				sP	sP	01 37 49.3	+5.7
HHC				S	**S**	**01 41 50.8**	**-2.0**
HHC				sS	sS	01 41 59.9	+2.5
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,240nm,5.7s						
HHC				LR	LR		
	comp=Z,760nm,15.3s						
HHC				LR	LR		
	comp=Z,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,15.4s						
KNGR	**Kungurtug, Tuv**	**23.42**	**16**	⇓*e*P	**P**	**01 37 41.7**	**+0.7**
WHN	**Wuhan**	**23.46**	**78**	⇓P	**P**	**01 37 42.4**	**+0.9**
SONM	**Songino Array**	**24.31**	**32**	P	**P**	**01 37 50.1**	**+0.6**
	comp=Z,7.1nm,1.0s,baz=220,slow=10,SNR=18						
SONM				LR	LR	01 48 25.1	
	comp=Z,261nm,21.4s,baz=226,slow=39						
	comp=Z,7.1nm,1.0s						
SONM	**Songino Array**	**24.31**	**32**	P	**P**	**01 37 50.2**	**+0.6**
HNS	**HongShan**	**24.48**	**62**	⇓P	**P**	**01 37 52.8**	**+1.8**
HNS				*e*S	**S**	**01 42 11.5**	**-0.2**
HNS				pmax	pmax		
	comp=Z,19nm,1.1s						
HNS				LR	LR		
	comp=Z,680nm,13.1s						
HNS				LR	LR		
	comp=Z,340nm,13.7s						
HNS				LR	LR		
	comp=Z,510nm,21.4s						
ULN	**Ulaanbaatar**	**24.64**	**33**	P	**P**	**01 37 52.4**	**-0.2**
ULN				IAmb	IAmb	01 37 56.1	
	comp=Z,16nm,1.1s						
ULN	**Ulaanbaatar**	**24.64**	**33**	⇑*e*P	**P**	**01 37 53.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,21nm,1.3s						
ZAK	**Zakamensk**	**24.99**	**24**	*e*P	**P**	**01 37 57.4**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
MOY	**Mondy**	**25.33**	**20**	*e*P	**P**	**01 38 01.6**	**+2.9**
MOY				pmax	pmax		
	comp=Z,21nm,1.5s						
ZAA0	**Zalesovo Array**	**25.57**	**356**	P	**P**	**01 38 00.4**	**-0.3**
ZAA0				IAmb	IAmb	01 38 04.3	
	comp=Z,9.8nm,0.9s						
ZALV	**Zalesovo Beam**	**25.57**	**356**	P	**P**	**01 38 00.7**	**0.0**
	comp=Z,9.2nm,0.9s,baz=181,slow=8.5,SNR=18						
	comp=Z,9.2nm,0.9s						
KULM	**Kulim**	**26.18**	**149**	P	**P**	**01 38 06.0**	**-0.6**
KULM				IAmb	IAmb	01 38 27.2	
	comp=Z,22nm,1.0s						
GEYT	**Alibeck**	**26.25**	**299**	P	**P**	**01 38 07.6**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=128,slow=12,SNR=4.5						
GEYT				LR	LR	01 50 33.4	
	comp=Z,542nm,18.8s,baz=138,slow=41						
	comp=Z,3.5nm,0.8s						
GEYT	**Alibeck**	**26.25**	**299**	P	**P**	**01 38 06.4**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**26.25**	**299**	IAmb	IAmb	01 38 12.8	
	comp=Z,7.2nm,0.9s						
BJT	**Baijiatuau**	**26.27**	**56**	P	**P**	**01 38 06.6**	**-0.7**
BJT				IAmb	IAmb	01 38 13.4	
	comp=Z,13nm,1.2s						
BJT	**Baijiatuau**	**26.27**	**56**	P	**P**	**01 38 06.6**	**-0.7**
BJT				pmax	pmax		
	comp=Z,13nm,1.2s						
BJI	**Beijing**	**26.28**	**56**	P	**P**	**01 38 08.3**	**+0.9**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BJI				LR	LR		
	comp=Z,430nm,14.4s						
BJI				LR	LR		
	comp=Z,320nm,13.7s						
BJI				LR	LR		
	comp=Z,650nm,16.4s						
WSAR	**Wadi Sarin**	**26.45**	**265**	LR	LR	01 48 35.2	
	comp=Z,124nm,21.6s,baz=60,slow=37						
NJ2	**Nanjing**	**27.29**	**75**	*e*P	**P**	**01 38 15.9**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BRVK	**Borovoye**	**27.70**	**337**	P	**P**	**01 38 18.2**	**-1.8**
BRVK	**Borovoye**	**27.70**	**337**	⇓*e*P	**P**	**01 38 19.5**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
PSI	**Prapat**	**27.72**	**155**	P	**P**	**01 38 21.4**	**+0.7**
	comp=Z,2.7nm,0.4s,baz=115,slow=23,SNR=1.3						
	comp=Z,2.7nm,0.4s						
GSI	**Gunungsitoli**	**28.64**	**159**	P	**P**	**01 38 28.4**	**-0.3**
GSI	**Gunungsitoli**	**28.64**	**159**	P	**P**	**01 38 29.9**	**+1.2**
AB31	**Akbulak array**	**29.61**	**322**	*e*P	**P**	**01 38 37.6**	**+0.6**
ABKAR	**Akbulak array**	**29.61**	**322**	P	**P**	**01 38 36.5**	**-0.5**
MNSI	**Mandailing Nat**	**29.81**	**155**	P	P	01 38 30.1	-9.0
AKTO	**Aktyubinsk**	**31.30**	**323**	LR	LR	01 54 03.5	
	comp=Z,363nm,20.6s,baz=126,slow=41						
CN2	**Changchun**	**33.96**	**53**	*e*P	**P**	**01 39 16.3**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
SVE	**Sverdlovsk**	**34.15**	**334**	*e*P	**P**	**01 39 18.0**	**+1.2**
SVE				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARU	**Arti**	**34.71**	**332**	P	**P**	**01 39 20.7**	**-0.9**
ARU				IAmb	IAmb	01 39 40.3	
	comp=Z,4.3nm,0.7s						
ARU	**Arti**	**34.71**	**332**	*c i*P	**P**	**01 39 22.1**	**+0.4**
ARU						01 40 35.0	
ARU				S	**S**	**01 44 53.3**	**+1.3**
ARU				SS	**SnSn**	**01 47 06.8**	**+2.5**
ARU				pmax	pmax		
	comp=Z,11nm,1.4s						
KSAR	**Wonju Array Be**	**34.86**	**64**	P	**P**	**01 39 23.3**	**+0.1**
KSAR	**Wonju Array Be**	**34.86**	**64**	P	**P**	**01 39 23.3**	**+0.1**
KSRS	**Korea Array**	**34.89**	**64**	P	**P**	**01 39 23.5**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=248,slow=7.6,SNR=13						
	comp=Z,1.9nm,0.8s						
BNX	**BinXian**	**35.80**	**50**	⇓P	**P**	**01 39 32.1**	**+1.0**
BNX				pmax	pmax		
	comp=Z,15nm,0.6s						
BNX				pmax	pmax		
	comp=Z,180nm,5.7s						
GROC	**Groznyy**	**36.49**	**305**	*e*P	**P**	**01 39 37.0**	**-0.1**
GROC				*e*		01 41 01.6	
GROC				*e*		01 42 01.3	
GROC				*e*S	**S**	**01 45 21.7**	**+2.1**
GNI	**Garni**	**36.88**	**300**	P	**P**	**01 39 40.4**	**-0.3**
GNI				IAmb	IAmb	01 39 52.0	
	comp=Z,11nm,1.1s						
GNI	**Garni**	**36.88**	**300**	P	**P**	**01 39 40.4**	**-0.3**
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
MYLDM	**Lahad Datu**	**37.41**	**122**	P	**P**	**01 39 45.0**	**-0.3**
MYLDM				IAmb	IAmb	01 40 04.1	
	comp=Z,12nm,1.0s						
ZEI	**Tsey**	**37.80**	**304**	*e*P	**P**	**01 39 49.0**	**+0.5**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BELG	**Belogornoye**	**37.95**	**320**	⇓*e*P	**P**	**01 39 50.8**	**+1.4**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NCK	**Nalchik**	**38.12**	**305**	⇑*e*P	**P**	**01 39 50.6**	**-0.4**
NCK				pmax	pmax		
	comp=Z,12nm,0.7s						
KARS	**Kars**	**38.18**	**301**	P	**P**	**01 39 50.5**	**-1.2**
KARS	**Kars**	**38.18**	**301**	P	**P**	**01 39 50.5**	**-1.2**
KARS				pmax	pmax		
	comp=Z,47nm,1.1s						
KBZ	**Khabaz**	**38.66**	**305**	P	**P**	**01 39 55.6**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=136,slow=5.8,SNR=12						
	comp=Z,3.6nm,0.8s						
KBZ	**Khabaz**	**38.66**	**305**	⇑*e*P	**P**	**01 39 56.9**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**38.84**	**306**	P	**P**	**01 39 57.7**	**+0.6**
KIV				IAmb	IAmb	01 40 01.3	
	comp=Z,5.2nm,0.7s						
KIV	**Kislovodsk**	**38.84**	**306**	*e*P	**P**	**01 39 58.6**	**+1.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,121nm,16.0s						
GURO	**Guroymak-BITLI**	**38.89**	**297**	P	**P**	**01 39 57.9**	**+0.3**
KLR	**Kul'dur**	**39.55**	**46**	⇓*e*P	**P**	**01 40 02.4**	**-0.5**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MARD	**Mardin**	**39.88**	**295**	P	**P**	**01 40 05.7**	**-0.2**
MARD				IAmb	IAmb	01 40 25.4	
	comp=Z,5.6nm,0.5s						
KIRV	**Kirov**	**39.95**	**330**	⇑*e*P	**P**	**01 40 08.3**	**+2.3**
NRIK	**Noril'sk**	**40.95**	**0**	P	**P**	**01 40 14.1**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=160,slow=2.7,SNR=5.6						
	comp=Z,1.8nm,0.4s						
NRIK	**Noril'sk**	**40.95**	**0**	P	**P**	**01 40 13.9**	**-0.3**
NRIK				IAmb	IAmb	01 40 22.2	
	comp=Z,5.8nm,0.9s						
NRIK	**Noril'sk**	**40.95**	**0**	*c i*P	**P**	**01 40 15.0**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VRH	**Novokhopyorsk**	**41.00**	**317**	*e*P	**P**	**01 40 13.9**	**-1.0**
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
TOLI2	**Tolitoli**	**41.83**	**125**	P	**P**	**01 40 20.9**	**-1.2**
TOLI2				IAmb	IAmb	01 40 39.4	
	comp=Z,8.8nm,1.2s						
VORD	**Divnogorie**	**42.43**	**316**	*e*P	**P**	**01 40 26.3**	**-0.2**
VORD				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSR	**Storozhevoye**	**42.56**	**316**	*e*P	**P**	**01 40 27.4**	**-0.2**
VSR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VORR	**Voronezh**	**42.65**	**317**	*e*P	**P**	**01 40 27.6**	**-0.7**
VORR				pmax	pmax		
	comp=Z,20nm,0.6s						
LPSR	**Galich'ya Gora**	**43.04**	**318**	*e*P	**P**	**01 40 31.4**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	**Matsushiro**	**43.13**	**66**	⇓*e*P	**P**	**01 40 31.6**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,11nm,1.2s						

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MJAR  Matsushiro Arr   43.13  66    P        P         01 40 33.8 +1.3
      comp=Z,2.4nm,0.9s,baz=271,slow=8.0,SNR=7.2
      comp=Z,2.4nm,0.9s
MJAR  Matsushiro Arr   43.13  66    P        P         01 40 32.1 -0.4
PRGR  Permogore        43.17 332   eP        P         01 40 32.0 -0.4
MOS   Moscow           44.63 322   eP        P         01 40 44.8 +0.6
MOS                                e                   01 42 30.3
OBN   Obninsk          45.04 321    P        P         01 40 47.1 -0.4
OBN   Obninsk          45.04 321   i P       P         01 40 46.9 -0.6
OBN                                i                   01 42 33.4
OBN                                 pmax     pmax
      comp=Z,15nm,1.3s
BRTR  Keskin Array B   45.40 299    P        P         01 40 51.1 +0.3
      comp=Z,0.4nm,0.5s,baz=133,slow=12,SNR=8.0
      comp=Z,0.4nm,0.5s
KLMR  Klimovskoe       45.44 329   eP        P         01 40 49.4 -1.2
KLMR                                pmax     pmax
      comp=Z,9.0nm,0.9s
KLMR  Klimovskoe       45.44 329   eP        P         01 40 49.5 -1.2
KLMR                                AMP                01 40 53.6
      comp=Z,9.0nm,0.9s
AKASG Malin Array Be   48.69 314    P        P         01 41 15.1 -1.0
      comp=Z,1.0nm,0.4s,baz=75,slow=8.0,SNR=14
      comp=Z,1.0nm,0.4s
AKASG Malin Array Be   48.69 314    IAmb     IAmb      01 41 17.9
      comp=Z,6.9nm,1.5s
AKASG Malin Array Be   48.69 314   i P       P         01 41 15.1 -1.0
AKASG                               pmax     pmax
      comp=Z,2.0nm,0.5s
AKBB  Malin Array Si   48.69 314    P        P         01 41 15.0 -1.1
AKBB  Malin Array Si   48.69 314ceP          P         01 41 16.6 +0.5
AKBB                                pmax     pmax
      comp=Z,10.0nm,1.1s
TIXI  Tiksi            48.81  16    P        P         01 41 16.5 -0.2
TIXI                                IAmb     IAmb      01 41 35.8
      comp=Z,4.2nm,0.5s
TIXI  Tiksi            48.81  16⇑eP          P         01 41 17.9 +1.1
TIXI                                pmax     pmax
      comp=Z,11nm,2.2s
SORM  Soroca           49.13 311  ⇑P         P         01 41 18.9 -0.7
VLDR  Vladesti         49.31 307  ⇓P         P         01 41 21.8 +0.9
MNK   Minsk            49.86 319   i P       P         01 41 23.7 -1.4
MNK                                i                   01 43 18.5
MNK                                i PPP     PPP       01 44 12.2
MNK                                i S       S         01 48 34.1 -1.2
MNK                                i                   01 51 18.8
MNK                                i SS      SS        01 52 06.3 -1.3
MNK                                i SSS     SSS       01 53 30.8
MNK                                 pmax     pmax
      comp=Z,13nm,0.8s
MNK                                 pmax     pmax
      comp=N,7.0nm,0.9s
MNK                                 pmax     pmax
      comp=E,2.0nm,0.9s
MNK                                 MLR      MLR
      comp=Z,93nm,14.0s
MNK                                 MLR      MLR
      comp=E,27nm,19.0s
MNK                                 MLR      MLR
      comp=N,46nm,13.0s
MNK   Minsk            49.86 319   i P       P         01 41 23.7 -1.4
      comp=E,2.0nm,0.9s
MNK                                i P       P         01 41 23.7 -1.4
      comp=N,7.0nm,0.9s
MNK                                i P       P         01 41 23.7 -1.4
      comp=Z,13nm,0.8s,baz=276
MNK                                i PP      PP        01 43 18.6 -1.0
MNK                                i PPP     PPP       01 44 12.3
MNK                                i S       S         01 48 34.2 -1.2
MNK                                i SS      SS        01 52 06.3 -1.3
MNK                                i SSS     SSS       01 53 30.8
MNK                                i LQ      LQ        01 59 29.4
MNK                                i LR      LR        02 02 43.0
MNK                                i LRM     MLR       02 04 55.5
      comp=E,27nm,18.7s
MNK                                i LRM     MLR       02 04 55.5
      comp=Z,93nm,13.6s
MNK                                i LRM     MLR       02 04 58.0
      comp=N,46nm,12.7s
VRI   Vrincioaia       50.25 308  ⇓P         P         01 41 28.8 +0.6
TESR  Tescani          50.29 308  ⇑P         P         01 41 28.5 +0.1
PLOR  Plostina         50.31 308  ⇑P         P         01 41 29.9 +1.3
NACGM Naroch           50.54 319⇑eP          P         01 41 31.4 +1.2
      baz=97
IDID  Didziasalis      50.61 320   eP        P         01 41 31.4 +0.7
COVR  Voineasa-Covas   50.62 308  ⇓P         P         01 41 33.1 +2.1
BIZ   Bicaz            50.66 309  ⇑P         P         01 41 31.0 -0.2
MLR   Muntele Rosu     50.81 307  ⇓P         P         01 41 34.2 +1.6
MLR   Muntele Rosu     50.81 307    P        P         01 41 32.7 +0.1
MLR   Muntele Rosu     50.81 307    P        P         01 41 32.7 +0.1
MLR                                 pmax     pmax
      comp=Z,15nm,0.8s
IIGN  Ignalina         50.91 320   eP        P         01 41 33.6 +0.7
ISAL  Salakas          50.98 320   eP        P         01 41 34.4 +0.8
DOPR  Dopca            51.18 308  ⇓P         P         01 41 37.3 +2.1
BURAR Bucovina Array   51.24 310  ⇓P         P         01 41 36.1 +0.3
BURAR Bucovina Array   51.24 310    P        P         01 41 35.7  0.0
BUR08 Bucovina Ar. S   51.25 310    P        P         01 41 35.4 -0.4
FINES FINESS Array B   51.84 328    P        P         01 41 39.3 -0.5
      comp=Z,2.0nm,0.4s,baz=109,slow=8.0,SNR=51
      comp=Z,2.0nm,0.4s
FINES FINESS Array B   51.84 328   i P       P         01 41 39.7 -0.1
FINES                               pmax     pmax
      comp=Z,2.0nm,0.4s
ARCR  ARCALIA          51.85 309  ⇑P         P         01 41 41.2 +1.0
SOEI  Soe              52.00 131    P        P         01 41 39.4 -2.4
PABE  Paberze          52.20 320    P        P         01 41 42.6  0.0
PABE  Paberze          52.20 320   eP        P         01 41 42.5  0.0
VSVD  Vaisvydziai      52.26 320   eP        P         01 41 43.8 +0.8
CJR   Cluj-Napoca      52.38 309  ⇓P         P         01 41 46.5 +2.3
MEF   Metsahovi        52.46 326   eP        P         01 41 44.6 +0.2
SUW   Suwalki          52.58 318   eP        P         01 41 46.0 +0.5
DRGR                   52.99 309  ⇓P         P         01 41 47.9 -0.8
VTS   Vitosha          52.99 304  ⇓P         P         01 41 50.9 +2.0
KOLS  Kolonicke sedl   53.16 312   eP        P         01 41 52.7 +2.8
KOLS  Kolonicke sedl   53.16 312   eP        P         01 41 52.7 +2.8
UZH   Uzhgorod         53.16 311   eP        P         01 41 51.0 +1.1
UZH                                e                   01 41 56.6
BLKB  Belogradchik     53.29 305  ⇓P         P         01 41 52.7 +1.8
SIRR  Siria            53.75 308  ⇑P         P         01 41 54.6 +0.4
RAF   Rauma            53.84 327   eP        P         01 41 55.2 +0.6
ARA0  ARCESS Array S   53.92 337   eP        P         01 41 55.4 +0.2
ARCES ARCESS Array B   53.93 337    P        P         01 41 54.7 -0.4
      comp=Z,1.7nm,0.5s,baz=107,slow=7.8,SNR=18
      comp=Z,1.7nm,0.5s
ARCES ARCESS Array B   53.93 337    IAmb     IAmb      01 42 21.4
      comp=Z,15nm,1.5s
KTK1  Kautokeino       54.58 337   eP        P         01 41 59.4 -0.5
OJC   Ojcow            54.71 313    P        P         01 42 01.7 +0.5
OJC                                 IAmb     IAmb      01 42 06.0
      comp=Z,3.0nm,0.8s
OJC   Ojcow            54.71 313    P        P         01 42 01.7 +0.5
OJC                                 pmax     pmax
      comp=Z,3.0nm,0.8s
HAMF  Hammerfest       54.82 339   eP        P         01 42 01.8 +0.1
JETT  Jettan, Norway   55.67 337   eP        P         01 42 08.0 +0.1
OKC   Ostrava-Krasne   55.80 313   eP        P         01 42 09.7 +0.7
OKC   Ostrava-Krasne   55.80 313   eP        P         01 42 09.7 +0.7
UPP   Uppsala          55.81 325   eP        P         01 42 09.0 +0.1
SRO2  Moca             55.83 310   eP        P         01 42 09.6 +0.3
SRO2  Moca             55.83 310   eP        P         01 42 09.6 +0.3
MAUC  Maruska          56.05 312   eP        P         01 42 12.1 +1.2
MORC  Moravsky Berou   56.19 313  ⇑P         P         01 42 12.9 +1.0
MORC  Moravsky Berou   56.19 313    P        P         01 42 11.6 -0.3
MORC                                IAmb     IAmb      01 42 14.3
      comp=Z,7.0nm,1.2s
MORC  Moravsky Berou   56.19 313    P        P         01 42 11.6 -0.3
MORC                                pmax     pmax
      comp=Z,7.0nm,1.2s
MORC  Moravsky Berou   56.19 313   eP        P         01 42 11.9  0.0
TRO   Tromso           56.20 337   eP        P         01 42 11.1 -0.5
KRLC  Kraliky          56.65 313   eP        P         01 42 14.7 -0.5
KRLC  Kraliky          56.65 313   eP        P         01 42 14.7 -0.5
KRLC                               ex        x         01 42 32.1
VRAC  Vranov           56.85 312   eP        P         01 42 16.8 +0.2
DPC   Dobruska-Polom   56.92 314   eP        P         01 42 16.8 -0.3
DPC   Dobruska-Polom   56.92 314   eP        P         01 42 16.8 -0.3
DPC                                ex        x         01 42 31.6
OSTC  Ostas            56.97 314   eP        P         01 42 17.2 -0.2
KRUC  Moravsky         57.01 312   eP        P         01 42 18.3 +0.6
CHVC  Chvalec          57.07 314   eP        P         01 42 18.1  0.0
FAUS  Fauske           57.26 334   eP        P         01 42 19.1  0.0
STEI  Steigen          57.32 335   eP        P         01 42 17.6 -1.9
CONA  Conrad Observa   57.51 311    P        P         01 42 20.6 -0.7
      comp=Z,3.0nm,0.8s
MOR8  Moi Rana         57.52 333   eP        P         01 42 19.9 -1.0
PRU   Pruhonice        58.10 313   eP        P         01 42 26.1 +0.8
PRU   Pruhonice        58.10 313   eP        P         01 42 26.1 +0.8
PRU                                ex        x         01 42 40.8
SOKA  Soboth           58.25 309   eP        P         01 42 25.2 -1.3
      comp=Z,1.0nm,0.5s
BRG   Berggiesshubel   58.37 314   eP        P         01 42 27.1 -0.1
BRG                                 Amp                01 42 30.7
      comp=Z,4.6nm,1.0s
BRG                                ex        x         01 42 44.0
BRG                                 Amp                01 42 46.6
      comp=Z,2.3nm,0.9s
BRG   Berggiesshubel   58.37 314   eP        P         01 42 27.1 -0.1
BRG                                 pmax     pmax
      comp=Z,5.0nm,1.0s
BRG                                 pmax     pmax
      comp=Z,2.0nm,0.9s
CKRC  Cesky Krumlov    58.41 312   eP        P         01 42 32.0 +4.5
SPA0  Spitsbergen Ar   58.52 347   eP        P         01 42 28.2 +0.4
MOA   Molln            58.58 311   eP        P         01 42 26.8 -2.0
      comp=Z,2.4nm,0.9s
GEC2  GERESS Array S   58.80 312    IAmb     IAmb      01 42 32.6
      comp=Z,6.2nm,1.1s
GERES GERESS Array B   58.80 312    P        P         01 42 29.9 -0.4
      comp=Z,1.7nm,0.7s,baz=79,slow=6.9,SNR=17
      comp=Z,1.7nm,0.7s
GERES GERESS Array B   58.80 312    P        P         01 42 30.0 -0.4
KHC   Kasperske Hory   58.84 312    IAmb     IAmb      01 42 35.9
      comp=Z,2.7nm,0.8s
KHC   Kasperske Hory   58.84 312   eP        P         01 42 29.2 -1.4
KHC   Kasperske Hory   58.84 312   eP        P         01 42 29.2 -1.4
KHC                                ex        x         01 42 46.8
NB2   NORSAR Subarra   58.97 327    P        P         01 42 30.3 -1.0
      comp=Z,1.8nm,0.8s,baz=86,slow=7.4
NB2   NORSAR Subarra   58.97 327    P        P         01 42 30.3 -1.0
      baz=86,slow=7.4
NOA   NORSAR Array B   58.97 327    P        P         01 42 30.2 -1.0
      comp=Z,1.0nm,0.6s,baz=87,slow=6.8,SNR=6.0
      comp=Z,1.0nm,0.6s
BIOA  Bad Ischl, Aus   59.02 311   eP        P         01 42 31.3 -0.6
STAL  STALIGIAL        59.90 309    IAmb     IAmb      01 42 55.4
      comp=Z,7.0nm,1.0s
NRCA  Norcia           60.31 305    P        P         01 42 40.4 -0.5
SKAR  Skarslia         60.42 326   eP        P         01 42 41.5 +0.2
WTTA  Wattenberg       60.44 311   eP        P         01 42 41.6 -0.2
      comp=Z,3.4nm,0.9s
WATA  Walderalm        60.46 311   eP        P         01 42 40.2 -1.7
      comp=Z,4.5nm,1.2s
HOMB  Homborsund       60.59 323   eP        P         01 42 43.0 +0.7
MURB  Monte Urbino     60.64 306    P        P         01 42 43.4 +0.4
SQTA  Sankt Quirin     60.73 311   eP        P         01 42 42.5 -1.2
      comp=Z,1.9nm,0.6s
MOTA  Moosalm          60.77 311   eP        P         01 42 42.8 -1.2
      comp=Z,4.5nm,0.9s
RETA  Reutte           60.98 311   eP        P         01 42 42.0 -3.4
      comp=Z,1.7nm,0.5s
FETA  Feichten         61.09 310   eP        P         01 42 46.2 -0.1
      comp=Z,0.7nm,0.4s
DAVA  Damuels          61.60 311   eP        P         01 42 48.5 -1.2
      comp=Z,9.8nm,1.1s
STU   Stuttgart        61.75 313    P        P         01 42 50.5 +0.1
STU   Stuttgart        61.75 313    P        P         01 42 50.6 +0.1
STU                                 pmax     pmax
      comp=Z,6.0nm,0.7s
SUE   Sulen            62.09 327   eP        P         01 42 51.6 -0.9
KEST  Kesra            65.00 299    P        P         01 43 12.8 +0.4
      comp=Z,4.2nm,0.9s,baz=66,slow=15,SNR=6.7
      comp=Z,4.2nm,0.9s
WRA   Warramunga Arr   66.04 131    P        P         01 43 18.6 -0.5
      comp=Z,2.4nm,0.5s,baz=326,slow=6.5,SNR=113
      comp=Z,2.4nm,0.5s
WRA   Warramunga Arr   66.04 131   i P       P         01 43 18.6 -0.5
WRA                                 pmax     pmax
      comp=Z,3.0nm,0.5s
WR0   Warramunga Arr   66.19 131    P        P         01 43 19.7 -0.2
AS31  Alice Springs    68.43 134    P        P         01 43 33.8 -0.4
AS31                                IAmb     IAmb      01 43 50.9
      comp=Z,1.4nm,0.6s
ASAR  Alice Springs    68.43 134    P        P         01 43 33.8 -0.4
      comp=Z,3.4nm,0.6s,baz=316,slow=5.9,SNR=89
      comp=Z,3.4nm,0.6s
ASAR  Alice Springs    68.43 134    P        P         01 43 34.0 -0.1
ASAR  Alice Springs    68.43 134    P        P         01 43 34.0 -0.1
SUMG  Summit           72.79 345    P        P         01 44 01.4 +0.9
SUMG                                IAmb     IAmb      01 44 03.2
      comp=Z,9.9nm,1.3s
SUMG  Summit           72.79 345    P        P         01 44 01.4 +0.9
SUMG                                pmax     pmax
      comp=Z,10.0nm,1.3s
ESDC  Sonseca Array    73.50 306    P        P         01 44 03.2 -1.8
      comp=Z,1.5nm,0.8s,baz=59,slow=5.9,SNR=13
      comp=Z,1.5nm,0.8s
BMAR  Burnt Mountain   76.83  18    P        P         01 44 23.5 -0.1
COLA  College          77.62  21⇓eP          P         01 44 27.9 -0.1
COLA                                pmax     pmax
      comp=Z,13nm,2.6s
ILAR  Eielson Array    78.00  21    P        P         01 44 28.9 -1.2
      comp=Z,1.9nm,1.1s,baz=293,slow=4.1,SNR=8.6
      comp=Z,1.9nm,1.1s
ILAR  Eielson Array    78.00  21    P        P         01 44 29.7 -0.4
ILAR  Eielson Array    78.00  21    P        P         01 44 29.7 -0.4
INK   Inuvik           78.90  14    P        P         01 44 35.3 +0.3
      comp=Z,2.8nm,1.0s,baz=15,slow=9.9,SNR=3.5
      comp=Z,2.8nm,1.0s
INK   Inuvik           78.90  14    IAmb     IAmb      01 44 39.6
      comp=Z,6.5nm,1.4s
STKA  Stephens Creek   79.02 135    P        P         01 44 35.2 -1.0
      comp=Z,1.9nm,0.7s,baz=315,slow=2.5,SNR=4.0
      comp=Z,1.9nm,0.7s
SCRK  Sand Creek       79.46  21    IAmb     IAmb      01 44 44.0
      comp=Z,2.3nm,0.7s
TORD  Torodi Ar. Bea   80.21 280    P        P         01 44 42.6 -0.5
      comp=Z,2.4nm,0.8s,baz=53,slow=4.5,SNR=23
      comp=Z,2.4nm,0.8s
TORD  Torodi Ar. Bea   80.21 280    P        P         01 44 44.2 +1.1
TORD                                IAmb     IAmb      01 45 01.7
      comp=Z,4.3nm,1.1s
BCAR  Beaver Creek A   80.80  20    P        P         01 44 45.4 -0.1
BOSA  Boshof           82.23 232    P        P         01 44 52.7 -0.9
      comp=Z,2.1nm,0.9s,baz=69,slow=5.9,SNR=5.9
      comp=Z,2.1nm,0.9s
MESA  MESA             82.88  22    P        P         01 44 57.2 +0.5
N31M  Braeburn, Yuko   83.82  19    P        P         01 45 02.2 +0.9
YKA   Yellowknife Ar   87.68  10    P        P         01 45 19.8 -0.5
      comp=Z,0.4nm,0.8s,baz=343,slow=5.0,SNR=3.5
      comp=Z,0.4nm,0.8s
YKA   Yellowknife Ar   87.68  10   i P       P         01 45 20.2 -0.2
YKA                                 pmax     pmax
      comp=Z,1.0nm,0.8s
TXAR  Lajitas Array   121.58  11    PKP      PKPdf     01 51 24.4 -2.0
      comp=Z,0.3nm,0.5s,baz=5.0,slow=2.0,SNR=5.4
SAML  Samuel          146.28 299    PKPbc    PKPdf     01 52 12.6 +0.2
SAML  Samuel          146.28 299    PKP2     PKPdf     01 52 12.6 +0.2
CPUP  Villa Florida   148.75 265    PKPbc    PKPbc     01 52 18.6 -1.4
      comp=Z,1.1nm,0.7s,baz=347,slow=4.5,SNR=3.1
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*ROM **22** 01:33:54.9±0.1, 38°.760N±0°.007×15°.67E±0°.01, h170^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=1.3km s-min=0.4km az=114.0*

ISC 22 01:33:51.3±2.1**, 38°.73N**±0°.06×**15°.76E**±0°.08**, h194**^{km}±12^{km}**, n41,** σ1^{s}**67**/60**, 9D, Sicily**

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Code  Station Name      Δ°   AZ°    Phase ID          Time        Res
                                   Op        ISC       h  m  s    ISC
JOPP  Joppolo           0.16 142  ⇓P         Pn        01 34 17.7 +0.8
JOPP                                S        Sn        01 34 34.5 -2.1
JOPP                                AML      AML
      comp=E,218µm,1.5s
JOPP                                AML      AML
      comp=N,364µm,0.2s
IST3  Stromboli F       0.42 279    P        Pn        01 34 18.7 +1.3
CEL   Celeste           0.48 168  ⇓P         Pn        01 34 18.6 +0.8
CEL                                 S        Sn        01 34 36.9 -1.2
CEL                                 AML      AML
      comp=E,103µm,0.9s
CEL                                 AML      AML
      comp=N,108µm,0.3s
CEL                                 AML      AML
      comp=E,104µm,0.9s
CEL                                 AML      AML
      comp=E,132µm,1.2s
CEL                                 AML      AML
      comp=N,108µm,0.3s
CEL                                 AML      AML
      comp=N,140µm,0.3s
MSRU  Castanea          0.51 203  ⇓P         Pn        01 34 18.4 +0.6
MSRU                                S        Sn        01 34 36.2 -2.0
GRI   Girifalco         0.52  80  ⇓P         Pn        01 34 19.5 +1.8
GRI                                 S        Sn        01 34 37.6 -0.7
GMB   Gambarie          0.57 175    P        Pn        01 34 19.7 +1.5
GMB                                 S        Sn        01 34 37.5 -1.3
GMB                                 AML      AML
      comp=E,813µm,1.0s
GMB                                 AML      AML
      comp=N,808µm,0.8s
PLAC  Placanica         0.60 118  ⇓P         Pn        01 34 19.6 +1.4
PLAC                                S        Sn        01 34 37.8 -1.0
PLAC                                AML      AML
      comp=E,176µm,0.2s
PLAC                                AML      AML
      comp=N,190µm,0.2s
CAR1  CAROLEI           0.63  34  ⇓P         Pn        01 34 19.3 +1.1
CAR1                                S        Sn        01 34 37.4 -1.9
CAR1                                AML      AML
      comp=E,269µm,0.9s
CAR1                                AML      AML
      comp=N,269µm,0.3s
CAR1                                AML      AML
      comp=E,270µm,0.9s
MPNC  Port Mandanici    0.67 209    P        Pn        01 34 19.2 +0.8
MPNC                                S        Sn        01 34 37.9 -1.6
MPNC                                AML      AML
      comp=E,234µm,1.1s
MPNC                                AML      AML
      comp=N,346µm,0.6s
SOI   Samo              0.70 161    P        Pn        01 34 19.9 +1.2
VPL   Vulcano Piano     0.70 240    P        Pn        01 34 19.9 +1.2
SPS2  Spezzano della    0.72  39    P        Pn        01 34 20.2 +1.5
SPS2                                S        Sn        01 34 39.0 -1.1
SPS2                                AML      AML
      comp=E,72µm,0.3s
SPS2                                AML      AML
      comp=N,122µm,0.8s
SPS2                                AML      AML
      comp=N,123µm,0.8s
SPS2                                AML      AML
      comp=E,72µm,0.3s
MTTG  Motta San Giov    0.73 184    P        Pn        01 34 20.3 +1.5
MTTG                                S        Sn        01 34 38.9 -1.1
MTTG                                AML      AML
      comp=E,168µm,1.3s
MTTG                                AML      AML
      comp=N,200µm,1.1s
SERS  Sersale           0.79  67  ⇓P         Pn        01 34 20.9 +1.7
SERS                                S        Sn        01 34 40.1 -0.6
SERS                                AML      AML
      comp=E,94µm,0.4s
SERS                                AML      AML
      comp=N,102µm,0.6s
CET2  Cetraro           0.81  11  ⇓P         Pn        01 34 20.4 +1.2
CET2                                S        Sn        01 34 39.0 -2.0
CET2                                AML      AML
      comp=E,567µm,0.7s
CET2                                AML      AML
      comp=N,312µm,0.4s
CET2                                AML      AML
      comp=E,566µm,0.7s
NOV   Novara            0.86 215    P        Pn        01 34 21.2 +1.6
NOV                                 S        Sn        01 34 39.9 -1.5
NOV                                 AML      AML
      comp=E,227µm,1.6s
NOV                                 AML      AML
      comp=N,180µm,0.6s
NOV                                 AML      AML
      comp=E,226µm,1.6s
AIO   Antillo           0.87 209    P        Pn        01 34 21.4 +1.8
AIO                                 S        Sn        01 34 40.2 -1.3
AIO                                 AML      AML
      comp=E,115µm,0.4s
AIO                                 AML      AML
      comp=N,104µm,0.3s
TIP   Timpagrande       0.90  60  ⇓P         Pn        01 34 21.6 +1.8
TIP                                 S        Sn        01 34 41.4 -0.5
TIP                                 AML      AML
      comp=N,99µm,0.9s
TIP                                 AML      AML
      comp=E,65µm,1.4s
TIP                                 AML      AML
      comp=N,99µm,0.9s
IFIL  Filicudi I Eol    0.95 260    P        Pn        01 34 21.5 +1.5
TDS   Terranova Siba    1.03  26    P        Pn        01 34 22.4 +1.8
TDS                                 S        Sn        01 34 42.4 -1.1
TDS                                 AML      AML
      comp=N,32µm,1.2s
TDS                                 AML      AML
      comp=N,33µm,1.2s
TDS                                 AML      AML
      comp=E,62µm,1.5s
LADO  San Nicola del    1.10  60    P        Pn        01 34 22.8 +1.7
PIPA  Pietrapaola       1.11  47    P        Pn        01 34 23.2 +2.0
PIPA                                AML      AML
      comp=E,90µm,1.5s
PIPA                                AML      AML
      comp=N,112µm,0.9s
PIPA                                AML      AML
      comp=E,90µm,1.5s
PIPA                                AML      AML
      comp=N,112µm,0.9s
MMN   Mormanno          1.17   9    P        Pn        01 34 23.0 +1.4
MMN                                 S        Sn        01 34 43.6 -1.6
SALB  San Lorenzo Be    1.23  21    P        Pn        01 34 24.3 +2.1
SALB                                AML      AML
      comp=N,77µm,0.3s
SALB                                AML      AML
      comp=N,78µm,0.3s
SALB                                AML      AML
      comp=E,121µm,0.6s
CUC   Castrocucco       1.26   2    P        Pn        01 34 23.7 +1.4
CUC                                 S        Sn        01 34 45.2 -1.5
CUC                                 AML      AML
      comp=N,58µm,0.4s
CUC                                 AML      AML
      comp=E,94µm,0.7s
EPOZ  Pozzillo          1.33 204    P        Pn        01 34 23.2 +0.2
BULG  Bulgheria - Ca    1.38 348    P        Pn        01 34 25.5 +2.1
MGR   Morigerati        1.41 354    P        Pn        01 34 25.7 +2.0
ORI   Oriolo Calabro    1.43  22    P        Pn        01 34 25.9 +2.0
SIRI  Monte Sirino -    1.45   3    P        Pn        01 34 25.5 +1.5
SIRI                                AML      AML
      comp=N,48µm,0.2s
SIRI                                AML      AML
      comp=E,49µm,1.4s
SIRI                                AML      AML
      comp=N,48µm,0.2s
SCHR  S. Chirico Rap    1.48   9    P        Pn        01 34 26.6 +2.3
MTSN  Montesano sull    1.53 360    P        Pn        01 34 26.3 +1.5
HLNI  Lentini           1.55 207    P        Pn        01 34 26.4 +1.5
GIB   Gibilmanna        1.55 242    P        Pn        01 34 26.5 +1.5
CSLB  Castelbuono       1.56 240    P        Pn        01 34 26.7 +1.7
MCEL  Monticello        1.59   1    P        Pn        01 34 27.2 +1.9
CRAC  Craco             1.71  18    P        Pn        01 34 29.2 +2.8
CRAC                                AML      AML
      comp=N,460µm,0.3s
CRAC                                AML      AML
      comp=E,308µm,0.7s
CRAC                                AML      AML
      comp=N,460µm,0.3s
CDRU  Civita di Ruta    1.79 349    P        Pn        01 34 29.9 +2.6
AMUR  Altamura          2.27  16    AML      AML
      comp=N,78µm,1.4s
AMUR                                AML      AML
      comp=E,111µm,0.9s
DBRK  Dubrovnik         4.33  24   ePn       Pn        01 34 57.7 +0.7
DBRK                                Sn       Sn        01 35 46.3 -2.3
STON  Ston              4.39  19   ePn       Pn        01 34 58.2 +0.6
STON                                Sn       Sn        01 35 46.5 -3.4
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*IDC **22** 01:39:46.9±1.1, 28°.22N×87°.49E, h0^{km}, mb3.6/8, mbtmp3.5/9, ML3.5/1, Error ellipse: s-maj=41.7km s-min=20.9km az=61.0*

ISC 22 01:39:48.5±1.2**, 28°.2N**±0°.2×**87°.5E**±0°.2**, h10**^{km}**, n9,** σ**0**^{s}**45**/9**, mb3.6**/8**, Xizang**

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Code  Station Name      Δ°   AZ°    Phase ID          Time        Res
                                   Op        ISC       h  m  s    ISC
MKAR  Makanchi Array   18.98 349    P        P         01 44 10.3 +0.2
      0.2nm,0.3s,baz=152,slow=13,SNR=3.7
```

	0.5nm,0.5s						
KURBB	Kurchatov Arra	23.38	345	P	P	01 44 57.6	+0.4
	1.0nm,0.8s,baz=169,slow=8.3,SNR=5.4						
	1.0nm,0.8s						
SONM	Songino Array	24.46	32	P	P	01 45 07.4	-0.3
	0.6nm,0.7s,baz=224,slow=8.0,SNR=3.1						
	0.6nm,0.7s						
ZALV	Zalesovo Beam	25.77	356	P	P	01 45 19.4	+0.2
	0.6nm,0.5s,baz=160,slow=8.8,SNR=2.0						
	0.6nm,0.5s						
FINES	FINESS Array B	52.02	328	P	P	01 48 57.4	-0.5
	1.3nm,0.9s,baz=142,slow=9.6,SNR=6.4						
	1.3nm,0.9s						
NOA	NORSAR Array B	59.15	327	P	P	01 49 49.6	+0.4
	0.4nm,0.7s,baz=90,slow=6.7,SNR=1.2						
	0.4nm,0.7s						
WRA	Warramunga Arr	65.90	131	P	P	01 50 34.4	-0.4
	0.3nm,0.5s,baz=324,slow=6.3,SNR=2.0						
	0.3nm,0.5s						
ASAR	Alice Springs	68.28	134	P	P	01 50 50.5	+0.6
	0.6nm,0.7s,baz=310,slow=5.9,SNR=5.3						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	80.27	280	P	P	01 51 59.9	-0.2
	0.7nm,1.0s,baz=75,slow=7.5,SNR=2.7						
	0.7nm,1.0s						

IDC ***22*** *01:46:07.8±0.8, 28°.37N×87°.52E, h0^{km}, mb3.8/10, mbtmp3.8/13, ML3.8/3, Error ellipse: s-maj=31.8km s-min=16.0km az=58.0*

NEIC ***22*** *01:46:09.8±1.5, 28°.25N±0°.10×87°.22E±0°.07, h10^{km}±6^{km}, mb4.0/10, Error ellipse: s-maj=14.5km s-min=8.2km az=173.0*

NDI ***22*** *01:46:16.1±3.0, 28°.15N×87°.87E, h10^{km}, ML3.3, mb4.0(NEIC)*

ISC 22 01:46:09.0±0.7**, 28°.25N**±0°.09×**87°.38E**±0°.10**, h10^{km}, n31, σ1^{s}.25**/30**, mb3.9**/13**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	1.43	130	eP	Pn	01 46 35.1	0.0
GTK				eS	Sn	01 46 51.5	-2.5
GTK				IAML		01 46 53.1	
	comp=E,749nm,0.4s						
GTK				IAML		01 46 53.7	
	comp=N,343nm,0.2s						
LSA	Lhasa	3.61	65		Pn	01 47 07.0	+1.6
SHL	Shillong	4.83	123	Pn	Pn	01 47 23.7	+1.8
SHL	Shillong	4.83	123	eP	Pn	01 47 23.7	+1.8
SHL				IAML		01 48 37.7	
	comp=E,88nm,0.6s						
SHL				IAML		01 48 39.1	
	comp=N,125nm,0.4s						
TEZP	TEZPUR	5.08	107	eP	Pn	01 47 25.6	+0.3
AZL	Aizawl	6.56	132	eP	Pn	01 47 47.8	+2.2
NIL	Nilore	13.26	297	Pn	Pn	01 49 16.6	-0.8
CMAR	Chiang Mai Arr	14.40	130	Pn	Pn	01 49 31.9	-1.1
	comp=N,0.3nm,0.3s,baz=315,slow=38,SNR=4.1						
	comp=N,0.5nm,0.3s						
AAK	Ala-Archa	17.75	327	P	P	01 50 17.1	-0.1
	comp=N,0.2nm,0.3s,baz=154,slow=13,SNR=2.7						
	comp=N,0.8nm,0.3s						
AAK	Ala-Archa	17.75	327	IAmb	IAmb	01 50 22.9	
	comp=Z,4.3nm,1.1s						
MKAR	Makanchi Array	18.94	349	P	Pn	01 50 30.2	-0.5
	comp=Z,0.2nm,0.3s,baz=155,slow=12,SNR=12						
	comp=Z,1.4nm,0.7s						
MAKZ	Makanchi	19.01	349	P	P	01 50 30.4	-0.4
MAKZ				IAmb	IAmb	01 50 30.8	
	comp=Z,11nm,0.6s						
KKAR	Karatay Array	20.13	322	P	P	01 50 43.1	0.0
KURBB	Kurchatov Arra	23.33	346	P	P	01 51 17.3	+0.1
	comp=Z,2.2nm,0.8s,baz=166,slow=9.0,SNR=9.8						
	comp=Z,2.2nm,0.8s						
KURK	Kurchatov	23.40	346	P	P	01 51 19.0	+1.1
KURK				IAmb	IAmb	01 51 19.8	
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	24.51	32	P	P	01 51 26.6	-2.0
	comp=Z,1.4nm,0.8s,baz=222,slow=11,SNR=5.1						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	24.51	32	P	P	01 51 29.1	+0.4
SONM				IAmb	IAmb	01 51 34.5	
	comp=Z,1.3nm,0.8s						
ULN	Ulaanbaatar	24.84	33	P	P	01 51 31.6	-0.1
ULN				IAmb	IAmb	01 51 38.5	
	comp=Z,2.9nm,0.5s						
ZAA0	Zalesovo Array	25.74	357	P	P	01 51 39.7	+0.1
ZAA0				IAmb	IAmb	01 52 03.7	
	comp=Z,3.3nm,1.2s						
ZALV	Zalesovo Beam	25.74	357	P	P	01 51 39.8	+0.2
	comp=Z,0.6nm,0.4s,baz=191,slow=6.9,SNR=4.8						
	comp=Z,0.6nm,0.4s						
ABKAR	Akbulak array	29.69	322	P	P	01 52 14.6	-0.4
TIXI	Tiksi	49.01	16	P	P	01 54 54.8	-0.7
	comp=Z,1.0nm,0.3s,baz=270,slow=20						
	comp=Z,1.0nm,0.3s						
FIA0	FINESS Array S	51.94	328	P	P	01 55 19.6	+1.8
FINES	FINESS Array B	51.94	328	P	P	01 55 17.6	-0.1
	comp=Z,0.5nm,0.4s,baz=104,slow=8.0,SNR=16						
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	54.05	337	P	P	01 55 31.4	-1.9
	comp=Z,4.6nm,1.1s,baz=104,slow=7.5,SNR=2.8						
	comp=Z,4.6nm,1.1s						
GERES	GERESS Array B	58.85	312	P	P	01 56 07.4	-0.5
	comp=Z,0.4nm,0.6s,baz=80,slow=7.3,SNR=4.4						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	66.00	131	P	P	01 56 56.4	+0.5
	comp=Z,0.4nm,0.6s,baz=327,slow=6.6,SNR=15						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	66.00	131	IAmb	IAmb	01 57 45.4	
	comp=Z,1.8nm,2.0s						
WRAB	Tennant Creek	66.00	131	P	P	01 56 57.5	+1.6
ASAR	Alice Springs	68.37	134	P	P	01 57 11.6	+0.6
	comp=Z,0.6nm,0.5s,baz=314,slow=6.5,SNR=10						
	comp=Z,0.6nm,0.5s						
TORD	Torodi Ar. Bea	80.15	280	P	P	01 58 21.6	+1.7
	comp=Z,0.3nm,0.5s,baz=51,slow=4.5,SNR=6.8						
	comp=Z,0.3nm,0.5s						

DMN ***22*** *01:48:44.1±0.3, 28°.53N×87°.67E, h10^{km}, Ml5.9/6, Error ellipse: s-maj=5.2km s-min=2.3km az=39.0*

IDC ***22*** *01:48:46.0±0.4, 28°.38N×87°.58E, h0^{km}, mb4.7/37, mbtmp4.7/40, ML4.4/3, MS4.8/61, Error ellipse: s-maj=11.5km s-min=9.9km az=25.0*

BJI ***22*** *01:48:45.6±0.0, 28°.27N×87°.62E, h10^{km}, mb4.9/59, mB5.4/51, Ms5.4/74, Ms7 5.2/69*

MOS ***22*** *01:48:45.8±0.9, 28°.38N×87°.48E, h9^{km}, mb5.2/69, MS4.9/28, Error ellipse: s-maj=5.9km s-min=3.0km az=117.9*

NEIC ***22*** *01:48:48.1±1.8, 28°.45N±0°.07×87°.53E±0°.06, h9^{km}±3^{km}, mb5.0/217, Mwc5.4(GCMT), Error ellipse: s-maj=9.9km s-min=7.4km az=170.0*

GCMT ***22*** *01:48:49.1±0.1, 28°.22N±0°.01×87°.62E±0°.01, h12^{km}, MW5.3/139, Moment Tensor Solution. s98,c157; s139,c258; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.89±.02; $M_{\theta\theta}$-0.46±.02; $M_{\phi\phi}$1.35±.01; $M_{r\theta}$0.44±.05; $M_{\theta\phi}$-0.15±.01; $M_{\phi r}$-0.27±.04; Best double couple: $M_0$1.29100×10^{17} NP1:ϕ_s203.00000°,δ45.00000°, λ-46.00000°. NP2:ϕ_s329.00000°,δ59.00000°, λ-125.00000°. Principal axes: T 1.4050, Plg8.0000°, Azm83.0000°; N -0.2270, Plg30.0000°, Azm349.0000°; P -1.1770, Plg59.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *01:48:50, 28°.22N×87°.61E, h13^{km}, Moment Tensor Solution. Duration: 2^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.09; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$1.54; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.06; $M_{\phi r}$-0.65; Fault plane solution: $M_0$1.52000×10^{17} NP1: ϕ_s178.00000°,δ32.00000°,λ-90.00000°. NP2: ϕ_s358.00000°,δ58.00000°,λ-90.00000°. Principal axes: T 1.6955, Plg13.0000°, Azm88.0000°; N -0.4572, Plg0.0000°, Azm178.0000°; P -1.2383, Plg77.0000°, Azm269.0000°;*

NDI ***22*** *01:48:51.3±3.0, 28°.28N×87°.36E, h10^{km}, mb5.0, ML4.9, mb5.0(NEIC)*

ISC 22 01:48:48.7±0.4**, 28°.38N**±0°.02×**87°.51E**±0°.02**, h16^{km}**±2^{km}**, h16^{km}:pP-P, n836, σ1^{s}.63**/882**, mb5.0**/240**, MS4.9**/116**, 56C-59D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	1.04	170	ePg	Pb	01 49 06.2	-2.4
TAPN				eSg	Sb	01 49 21.7	-0.4
	27µm,0.6s						
ODAN	Odare	1.52	184	ePg	Pb	01 49 16.2	-0.5
ODAN				eSg	Sg	01 49 38.1	+0.3
RAMN	Ramite	1.64	210	ePg	Pb	01 49 18.2	-0.5
RAMN				eSg	Sg	01 49 41.7	+0.1
	21µm,0.5s						
SLGI	Shiliguri	1.86	154	eP	Pb	01 49 22.4	+0.1
PKI	Pulchoki	2.02	247	ePg	Pb	01 49 25.8	+0.5
PKI				eSg	Sg	01 49 54.3	+0.4
	26µm,0.6s						
PKIN	Phulchoki	2.03	247	ePg	Pb	01 49 25.7	+0.3
PKIN				eSg	Sg	01 49 54.3	+0.1
	17µm,0.6s						
DMN	Daman	2.26	251	ePg	Pb	01 49 29.8	+0.5
DMN				eSg	Sg	01 50 00.8	-0.6
	65µm,0.8s						
GKN	Gorkha	2.56	262	ePg	Pb	01 49 34.7	+0.3
GKN				eSg	Sg	01 50 10.0	-1.1
	34µm,0.4s						
VLK	Valmikinagar	3.39	253	eP	Pn	01 49 41.4	+0.4
LSA	Lhasa	3.45	67		Pn	01 49 43.7	+1.5
LSA	Lhasa	3.45	67	P	Pn	01 49 43.7	+1.5
LSA	Lhasa	3.45	67	P	Pn	01 49 45.3	+3.1
LSA				S	Sb	01 50 30.9	-0.7
LSA				LR	LR		
	comp=N,38µm,6.8s						
LSA				LR	LR		
	comp=E,38µm,8.5s						
LSA				LR	LR		
	comp=Z,53µm,8.2s						
KOLN	Koldanda	3.51	261	ePg	Pb	01 49 52.2	+1.7
KOLN				eSg	Sg	01 50 38.4	-3.0
BOK	Bokaro	4.79	198	eP	Pn	01 50 02.2	+1.9
BOK				IAMs_20	IAMs_20	01 52 15.4	
	comp=Z,20µm,8.1s						
SHL	Shillong	4.81	125	Pn	Pn	01 50 00.9	+0.3
SHL	Shillong	4.81	125	P	Pn	01 50 00.9	+0.3
SHL	Shillong	4.81	125	eP	Pn	01 50 03.4	+2.8
VAR	Varanasi	5.05	234	eP	Pn	01 50 08.5	+4.7
ALBI	Allahabad	5.94	240	eP	Pn	01 50 17.5	+1.5
LGTI	Lohaghat	6.45	281	eP	Pn	01 50 26.9	+3.9
PTH	Pithoragarh	6.49	282	eP	Pn	01 50 25.8	+2.0
JHSG	JHARSUGUGA	7.41	208	eP	Pn	01 50 38.8	+2.5
BWNR	Bhubaneshwar	8.20	191	eP	Pn	01 50 49.8	+2.7
DDI	Dehra Dun	8.47	285	eP	Pn	01 50 53.1	+2.2
DDI				IAMs_20	IAMs_20	01 54 06.9	
	comp=Z,30µm,6.5s						
DDI				IAMs_20	IAMs_20	01 57 21.9	
	comp=Z,3µm,5.0s						
JHNI	Jhansi	8.52	252	eP	Pn	01 50 50.2	-1.2
JBP	Jabalpur	8.54	234	ex	x	01 50 52.9	
JBP				eP	P	01 50 52.9	+1.2
JBP				eS	Sn	01 52 26.6	-1.2
NDI	New Delhi	9.06	274	eP	Pn	01 50 59.3	+0.4
AYAN	Aya Nagar	9.14	273	eP	Pn	01 51 02.8	+2.8
SONA	Sohna	9.19	272	eP	Pn	01 51 01.0	+0.4
SMLA	Simla	9.40	289	eP	Pn	01 51 04.3	+0.9
SMLA				IAML		01 52 51.9	
	comp=E,562nm,0.6s						
SMLA				IAML		01 52 53.8	
	comp=N,723nm,1.2s						
KUDL	Kundal	9.72	271	eP	Pn	01 51 07.8	0.0
RAGD	RAYAGADA	9.82	203	eP	Pn	01 51 10.3	+1.0
GOMU	GeErMu	9.95	37	P	Pn	01 51 12.9	+1.6
GOMU				pP		01 51 18.5	
GOMU				sP		01 51 21.2	
GOMU				S	Sn	01 53 09.5	+6.7
GOMU				sS		01 53 12.7	
GOMU				pmax	pmax		
	comp=N,20nm,1.4s						
GOMU				pmax	pmax		
	comp=N,140nm,3.6s						
GOMU				LR	LR		
	comp=N,12µm,11.9s						
GOMU				LR	LR		
	comp=N,7µm,7.8s						
GOMU				LR	LR		
	comp=N,3µm,10.1s						
BHK	Bhakra	10.09	290	eP	Pn	01 51 10.2	-2.8
BHK				eS	Sn	01 53 10.8	+4.9
BHK	Bhakra	10.09	290	eP	Pn	01 51 14.2	+1.2
KHET	Khetri	10.33	271	eP	Pn	01 51 15.9	-0.3
BHPL	Bhopal	10.43	243	eP	Pn	01 51 16.4	-1.2
BHPL				eP	Pn	01 51 17.7	+0.1
BHPL				IAMs_20	IAMs_20	01 57 20.1	
	comp=Z,13µm,6.3s						
BHPL				IAMs_20	IAMs_20	01 57 28.8	
	comp=Z,11µm,7.1s						
THN	Thein Dam	10.95	295	eP	Pn	01 51 26.7	+1.9
JMU	Jammu	11.69	295	eP	Pn	01 51 38.2	+3.3
AKL	Akola	12.23	234	eP	Pn	01 51 41.2	-1.1
PZH	PanZhiHua	12.78	95	P	Pn	01 51 48.8	-1.1
PZH				pP	P	01 51 53.0	-8.0
PZH				PP	PnPn	01 52 00.4	+2.7
PZH				S	Sn	01 54 09.1	-2.9
PZH				PcP	PcP	01 57 24.5	-1.4
PZH				ScS	ScS	02 04 35.1	0.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,250nm,6.1s						
PZH				LR	LR		
	comp=Z,7µm,16.9s						
PZH				LR	LR		
	comp=Z,9µm,15.9s						
PZH				LR	LR		
	comp=Z,12µm,16.1s						
CHCP	Chirah Chowk	13.30	297	P	Pn	01 51 53.8	-3.1
NIL	Nilore	13.30	297	Pn	Pn	01 51 54.8	-2.2
NIL	Nilore	13.30	297	P	Pn	01 51 54.8	-2.2
SARP	Sargodha	13.31	289	P	Pn	01 51 53.0	-4.1
VJD	Vijayawada	13.40	210	eP	Pn	01 51 58.8	+0.6
HYBB	Hyderabad (bro	13.67	219	eP	Pn	01 52 00.8	-1.3
HYBB				e		01 54 22.9	
HYBB				eS	Sn	01 54 36.2	+2.5
HYBB				IVMs_BB	IVMs_BB	01 59 09.4	
	comp=Z,4µm,5.5s						
KMI	Kunming	13.99	100	⇑P	Pn	01 52 05.9	-0.7
KMI				pP	P	01 52 10.8	-3.7
KMI				S	Sn	01 54 43.3	+1.6
KMI				SS	S	01 55 01.3	-2.0
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI				pmax	pmax		
	comp=Z,470nm,8.6s						
KMI				LR	LR		
	comp=N,4µm,12.9s						
KMI				LR	LR		
	comp=E,12µm,12.8s						
KMI				LR	LR		
	comp=Z,17µm,15.7s						
KMI	Kunming	13.99	100	⇓P	Pn	01 52 07.3	+0.7
KMI				pP	P	01 52 10.7	-3.8
KMI				S	Sn	01 54 43.3	+1.6
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI				pmax	pmax		
	comp=Z,470nm,8.6s						
KMI				LR	LR		
	comp=Z,4µm,12.9s						
KMI				LR	LR		
	comp=Z,12µm,12.8s						
KMI				LR	LR		
	comp=Z,17µm,15.7s						
LATR	Latur	14.11	228	eP	Pn	01 52 06.2	-1.8
CHTO	Chiang Mai	14.15	130	Pn	Pn	01 52 08.0	-0.6
CHTO	Chiang Mai	14.15	130	P	Pn	01 52 08.0	-0.6
CHTO	Chiang Mai	14.15	130	P	Pn	01 52 08.6	0.0
THW	Thamme Wali	14.27	292	P	Pn	01 52 06.4	-3.8
CD2	Chengdu	14.36	76	P	Pn	01 52 09.6	-1.8
CD2				S	Sn	01 54 49.7	-0.6
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,610nm,6.7s						
CD2				LR	LR		
	comp=Z,17µm,13.9s						
CD2				LR	LR		
	comp=Z,14µm,15.3s						
CM31	Chiang Mai Arr	14.40	131	Pn	Pn	01 52 11.2	-0.8
CMAR	Chiang Mai Arr	14.40	131	Pn	Pn	01 52 09.9	-2.1
	comp=Z,0.8nm,0.3s,baz=309,slow=13,SNR=24						
CMAR				LR	LR	01 58 19.6	
	comp=Z,3µm,18.8s,baz=300,slow=40						
CMAR				ScP	ScP	02 01 02.8	+1.7
	comp=Z,2.0nm,0.7s,baz=302,slow=4.7,SNR=6.2						
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	14.40	131	Pn	Pn	01 52 10.2	-1.9
CEP	Cherat	14.42	296	P	Pn	01 52 08.0	-4.3
CEP				S	Sn	01 54 45.0	-7.0
KSH	Kashi	14.65	322	P	Pn	01 52 12.6	-2.8
KSH				pP	P	01 52 16.0	-5.6
KSH				PP	PnPn	01 52 29.7	+6.3
KSH				pmax	pmax		
	comp=Z,98nm,0.8s						
KSH				LR	LR		
	comp=Z,9µm,16.0s						
KSH				LR	LR		
	comp=Z,14µm,18.9s						
KSH				LR	LR		
	comp=Z,6µm,14.3s						
GTA	Gaotai	15.00	40	⇑P	Pn	01 52 16.4	-3.7
GTA				sP	P	01 52 23.3	-2.2
GTA				S	Sn	01 55 03.1	-2.9
GTA				sS	S	01 55 13.3	-10
GTA				SS	SnSn	01 55 23.4	+4.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,260nm,5.3s						
GTA				LR	LR		
	comp=Z,10µm,14.2s						
GTA				LR	LR		
	comp=Z,9µm,14.5s						
GTA				LR	LR		
	comp=Z,5µm,12.7s						
WMQ	Urumqi	15.41	1	eP	Pn	01 52 24.0	-1.5
WMQ				sP	P	01 52 30.7	+0.7
WMQ				PP	pP	01 52 36.6	+0.8
WMQ				S	Sn	01 55 21.6	+5.7
WMQ				SS	S	01 55 32.3	+0.4
WMQ				pmax	pmax		
	comp=Z,110nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,520nm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,8.5s						
WMQ				LR	LR		
	comp=Z,3µm,10.3s						
WMQ				LR	LR		
	comp=Z,1µm,12.5s						
TARG	Taragay, Kyrgy	15.49	332		Pn	01 52 24.9	-2.0
TARG				IAmb	IAmb	01 52 37.5	
	comp=Z,74nm,1.0s						
TARG	Taragay, Kyrgy	15.49	332	P	Pn	01 52 24.9	-2.0
TARG				pmax	pmax		
	comp=Z,74nm,1.0s						
LZH	Lanzhou	15.80	57	⇓P	Pn	01 52 28.3	-2.5
LZH				sP	P	01 52 34.9	+0.4
LZH				eS	Sn	01 55 24.3	-1.3
LZH				SS	SnSn	01 55 37.6	-1.0
LZH				pmax	pmax		
	comp=Z,97nm,1.1s						
LZH				pmax	pmax		
	comp=Z,780nm,4.5s						
LZH				LR	LR		
	comp=N,9µm,12.5s						
LZH				LR	LR		
	comp=E,7µm,12.5s						
LZH				LR	LR		
	comp=Z,11µm,14.6s						
LZH	Lanzhou	15.80	57	⇓P	Pn	01 52 28.2	-2.5
LZH				pP	P	01 52 31.0	-3.5
LZH				sP	pP	01 52 33.6	-6.7
LZH				PP	PnPn	01 52 40.4	+1.1
LZH				S	Sn	01 55 24.3	-1.3
LZH				sS	S	01 55 29.2	-11
LZH				SS	SnSn	01 55 39.1	+0.5
LZH				pmax	pmax		
	comp=Z,97nm,1.1s						
LZH				pmax	pmax		
	comp=Z,780nm,4.5s						
LZH				LR	LR		
	comp=Z,9µm,12.5s						
LZH				LR	LR		
	comp=Z,7µm,12.5s						
LZH				LR	LR		
	comp=Z,11µm,14.6s						
POO	Poona	15.90	235	⇑iP	Pn	01 52 26.0	-6.0
POO	Poona	15.90	235	eP	Pn	01 52 28.9	-3.0
POO				IAmb	IAmb	01 52 31.6	
	comp=Z,68nm,0.6s						
DGPR	DIGLIPUR	15.95	160	eP	P	01 52 34.6	-1.4
DGPR				IAmb	IAmb	01 52 44.1	
	comp=Z,177nm,0.4s						
KDJ	Kajisay	16.08	331	Pn	Pn	01 52 33.2	-1.2
KDJ	Kajisay	16.08	331	P	Pn	01 52 33.2	-1.2
KDJ				pmax	pmax		
	comp=Z,32nm,0.9s						
UZB	Uzynbulak	16.25	337	eP	Pn	01 52 36.0	-0.4
UZB	Uzynbulak	16.25	337	eP	Pn	01 52 36.1	-0.4
	baz=337						
PDGK	Podgornoye	16.26	339	P	Pn	01 52 34.4	-2.1
SATY	Saty	16.39	336	eP	Pn	01 52 36.6	-1.6
SATY	Saty	16.39	336	eP	Pn	01 52 36.6	-1.6
	baz=335						
ZHN	Zhinishke	16.47	336	eP	Pn	01 52 37.6	-1.6
ZHN	Zhinishke	16.47	336	eP	Pn	01 52 37.6	-1.6
	baz=336						
KAD	Karad	16.48	231	⇑iP	Pn	01 52 36.0	-3.5
KAD				i S	Sn	01 55 29.7	-13
KAD	Karad	16.48	231	eP	Pn	01 52 37.0	-2.4
ULHL	Ulahol	16.59	329	P	Pn	01 52 41.0	+0.2
	SNR=56						
KPKS	Kokpek	16.65	337	eP	Pn	01 52 39.8	-1.6
KPKS	Kokpek	16.65	337	eP	Pn	01 52 39.8	-1.6
	baz=337						
KBL	Kabul	16.90	296		Pn	01 52 42.3	-2.5
KBL				IAmb	IAmb	01 52 53.7	
	comp=Z,115nm,0.9s						
KBL	Kabul	16.90	296	P	Pn	01 52 42.3	-2.5
KBL				pmax	pmax		
	comp=Z,115nm,0.9s						
TNSS	Tian-Shan	16.93	333	eP	Pn	01 52 45.2	-0.1
TNSS	Tian-Shan	16.93	333	eP	Pn	01 52 45.2	-0.1
	baz=332						
MDOK	Medeo	17.00	333	eP	Pn	01 52 45.7	-0.2
MDOK				eS	Sn	01 55 55.0	+0.5
MDOK	Medeo	17.00	333	eP	Pn	01 52 45.7	-0.2
	baz=333						
MDOK				eS	Sn	01 55 55.0	+0.5
	baz=333						
AAA	Alma-Ata	17.09	333	eP	P	01 52 48.2	-0.4
AAA	Alma-Ata	17.09	333	eP	P	01 52 48.3	-0.4
	baz=332						
GYA	Guiyang	17.12	92	⇑P	Pn	01 52 45.9	-1.6
GYA				pP	P	01 52 51.7	+2.6
GYA				S	Sn	01 55 54.5	-3.1
GYA				pmax	pmax		
	comp=Z,27nm,1.6s						
GYA				pmax	pmax		
	comp=Z,1µm,4.2s						
GYA				LR	LR		
	comp=Z,6µm,13.7s						
GYA				LR	LR		
	comp=Z,3µm,13.0s						
GYA				LR	LR		
	comp=Z,2µm,9.3s						
PBA	Port Blair	17.35	163	Pn	Pn	01 52 50.7	+0.5
UCH	Uchtor	17.39	326	P	Pn	01 52 49.9	-1.2
	SNR=38						
TKM2	Tokmak 2	17.41	330	P	Pn	01 52 51.7	+0.6
	SNR=39						
TKM2	Tokmak 2	17.41	330	i P	Pn	01 52 50.4	-0.8
TKM2				pmax	pmax		
	comp=Z,74nm,1.7s						
KBK	Karagaybulak	17.50	328	P	P	01 52 54.5	+1.1
	SNR=41						
CHKK	Chushkaly	17.60	334	eP	Pn	01 52 53.4	+0.1
CHKK	Chushkaly	17.60	334	eP	Pn	01 52 53.4	+0.1
	baz=334						
AAK	Ala-Archa	17.70	327	P	P	01 52 57.4	+1.9
	SNR=31						
AAK	Ala-Archa	17.70	327	P	Pn	01 52 54.5	-0.3
	comp=Z,0.7nm,0.3s,baz=140,slow=13,SNR=35						

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AAK                                 S       Sn       01 56 01.9  -10
       comp=Z,1.0nm,0.4s,baz=91,slow=9.6,SNR=0.8
AAK                                 LR      LR       02 00 43.9
       comp=Z,3µm,18.3s,baz=140,slow=40
       comp=Z,9.7nm,0.9s
AAK    Ala-Archa          17.70 327         Pn       01 52 54.0 -0.8
AAK    Ala-Archa          17.70 327c iP     P        01 52 56.8 +1.2
AAK                                 pmax    pmax
       comp=Z,142nm,1.7s
AML    Almayashu          17.73 324 P       Pn       01 52 54.0 -1.3
       SNR=16
GAR    Garm               17.77 311 Pn      Pn       01 52 50.8 -4.7
GAR                                 IAmb    IAmb     01 53 06.6
       comp=Z,110nm,1.1s
FRU1   Bishkek            17.77 327 Pn      Pn       01 52 54.4 -1.0
FRU1   Bishkek            17.77 327 P       Pn       01 52 54.4 -1.0
FRU1                                pmax    pmax
       comp=Z,138nm,1.5s
CHMS   Chumysh            17.86 328 P       P        01 52 59.7 +2.6
       SNR=11
CHMS   Chumysh            17.86 328 i P     Pn       01 52 56.3 -0.2
CHMS                                pmax    pmax
       comp=Z,55nm,1.3s
KUU    Kurty              17.89 333 eP      Pn       01 52 56.7 -0.1
KUU                                 eS      Sn       01 56 16.6 +0.7
KUU                                 pmax    pmax
       comp=Z,188nm,1.9s
KUU    Kurty              17.89 333 eP      Pn       01 52 56.7 -0.1
       comp=Z,188nm,1.9s,baz=333
KUU                                 eS      Sn       01 56 16.6 +0.7
       baz=333
KUU                                 LR      LR       02 00 20.8
       baz=333
GOA    Goa                18.02 227 eP      P        01 53 02.1 +3.1
GOA                                 IAmb    IAmb     01 53 08.6
       comp=Z,68nm,0.9s
BTK    Batken             18.03 315 Pn      Pn       01 52 55.1 -3.5
BTK                                 IAmb    IAmb     01 53 02.8
       comp=Z,220nm,1.4s
BTK    Batken             18.03 315 P       Pn       01 52 55.1 -3.5
BTK                                 pmax    pmax
       comp=Z,220nm,1.4s
EKS2   Erkin-Say          18.07 326 P       P        01 53 01.8 +2.2
       SNR=56
TDK    Taldyqorghan       18.10 339 eP      Pn       01 52 59.4 -0.1
TDK    Taldyqorghan       18.10 339 eP      Pn       01 52 59.4 -0.1
       baz=338
TDK                                 LR      LR       02 00 35.8
       baz=338
USP    Ospenovka          18.18 328 P       P        01 53 01.3 +0.6
       SNR=25
SGDS   Sogindy            18.27 329 eP      Pn       01 53 01.3 -0.2
SGDS                                eS      Sn       01 56 25.9 +0.8
SGDS   Sogindy            18.27 329 eP      Pn       01 53 01.4 -0.2
       baz=328
SGDS                                eS      Sn       01 56 26.0 +0.8
       baz=328
CHGR   Chuyangaron        18.38 309 Pn      P        01 52 59.1 -3.8
CHGR   Chuyangaron        18.38 309 P       P        01 52 59.2 -3.8
CHGR                                pmax    pmax
       comp=Z,570nm,1.3s
SALM   Salem              18.79 209 eP      Pn       01 53 10.1 +2.2
MKAR   Makanchi Array     18.83 349 P       P        01 53 07.6 -0.2
       comp=Z,1.4nm,0.3s,baz=160,slow=12,SNR=73
MKAR                                ScP     ScP      02 01 10.6 +1.2
       comp=Z,1.6nm,1.0s,baz=208,slow=2.3,SNR=3.9
MKAR                                LR      LR       02 01 49.6
       comp=Z,2µm,18.7s,baz=159,slow=42
       comp=Z,24nm,0.8s
MKAR   Makanchi Array     18.83 349 P       P        01 53 06.7 -1.1
MK31   Makanchi Array     18.83 349 P       P        01 53 06.5 -1.3
MK31   Makanchi Array     18.83 349 i P     P        01 53 07.4 -0.4
MK31                                pmax    pmax
       comp=Z,76nm,1.2s
MAKZ   Makanchi           18.90 348 P       P        01 53 07.0 -1.6
MAKZ   Makanchi           18.90 348 P       P        01 53 08.1 -0.4
ZSN    Zaisan             19.15 355 eP      P        01 53 10.5 -0.7
ZSN    Zaisan             19.15 355 eP      P        01 53 10.5 -0.7
       baz=354
XAN    Xi'an              19.15  68 ⇑P      P        01 53 08.5 -2.9
XAN                                 sP      Pn       01 53 13.8 +1.5
XAN                                 S       Sn       01 56 44.1 -2.6
XAN                                 SS      SnSn     01 57 07.3 +6.6
XAN                                 pmax    pmax
       comp=Z,40nm,1.1s
XAN                                 pmax    pmax
       comp=Z,1µm,6.0s
XAN                                 LR      LR
       comp=N,6µm,10.5s
XAN                                 LR      LR
       comp=E,2µm,7.7s
XAN                                 LR      LR
       comp=Z,6µm,10.8s
ENH    Enshi              19.25  79 P       P        01 53 11.0 -1.6
ENH                                 IAmb    IAmb     01 53 26.0
       comp=Z,63nm,0.9s
DZA    Taraz              19.51 322 eP      P        01 53 15.5 +0.3
DZA    Taraz              19.51 322 eP      P        01 53 15.6 +0.3
       baz=322
TAS    Tashkent           19.70 316 P       P        01 53 15.5 -1.8
TAS                                 IAmb    IAmb     01 53 22.1
       comp=Z,182nm,1.2s
TAS    Tashkent           19.70 316 P       P        01 53 15.5 -1.8
TAS                                 pmax    pmax
       comp=Z,182nm,1.2s
IUG    Iuzhnay            19.75 319 eP      P        01 53 18.0  0.0
IUG    Iuzhnay            19.75 319 eP      P        01 53 18.0  0.0
       baz=318
BTLS   Baital             19.78 331 eP      P        01 53 18.1  0.0
BTLS                                eS      Sn       01 57 01.8 +0.3
BTLS                                pmax    pmax
       comp=Z,53nm,1.8s
BTLS   Baital             19.78 331 eP      P        01 53 18.1  0.0
       comp=Z,53nm,1.8s,baz=330
BTLS                                eS      Sn       01 57 01.9 +0.3
       baz=330
KK31   Karatay Array      20.10 321 P       P        01 53 20.7 -1.0
KK31   Karatay Array      20.10 321 i P     P        01 53 22.5 +0.9
KKAR   Karatay Array      20.10 321 P       P        01 53 21.7 +0.1
KKAR   Karatay Array      20.10 321 P       P        01 53 21.7 +0.1
KOD    Kodaikanal         20.37 210 eP      Pn       01 53 27.9 +0.7
PCHI   Peechi             20.62 213⇓eP      Pn       01 53 29.3 -0.4
PCHI                                eS      S        01 57 10.2 -7.2
GULI   GuiLin             20.62  93 ⇑P      P        01 53 25.9 -1.6
GULI                                S       S        01 57 12.5 -5.1
GULI                                pmax    pmax
       comp=Z,40nm,1.0s
GULI                                LR      LR
       comp=Z,7µm,19.0s
GULI                                LR      LR
       comp=Z,1µm,18.4s
GULI                                LR      LR
       comp=Z,7µm,14.1s
UBPT   Khong Chiam        21.13 124 P       P        01 53 33.0  0.0
PALK   Pallekele          21.96 198 P       P        01 53 42.9 +0.9
       comp=Z,11nm,0.8s,baz=185,slow=7.7,SNR=2.6
PALK                                LR      LR       02 01 39.1
       comp=Z,948nm,20.1s,baz=128,slow=35
       comp=Z,11nm,0.8s
PALK   Pallekele          21.96 198 P       P        01 53 41.2 -0.8
TRD    Trivandrum         22.13 209 eP      P        01 53 48.5 +4.8
TRD                                 IAmb    IAmb     01 53 57.1
       comp=Z,33nm,0.7s
TRD                                 IAMs_20 IAMs_20  02 00 39.9
       comp=Z,6µm,6.7s
LYN    LuoYang            22.13  68⇑iP      P        01 53 43.6 -0.1
LYN                                 pP      pP       01 53 47.6 -1.9
LYN                                 S       S        01 57 43.0 -4.1
LYN                                 pmax    pmax
       comp=Z,60nm,1.8s
LYN                                 pmax    pmax
       comp=Z,1µm,4.0s
LYN                                 LR      LR
       comp=Z,3µm,12.3s
LYN                                 LR      LR
       comp=Z,5µm,22.0s
LYN                                 LR      LR
       comp=Z,8µm,22.7s
BTO    Baotou             22.13  51 eP      P        01 53 40.6 -3.1
BTO                                 S       S        01 57 48.0 +0.8
BTO                                 LR      LR
       comp=Z,28µm,14.3s
BTO                                 LR      LR
       comp=Z,15µm,15.9s
HRA    Herat              22.36 292 P       P        01 53 44.4 -1.9
CNSH   ChangSha           22.38  84 ⇑P      P        01 53 45.3 -1.1
CNSH                                S       S        01 57 45.8 -6.0
CNSH                                pmax    pmax
       comp=Z,800nm,6.5s
CNSH                                LR      LR
       comp=N,4µm,12.7s
CNSH                                LR      LR
       comp=E,5µm,11.2s
CNSH                                LR      LR
       comp=Z,6µm,11.5s
QIZ    Qiongzhong         22.44 110 P       P        01 53 47.7 +0.6
QIZ    Qiongzhong         22.44 110 P       P        01 53 46.9 -0.2
QIZ                                 S       S        01 57 50.4 -2.6
QIZ                                 pmax    pmax
       comp=Z,26nm,1.5s
QIZ                                 pmax    pmax
       comp=Z,720nm,3.9s
QIZ                                 LR      LR
       comp=Z,3µm,19.9s
QIZ                                 LR      LR
       comp=Z,2µm,16.7s
QIZ                                 LR      LR
       comp=Z,1µm,23.1s
QIZ    Qiongzhong         22.44 110 P       P        01 53 49.0 +1.9
SEM    Semipalatinsk      22.68 348 eP      P        01 53 48.8 -0.8
SEM                                 pmax    pmax
       comp=Z,69nm,2.1s
SEM    Semipalatinsk      22.68 348 eP      P        01 53 48.8 -0.8
       comp=Z,69nm,2.1s,baz=348
SEM                                 LR      LR       02 03 26.0
       baz=348
SRIT   Nakonsritamara     22.75 148 P       P        01 53 49.7 -0.6
SRIT                                IAmb    IAmb     01 53 52.9
       comp=Z,52nm,1.1s
TIY    Taiyuan            22.82  60 eP      P        01 53 50.4 -0.6
TIY                                 PP      PnPn     01 54 12.8 -2.5
TIY                                 S       S        01 57 56.3 -3.4
TIY                                 sS      pS       01 58 03.1 -3.4
TIY                                 pmax    pmax
       comp=Z,250nm,4.5s
TIY                                 LR      LR
       comp=N,5µm,15.1s
TIY                                 LR      LR
       comp=E,2µm,11.6s
TIY                                 LR      LR
       comp=Z,6µm,13.9s
OTUK   Ortayu             23.05 333 P       P        01 53 53.3  0.0
KURBB  Kurchatov Arra     23.23 345 P       P        01 53 54.5 -0.6
       comp=Z,32nm,0.9s,baz=164,slow=9.1,SNR=80
KURBB                               S       S        01 58 05.9 -0.5
       comp=Z,0.7nm,0.6s,baz=170,slow=32,SNR=0.9
KURBB                               LR      LR       02 04 34.4
       comp=Z,1µm,18.3s,baz=150,slow=41
       comp=Z,32nm,0.9s
KURBB  Kurchatov Arra     23.23 345 P       P        01 53 54.0 -1.1
HHC    Hu-ho-hao-te       23.30  51 eP      P        01 53 56.3 +0.3
HHC                                 S       S        01 58 05.3 -2.6
HHC                                 sS      pS       01 58 12.6 -1.7
HHC                                 pmax    pmax
       comp=Z,52nm,0.8s
HHC                                 pmax    pmax
       comp=Z,1µm,4.6s
HHC                                 LR      LR
       comp=N,7µm,11.8s
HHC                                 LR      LR
       comp=E,14µm,11.9s
HHC                                 LR      LR
       comp=Z,19µm,12.6s
KURK   Kurchatov          23.30 346 P       P        01 53 53.9 -1.8
KURK   Kurchatov          23.30 346c iP     P        01 53 55.2 -0.5
KURK                                pmax    pmax
       comp=Z,180nm,1.7s
WHN    Wuhan              23.45  78 ⇑P      P        01 53 57.3 -0.2
WHN                                 S       S        01 58 07.6 -2.8
WHN                                 pmax    pmax
       comp=Z,2µm,3.7s
WHN                                 LR      LR
       comp=Z,7µm,12.9s
WHN                                 LR      LR
       comp=Z,7µm,10.7s
WHN                                 LR      LR
       comp=Z,18µm,19.5s
KNGR   Kungurtug, Tuv     23.46  16⇓eP      P        01 53 57.5  0.0
SONM   Songino Array      24.34  32 P       P        01 54 05.7 -0.2
       comp=Z,34nm,0.8s,baz=222,slow=8.1,SNR=74
SONM                                PcP     PcP      01 57 43.7 -1.5
       comp=Z,1.3nm,0.5s,baz=220,slow=3.0,SNR=2.7
SONM                                ScP     ScP      02 01 23.7 +0.4
       comp=Z,3.3nm,0.8s,baz=226,slow=4.2,SNR=10
SONM                                LR      LR       02 04 41.1
       comp=Z,3µm,19.9s,baz=222,slow=39
       comp=Z,34nm,0.8s
SONM   Songino Array      24.34  32 P       P        01 54 05.7 -0.2
SONM                                IAmb    IAmb     01 54 09.1
       comp=Z,44nm,0.9s
BRZS   Berezniki          24.36 336 eP      P        01 54 05.4 -0.4
BRZS                                pmax    pmax
       comp=Z,143nm,2.4s
BRZS   Berezniki          24.36 336 eP      P        01 54 05.4 -0.4
       comp=Z,143nm,2.4s,baz=336
HNS    HongShan           24.48  61 ⇓P      P        01 54 07.3 +0.2
HNS                                 S       S        01 58 23.0 -3.7
HNS                                 SS      SnSn     01 59 11.8 +0.6
HNS                                 ScP     ScP      02 01 24.8 +1.2
HNS                                 pmax    pmax
       comp=Z,80nm,1.2s
HNS                                 pmax    pmax
       comp=Z,1µm,5.5s
HNS                                 LR      LR
       comp=Z,7µm,17.1s
HNS                                 LR      LR
       comp=Z,3µm,16.1s
HNS                                 LR      LR
       comp=Z,6µm,23.1s
ULN    Ulaanbaatar        24.67  33 P       P        01 54 07.8 -1.1
ULN                                 IAmb    IAmb     01 54 16.4
       comp=Z,83nm,1.4s
ULN    Ulaanbaatar        24.67  33c iP     P        01 54 09.3 +0.4
ULN                                 pmax    pmax
       comp=Z,122nm,2.3s
LHMI   Lhok Sumawe        24.71 157 P       P        01 54 10.3 +1.0
LHMI   Lhok Sumawe        24.71 157 P       P        01 54 12.4 +3.2
       comp=Z,11µmcomp=Z,538nm,1.7s
LHMI   Lhok Sumawe        24.71 157 P       P        01 54 12.5 +3.2
ZAK    Zakamensk          25.02  24 eP      P        01 54 11.7 -0.3
ZAK                                 pmax    pmax
       comp=Z,47nm,1.4s
ZAK                                 pmax    pmax
       comp=Z,8.0nm,1.5s
MOY    Mondy              25.36  20 eP      P        01 54 16.2 +1.1
MOY                                 pmax    pmax
       comp=Z,81nm,2.1s
ZAA0   Zalesovo Array     25.62 356 P       P        01 54 15.9 -1.3
ZAA0                                IAmb    IAmb     01 54 25.9
       comp=Z,42nm,1.1s
ZALV   Zalesovo Beam      25.62 356 P       P        01 54 17.8 +0.6
       comp=Z,19nm,0.6s,baz=186,slow=9.2,SNR=50
ZALV                                PcP     PcP      01 57 49.2 +1.5
       comp=Z,1.8nm,0.7s,baz=177,slow=5.8,SNR=1.3
ZALV                                LR      LR       02 05 38.0
       comp=Z,2µm,18.6s,baz=182,slow=40
       comp=Z,19nm,0.6s
ZALV   Zalesovo Beam      25.62 356 P       P        01 54 16.6 -0.6
KULM   Kulim              26.14 149 P       P        01 54 23.5 +1.3
TIA    Tai'an             26.15  65 eP      P        01 54 23.8 +1.5
TIA                                 S       S        01 58 51.6 -1.8
TIA                                 pmax    pmax
       comp=Z,43nm,0.9s
TIA                                 LR      LR
       comp=N,2µm,16.7s
TIA                                 LR      LR
       comp=E,4µm,19.6s
TIA                                 LR      LR
       comp=Z,8µm,22.1s
TIA    Tai'an             26.15  65 eP      P        01 54 23.7 +1.5
TIA                                 S       S        01 58 51.6 -1.8
TIA                                 pmax    pmax
       comp=Z,43nm,0.9s
TIA                                 LR      LR
       comp=Z,2µm,16.7s
TIA                                 LR      LR
       comp=Z,4µm,19.6s
TIA                                 LR      LR
       comp=Z,8µm,22.1s
BJT    Baijiatuau         26.28  56 IAmb    IAmb     01 54 28.6
       comp=Z,32nm,1.2s
BJI    Beijing            26.29  56 P       P        01 54 25.0 +1.5
BJI                                 S       S        01 58 56.3 +0.8
BJI                                 pmax    pmax
       comp=Z,28nm,1.6s
BJI                                 pmax    pmax
       comp=Z,480nm,5.6s
BJI                                 LR      LR
       comp=Z,4µm,12.6s
BJI                                 LR      LR
       comp=Z,4µm,13.1s
BJI                                 LR      LR
       comp=Z,7µm,13.4s
GEYT   Alibeck            26.29 299 P       P        01 54 25.6 +2.0
       comp=Z,20nm,0.8s,baz=174,slow=6.0,SNR=42
GEYT                                LR      LR       02 06 41.0
       comp=Z,6µm,19.4s,baz=118,slow=41
       comp=Z,20nm,0.8s
GEYT   Alibeck            26.29 299 P       P        01 54 24.6 +1.0
GEYT                                IAmb    IAmb     01 54 30.1
       comp=Z,28nm,0.9s
GYA0B  ALIBECK ARRAY      26.29 299 IAmb    IAmb     01 54 30.1
       comp=Z,44nm,0.9s
WSAR   Wadi Sarin         26.46 265 P       P        01 54 26.2 +1.0
       comp=Z,6.1nm,0.8s,baz=157,slow=7.7,SNR=2.3
WSAR                                LR      LR       02 06 28.3
       comp=Z,2µm,19.0s,baz=98,slow=40
       comp=Z,6.1nm,0.8s
KCSI   Kotacane, Aceh     26.59 157 P       P        01 54 29.4 +3.1
       comp=Z,1µmcomp=Z,37nm,1.1s
TSI    Tuntungan          26.89 155 P       P        01 54 31.8 +2.8
       comp=Z,6µmcomp=Z,112nm,1.0s
IRK    Irkutsk            26.91  23 eP      P        01 54 29.6 +0.6
IRK                                 pmax    pmax
       comp=Z,71nm,2.2s
IPM    Ipoh               27.02 149 IAmb    IAmb     01 54 32.3
       comp=Z,28nm,0.8s
IPM    Ipoh               27.02 149 P       P        01 54 31.2 +0.9
NJ2    Nanjing            27.28  75 eP      P        01 54 33.3 +0.8
NJ2                                 pP      pP       01 54 36.3 -2.7
NJ2                                 S       S        01 59 12.3 +0.9
NJ2                                 sS      sS       01 59 24.8 +3.2
NJ2                                 SS      SnSn     02 00 25.8 +6.0
NJ2                                 pmax    pmax
       comp=Z,30nm,0.7s
NJ2                                 pmax    pmax
       comp=Z,480nm,4.6s
NJ2                                 LR      LR
       comp=N,3µm,15.6s
NJ2                                 LR      LR
       comp=E,5µm,11.8s
NJ2                                 LR      LR
       comp=Z,11µm,15.4s
NJ2    Nanjing            27.28  75 eP      P        01 54 33.2 +0.8
NJ2                                 pP      pP       01 54 36.2 -2.7
NJ2                                 S       S        01 59 12.2 +0.9
NJ2                                 SS      SnSn     02 00 25.8 +6.0
NJ2                                 pmax    pmax
       comp=Z,30nm,0.7s
NJ2                                 pmax    pmax
       comp=Z,480nm,4.6s
NJ2                                 LR      LR
       comp=Z,3µm,15.6s
NJ2                                 LR      LR
       comp=Z,5µm,11.8s
NJ2                                 LR      LR
       comp=Z,11µm,15.4s
XLT    XiLinHaoTe         27.61  48⇑iP      P        01 54 36.3 +0.8
XLT                                 pP      pP       01 54 41.6  0.0
XLT                                 sP      sP       01 54 44.8 +0.6
XLT                                 S       S        01 59 18.4 +1.9
XLT                                 sS      sS       01 59 33.1 +6.3
XLT                                 pmax    pmax
       comp=Z,22nm,1.4s
XLT                                 pmax    pmax
       comp=Z,210nm,4.3s
XLT                                 LR      LR
       comp=N,690nm,18.7s
XLT                                 LR      LR
       comp=E,4µm,17.3s
XLT                                 LR      LR
       comp=Z,5µm,17.4s
XLT    XiLinHaoTe         27.61  48⇑iP      P        01 54 36.2 +0.8
XLT                                 pP      pP       01 54 41.6  0.0
XLT                                 sP      sP       01 54 44.8 +0.6
XLT                                 S       S        01 59 18.4 +1.9
XLT                                 pmax    pmax
       comp=Z,22nm,1.4s
XLT                                 pmax    pmax
       comp=Z,210nm,4.3s
XLT                                 LR      LR
       comp=Z,690nm,18.7s
XLT                                 LR      LR
       comp=Z,4µm,17.3s
XLT                                 LR      LR
       comp=Z,5µm,17.4s
PSI    Prapat             27.67 155 P       P        01 54 36.5 +0.4
       comp=Z,5.7nm,0.6s,baz=317,slow=7.3,SNR=7.0
PSI                                 PcP     PcP      01 57 52.2 -1.1
       comp=Z,3.8nm,0.8s,baz=341,slow=18,SNR=2.0
PSI                                 LR      LR       02 07 23.3
       comp=Z,1µm,21.2s,baz=333,slow=40
       comp=Z,5.7nm,0.6s
BRVK   Borovoye           27.75 337 P       P        01 54 34.6 -1.8
BRVK   Borovoye           27.75 337c iP     P        01 54 37.3 +0.9
BRVK                                pmax    pmax
       comp=Z,15nm,1.7s
QZH    Quanzhou           27.95  90 eP      P        01 54 39.0 +0.5
QZH                                 S       S        01 59 22.8 +0.8
QZH                                 LR      LR
       comp=Z,4µm,15.6s
QZH                                 LR      LR
       comp=Z,770nm,11.8s
QZH                                 LR      LR
       comp=Z,3µm,15.2s
GSI    Gunungsitoli       28.59 159 P       P        01 54 46.0 +1.7
       comp=Z,5µmcomp=Z,251nm,1.8s
GSI    Gunungsitoli       28.59 159 P       P        01 54 46.6 +2.3
SSE    Sheshan            29.31  76 P       P        01 54 51.0 +0.5
SSE                                 S       S        01 59 42.6 -0.6
SSE                                 pmax    pmax
       comp=Z,13nm,0.8s
SSE                                 pmax    pmax
       comp=Z,250nm,4.1s
SSE                                 LR      LR
       comp=N,3µm,16.5s
SSE                                 LR      LR
       comp=E,2µm,17.4s
AB31   Akbulak array      29.66 322 i P     P        01 54 54.1 +0.7
ABKAR  Akbulak array      29.66 322 P       P        01 54 54.0 +0.5
MNSI   Mandailing Nat     29.76 155 P       P        01 54 56.0 +1.3
DL2    Dalian             30.13  61 P       P        01 54 59.9 +2.2
DL2                                 S       S        01 59 58.3 +2.4
DL2                                 pmax    pmax
       comp=E,49nm,1.2s
DL2                                 LR      LR
       comp=E,2µm,19.4s
DL2                                 LR      LR
       comp=E,6µm,20.8s
DL2                                 LR      LR
       comp=E,7µm,19.8s
YULB   Yu-li              30.74  91 P       P        01 55 03.7 +0.4
YULB                                IAmb    IAmb     01 55 07.5
       comp=Z,35nm,1.0s
BKNI   Bangkinang         30.76 153 P       P        01 55 04.4 +0.9
BKNI   Bangkinang         30.76 153 P       P        01 55 07.8 +4.3
       comp=Z,3µmcomp=Z,109nm,1.5s
BKNI   Bangkinang         30.76 153 P       P        01 55 05.5 +2.0
NACB   Ninganchiao        30.79  90 P       P        01 55 04.2 +0.4
NACB                                IAmb    IAmb     01 55 08.7
       comp=Z,29nm,0.7s
AKTO   Aktyubinsk         31.35 323 LR      LR       02 09 04.0
       comp=Z,3µm,19.2s,baz=133,slow=39
SNY    Shenyang           32.17  56 ⇑P      P        01 55 15.9 +0.2
SNY                                 S       S        02 00 27.8  0.0
SNY                                 pmax    pmax
       comp=Z,23nm,0.9s
SNY                                 pmax    pmax
       comp=Z,470nm,4.6s
SNY                                 LR      LR
       comp=Z,3µm,10.9s
SNY                                 LR      LR
       comp=Z,3µm,13.7s
SNY                                 LR      LR
       comp=Z,4µm,13.4s
HIA    Hailar             32.27  41 IAmb    IAmb     01 55 21.6
       comp=Z,32nm,1.0s
SUJ    Sinuiju            32.51  59 P       P        01 55 17.1 -1.7
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SUJ				pP	**pP**	**01 55 26.1**	**+1.2**
SUJ				S	**S**	**02 00 32.7**	**-0.5**
SUJ				AmB			
	comp=Z,212nm,2.6s						
SUJ				AMS	AMS		
	comp=N,351nm,12.0s						
SUJ				AMS	AMS		
	comp=E,165nm,5.7s						
SUJ				AMS	AMS		
	comp=Z,74nm,2.5s						
HJU	**Haeju**	**33.20**	**63**	P	**P**	**01 55 25.5**	**+0.7**
HJU				pP	**sP**	**01 55 32.9**	**-0.7**
HJU				S	**S**	**02 00 43.1**	**-0.8**
HJU				AmB			
	comp=Z,86nm,1.0s						
HJU				AMS	AMS		
	comp=N,1µm,2.4s						
HJU				AMS	AMS		
	comp=E,5µm,9.3s						
HJU				AMS	AMS		
	comp=Z,6µm,10.5s						
PYAG	**Pyongyang**	**33.33**	**61**	P	**P**	**01 55 24.9**	**-1.0**
PYAG				pP	**pP**	**01 55 31.4**	**-0.8**
PYAG				S	**S**	**02 00 45.9**	**-0.1**
PYAG				AmB			
	comp=Z,249nm,3.7s						
PYAG				AMS	AMS		
	comp=N,8µm,11.2s						
PYAG				AMS	AMS		
	comp=E,13µm,19.0s						
PYAG				AMS	AMS		
	comp=Z,12µm,17.9s						
INCN	**Inchon**	**33.87**	**64**	P	**P**	**01 55 31.0**	**+0.3**
INCN	**Inchon**	**33.87**	**64**	P	**P**	**01 55 31.0**	**+0.3**
INCN				pmax	pmax		
	comp=Z,47nm,1.1s						
INCN	**Inchon**	**33.87**	**64**	P	**P**	**01 55 32.4**	**+1.7**
CN2	**Changchun**	**33.97**	**53**	*e*P	**P**	**01 55 31.8**	**+0.3**
CN2				*e*S	**S**	**02 00 53.1**	**-2.7**
CN2				pmax	pmax		
	comp=Z,40nm,1.1s						
CN2				LR	LR		
	comp=N,2µm,14.0s						
CN2				LR	LR		
	comp=E,4µm,14.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
CN2	**Changchun**	**33.97**	**53**	*e*P	**P**	**01 55 31.7**	**+0.3**
CN2				S	**S**	**02 00 53.1**	**-2.7**
CN2				pmax	pmax		
	comp=Z,40nm,1.1s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,4µm,14.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
SVE	**Sverdlovsk**	**34.20**	**334**	*e*P	**P**	**01 55 34.2**	**+1.0**
SVE				*e*S	**S**	**02 01 00.5**	**+1.5**
SVE				pmax	pmax		
	comp=Z,28nm,0.8s						
SVE				MLR	MLR		
	comp=Z,993nm,11.0s						
TJN	**Taejon**	**34.40**	**66**	P	**P**	**01 55 34.9**	**-0.4**
TJN	**Taejon**	**34.40**	**66**	*de*P	**P**	**01 55 35.1**	**-0.1**
TJN	**Taejon**	**34.40**	**66**	P	**P**	**01 55 35.5**	**+0.3**
NAWB	**Namwon**	**34.41**	**68**	P	**P**	**01 55 34.2**	**-1.1**
NAWB				IAmb	IAmb	01 55 41.6	
	comp=Z,24nm,0.9s						
KSM	**Kuching**	**34.50**	**137**	IAmb	IAmb	01 55 39.4	
	comp=Z,45nm,1.3s						
KSM	**Kuching**	**34.50**	**137**	P	**P**	**01 55 38.1**	**+1.8**
ARU	**Arti**	**34.76**	**332**	P	**P**	**01 55 37.0**	**-1.1**
ARU				IAmb	IAmb	01 55 43.1	
	comp=Z,18nm,0.9s						
ARU	**Arti**	**34.76**	**332**	*c i*P	**P**	**01 55 38.6**	**+0.5**
ARU						01 56 50.6	
ARU						01 58 10.7	
ARU				S	**S**	**02 01 09.3**	**+1.6**
ARU				SS	**SnSn**	**02 03 13.7**	**-7.5**
ARU				SSS	SSS	02 03 41.9	
ARU				pmax	pmax		
	comp=Z,54nm,2.2s						
ARU				MLR	MLR		
	comp=Z,869nm,14.0s						
BOD	**Bodaibo**	**34.77**	**25**	*e*P	**P**	**01 55 38.7**	**+0.6**
BOD				pmax	pmax		
	comp=Z,23nm,1.4s						
HHU	**Hamhung**	**34.80**	**60**	P	**P**	**01 55 38.8**	**+0.2**
HHU				sP	**sP**	**01 55 52.4**	**+4.8**
HHU				S	**S**	**02 01 09.2**	**+0.6**
HHU				AmB			
	comp=Z,168nm,3.7s						
HHU				AMS	AMS		
	comp=N,2µm,5.0s						
HHU				AMS	AMS		
	comp=E,7µm,14.9s						
HHU				AMS	AMS		
	comp=Z,7µm,14.8s						
KSRS	**Korea Array**	**34.89**	**64**	P	**P**	**01 55 39.2**	**-0.2**
	comp=Z,8.4nm,0.7s,baz=257,slow=8.0,SNR=43						
KSRS				PcP	**PcP**	**01 58 11.4**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=235,slow=1.9,SNR=2.2						
KSRS				ScP	**ScP**	**02 01 57.9**	**+0.8**
	comp=Z,3.7nm,1.0s,baz=270,slow=3.2,SNR=16						
KSRS				LR	LR	02 11 28.9	
	comp=Z,1µm,18.6s,baz=260,slow=39						
	comp=Z,8.4nm,0.7s						
KSCHJ	**Chungju**	**34.91**	**65**	IAmb	IAmb	01 55 42.1	
	comp=Z,11nm,0.6s						
SBUM	**Sibu**	**34.94**	**133**	P	**P**	**01 55 39.8**	**-0.3**
SBUM				IAmb	IAmb	01 55 43.1	
	comp=Z,24nm,1.1s						
SEHB	**SEOHWA**	**35.20**	**63**	P	**P**	**01 55 41.8**	**-0.4**
MAK	**Makhachkala**	**35.26**	**305**	*e*P	P	01 55 37.5	-5.0
MAK				*e*		01 57 00.0	
MAK				*e*S	**S**	**02 01 08.1**	**-7.5**
MAK				*e*SS	**SnSn**	**02 03 33.2**	**-0.3**
MAK				pmax	pmax		
	comp=Z,23nm,0.5s						
MAK				MLR	MLR		
	comp=Z,2µm,14.0s						
BNX	**BinXian**	**35.81**	**50**	⇓P	**P**	**01 55 48.0**	**+0.7**
BNX				pP	**pP**	**01 55 52.8**	**-0.7**
BNX				sP	**sP**	**01 55 55.7**	**-0.4**
BNX				PP	**PP**	**01 57 08.7**	**+0.1**
BNX				S	**S**	**02 01 22.9**	**-1.2**
BNX				sS	**pS**	**02 01 30.3**	**-0.9**
BNX				pmax	pmax		
	comp=Z,120nm,1.3s						
BNX				pmax	pmax		
	comp=Z,690nm,7.3s						
BNX				LR	LR		
	comp=Z,4µm,10.4s						
BNX				LR	LR		
	comp=Z,1µm,13.5s						
BNX				LR	LR		
	comp=Z,8µm,17.6s						
JOW	**Kunigami**	**36.04**	**83**	LR	LR	02 11 50.3	
	comp=Z,1µm,18.6s,baz=293,slow=38						
STKI	**Sintang**	**36.32**	**137**	P	**P**	**01 55 55.0**	**+3.0**
TPI	**Tanjungpandan**	**36.52**	**145**	P	**P**	**01 55 56.7**	**+3.1**
	comp=Z,21nm,1.6s						
GROC	**Groznyy**	**36.53**	**305**	*e*P	**P**	**01 55 53.3**	**-0.2**
GROC				*e*		01 57 21.6	
GROC				*e*S	**S**	**02 01 35.4**	**+0.2**
GROC				*e*SS	**SnSn**	**02 04 05.5**	**+1.2**
GROC				pmax	pmax		
	comp=Z,84nm,0.8s						
GNI	**Garni**	**36.92**	**300**	LR	LR	02 13 48.2	
	comp=Z,1µm,19.4s,baz=90,slow=41						
GNI	**Garni**	**36.92**	**300**	P	**P**	**01 55 58.0**	**+1.0**
GNI				IAmb	IAmb	01 56 19.2	
	comp=Z,33nm,1.0s						
GNI	**Garni**	**36.92**	**300**	P	**P**	**01 55 58.0**	**+1.0**
GNI				pmax	pmax		
	comp=Z,33nm,1.0s						
JNU	**Nakatsue**	**37.38**	**72**	P	**P**	**01 56 00.8**	**0.0**
	comp=Z,14nm,0.8s,baz=266,slow=3.7,SNR=4.9						
JNU				LR	LR	02 12 44.9	
	comp=Z,6µm,18.7s,baz=273,slow=39						
	comp=Z,14nm,0.8s						
JNU	**Nakatsue**	**37.38**	**72**	IAmb	IAmb	01 56 05.2	
	comp=Z,23nm,1.0s						
ZEI	**Tsey**	**37.84**	**304**	*e*P	**P**	**01 56 06.3**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,27nm,0.8s						
RAYN	**Ar Rayn**	**37.94**	**273**	P	**P**	**01 56 03.9**	**-1.9**
RAYN	**Ar Rayn**	**37.94**	**273**	P	**P**	**01 56 03.9**	**-1.9**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKH	**Akhalkalaki**	**37.98**	**302**	⇓P	**P**	**01 56 08.4**	**+2.4**
BELG	**Belogornoye**	**38.00**	**320**	LR	LR	02 14 52.1	
	comp=Z,2µm,21.7s,baz=114,slow=41						
BELG	**Belogornoye**	**38.00**	**320**	*de*P	**P**	**01 56 06.1**	**+0.3**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NCK	**Nalchik**	**38.16**	**305**	*de*P	**P**	**01 56 08.6**	**+1.2**
NCK				pmax	pmax		
	comp=Z,53nm,0.6s						
KARS	**Kars**	**38.22**	**301**	P	**P**	**01 56 09.2**	**+1.2**
KARS	**Kars**	**38.22**	**301**	P	**P**	**01 56 09.2**	**+1.2**
KARS				pmax	pmax		
	comp=Z,217nm,0.9s						
ZEA	**Zeya**	**38.48**	**38**	*e*P	**P**	**01 56 10.5**	**+0.7**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,2µm,12.0s						
ZEA				MLR	MLR		
	comp=N,800nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,11.0s						
USA0B	**Ussuriysk Arra**	**38.67**	**54**	P	**P**	**01 56 12.7**	**+1.1**
USA0B	**Ussuriysk Arra**	**38.67**	**54**	P	**P**	**01 56 12.7**	**+1.1**
USA0B				pmax	pmax		
	comp=Z,22nm,1.2s						
USRK	**Ussuriysk Ar.**	**38.67**	**54**	P	**P**	**01 56 11.2**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=242,slow=8.6,SNR=7.5						
USRK				LR	LR	02 13 39.6	
	comp=Z,2µm,19.0s,baz=246,slow=39						
	comp=Z,5.2nm,0.6s						
KBZ	**Khabaz**	**38.70**	**305**	P	**P**	**01 56 12.4**	**+0.7**
	comp=Z,17nm,0.8s,baz=126,slow=6.2,SNR=55						
KBZ				LR	LR	02 14 41.1	
	comp=Z,2µm,19.1s,baz=89,slow=40						
	comp=Z,17nm,0.8s						
KBZ	**Khabaz**	**38.70**	**305**	*de*P	**P**	**01 56 12.5**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,18nm,0.8s						
GOF	**Gofitskoye**	**38.80**	**308**	⇑*i*P	**P**	**01 56 14.0**	**+1.3**
GOF				pmax	pmax		
	comp=Z,39nm,0.9s						
TBP	**Tagbilaran**	**38.86**	**111**	⇓*i*P	**P**	**01 56 13.0**	**-0.4**
KIV	**Kislovodsk**	**38.88**	**306**	⇑P	**P**	**01 56 14.5**	**+0.9**
KIV	**Kislovodsk**	**38.88**	**306**	P	**P**	**01 56 11.9**	**-1.5**
KIV	**Kislovodsk**	**38.88**	**306**	*e*P	**P**	**01 56 14.4**	**+0.9**
KIV				*e*S	**S**	**02 02 13.4**	**+2.4**
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,16.0s						
CHVG	**Ch'k'valeri**	**39.16**	**304**	⇓P	**P**	**01 56 18.1**	**+2.3**
BATM	**Batumi**	**39.34**	**302**	⇓P	**P**	**01 56 19.2**	**+2.0**
KLR	**Kul'dur**	**39.57**	**46**	P	**P**	**01 56 18.4**	**-0.6**
	comp=Z,27nm,1.0s,baz=271,slow=9.7,SNR=23						
KLR				LR	LR	02 14 16.1	
	comp=Z,2µm,19.0s,baz=254,slow=39						
	comp=Z,27nm,1.0s						
MARD	**Mardin**	**39.92**	**295**	P	**P**	**01 56 20.6**	**-1.7**
MARD				IAmb	IAmb	01 56 31.4	
	comp=Z,43nm,1.5s						
KIRV	**Kirov**	**40.00**	**330**	*c i*P	**P**	**01 56 23.4**	**+1.0**
KOPT	**Kop Dagi**	**40.16**	**299**	P	**P**	**01 56 24.6**	**+0.2**
SOC	**Sochi**	**40.97**	**305**	*e*P	**P**	**01 56 29.4**	**-1.3**
SOC				*e*		01 58 04.0	
SOC				*e*PPP	PPP	01 58 31.7	
SOC				*e*S	**S**	**02 02 41.7**	**-0.4**
SOC				*e*SS	**SS**	**02 05 43.7**	**-0.3**
SOC				*e*SSS	SSS	02 06 11.6	
SOC				pmax	pmax		
	comp=Z,16nm,0.8s						
SOC				MLR	MLR		
	comp=Z,767nm,18.0s						
NRIK	**Noril'sk**	**40.99**	**0**	P	**P**	**01 56 30.8**	**+0.3**
	comp=Z,7.3nm,0.6s,baz=185,slow=7.4,SNR=18						
NRIK				ScP	**ScP**	**02 02 20.1**	**+0.6**
	comp=Z,2.5nm,0.5s,baz=218,slow=3.5,SNR=4.6						
NRIK				LR	LR	02 14 46.5	
	comp=Z,1µm,19.7s,baz=184,slow=38						
	comp=Z,7.3nm,0.6s						
NRIK	**Noril'sk**	**40.99**	**0**	P	**P**	**01 56 28.6**	**-1.9**
NRIK				IAmb	IAmb	01 56 39.5	
	comp=Z,30nm,1.1s						
VRH	**Novokhopyorsk**	**41.05**	**317**	*e*P	**P**	**01 56 30.4**	**-0.9**
VRH				*e*S	**S**	**02 02 41.1**	**-2.0**
VRH				pmax	pmax		
	comp=Z,50nm,0.8s						
VRH				smax	smax		
	comp=N,220nm,2.8s						
VRH				MLR	MLR		
	comp=Z,950nm,12.0s						
BBKI	**Banjar Baru**	**41.15**	**136**	P	**P**	**01 56 35.0**	**+2.5**
	comp=Z,4µmcomp=Z,57nm,1.2s						
SMRI	**Semarang**	**41.60**	**144**	P	**P**	**01 56 37.6**	**+1.5**
SMRI	**Semarang**	**41.60**	**144**	P	**P**	**01 56 40.2**	**+4.0**
	comp=Z,178nm,2.4s						
SMRI	**Semarang**	**41.60**	**144**	P	**P**	**01 56 39.3**	**+3.1**
DAV	**Davao City (W)**	**41.73**	**113**	LR	LR	02 15 21.1	
	comp=Z,714nm,20.9s,baz=341,slow=38						
TOLI2	**Tolitoli**	**41.78**	**125**	P	**P**	**01 56 37.9**	**+0.2**
TOLI2	**Tolitoli**	**41.78**	**125**	P	**P**	**01 56 39.1**	**+1.4**
INU	**Inuyama**	**42.26**	**68**	P	**P**	**01 56 40.8**	**-0.7**
INU	**Inuyama**	**42.26**	**68**	P	**P**	**01 56 43.0**	**+1.6**
VORD	**Divnogorie**	**42.47**	**316**	*e*P	**P**	**01 56 42.9**	**0.0**
VORD				*e*S	**S**	**02 02 59.2**	**-4.9**
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
VORD				smax	smax		
	comp=E,30nm,4.0s						
VSR	**Storozhevoye**	**42.61**	**316**	*e*P	**P**	**01 56 43.2**	**-0.8**
VSR				*e*S	**S**	**02 03 03.5**	**-2.6**
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				smax	smax		
	comp=E,460nm,5.4s						
VSR				MLR	MLR		
	comp=Z,1µm,16.0s						
VORR	**Voronezh**	**42.69**	**317**	*e*P	**P**	**01 56 43.9**	**-0.8**
VORR				*e*S	**S**	**02 03 06.7**	**-0.6**
VORR				pmax	pmax		
	comp=Z,40nm,0.6s						
VORR				smax	smax		
	comp=E,320nm,1.4s						
ANN	**Anapa**	**42.72**	**306**	*e*P	**P**	**01 56 45.3**	**+0.3**
ANN				*e*		01 58 30.2	
ANN				*e*PPP	PPP	01 58 53.6	
ANN				*e*S	**S**	**02 03 11.1**	**+3.2**
ANN				*e*SS	**SS**	**02 06 21.2**	**+2.7**
ANN				pmax	pmax		
	comp=Z,19nm,0.6s						
ANN				MLR	MLR		
	comp=Z,2µm,16.0s						
GRNR	**Gornyy**	**42.86**	**45**	⇓*i*P	**P**	**01 56 46.9**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,1µm,13.0s						
GRNR				MLR	MLR		
	comp=N,700nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,10.0s						
LPSR	**Galich'ya Gora**	**43.09**	**318**	*e*P	**P**	**01 56 47.5**	**-0.4**
LPSR				*e*S	**S**	**02 03 10.6**	**-2.6**
LPSR				pmax	pmax		
	comp=Z,40nm,0.7s						
LPSR				smax	smax		
	comp=E,210nm,2.3s						
LPSR				MLR	MLR		
	comp=Z,3µm,17.0s						
MJB9	**Matsu-Tunnel**	**43.13**	**66**	IAmb	IAmb	01 56 51.1	
	comp=Z,21nm,0.9s						
MAJO	**Matsushiro**	**43.13**	**66**	P	**P**	**01 56 47.7**	**-0.8**
MAJO				IAmb	IAmb	01 56 51.1	
	comp=Z,22nm,0.9s						
MAJO	**Matsushiro**	**43.13**	**66**	*c i*P	**P**	**01 56 48.2**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAJO	**Matsushiro**	**43.13**	**66**	P	**P**	**01 56 49.5**	**+1.0**
MJAR	**Matsushiro Arr**	**43.13**	**66**	P	**P**	**01 56 48.3**	**-0.2**
	comp=Z,12nm,0.9s,baz=280,slow=8.4,SNR=29						
MJAR				ScP	**ScP**	**02 02 28.4**	**-0.4**
	comp=Z,6.2nm,1.1s,baz=262,slow=3.4,SNR=6.1						
MJAR				LR	LR	02 15 37.5	
	comp=Z,1µm,20.9s,baz=262,slow=37						
	comp=Z,12nm,0.9s						
PRGR	**Permogore**	**43.22**	**332**	*e*P	**P**	**01 56 49.4**	**+0.6**
YAK	**Yakutsk**	**43.54**	**27**	LR	LR	02 16 32.0	
	comp=Z,1µm,19.3s,baz=252,slow=38						
YAK	**Yakutsk**	**43.54**	**27**	P	**P**	**01 56 50.6**	**-0.8**
YAK				IAmb	IAmb	01 57 00.5	
	comp=Z,17nm,0.6s						
ASF	**Jabal al Asfar**	**43.55**	**288**	P	**P**	**01 56 52.6**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=96,slow=1.4,SNR=7.5						
	comp=Z,2.6nm,0.6s						
BNN	**Bunyan**	**43.76**	**298**	P	**P**	**01 56 53.9**	**+0.1**
TTSI	**Tana Toraja**	**44.05**	**130**	P	**P**	**01 56 57.7**	**+1.6**
	comp=Z,1µmcomp=Z,62nm,1.1s						
MMAI	**Mount Meron Ar**	**44.67**	**289**	LR	LR	02 20 28.2	
	comp=Z,830nm,19.3s,baz=252,slow=42						
MOS	**Moscow**	**44.68**	**322**	*e*P	**P**	**01 56 59.5**	**-1.1**
MOS				*e*		01 58 45.3	
MOS				*e*S	**S**	**02 03 34.9**	**-1.3**
MOS				*e*SS	**ScS**	**02 06 59.9**	**+2.4**
MOS				pmax	pmax		
	comp=Z,61nm,1.6s						
MOS				MLR	MLR		
	comp=Z,2µm,19.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
SPSI	**Sidrap Palu**	**44.69**	**131**	P	**P**	**01 57 03.8**	**+2.6**
	comp=E,1µmcomp=E,39nm,1.7s						
LUWI	**Luwuk**	**44.70**	**125**	P	**P**	**01 57 01.4**	**+0.1**
LUWI				IAmb	IAmb	01 57 19.9	
	comp=Z,30nm,1.0s						
JHJ	**Hachijo jima 2**	**44.80**	**70**	LR	LR	02 16 43.6	
	comp=Z,2µm,21.3s,baz=266,slow=38						
GHAJ	**Ghor Haditha**	**44.81**	**287**	P	**P**	**01 57 02.3**	**+0.3**
GHAJ				IAmb	IAmb	01 57 28.5	
	comp=Z,31nm,1.2s						
ATD	**Arta Tunnel**	**44.91**	**257**	LR	LR	02 15 25.8	
	comp=Z,734nm,19.2s,baz=77,slow=36						
SRBI	**Singaraja**	**45.06**	**139**	P	**P**	**01 57 07.0**	**+2.9**
	comp=Z,3µmcomp=Z,118nm,1.4s						
SIM	**Simferopol'**	**45.08**	**306**	*e*P	**P**	**01 57 04.3**	**+0.3**
SIM				*e*SS	SS	02 06 55.0	-10
SIM				pmax	pmax		
	comp=Z,38nm,0.8s						
OBN	**Obninsk**	**45.09**	**321**	P	**P**	**01 57 02.8**	**-1.1**
OBN				IAmb	IAmb	01 57 05.0	
	comp=Z,39nm,1.2s						
OBN	**Obninsk**	**45.09**	**321**	*d i*P	**P**	**01 57 03.1**	**-0.7**
OBN				*i*		01 58 44.8	
OBN				*i* SS	SS	02 06 49.8	-14
OBN				pmax	pmax		
	comp=Z,23nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,21.0s						
ILGA	**Ilgaz**	**45.33**	**301**	P	**P**	**01 57 06.0**	**-0.4**
JEW	**Eniwo**	**45.42**	**57**	P	**P**	**01 57 07.2**	**+0.5**
BRTR	**Keskin Array B**	**45.44**	**299**	P	**P**	**01 57 07.7**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=118,slow=8.0,SNR=14						
BRTR				ScP	**ScP**	**02 02 37.8**	**-0.5**
	comp=Z,1.9nm,1.1s,baz=114,slow=3.1,SNR=4.5						
BRTR				LR	LR	02 21 18.1	
	comp=Z,551nm,18.2s,baz=81,slow=43						
	comp=Z,2.9nm,0.7s						
KLMR	**Klimovskoe**	**45.49**	**329**	*e*P	**P**	**01 57 05.3**	**-1.7**
KLMR				*e*		01 58 52.7	
KLMR				pmax	pmax		
	comp=Z,34nm,1.2s						
KLMR	**Klimovskoe**	**45.49**	**329**	*e*P	**P**	**01 57 05.4**	**-1.6**
KLMR				AMP		01 57 15.5	
	comp=Z,34nm,1.2s						
KLMR				*e*PP	**PP**	**01 58 52.7**	**-0.6**
KLMR				*e*SS	**SS**	**02 07 13.8**	**+2.6**
KLMR				*e*SS	**SS**	**02 07 13.8**	**+2.6**
KLMR				LQ	LQ	02 12 42.6	
KLMR				LQ	LQ	02 12 42.6	
KLMR				LR	LR	02 15 41.0	
EIL	**Elat**	**45.64**	**285**	LR	LR	02 19 55.1	
	comp=Z,2µm,20.0s,baz=83,slow=41						
NKL	**Nikolayevsk**	**45.93**	**42**	*e*P	**P**	**01 57 08.9**	**-1.6**
NKL				*e*S	S	02 04 10.1	+16
NKL				pmax	pmax		
	comp=E,3.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,37nm,1.1s						
NKL				smax	smax		
	comp=E,11nm,2.6s						
NKL				smax	smax		
	comp=N,50nm,2.3s						
NKL				MLR	MLR		
	comp=E,8.0nm,12.0s						
NKL				MLR	MLR		
	comp=N,2.0nm,10.0s						
NKL				MLR	MLR		
	comp=Z,1µm,11.0s						
ANTO	**Ankara**	**46.08**	**299**	P	**P**	**01 57 13.2**	**+1.1**
ANTO				IAmb	IAmb	01 57 29.5	
	comp=Z,14nm,1.0s						
ANTO	**Ankara**	**46.08**	**299**	P	**P**	**01 57 13.2**	**+1.1**
ANTO				pmax	pmax		
	comp=Z,14nm,1.0s						
CSS	**Mathiatis**	**46.11**	**292**	P	**P**	**01 57 11.4**	**-0.9**
ASAJ	**Asahikawa**	**46.27**	**55**	LR	LR	02 18 11.9	
	comp=Z,1µm,18.2s,baz=328,slow=38						
YSS	**Yuzh-Sakhalins**	**46.48**	**51**	*de*P	**P**	**01 57 14.6**	**-0.4**
YSS				*e**SP	**pP**	**01 57 20.5**	**-0.9**
YSS				*e*		01 59 02.4	
YSS				*e*S	**S**	**02 04 01.7**	**-0.8**
YSS				*e*SS	**ScS**	**02 07 14.9**	**+5.4**
YSS				*e*SSS	SSS	02 08 25.9	
YSS				pmax	pmax		
	comp=Z,300nm,4.5s						
YSS				smax	smax		
	comp=N,400nm,6.5s						
YSS				MLR	MLR		
	comp=Z,3µm,17.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
ERM	**Erimo**	**46.70**	**58**	P	**P**	**01 57 16.4**	**-0.4**
ERM	**Erimo**	**46.70**	**58**	*c i*P	**P**	**01 57 17.1**	**+0.3**
ERM				pmax	pmax		
	comp=Z,38nm,1.2s						
ERM	**Erimo**	**46.70**	**58**	P	**P**	**01 57 18.3**	**+1.5**
TYV	**Tymovskoe**	**46.77**	**46**	*e*P	**P**	**01 57 16.9**	**-0.3**
TYV				*e*		02 04 10.4	
TYV				pmax	pmax		
	comp=Z,200nm,3.7s						
TYV				pmax	pmax		
	comp=Z,16nm,1.3s						
TYV				MLR	MLR		
	comp=Z,4µm,12.0s						
TNTI	**Ternate**	**46.95**	**119**	P	**P**	**01 57 18.8**	**-0.3**
BORA	**Eskisehir**	**47.88**	**299**	P	**P**	**01 57 25.4**	**-0.7**
BORA				IAmb	IAmb	01 57 27.3	
	comp=Z,10nm,0.9s						
ISP	**Isparta**	**48.02**	**297**	P	**P**	**01 57 26.6**	**-0.7**
ISP				IAmb	IAmb	01 57 35.6	
	comp=Z,9.5nm,0.8s						
ISP	**Isparta**	**48.02**	**297**	P	**P**	**01 57 26.6**	**-0.7**
ISP				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PURM	**Purcari**	**48.11**	**308**	⇑P	**P**	**01 57 28.3**	**+0.7**
AKASG	**Malin Array Be**	**48.74**	**314**	P	**P**	**01 57 31.7**	**-0.8**
	comp=Z,3.7nm,0.5s,baz=75,slow=8.1,SNR=57						
AKASG				LR	LR	02 22 08.1	
	comp=Z,941nm,21.1s,baz=94,slow=41						
	comp=Z,3.7nm,0.5s						
AKASG	**Malin Array Be**	**48.74**	**314**	*i* P	**P**	**01 57 31.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,13nm,0.6s						
AKBB	**Malin Array Si**	**48.74**	**314**	*c i*P	**P**	**01 57 32.4**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,34nm,0.9s						
JURR	**Jurilovca**	**48.81**	**306**	⇑P	**P**	**01 57 33.2**	**+0.1**
KIS	**Kishinev**	**48.84**	**309**	*e*P	**P**	**01 57 33.0**	**-0.3**
KIS	**Kishinev**	**48.84**	**309**	*e*PP	PP	01 59 34.0	+7.5
KIS				*e*L	L	02 17 30.0	
KIS				LRM	MLR	02 23 47.0	
	comp=Z,250nm,16.5s						
KIS	**Kishinev**	**48.84**	**309**	*e*P	**P**	**01 57 33.0**	**-0.3**

KIS				e		01 59 34.0	
MILM	Milestii Mici	48.84	309	⇓iP	P	01 57 33.0	-0.3
	comp=Z,60nm,0.9s						
MILM	Milestii Mici	48.84	309	ePP	PP	01 59 33.0	+6.5
MILM				eS	S	02 04 34.0	-2.1
	comp=Z,380nm,4.4s						
MILM				eL	L	02 17 26.0	
MILM				LRM	MLR	02 23 50.0	
	comp=Z,700nm,13.5s						
MILM	Milestii Mici	48.84	309	⇑P	P	01 57 33.0	-0.3
MILM	Milestii Mici	48.84	309	d iP	P	01 57 33.0	-0.3
MILM				e		01 59 33.0	
MILM				eS	S	02 04 34.0	-2.1
MILM				pmax	pmax		
	comp=Z,60nm,1.0s						
MILM				smax	smax		
	comp=N,400nm,4.4s						
MILM				smax	smax		
	comp=E,200nm,4.4s						
TLCR		48.84	307	⇑P	P	01 57 33.7	+0.3
TIXI	Tiksi	48.85	16	P	P	01 57 32.0	-1.0
	comp=E,11nm,0.5s,baz=114,slow=8.9,SNR=46						
	comp=E,11nm,0.5s						
TIXI	Tiksi	48.85	16	P	P	01 57 32.1	-1.0
TIXI				IAmb	IAmb	01 57 36.4	
	comp=Z,17nm,1.0s						
TIXI	Tiksi	48.85	16	P	P	01 57 32.1	-1.0
TIXI				pmax	pmax		
	comp=Z,17nm,1.0s						
TPGR	Topolog	49.13	306	⇑P	P	01 57 35.9	+0.2
SORM	Soroca	49.18	311	⇑P	P	01 57 35.4	-0.5
VLDR	Vladesti	49.35	308	⇓P	P	01 57 39.0	+1.7
TLBR	Topalu	49.41	306	⇓P	P	01 57 38.1	+0.5
SCTR	Scanteiesti	49.41	307	⇑P	P	01 57 38.5	+0.8
HARR	Harsova	49.48	306	⇓P	P	01 57 39.0	+0.7
PUL	Pulkovo	49.50	326	⇑eP	P	01 57 39.0	+0.9
PUL				pmax	pmax		
	comp=Z,65nm,0.8s						
EDFI	Ende, Flores	49.53	133	P	P	01 57 37.3	-1.7
VASR	Vaslui	49.54	309	⇓P	P	01 57 38.7	0.0
ICOR	Ion Corvin	49.60	305	⇑P	P	01 57 40.2	+1.1
MMRI	Maumere	49.80	132	P	P	01 57 41.2	+0.2
	comp=Z,50nm,1.6s						
MMRI	Maumere	49.80	132	P	P	01 57 40.8	-0.2
GHRR		49.82	308	⇑P	P	01 57 41.6	+0.8
MNK	Minsk	49.91	319	i P	P	01 57 42.2	+0.9
MNK				i		01 59 02.9	
MNK				i		01 59 36.9	
MNK				i PPP	PPP	02 00 39.3	
MNK				i S	S	02 04 52.0	+1.2
MNK				i		02 07 33.9	
MNK				i SS	SS	02 08 26.4	+3.1
MNK				i SSS	SSS	02 09 52.5	
MNK				pmax	pmax		
	comp=Z,33nm,0.9s						
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,505nm,16.0s						
MNK				MLR	MLR		
	comp=Z,827nm,15.0s						
MNK				MLR	MLR		
	comp=E,231nm,18.0s						
MNK	Minsk	49.91	319	i P	P	01 57 42.3	+0.9
	comp=E,4.0nm,1.0s						
MNK				i P	P	01 57 42.3	+0.9
	comp=N,11nm,0.8s						
MNK				i P	P	01 57 42.3	+0.9
	comp=Z,33nm,0.8s,baz=275						
MNK				i PP	PP	01 59 37.0	+0.9
MNK				i PPP	PPP	02 00 39.3	
MNK				i S	S	02 04 52.1	+1.2
MNK				i SS	SS	02 08 26.4	+3.1
MNK				i SSS	SSS	02 09 52.5	
MNK				i LQ	LQ	02 15 11.0	
MNK				i LR	LR	02 18 32.5	
MNK				i LRM	MLR	02 21 05.2	
	comp=N,505nm,15.9s						
MNK				i LRM	MLR	02 21 10.3	
	comp=E,231nm,18.1s						
MNK				i LRM	MLR	02 21 10.3	
	comp=Z,827nm,15.2s						
PANC	Panciu	50.00	308	⇓P	P	01 57 44.0	+1.8
LVZ	Lovozero	50.28	337	⇓eP	P	01 57 46.4	+2.4
LVZ				pmax	pmax		
	comp=Z,39nm,1.5s						
VRI	Vrincioaia	50.30	308	⇑P	P	01 57 45.7	+1.2
PLOR	Plostina	50.35	308	⇑P	P	01 57 46.4	+1.5
GIRR	Girov	50.43	309	⇓P	P	01 57 46.0	+0.5
ISR	Istrita	50.45	307	⇓P	P	01 57 47.6	+1.8
RAZG	Razgrad	50.56	305	⇑P	P	01 57 47.2	+0.7
APA	Apatity	50.59	336	⇓iP	P	01 57 45.1	-1.2
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,18.0s						
NACGM	Naroch	50.59	319	⇓eP	P	01 57 47.8	+1.3
	baz=97						
NEHR	Nehoiu	50.61	307	⇓P	P	01 57 48.4	+1.4
IDID	Didziasalis	50.66	320	eP	P	01 57 47.4	+0.4
COVR	Voineasa-Covas	50.66	308	⇓P	P	01 57 48.4	+1.1
BIZ	Bicaz	50.70	309	⇓P	P	01 57 47.7	+0.1
MLR	Muntele Rosu	50.86	307	⇑P	P	01 57 49.9	+1.1
MLR	Muntele Rosu	50.86	307	LR	LR	02 23 52.3	
	comp=Z,2µm,19.9s,baz=64,slow=41						
OZUR		50.94	308	⇓P	P	01 57 50.5	+1.1
IIGN	Ignalina	50.95	320	eP	P	01 57 49.6	+0.4
ISAL	Salakas	51.03	320	eP	P	01 57 50.3	+0.5
VSU	Vasula	51.07	324	c iP	P	01 57 50.1	+0.1
VSU				pmax	pmax		
	comp=Z,68nm,1.1s						
VSU	Vasula	51.07	324	eP	P	01 57 50.1	+0.1
ALN	Alexandroupoli	51.13	301	IAmb	IAmb	01 57 52.7	
	comp=Z,35nm,1.0s						
DOPR	Dopca	51.23	308	⇑P	P	01 57 52.3	+0.8
BURAR	Bucovina Array	51.29	310	⇓P	P	01 57 52.2	+0.2
BURAR	Bucovina Array	51.29	310	IAmb	IAmb	01 57 54.2	
	comp=Z,12nm,0.7s						
VOIR		51.49	307	⇑P	P	01 57 53.9	+0.3
HUMR	Humele	51.59	306	⇓P	P	01 57 55.0	+0.7
FIA1	FINESS Array S	51.89	328	IAmb	IAmb	01 57 58.8	
	comp=Z,31nm,1.4s						
FINES	FINESS Array B	51.89	328	P	P	01 57 56.4	+0.2
	comp=Z,8.7nm,0.6s,baz=107,slow=7.7,SNR=83						
FINES				LR	LR	02 22 54.0	
	comp=Z,3µm,21.8s,baz=105,slow=39						
	comp=Z,8.7nm,0.6s						
FINES	FINESS Array B	51.89	328	P	P	01 57 55.9	-0.3
FINES	FINESS Array B	51.89	328	i P	P	01 57 56.5	+0.3
FINES				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARCR	ARCALIA	51.89	309	⇓P	P	01 57 57.6	+1.1
SOEI	Soe	51.96	131	P	P	01 57 55.7	-1.7
SOEI	Soe	51.96	131	P	P	01 57 57.0	-0.4
	comp=Z,64nm,1.5s						
SOEI	Soe	51.96	131	P	P	01 57 56.0	-1.4
LVV	L'vov	52.04	313	eP	P	01 57 56.2	-1.3
LVV				e		01 59 54.1	
LVV				eS	S	02 05 13.3	-7.1
LVV				e		02 05 32.8	
LVV				pmax	pmax		
	comp=Z,50nm,1.0s						
LVV				MLR	MLR		
	comp=N,500nm,18.0s						
LVV				MLR	MLR		
	comp=E,400nm,18.0s						
LVV				MLR	MLR		
	comp=Z,800nm,18.0s						
PABE	Paberze	52.25	320	eP	P	01 57 59.4	+0.5
VSVD	Vaisvydziai	52.30	320	eP	P	01 57 59.5	+0.2
LOT	Lotru	52.39	307	⇓P	P	01 58 01.1	+0.8
CJR	Cluj-Napoca	52.43	309	⇓P	P	01 58 01.8	+1.3
MA2	Magadan	52.50	35	LR	LR	02 22 40.9	
	comp=Z,1µm,18.6s,baz=260,slow=39						
MA2	Magadan	52.50	35	⇓eP	P	01 58 02.8	+2.1
MA2				pmax	pmax		
	comp=Z,60nm,1.3s						
MEF	Metsahovi	52.51	326	eP	P	01 58 01.1	+0.4
MTSE	Matsula	52.62	324	eP	P	01 58 01.8	+0.2
SUW	Suwalki	52.62	318	eP	P	01 58 00.9	-0.9
SUW				eS	S	02 05 27.2	-1.1
SUW	Suwalki	52.62	318	eP	P	01 58 01.0	-0.7
MESR	Meseseni	52.85	309	⇑P	P	01 58 05.2	+1.7
IDI	Anoyia	52.88	294	LR	LR	02 23 28.9	
	comp=Z,320nm,21.6s,baz=86,slow=39						
KWP	Kalwaria Pacla	52.90	312	eP	P	01 58 03.7	-0.2
KWP				eS	S	02 05 31.6	-0.7
DEV	Deva	52.96	308	⇓P	P	01 58 06.0	+1.6
DRGR		53.03	309	⇑P	P	01 58 05.8	+0.8
VTS	Vitosha	53.03	304	⇑P	P	01 58 06.8	+1.6
VTS	Vitosha	53.03	304	IAmb	IAmb	01 58 08.6	
	comp=Z,18nm,0.9s						
FAKI	Fak Fak	53.05	118	P	P	01 58 04.8	-0.6
FAKI				IAmb	IAmb	01 58 06.3	
	comp=Z,31nm,0.9s						
FAKI	Fak Fak	53.05	118	P	P	01 58 08.2	+2.8
	comp=Z,48nm,1.4s						
FAKI	Fak Fak	53.05	118	P	P	01 58 06.7	+1.3
PUNG	Punghina	53.08	306	⇑P	P	01 58 06.0	+0.8
GZR	Gura Zlata	53.09	307	⇓P	P	01 58 05.7	+0.3
KOLS	Kolonicke sedl	53.21	312	eP	P	01 58 06.6	+0.4
KOLS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KOLS	Kolonicke sedl	53.21	312	eP	P	01 58 06.6	+0.4
UZH	Uzhgorod	53.21	311	eP	P	01 58 05.8	-0.4
UZH				e		02 00 11.0	
UZH				eS	S	02 05 34.8	-1.7
UZH				MLR	MLR		
	comp=N,230nm,16.0s						
UZH				MLR	MLR		
	comp=E,170nm,16.0s						
UZH				MLR	MLR		
	comp=Z,90nm,16.0s						
BLKB	Belogradchik	53.33	305	⇑P	P	01 58 07.9	+0.7
HERR	Herculane	53.39	307	⇑P	P	01 58 08.0	+0.5
PBUR	Paburge	53.43	320	eP	P	01 58 08.1	+0.5
VAY	Valandovo	53.69	302	i P	P	01 58 08.8	-1.0
SEY	Seymchan	53.73	31	P	P	01 58 10.0	+0.3
	comp=Z,7.3nm,1.0s,baz=221,slow=4.6,SNR=6.9						
SEY				LR	LR	02 24 01.7	
	comp=Z,1µm,18.1s,baz=259,slow=39						
	comp=Z,7.3nm,1.0s						
CRVS	Cervenica-Dubn	53.75	312	eP	P	01 58 11.8	+1.7
CRVS				pmax	pmax		
	comp=Z,122nm,2.4s						
CRVS	Cervenica-Dubn	53.75	312	eP	P	01 58 11.8	+1.7
SIRR	Siria	53.80	308	⇑P	P	01 58 11.5	+0.9
BZS	Buzias	53.88	308	⇓P	P	01 58 11.3	+0.1
RAF	Rauma	53.89	327	eP	P	01 58 11.7	+0.7
MDVR	Moldovita	53.90	306	⇑P	P	01 58 11.9	+0.6
ARA0	ARCESS Array S	53.98	337	eP	P	01 58 11.6	+0.2
ARCES	ARCESS Array B	53.98	337	P	P	01 58 11.6	+0.1
	comp=Z,9.4nm,0.7s,baz=100,slow=6.4,SNR=26						
ARCES				LR	LR	02 21 43.7	
	comp=Z,580nm,18.0s,baz=110,slow=37						
	comp=Z,9.4nm,0.7s						
ARCES	ARCESS Array B	53.98	337	IAmb	IAmb	01 58 15.3	
	comp=Z,16nm,0.9s						
BOVS	Bovan	54.03	305	⇑P	P	01 58 12.3	+0.1
BEL	Belsk	54.06	315	eP	P	01 58 12.7	+0.4
BEL				eS	S	02 05 48.9	+1.0
BANR	Banloc	54.24	307	⇓P	P	01 58 15.0	+1.3
SKO	Skopje	54.44	303	i P	P	01 58 15.3	0.0
KTK1	Kautokeino	54.62	337	eP	P	01 58 16.4	+0.2
BSZH	Besenyszg	54.66	310	P	P	01 58 17.9	+1.2
FNA	Florina	54.66	302	IAmb	IAmb	01 58 22.5	
	comp=Z,13nm,0.8s						
AAL	Aland	54.69	326	eP	P	01 58 17.4	+0.7
OJC	Ojcow	54.75	313	eP	P	01 58 17.2	-0.3
OJC	Ojcow	54.75	313	IAmb	IAmb	01 58 19.4	
	comp=Z,14nm,0.7s						
PSZ	Piszkesteto	54.86	310	⇑P	P	01 58 18.7	+0.4
PSZ	Piszkesteto	54.86	310	IAmb	IAmb	01 58 27.1	
	comp=Z,16nm,1.2s						
PSZ	Piszkesteto	54.86	310	P	P	01 58 18.1	-0.2
HAMF	Hammerfest	54.87	339	eP	P	01 58 18.3	+0.4
LANS	Liptovska Anna	55.04	312	eP	P	01 58 20.6	+1.0
LANS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LANS	Liptovska Anna	55.04	312	eP	P	01 58 20.6	+1.0
KBN	Korca	55.13	302	IAmb	IAmb	01 58 25.9	
	comp=Z,20nm,0.8s						
FRGS	Fruska Gora	55.20	307	⇑P	P	01 58 21.2	+0.4
FRGS	Fruska Gora	55.20	307	eP	P	01 58 20.9	+0.1
DIVS	Divibare	55.20	306	IAmb	IAmb	01 58 23.4	
	comp=Z,12nm,0.9s						
DIVS	Divibare	55.20	306	eP	P	01 58 20.7	-0.2
SJES	Sjenica	55.33	305	eP	P	01 58 22.3	+0.5
LODK	Lodwar	55.40	253	P	P	01 58 22.9	+0.2
VYHS	Vyhne	55.51	311	eP	P	01 58 23.5	+0.5
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VYHS	Vyhne	55.51	311	eP	P	01 58 23.5	+0.5
BBLS	Lazići	55.65	306	eP	P	01 58 24.2	+0.1
JETT	Jettan, Norway	55.72	337	eP	P	01 58 24.3	+0.1
KOLL	Kolacno	55.79	311	eP	P	01 58 25.5	+0.6
OKC	Ostrava-Krasne	55.84	313	eP	P	01 58 24.9	-0.4
OKC				MLR	MLR		
	comp=Z,600nm,12.2s						
OKC	Ostrava-Krasne	55.84	313	eP	P	01 58 24.9	-0.4
OKC				AMS	AMS	02 24 40.0	
	comp=Z,600nm,12.2s						
UPP	Uppsala	55.86	325	eP	P	01 58 25.9	+0.6
SRO2	Moca	55.88	310	eP	P	01 58 25.5	0.0
SRO2				pmax	pmax		
	comp=Z,21nm,0.8s						
SRO2	Moca	55.88	310	eP	P	01 58 25.5	0.0
MORH	Mrgy, Hungar	55.88	309	eP	P	01 58 25.5	-0.1
MORH	Mrgy, Hungar	55.88	309	P	P	01 58 25.4	-0.2
SRO	Srobarova	55.93	310	eP	P	01 58 27.4	+1.5
SRO				pmax	pmax		
	comp=Z,20nm,1.2s						
SRO	Srobarova	55.93	310	eP	P	01 58 27.4	+1.5
PDG	Podgorica	55.97	304	⇓P	P	01 58 26.4	+0.1
PDG	Podgorica	55.97	304	IAmb	IAmb	01 58 27.9	
	comp=Z,19nm,0.8s						
PDG	Podgorica	55.97	304	eP	P	01 58 26.2	-0.1
DRME	Dracevica, Mon	56.06	304	eP	P	01 58 26.7	-0.3
MAUC	Maruska	56.09	312	AMS	AMS	02 26 00.0	
	comp=Z,2µm,18.8s						
PETK	Petropavlovsk-	56.13	43	LR	LR	02 24 38.9	
	comp=Z,1µm,18.5s,baz=266,slow=38						
GKP	Gorka Klasztor	56.17	317	eP	P	01 58 27.3	-0.2
GKP				eS	S	02 06 15.3	-0.8
MORC	Moravsky Berou	56.24	313	⇓P	P	01 58 28.1	-0.1
MORC	Moravsky Berou	56.24	313	IAmb	IAmb	01 58 30.5	
	comp=Z,12nm,0.7s						
MORC	Moravsky Berou	56.24	313	eP	P	01 58 28.1	-0.1
JAVC	Velka Javorina	56.24	312	eP	P	01 58 29.1	+0.8
TRO	Tromso	56.25	337	eP	P	01 58 27.8	-0.1
HOPEN	Hopen	56.28	346	eP	P	01 58 28.6	+0.6
VIKU	Vikbolandet	56.32	323	eP	P	01 58 27.2	-1.3
KMBO	Kilima Mbogo	56.36	247	P	P	01 58 29.4	-0.3
	comp=Z,2.6nm,0.6s,baz=55,slow=12,SNR=5.2						
KMBO				LR	LR	02 22 22.3	
	comp=Z,840nm,19.4s,baz=73,slow=36						
	comp=Z,2.6nm,0.6s						
KMBO	Kilima Mbogo	56.36	247	P	P	01 58 29.6	-0.2
KMBO				IAmb	IAmb	01 58 39.2	
	comp=Z,22nm,1.4s						
KMBO	Kilima Mbogo	56.36	247	i P	P	01 58 30.8	+1.1
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRY	Bratogost	56.42	305	eP	P	01 58 29.3	-0.4
SMOL	Smolenice	56.44	311	eP	P	01 58 30.4	+0.8
SMOL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SMOL	Smolenice	56.44	311	eP	P	01 58 30.4	+0.8
MPLH	Magyarpolny	56.52	310	P	P	01 58 29.5	-0.7
HCY	Herceg Novi	56.53	304	eP	P	01 58 30.2	-0.1
MODS	Modra-Piesok	56.55	311	eP	P	01 58 30.8	+0.4
MODS				pmax	pmax		
	comp=Z,16nm,1.0s						
MODS	Modra-Piesok	56.55	311	eP	P	01 58 30.8	+0.4
TREB	Trebinje	56.59	304	eP	P	01 58 32.5	+1.8
EGYH	Egyhazaskeszo	56.63	310	P	P	01 58 30.9	0.0
ZST	Bratislava	56.69	311	eP	P	01 58 30.7	-0.7
ZST	Bratislava	56.69	311	eP	P	01 58 30.7	-0.7
KRLC	Kraliky	56.70	313	eP	P	01 58 30.8	-0.7
KRLC				MLR	MLR		
	comp=Z,800nm,14.3s						
KRLC	Kraliky	56.70	313	eP	P	01 58 30.8	-0.7
KRLC				AMS	AMS	02 25 00.0	
	comp=Z,800nm,14.3s						
PET	Petropavlovsk	56.71	43	⇓eP	P	01 58 31.2	-0.2
PET				pmax	pmax		
	comp=Z,25nm,0.9s						
VRAC	Vranov	56.90	312	⇑P	P	01 58 33.5	+0.6
VRAC	Vranov	56.90	312	LR	LR	02 27 06.3	
	comp=Z,901nm,18.6s,baz=86,slow=40						
VRAC	Vranov	56.90	312	eP	P	01 58 32.6	-0.3
KSP	Ksiaz	56.94	314	eP	P	01 58 33.1	0.0
DPC	Dobruska-Polom	56.97	314	eP	P	01 58 33.8	+0.4
DPC				MLR	MLR		
	comp=Z,1µm,32.5s						
DPC	Dobruska-Polom	56.97	314	eP	P	01 58 33.8	+0.4
DPC				AMS	AMS	02 20 10.0	
	comp=Z,1µm,32.5s						
OSTC	Ostas	57.01	314	eP	P	01 58 32.8	-0.9
OSTC				AMS	AMS	02 23 00.0	
	comp=Z,800nm,22.3s						
KRUC	Moravsky	57.06	312	eP	P	01 58 33.9	-0.1
BLY	Banja Luka	57.10	307	eP	P	01 58 33.6	-0.7
CHVC	Chvalec	57.11	314	eP	P	01 58 34.9	+0.5
CHVC				AMS	AMS	02 23 10.0	
	comp=Z,900nm,25.8s						
SOP	Sopron	57.12	310	P	P	01 58 35.0	+0.6
UPC	Upice	57.15	314	eP	P	01 58 35.4	+0.8
UPC				MLR	MLR		
	comp=Z,1µm,35.0s						
UPC	Upice	57.15	314	eP	P	01 58 35.4	+0.8
UPC				AMS	AMS	02 20 20.0	
	comp=Z,1µm,35.0s						
SRKY	Kupres RS	57.22	306	eP	P	01 58 34.8	-0.5
MGRS	Mrkonjic Grad	57.22	307	eP	P	01 58 36.1	+0.9
RONA	Rosalia, Austr	57.29	311	eP	P	01 58 35.8	+0.1
	SNR=6.0						
FAUS	Fauske	57.31	334	eP	P	01 58 35.5	+0.2
STEI	Steigen	57.37	335	eP	P	01 58 35.1	-0.7
KOGS	Kog	57.49	309	eP	P	01 58 36.7	-0.4
CONA	Conrad Observa	57.55	311	eP	P	01 58 37.4	-0.2
	comp=Z,7.0nm,0.8s,SNR=12						
MOR8	Moi Rana	57.56	333	eP	P	01 58 36.6	-0.7
TREC	Trest	57.62	312	eP	P	01 58 38.4	+0.4
TREC				MLR	MLR		
	comp=Z,900nm,19.2s						
TREC	Trest	57.62	312	eP	P	01 58 38.4	+0.4
TREC				AMS	AMS	02 26 50.0	
	comp=Z,900nm,19.2s						
HFS	Hagfors	57.84	325	LR	LR	02 25 32.6	
	comp=Z,2µm,21.9s,baz=94,slow=38						
ARSA	Arzberg	57.87	310	eP	P	01 58 39.9	+0.1
	comp=Z,5.1nm,1.0s						
PVCC	Panska Ves	58.06	314	AMS	AMS	02 23 30.0	
	comp=Z,900nm,21.2s						
KONS	Konsvik	58.11	333	eP	P	01 58 41.3	+0.3
CRES	Cresnjev	58.13	308	eP	P	01 58 40.9	-0.7
PRU	Pruhonice	58.15	313	eP	P	01 58 42.6	+1.0
PRU				MLR	MLR		
	comp=Z,900nm,24.6s						
PRU	Pruhonice	58.15	313	eP	P	01 58 42.6	+1.0
PRU				AMS	AMS	02 24 20.0	
	comp=Z,900nm,24.6s						
STOK	Stokkvaagen	58.15	333	eP	P	01 58 41.8	+0.5
MBWA	Marble Bar	58.26	144	P	P	01 58 42.9	+0.3
MBWA	Marble Bar	58.26	144	P	P	01 58 43.7	+1.1
SOKA	Soboth	58.29	309	eP	P	01 58 42.9	+0.1
	comp=Z,7.6nm,0.7s,SNR=15						
BRG	Berggiesshubel	58.41	314	eP	P	01 58 43.7	+0.2
BRG				Amp		01 58 46.2	
	comp=Z,13nm,0.9s						
BRG	Berggiesshubel	58.41	314	eP	P	01 58 43.6	+0.2
BRG				pmax	pmax		
	comp=Z,13nm,0.9s						
PDKS	Podkum	58.41	309	eP	P	01 58 43.5	-0.1
CKRC	Cesky Krumlov	58.45	312	eP	P	01 58 43.3	-0.5
HSPB	Hornsund (broa	58.51	345	eP	P	01 58 43.7	0.0
NSS	Namsos	58.57	331	eP	P	01 58 44.3	0.0
SPA0	Spitsbergen Ar	58.57	347	eP	P	01 58 44.9	+0.7
SPITS	Spitsbergen Ar	58.57	347	P	P	01 58 44.4	+0.2
	comp=Z,6.4nm,0.8s,baz=106,slow=8.1,SNR=14						
SPITS				LR	LR	02 30 35.4	
	comp=Z,910nm,18.6s,baz=86,slow=43						
	comp=Z,6.4nm,0.8s						
MOA	Molln	58.62	311	eP	P	01 58 44.7	-0.3
	comp=Z,7.7nm,0.7s,SNR=7.6						
OBKA	Obir	58.65	309	eP	P	01 58 46.0	+0.7
	comp=Z,4.6nm,0.8s						
PSA00	Pilbara Seismi	58.66	144	P	P	01 58 45.5	0.0
PSA00	Pilbara Seismi	58.66	144	P	P	01 58 46.2	+0.7
LJU	Ljubljana	58.74	309	eP	P	01 58 46.2	+0.4
GEC2	GERESS Array S	58.85	312	IAmb	IAmb	01 58 48.0	
	comp=Z,15nm,1.0s						
GERES	GERESS Array B	58.85	312	P	P	01 58 46.8	+0.1
	comp=Z,8.7nm,0.7s,baz=77,slow=7.0,SNR=80						
GERES				LR	LR	02 28 25.3	
	comp=Z,606nm,18.8s,baz=80,slow=40						
	comp=Z,8.7nm,0.7s						
GERES	GERESS Array B	58.85	312	P	P	01 58 46.4	-0.2
CEY	Cerknica	58.86	308	eP	P	01 58 46.5	-0.2
NC602	NORSAR Array S	58.88	326	eP	P	01 58 47.0	+0.5
KHC	Kasperske Hory	58.88	313	IAmb	IAmb	01 58 48.3	
	comp=Z,9.7nm,0.9s						
KHC	Kasperske Hory	58.88	313	d iP	P	01 58 46.2	-0.6
KHC				pmax	pmax		
	comp=Z,68nm,2.3s						
KHC	Kasperske Hory	58.88	313	eP	P	01 58 45.8	-1.0
KHC				AMS	AMS	02 26 30.0	
	comp=Z,800nm,15.3s						
CLL	Collm	58.95	315	P	P	01 58 47.3	+0.2
CLL				IAmb	IAmb	01 58 55.5	
	comp=Z,15nm,1.2s						
CLL	Collm	58.95	315	P	P	01 58 47.3	+0.2
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
CLL	Collm	58.95	315	⇑iP	P	01 58 47.2	+0.1
CLL				i x	x	01 58 54.8	
	comp=Z,19nm,1.4s						
CLL				ePP	PP	02 01 02.0	+4.8
CLL				eSS	SS	02 10 48.0	+2.1
CLL				eSSS	SSS	02 13 30.0	
CLL				LmV		02 28 00.0	
	comp=Z,1µm,20.7s						
NB201	NORSAR Array S	58.98	327	P	P	01 58 46.2	-1.1
NB2	NORSAR Subarra	59.02	327	P	P	01 58 46.5	-1.1
	comp=Z,144nm,3.3s,baz=86,slow=6.9						
NB2	NORSAR Subarra	59.02	327	P	P	01 58 46.5	-1.1
	baz=86,slow=6.9						
NOA	NORSAR Array B	59.02	327	P	P	01 58 47.2	-0.4
	comp=Z,5.6nm,0.7s,baz=86,slow=6.8,SNR=17						
NOA				LR	LR	02 27 11.4	
	comp=Z,2µm,20.7s,baz=95,slow=39						
	comp=Z,5.6nm,0.7s						
BIOA	Bad Ischl, Aus	59.07	311	eP	P	01 58 47.8	-0.3
SKDS	Skadanscina	59.18	308	eP	P	01 58 47.9	-1.0
SKDS	Skadanscina	59.18	308	eP	P	01 58 48.1	-0.8
KNRA	Kununurra	59.26	132	P	P	01 58 50.0	+0.3
KNRA				IAmb	IAmb	01 58 53.1	
	comp=Z,10.0nm,0.8s						
KNRA	Kununurra	59.26	132	P	P	01 58 50.0	+0.3
OSL	Oslo	59.34	325	eP	P	01 58 50.2	+0.5
TBLU	Trondheim	59.36	329	eP	P	01 58 49.9	+0.1
NKC	Novy Kostel	59.45	314	eP	P	01 58 50.9	+0.2
NKC				MLR	MLR		
	comp=Z,1µm,15.1s						
NKC	Novy Kostel	59.45	314	eP	P	01 58 50.9	+0.2
NKC				AMS	AMS	02 26 40.0	
	comp=Z,1µm,15.1s						
BILL	Bilibino	59.82	25	P	P	01 58 53.3	+0.4
BILL	Bilibino	59.82	25	d iP	P	01 58 52.9	0.0
BILL				i		01 59 32.8	
BILL				pmax	pmax		
	comp=Z,12nm,1.4s						
BILL				MLR	MLR		
	comp=Z,577nm,16.0s						
KONO	Kongsberg	59.93	325	eP	P	01 58 54.0	+0.2
STAL	STALIGIAL	59.94	309	IAmb	IAmb	01 58 55.0	
	comp=Z,13nm,0.8s						
DOMB	Dombas	59.98	328	eP	P	01 58 54.5	+0.4
ABTA	Abfaltersbach	59.99	310	eP	P	01 58 53.8	-0.7
	comp=Z,2.1nm,0.6s						
GRFO	Grafenberg	60.31	313	P	P	01 58 56.5	-0.1
GRFO				IAmb	IAmb	01 59 09.6	
	comp=Z,11nm,0.9s						
GRFO	Grafenberg	60.31	313	P	P	01 58 56.5	-0.1
GRFO				pmax	pmax		
	comp=Z,11nm,0.9s						
SKAR	Skarslia	60.47	326	eP	P	01 58 57.1	-0.5
WTTA	Wattenberg	60.48	311	eP	P	01 58 56.9	-1.1
	comp=Z,8.8nm,0.7s,SNR=8.8						
WATA	Walderalm	60.51	311	eP	P	01 58 57.0	-1.1

	comp=Z,6.4nm,0.6s,SNR=10.0						
MOL	Molde	60.64	328	eP	P	01 58 59.0	+0.4
CTI	Castel Tesino	60.71	309	P	P	01 58 58.9	-0.6
CTI				IAmb	IAmb	01 59 02.4	
	comp=Z,8.1nm,0.8s						
CTI	Castel Tesino	60.71	309	P	P	01 58 58.9	-0.6
CTI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SQTA	Sankt Quirin	60.77	311	eP	P	01 58 58.9	-1.0
	comp=Z,10nm,0.6s,SNR=9.9						
MOTA	Moosalm	60.82	311	eP	P	01 58 59.2	-1.1
	comp=Z,13nm,0.7s,SNR=13						
AKN	Aaknes	60.94	328	eP	P	01 59 02.1	+1.4
RETA	Reutte	61.02	311	eP	P	01 59 00.8	-0.8
	comp=Z,6.2nm,0.7s,SNR=7.9						
FETA	Feichten	61.13	310	eP	P	01 59 01.5	-1.0
	comp=Z,6.5nm,0.7s,SNR=6.5						
SNART	Snartemo	61.31	324	eP	P	01 59 05.0	+1.8
MBAR	Mbarara	61.45	252	LR	LR	02 27 00.6	
	comp=Z,381nm,18.3s,baz=51,slow=37						
MBAR	Mbarara	61.45	252	P	P	01 59 04.5	-0.5
MBAR				IAmb	IAmb	01 59 07.7	
	comp=Z,7.4nm,0.8s						
MBAR	Mbarara	61.45	252	c eP	P	01 59 06.2	+1.1
MBAR				pmax	pmax		
	comp=Z,26nm,2.5s						
OSSC	Osservatorio P	61.53	307	IAmb	IAmb	01 59 08.1	
	comp=Z,17nm,0.9s						
BLS5	Blasjo	61.55	325	eP	P	01 59 05.3	+0.4
SALO	Salr	61.57	309	P	P	01 59 05.2	0.0
SALO				IAmb	IAmb	01 59 06.7	
	comp=Z,19nm,0.9s						
DAVA	Damuels	61.65	311	eP	P	01 59 05.3	-0.7
	comp=Z,12nm,0.8s,SNR=13						
DAVOX	Davos/Dischmat	61.76	310	LR	LR	02 30 33.3	
	comp=Z,538nm,20.1s,baz=70,slow=41						
STU	Stuttgart	61.79	313	IAmb	IAmb	01 59 09.3	
	comp=Z,15nm,1.0s						
ASK	Askoy	62.02	326	eP	P	01 59 06.4	-1.6
TUE	Stuetta	62.18	310	IAmb	IAmb	01 59 13.5	
	comp=Z,13nm,0.8s						
BTNL	Ternell	63.35	315	dP	P	01 59 18.0	+0.9
	comp=Z,5.7nm,1.0s						
MEM	Membach	63.42	315	dP	P	01 59 18.5	+1.0
	comp=Z,6.4nm,0.9s						
BHOU	Houvegnez	63.48	315	dP	P	01 59 17.9	0.0
	comp=Z,5.3nm,0.9s						
WLF	Walferdange	63.55	314	P	P	01 59 17.7	-0.6
WLF				IAmb	IAmb	01 59 20.3	
	comp=Z,26nm,1.3s						
WLF	Walferdange	63.55	314	P	P	01 59 17.7	-0.6
WLF				pmax	pmax		
	comp=Z,26nm,1.3s						
WLF	Walferdange	63.55	314	dP	P	01 59 18.6	+0.3
	comp=Z,10.0nm,0.9s						
SENIN	Lac Senin/Sane	63.58	310	IAmb	IAmb	01 59 20.0	
	comp=Z,13nm,1.1s						
BCLA	Clavier	63.90	315	dP	P	01 59 20.9	+0.3
	comp=Z,5.1nm,1.1s						
RCHB	Rochefort	64.01	315	dP	P	01 59 22.4	+1.0
	comp=Z,4.4nm,1.0s						
BGES	Gesves	64.05	315	dP	P	01 59 22.4	+0.8
	comp=Z,5.6nm,0.9s						
NOR	Nord	64.15	351	i P	P	01 59 19.8	-2.1
NOR				IVmB_BB		01 59 22.9	
	comp=Z,335nm,2.7s						
BMRD	Maredsous	64.26	315	dP	P	01 59 23.6	+0.6
	comp=Z,4.9nm,0.9s						
BNI	Bardonecchia	64.34	309	IAmb	IAmb	01 59 34.6	
	comp=Z,6.8nm,0.8s						
DOU	Dourbes	64.42	315	dP	P	01 59 23.4	-0.7
	comp=Z,3.3nm,0.0s						
SNF	Seneffe	64.51	315	dP	P	01 59 25.0	+0.3
	comp=Z,9.8nm,0.9s						
KEST	Kesra	65.04	299	P	P	01 59 29.2	+0.7
	comp=Z,18nm,0.9s,baz=0.3,slow=2.7,SNR=23						
	comp=Z,18nm,0.9s						
JMIC	Jan Mayen	65.39	339	LR	LR	02 30 55.7	
	comp=Z,397nm,21.0s,baz=79,slow=39						
SSB	Saint Sauveur	65.73	310	IAmb	IAmb	01 59 38.6	
	comp=Z,8.5nm,1.0s						
SHEM	Shemya Is, Ala	65.97	42	LR	LR	02 30 02.6	
	comp=Z,834nm,21.3s,baz=291,slow=38						
WRA	Warramunga Arr	66.00	131	P	P	01 59 34.9	+0.2
	comp=Z,11nm,0.8s,baz=326,slow=6.5,SNR=94						
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	66.00	131	i P	P	01 59 34.9	+0.2
WRA				pmax	pmax		
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	66.00	131	P	P	01 59 35.1	+0.5
WRAB	Tennant Creek	66.00	131	c iP	P	01 59 35.2	+0.5
WRAB				pmax	pmax		
	comp=Z,61nm,2.5s						
WRAB	Tennant Creek	66.00	131	P	P	01 59 35.7	+1.0
WRKA	Warakurna	66.04	140	P	P	01 59 36.1	+1.2
WR0	Warramunga Arr	66.14	131	P	P	01 59 36.1	+0.5
DAG	Danmarks Havn	66.19	346	i P	P	01 59 34.1	-1.0
DAG				IAmb	IAmb	01 59 37.6	
	comp=Z,5.1nm,0.8s						
DAG				IVmB_BB		01 59 42.7	
	comp=Z,223nm,2.3s						
CLF	Chambon-Foret	66.45	313	IAmb	IAmb	01 59 38.3	
	comp=Z,22nm,1.2s						
EKA	Eskdalemuir Ar	67.53	322	LR	LR	02 33 17.4	
	comp=Z,1μm,19.5s,baz=78,slow=40						
DBG	Daneborg	67.54	344	i P	P	01 59 42.1	-1.6
DBG				IVmB_BB		01 59 45.0	
	comp=Z,427nm,3.3s						
ASAR	Alice Springs	68.38	134	P	P	01 59 50.3	+0.5
	comp=Z,11nm,0.6s,baz=318,slow=6.3,SNR=128						
ASAR				LR	LR	02 35 39.6	
	comp=Z,193nm,19.3s,baz=308,slow=41						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	68.38	134	P	P	01 59 50.1	+0.4
PMG	Port Moresby	68.75	114	LR	LR	02 31 47.0	
	comp=Z,93nm,19.7s,baz=301,slow=38						
SCO	Scoresbysund	69.71	340	P	P	01 59 57.2	-0.1
SCO				IAmb	IAmb	01 59 59.7	
	comp=Z,24nm,1.5s						
SCO	Scoresbysund	69.71	340	P	P	01 59 57.2	-0.1
SCO				pmax	pmax		
	comp=Z,24nm,1.5s						
SCO	Scoresbysund	69.71	340	i P	P	01 59 58.7	+1.4
SCO				IAmb	IAmb	01 59 59.2	
	comp=Z,29nm,1.6s						
QIS	Mount Isa	69.99	128	P	P	02 00 00.5	+0.7
EUNU	Eureka	71.74	359	IAmb	IAmb	02 00 11.2	
	comp=Z,18nm,1.1s						
LSZ	Lusaka	71.94	241	LR	LR	02 28 46.4	
	comp=Z,612nm,21.9s,baz=68,slow=33						
LSZ	Lusaka	71.94	241	P	P	02 00 12.3	+0.5
LSZ				IAmb	IAmb	02 00 18.0	
	comp=Z,22nm,1.4s						
LSZ	Lusaka	71.94	241	P	P	02 00 12.3	+0.5
LSZ				pmax	pmax		
	comp=Z,22nm,1.4s						
BORG	Borgarnes	72.23	335	LR	LR	02 34 05.7	
	comp=Z,444nm,20.1s,baz=80,slow=38						
OOD	Oodnadatta	72.47	136	P	P	02 00 14.7	+0.1
SUMG	Summit	72.84	345	P	P	02 00 16.8	0.0
SUMG				IAmb	IAmb	02 00 38.4	
	comp=Z,25nm,1.4s						
SUMG	Summit	72.84	345	P	P	02 00 16.8	0.0
SUMG				pmax	pmax		
	comp=Z,25nm,1.4s						
SUMG	Summit	72.84	345	i P	P	02 00 16.0	-0.8
SUMG				IVmB_BB		02 00 19.6	
	comp=Z,1μm,2.7s						
ESDC	Sonseca Array	73.55	306	P	P	02 00 21.3	+0.2
	comp=Z,6.1nm,0.8s,baz=56,slow=6.1,SNR=47						
	comp=Z,6.1nm,0.8s						
TULEG	Thule	74.30	354	i P	P	02 00 23.9	-0.8
TULEG				IAmb	IAmb	02 00 26.6	
	comp=Z,14nm,0.7s						
PBRG	Braganca	74.62	309	eP	P	02 00 30.9	+3.6
TOLK	Toolik Lake Re	74.66	19	P	P	02 00 26.6	-0.4
TOLK	Toolik Lake Re	74.66	19	P	P	02 00 27.0	0.0
	baz=310						
MATP	Matopo	74.84	236	LR	LR	02 30 45.4	
	comp=Z,1μm,19.0s,baz=60,slow=34						
MVO	Moncorvo	75.08	309	eP	P	02 00 31.9	+1.9
	comp=Z,35nm,1.4s						
MVO	Moncorvo	75.08	309	eLR	LR	02 26 55.8	
	comp=Z,225nm,22.0s						
COLD	Coldfoot	75.39	20	P	P	02 00 31.6	+0.4
	baz=310						
ICESG	Greenland Ices	75.51	343	i P	P	02 00 32.2	-0.1
ICESG				IAmb	IAmb	02 00 35.9	
	comp=Z,23nm,0.9s						
PVRL	Vila Real	75.51	309	eP	P	02 00 30.6	-1.8
	comp=Z,48nm,1.6s						
H21K	Melozitna Rive	75.56	22	IAmb	IAmb	02 00 33.6	
	comp=Z,21nm,1.5s						
H21K	Melozitna Rive	75.56	22	P	P	02 00 32.5	+0.2
	baz=308						
PGAV	Gavieira, Arco	75.59	310	eP	P	02 00 34.4	+1.4
PGAV	Gavieira, Arco	75.59	310	eLR	LR	02 26 09.2	
	comp=Z,216nm,18.0s						
INKA	Innaminka	75.61	133	P	P	02 00 34.5	+1.5
MTE	Manteigas	75.76	308	eP	P	02 00 36.0	+2.1
MTE	Manteigas	75.76	308	eLQ	LQ	02 23 11.6	
MTE				eLR	LR	02 27 08.9	
	comp=Z,273nm,18.0s						
PVIS	Viseu	75.86	309	eP	P	02 00 36.2	+1.7
PCBR	Castelo Branco	75.95	308	eP	P	02 00 36.7	+1.8
J20K	Nowinta River	76.00	23	IAmb	IAmb	02 00 40.8	
	comp=Z,12nm,0.9s						
J20K	Nowinta River	76.00	23	P	P	02 00 36.1	+1.3
	baz=307						
PMRV	Marv??o	76.06	307	eLQ	LQ	02 26 43.7	
PMRV				eLR	LR	02 30 33.5	
	comp=Z,242nm,20.0s						
I21K	Tanana	76.12	22	P	P	02 00 37.0	+1.6
PBAR	Barrancos	76.35	306	eP	P	02 00 38.6	+1.4
	comp=Z,28nm,1.8s						
H23K	Yukon River	76.49	21	P	P	02 00 38.0	+0.4
	baz=310						
K20K	Telida	76.53	24	IAmb	IAmb	02 00 43.9	
	comp=Z,10nm,0.8s						
K20K	Telida	76.53	24	P	P	02 00 37.9	+0.1
	baz=307						
MDT	Midelt	76.84	300	LR	LR	02 37 14.4	
	comp=Z,150nm,21.8s,baz=62,slow=38						
EVO	Evora	76.89	307	eP	P	02 00 41.3	+1.0
	comp=Z,34nm,1.6s						
H24K	Noodor Dome	77.00	20	P	P	02 00 40.8	+0.3
	baz=312						
PBEJ	Beja	77.00	306	eP	P	02 00 42.4	+1.5
PSBE	So Bento	77.01	308	eP	P	02 00 42.5	+1.5
	comp=Z,76nm,2.0s						
BPAW	Bear Paw Mtn.	77.14	23	P	P	02 00 42.3	+1.0
	baz=310						
QLP	Quilpie	77.15	130	P	P	02 00 43.3	+1.5
PVAQ	Vaqueiros	77.17	306	eP	P	02 00 42.7	+0.8
PVAQ	Vaqueiros	77.17	306	eLR	LR	02 28 25.6	
	comp=Z,219nm,20.0s						
MESJ	Messejana	77.33	306	eP	P	02 00 42.8	-0.1
MESJ				IAmb	IAmb	02 00 46.5	
	comp=Z,124nm,2.3s						
MESJ				eS	S	02 10 33.4	+0.9
MESJ	Messejana	77.33	306	eP	P	02 00 45.2	+2.4
MESJ	Messejana	77.33	306	eP	P	02 00 42.7	-0.1
MESJ				eS	S	02 10 33.4	+0.9
PBDV	Barranco-do-Ve	77.39	306	eP	P	02 00 42.8	-0.4
PNCL	Nicolau / Gran	77.44	307	eP	P	02 00 45.0	+1.6
NEA2	Nenana	77.45	22	IAmb	IAmb	02 00 47.6	
	comp=Z,17nm,1.0s						
NEA2	Nenana	77.45	22	P	P	02 00 43.6	+0.6
	baz=311						
MDM	Murphy Dome	77.48	21	IAmb	IAmb	02 00 49.0	
	comp=Z,16nm,1.0s						
PPLA	Purkeypile	77.48	24	P	P	02 00 42.9	-0.4
PPLA	Purkeypile	77.48	24	P	P	02 00 43.8	+0.5
	baz=309						
PMAFR	Mafra	77.59	308	eP	P	02 00 48.1	+3.9
TCOL	CIGO, UAF Yank	77.65	21	P	P	02 00 45.2	+1.1
	baz=312						
COLA	College	77.66	21	P	P	02 00 44.1	+0.1
COLA				IAmb	IAmb	02 00 48.6	
	comp=Z,30nm,1.2s						
COLA	College	77.66	21	P	P	02 00 44.2	+0.1
COLA				pmax	pmax		
	comp=Z,30nm,1.3s						
M20K	Styx River	77.77	25	IAmb	IAmb	02 00 55.1	
	comp=Z,22nm,1.4s						
M20K	Styx River	77.77	25	P	P	02 00 46.1	+1.2
	baz=308						
ILAR	Eielson Array	78.03	21	P	P	02 00 45.4	-0.8
	comp=Z,5.7nm,1.0s,baz=302,slow=3.9,SNR=21						
ILAR				PP	PP	02 03 43.0	+1.1
	comp=Z,1.8nm,0.9s,baz=304,slow=6.9,SNR=5.6						
	comp=Z,5.7nm,1.0s						
J25K	Salcha River,	78.61	21	P	P	02 00 48.4	-1.1
	baz=314						
INK	Inuvik	78.94	14	P	P	02 00 49.2	-1.9
	comp=Z,6.3nm,0.9s,baz=349,slow=6.6,SNR=7.4						
	comp=Z,6.3nm,0.9s						
INK	Inuvik	78.94	14	P	P	02 00 50.5	-0.6
INK				IAmb	IAmb	02 00 56.9	
	comp=Z,10nm,0.9s						
INK	Inuvik	78.94	14	P	P	02 00 50.5	-0.6
INK	Inuvik	78.94	14	P	P	02 00 51.6	+0.5
	baz=324						
STKA	Stephens Creek	78.98	135	P	P	02 00 50.1	-1.7
	comp=Z,4.4nm,0.8s,baz=323,slow=4.2,SNR=6.0						
	comp=Z,4.4nm,0.8s						
K24K	Donnelly Dome	79.05	21	P	P	02 00 51.4	-0.5
	baz=314						
DY2G	Dye2	79.14	343	i P	P	02 00 53.3	+0.8
DY2G				IAmb	IAmb	02 00 59.8	
	comp=Z,5.3nm,0.6s						
J26L	Joseph Creek	79.24	20	P	P	02 00 52.6	-0.4
	baz=316						
RIDG	Independent Ri	79.39	21	IAmb	IAmb	02 00 57.7	
	comp=Z,18nm,1.2s						
RIDG	Independent Ri	79.39	21	P	P	02 00 53.6	-0.1
	baz=315						
SCRK	Sand Creek	79.49	21	IAmb	IAmb	02 00 58.8	
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	79.49	21	P	P	02 00 54.1	-0.3
	baz=316						
SML	Sawmill	79.56	24	IAmb	IAmb	02 00 59.6	
	comp=Z,23nm,1.0s						
SML	Sawmill	79.56	24	P	P	02 00 54.3	-0.4
	baz=312						
EGAK	Eagle	79.75	19	IAmb	IAmb	02 01 21.7	
	comp=Z,18nm,1.2s						
LBTB	Lobatse	79.77	234	LR	LR	02 32 45.5	
	comp=Z,1μm,20.7s,baz=49,slow=33						
LBTB	Lobatse	79.77	234	P	P	02 00 56.5	+0.1
LBTB				IAmb	IAmb	02 00 58.4	
	comp=Z,18nm,1.1s						
LBTB	Lobatse	79.77	234	P	P	02 00 56.5	+0.1
LBTB				pmax	pmax		
	comp=Z,19nm,1.1s						
KNK	Knik Glacier	79.78	24	IAmb	IAmb	02 01 01.3	
	comp=Z,25nm,1.3s						
SFJD	Kangerlussuaq	79.81	345	LR	LR	02 41 29.0	
	comp=Z,435nm,20.3s,baz=37,slow=40						
SFJD	Kangerlussuaq	79.81	345	P	P	02 00 55.8	-0.1
SFJD				IAmb	IAmb	02 00 58.0	
	comp=Z,18nm,1.0s						
SFJD	Kangerlussuaq	79.81	345	P	P	02 00 55.8	-0.1
SFJD				pmax	pmax		
	comp=Z,18nm,1.0s						
SFJD	Kangerlussuaq	79.81	345	i P	P	02 00 55.8	-0.1
SCM	Sheep Creek Mo	79.89	23	IAmb	IAmb	02 01 02.4	
	comp=Z,41nm,1.4s						
K27K	Chicken	80.03	20	IAmb	IAmb	02 00 58.9	
	comp=Z,26nm,1.4s						
K27K	Chicken	80.03	20	P	P	02 00 57.7	+0.6
	baz=317						
RMQ	Roma	80.21	127	P	P	02 01 00.8	+2.2
TOA0	Torodi Ar. Sit	80.24	280	P	P	02 00 58.7	-0.4
TOA0				IAmb	IAmb	02 01 00.8	
	comp=Z,22nm,1.2s						
TORD	Torodi Ar. Bea	80.24	280	P	P	02 00 59.2	0.0
	comp=Z,6.4nm,0.6s,baz=50,slow=4.3,SNR=47						
TORD				PP	PP	02 03 59.9	-1.7
	comp=Z,1.5nm,0.9s,baz=66,slow=8.1,SNR=3.1						
	comp=Z,6.4nm,0.6s						
TORD	Torodi Ar. Bea	80.24	280	P	P	02 00 58.7	-0.4
TORD				IAmb	IAmb	02 01 00.7	
	comp=Z,17nm,1.1s						
KLU	Klutina	80.62	23	IAmb	IAmb	02 01 06.2	
	comp=Z,15nm,1.1s						
KLU	Klutina	80.62	23	P	P	02 01 02.0	+1.6
	baz=314						
DAWY	Dawson	80.80	19	P	P	02 01 01.7	+0.3
	baz=319						
L27K	Beaver Creek,	80.82	20	P	P	02 01 02.2	+0.7
	baz=317						
M26K	Nabesna, AK	80.94	21	IAmb	IAmb	02 01 09.3	
	comp=Z,17nm,1.2s						
M26K	Nabesna, AK	80.94	21	P	P	02 01 03.9	+1.8
	baz=316						
N25K	Chitina, Valde	80.99	22	IAmb	IAmb	02 01 07.9	
	comp=Z,14nm,0.9s						
N25K	Chitina, Valde	80.99	22	P	P	02 01 02.9	+0.5
	baz=315						
EIDS	Eidsvold	81.18	125	P	P	02 01 04.0	+0.2
EIDS	Eidsvold	81.18	125	P	P	02 01 05.1	+1.2
CMSA	Cobar Meteorol	81.34	133	P	P	02 01 05.1	+0.5
BMRM	Bremner River	81.44	23	IAmb	IAmb	02 01 06.4	
	comp=Z,31nm,1.4s						
MCARA	McCarthy VSAT	81.67	22	P	P	02 01 06.9	+0.9
	baz=317						
YUK3	Moose Creek	82.21	21	P	P	02 01 09.4	+0.3
	baz=319						
BOSA	Boshof	82.22	232	P	P	02 01 09.2	-0.3
	comp=Z,9.1nm,0.9s,baz=44,slow=3.6,SNR=10						
BOSA				LR	LR	02 35 14.6	
	comp=Z,1μm,19.1s,baz=57,slow=34						
	comp=Z,9.1nm,0.9s						
BOSA	Boshof	82.22	232	P	P	02 01 09.3	-0.1
BOSA				IAmb	IAmb	02 01 10.9	
	comp=Z,24nm,1.2s						
BOSA	Boshof	82.22	232	P	P	02 01 09.3	-0.1
BOSA				pmax	pmax		
	comp=Z,24nm,1.2s						
BARN	Barnard Glacie	82.36	22	IAmb	IAmb	02 01 30.2	
	comp=Z,16nm,1.1s						
TSUM	Tsumeb	82.46	244	LR	LR	02 35 37.7	
	comp=Z,828nm,21.8s,baz=46,slow=34						
TSUM	Tsumeb	82.46	244	P	P	02 01 10.2	-0.7
CTG	Chitna Glacier	82.53	22	P	P	02 01 12.9	+2.2
	baz=318						
M30M	Minto, Yukon	82.69	19	P	P	02 01 13.2	+1.9
	baz=322						
M31M	Drury Creek, Y	83.67	18	IAmb	IAmb	02 01 21.3	
	comp=Z,29nm,1.5s						
M31M	Drury Creek, Y	83.67	18	P	P	02 01 17.0	+0.6
	baz=324						
N31M	Braeburn, Yuko	83.85	19	P	P	02 01 17.9	+0.5
	baz=323						
HYT	Haines Junctio	83.86	20	IAmb	IAmb	02 01 22.7	
	comp=Z,10nm,0.9s						
HYT	Haines Junctio	83.86	20	P	P	02 01 17.6	+0.1
	baz=321						
MMPY	Sheldon Lake,	84.17	17	P	P	02 01 19.7	+0.7
	baz=326						
O30N	Mendenhall	84.33	20	P	P	02 01 20.4	+0.6
	baz=322						
KOWA	Kowa	84.55	283	P	P	02 01 22.0	+0.3
KOWA				IAmb	IAmb	02 01 38.0	
	comp=Z,24nm,1.3s						
ARMA	Armidale	84.61	129	P	P	02 01 22.6	+0.9
ARMA				IAmb	IAmb	02 01 34.9	
	comp=Z,15nm,1.4s						
WHY	Whitehorse	84.78	19	IAmb	IAmb	02 01 26.3	
	comp=Z,5.8nm,0.8s						
WHY	Whitehorse	84.78	19	P	P	02 01 22.8	+0.7
	baz=323						
PLBC	Pleasant Camp	85.29	21	P	P	02 01 25.6	+1.1
	baz=322						
P33M	Teslin, Yukon	85.74	19	IAmb	IAmb	02 01 31.1	
	comp=Z,11nm,0.9s						
P33M	Teslin, Yukon	85.74	19	P	P	02 01 27.0	0.0
	baz=325						
PMOZ	Porto Moniz, M	86.17	305	eLR	LR	02 32 41.4	
	comp=Z,136nm,20.0s						
BESE	Bessie Mountai	86.46	21	IAmb	IAmb	02 01 36.1	
	comp=Z,17nm,1.2s						
JIS	Juneau Island	86.85	21	IAmb	IAmb	02 01 34.5	
	comp=Z,23nm,1.4s						
SUR	Sutherland	87.54	231	LR	LR	02 38 27.0	
	comp=Z,903nm,18.4s,baz=66,slow=34						
YKA	Yellowknife Ar	87.72	10	P	P	02 01 35.4	-1.1
	comp=Z,2.6nm,0.8s,baz=335,slow=4.7,SNR=13						
	comp=Z,2.6nm,0.8s						
DLBC	Dease Lake	88.01	19	IAmb	IAmb	02 01 39.9	
	comp=Z,10nm,1.2s						
S34M	Telegraph Cree	88.14	19	P	P	02 01 40.0	+1.5
	baz=327						
DBIC	Dimbokro	88.94	277	P	P	02 01 42.9	-0.2
	comp=Z,8.5nm,0.8s,baz=36,slow=5.4,SNR=4.6						
DBIC				LR	LR	02 46 53.5	
	comp=Z,804nm,18.4s,baz=72,slow=39						
	comp=Z,8.5nm,0.8s						
DZM	Mont Dzumac	91.14	114	LR	LR	02 46 39.3	
	comp=Z,436nm,19.1s,baz=242,slow=38						
FCC	Fort Churchill	93.18	1	IAmb	IAmb	02 02 12.9	
	comp=Z,8.9nm,1.1s						
SCHQ	Schefferville	94.23	345	P	P	02 02 07.0	0.0
	comp=Z,2.7nm,1.0s,baz=5.5,slow=8.6,SNR=3.9						
	comp=Z,2.7nm,1.0s						
PDAR	Pinedale Array	107.48	13	PKiKP	PKiKP	02 07 14.8	-0.4
	comp=Z,0.4nm,0.6s,baz=42,slow=1.5,SNR=2.8						
NVAR	Mina Array Bea	109.29	21	PKiKP	PKiKP	02 07 19.3	+0.7
	comp=Z,0.7nm,0.7s,baz=343,slow=1.2,SNR=5.7						
NVAR				PKKPbc	PKKPbc	02 18 24.6	-0.1
	comp=Z,0.5nm,0.8s,baz=144,slow=4.7,SNR=3.8						
TROLL	Troll, Antarti	115.18	200	PKPdf	PKPdf	02 07 29.0	+0.5
SNAA	Sanae	116.76	201	PKPdf	PKPdf	02 07 30.2	-1.3
VNA2	Neumayer--Watz	118.12	202	PKPdf	PKPdf	02 07 32.2	-1.8
	baz=28,slow=3.0						
VNA3	Neumayer Olymp	118.89	202	PKPdf	PKPdf	02 07 35.0	-0.6
MNTX	Cornudas Mount	119.00	13	PKPdf	PKPdf	02 07 36.8	-0.3
MNTX	Cornudas Mount	119.00	13	P	PKiKP	02 07 38.2	+1.1
	baz=347						
JCT	Junction City	121.05	7	P	PKiKP	02 07 42.9	+1.7
	baz=352						
TXAR	Lajitas Array	121.62	11	PKP	PKPdf	02 07 41.8	-0.5
	comp=Z,1.8nm,0.6s,baz=297,slow=0.1,SNR=20						
TXAR				PKKPbc	PKKPab	02 17 43.5	-1.5
	comp=Z,0.3nm,0.7s,baz=197,slow=5.5,SNR=3.8						
RCBR	Riachuelo	122.03	282	eP	PKiKP	02 07 44.6	+1.2
NBPB	Pedra_Branca-C	125.05	284	eP	PKiKP	02 07 51.4	+2.0
PPT2	Papeete2	126.78	91	eLR	LR	02 47 57.4	
	comp=Z,513nm,29.8s						
TBI	Tubuai	128.89	98	eLR	LR	02 48 50.6	
TAOE	Nuku Hiva Isla	131.21	76	eLR	LR	02 50 14.0	
	comp=Z,357nm,25.2s						
PRPB	Parauapebas	134.00	290	eP	PKPdf	02 08 05.6	-0.5
BOAV	Boa Vista	136.65	310	eP	PKPdf	02 08 11.7	+0.7
PET01	Itanhaem-SP	139.45	265	eP	PKiKP	02 08 17.6	-0.5
SALV	Santo Antonio	143.87	282	eP	PKiKP	02 08 26.2	-1.2
VILB	Vilhena	146.25	290	eP	PKPbc	02 08 29.1	-0.1
PLTB	Pedras Altas	146.30	255	PKPbc	PKPab	02 08 29.8	0.0
PLTB	Pedras Altas	146.30	255	eP	PKPab	02 08 29.7	0.0
SAML	Samuel	146.32	299	PKPbc	PKPbc	02 08 29.5	0.0
SAML	Samuel	146.32	299	PKP2	PKPbc	02 08 29.5	0.0
PTLB	Pontes e Lacer	146.61	286	eP	PKPab	02 08 30.9	-0.4
TBTG	Tabatinga, AM	147.75	314	eP	PKPbc	02 08 33.0	-0.6
OTAV	Otavalo	148.52	332	PKPbc	PKPbc	02 08 35.5	-0.7
OTAV	Otavalo	148.52	332	PKP2	PKPbc	02 08 35.5	-0.7
OTAV	Otavalo	148.52	332	eP	PKPbc	02 08 34.4	-1.7
ITQB	Itaqui	148.69	259	eP	PKPdf	02 08 33.5	+1.8
CPUP	Villa Florida	148.77	265	PKPbc	PKPbc	02 08 36.0	+0.2
	comp=Z,4.0nm,0.7s,baz=104,slow=2.5,SNR=13						
CPUP	Villa Florida	148.77	265	PKPbc	PKiKP	02 08 37.1	-0.2
CPUP	Villa Florida	148.77	265	PKP2	PKiKP	02 08 37.1	-0.2
CPUP	Villa Florida	148.77	265	eP	PKPbc	02 08 34.7	-1.1
ETMB	Extrema	149.18	302	eP	PKPdf	02 08 33.5	+0.6
LPAZ	La Paz	154.51	293	PKPbc	PKiKP	02 08 50.5	+0.3
	comp=Z,0.6nm,0.7s,baz=349,slow=5.2,SNR=2.1						
LPAZ				PKPab	PKPab	02 09 03.5	-1.1
	comp=Z,2.0nm,0.9s,baz=80,slow=4.9,SNR=4.3						
GO08	Villa O'Higgin	154.72	212	PKPdf	PKPdf	02 08 38.1	-2.1
AY01	Puyuhuapi	157.48	219	PKPab	PKPab	02 09 14.4	-1.2
PB11	IPOC Station P	157.48	287		PKPdf	02 08 42.2	-2.8

IDC **22** *01:56:56.3±1.2, 84.°44N×106.°83E, h0km, mb3.7/10, mbtmp3.8/11, ML3.7/1, MS4.2/2, Error ellipse: s-maj=27.1km s-min=24.4km az=105.0*

ISC 22 01:56:57.7±1.0**, 84.°5N**±0.°1×**106.°6E**±0.°2**, h10**km**, n14, σ0.°91**/12**, mb3.6**/9**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NRIK	Noril'sk	15.61	205	Pn	Pn	02 00 36.8	-0.6
	0.3nm,0.3s,baz=25,slow=17,SNR=1.5						
	4.0nm,0.6s						
ARCES	ARCESS Array B	20.45	276	P	Pn	02 01 35.7	-1.2
	3.1nm,0.9s,baz=52,slow=11,SNR=1.7						
	3.1nm,0.9s						
INK	Inuvik	25.05	50	P	P	02 02 20.7	-0.8
	2.3nm,0.8s,baz=313,slow=7.9,SNR=1.9						
	2.3nm,0.8s						

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FINES FINESS Array B    28.29 271  P        P        02 02 49.2 -1.5
      2.1nm,1.0s,baz=10,slow=8.5,SNR=1.7
FINES                              ScP      ScP      02 09 44.0 +0.4
      0.9nm,0.7s,baz=47,slow=3.3,SNR=7.2
      2.1nm,1.0s
KIRV  Kirov             28.91 246  LR       LR       02 16 50.1
      comp=Z,619nm,21.5s,baz=131,slow=41
OBN   Obninsk           33.52 258  LR       LR       02 20 20.3
      comp=Z,334nm,21.4s,baz=112,slow=42
KURBB Kurchatov Arra    34.72 212  P        P        02 03 47.0 -0.3
      0.2nm,0.4s,baz=20,slow=7.7,SNR=3.2
      0.2nm,0.4s
SONM  Songino Array     36.77 180  P        P        02 04 06.0 +1.0
      0.3nm,0.4s,baz=350,slow=7.9,SNR=2.2
      0.3nm,0.4s
MKAR  Makanchi Array    38.37 207  P        P        02 04 18.2 -0.2
      0.9nm,0.7s,baz=10,slow=7.4,SNR=6.9
      0.9nm,0.7s
AKASG Malin Array Be    38.59 264  P        P        02 04 20.4 +0.2
      0.4nm,0.5s,baz=11,slow=9.2,SNR=2.7
      0.4nm,0.5s
BRTR  Keskin Array B    49.04 258  P        P        02 05 44.2 -0.2
      0.5nm,0.7s,baz=345,slow=4.9,SNR=2.3
      0.5nm,0.7s
ESDC  Sonseca Array     52.66 295  P        P        02 06 12.8 +1.3
      0.5nm,0.6s,baz=6.4,slow=8.0,SNR=6.6
      0.5nm,0.6s
TORD  Torodi Ar. Bea    78.43 286  P        P        02 08 59.1 +0.9
      1.6nm,0.7s,baz=12,slow=6.1,SNR=14
      1.6nm,0.7s
PLCA  Paso Flores      136.12 357  PKP      PKiKP    02 16 18.7 -0.8
      1.4nm,1.0s,baz=14,slow=4.2,SNR=3.4
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BJI ***22*** *02:05:53.1±0.0, 28°.42N×87°.59E, h10^{km}, mb4.8/57, mB5.5/41, Ms5.1/65, Ms7 4.8/60*

MOS ***22*** *02:05:53.6±0.9, 28°.49N×87°.45E, h14^{km}, mb5.3/66, MS4.5/17, Error ellipse: s-maj=5.8km s-min=3.0km az=116.9*

DMN ***22*** *02:05:53.3±0.4, 28°.49N×87°.59E, h10^{km}, Ml5.8/7, Error ellipse: s-maj=7.2km s-min=3.1km az=37.0*

IDC ***22*** *02:05:53.2±0.4, 28°.49N×87°.60E, h0^{km}, mb4.9/37, mbtmp4.9/40, ML4.4/3, MS4.5/41, Error ellipse: s-maj=12.9km s-min=9.8km az=22.0*

GCMT ***22*** *02:05:54.7±0.1, 28°.22N±0°.01×87°.60E±0°.01, h12^{km}, MW5.2/126, Moment Tensor Solution. s71,c96; s126,c241; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.78±.01; $M_{\theta\theta}$-0.07±.01; $M_{\phi\phi}$0.84±.01; $M_{r\theta}$0.10±.05; $M_{\theta\phi}$-0.16±.01; $M_{\phi r}$-0.23±.04; Best double couple: $M_0$0.86000×10^{17} NP1:ϕ_s175.00000°, δ37.00000°, λ-83.00000°. NP2:ϕ_s346.00000°, δ53.00000°, λ-95.00000°. Principal axes: T 0.9050, Plg8.0000°, Azm80.0000°; N -0.0910, Plg4.0000°, Azm349.0000°; P -0.8150, Plg81.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *02:05:54.7±1.4, 28°.57N±0°.05×87°.48E±0°.06, h4^{km}±2^{km}, mb5.1/213 Error ellipse: s-maj=8.1km s-min=6.3km az=130.0*

NDI ***22*** *02:05:56.0±2.7, 28°.46N×87°.47E, h4^{km}±28^{km}, ML4.8, mb5.1(NEIC)*

ISC 22 02:05:55.3±0.5**, 28°.45N**±0°.03×**87°.43E**±0°.02**, h13**^{km}±2^{km}**, h12**^{km}**:pP-P, n829, σ1s66**/843**, mb5.1**/245**, MS4.6**/72**, 45C-56D, Xizang**

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Code  Station Name        Δ°  AZ°    Phase ID             Time     Res
                                   Op       ISC        h  m  s   ISC
TAPN  Taplejung          1.12 167  ePg      Pb       02 06 14.8 -2.0
TAPN                               eSg      Sb       02 06 30.4 -1.0
      13µm,0.4s
GTK   Tadong             1.53 137  eP       Pn       02 06 21.3 -1.3
GTK                                eS       Sn       02 06 38.4 -4.0
GTK                                 IAML             02 06 41.5
      comp=E,10µm,0.4s
GTK                                 IAML             02 06 41.7
      comp=N,12µm,0.6s
ODAN  Odare              1.58 181  ePg      Pn       02 06 24.2 +0.9
ODAN                               eSg      Sb       02 06 45.4 +0.8
      comp=N,16µm,1.0s
RAMN  Ramite             1.66 206  ePg      Pn       02 06 25.6 +1.2
RAMN                               eSg      Sb       02 06 48.5 +1.5
      comp=N,16µm,0.5s
SLGI  Shiliguri          1.95 153  eP       Pb       02 06 30.4 -0.3
PKI   Pulchoki           1.99 244  ePg      Pb       02 06 32.8 +1.2
PKI                                eSg      Sg       02 07 00.1 +0.8
      comp=N,39µm,0.8s
PKIN  Phulchoki          2.00 245  ePg      Pb       02 06 33.2 +1.6
PKIN                               eSg      Sg       02 07 00.2 +0.7
      comp=N,40µm,0.8s
DMN   Daman              2.22 248  ePg      Pg       02 06 37.6 -0.2
DMN                                eSg      Sg       02 07 08.9 +2.3
      comp=N,46µm,0.8s
GKN   Gorkha             2.50 260  ePg      Pg       02 06 42.7 -0.6
GKN                                eSg      Sg       02 07 17.5 +1.7
      comp=N,49µm,0.5s
VLK   Valmikinagar       3.35 251  eP       Pb       02 06 51.9 -2.6
KOLN  Koldanda           3.45 260  ePg      Pg       02 07 00.0 -1.4
LSA   Lhasa              3.49  68           Pn       02 06 51.5 +1.7
LSA   Lhasa              3.49  68   P       Pn       02 06 51.5 +1.7
LSA   Lhasa              3.49  68   P       Pn       02 06 53.0 +3.3
LSA                                 S       Sb       02 07 37.6 -2.1
LSA                                 LR      LR
      comp=N,34µm,6.1s
LSA                                 LR      LR
      comp=E,37µm,6.4s
LSA                                 LR      LR
      comp=Z,45µm,5.7s
GUWA  GUWAHATI           4.41 120  eP       Pn       02 07 03.9 +1.9
BOK   Bokaro             4.84 197  eP       Pn       02 07 11.0 +3.1
BOK                                eS       Sn       02 08 04.5 +0.7
SHL   Shillong           4.90 125   Pn      Pn       02 07 08.5 -0.5
SHL   Shillong           4.90 125   P       Pn       02 07 08.5 -0.5
SHL   Shillong           4.90 125  eP       Pn       02 07 09.7 +0.8
SHL                                ex       Sn       02 08 07.2 +1.5
TEZP  TEZPUR             5.11 110  eP       Pn       02 07 11.4 -0.1
BRCI  Bahraich           5.24 262  ex       Pn       02 07 18.1 +4.7
ITAN  ITANAGAR           5.72 102  eP       Pn       02 07 20.7 +0.6
ITAN                                IAML             02 08 55.9
      comp=E,3µm,0.6s
ITAN                                IAML             02 09 01.3
      comp=N,3µm,0.6s
ALBI  Allahabad          5.91 239  eP       Pn       02 07 24.8 +2.1
LGTI  Lohaghat           6.37 281  eP       Pn       02 07 32.2 +3.3
PTH   Pithoragarh        6.41 282  eP       Pn       02 07 32.6 +3.0
AZL   Aizawl             6.66 134  eP       Pn       02 07 33.9 +0.9
IMP   Imphal             6.86 120  eP       Pn       02 07 37.3 +1.6
BRDH  Bariadhala         6.89 146   Pn      Pn       02 07 39.2 +3.1
      comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=1.7
BRDH                                Sn      Sn       02 08 52.4 -2.1
      baz=0.0,slow=20
JHSG  JHARSUGUGA         7.44 207  eP       Pn       02 07 46.6 +3.0
BLSP  Bilaspur           7.91 218  eP       Pn       02 07 52.7 +2.6
BWNR  Bhubaneshwar       8.25 191  eP       Pn       02 07 56.2 +1.5
DDI   Dehra Dun          8.39 285  ex       Pn       02 08 00.9 +4.3
DDI                                ex       Sn       02 09 32.8 +1.5
JHNI  Jhansi             8.47 252  eP       Pn       02 07 57.1 -0.7
NDI   New Delhi          8.98 274  eP       Pn       02 08 05.6 +0.8
NDI                                ex       Pn       02 08 09.0 +4.2
NDI                                ex       Sn       02 09 51.0 +5.1
AYAN  Aya Nagar          9.07 273  eP       Pn       02 08 08.2 +2.2
SONA  Sohna              9.12 271  eP       Pn       02 08 08.5 +1.9
SMLA  Simla              9.31 289  eP       Pn       02 08 11.7 +2.5
SMLA                               ex       Sn       02 09 55.3 +1.5
SMLA                                IAML             02 09 57.8
      comp=E,616nm,0.8s
SMLA                                IAML             02 10 04.0
      comp=N,585nm,1.1s
KUDL  Kundal             9.65 271  eP       Pn       02 08 14.9 +1.0
RAGD  RAYAGADA           9.85 202  eP       Pn       02 08 17.8 +1.1
GOMU  GeErMu             9.93  37   P       Pn       02 08 19.8 +1.6
GOMU                                pP               02 08 24.3
GOMU                                sP               02 08 27.4
GOMU                                S       Sn       02 10 16.0 +6.3
GOMU                                sS               02 10 19.3
GOMU                                pmax    pmax
      comp=Z,28nm,1.2s
GOMU                                pmax    pmax
      comp=Z,240nm,4.3s
GOMU                                LR      LR
      comp=N,6µm,12.1s
GOMU                                LR      LR
      comp=E,6µm,11.3s
GOMU                                LR      LR
      comp=Z,3µm,9.4s
GOMU  GeErMu             9.93  37   P       Pn       02 08 19.7 +1.6
GOMU                                pP               02 08 24.3
GOMU                                sP               02 08 27.4
GOMU                                S       Sn       02 10 16.0 +6.3
GOMU                                sS               02 10 19.3
GOMU                                pmax    pmax
      comp=Z,28nm,1.2s
GOMU                                pmax    pmax
      comp=Z,240nm,4.3s
GOMU                                LR      LR
      comp=Z,6µm,12.1s
GOMU                                LR      LR
      comp=Z,6µm,11.3s
GOMU                                LR      LR
      comp=Z,3µm,9.4s
BHK   Bhakra            10.00 290  eP       Pn       02 08 21.2 +2.4
BHK                                eP       Pn       02 08 21.5 +2.8
BHK                                ex       Sn       02 10 21.0  +10
BHPL  Bhopal            10.39 242  eP       Pn       02 08 23.9 -0.3
BHPL                               eS       Sn       02 10 13.7 -6.9
THN   Thein Dam         10.86 294  eP       Pn       02 08 31.9 +1.4
AJM   Ajmer             11.52 263  ex       Pn       02 08 31.0 -8.6
AJM                                ex       Pn       02 08 33.4 -6.3
AJM                                i x      Sn       02 10 43.0 -5.3
AKL   Akola             12.21 233  eP       Pn       02 08 48.3 -0.7
PZH   PanZhiHua         12.86  95   P       Pn       02 08 57.3 -0.7
PZH                                 pP      P        02 09 00.0 -8.8
PZH                                 PP      PnPn     02 09 08.8 +3.0
PZH                                 S       Sn       02 11 19.3 -1.8
PZH                                 SS      SnSn     02 11 41.6 +8.4
PZH   PanZhiHua         12.86  95   ScS     ScS      02 21 44.1 +1.3
PZH                                 pmax    pmax
      comp=Z,10.0nm,0.9s
PZH                                 pmax    pmax
      comp=Z,190nm,4.4s
PZH                                 LR      LR
      comp=N,14µm,18.4s
PZH                                 LR      LR
      comp=E,8µm,17.7s
PZH                                 LR      LR
      comp=Z,14µm,18.2s
CHCP  Chirah Chowk      13.20 297 ⇑P        Pn       02 09 03.4 +0.8
NIL   Nilore            13.21 297   Pn      Pn       02 09 01.4 -1.3
NIL   Nilore            13.21 297   P       Pn       02 09 01.4 -1.3
SARP  Sargodha          13.22 289   P       Pn       02 09 01.4 -1.4
VJD   Vijayawada        13.42 209  eP       Pn       02 09 05.7 +0.2
HYBB  Hyderabad (bro    13.68 219  eP       Pn       02 09 07.9 -1.2
HYBB                                IVmB_BB          02 09 17.9
      comp=Z,672nm,5.5s
HYBB                               e                 02 11 31.9
HYBB                               eSn      Sn       02 11 45.6 +4.5
HYBB                                IVMs_BB IVMs_BB  02 13 18.3
      comp=Z,4µm,3.4s
KMI   Kunming           14.07 100 ⇑P        Pn       02 09 14.0 -0.7
KMI                                 sP      P        02 09 24.8 +2.3
KMI                                 S       Sn       02 11 50.9  0.0
KMI                                 SS      S        02 12 10.9 -1.4
KMI                                 pmax    pmax
      comp=Z,15nm,2.5s
KMI                                 pmax    pmax
      comp=Z,470nm,8.7s
KMI                                 LR      LR
      comp=N,5µm,15.6s
KMI                                 LR      LR
      comp=E,3µm,14.1s
KMI                                 LR      LR
      comp=Z,6µm,16.3s
THW   Thamme Wali       14.18 292   P       Pn       02 09 14.8 -1.2
CHTO  Chiang Mai        14.25 130   Pn      Pn       02 09 15.7 -1.3
CHTO  Chiang Mai        14.25 130   P       Pn       02 09 15.7 -1.3
CHTO  Chiang Mai        14.25 130   P       Pn       02 09 17.2 +0.3
CEP   Cherat            14.33 296   P       Pn       02 09 16.7 -1.3
CEP                                 S       Sn       02 11 50.0 -6.9
CD2   Chengdu           14.41  76   P       Pn       02 09 16.8 -2.3
CD2                                 pmax    pmax
      comp=Z,70nm,1.4s
CD2                                 LR      LR
      comp=E,6µm,12.4s
CD2                                 LR      LR
      comp=Z,8µm,10.8s
CD2   Chengdu           14.41  76   P       Pn       02 09 16.7 -2.3
CD2                                 pmax    pmax
      comp=Z,70nm,1.4s
CD2                                 LR      LR
      comp=Z,6µm,12.4s
CD2                                 LR      LR
      comp=Z,8µm,10.8s
CM31  Chiang Mai Arr    14.50 131   Pn      Pn       02 09 18.4 -1.9
CMAR  Chiang Mai Arr    14.50 131   Pn      Pn       02 09 17.5 -2.9
      comp=Z,0.7nm,0.3s,baz=307,slow=12,SNR=20
CMAR                                LR      LR       02 15 28.7
      comp=Z,2µm,19.6s,baz=310,slow=40
      comp=Z,5.4nm,0.6s
CMAR  Chiang Mai Arr    14.50 131           Pn       02 09 19.9 -0.4
CMAR  Chiang Mai Arr    14.50 131  i P      Pn       02 09 20.7 +0.3
CMAR                                pmax    pmax
      comp=Z,11nm,0.8s
KSH   Kashi             14.55 322   P       Pn       02 09 19.4 -1.7
KSH                                 pP      P        02 09 22.9 -4.7
KSH                                 sP               02 09 28.4
KSH                                 PP               02 09 39.1
KSH                                 S       Sn       02 11 57.7 -4.6
KSH                                 pmax    pmax
      comp=Z,150nm,0.8s
KSH                                 LR      LR
      comp=Z,5µm,17.6s
KSH                                 LR      LR
      comp=Z,7µm,17.5s
KSH                                 LR      LR
      comp=Z,3µm,12.3s
GTA   Gaotai            14.99  40 ⇑P        Pn       02 09 24.0 -3.0
GTA                                 pP      P        02 09 28.0 -4.5
GTA                                 sP               02 09 31.2
GTA                                 S       Sn       02 12 11.1 -1.9
GTA                                 sS      S        02 12 19.0  -12
GTA                                 SS      SnSn     02 12 30.7 +4.9
GTA                                 pmax    pmax
      comp=Z,11nm,1.4s
GTA                                 pmax    pmax
      comp=Z,550nm,4.9s
GTA                                 LR      LR
      comp=Z,5µm,14.5s
GTA                                 LR      LR
      comp=Z,5µm,13.8s
GTA                                 LR      LR
      comp=Z,2µm,12.7s
WMQ   Urumqi            15.34   1  eP       Pn       02 09 32.8 +1.1
WMQ                                 pP      P        02 09 37.6 +1.3
WMQ                                 S       Sn       02 12 27.4 +5.9
WMQ                                 SS      S        02 12 39.0 +1.2
WMQ                                 pmax    pmax
      comp=Z,120nm,0.9s
WMQ                                 pmax    pmax
      comp=Z,1µm,4.1s
WMQ                                 LR      LR
      comp=N,2µm,11.5s
WMQ                                 LR      LR
      comp=E,2µm,11.1s
WMQ                                 LR      LR
      comp=Z,1µm,17.1s
WMQ   Urumqi            15.34   1  eP       Pn       02 09 32.7 +1.1
WMQ                                 pP      P        02 09 37.6 +1.3
WMQ                                 S       Sn       02 12 27.4 +5.9
WMQ                                 SS      S        02 12 39.0 +1.2
WMQ                                 pmax    pmax
      comp=Z,120nm,0.9s
WMQ                                 pmax    pmax
      comp=Z,1µm,4.1s
WMQ                                 LR      LR
      comp=Z,2µm,11.5s
WMQ                                 LR      LR
      comp=Z,2µm,11.1s
WMQ                                 LR      LR
      comp=Z,1µm,17.1s
TARG  Taragay, Kyrgy    15.40 332           Pn       02 09 31.0 -1.7
TARG                                IAmb    IAmb     02 09 50.5
      comp=Z,104nm,1.1s
TARG  Taragay, Kyrgy    15.40 332   P       Pn       02 09 31.0 -1.7
TARG                                pmax    pmax
      comp=Z,104nm,1.1s
LZH   Lanzhou           15.82  57 ⇑P        Pn       02 09 35.3 -2.7
LZH                                 sP      P        02 09 40.6 -1.2
LZH                                 PP      sP       02 09 51.8 +2.8
LZH                                eS       Sn       02 12 35.5 +2.1
LZH                                 SS      SnSn     02 12 46.3  0.0
LZH                                 pmax    pmax
      comp=Z,110nm,1.2s
LZH                                 pmax    pmax
      comp=Z,1µm,4.5s
LZH                                 LR      LR
      comp=N,6µm,10.2s
LZH                                 LR      LR
      comp=E,4µm,11.4s
LZH                                 LR      LR
      comp=Z,6µm,12.5s
LZH   Lanzhou           15.82  57 ⇓P        Pn       02 09 36.0 -2.0
LZH                                 pP      P        02 09 38.3 -3.5
LZH                                 sP      pP       02 09 40.6 -6.1
LZH                                 PP      sP       02 09 50.2 +1.2
LZH                                 S       Sn       02 12 32.1 -1.3
LZH                                 sS      S        02 12 36.5  -11
LZH                                 SS      SnSn     02 12 48.4 +2.1
LZH                                 pmax    pmax
      comp=Z,110nm,1.2s
LZH                                 pmax    pmax
      comp=Z,1µm,4.5s
LZH                                 LR      LR
      comp=Z,6µm,10.2s
LZH                                 LR      LR
      comp=Z,4µm,11.4s
LZH                                 LR      LR
      comp=Z,6µm,12.5s
KDJ   Kajisay           15.99 331   Pn      Pn       02 09 38.2 -1.9
KDJ   Kajisay           15.99 331   P       Pn       02 09 38.2 -1.9
KDJ                                 pmax    pmax
      comp=Z,42nm,0.8s
UZB   Uzynbulak         16.16 337  eP       Pn       02 09 40.5 -1.8
UZB   Uzynbulak         16.16 337  eP       Pn       02 09 40.5 -1.8
      baz=337
PDGK  Podgornoye        16.17 339   P       Pn       02 09 40.9 -1.5
SATY  Saty              16.30 336  eP       Pn       02 09 42.3 -1.7
SATY  Saty              16.30 336  eP       Pn       02 09 42.4 -1.7
      baz=336
ZHN   Zhinishke         16.38 336  eP       Pn       02 09 44.0 -1.1
ZHN   Zhinishke         16.38 336  eP       Pn       02 09 44.0 -1.1
      baz=336
KAD   Karad             16.47 231 ⇓i x      Pn       02 09 43.6 -2.7
KAD                                ex       Pn       02 09 43.7 -2.7
KAD                                i x      x        02 12 37.6
ULHL  Ulahol            16.49 330   P       Pn       02 09 47.2 +0.6
      SNR=76
KPKS  Kokpek            16.56 337  eP       Pn       02 09 46.5 -0.8
KPKS  Kokpek            16.56 337  eP       Pn       02 09 46.5 -0.8
      baz=337
KBL   Kabul             16.81 296   Pn      Pn       02 09 49.8 -0.9
KBL                                 IAmb    IAmb     02 09 56.6
      comp=Z,159nm,0.9s
KBL   Kabul             16.81 296   P       Pn       02 09 49.8 -0.9
KBL                                 pmax    pmax
      comp=Z,159nm,0.9s
TNSS  Tian-Shan         16.84 333  eP       Pn       02 09 50.6 -0.5
TNSS  Tian-Shan         16.84 333  eP       Pn       02 09 50.7 -0.5
      baz=332
MDOK  Medeo             16.90 333   P       Pn       02 09 52.7 +1.0
MDOK  Medeo             16.90 333  eP       Pn       02 09 51.4 -0.3
      baz=333
KNDC  Almaty            16.98 333   P       P        02 09 55.7 +1.2
AAA   Alma-Ata          17.00 333  eP       Pn       02 09 52.5 -0.3
AAA   Alma-Ata          17.00 333  eP       Pn       02 09 52.5 -0.3
      baz=333
GYA   Guiyang           17.19  92⇑iP        Pn       02 09 53.3 -2.2
GYA                                 pP      P        02 09 59.1 +2.1
GYA                                 S       Sn       02 13 01.1 -5.5
GYA                                 pmax    pmax
      comp=Z,25nm,1.3s
GYA                                 pmax    pmax
      comp=Z,1µm,3.6s
GYA                                 LR      LR
      comp=N,2µm,7.4s
GYA                                 LR      LR
      comp=E,2µm,6.9s
GYA                                 LR      LR
      comp=Z,4µm,16.4s
GYA   Guiyang           17.19  92⇑iP        Pn       02 09 53.2 -2.2
GYA                                 pP      P        02 09 59.1 +2.1
GYA                                 S       Sn       02 13 01.1 -5.5
GYA                                 pmax    pmax
      comp=Z,25nm,1.3s
GYA                                 pmax    pmax
      comp=Z,1µm,3.6s
GYA                                 LR      LR
      comp=Z,2µm,7.4s
GYA                                 LR      LR
      comp=Z,2µm,6.9s
GYA                                 LR      LR
      comp=Z,4µm,16.4s
UCH   Uchtor            17.29 326   P       Pn       02 09 56.0 -0.9
      SNR=26
TKM2  Tokmak 2          17.32 330   P       Pn       02 09 57.3 +0.3
      SNR=79
TKM2  Tokmak 2          17.32 330  i P      Pn       02 09 56.7 -0.3
TKM2                                pmax    pmax
      comp=Z,54nm,0.8s
KBK   Karagaybulak      17.41 328   P       P        02 10 00.9 +1.5
      SNR=59
CHKK  Chushkaly         17.51 334  eP       Pn       02 09 58.4 -0.8
CHKK  Chushkaly         17.51 334  eP       Pn       02 09 58.4 -0.8
      baz=334
AAK   Ala-Archa         17.61 327   P       P        02 10 03.2 +1.7
      SNR=44
AAK   Ala-Archa         17.61 327   P       P        02 10 02.6 +1.1
      comp=Z,0.7nm,0.3s,baz=140,slow=13,SNR=59
AAK                                 LR      LR       02 16 54.1
      comp=Z,1µm,21.3s,baz=142,slow=37
      comp=Z,27nm,1.0s
AAK   Ala-Archa         17.61 327           Pn       02 10 00.7 +0.1
AAK                                 IAmb    IAmb     02 10 06.8
      comp=Z,202nm,1.4s
AAK   Ala-Archa         17.61 327c iP       P        02 10 02.9 +1.3
AAK                                 pmax    pmax
      comp=Z,197nm,1.7s
AML   Almayashu         17.63 324   P       Pn       02 10 00.6 -0.5
      SNR=22
GAR   Garm              17.67 311   Pn      Pn       02 09 57.2 -4.1
FRU1  Bishkek           17.68 328           Pn       02 10 01.5 +0.2
FRU1  Bishkek           17.68 328   P       Pn       02 10 01.5 +0.2
FRU1                                pmax    pmax
      comp=Z,108nm,1.2s
CHMS  Chumysh           17.77 328   P       P        02 10 03.7 +0.6
      SNR=17
CHMS  Chumysh           17.77 328  i P      Pn       02 10 02.5 +0.1
CHMS                                pmax    pmax
      comp=Z,67nm,1.2s
KUU   Kurty             17.80 333  eP       Pn       02 10 02.1 -0.6
KUU                                 pmax    pmax
      comp=Z,178nm,1.8s
KUU   Kurty             17.80 333  eP       Pn       02 10 02.2 -0.6
      comp=Z,178nm,1.8s,baz=333
BTK   Batken            17.93 315   Pn      Pn       02 09 59.1 -5.3
BTK                                 IAmb    IAmb     02 10 07.9
      comp=Z,148nm,1.0s
BTK   Batken            17.93 315   P       Pn       02 09 59.2 -5.3
BTK                                 pmax    pmax
      comp=Z,148nm,1.0s
EKS2  Erkin-Say         17.98 326   P       P        02 10 07.6 +2.0
      SNR=118
TDK   Taldyqorghan      18.01 339  eP       Pn       02 10 04.7 -0.7
TDK   Taldyqorghan      18.01 339  eP       Pn       02 10 04.8 -0.7
      baz=339
USP   Ospenovka         18.09 328   P       P        02 10 06.9 +0.1
      SNR=31
SGDS  Sogindy           18.17 329  eP       Pn       02 10 06.6 -0.8
SGDS  Sogindy           18.17 329  eP       Pn       02 10 06.7 -0.8
      baz=329
CHGR  Chuyangaron       18.29 309   Pn      Pn       02 10 06.1 -2.8
CHGR  Chuyangaron       18.29 309   P       Pn       02 10 06.1 -2.8
CHGR                                pmax    pmax
      comp=Z,503nm,1.2s
MK31  Makanchi Array    18.75 349           P        02 10 12.2 -1.8
MK31  Makanchi Array    18.75 349  i P      P        02 10 13.6 -0.4
MKAR  Makanchi Array    18.75 349   P       P        02 10 13.3 -0.7
      comp=Z,1.5nm,0.3s,baz=167,slow=11,SNR=91
MKAR                                LR      LR       02 18 52.2
      comp=Z,1µm,18.3s,baz=166,slow=42
      comp=Z,41nm,0.9s
MKAR  Makanchi Array    18.75 349   P       P        02 10 12.2 -1.8
MAKZ  Makanchi          18.82 348   P       P        02 10 13.2 -1.5
MAKZ  Makanchi          18.82 348   P       P        02 10 13.2 -1.5
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MAKZ                                pmax    pmax
        comp=Z,70nm,1.2s
ZSN   Zaisan           19.07 355 eP     P        02 10 16.8  -0.7
ZSN                                pmax    pmax
        comp=Z,185nm,2.6s
ZSN   Zaisan           19.07 355 eP     P        02 10 16.9  -0.7
        comp=Z,185nm,2.6s,baz=354
XAN   Xi'an            19.19  68  P     P        02 10 16.3  -2.6
XAN                               sP    pP       02 10 21.8  -2.0
XAN                               S     Sn       02 13 51.3  -3.6
XAN                               SS    SnSn     02 14 12.8  +3.9
XAN                               pmax  pmax
        comp=Z,46nm,1.4s
XAN                               pmax  pmax
        comp=Z,950nm,5.2s
XAN                               LR    LR
        comp=N,4μm,10.0s
XAN                               LR    LR
        comp=E,2μm,8.2s
XAN                               LR    LR
        comp=Z,3μm,13.1s
ENH   Enshi            19.31  79        P        02 10 18.2  -2.1
DZA   Taraz            19.41 322 eP     P        02 10 20.8  -0.4
DZA   Taraz            19.41 322 eP     P        02 10 20.9  -0.3
        baz=322
TAS   Tashkent         19.60 316  P     P        02 10 21.4  -2.0
TAS                               IAmb  IAmb     02 10 29.4
        comp=Z,82nm,0.7s
TAS   Tashkent         19.60 316  P     P        02 10 21.4  -2.0
TAS                               pmax  pmax
        comp=Z,82nm,0.7s
IUG   Iuzhnay          19.66 319 eP     P        02 10 23.5  -0.5
IUG   Iuzhnay          19.66 319 eP     P        02 10 23.5  -0.5
        baz=318
BTLS  Baital           19.68 331 eP     P        02 10 23.3  -0.8
BTLS                             eS     S        02 14 05.6  -0.3
BTLS  Baital           19.68 331 eP     P        02 10 23.3  -0.8
        baz=331
BTLS                             eS     S        02 14 05.6  -0.3
        baz=331
KK31  Karatay Array    20.00 321        P        02 10 27.2  -0.5
KK31  Karatay Array    20.00 321 i P    P        02 10 28.2  +0.6
KKAR  Karatay Array    20.00 321  P     P        02 10 26.6  -1.0
KKAR  Karatay Array    20.00 321  P     P        02 10 26.6  -1.0
KOD   Kodaikanal       20.39 209 ex     Pn       02 10 35.1  +0.7
PCHI  Peechi           20.64 212 eP     Pn       02 10 38.3  +1.3
PCHI                             eS     S        02 14 18.3  -6.8
GULI  GuiLin           20.70  93 ⇑P     P        02 10 33.3  -2.1
GULI                              S     S        02 14 25.3  -1.1
GULI                              pmax  pmax
        comp=Z,60nm,2.0s
GULI                              LR    LR
        comp=N,4μm,17.9s
GULI                              LR    LR
        comp=E,970nm,16.3s
GULI                              LR    LR
        comp=Z,2μm,17.3s
GULI  GuiLin           20.70  93 ⇑P     P        02 10 33.2  -2.1
GULI                              S     S        02 14 25.2  -1.1
GULI                              pmax  pmax
        comp=Z,60nm,2.0s
GULI                              LR    LR
        comp=Z,4μm,17.9s
GULI                              LR    LR
        comp=Z,970nm,16.3s
GULI                              LR    LR
        comp=Z,2μm,17.3s
UBPT  Khong Chiam      21.23 124        P        02 10 40.0  -1.1
UBPT                              IAmb  IAmb     02 10 43.4
        comp=Z,48nm,0.8s
PALK  Pallekele        22.00 198  P     P        02 10 54.7  +5.3
        comp=Z,19nm,0.8s,baz=136,slow=9.1,SNR=4.3
PALK                              LR    LR       02 19 48.1
        comp=Z,1μm,20.1s,baz=132,slow=38
PALK  Pallekele        22.00 198  P     P        02 10 49.2  -0.2
PALK  Pallekele        22.00 198  P     P        02 10 49.2  -0.2
PALK                              pmax  pmax
        comp=Z,54nm,1.1s
BTO   Baotou           22.14  51 eP     P        02 10 49.1  -1.8
BTO                               S     S        02 14 55.2  +0.4
BTO                               LR    LR
        comp=Z,13μm,15.4s
BTO                               LR    LR
        comp=Z,8μm,15.3s
BTO   Baotou           22.14  51 eP     P        02 10 49.1  -1.8
BTO   Baotou           22.14  51  LR    LR
        comp=Z,8μm,15.3s
BTO   Baotou           22.14  51  LR    LR
        comp=Z,13μm,15.4s
LYN   LuoYang          22.17  68⇑iP     P        02 10 50.5  -0.6
LYN                               S     S        02 14 50.3  -4.9
LYN                               pmax  pmax
        comp=Z,40nm,1.5s
LYN                               pmax  pmax
        comp=Z,1μm,4.0s
LYN                               LR    LR
        comp=Z,2μm,23.5s
LYN                               LR    LR
        comp=Z,4μm,22.9s
HRA   Herat            22.27 292  P     P        02 10 51.2  -1.1
CNSH  ChangSha         22.45  85 ⇑P     P        02 10 52.8  -1.3
CNSH                              S     S        02 14 55.1  -5.3
CNSH                              pmax  pmax
        comp=Z,120nm,1.3s
CNSH                              LR    LR
        comp=N,2μm,12.1s
CNSH                              LR    LR
        comp=E,2μm,11.9s
CNSH                              LR    LR
        comp=Z,2μm,10.8s
QIZ   Qiongzhong       22.53 110  P     P        02 10 55.3  +0.2
QIZ   Qiongzhong       22.53 110  P     P        02 10 54.8  -0.3
QIZ                               S     S        02 15 02.8  +0.8
QIZ                               pmax  pmax
        comp=Z,36nm,2.0s
QIZ                               pmax  pmax
        comp=Z,610nm,4.0s
QIZ                               LR    LR
        comp=N,2μm,14.9s
QIZ                               LR    LR
        comp=E,2μm,16.5s
QIZ                               LR    LR
        comp=Z,840nm,12.0s
QIZ   Qiongzhong       22.53 110  P     P        02 10 54.7  -0.3
QIZ                               S     S        02 15 03.2  +1.2
QIZ                               pmax  pmax
        comp=Z,720nm,4.8s
QIZ                               LR    LR
        comp=Z,2μm,17.5s
QIZ                               LR    LR
        comp=Z,2μm,19.1s
QIZ                               LR    LR
        comp=Z,860nm,11.8s
SEM   Semipalatinsk    22.60 348 eP     P        02 10 54.2  -1.6
SEM   Semipalatinsk    22.60 348 eP     P        02 10 54.2  -1.6
        baz=348
SRIT  Nakonsritamara   22.84 148  P     P        02 10 58.7  +0.3
TIY   Taiyuan          22.84  60 ⇑P     P        02 10 57.0  -1.4
TIY                               pP    sP       02 11 04.8  -0.8
TIY                               PP    pP       02 11 27.5  +24
TIY                               S     S        02 15 06.6  -1.0
TIY                               sS    pS       02 15 11.8  -1.4
TIY                               pmax  pmax
        comp=Z,15nm,0.5s
TIY                               LR    LR
        comp=N,4μm,19.1s
TIY                               LR    LR
        comp=E,2μm,14.1s
TIY                               LR    LR
        comp=Z,3μm,14.7s
OTUK  Ortayu           22.96 334  P     P        02 10 58.8  -0.6
KURBB Kurchatov Arra   23.15 345  P     P        02 11 01.1  -0.2
        comp=Z,68nm,0.9s,baz=163,slow=9.9,SNR=124
KURBB                             LR    LR       02 21 12.4
        comp=Z,587nm,18.0s,baz=137,slow=40
        comp=Z,68nm,0.9s
KURBB Kurchatov Arra   23.15 345  P     P        02 10 58.8  -2.5
KURK  Kurchatov        23.22 346  P     P        02 11 00.7  -1.2
KURK  Kurchatov        23.22 346  P     P        02 11 01.1  -0.9
HHC   Hu-ho-hao-te     23.31  52 eP     P        02 11 02.6  -0.6
HHC                               S     S        02 15 11.3  -4.2
HHC                               sS    pS       02 15 17.4  -3.4
HHC                               pmax  pmax
        comp=Z,93nm,1.3s
HHC                               pmax  pmax
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        comp=Z,2μm,4.5s
HHC                               LR    LR
        comp=N,5μm,12.4s
HHC                               LR    LR
        comp=E,5μm,12.4s
HHC                               LR    LR
        comp=Z,6μm,12.6s
HHC   Hu-ho-hao-te     23.31  52 eP     P        02 11 03.1  -0.1
HHC                               S     S        02 15 11.0  -4.5
HHC                               sS    pS       02 15 17.0  -3.8
HHC                               pmax  pmax
        comp=Z,93nm,1.3s
HHC                               pmax  pmax
        comp=Z,3μm,4.6s
HHC                               LR    LR
        comp=N,5μm,12.3s
HHC                               LR    LR
        comp=E,5μm,12.8s
HHC                               LR    LR
        comp=Z,6μm,12.3s
KNGR  Kungurtug, Tuv   23.41  16⇑eP     P        02 11 02.3  -1.8
WHN   Wuhan            23.51  78 ⇑P     P        02 11 04.3  -0.8
WHN                               S     S        02 15 18.4  -0.3
WHN                               LR    LR
        comp=Z,5μm,8.2s
WHN                               LR    LR
        comp=Z,3μm,15.6s
WHN                               LR    LR
        comp=Z,9μm,17.4s
BRZS  Berezniki        24.27 336 eP     P        02 11 11.0  -1.1
BRZS                              pmax  pmax
        comp=Z,155nm,2.2s
BRZS  Berezniki        24.27 336 eP     P        02 11 11.1  -1.1
        comp=Z,155nm,2.2s,baz=336
SONM  Songino Array    24.32  32  P     P        02 11 12.2  -0.6
        comp=Z,11nm,0.7s,baz=222,slow=11,SNR=47
SONM                              PcP   PcP      02 14 52.9  +0.6
        comp=Z,1.4nm,0.5s,baz=226,slow=2.6,SNR=4.0
SONM                              ScP   ScP      02 18 30.5  -0.2
        comp=Z,1.2nm,0.8s,baz=198,slow=4.2,SNR=6.1
SONM                              LR    LR       02 21 55.3
        comp=Z,2μm,21.7s,baz=222,slow=40
        comp=Z,11nm,0.7s
SONM  Songino Array    24.32  32  P     P        02 11 12.3  -0.5
HNS   HongShan         24.51  62 ⇑P     P        02 11 14.5  +0.1
HNS                               S     S        02 15 35.5  +0.9
HNS                               SS    SnSn     02 16 24.6  +5.5
HNS                               pmax  pmax
        comp=Z,52nm,1.3s
HNS                               pmax  pmax
        comp=Z,1μm,5.3s
HNS                               LR    LR
        comp=Z,4μm,15.3s
HNS                               LR    LR
        comp=Z,2μm,15.3s
HNS                               LR    LR
        comp=Z,3μm,23.3s
ULN   Ulaanbaatar      24.65  33  P     P        02 11 15.5  -0.3
ULN                               IAmb  IAmb     02 11 17.7
        comp=Z,54nm,1.1s
ULN   Ulaanbaatar      24.65  33  P     P        02 11 15.5  -0.3
ULN                               pmax  pmax
        comp=Z,54nm,1.1s
LHMI  Lhok Sumawe      24.80 157  P     P        02 11 18.3  +1.1
ZAK   Zakamensk        24.99  24 eP     P        02 11 18.5  -0.3
ZAK                               pmax  pmax
        comp=Z,47nm,1.4s
MOY   Mondy            25.32  20 eP     P        02 11 21.9  +0.1
MOY                               pmax  pmax
        comp=Z,129nm,1.1s
ZAA0  Zalesovo Array   25.55 356  IAmb  IAmb     02 11 25.8
        comp=Z,47nm,0.8s
ZALV  Zalesovo Beam    25.55 356  P     P        02 11 23.5  -0.2
        comp=Z,46nm,0.8s,baz=183,slow=8.9,SNR=125
ZALV                              LR    LR       02 22 52.4
        comp=Z,594nm,19.3s,baz=184,slow=40
        comp=Z,46nm,0.8s
ZALV  Zalesovo Beam    25.55 356  P     P        02 11 21.9  -1.8
TIA   Tai'an           26.19  65 eP     P        02 11 28.6  -1.1
TIA                               pmax  pmax
        comp=Z,25nm,1.9s
TIA                               LR    LR
        comp=Z,1μm,17.7s
TIA                               LR    LR
        comp=Z,2μm,21.6s
TIA                               LR    LR
        comp=Z,4μm,21.6s
GEYT  Alibeck          26.20 299  P     P        02 11 32.3  +2.5
        comp=Z,19nm,0.8s,baz=153,slow=6.2,SNR=39
GEYT                              LR    LR       02 23 47.9
        comp=Z,3μm,20.1s,baz=122,slow=41
        comp=Z,19nm,0.8s
GYA0B ALIBECK ARRAY    26.20 299  IAmb  IAmb     02 11 35.9
        comp=Z,42nm,1.0s
KULM  Kulim            26.23 149  P     P        02 11 30.4  +0.2
KULM                              IAmb  IAmb     02 11 36.7
        comp=Z,46nm,1.3s
BJT   Baijiatuau       26.30  56  P     P        02 11 30.9  +0.3
BJT                               IAmb  IAmb     02 11 35.6
        comp=Z,60nm,1.5s
BJT   Baijiatuau       26.30  56  P     P        02 11 30.9  +0.3
BJT                               pmax  pmax
        comp=Z,60nm,1.5s
BJI   Beijing          26.31  56  P     P        02 11 30.8  +0.1
BJI                               S     S        02 16 04.5  +1.2
BJI                               pmax  pmax
        comp=Z,30nm,1.6s
BJI                               pmax  pmax
        comp=Z,740nm,5.6s
BJI                               LR    LR
        comp=Z,2μm,12.1s
BJI                               LR    LR
        comp=Z,1μm,11.2s
BJI                               LR    LR
        comp=Z,3μm,13.6s
WSAR  Wadi Sarin       26.40 265  P     P        02 11 34.3  +2.6
        comp=Z,7.2nm,0.7s,baz=82,slow=15,SNR=4.4
WSAR                              LR    LR       02 23 36.3
        comp=Z,803nm,18.9s,baz=94,slow=40
        comp=Z,7.2nm,0.7s
KCSI  Kotacane, Aceh   26.67 156  P     P        02 11 42.3  +8.1
IRK   Irkutsk          26.88  23 eP     P        02 11 36.4  +0.6
IRK                               pmax  pmax
        comp=Z,114nm,2.0s
IPM   Ipoh             27.12 149  P     P        02 11 38.4  +0.2
IPM   Ipoh             27.12 149  P     P        02 11 42.6  +4.4
NJ2   Nanjing          27.33  75 eP     P        02 11 40.3  +0.3
NJ2                               pP    pP       02 11 43.5  -1.8
NJ2                               sP    sP       02 11 49.1  +1.6
NJ2                               pmax  pmax
        comp=Z,96nm,0.8s
NJ2                               LR    LR
        comp=Z,1μm,10.2s
NJ2                               LR    LR
        comp=Z,3μm,11.4s
NJ2                               LR    LR
        comp=Z,5μm,17.7s
XLT   XiLinHaoTe       27.62  48⇑iP     P        02 11 43.3  +0.7
XLT                               sP    sP       02 11 49.8  -0.3
XLT                               S     S        02 16 25.3  +1.3
XLT                               sS    sS       02 16 41.9  +9.1
XLT                               pmax  pmax
        comp=Z,27nm,1.9s
XLT                               pmax  pmax
        comp=Z,180nm,6.4s
XLT                               LR    LR
        comp=N,200nm,12.6s
XLT                               LR    LR
        comp=E,1μm,12.5s
XLT                               LR    LR
        comp=Z,2μm,16.3s
XLT   XiLinHaoTe       27.62  48⇑iP     P        02 11 43.2  +0.7
XLT                               sP    sP       02 11 49.7  -0.4
XLT                               S     S        02 16 25.3  +1.3
XLT                               pmax  pmax
        comp=Z,27nm,1.9s
XLT                               pmax  pmax
        comp=Z,180nm,6.4s
XLT                               LR    LR
        comp=Z,200nm,12.6s
XLT                               LR    LR
        comp=Z,1μm,12.5s
XLT                               LR    LR
        comp=Z,2μm,16.3s
BRVK  Borovoye         27.66 337  P     P        02 11 42.1  -0.7
BRVK  Borovoye         27.66 337  P     P        02 11 43.3  +0.6
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PSI   Prapat           27.76 155  P     P        02 11 49.9  +5.8
        comp=Z,4.2nm,0.4s,baz=281,slow=2.4,SNR=5.4
PSI                               PcP   PcP      02 15 02.0  +1.3
        comp=Z,4.2nm,0.6s,baz=197,slow=3.6,SNR=4.6
PSI                               LR    LR       02 25 11.6
        comp=Z,429nm,19.4s,baz=307,slow=42
GSI   Gunungsitoli     28.68 158  P     P        02 11 52.8  +0.6
GSI   Gunungsitoli     28.68 158  P     P        02 11 57.7  +5.5
GSI   Gunungsitoli     28.68 158  P     P        02 11 53.7  +1.5
SSE   Sheshan          29.36  76  P     P        02 11 57.3  -0.8
SSE                               S     S        02 16 51.4   0.0
SSE                               pmax  pmax
        comp=Z,12nm,1.0s
SSE                               pmax  pmax
        comp=Z,500nm,11.4s
SSE                               LR    LR
        comp=N,2μm,16.1s
SSE                               LR    LR
        comp=E,1μm,18.0s
AB31  Akbulak array    29.56 322 i P    P        02 12 00.9  +1.2
ABKAR Akbulak array    29.56 322  P     P        02 12 00.1  +0.4
MNSI  Mandailing Nat   29.85 155  P     P        02 12 05.3  +2.7
        comp=E,33nm,1.0s
DL2   Dalian           30.16  61  P     P        02 12 05.3  +0.2
DL2                               S     S        02 17 09.2  +5.4
DL2                               pmax  pmax
        comp=E,32nm,1.1s
DL2                               LR    LR
        comp=E,910nm,17.7s
DL2                               LR    LR
        comp=E,2μm,17.5s
DL2                               LR    LR
        comp=E,3μm,19.4s
BKNI  Bangkinang       30.85 153  P     P        02 12 12.0  +0.6
AKTO  Aktyubinsk       31.25 323  P     P        02 12 15.5  +0.8
        comp=E,22nm,0.7s,baz=121,slow=9.0,SNR=74
AKTO                              LR    LR       02 25 20.1
        comp=E,629nm,21.4s,baz=134,slow=37
        comp=E,22nm,0.7s
SNY   Shenyang         32.19  56 ⇑P     P        02 12 22.4  -0.6
SNY                               pmax  pmax
        comp=E,23nm,0.5s
SNY                               pmax  pmax
        comp=E,550nm,11.2s
SNY                               LR    LR
        comp=E,1μm,10.3s
SNY                               LR    LR
        comp=E,1μm,13.5s
SNY                               LR    LR
        comp=E,2μm,12.8s
HIA   Hailar           32.27  41  P     P        02 12 23.1  -0.6
HIA                               IAmb  IAmb     02 12 28.5
        comp=Z,38nm,1.1s
HIA   Hailar           32.27  41  P     P        02 12 23.1  -0.6
HIA                               pmax  pmax
        comp=Z,38nm,1.1s
INCN  Inchon           33.90  64  P     P        02 12 38.4  +0.4
INCN                              IAmb  IAmb     02 13 06.7
        comp=Z,14nm,0.5s
INCN  Inchon           33.90  64  P     P        02 12 38.4  +0.4
INCN                              pmax  pmax
        comp=Z,14nm,0.5s
CN2   Changchun        33.99  53 eP     P        02 12 38.0  -0.7
CN2                               pmax  pmax
        comp=Z,30nm,0.9s
CN2                               LR    LR
        comp=Z,1μm,13.0s
CN2                               LR    LR
        comp=Z,1μm,13.0s
CN2                               LR    LR
        comp=Z,2μm,19.0s
SVE   Sverdlovsk       34.11 334ceP     P        02 12 40.7  +1.2
SVE                               pmax  pmax
        comp=Z,41nm,0.9s
SVE                               MLR   MLR
        comp=Z,492nm,10.0s
TJN   Taejon           34.44  66⇓eP     P        02 12 43.0  +0.4
KSM   Kuching          34.60 137  P     P        02 12 45.5  +1.2
KSM                               IAmb  IAmb     02 12 46.7
        comp=Z,23nm,1.2s
ARU   Arti             34.67 332  P     P        02 12 45.1  +0.7
        comp=Z,8.0nm,0.6s,baz=137,slow=3.8,SNR=44
        comp=Z,8.0nm,0.6s
ARU   Arti             34.67 332  P     P        02 12 43.7  -0.7
ARU                               IAmb  IAmb     02 12 46.6
        comp=Z,29nm,0.8s
ARU   Arti             34.67 332d iP    P        02 12 45.1  +0.7
ARU                                              02 13 56.7
ARU                                              02 15 14.2
ARU                               S     S        02 18 17.3  +3.6
ARU                               SS    SnSn     02 20 26.1   0.0
ARU                               SSS   SSS      02 20 51.3
ARU                               pmax  pmax
        comp=Z,33nm,0.8s
ARU                               MLR   MLR
        comp=Z,502nm,15.0s
BOD   Bodaibo          34.74  25 eP     P        02 12 45.6  +0.6
BOD                               pmax  pmax
        comp=Z,31nm,1.5s
KSAR  Wonju Array Be   34.90  65  P     P        02 12 45.2  -1.4
KSAR                              PcP   PcP      02 15 18.9  -0.4
KSAR  Wonju Array Be   34.90  65  P     P        02 12 45.2  -1.4
KSAR                                             02 15 18.9
KSRS  Korea Array      34.93  65  P     P        02 12 44.8  -2.1
        comp=Z,2.9nm,0.8s,baz=262,slow=8.0,SNR=10
KSRS                              PcP   PcP      02 15 18.4  -0.9
        comp=Z,1.5nm,0.8s,baz=240,slow=3.7,SNR=5.3
KSRS                              LR    LR       02 28 26.0
        comp=Z,516nm,21.1s,baz=260,slow=39
        comp=Z,2.9nm,0.8s
MAK   Makhachkala      35.16 305 eP     P        02 12 43.4  -5.4
MAK                              eS     S        02 18 13.9  -7.6
MAK                              eSS    SnSn     02 20 31.8  -6.5
MAK                               pmax  pmax
        comp=Z,60nm,1.0s
MAK                               MLR   MLR
        comp=Z,658nm,15.0s
SEHB  SEOHWA           35.23  63  P     P        02 12 50.2  +0.7
BNX   BinXian          35.82  50 ⇑P     P        02 12 53.8  -0.7
BNX                               pmax  pmax
        comp=Z,73nm,1.1s
BNX                               pmax  pmax
        comp=Z,1μm,5.1s
JOW   Kunigami         36.10  83  LR    LR       02 29 54.9
        comp=Z,1μm,18.1s,baz=109,slow=40
GROC  Groznyy          36.44 305 eP     P        02 13 01.3  +1.5
GROC                             e               02 14 24.8
GROC                             eS     S        02 18 42.4  +1.3
GROC                              pmax  pmax
        comp=Z,113nm,0.8s
GNI   Garni            36.82 300  P     P        02 13 06.0  +2.7
        comp=Z,15nm,0.8s,baz=84,slow=1.7,SNR=12
        comp=Z,15nm,0.8s
GNI   Garni            36.82 300  P     P        02 13 03.7  +0.4
GNI                               IAmb  IAmb     02 13 09.7
        comp=Z,22nm,0.8s
GNI   Garni            36.82 300  P     P        02 13 06.0  +2.7
JNU   Nakatsue         37.42  72  LR    LR       02 29 52.2
        comp=Z,2μm,18.6s,baz=272,slow=39
MYLDM Lahad Datu       37.47 122  P     P        02 13 09.1  +0.3
MYLDM                             IAmb  IAmb     02 13 12.5
        comp=Z,35nm,1.2s
ZEI   Tsey             37.74 304 eP     P        02 13 12.2  +1.0
ZEI                               pmax  pmax
        comp=Z,46nm,0.8s
RAYN  Ar Rayn          37.87 272  P     P        02 13 12.7  +0.5
RAYN                              PcP   PcP      02 15 25.8  -2.7
AKH   Akhalkalaki      37.88 302 ⇓P     P        02 13 15.5  +3.2
BELG  Belogornoye      37.90 320d iP    P        02 13 12.3  +0.2
BELG                              pmax  pmax
        comp=Z,7.0nm,0.8s
GEVA  Gevas            38.02 297  P     P        02 13 12.9  -0.7
GEVA                              PcP   PcP      02 15 31.3  +2.4
NCK   Nalchik          38.07 305⇑iP     P        02 13 15.0  +1.4
NCK                               pmax  pmax
        comp=Z,80nm,0.6s
VLA   Vladivostok      38.47  56deP     P        02 13 16.4  -0.5
VLA                               pmax  pmax
        comp=Z,49nm,0.8s
ZEA   Zeya             38.47  38 eP     P        02 13 17.4  +0.6
ZEA                               pmax  pmax
        comp=N,10.0nm,1.0s
ZEA                               pmax  pmax
        comp=Z,20nm,1.0s
ZEA                               MLR   MLR
        comp=E,600nm,13.0s
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ZEA				MLR	MLR		
	comp=N,400nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
KBZ	Khabaz	38.60	305	P	P	02 13 18.9	+0.8
	comp=Z,21nm,0.8s,baz=119,slow=6.4,SNR=60						
KBZ				LR	LR	02 31 46.0	
	comp=Z,939nm,18.5s,baz=90,slow=40						
	comp=Z,21nm,0.8s						
USA0B	Ussuriysk Arra	38.69	54	deP	P	02 13 18.2	-0.7
USRK	Ussuriysk Ar.	38.69	54	P	P	02 13 17.8	-1.0
	comp=Z,9.2nm,0.8s,baz=255,slow=8.0,SNR=14						
USRK				LR	LR	02 31 23.3	
	comp=Z,611nm,19.2s,baz=245,slow=40						
	comp=Z,9.2nm,0.8s						
USRK	Ussuriysk Ar.	38.69	54	P	P	02 13 17.5	-1.3
KIV	Kislovodsk	38.78	306	P	P	02 13 19.7	-0.1
KIV				IAmb	IAmb	02 13 22.6	
	comp=Z,32nm,0.8s						
KIV	Kislovodsk	38.78	306	eP	P	02 13 20.4	+0.6
KIV				eS	S	02 19 19.1	+2.1
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV				MLR	MLR		
	comp=Z,517nm,16.0s						
CHVG	Ch'k'valeri	39.06	304	⇓P	P	02 13 24.7	+2.7
BATM	Batumi	39.25	302	⇓P	P	02 13 26.2	+2.6
KLR	Kul'dur	39.57	46	P	P	02 13 25.6	-0.6
	comp=Z,18nm,0.9s,baz=273,slow=9.5,SNR=24						
KLR				LR	LR	02 31 20.8	
	comp=Z,643nm,20.4s,baz=248,slow=39						
	comp=Z,18nm,0.9s						
KIRV	Kirov	39.91	330	P	P	02 13 29.5	+0.7
	comp=Z,73nm,0.7s,baz=132,slow=2.3,SNR=29						
	comp=Z,73nm,0.7s						
KOPT	Kop Dagi	40.06	299	P	P	02 13 29.9	-0.8
LEM	Lembang	40.12	148	LR	LR	02 33 36.0	
	comp=Z,503nm,19.0s,baz=312,slow=42						
SOC	Sochi	40.88	305	eP	P	02 13 35.6	-1.4
SOC				e		02 15 10.7	
SOC				ePPP	PPP	02 15 35.4	
SOC				eS	S	02 19 48.0	-0.1
SOC				eSS	SS	02 22 42.3	-7.1
SOC				eSSS	SSS	02 23 17.5	
SOC				pmax	pmax		
	comp=Z,27nm,1.4s						
SOC				MLR	MLR		
	comp=Z,430nm,21.0s						
NRIK	Noril'sk	40.92	0	P	P	02 13 37.3	+0.2
	comp=Z,18nm,0.7s,baz=167,slow=7.1,SNR=27						
NRIK				LR	LR	02 34 17.5	
	comp=Z,450nm,18.1s,baz=182,slow=42						
	comp=Z,18nm,0.7s						
NRIK	Noril'sk	40.92	0	P	P	02 13 36.3	-0.8
NRIK				IAmb	IAmb	02 13 39.0	
	comp=Z,32nm,0.9s						
VRH	Novokhopyorsk	40.95	317	eP	P	02 13 37.7	+0.2
VRH				pmax	pmax		
	comp=Z,100nm,0.7s						
BBKI	Banjar Baru	41.25	136	P	P	02 13 42.9	+2.5
	comp=Z,25nm,0.6s						
SMRI	Semarang	41.70	144	P	P	02 13 45.8	+1.8
SMRI	Semarang	41.70	144	P	P	02 13 47.6	+3.6
	comp=Z,113nm,1.4s						
SMRI	Semarang	41.70	144	P	P	02 13 46.8	+2.8
DAV	Davao City (W)	41.82	113	LR	LR	02 32 29.0	
	comp=Z,377nm,18.7s,baz=358,slow=38						
TOLI2	Tolitoli	41.88	125	P	P	02 13 45.8	+0.2
TOLI2	Tolitoli	41.88	125	P	P	02 13 47.5	+1.9
VORD	Divnogorie	42.38	316	eP	P	02 13 49.9	+0.7
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
VSR	Storozhevoye	42.51	316	eP	P	02 13 50.0	-0.3
VSR				pmax	pmax		
	comp=Z,50nm,0.6s						
VORR	Voronezh	42.59	317	eP	P	02 13 50.7	-0.3
VORR				pmax	pmax		
	comp=Z,90nm,0.6s						
ANN	Anapa	42.62	306	eP	P	02 13 51.2	-0.1
ANN				e		02 15 34.8	
ANN				ePPP	PPP	02 16 01.2	
ANN				eS	S	02 20 15.8	+1.9
ANN				eSSS	SSS	02 24 04.8	
ANN				pmax	pmax		
	comp=Z,35nm,0.6s						
ANN				MLR	MLR		
	comp=Z,848nm,17.0s						
GRNR	Gornyy	42.86	45	⇓iP	P	02 13 52.1	-1.1
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				MLR	MLR		
	comp=E,520nm,13.0s						
GRNR				MLR	MLR		
	comp=N,360nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,640nm,10.0s						
LPSR	Galich'ya Gora	42.99	318	eP	P	02 13 54.8	+0.6
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
JSD	Sado	43.12	64	P	P	02 13 55.1	-0.4
PRGR	Permogore	43.13	332	eP	P	02 13 54.8	-0.3
MAJO	Matsushiro	43.17	66	P	P	02 13 55.2	-0.7
MAJO	Matsushiro	43.17	66	P	P	02 13 55.2	-0.7
MAJO				pmax	pmax		
	comp=Z,18nm,1.1s						
MAJO	Matsushiro	43.17	66	P	P	02 13 56.2	+0.3
MJAR	Matsushiro Arr	43.17	66	P	P	02 13 55.3	-0.6
	comp=Z,6.1nm,0.9s,baz=281,slow=9.4,SNR=14						
MJAR				LR	LR	02 32 45.2	
	comp=Z,490nm,20.4s,baz=259,slow=38						
	comp=Z,6.1nm,0.9s						
MJAR	Matsushiro Arr	43.17	66	P	P	02 13 55.3	-0.6
YAK	Yakutsk	43.51	27	LR	LR	02 33 21.8	
	comp=Z,907nm,20.6s,baz=258,slow=38						
YAK	Yakutsk	43.51	27	⇓eP	P	02 13 58.6	+0.4
YAK				pmax	pmax		
	comp=Z,43nm,1.7s						
MOS	Moscow	44.58	322	eP	P	02 14 06.5	-0.4
MOS				e		02 15 52.7	
MOS				eS	S	02 20 45.6	+3.3
MOS				pmax	pmax		
	comp=Z,49nm,0.9s						
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
MMAI	Mount Meron Ar	44.58	289	LR	LR	02 37 35.6	
	comp=Z,464nm,19.1s,baz=246,slow=42						
JHJ	Hachijo jima 2	44.84	70	LR	LR	02 34 31.2	
	comp=Z,928nm,18.7s,baz=278,slow=38						
ATD	Arta Tunnel	44.86	257	LR	LR	02 32 25.1	
	comp=Z,341nm,20.7s,baz=76,slow=35						
SIM	Simferopol'	44.99	306	eP	P	02 14 10.5	+0.1
SIM				pmax	pmax		
	comp=Z,67nm,1.0s						
SIM				MLR	MLR		
	comp=Z,510nm,17.6s						
OBN	Obninsk	44.99	321	⇓P	P	02 14 10.6	+0.4
OBN	Obninsk	44.99	321	P	P	02 14 10.4	+0.2
OBN	Obninsk	44.99	321	d iP	P	02 14 10.0	-0.2
OBN				i		02 14 17.7	
OBN				i		02 15 52.0	
OBN				pmax	pmax		
	comp=Z,61nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,23.0s						
BR131	Keskin Array S	45.34	299	⇓eP	P	02 14 13.9	+0.5
BRTR	Keskin Array B	45.34	299	P	P	02 14 14.2	+0.8
	comp=Z,4.9nm,0.9s,baz=115,slow=7.2,SNR=22						
	comp=Z,4.9nm,0.9s						
KLMR	Klimovskoe	45.40	329	eP	P	02 14 12.1	-1.2
KLMR				e		02 15 52.3	
KLMR				pmax	pmax		
	comp=Z,40nm,0.9s						
KLMR	Klimovskoe	45.40	329	eP	P	02 14 12.2	-1.1
KLMR				AMP		02 14 15.1	
	comp=Z,40nm,0.9s						
KLMR				ePcP	PcP	02 15 52.4	-0.1
EIL	Elat	45.56	285	LR	LR	02 36 51.8	
	comp=Z,1µm,19.2s,baz=82,slow=41						
KAPI	Kappang	45.56	132	LR	LR	02 37 47.4	
	comp=Z,186nm,18.3s,baz=289,slow=42						
CSS	Mathiatis	46.02	292	P	P	02 14 18.6	-0.1
BKSI	Bulukumba	46.03	132	P	P	02 14 20.5	+1.6
	comp=Z,14nm,0.9s						
ASAJ	Asahikawa	46.29	55	P	P	02 14 18.6	-2.1
	comp=Z,6.0nm,0.5s,baz=235,slow=22,SNR=5.1						
ASAJ				LR	LR	02 34 43.1	
	comp=Z,540nm,19.1s,baz=268,slow=38						
	comp=Z,6.0nm,0.5s						
YSS	Yuzh-Sakhalins	46.49	51	P	P	02 14 21.6	-0.6
YSS	Yuzh-Sakhalins	46.49	51	c iP	P	02 14 21.8	-0.4
YSS				pmax	pmax		
	comp=Z,108nm,1.7s						
YSS	Yuzh-Sakhalins	46.49	51	P	P	02 14 22.7	+0.5
TYV	Tymovskoe	46.78	46	eP	P	02 14 24.4	0.0
TYV				pmax	pmax		
	comp=Z,24nm,1.5s						
TYV				pmax	pmax		
	comp=Z,400nm,8.0s						
TNTI	Ternate	47.04	119	P	P	02 14 26.5	-0.4
TNTI				IAmb	IAmb	02 14 28.6	
	comp=Z,18nm,0.8s						
BORA	Eskisehir	47.78	299	P	P	02 14 32.9	+0.3
BORA				IAmb	IAmb	02 14 34.3	
	comp=Z,13nm,0.7s						
PURM	Purcari	48.01	308	⇓P	P	02 14 35.1	+1.1
JCJ	Chichijima	48.11	78	LR	LR	02 35 46.5	
	comp=Z,313nm,19.1s,baz=260,slow=37						
AKASG	Malin Array Be	48.64	314	P	P	02 14 38.3	-0.5
	comp=Z,7.8nm,0.5s,baz=76,slow=7.9,SNR=87						
AKASG				PP	PP	02 16 35.9	+4.2
	comp=Z,1.8nm,0.8s,baz=79,slow=9.4,SNR=3.4						
	comp=Z,7.8nm,0.5s						
AKASG	Malin Array Be	48.64	314	i P	P	02 14 38.5	-0.3
AKASG				pmax	pmax		
	comp=Z,28nm,0.7s						
AKBB	Malin Array Si	48.64	314	d iP	P	02 14 37.9	-0.9
AKBB				pmax	pmax		
	comp=Z,41nm,0.8s						
JURR	Jurilovca	48.71	306	⇑P	P	02 14 39.9	+0.4
KIS	Kishinev	48.74	309	eP	P	02 14 38.0	-1.7
KIS	Kishinev	48.74	309	ePP	PP	02 16 35.0	+2.3
KIS				LRM	MLR	02 39 17.0	
	comp=Z,200nm,12.0s						
KIS	Kishinev	48.74	309	eP	P	02 14 38.0	-1.7
KIS				e		02 16 35.0	
KIS				MLR	MLR		
	comp=Z,200nm,12.0s						
MILM	Milestii Mici	48.75	309	eP	P	02 14 37.0	-2.7
MILM	Milestii Mici	48.75	309	ePP	PP	02 16 34.0	+1.3
MILM				eL	L	02 35 00.0	
MILM				LRM	MLR	02 39 19.0	
	comp=Z,400nm,15.5s						
MILM	Milestii Mici	48.75	309	⇑P	P	02 14 39.9	+0.2
MILM	Milestii Mici	48.75	309	eP	P	02 14 37.0	-2.7
MILM				e		02 16 34.0	
MILM				MLR	MLR		
	comp=Z,400nm,15.5s						
TLCR		48.75	307	⇓P	P	02 14 40.2	+0.5
TIXI	Tiksi	48.81	16	P	P	02 14 38.4	-1.4
TIXI				IAmb	IAmb	02 14 40.2	
	comp=Z,26nm,0.9s						
TIXI	Tiksi	48.81	16	P	P	02 14 38.4	-1.4
TIXI				pmax	pmax		
	comp=Z,26nm,0.9s						
EFOR	EFORIE	48.90	305	⇑P	P	02 14 42.0	+1.0
TPGR	Topolog	49.03	306	⇑P	P	02 14 42.7	+0.7
SORM	Soroca	49.08	310	⇑P	P	02 14 42.2	0.0
LEOM	Leova	49.13	308	⇓P	P	02 14 43.2	+0.6
VLDR	Vladesti	49.25	307	⇑P	P	02 14 44.7	+1.1
TLBR	Topalu	49.31	306	⇑P	P	02 14 44.9	+0.9
SCTR	Scanteiesti	49.32	307	⇓P	P	02 14 45.2	+1.1
HARR	Harsova	49.39	306	⇓P	P	02 14 45.1	+0.5
VASR	Vaslui	49.45	309	⇓P	P	02 14 45.7	+0.6
ICOR	Ion Corvin	49.50	305	⇓P	P	02 14 46.6	+1.1
TUDR		49.55	307	⇓P	P	02 14 47.2	+1.3
IAS	Iasi	49.60	309	⇑P	P	02 14 47.2	+0.9
EDFI	Ende, Flores	49.62	133	P	P	02 14 45.3	-1.6
GHRR		49.72	308	⇑P	P	02 14 48.8	+1.6
MNK	Minsk	49.81	319	i P	P	02 14 48.3	+0.6
MNK				i		02 16 08.7	
MNK				i		02 16 43.1	
MNK				i PPP	PPP	02 17 36.7	
MNK				i S	S	02 21 57.8	+0.9
MNK				i SSS	SSS	02 26 54.8	
MNK				pmax	pmax		
	comp=Z,75nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				MLR	MLR		
	comp=Z,389nm,17.0s						
MNK				MLR	MLR		
	comp=E,89nm,20.0s						
MNK				MLR	MLR		
	comp=N,213nm,15.0s						
MNK	Minsk	49.81	319	i P	P	02 14 48.3	+0.6
	comp=E,9.0nm,0.9s						
MNK				i P	P	02 14 48.3	+0.6
	comp=N,13nm,0.9s						
MNK				i P	P	02 14 48.3	+0.6
	comp=Z,75nm,0.8s,baz=276						
MNK				i PP	PP	02 16 43.2	+0.9
MNK				i PPP	PPP	02 17 36.7	
MNK				i S	S	02 21 57.8	+0.9
MNK				i SS	SS	02 25 33.1	+3.9
MNK				i SSS	SSS	02 26 54.8	
MNK				i LQ	LQ	02 33 06.7	
MNK				i LR	LR	02 35 19.5	
MNK				i LRM	MLR	02 38 18.8	
	comp=E,89nm,20.4s						
MNK				i LRM	MLR	02 38 18.8	
	comp=Z,389nm,17.0s						
MNK				i LRM	MLR	02 38 20.1	
	comp=N,213nm,15.3s						
MMRI	Maumere	49.89	132	P	P	02 14 48.1	-0.8
MMRI				IAmb	IAmb	02 14 52.2	
	comp=Z,22nm,0.7s						
MMRI	Maumere	49.89	132	P	P	02 14 51.4	+2.6
	comp=Z,31nm,0.9s						
MMRI	Maumere	49.89	132	P	P	02 14 48.3	-0.5
PANC	Panciu	49.91	308	⇑P	P	02 14 50.1	+1.5
ODBI	Odobesti	49.97	307	⇓P	P	02 14 50.9	+1.8
LEHL	Lehliu	50.19	306	⇑P	P	02 14 52.6	+1.8
LVZ	Lovozero	50.19	337	P	P	02 14 49.7	-0.8
LVZ				IAmb	IAmb	02 14 51.8	
	comp=Z,30nm,0.9s						
LVZ	Lovozero	50.19	337	⇓eP	P	02 14 50.8	+0.3
LVZ				pmax	pmax		
	comp=Z,40nm,1.0s						
VRI	Vrincioaia	50.20	308	⇓P	P	02 14 52.3	+1.4
TESR	Tescani	50.24	308	⇓P	P	02 14 51.8	+0.6
PLOR	Plostina	50.25	308	⇓P	P	02 14 52.8	+1.5
ISR	Istrita	50.35	307	⇑P	P	02 14 53.9	+1.7
RAZG	Razgrad	50.47	305	⇓P	P	02 14 53.9	+1.0
NACGM	Naroch	50.49	319	⇓eP	P	02 14 54.1	+1.2
	baz=96						
NEHR	Nehoiu	50.52	307	⇑P	P	02 14 55.0	+1.7
IDID	Didziasalis	50.56	320	eP	P	02 14 53.7	+0.3
COVR	Voineasa-Covas	50.56	308	⇓P	P	02 14 54.7	+1.0
SULR		50.58	306	⇓P	P	02 14 55.2	+1.5
BIZ	Bicaz	50.60	309	⇓P	P	02 14 54.6	+0.8
MLR	Muntele Rosu	50.76	307	⇓P	P	02 14 56.9	+1.7
MLR	Muntele Rosu	50.76	307	P	P	02 14 55.6	+0.3
MLR	Muntele Rosu	50.76	307	P	P	02 14 55.6	+0.3
MLR				pmax	pmax		
	comp=Z,81nm,0.8s						
SGRR	Singureni	50.81	305	⇑P	P	02 14 56.7	+1.3
OZUR		50.85	308	⇑P	P	02 14 56.4	+0.6
IIGN	Ignalina	50.86	320	eP	P	02 14 55.9	+0.3
ISAL	Salakas	50.94	320	eP	P	02 14 56.5	+0.3
VSU	Vasula	50.97	324	d iP	P	02 14 56.2	-0.2
VSU				pmax	pmax		
	comp=Z,103nm,1.3s						
VSU	Vasula	50.97	324	eP	P	02 14 56.5	+0.1
ALN	Alexandroupoli	51.04	301	IAmb	IAmb	02 15 00.2	
	comp=Z,37nm,1.0s						
DOPR	Dopca	51.13	308	⇓P	P	02 14 59.0	+1.1
BURAR	Bucovina Array	51.19	310	⇓P	P	02 14 59.1	+0.7
BURAR	Bucovina Array	51.19	310	IAmb	IAmb	02 15 00.8	
	comp=Z,15nm,0.8s						
VOIR		51.39	307	⇓P	P	02 15 00.1	+0.1
RDO	Rodhopi	51.39	302	IAmb	IAmb	02 15 06.2	
	comp=Z,34nm,1.1s						
ARCR	ARCALIA	51.80	309	⇓P	P	02 15 04.2	+1.4
FIA1	FINESS Array S	51.80	328	P	P	02 15 02.2	-0.4
FIA1				IAmb	IAmb	02 15 04.1	
	comp=Z,16nm,0.6s						
FINES	FINESS Array B	51.80	328	P	P	02 15 02.8	+0.2
	comp=Z,11nm,0.5s,baz=107,slow=7.7,SNR=183						
FINES				LR	LR	02 40 01.0	
	comp=Z,2µm,21.9s,baz=107,slow=40						
	comp=Z,11nm,0.5s						
LVV	L'vov	51.94	313	eP	P	02 15 02.8	-1.1
LVV				eS	S	02 22 19.0	-7.6
LVV				pmax	pmax		
	comp=Z,70nm,1.3s						
LVV				MLR	MLR		
	comp=Z,400nm,16.0s						
BATI	Baumata	51.99	132	P	P	02 15 04.5	-0.2
	comp=Z,18nm,0.5s,baz=296,slow=16,SNR=3.9						
	comp=Z,18nm,0.5s						
SOEI	Soe	52.05	131	P	P	02 15 09.1	+3.9
	comp=Z,59nm,0.8s						
SOEI	Soe	52.05	131	P	P	02 15 08.8	+3.6
PABE	Paberze	52.15	320	eP	P	02 15 05.9	+0.6
VSVD	Vaisvydziai	52.21	320	eP	P	02 15 05.7	0.0
LOT	Lotru	52.29	307	⇑P	P	02 15 07.3	+0.6
CJR	Cluj-Napoca	52.33	309	⇓P	P	02 15 08.2	+1.3
CBBR	Cluj-Babes-Bol	52.36	309	⇑P	P	02 15 08.7	+1.6
MEF	Metsahovi	52.41	326	eP	P	02 15 07.5	+0.4
MA2	Magadan	52.48	35	P	P	02 15 06.8	-0.9
	comp=Z,24nm,0.8s,baz=274,slow=6.4,SNR=5.0						
MA2				LR	LR	02 39 01.0	
	comp=Z,744nm,20.4s,baz=261,slow=38						
	comp=Z,24nm,0.8s						
MA2	Magadan	52.48	35	⇑eP	P	02 15 07.0	-0.7
MA2				pmax	pmax		
	comp=Z,71nm,1.3s						
MTSE	Matsula	52.52	324	⇓eP	P	02 15 08.3	+0.3
SUW	Suwalki	52.53	318	eP	P	02 15 07.7	-0.4
SUW	Suwalki	52.53	318	eP	P	02 15 08.0	-0.2
MESR	Meseseni	52.75	309	⇑P	P	02 15 10.7	+0.8
KWP	Kalwaria Pacla	52.80	312	eP	P	02 15 10.6	+0.3
DEV	Deva	52.87	308	⇓P	P	02 15 11.9	+1.2
DRGR		52.93	309	⇓P	P	02 15 12.2	+0.8
VTS	Vitosha	52.94	304	⇓P	P	02 15 12.5	+0.9
VTS	Vitosha	52.94	304	IAmb	IAmb	02 15 14.8	
	comp=Z,26nm,0.9s						
GZR	Gura Zlata	52.99	307	⇑P	P	02 15 12.3	+0.5
KOLS	Kolonicke sedl	53.11	312	eP	P	02 15 13.0	+0.4
KOLS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KOLS	Kolonicke sedl	53.11	312	eP	P	02 15 13.0	+0.4
UZH	Uzhgorod	53.11	311	eP	P	02 15 12.6	+0.1
UZH				e		02 15 16.7	
FAKI	Fak Fak	53.14	118	P	P	02 15 12.1	-1.1
FAKI				IAmb	IAmb	02 15 14.0	
	comp=Z,26nm,1.0s						
BLKB	Belogradchik	53.23	305	⇓P	P	02 15 14.5	+0.9
PBUR	Paburge	53.33	320	eP	P	02 15 13.8	-0.2
KEV	Kevo	53.45	338	P	P	02 15 14.3	-0.4
KEV				IAmb	IAmb	02 15 19.1	
	comp=Z,16nm,0.7s						
KEV	Kevo	53.45	338	P	P	02 15 14.3	-0.4
KEV				pmax	pmax		
	comp=Z,17nm,0.7s						
LTVH	Ltavrtes, Hu	53.45	310	P	P	02 15 16.8	+1.8
VAY	Valandovo	53.59	302	eP	P	02 15 17.4	+1.2
CRVS	Cervenica-Dubn	53.65	312	eP	P	02 15 18.2	+1.7
CRVS				pmax	pmax		
	comp=Z,76nm,2.1s						
CRVS	Cervenica-Dubn	53.65	312	eP	P	02 15 18.2	+1.7
SEY	Seymchan	53.70	31	LR	LR	02 39 44.8	
	comp=Z,823nm,19.2s,baz=254,slow=38						
SEY	Seymchan	53.70	31	⇑eP	P	02 15 15.8	-0.9
SEY				pmax	pmax		
	comp=Z,18nm,1.0s						
RAF	Rauma	53.80	327	eP	P	02 15 18.2	+0.8
ARA0	ARCESS Array S	53.89	337	eP	P	02 15 18.2	+0.3
ARCES	ARCESS Array B	53.89	337	P	P	02 15 18.2	+0.3
	comp=Z,16nm,0.7s,baz=111,slow=7.7,SNR=61						
	comp=Z,16nm,0.7s						
ARCES	ARCESS Array B	53.89	337	P	P	02 15 18.2	+0.3
BEL	Belsk	53.96	315	eP	P	02 15 19.1	+0.3
SKO	Skopje	54.34	303	i P	P	02 15 22.1	+0.4
KTK1	Kautokeino	54.53	337	eP	P	02 15 22.6	0.0
FNA	Florina	54.56	302	IAmb	IAmb	02 15 34.3	
	comp=Z,18nm,1.0s						
AAL	Aland	54.59	326	eP	P	02 15 24.4	+1.2
OJC	Ojcow	54.66	313	eP	P	02 15 23.6	-0.2
OJC	Ojcow	54.66	313	IAmb	IAmb	02 15 25.3	
	comp=Z,19nm,0.7s						
PSZ	Piszkesteto	54.76	310	IAmb	IAmb	02 15 26.9	
	comp=Z,14nm,0.9s						
PSZ	Piszkesteto	54.76	310	P	P	02 15 25.4	+0.7
PSZ				PP	pP	02 15 28.9	-1.5
HAMF	Hammerfest	54.78	339	eP	P	02 15 24.9	+0.5
LANS	Liptovska Anna	54.94	312	eP	P	02 15 27.1	+1.1
LANS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LANS	Liptovska Anna	54.94	312	eP	P	02 15 27.1	+1.1
OHR	Ohrid	54.95	302	i P	P	02 15 28.2	+2.1
FRGS	Fruska Gora	55.10	307	eP	P	02 15 27.3	+0.1
DIVS	Divibare	55.10	306	IAmb	IAmb	02 15 34.1	
	comp=Z,16nm,0.9s						
DIVS	Divibare	55.10	306	eP	P	02 15 27.1	-0.2
SJES	Sjenica	55.23	305	eP	P	02 15 28.6	+0.3
BUD	Budapest	55.38	310	P	P	02 15 30.9	+1.7
VYHS	Vyhne	55.41	311	eP	P	02 15 29.7	+0.3
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	Vyhne	55.41	311	eP	P	02 15 29.7	+0.3
BBLS	Lazići	55.56	306	eP	P	02 15 30.2	-0.3
JETT	Jettan, Norway	55.63	337	eP	P	02 15 31.0	+0.4
KOLL	Kolacno	55.69	311	eP	P	02 15 31.8	+0.5
OKC	Ostrava-Krasne	55.75	313	eP	P	02 15 32.1	+0.4
OKC	Ostrava-Krasne	55.75	313	eP	P	02 15 32.1	+0.4
UPP	Uppsala	55.77	325	eP	P	02 15 31.5	-0.1
SRO2	Moca	55.78	310	eP	P	02 15 31.9	-0.1
SRO2				pmax	pmax		
	comp=Z,28nm,0.8s						
SRO2	Moca	55.78	310	eP	P	02 15 31.9	-0.1
MORH	Mrgy, Hungar	55.78	308	eP	P	02 15 31.8	-0.2
MORH	Mrgy, Hungar	55.78	308	P	P	02 15 31.8	-0.2
SRO	Srobarova	55.83	310	eP	P	02 15 33.5	+1.1
SRO				pmax	pmax		
	comp=Z,21nm,0.8s						
SRO	Srobarova	55.83	310	eP	P	02 15 33.4	+1.1
PDG	Podgorica	55.88	304	eP	P	02 15 31.8	-0.9
DRME	Dracevica, Mon	55.97	304	eP	P	02 15 32.8	-0.6
MAUC	Maruska	55.99	312	eP	P	02 15 34.2	+0.6
GKP	Gorka Klasztor	56.07	317	eP	P	02 15 33.2	-0.7
GKP	Gorka Klasztor	56.07	317	eP	P	02 15 34.2	+0.2
MORC	Moravsky Berou	56.14	313	IAmb	IAmb	02 15 36.8	
	comp=Z,22nm,0.9s						
MORC	Moravsky Berou	56.14	313	eP	P	02 15 34.9	+0.3
JAVC	Velka Javorina	56.15	312	eP	P	02 15 35.6	+0.9
TRO	Tromso	56.16	337	eP	P	02 15 34.4	+0.1
VIKU	Vikbolandet	56.23	323	eP	P	02 15 35.2	+0.3
KMBO	Kilima Mbogo	56.32	247	P	P	02 15 37.2	+0.7
	comp=Z,5.3nm,0.8s,baz=33,slow=11,SNR=7.7						
KMBO				LR	LR	02 39 01.1	
	comp=Z,433nm,20.4s,baz=70,slow=35						
	comp=Z,5.3nm,0.8s						
KMBO	Kilima Mbogo	56.32	247	P	P	02 15 37.6	+1.0
KMBO	Kilima Mbogo	56.32	247	i P	P	02 15 38.0	+1.4
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRY	Bratogost	56.32	305	eP	P	02 15 36.1	0.0
SMOL	Smolenice	56.34	311	eP	P	02 15 36.5	+0.5
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SMOL	Smolenice	56.34	311	eP	P	02 15 36.5	+0.5
MPLH	Magyarpolny	56.42	310	P	P	02 15 36.8	+0.2
MPLH				PP	pP	02 15 40.4	-1.8
HCY	Herceg Novi	56.43	304	eP	P	02 15 36.4	-0.3
MODS	Modra-Piesok	56.46	311	eP	P	02 15 37.1	+0.2
MODS				pmax	pmax		
	comp=Z,136nm,2.4s						
MODS	Modra-Piesok	56.46	311	eP	P	02 15 37.1	+0.2
TREB	Trebinje	56.49	304	eP	P	02 15 37.2	0.0
EGYH	Egyhazaskeszo	56.53	310	P	P	02 15 38.0	+0.6
EGYH				PP	pP	02 15 41.0	-2.0
ZST	Bratislava	56.59	311	eP	P	02 15 38.7	+0.9
ZST				pmax	pmax		
	comp=Z,31nm,0.9s						
ZST	Bratislava	56.59	311	eP	P	02 15 38.7	+0.9
KRLC	Kraliky	56.60	313	eP	P	02 15 37.8	-0.1
KRLC	Kraliky	56.60	313	eP	P	02 15 37.8	-0.1
VRAC	Vranov	56.80	312	eP	P	02 15 39.9	+0.6
KSP	Ksiaz	56.84	314	eP	P	02 15 39.7	+0.2
DPC	Dobruska-Polom	56.87	314	eP	P	02 15 40.1	+0.3

DPC	Dobruska-Polom	56.87	314	*e*P	P	02 15 40.1	+0.3
OSTC	Ostas	56.92	314	*e*P	P	02 15 40.2	+0.1
KRUC	Moravsky	56.96	312	*e*P	P	02 15 40.8	+0.4
BLY	Banja Luka	57.00	307	*e*P	P	02 15 41.0	+0.2
CHVC	Chvalec	57.02	314	*e*P	P	02 15 41.1	+0.3
SOP	Sopron	57.02	310	P	P	02 15 41.2	+0.4
UPC	Upice	57.05	314	*e*P	P	02 15 42.5	+1.5
UPC	Upice	57.05	314	*e*P	P	02 15 42.5	+1.5
BJO1	Bjornoya	57.08	343	*e*P	P	02 15 40.8	0.0
SRKY	Kupres RS	57.12	306	*e*P	P	02 15 40.0	-1.8
MGRS	Mrkonjic Grad	57.13	307	*e*P	P	02 15 42.0	+0.3
RONA	Rosalia, Austr	57.19	310	*e*P	P	02 15 42.3	+0.1
	SNR=6.9						
FAUS	Fauske	57.22	334	*e*P	P	02 15 42.0	+0.1
STEI	Steigen	57.28	335	*e*P	P	02 15 42.8	+0.5
BSD	Bornholm Skovb	57.32	319	*e*P	P	02 15 41.8	-1.0
KOGS	Kog	57.40	309	*i* P	P	02 15 43.5	0.0
CONA	Conrad Observa	57.45	311	*e*P	P	02 15 44.4	+0.4
	comp=Z,9.2nm,0.6s,SNR=20						
MOR8	Moi Rana	57.47	333	*e*P	P	02 15 42.8	-1.0
TREC	Trest	57.52	312	*e*P	P	02 15 44.8	+0.4
TREC	Trest	57.52	312	*e*P	P	02 15 44.8	+0.4
HFS	Hagfors	57.74	325	P	P	02 15 45.2	-0.5
	comp=Z,5.4nm,0.7s,baz=108,slow=28,SNR=38						
	comp=Z,5.4nm,0.7s						
ARSA	Arzberg	57.77	310	*e*P	P	02 15 46.5	+0.3
	comp=Z,4.3nm,0.6s						
DEL	Delary	57.82	321	*e*P	P	02 15 45.6	-0.7
PVCC	Panska Ves	57.96	314	*e*P	P	02 15 48.1	+0.7
PVCC	Panska Ves	57.96	314	*e*P	P	02 15 48.1	+0.7
KONS	Konsvik	58.02	333	*e*P	P	02 15 47.4	-0.2
CRES	Cresnjev	58.04	308	*e*P	P	02 15 48.2	+0.1
CRES	Cresnjev	58.04	308	*e*P	P	02 15 48.4	+0.3
PRU	Pruhonice	58.05	313	*e*P	P	02 15 48.6	+0.6
PRU	Pruhonice	58.05	313	*e*P	P	02 15 48.6	+0.6
STOK	Stokkvaagen	58.05	333	*e*P	P	02 15 47.7	-0.1
PERS	Pernice	58.14	309	*i* P	P	02 15 49.0	+0.2
SOKA	Soboth	58.19	309	*e*P	P	02 15 49.6	+0.3
	comp=Z,8.9nm,0.6s,SNR=19						
BRG	Berggiesshubel	58.32	314	*e*P	P	02 15 50.1	+0.2
BRG				Amp		02 15 52.0	
	comp=Z,26nm,1.1s						
BRG				*e*x	x	02 16 22.2	
BRG				Amp		02 16 25.9	
	comp=Z,6.1nm,0.9s						
BRG				Amp		02 26 25.0	
	comp=Z,1.1nm,15.7s						
BRG				Amp		02 26 29.0	
	comp=E,0.7nm,18.0s						
BRG				Amp		02 26 36.0	
	comp=N,0.6nm,15.3s						
BRG	Berggiesshubel	58.32	314	*e*P	P	02 15 50.1	+0.2
BRG				pmax	pmax		
	comp=Z,26nm,1.1s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIP	Timpagrande	58.35	301	IAmb	IAmb	02 15 53.9	
	comp=Z,33nm,1.1s						
MBWA	Marble Bar	58.35	144	P	P	02 15 50.6	+0.2
MBWA	Marble Bar	58.35	144	P	P	02 15 52.1	+1.7
CKRC	Cesky Krumlov	58.36	312	*e*P	P	02 15 50.6	+0.4
HSPB	Hornsund (broa	58.43	345	*e*P	P	02 15 50.7	+0.4
NSS	Namsos	58.47	331	*e*P	P	02 15 50.5	-0.2
SPB2	Spitsbergen Ar	58.49	347	P	P	02 15 51.1	+0.5
SPB2				IAmb	IAmb	02 15 57.2	
	comp=Z,19nm,0.8s						
SPA0	Spitsbergen Ar	58.49	347	*e*P	P	02 15 50.8	+0.1
MOA	Molln	58.53	311	*e*P	P	02 15 51.4	-0.1
	comp=Z,9.7nm,0.6s,SNR=12						
OBKA	Obir	58.55	309	*e*P	P	02 15 52.1	+0.4
	comp=Z,7.4nm,0.8s,SNR=6.2						
LJU	Ljubljana	58.64	309	*e*P	P	02 15 52.4	+0.1
GEC2	GERESS Array S	58.75	312	IAmb	IAmb	02 15 55.0	
	comp=Z,20nm,0.8s						
GERES	GERESS Array B	58.75	312	P	P	02 15 53.4	+0.3
	comp=Z,13nm,0.8s,baz=78,slow=7.0,SNR=115						
	comp=Z,13nm,0.8s						
GERES	GERESS Array B	58.75	312	P	P	02 15 53.1	+0.1
PSA00	Pilbara Seismi	58.76	144	P	P	02 15 53.4	+0.2
PSA00	Pilbara Seismi	58.76	144	P	P	02 15 55.0	+1.8
CEY	Cerknica	58.76	308	*e*P	P	02 15 53.3	+0.2
NC602	NORSAR Array S	58.78	326	*e*P	P	02 15 52.8	-0.2
KHC	Kasperske Hory	58.79	312	IAmb	IAmb	02 15 55.3	
	comp=Z,17nm,0.8s						
KHC	Kasperske Hory	58.79	312	*e*P	P	02 15 53.1	-0.2
KHC	Kasperske Hory	58.79	312	*e*P	P	02 15 53.1	-0.2
CLL	Collm	58.85	315	*i* P	P	02 15 52.8	-0.8
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL				MLR	MLR		
	comp=Z,500nm,19.7s						
CLL	Collm	58.85	315	*i* P	P	02 15 52.8	-0.8
	comp=Z,11nm,0.9s						
CLL				*e*x	x	02 16 00.0	
CLL				*e*PP	PP	02 18 01.0	-2.4
CLL				LmV		02 43 00.0	
	comp=Z,500nm,19.7s						
NB2	NORSAR Subarra	58.93	327	P	P	02 15 53.1	-0.9
	comp=Z,112nm,2.0s,baz=86,slow=6.9						
NB2	NORSAR Subarra	58.93	327	P	P	02 15 53.1	-0.9
	baz=86,slow=6.9						
NOA	NORSAR Array B	58.93	327	P	P	02 15 53.2	-0.8
	comp=Z,9.3nm,0.7s,baz=87,slow=6.9,SNR=45						
NOA				PP	PP	02 17 58.1	-5.9
	comp=Z,2.5nm,0.9s,baz=90,slow=9.6,SNR=3.9						
	comp=Z,9.3nm,0.7s						
BIOA	Bad Ischl, Aus	58.97	311	*e*P	P	02 15 54.4	-0.2
	SNR=7.1						
SKDS	Skadanscina	59.08	308	*e*P	P	02 15 54.7	-0.7
NAO01	NORSAR Array S	59.10	326	IAmb	IAmb	02 15 58.5	
	comp=Z,21nm,0.9s						
MYKA	Terra Mystica	59.15	310	*e*P	P	02 15 58.1	+2.2
	comp=Z,3.3nm,0.4s						
OSL	Oslo	59.24	325	*e*P	P	02 15 56.1	0.0
TBLU	Trondheim	59.26	329	*e*P	P	02 15 55.8	-0.5
KBA	Koelnbreinsper	59.27	310	*e*P	P	02 15 56.6	-0.2
	comp=Z,1.1nm,0.2s						
NKC	Novy Kostel	59.35	314	*e*P	P	02 15 57.7	+0.6
NKC	Novy Kostel	59.35	314	*e*P	P	02 15 57.7	+0.6
KNRA	Kununurra	59.36	132	P	P	02 15 57.5	0.0
KNRA				IAmb	IAmb	02 15 58.4	
	comp=Z,17nm,0.9s						
KNRA	Kununurra	59.36	132	P	P	02 15 58.6	+1.1
KBS	Kingsbay	59.49	347	*e*P	P	02 15 57.5	-0.1
PAOL	Paolisi	59.59	303	IAmb	IAmb	02 16 02.4	
	comp=Z,10nm,0.9s						
BILL	Bilibino	59.79	25	P	P	02 15 59.2	-0.7
BILL				IAmb	IAmb	02 16 00.9	
	comp=Z,9.9nm,0.9s						
BILL	Bilibino	59.79	25	*i* P	P	02 15 57.8	-2.0
BILL				pmax	pmax		
	comp=Z,12nm,0.9s						
BILL				MLR	MLR		
	comp=Z,418nm,16.0s						
KONO	Kongsberg	59.83	325	*ce*P	P	02 16 02.0	+1.8
KONO				pmax	pmax		
	comp=Z,22nm,1.3s						
KONO	Kongsberg	59.83	325	*e*P	P	02 16 00.5	+0.3
STAL	STALIGIAL	59.85	309	IAmb	IAmb	02 16 04.9	
	comp=Z,21nm,0.8s						
DOMB	Dombas	59.89	328	*e*P	P	02 15 59.9	-0.8
ABTA	Abfaltersbach	59.89	310	*e*P	P	02 16 00.6	-0.4
	comp=Z,3.3nm,0.6s						
GRA1	Grafenberg Arr	60.22	313	IAmb	IAmb	02 16 11.4	
	comp=Z,10nm,0.9s						
GRFO	Grafenberg	60.22	313	P	P	02 16 03.6	+0.5
GRFO				IAmb	IAmb	02 16 10.5	
	comp=Z,10nm,0.9s						
GRFO	Grafenberg	60.22	313	P	P	02 16 03.6	+0.5
GRFO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SKAR	Skarslia	60.38	326	*e*P	P	02 16 03.6	-0.4
WTTA	Wattenberg	60.38	311	*e*P	P	02 16 03.6	-0.9
	comp=Z,7.9nm,0.7s,SNR=11						
WATA	Walderalm	60.41	311	*e*P	P	02 16 03.8	-0.9
	comp=Z,7.2nm,0.6s,SNR=12						
MOL	Molde	60.55	328	*e*P	P	02 16 05.1	+0.1
CTI	Castel Tesino	60.61	309	P	P	02 16 05.3	-0.7
CTI				IAmb	IAmb	02 16 07.0	
	comp=Z,13nm,0.7s						
CTI	Castel Tesino	60.61	309	P	P	02 16 05.3	-0.7
CTI				pmax	pmax		
	comp=Z,13nm,0.7s						
SQTA	Sankt Quirin	60.68	311	*e*P	P	02 16 05.6	-0.8
	comp=Z,12nm,0.6s,SNR=12						
MOTA	Moosalm	60.72	311	*e*P	P	02 16 06.0	-0.8
	comp=Z,13nm,0.7s,SNR=16						
OPO	Ambohidratompo	60.82	225	LR	LR	02 39 14.1	
	comp=Z,601nm,18.2s,baz=173,slow=33						
AKN	Aaknes	60.84	328	*e*P	P	02 16 08.0	+0.9
RETA	Reutte	60.92	311	*e*P	P	02 16 07.5	-0.5
	comp=Z,7.5nm,0.5s,SNR=12						
FETA	Feichten	61.04	310	*e*P	P	02 16 08.2	-0.7
	comp=Z,7.1nm,0.6s,SNR=11						
SNART	Snartemo	61.22	324	*e*P	P	02 16 10.1	+0.4
HYA	Hoyanger	61.35	327	*e*P	P	02 16 10.5	-0.1
MBAR	Mbarara	61.41	252	LR	LR	02 41 02.9	
	comp=Z,322nm,20.7s,baz=42,slow=34						
CLTB	Caltabellotta	61.44	299	IAmb	IAmb	02 16 31.3	
	comp=Z,23nm,1.1s						
DAVA	Damuels	61.55	311	*e*P	P	02 16 11.7	-0.6
	comp=Z,23nm,1.0s,SNR=24						
BER	Bergen	61.87	326	*e*P	P	02 16 14.7	+0.7
VLC	Villacollemand	61.89	307	IAmb	IAmb	02 16 21.0	
	comp=Z,20nm,0.9s						
TUE	Stuetta	62.08	310	P	P	02 16 15.2	-0.8
TUE				IAmb	IAmb	02 16 21.0	
	comp=Z,17nm,0.8s						
ECH	Echery	63.14	312	IAmb	IAmb	02 16 24.2	
	comp=Z,9.8nm,1.1s						
BTNL	Ternell	63.25	315	*d*P	P	02 16 23.5	-0.1
	comp=Z,9.1nm,0.9s						
MEM	Membach	63.32	315	*d*P	P	02 16 24.5	+0.5
	comp=Z,8.3nm,0.9s						
BHOU	Houvegnez	63.38	315	*d*P	P	02 16 25.3	+0.9
	comp=Z,6.5nm,1.1s						
WLF	Walferdange	63.45	314	*d*P	P	02 16 25.5	+0.7
	comp=Z,15nm,0.9s						
SENIN	Lac Senin/Sane	63.49	310	IAmb	IAmb	02 16 26.9	
	comp=Z,23nm,1.1s						
BCLA	Clavier	63.80	315	*d*P	P	02 16 28.3	+1.1
VSL	Villasalto	63.81	302	P	P	02 16 27.3	-0.1
VSL				IAmb	IAmb	02 16 29.4	
	comp=Z,19nm,1.1s						
RCHB	Rochefort	63.91	315	*d*P	P	02 16 28.2	+0.4
	comp=Z,5.1nm,1.1s						
BGES	Gesves	63.95	315	*d*P	P	02 16 29.1	+1.0
NOR	Nord	64.08	351	*i* P	P	02 16 26.8	-1.7
NOR				IAmb	IAmb	02 16 28.6	
	comp=Z,7.4nm,0.8s						
NOR				IVmB_BB		02 16 29.8	
	comp=Z,470nm,4.5s						
BMRD	Maredsous	64.17	315	*d*P	P	02 16 29.5	0.0
	comp=Z,4.7nm,1.0s						
BNI	Bardonecchia	64.24	309	IAmb	IAmb	02 16 39.7	
	comp=Z,12nm,0.8s						
DOU	Dourbes	64.32	315	*d*P	P	02 16 30.8	+0.3
SNF	Seneffe	64.42	315	*d*P	P	02 16 31.8	+0.7
	comp=Z,11nm,0.9s						
KEST	Kesra	64.94	299	P	P	02 16 35.6	+0.6
	comp=Z,26nm,0.9s,baz=323,slow=4.0,SNR=25						
	comp=Z,26nm,0.9s						
SSB	Saint Sauveur	65.63	310	P	P	02 16 39.3	0.0
SSB				IAmb	IAmb	02 16 40.7	
	comp=Z,14nm,1.0s						
SSB	Saint Sauveur	65.63	310	P	P	02 16 39.3	0.0
SSB				pmax	pmax		
	comp=Z,14nm,1.0s						
WB0	Warramunga Arr	66.01	131	IAmb	IAmb	02 16 43.0	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	66.09	131	P	P	02 16 42.4	0.0
	comp=Z,4.4nm,0.5s,baz=326,slow=6.5,SNR=32						
	comp=Z,4.4nm,0.5s						
WRAB	Tennant Creek	66.09	131	*ce*P	P	02 16 41.2	-1.2
WRAB				pmax	pmax		
	comp=Z,18nm,1.3s						
WRAB	Tennant Creek	66.09	131	P	P	02 16 43.4	+1.0
WB2	Warramunga Arr	66.10	131	P	P	02 16 42.4	-0.1
WB2				IAmb	IAmb	02 16 43.9	
	comp=Z,20nm,1.1s						
DAG	Danmarks Havn	66.11	346	*i* P	P	02 16 41.0	-0.7
DAG				IAmb	IAmb	02 16 42.9	
	comp=Z,16nm,1.0s						
WRKA	Warakurna	66.13	140	P	P	02 16 44.4	+1.8
MCD	Coleburn Disti	66.82	324	*e*P	P	02 16 46.3	-0.2
EDMD	Edmundbyers	66.92	321	*e*P	P	02 16 47.0	-0.3
ESY	Stoneypath	66.96	322	*e*P	P	02 16 47.2	-0.3
HPK	Haverah Park	66.99	320	*e*P	P	02 16 47.7	0.0
HPK				IAmb	IAmb	02 16 49.5	
	comp=Z,25nm,0.9s						
EBL	Broad Law	67.24	322	*e*P	P	02 16 49.4	+0.1
EDI	Edinburgh	67.27	322	*e*P	P	02 16 49.3	-0.2
EDI				IAmb	IAmb	02 16 51.2	
	comp=Z,39nm,0.9s						
DBG	Daneborg	67.46	344	*i* P	P	02 16 49.3	-1.1
DBG				IVmB_BB		02 16 51.0	
	comp=Z,298nm,2.1s						
ESK	Eskdalemuir	67.46	322	*e*P	P	02 16 51.2	+0.6
ESK				IAmb	IAmb	02 16 52.0	
	comp=Z,21nm,0.9s						
ESK	Eskdalemuir	67.46	322	P	P	02 16 51.3	+0.6
ESK	Eskdalemuir	67.46	322	P	P	02 16 51.3	+0.6
ESK				pmax	pmax		
	comp=Z,20nm,0.9s						
KESW	Keswick, Cumbr	67.63	321	*e*P	P	02 16 51.7	-0.1
KESW				IAmb	IAmb	02 16 53.7	
	comp=Z,26nm,0.8s						
KAC	Achnashellach	67.90	324	*e*P	P	02 16 53.0	-0.4
STRD	Stroud	67.96	318	*e*P	P	02 16 53.1	-0.8
STRD				IAmb	IAmb	02 16 55.3	
	comp=Z,29nm,0.8s						
PGBU	Glenifferbraes	68.00	323	*e*P	P	02 16 54.0	0.0
PGBU				IAmb	IAmb	02 16 56.0	
	comp=Z,33nm,0.9s						
KPL	Plockton	68.13	324	*e*P	P	02 16 54.6	-0.2
HLM1	Long Mynd	68.15	319	*e*P	P	02 16 55.6	+0.5
HLM1				IAmb	IAmb	02 16 56.7	
	comp=Z,14nm,0.9s						
FOEL	Foel Wylfa	68.21	319	*e*P	P	02 16 55.8	+0.3
LAWE	Loch Awe, Argy	68.34	323	*e*P	P	02 16 56.0	-0.2
MCH1	Michaelchurch	68.38	318	*e*P	P	02 16 56.9	+0.4
AS31	Alice Springs	68.48	134	P	P	02 16 57.9	+0.4
ASAR	Alice Springs	68.48	134	P	P	02 16 57.5	0.0
	comp=Z,14nm,1.0s,baz=319,slow=6.2,SNR=22						
	comp=Z,14nm,1.0s						
SCO	Scoresbysund	69.63	340	P	P	02 17 04.7	+0.8
SCO				IAmb	IAmb	02 17 06.6	
	comp=Z,15nm,1.0s						
SCO	Scoresbysund	69.63	340	P	P	02 17 04.7	+0.8
SCO				pmax	pmax		
	comp=Z,15nm,1.0s						
SCO	Scoresbysund	69.63	340	*i* P	P	02 17 04.7	+0.8
SCO				IAmb	IAmb	02 17 06.1	
	comp=Z,4.6nm,0.9s						
SCO				IVmB_BB		02 17 06.5	
	comp=Z,500nm,5.7s						
QIS	Mount Isa	70.09	128	P	P	02 17 09.3	+1.8
EUNU	Eureka	71.67	359	IAmb	IAmb	02 17 18.1	
	comp=Z,24nm,0.9s						
LSZ	Lusaka	71.91	241	LR	LR	02 45 55.7	
	comp=Z,314nm,22.0s,baz=66,slow=33						
LSZ	Lusaka	71.91	241	P	P	02 17 18.6	-0.2
LSZ				IAmb	IAmb	02 17 20.6	
	comp=Z,12nm,0.9s						
LSZ	Lusaka	71.91	241	P	P	02 17 18.6	-0.2
LSZ				pmax	pmax		
	comp=Z,12nm,0.9s						
SUMG	Summit	72.76	345	P	P	02 17 23.2	-0.2
SUMG				IAmb	IAmb	02 17 30.4	
	comp=Z,28nm,1.3s						
SUMG	Summit	72.76	345	P	P	02 17 23.2	-0.2
SUMG				pmax	pmax		
	comp=Z,28nm,1.3s						
SUMG	Summit	72.76	345	*i* P	P	02 17 23.0	-0.4
SUMG				IVmB_BB		02 17 25.1	
	comp=Z,1µm,3.7s						
SUMG				IAmb	IAmb	02 17 28.9	
	comp=Z,6.3nm,0.8s						
ESBB	Sonseca Array	73.45	306	IAmb	IAmb	02 17 29.5	
	comp=Z,17nm,0.9s						
ESDC	Sonseca Array	73.45	306	P	P	02 17 28.1	+0.4
	comp=Z,9.4nm,0.8s,baz=57,slow=6.0,SNR=60						
	comp=Z,9.4nm,0.8s						
SOEG	Soedalen	73.67	340	*i* P	P	02 17 29.0	+0.7
SOEG				IAmb	IAmb	02 17 32.4	
	comp=Z,5.5nm,0.8s						
PAB	San Pablo	73.77	306	P	P	02 17 29.9	+0.3
PAB				IAmb	IAmb	02 17 32.0	
	comp=Z,12nm,0.9s						
PAB	San Pablo	73.77	306	P	P	02 17 29.9	+0.3
PAB				pmax	pmax		
	comp=Z,12nm,1.0s						
TULEG	Thule	74.22	354	*e*P	P	02 17 20.8	-11
TULEG				IAmb	IAmb	02 17 31.2	
	comp=Z,18nm,0.7s						
PBRG	Braganca	74.52	309	*e*P	P	02 17 35.8	+1.9
CTAO	Charters Tower	74.54	123	P	P	02 17 35.0	+0.9
CTAO				IAmb	IAmb	02 17 35.7	
	comp=Z,41nm,1.3s						
CTAO	Charters Tower	74.54	123	P	P	02 17 35.0	+0.9
CTAO				pmax	pmax		
	comp=Z,41nm,1.3s						
TOLK	Toolik Lake Re	74.62	19	P	P	02 17 34.8	+0.9
	baz=310						
MVO	Moncorvo	74.98	309	*e*P	P	02 17 37.4	+0.8
COLD	Coldfoot	75.35	20	IAmb	IAmb	02 17 42.9	
	comp=Z,15nm,1.2s						
COLD	Coldfoot	75.35	20	P	P	02 17 38.1	0.0
	baz=310						
ICESG	Greenland Ices	75.42	343	*i* P	P	02 17 37.9	-1.1
ICESG				IVmB_BB		02 17 39.4	
	comp=Z,1µm,2.5s						
ICESG				IAmb	IAmb	02 17 41.1	
	comp=Z,21nm,0.8s						
H21K	Melozitna Rive	75.52	22	P	P	02 17 39.2	0.0
	baz=308						
MTE	Manteigas	75.66	308	*e*P	P	02 17 41.3	+0.8
INKA	Innaminka	75.71	133	P	P	02 17 43.1	+2.4
PVIS	Viseu	75.77	309	*e*P	P	02 17 41.9	+0.8
	comp=Z,57nm,1.3s						
PCBR	Castelo Branco	75.85	308	*e*P	P	02 17 42.7	+1.2
PMRV	Marv??o	75.97	307	*e*P	P	02 17 43.5	+1.3
J20K	Nowinta River	75.97	23	IAmb	IAmb	02 17 43.6	
	comp=Z,20nm,1.1s						
J20K	Nowinta River	75.97	23	P	P	02 17 42.3	+0.6
	baz=307,SNR=8.1						
TTA	Tatalina	76.04	25	P	P	02 17 42.6	+0.4
	baz=306						
PTO	Porto	76.07	309	*e*P	P	02 17 44.0	+1.3
PBAR	Barrancos	76.25	306	*e*P	P	02 17 44.3	+0.5
	comp=Z,32nm,1.1s						
H23K	Yukon River	76.46	21	P	P	02 17 45.0	+0.5
	baz=311						
K20K	Telida	76.49	24	P	P	02 17 44.4	-0.4
K20K				IAmb	IAmb	02 17 46.8	
	comp=Z,33nm,1.3s						
K20K	Telida	76.49	24	P	P	02 17 45.5	+0.7
	baz=307,SNR=8.4						
PMTG	Montargil	76.71	307	*e*P	P	02 17 47.8	+1.4
EVO	Evora	76.79	307	*e*P	P	02 17 47.0	+0.1
BMAR	Burnt Mountain	76.83	18	P	P	02 17 47.3	+0.7
PBEJ	Beja	76.91	306	*e*P	P	02 17 49.5	+2.0
PSBE	So Bento	76.91	308	*e*P	P	02 17 48.4	+0.8
I23K	Minto, Yukon-K	76.96	21	P	P	02 17 47.9	+0.7
	baz=311						
H24K	Noodor Dome	76.96	20	P	P	02 17 48.3	+0.9
	baz=312						
PVAQ	Vaqueiros	77.07	306	*e*P	P	02 17 49.2	+0.7
	comp=Z,63nm,1.7s						
L20K	Farewell, AK	77.10	25	P	P	02 17 49.3	+1.1
	baz=308						
BPAW	Bear Paw Mtn.	77.10	23	IAmb	IAmb	02 17 52.6	
	comp=Z,12nm,1.0s						
BPAW	Bear Paw Mtn.	77.10	23	P	P	02 17 48.9	+0.7
	baz=310						
PCVE	Castro Verde	77.20	306	*e*P	P	02 17 51.0	+1.8
	comp=Z,48nm,1.8s						
ANGG	Ammassalik, Gr	77.23	340	IVmB_BB		02 17 47.9	
	comp=Z,2µm,4.2s						
ANGG				*i* P	P	02 17 49.3	+0.6
ANGG				IAmb	IAmb	02 17 53.0	
	comp=Z,12nm,0.7s						
MESJ	Messejana	77.24	306	*e*P	P	02 17 49.7	+0.2
MESJ				IAmb	IAmb	02 17 54.5	
	comp=Z,18nm,1.1s						
MESJ	Messejana	77.24	306	*e*P	P	02 17 50.5	+1.1
MESJ	Messejana	77.24	306	*e*P	P	02 17 49.6	+0.2
QLP	Quilpie	77.25	130	P	P	02 17 52.0	+2.6
PNCL	Nicolau / Gran	77.34	306	*e*P	P	02 17 50.9	+1.0
NEA2	Nenana	77.42	22	IAmb	IAmb	02 17 50.9	
	comp=Z,22nm,1.1s						
NEA2	Nenana	77.42	22	P	P	02 17 49.7	-0.3
	baz=311						
MDM	Murphy Dome	77.44	21	P	P	02 17 50.0	-0.1
MDM				IAmb	IAmb	02 17 54.7	
	comp=Z,16nm,1.0s						
PPLA	Purkeypile	77.45	24	P	P	02 17 50.5	+0.2
	baz=309,SNR=5.7						
PMAFR	Mafra	77.50	308	*e*P	P	02 17 53.0	+2.2
POKR	Poker Plat Res	77.59	21	IAmb	IAmb	02 17 52.1	
	comp=Z,16nm,1.1s						
POKR	Poker Plat Res	77.59	21	P	P	02 17 51.6	+0.7
	baz=312						
TCOL	CIGO, UAF Yank	77.62	21	IAmb	IAmb	02 17 54.7	
	comp=Z,13nm,0.8s						
TCOL	CIGO, UAF Yank	77.62	21	P	P	02 17 50.6	-0.4
	baz=312						
COLA	College	77.62	21	P	P	02 17 51.2	+0.2
COLA				IAmb	IAmb	02 17 54.7	
	comp=Z,14nm,0.8s						
COLA	College	77.62	21	P	P	02 17 51.2	+0.2
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	77.99	21	P	P	02 17 52.0	-1.1
	comp=Z,6.5nm,0.9s,baz=296,slow=4.8,SNR=27						
ILAR				PP	PP	02 20 46.5	-2.1
	comp=Z,1.6nm,0.9s,baz=308,slow=7.2,SNR=5.4						
	comp=Z,6.5nm,0.9s						
ILULI	Ilulissat	78.05	346	*i* P	P	02 17 52.0	-1.3
ILULI				IAmb	IAmb	02 17 53.2	
	comp=Z,15nm,0.6s						
HDA	Harding Lake	78.22	21	P	P	02 17 53.7	-0.7
	baz=313						
INK	Inuvik	78.89	14	P	P	02 17 57.5	-0.4
INK				IAmb	IAmb	02 17 59.1	
	comp=Z,19nm,1.1s						
INK	Inuvik	78.89	14	P	P	02 17 57.5	-0.4
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
INK	Inuvik	78.89	14	P	P	02 17 57.5	-0.4
	baz=324						
K24K	Donnelly Dome	79.01	21	P	P	02 17 57.9	-0.9
	baz=314						
DY2G	Dye2	79.06	343	*i* P	P	02 17 57.3	-1.9
DY2G				IVmB_BB		02 17 57.8	
	comp=Z,940nm,5.9s						
STKA	Stephens Creek	79.08	135	P	P	02 17 58.8	-0.6
	comp=Z,4.8nm,0.8s,baz=330,slow=12,SNR=3.2						
	comp=Z,4.8nm,0.8s						
J26L	Joseph Creek	79.20	20	P	P	02 17 58.8	-1.1
	baz=316						
RIDG	Independent Ri	79.35	21	P	P	02 17 59.7	-1.0
	baz=315						
PMR	Palmer	79.39	24	P	P	02 18 01.5	+0.7
PMR	Palmer	79.39	24	P	P	02 18 01.5	+0.7
PMR				pmax	pmax		
	comp=Z,16nm,1.2s						
SCRK	Sand Creek	79.45	21	P	P	02 18 00.8	-0.5
	baz=316						
SML	Sawmill	79.53	24	P	P	02 18 02.0	+0.4
SML	Sawmill	79.53	24	P	P	02 18 01.5	-0.2
	baz=312,SNR=6.2						
PAX	Paxson	79.70	22	IAmb	IAmb	02 18 07.1	
	comp=Z,20nm,1.4s						
PAX	Paxson	79.70	22	P	P	02 18 00.4	-2.2
	baz=314						
EGAK	Eagle	79.71	19	IAmb	IAmb	02 18 11.8	
	comp=Z,11nm,0.5s						
EGAK	Eagle	79.71	19	P	P	02 18 02.4	-0.2
	baz=318						
SFJD	Kangerlussuaq	79.72	345	P	P	02 18 02.5	0.0
SFJD				IAmb	IAmb	02 18 03.4	
	comp=Z,28nm,0.9s						
SFJD	Kangerlussuaq	79.72	345	P	P	02 18 02.5	0.0
SFJD				pmax	pmax		
	comp=Z,28nm,0.9s						
SFJD	Kangerlussuaq	79.72	345	*i* P	P	02 18 01.7	-0.8
SFJD				IVmB_BB		02 18 02.0	
	comp=Z,612nm,2.5s						
SFJD				IAmb	IAmb	02 18 02.9	
	comp=Z,14nm,0.8s						
KNK	Knik Glacier	79.75	24	IAmb	IAmb	02 18 04.2	
	comp=Z,27nm,1.3s						
KNK	Knik Glacier	79.75	24	P	P	02 18 01.0	-1.8
	baz=312						
M23K	Glacier View	79.75	23	P	P	02 18 02.0	-0.9
	baz=313						

LBTB	Lobatse	79.75	234	LR	LR	02 49 34.1	
	comp=Z,573nm,21.6s,baz=45,slow=33						
LBTB	Lobatse	79.75	234	P	P	02 18 04.2	+0.7
LBTB	Lobatse	79.75	234	P	P	02 18 04.2	+0.7
LBTB				pmax	pmax		
	comp=Z,13nm,1.0s						
C36M	Paulatuk	79.82	11	IAmb	IAmb	02 18 03.6	
	comp=Z,26nm,1.2s						
C36M	Paulatuk	79.82	11	P	P	02 18 02.9	-0.1
	baz=332						
SCM	Sheep Creek Mo	79.86	23	IAmb	IAmb	02 18 07.1	
	comp=Z,14nm,0.8s						
SCM	Sheep Creek Mo	79.86	23	P	P	02 18 03.7	+0.2
	baz=313						
K27K	Chicken	80.00	20	P	P	02 18 04.0	-0.1
	baz=317						
M24K	Tolsona, Glenn	80.07	23	P	P	02 18 05.1	+0.5
	baz=314						
TOA0	Torodi Ar. Sit	80.16	280	P	P	02 18 05.6	-0.2
TOA0				IAmb	IAmb	02 18 10.1	
	comp=Z,19nm,0.9s						
TORD	Torodi Ar. Bea	80.16	280	P	P	02 18 06.2	+0.4
	comp=Z,16nm,0.9s,baz=66,slow=3.8,SNR=38						
	comp=Z,16nm,0.9s						
TORD	Torodi Ar. Bea	80.16	280	P	P	02 18 05.9	+0.1
TORD				IAmb	IAmb	02 18 09.6	
	comp=Z,18nm,1.0s						
HARP	HAARP	80.20	22	P	P	02 18 05.9	+0.6
	baz=315						
KLU	Klutina	80.58	23	IAmb	IAmb	02 18 12.3	
	comp=Z,21nm,1.1s						
KLU	Klutina	80.58	23	P	P	02 18 08.0	+0.6
	baz=314						
DAWY	Dawson	80.75	19	P	P	02 18 07.7	-0.6
	baz=319,SNR=5.6						
L27K	Beaver Creek,	80.79	20	IAmb	IAmb	02 18 10.3	
	comp=Z,16nm,1.1s						
L27K	Beaver Creek,	80.79	20	P	P	02 18 08.6	+0.1
	baz=318,SNR=5.8						
BCAR	Beaver Creek A	80.80	20	P	P	02 18 09.1	+0.6
M26K	Nabesna, AK	80.90	21	IAmb	IAmb	02 18 12.3	
	comp=Z,20nm,1.2s						
M26K	Nabesna, AK	80.90	21	P	P	02 18 11.1	+2.0
	baz=317,SNR=6.7						
N25K	Chitina, Valde	80.95	22	IAmb	IAmb	02 18 11.2	
	comp=Z,25nm,1.1s						
N25K	Chitina, Valde	80.95	22	P	P	02 18 10.0	+0.6
	baz=315,SNR=7.4						
M27K	Edge Creek, AK	81.29	21	P	P	02 18 11.7	+0.4
	baz=318,SNR=5.8						
BMRM	Bremner River	81.41	23	IAmb	IAmb	02 18 26.1	
	comp=Z,15nm,1.0s						
BMRM	Bremner River	81.41	23	P	P	02 18 12.9	+1.1
	baz=315						
VRDI	Verde Repeater	81.61	22	IAmb	IAmb	02 18 18.0	
	comp=Z,16nm,1.0s						
MCARA	McCarthy VSAT	81.64	22	P	P	02 18 12.6	-0.4
MCARA	McCarthy VSAT	81.64	22	P	P	02 18 13.4	+0.5
	baz=317,SNR=10.0						
BOSA	Boshof	82.20	232	P	P	02 18 16.8	+0.3
	comp=Z,9.8nm,0.9s,baz=51,slow=3.0,SNR=12						
BOSA				LR	LR	02 52 13.9	
	comp=Z,567nm,19.8s,baz=50,slow=34						
	comp=Z,9.8nm,0.9s						
BOSA	Boshof	82.20	232	P	P	02 18 16.7	+0.3
BOSA				IAmb	IAmb	02 18 19.8	
	comp=Z,18nm,1.0s						
NUUK	Nuuk	82.28	343	IAmb	IAmb	02 18 03.6	
	comp=Z,514nm,2.9s						
NUUK				*i* P	P	02 18 14.5	-1.7
BARN	Barnard Glacie	82.32	22	IAmb	IAmb	02 18 18.8	
	comp=Z,19nm,1.0s						
WAX	Waxell Ridge	82.38	23	IAmb	IAmb	02 18 21.6	
	comp=Z,21nm,0.8s						
TSUM	Tsumeb	82.43	244	LR	LR	02 52 46.7	
	comp=Z,470nm,21.9s,baz=13,slow=34						
ISLE	Juniper Island	82.44	22	IAmb	IAmb	02 18 22.3	
	comp=Z,30nm,1.2s						
CTG	Chitna Glacier	82.50	22	P	P	02 18 18.3	+0.6
	baz=318						
CTGM	Chitina Glacie	82.50	22	IAmb	IAmb	02 18 19.7	
	comp=Z,21nm,1.1s						
GRNC	Granite Creek	82.54	22	IAmb	IAmb	02 18 24.6	
	comp=Z,10nm,0.9s						
M30M	Minto, Yukon	82.65	19	P	P	02 18 17.0	-1.3
	baz=322,SNR=6.5						
NRS	Narsarsuaq	82.87	339	*i* P	P	02 18 18.3	-1.0
NRS				IAmb	IAmb	02 18 26.4	
	comp=Z,10nm,0.9s						
MESA	MESA	82.88	22	P	P	02 18 20.6	+0.8
	baz=318						
N30M	Aishikik Lake	83.45	20	P	P	02 18 22.9	+0.5
	baz=322						
YUK6	Outpost Mounta	83.46	21	P	P	02 18 22.9	+0.2
	baz=321						
PINM	Pinnacle	83.51	22	P	P	02 18 22.6	-0.2
	baz=319						
M31M	Drury Creek, Y	83.63	18	IAmb	IAmb	02 18 24.6	
	comp=Z,15nm,1.1s						
M31M	Drury Creek, Y	83.63	18	P	P	02 18 22.6	-0.7
	baz=324						
N31M	Braeburn, Yuko	83.81	19	P	P	02 18 24.4	+0.1
	baz=323,SNR=10.0						
HYT	Haines Junctio	83.82	20	IAmb	IAmb	02 18 26.2	
	comp=Z,13nm,0.9s						
HYT	Haines Junctio	83.82	20	P	P	02 18 24.8	+0.4
	baz=321,SNR=8.7						
PNL	Peninsula	84.11	22	P	P	02 18 26.0	+0.2
	baz=320						
KOWA	Kowa	84.47	283	P	P	02 18 28.6	+0.2
KOWA				IAmb	IAmb	02 18 38.8	
	comp=Z,23nm,1.4s						
WHY	Whitehorse	84.74	19	IAmb	IAmb	02 18 30.2	
	comp=Z,12nm,1.0s						
WHY	Whitehorse	84.74	19	P	P	02 18 28.7	-0.4
	baz=324,SNR=6.3						
PLBC	Pleasant Camp	85.25	21	P	P	02 18 31.3	-0.2
	baz=322,SNR=6.6						
SKAG	Skagway	85.57	20	P	P	02 18 33.9	+0.8
	baz=323,SNR=5.4						
P33M	Teslin, Yukon	85.70	19	IAmb	IAmb	02 18 35.1	
	comp=Z,15nm,0.8s						
P33M	Teslin, Yukon	85.70	19	P	P	02 18 33.3	-0.6
	baz=325,SNR=11						
BESE	Bessie Mountai	86.42	21	IAmb	IAmb	02 18 39.5	
	comp=Z,14nm,1.0s						
JIS	Juneau Island	86.82	21	IAmb	IAmb	02 18 43.7	
	comp=Z,12nm,0.7s						
SUR	Sutherland	87.53	231	LR	LR	02 55 27.7	
	comp=Z,519nm,18.1s,baz=58,slow=34						
YKA	Yellowknife Ar	87.67	10	P	P	02 18 42.4	-1.0
	comp=Z,4.0nm,0.8s,baz=337,slow=4.7,SNR=23						
	comp=Z,4.0nm,0.8s						
DLBC	Dease Lake	87.97	19	IAmb	IAmb	02 18 47.0	
	comp=Z,12nm,1.0s						
S34M	Telegraph Cree	88.10	19	P	P	02 18 46.3	+0.9
	baz=327,SNR=5.3						
DBIC	Dimbokro	88.86	277	P	P	02 18 50.1	+0.2
	comp=Z,9.5nm,0.8s,baz=108,slow=6.8,SNR=3.7						
	comp=Z,9.5nm,0.8s						
FCC	Fort Churchill	93.11	1	IAmb	IAmb	02 19 10.2	
	comp=Z,12nm,1.2s						
SCHQ	Schefferville	94.15	345	P	P	02 19 12.9	-0.8
	comp=Z,3.7nm,0.9s,baz=23,slow=9.3,SNR=4.6						
	comp=Z,3.7nm,0.9s						
EDM	Edmonton	96.68	12	P	P	02 19 23.7	-1.6
EDM				IAmb	IAmb	02 19 24.2	
	comp=Z,11nm,1.1s						
EDM	Edmonton	96.68	12	P	P	02 19 23.7	-1.6
EDM				pmax	pmax		
	comp=Z,11nm,1.1s						
MAW	Mawson	97.52	189	LR	LR	03 00 50.6	
	comp=Z,117nm,18.1s,baz=6.0,slow=34						
SHEL	Horse Pasture	100.16	257	*i* P	Pdif	02 19 39.1	-2.4
NVAR	Mina Array Bea	109.25	21	PKiKP	PKiKP	02 24 24.1	-1.6
	comp=Z,0.5nm,0.8s,baz=343,slow=0.9,SNR=2.4						
TROLL	Troll, Antarti	115.22	200	PKPdf	PKPdf	02 24 36.4	+0.7
SNAA	Sanae	116.80	201	PKPdf	PKPdf	02 24 38.8	+0.1
VNA2	Neumayer--Watz	118.16	202	PKPdf	PKiKP	02 24 41.6	+0.3
	baz=40,slow=3.0						
VNA3	Neumayer Olymp	118.92	202	PKPdf	PKPdf	02 24 41.9	-0.9
MNTX	Cornudas Mount	118.95	12	PKPdf	PKPdf	02 24 43.5	-0.7
TX32	Lajitas Array	121.57	11		PKPdf	02 24 47.9	-1.4
TXAR	Lajitas Array	121.57	11	PKP	PKPdf	02 24 48.7	-0.6
	comp=Z,4.0nm,1.0s,baz=349,slow=1.0,SNR=13						
TXAR	Lajitas Array	121.57	11	PKPdf	PKPdf	02 24 48.6	-0.8
RCBR	Riachuelo	121.95	282	*e*P	PKiKP	02 24 53.7	+3.2
CCIG	Comitan	135.53	359		PKPpre	02 25 03.0	
RCLB	Rio Claro- Sao	139.06	268	*e*P	PKiKP	02 25 24.4	-0.2
PET01	Itanhaem-SP	139.38	265	*e*P	PKiKP	02 25 25.9	+0.7
TER01	Tubaro-SC	141.97	259	*e*P	PKiKP	02 25 30.9	+0.5
ANIL	Santa Ana	143.31	330	*e*P	PKPab	02 25 12.0	-14
BETC	Betania	144.94	329	*e*P	PKPab	02 25 31.8	-0.6
GARC	Garzon, Huila	145.40	329	*e*P	PKPbc	02 25 33.0	-1.1
PCON	Cinco Dias	145.68	330	*e*P	PKPdf	02 25 35.0	-0.1
SOTA	Rioblanco	145.94	331	*e*P	PKPdf	02 25 35.1	-0.4
SAML	Samuel	146.23	299	PKPbc	PKPdf	02 25 35.3	0.0
SAML	Samuel	146.23	299	PKP2	PKPdf	02 25 35.3	0.0
PTLB	Pontes e Lacer	146.52	286	*e*P	PKPab	02 25 39.2	+1.1
OTAV	Otavalo	148.43	332	PKPbc	PKPdf	02 25 41.2	+1.7
OTAV	Otavalo	148.43	332	PKP2	PKPdf	02 25 41.3	+1.7
CPUP	Villa Florida	148.70	265	PKPbc	PKPbc	02 25 43.2	+0.4
	comp=Z,5.6nm,0.9s,baz=80,slow=2.2,SNR=8.6						
CPUP	Villa Florida	148.70	265	PKPbc	PKPbc	02 25 42.1	-0.7
ETMB	Extrema	149.08	302	*e*P	PKPbc	02 25 42.4	-1.7
CZSB	Cruzeiro do Su	152.14	314	*e*P	PKPdf	02 25 46.5	+1.8
AY01	Puyuhuapi	157.49	220	PKPab	PKPab	02 26 22.3	-0.5

JMA ***22*** *02:06:16.8±0.5, 23˚N±1˚×12˚1E±˚, h0*^{km}*, MD4.5/15, MV5.0/15, TAIWAN REGION*

BJI ***22*** *02:06:17.1±0.0, 22°.74N×120°.51E, h19*^{km}*, mb4.5/13, mB5.1/8, ML4.3/7, Ms4.6/8, Ms7 4.2/8*

NEIC ***22*** *02:06:18.4±1.3, 22°.82N±0°.06×120°.52E±0°.06, h8*^{km}*±1*^{km}*, mb4.6/30, ML4.6(TAP), Error ellipse: s-maj=10.9km s-min=6.5km az=138.0*

TAP ***22*** *02:06:19.6, 22°.90N×120°.60E, h17*^{km}*, ML4.8, B*

IASPEI ***22*** *02:06:20.4±0.8, 22°.89N±0°.01×120°.58E±0°.02, h18*^{km}*±1*^{km}*, mb4.5/25, Error ellipse: s-maj=2.4km s-min=1.7km az=75.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ASIES ***22*** *02:06:20.7, 22°.91N×120°.62E, h22*^{km}*, MW4.4*

IDC ***22*** *02:06:25.8±4.8, 22°.84N×120°.97E, h66*^{km}*±42*^{km}*, mb4.0/9, mbtmp4.3/11, ML4.0/2, Error ellipse: s-maj=33.6km s-min=14.7km az=83.0*

ISC 22 02:06:20.4±0.6**, 22°.89N**±0°.01×**120°.58E**±0°.01**, h20**^{km}±2^{km}**, n229,** σ1^{s}**31**/313**, mb4.5**/25**, 48C-27D, Fault plane solution: NP1:**ϕ_s310.28012°**,** δ53.89144°**,** λ-69.01982°. **NP2:**ϕ_s97.22817°**,** δ41.03214°**,** λ-116.14403°. **Principal axes:** T Plg6.7011°**,** Azm25.5114°**;** N Plg16.8140°**,** Azm117.5461°**;** P Plg71.8253°**,** Azm274.5408°**; Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCST	Cishan	0.07	266	⇑*i*P	Pg	02 06 23.6	-0.5
	baz=263						
SCST				*i* S	Sg	02 06 27.4	+0.8
	baz=263						
SSD	Sandimen	0.15	160	⇓*i*P	Pb	02 06 24.4	+0.6
	baz=165						
SSD				*i* S	Sg	02 06 27.6	-0.3
	baz=165						
TWM1	Shoushan	0.16	244	⇑*i*P	Pg	02 06 25.3	+0.3
	baz=244						
TWM1				*e*S	Sg	02 06 30.7	+2.6
	baz=244						
SGLT	Jiouru	0.18	205	⇑*i*P	Pg	02 06 26.0	+0.7
	baz=201						
SGLT				*i* S	Sg	02 06 31.2	+2.6
	baz=201						
SGST	Jiashian	0.19	2	⇑*i*P	Pb	02 06 24.0	-0.8
	baz=359						
SGST				*i* S	Sb	02 06 28.0	+0.3
	baz=359						
TSMG	Majia	0.20	161	⇓*i*P	Pb	02 06 25.0	0.0
	baz=166						
TSMG				*i* S	Sg	02 06 28.5	-0.4
	baz=166						
SHHT	Tainan City	0.25	302	⇓*i*P	Pg	02 06 27.5	+1.3
	baz=304						
SHHT				*i* S	Sg	02 06 33.3	+3.1
	baz=304						
SNJT	Kaohsiung City	0.26	238	P	Pg	02 06 27.1	+0.7
	baz=239						
SNJT				*e*S	Sn	02 06 34.3	-0.4
	baz=239						
CHN3	Shinhua	0.27	314	⇓*i*P	Pg	02 06 27.7	+1.1
	baz=315						
CHN3				*e*S	Sn	02 06 34.9	0.0
	baz=315						
MASBT	Mashibuluo	0.28	169	⇑*i*P	Pb	02 06 26.5	-0.3
	baz=164						
MASBT				*i* S	Sb	02 06 30.6	-0.5
	baz=164						
CHN1	Nanshi	0.30	352	⇑*i*P	Pg	02 06 27.1	0.0
	baz=353						
CHN1				*i* S	Sg	02 06 32.9	+1.3
	baz=353						
STYH	Taoyuan	0.33	34	⇓*i*P	Pg	02 06 27.1	-0.6
	baz=36						
STYH				*i* S	Sg	02 06 32.8	+0.1
	baz=36						
SNST	Tainan City	0.34	348	⇓*i*P	Pb	02 06 27.9	+0.1
	baz=356						
SNST				*i* S	Sb	02 06 34.1	+1.3
	baz=356						
TAI1	Yung-k'ang	0.35	295	⇓*i*P	Pb	02 06 28.4	+0.4
	baz=294						
TWK	Hsinying	0.38	348	⇑*i*P	Pg	02 06 28.5	-0.1
TWK				*i* S	Sb	02 06 35.1	+0.8
KAU	Kaohsiung	0.41	218	*e*P	Pn	02 06 30.3	-0.9
	baz=232						
SSPT	Xinbi	0.41	181	⇑*i*P	Pb	02 06 29.1	+0.1
	baz=173						
SSPT				*i* S	Sb	02 06 35.5	+0.7
	baz=173						
TPUB	Ta-pu	0.41	7		Pg	02 06 28.7	-0.4
TPUB	Ta-pu	0.41	7	P	Pg	02 06 29.2	+0.2
TPUB	Ta-pu	0.41	7	⇑*i*P	Pg	02 06 28.6	-0.4
	baz=5.0						
TPUB				*i* S	Sb	02 06 35.4	+0.3
	baz=5.0						
SCLT	Jiali	0.45	309	⇓*i*P	Pb	02 06 30.1	+0.3
	baz=308						
SCLT				*e*S	Sn	02 06 39.0	-0.4
	baz=308						
ECL	Taimali	0.46	130	⇓*i*P	Pg	02 06 29.3	-0.5
	baz=137						
ECL				*i* S	Sg	02 06 35.4	-0.7
	baz=137						
TWG	Pinlang	0.46	99		Pg	02 06 29.5	-0.5
TWG	Pinlang	0.46	99	⇓*i*P	Pg	02 06 29.7	-0.3
	baz=103						
TWG				*i* S	Sb	02 06 37.4	+0.9
	baz=103						
TWGBT	Beinan	0.47	99	⇓*i*P	Pg	02 06 29.7	-0.4
	baz=103						
TWGBT				*i* S	Sb	02 06 37.1	+0.4
	baz=103						
ELDTW	Lidau	0.50	54	⇓*i*P	Pb	02 06 30.4	-0.3
	baz=46						
ELDTW				*e*S	Sg	02 06 37.5	-0.1
	baz=46						
LONT	Longtian	0.51	88	⇓*i*P	Pb	02 06 30.5	-0.3
	baz=79						
LONT				*i* S	Sg	02 06 38.6	+0.8
	baz=79						
SCZT	Fangliau	0.52	175	⇑*i*P	Pb	02 06 30.7	-0.2
	baz=168						
ICHU	Yijhu	0.54	330	⇓*i*P	Pg	02 06 31.7	+0.3
	baz=329						
ICHU				*i* S	Sn	02 06 41.9	+0.3
	baz=329						
TTN	Taitung	0.55	104	⇓*i*P	Pg	02 06 31.9	+0.5
	baz=106						
TTN				*e*S	Sn	02 06 41.0	-0.7
	baz=106						
CHN8	Yiju	0.56	324	⇓*i*P	Pb	02 06 31.7	+0.1
	baz=323						
CHN8				*e*S	Sn	02 06 41.9	-0.3
	baz=323						
EAST	Anshuo	0.56	153	⇑*i*P	Pb	02 06 31.6	-0.1
	baz=149						
EAST				*e*S	Sg	02 06 39.6	+0.1
	baz=149						
WLCH	Liuqiu	0.57	199	⇓*i*P	Pn	02 06 34.4	+1.0
	baz=200						
WLCH				*e*S	Sn	02 06 45.4	+3.2
	baz=200						
TAW	Tawu	0.61	151	⇑*i*P	Pb	02 06 32.3	-0.1
	baz=147						
TAW				*e*S	Sg	02 06 41.0	+0.2
	baz=147						
CHY	Chiayi	0.62	347	⇓*i*P	Pg	02 06 32.9	0.0
	baz=346						
CHY				*i* S	Sn	02 06 43.0	-0.6
	baz=346						
TAWH	Dawu Township	0.62	152	*i* P	Pb	02 06 31.6	-0.9
	baz=151						
TAWH				*e*S	Sb	02 06 40.0	-0.8
	baz=151						
ALS	Alishan	0.65	19	⇑*i*P	Pb	02 06 32.8	-0.5
	baz=18						
ALS				*e*S	Sg	02 06 42.8	+0.5
	baz=18						
EDH	Donghe	0.68	83	⇑*i*P	Pb	02 06 33.6	+0.1
	baz=75						
EDH				*e*S	Sg	02 06 44.2	+1.2
	baz=75						
YUS	Yu-Shan	0.69	30	⇑*i*P	Pb	02 06 33.6	-0.5
	baz=30						
YUS				*e*S	Sg	02 06 44.1	+0.5
	baz=30						
SLIU	Shizi	0.70	163	⇑*i*P	Pb	02 06 33.9	-0.1
	baz=168						
SLIU				*e*S	Sg	02 06 43.5	-0.2
	baz=168						
WSL	Shuilin Townsh	0.70	333	*e*P	Pb	02 06 33.0	-1.1
	baz=332						
WSL				*e*S	Sg	02 06 44.3	+0.5
	baz=332						
FULB	Fuli	0.73	65	⇑*i*P	Pb	02 06 34.9	+0.4
	baz=65						
FULB				*i* S	Sn	02 06 46.1	-0.2
	baz=65						
CHKT	Chengkung	0.76	74	⇑*i*P	Pb	02 06 35.1	+0.1
	baz=89						
CHKT				*e*S	Sg	02 06 46.5	+1.0
	baz=89						
WDLH	Douliu	0.80	358	*e*P	Pb	02 06 35.6	0.0
	baz=357						
WDLH				*e*S	Sn	02 06 48.4	+0.5
	baz=357						
WSF	Szhu	0.81	336	*e*P	Pb	02 06 35.7	-0.2
	baz=336						
WSF				*i* S	Sn	02 06 47.9	-0.3
	baz=336						
WTK	Tuku	0.81	348	P	Pb	02 06 36.1	+0.2
	baz=347						
WTK				*e*S	Sn	02 06 48.6	+0.3
	baz=347						
EYUL	Yuli	0.82	56	⇑*i*P	Pb	02 06 35.8	-0.2
	baz=64						
EYUL				S	Sb	02 06 47.1	+0.4
	baz=64						
YULB	Yu-li	0.83	53	Pg	Pb	02 06 35.7	-0.5
YULB	Yu-li	0.83	53	⇑*i*P	Pb	02 06 35.7	-0.5
	baz=60						
YULB				S	Sb	02 06 46.5	-0.5
	baz=60						
LDUT	Ludao	0.85	105	⇑*i*P	Pb	02 06 36.2	-0.4
	baz=95						
LDUT				S	Sg	02 06 48.9	+0.5
	baz=95						
HEN	Hengchun	0.89	170	⇑*i*P	Pn	02 06 38.3	+0.4
	baz=160						
HEN				*e*S	Sn	02 06 52.1	+1.8
	baz=160						
SMST	Manzhou Townsh	0.90	164	*e*P	Pn	02 06 38.0	0.0
	baz=155						
SMST				*e*S	Sn	02 06 52.1	+1.6
	baz=155						
WDGT	Dungji	0.92	294	⇓*i*P	Pb	02 06 36.8	-0.9
	baz=294						
WDGT				*e*S	Sb	02 06 49.5	-0.1
	baz=294						
EHY	Hungye	0.92	48	⇑*i*P	Pb	02 06 37.4	-0.4
	baz=55						
EHY				*e*S	Sb	02 06 49.6	0.0
	baz=55						
WJS	Zhushan	0.94	9	*e*P	Pb	02 06 38.1	0.0
	baz=354						
WJS				*e*S	Sg	02 06 51.2	+0.1
	baz=354						
SSLB	Suanglung	0.96	21	Pg	Pb	02 06 37.7	-0.7
SSLB	Suanglung	0.96	21	P	Pb	02 06 38.5	+0.1
SSLB	Suanglung	0.96	21	⇑*i*P	Pb	02 06 37.8	-0.6
	baz=21						
SSLB				S	Sn	02 06 52.5	+0.5
	baz=21						
TWK1	Hengchun	0.97	167	⇑*i*P	Pn	02 06 39.0	0.0
	baz=168						
TWK1				*e*S	Sn	02 06 54.4	+2.3
	baz=168						
TWKBT	Hengchun	0.97	167	⇑*i*P	Pn	02 06 39.1	+0.1
	baz=168						
TWKBT				*e*S	Sn	02 06 53.8	+1.6
	baz=168						
HGSD	Ruisui	0.98	52	⇑*i*P	Pb	02 06 39.2	+0.3
	baz=47						
HGSD				*e*S	Sn	02 06 52.6	+0.1
	baz=47						
WNT	Mingjian	0.99	6	P	Pb	02 06 38.6	-0.3
	baz=6.0						
WNT				*e*S	Sg	02 06 53.5	+0.8
	baz=6.0						
VWDT	VWDT	1.00	31	⇑*i*P	Pb	02 06 38.7	-0.5
	baz=31						
VWDT				*e*S	Sn	02 06 53.2	+0.2
	baz=31						
WTCT	Ta-ch'eng	1.01	344	*e*P	Pb	02 06 38.5	-0.7
	baz=345						
WTCT				S	Sb	02 06 52.6	+0.6
	baz=345						
WRL	Guolierlin Hig	1.02	350	P	Pb	02 06 38.8	-0.7
	baz=337						
WRL				S	Sn	02 06 53.8	+0.3
	baz=337						
TSEB	Hengchuen, Pin	1.03	163	*i* P	Pn	02 06 39.9	+0.1
	baz=165						
TSEB				*e*S	Sg	02 06 54.9	+0.8
	baz=165						
SMLT	Sun Moon Lake	1.03	17	⇑*i*P	Pb	02 06 39.3	-0.4
	baz=17						
SMLT				*i* S	Sg	02 06 54.5	+0.3
	baz=17						
TYC	Yuchr	1.04	14	P	Pb	02 06 39.4	-0.4
	baz=15						
TYC				*e*S	Sg	02 06 55.0	+0.6
	baz=15						
EGFH	Guangfu	1.10	45	⇑*i*P	Pn	02 06 40.7	-0.1
	baz=55						
EGFH				*e*S	Sb	02 06 55.4	+0.6
	baz=55						
PHUB	P'eng-hu	1.11	304	P	Pn	02 06 39.4	-1.5
	baz=316						
PHUB				S	Sb	02 06 54.5	-0.6
	baz=316						
PNG	Penghu	1.16	306	*e*P	Pn	02 06 40.0	-1.5
	baz=306						
PNG				*e*S	Sb	02 06 55.5	-0.9
	baz=306						
WCHH	Zhanghua	1.18	359	P	Pn	02 06 41.9	0.0
	baz=359						
WCHH				*e*S	Sn	02 06 58.3	+0.8
	baz=359						
OWD	Renai	1.19	27	P	Pn	02 06 42.1	-0.1
	baz=15						
OWD				*e*S	Sn	02 06 58.8	+0.8
	baz=15						
WCS	Beigang Elemen	1.20	15	⇑*i*P	Pn	02 06 42.1	0.0
	baz=15						
WCS				*e*S	Sn	02 06 58.7	+0.8
	baz=15						
WUSB	Renai	1.20	24	⇑*i*P	Pn	02 06 42.1	-0.2
	baz=13						
WUSB				*e*S	Sb	02 06 58.1	+0.2
	baz=13						
ESL	Shilin	1.21	40	⇑*i*P	Pn	02 06 42.5	+0.2
	baz=33						
ESL				*e*S	Sb	02 06 58.2	+0.3
	baz=33						
LAY	Lan-yu	1.24	133	*e*P	Pn	02 06 42.1	-0.6
	baz=133						
LAY				*e*S	Sg	02 07 00.9	+0.2
	baz=133						

TCU	Taichung	1.25	4	P	Pn	02 06 42.8	-0.1
	baz=5.0						
TCU				*e*S	Sb	02 07 00.1	+0.9
	baz=5.0						
LYUB	Lan-yu	1.29	133	*e*P	Pn	02 06 41.0	-2.3
	baz=134						
LYUB				*e*S	Sn	02 06 58.8	-1.2
	baz=134						
CHGB	Renai	1.29	25	⇑*i*P	Pn	02 06 43.7	+0.1
	baz=13						
CHGB				*e*S	Sb	02 07 00.9	+0.6
	baz=13						
WHF	Hehuan Shan	1.40	27	⇓*i*P	Pb	02 06 46.0	-0.2
	baz=17						
WHF				*e*S	Sg	02 07 05.3	-0.7
	baz=17						
WHP	Taichung City	1.42	14	⇑*i*P	Pn	02 06 45.4	+0.1
	baz=14						
WHP				*e*S	Sb	02 07 05.3	+1.2
	baz=14						
HWA	Hwalien	1.44	41	*e*P	Pb	02 06 46.8	+0.2
	baz=34						
HWA				*e*S	Sg	02 07 07.0	0.0
	baz=34						
WDJ	Dajia District	1.45	2	*e*P	Pn	02 06 46.3	+0.7
	baz=3.0						
WDJ				*e*S	Sb	02 07 04.8	-0.1
	baz=3.0						
TDCB	Techi	1.46	21	⇑*i*P	Pn	02 06 45.9	+0.1
	baz=22						
TDCB				*e*S	Sb	02 07 06.3	+1.1
	baz=22						
TWQ1	Liyutan	1.46	7	*i* P	Pn	02 06 46.1	+0.3
	baz=8.0						
TWQ1				*e*S	Sb	02 07 06.3	+1.1
	baz=8.0						
TWT	Tachien	1.46	22	⇓P	Pn	02 06 46.4	+0.5
	baz=22						
TWT				*e*S	Sg	02 07 07.1	-0.8
	baz=22						
FUSS	Fushou	1.48	24	⇑*i*P	Pn	02 06 46.5	+0.2
	baz=25						
FUSS				*e*S	Sb	02 07 06.3	+0.3
	baz=25						
TWD	Chiawan	1.51	38	*i* P	Pn	02 06 46.5	+0.1
	baz=39						
TWD				*e*S	Sb	02 07 07.2	+0.7
	baz=39						
ETLH	Xiulin Townshi	1.55	32	*e*P	Pb	02 06 48.6	+0.1
	baz=39						
ETLH				*e*S	Sb	02 07 09.2	+1.4
	baz=39						
NACB	Ninganchiao	1.58	36		Pn	02 06 47.5	+0.2
NACB	Ninganchiao	1.58	36	⇑*i*P	Pn	02 06 47.6	+0.2
	baz=36						
NACB				*e*S	Sb	02 07 08.4	-0.3
	baz=36						
ETL	Fush Village	1.59	37	*e*P	Pn	02 06 48.3	+0.8
	baz=37						
NMLH	Miaoli	1.65	7	*e*P	Pb	02 06 49.7	-0.5
	baz=7.0						
NMLH				*e*S	Sb	02 07 10.9	+0.2
	baz=7.0						
NNSB	Datong	1.70	26	⇑*i*P	Pn	02 06 49.7	+0.6
	baz=14						
NNSB				*e*S	Sb	02 07 13.4	+1.2
	baz=14						
NNS	Nan Shan	1.71	25	*i* P	Pn	02 06 50.0	+0.8
	baz=14						
NNS				*e*S	Sb	02 07 11.9	-0.4
	baz=14						
NSTT	Nanjuang	1.78	13	P	Pn	02 06 49.8	-0.3
	baz=357						
NSTT				*e*S	Sb	02 07 13.9	-0.4
	baz=357						
LIOB	Emei	1.79	13	*e*P	Pn	02 06 50.4	0.0
	baz=358						
NFF	Wufeng Townshi	1.80	16	*e*P	Pn	02 06 51.3	+0.8
	baz=1.0						
LATG	Datong	1.85	28	⇑*i*P	Pn	02 06 52.2	+0.9
	baz=28						
LATG				*e*S	Sb	02 07 16.7	+0.1
	baz=28						
ENA	Nanau	1.87	35	*e*P	Pn	02 06 51.2	-0.1
	baz=35						
EWUT	Wuta	1.90	35	*e*P	Pn	02 06 52.7	+0.9
	baz=36						
NSK	Sanguang	1.92	22	⇑*i*P	Pn	02 06 52.2	+0.2
	baz=23						
YHNB	Yeheng	1.92	22		Pn	02 06 52.4	+0.3
YHNB	Yeheng	1.92	22	P	Pb	02 06 53.8	-1.0
YHNB	Yeheng	1.92	22	⇑*i*P	Pn	02 06 52.4	+0.3
	baz=23						
SBCB	Hsinchu	1.93	11	*e*P	Pn	02 06 52.1	0.0
	baz=12						
ENTT	Nioudou	1.96	27	*e*P	Pb	02 06 54.6	-1.0
	baz=28						
NDS	Dongshan	2.02	31	P	Pb	02 06 55.8	-0.8
	baz=48						
NWLT	Wulai	2.06	24	P	Pn	02 06 54.8	+0.7
	baz=24						
TWC	Suao	2.07	34	*e*P	Pn	02 06 54.7	+0.6
	baz=35						
FUSB	Fushanzhiwuyua	2.08	26	*e*P	Pn	02 06 56.0	+1.7
	baz=9.0						
TWE	Neicheng	2.08	29	*e*P	Pb	02 06 56.2	-1.3
	baz=12						
TATO	Taipei	2.24	22		Pn	02 06 58.2	+1.8
NHDH	Xindian Distri	2.24	23	*e*P	Pb	02 07 00.1	-0.1
	baz=23						
NTC	Toucheng	2.27	30	*e*P	Pn	02 06 58.2	+1.4
	baz=46						
TWA	Mucha	2.27	24	*e*P	Pb	02 07 00.9	0.0
	baz=25						
EGS		2.31	32	*e*P	Pb	02 07 00.8	-0.6
	baz=33						
TWS1	Kuangyinshan	2.33	19	*e*P	Pn	02 06 57.3	-0.4
	baz=20						
VWUC	VWUC	2.33	334	*e*P	Pn	02 06 57.0	-0.7
	baz=335						
TIPB	Shuangxi	2.37	29	*e*P	Pn	02 06 59.4	+1.2
	baz=11						
NTST	Danshui	2.40	19	*e*P	Pn	02 07 00.7	+2.1
	baz=20						
YM01	YM01	2.42	22	*e*P	Pn	02 06 59.3	+0.3
	baz=22						
NWF	Wu-fen Shan	2.43	27	*e*P	Pn	02 07 00.2	+1.0
	baz=11						
TWB1	Santiao Chiao	2.47	31	*e*P	Pn	02 07 02.1	+2.5
	baz=32						
KNM	Kinmen	2.48	308	*e*P	Pn	02 07 00.5	+0.7
	baz=308						
SXI1	Grass Mountain	2.50	28	*e*P	Pn	02 07 00.8	+0.7
	baz=12						
PTMZ	Houxiangcun	2.52	328	*e*P	Pn	02 06 59.0	-1.3
	baz=343						
KNMB	Chin-men Tao	2.54	308	Pn	Pn	02 06 59.7	-1.0
KNMB	Chin-men Tao	2.54	308	*e*P	Pn	02 06 59.3	-1.3
	baz=310						
TWY	Chenhua	2.55	21	*e*P	Pn	02 07 02.1	+1.4
	baz=22						
JYNG	Yonagunijimaku	2.67	54	P	Pn	02 07 03.5	+1.2
JYNG				S	Sb	02 07 37.9	-2.1
JYNG	Yonagunijimaku	2.67	54	A	A	02 07 03.5	
	comp=E,7.0nm,2.2s,comp=E,6.0nm,2.5s						
YOJ	Yonaguni jima	2.73	55	Pn	Pn	02 07 03.7	+0.6
YOJ	Yonaguni jima	2.73	55	P	Pn	02 07 04.8	+1.7
YOJ	Yonaguni jima	2.73	55	*e*P	Pn	02 07 04.3	+1.2
	baz=54						
YOJ	Yonaguni jima	2.73	55	P	Pn	02 07 04.4	+1.2
YOJ				S	Sb	02 07 39.2	-2.4
YOJ	Yonaguni jima	2.73	55	A	A	02 07 04.4	
	comp=E,3.0nm,1.9s,comp=E,4.0nm,1.8s						
QZH	Quanzhou	2.73	319	*e*Pn	Pn	02 07 03.3	+0.1
QZH				Sn	Sn	02 07 33.1	-2.6
QZH				smax	smax		
	comp=N,440nm,0.7s						
QZH				smax	smax		
	comp=E,500nm,0.4s						
ZPLA	Ao Xicun	2.79	292	*e*P	Pn	02 07 02.8	-1.3
	baz=295						
PCYT	Pengchaiyu	3.05	26	*e*P	Pn	02 07 07.2	-0.3
	baz=14						
AXDP	Jialang	3.11	311	*e*P	Pn	02 07 06.7	-1.7
	baz=312						
HATJ	Hateruma jima	3.19	68	P	Pn	02 07 10.1	+0.7
HATJ				*e*S	Sn	02 07 48.6	+1.8
IRIF	Iriomote-Funau	3.23	63	P	Pn	02 07 11.8	+1.8
IRIF				*e*S	Sn	02 07 51.4	+3.4
IRIF	Iriomote-Funau	3.23	63	A	A	02 07 11.8	
	comp=N,6.0nm,1.5s						
MATB	Ma-tsu	3.30	350	*e*P	Pn	02 07 09.8	-1.2
	baz=338						
JKRS	Kuro-shima	3.42	66	P	Pn	02 07 13.6	+0.9
JKRS				S	Sn	02 07 54.6	+1.8
JKRS	Kuro-shima	3.42	66	A	A	02 07 13.6	
	comp=N,4.0nm,1.9s						
MHZQ	Yeshan	3.49	337	*e*P	Pn	02 07 13.3	-0.3
	baz=337						
JIJ	Ishigaki jima	3.58	65	P	Pn	02 07 15.3	+0.3
JIJ				S	Sn	02 07 57.1	+0.3
LYJJ	Jianjiangzhen	3.72	349	*e*P	Pn	02 07 15.9	-0.9
	baz=349						
JISG	Ishigakijimahi	3.82	63	P	Pn	02 07 18.3	+0.2
XPSS	Dashiqiu	4.04	355	*e*P	Pn	02 07 19.9	-1.2
	baz=343						
JTJ	Tarama	4.16	64	P	Pn	02 07 22.6	-0.3
JTJ				S	Sn	02 08 12.6	+1.6
JTJ	Tarama	4.16	64	A	A	02 07 22.6	
	comp=E,3.0nm,2.9s,comp=E,3.0nm,2.9s						
SXFK	Yanhouchang	4.39	323	*e*P	Pn	02 07 25.4	-0.7
	baz=324						
JIRB	Irabujima	4.63	64	P	Pn	02 07 29.8	+0.5
JIRB				S	Sn	02 08 23.1	+0.6
JMJ	Miyako jima 2	4.72	65	P	Pn	02 07 31.9	+1.3
JMJ2	Miyako jima3	4.73	66	P	Pn	02 07 31.7	+1.1
JMJ2				S	Sn	02 08 26.1	+1.2
JIKM	Ikemajima	4.73	64	P	Pn	02 07 31.1	+0.4
JIKM				S	Sn	02 08 26.9	+1.9
JOGS	Gusukube	4.80	66	P	Pn	02 07 32.9	+1.2
JOGS				S	Sn	02 08 28.9	+2.2
APYP	Conner	5.04	173	⇓*e*P	Pn	02 07 41.2	+6.2
SAMP	Sagada Mountai	5.79	177	⇑*e*P	Pn	02 07 45.1	-0.1
SAMP				*e*S	Sn	02 08 44.0	-7.2
HKPS	Hong Kong Po S	5.98	265	Pn	Pn	02 07 45.9	-2.0
JOW	Kunigami	8.02	59	P	Pn	02 08 14.2	-1.6
	7.7nm,0.3s,baz=177,slow=10,SNR=19						
JOW				S	Sn	02 09 44.0	-2.1
	5.0nm,0.4s,baz=336,slow=20,SNR=1.2						
	13nm,0.3s						
JOW	Kunigami	8.02	59	Pn	Pn	02 08 14.4	-1.5
NJ2	Nanjing	9.25	351	*e*P	Pn	02 08 31.9	-0.9
NJ2				pmax	pmax		
	comp=Z,19nm,0.7s						
QIZ	Qiongzhong	10.74	251	P	Pn	02 08 50.3	-2.9
QIZ				S	Sn	02 10 51.4	-1.5
QIZ				LR	LR		
	comp=E,2µm,7.1s						
QIZ				LR	LR		
	comp=Z,1µm,14.9s						
HNS	HongShan	15.32	342	⇑P	P	02 10 08.3	+8.1
HNS				*e*S	S	02 13 08.4	+7.5
HNS				pmax	pmax		
	comp=Z,17nm,1.1s						
HNS				LR	LR		
	comp=N,710nm,10.2s						
HNS				LR	LR		
	comp=E,1µm,10.8s						
HNS				LR	LR		
	comp=Z,2µm,21.0s						
KSAR	Wonju Array Be	15.81	22	Pn	Pn	02 09 59.7	-2.3
KSRS	Korea Array	15.83	22	P	Pn	02 10 03.3	+1.1
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=7.6						
	comp=Z,1.4nm,0.6s						
PZH	PanZhiHua	17.49	286	P	Pn	02 10 21.5	-1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,170nm,4.7s						
INU	Inuyama	18.95	45		P	02 10 39.5	-0.9
INU				IAmb	IAmb	02 10 47.1	
	comp=Z,16nm,0.8s						
JGF	Kuroka	19.32	45		P	02 10 44.4	-0.1
MAJO	Matsushiro	20.44	44		P	02 10 57.7	+1.1
MJB9	Matsu-Tunnel	20.44	44	P	P	02 10 57.2	+0.6
MJAR	Matsushiro Arr	20.44	44	P	P	02 10 56.2	-0.4
	comp=Z,9.7nm,0.8s,baz=230,slow=7.8,SNR=33						
	comp=Z,9.7nm,0.8s						
MJAR	Matsushiro Arr	20.44	44	P	P	02 10 56.6	0.0
TOLI2	Tolitoli	21.65	179	P	P	02 11 09.4	-0.4
GTOI	Gorontalo	22.25	174	P	P	02 11 16.4	+0.2
	comp=Z,16nm,0.8s						
MRSI	Marisa	22.32	176	P	P	02 11 23.1	+6.1
MPSI	Mapaga	22.43	182	P	P	02 11 18.0	-0.2
	comp=Z,5.9nm,1.2s						
JMM	Marumori	22.89	45	IAmb	IAmb	02 11 19.4	
	comp=Z,41nm,1.3s						
LUWI	Luwuk	23.88	175	P	P	02 11 32.1	-0.8
LUWI	Luwuk	23.88	175	P	P	02 11 38.4	+5.5
LBMI	Labuha	24.34	163	P	P	02 11 43.0	+5.8
GUMO	Guam	24.83	108	P	P	02 11 39.2	-2.4
	comp=Z,88nm,0.8s,baz=270,slow=4.0,SNR=4.5						
GUMO	Guam	24.83	108	IAmb	IAmb	02 11 41.5	
	comp=Z,108nm,0.8s						
SANI	Sanana	25.34	167	P	P	02 11 43.7	-2.6
KLR	Kul'dur	27.73	16	P	P	02 12 07.7	+0.2
	comp=Z,0.8nm,0.4s,baz=184,slow=2.3,SNR=3.7						
	comp=Z,0.8nm,0.4s						
WMQ	Urumqi	34.16	316	*e*P	P	02 13 06.3	+1.9
KNRA	Kununurra	39.16	167	P	P	02 13 45.0	-2.1
KNRA				IAmb	IAmb	02 13 46.5	
	comp=Z,10nm,0.8s						
ZALV	Zalesovo Beam	41.03	328	P	P	02 14 05.9	+3.6
	comp=Z,1.9nm,0.5s,baz=119,slow=8.4,SNR=2.5						
	comp=Z,1.9nm,0.5s						
H11N1	WAKE ISLAND Hy	43.13	85	T	T	02 59 39.3	
	baz=283,slow=74,SNR=17						
H11N2	WAKE ISLAND Hy	43.14	85	T	T	02 59 37.2	
	baz=283,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	43.15	85	T	T	02 59 36.9	
	baz=283,slow=74,SNR=20						
H11S3	WAKE ISLAND Hy	43.23	87	T	T	02 59 59.9	
	baz=284,slow=74,SNR=27						
H11S1	WAKE ISLAND Hy	43.24	87	T	T	02 59 51.1	
	baz=284,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	43.24	87	T	T	02 59 55.9	
	baz=284,slow=74,SNR=15						
WRA	Warramunga Arr	44.64	161	P	P	02 14 29.8	-2.1
	comp=Z,9.3nm,0.6s,baz=344,slow=8.8,SNR=88						
	comp=Z,9.3nm,0.6s						
WRA	Warramunga Arr	44.64	161	P	P	02 14 30.3	-1.6
WB2	Warramunga Arr	44.65	161	P	P	02 14 29.6	-2.3
WR0	Warramunga Arr	44.72	161	P	P	02 14 30.5	-2.0
AS31	Alice Springs	48.06	163	P	P	02 14 56.7	-2.0
AS31				IAmb	IAmb	02 15 01.0	
	comp=Z,4.0nm,0.5s						
ASAR	Alice Springs	48.06	163	P	P	02 14 57.5	-1.2
	comp=Z,3.9nm,0.5s,baz=342,slow=7.5,SNR=84						
ASAR				PcP	PcP	02 16 25.4	-1.1
	comp=Z,2.3nm,0.8s,baz=356,slow=2.4,SNR=7.7						
	comp=Z,3.9nm,0.5s						
ASAR	Alice Springs	48.06	163	P	P	02 14 57.2	-1.5
STKA	Stephens Creek	58.06	159	P	P	02 16 11.6	-0.7
	comp=Z,4.1nm,0.8s,baz=332,slow=8.7,SNR=9.3						
	comp=Z,4.1nm,0.8s						
STKA	Stephens Creek	58.06	159	IAmb	IAmb	02 16 14.3	
	comp=Z,2.2nm,1.1s						
TTA	Tatalina	66.90	30	P	P	02 17 11.2	0.0
TTA				IAmb	IAmb	02 17 12.0	
	comp=Z,5.5nm,1.2s						
IMAR	Indian Mountai	67.58	26	P	P	02 17 15.0	-0.4
H21K	Melozitna Rive	68.01	27	P	P	02 17 18.2	+0.1
H21K				IAmb	IAmb	02 17 19.4	
	comp=Z,4.9nm,0.8s						
TOLK	Toolik Lake Re	68.85	23	P	P	02 17 23.9	+0.5
TOLK				IAmb	IAmb	02 17 24.5	
	comp=Z,2.9nm,0.8s						
NEA2	Nenana	69.73	27	P	P	02 17 27.9	-0.9
NEA2				IAmb	IAmb	02 17 29.5	
	comp=Z,7.3nm,0.9s						
ILAR	Eielson Array	70.61	27	P	P	02 17 32.1	-2.0
	comp=Z,0.7nm,0.6s,baz=291,slow=7.9,SNR=11						
	comp=Z,0.7nm,0.6s						
BMAR	Burnt Mountain	70.93	24	P	P	02 17 36.8	+0.7
SCRK	Sand Creek	72.03	27	IAmb	IAmb	02 17 42.9	
	comp=Z,5.3nm,1.2s						
K27K	Chicken	72.82	27	IAmb	IAmb	02 17 48.5	
	comp=Z,4.5nm,0.8s						
M26K	Nabesna, AK	72.89	29	P	P	02 17 48.1	+0.1
M26K				IAmb	IAmb	02 17 49.2	
	comp=Z,7.9nm,1.2s						
BCAR	Beaver Creek A	73.23	28	P	P	02 17 50.3	+0.3
DAWY	Dawson	73.94	27	IAmb	IAmb	02 17 54.6	
	comp=Z,5.0nm,0.9s						
M30M	Minto, Yukon	75.56	28	P	P	02 18 04.0	+0.5
M30M				IAmb	IAmb	02 18 04.7	
	comp=Z,4.4nm,1.0s						
HYT	Haines Junctio	75.89	30	P	P	02 18 05.4	-0.2
HYT				IAmb	IAmb	02 18 06.7	
	comp=Z,9.3nm,1.3s						
NOA	NORSAR Array B	79.10	332	P	P	02 18 23.2	-0.1
	comp=Z,0.8nm,0.7s,baz=56,slow=5.9,SNR=3.4						
	comp=Z,0.8nm,0.7s						
YKA	Yellowknife Ar	84.37	23	P	P	02 18 50.6	-0.5
	comp=Z,3.4nm,0.8s,baz=329,slow=4.7,SNR=13						
	comp=Z,3.4nm,0.8s						
B06A	Marblemount	89.91	36	P	P	02 19 17.6	-0.6
B08A	Colville Reser	91.16	35	IAmb	IAmb	02 19 25.0	
	comp=Z,4.2nm,1.0s						
OCAC	Ocana	146.20	25	PKPbc	PKPdf	02 25 58.9	-0.7
SDV	Santo Domingo	146.57	20	PKPbc	PKPdf	02 26 00.8	+0.6
BAUV	El Baul	147.26	16	PKPbc	PKPdf	02 26 01.5	+0.3

MOS ***22*** *02:07:19.9±0.0, 41°.72N×46°.51E, h8^{km}, MPVA3.2*
TIF ***22*** *02:07:20.4, 41°.65N×46°.40E, h10^{km}±1^{km}*
NORS ***22*** *02:07:22.2±0.0, 41°.87N×46°.51E, h3^{km}, MPVA3.4*
DRS ***22*** *02:07:22.1±0.0, 41°.69N×46°.38E, h16^{km}*
ISC 22 02:07:21.9±1.1, **41°.72N**±0°.03×**46°.49E**±0°.02, **h8**^{km}±9^{km}, **n28**, σ**1^{s}.31**/54, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.22	304	P	Pg	02 07 25.8	-0.5
LGD				S	Sg	02 07 28.9	-0.4
DDFL	Dedoflistskaro	0.39	226	P	Pb	02 07 31.2	+0.2
DDFL				S	Sb	02 07 42.6	+5.4
KMKR	Kumukh	0.62	48	*i* Pg	Pg	02 07 34.0	+0.1
KMKR				*e*Sg	Sb	02 07 43.5	-0.6
GNBR	Gunib	0.76	28	*e*Pg	Pg	02 07 36.6	0.0
GNBR				*e*Sg	Sb	02 07 48.0	-0.1
XNZR	Khunzakh	0.84	11	*e*Pg	Pg	02 07 37.9	-0.2
XNZR				*e*Sg	Sb	02 07 51.0	+0.5
AKT	Akhty	0.96	104	*e*Pg	Pg	02 07 39.7	-0.8
AKT				*e*Sg	Sb	02 07 53.7	-0.1
ARKR	Arakani	0.96	23	*e*Pg	Pg	02 07 40.2	-0.2
ARKR				*e*Sg	Sb	02 07 53.8	0.0
BTLR	Botlikh	0.97	348	*e*Pg	Pg	02 07 39.8	-0.8
BTLR				*e*Sg	Sg	02 07 52.9	-0.3
URKR	Urkarakh	0.97	62	*e*Pg	Pg	02 07 40.4	-0.1
URKR				*e*Sg	Sn	02 07 55.1	-0.9
UNCR	Uncukul	1.02	13	*e*Pg	Pg	02 07 41.1	-0.5
UNCR				*e*Sg	Sb	02 07 56.0	+0.4
SGKR	Sergokala	1.15	49	*e*Pg	Pg	02 07 43.9	-0.1
SGKR				*e*Sg	Sn	02 08 01.1	+0.9
KRNR	Karanay	1.15	16	*e*Pg	Pb	02 07 43.8	-0.4
KRNR				*e*Sg	Sn	02 08 00.7	+0.2
BUJR	Buynaksk	1.20	22	*e*Pg	Pb	02 07 44.7	-0.2
BUJR				*e*Sg	Sn	02 08 02.1	+0.5
KSMR	Kasumkent	1.24	95	*e*Pg	Pn	02 07 44.8	-0.7
KSMR				*e*Sg	Sn	02 08 02.5	+0.1
BTNK	Botanikuri	1.26	269	P	Pn	02 07 40.9	-5.0
BTNK				S	Sb	02 07 58.0	-4.4
DVE	Vedeno	1.27	348	*e*Pg	Pn	02 07 45.5	-0.5
DVE				*e*Sg	Sn	02 08 03.5	+0.2
DBC	Dubki	1.33	11	*e*Pg	Pn	02 07 46.4	-0.5
DBC				*e*Sg	Sg	02 08 05.6	+0.9
DLMR	Dylym	1.36	5	*e*Pg	Pn	02 07 46.9	-0.3
DLMR				*e*Sg	Sg	02 08 06.7	+1.1
DRN	Derbent	1.41	77	*e*Pg	Pn	02 07 47.8	-0.1
DRN				*e*Sg	Sg	02 08 08.2	+0.8
GROC	Groznyy	1.57	341	*e*Pg	Pg	02 07 52.5	+0.4
GROC				*e*Sg	Sg	02 08 14.5	+2.1
GUDG	Gudauri	1.67	297	P	Pn	02 07 51.1	-0.5
MTEO	Meteo	1.74	304	P	Pn	02 07 52.5	-0.4
MTEO				S	Sn	02 08 15.8	+0.3
DMNI	Dmanisi	1.77	258	P	Pn	02 07 51.7	-1.2
DMNI				S	Sn	02 08 14.9	-0.7
TRLG	Trialeti	1.79	265	P	Pn	02 07 52.3	-1.0
TRLG				S	Sn	02 08 16.0	-0.3
KMGR	Komgaron	1.80	319	*e*Pg	Pg	02 07 57.0	+0.6
KMGR				*e*Sg	Sg	02 08 23.9	+4.1
LACR	Lac	1.97	305	*e*Pg	Pn	02 07 56.6	+1.0
LACR				*e*Sg	Sg	02 08 24.8	-0.4
ZEI	Tsey	2.20	300	*e*Pg	Pb	02 08 01.0	-1.0
ZEI				*e*Sg	Sb	02 08 29.9	+0.4
BKRG	Bakuriani	2.22	272	P	Pn	02 07 59.4	+0.3
BKRG				S	Sb	02 08 29.1	-1.0

IDC ***22*** *02:16:16.9±1.0, 28°.40N×87°.49E, h0^{km}, mb3.7/8, mbtmp3.7/9, ML3.5/1, Error ellipse: s-maj=35.3km s-min=19.5km az=59.0*
ISC 22 02:16:18.6±1.1, **28°.4N**±0°.2×**87°.5E**±0°.2, **h10**^{km}, **n9**, σ**0^{s}.65**/9, **mb3.7**/8, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.80	349	P	P	02 20 37.5	-0.7
	0.2nm,0.3s,baz=146,slow=13,SNR=4.8						
	1.1nm,0.8s						
KURBB	Kurchatov Arra	23.20	345	P	P	02 21 26.2	+0.7
	2.2nm,1.0s,baz=159,slow=10,SNR=7.0						
	2.2nm,1.0s						
SONM	Songino Array	24.31	32	P	P	02 21 37.0	+0.6
	0.7nm,0.4s,baz=227,slow=7.7,SNR=4.9						
	0.7nm,0.4s						
ZALV	Zalesovo Beam	25.59	356	P	P	02 21 46.9	-0.8
	0.9nm,0.6s,baz=183,slow=7.4,SNR=5.0						
	0.9nm,0.6s						
FINES	FINESS Array B	51.86	328	P	P	02 25 26.6	-0.2
	0.5nm,0.5s,baz=96,slow=6.6,SNR=8.2						
	0.5nm,0.5s						
GERES	GERESS Array B	58.83	312	P	P	02 26 17.6	+0.3
	0.2nm,0.4s,baz=98,slow=7.1,SNR=4.1						
	0.2nm,0.4s						
WRA	Warramunga Arr	66.02	131	P	P	02 27 05.1	-0.5
	0.6nm,0.7s,baz=324,slow=6.7,SNR=4.8						
	0.6nm,0.7s						
ASAR	Alice Springs	68.40	134	P	P	02 27 21.1	+0.4
	0.6nm,0.5s,baz=319,slow=5.9,SNR=6.8						
	0.6nm,0.5s						
TORD	Torodi Ar. Bea	80.23	280	P	P	02 28 29.9	-0.1
	0.6nm,0.9s,baz=59,slow=3.9,SNR=7.0						
	0.6nm,0.9s						

IDC ***22*** *02:18:10.0±1.1, 28°.40N×87°.41E, h0^{km}, mb3.7/10, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=41.4km s-min=19.7km az=55.0*
ISC 22 02:18:11.5±1.2, **28°.4N**±0°.2×**87°.4E**±0°.2, **h10**^{km}, **n11**, σ**0^{s}.44**/11, **mb3.8**/10, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.77	349	P	P	02 22 30.6	-0.1
	0.2nm,0.3s,baz=161,slow=12,SNR=4.1						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	23.17	346	P	P	02 23 18.7	+0.6
	2.2nm,0.8s,baz=260,slow=20,SNR=11						
	2.2nm,0.8s						
SONM	Songino Array	24.34	32	P	P	02 23 29.3	-0.4
	0.9nm,0.7s,baz=216,slow=11,SNR=3.5						
	0.9nm,0.7s						
ZALV	Zalesovo Beam	25.57	356	P	P	02 23 41.0	+0.5
	1.4nm,0.7s,baz=180,slow=9.8,SNR=6.0						
	1.4nm,0.7s						
AKASG	Malin Array Be	48.65	314	P	P	02 26 55.1	-0.5
	0.3nm,0.3s,baz=76,slow=7.7,SNR=2.9						
	0.3nm,0.3s						
FINES	FINESS Array B	51.81	328	P	P	02 27 19.4	+0.1
	0.7nm,0.4s,baz=109,slow=7.6,SNR=17						
	0.7nm,0.4s						
ARCES	ARCESS Array B	53.90	337	P	P	02 27 35.0	+0.3
	1.6nm,0.7s,baz=108,slow=8.8,SNR=7.3						
	1.6nm,0.7s						
GERES	GERESS Array B	58.76	312	P	P	02 28 10.1	+0.3
	0.4nm,0.7s,baz=95,slow=6.7,SNR=4.5						
	0.4nm,0.7s						
NOA	NORSAR Array B	58.94	327	P	P	02 28 10.3	-0.5
	0.6nm,0.8s,baz=92,slow=6.3,SNR=1.5						
	0.6nm,0.8s						
WRA	Warramunga Arr	66.09	131	P	P	02 28 58.9	-0.1
	0.6nm,0.8s,baz=327,slow=6.6,SNR=2.1						
	0.6nm,0.8s						
ASAR	Alice Springs	68.47	134	P	P	02 29 14.4	+0.3
	0.3nm,0.6s,baz=312,slow=6.0,SNR=4.6						
	0.3nm,0.6s						

*IDC **22** 02:19:17.3±2.3, 22°.33S×179°.44W, h598^{km}±22^{km}, mb2.9/3, mbtmp4.0/5, Error ellipse: s-maj=42.7km s-min=23.4km az=148.0*
ISC 22 02:19:15.8±1.0**, 22°.4S**±0°.2×**179°.4W**±0°.2**, h579**^{km}**, n17, σ1^{s}03**/16**, mb3.5**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.28	332	P	P	02 20 51.2	+1.4
	22nm,0.3s,baz=237,slow=23,SNR=73						
URZ	Urewera	16.05	190	P	P	02 22 35.3	+1.0
	2.4nm,0.3s,baz=194,slow=0.8,SNR=5.7						
ASAR	Alice Springs	42.87	259	P	P	02 26 24.7	+0.4
	2.0nm,0.9s,baz=90,slow=8.3,SNR=14						
	2.0nm,0.9s						
WRA	Warramunga Arr	43.11	264	P	P	02 26 25.9	-0.4
	0.7nm,0.5s,baz=95,slow=8.1,SNR=84						
	0.7nm,0.5s						
TXAR	Lajitas Array	89.17	58	P	P	02 31 11.7	+0.9
	0.3nm,0.7s,baz=227,slow=5.0,SNR=3.4						
	0.3nm,0.7s						
ARCES	ARCESS Array B	130.58	349	PKP	PKPdf	02 37 19.5	-1.2
	3.3nm,1.0s,baz=48,slow=1.3,SNR=4.9						
FINES	FINESS Array B	137.25	342	PKP	PKPdf	02 37 33.0	-0.3
	2.2nm,1.1s,baz=140,slow=9.2,SNR=4.5						
AKASG	Malin Array Be	144.05	329	PKP	PKPbc	02 37 43.4	-2.0
	0.8nm,0.3s,baz=43,slow=4.1,SNR=11						
BRTR	Keskin Array B	147.14	309	PKPbc	PKPbc	02 37 53.6	-1.2
	0.7nm,0.6s,baz=131,slow=5.6,SNR=4.2						
OSTC	Ostas	149.40	340	*e*PKP	PKPbc	02 37 58.8	-1.2
DPC	Dobruska-Polom	149.55	340	*e*PKP	PKPbc	02 37 59.4	-0.9
KRLC	Kraliky	149.64	339	*e*PKP	PKPbc	02 37 59.6	-1.0
MAUC	Maruska	149.88	337	*e*PKP	PKPbc	02 38 00.6	-0.6
PVCC	Panska Ves	149.92	342	*e*PKP	PKPbc	02 38 00.4	-0.7
KHC	Kasperske Hory	151.46	342	*e*PKP	PKPbc	02 38 03.7	-1.1
KHC				*e*x	x	02 38 14.6	
CKRC	Cesky Krumlov	151.52	341	*e*PKP	PKPbc	02 38 03.8	-1.1
CKRC				*e*x	x	02 38 15.0	
GERES	GERESS Array B	151.68	342	PKPbc	PKPbc	02 38 04.4	-0.9
	0.2nm,0.3s,baz=20,slow=3.2,SNR=6.3						

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*SNET **22** 02:25:40.7±1.3, 13°.67N×87°.59W, h178^{km}±15^{km}, ML3.4*
*INET **22** 02:25:45.4±0.5, 13°.26N×87°.50W, h150^{km}±23^{km}, MW2.9*
ISC 22 02:25:41.8±2.6**, 13°.4N**±0°.2×**87°.66W**±0°.09**, h175**^{km}±16^{km}**, n14, σ1^{s}67**/18**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.22	233	*e*P	Pn	02 26 04.9	-0.4
CNCH				*e*S	Sn	02 26 25.6	+2.3
CNCH				IAML		02 26 43.2	
	comp=Z,410nm,0.2s						
LCND	La Caada	0.25	247	*e*P	Pn	02 26 05.3	+0.1
LCND				*e*S	Sn	02 26 23.6	+0.5
LCND				IAML		02 26 31.9	
	comp=Z,119nm,0.3s						
FAGO	Alcalda de S	0.52	303	*e*P	Pn	02 26 02.8	-3.4
FAGO				*e*S	Sn	02 26 21.1	-3.8
VSM	San Miguel	0.60	272	*e*P	Pn	02 26 07.3	+0.5
RANC	El Ranchito	0.61	272	*e*P	Pn	02 26 07.0	+0.2
PACA	Pacayal	0.65	275	*e*P	Pn	02 26 07.5	+0.6
PACA				IAML		02 26 40.4	
	comp=Z,1μm,0.2s						
TGUH	Tegucigalpa,Un	0.74	30	*e*P	Pn	02 26 09.2	+1.7
CRIN	San Cristobal	0.92	140	*e*P	Pn	02 26 08.3	-0.3
SCLA	Alcaldia de Sa	1.08	286	*e*P	Pn	02 26 10.2	+0.5
SCLA				*e*S	Sn	02 26 33.0	+1.8
SJTE	Alcalda de S	1.33	279	*e*P	Pn	02 26 11.9	0.0
LFRS	El Faro	1.38	279	*e*P	Pn	02 26 12.5	+0.1
MATN	Matagalpa	1.75	106	*e*P	Pn	02 26 15.9	-0.1
NUBE	Las Nubes	2.12	284	*e*P	Pn	02 26 19.7	-0.3
BOAB	BOACO BROADBAN	2.16	116	*e*P	Pn	02 26 19.9	-0.5

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*IDC **22** 02:38:38.8±2.6, 49°.57N×176°.59W, h0^{km}, mb3.7/5, mbtmp3.7/5, MS4.1/1, Error ellipse: s-maj=70.8km s-min=32.1km az=10.0*
*NEIC **22** 02:38:41.8±0.3, 49°.99N±0°.09×176°.4W±0°.2, h16^{km}±10^{km}, ML2.8(AEIC), Error ellipse: s-maj=16.0km s-min=13.3km az=87.0*
*AEIC **22** 02:38:44±0.4, 50°.16N±0°.04×176°.5W±0°.2, h33^{km}±8^{km}, Error ellipse: s-maj=15.2km s-min=5.3km az=101.0*
ISC 22 02:38:44.9±1.4**, 50°.1N**±0°.1×**176°.5W**±0°.1**, h23**^{km}**, n19, σ1^{s}19**/19**, mb4.0**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.71	344		Pn	02 39 12.4	-0.9
ADK	Adak	1.77	356		Sn	02 39 34.6	-1.3
ADK	Adak	1.77	356		Pn	02 39 12.9	-1.2
KIWB	Kanaga Island	1.79	346		Pn	02 39 13.8	-0.6
KICM	Kanaga Island	1.86	346		Pn	02 39 14.7	-0.6
TAPA	Tanaga Point A	1.90	334		Pn	02 39 15.3	-0.6
GSCK	Great Sitkin C	1.91	6		Pn	02 39 15.2	-0.8
GSMY	Great Sitkin M	1.95	8		Pn	02 39 15.8	-0.8
GSTD	Great Sitkin T	1.95	6		Pn	02 39 15.9	-0.7
TASE	Tanaga Southea	1.98	331		Pn	02 39 16.6	-0.5
GSTR	Great Sitkin T	2.00	7	Pn	Pn	02 39 16.0	-1.3
GSTR					Sn	02 39 42.5	+1.0
TAFP	Tanaga Falls P	2.02	333		Pn	02 39 16.9	-0.7
GANO	Gareloi North	2.25	320		Pn	02 39 20.1	-0.7
ILAR	Eielson Array	21.36	36	P	P	02 43 33.2	+3.0
	0.4nm,0.8s,baz=236,slow=9.7,SNR=4.2						
	0.4nm,0.8s						
PDAR	Pinedale Array	45.29	72	LR	LR	03 02 49.7	
	comp=Z,212nm,21.1s,baz=5.5,slow=32						
TXAR	Lajitas Array	57.38	82	P	P	02 48 29.9	-1.6
	0.2nm,0.4s,baz=308,slow=7.6,SNR=4.7						
	0.2nm,0.4s						
ARCES	ARCESS Array B	59.58	351	P	P	02 48 46.4	+0.3
	2.1nm,0.9s,baz=25,slow=9.0,SNR=4.1						
	2.1nm,0.9s						
KURBB	Kurchatov Arra	61.06	315	P	P	02 48 56.6	+0.1
	0.7nm,0.6s,baz=43,slow=6.5,SNR=9.4						
	0.7nm,0.6s						
AKTO	Aktyubinsk	69.56	326	P	P	02 49 52.0	+0.5
	0.7nm,0.5s,baz=63,slow=9.0,SNR=4.3						
	0.7nm,0.5s						

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*MAN **22** 02:44:25.4, 7°.43N×123°.40E, h4^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*
*IDC **22** 02:44:25.6±0.8, 7°.15N×123°.30E, h0^{km}, mb4.1/8, mbtmp4.1/9, ML4.6/1, MS3.3/3, Error ellipse: s-maj=32.3km s-min=16.2km az=56.0*
*NEIC **22** 02:44:28.6±2.0, 6°.97N±0°.10×123°.42E±0°.03, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=16.1km s-min=5.5km az=175.0*
ISC 22 02:44:26.7±0.5**, 7°.33N**±0°.03×**123°.53E**±0°.04**, h10**^{km}**, n46, σ2^{s}40**/51**, mb4.3**/17**, 9C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.54	345	⇓*e*P	Pg	02 44 34.3	-2.8
CTBH	Cotabato--PC H	0.72	98	⇓*i*P	Pn	02 44 42.0	-1.1
CTBH				*i* S	Sn	02 44 53.5	-0.7
DCPH	Dipolog City	1.26	352	⇑*e*P	Pn	02 44 47.1	-3.3
DCPH				*i* S	Sb	02 45 02.5	-4.4
ZCP	Zamboanga City	1.49	255	⇑*i*P	Pn	02 44 51.7	-1.9
ZCP				*i* S	Sn	02 45 10.4	-2.7
KCP	Kidapawan	1.58	101	⇓*i*P	Pg	02 44 55.6	-1.6
BUKP	Musuan	1.62	70	⇑*i*P	Pb	02 44 56.0	-0.8
GSPH	General Santos	1.88	131	*e*P	Pg	02 45 08.0	+5.2
DAV	Davao City (W)	2.06	97	Pn	Pb	02 45 03.6	-0.6
	150nm,0.3s,baz=126,slow=1.2,SNR=15						
DAV				Sn	Sg	02 45 33.9	+1.1
	128nm,0.3s,baz=148,slow=22,SNR=7.1						
DAV				LR	LR	02 46 03.9	
	comp=Z,340nm,21.4s,baz=354,slow=44						
	518nm,0.5s						
DAV	Davao City (W)	2.06	97		Pg	02 45 05.0	-1.2
TBP	Tagbilaran	2.37	8	*e*P	Pn	02 45 03.7	-2.1
TBP				*i* S	Sn	02 45 31.9	-3.0
DDMP	Don Marcelino,	2.49	119	⇑*i*P	Pb	02 45 09.9	-1.7
CNOP	Candoni, Negro	2.63	341	⇑*i*P	Pn	02 45 07.2	-2.2
CNOP				*e*S	Sn	02 45 39.4	-2.0
BUTP	Butuan	2.64	52	⇑*e*P	Pb	02 45 10.8	-3.3
LLP	Lapu-Lapu	3.00	8	⇑*e*P	Pn	02 45 13.2	-1.2
LLP				*i* S	Sn	02 45 49.4	-1.1
MSLP	Maasin	3.08	25	⇑*e*P	Pn	02 45 16.4	+0.9
MSLP				*e*S	Sn	02 45 49.0	-3.5
RCP	Roxas	4.28	350	⇑*e*P	Pn	02 45 31.5	-0.4
RCP				*e*S	Sn	02 46 26.2	+4.3
MYLDM	Lahad Datu	5.43	247		Pn	02 45 47.7	-0.2
TOLI2	Tolitoli	6.75	204		Pn	02 46 02.4	-3.7
MMRI	Maumere	15.91	185	Pn	Pn	02 48 07.4	-3.5
MMRI				IAmb	IAmb	02 48 17.8	
	comp=Z,41nm,1.5s						
UBPT	Khong Chiam	19.38	296	P	Pn	02 48 53.0	-1.0
UBPT				IAmb	IAmb	02 48 58.8	
	comp=Z,25nm,1.3s						
MTN	Manton Dam	21.42	159	P	P	02 49 14.0	-1.0
MTN				IAmb	IAmb	02 49 38.3	
	comp=Z,8.5nm,0.8s						
KNRA	Kununurra	23.44	167	P	P	02 49 34.2	-2.1
KNRA				IAmb	IAmb	02 49 46.4	
	comp=Z,20nm,1.5s						
JSU	Suzuyama	24.91	14	P	P	02 49 52.8	+2.8
CMAR	Chiang Mai Arr	26.35	297	P	P	02 50 07.8	+4.5
	comp=Z,1.0nm,0.3s,baz=117,slow=7.2,SNR=4.6						
CHTO	Chiang Mai	26.48	298	P	P	02 50 05.9	+1.5
CHTO				IAmb	IAmb	02 50 09.4	
	comp=Z,13nm,1.3s						
PSA00	Pilbara Seismi	28.95	187	P	P	02 50 22.2	-4.3
PSA00				IAmb	IAmb	02 50 28.5	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	29.11	159	P	P	02 50 27.0	-1.0
	comp=Z,1.2nm,0.8s,baz=342,slow=9.4,SNR=13						
WRA				LR	LR	03 03 09.5	
	comp=Z,113nm,18.3s,baz=254,slow=39						
	comp=Z,1.2nm,0.8s						
WB2	Warramunga Arr	29.12	159	P	P	02 50 26.9	-1.1
WB2				IAmb	IAmb	02 50 30.3	
	comp=Z,10nm,1.3s						
ASAR	Alice Springs	32.43	162	P	P	02 50 56.9	-0.3
	comp=Z,1.1nm,0.6s,baz=340,slow=7.0,SNR=16						
	comp=Z,1.1nm,0.6s						
ASAJ	Asahikawa	40.26	21	LR	LR	03 09 46.4	
	comp=Z,47nm,19.7s,baz=60,slow=38						
STKA	Stephens Creek	42.63	157	P	P	02 52 23.4	-0.1
	comp=Z,3.1nm,0.7s,baz=326,slow=5.6,SNR=6.6						
	comp=Z,3.1nm,0.7s						
MKAR	Makanchi Array	52.80	325	P	P	02 53 41.1	-1.2
	comp=Z,0.6nm,0.8s,baz=118,slow=12,SNR=2.3						
MKAR				PcP	PcP	02 54 53.2	+1.6
	comp=Z,0.8nm,0.7s,baz=123,slow=4.5,SNR=5.0						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	52.80	325	P	P	02 53 45.0	+2.7
NIL	Nilore	53.22	307	P	P	02 53 47.3	+1.6
ZAA0	Zalesovo Array	55.96	334	P	P	02 54 09.6	+4.5
KURBB	Kurchatov Arra	57.01	328	P	P	02 54 11.4	-1.3
	comp=Z,1.5nm,0.9s,baz=117,slow=9.0,SNR=4.8						
	comp=Z,1.5nm,0.9s						
KURK	Kurchatov	57.01	328	P	P	02 54 15.6	+2.9
KURK				IAmb	IAmb	02 54 16.8	
	comp=Z,5.5nm,1.2s						
GAR	Garm	57.16	312	P	P	02 54 16.8	+2.7
KK31	Karatay Array	58.44	317	P	P	02 54 27.3	+4.4
KKAR	Karatay Array	58.44	317	P	P	02 54 26.3	+3.3
NRIK	Noril'sk	66.21	347	P	P	02 55 16.4	+1.9
	comp=Z,1.4nm,0.4s,baz=154,slow=2.9,SNR=4.4						
	comp=Z,1.4nm,0.4s						
GURO	Guroymak-BITLI	78.83	308	P	P	02 56 32.8	+2.3
GURO				IAmb	IAmb	02 56 36.4	
	comp=Z,3.5nm,1.0s						
COLD	Coldfoot	81.85	23	P	P	02 56 48.4	+2.5
COLD				IAmb	IAmb	02 56 51.5	
	comp=Z,2.1nm,0.5s						
ARCES	ARCESS Array B	85.99	340	P	P	02 57 09.6	+2.5
	comp=Z,2.4nm,0.8s,baz=69,slow=6.6,SNR=3.8						
	comp=Z,2.4nm,0.8s						
ARCES	ARCESS Array B	85.99	340	IAmb	IAmb	02 57 14.4	
	comp=Z,17nm,1.4s						
FINES	FINESS Array B	87.17	332	P	P	02 57 14.9	+2.0
	comp=Z,0.7nm,0.7s,baz=73,slow=2.6,SNR=6.5						
	comp=Z,0.7nm,0.7s						

IDC 22 02:46:00.9±2.1**, 28°.46N**×**87°.51E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/4**, ML3.2**/1**, Error ellipse: s-maj=130.8km s-min=26.6km az=59.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	18.76	349	P	Pn	02 50 22.7	+1.0
	0.1nm,0.3s,baz=164,slow=11,SNR=3.4						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	23.16	345	P	P	02 51 07.6	-1.2
	0.8nm,0.9s,baz=161,slow=10,SNR=5.4						
	0.8nm,0.9s						
FINES	FINESS Array B	51.83	328	P	P	02 55 10.6	+0.1
	0.6nm,0.6s,baz=122,slow=10.0,SNR=8.0						
	0.6nm,0.6s						
WRA	Warramunga Arr	66.04	131	P	P	02 56 49.8	0.0
	0.4nm,0.9s,baz=313,slow=9.0,SNR=4.8						
	0.4nm,0.9s						

IDC 22 02:50:28.7±2.0**, 28°.68N**×**88°.01E, h0**^{km}**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=166.7km s-min=24.2km az=57.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	23.06	344	P	P	02 55 36.7	+1.1
	0.6nm,0.6s,baz=162,slow=10,SNR=4.2						
	0.6nm,0.6s						
FINES	FINESS Array B	51.88	327	P	P	02 59 37.7	-0.8
	1.0nm,0.8s,baz=139,slow=6.8,SNR=5.4						
	1.0nm,0.8s						
WRA	Warramunga Arr	65.86	132	P	P	03 01 16.5	+0.1
	0.6nm,0.8s,baz=326,slow=6.5,SNR=6.8						
	0.6nm,0.8s						
ASAR	Alice Springs	68.28	135	P	P	03 01 31.6	-0.1
	0.4nm,0.7s,baz=318,slow=6.6,SNR=4.1						
	0.4nm,0.7s						

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*IDC **22** 02:55:40.0±1.0, 28°.36N×87°.49E, h0^{km}, mb3.8/15, mbtmp3.8/16, ML3.6/1, Error ellipse: s-maj=28.4km s-min=18.8km az=46.0*
*NEIC **22** 02:55:42.3±2.2, 28°.39N±0°.07×87°.36E±0°.07, h10^{km}±2^{km}, mb4.0/23, Error ellipse: s-maj=12.6km s-min=10.1km az=155.0*
*NDI **22** 02:55:46.0±2.8, 28°.49N×87°.47E, h10^{km}, ML3.3, mb4.0(NEIC)*
ISC 22 02:55:42.4±0.5**, 28°.47N**±0°.06×**87°.41E**±0°.05**, h10**^{km}**, n48, σ1^{s}53**/48**, mb3.9**/18**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLK	Valmikinagar	3.34	251	*e*P	Pb	02 56 43.0	+1.3
VLK				*e*S	Sb	02 57 22.4	0.0
LSA	Lhasa	3.50	68	Pn	Pn	02 56 39.3	+2.0
TURI	Tura	3.90	137	*e*P	Pn	02 56 45.2	+2.8
TURI				*e*S	Sn	02 57 30.6	+2.2
TURI				IAML		02 57 38.7	
	comp=E,74nm,0.2s						
TURI				IAML		02 57 43.0	
	comp=N,103nm,0.6s						
SHL	Shillong	4.92	125	Pn	Pn	02 56 57.5	+0.9
SHL	Shillong	4.92	125	*e*P	Pn	02 56 58.8	+2.1
SMLA	Simla	9.29	289	*e*P	Pn	02 58 00.6	+4.2
SMLA				IAML		02 58 03.3	
	comp=E,47nm,0.7s						
BHPL	Bhopal	10.39	242	*e*P	Pn	02 58 12.8	+1.3
BHPL				*e*S	Sn	03 00 04.2	-3.9
NIL	Nilore	13.19	297	Pn	Pn	02 58 50.8	+0.9
CMAR	Chiang Mai Arr	14.52	131	Pn	Pn	02 59 05.3	-2.8
TARG	Taragay, Kyrgy	15.38	332	Pn	Pn	02 59 20.7	+0.9
TARG				IAmb	IAmb	02 59 36.5	
	comp=Z,3.7nm,0.8s						
KDJ	Kajisay	15.97	331	Pn	Pn	02 59 26.7	-0.6
KBL	Kabul	16.79	296	Pn	Pn	02 59 37.4	-0.5
KBL				IAmb	IAmb	02 59 42.1	
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	17.59	327	P	P	02 59 52.1	+3.2
	comp=Z,1.4nm,0.5s,baz=148,slow=8.8,SNR=5.6						
AAK	Ala-Archa	17.59	327	Pn	Pn	02 59 46.6	-1.2
AAK				IAmb	IAmb	02 59 55.6	
	comp=Z,20nm,1.9s						
GAR	Garm	17.65	311	Pn	Pn	02 59 47.5	-1.0
GAR				IAmb	IAmb	02 59 49.1	
	comp=Z,21nm,1.7s						
BTK	Batken	17.91	315		Pn	02 59 50.5	-1.2
BTK				IAmb	IAmb	02 59 52.2	
	comp=Z,4.5nm,0.7s						
CHGR	Chuyangaron	18.26	309	P	P	02 59 57.0	+0.7
CHGR				IAmb	IAmb	03 00 01.2	
	comp=Z,17nm,1.0s						
MK31	Makanchi Array	18.73	349	P	P	02 59 59.4	-1.8
MKAR	Makanchi Array	18.73	349	P	P	03 00 00.8	-0.5
	comp=Z,0.2nm,0.3s,baz=158,slow=13,SNR=9.8						
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	18.73	349	P	P	03 00 00.2	-1.0
KK31	Karatay Array	19.98	321	P	Pn	03 00 16.8	+0.2
KKAR	Karatay Array	19.98	321	P	P	03 00 14.1	-0.8
KURBB	Kurchatov Arra	23.13	346	P	P	03 00 48.9	+0.3
	comp=Z,3.4nm,0.8s,baz=163,slow=9.3,SNR=16						
	comp=Z,3.4nm,0.8s						
KURK	Kurchatov	23.20	346	P	P	03 00 48.3	-1.0
SONM	Songino Array	24.31	32	P	P	03 01 00.4	+0.2
	comp=Z,1.1nm,0.8s,baz=220,slow=10,SNR=4.4						
	comp=Z,1.1nm,0.8s						
SONM	Songino Array	24.31	32	IAmb	IAmb	03 01 03.4	
	comp=Z,8.6nm,2.0s						
ULN	Ulaanbaatar	24.65	33	P	P	03 01 05.2	+1.9
ULN				IAmb	IAmb	03 01 08.1	
	comp=Z,2.8nm,1.0s						
ZAA0	Zalesovo Array	25.53	356	P	P	03 01 10.1	-0.9
ZAA0				IAmb	IAmb	03 01 12.3	
	comp=Z,3.6nm,0.9s						
ZALV	Zalesovo Beam	25.53	356	P	P	03 01 11.4	+0.4
	comp=Z,2.6nm,0.7s,baz=190,slow=9.2,SNR=9.7						
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	25.53	356	P	P	03 01 10.9	-0.2
ABKAR	Akbulak array	29.54	322	P	P	03 01 47.2	+0.1
ABKAR				IAmb	IAmb	03 01 49.1	
	comp=Z,2.5nm,0.6s						
AKTO	Aktyubinsk	31.23	323	P	P	03 02 01.7	-0.3
	comp=Z,1.0nm,0.5s,baz=119,slow=8.7,SNR=5.7						
	comp=Z,1.0nm,0.5s						
ARU	Arti	34.65	332	P	P	03 02 32.3	+0.6
	comp=Z,0.7nm,0.5s,baz=189,slow=9.5,SNR=4.2						
	comp=Z,0.7nm,0.5s						
ARU	Arti	34.65	332	IAmb	IAmb	03 02 36.2	
	comp=Z,4.2nm,1.2s						
KLR	Kul'dur	39.57	46	P	P	03 03 13.1	-0.6
	comp=Z,1.5nm,0.7s,baz=281,slow=5.2,SNR=4.7						
	comp=Z,1.5nm,0.7s						
AKASG	Malin Array Be	48.62	314	P	P	03 04 25.7	-0.5
	comp=Z,0.4nm,0.4s,baz=79,slow=7.0,SNR=6.1						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	48.62	314	IAmb	IAmb	03 05 03.9	
	comp=Z,1.6nm,0.9s						
AKBB	Malin Array Si	48.62	314	P	P	03 04 26.1	-0.1
FINES	FINESS Array B	51.77	328	P	P	03 04 50.0	+0.1
	comp=Z,1.1nm,0.4s,baz=105,slow=8.0,SNR=26						
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	53.87	337	P	P	03 05 05.8	+0.5
	comp=Z,2.3nm,0.7s,baz=104,slow=8.9,SNR=7.7						
	comp=Z,2.3nm,0.7s						
GEC2	GERESS Array S	58.73	312	P	P	03 05 39.6	-0.8
GERES	GERESS Array B	58.73	312	P	P	03 05 40.9	+0.5
	comp=Z,0.6nm,0.7s,baz=63,slow=6.7,SNR=7.4						
	comp=Z,0.6nm,0.7s						
NB2	NORSAR Subarra	58.91	326	P	P	03 05 41.3	-0.1
	comp=Z,0.6nm,0.6s,baz=86,slow=6.9						
NOA	NORSAR Array B	58.91	326	P	P	03 05 40.8	-0.6
	comp=Z,0.8nm,0.7s,baz=86,slow=7.2,SNR=4.6						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	66.12	131	P	P	03 06 29.5	-0.6
	comp=Z,0.7nm,1.0s,baz=323,slow=6.9,SNR=2.5						
	comp=Z,0.7nm,1.0s						
ASAR	Alice Springs	68.50	134	P	P	03 06 42.6	-2.6
	comp=Z,0.7nm,0.9s,baz=325,slow=7.9,SNR=3.3						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	77.98	21	P	P	03 07 39.6	-1.0
	comp=Z,0.4nm,1.0s,baz=293,slow=4.8,SNR=3.3						
	comp=Z,0.4nm,1.0s						
TORD	Torodi Ar. Bea	80.14	280	P	P	03 07 53.6	+0.4
	comp=Z,1.2nm,1.1s,baz=43,slow=4.8,SNR=3.5						
	comp=Z,1.2nm,1.1s						

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*MDD **22** 03:11:14.8±0.5, 35°.56N×3°.76W, h0^{km}, mb_Lg2.5/12, Error ellipse: s-maj=3.6km s-min=3.3km az=156.0*
*SFS **22** 03:11:14.0, 35°.52N×3°.79W, ML2.5, ALBORAN SUR*
*CNRM **22** 03:11:15.9, 35°.51N×3°.83W, h12^{km}, ml2.0*
*IGIL **22** 03:11:16.1, 35°.53N×3°.80W, h1^{km}*
*INMG **22** 03:11:17.3±1.6, 35°.52N×3°.89W, h5^{km}±6^{km}, ML2.1, Error ellipse: s-maj=5.5km s-min=4.6km az=25.0*
ISC 22 03:11:14.4±1.0**, 35°.52N**±0°.02×**3°.77W**±0°.02**, h14**^{km}±8^{km}**, n53, σ1^{s}48**/88**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.33	204	P	Pb	03 11 22.0	-0.2
PALE				S	Sg	03 11 26.1	+0.2
PALE	Palemas	0.33	204	P	Pb	03 11 22.7	+0.6
PALE				S	Sg	03 11 25.1	-0.8
PVLZ	Peæn de	0.56	231	P	Pb	03 11 25.8	-0.1
PVLZ				S	Sg	03 11 32.0	-0.7
WMELI	Melilla	0.70	107	P	Pg	03 11 28.1	+0.1
WMELI				S	Sg	03 11 37.2	-0.1
GOG	Mont Gurugu	0.70	115	S	Sb	03 11 38.0	0.0
GOG	Mont Gurugu	0.70	115	P	Pg	03 11 27.9	-0.1
GOG				S	Sb	03 11 38.4	+0.4
EMEL	Melilla	0.70	108	Pg	Pg	03 11 27.9	-0.2
EMEL				Sg	Sg	03 11 36.6	-0.7
AKLM	AKL	1.01	184	P	Pb	03 11 33.6	-0.1
AKLM	AKL	1.01	184	P	Pn	03 11 34.5	+0.2
AKLM				S	Sn	03 11 49.4	+1.1
CHAS	Isla Isabel II	1.15	107	P	Pn	03 11 33.3	-2.7
CHAS				S	Sb	03 11 47.7	-3.0
TAF	Taforalt	1.32	122	P	Pg	03 11 41.0	+1.2
TAF	Taforalt	1.32	122	P	Pg	03 11 39.7	-0.1
TAF				S	Sn	03 11 56.5	+0.6
EMIJ	Mijas	1.32	322	Pg	Pg	03 11 40.0	+0.2
EMIJ				Sg	Sg	03 11 57.5	+0.5
EMIJ				*i* Vmb_Lg		03 12 03.4	
SMIR	Smir Dam	1.32	277	P	Pn	03 11 37.1	-1.3
SMIR				S	Sn	03 11 54.0	-1.8
EMAL	Malaga-Limoner	1.35	337	P	Pb	03 11 39.1	-0.3
EMAL				S	Sn	03 11 55.3	-1.2
CHEFC	Chefchaouen	1.35	253	P	Pb	03 11 40.0	+0.5
CHEFC	Chefchaouen	1.35	253	P	Pn	03 11 39.0	+0.2
CHEFC				S	Sn	03 11 52.7	-3.9
ELGU	Los Guajares,	1.35	5	Pg	Pn	03 11 38.1	-0.8
ELGU				Sg	Sg	03 11 57.5	-0.5
ELGU				*i* Vmb_Lg		03 12 02.3	
CEU	Ceuta	1.36	287	P	Pn	03 11 36.9	-2.0
CEU				S	Sn	03 11 52.5	-4.2
ECEU	Ceuta	1.36	286	Pg	Pn	03 11 39.0	+0.1
ECEU				Sg	Sn	03 11 53.6	-3.2
ECEU				*i* Vmb_Lg		03 11 56.5	
JBK	JBK	1.54	140	P	Pb	03 11 43.0	+0.1
JBK	JBK	1.54	140	P	Pn	03 11 42.3	+0.6
JBK				S	Sn	03 12 01.2	-0.4
EBER	Berja	1.55	27	Pg	Pn	03 11 41.9	+0.2
EBER				Sg	Sn	03 12 01.3	-0.4
EBER				*i* Vmb_Lg		03 12 05.8	
EGOR	Sierra Gorda,	1.61	350	Pn	Pb	03 11 43.4	-0.6
EGOR				Sn	Sb	03 12 03.8	-0.4
EGOR				*i* Vmb_Lg		03 12 09.5	
EQES	Quesada	2.34	14	Pg	Pb	03 11 55.0	-1.5
EQES				Sg	Sb	03 12 26.5	+1.1
EQES				*i* Vmb_Lg		03 12 28.4	
EADA	Adamuz	2.72	346	Pn	Pn	03 11 59.4	+1.7
EADA				Sn	Sb	03 12 34.9	-1.2
EADA				*i* Vmb_Lg		03 12 37.5	
MD31	MD31	2.77	197	P	Pn	03 11 59.2	+0.7
MD31				S	Sn	03 12 32.4	+0.7
MDT	Midelt	2.79	195	P	Pn	03 12 00.0	+1.3
MDT	Midelt	2.79	195	P	Pn	03 12 00.0	+1.3
ZHG	ZHG	3.15	230	P	Pn	03 12 04.4	+0.8
ZHG				S	Sn	03 12 40.9	-0.1
ETOB	Tobarra	3.59	29	Pn	Pn	03 12 11.1	+1.4
ETOB				Sn	Sn	03 12 53.3	+1.3
ETOB				*i* Vmb_Lg		03 14 02.0	
EGRO	El Granado	3.60	305	Pn	Pn	03 12 11.1	+1.3
EGRO				Sn	Sn	03 12 52.3	+0.2
EGRO				*i* Vmb_Lg		03 14 00.9	
PVAQ	Vaqueiros	3.69	302	*e*Pn	Pn	03 12 12.5	+1.4
PVAQ				*e*Sn	Sn	03 12 54.0	-0.4
PVAQ				A	A	03 12 55.5	
	4.9nm,0.3s						
PBAR	Barrancos	3.73	316	*e*Pn	Pn	03 12 14.4	+2.9
PBAR				*e*Sn	Sn	03 12 55.4	+0.2
PBAR				A	A	03 12 58.9	
	1.8nm,0.3s						

PCVE	**Castro Verde**	**4.03**	**303**	*e*Pn	**Pn**	**03 12 18.2**	**+2.5**
PCVE				*e*Sn	**Sn**	**03 13 01.7**	**-1.0**
PCVE				A	A	03 13 06.2	
	2.1nm,0.7s						
PAB	**San Pablo**	**4.04**	**354**	Pn	**Pn**	**03 12 17.4**	**+1.4**
PAB				*i* Vmb_Lg		03 12 19.7	
PBEJ	**Beja**	**4.13**	**308**	*e*Sn	**Sn**	**03 13 06.6**	**+1.4**
EBAD	**Badajoz**	**4.14**	**322**	Pn	**Pn**	**03 12 17.4**	**+0.2**
EBAD				Sn	**Sn**	**03 13 03.9**	**-1.4**
EBAD				*i* Vmb_Lg		03 13 12.9	
ESDC	**Sonseca Array**	**4.15**	**358**	Pn	**Pn**	**03 12 19.3**	**+1.9**
ESDC				*i* Vmb_Lg		03 12 20.8	
MESJ	**Messejana**	**4.26**	**304**	*e*P	**Pn**	**03 12 19.8**	**+1.0**
MESJ	**Messejana**	**4.26**	**304**	*e*Pn	**Pn**	**03 12 20.7**	**+1.9**
MESJ				*e*Sn	**Sn**	**03 13 08.3**	**0.0**
MESJ				A	A	03 13 11.3	
	2.2nm,0.3s						
MORF	**Marmelete**	**4.32**	**296**	*e*P	**Pn**	**03 12 20.8**	**+1.1**
MORF	**Marmelete**	**4.32**	**296**	*e*Pn	**Pn**	**03 12 21.6**	**+1.9**
MORF				*e*Sn	**Sn**	**03 13 10.7**	**+0.8**
MORF				A	A	03 13 12.4	
	2.9nm,0.2s						
PFVI	**Vila Bisbo**	**4.39**	**293**	*e*Sn	**Sn**	**03 13 10.9**	**-0.6**
PTEO	**Sao Teotonio**	**4.47**	**298**	*e*Sn	**Sn**	**03 13 12.8**	**-0.7**
PESTR	**Estremoz**	**4.52**	**319**	*e*Pn	**Pn**	**03 12 24.8**	**+2.3**
PESTR				*e*Sn	**Sn**	**03 13 15.0**	**+0.2**
PESTR				A	A	03 13 21.4	
	1.7nm,0.7s						
PESTR	**Estremoz**	**4.52**	**319**	P	**Pn**	**03 12 21.1**	**-1.4**
PESTR				S	**Sn**	**03 13 12.3**	**-2.5**
EVO	**Evora**	**4.53**	**313**	*e*Sn	**Sn**	**03 13 15.6**	**+0.5**
PNCL	**Nicolau / Gran**	**4.61**	**306**	*e*Pn	**Pn**	**03 12 25.2**	**+1.6**
PNCL				*e*Sn	**Sn**	**03 13 15.9**	**-1.1**
PNCL				A	A	03 13 21.9	
	1.9nm,0.2s						
PMRV	**Marv??o**	**4.85**	**325**	*e*Pn	**Pn**	**03 12 29.7**	**+2.8**
PMRV				*e*Sn	**Sn**	**03 13 23.0**	**+0.1**
PMTG	**Montargil**	**5.01**	**316**	*e*Pn	**Pn**	**03 12 32.0**	**+2.8**
PSBE	**So Bento**	**5.64**	**316**	*e*Pn	**Pn**	**03 12 40.5**	**+2.7**
MVO	**Moncorvo**	**6.19**	**337**	*e*Pn	**Pn**	**03 12 48.2**	**+2.8**

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*IDC **22** 03:20:21.0±1.4, 31°.16N×141°.73E, h0^{km}, mb3.5/5, mbtmp3.5/7, ML3.1/2, MS3.2/5, Error ellipse: s-maj=53.4km s-min=19.5km az=73.0*

ISC 22 03:20:26.3±1.1, **31°.2N**±0°.1×**141°.7E**±0°.3, **h37**^{km}, **n12**, σ**0^{s}66**/8, **mb3.5**/5, **MS3.6**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.09**	**173**	Pn	**Pn**	**03 21 26.5**	**+0.3**
	5.4nm,0.3s,baz=82,slow=23,SNR=7.3						
JCJ				Sn	**Sn**	**03 22 12.1**	**-0.7**
	3.4nm,0.3s,baz=288,slow=20,SNR=1.0						
	36nm,0.5s						
MJAR	**Matsushiro Arr**	**6.08**	**333**	Pn	**Pn**	**03 21 52.6**	**-1.0**
	0.1nm,0.3s,baz=152,slow=12,SNR=5.3						
	2.0nm,0.7s						
KSRS	**Korea Array**	**12.96**	**303**	LR	LR	03 28 59.8	
	comp=Z,27nm,18.4s,baz=100,slow=40						
USRK	**Ussuriysk Ar.**	**15.07**	**332**	LR	LR	03 29 51.6	
	comp=Z,54nm,20.8s,baz=190,slow=38						
DAV	**Davao City (W)**	**28.31**	**215**	LR	LR	03 39 59.9	
	comp=Z,32nm,18.1s,baz=327,slow=42						
SONM	**Songino Array**	**31.55**	**312**	P	**P**	**03 26 45.9**	**+0.7**
	0.9nm,0.9s,baz=113,slow=6.5,SNR=5.0						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	**47.60**	**307**	P	**P**	**03 28 58.6**	**+0.2**
	0.3nm,0.7s,baz=94,slow=12,SNR=2.1						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**51.30**	**189**	P	**P**	**03 29 26.6**	**-0.2**
	0.3nm,0.6s,baz=6.0,slow=7.7,SNR=8.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**55.03**	**189**	P	**P**	**03 29 54.3**	**+0.1**
	0.2nm,0.5s,baz=5.8,slow=6.0,SNR=5.2						
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**62.83**	**314**	LR	LR	03 59 00.5	
	comp=Z,36nm,18.5s,baz=24,slow=37						
RPZ	**Rata Peaks**	**79.23**	**159**	LR	LR	04 05 10.5	
	comp=Z,82nm,19.9s,baz=34,slow=34						
TXAR	**Lajitas Array**	**93.52**	**53**	P	**P**	**03 33 38.9**	**+0.2**
	0.4nm,0.7s,baz=318,slow=1.2,SNR=3.7						
	0.4nm,0.7s						

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*DJA **22** 03:32:13.3±1.8, 2°N±8°×12°8E±1°5, h10^{km}, M3.8/7, mb3.9/1, MLv3.8/7*

*IDC **22** 03:32:13.4±1.2, 1°.60N×127°.69E, h0^{km}, mb3.8/4, mbtmp3.9/5, ML3.8/1, MS3.3/1, Error ellipse: s-maj=68.5km s-min=20.2km az=63.0*

*NEIC **22** 03:32:15.2±1.3, 1°.66N±0°.06×127°.80E±0°.04, h10^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=11.2km s-min=6.4km az=19.0*

ISC 22 03:32:14.9±1.0, **1°.65N**±0°.08×**127°.83E**±0°.09, **h10**^{km}, **n19**, σ**0^{s}90**/19, **mb4.2**/7, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.98**	**208**		**Pg**	**03 32 33.6**	**-0.1**
TNTI	**Ternate**	**0.98**	**208**	P	**Pb**	**03 32 34.0**	**0.0**
LBMI	**Labuha**	**2.29**	**188**	P	**Pn**	**03 32 52.8**	**0.0**
KMSI	**Cibinong**	**3.99**	**255**	P	**Pn**	**03 33 16.1**	**0.0**
SANI	**Sanana**	**4.11**	**207**	P	**Pn**	**03 33 17.6**	**-0.1**
SIJI	**Sorong**	**4.25**	**126**	Pn	**Pn**	**03 33 21.6**	**+1.8**
	5.1nm,0.3s,baz=342,slow=24,SNR=5.6						
SIJI				LR	LR	03 35 12.1	
	comp=Z,350nm,19.4s,baz=122,slow=41						
	12nm,0.3s						
GTOI	**Gorontalo**	**4.92**	**258**	P	**Pn**	**03 33 30.2**	**+1.3**
LUWI	**Luwuk**	**5.72**	**242**	Pn	**Pn**	**03 33 42.0**	**+2.1**
TOLI2	**Tolitoli**	**7.06**	**266**	Pn	**Pn**	**03 33 58.5**	**+0.1**
WB0	**Warramunga Arr**	**22.23**	**163**	P	**P**	**03 37 12.0**	**0.0**
WB0				IAmb	IAmb	03 37 12.6	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**22.39**	**164**	P	**P**	**03 37 13.6**	**0.0**
	comp=Z,3.0nm,0.9s,baz=345,slow=11,SNR=19						
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**22.39**	**164**	P	**P**	**03 37 14.2**	**+0.6**
WB2	**Warramunga Arr**	**22.39**	**164**	P	**P**	**03 37 13.1**	**-0.5**
WB2				IAmb	IAmb	03 37 24.2	
	comp=Z,15nm,1.4s						
ASAR	**Alice Springs**	**25.85**	**167**	P	**P**	**03 37 46.2**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=350,slow=8.3,SNR=4.1						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**49.61**	**341**	P	**P**	**03 41 07.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=146,slow=10,SNR=2.4						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.88**	**325**	P	**P**	**03 42 20.6**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=121,slow=8.1,SNR=16						
	comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**64.07**	**328**	P	**P**	**03 42 48.3**	**-0.7**
BRVK	**Borovoye**	**69.72**	**327**	P	**P**	**03 43 24.0**	**-1.0**
BRVK				IAmb	IAmb	03 43 26.0	
	comp=Z,3.6nm,1.2s						
ABKAR	**Akbulak array**	**74.45**	**321**	P	**P**	**03 43 52.5**	**-0.9**

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*MAN **22** 03:43:33.8, 9°.77N×125°.86E, h30^{km}, mb4.1, ML2.9, MS2.6, Hypocentre not reviewed by the ISC*

ISC 22 03:43:34.5±1.3, **9°.75N**±0°.05×**125°.72E**±0°.04, **h13**^{km}±10^{km}, **n7**, σ**0^{s}82**/14, **4C-2D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.23**	**278**	⇓*i*P	**Pg**	**03 43 39.8**	**+0.4**
SCPH				*i* S	**Sb**	**03 43 44.0**	**-0.5**
GLSP	**General Luna,**	**0.40**	**85**	⇑*e*P	**Pg**	**03 43 42.8**	**+0.3**
GLSP				*e*S	**Sb**	**03 43 49.0**	**-0.6**
BUTP	**Butuan**	**0.78**	**187**	⇑*i*P	**Pg**	**03 43 49.0**	**-0.7**
BUTP				*e*S	**Sb**	**03 44 01.2**	**+0.7**
MSLP	**Maasin**	**0.93**	**294**	⇑*i*P	**Pg**	**03 43 52.1**	**-0.3**
MSLP				*e*S	**Sn**	**03 44 05.8**	**-0.7**
LLP	**Lapu-Lapu**	**1.82**	**288**	*e*P	**Pn**	**03 44 06.4**	**+0.9**
LLP				*e*S	**Sb**	**03 44 30.8**	**+0.5**
TBP	**Tagbilaran**	**1.83**	**268**	⇓*i*P	**Pn**	**03 44 04.9**	**-0.7**
TBP				*i* S	**Sn**	**03 44 29.4**	**+0.6**
BUKP	**Musuan**	**1.97**	**199**	⇑*e*P	**Pb**	**03 44 09.7**	**-0.5**
BUKP				*e*S	**Sn**	**03 44 33.6**	**+1.4**

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*IDC **22** 03:55:00.1±1.1, 31°.24N×141°.58E, h0^{km}, mb3.9/6, mbtmp3.8/9, ML3.4/3, MS2.9/3, Error ellipse: s-maj=47.9km s-min=16.9km az=75.0*

*NEIC **22** 03:55:02.6±1.1, 31°.22N±0°.08×141°.6E±0°.2, h12^{km}±5^{km}, mb4.2/10, Error ellipse: s-maj=21.1km s-min=9.0km az=69.0*

ISC 22 03:55:05.1±0.7, **31°.18N**±0°.08×**141°.6E**±0°.1, **h37**^{km}, **n28**, σ**0^{s}90**/26, **mb4.1**/12, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.44**	**323**	Pn	**Pn**	**03 55 41.5**	**-0.8**
JCJ	**Chichijima**	**4.10**	**172**	Pn	**Pn**	**03 56 06.2**	**+0.9**
	9.0nm,0.3s,baz=358,slow=16,SNR=16						
JCJ				Sn	**Sn**	**03 56 51.5**	**-0.4**
	10nm,0.3s,baz=292,slow=24,SNR=4.1						
	19nm,0.3s						
JCJ	**Chichijima**	**4.10**	**172**		**Pn**	**03 56 04.7**	**-0.6**
JGF	**Kuroka**	**5.65**	**322**	Pn	**Pn**	**03 56 26.9**	**+0.4**
MJAR	**Matsushiro Arr**	**6.04**	**333**	Pn	**Pn**	**03 56 31.4**	**-0.5**
	0.3nm,0.3s,baz=152,slow=12,SNR=16						
MJAR				Sn	**Sn**	**03 57 40.9**	**+1.1**
	0.2nm,0.3s,baz=112,slow=24,SNR=5.6						
	2.2nm,0.3s						
MAJO	**Matsushiro**	**6.04**	**333**		**Pn**	**03 56 31.8**	**-0.1**
MJB9	**Matsu-Tunnel**	**6.04**	**333**		**Pn**	**03 56 31.6**	**-0.4**
ERM	**Erimo**	**10.89**	**6**	Pn	**Pn**	**03 57 36.2**	**-2.1**
KSRS	**Korea Array**	**12.90**	**303**	LR	LR	04 03 24.0	
	comp=Z,49nm,18.1s,baz=115,slow=39						
KLR	**Kul'dur**	**19.50**	**340**	P	**P**	**03 59 28.4**	**-0.5**
	0.1nm,0.3s,baz=125,slow=12,SNR=3.6						
	0.6nm,0.3s						
SONM	**Songino Array**	**31.50**	**312**	P	**P**	**04 01 21.7**	**-1.8**
SONM				IAmb	IAmb	04 01 26.0	
	comp=Z,2.9nm,1.2s						
CMAR	**Chiang Mai Arr**	**40.48**	**262**	LR	LR	04 21 22.0	
	comp=Z,12nm,18.2s,baz=295,slow=39						
ZAA0	**Zalesovo Array**	**46.12**	**317**	P	**P**	**04 03 25.7**	**+0.2**
ZAA0				IAmb	IAmb	04 03 42.5	
	comp=Z,1.7nm,0.4s						
MK31	**Makanchi Array**	**47.54**	**307**	P	**P**	**04 03 37.0**	**+0.1**
MKAR	**Makanchi Array**	**47.54**	**307**	P	**P**	**04 03 37.4**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=89,slow=7.9,SNR=4.9						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**49.81**	**312**	P	**P**	**04 03 53.4**	**-0.7**
KURK	**Kurchatov**	**49.81**	**312**	IAmb	IAmb	04 03 56.2	
	comp=Z,2.6nm,1.1s						
KURBB	**Kurchatov Arra**	**49.87**	**312**	P	**P**	**04 03 53.4**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=87,slow=6.8,SNR=6.6						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**51.30**	**189**	P	**P**	**04 04 06.3**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=5.9,slow=7.6,SNR=33						
	comp=Z,0.7nm,0.3s						
ASAR	**Alice Springs**	**55.03**	**189**	P	**P**	**04 04 33.9**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=0.8,slow=4.6,SNR=10						
	comp=Z,0.5nm,0.6s						
KK31	**Karatay Array**	**56.33**	**304**	P	**P**	**04 04 42.8**	**+0.5**
KK31				IAmb	IAmb	04 04 44.0	
	comp=Z,2.2nm,0.7s						
KKAR	**Karatay Array**	**56.33**	**304**	P	**P**	**04 04 43.0**	**+0.7**
KKAR				IAmb	IAmb	04 04 44.0	
	comp=Z,2.2nm,0.7s						
BARN	**Barnard Glacie**	**56.93**	**34**	P	**P**	**04 04 47.4**	**+0.8**
ABKAR	**Akbulak array**	**61.91**	**313**	P	**P**	**04 05 20.8**	**0.0**
ABKAR				IAmb	IAmb	04 05 43.1	
	comp=Z,1.4nm,0.9s						
OBN	**Obninsk**	**72.90**	**325**	LR	LR	04 41 56.7	
	comp=Z,8.0nm,18.2s,baz=357,slow=39						
FINES	**FINESS Array B**	**74.07**	**333**	P	**P**	**04 06 36.9**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=57,slow=7.0,SNR=3.8						
	comp=Z,0.8nm,0.8s						
TX32	**Lajitas Array**	**93.57**	**53**	P	**P**	**04 08 19.0**	**+1.3**
TXAR	**Lajitas Array**	**93.57**	**53**	P	**P**	**04 08 18.2**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=313,slow=2.5,SNR=7.8						
	comp=Z,1.3nm,1.0s						

TAP 22 03:58:57.2, 24°.44N×121°.81E, h12^{km}, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.03**	**273**	P	Pg	03 58 59.5	+0.2
	baz=273						
EWUT				*e*S	Sg	03 59 00.7	0.0
	baz=273						
ENA	**Nanau**	**0.06**	**255**	P	Pg	03 58 59.8	+0.2
	baz=251						
ENA				S	Sg	03 59 01.2	-0.1
	baz=251						
TWC	**Suao**	**0.17**	**13**	P	Pg	03 59 01.4	+0.4
	baz=9.0						
TWC				S	Sg	03 59 03.9	+0.2
	baz=9.0						
NDS	**Dongshan**	**0.21**	**337**	P	Pg	03 59 02.2	+0.6
	baz=336						
NDS				*e*S	Sg	03 59 05.2	+0.5
	baz=336						
LATG	**Datong**	**0.27**	**290**	*e*P	Pg	03 59 03.4	+0.5
	baz=290						
LATG				*e*S	Sg	03 59 07.1	+0.5
	baz=290						
ENTT	**Nioudou**	**0.29**	**312**	*e*P	Pb	03 59 03.9	-0.6
	baz=312						
ENTT				*e*S	Sg	03 59 08.0	+0.7
	baz=312						
TWE	**Neicheng**	**0.30**	**335**	*e*P	Pg	03 59 03.9	+0.5
	baz=337						
TWE				*e*S	Sg	03 59 08.1	+0.6
	baz=337						
NDT	**Datong Townshi**	**0.31**	**301**	*e*P	Pg	03 59 04.0	+0.5
	baz=301						
NDT				*e*S	Sg	03 59 08.3	+0.6
	baz=301						
NACB	**Ninganchiao**	**0.33**	**216**	*e*P	Pg	03 59 03.1	-0.8
	baz=208						
NACB				*e*S	Sg	03 59 08.6	+0.2
	baz=208						
FUSB	**Fushanzhiwuyua**	**0.37**	**328**	*e*P	Pb	03 59 05.3	-0.5
	baz=317						
FUSB				*e*S	Sg	03 59 09.6	-0.1
	baz=317						
ETLH	**Xiulin Townshi**	**0.38**	**231**	*e*P	Pg	03 59 04.9	+0.1
	baz=231						
NNSB	**Datong**	**0.39**	**268**	*e*P	Pg	03 59 05.3	+0.4
	baz=268						
NNSB				*e*S	Sg	03 59 10.3	+0.2
	baz=268						
NNS	**Nan Shan**	**0.40**	**270**	*e*S	Sg	03 59 10.6	+0.2
	baz=269						
NWLT	**Wulai**	**0.43**	**320**	*e*P	Pg	03 59 06.3	+0.5
	baz=314						
NWLT				*e*S	Sg	03 59 11.7	+0.2
	baz=314						
YHNB	**Yeheng**	**0.45**	**300**	*e*P	Pb	03 59 06.9	-0.3
	baz=306						
YHNB				*e*S	Sb	03 59 13.5	-0.5
	baz=306						
NSK	**Sanguang**	**0.47**	**300**	*e*P	Pb	03 59 07.3	-0.2
	baz=300						
NSK				*e*S	Sb	03 59 13.9	-0.5
	baz=300						
TIPB	**Shuangxi**	**0.53**	**2**	*e*S	Sg	03 59 14.6	+0.1
	baz=2.0						

JMA 22 03:59:49.2±0.1, **24°.2N**±0°.5×**123°.6E**±0°.4, **h15**^{km}±1^{km}, **MV1.1**/8, **NEAR ISHIGAKIJIMA ISLAND**, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.18**	**46**	P	Pg	03 59 53.4	0.0
IRIF				*e*S	Sg	03 59 56.1	-0.1
HATJ	**Hateruma jima**	**0.25**	**128**	P	Pg	03 59 54.4	-0.1
JKRS	**Kuro-shima**	**0.38**	**86**	P	Pg	03 59 56.9	0.0
JKRS				*e*S	Sb	04 00 03.1	-0.3
JIJ	**Ishigaki jima**	**0.53**	**73**	*e*P	Pg	03 59 59.1	-0.4
JIJ				*e*S	Sg	04 00 06.9	+0.3
JISG	**Ishigakijimahi**	**0.76**	**60**	*e*P	Pg	04 00 03.5	-0.4
JISG				*e*S	Sg	04 00 13.7	-0.1
JTJ	**Tarama**	**1.10**	**67**	*e*S	Sn	04 00 25.0	0.0

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*ISK **22** 04:02:02.9, 34°.88N×37°.25E, h5^{km}, ML3.3/26*

*DDA **22** 04:02:05.2±0.0, 35°.05N×37°.34E, h8^{km}±2^{km}, ML2.8*

*GII **22** 04:02:05.2±0.0, 34°.82N×37°.65E, h5^{km}, MD3.2/3, Mm3.2/5*

*GRAL **22** 04:02:06.7±0.8, 35°.19N×36°.96E, h6^{km}±11^{km}, MD3.5*

ISC 22 04:02:00.7±1.3, **34°.80N**±0°.04×**37°.59E**±0°.06, **h3**^{km}±12^{km}, **n54**, σ**1^{s}58**/70, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**1.45**	**250**	*e*P	**Pb**	**04 02 28.4**	**0.0**
HWQ				*e*S	**Sn**	**04 02 44.6**	**-2.9**
YAYL	**Yayladag**	**1.73**	**316**	P	**Pb**	**04 02 33.0**	**-0.2**
YAYL				S	**Sn**	**04 02 52.8**	**-1.5**
BHL	**Bhannes**	**1.83**	**241**	*e*P	**Pb**	**04 02 35.3**	**+0.4**
BHL				*e*S	**Sn**	**04 02 56.6**	**-0.2**
TAHT	**Tahtakopru-Hat**	**1.95**	**324**	PN	**Pn**	**04 02 35.7**	**+1.1**
TAHT				SN	**Sn**	**04 02 59.4**	**-0.1**
RCY	**Rachaya**	**1.95**	**229**	*e*P	**Pg**	**04 02 38.5**	**+0.5**
RCY				*e*S	**Sb**	**04 03 02.7**	**+1.1**
DQRL	**Deir Qamar**	**2.00**	**237**	*e*P	**Pb**	**04 02 38.2**	**+0.6**
DQRL				*e*S	**Sn**	**04 03 01.4**	**+0.6**
QRWL	**Qaraoun**	**2.01**	**232**	*e*P	**Pg**	**04 02 39.0**	**-0.3**
ASUZ	**Hatay-Arsuz**	**2.10**	**316**	P	**Pn**	**04 02 37.6**	**+1.0**
ASUZ				S	**Sn**	**04 03 02.2**	**-0.9**
ASUZ				*i* AML	AML	04 03 05.0	
	comp=E,120nm,0.2s						
ASUZ				*i* AML	AML	04 03 06.0	
	comp=N,295nm,0.5s						
SHBL	**Chebaa**	**2.11**	**227**	*e*P	**Pg**	**04 02 41.2**	**+0.1**
NATI	**Neve Ativ**	**2.17**	**226**	Pn	**Pg**	**04 02 41.8**	**-0.5**
NATI				Sn	**Sg**	**04 03 10.8**	**+0.4**
SURC	**SANLIURFA_SURC**	**2.24**	**22**	P	**Pg**	**04 02 43.0**	**-0.6**
SURC				S	**Sg**	**04 03 16.3**	**+3.7**
SURC				*i* AML	AML	04 03 25.0	
	comp=E,198nm,0.9s						
SURC				*i* AML	AML	04 03 26.0	
	comp=N,170nm,0.4s						
GEM	**Giv'at Ha'Em**	**2.25**	**226**	Pn	**Pg**	**04 02 43.3**	**-0.5**
GEM				Sn	**Sg**	**04 03 11.9**	**-1.1**
KAMA	**Osmaniye**	**2.50**	**343**	P	**Pb**	**04 02 44.7**	**-1.5**
KAMA				S	**Sn**	**04 03 15.3**	**+2.1**
KAMA				*i* AML	AML	04 03 24.0	
	comp=E,66nm,0.7s						
KAMA				*i* AML	AML	04 03 26.0	
	comp=N,105nm,0.5s						
MMA0B	**Mount Meron ar**	**2.54**	**226**	Pn	**Pg**	**04 02 48.3**	**-1.1**
MMA0B				Sn	**Sb**	**04 03 20.2**	**+1.6**
MMC7	**Mount Meron ar**	**2.54**	**227**	Pn	**Pg**	**04 02 48.0**	**-1.4**
YURE	**YUREGIR**	**2.57**	**322**	P	**Pn**	**04 02 45.6**	**+2.4**
HCB	**Kahramanmara**	**2.60**	**348**	P	**Pb**	**04 02 46.2**	**-1.8**
HCB				S	**Sn**	**04 03 17.0**	**+1.3**
HCB				*i* AML	AML	04 03 28.0	
	comp=E,95nm,0.5s						
HCB				*i* AML	AML	04 03 30.0	
	comp=N,52nm,0.3s						
HNTI	**Hanita**	**2.64**	**230**	Pn	**Pb**	**04 02 49.0**	**+0.5**
HNTI				Sn	**Sb**	**04 03 22.6**	**+1.3**
CEYT	**Ceyhan**	**2.67**	**326**	PN	**Pn**	**04 02 45.9**	**+1.4**
KAHM	**Kahramanmaras,**	**2.76**	**350**	P	**Pb**	**04 02 48.7**	**-1.9**
KAHM				*i* AML	AML	04 03 34.0	
	comp=E,61nm,0.5s						
KAHM				*i* AML	AML	04 03 38.0	
	comp=N,46nm,0.5s						
KMRS	**Kahramanmaras**	**2.76**	**349**	PN	**Pn**	**04 02 47.7**	**+1.9**
BLGI	**Bet Lehem HaGe**	**2.87**	**225**	Pn	**Pb**	**04 02 52.9**	**+0.4**
EREN	**Erenkoy**	**2.90**	**286**	PN	**Pn**	**04 02 47.6**	**0.0**
MMLI	**Mount Malkishu**	**2.97**	**218**	PN	**Pb**	**04 02 51.9**	**-2.3**
MMLI	**Mount Malkishu**	**2.97**	**218**	Pn	**Pb**	**04 02 53.9**	**-0.3**
MMLI				Sn	**Sb**	**04 03 30.5**	**-0.4**
KOZT	**Kozan**	**3.03**	**332**	PN	**Pn**	**04 02 50.4**	**+0.8**
HMDT	**Nahal Hemdat**	**3.07**	**215**	Pn	**Pb**	**04 02 54.8**	**-1.1**
OFRI	**`Ofer**	**3.07**	**226**	Pn	**Pb**	**04 02 55.8**	**-0.1**
OFRI				Sn	**Sb**	**04 03 33.1**	**-0.7**
KARA	**Karaisali**	**3.20**	**321**	PN	**Pn**	**04 02 53.3**	**+1.4**
MERS	**Mersin**	**3.24**	**311**	PN	**Pn**	**04 02 53.1**	**+0.7**
SLTI	**Sal'it**	**3.32**	**221**	Pn	**Pb**	**04 03 00.0**	**-0.2**
LFK	**Lefkose**	**3.36**	**279**	PN	**Pn**	**04 02 54.5**	**+0.4**
IKL	**Isikli**	**3.49**	**295**	PN	**Pn**	**04 02 56.1**	**+0.2**
CSS	**Mathiatis**	**3.50**	**274**	PN	**Pn**	**04 02 57.2**	**+1.2**
MAZI	**Mazidag**	**3.52**	**40**	PN	**Pb**	**04 03 02.9**	**-0.8**
CMRD	**Camardi-Nigde**	**3.55**	**324**	PN	**Pn**	**04 02 57.6**	**+0.9**
KEBE	**Keben-Mersin**	**3.56**	**299**	PN	**Pn**	**04 02 57.1**	**+0.3**
AKKU	**Akkuyu-Mersin**	**3.56**	**294**	PN	**Pn**	**04 02 55.9**	**-0.9**
MALT	**Malatya**	**3.57**	**11**	PN	**Pb**	**04 03 01.3**	**-3.3**
GULN	**MERSIN_Gulnar**	**3.58**	**294**	P	**Pn**	**04 02 55.7**	**-1.4**
GULN				S	**Sn**	**04 03 35.8**	**-4.0**
GULN				*i* AML	AML	04 03 39.0	
	comp=N,7.3nm,0.3s						
GULN				*i* AML	AML	04 03 42.0	
	comp=E,11nm,0.6s						
SARI	**SarD1z-Kayseri**	**3.72**	**346**	PN	**Pn**	**04 03 02.1**	**+2.9**
TEVE	**Tevekalti-Mers**	**3.75**	**297**	PN	**Pn**	**04 02 59.1**	**-0.4**
DYBB	**Diyarbakir**	**3.76**	**32**	PN	**Pb**	**04 03 05.9**	**-1.9**
DARE	**Darende-Malaty**	**3.77**	**359**	PN	**Pn**	**04 03 02.9**	**+3.2**
KERG	**Konya-Eregli**	**3.83**	**314**	P	**Pn**	**04 03 03.1**	**+2.4**
KERG				S	**Sn**	**04 03 46.0**	**-0.3**
KERG				*i* AML	AML	04 03 47.0	
	comp=N,33nm,0.8s						
KERG				*i* AML	AML	04 03 50.0	
	comp=E,15nm,0.6s						
SVRC	**Sivrice-ELAZID**	**3.83**	**21**	PN	**Pb**	**04 03 05.5**	**-3.5**
BERE	**Bereket-Mersin**	**3.88**	**295**	PN	**Pn**	**04 03 02.5**	**+1.2**
TEKE	**Tekeli-Mersin**	**3.89**	**291**	PN	**Pn**	**04 03 01.7**	**+0.4**
KRMN	**Karaman**	**4.23**	**305**	PN	**Pn**	**04 03 07.0**	**+0.9**
YESY	**Yesilyurt**	**4.30**	**315**	PN	**Pn**	**04 03 08.9**	**+1.8**
SVAN	**Silvan-Diyarba**	**4.43**	**40**	PN	**Pb**	**04 03 16.1**	**-3.1**
HDMB	**Hadim**	**4.67**	**299**	PN	**Pn**	**04 03 13.2**	**+0.9**
GURO	**Guroymak-BITLI**	**5.17**	**42**	PN	Pb	04 03 26.2	-5.7
EIL	**Elat**	**5.58**	**204**	PN	Pb	04 03 30.8	-7.9

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*IDC **22** 04:05:27.1±2.3, 25°.82S×128°.88E, h0^{km}, mbtmp4.1/3, ML4.0/3, Error ellipse: s-maj=51.4km s-min=40.4km az=169.0*

*AUST **22** 04:05:37.2±0.6, 25°.60S×129°.82E, h0^{km}, Error ellipse: s-maj=7.8km s-min=5.7km az=24.0*

*NOU **22** 04:05:41.7, 25°.60S×129°.77E, h78^{km}, mb4.3/22, Northern Territory, Australia*

ISC 22 04:05:38.2±0.7, **25°.60S**±0°.07×**129°.80E**±0°.04, **h10**^{km}, **n37**, σ**1^{s}69**/41, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.47**	**292**	P	**Pb**	**04 06 05.9**	**+0.3**
	baz=1.5,SNR=267						
WRKA				S	**Sg**	**04 06 25.9**	**+0.3**
	baz=1.5,SNR=15						
WRKA	**Warakurna**	**1.47**	**292**	P	**Pg**	**04 06 06.3**	**-0.1**
ASAR	**Alice Springs**	**4.20**	**64**	Pn	**Pn**	**04 06 44.0**	**+1.6**
	3.8nm,0.3s,baz=244,slow=12,SNR=148						
ASAR				Pg	**Pb**	**04 06 55.0**	**+2.7**
	5.7nm,0.3s,baz=233,slow=15,SNR=27						
ASAR				Sn	**Sn**	**04 07 32.3**	**+0.7**
	9.7nm,0.3s,baz=249,slow=22,SNR=13						
ASAR				Lg	Lg	04 07 44.9	
	15nm,0.3s,baz=247,slow=25,SNR=11						
	6.5nm,0.3s						
FORT	**Forrest**	**5.38**	**196**	P	**Pn**	**04 07 02.1**	**+3.6**
	baz=5.4,SNR=18						
FORT	**Forrest**	**5.38**	**196**	P	**Pn**	**04 07 00.0**	**+1.4**
OOD	**Oodnadatta**	**5.70**	**114**	P	**Pn**	**04 07 04.7**	**+1.7**
	baz=5.7,SNR=9.7						
OOD	**Oodnadatta**	**5.70**	**114**	P	**Pn**	**04 07 04.8**	**+1.9**
MULG	**Mulgathing**	**6.00**	**142**	P	**Pn**	**04 07 09.0**	**+2.1**
	baz=6.0,SNR=3.7						
MULG	**Mulgathing**	**6.00**	**142**	P	**Pn**	**04 07 08.5**	**+1.5**
WRA	**Warramunga Arr**	**7.02**	**38**	Pn	**Pn**	**04 07 21.1**	**0.0**
	1.8nm,0.3s,baz=222,slow=14,SNR=121						
WRA				Sn	**Sn**	**04 08 36.0**	**-4.9**
	2.5nm,0.3s,baz=219,slow=20,SNR=7.0						
WRA				Lg	Lg	04 09 11.4	
	2.4nm,0.3s,baz=216,slow=24,SNR=3.7						
	4.5nm,0.4s						
WRAB	**Tennant Creek**	**7.03**	**38**	P	**Pn**	**04 07 22.5**	**+1.3**
LCRK	**Leigh Creek**	**8.87**	**125**	P	**Pn**	**04 07 47.0**	**+0.6**
	baz=8.9,SNR=5.7						
LCRK	**Leigh Creek**	**8.87**	**125**	P	**Pn**	**04 07 47.2**	**+0.8**
BBOO	**Buckleboo**	**9.03**	**144**	P	**Pn**	**04 07 49.1**	**+0.5**
	baz=9.1,SNR=18						
BBOO	**Buckleboo**	**9.03**	**144**	P	**Pn**	**04 07 48.9**	**+0.3**
KNRA	**Kununurra**	**9.92**	**354**	P	**Pn**	**04 08 01.7**	**+0.8**
	baz=9.9,SNR=6.2						
KNRA	**Kununurra**	**9.92**	**354**	P	**Pn**	**04 08 01.9**	**+1.0**
INKA	**Innaminka**	**10.02**	**105**	P	**Pn**	**04 08 02.4**	**+0.2**
	baz=10.0,SNR=5.5						
INKA	**Innaminka**	**10.02**	**105**	P	**Pn**	**04 08 03.1**	**+0.9**
MEEK	**Meekatharra**	**10.11**	**262**	P	**Pn**	**04 08 03.0**	**-0.5**
MBWA	**Marble Bar**	**10.25**	**293**	P	**Pn**	**04 08 05.2**	**-0.2**
QIS	**Mount Isa**	**10.33**	**63**	P	**Pn**	**04 08 07.6**	**+1.1**

NAPP	**Napperby**	**10.49**	**138**	P	**Pn**	**04 08 09.1**	**+0.5**
HTT	**Hallett**	**11.13**	**137**	P	**Pn**	**04 08 17.4**	**-0.1**
TWOA	**Tennyson Woods**	**12.07**	**143**	P	**Pn**	**04 08 31.3**	**+1.0**
	17nm,1.1s						
STKA	**Stephens Creek**	**12.09**	**124**	Pn	**Pn**	**04 08 28.2**	**-2.3**
	0.8nm,0.3s,baz=300,slow=13,SNR=9.0						
STKA				Sn	**Sn**	**04 10 40.2**	**-5.2**
	1.6nm,0.3s,baz=342,slow=13,SNR=7.1						
	2.1nm,0.3s						
STKA	**Stephens Creek**	**12.09**	**124**	P	**Pn**	**04 08 30.1**	**-0.5**
	baz=12,SNR=5.6						
STKA	**Stephens Creek**	**12.09**	**124**	P	**Pn**	**04 08 31.3**	**+0.8**
KLBR	**Kellerberrin**	**12.15**	**238**	P	**Pn**	**04 08 30.4**	**-0.9**
	baz=12,SNR=6.0						
KLBR	**Kellerberrin**	**12.15**	**238**	P	**Pn**	**04 08 31.0**	**-0.3**
BLDU	**Ballidu**	**12.59**	**244**	P	**Pn**	**04 08 37.5**	**+0.2**
QLP	**Quilpie**	**13.01**	**97**	P	**Pn**	**04 08 43.5**	**+0.3**
NWAO	**Narrogin (SRO)**	**13.17**	**233**	P	**Pn**	**04 08 46.2**	**+0.9**
	64nm,2.3s						
MUN	**Mundaring**	**13.50**	**239**	P	**Pn**	**04 08 49.7**	**-0.1**
RKGY	**Rocky Gully**	**14.26**	**228**	P	**Pn**	**04 09 01.4**	**+1.1**
	baz=14,SNR=4.6						
CMSA	**Cobar Meteorol**	**15.16**	**117**	P	**Pn**	**04 09 11.6**	**-0.8**
FINES	**FINESS Array B**	**118.67**	**328**	PKP	PKPdf	04 24 15.8	-10
	0.9nm,0.3s,baz=90,slow=3.1,SNR=24						

REN ***22*** *04:10:41.8±1.8, 38°.26N±0°.04×114°.61W±0°.03, h2^{km}±7^{km}, ML2.6/6, ML2.4/62(NEIC), Error ellipse: s-maj=5.4km s-min=3.2km az=188.0*

NEIC 22 04:10:41.6±1.3**, 38°.25N**±0°.04×**114°.64W**±0°.03**, h4**^{km}±7^{km}**, Error ellipse: s-maj=5.4km s-min=3.3km az=189.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSUT	**Pine Spring**	**0.68**	**65**		Pg	04 10 54.6	-0.1
PSUT					Sg	04 11 03.8	+0.3
PSUT	**Pine Spring**	**0.68**	**65**	IAML		04 11 04.1	
	comp=N,174nm,0.3s						
R11A	**Troy Canyon, C**	**0.75**	**278**	Pg	Pg	04 10 55.9	-0.2
R11A				IAML		04 11 10.7	
	comp=N,133nm,0.3s						
R11A				IAML		04 11 11.0	
	comp=E,154nm,0.2s						
PRN	**Pahroc Range**	**0.91**	**201**		Pg	04 10 59.3	+0.3
S11A	**Rachel**	**1.07**	**236**		Pg	04 11 01.6	-0.4
S11A				IAML		04 11 19.8	
	comp=N,138nm,0.6s						
CCUT	**Cedar City**	**1.23**	**124**		Pg	04 11 04.8	-0.4
CCUT	**Cedar City**	**1.23**	**124**	IAML		04 11 23.7	
	comp=N,72nm,0.4s						
CCUT				IAML		04 11 23.8	
	comp=E,96nm,0.4s						
ICU	**Indian Springs**	**1.24**	**153**		Pg	04 11 05.1	-0.3
SZCU	**Shurtz Canyon**	**1.39**	**118**		Pn	04 11 08.1	0.0
LCMT	**Little Creek M**	**1.66**	**138**		Pn	04 11 12.3	+0.5
TCRU	**Three Creeks R**	**1.76**	**78**	Pn	Pn	04 11 12.8	-0.4
SHPR	**Sheep Range**	**1.79**	**194**		Pn	04 11 13.9	+0.4
TPNV	**Topopah Spring**	**1.82**	**225**		Pb	04 11 15.0	-0.7
TPNV				IAML		04 11 43.5	
	comp=E,45nm,0.5s						
TPNV				IAML		04 11 43.0	
	comp=E,39nm,0.4s						
MTPU	**Mount Pierson**	**1.95**	**95**		Pn	04 11 16.4	+0.6
MTPU				IAML		04 11 46.7	
	comp=N,20nm,0.4s						
MSU	**Marysvale**	**1.95**	**82**		Pn	04 11 16.5	+0.7
PKCU	**Pink Cliffs**	**2.01**	**113**	Pn	Pn	04 11 17.4	+0.7
TPH	**Tonopah**	**2.04**	**266**	Pn	Pn	04 11 17.6	+0.5
Q09A	**Carvers**	**2.08**	**287**	Pn	Pn	04 11 18.0	+0.5
DUG	**Dugway, Tooele**	**2.40**	**36**	Pn	Pn	04 11 21.7	-0.2
DUG				IAML		04 11 59.2	
	comp=N,13nm,0.7s						
ELK	**Elko**	**2.53**	**350**	Pn	Pn	04 11 24.5	+0.8
LCH	**Last Change Ra**	**2.59**	**248**	Pn	Pn	04 11 25.6	+1.1
LCH				IAML		04 12 09.9	
	comp=N,11nm,0.4s						
LCH				IAML		04 12 11.3	
	comp=E,13nm,0.4s						
U15A	**North Rim**	**2.61**	**134**	Pn	Pn	04 11 24.4	-0.5
U15A				IAML		04 12 07.6	
	comp=N,14nm,0.9s						
U15A				IAML		04 12 07.9	
	comp=E,11nm,0.8s						
GWY	**Greenwater Val**	**2.62**	**219**	Pn	Pn	04 11 24.9	0.0
GWY				IAML		04 12 11.6	
	comp=E,17nm,0.5s						
GWY				IAML		04 12 15.0	
	comp=N,15nm,0.7s						
NV11	**Mina Array Sit**	**2.77**	**275**	Pn	Pn	04 11 27.3	+0.3
NV11				IAML		04 12 10.4	
	comp=N,15nm,0.8s						
KVN	**Kaiserville**	**2.82**	**287**	Pn	Pn	04 11 28.3	+0.5
KVN				IAML		04 12 14.8	
	comp=N,11nm,0.5s						
KVN				IAML		04 12 19.4	
	comp=E,11nm,0.8s						
NVAR	**Mina Array Bea**	**2.89**	**275**	Pn	Pn	04 11 29.7	+1.1
BMN	**Battle Mountai**	**2.96**	**318**	Pn	Pn	04 11 30.5	+1.0
LHV	**Little Huntoon**	**3.04**	**271**	Pn	Pn	04 11 30.5	0.0
LHV				IAML		04 12 21.9	
	comp=N,17nm,0.8s						
RYN	**Ryan**	**3.07**	**278**	Pn	Pn	04 11 30.6	-0.5
RYN				IAML		04 12 22.9	
	comp=E,13nm,0.4s						
RYN				IAML		04 12 24.7	
	comp=N,15nm,0.8s						
YERR	**Yerington**	**3.68**	**283**	Pn	Pn	04 11 38.9	-0.5
YERR				IAML		04 12 41.9	
	comp=N,9.1nm,1.2s						
YERR				IAML		04 13 41.3	
	comp=E,7.5nm,4.6s						
P18A	**Preston Nutter**	**3.69**	**67**	Pn	Pn	04 11 38.8	-0.9
P18A				IAML		04 12 06.6	
	comp=N,4.5nm,3.3s						
P18A				IAML		04 12 10.9	
	comp=E,4.2nm,4.2s						
PNTR	**Pine Nut**	**3.97**	**284**	Pn	Pn	04 11 43.2	-0.3
PNTR				IAML		04 12 46.6	
	comp=E,8.2nm,4.4s						
PNTR				IAML		04 12 50.8	
	comp=N,7.6nm,2.8s						

MOS ***22*** *04:16:38.6±1.1, 44°.21N×148°.09E, h78^{km}, mb4.3/6, Error ellipse: s-maj=10.5km s-min=8.7km az=59.6*

JMA ***22*** *04:16:39.6±0.3, 44°N±1°×14°8E±°, h0^{km}, MV4.5/29, E OFF HOKKAIDO*

NIED ***22*** *04:16:39.6, 43°.95N×147°.80E, h0^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.93; $M_{\theta\theta}$7.66; $M_{\phi\phi}$-6.73; $M_{r\theta}$3.92; $M_{\theta\phi}$1.18; $M_{\phi r}$-4.98; Fault plane solution: $M_0$9.67000×10^{14} NP1:ϕ_s44.00000°, δ50.00000°, λ-172.00000°. NP2:ϕ_s309.00000°, δ84.00000°, λ-40.00000°.*

IDC ***22*** *04:16:40.5±2.5, 44°.17N×148°.00E, h81^{km}±23^{km}, mb3.4/9, mbtmp3.7/14, MS2.7/2 Error ellipse: s-maj=40.6km s-min=17.1km az=156.0*

SKHL ***22*** *04:16:41.1±0.2, 44°.40N×147°.90E, h82^{km}±5^{km}, mb5.2/4, msha6.0/4*

ISC 22 04:16:38.9±1.1**, 44°.19N**±0°.06×**148°.11E**±0°.07**, h63**^{km}±9^{km}**, n69,** σ**1^{s}28**/84**, mb3.9**/13**, 4C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.98**	**251**	*c i*PN	**Pn**	**04 16 57.1**	**+0.3**
SHO				*i* S	**Sn**	**04 17 08.6**	**-1.4**
SHO				pmax	pmax		
	comp=Z,78nm,0.1s						
SHO				smax	smax		
	comp=N,3μm,0.2s						
SHO				smax	smax		
	comp=E,4μm,0.2s						
SHO	**Shikotan**	**0.98**	**251**	*i* P	**Pn**	**04 16 57.1**	**+0.3**
SHO				AMB	AMB	04 16 57.5	
	comp=E,80nm,0.2s						
SHO				*i* S	**Sn**	**04 17 09.2**	**-0.8**
SHO				A	A	04 17 09.9	
	comp=E,3μm,0.3s						
SHO				A	A	04 17 09.9	
	comp=E,4μm,0.3s						
KUR	**Kuril'sk**	**1.05**	**350**	*c i*PN	**Pn**	**04 16 58.2**	**+0.5**
KUR				*e*S	**Sn**	**04 17 11.2**	**-0.5**
KUR				pmax	pmax		
	comp=N,275nm,0.3s						
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,233nm,0.2s						
KUR				smax	smax		
	comp=N,3μm,0.6s						
KUR				smax	smax		
	comp=E,4μm,0.6s						
KUR	**Kuril'sk**	**1.05**	**350**	*i* P	**Pn**	**04 16 58.4**	**+0.7**
KUR				AMB	AMB	04 16 58.8	
	comp=E,280nm,0.3s						
KUR				AMB	AMB	04 16 58.8	
	comp=E,230nm,0.3s						
KUR				AMB	AMB	04 16 58.8	
	comp=E,2μm,0.3s						
KUR				*e*S	**Sn**	**04 17 11.4**	**-0.3**
KUR				A	A	04 17 12.3	
	comp=E,3μm,0.5s						
KUR				A	A	04 17 12.3	
	comp=E,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.63**	**265**	*d i*PN	**Pn**	**04 17 05.9**	**+0.6**
YUK				*i* S	**Sn**	**04 17 24.3**	**-1.0**
YUK				pmax	pmax		
	comp=N,350nm,0.2s						
YUK				pmax	pmax		
	comp=E,292nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.63**	**265**	*i* P	**Pn**	**04 17 05.9**	**+0.6**
YUK				AMB	AMB	04 17 07.5	
	comp=N,350nm,0.3s						
YUK				AMB	AMB	04 17 07.5	
	comp=N,290nm,0.3s						
YUK				AMB	AMB	04 17 07.5	
	comp=N,1μm,0.3s						
YUK				*i* S	**Sn**	**04 17 24.3**	**-1.0**
YUK				A	A	04 17 27.0	
	comp=N,2μm,0.3s						
YUK				A	A	04 17 27.0	
	comp=N,2μm,0.3s						
NEM2	**Nemuro 2**	**1.91**	**245**	*e*P	**Pn**	**04 17 09.4**	**+0.4**
NEM2				*e*S	**Sn**	**04 17 30.7**	**-1.3**
NMR	**Nemuro--Hokkai**	**1.92**	**245**	⇓*i*PN	**Pn**	**04 17 09.4**	**+0.2**
NMR				*i* S	**Sn**	**04 17 30.7**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.92**	**245**	*i* P	**Pn**	**04 17 09.4**	**+0.2**
NMR				*i* S	**Sn**	**04 17 30.7**	**-1.5**
GLVR	**Golovnino**	**1.93**	**257**	*e*PN	**Pn**	**04 17 10.5**	**+1.2**
GLVR				*i* S	**Sn**	**04 17 32.4**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,671nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.2s						
GLVR				smax	smax		
	comp=E,512nm,0.2s						
GLVR	**Golovnino**	**1.93**	**257**	*e*P	**Pn**	**04 17 10.2**	**+0.9**
GLVR				AMB	AMB	04 17 10.9	
	comp=E,670nm,0.3s						
GLVR				*i* S	**Sn**	**04 17 32.0**	**-0.5**
GLVR				A	A	04 17 37.3	
	comp=E,2μm,0.3s						
GLVR				A	A	04 17 37.3	
	comp=E,510nm,0.3s						
RUSJ	**Misakicho**	**2.07**	**269**	*e*PN	**Pn**	**04 17 13.1**	**+1.9**
RUSJ				*e*S	**Sn**	**04 17 37.5**	**+1.6**
JRA	**Rausu**	**2.17**	**264**	*e*P	**Pn**	**04 17 14.3**	**+1.6**
JRA				*e*S	**Sn**	**04 17 39.7**	**+1.2**
JNSB	**Nemuroshibetsu**	**2.28**	**261**	*e*P	**Pn**	**04 17 15.8**	**+1.6**
JNSB				*e*S	**Sn**	**04 17 42.3**	**+1.1**
JKHN	**Kushirohamanak**	**2.42**	**244**	*e*P	**Pn**	**04 17 16.8**	**+0.9**
JKHN				*e*S	**Sn**	**04 17 44.0**	**-0.3**
JNK	**Nakash**	**2.53**	**257**	*e*P	**Pn**	**04 17 19.0**	**+1.4**
JNK				*e*S	**Sn**	**04 17 47.4**	**+0.2**
AKK	**Akkeshi**	**2.65**	**245**	*e*P	**Pn**	**04 17 19.6**	**+0.4**
JAK	**Akkeshi**	**2.76**	**245**	*e*P	**Pn**	**04 17 21.2**	**+0.6**
JAK				*e*S	**Sn**	**04 17 51.9**	**-0.9**
JTKR	**Abashiri--Toko**	**3.04**	**267**	*e*P	**Pn**	**04 17 25.9**	**+1.4**
JAR	**Ashorobuto**	**3.27**	**256**	*e*P	**Pn**	**04 17 29.5**	**+1.8**
JAR				*e*S	**Sn**	**04 18 06.5**	**+1.1**
JCH	**Churui**	**3.81**	**247**	*e*P	**Pn**	**04 17 37.1**	**+2.1**
JCH				*e*S	**Sn**	**04 18 18.6**	**+0.1**
JKK2	**Kamakawa 2**	**3.88**	**267**	*e*P	**Pn**	**04 17 38.5**	**+2.4**
JKA	**Kamikawa-asahi**	**3.97**	**271**	*e*P	**Pn**	**04 17 39.7**	**+2.5**
ASAJ	**Asahikawa**	**3.97**	**271**	P	**Pn**	**04 17 39.7**	**+2.5**
	comp=E,16nm,0.5s,baz=90,slow=20,SNR=27						
ASAJ				S	Sn	04 18 36.0	+13
	comp=E,26nm,0.6s,baz=36,slow=32,SNR=8.0						
ASAJ				LR	LR	04 19 20.5	
	comp=E,85nm,21.1s,baz=6.5,slow=41						
ERM	**Erimo**	**4.23**	**241**	*de*PN	**Pn**	**04 17 43.3**	**+2.5**
JNBK	**Urakawa-nobuka**	**4.36**	**246**	*e*P	**Pn**	**04 17 43.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.67**	**308**	*e*PN	**Pn**	**04 17 48.1**	**+1.4**
YSS				*e*S	**Sn**	**04 18 36.5**	**-3.0**
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS				smax	smax		
	comp=N,30nm,1.0s						
YSS				smax	smax		
	comp=E,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.67**	**308**	*e*P	**Pn**	**04 17 47.8**	**+1.1**
YSS				AMB	AMB	04 17 48.7	
	comp=E,40nm,0.5s						
YSS				*e*S	**Sn**	**04 18 36.5**	**-3.0**
YSS				A	A	04 18 39.5	
	comp=E,30nm,0.7s						
YSS				A	A	04 18 39.5	
	comp=E,50nm,0.7s						
JEW	**Eniwo**	**5.03**	**257**	*e*P	**Pn**	**04 17 54.5**	**+2.8**
JRBN	**Rebuntou**	**5.17**	**286**	*e*P	**Pn**	**04 17 55.7**	**+2.2**
MJAR	**Matsushiro Arr**	**10.74**	**228**	P	**Pn**	**04 19 08.7**	**-1.2**
	comp=E,1.8nm,0.9s,baz=27,slow=12,SNR=5.5						
PETK	**Petropavlovsk-**	**10.93**	**32**	P	**Pn**	**04 19 13.6**	**+1.2**
	comp=E,2.9nm,0.6s,baz=200,slow=11,SNR=7.0						
PETK				LR	LR	04 23 55.7	
	comp=E,41nm,19.8s,baz=133,slow=40						
KSRS	**Korea Array**	**16.68**	**253**	P	**Pn**	**04 20 26.7**	**-1.6**
	comp=E,0.9nm,0.7s,baz=54,slow=12,SNR=4.9						
KSRS	**Korea Array**	**16.68**	**253**	*e*P	**P**	**04 20 29.4**	**-0.3**
KSRS	**Korea Array**	**16.68**	**253**	*e*P	**P**	**04 20 29.4**	**-0.3**
SEY	**Seymchan**	**18.94**	**6**	P	**P**	**04 20 54.7**	**+0.3**
	comp=E,2.7nm,0.6s,baz=176,slow=7.7,SNR=6.8						
SONM	**Songino Array**	**28.95**	**292**	P	**P**	**04 22 32.8**	**+0.7**
	comp=E,0.2nm,0.4s,baz=95,slow=9.9,SNR=2.2						
	comp=E,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**29.00**	**141**	T	T	04 53 25.4	
	baz=332,slow=76,SNR=218						
H11N1	**WAKE ISLAND Hy**	**29.01**	**141**	T	T	04 53 23.0	
	baz=332,slow=76,SNR=168						
H11N3	**WAKE ISLAND Hy**	**29.01**	**141**	T	T	04 53 26.8	
	baz=332,slow=76,SNR=197						
H11S1	**WAKE ISLAND Hy**	**29.98**	**143**	T	T	04 54 42.8	
	baz=333,slow=76,SNR=372						
H11S3	**WAKE ISLAND Hy**	**29.99**	**143**	T	T	04 54 39.5	
	baz=333,slow=76,SNR=246						
H11S2	**WAKE ISLAND Hy**	**30.00**	**143**	T	T	04 54 33.4	
	baz=333,slow=76,SNR=184						
COLA	**College**	**40.30**	**36**	⇑*e*P	**P**	**04 24 09.8**	**+0.4**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**40.72**	**37**	P	**P**	**04 24 13.2**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=268,slow=7.8,SNR=13						
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**40.72**	**37**	*e*P	**P**	**04 24 13.6**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	**Makanchi Array**	**45.00**	**298**	⇑*e*P	**P**	**04 24 47.7**	**-0.1**
MKAR	**Makanchi Array**	**45.00**	**298**	P	**P**	**04 24 47.8**	**0.0**
	comp=Z,0.6nm,0.6s,baz=83,slow=8.8,SNR=5.5						
	comp=Z,0.6nm,0.6s						
INK	**Inuvik**	**45.67**	**31**	P	**P**	**04 24 53.5**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=310,slow=9.4,SNR=16						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**45.86**	**304**	⇓*e*P	**P**	**04 24 53.0**	**-1.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**45.86**	**304**	*e*P	**P**	**04 24 53.0**	**-1.5**
YKA	**Yellowknife Ar**	**55.04**	**34**	P	**P**	**04 26 04.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=300,slow=6.6,SNR=6.2						
	comp=Z,0.7nm,0.6s						
FINES	**FINESS Array B**	**64.79**	**333**	P	**P**	**04 27 08.0**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=38,slow=7.2,SNR=7.7						
	comp=Z,0.7nm,0.6s						
FINES	**FINESS Array B**	**64.79**	**333**	P	**P**	**04 27 08.0**	**-2.3**
NOA	**NORSAR Array B**	**69.44**	**339**	P	**P**	**04 27 39.1**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=32,slow=6.0,SNR=3.8						
	comp=Z,0.5nm,0.6s						
KIV	**Kislovodsk**	**69.98**	**312**	*e*P	**P**	**04 27 43.8**	**+0.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**69.98**	**312**	*e*P	**P**	**04 27 43.8**	**+0.2**
DPC	**Dobruska-Polom**	**76.92**	**331**	*e*P	**P**	**04 28 23.6**	**-0.5**
DPC	**Dobruska-Polom**	**76.92**	**331**	*e*P	**P**	**04 28 23.6**	**-0.5**
KRLC	**Kraliky**	**76.99**	**330**	*e*P	**P**	**04 28 24.3**	**-0.2**
KRLC	**Kraliky**	**76.99**	**330**	*e*P	**P**	**04 28 24.3**	**-0.2**
CLL	**Collm**	**77.24**	**333**	*i* P	**P**	**04 28 25.3**	**-0.5**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CLL	**Collm**	**77.24**	**333**	*i* P	**P**	**04 28 25.3**	**-0.5**
	comp=Z,4.0nm,1.1s						
KHC	**Kasperske Hory**	**78.91**	**332**	*e*P	**P**	**04 28 34.9**	**-0.3**
KHC	**Kasperske Hory**	**78.91**	**332**	*e*P	**P**	**04 28 34.9**	**-0.3**
CKRC	**Cesky Krumlov**	**78.92**	**331**	*e*P	**P**	**04 28 34.8**	**-0.4**
GERES	**GERESS Array B**	**79.11**	**331**	P	**P**	**04 28 36.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=8.2						
	comp=Z,0.6nm,0.6s						
GERES	**GERESS Array B**	**79.11**	**331**	*e*P	**P**	**04 28 37.1**	**+0.8**
TXAR	**Lajitas Array**	**81.82**	**57**	P	**P**	**04 28 51.4**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=289,slow=5.6,SNR=2.1						
	comp=Z,0.1nm,0.5s						

DMN ***22*** *04:49:41.1±0.3, 28°.52N×87°.65E, h10^{km}, Ml5.0/7, Error ellipse: s-maj=4.2km s-min=2.2km az=40.0*

IDC ***22*** *04:49:42.7±0.7, 28°.49N×87°.61E, h0^{km}, mb4.2/21, mbtmp4.2/24, ML4.3/3, MS3.4/21, Error ellipse: s-maj=19.5km s-min=13.0km az=29.0*

MOS ***22*** *04:49:43.9±1.0, 28°.53N×87°.48E, h16^{km}, mb4.7/18, Error ellipse: s-maj=9.3km s-min=4.4km az=123.5*

BJI ***22*** *04:49:45.2±0.0, 28°.59N×87°.50E, h10^{km}, mb4.4/35, mB4.7/17, Ms4.0/26, Ms7 3.8/23*

NEIC ***22*** *04:49:45.2±1.4, 28°.56N±0°.09×87°.59E±0°.06, h11^{km}±4^{km}, mb4.3/41, Error ellipse: s-maj=12.9km s-min=8.0km az=169.0*

NDI ***22*** *04:49:47.6±3.3, 28°.29N×87°.56E, h10^{km}, ML4.0, mb4.3(NEIC)*

ISC 22 04:49:44.8±1.1**, 28°.41N**±0°.04×**87°.45E**±0°.03**, h15**^{km}±7^{km}**, n220,** σ**1^{s}64**/229**, mb4.4**/59**, MS3.4**/24**, 21C-17D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**1.49**	**137**	*e*P	**Pn**	**04 50 09.7**	**-1.5**
GTK				*e*S	**Sn**	**04 50 26.4**	**-4.0**
GTK				IAML		04 50 29.8	
	comp=E,2μm,0.7s						
GTK				IAML		04 50 29.9	
	comp=N,3μm,0.2s						
ODAN	**Odare**	**1.54**	**182**	*e*Pg	**Pn**	**04 50 12.8**	**+0.8**
ODAN				*e*Sg	**Sg**	**04 50 33.8**	**-0.8**
	comp=N,2μm,0.8s						
RAMN	**Ramite**	**1.64**	**208**	*e*Pg	**Pb**	**04 50 15.1**	**+0.2**
RAMN				*e*Sg	**Sg**	**04 50 38.4**	**+0.7**
	comp=N,4μm,0.7s						
SLGI	**Shiliguri**	**1.91**	**153**	*e*P	**Pb**	**04 50 19.6**	**+0.3**
SLGI				*e*x	**Sg**	**04 50 44.7**	**-1.5**
PKI	**Pulchoki**	**1.99**	**246**	*e*Pg	**Pg**	**04 50 22.5**	**-0.6**
PKI				*e*Sg	**Sg**	**04 50 51.0**	**+2.1**
	comp=N,3μm,0.5s						
PKIN	**Phulchoki**	**2.00**	**246**	*e*Pg	**Pg**	**04 50 22.6**	**-0.6**
PKIN				*e*Sg	**Sg**	**04 50 51.2**	**+2.0**
	comp=N,2μm,0.4s						
DMN	**Daman**	**2.22**	**250**	*e*Pg	**Pb**	**04 50 26.3**	**+1.4**
DMN				*e*Sg	**Sg**	**04 50 57.7**	**+1.3**
	comp=N,4μm,0.6s						
GKN	**Gorkha**	**2.52**	**261**	*e*Pg	**Pb**	**04 50 31.3**	**+1.5**
GKN				*e*Sg	**Sg**	**04 51 06.3**	**+0.5**
	comp=N,5μm,0.3s						
VLK	**Valmikinagar**	**3.36**	**252**	*e*P	**Pb**	**04 50 41.4**	**-2.6**
VLK				*e*x	**Sg**	**04 51 28.8**	**-3.9**
KOLN	**Koldanda**	**3.46**	**260**	*e*Pg	**Pg**	**04 50 49.0**	**-2.2**
KOLN				*e*Sg	**Sg**	**04 51 35.9**	**-0.2**
	comp=N,313nm,0.5s						
LSA	**Lhasa**	**3.48**	**67**	Pn	**Pn**	**04 50 38.5**	**-0.4**
LSA	**Lhasa**	**3.48**	**67**	P	**Pn**	**04 50 38.5**	**-0.4**
LSA	**Lhasa**	**3.48**	**67**	Pg	**Pn**	**04 50 41.6**	**+2.7**
LSA				Sg	**Sb**	**04 51 25.5**	**-3.3**
LSA				LR	LR		
	comp=N,2μm,5.3s						
LSA				LR	LR		
	comp=N,2μm,7.1s						
LSA				LR	LR		
	comp=N,2μm,6.1s						
GUWA	**GUWAHATI**	**4.37**	**119**	*e*P	**Pn**	**04 50 51.7**	**+1.1**
GUWA				*i* x	**Pb**	**04 51 01.7**	**+0.4**
BOK	**Bokaro**	**4.81**	**197**	*e*P	**Pn**	**04 50 59.3**	**+2.6**
SHL	**Shillong**	**4.86**	**125**		**Pn**	**04 50 57.6**	**0.0**
SHL	**Shillong**	**4.86**	**125**	P	**Pn**	**04 50 57.6**	**0.0**
SHL	**Shillong**	**4.86**	**125**	*e*P	**Pn**	**04 50 57.9**	**+0.3**
ITAN	**ITANAGAR**	**5.70**	**101**	*e*P	**Pn**	**04 51 10.2**	**+1.3**
ALBI	**Allahabad**	**5.91**	**240**	*e*P	**Pn**	**04 51 15.0**	**+3.1**
IMP	**Imphal**	**6.82**	**120**	*e*P	**Pn**	**04 51 25.8**	**+1.4**
IMP				*e*x	**Sn**	**04 52 46.1**	**+4.3**
BWNR	**Bhubaneshwar**	**8.21**	**191**	*e*P	**Pn**	**04 51 46.8**	**+3.3**
DDI	**Dehra Dun**	**8.42**	**285**	*e*P	**Pn**	**04 51 50.3**	**+3.9**
JHNI	**Jhansi**	**8.48**	**252**	*e*P	**Pn**	**04 51 47.1**	**0.0**
NDI	**New Delhi**	**9.01**	**274**	*e*x	x	04 52 42.0	
NDI				*e*x	**Sn**	**04 53 35.0**	**-0.6**
SMLA	**Simla**	**9.34**	**289**	*e*P	**Pn**	**04 52 00.7**	**+1.8**
SMLA				*e*S	**Sn**	**04 53 44.1**	**+0.4**
SMLA				IAML		04 53 50.2	
	comp=N,66nm,1.2s						
SMLA				IAML		04 53 50.2	
	comp=E,66nm,1.2s						
RAGD	**RAYAGADA**	**9.82**	**203**	*e*P	**Pn**	**04 52 08.8**	**+3.2**
GOMU	**GeErMu**	**9.95**	**37**	P	**Pn**	**04 52 09.3**	**+1.7**
GOMU				pP		04 52 13.8	
GOMU				sP		04 52 15.6	
GOMU				S	**Sn**	**04 54 06.0**	**+6.7**
GOMU				sS		04 54 11.0	
GOMU				pmax	pmax		
	comp=E,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=E,91nm,6.1s						
GOMU				LR	LR		
	comp=E,220nm,7.2s						
GOMU				LR	LR		
	comp=E,170nm,7.7s						
GOMU				LR	LR		
	comp=E,160nm,9.8s						
BHPL	**Bhopal**	**10.39**	**243**	*e*P	**Pn**	**04 52 13.1**	**-0.4**
BHPL				*e*S	**Sn**	**04 54 04.7**	**-5.0**
PZH	**PanZhiHua**	**12.83**	**95**	P	**Pn**	**04 52 47.3**	**+0.4**
PZH				S	**Sn**	**04 55 11.4**	**+1.9**
PZH				pmax	pmax		
	comp=E,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=E,110nm,6.7s						
PZH				LR	LR		
	comp=E,570nm,19.8s						
PZH				LR	LR		
	comp=E,380nm,18.5s						
PZH				LR	LR		
	comp=E,740nm,21.0s						
NIL	**Nilore**	**13.25**	**297**	Pn	**Pn**	**04 52 52.0**	**-0.4**
NIL	**Nilore**	**13.25**	**297**	P	**Pn**	**04 52 52.0**	**-0.4**
HYBB	**Hyderabad (bro**	**13.66**	**219**	*e*P	**Pn**	**04 52 58.6**	**+0.4**
HYBB				*e*		04 55 23.1	
HYBB				*e*Sn	**Sn**	**04 55 33.1**	**+3.3**
CHTO	**Chiang Mai**	**14.21**	**130**	Pn	**Pn**	**04 53 06.9**	**+1.3**
CHTO	**Chiang Mai**	**14.21**	**130**	P	**Pn**	**04 53 06.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**14.46**	**131**	Pn	**Pn**	**04 53 08.1**	**-0.9**
	comp=E,1.0nm,0.3s,baz=300,slow=12,SNR=2.7						
CMAR				LR	LR	04 59 17.7	
	comp=E,95nm,21.2s,baz=305,slow=40						
	comp=E,1.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.46**	**131**	*ce*P	**Pn**	**04 53 12.0**	**+3.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSH	**Kashi**	**14.60**	**322**	P	**Pn**	**04 53 09.1**	**-1.8**
KSH				pP	P	04 53 11.8	-5.5
KSH				sP		04 53 17.3	
KSH				PP	**PnPn**	**04 53 23.3**	**+4.4**
KSH				S	**Sn**	**04 55 46.4**	**-6.1**
KSH				pmax	pmax		

	comp=Z,20nm,0.8s						
KSH				LR	LR		
	comp=Z,190nm,14.6s						
KSH				LR	LR		
	comp=Z,380nm,18.1s						
GTA	**Gaotai**	**15.01**	**40**	⇑P	**P**	**04 53 20.8**	**-1.1**
GTA				pP	pP	04 53 25.8	-1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,80nm,4.9s						
GTA				LR	LR		
	comp=Z,300nm,13.8s						
GTA				LR	LR		
	comp=Z,230nm,13.1s						
GTA				LR	LR		
	comp=Z,150nm,12.7s						
WMQ	**Urumqi**	**15.38**	**1**	*e*P	**Pn**	**04 53 21.5**	**+0.1**
TARG	**Taragay, Kyrgy**	**15.44**	**332**	Pn	**Pn**	**04 53 22.4**	**-0.1**
TARG				IAmb	IAmb	04 53 27.4	
	comp=Z,12nm,0.8s						
TARG	**Taragay, Kyrgy**	**15.44**	**332**	P	**Pn**	**04 53 22.4**	**-0.1**
TARG				pmax	pmax		
	comp=Z,12nm,0.8s						
LZH	**Lanzhou**	**15.83**	**57**	*e*P	**Pn**	**04 53 24.0**	**-3.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=Z,430nm,10.2s						
LZH				LR	LR		
	comp=Z,310nm,10.8s						
LZH				LR	LR		
	comp=Z,320nm,11.9s						
PRZ	**Przheval'sk**	**15.85**	**335**	Pn	**Pn**	**04 53 26.3**	**-1.2**
PRZ				IAmb	IAmb	04 53 35.1	
	comp=Z,23nm,0.9s						
PRZ	**Przheval'sk**	**15.85**	**335**	P	**Pn**	**04 53 26.3**	**-1.2**
PRZ				pmax	pmax		
	comp=Z,23nm,1.0s						
POO	**Poona**	**15.88**	**235**	*e*x	**Pn**	**04 53 25.0**	**-2.9**
POO				*e*x	**S**	**04 56 34.0**	**-3.9**
KDJ	**Kajisay**	**16.04**	**331**	Pn	**Pn**	**04 53 28.6**	**-1.4**
KDJ	**Kajisay**	**16.04**	**331**	P	**Pn**	**04 53 28.6**	**-1.4**
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBL	**Kabul**	**16.84**	**296**	Pn	**Pn**	**04 53 38.9**	**-1.4**
KBL				IAmb	IAmb	04 53 44.9	
	comp=Z,16nm,0.9s						
KBL	**Kabul**	**16.84**	**296**	P	**Pn**	**04 53 38.9**	**-1.4**
KBL				pmax	pmax		
	comp=Z,17nm,1.0s						
DRK	**Karamyk**	**17.02**	**314**	Pn	**Pn**	**04 53 42.5**	**-0.1**
DRK				IAmb	IAmb	04 53 48.2	
	comp=Z,9.5nm,0.6s						
AAK	**Ala-Archa**	**17.66**	**327**	P	**Pn**	**04 53 50.7**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=148,slow=12,SNR=16						
AAK				LR	LR	05 00 43.3	
	comp=Z,70nm,20.2s,baz=154,slow=37						
	comp=Z,2.4nm,0.5s						
AAK	**Ala-Archa**	**17.66**	**327**	Pn	**Pn**	**04 53 48.3**	**-2.1**
AAK				IAmb	IAmb	04 53 55.8	
	comp=Z,23nm,1.4s						
AAK	**Ala-Archa**	**17.66**	**327**	⇑*e*P	**P**	**04 53 52.1**	**+0.8**
GAR	**Garm**	**17.71**	**311**	Pn	**Pn**	**04 53 48.3**	**-2.8**
BTK	**Batken**	**17.97**	**315**	Pn	**Pn**	**04 53 50.5**	**-3.7**
BTK				IAmb	IAmb	04 53 56.3	
	comp=Z,16nm,0.8s						
BTK	**Batken**	**17.97**	**315**	P	**Pn**	**04 53 50.5**	**-3.7**
BTK				pmax	pmax		
	comp=Z,16nm,0.8s						
CHGR	**Chuyangaron**	**18.33**	**309**	Pn	**Pn**	**04 53 56.4**	**-2.2**
CHGR	**Chuyangaron**	**18.33**	**309**	P	**Pn**	**04 53 56.4**	**-2.2**
CHGR				pmax	pmax		
	comp=Z,112nm,1.2s						
MK31	**Makanchi Array**	**18.80**	**349**		**P**	**04 54 02.5**	**-1.2**
MK31	**Makanchi Array**	**18.80**	**349**	⇓*i*P	**P**	**04 54 03.0**	**-0.6**
MKAR	**Makanchi Array**	**18.80**	**349**	P	**P**	**04 54 03.2**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=162,slow=13,SNR=28						
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**18.80**	**349**	P	**P**	**04 54 02.5**	**-1.2**
MKAR	**Makanchi Array**	**18.80**	**349**	*i* P	**P**	**04 54 03.4**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	**Makanchi**	**18.86**	**348**	P	**P**	**04 54 03.2**	**-1.2**
MAKZ	**Makanchi**	**18.86**	**348**	P	**P**	**04 54 03.2**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN	**Xi'an**	**19.19**	**68**	P	**P**	**04 54 06.4**	**-1.7**
XAN				S	**Sn**	**04 57 41.8**	**-2.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				LR	LR		
	comp=Z,210nm,10.8s						
XAN				LR	LR		
	comp=Z,200nm,9.6s						
XAN				LR	LR		
	comp=Z,180nm,10.0s						
KK31	**Karatay Array**	**20.04**	**321**		**P**	**04 54 17.6**	**+0.3**
KK31				IAmb	IAmb	04 54 24.2	
	comp=Z,9.2nm,0.9s						
KK31	**Karatay Array**	**20.04**	**321**	P	**P**	**04 54 17.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KKAR	**Karatay Array**	**20.04**	**321**		**P**	**04 54 17.1**	**-0.2**
KKAR	**Karatay Array**	**20.04**	**321**	P	**P**	**04 54 17.4**	**0.0**
KKAR				IAmb	IAmb	04 54 24.2	
	comp=Z,9.2nm,0.9s						
KKAR	**Karatay Array**	**20.04**	**321**	P	**P**	**04 54 17.1**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURBB	**Kurchatov Arra**	**23.19**	**345**	P	**P**	**04 54 50.5**	**-0.4**
	comp=Z,13nm,0.9s,baz=165,slow=9.9,SNR=46						
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**23.26**	**346**	P	**P**	**04 54 51.2**	**-0.3**
KURK	**Kurchatov**	**23.26**	**346**	*c* *i*P	**P**	**04 54 51.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,39nm,1.3s						
HHC	**Hu-ho-hao-te**	**23.32**	**52**	*e*P	**P**	**04 54 51.8**	**-0.6**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.1s						
HHC				LR	LR		
	comp=Z,330nm,13.8s						
HHC				LR	LR		
	comp=Z,360nm,11.9s						
HHC				LR	LR		
	comp=Z,300nm,11.4s						
KNGR	**Kungurtug, Tuv**	**23.44**	**16**	⇓*e*P	**P**	**04 54 53.6**	**0.0**
SONM	**Songino Array**	**24.34**	**32**	P	**P**	**04 55 02.2**	**0.0**
	comp=Z,5.0nm,0.8s,baz=222,slow=10,SNR=15						
SONM				LR	LR	05 05 52.3	
	comp=Z,60nm,20.4s,baz=212,slow=40						
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**24.34**	**32**	P	**P**	**04 55 01.6**	**-0.5**
ULN	**Ulaanbaatar**	**24.67**	**33**	⇓*e*P	**P**	**04 55 05.4**	**+0.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.9s						
ZAK	**Zakamensk**	**25.02**	**24**	*e*P	**P**	**04 55 07.9**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ZAA0	**Zalesovo Array**	**25.59**	**356**	P	**P**	**04 55 12.8**	**-0.5**
ZAA0				IAmb	IAmb	04 55 14.2	
	comp=Z,9.5nm,0.9s						
ZALV	**Zalesovo Beam**	**25.59**	**356**	P	**P**	**04 55 13.4**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=182,slow=9.6,SNR=29						
	comp=Z,6.0nm,0.7s						
GEYT	**Alibeck**	**26.24**	**299**	P	**P**	**04 55 22.1**	**+2.8**
	comp=Z,3.8nm,0.7s,baz=75,slow=19,SNR=5.8						
GEYT				LR	LR	05 07 36.4	
	comp=Z,143nm,19.5s,baz=138,slow=41						
	comp=Z,3.8nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**26.24**	**299**	P	**P**	**04 55 21.5**	**+2.2**
GYA0B				IAmb	IAmb	04 55 24.6	
	comp=Z,12nm,1.2s						
WSAR	**Wadi Sarin**	**26.41**	**265**	LR	LR	05 06 02.3	
	comp=Z,46nm,21.8s,baz=118,slow=37						
BRVK	**Borovoye**	**27.70**	**337**	P	**P**	**04 55 33.1**	**+0.8**
BRVK				IAmb	IAmb	04 55 43.7	
	comp=Z,4.7nm,0.9s						
BRVK	**Borovoye**	**27.70**	**337**	⇓*e*P	**P**	**04 55 33.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ABKAR	**Akbulak array**	**29.60**	**322**	P	**P**	**04 55 50.4**	**+1.1**
AKTO	**Aktyubinsk**	**31.30**	**323**	LR	LR	05 08 57.5	
	comp=Z,40nm,21.1s,baz=131,slow=37						
CN2	**Changchun**	**33.99**	**53**	*e*P	**P**	**04 56 27.4**	**-0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,100nm,10.0s						
CN2				LR	LR		
	comp=Z,100nm,10.0s						
CN2				LR	LR		
	comp=Z,100nm,11.0s						
ARU	**Arti**	**34.71**	**332**	LR	LR	05 12 03.6	
	comp=Z,27nm,19.5s,baz=128,slow=39						
ARU	**Arti**	**34.71**	**332**	P	**P**	**04 56 34.3**	**+0.3**
ARU	**Arti**	**34.71**	**332**	*c* *i*P	**P**	**04 56 34.5**	**+0.5**
ARU						04 57 48.3	
ARU				S	**S**	**05 02 06.9**	**+3.6**
ARU				SS	**SnSn**	**05 04 16.2**	**-0.1**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS	**Korea Array**	**34.92**	**64**	P	**P**	**04 56 34.4**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=264,slow=6.3,SNR=4.4						
KSRS				LR	LR	05 12 15.6	
	comp=Z,28nm,21.4s,baz=255,slow=39						
	comp=Z,1.0nm,0.7s						
GROC	**Groznyy**	**36.48**	**305**	*e*P	**P**	**04 56 51.2**	**+1.9**
GROC				*e*S	**S**	**05 02 30.1**	**-0.6**
GROC				pmax	pmax		
	comp=Z,22nm,1.0s						
ZEI	**Tsey**	**37.78**	**304**	*e*P	**P**	**04 57 02.3**	**+1.6**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BELG	**Belogornoye**	**37.95**	**320**	LR	LR	05 15 32.4	
	comp=Z,31nm,20.2s,baz=105,slow=41						
NCK	**Nalchik**	**38.11**	**305**	*c* *i*P	**P**	**04 57 04.6**	**+1.4**
NCK				pmax	pmax		
	comp=Z,16nm,0.6s						
KBZ	**Khabaz**	**38.64**	**305**	P	**P**	**04 57 08.9**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=125,slow=6.3,SNR=9.9						
	comp=Z,2.7nm,0.8s						
KIV	**Kislovodsk**	**38.83**	**306**	*e*P	**P**	**04 57 10.7**	**+1.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,31nm,16.0s						
KLR	**Kul'dur**	**39.58**	**46**	P	**P**	**04 57 13.7**	**-1.7**
	comp=Z,3.6nm,0.8s,baz=282,slow=8.2,SNR=8.4						
	comp=Z,3.6nm,0.8s						
KLR	**Kul'dur**	**39.58**	**46**	*d* *i*P	**P**	**04 57 14.5**	**-0.9**
KLR				pmax	pmax		
	comp=Z,16nm,2.5s						
MARD	**Mardin**	**39.86**	**295**	P	**P**	**04 57 20.1**	**+2.0**
MARD				IAmb	IAmb	04 57 39.9	
	comp=Z,5.3nm,0.4s						
KIRV	**Kirov**	**39.95**	**330**	⇓*e*P	**P**	**04 57 18.8**	**+0.5**
NRIK	**Noril'sk**	**40.96**	**0**	P	**P**	**04 57 25.2**	**-1.4**
	comp=Z,4.6nm,0.6s,baz=162,slow=7.3,SNR=6.2						
	comp=Z,4.6nm,0.6s						
NRIK	**Noril'sk**	**40.96**	**0**	P	**P**	**04 57 26.6**	**0.0**
NRIK				IAmb	IAmb	04 57 30.6	
	comp=Z,5.4nm,0.8s						
NRIK	**Noril'sk**	**40.96**	**0**	*de*P	**P**	**04 57 26.7**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VORR	**Voronezh**	**42.64**	**317**	*e*P	**P**	**04 57 37.0**	**-3.5**
VORR				pmax	pmax		
	comp=Z,40nm,0.4s						
ANN	**Anapa**	**42.66**	**306**	*e*P	P	04 57 36.9	-3.9
ANN				*e*S	**S**	**05 03 58.4**	**-5.1**
ANN				pmax	pmax		
	comp=Z,21nm,1.2s						
MJAR	**Matsushiro Arr**	**43.17**	**66**	P	**P**	**04 57 44.2**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=267,slow=7.9,SNR=5.3						
MJAR				LR	LR	05 15 09.0	
	comp=Z,69nm,20.2s,baz=259,slow=36						
	comp=Z,1.1nm,0.7s						
MJAR	**Matsushiro Arr**	**43.17**	**66**	IAmb	IAmb	04 57 51.5	
	comp=Z,2.4nm,1.1s						
PRGR	**Permogore**	**43.17**	**332**	*e*P	**P**	**04 57 44.3**	**-0.4**
YAK	**Yakutsk**	**43.54**	**27**	LR	LR	05 17 18.7	
	comp=Z,44nm,21.1s,baz=274,slow=38						
JHJ	**Hachijo jima 2**	**44.84**	**70**	LR	LR	05 17 17.2	
	comp=Z,83nm,18.2s,baz=131,slow=37						
OBN	**Obninsk**	**45.03**	**321**	*i* P	**P**	**04 58 00.5**	**+0.8**
OBN				*i*		04 58 10.1	
OBN				*i*		04 59 41.5	
OBN				*i*		04 59 50.3	
OBN				pmax	pmax		
	comp=Z,15nm,1.2s						
OBN				MLR	MLR		
	comp=Z,48nm,24.0s						
BR131	**Keskin Array S**	**45.38**	**299**	⇓*e*P	**P**	**04 58 03.5**	**+0.6**
BRTR	**Keskin Array B**	**45.38**	**299**	P	**P**	**04 58 03.3**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=79,slow=6.7,SNR=4.9						
BRTR				LR	LR	05 20 42.1	
	comp=Z,32nm,18.2s,baz=89,slow=41						
	comp=Z,1.2nm,0.9s						
KLMR	**Klimovskoe**	**45.44**	**329**	*e*P	**P**	**04 58 02.1**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLMR	**Klimovskoe**	**45.44**	**329**	*e*P	**P**	**04 58 02.1**	**-0.8**
KLMR				AMP		04 58 05.8	
	comp=Z,9.0nm,0.9s						
AKASG	**Malin Array Be**	**48.68**	**314**	P	**P**	**04 58 28.0**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=77,slow=7.5,SNR=18						
AKASG				LR	LR	05 23 39.8	
	comp=Z,30nm,20.1s,baz=34,slow=42						
	comp=Z,0.9nm,0.4s						
AKBB	**Malin Array Si**	**48.68**	**314**	P	**P**	**04 58 28.3**	**0.0**
AKBB	**Malin Array Si**	**48.68**	**314**	P	**P**	**04 58 28.3**	**0.0**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLCR		**48.79**	**307**	⇑P	**P**	**04 58 29.9**	**+0.7**
TLCR		**48.79**	**307**	⇑P	**P**	**04 58 29.9**	**+0.7**
TIXI	**Tiksi**	**48.84**	**16**	P	**P**	**04 58 28.3**	**-0.9**
TIXI	**Tiksi**	**48.84**	**16**	⇑*e*P	**P**	**04 58 28.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VRI	**Vrincioaia**	**50.24**	**308**	⇑P	**P**	**04 58 41.8**	**+1.5**
VRI	**Vrincioaia**	**50.24**	**308**	⇑P	**P**	**04 58 41.8**	**+1.5**
TESR	**Tescani**	**50.28**	**308**	⇓P	**P**	**04 58 41.3**	**+0.7**
PLOR	**Plostina**	**50.30**	**308**	⇓P	**P**	**04 58 42.4**	**+1.7**
PLOR	**Plostina**	**50.30**	**308**	⇓P	**P**	**04 58 42.4**	**+1.7**
NACGM	**Naroch**	**50.54**	**319**	*e*P	**P**	**04 58 42.3**	**-0.1**
	baz=95						
BIZ	**Bicaz**	**50.64**	**309**	⇓P	**P**	**04 58 44.1**	**+0.8**
MLR	**Muntele Rosu**	**50.80**	**307**	⇑P	**P**	**04 58 46.3**	**+1.6**
MLR	**Muntele Rosu**	**50.80**	**307**	LR	LR	05 25 07.6	
	comp=Z,49nm,18.5s,baz=80,slow=42						
MLR	**Muntele Rosu**	**50.80**	**307**	P	**P**	**04 58 45.8**	**+1.1**
MLR	**Muntele Rosu**	**50.80**	**307**	⇑P	**P**	**04 58 46.3**	**+1.6**
BUR01	**Bucovina Ar. S**	**51.23**	**310**	⇓P	**P**	**04 58 48.4**	**+0.5**
BURAR	**Bucovina Array**	**51.23**	**310**	P	**P**	**04 58 48.2**	**+0.3**
BURAR				IAmb	IAmb	04 58 49.1	
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**51.84**	**328**	P	**P**	**04 58 52.5**	**+0.4**
	comp=Z,2.5nm,0.4s,baz=110,slow=8.4,SNR=64						
FINES				LR	LR	05 22 03.5	
	comp=Z,76nm,18.6s,baz=53,slow=37						
	comp=Z,2.5nm,0.4s						
FINES	**FINESS Array B**	**51.84**	**328**	P	**P**	**04 58 52.8**	**+0.7**
FINES	**FINESS Array B**	**51.84**	**328**	P	**P**	**04 58 52.8**	**+0.7**
DRGR		**52.98**	**309**	⇓P	**P**	**04 59 01.7**	**+0.8**
DRGR		**52.98**	**309**	⇓P	**P**	**04 59 01.7**	**+0.8**
VTS	**Vitosha**	**52.98**	**304**	⇑P	**P**	**04 59 02.2**	**+1.2**
VTS	**Vitosha**	**52.98**	**304**	⇑P	**P**	**04 59 02.2**	**+1.2**
BZS	**Buzias**	**53.83**	**308**	⇑P	**P**	**04 59 07.5**	**+0.5**
BZS	**Buzias**	**53.83**	**308**	⇑P	**P**	**04 59 07.5**	**+0.5**
ARCES	**ARCESS Array B**	**53.93**	**337**	P	**P**	**04 59 07.8**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=106,slow=7.6,SNR=22						
	comp=Z,2.5nm,0.6s						
OKC	**Ostrava-Krasne**	**55.79**	**313**	*e*P	**P**	**04 59 21.4**	**+0.2**
OKC	**Ostrava-Krasne**	**55.79**	**313**	*e*P	**P**	**04 59 21.4**	**+0.2**
SRO2	**Moca**	**55.82**	**310**	*e*P	**P**	**04 59 20.4**	**-1.0**
SRO2	**Moca**	**55.82**	**310**	*e*P	**P**	**04 59 20.4**	**-1.0**
MAUC	**Maruska**	**56.04**	**312**	*e*P	**P**	**04 59 21.9**	**-1.1**
MORC	**Moravsky Berou**	**56.18**	**313**	⇓P	**P**	**04 59 24.8**	**+0.7**
MORC	**Moravsky Berou**	**56.18**	**313**	P	**P**	**04 59 24.1**	**+0.1**
MORC				IAmb	IAmb	04 59 25.5	
	comp=Z,3.5nm,0.9s						
MORC	**Moravsky Berou**	**56.18**	**313**	⇓P	**P**	**04 59 24.8**	**+0.7**
MORC	**Moravsky Berou**	**56.18**	**313**	*e*P	**P**	**04 59 24.2**	**+0.1**
SMOL	**Smolenice**	**56.38**	**311**	*e*P	**P**	**04 59 25.9**	**+0.4**
SMOL	**Smolenice**	**56.38**	**311**	*e*P	**P**	**04 59 25.9**	**+0.4**
KRLC	**Kraliky**	**56.65**	**313**	*e*P	**P**	**04 59 27.4**	**+0.1**
KRLC	**Kraliky**	**56.65**	**313**	*e*P	**P**	**04 59 27.4**	**+0.1**
VRAC	**Vranov**	**56.85**	**312**	⇑P	**P**	**04 59 29.4**	**+0.7**
VRAC	**Vranov**	**56.85**	**312**	⇑P	**P**	**04 59 29.4**	**+0.7**
VRAC	**Vranov**	**56.85**	**312**	*e*P	**P**	**04 59 29.3**	**+0.6**
DPC	**Dobruska-Polom**	**56.91**	**314**	*e*P	**P**	**04 59 29.3**	**+0.1**
DPC	**Dobruska-Polom**	**56.91**	**314**	*e*P	**P**	**04 59 29.3**	**+0.1**
OSTC	**Ostas**	**56.96**	**314**	*e*P	**P**	**04 59 30.4**	**+0.9**
KRUC	**Moravsky**	**57.00**	**312**	*e*P	**P**	**04 59 30.0**	**+0.2**
CHVC	**Chvalec**	**57.06**	**314**	*e*P	**P**	**04 59 31.0**	**+0.8**
UPC	**Upice**	**57.09**	**314**	*e*P	**P**	**04 59 31.9**	**+1.4**
UPC	**Upice**	**57.09**	**314**	*e*P	**P**	**04 59 31.9**	**+1.4**
CONA	**Conrad Observa**	**57.50**	**311**	*e*P	**P**	**04 59 33.8**	**+0.4**
	comp=Z,2.5nm,0.8s						
HFS	**Hagfors**	**57.79**	**325**	LR	LR	05 26 57.0	
	comp=Z,52nm,18.8s,baz=93,slow=39						
ARSA	**Arzberg**	**57.82**	**310**	*e*P	**P**	**04 59 35.9**	**+0.3**
	comp=Z,3.9nm,0.9s						
PRU	**Pruhonice**	**58.09**	**313**	*e*P	**P**	**04 59 38.2**	**+0.7**
PRU	**Pruhonice**	**58.09**	**313**	*e*P	**P**	**04 59 38.2**	**+0.7**
SOKA	**Soboth**	**58.23**	**309**	*e*P	**P**	**04 59 39.1**	**+0.5**
	comp=Z,2.6nm,0.7s						
MOA	**Molln**	**58.57**	**311**	*e*P	**P**	**04 59 41.0**	**+0.1**
	comp=Z,3.1nm,0.8s						
GEC2	**GERESS Array S**	**58.79**	**312**	IAmb	IAmb	04 59 43.8	
	comp=Z,3.5nm,0.9s						
GERES	**GERESS Array B**	**58.79**	**312**	P	**P**	**04 59 43.1**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=77,slow=7.0,SNR=19						
	comp=Z,1.5nm,0.7s						
GERES	**GERESS Array B**	**58.79**	**312**	P	**P**	**04 59 42.3**	**-0.3**
KHC	**Kasperske Hory**	**58.83**	**312**	IAmb	IAmb	04 59 43.6	
	comp=Z,2.3nm,0.8s						
KHC	**Kasperske Hory**	**58.83**	**312**	⇑*e*P	**P**	**04 59 43.3**	**+0.6**
KHC				pmax	pmax		
	comp=Z,26nm,3.2s						
KHC	**Kasperske Hory**	**58.83**	**312**	*e*P	**P**	**04 59 43.0**	**+0.3**
NB2	**NORSAR Subarra**	**58.97**	**327**	P	**P**	**04 59 43.1**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=86,slow=6.9						
NOA	**NORSAR Array B**	**58.97**	**327**	P	**P**	**04 59 43.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=87,slow=6.8,SNR=8.2						
NOA				LR	LR	05 28 07.6	
	comp=Z,33nm,20.9s,baz=95,slow=39						
	comp=Z,1.3nm,0.6s						
BILL	**Bilibino**	**59.82**	**25**	*i* P	**P**	**04 59 48.0**	**-1.2**
BILL				*i*		05 00 38.1	
BILL				*i*		05 01 58.3	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,312nm,22.0s						
ABTA	**Abfaltersbach**	**59.93**	**310**	*e*P	**P**	**04 59 49.6**	**-0.8**
	comp=Z,2.0nm,0.9s						
WTTA	**Wattenberg**	**60.42**	**311**	*e*P	**P**	**04 59 53.5**	**-0.4**
	comp=Z,3.1nm,0.7s						
WATA	**Walderalm**	**60.45**	**311**	*e*P	**P**	**04 59 53.6**	**-0.5**
	comp=Z,3.2nm,0.6s						
SQTA	**Sankt Quirin**	**60.72**	**311**	*e*P	**P**	**04 59 55.2**	**-0.6**
	comp=Z,3.4nm,0.6s						
MOTA	**Moosalm**	**60.77**	**311**	*e*P	**P**	**04 59 55.5**	**-0.7**
	comp=Z,3.0nm,0.7s						
RETA	**Reutte**	**60.97**	**311**	*e*P	**P**	**04 59 57.1**	**-0.4**
	comp=Z,1.1nm,0.5s						
FETA	**Feichten**	**61.08**	**310**	*e*P	**P**	**04 59 57.7**	**-0.6**
	comp=Z,1.7nm,0.8s						
MBAR	**Mbarara**	**61.41**	**252**	LR	LR	05 26 33.9	
	comp=Z,26nm,18.0s,baz=86,slow=36						
DAVA	**Damuels**	**61.59**	**311**	*e*P	**P**	**05 00 01.4**	**-0.4**
	comp=Z,5.1nm,1.0s						
DAVOX	**Davos/Dischmat**	**61.70**	**310**	LR	LR	05 29 22.8	
	comp=Z,36nm,19.7s,baz=80,slow=38						
KEST	**Kesra**	**64.98**	**299**	P	**P**	**05 00 25.4**	**+1.0**
	comp=Z,4.6nm,0.8s,baz=195,slow=5.2,SNR=5.9						
	comp=Z,4.6nm,0.8s						
KEST	**Kesra**	**64.98**	**299**	P	**P**	**05 00 24.6**	**+0.2**
WRA	**Warramunga Arr**	**66.05**	**131**	P	**P**	**05 00 31.4**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=323,slow=6.6,SNR=6.8						
	comp=Z,1.5nm,0.7s						
WRA	**Warramunga Arr**	**66.05**	**131**	*i* P	**P**	**05 00 35.0**	**+3.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**68.44**	**134**	P	**P**	**05 00 46.8**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=317,slow=6.1,SNR=20						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**68.44**	**134**	P	**P**	**05 00 46.1**	**-0.3**
ESDC	**Sonseca Array**	**73.49**	**306**	P	**P**	**05 01 17.3**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=53,slow=5.7,SNR=9.4						
	comp=Z,1.2nm,0.9s						
ESDC	**Sonseca Array**	**73.49**	**306**	IAmb	IAmb	05 01 18.1	
	comp=Z,1.6nm,1.1s						
BMAR	**Burnt Mountain**	**76.86**	**18**	P	**P**	**05 01 35.9**	**0.0**
COLA	**College**	**77.65**	**21**	⇑*e*P	**P**	**05 01 40.3**	**0.0**
COLA				pmax	pmax		
	comp=Z,16nm,3.0s						
ILAR	**Eielson Array**	**78.02**	**21**	P	**P**	**05 01 41.4**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=282,slow=4.1,SNR=6.9						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**80.19**	**280**	P	**P**	**05 01 55.7**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=44,slow=4.2,SNR=7.8						
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.19**	**280**	IAmb	IAmb	05 01 59.4	
	comp=Z,2.6nm,0.9s						
BCAR	**Beaver Creek A**	**80.83**	**20**	P	**P**	**05 01 57.5**	**-0.3**
TSUM	**Tsumeb**	**82.43**	**244**	LR	LR	05 38 08.7	
	comp=Z,28nm,19.5s,baz=174,slow=35						
M31M	**Drury Creek, Y**	**83.66**	**18**	P	**P**	**05 02 12.1**	**-0.5**
M31M				IAmb	IAmb	05 02 13.0	
	comp=Z,2.1nm,0.9s						
TXAR	**Lajitas Array**	**121.61**	**11**	PKP	**PKPdf**	**05 08 38.0**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=7.0,slow=2.9,SNR=4.1						
SAML	**Samuel**	**146.27**	**299**	PKPbc	**PKPbc**	**05 09 26.1**	**+0.6**
SAML	**Samuel**	**146.27**	**299**	PKP2	**PKPbc**	**05 09 26.1**	**+0.6**
OTAV	**Otavalo**	**148.48**	**332**	PKPbc	**PKPdf**	**05 09 30.9**	**+2.2**
OTAV	**Otavalo**	**148.48**	**332**	PKP2	**PKPdf**	**05 09 31.0**	**+2.2**

IDC 22 04:53:53.6±1.8, 6°.30S×129°.67E, h0^{km}, mb3.6/1, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=69.8km s-min=28.8km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.62**	**16**	Pn	Pn	04 55 18.9	+0.3
	4.4nm,0.3s,baz=278,slow=23,SNR=20						
SIJI				Sn	Sn	04 56 11.7	-12
	2.4nm,0.3s,baz=270,slow=20,SNR=2.3						
	9.8nm,0.2s						
WRA	**Warramunga Arr**	**14.30**	**162**	Pn	Pn	04 57 16.5	-1.1
	0.2nm,0.3s,baz=346,slow=12,SNR=23						
WRA				Sn	Sn	04 59 45.2	-12
	0.3nm,0.3s,baz=228,slow=8.4,SNR=7.2						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**17.74**	**167**	P	P	04 58 03.2	0.0
	0.1nm,0.3s,baz=340,slow=9.4,SNR=3.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	05 04 51.3	-0.1
	0.2nm,0.3s,baz=130,slow=5.9,SNR=4.9						
	0.2nm,0.3s						

SKO 22 04:57:48.0, 41°.54N×20°.97E, h0^{km}, 1C, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.45**	**197**	⇑*i*Pg	Pg	04 57 56.8	+0.2
OHR				*i* Sg	Sg	04 58 01.5	-0.9
OHR				*e*Lg	Lg	04 58 02.3	
	comp=E,49nm,0.4s						
OHR				*e*Lg	Lg	04 58 02.5	
	comp=N,22nm,0.3s						
FNA	**Florina**	**0.81**	**158**	*i* Pg	Pg	04 58 03.5	-0.2
FNA				*i* Sg	Sg	04 58 14.5	+0.3
GRG	**Griva**	**1.23**	**118**	*i* Pg	Pg	04 58 09.2	-2.4

GUC 22 05:15:44.4±0.3, 38°.06S×74°.13W, h44^{km}±4^{km}, ML3.6, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LC02	**Puerto Saavedr**	**0.94**	**142**	⇓*i*P	Pn	05 16 00.9	-0.3
LC02				*i* S	Sn	05 16 13.6	+0.2
LC02				IAML		05 16 23.4	
	comp=E,7µm,0.5s						
CCSP	**San Pedro de C**	**1.46**	**34**	*e*P	Pn	05 16 08.2	0.0
CCSP				*i* S	Sn	05 16 26.4	+0.4
CCSP				IAML		05 16 39.2	
	comp=E,1µm,0.4s						
BI05	**Punta Hualpn**	**1.50**	**30**	*e*P	Pn	05 16 09.1	+0.2
BI05				*i* S	Sn	05 16 27.7	+0.5
LR04	**Corral**	**1.90**	**164**	*e*P	Pn	05 16 14.6	+0.2

LR04				*i* S	Sn	05 16 35.7	-1.4
LR04				IAML		05 16 40.2	
	comp=E,494nm,0.3s						
LR03	**Panguipulli**	**2.10**	**139**	⇑*i*P	Pn	05 16 19.2	+2.1
LR03				*i* S	Sn	05 16 52.8	+11
LL04	**Puerto Octay**	**3.15**	**156**	*e*P	Pn	05 16 32.1	+0.7
LL04				*i* S	Sn	05 17 06.0	-1.7
LL04				IAML		05 17 10.8	
	comp=N,236nm,0.3s						
ML02	**Panimavida**	**3.15**	**44**	*e*P	Pn	05 16 32.2	+0.6
ML02				IAML		05 17 32.9	
	comp=E,214nm,0.6s						
LL03	**Petrohue**	**3.35**	**157**	*e*P	Pn	05 16 32.5	-1.8
LL03				IAML		05 17 46.8	
	comp=E,252nm,0.7s						
LL05	**Los Muermos**	**3.38**	**172**	⇑*i*P	Pn	05 16 35.9	+1.2
LL05				IAML		05 17 53.3	
	comp=E,63nm,0.4s						
GO05	**Huala**	**3.52**	**31**	*e*P	Pn	05 16 37.1	+0.5
PLCA	**Paso Flores**	**3.85**	**135**	*e*P	Pn	05 16 43.8	+2.6
BO01	**Tunca**	**4.41**	**35**	*e*P	Pn	05 16 49.8	+1.0
MT09	**Talagante**	**4.97**	**32**	*e*P	Pn	05 16 57.1	+0.5
MT02	**Curacav**	**5.37**	**28**	*e*P	Pn	05 17 01.6	-0.3
FCH	**Farellones**	**5.66**	**35**	*e*P	Pn	05 17 06.3	+0.1

IDC 22 05:23:37.7±6.4**, 30°.52N**×**92°.07E, h0^{km}, mb3.5**/2**, mbtmp3.4**/3**, ML3.2**/1**, MS2.9**/1**, Error ellipse: s-maj=585.5km s-min=37.9km az=61.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.93**	**338**	P	Pn	05 27 48.5	+0.1
	0.1nm,0.3s,baz=147,slow=12,SNR=4.9						
	0.8nm,0.7s						
GEYT	**Alibeck**	**28.91**	**294**	LR	LR	05 44 06.5	
	comp=Z,24nm,18.9s,baz=206,slow=42						
WRA	**Warramunga Arr**	**64.57**	**136**	P	P	05 34 17.9	+0.9
	0.5nm,0.7s,baz=327,slow=6.3,SNR=1.6						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**67.18**	**138**	P	P	05 34 32.9	-0.9
	0.2nm,0.5s,baz=329,slow=7.0,SNR=1.4						
	0.2nm,0.5s						

DMN ***22*** *05:37:28.2±0.0, 28°.60N×87°.93E, h60^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

IDC ***22*** *05:37:29.2±1.4, 28°.21N×87°.74E, h0^{km}, mb3.7/7, mbtmp3.7/9, ML4.1/2, MS3.1/12, Error ellipse: s-maj=42.3km s-min=23.9km az=54.0*

ISC 22 05:37:30.3±2.6**, 28°.3N**±0°.1×**87°.61E**±0°.08**, h4^{km}**±20^{km}**, n26, σ1^{s}.16**/23**, mb3.9**/7**, MS3.2**/9**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODAN	**Odare**	**1.45**	**188**	*e*Pg	**Pg**	**05 37 57.7**	**-0.5**
ODAN				*e*Sg	**Sg**	**05 38 19.7**	**+2.6**
	955nm,0.4s						
RAMN	**Ramite**	**1.62**	**214**	*e*Pn	**Pb**	**05 37 59.3**	**-1.6**
RAMN				*e*Sg	**Sg**	**05 38 23.7**	**+1.2**
	3µm,0.6s						
PKI	**Pulchoki**	**2.08**	**250**	*e*Pg	**Pn**	**05 38 06.2**	**-0.1**
PKI				*e*Sg	**Sb**	**05 38 34.9**	**-0.3**
	1µm,0.7s						
PKIN	**Phulchoki**	**2.09**	**250**	*e*Pg	**Pn**	**05 38 06.2**	**-0.1**
PKIN				*e*Sg	**Sb**	**05 38 34.5**	**-0.8**
DMN	**Daman**	**2.32**	**253**	*e*Pg	**Pn**	**05 38 10.2**	**+0.7**
DMN				*e*Sg	**Sn**	**05 38 39.5**	**+0.9**
GKN	**Gorkha**	**2.64**	**264**	*e*Pg	**Pn**	**05 38 12.8**	**-1.0**
GKN				*e*Sg	**Sn**	**05 38 46.7**	**+0.3**
KOLN	**Koldanda**	**3.59**	**262**	*e*Pg	**Pn**	**05 38 25.7**	**-1.1**
KOLN	**Koldanda**	**3.59**	**262**	*e*Pg	**Pn**	**05 38 25.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**14.28**	**131**	LR	LR	05 46 26.4	
	comp=Z,55nm,21.7s,baz=305,slow=38						
AAK	**Ala-Archa**	**17.82**	**327**	P	**Pn**	**05 41 39.2**	**-0.1**
	0.3nm,0.3s,baz=233,slow=10,SNR=1.9						
AAK				LR	LR	05 47 52.8	
	comp=Z,16nm,21.7s,baz=149,slow=35						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**18.92**	**349**	P	**P**	**05 41 51.2**	**-0.8**
	1.3nm,0.3s,baz=137,slow=14,SNR=23						
MKAR				LR	LR	05 50 30.3	
	comp=Z,56nm,19.9s,baz=158,slow=41						
	1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**23.33**	**345**	P	**P**	**05 42 41.3**	**+2.0**
	3.9nm,0.9s,baz=161,slow=10.0,SNR=19						
	3.9nm,0.9s						
SONM	**Songino Array**	**24.35**	**32**	P	**P**	**05 42 49.4**	**+0.1**
	0.9nm,0.7s,baz=202,slow=11,SNR=3.4						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**25.70**	**356**	P	**P**	**05 43 01.9**	**+0.5**
	1.8nm,0.7s,baz=170,slow=9.0,SNR=9.0						
ZALV				LR	LR	05 54 38.9	
	comp=Z,38nm,21.0s,baz=42,slow=40						
	1.8nm,0.7s						
GEYT	**Alibeck**	**26.41**	**299**	LR	LR	05 55 25.5	
	comp=Z,54nm,21.2s,baz=106,slow=40						
AKTO	**Aktyubinsk**	**31.46**	**323**	LR	LR	05 57 07.1	
	comp=Z,28nm,18.0s,baz=131,slow=37						
KSRS	**Korea Array**	**34.84**	**64**	LR	LR	05 58 42.9	
	comp=Z,41nm,20.4s,baz=245,slow=37						
JOW	**Kunigami**	**35.96**	**83**	LR	LR	05 58 22.1	
	comp=Z,30nm,20.1s,baz=120,slow=35						
AKASG	**Malin Array Be**	**48.86**	**314**	P	**P**	**05 46 17.5**	**+0.7**
	0.2nm,0.3s,baz=77,slow=7.7,SNR=5.0						
	0.2nm,0.3s						
MLR	**Muntele Rosu**	**50.98**	**307**	LR	LR	06 12 56.4	
	comp=Z,29nm,19.6s,baz=26,slow=42						
FINES	**FINESS Array B**	**52.00**	**328**	P	**P**	**05 46 40.5**	**+0.1**
	0.8nm,0.8s,baz=108,slow=8.9,SNR=4.8						
	0.8nm,0.8s						
HFS	**Hagfors**	**57.95**	**325**	LR	LR	06 14 54.1	
	comp=Z,33nm,21.1s,baz=90,slow=39						
GERES	**GERESS Array B**	**58.97**	**312**	P	**P**	**05 47 32.0**	**+1.1**
	1.0nm,0.9s,baz=79,slow=6.9,SNR=6.1						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**59.14**	**327**	LR	LR	06 15 44.8	
	comp=Z,26nm,19.5s,baz=115,slow=39						
WRA	**Warramunga Arr**	**65.88**	**131**	P	**P**	**05 48 15.9**	**-1.5**
	0.7nm,0.9s,baz=324,slow=6.7,SNR=5.0						
	0.7nm,0.9s						
FRB	**Frobisher Bay**	**86.34**	**350**	LR	LR	06 36 10.9	
	comp=Z,18nm,18.5s,baz=224,slow=41						

IDC 22 05:46:03.5±5.8**, 5°.74S**×**154°.47E, h0^{km}, mb4.0**/3**, mbtmp4.0**/3**, Error ellipse: s-maj=175.5km s-min=39.9km az=110.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.13**	**232**	P	P	05 51 22.2	+0.7
	3.8nm,0.4s,baz=59,slow=9.9,SNR=10.0						
	3.8nm,0.4s						
ASAR	**Alice Springs**	**26.64**	**226**	P	P	05 51 43.7	-0.5
	0.9nm,0.5s,baz=59,slow=8.6,SNR=3.8						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**82.12**	**319**	P	P	05 58 26.1	-0.2
	0.5nm,0.5s,baz=101,slow=6.6,SNR=5.4						
	0.5nm,0.5s						

IDC 22 06:02:15.0±19.0**, 12°.19S**×**167°.22E, h187^{km}**±173^{km}**, mb3.5**/4**, mbtmp3.9**/4**, Error ellipse: s-maj=137.8km s-min=52.7km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.48**	**252**	P	P	06 08 28.1	-0.1
	3.6nm,1.4s,baz=83,slow=8.7,SNR=7.7						
	3.6nm,1.4s						
ASAR	**Alice Springs**	**33.60**	**246**	P	P	06 08 37.8	-0.1
	0.3nm,0.4s,baz=68,slow=9.8,SNR=6.1						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**84.14**	**18**	P	P	06 14 24.6	0.0
	0.9nm,0.6s,baz=247,slow=5.0,SNR=13						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**95.34**	**317**	P	P	06 15 18.2	+0.2
	0.3nm,0.5s,baz=94,slow=4.3,SNR=2.8						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**117.80**	**346**	PKP	PKPdf	06 20 38.1	-0.4
	2.4nm,0.9s,baz=30,slow=4.2,SNR=6.1						

MOS ***22*** *06:11:34.8±1.3, 36°.72N×142°.11E, h30^{km}, mb4.6/13, Error ellipse: s-maj=10.6km s-min=7.2km az=117.0*

NEIC ***22*** *06:11:34.5±1.4, 36°.74N±0°.04×142°.2E±0°.1, h25^{km}±6^{km}, mb4.5/13, Mwr4.1/20, Error ellipse: s-maj=12.1km s-min=6.3km az=88.0*

NEIC ***22*** *06:11:34.9, 36°.74N×142°.18E, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.87; M$_{\theta\theta}$-0.91; M$_{\phi\phi}$0.04; M$_{r\theta}$0.57; M$_{\theta\phi}$-0.62; M$_{\phi r}$1.08; Fault plane solution: M$_0$1.63000×10^{15} NP1:φ$_s$271.68000°, δ29.54000°, λ141.29000°. NP2:φ$_s$36.56000°, δ72.04000°, λ66.14000°. Principal axes: T 1.6129, Plg56.0000°, Azm275.0000°; N 0.0355, Plg23.0000°, Azm44.0000°; P -1.6485, Plg23.0000°, Azm145.0000°;*

JMA ***22*** *06:11:35.2±0.3, 36°.8N±0°.7×14°2E±°, h35^{km}, MV4.1/39, E OFF FUKUSHIMA PREF*

NIED ***22*** *06:11:35.2, 36°.75N×142°.12E, h35^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.06; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$-0.96; M$_{r\theta}$0.75; M$_{\theta\phi}$-0.46; M$_{\phi r}$1.53; Fault plane solution: M$_0$2.03000×10^{15} NP1: φ$_s$201.00000°, δ17.00000°, λ86.00000°. NP2:φ$_s$26.00000°, δ73.00000°, λ91.00000°.*

IDC ***22*** *06:11:36.8±6.1, 36°.67N×142°.04E, h28^{km}±43^{km}, mb3.8/16, mbtmp4.0/21, ML3.9/4, MS3.5/19 Error ellipse: s-maj=20.7km s-min=14.8km az=90.0*

ISC 22 06:11:34.9±0.5**, 36°.65N**±0°.04×**142°.05E**±0°.05**, h19^{km}, n125, σ1^{s}.32**/107**, mb4.2**/30**, MS3.6**/14**, 7C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.10**	**294**	⇓P	**Pn**	**06 11 54.7**	**-0.7**
ONAJ				⇓*e*S	**Sb**	**06 12 08.8**	**-0.6**
JFK	**Kawauchi**	**1.18**	**308**	P	**Pn**	**06 11 55.3**	**-1.1**
JHO	**Hitachi**	**1.19**	**269**	P	**Pn**	**06 11 56.4**	**-0.1**
JHYU	**Hitachinakayam**	**1.22**	**256**	⇓P	**Pb**	**06 11 57.7**	**+0.4**
JHYU				⇓S	**Sg**	**06 12 15.1**	**+0.6**
JFFD	**Fukushimafurud**	**1.27**	**291**	*e*P	**Pn**	**06 11 57.4**	**-0.3**
JYT	**Yasato**	**1.56**	**255**	Pn	**Pb**	**06 12 02.7**	**-0.4**
JMM	**Marumori**	**1.57**	**321**		**Pn**	**06 12 00.9**	**-0.8**
JMM	**Marumori**	**1.57**	**321**	⇓P	**Pn**	**06 12 01.0**	**-0.8**
JFT	**Otama**	**1.62**	**303**	P	**Pn**	**06 12 02.9**	**+0.5**
JIO	**Ouri**	**1.89**	**343**	P	**Pn**	**06 12 05.2**	**-0.9**
JIO				*e*S	**Sn**	**06 12 28.1**	**-1.2**
JFY	**Yanaizu**	**2.02**	**293**	P	**Pb**	**06 12 09.6**	**-1.5**
JOU	**Okura**	**2.04**	**328**	P	**Pn**	**06 12 08.3**	**+0.2**
JAG	**Ashikaga**	**2.10**	**265**	P	**Pn**	**06 12 10.2**	**+1.2**
BSO1	**Boso 1**	**2.18**	**204**	P	**Pb**	**06 12 11.8**	**-1.5**
BSO1				*e*S	**Sb**	**06 12 40.1**	**+0.4**
JYS	**Shirataka**	**2.23**	**315**	P	**Pn**	**06 12 11.6**	**+0.8**
JMK	**Ichinoseki**	**2.39**	**344**	P	**Pn**	**06 12 12.7**	**-0.3**
JRY	**Ryogami san**	**2.62**	**257**	P	**Pn**	**06 12 17.6**	**+1.3**
JYK	**Kaneyama**	**2.63**	**330**	P	**Pn**	**06 12 16.7**	**+0.4**
MJAR	**Matsushiro Arr**	**3.09**	**269**	Pn	**Pn**	**06 12 24.7**	**+2.0**
	3.3nm,0.3s,baz=95,slow=10,SNR=213						
MJAR				LR	LR	06 13 53.1	
	comp=Z,680nm,18.3s,baz=150,slow=44						
	85nm,0.6s						
MAJO	**Matsushiro**	**3.10**	**269**	Pn	**Pn**	**06 12 25.0**	**+2.3**
MAJO	**Matsushiro**	**3.10**	**269**	*i* P	**Pn**	**06 12 25.7**	**+3.0**
MJB9	**Matsu-Tunnel**	**3.10**	**269**		**Pn**	**06 12 25.2**	**+2.4**
JSD	**Sado**	**3.32**	**296**	Pn	**Pn**	**06 12 26.2**	**+0.4**
JGF	**Kuroka**	**3.94**	**256**	Pn	**Pn**	**06 12 34.9**	**+0.5**
JHJ2	**Mitsune**	**3.98**	**208**	Pn	**Pn**	**06 12 34.0**	**-0.9**
JHJ	**Hachijo jima 2**	**3.99**	**209**	Pn	**Pn**	**06 12 36.1**	**+1.1**
	38nm,0.3s,baz=53,slow=20,SNR=5.2						
JHJ				Sn	**Sn**	**06 13 20.6**	**-0.5**
	159nm,0.3s,baz=56,slow=23,SNR=9.9						
	84nm,0.3s						
JTM	**Tenmabayashi**	**4.20**	**350**	Pn	**Pn**	**06 12 35.4**	**-2.5**
INU	**Inuyama**	**4.28**	**254**	Pn	**Pn**	**06 12 41.6**	**+2.6**
ERM	**Erimo**	**5.42**	**9**	Pn	**Pn**	**06 12 52.8**	**-1.9**
ERM	**Erimo**	**5.42**	**9**	P	**Pn**	**06 12 52.8**	**-1.9**
JHS	**Saijyo**	**7.44**	**260**		**Pn**	**06 13 23.2**	**+0.7**
ASAJ	**Asahikawa**	**7.47**	**3**	Pn	**Pn**	**06 13 22.1**	**-0.7**
	1.4nm,0.3s,baz=208,slow=11,SNR=10						
	3.2nm,0.3s						
JKA	**Kamikawa-asahi**	**7.47**	**3**	Pn	**Pn**	**06 13 20.9**	**-1.9**
SHO	**Shikotan**	**8.08**	**25**	*e*P	Pn	06 13 19.5	-12
JCJ	**Chichijima**	**9.53**	**179**	Pn	**Pn**	**06 13 50.4**	**-0.7**
	4.8nm,0.3s,baz=311,slow=21,SNR=14						
JCJ				Sn	Sn	06 15 28.4	-9.2
	11nm,0.3s,baz=300,slow=20,SNR=1.8						
	39nm,0.7s						
JCJ	**Chichijima**	**9.53**	**179**	Pn	**Pn**	**06 13 49.5**	**-1.6**
KUR	**Kuril'sk**	**9.63**	**25**	*e*P	**Pn**	**06 13 55.3**	**+2.9**
KUR				pmax	pmax		
	comp=Z,20nm,0.5s						
JNU	**Nakatsue**	**9.83**	**252**	LR	LR	06 17 45.3	
	comp=Z,101nm,20.5s,baz=265,slow=38						
JNU	**Nakatsue**	**9.83**	**252**	Pn	**Pn**	**06 13 56.3**	**+1.1**
YSS	**Yuzh-Sakhalins**	**10.31**	**3**	Pn	**Pn**	**06 13 59.0**	**-2.7**
YSS	**Yuzh-Sakhalins**	**10.31**	**3**	*e*P	Pn	06 14 11.9	+10
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
JTU	**Tsushima**	**10.52**	**262**	Pn	**Pn**	**06 14 04.8**	**+0.2**
USA0B	**Ussuriysk Arra**	**10.75**	**318**	Pn	**Pn**	**06 14 05.0**	**-2.7**
USA0B	**Ussuriysk Arra**	**10.75**	**318**	P	**Pn**	**06 14 05.0**	**-2.7**
USRK	**Ussuriysk Ar.**	**10.75**	**318**	Pn	**Pn**	**06 14 07.8**	**0.0**
	comp=Z,1.8nm,0.6s,baz=115,slow=14,SNR=2.4						
USRK				LR	LR	06 17 58.7	
	comp=Z,239nm,20.0s,baz=108,slow=36						
USRK	**Ussuriysk Ar.**	**10.75**	**318**	Pn	**Pn**	**06 14 05.7**	**-2.0**
KSRS	**Korea Array**	**11.32**	**278**	Pn	Pn	06 14 20.6	+5.1
	comp=Z,0.1nm,0.3s,baz=90,slow=13,SNR=7.3						
KSRS				LR	LR	06 18 40.1	
	comp=Z,299nm,18.3s,baz=85,slow=37						
KLR	**Kul'dur**	**14.64**	**332**	LR	LR	06 20 32.3	
	comp=Z,165nm,18.7s,baz=178,slow=37						
KLR	**Kul'dur**	**14.64**	**332**	*i* P	**P**	**06 15 07.4**	**+0.3**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ZEA	**Zeya**	**19.95**	**334**	*e*P	**P**	**06 16 06.1**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,100nm,17.0s						
GUMO	**Guam**	**23.10**	**173**	P	**P**	**06 16 38.7**	**-1.0**
GUMO	**Guam**	**23.10**	**173**	P	**P**	**06 16 38.7**	**-1.0**
GUMO				pmax	pmax		
	comp=Z,107nm,1.1s						
MA2	**Magadan**	**23.62**	**11**	LR	LR	06 25 22.9	
	comp=Z,36nm,19.9s,baz=102,slow=35						
YAK	**Yakutsk**	**26.56**	**347**	LR	LR	06 27 58.8	
	comp=Z,67nm,19.0s,baz=252,slow=37						
YAK	**Yakutsk**	**26.56**	**347**	P	**P**	**06 17 11.4**	**+0.1**
YAK	**Yakutsk**	**26.56**	**347**	*ce*P	**P**	**06 17 17.2**	**+6.0**
YAK				pmax	pmax		
	comp=Z,12nm,0.5s						
SEY	**Seymchan**	**27.07**	**10**	P	**P**	**06 17 17.8**	**+1.9**
	comp=Z,3.3nm,0.7s,baz=171,slow=13,SNR=5.2						
	comp=Z,3.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.51**	**121**	T	T	06 46 22.3	
	baz=313,slow=74,SNR=21						
H11N1	**WAKE ISLAND Hy**	**27.52**	**121**	T	T	06 46 28.2	
	baz=313,slow=74,SNR=28						
H11N3	**WAKE ISLAND Hy**	**27.53**	**121**	T	T	06 46 13.7	
	baz=313,slow=74,SNR=27						
ENH	**Enshi**	**27.82**	**266**	P	**P**	**06 17 22.7**	**-0.2**
ENH				IAmb	IAmb	06 17 24.2	
	comp=Z,15nm,0.7s						
ULN	**Ulaanbaatar**	**27.99**	**305**	P	**P**	**06 17 23.4**	**-1.1**
ULN				IAmb	IAmb	06 17 26.3	
	comp=Z,5.9nm,1.1s						
ULN	**Ulaanbaatar**	**27.99**	**305**	*ce*P	**P**	**06 17 25.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
H11S1	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	06 47 17.7	
	baz=316,slow=75,SNR=25						
H11S3	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	06 47 13.0	
	baz=316,slow=75,SNR=21						
H11S2	**WAKE ISLAND Hy**	**28.24**	**123**	T	T	06 47 14.6	
	baz=316,slow=75,SNR=24						
SONM	**Songino Array**	**28.42**	**304**	P	**P**	**06 17 29.0**	**+0.7**
	comp=Z,6.1nm,0.8s,baz=102,slow=9.0,SNR=30						
	comp=Z,6.1nm,0.8s						
SONM	**Songino Array**	**28.42**	**304**	P	**P**	**06 17 27.6**	**-0.8**
SONM				IAmb	IAmb	06 17 30.2	
	comp=Z,5.0nm,0.8s						
ZAK	**Zakamensk**	**30.91**	**309**	*e*P	**P**	**06 17 50.7**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TIXI	**Tiksi**	**35.73**	**353**	*i* P	P	06 18 40.2	+8.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
CMAR	**Chiang Mai Arr**	**41.90**	**256**	LR	LR	06 39 24.1	
	comp=Z,44nm,18.4s,baz=200,slow=40						
CMAR	**Chiang Mai Arr**	**41.90**	**256**	P	**P**	**06 19 23.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**41.90**	**256**	P	**P**	**06 19 23.3**	**-0.9**
ZAA0	**Zalesovo Array**	**42.55**	**313**	P	**P**	**06 19 27.6**	**-1.5**
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**06 19 29.9**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=92,slow=7.4,SNR=11						
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**06 19 28.0**	**-1.1**
ZALV	**Zalesovo Beam**	**42.55**	**313**	*i* P	**P**	**06 19 30.2**	**+1.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	**Lhasa**	**42.76**	**276**	P	**P**	**06 19 30.6**	**-1.1**
LSA				IAmb	IAmb	06 19 49.0	
	comp=Z,5.1nm,0.5s						
LSA	**Lhasa**	**42.76**	**276**	P	**P**	**06 19 30.6**	**-1.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NRIK	**Noril'sk**	**43.83**	**335**	LR	LR	06 39 15.9	
	comp=Z,73nm,18.1s,baz=137,slow=38						
MK31	**Makanchi Array**	**44.76**	**303**	P	**P**	**06 19 45.8**	**-1.2**
MK31	**Makanchi Array**	**44.76**	**303**	P	**P**	**06 19 45.8**	**-1.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MKAR	**Makanchi Array**	**44.76**	**303**	P	**P**	**06 19 47.8**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=85,slow=9.8,SNR=11						
MKAR				LR	LR	06 38 48.4	
	comp=Z,38nm,21.3s,baz=90,slow=36						
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**44.76**	**303**	P	**P**	**06 19 46.5**	**-0.6**
KURK	**Kurchatov**	**46.57**	**308**	P	**P**	**06 20 00.8**	**-0.4**
KURK				IAmb	IAmb	06 20 16.7	
	comp=Z,7.2nm,0.9s						
KURK	**Kurchatov**	**46.57**	**308**	*ce*P	**P**	**06 20 02.0**	**+0.8**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURBB	**Kurchatov Arra**	**46.64**	**308**	P	**P**	**06 20 02.0**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=82,slow=8.4,SNR=20						
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**06 20 24.7**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=270,slow=6.8,SNR=9.6						
	comp=Z,0.8nm,0.8s						
AAK	**Ala-Archa**	**51.12**	**299**	LR	LR	06 43 48.5	
	comp=Z,122nm,18.3s,baz=63,slow=38						
AAK	**Ala-Archa**	**51.12**	**299**	*i* P	**P**	**06 20 36.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
BRVK	**Borovoye**	**51.26**	**313**	*ce*P	**P**	**06 20 38.5**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KK31	**Karatay Array**	**53.76**	**301**	P	**P**	**06 20 55.2**	**-0.7**
KK31				IAmb	IAmb	06 21 21.0	
	comp=Z,3.3nm,1.1s						
KK31	**Karatay Array**	**53.76**	**301**	P	**P**	**06 20 55.2**	**-0.7**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KKAR	**Karatay Array**	**53.76**	**301**	P	**P**	**06 20 55.6**	**-0.3**
KKAR	**Karatay Array**	**53.76**	**301**	P	**P**	**06 20 55.6**	**-0.3**
CHGR	**Chuyangaron**	**56.29**	**296**	P	**P**	**06 21 13.8**	**-0.6**
CHGR	**Chuyangaron**	**56.29**	**296**	P	**P**	**06 21 13.8**	**-0.6**
CHGR				pmax	pmax		
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**56.76**	**189**	P	**P**	**06 21 18.5**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=5.9,slow=7.4,SNR=6.9						
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**56.76**	**189**	P	**P**	**06 21 17.3**	**-0.3**
ARU	**Arti**	**56.99**	**319**	P	**P**	**06 21 19.6**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=28,slow=7.6,SNR=4.2						
	comp=Z,0.8nm,0.3s						
ARU	**Arti**	**56.99**	**319**	P	**P**	**06 21 17.3**	**-1.6**
ARU				IAmb	IAmb	06 21 32.5	
	comp=Z,4.2nm,0.6s						
ARU	**Arti**	**56.99**	**319**	*c i*P	**P**	**06 21 19.3**	**+0.4**
ARU						06 22 11.7	
ARU				S	S	06 29 02.2	-10
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ABKAR	**Akbulak array**	**58.58**	**310**	P	**P**	**06 21 29.6**	**-0.6**
AKTO	**Aktyubinsk**	**59.31**	**312**	P	**P**	**06 21 34.5**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=83,slow=9.7,SNR=4.4						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**60.48**	**189**	P	**P**	**06 21 44.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=9.6,slow=6.1,SNR=3.5						
	comp=Z,0.5nm,0.7s						
KIRV	**Kirov**	**60.86**	**323**	*ce*P	**P**	**06 21 47.3**	**+1.6**
YKA	**Yellowknife Ar**	**63.88**	**30**	P	**P**	**06 22 06.5**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=300,slow=5.1,SNR=3.0						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**69.39**	**333**	P	**P**	**06 22 40.4**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=92,slow=5.7,SNR=5.5						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**69.39**	**333**	P	**P**	**06 22 40.0**	**-1.1**
FINES	**FINESS Array B**	**69.39**	**333**	*i* P	**P**	**06 22 41.2**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**71.54**	**311**	P	**P**	**06 22 55.4**	**+0.9**
	comp=Z,3.0nm,0.9s,baz=38,slow=3.0,SNR=6.1						
	comp=Z,3.0nm,0.9s						
KBZ	**Khabaz**	**71.54**	**311**	*ce*P	**P**	**06 22 55.7**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	**Kislovodsk**	**71.54**	**311**	*e*P	**P**	**06 22 54.9**	**+0.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HFS	**Hagfors**	**74.65**	**336**	LR	LR	06 58 37.6	
	comp=Z,70nm,18.6s,baz=24,slow=38						
NB2	**NORSAR Subarra**	**74.74**	**338**	P	**P**	**06 23 13.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.74**	**338**	P	**P**	**06 23 13.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=39,slow=5.8,SNR=4.1						
NOA				LR	LR	06 59 40.8	
	comp=Z,31nm,19.1s,baz=45,slow=39						
	comp=Z,0.9nm,0.7s						
AKASG	**Malin Array Be**	**74.91**	**323**	P	**P**	**06 23 14.7**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=43,slow=4.2,SNR=7.1						
AKASG				LR	LR	06 59 35.4	
	comp=Z,29nm,18.1s,baz=62,slow=38						
	comp=Z,1.3nm,0.6s						
RAR	**Rarotonga**	**79.52**	**126**	LR	LR	06 51 10.6	
	comp=Z,50nm,20.9s,baz=276,slow=30						
MLR	**Muntele Rosu**	**80.01**	**320**	LR	LR	07 02 26.7	
	comp=Z,46nm,18.0s,baz=32,slow=38						
CLL	**Collm**	**81.68**	**330**	*e*P	**P**	**06 23 52.0**	**+0.3**
CLL	**Collm**	**81.68**	**330**	*e*P	**P**	**06 23 52.0**	**+0.3**
PPT	**Papeete**	**84.00**	**117**	LR	LR	06 54 47.5	
	comp=Z,17nm,20.4s,baz=55,slow=31						
DAVOX	**Davos/Dischmat**	**86.52**	**329**	LR	LR	07 06 12.6	
	comp=Z,42nm,18.0s,baz=76,slow=38						
TXAR	**Lajitas Array**	**89.95**	**53**	P	**P**	**06 24 33.9**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=309,slow=5.7,SNR=1.6						
	comp=Z,0.1nm,0.6s						
ESDC	**Sonseca Array**	**97.86**	**334**	LR	LR	07 14 07.6	
	comp=Z,38nm,18.9s,baz=314,slow=38						

GII ***22*** *06:18:47.0±0.0, 37°.03N×37°.82E, h1^{km}, mb4.1/3, MD3.9/3, Mm4.0/3*

NIC ***22*** *06:19:05.9±0.0, 36°.37N×36°.35E, h10^{km}±31^{km}, Ml3.9/6*

ISK ***22*** *06:19:06.7, 36°.08N×36°.38E, h13^{km}, ML3.8/20*

GRAL ***22*** *06:19:06.2±0.6, 36°.23N×36°.79E, h0^{km}±999^{km}, MD3.9*

IDC ***22*** *06:19:07.2±1.2, 36°.07N×36°.46E, h0^{km}, mb3.5/5, mbtmp3.5/7, ML3.3/3, MS2.5/2, Error ellipse: s-maj=27.1km s-min=16.1km az=86.0*

DDA ***22*** *06:19:08.7±0.0, 36°.12N×36°.39E, h9^{km}±1^{km}, MW3.9*

ISC 22 06:19:08.4±1.1**, 36°.13N**±0°.02×**36°.38E**±0°.02**, h13^{km}**±8^{km}**, n108, σ1^{s}.24**/141**, mb3.6**/4**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.24**	**247**	P	**Pb**	**06 19 14.1**	**-0.5**
YAYL				S	**Sg**	**06 19 18.1**	**+1.1**
TAHT	**Tahtakopru-Hat**	**0.29**	**328**	PG	**Pb**	**06 19 14.9**	**-0.6**
YURE	**YUREGIR**	**0.92**	**320**	P	**Pn**	**06 19 26.8**	**-0.2**
YURE				S	**Sn**	**06 19 41.8**	**+1.6**
CEYT	**Ceyhan**	**1.01**	**330**	PG	**Pn**	**06 19 27.8**	**-0.5**
CEYT				SG	**Sn**	**06 19 42.5**	**+0.1**
KAMA	**Osmaniye**	**1.08**	**12**	P	**Pn**	**06 19 29.1**	**-0.2**
KAMA				S	**Sn**	**06 19 43.5**	**-0.8**
HCB	**Kahramanmara**	**1.29**	**19**	P	**Pn**	**06 19 31.5**	**-0.6**
HCB				S	**Sn**	**06 19 48.9**	**-0.3**
KOZT	**Kozan**	**1.42**	**342**	PN	**Pn**	**06 19 33.5**	**-0.4**
KOZT				SN	**Sg**	**06 19 53.0**	**-1.1**
KMRS	**Kahramanmaras**	**1.44**	**17**	PN	**Pn**	**06 19 33.7**	**-0.5**
ANDN	**Andirin**	**1.45**	**359**	P	**Pn**	**06 19 34.4**	**0.0**
ANDN				S	**Sn**	**06 19 53.0**	**-0.4**

KAHM	**Kahramanmaras,**	**1.47**	**19**	P	**Pb**	**06 19 35.0**	**-0.6**
KAHM				S	**Sn**	**06 19 52.8**	**-1.0**
DED	**Mersin**	**1.52**	**304**	P	**Pb**	**06 19 35.8**	**-0.6**
DED				S	**Sn**	**06 19 54.8**	**-0.1**
AKO	**Adana**	**1.52**	**331**	P	**Pb**	**06 19 35.6**	**-0.9**
GZT	**Gaziantep**	**1.55**	**38**	P	**Pn**	**06 19 35.1**	**-0.7**
GZT				S	**Sg**	**06 19 58.5**	**+0.2**
MERS	**Mersin**	**1.67**	**297**	PN	**Pn**	**06 19 36.9**	**-0.4**
GULE	**Gulek**	**1.73**	**312**	P	**Pb**	**06 19 39.6**	**-0.5**
GULE				S	**Sb**	**06 20 01.6**	**-0.1**
SAIM	**ADANA**	**1.86**	**353**	P	**Pn**	**06 19 40.7**	**+0.7**
SAIM				S	**Sn**	**06 19 60.0**	**-3.5**
HWQ	**Hawqa**	**1.88**	**191**	*e*P	**Pn**	**06 19 40.8**	**+0.5**
HWQ				*e*S	**Sb**	**06 20 06.2**	**+0.2**
EREN	**Erenkoy**	**1.89**	**252**	PN	**Pn**	**06 19 39.2**	**-1.1**
EREN	**Erenkoy**	**1.89**	**252**	P	**Pn**	**06 19 39.1**	**-1.2**
CMRD	**Camardi-Nigde**	**1.89**	**324**	PN	**Pn**	**06 19 40.7**	**+0.2**
SURC	**SANLIURFA_SURC**	**1.95**	**67**	P	**Pn**	**06 19 40.6**	**-0.7**
SURC				S	**Sb**	**06 20 08.6**	**+0.5**
SILI	**Silifke-Mersin**	**2.00**	**278**	PN	**Pn**	**06 19 41.5**	**-0.3**
ATAB	**Bozova**	**2.04**	**48**	P	**Pn**	**06 19 42.1**	**-0.3**
ATAB				S	**Sg**	**06 20 12.6**	**-1.4**
YAHY	**KAYSERI_Yahyal**	**2.12**	**338**	P	**Pn**	**06 19 44.0**	**+0.3**
YAHY				S	**Sn**	**06 20 10.7**	**+0.7**
KARG	**Kargicak-Mersi**	**2.16**	**273**	PN	**Pn**	**06 19 43.1**	**-1.0**
KEBE	**Keben-Mersin**	**2.17**	**279**	PN	**Pn**	**06 19 43.9**	**-0.4**
IKL	**Isikli**	**2.18**	**274**	PN	**Pn**	**06 19 44.1**	**-0.2**
TISA	**Tisan-Mersin**	**2.18**	**272**	PN	**Pn**	**06 19 43.7**	**-0.7**
YESI	**Yesilovacik-Me**	**2.21**	**273**	PN	**Pn**	**06 19 44.3**	**-0.5**
PARAL	**Paralimni**	**2.21**	**240**	P	**Pn**	**06 19 43.3**	**-1.5**
PARAL				S	**Sn**	**06 20 13.1**	**+1.1**
PARAL				AML	AML	06 20 28.6	
	1.3nm,0.6s						
PARAL				AML	AML	06 20 28.6	
	1.3nm,0.6s						
PARAL				AML	AML	06 20 35.6	
	1.3nm,0.6s						
PARAL				AML	AML	06 20 35.6	
	1.3nm,0.6s						
KERG	**Konya-Eregli**	**2.22**	**306**	P	**Pn**	**06 19 46.3**	**+1.4**
KERG				S	**Sb**	**06 20 13.8**	**-2.0**
NIDE	**Nigde/Merkez-G**	**2.26**	**326**	P	**Pn**	**06 19 46.8**	**+1.2**
NIDE				S	**Sb**	**06 20 16.1**	**-1.1**
ELBS	**KAHRAMANMARAS_**	**2.27**	**15**	P	**Pn**	**06 19 46.7**	**+1.0**
ELBS				S	**Sg**	**06 20 22.4**	**+0.9**
SARI	**SarD1z-Kayseri**	**2.27**	**1**	PN	**Pn**	**06 19 45.8**	**0.0**
AKKU	**Akkuyu-Mersin**	**2.29**	**272**	PN	**Pn**	**06 19 45.4**	**-0.4**
AKK2	**Akkuyu-Mersin**	**2.29**	**271**	PN	**Pn**	**06 19 44.8**	**-1.0**
GULN	**MERSIN_Gulnar**	**2.29**	**272**	P	**Pn**	**06 19 45.3**	**-0.6**
GULN				S	**Sn**	**06 20 13.1**	**-0.9**
TEPK	**Tepekoy-MERSIN**	**2.29**	**273**	PN	**Pn**	**06 19 44.8**	**-1.1**
AKK1	**Akkuyu-Mersin**	**2.29**	**271**	PN	**Pn**	**06 19 45.1**	**-0.8**
BHL	**Bhannes**	**2.30**	**195**	*e*P	**Pn**	**06 19 47.0**	**+1.0**
BHL				*e*S	**Sb**	**06 20 17.1**	**-1.0**
SANL	**SANLIURFA_Merk**	**2.35**	**63**	P	**Pn**	**06 19 46.0**	**-0.6**
SANL				S	**Sb**	**06 20 19.7**	**+0.3**
OREN	**Orenkoy-Mersin**	**2.36**	**273**	PN	**Pn**	**06 19 46.5**	**-0.3**
BEYL	**Beirut**	**2.37**	**198**	*e*P	**Pn**	**06 19 48.5**	**+1.6**
TEVE	**Tevekalti-Mers**	**2.39**	**278**	PN	**Pn**	**06 19 46.8**	**-0.5**
NIG	**Nigde**	**2.43**	**325**	PN	**Pn**	**06 19 47.8**	**-0.2**
LFK	**Lefkose**	**2.46**	**251**	PN	**Pn**	**06 19 47.5**	**-0.8**
AKCD	**Akcadag**	**2.49**	**29**	P	**Pn**	**06 19 49.7**	**+1.0**
MVOU	**Mavrovouni**	**2.50**	**244**	P	**Pn**	**06 19 47.5**	**-1.2**
MVOU				S	**Sb**	**06 20 21.8**	**-1.9**
MVOU				AML	AML	06 20 32.3	
	0.7nm,0.5s						
MVOU				AML	AML	06 20 32.3	
	0.7nm,0.5s						
MVOU				AML	AML	06 20 36.7	
	0.9nm,0.8s						
MVOU				AML	AML	06 20 36.7	
	0.9nm,0.8s						
DQRL	**Deir Qamar**	**2.51**	**196**	*e*P	**Pn**	**06 19 49.7**	**+0.8**
BERE	**Bereket-Mersin**	**2.56**	**276**	PN	**Pn**	**06 19 49.3**	**-0.4**
DARE	**Darende-Malaty**	**2.59**	**20**	PN	**Pn**	**06 19 50.3**	**+0.2**
ATHAL	**Athalassa**	**2.62**	**249**	S	**Sn**	**06 20 24.3**	**+2.3**
TEKE	**Tekeli-Mersin**	**2.64**	**271**	PN	**Pn**	**06 19 50.2**	**-0.5**
RCY	**Rachaya**	**2.66**	**190**	*e*P	**Pn**	**06 19 51.6**	**+0.4**
YESY	**Yesilyurt**	**2.68**	**309**	PN	**Pn**	**06 19 51.8**	**+0.5**
CUGUR	**Gurin_SVAS**	**2.69**	**15**	P	**Pn**	**06 19 52.4**	**+0.9**
CUGUR				S	**Sg**	**06 20 37.0**	**+2.2**
KRMN	**Karaman**	**2.71**	**294**	PN	**Pn**	**06 19 51.6**	**-0.1**
MALT	**Malatya**	**2.73**	**36**	PN	**Pn**	**06 19 52.1**	**+0.1**
CSS	**Mathiatis**	**2.74**	**246**	PN	**Pn**	**06 19 51.8**	**-0.3**
CSS	**Mathiatis**	**2.74**	**246**	P	**Pn**	**06 19 52.0**	**-0.1**
CSS	**Mathiatis**	**2.74**	**246**	Pn	**Pn**	**06 19 52.3**	**+0.2**
BNN	**Bunyan**	**2.75**	**351**	PN	**Pn**	**06 19 52.5**	**+0.2**
GULA	**Gulagac**	**2.79**	**323**	PN	**Pn**	**06 19 53.2**	**+0.3**
SHBL	**Chebaa**	**2.82**	**191**	*e*P	**Pn**	**06 19 53.5**	**+0.2**
SHBL				*e*S	**Sn**	**06 20 29.4**	**+2.1**
ERMK	**Ermenek**	**2.84**	**281**	P	**Pn**	**06 19 55.5**	**+1.9**
ERMK				S	**Sb**	**06 20 32.1**	**-1.7**
ASGA	**Asgata**	**2.88**	**243**	P	**Pn**	**06 19 53.6**	**-0.4**
ASGA				AML	AML	06 20 39.0	
	0.8nm,0.7s						
ASGA				AML	AML	06 20 47.3	
	0.9nm,0.9s						
AKDN	**Akdeniz- Kıbrı**	**2.89**	**254**	PN	**Pn**	**06 19 53.5**	**-0.6**
NATI	**Neve Ativ**	**2.91**	**191**	Pn	**Pn**	**06 19 52.1**	**-2.2**
NATI				Sn	**Sg**	**06 20 41.4**	**-0.4**
KKBE	**Karaman, Kazim**	**2.97**	**293**	P	**Pn**	**06 19 57.9**	**+2.6**
KKBE				S	**Sb**	**06 20 34.7**	**-2.7**
GEM	**Giv'at Ha'Em**	**2.97**	**192**	Pn	**Pn**	**06 19 51.0**	**-4.2**
GEM				Sn	**Sg**	**06 20 42.1**	**-1.7**
LEF	**Lefka**	**3.01**	**251**	PN	**Pn**	**06 19 55.8**	**0.0**
LEF	**Lefka**	**3.01**	**251**	P	**Pn**	**06 19 57.5**	**+1.7**
LEF				S	**Sn**	**06 20 34.9**	**+3.2**
HEKM	**Malatya_Hekimh**	**3.02**	**24**	P	**Pg**	**06 20 06.4**	**+0.1**
HEKM				S	**Sg**	**06 20 45.3**	**-0.2**
SULT	**Sultanhani-AKS**	**3.08**	**313**	PN	**Pn**	**06 19 56.9**	**+0.1**
CUAYA	**Sivas-Altinyay**	**3.15**	**5**	P	**Pn**	**06 19 59.6**	**+1.8**
ELZG	**Elazig**	**3.15**	**41**	P	**Pn**	**06 19 58.2**	**+0.4**
SZAC	**Souni**	**3.16**	**245**	P	**Pn**	**06 19 57.9**	**0.0**
SZAC				AML	AML	06 20 51.2	
	1.3nm,0.5s						
SZAC				AML	AML	06 20 54.5	
	1.1nm,0.7s						
HNTI	**Hanita**	**3.20**	**198**	Pn	**Pn**	**06 19 57.7**	**-0.6**
MMA0B	**Mount Meron ar**	**3.21**	**195**	Pn	**Pn**	**06 19 56.8**	**-1.8**
MMAI	**Mount Meron Ar**	**3.21**	**195**	Pn	**Pn**	**06 19 57.8**	**-0.7**
	8.5nm,0.3s,baz=55,slow=5.5,SNR=4.9						
MMAI				Sn	**Sb**	**06 20 44.1**	**-0.2**
	28nm,0.3s,baz=148,slow=36,SNR=3.1						
ALFC	**Alefka**	**3.23**	**254**	P	**Pn**	**06 19 56.7**	**-2.1**
ALFC				S	**Sn**	**06 20 36.9**	**-0.2**
ALFC				AML	AML	06 20 38.9	
	0.9nm,0.4s						
ALFC				AML	AML	06 20 38.9	
	0.9nm,0.4s						
ALFC				AML	AML	06 20 46.7	
	0.7nm,0.3s						
ALFC				AML	AML	06 20 46.7	
	0.7nm,0.3s						
HDMB	**Hadim**	**3.24**	**286**	PN	**Pn**	**06 19 58.6**	**-0.5**
GAZI	**Gazipasa**	**3.29**	**273**	P	**Pn**	**06 20 00.3**	**+0.8**
GAZI				S	**Sn**	**06 20 38.4**	**-0.1**
AKMS	**Akamas**	**3.48**	**253**	P	**Pn**	**06 20 01.6**	**-0.6**
AKMS				AML	AML	06 20 53.4	
	0.6nm,0.5s						
AKMS				AML	AML	06 20 58.5	
	0.9nm,0.8s						
KEMA	**Kemaliye**	**3.56**	**28**	P	**Pn**	**06 20 04.0**	**+0.7**
KIRS	**Kirsehir-Merke**	**3.58**	**328**	P	**Pn**	**06 20 04.5**	**+0.9**
MMLI	**Mount Malkishu**	**3.77**	**192**	PN	**Pn**	**06 20 05.5**	**-0.7**
MMLI	**Mount Malkishu**	**3.77**	**192**	P	**Pn**	**06 20 08.0**	**+1.9**
KEPZ	**Antalya-Kepez**	**3.92**	**283**	P	**Pn**	**06 20 10.2**	**+1.9**
HMDT	**Nahal Hemdat**	**3.93**	**191**	Pn	**Pn**	**06 20 05.9**	**-2.5**
HMDT				Sn	**Sb**	**06 21 06.6**	**+1.6**
SEDI	**Konya, Seydise**	**3.94**	**291**	P	**Pn**	**06 20 11.5**	**+2.9**
ASF	**Jabal al Asfar**	**3.97**	**174**	Pn	**Pn**	**06 20 08.2**	**-0.9**
	1.2nm,0.3s,baz=171,slow=19,SNR=6.2						
ASF				Lg	Lg	06 21 11.7	
	10nm,0.3s,baz=110,slow=22,SNR=8.2						
	2.2nm,0.3s						
KDHN	**Kadinhani**	**4.15**	**306**	P	**Pn**	**06 20 13.8**	**+2.3**
BRTR	**Keskin Array B**	**4.19**	**330**	Pn	**Pn**	**06 20 14.3**	**+2.2**
	1.1nm,0.3s,baz=159,slow=14,SNR=30						
BRTR				LR	LR	06 21 42.4	
	comp=Z,30nm,20.2s,baz=118,slow=36						
	2.1nm,0.3s						
UJAP	**Al Uja**	**4.23**	**191**	PN	**Pn**	**06 20 12.3**	**-0.2**
SUSE	**Susehri**	**4.32**	**19**	P	**Pn**	**06 20 15.6**	**+1.7**
KELT	**Kelkit**	**4.61**	**29**	P	**Pn**	**06 20 18.5**	**+0.5**
DSI	**Dead Sea**	**4.62**	**191**	Pn	**Pn**	**06 20 16.4**	**-1.5**
YVAC	**Isparta, Yalva**	**4.62**	**299**	P	**Pn**	**06 20 20.6**	**+2.5**
KRMI	**Paran Flat**	**6.15**	**193**	Pn	**Pn**	**06 20 36.7**	**-2.3**
EIL	**Elat**	**6.55**	**191**	LR	LR	06 23 28.3	
	comp=Z,67nm,18.4s,baz=38,slow=40						
AKASG	**Malin Array Be**	**15.45**	**343**	Pn	**P**	**06 22 49.5**	**-0.9**
	0.3nm,0.3s,baz=159,slow=10,SNR=9.1						
GERES	**GERESS Array B**	**20.91**	**314**	P	Pn	06 23 54.1	+1.1
	0.6nm,0.7s,baz=116,slow=12,SNR=6.2						
	0.6nm,0.7s						
GERES	**GERESS Array B**	**20.91**	**314**	P	P	06 23 54.1	-6.3
AKTO	**Aktyubinsk**	**21.17**	**41**	P	**P**	**06 23 53.4**	**+0.2**
	2.5nm,0.8s,baz=224,slow=11,SNR=5.8						
	2.5nm,0.8s						
FINES	**FINESS Array B**	**26.16**	**349**	P	**P**	**06 24 42.7**	**+0.6**
	0.8nm,0.7s,baz=141,slow=16,SNR=1.6						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**33.40**	**51**	P	**P**	**06 25 47.9**	**+1.4**
	0.7nm,0.6s,baz=263,slow=8.6,SNR=7.1						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**35.56**	**58**	P	**P**	**06 26 05.8**	**+0.5**
	0.4nm,0.6s,baz=278,slow=9.8,SNR=3.1						
	0.4nm,0.6s						

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*ISK **22** 06:25:23.8, 38.°75N×23.°05E, h4^{km}, ML3.9/36*

*IDC **22** 06:25:23.9±1.0, 38.°63N×22.°80E, h0^{km}, mb3.8/10, mbtmp3.8/13, ML3.4/2, MS3.2/18, Error ellipse: s-maj=20.2km s-min=17.5km az=157.0*

*THE **22** 06:25:24.3, 38.°69N×22.°84E, h0^{km}±1^{km}, ML3.9/21, Error ellipse: s-maj=1.4km s-min=0.3km az=11.0*

*ATH **22** 06:25:24.1, 38.°67N×22.°83E, h7^{km}, Mw3.9, Moment Tensor Solution. s9 Moment tensor: M$_{rr}$2.25; M$_{\theta\theta}$6.27; M$_{\phi\phi}$-8.52; M$_{r\theta}$-3.73; M$_{\theta\phi}$-1.16; M$_{\phi r}$0.08; Fault plane solution: NP1:φ$_s$225.00000°, δ70.00000°, λ157.00000°. NP2:φ$_s$324.00000°, δ68.00000°, λ22.00000°.*

*NEIC **22** 06:25:27.0±2.2, 38.°63N±0.°05×22.°90E±0.°06, h16^{km}±5^{km}, mb4.1/11, Mwr4.0/24, ML3.9(THE) Error ellipse: s-maj=7.4km s-min=5.4km az=142.0*

*NEIC **22** 06:25:27.8, 38.°60N×22.°87E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.33; M$_{\theta\theta}$1.19; M$_{\phi\phi}$-1.52; M$_{r\theta}$-0.45; M$_{\theta\phi}$-0.02; M$_{\phi r}$0.08; Fault plane solution: M$_0$1.46000×10^{15} NP1:φ$_s$223.07000°, δ72.20000°, λ164.93000°. NP2:φ$_s$317.78000°, δ75.67000°, λ18.39000°. Principal axes: T 1.3839, Plg23.0000°, Azm181.0000°; N 0.1390, Plg67.0000°, Azm354.0000°; P -1.5229, Plg2.0000°, Azm90.0000°;*

ISC 22 06:25:25.2±0.5**, 38.°68N**±0.°02×**22.°86E**±0.°02**, h10^{km}, n241, σ1.^{s}28**/268**, mb4.0**/12**, MS3.2**/12**, 17C-14D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKR	**Lokris**	**0.12**	**103**	P	**Pg**	**06 25 26.5**	**-1.6**
LKR				S	**Sg**	**06 25 29.0**	**-1.1**
LKR				AML	AML	06 25 30.1	
LKR				AML	AML	06 25 30.4	
LKR	**Lokris**	**0.12**	**103**	P	**Pg**	**06 25 26.5**	**-1.6**
LKR				S	**Sg**	**06 25 28.2**	**-1.8**
	151µm,0.3s						
DLFA	**Delphi**	**0.34**	**235**	P	**Pg**	**06 25 30.9**	**-1.2**
DLFA				S	**Sg**	**06 25 35.1**	**-1.5**
DLFA				AML	AML	06 25 36.1	
DLFA				AML	AML	06 25 37.3	
VIL2	**Platees**	**0.57**	**145**	P	**Pb**	**06 25 36.0**	**-1.2**
VIL2				S	**Sb**	**06 25 44.7**	**-0.7**
VIL2				AML	AML	06 25 49.6	
	comp=N,43301µm,0.5s						
VIL2				AML	AML	06 25 51.8	
	comp=E,73397µm,0.6s						
VILL	**Villia**	**0.63**	**145**	P	**Pg**	**06 25 36.7**	**-0.7**
VILL				S	**Sb**	**06 25 45.9**	**-1.2**
	comp=E,4µm,0.6s						
MAKR	**Makrakomi, Fth**	**0.66**	**301**	P	**Pg**	**06 25 36.4**	**-1.6**
MAKR				S	**Sg**	**06 25 45.6**	**-1.0**
MAKR				AML	AML	06 25 49.7	
	comp=E,5586µm,0.3s						
MAKR				AML	AML	06 25 53.1	
	comp=N,11334µm,0.7s						
MAKR	**Makrakomi, Fth**	**0.66**	**301**	P	**Pg**	**06 25 36.7**	**-1.3**
MAKR				S	**Sg**	**06 25 45.3**	**-1.3**
	comp=N,13µm,0.5s						
THAL	**Thalero**	**0.66**	**193**	P	**Pg**	**06 25 36.7**	**-1.2**
THAL				S	**Sg**	**06 25 44.8**	**-1.7**
THAL				AML	AML	06 25 52.8	
	comp=E,43220µm,0.7s						
THAL				AML	AML	06 25 54.6	
	comp=N,37896µm,0.6s						
THAL	**Thalero**	**0.66**	**193**	P	**Pg**	**06 25 36.7**	**-1.2**
THAL				S	**Sb**	**06 25 47.2**	**-0.7**
	comp=N,3µm,0.6s						
LTK	**Loutraki**	**0.66**	**172**	P	**Pg**	**06 25 36.5**	**-1.4**
LTK				S	**Sg**	**06 25 45.8**	**-0.8**
NEO	**Neokhori**	**0.69**	**24**	P	**Pg**	**06 25 37.8**	**-0.8**
NEO				S	**Sg**	**06 25 47.5**	**-0.1**
NEO				AML	AML	06 25 51.6	
	comp=N,28326µm,0.3s						
NEO				AML	AML	06 25 51.9	
	comp=E,24208µm,0.2s						
NEO	**Neokhori**	**0.69**	**24**	P	**Pg**	**06 25 37.9**	**-0.7**
NEO				S	**Sg**	**06 25 47.3**	**-0.4**
	comp=E,13µm,0.2s						
ALIK	**Aliki, Aigiali**	**0.72**	**235**	P	**Pg**	**06 25 37.5**	**-1.6**
ALIK				S	**Sg**	**06 25 48.2**	**-0.2**
ANX	**Ano Chora**	**0.74**	**264**	P	**Pg**	**06 25 37.3**	**-2.2**
ANX				S	**Sg**	**06 25 47.2**	**-1.9**
ANX	**Ano Chora**	**0.74**	**264**	P	**Pg**	**06 25 37.5**	**-2.0**
ANX				S	**Sg**	**06 25 48.7**	**-0.4**
	comp=E,21µm,0.6s						
XOR	**Xorichti**	**0.74**	**21**	P	**Pg**	**06 25 38.3**	**-1.2**
XOR				S	**Sg**	**06 25 48.8**	**-0.3**
XOR				AML	AML	06 25 52.5	
	comp=E,13828µm,0.3s						
XOR				AML	AML	06 25 57.3	
	comp=N,16003µm,0.7s						
XOR	**Xorichti**	**0.74**	**21**	P	**Pg**	**06 25 38.8**	**-0.7**
XOR				S	**Sg**	**06 25 49.1**	**0.0**
	comp=N,7µm,0.5s						
EFP	**Efpalio**	**0.79**	**252**	P	**Pg**	**06 25 38.2**	**-2.2**
EFP				S	**Sg**	**06 25 49.0**	**-1.6**
EFP				AML	AML	06 25 51.2	
	comp=N,31480µm,1.0s						
EFP				AML	AML	06 25 56.0	
	comp=E,24484µm,0.7s						
EFP	**Efpalio**	**0.79**	**252**	P	**Pg**	**06 25 38.5**	**-1.9**
EFP				S	**Sg**	**06 25 50.5**	**-0.1**
	comp=E,16µm,0.8s						
LAKA	**Lakka**	**0.81**	**238**	P	**Pg**	**06 25 39.1**	**-1.9**
LAKA				S	**Sg**	**06 25 50.3**	**-1.3**
LAKA				AML	AML	06 25 54.4	
	comp=E,33674µm,0.7s						
LAKA				AML	AML	06 25 55.6	
	comp=N,42011µm,1.0s						
LAKA	**Lakka**	**0.81**	**238**	P	**Pg**	**06 25 39.4**	**-1.5**
LAKA				S	**Sg**	**06 25 51.3**	**-0.3**
	comp=N,18µm,0.8s						
KLV	**Kalavryta, Ach**	**0.84**	**221**	P	**Pg**	**06 25 39.0**	**-2.5**
KLV				AML	AML	06 25 55.9	
	comp=N,15991µm,0.6s						
KLV				AML	AML	06 25 56.4	
	comp=E,16268µm,0.8s						
KLV	**Kalavryta, Ach**	**0.84**	**221**	P	**Pg**	**06 25 39.7**	**-1.7**
KLV				S	**Sg**	**06 25 52.3**	**-0.1**
	comp=E,8µm,0.7s						
EVR	**Evrytania**	**0.85**	**287**	P	**Pg**	**06 25 39.9**	**-1.8**
EVR				AML	AML	06 25 58.4	
	comp=E,6027µm,0.6s						
EVR				AML	AML	06 26 03.7	
	comp=N,4256µm,0.6s						
EVR	**Evrytania**	**0.85**	**287**	P	**Pg**	**06 25 40.4**	**-1.3**
EVR				S	**Sg**	**06 25 53.3**	**+0.5**
	comp=N,3µm,0.7s						
ALNA	**Alonissos**	**0.92**	**59**	P	**Pg**	**06 25 41.9**	**-1.0**
ALNA				AML	AML	06 26 01.4	
	comp=E,15343µm,1.3s						
ALNA				AML	AML	06 26 05.2	
	comp=N,18723µm,0.7s						
UPR	**University Cam**	**0.93**	**245**	P	**Pg**	**06 25 41.8**	**-1.2**
UPR				S	**Sb**	**06 25 55.8**	**+0.1**
KYMI	**Kymi, Euboea I**	**0.98**	**92**	P	**Pg**	**06 25 42.4**	**-1.6**
KYMI				S	**Sb**	**06 25 56.7**	**-0.4**
KYMI				AML	AML	06 26 02.8	
	comp=E,9279µm,1.0s						
KYMI				AML	AML	06 26 09.4	
	comp=N,7064µm,1.0s						
KYMI	**Kymi, Euboea I**	**0.98**	**92**	P	**Pg**	**06 25 42.2**	**-1.8**
KYMI				S	**Sn**	**06 25 57.5**	**-1.4**
	comp=N,4µm,1.0s						
ATH	**Athens Observa**	**0.98**	**136**	P	**Pg**	**06 25 42.1**	**-1.9**
ATH				S	**Sb**	**06 25 56.3**	**-0.8**
ATH	**Athens Observa**	**0.98**	**136**	P	**Pg**	**06 25 43.1**	**-0.9**
ATH				S	**Sn**	**06 25 58.0**	**-0.9**
	comp=N,19µm,0.5s						
PTL	**Penteli**	**1.01**	**128**	P	**Pg**	**06 25 43.0**	**-1.7**
ATHU	**Athens Univers**	**1.02**	**134**	P	**Pg**	**06 25 43.1**	**-1.7**
ATHU	**Athens Univers**	**1.02**	**134**	P	**Pg**	**06 25 43.6**	**-1.2**
ATHU				S	**Sn**	**06 25 59.4**	**-0.5**
	comp=N,9µm,0.7s						
DION	**Dionisos Attik**	**1.04**	**125**	P	**Pg**	**06 25 43.6**	**-1.6**
DION	**Dionisos Attik**	**1.04**	**125**	P	**Pg**	**06 25 43.7**	**-1.5**
DION				S	**Sn**	**06 25 59.6**	**-0.8**
	comp=N,32µm,0.5s						
PVO	**Paravola**	**1.04**	**267**	P	**Pg**	**06 25 42.6**	**-2.6**
LRSO	**Larissa Observ**	**1.06**	**340**	P	**Pb**	**06 25 43.5**	**-2.1**
EPID	**Epidavros**	**1.08**	**169**	P	**Pg**	**06 25 44.9**	**-1.1**
EPID	**Epidavros**	**1.08**	**169**	P	**Pg**	**06 25 44.7**	**-1.3**
EPID				S	**Sn**	**06 26 01.7**	**+0.2**
	comp=N,625nm,0.6s						
THL	**Klokotos Trika**	**1.10**	**324**	P	**Pb**	**06 25 44.6**	**-1.8**
THL				AML	AML	06 26 04.4	
	comp=E,2248µm,1.0s						
THL				AML	AML	06 26 08.0	
	comp=N,2010µm,1.2s						
THL	**Klokotos Trika**	**1.10**	**324**	P	**Pb**	**06 25 44.6**	**-1.8**
THL				S	**Sb**	**06 26 01.1**	**+0.3**
	comp=N,1µm,1.1s						
VLY	**Voula,Athens**	**1.11**	**138**	P	**Pg**	**06 25 44.9**	**-1.6**
VLY				S	**Sn**	**06 26 00.9**	**-1.2**
VLY				AML	AML	06 26 05.0	
	comp=E,15455µm,0.8s						
VLY				AML	AML	06 26 07.0	
	comp=N,21015µm,0.6s						
VLY	**Voula,Athens**	**1.11**	**138**	P	**Pb**	**06 25 45.8**	**-0.6**
VLY				S	**Sn**	**06 26 01.4**	**-0.7**
	comp=N,9µm,0.7s						
TYRN	**Tyrnavos**	**1.14**	**335**	P	**Pb**	**06 25 45.0**	**-2.1**
TYRN				AML	AML	06 26 05.6	
	comp=N,2049µm,0.7s						
TYRN				AML	AML	06 26 10.9	
	comp=E,2926µm,0.6s						
DRO	**Drossia**	**1.16**	**232**	P	**Pb**	**06 25 44.8**	**-2.4**
DRO				S	**Sb**	**06 26 00.5**	**-1.8**
DRO				AML	AML	06 26 08.9	
	comp=N,18057µm,0.5s						
DRO				AML	AML	06 26 13.9	
	comp=E,5610µm,0.6s						
DRO	**Drossia**	**1.16**	**232**	P	**Pb**	**06 25 45.2**	**-2.1**
DRO				S	**Sn**	**06 26 03.1**	**-0.2**
	comp=E,6µm,0.5s						
RLS	**Riolos of Patr**	**1.25**	**241**	P	**Pn**	**06 25 47.1**	**-1.7**
RLS				AML	AML	06 26 10.9	
	comp=N,4527µm,0.8s						
RLS				AML	AML	06 26 12.6	
	comp=E,8654µm,0.8s						
RLS	**Riolos of Patr**	**1.25**	**241**	P	**Pn**	**06 25 47.6**	**-1.2**
RLS				S	**Sn**	**06 26 06.2**	**+0.5**
	comp=E,4µm,0.8s						
KRND	**KRANIDI**	**1.31**	**170**	P	**Pn**	**06 25 48.5**	**-1.1**
KRND				AML	AML	06 26 10.2	
	comp=E,13929µm,0.6s						
KRND				AML	AML	06 26 16.4	
	comp=N,8575µm,0.8s						
KRND	**KRANIDI**	**1.31**	**170**	P	**Pn**	**06 25 48.6**	**-1.0**
KRND				S	**Sg**	**06 26 09.0**	**+1.5**
	comp=N,6µm,0.6s						
KARY	**Karystos**	**1.40**	**117**	P	**Pn**	**06 25 50.1**	**-0.7**
KARY	**Karystos**	**1.40**	**117**	P	**Pn**	**06 25 50.3**	**-0.5**
ITM	**Ithomi**	**1.67**	**206**	P	**Pn**	**06 25 54.2**	**-0.3**
ITM				AML	AML	06 26 27.0	
	comp=E,2218µm,0.8s						
ITM				AML	AML	06 26 28.6	
	comp=N,2241µm,0.7s						
ITM	**Ithomi**	**1.67**	**206**	P	**Pn**	**06 25 54.5**	**0.0**
ITM	**Ithomi**	**1.67**	**206**	PN	**Pb**	**06 25 55.3**	**-0.7**
ITM				SN	**Sg**	**06 26 20.5**	**+1.7**
ITM	**Ithomi**	**1.67**	**206**	Pn	**Pn**	**06 25 54.6**	**+0.2**
KPRO	**Kipourio**	**1.72**	**318**	P	**Pn**	**06 25 55.1**	**-0.2**
EVGI	**Lefkada island**	**1.72**	**269**	P	**Pn**	**06 25 55.3**	**0.0**
PLG	**Polygyros**	**1.75**	**15**	P	**Pn**	**06 25 54.6**	**-1.1**
KZN	**Kozani**	**1.83**	**333**	P	**Pn**	**06 25 56.9**	**+0.1**
JAN	**Janina**	**1.84**	**303**	P	**Pn**	**06 25 57.1**	**+0.2**
OUR	**Ouranopolis**	**1.87**	**27**	PN	**Pn**	**06 25 55.6**	**-1.7**
OUR				SN	**Sn**	**06 26 18.2**	**-2.7**
HORT	**Hortiatis**	**1.93**	**6**	P	**Pn**	**06 25 56.9**	**-1.3**
HORT	**Hortiatis**	**1.93**	**6**	PN	**Pn**	**06 25 56.9**	**-1.3**
HORT				SN	**Sn**	**06 26 21.2**	**-1.3**
VLI	**Veliai**	**1.96**	**178**	P	**Pn**	**06 25 57.6**	**-0.9**
SOH	**Sokhos**	**2.18**	**10**	P	**Pn**	**06 26 00.5**	**-1.0**
GRG	**Griva**	**2.30**	**351**	P	**Pn**	**06 26 02.5**	**-0.7**
GRG	**Griva**	**2.30**	**351**	PN	**Pn**	**06 26 02.6**	**-0.7**
FNA	**Florina**	**2.39**	**332**	P	**Pn**	**06 26 04.9**	**+0.4**
FNA	**Florina**	**2.39**	**332**	PN	**Pn**	**06 26 05.7**	**+1.2**
FNA	**Florina**	**2.39**	**332**		**Pn**	**06 26 05.5**	**+1.0**
KTHR	**Kythira**	**2.42**	**177**	P	**Pn**	**06 26 05.0**	**+0.2**
KTHA	**Kythira Island**	**2.42**	**176**	P	**Pn**	**06 26 04.4**	**-0.5**
KNT	**Kendrikon**	**2.48**	**1**	P	**Pn**	**06 26 05.8**	**+0.1**
KNT	**Kendrikon**	**2.48**	**1**	PN	**Pn**	**06 26 05.4**	**-0.3**
SRS	**Serrai**	**2.50**	**13**	P	**Pn**	**06 26 05.1**	**-0.9**
KBN	**Korca**	**2.52**	**321**		**Pb**	**06 26 09.1**	**-1.4**
CHOS	**Chios island**	**2.53**	**96**	PN	**Pn**	**06 26 04.9**	**-1.5**
KEK	**Kerkira**	**2.59**	**294**		**Pb**	**06 26 09.9**	**-1.8**
VAY	**Valandovo**	**2.65**	**355**	*i* Pn	**Pn**	**06 26 08.1**	**+0.1**
APE	**Apeiranthos**	**2.66**	**126**	⇑P	**Pn**	**06 26 09.5**	**+1.4**
APE				⇑S	**Sn**	**06 26 40.7**	**+0.2**
APE	**Apeiranthos**	**2.66**	**126**	P	**Pn**	**06 26 07.8**	**-0.3**
APE	**Apeiranthos**	**2.66**	**126**	PN	**Pn**	**06 26 07.8**	**-0.3**
NVR	**Nevrokopi**	**2.78**	**16**	P	**Pn**	**06 26 09.1**	**-0.7**
GADA	**Gvkgeada**	**2.80**	**56**	PN	**Pn**	**06 26 07.9**	**-2.2**
OHR	**Ohrid**	**2.90**	**328**	*i* Pn	**Pn**	**06 26 13.0**	**+1.5**
EZN	**Ezine**	**2.93**	**66**	PN	**Pn**	**06 26 10.1**	**-1.7**
SANT	**Santorini**	**3.10**	**137**	⇓P	**Pn**	**06 26 14.0**	**-0.2**
SANT	**Santorini**	**3.10**	**137**	PN	**Pn**	**06 26 14.2**	**0.0**
SANT	**Santorini**	**3.10**	**137**		**Pn**	**06 26 15.5**	**+1.3**
VLO	**Vlora**	**3.15**	**306**	Pn	**Pn**	**06 26 17.6**	**+2.7**
DKL	**Dikili**	**3.19**	**82**	PN	**Pn**	**06 26 13.8**	**-1.5**
RODP	**Rodopos**	**3.19**	**167**	PN	**Pn**	**06 26 16.7**	**+1.2**
RDO	**Rodhopi**	**3.21**	**39**	PN	**Pn**	**06 26 14.6**	**-1.2**
RDO	**Rodhopi**	**3.21**	**39**	Pn	**Pn**	**06 26 16.2**	**+0.5**
ENEZ	**Enez**	**3.27**	**50**	PN	**Pn**	**06 26 14.6**	**-1.9**
GELI	**Tayfur-Gelibol**	**3.28**	**57**	PN	**Pn**	**06 26 15.1**	**-1.6**
BLCB	**Balcova**	**3.30**	**94**	PN	**Pn**	**06 26 15.5**	**-1.4**
ALN	**Alexandroupoli**	**3.31**	**47**	PN	**Pn**	**06 26 15.3**	**-1.8**
ALN	**Alexandroupoli**	**3.31**	**47**		**Pn**	**06 26 17.7**	**+0.7**
IMMV	**Iera Moni Meta**	**3.33**	**164**	P	**Pn**	**06 26 16.9**	**-0.5**
IMMV	**Iera Moni Meta**	**3.33**	**164**	PN	**Pn**	**06 26 17.8**	**+0.4**
ERIK	**Erikli-Kesan**	**3.45**	**54**	PN	**Pn**	**06 26 17.1**	**-1.9**
SKO	**Skopje**	**3.46**	**342**	*i* Pn	**Pn**	**06 26 19.6**	**+0.4**
TIR	**Tirane**	**3.52**	**320**	⇑P	**Pn**	**06 26 22.1**	**+2.1**
TIR	**Tirane**	**3.52**	**320**		**Pn**	**06 26 22.9**	**+2.9**
SCTE	**Santa Cesarea**	**3.67**	**294**		**Pn**	**06 26 23.4**	**+1.4**
PLD	**Plovdiv**	**3.70**	**22**	PN	**Pn**	**06 26 21.9**	**-0.6**
IDI	**Anoyia**	**3.75**	**154**	⇑P	**Pn**	**06 26 24.1**	**+0.8**
IDI				⇓S	**Sn**	**06 27 09.3**	**+1.7**
IDI	**Anoyia**	**3.75**	**154**	Pn	**Pn**	**06 26 23.4**	**+0.1**
	comp=N,4.3nm,0.3s,baz=328,slow=13,SNR=27						
IDI				Sn	**Sn**	**06 27 06.4**	**-1.1**
	comp=N,4.1nm,0.3s,baz=102,slow=20,SNR=3.5						
IDI				LR	LR	06 28 25.0	
	comp=N,186nm,21.2s,baz=274,slow=49						
	comp=N,23nm,0.4s						
IDI	**Anoyia**	**3.75**	**154**	PN	**Pn**	**06 26 23.7**	**+0.5**
IDI	**Anoyia**	**3.75**	**154**		**Pn**	**06 26 23.8**	**+0.5**
KOSK	**Kos Island**	**3.79**	**119**	PN	**Pn**	**06 26 23.9**	**+0.2**
HRKL	**Herakleio**	**3.81**	**151**	PN	**Pn**	**06 26 25.3**	**+1.4**
KRBG	**Karabiga-Canak**	**3.84**	**62**	PN	**Pn**	**06 26 22.7**	**-1.6**
BODT	**Bodrum**	**3.88**	**113**	PN	**Pn**	**06 26 25.0**	**+0.1**
VTS	**Vitosha**	**3.95**	**4**	⇑P	**Pn**	**06 26 27.5**	**+1.5**
VTS	**Vitosha**	**3.95**	**4**	Pn	**Pn**	**06 26 26.4**	**+0.4**
GVD	**Gavdhos**	**3.96**	**165**	PN	**Pn**	**06 26 26.9**	**+0.9**
MAR3	**Marsite Statio**	**4.00**	**58**	PN	**Pn**	**06 26 25.4**	**-1.1**
NIS1	**Nisyros Isl.**	**4.01**	**120**	PN	**Pn**	**06 26 26.2**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**4.03**	**99**	PN	**Pn**	**06 26 26.8**	**-0.3**
MLSB	**Milas**	**4.13**	**108**	PN	**Pn**	**06 26 28.1**	**-0.2**
DAT	**Datca**	**4.22**	**116**	PN	**Pn**	**06 26 29.5**	**-0.2**

EDRB	Edirne	4.34	42	PN	Pn	06 26 30.3	-1.0
ZKR	Zakros	4.46	142	PN	Pn	06 26 33.9	+1.0
DRME	Dracevica, Mon	4.49	323	*e*Pn	Pn	06 26 35.3	+2.0
KULA	Kula-Manisa	4.55	90	PN	Pn	06 26 32.9	-1.3
YER	Yerkesik	4.56	108	PN	Pn	06 26 33.7	-0.6
PDG	Podgorica	4.64	325	⇓P	Pn	06 26 36.7	+1.3
PDG	Podgorica	4.64	325	Pn	Pn	06 26 38.4	+3.0
PDG	Podgorica	4.64	325	*e*Pn	Pn	06 26 37.0	+1.6
KARP	Karpathos	4.65	131	PN	Pn	06 26 35.7	+0.2
KARP	Karpathos	4.65	131	Pn	Pn	06 26 36.2	+0.7
TIP	Timpagrande	4.78	278	⇑P	Pn	06 26 39.3	+1.9
TIP				⇑S	Sn	06 27 34.8	+2.0
TIP	Timpagrande	4.78	278	Pn	Pn	06 26 38.3	+1.0
ARG	Arkhangelos	4.86	119	Pn	Pn	06 26 40.0	+1.6
BLKB	Belogradchik	4.94	358	⇑P	Pn	06 26 40.5	+0.9
DALY	Dalyan (Mula)	4.96	110	PN	Pn	06 26 39.4	-0.3
BOVS	Bovan	5.03	350	⇓P	Pn	06 26 40.9	+0.2
SJES	Sjenica	5.07	335	*e*Pn	Pn	06 26 42.1	+0.7
MATE	Matera	5.14	294	⇓P	Pn	06 26 43.2	+1.0
TREB	Trebinje	5.29	321	*e*Pn	Pn	06 26 44.2	-0.1
BRY	Bratogost	5.34	324	*e*Pn	Pn	06 26 39.2	-5.9
YLV	Yalova	5.37	67	PN	Pn	06 26 44.8	-0.7
CUC	Castrocucco	5.61	286	Pn	Pn	06 26 50.7	+1.9
BBLS	Lazići	5.80	334	*e*Pn	Pn	06 26 50.1	-1.2
DIVS	Divibare	5.83	339		Pn	06 26 53.7	+2.0
DIVS	Divibare	5.83	339	*e*Pn	Pn	06 26 52.8	+1.0
BORA	Eskisehir	6.02	76		Pn	06 26 54.3	-0.1
MDVR	Moldovita	6.16	352	⇑P	Pn	06 26 56.8	+0.5
HERR	Herculane	6.21	357	⇓P	Pn	06 26 57.7	+0.8
SGRT	San Giovanni R	6.25	302	Pn	Pn	06 26 57.4	-0.1
GZR	Gura Zlata	6.71	360	⇓P	Pn	06 27 05.1	+1.2
PAOL	Paolisi	6.80	293		Pn	06 27 06.3	+1.3
FRGS	Fruska Gora	6.86	342	⇑P	Pn	06 27 07.6	+1.8
VOIR		6.95	13	⇓P	Pn	06 27 07.6	+0.4
ISR	Istrita	7.00	22	⇓P	Pn	06 27 09.0	+1.2
HARR	Harsova	7.11	31	⇑P	Pn	06 27 09.4	+0.2
TIRR	Tirgusor	7.12	34	Pn	Pn	06 27 10.8	+1.5
MGRS	Mrkonjic Grad	7.18	325	*e*Pn	Pn	06 27 13.4	+3.1
MLR	Muntele Rosu	7.18	18	⇓P	Pn	06 27 10.8	+0.4
MLR	Muntele Rosu	7.18	18	Pn	Pn	06 27 13.4	+2.9
	comp=N,8.1nm,0.8s,baz=270,slow=4.0						
MLR				LR	LR	06 30 05.2	
	comp=N,122nm,19.2s,baz=212,slow=39						
MLR	Muntele Rosu	7.18	18	Pn	Pn	06 27 12.3	+1.9
NEHR	Nehoiu	7.21	20	⇓P	Pn	06 27 11.5	+0.8
BLY	Banja Luka	7.40	327	*e*Pn	Pn	06 27 12.7	-0.6
DOPR	Dopca	7.52	14	⇑P	Pn	06 27 16.0	+1.1
COVR	Voineasa-Covas	7.58	18	⇑P	Pn	06 27 16.9	+1.1
PLOR	Plostina	7.70	20	⇓P	Pn	06 27 18.1	+0.7
OZUR		7.72	15	⇑P	Pn	06 27 18.4	+0.7
VRI	Vrincioaia	7.74	21	⇓P	Pn	06 27 18.1	+0.2
MORH	Mrgy, Hungar	8.15	339	*e*Pn	Pn	06 27 23.3	-0.2
MORH	Mrgy, Hungar	8.15	339	P	Pn	06 27 24.7	+1.2
TESR	Tescani	8.31	18	⇑P	Pn	06 27 27.2	+1.4
BRTR	Keskin Array B	8.44	80	Pn	Pn	06 27 29.1	+1.4
	comp=N,0.3nm,0.3s,baz=261,slow=12,SNR=7.1						
BRTR				LR	LR	06 30 48.8	
	comp=N,125nm,21.9s,baz=282,slow=38						
	comp=N,1.3nm,0.5s						
BRTR	Keskin Array B	8.44	80	Pn	Pn	06 27 27.6	-0.1
NRCA	Norcia	8.48	302		Pn	06 27 29.4	+1.3
BIZ	Bicaz	8.60	15	⇑P	Pn	06 27 30.5	+0.9
CRES	Cresnjev	9.00	325	*e*Pn	Pn	06 27 34.7	-0.5
MURB	Monte Urbino	9.05	304	Pn	Pn	06 27 36.4	+0.4
BUR01	Bucovina Ar. S	9.10	10	⇑P	Pn	06 27 36.9	+0.3
BURAR	Bucovina Array	9.10	10	Pn	Pn	06 27 39.8	+3.1
MPLH	Magyarpolny	9.34	337	P	Pn	06 27 46.5	+6.7
CEY	Cerknica	9.42	321	*e*Pn	Pn	06 27 39.5	-1.5
PSZ	Piszkesteto	9.48	348	⇓P	Pn	06 27 43.3	+1.4
PSZ	Piszkesteto	9.48	348		Pn	06 27 44.9	+3.0
PSZ	Piszkesteto	9.48	348	P	Pn	06 27 44.6	+2.7
SKDS	Skadanscina	9.50	319	*e*Pn	Pn	06 27 41.6	-0.4
SOKA	Soboth	9.85	327	*e*Pn	Pn	06 27 47.1	+0.2
	comp=N,2.0nm,0.6s						
OBKA	Obir	9.93	325	*e*Pn	Pn	06 27 49.0	+1.0
	comp=N,0.5nm,0.3s						
ARSA	Arzberg	10.11	330	*e*Pn	Pn	06 27 51.4	+1.0
	comp=N,1.4nm,0.3s						
STAL	STALIGIAL	10.65	319	Pn	Pn	06 28 00.1	+2.3
ABTA	Abfaltersbach	11.08	320	*e*Pn	Pn	06 28 03.1	-0.6
	comp=N,1.3nm,0.6s						
CTI	Castel Tesino	11.08	315		Pn	06 28 04.9	+1.1
MOA	Molln	11.09	328	*e*Pn	Pn	06 28 04.0	+0.2
	comp=N,2.4nm,0.9s						
VRAC	Vranov	11.54	339	LR	LR	06 32 50.4	
	comp=N,28nm,20.6s,baz=272,slow=39						
MMAI	Mount Meron Ar	11.64	115	LR	LR	06 33 38.6	
	comp=N,53nm,20.4s,baz=99,slow=42						
KHC	Kasperske Hory	12.40	330	*e*P	Pn	06 28 27.2	+5.5
KBZ	Khabaz	15.90	65	Pn	P	06 29 14.8	+2.2
	comp=N,0.1nm,0.3s,baz=139,slow=9.3,SNR=4.2						
NACGM	Naroch	16.45	8	*e*P	P	06 29 26.0	+7.4
	baz=192						
IIGN	Ignalina	16.83	7	IAmb	IAmb	06 29 26.7	
	comp=Z,4.0nm,1.0s						
IDID	Didziasalis	16.85	8	IAmb	IAmb	06 29 30.1	
	comp=Z,3.2nm,0.3s						
PABE	Paberze	16.85	2		Pn	06 29 21.5	+0.5
PABE				IAmb	IAmb	06 29 39.2	
	comp=Z,28nm,1.5s						
PABE	Paberze	16.85	2	*e*P	P	06 29 23.4	+0.2
GNI	Garni	16.98	78	LR	LR	06 36 03.0	
	comp=Z,75nm,19.1s,baz=286,slow=38						
GNI	Garni	16.98	78	Pn	Pn	06 29 21.1	-1.8
GNI				IAmb	IAmb	06 29 37.6	
	comp=Z,6.8nm,1.0s						
VSU	Vasula	19.96	6	*e*P	P	06 29 57.4	+0.2
MTSE	Matsula	20.06	1	*e*P	P	06 29 58.5	+0.2
ESBB	Sonseca Array	20.79	281	P	P	06 30 07.5	+1.0
ESBB				IAmb	IAmb	06 30 10.0	
	comp=Z,5.8nm,1.0s						
ESDC	Sonseca Array	20.79	281	P	P	06 30 07.3	+0.8
	comp=Z,4.1nm,1.0s,baz=78,slow=10,SNR=16						
	comp=Z,4.1nm,1.0s						
ESDC	Sonseca Array	20.79	281	P	P	06 30 07.2	+0.7
MEF	Metsahovi	21.58	2	*e*P	P	06 30 15.1	+0.3
BELG	Belogornoye	21.98	43	LR	LR	06 39 50.1	
	comp=Z,43nm,19.5s,baz=202,slow=39						
HFS	Hagfors	22.25	348	LR	LR	06 39 02.6	
	comp=Z,36nm,21.6s,baz=178,slow=37						
RAF	Rauma	22.38	359	*e*P	P	06 30 23.4	+0.1
FINES	FINESS Array B	22.88	4	P	P	06 30 27.6	-1.1
	comp=Z,1.5nm,0.8s,baz=245,slow=6.0,SNR=2.8						
FINES				LR	LR	06 39 58.4	
	comp=Z,75nm,19.9s,baz=180,slow=38						
	comp=Z,1.5nm,0.8s						
FINES	FINESS Array B	22.88	4	P	P	06 30 27.9	-0.7
NC602	NORSAR Array S	23.19	346	P	P	06 30 32.3	+0.4
NB2	NORSAR Subarra	23.54	346	P	P	06 30 36.0	+0.6
	comp=Z,0.7nm,0.6s,baz=158,slow=11						
NOA	NORSAR Array B	23.54	346	P	P	06 30 34.5	-0.9
	comp=Z,0.6nm,0.8s,baz=155,slow=9.3,SNR=4.8						
NOA				LR	LR	06 40 19.0	
	comp=Z,26nm,18.3s,baz=170,slow=38						
	comp=Z,0.6nm,0.8s						
EKA	Eskdalemuir Ar	24.12	322	P	P	06 30 41.0	+0.1
	comp=Z,5.4nm,0.7s,baz=115,slow=10,SNR=44						
	comp=Z,5.4nm,0.7s						
ESK	Eskdalemuir	24.13	322	P	P	06 30 42.8	+1.7
ESK				IAmb	IAmb	06 30 44.7	
	comp=Z,7.5nm,0.8s						
GEYT	Alibeck	27.58	80	LR	LR	06 44 17.7	
	comp=Z,25nm,19.8s,baz=146,slow=41						
ARCES	ARCESS Array B	30.95	2	LR	LR	06 43 59.0	
	comp=Z,38nm,21.2s,baz=98,slow=36						
TOA0	Torodi Ar. Sit	31.60	222	P	P	06 31 48.2	-0.1
TOA0				IAmb	IAmb	06 31 56.0	
	comp=Z,9.5nm,1.3s						
TORD	Torodi Ar. Bea	31.60	222	P	P	06 31 47.4	-0.8
	comp=Z,1.6nm,0.7s,baz=34,slow=8.2,SNR=7.6						
	comp=Z,1.6nm,0.7s						
KURBB	Kurchatov Arra	40.45	54	P	P	06 33 04.6	+0.9
	comp=Z,0.6nm,0.7s,baz=283,slow=8.5,SNR=6.1						
	comp=Z,0.6nm,0.7s						
MK31	Makanchi Array	43.48	59	P	P	06 33 29.6	+1.1
MKAR	Makanchi Array	43.48	59	P	P	06 33 29.8	+1.3
	comp=Z,0.9nm,0.5s,baz=273,slow=8.5,SNR=14						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	43.48	59	P	P	06 33 29.3	+0.8
ZAA0	Zalesovo Array	43.99	49	P	P	06 33 34.2	+1.8
ZAA0				IAmb	IAmb	06 33 38.0	
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	43.99	49	P	P	06 33 31.9	-0.6
	comp=Z,1.1nm,0.5s,baz=243,slow=6.3,SNR=4.0						
ZALV				LR	LR	06 53 43.6	
	comp=Z,30nm,18.6s,baz=127,slow=39						
	comp=Z,1.1nm,0.5s						
NRIK	Noril'sk	45.53	27	LR	LR	06 54 16.1	
	comp=Z,41nm,19.7s,baz=123,slow=38						
LSZ	Lusaka	53.90	174	LR	LR	06 59 03.3	
	comp=Z,76nm,18.4s,baz=172,slow=38						
SCHQ	Schefferville	59.33	318	P	P	06 35 28.3	+1.2
	comp=Z,1.2nm,0.5s,baz=74,slow=8.1,SNR=3.7						
	comp=Z,1.2nm,0.5s						
SCHQ	Schefferville	59.33	318	P	P	06 35 28.8	+1.7
LBTB	Lobatse	63.41	177	LR	LR	07 04 23.1	
	comp=Z,38nm,18.4s,baz=157,slow=37						
MA2	Magadan	73.08	25	LR	LR	07 14 14.7	
	comp=Z,35nm,18.1s,baz=81,slow=40						
YKA	Yellowknife Ar	73.53	341	P	P	06 36 58.7	+0.8
	comp=Z,0.3nm,0.6s,baz=30,slow=5.5,SNR=6.6						
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	76.37	325	LR	LR	07 10 24.4	
	comp=Z,23nm,18.7s,baz=62,slow=35						

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*TUL **22** 06:29:35.9±0.7, 36°.55N±0°.01×97°.06W±0°.02, h6^{km}±7^{km}, ML2.9, mb_Lg2.5/48(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=52.0*

*ANF **22** 06:29:36.2±0.4, 36°.53N×97°.05W, h6^{km}, ML3.0/9, Error ellipse: s-maj=3.7km s-min=3.3km az=30.0*

*NEIC **22** 06:29:36.0±0.7, 36°.542N±0°.007×97°.07W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=0.3km az=63.0*

ISC 22 06:29:35.6±1.3, 36°.55N±0°.04×97°.11W±0°.03, h5^{km}±13^{km}, n45, σ0^{s}.88/35, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.60	53		Pg	06 29 47.3	+0.1
T35A				Sg	Sg	06 29 55.2	+0.1
T35B	Sooner Cattle	0.60	53	P	Pg	06 29 47.3	+0.1
	baz=230						
T35B				S	Sg	06 29 54.9	-0.2
	baz=230						
OKCFA	Oklahoma City	1.17	194		Pb	06 29 58.0	-0.3
OKCFA	Oklahoma City	1.17	194	S	Sn	06 30 13.9	-1.0
	baz=15						
OKCSW	OKLAHOMA CITY	1.17	193		Pb	06 29 58.0	-0.3
TUL1	Leonard	1.24	121		Pn	06 29 58.6	-1.0
TUL1	Leonard	1.24	121	P	Pn	06 29 58.6	-1.0
	baz=302						
TUL1				S	Sb	06 30 15.1	-0.7
	baz=302						
FNO	Franklin	1.31	190	Pn	Pb	06 30 00.3	-0.5
U32A	Winter Ranch,	1.54	264	Pn	Pb	06 30 04.8	+0.2
U32A	Winter Ranch,	1.54	264	P	Pg	06 30 04.9	-0.2
	baz=83						
U32A				S	Sg	06 30 26.1	+1.1
	baz=83						
X34A	Smith Ranch, M	2.03	197		Pn	06 30 11.3	+0.8
R32A	Long Quarter,	2.26	326	P	Pb	06 30 16.5	-0.4
	baz=145						
R32A				Sb	Sg	06 30 46.9	-1.4
	baz=145						
WMOK	Wichita Mounta	2.26	217		Pn	06 30 13.8	0.0
X37A	Clayton	2.42	144		Pn	06 30 16.6	+0.8
X37A				IAmb_Lg		06 30 57.2	
	comp=Z,13nm,1.0s						
X37A	Clayton	2.42	144	P	Pb	06 30 17.3	-2.2
	baz=325						
X37A				Sb	Sb	06 30 51.0	+1.4
	baz=325						
HHAR	Hobbs	2.57	95	Sb	Sb	06 30 54.6	+0.5
	baz=277						
W39A	Magazine	3.02	116		Pn	06 30 24.6	+0.5
W39A				IAmb_Lg		06 31 14.9	
	comp=Z,18nm,0.8s						
W39A	Magazine	3.02	116	Sb	Sb	06 31 08.1	+1.1
	baz=298						
S39A	Bolivar	3.23	68		Pn	06 30 27.9	+0.9
S39A	Bolivar	3.23	68	P	Pn	06 30 28.0	+0.9
	baz=250						
U40A	Yellville	3.44	92		Pn	06 30 29.9	0.0
MIAR	Mount Ida	3.51	124		Pn	06 30 30.3	-0.5
MIAR	Mount Ida	3.51	124	P	Pb	06 30 39.5	+1.3
	baz=306						
X40A	Basin Creek Fa	4.05	119		Pn	06 30 37.8	-0.4
X40A				IAmb_Lg		06 31 46.9	
	comp=Z,9.7nm,0.7s						
X40A	Basin Creek Fa	4.05	119	P	Pn	06 30 39.2	+1.0
	baz=302						
X40A				P	Pn	06 30 39.2	+1.0
	baz=302						
AMTX	Amarillo	4.08	247	IAmb_Lg		06 31 55.4	
	comp=Z,7.3nm,0.8s						
FCAR	Ozark Folk Cen	4.08	98	IAmb_Lg		06 31 43.2	
	comp=Z,13nm,0.9s						
WHAR	Wooly Hollow	4.11	106	IAmb_Lg		06 31 54.9	
	comp=Z,11nm,0.9s						
P38A	Dawn	4.17	42		Pn	06 30 39.6	-0.2
P38A				IAmb_Lg		06 31 47.8	
	comp=Z,7.4nm,0.7s						
W41B	Gary Mavity, V	4.18	108	Pn	Pn	06 30 40.7	+0.7
W41B				IAmb_Lg		06 31 52.4	
	comp=Z,10nm,0.7s						
R40A	Maddies Statio	4.23	64		Pn	06 30 41.3	+0.6
R40A				IAmb_Lg		06 31 49.4	
	comp=Z,14nm,0.8s						
UALR	University of	4.27	113	IAmb_Lg		06 31 51.7	
	comp=Z,10nm,0.8s						
WLAR	White Oak Lake	4.35	130	IAmb_Lg		06 32 02.7	
	comp=Z,14nm,1.2s						
LCAR	Lake Charles	4.83	94	IAmb_Lg		06 32 06.8	
	comp=Z,11nm,1.0s						
CCM	Cathedral Cave	4.91	70	IAmb_Lg		06 32 14.9	
	comp=Z,7.9nm,0.7s						
P40A	Paris	4.98	52	IAmb_Lg		06 32 20.9	
	comp=Z,5.9nm,0.7s						
FVM	French Village	5.52	73	IAmb_Lg		06 32 30.2	
	comp=Z,9.3nm,0.9s						
435B	Jarrell	5.77	184	IAmb_Lg		06 32 43.1	
	comp=Z,7.0nm,0.7s						
T25A	Trinidad	5.88	278	IAmb_Lg		06 32 50.3	
	comp=Z,8.2nm,0.7s						
JCT	Junction City	6.46	201	IAmb_Lg		06 33 13.9	
	comp=Z,8.6nm,1.1s						
P43A	Skaggs, Pawnee	6.73	60	IAmb_Lg		06 33 12.7	
	comp=Z,9.8nm,0.8s						
SDCO	Great Sand Dun	6.81	283	IAmb_Lg		06 33 18.9	
	comp=Z,4.2nm,0.9s						
Q24A	Divide	6.81	293	IAmb_Lg		06 33 14.1	
	comp=Z,4.1nm,0.8s						
HDIL	Hopedale	7.31	54	IAmb_Lg		06 33 43.9	
	comp=Z,8.5nm,0.8s						
N23A	Red Feather La	8.15	305	IAmb_Lg		06 34 02.0	
	comp=Z,5.9nm,1.1s						

IDC 22 06:30:47.1±2.0, 4°.31N×124°.01E, h0^{km}, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=288.5km s-min=20.1km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.15	158	P	P	06 36 23.6	+0.4
	0.8nm,0.3s,baz=337,slow=9.5,SNR=34						
	0.8nm,0.3s						
ASAR	Alice Springs	29.43	161	P	P	06 36 52.1	-0.5
	0.5nm,0.5s,baz=336,slow=7.8,SNR=13						
	0.5nm,0.5s						
MKAR	Makanchi Array	55.56	326	P	P	06 40 24.8	+0.5
	0.6nm,0.3s,baz=126,slow=8.2,SNR=14						
	0.6nm,0.3s						
KURBB	Kurchatov Arra	59.81	328	P	P	06 40 53.5	-0.6
	0.4nm,0.5s,baz=133,slow=6.7,SNR=8.2						
	0.4nm,0.5s						

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*IDC **22** 06:32:36.0±2.2, 12°.39S×166°.60E, h0^{km}, mb4.0/4, mbtmp4.0/4, MS3.4/4, Error ellipse: s-maj=119.6km s-min=27.3km az=137.0*

*NEIC **22** 06:32:41.9±1.0, 12°.3S±0°.1×166°.6E±0°.2, h35^{km}±13^{km}, mb4.3/12, Error ellipse: s-maj=24.6km s-min=15.9km az=56.0*

ISC 22 06:32:44.0±1.0, 12°.5S±0°.1×166°.7E±0°.1, h59^{km}, n24, σ0^{s}.70/21, mb4.1/8, MS3.4/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.00	170		Pn	06 33 29.5	+0.4
SANVU				Sn	Sn	06 34 03.5	-0.3
DZM	Mont Dzumac	9.54	181	Pn	Pn	06 34 58.7	-0.1
PMG	Port Moresby	19.38	277	LR	LR	06 43 49.3	
	comp=Z,96nm,19.1s,baz=146,slow=35						
EIDS	Eidsvold	19.50	227	P	P	06 37 06.3	-0.1
EIDS				IAmb	IAmb	06 37 31.5	
	comp=Z,13nm,1.4s						
AFI	Afiamalu	21.05	96	P	P	06 37 22.4	-1.0
ARMA	Armidale	22.63	216	P	P	06 37 40.8	+0.6
ARMA				IAmb	IAmb	06 38 04.7	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	30.05	226	P	P	06 38 48.1	+0.4
	comp=Z,2.2nm,0.7s,baz=24,slow=12,SNR=3.6						
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	30.05	226	P	P	06 38 48.0	+0.4
STKA				IAmb	IAmb	06 38 56.0	
	comp=Z,4.7nm,1.5s						
WR0	Warramunga Arr	31.67	252	P	P	06 39 01.3	-0.8
WB0	Warramunga Arr	31.78	253	P	P	06 39 02.5	-0.6
WB0				IAmb	IAmb	06 39 07.9	
	comp=Z,8.1nm,1.3s						
WB2	Warramunga Arr	31.85	252	P	P	06 39 02.9	-0.7
WB2				IAmb	IAmb	06 39 14.5	
	comp=Z,8.3nm,1.4s						
WRA	Warramunga Arr	31.86	252	P	P	06 39 03.0	-0.7
	comp=Z,0.9nm,0.6s,baz=85,slow=9.6,SNR=17						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	31.86	252	P	P	06 39 03.1	-0.6
AS31	Alice Springs	32.98	246	P	P	06 39 13.1	-0.4
ASAR	Alice Springs	32.98	246	P	P	06 39 12.7	-0.8
	comp=Z,1.4nm,0.5s,baz=66,slow=10,SNR=29						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	32.98	246	P	P	06 39 13.7	+0.1
BBOO	Buckleboo	34.53	229	P	P	06 39 26.6	-0.3
KNRA	Kununurra	36.85	260	P	P	06 39 47.7	+0.8
JCJ	Chichijima	45.95	329	LR	LR	06 56 12.3	
	comp=Z,41nm,21.5s,baz=338,slow=31						
QSPA	South Pole Qui	77.53	180	P	P	06 44 34.6	+1.2
QSPA				IAmb	IAmb	06 44 40.3	
	comp=Z,7.6nm,1.5s						
ILAR	Eielson Array	84.59	18	P	P	06 45 11.3	+0.8
	comp=Z,0.4nm,0.6s,baz=233,slow=4.4,SNR=8.6						
	comp=Z,0.4nm,0.6s						
PFO	Pinyon Flats O	86.18	55	LR	LR	07 15 30.8	
	comp=Z,24nm,20.2s,baz=151,slow=30						
NEW	Newport	90.25	40	LR	LR	07 16 43.7	
	comp=Z,17nm,21.5s,baz=273,slow=29						
ARCES	ARCESS Array B	117.94	346	PKP	PKPdf	06 51 22.4	-1.0
	comp=Z,1.7nm,0.9s,baz=61,slow=1.9,SNR=8.2						

IDC 22 07:15:31.4±4.5, 10°.46S×165°.64E, h0^{km}, mb3.7/3, mbtmp3.7/3, MS3.4/2, Error ellipse: s-maj=233.8km s-min=31.6km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	22.34	101	LR	LR	07 27 25.2	
	comp=Z,46nm,18.6s,baz=208,slow=32						
WRA	Warramunga Arr	31.59	249	P	P	07 21 56.5	+0.4
	1.0nm,0.7s,baz=81,slow=8.8,SNR=7.4						
WRA				LR	LR	07 33 52.6	
	comp=Z,132nm,18.1s,baz=147,slow=35						
	1.0nm,0.7s						
ASAR	Alice Springs	32.96	242	P	P	07 22 07.6	-0.5
	0.3nm,0.5s,baz=63,slow=9.0,SNR=4.5						
	0.3nm,0.5s						
ILAR	Eielson Array	83.00	19	P	P	07 27 58.1	0.0
	0.3nm,0.5s,baz=229,slow=4.9,SNR=9.5						
	0.3nm,0.5s						

TRN 22 07:22:31.2, 18°.03N×61°.61W, h24^{km}, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.40	205	*e*P	Pn	07 22 41.2	-0.3
ANWB				*e*S	Sn	07 22 48.9	+0.8
ANBD	Bethesda, Anti	0.99	189	*e*P	Pb	07 22 50.0	+0.4
ANBD				*e*S	Sn	07 23 05.6	+2.8
BPA	Boggy Peak	1.01	194	*e*	Pn	07 22 49.7	-0.1
BPA	Boggy Peak	1.01	194	*e*P	Pb	07 22 50.7	+0.8
BPA				*e*S	Sn	07 23 06.1	+2.8
SKOC	St. Kitts, UWI	1.30	236	*e*P	Pb	07 22 55.2	+0.4
SKOC				*e*S	Sb	07 23 13.4	+2.3
MBFL	Flemmings, Mon	1.40	204	*e*P	Pb	07 22 56.7	+0.1
MBFL				*e*S	Sb	07 23 15.6	+1.6
SEUS	St. Eustatius	1.41	248	*e*P	Pn	07 22 55.8	+0.4
SEUS				*e*S	Sb	07 23 16.0	+1.6
MLYT	Lee's Yard	1.41	203	*e*P	Pb	07 22 57.4	+0.5
MLYT				*e*S	Sb	07 23 16.9	+2.4
ABD	La Joyeuse, An	1.55	176	*e*P	Pb	07 22 59.2	0.0
ABD				*e*S	Sb	07 23 20.2	+1.8
CBE	Ff, Capester	1.95	180	*e*P	Pb	07 23 04.6	-1.4
CBE				*e*S	Sb	07 23 29.5	-0.4
MAGL	Barre de l’ile	2.09	171	*e*P	Pb	07 23 06.9	-1.6
MAGL				*e*S	Sn	07 23 31.9	+1.8
TDBA	Terre de Bas,	2.17	181	*e*P	Pn	07 23 07.7	+1.9
TDBA				*e*S	Sn	07 23 33.6	+1.7
DSLB	Salisbury	2.58	176	*e*P	Pb	07 23 14.3	-2.5
CDVI	St. Croix	3.02	265	*e*P	Pn	07 23 20.4	+2.9
MPOM	Morne Pois Mar	3.64	168	*e*P	Pn	07 23 27.5	+1.4
MPOM				*e*S	Sn	07 24 10.4	+2.2
SLBI	Saint Lucia, B	4.03	171	*e*P	Pn	07 23 34.4	+2.9
AOPR	Arecibo Observ	4.90	274	*e*P	Pn	07 23 46.3	+2.8

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*IDC **22** 07:28:48.1±2.1, 4°.12N×124°.89E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=194.5km s-min=26.8km az=64.0*

ISC 22 07:28:50.2±1.4, 3°.92N±0°.09×124°.5E±0°.2, h10^{km}, n5, σ0^{s}.61/7, mb3.4/3, 2D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.48	29	⇓*e*P	Pg	07 29 37.4	-0.5
DDMP				*e*S	Sn	07 30 01.2	+0.1
KCP	Kidapawan	3.13	11	⇓*i*P	Pg	07 29 49.8	-0.4
KCP				*i* S	Sb	07 30 24.9	+0.8
WRA	Warramunga Arr	25.61	158	P	P	07 34 19.4	-0.4
	0.4nm,0.8s,baz=338,slow=10,SNR=14						
	0.4nm,0.8s						
ASAR	Alice Springs	28.91	162	P	P	07 34 50.1	+0.6
	0.3nm,0.4s,baz=343,slow=7.5,SNR=7.8						
	0.3nm,0.4s						
MKAR	Makanchi Array	56.15	326	P	P	07 38 29.9	-0.2
	0.2nm,0.4s,baz=126,slow=7.0,SNR=4.6						
	0.2nm,0.4s						

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*IDC **22** 07:56:16.2±2.5, 31°.45S×68°.09W, h92^{km}±34^{km}, mb2.9/1, mbtmp3.5/5, Error ellipse: s-maj=50.2km s-min=22.4km az=93.0*

ISC 22 07:56:15.5±1.0, 31°.52S±0°.08×68°.0W±0°.2, h100^{km}, n7, σ2^{s}.16/7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	8.91	355	P	Pn	07 58 22.7	+1.0
	3.0nm,0.3s,baz=180,slow=10.0,SNR=21						
LVC				S	Sn	07 59 58.1	-2.4
	3.6nm,0.7s,baz=248,slow=16,SNR=2.0						
PLCA	Paso Flores	9.43	192	P	Pn	07 58 29.4	+1.1
	0.6nm,0.6s,baz=358,slow=10,SNR=8.9						
CPUP	Villa Florida	10.68	64	P	Pn	07 58 46.4	+1.0
	2.1nm,0.9s,baz=219,slow=14,SNR=2.0						
LPAZ	La Paz	15.16	360	P	Pn	07 59 45.7	+0.8
	1.2nm,0.9s,baz=149,slow=6.8,SNR=4.8						
SNAA	Sanae	52.63	159	P	P	08 05 16.0	-2.8
TROLL	Troll, Antarti	54.35	159	P	P	08 05 26.8	-4.7
TXAR	Lajitas Array	69.37	327	P	P	08 07 13.6	+1.0
	0.2nm,0.7s,baz=155,slow=7.5,SNR=2.8						
	0.2nm,0.7s						

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*TEH **22** 07:57:51.8, 28°.21N×59°.01E, h8^{km}, ML3.5*

*DSN **22** 07:57:58.4±1.4, 27°.87N×58°.89E, h10^{km}, ML3.2/4, Error ellipse: s-maj=38.8km s-min=11.6km az=147.0*

ISC 22 07:57:52.5±1.1, 28°.24N±0°.04×58°.97E±0°.05, h10^{km}, n22, σ1^{s}.71/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBAM	BAM	1.00	333	*e*Pg	Pn	07 58 12.3	-0.5

KBAM				e		07 58 27.2	
	comp=Z,21μm,0.2s						
KHNJ	Kahnooj	1.16	256	ePg	Pg	07 58 14.9	+0.2
KHNJ				eSg	Sn	07 58 30.7	0.0
ZHDN	Zahedan	1.98	54	ePn	Pb	07 58 27.2	-1.7
CHMN	Cheshme madani	2.04	323	ePn	Pb	07 58 30.0	0.0
CHMN				e		07 59 01.6	
	comp=Z,3μm,0.2s						
NGRK	Negar Kerman	2.41	306	ePn	Pb	07 58 35.4	-0.9
NGRK				e		07 59 16.3	
	comp=Z,2μm,0.2s						
JASK	Jask - Hormozg	2.56	203	ePn	Pn	07 58 35.4	+1.3
JASK				e		07 59 20.5	
	comp=Z,2μm,0.6s						
KRBR	Kerman	2.60	312	ePn	Pb	07 58 37.5	-1.9
TVBK	TV Kerman	2.60	313	ePn	Pn	07 58 37.0	+2.0
TVBK				e		07 59 23.3	
	comp=Z,2μm,0.2s						
GENO	Geno	2.62	252	ePn	Pb	07 58 37.3	-2.3
KHGB	Koh Gabri	3.05	315	ePn	Pb	07 58 43.9	-3.1
SRVN	Saravan	3.15	105	ePn	Pn	07 58 43.3	+1.0
NHDN	Nehbandan	3.28	16	ePn	Pn	07 58 45.7	+1.6
BANOM	Banah	3.32	227	P	Pn	07 58 45.5	+1.0
BANOM				S	Sn	07 59 23.5	-0.5
SHME	Shamm	3.33	230	P	Pn	07 58 47.3	+2.6
BSRN	Basiran	3.72	2	ePn	Pn	07 58 51.2	+1.1
MSFE	Esma-Masafi	3.81	222	P	Pn	07 58 53.0	+1.6
UOSS	Minazif	4.11	218	P	Pn	07 58 56.2	+0.8
ASHO	Ashiyiah	4.40	217	P	Pn	07 59 01.5	+2.0
TPRV	Parvadeh(Tabas	5.16	338	ePn	Pn	07 59 11.9	+1.9
AFRZ	Afriz	5.17	0	ePn	Pn	07 59 11.6	+1.5
SHRT	Shahrakht	5.51	12	ePn	Pn	07 59 16.2	+1.5
TABS	Tabas	5.62	344	ePn	Pn	07 59 18.6	+2.3

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*NIED **22** 08:07:08.6, 39°.15N×142°.39E, h48^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.36; M$_{θθ}$0.51; M$_{φφ}$-3.87; M$_{rθ}$1.57; M$_{θφ}$-1.43; M$_{φr}$-5.52; Fault plane solution: M$_0$6.95000×10^{14} NP1:φ$_s$42.00000°, δ23.00000°, λ139.00000°. NP2:φ$_s$170.00000°, δ75.00000°, λ72.00000°.*

*JMA **22** 08:07:08.6±0.1, 39°.2N±0°.2×142°.4E±0°.6, h48^{km}, MD4.1/40, MV4.3/40, E OFF IWATE PREF*

JMA Felt II J1 at E OFF IWATE PREF .

*IDC **22** 08:07:09.1±0.8, 39°.07N×142°.32E, h54^{km}±7^{km}, mb3.7/14, mbtmp3.9/18, MS2.5/3, Error ellipse: s-maj=18.5km s-min=14.5km az=151.0*

*NEIC **22** 08:07:10.2±1.5, 39°.12N±0°.06×142°.3E±0°.1, h55^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=13.8km s-min=8.0km az=112.0*

ISC 22 08:07:09.2±0.7**, 39°.14N**±0°.04×**142°.37E**±0°.06**, h51**^{km}±6^{km}**, n87, σ0^{s}88**/84**, mb4.1**/26**, 14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.55	264	i P	Pn	08 07 20.6	-0.5
OFUJ				S	Sn	08 07 29.1	-0.6
OFUJ	Ofunato	0.55	264	A	A	08 07 20.6	
	comp=E,30nm,0.4s,comp=E,14nm,0.2s						
MIYJ	Miyakonagasawa	0.61	315	⇓iP	Pn	08 07 21.1	-0.7
MIYJ				⇓S	Sn	08 07 30.0	-0.9
JKMT	Kesennumamotoy	0.78	245	i P	Pn	08 07 23.4	-0.6
JKMT				S	Sn	08 07 34.0	-0.6
JKMT	Kesennumamotoy	0.78	245	A	A	08 07 23.4	
	comp=E,10.0nm,0.6s,comp=E,6.0nm,0.9s						
JTH	Tanohata	0.89	334	⇓iP	Pn	08 07 24.9	-0.6
JTH				⇓S	Sn	08 07 36.8	-0.5
JOM	Ohasama	0.90	292	⇓iP	Pn	08 07 25.4	-0.2
JOM				⇓S	Sn	08 07 37.5	-0.1
JOM	Ohasama	0.90	292	A	A	08 07 25.4	
	comp=E,14nm,0.2s,comp=E,13nm,0.3s						
JMK	Ichinoseki	0.92	258	⇓iP	Pn	08 07 25.5	-0.4
JMK				⇓S	Sn	08 07 38.0	-0.1
JMK	Ichinoseki	0.92	258	A	A	08 07 25.5	
	comp=E,7.0nm,0.8s,comp=E,10.0nm,0.6s						
JIO	Ouri	1.06	230	⇓iP	Pn	08 07 27.0	-0.6
JIO				⇓S	Sn	08 07 40.3	-1.0
JKZ	Kuzumaki	1.16	316	i P	Pn	08 07 29.2	0.0
JKZ				S	Sn	08 07 44.1	0.0
JKEN	Kujiedanarisaw	1.18	334	A	A	08 07 29.1	
	comp=E,8.0nm,0.7s,comp=E,10.0nm,0.8s						
JSZI	Iwateshizukuis	1.25	299	A	A	08 07 30.2	
	comp=E,7.0nm,1.7s,comp=E,9.0nm,0.5s						
JOFO	Osakifurukawao	1.26	245	A	A	08 07 30.4	
	comp=E,19nm,0.7s,comp=E,21nm,0.3s						
JRG	Rokugo	1.37	281	⇓iP	Pn	08 07 31.9	-0.1
JRG	Rokugo	1.37	281	A	A	08 07 31.9	
	comp=E,3.0nm,2.6s,comp=E,3.0nm,2.1s						
JANG	Nango	1.39	332	⇓iP	Pn	08 07 31.6	-0.6
JOU	Okura	1.55	240	⇓iP	Pn	08 07 34.0	-0.3
JYK	Kaneyama	1.58	262	⇓iP	Pn	08 07 34.9	+0.1
JMM	Marumori	1.78	225		Pn	08 07 36.8	-0.7
JMM				Sn	Sn	08 07 58.0	-1.0
JTM	Tenmabayashi	1.92	329		Pn	08 07 39.8	+0.3
ERM	Erimo	2.93	12		Pn	08 07 52.7	-0.5
JYT	Yasato	3.39	211	Pn	Pn	08 07 59.2	-0.3
JSD	Sado	3.41	252	Pn	Pn	08 07 59.7	-0.1
JEW	Eniwo	3.76	350		Pn	08 08 05.8	+1.2
MJAR	Matsushiro Arr	4.20	233	P	Pn	08 08 11.3	+0.6
	15nm,0.5s,baz=34,slow=11,SNR=65						
MJAR				S	Sn	08 09 00.1	+1.7
	6.1nm,0.7s,baz=358,slow=13,SNR=4.2						
MJAR				LR	LR	08 10 01.2	
	comp=Z,121nm,20.2s,baz=4.5,slow=42						
MJAR	Matsushiro Arr	4.20	233	Pn	Pn	08 08 10.8	+0.1
MAJO	Matsushiro	4.20	233	Pn	Pn	08 08 12.3	+1.6
MJB9	Matsu-Tunnel	4.20	233		Pn	08 08 12.3	+1.6
ASAJ	Asahikawa	4.97	2	P	Pn	08 08 21.6	+0.4
	6.6nm,0.3s,baz=222,slow=8.2,SNR=20						
ASAJ				S	Sn	08 09 15.8	-1.6
	16nm,0.7s,baz=47,slow=28,SNR=3.0						
JKA	Kamikawa-asahi	4.97	2	Pn	Pn	08 08 21.2	-0.1
JGF	Kuroka	5.33	230	Pn	Pn	08 08 27.9	+1.6
INU	Inuyama	5.71	230	Pn	Pn	08 08 32.7	+1.3
JHJ	Hachijo jima 2	6.37	200	LR	LR	08 10 29.1	
	comp=Z,25nm,20.1s,baz=78,slow=32						
JHS	Saijyo	8.47	244	Pn	Pn	08 09 10.1	+0.8
USRK	Ussuriysk Ar.	9.26	306	P	Pn	08 09 21.6	+1.6
	3.4nm,0.7s,baz=114,slow=14,SNR=5.1						
KSRS	Korea Array	11.48	266	P	Pn	08 09 51.5	+1.2
	0.7nm,0.4s,baz=79,slow=14,SNR=7.0						
KSRS				LR	LR	08 13 01.8	
	comp=Z,20nm,20.8s,baz=240,slow=31						
KLR	Kul'dur	12.63	326	P	P	08 10 15.3	-0.7
	1.8nm,0.5s,baz=138,slow=12,SNR=8.1						
SEY	Seymchan	24.58	11	P	P	08 12 24.1	+0.1
	2.3nm,0.7s,baz=214,slow=11,SNR=5.6						
	2.3nm,0.7s						
SONM	Songino Array	27.30	300	P	P	08 12 48.4	-0.6
	1.3nm,0.3s,baz=121,slow=31,SNR=14						
	1.3nm,0.3s						
H11N2	WAKE ISLAND Hy	28.66	125	T	T	08 43 27.6	
	baz=318,slow=75,SNR=892						
H11N1	WAKE ISLAND Hy	28.67	125	T	T	08 43 28.2	
	baz=318,slow=75,SNR=613						
H11N3	WAKE ISLAND Hy	28.68	125	T	T	08 43 28.9	
	baz=318,slow=75,SNR=638						
H11S1	WAKE ISLAND Hy	29.45	127	T	T	08 44 25.2	
	baz=319,slow=76,SNR=117						
H11S3	WAKE ISLAND Hy	29.45	127	T	T	08 44 27.7	
	baz=319,slow=76,SNR=167						
H11S2	WAKE ISLAND Hy	29.47	127	T	T	08 44 28.8	
	baz=319,slow=76,SNR=116						
ZALV	Zalesovo Beam	41.09	311	P	P	08 14 46.6	-1.1
	1.2nm,0.3s,baz=93,slow=8.0,SNR=6.0						
	1.2nm,0.3s						
ZALV	Zalesovo Beam	41.09	311	P	P	08 14 46.9	-0.7
CMAR	Chiang Mai Arr	42.79	254	P	P	08 15 08.2	+6.2
	0.8nm,0.4s,baz=41,slow=9.8,SNR=4.0						
MK31	Makanchi Array	43.67	300	P	P	08 15 08.3	-0.6
MKAR	Makanchi Array	43.67	300	P	P	08 15 08.5	-0.3
	1.9nm,0.8s,baz=84,slow=9.5,SNR=10						
	1.9nm,0.8s						
MKAR	Makanchi Array	43.67	300	P	P	08 15 08.7	-0.1
K20K	Telida	44.17	35	P	P	08 15 14.3	+1.8
K20K				IAmb	IAmb	08 15 15.5	
	comp=Z,8.3nm,1.4s						
J20K	Nowinta River	44.17	34	P	P	08 15 14.2	+1.7
IMAR	Indian Mountai	44.46	32	P	P	08 15 15.8	+1.0
KDAK	Kodiak Island	45.04	43	P	P	08 15 19.9	+0.4
KURK	Kurchatov	45.26	307	P	P	08 15 20.9	-0.5
KURK				IAmb	IAmb	08 15 21.4	
	comp=Z,4.1nm,0.8s						
TOLK	Toolik Lake Re	46.25	28	P	P	08 15 30.1	+1.1
TOLK				IAmb	IAmb	08 15 47.3	
	comp=Z,6.9nm,1.4s						
PMR	Palmer	46.49	38	P	P	08 15 31.7	+0.8
PMR				IAmb	IAmb	08 15 41.7	
	comp=Z,6.0nm,1.2s						
RND	Reindeer	46.52	35	P	P	08 15 32.0	+0.7
RND				IAmb	IAmb	08 15 33.0	
	comp=Z,9.1nm,1.4s						
MDM	Murphy Dome	46.73	33	P	P	08 15 33.8	+1.0
MDM				IAmb	IAmb	08 15 35.2	
	comp=Z,6.5nm,1.2s						
IL31		47.31	33	P	P	08 15 38.2	+0.9
IL31				IAmb	IAmb	08 15 38.8	
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	47.31	33	P	P	08 15 37.9	+0.5
	comp=Z,2.4nm,0.6s,baz=264,slow=6.2,SNR=36						
	comp=Z,2.4nm,0.6s						
SCRK	Sand Creek	48.63	34	P	P	08 15 48.0	+0.3
SCRK				IAmb	IAmb	08 15 48.8	
	comp=Z,2.8nm,0.6s						
L26K	Log Cabin Wild	49.03	36	P	P	08 15 51.6	+1.0
K27K	Chicken	49.46	34	P	P	08 15 54.9	+1.0
K27K				IAmb	IAmb	08 15 58.1	
	comp=Z,5.4nm,1.3s						
INK	Inuvik	52.17	28	P	P	08 16 15.1	+1.0
	comp=Z,0.9nm,0.4s,baz=276,slow=7.0,SNR=6.1						
	comp=Z,0.9nm,0.4s						
INK	Inuvik	52.17	28	P	P	08 16 15.0	+1.0
INK				IAmb	IAmb	08 16 30.8	
	comp=Z,6.1nm,1.2s						
ABKAR	Akbulak array	57.17	309	P	P	08 16 50.7	0.0
WB0	Warramunga Arr	59.08	189	P	P	08 17 03.2	-0.9
WR0	Warramunga Arr	59.25	189	P	P	08 17 04.0	-1.3
WRA	Warramunga Arr	59.26	189	P	P	08 17 04.0	-1.4
	comp=Z,0.6nm,0.9s,baz=5.7,slow=7.1,SNR=9.4						
WRA				pP	pP	08 17 18.5	-0.8
	comp=Z,0.6nm,0.5s,baz=7.2,slow=7.2,SNR=3.8						
	comp=Z,0.6nm,0.9s						
WRA	Warramunga Arr	59.26	189	P	P	08 17 04.3	-1.1
YKA	Yellowknife Ar	61.61	31	P	P	08 17 21.3	+0.3
	comp=Z,0.5nm,0.6s,baz=302,slow=6.8,SNR=6.3						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	62.98	189	pP	pP	08 17 43.6	-1.0
	comp=Z,0.3nm,0.5s,baz=356,slow=5.0,SNR=2.5						
LTY	Liberty	66.66	47	P	P	08 17 55.4	+0.9
LTY				IAmb	IAmb	08 17 58.2	
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	67.30	332	P	P	08 17 58.1	-0.1
	comp=Z,1.1nm,0.8s,baz=15,slow=12,SNR=2.2						
	comp=Z,1.1nm,0.8s						
YBH	Yreka Blue Hor	68.47	53	P	P	08 18 07.4	+1.4
LRM	Limekiln Ridge	72.12	45	P	P	08 18 29.5	+1.0
AKASG	Malin Array Be	73.09	322	P	P	08 18 33.0	-0.8
	comp=Z,0.4nm,0.4s,baz=45,slow=7.0,SNR=4.2						
	comp=Z,0.4nm,0.4s						
NVAR	Mina Array Bea	73.13	54	P	P	08 18 35.5	+0.9
	comp=Z,0.6nm,0.6s,baz=295,slow=5.8,SNR=6.4						
NVAR				pP	pP	08 18 49.4	+0.7
	comp=Z,0.1nm,0.3s,baz=287,slow=7.4,SNR=3.2						
	comp=Z,0.6nm,0.6s						
PDAR	Pinedale Array	75.66	46	P	P	08 18 49.3	+0.1
	comp=Z,0.7nm,0.7s,baz=307,slow=1.2,SNR=6.2						
	comp=Z,0.7nm,0.7s						
PDAR	Pinedale Array	75.66	46	P	P	08 18 49.5	+0.3
ULM	Lac du Bonnet	77.33	34	P	P	08 18 57.4	-0.8
	comp=Z,1.2nm,0.4s,baz=192,slow=2.9,SNR=2.2						
	comp=Z,1.2nm,0.4s						
TXAR	Lajitas Array	88.24	53	P	P	08 19 55.2	0.0
	comp=Z,0.2nm,0.6s,baz=301,slow=3.3,SNR=4.9						
TXAR				pP	pP	08 20 11.0	+1.3
	comp=Z,0.2nm,0.8s,baz=262,slow=6.2,SNR=2.0						
	comp=Z,0.2nm,0.6s						
TXAR	Lajitas Array	88.24	53	P	P	08 19 55.7	+0.5

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*IDC **22** 08:37:05.6±3.6, 16°.24S×72°.92W, h163^{km}±32^{km}, mb3.3/4, mbtmp3.8/5, MS3.1/2, Error ellipse: s-maj=32.9km s-min=28.3km az=65.0*

ISC 22 08:36:44.9±1.4**, 15°.9S**±0°.1×**73°.5W**±0°.1**, h10**^{km}**, n19, σ1^{s}71**/11**, mb3.8**/4**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	4.08	133	eP	Pn	08 37 47.8	+0.4
PB12				i S	Sg	08 38 57.1	+1.2
PB12				IAML		08 39 06.2	
	comp=N,163nm,0.5s						
PB16	IPOC Station P	4.53	123	eP	Pb	08 37 59.8	-5.1
LPAZ	La Paz	5.17	95	P	Pb	08 38 13.9	-1.9
	comp=N,19nm,0.3s,baz=267,slow=13,SNR=62						
LPAZ				S	Sb	08 39 20.4	+2.2
	comp=N,5.6nm,0.7s,baz=29,slow=18,SNR=1.0						
LPAZ	La Paz	5.17	95	eP	Pb	08 38 14.4	-1.4
PB08	IPOC Station P	5.93	137	⇑iP	Pn	08 38 12.7	-0.5
PB08				i S	Sn	08 39 18.8	-2.6
PB08				IAML		08 40 02.2	
	comp=N,35nm,1.3s						
PB02	IPOC Station P	6.41	148	eP	Pn	08 38 14.7	-4.8
LVC	Limon Verde	7.98	148	LR	LR	08 41 42.7	
	comp=N,73nm,18.1s,baz=278,slow=38						
H03N1	Juan Fernandez	18.18	195	T	T	08 58 59.5	
	baz=16,slow=74,SNR=1573						
H03N2	Juan Fernandez	18.18	195	T	T	08 59 10.7	
	baz=16,slow=74,SNR=1174						
H03N3	Juan Fernandez	18.20	195	T	T	08 58 57.8	
	baz=16,slow=74,SNR=1989						
BDFB	Brasilia	24.51	93	P	P	08 42 05.6	+0.7
	comp=N,2.0nm,0.7s,baz=262,slow=11,SNR=4.0						
	comp=N,2.0nm,0.7s						
PLCA	Paso Flores	24.91	175	P	P	08 42 10.0	+1.7
	comp=N,1.8nm,1.0s,baz=346,slow=12,SNR=4.4						
	comp=N,1.8nm,1.0s						
MDP	Montagnes des	29.32	46	LR	LR	08 55 30.2	
	comp=N,57nm,18.5s,baz=188,slow=38						
TXAR	Lajitas Array	53.55	327	P	P	08 46 15.2	+9.0
	comp=N,0.3nm,0.8s,baz=140,slow=4.7,SNR=3.8						
	comp=N,0.3nm,0.8s						
TORD	Torodi Ar. Bea	79.72	73	P	P	08 48 54.2	+0.6
	comp=N,1.5nm,0.7s,baz=243,slow=3.8,SNR=6.4						
	comp=N,1.5nm,0.7s						
H11S2	WAKE ISLAND Hy	22.66	282	T	T	11 09 27.6	
	baz=99,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	22.67	282	T	T	11 09 30.5	
	baz=99,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy	22.68	282	T	T	11 09 31.6	
	baz=99,slow=75,SNR=30						
SONM	Songino Array	148.12	0	PKPbc	PKPbc	08 56 30.2	-1.0
	comp=N,0.8nm,0.9s,baz=337,slow=1.9,SNR=3.8						

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*DDA **22** 08:58:28.5±0.0, 41°.64N×23°.36E, h7^{km}±2^{km}, MW4.3*

*IDC **22** 08:58:29.9±0.6, 41°.64N×23°.28E, h0^{km}, mb3.9/15, mbtmp3.9/28, ML3.5/14, MS3.5/25, Error ellipse: s-maj=10.2km s-min=9.2km az=3.0*

*PRU **22** 08:58:30.4±0.0, 41°.57N×23°.29E, h0^{km}, M4.3*

*TIR **22** 08:58:30.6, 41°.61N×23°.39E, h24^{km}±6^{km}, Ml4.7*

*SOF **22** 08:58:30.2, 41°.60N×23°.27E, h21^{km}, MD4.3*

*BEO **22** 08:58:31.7±0.3, 41°.62N×23°.27E, h18^{km}±2^{km}, ML4.8/10*

*ATH **22** 08:58:31.0, 41°.65N×23°.30E, h15^{km}±1^{km}, ML4.3/13, Error ellipse: s-maj=2.5km s-min=1.0km az=173.0*

*NEIC **22** 08:58:31.9, 41°.67N×23°.29E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.49; M$_{θθ}$2.58; M$_{φφ}$-2.10; M$_{rθ}$-1.17; M$_{θφ}$1.54; M$_{φr}$-2.24; Fault plane solution: M$_0$3.80000×10^{15} NP1:φ$_s$31.06000°, δ84.97000°, λ-137.40000°. NP2:φ$_s$296.46000°, δ47.60000°, λ-6.82000°. Principal axes: T 3.8541, Plg25.0000°, Azm156.0000°; N -0.1211, Plg47.0000°, Azm37.0000°; P -3.7331, Plg33.0000°, Azm263.0000°;*

*MED_RC **22** 08:58:31.0±0.2, 41°.67N×23°.34E, h20^{km}, MW4.5/21, Moment Tensor Solution.Mantle waves: s21,c25; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.37±.51; M$_{θθ}$6.36±.38; M$_{φφ}$-1.99±.24; M$_{rθ}$1.31±.37; M$_{θφ}$2.97±.21; M$_{φr}$-1.97±.36; Best double couple: M$_0$6.70000×10^{15} NP1:φ$_s$282.00000°, δ58.00000°, λ-46.00000°. NP2:φ$_s$41.00000°, δ52.00000°, λ-138.00000°. Principal axes: T 7.3500, Plg3.0000°, Azm343.0000°; N -1.2900, Plg36.0000°, Azm75.0000°; P -6.0600, Plg54.0000°, Azm248.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PDG **22** 08:58:31.3±0.6, 41°.63N×23°.32E, h17^{km}, ML4.3/13 Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*MOS **22** 08:58:31.3±1.1, 41°.62N×23°.23E, h22^{km}, mb4.3/9, Error ellipse: s-maj=5.4km s-min=3.4km az=98.6*

*ISK **22** 08:58:31.2, 41°.59N×23°.31E, h14^{km}, ML4.6/26*

*NEIC **22** 08:58:32.2±1.9, 41°.66N±0°.03×23°.26E±0°.06, h10^{km}±1^{km}, mb4.3/11, Mwr4.3/31, ML4.8/4(BUC), Error ellipse: s-maj=7.1km s-min=4.2km az=105.0*

*THE **22** 08:58:32.0, 41°.58N×23°.32E, h7^{km}±1^{km}, ML4.3/6, Error ellipse: s-maj=1.5km s-min=0.6km az=170.0*

*SKO **22** 08:58:32.7, 41°.62N×23°.29E, h0^{km}*

*BJI **22** 08:58:32.9±0.0, 41°.42N×23°.73E, h6^{km}, mb4.8/3, mB5.0/2*

ISC 22 08:58:31.6±0.9**, 41°.64N**±0°.01×**23°.29E**±0°.01**, h7**^{km}±6^{km}**, n607, σ1^{s}58**/745**, mb4.1**/22**, MS3.6**/18**, 54C-48D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.27	326	i Pg	Pg	08 58 36.8	-0.2
MMB	Musomiste	0.33	99	i Pg	Pg	08 58 38.3	+0.1
NVR	Nevrokopi	0.52	124	P	Pg	08 58 41.2	-0.5
NVR				S	Sg	08 58 48.4	-0.1
NVR				AML	AML	08 58 48.8	
	comp=N,60988μm,0.4s						
NVR				AML	AML	08 58 49.4	
	comp=E,54674μm,0.3s						
NVR	Nevrokopi	0.52	124	P	Pg	08 58 41.2	-0.5
NVR				S	Sg	08 58 48.2	-0.3
	comp=E,26μm,0.2s						
KNT	Kendrikon	0.56	211	P	Pg	08 58 42.3	-0.2
KNT				S	Sg	08 58 49.8	-0.1
KNT	Kendrikon	0.56	211	P	Pg	08 58 42.3	-0.2
KNT				S	Sg	08 58 49.6	-0.2
	comp=E,45μm,0.4s						
KNT	Kendrikon	0.56	211	PG	Pg	08 58 42.3	-0.2
KNT				SG	Sg	08 58 49.7	-0.1
KNT	Kendrikon	0.56	211	⇑iPg	Pg	08 58 42.3	-0.2
KNT				i Sg	Sg	08 58 49.8	-0.1
SRS	Serrai	0.57	156	ePg	Pg	08 58 42.3	-0.4
SRS				eSg	Sg	08 58 50.8	+0.6
SRS	Serrai	0.57	156	P	Pg	08 58 42.3	-0.4
SRS				S	Sg	08 58 50.3	+0.1
SRS	Serrai	0.57	156	P	Pg	08 58 42.3	-0.4
SRS				S	Sg	08 58 50.5	+0.3
SRS	Serrai	0.57	156	⇑iPg	Pg	08 58 42.3	-0.4
SRS				i Sg	Sg	08 58 49.9	-0.2
VAY	Valandovo	0.63	239	ePg	Pg	08 58 43.9	+0.2
VAY				eSg	Sg	08 58 52.0	+0.1
VAY	Valandovo	0.63	239	i Pg	Pg	08 58 43.7	0.0
VAY				i Sg	Sg	08 58 52.3	+0.4
VAY				eLg	Lg	08 58 52.4	
	comp=N,14μm,0.6s						
SOH	Sokhos	0.82	176	P	Pg	08 58 46.8	-0.6
SOH				S	Sg	08 58 57.4	-0.7
SOH				AML	AML	08 59 01.4	
	comp=N,77454μm,0.3s						
SOH				AML	AML	08 59 02.6	
	comp=E,53647μm,0.4s						
SOH	Sokhos	0.82	176	P	Pg	08 58 46.9	-0.6
SOH				S	Sg	08 58 58.0	-0.1
	comp=E,26μm,0.3s						
SOH	Sokhos	0.82	176	⇑iPg	Pg	08 58 46.9	-0.6
SOH				i Sg	Sg	08 58 58.3	+0.2
GRG	Griva	0.96	225	P	Pg	08 58 49.7	-0.3
GRG				S	Sg	08 59 02.0	-0.4
GRG	Griva	0.96	225	P	Pg	08 58 49.4	-0.6
GRG				S	Sg	08 59 02.4	0.0
	comp=E,33μm,0.5s						
GRG	Griva	0.96	225	PG	Pg	08 58 49.8	-0.2
GRG				SG	Sg	08 59 02.4	0.0
GRG	Griva	0.96	225	⇑iPg	Pg	08 58 49.7	-0.3
GRG				i Sg	Sg	08 59 02.4	0.0
VTS	Vitosha	0.97	358	⇑P	Pg	08 58 49.8	-0.6
VTS				⇑S	Sg	08 59 03.3	+0.2
VTS	Vitosha	0.97	358	ePg	Pg	08 58 50.0	-0.4
VTS				eSg	Sg	08 59 03.4	+0.3
VTS	Vitosha	0.97	358	Pg	Pg	08 58 49.8	-0.6
VTS	Vitosha	0.97	358		Sg	08 59 03.3	+0.2
VTS	Vitosha	0.97	358	⇑iPg	Pg	08 58 49.9	-0.6
VTS				i Sg	Sg	08 59 03.0	-0.1
VTS	Vitosha	0.97	358	i Pg	Pg	08 58 49.7	-0.7
KOKK	Kokkinochori,	0.98	147	P	Pg	08 58 49.6	-1.0
KOKK	Kokkinochori,	0.98	147	P	Pg	08 58 49.5	-1.0
KOKK				S	Sg	08 59 02.3	-1.0
	comp=E,17μm,0.5s						
THE	Thessaloniki	1.04	194	P	Pg	08 58 51.0	-0.6
THE				S	Sg	08 59 04.6	-0.5
THE				AML	AML	08 59 05.6	
	comp=E,25345μm,0.4s						
THE				AML	AML	08 59 07.1	
	comp=N,32785μm,0.6s						
THE	Thessaloniki	1.04	194	P	Pg	08 58 50.9	-0.6
THE				S	Sg	08 59 04.6	-0.5
	comp=N,15μm,0.5s						
THE	Thessaloniki	1.04	194	⇑iPg	Pg	08 58 51.0	-0.6
THE				i Sg	Sb	08 59 05.5	-0.3
THE	Thessaloniki	1.04	194	P	Pg	08 58 50.9	-0.6
	baz=199						
THE				S	Sg	08 59 05.0	-0.1
	baz=199						
BOSS	Bosilegrad	1.04	325	ePg	Pg	08 58 51.6	-0.1
BOSS				eSg	Sg	08 59 04.8	-0.4
HORT	Hortiatis	1.05	188	P	Pg	08 58 51.3	-0.6
HORT				S	Sg	08 59 04.2	-1.3
HORT				AML	AML	08 59 06.8	
	comp=E,35088μm,0.3s						
HORT				AML	AML	08 59 07.6	
	comp=N,21383μm,0.4s						
HORT	Hortiatis	1.05	188	P	Pg	08 58 51.3	-0.6
HORT				S	Sg	08 59 04.5	-1.0
HORT	Hortiatis	1.05	188	PG	Pg	08 58 51.3	-0.6
RZN	Rozhen	1.07	87	i Pg	Pg	08 58 51.2	-1.0
KVLA	Kavala	1.09	130	P	Pg	08 58 51.4	-1.2
KVLA				S	Sg	08 59 05.3	-1.3
KVLA				AML	AML	08 59 07.9	
	comp=N,40059μm,0.3s						
KVLA				AML	AML	08 59 07.9	
	comp=E,30559μm,0.4s						
PGB	Panagyurishte	1.12	36	i Pg	Pg	08 58 51.9	-1.2
KAVA	Kavala	1.13	125	P	Pg	08 58 51.8	-1.4
KAVA				S	Sg	08 59 06.8	-1.0
KAVA				AML	AML	08 59 09.2	
	comp=N,22828μm,0.4s						
KAVA				AML	AML	08 59 09.7	
	comp=E,33871μm,0.9s						
KAVA	Kavala	1.13	125	P	Pg	08 58 51.9	-1.4
KAVA				S	Sg	08 59 07.5	-0.4
PLD	Plovdiv	1.15	66	ePg	Pg	08 58 53.2	-0.5
PLD				eSg	Sb	08 59 09.0	-0.1
PLD	Plovdiv	1.15	66	PN	Pg	08 58 53.3	-0.5
PLD	Plovdiv	1.15	66	⇓iPg	Pg	08 58 53.3	-0.5
PLD				i Sg	Sn	08 59 09.9	-0.4
PLD	Plovdiv	1.15	66	i Pg	Pg	08 58 53.2	-0.5
PLG	Polygyros	1.27	175	P	Pn	08 58 54.5	-1.5
PLG				S	Sb	08 59 11.6	-1.0
PLG				AML	AML	08 59 13.9	
	comp=E,16159μm,0.5s						
PLG				AML	AML	08 59 14.4	
	comp=N,25656μm,0.4s						
PLG	Polygyros	1.27	175	P	Pn	08 58 54.4	-1.5
PLG				S	Sg	08 59 12.4	-0.2
OUR	Ouranopolis	1.41	158	P	Pn	08 58 56.4	-1.3
OUR				S	Sb	08 59 16.0	-0.4
OUR				AML	AML	08 59 17.3	
	comp=E,22513μm,0.3s						
OUR				AML	AML	08 59 25.4	
	comp=N,23443μm,0.8s						
OUR	Ouranopolis	1.41	158	P	Pn	08 58 56.3	-1.3
OUR	Ouranopolis	1.41	158	PN	Pn	08 58 56.4	-1.3
SKO	Skopje	1.42	284	i Pg	Pb	08 58 58.1	-0.4
THAS	Thassos island	1.50	133	P	Pn	08 58 57.5	-1.4
THAS				AML	AML	08 59 20.5	
	comp=N,10934μm,0.3s						
THAS				AML	AML	08 59 21.4	
	comp=E,22389μm,0.3s						
THAS	Thassos island	1.50	133	P	Pn	08 58 57.2	-1.7
KDZ	Kurdzhali	1.60	89	i Pg	Pn	08 58 58.9	-1.4
BARS	Barje	1.60	317	ePg	Pg	08 59 01.9	-0.4
BARS	Barje	1.60	317	eSg	Sb	08 59 22.4	+0.3
BARS	Barje	1.60	317	i Pg	Pg	08 59 02.0	-0.4
FNA	Florina	1.68	240	P	Pn	08 59 00.9	-0.5

FNA				AML	AML	08 59 31.4	
	comp=E,13971µm,0.5s						
FNA				AML	AML	08 59 32.7	
	comp=N,13737µm,0.5s						
FNA	Florina	1.68	240	P	Pn	08 59 00.9	-0.5
FNA	Florina	1.68	240	PN	Pn	08 59 00.9	-0.5
FNA	Florina	1.68	240		Pn	08 59 01.0	-0.5
FNA				Sn	Sb	08 59 23.9	-0.3
FNA	Florina	1.68	240	P	Pn	08 59 01.0	-0.5
FNA						08 59 23.9	
FNA	Florina	1.68	240	*i* Pn	Pg	08 59 03.3	-0.5
FNA	Florina	1.68	240	P	Pn	08 59 01.0	-0.5
	baz=243						
FNA				S	Sn	08 59 22.9	-0.4
	baz=243						
FNA	Florina	1.68	240	P	Pn	08 59 01.0	-0.5
FNA				S	Sg	08 59 25.7	+0.1
DIM	Dimitrovgrad	1.73	76	*i* Pg	Pb	08 59 03.5	-0.2
PAIG	Paliouri	1.74	170	P	Pn	08 59 01.0	-1.3
PAIG				AML	AML	08 59 27.8	
	comp=E,5107µm,0.5s						
PAIG				AML	AML	08 59 44.5	
	comp=N,5013µm,0.8s						
PAIG	Paliouri	1.74	170	P	Pn	08 59 00.9	-1.3
KZN	Kozani	1.76	221	P	Pn	08 59 01.5	-1.1
KZN				AML	AML	08 59 32.3	
	comp=N,4470µm,0.9s						
KZN				AML	AML	08 59 36.9	
	comp=E,6812µm,0.6s						
KZN	Kozani	1.76	221	P	Pn	08 59 01.7	-0.9
RDO	Rodhopi	1.76	106	P	Pn	08 59 01.4	-1.2
RDO				S	Sn	08 59 24.0	-1.3
RDO				AML	AML	08 59 29.2	
	comp=E,12725µm,0.5s						
RDO				AML	AML	08 59 29.5	
	comp=N,14548µm,0.5s						
RDO	Rodhopi	1.76	106	P	Pn	08 59 01.5	-1.1
RDO	Rodhopi	1.76	106	PN	Pn	08 59 02.1	-0.5
RDO	Rodhopi	1.76	106		Pn	08 59 02.0	-0.5
OHR	Ohrid	1.95	255	*i* Pn	Pg	08 59 08.6	-0.4
BLKB	Belogradchik	2.03	347	⇓P	Pn	08 59 06.0	-0.4
BLKB				⇑S	Sn	08 59 31.9	-0.1
BLKB	Belogradchik	2.03	347		Pn	08 59 06.0	-0.4
BLKB					Sn	08 59 31.9	-0.1
SMTH	Samothraki Isl	2.06	124	P	Pn	08 59 05.0	-1.7
NEST	Nestorio	2.09	235	P	Pn	08 59 06.8	-0.4
PHP	Peshkopia	2.13	272	P	Pn	08 59 07.3	-0.5
	baz=273						
PHP				S	Sn	08 59 35.7	+1.2
	baz=273						
PHP				AMP			
	comp=N,14nm,0.8s,baz=273						
KBN	Korca	2.15	242		Pn	08 59 07.7	-0.2
KBN	Korca	2.15	242	P	Pn	08 59 07.7	-0.2
KBN	Korca	2.15	242	P	Pn	08 59 07.4	-0.6
	baz=245						
KBN				S	Sn	08 59 34.8	0.0
	baz=245						
KBN				AMP			
	comp=E,9.5nm,1.6s,baz=245						
PENT	Pentalofos	2.18	229	P	Pn	08 59 07.9	-0.5
ALN	Alexandroupoli	2.21	109	P	Pn	08 59 07.7	-1.0
ALN	Alexandroupoli	2.21	109	PN	Pn	08 59 07.9	-0.8
ALN	Alexandroupoli	2.21	109	Pn	Pn	08 59 07.7	-1.0
ALN	Alexandroupoli	2.21	109	P	Pn	08 59 07.7	-1.0
ALN	Alexandroupoli	2.21	109	P	Pn	08 59 07.8	-0.8
ALN				S	Sg	08 59 41.4	-1.2
KPRO	Kipourio	2.23	222	P	Pn	08 59 08.7	-0.4
SELS	Selova	2.25	315	*e*Pn	Pn	08 59 08.3	-1.0
SELS				*e*Sn	Sn	08 59 34.7	-2.6
XOR	Xorichti	2.28	182	P	Pn	08 59 08.5	-1.2
THL	Klokotos Trika	2.29	205	P	Pn	08 59 09.5	-0.3
ZAGS	Zajecar	2.30	341	*e*Pn	Pn	08 59 09.3	-0.7
BOVS	Bovan	2.31	330	⇓P	Pn	08 59 08.9	-1.2
BOVS				⇓S	Sn	08 59 38.1	-0.6
BOVS	Bovan	2.31	330	*e*Pn	Pn	08 59 09.9	-0.2
BOVS				*e*Sn	Sn	08 59 37.3	-1.4
BOVS	Bovan	2.31	330		Pn	08 59 08.9	-1.2
BOVS					Sn	08 59 38.1	-0.6
ENEZ	Enez	2.34	112	PN	Pn	08 59 09.9	-0.7
CAVK	Edirne/Enez-Ca	2.37	113	P	Pn	08 59 09.5	-1.5
CAVK				S	Sb	08 59 45.2	+1.1
BAIL	Bailesti	2.38	1	⇑P	Pn	08 59 12.3	+1.3
BAIL	Bailesti	2.38	1		Pn	08 59 12.3	+1.3
GADA	Gvkgeada	2.45	125	PN	Pn	08 59 10.9	-1.2
GOKA	anakkale-Gk	2.46	125	P	Pn	08 59 11.1	-1.0
GOKA				S	Sg	08 59 49.4	-1.2
VLAD	Vladila	2.49	19	⇓P	Pn	08 59 13.4	+0.8
VLAD	Vladila	2.49	19		Pn	08 59 13.4	+0.8
BCI	Bajram Curri	2.51	288	P	Pn	08 59 13.0	+0.1
	baz=289						
BCI				S	Sb	08 59 45.7	-2.4
	baz=289						
BCI				AMP			
	comp=N,15nm,1.3s,baz=289						
LSK	Leskovik	2.52	235	P	Pn	08 59 12.9	-0.3
	baz=237						
LSK				S	Sn	08 59 45.0	+0.8
	baz=237						
LSK				AMP			
	comp=N,16nm,0.9s,baz=237						
ZIMR		2.53	37	⇓P	Pn	08 59 14.6	+1.5
ZIMR				⇑S	Sb	08 59 48.3	-0.3
ZIMR		2.53	37		Pn	08 59 14.7	+1.5
ZIMR					Sb	08 59 48.3	-0.3
UKOP	Uzunkopru-Edir	2.57	100	PN	Pn	08 59 14.0	+0.4
UKOP	Uzunkopru-Edir	2.57	100	P	Pb	08 59 18.7	+0.6
UKOP				S	Sg	08 59 52.0	-2.1
JMB	Yambol	2.59	70	*e*Pg	Pn	08 59 16.1	+2.2
TIR	Tirane	2.59	265	⇓S	Sn	08 59 41.5	-4.2
TIR	Tirane	2.59	265		Pn	08 59 14.2	+0.3
TIR	Tirane	2.59	265		Sn	08 59 41.5	-4.2
TIR	Tirane	2.59	265	*i* Pn	Pn	08 59 15.2	+1.3
TIR	Tirane	2.59	265	P	Pn	08 59 13.3	-0.6
	baz=266						
TIR				S	Sn	08 59 47.2	+1.6
	baz=266						
TIR				AMP			
	comp=N,3.2nm,1.1s,baz=266						
EDRB	Edirne	2.59	84	PN	Pn	08 59 13.3	-0.7
EDRB	Edirne	2.59	84	P	Pn	08 59 13.3	-0.7
EDRB				S	Sb	08 59 51.2	+0.6
ERIK	Erikli-Kesan	2.62	111	PN	Pn	08 59 13.4	-1.0
ERIK	Erikli-Kesan	2.62	111	P	Pn	08 59 13.1	-1.3
ERIK				S	Sb	08 59 53.2	+1.9
PUNG	Punghina	2.65	354	⇑S	Sn	08 59 48.2	+1.2
PUNG	Punghina	2.65	354		Sn	08 59 48.2	+1.2
PVY	Plav	2.65	292	⇓*i*Pn	Pn	08 59 15.0	0.0
PVY				*i* Sn	Sn	08 59 48.8	+1.4
KESN	Edirne-Kesan	2.69	107	P	Pn	08 59 14.3	-1.3
KESN				S	Sg	08 59 57.6	-0.3
ECEA	Canakkale, Ece	2.71	125	P	Pn	08 59 14.8	-0.8
ECEA				S	Sg	08 59 56.5	-2.1
GELI	Tayfur-Gelibol	2.71	116	PN	Pn	08 59 14.8	-0.8
BOZC	Bozcaada	2.77	130	P	Pn	08 59 15.5	-0.9
BOZC				S	Sg	08 59 58.5	-2.0
IVA	Berane	2.80	297	⇓*i*Pn	Pn	08 59 17.2	+0.2
IVA				*i* Sn	Sn	08 59 52.5	+1.4
KIRK	Kırklareli	2.85	86	P	Pn	08 59 16.5	-1.1
KIRK				S	Sb	08 59 59.7	+1.6
COPA	Copaceanca	2.87	29	⇓P	Pn	08 59 19.4	+1.7
COPA	Copaceanca	2.87	29		Pn	08 59 19.4	+1.7
EZN	Ezine	2.94	127	PN	Pn	08 59 18.0	-0.7
EZN	Ezine	2.94	127	P	Pn	08 59 17.8	-0.9
EZN				S	Sb	09 00 02.5	+2.1
GRUS	Gruza	2.94	321	*e*Pn	Pn	08 59 18.0	-0.7
SJES	Sjenica	2.94	305	*e*Pn	Pn	08 59 18.7	-0.2
SJES				*e*Sn	Sn	08 59 51.7	-2.7
SJES	Sjenica	2.94	305	*e*Pn	Pn	08 59 18.6	-0.3
EVR	Evrytania	2.95	203	P	Pn	08 59 18.7	-0.3
KUBS	Kucevo	3.01	337	*e*Pn	Pn	08 59 18.1	-1.6
KUBS				*e*Sn	Sn	08 59 53.7	-2.4
IVAS	Ivanjica	3.02	311	*e*Pn	Pn	08 59 19.0	-0.9
SVIS	Svilajnac	3.03	331	*e*Pn	Pn	08 59 19.8	-0.2
SVIS				*e*Sn	Sn	08 59 54.6	-1.9
ULC	Ulcinj	3.04	277	⇑*i*Pn	Pn	08 59 20.7	+0.5
ULC				*i* Sn	Sn	08 59 57.9	+1.1
KOCA	Canakkale, Ayv	3.05	134	P	Pn	08 59 19.5	-0.7
KOCA				S	Sb	09 00 04.6	+1.0
RMGR	Halanga-Turnu	3.05	352	⇓P	Pn	08 59 19.7	-0.5
RMGR	Halanga-Turnu	3.05	352		Pn	08 59 19.8	-0.5
KOME	Kolasin	3.05	295	⇑*i*Pn	Pn	08 59 20.2	-0.2
KOME				*i* Sn	Sn	08 59 58.1	+0.9
SRN	Sarande	3.06	236	P	Pn	08 59 21.8	+1.5
	baz=238						
SRN				S	Sn	08 59 58.4	+1.2
	baz=238						
SRN				AMP			
	comp=N,3.8nm,1.3s,baz=238						
RAZG	Razgrad	3.06	50	⇑P	Pn	08 59 22.0	+1.6
RAZG	Razgrad	3.06	50		Pn	08 59 22.0	+1.6
DJES	Djerdap	3.07	350	⇓P	Pn	08 59 19.6	-1.0
DJES	Djerdap	3.07	350		Pn	08 59 19.6	-1.0
IGT	Igoumenitsa	3.08	228	P	Pn	08 59 22.6	+1.8
	baz=230						
IGT				S	Sn	08 59 58.9	+1.1
	baz=230						
RKY	Sarkoy-Tekirda	3.09	107	PN	Pn	08 59 20.4	-0.5
RKY	Sarkoy-Tekirda	3.09	107	P	Pn	08 59 19.1	-1.8
RKY				S	Sg	09 00 08.1	-2.7
SART	Tekirdag	3.09	107	P	Pn	08 59 20.3	-0.6
SART				S	Sg	09 00 08.9	-1.9
VLO	Vlora	3.10	249	Pn	Pn	08 59 20.2	-0.7
VLO	Vlora	3.10	249	P	Pn	08 59 20.2	-0.7
PDG	Podgorica	3.10	286		Pn	08 59 22.1	+1.1
PDG	Podgorica	3.10	286	*e*Pn	Pn	08 59 21.8	+0.8
PDG	Podgorica	3.10	286	*i* Pn	Pn	08 59 23.5	+2.5
TTG	Podgorica	3.10	286	⇑*i*Pn	Pn	08 59 21.9	+0.9
TTG				*e*Sn	Sn	09 00 00.7	+2.3
ARMN	Kirklareli, Me	3.11	85	P	Pn	08 59 20.7	-0.4
ARMN				S	Sb	09 00 07.1	+1.8
DRME	Dracevica, Mon	3.11	281	*e*Pn	Pn	08 59 22.6	+1.4
DRME	Dracevica, Mon	3.11	281	⇓*i*Pn	Pn	08 59 22.5	+1.4
DRME				*i* Sn	Sn	08 59 59.9	+1.4
SIGR	SIGRI	3.12	140	P	Pn	08 59 20.6	-0.6
BAYC	CANAKKALE_Bayr	3.12	126	P	Pn	08 59 20.9	-0.4
BAYC				S	Sb	09 00 07.9	+2.1
MAR6	Marsite Statio	3.15	106	PN	Pn	08 59 22.4	+0.8
MAR3	Marsite Statio	3.15	105	PN	Pn	08 59 22.1	+0.4
PHSR	Pinarhisar	3.17	89	PN	Pn	08 59 22.1	+0.1
GZKV	Gazikoy-Tekird	3.18	105	PN	Pn	08 59 22.1	+0.1
SGRR	Singureni	3.25	37	⇓P	Pn	08 59 22.8	-0.1
SGRR	Singureni	3.25	37		Pn	08 59 22.8	-0.1
TKR	Tekirdag	3.27	100	PN	Pn	08 59 23.4	+0.2
KEK	Kerkira	3.28	235		Pn	08 59 24.9	+1.5
KRBG	Karabiga-Canak	3.28	111	PN	Pn	08 59 23.1	-0.3
KRBG	Karabiga-Canak	3.28	111	P	Pn	08 59 22.9	-0.5
KRBG				S	Sb	09 00 12.5	+2.2
HERR	Herculane	3.30	349	⇑P	Pn	08 59 22.2	-1.5
HERR	Herculane	3.30	349		Pn	08 59 22.2	-1.5
TRUS	Trudelj	3.34	322	*e*Pn	Pn	08 59 23.4	-0.8
PLE	Pljevlja	3.34	302	⇓*i*Pn	Pn	08 59 24.8	+0.4
PLE				*i* Sn	Sn	09 00 05.3	+0.9
MDVR	Moldovita	3.34	340	⇑P	Pn	08 59 23.5	-0.9
MDVR	Moldovita	3.34	340		Pn	08 59 23.5	-0.9
BUM	Brajici-Budva	3.34	283	⇓*i*Pn	Pn	08 59 25.7	+1.3
BUM				*e*Sn	Sn	09 00 06.3	+2.0
BUC1	Bucharest	3.37	36	⇓P	Pn	08 59 25.9	+1.2
BUC1	Bucharest	3.37	36		Pn	08 59 25.9	+1.2
BUC1	Bucharest	3.37	36	P	Pn	08 59 25.9	+1.2
CEME	Cevo	3.38	287	⇓*i*Pn	Pn	08 59 25.6	+0.8
CEME				*i* Sn	Sn	09 00 06.2	+1.0
CRLT	Corlu	3.39	97	PN	Pn	08 59 25.0	+0.1
NKY	Niksic	3.40	292	⇑*i*Pn	Pn	08 59 25.1	-0.1
NKY				*i* Sn	Sn	09 00 06.9	+1.2
VIZE	Kirklareli, Vi	3.41	90	P	Pn	08 59 24.5	-0.8
VIZE				S	Sb	09 00 12.9	-1.3
MRMT	Marmara Adasi	3.42	106	PN	Pn	08 59 25.1	-0.3
STFAR	Stefanesti-Arg	3.44	20	⇑P	Pn	08 59 26.3	+0.6
STFAR	Stefanesti-Arg	3.44	20		Pn	08 59 26.3	+0.6
DIVS	Divibare	3.45	316	*e*Pn	Pn	08 59 25.1	-0.7
DIVS				*e*Sn	Sn	09 00 04.7	-2.3
DIVS	Divibare	3.45	316	Pn	Pn	08 59 25.3	-0.5
DIVS	Divibare	3.45	316	*e*Pn	Pn	08 59 24.7	-1.1
AYVA	Ayvalik	3.49	131	P	Pn	08 59 25.3	-1.0
RUDO	Rudo	3.50	306	*e*Pn	Pn	08 59 25.4	-1.1
BUHA	Balikesir, Bur	3.59	125	P	Pn	08 59 27.8	0.0
BUHA				S	Sg	09 00 24.1	-2.9
UPM	Unac-Piva	3.60	297	*e*Pn	Pn	08 59 28.2	+0.2
UPM	Unac-Piva	3.60	297	⇓*i*Pn	Pn	08 59 28.3	+0.2
UPM				*i* Sn	Sn	09 00 11.5	+0.6
BBLS	Lazići	3.62	309	*e*Pn	Pn	08 59 28.3	+0.1
BBLS	Lazići	3.62	309	*e*Pn	Pn	08 59 27.1	-1.1
HCY	Herceg Novi	3.66	284	*e*Pn	Pn	08 59 30.0	+1.3
HCY	Herceg Novi	3.66	284	⇑*i*Pn	Pn	08 59 29.5	+0.8
HCY				*e*Sn	Sn	09 00 13.8	+1.7
EDC	Edincik	3.70	109	PN	Pn	08 59 29.4	+0.2
EDC	Edincik	3.70	109	P	Pn	08 59 28.0	-1.2
EDC				S	Sg	09 00 26.3	-4.0
GONE	Gonen-Balikesi	3.70	114	PN	Pn	08 59 29.7	+0.5
GONE	Gonen-Balikesi	3.70	114	P	Pn	08 59 29.7	+0.5
SLVT	Silivri	3.72	95	PN	Pn	08 59 29.4	-0.1
SULR		3.73	35	⇑P	Pn	08 59 30.4	+0.8
SULR		3.73	35		Pn	08 59 30.4	+0.8
BRY	Bratogost	3.74	291	*e*Pn	Pn	08 59 31.0	+1.1
BRY	Bratogost	3.74	291	⇑*i*Pn	Pn	08 59 30.1	+0.2
BRY				*i* Sn	Sn	09 00 14.9	+0.6
GZR	Gura Zlata	3.77	355	⇓P	Pn	08 59 29.2	-1.0
GZR	Gura Zlata	3.77	355		Pn	08 59 29.2	-1.0
GZR	Gura Zlata	3.77	355	P	Pn	08 59 29.2	-1.0
DKL	Dikili	3.77	132	PN	Pn	08 59 29.8	-0.4
DKL	Dikili	3.77	132	P	Pn	08 59 29.9	-0.4
DKL				S	Sg	09 00 32.7	-0.1
CAND	Candarli	3.80	134	PN	Pn	08 59 30.8	+0.2
BALY	Balya	3.80	119	P	Pn	08 59 29.9	-0.8
BALY				S	Sg	09 00 30.1	-3.6
LOT	Lotru	3.82	5	⇓P	Pn	08 59 29.8	-1.1
LOT	Lotru	3.82	5		Pn	08 59 29.8	-1.1
TREB	Trebinje	3.82	288	*e*Pn	Pn	08 59 32.2	+1.3
RASA	Rasa	3.83	47	⇓P	Pn	08 59 31.7	+0.8
RASA	Rasa	3.83	47		Pn	08 59 31.8	+0.8
PLAR	PLOIESTI	3.83	31	⇓P	Pn	08 59 31.6	+0.6
PLAR	PLOIESTI	3.83	31		Pn	08 59 31.6	+0.6
LEHL	Lehliu	3.83	41	⇑P	Pn	08 59 34.0	+2.9
LEHL	Lehliu	3.83	41		Pn	08 59 34.0	+2.9
CHOS	Chios island	3.88	146	PN	Pn	08 59 31.2	-0.6
ZEDA	zmir-Bergama	3.94	131	P	Pn	08 59 32.0	-0.5
ZEDA				S	Sg	09 00 36.6	-1.6
SECR		3.95	30	⇓P	Pn	08 59 34.3	+1.7
SECR		3.95	30		Pn	08 59 34.3	+1.7
DBRK	Dubrovnik	3.96	287	*e*Pn	Pn	08 59 33.4	+0.7
DBRK				Sn	Sn	09 00 18.6	-0.8
SCTE	Santa Cesarea	3.98	248		Pn	08 59 32.8	-0.2
VOIR		4.00	18	⇑P	Pn	08 59 33.5	+0.1
VOIR		4.00	18		Pn	08 59 33.5	+0.1
VOIR		4.00	18	P	Pn	08 59 33.5	+0.1
STEP	BALIKESIR_Sava	4.07	122	P	Pn	08 59 34.1	-0.2
URLA	Izmir	4.15	141	P	Pn	08 59 34.7	-0.7
URLA				S	Sg	09 00 40.6	-4.2
BZS	Buzias	4.15	344	⇓P	Pn	08 59 34.1	-1.4
BZS	Buzias	4.15	344		Pn	08 59 34.1	-1.4
BZS	Buzias	4.15	344	P	Pn	08 59 34.1	-1.4
ZEYE	Izmir, Urla-Ze	4.20	143	P	Pn	08 59 35.6	-0.5
ZEYE				S	Sg	09 00 43.8	-2.8
DEV	Deva	4.25	356	⇑P	Pn	08 59 35.8	-1.0
DEV	Deva	4.25	356		Pn	08 59 35.8	-1.0
DEV	Deva	4.25	356	P	Pn	08 59 35.8	-1.0
BLJ	Bijeljina	4.30	318	*e*Pn	Pn	08 59 36.4	-1.0
MLR	Muntele Rosu	4.30	26	⇓P	Pn	08 59 38.1	+0.4
MLR	Muntele Rosu	4.30	26	Pn	Pn	08 59 38.8	+1.1
	comp=N,11nm,0.3s,baz=189,slow=1.7,SNR=41						
MLR				Sn	Sn	09 00 32.8	+4.6
	comp=N,11nm,0.3s,baz=318,slow=22,SNR=3.4						
MLR				Lg	Lg	09 00 50.4	
	comp=N,22nm,0.3s,baz=336,slow=23,SNR=4.9						
MLR				LR	LR	09 01 53.4	
	comp=N,853nm,19.5s,baz=219,slow=47						
MLR	Muntele Rosu	4.30	26	Pn	Pn	08 59 38.9	+1.3
MLR	Muntele Rosu	4.30	26	P	Pn	08 59 38.9	+1.3
STON	Ston	4.33	288	*e*Pn	Pn	08 59 38.6	+0.8
STON				Sn	Sn	09 00 27.0	-1.4
FRGS	Fruska Gora	4.33	325	⇓P	Pn	08 59 36.9	-1.1
FRGS	Fruska Gora	4.33	325	*e*Pn	Pn	08 59 36.4	-1.5
FRGS	Fruska Gora	4.33	325		Pn	08 59 36.9	-1.1
FRGS	Fruska Gora	4.33	325	*e*Pn	Pn	08 59 36.7	-1.2
NEHR	Nehoiu	4.37	29	⇓P	Pn	08 59 39.6	+1.2
NEHR	Nehoiu	4.37	29		Pn	08 59 39.6	+1.2
DGB	zmir	4.53	141	P	Pn	08 59 40.6	0.0
TLBR	Topalu	4.53	49	⇑P	Pn	08 59 43.0	+2.3
TLBR	Topalu	4.53	49		Pn	08 59 43.0	+2.3
MFTR	Murfatlar	4.54	54	⇑P	Pn	08 59 44.5	+3.7
MFTR	Murfatlar	4.54	54		Pn	08 59 44.5	+3.7
HARR	Harsova	4.56	47	⇓P	Pn	08 59 42.8	+1.8
HARR	Harsova	4.56	47		Pn	08 59 42.8	+1.8
HARR	Harsova	4.56	47	P	Pn	08 59 42.8	+1.8
MDB	Medias	4.57	10	⇑P	Pn	08 59 43.4	+2.3
MDB	Medias	4.57	10		Pn	08 59 43.4	+2.3
MDB	Medias	4.57	10	P	Pn	08 59 43.4	+2.3
ITM	Ithomi	4.58	194		Pn	08 59 42.8	+1.4
DOPR	Dopca	4.58	19	⇑P	Pn	08 59 41.3	-0.1
DOPR	Dopca	4.58	19		Pn	08 59 41.3	-0.1
GRER		4.60	34	⇓P	Pn	08 59 44.1	+2.6
GRER		4.60	34		Pn	08 59 44.1	+2.6
EFOR	EFORIE	4.62	56	⇑P	Pn	08 59 44.4	+2.6
EFOR	EFORIE	4.62	56		Pn	08 59 44.4	+2.6
BISRR	Bisoca	4.63	31	⇑P	Pn	08 59 43.8	+1.8
BISRR	Bisoca	4.63	31		Pn	08 59 43.8	+1.8
TIRR	Tirgusor	4.69	51	⇓P	Pn	08 59 45.7	+2.9
TIRR				⇓P	Pb	08 59 45.9	-8.4
TIRR	Tirgusor	4.69	51	⇓P	Pn	08 59 45.7	+2.9
TIRR				⇓P	Pb	08 59 45.9	-8.4
TIRR	Tirgusor	4.69	51	Pn	Pn	08 59 43.5	+0.7
TIRR	Tirgusor	4.69	51		Pn	08 59 45.9	+3.0
TIRR	Tirgusor	4.69	51	P	Pn	08 59 43.5	+0.7
COVR	Voineasa-Covas	4.70	26	⇑P	Pn	08 59 43.7	+0.7
COVR	Voineasa-Covas	4.70	26		Pn	08 59 43.7	+0.7
SIRR	Siria	4.77	346	⇑P	Pn	08 59 42.3	-1.7
SIRR	Siria	4.77	346		Pn	08 59 42.3	-1.7
OZUR		4.80	21	⇑P	Pn	08 59 44.5	0.0
OZUR		4.80	21		Pn	08 59 44.5	0.0
PLOR	Plostina	4.86	29	⇓P	Pn	08 59 46.3	+1.1
PLOR	Plostina	4.86	29		Pn	08 59 46.3	+1.1
PLOR	Plostina	4.86	29	P	Pn	08 59 46.3	+1.1
LSTV	Lastovo	4.88	285	*e*Pn	Pn	08 59 45.7	+0.3
LSTV				Sn	Sn	09 00 41.1	-1.0
APE	Apeiranthos	4.89	158	⇑P	Pn	08 59 44.4	-1.2
APE	Apeiranthos	4.89	158		Pn	08 59 44.4	-1.2
APE	Apeiranthos	4.89	158	*i* P	Pn	08 59 44.4	-1.2
APE	Apeiranthos	4.89	158	P	Pn	08 59 43.8	-1.8
VRI	Vrincioaia	4.90	29	⇑P	Pn	08 59 46.5	+0.7
VRI	Vrincioaia	4.90	29		Pn	08 59 46.5	+0.7
VRI	Vrincioaia	4.90	29	P	Pn	08 59 46.5	+0.7
RICI	Ricice	4.91	294	*e*Pn	Pn	08 59 47.1	+1.3
RICI				Sn	Sn	09 00 42.1	-0.8
MAKA	Makarska	4.92	292	*i* Pn	Pn	08 59 46.5	+0.6
MAKA				Sn	Sn	09 00 42.4	-0.7
TPGR	Topolog	4.94	48	⇑P	Pn	08 59 47.6	+1.4
TPGR	Topolog	4.94	48		Pn	08 59 47.6	+1.4
ODBI	Odobesti	4.94	32	⇓P	Pn	08 59 48.5	+2.2
ODBI	Odobesti	4.94	32		Pn	08 59 48.5	+2.2
PANC	Panciu	5.07	32	⇑P	Pn	08 59 48.8	+0.8
PANC	Panciu	5.07	32		Pn	08 59 48.8	+0.8
SRKY	Kupres RS	5.11	300	*e*Pn	Pn	08 59 49.3	+0.6
SCTR	Scanteiesti	5.28	39	⇑P	Pn	08 59 53.3	+2.4
SCTR	Scanteiesti	5.28	39		Pn	08 59 53.3	+2.4
HVAR	Hvar	5.29	289	*e*Pn	Pn	08 59 51.0	0.0
HVAR				Sn	Sn	09 00 50.6	-1.6
MGRS	Mrkonjic Grad	5.33	303	*e*Pn	Pn	08 59 52.5	+0.9
TLCR		5.36	47	⇓P	Pn	08 59 52.7	+0.7
TLCR		5.36	47		Pn	08 59 52.7	+0.7
TLCR		5.36	47	P	Pn	08 59 52.7	+0.7
BLY	Banja Luka	5.43	307	*e*Pn	Pn	08 59 52.9	-0.1
TESR	Tescani	5.44	25	⇑P	Pn	08 59 53.3	+0.2
TESR	Tescani	5.44	25		Pn	08 59 53.3	+0.2
VLDR	Vladesti	5.45	38	⇑P	Pn	08 59 54.3	+1.1
VLDR	Vladesti	5.45	38		Pn	08 59 54.4	+1.1
A252A	Venje	5.48	316	*e*Pn	Pn	08 59 53.0	-0.6
A252A				Sn	Sn	09 00 52.3	-4.5
BORR	Bors	5.55	349	⇑P	Pn	08 59 54.3	-0.4
BORR	Bors	5.55	349		Pn	08 59 54.3	-0.4
TIP	Timpagrande	5.56	246	⇑P	Pn	08 59 53.7	-1.1
TIP	Timpagrande	5.56	246		Pn	08 59 54.6	-0.2
KIJV	Kijevo	5.58	297	*e*Pn	Pn	08 59 55.9	+0.8
KIJV				Sn	Sn	09 00 58.0	-1.5
SGRT	San Giovanni R	5.65	274	Pn	Pn	08 59 55.3	-0.8
BIZ	Bicaz	5.67	20	⇓P	Pn	08 59 57.0	+0.8
BIZ	Bicaz	5.67	20		Pn	08 59 57.0	+0.8
MORH	Mrgy, Hungar	5.67	325	*e*Pn	Pn	08 59 55.0	-1.2
MORH	Mrgy, Hungar	5.67	325	P	Pn	08 59 55.2	-1.0
MORH				S	Sn	09 01 01.5	-0.1
BORA	Eskisehir	5.72	106	Pn	Pn	08 59 57.4	+0.3
GIRR	Girov	5.79	22	⇑P	Pn	08 59 58.9	+0.9
GIRR	Girov	5.79	22		Pn	08 59 58.9	+0.9
LTVH	Ltavrtes, Hu	5.83	351	P	Pn	08 59 59.7	+1.3
CUC	Castrocucco	5.90	256		Pn	08 59 59.9	+0.3
ZIRJ	Zirje	5.98	292	*e*Pn	Pn	09 00 00.5	0.0
ZIRJ				Sn	Sn	09 01 07.9	-1.5
MORI	Morici	6.01	294	*e*Pn	Pn	09 00 01.2	+0.3
MORI				Sn	Sn	09 01 07.9	-2.0
MDUB	Mudurnu	6.09	98		Pn	09 00 02.9	+0.7
BURAR	Bucovina Array	6.13	12	⇓P	Pn	09 00 02.7	0.0
BURAR	Bucovina Array	6.13	12		Pn	09 00 02.7	0.0
BURAR	Bucovina Array	6.13	12		Pn	09 00 02.7	0.0
BUR08	Bucovina Ar. S	6.15	12		Pn	09 00 03.3	+0.3
MOSL	Moslavina	6.18	312	*e*Pn	Pn	09 00 02.7	-0.7
MOSL				Sn	Sn	09 01 09.4	-4.9
UDBI	Udbina	6.22	300	*e*Pn	Pn	09 00 03.6	-0.3
UDBI				Sn	Sn	09 01 11.8	-3.4
PLIT	Plitvice	6.46	303	*e*Pn	Pn	09 00 07.4	+0.2
PLIT				Sn	Sn	09 01 17.7	-3.4
IDI	Anoyia	6.47	168	⇑P	Pn	09 00 08.4	+1.1
IDI	Anoyia	6.47	168	Pn	Pn	09 00 06.7	-0.7
	comp=N,4.6nm,0.3s,baz=12,slow=9.2,SNR=29						
IDI				Sn	Sn	09 01 19.8	-1.6
	baz=108,slow=13						
IDI				LR	LR	09 02 58.6	
	comp=N,280nm,21.0s,baz=274,slow=42						
	comp=N,17nm,0.4s						
IDI	Anoyia	6.47	168		Pn	09 00 08.4	+1.1
DUGI	Dugi Otok	6.49	294	*e*Pn	Pn	09 00 07.5	0.0
DUGI				Sn	Sn	09 01 19.5	-2.3
TIH	Tihany	6.53	325	P	Pn	09 00 07.3	-0.7
BUD	Budapest	6.58	334	P	Pn	09 00 08.1	-0.7
BUD				S	Sn	09 01 22.9	-1.2
PAOL	Paolisi	6.59	268		Pn	09 00 09.5	+0.5
VIRC	Vir	6.59	296	*e*Pn	Pn	09 00 08.9	-0.1
VIRC				Sn	Sn	09 01 22.8	-1.5
MILM	Milestii Mici	6.60	35	*e*P	Pn	09 00 10.0	+1.0
	comp=N,17nm,0.7s						
MILM				*e*S	Sn	09 01 24.0	-0.4
MILM				*e*L	L	09 02 41.0	
MILM				LRM	MLR	09 03 07.0	
	comp=N,800nm,10.5s						
MILM	Milestii Mici	6.60	35	*e*P	Pn	09 00 10.0	+1.0
MILM				*e*S	Sn	09 01 24.0	-0.4
MILM				pmax	pmax		
	comp=Z,17nm,0.7s						
MILM				MLR	MLR		
	comp=Z,800nm,10.5s						
MILM				MLR	MLR		
	comp=N,900nm,14.0s						
ARG	Arkhangelos	6.60	144	Pn	Pn	09 00 09.9	+0.8
ARG	Arkhangelos	6.60	144	P	Pn	09 00 09.9	+0.8
CEL	Celeste	6.61	242		Pn	09 00 09.0	-0.2
KIS	Kishinev	6.66	35	*e*	Pg	09 00 46.0	+6.8
KIS				LRM	MLR	09 03 40.0	
	comp=N,900nm,11.0s						
KALN	Kalnik	6.67	315	*e*Pn	Pn	09 00 09.1	-1.0
KALN				Sn	Sn	09 01 20.3	-5.9
PSZ	Piszkesteto	6.72	340	⇓P	Pn	09 00 10.4	-0.4
PSZ	Piszkesteto	6.72	340		Pn	09 00 09.6	-1.2
PSZ	Piszkesteto	6.72	340		Pn	09 00 10.4	-0.4
PSZ	Piszkesteto	6.72	340	P	Pn	09 00 09.6	-1.2
PSZ	Piszkesteto	6.72	340	P	Pn	09 00 10.3	-0.4
PSZ				S	Sn	09 01 23.2	-4.5
ISP	Isparta	6.75	122	*i* P	Pn	09 00 19.2	+7.9
PTJ	Puntijarka	6.80	311	*e*Pn	Pn	09 00 10.8	-1.1
PTJ				Sn	Sn	09 01 24.9	-4.6
MPLH	Magyarpolny	6.89	325	P	Pn	09 00 12.9	-0.1
MPLH				S	Sn	09 01 29.9	-1.7
OZLJ	Ozalj	6.92	308	*e*Pn	Pn	09 00 12.8	-0.7
OZLJ				Sn	Sn	09 01 27.5	-4.9
BOJS	Bojanci	7.00	306	*i* Pn	Pn	09 00 14.3	-0.2
BOJS				*i* Pg	Pg	09 00 42.2	-3.3
BOJS				*i* Sn	Sn	09 01 30.7	-3.5
BOJS				*e*		09 02 12.3	
BOJS				*e*Sg	Sg	09 02 20.3	+4.2
A250A	Rusevo Krmpots	7.01	302	*e*Pn	Pn	09 00 15.0	+0.4
A250A				Sn	Sn	09 01 31.4	-3.2
UZH	Uzhgorod	7.02	355	*e*P	Pn	09 00 20.0	+5.2
UZH				*e*S	Sn	09 01 41.0	+6.1
UZH				MLR	MLR		

	comp=N,140nm,11.0s						
UZH				MLR	MLR		
	comp=E,60nm,11.0s						
UZH				MLR	MLR		
	comp=Z,160nm,11.0s						
SRO2	Moca	7.04	332	*e*P	Pn	09 00 17.5	+2.4
SRO2				*e*		09 01 33.8	
SRO2	Moca	7.04	332	*e*PN	Pn	09 00 17.5	+2.4
SRO2				*e*SN	Sn	09 01 33.8	-1.5
CRES	Cresnjev	7.04	309	*e*Pn	Pn	09 00 14.5	-0.7
SRO	Srobarova	7.11	332	*e*P	Pn	09 00 16.8	+0.7
SRO				*e*		09 01 38.3	
SRO	Srobarova	7.11	332	*e*PN	Pn	09 00 16.8	+0.7
SRO				*e*SN	Sn	09 01 38.2	+1.1
KECS	Kecovo	7.12	345	*e*P	Pn	09 00 16.0	-0.2
KECS				*e*		09 01 38.4	
KECS	Kecovo	7.12	345	*e*PN	Pn	09 00 16.0	-0.2
KECS				*e*SN	Sn	09 01 38.4	+1.1
EGYH	Egyhazaskeszo	7.17	326	P	Pn	09 00 17.7	+0.8
KOLS	Kolonicke sedl	7.33	355	*e*P	Pn	09 00 19.5	+0.5
KOLS	Kolonicke sedl	7.33	355	*e*PN	Pn	09 00 19.5	+0.5
KOLS	Kolonicke sedl	7.33	355	*e*SG	Sg	09 02 28.0	+1.3
CRVS	Cervenica-Dubn	7.37	351	*e*P	Pn	09 00 22.6	+2.9
CRVS	Cervenica-Dubn	7.37	351	*e*PN	Pn	09 00 22.6	+2.9
RIY	Rijeka	7.38	303	*e*Pn	Pn	09 00 20.0	+0.2
AQU	L'Aquila	7.40	279		Pn	09 00 20.1	0.0
AQU	L'Aquila	7.40	279	P	Pn	09 00 20.1	0.0
SORM	Soroca	7.42	27	⇑P	Pn	09 00 21.7	+1.4
SORM	Soroca	7.42	27		Pn	09 00 21.7	+1.4
SORM	Soroca	7.42	27	P	Pn	09 00 21.7	+1.4
BR231	Keskin MP Arra	7.43	101	Pn	Pn	09 00 20.3	-0.2
ANTO	Ankara	7.43	101	Pn	Pn	09 00 20.0	-0.6
ANTO	Ankara	7.43	101	P	Pn	09 00 20.0	-0.6
SMRN	Sveta Marina	7.47	300	*e*Pn	Pn	09 00 20.8	-0.2
SMRN				Sn	Sn	09 01 43.3	-2.6
VYHS	Vyhne	7.54	337	*e*P	Pn	09 00 21.9	0.0
VYHS				*e*		09 01 47.2	
VYHS	Vyhne	7.54	337	*e*PN	Pn	09 00 21.9	0.0
VYHS				*e*SN	Sn	09 01 47.2	-0.4
CEY	Cerknica	7.61	305	*e*Pn	Pn	09 00 22.8	-0.2
NRCA	Norcia	7.64	282	Pn	Pn	09 00 23.3	-0.1
BRJN	Brijuni	7.69	298	*e*Pn	Pn	09 00 23.1	-0.8
BRJN				Sn	Sn	09 01 47.9	-3.3
LJU	Ljubljana	7.71	308	*e*Pn	Pn	09 00 23.9	-0.4
SOP	Sopron	7.71	324	P	Pn	09 00 24.1	-0.1
SOP				S	Sn	09 01 46.4	-5.4
KOLL	Kolacno	7.75	335	*e*PN	Pn	09 00 24.6	-0.2
KOLL				*e*SN	Sn	09 01 51.5	-1.2
SKDS	Skadanscina	7.78	303	*e*Pn	Pn	09 00 23.4	-1.9
SOKA	Soboth	7.78	313	*e*Pn	Pn	09 00 24.5	-0.8
	comp=Z,2.0nm,0.3s,SNR=9.0						
SOKA				*e*Sn	Sn	09 01 51.8	-1.9
	comp=Z,19nm,0.3s						
RONA	Rosalia, Austr	7.84	323	*e*Pn	Pn	09 00 25.2	-0.9
RONA				Sn	Sn	09 01 53.2	-1.8
ZST	Bratislava	7.88	328	*e*P	Pn	09 00 27.0	+0.4
ZST				*e*		09 01 51.2	
ZST	Bratislava	7.88	328	*e*PN	Pn	09 00 27.0	+0.4
ZST				*e*SN	Sn	09 01 51.2	-4.9
ARSA	Arzberg	7.89	318	*e*Pn	Pn	09 00 26.5	-0.3
	comp=Z,18nm,0.3s,SNR=28						
ARSA				*e*Sn	Sn	09 01 55.8	-0.5
	comp=Z,40nm,0.5s						
OBKA	Obir	7.95	311	*e*Pn	Pn	09 00 28.0	+0.3
	comp=Z,1.4nm,0.2s						
OBKA				*e*Sn	Sn	09 01 52.9	-5.0
	comp=Z,40nm,0.7s						
MODS	Modra-Piesok	7.96	330	*e*P	Pn	09 00 28.1	+0.4
MODS				*e*		09 01 55.1	
MODS	Modra-Piesok	7.96	330	*e*PN	Pn	09 00 28.1	+0.4
MODS				*e*SN	Sn	09 01 55.1	-2.9
LANS	Liptovska Anna	7.97	342	*e*P	Pn	09 00 30.5	+2.6
LANS	Liptovska Anna	7.97	342	*e*PN	Pn	09 00 30.5	+2.6
LANS				*e*PG	Pg	09 00 58.2	-6.0
KWP	Kalwaria Pacla	8.00	357	*e*P	Pn	09 00 34.2	+6.0
KWP				*e*S	Sb	09 02 32.0	+6.0
VAE	Valguarnera	8.02	242	Pn	Pn	09 00 28.0	-0.6
	comp=Z,0.9nm,0.3s,baz=184,slow=21,SNR=1.3						
	comp=Z,3.1nm,0.3s						
SMOL	Smolenice	8.02	331	*e*P	Pn	09 00 32.4	+3.8
SMOL	Smolenice	8.02	331	*e*PN	Pn	09 00 32.4	+3.8
NIE	Niedzica	8.05	346	*e*P	Pn	09 00 30.2	+1.2
NIE				*e*S	Sb	09 02 23.6	-3.9
BR131	Keskin Array S	8.10	100		Pn	09 00 29.2	-0.5
BR131	Keskin Array S	8.10	100	*i* P	Pn	09 00 29.8	+0.1
BRTR	Keskin Array B	8.10	100	Pn	Pn	09 00 29.2	-0.5
	comp=Z,0.6nm,0.3s,baz=281,slow=15,SNR=12						
BRTR				Sn	Sn	09 01 56.9	-4.7
	comp=Z,0.6nm,0.3s,baz=45,slow=24,SNR=5.6						
	comp=Z,1.8nm,0.4s						
BRTR	Keskin Array B	8.10	100		Pn	09 00 29.4	-0.3
BRTR	Keskin Array B	8.10	100	P	Pn	09 00 29.4	-0.3
MURB	Monte Urbino	8.12	285		Pn	09 00 30.0	0.0
SEV	Sevastopol'	8.13	66	⇓*e*P	Pn	09 00 31.4	+1.4
SEV				*e*S	Sn	09 02 04.6	+2.5
LVV	L'vov	8.19	3	*e*P	Pn	09 00 31.4	+0.5
LVV				*e*S	Sn	09 02 04.1	+0.4
LVV				MLR	MLR		
	comp=E,600nm,10.0s						
LVV				MLR	MLR		
	comp=N,700nm,9.0s						
LVV				MLR	MLR		
	comp=Z,600nm,10.0s						
CONA	Conrad Observa	8.21	322	*e*Pn	Pn	09 00 30.0	-1.1
	comp=Z,8.8nm,0.5s,SNR=15						
CONA				*e*Sn	Sn	09 02 02.1	-2.0
	comp=Z,14nm,0.4s						
JAVC	Velka Javorina	8.23	333	*e*PN	Pn	09 00 33.3	+1.8
MYKA	Terra Mystica	8.54	309	*e*Pn	Pn	09 00 36.4	+0.7
	comp=Z,5.4nm,0.5s,SNR=8.1						
SIM	Simferopol'	8.56	64	*e*P	Pn	09 00 36.7	+0.8
SIM				*e*S	Sn	09 02 12.4	-0.3
LATE	Laterza	8.59	280		Pn	09 00 35.6	-0.8
MAUC	Maruska	8.62	335	*e*PN	Pn	09 00 37.2	+0.4
MAUC				AMS	AMS	09 04 20.0	
	comp=Z,2µm,10.5s						
ALU	Alushta	8.67	66	*e*P	Pn	09 00 37.3	-0.2
ALU				*e*S	Sn	09 02 15.9	+0.4
KRUC	Moravsky	8.86	329	*e*PN	Pn	09 00 39.9	-0.2
OJC	Ojcow	8.91	345	*e*P	Pn	09 00 43.3	+2.5
OJC				*e*S	Sg	09 02 58.5	-19
OJC	Ojcow	8.91	345		Pn	09 00 40.3	-0.5
OJC	Ojcow	8.91	345	P	Pn	09 00 40.3	-0.5
STAL	STALIGIAL	8.91	305		Pn	09 00 40.2	-0.6
MOA	Molln	8.92	317	*e*Pn	Pn	09 00 41.7	+0.7
	comp=Z,8.2nm,0.5s,SNR=15						
MOA				*e*Sn	Sn	09 02 20.0	-1.7
	comp=Z,55nm,0.8s						
OKC	Ostrava-Krasne	8.95	338	AMS	AMS	09 04 30.0	
	comp=Z,1µm,10.0s						
KBA	Koelnbreinsper	8.96	311	*e*Pn	Pn	09 00 43.8	+2.2
	comp=Z,4.7nm,0.5s,SNR=11						
KBA				*e*Sn	Sn	09 02 21.5	-1.1
	comp=Z,23nm,0.6s						
VRAC	Vranov	8.99	331	Pn	Pn	09 00 40.0	-1.8
	comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=2.7						
VRAC				LR	LR	09 04 47.6	
	comp=Z,144nm,20.3s,baz=146,slow=42						
	comp=Z,2.2nm,0.7s						
VRAC	Vranov	8.99	331	P	Pn	09 00 40.0	-1.8
VRAC	Vranov	8.99	331	*e*PN	Pn	09 00 43.2	+1.4
MORC	Moravsky Berou	9.07	336	*e*PN	Pn	09 00 44.1	+1.1
OSSC	Osservatorio P	9.08	286		Pn	09 00 42.5	-0.6
SUDU	Sudak	9.14	65	*e*P	Pn	09 00 46.4	+2.5
SUDU				*i* S	Sn	09 02 28.6	+1.7
BIOA	Bad Ischl, Aus	9.15	315	*e*Pn	Pn	09 00 45.0	+1.0
	SNR=8.5						
BIOA				Sn	Sn	09 02 24.4	-2.9
TEOL	Teolo	9.22	298		Pn	09 00 43.4	-1.7
ABTA	Abfaltersbach	9.27	307	*e*Pn	Pn	09 00 45.8	+0.1
	comp=Z,12nm,0.5s,SNR=20						
CASP	Castiglione de	9.29	281	Pn	Pn	09 00 45.4	-0.6
TREC	Trest	9.41	327	AMS	AMS	09 04 40.0	
	comp=Z,600nm,8.5s						
FEO	Feodosiya	9.44	65	*e*P	Pn	09 00 53.1	+5.1
FEO				*e*S	Sn	09 02 38.5	+4.2
CTI	Castel Tesino	9.49	302		Pn	09 00 48.1	-0.7
CTI	Castel Tesino	9.49	302	P	Pn	09 00 48.1	-0.7
CKRC	Cesky Krumlov	9.57	322	*e*PN	Pn	09 00 53.2	+3.5
CKRC				*e*SN	Sn	09 02 38.7	+1.3
KRLC	Kraliky	9.57	334	AMS	AMS	09 04 50.0	
	comp=Z,700nm,10.6s						
VLC	Villacollemand	9.80	289		Pn	09 00 52.4	-0.5
GEC2	GERESS Array S	9.87	320		Pn	09 00 54.3	+0.3
GERES	GERESS Array B	9.87	320	Pn	Pn	09 00 54.3	+0.3
	comp=Z,0.6nm,0.3s,baz=150,slow=14,SNR=13						
GERES				Sn	Sn	09 02 51.6	+6.5
	comp=Z,1.0nm,0.3s,baz=136,slow=27,SNR=5.3						
GERES				LR	LR	09 04 30.5	
	comp=Z,143nm,21.1s,baz=142,slow=36						
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	9.87	320		Pn	09 00 54.0	0.0
AKASG	Malin Array Be	9.95	22	Pn	Pn	09 00 52.8	-2.1
	comp=Z,0.7nm,0.3s,baz=208,slow=13,SNR=2.9						
AKASG				Sn	Sn	09 02 43.9	-2.9
	comp=Z,1.1nm,0.3s,baz=200,slow=24,SNR=4.5						
AKASG				LR	LR	09 05 34.5	
	comp=Z,424nm,18.8s,baz=208,slow=43						
	comp=Z,0.5nm,0.4s						
AKBB	Malin Array Si	9.95	22	*i* P	Pn	09 00 59.9	+5.0
DPC	Dobruska-Polom	9.96	333	*e*P	Pn	09 00 54.2	-1.0
DPC				*e*		09 02 43.7	
DPC				MLR	MLR		
	comp=Z,600nm,11.2s						
DPC	Dobruska-Polom	9.96	333	*e*PN	Pn	09 00 54.2	-1.0
DPC				*e*SN	Sn	09 02 43.7	-3.5
DPC				AMS	AMS	09 05 10.0	
	comp=Z,600nm,11.2s						
PRMA	PARMA	9.97	293		Pn	09 00 55.4	+0.1
WTTA	Wattenberg	10.04	308	*e*Pn	Pn	09 00 57.8	+1.3
	comp=Z,17nm,0.4s,SNR=18						
WTTA				*e*Sn	Sn	09 02 48.0	-1.4
	comp=Z,22nm,0.9s						
SALO	Salr	10.07	298		Pn	09 00 55.0	-1.7
WATA	Walderalm	10.12	308	*e*Pn	Pn	09 00 59.4	+2.0
	comp=Z,12nm,0.4s,SNR=13						
WATA				*e*Sn	Sn	09 02 49.6	-1.5
	comp=Z,20nm,0.7s						
KHC	Kasperske Hory	10.13	321		Pn	09 00 57.4	-0.1
KHC	Kasperske Hory	10.13	321	*e*P	Pn	09 01 00.4	+3.0
KHC				*e*		09 02 52.4	
KHC				MLR	MLR		
	comp=Z,1µm,9.7s						
KHC	Kasperske Hory	10.13	321	*e*PN	Pn	09 01 00.4	+3.0
KHC				*e*SN	Sn	09 02 52.4	+1.2
KHC				AMS	AMS	09 05 10.0	
	comp=Z,1µm,9.7s						
OSTC	Ostas	10.17	334	AMS	AMS	09 05 10.0	
	comp=Z,500nm,12.2s						
UPC	Upice	10.20	333	AMS	AMS	09 05 10.0	
	comp=Z,800nm,12.4s						
CHVC	Chvalec	10.25	333	AMS	AMS	09 05 20.0	
	comp=Z,700nm,10.6s						
SQTA	Sankt Quirin	10.28	307	*e*Pn	Pn	09 01 01.4	+1.8
	comp=Z,8.2nm,0.4s,SNR=19						
PRU	Pruhonice	10.33	327	*e*P	Pn	09 01 02.4	+2.2
PRU				*e*		09 02 54.4	
PRU				MLR	MLR		
	comp=Z,500nm,8.9s						
PRU	Pruhonice	10.33	327	*e*PN	Pn	09 01 02.4	+2.2
PRU				*e*SN	Sn	09 02 54.4	-1.8
PRU				AMS	AMS	09 05 30.0	
	comp=Z,500nm,8.9s						
KSP	Ksiaz	10.39	335	*e*P	Pn	09 01 08.9	+7.8
MOTA	Moosalm	10.40	307	*e*Pn	Pn	09 01 02.0	+0.8
	comp=Z,19nm,0.5s,SNR=25						
MOTA				*e*Sn	Sn	09 02 56.7	-1.4
	comp=Z,6.7nm,0.7s						
MSSA	Maissana	10.44	289		Pn	09 01 00.6	-1.2
FETA	Feichten	10.48	305	*e*Pn	Pn	09 01 02.9	+0.5
	comp=Z,8.6nm,0.7s,SNR=14						
RETA	Reutte	10.67	307	*e*Pn	Pn	09 01 06.0	+1.1
	comp=Z,3.7nm,0.3s						
PVCC	Panska Ves	10.74	329	AMS	AMS	09 05 30.0	
	comp=Z,600nm,8.9s						
VSL	Villasalto	10.80	263	Pn	Pn	09 01 05.7	-1.0
DAVOX	Davos/Dischmat	10.90	303	Pn	Pn	09 01 07.8	-0.4
	comp=Z,0.7nm,0.3s,baz=137,slow=14,SNR=25						
DAVOX				Sn	Sn	09 03 10.6	+0.1
	comp=Z,0.1nm,0.3s,baz=320,slow=20,SNR=1.8						
DAVOX				LR	LR	09 06 08.8	
	comp=Z,380nm,19.6s,baz=84,slow=42						
	comp=Z,8.1nm,0.7s						
DAVA	Damuels	11.11	305	*e*Pn	Pn	09 01 12.5	+1.4
	comp=Z,2.7nm,0.3s						
TUE	Stuetta	11.13	300		Pn	09 01 09.8	-1.5
BRG	Berggiesshubel	11.26	328	*e*P	Pn	09 01 15.7	+2.8
BRG				Amp		09 01 28.6	
	comp=Z,1.5nm,0.5s						
BRG				*e*x	x	09 01 52.1	
BRG				Amp		09 01 55.6	
	comp=Z,3.2nm,1.1s						
BRG				*e*x	x	09 03 54.1	
BRG				Amp		09 04 43.1	
	comp=Z,6.7nm,0.9s						
BRG	Berggiesshubel	11.26	328	*e*P	Pn	09 01 15.7	+2.8
BRG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NKC	Novy Kostel	11.42	322	*e*P	Pn	09 01 16.9	+1.7
NKC				MLR	MLR		
	comp=Z,900nm,11.2s						
NKC	Novy Kostel	11.42	322	*e*PN	Pn	09 01 16.9	+1.7
NKC				AMS	AMS	09 05 50.0	
	comp=Z,900nm,11.2s						
GRA1	Grafenberg Arr	11.65	318		Pn	09 01 17.7	-0.6
GRF	Grafenberg Arr	11.65	318	P	Pn	09 01 17.7	-0.6
GRFO	Grafenberg	11.65	318	Pn	Pn	09 01 17.4	-0.8
GRFO	Grafenberg	11.65	318	P	Pn	09 01 17.4	-0.8
CLL	Collm	11.97	327	*e*P	Pn	09 01 25.0	+2.4
CLL	Collm	11.97	327	*e*Pn	Pn	09 01 25.0	+2.4
CLL				*e*x	x	09 01 42.0	
CLL				*e*Sb	Sn	09 04 01.0	+25
CLL				*e*x	x	09 04 21.0	
CLL				*e*Sg		09 04 52.0	
CLL				*e*Sglp		09 04 58.0	
	comp=N,300nm,23.5s						
CLL				*e*Sglp		09 04 58.0	
	comp=E,300nm,22.7s						
STU	Stuttgart	12.22	310	Pn	Pn	09 01 26.1	+0.1
STU	Stuttgart	12.22	310	P	Pn	09 01 26.1	+0.1
SOC	Sochi	12.26	75	*e*P	Pn	09 01 28.1	+1.5
SOC				*e*		09 03 46.3	
SOC				MLR	MLR		
	comp=Z,88nm,15.0s						
SUW	Suwalki	12.38	360	*e*P	Pn	09 01 29.4	+1.3
SUW	Suwalki	12.38	360		Pn	09 01 26.5	-1.6
SUW	Suwalki	12.38	360	P	Pn	09 01 26.5	-1.6
KEST	Kesra	12.38	246	Pn	Pn	09 01 29.3	+0.9
	comp=Z,0.2nm,0.3s,baz=37,slow=4.6,SNR=4.5						
	comp=Z,5.6nm,1.1s						
KEST	Kesra	12.38	246	Pn	Pn	09 01 28.1	-0.3
SENIN	Lac Senin/Sane	12.44	298		Pn	09 01 28.6	-0.7
BFO	Black Forest	12.51	307		Pn	09 01 29.6	-0.4
BFO	Black Forest	12.51	307	P	Pn	09 01 29.6	-0.4
BNI	Bardonecchia	12.56	291		Pn	09 01 30.2	-0.6
BNI	Bardonecchia	12.56	291	P	Pn	09 01 30.2	-0.6
MMAI	Mount Meron Ar	12.92	128	LR	LR	09 07 12.1	
	comp=Z,151nm,19.2s,baz=108,slow=40						
KLNR	Kaliningrad	13.13	352	*i* P	Pn	09 01 42.4	+4.0
KLNR				pmax	pmax		
	comp=Z,41nm,1.6s						
ECH	Echery	13.17	305		Pn	09 01 38.2	-0.8
ECH	Echery	13.17	305	P	Pn	09 01 38.2	-0.8
MNK	Minsk	13.22	12	*i* P	P	09 01 45.5	-4.2
	comp=E,1.0nm,0.8s						
MNK				*i* P	P	09 01 45.5	-4.2
	comp=N,13nm,0.7s						
MNK				*i* P	P	09 01 45.5	-4.2
	comp=Z,6.0nm,0.7s,baz=194						
MNK				*i* PP	PnPn	09 01 53.4	+5.9
MNK				*i* PPP	PPP	09 02 01.1	
MNK				*i* S	Sn	09 04 14.8	+7.9
MNK				*i* SS	S	09 04 28.3	-3.5
MNK				*i* SSS	SSS	09 04 40.8	
MNK				*i* LQ	LQ	09 05 39.6	
MNK				*i* LR	LR	09 06 29.9	
MNK				*i* LRM	MLR	09 07 22.9	
	comp=E,12nm,12.7s						
MNK				*i* LRM	MLR	09 07 22.9	
	comp=N,176nm,13.6s						
MNK				*i* LRM	MLR	09 07 22.9	
	comp=Z,227nm,14.0s						
SHA1	Shidzhatmaz	14.40	75	*i* P	P	09 02 00.8	-2.3
KIV	Kislovodsk	14.43	74	*e*P	P	09 02 01.1	-2.2
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,26nm,13.0s						
KBZ	Khabaz	14.57	75	Pn	Pn	09 01 58.5	+0.3
	comp=Z,0.1nm,0.3s,baz=60,slow=23,SNR=1.9						
	comp=Z,0.6nm,0.5s						
KBZ	Khabaz	14.57	75	*ce*P	P	09 02 03.2	-1.6
BTNL	Ternell	14.86	313	*d*P	P	09 02 05.9	-2.0
MEM	Membach	14.94	313	*d*PP	P	09 02 09.3	+0.5
NCK	Nalchik	15.08	76	*i* P	P	09 02 10.3	-0.1
NCK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
RCHB	Rochefort	15.15	310	*d*PP	P	09 02 12.8	+1.7
BCLA	Clavier	15.23	311	*d*P	P	09 02 10.8	-1.3
BCLA				*d*x	x	09 02 18.2	
LPSR	Galich'ya Gora	15.24	39	*e*P	Pn	09 02 06.6	-0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	15.32	79	*e*P	P	09 02 15.6	+2.3
ZEI				pmax	pmax		
	comp=Z,18nm,1.3s						
BMRD	Maredsous	15.48	310	*d*P	P	09 02 13.2	-1.7
BMRD				*d*x	x	09 02 23.8	
VRH	Novokhopyorsk	15.87	47	*e*P	Pn	09 02 14.9	-0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	Obninsk	16.07	28	*i* P	P	09 02 20.7	-0.6
OBN				pmax	pmax		
	comp=Z,21nm,0.5s						
OBN				MLR	MLR		
	comp=Z,126nm,13.0s						
GNI	Garni	16.29	88	Pn	Pn	09 02 22.0	+1.0
	comp=Z,1.1nm,0.3s,baz=162,slow=20,SNR=1.6						
	comp=Z,5.1nm,0.5s						
GNI	Garni	16.29	88	Pn	Pn	09 02 19.9	-1.1
GNI				IAmb	IAmb	09 02 28.5	
	comp=Z,27nm,1.2s						
GNI	Garni	16.29	88	P	Pn	09 02 22.0	+1.0
GROC	Groznyy	16.69	77	*e*P	P	09 02 28.5	+0.2
GROC				pmax	pmax		
	comp=Z,18nm,0.7s						
MOS	Moscow	16.93	29	*e*P	P	09 02 32.6	+1.7
MOS				*e*S	Sn	09 05 40.3	+3.2
MOS				MLR	MLR		
	comp=Z,300nm,11.0s						
VSU	Vasula	16.98	6	*i* P	P	09 02 33.7	+2.4
VSU				pmax	pmax		
	comp=Z,41nm,0.9s						
VSU	Vasula	16.98	6	*e*P	P	09 02 31.7	+0.4
VIKU	Vikbolandet	17.38	348	*e*P	P	09 02 36.6	+0.8
MEF	Metsahovi	18.61	2	*e*P	Pn	09 02 50.5	+0.9
RAF	Rauma	19.43	358	*e*P	P	09 02 55.7	-2.6
HFS	Hagfors	19.44	345	P	P	09 02 57.3	-1.2
	comp=Z,0.1nm,0.3s,baz=114,slow=33,SNR=2.2						
HFS				LR	LR	09 12 38.9	
	comp=Z,105nm,18.1s,baz=160,slow=44						
	comp=Z,0.8nm,0.6s						
BELG	Belogornoye	19.68	49	P	Pn	09 03 01.8	-0.6
	baz=50,slow=5.6,SNR=5.3						
	comp=Z,15nm,1.0s						
FINES	FINESS Array B	19.90	4	P	P	09 03 02.2	-1.2
	comp=Z,0.2nm,0.3s,baz=186,slow=7.7,SNR=7.9						
FINES				LR	LR	09 10 15.3	
	comp=Z,104nm,21.4s,baz=189,slow=35						
	comp=Z,1.6nm,0.7s						
FINES	FINESS Array B	19.90	4	P	P	09 03 03.0	-0.4
FINES	FINESS Array B	19.90	4	P	P	09 03 03.0	-0.4
NC602	NORSAR Array S	20.43	343	P	P	09 03 08.0	-1.1
NC602				IAmb	IAmb	09 03 18.7	
	comp=Z,9.7nm,0.8s						
NAO01	NORSAR Array S	20.67	343	P	P	09 03 11.1	-0.7
NC405	NORSAR Array S	20.73	344	P	P	09 03 10.8	-1.7
NC405				IAmb	IAmb	09 03 19.7	
	comp=Z,19nm,0.9s						
ESDC	Sonseca Array	20.74	274	P	P	09 03 11.7	-1.1
	comp=Z,1.5nm,0.8s,baz=70,slow=12,SNR=10						
ESDC				LR	LR	09 11 19.1	
	comp=Z,82nm,21.0s,baz=78,slow=37						
	comp=Z,1.5nm,0.8s						
ESDC	Sonseca Array	20.74	274	IAmb	IAmb	09 03 18.5	
	comp=Z,2.8nm,1.3s						
NB2	NORSAR Subarra	20.77	343	P	P	09 03 11.2	-1.8
	comp=Z,12nm,1.1s,baz=155,slow=11						
NOA	NORSAR Array B	20.77	343	P	P	09 03 11.8	-1.2
	comp=Z,4.2nm,0.8s,baz=145,slow=10,SNR=12						
NOA				LR	LR	09 12 24.2	
	comp=Z,91nm,18.4s,baz=160,slow=40						
	comp=Z,4.2nm,0.8s						
NBO00	NORSAR Array S	20.86	343	P	P	09 03 13.5	-0.4
NBO00				IAmb	IAmb	09 03 22.1	
	comp=Z,32nm,1.1s						
NC303	NORSAR Array S	20.90	344	P	P	09 03 13.7	-0.6
NC303				IAmb	IAmb	09 03 20.4	
	comp=Z,18nm,1.2s						
NC204	NORSAR Array S	21.08	343	P	P	09 03 15.8	-0.6
KLMR	Klimovskoe	21.64	22	*e*P	P	09 03 23.0	+0.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.2s						
KLMR	Klimovskoe	21.64	22	*e*P	P	09 03 23.1	+0.8
KLMR				AMP		09 03 31.6	
	comp=Z,21nm,1.2s						
EKA	Eskdalemuir Ar	22.07	317	P	P	09 03 25.9	-1.0
	comp=Z,1.9nm,0.7s,baz=104,slow=8.6,SNR=7.5						
EKA				LR	LR	09 12 46.1	
	comp=Z,89nm,21.2s,baz=120,slow=39						
	comp=Z,1.9nm,0.7s						
KIRV	Kirov	23.60	35	P	P	09 03 43.6	+0.9
	comp=Z,5.2nm,0.5s,baz=45,slow=21,SNR=1.9						
	comp=Z,5.2nm,0.5s						
KIRV	Kirov	23.60	35	*ce*P	P	09 03 46.6	+3.8
MDT	Midelt	23.81	257	P	P	09 03 45.0	-0.2
	comp=Z,4.2nm,0.9s,baz=77,slow=4.7,SNR=8.1						
MDT				LR	LR	09 13 01.1	
	comp=Z,81nm,19.3s,baz=76,slow=37						
	comp=Z,4.2nm,0.9s						
AKTO	Aktyubinsk	25.46	58	P	P	09 04 00.7	+0.6
	comp=Z,5.1nm,1.1s,baz=252,slow=13,SNR=6.2						
AKTO				LR	LR	09 15 55.8	
	comp=Z,64nm,19.4s,baz=275,slow=41						
	comp=Z,5.1nm,1.1s						
ARU	Arti	27.08	45	P	P	09 04 15.3	+0.6
	comp=Z,0.6nm,0.4s,baz=141,slow=20,SNR=1.2						
	comp=Z,0.6nm,0.4s						
ARU	Arti	27.08	45	P	P	09 04 12.7	-1.9
ARU	Arti	27.08	45	*c i*P	P	09 04 19.7	+5.1
ARU						09 05 00.6	
ARU				SS	SS	09 10 05.2	-41
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,113nm,12.0s						
ARCES	ARCESS Array B	27.98	2	LR	LR	09 16 28.3	
	comp=Z,167nm,18.4s,baz=196,slow=38						
BRVK	Borovoye	33.24	54	*ce*P	P	09 05 14.6	+5.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JMIC	Jan Mayen	33.47	342	LR	LR	09 20 37.2	
	comp=Z,59nm,18.0s,baz=331,slow=40						
TORD	Torodi Ar. Bea	34.05	220	P	P	09 05 16.0	-0.6
	comp=Z,3.0nm,0.8s,baz=36,slow=9.2,SNR=16						
	comp=Z,3.0nm,0.8s						
TORD	Torodi Ar. Bea	34.05	220	P	P	09 05 15.2	-1.4
TORD				IAmb	IAmb	09 05 17.1	
	comp=Z,4.7nm,1.1s						
BORG	Borgarnes	34.22	328	LR	LR	09 19 49.8	
	comp=Z,58nm,20.7s,baz=129,slow=37						
WSAR	Wadi Sarin	34.71	111	LR	LR	09 22 37.9	
	comp=Z,92nm,20.0s,baz=302,slow=42						
MKAR	Makanchi Array	41.74	62	P	P	09 06 20.8	-0.4
	comp=Z,0.6nm,0.6s,baz=312,slow=5.9,SNR=2.8						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	41.74	62	*ce*P	P	09 06 26.3	+5.1
ZALV	Zalesovo Beam	41.83	51	P	P	09 06 21.4	-0.4
	comp=Z,0.5nm,0.4s,baz=282,slow=8.4,SNR=2.3						
	comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	41.83	51	*i* P	P	09 06 30.0	+8.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DBIC	Dimbokro	42.87	224	LR	LR	09 25 50.6	
	comp=Z,82nm,18.0s,baz=74,slow=38						
WMQ	Urumqi	46.28	65	*e*P	P	09 06 59.8	+2.0
SFJD	Kangerlussuaq	46.34	329	LR	LR	09 27 38.1	
	comp=Z,54nm,19.5s,baz=88,slow=38						
TIXI	Tiksi	55.66	22	P	P	09 08 07.7	-0.1
TIXI				IAmb	IAmb	09 08 18.7	
	comp=Z,4.3nm,1.4s						
TIXI	Tiksi	55.66	22	*ce*P	P	09 08 13.5	+5.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	56.65	53	P	P	09 08 15.3	-0.1

	comp=Z,0.4nm,0.3s,baz=284,slow=5.8,SNR=2.8						
	comp=Z,0.4nm,0.3s						
TSUM	Tsumeb	60.77	186	LR	LR	09 36 21.0	
	comp=Z,68nm,19.9s,baz=330,slow=37						
HHC	Hu-ho-hao-te	63.36	58	eP	P	09 09 01.8	+0.2
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
PZH	PanZhiHua	64.64	76	P	P	09 09 12.6	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,5.9s						
BILL	Bilibino	67.15	14	i P	P	09 09 25.9	+0.3
BILL				i		09 10 00.6	
BILL				i		09 12 02.3	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
CMAR	Chiang Mai Arr	67.38	85	P	P	09 09 27.1	-0.7
	comp=Z,0.8nm,0.6s,baz=307,slow=7.8,SNR=1.7						
	comp=Z,0.8nm,0.6s						
CMAR	Chiang Mai Arr	67.38	85	ceP	P	09 09 32.5	+4.7
SEY	Seymchan	68.13	22	i P	P	09 09 36.6	+4.7
KLR	Kul'dur	69.86	41	LR	LR	09 43 59.9	
	comp=Z,58nm,18.4s,baz=359,slow=39						
KLR	Kul'dur	69.86	41	i P	P	09 09 44.7	+1.9
KLR				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BOSA	Boshof	69.93	178	P	P	09 09 43.4	-0.1
	comp=Z,1.7nm,1.0s,baz=158,slow=15,SNR=1.1						
	comp=Z,1.7nm,1.0s						
MA2	Magadan	70.26	25	i P	P	09 09 50.2	+5.1
MA2				pmax	pmax		
	comp=Z,100nm,2.3s						
YKA	Yellowknife Ar	70.84	341	P	P	09 09 47.8	-0.8
	comp=Z,0.7nm,0.7s,baz=25,slow=6.7,SNR=9.0						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	70.84	341	P	P	09 09 48.3	-0.3
YKA	Yellowknife Ar	70.84	341	P	P	09 09 48.3	-0.3
SUR	Sutherland	73.69	182	LR	LR	09 43 34.7	
	comp=Z,44nm,18.5s,baz=146,slow=37						
YSS	Yuzh-Sakhalins	76.72	38	eP	P	09 10 27.4	+4.1
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
PETK	Petropavlovsk-	77.76	26	LR	LR	09 49 00.0	
	comp=Z,45nm,19.3s,baz=316,slow=39						
NVAR	Mina Array Bea	92.95	331	LR	LR	09 56 54.3	
	comp=Z,43nm,18.8s,baz=7.0,slow=38						
TXAR	Lajitas Array	94.06	316	P	P	09 11 48.8	-2.2
	comp=Z,0.4nm,0.9s,baz=46,slow=3.9,SNR=3.7						
	comp=Z,0.4nm,0.9s						

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*IDC **22** 09:08:02.3±0.4, 41°.59N×120°.14E, h0^{km}, mb4.2/25, mbtmp4.2/31, ML3.4/5, MS3.8/6, Error ellipse: s-maj=13.8km s-min=10.2km az=57.0*

*MOS **22** 09:08:02.2±1.0, 41°.66N×120°.18E, h9^{km}, mb4.9/29, MS4.2/6, Error ellipse: s-maj=8.0km s-min=5.0km az=130.2*

*BJI **22** 09:08:04.0±0.0, 41°.62N×120°.09E, h6^{km}, mb4.3/33, mB4.5/17, ML4.8/17, Ms4.5/42, Ms7 4.2/40*

*KEA **22** 09:08:05.5, 41°.61N×120°.21E, h15^{km}, ML4.7/6*

*NEIC **22** 09:08:06.0±1.9, 41°.62N±0°.06×120°.06E±0°.08, h17^{km}±3^{km}, mb4.8/83, ML4.8(BJI), Error ellipse: s-maj=9.2km s-min=8.6km az=116.0*

ISC 22 09:08:05.3±0.5**, 41°.65N**±0°.03×**120°.19E**±0°.02**, h15**^{km}±3^{km}**, h16**^{km}**:pP-P, n308,** σ2^{s}**02**/345**, mb4.7**/93**, MS4.2**/16**, 16C-4D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNY	Shenyang	2.54	85	⇓Pn	Pn	09 08 46.3	+0.4
SNY				Pg	Pg	09 08 53.3	-0.7
SNY				Sg	Sg	09 09 26.1	-0.9
SNY				smax	smax		
	comp=N,2µm,0.7s						
SNY				smax	smax		
	comp=E,2µm,0.6s						
SNY	Shenyang	2.54	85	⇓Pn	Pn	09 08 46.2	+0.4
SNY				Pg	Pg	09 08 53.3	-0.7
SNY				Sg	Sg	09 09 26.1	-0.9
SNY				smax	smax		
	comp=E,2µm,0.7s						
SNY				smax	smax		
	comp=E,2µm,0.6s						
DL2	Dalian	2.95	158	Pn	Pn	09 08 51.3	-0.2
DL2				Pg	Pg	09 09 00.8	-1.0
DL2				Sn	Sn	09 09 29.4	+2.8
DL2				smax	smax		
	comp=E,3µm,0.8s						
DL2				smax	smax		
	comp=E,4µm,0.8s						
BJI	Beijing	3.44	244	Pn	Pn	09 08 57.9	-0.3
BJI				Pg	Pb	09 09 07.3	+1.4
BJI				Sg	Sg	09 09 52.3	-3.5
BJI				smax	smax		
	comp=E,5µm,0.5s						
BJI				smax	smax		
	comp=E,5µm,0.5s						
BJT	Baijiatuau	3.46	243		Pn	09 08 57.0	-1.5
BJT	Baijiatuau	3.46	243	P	Pn	09 08 57.0	-1.5
SUJ	Sinuiju	3.61	114	Pg	Pg	09 09 12.4	-2.0
SUJ				Sg	Sg	09 10 00.5	-0.7
SUJ				AML	AML		
	comp=N,3µm,0.6s						
SUJ				AML	AML		
	comp=E,3µm,0.8s						
SUJ				AML	AML		
	comp=Z,5µm,1.1s						
XLT	XiLinHaoTe	3.77	308	ePn	Pn	09 09 01.9	-1.0
XLT				Pg	Pb	09 09 13.8	+2.3
XLT				Sg	Sg	09 10 02.2	-4.1
XLT				smax	smax		
	comp=Z,510nm,0.9s						
XLT				smax	smax		
	comp=Z,3µm,0.7s						
CN2	Changchun	4.43	59	ePg	Pb	09 09 19.8	-2.9
CN2				Sg	Sg	09 10 27.9	+0.4
CN2				smax	smax		
	comp=Z,630nm,0.7s						
CN2				smax	smax		
	comp=Z,490nm,0.7s						
KGE	Kanggye	4.89	96	Pg	Pg	09 09 37.2	-1.7
KGE				Sg	Sg	09 10 40.5	-1.7
KGE				AML	AML		
	comp=N,805nm,0.6s						
KGE				AML	AML		
	comp=E,482nm,0.6s						
KGE				AML	AML		
	comp=Z,939nm,0.6s						
PYS	Pyongsong	4.94	117	Pg	Pg	09 09 37.9	-2.0
PYS				Sg	Sg	09 10 42.1	-1.7
PYS				AML	AML		
	comp=N,4µm,0.8s						
PYS				AML	AML		
	comp=E,2µm,0.9s						
PYS				AML	AML		
	comp=Z,5µm,1.3s						
PYAG	Pyongyang	4.98	120	Pg	Pg	09 09 38.4	-2.2
PYAG				Sg	Sg	09 10 43.5	-1.6
PYAG				AML	AML		
	comp=N,1µm,1.4s						
PYAG				AML	AML		
	comp=E,1µm,0.8s						
PYAG				AML	AML		
	comp=Z,1µm,0.7s						
HJU	Haeju	5.58	128	Pg	Pg	09 09 49.7	-2.3
HJU				Sg	Sg	09 11 02.6	-1.6
HJU				AML	AML		
	comp=N,2µm,1.2s						
HJU				AML	AML		
	comp=E,1µm,0.9s						
HJU				AML	AML		
	comp=Z,2µm,1.2s						
HHU	Hamhung	5.83	105	Pg	Pg	09 09 54.8	-2.0
HHU				Sg	Sg	09 11 10.7	-1.6
HHU				AML	AML		
	comp=N,1µm,1.2s						
HHU				AML	AML		
	comp=E,810nm,0.7s						
HHU				AML	AML		
	comp=Z,1µm,0.6s						
TIA	Tai'an	5.93	205	Sg	Sn	09 10 46.8	+6.6
TIA	Tai'an	5.93	205	Pg	Pg	09 09 58.9	+0.1
TIA				Sg	Sg	09 11 10.1	-5.4
TIA				smax	smax		
	comp=N,340nm,0.7s						
TIA				smax	smax		
	comp=E,580nm,0.7s						
TIA	Tai'an	5.93	205	Pn	Pn	09 09 31.2	-1.2
TIA				Sn	Sn	09 10 46.7	+6.6
TIA				smax	smax		
	comp=E,290nm,0.8s						
TIA				smax	smax		
	comp=E,140nm,1.0s						
TIA	Tai'an	5.93	205	smax	smax		
	comp=N,290nm,0.8s						
TIA	Tai'an	5.93	205	smax	smax		
	comp=E,140nm,1.0s						
TIA	Tai'an	5.93	205	Pg	Pn	09 09 31.3	-1.2
HNS	HongShan	6.00	227	P	Pn	09 09 32.3	-1.1
HNS	HongShan	6.00	227	⇓Pn	Pn	09 09 32.2	-1.1
HNS				Pg	Pb	09 09 53.3	+3.9
HNS				Sg	Sg	09 11 10.5	-7.1
HNS				smax	smax		
	comp=E,1µm,0.7s						
HNS				smax	smax		
	comp=E,2µm,0.9s						
WOSN	Wonsan	6.05	112	Sg	Sg	09 11 18.0	-1.5
INCN	Inchon	6.49	128		Pn	09 09 43.1	+3.0
INCN	Inchon	6.49	128	P	Pn	09 09 43.1	+3.0
INCN	Inchon	6.49	128	P	Pb	09 09 50.2	-7.6
	comp=E,54nm,1.2s						
HHC	Hu-ho-hao-te	6.55	266	eP	Pn	09 09 42.8	+1.7
HHC				S	Sn	09 11 02.6	+7.1
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				LR	LR		
	comp=N,5µm,4.8s						
HHC				LR	LR		
	comp=E,5µm,5.5s						
HHC				LR	LR		
	comp=Z,4µm,10.0s						
HHC	Hu-ho-hao-te	6.55	266	ePn	Pn	09 09 42.7	+1.7
HHC				Sn	Sn	09 11 02.6	+7.1
HHC				LR	LR		
	comp=Z,5µm,4.8s						
HHC				LR	LR		
	comp=Z,5µm,5.5s						
HHC				LR	LR		
	comp=Z,4µm,10.0s						
BNX	BinXian	6.64	50	⇑Pg	Pg	09 10 12.3	0.0
BNX				Sg	Sg	09 11 36.6	-1.6
BNX				smax	smax		
	comp=N,420nm,0.8s						
BNX				smax	smax		
	comp=E,360nm,0.7s						
SEHB	SEOHWA	7.05	116	Pn	Pn	09 09 51.8	+3.9
TIY	Taiyuan	7.15	239	ePn	Pn	09 09 57.4	+8.0
TIY				Pg	Pg	09 10 20.3	-1.9
TIY				Sg	Sg	09 11 46.6	-8.2
TIY				smax	smax		
	comp=N,550nm,0.6s						
TIY				smax	smax		
	comp=E,590nm,0.7s						
KS19	Wonju Array Si	7.23	122		Pn	09 09 51.6	+1.2
KSAR	Wonju Array Be	7.28	123	Pn	Pn	09 09 51.1	+0.1
KSAR	Wonju Array Be	7.28	123	P	Pn	09 09 51.1	+0.1
KSRS	Korea Array	7.30	122	Pn	Pn	09 09 51.4	+0.2
	comp=E,1.4nm,0.3s,baz=304,slow=14,SNR=63						
KSRS				Lg	Lg	09 11 56.6	
	comp=E,19nm,0.3s,baz=308,slow=28,SNR=10						
	comp=E,13nm,0.8s						
MDJ	Mudanjiang	7.49	64	Pn	Pn	09 09 58.2	+4.3
MDJ	Mudanjiang	7.49	64	Pg	Pg	09 10 32.8	+4.2
MDJ				Sg	Sg	09 12 03.3	-2.2
MDJ				smax	smax		
	comp=N,370nm,1.2s						
MDJ				smax	smax		
	comp=E,190nm,1.0s						
HIA	Hailar	7.63	358	Pn	Pn	09 09 55.2	-0.5
HIA	Hailar	7.63	358	i P	Pn	09 09 55.6	-0.2
TJN	Taejon	7.67	131		Pn	09 09 56.8	+0.4
TJN	Taejon	7.67	131	ceP	Pn	09 09 57.2	+0.8
TJN	Taejon	7.67	131	P	Pn	09 10 04.6	+8.2
KSCHJ	Chungju	7.69	126		Pn	09 09 57.0	+0.3
BTO	Baotou	7.75	266	ePn	Pn	09 09 59.1	+1.6
BTO				Sn	Sn	09 11 16.8	-8.2
BTO				smax	smax		
	comp=E,4µm,0.7s						
BTO				smax	smax		
	comp=E,2µm,0.7s						
MSHR	Mys Shultsa	8.21	80	i P	Pn	09 10 02.4	-1.3
MSHR				pmax	pmax		
	comp=Z,12nm,0.9s						
NAWB	Namwon	8.40	135	Pn	Pn	09 10 07.1	+0.8
VLA	Vladivostok	8.78	76	i P	Pn	09 10 10.9	-0.7
VLA				pmax	pmax		
	comp=Z,13nm,0.9s						
USA0B	Ussuriysk Arra	9.03	70	Pn	Pn	09 10 15.2	+0.3
USA0B	Ussuriysk Arra	9.03	70	P	Pn	09 10 15.2	+0.3
USRK	Ussuriysk Ar.	9.03	70	Pn	Pn	09 10 15.8	+0.9
	comp=Z,1.4nm,0.3s,baz=254,slow=12,SNR=16						
USRK				Lg	Lg	09 12 53.8	
	comp=Z,3.9nm,0.3s,baz=267,slow=27,SNR=5.9						
USRK				LR	LR	09 13 18.0	
	comp=Z,127nm,20.4s,baz=253,slow=35						
	comp=Z,2.3nm,0.3s						
USRK	Ussuriysk Ar.	9.03	70	P	Pn	09 10 15.8	+0.9
LYN	LuoYang	9.34	223	eP	Pn	09 10 25.8	+6.6
LYN				S	Sn	09 12 11.0	+7.1
LYN				pmax	pmax		
	comp=Z,150nm,7.3s						
LYN				LR	LR		
	comp=N,1µm,12.1s						
LYN				LR	LR		
	comp=E,850nm,8.9s						
LYN				LR	LR		
	comp=Z,1µm,15.6s						
LYN	LuoYang	9.34	223	eP	Pn	09 10 25.7	+6.5
LYN				S	Sn	09 12 11.0	+7.1
LYN				pmax	pmax		
	comp=Z,150nm,7.3s						
LYN				LR	LR		
	comp=Z,1µm,12.1s						
LYN				LR	LR		
	comp=Z,850nm,8.9s						
LYN				LR	LR		
	comp=Z,1µm,15.6s						
NJ2	Nanjing	9.64	187	eP	Pn	09 10 25.3	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
NJ2				LR	LR		
	comp=N,2µm,11.8s						
NJ2				LR	LR		
	comp=E,910nm,9.9s						
NJ2				LR	LR		
	comp=Z,3µm,13.5s						
JTU	Tsushima	10.16	131	Pn	Pn	09 10 33.0	+2.6
KLR	Kul'dur	11.10	43	Pn	Pn	09 10 43.8	+0.5
	comp=Z,0.2nm,0.3s,baz=235,slow=16,SNR=2.9						
KLR				Lg	Lg	09 13 57.2	
	comp=Z,0.9nm,0.3s,baz=301,slow=10,SNR=6.1						
KLR				LR	LR	09 15 07.1	
	comp=Z,280nm,20.3s,baz=236,slow=38						
	comp=Z,1.4nm,0.8s						
ULN	Ulaanbaatar	11.21	308		Pn	09 10 43.9	-1.1
ULN	Ulaanbaatar	11.21	308	ceP	Pn	09 10 44.8	-0.2
ULN				pmax	pmax		
	comp=Z,20nm,1.7s						
SONM	Songino Array	11.59	307	Pn	Pn	09 10 49.2	-0.9
	comp=Z,0.1nm,0.3s,baz=116,slow=13,SNR=11						
SONM				Lg	Lg	09 14 11.0	
	comp=Z,3.2nm,0.3s,baz=130,slow=28,SNR=5.3						
SONM				LR	LR	09 15 49.3	
	comp=Z,2µm,19.4s,baz=118,slow=40						
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	11.59	307	Pn	Pn	09 10 51.1	+1.0
XAN	Xi'an	11.70	233	P	Pn	09 10 55.5	+3.9
XAN				S	Sn	09 13 08.6	+6.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				LR	LR		
	comp=Z,1µm,7.4s						
XAN				LR	LR		
	comp=Z,880nm,7.7s						
XAN				LR	LR		
	comp=Z,1µm,10.0s						
JNU	Nakatsue	12.02	132	Pn	Pn	09 10 56.1	+0.1
	comp=Z,0.5nm,0.3s,baz=3.6,slow=9.8,SNR=4.8						
JNU				Lg	Lg	09 14 24.1	
	comp=Z,1.2nm,0.3s,baz=55,slow=7.7,SNR=4.1						
	comp=Z,12nm,0.8s						
JNU	Nakatsue	12.02	132		Pn	09 10 57.4	+1.4
WHN	Wuhan	12.04	205	⇑P	Pn	09 10 59.0	+2.8
WHN				S	Sn	09 13 10.8	+0.6
WHN				LR	LR		
	comp=Z,2µm,11.7s						
WHN				LR	LR		
	comp=Z,2µm,7.9s						
WHN				LR	LR		
	comp=Z,2µm,14.5s						
ZEA	Zeya	12.99	19	eP	Pn	09 11 08.9	-0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=N,800nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,14.0s						
LZH	Lanzhou	13.89	252	⇑P	P	09 11 27.6	-2.2
LZH				pP	Pn	09 11 32.4	+11
LZH				sP		09 11 34.6	
LZH				PP	PnPn	09 11 38.6	+9.2
LZH				sS	S	09 14 08.0	-10
LZH				pmax	pmax		
	comp=Z,38nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.1s						
LZH				LR	LR		
	comp=Z,2µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
JSD	Sado	14.34	99	Pn	Pn	09 11 29.3	+1.6
INU	Inuyama	14.59	110	Pn	Pn	09 11 32.3	+1.2
INU	Inuyama	14.59	110	P	P	09 11 39.4	+1.9
ZAK	Zakamensk	14.61	312	eP	Pn	09 11 31.3	-0.1
ZAK				pmax	pmax		
	comp=Z,13nm,1.5s						
CNSH	ChangSha	14.68	206	⇑P	Pn	09 11 31.8	-0.6
CNSH				S	Sn	09 14 14.1	-0.7
CNSH				LR	LR		
	comp=N,880nm,14.8s						
CNSH				LR	LR		
	comp=E,790nm,13.1s						
JGF	Kuroka	14.71	109	Pn	P	09 11 36.0	-2.8
MJB9	Matsu-Tunnel	14.88	104		Pn	09 11 36.9	+1.9
MAJO	Matsushiro	14.88	104	Pn	Pn	09 11 36.9	+1.8
MAJO	Matsushiro	14.88	104	i P	Pn	09 11 35.8	+0.7
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s						
MAJO	Matsushiro	14.88	104	P	P	09 11 43.8	+3.1
MJAR	Matsushiro Arr	14.89	104	Pn	P	09 11 39.3	-1.5
	baz=344,slow=8.0,SNR=19						
MJAR	Matsushiro Arr	14.89	104	Pn	Pn	09 11 35.9	+0.8
MJAR	Matsushiro Arr	14.89	104	P	Pn	09 11 35.9	+0.8
IRK	Irkutsk	15.15	320	eP	Pn	09 11 39.5	+1.0
IRK				pmax	pmax		
	comp=Z,65nm,1.9s						
GTA	Gaotai	15.65	269	P	P	09 11 49.9	+0.5
GTA				pP	sP	09 11 55.7	-0.2
GTA				sP	pP	09 11 58.6	+4.7
GTA				S	S	09 14 46.4	-7.2
GTA				sS	sS	09 14 51.2	-9.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=Z,580nm,17.1s						
GTA				LR	LR		
	comp=Z,990nm,14.2s						
GTA				LR	LR		
	comp=Z,1µm,16.0s						
JOW	Kunigami	16.21	153	Pn	Pn	09 11 52.4	+0.1
	comp=Z,24nm,0.8s,baz=61,slow=24,SNR=1.5						
MOY	Mondy	16.51	314	eP	P	09 11 57.3	-1.5
MOY				pmax	pmax		
	comp=Z,18nm,1.9s						
BOD	Bodaibo	16.66	348	eP	Pn	09 11 56.0	-2.0
BOD				pmax	pmax		
	comp=Z,24nm,1.7s						
YHNB	Yeheng	16.96	176	P	P	09 12 04.0	+0.2
CD2	Chengdu	17.01	236	P	Pn	09 12 03.3	+0.7
CD2				pP	sP	09 12 10.8	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=E,490nm,7.4s						
CD2				LR	LR		
	comp=Z,440nm,9.8s						
CD2	Chengdu	17.01	236	P	Pn	09 12 03.2	+0.7
CD2				pP	sP	09 12 10.7	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=Z,490nm,7.4s						
CD2				LR	LR		
	comp=Z,440nm,9.8s						
JHJ2	Mitsune	17.75	112	P	P	09 12 19.3	+6.9
SSLB	Suanglung	17.82	178	P	P	09 12 16.1	+2.7
KNGR	Kungurtug, Tuv	18.03	307	i P	Pn	09 12 14.9	-0.3
YULB	Yu-li	18.23	177	P	P	09 12 20.7	+2.9
YULB				IAmb	IAmb	09 12 22.2	
	comp=Z,66nm,1.1s						
GYA	Guiyang	18.81	221	⇑P	Pn	09 12 25.4	+0.6
GYA				pP	sP	09 12 31.1	+0.3
GYA				S	S	09 15 57.7	-0.2
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				LR	LR		
	comp=Z,440nm,12.4s						
GYA				LR	LR		
	comp=Z,660nm,12.7s						
GYA				LR	LR		
	comp=Z,750nm,13.1s						
GOMU	GeErMu	20.44	263	P	P	09 12 42.6	+0.2
GOMU				pP	pP	09 12 46.0	-0.9
GOMU				pmax	pmax		
	comp=Z,11nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,74nm,4.7s						
GOMU				LR	LR		
	comp=Z,390nm,13.7s						
GOMU				LR	LR		
	comp=Z,370nm,11.2s						
GOMU				LR	LR		
	comp=Z,450nm,13.4s						
YAK	Yakutsk	21.20	12	P	P	09 12 48.6	-1.3
	comp=Z,5.3nm,0.4s,baz=39,slow=2.3,SNR=1.8						
YAK				Lg	Lg	09 19 08.3	
	comp=Z,0.1nm,0.3s,baz=178,slow=17,SNR=6.7						
YAK				LR	LR	09 21 33.4	
	comp=Z,471nm,19.0s,baz=264,slow=38						
	comp=Z,5.3nm,0.4s						
YAK	Yakutsk	21.20	12	P	P	09 12 50.9	+1.0
YAK				IAmb	IAmb	09 13 07.2	
	comp=Z,18nm,0.6s						
YAK	Yakutsk	21.20	12	ceP	P	09 12 50.9	+1.0
YAK				pmax	pmax		
	comp=Z,43nm,1.7s						
PZH	PanZhiHua	21.42	231	P	P	09 12 56.8	+4.1
PZH				sP	sP	09 13 02.8	+3.5
PZH				S	S	09 16 52.4	+2.4
PZH				sS	pS	09 17 00.0	+0.6
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,60nm,4.8s						
PZH				LR	LR		
	comp=Z,660nm,19.4s						
PZH				LR	LR		
	comp=Z,900nm,19.0s						
PZH				LR	LR		
	comp=Z,790nm,19.8s						
KMI	Kunming	21.93	227	⇑P	P	09 13 02.1	+3.8
KMI				pP	sP	09 13 08.4	+3.5
KMI				S	S	09 16 56.3	-3.8
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						

KMI				LR	LR		
	comp=N,460nm,16.2s						
KMI				LR	LR		
	comp=E,330nm,11.2s						
KMI				LR	LR		
	comp=Z,370nm,15.0s						
WMQ	**Urumqi**	**23.89**	**286**	⇓P	**P**	**09 13 19.9**	**+1.7**
WMQ				sP	sP	09 13 25.6	+0.6
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ				LR	LR		
	comp=Z,890nm,14.1s						
WMQ				LR	LR		
	comp=Z,970nm,7.7s						
WMQ				LR	LR		
	comp=Z,460nm,21.1s						
QIZ	**Qiongzhong**	**24.21**	**204**	P	**P**	**09 13 23.5**	**+2.2**
QIZ				LR	LR		
	comp=Z,410nm,16.7s						
QIZ				LR	LR		
	comp=Z,450nm,14.3s						
QIZ				LR	LR		
	comp=Z,520nm,14.3s						
LSA	**Lhasa**	**26.30**	**252**	P	**P**	**09 13 40.1**	**-0.7**
LSA	**Lhasa**	**26.30**	**252**	P	**P**	**09 13 40.1**	**-0.7**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAA0	**Zalesovo Array**	**26.46**	**310**	P	**P**	**09 13 42.1**	**+0.7**
ZALV	**Zalesovo Beam**	**26.46**	**310**	P	**P**	**09 13 39.5**	**-1.9**
	comp=Z,0.7nm,0.5s,baz=37,slow=30,SNR=2.7						
ZALV				Lg	Lg	09 21 58.1	
	comp=Z,0.1nm,0.3s,baz=104,slow=18,SNR=1.3						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**26.46**	**310**	P	**P**	**09 13 41.4**	**0.0**
ZALV	**Zalesovo Beam**	**26.46**	**310**	P	**P**	**09 13 41.4**	**0.0**
TGY	**Tagaytay City**	**27.45**	**178**	P	**P**	**09 13 50.4**	**-0.2**
	comp=Z,106nm,0.3s,baz=266,slow=3.0,SNR=5.6						
MK31	**Makanchi Array**	**27.45**	**294**	P	**P**	**09 13 50.0**	**-0.5**
MK31	**Makanchi Array**	**27.45**	**294**	P	**P**	**09 13 50.0**	**-0.5**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**27.45**	**294**	P	**P**	**09 13 50.0**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=91,slow=11,SNR=13						
MKAR				PcP	**PcP**	**09 17 08.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=110,slow=0.1,SNR=4.2						
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	**27.45**	**294**	P	**P**	**09 13 50.4**	**-0.1**
MAKZ	**Makanchi**	**27.67**	**294**	P	**P**	**09 13 52.8**	**+0.4**
MAKZ	**Makanchi**	**27.67**	**294**	P	**P**	**09 13 52.8**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SEY	**Seymchan**	**28.50**	**31**	P	**P**	**09 14 02.8**	**+3.3**
	comp=Z,2.2nm,0.8s,baz=242,slow=22,SNR=1.9						
CMAR	**Chiang Mai Arr**	**29.38**	**225**	P	**P**	**09 14 06.3**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=24,slow=8.4,SNR=7.0						
	comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.38**	**225**	P	**P**	**09 14 06.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**29.38**	**225**	P	**P**	**09 14 06.9**	**-0.9**
KURK	**Kurchatov**	**29.83**	**302**	P	**P**	**09 14 11.0**	**-0.5**
KURBB	**Kurchatov Arra**	**29.89**	**302**	P	**P**	**09 14 12.0**	**0.0**
	comp=Z,4.6nm,0.7s,baz=90,slow=9.5,SNR=42						
KURBB				PcP	**PcP**	**09 17 14.0**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=79,slow=2.1,SNR=4.2						
	comp=Z,4.6nm,0.7s						
TIXI	**Tiksi**	**30.39**	**5**	P	**P**	**09 14 16.4**	**+0.2**
	comp=Z,8.8nm,0.8s,baz=270,slow=23,SNR=22						
	comp=Z,8.8nm,0.8s						
TIXI	**Tiksi**	**30.39**	**5**	P	**P**	**09 14 15.9**	**-0.3**
TIXI				IAmb	IAmb	09 14 22.6	
	comp=Z,31nm,1.5s						
PRZ	**Przheval'sk**	**30.81**	**286**	P	**P**	**09 14 22.1**	**+1.6**
PRZ				IAmb	IAmb	09 14 28.2	
	comp=Z,23nm,1.3s						
PRZ	**Przheval'sk**	**30.81**	**286**	P	**P**	**09 14 22.1**	**+1.6**
PRZ				pmax	pmax		
	comp=Z,23nm,1.3s						
TARG	**Taragay, Kyrgy**	**31.42**	**285**	P	**P**	**09 14 25.8**	**-0.4**
TARG				IAmb	IAmb	09 14 36.3	
	comp=Z,14nm,1.2s						
TARG	**Taragay, Kyrgy**	**31.42**	**285**	P	**P**	**09 14 25.8**	**-0.4**
TARG				pmax	pmax		
	comp=Z,14nm,1.2s						
KDJ	**Kajisay**	**31.77**	**286**	P	**P**	**09 14 29.0**	**0.0**
KDJ				IAmb	IAmb	09 14 36.2	
	comp=Z,10nm,1.2s						
KDJ	**Kajisay**	**31.77**	**286**	P	**P**	**09 14 29.0**	**0.0**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NRIK	**Noril'sk**	**32.55**	**339**	P	**P**	**09 14 35.0**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=126,slow=9.5,SNR=7.4						
	comp=Z,3.4nm,0.8s						
NRIK	**Noril'sk**	**32.55**	**339**	P	**P**	**09 14 36.3**	**+1.1**
NRIK	**Noril'sk**	**32.55**	**339**	P	**P**	**09 14 36.3**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH	**Kashi**	**33.38**	**281**	P	P	09 14 48.0	+5.0
KSH				pP	sP	09 14 52.0	+2.2
KSH				LR	LR		
	comp=Z,2µm,24.5s						
KSH				LR	LR		
	comp=Z,1µm,24.8s						
AAK	**Ala-Archa**	**33.58**	**287**	P	**P**	**09 14 45.0**	**+0.3**
AAK	**Ala-Archa**	**33.58**	**287**	*ce*P	**P**	**09 14 45.5**	**+0.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**35.00**	**306**	P	**P**	**09 14 57.3**	**+0.6**
BRVK				IAmb	IAmb	09 14 59.4	
	comp=Z,8.6nm,0.8s						
BRVK	**Borovoye**	**35.00**	**306**	P	**P**	**09 14 57.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL	**Bilibino**	**36.01**	**27**	*i* P	**P**	**09 15 05.6**	**+0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,253nm,16.0s						
KK31	**Karatay Array**	**36.30**	**289**	P	**P**	**09 15 08.4**	**+0.3**
KK31				IAmb	IAmb	09 15 15.2	
	comp=Z,14nm,1.2s						
KK31	**Karatay Array**	**36.30**	**289**	P	**P**	**09 15 08.4**	**+0.3**
KK31				pmax	pmax		
	comp=Z,14nm,1.2s						
KKAR	**Karatay Array**	**36.30**	**289**	P	**P**	**09 15 08.4**	**+0.3**
KKAR	**Karatay Array**	**36.30**	**289**	P	**P**	**09 15 08.2**	**+0.1**
KKAR				IAmb	IAmb	09 15 15.2	
	comp=Z,14nm,1.2s						
KKAR	**Karatay Array**	**36.30**	**289**	P	**P**	**09 15 08.4**	**+0.3**
MYLDM	**Lahad Datu**	**36.34**	**183**	P	**P**	**09 15 09.7**	**+1.2**
BTK	**Batken**	**36.97**	**284**	P	**P**	**09 15 14.8**	**+0.9**
BTK				IAmb	IAmb	09 15 20.6	
	comp=Z,9.9nm,0.9s						
BTK	**Batken**	**36.97**	**284**	P	**P**	**09 15 14.8**	**+0.9**
BTK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NIL	**Nilore**	**37.63**	**273**	P	**P**	**09 15 18.3**	**-1.2**
NIL				IAmb	IAmb	09 15 26.2	
	comp=Z,21nm,1.2s						
NIL	**Nilore**	**37.63**	**273**	P	**P**	**09 15 18.3**	**-1.2**
NIL				pmax	pmax		
	comp=Z,21nm,1.3s						
GAR	**Garm**	**37.69**	**283**	P	**P**	**09 15 20.0**	**0.0**
GAR				IAmb	IAmb	09 15 26.6	
	comp=Z,24nm,1.1s						
CHGR	**Chuyangaron**	**38.66**	**283**	P	**P**	**09 15 28.5**	**+0.3**
CHGR	**Chuyangaron**	**38.66**	**283**	P	**P**	**09 15 28.5**	**+0.3**
CHGR				pmax	pmax		
	comp=Z,65nm,0.9s						
SBUM	**Sibu**	**39.68**	**193**	P	**P**	**09 15 35.8**	**-0.9**
SBUM				IAmb	IAmb	09 15 38.0	
	comp=Z,20nm,1.0s						
KULM	**Kulim**	**40.18**	**211**	P	**P**	**09 15 40.5**	**-0.5**
KULM				IAmb	IAmb	09 15 42.1	
	comp=Z,20nm,0.8s						
TOLI2	**Tolitoli**	**40.36**	**179**	P	**P**	**09 15 42.6**	**+0.2**
TOLI2				IAmb	IAmb	09 15 44.2	
	comp=Z,29nm,1.2s						
TOLI2	**Tolitoli**	**40.36**	**179**	P	**P**	**09 15 42.9**	**+0.6**
KBL	**Kabul**	**40.38**	**277**	P	**P**	**09 15 41.4**	**-1.3**
KBL	**Kabul**	**40.38**	**277**	P	**P**	**09 15 41.4**	**-1.3**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IPM	**Ipoh**	**40.78**	**210**	P	**P**	**09 15 45.2**	**-0.8**
IPM	**Ipoh**	**40.78**	**210**	P	**P**	**09 15 45.5**	**-0.4**
ARU	**Arti**	**41.55**	**313**	P	**P**	**09 15 52.4**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=116,slow=2.4,SNR=11						
	comp=Z,3.3nm,0.7s						
ARU	**Arti**	**41.55**	**313**	P	**P**	**09 15 52.4**	**+0.5**
ARU				IAmb	IAmb	09 15 54.6	
	comp=Z,13nm,0.9s						
ARU	**Arti**	**41.55**	**313**	*c i*P	**P**	**09 15 51.9**	**+0.1**
ARU						09 17 24.1	
ARU						09 17 47.3	
ARU				S	**S**	**09 22 08.1**	**+1.2**
ARU				SS	**SS**	**09 25 09.2**	**-2.2**
ARU				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU				MLR	MLR		
	comp=Z,483nm,14.0s						
ABKAR	**Akbulak array**	**41.94**	**302**	P	**P**	**09 15 54.8**	**-0.3**
AKTO	**Aktyubinsk**	**42.89**	**304**	P	**P**	**09 16 02.6**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=65,slow=7.1,SNR=5.6						
	comp=Z,1.9nm,0.8s						
BKNI	**Bangkinang**	**44.62**	**208**	P	**P**	**09 16 18.7**	**+1.7**
GSI	**Gunungsitoli**	**45.04**	**213**	P	**P**	**09 16 19.9**	**-0.5**
HRA	**Herat**	**45.48**	**281**	P	**P**	**09 16 24.3**	**+0.3**
HRA				IAmb	IAmb	09 16 31.4	
	comp=Z,14nm,1.1s						
KIRV	**Kirov**	**46.11**	**317**	*ce*P	**P**	**09 16 27.5**	**-0.9**
GEYT	**Alibeck**	**46.94**	**287**	P	**P**	**09 16 34.9**	**-0.3**
GEYT				IAmb	IAmb	09 16 42.6	
	comp=Z,7.1nm,0.9s						
PRGR	**Permogore**	**47.39**	**321**	*e*P	**P**	**09 16 38.1**	**-0.3**
KLMR	**Klimovskoe**	**50.45**	**321**	*e*P	**P**	**09 17 00.8**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,23nm,1.1s						
KLMR	**Klimovskoe**	**50.45**	**321**	*e*P	**P**	**09 17 00.8**	**-1.0**
KLMR				AMP		09 17 08.5	
	comp=Z,23nm,1.1s						
SOEI	**Soe**	**51.28**	**175**	P	**P**	**09 17 07.1**	**-1.6**
MAK	**Makhachkala**	**52.17**	**297**	*e*P	**P**	**09 17 12.3**	**-2.7**
MAK				*e*S	**S**	**09 24 35.0**	**-3.8**
MAK				pmax	pmax		
	comp=Z,260nm,1.5s						
MAK				MLR	MLR		
	comp=Z,819nm,13.0s						
H23K	**Yukon River**	**53.00**	**31**	P	**P**	**09 17 21.9**	**+1.1**
MOS	**Moscow**	**53.07**	**315**	*e*P	**P**	**09 17 20.9**	**-0.6**
MOS				pmax	pmax		
	comp=Z,41nm,0.8s						
GROC	**Groznyy**	**53.20**	**298**	*e*P	**P**	**09 17 23.3**	**+0.7**
GROC				pmax	pmax		
	comp=Z,23nm,0.5s						
ARCES	**ARCESS Array B**	**53.26**	**334**	P	**P**	**09 17 21.3**	**-1.4**
	comp=Z,4.5nm,0.8s,baz=62,slow=10,SNR=3.8						
	comp=Z,4.5nm,0.8s						
ARCES	**ARCESS Array B**	**53.26**	**334**	P	**P**	**09 17 22.0**	**-0.7**
ARCES				IAmb	IAmb	09 17 38.4	
	comp=Z,15nm,1.3s						
ARCES	**ARCESS Array B**	**53.26**	**334**	P	**P**	**09 17 22.0**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,15nm,1.3s						
OBN	**Obninsk**	**53.86**	**315**	*i* P	**P**	**09 17 26.3**	**-1.0**
OBN				*i*		09 17 32.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,280nm,18.0s						
TCOL	**CIGO, UAF Yank**	**54.00**	**32**	P	**P**	**09 17 30.5**	**+2.3**
TCOL				IAmb	IAmb	09 17 38.8	
	comp=Z,5.9nm,0.8s						
COLA	**College**	**54.01**	**32**	P	**P**	**09 17 29.9**	**+1.7**
COLA				IAmb	IAmb	09 17 38.8	
	comp=Z,6.3nm,0.8s						
COLA	**College**	**54.01**	**32**	P	**P**	**09 17 29.9**	**+1.7**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KRVT	**Keravat (AS076**	**54.16**	**140**	LR	LR	09 41 25.6	
	comp=Z,50nm,18.0s,baz=338,slow=37						
BMAR	**Burnt Mountain**	**54.24**	**28**	P	**P**	**09 17 32.3**	**+2.3**
ILAR	**Eielson Array**	**54.42**	**32**	P	**P**	**09 17 31.4**	**0.0**
	comp=Z,1.0nm,1.0s,baz=283,slow=6.7,SNR=7.2						
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**54.42**	**32**	P	**P**	**09 17 30.8**	**-0.5**
ZEI	**Tsey**	**54.63**	**299**	*e*P	**P**	**09 17 31.1**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	**Khabaz**	**54.86**	**300**	P	**P**	**09 17 34.7**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=143,slow=6.1,SNR=5.6						
	comp=Z,2.6nm,0.8s						
KBZ	**Khabaz**	**54.86**	**300**	*ce*P	**P**	**09 17 35.0**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	**Kislovodsk**	**54.90**	**300**	P	**P**	**09 17 35.4**	**+0.2**
KIV	**Kislovodsk**	**54.90**	**300**	*e*P	**P**	**09 17 35.3**	**+0.2**
KIV				pmax	pmax		
	comp=Z,45nm,1.0s						
KIV				MLR	MLR		
	comp=Z,286nm,17.0s						
SHA1	**Shidzhatmaz**	**55.01**	**300**	*i* P	**P**	**09 17 34.6**	**-1.6**
MTN	**Manton Dam**	**55.15**	**167**	P	**P**	**09 17 35.6**	**-1.5**
GNI	**Garni**	**55.28**	**295**	P	**P**	**09 17 36.0**	**-2.1**
GNI				IAmb	IAmb	09 17 46.0	
	comp=Z,18nm,1.2s						
GNI	**Garni**	**55.28**	**295**	P	**P**	**09 17 36.0**	**-2.1**
GNI				pmax	pmax		
	comp=Z,18nm,1.2s						
FIA1	**FINESS Array S**	**56.30**	**325**	P	**P**	**09 17 44.4**	**-0.4**
FIA1				IAmb	IAmb	09 17 45.5	
	comp=Z,9.8nm,0.9s						
FINES	**FINESS Array B**	**56.30**	**325**	P	**P**	**09 17 44.6**	**-0.2**
	comp=Z,6.3nm,0.8s,baz=63,slow=6.2,SNR=22						
	comp=Z,6.3nm,0.8s						
VSU	**Vasula**	**57.35**	**321**	*e*P	**P**	**09 17 52.3**	**0.0**
I29M	**Ogilvie Camp,**	**57.43**	**29**	P	**P**	**09 17 53.4**	**+0.6**
I29M				IAmb	IAmb	09 18 00.1	
	comp=Z,7.7nm,1.1s						
INK	**Inuvik**	**57.56**	**25**	P	**P**	**09 17 54.3**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=263,slow=7.9,SNR=4.5						
	comp=Z,1.3nm,0.8s						
INK	**Inuvik**	**57.56**	**25**	P	**P**	**09 17 54.1**	**+0.5**
KNRA	**Kununurra**	**57.58**	**170**	P	**P**	**09 17 53.1**	**-1.2**
MEF	**Metsahovi**	**57.60**	**324**	*e*P	**P**	**09 17 53.9**	**-0.1**
EUNU	**Eureka**	**57.62**	**5**	P	**P**	**09 17 54.4**	**+0.3**
EUNU				IAmb	IAmb	09 18 17.1	
	comp=Z,8.9nm,1.4s						
RAF	**Rauma**	**58.35**	**326**	*e*P	**P**	**09 17 58.8**	**-0.5**
MTSE	**Matsula**	**58.58**	**323**	*e*P	**P**	**09 18 01.1**	**+0.2**
MNK	**Minsk**	**58.66**	**317**	*i* P	**P**	**09 18 02.2**	**+0.7**
MNK				*i*		09 18 51.7	
MNK				*i*		09 20 12.2	
MNK				*i* PPP	PPP	09 21 32.1	
MNK				*i* S	**S**	**09 26 03.6**	**-1.5**
MNK				*i*		09 27 49.3	
MNK				*i* SS	**SS**	**09 30 00.0**	**+2.7**
MNK				pmax	pmax		
	comp=N,10.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,334nm,17.0s						
MNK				MLR	MLR		
	comp=Z,105nm,16.0s						
MNK				MLR	MLR		
	comp=E,84nm,20.0s						
MNK	**Minsk**	**58.66**	**317**	*i* P	**P**	**09 18 02.2**	**+0.7**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**09 18 02.2**	**+0.7**
	comp=N,10.0nm,0.7s						
MNK				*i* P	**P**	**09 18 02.2**	**+0.7**
	comp=Z,9.0nm,0.8s,baz=241						
MNK				*i* PcP	**PcP**	**09 18 51.7**	**+0.3**
MNK				*i* PP	**PP**	**09 20 12.3**	**+1.4**
MNK				*i* PPP	PPP	09 21 32.1	
MNK				*i* S	**S**	**09 26 03.6**	**-1.5**
MNK				*i* SS	**SS**	**09 30 00.0**	**+2.7**
MNK				*i* SSS	SSS	09 32 36.3	
MNK				*i* LR	LR	09 42 56.2	
MNK				*i* LRM	MLR	09 45 49.2	
	comp=N,334nm,16.9s						
MNK				*i* LRM	MLR	09 45 53.2	
	comp=Z,105nm,16.1s						
MNK				*i* LRM	MLR	09 45 57.7	
	comp=E,84nm,19.5s						
IDID	**Didziasalis**	**58.84**	**318**	*e*P	**P**	**09 18 01.4**	**-1.4**
NACGM	**Naroch**	**59.02**	**318**	⇑*e*P	**P**	**09 18 04.7**	**+0.7**
	baz=60						
ISAL	**Salakas**	**59.02**	**319**	*e*P	**P**	**09 18 02.2**	**-1.9**
DAG	**Danmarks Havn**	**59.05**	**350**	*i* P	**P**	**09 18 02.8**	**-1.1**
DAG				IAmb	IAmb	09 18 09.2	
	comp=Z,1.9nm,0.8s						
IIGN	**Ignalina**	**59.08**	**318**	*e*P	**P**	**09 18 03.5**	**-1.0**
M30M	**Minto, Yukon**	**59.43**	**32**	P	**P**	**09 18 07.7**	**+0.8**
AKASG	**Malin Array Be**	**59.81**	**313**	P	**P**	**09 18 08.8**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=51,slow=6.8,SNR=12						
	comp=Z,2.3nm,0.7s						
AKASG	**Malin Array Be**	**59.81**	**313**	P	**P**	**09 18 09.0**	**-0.5**
AKASG				IAmb	IAmb	09 18 15.8	
	comp=Z,7.9nm,1.4s						
AKBB	**Malin Array Si**	**59.81**	**313**	P	**P**	**09 18 08.6**	**-1.0**
AKBB				IAmb	IAmb	09 18 15.4	
	comp=Z,6.8nm,0.8s						
AKBB	**Malin Array Si**	**59.81**	**313**	*ce*P	**P**	**09 18 09.3**	**-0.3**
VSVD	**Vaisvydziai**	**59.89**	**320**	*e*P	**P**	**09 18 10.8**	**+0.8**
PABE	**Paberze**	**60.12**	**319**	P	**P**	**09 18 10.6**	**-0.9**
PABE	**Paberze**	**60.12**	**319**	*e*P	**P**	**09 18 12.0**	**+0.4**
UPP	**Uppsala**	**60.71**	**326**	*e*P	**P**	**09 18 14.8**	**-0.8**
VIKU	**Vikbolandet**	**61.86**	**325**	*e*P	**P**	**09 18 23.5**	**+0.2**
P33M	**Teslin, Yukon**	**62.34**	**33**	P	**P**	**09 18 27.8**	**+1.1**
P33M				IAmb	IAmb	09 18 34.9	
	comp=Z,14nm,1.4s						
NC405	**NORSAR Array S**	**62.39**	**329**	P	**P**	**09 18 26.7**	**-0.3**
WB0	**Warramunga Arr**	**62.50**	**165**	P	**P**	**09 18 26.7**	**-1.4**
NB2	**NORSAR Subarra**	**62.63**	**329**	P	**P**	**09 18 27.8**	**-0.8**
	comp=Z,13nm,0.9s,baz=53,slow=6.9						
NOA	**NORSAR Array B**	**62.63**	**329**	P	**P**	**09 18 28.1**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=54,slow=6.7,SNR=14						
	comp=Z,3.8nm,0.8s						
WRAB	**Tennant Creek**	**62.66**	**165**	P	**P**	**09 18 28.0**	**-1.1**
WRAB	**Tennant Creek**	**62.66**	**165**	P	**P**	**09 18 28.0**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s						
WRA	**Warramunga Arr**	**62.66**	**165**	P	**P**	**09 18 27.7**	**-1.5**
	comp=Z,24nm,0.8s,baz=352,slow=7.0,SNR=111						
WRA	**Warramunga Arr**	**62.66**	**165**	P	**P**	**09 18 28.0**	**-1.1**
WB2	**Warramunga Arr**	**62.67**	**165**	P	**P**	**09 18 27.8**	**-1.4**
WR0	**Warramunga Arr**	**62.72**	**165**	P	**P**	**09 18 28.2**	**-1.4**
BR131	**Keskin Array S**	**62.86**	**300**	P	**P**	**09 18 30.4**	**-0.1**
BR131				IAmb	IAmb	09 18 36.7	
	comp=Z,7.2nm,0.8s						
BRTR	**Keskin Array B**	**62.86**	**300**	P	**P**	**09 18 30.2**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=94,slow=3.3,SNR=17						
	comp=Z,2.5nm,0.6s						
BRTR	**Keskin Array B**	**62.86**	**300**	P	**P**	**09 18 31.0**	**+0.4**
BUR08	**Bucovina Ar. S**	**63.66**	**311**	P	**P**	**09 18 35.1**	**-0.6**
BUR08				IAmb	IAmb	09 18 42.3	
	comp=Z,5.9nm,1.2s						
BURAR	**Bucovina Array**	**63.67**	**311**	P	**P**	**09 18 36.0**	**+0.2**
DLBC	**Dease Lake**	**64.56**	**33**	P	**P**	**09 18 42.3**	**+0.9**
DLBC				IAmb	IAmb	09 18 50.1	
	comp=Z,5.9nm,0.9s						
SUMG	**Summit**	**65.10**	**353**	P	**P**	**09 18 45.9**	**+0.8**
SUMG				IAmb	IAmb	09 18 52.2	
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**65.10**	**353**	P	**P**	**09 18 45.9**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**65.10**	**353**	*i* P	**P**	**09 18 45.0**	**-0.2**
SUMG				IAmb	IAmb	09 18 52.9	
	comp=Z,3.7nm,1.0s						
OJC	**Ojcow**	**65.13**	**316**	*e*P	**P**	**09 18 45.0**	**-0.2**
OJC	**Ojcow**	**65.13**	**316**	P	**P**	**09 18 44.8**	**-0.4**
OJC				IAmb	IAmb	09 18 51.7	
	comp=Z,12nm,1.0s						
OJC	**Ojcow**	**65.13**	**316**	P	**P**	**09 18 44.8**	**-0.4**
OJC				pmax	pmax		
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**66.21**	**166**	P	**P**	**09 18 51.6**	**-0.8**
AS31				IAmb	IAmb	09 18 52.5	
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**66.21**	**166**	P	**P**	**09 18 51.5**	**-0.8**
	comp=Z,13nm,0.8s,baz=347,slow=5.5,SNR=76						
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**66.21**	**166**	P	**P**	**09 18 51.1**	**-1.2**
MORC	**Moravsky Berou**	**66.56**	**316**	P	**P**	**09 18 54.0**	**-0.5**
MORC				IAmb	IAmb	09 19 01.3	
	comp=Z,5.4nm,1.1s						
MORC	**Moravsky Berou**	**66.56**	**316**	P	**P**	**09 18 54.0**	**-0.5**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DPC	**Dobruska-Polom**	**66.84**	**317**	*e*P	**P**	**09 18 56.2**	**0.0**
DPC				*e*		09 19 01.1	
DPC	**Dobruska-Polom**	**66.84**	**317**	*e*P	**P**	**09 18 56.2**	**0.0**
DPC				*e*pP	**pP**	**09 19 01.1**	**-0.3**
UPC	**Upice**	**66.90**	**318**	*e*P	P	09 19 02.9	+6.3
UPC	**Upice**	**66.90**	**318**	*e*pP	pP	09 19 02.9	+1.1
YKA	**Yellowknife Ar**	**67.31**	**24**	P	**P**	**09 18 57.9**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=322,slow=5.8,SNR=13						
	comp=Z,1.4nm,0.9s						
EIL	**Elat**	**67.65**	**290**	LR	LR	09 53 20.3	
	comp=Z,167nm,18.1s,baz=79,slow=40						
BRG	**Berggiesshubel**	**67.71**	**319**	*e*P	**P**	**09 19 01.9**	**+0.3**
BRG				Amp		09 19 02.9	
	comp=Z,2.7nm,1.0s						
BRG				*e*x	x	09 19 10.1	
BRG				Amp		09 19 12.7	
	comp=Z,8.6nm,1.4s						
BRG				Amp		09 51 50.0	
	comp=N,0.2nm,13.7s						
BRG				Amp		09 51 50.0	
	comp=E,0.3nm,18.7s						
BRG				Amp		09 51 53.0	
	comp=Z,0.4nm,13.9s						
BRG	**Berggiesshubel**	**67.71**	**319**	*e*P	**P**	**09 19 01.9**	**+0.3**
BRG				*e*		09 19 10.1	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,240nm,13.7s						
BRG				MLR	MLR		
	comp=E,290nm,18.7s						
BRG				MLR	MLR		
	comp=Z,420nm,13.9s						
CLL	**Collm**	**67.89**	**320**	P	**P**	**09 19 02.6**	**-0.2**
CLL				IAmb	IAmb	09 19 09.3	
	comp=Z,7.4nm,0.9s						
CLL	**Collm**	**67.89**	**320**	*e*P	**P**	**09 19 03.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**67.89**	**320**	*e*P	**P**	**09 19 03.0**	**+0.2**
CLL				*i* pP	**pP**	**09 19 07.9**	**-0.1**
	comp=Z,10.0nm,1.0s						
RONA	**Rosalia, Austr**	**68.49**	**315**	*e*P	P	09 19 13.3	+6.6
ICESG	**Greenland Ices**	**68.57**	**352**	*i* P	**P**	**09 19 10.6**	**+3.4**
ICESG				IAmb	IAmb	09 19 14.0	
	comp=Z,4.4nm,0.8s						
CONA	**Conrad Observa**	**68.58**	**316**	*e*P	P	09 19 13.7	+6.4
	comp=Z,9.2nm,1.4s						
CKRC	**Cesky Krumlov**	**68.82**	**317**	*e*P	P	09 19 14.9	+6.2
CKRC				*e*x	x	09 19 18.1	
KHC	**Kasperske Hory**	**68.99**	**318**	*e*P	**P**	**09 19 09.7**	**-0.1**
KHC				*e*		09 19 14.9	
KHC	**Kasperske Hory**	**68.99**	**318**	*e*P	**P**	**09 19 09.7**	**-0.1**
KHC				*e*pP	**pP**	**09 19 14.9**	**-0.1**
GERES	**GERESS Array B**	**69.11**	**317**	P	**P**	**09 19 10.9**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=154,slow=32,SNR=1.6						
	comp=Z,0.2nm,0.7s						
GERES	**GERESS Array B**	**69.11**	**317**	P	**P**	**09 19 10.5**	**-0.1**
SOKA	**Soboth**	**69.81**	**315**	*e*P	P	09 19 20.1	+5.2
	comp=Z,3.0nm,1.0s						
OBKA	**Obir**	**70.17**	**315**	*e*P	P	09 19 21.9	+4.7
KBA	**Koelnbreinsper**	**70.44**	**316**	*e*P	P	09 19 24.4	+5.5
	comp=Z,7.8nm,1.0s						
MYKA	**Terra Mystica**	**70.57**	**316**	*e*P	P	09 19 24.8	+5.2
	comp=Z,0.9nm,0.4s						
ABTA	**Abfaltersbach**	**71.08**	**316**	*e*P	**P**	**09 19 26.2**	**+3.5**
	comp=Z,5.4nm,1.3s						
RETA	**Reutte**	**71.49**	**318**	*e*P	P	09 19 31.1	+6.0
	comp=Z,3.7nm,1.2s						
DY2G	**Dye2**	**71.71**	**354**	*i* P	**P**	**09 19 30.8**	**+4.5**
DY2G				IAmb	IAmb	09 19 32.3	
	comp=Z,8.1nm,0.8s						
DAVA	**Damuels**	**72.07**	**318**	*e*P	P	09 19 33.8	+5.0
	comp=Z,11nm,1.1s						
BFO	**Black Forest**	**72.13**	**319**	P	**P**	**09 19 28.8**	**-0.1**
BFO	**Black Forest**	**72.13**	**319**	P	**P**	**09 19 28.8**	**-0.1**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FORT	**Forrest**	**72.43**	**173**	P	**P**	**09 19 31.2**	**+0.6**
EIDS	**Eidsvold**	**72.56**	**151**	P	**P**	**09 19 31.7**	**+0.2**
EIDS				IAmb	IAmb	09 19 32.8	

	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**75.78**	**161**	P	**P**	**09 19 48.9**	**-1.3**
	comp=Z,8.6nm,0.9s,baz=344,slow=5.9,SNR=7.2						
	comp=Z,8.6nm,0.9s						
STKA	**Stephens Creek**	**75.78**	**161**	P	**P**	**09 19 49.6**	**-0.6**
B08A	**Colville Reser**	**76.13**	**36**	P	**P**	**09 19 52.5**	**+0.2**
B08A				IAmb	IAmb	09 20 00.2	
	comp=Z,6.4nm,1.1s						
J08A	**Circle Bar Ran**	**80.29**	**39**	P	**P**	**09 20 16.4**	**+0.9**
J08A				IAmb	IAmb	09 20 24.3	
	comp=Z,8.4nm,1.2s						
MOD	**Modoc Plateau**	**80.51**	**41**	P	**P**	**09 20 17.4**	**+0.6**
DLMT	**Dillon**	**81.38**	**35**	P	**P**	**09 20 21.7**	**+0.4**
MFID	**Camas Ranch**	**81.48**	**38**	P	**P**	**09 20 22.3**	**+0.4**
MCMT	**McKenzie Canyo**	**81.69**	**35**	P	**P**	**09 20 24.5**	**+1.3**
NVAR	**Mina Array Bea**	**84.14**	**42**	P	**P**	**09 20 37.1**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=278,slow=3.7,SNR=7.6						
	comp=Z,0.8nm,0.8s						
ESDC	**Sonseca Array**	**84.48**	**320**	P	**P**	**09 20 36.7**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=23,slow=4.3,SNR=6.5						
	comp=Z,0.9nm,0.7s						
ESDC	**Sonseca Array**	**84.48**	**320**	P	**P**	**09 20 36.9**	**-0.5**
ESDC				IAmb	IAmb	09 20 44.9	
	comp=Z,6.5nm,1.3s						
PDAR	**Pinedale Array**	**84.76**	**34**	P	**P**	**09 20 38.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=18,slow=2.3,SNR=2.5						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**84.76**	**34**	P	**P**	**09 20 39.0**	**0.0**
HWUT	**Hardware Ranch**	**84.83**	**36**	P	**P**	**09 20 40.1**	**+0.7**
HWUT				IAmb	IAmb	09 20 47.4	
	comp=Z,4.5nm,0.9s						
KMBO	**Kilima Mbogo**	**85.46**	**264**	P	**P**	**09 20 43.5**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=217,slow=22,SNR=1.6						
	comp=Z,0.7nm,0.3s						
RSSD	**Black Hills**	**85.84**	**30**	P	**P**	**09 20 44.8**	**+0.4**
RSSD				IAmb	IAmb	09 20 51.5	
	comp=Z,13nm,1.3s						
RSSD	**Black Hills**	**85.84**	**30**	P	**P**	**09 20 44.8**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	**Albuquerque**	**92.59**	**37**	*ce*P	**P**	**09 21 14.0**	**-2.4**
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.5s						
VNDA	**Vanda**	**121.63**	**170**	PKP	**PKPdf**	**09 26 55.4**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=302,slow=4.0,SNR=11						
VNDA	**Vanda**	**121.63**	**170**		**PKPdf**	**09 26 56.6**	**-0.2**
VNDA	**Vanda**	**121.63**	**170**	PKIKP	**PKPdf**	**09 26 56.6**	**-0.2**
QSPA	**South Pole Qui**	**131.39**	**180**	PKP	**PKPdf**	**09 27 15.1**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=225,slow=2.7,SNR=4.9						
BDFB	**Brasilia**	**152.15**	**335**	PKPbc	**PKPbc**	**09 27 59.5**	**-1.1**
	comp=Z,4.1nm,0.8s,baz=177,slow=22,SNR=4.3						
BDFB	**Brasilia**	**152.15**	**335**	PKPdf	**PKPdf**	**09 27 51.7**	**-2.2**
BDFB					**sPKPdf**	**09 28 00.1**	**-1.1**
BDFB				PKPab	**PKPab**	**09 28 10.8**	**+0.7**
BDFB	**Brasilia**	**152.15**	**335**	PKIKP	**PKPdf**	**09 27 51.7**	**-2.2**
LPAZ	**La Paz**	**153.73**	**18**	PKPbc	**PKPbc**	**09 28 02.5**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=211,slow=10,SNR=2.3						

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*IDC **22** 09:08:55.5±0.7, 41°.17N×120°.30E, h0^{km}, mb4.3/10, mbtmp4.3/13, ML3.4/3, Error ellipse: s-maj=25.3km s-min=16.4km az=56.0*

*BJI **22** 09:08:57.8±0.0, 41°.61N×120°.09E, h6^{km}, mb4.5/8, mB4.4/5, ML4.4/2, Ms4.1/2, Ms7 4.0/8*

ISC 22 09:08:57.4±0.5**, 41°.29N**±0°.06×**120°.28E**±0°.05**, h10**^{km}**, n23, σ1**^{s}**.80**/28**, mb4.5**/12**, MS4.0**/3**, 1D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNY	**Shenyang**	**2.53**	**77**	⇓Pg	**Pg**	**09 09 44.9**	**-1.0**
SNY				Sg	**Sg**	**09 10 18.8**	**0.0**
SNY				smax	smax		
	comp=N,1µm,0.7s						
SNY				smax	smax		
	comp=E,950nm,0.7s						
DL2	**Dalian**	**2.59**	**156**	Pn	**Pn**	**09 09 38.8**	**-0.5**
DL2				Pg	**Pb**	**09 09 44.8**	**+0.9**
DL2				Sg	**Sb**	**09 10 16.3**	**+0.5**
DL2				smax	smax		
	comp=N,1µm,0.8s						
DL2				smax	smax		
	comp=E,2µm,0.5s						
DL2	**Dalian**	**2.59**	**156**	Sg	**Pn**	**09 09 38.3**	**-1.0**
HHC	**Hu-ho-hao-te**	**6.60**	**269**	*e*Pn	Pn	09 10 29.3	-5.2
BTO	**Baotou**	**7.79**	**268**	*e*Pg	**Pn**	**09 10 50.6**	**-0.3**
BTO				Sg	Sn	09 12 08.9	-10
BTO				smax	smax		
	comp=N,4µm,0.7s						
BTO				smax	smax		
	comp=E,2µm,0.7s						
USRK	**Ussuriysk Ar.**	**9.10**	**67**	Pn	**Pn**	**09 11 07.2**	**-1.4**
	comp=E,0.5nm,0.3s,baz=262,slow=14,SNR=2.0						
	comp=E,2.9nm,0.5s						
KLR	**Kul'dur**	**11.32**	**42**	Pn	**Pn**	**09 11 39.6**	**+0.5**
	comp=E,0.7nm,0.3s,baz=223,slow=18,SNR=3.5						
	comp=E,2.8nm,0.5s						
SONM	**Songino Array**	**11.86**	**308**	Pn	**Pn**	**09 11 47.5**	**+0.8**
	comp=E,0.7nm,0.3s,baz=130,slow=14,SNR=4.0						
	comp=E,2.0nm,0.5s						
LZH	**Lanzhou**	**13.84**	**253**	*e*P	**Pn**	**09 12 16.3**	**+2.6**
LZH				pP	P	09 12 23.1	+0.9
LZH				pmax	pmax		
	comp=E,18nm,1.1s						
LZH				LR	LR		
	comp=E,480nm,14.1s						
MJAR	**Matsushiro Arr**	**14.74**	**103**	Pn	**P**	**09 12 33.8**	**+1.9**
	comp=E,0.1nm,0.3s,baz=300,slow=13,SNR=5.0						
GOMU	**GeErMu**	**20.47**	**264**	P	Pn	09 13 36.9	-0.8
GOMU				pP	sP	09 13 40.3	+0.4
GOMU				sP	pP	09 13 41.8	+3.3
GOMU				pmax	pmax		
	comp=E,13nm,0.7s						
GOMU				pmax	pmax		
	comp=E,36nm,4.1s						
GOMU				LR	LR		
	comp=E,450nm,12.9s						
PZH	**PanZhiHua**	**21.25**	**232**	P	**P**	**09 13 43.8**	**+0.1**
PZH				S	**S**	**09 17 39.9**	**0.0**
PZH				pmax	pmax		
	comp=E,20nm,1.2s						
PZH				pmax	pmax		
	comp=E,100nm,6.6s						
PZH				LR	LR		
	comp=E,600nm,13.1s						
WMQ	**Urumqi**	**24.05**	**287**	*e*P	**P**	**09 14 12.3**	**-0.4**
WMQ				pP	sP	09 14 16.8	-0.4
WMQ				S	**S**	**09 18 23.4**	**-6.5**
WMQ				pmax	pmax		
	comp=E,17nm,0.7s						
WMQ				LR	LR		
	comp=E,400nm,21.9s						
MKAR	**Makanchi Array**	**27.66**	**294**	P	**P**	**09 14 46.7**	**+1.4**
	comp=E,2.0nm,0.8s,baz=81,slow=9.1,SNR=3.5						
MKAR				PcP	**PcP**	**09 17 59.0**	**-3.1**
	comp=E,0.6nm,0.5s,baz=62,slow=1.4,SNR=5.9						
	comp=E,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**30.13**	**302**	P	**P**	**09 15 07.5**	**+0.4**
	comp=E,3.1nm,0.7s,baz=90,slow=9.8,SNR=5.9						
KURBB				PcP	**PcP**	**09 18 10.6**	**+2.3**
	comp=E,1.0nm,0.7s,baz=100,slow=2.8,SNR=3.1						
	comp=E,3.1nm,0.7s						
ILAR	**Eielson Array**	**54.70**	**32**	P	**P**	**09 18 27.3**	**+1.1**
	comp=E,1.1nm,0.7s,baz=286,slow=6.8,SNR=6.4						
	comp=E,1.1nm,0.7s						
FINES	**FINESS Array B**	**56.64**	**325**	P	**P**	**09 18 40.2**	**0.0**
	comp=E,3.7nm,0.7s,baz=70,slow=8.3,SNR=4.0						
	comp=E,3.7nm,0.7s						
AKASG	**Malin Array Be**	**60.10**	**313**	P	**P**	**09 19 03.7**	**-0.8**
	comp=E,0.6nm,0.4s,baz=50,slow=7.6,SNR=4.2						
	comp=E,0.6nm,0.4s						
WRA	**Warramunga Arr**	**62.30**	**165**	P	**P**	**09 19 18.6**	**-1.1**
	comp=E,9.1nm,0.7s,baz=350,slow=7.5,SNR=15						
	comp=E,9.1nm,0.7s						
NOA	**NORSAR Array B**	**62.97**	**329**	P	**P**	**09 19 24.6**	**+0.7**
	comp=E,3.3nm,0.7s,baz=54,slow=6.8,SNR=5.4						
	comp=E,3.3nm,0.7s						
BRTR	**Keskin Array B**	**63.10**	**300**	P	**P**	**09 19 25.6**	**+0.4**
	comp=E,2.1nm,0.7s,baz=78,slow=4.8,SNR=4.2						
	comp=E,2.1nm,0.7s						
ASAR	**Alice Springs**	**65.85**	**166**	P	**P**	**09 19 42.5**	**-0.5**
	comp=E,5.7nm,0.7s,baz=354,slow=7.3,SNR=11						
	comp=E,5.7nm,0.7s						
STKA	**Stephens Creek**	**75.41**	**161**	P	**P**	**09 20 40.2**	**-0.9**
	comp=E,3.2nm,0.7s,baz=8.3,slow=8.1,SNR=3.8						
	comp=E,3.2nm,0.7s						

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*ISK **22** 09:10:07.9, 41°.56N×23°.32E, h16^{km}, ML3.2/12*

*SOF **22** 09:10:08.6, 41°.67N×23°.35E, h16^{km}, MD2.9*

*ATH **22** 09:10:08.9, 41°.61N×23°.31E, h10^{km}±3^{km}, ML2.6/1, Error ellipse: s-maj=4.6km s-min=1.5km az=174.0*

*THE **22** 09:10:09.5, 41°.58N×23°.31E, h7^{km}±1^{km}, ML2.7/11, Error ellipse: s-maj=1.7km s-min=0.6km az=184.0*

*BEO **22** 09:10:09.0±0.3, 41°.61N×23°.25E, h16^{km}±3^{km}, ML3.0/11*

*SKO **22** 09:10:10.0, 41°.62N×23°.27E, h0^{km}*

ISC 22 09:10:08.8±0.9**, 41°.61N**±0°.02×**23°.29E**±0°.02**, h14**^{km}±8^{km}**, n89, σ0**^{s}**.87**/131**, 22C-10D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.30**	**330**	*i* Pg	**Pg**	**09 10 14.1**	**-1.0**
MMB	**Musomiste**	**0.33**	**93**	*i* Pg	**Pg**	**09 10 15.6**	**-0.1**
NVR	**Nevrokopi**	**0.50**	**121**	P	**Pg**	**09 10 18.5**	**-0.3**
NVR				S	**Sg**	**09 10 24.4**	**-1.2**
NVR				AML	AML	09 10 26.9	
	comp=E,2396µm,0.2s						
NVR				AML	AML	09 10 27.0	
	comp=N,1634µm,0.1s						
NVR	**Nevrokopi**	**0.50**	**121**	P	**Pg**	**09 10 18.4**	**-0.4**
NVR				S	**Sg**	**09 10 25.3**	**-0.2**
	comp=N,1µm,0.1s						
KNT	**Kendrikon**	**0.53**	**213**	P	**Pg**	**09 10 19.5**	**+0.2**
KNT				S	**Sg**	**09 10 26.4**	**-0.1**
KNT	**Kendrikon**	**0.53**	**213**	P	**Pg**	**09 10 19.5**	**+0.2**
KNT				S	**Sg**	**09 10 26.6**	**+0.2**
	comp=N,862nm,0.1s						
KNT	**Kendrikon**	**0.53**	**213**	PG	**Pg**	**09 10 19.1**	**-0.2**
KNT				SG	**Sg**	**09 10 26.3**	**-0.1**
KNT	**Kendrikon**	**0.53**	**213**	⇑*i*Pg	**Pg**	**09 10 19.4**	**+0.2**
KNT				*i* Sg	**Sg**	**09 10 26.8**	**+0.4**
SRS	**Serrai**	**0.54**	**155**	*e*Pg	**Pg**	**09 10 19.4**	**0.0**
SRS				*e*Sg	**Sb**	**09 10 27.6**	**-0.1**
SRS	**Serrai**	**0.54**	**155**	P	**Pg**	**09 10 19.5**	**0.0**
SRS				S	**Sb**	**09 10 27.4**	**-0.3**
SRS	**Serrai**	**0.54**	**155**	P	**Pg**	**09 10 19.5**	**0.0**
SRS				S	**Sg**	**09 10 27.1**	**+0.4**
	comp=N,1µm,0.2s						
SRS	**Serrai**	**0.54**	**155**	⇑*i*Pg	**Pg**	**09 10 19.6**	**0.0**
SRS				*i* Sg	**Sb**	**09 10 27.9**	**+0.2**
VAY	**Valandovo**	**0.61**	**242**	*e*Pg	**Pg**	**09 10 21.1**	**+0.4**
VAY				*e*Sg	**Sb**	**09 10 30.6**	**+1.0**
VAY	**Valandovo**	**0.61**	**242**	*i* Pg	**Pb**	**09 10 21.7**	**+0.5**
VAY				*i* Sg	**Sg**	**09 10 29.5**	**+0.7**
VAY				*e*Lg	Lg	09 10 30.5	
	comp=E,70nm,0.3s						
SOH	**Sokhos**	**0.79**	**176**	P	**Pb**	**09 10 24.0**	**-0.3**
SOH	**Sokhos**	**0.79**	**176**	P	**Pb**	**09 10 24.0**	**-0.3**
SOH				S	**Sb**	**09 10 35.4**	**+0.6**
	comp=E,552nm,0.5s						
SOH	**Sokhos**	**0.79**	**176**	*i* Pg	**Pb**	**09 10 24.0**	**-0.3**
SOH				*i* Sg	**Sb**	**09 10 35.4**	**+0.6**
GRG	**Griva**	**0.93**	**226**	P	**Pb**	**09 10 26.7**	**0.0**
GRG	**Griva**	**0.93**	**226**	P	**Pb**	**09 10 26.8**	**0.0**
GRG				S	**Sb**	**09 10 39.6**	**+0.6**
	comp=E,368nm,0.5s						
GRG	**Griva**	**0.93**	**226**	PG	**Pb**	**09 10 26.2**	**-0.5**
GRG				SG	**Sb**	**09 10 38.9**	**0.0**
GRG	**Griva**	**0.93**	**226**	*i* Pg	**Pb**	**09 10 26.8**	**0.0**
GRG				*i* Sg	**Sb**	**09 10 39.5**	**+0.6**
KOKK	**Kokkinochori,**	**0.96**	**145**	P	**Pb**	**09 10 26.8**	**-0.3**
KOKK	**Kokkinochori,**	**0.96**	**145**	P	**Pb**	**09 10 26.8**	**-0.3**
KOKK				S	**Sg**	**09 10 39.8**	**0.0**
	comp=E,598nm,0.3s						
THE	**Thessaloniki**	**1.00**	**194**	P	**Pb**	**09 10 28.2**	**+0.3**
THE	**Thessaloniki**	**1.00**	**194**	P	**Pb**	**09 10 28.2**	**+0.3**
THE				S	**Sn**	**09 10 42.4**	**+0.1**
	comp=E,358nm,0.3s						
THE	**Thessaloniki**	**1.00**	**194**	*i* Pg	**Pb**	**09 10 28.3**	**+0.3**
THE				*i* Sg	**Sn**	**09 10 42.4**	**+0.1**
VTS	**Vitosha**	**1.01**	**358**	⇓P	**Pb**	**09 10 27.5**	**-0.6**
VTS				⇑S	**Sb**	**09 10 40.8**	**-0.5**
VTS	**Vitosha**	**1.01**	**358**	*e*Pg	**Pb**	**09 10 27.2**	**-1.0**
VTS				*e*Sg	**Sb**	**09 10 39.8**	**-1.6**
VTS	**Vitosha**	**1.01**	**358**	⇑*i*Pg	**Pb**	**09 10 27.1**	**-1.1**
VTS				*i* Sg	**Sb**	**09 10 40.6**	**-0.8**
VTS	**Vitosha**	**1.01**	**358**	P	**Pb**	**09 10 27.0**	**-1.1**
HORT	**Hortiatis**	**1.02**	**188**	P	**Pb**	**09 10 28.4**	**+0.1**
HORT	**Hortiatis**	**1.02**	**188**	P	**Pb**	**09 10 28.4**	**+0.1**
HORT				S	**Sg**	**09 10 42.4**	**+0.6**
	comp=E,502nm,0.4s						
HORT	**Hortiatis**	**1.02**	**188**	PG	**Pb**	**09 10 27.6**	**-0.6**
HORT				SG	**Sb**	**09 10 41.4**	**-0.1**
KVLA	**Kavala**	**1.07**	**129**	P	**Pb**	**09 10 28.8**	**-0.2**
BOSS	**Bosilegrad**	**1.07**	**326**	*e*Pg	**Pb**	**09 10 28.6**	**-0.5**
BOSS				*e*Sg	**Sb**	**09 10 42.2**	**-0.8**
RZN	**Rozhen**	**1.07**	**85**	P	**Pb**	**09 10 28.6**	**-0.7**
KAVA	**Kavala**	**1.11**	**123**	P	**Pn**	**09 10 29.6**	**-0.3**
KAVA				S	**Sg**	**09 10 44.7**	**0.0**
	comp=E,615nm,0.2s						
PLD	**Plovdiv**	**1.17**	**64**	*e*Pg	**Pg**	**09 10 31.7**	**+0.4**
PLD				*e*Sg	**Sg**	**09 10 47.8**	**+1.2**
PLD	**Plovdiv**	**1.17**	**64**	PN	**Pn**	**09 10 30.2**	**-0.5**
PLD	**Plovdiv**	**1.17**	**64**	*i* Pg	**Pg**	**09 10 31.8**	**+0.4**
PLD				*i* Sg	**Sg**	**09 10 48.0**	**+1.4**
PLD	**Plovdiv**	**1.17**	**64**	P	**Pg**	**09 10 31.9**	**+0.5**
PLG	**Polygyros**	**1.24**	**174**	P	**Pn**	**09 10 31.6**	**-0.1**
OUR	**Ouranopolis**	**1.38**	**157**	P	**Pn**	**09 10 33.7**	**+0.2**
OUR	**Ouranopolis**	**1.38**	**157**	PN	**Pn**	**09 10 32.6**	**-0.9**
THAS	**Thassos island**	**1.48**	**132**	P	**Pn**	**09 10 34.9**	**0.0**
THAS				S	**Sb**	**09 10 55.0**	**+0.5**
	comp=E,372nm,0.4s						
KDZ	**Kurdzhali**	**1.60**	**88**	P	**Pn**	**09 10 36.9**	**+0.3**
BARS	**Barje**	**1.63**	**318**	*e*Pg	**Pn**	**09 10 37.3**	**+0.3**
BARS	**Barje**	**1.63**	**318**	*e*Pn	Pg	09 10 50.0	+10
BARS				*e*Sg	**Sb**	**09 10 59.8**	**+0.8**
BARS	**Barje**	**1.63**	**318**	*i* Pn	**Pb**	**09 10 39.5**	**+0.9**
FNA	**Florina**	**1.66**	**241**	PN	**Pn**	**09 10 37.3**	**-0.2**
RDO	**Rodhopi**	**1.76**	**104**	P	**Pb**	**09 10 39.6**	**-1.2**
RDO				S	**Sb**	**09 11 02.4**	**-0.2**
	comp=E,252nm,0.2s						
RDO	**Rodhopi**	**1.76**	**104**	PN	**Pn**	**09 10 38.1**	**-0.7**
OHR	**Ohrid**	**1.94**	**256**	*i* Pn	**Pg**	**09 10 45.5**	**-0.5**
BLKB	**Belogradchik**	**2.06**	**348**	⇓P	**Pn**	**09 10 44.5**	**+1.4**
BLKB				⇑S	**Sn**	**09 11 08.1**	**-0.5**
ALN	**Alexandroupoli**	**2.20**	**108**	PN	**Pn**	**09 10 44.3**	**-0.6**
SELS	**Selova**	**2.27**	**316**	*e*Pn	**Pn**	**09 10 45.7**	**-0.2**
SELS				*e*Sn	**Sn**	**09 11 13.4**	**-0.3**
ZAGS	**Zajecar**	**2.34**	**341**	*e*Pn	**Pn**	**09 10 46.4**	**-0.3**
BOVS	**Bovan**	**2.34**	**331**	⇓P	**Pn**	**09 10 46.5**	**-0.2**
BOVS				⇑S	**Sn**	**09 11 12.8**	**-2.4**
BOVS	**Bovan**	**2.34**	**331**	*e*Pn	**Pn**	**09 10 46.6**	**-0.2**
BOVS				*e*Sn	**Sn**	**09 11 15.6**	**+0.3**
BAIL	**Bailesti**	**2.41**	**1**	⇓S	**Sn**	**09 11 18.1**	**+1.0**
VLAD	**Vladila**	**2.53**	**19**	⇓P	**Pb**	**09 10 53.7**	**-0.2**
VLAD				⇑S	**Sb**	**09 11 23.7**	**-1.1**
UKOP	**Uzunkopru-Edir**	**2.56**	**100**	PN	**Pn**	**09 10 49.6**	**-0.3**
EDRB	**Edirne**	**2.60**	**84**	PN	**Pn**	**09 10 50.2**	**-0.2**
ERIK	**Erikli-Kesan**	**2.61**	**110**	PN	**Pn**	**09 10 49.7**	**-0.8**
PUNG	**Punghina**	**2.68**	**355**	⇑P	**Pn**	**09 10 53.2**	**+1.7**
PUNG				⇑S	**Sn**	**09 11 23.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**2.70**	**116**	PN	**Pn**	**09 10 51.4**	**-0.3**
EZN	**Ezine**	**2.92**	**127**	PN	**Pn**	**09 10 54.3**	**-0.4**
SJES	**Sjenica**	**2.96**	**305**	*e*Pn	**Pn**	**09 10 54.9**	**-0.5**
SJES				*e*Sn	**Sn**	**09 11 29.5**	**-1.2**
GRUS	**Gruza**	**2.96**	**321**	*e*Pn	**Pn**	**09 10 55.1**	**-0.3**
GRUS				*e*Sn	**Sn**	**09 11 30.8**	**+0.1**
IVAS	**Ivanjica**	**3.04**	**311**	*e*Pn	**Pn**	**09 10 56.2**	**-0.2**
KUBS	**Kucevo**	**3.04**	**338**	*e*Pn	**Pn**	**09 10 55.4**	**-1.1**
RAZG	**Razgrad**	**3.08**	**49**	⇑P	**Pb**	**09 11 04.8**	**+1.4**
RAZG				⇑S	**Sb**	**09 11 42.4**	**+1.6**
DJES	**Djerdap**	**3.11**	**350**	⇑P	**Pn**	**09 10 59.4**	**+2.0**
DJES				⇑S	**Sn**	**09 11 34.6**	**+0.3**
MAR6	**Marsite Statio**	**3.14**	**105**	PN	**Pn**	**09 10 57.3**	**-0.5**
MAR3	**Marsite Statio**	**3.15**	**105**	PN	**Pn**	**09 10 57.9**	**0.0**
HERR	**Herculane**	**3.33**	**349**	⇑P	**Pn**	**09 11 01.3**	**+0.8**
TRUS	**Trudelj**	**3.36**	**322**	*e*Pn	**Pn**	**09 11 00.5**	**-0.4**
MDVR	**Moldovita**	**3.37**	**341**	⇑P	**Pn**	**09 11 01.1**	**0.0**
MDVR				⇓S	**Sn**	**09 11 37.2**	**-3.7**
DIVS	**Divibare**	**3.47**	**317**	*e*Pn	**Pn**	**09 11 02.0**	**-0.5**
DIVS				*e*Sn	**Sn**	**09 11 42.5**	**-0.9**
BBLS	**Lazići**	**3.64**	**310**	*e*Pn	**Pn**	**09 11 04.8**	**0.0**
GZR	**Gura Zlata**	**3.80**	**355**	⇓P	**Pn**	**09 11 08.8**	**+1.8**
GZR				⇓S	**Sn**	**09 11 50.9**	**-0.5**
VOIR		**4.04**	**18**	⇑P	**Pn**	**09 11 13.2**	**+3.0**
BZS	**Buzias**	**4.19**	**344**	⇑P	**Pn**	**09 11 12.3**	**+0.1**
DEV	**Deva**	**4.28**	**356**	⇑P	**Pn**	**09 11 15.2**	**+1.7**
MLR	**Muntele Rosu**	**4.34**	**26**	⇑P	Pn	09 11 19.1	+4.7
DOPR	**Dopca**	**4.62**	**19**	⇓P	**Pn**	**09 11 21.1**	**+3.0**
PLOR	**Plostina**	**4.89**	**29**	⇑P	Pn	09 11 27.2	+5.3
VRI	**Vrincioaia**	**4.93**	**29**	⇑P	Pn	09 11 27.5	+5.0
DRGR		**5.20**	**356**	⇑P	**Pn**	**09 11 27.9**	**+1.7**
DRGR				⇓S	**Sn**	**09 12 24.9**	**-1.0**

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*IDC **22** 09:10:16.3±1.7, 18°.94N×145°.45E, h182^{km}±17^{km}, mb3.5/8, mbtmp4.1/11, Error ellipse: s-maj=27.1km s-min=11.4km az=92.0*

*NEIC **22** 09:10:17.2±1.2, 18°.94N±0°.08×145°.4E±0°.1, h186^{km}±8^{km}, mb4.3/19, Error ellipse: s-maj=18.0km s-min=10.3km az=67.0*

ISC 22 09:10:18.0±0.6**, 18°.91N**±0°.06×**145°.3E**±0°.2**, h200**^{km}**, n41, σ1**^{s}**.55**/44**, mb4.1**/19**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.30**	**184**	P	**Pn**	**09 11 36.2**	**-0.2**
	24nm,0.3s,baz=90,slow=2.5,SNR=13						
GUMO				S	**Sn**	**09 12 35.7**	**-2.4**
	30nm,0.5s,baz=349,slow=22,SNR=1.5						
GUMO	**Guam**	**5.30**	**184**		**Pn**	**09 11 35.5**	**-0.8**
JCJ	**Chichijima**	**8.64**	**341**	P	**Pn**	**09 12 19.4**	**-0.1**
	21nm,0.5s,baz=205,slow=18,SNR=1.3						
JCJ				S	**Sn**	**09 13 53.2**	**-3.3**
	39nm,0.8s,baz=96,slow=21,SNR=1.5						
JCJ	**Chichijima**	**8.64**	**341**		**Pn**	**09 12 18.1**	**-1.4**
MJAR	**Matsushiro Arr**	**18.64**	**342**	P	**P**	**09 14 21.5**	**+0.8**
	0.6nm,0.5s,baz=165,slow=10,SNR=2.1						
MMRI	**Maumere**	**35.57**	**222**	P	**P**	**09 16 57.2**	**+0.7**
KNRA	**Kununurra**	**38.02**	**206**	P	**P**	**09 17 18.2**	**+1.1**
KNRA				IAmb	IAmb	09 17 30.3	
	comp=Z,7.8nm,1.1s						
WB0	**Warramunga Arr**	**39.89**	**196**	P	**P**	**09 17 32.2**	**-0.4**
WB0				IAmb	IAmb	09 17 51.4	
	comp=Z,15nm,1.5s						
WR0	**Warramunga Arr**	**40.03**	**196**	P	**P**	**09 17 34.0**	**+0.3**
WRAB	**Tennant Creek**	**40.06**	**196**	P	**P**	**09 17 34.4**	**+0.5**
WB2	**Warramunga Arr**	**40.07**	**196**	P	**P**	**09 17 34.7**	**+0.7**
WB2				IAmb	IAmb	09 17 48.2	
	comp=Z,13nm,1.2s						
WRA	**Warramunga Arr**	**40.07**	**196**	P	**P**	**09 17 34.6**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=2.2,slow=8.5,SNR=59						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**40.07**	**196**	P	**P**	**09 17 35.0**	**+0.9**
ASAR	**Alice Springs**	**43.74**	**195**	P	**P**	**09 18 04.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=10,slow=8.0,SNR=4.1						
	comp=Z,0.3nm,0.4s						
PSA00	**Pilbara Seismi**	**47.31**	**213**	P	**P**	**09 18 29.7**	**-1.1**
PSA00	**Pilbara Seismi**	**47.31**	**213**	P	**P**	**09 18 30.1**	**-1.6**
PSA00				IAmb	IAmb	09 18 30.4	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**50.62**	**184**	P	**P**	**09 18 57.0**	**+0.3**
ZALV	**Zalesovo Beam**	**57.61**	**322**	PcP	**PcP**	**09 20 43.1**	**+5.3**
	comp=Z,0.6nm,0.3s,baz=126,slow=7.3,SNR=6.0						
MKAR	**Makanchi Array**	**58.03**	**314**	PcP	**PcP**	**09 20 45.2**	**+5.5**
	comp=Z,1.1nm,1.0s,baz=83,slow=9.9,SNR=4.5						
TTA	**Tatalina**	**59.25**	**27**	P	**P**	**09 19 57.8**	**-0.4**
TTA				IAmb	IAmb	09 20 24.2	
	comp=Z,3.9nm,1.2s						
KDAK	**Kodiak Island**	**59.40**	**33**	P	**P**	**09 19 59.0**	**-0.2**
	comp=Z,22nm,1.3s,baz=185,slow=1.7,SNR=6.6						
	comp=Z,22nm,1.3s						
KDAK	**Kodiak Island**	**59.40**	**33**	P	**P**	**09 19 58.3**	**-0.9**
J20K	**Nowinta River**	**60.45**	**26**	P	**P**	**09 20 07.0**	**+0.8**
J20K				IAmb	IAmb	09 20 11.7	
	comp=Z,7.9nm,1.5s						
KURBB	**Kurchatov Arra**	**60.90**	**318**	P	**P**	**09 20 09.8**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=92,slow=7.5,SNR=4.7						
KURBB				PcP	**PcP**	**09 20 53.0**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=93,slow=3.3,SNR=8.9						
	comp=Z,0.4nm,0.6s						
IMAR	**Indian Mountai**	**61.19**	**24**	P	**P**	**09 20 11.9**	**+0.6**
I23K	**Minto, Yukon-K**	**62.70**	**26**	P	**P**	**09 20 21.0**	**-0.2**
TOLK	**Toolik Lake Re**	**63.55**	**22**	P	**P**	**09 20 27.4**	**+0.5**
TOLK				IAmb	IAmb	09 20 29.7	
	comp=Z,7.2nm,1.4s						
ILAR	**Eielson Array**	**63.64**	**26**	P	**P**	**09 20 26.2**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=256,slow=5.8,SNR=5.1						
	comp=Z,1.0nm,0.8s						
BMAR	**Burnt Mountain**	**65.09**	**24**	P	**P**	**09 20 37.3**	**+0.5**
BCAR	**Beaver Creek A**	**65.59**	**29**	P	**P**	**09 20 40.3**	**+0.1**
DAWY	**Dawson**	**66.75**	**28**	P	**P**	**09 20 47.5**	**-0.1**
M30M	**Minto, Yukon**	**67.84**	**29**	P	**P**	**09 20 54.5**	**+0.1**
M30M				IAmb	IAmb	09 21 20.0	
	comp=Z,5.9nm,1.4s						
INK	**Inuvik**	**69.34**	**23**	P	**P**	**09 21 04.0**	**+0.6**
INK				IAmb	IAmb	09 21 05.1	
	comp=Z,8.5nm,1.4s						
DLBC	**Dease Lake**	**71.34**	**34**	P	**P**	**09 21 15.8**	**-0.1**
DLBC				IAmb	IAmb	09 21 43.5	
	comp=Z,4.3nm,1.3s						
ABKAR	**Akbulak array**	**72.92**	**317**	P	**P**	**09 21 26.0**	**+0.7**
EUNU	**Eureka**	**77.58**	**8**	P	**P**	**09 21 51.3**	**-0.1**
EUNU				IAmb	IAmb	09 22 10.9	
	comp=Z,11nm,1.4s						
YKA	**Yellowknife Ar**	**77.99**	**28**	P	**P**	**09 21 53.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=285,slow=5.5,SNR=8.8						
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**77.99**	**28**	P	**P**	**09 21 52.9**	**-1.0**
NVAR	**Mina Array Bea**	**83.32**	**52**	P	**P**	**09 22 22.7**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=267,slow=5.6,SNR=8.1						
	comp=Z,1.4nm,0.7s						
NVAR	**Mina Array Bea**	**83.32**	**52**	P	**P**	**09 22 23.4**	**+0.4**
FINES	**FINESS Array B**	**86.53**	**335**	P	**P**	**09 22 37.0**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=67,slow=3.6,SNR=2.2						
	comp=Z,1.2nm,0.8s						

ROM 22 09:16:21.7±0.1**, 40°.802N**±0°.004×**15°.23E**±0°.01**, h11**^{km}**, ML1.7**/5**, 2C-1D, Error ellipse: s-maj=0.9km s-min=0.5km az=271.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCRV	**Calabrutti - M**	**0.05**	**248**	⇓P	Pg	09 16 24.1	+0.2
MCRV				S	Sg	09 16 26.2	+0.5
MCRV				AML	AML		
	comp=E,1710µm,0.5s						
MCRV				AML	AML		
	comp=N,2500µm,0.5s						
SNAL	**S. Angelo Dei**	**0.12**	**352**	P	Pg	09 16 25.0	+0.2
SNAL				S	Sg	09 16 27.9	+0.9
SNAL				AML	AML		
	comp=N,541µm,0.6s						
SNAL				AML	AML		
	comp=N,540µm,0.6s						
SNAL				AML	AML		
	comp=E,431µm,0.7s						
MRLC	**Muro Lucano**	**0.20**	**103**	⇑P	Pg	09 16 26.2	+0.2
MRLC				S	Sg	09 16 30.4	+1.5
MRLC				AML	AML		
	comp=E,200µm,0.3s						
MRLC				AML	AML		
	comp=N,183µm,0.3s						
MRLC				AML	AML		
	comp=N,182µm,0.3s						
CAFE	**Carife**	**0.23**	**1**	P	Pg	09 16 26.6	+0.2
CAFE				S	Sg	09 16 31.2	+1.5
CAFE				AML	AML		
	comp=E,326µm,1.4s						
CAFE				AML	AML		
	comp=N,384µm,0.4s						
CDRU	**Civita di Ruta**	**0.32**	**170**	⇑P	Pg	09 16 28.1	0.0
CDRU				S	Sb	09 16 33.8	-0.9
VULT	**Monte Vulture**	**0.33**	**62**	P	Pg	09 16 28.5	+0.1
VULT				S	Sb	09 16 34.3	-0.8
CMPR	**Campora**	**0.49**	**174**	P	Pg	09 16 31.4	+0.2
SLCN	**Sala Consilina**	**0.51**	**143**	P	Pg	09 16 32.2	+0.5
ACER	**Acerenza**	**0.54**	**91**	P	Pg	09 16 32.0	-0.2
ACER				S	Sb	09 16 40.7	-0.4
ACER				AML	AML		
	comp=E,56µm,1.2s						
ACER				AML	AML		
	comp=N,57µm,1.3s						
PAOL	**Paolisi**	**0.55**	**295**	P	Pb	09 16 33.0	-0.5
PALZ	**Palazzo San Ge**	**0.57**	**75**	P	Pb	09 16 33.5	-0.3
MCEL	**Monticello**	**0.65**	**137**	P	Pg	09 16 34.5	+0.3
MTSN	**Montesano sull**	**0.67**	**143**	P	Pg	09 16 34.8	+0.2
MSAG	**Monte S. Angel**	**1.04**	**29**	P	Pg	09 16 41.0	-0.8

*IDC **22** 09:36:16.1±3.9, 26°.72N×66°.53E, h0km, mb3.6/5, mbtmp3.6/5, MS2.9/2, Error ellipse: s-maj=127.0km s-min=31.5km az=145.0*

ISC 22 09:36:20.3±3.2**, 26°.5N**±0°.6×**66°.6E**±0°.5**, h35km, n8,** σ**1s.83**/6**, mb3.6**/5**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	7.73	34	P	Pn	09 38 11.9	+1.5
AAK	Ala-Archa	17.39	20	LR	LR	09 47 23.7	
	comp=Z,38nm,18.8s,baz=180,slow=39						
MKAR	Makanchi Array	23.80	27	P	P	09 41 28.8	-0.9
	0.8nm,0.7s,baz=209,slow=9.4,SNR=5.4 0.8nm,0.7s						
KURBB	Kurchatov Arra	25.80	18	P	P	09 41 47.5	-0.4
	0.8nm,0.5s,baz=208,slow=9.0,SNR=4.8 0.8nm,0.5s						
ZALV	Zalesovo Beam	30.59	21	P	P	09 42 28.1	-2.5
	0.6nm,0.5s,baz=224,slow=12,SNR=1.8 0.6nm,0.5s						
CMAR	Chiang Mai Arr	30.85	98	LR	LR	09 56 30.0	
	comp=Z,23nm,18.1s,baz=300,slow=39						
SONM	Songino Array	37.66	45	P	P	09 43 32.1	-0.1
	0.4nm,0.4s,baz=226,slow=7.8,SNR=2.2 0.4nm,0.4s						
TORD	Torodi Ar. Bea	61.95	271	P	P	09 46 37.7	+0.7
	0.4nm,0.9s,baz=57,slow=5.3,SNR=2.0 0.4nm,0.9s						

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*GII **22** 09:40:01.3±0.0, 35°.42N×38°.51E, h10km, mb4.1/4, MD3.9/4, Mm4.0/3*

*GRAL **22** 09:40:06.6±0.5, 34°.95N×38°.83E, h35km±294km, MD4.2*

*IDC **22** 09:40:08.5±1.1, 34°.64N×38°.18E, h0km, mb3.4/5, mbtmp3.5/10, ML3.6/5, MS3.1/1, Error ellipse: s-maj=22.8km s-min=10.9km az=123.0*

*ISK **22** 09:40:11.7, 34°.91N×38°.15E, h5km, ML4.0/34*

ISC 22 09:40:10.7±2.5**, 34°.63N**±0°.04×**38°.22E**±0°.05**, h12km**±17km**, n69,** σ**1s.61**/79**, mb3.4**/5**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	1.91	260	*e*P	Pn	09 40 43.9	+0.6
HWQ				*e*S	Sg	09 41 11.4	-0.9
BHL	Bhannes	2.25	252	*e*P	Pn	09 40 48.9	+1.1
BHL				*e*S	Sb	09 41 20.2	+1.1
RCY	Rachaya	2.28	241	*e*P	Pn	09 40 49.8	+1.4
BEYL	Beirut	2.38	252	*e*P	Pn	09 40 51.1	+1.6
DQRL	Deir Qamar	2.38	248	*e*P	Pn	09 40 50.9	+1.2
DQRL				*e*S	Sb	09 41 23.4	+0.3
TAHT	Tahtakopru-Hat	2.41	317	PN	Pn	09 40 50.5	+0.5
TAHT				SN	Sn	09 41 18.6	-0.8
SHBL	Chebaa	2.42	239	*e*P	Pn	09 40 51.2	+0.9
SHBL				*e*S	Sb	09 41 24.6	+0.4
NATI	Neve Ativ	2.47	237	Pn	Pn	09 40 51.4	+0.6
NATI				Sn	Sb	09 41 27.3	+1.8
GEM	Giv'at Ha'Em	2.55	237	Pn	Pn	09 40 52.8	+0.8
GEM				Sn	Sb	09 41 29.2	+1.3
ASF	Jabal al Asfar	2.69	205	Pn	Pn	09 40 53.9	0.0
	14nm,0.3s,baz=34,slow=9.6,SNR=43						
ASF				Lg	Lg	09 41 32.2	
	45nm,0.3s,baz=48,slow=23,SNR=14 34nm,0.2s						
MMA0B	Mount Meron ar	2.84	236	Pn	Pn	09 40 55.6	-0.4
MMA0B				Sn	Sb	09 41 38.1	+1.8
MMAI	Mount Meron Ar	2.84	236	Pn	Pn	09 40 55.7	-0.3
	17nm,0.3s,baz=16,slow=16,SNR=5.6						
MMAI				Lg	Lg	09 41 36.5	
	142nm,0.3s,baz=33,slow=42,SNR=5.2 2.3nm,0.3s						
KMRS	Kahramanmaras	3.06	340	PN	Pn	09 40 59.7	+0.7
KMRS				SN	Sn	09 41 33.8	-1.9
CEYT	Ceyhan	3.11	321	PN	Pn	09 41 00.6	+1.0
BLGI	Bet Lehem HaGe	3.15	234	Pn	Pn	09 41 00.2	0.0
BLGI				Sn	Sb	09 41 46.2	+1.1
MMLI	Mount Malkishu	3.20	228	PN	Pb	09 41 07.3	-0.2
MMLI	Mount Malkishu	3.20	228	Pn	Pn	09 41 02.3	+1.4
MMLI				Sn	Sb	09 41 47.4	+0.9
HMDT	Nahal Hemdat	3.27	224	Pn	Pn	09 41 03.4	+1.6
HMDT				Sn	Sb	09 41 50.9	+2.5
MAZI	Mazidag	3.35	32	PN	Pn	09 41 04.8	+1.7
EREN	Erenkoy	3.44	286	PN	Pn	09 41 06.2	+2.0
KOZT	Kozan	3.44	326	PN	Pn	09 41 04.4	+0.2
UJAP	Al Uja	3.53	222	PN	Pb	09 41 12.9	-0.2
SLTI	Sal'it	3.57	229	Pn	Pb	09 41 12.9	-0.9
SLTI				Sn	Sb	09 41 56.7	-0.4
DYBB	Diyarbakir	3.66	24	PN	Pn	09 41 07.7	+0.4
KARA	Karaisali	3.67	317	PN	Pn	09 41 08.1	+0.7
MALT	Malatya	3.68	3	PN	Pn	09 41 07.3	-0.3
MERS	Mersin	3.75	308	PN	Pn	09 41 09.6	+1.2
SWQJ	Swaqa	3.83	209	P	Pn	09 41 04.4	-5.2
SVRC	Sivrice-ELAZID	3.84	13	PN	Pn	09 41 10.1	+0.2
DSI	Dead Sea	3.87	219	Pn	Pn	09 41 11.2	+1.1
SILI	Silifke-Mersin	3.91	298	PN	Pn	09 41 12.7	+2.1
DARE	Darende-Malaty	3.98	352	PN	Pn	09 41 11.8	+0.1
CMRD	Camardi-Nigde	4.00	320	PN	Pn	09 41 13.1	+1.1
IKL	Isikli	4.04	295	PN	Pn	09 41 14.5	+2.2
CSS	Mathiatis	4.04	276	PN	Pn	09 41 16.4	+4.0
SARI	SarD1z-Kayseri	4.04	339	PN	Pn	09 41 12.9	+0.3
KEBE	Keben-Mersin	4.10	298	PN	Pn	09 41 14.9	+1.6
AKKU	Akkuyu-Mersin	4.11	293	PN	Pn	09 41 15.6	+2.3
KARJ	KARJ	4.11	212	P	Pn	09 41 07.2	-6.2
SVAN	Silvan-Diyarba	4.26	33	PN	Pn	09 41 17.5	+2.1
TEVE	Tevekalti-Mers	4.29	296	PN	Pn	09 41 17.9	+1.9
LEF	Lefka	4.41	278	PN	Pn	09 41 22.4	+4.9
BERE	Bereket-Mersin	4.42	294	PN	Pn	09 41 19.2	+1.4
TEKE	Tekeli-Mersin	4.44	291	PN	Pn	09 41 19.4	+1.5
ARPR	Arapgir-MALATY	4.46	1	PN	Pn	09 41 18.8	+0.5
BNN	Bunyan	4.63	336	PN	Pn	09 41 21.3	+0.7
BNGB	Bingl	4.78	24	PN	Pn	09 41 23.9	+1.2
YESY	Yesilyurt	4.80	312	PN	Pn	09 41 25.4	+2.5
ILIC	ilic-Erzincan	4.82	3	PN	Pn	09 41 23.8	+0.5
GULA	Gulagac	4.91	320	PN	Pn	09 41 25.4	+1.0
GURO	Guroymak-BITLI	4.97	37	PN	Pn	09 41 27.2	+1.8
PRNI	Paran	5.05	213	Pn	Pn	09 41 27.2	+0.8
CUKT	Cukurca	5.09	58	PN	Pn	09 41 31.4	+4.4
HRFI	Mount Harif	5.31	211	Pn	Pn	09 41 31.9	+2.0
HRFI				Sn	Sb	09 42 42.9	-4.4
AKDM	Akdamar-Van	5.32	45	PN	Pn	09 41 32.5	+2.3
KRMI	Paran Flat	5.38	214	Pn	Pn	09 41 31.9	+1.0
EIL	Elat	5.67	210	Pn	Pn	09 41 35.8	+1.0
	0.6nm,0.3s,baz=126,slow=12,SNR=2.2						
EIL				Lg	Lg	09 43 06.7	
	3.3nm,0.3s,baz=72,slow=8.4,SNR=4.5 2.1nm,0.4s						
EIL	Elat	5.67	210	PN	Pb	09 41 43.4	-6.2
EIL	Elat	5.67	210	Pn	Pn	09 41 36.7	+1.9
MLAZ	Malazgirt-MUS	5.69	36	PN	Pn	09 41 37.8	+2.6
KONT	Konya--Tatoy	5.78	307	PN	Pn	09 41 39.7	+3.4
BRTR	Keskin Array B	6.27	326	Pn	Pn	09 41 44.0	+0.9
	0.2nm,0.3s,baz=138,slow=14,SNR=3.8						
BRTR				Sn	Sn	09 42 55.0	+0.3
	0.2nm,0.3s,baz=146,slow=16,SNR=2.2 0.5nm,0.5s						
BELG	Belogornoye	18.99	18	P	P	09 44 32.1	+0.1
	1.6nm,0.3s,baz=120,slow=0.8,SNR=4.0 4.8nm,0.4s						
WSAR	Wadi Sarin	21.12	117	LR	LR	09 55 14.2	
	comp=Z,55nm,19.2s,baz=133,slow=43						
AKTO	Aktyubinsk	21.40	36	P	P	09 44 56.8	-1.4
	3.0nm,0.8s,baz=235,slow=9.0,SNR=6.4 3.0nm,0.8s						
GERES	GERESS Array B	23.03	316	P	P	09 45 13.7	-2.0
	0.4nm,0.6s,baz=108,slow=8.7,SNR=4.9 0.4nm,0.6s						
KURBB	Kurchatov Arra	33.22	49	P	P	09 46 48.1	+0.7
	0.4nm,0.6s,baz=261,slow=9.2,SNR=2.6 0.4nm,0.6s						
MKAR	Makanchi Array	35.11	56	P	P	09 47 02.1	-1.8
	0.2nm,0.5s,baz=262,slow=7.1,SNR=2.0 0.2nm,0.5s						
TORD	Torodi Ar. Bea	39.34	246	P	P	09 47 41.1	+1.1
	0.7nm,0.7s,baz=52,slow=5.8,SNR=4.8 0.7nm,0.7s						

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*GUC **22** 09:44:38.2±1.0, 33°.95S×73°.35W, h13km±15km, ML3.1*

*IDC **22** 09:44:43.2±1.8, 34°.37S×73°.32W, h0km, mb4.0/3, mbtmp3.7/5, ML3.6/2, MS2.7/2, Error ellipse: s-maj=58.0km s-min=31.7km az=68.0*

ISC 22 09:44:35.3±1.1**, 33°.91S**±0°.05×**73°.33W**±0°.06**, h10km, n25,** σ**0s.83**/27**, 1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	1.28	118	*i* P	Pg	09 45 00.5	+0.7
BO03				*e*S	Sb	09 45 15.7	-0.2
BO03				IAML		09 45 17.3	
	comp=N,261nm,0.3s						
VA05	Santo Domingo	1.45	81	*e*P	Pg	09 45 03.6	+0.5
VA05				*i* S	Sg	09 45 22.2	+0.2
GO05	Huala	1.59	134	⇓*i*P	Pb	09 45 04.8	-0.1
GO05				*e*S	Sn	09 45 23.0	-1.4
GO05				IAML		09 45 24.5	
	comp=E,422nm,0.3s						
VA01	Torpederas	1.66	58	*e*P	Pg	09 45 06.9	-0.3
VA01				IAML		09 45 35.7	
	comp=E,427nm,0.3s						
MT01	Popeta	1.73	89	*e*P	Pb	09 45 07.3	+0.1
BO01	Tunca	1.92	105	*i* P	Pb	09 45 09.9	-0.5
MT02	Curacav	1.94	71	*e*P	Pb	09 45 10.8	0.0
MT09	Talagante	1.95	87	*e*P	Pb	09 45 10.8	-0.3
ROCH	El Roble	2.15	65	*e*P	Pb	09 45 14.4	-0.1
VA06	Catapilco	2.17	52	*e*P	Pb	09 45 14.2	-0.5
VA06				IAML		09 45 42.5	
	comp=N,244nm,0.2s						
BO04	La Punta	2.26	93	*e*P	Pb	09 45 15.8	-0.5
PEL	Peldehue	2.34	72	*e*P	Pb	09 45 17.7	+0.1
MT03	Universidad Ad	2.39	81	*e*P	Pb	09 45 17.7	-0.7
ML02	Panimavida	2.43	140	*e*P	Pb	09 45 17.5	-1.6
VA03	San Esteban	2.59	65	*e*P	Pb	09 45 20.8	-1.1
FCH	Farellones	2.60	78	*e*P	Pb	09 45 21.2	-1.0
FCH				IAML		09 45 55.4	
	comp=N,82nm,0.2s						
BI05	Punta Hualpn	2.83	178	*e*P	Pn	09 45 20.2	-0.4
H03S1	Juan Fernandez	4.64	269	Pn	Pn	09 45 44.7	-0.5
H03S1				T	T	09 50 30.4	
	baz=88						
H03S3	Juan Fernandez	4.64	269	Pn	Pn	09 45 45.0	-0.3
H03S3				T	T	09 50 36.3	
	baz=88						
H03S2	Juan Fernandez	4.66	269	Pn	Pn	09 45 44.8	-0.6
H03S2				T	T	09 50 31.3	
	baz=88						
H03N1	Juan Fernandez	4.68	274	Pn	Pn	09 45 46.8	+1.1
H03N1				T	T	09 50 34.8	
	baz=91,slow=74,SNR=6.6						
H03N3	Juan Fernandez	4.69	274	Pn	Pn	09 45 46.7	+0.8
H03N3				T	T	09 50 33.0	
	baz=91,slow=74,SNR=5.8						
H03N2	Juan Fernandez	4.70	274	Pn	Pn	09 45 46.9	+1.0
H03N2				T	T	09 50 43.5	
	baz=91,slow=74,SNR=4.4						
PLCA	Paso Flores	7.16	163	Pn	Pn	09 46 22.2	+2.0
	comp=N,0.3nm,0.3s,baz=327,slow=10,SNR=16						
PLCA				LR	LR	09 48 23.9	
	comp=N,37nm,21.0s,baz=138,slow=33 comp=N,0.8nm,0.5s						
CPUP	Villa Florida	15.76	66	LR	LR	09 55 04.9	
	comp=N,47nm,19.4s,baz=98,slow=39						

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*GUC **22** 09:44:45.7±0.9, 33°.97S×73°.33W, h23km±10km, ML3.5*

ISC 22 09:44:45.4±1.1**, 34°.04S**±0°.05×**73°.27W**±0°.07**, h10km, n28,** σ**1s.09**/26**, mb4.0**/3**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	1.18	113	*e*P	Pb	09 45 07.4	-0.4
BO03				*e*S	Sb	09 45 22.5	-0.6
BO03				IAML		09 45 24.1	
	comp=N,849nm,0.4s						
VA05	Santo Domingo	1.43	75	*e*P	Pn	09 45 10.5	-0.9
VA05				*e*S	Sn	09 45 28.8	-1.5
VA05				IAML		09 45 31.1	
	comp=N,960nm,0.3s						
VA05	Santo Domingo	1.43	75	IAML		09 45 31.1	
	comp=N,947nm,0.3s						
GO05	Huala	1.47	132	*e*P	Pn	09 45 11.6	-0.4
GO05				*e*S	Sn	09 45 29.6	-1.7
GO05				IAML		09 45 31.3	
	comp=E,2µm,0.3s						
MT01	Popeta	1.69	85	*e*P	Pn	09 45 14.2	-0.8
MT01				IAML		09 45 37.3	
	comp=N,304nm,0.2s						
VA01	Torpederas	1.69	54	*e*P	Pn	09 45 13.7	-1.3
BO01	Tunca	1.85	102	*e*P	Pn	09 45 17.0	-0.2
MT09	Talagante	1.92	83	*e*P	Pn	09 45 17.6	-0.7
MT09				IAML		09 45 42.5	
	comp=N,616nm,0.3s						
MT02	Curacav	1.94	67	*e*P	Pn	09 45 18.0	-0.5
ROCH	El Roble	2.17	61	*e*P	Pn	09 45 21.4	-0.4
ROCH				IAML		09 45 50.1	
	comp=N,213nm,0.3s						
BO04	La Punta	2.21	89	*e*P	Pn	09 45 22.6	+0.4
VA06	Catapilco	2.22	49	*e*P	Pn	09 45 21.0	-1.2
VA06				IAML		09 45 48.6	
	comp=E,1µm,0.3s						
ML02	Panimavida	2.30	139	*e*P	Pn	09 45 23.9	+0.6
ML02				IAML		09 45 55.7	
	comp=N,856nm,0.5s						
PEL	Peldehue	2.34	68	*e*P	Pn	09 45 24.5	+0.5
VA03	San Esteban	2.61	62	*e*P	Pn	09 45 27.6	-0.1
VA03				IAML		09 46 00.9	
	comp=E,284nm,0.2s						
BI05	Punta Hualpn	2.70	179	*e*P	Pn	09 45 26.9	-2.0
CO02	Combarbal	3.42	35	*e*P	Pn	09 45 38.2	-0.7
CO06	Fray Jorge	3.63	23	*e*P	Pn	09 45 39.7	-2.0
GO04	Tololo Observa	4.39	29	*e*P	Pn	09 45 50.5	-1.8
CO01	Juntas del Tor	4.87	35	*e*P	Pn	09 45 58.8	-0.1
LPAZ	La Paz	18.27	16	P	P	09 49 01.0	+1.0
	comp=E,0.1nm,0.3s,baz=163,slow=9.8,SNR=3.7						
LPAZ	La Paz	18.27	16				
	comp=E,1.0nm,0.7s						
TXAR	Lajitas Array	69.28	332	P	P	09 55 54.1	+1.3
	comp=E,0.3nm,0.5s,baz=159,slow=6.5,SNR=5.6						
TXAR	Lajitas Array	69.28	332				
	comp=E,0.3nm,0.5s						
DBIC	Dimbokro	76.16	72	P	P	09 56 34.6	+0.6
	comp=E,5.8nm,1.1s,baz=214,slow=7.3,SNR=1.8						
DBIC	Dimbokro	76.16	72				
	comp=E,5.8nm,1.1s						
TORD	Torodi Ar. Bea	85.19	71	P	P	09 57 23.2	+0.8
	comp=E,0.8nm,0.8s,baz=241,slow=4.8,SNR=2.4						
TORD	Torodi Ar. Bea	85.19	71				
	comp=E,0.8nm,0.8s						

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*KRSC **22** 10:41:01.6±1.5, 55°.95N×163°.93E, h18km±25km, ML4.2*

*IDC **22** 10:41:01.9±0.8, 56°.12N×163°.78E, h0km, mb3.8/15, mbtmp3.8/17, ML3.4/2, MS3.0/3, Error ellipse: s-maj=24.8km s-min=13.1km az=156.0*

*MOS **22** 10:41:03.7±0.7, 56°.03N×163°.94E, h27km, mb4.5/4, Error ellipse: s-maj=8.1km s-min=4.8km az=57.5*

*NEIC **22** 10:41:06.0±1.3, 55°.9N±0°.1×164°.1E±0°.2, h35km±2km, mb4.3/12, Error ellipse: s-maj=24.4km s-min=16.6km az=156.0*

ISC 22 10:41:02.0±1.4**, 56°.03N**±0°.04×**163°.93E**±0°.03**, h5km**±9km**, n135,** σ**1s.20**/149**, mb4.0**/21**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.65	286	PN	Pg	10 41 14.3	-0.1
KBTR				S	Sg	10 41 22.4	-0.4
KBTR	Krutoberegovo	0.65	286	*e*P	Pg	10 41 14.3	-0.1
KBTR				*e*S	Sg	10 41 22.4	-0.4
KBG	Krutoberegovo	0.72	289	PN	Pg	10 41 15.6	-0.2
KBG				S	Sg	10 41 24.9	-0.3
KBG	Krutoberegovo	0.72	289	*e*P	Pg	10 41 15.6	-0.2
KBG				*e*S	Sg	10 41 24.9	-0.3
BKI	Bering	1.43	125	PN	Pn	10 41 28.7	+0.1
BKI				S	Sn	10 41 47.4	-0.3
BKI	Bering	1.43	125	*e*P	Pn	10 41 28.7	+0.1
BKI				*e*S	Sn	10 41 47.4	-0.3
SMKR	Semkarok	1.48	293	PN	Pn	10 41 28.8	-0.6
SMKR				S	Sn	10 41 48.0	-1.1
SMKR	Semkarok	1.48	293	*e*P	Pn	10 41 28.8	-0.6
SMKR				*e*S	Sn	10 41 48.0	-1.1
BDR	Baidarnaya	1.61	291	PN	Pn	10 41 30.9	-0.3
BDR	Baidarnaya	1.61	291	*e*P	Pn	10 41 30.9	-0.3
SRKR	Sorokina	1.66	293	PN	Pn	10 41 31.7	-0.2
SRKR	Sorokina	1.66	293	*e*P	Pn	10 41 31.7	-0.2
ZLN	Zelenaya	1.75	271	PN	Pn	10 41 33.6	+0.4
ZLN	Zelenaya	1.75	271	*e*P	Pn	10 41 33.6	+0.4
LGNR	Loginova	1.82	273	PN	Pn	10 41 34.5	+0.3
LGNR	Loginova	1.82	273	*e*P	Pn	10 41 34.5	+0.3
BZGR	Bezymyannyi-Gr	1.82	268	PN	Pn	10 41 34.3	+0.2
BZGR				S	Sn	10 41 57.3	-0.3
BZGR	Bezymyannyi-Gr	1.82	268	*e*P	Pn	10 41 34.3	+0.2
BZGR				*e*S	Sn	10 41 57.3	-0.3
KLY	Klyuchi	1.85	280	PN	Pn	10 41 33.2	-1.3
KLY				S	Sn	10 41 55.1	-3.2
KLY	Klyuchi	1.85	280	*e*P	Pn	10 41 33.2	-1.3
KLY				*e*S	Sn	10 41 55.1	-3.2
KRSR	Krestovskiy	1.89	277	PN	Pn	10 41 35.5	+0.4
KRSR	Krestovskiy	1.89	277	*e*P	Pn	10 41 35.5	+0.4
BZWR	Bezymyannyi-We	1.93	269	PN	Pn	10 41 36.5	+0.8
BZWR	Bezymyannyi-We	1.93	269	*e*P	Pn	10 41 36.5	+0.8
MKZ	Mys Kozlova	1.94	221	PN	Pn	10 41 34.8	-0.9
MKZ				S	Sn	10 41 57.6	-2.8
MKZ	Mys Kozlova	1.94	221	*e*P	Pn	10 41 34.8	-0.9
MKZ				*e*S	Sn	10 41 57.6	-2.8
KIRR	Kirishev	2.02	269	PN	Pn	10 41 37.6	+0.7
KIRR				S	Sn	10 42 03.2	+0.7
KIRR	Kirishev	2.02	269	*e*P	Pn	10 41 37.6	+0.7
KIRR				*e*S	Sn	10 42 03.2	+0.7
KPT	Kopyto	2.08	270	PN	Pn	10 41 38.6	+0.9
KPT	Kopyto	2.08	270	*e*P	Pn	10 41 38.6	+0.9
KMNR	Kamenistaya	2.10	264	PN	Pn	10 41 38.7	+0.8
KMNR	Kamenistaya	2.10	264	*e*P	Pn	10 41 38.7	+0.8
TUMD	Tumrok D	2.17	249	*e*P	Pn	10 41 38.8	0.0
TUMD				*e*S	Sn	10 42 05.2	-0.9
TUMR	Tumrok	2.27	252	PN	Pn	10 41 41.1	+0.8
TUMR				S	Sn	10 42 09.3	+0.6
TUMR	Tumrok	2.27	252	*e*P	Pn	10 41 41.1	+0.8
TUMR				*e*S	Sn	10 42 09.3	+0.6
ESO	Esso	2.94	270	PN	Pn	10 41 52.1	+2.7
ESO	Esso	2.94	270	*e*P	Pn	10 41 52.1	+2.7
OSSR	Ossora	3.26	352	PN	Pn	10 41 53.5	-0.3
OSSR	Ossora	3.26	352	*e*P	Pn	10 41 53.5	-0.3
KII	Karymskiy	3.26	234	PN	Pn	10 41 55.1	+1.2
KII	Karymskiy	3.26	234	*e*P	Pn	10 41 55.1	+1.2
SPN	Mys Shipunski	3.72	219	PN	Pn	10 41 58.9	-1.2
SPN	Mys Shipunski	3.72	219	*e*P	Pn	10 41 58.9	-1.2
SPN				*e*S	Sn	10 42 39.9	-4.3
NLC	Nalytchevo	3.91	225	PN	Pn	10 42 03.3	+0.5
NLC	Nalytchevo	3.91	225	*e*P	Pn	10 42 03.3	+0.5
SDLR	Sedlovina	4.02	229	PN	Pn	10 42 05.1	+0.7
SDLR	Sedlovina	4.02	229	*e*P	Pn	10 42 05.1	+0.7
KRER	Koryakskii	4.06	230	PN	Pn	10 42 06.5	+1.5
KRER	Koryakskii	4.06	230	*e*P	Pn	10 42 06.5	+1.5
KRX	Arik	4.07	231	PN	Pn	10 42 06.2	+1.2
KRX	Arik	4.07	231	*e*P	Pn	10 42 06.2	+1.2
SMAR	Somma	4.07	229	PN	Pn	10 42 05.7	+0.6
SMAR	Somma	4.07	229	*e*P	Pn	10 42 05.7	+0.6
AVH	Avacha	4.09	230	PN	Pn	10 42 06.1	+0.7
AVH	Avacha	4.09	230	*e*P	Pn	10 42 06.1	+0.7
UGLR	Uglovaya	4.10	228	PN	Pn	10 42 06.2	+0.8
UGLR	Uglovaya	4.10	228	*e*P	Pn	10 42 06.2	+0.8
KOK	Koryaka	4.12	230	PN	Pn	10 42 06.1	+0.4
KOK	Koryaka	4.12	230	*e*P	Pn	10 42 06.1	+0.4
GNL	Ganaly	4.18	238	PN	Pn	10 42 07.8	+1.3
GNL	Ganaly	4.18	238	*e*P	Pn	10 42 07.8	+1.3
DALK	Dalny	4.26	227	PN	Pn	10 42 07.6	+0.1
DALK	Dalny	4.26	227	*e*P	Pn	10 42 07.6	+0.1
PET	Petropavlovsk	4.30	228	Pn	Pn	10 42 08.9	+0.8
PET	Petropavlovsk	4.30	228	*e*PN	Pn	10 42 08.7	+0.6
PET				*e*S	Sn	10 42 58.8	+0.1
PET				smax	smax		
	comp=N,104nm,0.8s						
PET				MLR	MLR		
	comp=Z,200nm,21.0s						
PET	Petropavlovsk	4.30	228	*e*P	Pn	10 42 08.6	+0.5
PEA0B	Petropavlovsk-	4.66	234	Pn	Pn	10 42 14.5	+1.4
PEA0B	Petropavlovsk-	4.66	234	PN	Pn	10 42 14.5	+1.4
PETK	Petropavlovsk-	4.66	234	Pn	Pn	10 42 13.7	+0.6
	comp=Z,1.2nm,0.3s,baz=80,slow=17,SNR=24						
PETK				Sn	Sn	10 43 11.2	+3.7
	comp=Z,0.4nm,0.3s,baz=51,slow=21,SNR=2.3 comp=Z,3.1nm,0.5s						
PETK	Petropavlovsk-	4.66	234		Pn	10 42 14.7	+1.6
PETK	Petropavlovsk-	4.66	234	PN	Pn	10 42 14.7	+1.6
KRMR	Karymshinskiy	4.66	229	PN	Pn	10 42 14.4	+1.3
KRMR	Karymshinskiy	4.66	229	*e*P	Pn	10 42 14.4	+1.3
RUS	Russkaya	4.80	224	PN	Pn	10 42 15.4	+0.4
RUS	Russkaya	4.80	224	*e*P	Pn	10 42 15.4	+0.4
GRL	Gorelyy	4.89	227	PN	Pn	10 42 18.3	+2.0
GRL	Gorelyy	4.89	227	*e*P	Pn	10 42 18.3	+2.0
MTVR	Mutnovka	4.90	226	PN	Pn	10 42 17.9	+1.5
MTVR	Mutnovka	4.90	226	*e*P	Pn	10 42 17.9	+1.5
APC	Apacha	5.03	235	PN	Pn	10 42 20.7	+2.7
APC	Apacha	5.03	235	*e*P	Pn	10 42 20.7	+2.7
ASAK	Asacha	5.09	227	PN	Pn	10 42 20.6	+1.6
ASAK	Asacha	5.09	227	*e*P	Pn	10 42 20.6	+1.6
KDTR	Khodutka, Kamc	5.46	222	PN	Pn	10 42 23.9	-0.1
KDTR	Khodutka, Kamc	5.46	222	*e*P	Pn	10 42 23.9	-0.1
KMSK	Kamenskaya	6.56	9	PN	Pn	10 42 40.9	+1.9
KMSK	Kamenskaya	6.56	9	*e*P	Pn	10 42 40.9	+1.9
MA2	Magadan	7.87	302	LR	LR	10 46 09.5	
	comp=Z,63nm,18.8s,baz=330,slow=40						
ASAJ	Asahikawa	18.07	238	P	P	10 45 14.5	+0.4
	comp=Z,0.5nm,0.3s,baz=137,slow=7.4,SNR=6.2						
ASAJ				LR	LR	10 51 59.7	
	comp=Z,54nm,20.0s,baz=150,slow=36 comp=Z,5.1nm,0.8s						
ERM	Erimo	19.44	233	P	P	10 45 28.7	-0.5
ERM				IAmb	IAmb	10 45 49.1	
	comp=Z,18nm,1.1s						
ERM	Erimo	19.44	233	P	P	10 45 28.7	-0.5
ERM				pmax	pmax		
	comp=Z,18nm,1.2s						
TIXI	Tiksi	21.48	330	P	P	10 45 52.2	+1.1
	comp=Z,5.1nm,0.7s,baz=90,slow=23,SNR=17 comp=Z,5.1nm,0.7s						
TIXI	Tiksi	21.48	330	P	P	10 45 52.5	+1.4
TIXI				IAmb	IAmb	10 45 54.8	
	comp=Z,5.8nm,0.8s						
TIXI	Tiksi	21.48	330	P	P	10 45 52.5	+1.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
IMAR	Indian Mountai	22.34	46	P	P	10 46 00.6	+0.3
H21K	Melozitna Rive	22.69	47	P	P	10 46 04.0	-0.2
TOLK	Toolik Lake Re	24.27	40	P	P	10 46 20.5	+0.7
TOLK				IAmb	IAmb	10 46 22.3	
	comp=Z,8.9nm,0.9s						
ILAR	Eielson Array	25.18	50	P	P	10 46 28.4	+0.5
	comp=Z,2.1nm,0.9s,baz=265,slow=8.0,SNR=17 comp=Z,2.1nm,0.9s						
BMAR	Burnt Mountain	26.06	43	P	P	10 46 35.7	-0.3
MJAR	Matsushiro Arr	26.12	233	P	P	10 46 37.4	+0.6
	comp=Z,1.1nm,0.6s,baz=37,slow=9.1,SNR=5.1 comp=Z,1.1nm,0.6s						
EGAK	Eagle	27.62	49	P	P	10 46 49.2	-0.9
BCAR	Beaver Creek A	27.62	53	P	P	10 46 50.5	+0.4
JHJ	Hachijo jima 2	28.37	226	P	P	10 46 58.4	+1.4
	comp=Z,304nm,0.8s,baz=62,slow=6.4,SNR=2.2						
HYT	Haines Junctio	30.13	56	P	P	10 47 12.1	-0.4
HYT				IAmb	IAmb	10 47 22.7	
	comp=Z,5.2nm,1.3s						
INK	Inuvik	30.18	41	P	P	10 47 13.9	+1.3
	comp=Z,0.6nm,0.5s,baz=315,slow=3.1,SNR=4.1 comp=Z,0.6nm,0.5s						
INK	Inuvik	30.18	41	P	P	10 47 13.4	+0.8
INK				IAmb	IAmb	10 47 27.6	
	comp=Z,4.9nm,1.3s						
INK	Inuvik	30.18	41	P	P	10 47 14.0	+1.3
C36M	Paulatuk	33.35	38	P	P	10 47 40.6	+0.1
C36M				IAmb	IAmb	10 48 09.6	
	comp=Z,13nm,1.2s						
DLBC	Dease Lake	34.54	58	P	P	10 47 52.4	+1.3
	comp=Z,2.2nm,0.9s,baz=318,slow=7.9,SNR=4.2 comp=Z,2.2nm,0.9s						
SONM	Songino Array	35.45	281	P	P	10 47 57.9	-1.2
	comp=Z,1.0nm,0.7s,baz=60,slow=9.0,SNR=6.1 comp=Z,1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	36.31	175	T	T	11 26 51.8	
	baz=357,slow=76,SNR=2477						
H11N3	WAKE ISLAND Hy	36.33	175	T	T	11 26 59.5	
	baz=357,slow=76,SNR=1423						
H11N1	WAKE ISLAND Hy	36.33	175	T	T	11 26 56.7	
	baz=357,slow=76,SNR=1413						
RUBB	Prince Rupert	36.35	64	P	P	10 48 04.2	-2.3
H11S1	WAKE ISLAND Hy	37.52	176	T	T	11 28 36.7	
	baz=326,slow=72,SNR=34						
H11S3	WAKE ISLAND Hy	37.53	176	T	T	11 28 25.9	
	baz=326,slow=72,SNR=29						
H11S2	WAKE ISLAND Hy	37.54	176	T	T	11 28 40.4	
	baz=326,slow=72,SNR=32						

YKA	Yellowknife Ar	39.50	46	P	P	10 48 33.6	+0.5
	comp=Z,0.2nm,0.6s,baz=298,slow=8.5,SNR=2.8						
	comp=Z,0.2nm,0.6s						
RES	Resolute Bay	39.74	24	LR	LR	11 06 26.5	
	comp=Z,23nm,18.4s,baz=63,slow=38						
SPITS	Spitsbergen Ar	44.59	351	P	P	10 49 14.4	-0.1
SPITS				pmax	pmax		
	comp=Z,19nm,1.2s						
MK31	Makanchi Array	48.90	296	P	P	10 49 47.4	-1.2
MK31	Makanchi Array	48.90	296	P	P	10 49 47.4	-1.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	48.90	296	P	P	10 49 46.5	-2.1
	comp=Z,1.2nm,0.7s,baz=60,slow=7.2,SNR=12						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	48.90	296	P	P	10 49 47.8	-0.8
MKAR	Makanchi Array	48.90	296	P	P	10 49 47.8	-0.8
FCC	Fort Churchill	49.79	42	P	P	10 49 54.9	-0.2
FCC	Fort Churchill	49.79	42	P	P	10 49 54.9	-0.2
FCC				pmax	pmax		
	comp=Z,15nm,1.5s						
NVAR	Mina Array Bea	52.72	75	P	P	10 50 17.8	0.0
	comp=Z,0.6nm,0.8s,baz=297,slow=6.0,SNR=4.6						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	54.19	65	P	P	10 50 29.0	+0.5
	comp=Z,0.2nm,0.3s,baz=344,slow=2.0,SNR=2.4						
	comp=Z,0.2nm,0.3s						
PDAR	Pinedale Array	54.19	65	P	P	10 50 27.1	-1.4
CMAR	Chiang Mai Arr	60.94	260	P	P	10 51 16.4	+0.4
	comp=Z,0.6nm,0.3s,baz=18,slow=6.0,SNR=1.4						
	comp=Z,0.6nm,0.3s						
NOA	NORSAR Array B	61.30	345	P	P	10 51 17.4	-0.6
	comp=Z,0.9nm,0.8s,baz=17,slow=6.9,SNR=3.7						
	comp=Z,0.9nm,0.8s						
AKASG	Malin Array Be	67.19	331	P	P	10 51 56.5	-0.2
	comp=Z,0.2nm,0.3s,baz=25,slow=5.1,SNR=1.5						
	comp=Z,0.2nm,0.3s						
TXAR	Lajitas Array	67.49	71	P	P	10 51 59.8	+0.8
	comp=Z,0.5nm,0.8s,baz=308,slow=4.4,SNR=7.2						
	comp=Z,0.5nm,0.8s						
KBZ	Khabaz	68.88	318	P	P	10 52 07.8	+0.5
	comp=Z,3.0nm,0.8s,baz=47,slow=0.7,SNR=8.4						
	comp=Z,3.0nm,0.8s						

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*IDC **22** 10:55:00.1±1.1, 43°.27N×84°.78E, h0^{km}, mb3.6/9, mbtmp3.6/14, ML3.3/5, MS2.5/1, Error ellipse: s-maj=22.6km s-min=16.6km az=44.0*
*SOME **22** 10:55:02.4, 43°.58N×85°.07E, h10^{km}*
*NNC **22** 10:55:04.1±1.0, 43°.61N×85°.07E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=8.2km s-min=4.4km az=127.0*
ISC 22 10:55:00.9±0.6**, 43°.30N**±0°.05×**85°.02E**±0°.04**, h10**^{km}**, n54, σ1ˢ96**/75**, mb3.6**/9**, 16C-10D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	2.02	74	Pg	Pn	10 55 34.0	-1.1
WMQ				Sg	Sn	10 55 55.9	-4.4
WMQ				smax	smax		
	comp=N,500nm,0.5s						
WMQ				smax	smax		
	comp=E,240nm,0.7s						
KTMS	Ketmen	3.40	274	*e*P	Pg	10 56 05.1	-1.1
	comp=E,6.8nm,0.1s						
KTMS				*e*S	Sg	10 56 50.2	-0.1
	comp=E,44nm,0.1s						
KTMS	Ketmen	3.40	274	Pg	Pg	10 56 05.1	-1.1
	comp=E,6.8nm,0.5s						
KTMS				Lg	Lg	10 56 50.2	
	comp=E,63nm,0.7s						
DJR	Jarkent	3.92	287	*e*P	Pg	10 56 14.6	-1.4
	comp=E,11nm,0.2s						
DJR				*e*S	Sg	10 57 06.4	-0.4
	comp=E,99nm,0.1s						
DJR	Jarkent	3.92	287	Pg	Pg	10 56 14.9	-1.1
	comp=E,30nm,0.6s						
DJR				Lg	Lg	10 57 06.9	
	comp=E,100nm,0.9s						
MK31	Makanchi Array	3.99	332	⇓Pn	Pn	10 56 03.5	+1.3
	comp=E,0.5nm,0.3s,baz=146,slow=14,SNR=135						
MK31				⇑Pg	Pb	10 56 12.6	+1.3
	comp=E,9.0nm,0.5s,baz=141,slow=16,SNR=35						
MK31				⇓Lg	Lg	10 57 03.2	
	comp=E,94nm,0.8s,baz=143,slow=31,SNR=10						
MKAR	Makanchi Array	3.99	332	Pn	Pn	10 56 03.7	+1.5
	comp=E,1.8nm,0.3s,baz=141,slow=14,SNR=40						
MKAR				Pg	Pb	10 56 13.1	+1.8
	comp=E,6.4nm,0.3s,baz=139,slow=17,SNR=29						
MKAR				Sn	Sn	10 56 51.8	+2.9
	comp=E,7.0nm,0.3s,baz=152,slow=28,SNR=5.7						
MKAR				Lg	Lg	10 57 03.8	
	comp=E,23nm,0.3s,baz=140,slow=29,SNR=15						
	comp=E,3.6nm,0.4s						
PDGK	Podgornoye	4.03	272	Pg	Pg	10 56 17.1	-1.1
	comp=E,6.2nm,0.6s						
PDGK				Lg	Lg	10 57 10.6	
	comp=E,31nm,0.8s						
PDGK	Podgornoye	4.03	272	⇑Pn	Pb	10 56 07.5	-4.6
	comp=E,5.8nm,0.6s						
PDGK				⇑Pg	Pg	10 56 17.1	-1.1
	comp=E,11nm,0.4s						
PDGK				⇑Lg	Lg	10 57 13.0	
	comp=E,50nm,0.6s						
MAKZ	Makanchi	4.11	329	⇑Pn	Pn	10 56 05.1	+1.3
	comp=E,1.9nm,0.5s						
MAKZ				⇑Pg	Pb	10 56 15.6	+2.2
	comp=E,15nm,0.8s						
MAKZ				⇑Lg	Lg	10 57 07.4	
	comp=E,54nm,0.7s						
ZSN	Zaisan	4.15	359	*e*P	Pb	10 56 14.8	+0.8
	comp=E,6.8nm,0.3s						
ZSN				*e*S	Sb	10 57 06.6	+2.5
	comp=E,56nm,0.5s						
ZSN	Zaisan	4.15	359	Pg	Pb	10 56 14.8	+0.8
	comp=E,6.8nm,0.3s						
ZSN				Lg	Lg	10 57 06.6	
	comp=E,56nm,0.5s						
UZB	Uzynbulak	4.38	270	*e*P	Pg	10 56 24.2	-0.6
	comp=E,15nm,0.2s						
UZB				*e*S	Sg	10 57 23.2	+1.6
	comp=E,31nm,0.6s						
UZB	Uzynbulak	4.38	270	Pg	Pg	10 56 25.1	+0.2
	comp=E,15nm,0.6s						
UZB				Lg	Lg	10 57 24.5	
	comp=E,31nm,0.6s						
KAPS	Kapalarasan	4.52	298	*e*P	Pg	10 56 24.2	-3.2
	comp=E,11nm,0.2s						
KAPS				*e*S	Sg	10 57 23.2	-2.9
	comp=E,66nm,0.1s						
KAPS	Kapalarasan	4.52	298	Pg	Pg	10 56 26.1	-1.4
	comp=E,18nm,0.7s						
KAPS				Lg	Lg	10 57 25.9	
	comp=E,72nm,1.4s						
KPKS	Kokpek	4.62	274	*e*P	Pg	10 56 28.3	-1.0
	comp=E,12nm,0.2s						
KPKS				*e*S	Sg	10 57 30.0	+0.8
	comp=E,46nm,0.0s						
ZHN	Zhinishke	4.81	271	*e*P	Pg	10 56 32.8	-0.2
	comp=E,15nm,0.1s						
ZHN				*e*S	Sg	10 57 37.8	+2.5
	comp=E,33nm,0.1s						
ZHN	Zhinishke	4.81	271	Pg	Pg	10 56 34.3	+1.2
	comp=E,9.6nm,0.3s						
ZHN				Lg	Lg	10 57 40.3	
	comp=E,30nm,0.6s						
SATY	Saty	4.84	269	*e*P	Pg	10 56 32.4	-1.2
	comp=E,12nm,0.2s						
SATY				*e*S	Sg	10 57 37.4	+1.1
	comp=E,26nm,0.1s						
SATY	Saty	4.84	269	Pg	Pg	10 56 34.5	+0.9
	comp=E,15nm,0.5s						
SATY				Lg	Lg	10 57 40.7	
	comp=E,22nm,0.7s						
KURS	Kuram	4.99	274	*e*P	Pg	10 56 35.4	-1.2
	comp=E,5.0nm,0.2s						
KURS				*e*S	Sg	10 57 42.2	+1.0
	comp=E,18nm,0.2s						
KURS	Kuram	4.99	274	Pg	Pg	10 56 36.0	-0.5
	comp=E,5.0nm,0.8s						
KURS				Lg	Lg	10 57 43.1	
	comp=E,18nm,1.1s						
TDK	Taldyqorghan	5.05	292	*e*P	Pg	10 56 35.2	-2.4
	comp=E,79nm,0.1s						
TDK				*e*S	Sg	10 57 42.3	-0.7
	comp=E,315nm,0.2s						
TDK	Taldyqorghan	5.05	292	Pg	Pg	10 56 37.4	-0.2
	comp=E,90nm,0.7s						
TDK				Lg	Lg	10 57 45.6	
	comp=E,389nm,1.0s						
MDOK	Medeo	5.82	271	*e*P	Pg	10 56 51.4	-1.0
	comp=E,5.5nm,0.3s						
MDOK				*e*S	Sg	10 58 09.9	+2.1
	comp=E,18nm,0.2s						
MDOK	Medeo	5.82	271	⇓Pn	Pn	10 56 31.8	+4.3
	comp=E,3.4nm,0.5s						
MDOK				⇑Pg	Pg	10 56 51.7	-0.7
	comp=E,5.9nm,0.5s						
MDOK				⇑Lg	Lg	10 58 11.3	
	comp=E,25nm,0.6s						
MDOK	Medeo	5.82	271	Pg	Pg	10 56 52.9	+0.5
	comp=E,5.5nm,0.9s						
MDOK				Lg	Lg	10 58 12.0	
	comp=E,18nm,1.0s						
CHKK	Chushkaly	5.86	278	*e*P	Pg	10 56 51.7	-1.4
	comp=E,4.1nm,0.2s						
CHKK				*e*S	Sg	10 58 10.6	+1.7
	comp=E,21nm,1.2s						
KTBS	Karatobe	6.08	277	*e*P	Pg	10 56 55.4	-1.9
	comp=E,3.0nm,0.2s						
KTBS				*e*S	Sg	10 58 16.7	+0.8
	comp=E,57nm,0.3s						
KTBS	Karatobe	6.08	277	Pg	Pg	10 56 55.4	-1.9
	comp=E,3.1nm,1.0s						
KTBS				Lg	Lg	10 58 16.7	
	comp=E,57nm,0.7s						
TKM2	Tokmak 2	6.91	270	⇑Pn	Pn	10 56 48.1	+5.8
	comp=E,3.5nm,0.6s						
TKM2				⇑Lg	Lg	10 58 45.7	
	comp=E,20nm,0.8s						
CHMS	Chumysh	7.51	271	⇑Lg	Lg	10 59 05.1	
	comp=E,22nm,1.1s						
AAK	Ala-Archa	7.75	269	Pn	Pn	10 56 54.8	+0.9
	comp=E,0.4nm,0.3s,baz=74,slow=9.9,SNR=2.2						
AAK				Lg	Lg	10 59 04.8	
	comp=E,0.5nm,0.3s,baz=201,slow=17,SNR=1.9						
AAK				LR	LR	10 59 41.8	
	comp=E,32nm,18.4s,baz=176,slow=37						
	comp=E,1.2nm,0.4s						
KURBB	Kurchatov Arra	8.56	331	Pn	Pn	10 57 04.8	0.0
	comp=E,0.2nm,0.3s,baz=150,slow=12,SNR=10						
KURBB				Sn	Sn	10 58 39.4	-1.9
	comp=E,0.2nm,0.3s,baz=132,slow=25,SNR=6.7						
KURBB				Lg	Lg	10 59 28.7	
	comp=E,0.4nm,0.3s,baz=150,slow=31,SNR=6.5						
	comp=E,0.6nm,0.3s						
KURBB	Kurchatov Arra	8.56	331	⇑Pn	Pn	10 57 04.9	+0.1
	comp=E,1.4nm,0.5s						
KURBB				⇓Sn	Sn	10 58 40.5	-0.8
	comp=E,20nm,0.7s						
KURBB				⇓Lg	Lg	10 59 28.4	
	comp=E,75nm,0.8s						
KURK	Kurchatov	8.60	332	⇓Sn	Sn	10 58 41.4	-1.0
	comp=E,3.3nm,0.5s						
KURK				⇑Lg	Lg	10 59 30.5	
	comp=E,32nm,1.0s						
OTUK	Ortayu	10.14	304	⇓Pn	Pn	10 57 28.3	+1.8
	comp=E,1.2nm,0.7s						
OTUK				⇓Sn	Sn	10 59 22.6	+2.4
	comp=E,2.2nm,0.7s						
OTUK				⇑Lg	Lg	11 00 22.3	
	comp=E,21nm,1.2s						
GOMU	GeErMu	10.35	130	P	Pn	10 57 26.8	-3.0
GOMU				pP		10 57 30.6	
GOMU				sP		10 57 31.8	
GOMU				S	Sn	10 59 30.4	+4.4
GOMU				sS		10 59 37.0	
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,33nm,4.0s						
GOMU				LR	LR		
	comp=N,35nm,6.6s						
GOMU				LR	LR		
	comp=E,61nm,4.6s						
GOMU				LR	LR		
	comp=Z,39nm,7.0s						
KK31	Karatay Array	10.60	274	⇓Lg	Lg	11 00 42.7	
	comp=Z,5.1nm,0.8s,baz=72,slow=29,SNR=7.0						
ZALV	Zalesovo Beam	10.65	359	Pn	Pn	10 57 31.0	-2.5
	comp=Z,0.3nm,0.3s,baz=181,slow=13,SNR=4.1						
ZALV				Sn	Sn	10 59 25.2	-7.5
	comp=Z,0.8nm,0.3s,baz=172,slow=24,SNR=7.5						
BRVK	Borovoye	13.82	320	⇑Pn	Pn	10 58 18.3	+1.5
	comp=Z,2.6nm,0.6s						
BRVK				⇓Lg	Lg	11 02 17.0	
	comp=Z,15nm,1.3s						
SONM	Songino Array	15.63	66	Pn	Pn	10 58 43.9	+2.6
	comp=Z,0.3nm,0.3s,baz=260,slow=13,SNR=1.6						
SONM				Lg	Lg	11 03 07.3	
	comp=Z,0.1nm,0.3s,baz=259,slow=23,SNR=1.3						
	comp=Z,0.5nm,0.4s						
AKTO	Aktyubinsk	19.72	301	P	P	10 59 28.2	-2.2
	comp=Z,0.1nm,0.3s,baz=178,slow=20,SNR=1.8						
	comp=Z,0.7nm,0.5s						
GEYT	Alibeck	21.07	264	P	P	10 59 43.9	-1.3
	comp=Z,1.1nm,0.4s,baz=88,slow=12,SNR=1.8						
	comp=Z,1.1nm,0.4s						
ARU	Arti	21.35	317	P	P	10 59 48.1	0.0
	comp=Z,1.0nm,0.4s,baz=113,slow=8.3,SNR=3.9						
	comp=Z,1.0nm,0.4s						
KLR	Kul'dur	32.42	63	P	P	11 01 32.9	+2.0
	comp=Z,0.4nm,0.5s,baz=276,slow=9.2,SNR=1.4						
	comp=Z,0.4nm,0.5s						
FINES	FINESS Array B	38.71	319	P	P	11 02 24.6	0.0
	comp=Z,0.5nm,0.4s,baz=99,slow=9.6,SNR=8.1						
	comp=Z,0.5nm,0.4s						
ARCES	ARCESS Array B	39.64	332	P	P	11 02 32.0	-0.4
	comp=Z,1.0nm,0.6s,baz=72,slow=12,SNR=4.9						
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	45.88	319	P	P	11 03 23.0	-0.2
	comp=Z,0.8nm,0.4s,baz=76,slow=7.9						
NOA	NORSAR Array B	45.88	319	P	P	11 03 23.1	0.0
	comp=Z,0.8nm,0.3s,baz=77,slow=7.8,SNR=8.0						
	comp=Z,0.8nm,0.3s						
YKA	Yellowknife Ar	73.38	9	P	P	11 06 32.0	-0.5
	comp=Z,0.3nm,0.8s,baz=349,slow=6.3,SNR=2.8						
	comp=Z,0.3nm,0.8s						
TORD	Torodi Ar. Bea	76.28	275	P	P	11 06 49.9	-0.2
	comp=Z,0.2nm,0.4s,baz=55,slow=6.2,SNR=5.5						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	77.53	133	P	P	11 06 59.4	+2.5
	comp=Z,0.3nm,0.6s,baz=329,slow=4.4,SNR=4.6						
	comp=Z,0.3nm,0.6s						

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*MDD **22** 11:01:22.9±0.2, 37°.76N×4°.24W, h8^{km}±1^{km}, mb_Lg3.6/32, Error ellipse: s-maj=1.1km s-min=1.0km az=160.0*
*LDG **22** 11:01:23.6±0.1, 37°.68N×4°.22W, h15^{km}, Ml3.2/13, Error ellipse: s-maj=2.1km s-min=1.5km az=170.0*
*SFS **22** 11:01:23.0, 37°.60N×4°.20W, h15^{km}, ML3.7, VALENZUELA (CORDOBA)*
*IGIL **22** 11:01:23.7, 37°.70N×4°.25W, h11^{km}, ML3.4*
*INMG **22** 11:01:24.1±1.8, 37°.71N×4°.22W, h22^{km}±2^{km}, ML3.4, Error ellipse: s-maj=1.6km s-min=1.4km az=16.0*
*CNRM **22** 11:01:27.2, 37°.62N×4°.57W, h62^{km}, ml3.3*
ISC 22 11:01:22.1±0.6**, 37°.74N**±0°.01×**4°.22W**±0°.01**, h14**^{km}**, n133, σ2ˢ31**/285**, 2C-9D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EADA	Adamuz	0.51	327	⇓Pg	Pb	11 01 34.5	+1.6
EADA				Sg	Sb	11 01 42.1	+1.8
EADA				*i* Vmb_Lg		11 01 44.2	
EGOR	Sierra Gorda,	0.63	172	⇑Pg	Pg	11 01 35.3	+0.8
EGOR				Sg	Sg	11 01 42.5	-0.4
EGOR				*i* Vmb_Lg		11 01 44.7	
EQUE	Quentar	0.82	130	⇓Pg	Pg	11 01 38.5	+0.6
EQUE				Sg	Sg	11 01 49.4	+0.7
EQUE				*i* Vmb_Lg		11 01 51.8	
EQES	Quesada	0.91	86	⇑Pg	Pb	11 01 40.8	+1.1
EQES				Sg	Sg	11 01 52.9	+1.2
EQES				*i* Vmb_Lg		11 01 54.9	
ELGU	Los Guajares,	0.99	151	Pg	Pb	11 01 41.5	+0.4
ELGU				Sg	Sb	11 01 54.4	+0.4
ELGU				*i* Vmb_Lg		11 01 57.3	
EMAL	Malaga-Limoner	0.99	190	P	Pb	11 01 41.8	+0.8
EMAL				S	Sg	11 01 54.7	+0.5
ECAB	El Cabril	1.01	290	⇓Pg	Pb	11 01 42.0	+0.7
ECAB				Sg	Sg	11 01 56.5	+1.8
ECAB				*i* Vmb_Lg		11 01 58.0	
EMIJ	Mijas	1.25	201	Pg	Pn	11 01 45.6	+0.4
EMIJ				Sg	Sg	11 02 02.8	+0.3
EMIJ				*i* Vmb_Lg		11 02 08.3	
LIJA	Lijar	1.26	229	P	Pn	11 01 46.0	+0.7
EBER	Berja	1.35	128	Pg	Pb	11 01 48.1	+0.8
EBER				Sg	Sg	11 02 07.8	+2.1
EBER				*i* Vmb_Lg		11 02 09.7	
ESPR	Espera	1.57	237	Pg	Pn	11 01 50.5	+1.0
ESPR				Sg	Sg	11 02 13.8	+1.2
ESPR				*i* Vmb_Lg		11 02 18.3	
EJIF	Jimena Fronter	1.63	218	Pn	Pn	11 01 51.3	+1.0
EJIF				Pg	Pg	11 01 54.0	+0.6
EJIF				Sg	Sb	11 02 13.8	+1.5
ENIJ	Nijar	1.78	115	Pn	Pn	11 01 53.2	+0.8
ENIJ				Pg	Pb	11 01 55.6	+1.2
ENIJ				Sn	Sb	11 02 16.7	+0.1
ENIJ				Sg	Sg	11 02 19.3	+0.1
ENIJ				*i* Vmb_Lg		11 02 21.1	
PAB	San Pablo	1.81	357	Pn	Pn	11 01 52.9	0.0
PAB				Pg	Pb	11 01 56.9	+1.9
PAB				Sn	Sn	11 02 16.4	+0.7
PAB				Sg	Sb	11 02 19.3	+1.8
PAB				*i* Vmb_Lg		11 02 21.9	
PAB	San Pablo	1.81	357	P	Pb	11 01 57.6	+2.6
ESDC	Sonseca Array	1.94	6	Pn	Pn	11 01 56.3	+1.5
ESDC				Pg	Pb	11 01 59.3	+1.9
ESDC				Sn	Sn	11 02 18.8	-0.2
ESDC				Sg	Sb	11 02 22.7	+1.3
ESDC				*i* Vmb_Lg		11 02 29.2	
EMIN	Mina Concepcio	1.94	272	⇓Pn	Pn	11 01 54.6	-0.1
EMIN				Pg	Pb	11 01 59.0	+1.7
EMIN				Sn	Sn	11 02 18.6	-0.4
EMIN				Sg	Sb	11 02 23.4	+1.9
EMIN				*i* Vmb_Lg		11 02 25.8	
EZAR	Zarzadilla de	2.00	85	Pn	Pn	11 01 56.6	+1.0
EZAR				Pg	Pb	11 02 00.2	+1.9
EZAR				Sn	Sn	11 02 21.1	+0.6
EZAR				Sg	Sb	11 02 25.9	+2.7
TLOR	Lorca, Murcia	2.01	92	Pg	Pb	11 02 00.2	+1.9
TLOR				Sn	Sn	11 02 21.2	+0.7
TLOR				Sg	Sg	11 02 27.6	+0.9
EALB	Alboran	2.03	152	Pn	Pn	11 01 56.9	+1.0
EALB				Sn	Sn	11 02 21.9	+0.9
EALB				*i* Vmb_Lg		11 02 23.9	
CEU	Ceuta	2.06	207	P	Pn	11 01 57.2	+0.9
CEU				S	Sn	11 02 20.8	-0.8
ECEU	Ceuta	2.06	207	Pg	Pb	11 01 59.8	+0.5
ECEU				Sn	Sn	11 02 21.6	-0.2
SMIR	Smir Dam	2.25	205	P	Pn	11 01 59.6	+0.7
SMIR	Smir Dam	2.25	205	P	Pn	11 01 60.0	+1.0
SMIR				S	Sn	11 02 25.0	-1.6
PBAR	Barrancos	2.27	282	⇓*i*Pn	Pn	11 01 59.2	0.0
PBAR	Barrancos	2.27	282	*e*Pg	Pb	11 02 05.5	+2.6
PBAR				*e*Sg	Sg	11 02 35.0	-0.1
PBAR				A	A	11 02 40.5	
	204nm,0.6s						
ETOB	Tobarra	2.29	66	Pn	Pn	11 01 59.5	0.0
ETOB				Pg	Pb	11 02 04.8	+1.5
ETOB				Sn	Sn	11 02 25.6	-1.9
ETOB				Sg	Sb	11 02 34.6	+3.2
ETOB				*i* Vmb_Lg		11 02 39.5	
EMUR	La Murta	2.36	87	Pn	Pn	11 02 00.7	+0.3
EMUR				Pg	Pb	11 02 06.7	+2.3
EMUR				Sg	Sg	11 02 37.8	-0.2
EMUR				*i* Vmb_Lg		11 02 41.1	
EBAD	Badajoz	2.42	296	Pn	Pn	11 02 01.3	+0.1
EBAD				Pg	Pb	11 02 08.0	+2.6
EBAD				Sn	Sn	11 02 29.0	-1.7
EBAD				Sg	Sb	11 02 39.1	+3.9
EBAD				*i* Vmb_Lg		11 02 43.7	
PALE	Palemas	2.53	175	P	Pn	11 02 05.7	+2.9
PALE				S	Sn	11 02 30.7	-2.6
CART	Cartagena	2.56	92	P	Pb	11 02 08.5	+0.8
CART				S	Sb	11 02 39.2	+0.2
PVLZ	Peæn de	2.56	182	P	Pn	11 02 04.0	+0.8
PVLZ				S	Sn	11 02 32.5	-1.6
EGRO	El Granado	2.60	266	Pn	Pn	11 02 03.5	-0.2
EGRO				Sn	Sn	11 02 33.4	-1.7
EGRO				Sg	Sb	11 02 43.3	+3.0
EGRO				*i* Vmb_Lg		11 02 47.1	
WMELI	Melilla	2.62	157	S	Sn	11 02 36.6	+0.9
EMEL	Melilla	2.64	157	Pn	Pn	11 02 05.2	+1.0
EMEL				Sn	Sn	11 02 35.6	-0.4
UCM	Universidad Co	2.67	16	P	Pg	11 02 13.9	+0.5
UCM				S	Sb	11 02 47.1	+4.7
GOG	Mont Gurugu	2.70	158	P	Pn	11 02 08.0	+2.9
EPLA	Plasencia	2.74	329	Pn	Pn	11 02 05.9	+0.2
EPLA				Pg	Pb	11 02 12.8	+1.9
EPLA				Sn	Sn	11 02 37.6	-0.9
EPLA				Sg	Sb	11 02 47.0	+2.6
EPLA				*i* Vmb_Lg		11 02 53.6	
PVAQ	Vaqueiros	2.80	264	⇓*i*Pn	Pn	11 02 06.2	-0.3
PVAQ				*e*Sn	Sn	11 02 39.3	-0.7
PVAQ				*e*Sg	Sb	11 02 49.8	+3.8
PVAQ				A	A	11 02 53.7	
	207nm,0.4s						
PVAQ	Vaqueiros	2.80	264	P	Pn	11 02 06.0	-0.5
PESTR	Estremoz	2.88	294	⇓*i*Pn	Pn	11 02 07.5	-0.1
PESTR	Estremoz	2.88	294	*e*Pg	Pb	11 02 16.3	+3.0
PESTR				*e*Sn	Sn	11 02 41.2	-0.9
PESTR				*e*Sg	Sg	11 02 54.8	+0.1
PESTR				A	A	11 03 03.8	
	103nm,0.4s						
PESTR	Estremoz	2.88	294	P	Pn	11 02 07.4	-0.2
PESTR	Estremoz	2.88	294	P	Pb	11 02 15.8	+2.5
PESTR				S	Sg	11 02 54.8	+0.1
GUD	Guadarrama	2.90	1	Pn	Pn	11 02 09.0	+1.0
GUD				Pg	Pb	11 02 17.3	+3.6
GUD				Sn	Sn	11 02 42.8	+0.1
GUD				Sg	Sb	11 02 51.2	+2.1
GUD				*i* Vmb_Lg		11 02 56.6	
PBEJ	Beja	2.90	277	*e*Pn	Pn	11 02 07.7	-0.1
PBEJ	Beja	2.90	277	*e*Pg	Pb	11 02 15.7	+2.1
PBEJ				*e*Sn	Sn	11 02 41.8	-0.7
PBEJ				*e*Sg	Sb	11 02 53.0	+4.1
PBEJ				A	A	11 02 59.7	
	83nm,0.3s						
CHAS	Isla Isabel II	2.93	150	S	Sn	11 02 42.6	-0.6
PBDV	Barranco-do-Ve	2.99	262	*e*Pn	Pn	11 02 09.6	+0.4
PBDV	Barranco-do-Ve	2.99	262	*e*Pg	Pg	11 02 19.9	+0.4
PBDV				*e*Sn	Sn	11 02 44.1	-0.8
PBDV				*e*Sg	Sb	11 02 56.0	+4.3
PBDV				A	A	11 03 02.3	
	126nm,0.4s						
PMRV	Marv??o	3.00	305	⇓*i*Pn	Pn	11 02 09.3	0.0
PMRV	Marv??o	3.00	305	*e*Pg	Pg	11 02 19.3	-0.4
PMRV				*e*Sg	Sb	11 02 56.9	+4.9
PMRV				A	A	11 03 02.3	
	102nm,0.3s						
PCVE	Castro Verde	3.03	269	⇓*e*Pn	Pn	11 02 09.4	-0.3
PCVE	Castro Verde	3.03	269	*e*Pg	Pb	11 02 18.5	+2.7
PCVE				*e*Sn	Sn	11 02 44.1	-1.7
PCVE				*e*Sg	Sb	11 02 57.2	+4.5
PCVE				A	A	11 03 04.7	
	106nm,0.3s						
EVO	Evora	3.10	286	P	Pn	11 02 08.7	-1.9
EVO				S	Sn	11 02 46.8	-0.5
EVO	Evora	3.10	286	*e*Pn	Pn	11 02 11.9	+1.4
EVO				*e*Sn	Sn	11 02 47.0	-0.3
EVO				*e*Sg	Sg	11 03 01.3	-0.2
EVO				A	A	11 03 06.7	
	88nm,0.2s						
ECHE	Chera	3.15	53	Pn	Pn	11 02 11.4	+0.1
ECHE				Pg	Pg	11 02 22.8	+0.4
ECHE				Sn	Sn	11 02 47.5	-1.1
ECHE				Sg	Sb	11 02 58.5	+2.5
MESJ	Messejana	3.17	273	*e*P	Pn	11 02 11.4	-0.1
MESJ				*e*S	Sn	11 02 46.5	-2.7
MESJ				IAML		11 03 03.6	
	comp=N,71nm,0.5s						
MESJ	Messejana	3.17	273	*e*Pn	Pn	11 02 11.4	-0.1
MESJ				*e*Sn	Sn	11 02 48.4	-0.8
MESJ				*e*Sg	Sb	11 03 00.9	+4.2
MESJ				A	A	11 03 08.3	
	comp=N,81nm,0.3s						
PCBR	Castelo Branco	3.30	310	*e*Pn	Pn	11 02 13.7	+0.4
PCBR				*e*Sn	Sn	11 02 52.2	-0.1
PCBR				*e*Sg	Sg	11 03 07.0	-1.1
PCBR				A	A	11 03 14.5	
	comp=N,74nm,0.8s						
EBEN2	Beniarda presa	3.31	72	Pn	Pn	11 02 12.4	-1.0
EBEN2				Pg	Pb	11 02 22.7	+2.1
EBEN2				Sn	Sn	11 02 50.6	-2.0
EBEN2				Sg	Sb	11 03 05.6	+5.0

PMTG	**Montargil**	**3.42**	**294**	*e*Pn	**Pn**	**11 02 14.4**	**-0.5**
PMTG	**Montargil**	**3.42**	**294**	*e*Pg	**Pb**	**11 02 25.3**	**+2.9**
PMTG				*e*Sn	**Sn**	**11 02 53.6**	**-1.6**
PMTG				*e*Sg	**Sg**	**11 03 09.5**	**-2.3**
PMTG				A	A	11 03 16.0	
	comp=N,76nm,0.4s						
PNCL	**Nicolau / Gran**	**3.43**	**278**	*e*Pn	**Pn**	**11 02 15.1**	**0.0**
PNCL	**Nicolau / Gran**	**3.43**	**278**	*e*Pg	**Pb**	**11 02 25.7**	**+3.1**
PNCL				*e*Sn	**Sn**	**11 02 54.4**	**-1.1**
PNCL				*e*Sg	**Sb**	**11 03 08.7**	**+4.6**
PNCL				A	A	11 03 21.3	
	comp=N,61nm,0.5s						
ETOR	**Torete**	**3.50**	**28**	Pn	**Pn**	**11 02 16.6**	**+0.4**
ETOR				Pg	**Pg**	**11 02 28.7**	**-0.5**
ETOR				Sn	**Sn**	**11 02 55.3**	**-2.2**
ETOR				Sg	**Sg**	**11 03 13.7**	**-0.9**
ETOR				*i* Vmb_Lg		11 03 20.9	
MORF	**Marmelete**	**3.55**	**264**	*e*P	**Pn**	**11 02 16.7**	**-0.1**
MORF				*e*S	**Sn**	**11 02 55.5**	**-3.2**
MORF				IAML		11 03 18.9	
	comp=N,190nm,1.0s						
MORF	**Marmelete**	**3.55**	**264**	*e*Pn	**Pn**	**11 02 16.8**	**-0.1**
MORF				*e*Sn	**Sn**	**11 02 56.8**	**-1.8**
MORF				*e*Sg	**Sg**	**11 03 15.0**	**-1.1**
MORF				A	A	11 03 20.7	
	comp=N,100nm,0.2s						
PTEO	**Sao Teotonio**	**3.58**	**268**	*e*Pn	**Pn**	**11 02 17.4**	**+0.2**
PTEO	**Sao Teotonio**	**3.58**	**268**	*e*Pg	**Pg**	**11 02 29.6**	**-1.1**
PTEO				*e*Sn	**Sn**	**11 02 57.7**	**-1.6**
PTEO				*e*Sg	**Sg**	**11 03 16.3**	**-0.8**
PTEO				A	A	11 03 22.1	
	comp=N,133nm,0.8s						
JBK	**JBK**	**3.65**	**158**	P	**Pn**	**11 02 22.0**	**+3.7**
MTE	**Manteigas**	**3.71**	**317**	*e*Pn	**Pn**	**11 02 20.2**	**+1.2**
MTE	**Manteigas**	**3.71**	**317**	*e*Pg	**Pg**	**11 02 32.8**	**-0.3**
MTE				*e*Sg	**Sg**	**11 03 19.2**	**-2.0**
MTE				A	A	11 03 28.2	
	comp=N,105nm,0.5s						
PFVI	**Vila Bisbo**	**3.72**	**262**	*e*Pn	**Pn**	**11 02 19.0**	**-0.1**
PFVI				*e*Sn	**Sn**	**11 02 59.7**	**-3.0**
PFVI				*e*Sg	**Sg**	**11 03 18.4**	**-3.1**
PFVI				A	A	11 03 30.7	
	comp=N,60nm,0.6s						
EMOS	**Mosqueruela**	**3.92**	**47**	Pn	**Pb**	**11 02 29.4**	**-1.7**
EMOS				Pg	**Pg**	**11 02 35.9**	**-1.3**
EMOS				Sn	**Sn**	**11 03 06.0**	**-1.9**
EMOS				Sg	**Sb**	**11 03 25.1**	**+6.6**
EMOS				*i* Vmb_Lg		11 03 31.9	
PSBE	**So Bento**	**4.00**	**298**	*e*Pn	**Pn**	**11 02 22.9**	**-0.1**
PSBE	**So Bento**	**4.00**	**298**	*e*Pg	**Pg**	**11 02 37.6**	**-1.1**
PSBE				*e*Sn	**Sn**	**11 03 08.4**	**-1.2**
PSBE				*e*Sg	**Sg**	**11 03 30.8**	**+0.3**
PSBE				A	A	11 03 40.2	
	comp=N,75nm,0.4s						
PMST	**Lisbon--Monsan**	**4.03**	**286**	*e*Sg	**Sg**	**11 03 32.0**	**+0.4**
PMST				A	A	11 03 52.4	
	comp=N,60nm,0.7s						
MVO	**Moncorvo**	**4.05**	**328**	*e*Pn	**Pn**	**11 02 25.1**	**+1.3**
MVO				*e*Sn	**Sn**	**11 03 09.7**	**-1.4**
MVO				*e*Sg	**Sg**	**11 03 32.3**	**+0.1**
MVO				A	A	11 03 44.6	
	comp=N,80nm,0.5s						
PCAS	**Casmilo, Conde**	**4.06**	**306**	*e*Pn	**Pn**	**11 02 24.5**	**+0.7**
PCAS	**Casmilo, Conde**	**4.06**	**306**	*e*Pg	**Pg**	**11 02 40.3**	**+0.4**
PCAS				*e*Sn	**Sn**	**11 03 10.7**	**-0.4**
PCAS				*e*Sg	**Sg**	**11 03 31.6**	**-0.9**
PCAS				A	A	11 03 40.6	
	comp=N,80nm,0.6s						
COI	**Coimbra**	**4.09**	**308**	*e*Pn	**Pn**	**11 02 25.4**	**+1.2**
COI				*e*Sn	**Sn**	**11 03 11.0**	**-0.9**
COI				*e*Sg	**Sg**	**11 03 35.9**	**+2.4**
COI				A	A	11 03 38.6	
	comp=N,106nm,0.4s						
PVIS	**Viseu**	**4.12**	**317**	*e*Pn	**Pn**	**11 02 25.7**	**+1.0**
PVIS	**Viseu**	**4.12**	**317**	*e*Pg	**Pg**	**11 02 41.3**	**+0.3**
PVIS				*e*Sn	**Sn**	**11 03 11.7**	**-1.0**
PVIS				*e*Sg	**Sg**	**11 03 35.4**	**+1.0**
PVIS				A	A	11 03 49.3	
	comp=N,47nm,0.5s						
PMAFR	**Mafra**	**4.16**	**289**	*e*Pn	**Pn**	**11 02 25.6**	**+0.4**
PMAFR				*e*Sn	**Sn**	**11 03 12.3**	**-1.4**
PMAFR				*e*Sg	**Sg**	**11 03 33.8**	**-1.9**
PMAFR				A	A	11 03 42.9	
	comp=N,69nm,1.2s						
ECOL	**Islas Columbre**	**4.39**	**59**	Pn	**Pn**	**11 02 27.6**	**-0.7**
ECOL				Sn	**Sn**	**11 03 15.9**	**-3.4**
ECOL				Sg	**Sb**	**11 03 37.4**	**+5.5**
PVRL	**Vila Real**	**4.45**	**324**	*e*Pn	**Pn**	**11 02 29.5**	**+0.3**
PVRL				*e*Sn	**Sn**	**11 03 17.9**	**-2.9**
PVRL				*e*Sg	**Sg**	**11 03 42.4**	**-2.5**
PVRL				A	A	11 03 53.6	
	comp=N,38nm,0.3s						
PBRG	**Braganca**	**4.50**	**335**	*e*Pn	**Pn**	**11 02 30.6**	**+0.7**
PBRG				*e*Sg	**Sg**	**11 03 43.8**	**-2.8**
PBRG				A	A	11 03 50.5	
	comp=N,29nm,0.4s						
EIBI	**Ibiza**	**4.55**	**72**	Pn	**Pn**	**11 02 29.7**	**-0.9**
EIBI				Sn	**Sn**	**11 03 17.4**	**-5.9**
POLO	**Lamas de Olo**	**4.56**	**324**	*e*Pn	**Pn**	**11 02 31.1**	**+0.3**
POLO				*e*Sg	**Sg**	**11 03 47.4**	**-1.1**
POLO				A	A	11 03 55.6	
	comp=N,25nm,0.5s						
ECAL	**Calabor**	**4.62**	**336**	Pn	**Pn**	**11 02 32.9**	**+1.3**
ECAL				Sn	**Sn**	**11 03 22.1**	**-3.0**
ECAL				Sg	**Sb**	**11 03 45.4**	**+6.9**
ECAL				*i* Vmb_Lg		11 03 55.8	
ZHG	**ZHG**	**4.72**	**205**	P	**Pn**	**11 02 31.6**	**-1.2**
ZHG				S	**Sn**	**11 03 24.3**	**-3.2**
ERTA	**Horta de San J**	**4.77**	**46**	Pn	**Pn**	**11 02 35.3**	**+1.7**
ERTA				Sg	**Sb**	**11 03 48.8**	**+6.0**
ERTA				*i* Vmb_Lg		11 03 58.5	
PTO	**Porto**	**4.80**	**316**	*e*Sg	**Sg**	**11 03 56.8**	**+0.6**
MD31	**MD31**	**4.88**	**185**	P	**Pn**	**11 02 35.1**	**0.0**
MD31				S	**Sn**	**11 03 25.8**	**-5.7**
ESAC	**San Caprasio**	**4.92**	**35**	Pn	**Pn**	**11 02 36.6**	**+1.0**
ESAC				Pg	**Pb**	**11 02 52.2**	**+4.2**
ESAC				Sg	**Sg**	**11 03 57.3**	**-2.6**
ESAC				*i* Vmb_Lg		11 04 09.7	
MDT	**Midelt**	**4.92**	**184**	P	**Pn**	**11 02 36.4**	**+0.6**
MDT	**Midelt**	**4.92**	**184**	P	**Pn**	**11 02 36.4**	**+0.6**
MDT				S	**Sn**	**11 03 28.7**	**-3.9**
PCAB	**Cabril**	**4.93**	**325**	*e*Pn	**Pn**	**11 02 36.2**	**+0.4**
PCAB				*e*Sn	**Sn**	**11 03 31.6**	**-1.1**
PCAB				*e*Sg	**Sg**	**11 04 00.2**	**-0.3**
PCAB				A	A	11 04 08.1	
	comp=N,63nm,0.6s						
ELOB	**Lobios**	**5.08**	**326**	Pn	**Pn**	**11 02 38.0**	**+0.2**
ELOB				Sn	**Sn**	**11 03 32.1**	**-4.2**
ELOB				Sg	**Sg**	**11 04 04.7**	**-0.3**
ELOB				*i* Vmb_Lg		11 04 11.5	
PGAV	**Gavieira, Arco**	**5.25**	**325**	*e*Pn	**Pn**	**11 02 40.6**	**+0.4**
PGAV				*e*Sn	**Sn**	**11 03 38.3**	**-2.2**
PGAV				*e*Sg	**Sg**	**11 04 09.7**	**-0.8**
PGAV				A	A	11 04 15.3	
	comp=N,37nm,0.8s						
EARA	**Aranguren**	**5.42**	**21**	Sn	**Sn**	**11 03 41.4**	**-3.2**
EARA				Sg	**Sb**	**11 04 10.1**	**+8.8**
EPOB	**Poblet**	**5.46**	**47**	Pn	**Pn**	**11 02 43.2**	**+0.1**
EPOB				Sn	**Sn**	**11 03 43.4**	**-2.3**
EPOB				Sg	**Sb**	**11 04 07.0**	**+4.4**
ELAN	**Lanestosa**	**5.52**	**6**	Pn	**Pn**	**11 02 45.3**	**+1.5**
ELAN				Sg	**Sg**	**11 04 18.6**	**-0.6**
ELAN				*i* Vmb_Lg		11 04 20.6	
EZAM	**Zamans**	**5.59**	**323**	Sn	**Sn**	**11 03 46.6**	**-2.2**
EZAM				Sg	**Sg**	**11 04 18.4**	**-3.1**
EARI	**Arriondas**	**5.61**	**353**	Pn	**Pn**	**11 02 46.4**	**+1.4**
EARI				Sn	**Sn**	**11 03 44.1**	**-5.2**
EARI				Sg	**Sg**	**11 04 18.8**	**-3.2**
EARI				*i* Vmb_Lg		11 04 34.7	
EORO	**Oroz-Betelu**	**5.61**	**22**	Pn	**Pn**	**11 02 46.8**	**+1.7**
EORO				Pg	**Pg**	**11 03 10.1**	**+0.7**
EORO				Sn	**Sn**	**11 03 47.0**	**-2.3**
EORO				Sg	**Sg**	**11 04 20.6**	**-1.4**
EORO				*i* Vmb_Lg		11 04 37.0	
EALK	**Alkurruntz**	**5.85**	**20**	Pn	**Pn**	**11 02 49.9**	**+1.4**
EALK				Sn	**Sn**	**11 03 52.7**	**-2.7**
ETOS	**Mallorca**	**5.86**	**68**	Pn	**Pn**	**11 02 48.6**	**+0.1**
ETOS				Sn	**Sn**	**11 03 50.5**	**-5.0**
ETSF	**Etsaut**	**5.86**	**27**	*e*Pn	**Pn**	**11 02 48.8**	**+0.2**
ETSF				*e*Sn	**Sn**	**11 03 52.5**	**-3.1**
	comp=N,6.3nm,0.4s						
ETSF				*e*Sg	**Sg**	**11 04 27.4**	**-2.8**
	comp=N,8.1nm,0.4s						
ECHI	**Chisagues Biel**	**5.97**	**33**	Sn	**Sn**	**11 03 56.1**	**-2.2**
SRHM	**Skhour des Reh**	**6.06**	**211**	P	**Pn**	**11 02 50.3**	**-1.0**
SRHM				S	**Sn**	**11 03 55.9**	**-4.6**
EPF	**Esparros**	**6.33**	**32**	*e*Pn	**Pn**	**11 02 55.2**	**+0.2**
EPF	**Esparros**	**6.33**	**32**	*e*Pg	**Pg**	**11 03 21.9**	**-1.3**
EPF				*e*Sn	**Sn**	**11 04 03.5**	**-3.6**
	comp=N,4.2nm,0.3s						
EPF				*e*Sg	**Sg**	**11 04 43.1**	**-2.0**
	comp=N,3.7nm,0.3s						
EMAZ	**Mazaricos**	**6.35**	**327**	Sn	**Sn**	**11 04 00.6**	**-6.9**
EMAZ				Sg	**Sg**	**11 04 43.3**	**-2.4**
OUZM	**OUZ**	**7.13**	**198**	P	**Pn**	**11 03 05.6**	**-0.5**
OUZM				S	**Sn**	**11 04 20.7**	**-6.3**
OUK	**Oukaimeden**	**7.18**	**206**	P	**Pn**	**11 03 04.6**	**-2.3**
OUK				S	Sn	11 04 19.4	-9.0
EJON	**La Jonquera**	**7.20**	**47**	Sg	**Sg**	**11 05 08.7**	**-4.2**
MTLF	**Montolieu**	**7.44**	**39**	*e*Pn	**Pn**	**11 03 11.5**	**+1.4**
MTLF				*e*Sg	**Sg**	**11 05 16.7**	**-3.9**
	comp=N,2.9nm,0.4s						
TTIG	**Tnine Tigouga,**	**7.98**	**207**	P	**Pn**	**11 03 14.1**	**-3.7**
TTIG				S	Sn	11 04 36.5	-11
LFF	**La Frestale**	**8.10**	**26**	*e*Pn	**Pn**	**11 03 19.7**	**+0.5**
LFF				*e*Sn	**Sn**	**11 04 45.9**	**-4.7**
	comp=N,4.0nm,0.4s						
MFF	**Saint Martin d**	**9.36**	**18**	*e*Pn	**Pn**	**11 03 36.2**	**-0.3**
MFF				*e*Sn	**Sn**	**11 05 16.7**	**-4.7**
	comp=N,0.7nm,0.4s						
TCF	**Toulx Ste Croi**	**9.79**	**27**	*e*Sg	Sg	11 06 30.0	
	comp=N,0.3nm,0.2s						
QUIF	**Quistinic**	**10.20**	**4**	*e*Pn	**Pn**	**11 03 47.6**	**-0.4**
QUIF				*e*Sn	**Sn**	**11 05 35.8**	**-6.3**
	comp=N,0.9nm,0.2s						
BGF	**Bois d'Agland**	**10.25**	**28**	*e*Pn	**Pn**	**11 03 48.7**	**0.0**
ROSF	**Rostrenen**	**10.62**	**3**	*e*Sn	Sn	11 05 44.0	-8.3
	comp=N,1.6nm,0.2s						
AVF	**Avril sur Loir**	**10.64**	**29**	*e*Pn	**Pn**	**11 03 55.3**	**+1.3**
AVF	**Avril sur Loir**	**10.64**	**29**	*e*P	Pn	11 03 59.7	+5.7
SMF	**Signal de Mont**	**10.71**	**31**	*e*Pn	**Pn**	**11 03 55.0**	**-0.1**
SMF	**Signal de Mont**	**10.71**	**31**	*e*P	**Pn**	**11 03 59.6**	**+4.5**
SSF	**Saint Saulge**	**10.92**	**29**	*e*Pn	**Pn**	**11 03 57.3**	**-0.6**
SSF	**Saint Saulge**	**10.92**	**29**	*e*P	Pn	11 04 03.7	+5.8
GRR	**Gorron**	**10.92**	**12**	*e*Pn	**Pn**	**11 03 57.7**	**-0.2**
GRR				*e*Sn	**Sn**	**11 05 53.5**	**-6.3**
	comp=N,0.4nm,0.3s						

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*MDD **22** 11:01:47.4±0.5, 37°.73N×4°.23W, h12^{km}, mb_Lg3.5/15, Error ellipse: s-maj=2.3km s-min=1.6km az=177.0*
ISC 22 11:01:45.6±0.9**, 37°.79N**±0°.03×**4°.23W**±0°.02**, h14^{km}, n28, σ1^{s}.11**/31**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EADA	**Adamuz**	**0.47**	**324**	Pg	**Pn**	**11 01 57.6**	**-0.5**
EADA				Sg	**Sn**	**11 02 04.8**	**-1.4**
EADA				*i* Vmb_Lg		11 02 06.0	
EGOR	**Sierra Gorda,**	**0.68**	**172**	Sg	**Sg**	**11 02 07.3**	**-0.7**
EGOR				*i* Vmb_Lg		11 02 07.4	
EQUE	**Quentar**	**0.85**	**133**	Pg	**Pg**	**11 02 01.9**	**-0.3**
EQUE				Sg	**Sg**	**11 02 12.9**	**-0.4**
EQUE				*i* Vmb_Lg		11 02 14.5	
EQES	**Quesada**	**0.91**	**89**	Sg	**Sb**	**11 02 15.8**	**+0.3**
EQES				*i* Vmb_Lg		11 02 17.5	
ECAB	**El Cabril**	**0.99**	**287**	Pg	**Pn**	**11 02 06.6**	**+1.4**
ECAB				Sg	**Sn**	**11 02 19.3**	**+0.4**
ECAB				*i* Vmb_Lg		11 02 20.4	
ELGU	**Los Guajares,**	**1.03**	**152**	Sg	**Sb**	**11 02 18.3**	**-0.5**
EMIJ	**Mijas**	**1.29**	**200**	Sg	**Sg**	**11 02 27.5**	**+0.1**
EBER	**Berja**	**1.39**	**129**	Sg	**Sg**	**11 02 30.9**	**+0.6**
ESPR	**Espera**	**1.59**	**235**	Sg	**Sg**	**11 02 37.0**	**+0.2**
ESPR				*i* Vmb_Lg		11 02 42.5	
PAB	**San Pablo**	**1.76**	**357**	Sg	**Sg**	**11 02 42.3**	**0.0**
PAB				*i* Vmb_Lg		11 02 44.7	
ENIJ	**Nijar**	**1.80**	**116**	Sg	**Sb**	**11 02 41.8**	**+1.0**
ESDC	**Sonseca Array**	**1.90**	**6**	Sg	**Sg**	**11 02 47.1**	**+0.4**
ESDC				*i* Vmb_Lg		11 02 50.3	
EMIN	**Mina Concepcio**	**1.94**	**270**	Sg	**Sb**	**11 02 46.2**	**+1.4**
EMIN				*i* Vmb_Lg		11 02 48.4	
EZAR	**Zarzadilla de**	**2.01**	**87**	Sg	**Sg**	**11 02 49.0**	**-1.1**
TLOR	**Lorca, Murcia**	**2.02**	**93**	Sg	**Sg**	**11 02 50.6**	**+0.2**
EALB	**Alboran**	**2.08**	**152**	Sn	**Sn**	**11 02 45.2**	**-0.4**
EALB				*i* Vmb_Lg		11 02 47.5	
PBAR	**Barrancos**	**2.26**	**281**	*e*Sg	**Sg**	**11 02 57.9**	**-0.3**
PBAR				A	A	11 02 58.7	
	80nm,0.2s						
ETOB	**Tobarra**	**2.28**	**67**	Sg	**Sg**	**11 02 59.3**	**+0.4**
ETOB				*i* Vmb_Lg		11 03 03.7	
EMUR	**La Murta**	**2.36**	**88**	Sg	**Sg**	**11 03 00.3**	**-1.3**
EGRO	**El Granado**	**2.60**	**265**	Sg	**Sb**	**11 03 06.0**	**+2.2**
EGRO				*i* Vmb_Lg		11 03 10.8	
EPLA	**Plasencia**	**2.70**	**328**	Sg	**Sg**	**11 03 12.5**	**+0.2**
EPLA				*i* Vmb_Lg		11 03 16.0	
PVAQ	**Vaqueiros**	**2.80**	**263**	Sg	**Sg**	**11 03 14.2**	**-1.4**
PVAQ				A	A	11 03 16.2	
	102nm,0.4s						
GUD	**Guadarrama**	**2.85**	**1**	Sg	**Sg**	**11 03 17.1**	**-0.3**
PBEJ	**Beja**	**2.89**	**276**	*e*Sg	**Sg**	**11 03 17.8**	**-0.7**
PBEJ				A	A	11 03 20.2	
	46nm,0.4s						
PCVE	**Castro Verde**	**3.03**	**268**	*e*Sg	**Sg**	**11 03 20.9**	**-2.0**
PCVE				A	A	11 03 27.4	
	53nm,0.3s						
ECHE	**Chera**	**3.12**	**54**	Sg	**Sg**	**11 03 25.3**	**-0.6**
PNCL	**Nicolau / Gran**	**3.42**	**277**	*e*Sg	**Sg**	**11 03 32.4**	**-3.0**
PNCL				A	A	11 03 37.0	
	42nm,0.6s						
ETOR	**Torete**	**3.47**	**28**	Sg	**Sg**	**11 03 36.1**	**-0.8**

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*IDC **22** 11:14:33.8±1.1, 34°.05S×73°.16W, h0^{km}, mb4.2/5, mbtmp4.1/8, ML3.9/3, MS3.1/2, Error ellipse: s-maj=36.2km s-min=22.8km az=80.0*
*NEIC **22** 11:14:34.5±2.9, 34°.04S±0°.05×73°.27W±0°.10, h7^{km}±4^{km}, mb4.5/6, Error ellipse: s-maj=11.8km s-min=7.2km az=102.0*
*GUC **22** 11:14:36.6±1.0, 34°.00S×73°.18W, h18^{km}±5^{km}, ML3.4*
ISC 22 11:14:34.2±1.6**, 34°.02S**±0°.04×**73°.20W**±0°.06**, h6^{km}**±10^{km}**, n63, σ1^{s}.11**/71**, mb4.4**/6**, 2C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**1.13**	**115**	⇓*i*P	**Pn**	**11 14 56.5**	**-0.1**
BO03				*e*S	**Sn**	**11 15 11.6**	**-0.9**
VA05	**Santo Domingo**	**1.37**	**75**		**Pn**	**11 14 59.8**	**0.0**
VA05	**Santo Domingo**	**1.37**	**75**	⇓*i*P	**Pn**	**11 14 59.8**	**0.0**
VA05				*i* S	**Sb**	**11 15 16.4**	**-1.6**
VA05				IAML		11 15 19.9	
	comp=E,607nm,0.3s						
GO05	**Huala**	**1.44**	**134**		**Pn**	**11 15 00.8**	**-0.1**
GO05	**Huala**	**1.44**	**134**	⇓*i*P	**Pn**	**11 15 00.8**	**-0.1**
GO05				*i* S	**Sb**	**11 15 18.9**	**-1.3**
GO05				IAML		11 15 20.9	
	comp=E,1μm,0.4s						
MT01	**Popeta**	**1.63**	**85**		**Pn**	**11 15 03.3**	**-0.1**
MT01	**Popeta**	**1.63**	**85**	⇓*i*P	**Pn**	**11 15 03.2**	**-0.2**
VA01	**Torpederas**	**1.64**	**53**	*e*P	**Pn**	**11 15 03.2**	**-0.3**
VA01				*i* S	**Sn**	**11 15 24.0**	**-0.8**
VA01				IAML		11 15 25.6	
	comp=N,362nm,0.6s						
BO01	**Tunca**	**1.79**	**103**		**Pn**	**11 15 05.8**	**+0.1**
BO01	**Tunca**	**1.79**	**103**	*e*P	**Pn**	**11 15 05.8**	**+0.1**
MT09	**Talagante**	**1.86**	**83**	*e*P	**Pn**	**11 15 06.5**	**-0.2**
MT09				*i* S	**Sn**	**11 15 30.2**	**-0.4**
MT09				IAML		11 15 33.9	
	comp=N,586nm,0.5s						
MT02	**Curacav**	**1.88**	**67**	*e*P	**Pn**	**11 15 06.8**	**-0.2**
MT02				*i* S	**Sn**	**11 15 30.1**	**-0.9**
ROC1	**El Roble**	**2.10**	**61**		**Pn**	**11 15 10.6**	**+0.4**
ROCH	**El Roble**	**2.11**	**61**	*e*P	**Pn**	**11 15 10.3**	**+0.1**
ROCH				*i* S	**Sn**	**11 15 35.7**	**-1.2**
ROCH				IAML		11 15 44.1	
	comp=E,204nm,0.4s						
BO04	**La Punta**	**2.15**	**90**	*e*P	**Pn**	**11 15 11.6**	**+0.8**
BO04				*e*S	**Sn**	**11 15 38.5**	**+0.7**
BO04				IAML		11 15 40.6	
	comp=N,299nm,0.2s						
VA06	**Catapilco**	**2.16**	**48**		**Pn**	**11 15 10.0**	**-0.7**
VA06	**Catapilco**	**2.16**	**48**	*e*P	**Pn**	**11 15 10.2**	**-0.5**
VA06				*e*S	**Sn**	**11 15 36.4**	**-1.4**
VA06				IAML		11 15 38.2	
	comp=E,903nm,0.5s						
ML02	**Panimavida**	**2.28**	**140**		**Pn**	**11 15 13.2**	**+0.9**
ML02	**Panimavida**	**2.28**	**140**	*i* P	**Pn**	**11 15 13.2**	**+0.9**
ML02				*e*S	**Sb**	**11 15 42.0**	**-2.1**
PEL	**Peldehue**	**2.28**	**68**	*e*P	**Pn**	**11 15 13.7**	**+1.3**
MT03	**Universidad Ad**	**2.30**	**78**	⇑*e*P	**Pn**	**11 15 13.7**	**+0.9**
MT03				*i* S	**Sn**	**11 15 42.6**	**+1.1**
MT03				IAML		11 15 48.3	
	comp=N,290nm,0.5s						
FCH	**Farellones**	**2.52**	**75**	*e*P	**Pn**	**11 15 17.3**	**+1.2**
FCH				*e*S	**Sn**	**11 15 48.7**	**+1.4**
FCH				IAML		11 15 50.8	
	comp=N,256nm,0.5s						
VA03	**San Esteban**	**2.55**	**61**	*e*P	**Pn**	**11 15 16.6**	**+0.5**
VA03				IAML		11 15 53.6	
	comp=N,287nm,0.5s						
BI05	**Punta Hualpn**	**2.72**	**180**		**Pn**	**11 15 16.1**	**-2.4**
BI05	**Punta Hualpn**	**2.72**	**180**	*e*P	**Pn**	**11 15 16.1**	**-2.4**
BI05				IAML		11 15 47.5	
	comp=N,134nm,0.1s						
CO02	**Combarbal**	**3.37**	**34**	⇑*e*P	**Pn**	**11 15 27.2**	**-0.2**
CO02				*i* S	**Sn**	**11 16 06.4**	**-1.4**
CO06	**Fray Jorge**	**3.59**	**22**	*e*P	**Pn**	**11 15 28.6**	**-1.8**
CO06				IAML		11 16 15.8	
	comp=E,72nm,0.3s						
GO04	**Tololo Observa**	**4.34**	**29**	*e*P	**Pn**	**11 15 40.3**	**-0.7**
CO05	**La Serena**	**4.42**	**23**	*e*P	**Pn**	**11 15 40.6**	**-1.1**
H03S1	**Juan Fernandez**	**4.74**	**271**	T	T	11 20 22.6	
	baz=96,SNR=56						
H03S3	**Juan Fernandez**	**4.75**	**271**	T	T	11 20 23.5	
	baz=96,SNR=53						
H03S2	**Juan Fernandez**	**4.76**	**271**	T	T	11 20 24.8	
	baz=96,SNR=64						
H03N1	**Juan Fernandez**	**4.79**	**275**	T	T	11 20 29.3	
	baz=96						
H03N3	**Juan Fernandez**	**4.80**	**275**	T	T	11 20 34.0	
	baz=96						
H03N2	**Juan Fernandez**	**4.81**	**275**	T	T	11 20 33.8	
	baz=96						
CO01	**Juntas del Tor**	**4.82**	**34**	*e*P	**Pn**	**11 15 48.1**	**+0.5**
LR03	**Panguipulli**	**5.64**	**173**		**Pn**	**11 15 57.6**	**-1.1**
PLCA	**Paso Flores**	**7.03**	**163**	Pn	**Pn**	**11 16 18.1**	**+0.4**
	comp=E,1.2nm,0.3s,baz=324,slow=12,SNR=70						
PLCA				LR	LR	11 18 31.1	
	comp=E,42nm,21.5s,baz=114,slow=34						
	comp=E,6.3nm,0.5s						
PLCA	**Paso Flores**	**7.03**	**163**		**Pn**	**11 16 17.5**	**-0.2**
AC06	**Mina Casimiro**	**7.08**	**21**	Pn	**Pn**	**11 16 15.9**	**-2.4**
LL05	**Los Muermos**	**7.38**	**182**		**Pn**	**11 16 19.8**	**-2.6**
TRQA	**Tornquist**	**9.94**	**117**	Pn	**Pn**	**11 16 59.4**	**+1.8**
CPUP	**Villa Florida**	**15.71**	**65**	Pn	**P**	**11 18 18.2**	**-2.0**
	baz=229,slow=11,SNR=1.6						
	comp=E,1.6nm,0.7s						
LPAZ	**La Paz**	**18.24**	**16**	P	**P**	**11 18 50.8**	**+1.9**
	comp=E,0.1nm,0.3s,baz=176,slow=7.7,SNR=7.5						
	comp=E,1.8nm,0.8s						
BDFB	**Brasilia**	**29.15**	**57**	P	**P**	**11 20 36.3**	**-0.1**
	comp=E,1.1nm,0.4s,baz=266,slow=13,SNR=1.9						
BDFB				LR	LR	11 32 34.0	
	comp=E,126nm,20.6s,baz=282,slow=37						
	comp=E,1.1nm,0.4s						
VNA3	**Neumayer Olymp**	**49.71**	**158**	P	**P**	**11 23 27.6**	**+1.0**
VNA2	**Neumayer--Watz**	**50.37**	**157**	P	**P**	**11 23 32.6**	**+0.9**
	baz=295,slow=7.0						
SNAA	**Sanae**	**51.93**	**158**	P	**P**	**11 23 44.3**	**+0.8**
SNAA	**Sanae**	**51.93**	**158**	P	**P**	**11 23 44.0**	**+0.5**
	comp=E,4.1nm,0.8s,baz=277,slow=7.9,SNR=17						
	comp=E,4.1nm,0.8s						
SNAA	**Sanae**	**51.93**	**158**	P	**P**	**11 23 44.3**	**+0.8**
SNAA				IAmb	IAmb	11 23 56.1	
	comp=Z,14nm,1.5s						
TROLL	**Troll, Antarti**	**53.63**	**158**	P	**P**	**11 23 57.0**	**+0.8**
QSPA	**South Pole Qui**	**56.22**	**180**	P	**P**	**11 24 16.0**	**+1.1**
TXAR	**Lajitas Array**	**69.29**	**332**	P	**P**	**11 25 43.4**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=154,slow=8.1,SNR=14						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**69.29**	**332**	P	**P**	**11 25 42.9**	**+0.6**
DBIC	**Dimbokro**	**76.10**	**72**	P	**P**	**11 26 23.1**	**0.0**
	comp=Z,2.6nm,0.7s,baz=270,slow=3.0,SNR=1.5						
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**76.10**	**72**	P	**P**	**11 26 23.8**	**+0.6**
RAO	**Raoul Island**	**85.05**	**238**	LR	LR	11 57 16.9	
	comp=Z,339nm,21.4s,baz=252,slow=30						
TOA0	**Torodi Ar. Sit**	**85.13**	**71**	P	**P**	**11 27 12.1**	**+0.6**
TOA0				IAmb	IAmb	11 27 12.9	
	comp=Z,3.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**85.13**	**71**	P	**P**	**11 27 11.8**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=249,slow=4.7,SNR=6.5						
	comp=Z,1.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**85.13**	**71**	P	**P**	**11 27 11.8**	**+0.3**
TORD				IAmb	IAmb	11 27 12.9	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**154.75**	**31**	PKPbc	**PKPbc**	**11 34 35.3**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=339,slow=3.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**154.75**	**31**	PKPdf	**PKPdf**	**11 34 24.6**	**-2.5**
ZALV					**pPKPbc**	**11 34 36.2**	**+0.2**
ZALV				PKPab	**PKPab**	**11 34 50.5**	**-0.2**
MKAR	**Makanchi Array**	**157.50**	**48**	PKPab	**PKPab**	**11 35 03.2**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=298,slow=6.2,SNR=3.0						

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*SOME **22** 11:22:21.9, 44°.20N×82°.90E, h5^{km}*
*NNC **22** 11:22:25.7±2.4, 44°.38N×82°.70E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=24.0km s-min=10.1km az=125.0*
ISC 22 11:22:19.8±1.7**, 44°.24N**±0°.07×**83°.04E**±0°.07**, h10^{km}, n14, σ1^{s}.12**/20**, 1C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.10**	**249**	*e*P	**Pg**	**11 22 59.1**	**-0.8**
	1.9nm,0.1s						
KTMS				*e*S	**Sg**	**11 23 26.4**	**-0.7**
	7.2nm,0.0s						
KTMS	**Ketmen**	**2.10**	**249**	Pg	**Pg**	**11 22 59.2**	**-0.8**
	1.9nm,0.3s						
KTMS				Lg	Lg	11 23 26.5	
	7.3nm,0.3s						
DJR	**Jarkent**	**2.33**	**273**	*e*P	**Pg**	**11 23 04.3**	**-0.1**
	6.2nm,0.2s						
DJR				*e*S	**Sg**	**11 23 35.5**	**+0.8**
	6.2nm,0.1s						
DJR	**Jarkent**	**2.33**	**273**	Pg	**Pg**	**11 23 04.3**	**-0.1**
	6.7nm,0.4s						
DJR				Lg	Lg	11 23 35.5	
	4.0nm,0.4s						
MK31	**Makanchi Array**	**2.61**	**349**	⇓Pn	**Pb**	**11 23 06.9**	**+0.3**
	0.1nm,0.2s,baz=175,slow=16,SNR=34						
MK31				⇓Lg	Lg	11 23 39.5	
	0.5nm,0.2s,baz=165,slow=28,SNR=12						
MAKZ	**Makanchi**	**2.68**	**344**	⇓Pn	**Pb**	**11 23 08.8**	**+1.0**
	1.8nm,0.9s						
MAKZ				⇓Lg	Lg	11 23 40.5	
	1.6nm,0.5s						
PDGK	**Podgornoye**	**2.72**	**252**	Pg	**Pb**	**11 23 10.2**	**+1.6**
	0.9nm,0.3s						
PDGK				Lg	Lg	11 23 45.5	
	3.6nm,0.5s						
PDGK	**Podgornoye**	**2.72**	**252**	⇓Pn	**Pb**	**11 23 09.6**	**+1.0**
	0.3nm,0.2s						
PDGK				⇑Lg	Lg	11 23 45.9	
	4.1nm,0.4s						
KAPS	**Kapalarasan**	**2.82**	**293**	*e*P	**Pg**	**11 23 12.7**	**-1.1**
	0.5nm,0.4s						
KAPS				*e*S	**Sg**	**11 23 49.5**	**-0.9**
	3.6nm,0.1s						
KAPS	**Kapalarasan**	**2.82**	**293**	Pg	**Pb**	**11 23 12.0**	**+1.7**
	0.5nm,0.4s						
KAPS				Lg	Lg	11 23 48.4	
	3.0nm,0.4s						
UZB	**Uzynbulak**	**3.11**	**251**	*e*P	**Pg**	**11 23 18.1**	**-1.2**
	1.5nm,0.0s						
UZB				*e*S	**Sg**	**11 23 58.9**	**-0.7**
	2.5nm,0.1s						
UZB	**Uzynbulak**	**3.11**	**251**	Pg	**Pb**	**11 23 17.0**	**+1.8**
	1.7nm,0.4s						
UZB				Lg	Lg	11 23 57.1	
	3.6nm,0.8s						
KPKS	**Kokpek**	**3.24**	**258**	*e*P	**Pg**	**11 23 20.4**	**-1.4**
	2.1nm,0.0s						
KPKS				*e*S	**Sg**	**11 24 02.5**	**-1.3**
	11nm,0.1s						
ZSN	**Zaisan**	**3.46**	**21**	*e*P	**Pg**	**11 23 25.3**	**-0.7**
	2.7nm,0.0s						
ZSN				*e*S	**Sg**	**11 24 10.8**	**0.0**
	1.9nm,0.0s						

*IDC **22** 11:27:04.5±1.4, 38°.78N×20°.23E, h0^{km}, mb3.5/6, mbtmp3.5/9, ML3.5/3, MS2.5/2, Error ellipse: s-maj=25.0km s-min=20.5km az=72.0*

*THE **22** 11:27:06.2, 38°.73N×20°.59E, h9^{km}±1^{km}, ML3.4/11, Error ellipse: s-maj=1.1km s-min=0.4km az=87.0*

*ATH **22** 11:27:06.0, 38°.74N×20°.63E, h12^{km}, ML3.3/19, Error ellipse: s-maj=1.4km s-min=0.7km az=292.0*

ISC 22 11:27:05.4±0.7**, 38°.76N**±0°.02×**20°.57E**±0°.03**, h13**^{km}±4^{km}**, n95, σ1^{s}29**/133**, mb3.5**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	0.07	174	P	Pg	11 27 08.2	+0.2
DRAG	**Dragano-Lefkad**	0.07	174	P	Pg	11 27 08.2	+0.2
DRAG				S	Sg	11 27 09.2	-0.7
LKD2	**Lefkada island**	0.08	65	P	Pg	11 27 08.3	+0.1
LKD2				S	Sg	11 27 09.7	-0.4
LKD2				AML	AML	11 27 10.2	
	comp=N,81185µm,0.3s						
LKD2				AML	AML	11 27 10.4	
	comp=E,55067µm,0.1s						
LKD2	**Lefkada island**	0.08	65	P	Pg	11 27 08.2	+0.1
LKD2				S	Sg	11 27 10.0	-0.1
	comp=E,35µm,0.2s						
TSLK	**Tsoukalades, L**	0.10	45	P	Pg	11 27 08.8	+0.5
TSLK				S	Sg	11 27 10.9	+0.4
TSLK				AML	AML	11 27 12.3	
	comp=E,67379µm,0.4s						
TSLK				AML	AML	11 27 12.5	
	comp=N,81418µm,0.5s						
TSLK	**Tsoukalades, L**	0.10	45	P	Pg	11 27 08.8	+0.5
TSLK				S	Sg	11 27 11.0	+0.5
	comp=N,38µm,0.4s						
NYDR	**Nydri-Lefkada**	0.11	112	P	Pg	11 27 08.3	-0.1
NYDR				S	Sg	11 27 10.0	-0.7
NYDR	**Nydri-Lefkada**	0.11	112	P	Pg	11 27 08.3	-0.1
NYDR				S	Sg	11 27 10.0	-0.7
	comp=N,159µm,0.3s						
EVGI	**Lefkada island**	0.15	152	P	Pg	11 27 09.1	+0.1
EVGI				S	Sg	11 27 11.5	-0.1
EVGI	**Lefkada island**	0.15	152	P	Pg	11 27 09.2	+0.1
FSK	**Fiskardo**	0.29	180	P	Pb	11 27 12.2	-0.3
FSK				S	Sg	11 27 16.2	+0.7
FSK				AML	AML	11 27 17.2	
	comp=N,32345µm,0.4s						
FSK				AML	AML	11 27 18.5	
	comp=E,48208µm,0.2s						
KEF4	**Livadi, Kephal**	0.51	193	P	Pg	11 27 15.4	0.0
KEF4				S	Sb	11 27 23.6	+0.1
KEF4	**Livadi, Kephal**	0.51	193	P	Pg	11 27 15.4	0.0
KEF4				S	Sg	11 27 22.9	+0.8
	comp=E,43µm,0.3s						
DMLN	**Damoulianata-K**	0.54	196	P	Pg	11 27 15.8	-0.1
DMLN				S	Sb	11 27 24.0	-0.4
	comp=E,8µm,0.5s						
LXRA	**Lixouri, Kepha**	0.56	190	P	Pg	11 27 16.2	-0.2
LXRA				S	Sb	11 27 25.3	+0.3
KEF3	**Kipouria, Keph**	0.58	197	P	Pg	11 27 16.0	-0.7
KEF3	**Kipouria, Keph**	0.58	197	P	Pg	11 27 16.1	-0.6
KEF3				S	Sg	11 27 24.4	+0.1
	comp=E,11µm,0.3s						
VLS	**Valsamata**	0.58	178	P	Pg	11 27 16.3	-0.4
VLS				S	Sg	11 27 24.8	+0.4
VLS				AML	AML	11 27 26.5	
	comp=E,11636µm,0.3s						
VLS				AML	AML	11 27 27.1	
	comp=N,10490µm,0.4s						
VLS	**Valsamata**	0.58	178	P	Pg	11 27 16.3	-0.4
VLS				S	Sg	11 27 25.1	+0.8
	comp=N,6µm,0.3s						
ARGA	**Argostoli. Kep**	0.58	187	P	Pb	11 27 17.4	0.0
ARGA				S	Sb	11 27 25.7	+0.1
PSDA	**Pessada-Kefalo**	0.64	179	P	Pg	11 27 17.4	-0.5
PSDA				S	Sg	11 27 26.3	0.0
PSDA	**Pessada-Kefalo**	0.64	179	P	Pg	11 27 17.3	-0.6
PSDA				S	Sb	11 27 27.3	0.0
	comp=N,718nm,0.2s						
PVO	**Paravola**	0.76	100	P	Pg	11 27 20.2	0.0
PVO				S	Sg	11 27 30.0	-0.3
IGT	**Igoumenitsa**	0.80	347	P	Pg	11 27 20.9	0.0
IGT				AML	AML	11 27 39.4	
	comp=N,1904µm,0.3s						
IGT				AML	AML	11 27 41.8	
	comp=E,1858µm,0.4s						
IGT	**Igoumenitsa**	0.80	347	P	Pb	11 27 21.6	+0.4
IGT				S	Sn	11 27 34.1	-0.1
	comp=E,928nm,0.4s						
JAN	**Janina**	0.93	14	P	Pg	11 27 22.9	-0.4
JAN				AML	AML	11 27 40.4	
	comp=E,4758µm,0.4s						
JAN				AML	AML	11 27 40.7	
	comp=N,3392µm,0.3s						
EVR	**Evrytania**	0.98	80	P	Pb	11 27 23.7	-0.7
EVR				AML	AML	11 27 45.8	
	comp=E,996µm,0.7s						
EVR				AML	AML	11 27 53.5	
	comp=N,1510µm,0.9s						
EVR	**Evrytania**	0.98	80	P	Pb	11 27 23.8	-0.7
EVR				S	Sn	11 27 38.8	-0.2
	comp=N,780nm,0.9s						
RLS	**Riolos of Patr**	0.99	134	P	Pb	11 27 23.5	-1.0
RLS				AML	AML	11 27 44.8	
	comp=E,2635µm,0.4s						
RLS				AML	AML	11 27 46.3	
	comp=N,3162µm,0.3s						
RLS	**Riolos of Patr**	0.99	134	P	Pb	11 27 23.5	-1.0
RLS				S	Sn	11 27 38.7	-0.3
	comp=N,1µm,0.3s						
ANX	**Ano Chora**	1.07	98	P	Pb	11 27 25.0	-0.9
ANX				AML	AML	11 27 43.7	
	comp=N,6059µm,0.4s						
ANX				AML	AML	11 27 43.8	
	comp=E,3579µm,0.5s						
EFP	**Efpalio**	1.10	107	P	Pb	11 27 25.2	-1.1
EFP				AML	AML	11 27 44.8	
	comp=N,5071µm,0.2s						
EFP				AML	AML	11 27 45.9	
	comp=E,3789µm,0.3s						
KASA	**Kassiopi**	1.10	334	P	Pg	11 27 27.8	+1.1
KEK	**Kerkira**	1.13	328	P	Pg	11 27 28.0	+0.8
KEK				AML	AML	11 27 50.3	
	comp=E,1298µm,0.6s						
KEK				AML	AML	11 27 58.1	
	comp=N,1156µm,0.5s						
KEK	**Kerkira**	1.13	328	P	Pg	11 27 28.3	+1.2
DRO	**Drossia**	1.21	131	P	Pn	11 27 27.2	-0.9
DRO				AML	AML	11 27 52.5	
	comp=N,5199µm,0.4s						
DRO				AML	AML	11 27 53.8	
	comp=E,1828µm,0.5s						
LAKA	**Lakka**	1.22	114	P	Pn	11 27 27.2	-1.0
LAKA				S	Sb	11 27 42.6	-1.5
LAKA				AML	AML	11 27 53.7	
	comp=E,5004µm,0.5s						
LAKA				AML	AML	11 27 55.5	
	comp=N,6436µm,0.6s						
MAKR	**Makrakomi, Fth**	1.25	78	P	Pn	11 27 28.7	0.0
MAKR				AML	AML	11 27 59.2	
	comp=N,980µm,0.8s						
MAKR				AML	AML	11 27 59.7	
	comp=E,967µm,0.7s						
THL	**Klokotos Trika**	1.39	54	P	Pb	11 27 31.2	-0.1
THL				AML	AML	11 27 57.4	
	comp=N,1532µm,0.7s						
THL				AML	AML	11 27 57.6	
	comp=E,2461µm,0.7s						
KLV	**Kalavryta, Ach**	1.43	119	P	Pn	11 27 30.6	-0.6
KLV				AML	AML	11 27 58.8	
	comp=E,755µm,0.8s						
KLV				AML	AML	11 28 03.5	
	comp=N,887µm,0.6s						
THAL	**Thalero**	1.80	113	P	Pb	11 27 37.5	-0.7
THAL				AML	AML	11 28 18.7	
	comp=N,1726µm,0.6s						
THAL				AML	AML	11 28 22.4	
	comp=E,2262µm,0.6s						
ITM	**Ithomi**	1.91	145	P	Pb	11 27 39.4	-0.7
ITM				AML	AML	11 28 10.8	
	comp=E,930µm,0.5s						
ITM				AML	AML	11 28 12.5	
	comp=N,932µm,0.3s						
LKR	**Lokris**	1.91	92	P	Pb	11 27 39.9	-0.2
VIL2	**Platees**	2.19	103	P	Pb	11 27 45.6	+0.6
VIL2				AML	AML	11 28 33.4	
	comp=E,930µm,0.7s						
VIL2				AML	AML	11 28 33.5	
	comp=N,545µm,0.7s						
OHR	**Ohrid**	2.36	4	*i* Pn	Pb	11 27 47.7	-0.2
DION	**Dionisos Attik**	2.73	103	P	Pb	11 27 52.3	-1.9
DRME	**Dracevica, Mon**	3.59	343	*e*Pn	Pn	11 28 01.8	+1.0
PDG	**Podgorica**	3.80	345	*e*Pn	Pn	11 28 04.8	+1.1
HCY	**Herceg Novi**	4.01	338	*e*Pn	Pn	11 28 04.2	-2.4
TREB	**Trebinje**	4.30	338	*e*Pn	Pn	11 28 10.7	+0.1
DBRK	**Dubrovnik**	4.32	336	*e*Pn	Pn	11 28 11.0	+0.2
DBRK				Sn	Sn	11 28 59.0	-2.1
BRY	**Bratogost**	4.42	340	*e*Pn	Pn	11 28 12.3	0.0
SJES	**Sjenica**	4.52	355	*e*Pn	Pn	11 28 15.5	+1.8
STON	**Ston**	4.65	333	*i* Pn	Pn	11 28 15.6	+0.2
STON				Sn	Sn	11 29 06.4	-2.8
LSTV	**Lastovo**	4.88	326	*e*Pn	Pn	11 28 18.5	0.0
LSTV				Sn	Sn	11 29 12.0	-3.0
IDI	**Anoyia**	4.89	134	Pn	Pn	11 28 21.9	+3.1
	comp=N,0.5nm,0.3s,baz=229,slow=8.3,SNR=6.4						
IDI				Sn	Sn	11 29 18.6	+3.3
	comp=N,1.2nm,0.3s,baz=343,slow=3.4,SNR=7.5						
	comp=N,4.8nm,0.7s						
RUDO	**Rudo**	4.94	350	*e*Pn	Pn	11 28 19.6	+0.2
BBLS	**Lazići**	5.18	351	*e*Pn	Pn	11 28 22.6	-0.1
MAKA	**Makarska**	5.26	331	*e*Pn	Pn	11 28 23.7	0.0
MAKA				Sn	Sn	11 29 20.6	-3.6
DIVS	**Divibare**	5.36	356	*e*Pn	Pn	11 28 25.5	+0.3
RICI	**Ricice**	5.40	332	*e*Pn	Pn	11 28 25.6	-0.1
RICI				Sn	Sn	11 29 24.8	-2.9
HVAR	**Hvar**	5.41	326	*e*Pn	Pn	11 28 25.6	-0.1
HVAR				Sn	Sn	11 29 25.3	-2.6
SRKY	**Kupres RS**	5.89	335	*e*Pn	Pn	11 28 33.3	+0.8
KIJV	**Kijevo**	6.11	331	*e*Pn	Pn	11 28 35.7	+0.3
KIJV				Sn	Sn	11 29 41.6	-3.5
ZIRJ	**Zirje**	6.14	324	*e*Pn	Pn	11 28 35.6	-0.2
ZIRJ				Sn	Sn	11 29 43.1	-2.9
MORI	**Morici**	6.28	326	*e*Pn	Pn	11 28 37.6	-0.1
MORI				Sn	Sn	11 29 46.3	-3.1
FRGS	**Fruska Gora**	6.42	355	*e*Pn	Pn	11 28 39.6	-0.1
DUGI	**Dugi Otok**	6.67	323	*e*Pn	Pn	11 28 42.9	-0.3
DUGI				Sn	Sn	11 29 56.5	-2.5
UDBI	**Udbina**	6.80	330	*e*Pn	Pn	11 28 45.7	+0.8
UDBI				Sn	Sn	11 29 59.6	-2.6
VIRC	**Vir**	6.91	325	*e*Pn	Pn	11 28 46.7	+0.4
VIRC				Sn	Sn	11 30 02.2	-2.5
PLIT	**Plitvice**	7.14	330	*e*Pn	Pn	11 28 50.1	+0.4
PLIT				Sn	Sn	11 30 07.1	-3.6
A250A	**Rusevo Krmpots**	7.60	328	*e*Pn	Pn	11 28 56.4	+0.5
A250A				Sn	Sn	11 30 18.7	-3.2
MLR	**Muntele Rosu**	7.83	29	Pn	Pn	11 29 04.7	+5.6
	comp=N,0.3nm,0.3s,baz=243,slow=8.0,SNR=2.3						
	comp=N,1.7nm,0.5s						
BRJN	**Brijuni**	7.98	323	*e*Pn	Pn	11 29 00.7	-0.3
BRJN				Sn	Sn	11 30 27.0	-4.1
GBRS	**Gornja Briga**	8.01	330	*i* Pn	Pn	11 29 02.5	+1.0
CRES	**Cresnjev**	8.02	333	*e*Pn	Pn	11 29 01.4	-0.2
CEY	**Cerknica**	8.33	329	*e*Pn	Pn	11 29 06.4	+0.5
CEY	**Cerknica**	8.33	329	*i* Pn	Pn	11 29 06.5	+0.5
SKDS	**Skadanscina**	8.35	326	*e*Pn	Pn	11 29 05.5	-0.7
PDKS	**Podkum**	8.38	332	*i* Pn	Pn	11 29 06.8	+0.2
VOJS	**Vojsko**	8.79	328	*i* Pn	Pn	11 29 12.4	+0.1
SOKA	**Soboth**	8.90	335	*e*P	Pn	11 29 13.3	-0.5
	comp=N,2.0nm,0.4s,SNR=8.9						
OBKA	**Obir**	8.93	332	*e*P	Pn	11 29 14.4	+0.3
	comp=N,1.4nm,0.4s,SNR=4.2						
ABTA	**Abfaltersbach**	9.94	326	*e*P	Pn	11 29 28.8	+0.8
	comp=N,1.7nm,0.6s						
MOA	**Molln**	10.18	335	*e*P	Pn	11 29 31.6	+0.4
	comp=N,1.9nm,0.4s,SNR=5.2						
VRAC	**Vranov**	10.93	346	LR	LR	11 35 09.7	
	comp=N,30nm,19.0s,baz=230,slow=45						
MOTA	**Moosalm**	11.02	324	*i* P	Pn	11 29 44.2	+1.3
	comp=N,2.3nm,0.5s,SNR=4.6						
GERES	**GERESS Array B**	11.23	336	Pn	Pn	11 29 46.3	+0.6
	comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=6.5						
	comp=N,0.5nm,0.4s						
FINES	**FINESS Array B**	22.97	7	P	P	11 32 08.8	-0.6
	comp=N,1.4nm,0.7s,baz=166,slow=11,SNR=7.7						
	comp=N,1.4nm,0.7s						
EKA	**Eskdalemuir Ar**	22.98	324	P	P	11 32 08.6	-1.0
	comp=N,2.6nm,0.7s,baz=122,slow=11,SNR=11						
	comp=N,2.6nm,0.7s						
NB2	**NORSAR Subarra**	23.06	348	P	P	11 32 10.5	+0.1
	comp=Z,0.4nm,0.6s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	23.06	348	P	P	11 32 09.4	-0.9
	comp=Z,0.3nm,0.5s,baz=158,slow=9.2,SNR=5.0						
NOA				LR	LR	11 41 22.0	
	comp=Z,8.0nm,19.9s,baz=50,slow=37						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	30.50	218	P	P	11 33 18.8	+0.5
	comp=Z,0.3nm,0.5s,baz=36,slow=9.0,SNR=2.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	44.97	59	P	P	11 35 23.5	+3.2
	comp=Z,0.2nm,0.4s,baz=273,slow=8.4,SNR=1.8						
	comp=Z,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	45.28	49	P	P	11 35 23.5	+1.0
	comp=Z,1.2nm,0.5s,baz=263,slow=10.0,SNR=2.7						
	comp=Z,1.2nm,0.5s						

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*SOME **22** 11:44:49.9, 44°.27N×82°.90E, h5^{km}*

*NNC **22** 11:44:54.1±2.9, 44°.30N×82°.79E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=27.7km s-min=8.7km az=121.0*

ISC 22 11:44:46.7±1.9**, 44°.28N**±0°.06×**83°.04E**±0°.07**, h10**^{km}**, n14, σ0^{s}65**/23**, 3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	2.12	248	*e*P	Pg	11 45 27.9	+0.7
	2.9nm,0.0s						
KTMS				*e*S	Sg	11 45 55.3	+0.6
	7.6nm,0.1s						
KTMS	**Ketmen**	2.12	248	Pg	Pg	11 45 27.9	+0.7
	2.9nm,0.3s						
KTMS				Lg	Lg	11 45 55.3	
	7.6nm,0.4s						
DJR	**Jarkent**	2.34	272	*e*P	Pg	11 45 32.1	+0.7
	5.7nm,0.5s						
DJR				*e*S	Sg	11 46 02.6	+0.9
	4.7nm,0.0s						
DJR	**Jarkent**	2.34	272	Pg	Pg	11 45 32.1	+0.7
	5.7nm,0.5s						
DJR				Lg	Lg	11 46 02.6	
	4.8nm,0.5s						
MK31	**Makanchi Array**	2.57	348	Pn	Pg	11 45 36.2	+0.3
	0.3nm,0.2s,baz=175,slow=16,SNR=86						
MK31				Sn	Sg	11 46 08.8	-0.4
	0.5nm,0.2s,baz=165,slow=26,SNR=10						
MAKZ	**Makanchi**	2.64	344	⇑Pn	Pg	11 45 36.4	-0.8
	0.7nm,0.5s						
MAKZ				⇓Sn	Sg	11 46 10.4	-1.0
	0.9nm,0.3s						
PDGK	**Podgornoye**	2.74	251	Pg	Pg	11 45 38.6	-0.6
	1.7nm,0.4s						
PDGK				Lg	Lg	11 46 13.7	
	3.7nm,0.6s						
PDGK	**Podgornoye**	2.74	251	⇑Pn	Pg	11 45 39.0	-0.2
	0.7nm,0.2s						
PDGK				⇑Sn	Sg	11 46 14.5	-0.2
	4.5nm,0.5s						
KAPS	**Kapalarasan**	2.81	292	*e*P	Pg	11 45 40.9	+0.3
	0.9nm,0.1s						
KAPS				*e*S	Sg	11 46 17.3	+0.4
	3.7nm,0.1s						
KAPS	**Kapalarasan**	2.81	292	Pg	Pg	11 45 40.9	+0.3
	0.9nm,0.5s						
KAPS				Lg	Lg	11 46 17.3	
	3.7nm,0.7s						
UZB	**Uzynbulak**	3.13	250	*e*P	Pg	11 45 46.1	-0.5
	1.5nm,0.1s						
UZB				*e*S	Sg	11 46 26.3	-0.8
	3.5nm,0.0s						
UZB	**Uzynbulak**	3.13	250	Pg	Pg	11 45 46.1	-0.5
	1.5nm,0.1s						
UZB				Lg	Lg	11 46 26.3	
	3.5nm,0.4s						
KPKS	**Kokpek**	3.25	257	*e*P	Pg	11 45 48.4	-0.6
	2.9nm,0.1s						
KPKS				*e*S	Sg	11 46 30.4	-0.8
	20nm,0.1s						
ZSN	**Zaisan**	3.42	21	*e*P	Pg	11 45 52.4	+0.2
	2.1nm,0.1s						
ZSN				*e*S	Sg	11 46 37.2	+0.8
	3.3nm,0.1s						

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*SJA **22** 11:47:03.7±0.7, 30°.60S×72°.12W, h12^{km}, ML5.1, MW4.7*

*IDC **22** 11:47:04.8±0.4, 30°.60S×71°.71W, h0^{km}, mb4.7/18, mbtmp4.6/22, ML4.4/4, MS4.4/18, Error ellipse: s-maj=18.9km s-min=12.4km az=86.0*

*MOS **22** 11:47:07.2±1.1, 30°.57S×71°.65W, h27^{km}, mb5.1/25, Error ellipse: s-maj=14.4km s-min=8.0km az=98.0*

*NEIC **22** 11:47:09.1±1.6, 30°.61S±0°.04×71°.69W±0°.09, h26^{km}±3^{km}, mb5.0/89, Mwr4.9/64, Mww5.1, Mwr5.0(GUC), Error ellipse: s-maj=10.7km s-min=6.3km az=96.0*

*NEIC **22** 11:47:09.1, 30°.61S×71°.69W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.99; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-2.04; M$_{r\theta}$0.59; M$_{\theta\phi}$-0.27; M$_{\phi r}$-1.44; Fault plane solution: M$_0$2.56000×10^{16} NP1:ϕ$_s$170.33000°, δ63.95000°, λ74.29000°. NP2:ϕ$_s$22.96000°, δ30.13000°, λ118.98000°. Principal axes: T 2.6132, Plg67.0000°, Azm51.0000°; N -0.1113, Plg14.0000°, Azm177.0000°; P -2.5019, Plg18.0000°, Azm272.0000°;*

*GUC **22** 11:47:10.0±0.8, 30°.63S×71°.65W, h32^{km}±2^{km}, ML5.1*

*BJI **22** 11:47:11.0±0.0, 30°.60S×71°.80W, h30^{km}, mB4.8/2, Ms5.0/6, Ms7 4.9/6*

*VAO **22** 11:47:12.7±0.5, 30°.38S×71°.45W, h29^{km}, mb5.1*

*GCMT **22** 11:47:14.1±0.2, 30°.54S±0°.02×71°.93W±0°.02, h32^{km}, MW5.1/80, Moment Tensor Solution. s74,c94; s80,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.76±.16; M$_{\theta\theta}$-0.15±.11; M$_{\phi\phi}$-4.61±.12; M$_{r\theta}$0.73±.14; M$_{\theta\phi}$0.05±.07; M$_{\phi r}$-2.24±.16; Best double couple: M$_0$5.24100×10^{16} NP1:ϕ$_s$6.00000°, δ33.00000°, λ102.00000°. NP2: ϕ$_s$172.00000°, δ58.00000°, λ82.00000°. Principal axes: T 5.3560, Plg75.0000°, Azm60.0000°; N -0.2310, Plg7.0000°, Azm176.0000°; P -5.1260, Plg13.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 11:47:14, 30°.60S×71°.72W, h36^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.42; M$_{\theta\theta}$0.70; M$_{\phi\phi}$-6.12; M$_{r\theta}$0.69; M$_{\theta\phi}$0.49; M$_{\phi r}$-0.80; Fault plane solution: M$_0$5.91000×10^{16} NP1:ϕ$_s$3.00000°, δ41.00000°, λ101.00000°. NP2:ϕ$_s$169.00000°, δ50.00000°, λ80.00000°. Principal axes: T 5.5595, Plg81.0000°, Azm25.0000°; N 0.6539, Plg7.0000°, Azm175.0000°; P -6.2134, Plg4.0000°, Azm266.0000°;*

ISC 22 11:47:08.0±0.6**, 30°.58S**±0°.02×**71°.85W**±0°.03**, h24**^{km}±4^{km}**, n402, σ1^{s}93**/430**, mb4.9**/60**, MS4.4**/20**, 35C-11D, Fault plane solution: NP1:**ϕ$_s$359.97311°**,** δ36.20991°**,** λ99.73573°. **NP2:**ϕ$_s$167.96822°**,** δ54.39193°**,** λ82.94211°. **Principal axes:** T Plg79.1852°**,** Azm50.3843°**;** N Plg5.7333°**,** Azm172.0914°**;** P Plg9.1390°**,** Azm263.0168°**;**
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	0.21	118		Pb	11 47 14.5	+0.8
CO06				Sg	Sb	11 47 18.0	+0.4
CO06	**Fray Jorge**	0.21	118	⇑*i*P	Pb	11 47 14.5	+0.8
CO06				*i* S	Sb	11 47 18.0	+0.4
CO06				IAML		11 47 20.0	
	comp=E,263µm,0.2s						
CO05	**La Serena**	0.84	39		Pn	11 47 24.5	+0.3
CO05	**La Serena**	0.84	39	⇓*i*P	Pn	11 47 24.5	+0.3
CO05				*i* S	Sn	11 47 36.0	+0.1
CO05				IAML		11 47 39.8	
	comp=N,57µm,0.3s						
CO02	**Combarbal**	0.96	131		Pn	11 47 24.9	-1.2
CO02	**Combarbal**	0.96	131	⇓*i*P	Pn	11 47 24.9	-1.2
CO02				*i* S	Sb	11 47 36.0	-2.4
CO02				IAML		11 47 41.6	
	comp=N,180µm,0.3s						
CO02	**Combarbal**	0.96	131	*e*P	Pn	11 47 24.0	-2.0
CO02				IAML		11 47 40.5	
	comp=Z,34µm,0.4s						
GO04	**Tololo Observa**	0.99	66		Pn	11 47 26.2	-0.3
GO04	**Tololo Observa**	0.99	66	⇓*i*P	Pn	11 47 26.3	-0.3
GO04				*i* S	Sb	11 47 37.9	-1.5
GO04				IAML		11 47 43.7	
	comp=E,147µm,0.5s						
GO04	**Tololo Observa**	0.99	66	*e*P	Pn	11 47 26.0	-0.6
CO01	**Juntas del Tor**	1.63	69	⇓*i*P	Pn	11 47 36.3	+0.9
CO01				*i* S	Sn	11 47 54.9	-0.8
CO01	**Juntas del Tor**	1.63	69	*e*P	Pb	11 47 36.6	-0.9
CO01				*e*S	Sb	11 47 58.4	+0.6
LCO	**Las Campanas**	1.85	33	⇑*i*P	Pn	11 47 39.2	+0.8
LCO				*i* S	Sb	11 48 04.2	+0.1
LCO	**Las Campanas**	1.85	33	*e*P	Pb	11 47 40.0	-1.3
VA06	**Catapilco**	2.03	167		Pn	11 47 41.0	+0.3
VA06	**Catapilco**	2.03	167	⇑*i*P	Pn	11 47 40.8	+0.1
VA06				*i* S	Sn	11 48 07.1	+1.8
VA06				IAML		11 48 15.6	
	comp=N,43µm,0.5s						
VA01	**Torpederas**	2.44	176	*e*P	Pn	11 47 46.4	+0.1
VA01				*i* S	Sn	11 48 18.2	+2.8
VA01				IAML		11 48 25.0	
	comp=E,5µm,0.7s						
VA01	**Torpederas**	2.44	176	*e*P	Pn	11 47 46.0	-0.3
VA01				IAML		11 48 27.4	
	comp=Z,4µm,0.6s						
VA03	**San Esteban**	2.44	153	⇑*i*P	Pn	11 47 47.3	+0.9
VA03				*i* S	Sn	11 48 17.2	+1.6
VA03				IAML		11 48 23.9	
VA03	**San Esteban**	2.44	153	*e*P	Pn	11 47 47.0	+0.5
VA03				IAML		11 48 29.0	
	comp=Z,12µm,0.9s						
AC04	**Llanos de Chal**	2.46	16	Pn	Pn	11 47 47.5	+0.9
AC04	**Llanos de Chal**	2.46	16	⇑*i*P	Pn	11 47 47.4	+0.9
AC04				*i* S	Sb	11 48 20.4	-1.0
AC04				IAML		11 48 35.9	
	comp=E,4µm,0.3s						
AC04	**Llanos de Chal**	2.46	16	*e*P	Pn	11 47 47.0	+0.5
AC04				*e*S	Sb	11 48 21.1	-0.2
ROCH	**El Roble**	2.49	164	*e*P	Pn	11 47 47.7	+0.4
ROCH				*i* S	Sn	11 48 19.6	+2.6
ROCH				IAML		11 48 25.4	
	comp=N,23µm,0.4s						
ROC1	**El Roble**	2.50	164		Pn	11 47 47.6	+0.4
ROC1	**El Roble**	2.50	164	*e*P	Pn	11 47 48.0	+0.7
RTLS	**Leoncito**	2.50	120	*e*P	Pb	11 47 50.5	-1.9
RTLS				IAML		11 48 31.5	
	comp=Z,25µm,0.7s						
AUSP	**Uspallata**	2.67	129	*e*P	Pn	11 47 52.0	+2.3
AUSP				*e*S	Sb	11 48 28.6	+0.9
MT02	**Curacav**	2.74	167		Pn	11 47 50.3	-0.1
MT02	**Curacav**	2.74	167	*e*P	Pn	11 47 52.3	+1.9
MT02				*i* S	Sn	11 48 25.0	+2.2
MT02				IAML		11 48 37.3	
	comp=E,7µm,0.6s						
MT02	**Curacav**	2.74	167	*e*P	Pn	11 47 50.0	-0.5
MT02				IAML		11 48 38.2	
	comp=Z,6µm,0.8s						
PEL	**Peldehue**	2.74	159		Pn	11 47 51.5	+1.0
PEL	**Peldehue**	2.74	159	P	Pn	11 47 51.5	+1.0
PEL	**Peldehue**	2.74	159	⇑*i*P	Pn	11 47 51.3	+0.8
PEL				*i* S	Sn	11 48 24.4	+1.5
PEL	**Peldehue**	2.74	159	*e*P	Pn	11 47 51.0	+0.5
PEL				*e*S	Sn	11 48 23.6	+0.7
ZON	**Zonda**	2.89	110	*e*P	Pb	11 47 56.0	-2.8
ZON				IAML		11 48 49.6	
	comp=Z,4µm,1.1s						
VA05	**Santo Domingo**	3.08	176	*e*P	Pn	11 47 54.8	-0.2
VA05				*i* S	Sb	11 48 36.3	-2.9
VA05				IAML		11 48 50.4	
	comp=E,9µm,0.5s						
MT03	**Universidad Ad**	3.12	159	*e*P	Pn	11 47 56.7	+0.9
MT03				*i* S	Sn	11 48 34.0	+1.7
MT03				IAML		11 48 48.7	
	comp=N,17µm,0.8s						
MT03	**Universidad Ad**	3.12	159	*e*P	Pn	11 47 57.0	+1.2
MT03				*e*P	Pb	11 47 57.1	-5.8
MT03				*e*S	Sb	11 48 38.1	-2.5
MT03				IAML		11 48 48.1	
	comp=Z,8µm,0.7s						
MT09	**Talagante**	3.27	167	⇑*i*P	Pn	11 47 58.3	+0.4
MT09				*i* S	Sn	11 48 38.3	+2.2
MT09				IAML		11 48 53.2	
	comp=E,7µm,0.5s						
GO03	**Copiap**	3.29	26	*e*P	Pn	11 47 59.4	+1.3
GO03				*e*S	Sb	11 48 42.6	-2.7
MT01	**Popeta**	3.32	171	*e*P	Pn	11 47 58.6	+0.2

MT01				eS	Sb	11 48 42.6	-3.4
MT01				IAML		11 48 51.5	
	comp=Z,3µm,0.8s						
BO04	La Punta	3.56	163		Pn	11 48 02.5	+0.7
AVFE	Valle Fertil	3.79	92	eP	Pn	11 48 07.1	+2.2
AVFE				eS	Sb	11 48 57.1	-2.5
AVFE				IAML		11 49 04.1	
	comp=Z,3µm,0.5s						
BO01	Tunca	3.86	171	eP	Pn	11 48 06.0	+0.2
BO01				eS	Sb	11 48 56.6	-5.0
BO01				IAML		11 49 11.2	
	comp=Z,2µm,0.7s						
ACLC	CERRO LA CRUZ	4.40	76	eP	Pn	11 48 16.3	+2.9
ACLC				eS	Sb	11 49 10.5	-6.8
ACLC				IAML		11 49 29.6	
	comp=Z,4µm,0.8s						
AC02	Maricunga	4.43	33	eP	Pn	11 48 15.8	+1.8
AC02				eS	Sb	11 49 29.1	+11
AC02				IAML		11 49 36.8	
	comp=Z,2µm,1.4s						
ACHE	Chepes	4.50	99	eP	Pn	11 48 17.0	+2.3
AC01	Pan de Azucar	4.55	14	eP	Pn	11 48 14.6	-0.7
AC01				eS	Sb	11 49 23.6	+2.1
AC01				IAML		11 49 50.3	
	comp=Z,758nm,0.8s						
APLL	PUNTA DE LOS L	4.59	89	eP	Pn	11 48 18.0	+2.0
RFA	San Rafael	5.06	147	eP	Pn	11 48 24.0	+1.6
RFA				eS	Sb	11 49 44.6	+8.3
ML02	Panimavida	5.18	176		Pn	11 48 22.8	-1.2
BI05	Punta Hualpn	6.26	190		Pn	11 48 36.6	-2.1
H03N1	Juan Fernandez	6.64	243	Pn	Pn	11 48 43.9	0.0
	baz=115,slow=18						
H03N1				Sn	Sn	11 49 55.0	-3.7
	baz=99,slow=22						
H03N1				T	T	11 55 34.9	
	baz=72,slow=72						
H03N2	Juan Fernandez	6.66	243	Pn	Pn	11 48 44.1	+0.1
	baz=115,slow=18						
H03N2				Sn	Sn	11 49 55.3	-3.7
	baz=99,slow=22						
H03N2				T	T	11 55 39.4	
	baz=72,slow=72						
H03N3	Juan Fernandez	6.66	243	Pn	Pn	11 48 43.8	-0.2
	baz=115,slow=18						
H03N3				Sn	Sn	11 49 55.8	-3.3
	baz=99,slow=22						
H03N3				T	T	11 55 34.8	
	baz=72,slow=72,SNR=7137						
H03S3	Juan Fernandez	6.80	240	Pn	Pn	11 48 45.3	-0.8
H03S3				Sn	Sn	11 49 57.4	-5.2
H03S3				T	T	11 56 18.0	
	baz=86,SNR=50						
H03S1	Juan Fernandez	6.81	240	Pn	Pn	11 48 45.1	-1.0
H03S1				Sn	Sn	11 49 57.0	-5.7
H03S1				T	T	11 55 48.0	
	baz=86,SNR=38						
H03S2	Juan Fernandez	6.82	240	Pn	Pn	11 48 45.3	-0.9
H03S2				Sn	Sn	11 49 57.3	-5.7
H03S2				T	T	11 56 17.3	
	baz=86,SNR=47						
PB10	IPOC Station P	7.13	10	Pn	Pn	11 48 49.9	-0.8
LVC	Limon Verde	8.36	19	Pn	Pn	11 49 06.5	-1.4
	comp=Z,1.0nm,0.3s,baz=177,slow=7.1,SNR=15						
LVC				Sn	Sn	11 50 35.6	-6.1
	comp=Z,5.7nm,0.3s,baz=231,slow=6.7,SNR=3.1						
LVC				LR	LR	11 52 24.9	
	comp=Z,3µm,20.9s,baz=211,slow=38						
	comp=Z,3.4nm,0.3s						
LVC	Limon Verde	8.36	19	eP	Pn	11 49 07.0	-0.9
LR03	Panguipulli	9.04	182		Pn	11 49 16.3	-0.7
PLCA	Paso Flores	10.19	174	Pn	Pn	11 49 32.9	+0.2
	comp=Z,0.8nm,0.3s,baz=345,slow=12,SNR=34						
PLCA				LR	LR	11 53 54.3	
	comp=Z,2µm,19.1s,baz=352,slow=40						
	comp=Z,3.5nm,0.5s						
PLCA	Paso Flores	10.19	174	Pn	Pn	11 49 33.2	+0.5
PLCA	Paso Flores	10.19	174	eP	Pn	11 49 33.2	+0.5
TRQA	Tornquist	11.05	135		Pn	11 49 43.2	-1.3
TRQA	Tornquist	11.05	135	P	Pn	11 49 43.2	-1.3
LPA	La Plata	12.48	114	eP	Pn	11 50 01.7	-2.4
LPA				pP	P	11 50 09.9	-5.7
LPA				sP		11 50 15.3	
LPA				PPP	PPP	11 50 23.7	
LPA				PP	PbPb	11 50 39.7	-5.8
LPA				S	Sn	11 52 13.5	-8.8
LPA				sS		11 52 29.0	
LPA	La Plata	12.48	114	SN	Sn	11 52 19.5	-2.8
LPA				SSS	SSS	11 52 44.1	
LPA				SS	SbSb	11 53 19.0	+4.1
LPA				PCP	PcP	11 55 41.0	-2.0
LPA				SCS	ScS	12 02 55.6	+4.9
LPA				PKIKP	PKiKP	12 03 35.5	-5.1
LPA				PKIKS		12 07 11.6	
LPA				SKIKS		12 10 49.9	
ITQB	Itaqui	13.21	90	Pn	Pn	11 50 12.3	-1.7
ITQB	Itaqui	13.21	90	eP	Pn	11 50 11.9	-2.1
CPUP	Villa Florida	13.45	75	Pn	Pn	11 50 14.3	-3.1
	comp=Z,0.5nm,0.3s,baz=253,slow=10,SNR=9.5						
CPUP				LR	LR	11 55 47.2	
	comp=Z,2µm,21.8s,baz=254,slow=39						
	comp=Z,3.1nm,0.6s						
CPUP	Villa Florida	13.45	75		Pn	11 50 16.4	-0.9
CPUP	Villa Florida	13.45	75	P	Pn	11 50 16.5	-0.9
CPUP	Villa Florida	13.45	75	eP	Pn	11 50 16.4	-0.9
LPAZ	La Paz	14.62	14	Pn	Pn	11 50 31.4	-2.6
	comp=Z,1.5nm,0.3s,baz=129,slow=4.6,SNR=29						
	comp=Z,4.1nm,0.3s						
LPAZ	La Paz	14.62	14		Pn	11 50 31.6	-2.4
LPAZ	La Paz	14.62	14	eP	Pn	11 50 31.6	-2.4
COYC	Coyhaique	14.97	181		Pn	11 50 37.5	-0.4
PLTB	Pedras Altas	15.66	99	Pn	Pn	11 50 45.3	-1.8
PLTB	Pedras Altas	15.66	99	eP	Pn	11 50 45.1	-2.0
CPSB	Cacapava Do Su	15.87	94	eP	Pn	11 50 48.5	-1.3
ITAB	Concordia	17.58	84		Pn	11 51 10.5	-0.9
ITAB				IAmb	IAmb	11 51 30.8	
	comp=Z,249nm,1.3s						
ITAB	Concordia	17.58	84	eP	Pn	11 51 10.8	-0.6
GO08	Villa O'Higgin	17.87	182	P	Pn	11 51 14.5	-0.4
CNLB	Canela	18.24	91	eP	Pn	11 51 19.0	-0.6
TRCB	Terra Rica	18.82	70	P	P	11 51 24.6	-1.5
TRCB				IAmb	IAmb	11 51 41.1	
	comp=Z,326nm,1.9s						
TRCB	Terra Rica	18.82	70	eP	P	11 51 25.9	-0.1
PTLB	Pontes e Lacer	19.04	41	eP	P	11 51 28.6	+0.3
NNA	Nana	19.07	345	LR	LR	11 57 23.4	
	comp=Z,565nm,19.6s,baz=169,slow=32						
TER01	Tubaro-SC	19.87	90	eP	P	11 51 37.4	0.0
PCMB	Pacaembu	20.51	69	eP	P	11 51 44.0	-0.4
VILB	Vilhena	20.58	34	eP	P	11 51 45.4	+0.2
GO09	Cerro Castillo	20.68	181	P	P	11 51 46.0	0.0
SALV	Santo Antonio	20.79	49	eP	P	11 51 47.4	0.0
TIJ01	Guaruva-PR	20.83	81	eP	P	11 51 46.9	-1.1
FRTB	Fartura	21.11	75	eP	P	11 51 50.8	-0.2
ETMB	Extrema	21.31	15	eP	P	11 51 54.6	+1.5
ITRB	Iturama	22.22	66	eP	P	11 52 01.8	-1.1
PET01	Itanhaem-SP	22.67	80	eP	P	11 52 08.0	+0.5
CZSB	Cruzeiro do Su	22.74	358	eP	P	11 52 10.8	+2.4
SAML	Samuel	22.99	22	P	P	11 52 11.1	+0.1
SAML	Samuel	22.99	22	P	P	11 52 11.1	+0.1
SAML				pmax	pmax		
	comp=Z,31nm,1.2s						
BB19B	Bebedouro	22.99	71	eP	P	11 52 10.5	-0.5
RCLB	Rio Claro- Sao	23.20	75	eP	P	11 52 12.7	-0.5
EFI	East Falkland	23.42	158	i P	P	11 52 14.4	-0.6
EFI				pmax	pmax		
	comp=Z,32nm,1.0s						
VAO	Valinhos	23.43	77	eP	P	11 52 13.9	-1.6
PDRB	Porto dos Gac	23.51	40	eP	P	11 52 16.4	+0.2
ATAH	Atahualpa	24.11	344	LR	LR	12 00 38.2	
	comp=Z,390nm,18.1s,baz=177,slow=34						
USHA	Ushuaia	24.37	175	P	P	11 52 24.7	+0.8
	comp=Z,12nm,0.5s,baz=4.0,slow=9.0,SNR=11						
USHA				LR	LR	12 02 24.9	
	comp=Z,1µm,18.4s,baz=7.0,slow=38						
	comp=Z,12nm,0.5s						
PARB	Paraibuna	24.43	79	eP	P	11 52 24.1	-0.7
CLDB	Colider	24.63	41	eP	P	11 52 28.7	+2.0
IPMB	Ipameri, GO	24.86	65	eP	P	11 52 27.9	-1.0
MAN01	Angra dos Reis	26.02	80	eP	P	11 52 38.5	-0.8
BDFB	Brasilia	26.41	61	P	P	11 52 42.2	-0.7
	comp=Z,15nm,0.8s,baz=235,slow=8.3,SNR=29						
BDFB				LR	LR	12 04 11.9	
	comp=Z,2µm,18.4s,baz=224,slow=39						
	comp=Z,15nm,0.8s						
BDFB	Brasilia	26.41	61	P	P	11 52 42.0	-0.9
BDFB				IAmb	IAmb	11 52 55.4	
	comp=Z,62nm,1.0s						
BDFB	Brasilia	26.41	61	P	P	11 52 42.0	-0.9
BDFB				pmax	pmax		
	comp=Z,62nm,1.0s						
BDFB	Brasilia	26.41	61	eP	P	11 52 42.2	-0.7
SNDB	Serra Nova Dou	26.55	50	eP	P	11 52 43.9	-0.2
DUB01	Friburgo-RJ	27.68	79	eP	P	11 52 53.8	-0.5
DIAM	Diamantina, MG	28.33	71	eP	P	11 52 59.9	-0.3
CAM01	Campos-RJ	28.39	79	eP	P	11 53 00.6	+0.1
PEXB	Peixe	28.51	55	eP	P	11 53 01.7	0.0
JANB	Januaria	29.60	65	eP	P	11 53 10.8	-0.5
ALF01	Guarapari-ES	29.68	78	eP	P	11 53 11.6	-0.4
SJMB	Sao Joao De Ma	30.17	74	eP	P	11 53 15.7	-0.7
ITTB	Itaituba	30.18	33	eP	P	11 53 15.9	-0.5
RIB01	Linhares ES	30.54	76	eP	P	11 53 20.8	+1.2
SDBA	SAO DESIDERIO	30.78	60	eP	P	11 53 21.6	-0.2
SMTB	Santa Maria do	31.30	51	eP	P	11 53 26.4	0.0
NAN01	Guarapari, ES	31.47	74	eP	P	11 53 27.1	-0.7
PRPB	Parauapebas	31.90	45	eP	P	11 53 31.5	-0.2
GUA01	Guaratinga, BA	32.37	72	eP	P	11 53 37.4	+1.7
RPN	Rapa Nui	32.92	266	LR	LR	12 03 24.3	
	comp=Z,805nm,19.3s,baz=103,slow=30						
MALB	Monte Alegre	33.07	34	eP	P	11 53 41.3	-0.6
CMC01	Camacan, BA	33.25	70	eP	P	11 53 43.3	-0.1
GDU01	Guandu, BA	34.11	68	eP	P	11 53 50.4	-0.5
PRAC	Prado	34.22	355	eP	P	11 53 54.3	+2.5
ORTC	Ortega, Tolima	34.44	354	eP	P	11 53 56.3	+2.4
BOAV	Boa Vista	34.52	20	eP	P	11 53 55.2	+0.7
VILC	Villavicencio,	34.54	357	eP	P	11 53 56.3	+1.5
PMSA	Palmer Station	34.56	174	LR	LR	12 07 51.8	
	comp=Z,801nm,18.6s,baz=338,slow=36						
PMSA	Palmer Station	34.56	174	eP	P	11 54 00.5	+6.2
YOTC	Yotoco, Valle	34.63	352	eP	P	11 53 58.2	+2.7
CHIC	Chingaza	35.05	357	eP	P	11 54 01.1	+1.6
ORCD	Orcadas	35.11	157	P	P	11 53 58.3	-0.8
NBPN	Ponto Novo - B	35.33	63	eP	P	11 54 00.7	-0.8
MCPB	Macapa, AP	35.45	36	eP	P	11 54 02.3	-0.2
PLMC	San Jos del P	35.53	352	eP	P	11 54 05.0	+1.7
NORC	Norcasia	36.05	355	eP	P	11 54 09.8	+2.1
SPBC	San Pablo de B	36.09	356	eP	P	11 54 09.8	+1.8
RUSC	La Rusia	36.28	358	eP	P	11 54 12.7	+2.5
CBOC	Ciudad Bolivar	36.45	353	eP	P	11 54 14.6	+3.4
HELC	Santa Helena	36.73	354	eP	P	11 54 17.5	+3.7
PTBC	PUERTO BERRIO,	36.99	356	eP	P	11 54 14.6	-1.0
DBBC	Dabeiba	37.61	353	eP	P	11 54 24.2	+3.2
ZARC	Zaragoza, Cauc	37.96	355	P	P	11 54 24.9	+1.0
ZARC				IAmb	IAmb	11 54 27.6	
	comp=Z,18nm,1.0s						
ZARC	Zaragoza, Cauc	37.96	355	eP	P	11 54 25.2	+1.4
NBMA	Muriti-CE	38.63	60	eP	P	11 54 29.6	-0.1
NBPS	Pedro II - PI	38.72	54	eP	P	11 54 30.1	-0.3
NBAN	Anadia - AL	39.09	65	eP	P	11 54 32.7	-0.8
NBPB	Pedra_Branca-C	39.24	57	eP	P	11 54 35.3	+0.6
SDV	Santo Domingo	39.25	2	P	P	11 54 35.4	+0.5
	comp=Z,10.0nm,0.6s,baz=265,slow=8.5,SNR=4.4						
SDV				LR	LR	12 13 15.7	
	comp=Z,513nm,18.1s,baz=174,slow=40						
	comp=Z,10.0nm,0.6s						
SDV	Santo Domingo	39.25	2	eP	P	11 54 36.5	+1.6
BAUV	El Baul	39.46	6	P	P	11 54 36.5	+0.1
MDP	Montagnes des	39.95	31	LR	LR	12 12 00.6	
	comp=Z,553nm,21.6s,baz=235,slow=38						
RCBR	Riachuelo	41.78	61	P	P	11 54 57.3	+1.5
	comp=Z,7.3nm,0.9s,baz=229,slow=11,SNR=1.5						
RCBR				LR	LR	12 13 42.2	
	comp=Z,900nm,19.7s,baz=6.5,slow=38						
	comp=Z,7.3nm,0.9s						
RCBR	Riachuelo	41.78	61	P	P	11 54 55.6	-0.1
RCBR	Riachuelo	41.78	61	P	P	11 54 55.6	-0.1
RCBR				pmax	pmax		
	comp=Z,74nm,1.3s						
RCBR	Riachuelo	41.78	61	eP	P	11 54 57.2	+1.5
JTS	Las Juntas de	42.54	341	i P	P	11 55 01.3	-0.5
JTS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MLPR	Magueyes Islan	48.49	6	P	P	11 55 49.3	+0.5
CRPR	Cabo Rojo, PR	48.52	6	P	P	11 55 49.4	+0.4
OBIP	Obispado Ponce	48.60	7	P	P	11 55 50.0	+0.4
SJG	San Juan	48.72	7	P	P	11 55 50.5	0.0
SJG	San Juan	48.72	7	P	P	11 55 50.5	0.0
SJG				pmax	pmax		
	comp=Z,24nm,0.9s						
GCPR	Guaynabo City	48.92	7	P	P	11 55 51.5	-0.6
BELA	Belgrano 2	50.22	170	P	P	11 56 01.7	+0.3
BELA				IAmb	IAmb	11 56 10.9	
	comp=Z,14nm,1.1s						
VNA3	Neumayer Olymp	52.47	159	P	P	11 56 18.9	+0.5
VNA3	Neumayer Olymp	52.47	159	pP	pP	11 56 26.5	+0.7
VNA1	Neumayer--Stat	52.76	158	P	P	11 56 21.5	+1.0
VNA1	Neumayer--Stat	52.76	158	pP	pP	11 56 29.2	+1.3
VNA2	Neumayer--Watz	53.11	158	P	P	11 56 23.5	+0.4
	baz=288,slow=8.0						
VNA2	Neumayer--Watz	53.11	158	pP	pP	11 56 31.5	+0.9
SNAA	Sanae	54.70	159	P	P	11 56 35.1	+0.3
SNAA	Sanae	54.70	159	pP	pP	11 56 43.1	+0.9
SNAA	Sanae	54.70	159	P	P	11 56 34.9	+0.2
	comp=Z,7.3nm,0.6s,baz=277,slow=8.1,SNR=68						
SNAA				LR	LR	12 17 54.4	
	comp=Z,312nm,21.7s,baz=284,slow=34						
	comp=Z,7.3nm,0.6s						
SNAA	Sanae	54.70	159	P	P	11 56 34.4	-0.4
SNAA				IAmb	IAmb	11 56 43.6	
	comp=Z,20nm,0.8s						
SNAA	Sanae	54.70	159	P	P	11 56 34.4	-0.4
SNAA				pmax	pmax		
	comp=Z,21nm,0.8s						
TROLL	Troll, Antarti	56.41	159	P	P	11 56 47.6	+0.4
TROLL	Troll, Antarti	56.41	159	pP	pP	11 56 55.6	+1.0
QSPA	South Pole Qui	59.65	180	P	P	11 57 10.8	+0.9
	comp=Z,11nm,0.8s,baz=200,slow=0.4,SNR=69						
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	59.65	180	P	P	11 57 10.3	+0.4
QSPA				IAmb	IAmb	11 57 19.8	
	comp=Z,15nm,0.9s						
H06S1	SOCORRO T	61.80	317	T	T	13 04 44.6	
	SNR=48						
H06E1	SOCORRO T-PHAS	61.81	317	T	T	13 04 44.2	
	SNR=210						
833A	Chaparral WMA,	64.20	333	P	P	11 57 44.2	+3.5
	baz=154						
HKT	Hockley	64.38	337	i P	P	11 57 42.1	+0.4
HKT				pmax	pmax		
	comp=Z,9.0nm,1.5s						
X48A	Hartselle	66.25	346	P	P	11 57 54.8	+0.9
X48A				IAmb	IAmb	11 58 04.3	
	comp=Z,20nm,1.1s						
W50A	Signal Mountai	66.64	348	P	P	11 57 57.1	+0.7
W50A				IAmb	IAmb	11 58 13.5	
	comp=Z,12nm,0.9s						
V55A	Taylorsville	66.66	352	P	P	11 57 58.1	+1.6
CPCT	Cooper Cave	66.75	349	P	P	11 57 58.0	+1.0
CPCT				IAmb	IAmb	11 58 07.5	
	comp=Z,20nm,1.2s						
OXF	Oxford	66.83	344	P	P	11 57 59.1	+1.6
OXF	Oxford	66.83	344	P	P	11 57 59.1	+1.6
OXF				pmax	pmax		
	comp=Z,44nm,1.2s						
TXAR	Lajitas Array	66.85	330	P	P	11 57 59.6	+1.7
	comp=Z,2.1nm,0.8s,baz=144,slow=8.7,SNR=14						
TXAR				LR	LR	12 23 09.8	
	comp=Z,213nm,18.1s,baz=166,slow=32						
	comp=Z,2.1nm,0.8s						
TXAR	Lajitas Array	66.85	330	P	P	11 57 58.3	+0.4
TXAR	Lajitas Array	66.85	330	P	P	11 57 58.3	+0.4
TAOE	Nuku Hiva Isla	66.89	273	eS	S	12 06 54.0	+3.6
TAOE	Nuku Hiva Isla	66.89	273	eLR	LR	12 17 43.5	
	comp=Z,195nm,22.9s						
PLAL	Pickwick Lake	66.98	346	P	P	11 58 00.5	+1.9
PLAL				IAmb	IAmb	11 58 08.6	
	comp=Z,35nm,1.7s						
V48A	Smith Brothers	67.45	347	P	P	11 58 02.6	+1.1
V48A				IAmb	IAmb	11 58 12.0	
	comp=Z,24nm,1.2s						
VNDA	Vanda	67.48	191	P	P	11 58 02.9	+1.6
	comp=Z,1.4nm,0.8s,baz=164,slow=4.8,SNR=4.3						
	comp=Z,1.4nm,0.8s						
VNDA	Vanda	67.48	191	P	P	11 58 01.3	0.0
VNDA				IAmb	IAmb	11 59 01.5	
	comp=Z,29nm,2.0s						
VNDA	Vanda	67.48	191	P	P	11 58 01.3	0.0
VNDA				pmax	pmax		
	comp=Z,29nm,2.0s						
CLTN	Cedars of Leba	67.70	347	P	P	11 58 04.2	+1.1
CLTN				IAmb	IAmb	11 58 19.9	
	comp=Z,11nm,1.0s						
WVT	Waverly	68.03	346	P	P	11 58 05.4	+0.3
WVT				IAmb	IAmb	11 58 22.0	
	comp=Z,13nm,0.8s						
WVT	Waverly	68.03	346	IAmb_Lg		11 58 22.5	
	comp=Z,9.5nm,0.8s						
WVT	Waverly	68.03	346	P	P	11 58 05.4	+0.3
WVT				pmax	pmax		
	comp=Z,13nm,0.9s						
TBI	Tubuai	68.32	255	eS	S	12 07 11.4	+4.2
TBI	Tubuai	68.32	255	eLR	LR	12 18 32.2	
	comp=Z,282nm,27.2s						
TBI	Tubuai	68.32	255	eT	T	13 12 40.8	
	comp=Z,28nm,0.2s						
W39A	Magazine	68.61	341	P	P	11 58 11.5	+2.8
	baz=160						
T47A	Sharon Grove	68.72	347	P	P	11 58 10.2	+0.8
T47A				IAmb	IAmb	11 58 19.7	
	comp=Z,16nm,0.9s						
TUL1	Leonard	69.86	339	P	P	11 58 18.0	+1.4
	baz=158						
MSTX	Muleshoe	70.53	333	P	P	11 58 23.0	+2.1
	baz=152						
PPT2	Papeete2	70.92	260	eS	SKiKP	12 07 54.3	-10
	comp=Z,194nm,28.5s						
PPT2	Papeete2	70.92	260	eLR	LR	12 19 49.8	
	comp=Z,342nm,23.8s						
319A	Douglas	71.12	327	P	P	11 58 24.2	-0.3
319A				IAmb	IAmb	11 58 44.0	
	comp=Z,12nm,1.2s						
P46A	Rosedale	71.28	348	P	P	11 58 25.0	-0.1
P46A				IAmb	IAmb	11 58 27.1	
	comp=Z,16nm,0.8s						
121A	Cookes Peak, D	71.40	328	P	P	11 58 26.2	-0.1
121A				IAmb	IAmb	11 58 39.4	
	comp=Z,9.2nm,1.1s						
N49A	Columbus Grove	72.05	350	P	P	11 58 30.7	+1.0
ANMO	Albuquerque	72.87	331	LR	LR	12 26 39.2	
	comp=Z,233nm,19.2s,baz=168,slow=33						
ANMO	Albuquerque	72.87	331	i P	P	11 58 35.0	0.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LIC	Lamto	73.56	72	eP	P	11 58 39.6	+0.3
	comp=Z,80nm,1.3s						
TIC	Toumodi	73.80	72	ePKP2	P	11 58 40.6	-0.2
	comp=Z,259nm,1.4s						
KIC	Kosan Boka	73.87	72	ePKP2	P	11 58 40.9	-0.3
	comp=Z,68nm,0.9s						
T25A	Trinidad	73.94	333	P	P	11 58 44.6	+3.3
	baz=151						
DBIC	Dimbokro	73.95	72	P	P	11 58 42.0	+0.4
	comp=Z,12nm,0.6s,baz=237,slow=6.1,SNR=31						
	comp=Z,12nm,0.6s						
DBIC	Dimbokro	73.95	72	P	P	11 58 40.8	-0.8
DBIC	Dimbokro	73.95	72	P	P	11 58 40.8	-0.8
DBIC				pmax	pmax		
	comp=Z,70nm,1.0s						
W18A	Petrified Fore	74.45	328	P	P	11 58 47.8	+3.5
	baz=147						
SDCO	Great Sand Dun	74.90	333	P	P	11 58 50.2	+3.3
	baz=150						
WUAZ	Wupatki	75.53	328	P	P	11 58 50.9	+0.4
WUAZ				IAmb	IAmb	11 59 03.6	
	comp=Z,13nm,1.1s						
WUAZ	Wupatki	75.53	328	P	P	11 58 53.9	+3.4
	baz=146						
MVCO	Mesa Verde	75.66	331	P	P	11 58 54.2	+2.9
	baz=148						
I42A	Draeger Farm,	75.74	347	P	P	11 58 52.4	+1.2
I42A				IAmb	IAmb	11 59 14.1	
	comp=Z,7.3nm,0.7s						
Q24A	Divide	75.82	334	P	P	11 58 54.9	+2.6
	baz=151						
BC3	Big Chuckawall	76.01	324	P	P	11 58 56.0	+2.8
	baz=142						
LMN	Caledonia Moun	76.34	5	P	P	11 58 56.3	+1.7
LMN				IAmb	IAmb	11 58 57.6	
	comp=Z,18nm,0.9s						
SUR	Sutherland	76.36	120	P	P	11 58 55.8	+0.2
SUR				IAmb	IAmb	11 58 57.1	
	comp=Z,17nm,0.8s						
MAW	Mawson	76.41	164	P	P	11 58 55.7	+0.8
	comp=Z,14nm,0.5s,baz=216,slow=7.0,SNR=70						
MAW				LR	LR	12 35 01.8	
	comp=Z,368nm,19.4s,baz=225,slow=38						
	comp=Z,14nm,0.5s						
MAW	Mawson	76.41	164	P	P	11 58 55.3	+0.4
MAW	Mawson	76.41	164	P	P	11 58 55.3	+0.4
MAW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
D62A	Allapoint, All	77.34	2	P	P	11 59 01.9	+1.7
ECSD	EROS Data Cent	77.35	342	P	P	11 59 01.0	+0.6
ECSD				IAmb	IAmb	11 59 02.9	
	comp=Z,16nm,0.9s						
ECSD	EROS Data Cent	77.35	342	P	P	11 59 02.1	+1.7
	baz=158						
HEC	Hector,Ludlow	77.39	324	P	P	11 59 04.8	+3.9
	baz=142						
E46A	Sault Ste Mari	77.41	351	P	P	11 59 01.6	+1.0
E46A				IAmb	IAmb	11 59 10.8	
	comp=Z,21nm,1.2s						
TUQ	Turquoise Moun	77.66	324	P	P	11 59 05.8	+3.3
	baz=142						
RAR	Rarotonga	77.81	253	LR	LR	12 25 09.6	
	comp=Z,116nm,21.5s,baz=126,slow=29						
E43A	Lone Tree Farm	77.81	349	P	P	11 59 02.6	-0.2
E43A				IAmb	IAmb	11 59 18.5	
	comp=Z,10nm,1.1s						
COWI	Conover	77.91	348	P	P	11 59 04.0	+0.5
O20A	White River Ci	78.04	332	P	P	11 59 06.5	+1.9
O20A				IAmb	IAmb	11 59 07.7	
	comp=Z,8.1nm,0.9s						
SRU	San Rafael Swe	78.12	330	P	P	11 59 06.6	+1.5
SRU	San Rafael Swe	78.12	330	P	P	11 59 06.6	+1.5
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHPR	Sheep Range	78.12	326	P	P	11 59 06.2	+1.1
P17A	Butcher Ranch,	78.52	330	P	P	11 59 08.6	+1.4
F36A	Milaca	78.58	345	P	P	11 59 06.4	-0.8
F36A				IAmb	IAmb	11 59 09.0	
	comp=Z,9.5nm,0.8s						
D41A	Chassel	78.74	348	P	P	11 59 08.9	+0.9
E38A	The Farm, Brul	78.86	346	P	P	11 59 09.9	+1.2
RDMU	Red Mountain	78.95	332	P	P	11 59 11.1	+1.5
RDMU				IAmb	IAmb	11 59 12.7	
	comp=Z,9.7nm,0.8s						
RWWY	Rawlins	78.97	334	P	P	11 59 10.8	+1.0
RWWY				IAmb	IAmb	11 59 21.3	
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	79.01	325	P	P	11 59 12.8	+2.8
	baz=142						
KOWA	Kowa	79.09	66	P	P	11 59 09.5	-1.1
ISA	Isabella, Lake	79.13	323	P	P	11 59 13.7	+3.2
	baz=140						
MPU	Maple Canyon	79.35	330	P	P	11 59 13.4	+1.6
CWC	Cottonwood Cre	79.53	324	P	P	11 59 15.5	+2.7
	baz=141						
VES	Vestal, Richgr	79.59	323	P	P	11 59 16.0	+3.0
	baz=140						
JLU	Jordanelle	79.76	330	P	P	11 59 15.9	+1.8
R11A	Troy Canyon, C	79.79	326	P	P	11 59 16.4	+2.2
R11A	Troy Canyon, C	79.79	326	P	P	11 59 16.8	+2.6
	baz=143						
CTU	Camp Tracy	79.96	330	P	P	11 59 17.1	+2.1
TSUM	Tsumeb	80.00	106	P	P	11 59 16.4	+0.5
TSUM				IAmb	IAmb	11 59 28.7	
	comp=Z,18nm,1.1s						
DUG	Dugway, Tooele	80.01	329	P	P	11 59 16.9	+1.6
DUG	Dugway, Tooele	80.01	329	P	P	11 59 16.9	+1.6
DUG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	80.01	329	P	P	11 59 17.7	+2.3
	baz=145						
EYMN	Ely	80.13	347	P	P	11 59 15.6	0.0
EYMN	Ely	80.13	347	P	P	11 59 17.4	+1.8
	baz=163						
HWUT	Hardware Ranch	80.64	331	P	P	11 59 19.4	+0.6
HWUT				IAmb	IAmb	11 59 21.5	
	comp=Z,10nm,0.8s						
PDAR	Pinedale Array	80.79	333	P	P	11 59 20.4	+0.8
	comp=Z,1.4nm,0.7s,baz=134,slow=4.3,SNR=7.7						
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	80.79	333	P	P	11 59 20.9	+1.3
BW06	Boulder Array	80.79	333	P	P	11 59 20.8	+1.2

BW06	Boulder Array	80.79	333	P	P	11 59 21.0	+1.4
	baz=148						
OMMB	Old Mammoth Mi	80.90	324	P	P	11 59 20.0	-0.4
B35A	Bob, Littlefor	80.99	345	P	P	11 59 20.5	+0.3
B35A				IAmb	IAmb	11 59 22.1	
	comp=Z,11nm,0.7s						
NV11	Mina Array Sit	81.11	325	P	P	11 59 22.5	+1.3
NVAR	Mina Array Bea	81.18	325	P	P	11 59 23.3	+1.6
	comp=Z,2.3nm,0.9s,baz=148,slow=5.9,SNR=15						
	comp=Z,2.3nm,0.9s						
AGMN	Agassiz Nation	81.42	344	P	P	11 59 23.2	+0.8
AGMN				IAmb	IAmb	11 59 24.5	
	comp=Z,8.4nm,0.7s						
AGMN	Agassiz Nation	81.42	344	P	P	11 59 23.5	+1.1
	baz=159						
BOSA	Boshof	81.53	118	P	P	11 59 23.9	+0.1
	comp=Z,7.7nm,0.8s,baz=253,slow=4.2,SNR=15						
	comp=Z,7.7nm,0.8s						
BOSA	Boshof	81.53	118	P	P	11 59 23.0	-0.9
BOSA				IAmb	IAmb	11 59 24.7	
	comp=Z,11nm,0.9s						
BOSA	Boshof	81.53	118	P	P	11 59 23.0	-0.9
BOSA				pmax	pmax		
	comp=Z,11nm,0.9s						
ELK	Elko	81.54	328	LR	LR	12 31 09.6	
	comp=Z,132nm,20.5s,baz=149,slow=32						
ELK	Elko	81.54	328	P	P	11 59 25.4	+1.8
ELK	Elko	81.54	328	P	P	11 59 25.4	+1.8
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TPAW	Teton Pass	81.95	332	P	P	11 59 26.8	+1.1
RLMT	Red Lodge	82.68	334	P	P	11 59 31.2	+1.8
	baz=148						
TOA0	Torodi Ar. Sit	82.90	70	P	P	11 59 30.9	-0.1
TORD	Torodi Ar. Bea	82.90	70	P	P	11 59 30.9	-0.1
	comp=Z,5.0nm,0.5s,baz=281,slow=5.9,SNR=62						
	comp=Z,5.0nm,0.5s						
TORD	Torodi Ar. Bea	82.90	70	P	P	11 59 31.0	-0.1
ULM	Lac du Bonnet	83.25	345	P	P	11 59 32.8	+0.8
	comp=Z,7.3nm,0.8s,baz=175,slow=3.7,SNR=9.1						
	comp=Z,7.3nm,0.8s						
ULM	Lac du Bonnet	83.25	345	P	P	11 59 32.5	+0.6
ULM				IAmb	IAmb	11 59 33.8	
	comp=Z,8.9nm,0.8s						
ULM	Lac du Bonnet	83.25	345	P	P	11 59 32.5	+0.6
ULM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BEKR	Beckworth	83.31	325	P	P	11 59 34.5	+1.7
HLID	Hailey	83.44	330	P	P	11 59 34.7	+1.3
HLID	Hailey	83.44	330	P	P	11 59 35.7	+2.3
	baz=144						
LBTB	Lobatse	83.60	115	P	P	11 59 33.8	-0.9
LBTB				IAmb	IAmb	11 59 47.3	
	comp=Z,15nm,0.9s						
LBTB	Lobatse	83.60	115	P	P	11 59 33.8	-0.9
LBTB				pmax	pmax		
	comp=Z,15nm,1.0s						
BCYI	Bear Canyon	83.63	331	P	P	11 59 36.4	+2.0
MCMT	McKenzie Canyo	83.83	332	P	P	11 59 37.5	+2.1
DGMT	Dagmar	83.85	339	P	P	11 59 36.2	+1.0
DGMT	Dagmar	83.85	339	P	P	11 59 37.5	+2.3
	baz=152						
MOD	Modoc Plateau	84.83	326	P	P	11 59 40.9	+0.5
MOD				IAmb	IAmb	11 59 43.1	
	comp=Z,16nm,1.6s						
J08A	Circle Bar Ran	85.08	328	P	P	11 59 43.4	+1.7
J08A				IAmb	IAmb	11 59 44.9	
	comp=Z,11nm,1.0s						
SCHQ	Schefferville	85.17	3	P	P	11 59 42.9	+1.2
	comp=Z,8.8nm,1.1s,baz=188,slow=4.5,SNR=5.6						
	comp=Z,8.8nm,1.1s						
SCHQ	Schefferville	85.17	3	P	P	11 59 42.5	+0.8
PLID	Pearl Lake	85.35	330	P	P	11 59 44.3	+1.2
PLID				IAmb	IAmb	11 59 45.4	
	comp=Z,5.0nm,0.8s						
EDM	Edmonton	90.92	337	P	P	12 00 10.8	+1.6
EDM				IAmb	IAmb	12 00 12.1	
	comp=Z,5.2nm,0.8s						
EDM	Edmonton	90.92	337	P	P	12 00 10.9	+1.6
EDM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ESDC	Sonseca Array	94.09	46	P	P	12 00 25.2	+0.9
	comp=Z,0.9nm,0.9s,baz=253,slow=4.2,SNR=4.3						
	comp=Z,0.9nm,0.9s						
MSVF	Nonsavu	97.43	244	*i* P	P	12 00 38.1	-2.1
MSVF				pmax	pmax		
	comp=Z,13nm,1.2s						
YKA	Yellowknife Ar	98.88	341	P	Pdif	12 00 45.9	+0.6
	comp=Z,0.6nm,0.6s,baz=142,slow=4.7,SNR=8.1						
	comp=Z,0.6nm,0.6s						
CLL	Collm	110.21	42	*e*PP	PP	12 06 06.0	-6.1
CLL				*e*PS	PS	12 15 30.0	-12
CLL				Lm	MLR	12 51 00.0	
	comp=N,100nm,20.6s						
CLL				Lm	MLR	12 51 00.0	
	comp=E,200nm,18.8s						
CLL				Lm	MLR	12 51 00.0	
	comp=Z,200nm,19.6s						
KLNR	Kaliningrad	115.45	40	*i* PKIKP	PKPdf	12 05 45.0	-2.1
KLNR				pmax	pmax		
	comp=Z,19nm,0.8s						
VSU	Vasula	119.88	37	*i* PKIKP	PKPdf	12 05 54.6	-0.9
VSU				pmax	pmax		
	comp=Z,13nm,1.0s						
ASAR	Alice Springs	120.68	208	PKP	PKPdf	12 05 57.6	-0.8
	comp=Z,0.6nm,0.5s,baz=136,slow=1.6,SNR=14						
ASAR				PKKPbc	PKKPab	12 16 09.4	+2.7
	comp=Z,0.4nm,0.7s,baz=337,slow=2.9,SNR=4.2						
ASAR	Alice Springs	120.68	208		PKPdf	12 05 57.9	-0.5
ASAR	Alice Springs	120.68	208	PKIKP	PKPdf	12 05 57.9	-0.5
SIM	Simferopol'	121.66	53	*i* PKIKP	PKiKP	12 06 06.2	+6.7
SIM				*e*		12 07 31.0	
SIM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRA	Warramunga Arr	123.81	210	PKP	PKPdf	12 06 03.9	-0.5
	comp=Z,2.3nm,0.6s,baz=154,slow=1.6,SNR=42						
WRA	Warramunga Arr	123.81	210		PKiKP	12 06 04.9	+0.2
WRA	Warramunga Arr	123.81	210	PKIKP	PKiKP	12 06 04.9	+0.2
OBN	Obninsk	124.81	42	*i* PKIKP	PKPdf	12 06 03.8	-1.3
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11S2	WAKE ISLAND Hy	125.91	272	T	T	14 24 48.8	
	baz=116,slow=75,SNR=1942						
H11S1	WAKE ISLAND Hy	125.93	272	T	T	14 24 51.4	
	baz=116,slow=75,SNR=819						
H11S3	WAKE ISLAND Hy	125.93	272	T	T	14 24 55.9	
	baz=116,slow=75,SNR=1146						
H11N3	WAKE ISLAND Hy	126.24	273	T	T	14 25 13.2	
	baz=116,slow=75,SNR=109						
H11N1	WAKE ISLAND Hy	126.25	273	T	T	14 25 19.6	
	baz=116,slow=75,SNR=55						
H11N2	WAKE ISLAND Hy	126.26	273	T	T	14 25 23.2	
	baz=116,slow=75,SNR=216						
KLMR	Klimovskoe	126.53	35	*e*PKIKP	PKPdf	12 06 08.0	-0.2
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	Klimovskoe	126.53	35	*e*PKPdf	PKPdf	12 06 08.1	-0.2
KLMR				AMP		12 06 18.9	
	comp=Z,18nm,1.3s						
KIV	Kislovodsk	127.50	56	*i* PKIKP	PKPdf	12 06 10.0	-0.8
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,50nm,23.0s						
KBZ	Khabaz	127.61	56	*i* PKIKP	PKPdf	12 06 10.2	-0.6
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PRGR	Permogore	129.40	33	*e*PKIKP	PKiKP	12 06 14.6	+0.2
BILL	Bilibino	129.82	335	*i* PKIKP	PKPdf	12 06 14.5	+0.2
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARU	Arti	137.01	38	*i* PKIKP	PKPdf	12 06 28.6	+0.5
ARU						12 09 13.3	
ARU				SS	SS	12 27 17.9	+2.0
ARU				MLR	MLR		
	comp=Z,170nm,18.0s						
TIXI	Tiksi	137.36	350*c*	*i*PKIKP	PKPdf	12 06 29.0	+0.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	144.54	40	PKIKP	PKPdf	12 06 41.5	-0.3
YAK	Yakutsk	145.55	342	PKPbc	PKPab	12 06 44.3	+0.6
	comp=Z,29nm,0.8s,baz=30,slow=0.4,SNR=16						
YAK	Yakutsk	145.55	342		PKPab	12 06 44.6	+0.9
YAK	Yakutsk	145.55	342*c*	*i*PKP2	PKPab	12 06 44.3	+0.6
YAK				pmax	pmax		
	comp=Z,51nm,0.7s						
OTUK	Ortayu	147.56	47	PKP2	PKPbc	12 06 49.6	-0.2
KK31	Karatay Array	147.65	57	*i* PKP2	PKPbc	12 06 50.2	-0.1
YSS	Yuzh-Sakhalins	148.76	311	*e*PKP2	PKPbc	12 06 53.7	+0.7
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
HYBB	Hyderabad (bro	150.06	109	*e*PKPbc	PKPbc	12 06 56.7	-0.4
EKS2	Erkin-Say	150.09	57	P	PKiKP	12 06 58.1	+0.7
	SNR=5.6						
AML	Almayashu	150.14	58	P	PKiKP	12 06 58.4	+0.4
	SNR=5.2						
KURBB	Kurchatov Arra	150.20	39	PKP	PKPdf	12 06 52.3	+1.0
	comp=Z,2.8nm,0.9s,baz=304,slow=3.2,SNR=3.8						
KURBB				PKPbc	PKiKP	12 06 57.1	-0.2
	comp=Z,8.4nm,0.8s,baz=300,slow=3.2,SNR=55						
KURBB	Kurchatov Arra	150.20	39	PKIKP	PKPbc	12 06 56.3	-0.1
KURK	Kurchatov	150.20	39		PKPdf	12 06 50.4	-0.9
KURK				PKPbc	PKiKP	12 06 57.4	+0.2
KURK	Kurchatov	150.20	39	PKIKP	PKiKP	12 06 57.4	+0.2
USP	Ospenovka	150.47	55	P	PKiKP	12 06 58.3	+0.1
	SNR=9.0						
AAK	Ala-Archa	150.61	56	P	PKiKP	12 06 59.5	+0.9
	SNR=10						
AAK	Ala-Archa	150.61	56	PKPbc	PKiKP	12 06 58.6	0.0
	comp=Z,8.7nm,0.8s,baz=219,slow=3.0,SNR=18						
UCH	Uchtor	150.72	57	P	PKiKP	12 06 59.8	+0.6
	SNR=13						
ZALV	Zalesovo Beam	151.21	29	PKP	PKPdf	12 06 53.4	+0.6
	comp=Z,32nm,0.8s,baz=225,slow=1.5,SNR=6.3						
ZALV				PKPbc	PKPbc	12 06 58.9	+0.2
	comp=Z,32nm,0.8s,baz=298,slow=3.1,SNR=50						
ZALV	Zalesovo Beam	151.21	29	PKPdf	PKPdf	12 06 52.6	-0.2
ZALV				PKPbc	PKiKP	12 06 59.2	0.0
ZALV				PKPab	sPKPbc	12 07 09.1	+0.5
TKM2	Tokmak 2	151.33	55	P	PKiKP	12 07 00.6	+0.4
	SNR=9.1						
TKM2	Tokmak 2	151.33	55	PKIKP	PKPbc	12 06 59.3	-0.4
ULHL	Ulahol	151.96	57	P	PKiKP	12 07 02.7	+1.2
	SNR=5.2						
BOD	Bodaibo	152.46	353	*e*PKIKP	PKPbc	12 07 01.3	-0.1
BOD				pmax	pmax		
	comp=Z,16nm,1.1s						
ZEA	Zeya	153.04	335	*e*PKIKP	PKiKP	12 07 03.5	+0.5
MK31	Makanchi Array	154.29	44	*i* PKIKP	PKPbc	12 07 05.4	-0.4
MKAR	Makanchi Array	154.29	44	PKP	PKPdf	12 06 57.5	-0.1
	comp=Z,0.2nm,0.5s,baz=232,slow=1.4,SNR=3.7						
MKAR				PKPbc	PKiKP	12 07 06.2	+0.3
	comp=Z,2.5nm,0.8s,baz=300,slow=2.4,SNR=17						
MKAR	Makanchi Array	154.29	44		PKPdf	12 06 56.9	-0.7
MKAR				PKPbc	pPKPdf	12 07 06.7	+1.7
MKAR				PKPab	PKPab	12 07 20.4	+0.5
MKAR	Makanchi Array	154.29	44	PKIKP	PKPdf	12 06 56.9	-0.7
MKAR						12 07 06.7	
MJAR	Matsushiro Arr	154.32	291	PKP	PKPdf	12 06 57.3	-0.7
	comp=Z,0.3nm,0.3s,baz=124,slow=8.0,SNR=2.0						
MJAR				PKPbc	PKPbc	12 07 06.2	-0.1
	comp=Z,0.9nm,0.9s,baz=72,slow=5.7,SNR=2.0						
MJAR				PKPab	PKPab	12 07 21.4	+1.0
	comp=Z,2.7nm,0.8s,baz=96,slow=0.6,SNR=9.0						
MJAR	Matsushiro Arr	154.32	291	PKPdf	PKPdf	12 06 57.1	-0.8
MJAR				PKPab	PKPab	12 07 22.2	+1.8
MJAR	Matsushiro Arr	154.32	291	PKP2	PKPab	12 07 22.2	+1.8
MJAR						13 06 57.1	
WMQ	Urumqi	159.09	45	*e*PKP	PKPdf	12 07 04.0	+0.1
ZAK	Zakamensk	159.88	9	*e*PKP2	PKPab	12 07 44.7	+0.8
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SONM	Songino Array	162.71	4	PKPab	PKPab	12 07 57.6	+1.3
	comp=Z,2.6nm,0.9s,baz=334,slow=4.0,SNR=11						
SONM	Songino Array	162.71	4	PKPdf	PKPdf	12 07 07.2	-0.5
SONM					PKPab	12 07 57.2	+0.9
SONM	Songino Array	162.71	4	PKP2	PKPab	12 07 57.2	+0.9
SONM						13 07 07.3	
CMAR	Chiang Mai Arr	165.32	143	PKPab	PKPab	12 08 06.0	-2.4
	comp=Z,2.4nm,1.0s,baz=216,slow=4.2,SNR=5.7						
CMAR	Chiang Mai Arr	165.32	143	PKPdf	PKPdf	12 07 11.0	+0.2
CMAR					PKPab	12 08 07.2	-1.2
CMAR	Chiang Mai Arr	165.32	143	PKP2	PKPab	12 08 07.2	-1.2
CMAR						13 07 11.0	
GTA	Gaotai	168.85	36	*e*PKP	PKPdf	12 07 13.8	+0.8
GTA				pPKP	pPKPdf	12 07 22.8	+2.3
GTA				sPKP		12 07 27.4	
GTA				LR	LR		
	comp=Z,79nm,22.5s						
GTA				LR	LR		
	comp=Z,76nm,22.5s						
GTA				LR	LR		
	comp=Z,120nm,24.0s						
HHC	Hu-ho-hao-te	169.38	346	*e*PKP	PKPdf	12 07 12.4	-0.9
PZH	PanZhiHua	173.05	124	PKP	PKPdf	12 07 15.5	-0.1
LZH	Lanzhou	173.43	32	*e*PKP	PKPdf	12 07 15.8	+0.3
LZH				pPKP	pPKPdf	12 07 25.1	+2.1
LZH				sPKP		12 07 29.3	
XAN	Xi'an	176.49	350	P	PKPdf	12 07 03.4	-13
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						

ANF ***22*** *11:53:47.6±0.3, 36°.38N×97°.74W, h6^{km}, ML3.2/8 Error ellipse: s-maj=3.5km s-min=2.2km az=169.0*

TUL ***22*** *11:53:47.7±1.0, 36°.376N±0°.010×97°.724W±0°.008, h6^{km}±7^{km}, ML2.7, mb_Lg2.7/68(NEIC), Error ellipse: s-maj=1.5km s-min=0.6km az=150.0*

NEIC ***22*** *11:53:47.9±0.9, 36°.38N±0°.01×97°.73W±0°.02, h1^{km}±7^{km}, Error ellipse: s-maj=1.8km s-min=1.5km az=66.0*

ISC 22 11:53:47.4±1.3**, 36°.37N**±0°.03×**97°.73W**±0°.03**, h4**^{km}±12^{km}**, n57, σ0^{s}.73**/43**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.98	167	Pg	Pg	11 54 06.2	0.0
OKCFA				Sg	Sb	11 54 20.8	+0.5
OKCFA	Oklahoma City	0.98	167	S	Sb	11 54 20.2	-0.1
	baz=347						
OKCSW	OKLAHOMA CITY	0.99	166	Pg	Pg	11 54 06.4	0.0
OKCSW				Sg	Sg	11 54 19.8	+0.4
U32A	Winter Ranch,	1.03	271	Pg	Pg	11 54 07.1	0.0
U32A				Sg	Sb	11 54 21.4	-0.2
U32A	Winter Ranch,	1.03	271	P	Pg	11 54 07.1	0.0
	baz=90,SNR=36						
U32A				S	Sb	11 54 21.2	-0.4
	baz=90						
T35A	Sooner Cattle	1.12	61	Pg	Pg	11 54 08.3	-0.6
T35A				Sg	Sg	11 54 23.6	+0.2
T35B	Sooner Cattle	1.12	61	P	Pg	11 54 08.7	-0.2
	baz=241,SNR=100						
T35B				S	Sb	11 54 24.4	+0.1
	baz=241						
FNO	Franklin	1.14	166	Pg	Pg	11 54 09.1	-0.3
FNO					Sb	11 54 25.2	+0.2
TUL1	Leonard	1.64	106		Pn	11 54 16.1	-0.9
TUL1				IAmb_Lg		11 54 39.9	
	comp=Z,60nm,0.8s						
TUL1	Leonard	1.64	106	P	Pn	11 54 17.0	0.0
	baz=287,SNR=68						
TUL1				S	Sb	11 54 39.2	0.0
	baz=287						
X34A	Smith Ranch, M	1.77	183		Pb	11 54 20.3	-0.1
WMOK	Wichita Mounta	1.84	208		Pb	11 54 21.0	-0.7
WMOK	Wichita Mounta	1.84	208	P	Pn	11 54 20.5	+0.6
	baz=27,SNR=36						
R32A	Long Quarter,	2.19	339		Pb	11 54 26.6	-1.1
R32A	Long Quarter,	2.19	339	P	Pb	11 54 27.6	0.0
	baz=159						
X37A	Clayton	2.62	132		Pn	11 54 31.6	+1.1
X37A				IAmb_Lg		11 55 16.0	
	comp=Z,32nm,0.8s						
X37A	Clayton	2.62	132	P	Pn	11 54 31.6	+1.1
	baz=314,SNR=26						
CBKS	Cedar Bluff	2.91	327		Pn	11 54 35.2	+0.6
Z35A	Perchaven, San	3.06	173	Pn	Pn	11 54 37.0	+0.5
HHAR	Hobbs	3.06	91	Pn	Pn	11 54 37.9	+1.2
W39A	Magazine	3.42	109		Pn	11 54 42.2	+0.8
AMTX	Amarillo	3.54	246		Pn	11 54 44.1	+0.8
AMTX				IAmb_Lg		11 55 48.6	
	comp=Z,16nm,0.8s						
S39A	Bolivar	3.76	68		Pn	11 54 47.2	+0.9
S39A				IAmb_Lg		11 55 48.0	
	comp=Z,15nm,0.7s						
S39A	Bolivar	3.76	68	P	Pn	11 54 47.0	+0.7
	baz=251,SNR=8.9						
Z38A	Mt. Pleasant	3.84	143		Pn	11 54 48.0	+0.7
MIAR	Mount Ida	3.85	117		Pn	11 54 48.6	+1.2
MIAR				IAmb_Lg		11 55 55.9	
	comp=Z,26nm,0.9s						
U40A	Yellville	3.94	89		Pn	11 54 50.5	+1.9
ABTX	Abilene, Hawle	4.06	203	Pn	Pn	11 54 51.1	+0.7
ABTX				IAmb_Lg		11 55 56.2	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	4.55	102		Pn	11 54 56.8	-0.3
WHAR				IAmb_Lg		11 56 15.5	
	comp=Z,18nm,0.7s						
FCAR	Ozark Folk Cen	4.56	94		Pn	11 54 57.4	+0.2
W41B	Gary Mavity, V	4.62	103		Pn	11 54 58.5	+0.6
W41B				IAmb_Lg		11 56 22.3	
	comp=Z,14nm,0.8s						
WLAR	White Oak Lake	4.64	124	IAmb_Lg		11 56 27.7	
	comp=Z,14nm,0.9s						
P38A	Dawn	4.64	44		Pn	11 54 59.7	+1.4
P38A				IAmb_Lg		11 56 14.6	
	comp=Z,20nm,0.7s						
237A	Washetta, Mont	4.64	159	Pn	Pn	11 54 57.9	-0.4
237A	Washetta, Mont	4.64	159	S	Sn	11 55 51.7	-1.0
	baz=341						
UALR	University of	4.67	108	IAmb_Lg		11 56 18.2	
	comp=Z,18nm,0.8s						
KSCO	Kaye Shedlock’	4.69	306	IAmb_Lg		11 56 19.3	
	comp=Z,14nm,1.0s						
R40A	Maddies Statio	4.75	65		Pn	11 55 00.3	+0.4
R40A				IAmb_Lg		11 56 15.6	
	comp=Z,12nm,0.9s						
MSTX	Muleshoe	4.78	241	IAmb_Lg		11 56 30.9	
	comp=Z,14nm,1.3s						
Z41A	Richland Creek	5.11	126	IAmb_Lg		11 56 40.5	
	comp=Z,17nm,0.8s						
T25A	Trinidad	5.42	280	IAmb_Lg		11 56 48.3	
	comp=Z,18nm,1.1s						
P40A	Paris	5.49	53	IAmb_Lg		11 56 44.4	
	comp=Z,18nm,0.8s						
435B	Jarrell	5.58	179	IAmb_Lg		11 56 54.5	
	comp=Z,10.0nm,0.8s						
OGNE	Ogallala	5.67	325	IAmb_Lg		11 56 54.7	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	5.89	84	IAmb_Lg		11 56 56.8	
	comp=Z,13nm,0.7s						
FVM	French Village	6.05	72	IAmb_Lg		11 57 03.0	
	comp=Z,9.2nm,1.0s						
Q24A	Divide	6.43	296	IAmb_Lg		11 57 19.8	
	comp=Z,8.8nm,0.7s						
S44A	Carbondale	6.91	76	IAmb_Lg		11 57 30.4	
	comp=Z,10nm,0.7s						
N41A	Harden Midland	6.91	49	IAmb_Lg		11 57 33.0	
	comp=Z,13nm,0.7s						
L40A	Anamosa	7.60	40	IAmb_Lg		11 57 55.8	
	comp=Z,11nm,0.8s						
PHWY	Pilot Hill	7.78	312	IAmb_Lg		11 58 04.8	
	comp=Z,8.6nm,0.9s						
N23A	Red Feather La	7.85	308	IAmb_Lg		11 58 08.7	
	comp=Z,6.2nm,0.8s						
MNTX	Cornudas Mount	7.88	236	IAmb_Lg		11 58 11.6	
	comp=Z,5.8nm,1.1s						
L42A	Oliver, Polo	8.41	46	IAmb_Lg		11 58 25.8	
	comp=Z,10nm,0.8s						
JFWS	Jewell Farm	8.71	39	IAmb_Lg		11 58 27.0	
	comp=Z,11nm,0.8s						
I40A	Norwalk	9.27	34	IAmb_Lg		11 58 45.4	
	comp=Z,7.5nm,1.0s						
F36A	Milaca	9.99	17	IAmb_Lg		11 59 09.8	
	comp=Z,5.7nm,0.8s						

TUL ***22*** *11:54:35.9±1.1, 36°.37N±0°.01×97°.72W±0°.01, h5^{km}±6^{km}, ML2.7, mb_Lg2.8/52(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=63.0*

NEIC 22 11:54:35.7±1.1**, 36°.373N**±0°.006×**97°.73W**±0°.01**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.0km az=260.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.98	167	Pg	Pg	11 54 54.4	-0.2
OKCSW	OKLAHOMA CITY	0.99	166	Pg	Pg	11 54 54.4	-0.4
OKCSW				Sg	Sb	11 55 08.5	-0.3
U32A	Winter Ranch,	1.02	271	Pg	Pg	11 54 54.9	-0.4
T35A	Sooner Cattle	1.12	61	Pg	Pg	11 54 56.9	-0.3
T35A					Sn	11 55 15.1	+1.2
FNO	Franklin	1.15	166	Pg	Pg	11 54 57.3	-0.4
TUL1	Leonard	1.64	106	IAmb_Lg		11 55 28.1	
	comp=Z,44nm,0.8s						
CBKS	Cedar Bluff	2.91	327	Pn	Pn	11 55 22.4	-0.4
AMTX	Amarillo	3.54	246	IAmb_Lg		11 56 29.0	
	comp=Z,17nm,0.9s						
Z38A	Mt. Pleasant	3.84	143	IAmb_Lg		11 56 46.7	
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	3.85	117	Pn	Pn	11 55 33.6	-2.0
MIAR				IAmb_Lg		11 56 48.4	
	comp=Z,14nm,0.8s						
U40A	Yellville	3.94	89	Pn	Pn	11 55 35.2	-1.6
U40A				IAmb_Lg		11 56 43.4	
	comp=Z,26nm,0.8s						
X40A	Basin Creek Fa	4.42	114	IAmb_Lg		11 57 02.5	
	comp=Z,24nm,0.9s						
WHAR	Wooly Hollow	4.55	102	IAmb_Lg		11 57 08.5	
	comp=Z,13nm,0.9s						
FCAR	Ozark Folk Cen	4.56	94	IAmb_Lg		11 56 59.1	
	comp=Z,12nm,0.8s						
WLAR	White Oak Lake	4.64	124	IAmb_Lg		11 57 04.6	
	comp=Z,20nm,1.0s						
UALR	University of	4.67	108	IAmb_Lg		11 57 12.6	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock’	4.69	306	IAmb_Lg		11 57 04.4	
	comp=Z,12nm,0.7s						
Z41A	Richland Creek	5.11	126	IAmb_Lg		11 57 28.9	
	comp=Z,13nm,0.8s						
T25A	Trinidad	5.42	280	IAmb_Lg		11 57 36.6	
	comp=Z,12nm,0.8s						
P40A	Paris	5.49	53	IAmb_Lg		11 57 33.3	
	comp=Z,19nm,0.9s						
435B	Jarrell	5.58	179	IAmb_Lg		11 57 33.0	
	comp=Z,9.0nm,0.8s						
HBAR	Harrisburg	5.80	96	IAmb_Lg		11 57 48.6	
	comp=Z,23nm,0.8s						
PBMO	Poplar Bluff	5.89	84	IAmb_Lg		11 57 44.4	
	comp=Z,10.0nm,0.8s						
JCT	Junction City	6.13	197	IAmb_Lg		11 57 54.8	
	comp=Z,22nm,1.1s						
143A	Socs Landing,	6.38	123	IAmb_Lg		11 57 54.7	
	comp=Z,19nm,0.8s						
Q24A	Divide	6.43	296	IAmb_Lg		11 58 11.1	
	comp=Z,9.0nm,0.9s						
S44A	Carbondale	6.91	76	IAmb_Lg		11 58 13.2	
	comp=Z,7.8nm,0.8s						
P43A	Skaggs, Pawnee	7.26	61	IAmb_Lg		11 58 31.6	
	comp=Z,15nm,0.8s						
HDIL	Hopedale	7.83	55	IAmb_Lg		11 58 58.3	
	comp=Z,16nm,0.8s						
WVT	Waverly	8.00	89	IAmb_Lg		11 59 05.5	
	comp=Z,6.7nm,1.0s						
I37A	Lemond, Waseca	8.32	22	IAmb_Lg		11 59 19.7	
	comp=Z,10nm,1.0s						
JFWS	Jewell Farm	8.71	39	IAmb_Lg		11 59 27.5	
	comp=Z,12nm,1.0s						

IDC ***22*** *12:00:45.8±2.5, 36°.50N×97°.69W, h0^{km}, mb3.2/1, mbtmp3.0/4, ML3.9/2, Error ellipse: s-maj=30.3km s-min=16.4km az=90.0*

ANF ***22*** *12:00:46.2±0.3, 36°.37N×97°.72W, h6^{km}, ML4.1/17, Error ellipse: s-maj=3.4km s-min=2.9km az=170.0*

NEIC ***22*** *12:00:46.1±1.1, 36°.37N±0°.01×97°.725W±0°.009, h1^{km}±7^{km}, Error ellipse: s-maj=1.6km s-min=1.0km az=160.0*

NEIC ***22*** *12:00:46, 36°.37N×97°.72W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.40; $M_{\theta\theta}$4.52; $M_{\phi\phi}$-4.12; $M_{r\theta}$0.63; $M_{\theta\phi}$4.84; $M_{\phi r}$-1.45; Fault plane solution: $M_0$6.68000×10^{13} NP1:ϕ_s290.00000°, δ80.00000°, λ-10.00000°. NP2:ϕ_s22.00000°, δ80.00000°, λ-170.00000°. Principal axes: T 6.6866, Plg0.0000°, Azm156.0000°; N 0.0002, Plg76.0000°, Azm65.0000°; P -6.6867, Plg14.0000°, Azm246.0000°;*

TUL ***22*** *12:00:46±1.4, 36°.38N±0°.01×97°.72W±0°.02, h6^{km}±6^{km}, ML3.7, mb_Lg3.4/102(NEIC), Mwr3.2/19(SLM) Error ellipse: s-maj=1.8km s-min=1.6km az=50.0*

ISC 22 12:00:45.5±1.2**, 36°.39N**±0°.02×**97°.71W**±0°.02**, h1**^{km}±10^{km}**, n123, σ1^{s}.00**/118**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.99	168	Pg	Pg	12 01 04.6	0.0
OKCFA				Sg	Sb	12 01 19.1	0.0

OKCFA	**Oklahoma City**	**0.99**	**168**	P	**Pg**	**12 01 04.6**	**0.0**
	baz=347,SNR=70						
OKCSW	**OKLAHOMA CITY**	**1.01**	**167**	Pg	**Pg**	**12 01 05.0**	**+0.2**
OKCSW					**Sg**	**12 01 18.3**	**+0.4**
U32A	**Winter Ranch,**	**1.04**	**270**		**Pg**	**12 01 05.5**	**-0.1**
U32A				Sg	**Sg**	**12 01 19.4**	**+0.2**
U32A	**Winter Ranch,**	**1.04**	**270**	P	**Pg**	**12 01 05.4**	**-0.1**
	baz=90,SNR=168						
U32A				S	**Sb**	**12 01 19.8**	**-0.8**
	baz=90						
T35A	**Sooner Cattle**	**1.09**	**61**		**Pg**	**12 01 07.0**	**+0.4**
T35A				Sg	**Sb**	**12 01 22.3**	**+0.2**
T35B	**Sooner Cattle**	**1.09**	**61**	P	**Pg**	**12 01 07.0**	**+0.4**
	baz=241,SNR=247						
T35B				S	**Sb**	**12 01 22.9**	**+0.8**
	baz=241						
FNO	**Franklin**	**1.16**	**167**	Pg	**Pg**	**12 01 07.5**	**-0.2**
FNO				Sg	**Sg**	**12 01 23.1**	**+0.4**
TUL1	**Leonard**	**1.62**	**107**		**Pn**	**12 01 15.3**	**+0.1**
TUL1				IAmb_Lg		12 01 38.7	
	comp=Z,269nm,0.8s						
TUL1	**Leonard**	**1.62**	**107**	P	**Pn**	**12 01 15.3**	**+0.1**
	baz=287,SNR=86						
TUL1				S	**Sb**	**12 01 37.5**	**+0.3**
	baz=287						
TUL1	**Leonard**	**1.62**	**107**	P	**Pn**	**12 01 15.3**	**+0.1**
	baz=287						
TUL1				S	**Sb**	**12 01 37.5**	**+0.3**
	baz=287						
X34A	**Smith Ranch, M**	**1.79**	**183**		**Pb**	**12 01 18.4**	**-0.6**
WMOK	**Wichita Mounta**	**1.87**	**208**		**Pn**	**12 01 18.9**	**+0.2**
WMOK	**Wichita Mounta**	**1.87**	**208**	P	**Pn**	**12 01 18.8**	**+0.2**
	baz=27,SNR=95						
WMOK	**Wichita Mounta**	**1.87**	**208**	P	**Pn**	**12 01 18.8**	**+0.2**
	baz=27						
WMOK				S	**Sb**	**12 01 43.7**	**-0.6**
	baz=27						
R32A	**Long Quarter,**	**2.18**	**339**		**Pn**	**12 01 24.4**	**+1.4**
R32A	**Long Quarter,**	**2.18**	**339**	P	**Pb**	**12 01 24.8**	**-1.0**
	baz=159						
X37A	**Clayton**	**2.62**	**133**	Pn	**Pn**	**12 01 29.7**	**+0.8**
X37A				IAmb_Lg		12 02 10.7	
	comp=Z,138nm,0.7s						
X37A	**Clayton**	**2.62**	**133**	P	**Pn**	**12 01 29.8**	**+0.8**
	baz=314,SNR=91						
KSU1	**Kansas State U**	**2.84**	**17**		**Pn**	**12 01 34.0**	**+1.9**
KSU1				IAmb_Lg		12 02 22.7	
	comp=Z,134nm,0.9s						
KSU1	**Kansas State U**	**2.84**	**17**	Sb	**Sb**	**12 02 15.2**	**+2.8**
	baz=198						
CBKS	**Cedar Bluff**	**2.91**	**327**		**Pn**	**12 01 33.8**	**+0.8**
CBKS	**Cedar Bluff**	**2.91**	**327**	P	**Pg**	**12 01 40.3**	**-1.0**
	baz=146						
CBKS	**Cedar Bluff**	**2.91**	**327**	P	**Pg**	**12 01 40.3**	**-1.0**
	baz=146						
HHAR	**Hobbs**	**3.04**	**91**	Pn	**Pn**	**12 01 35.2**	**+0.4**
Z35A	**Perchaven, San**	**3.07**	**173**		**Pn**	**12 01 36.3**	**+1.0**
Z35A	**Perchaven, San**	**3.07**	**173**	P	**Pb**	**12 01 40.6**	**-0.4**
	baz=353						
Z35A				S	**Sn**	**12 02 14.1**	**+1.5**
	baz=353						
W39A	**Magazine**	**3.40**	**109**		**Pn**	**12 01 40.9**	**+1.2**
W39A	**Magazine**	**3.40**	**109**	S	**Sg**	**12 02 34.1**	**-0.8**
	baz=291						
AMTX	**Amarillo**	**3.57**	**246**		**Pn**	**12 01 43.9**	**+1.8**
AMTX				IAmb_Lg		12 02 38.6	
	comp=Z,137nm,1.0s						
AMTX	**Amarillo**	**3.57**	**246**	Sb	**Sb**	**12 02 36.3**	**+3.0**
	baz=64						
S39A	**Bolivar**	**3.74**	**68**		**Pn**	**12 01 45.3**	**+0.9**
S39A				IAmb_Lg		12 02 44.2	
	comp=Z,75nm,0.9s						
S39A	**Bolivar**	**3.74**	**68**	P	**Pn**	**12 01 45.2**	**+0.9**
	baz=251,SNR=25						
MIAR	**Mount Ida**	**3.84**	**117**		**Pn**	**12 01 47.1**	**+1.4**
MIAR				IAmb_Lg		12 02 54.2	
	comp=Z,100nm,0.9s						
MIAR	**Mount Ida**	**3.84**	**117**	P	**Pn**	**12 01 46.9**	**+1.2**
	baz=300,SNR=32						
MIAR	**Mount Ida**	**3.84**	**117**	P	**Pn**	**12 01 47.0**	**+1.2**
	baz=300						
Z38A	**Mt. Pleasant**	**3.84**	**144**		**Pn**	**12 01 47.5**	**+1.7**
U40A	**Yellville**	**3.92**	**89**		**Pn**	**12 01 48.4**	**+1.6**
U40A				IAmb_Lg		12 02 54.5	
	comp=Z,136nm,0.8s						
ABTX	**Abilene, Hawle**	**4.08**	**204**		**Pn**	**12 01 50.7**	**+1.6**
ABTX				IAmb_Lg		12 02 58.2	
	comp=Z,73nm,0.8s						
N33B	**J Bar K, Exete**	**4.35**	**3**	S	**Sn**	**12 02 44.0**	**0.0**
	baz=183						
WHTX	**Lake Whitney,**	**4.39**	**177**		**Pn**	**12 01 54.2**	**+0.9**
WHTX	**Lake Whitney,**	**4.39**	**177**	P	**Pn**	**12 01 53.7**	**+0.4**
	baz=357,SNR=10						
WHTX	**Lake Whitney,**	**4.39**	**177**	P	**Pn**	**12 01 53.6**	**+0.2**
	baz=357						
X40A	**Basin Creek Fa**	**4.41**	**114**		**Pn**	**12 01 55.0**	**+1.4**
MGMO	**Mountain Grove**	**4.43**	**78**		**Pn**	**12 01 55.0**	**+1.1**
MGMO				IAmb_Lg		12 03 08.7	
	comp=Z,65nm,0.7s						
WHAR	**Wooly Hollow**	**4.54**	**102**		**Pn**	**12 01 57.0**	**+1.7**
WHAR				IAmb_Lg		12 03 15.9	
	comp=Z,90nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.55**	**95**		**Pn**	**12 01 56.8**	**+1.3**
W41B	**Gary Mavity, V**	**4.60**	**104**	IAmb_Lg		12 03 20.6	
	comp=Z,69nm,0.8s						
W41B	**Gary Mavity, V**	**4.60**	**104**	S	**Sn**	**12 02 48.9**	**-1.3**
	baz=287						
W41B	**Gary Mavity, V**	**4.60**	**104**	S	**Sn**	**12 02 49.0**	**-1.3**
	baz=287						
P38A	**Dawn**	**4.62**	**44**		**Pn**	**12 01 57.1**	**+0.7**
P38A				IAmb_Lg		12 03 15.0	
	comp=Z,124nm,0.7s						
WLAR	**White Oak Lake**	**4.63**	**124**		**Pn**	**12 01 57.4**	**+0.8**
WLAR				IAmb_Lg		12 03 22.5	
	comp=Z,75nm,0.7s						
237A	**Washetta, Mont**	**4.65**	**160**		**Pn**	**12 01 56.6**	**-0.3**
237A	**Washetta, Mont**	**4.65**	**160**	P	**Pn**	**12 01 56.6**	**-0.3**
	baz=341,SNR=5.4						
237A				S	**Sn**	**12 02 49.9**	**-1.6**
	baz=341						
UALR	**University of**	**4.66**	**109**		**Pn**	**12 01 57.5**	**+0.5**
UALR				IAmb_Lg		12 03 16.5	
	comp=Z,90nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.70**	**305**		**Pn**	**12 01 57.9**	**+0.3**
KSCO				IAmb_Lg		12 03 23.0	
	comp=Z,69nm,0.8s						
R40A	**Maddies Statio**	**4.73**	**65**		**Pn**	**12 01 58.7**	**+0.7**
R40A				IAmb_Lg		12 03 24.1	
	comp=Z,54nm,0.8s						
R40A	**Maddies Statio**	**4.73**	**65**	P	**Pn**	**12 01 58.5**	**+0.6**
	baz=248,SNR=34						
N35A	**Tabor**	**4.75**	**19**		**Pn**	**12 01 59.3**	**+1.1**
MSTX	**Muleshoe**	**4.80**	**241**		**Pn**	**12 02 00.2**	**+1.1**
BGNE	**Belgrade**	**5.02**	**356**		**Pn**	**12 02 02.3**	**+0.3**
BGNE	**Belgrade**	**5.02**	**356**	P	**Pn**	**12 02 02.0**	**-0.1**
	baz=176,SNR=12						
BGNE	**Belgrade**	**5.02**	**356**	P	**Pn**	**12 02 02.0**	**-0.1**
	baz=176						
Z41A	**Richland Creek**	**5.10**	**126**		**Pn**	**12 02 02.4**	**-0.7**
Z41A				IAmb_Lg		12 03 39.7	
	comp=Z,80nm,0.8s						
Z41A	**Richland Creek**	**5.10**	**126**	S	**Sn**	**12 03 01.1**	**-1.5**
	baz=309						
NATX	**Nacogdoches**	**5.26**	**150**		**Pn**	**12 02 06.0**	**+0.6**
CCM	**Cathedral Cave**	**5.42**	**70**		**Pn**	**12 02 07.9**	**+0.4**
CCM				IAmb_Lg		12 03 50.9	
	comp=Z,52nm,0.8s						
T25A	**Trinidad**	**5.43**	**280**		**Pn**	**12 02 08.9**	**+1.1**
T25A				IAmb_Lg		12 03 46.7	
	comp=Z,84nm,0.9s						
CCAR	**Cane Creek**	**5.45**	**115**	Pn	**Pn**	**12 02 08.3**	**+0.4**
CCAR				IAmb_Lg		12 03 51.9	
	comp=Z,90nm,0.9s						
P40A	**Paris**	**5.46**	**53**		**Pn**	**12 02 08.8**	**+0.8**
435B	**Jarrell**	**5.59**	**179**		**Pn**	**12 02 10.1**	**+0.3**
435B				IAmb_Lg		12 03 56.5	
	comp=Z,54nm,0.8s						
N38A	**Joes South For**	**5.62**	**37**		**Pn**	**12 02 11.0**	**+0.8**
L34A	**Svendsen Farm,**	**5.67**	**10**		**Pn**	**12 02 12.4**	**+1.6**
OGNE	**Ogallala**	**5.67**	**325**	Pn	**Pn**	**12 02 11.8**	**+0.8**
OGNE				IAmb_Lg		12 03 55.5	
	comp=Z,60nm,0.8s						
OGNE	**Ogallala**	**5.67**	**325**	P	**Pn**	**12 02 12.0**	**+1.1**
	baz=142,SNR=8.1						
OGNE	**Ogallala**	**5.67**	**325**	P	**Pn**	**12 02 12.0**	**+1.1**
	baz=142						
PBMO	**Poplar Bluff**	**5.87**	**84**	IAmb_Lg		12 03 56.7	
	comp=Z,75nm,0.7s						
FVM	**French Village**	**6.03**	**73**	Pn	**Pn**	**12 02 15.8**	**0.0**
JCT	**Junction City**	**6.15**	**197**		**Pn**	**12 02 19.7**	**+2.1**
JCT				IAmb_Lg		12 04 05.5	
	comp=Z,91nm,1.0s						
K31A	**O'Neill**	**6.28**	**353**		**Pn**	**12 02 18.8**	**-0.5**
PEBM	**Pemiscott Bayo**	**6.34**	**90**		**Pn**	**12 02 18.9**	**-1.3**
PEBM				IAmb_Lg		12 04 08.6	
	comp=Z,90nm,0.7s						
SLM	**Saint Louis**	**6.35**	**67**	IAmb_Lg		12 04 08.4	
	comp=Z,54nm,0.8s						
143A	**Socs Landing,**	**6.37**	**123**	IAmb_Lg		12 04 20.1	
	comp=Z,50nm,0.8s						
SDCO	**Great Sand Dun**	**6.38**	**285**		**Pn**	**12 02 21.2**	**+0.3**
Q24A	**Divide**	**6.44**	**296**		**Pn**	**12 02 23.1**	**+1.3**
Q24A				IAmb_Lg		12 04 17.7	
	comp=Z,60nm,0.8s						
SCIA	**State Center**	**6.52**	**31**		**Pn**	**12 02 21.7**	**-0.9**
S44A	**Carbondale**	**6.88**	**77**	Pn	**Pn**	**12 02 27.2**	**-0.4**
S44A				IAmb_Lg		12 04 23.3	
	comp=Z,54nm,0.8s						
N41A	**Harden Midland**	**6.88**	**49**		**Pn**	**12 02 28.3**	**+0.8**
N41A				IAmb_Lg		12 04 33.0	
	comp=Z,62nm,0.7s						
OXF	**Oxford**	**7.03**	**103**	IAmb_Lg		12 04 36.9	
	comp=Z,51nm,0.8s						
W45A	**Hickory Valley**	**7.04**	**98**		**Pn**	**12 02 28.9**	**-0.8**
W45A				IAmb_Lg		12 04 29.1	
	comp=Z,52nm,0.8s						
ISCO	**Idaho Springs**	**7.10**	**301**		**Pn**	**12 02 31.1**	**+0.2**
ISCO				IAmb_Lg		12 04 39.4	
	comp=Z,33nm,0.8s						
Y45A	**Yeager Farm, C**	**7.15**	**108**	IAmb_Lg		12 04 42.5	
	comp=Z,51nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.23**	**61**		**Pn**	**12 02 33.3**	**+1.0**
P43A				IAmb_Lg		12 04 46.5	
	comp=Z,68nm,0.8s						
ANMO	**Albuquerque**	**7.27**	**261**	Pn	**Pn**	**12 02 34.9**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=96,slow=9.2,SNR=1.5						
ANMO				Pg	Pb	12 02 58.3	+5.8
	comp=Z,1.0nm,0.3s,baz=85,slow=16,SNR=14						
ANMO				Lg	Lg	12 04 34.4	
	comp=Z,2.1nm,0.3s,baz=144,slow=23,SNR=4.6						
ANMO	**Albuquerque**	**7.27**	**261**		**Pn**	**12 02 32.2**	**-0.8**
K38A	**Parkersburg**	**7.32**	**30**		**Pn**	**12 02 33.3**	**-0.3**
Q44A	**Meyer Farm, Va**	**7.34**	**67**		**Pn**	**12 02 34.8**	**+1.1**
ECSD	**EROS Data Cent**	**7.38**	**6**	Pn	**Pn**	**12 02 33.3**	**-1.1**
L40A	**Anamosa**	**7.58**	**40**		**Pn**	**12 02 36.1**	**-0.9**
L40A				IAmb_Lg		12 05 04.1	
	comp=Z,54nm,0.7s						
BNM	**Barren Site**	**7.63**	**256**		**Pn**	**12 02 39.8**	**+1.8**
CRNM	**Carthage**	**7.78**	**254**		**Pn**	**12 02 41.7**	**+1.6**
PHWY	**Pilot Hill**	**7.79**	**311**		**Pn**	**12 02 38.7**	**-1.5**
PHWY				IAmb_Lg		12 05 03.6	
	comp=Z,48nm,0.9s						
HDIL	**Hopedale**	**7.80**	**55**	Pn	**Pn**	**12 02 39.2**	**-0.9**
N23A	**Red Feather La**	**7.86**	**307**	IAmb_Lg		12 04 53.3	
	comp=Z,29nm,0.7s						
Y22D	**IRIS PASSCAL I**	**7.88**	**256**	IAmb_Lg		12 05 15.0	
	comp=Z,45nm,0.8s						
PLAL	**Pickwick Lake**	**7.96**	**97**		**Pn**	**12 02 42.5**	**+0.1**
833A	**Chaparral WMA,**	**8.17**	**191**	IAmb_Lg		12 05 11.0	
	comp=Z,31nm,1.0s						
O44A	**Mansfield**	**8.18**	**60**		**Pn**	**12 02 45.7**	**+0.4**
O44A				IAmb_Lg		12 05 24.4	
	comp=Z,41nm,0.7s						
L42A	**Oliver, Polo**	**8.39**	**46**		**Pn**	**12 02 47.7**	**-0.5**
L42A				IAmb_Lg		12 05 14.6	
	comp=Z,51nm,0.8s						
T47A	**Sharon Grove**	**8.54**	**83**		**Pn**	**12 02 50.4**	**+0.1**
TXAR	**Lajitas Array**	**8.64**	**217**	Pn	**Pn**	**12 02 51.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=35,slow=10,SNR=8.6						
TXAR				Lg	Lg	12 05 18.3	
	comp=Z,2.0nm,0.3s,baz=25,slow=30,SNR=6.5						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**8.64**	**217**		**Pn**	**12 02 51.1**	**-0.7**
JFWS	**Jewell Farm**	**8.69**	**39**		**Pn**	**12 02 53.1**	**+0.8**
JFWS				IAmb_Lg		12 05 34.6	
	comp=Z,46nm,0.7s						
RWWY	**Rawlins**	**9.09**	**308**	IAmb_Lg		12 05 46.4	
	comp=Z,28nm,1.1s						
K22A	**Casper**	**9.24**	**315**	IAmb_Lg		12 05 50.5	
	comp=Z,34nm,1.0s						
I40A	**Norwalk**	**9.25**	**34**	IAmb_Lg		12 05 48.6	
	comp=Z,22nm,0.8s						
L44A	**Lake County Fo**	**9.54**	**50**	IAmb_Lg		12 05 58.4	
	comp=Z,42nm,1.0s						
SPMN	**Marine on St.**	**9.57**	**21**	IAmb_Lg		12 06 09.8	
	comp=Z,23nm,0.8s						
PDAR	**Pinedale Array**	**11.14**	**308**	Pn	**Pn**	**12 03 26.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=123,slow=21,SNR=1.8						
PDAR				Pg		12 04 10.4	
	comp=Z,0.3nm,0.3s,baz=111,slow=8.4,SNR=2.4						
PDAR				Lg	Lg	12 06 33.5	
	comp=Z,0.6nm,0.3s,baz=96,slow=40,SNR=2.5						
	comp=Z,0.2nm,0.3s						
TKL	**Tuckaleechee C**	**11.31**	**90**	Lg	Lg	12 06 40.5	
	comp=Z,0.9nm,0.3s,baz=13,slow=20,SNR=6.9						
ULM	**Lac du Bonnet**	**13.92**	**5**	Lg	Lg	12 07 59.0	
	comp=Z,0.3nm,0.3s,baz=107,slow=16,SNR=1.9						
SADO	**Sadowa**	**16.38**	**54**	Lg	Lg	12 09 17.0	
	comp=Z,0.2nm,0.3s,baz=162,slow=18,SNR=3.9						
ILAR	**Eielson Array**	**40.56**	**330**	P	**P**	**12 08 26.3**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=109,slow=7.7,SNR=2.1						
	comp=Z,0.2nm,0.7s						

GUC 22 12:02:36.2±0.7,30°.62S×71°.92W,h34^{km}±2^{km},ML3.7,3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.25**	**103**	*e*P	Pn	12 02 43.0	-0.1
CO06				*i* S	Sb	12 02 48.1	-0.4
CO06				IAML		12 02 48.8	
	comp=N,32µm,0.1s						
CO05	**La Serena**	**0.91**	**41**	*e*P	Pn	12 02 52.9	+0.4
CO05				*i* S	Sb	12 03 05.5	+0.1
CO05				IAML		12 03 08.6	
	comp=N,3µm,0.4s						
CO02	**Combarbal**	**0.98**	**127**	*e*P	Pn	12 02 53.6	-0.2
CO02				*i* S	Sn	12 03 06.9	+0.4
CO02				IAML		12 03 11.2	
	comp=N,6µm,0.3s						
GO04	**Tololo Observa**	**1.06**	**66**	⇓*e*P	Pn	12 02 54.7	-0.2
GO04				*i* S	Sb	12 03 09.8	-0.3
GO04				IAML		12 03 12.5	
	comp=E,9µm,0.2s						
CO01	**Juntas del Tor**	**1.70**	**69**	*e*P	Pn	12 03 05.3	+1.6
CO01				*i* S	Sb	12 03 27.5	-0.8
CO01				IAML		12 03 30.1	
	comp=N,342nm,0.5s						
LCO	**Las Campanas**	**1.92**	**34**	*e*P	Pn	12 03 08.6	+1.9
LCO				*i* S	Sb	12 03 33.7	-0.7
VA06	**Catapilco**	**2.01**	**165**	*e*P	Pb	12 03 11.6	-0.5
VA06				*i* S	Sb	12 03 35.2	-1.6
VA06				IAML		12 03 48.0	
	comp=N,1µm,0.4s						
VA03	**San Esteban**	**2.44**	**152**	*e*P	Pn	12 03 16.0	+2.3
VA03				*i* S	Sb	12 03 46.1	-3.1
VA03				IAML		12 03 56.6	
	comp=E,729nm,0.2s						
ROCH	**El Roble**	**2.47**	**162**	*e*P	Pb	12 03 17.7	-2.4
ROCH				*i* S	Sb	12 03 48.0	-2.3
ROCH				IAML		12 03 55.9	
	comp=N,362nm,0.4s						
AC04	**Llanos de Chal**	**2.51**	**17**	⇓*i*P	Pn	12 03 16.1	+1.5
AC04				*e*S	Sn	12 03 47.3	+3.2
AC04				IAML		12 04 05.4	
	comp=E,152nm,0.2s						
MT02	**Curacav**	**2.72**	**166**	*e*P	Pn	12 03 19.6	+2.2
MT02				IAML		12 04 09.4	
	comp=E,103nm,0.3s						
FCH	**Farellones**	**3.04**	**153**	*e*P	Pb	12 03 26.5	-3.3
FCH				IAML		12 04 13.0	
	comp=E,110nm,0.1s						
VA05	**Santo Domingo**	**3.04**	**175**	*e*P	Pn	12 03 23.6	+1.7
VA05				*i* S	Sn	12 03 59.9	+2.8
VA05				IAML		12 04 29.3	
	comp=E,210nm,0.3s						
MT03	**Universidad Ad**	**3.11**	**158**	*e*P	Pn	12 03 24.9	+2.0
MT03				IAML		12 04 18.1	
	comp=E,388nm,0.2s						
MT09	**Talagante**	**3.25**	**166**	*e*P	Pn	12 03 27.8	+2.9
MT09				IAML		12 04 23.7	
	comp=E,186nm,0.4s						
MT01	**Popeta**	**3.29**	**170**	*e*P	Pn	12 03 27.4	+2.2
MT01				*e*S	Sn	12 04 05.9	+2.7
MT01				IAML		12 04 22.4	
	comp=E,114nm,0.4s						
GO03	**Copiap**	**3.35**	**27**	*e*P	Pn	12 03 27.8	+1.5
GO03				*i* S	Sn	12 04 07.7	+2.8
GO03				IAML		12 04 23.8	
	comp=E,168nm,0.7s						
AC06	**Mina Casimiro**	**3.52**	**23**	*e*P	Pn	12 03 30.0	+1.4
AC06				IAML		12 04 29.4	
	comp=N,73nm,0.4s						
BO04	**La Punta**	**3.54**	**162**	⇓*e*P	Pn	12 03 31.3	+2.5
BO04				IAML		12 04 27.4	
	comp=E,119nm,0.3s						
BO01	**Tunca**	**3.83**	**170**	*e*P	Pn	12 03 34.9	+2.2
BO03	**Pichilemu**	**3.87**	**180**	*e*P	Pn	12 03 35.0	+1.8
AC02	**Maricunga**	**4.49**	**34**	*e*P	Pn	12 03 44.2	+1.9

IDC 22 12:04:33.9±4.0,4°.76N×93°.99E,h0^{km},mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=161.3km s-min=25.2km az=60.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**24.73**	**240**	T	T	12 35 58.0	
	baz=60,slow=75,SNR=22						
H08S3	**Diego Garcia H**	**24.73**	**240**	T	T	12 35 49.5	
	baz=60,slow=75,SNR=15						
H08S1	**Diego Carcia H**	**24.75**	**240**	T	T	12 35 49.5	
	baz=60,slow=75,SNR=14						
SONM	**Songino Array**	**44.22**	**12**	P	P	12 12 45.3	+0.3
	0.4nm,0.4s,baz=199,slow=9.7,SNR=2.0						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**46.64**	**123**	P	P	12 13 04.6	+0.1
	1.3nm,0.6s,baz=304,slow=9.0,SNR=5.8						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**47.52**	**347**	P	P	12 13 11.7	+0.9
	0.2nm,0.4s,baz=159,slow=8.0,SNR=1.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**48.09**	**128**	P	P	12 13 15.3	-0.4
	0.4nm,0.5s,baz=292,slow=7.7,SNR=2.3						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**49.61**	**353**	P	P	12 13 25.5	-1.4
	0.9nm,0.5s,baz=146,slow=8.1,SNR=3.5						
	0.9nm,0.5s						

IDC ***22*** *12:06:26.3±2.4,17°.65S×178°.65W,h604^{km}±20^{km},mb2.9/6, mbtmp3.7/7,Error ellipse: s-maj=97.7km s-min=20.9km az=151.0*

ISC 22 12:06:26.0±1.7,17°.6S±0°.6×178°.7W±0°.3,h600^{km},n9, σ0^s.60/11,mb3.4/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.14**	**267**	P	**P**	**12 07 47.1**	**+1.1**
	9.3nm,0.6s,baz=85,slow=23,SNR=9.9						
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**12 13 45.1**	**-0.5**
	0.2nm,0.3s,baz=94,slow=7.4,SNR=1.5						
WRA				PcP	**PcP**	**12 15 15.2**	**-0.5**
	0.2nm,0.4s,baz=89,slow=3.7,SNR=1.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**12 13 46.8**	**-0.2**
	0.9nm,0.6s,baz=90,slow=8.8,SNR=5.1						
ASAR				PcP	**PcP**	**12 15 15.7**	**-0.7**
	0.4nm,0.5s,baz=107,slow=3.8,SNR=2.4						
	0.9nm,0.6s						
NVAR	**Mina Array Bea**	**79.36**	**44**	P	**P**	**12 17 30.5**	**-0.6**
	0.5nm,0.7s,baz=222,slow=9.5,SNR=5.2						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**12 18 01.6**	**-0.1**
	0.3nm,0.4s,baz=218,slow=4.9,SNR=9.7						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**12 18 05.1**	**+0.5**
	0.7nm,0.6s,baz=217,slow=7.2,SNR=5.0						
	0.7nm,0.6s						
PDAR	**Pinedale Array**	**87.28**	**44**	P	**P**	**12 18 10.4**	**+0.1**
	0.5nm,0.6s,baz=214,slow=6.4,SNR=1.8						
	0.5nm,0.6s						
BRTR	**Keskin Array B**	**144.39**	**315**	PKP	**PKPab**	**12 24 55.8**	**-0.2**
	0.5nm,0.5s,baz=136,slow=5.3,SNR=3.6						
GERES	**GERESS Array B**	**147.24**	**345**	PKPbc	**PKPbc**	**12 25 03.3**	**+0.2**
	1.1nm,0.7s,baz=37,slow=3.3,SNR=7.2						

AUST ***22*** *12:08:23.6±0.0,25°.47S×129°.87E,h0^{km},Error ellipse: s-maj=0.1km s-min=0.1km az=313.0*

IDC ***22*** *12:08:28.9±4.7,25°.25S×130°.17E,h0^{km},mbtmp3.2/3, ML2.9/3,Error ellipse: s-maj=38.3km s-min=27.3km az=90.0*

ISC 22 12:08:23.4±1.0,25°.46S±0°.06×129°.87E±0°.04,h10^{km},n9, σ1^s.24/17,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.48**	**286**	P	**Pg**	**12 08 50.9**	**-1.1**
	baz=1.5						
WRKA				S	**Sg**	**12 09 11.5**	**+0.3**
	baz=1.5						
ASPA	**Alice Springs**	**4.08**	**65**	P	**Pn**	**12 09 27.7**	**+1.7**
	baz=4.1						
ASPA				S	**Sn**	**12 10 15.0**	**+1.0**
	baz=4.1						
ASAR	**Alice Springs**	**4.09**	**65**	Pn	**Pn**	**12 09 27.4**	**+1.4**
	0.4nm,0.3s,baz=243,slow=12,SNR=28						
ASAR				Pg	**Pg**	**12 09 39.7**	**-2.1**
	0.8nm,0.3s,baz=242,slow=15,SNR=14						
ASAR				Sn	**Sn**	**12 10 15.1**	**+1.0**
	1.2nm,0.3s,baz=248,slow=22,SNR=13						
ASAR				Lg	Lg	12 10 30.2	
	2.0nm,0.3s,baz=241,slow=26,SNR=11						
	0.8nm,0.3s						
FORT	**Forrest**	**5.53**	**196**	P	**Pn**	**12 09 47.3**	**+1.4**
	baz=5.5						
FORT				S	**Sn**	**12 10 49.1**	**-0.4**
	baz=5.5						
OOD	**Oodnadatta**	**5.70**	**115**	P	**Pn**	**12 09 49.3**	**+1.1**
	baz=5.7						
OOD				S	**Sn**	**12 10 53.9**	**+0.2**
	baz=5.7						
MULG	**Mulgathing**	**6.07**	**143**	P	**Pn**	**12 09 54.6**	**+1.4**
	baz=6.1						
MULG				S	**Sn**	**12 11 02.0**	**-0.7**
	baz=6.1						
WRA	**Warramunga Arr**	**6.87**	**38**	Pn	**Pn**	**12 10 05.2**	**+0.9**
	0.2nm,0.3s,baz=217,slow=13,SNR=18						
WRA				Sn	**Sn**	**12 11 21.7**	**-1.0**
	0.4nm,0.3s,baz=247,slow=16,SNR=6.3						
WRA				Lg	Lg	12 11 55.5	
	0.7nm,0.3s,baz=211,slow=27,SNR=6.1						
	0.6nm,0.7s						
WC3	**Warramunga Arr**	**6.88**	**38**	P	**Pn**	**12 10 05.7**	**+1.3**
	baz=6.9						
WC3				S	**Sn**	**12 11 22.4**	**-0.4**
	baz=6.9						
STKA	**Stephens Creek**	**12.11**	**125**	Pn	Pn	12 11 22.8	+6.7
	0.1nm,0.3s,baz=283,slow=18,SNR=2.0						
	2.9nm,0.8s						

IDC 22 12:15:33.3±1.9,6°.70S×128°.60E,h0^{km},mb3.6/1, mbtmp3.5/4,ML3.6/3,MS4.1/1,Error ellipse: s-maj=66.8km s-min=29.2km az=79.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.38**	**25**	Pn	Pn	12 17 08.6	-0.1
	1.8nm,0.3s,baz=189,slow=23,SNR=16						
SIJI				Sn	Sn	12 18 15.3	-6.9
	0.5nm,0.3s,baz=225,slow=22,SNR=1.4						
	4.5nm,0.3s						
WRA	**Warramunga Arr**	**14.29**	**158**	Pn	Pn	12 18 56.2	-0.9
	0.3nm,0.3s,baz=334,slow=13,SNR=22						
WRA				Sn	Sn	12 21 23.5	-13
	0.5nm,0.3s,baz=334,slow=23,SNR=9.5						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.62**	**164**	P	P	12 19 41.1	-0.5
	0.2nm,0.3s,baz=342,slow=10.0,SNR=12						
ASAR				S	Sn	12 22 51.1	-6.3
	0.3nm,0.5s,baz=338,slow=23,SNR=5.1						
	0.3nm,0.4s						
DZM	**Mont Dzumac**	**39.56**	**117**	LR	LR	12 39 12.8	
	comp=Z,260nm,18.2s,baz=168,slow=36						
MKAR	**Makanchi Array**	**67.22**	**327**	P	P	12 26 29.6	0.0
	0.2nm,0.4s,baz=141,slow=7.8,SNR=3.7						

0.2nm,0.4s

SCB **22** *12:20:40.5±2.7, 22°.44S×64°.33W, h3^{km}±20^{km}, ML5.5/1, Error ellipse: s-maj=17.6km s-min=11.2km az=1.0*
SJA **22** *12:20:41.6±0.9, 22°.46S×64°.29W, h12^{km}±11^{km}, ML4.8, MW5.2*
NEIC **22** *12:20:42.8±2.6, 22°.35S±0°.06×64°.23W±0°.07, h10^{km}±3^{km}, mb5.5/161, Mww5.3, Md5.0(SJA), Error ellipse: s-maj=9.4km s-min=8.9km az=87.0*
MOS **22** *12:20:42.0±1.6, 22°.33S×64°.29W, h14^{km}, mb5.6/28, MS4.6/8, Error ellipse: s-maj=10.1km s-min=6.3km az=108.1*
VAO **22** *12:20:44.5±0.3, 22°.39S×64°.39W, h10^{km}, mb4.9*
IDC **22** *12:20:44.6±2.5, 22°.33S×64°.20W, h22^{km}±15^{km}, mb4.8/19, mbtmp4.9/25, ML4.6/6, MS4.6/52, Error ellipse: s-maj=14.9km s-min=11.6km az=38.0*
NEIC **22** *12:20:48, 22°.38S×64°.31W, h18^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.00; M$_{\theta\theta}$0.02; M$_{\phi\phi}$-1.02; M$_{r\theta}$-0.28; M$_{\theta\phi}$-0.04; M$_{\phi r}$-0.27; Fault plane solution: M$_0$1.09000×10^{17} NP1: ϕ$_s$349.00000°, δ39.00000°, λ68.00000°. NP2: ϕ$_s$196.00000°, δ54.00000°, λ107.00000°. Principal axes: T 1.1087, Plg74.0000°, Azm155.0000°; N -0.0465, Plg13.0000°, Azm6.0000°; P -1.0622, Plg8.0000°, Azm274.0000°;*
GCMT **22** *12:20:48.8±0.2, 22°.49S±0°.02×64°.25W±0°.01, h12^{km}, MW5.2/91, Moment Tensor Solution. s66,c89; s91,c151; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.60±.01; M$_{\theta\theta}$0.18±.02; M$_{\phi\phi}$-0.77±.01; M$_{r\theta}$-0.39±.05; M$_{\theta\phi}$-0.06±.01; M$_{\phi r}$0.40±.04; Best double couple: M$_0$0.90300×10^{17} NP1:ϕ$_s$210.00000°, δ37.00000°, λ137.00000°. NP2:ϕ$_s$337.00000°, δ66.00000°, λ61.00000°. Principal axes: T 0.9160, Plg59.0000°, Azm205.0000°; N -0.0240, Plg26.0000°, Azm349.0000°; P -0.8900, Plg16.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 12:20:42.6±0.2, **22°.37S**±0°.03×**64°.32W**±0°.04, **h10**^{km}, **n759**, σ**1^{s}59**/736, **mb5.4**/123, **MS4.7**/64, **8C-8D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.12	280	i P	Pn	12 21 04.5	-0.3
YJA				eS	Sn	12 21 22.1	+1.7
YJA				IAML		12 21 25.0	
	comp=Z,7μm,0.7s						
HJA	Humahuaca	1.30	230	i P	Pn	12 21 07.0	-0.3
HJA				eS	Sn	12 21 24.9	-0.1
HJA				IAML		12 21 32.0	
	comp=Z,32μm,1.3s						
MOCB	Mochara	1.65	312	P	Pg	12 21 15.2	+0.8
MOCB				S	Sb	12 21 33.7	-0.8
MOCB				IAML		12 21 41.3	
	comp=Z,49μm,0.4s						
SLA	San Lorenzo	2.58	205	P	Pn	12 21 26.4	+1.8
SLA	San Lorenzo	2.58	205	i P	Pn	12 21 25.5	+0.9
SLA				eS	Sg	12 22 05.1	-0.5
SLA				IAML		12 22 10.9	
	comp=Z,21μm,1.1s						
AF01	San Pedro de A	3.61	260		Pn	12 21 41.9	+3.0
FSA	Cafayete	4.02	202	i P	Pn	12 21 45.0	+0.6
LVC	Limon Verde	4.25	266	Pn	Pn	12 21 51.3	+3.6
	comp=Z,4.5nm,0.3s,baz=56,slow=5.8,SNR=38						
LVC				Pg	Pg	12 22 05.1	+1.1
	comp=Z,8.2nm,0.3s,baz=100,slow=11,SNR=26						
	comp=Z,26nm,0.5s						
LVC	Limon Verde	4.25	266		Pn	12 21 51.0	+3.3
LVC	Limon Verde	4.25	266	P	Pn	12 21 50.9	+3.2
PB09	IPOC Station P	4.60	276		Pn	12 21 55.6	+3.3
PB09	IPOC Station P	4.60	276	P	Pn	12 21 55.4	+3.0
PB15	IPOC Station P	4.82	259	P	Pn	12 21 58.3	+2.8
PB06	IPOC Station P	4.86	265		Pn	12 21 58.6	+2.6
PB06	IPOC Station P	4.86	265	P	Pn	12 21 59.1	+3.1
PB01	IPOC Station P	4.98	284		Pn	12 22 00.6	+3.1
PB01	IPOC Station P	4.98	284	P	Pn	12 22 00.7	+3.1
PB01	IPOC Station P	4.98	284	i P	Pn	12 22 01.0	+3.4
PB01				IAML		12 23 15.0	
	comp=Z,144nm,1.9s						
PB08	IPOC Station P	5.02	295	P	Pn	12 22 01.7	+3.3
PB07	IPOC Station P	5.20	276	P	Pn	12 22 03.7	+3.0
PB02	IPOC Station P	5.28	280	P	Pn	12 22 04.9	+3.2
PB04	IPOC Station P	5.39	269	P	Pn	12 22 06.1	+2.8
GO02	Mina Guanaco	5.57	239		Pn	12 22 08.8	+2.9
HMBC	Humberstone	5.59	291	P	Pn	12 22 08.8	+2.8
PB11	IPOC Station P	5.62	297	P	Pn	12 22 09.5	+3.1
PATCX	Punta Patache	5.64	285		Pn	12 22 09.0	+2.4
TA01	Diego Aracena	5.74	287		Pn	12 22 11.1	+3.1
PB10	IPOC Station P	5.86	258	P	Pn	12 22 12.7	+3.2
AC02	Maricunga	6.24	224	Pn	Pn	12 22 17.9	+2.7
PB16	IPOC Station P	6.31	309	P	Pn	12 22 18.6	+2.4
AC01	Pan de Azucar	6.85	235		Pn	12 22 24.0	+0.8
LPAZ	La Paz	7.04	329	Pn	Pn	12 22 28.0	+1.7
	comp=Z,3.0nm,0.3s,baz=128,slow=5.8,SNR=66						
LPAZ				Sn	Sn	12 23 49.5	+2.8
	comp=Z,6.7nm,0.3s,baz=340,slow=17,SNR=1.8						
LPAZ				Lg	Lg	12 24 35.9	
	comp=Z,1.7nm,0.3s,baz=133,slow=19,SNR=1.4						
	comp=Z,8.5nm,0.2s						
LPAZ	La Paz	7.04	329	P	Pn	12 22 28.3	+2.0
LPAZ	La Paz	7.04	329	eP	Pn	12 22 27.6	+1.4
GO03	Copiap	7.47	225		Pn	12 22 32.1	+0.4
CPUP	Villa Florida	7.50	123	Pn	Pn	12 22 30.4	-1.6
	comp=Z,6.8nm,0.3s,baz=305,slow=12,SNR=92						
CPUP				Lg	Lg	12 24 38.7	
	comp=Z,19nm,0.3s,baz=24,slow=17,SNR=1.6						
CPUP				LR	LR	12 25 55.3	
	comp=Z,3μm,21.5s,baz=306,slow=42						
	comp=Z,70nm,0.7s						
CPUP	Villa Florida	7.50	123	P	Pn	12 22 30.5	-1.5
CPUP	Villa Florida	7.50	123	P	Pn	12 22 31.1	-0.9
PTLB	Pontes e Lacer	8.45	36	eP	Pn	12 22 46.2	+1.0
LCO	Las Campanas	8.76	220	Pn	Pn	12 22 49.4	-0.3
LCO	Las Campanas	8.76	220	eP	Pn	12 22 49.4	-0.3
CO01	Juntas del Tor	9.18	213		Pn	12 22 57.1	+1.8
GO04	Tololo Observa	9.70	215		Pn	12 23 01.5	-1.0
ITQB	Itaqui	10.04	138		Pn	12 23 07.1	+0.3
ITQB	Itaqui	10.04	138	eP	Pn	12 23 07.8	+0.9
VILB	Vilhena	10.15	23	eP	Pn	12 23 09.8	+1.2
TRCB	Terra Rica	10.81	94		Pn	12 23 18.0	+0.5
TRCB	Terra Rica	10.81	94	eP	Pn	12 23 19.0	+1.5
ITAB	Concordia	12.08	116	eP	Pn	12 23 36.9	+2.0
ROC1	El Roble	12.11	208		Pn	12 23 34.8	-0.7
PCMB	Pacaembu	12.14	89	eP	Pn	12 23 36.6	+0.8
MT03	Universidad Ad	12.35	205		Pn	12 23 38.3	-0.4
ETMB	Extrema	12.61	351	eP	Pn	12 23 42.7	+0.5
MT09	Talagante	12.79	206		Pn	12 23 42.6	-2.1
BO04	La Punta	12.83	204		Pn	12 23 44.1	-1.0
PDRB	Porto dos Gac	12.92	35	eP	Pn	12 23 48.7	+2.3
ITRB	Iturama	13.30	81	eP	Pn	12 23 53.1	+1.4
PLTB	Pedras Altas	13.36	137		Pn	12 23 50.1	-2.2
PLTB	Pedras Altas	13.36	137	eP	Pn	12 23 54.7	+2.4
BO01	Tunca	13.37	205		Pn	12 23 51.3	-1.1
SAML	Samuel	13.39	5		Pn	12 23 50.5	-2.3
SAML	Samuel	13.39	5	P	Pn	12 23 50.5	-2.3
FRTB	Fartura	13.64	97	eP	Pn	12 23 56.7	+0.4
LPA	La Plata	13.69	157	eP	Pn	12 23 58.1	+1.3
LPA				sP	P	12 24 04.0	-1.6
LPA				pPP		12 24 09.5	
LPA				PP	PbPb	12 24 37.2	-4.3
LPA				PPP	PPP	12 24 49.1	
LPA				S	Sn	12 26 34.5	+5.5
LPA				SS	SnSn	12 26 46.3	+4.7
LPA				SSS	SSS	12 26 56.8	
LPA				SS	SbSb	12 27 36.2	+11
LPA				SSS	SSS	12 28 15.6	
LPA				PCP	PcP	12 29 13.8	-7.9
LPA				SCS	ScS	12 36 28.5	-3.8
LPA				PKIKP	PKiKP	12 37 14.9	-3.2
LPA				SKIKP		12 40 49.4	
LPA				PKIKS		12 40 53.9	
LPA				SKIKS		12 44 22.1	
CNLB	Canela	13.96	122	eP	Pn	12 24 03.3	+2.8
CLDB	Colider	14.04	37	eP	Pn	12 24 03.5	+1.7
TIJ01	Guaruva-PR	14.32	105	eP	Pn	12 24 07.9	+2.3
TER01	Tubaro-SC	15.03	117	eP	Pn	12 24 15.3	+0.2
RCLB	Rio Claro- Sao	15.53	93	eP	Pn	12 24 23.3	+1.5
IPMB	Ipameri, GO	15.74	77	eP	Pn	12 24 26.5	+1.9
TRQA	Tornquist	15.77	173	P	Pn	12 24 23.6	-1.2
TRQA	Tornquist	15.77	173	P	Pn	12 24 23.6	-1.2
TRQA				pmax	pmax		
	comp=Z,179nm,1.5s						
PET01	Itanhaem-SP	15.78	100	eP	P	12 24 27.5	-1.4
NNA	Nana	15.79	309	Pn	P	12 24 27.8	-1.3
	comp=Z,1.7nm,0.3s,baz=162,slow=11,SNR=12						
NNA				LR	LR	12 30 55.0	
	comp=Z,2μm,21.2s,baz=149,slow=38						
	comp=Z,76nm,0.9s						
NNA	Nana	15.79	309		Pn	12 24 26.1	+0.8
NNA	Nana	15.79	309	P	P	12 24 28.4	-0.7
VAO	Valinhos	16.03	96	eP	P	12 24 30.3	-1.5
SNDB	Serra Nova Dou	16.17	52	eP	Pn	12 24 31.7	+1.6
BI05	Punta Hualpn	16.26	206	P	Pn	12 24 29.9	-1.2
CZSB	Cruzeiro do Su	16.64	330	eP	Pn	12 24 36.7	+0.5
BDFB	Brasilia	16.80	69	Pn	Pn	12 24 39.2	+0.9
	comp=Z,1.6nm,0.3s,baz=250,slow=15,SNR=16						
BDFB				Lg	Lg	12 29 37.8	
	comp=Z,0.5nm,0.3s,baz=268,slow=26,SNR=3.3						
BDFB				LR	LR	12 32 33.5	
	comp=Z,612nm,18.1s,baz=248,slow=42						
	comp=Z,10nm,0.5s						
BDFB	Brasilia	16.80	69	P	Pn	12 24 38.4	+0.2
BDFB	Brasilia	16.80	69	eP	Pn	12 24 39.1	+0.8
PARB	Paraibuna	17.27	97	eP	P	12 24 45.1	-0.4
PEXB	Peixe	18.38	59	eP	P	12 24 59.9	+2.1
LR03	Panguipulli	18.52	200	P	P	12 24 58.4	-0.7
MAN01	Angra dos Reis	18.80	95	eP	Pn	12 25 03.7	+0.8
PLCA	Paso Flores	19.05	195	P	P	12 25 05.2	+0.2
	comp=Z,0.4nm,0.3s,baz=24,slow=12,SNR=60						
PLCA				Lg	Lg	12 30 53.9	
	comp=Z,0.1nm,0.3s,baz=300,slow=13,SNR=2.8						
PLCA				LR	LR	12 32 30.3	
	comp=Z,1μm,20.9s,baz=358,slow=37						
	comp=Z,54nm,1.0s						
PLCA	Paso Flores	19.05	195	P	P	12 25 03.9	-1.2
PLCA	Paso Flores	19.05	195	eP	P	12 25 04.3	-0.8
LR04	Corral	19.10	202	P	P	12 25 04.2	-1.2
MACA	Manacapuru-AM	19.42	11	eP	Pn	12 25 11.1	+0.8
LL04	Puerto Octay	19.71	198	P	P	12 25 10.9	-1.2
ITTB	Itaituba	19.73	26	eP	Pn	12 25 14.1	0.0
DIAM	Diamantina, MG	19.78	82	eP	Pn	12 25 15.1	+0.3
JANB	Januaria	20.29	72	eP	P	12 25 19.6	+0.8
DUB01	Friburgo-RJ	20.32	93	eP	Pn	12 25 20.6	-0.4
ATAH	Atahualpa	20.33	316	P	Pn	12 25 20.7	-0.8
	comp=Z,25nm,1.0s,baz=141,slow=7.6,SNR=7.6						
ATAH				LR	LR	12 34 27.6	
	comp=Z,3μm,21.7s,baz=135,slow=40						
	comp=Z,25nm,1.0s						
SMTB	Santa Maria do	20.95	53	eP	Pn	12 25 27.2	-1.1
SDBA	SAO DESIDERIO	20.99	65	eP	P	12 25 27.6	+1.3
CAM01	Campos-RJ	21.01	93	eP	P	12 25 27.4	+1.0
PRPB	Parauapebas	21.34	43	eP	P	12 25 30.9	+0.9
SJMB	Sao Joao De Ma	21.97	85	eP	P	12 25 38.4	+1.7
ALF01	Guarapari-ES	22.02	90	eP	P	12 25 38.6	+1.3
GO07	Milladeo Hill,	22.10	198	P	P	12 25 36.0	-2.0
RIB01	Linhares ES	22.56	87	eP	P	12 25 45.2	+2.1
MALB	Monte Alegre	22.62	27	eP	P	12 25 44.4	+0.7
AY01	Puyuhuapi	23.04	195	P	P	12 25 45.8	-2.1
AY01				IAmb	IAmb	12 25 48.7	
	comp=Z,177nm,1.1s						
NAN01	Guarapari, ES	23.15	83	eP	P	12 25 50.6	+1.3
GUA01	Guaratinga, BA	23.80	80	eP	P	12 25 57.2	+1.4
COYC	Coyhaique	24.00	193	P	P	12 25 54.9	-2.5
COYC				IAmb	IAmb	12 25 58.3	
	comp=Z,183nm,1.3s						
CMC01	Camacan, BA	24.46	78	eP	P	12 26 03.2	+1.3
BOAV	Boa Vista	24.89	9	eP	P	12 26 06.4	+0.6
MCPB	Macapa, AP	24.93	30	eP	P	12 26 07.6	+1.5
GDU01	Guandu, BA	25.02	74	eP	P	12 26 07.5	+0.5
TMAB	Tom-Au,PA,Br	25.37	41	eP	P	12 26 12.8	+2.7
NBPN	Ponto Novo - B	25.76	68	eP	P	12 26 14.2	+0.5
FLOC	Florencia	26.25	334	eP	P	12 26 17.7	-0.4
OTAV	Otavalo	26.35	327	P	P	12 26 20.6	+1.1
OTAV	Otavalo	26.35	327	P	P	12 26 20.7	+1.1
OTAV				pmax	pmax		
	comp=Z,52nm,1.3s						
OTAV	Otavalo	26.35	327	eP	P	12 26 28.3	+8.8
OTAV	Otavalo	26.35	327	eP	P	12 26 21.2	+1.6
CMBC	Cumbal	26.65	329	eP	P	12 26 28.3	+6.1
GCUF	Volcan Galeras	26.67	330	eP	P	12 26 28.3	+5.8
GO08	Villa O'Higgin	26.86	192	P	P	12 26 23.1	-0.2
GO08				IAmb	IAmb	12 26 26.6	
	comp=Z,182nm,1.6s						
ROSB	Rosrio	27.55	48	eP	P	12 26 32.6	+2.8
VILC	Villavicencio,	27.87	340	eP	P	12 26 32.2	-0.6
ORTC	Ortega, Tolima	28.22	336	eP	P	12 26 35.1	-0.7
CHIC	Chingaza	28.37	340	eP	P	12 26 38.0	+0.4
NBPS	Pedro II - PI	28.46	54	eP	P	12 26 39.8	+1.7
YOTC	Yotoco, Valle	28.71	334	eP	P	12 26 37.0	-3.3
ROSC	El Rosal	28.76	339	P	P	12 26 41.5	+0.5
	comp=Z,12nm,0.4s,baz=135,slow=7.2,SNR=9.3						
ROSC				LR	LR	12 38 21.0	
	comp=Z,3μm,18.8s,baz=220,slow=37						
	comp=Z,12nm,0.4s						
ROSC	El Rosal	28.76	339	P	P	12 26 41.0	-0.1
ROSC				IAmb	IAmb	12 27 03.6	
	comp=Z,104nm,1.2s						
NBMA	Muriti-CE	28.78	63	eP	P	12 26 42.4	+1.5
NBPB	Pedra_Branca-C	29.18	59	eP	P	12 26 45.6	+1.2
RUSC	La Rusia	29.37	342	eP	P	12 26 46.6	+0.1
SPBC	San Pablo de B	29.44	340	eP	P	12 26 44.7	-2.0
PLMC	San Jos del P	29.52	335	eP	P	12 26 44.7	-2.8
MDP	Montagnes des	29.60	24	P	P	12 26 48.4	+0.3
	comp=Z,20nm,1.0s,baz=204,slow=9.0,SNR=8.6						
MDP				LR	LR	12 38 27.6	
	comp=Z,578nm,18.4s,baz=196,slow=36						
	comp=Z,20nm,1.0s						
NORC	Norcasia	29.62	338	eP	P	12 26 47.6	-0.7
EFI	East Falkland	29.65	172	i P	P	12 26 48.4	+0.2
EFI				pmax	pmax		
	comp=Z,81nm,1.2s						
NBAN	Anadia - AL	29.70	69	eP	P	12 26 50.8	+1.7
NBMO	Morrinhos-CE	30.22	55	eP	P	12 26 55.4	+1.7
CBOC	Ciudad Bolivar	30.30	336	eP	P	12 26 53.4	-1.1
PTBC	PUERTO BERRIO,	30.40	340	eP	P	12 26 52.4	-2.7
HELC	Santa Helena	30.43	338	eP	P	12 26 53.4	-2.5
BAUV	El Baul	31.33	353	P	P	12 27 02.3	-1.0
BAUV				IAmb	IAmb	12 28 14.0	
	comp=Z,191nm,2.0s						
ZARC	Zaragoza, Cauc	31.42	340	P	P	12 26 60.0	-4.2
ZARC	Zaragoza, Cauc	31.42	340	eP	P	12 26 59.1	-5.0
OCAC	Ocana	31.67	343	P	P	12 27 05.3	-1.3
SDV	Santo Domingo	31.67	348	eP	P	12 27 08.1	+1.6
DSPA	Despedida	31.68	184	P	P	12 27 04.8	-1.2
UREC	San Jos de Ur	31.89	339	eP	P	12 27 04.9	-3.3
RCBR	Riachuelo	32.00	63	LR	LR	12 40 10.2	
	comp=Z,1μm,19.7s,baz=19,slow=37						
RCBR	Riachuelo	32.00	63	eP	P	12 27 11.5	+2.2
USHA	Ushuaia	32.56	184	LR	LR	12 42 24.3	
	comp=Z,2μm,19.1s,baz=1.0,slow=40						
CACAO	El Cacao, Vera	33.68	329	⇑eP	P	12 27 22.3	-1.7
SJCC	San Jacinto, C	33.79	341	P	P	12 27 21.2	-3.7
SRBA	San Rafael, Bu	36.53	327	P	P	12 27 49.7	+1.0
JTS	Las Juntas de	38.24	326	LR	LR	12 44 36.7	
	comp=Z,681nm,20.3s,baz=216,slow=37						
JTS	Las Juntas de	38.24	326	P	P	12 28 04.2	+1.1
JTS	Las Juntas de	38.24	326	P	P	12 28 04.2	+1.1
JTS				pmax	pmax		
	comp=Z,76nm,1.5s						
ORTG	Ortega, Santa	38.57	325	P	P	12 28 07.5	+1.6
ESPN	Las Esperanzas	39.54	328	P	P	12 28 15.4	+1.4
ESPN				IAmb	IAmb	12 28 41.4	
	comp=Z,68nm,0.6s						
SJG	San Juan	40.27	357	LR	LR	12 46 17.0	
	comp=Z,1μm,19.2s,baz=176,slow=38						
BOAB	BOACO BROADBAN	40.44	327	P	P	12 28 22.7	+1.3
BOAB				IAmb	IAmb	12 28 26.5	
	comp=Z,207nm,1.6s						
MATN	Matagalpa	40.98	327	P	P	12 28 26.2	+0.2
RPN	Rapa Nui	40.99	254	LR	LR	12 41 26.8	
	comp=Z,964nm,18.1s,baz=92,slow=30						
PMSA	Palmer Station	42.39	180	LR	LR	12 48 07.9	
	comp=Z,1μm,18.3s,baz=342,slow=39						
TGUH	Tegucigalpa,Un	42.62	326	P	P	12 28 39.5	+0.1
MTO3	Montecristo	44.02	324	P	P	12 28 51.5	+0.6
MTO3				IAmb	IAmb	12 28 55.7	
	comp=Z,118nm,1.5s						
SMAI	San Martin Ant	45.80	181	P	P	12 29 04.7	+0.6
SMAI				IAmb	IAmb	12 29 06.2	
	comp=Z,95nm,1.6s						
PETF	Flores	46.37	325	P	P	12 29 09.2	0.0
PETF				IAmb	IAmb	12 29 19.6	
	comp=Z,43nm,0.9s						
SOR	Soroa	48.44	337	P	P	12 29 24.3	-1.0
SOR				IAmb	IAmb	12 29 29.4	
	comp=Z,97nm,1.7s						
SOR	Soroa	48.44	337	P	P	12 29 24.3	-1.0
SOR				pmax	pmax		
	comp=Z,97nm,1.7s						
CMIG	Matias Romero	49.33	320	LR	LR	12 50 03.7	
	comp=Z,409nm,19.7s,baz=148,slow=36						
TLIG	Tlapa	51.94	317	P	P	12 29 52.6	+0.5
TLIG				IAmb	IAmb	12 29 54.7	
	comp=Z,85nm,1.9s						
352A	Blakely	57.07	339	P	P	12 30 28.5	-0.5
352A				IAmb	IAmb	12 30 33.1	
	comp=Z,117nm,1.7s						
BELA	Belgrano 2	57.33	173	P	P	12 30 30.3	0.0
154A	Montrose	57.55	341	P	P	12 30 32.1	-0.2
154A				IAmb	IAmb	12 30 36.4	
	comp=Z,87nm,1.4s						
VNA3	Neumayer Olymp	57.91	162	P	P	12 30 34.5	0.0
VNA3	Neumayer Olymp	57.91	162	PP	PP	12 32 37.0	-5.6
250A	Grady	57.98	338	P	P	12 30 34.4	-1.0
250A	Grady	57.98	338	P	P	12 30 34.2	-1.2
	baz=156,SNR=8.4						
VNA1	Neumayer--Stat	58.06	161	P	P	12 30 35.7	+0.2
VNA1	Neumayer--Stat	58.06	161	PP	PP	12 32 41.6	-2.3
ZAIG	Zacatecas	58.31	318	P	P	12 30 38.9	+0.6
GOGA	Godfrey	58.40	341	P	P	12 30 37.2	-1.1
GOGA				IAmb	IAmb	12 30 41.6	
	comp=Z,52nm,1.6s						
GOGA	Godfrey	58.40	341	P	P	12 30 37.2	-1.1
GOGA				pmax	pmax		
	comp=Z,52nm,1.7s						
GOGA	Godfrey	58.40	341	P	P	12 30 37.0	-1.3
	baz=159						
GOGA	Godfrey	58.40	341	P	P	12 30 37.0	-1.3
	baz=159						
VNA2	Neumayer--Watz	58.44	161	P	P	12 30 37.9	-0.3
	baz=296,slow=8.0						
VNA2	Neumayer--Watz	58.44	161	PP	PP	12 32 44.3	-3.0
BIRD	Birdtown, Kers	58.74	344	P	P	12 30 40.5	-0.1
BIRD				IAmb	IAmb	12 31 35.1	
	comp=Z,43nm,1.4s						
HODGE	Hodges	58.82	343	P	P	12 30 41.7	+0.5
HODGE				IAmb	IAmb	12 30 45.8	
	comp=Z,87nm,1.7s						
Y52A	Lilburn	59.00	341	P	P	12 30 42.0	-0.4
LRAL	Lakeview Retre	59.19	338	P	P	12 30 42.5	-1.4
LRAL	Lakeview Retre	59.19	338	P	P	12 30 42.0	-1.9
	baz=155						
LRAL	Lakeview Retre	59.19	338	P	P	12 30 42.1	-1.8
	baz=155						
344A	Westbrook Farm	59.20	334	P	P	12 30 44.8	+0.9
344A				IAmb	IAmb	12 30 48.7	
	comp=Z,78nm,1.5s						
PAULI	Pauline	59.25	343	P	P	12 30 44.2	0.0
KMSC	Kings Mountain	59.43	344	P	P	12 30 44.9	-0.6
KMSC				IAmb	IAmb	12 30 49.2	
	comp=Z,49nm,1.5s						
KMSC	Kings Mountain	59.43	344	P	P	12 30 44.5	-1.0
	baz=162						
146A	Union	59.59	336	P	P	12 30 46.0	-0.6
BG3	Lake Jocassee	59.72	342	P	P	12 30 47.5	0.0
BG3				IAmb	IAmb	12 30 48.7	
	comp=Z,98nm,1.8s						
CASEE	Lake Jocassee	59.72	342	P	P	12 30 47.0	-0.5
	baz=160						
Z47A	Carrollton	59.72	337	P	P	12 30 46.9	-0.6
Z47A	Carrollton	59.72	337	P	P	12 30 44.9	-2.6
	baz=154						
Y49A	Blount Mountai	59.74	339	P	P	12 30 45.8	-1.9
	baz=156						
X51A	Calhoun	59.89	340	P	P	12 30 48.1	-0.5
X51A				IAmb	IAmb	12 30 54.9	
	comp=Z,31nm,1.0s						
X51A	Calhoun	59.89	340	P	P	12 30 47.4	-1.2
	baz=158						
X51A				P	P	12 30 47.4	-1.2
	baz=158						
V55A	Taylorsville	60.07	344	P	P	12 30 49.5	-0.3
V55A				IAmb	IAmb	12 30 54.7	
	comp=Z,85nm,1.6s						
V55A	Taylorsville	60.07	344	P	P	12 30 49.4	-0.4
	baz=162,SNR=5.5						
V55A				P	P	12 30 49.4	-0.4
	baz=162,SNR=5.5						
SNAA	Sanae	60.08	161	P	P	12 30 49.1	-0.5
SNAA	Sanae	60.08	161	PP	PP	12 32 58.8	-3.1
SNAA	Sanae	60.08	161	P	P	12 30 49.7	+0.1
SNAA	Sanae	60.08	161	i P	P	12 30 49.9	+0.3
SNAA				pmax	pmax		
	comp=Z,99nm,1.5s						
W52A	Murphy	60.10	341	P	P	12 30 49.4	-0.8
W52A				IAmb	IAmb	12 30 53.7	
	comp=Z,72nm,1.7s						
FPAL	Fort Paine	60.10	340	P	P	12 30 49.7	-0.5
FPAL				IAmb	IAmb	12 30 53.9	
	comp=Z,46nm,1.5s						
HKT	Hockley	60.20	328	P	P	12 30 50.5	-0.3
HKT				IAmb	IAmb	12 30 55.7	
	comp=Z,76nm,1.8s						
HKT	Hockley	60.20	328	ceP	P	12 30 51.3	+0.5
HKT				pmax	pmax		
	comp=Z,43nm,1.7s						
HKT	Hockley	60.20	328	P	P	12 30 50.5	-0.3
	baz=146						
V53A	Saluda	60.32	343	P	P	12 30 50.0	-1.6
	baz=160,SNR=7.4						
V53A				P	P	12 30 50.0	-1.6
	baz=160,SNR=7.4						
X48A	Hartselle	60.50	338	P	P	12 30 51.9	-0.9
X48A	Hartselle	60.50	338	P	P	12 30 51.1	-1.7
	baz=156,SNR=14						
TKL	Tuckaleechee C	60.58	342	LR	LR	12 59 33.0	
	comp=Z,960nm,19.5s,baz=162,slow=38						
TKL	Tuckaleechee C	60.58	342	P	P	12 30 51.8	-1.6
TKL	Tuckaleechee C	60.58	342	P	P	12 30 51.8	-1.6
TKL				pmax	pmax		
	comp=Z,166nm,1.9s						
TKL	Tuckaleechee C	60.58	342	P	P	12 30 51.2	-2.2
	baz=159,SNR=11						
CPCT	Cooper Cave	60.61	341	P	P	12 30 52.3	-1.2
CPCT				IAmb	IAmb	12 30 54.2	
	comp=Z,92nm,1.9s						
W50A	Signal Mountai	60.62	340	P	P	12 30 51.3	-2.3
	baz=158,SNR=6.6						
V52A	Sevierville	60.70	342	P	P	12 30 51.9	-2.3
	baz=160,SNR=11						
833A	Chaparral WMA,	60.71	324	P	P	12 30 54.0	-0.4
	baz=142,SNR=17						
833A	Chaparral WMA,	60.71	324	P	P	12 30 54.1	-0.3
	baz=142,SNR=17						
SWET	Sewanee	60.83	340	P	P	12 30 53.8	-1.3
U54A	Nelsons Funny	60.86	344	P	P	12 30 53.9	-1.4
	baz=161						
U54A				P	P	12 30 53.9	-1.4
	baz=161						
Y45A	Yeager Farm, C	60.86	336	P	P	12 30 55.4	+0.1
V51A	Loudon	60.89	341	P	P	12 30 54.1	-1.3
	baz=159						
NATX	Nacogdoches	61.16	331	P	P	12 30 58.3	+0.9
PLAL	Pickwick Lake	61.33	338	P	P	12 30 56.9	-1.6
TZTN	Tazewell	61.35	342	P	P	12 30 57.5	-1.1
TZTN				IAmb	IAmb	12 30 59.1	
	comp=Z,83nm,1.8s						
TZTN	Tazewell	61.35	342	P	P	12 30 57.2	-1.3
	baz=160						
OXF	Oxford	61.39	336	P	P	12 30 57.1	-1.8
OXF	Oxford	61.39	336	P	P	12 30 57.1	-1.8
OXF				pmax	pmax		
	comp=Z,83nm,1.4s						
OXF	Oxford	61.39	336	P	P	12 30 57.0	-1.9
	baz=153						
V48A	Smith Brothers	61.60	339	P	P	12 30 58.5	-1.7
	baz=156,SNR=15						
CLTN	Cedars of Leba	61.76	340	P	P	12 30 59.6	-1.8
CLTN				IAmb	IAmb	12 31 02.2	
	comp=Z,22nm,0.8s						
CCAR	Cane Creek	61.78	334	P	P	12 31 01.5	0.0
TROLL	Troll, Antarti	61.79	161	P	P	12 31 01.6	+0.3
W45A	Hickory Valley	61.88	337	P	P	12 31 00.9	-1.3
W45A	Hickory Valley	61.88	337	P	P	12 31 00.9	-1.3
	baz=154,SNR=17						
S54A	Dingess, Beckl	61.95	345	P	P	12 31 01.9	-0.7
	baz=162						

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S54A                                  P      P      12 31 01.9 -0.7
       baz=162
U49A   Red Boiling Sp   61.97 340     P      P      12 31 00.6 -2.1
       baz=157,SNR=9.0
WLAR   White Oak Lake   62.13 333     P      P      12 31 02.9 -1.0
T50A   Nancy            62.16 342     P      P      12 31 02.2 -1.8
       baz=158
T50A                                  P      P      12 31 02.2 -1.8
       baz=158
WVT    Waverly          62.29 339     P      P      12 31 02.7 -2.2
WVT                                   IAmb   IAmb   12 31 05.5
       comp=Z,36nm,0.8s
WVT    Waverly          62.29 339     P      P      12 31 02.7 -2.2
WVT                                   pmax   pmax
       comp=Z,36nm,0.9s
WVT    Waverly          62.29 339     P      P      12 31 02.8 -2.2
       baz=155,SNR=31
WVT    Waverly          62.29 339     P      P      12 31 02.6 -2.2
       baz=155
JCT    Junction City    62.63 326     P      P      12 31 06.2 -1.2
JCT                                   IAmb   IAmb   12 31 11.4
       comp=Z,28nm,1.1s
JCT    Junction City    62.63 326     P      P      12 31 06.2 -1.2
JCT                                   pmax   pmax
       comp=Z,28nm,1.2s
JCT    Junction City    62.63 326     P      P      12 31 06.9 -0.5
       baz=143,SNR=9.1
JCT    Junction City    62.63 326     P      P      12 31 06.9 -0.5
       baz=143,SNR=9.1
WHTX   Lake Whitney,    62.67 328     P      P      12 31 06.6 -0.9
WHTX                                  IAmb   IAmb   12 31 11.8
       comp=Z,61nm,1.6s
WHTX   Lake Whitney,    62.67 328     P      P      12 31 07.4 -0.1
       baz=145
X40A   Basin Creek Fa   62.70 334     P      P      12 31 09.4 +1.7
       baz=150
UALR   University of    62.75 334     P      P      12 31 07.4 -0.7
T47A   Sharon Grove     62.83 340     P      P      12 31 06.5 -2.0
T47A   Sharon Grove     62.83 340     P      P      12 31 06.4 -2.1
       baz=156,SNR=13
GLAT   Glass            62.92 337     P      P      12 31 08.4 -0.7
MIAR   Mount Ida        63.06 333     P      P      12 31 09.4 -0.7
MIAR                                  IAmb   IAmb   12 31 14.6
       comp=Z,46nm,1.5s
MIAR   Mount Ida        63.06 333     P      P      12 31 09.4 -0.7
MIAR                                  pmax   pmax
       comp=Z,46nm,1.5s
MIAR   Mount Ida        63.06 333     P      P      12 31 09.2 -0.9
       baz=150,SNR=13
MIAR   Mount Ida        63.06 333     P      P      12 31 09.4 -0.7
       baz=150,SNR=13
W41B   Gary Mavity, V   63.06 335     P      P      12 31 08.9 -1.2
       baz=151
W41B   Gary Mavity, V   63.06 335     P      P      12 31 09.0 -1.1
       baz=151
WHAR   Wooly Hollow     63.18 335     P      P      12 31 10.2 -0.7
WHAR                                  IAmb   IAmb   12 31 54.0
       comp=Z,54nm,1.6s
R50A   Paris            63.19 342     P      P      12 31 09.6 -1.2
       baz=159
R50A                                  P      P      12 31 09.6 -1.2
       baz=159
HPIG                    63.26 319     P      P      12 31 11.1 -0.7
Q52A   Bidwell          63.28 344     P      P      12 31 09.9 -1.6
       baz=161
Q52A                                  P      P      12 31 09.9 -1.6
       baz=161
LCAR   Lake Charles     63.42 336     P      P      12 31 11.4 -1.1
PARMO  Parma            63.44 337     P      P      12 31 11.4 -1.1
P53A   Whipple          63.57 345     P      P      12 31 12.7 -0.7
       baz=162
P53A                                  P      P      12 31 12.7 -0.7
       baz=162
Q51A   Peebles          63.62 344     P      P      12 31 12.4 -1.3
       baz=160
Q51A                                  P      P      12 31 12.4 -1.3
       baz=160
FCAR   Ozark Folk Cen   63.64 335     P      P      12 31 12.6 -1.3
FCAR                                  IAmb   IAmb   12 31 16.9
       comp=Z,58nm,1.7s
W39A   Magazine         63.71 333     P      P      12 31 14.3  0.0
       baz=150,SNR=6.9
W39A   Magazine         63.71 333     P      P      12 31 14.8 +0.5
       baz=150,SNR=6.9
SLBS   Sierra La Lagu   63.75 313     P      P      12 31 15.6 +0.6
SLBS                                  IAmb   IAmb   12 31 20.8
       comp=Z,53nm,1.4s
PBMO   Poplar Bluff     63.78 337     P      P      12 31 14.0 -0.8
PBMO   Poplar Bluff     63.78 337     P      P      12 31 13.9 -0.8
       baz=153,SNR=46
TX31   Lajitas Ar. Si   63.86 322     P      P      12 31 15.6  0.0
       baz=139
TX32   Lajitas Array    63.86 322     P      P      12 31 15.0 -0.6
TXAR   Lajitas Array    63.86 322     P      P      12 31 15.0 -0.6
       comp=Z,3.0nm,0.7s,baz=147,slow=8.1,SNR=25
TXAR                                  LR     LR     12 59 11.3
       comp=Z,183nm,18.4s,baz=131,slow=36
       comp=Z,3.0nm,0.7s
TXAR   Lajitas Array    63.86 322     P      P      12 31 15.4 -0.2
TXAR   Lajitas Array    63.86 322     P      P      12 31 15.4 -0.2
X37A   Clayton          63.87 332            P      12 31 15.7 +0.2
P52A   Corning          63.89 345     P      P      12 31 14.2 -1.3
P52A                                  IAmb   IAmb   12 31 18.6
       comp=Z,48nm,1.4s
P52A   Corning          63.89 345     P      P      12 31 14.0 -1.4
       baz=162
S44A   Carbondale       64.19 338     P      P      12 31 15.8 -1.6
       baz=154,SNR=6.6
O53A   New Philadelph   64.25 346     P      P      12 31 17.2 -0.7
       baz=163
ABTX   Abilene, Hawle   64.26 327     P      P      12 31 17.6 -0.5
       baz=144,SNR=7.2
ABTX   Abilene, Hawle   64.26 327     P      P      12 31 17.7 -0.4
       baz=144,SNR=7.2
LPIG   La Paz           64.27 313     LR     LR     12 58 47.0
       comp=Z,59nm,18.5s,baz=186,slow=36
U40A   Yellville        64.33 335     P      P      12 31 18.4  0.0
U40A   Yellville        64.33 335     P      P      12 31 17.9 -0.6
       baz=151,SNR=11
U40A                                  P      P      12 31 17.9 -0.6
       baz=151,SNR=11
U40A   Yellville        64.33 335     P      P      12 31 18.2 -0.3
       baz=151,SNR=11
P49A   Miami Univ. Ec   64.47 343     P      P      12 31 16.6 -2.6
       baz=159,SNR=6.1
P49A   Miami Univ. Ec   64.47 343     P      P      12 31 17.2 -2.0
       baz=159,SNR=6.1
LIC    Lamto            64.59  71    eP      P      12 31 21.0 +0.4
       comp=Z,76nm,1.9s
P48A   Milroy           64.59 342     P      P      12 31 17.6 -2.5
       baz=158
P48A                                  P      P      12 31 17.6 -2.5
       baz=158
BLO    Bloomington      64.65 341     P      P      12 31 18.9 -1.6
BLO                                   IAmb   IAmb   12 31 21.1
       comp=Z,19nm,0.7s
BLO    Bloomington      64.65 341     P      P      12 31 18.9 -1.6
BLO                                   pmax   pmax
       comp=Z,19nm,0.7s
ACSO   Alum Creek Sta   64.66 344     P      P      12 31 18.4 -2.1
       baz=161
ACSO   Alum Creek Sta   64.66 344     P      P      12 31 18.7 -1.8
       baz=161
HHAR   Hobbs            64.71 334     P      P      12 31 20.0 -0.9
HHAR   Hobbs            64.71 334     P      P      12 31 20.1 -0.9
       baz=150
TIC    Toumodi          64.79  71    eP      P      12 31 22.2 +0.2
       comp=Z,115nm,1.5s
FVM    French Village   64.86 337     P      P      12 31 20.0 -1.8
       baz=153,SNR=10
KIC    Kosan Boka       64.90  71    eP      P      12 31 22.9 +0.2
       comp=Z,29nm,0.6s
DBIC   Dimbokro         64.95  71     P      P      12 31 22.5 -0.4
       comp=Z,14nm,0.7s,baz=244,slow=6.8,SNR=13
DBIC                                  LR     LR     12 57 50.1
       comp=Z,702nm,19.6s,baz=241,slow=34
       comp=Z,14nm,0.7s
DBIC   Dimbokro         64.95  71     P      P      12 31 21.1 -1.9
DBIC                                  IAmb   IAmb   12 31 23.9
       comp=Z,18nm,0.8s
O49A   Covington        64.97 343     P      P      12 31 20.8 -1.8
       baz=160
O49A                                  P      P      12 31 20.8 -1.8
       baz=160
X34A   Smith Ranch, M   64.99 330            P      12 31 23.1 +0.2
X34A                                  IAmb   IAmb   12 31 27.1
       comp=Z,52nm,1.4s
BINY   Binghamton       65.14 350     P      P      12 31 24.6 +1.0
       baz=168
TUL1   Leonard          65.17 332            P      12 31 24.4 +0.4
TUL1                                  IAmb   IAmb   12 31 28.0
       comp=Z,92nm,1.9s
TUL1   Leonard          65.17 332     P      P      12 31 23.6 -0.4
       baz=148
TUL1   Leonard          65.17 332     P      P      12 31 24.4 +0.4
       baz=148
CCM    Cathedral Cave   65.21 337     P      P      12 31 22.9 -1.2
CCM                                   IAmb   IAmb   12 31 27.3
       comp=Z,64nm,1.5s
CCM    Cathedral Cave   65.21 337     P      P      12 31 22.9 -1.2
CCM                                   pmax   pmax
       comp=Z,64nm,1.5s
CCM    Cathedral Cave   65.21 337     P      P      12 31 22.7 -1.5
       baz=152,SNR=18
CCM    Cathedral Cave   65.21 337     P      P      12 31 22.7 -1.5
       baz=152
O48B   Farmland         65.26 343     P      P      12 31 22.2 -2.2
       baz=159,SNR=7.9
O48B   Farmland         65.26 343     P      P      12 31 22.2 -2.2
       baz=159,SNR=7.9
P46A   Rosedale         65.27 341     P      P      12 31 23.2 -1.3
P46A                                  IAmb   IAmb   12 31 26.9
       comp=Z,43nm,1.4s
N49A   Columbus Grove   65.62 344     P      P      12 31 24.9 -1.8
       baz=160,SNR=6.7
N49A                                  P      P      12 31 24.9 -1.8
       baz=160,SNR=6.7
S39A   Bolivar          65.68 335     P      P      12 31 26.5 -0.7
       baz=150,SNR=18
ERPA   Erie             65.78 347     P      P      12 31 26.8 -0.9
       baz=164,SNR=5.2
ERPA   Erie             65.78 347     P      P      12 31 27.0 -0.7
       baz=164,SNR=5.2
WVNY   West Valley, N   65.79 348     P      P      12 31 27.8  0.0
       baz=165
R40A   Maddies Statio   65.80 336     P      P      12 31 26.5 -1.4
       baz=152
SFIN   Lafayette        65.93 341     P      P      12 31 26.8 -2.0
       baz=157,SNR=8.2
SFIN   Lafayette        65.93 341     P      P      12 31 26.6 -2.2
       baz=157,SNR=8.2
N47A   Urbana           65.99 342     P      P      12 31 26.6 -2.5
       baz=158,SNR=9.3
N47A                                  P      P      12 31 26.6 -2.5
       baz=158,SNR=9.3
P43A   Skaggs, Pawnee   66.03 339     P      P      12 31 27.3 -2.1
       baz=154,SNR=6.2
T35B   Sooner Cattle    66.33 332     P      P      12 31 31.7 +0.3
       baz=147
MNTX   Cornudas Mount   66.60 322     P      P      12 31 32.6 -0.7
MNTX                                  IAmb   IAmb   12 31 37.0
       comp=Z,36nm,1.3s
MNTX   Cornudas Mount   66.60 322     P      P      12 31 32.2 -1.1
       baz=139,SNR=29
MNTX   Cornudas Mount   66.60 322     P      P      12 31 32.1 -1.2
       baz=139,SNR=29
HDIL   Hopedale         66.78 340     P      P      12 31 32.9 -1.3
HDIL   Hopedale         66.78 340     P      P      12 31 32.8 -1.3
       baz=155
HDIL   Hopedale         66.78 340     P      P      12 31 32.7 -1.5
       baz=155
P40A   Paris            66.81 337     P      P      12 31 32.6 -1.7
       baz=152,SNR=9.7
MSTX   Muleshoe         66.92 326     P      P      12 31 34.8 -0.6
       baz=141,SNR=31
MSTX   Muleshoe         66.92 326     P      P      12 31 34.6 -0.8
       baz=141,SNR=31
AMTX   Amarillo         67.08 327     P      P      12 31 35.9 -0.4
       baz=142
AMTX   Amarillo         67.08 327     P      P      12 31 35.9 -0.4
       baz=142
LONY   Lake Ozonia      67.32 352     P      P      12 31 36.1 -1.4
       baz=170
P38A   Dawn             67.44 336     P      P      12 31 37.0 -1.4
       baz=151
QSPA   South Pole Qui   67.83 180     LR     LR     13 03 43.7
       comp=Z,508nm,19.2s,baz=163,slow=38
QSPA   South Pole Qui   67.83 180     P      P      12 31 40.2 -0.6
QSPA                                  IAmb   IAmb   12 31 42.4
       comp=Z,39nm,1.2s
SADO   Sadowa           68.17 349     LR     LR     13 03 30.4
       comp=Z,545nm,20.2s,baz=156,slow=38
SADO   Sadowa           68.17 349     P      P      12 31 41.8 -1.1
SADO                                  IAmb   IAmb   12 31 46.3
       comp=Z,60nm,1.8s
L42A   Oliver, Polo     68.21 340     P      P      12 31 41.7 -1.5
       baz=155
KSU1   Kansas State U   68.21 333     P      P      12 31 43.1 -0.2
       baz=148
KSU1   Kansas State U   68.21 333     P      P      12 31 43.0 -0.2
       baz=148
K43A   Burlington       68.43 341     P      P      12 31 43.0 -1.6
       baz=156,SNR=6.0
R32A   Long Quarter,    68.54 332     P      P      12 31 45.4  0.0
       baz=146,SNR=7.4
121A   Cookes Peak, D   68.59 321     P      P      12 31 46.1 +0.1
       baz=137,SNR=24
121A   Cookes Peak, D   68.59 321     P      P      12 31 46.7 +0.6
       baz=137,SNR=24
L40A   Anamosa          68.77 339     P      P      12 31 45.2 -1.5
       baz=153,SNR=14
CRNM   Carthage         69.04 323     P      P      12 31 49.6 +0.8
BNM    Barren Site      69.13 323     P      P      12 31 49.2 -0.3
Y22A   Socorro          69.16 323     P      P      12 31 49.9 +0.4
       baz=138,SNR=17
JFWS   Jewell Farm      69.22 340     P      P      12 31 48.2 -1.3
       baz=154,SNR=11
JFWS   Jewell Farm      69.22 340     P      P      12 31 48.3 -1.2
       baz=154,SNR=11
D62A   Allapoint, All   69.26 357     P      P      12 31 49.3 -0.2
       baz=175
D62A                                  P      P      12 31 49.3 -0.2
       baz=175
CBKS   Cedar Bluff      69.32 331     P      P      12 31 51.8 +1.5
       baz=145
CBKS   Cedar Bluff      69.32 331     P      P      12 31 51.3 +1.0
       baz=145
GLMI   Grayling         69.39 345     P      P      12 31 50.0 -0.5
GLMI                                  IAmb   IAmb   12 31 53.0
       comp=Z,38nm,0.9s
KOWA   Kowa             69.51  64     P      P      12 31 51.5 -0.4
KOWA                                  IAmb   IAmb   12 31 56.2
       comp=Z,49nm,1.6s
ANMO   Albuquerque      69.63 324     LR     LR     13 04 42.5
       comp=Z,81nm,19.1s,baz=140,slow=38
ANMO   Albuquerque      69.63 324     P      P      12 31 52.8 +0.4
ANMO                                  IAmb   IAmb   12 31 57.8
       comp=Z,53nm,1.2s
ANMO   Albuquerque      69.63 324ceP         P      12 31 52.8 +0.4
ANMO                                  pmax   pmax
       comp=Z,72nm,1.7s
ANMO   Albuquerque      69.63 324     P      P      12 31 52.7 +0.2
       baz=139,SNR=48
ANMO   Albuquerque      69.63 324     P      P      12 31 52.6 +0.2
       baz=139
I42A   Draeger Farm,    69.69 341     P      P      12 31 50.8 -1.6
I42A                                  IAmb   IAmb   12 31 55.6
       comp=Z,58nm,1.4s
I42A   Draeger Farm,    69.69 341     P      P      12 31 50.6 -1.7
       baz=156,SNR=9.9
K38A   Parkersburg      69.81 338     P      P      12 31 51.8 -1.4
       baz=152
G45A   Suttons Bay      69.85 344     P      P      12 31 51.8 -1.6
       baz=159,SNR=5.5
G45A                                  P      P      12 31 51.8 -1.6
       baz=159,SNR=5.5
H43A   Windswept, Lux   69.89 342     P      P      12 31 51.6 -2.0
       baz=157,SNR=8.6
TUC    Tucson           70.21 319     P      P      12 31 56.6 +0.7
TUC                                   IAmb   IAmb   12 32 01.4
       comp=Z,51nm,1.2s
TUC    Tucson           70.21 319     P      P      12 31 56.6 +0.7
TUC                                   pmax   pmax
       comp=Z,51nm,1.2s
TUC    Tucson           70.21 319     P      P      12 31 56.6 +0.7
       baz=135
I40A   Norwalk          70.21 340     P      P      12 31 53.8 -1.8
       baz=154
T25A   Trinidad         70.22 327     P      P      12 31 56.4 +0.3
T25A                                  IAmb   IAmb   12 31 58.8
       comp=Z,55nm,1.8s
T25A   Trinidad         70.22 327     P      P      12 31 56.6 +0.6
       baz=141,SNR=5.4
E46A   Sault Ste Mari   70.77 345     P      P      12 31 57.2 -1.7
E46A                                  IAmb   IAmb   12 32 02.7
       comp=Z,84nm,1.5s
E46A   Sault Ste Mari   70.77 345     P      P      12 31 57.2 -1.7
       baz=160,SNR=12
BGNE   Belgrade         70.79 334     P      P      12 31 58.7 -0.5
BGNE   Belgrade         70.79 334     P      P      12 31 59.5 +0.2
       baz=147
PMOZ   Porto Moniz, M   70.96  41    i LQ    LQ     12 36 11.2
PMOZ   Porto Moniz, M   70.96  41    eLR     LR     12 59 01.9
       comp=Z,348nm,20.0s
214A   Organ Pipe Nat   71.20 318     P      P      12 32 03.7 +1.8
       baz=133
I37B   Waseca           71.24 338     P      P      12 32 00.2 -1.6
       baz=152,SNR=7.3
SDCO   Great Sand Dun   71.24 327     P      P      12 32 02.1 -0.3
SDCO                                  IAmb   IAmb   12 32 07.7
       comp=Z,51nm,1.2s
SDCO   Great Sand Dun   71.24 327     P      P      12 32 02.6 +0.2
       baz=140,SNR=48
SDCO   Great Sand Dun   71.24 327     P      P      12 32 02.8 +0.4
       baz=140,SNR=48
G40A   Rib Lake         71.33 341     P      P      12 32 01.2 -1.1
       baz=155,SNR=12
E43A   Lone Tree Farm   71.44 344     P      P      12 32 01.1 -1.9
       baz=158,SNR=17
W18A   Petrified Fore   71.58 322     P      P      12 32 05.2 +0.8
       baz=136,SNR=27
COWI   Conover          71.77 342     P      P      12 32 03.4 -1.6
       baz=156
S22A   4UR Ranch, Cre   71.92 326     P      P      12 32 07.0 +0.5
       baz=139,SNR=8.6
Q24A   Divide           72.00 328     P      P      12 32 07.5 +0.6
       baz=140,SNR=8.6
SPMN   Marine on St.    72.11 339     P      P      12 32 05.7 -1.4
SPMN                                  IAmb   IAmb   12 32 10.2
       comp=Z,71nm,1.6s
SPMN   Marine on St.    72.11 339     P      P      12 32 05.2 -1.8
       baz=152,SNR=9.1
SPMN   Marine on St.    72.11 339     P      P      12 32 05.5 -1.5
       baz=152,SNR=9.1
ECSD   EROS Data Cent   72.15 336     P      P      12 32 05.7 -1.6
       baz=149,SNR=12
ECSD   EROS Data Cent   72.15 336     P      P      12 32 06.2 -1.1
       baz=149,SNR=12
MVCO   Mesa Verde       72.41 324     P      P      12 32 09.3 -0.1
MVCO   Mesa Verde       72.41 324     P      P      12 32 10.2 +0.8
       baz=137,SNR=33
D41A   Chassel          72.49 343     P      P      12 32 08.2 -1.0
       baz=156,SNR=19
WUAZ   Wupatki          72.80 321     P      P      12 32 12.9 +1.2
       baz=135,SNR=33
ISCO   Idaho Springs    72.87 328     P      P      12 32 12.7 +0.6
ISCO   Idaho Springs    72.87 328     P      P      12 32 12.7 +0.6
ISCO                                  pmax   pmax
       comp=Z,32nm,1.4s
ISCO   Idaho Springs    72.87 328     P      P      12 32 11.1 -1.1
       baz=140,SNR=17
ISCO   Idaho Springs    72.87 328     P      P      12 32 12.5 +0.4
       baz=140,SNR=17
F36A   Milaca           72.91 339     P      P      12 32 10.1 -1.7
       baz=152,SNR=15
E38A   The Farm, Brul   72.94 341     P      P      12 32 10.7 -1.3
       baz=154
GLA    Glamis           73.20 317     P      P      12 32 15.3 +1.4
       baz=132
PV07   Paradox Valley   73.39 325     P      P      12 32 16.3 +1.1
PV07                                  IAmb   IAmb   12 32 20.8
       comp=Z,51nm,1.3s
PDMCI  Parker Dam,Lak   73.61 319     P      P      12 32 17.5 +1.2
       baz=133
TAOE   Nuku Hiva Isla   73.63 267    eLR     LR     12 55 55.0
       comp=Z,628nm,26.2s
TOA0   Torodi Ar. Sit   73.68  68     P      P      12 32 16.6 -0.5
TORD   Torodi Ar. Bea   73.68  68     P      P      12 32 16.2 -0.9
       comp=Z,11nm,0.4s,baz=256,slow=6.3,SNR=174
TORD                                  LR     LR     13 04 36.4
       comp=Z,281nm,19.1s,baz=218,slow=36
       comp=Z,11nm,0.4s
TORD   Torodi Ar. Bea   73.68  68     P      P      12 32 16.0 -1.1
IKP    In-Ko-Pah, Jac   73.75 316     P      P      12 32 18.2 +1.0
       baz=131
N23A   Red Feather La   73.87 328     P      P      12 32 18.8 +0.9
       baz=140,SNR=6.8
BC3    Big Chuckawall   73.99 317     P      P      12 32 19.5 +0.9
       baz=132,SNR=13
MONP2  Monument Peak    74.10 316     P      P      12 32 20.3 +0.8
       baz=131
EYMN   Ely              74.13 341     P      P      12 32 17.0 -1.9
       baz=154
EYMN   Ely              74.13 341     P      P      12 32 17.1 -1.9
       baz=154
IRM    Iron Mountain    74.13 318     P      P      12 32 20.7 +1.4
       baz=132,SNR=8.9
NEE2   Needles Airpor   74.22 319     P      P      12 32 21.1 +1.3
       baz=132
O20A   White River Ci   74.44 326     P      P      12 32 22.0 +0.8
       baz=138,SNR=27
SUR    Sutherland       74.45 119     LR     LR     13 01 49.6
       comp=Z,519nm,19.3s,baz=262,slow=33
BELC   Belle Mtn. Jos   74.56 317     P      P      12 32 23.2 +1.2
       baz=131,SNR=14
PFO    Pinyon Flats O   74.59 317     LR     LR     13 03 27.1
       comp=Z,138nm,20.9s,baz=135,slow=34
PFO    Pinyon Flats O   74.59 317     P      P      12 32 23.3 +1.2
PFO    Pinyon Flats O   74.59 317ceP         P      12 32 23.8 +1.6
PFO    Pinyon Flats O   74.59 317     P      P      12 32 23.2 +1.0
       baz=131,SNR=8.7
GMRC   Granite Mounta   74.86 318     P      P      12 32 25.1 +1.4
       baz=132,SNR=34
SRU    San Rafael Swe   74.89 324     P      P      12 32 24.6 +0.8
SRU                                   IAmb   IAmb   12 32 29.3
       comp=Z,69nm,1.1s
SRU    San Rafael Swe   74.89 324     P      P      12 32 24.6 +0.8
SRU                                   pmax   pmax
       comp=Z,69nm,1.1s
LCMT   Little Creek M   74.93 321     P      P      12 32 24.6 +0.6
LCMT                                  IAmb   IAmb   12 32 30.1
       comp=Z,43nm,1.2s
MTPU   Mount Pierson    75.04 323     P      P      12 32 25.7 +0.8
MURC   Murrieta         75.06 316     P      P      12 32 25.4 +0.7
       baz=130,SNR=7.8
RWWY   Rawlins          75.09 328     P      P      12 32 25.8 +0.7
B35A   Bob, Littlefor   75.17 340     P      P      12 32 23.1 -1.9
       baz=152,SNR=12
BBRC   Big Bear Solar   75.31 317     P      P      12 32 28.6 +2.2
       baz=131
HEC    Hector,Ludlow    75.31 318     P      P      12 32 27.6 +1.4
       baz=131
CCUT   Cedar City       75.37 322     P      P      12 32 27.8 +1.1
CCUT                                  IAmb   IAmb   12 32 33.3
       comp=Z,65nm,1.1s
TUQ    Turquoise Moun   75.46 319     P      P      12 32 28.4 +1.3
       baz=132,SNR=14
K22A   Casper           75.50 329     P      P      12 32 28.5 +1.3
       baz=140
K22A   Casper           75.50 329     P      P      12 32 28.6 +1.4
       baz=140
RSSD   Black Hills      75.50 332     P      P      12 32 27.1 -0.2
RSSD   Black Hills      75.50 332     P      P      12 32 27.1 -0.2
RSSD                                  pmax   pmax
       comp=Z,6.0nm,1.0s
RSSD   Black Hills      75.50 332     P      P      12 32 26.9 -0.4
       baz=142
RSSD   Black Hills      75.50 332     P      P      12 32 27.0 -0.2
       baz=142
TCRU   Three Creeks R   75.59 323     P      P      12 32 29.1 +1.1
TSUM   Tsumeb           75.71 105     LR     LR     13 01 39.4
       comp=Z,427nm,21.2s,baz=329,slow=32
TSUM   Tsumeb           75.71 105     P      P      12 32 28.5 -0.5
SBA    Scott Base       75.72 190     P      P      12 32 29.5 +1.6
SBA                                   IAmb   IAmb   12 32 31.5
       comp=Z,96nm,1.6s
SBA    Scott Base       75.72 190     P      P      12 32 29.5 +1.6
SBA                                   pmax   pmax
       comp=Z,96nm,1.7s
RRX    Edison Barstow   75.75 318     P      P      12 32 31.0 +2.3
       baz=131
BFSC   Mount Baldy Ra   75.76 317     P      P      12 32 30.2 +1.3
       baz=130,SNR=9.4
AGMN   Agassiz Nation   75.81 339     P      P      12 32 27.4 -1.3
       baz=150,SNR=5.5
AGMN   Agassiz Nation   75.81 339     P      P      12 32 27.8 -0.9
       baz=150,SNR=5.5
GSC    Goldstone, Bar   75.91 318     P      P      12 32 30.7 +1.0
       baz=131,SNR=18
SHOC   Shoshone, Teco   75.98 319     P      P      12 32 31.3 +1.4
       baz=131
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E28A	Huff	76.10	335	P	P	12 32 30.9	+0.5
	baz=146						
DECC	Green Verdugo	76.20	316	P	P	12 32 32.4	+1.2
	baz=130						
EDW2	Edwards Air Fo	76.38	317	P	P	12 32 33.0	+0.7
	baz=130,SNR=6.8						
LRMC	Laurel Mtn Rad	76.57	318	P	P	12 32 34.3	+0.9
	baz=130						
TPNV	Topopah Spring	76.66	320	P	P	12 32 35.4	+1.4
	baz=132,SNR=34						
FURC	Furnace Creek,	76.71	319	P	P	12 32 35.2	+1.2
	baz=131,SNR=20						
VNDA	Vanda	76.71	189	P	P	12 32 34.8	+1.3
	comp=Z,20nm,1.1s,baz=144,slow=4.1,SNR=37						
VNDA				LR	LR	13 05 11.7	
	comp=Z,598nm,19.1s,baz=24,slow=35						
	comp=Z,20nm,1.1s						
VNDA	Vanda	76.71	189	P	P	12 32 35.0	+1.5
VNDA				IAmb	IAmb	12 32 36.8	
	comp=Z,35nm,1.1s						
VNDA	Vanda	76.71	189	P	P	12 32 35.0	+1.5
VNDA				pmax	pmax		
	comp=Z,35nm,1.2s						
MDND	Maddock	76.74	336	P	P	12 32 34.7	+0.7
	baz=147						
MDND	Maddock	76.74	336	P	P	12 32 34.5	+0.5
	baz=147						
DUG	Dugway, Tooele	76.90	324	P	P	12 32 36.2	+1.0
	baz=135,SNR=30						
SCHQ	Schefferville	76.92	359	P	P	12 32 34.0	-0.8
	comp=Z,7.1nm,0.8s,baz=179,slow=3.6,SNR=14						
SCHQ				LR	LR	13 08 37.7	
	comp=Z,183nm,19.3s,baz=169,slow=37						
	comp=Z,7.1nm,0.8s						
SCHQ	Schefferville	76.92	359	P	P	12 32 34.9	+0.1
BW06	Boulder Array	77.06	328	P	P	12 32 36.2	0.0
BW06				IAmb	IAmb	12 32 42.2	
	comp=Z,58nm,1.8s						
BW06	Boulder Array	77.06	328	P	P	12 32 36.2	0.0
	baz=138,SNR=16						
PD31	Pinedale Array	77.06	328	P	P	12 32 36.2	+0.1
PD31				IAmb	IAmb	12 32 42.2	
	comp=Z,53nm,1.8s						
PDAR	Pinedale Array	77.06	328	P	P	12 32 36.1	-0.1
	comp=Z,2.6nm,0.5s,baz=147,slow=6.9,SNR=24						
PDAR				LR	LR	13 10 37.7	
	comp=Z,133nm,20.8s,baz=146,slow=39						
	comp=Z,2.6nm,0.5s						
PDAR	Pinedale Array	77.06	328	P	P	12 32 35.6	-0.6
ISA	Isabella, Lake	77.19	317	P	P	12 32 38.5	+1.6
	baz=130,SNR=20						
R11A	Troy Canyon, C	77.20	321	P	P	12 32 38.2	+1.2
	baz=132,SNR=42						
TBI	Tubuai	77.22	250	*e*LR	LR	12 57 36.0	
	comp=Z,357nm,24.0s						
GRAC	Grapevine Rang	77.36	319	P	P	12 32 39.3	+1.6
	baz=131						
CWC	Cottonwood Cre	77.44	318	P	P	12 32 39.6	+1.3
	baz=130						
ULM	Lac du Bonnet	77.51	340	P	P	12 32 36.6	-1.6
	comp=Z,6.3nm,0.6s,baz=158,slow=6.5,SNR=11						
ULM				LR	LR	13 09 59.0	
	comp=Z,621nm,19.1s,baz=126,slow=38						
	comp=Z,6.3nm,0.6s						
PKM	Mcpherson Peak	77.55	316	P	P	12 32 40.6	+1.6
	baz=129,SNR=10						
VES	Vestal, Richgr	77.68	317	P	P	12 32 40.4	+0.9
	baz=129,SNR=21						
TIN	Tinemaha, Big	77.92	319	P	P	12 32 43.2	+2.2
	baz=130						
SMMC	Simmler	77.93	316	P	P	12 32 42.9	+1.9
	baz=129						
LAO	LASA Array	78.47	332	P	P	12 32 44.2	+0.4
	baz=141						
LAO	LASA Array	78.47	332	P	P	12 32 44.0	+0.3
	baz=141						
ELK	Elko	78.62	323	LR	LR	13 09 44.6	
	comp=Z,226nm,18.3s,baz=146,slow=37						
RLMT	Red Lodge	78.66	329	P	P	12 32 45.9	+0.9
	baz=138,SNR=8.5						
MLAC	Mammoth, Mammo	78.66	319	P	P	12 32 46.7	+1.5
	baz=130,SNR=12						
H17A	Grant Village	78.75	328	P	P	12 32 47.6	+1.9
	baz=137						
NV11	Mina Array Sit	78.77	320	P	P	12 32 45.8	+0.1
NV11				IAmb	IAmb	12 32 51.6	
	comp=Z,50nm,1.3s						
NVAR	Mina Array Bea	78.86	320	P	P	12 32 47.2	+0.9
	comp=Z,17nm,1.1s,baz=144,slow=6.0,SNR=44						
NVAR				LR	LR	13 09 08.3	
	comp=Z,147nm,20.0s,baz=130,slow=37						
	comp=Z,17nm,1.1s						
NVAR	Mina Array Bea	78.86	320	P	P	12 32 46.7	+0.5
DGMT	Dagmar	79.03	334	P	P	12 32 46.9	+0.2
	baz=143						
MDT	Midelt	79.11	48	P	P	12 32 47.8	+0.1
	comp=Z,5.7nm,0.8s,baz=272,slow=3.3,SNR=8.1						
MDT				LR	LR	13 05 26.7	
	comp=Z,415nm,21.1s,baz=182,slow=34						
	comp=Z,5.7nm,0.8s						
RYN	Ryan	79.11	320	P	P	12 32 48.6	+1.0
RYN				IAmb	IAmb	12 32 53.5	
	comp=Z,61nm,1.4s						
KVN	Kaiserville	79.14	320	P	P	12 32 48.2	+0.5
KVN				IAmb	IAmb	12 32 53.3	
	comp=Z,61nm,1.2s						
KVN	Kaiserville	79.14	320	P	P	12 32 48.2	+0.5
KVN				pmax	pmax		
	comp=Z,61nm,1.2s						
YMR	Madison River	79.14	328	P	P	12 32 49.2	+1.5
PPT2	Papeete2	79.24	255	*e*LR	LR	12 58 26.0	
	comp=Z,2µm,34.2s						
BOSA	Boshof	79.27	117	P	P	12 32 47.5	-1.3
	comp=Z,12nm,1.1s,baz=256,slow=4.6,SNR=9.0						
BOSA				LR	LR	13 04 28.3	
	comp=Z,600nm,18.8s,baz=236,slow=33						
	comp=Z,12nm,1.1s						
BOSA	Boshof	79.27	117	P	P	12 32 48.0	-0.8
BOSA	Boshof	79.27	117	P	P	12 32 48.0	-0.8
BOSA				pmax	pmax		
	comp=Z,38nm,1.5s						
GCMT	Greycliff	79.35	330	P	P	12 32 49.0	+0.3
YHL	Hebgen Lake	79.38	328	P	P	12 32 49.7	+0.6
YHL				IAmb	IAmb	12 33 08.3	
	comp=Z,64nm,1.6s						
PCVE	Castro Verde	79.75	42	*e*P	P	12 32 52.3	+1.4
	comp=Z,31nm,1.7s						
PVAQ	Vaqueiros	79.81	42	*e*P	P	12 32 53.3	+2.1
	comp=Z,49nm,1.7s						
PVAQ	Vaqueiros	79.81	42	*e*LR	LR	13 00 12.8	
	comp=Z,419nm,18.0s						
HLID	Hailey	80.11	326	P	P	12 32 54.0	+1.2
	baz=134,SNR=49						
BOZ	Bozeman (W)	80.14	328	P	P	12 32 54.1	+1.1
	baz=136,SNR=8.4						
MCMT	McKenzie Canyo	80.19	327	P	P	12 32 53.8	+0.4
MPK	Martis Peak	80.44	319	P	P	12 32 56.0	+1.0
MPK				IAmb	IAmb	12 33 01.3	
	comp=Z,84nm,1.3s						
PMTG	Montargil	80.54	41	*e*P	P	12 32 56.9	+1.8
	comp=Z,102nm,1.7s						
LRM	Limekiln Ridge	80.70	328	P	P	12 32 57.2	+1.0
PBAR	Barrancos	80.71	42	*e*P	P	12 32 57.0	+1.0
	comp=Z,32nm,1.4s						
MFID	Camas Ranch	80.75	325	P	P	12 32 56.6	+0.3
MFID				IAmb	IAmb	12 33 02.5	
	comp=Z,92nm,1.6s						
LBTB	Lobatse	80.78	113	LR	LR	13 04 02.0	
	comp=Z,466nm,21.8s,baz=242,slow=32						
LBTB	Lobatse	80.78	113	P	P	12 32 55.8	-1.2
LBTB	Lobatse	80.78	113	P	P	12 32 55.8	-1.2
LBTB				pmax	pmax		
	comp=Z,39nm,1.6s						
PESTR	Estremoz	80.80	41	*e*P	P	12 32 56.9	+0.4
	comp=Z,47nm,1.9s						
PESTR	Estremoz	80.80	41	P	P	12 32 57.7	+1.2
PCAS	Casmilo, Conde	80.99	40	*e*P	P	12 32 58.6	+1.1
	comp=Z,86nm,1.8s						
BEKR	Beckworth	81.00	320	P	P	12 32 58.4	+0.6
BEKR				IAmb	IAmb	12 33 03.6	
	comp=Z,57nm,1.4s						
EGMT	Eagleton	81.05	331	P	P	12 32 57.4	-0.4
	baz=138,SNR=16						
PMRV	Marv??o	81.27	41	*e*P	P	12 32 59.8	+0.8
	comp=Z,35nm,1.6s						
PMRV	Marv??o	81.27	41	*e*LR	LR	13 00 49.7	
	comp=Z,319nm,18.0s						
MTE	Manteigas	81.78	40	*e*P	P	12 33 02.6	+0.8
	comp=Z,64nm,1.4s						
MTE	Manteigas	81.78	40	*e*LR	LR	13 00 21.7	
	comp=Z,334nm,18.0s						
MSO	Missoula	82.14	328	P	P	12 33 03.9	+0.3
	baz=135,SNR=17						
J08A	Circle Bar Ran	82.15	323	P	P	12 33 04.3	+0.6
PVRL	Vila Real	82.22	39	*e*P	P	12 33 04.7	+0.7
MAW	Mawson	82.24	162	P	P	12 33 04.3	+0.6
	comp=Z,23nm,1.1s,baz=234,slow=7.1,SNR=15						
MAW				LR	LR	13 10 16.2	
	comp=Z,384nm,19.2s,baz=239,slow=36						
	comp=Z,23nm,1.1s						
MAW	Mawson	82.24	162	P	P	12 33 03.5	-0.2
PCAB	Cabril	82.31	39	*e*P	P	12 33 02.8	-1.7
PGAV	Gavieira, Arco	82.33	39	*e*LR	LR	13 00 59.9	
	comp=Z,232nm,20.0s						
MVO	Moncorvo	82.56	40	*e*P	P	12 33 06.8	+1.0
	comp=Z,40nm,1.9s						
MVO	Moncorvo	82.56	40	*e*LR	LR	13 01 03.8	
	comp=Z,231nm,22.0s						
JTMT	Jette	82.95	329	P	P	12 33 08.9	+1.1
JTMT				IAmb	IAmb	12 33 13.2	
	comp=Z,52nm,1.6s						
K05A	Summer Lake	83.11	322	P	P	12 33 09.9	+1.1
PBRG	Braganca	83.12	39	*e*P	P	12 33 09.7	+1.0
	comp=Z,81nm,1.7s						
I07A	Izee	83.19	323	P	P	12 33 10.2	+1.0
I07A				IAmb	IAmb	12 33 15.0	
	comp=Z,60nm,1.4s						
PAB	San Pablo	83.21	42	P	P	12 33 09.9	+0.6
PAB	San Pablo	83.21	42	P	P	12 33 09.9	+0.6
PAB				pmax	pmax		
	comp=Z,41nm,1.8s						
F10A	Beach Ranch, E	83.21	326	P	P	12 33 10.4	+1.2
KMRM	Mail Ridge	83.25	318	P	P	12 33 10.6	+1.1
ESDC	Sonseca Array	83.53	42	P	P	12 33 11.1	+0.2
	comp=Z,13nm,1.2s,baz=242,slow=4.9,SNR=28						
ESDC				LR	LR	13 09 38.4	
	comp=Z,424nm,18.1s,baz=221,slow=35						
	comp=Z,13nm,1.2s						
ESDC	Sonseca Array	83.53	42	P	P	12 33 11.0	+0.2
ESBB	Sonseca Array	83.53	42	P	P	12 33 11.8	+0.9
ESBB				IAmb	IAmb	12 33 13.2	
	comp=Z,32nm,1.4s						
YBH	Yreka Blue Hor	83.56	320	LR	LR	13 10 30.9	
	comp=Z,183nm,21.9s,baz=132,slow=36						
L04D	Klamath Falls	83.61	321	P	P	12 33 11.1	-0.3
	baz=128						
J05D	Fort Rock, OR	83.66	322	P	P	12 33 12.3	+0.8
	baz=129,SNR=15						
WALA	Waterton Lakes	83.70	330	P	P	12 33 11.0	-0.6
WALA				IAmb	IAmb	12 33 23.9	
	comp=Z,42nm,1.6s						
J04D	Umpqua Nationa	84.13	322	P	P	12 33 15.4	+1.4
	baz=128						
L02F	Cave Junction	84.30	320	P	P	12 33 15.2	+0.5
	baz=127						
I05D	Terrebonne, OR	84.37	323	P	P	12 33 16.7	+1.6
	baz=129,SNR=7.0						
NEW	Newport	84.70	328	LR	LR	13 17 34.8	
	comp=Z,213nm,19.1s,baz=135,slow=40						
NEW	Newport	84.70	328	P	P	12 33 17.0	+0.3
	baz=132						
K02D	Willamette Mer	84.70	320	P	P	12 33 17.7	+0.9
	baz=127						
G05D	Wamic, OR	84.93	324	P	P	12 33 19.4	+1.6
	baz=129,SNR=10						
F05D	White Salmon	85.41	324	P	P	12 33 21.3	+1.1
	baz=129						
FRB	Frobisher Bay	85.89	358	LR	LR	13 13 51.6	
	comp=Z,185nm,18.9s,baz=185,slow=37						
EDM	Edmonton	86.41	333	P	P	12 33 24.2	-0.8
EDM	Edmonton	86.41	333	P	P	12 33 24.2	-0.8
EDM				pmax	pmax		
	comp=Z,121nm,1.5s						
E04D	Cinebar	86.43	324	P	P	12 33 26.4	+1.2
	baz=128						
RAR	Rarotonga	86.90	248	LR	LR	13 03 31.7	
	comp=Z,144nm,21.6s,baz=119,slow=30						
D03D	Eldon	87.31	325	P	P	12 33 29.9	+0.4
	baz=128,SNR=8.8						
LLLB	Lillooet	88.58	327	P	P	12 33 35.1	-0.5
KEST	Kesra	90.47	51	P	P	12 33 45.0	+0.2
	comp=Z,7.7nm,1.1s,baz=243,slow=5.7,SNR=6.8						
KEST				LR	LR	13 16 49.9	
	comp=Z,769nm,18.2s,baz=210,slow=37						
	comp=Z,7.7nm,1.1s						
CASY	Casey	91.54	178	P	P	12 33 50.6	+1.4
CASY				IAmb	IAmb	12 33 52.1	
	comp=Z,42nm,1.4s						
SSB	Saint Sauveur	91.85	41	P	P	12 33 50.8	-0.2
SSB				IAmb	IAmb	12 33 52.9	
	comp=Z,41nm,1.7s						
SSB	Saint Sauveur	91.85	41	P	P	12 33 50.8	-0.2
SSB				pmax	pmax		
	comp=Z,41nm,1.7s						
BBB	Bella Bella	92.66	326	LR	LR	13 23 12.0	
	comp=Z,93nm,18.1s,baz=144,slow=40						
BORG	Borgarnes	92.95	17	LR	LR	13 11 18.6	
	comp=Z,109nm,19.8s,baz=227,slow=33						
EKA	Eskdalemuir Ar	93.18	30	P	P	12 33 56.0	-0.7
	comp=Z,1.4nm,0.8s,baz=218,slow=5.3,SNR=4.8						
EKA				LR	LR	13 11 13.1	
	comp=Z,286nm,21.4s,baz=226,slow=32						
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	93.47	339	P	P	12 33 57.4	-0.6
	comp=Z,9.3nm,0.7s,baz=124,slow=4.5,SNR=94						
YKA				LR	LR	13 19 36.6	
	comp=Z,317nm,18.9s,baz=94,slow=38						
	comp=Z,9.3nm,0.7s						
YKA	Yellowknife Ar	93.47	339	P	P	12 33 57.1	-0.8
MBAR	Mbarara	94.46	92	LR	LR	13 15 16.6	
	comp=Z,309nm,18.4s,baz=212,slow=35						
BMRD	Maredsous	94.50	37	*d*P	P	12 34 02.2	-0.8
RCHB	Rochefort	94.69	37	*d*P	P	12 34 02.5	-1.3
BGES	Gesves	94.72	37	*d*P	P	12 34 02.8	-1.2
BCLA	Clavier	94.86	37	*d*PcP	PcP	12 34 05.1	+0.1
VAE	Valguarnera	94.90	52	LR	LR	13 18 38.4	
	comp=Z,448nm,19.7s,baz=297,slow=37						
WLF	Walferdange	94.97	38	P	P	12 34 05.0	-0.1
WLF	Walferdange	94.97	38	P	P	12 34 05.0	-0.1
WLF				pmax	pmax		
	comp=Z,52nm,1.7s						
WLF	Walferdange	94.97	38	*d*PcP	P	12 34 04.8	-0.3
BHOU	Houvegnez	95.22	37	*d*PcP	P	12 34 06.0	-0.3
BFO	Black Forest	95.60	40*c*	*e*P	P	12 34 10.1	+2.0
DAVOX	Davos/Dischmat	95.84	42	P	P	12 34 09.1	-0.4
	comp=Z,5.8nm,0.9s,baz=246,slow=2.7,SNR=6.4						
DAVOX				LR	LR	13 14 45.6	
	comp=Z,430nm,20.5s,baz=262,slow=34						
	comp=Z,5.8nm,0.9s						
DAVA	Damuels	96.06	41	*e*P	P	12 34 10.3	-0.1
	comp=Z,9.9nm,1.2s						
FETA	Feichten	96.47	42	*e*P	P	12 34 11.6	-0.7
	comp=Z,18nm,1.4s						
URZ	Urewera	96.61	224	LR	LR	13 11 14.6	
	comp=Z,155nm,18.6s,baz=211,slow=31						
RETA	Reutte	96.69	41	*e*P	P	12 34 12.9	-0.2
	comp=Z,6.6nm,1.1s						
MOTA	Moosalm	96.84	42	*e*P	P	12 34 13.1	-0.9
	comp=Z,7.9nm,1.1s						
SQTA	Sankt Quirin	96.85	42	*e*P	P	12 34 12.8	-1.1
	comp=Z,11nm,1.0s						
RPZ	Rata Peaks	96.94	217	LR	LR	13 09 51.0	
	comp=Z,126nm,19.4s,baz=144,slow=30						
DLBC	Dease Lake	96.98	331	LR	LR	13 22 34.1	
	comp=Z,319nm,20.3s,baz=114,slow=38						
WATA	Walderalm	97.12	42	*e*P	P	12 34 15.0	-0.2
	comp=Z,15nm,1.6s						
WTTA	Wattenberg	97.13	42	*e*P	P	12 34 14.4	-0.9
	comp=Z,21nm,1.5s						
S34M	Telegraph Cree	97.20	330	P	Pdif	12 34 16.3	+1.1
	baz=121						
ABTA	Abfaltersbach	97.45	42	P	P	12 34 16.6	0.0
	comp=Z,4.7nm,0.9s						
MYKA	Terra Mystica	98.12	43	*e*P	P	12 34 18.4	-1.2
	comp=Z,5.6nm,0.8s						
BIOA	Bad Ischl, Aus	98.54	42	*e*P	P	12 34 20.9	-0.5
OBKA	Obir	98.64	43	*e*P	Pdif	12 34 22.3	+0.3
	comp=Z,2.7nm,0.7s						
RES	Resolute Bay	98.80	352	LR	LR	13 22 49.3	
	comp=Z,288nm,18.6s,baz=114,slow=38						
MOA	Molln	98.99	42	*e*P	P	12 34 23.0	-0.4
	comp=Z,3.3nm,1.2s						
P33M	Teslin, Yukon	99.11	332	P	Pdif	12 34 24.5	+0.8
	baz=119						
CLL	Collm	99.62	38	*e*P	Pdif	12 34 26.0	-0.1
CLL	Collm	99.62	38	*e*Pdif	Pdif	12 34 26.0	-0.1
CLL				*e*x	x	12 34 29.0	
CLL				LmH		13 15 00.0	
	comp=N,100nm,19.5s						
CLL				LmH		13 15 00.0	
	comp=E,200nm,21.3s						
CLL				LmV		13 20 00.0	
	comp=Z,200nm,19.4s						
CLL	Collm	99.62	38	*e*Px	Px	12 39 09.0	
BRG	Berggiesshubel	99.99	39	*e*P	Pdif	12 34 28.5	+0.7
BRG				Amp		12 34 33.8	
	comp=Z,10nm,1.7s						
BRG	Berggiesshubel	99.99	39	*e*P	Pdif	12 34 28.5	+0.7
BRG				pmax	pmax		
	comp=Z,10.0nm,1.7s						
CONA	Conrad Observa	100.02	42	*e*P	Pdif	12 34 31.6	+3.6
	comp=Z,4.5nm,1.4s						
M30M	Minto, Yukon	101.91	333	P	Pdif	12 34 37.0	+0.9
	baz=116						
DAWY	Dawson	103.59	334	P	Pdif	12 34 43.1	-0.4
	baz=113						
L27K	Beaver Creek,	104.22	333	P	Pdif	12 34 46.7	+0.4
	baz=111						
K27K	Chicken	104.67	334	P	Pdif	12 34 49.1	+0.8
	baz=111						
ILAR	Eielson Array	106.89	334	PKiKP	PKiKP	12 39 10.1	+2.2
	comp=Z,0.2nm,0.7s,baz=267,slow=0.4,SNR=2.2						
NACGM	Naroch	108.62	38⇓	*e*PKiKP	PKiKP	12 39 17.6	+6.3
	baz=257						
MNK	Minsk	109.16	38	*i* P	Pdif	12 35 00.9	-7.5
MNK	Minsk	109.16	38	*i* LRM	MLR	13 25 07.1	
	comp=E,41nm,24.3s						
MNK	Minsk	109.16	38	*i* P	Pdif	12 35 01.0	-7.5
	comp=N,10.0nm,0.8s						
MNK	Minsk	109.16	38	*i* P	Pdif	12 35 01.0	-7.5
	comp=E,3.0nm,0.9s						
MNK	Minsk	109.16	38	*i* P	Pdif	12 35 01.0	-7.5
	comp=Z,7.0nm,0.8s,baz=80						
MNK	Minsk	109.16	38	*i* PKP	PKiKP	12 39 00.1	-12
MNK	Minsk	109.16	38	*i* PP	PP	12 39 27.4	-14
MNK	Minsk	109.16	38	*i* PP	PP	12 39 27.4	-14
MNK	Minsk	109.16	38	*i* PP	PP	12 39 27.4	-14
MNK	Minsk	109.16	38	*i* SKS		12 45 24.1	
MNK	Minsk	109.16	38	*i* PS	PS	12 48 42.1	-26
MNK	Minsk	109.16	38	*i* SS	SS	12 54 51.6	-10
MNK	Minsk	109.16	38	*i* LR	LR	13 21 33.7	
MNK	Minsk	109.16	38	*i* LRM	MLR	13 24 21.1	
	comp=N,603nm,23.0s						
MNK	Minsk	109.16	38	MLR	MLR		
	comp=N,603nm,23.0s						
MNK	Minsk	109.16	38	pmax	pmax		
	comp=N,10.0nm,0.8s						
MNK	Minsk	109.16	38	pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK	Minsk	109.16	38	pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK	Minsk	109.16	38	MLR	MLR		
	comp=E,41nm,24.0s						
APA	Apatity	113.40	24⇓	*i*PKIKP	PKiKP	12 39 19.2	-0.9
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,400nm,19.0s						
OBN	Obninsk	114.22	38	*i* PKIKP	PKPdf	12 39 21.3	-0.6
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,149nm,20.0s						
MOS	Moscow	114.86	38	*e*PKIKP	PKiKP	12 39 23.8	+0.6
SOC	Sochi	115.03	51	*i* PKIKP	PKPdf	12 39 23.3	-0.6
SOC				*e*		12 40 24.1	
SOC				*e*PPP	PPP	12 42 47.4	
SOC				*e*		12 46 09.5	
SOC				*e*PS	PKKPab	12 50 04.0	-0.4
SOC				*e*SS	SS	12 56 24.5	+4.4
KIV	Kislovodsk	117.21	51	*i* PKIKP	PKiKP	12 39 29.8	+1.5
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,63nm,22.0s						
KBZ	Khabaz	117.34	51	PKP	PKPdf	12 39 27.9	-0.5
	comp=Z,1.6nm,0.8s,baz=285,slow=4.7,SNR=4.5						
BILL	Bilibino	124.86	339	*i* PKIKP	PKPdf	12 39 41.2	-0.9
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARU	Arti	126.43	35	*i* PKIKP	PKiKP	12 39 46.9	+1.0
ARU						12 41 42.3	
ARU						12 46 58.1	
ARU				SS	SS	12 58 45.3	+0.1
ARU				MLR	MLR		
	comp=Z,226nm,19.0s						
ABKAR	Akbulak array	128.85	44		PKPdf	12 39 50.5	+0.2
ABKAR	Akbulak array	128.85	44		PKPdf	12 39 50.3	0.0
NRIK	Noril'sk	130.05	13	*i* PKIKP	PKPdf	12 39 51.3	-0.7
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,218nm,20.0s						
TIXI	Tiksi	130.12	355*c*	*i*PKIKP	PKPdf	12 39 52.2	+0.2
TIXI				*i*		12 39 52.8	
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AS31	Alice Springs	130.93	202	PKPdf	PKPdf	12 39 55.4	+0.2
ASAR	Alice Springs	130.93	202	PKP	PKPdf	12 39 54.2	-0.9
	comp=Z,5.1nm,0.9s,baz=132,slow=1.5,SNR=4.3						
ASAR				SKPbc	SKPbc	12 43 17.9	-1.7
	comp=Z,2.8nm,1.1s,baz=155,slow=6.2,SNR=4.7						
ASAR	Alice Springs	130.93	202		PKPdf	12 39 53.5	-1.6
SEY	Seymchan	132.53	338	PKP	PKPdf	12 39 56.4	-0.5
	comp=Z,4.1nm,0.9s,baz=105,slow=7.2,SNR=5.1						
BRVK	Borovoye	133.95	37*c*	*i*PKIKP	PKiKP	12 40 02.1	+1.0
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WRA	Warramunga Arr	134.17	205	PKP	PKPdf	12 40 00.6	-0.7
	comp=Z,3.8nm,0.6s,baz=161,slow=1.7,SNR=40						
WRA	Warramunga Arr	134.17	205		PKPdf	12 40 01.2	-0.2
WRA	Warramunga Arr	134.17	205	PKIKP	PKPdf	12 40 01.2	-0.2
WB0	Warramunga Arr	134.30	205	PKPdf	PKPdf	12 40 00.8	-0.8
SKR	Severo-Kuril's	137.74	322	*i* PKIKP	PKiKP	12 40 12.4	+3.5
SKR				*e*		12 42 52.3	
SKR				MLR	MLR		
	comp=Z,100nm,20.0s						
YAK	Yakutsk	139.21	350	*i* PKIKP	PKPdf	12 40 09.5	+0.2
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	Kurchatov	139.61	36	*i* PKIKP	PKPdf	12 40 11.0	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AAK	Ala-Archa	140.30	50	PKP	PKPdf	12 40 12.5	+0.4
	comp=Z,4.3nm,0.9s,baz=18,slow=0.8,SNR=6.5						
ZALV	Zalesovo Beam	140.80	29	PKP	PKPdf	12 40 12.2	-0.2
	comp=Z,2.1nm,0.6s,baz=286,slow=2.8,SNR=9.2						
ZALV	Zalesovo Beam	140.80	29		PKPdf	12 40 11.7	-0.7
KSH	Kashi	142.25	54	PKP	PKPdf	12 40 11.3	-4.4
KSH				PP	PP	12 43 21.3	-1.0
KSH				AMB	AMB		
	comp=Z,120nm,5.2s						
KSH				LR	LR		
	comp=Z,330nm,19.7s						
KSH				LR	LR		
	comp=Z,270nm,18.4s						
KSH				LR	LR		
	comp=Z,210nm,20.6s						
TARG	Taragay, Kyrgy	142.93	50		PKPdf	12 40 14.9	-2.3
TARG	Taragay, Kyrgy	142.93	50	PKIKP	PKPdf	12 40 14.9	-2.3
MAKZ	Makanchi	143.51	40		PKPdf	12 40 16.3	-1.2
MAKZ	Makanchi	143.51	40	PKIKP	PKPdf	12 40 16.3	-1.2
MK31	Makanchi Array	143.70	40		PKPbc	12 40 15.8	+0.4
MK31	Makanchi Array	143.70	40	PKIKP	PKPbc	12 40 15.8	+0.4
MKAR	Makanchi Array	143.70	40	PKP	PKPbc	12 40 15.5	+0.1
	comp=Z,2.1nm,0.6s,baz=298,slow=3.7,SNR=23						
MKAR	Makanchi Array	143.70	40		PKPbc	12 40 15.8	+0.4
MKAR	Makanchi Array	143.70	40	PKIKP	PKPbc	12 40 15.8	+0.4
AKL	Akola	144.06	85	*e*P	PKPab	12 40 16.2	-0.5
KUDL	Kundal	144.21	73	*e*P	PKPab	12 40 17.1	0.0
BOD	Bodaibo	144.57	2	*e*PKIKP	PKPab	12 40 16.3	-1.1
BOD				pmax	pmax		
	comp=Z,30nm,1.7s						
SMLA	Simla	144.66	67	*e*P	PKPab	12 40 18.3	-0.3
BHPL	Bhopal	144.79	81	*e*P	PKPab	12 40 19.0	-0.4
HYBB	Hyderabad (bro	144.81	91	*e*PKPbc	PKPab	12 40 19.1	-0.5
NDI	New Delhi	144.84	72	*e*P	PKPab	12 40 18.1	-1.3
JHNI	Jhansi	145.98	77	*e*P	PKPdf	12 40 21.3	-1.1
UGL	Uglegorsk	146.13	328	*e*PKP2	PKPab	12 40 24.6	+1.1

UGL				pmax	pmax		
	comp=Z,900nm,5.0s						
VJD	**Vijayawada**	**146.51**	**94**	*e*P	**PKPdf**	**12 40 22.4**	**-1.1**
YSS	**Yuzh-Sakhalins**	**147.17**	**325**		**PKPbc**	**12 40 26.0**	**0.0**
YSS	**Yuzh-Sakhalins**	**147.17**	**325**	*i* PKP2	**PKPdf**	**12 40 24.1**	**+0.4**
YSS				*e*		12 43 54.2	
YSS				*e*		12 47 29.4	
YSS				*e*SS	SS	13 02 54.4	+2.4
YSS				pmax	pmax		
	comp=Z,20nm,1.7s						
YSS				pmax	pmax		
	comp=Z,700nm,4.5s						
GRNR	**Gornyy**	**147.35**	**335**	*e*PKHKP	PKPpre	12 40 13.4	
GRNR				MLR	MLR		
	comp=E,60nm,11.0s						
GRNR				MLR	MLR		
	comp=N,80nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,100nm,20.0s						
PTH	**Pithoragarh**	**147.42**	**70**	*e*P	**PKPdf**	**12 40 23.6**	**-1.3**
LGTI	**Lohaghat**	**147.45**	**70**	*e*P	**PKPdf**	**12 40 23.7**	**-1.0**
ZEA	**Zeya**	**147.47**	**347**	*i* PKP2	**PKPbc**	**12 40 27.1**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,30nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,300nm,5.3s						
ZEA				MLR	MLR		
	comp=N,100nm,23.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,20.0s						
KNGR	**Kungurtug, Tuv**	**148.44**	**22**	*i* PKIKP	**PKPdf**	**12 40 25.5**	**-0.4**
WMQ	**Urumqi**	**148.51**	**41**	PKPbc	**PKPdf**	**12 40 26.5**	**+0.3**
WMQ				PP	**PP**	**12 44 02.0**	**+3.0**
WMQ				AMB	AMB		
	comp=Z,170nm,4.1s						
WMQ				LR	LR		
	comp=Z,250nm,13.7s						
WMQ				LR	LR		
	comp=Z,170nm,21.5s						
MMRI	**Maumere**	**148.52**	**192**	PKPdf	**PKPdf**	**12 40 24.1**	**-2.9**
MMRI					**PKPbc**	**12 40 30.6**	**0.0**
MOY	**Mondy**	**148.62**	**18**	*e*PKP2	**PKPbc**	**12 40 29.2**	**-0.7**
MOY				pmax	pmax		
	comp=Z,55nm,1.8s						
IRK	**Irkutsk**	**148.91**	**14**	*e*PKIKP	**PKPdf**	**12 40 28.4**	**+1.9**
IRK				pmax	pmax		
	comp=Z,76nm,1.9s						
ALBI	**Allahabad**	**148.93**	**78**	*e*P	**PKPdf**	**12 40 25.8**	**-1.5**
JKA	**Kamikawa-asahi**	**148.97**	**321**	PKPdf	**PKPdf**	**12 40 25.6**	**-1.3**
JKA					**PKiKP**	**12 40 32.1**	**-0.1**
ASAJ	**Asahikawa**	**148.98**	**321**	PKIKP	**PKPdf**	**12 40 25.6**	**-1.2**
ASAJ						12 40 32.1	
BLSP	**Bilaspur**	**148.99**	**84**	*e*P	**PKPdf**	**12 40 26.2**	**-1.3**
PYUN	**Piuthan**	**149.94**	**72**	*e*P	**PKPdf**	**12 40 28.9**	**-0.3**
	comp=Z,125nm,0.9s						
ZAK	**Zakamensk**	**150.40**	**16**	*e*PKIKP	**PKPdf**	**12 40 30.2**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,17nm,1.5s						
KOLN	**Koldanda**	**150.50**	**73**	*e*P	**PKPdf**	**12 40 30.1**	**0.0**
GKN	**Gorkha**	**151.40**	**72**	*e*P	**PKPbc**	**12 40 36.6**	**-0.8**
	comp=Z,138nm,1.0s						
DMN	**Daman**	**151.84**	**73**	*e*P	**PKPbc**	**12 40 37.6**	**-1.0**
PKIN	**Phulchoki**	**152.10**	**73**	*e*P	**PKPbc**	**12 40 37.7**	**-1.5**
PKI	**Pulchoki**	**152.12**	**73**	*e*P	**PKPbc**	**12 40 37.5**	**-1.8**
	comp=Z,32nm,0.8s						
BWNR	**Bhubaneshwar**	**152.12**	**89**	*e*P	**PKPdf**	**12 40 33.9**	**+1.5**
BOK	**Bokaro**	**152.58**	**81**	*e*P	**PKPdf**	**12 40 31.8**	**-1.3**
RAMN	**Ramite**	**153.21**	**74**	*e*P	**PKPbc**	**12 40 40.5**	**-1.2**
	comp=Z,51nm,0.6s						
SONM	**Songino Array**	**153.52**	**14**	PKP	**PKPdf**	**12 40 33.9**	**+0.1**
	comp=Z,2.2nm,1.0s,baz=280,slow=1.1,SNR=8.3						
SONM				PKPbc	**PKiKP**	**12 40 41.8**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=298,slow=1.5,SNR=12						
ULN	**Ulaanbaatar**	**153.64**	**13**	PKPdf	**PKPdf**	**12 40 33.2**	**-0.9**
ULN					**PKPab**	**12 40 53.5**	**-0.8**
USRK	**Ussuriysk Ar.**	**154.40**	**332**	PKPab	**PKPab**	**12 40 59.5**	**+2.0**
	comp=Z,3.8nm,0.8s,baz=60,slow=9.1,SNR=7.2						
USRK	**Ussuriysk Ar.**	**154.40**	**332**	PKPdf	**PKPdf**	**12 40 34.6**	**-0.4**
USRK				PKPab	**PKPab**	**12 40 58.6**	**+1.1**
USRK	**Ussuriysk Ar.**	**154.40**	**332**	PKIKP	**PKPdf**	**12 40 34.6**	**-0.4**
BNX	**BinXian**	**154.80**	**340**	⇑P	**PKPab**	**12 40 58.8**	**-0.3**
BNX				pmax	pmax		
	comp=Z,34nm,0.9s						
BNX				pmax	pmax		
	comp=Z,410nm,5.5s						
JSD	**Sado**	**155.10**	**314**	PKPdf	**PKPdf**	**12 40 34.9**	**-1.2**
JSD				PKPab	**PKPab**	**12 41 00.3**	**-0.4**
MJAR	**Matsushiro Arr**	**155.91**	**311**	PKPab	**PKPab**	**12 41 02.4**	**-1.9**
	comp=Z,2.8nm,0.9s,baz=67,slow=3.3,SNR=6.6						
MJAR	**Matsushiro Arr**	**155.91**	**311**	PKPdf	**PKPdf**	**12 40 36.7**	**-0.7**
MJAR				PKPab	**PKPab**	**12 41 03.7**	**-0.6**
MJAR	**Matsushiro Arr**	**155.91**	**311**	PKP2	**PKPab**	**12 41 03.7**	**-0.6**
MJAR						13 40 36.7	
MAJO	**Matsushiro**	**155.91**	**311**	PKPdf	**PKPdf**	**12 40 36.2**	**-1.1**
MAJO				PKPab	**PKPab**	**12 41 04.5**	**+0.2**
MAJO	**Matsushiro**	**155.91**	**311**	PKP2	**PKPab**	**12 41 04.5**	**+0.2**
MAJO						13 40 36.3	
GOMU	**GeErMu**	**157.24**	**48**	PKP	**PKPdf**	**12 40 39.0**	**-0.6**
GOMU				pPKP	pPKPdf	12 40 43.6	+0.3
GOMU				sPKP		12 40 46.9	
GOMU				PP	**PP**	**12 44 48.3**	**-0.8**
GOMU				SKS	**SKSdf**	**12 47 44.8**	**-1.3**
GOMU				AMB	AMB		
	comp=Z,78nm,5.0s						
GOMU				LR	LR		
	comp=Z,110nm,17.5s						
GOMU				LR	LR		
	comp=Z,82nm,16.3s						
GOMU				LR	LR		
	comp=Z,120nm,21.6s						
GTA	**Gaotai**	**158.29**	**35**	*e*PKP	**PKPdf**	**12 40 40.6**	**+0.1**
GTA				PKPab	**PKPab**	**12 41 14.5**	**0.0**
GTA				LR	LR		
	comp=Z,110nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,20.0s						
GTA				LR	LR		
	comp=Z,150nm,23.3s						
TOLI2	**Tolitoli**	**158.29**	**194**	PKPdf	**PKPdf**	**12 40 39.4**	**-1.6**
TOLI2					**PKPab**	**12 41 13.8**	**-1.1**
HHC	**Hu-ho-hao-te**	**161.25**	**10**	*e*PKP	**PKPdf**	**12 40 38.9**	**-4.8**
HHC				LR	LR		
	comp=Z,470nm,18.6s						
HHC				LR	LR		
	comp=Z,380nm,15.8s						
HHC				LR	LR		
	comp=Z,430nm,18.6s						
KSRS	**Korea Array**	**161.62**	**328**	PKP	**PKPdf**	**12 40 45.4**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=40,slow=1.7,SNR=9.6						
KSRS				PKPab	**PKPab**	**12 41 29.1**	**+0.2**
	comp=Z,4.9nm,0.8s,baz=41,slow=4.4,SNR=20						
KSAR	**Wonju Array Be**	**161.65**	**328**	PKPdf	**PKPdf**	**12 40 44.1**	**0.0**
KSAR					**PKPab**	**12 41 29.3**	**+0.3**
KSAR	**Wonju Array Be**	**161.65**	**328**	PKP2	**PKPab**	**12 41 29.3**	**+0.3**
KSAR						13 40 44.1	
LZH	**Lanzhou**	**162.89**	**34**	*e*PKP	**PKPdf**	**12 40 47.1**	**+1.5**
LZH				sPKP		12 40 50.0	
LZH				PP	**PP**	**12 45 17.3**	**-1.6**
LZH				AMB	AMB		
	comp=Z,190nm,8.7s						
LZH				LR	LR		
	comp=Z,200nm,18.0s						
LZH				LR	LR		
	comp=Z,230nm,17.9s						
LZH				LR	LR		
	comp=Z,340nm,21.1s						
CMAR	**Chiang Mai Arr**	**163.84**	**101**	PKPab	**PKPab**	**12 41 38.1**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=240,slow=5.1,SNR=1.3						
CMAR	**Chiang Mai Arr**	**163.84**	**101**	PKPdf	**PKPdf**	**12 40 47.0**	**+0.2**
CMAR					**PKPab**	**12 41 37.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**163.84**	**101**	PKP2	**PKPab**	**12 41 37.8**	**-1.5**
CMAR						13 40 47.0	
CD2	**Chengdu**	**166.37**	**49**	PKP	**PKPdf**	**12 40 47.9**	**-0.8**
CD2				pPKP	pPKPdf	12 40 50.3	-2.1
PZH	**PanZhiHua**	**166.66**	**69**	PKP	**PKPdf**	**12 40 49.1**	**0.0**
XAN	**Xi'an**	**166.94**	**26**	PKP	**PKPdf**	**12 40 49.8**	**+0.8**
XAN				LR	LR		
	comp=Z,170nm,20.4s						
XAN				LR	LR		
	comp=Z,190nm,21.3s						
XAN				LR	LR		
	comp=Z,220nm,22.2s						

IDC ***22*** *12:28:34.7±1.4, 84°.38N×109°.14E, h0^{km}, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=37.0km s-min=28.2km az=157.0*

ISC 22 12:28:40.4±2.3**, 84°.2N**±0°.3×**102°.7E**±0°.2**, h10**^{km}**, n9, σ1^{s}17**/10**, mb3.7**/5**, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZFI2	**Zemlya Franca-**	**7.59**	**274**	*e*P	**Pn**	**12 30 30.7**	**-0.1**
ZFI2				*e*S	**Sn**	**12 31 55.9**	**-0.9**
ZFI	**Zemlya Franca-**	**7.59**	**274**	*e*P	**Pn**	**12 30 30.7**	**-0.1**
ZFI				*e*S	**Sn**	**12 31 56.0**	**-0.7**
NRIK	**Noril'sk**	**15.22**	**201**	Pn	**P**	**12 32 20.1**	**+0.2**
	0.4nm,0.3s,baz=20,slow=14,SNR=5.8						
ARCES	**ARCESS Array B**	**20.09**	**273**	P	**Pn**	**12 33 17.7**	**+2.4**
	7.5nm,1.1s,baz=14,slow=12,SNR=1.7						
	7.5nm,1.1s						
FINES	**FINESS Array B**	**27.91**	**267**	P	**P**	**12 34 30.7**	**+0.8**
	1.7nm,0.8s,baz=26,slow=11,SNR=4.4						
	1.7nm,0.8s						
ILAR	**Eielson Array**	**27.92**	**59**	P	P	12 34 20.3	-10
	0.5nm,0.9s,baz=355,slow=9.1,SNR=2.7						
	0.5nm,0.9s						
ZALV	**Zalesovo Beam**	**30.72**	**201**	P	**P**	**12 34 54.8**	**-0.1**
	0.4nm,0.4s,baz=19,slow=4.9,SNR=2.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**37.97**	**203**	P	**P**	**12 35 57.1**	**-0.6**
	0.5nm,0.7s,baz=352,slow=7.4,SNR=4.8						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.12**	**282**	P	**P**	**12 40 38.0**	**-1.2**
	1.7nm,0.7s,baz=4.3,slow=5.7,SNR=8.2						
	1.7nm,0.7s						

PRU 22 12:32:27.0±0.0**, 51°.40N**×**16°.46E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.85**	**198**	*e*PG	Pg	12 32 43.6	+0.3
CHVC				*e*SG	Sg	12 32 54.0	-0.3
OSTC	**Ostas**	**0.86**	**190**	*e*PG	Pg	12 32 43.3	-0.1
OSTC				*e*SG	Sg	12 32 54.4	-0.1
UPC	**Upice**	**0.94**	**198**	*e*PG	Pg	12 32 44.2	-0.7
UPC				*e*SG	Sg	12 32 57.3	+0.2
	comp=Z,2.5nm,0.2s						
DPC	**Dobruska-Polom**	**1.05**	**185**	*e*PG	Pg	12 32 46.6	-0.6
DPC				*e*SG	Sg	12 33 00.9	+0.1
	comp=Z,1.1nm,0.5s						

JMA ***22*** *12:45:24.4±0.2, 24°N±1°×122°.3E±0°.3, h18^{km}±3^{km}, MV1.9/11, TAIWAN REGION*

TAP ***22*** *12:45:24.3, 24°.15N×122°.26E, h21^{km}, ML2.5, D*

ISC 22 12:45:23.9±1.1**, 24°.09N**±0°.02×**122°.23E**±0°.02**, h20**^{km}±5^{km}**, n81, σ0^{s}63**/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.55**	**311**	P	**Pb**	**12 45 34.9**	**+0.1**
	baz=312						
EWUT				S	**Sg**	**12 45 42.7**	**+0.2**
	baz=312						
ETL	**Fush Village**	**0.56**	**277**	P	**Pn**	**12 45 36.6**	**-0.3**
	baz=254						
ENA	**Nanau**	**0.56**	**307**	*i* P	**Pb**	**12 45 35.2**	**+0.1**
	baz=309						
ENA				*i* S	**Sg**	**12 45 43.6**	**+0.7**
	baz=309						
NACB	**Ninganchiao**	**0.59**	**279**	P	**Pg**	**12 45 36.6**	**+0.8**
	baz=256						
NACB				S	**Sn**	**12 45 45.8**	**-0.5**
	baz=256						
TWC	**Suao**	**0.63**	**326**	*i* P	**Pb**	**12 45 35.7**	**-0.5**
	baz=321						
TWC				*i* S	**Sb**	**12 45 43.7**	**-0.9**
	baz=321						
ETM	**Tongmen**	**0.69**	**260**	*e*P	**Pb**	**12 45 36.8**	**-0.5**
	baz=243						
ETLH	**Xiulin Townshi**	**0.70**	**280**	P	**Pn**	**12 45 38.4**	**-0.4**
	baz=275						
ETLH				S	**Sn**	**12 45 49.2**	**+0.1**
	baz=275						
NDS	**Dongshan**	**0.72**	**319**	P	**Pb**	**12 45 37.8**	**0.0**
	baz=319						
NDS				S	**Sb**	**12 45 47.0**	**-0.3**
	baz=319						
JYNG	**Yonagunijimaku**	**0.74**	**61**	*e*P	**Pb**	**12 45 37.9**	**-0.3**
JYNG				S	**Sb**	**12 45 47.2**	**-0.8**
ESL	**Shilin**	**0.78**	**250**	*i* P	**Pg**	**12 45 39.3**	**0.0**
	baz=235						
LATG	**Datong**	**0.78**	**305**	P	**Pg**	**12 45 39.5**	**+0.1**
	baz=308						
LATG				S	**Sn**	**12 45 50.7**	**-0.6**
	baz=308						
YOJ	**Yonaguni jima**	**0.80**	**62**	P	**Pb**	**12 45 39.4**	**+0.1**
	baz=63						
YOJ				S	**Sb**	**12 45 50.0**	**+0.4**
	baz=63						
YOJ	**Yonaguni jima**	**0.80**	**62**	P	**Pb**	**12 45 39.2**	**0.0**
YOJ				S	**Sb**	**12 45 49.1**	**-0.5**
EGS		**0.80**	**340**	P	**Pb**	**12 45 39.4**	**+0.2**
	baz=337						
EGS				S	**Sb**	**12 45 50.0**	**+0.3**
	baz=337						
ENTT	**Nioudou**	**0.82**	**312**	*i* P	**Pg**	**12 45 40.0**	**-0.1**
	baz=308						
ENTT				S	**Sg**	**12 45 50.9**	**-0.1**
	baz=308						
EGFH	**Guangfu**	**0.85**	**241**	*e*S	**Sn**	**12 45 53.9**	**+1.3**
	baz=227						
NNSB	**Datong**	**0.85**	**294**	P	**Pg**	**12 45 40.8**	**+0.2**
	baz=289						
NTC	**Toucheng**	**0.85**	**334**	*i* P	**Pb**	**12 45 39.7**	**-0.3**
	baz=330						
NTC				S	**Sg**	**12 45 51.9**	**+0.1**
	baz=330						
NNS	**Nan Shan**	**0.86**	**294**	*i* P	**Pn**	**12 45 41.1**	**0.0**
	baz=290						
NNS				S	**Sn**	**12 45 53.5**	**+0.3**
	baz=290						
WHF	**Hehuan Shan**	**0.89**	**274**	*i* P	**Pg**	**12 45 41.6**	**+0.2**
	baz=255						
FUSB	**Fushanzhiwuyua**	**0.89**	**319**	P	**Pg**	**12 45 41.2**	**-0.2**
	baz=314						
FUSS	**Fushou**	**0.92**	**280**	*i* P	**Pg**	**12 45 41.9**	**0.0**
	baz=276						
TWB1	**Santiao Chiao**	**0.94**	**346**	*i* P	**Pb**	**12 45 41.4**	**-0.2**
	baz=343						
TWB1				*i* S	**Sb**	**12 45 54.0**	**+0.2**
	baz=343						
HGSD	**Ruisui**	**0.95**	**232**	P	**Pg**	**12 45 43.0**	**+0.6**
	baz=230						
TIPB	**Shuangxi**	**0.96**	**337**	*i* P	**Pb**	**12 45 41.9**	**0.0**
	baz=333						
TIPB				S	**Sb**	**12 45 53.9**	**-0.2**
	baz=333						
NWLT	**Wulai**	**0.96**	**316**	*i* P	**Pn**	**12 45 42.5**	**+0.2**
	baz=307						
NWLT				S	**Sn**	**12 45 55.4**	**0.0**
	baz=307						
CHGB	**Renai**	**0.97**	**269**	P	**Pn**	**12 45 42.6**	**0.0**
	baz=252						
CHGB				*e*S	**Sn**	**12 45 57.3**	**+1.4**
	baz=252						
YHNB	**Yeheng**	**0.97**	**307**	P	**Pn**	**12 45 42.7**	**+0.1**
	baz=303						
OWD	**Renai**	**0.98**	**262**	*i* P	**Pb**	**12 45 42.3**	**+0.1**
	baz=260						
OWD				S	**Sg**	**12 45 55.5**	**-0.4**
	baz=260						
NSK	**Sanguang**	**0.99**	**306**	*i* P	**Pn**	**12 45 43.0**	**+0.1**
	baz=303						
NSK				*i* S	**Sg**	**12 45 56.1**	**-0.2**
	baz=303						
EHY	**Hungye**	**1.01**	**235**	*i* P	**Pg**	**12 45 44.0**	**+0.3**
	baz=249						
WUSB	**Renai**	**1.02**	**265**	P	**Pn**	**12 45 43.5**	**+0.2**
	baz=251						
VWDT	**VWDT**	**1.05**	**252**	P	**Pn**	**12 45 44.2**	**+0.6**
	baz=238						
SXI1	**Grass Mountain**	**1.05**	**342**	P	**Pb**	**12 45 43.3**	**-0.3**
	baz=338						
NWF	**Wu-fen Shan**	**1.06**	**337**	*i* P	**Pb**	**12 45 43.3**	**-0.5**
	baz=333						
NWF				S	**Sg**	**12 45 58.7**	**+0.1**
	baz=333						
TWA	**Mucha**	**1.07**	**327**	*i* P	**Pg**	**12 45 44.5**	**-0.2**
	baz=323						
NHDH	**Xindian Distri**	**1.08**	**324**	P	**Pg**	**12 45 44.7**	**-0.4**
	baz=334						
YULB	**Yu-li**	**1.10**	**231**	P	**Pn**	**12 45 44.4**	**+0.1**
	baz=246						
EYUL	**Yuli**	**1.11**	**229**	P	**Pb**	**12 45 45.2**	**+0.7**
	baz=245						
EYUL				S	**Sn**	**12 45 59.9**	**+0.6**
	baz=245						
NFF	**Wufeng Townshi**	**1.15**	**298**	P	**Pg**	**12 45 46.1**	**-0.3**
	baz=295						
WHP	**Taichung City**	**1.19**	**279**	*i* P	**Pg**	**12 45 47.4**	**+0.3**
	baz=265						
SSLB	**Suanglung**	**1.21**	**256**	*e*P	**Pb**	**12 45 46.5**	**+0.3**
	baz=243						
SSLB				*e*S	**Sn**	**12 46 02.0**	**+0.4**
	baz=243						
WCS	**Beigang Elemen**	**1.21**	**269**	P	**Pb**	**12 45 46.2**	**+0.1**
	baz=266						
YM01	**YM01**	**1.22**	**330**	P	**Pn**	**12 45 46.0**	**+0.1**
	baz=342						
FULB	**Fuli**	**1.23**	**224**	*i* P	**Pn**	**12 45 45.9**	**-0.3**
	baz=211						
FULB				S	**Sn**	**12 46 02.5**	**+0.2**
	baz=211						
SMLT	**Sun Moon Lake**	**1.24**	**261**	*i* P	**Pb**	**12 45 46.7**	**-0.1**
	baz=247						
LIOB	**Emei**	**1.24**	**297**	*i* P	**Pg**	**12 45 47.7**	**-0.4**
	baz=294						
NSTT	**Nanjuang**	**1.25**	**296**	*i* P	**Pg**	**12 45 47.6**	**-0.5**
	baz=293						
TWS1	**Kuangyinshan**	**1.25**	**324**	*i* P	**Pn**	**12 45 46.6**	**+0.2**
	baz=320						
CHKT	**Chengkung**	**1.27**	**219**	S	**Sn**	**12 46 01.6**	**-1.4**
	baz=208						
TYC	**Yuchr**	**1.27**	**262**	*e*P	**Pg**	**12 45 48.1**	**-0.5**
	baz=252						
TYC				*e*S	**Sg**	**12 46 04.3**	**-0.9**
	baz=252						
TWY	**Chenhua**	**1.32**	**334**	P	**Pb**	**12 45 48.2**	**+0.2**
	baz=330						
TWY				*e*S	**Sb**	**12 46 05.5**	**+1.0**
	baz=330						
YUS	**Yu-Shan**	**1.32**	**243**	*i* P	**Pb**	**12 45 48.6**	**+0.3**
	baz=243						
YUS				S	**Sb**	**12 46 04.1**	**-0.8**
	baz=243						
TWQ1	**Liyutan**	**1.36**	**281**	*e*P	**Pg**	**12 45 50.1**	**-0.2**
	baz=279						
IRIF	**Iriomote-Funau**	**1.39**	**79**	P	**Pn**	**12 45 49.0**	**+0.7**
IRIF				S	**Sb**	**12 46 07.2**	**+0.7**
NMLH	**Miaoli**	**1.39**	**289**	P	**Pb**	**12 45 50.1**	**+0.8**
	baz=286						
EDH	**Donghe**	**1.40**	**218**	P	**Pn**	**12 45 47.7**	**-0.6**
	baz=208						
EDH				*i* S	**Sn**	**12 46 04.9**	**-1.4**
	baz=208						
WJS	**Zhushan**	**1.40**	**259**	*e*S	**Sg**	**12 46 10.1**	**+0.7**
	baz=258						
ALS	**Alishan**	**1.43**	**247**	*i* P	**Pb**	**12 45 50.0**	**-0.1**
	baz=246						
ELDTW	**Lidau**	**1.43**	**232**	P	**Pn**	**12 45 48.7**	**-0.2**
	baz=218						
WNT	**Mingjian**	**1.43**	**262**	*e*S	**Sg**	**12 46 09.8**	**-0.5**
	baz=261						
HATJ	**Hateruma jima**	**1.44**	**91**	*e*S	**Sn**	**12 46 08.3**	**+1.1**
CHN5	**Tsauling**	**1.50**	**251**	*i* P	**Pb**	**12 45 52.2**	**+0.9**
	baz=240						
CHN5				S	**Sg**	**12 46 13.2**	**+0.5**
	baz=240						
LONT	**Longtian**	**1.55**	**221**	*e*S	**Sb**	**12 46 11.7**	**+0.5**
	baz=223						
WDLH	**Douliu**	**1.60**	**256**	*e*S	**Sg**	**12 46 15.7**	**0.0**
	baz=242						
STYH	**Taoyuan**	**1.62**	**236**	S	**Sb**	**12 46 13.9**	**+0.7**
	baz=236						
JKRS	**Kuro-shima**	**1.63**	**84**	P	**Pn**	**12 45 52.3**	**+0.8**
JKRS				*e*S	**Sn**	**12 46 12.9**	**+0.9**
TWGBT	**Beinan**	**1.65**	**220**	*e*P	**Pn**	**12 45 52.8**	**+0.9**
	baz=221						
TWG	**Pinlang**	**1.65**	**220**	P	**Pn**	**12 45 52.6**	**+0.8**
	baz=221						
WTP	**Ta-pu**	**1.70**	**241**	P	**Pb**	**12 45 55.4**	**+0.7**
	baz=241						
WTP				S	**Sg**	**12 46 17.9**	**-1.1**
	baz=241						
JIJ	**Ishigaki jima**	**1.77**	**81**	P	**Pn**	**12 45 53.5**	**+0.1**
JIJ				S	**Sn**	**12 46 14.1**	**-1.2**
TWK	**Hsinying**	**1.80**	**243**	*i* P	**Pb**	**12 45 57.5**	**+1.3**
	baz=243						
TWK				*i* S	**Sb**	**12 46 19.7**	**+1.4**
	baz=243						
CHN1	**Nanshi**	**1.80**	**240**	P	**Pb**	**12 45 56.7**	**+0.3**
	baz=241						
CHN1				*i* S	**Sg**	**12 46 20.6**	**-1.5**
	baz=241						
SNST	**Tainan City**	**1.81**	**242**	*i* S	**Sg**	**12 46 20.8**	**-1.6**
	baz=242						
ECL	**Taimali**	**1.89**	**219**	*e*P	**Pn**	**12 45 54.8**	**-0.4**
	baz=219						
JISG	**Ishigakijimahi**	**1.96**	**75**	P	**Pn**	**12 45 55.8**	**-0.3**
TSMG	**Majia**	**2.00**	**227**	P	**Pb**	**12 45 58.6**	**-1.1**
	baz=221						
TSMG				*e*S	**Sb**	**12 46 23.1**	**-1.2**
	baz=221						
MASBT	**Mashibuluo**	**2.08**	**225**	P	**Pb**	**12 45 59.9**	**-1.1**
	baz=219						
MASBT				*e*S	**Sb**	**12 46 26.0**	**-0.4**
	baz=219						
EAST	**Anshuo**	**2.12**	**217**	*e*P	**Pn**	**12 45 59.1**	**+0.8**
	baz=218						
TAWH	**Dawu Township**	**2.13**	**216**	*e*P	**Pn**	**12 45 59.4**	**+0.9**
	baz=217						
JTJ	**Tarama**	**2.32**	**76**	S	**Sn**	**12 46 28.4**	**-0.6**

TAP ***22*** *12:56:50.9, 24°.59N×122°.68E, h104^{km}, ML2.6, C*

JMA ***22*** *12:56:51.7±0.1, 25°N±2°×122°.7E±0°.7, h93^{km}±1^{km}, MV1.7/10, NW OFF ISHIGAKIJIMA IS*

ISC 22 12:56:52.7±1.5**, 24°.50N**±0°.05×**122°.66E**±0°.03**, h89**^{km}±10^{km}**, n54, σ0^{s}78**/97**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.26**	**101**	*i* P	**Pn**	**12 57 05.8**	**+0.1**
JYNG				*e*S	**Sn**	**12 57 16.3**	**+0.9**
YOJ	**Yonaguni jima**	**0.32**	**97**	P	**Pn**	**12 57 06.0**	**0.0**
	baz=116						
YOJ				S	**Sn**	**12 57 17.3**	**+1.4**
	baz=116						
YOJ	**Yonaguni jima**	**0.32**	**97**	*e*P	**Pn**	**12 57 06.0**	**0.0**
TWC	**Suao**	**0.75**	**278**	*i* P	**Pn**	**12 57 08.8**	**-0.7**
	baz=273						
TWC				S	**Sn**	**12 57 22.2**	**+0.1**
	baz=273						
EWUT	**Wuta**	**0.81**	**266**	P	**Pn**	**12 57 09.8**	**-0.3**
	baz=256						
EWUT				S	**Sn**	**12 57 23.9**	**+0.7**
	baz=256						
NTC	**Toucheng**	**0.84**	**295**	S	**Sn**	**12 57 23.6**	**-0.1**
	baz=283						
ENA	**Nanau**	**0.84**	**265**	*i* P	**Pn**	**12 57 10.6**	**0.0**
	baz=255						
ENA				*i* S	**Sn**	**12 57 24.9**	**+1.0**
	baz=255						
NDS	**Dongshan**	**0.87**	**279**	P	**Pn**	**12 57 10.9**	**+0.1**
	baz=276						
NDS				S	**Sn**	**12 57 23.2**	**-1.2**
	baz=276						
TIPB	**Shuangxi**	**0.89**	**302**	P	**Pn**	**12 57 10.7**	**-0.4**
	baz=294						
TIPB				*i* S	**Sn**	**12 57 24.0**	**-0.9**
	baz=294						
SXI1	**Grass Mountain**	**0.93**	**310**	P	**Pn**	**12 57 11.3**	**-0.2**
	baz=297						
SXI1				S	**Sn**	**12 57 25.9**	**+0.3**
	baz=297						
TWE	**Neicheng**	**0.93**	**284**	*i* P	**Pn**	**12 57 10.8**	**-0.6**
	baz=276						
TWE				*e*S	**Sn**	**12 57 25.3**	**-0.3**
	baz=276						
IRIF	**Iriomote-Funau**	**0.99**	**99**	*e*P	**Pn**	**12 57 11.8**	**-0.3**
IRIF				*e*S	**Sn**	**12 57 26.7**	**+0.1**
ENTT	**Nioudou**	**1.01**	**278**	*i* P	**Pn**	**12 57 12.8**	**+0.4**
	baz=269						
ENTT				*e*S	**Sn**	**12 57 27.2**	**+0.1**
	baz=269						
ETL	**Fush Village**	**1.01**	**250**	P	**Pn**	**12 57 11.9**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=239						
ETL				S	Sn	12 57 27.2	+0.1
	baz=239						
FUSB	Fushanzhiwuyua	1.01	285	P	Pn	12 57 12.6	+0.2
	baz=286						
FUSB				S	Sn	12 57 27.2	-0.1
	baz=286						
NACB	Ninganchiao	1.03	252	P	Pn	12 57 12.0	-0.5
	baz=241						
NACB				S	Sn	12 57 26.3	-1.2
	baz=241						
LATG	Datong	1.04	272	P	Pn	12 57 12.7	-0.1
	baz=266						
LATG				*e*S	Sn	12 57 28.3	+0.4
	baz=266						
NWLT	Wulai	1.09	285	*i* P	Pn	12 57 13.7	+0.4
	baz=286						
NWLT				S	Sn	12 57 28.9	0.0
	baz=286						
TWA	Mucha	1.09	296	S	Sn	12 57 28.4	-0.5
	baz=284						
ETLH	Xiulin Townshi	1.12	255	P	Pn	12 57 13.0	-0.7
	baz=250						
ETLH				S	Sn	12 57 29.4	-0.1
	baz=250						
NNSB	Datong	1.17	267	P	Pn	12 57 13.8	-0.6
	baz=256						
NNSB				S	Sn	12 57 30.6	-0.1
	baz=256						
NNS	Nan Shan	1.18	267	P	Pn	12 57 14.0	-0.5
	baz=256						
NNS				*i* S	Sn	12 57 30.7	-0.1
	baz=256						
YHNB	Yeheng	1.18	278	P	Pn	12 57 14.5	0.0
	baz=273						
YHNB				S	Sn	12 57 30.9	0.0
	baz=273						
NSK	Sanguang	1.20	279	S	Sn	12 57 31.0	-0.3
	baz=268						
JKRS	Kuro-shima	1.25	102	P	Pn	12 57 15.2	0.0
JKRS				*e*S	Sn	12 57 32.9	+0.6
TWS1	Kuangyinshan	1.28	298	*e*P	Pn	12 57 15.0	-0.5
	baz=288						
ESL	Shilin	1.31	239	*i* P	Pn	12 57 15.4	-0.7
	baz=234						
ESL				*i* S	Sn	12 57 33.3	-0.4
	baz=234						
FUSS	Fushou	1.32	259	*i* P	Pn	12 57 16.3	0.0
	baz=254						
FUSS				S	Sn	12 57 33.6	-0.5
	baz=254						
WHF	Hehuan Shan	1.32	255	*i* P	Pn	12 57 16.3	-0.2
	baz=250						
WHF				*i* S	Sn	12 57 34.5	0.0
	baz=250						
JIJ	Ishigaki jima	1.36	95	P	Pn	12 57 16.0	-0.6
JIJ				*e*S	Sn	12 57 33.6	-0.9
EGFH	Guangfu	1.40	234	*i* P	Pn	12 57 16.7	-0.4
	baz=230						
EGFH				*i* S	Sn	12 57 35.2	-0.4
	baz=230						
NFF	Wufeng Townshi	1.41	276	*i* S	Sn	12 57 35.7	-0.2
	baz=277						
CHGB	Renai	1.43	252	P	Pn	12 57 17.7	0.0
	baz=242						
CHGB				S	Sn	12 57 35.9	-0.6
	baz=242						
OWD	Renai	1.46	248	*i* P	Pn	12 57 17.6	-0.4
	baz=239						
OWD				*i* S	Sn	12 57 36.5	-0.6
	baz=239						
WUSB	Renai	1.50	251	P	Pn	12 57 18.7	+0.2
	baz=242						
WUSB				S	Sn	12 57 37.9	-0.1
	baz=242						
JISG	Ishigakijimahi	1.50	86	S	Sn	12 57 40.0	+2.2
LIOB	Emei	1.51	276	P	Pn	12 57 18.6	+0.1
	baz=272						
LIOB				S	Sn	12 57 38.4	+0.4
	baz=272						
HGSD	Ruisui	1.51	229	P	Pn	12 57 18.5	0.0
	baz=224						
HGSD				S	Sn	12 57 38.6	+0.5
	baz=224						
NSTT	Nanjuang	1.52	275	*i* S	Sn	12 57 38.1	-0.1
	baz=271						
EHY	Hungye	1.58	231	*i* P	Pn	12 57 18.6	-0.8
	baz=227						
EHY				*e*S	Sn	12 57 38.8	-0.8
	baz=227						
VWDT	VWDT	1.58	242	P	Pn	12 57 19.4	+0.1
	baz=233						
VWDT				S	Sn	12 57 39.8	+0.3
	baz=233						
WHP	Taichung City	1.58	262	S	Sn	12 57 40.3	+0.5
	baz=256						
WCS	Beigang Elemen	1.66	255	P	Pn	12 57 21.4	+1.0
	baz=256						
WCS				S	Sn	12 57 43.2	+1.8
	baz=256						
YULB	Yu-li	1.67	229	P	Pn	12 57 19.9	-0.7
	baz=232						
YULB				*e*S	Sn	12 57 41.2	-0.4
	baz=232						
EYUL	Yuli	1.68	227	P	Pn	12 57 20.8	+0.1
	baz=231						
EYUL				S	Sn	12 57 43.0	+1.1
	baz=231						
SSLB	Suanglung	1.71	246	P	Pn	12 57 21.4	+0.3
	baz=239						
SSLB				S	Sn	12 57 43.7	+0.9
	baz=239						
SMLT	Sun Moon Lake	1.72	249	P	Pn	12 57 22.3	+1.0
	baz=240						
SMLT				*e*S	Sn	12 57 43.9	+0.8
	baz=240						
FULB	Fuli	1.80	224	*i* P	Pn	12 57 22.0	-0.3
	baz=215						
FULB				*i* S	Sn	12 57 44.9	+0.1
	baz=215						
JTJ	Tarama	1.86	85	P	Pn	12 57 22.3	-0.7
JTJ				*e*S	Sn	12 57 45.5	-0.6
WJS	Zhushan	1.89	249	S	Sn	12 57 49.1	+2.2
	baz=239						
ALS	Alishan	1.96	240	*i* P	Pn	12 57 25.5	+0.8
	baz=236						
ALS				*i* S	Sn	12 57 50.9	+2.0
	baz=236						
EDH	Donghe	1.97	220	S	Sn	12 57 47.5	-1.0
	baz=216						
ELDTW	Lidau	1.99	229	*e*P	Pn	12 57 22.3	-2.5
	baz=222						
ELDTW				S	Sn	12 57 48.4	-0.9
	baz=222						
CHN5	Tsauling	2.02	244	*e*P	Pn	12 57 26.5	+1.3
	baz=240						
CHN5				*i* S	Sn	12 57 52.4	+2.3
	baz=240						

DJA ***22*** *13:09:52.8±0.6, 8°S±4°×11°0E±°, h11^{km}±3^{km}, M4.1/16, mb4.2/3, MLv4.0/16*

NEIC ***22*** *13:09:53.1±1.2, 8.°41S±0.°04×110.°29E±0.°06, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=9.7km s-min=5.5km az=106.0*

ISC 22 13:09:52.0±1.8**, 8.°43S**±0.°07×**110.°23E**±0.°04**, h13**^{km}±11^{km}**, n32, σ0^{s}.92**/39**, mb4.5**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UGM	Wanagama	0.59	29	Pg	Pg	13 10 03.9	+0.3
UGM				Sg	Sg	13 10 10.3	-1.2
UGM	Wanagama	0.59	29	P	Pb	13 10 04.3	+0.1
UGM				S	Sg	13 10 10.9	-0.6
YOGI	Yogyakarta	0.61	6	P	Pb	13 10 04.9	+0.3
YOGI				S	Sg	13 10 12.6	+0.4
WOJI	Wonogiri, Jawa	0.91	49	P	Pb	13 10 09.0	-0.5
PCJI	Pacitan	0.96	76	P	Pb	13 10 10.4	-0.1
PCJI				S	Sb	13 10 22.4	-0.8
SMRI	Semarang	1.39	9	Pn	Pb	13 10 18.1	+0.3
SMRI	Semarang	1.39	9	P	Pb	13 10 18.1	+0.3
PWJI	Pagerwojo	1.61	75	P	Pn	13 10 20.3	+0.3
PWJI				S	Sn	13 10 40.4	-0.2
KPJI	Karang Pucung	1.69	310	P	Pn	13 10 22.1	+1.0
KPJI				S	Sn	13 10 41.3	-1.3
CMJI	Cimerak	1.88	290	P	Pn	13 10 24.6	+0.8
UWJI	Ujung Watu	2.12	20	P	Pn	13 10 27.6	+0.5
GRJI	Gresik	2.69	56	P	Pn	13 10 35.1	+0.2
JCJI	Jatiwangi	2.74	315	P	Pn	13 10 36.8	+1.2
JCJI				S	Sn	13 11 05.9	-2.7
GMJI	Gumukmas	3.18	87	P	Pn	13 10 42.9	+1.2
CNJI	Cibinong	3.27	290	P	Pn	13 10 43.9	+1.0
BLJI	Banyuglugur	3.40	79	P	Pn	13 10 44.7	0.0
JAGI	Jajag, Banyuwa	3.88	91	Pn	Pn	13 10 52.3	+1.0
JAGI	Jajag, Banyuwa	3.88	91	P	Pn	13 10 52.5	+1.2
XMIS	Christmas Isla	4.96	245	Pn	Pn	13 11 06.2	+0.1
PLAI	Plampang	7.47	94	P	Pn	13 11 41.8	+1.1
	0.1nm30nm,1.3s						
EDFI	Ende, Flores	11.34	92	P	Pn	13 12 34.5	+0.7
SOEI	Soe	13.92	96	Pn	Pn	13 13 07.4	-1.8
KNRA	Kununurra	19.49	113	P	Pn	13 14 19.9	-0.2
KNRA				IAmb	IAmb	13 14 34.4	
	comp=Z,16nm,1.2s						
MTN	Manton Dam	21.00	104	P	P	13 14 34.4	-1.0
MTN				IAmb	IAmb	13 15 01.7	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	25.98	119	P	P	13 15 24.8	+0.1
WB2	Warramunga Arr	25.99	119	P	P	13 15 25.1	+0.3
WB2				IAmb	IAmb	13 15 31.0	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	26.16	119	P	P	13 15 26.9	+0.6
WR0				IAmb	IAmb	13 15 49.6	
	comp=Z,4.2nm,1.2s						
AS31	Alice Springs	27.26	127	P	P	13 15 37.0	+0.8
ASAR	Alice Springs	27.26	127	P	P	13 15 37.1	+0.9
ENH	Enshi	38.49	359	P	P	13 17 14.8	+0.9
MAJO	Matsushiro	51.88	29	P	P	13 19 00.8	+0.5
MJB9	Matsu-Tunnel	51.88	29	P	P	13 19 00.7	+0.5
MJB9				IAmb	IAmb	13 19 01.9	
	comp=Z,11nm,1.4s						

NEIC 22 13:21:40.1±0.5**, 35.°945N**±0.°008×**97.°40W**±0.°01**, h4**^{km}±4^{km}**, mb_Lg2.1**/5**, Error ellipse: s-maj=1.5km s-min=1.1km az=72.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.53	185	Pg	Pg	13 21 49.2	-1.1
OKCFA				Sg	Sg	13 21 57.3	+0.2
OKCSW	OKLAHOMA CITY	0.54	183		Pg	13 21 49.9	-0.6
FNO	Franklin	0.69	180		Pg	13 21 52.6	-0.7
FNO				Sg	Sg	13 22 02.3	+0.1
T35A	Sooner Cattle	1.21	36		Pg	13 22 02.0	-1.2
TUL1	Leonard	1.30	91		Pg	13 22 03.1	-2.0
TUL1				IAmb_Lg		13 22 24.8	
	comp=Z,11nm,1.2s						
U32A	Winter Ranch,	1.37	289	Pg	Pn	13 22 04.8	-1.2
X34A	Smith Ranch, M	1.39	195	Pg	Pn	13 22 05.8	-0.5
X37A	Clayton	2.14	129	Pn	Pn	13 22 16.1	-0.6
X37A				IAmb_Lg		13 22 52.3	
	comp=Z,10nm,0.8s						
X40A	Basin Creek Fa	4.01	110	IAmb_Lg		13 23 51.8	
	comp=Z,5.1nm,0.8s						

IDC ***22*** *13:40:40.0±0.4, 84.°42N×107.°54E, h0^{km}, mb4.2/36, mbtmp4.2/36, MS3.7/50, Error ellipse: s-maj=11.7km s-min=9.7km az=151.0*

GCMT ***22*** *13:40:40.9±0.4, 84.°34N±0.°05×107.°6E±0.°4, h21^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s12,c13; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.11±.18; $M_{\theta\theta}$0.69±.10; $M_{\phi\phi}$1.42±.12; $M_{r\theta}$-0.60±.21; $M_{\theta\phi}$-0.48±.05; $M_{\phi r}$0.01±.21; Best double couple: $M_0$1.95600×10^{16} NP1:ϕ_s344.00000°, δ42.00000°, λ-73.00000°. NP2: ϕ_s142.00000°, δ50.00000°, λ-104.00000°. Principal axes: T 1.6760, Plg4.0000°, Azm242.0000°; N 0.5560, Plg11.0000°, Azm151.0000°; P -2.2360, Plg78.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *13:40:41.9±1.5, 84.°41N±0.°09×107.°2E±0.°8, h10^{km}±1^{km}, mb4.7/173 Error ellipse: s-maj=14.7km s-min=12.9km az=25.0*

MOS ***22*** *13:40:41.1±0.9, 84.°36N×107.°66E, h17^{km}, mb4.7/50, MS3.5/8, Error ellipse: s-maj=46.1km s-min=5.9km az=88.5*

IEPN ***22*** *13:40:43.0, 84.°50N×106.°13E, h10^{km}*

ISC 22 13:40:41.5±0.3**, 84.°43N**±0.°04×**106.°41E**±0.°04**, h10**^{km}**, n471,** σ**1^{s}.43**/462**, mb4.6**/164**, MS3.7**/58**, 22C-19D, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	7.94	276	*e*P	Pn	13 42 35.9	-0.8
ZFI2				*e*S	Sn	13 44 01.0	-5.3
	22nm,0.9s						
ZFI	Zemlya Franca-	7.94	276	*e*P	Pn	13 42 35.8	-0.9
ZFI				*e*S	Sn	13 44 01.1	-5.3
	20nm,0.8s						
NOR	Nord	12.43	325	*i* P	Pn	13 43 40.7	+2.6
NOR				IAmb	IAmb	13 43 52.6	
	comp=Z,4.1nm,0.6s						
KBS	Kingsbay	12.85	300	Pn	Pn	13 43 42.4	-1.4
KBS	Kingsbay	12.85	300	*i* P	Pn	13 43 43.9	+0.1
KBS	Kingsbay	12.85	300	*e*P	Pn	13 43 42.6	-1.1
SPA0	Spitsbergen Ar	13.14	295	*e*P	Pn	13 43 46.1	-1.7
SPA0				*i* S	Sn	13 46 05.6	-8.1
SPITS	Spitsbergen Ar	13.14	295	Pn	Pn	13 43 45.1	-2.7
	baz=40,slow=12						
SPITS				Sn	Sn	13 46 11.2	-2.5
	baz=87,slow=29						
SPB2	Spitsbergen Ar	13.14	295	Pn	Pn	13 43 46.0	-1.8
TIXI	Tiksi	13.45	149	Pn	Pn	13 43 49.8	-2.2
	comp=Z,24nm,0.3s,baz=273,slow=23,SNR=16						
TIXI				Sn	Sn	13 46 17.7	-3.5
	comp=Z,11nm,0.3s,baz=270,slow=19,SNR=1.7						
TIXI	Tiksi	13.45	149	Pn	Pn	13 43 50.4	-1.6
TIXI	Tiksi	13.45	149	*ce*P	Pn	13 43 52.0	0.0
TIXI				pmax	pmax		
	comp=Z,12nm,1.7s						
EUNU	Eureka	15.53	8	Pn	Pn	13 44 17.6	-2.5
NRIK	Noril'sk	15.58	205	Pn	Pn	13 44 17.4	-3.4
	comp=Z,0.4nm,0.3s,baz=20,slow=10,SNR=8.6						
NRIK				LR	LR	13 50 45.0	
	comp=Z,372nm,20.3s,baz=356,slow=39						
NRIK	Noril'sk	15.58	205		Pn	13 44 17.2	-3.6
NRIK				IAmb	IAmb	13 44 27.6	
	comp=Z,32nm,0.9s						
NRIK	Noril'sk	15.58	205	*i* P	Pn	13 44 22.0	+1.2
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NRIK				MLR	MLR		
	comp=Z,221nm,16.0s						
AMDE	Amderma	16.83	238	*e*P	Pn	13 44 36.5	-0.2
	comp=Z,7.5nm,0.7s						
AMDE				S	Sn	13 47 31.5	-12
DAG	Danmarks Havn	17.15	320	*i* P	Pn	13 44 40.0	-0.7
DAG				IAmb	IAmb	13 44 53.1	
	comp=Z,1.8nm,0.6s						
TULEG	Thule	19.14	357	*e*P	P	13 45 02.0	-2.2
TULEG				IAmb	IAmb	13 45 09.7	
	comp=Z,7.4nm,0.8s						
DBG	Daneborg	19.65	319	*i* P	Pn	13 45 11.0	-0.2
DBG				IAmb	IAmb	13 45 22.4	
	comp=Z,3.6nm,0.9s						
BILL	Bilibino	19.85	107	P	Pn	13 45 12.5	-1.2
BILL	Bilibino	19.85	107	*d i*P	Pn	13 45 11.8	-1.8
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,68nm,16.0s						
KEV	Kevo	20.08	275	Pn	Pn	13 45 17.9	+1.6
KEV	Kevo	20.08	275	P	Pn	13 45 17.9	+1.6
KEV				pmax	pmax		
	comp=Z,32nm,1.3s						
ARCES	ARCESS Array B	20.44	276	P	P	13 45 19.4	+1.0
	comp=Z,6.1nm,0.8s,baz=18,slow=12,SNR=8.4						
ARCES				LR	LR	13 53 46.3	
	comp=Z,95nm,18.1s,baz=26,slow=38						
	comp=Z,6.1nm,0.8s						
ARCES	ARCESS Array B	20.44	276		P	13 45 19.5	+1.0
RES	Resolute Bay	20.73	16	LR	LR	13 53 33.0	
	comp=Z,215nm,19.3s,baz=320,slow=37						
LVZ	Lovozero	21.13	266	P	P	13 45 26.5	+0.5
LVZ	Lovozero	21.13	266	*ce*P	P	13 45 26.8	+0.8
LVZ				pmax	pmax		
	comp=Z,27nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,34nm,4.0s						
APA	Apatity	21.57	267	⇓*i*P	P	13 45 29.9	-0.7
APA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,200nm,13.0s						
A36M	Sachs Harbour	22.03	41	P	P	13 45 35.6	+0.1
A36M	Sachs Harbour	22.03	41	P	P	13 45 35.6	+0.1
	baz=348						
SUMG	Summit	22.34	333	P	P	13 45 39.0	-0.3
SUMG	Summit	22.34	333	P	P	13 45 39.0	-0.3
SUMG				pmax	pmax		
	comp=Z,21nm,1.2s						
SUMG	Summit	22.34	333	*i* P	P	13 45 37.9	-1.4
SUMG				IAmb	IAmb	13 46 15.4	
	comp=Z,3.2nm,1.0s						
RDOG	Red Dog Mine	22.81	76	P	P	13 45 41.9	-2.0
RDOG				IAmb	IAmb	13 45 50.0	
	comp=Z,56nm,1.4s						
LSH	Leshukonskoye	23.02	252	*e*P	P	13 45 45.3	-0.7
	comp=Z,87nm,1.5s						
YAK	Yakutsk	23.08	152	P	P	13 45 46.2	-0.4
	comp=Z,5.6nm,0.6s,baz=0.5,slow=3.3,SNR=6.8						
YAK				LR	LR	13 55 32.7	
	comp=Z,90nm,21.5s,baz=53,slow=39						
	comp=Z,5.6nm,0.6s						
YAK	Yakutsk	23.08	152	P	P	13 45 46.0	-0.7
YAK				IAmb	IAmb	13 46 09.7	
	comp=Z,18nm,0.8s						
YAK	Yakutsk	23.08	152	*e*P	P	13 45 46.2	-0.4
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
TOLK	Toolik Lake Re	23.46	63	P	P	13 45 50.4	-0.1
TOLK	Toolik Lake Re	23.46	63	P	P	13 45 51.1	+0.6
	baz=346						
SCO	Scoresbysund	23.52	319	P	P	13 45 53.2	+2.2
SCO	Scoresbysund	23.52	319	P	P	13 45 53.2	+2.2
SCO				pmax	pmax		
	comp=Z,16nm,1.1s						
SEY	Seymchan	23.65	125	P	P	13 45 52.7	+0.4
	comp=Z,4.8nm,0.7s,baz=0.0,slow=12,SNR=9.8						
SEY				LR	LR	13 56 12.0	
	comp=Z,105nm,18.4s,baz=39,slow=40						
	comp=Z,4.8nm,0.7s						
SEY	Seymchan	23.65	125	*ce*P	P	13 45 53.9	+1.5
SEY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ADZR	Andozero	24.65	259	*e*P	P	13 46 01.4	-0.3
	comp=Z,16nm,0.7s						
C36M	Paulatuk	24.71	41	P	P	13 46 01.4	-0.8
C36M				IAmb	IAmb	13 46 03.0	
	comp=Z,19nm,0.8s						
C36M	Paulatuk	24.71	41	P	P	13 46 01.8	-0.4
	baz=350,SNR=6.8						
COLD	Coldfoot	24.78	65	P	P	13 46 02.7	-0.2
BMAR	Burnt Mountain	25.07	59	P	P	13 46 05.5	-0.1
INK	Inuvik	25.08	49	P	P	13 46 04.9	-0.7
	comp=Z,8.3nm,0.8s,baz=358,slow=7.5,SNR=16						
INK				LR	LR	13 57 28.7	
	comp=Z,134nm,19.3s,baz=28,slow=40						
	comp=Z,8.3nm,0.8s						
INK	Inuvik	25.08	49	P	P	13 46 05.0	-0.5
INK	Inuvik	25.08	49	P	P	13 46 05.0	-0.5
INK				pmax	pmax		
	comp=Z,43nm,1.4s						
INK	Inuvik	25.08	49	P	P	13 46 05.3	-0.3
	baz=348,SNR=7.5						
IMAR	Indian Mountai	25.68	69	P	P	13 46 10.8	-0.2
ICESG	Greenland Ices	25.87	333	*i* P	P	13 46 16.6	+3.5
ICESG				IAmb	IAmb	13 46 20.5	
	comp=Z,4.6nm,0.9s						
H21K	Melozitna Rive	26.09	68	P	P	13 46 15.3	+0.7
H21K				IAmb	IAmb	13 46 24.1	
	comp=Z,14nm,0.9s						
H21K	Melozitna Rive	26.09	68	P	P	13 46 15.4	+0.7
	baz=347,SNR=16						
PRGR	Permogore	26.21	251	*e*P	P	13 46 17.9	+2.1
PRGR				*e*		13 46 26.2	
PRGR	Permogore	26.21	251	*e*P	P	13 46 17.9	+2.1
H23K	Yukon River	26.21	65	P	P	13 46 15.2	-0.7
H23K				IAmb	IAmb	13 46 27.8	
	comp=Z,27nm,1.2s						
H23K	Yukon River	26.21	65	P	P	13 46 16.9	+1.0
	baz=348,SNR=9.5						
H24K	Noodor Dome	26.35	63	P	P	13 46 17.4	+0.3
H24K				IAmb	IAmb	13 46 29.7	
	comp=Z,19nm,1.1s						
H24K	Noodor Dome	26.35	63	P	P	13 46 18.0	+0.9
	baz=348,SNR=8.4						
GCSA	Galena City Sc	26.61	72	P	P	13 46 21.9	+2.5
	baz=347						
I21K	Tanana	26.63	67	P	P	13 46 19.7	+0.1
I21K	Tanana	26.63	67	P	P	13 46 21.3	+1.8
	baz=348						
EPYK	Eagle Plains	26.75	53	P	P	13 46 20.8	+0.1
EPYK	Eagle Plains	26.75	53	P	P	13 46 21.1	+0.4
	baz=349,SNR=12						
I23K	Minto, Yukon-K	26.89	65	P	P	13 46 23.1	+1.2
I23K				IAmb	IAmb	13 46 37.5	
	comp=Z,31nm,1.5s						
I23K	Minto, Yukon-K	26.89	65	P	P	13 46 22.9	+1.0
	baz=348						
J20K	Nowinta River	27.42	70	P	P	13 46 31.6	+4.9
	baz=348						
NEA2	Nenana	27.47	65	P	P	13 46 27.4	+0.3
NEA2				IAmb	IAmb	13 46 55.2	
	comp=Z,21nm,1.4s						
IL31		27.48	63	P	P	13 46 27.9	+0.7
IL31				IAmb	IAmb	13 46 37.2	
	comp=Z,20nm,1.4s						
ILAR	Eielson Array	27.48	63	P	P	13 46 27.8	+0.5
	comp=Z,4.6nm,1.0s,baz=348,slow=8.1,SNR=32						
ILAR				PcP	PcP	13 49 43.8	-1.2
	baz=339,slow=2.2,SNR=3.5						
ILAR				LR	LR	13 57 12.7	
	comp=Z,105nm,19.7s,baz=350,slow=36						
	comp=Z,4.6nm,1.0s						
ILAR	Eielson Array	27.48	63	P	P	13 46 27.3	+0.1
CCB	Clear Creek Bu	27.52	64	P	P	13 46 28.4	+0.8
CCB				IAmb	IAmb	13 46 40.9	
	comp=Z,13nm,1.2s						
KLMR	Klimovskoe	27.55	257	*e*P	P	13 46 27.5	-0.4
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	27.55	257	*e*P	P	13 46 27.5	-0.4
	comp=Z,26nm,1.2s						
KLMR	Klimovskoe	27.55	257	*e*P	P	13 46 27.6	-0.4
KLMR				AMP		13 46 41.5	
	comp=Z,17nm,1.4s						
I29M	Ogilvie Camp,	27.62	55	P	P	13 46 27.9	-0.6
I29M	Ogilvie Camp,	27.62	55	P	P	13 46 27.9	-0.6
	baz=349,SNR=6.9						
J25K	Salcha River,	27.77	62	P	P	13 46 30.8	+0.9
J25K				IAmb	IAmb	13 46 43.8	
	comp=Z,15nm,1.5s						
J25K	Salcha River,	27.77	62	P	P	13 46 30.2	+0.3
	baz=348						
HDA	Harding Lake	27.83	63	P	P	13 46 30.0	-0.4
HDA	Harding Lake	27.83	63	P	P	13 46 31.7	+1.3
	baz=348						
BWN	Browne	27.84	65	P	P	13 46 29.6	-0.9
CHUM	Lake Minchumin	27.87	68	P	P	13 46 32.0	+1.3
	baz=348						
EGAK	Eagle	27.96	58	P	P	13 46 31.7	+0.2
EGAK	Eagle	27.96	58	P	P	13 46 32.4	+0.9
	baz=349						
J26L	Joseph Creek	28.03	60	P	P	13 46 33.0	+0.7
	baz=349						
FIA1	FINESS Array S	28.27	271	P	P	13 46 35.3	+1.0
FIA1				IAmb	IAmb	13 46 36.1	
	comp=Z,9.8nm,0.8s						
FINES	FINESS Array B	28.28	271	P	P	13 46 35.1	+0.8
	comp=Z,7.7nm,0.8s,baz=23,slow=11,SNR=23						
FINES				PcP	PcP	13 49 46.4	-0.5
	comp=Z,1.5nm,0.8s,baz=90,slow=3.2,SNR=2.3						
	comp=Z,7.7nm,0.8s						
FINES	FINESS Array B	28.28	271	P	P	13 46 35.3	+1.0
SFJD	Kangerlussuaq	28.38	341	LR	LR	13 57 14.9	
	comp=Z,81nm,18.7s,baz=358,slow=35						
TRF	Thorofare Moun	28.48	67	P	P	13 46 36.8	+0.4

	baz=348						
K27K	Chicken	28.62	59	P	P	13 46 38.2	+0.7
	baz=349						
DAWY	Dawson	28.81	56	P	P	13 46 39.1	0.0
DAWY	Dawson	28.81	56	P	P	13 46 39.3	+0.1
	baz=349						
PPLA	Purkeypile	28.86	68	P	P	13 46 40.3	+0.6
KIRV	Kirov	28.88	245	P	P	13 46 40.0	+0.3
	comp=Z,8.6nm,0.7s,baz=27,slow=11,SNR=5.1						
KIRV				LR	LR	14 00 56.2	
	comp=Z,152nm,18.0s,baz=27,slow=42						
	comp=Z,8.6nm,0.7s						
DHY	Denali Highway	29.11	64	P	P	13 46 42.6	+0.7
	baz=349						
BORG	Borgarnes	29.15	316	LR	LR	13 56 48.8	
	comp=Z,37nm,19.3s,baz=53,slow=33						
L19K	White Mountain	29.31	71	P	P	13 46 44.4	+0.8
L19K				IAmb	IAmb	13 47 08.6	
	comp=Z,18nm,1.5s						
PAX	Paxson	29.38	62	P	P	13 46 44.4	+0.1
PAX				IAmb	IAmb	13 46 53.4	
	comp=Z,12nm,1.2s						
PAX	Paxson	29.38	62	P	P	13 46 44.4	+0.1
PAX				pmax	pmax		
	comp=Z,12nm,1.2s						
PAX	Paxson	29.38	62	P	P	13 46 44.7	+0.5
	baz=349						
L26K	Log Cabin Wild	29.51	60	P	P	13 46 46.4	+1.1
	baz=349						
MENT	Mentasta	29.56	61	P	P	13 46 46.2	+0.4
BCAR	Beaver Creek A	29.60	59	P	P	13 46 46.8	+0.6
L27K	Beaver Creek,	29.60	59	P	P	13 46 46.4	+0.2
L27K				IAmb	IAmb	13 46 57.7	
	comp=Z,13nm,1.2s						
L27K	Beaver Creek,	29.60	59	P	P	13 46 46.8	+0.7
	baz=349						
NB2	NORSAR Subarra	30.11	285	P	P	13 46 52.1	+1.4
	comp=Z,5.5nm,1.0s,baz=10,slow=9.3						
NOA	NORSAR Array B	30.11	285	P	P	13 46 51.3	+0.7
	comp=Z,2.9nm,1.0s,baz=19,slow=8.9,SNR=3.8						
NOA				PcP	PcP	13 49 51.9	+0.3
	comp=Z,1.4nm,0.8s,baz=13,slow=4.2,SNR=5.3						
NOA				LR	LR	13 58 50.7	
	comp=Z,34nm,20.6s,baz=5.0,slow=36						
	comp=Z,2.9nm,1.0s						
ARU	Arti	30.24	235	P	P	13 46 52.1	+0.3
	comp=Z,0.8nm,0.4s,baz=8.1,slow=6.3,SNR=6.5						
ARU				LR	LR	14 00 30.0	
	comp=Z,418nm,19.9s,baz=22,slow=39						
	comp=Z,0.8nm,0.4s						
ARU	Arti	30.24	235	P	P	13 46 52.2	+0.4
ARU	Arti	30.24	235	c iP	P	13 46 52.9	+1.1
ARU						13 49 51.4	
ARU				S	S	13 51 54.6	+3.8
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,413nm,20.0s						
SCM	Sheep Creek Mo	30.34	64	P	P	13 46 52.9	+0.2
SCM				IAmb	IAmb	13 47 01.1	
	comp=Z,15nm,0.9s						
SCM	Sheep Creek Mo	30.34	64	P	P	13 46 52.9	+0.2
SCM				pmax	pmax		
	comp=Z,15nm,0.9s						
SCM	Sheep Creek Mo	30.34	64	P	P	13 46 53.0	+0.3
	baz=349						
M30M	Minto, Yukon	30.49	55	P	P	13 46 54.2	+0.1
M30M	Minto, Yukon	30.49	55	P	P	13 46 54.5	+0.4
	baz=350						
HFS	Hagfors	30.77	282	LR	LR	13 58 47.8	
	comp=Z,102nm,20.8s,baz=22,slow=35						
KLU	Klutina	30.80	63	P	P	13 46 57.5	+0.7
KLU				IAmb	IAmb	13 47 06.2	
	comp=Z,16nm,1.0s						
KLU	Klutina	30.80	63	P	P	13 46 57.8	+1.0
	baz=349,SNR=5.9						
YUK3	Moose Creek	30.98	58	P	P	13 46 59.2	+0.6
	baz=350						
M31M	Drury Creek, Y	31.05	53	P	P	13 46 58.5	-0.4
	baz=350						
ZAA0	Zalesovo Array	31.08	205	P	P	13 46 59.4	+0.1
ZALV	Zalesovo Beam	31.08	205	P	P	13 46 59.0	-0.2
	comp=Z,2.9nm,0.8s,baz=359,slow=9.3,SNR=12						
ZALV				PcP	PcP	13 49 53.6	-0.6
	baz=241,slow=4.5,SNR=3.8						
ZALV				LR	LR	14 00 26.1	
	comp=Z,185nm,19.9s,baz=340,slow=38						
	comp=Z,2.9nm,0.8s						
VSU	Vasula	31.15	269	iP	P	13 47 00.1	+0.4
VSU				pmax	pmax		
	comp=Z,33nm,0.9s						
ZEA	Zeya	31.26	156	eP	P	13 47 01.9	+1.1
N30M	Aishikik Lake	31.57	55	P	P	13 47 04.6	+1.0
	baz=350,SNR=5.5						
N31M	Braeburn, Yuko	31.65	54	P	P	13 47 04.8	+0.6
N31M				IAmb	IAmb	13 47 13.0	
	comp=Z,13nm,1.0s						
N31M	Braeburn, Yuko	31.65	54	P	P	13 47 04.4	+0.2
	baz=350						
YUK6	Outpost Mounta	31.98	57	P	P	13 47 08.4	+1.1
	baz=350						
FRB	Frobisher Bay	31.99	356	LR	LR	13 59 54.4	
	comp=Z,96nm,19.5s,baz=322,slow=36						
YKA	Yellowknife Ar	32.09	35	P	P	13 47 06.4	-1.6
	comp=Z,0.5nm,0.6s,baz=354,slow=9.2,SNR=5.9						
YKA				PcP	PcP	13 49 56.4	-0.3
	comp=Z,1.0nm,0.7s,baz=332,slow=3.2,SNR=6.3						
YKA				LR	LR	14 00 29.3	
	comp=Z,205nm,19.0s,baz=350,slow=37						
	comp=Z,0.5nm,0.6s						
HYT	Haines Junctio	32.16	56	P	P	13 47 10.4	+1.5
	baz=350						
BRVK	Borovoye	32.74	221	ceP	P	13 47 15.5	+1.7
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MOY	Mondy	32.94	186	eP	P	13 47 17.0	+1.2
P33M	Teslin, Yukon	33.14	52	P	P	13 47 17.5	+0.1
P33M				IAmb	IAmb	13 47 18.6	
	comp=Z,12nm,1.2s						
P33M	Teslin, Yukon	33.14	52	P	P	13 47 17.8	+0.5
	baz=351,SNR=7.2						
OBN	Obninsk	33.50	258	iP	P	13 47 20.5	+0.1
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,140nm,22.0s						
PETK	Petropavlovsk-	33.81	122	P	P	13 47 23.3	+0.1
PETK	Petropavlovsk-	33.81	122	P	P	13 47 23.3	+0.1
KDAK	Kodiak Island	33.86	71	LR	LR	14 03 18.0	
	comp=Z,99nm,18.1s,baz=15,slow=40						
PABE	Paberze	34.33	271	P	P	13 47 28.6	+1.0
OHAK	Old Harbor	34.35	72	P	P	13 47 28.4	+0.7
KURK	Kurchatov	34.60	211	P	P	13 47 29.6	-0.4
KURK	Kurchatov	34.60	211	P	P	13 47 30.7	+0.7
KURK						13 50 04.5	
NACGM	Naroch	34.65	268	⇑eP	P	13 47 31.7	+1.3
	baz=11						
KURBB	Kurchatov Arra	34.69	212	P	P	13 47 30.6	-0.2
	comp=Z,1.0nm,0.6s,baz=20,slow=7.0,SNR=14						
KURBB				PcP	PcP	13 50 04.5	+0.2
	comp=Z,1.1nm,0.7s,baz=357,slow=2.7,SNR=8.2						
KURBB				LR	LR	14 04 42.8	
	comp=Z,184nm,18.1s,baz=290,slow=42						
	comp=Z,1.0nm,0.6s						
MNK	Minsk	34.94	266	iP	P	13 47 33.2	+0.3
MNK				i		13 48 50.3	
MNK				i		13 50 05.0	
MNK				iS	S	13 53 05.0	+1.1
MNK				iSS	SnSn	13 55 22.9	+4.7
MNK				i		13 57 54.4	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,32nm,0.9s						
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				MLR	MLR		
	comp=N,272nm,19.0s						
MNK				MLR	MLR		
	comp=E,67nm,23.0s						
MNK				MLR	MLR		
	comp=Z,69nm,17.0s						
MNK	Minsk	34.94	266	iP	P	13 47 33.2	+0.3
	comp=E,2.0nm,0.8s						
MNK				iP	P	13 47 33.2	+0.3
	comp=N,21nm,1.0s						
MNK				iP	P	13 47 33.2	+0.3
	comp=Z,32nm,0.9s,baz=190						
MNK				iPP	PnPn	13 48 50.3	+0.9
MNK				iPPP	PPP	13 49 02.9	
MNK				iS	S	13 53 05.0	+1.1
MNK				iSS	SnSn	13 55 22.9	+4.7
MNK				iSSS	SSS	13 55 39.1	
MNK				iLQ	LQ	13 58 48.3	
MNK				iLR	LR	14 01 26.5	
MNK				iLRM	MLR	14 03 03.9	
	comp=N,272nm,19.4s						
MNK				iLRM	MLR	14 03 11.2	
	comp=E,67nm,23.2s						
MNK				iLRM	MLR	14 03 27.1	
	comp=Z,69nm,16.8s						
DLBC	Dease Lake	35.11	50	LR	LR	14 04 25.3	
	comp=Z,67nm,18.2s,baz=328,slow=41						
BELG	Belogornoye	35.17	246	P	P	13 47 35.7	+0.9
	comp=Z,22nm,0.8s,baz=137,slow=1.8,SNR=5.0						
BELG				LR	LR	14 02 54.7	
	comp=Z,110nm,21.1s,baz=2.4,slow=38						
	comp=Z,22nm,0.8s						
SHEM	Shemya Is, Ala	35.65	105	LR	LR	14 02 14.2	
	comp=Z,49nm,19.6s,baz=325,slow=36						
KLR	Kul'dur	35.96	151	P	P	13 47 40.7	-1.0
	comp=Z,0.7nm,0.7s,baz=337,slow=18,SNR=1.9						
	comp=Z,0.7nm,0.7s						
KLR	Kul'dur	35.96	151	ceP	P	13 47 41.1	-0.6
KLR				pmax	pmax		
	comp=Z,8.0nm,3.0s						
KLR				MLR	MLR		
	comp=Z,83nm,18.0s						
AKTO	Aktyubinsk	36.23	234	P	P	13 47 44.9	+0.8
	comp=Z,5.7nm,0.8s,baz=9.5,slow=8.2,SNR=16						
AKTO				LR	LR	14 03 48.8	
	comp=Z,205nm,21.6s,baz=9.7,slow=38						
	comp=Z,5.7nm,0.8s						
VORR	Voronezh	36.65	254	eP	P	13 47 50.3	+2.7
FCC	Fort Churchill	36.71	18	P	P	13 47 47.0	-1.0
FCC	Fort Churchill	36.71	18	P	P	13 47 47.0	-1.0
FCC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ULN	Ulaanbaatar	36.72	179	ceP	P	13 47 51.1	+2.7
ULN				pmax	pmax		
	comp=Z,5.0nm,2.5s						
SONM	Songino Array	36.75	180	P	P	13 47 49.2	+0.6
	comp=Z,3.0nm,0.8s,baz=348,slow=8.1,SNR=16						
SONM				PcP	PcP	13 50 11.0	+0.4
	comp=Z,0.8nm,0.4s,baz=318,slow=1.9,SNR=3.7						
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	36.75	180	P	P	13 47 49.2	+0.6
ABKAR	Akbulak array	37.26	232	P	P	13 47 52.1	-0.7
MAKZ	Makanchi	38.34	207	P	P	13 48 01.0	-1.0
MAKZ	Makanchi	38.34	207	⇑P	P	13 48 01.3	-0.7
MK31	Makanchi Array	38.34	207	P	P	13 48 01.3	-0.6
MK31	Makanchi Array	38.34	207	P	P	13 48 01.3	-0.6
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	38.34	207	P	P	13 48 01.7	-0.2
	comp=Z,4.3nm,0.7s,baz=1.5,slow=7.0,SNR=45						
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	38.34	207	P	P	13 48 01.0	-0.9
AKASG	Malin Array Be	38.57	264	P	P	13 48 03.9	+0.1
	comp=Z,3.5nm,0.7s,baz=11,slow=8.9,SNR=19						
AKASG				LR	LR	14 06 16.3	
	comp=Z,121nm,21.5s,baz=26,slow=40						
	comp=Z,3.5nm,0.7s						
AKASG	Malin Array Be	38.57	264	iP	P	13 48 04.3	+0.5
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKBB	Malin Array Si	38.57	264	P	P	13 48 04.1	+0.3
AKBB	Malin Array Si	38.57	264	ceP	P	13 48 04.8	+1.0
YSS	Yuzh-Sakhalins	38.84	140	ceP	P	13 48 06.9	+0.8
YSS				pmax	pmax		
	comp=Z,18nm,1.7s						
BNX	BinXian	39.26	157	⇑P	P	13 48 09.5	-0.1
BNX				pmax	pmax		
	comp=Z,18nm,1.1s						
BNX				pmax	pmax		
	comp=Z,110nm,4.6s						
CLL	Collm	39.55	280	iP	P	13 48 13.6	+1.6
CLL				e		13 48 21.0	
CLL				eS	S	13 54 11.0	-3.0
CLL				pmax	pmax		
	comp=Z,13nm,1.5s						
CLL	Collm	39.55	280	iP	P	13 48 13.6	+1.6
	comp=Z,13nm,1.5s						
CLL				ex	x	13 48 21.0	
CLL				eS	S	13 54 11.0	-3.0
BRG	Berggiesshubel	39.89	279	eP	P	13 48 16.7	+1.9
BRG				Amp		13 48 18.2	
	comp=Z,7.8nm,1.3s						
BRG				ex	x	13 48 26.7	
BRG				Amp		13 48 28.1	
	comp=Z,4.3nm,1.1s						
BRG	Berggiesshubel	39.89	279	eP	P	13 48 16.7	+1.9
BRG				e		13 48 26.7	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OJC	Ojcow	39.97	273	P	P	13 48 16.6	+1.1
OJC	Ojcow	39.97	273	P	P	13 48 16.6	+1.1
OJC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DPC	Dobruska-Polom	40.17	277	eP	P	13 48 18.4	+1.1
DPC	Dobruska-Polom	40.17	277	eP	P	13 48 18.4	+1.1
NKC	Novy Kostel	40.66	281	eP	P	13 48 22.8	+1.5
NKC	Novy Kostel	40.66	281	eP	P	13 48 22.8	+1.5
PRU	Pruhonice	40.71	278	eP	P	13 48 33.4	+12
MEM	Membach	40.90	287	dP	P	13 48 22.9	-0.3
SCHQ	Schefferville	40.92	354	P	P	13 48 23.6	+0.2
	comp=Z,1.2nm,0.6s,baz=234,slow=17,SNR=2.7						
	comp=Z,1.2nm,0.6s						
USA0B	Ussuriysk Arra	40.99	152	iP	P	13 48 25.3	+1.3
LANS	Liptovska Anna	41.06	273	eP	P	13 48 27.5	+2.9
LANS	Liptovska Anna	41.06	273	eP	P	13 48 27.5	+2.9
WMQ	Urumqi	41.09	201	⇓P	P	13 48 25.3	+0.3
WMQ				sP	pwP	13 48 35.1	+3.0
WMQ				pmax	pmax		
	comp=Z,36nm,0.9s						
WMQ				LR	LR		
	comp=Z,170nm,21.7s						
CRVS	Cervenica-Dubn	41.11	271	eP	P	13 48 26.9	+1.9
CRVS				pmax	pmax		
	comp=Z,14nm,1.4s						
CRVS	Cervenica-Dubn	41.11	271	eP	P	13 48 26.9	+1.9
BCLA	Clavier	41.16	287	dP	P	13 48 27.3	+2.0
	comp=Z,5.5nm,0.9s						
SNF	Seneffe	41.16	288	dP	P	13 48 26.7	+1.4
	comp=Z,6.8nm,0.9s						
VRAC	Vranov	41.18	276	⇓P	P	13 48 27.7	+2.1
VRAC	Vranov	41.18	276	LR	LR	14 09 04.1	
	comp=Z,56nm,18.3s,baz=40,slow=41						
VRAC	Vranov	41.18	276	⇓P	P	13 48 27.7	+2.1
SORM	Soroca	41.20	264	⇓P	P	13 48 26.7	+1.1
SORM	Soroca	41.20	264	⇓P	P	13 48 26.7	+1.1
BGES	Gesves	41.21	288	dP	P	13 48 27.7	+1.9
	comp=Z,5.4nm,0.8s						
GRA1	Grafenberg Arr	41.32	282	P	P	13 48 29.0	+2.3
GRA1				IAmb	IAmb	13 48 30.1	
	comp=Z,14nm,1.0s						
GRF	Grafenberg Arr	41.32	282	P	P	13 48 29.0	+2.3
GRF				pmax	pmax		
	comp=Z,14nm,1.0s						
GRFO	Grafenberg	41.32	282	P	P	13 48 28.9	+2.2
GRFO				IAmb	IAmb	13 48 30.0	
	comp=Z,16nm,1.1s						
GRFO	Grafenberg	41.32	282	P	P	13 48 28.9	+2.2
GRFO				pmax	pmax		
	comp=Z,16nm,1.1s						
RCHB	Rochefort	41.42	288	dx	x	13 48 29.5	
BBB	Bella Bella	41.47	49	LR	LR	14 06 09.0	
	comp=Z,68nm,20.1s,baz=14,slow=37						
DOU	Dourbes	41.54	288	dP	P	13 48 30.3	+1.8
KHC	Kasperske Hory	41.65	279	P	P	13 48 31.4	+1.9
KHC	Kasperske Hory	41.65	279	eP	P	13 48 30.9	+1.5
KHC				e		13 48 40.0	
KHC	Kasperske Hory	41.65	279	eP	P	13 48 30.9	+1.5
KHC				ex	x	13 48 40.0	
VYHS	Vyhne	41.77	274	eP	P	13 48 32.3	+1.9
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VYHS	Vyhne	41.77	274	eP	P	13 48 32.3	+1.9
WLF	Walferdange	41.83	287	P	P	13 48 33.0	+2.2
WLF	Walferdange	41.83	287	P	P	13 48 33.0	+2.2
WLF				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GEC2	GERESS Array S	41.92	279	P	P	13 48 33.3	+1.6
GERES	GERESS Array B	41.92	279	P	P	13 48 32.2	+0.5
	comp=Z,1.7nm,1.0s,baz=29,slow=6.1,SNR=8.2						
GERES				PcP	PcP	13 50 26.8	-0.2
	comp=Z,0.6nm,0.6s,baz=25,slow=4.4,SNR=4.5						
	comp=Z,1.7nm,1.0s						
GERES	GERESS Array B	41.92	279	P	P	13 48 33.2	+1.6
BUR08	Bucovina Ar. S	41.99	267	P	P	13 48 33.5	+1.2
BURAR	Bucovina Array	42.02	267	⇓P	P	13 48 33.9	+1.4
BURAR	Bucovina Array	42.02	267	P	P	13 48 33.7	+1.2
BURAR	Bucovina Array	42.02	267	⇓P	P	13 48 33.9	+1.4
PSZ	Piszkesteto	42.23	273	⇑P	P	13 48 36.9	+2.6
PSZ	Piszkesteto	42.23	273	P	P	13 48 36.3	+2.1
PSZ	Piszkesteto	42.23	273	⇑P	P	13 48 36.9	+2.6
BIZ	Bicaz	42.60	266	⇓P	P	13 48 39.3	+2.1
CONA	Conrad Observa	42.62	277	eP	P	13 48 39.7	+2.3
	comp=Z,4.2nm,0.9s						
KK31	Karatay Array	42.65	219	P	P	13 48 38.6	+1.0
KK31	Karatay Array	42.65	219	P	P	13 48 38.6	+1.0
KK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KKAR	Karatay Array	42.65	219	P	P	13 48 38.6	+1.0
KKAR	Karatay Array	42.65	219	P	P	13 48 38.6	+1.0
RONA	Rosalia, Austr	42.80	276	eP	P	13 48 41.4	+2.5
MOA	Molln	42.85	278	eP	P	13 48 41.4	+2.2
	comp=Z,4.2nm,1.1s						
AAK	Ala-Archa	42.87	215	P	P	13 48 40.8	+1.2
	comp=Z,1.1nm,0.3s,baz=11,slow=4.0,SNR=8.0						
AAK				LR	LR	14 08 43.5	
	comp=Z,181nm,21.5s,baz=5.0,slow=39						
	comp=Z,1.1nm,0.3s						
AAK	Ala-Archa	42.87	215	P	P	13 48 41.2	+1.6
AAK	Ala-Archa	42.87	215	P	P	13 48 41.3	+1.6
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BFO	Black Forest	42.94	284	P	P	13 48 41.9	+1.9
BFO				IAmb	IAmb	13 48 43.0	
	comp=Z,16nm,1.4s						
BFO	Black Forest	42.94	284	P	P	13 48 41.9	+1.9
BFO				pmax	pmax		
	comp=Z,16nm,1.4s						
TESR	Tescani	42.97	266	⇓P	P	13 48 41.7	+1.5
DRGR		43.08	270	⇑P	P	13 48 43.1	+2.0
DRGR		43.08	270	⇑P	P	13 48 43.1	+2.0
KDJ	Kajisay	43.23	212	P	P	13 48 43.4	+0.8
KDJ				IAmb	IAmb	13 48 44.7	
	comp=Z,11nm,0.8s						
KDJ	Kajisay	43.23	212	P	P	13 48 43.4	+0.8
KDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
RETA	Reutte	43.55	282	eP	P	13 48 47.1	+2.2
	comp=Z,9.2nm,1.6s						
MOTA	Moosalm	43.65	281	eP	P	13 48 47.8	+1.9
	comp=Z,6.2nm,1.3s						
WTTA	Wattenberg	43.68	281	eP	P	13 48 49.3	+3.1
	comp=Z,5.9nm,1.1s						
SIRR	Siria	43.70	271	⇑P	P	13 48 48.3	+2.3
KBA	Koelnbreinsper	43.70	279	eP	P	13 48 49.3	+3.0
	comp=Z,13nm,1.5s						
HHC	Hu-ho-hao-te	43.76	174	eP	P	13 48 46.5	-0.2
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
CLF	Chambon-Foret	43.81	290	P	P	13 48 48.5	+1.6
DAVA	Damuels	43.83	282	eP	P	13 48 49.7	+2.4
	comp=Z,9.7nm,1.2s						
SOKA	Soboth	43.94	277	eP	P	13 48 50.0	+2.0
	comp=Z,7.8nm,1.5s						
KVAR	Kislovodsk Arr	43.98	249	P	P	13 48 50.1	+1.7
	comp=Z,2.0nm,0.5s,baz=267,slow=22,SNR=2.3						
	comp=Z,2.0nm,0.5s						
KIV	Kislovodsk	43.98	249	⇑P	P	13 48 49.4	+1.0
KIV	Kislovodsk	43.98	249	P	P	13 48 49.9	+1.5
KIV				IAmb	IAmb	13 48 51.6	
	comp=Z,23nm,1.2s						
KIV	Kislovodsk	43.98	249	eP	P	13 48 50.2	+1.8
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV				MLR	MLR		
	comp=Z,48nm,17.0s						
MLR	Muntele Rosu	44.05	266	⇓P	P	13 48 50.9	+1.9
MLR	Muntele Rosu	44.05	266	LR	LR	14 09 55.6	
	comp=Z,92nm,19.4s,baz=24,slow=40						
MLR	Muntele Rosu	44.05	266	⇓P	P	13 48 50.9	+1.9
ABTA	Abfaltersbach	44.11	280	eP	P	13 48 52.2	+2.7
	comp=Z,6.1nm,1.2s						
MYKA	Terra Mystica	44.12	279	eP	P	13 48 51.8	+2.3
	comp=Z,8.3nm,1.3s						
OBKA	Obir	44.15	278	eP	P	13 48 52.4	+2.6
	comp=Z,12nm,1.0s						
KBZ	Khabaz	44.18	249	P	P	13 48 51.4	+1.5
	comp=Z,5.3nm,1.0s,baz=306,slow=2.1,SNR=8.0						
KBZ				LR	LR	14 11 19.7	
	comp=Z,42nm,18.0s,baz=31,slow=42						
	comp=Z,5.3nm,1.0s						
SHA1	Shidzhatmaz	44.20	249	iP	P	13 48 51.7	+1.4
DAVOX	Davos/Dischmat	44.33	282	P	P	13 48 53.2	+1.9
	comp=Z,7.8nm,1.1s,baz=356,slow=8.6,SNR=6.7						
DAVOX				LR	LR	14 08 09.2	
	comp=Z,46nm,18.6s,baz=262,slow=37						
	comp=Z,7.8nm,1.1s						
GZR	Gura Zlata	44.45	269	⇑P	P	13 48 54.4	+2.2
GZR	Gura Zlata	44.45	269	⇑P	P	13 48 54.4	+2.2
MAK	Makhachkala	44.53	244	eP	P	13 48 47.7	-5.0
MAK				eS	S	13 55 22.7	-5.0
MAK				eSS	SS	13 58 38.9	-7.8
MAK				MLR	MLR		
	comp=Z,312nm,19.0s						
TUE	Stuetta	44.69	283	P	P	13 48 56.7	+2.5
TUE				IAmb	IAmb	13 48 58.0	
	comp=Z,16nm,1.0s						
FRGS	Fruska Gora	44.98	272	⇑P	P	13 48 58.6	+2.3
ZEI	Tsey	45.03	247	eP	P	13 48 57.5	+0.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDVR	Moldovita	45.16	270	⇑P	P	13 48 59.6	+1.7
ULM	Lac du Bonnet	45.17	20	LR	LR	14 08 18.7	
	comp=Z,111nm,19.1s,baz=34,slow=37						
GTA	Gaotai	45.21	187	eP	P	13 49 02.6	+4.2
GTA				pP	pwP	13 49 07.8	+2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,73nm,4.6s						
GTA				LR	LR		
	comp=N,200nm,16.4s						
GTA				LR	LR		
	comp=E,190nm,17.1s						
GTA				LR	LR		
	comp=Z,280nm,17.1s						
BTK	Batken	45.66	219	P	P	13 49 03.1	+1.2
BTK	Batken	45.66	219	P	P	13 49 03.1	+1.2
BTK				pmax	pmax		
	comp=Z,13nm,0.8s						
B08A	Colville Reser	45.89	42	P	P	13 49 03.6	+0.1
KSH	Kashi	45.90	213	P	P	13 49 06.6	+2.8
KSH				ScP	ScP	13 54 35.0	+1.9
NEW	Newport	46.12	40	LR	LR	14 09 07.2	
	comp=Z,168nm,19.4s,baz=3.0,slow=37						
NEW	Newport	46.12	40	P	P	13 49 05.9	+0.5
NEW				IAmb	IAmb	13 49 20.5	
	comp=Z,20nm,1.5s						
NEW	Newport	46.12	40	P	P	13 49 05.9	+0.5
NEW				pmax	pmax		
	comp=Z,19nm,1.5s						
NEW	Newport	46.12	40	P	P	13 49 06.4	+1.0
	baz=355						
GAR	Garm	46.74	219	P	P	13 49 11.6	+1.2
MSSA	Maissana	46.81	282	P	P	13 49 11.8	+1.0
VLC	Villacollemand	46.88	281	P	P	13 49 13.1	+1.8
B35A	Bob, Littlefor	47.13	18	P	P	13 49 12.1	-1.1
B35A				IAmb	IAmb	13 49 13.0	
	comp=Z,6.0nm,0.9s						
OSSC	Osservatorio P	47.43	280	P	P	13 49 17.2	+1.6
JSD	Sado	47.45	146	P	P	13 49 15.2	-0.6
JSD				IAmb	IAmb	13 49 16.4	
	comp=Z,7.6nm,0.9s						
KSRS	Korea Array	47.55	157	P	P	13 49 15.3	-1.2
	comp=Z,0.8nm,0.7s,baz=352,slow=6.6,SNR=6.3						
	comp=Z,0.8nm,0.7s						
KSAR	Wonju Array Be	47.56	157	P	P	13 49 15.3	-1.3
KSAR	Wonju Array Be	47.56	157	P	P	13 49 15.3	-1.3
MURB	Monte Urbino	47.56	279	P	P	13 49 19.1	+2.4
GNI	Garni	47.57	246	LR	LR	14 10 43.9	

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       comp=Z,58nm,21.7s,baz=18,slow=38
EYMN  Ely                 47.60  16   P      P       13 49 15.7 -1.2
EYMN                                  IAmb   IAmb    13 49 25.1
       comp=Z,6.0nm,1.1s
EYMN  Ely                 47.60  16   P      P       13 49 15.7 -1.2
       baz=358
E07A  Sunnyside           47.65  42   P      P       13 49 17.2  0.0
E07A                                  IAmb   IAmb    13 49 25.5
       comp=Z,8.0nm,0.9s
MSO   Missoula            47.74  37   P      P       13 49 18.0 -0.1
MSO                                   IAmb   IAmb    13 49 26.4
       comp=Z,7.9nm,1.0s
MSO   Missoula            47.74  37   P      P       13 49 18.0 -0.1
       baz=355,SNR=5.4
NRCA  Norcia              47.93 278   P      P       13 49 20.3 +0.8
NRCA                                  IAmb   IAmb    13 49 35.4
       comp=Z,8.0nm,1.2s
F05D  White Salmon        48.21  44   P      P       13 49 22.4 +0.8
       baz=354
LAO   LASA Array          48.30  30   P      P       13 49 22.9 +0.5
LAO   LASA Array          48.30  30   P      P       13 49 23.0 +0.6
       baz=356
LZH   Lanzhou             48.50 183  eP      P       13 49 27.6 +3.5
LZH                                   pP     pwP     13 49 33.4 +2.1
LZH                                   pmax   pmax
       comp=Z,19nm,1.3s
LZH                                   LR     LR
       comp=N,200nm,14.7s
LZH                                   LR     LR
       comp=E,230nm,14.9s
LZH                                   LR     LR
       comp=Z,340nm,16.5s
D41A  Chassel             48.56  14   P      P       13 49 24.1 -0.2
GEYT  Alibeck             48.66 232   P      P       13 49 24.7 -0.4
       comp=Z,1.7nm,0.6s,baz=307,slow=13,SNR=3.8
GEYT                                  LR     LR      14 12 34.6
       comp=Z,114nm,20.1s,baz=24,slow=39
       comp=Z,1.7nm,0.6s
HOOD  Mount Hood Mea      48.76  44   P      P       13 49 26.5 +0.5
MJAR  Matsushiro Arr      48.94 146   P      P       13 49 26.9 -0.4
       comp=Z,2.1nm,0.9s,baz=353,slow=8.7,SNR=7.8
       comp=Z,2.1nm,0.9s
MJAR  Matsushiro Arr      48.94 146   IAmb   IAmb    13 49 35.9
       comp=Z,2.0nm,1.2s
E38A  The Farm, Brul      48.94  16   P      P       13 49 26.3 -0.9
E38A                                  IAmb   IAmb    13 49 27.3
       comp=Z,14nm,1.4s
G08A  Pilot Rock          48.97  42   P      P       13 49 28.3 +0.7
G08A                                  IAmb   IAmb    13 49 36.5
       comp=Z,10nm,0.9s
BR131 Keskin Array S      49.02 257   P      P       13 49 29.8 +1.7
BR131                                 IAmb   IAmb    13 49 30.9
       comp=Z,5.2nm,0.8s
BR131 Keskin Array S      49.02 257   P      P       13 49 29.8 +1.7
BR131                                 pmax   pmax
       comp=Z,5.0nm,0.9s
BRTR  Keskin Array B      49.02 257   P      P       13 49 29.7 +1.7
       comp=Z,2.9nm,0.8s,baz=9.3,slow=5.9,SNR=17
BRTR                                  LR     LR      14 14 10.9
       comp=Z,72nm,19.1s,baz=20,slow=41
       comp=Z,2.9nm,0.8s
BRTR  Keskin Array B      49.02 257   P      P       13 49 29.4 +1.4
BRTR  Keskin Array B      49.02 257 i P      P       13 49 30.1 +2.0
BRTR                                  pmax   pmax
       comp=Z,3.0nm,0.8s
BOZ   Bozeman (W)         49.11  35   P      P       13 49 28.8 +0.1
BOZ                                   IAmb   IAmb    13 49 37.2
       comp=Z,5.9nm,1.1s
BOZ   Bozeman (W)         49.11  35   P      P       13 49 28.8 +0.1
BOZ                                   pmax   pmax
       comp=Z,6.0nm,1.1s
BOZ   Bozeman (W)         49.11  35   P      P       13 49 29.0 +0.3
       baz=355,SNR=5.2
E43A  Lone Tree Farm      49.28  12   P      P       13 49 29.5 -0.3
E43A                                  IAmb   IAmb    13 49 30.5
       comp=Z,9.1nm,0.8s
E46A  Sault Ste Mari      49.34  10   P      P       13 49 30.6 +0.3
E46A                                  IAmb   IAmb    13 49 31.7
       comp=Z,11nm,1.1s
BMO   Blue Mountains      49.51  40   P      P       13 49 32.4 +0.7
BMO                                   IAmb   IAmb    13 49 41.3
       comp=Z,11nm,1.1s
BMO   Blue Mountains      49.51  40   P      P       13 49 32.4 +0.7
BMO                                   pmax   pmax
       comp=Z,11nm,1.1s
COWI  Conover             49.51  14   P      P       13 49 30.7 -0.9
COWI                                  IAmb   IAmb    13 49 43.0
       comp=Z,12nm,1.4s
RLMT  Red Lodge           49.71  33   P      P       13 49 33.3  0.0
I05D  Terrebonne, OR      49.76  44   P      P       13 49 34.5 +1.0
       baz=354
MCMT  McKenzie Canyo      49.80  36   P      P       13 49 34.5 +0.3
LMN   Caledonia Moun      49.89 352   P      P       13 49 34.4 -0.1
LMN                                   IAmb   IAmb    13 49 35.4
       comp=Z,8.6nm,0.9s
F64A  Sherman             49.91 355   P      P       13 49 34.8 +0.1
F64A                                  IAmb   IAmb    13 49 43.9
       comp=Z,18nm,1.5s
I07A  Izee                50.13  42   P      P       13 49 37.7 +1.2
I07A                                  IAmb   IAmb    13 49 38.6
       comp=Z,9.0nm,1.0s
GBN   Guysborough         50.28 349   P      P       13 49 37.8 +0.5
BCYI  Bear Canyon         50.29  37   P      P       13 49 38.0 +0.2
G40A  Rib Lake            50.32  15   P      P       13 49 37.1 -0.6
G40A                                  IAmb   IAmb    13 49 37.9
       comp=Z,5.3nm,0.8s
FLWY  Flagg Ranch         50.67  34   P      P       13 49 41.0 +0.3
J05D  Fort Rock, OR       50.81  44   P      P       13 49 43.2 +1.5
       baz=355
DBO   Dodson Butte        50.84  46   P      P       13 49 42.8 +1.0
J08A  Circle Bar Ran      50.92  42   P      P       13 49 43.9 +1.4
RSSD  Black Hills         50.97  28   P      P       13 49 42.6 -0.3
RSSD                                  IAmb   IAmb    13 49 51.6
       comp=Z,12nm,0.9s
RSSD  Black Hills         50.97  28   P      P       13 49 42.6 -0.3
RSSD                                  pmax   pmax
       comp=Z,12nm,0.9s
RSSD  Black Hills         50.97  28   P      P       13 49 42.7 -0.3
       baz=356
MOOW  Moose Ponds         51.00  34   P      P       13 49 43.5 +0.3
SADO  Sadowa              51.01   5   LR     LR      14 11 37.2
       comp=Z,75nm,18.5s,baz=338,slow=36
MFID  Camas Ranch         51.03  39   P      P       13 49 43.5 +0.2
MFID                                  IAmb   IAmb    13 49 52.3
       comp=Z,12nm,1.4s
TPAW  Teton Pass          51.24  34   P      P       13 49 45.6 +0.6
TPAW                                  IAmb   IAmb    13 49 54.9
       comp=Z,14nm,1.4s
HUMO  Hull Mountain       51.37  46   P      P       13 49 46.5 +0.8
HUMO                                  IAmb   IAmb    13 49 54.8
       comp=Z,7.6nm,0.8s
REDW  Red Top Meadow      51.38  34   P      P       13 49 46.5 +0.5
REDW                                  IAmb   IAmb    13 49 47.8
       comp=Z,10.0nm,1.5s
ECSD  EROS Data Cent      51.65  21   P      P       13 49 46.6 -1.2
       baz=357
I42A  Draeger Farm,       51.72  14   P      P       13 49 47.9 -0.4
I42A                                  IAmb   IAmb    13 49 48.7
       comp=Z,8.3nm,0.8s
L04D  Klamath Falls       51.80  45   P      P       13 49 49.5 +0.4
L04D                                  IAmb   IAmb    13 49 50.5
       comp=Z,13nm,0.9s
L04D  Klamath Falls       51.80  45   P      P       13 49 49.5 +0.4
       baz=355
WVOR  Wild Horse Val      51.83  42   P      P       13 49 50.1 +0.8
WVOR                                  IAmb   IAmb    13 49 59.0
       comp=Z,18nm,1.2s
WVOR  Wild Horse Val      51.83  42   P      P       13 49 50.1 +0.8
WVOR                                  pmax   pmax
       comp=Z,18nm,1.3s
NIL   Nilore              51.89 215   P      P       13 49 49.7  0.0
NIL   Nilore              51.89 215   P      P       13 49 49.7  0.0
NIL                                   pmax   pmax
       comp=Z,19nm,0.9s
BW06  Boulder Array       52.04  33   P      P       13 49 50.6 -0.3
PDAR  Pinedale Array      52.04  33   P      P       13 49 49.5 -1.4
       comp=Z,0.4nm,0.6s,baz=0.0,slow=4.6,SNR=5.2
PDAR                                  LR     LR      14 13 16.2
       comp=Z,60nm,18.6s,baz=13,slow=38
       comp=Z,0.4nm,0.6s
PDAR  Pinedale Array      52.04  33   P      P       13 49 50.5 -0.5
MOD   Modoc Plateau       52.25  43   P      P       13 49 53.3 +0.8
MOD                                   IAmb   IAmb    13 50 02.3
       comp=Z,21nm,1.4s
YBH   Yreka Blue Hor      52.26  46   LR     LR      14 14 57.6
       comp=Z,56nm,18.9s,baz=346,slow=39
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ESBB  Sonseca Array       52.66 294   P      P       13 49 56.3 +0.9
ESDC  Sonseca Array       52.66 294   P      P       13 49 56.3 +1.0
       comp=Z,2.1nm,0.8s,baz=5.7,slow=7.6,SNR=14
       comp=Z,2.1nm,0.8s
ESDC  Sonseca Array       52.66 294   P      P       13 49 56.5 +1.2
PAB   San Pablo           52.82 295   P      P       13 49 58.3 +1.7
PAB                                   IAmb   IAmb    13 50 08.4
       comp=Z,10nm,1.3s
PAB   San Pablo           52.82 295   P      P       13 49 58.3 +1.7
PAB                                   pmax   pmax
       comp=Z,10.0nm,1.3s
HWUT  Hardware Ranch      53.09  35   P      P       13 49 58.6 -0.1
HWUT                                  IAmb   IAmb    13 50 07.8
       comp=Z,18nm,1.5s
ELK   Elko                53.73  39   LR     LR      14 13 28.3
       comp=Z,130nm,19.9s,baz=334,slow=37
ELK   Elko                53.73  39   P      P       13 50 03.6 +0.1
ELK   Elko                53.73  39   P      P       13 50 03.6 +0.1
ELK                                   pmax   pmax
       comp=Z,4.0nm,1.0s
BMN   Battle Mountai      53.92  41   P      P       13 50 05.2 +0.5
BMN                                   IAmb   IAmb    13 50 06.6
       comp=Z,5.0nm,0.9s
BMN   Battle Mountai      53.92  41   P      P       13 50 05.3 +0.5
BMN                                   pmax   pmax
       comp=Z,5.0nm,0.9s
OGNE  Ogallala            54.22  26   P      P       13 50 06.6 -0.3
       baz=357
RDMU  Red Mountain        54.23  33   P      P       13 50 06.8 -0.3
RDMU                                  IAmb   IAmb    13 50 14.7
       comp=Z,8.0nm,1.2s
IDI   Anoyia              54.26 265   LR     LR      14 15 55.6
       comp=Z,27nm,18.7s,baz=256,slow=39
BEKR  Beckworth           54.27  44   P      P       13 50 06.9 -0.4
BEKR                                  IAmb   IAmb    13 50 16.6
       comp=Z,15nm,1.4s
M55A  Ridgway             54.31   5   P      P       13 50 07.8 +0.4
M55A                                  IAmb   IAmb    13 50 17.6
       comp=Z,11nm,1.1s
DUG   Dugway, Tooele      54.42  37   P      P       13 50 07.9 -0.5
DUG                                   IAmb   IAmb    13 50 17.6
       comp=Z,9.1nm,1.2s
DUG   Dugway, Tooele      54.42  37   P      P       13 50 07.9 -0.5
DUG                                   pmax   pmax
       comp=Z,9.0nm,1.2s
DUG   Dugway, Tooele      54.42  37   P      P       13 50 08.2 -0.2
       baz=356
PAHR  Pah Rah Range       54.50  43   P      P       13 50 09.2 +0.3
PAHR                                  IAmb   IAmb    13 50 17.9
       comp=Z,7.9nm,1.1s
MPU   Maple Canyon        54.67  35   P      P       13 50 09.8 -0.5
MPU                                   IAmb   IAmb    13 50 18.8
       comp=Z,6.2nm,1.1s
NLU   North Lily Min      54.70  36   P      P       13 50 10.4 -0.2
MPK   Martis Peak         54.86  43   P      P       13 50 12.3 +0.5
VCNR  Virginia City       54.89  43   P      P       13 50 11.8 -0.1
VCNR                                  IAmb   IAmb    13 50 21.2
       comp=Z,11nm,1.2s
PNTR  Pine Nut            55.10  43   P      P       13 50 13.9 +0.5
PNTR                                  IAmb   IAmb    13 50 23.0
       comp=Z,15nm,1.3s
GDXM  Geysers             55.16  46   P      P       13 50 15.2 +1.5
GDXM                                  IAmb   IAmb    13 50 25.6
       comp=Z,9.9nm,1.1s
EMB   Emerald Bay         55.18  44   P      P       13 50 14.4 +0.4
ISCO  Idaho Springs       55.20  30   P      P       13 50 14.3 +0.1
       baz=356
YERR  Yerington           55.23  43   P      P       13 50 14.5 +0.2
YERR                                  IAmb   IAmb    13 50 23.8
       comp=Z,13nm,1.1s
KVN   Kaiserville         55.23  42   P      P       13 50 14.5 +0.2
KVN                                   IAmb   IAmb    13 50 24.0
       comp=Z,12nm,1.2s
KVN   Kaiserville         55.23  42   P      P       13 50 14.5 +0.2
KVN                                   pmax   pmax
       comp=Z,12nm,1.2s
P17A  Butcher Ranch,      55.26  35   P      P       13 50 14.5  0.0
P17A                                  IAmb   IAmb    13 50 23.8
       comp=Z,12nm,1.4s
KEST  Kesra               55.33 281   P      P       13 50 16.9 +1.9
       comp=Z,14nm,0.9s,baz=352,slow=2.5,SNR=16
       comp=Z,14nm,0.9s
KEST  Kesra               55.33 281   P      P       13 50 16.5 +1.6
MMAI  Mount Meron Ar      55.50 255   LR     LR      14 17 41.2
       comp=Z,41nm,18.1s,baz=214,slow=40
RYN   Ryan                55.63  42   P      P       13 50 17.6 +0.5
RYN                                   IAmb   IAmb    13 50 31.1
       comp=Z,11nm,1.0s
NVAR  Mina Array Bea      55.84  42   P      P       13 50 19.1 +0.3
       comp=Z,1.8nm,0.9s,baz=357,slow=4.8,SNR=13
NVAR                                  LR     LR      14 16 03.7
       comp=Z,59nm,18.2s,baz=353,slow=38
       comp=Z,1.8nm,0.9s
NVAR  Mina Array Bea      55.84  42   P      P       13 50 19.0 +0.2
NV11  Mina Array Sit      55.85  42   P      P       13 50 19.0 +0.3
NV11                                  IAmb   IAmb    13 50 28.2
       comp=Z,8.4nm,1.2s
LHV   Little Huntoon      56.00  42   P      P       13 50 20.1 +0.5
LHV                                   IAmb   IAmb    13 50 29.7
       comp=Z,12nm,1.4s
PSUT  Pine Spring         56.01  38   P      P       13 50 20.6 +0.6
PSUT                                  IAmb   IAmb    13 50 29.6
       comp=Z,9.8nm,1.1s
R11A  Troy Canyon, C      56.09  39   P      P       13 50 20.8 +0.2
R11A                                  IAmb   IAmb    13 50 29.9
       comp=Z,10.0nm,1.1s
R11A  Troy Canyon, C      56.09  39   P      P       13 50 20.9 +0.4
       baz=355,SNR=11
CMB   Columbia Colle      56.09  44   P      P       13 50 20.5 +0.1
CMB   Columbia Colle      56.09  44   P      P       13 50 20.5 +0.1
CMB                                   pmax   pmax
       comp=Z,3.0nm,0.9s
MSU   Marysvale           56.13  36   P      P       13 50 20.9  0.0
MSU   Marysvale           56.13  36   P      P       13 50 20.9  0.0
P53A  Whipple             56.26   7   P      P       13 50 22.0 +0.6
TPH   Tonopah             56.26  41   P      P       13 50 22.0 +0.2
TPH   Tonopah             56.26  41   P      P       13 50 22.0 +0.2
TPH                                   pmax   pmax
       comp=Z,39nm,1.2s
PV10  Paradox Valley      56.44  33   P      P       13 50 23.7 +0.6
PV13  Radium Mtn., P      56.67  33   P      P       13 50 24.6 -0.1
CCUT  Cedar City          57.02  37   P      P       13 50 27.1 -0.1
CCUT                                  IAmb   IAmb    13 50 36.7
       comp=Z,8.4nm,1.4s
LCH   Last Change Ra      57.07  41   P      P       13 50 27.0 -0.4
LCH                                   IAmb   IAmb    13 50 36.9
       comp=Z,7.7nm,1.2s
S22A  4UR Ranch, Cre      57.19  31   P      P       13 50 28.9 +0.5
       baz=356,SNR=7.0
TPNV  Topopah Spring      57.45  40   P      P       13 50 30.3 +0.2
       baz=355
LCMT  Little Creek M      57.57  37   P      P       13 50 31.2 +0.2
LCMT                                  IAmb   IAmb    13 50 40.5
       comp=Z,8.7nm,1.2s
MVCO  Mesa Verde          57.63  33   P      P       13 50 31.5  0.0
MVCO  Mesa Verde          57.63  33   P      P       13 50 32.6 +1.0
       baz=356,SNR=5.4
S39A  Bolivar             57.79  18   P      P       13 50 33.1 +0.8
S39A                                  IAmb   IAmb    13 50 43.5
       comp=Z,9.9nm,1.3s
CWC   Cottonwood Cre      57.83  42   P      P       13 50 33.6 +0.8
       baz=355
FURC  Furnace Creek,      57.88  41   P      P       13 50 33.4 +0.4
       baz=355
SHPR  Sheep Range         57.95  39   P      P       13 50 33.8 +0.1
PZH   PanZhiHua           58.06 185   P      P       13 50 36.1 +1.6
PZH                                   pmax   pmax
       comp=Z,10.0nm,1.0s
PZH                                   pmax   pmax
       comp=Z,120nm,5.9s
GWY   Greenwater Val      58.18  41   P      P       13 50 35.6 +0.3
QSM   Queen of Sheba      58.38  41   P      P       13 50 37.2 +0.7
QSM                                   IAmb   IAmb    13 50 46.0
       comp=Z,7.1nm,1.1s
PAGB  Antelope Grade      58.40  44   P      P       13 50 37.4 +0.8
SHOC  Shoshone, Teco      58.49  40   P      P       13 50 38.0 +0.7
       baz=356,SNR=6.5
LRMC  Laurel Mtn Rad      58.81  42   P      P       13 50 40.5 +0.8
       baz=355
EIL   Elat                58.86 255   LR     LR      14 20 56.3
       comp=Z,54nm,18.1s,baz=82,slow=41
TUQ   Turquoise Moun      58.97  40   P      P       13 50 41.4 +0.6
       baz=356
GSC   Goldstone, Bar      59.05  41   P      P       13 50 41.3  0.0
GSC                                   IAmb   IAmb    13 50 43.3
       comp=Z,5.8nm,1.1s
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GSC   Goldstone, Bar      59.05  41   P      P       13 50 41.3  0.0
GSC                                   pmax   pmax
       comp=Z,6.0nm,1.1s
GSC   Goldstone, Bar      59.05  41   P      P       13 50 41.4 +0.2
       baz=356
TZTN  Tazewell            59.17   9   P      P       13 50 41.9 -0.1
EDW2  Edwards Air Fo      59.39  42   P      P       13 50 44.1 +0.5
       baz=355
GMRC  Granite Mounta      59.63  40   P      P       13 50 46.1 +0.8
       baz=356
ANMO  Albuquerque         59.99  31   LR     LR      14 17 00.6
       comp=Z,120nm,19.9s,baz=338,slow=36
ANMO  Albuquerque         59.99  31   P      P       13 50 47.4 -0.5
ANMO                                  IAmb   IAmb    13 50 56.6
       comp=Z,8.0nm,1.4s
ANMO  Albuquerque         59.99  31   P      P       13 50 47.4 -0.5
ANMO                                  pmax   pmax
       comp=Z,8.0nm,1.4s
ANMO  Albuquerque         59.99  31   P      P       13 50 47.4 -0.5
       baz=356
TKL   Tuckaleechee C      60.05  10   LR     LR      14 16 35.8
       comp=Z,151nm,19.4s,baz=4.0,slow=36
WMOK  Wichita Mounta      60.55  24   P      P       13 50 51.6 +0.1
WMOK  Wichita Mounta      60.55  24   P      P       13 50 51.6 +0.1
WMOK                                  pmax   pmax
       comp=Z,14nm,0.8s
PFO   Pinyon Flats O      60.75  41   LR     LR      14 17 45.6
       comp=Z,80nm,19.7s,baz=328,slow=37
X40A  Basin Creek Fa      61.00  18   P      P       13 50 53.3 -1.3
       baz=358
YUH   Yuha Desert         61.74  40   P      P       13 51 00.3 +0.7
WSAR  Wadi Sarin          63.20 230   LR     LR      14 21 40.2
       comp=Z,81nm,18.2s,baz=72,slow=39
TX31  Lajitas Ar. Si      65.72  29   P      P       13 51 25.0 -1.0
TX32  Lajitas Array       65.72  29   P      P       13 51 24.8 -1.1
TX32                                  IAmb   IAmb    13 51 34.2
       comp=Z,10nm,1.5s
TXAR  Lajitas Array       65.72  29   P      P       13 51 24.6 -1.3
       comp=Z,0.7nm,0.6s,baz=357,slow=3.6,SNR=11
TXAR                                  LR     LR      14 21 32.9
       comp=Z,80nm,18.6s,baz=333,slow=37
       comp=Z,0.7nm,0.6s
TXAR  Lajitas Array       65.72  29   P      P       13 51 24.9 -1.0
TXAR  Lajitas Array       65.72  29   P      P       13 51 24.9 -1.0
CM31  Chiang Mai Arr      66.10 188   P      P       13 51 27.7 -0.7
CM31                                  IAmb   IAmb    13 51 28.7
       comp=Z,5.5nm,0.9s
CMAR  Chiang Mai Arr      66.10 188   P      P       13 51 27.8 -0.6
       comp=Z,1.5nm,0.9s,baz=340,slow=7.6,SNR=6.9
       comp=Z,1.5nm,0.9s
CMAR  Chiang Mai Arr      66.10 188 i P      P       13 51 28.0 -0.4
CMAR                                  pmax   pmax
       comp=Z,2.0nm,0.8s
LPIG  La Paz              70.57  35   LR     LR      14 26 12.1
       comp=Z,36nm,18.1s,baz=42,slow=39
ATD   Arta Tunnel         76.10 245   LR     LR      14 32 06.3
       comp=Z,42nm,18.3s,baz=44,slow=40
TOA0  Torodi Ar. Sit      78.42 286   P      P       13 52 42.3 +0.3
TORD  Torodi Ar. Bea      78.42 286   P      P       13 52 42.5 +0.5
       comp=Z,10nm,0.7s,baz=359,slow=6.1,SNR=52
       comp=Z,10nm,0.7s
TORD  Torodi Ar. Bea      78.42 286   P      P       13 52 42.4 +0.5
DBIC  Dimbokro            85.43 292   P      P       13 53 19.1 +0.3
       comp=Z,7.7nm,0.9s,baz=360,slow=1.4,SNR=5.2
       comp=Z,7.7nm,0.9s
DBIC  Dimbokro            85.43 292   IAmb   IAmb    13 53 24.9
       comp=Z,30nm,1.4s
MBAR  Mbarara             89.21 256   LR     LR      14 39 06.0
       comp=Z,47nm,19.4s,baz=112,slow=39
PLCA  Paso Flores        136.14 357   PKP    PKiKP   14 00 02.4 -0.9
       comp=Z,3.5nm,0.9s,baz=287,slow=1.4,SNR=12
PLCA  Paso Flores        136.14 357          PKiKP   14 00 02.7 -0.6
PLCA  Paso Flores        136.14 357   PKIKP  PKiKP   14 00 02.7 -0.6
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IDC 22 13:56:15.2±2.5**,2°.75N**×**128°.49E,h0**km**,mb3.5**/3**,**
mbtmp3.5/3**,Error ellipse: s-maj=164.1km**
s-min=28.0km az=68.0,Halmahera

```
Code  Station Name         Δ°  AZ°    Phase ID            Time     Res
                                      Op     ISC         h  m  s   ISC
WRA   Warramunga Arr      23.27 166   P      P       14 01 24.9 +0.2
       0.6nm,0.4s,baz=346,slow=10,SNR=15
       0.6nm,0.4s
ASAR  Alice Springs       26.78 169   P      P       14 01 56.5 -0.6
       0.3nm,0.4s,baz=355,slow=7.6,SNR=6.4
       0.3nm,0.4s
MKAR  Makanchi Array      59.36 325   P      P       14 06 19.6 +0.3
       0.2nm,0.4s,baz=123,slow=8.2,SNR=3.1
       0.2nm,0.4s
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*IDC **22** 13:57:56.8±0.7,6°.77N×72°.97W,h163km±8km,mb3.2/5,*
mbtmp3.9/8,Error ellipse: s-maj=27.4km s-min=7.7km
az=132.0
*NEIC **22** 13:57:56.9±2.8,6°.88N±0°.06×73°.07W±0°.04,h152km±6km,*
mb4.3/16,Error ellipse: s-maj=9.9km s-min=4.8km
az=207.0
*RSNC **22** 13:57:57.9±0.9,6°.79N×73°.10W,h154km±3km,ML3.8,*
Mw4.1
ISC 22 13:57:56.5±0.6**,6°.83N**±0°.03×**73°.08W**±0°.04**,h160**km±5km**,**
n84,σ**1§44**/113**,mb4.0**/11**,1C-4D,Northern Colombia**

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Code  Station Name         Δ°  AZ°    Phase ID            Time     Res
                                      Op     ISC         h  m  s   ISC
BARC  Barichara            0.26 204⇓ eP      Pn      13 58 18.5 +0.1
BARC                                 eS      Sn      13 58 34.4 -0.8
BARC                                 i               13 58 35.6
       comp=Z,1µm,0.3s
PAMC  Pamplona, Colo       0.63  36  eP      Pn      13 58 21.3 +1.1
PAMC                                 eS      Sn      13 58 38.9 +0.5
PAMC                                 i               13 58 42.7
       comp=Z,371nm,0.3s
BRRC  Barranca, Sant       0.69 294  eP      Pn      13 58 20.4 +0.5
BRRC                                 eS      Sn      13 58 38.0  0.0
BRRC                                 i               13 58 42.2
       comp=Z,571nm,0.3s
RUSC  La Rusia             0.93 180  eS      Sn      13 58 41.5 -0.4
RUSC                                 i               13 58 42.9
       comp=Z,631nm,0.5s
PTBC  PUERTO BERRIO,       1.40 258⇓ eP      Pn      13 58 25.1 -0.7
PTBC                                 eS      Sn      13 58 46.8 -1.5
PTBC                                 i               13 58 54.2
       comp=Z,1µm,0.3s
OCAC  Ocana                1.42 350   Pn     Pn      13 58 26.9 +0.7
OCAC  Ocana                1.42 350  eP      Pn      13 58 26.8 +0.6
OCAC                                 eS      Sn      13 58 49.9 +0.7
OCAC                                 i               13 58 53.6
       comp=Z,2µm,0.3s
ZARC  Zaragoza, Cauc       1.89 291          Pn      13 58 30.7 -0.2
NORC  Norcasia             2.18 235⇓ eP      Pn      13 58 34.2 -0.1
NORC                                 eS      Sn      13 59 02.4 -1.2
NORC                                 i               13 59 10.7
       comp=Z,479nm,0.4s
CHIC  Chingaza             2.28 197⇓ eP      Pn      13 58 36.2 +0.3
CHIC                                 eS      Sn      13 59 05.7 -0.6
CHIC                                 i               13 59 12.0
       comp=Z,307nm,0.6s
ROSC  El Rosal             2.33 212   P      Pn      13 58 38.3 +1.8
       comp=Z,312nm,0.3s,baz=315,slow=18,SNR=45
ROSC                                  S      Sn      13 59 08.3 +1.0
       comp=Z,549nm,0.4s,baz=128,slow=18,SNR=8.3
ROSC  El Rosal             2.33 212   Pn     Pn      13 58 37.8 +1.4
ROSC  El Rosal             2.33 212  eP      Pn      13 58 38.2 +1.8
ROSC                                 eS      Sn      13 59 10.1 +2.8
ROSC                                 i               13 59 16.2
       comp=Z,581nm,0.5s
HELC  Santa Helena         2.52 256  eP      Pn      13 58 39.1 +0.5
HELC                                 eS      Sn      13 59 09.2 -2.0
HELC                                 i               13 59 17.0
       comp=Z,465nm,0.3s
LL1C  La Loma 1 Cana       2.74 350  eP      Pn      13 58 43.9 +2.9
LL1C                                 eS      Sn      13 59 17.9 +2.3
PTGC  Puerto Gaitan,       2.77 160  eP      Pn      13 58 41.3 -0.2
PTGC                                 eS      Sn      13 59 14.6 -1.8
PTGC                                 i               13 59 15.8
       comp=Z,287nm,0.3s
LL6C  La Loma 6 Bece       2.90 356  eP      Pn      13 58 43.8 +0.8
LL6C                                 eS      Sn      13 59 18.0 -1.1
LL6C                                 i               13 59 27.5
       comp=Z,160nm,0.5s
LL5C  La Loma 5 El P       2.97 348  eP      Pn      13 58 41.6 -2.3
LL5C                                 eS      Sn      13 59 22.1 +1.4
CBOC  Ciudad Bolivar       3.07 252  eP      Pn      13 58 46.1 +0.8
CBOC                                 eS      Sn      13 59 22.9 -0.2
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CBOC				i		13 59 28.9	
	comp=Z,151nm,0.6s						
DBBC	Dabeiba	3.12	274	⇑iP	Pn	13 58 46.1	+0.3
DBBC				eS	Sn	13 59 22.4	-1.6
SDV	Santo Domingo	3.17	50	P	Pn	13 58 48.1	+1.5
	comp=Z,38nm,0.3s,baz=253,slow=7.3,SNR=14						
SDV				S	Sn	13 59 24.9	-0.6
	comp=Z,141nm,0.4s,baz=33,slow=12,SNR=41						
SDV	Santo Domingo	3.17	50	Pn	Pn	13 58 47.8	+1.2
SDV	Santo Domingo	3.17	50	eP	Pn	13 58 48.0	+1.5
SDV				eS	Sn	13 59 25.1	-0.4
SDV				i		13 59 27.3	
	comp=Z,141nm,0.4s						
ARGC	Ariguani, Magd	3.23	339	eP	Pn	13 58 48.7	+1.6
ARGC				eS	Sn	13 59 27.6	+1.1
ARGC				i		13 59 34.4	
	comp=Z,120nm,0.2s						
ANIL	Santa Ana	3.28	225	eP	Pn	13 58 49.1	+1.1
ANIL				eS	Sn	13 59 28.5	+0.5
ANIL				i		13 59 36.4	
	comp=Z,591nm,0.3s						
PRAC	Prado	3.58	210	eP	Pn	13 58 51.9	+0.2
PRAC				eS	Sn	13 59 34.4	-0.2
PRAC				i		13 59 38.8	
	comp=Z,386nm,0.8s						
ORTC	Ortega, Tolima	3.61	217	eP	Pn	13 58 52.3	+0.2
ORTC				eS	Sn	13 59 36.3	+1.0
ORTC				i		13 59 42.4	
	comp=Z,160nm,0.5s						
SJCC	San Jacinto, C	3.69	326	Pn	Pn	13 58 52.2	-0.9
SJCC	San Jacinto, C	3.69	326	eP	Pn	13 58 52.2	-0.9
SJCC				eS	Sn	13 59 34.3	-2.9
SJCC				i		13 59 42.1	
	comp=Z,156nm,0.5s						
PLMC	San Jos del P	3.72	239	eP	Pn	13 58 54.3	+0.9
PLMC				eS	Sn	13 59 38.0	+0.3
PLMC				i		13 59 49.2	
	comp=Z,137nm,0.5s						
LCBC	Los crdobas,	3.83	302	eP	Pn	13 58 54.8	-0.1
LCBC				eS	Sn	13 59 39.5	-0.8
LCBC				i		13 59 48.9	
	comp=Z,89nm,0.4s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	13 58 58.6	-0.7
CRJC				eS	Sn	13 59 42.7	-5.6
CRJC				i		13 59 52.9	
	comp=Z,151nm,0.4s						
GUVC	San Jose del G	4.28	174	eP	Pn	13 59 00.5	-0.2
GUVC				eS	Sn	13 59 49.0	-1.7
GUVC				i		13 59 55.4	
	comp=Z,184nm,0.3s						
PTAC	Punta Ardita,	4.71	274	eP	Pn	13 59 05.3	-0.9
MACC	Macarena, Meta	4.71	189	eP	Pn	13 59 05.2	-1.2
MACC				i		13 59 38.2	
	comp=Z,26nm,0.5s						
MACC				eS	Sn	13 59 57.2	-3.8
MARP	Paez Belalcaza	4.89	216	eP	Pn	13 59 08.9	0.0
URIC	Uribia, Colomb	4.96	12	Pn	Pn	13 59 07.4	-2.1
MALC	Bahia Malaga	5.08	237	eP	Pn	13 59 14.5	+3.4
MALC				eS	Sn	14 00 11.6	+2.1
GARC	Garzon, Huila	5.20	208	eP	Pn	13 59 12.4	-0.5
GARC				eS	Sn	14 00 09.5	-3.3
GARC				i		14 00 16.0	
	comp=Z,40nm,0.2s						
BAUV	El Baul	5.41	67		Pn	13 59 14.2	-1.3
PCON	Cinco Dias	5.56	217	eP	Pn	13 59 18.5	+0.4
FLOC	Florencia	5.81	206	eP	Pn	13 59 20.6	-0.2
FLOC				eS	Sn	14 00 24.6	-2.3
BCIP	Isla Barro Col	7.09	290	Pn	Pn	13 59 36.3	-1.4
TUMC	Tumaco	7.51	229	Pn	Pn	13 59 43.9	+0.5
BIRV	Birongo	7.64	61	Pn	Pn	13 59 44.0	-1.1
OTAV	Otavalo	8.46	220	Pn	Pn	13 59 57.1	+0.7
DRK0	Durika	10.35	284	Pn	Pn	14 00 21.3	+0.1
SRBA	San Rafael, Bu	10.46	284	Pn	Pn	14 00 23.9	+1.4
CVTR	Volcan Turrial	11.03	287	Pn	Pn	14 00 31.2	+0.9
MTDJ	Mount Denham	12.13	339	Pn	Pn	14 00 44.3	0.0
SDDR	Presa de Saban	12.21	8	Pn	Pn	14 00 46.2	+1.0
CELP	Cerrillos	12.85	29	Pn	Pn	14 00 52.2	-1.2
PDPR	Patillas Dam,	13.08	31	Pn	Pn	14 00 55.9	-0.4
SJG	San Juan	13.09	30	P	Pn	14 00 56.5	-0.1
	comp=Z,5.3nm,0.5s,baz=198,slow=16,SNR=5.2						
GTBY	Guantanamo Bay	13.17	352	P	P	14 01 01.4	-0.2
EMPR	Esperanza - Ma	13.22	28	P	P	14 01 00.5	-1.7
HUMP	Col San Antoni	13.27	31	Pn	Pn	14 00 57.6	-1.3
GCPR	Guaynabo City	13.29	30	Pn	Pn	14 00 58.0	-1.1
LCCY	Blossom Villag	14.46	333	Pn	Pn	14 01 12.4	-1.4
FSCY	Frank Sound, G	14.70	328	Pn	Pn	14 01 16.5	-0.3
SAML	Samuel	18.52	148		P	14 02 00.8	0.0
TXAR	Lajitas Array	36.49	312	P	P	14 04 45.8	-0.7
	comp=Z,0.2nm,0.7s,baz=142,slow=9.0,SNR=2.0						
	comp=Z,0.2nm,0.7s						
TXAR	Lajitas Array	36.49	312	P	P	14 04 44.0	-2.5
I62A	Tamworth	36.93	2	P	P	14 04 48.3	-1.6
LBNH	Lisbon	37.28	1	P	P	14 04 52.0	-0.8
G65A	Princeton	38.53	6	P	P	14 05 05.3	+2.1
LMN	Caledonia Moun	39.53	9	P	P	14 05 13.2	+1.6
LMN				IAmb	IAmb	14 05 35.2	
	comp=Z,4.4nm,1.1s						
D62A	Allapoint, All	40.26	4	P	P	14 05 19.7	+2.1
D62A				IAmb	IAmb	14 05 28.2	
	comp=Z,18nm,1.4s						
BATG	Bathurst New B	40.75	7	P	P	14 05 23.1	+1.4
BATG				IAmb	IAmb	14 05 47.3	
	comp=Z,13nm,1.2s						
EYMN	Ely	43.88	342	P	P	14 05 47.5	+0.6
PV10	Paradox Valley	45.19	319	P	P	14 05 57.5	-0.3
PDAR	Pinedale Array	48.10	324	P	P	14 06 21.0	+0.7
	comp=Z,0.1nm,0.4s,baz=143,slow=7.8,SNR=1.9						
	comp=Z,0.1nm,0.4s						
SCHQ	Schefferville	48.13	5	P	P	14 06 21.7	+1.6
	comp=Z,2.7nm,0.5s,baz=195,slow=6.8,SNR=9.8						
	comp=Z,2.7nm,0.5s						
SCHQ	Schefferville	48.13	5	IAmb	IAmb	14 06 22.4	
	comp=Z,3.0nm,0.6s						
YKA	Yellowknife Ar	63.27	340	P	P	14 08 08.5	+0.8
	comp=Z,1.1nm,0.7s,baz=134,slow=6.8,SNR=8.4						
	comp=Z,1.1nm,0.7s						
SUMG	Summit	68.97	11	P	P	14 08 45.1	+0.6
SUMG				IAmb	IAmb	14 08 46.3	
	comp=Z,3.9nm,0.8s						
M30M	Minto, Yukon	72.05	334	P	P	14 09 04.5	+1.7
M30M				IAmb	IAmb	14 09 15.3	
	comp=Z,3.3nm,1.4s						
TORD	Torodi Ar. Bea	73.69	78	P	P	14 09 12.2	-1.2
	comp=Z,0.7nm,1.0s,baz=284,slow=7.4,SNR=2.8						
	comp=Z,0.7nm,1.0s						
TORD	Torodi Ar. Bea	73.69	78	IAmb	IAmb	14 09 16.0	
	comp=Z,2.6nm,1.4s						
BMAR	Burnt Mountain	76.67	338	P	P	14 09 31.2	+1.7
N18K	Kilae Creek	80.56	330	P	P	14 09 51.1	+0.3
N18K				IAmb	IAmb	14 09 51.6	
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	14 16 32.3	-0.4
	comp=Z,0.1nm,0.4s,baz=316,slow=2.0,SNR=2.1						
ASAR	Alice Springs	149.15	234	PKPbc	PKPbc	14 17 26.6	-0.3
	comp=Z,0.1nm,0.3s,baz=114,slow=3.4,SNR=1.9						
WRA	Warramunga Arr	150.38	241	PKPbc	PKPbc	14 17 29.8	-0.1
	comp=Z,0.5nm,0.6s,baz=105,slow=2.9,SNR=9.6						

*DJA **22** 14:17:54.0±0.3, 9˚S±5˚×11˚8E±˚, h117^{km}±5^{km}, M4.0/12, mb4.2/3, MLv3.9/12*

ISC 22 14:17:52.9±0.8**, 8°.5S**±0°.1×**118°.37E**±0°.04**, h152**^{km}**, n23,** σ1^s.**40**/28**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.66	242	P	Pn	14 18 14.1	-1.3
PLAI				S	Sn	14 18 28.5	-4.0
PLAI	Plampang	0.66	242	P	Pn	14 18 14.2	-1.2
WBSI	Waikabubak, Su	1.50	138	P	Pn	14 18 20.9	-1.8
SRBI	Singaraja	3.15	278	P	Pn	14 18 43.3	+1.0
BSSI	Bau Bau, Buton	3.16	42	P	Pn	14 18 42.8	+0.3
IGBI	Denpasar	3.20	264	P	Pn	14 18 43.8	+0.9
IGBI				S	Sn	14 19 22.2	+0.6
EDFI	Ende, Flores	3.29	94	P	Pn	14 18 45.2	+1.0
EDFI				S	Sn	14 19 23.3	-0.6
BKSI	Bulukumba	3.62	29	P	Pn	14 18 48.9	+0.5
MMRI	Maumere	3.83	92	P	Pn	14 18 51.9	+0.9
MMRI	Maumere	3.83	92	P	Pn	14 18 51.4	+0.4
JAGI	Jajag, Banyuwa	4.17	270	P	Pn	14 18 55.1	-0.4
JAGI				S	Sn	14 19 42.9	-1.2
JAGI	Jajag, Banyuwa	4.17	270	P	Pn	14 18 55.3	-0.2
GMJI	Gumukmas	4.88	273	P	Pn	14 19 05.1	+0.3
BATI	Baumata	5.49	108	P	Pn	14 19 13.2	+0.3
	0.1nm16nm,0.4s						
BATI				S	Sn	14 20 12.4	-2.9
	0.1nm16nm,0.4s						
SOEI	Soe	5.95	102	P	Pn	14 19 20.7	+1.6
	0.1nm23nm,0.5s						
SOEI	Soe	5.95	102	P	Pn	14 19 19.8	+0.7
PCJI	Pacitan	7.12	272	P	Pn	14 19 35.6	+1.0
KNRA	Kununurra	12.40	126	P	Pn	14 20 44.6	+0.2
MTN	Manton Dam	13.26	110	P	Pn	14 20 55.5	+0.1
KDU	Kakadu	14.47	108	P	P	14 21 12.5	-0.7
FAKI	Fak Fak	14.89	69	P	P	14 21 17.8	0.0
WRKA	Warakurna	18.96	151	P	Pn	14 22 05.5	+0.5
OOD	Oodnadatta	25.20	142	P	P	14 23 07.1	+2.5

*IDC **22** 14:44:17.5±2.7, 6°.88S×131°.29E, h66^{km}±28^{km}, mb3.6/4, mbtmp4.0/8, ML4.0/4, Error ellipse: s-maj=40.0km s-min=24.6km az=91.0*

*DJA **22** 14:44:18.4±0.5, 7˚S±4˚×13˚1E±˚, h134^{km}±30^{km}, M4.2/11, mb4.3/7, mB4.7/3, MLv4.3/11, Mw(mB)3.9/3*

*NEIC **22** 14:44:19.4±1.0, 6°.81S±0°.07×131°.2E±0°.1, h73^{km}±11^{km}, mb4.0/8, Error ellipse: s-maj=17.7km s-min=7.3km az=115.0*

ISC 22 14:44:19.6±0.6**, 6°.78S**±0°.05×**131°.18E**±0°.06**, h100**^{km}**, n46,** σ**2**^{s}.**22**/50**, mb4.0**/7**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.20	174		Pn	14 44 43.5	+1.2
SAUI	Saumlaki	1.20	174	P	Pn	14 44 43.9	+1.6
BNDI	Bandanaira	2.58	330	P	Pn	14 44 59.8	0.0
FAKI	Fak Fak	3.98	16	Pn	Pn	14 45 18.6	0.0
FAKI	Fak Fak	3.98	16	P	Pn	14 45 17.6	-1.0
FAKI				S	Sn	14 46 01.3	-3.0
FAKI	Fak Fak	3.98	16	P	Pn	14 45 18.8	+0.2
KMPI	Kaimana, Papua	3.99	39	P	Pn	14 45 15.6	-3.1
KMPI				S	Sn	14 46 03.8	-0.7
MSAI	Masohi	4.09	327	P	Pn	14 45 21.0	+1.0
AAI	Ambon	4.28	316	P	Pn	14 45 22.4	-0.2
SIJI	Sorong	5.88	1	P	Pn	14 45 43.5	-0.8
	2.1nm,0.3s,baz=153,slow=16,SNR=9.9						
SIJI				S	Sn	14 46 44.6	-5.7
	43nm,0.2s,baz=313,slow=23,SNR=15						
	8.1nm,0.3s						
SWI	Sorong	5.88	1	P	Pn	14 45 43.7	-0.6
	0.4nm670nm31nm,0.7s						
KDU	Kakadu	6.00	168	P	Pn	14 45 45.8	-0.1
MTN	Manton Dam	6.02	180		Pn	14 45 46.2	-0.1
MTN	Manton Dam	6.02	180	P	Pn	14 45 46.6	+0.4
SANI	Sanana	7.00	312	P	Pn	14 46 00.3	+0.8
	0.1nm34nm,0.8s						
SANI	Sanana	7.00	312	P	Pn	14 46 00.9	+1.4
LBMI	Labuha	7.12	329	P	Pn	14 46 00.2	-1.0
	0.1nm25nm,0.8s						
SOEI	Soe	7.45	246		Pn	14 46 04.9	-0.9
SOEI	Soe	7.45	246	P	Pn	14 46 05.1	-0.7
	0.3nm48nm,0.7s						
SOEI	Soe	7.45	246	P	Pn	14 46 05.1	-0.7
BATI	Baumata	8.18	245	P	Pn	14 46 14.5	-1.0
	6.8nm,0.3s,baz=70,slow=4.7,SNR=8.9						
BATI				S	Sn	14 47 40.6	-5.8
	36nm,0.6s,baz=294,slow=21,SNR=7.8						
	14nm,0.4s						
BATI	Baumata	8.18	245	P	Pn	14 46 13.0	-2.6
	14nm,1.0s						
KNRA	Kununurra	9.15	195		Pn	14 46 27.9	-0.9
KNRA	Kununurra	9.15	195	P	Pn	14 46 28.0	-0.8
WB0	Warramunga Arr	13.28	167		Pn	14 47 20.4	-3.8
WRAB	Tennant Creek	13.43	167		Pn	14 47 22.5	-3.6
WRA	Warramunga Arr	13.43	167	P	Pn	14 47 22.7	-3.5
	0.6nm,0.3s,baz=347,slow=13,SNR=45						
WRA				S	Sn	14 49 43.2	-11
	3.8nm,0.5s,baz=342,slow=21,SNR=11						
	4.5nm,0.6s						
WB2	Warramunga Arr	13.44	167		Pn	14 47 22.8	-3.5
WR0	Warramunga Arr	13.50	166	Pn	Pn	14 47 23.5	-3.6
COEN	Coen	13.78	122	Pn	Pn	14 47 31.7	+0.9
COEN	Coen	13.78	122	P	P	14 47 33.0	-2.9
QIS	Mount Isa	15.94	150	P	Pn	14 47 57.9	-0.4
AS31	Alice Springs	16.99	171	Pn	Pn	14 48 10.0	-1.2
ASAR	Alice Springs	16.99	171	P	Pn	14 48 10.2	-0.9
	0.5nm,0.3s,baz=4.8,slow=12,SNR=21						
ASAR				S	Sn	14 51 06.8	-13
	2.0nm,0.6s,baz=358,slow=27,SNR=7.9						
	1.5nm,0.6s						
MTSU	Mount Surprise	17.07	133	P	P	14 48 13.6	+1.3
PSA00	Pilbara Seismi	18.34	216	P	Pn	14 48 27.6	+0.2
PSA00				IAmb	IAmb	14 48 39.4	
	comp=Z,5.0nm,1.1s						
KULM	Kulim	32.75	291	P	P	14 50 45.5	+2.2
UBPT	Khong Chiam	33.61	311	P	P	14 50 51.6	+0.9
CMAR	Chiang Mai Arr	40.50	309	P	P	14 51 50.7	+1.7
	comp=Z,0.7nm,0.7s,baz=131,slow=6.7,SNR=2.9						
	comp=Z,0.7nm,0.7s						
MJAR	Matsushiro Arr	43.60	8	P	P	14 52 15.6	+1.7
	comp=Z,1.0nm,0.8s,baz=193,slow=10.0,SNR=2.8						
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	68.69	326	P	P	14 55 14.8	+2.4
MK31				IAmb	IAmb	14 55 16.5	
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	68.69	326	P	P	14 55 15.4	+2.9
	comp=Z,2.3nm,0.7s,baz=125,slow=8.0,SNR=24						
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	68.69	326	P	P	14 55 14.6	+2.2
MAKZ	Makanchi	68.88	326	P	P	14 55 16.0	+2.4
MAKZ				IAmb	IAmb	14 55 16.7	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	71.92	333	P	P	14 55 33.8	+1.9
	comp=Z,0.5nm,0.3s,baz=145,slow=5.3,SNR=2.3						
	comp=Z,0.5nm,0.3s						
BRVK	Borovoye	78.58	327	P	P	14 56 12.6	+2.5
BRVK				IAmb	IAmb	14 56 40.0	
	comp=Z,2.5nm,0.6s						

*GCMT **22** 14:51:19.8±0.2, 13°.52N±0°.01×90°.82W±0°.02, h61^{km}±1^{km}, MW5.0/111, Moment Tensor Solution. s70,c90; s111,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.52±.14; $M_{\theta\theta}$0.81±.13; $M_{\phi\phi}$2.72±.15; $M_{r\theta}$2.01±.08; $M_{\theta\phi}$-2.47±.11; $M_{\phi r}$-1.29±.10; Best double couple: $M_0$4.65800×10^{16} NP1:ϕ_s162.00000°, δ33.00000°, λ-64.00000°. NP2:ϕ_s312.00000°, δ61.00000°, λ-106.00000°. Principal axes: T 4.9910, Plg15.0000°, Azm53.0000°; N -0.6600, Plg14.0000°, Azm320.0000°; P -4.3250, Plg70.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SNET **22** 14:51:20.9±1.0, 13°.50N×90°.70W, h32^{km}±5^{km}, ML5.4, MW5.4*

*IDC **22** 14:51:21.9±0.5, 13°.90N×90°.07W, h69^{km}±3^{km}, mb4.2/28, mbtmp4.5/29, MS4.0/54, Error ellipse: s-maj=17.1km s-min=8.4km az=55.0*

*UCR **22** 14:51:21.3±1.1, 13°.54N×90°.69W, h33^{km}±5^{km}, ML5.2, MW5.4, mb5.0(NEIC)*

*MOS **22** 14:51:21.2±1.0, 13°.71N×90°.38W, h85^{km}, mb4.8/36, Error ellipse: s-maj=9.8km s-min=5.1km az=112.1*

*NEIC **22** 14:51:22.6±1.5, 13°.71N±0°.06×90°.45W±0°.05, h76^{km}±4^{km}, mb5.0/428, Mww5.0, Md5.4(SNET), Error ellipse: s-maj=9.7km s-min=6.9km az=211.0*

*INET **22** 14:51:22.7±1.8, 13°.59N×90°.52W, h15^{km}±15^{km}, MW4.7*

*GCG **22** 14:51:23.1±2.8, 13°.66N×90°.55W, h62^{km}, MD4.8*

*NEIC **22** 14:51:30, 13°.81N×90°.53W, h60^{km}, Moment Tensor Solution. Duration: 14^s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.36; $M_{\theta\theta}$3.05; $M_{\phi\phi}$0.30; $M_{r\theta}$2.23; $M_{\theta\phi}$-1.46; $M_{\phi r}$-1.36; Fault plane solution: $M_0$4.39000×10^{16} NP1: ϕ_s107.00000°, δ27.00000°, λ-99.00000°. NP2: ϕ_s298.00000°, δ63.00000°, λ-85.00000°. Principal axes: T 4.5314, Plg18.0000°, Azm25.0000°; N -0.2984, Plg4.0000°, Azm116.0000°; P -4.2330, Plg71.0000°, Azm219.0000°;*

ISC 22 14:51:21.8±0.3**, 13°.67N**±0°.03×**90°.52W**±0°.04**, h77**^{km}±2^{km}**, h77**^{km}**:pP-P, n1124,** σ**1**^{s}.**38**/1188**, mb5.0**/227**, 86C-52D, Fault plane solution: NP1:**ϕ_s174.06447°**,** δ35.79506°, λ-39.89018°. **NP2:**ϕ_s298.20020°**,** δ67.96956°**,** λ-118.95469°. **Principal axes:** T Plg17.9574°, Azm49.2914°**;** N Plg26.6648°**,** Azm309.9245°**;** P Plg57.0115°, Azm169.2440°**; Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.72	353	⇓iP	Pn	14 51 38.5	+0.8
NUBE	Las Nubes	0.76	72	eP	Pn	14 51 38.5	+0.5
NUBE	Las Nubes	0.76	72	eP	Pn	14 51 38.5	+0.5
LOAL	Lomas de Alarc	0.79	66	eP	Pn	14 51 39.4	+1.1
LOAL	Lomas de Alarc	0.79	66	eP	Pn	14 51 39.4	+1.1
SLOZ	Alcaldia de Sa	0.80	64	eP	Pn	14 51 39.5	+1.1
SLOZ				eS	Sn	14 51 53.9	+3.2
FUG	Fuego 3	0.83	338	⇓iP	Pn	14 51 39.1	+0.2
CEVE	Cerro Verde	0.89	80	⇑iP	Pn	14 51 40.5	+0.9
CEVE				IAML		14 51 56.7	
	comp=Z,103µm,0.3s						
CEVE	Cerro Verde	0.89	80	⇑iP	Pn	14 51 40.5	+0.9
CEVE				IAML		14 51 56.7	
	comp=Z,103µm,0.3s						
SBLS	San Blas	0.89	79	⇑iP	Pn	14 51 40.5	+0.9
SBLS	San Blas	0.89	79	⇑iP	Pn	14 51 40.5	+0.9
SNJE	San Jose	0.91	78	⇑iP	Pn	14 51 40.9	+1.0
SNJE	San Jose	0.91	78	⇑iP	Pn	14 51 40.9	+1.0
NBG	Las Nubes	0.93	11	⇑iP	Pn	14 51 42.9	+2.8
UNIC	Universidad Ca	0.99	72	eP	Pn	14 51 41.9	+1.3
UNIC	Universidad Ca	0.99	72	eP	Pn	14 51 41.9	+1.3
JAYA	Jayaque - finc	1.04	91	⇑iP	Pn	14 51 40.8	-0.5
JAYA	Jayaque - finc	1.04	91	⇑iP	Pn	14 51 40.8	-0.5
CEDA	San Andres	1.10	83	⇑iP	Pn	14 51 43.2	+1.2
CEDA				IAML		14 52 08.3	
	comp=Z,63µm,0.5s						
CEDA	San Andres	1.10	83	⇑iP	Pn	14 51 43.2	+1.2
CEDA				IAML		14 52 08.3	
	comp=Z,63µm,0.5s						
CEDA	San Andres	1.10	83	eP	Pn	14 51 43.2	+1.2
LALI	Alcalda de L	1.18	99	eP	Pn	14 51 43.2	+0.3
LALI	Alcalda de L	1.18	99	eP	Pn	14 51 43.2	+0.3
LALI	Alcalda de L	1.18	99	eP	Pn	14 51 43.1	+0.3
LALI				eS	Sn	14 52 00.3	+1.5
BOQS	Boqueron	1.21	87	⇑iP	Pn	14 51 44.7	+1.2
BOQS	Boqueron	1.21	87	⇑iP	Pn	14 51 44.7	+1.2
ITCA	Escuela Especi	1.21	90	i P	Pn	14 51 44.6	+1.2
ITCA	Escuela Especi	1.21	90	i P	Pn	14 51 44.6	+1.2
UEES	Universidad Ev	1.25	88	eP	Pn	14 51 45.2	+1.3
UEES	Universidad Ev	1.25	88	eP	Pn	14 51 45.2	+1.3
SNET	Serv Nac Est T	1.25	89		Pn	14 51 45.0	+1.1
SNET	Serv Nac Est T	1.25	89	⇑iP	Pn	14 51 45.1	+1.1
SNET				IAML		14 52 05.0	
	comp=Z,33µm,0.3s						
SNET	Serv Nac Est T	1.25	89	⇑iP	Pn	14 51 45.1	+1.1
SNET				IAML		14 52 05.0	
	comp=Z,33µm,0.3s						
SNET	Serv Nac Est T	1.25	89	eP	Pn	14 51 45.1	+1.2
SNET				eS	Sn	14 52 03.5	+2.9
SEMO	Seminario San	1.26	88	⇑eP	Pn	14 51 45.5	+1.5
UESS	Universidad de	1.29	88	eP	Pn	14 51 46.0	+1.7
UESS	Universidad de	1.29	88	eP	Pn	14 51 46.0	+1.7
UDBS	Universidad Do	1.33	88	eP	Pn	14 51 46.4	+1.5
UDBS	Universidad Do	1.33	88	eP	Pn	14 51 46.4	+1.5
MTO3	Montecristo	1.34	57		Pn	14 51 46.6	+1.5
MTO3	Montecristo	1.34	57	⇑iP	Pn	14 51 46.8	+1.7
MTO3	Montecristo	1.34	57	⇑iP	Pn	14 51 46.8	+1.7
MTO3	Montecristo	1.34	57	eP	Pn	14 51 46.9	+1.7
MTO3				eS	Sn	14 52 06.2	+3.5
AEIL	Aeropuerto Ilo	1.37	89	i P	Pn	14 51 47.2	+1.8
AEIL	Aeropuerto Ilo	1.37	89	i P	Pn	14 51 47.2	+1.8
RTAL	Retalhuleu	1.42	307	Pn	Pn	14 51 44.3	-1.7
RTAL	Retalhuleu	1.42	307	⇓iP	Pn	14 51 44.4	-1.5
RTAL				eS	Sn	14 52 01.6	-2.6
LFRS	El Faro	1.42	92	⇑iP	Pn	14 51 47.2	+1.2
LFRS	El Faro	1.42	92	⇑iP	Pn	14 51 47.2	+1.2
LBRS	Las Brisas	1.44	87	⇑eP	Pn	14 51 47.8	+1.6
LBRS	Las Brisas	1.44	87	⇑eP	Pn	14 51 47.8	+1.6
ESQI	Esquipulas	1.45	52		Pn	14 51 48.4	+2.0
ESQI	Esquipulas	1.45	52	⇑iP	Pn	14 51 48.6	+2.2
STG3	Santiaguito 3,	1.45	316	⇓eP	Pn	14 51 46.2	-0.4
STG3				eS	Sn	14 52 15.0	+10
SJTE	Alcalda de S	1.47	92	eP	Pn	14 51 48.1	+1.4
SJTE	Alcalda de S	1.47	92	eP	Pn	14 51 48.1	+1.4
PAVA	Las Pavas	1.54	88	⇑iP	Pn	14 51 49.2	+1.5
PAVA	Las Pavas	1.54	88	⇑iP	Pn	14 51 49.2	+1.5
PAVA	Las Pavas	1.54	88	eP	Pn	14 51 49.2	+1.5
COEG	Centro de Oper	1.60	92	eP	Pn	14 51 49.7	+1.4
COEG	Centro de Oper	1.60	92	eP	Pn	14 51 49.7	+1.4
COEG	Centro de Oper	1.60	92	eP	Pn	14 51 49.7	+1.4
COEG				eS	Sn	14 52 12.2	+3.8
LLGN	La Laguna	1.61	72	⇑iP	Pn	14 51 50.0	+1.5
LLGN	La Laguna	1.61	72	⇑iP	Pn	14 51 50.0	+1.5
MRL	Marmol	1.62	30	⇓iP	Pn	14 51 52.1	+3.3
SCLA	Alcaldia de Sa	1.74	89	⇑iP	Pn	14 51 51.8	+1.5
SCLA	Alcaldia de Sa	1.74	89	⇑iP	Pn	14 51 51.8	+1.5
HUEH	Huehuetenango	1.89	330		Pn	14 51 53.5	+1.1
HUEH	Huehuetenango	1.89	330	eP	Pn	14 51 53.8	+1.4
HUEH	Huehuetenango	1.89	330	eP	Pn	14 51 53.8	+1.4
HUEH	Huehuetenango	1.89	330	eP	Pn	14 51 53.8	+1.4
PQSS	Presa 15 de Se	1.91	91	eP	Pn	14 51 53.7	+1.3
PQSS	Presa 15 de Se	1.91	91	eP	Pn	14 51 53.7	+1.3
PACA	Pacayal	2.15	95	eP	Pn	14 51 57.0	+1.3
PACA	Pacayal	2.15	95	eP	Pn	14 51 57.0	+1.3
PACA	Pacayal	2.15	95	eP	Pn	14 51 56.9	+1.3
RANC	El Ranchito	2.19	96	⇓eP	Pn	14 51 57.6	+1.3
RANC	El Ranchito	2.19	96	⇓eP	Pn	14 51 57.6	+1.3
LCND	La Caada	2.59	98	⇑eP	Pn	14 52 02.8	+1.3
LCND	La Caada	2.59	98	⇑eP	Pn	14 52 02.8	+1.3
CNCH	Conchagua	2.65	98	⇑iP	Pn	14 52 03.7	+1.3
CNCH	Conchagua	2.65	98	⇑iP	Pn	14 52 03.7	+1.3
CNCH	Conchagua	2.65	98	eP	Pn	14 52 03.7	+1.3
CSGN	Cosiguina Volc	2.97	103	eP	Pn	14 52 07.7	+1.0
CCIG	Comitan	3.03	329		Pn	14 52 09.8	+2.1
TGUH	Tegucigalpa,Un	3.18	83	Pn	Pn	14 52 11.0	+1.4
TGUH	Tegucigalpa,Un	3.18	83	eP	Pn	14 52 11.2	+1.5
PETF	Flores	3.29	11		Pn	14 52 13.8	+2.8
PETF	Flores	3.29	11	eP	Pn	14 52 14.3	+3.3
CRIN	San Cristobal	3.52	106		Pn	14 52 15.2	+1.0
CRIN	San Cristobal	3.52	106	eP	Pn	14 52 15.4	+1.2
CRIN				eS	Sn	14 52 55.4	+0.7
CNGN	Cerro Negro	3.90	107		Pn	14 52 20.0	+0.6
CNGN	Cerro Negro	3.90	107	eP	Pn	14 52 20.1	+0.6
MOMN	Momotombo	4.08	107	eP	Pn	14 52 22.1	+0.3
APYN	Apoyeque	4.31	109	eP	Pn	14 52 25.3	+0.4
TISN	Laguna Tiscapa	4.42	110	eP	Pn	14 52 27.2	+0.8
HUEN		4.44	107	eP	Pn	14 52 27.2	+0.5
WILN	Americas 2	4.49	109	eP	Pn	14 52 28.1	+0.7
MATN	Matagalpa	4.54	99		Pn	14 52 27.8	-0.3
MATN	Matagalpa	4.54	99	eP	Pn	14 52 28.0	-0.1
BOAB	BOACO BROADBAN	4.89	104	Pn	Pn	14 52 32.9	+0.1
BOAB	BOACO BROADBAN	4.89	104	eP	Pn	14 52 33.1	+0.3
CONN	Concepcion	5.22	113	eP	Pn	14 52 38.0	+0.6
CMIG	Matias Romero	5.41	309	P	Pn	14 52 39.5	-0.4
	comp=Z,48nm,0.6s,baz=126,slow=11,SNR=48						
CMIG				S	Sn	14 53 38.7	-2.1
	comp=Z,334nm,0.9s,baz=140,slow=16,SNR=5.9						
CMIG				LR	LR	14 54 26.7	
	comp=Z,536nm,21.4s,baz=136,slow=33						
ACON	Acoyapa	5.49	107		Pn	14 52 40.7	-0.3
HZTE	Horizontes, Gu	5.64	121	Pn	Pn	14 52 45.0	+1.8
HZTE	Horizontes, Gu	5.64	121	eP	Pn	14 52 45.0	+1.8
HZTE	Horizontes, Gu	5.64	121	eP	Pn	14 52 45.2	+2.0
GBS3	Finca Las Img	5.73	120	eP	Pn	14 52 46.6	+2.3
GB1A	Borinquen Arri	5.76	119	eP	Pn	14 52 46.1	+1.3
BUEV	Buena Vista	5.76	119	eP	Pn	14 52 47.0	+2.2
GPS2	Hotel Rincn d	5.83	119	eP	Pn	14 52 48.4	+2.6
SAJU	San Juanillo,	5.92	127	eP	Pn	14 52 48.2	+1.3
LIM1	Limonal	5.94	119	eP	Pn	14 52 49.3	+2.0
ORTG	Ortega, Santa	5.95	123	Pn	Pn	14 52 49.0	+1.6
ORTG	Ortega, Santa	5.95	123	eP	Pn	14 52 49.1	+1.8
GUAB	Guayabo de Bag	5.96	119	eP	Pn	14 52 49.2	+1.7
GUAI	GUAI	5.96	124	eP	Pn	14 52 49.1	+1.7
HORNC	Hornillas	6.00	119	eP	Pn	14 52 49.2	+1.1
COLC	Colonia	6.00	119	eP	Pn	14 52 49.9	+1.9
CUI	Cuipilapa	6.04	119	eP	Pn	14 52 50.4	+1.9
DUNO	Dulce Nombre,	6.08	125		Pn	14 52 50.6	+1.5
DUNO	Dulce Nombre,	6.08	125	eP	Pn	14 52 50.7	+1.5
ACAL	Aguas Claras	6.16	119	eP	Pn	14 52 51.5	+1.3
PTEN	Parque Tenorio	6.16	118	eP	Pn	14 52 51.2	+0.9
ESPN	Las Esperanzas	6.24	103		Pn	14 52 52.1	+0.8
JTS	Las Juntas de	6.40	121	P	Pn	14 52 54.8	+1.2
	comp=Z,50nm,0.3s,baz=11,slow=23,SNR=122						
JTS				S	Sn	14 54 02.4	-2.9
	comp=Z,78nm,0.8s,baz=336,slow=17,SNR=1.2						
JTS	Las Juntas de	6.40	121	Pn	Pn	14 52 54.6	+1.1
JTS	Las Juntas de	6.40	121	eP	Pn	14 52 54.9	+1.4
JTS	Las Juntas de	6.40	121	eP	Pn	14 52 54.9	+1.4

ARE1	Arenal 1	6.51	119	*e*P	Pn	14 52 57.5	+2.4
CEDE	Laguna Cedeo	6.51	118	*e*P	Pn	14 52 57.7	+2.6
CASO	Castillo	6.51	119	*e*P	Pn	14 52 56.9	+1.8
FORC	Fortuna	6.55	118	*e*P	Pn	14 52 57.8	+2.2
LAFE	Finca La Fe, P	6.71	124	*e*P	Pn	14 52 59.0	+1.3
LAFE	Finca La Fe, P	6.71	124	*e*P	Pn	14 52 58.9	+1.3
JACO	JACO, Garabito	6.99	124	Pn	Pn	14 53 03.1	+1.6
JACO	JACO, Garabito	6.99	124	*e*P	Pn	14 53 03.4	+1.9
HDC	Heredia	7.26	119		Pn	14 53 06.6	+1.3
HDC	Heredia	7.26	119	*e*P	Pn	14 53 07.2	+1.8
LCR2	La Lucha 2	7.48	121	*e*P	Pn	14 53 10.7	+2.2
CDM	Cerro de Muert	7.78	121	*e*P	Pn	14 53 15.1	+2.3
BATAN	Batan	7.84	116		Pn	14 53 13.7	+0.5
PEZE	Perez Zeledon,	7.95	122		Pn	14 53 17.0	+2.3
PEZE	Perez Zeledon,	7.95	122	*e*P	Pn	14 53 17.1	+2.3
SRBA	San Rafael, Bu	8.29	121		Pn	14 53 20.7	+1.2
DRK0	Durika	8.37	121		Pn	14 53 21.9	+1.3
RIOS	Rincon, Osa	8.47	125		Pn	14 53 23.4	+1.7
RIOS	Rincon, Osa	8.47	125	*e*P	Pn	14 53 23.9	+2.2
TLIG	Tlapa	8.66	298	Pn	Pn	14 53 26.1	+1.6
PRVC	Isla de Provid	8.91	91	Pn	Pn	14 53 28.5	+0.7
CDITO	Canoas	9.06	123		Pn	14 53 30.9	+1.1
BRU2	Volcan	9.08	121		Pn	14 53 31.6	+1.3
BRU2	Volcan	9.08	121	*e*P	Pn	14 53 31.9	+1.6
PNME	Penonome	11.25	116	*e*P	Pn	14 53 59.8	0.0
BCIP	Isla Barro Col	11.39	112	Pn	Pn	14 54 01.8	+0.2
BCIP	Isla Barro Col	11.39	112	P	Pn	14 54 01.8	+0.2
SOR	Soroa	11.54	37		Pn	14 54 04.7	+1.1
SOR	Soroa	11.54	37	P	Pn	14 54 04.7	+1.1
LCCY	Blossom Villag	11.64	58	Pn	Pn	14 54 05.9	+0.9
MTDJ	Mount Denham	13.28	68	Pn	Pn	14 54 26.6	-0.7
MTDJ	Mount Denham	13.28	68	*e*P	P	14 54 35.3	+1.0
PAYG	Puerto Ayora	14.26	179	P	P	14 54 46.5	+1.4
PAYG	Puerto Ayora	14.26	179	*e*P	P	14 54 45.8	+0.8
ZAIG	Zacatecas	14.58	310	Pn	Pn	14 54 45.8	+1.3
061Z	Ochoppi	15.12	35	Pn	Pn	14 54 51.4	+0.3
061Z	Ochoppi	15.12	35	P	Pn	14 54 52.3	+1.2
	baz=218						
SJCC	San Jacinto, C	15.48	102	P	P	14 54 58.5	-0.2
SJCC				IAmb	IAmb	14 55 00.6	
	comp=Z,194nm,1.1s						
SJCC	San Jacinto, C	15.48	102	*e*P	P	14 54 59.3	+0.5
DBBC	Dabeiba	15.55	114	*e*P	Pn	14 54 57.4	+0.6
UREC	San Jos de Ur	15.86	110	*e*P	Pn	14 55 00.2	-0.3
GTBY	Guantanamo Bay	16.01	65	P	P	14 55 03.7	-0.7
GTBY	Guantanamo Bay	16.01	65	*e*P	P	14 55 04.1	-0.4
MALC	Bahia Malaga	16.17	125	*e*P	P	14 55 11.7	+5.4
CBOC	Ciudad Bolivar	16.26	117	*e*P	P	14 55 07.9	+0.4
060A	Indiantown	16.34	34	P	P	14 55 08.2	+0.1
PLMC	San Jos del P	16.52	120	*e*P	Pn	14 55 07.9	-1.1
HELC	Santa Helena	16.53	115	*e*P	P	14 55 11.7	+1.1
735A	Kenedy	16.55	337	P	P	14 55 11.7	+1.3
735A	Kenedy	16.55	337	S	S	14 58 22.0	+2.3
	baz=154						
ZARC	Zaragoza, Cauc	16.57	110		Pn	14 55 08.7	-0.8
ZARC				PcP	PcP	14 59 57.4	+1.2
ZARC	Zaragoza, Cauc	16.57	110	*e*P	Pn	14 55 08.9	-0.6
DWPF	Disney Wildern	16.68	29		Pn	14 55 10.3	-0.4
DWPF				IAmb	IAmb	14 55 16.3	
	comp=Z,127nm,0.8s						
DWPF	Disney Wildern	16.68	29	P	P	14 55 13.1	+1.3
	baz=212,SNR=7.1						
DWPF	Disney Wildern	16.68	29	P	P	14 55 13.0	+1.2
	baz=212						
833A	Chaparral WMA,	16.75	332	P	P	14 55 14.1	+1.5
833A	Chaparral WMA,	16.75	332	P	P	14 55 14.5	+1.9
	baz=148						
833A	Chaparral WMA,	16.75	332	P	P	14 55 14.6	+1.9
	baz=148						
HKT	Hockley	16.93	344	P	P	14 55 16.2	+1.7
HKT				IAmb	IAmb	14 55 32.7	
	comp=Z,205nm,1.5s						
HKT	Hockley	16.93	344	P	P	14 55 16.2	+1.7
HKT				pmax	pmax		
	comp=Z,205nm,1.5s						
HKT	Hockley	16.93	344	P	P	14 55 16.6	+2.2
	baz=162						
YOTC	Yotoco, Valle	16.98	123	*e*P	P	14 55 15.6	+0.1
656A	Willston	17.29	24	P	Pn	14 55 17.8	-0.3
656A	Willston	17.29	24	P	P	14 55 21.1	+2.6
	baz=207,SNR=13						
PTBC	PUERTO BERRIO,	17.32	113	*e*P	Pn	14 55 17.5	-1.3
553A	Crawfordville	17.37	18	P	P	14 55 25.3	+5.8
	baz=200,SNR=11						
NORC	Norcasia	17.40	116	*e*P	P	14 55 21.3	+1.4
CRJC	Cerrejon, Guaj	17.43	97	*e*P	Pn	14 55 19.4	-0.8
ANIL	Santa Ana	17.48	120	*e*P	P	14 55 25.2	+4.0
346A	Big Creek Wild	17.66	3	P	Pn	14 55 25.3	+2.6
	baz=183,SNR=20						
342A	Flagon Creek P	17.70	355		Pn	14 55 23.1	-0.1
342B	Flagon Creek P	17.70	355	P	Pn	14 55 26.6	+3.4
	baz=174,SNR=15						
344A	Westbrook Farm	17.70	359	P	Pn	14 55 27.5	+4.4
	baz=179,SNR=42						
BRAL	Brewton	17.70	10	P	Pn	14 55 26.6	+3.4
	baz=191,SNR=5.5						
BRAL	Brewton	17.70	10	P	Pn	14 55 26.0	+2.8
	baz=191,SNR=5.5						
OCAC	Ocana	17.73	106	P	P	14 55 21.9	-1.8
SOTA	Rioblanco	17.91	129	*e*P	Pn	14 55 31.9	+5.5
OTAV	Otavalo	17.92	137	P	P	14 55 25.0	-1.1
OTAV	Otavalo	17.92	137	P	P	14 55 25.0	-1.1
OTAV				pmax	pmax		
	comp=Z,36nm,1.2s						
OTAV	Otavalo	17.92	137	*e*P	Pn	14 55 30.0	+3.5
OTAV	Otavalo	17.92	137	*e*P	P	14 55 25.6	-0.5
ORTC	Ortega, Tolima	17.93	121	*e*P	Pn	14 55 28.1	+1.9
PCON	Cinco Dias	17.95	128	*e*P	Pn	14 55 30.0	+3.1
MARP	Paez Belalcaza	17.97	125	*e*P	Pn	14 55 31.9	+5.0
SPBC	San Pablo de B	18.06	115	*e*P	P	14 55 27.1	-0.2
ROSC	El Rosal	18.23	117	P	Pn	14 55 31.5	+1.4
	comp=Z,30nm,0.6s,baz=342,slow=8.6,SNR=14						
ROSC	El Rosal	18.23	117	P	P	14 55 29.3	-0.2
ROSC				IAmb	IAmb	14 55 37.5	
	comp=Z,48nm,0.8s						
ROSC	El Rosal	18.23	117	P	P	14 55 29.3	-0.2
ROSC				pmax	pmax		
	comp=Z,48nm,0.8s						
435B	Jarrell	18.23	340		Pn	14 55 29.9	+0.3
435B	Jarrell	18.23	340	P	Pn	14 55 30.3	+0.7
	baz=157						
435B	Jarrell	18.23	340	P	Pn	14 55 31.2	+1.6
	baz=157						
PRAC	Prado	18.34	121	*e*P	Pn	14 55 33.8	+2.7
NATX	Nacogdoches	18.40	349	P	Pn	14 55 31.4	-0.3
NATX				IAmb	IAmb	14 55 50.9	
	comp=Z,67nm,0.9s						
NATX	Nacogdoches	18.40	349	P	Pn	14 55 32.0	+0.4
	baz=167,SNR=6.9						
NATX	Nacogdoches	18.40	349	P	Pn	14 55 32.4	+0.8
	baz=167,SNR=6.9						
BARC	Barichara	18.45	111	*e*P	Pn	14 55 33.8	+1.1
352A	Blakely	18.45	15	P	Pn	14 55 33.7	+1.4
	baz=197,SNR=20						
VBMS	Vicksburg	18.46	0	P	Pn	14 55 34.3	+1.9
	baz=180						
VBMS	Vicksburg	18.46	0	P	Pn	14 55 34.3	+1.9
	baz=180						
BETC	Betania	18.48	125	*e*P	Pn	14 55 33.8	+1.0
250A	Grady	18.63	11	P	P	14 55 33.3	0.0
250A	Grady	18.63	11	P	Pn	14 55 36.8	+2.3
	baz=193,SNR=15						
GARC	Garzon, Huila	18.74	126	*e*P	Pn	14 55 37.6	+1.5
JCT	Junction City	18.79	334	P	P	14 55 35.7	+0.6
JCT	Junction City	18.79	334	P	P	14 55 35.7	+0.6
JCT				pmax	pmax		
	comp=Z,44nm,1.4s						
JCT	Junction City	18.79	334	P	Pn	14 55 37.6	+1.2
	baz=151,SNR=6.2						
JCT				S	Sn	14 59 10.3	+3.9
	baz=151						
JCT	Junction City	18.79	334	P	Pn	14 55 38.2	+1.8
	baz=151,SNR=6.2						
TIGA	Tifton	18.80	19	P	P	14 55 35.4	+0.3
TIGA	Tifton	18.80	19	P	Pn	14 55 37.9	+1.5
	baz=201						
TIGA	Tifton	18.80	19	P	Pn	14 55 37.6	+1.2
	baz=201						
RUSC	La Rusia	18.83	113	*e*P	Pn	14 55 39.6	+2.1
CHIC	Chingaza	18.84	117	*e*P	Pn	14 55 39.6	+2.1
237A	Washetta, Mont	18.88	346	P	P	14 55 35.9	-0.1
237A				IAmb	IAmb	14 55 53.8	
	comp=Z,44nm,0.7s						
237A	Washetta, Mont	18.88	346	S	Sn	14 59 11.5	+3.2
	baz=164						
146A	Union	18.93	4		Pn	14 55 38.8	+0.8
146A	Union	18.93	4	P	Pn	14 55 39.7	+1.7
	baz=184,SNR=12						
143A	Socs Landing,	18.96	358		Pn	14 55 38.7	+0.3
143A				IAmb	IAmb	14 55 50.1	
	comp=Z,98nm,0.8s						
FLOC	Florencia	18.99	128	*e*P	Pn	14 55 40.5	+1.6
VILC	Villavicencio,	19.13	118	*e*P	Pn	14 55 42.5	+1.8
SDDR	Presa de Saban	19.19	71		P	14 55 40.4	+0.7
SDDR				IAmb	IAmb	14 55 59.4	
	comp=Z,73nm,1.3s						
SDDR	Presa de Saban	19.19	71	*e*P	Pn	14 55 40.5	-0.8
WHTX	Lake Whitney,	19.31	342	P	P	14 55 41.1	+0.3
WHTX				IAmb	IAmb	14 55 55.7	
	comp=Z,76nm,0.7s						
WHTX	Lake Whitney,	19.31	342	P	Pn	14 55 41.7	-0.8
	baz=159,SNR=12						
WHTX				S	Sn	14 59 20.8	+2.0
	baz=159						
WHTX	Lake Whitney,	19.31	342	P	Pn	14 55 42.1	-0.4
	baz=159,SNR=12						
LRAL	Lakeview Retre	19.54	9	Pn	Pn	14 55 45.7	+0.6
LRAL				IAmb	IAmb	14 56 05.0	
	comp=Z,74nm,1.0s						
LRAL	Lakeview Retre	19.54	9	P	Pn	14 55 45.8	+0.6
	baz=190,SNR=24						
LRAL	Lakeview Retre	19.54	9	P	Pn	14 55 46.0	+0.8
	baz=190,SNR=24						
Z47A	Carrollton	19.57	6	Pn	Pn	14 55 46.1	+0.7
Z47A	Carrollton	19.57	6	P	Pn	14 55 46.2	+0.7
	baz=187,SNR=30						
Z41A	Richland Creek	19.61	354		Pn	14 55 46.4	+0.4
Z41A	Richland Creek	19.61	354	P	Pn	14 55 46.8	+0.8
	baz=173,SNR=5.8						
Z41A				P	Pn	14 55 46.8	+0.8
	baz=173,SNR=5.8						
Z41A				S	Sn	14 59 27.3	+1.4
	baz=173						
Z41A				S	Sn	14 59 27.3	+1.4
	baz=173						
Z41A	Richland Creek	19.61	354	P	Pn	14 55 46.7	+0.8
	baz=173,SNR=5.8						
255A	Hazlehurst	19.61	21		Pn	14 55 46.0	0.0
152A	Waverly Hall	19.64	15		Pn	14 55 46.4	0.0
152A				IAmb	IAmb	14 56 10.1	
	comp=Z,161nm,1.4s						
152A	Waverly Hall	19.64	15	P	Pn	14 55 47.0	+0.6
	baz=197,SNR=21						
TX32	Lajitas Array	19.78	324		Pn	14 55 48.6	+0.4
TXAR	Lajitas Array	19.78	324	P	Pn	14 55 48.3	+0.1
	comp=Z,12nm,0.8s,baz=148,slow=12,SNR=82						
TXAR				PcP	PcP	15 00 03.2	+1.8
	comp=Z,4.1nm,0.9s,baz=160,slow=2.9,SNR=8.1						
TXAR				ScP	ScP	15 03 34.1	+3.1
	comp=Z,3.5nm,0.8s,baz=183,slow=4.4,SNR=12						
TXAR				LR	LR	15 04 57.3	
	comp=Z,117nm,20.1s,baz=130,slow=41						
TXAR	Lajitas Array	19.78	324	Pn	Pn	14 55 48.5	+0.3
TXAR					PcP	15 00 02.8	+1.4
TXAR	Lajitas Array	19.78	324	P	Pn	14 55 48.5	+0.3
TX31	Lajitas Ar. Si	19.78	324	P	P	14 55 46.9	+0.9
TX31				IAmb	IAmb	14 55 52.6	
	comp=Z,69nm,1.2s						
TX31					PcP	15 00 01.9	+0.5
TX31	Lajitas Ar. Si	19.78	324	P	Pn	14 55 49.2	+1.0
	baz=139,SNR=32						
SC01	Santiago de lo	19.81	71		Pn	14 55 48.0	-0.5
Z38A	Mt. Pleasant	19.92	349	P	P	14 55 48.0	+0.7
Z38A				IAmb	IAmb	14 55 49.7	
	comp=Z,92nm,0.7s						
Z38A	Mt. Pleasant	19.92	349	P	Pn	14 55 49.0	-0.6
	baz=167,SNR=12						
BANI	BANI	19.94	74		Pn	14 55 49.4	-0.7
154A	Montrose	20.04	19	P	P	14 55 49.0	+0.4
154A	Montrose	20.04	19	P	Pn	14 55 50.6	-0.4
	baz=201,SNR=6.1						
GRTK	Grand Turk	20.05	64	P	P	14 55 48.5	-0.3
WLAR	White Oak Lake	20.06	354	P	P	14 55 49.8	+0.9
SDV	Santo Domingo	20.07	102	P	P	14 55 48.6	-0.7
	comp=Z,48nm,0.6s,baz=298,slow=7.4,SNR=13						
SDV				LR	LR	15 04 27.4	
	comp=Z,226nm,21.6s,baz=284,slow=40						
SDV	Santo Domingo	20.07	102	P	P	14 55 48.2	-1.2
SDV				IAmb	IAmb	14 55 55.1	
	comp=Z,60nm,0.7s						
SDV	Santo Domingo	20.07	102	*e*P	P	14 55 47.2	-2.1
SDV	Santo Domingo	20.07	102	*e*P	P	14 55 48.9	-0.4
Y45A	Yeager Farm, C	20.12	2		Pn	14 55 52.8	+0.8
Y45A	Yeager Farm, C	20.12	2	P	Pn	14 55 53.1	+1.1
	baz=182,SNR=6.0						
Z51A	Franklin	20.15	13	P	Pn	14 55 52.7	+0.3
	baz=195,SNR=9.8						
Y49A	Blount Mountai	20.44	10	P	P	14 55 54.0	+1.0
Y49A				IAmb	IAmb	14 55 56.6	
	comp=Z,75nm,0.7s						
Y49A	Blount Mountai	20.44	10	P	Pn	14 55 55.4	-0.3
	baz=191,SNR=32						
Z35A	Perchaven, San	20.51	344	P	P	14 55 53.1	-0.6
Z35A				IAmb	IAmb	14 56 15.7	
	comp=Z,59nm,0.9s						
Z35A	Perchaven, San	20.51	344	P	Pn	14 55 55.2	-1.3
	baz=161,SNR=7.7						
ABTX	Abilene, Hawle	20.62	338	P	P	14 55 55.1	+0.1
ABTX				IAmb	IAmb	14 56 13.4	
	comp=Z,113nm,1.3s						
ABTX	Abilene, Hawle	20.62	338	P	Pn	14 55 56.7	-1.3
	baz=154						
ABTX	Abilene, Hawle	20.62	338	P	P	14 55 56.3	+1.3
	baz=154						
GOGA	Godfrey	20.67	17	P	Pn	14 55 57.2	-1.3
	baz=200,SNR=17						
GOGA	Godfrey	20.67	17	P	Pn	14 55 57.2	-1.3
	baz=200,SNR=17						
OXF	Oxford	20.77	3	P	P	14 55 56.1	-0.4
OXF				IAmb	IAmb	14 56 20.0	
	comp=Z,118nm,1.1s						
OXF	Oxford	20.77	3	P	P	14 55 56.1	-0.4
OXF				pmax	pmax		
	comp=Z,118nm,1.2s						
OXF	Oxford	20.77	3	P	Pn	14 55 59.1	-0.5
	baz=183						
X40A	Basin Creek Fa	20.83	355	P	P	14 55 57.4	+0.2
X40A				IAmb	IAmb	14 56 15.2	
	comp=Z,73nm,1.4s						
X40A	Basin Creek Fa	20.83	355	P	P	14 55 58.3	+1.1
	baz=174						
SLBS	Sierra La Lagu	20.90	301	P	Pn	14 56 00.2	-1.1
DR12	Loma Pena Alta	20.92	73	P	P	14 55 57.7	-0.6
X48A	Hartselle	20.93	8	P	P	14 55 59.1	+0.9
X48A				IAmb	IAmb	14 56 18.8	
	comp=Z,103nm,1.0s						
X48A	Hartselle	20.93	8	P	Pn	14 56 00.1	-1.4
	baz=189,SNR=30						
Y52A	Lilburn	20.94	15	P	P	14 55 59.4	+1.0
Y52A	Lilburn	20.94	15	P	Pn	14 56 00.3	-1.4
	baz=198,SNR=25						
Y52A				P	Pn	14 56 00.3	-1.4
	baz=198,SNR=25						
MIAR	Mount Ida	20.96	353	P	P	14 55 58.6	+0.1
MIAR				IAmb	IAmb	14 56 24.4	
	comp=Z,39nm,0.8s						
MIAR	Mount Ida	20.96	353	P	P	14 55 58.7	+0.1
MIAR				pmax	pmax		
	comp=Z,39nm,0.8s						
MIAR	Mount Ida	20.96	353	P	P	14 55 59.0	+0.4
	baz=172,SNR=12						
MIAR	Mount Ida	20.96	353	P	P	14 55 59.3	+0.7
	baz=172,SNR=12						
UALR	University of	21.07	356	P	P	14 55 59.4	-0.3
UALR				IAmb	IAmb	14 56 25.7	
	comp=Z,77nm,1.1s						
HAW	Hawthorne Fire	21.21	21	P	P	14 56 02.4	+1.2
	baz=204						
FPAL	Fort Paine	21.25	11	P	P	14 56 02.6	+1.0
FPAL				IAmb	IAmb	14 56 05.7	
	comp=Z,91nm,1.0s						
X37A	Clayton	21.28	349		P	14 56 03.0	+1.0
X37A				IAmb	IAmb	14 56 31.6	
	comp=Z,56nm,0.9s						
X37A	Clayton	21.28	349	P	P	14 56 03.2	+1.2
	baz=167,SNR=23						
PLAL	Pickwick Lake	21.33	6	P	P	14 56 03.0	+0.5
PLAL				IAmb	IAmb	14 56 24.0	
	comp=Z,62nm,0.9s						
W45A	Hickory Valley	21.43	3	P	P	14 56 04.7	+1.2
W45A	Hickory Valley	21.43	3	P	P	14 56 05.6	+2.1
	baz=183						
X51A	Calhoun	21.43	13	P	P	14 56 04.6	+1.1
X51A					PcP	15 00 04.5	+0.2
X51A	Calhoun	21.43	13	P	P	14 56 05.3	+1.8
	baz=195,SNR=6.4						
X51A				P	P	14 56 05.3	+1.8
	baz=195,SNR=6.4						
W41B	Gary Mavity, V	21.46	356	P	P	14 56 04.6	+0.7
W41B				IAmb	IAmb	14 56 33.8	
	comp=Z,54nm,1.0s						
W41B	Gary Mavity, V	21.46	356	P	P	14 56 04.8	+0.8
	baz=175						
W41B	Gary Mavity, V	21.46	356	P	P	14 56 05.5	+1.6
	baz=175						
NHSC	New Hope	21.52	24	P	P	14 56 07.8	+3.2
	baz=208,SNR=5.5						
NHSC	New Hope	21.52	24	P	P	14 56 07.9	+3.4
	baz=208,SNR=5.5						
WHAR	Wooly Hollow	21.58	356	P	P	14 56 05.1	-0.1
WHAR				IAmb	IAmb	14 56 29.0	
	comp=Z,77nm,1.2s						
W39A	Magazine	21.63	353	P	P	14 56 05.9	+0.2
W39A				IAmb	IAmb	14 56 28.3	
	comp=Z,60nm,1.1s						
W39A	Magazine	21.63	353	P	P	14 56 06.7	+1.0
	baz=171,SNR=12						
W39A	Magazine	21.63	353	P	P	14 56 06.5	+0.8
	baz=171,SNR=12						
HODGE	Hodges	21.80	19	P	P	14 56 08.2	+0.7
HODGE				IAmb	IAmb	14 56 29.5	
	comp=Z,49nm,1.0s						
HODGE	Hodges	21.80	19	P	P	14 56 08.6	+1.1
	baz=202,SNR=14						
SWET	Sewanee	21.85	10	P	P	14 56 08.9	+0.8
SWET				IAmb	IAmb	14 56 11.7	
	comp=Z,70nm,0.8s						
X34A	Smith Ranch, M	21.86	344		P	14 56 08.8	+0.5
X34A				IAmb	IAmb	14 56 32.5	
	comp=Z,91nm,1.0s						
W50A	Signal Mountai	21.95	11	P	P	14 56 09.5	+0.4
W50A				IAmb	IAmb	14 56 30.9	
	comp=Z,93nm,1.1s						
W50A	Signal Mountai	21.95	11	P	P	14 56 10.5	+1.4
	baz=193,SNR=14						
W50A				S	S	15 00 08.3	+1.2
	baz=193						
W52A	Murphy	22.14	14	P	P	14 56 11.9	+0.7
W52A	Murphy	22.14	14	P	P	14 56 13.0	+1.8
	baz=197,SNR=11						
HALT	Halls	22.17	3	P	P	14 56 11.2	-0.2
HALT				IAmb	IAmb	14 56 36.0	
	comp=Z,80nm,1.1s						
FCAR	Ozark Folk Cen	22.17	357	P	P	14 56 10.9	-0.5
FCAR				IAmb	IAmb	14 56 35.0	
	comp=Z,60nm,1.0s						
V48A	Smith Brothers	22.22	8	P	P	14 56 12.7	+0.6
V48A				IAmb	IAmb	14 56 34.4	
	comp=Z,82nm,1.1s						
V48A	Smith Brothers	22.22	8	P	P	14 56 12.9	+0.8
	baz=189,SNR=19						
Y57A	Sumter	22.24	23	P	P	14 56 12.6	+0.3
Y57A				IAmb	IAmb	14 56 14.9	
	comp=Z,93nm,0.9s						
Y57A	Sumter	22.24	23	P	P	14 56 13.4	+1.2
	baz=207,SNR=6.7						
Y57A				P	P	14 56 13.4	+1.2
	baz=207,SNR=6.7						
WMOK	Wichita Mounta	22.26	342	P	P	14 56 12.5	-0.1
	baz=158						
BG3	Lake Jocassee	22.31	17	P	P	14 56 14.1	+1.1
CASEE	Lake Jocassee	22.31	17	P	P	14 56 14.3	+1.3
	baz=200,SNR=22						
LCAR	Lake Charles	22.31	359	P	P	14 56 11.5	-1.5
LCAR				IAmb	IAmb	14 56 35.3	
	comp=Z,73nm,0.8s						
LCAR	Lake Charles	22.31	359	P	P	14 56 12.8	-0.2
	baz=178,SNR=5.6						
CPCT	Cooper Cave	22.35	13	P	P	14 56 14.1	+0.6
FNO	Franklin	22.37	345		P	14 56 13.4	-0.3
Y58A	Scranton	22.43	24	P	P	14 56 15.1	+0.9
	baz=208						
Y58A				P	P	14 56 15.1	+0.9
	baz=208						
PAULI	Pauline	22.48	19	P	P	14 56 15.8	+0.9
	baz=202						
WVT	Waverly	22.49	6	P	P	14 56 14.6	-0.4
WVT	Waverly	22.49	6	P	P	14 56 14.6	-0.4
WVT				pmax	pmax		
	comp=Z,114nm,1.0s						
WVT	Waverly	22.49	6	P	P	14 56 14.8	-0.2
	baz=187,SNR=18						
WVT	Waverly	22.49	6	P	P	14 56 15.2	+0.2
	baz=187						
OKCSW	OKLAHOMA CITY	22.52	345	P	P	14 56 15.0	-0.2
GLAT	Glass	22.53	3	P	P	14 56 15.6	+0.3
GLAT				IAmb	IAmb	14 56 40.0	
	comp=Z,88nm,1.0s						
BAUV	El Baul	22.53	100	P	P	14 56 12.8	-2.8
BAUV				IAmb	IAmb	14 56 17.6	
	comp=Z,30nm,0.8s						
MNTX	Cornudas Mount	22.53	325	P	P	14 56 15.6	+0.1
MNTX				IAmb	IAmb	14 56 34.8	
	comp=Z,39nm,0.9s						
MNTX	Cornudas Mount	22.53	325	P	P	14 56 16.2	+0.8
	baz=139,SNR=48						
MNTX	Cornudas Mount	22.53	325	P	P	14 56 16.3	+0.8
	baz=139,SNR=48						
OKCFA	Oklahoma City	22.53	345		P	14 56 15.5	0.0
OKCFA				IAmb	IAmb	14 56 40.6	
	comp=Z,97nm,1.0s						
CLTN	Cedars of Leba	22.64	9	P	P	14 56 17.1	+0.6
TUL1	Leonard	22.64	349		P	14 56 15.0	-1.6
TUL1				IAmb	IAmb	14 56 41.8	
	comp=Z,51nm,0.8s						
TUL1	Leonard	22.64	349	P	P	14 56 15.9	-0.7
	baz=166,SNR=19						
TUL1				S	S	15 00 19.8	+0.8
	baz=166						
TUL1	Leonard	22.64	349	P	P	14 56 15.9	-0.7
	baz=166,SNR=19						
U40A	Yellville	22.68	355	P	P	14 56 16.1	-0.9
U40A				IAmb	IAmb	14 56 35.1	
	comp=Z,48nm,0.9s						
U40A	Yellville	22.68	355	P	P	14 56 16.9	-0.2
	baz=174,SNR=14						
U40A				P	P	14 56 16.9	-0.2
	baz=174,SNR=14						
U40A	Yellville	22.68	355	P	P	14 56 17.1	+0.1
	baz=174,SNR=14						
TKL	Tuckaleechee C	22.72	14	P	P	14 56 18.1	+0.7
	comp=Z,47nm,0.7s,baz=185,slow=11,SNR=78						
TKL				LR	LR	15 05 51.0	
	comp=Z,965nm,21.6s,baz=200,slow=39						
TKL	Tuckaleechee C	22.72	14	P	P	14 56 18.4	+1.1
	baz=197,SNR=27						
HHAR	Hobbs	22.72	353	P	P	14 56 17.1	-0.3
V51A	Loudon	22.73	13	P	P	14 56 17.4	0.0
V51A	Loudon	22.73	13	P	P	14 56 18.6	+1.1
	baz=195,SNR=11						
BIRD	Birdtown, Kers	22.78	22	P	P	14 56 17.8	-0.2
BIRD				IAmb	IAmb	14 56 38.2	
	comp=Z,78nm,1.2s						
BIRD	Birdtown, Kers	22.78	22	P	P	14 56 18.7	+0.8
	baz=206,SNR=6.7						
HICK	Hickman	22.80	3	P	P	14 56 17.1	-1.1
HICK				IAmb	IAmb	14 56 20.3	
	comp=Z,73nm,0.9s						
Y59A	Loris	22.82	26	P	P	14 56 18.9	+0.5
	baz=210						
Y59A				P	P	14 56 18.9	+0.5
	baz=210						
KMSC	Kings Mountain	22.93	20	P	P	14 56 20.4	+0.9
	baz=203,SNR=9.8						
KMSC	Kings Mountain	22.93	20	P	P	14 56 20.4	+0.9
	baz=203,SNR=9.8						
V52A	Sevierville	22.94	15	P	P	14 56 19.6	+0.1
V52A	Sevierville	22.94	15	P	P	14 56 20.3	+0.7
	baz=197,SNR=19						
V53A	Saluda	22.98	16	P	P	14 56 20.2	+0.2
V53A	Saluda	22.98	16	P	P	14 56 21.1	+1.0
	baz=199,SNR=14						
V53A				P	P	14 56 21.1	+1.0
	baz=199,SNR=14						
PBMO	Poplar Bluff	23.01	0	P	P	14 56 20.1	-0.2

PBMO				IAmb	IAmb	14 56 44.2	
	comp=Z,55nm,0.8s						
PBMO	Poplar Bluff	23.01	0	P	P	14 56 20.3	0.0
	baz=180,SNR=8.1						
MSTX	Muleshoe	23.07	333	P	P	14 56 21.3	+0.3
	baz=148,SNR=6.0						
MSTX	Muleshoe	23.07	333	P	P	14 56 22.6	+1.6
	baz=148,SNR=6.0						
Y60A	Bolivia	23.12	27	P	P	14 56 21.7	+0.3
X58A	Rowland	23.12	24	P	P	14 56 21.9	+0.5
X58A				IAmb	IAmb	14 56 41.5	
	comp=Z,99nm,1.5s						
X58A	Rowland	23.12	24	P	P	14 56 22.1	+0.7
	baz=208						
X58A				P	P	14 56 22.1	+0.7
	baz=208						
U49A	Red Boiling Sp	23.14	10	P	P	14 56 21.1	-0.5
U49A	Red Boiling Sp	23.14	10	P	P	14 56 22.1	+0.6
	baz=192,SNR=40						
T45A	Paducah	23.31	4	P	P	14 56 21.8	-1.3
AMTX	Amarillo	23.40	336	P	P	14 56 24.4	+0.3
AMTX	Amarillo	23.40	336	P	P	14 56 25.2	+1.1
	baz=152						
AMTX	Amarillo	23.40	336	P	P	14 56 25.2	+1.1
	baz=152						
OBIP	Obispado Ponce	23.41	76	P	P	14 56 22.3	-1.9
W57A	Gilead	23.41	22	P	P	14 56 23.5	-0.5
W57A	Gilead	23.41	22	P	P	14 56 24.3	+0.3
	baz=206,SNR=6.1						
W57A				P	P	14 56 24.3	+0.3
	baz=206,SNR=6.1						
T47A	Sharon Grove	23.42	7	P	P	14 56 24.2	0.0
T47A	Sharon Grove	23.42	7	P	P	14 56 24.6	+0.5
	baz=188,SNR=62						
T47A				S	S	15 00 34.2	+2.8
	baz=188						
MGMO	Mountain Grove	23.44	356	P	P	14 56 24.2	-0.1
TZTN	Tazewell	23.62	14	P	P	14 56 26.4	+0.4
TZTN				IAmb	IAmb	14 56 47.3	
	comp=Z,107nm,1.1s						
TZTN	Tazewell	23.62	14	P	P	14 56 26.6	+0.6
	baz=197,SNR=18						
TZTN	Tazewell	23.62	14	P	P	14 56 26.7	+0.8
	baz=197,SNR=18						
V55A	Taylorsville	23.62	19	P	P	14 56 26.1	+0.1
V55A				IAmb	IAmb	14 56 28.3	
	comp=Z,39nm,0.8s						
V55A	Taylorsville	23.62	19	P	P	14 56 26.4	+0.4
	baz=203,SNR=13						
V55A				P	P	14 56 26.4	+0.4
	baz=203,SNR=13						
T35A	Sooner Cattle	23.76	348		P	14 56 26.5	-0.7
T35A				IAmb	IAmb	14 56 28.2	
	comp=Z,49nm,0.8s						
T35B	Sooner Cattle	23.76	348	P	P	14 56 26.9	-0.3
	baz=165,SNR=27						
T50A	Nancy	23.80	11	P	P	14 56 27.5	-0.1
T50A				IAmb	IAmb	14 56 48.7	
	comp=Z,76nm,0.9s						
T50A	Nancy	23.80	11	P	P	14 56 28.0	+0.5
	baz=194						
T50A				P	P	14 56 28.0	+0.5
	baz=194						
SJG	San Juan	23.84	76	P	P	14 56 26.4	-1.7
	comp=Z,12nm,0.6s,baz=264,slow=7.6,SNR=5.8						
	comp=Z,12nm,0.6s						
SJG	San Juan	23.84	76	IAmb	IAmb	14 56 28.4	
	comp=Z,19nm,0.7s						
SJG	San Juan	23.84	76	P	P	14 56 26.4	-1.7
SJG				pmax	pmax		
	comp=Z,19nm,0.7s						
ATAH	Atahualpa	23.92	149	P	P	14 56 31.3	+2.0
	comp=Z,28nm,0.8s,baz=335,slow=10.0,SNR=15						
	comp=Z,28nm,0.8s						
BIRV	Birongo	23.92	95	P	P	14 56 28.0	-0.9
S44A	Carbondale	23.95	2	P	P	14 56 28.5	-0.3
S44A				IAmb	IAmb	14 56 57.8	
	comp=Z,110nm,1.2s						
S44A	Carbondale	23.95	2	P	P	14 56 29.6	+0.7
	baz=183,SNR=15						
S39A	Bolivar	24.05	355	P	P	14 56 29.4	-0.4
S39A	Bolivar	24.05	355	P	P	14 56 30.2	+0.4
	baz=173,SNR=35						
U54A	Nelsons Funny	24.05	17	P	P	14 56 30.0	+0.1
U54A	Nelsons Funny	24.05	17	P	P	14 56 30.8	+0.9
	baz=201,SNR=25						
U54A				P	P	14 56 30.8	+0.9
	baz=201,SNR=25						
CCM	Cathedral Cave	24.29	359	P	P	14 56 31.8	-0.2
CCM	Cathedral Cave	24.29	359	P	P	14 56 31.8	-0.2
CCM				pmax	pmax		
	comp=Z,33nm,1.2s						
CCM	Cathedral Cave	24.29	359	P	P	14 56 31.9	0.0
	baz=178,SNR=13						
CCM	Cathedral Cave	24.29	359	P	P	14 56 32.0	0.0
	baz=178						
V58A	Windy Hill, Pi	24.30	23	P	P	14 56 32.1	+0.1
V58A	Windy Hill, Pi	24.30	23	P	P	14 56 32.6	+0.6
	baz=208,SNR=25						
V58A				P	P	14 56 32.6	+0.6
	baz=208,SNR=25						
CNNC	Cliffs of the	24.31	26	P	P	14 56 32.2	+0.1
CNNC				IAmb	IAmb	14 56 35.0	
	comp=Z,43nm,0.6s						
CNNC	Cliffs of the	24.31	26	P	P	14 56 32.9	+0.7
	baz=211						
U56A	King	24.34	20	P	P	14 56 33.7	+1.2
	baz=204,SNR=12						
U56A				P	P	14 56 33.7	+1.2
	baz=204,SNR=12						
SRIG	Santa Rosalia	24.40	307	P	P	14 56 34.8	+1.7
SRIG				IAmb	IAmb	14 56 36.5	
	comp=Z,57nm,0.9s						
MTP	Monte Pirata	24.41	76	P	P	14 56 30.9	-2.3
MTP				IAmb	IAmb	14 56 33.7	
	comp=Z,44nm,0.8s						
121A	Cookes Peak, D	24.52	323	P	P	14 56 36.5	+2.1
121A				IAmb	IAmb	14 56 39.9	
	comp=Z,76nm,1.1s						
121A	Cookes Peak, D	24.52	323	P	P	14 56 37.4	+3.0
	baz=136,SNR=36						
121A	Cookes Peak, D	24.52	323	P	P	14 56 37.3	+3.0
	baz=136,SNR=36						
R40A	Maddies Statio	24.57	357	P	P	14 56 34.5	0.0
R40A				IAmb	IAmb	14 57 03.6	
	comp=Z,57nm,1.2s						
R40A	Maddies Statio	24.57	357	P	P	14 56 34.2	-0.2
	baz=176,SNR=7.4						
319A	Douglas	24.64	319	P	P	14 56 37.0	+1.6
319A				IAmb	IAmb	14 56 55.9	
	comp=Z,46nm,1.1s						
S51A	Beattyville	24.66	13	P	P	14 56 35.8	+0.5
S51A				IAmb	IAmb	14 57 03.3	
	comp=Z,70nm,1.1s						
S51A	Beattyville	24.66	13	P	P	14 56 36.0	+0.7
	baz=196,SNR=6.7						
S51A				P	P	14 56 36.0	+0.7
	baz=196,SNR=6.7						
R49A	Shelbyville	24.98	10	P	P	14 56 36.6	-1.6
R49A				IAmb	IAmb	14 56 57.6	
	comp=Z,78nm,1.1s						
R49A	Shelbyville	24.98	10	P	P	14 56 38.5	+0.3
	baz=192,SNR=18						
R49A				P	P	14 56 38.5	+0.3
	baz=192,SNR=18						
CRNM	Carthage	24.98	327	P	P	14 56 40.0	+1.5
BNM	Barren Site	25.08	327	P	P	14 56 40.9	+1.4
Y22A	Socorro	25.10	326	P	P	14 56 42.0	+2.4
	baz=140,SNR=9.8						
BLA	Blacksburg	25.12	19	P	P	14 56 39.8	+0.2
BLA	Blacksburg	25.12	19	P	P	14 56 39.8	+0.2
BLA				pmax	pmax		
	comp=Z,30nm,1.0s						
BLA	Blacksburg	25.12	19	P	P	14 56 40.4	+0.9
	baz=203,SNR=5.9						
BLA	Blacksburg	25.12	19	P	P	14 56 40.4	+0.9
	baz=203,SNR=5.9						
R50A	Paris	25.12	12	P	P	14 56 39.6	+0.1
R50A				IAmb	IAmb	14 56 59.3	
	comp=Z,101nm,1.1s						
R50A	Paris	25.12	12	P	P	14 56 40.2	+0.7
	baz=194,SNR=19						
R50A				P	P	14 56 40.2	+0.7
	baz=194,SNR=19						
U59A	Littleton	25.31	25	P	P	14 56 41.2	0.0
U59A	Littleton	25.31	25	P	P	14 56 41.5	+0.3
	baz=210,SNR=8.0						
U59A				P	P	14 56 41.5	+0.3
	baz=210,SNR=8.0						
T57A	Hurt	25.32	21	P	P	14 56 41.1	-0.3
T57A	Hurt	25.32	21	P	P	14 56 42.1	+0.8
	baz=206,SNR=7.2						
T57A				P	P	14 56 42.1	+0.8
	baz=206,SNR=7.2						
S54A	Dingess, Beckl	25.39	17	P	P	14 56 41.7	-0.4
S54A	Dingess, Beckl	25.39	17	P	P	14 56 42.5	+0.4
	baz=201,SNR=5.2						
S54A				P	P	14 56 42.5	+0.4
	baz=201,SNR=5.2						
ANMO	Albuquerque	25.61	329	P	P	14 56 45.6	+1.4
	comp=Z,3.0nm,1.0s,baz=156,slow=13,SNR=7.2						
ANMO				ScP	ScP	15 03 49.5	+3.4
	comp=Z,2.6nm,0.9s,baz=47,slow=11,SNR=3.8						
ANMO				LR	LR	15 09 06.6	
	comp=Z,121nm,19.2s,baz=138,slow=42						
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	25.61	329	P	P	14 56 44.4	+0.2
ANMO	Albuquerque	25.61	329	*ce*P	P	14 56 47.1	+2.9
ANMO				pmax	pmax		
	comp=Z,11nm,2.5s						
ANMO	Albuquerque	25.61	329	P	P	14 56 45.3	+1.0
	baz=142						
ANMO	Albuquerque	25.61	329	P	P	14 56 45.8	+1.6
	baz=142						
BLO	Bloomington	25.64	7	P	P	14 56 44.1	-0.1
BLO				IAmb	IAmb	14 57 04.8	
	comp=Z,48nm,1.1s						
BLO	Bloomington	25.64	7	P	P	14 56 44.2	-0.1
BLO				pmax	pmax		
	comp=Z,48nm,1.1s						
R32A	Long Quarter,	25.70	345	P	P	14 56 45.8	+1.0
	baz=161						
R53A	Hurricane	25.71	16	P	P	14 56 44.3	-0.5
R53A				IAmb	IAmb	14 57 04.7	
	comp=Z,60nm,1.4s						
R53A	Hurricane	25.71	16	P	P	14 56 45.3	+0.5
	baz=199						
R53A				P	P	14 56 45.3	+0.5
	baz=199						
P40A	Paris	25.79	357	P	P	14 56 44.5	-1.1
P40A				IAmb	IAmb	14 57 13.9	
	comp=Z,29nm,0.9s						
P40A	Paris	25.79	357	P	P	14 56 45.5	-0.1
	baz=176						
KSU1	Kansas State U	25.89	349	P	P	14 56 47.4	+0.8
KSU1				IAmb	IAmb	14 57 13.4	
	comp=Z,43nm,0.9s						
KSU1	Kansas State U	25.89	349	P	P	14 56 48.0	+1.4
	baz=166						
KSU1	Kansas State U	25.89	349	P	P	14 56 47.6	+1.1
	baz=166						
T59A	Double "B" Far	25.94	24	P	P	14 56 47.0	+0.1
T59A				IAmb	IAmb	14 56 47.9	
	comp=Z,31nm,0.8s						
T59A	Double "B" Far	25.94	24	P	P	14 56 47.3	+0.4
	baz=210,SNR=10						
T59A				P	P	14 56 47.3	+0.4
	baz=210,SNR=10						
P38A	Dawn	25.99	355	P	P	14 56 47.3	-0.1
P38A	Dawn	25.99	355	P	P	14 56 47.4	+0.1
	baz=173						
P46A	Rosedale	26.01	6	P	P	14 56 47.3	-0.2
P46A				IAmb	IAmb	14 57 11.1	
	comp=Z,60nm,1.1s						
P46A	Rosedale	26.01	6	P	P	14 56 47.7	+0.2
	baz=187,SNR=5.4						
Q51A	Peebles	26.04	13	P	P	14 56 47.8	-0.1
Q51A	Peebles	26.04	13	P	P	14 56 48.7	+0.9
	baz=196,SNR=22						
Q51A				P	P	14 56 48.7	+0.9
	baz=196,SNR=22						
P48A	Milroy	26.08	9	P	P	14 56 47.4	-0.8
P48A				IAmb	IAmb	14 57 07.3	
	comp=Z,74nm,1.1s						
P48A	Milroy	26.08	9	P	P	14 56 48.2	+0.1
	baz=191,SNR=7.8						
P48A				P	P	14 56 48.2	+0.1
	baz=191,SNR=7.8						
R55A	Marlinton	26.19	19	P	P	14 56 49.4	+0.1
TUC	Tucson	26.22	318	P	P	14 56 52.3	+2.6
	baz=130						
Q52A	Bidwell	26.23	15	P	P	14 56 49.7	+0.2
Q52A	Bidwell	26.23	15	P	P	14 56 50.2	+0.7
	baz=198						
Q52A				P	P	14 56 50.2	+0.7
	baz=198						
P49A	Miami Univ. Ec	26.27	10	P	P	14 56 48.9	-0.9
P49A	Miami Univ. Ec	26.27	10	P	P	14 56 49.9	0.0
	baz=193,SNR=9.9						
P49A	Miami Univ. Ec	26.27	10	P	P	14 56 49.9	0.0
	baz=193,SNR=9.9						
JSRW	J. Sargeant Re	26.44	23	P	P	14 56 51.4	0.0
P51A	Williamsport	26.54	13	P	P	14 56 51.8	-0.5
P51A				IAmb	IAmb	14 57 13.7	
	comp=Z,43nm,0.9s						
Q54A	Coxs Mills	26.63	17	P	P	14 56 53.1	-0.1
Q54A				IAmb	IAmb	14 57 14.1	
	comp=Z,75nm,1.2s						
Q54A	Coxs Mills	26.63	17	P	P	14 56 53.4	+0.2
	baz=201,SNR=8.3						
Q54A				P	P	14 56 53.4	+0.2
	baz=201,SNR=8.3						
R58B	Mineral	26.68	23	P	P	14 56 54.2	+0.6
	baz=208						
R58B				P	P	14 56 54.2	+0.6
	baz=208						
SFIN	Lafayette	26.77	6	P	P	14 56 53.8	-0.6
SFIN				IAmb	IAmb	14 57 23.1	
	comp=Z,25nm,0.8s						
SFIN	Lafayette	26.77	6	P	P	14 56 54.4	0.0
	baz=187,SNR=7.2						
SFIN	Lafayette	26.77	6	P	P	14 56 54.4	0.0
	baz=187,SNR=7.2						
HDIL	Hopedale	26.80	2	P	P	14 56 54.7	0.0
P52A	Corning	26.90	14	P	P	14 56 55.3	-0.2
P52A				IAmb	IAmb	14 57 15.2	
	comp=Z,80nm,1.4s						
P52A	Corning	26.90	14	P	P	14 56 55.8	+0.3
	baz=198,SNR=5.7						
O48B	Farmland	26.90	9	P	P	14 56 55.5	0.0
	baz=191,SNR=14						
O48B	Farmland	26.90	9	P	P	14 56 55.4	-0.2
	baz=191,SNR=14						
N41A	Harden Midland	26.93	359	P	P	14 56 55.5	-0.4
P53A	Whipple	26.95	16	P	P	14 56 56.4	+0.4
P53A				IAmb	IAmb	14 57 16.2	
	comp=Z,78nm,1.4s						
P53A	Whipple	26.95	16	P	P	14 56 56.6	+0.6
	baz=200,SNR=5.6						
P53A				P	P	14 56 56.6	+0.6
	baz=200,SNR=5.6						
O49A	Covington	26.97	10	P	P	14 56 55.6	-0.6
O49A				IAmb	IAmb	14 57 17.0	
	comp=Z,60nm,1.2s						
O49A	Covington	26.97	10	P	P	14 56 56.1	-0.1
	baz=193						
O49A				P	P	14 56 56.1	-0.1
	baz=193						
CBN	Corbin Frederi	27.08	23	P	P	14 56 57.3	+0.1
CBN				IAmb	IAmb	14 56 58.9	
	comp=Z,36nm,0.8s						
CBN	Corbin Frederi	27.08	23	P	P	14 56 58.3	+1.1
	baz=209						
X18A	Snowflake	27.21	323	P	P	14 56 59.3	+0.7
ACSO	Alum Creek Sta	27.27	13	P	P	14 56 58.9	0.0
ACSO	Alum Creek Sta	27.27	13	P	P	14 56 59.4	+0.5
	baz=196,SNR=9.8						
ACSO	Alum Creek Sta	27.27	13	P	P	14 56 59.4	+0.5
	baz=196,SNR=9.8						
214A	Organ Pipe Nat	27.35	315	P	P	14 57 00.5	+0.8
214A				IAmb	IAmb	14 57 19.2	
	comp=Z,38nm,0.9s						
214A	Organ Pipe Nat	27.35	315	P	P	14 57 02.2	+2.5
	baz=127						
O52A	Adamsville	27.43	15	P	P	14 57 00.2	-0.1
O52A				IAmb	IAmb	14 57 20.0	
	comp=Z,82nm,1.2s						
O52A	Adamsville	27.43	15	P	P	14 57 00.6	+0.3
	baz=198,SNR=7.6						
O52A				P	P	14 57 00.6	+0.3
	baz=198,SNR=7.6						
N47A	Urbana	27.43	8	P	P	14 56 59.0	-1.3
N47A				IAmb	IAmb	14 57 20.7	
	comp=Z,58nm,1.3s						
N47A	Urbana	27.43	8	P	P	14 56 59.8	-0.5
	baz=190,SNR=5.8						
N47A				P	P	14 56 59.8	-0.5
	baz=190,SNR=5.8						
MCWV	Mont Chateau	27.54	18	P	P	14 57 01.4	+0.1
	baz=203						
CZSB	Cruzeiro do Su	27.66	139	*e*P	P	14 57 05.0	+2.4
M44A	Midewin, Midew	27.70	4	P	P	14 57 01.9	-0.7
M44A	Midewin, Midew	27.70	4	P	P	14 57 02.3	-0.4
	baz=185						
N49A	Columbus Grove	27.71	10	P	P	14 57 02.1	-0.7
N49A				IAmb	IAmb	14 57 27.6	
	comp=Z,26nm,1.1s						
N49A	Columbus Grove	27.71	10	P	P	14 57 02.3	-0.5
	baz=193						
N49A				P	P	14 57 02.3	-0.5
	baz=193						
O53A	New Philadelph	27.71	15	P	P	14 57 03.3	+0.5
	baz=200						
O54A	Avella	27.87	17	P	P	14 57 04.3	0.0
O54A				IAmb	IAmb	14 57 05.2	
	comp=Z,16nm,0.7s						
O54A	Avella	27.87	17	P	P	14 57 04.6	+0.3
	baz=201,SNR=5.3						
O54A				P	P	14 57 04.6	+0.3
	baz=201,SNR=5.3						
P57A	Homestead Farm	27.98	21	P	P	14 57 05.6	+0.4
P57A				IAmb	IAmb	14 57 07.1	
	comp=Z,18nm,0.8s						
P57A	Homestead Farm	27.98	21	P	P	14 57 06.2	+1.0
	baz=206						
P57A				P	P	14 57 06.2	+1.0
	baz=206						
S22A	4UR Ranch, Cre	28.03	332	P	P	14 57 07.7	+1.6
	baz=144,SNR=5.1						
N51A	Ashland	28.06	13	P	P	14 57 05.8	-0.2
N51A				IAmb	IAmb	14 57 25.4	
	comp=Z,54nm,1.1s						
L40A	Anamosa	28.29	359	P	P	14 57 07.0	-1.0
N53A	Lisbon	28.33	16	P	P	14 57 08.3	0.0
N53A				IAmb	IAmb	14 57 09.3	
	comp=Z,18nm,0.7s						
N53A	Lisbon	28.33	16	P	P	14 57 08.7	+0.3
	baz=200,SNR=5.7						
N53A				P	P	14 57 08.7	+0.3
	baz=200,SNR=5.7						
SDMD	Soldier's Deli	28.34	23	P	P	14 57 08.6	+0.3
SDMD	Soldier's Deli	28.34	23	P	P	14 57 08.7	+0.3
	baz=209,SNR=5.3						
M50A	Fremont	28.39	12	P	P	14 57 08.8	-0.1
M50A	Fremont	28.39	12	P	P	14 57 09.2	+0.3
	baz=195,SNR=7.2						
M50A				P	P	14 57 09.2	+0.3
	baz=195,SNR=7.2						
MVCO	Mesa Verde	28.41	329	P	P	14 57 11.4	+2.1
MVCO	Mesa Verde	28.41	329	P	P	14 57 11.9	+2.6
	baz=141,SNR=5.5						
L48A	N Adams	28.66	9	P	P	14 57 11.1	-0.2
L48A				IAmb	IAmb	14 57 30.5	
	comp=Z,39nm,0.8s						
WUAZ	Wupatki	28.73	323	P	P	14 57 13.2	+1.0
WUAZ	Wupatki	28.73	323	P	P	14 57 14.6	+2.4
	baz=134						
MPOM	Morne Pois Mar	28.78	85	P	P	14 57 11.5	-1.1
K38A	Parkersburg	28.94	357	P	P	14 57 13.6	-0.1
M53A	WI Miller and	28.96	15	P	P	14 57 13.8	-0.2
M53A				IAmb	IAmb	14 57 33.5	
	comp=Z,48nm,1.1s						
M53A	WI Miller and	28.96	15	P	P	14 57 14.3	+0.3
	baz=200						
K43A	Burlington	28.99	3	P	P	14 57 13.5	-0.7
K43A				IAmb	IAmb	14 57 42.1	
	comp=Z,30nm,1.1s						
MVL	Millersville	29.03	23	P	P	14 57 14.7	+0.1
SSPA	Standing Stone	29.05	20	P	P	14 57 14.7	0.0
SSPA	Standing Stone	29.05	20	P	P	14 57 15.2	+0.5
	baz=206						
SSPA	Standing Stone	29.05	20	P	P	14 57 15.2	+0.5
	baz=206						
JFWS	Jewell Farm	29.14	0	P	P	14 57 14.8	-0.7
JFWS	Jewell Farm	29.14	0	P	P	14 57 14.8	-0.7
JFWS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JFWS	Jewell Farm	29.14	0	P	P	14 57 15.3	-0.2
	baz=180						
ISCO	Idaho Springs	29.22	336	P	P	14 57 17.1	+0.6
ISCO	Idaho Springs	29.22	336	P	P	14 57 17.2	+0.6
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ISCO	Idaho Springs	29.22	336	P	P	14 57 17.5	+0.9
	baz=149						
M55A	Ridgway	29.53	18	P	P	14 57 18.9	-0.1
BLYC	Blythe	29.57	317	PcP	PcP	15 00 24.0	+1.2
TUPA	Temple Univers	29.63	24	P	P	14 57 19.6	-0.3
	baz=211,SNR=5.7						
N58A	Sunbury	29.64	21	P	P	14 57 19.9	-0.1
N58A				IAmb	IAmb	14 57 46.1	
	comp=Z,34nm,1.4s						
PDMCI	Parker Dam,Lak	29.66	318	P	P	14 57 23.0	+2.8
	baz=128						
ERPA	Erie	29.78	16	P	P	14 57 20.6	-0.6
	baz=201,SNR=5.3						
ERPA	Erie	29.78	16	P	P	14 57 21.1	-0.1
	baz=201,SNR=5.3						
J47A	Sunmer	29.87	8	P	P	14 57 21.8	-0.2
J47A				IAmb	IAmb	14 57 51.2	
	comp=Z,35nm,1.2s						
LUPA	Lehigh Univers	29.93	24	P	P	14 57 22.7	+0.2
LUPA				IAmb	IAmb	14 57 23.9	
	comp=Z,27nm,0.7s						
M57A	Sunshine Farm,	29.93	20	P	P	14 57 22.8	+0.3
M57A				IAmb	IAmb	14 57 23.8	
	comp=Z,19nm,0.8s						
M57A	Sunshine Farm,	29.93	20	P	P	14 57 22.9	+0.3
	baz=207,SNR=5.6						
M57A				P	P	14 57 22.9	+0.3
	baz=207,SNR=5.6						
SWSC	Sam W. Stewart	29.98	314	P	P	14 57 26.1	+3.1
	baz=124						
IKP	In-Ko-Pah, Jac	30.04	313	P	P	14 57 26.9	+3.2
	baz=123,SNR=5.9						
BBSR	BB Station	30.06	47	P	P	14 57 24.1	+0.4
BBSR	BB Station	30.06	47	P	P	14 57 24.6	+0.8
BC3	Big Chuckawall	30.14	316	P	P	14 57 27.2	+2.5
	baz=125,SNR=7.3						
I42A	Draeger Farm,	30.15	2	P	P	14 57 23.8	-0.6
I42A				IAmb	IAmb	14 57 25.1	
	comp=Z,16nm,0.8s						
I42A	Draeger Farm,	30.15	2	P	P	14 57 24.2	-0.2
	baz=183,SNR=5.1						
IRM	Iron Mountain	30.23	317	P	P	14 57 29.5	+4.2
	baz=126						
BRNJ	Basking Ridge	30.32	24	P	P	14 57 26.4	+0.5
BRNJ				IAmb	IAmb	14 57 28.8	
	comp=Z,43nm,1.2s						
I37B	Waseca	30.34	356	P	P	14 57 26.3	+0.2
	baz=174,SNR=5.4						
MONP2	Monument Peak	30.39	313	P	P	14 57 29.4	+2.5
	baz=123						
ECSD	EROS Data Cent	30.41	351	P	P	14 57 26.5	-0.3
ECSD	EROS Data Cent	30.41	351	P	P	14 57 27.2	+0.4
	baz=168						
ECSD	EROS Data Cent	30.41	351	P	P	14 57 26.7	0.0
	baz=168						
WVNY	West Valley, N	30.43	18	P	P	14 57 26.7	-0.3
WVNY				IAmb	IAmb	14 57 47.5	
	comp=Z,52nm,1.2s						
WVNY	West Valley, N	30.43	18	P	P	14 57 27.1	+0.1
	baz=203						
I45A	Fountain	30.48	6	P	P	14 57 26.3	-1.0
L56A	Greenwood	30.51	19	P	P	14 57 27.1	-0.6
L56A				IAmb	IAmb	14 57 28.2	
	comp=Z,16nm,0.8s						
KSPA	Keystone Colle	30.61	22	P	P	14 57 28.3	-0.2
O20A	White River Ci	30.61	333	P	P	14 57 31.0	+2.3
	baz=144						
ODNJ	Ogdensburg	30.64	24	P	P	14 57 28.8	0.0
H43A	Windswept, Lux	30.78	4	P	P	14 57 29.5	-0.5
H43A				IAmb	IAmb	14 57 30.4	
	comp=Z,16nm,0.7s						
H43A	Windswept, Lux	30.78	4	P	P	14 57 29.8	-0.2
	baz=185						
PFO	Pinyon Flats O	30.81	315	P	P	14 57 33.1	+2.5
	comp=Z,3.5nm,0.9s,baz=95,slow=9.3,SNR=3.8						
PFO				pP	pP	14 57 49.8	+1.2
	comp=Z,9.3nm,0.9s,baz=129,slow=7.9,SNR=7.3						

PFO				ScP	ScP	15 04 06.1	+3.9
	comp=Z,11nm,1.0s,baz=76,slow=4.3,SNR=9.2						
PFO				LR	LR	15 12 02.9	
	comp=Z,159nm,18.3s,baz=131,slow=40						
	comp=Z,3.5nm,0.9s						
PFO	Pinyon Flats O	30.81	315	P	P	14 57 33.4	+2.9
	baz=124						
TRNY	Table Rock, Ra	30.84	24	P	P	14 57 30.5	-0.1
LCMT	Little Creek M	30.86	323	P	P	14 57 31.0	+0.1
I49A	Point Hope	30.88	11	P	P	14 57 30.1	-0.8
GMRC	Granite Mounta	30.94	317	P	P	14 57 34.5	+2.8
	baz=126,SNR=6.7						
MTPU	Mount Pierson	30.97	326	P	P	14 57 32.5	+0.3
BINY	Binghamton	31.09	21	P	P	14 57 32.8	-0.1
BINY				IAmb	IAmb	14 57 33.5	
	comp=Z,17nm,0.8s						
BINY	Binghamton	31.09	21	P	P	14 57 32.7	-0.1
	baz=208						
BINY	Binghamton	31.09	21	P	P	14 57 33.1	+0.3
	baz=208						
MEDO	Medina	31.17	17	P	P	14 57 33.2	-0.2
MEDO				IAmb	IAmb	14 57 35.0	
	comp=Z,17nm,0.8s						
P17A	Butcher Ranch,	31.27	329	P	P	14 57 36.0	+1.4
MURC	Murrieta	31.32	314	P	P	14 57 37.7	+2.8
	baz=123						
TMUT	Trail Mountain	31.37	328	P	P	14 57 36.7	+1.0
K57A	Scipio Center	31.38	20	P	P	14 57 34.8	-0.5
K57A				IAmb	IAmb	14 57 36.0	
	comp=Z,29nm,0.8s						
K57A	Scipio Center	31.38	20	P	P	14 57 34.9	-0.4
	baz=207,SNR=5.8						
HEC	Hector,Ludlow	31.42	317	P	P	14 57 40.0	+4.1
	baz=126						
L59A	Walton	31.43	22	P	P	14 57 35.5	-0.3
L59A				IAmb	IAmb	14 57 36.9	
	comp=Z,22nm,0.8s						
J55A	Hilton	31.45	18	P	P	14 57 35.7	-0.2
J55A				IAmb	IAmb	14 57 56.1	
	comp=Z,18nm,1.0s						
RWWY	Rawlins	31.46	336	P	P	14 57 36.8	+0.5
TUQ	Turquoise Moun	31.50	318	P	P	14 57 39.9	+3.3
	baz=127						
SPMN	Marine on St.	31.51	357	P	P	14 57 35.8	-0.5
SPMN				IAmb	IAmb	14 57 36.6	
	comp=Z,25nm,0.6s						
SPMN	Marine on St.	31.51	357	P	P	14 57 35.8	-0.5
	baz=176,SNR=9.1						
SPMN	Marine on St.	31.51	357	P	P	14 57 36.1	-0.3
	baz=176,SNR=9.1						
G45A	Suttons Bay	31.54	7	P	P	14 57 35.8	-0.9
G45A	Suttons Bay	31.54	7	P	P	14 57 36.2	-0.4
	baz=189,SNR=13						
G45A				P	P	14 57 36.2	-0.4
	baz=189,SNR=13						
KSCT	Kent School, K	31.63	25	P	P	14 57 37.2	-0.3
KSCT				IAmb	IAmb	14 58 01.2	
	comp=Z,43nm,1.3s						
SHPR	Sheep Range	31.68	320	P	P	14 57 38.2	0.0
BOAV	Boa Vista	31.70	108	*e*P	P	14 57 37.3	-1.2
J56A	Wolcott	31.76	19	P	P	14 57 37.8	-0.8
J56A	Wolcott	31.76	19	P	P	14 57 38.7	+0.1
	baz=206,SNR=10						
J56A				P	P	14 57 38.7	+0.1
	baz=206,SNR=10						
BFSC	Mount Baldy Ra	31.99	314	P	P	14 57 43.3	+2.4
	baz=123						
GSC	Goldstone, Bar	32.01	317	P	P	14 57 43.7	+2.6
	baz=126						
SHOC	Shoshone, Teco	32.01	318	P	P	14 57 43.8	+2.8
	baz=127						
MPU	Maple Canyon	32.13	329	P	P	14 57 42.7	+0.5
J57A	Williamstown	32.16	20	P	P	14 57 41.5	-0.6
J57A	Williamstown	32.16	20	P	P	14 57 41.3	-0.8
	baz=207,SNR=12						
J57A				P	P	14 57 41.3	-0.8
	baz=207,SNR=12						
F36A	Milaca	32.19	356	P	P	14 57 41.5	-0.8
F36A				IAmb	IAmb	14 58 00.1	
	comp=Z,25nm,1.5s						
F36A	Milaca	32.19	356	P	P	14 57 41.5	-0.8
	baz=174						
UCCT	U. Connecticut	32.22	26	P	P	14 57 42.9	+0.2
PECO	Prince Edward	32.31	18	P	P	14 57 42.9	-0.5
PECO				IAmb	IAmb	14 58 03.5	
	comp=Z,22nm,1.0s						
COWI	Conover	32.34	2	P	P	14 57 42.9	-0.8
COWI				IAmb	IAmb	14 57 43.9	
	comp=Z,18nm,0.8s						
COWI	Conover	32.34	2	P	P	14 57 43.0	-0.8
	baz=182						
J58A	Remsen	32.36	21	P	P	14 57 43.4	-0.5
J58A				IAmb	IAmb	14 57 44.9	
	comp=Z,17nm,0.7s						
J58A	Remsen	32.36	21	P	P	14 57 43.6	-0.3
	baz=208,SNR=6.5						
J58A				P	P	14 57 43.6	-0.3
	baz=208,SNR=6.5						
QSM	Queen of Sheba	32.44	318	P	P	14 57 46.2	+1.6
QSM				IAmb	IAmb	14 58 04.5	
	comp=Z,17nm,1.0s						
SADO	Sadowa	32.48	15	P	P	14 57 44.2	-0.7
	comp=Z,13nm,0.6s,baz=220,slow=8.9,SNR=22						
SADO				LR	LR	15 11 43.0	
	comp=Z,726nm,20.9s,baz=176,slow=38						
	comp=Z,13nm,0.6s						
SADO	Sadowa	32.48	15	P	P	14 57 44.2	-0.7
SADO				IAmb	IAmb	14 58 03.9	
	comp=Z,50nm,1.2s						
L61B	Northampton	32.57	25	P	P	14 57 45.2	-0.5
L61B				IAmb	IAmb	14 58 10.6	
	comp=Z,34nm,1.5s						
EDW2	Edwards Air Fo	32.57	315	P	P	14 57 48.0	+2.1
	baz=124						
TPNV	Topopah Spring	32.64	320	P	P	14 57 50.2	+3.6
	baz=128,SNR=6.6						
DELO	Deloro Mine	32.66	17	P	P	14 57 46.1	-0.4
DELO				IAmb	IAmb	14 58 06.5	
	comp=Z,48nm,1.1s						
LRMC	Laurel Mtn Rad	32.69	316	P	P	14 57 49.8	+2.7
	baz=125,SNR=5.1						
J59A	Piesco	32.73	22	P	P	14 57 46.4	-0.7
J59A				IAmb	IAmb	14 57 47.6	
	comp=Z,12nm,0.8s						
E43A	Lone Tree Farm	32.73	5	P	P	14 57 46.1	-1.0
E43A				IAmb	IAmb	14 57 47.3	
	comp=Z,24nm,0.8s						
E43A	Lone Tree Farm	32.73	5	P	P	14 57 46.0	-1.1
	baz=186,SNR=22						
FURC	Furnace Creek,	32.73	319	P	P	14 57 51.3	+4.1
	baz=127						
E38A	The Farm, Brul	32.84	359	P	P	14 57 47.1	-0.9
E38A				IAmb	IAmb	14 57 48.1	
	comp=Z,21nm,0.7s						
E38A	The Farm, Brul	32.84	359	P	P	14 57 47.3	-0.7
	baz=178,SNR=12						
DUG	Dugway, Tooele	32.87	328	P	P	14 57 51.0	+2.4
	baz=137						
K62A	Royalston	32.93	25	P	P	14 57 49.4	+0.5
K62A				IAmb	IAmb	14 58 07.4	
	comp=Z,21nm,1.2s						
ACCN	Adirondack Com	32.97	23	P	P	14 57 48.9	-0.3
E46A	Sault Ste Mari	33.01	8	P	P	14 57 48.7	-0.8
E46A				IAmb	IAmb	14 58 07.9	
	comp=Z,14nm,1.0s						
R11A	Troy Canyon, C	33.13	322	P	P	14 57 53.6	+2.7
	baz=131,SNR=14						
NCB	Newcomb	33.27	22	P	P	14 57 51.3	-0.5
ARVC	Arvin	33.28	315	P	P	14 57 55.0	+3.0
	baz=123						
HWUT	Hardware Ranch	33.31	331	P	P	14 57 53.7	+1.3
HWUT					PcP	15 00 33.0	0.0
D41A	Chassel	33.32	2	P	P	14 57 51.4	-0.9
D41A				IAmb	IAmb	14 57 52.4	
	comp=Z,17nm,0.9s						
D41A	Chassel	33.32	2	P	P	14 57 51.6	-0.7
	baz=183						
BW06	Boulder Array	33.33	334	P	P	14 57 54.6	+2.0
	baz=145						
PDAR	Pinedale Array	33.33	334	P	P	14 57 53.0	+0.4
	comp=Z,0.7nm,0.6s,baz=132,slow=12,SNR=7.5						
PDAR				PcP	PcP	15 00 33.4	+0.3
	comp=Z,0.8nm,0.6s,baz=146,slow=5.2,SNR=4.3						
PDAR				pPcP		15 00 53.0	
	comp=Z,0.3nm,0.4s,baz=174,slow=3.0,SNR=3.8						
PDAR				ScP	ScP	15 04 13.2	+2.4
	comp=Z,3.2nm,0.8s,baz=131,slow=6.5,SNR=12						
PDAR				PKiKP	PKiKP	15 07 57.7	-0.8
	comp=Z,0.2nm,0.3s,baz=131,slow=2.5,SNR=3.7						
PDAR				LR	LR	15 14 02.0	
	comp=Z,116nm,20.4s,baz=148,slow=41						
	comp=Z,0.7nm,0.6s						
ISA	Isabella, Lake	33.33	316	P	P	14 57 55.3	+2.8
	baz=124						
GRAC	Grapevine Rang	33.38	319	P	P	14 57 56.8	+3.9
	baz=127,SNR=10						
CWC	Cottonwood Cre	33.51	317	P	P	14 57 57.2	+2.9
	baz=125						
ETMB	Extrema	33.56	133	*e*P	P	14 57 55.2	+0.5
LONY	Lake Ozonia	33.71	21	P	P	14 57 55.0	-0.6
LONY				IAmb	IAmb	14 57 56.3	
	comp=Z,15nm,0.8s						
LONY	Lake Ozonia	33.71	21	P	P	14 57 55.4	-0.2
	baz=209,SNR=7.2						
PKM	Mcpherson Peak	33.84	314	P	P	14 57 60.0	+2.8
	baz=121						
VES	Vestal, Richgr	33.84	316	P	P	14 58 00.1	+3.2
	baz=123,SNR=8.5						
BMNY	Brushton-Moira	33.93	21	P	P	14 57 57.1	-0.4
	baz=208						
TPH	Tonopah	33.95	321	P	P	14 57 59.4	+1.4
TPH	Tonopah	33.95	321	P	P	14 57 59.4	+1.4
TPH				pmax	pmax		
	comp=Z,92nm,1.4s						
MACA	Manacapuru-AM	34.00	117	*e*P	P	14 57 59.6	+1.1
EYMN	Ely	34.18	359	P	P	14 57 58.1	-1.6
EYMN	Ely	34.18	359	P	P	14 57 58.5	-1.2
	baz=178,SNR=8.5						
EYMN	Ely	34.18	359	P	P	14 57 58.6	-1.1
	baz=178,SNR=8.5						
FRNY	Flat Rock	34.24	22	P	P	14 57 59.5	-0.8
I62A	Tamworth	34.30	25	P	P	14 58 00.8	0.0
I62A				IAmb	IAmb	14 58 01.3	
	comp=Z,31nm,1.1s						
LBNH	Lisbon	34.36	24	P	P	14 58 01.1	-0.2
LBNH	Lisbon	34.36	24	P	P	14 58 01.1	-0.2
LBNH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
REDW	Red Top Meadow	34.37	333	P	P	14 58 02.6	+1.0
REDW				IAmb	IAmb	14 58 04.9	
	comp=Z,13nm,0.7s						
SNOW	Snow King Moun	34.40	334	P	P	14 58 02.9	+0.9
SNOW				IAmb	IAmb	14 58 05.7	
	comp=Z,18nm,0.6s						
LOHW	Long Hollow	34.46	334	P	P	14 58 02.9	+0.4
TPAW	Teton Pass	34.51	333	P	P	14 58 04.0	+1.1
TPAW				IAmb	IAmb	14 58 06.3	
	comp=Z,20nm,1.5s						
ELK	Elko	34.55	326	P	P	14 58 05.0	+1.7
	comp=Z,4.9nm,0.9s,baz=116,slow=4.8,SNR=16						
ELK				pP	pP	14 58 22.3	+0.7
	comp=Z,4.0nm,0.8s,baz=137,slow=6.9,SNR=6.0						
ELK				PcP	PcP	15 00 37.1	+0.5
	comp=Z,1.6nm,0.7s,baz=156,slow=7.0,SNR=3.1						
ELK				ScP	ScP	15 04 18.2	+3.0
	comp=Z,3.5nm,0.9s,baz=61,slow=0.7,SNR=7.9						
ELK				LR	LR	15 13 49.0	
	comp=Z,294nm,20.9s,baz=139,slow=39						
	comp=Z,4.9nm,0.9s						
ELK	Elko	34.55	326	P	P	14 58 04.5	+1.2
ELK	Elko	34.55	326	P	P	14 58 04.5	+1.2
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PAGB	Antelope Grade	34.58	315	P	P	14 58 04.3	+0.9
PAGB				IAmb	IAmb	14 58 24.2	
	comp=Z,28nm,1.0s						
B35A	Bob, Littlefor	34.69	356	P	P	14 58 02.7	-1.3
B35A				IAmb	IAmb	14 58 21.6	
	comp=Z,18nm,1.1s						
B35A	Bob, Littlefor	34.69	356	P	P	14 58 03.1	-0.9
	baz=174,SNR=9.7						
I63A	Otisfield	34.75	26	P	P	14 58 03.8	-0.9
	baz=215						
I63A				P	P	14 58 03.8	-0.9
	baz=215						
AGMN	Agassiz Nation	34.81	354	P	P	14 58 04.7	-0.4
AGMN				IAmb	IAmb	14 58 05.4	
	comp=Z,19nm,0.9s						
AGMN	Agassiz Nation	34.81	354	P	P	14 58 04.6	-0.5
	baz=171						
AGMN	Agassiz Nation	34.81	354	P	P	14 58 04.7	-0.4
	baz=171						
MNTQ	Montreal, Queb	34.81	21	P	P	14 58 04.6	-0.5
MNTQ				IAmb	IAmb	14 58 05.8	
	comp=Z,20nm,0.8s						
NVAR	Mina Array Bea	34.83	320	P	P	14 58 08.2	+2.5
	comp=Z,16nm,1.0s,baz=134,slow=8.2,SNR=61						
NVAR				pP	pP	14 58 25.4	+1.4
	comp=Z,16nm,0.8s,baz=135,slow=8.3,SNR=16						
NVAR				PcP	PcP	15 00 39.3	+1.9
	comp=Z,3.8nm,0.7s,baz=130,slow=3.6,SNR=9.0						
NVAR				pPcP		15 00 58.8	
	comp=Z,6.4nm,0.8s,baz=130,slow=3.7,SNR=9.7						
NVAR				ScP	ScP	15 04 20.2	+4.0
	comp=Z,4.9nm,0.7s,baz=140,slow=4.7,SNR=15						
NVAR				PKiKP	PKiKP	15 07 60.0	+0.2
	comp=Z,0.1nm,0.3s,baz=171,slow=3.8,SNR=3.5						
NVAR				LR	LR	15 14 03.3	
	comp=Z,301nm,21.9s,baz=130,slow=39						
	comp=Z,16nm,1.0s						
NVAR	Mina Array Bea	34.83	320	P	P	14 58 08.1	+2.4
MDPB	Devils Postpil	34.85	318		pP	14 58 24.9	+0.7
FLWY	Flagg Ranch	34.88	334	P	P	14 58 06.7	+0.7
MDND	Maddock	34.90	349	P	P	14 58 05.6	-0.4
MDND	Maddock	34.90	349	P	P	14 58 06.4	+0.5
	baz=164						
KVN	Kaiserville	35.09	321	P	P	14 58 09.1	+1.2
KVN				IAmb	IAmb	14 58 27.9	
	comp=Z,16nm,1.0s						
KVN	Kaiserville	35.09	321	P	P	14 58 09.1	+1.2
KVN				pmax	pmax		
	comp=Z,16nm,1.0s						
RYN	Ryan	35.09	320	P	P	14 58 09.1	+1.3
TRQ	Mont Tremblant	35.13	19	P	P	14 58 07.6	-0.4
TRQ				IAmb	IAmb	14 58 08.6	
	comp=Z,12nm,1.0s						
SAML	Samuel	35.24	128	P	P	14 58 08.4	-0.8
SAML	Samuel	35.24	128	P	P	14 58 08.4	-0.8
SAML				pmax	pmax		
	comp=Z,41nm,1.0s						
SAML	Samuel	35.24	128	P	P	14 58 08.7	-0.5
SAML				pP	pP	14 58 25.7	-1.7
BMN	Battle Mountai	35.45	324	P	P	14 58 11.9	+0.9
BMN				IAmb	IAmb	14 58 30.9	
	comp=Z,14nm,1.1s						
BMN	Battle Mountai	35.45	324	P	P	14 58 11.9	+0.9
BMN				pmax	pmax		
	comp=Z,14nm,1.1s						
G62A	West of Eustis	35.73	24	P	P	14 58 12.8	-0.2
G62A				IAmb	IAmb	14 58 13.9	
	comp=Z,14nm,0.8s						
YERR	Yerington	35.75	320	P	P	14 58 14.2	+0.6
YERR				IAmb	IAmb	14 58 17.8	
	comp=Z,27nm,1.4s						
CMB	Columbia Colle	35.93	318	P	P	14 58 16.4	+1.5
CMB	Columbia Colle	35.93	318	P	P	14 58 16.4	+1.5
CMB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VLDQ	Val d'Or	36.02	15	P	P	14 58 14.5	-0.9
VLDQ				IAmb	IAmb	14 58 34.5	
	comp=Z,22nm,1.1s						
HLID	Hailey	36.16	330	P	P	14 58 17.1	+0.1
HLID	Hailey	36.16	330	P	P	14 58 18.1	+1.1
	baz=138						
PKME	Peaks-Kenny Pk	36.28	26	P	P	14 58 17.0	-0.7
PKME				IAmb	IAmb	14 58 18.0	
	comp=Z,23nm,1.0s						
PKME	Peaks-Kenny Pk	36.28	26	P	P	14 58 17.7	0.0
	baz=216						
MCMT	McKenzie Canyo	36.40	333	P	P	14 58 20.4	+1.3
BOZ	Bozeman (W)	36.49	335	P	P	14 58 20.4	+0.6
BOZ	Bozeman (W)	36.49	335	P	P	14 58 20.4	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DGMT	Dagmar	36.50	345	P	P	14 58 19.3	-0.3
DGMT				IAmb	IAmb	14 58 21.6	
	comp=Z,14nm,0.8s						
DGMT	Dagmar	36.50	345	P	P	14 58 20.1	+0.5
	baz=157						
F63A	Nahmakanta, Br	36.71	25	P	P	14 58 20.5	-0.9
F63A				IAmb	IAmb	14 58 48.6	
	comp=Z,21nm,1.3s						
ULM	Lac du Bonnet	36.74	354	P	P	14 58 20.1	-1.5
	comp=Z,18nm,0.7s,baz=173,slow=9.0,SNR=14						
ULM				pP	pP	14 58 38.7	-1.3
	comp=Z,11nm,0.9s,baz=180,slow=7.4,SNR=4.7						
ULM				LR	LR	15 17 10.3	
	comp=Z,199nm,18.6s,baz=106,slow=42						
	comp=Z,18nm,0.7s						
ULM	Lac du Bonnet	36.74	354	P	P	14 58 20.0	-1.5
ULM				IAmb	IAmb	14 58 21.3	
	comp=Z,22nm,0.8s						
ULM	Lac du Bonnet	36.74	354	P	P	14 58 20.0	-1.5
ULM				*PP	pP	14 58 38.7	-1.3
ULM				pmax	pmax		
	comp=Z,22nm,0.9s						
G65A	Princeton	36.98	27	P	P	14 58 23.0	-0.6
G65A				IAmb	IAmb	14 58 24.6	
	comp=Z,16nm,0.8s						
LRM	Limekiln Ridge	37.02	334	P	P	14 58 24.7	+0.4
LPAZ	La Paz	37.09	143	P	P	14 58 25.9	+0.2
	comp=Z,8.4nm,0.8s,baz=329,slow=7.5,SNR=30						
	comp=Z,8.4nm,0.8s						
LPAZ	La Paz	37.09	143	P	P	14 58 25.4	-0.3
LPAZ				IAmb	IAmb	14 58 27.2	
	comp=Z,10nm,0.9s						
LPAZ	La Paz	37.09	143	*e*P	P	14 58 25.8	+0.1
LPAZ	La Paz	37.09	143	*e*P	P	14 58 26.1	+0.4
LPAZ	La Paz	37.09	143	P	P	14 58 26.2	+0.5
LPAZ				pP	pP	14 58 45.8	+1.8
LPAZ				sP	sP	14 58 52.8	-0.1
F64A	Sherman	37.15	26	P	P	14 58 24.6	-0.5
WVOR	Wild Horse Val	37.57	325	P	P	14 58 29.9	+1.0
WVOR				IAmb	IAmb	14 58 33.8	
	comp=Z,13nm,0.8s						
WVOR	Wild Horse Val	37.57	325	P	P	14 58 29.9	+1.0
WVOR				pmax	pmax		
	comp=Z,13nm,0.8s						
LMQ	La Malbaie	37.74	22	P	P	14 58 29.5	-0.7
PB12	IPOC Station P	37.76	148	P	P	14 58 30.3	-0.4
PB12				IAmb	IAmb	14 58 32.0	
	comp=Z,25nm,1.0s						
EGMT	Eagleton	37.80	339	P	P	14 58 31.9	+1.2
EGMT	Eagleton	37.80	339	P	P	14 58 32.2	+1.5
	baz=148,SNR=5.5						
D62A	Allapoint, All	37.85	24	P	P	14 58 30.1	-0.8
D62A				IAmb	IAmb	14 58 31.2	
	comp=Z,11nm,0.8s						
PB16	IPOC Station P	37.96	146	P	P	14 58 33.2	+0.3
PB16				IAmb	IAmb	14 58 35.1	
	comp=Z,22nm,1.0s						
PLID	Pearl Lake	38.06	330	P	P	14 58 33.2	+0.1
PLID				IAmb	IAmb	14 58 35.8	
	comp=Z,9.2nm,0.8s						
J08A	Circle Bar Ran	38.10	326	P	P	14 58 33.9	+0.6
MOD	Modoc Plateau	38.18	323	P	P	14 58 35.0	+0.9
MOD				IAmb	IAmb	14 58 36.8	
	comp=Z,17nm,1.3s						
MSO	Missoula	38.45	334	P	P	14 58 37.1	+0.9
MSO				IAmb	IAmb	14 58 39.2	
	comp=Z,21nm,1.5s						
MSO	Missoula	38.45	334	P	P	14 58 37.9	+1.7
	baz=142,SNR=7.9						
BMO	Blue Mountains	38.53	329	P	P	14 58 37.0	+0.1
BMO	Blue Mountains	38.53	329	P	P	14 58 37.0	+0.1
BMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LMN	Caledonia Moun	38.73	29	P	P	14 58 37.7	-0.8
LMN				IAmb	IAmb	14 58 38.9	
	comp=Z,19nm,1.0s						
ITTB	Itaituba	38.90	115	*e*P	P	14 58 39.0	-1.3
PB11	IPOC Station P	39.06	148	P	P	14 58 41.5	-0.1
PB11					PcP	15 00 51.4	+1.0
MALB	Monte Alegre	39.12	110	*e*P	P	14 58 42.5	+0.4
I07A	Izee	39.14	326	P	P	14 58 43.1	+1.1
I07A				IAmb	IAmb	14 58 44.2	
	comp=Z,11nm,1.0s						
BATG	Bathurst New B	39.24	26	P	P	14 58 42.1	-0.6
BATG				IAmb	IAmb	14 58 43.8	
	comp=Z,14nm,1.0s						
KMRM	Mail Ridge	39.29	319	P	P	14 58 45.4	+2.1
KMRM					pP	14 59 02.6	+0.8
F10A	Beach Ranch, E	39.29	330	P	P	14 58 43.6	+0.3
F10A				IAmb	IAmb	14 58 46.1	
	comp=Z,20nm,0.8s						
TA01	Diego Aracena	39.47	149	P	P	14 58 45.4	+0.5
YBH	Yreka Blue Hor	39.51	321	P	P	14 58 45.7	+0.6
	comp=Z,3.1nm,0.6s,baz=130,slow=4.4,SNR=14						
YBH				pP	pP	14 59 03.3	-0.4
	comp=Z,3.5nm,0.8s,baz=118,slow=9.4,SNR=3.9						
YBH				ScP	ScP	15 04 37.1	+3.6
	comp=Z,2.5nm,0.8s,baz=112,slow=8.6,SNR=5.5						
YBH				LR	LR	15 17 11.1	
	comp=Z,308nm,20.8s,baz=148,slow=39						
	comp=Z,3.1nm,0.6s						
YBH	Yreka Blue Hor	39.51	321	P	P	14 58 45.5	+0.4
YBH	Yreka Blue Hor	39.51	321	P	P	14 58 45.6	+0.4
YBH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
L04D	Klamath Falls	39.55	322	P	P	14 58 46.6	+1.0
L04D	Klamath Falls	39.55	322	P	P	14 58 46.9	+1.4
	baz=126,SNR=5.3						
J05D	Fort Rock, OR	39.58	324	P	P	14 58 47.6	+1.8
	baz=129						
PB08	IPOC Station P	39.63	148	P	P	14 58 47.7	+1.0
PB08				IAmb	IAmb	14 58 49.3	
	comp=Z,20nm,1.0s						
PB08					PcP	15 00 53.2	+0.7
PATCX	Punta Patache	39.70	149	P	P	14 58 47.5	+0.7
PINE	Pine Mountain	39.74	325	P	P	14 58 48.2	+1.1
PINE				IAmb	IAmb	14 58 49.5	
	comp=Z,16nm,0.8s						
VILB	Vilhena	40.03	130	*e*P	P	14 58 49.9	+0.2
GBN	Guysborough	40.05	32	P	P	14 58 48.6	-0.7
GBN				IAmb	IAmb	14 58 50.4	
	comp=Z,17nm,0.9s						
J04D	Umpqua Nationa	40.05	324	P	P	14 58 50.9	+1.1
J04D	Umpqua Nationa	40.05	324	P	P	14 58 51.5	+1.8
	baz=128,SNR=5.3						
HUMO	Hull Mountain	40.17	322	P	P	14 58 51.0	+0.5
PB01	IPOC Station P	40.22	149	P	P	14 58 51.6	+0.5
PB01				IAmb	IAmb	14 58 53.3	
	comp=Z,19nm,1.0s						
PB02	IPOC Station P	40.24	149	P	P	14 58 52.4	+1.0
KSXB	Camp Six Broad	40.28	321	P	P	14 58 53.1	+1.6
KSXB				IAmb	IAmb	14 58 54.3	
	comp=Z,16nm,0.9s						
I05D	Terrebonne, OR	40.31	325	P	P	14 58 53.3	+1.7
	baz=130						
I04A	Tendick Farm,	40.57	324	P	P	14 58 54.6	+0.8
	baz=128						
MCPB	Macapa, AP	40.57	107	*e*P	P	14 58 54.2	0.0
PB07	IPOC Station P	40.59	150	P	P	14 58 54.9	+0.6
G05D	Wamic, OR	40.88	326	P	P	14 58 58.4	+2.1
	baz=130						
D08A	Wollman Farm,	40.89	330	P	P	14 58 57.1	+0.8
NEW	Newport	40.93	333	PcP	PcP	15 00 56.0	+0.2
	comp=Z,2.7nm,0.7s,baz=135,slow=1.4,SNR=4.1						
NEW				pPcP		15 01 15.5	
	comp=Z,3.9nm,0.8s,baz=153,slow=4.3,SNR=5.3						
NEW				ScP	ScP	15 04 41.3	+2.4
	comp=Z,2.7nm,0.9s,baz=59,slow=0.9,SNR=4.2						
NEW				LR	LR	15 18 39.6	
	comp=Z,226nm,21.4s,baz=136,slow=40						
PB09	IPOC Station P	40.97	149	P	P	14 58 58.2	+0.8
H04A	Detroit Lake	40.99	325	P	P	14 58 57.9	+0.6
E07A	Sunnyside	41.00	329	P	P	14 58 58.0	+0.7
I03D	Drain, OR	41.05	323	P	P	14 58 59.2	+1.5
	baz=127						
J01E	Myrtle Point	41.08	322	P	P	14 59 00.2	+2.3
	baz=125						
HOOD	Mount Hood Mea	41.11	326	P	P	14 58 59.9	+1.6
BUCK	Buck Mountain	41.14	324	P	P	14 58 59.3	+0.7
BUCK				IAmb	IAmb	14 59 03.8	
	comp=Z,63nm,1.5s						
H04D	Lebanon	41.20	325	P	P	14 58 60.0	+1.0
H04D				IAmb	IAmb	14 59 00.7	
	comp=Z,34nm,0.9s						
H04D	Lebanon	41.20	325	P	P	14 58 59.7	+0.7
	baz=128						
F05D	White Salmon	41.37	327	P	P	14 59 02.7	+2.3
	baz=131						
PB06	IPOC Station P	41.57	150	P	P	14 59 03.2	+0.8
PB06				IAmb	IAmb	14 59 04.5	
	comp=Z,34nm,0.9s						
I02E	Swisshome, OR	41.58	323	P	P	14 59 03.9	+1.8
I02E	Swisshome, OR	41.58	323	P	P	14 59 03.9	+1.8

	baz=126						
LVC	Limon Verde	41.82	149	LR	LR	15 13 44.5	
	comp=Z,95nm,19.4s,baz=298,slow=32						
LVC	Limon Verde	41.82	149	P	P	14 59 05.0	+0.4
LVC				IAmb	IAmb	14 59 07.4	
	comp=Z,33nm,1.1s						
LVC	Limon Verde	41.82	149	*e*P	P	14 59 05.7	+1.1
LVC	Limon Verde	41.82	149	*e*P	P	14 59 06.5	+1.9
LVC	Limon Verde	41.82	149	P	P	14 59 06.2	+1.6
LVC				pP	pP	14 59 25.3	+2.1
LVC				sP	sP	14 59 32.8	+0.7
PDRB	Porto dos Gac	41.88	125	*e*P	P	14 59 05.2	+0.3
G03D	McMinnville, O	41.92	325	P	P	14 59 05.9	+1.1
G03D	McMinnville, O	41.92	325	P	P	14 59 06.4	+1.6
	baz=128						
B08A	Colville Reser	42.01	331	P	P	14 59 06.1	+0.6
HEBO	Mount Hebo	42.20	325	P	P	14 59 08.4	+1.3
CLDB	Colider	42.21	124	*e*P	P	14 59 06.6	-0.9
F04D	Rainier, OR	42.33	326	P	P	14 59 10.6	+2.5
	baz=129						
PTLB	Pontes e Lacer	42.44	132	*e*P	P	14 59 10.0	+0.7
PB14	IPOC Station P	42.83	153	P	P	14 59 13.1	+0.3
E03A	Lebam	42.91	326	P	P	14 59 14.4	+1.6
E03A				IAmb	IAmb	14 59 15.5	
	comp=Z,32nm,0.9s						
EDM	Edmonton	43.42	340	P	P	14 59 16.5	-0.4
EDM				IAmb	IAmb	14 59 18.6	
	comp=Z,17nm,0.7s						
EDM	Edmonton	43.42	340	P	P	14 59 16.5	-0.4
EDM				pmax	pmax		
	comp=Z,17nm,0.7s						
GO02	Mina Guanaco	43.66	152	P	P	14 59 20.3	+0.8
AC01	Pan de Azucar	44.07	154	P	P	14 59 22.8	+0.4
AC01				IAmb	IAmb	14 59 24.0	
	comp=Z,30nm,1.1s						
RPN	Rapa Nui	44.48	204	LR	LR	15 13 17.2	
	comp=Z,172nm,20.0s,baz=26,slow=29						
DRLN	Deer Lake	44.65	31	P	P	14 59 25.1	-1.5
DRLN				IAmb	IAmb	14 59 25.9	
	comp=Z,24nm,0.8s						
LLLB	Lillooet	44.77	332	P	P	14 59 28.6	+0.9
PRPB	Parauapebas	44.97	113	*e*P	P	14 59 29.4	-0.3
TMAB	Tom-Au,PA,Br	44.99	108	*e*P	P	14 59 27.6	-2.3
SCHQ	Schefferville	45.04	19	P	P	14 59 29.0	-0.7
	comp=Z,44nm,0.7s,baz=218,slow=6.6,SNR=91						
SCHQ				ScP	ScP	15 04 55.7	+0.5
	comp=Z,1.6nm,0.7s,baz=245,slow=7.2,SNR=3.6						
SCHQ				LR	LR	15 18 39.3	
	comp=Z,435nm,21.9s,baz=253,slow=37						
	comp=Z,44nm,0.7s						
SCHQ	Schefferville	45.04	19	P	P	14 59 28.9	-0.9
FCC	Fort Churchill	45.09	357	P	P	14 59 29.1	-0.8
FCC	Fort Churchill	45.09	357	P	P	14 59 29.2	-0.8
FCC				pmax	pmax		
	comp=Z,12nm,1.2s						
AC06	Mina Casimiro	45.24	154	P	P	14 59 32.1	+0.4
AC06				IAmb	IAmb	14 59 33.5	
	comp=Z,23nm,0.8s						
SALV	Santo Antonio	45.27	129	*e*P	P	14 59 31.8	-0.2
AC02	Maricunga	45.31	153	P	P	14 59 33.5	+0.7
GO03	Copiap	45.50	154	P	P	14 59 34.0	+0.3
GO03				IAmb	IAmb	14 59 35.6	
	comp=Z,20nm,1.0s						
SNDB	Serra Nova Dou	46.50	121	*e*P	P	14 59 41.7	-0.1
LCO	Las Campanas	46.56	156	P	P	14 59 42.3	0.0
LCO	Las Campanas	46.56	156	*e*P	P	14 59 42.3	0.0
LCO	Las Campanas	46.56	156	P	P	14 59 43.1	+0.8
GO04	Tololo Observa	47.55	157	P	P	14 59 50.2	+0.3
CO01	Juntas del Tor	47.66	156	P	P	14 59 51.6	+0.8
CO01				IAmb	IAmb	14 59 53.0	
	comp=Z,19nm,1.1s						
H03N2	Juan Fernandez	48.14	167	T	T	15 51 39.3	
	baz=346,slow=76,SNR=4.1						
SMTB	Santa Maria do	48.14	115	*e*P	P	14 59 54.4	-0.1
H03N1	Juan Fernandez	48.14	167	T	T	15 51 40.2	
	baz=346,slow=76,SNR=7.7						
H03N3	Juan Fernandez	48.15	167	T	T	15 51 41.7	
	baz=346,slow=76,SNR=6.2						
CO02	Combarbal	48.40	157	P	P	14 59 56.8	+0.4
BBB	Bella Bella	48.75	330	LR	LR	15 22 34.9	
	comp=Z,112nm,20.2s,baz=112,slow=38						
ROSB	Rosrio	48.87	106	*e*P	P	14 59 59.9	-0.3
PEXB	Peixe	49.07	120	*e*P	P	15 00 01.1	-0.6
VA06	Catapilco	49.52	159	P	P	15 00 04.8	+0.1
VA01	Torpederas	49.81	159	P	P	15 00 06.9	0.0
VA03	San Esteban	49.97	158	P	P	15 00 08.5	+0.2
ROC1	El Roble	49.99	159	P	P	15 00 08.6	-0.1
MT02	Curacav	50.20	159	P	P	15 00 10.3	+0.4
MT02				IAmb	IAmb	15 00 11.6	
	comp=Z,20nm,0.9s						
PEL	Peldehue	50.26	158	P	P	15 00 10.7	+0.2
PEL				IAmb	IAmb	15 00 11.4	
	comp=Z,21nm,0.8s						
PEL	Peldehue	50.26	158	P	P	15 00 10.7	+0.2
PEL				pmax	pmax		
	comp=Z,21nm,0.8s						
PEL	Peldehue	50.26	158	P	P	15 00 10.9	+0.5
MT03	Universidad Ad	50.64	158	P	P	15 00 13.6	+0.2
MT01	Popeta	50.71	159	P	P	15 00 13.0	-0.8
MT01				IAmb	IAmb	15 00 14.6	
	comp=Z,22nm,1.0s						
MT09	Talagante	50.72	159	P	P	15 00 13.6	-0.4
BO04	La Punta	51.05	159	P	P	15 00 15.9	-0.4
BDFB	Brasilia	51.14	123	P	P	15 00 17.9	+0.5
	comp=Z,12nm,0.9s,baz=281,slow=8.0,SNR=15						
BDFB				PcP	PcP	15 01 32.1	0.0
	comp=Z,7.7nm,0.7s,baz=309,slow=2.8,SNR=6.4						
	comp=Z,12nm,0.9s						
BDFB	Brasilia	51.14	123	P	P	15 00 17.1	-0.3
BDFB				IAmb	IAmb	15 00 19.0	
	comp=Z,14nm,0.9s						
BDFB					PcP	15 01 32.5	+0.4
BDFB	Brasilia	51.14	123	*e*P	P	15 00 18.0	+0.5
CPUP	Villa Florida	51.22	141	P	P	15 00 16.8	-0.9
	comp=Z,11nm,0.9s,baz=329,slow=8.4,SNR=15						
CPUP				pP	pP	15 00 35.9	-1.0
	comp=Z,8.4nm,1.0s,baz=330,slow=9.6,SNR=5.4						
CPUP				LR	LR	15 20 56.5	
	comp=Z,133nm,20.5s,baz=294,slow=35						
	comp=Z,11nm,0.9s						
CPUP	Villa Florida	51.22	141	P	P	15 00 16.9	-0.8
CPUP				IAmb	IAmb	15 00 18.1	
	comp=Z,17nm,1.1s						
CPUP	Villa Florida	51.22	141	P	P	15 00 16.9	-0.8
CPUP				pmax	pmax		
	comp=Z,17nm,1.1s						
CPUP	Villa Florida	51.22	141	*e*P	P	15 00 17.1	-0.6
CPUP	Villa Florida	51.22	141	P	P	15 00 17.0	-0.7
CPUP				pP	pP	15 00 36.0	-0.9
CPUP				sP	sP	15 00 47.1	+1.6
BO01	Tunca	51.25	159	P	P	15 00 17.6	-0.2
GO05	Huala	51.53	160	P	P	15 00 19.7	-0.2
ITRB	Iturama	51.60	129	*e*P	P	15 00 20.3	-0.4
YKA	Yellowknife Ar	51.68	346	P	P	15 00 19.9	-0.8
	comp=Z,2.2nm,0.6s,baz=144,slow=7.6,SNR=19						
YKA				pP	pP	15 00 38.1	-1.8
	comp=Z,8.1nm,0.9s,baz=147,slow=8.0,SNR=11						
YKA				ScP	ScP	15 05 23.7	+0.5
	comp=Z,1.2nm,0.7s,baz=144,slow=4.6,SNR=6.2						
YKA				LR	LR	15 26 16.8	
	comp=Z,84nm,19.7s,baz=132,slow=41						
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	51.68	346	P	P	15 00 20.7	+0.1
YKA	Yellowknife Ar	51.68	346	P	P	15 00 20.7	+0.1
TRCB	Terra Rica	51.87	134	*e*P	P	15 00 22.2	-0.4
NBPS	Pedro II - PI	51.90	107	*e*P	P	15 00 21.5	-1.7
PCMB	Pacaembu	52.09	132	*e*P	P	15 00 24.2	-0.2
SDBA	SAO DESIDERIO	52.12	118	*e*P	P	15 00 24.0	-0.7
IPMB	Ipameri, GO	52.26	126	*e*P	P	15 00 25.4	-0.3
FRB	Frobisher Bay	52.32	12	LR	LR	15 23 23.8	
	comp=Z,470nm,21.3s,baz=194,slow=37						
ML02	Panimavida	52.39	160	P	P	15 00 26.2	0.0
BI05	Punta Hualpn	52.74	163	P	P	15 00 29.0	+0.1
NBMO	Morrinhos-CE	52.84	105	*e*P	P	15 00 29.5	-0.5
DLBC	Dease Lake	53.54	335	P	P	15 00 35.2	+0.6
	comp=Z,3.2nm,0.7s,baz=141,slow=3.4,SNR=5.6						
DLBC				pP	pP	15 00 53.4	-0.5
	comp=Z,2.7nm,0.8s,baz=75,slow=4.4,SNR=3.0						
DLBC				ScP	ScP	15 05 32.5	+0.9
	comp=Z,3.3nm,0.9s,baz=70,slow=2.9,SNR=3.7						
DLBC				LR	LR	15 26 11.3	
	comp=Z,137nm,18.9s,baz=164,slow=39						
	comp=Z,3.2nm,0.7s						
DLBC	Dease Lake	53.54	335	P	P	15 00 35.4	+0.9
BB19B	Bebedouro	53.79	129	*e*P	P	15 00 37.0	+0.2
JANB	Januaria	53.90	120	*e*P	P	15 00 38.4	+0.6
NBPB	Pedra_Branca-C	54.04	107	*e*P	P	15 00 38.2	-0.6
ITQB	Itaqui	54.09	143	P	P	15 00 38.4	-0.4
ITQB	Itaqui	54.09	143	*e*P	P	15 00 38.8	0.0
TAOE	Nuku Hiva Isla	54.10	248	*e*S	S	15 08 00.0	-11
	comp=Z,127nm,28.4s						
TAOE				*e*LR	LR	15 15 58.0	
	comp=Z,464nm,26.7s						
TAOE	Nuku Hiva Isla	54.10	248	*e*T	T	15 58 08.5	
	comp=Z,34nm,0.2s						
FRTB	Fartura	54.40	132	*e*P	P	15 00 41.6	+0.4
ITAB	Concordia	55.15	138	P	P	15 00 46.1	-0.5
ITAB	Concordia	55.15	138	*e*P	P	15 00 46.4	-0.2
RCLB	Rio Claro- Sao	55.33	130	*e*P	P	15 00 48.4	+0.4
NBMA	Muriti-CE	55.47	109	*e*P	P	15 00 48.7	-0.4
NBPN	Ponto Novo - B	55.55	114	*e*P	P	15 00 48.6	-1.1
TIJ01	Guaruva-PR	56.03	134	*e*P	P	15 00 54.2	+1.2
DIAM	Diamantina, MG	56.06	123	*e*P	P	15 00 53.8	+0.3
VAO	Valinhos	56.09	130	*e*P	P	15 00 53.3	-0.2
IVI	Ivigtut	56.41	23	P	P	15 00 53.6	-1.4
IVI	Ivigtut	56.41	23	*i* P	P	15 00 52.9	-2.1
IVI				IAmb	IAmb	15 00 54.9	
	comp=Z,26nm,0.8s						
IVI	Ivigtut	56.41	23	P	P	15 00 54.2	-0.8
CPSB	Cacapava Do Su	56.52	141	*e*P	P	15 00 56.0	-0.3
PET01	Itanhaem-SP	56.63	132	*e*P	P	15 00 57.5	+0.2
LL04	Puerto Octay	56.84	164	P	P	15 00 57.9	-0.5
LL04				IAmb	IAmb	15 00 59.3	
	comp=Z,20nm,1.1s						
NUUK	Nuuk	57.12	19	*i* P	P	15 00 59.8	-0.2
NUUK				IAmb	IAmb	15 01 01.1	
	comp=Z,24nm,1.2s						
PLCA	Paso Flores	57.21	162	P	P	15 01 01.4	+0.3
	comp=Z,18nm,1.0s,baz=335,slow=8.5,SNR=28						
PLCA				LR	LR	15 20 02.9	
	comp=Z,172nm,20.8s,baz=323,slow=30						
	comp=Z,18nm,1.0s						
PLCA	Paso Flores	57.21	162	P	P	15 01 01.0	-0.1
PLCA	Paso Flores	57.21	162	P	P	15 01 01.0	-0.1
PLCA				pmax	pmax		
	comp=Z,41nm,1.2s						
PLCA	Paso Flores	57.21	162	*e*P	P	15 01 01.6	+0.5
PLCA	Paso Flores	57.21	162	P	P	15 01 01.4	+0.3
PLCA				pP	pP	15 01 18.6	-2.0
PLCA				sP	sP	15 01 30.9	+1.7
PARB	Paraibuna	57.29	130	*e*P	P	15 01 02.4	+0.3
GDU01	Guandu, BA	57.33	116	*e*P	P	15 01 02.2	-0.1
CNLB	Canela	57.38	139	*e*P	P	15 01 03.2	+0.7
PLTB	Pedras Altas	57.39	143	P	P	15 01 01.9	-0.6
PLTB				IAmb	IAmb	15 01 02.6	
	comp=Z,19nm,0.9s						
PLTB	Pedras Altas	57.39	143	*e*P	P	15 01 01.9	-0.6
NRS	Narsarsuaq	57.45	24	P	P	15 01 01.0	-1.4
NRS	Narsarsuaq	57.45	24	P	P	15 01 01.0	-1.4
NRS				pmax	pmax		
	comp=Z,32nm,0.8s						
NRS	Narsarsuaq	57.45	24	*i* P	P	15 00 59.9	-2.5
NRS				IAmb	IAmb	15 01 01.9	
	comp=Z,32nm,0.8s						
RCBR	Riachuelo	57.57	106	LR	LR	15 29 01.1	
	comp=Z,124nm,19.5s,baz=69,slow=40						
RCBR	Riachuelo	57.57	106	P	P	15 01 02.8	-1.3
RCBR				IAmb	IAmb	15 01 05.7	
	comp=Z,18nm,0.8s						
RCBR	Riachuelo	57.57	106	P	P	15 01 02.8	-1.3
RCBR				pmax	pmax		
	comp=Z,18nm,0.9s						
RCBR	Riachuelo	57.57	106	*e*P	P	15 01 03.5	-0.6
TER01	Tubaro-SC	57.99	137	*e*P	P	15 01 06.5	-0.3
CMC01	Camacan, BA	58.11	118	*e*P	P	15 01 08.1	+0.3
MAN01	Angra dos Reis	58.28	128	*e*P	P	15 01 09.6	+0.7
SJMB	Sao Joao De Ma	58.30	122	*e*P	P	15 01 10.2	+1.1
GUA01	Guaratinga, BA	58.43	119	*e*P	P	15 01 10.2	+0.2
NBAN	Anadia - AL	58.62	110	*e*P	P	15 01 11.5	+0.2
NAN01	Guarapari, ES	58.76	121	*e*P	P	15 01 12.8	+0.6
LL02	Futaleuf	59.12	164	P	P	15 01 13.6	-0.6
RIB01	Linhares ES	59.25	123	*e*P	P	15 01 16.1	+0.5
NBRF	Rio Formoso -	59.30	109	*e*P	P	15 01 16.7	+0.6
SFJD	Kangerlussuaq	59.40	17	LR	LR	15 27 01.7	
	comp=Z,326nm,21.1s,baz=228,slow=36						
CAM01	Campos-RJ	59.51	126	*e*P	P	15 01 18.0	+0.6
ALF01	Guarapari-ES	59.63	124	*e*P	P	15 01 18.8	+0.5
AY01	Puyuhuapi	60.06	165	P	P	15 01 20.7	0.0
M27K	Edge Creek, AK	60.60	335	P	P	15 01 25.1	+0.7
M27K				IAmb	IAmb	15 01 26.5	
	comp=Z,11nm,1.4s						
M27K	Edge Creek, AK	60.60	335	P	P	15 01 25.3	+0.9
	baz=119						
MCARA	McCarthy VSAT	60.61	334	P	P	15 01 23.8	-0.6
MCARA				IAmb	IAmb	15 01 27.2	
	comp=Z,7.3nm,0.8s						
BCAR	Beaver Creek A	60.91	336	P	P	15 01 26.5	+0.1
L27K	Beaver Creek,	60.93	336	P	P	15 01 26.7	+0.2
L27K	Beaver Creek,	60.93	336	P	P	15 01 27.3	+0.8
	baz=120,SNR=5.6						
GLB	Gilahina Butte	60.97	334	P	P	15 01 27.2	+0.4
RES	Resolute Bay	61.05	359	P	P	15 01 25.7	-1.3
	comp=Z,4.7nm,0.6s,baz=189,slow=8.9,SNR=13						
RES				LR	LR	15 30 12.0	
	comp=Z,204nm,19.7s,baz=164,slow=38						
	comp=Z,4.7nm,0.6s						
RES	Resolute Bay	61.05	359	P	P	15 01 25.9	-1.2
RES	Resolute Bay	61.05	359	P	P	15 01 25.9	-1.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BMRM	Bremner River	61.11	333	P	P	15 01 27.8	0.0
BMRM				IAmb	IAmb	15 01 30.2	
	comp=Z,8.3nm,0.7s						
BMRM	Bremner River	61.11	333	P	P	15 01 29.2	+1.5
	baz=116						
INK	Inuvik	61.16	343	P	P	15 01 27.2	-0.6
	comp=Z,4.5nm,0.8s,baz=138,slow=2.5,SNR=8.1						
INK				LR	LR	15 32 11.4	
	comp=Z,162nm,20.3s,baz=146,slow=40						
	comp=Z,4.5nm,0.8s						
INK	Inuvik	61.16	343	P	P	15 01 27.0	-0.9
INK				IAmb	IAmb	15 01 28.0	
	comp=Z,8.3nm,1.1s						
INK	Inuvik	61.16	343	P	P	15 01 27.0	-0.9
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	61.16	343	P	P	15 01 27.5	-0.4
	baz=131						
COYC	Coyhaique	61.28	165	P	P	15 01 29.1	+0.1
COYC	Coyhaique	61.28	165	P	P	15 01 29.6	+0.6
COYC				pP	pP	15 01 45.5	-3.2
COYC				sP	sP	15 01 51.2	-6.0
N25K	Chitina, Valde	61.38	334	P	P	15 01 30.7	+1.0
N25K				IAmb	IAmb	15 01 32.3	
	comp=Z,7.2nm,0.6s						
N25K	Chitina, Valde	61.38	334	P	P	15 01 31.8	+2.1
	baz=116						
K27K	Chicken	61.51	337	P	P	15 01 31.3	+0.9
	baz=120						
EGAK	Eagle	61.55	338	P	P	15 01 30.5	-0.1
	baz=121						
FID	Port Fidalgo	61.85	333	P	P	15 01 33.6	+0.9
FID				IAmb	IAmb	15 01 44.1	
	comp=Z,17nm,1.2s						
KLU	Klutina	61.91	333	P	P	15 01 34.2	+1.1
KLU				IAmb	IAmb	15 01 35.5	
	comp=Z,6.4nm,0.6s						
KLU	Klutina	61.91	333	P	P	15 01 34.4	+1.2
	baz=115						
GLI	Glacier Island	62.17	333	P	P	15 01 36.0	+1.1
M24K	Tolsona, Glenn	62.28	334	P	P	15 01 36.6	+1.0
M24K				IAmb	IAmb	15 01 38.9	
	comp=Z,14nm,0.9s						
M24K	Tolsona, Glenn	62.28	334	P	P	15 01 37.7	+2.1
	baz=115						
ISOG	Isortoq, Green	62.28	22	*i* P	P	15 01 31.4	-4.0
J26L	Joseph Creek	62.31	337	P	P	15 01 36.4	+0.6
	baz=119,SNR=6.4						
PAX	Paxson	62.35	335	P	P	15 01 36.6	+0.4
PAX	Paxson	62.35	335	P	P	15 01 36.6	+0.4
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PAX	Paxson	62.35	335	P	P	15 01 36.1	-0.1
	baz=116						
RIDG	Independent Ri	62.45	336	P	P	15 01 37.4	+0.7
RIDG	Independent Ri	62.45	336	P	P	15 01 38.1	+1.3
	baz=117						
SCM	Sheep Creek Mo	62.66	333	P	P	15 01 38.9	+0.7
SCM				IAmb	IAmb	15 01 48.4	
	comp=Z,14nm,1.4s						
SCM	Sheep Creek Mo	62.66	333	P	P	15 01 38.9	+0.7
SCM				pmax	pmax		
	comp=Z,14nm,1.4s						
K24K	Donnelly Dome	62.85	336	P	P	15 01 40.5	+1.1
	baz=116						
KNK	Knik Glacier	62.99	333	P	P	15 01 41.2	+0.9
	baz=112						
J25K	Salcha River,	63.05	337	P	P	15 01 41.3	+0.5
J25K	Salcha River,	63.05	337	P	P	15 01 41.4	+0.7
	baz=117,SNR=5.4						
WAT6	Susitna Watana	63.14	334	P	P	15 01 41.1	-0.4
	baz=114						
PMR	Palmer	63.36	333	P	P	15 01 43.3	+0.6
PMR	Palmer	63.36	333	P	P	15 01 43.3	+0.6
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PMOR	Pomariorio Ree	63.51	245	*e*T	T	16 10 13.3	
	comp=Z,4.5nm,0.2s						
ILAR	Eielson Array	63.71	337	LR	LR	15 31 46.8	
	comp=Z,174nm,20.7s,baz=104,slow=38						
KDAK	Kodiak Island	63.75	328	P	P	15 01 46.5	+1.2
	comp=Z,5.9nm,0.8s,baz=156,slow=8.3,SNR=4.0						
	comp=Z,5.9nm,0.8s						
KDAK	Kodiak Island	63.75	328	P	P	15 01 46.4	+1.1
KDAK	Kodiak Island	63.75	328	P	P	15 01 46.4	+1.1
KDAK				pmax	pmax		
	comp=Z,50nm,1.5s						
GO08	Villa O'Higgin	63.89	167	P	P	15 01 46.5	+0.2
GO08				IAmb	IAmb	15 01 48.6	
	comp=Z,13nm,0.8s						
RND	Reindeer	63.93	335	P	P	15 01 46.7	+0.1
RND				IAmb	IAmb	15 01 48.5	
	comp=Z,15nm,1.1s						
RND	Reindeer	63.93	335	P	P	15 01 46.7	+0.1
RND				pmax	pmax		
	comp=Z,15nm,1.1s						
ICESG	Greenland Ices	63.93	18	*i* P	P	15 01 43.7	-3.1
ICESG				IAmb	IAmb	15 01 46.4	
	comp=Z,9.3nm,0.8s						
POKR	Poker Plat Res	64.06	337	P	P	15 01 47.4	+0.1
	baz=115,SNR=5.7						
BMAR	Burnt Mountain	64.09	340	P	P	15 01 47.6	+0.1
COLA	College	64.12	336	*i* P	P	15 01 48.8	+1.2
COLA				pmax	pmax		
	comp=Z,16nm,0.5s						
BWN	Browne	64.48	335	P	P	15 01 49.8	-0.2
BWN				IAmb	IAmb	15 01 53.4	
	comp=Z,32nm,1.1s						
NEA2	Nenana	64.49	336	P	P	15 01 50.3	+0.2
	baz=113,SNR=13						
H24K	Noodor Dome	64.54	337	P	P	15 01 49.9	-0.5
	baz=115						
TRF	Thorofare Moun	64.55	335	P	P	15 01 51.0	+0.3
TRF	Thorofare Moun	64.55	335	P	P	15 01 50.4	-0.3
	baz=112						
I23K	Minto, Yukon-K	64.82	336	P	P	15 01 52.8	+0.6
	baz=113,SNR=7.2						
BPAW	Bear Paw Mtn.	65.07	335	P	P	15 01 54.1	+0.1
	baz=111,SNR=6.1						
PPLA	Purkeypile	65.16	334	P	P	15 01 55.0	+0.3
PPLA				IAmb	IAmb	15 01 59.6	
	comp=Z,17nm,1.4s						
M20K	Styx River	65.25	332	P	P	15 01 55.7	+0.5
M20K	Styx River	65.25	332	P	P	15 01 56.1	+0.9
	baz=108						
N19K	Bonanza Creek	65.55	331	P	P	15 01 56.8	-0.4
N19K				IAmb	IAmb	15 01 58.0	
	comp=Z,27nm,1.4s						
N19K	Bonanza Creek	65.55	331	P	P	15 01 56.9	-0.4
	baz=106						
L20K	Farewell, AK	65.77	333	P	P	15 01 58.0	-0.4
	baz=108,SNR=6.4						
M19K	Big River Lodg	65.82	332	P	P	15 01 59.3	+0.5
M19K	Big River Lodg	65.82	332	P	P	15 01 59.6	+0.8
	baz=107						
I21K	Tanana	65.86	336	P	P	15 01 59.8	+0.8
	baz=111						
COLD	Coldfoot	65.96	338	P	P	15 02 00.2	+0.7
COLD	Coldfoot	65.96	338	P	P	15 02 00.6	+1.1
	baz=113						
PPT	Papeete	66.02	244	LR	LR	15 22 42.9	
	comp=Z,235nm,18.5s,baz=92,slow=28						
PPT2	Papeete2	66.03	244	*e*LR	LR	15 21 18.0	
	comp=Z,465nm,26.2s,baz=51						
L19K	White Mountain	66.11	332	P	P	15 02 01.2	+0.5
K20K	Telida	66.12	334	P	P	15 02 00.5	-0.1
K20K	Telida	66.12	334	P	P	15 02 01.4	+0.7
	baz=108,SNR=5.4						
SVW2	Sparrevohn	66.14	331	P	P	15 02 00.5	-0.4
SVW2				IAmb	IAmb	15 02 16.1	
	comp=Z,18nm,1.4s						
SUMG	Summit	66.17	15	P	P	15 02 00.3	-1.0
SUMG				IAmb	IAmb	15 02 28.3	
	comp=Z,27nm,1.5s						
SUMG	Summit	66.17	15	P	P	15 02 00.3	-1.0
SUMG				pmax	pmax		
	comp=Z,27nm,1.5s						
SUMG	Summit	66.17	15	*i* P	P	15 01 59.4	-1.9
SUMG				IAmb	IAmb	15 02 02.2	
	comp=Z,5.5nm,0.7s						
N18K	Kilae Creek	66.18	331	P	P	15 02 00.9	-0.2
TOLK	Toolik Lake Re	66.32	340	P	P	15 02 01.6	-0.3
TOLK	Toolik Lake Re	66.32	340	P	P	15 02 02.2	+0.3
	baz=114						
H21K	Melozitna Rive	66.35	336	P	P	15 02 02.0	-0.1
H21K	Melozitna Rive	66.35	336	P	P	15 02 01.4	-0.7
	baz=110						
J20K	Nowinta River	66.40	335	P	P	15 02 02.4	-0.1
J20K	Nowinta River	66.40	335	P	P	15 02 02.3	-0.2
	baz=108						
EUNU	Eureka	66.43	1	P	P	15 02 01.9	-0.6
IMAR	Indian Mountai	66.83	337	P	P	15 02 04.8	-0.3
TTA	Tatalina	66.84	333	P	P	15 02 04.6	-0.7
TTA	Tatalina	66.84	333	P	P	15 02 04.6	-0.7
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TTA	Tatalina	66.84	333	P	P	15 02 05.7	+0.4
	baz=106						
TBI	Tubuai	68.39	238	*e*LR	LR	15 22 53.0	
	comp=Z,395nm,29.0s,baz=59						
TBI	Tubuai	68.39	238	*e*T	T	16 16 09.3	
	comp=Z,4.8nm,0.2s						
BORG	Borgarnes	68.88	25	LR	LR	15 32 33.1	
	comp=Z,62nm,20.4s,baz=259,slow=36						
MG03	Isla Dawson	69.40	167	P	P	15 02 21.8	+0.6
USHA	Ushuaia	70.76	167	LR	LR	15 26 51.0	
	comp=Z,121nm,19.4s,baz=190,slow=30						
UNV	Unalaska Valle	70.81	323	P	P	15 02 31.0	+1.0
DAG	Danmarks Havn	72.65	13	*i* P	P	15 02 38.0	-2.7
DAG				IAmb	IAmb	15 02 40.2	
	comp=Z,4.7nm,0.7s						
NOR	Nord	74.21	8	*i* P	P	15 02 48.9	-0.9
NOR				IAmb	IAmb	15 02 49.9	
	comp=Z,1.7nm,0.7s						
JMIC	Jan Mayen	74.56	20	LR	LR	15 34 51.0	
	comp=Z,105nm,22.0s,baz=260,slow=35						
RAR	Rarotonga	76.30	244	LR	LR	15 28 33.3	
	comp=Z,47nm,21.4s,baz=74,slow=29						
ADK	Adak	77.02	321	P	P	15 03 07.0	+0.7
ADK				IAmb	IAmb	15 03 11.5	
	comp=Z,20nm,0.9s						
ADK	Adak	77.02	321	P	P	15 03 07.0	+0.7
ADK				pmax	pmax		
	comp=Z,20nm,0.9s						
ESK	Eskdalemuir	77.37	36	P	P	15 03 05.6	-2.6
ESK				IAmb	IAmb	15 03 32.8	
	comp=Z,18nm,1.3s						
ESK	Eskdalemuir	77.37	36	P	P	15 03 05.6	-2.6
ESK				pmax	pmax		
	comp=Z,18nm,1.3s						
EKA	Eskdalemuir Ar	77.39	36	LR	LR	15 35 40.2	
	comp=Z,78nm,19.0s,baz=246,slow=35						
PAB	San Pablo	78.52	52	P	P	15 03 13.3	-1.7
PAB	San Pablo	78.52	52	P	P	15 03 13.3	-1.7
PAB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ESBB	Sonseca Array	78.79	52	P	P	15 03 14.3	-2.3
ESDC	Sonseca Array	78.79	52	P	P	15 03 14.3	-2.3
	comp=Z,3.5nm,0.8s,baz=291,slow=6.2,SNR=18						
ESDC				LR	LR	15 33 28.4	
	comp=Z,54nm,18.8s,baz=304,slow=32						
	comp=Z,3.5nm,0.8s						
ESDC	Sonseca Array	78.79	52	P	P	15 03 14.1	-2.4
MDT	Midelt	79.34	59	LR	LR	15 33 34.8	

	comp=Z,61nm,19.9s,baz=343,slow=32						
SPITS	Spitsbergen Ar	80.12	12	LR	LR	15 40 38.9	
	comp=Z,185nm,20.1s,baz=259,slow=37						
SPITS	Spitsbergen Ar	80.12	12	P	P	15 03 22.8	-0.2
SPITS				pmax	pmax		
	comp=Z,28nm,1.5s						
PMSA	Palmer Station	80.76	169	LR	LR	15 33 00.7	
	comp=Z,114nm,20.8s,baz=232,slow=31						
BILL	Bilibino	82.29	338	P	P	15 03 34.8	+0.2
BILL	Bilibino	82.29	338	*d i*P	P	15 03 35.1	+0.5
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHEM	Shemya Is, Ala	82.47	322	LR	LR	15 42 16.3	
	comp=Z,28nm,18.2s,baz=158,slow=37						
SMAI	San Martin Ant	83.31	171	P	P	15 03 41.1	+1.4
SMAI				IAmb	IAmb	15 03 41.9	
	comp=Z,29nm,1.3s						
NC204	NORSAR Array S	83.47	28	P	P	15 03 40.7	-0.2
NC204				IAmb	IAmb	15 04 00.3	
	comp=Z,11nm,1.1s						
NB2	NORSAR Subarra	83.75	29	P	P	15 03 41.7	-0.6
	comp=Z,3.5nm,0.9s,baz=288,slow=5.3						
NOA	NORSAR Array B	83.75	29	P	P	15 03 41.6	-0.6
	comp=Z,1.2nm,0.7s,baz=289,slow=5.3,SNR=7.4						
NOA				LR	LR	15 38 40.9	
	comp=Z,70nm,21.8s,baz=285,slow=34						
	comp=Z,1.2nm,0.7s						
NB201	NORSAR Array S	83.78	29	P	P	15 03 43.1	+0.7
NB201				IAmb	IAmb	15 03 51.4	
	comp=Z,20nm,1.2s						
TIC	Toumodi	84.10	85	*e*PKP2	P	15 03 43.1	-1.9
	comp=Z,26nm,0.2s						
LIC	Lamto	84.19	85	*e*P	P	15 03 43.1	-2.3
	comp=Z,54nm,1.4s						
DBIC	Dimbokro	84.26	85	P	P	15 03 44.1	-1.7
	comp=Z,13nm,0.7s,baz=292,slow=5.0,SNR=13						
DBIC				LR	LR	15 36 12.2	
	comp=Z,128nm,21.8s,baz=304,slow=32						
	comp=Z,13nm,0.7s						
DBIC	Dimbokro	84.26	85	P	P	15 03 44.7	-1.0
DBIC				IAmb	IAmb	15 03 46.9	
	comp=Z,14nm,0.8s						
DBIC	Dimbokro	84.26	85	P	P	15 03 44.7	-1.0
DBIC				pmax	pmax		
	comp=Z,14nm,0.9s						
KIC	Kosan Boka	84.44	85	*e*PKP2	P	15 03 44.3	-2.4
	comp=Z,26nm,0.6s						
AFI	Afiamalu	84.99	254	LR	LR	15 32 28.0	
	comp=Z,70nm,20.6s,baz=136,slow=29						
HFS	Hagfors	85.19	29	LR	LR	15 39 34.2	
	comp=Z,67nm,21.4s,baz=294,slow=34						
SENIN	Lac Senin/Sane	85.54	43	P	P	15 03 49.8	-2.0
ARCES	ARCESS Array B	85.99	18	P	P	15 03 51.9	-1.5
	comp=Z,1.1nm,0.8s,baz=279,slow=8.1,SNR=3.9						
ARCES				LR	LR	15 42 26.1	
	comp=Z,71nm,20.3s,baz=295,slow=36						
	comp=Z,1.1nm,0.8s						
TUE	Stuetta	86.87	43	P	P	15 03 57.1	-1.3
DAVOX	Davos/Dischmat	87.13	43	LR	LR	15 37 15.4	
	comp=Z,53nm,21.0s,baz=262,slow=32						
CLL	Collm	87.70	38	P	P	15 04 00.6	-1.4
CLL	Collm	87.70	38	*i* P	P	15 04 00.9	-1.1
CLL				*e**PP	sP	15 04 28.0	-3.2
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	87.70	38	*i* P	P	15 04 00.9	-1.1
	comp=Z,4.0nm,0.8s						
CLL				*e*pP	pP	15 04 26.0	+3.1
CLL				*e*sP	sP	15 04 34.0	+2.8
CLL				*e*PP	PP	15 07 24.0	-4.0
CLL				*e*S	S	15 14 36.0	-1.9
KHC	Kasperske Hory	88.77	40	P	P	15 04 05.5	-1.6
KHC	Kasperske Hory	88.77	40	*i* P	P	15 04 07.4	+0.2
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	88.94	40	P	P	15 04 06.2	-1.8
	comp=Z,0.5nm,0.5s,baz=318,slow=1.8,SNR=5.7						
GERES				LR	LR	15 39 58.9	
	comp=Z,55nm,19.5s,baz=292,slow=33						
	comp=Z,0.5nm,0.5s						
TOA0	Torodi Ar. Sit	89.06	77	P	P	15 04 06.3	-2.8
TORD	Torodi Ar. Bea	89.06	77	P	P	15 04 06.3	-2.8
	comp=Z,1.2nm,0.6s,baz=294,slow=4.8,SNR=9.0						
	comp=Z,1.2nm,0.6s						
TORD	Torodi Ar. Bea	89.06	77	P	P	15 04 06.3	-2.8
SEY	Seymchan	89.64	336	LR	LR	15 49 58.8	
	comp=Z,59nm,20.1s,baz=29,slow=39						
SEY	Seymchan	89.64	336	*i* P	P	15 04 12.2	+1.3
FINES	FINESS Array B	90.18	25	P	P	15 04 12.8	-0.7
	comp=Z,1.1nm,0.8s,baz=298,slow=3.0,SNR=4.0						
FINES				LR	LR	15 42 20.5	
	comp=Z,67nm,21.4s,baz=301,slow=34						
	comp=Z,1.1nm,0.8s						
VRAC	Vranov	90.55	39	LR	LR	15 41 58.3	
	comp=Z,64nm,20.2s,baz=282,slow=34						
TIXI	Tiksi	90.87	348	P	P	15 04 15.3	-1.2
	comp=Z,2.2nm,0.8s,baz=91,slow=23,SNR=6.7						
TIXI				LR	LR	15 50 18.3	
	comp=Z,104nm,18.2s,baz=0.0,slow=39						
	comp=Z,2.2nm,0.8s						
TIXI	Tiksi	90.87	348	P	P	15 04 15.4	-1.1
TIXI	Tiksi	90.87	348	*i* P	P	15 04 17.6	+1.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VSU	Vasula	91.96	28	*i* P	P	15 04 23.2	+1.5
VSU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VAE	Valguarnera	93.27	50	LR	LR	15 39 59.4	
	comp=Z,91nm,20.5s,baz=320,slow=32						
MNK	Minsk	94.53	31	*i* P	P	15 04 24.4	-9.3
MNK				*i* PPP	PPP	15 10 23.8	
MNK				*i* PS	PS	15 16 57.3	-7.8
MNK				*i* SS	SS	15 21 54.9	-8.2
MNK				*i* SSS	SSS	15 25 37.5	
MNK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				MLR	MLR		
	comp=N,174nm,24.0s						
MNK				MLR	MLR		
	comp=E,17nm,22.0s						
MNK				MLR	MLR		
	comp=Z,152nm,20.0s						
MNK	Minsk	94.53	31	*i* P	P	15 04 24.5	-9.2
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	15 04 24.5	-9.2
	comp=N,21nm,0.8s						
MNK				*i* P	P	15 04 24.5	-9.2
	comp=Z,7.0nm,0.6s,baz=123						
MNK				*i* PP	PP	15 08 12.2	-9.5
MNK				*i* PPP	PPP	15 10 23.8	
MNK				*i* S	SKSac	15 14 51.0	-11
MNK				*i* SP	SP	15 16 45.7	-9.2
MNK				*i* PS	PS	15 16 57.4	-7.7
MNK				*i* SS	SS	15 21 55.0	-8.1
MNK				*i* SSS	SSS	15 25 37.5	
MNK				*i* SSS	SSS	15 25 37.5	
MNK				*i* LR	LR	15 40 35.0	
MNK				*i* LRM	MLR	15 47 00.9	
	comp=N,174nm,24.3s						
MNK				*i* LRM	MLR	15 47 17.5	
	comp=E,17nm,21.7s						
MNK				*i* LRM	MLR	15 47 59.1	
	comp=Z,152nm,20.4s						
NRIK	Noril'sk	97.19	1	LR	LR	15 50 42.0	
	comp=Z,150nm,21.9s,baz=355,slow=37						
AKASG	Malin Array Be	97.20	34	LR	LR	15 47 00.8	
	comp=Z,48nm,19.9s,baz=252,slow=34						
MLR	Muntele Rosu	97.92	39	LR	LR	15 44 40.4	
	comp=Z,60nm,21.4s,baz=308,slow=33						
YAK	Yakutsk	98.21	342	LR	LR	15 53 00.8	
	comp=Z,52nm,21.9s,baz=86,slow=38						
OBN	Obninsk	98.31	28	*i* P	P	15 04 50.4	-0.4
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	105.75	42	PKKPbc	PKKPbc	15 21 00.9	-0.7
	comp=Z,0.4nm,0.9s,baz=144,slow=4.4,SNR=4.7						
SONM	Songino Array	116.94	347	PKP	PKiKP	15 09 58.3	+0.3
	comp=Z,0.7nm,0.9s,baz=225,slow=1.3,SNR=4.3						
SONM				pPKP	pPKPdf	15 10 17.8	-2.0
	comp=Z,0.8nm,0.8s,baz=3.8,slow=4.5,SNR=4.1						
SONM				PKKPbc	PKKPbc	15 20 23.3	-2.0
	comp=Z,2.1nm,0.8s,baz=193,slow=3.7,SNR=9.5						
KSRS	Korea Array	117.62	326	PKP	PKiKP	15 10 00.2	+0.8
	comp=Z,2.2nm,0.7s,baz=12,slow=1.2,SNR=16						
KSRS				pPKP	pPKPdf	15 10 19.9	-1.3
	comp=Z,2.6nm,0.8s,baz=22,slow=0.8,SNR=6.8						
KSAR	Wonju Array Be	117.65	326	PKPdf	PKiKP	15 09 59.5	0.0
KSAR	Wonju Array Be	117.65	326	PKIKP	PKiKP	15 09 59.5	0.0
BOSA	Boshof	118.92	115	PKP	PKiKP	15 10 02.8	+0.4
	comp=Z,10nm,0.8s,baz=270,slow=2.2,SNR=24						
MKAR	Makanchi Array	119.47	6	PKP	PKPdf	15 10 02.6	-0.1
	comp=Z,0.5nm,0.8s,baz=343,slow=3.8,SNR=4.3						
MKAR				PKKPbc	PKKPbc	15 20 13.5	-2.6
	comp=Z,0.5nm,0.8s,baz=197,slow=4.4,SNR=4.7						
HHC	Hu-ho-hao-te	122.02	340	*e*PKP	PKPdf	15 10 04.3	-3.6
WMQ	Urumqi	122.76	2	*e*PKP	PKPdf	15 10 09.3	+0.1
WMQ				LR	LR		
	comp=Z,180nm,21.5s						
GTA	Gaotai	126.32	350	*e*PKP	PKiKP	15 10 17.4	+0.7
GTA				sPKP		15 10 48.4	
GTA				LR	LR		
	comp=Z,83nm,20.7s						
GTA				LR	LR		
	comp=Z,74nm,21.4s						
GTA				LR	LR		
	comp=Z,110nm,21.1s						
XAN	Xi'an	129.07	339	PKP	PKPdf	15 10 21.6	0.0
WRA	Warramunga Arr	136.70	255	PKP	PKPdf	15 10 37.0	+0.8
	comp=Z,2.8nm,0.7s,baz=88,slow=2.3,SNR=8.2						
WRA				SKP		15 14 08.9	
	comp=Z,2.4nm,0.7s,baz=89,slow=3.3,SNR=20						
ASAR	Alice Springs	136.91	250	PKhKP	PKPpre	15 10 28.1	
	comp=Z,0.5nm,0.6s,baz=106,slow=3.9,SNR=8.1						
ASAR				PKP	PKPdf	15 10 36.5	0.0
	comp=Z,1.3nm,0.8s,baz=109,slow=3.4,SNR=9.5						
ASAR				SKP		15 14 10.4	
	comp=Z,3.7nm,0.9s,baz=101,slow=3.2,SNR=12						
PZH	PanZhiHua	138.32	343	PKP	PKPdf	15 10 37.8	-1.4
BATI	Baumata	146.40	272	PKPbc	PKPbc	15 10 55.4	+0.3
	comp=Z,34nm,0.8s,baz=135,slow=1.6,SNR=6.0						
CMAR	Chiang Mai Arr	146.74	343	PKPbc	PKPbc	15 10 56.2	+0.4
	comp=Z,4.6nm,0.6s,baz=335,slow=3.3,SNR=26						
CMAR				pPKP	pPKPdf	15 11 15.8	-0.1
	comp=Z,12nm,0.7s,baz=343,slow=3.3,SNR=16						
CMAR				SKPbc	SKiKP	15 14 30.9	+2.7
	comp=Z,5.3nm,1.1s,baz=337,slow=2.5,SNR=9.2						
CMAR	Chiang Mai Arr	146.74	343		PKPbc	15 10 56.1	+0.2
CMAR	Chiang Mai Arr	146.74	343	PKP2	PKPbc	15 10 56.1	+0.2
HYBB	Hyderabad (bro	147.28	20	*e*PKPbc	PKPbc	15 10 56.8	-0.6
KAPI	Kappang	148.95	283	PKPbc	PKPbc	15 11 02.5	+0.6
	comp=Z,13nm,0.7s,baz=201,slow=2.2,SNR=9.2						

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*UUSS **22** 15:01:47.3±2.2,37°.10N±0°.03×112°.34W±0°.04,h14^{km}±5^{km}, ML2.5/9,ML2.5/34(NEIC) Error ellipse: s-maj=5.0km s-min=4.0km az=141.0*

NEIC 22 15:01:47.2±0.8,**37°.10N**±0°.01×**112°.35W**±0°.02,**h6**^{km}±9^{km}, **Error ellipse: s-maj=2.7km s-min=1.8km az=79.0,Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKU	East Kanab	0.12	257		Pg	15 01 51.0	+1.0
PKCU	Pink Cliffs	0.34	5		Pg	15 01 54.5	+0.4
PKCU				IAML		15 02 00.4	
	comp=N,626nm,0.4s						
PKCU				IAML		15 02 02.7	
	comp=E,1μm,0.3s						
BHU	Blowhard Mount	0.64	320		Pg	15 02 00.1	+0.5
ZNPU	Zion National	0.67	292		Pg	15 02 00.2	0.0
ZNPU					Sg	15 02 09.4	+0.4
U15A	North Rim	0.68	176	Pg	Pg	15 02 00.3	0.0
U15A				IAML		15 02 09.6	
	comp=N,253nm,0.3s						
U15A				IAML		15 02 10.2	
	comp=E,194nm,0.2s						
LCMT	Little Creek M	0.72	263	Pg	Pg	15 02 00.7	-0.5
LCMT				IAML		15 02 10.9	
	comp=N,261nm,0.2s						
LCMT				IAML		15 02 11.4	
	comp=E,215nm,0.2s						
PGAZ	Page	0.73	105		Pg	15 02 01.2	-0.2
BTU	Barney Top	0.75	30		Pg	15 02 01.8	+0.1
SZCU	Shurtz Canyon	0.77	310		Pg	15 02 01.8	-0.2
SZCU				IAML		15 02 12.4	
	comp=E,171nm,0.4s						
SZCU				IAML		15 02 18.1	
	comp=N,127nm,0.3s						
MTPU	Mount Pierson	0.94	8		Pg	15 02 04.8	-0.6
ARUT	Antelope Range	1.11	308		Pg	15 02 08.3	-0.2
DWU	Dry Willow Pea	1.13	333		Pg	15 02 08.6	-0.3
MMU	Miners Mountai	1.38	37		Pn	15 02 12.2	-1.1
MSU	Marysvale	1.41	5	Pn	Pn	15 02 13.4	-0.3
TCRU	Three Creeks R	1.50	357		Pb	15 02 15.7	0.0
HMU	Henry Mountain	1.52	56		Pn	15 02 15.1	-0.2
WUAZ	Wupatki	1.77	153	Pn	Pn	15 02 18.7	+0.2
PRN	Pahroc Range	2.18	279	Pn	Pn	15 02 24.4	+0.2
PRN				IAML		15 03 00.3	
	comp=N,21nm,0.8s						
PRN				IAML		15 03 04.8	
	comp=E,23nm,0.6s						
SHPR	Sheep Range	2.34	256	Pn	Pn	15 02 26.4	+0.1
SHPR				IAML		15 02 59.5	
	comp=E,16nm,0.5s						
TMUT	Trail Mountain	2.37	22		Pn	15 02 27.6	+0.8
TMUT				IAML		15 03 06.1	
	comp=N,31nm,0.6s						
TMUT				IAML		15 03 06.4	
	comp=E,28nm,0.6s						
PV10	Paradox Valley	2.91	63	Pn	Pn	15 02 34.1	-0.2
PV13	Radium Mtn., P	2.99	68	Pn	Pn	15 02 35.1	-0.3
PV11	David Mesa, Pa	3.00	66	Pn	Pn	15 02 35.5	0.0
MVCO	Mesa Verde	3.08	87	Pn	Pn	15 02 37.0	+0.5
MVCO				IAML		15 03 30.3	
	comp=E,32nm,0.5s						
MVCO				IAML		15 03 37.6	
	comp=E,30nm,0.8s						
TPNV	Topopah Spring	3.13	268		Pn	15 02 37.0	-0.2
TPNV				IAML		15 03 28.0	
	comp=E,8.0nm,0.6s						
TPH	Tonopah	3.99	286	Pn	Pn	15 02 49.1	-0.1
S22A	4UR Ranch, Cre	4.44	80	Pn	Pn	15 02 55.8	+0.4
S22A				IAML		15 04 18.9	
	comp=N,6.3nm,0.1s						
S22A				IAML		15 04 28.3	
	comp=E,5.9nm,2.4s						
LHV	Little Huntoon	5.02	285	Pn	Pn	15 03 02.9	-0.1

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*SOME **22** 15:02:46.7,44°.25N×83°.15E,h10^{km}*

*NNC **22** 15:02:52.0±2.3,44°.45N×82°.84E,h0^{km},mb2.7,mpv2.3, Error ellipse: s-maj=23.6km s-min=9.6km az=124.0*

ISC 22 15:02:49.7±1.7,**44°.29N**±0°.08×**83°.06E**±0°.08,**h17**^{km}**,n14, σ1^{s}.39**/20**,3C-3D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	2.13	248	*e*P	Pb	15 03 27.6	-0.4
	0.8nm,0.1s						
KTMS				*e*S	Sg	15 03 57.0	-1.3
	8.9nm,0.0s						
KTMS	Ketmen	2.13	248	Pg	Pb	15 03 27.6	-0.4
	0.8nm,0.4s						
KTMS				Lg	Lg	15 03 57.0	
	5.4nm,0.3s						
DJR	Jarkent	2.35	272	*e*P	Pb	15 03 32.2	+0.6
	0.9nm,0.1s						
DJR				*e*S	Sg	15 04 05.0	-0.2
	2.5nm,0.1s						
DJR	Jarkent	2.35	272	Pg	Pb	15 03 32.4	+0.8
	0.9nm,0.3s						
DJR				Lg	Lg	15 04 05.0	
	2.5nm,0.2s						
MK31	Makanchi Array	2.56	348	⇓Pn	Pb	15 03 33.4	-1.8
	0.3nm,0.3s,baz=172,slow=16,SNR=9.9						
MK31				⇑Lg	Lg	15 04 04.2	
	2.1nm,0.6s,baz=169,slow=30,SNR=6.5						
MAKZ	Makanchi	2.63	344	⇓Pn	Pn	15 03 32.8	+1.4
	1.1nm,0.8s						
MAKZ				⇑Lg	Lg	15 04 07.7	
	0.5nm,0.5s						
PDGK	Podgornoye	2.76	251	Pg	Pb	15 03 38.4	-0.2
	0.5nm,0.7s						
PDGK				Lg	Lg	15 04 15.2	
	1.5nm,0.6s						
PDGK	Podgornoye	2.76	251	⇑Pn	Pb	15 03 38.8	+0.2
	0.7nm,0.5s						
PDGK				⇓Lg	Lg	15 04 17.3	
	2.0nm,0.5s						
KAPS	Kapalarasan	2.82	292	*e*P	Pb	15 03 40.4	+0.8
	0.5nm,0.0s						
KAPS				*e*S	Sg	15 04 18.8	-1.5
	2.9nm,0.1s						
KAPS	Kapalarasan	2.82	292	Pg	Pb	15 03 39.6	-0.1
	1.0nm,0.8s						
KAPS				Lg	Lg	15 04 17.3	
	2.9nm,0.3s						
UZB	Uzynbulak	3.14	250	*e*P	Pb	15 03 45.7	+0.5
	1.6nm,0.1s						
UZB				*e*S	Sg	15 04 27.8	-2.8
	1.9nm,0.0s						
UZB	Uzynbulak	3.14	250	Pg	Pb	15 03 45.7	+0.5
	1.7nm,0.3s						
UZB				Lg	Lg	15 04 27.8	
	1.9nm,0.7s						
KPKS	Kokpek	3.27	257	*e*P	Pb	15 03 48.0	+0.7
	1.9nm,0.0s						
KPKS				*e*S	Sg	15 04 31.9	-2.8
	3.5nm,0.1s						
ZSN	Zaisan	3.41	21	*e*P	Pb	15 03 48.6	-1.0
	1.3nm,0.0s						
ZSN				*e*S	Sb	15 04 32.7	+2.0
	1.8nm,0.1s						

IDC 22 15:13:51.6±2.5,**11°.43S**×**115°.73E,h0**^{km}**,mb3.2**/2**, mbtmp3.3**/3**,ML3.3**/1**,Error ellipse: s-maj=119.9km s-min=28.0km az=46.0,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.80	118	P	P	15 18 24.5	+0.7
	0.1nm,0.3s,baz=292,slow=11,SNR=9.8						
	0.5nm,0.5s						
ASAR	Alice Springs	21.14	128	P	P	15 18 37.5	-0.9
	0.2nm,0.5s,baz=303,slow=9.1,SNR=4.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	65.23	335	P	P	15 24 35.0	+0.1
	0.4nm,0.5s,baz=145,slow=8.2,SNR=5.7						
	0.4nm,0.5s						

IDC 22 15:13:54.2±2.5,**8°.42S**×**110°.56E,h0**^{km}**,mb3.8**/3**, mbtmp3.8**/3**,Error ellipse: s-maj=116.8km s-min=51.6km az=37.0,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.70	119	P	P	15 19 26.2	-0.2
	0.6nm,0.6s,baz=292,slow=12,SNR=20						
WRA				PcP	PcP	15 22 56.2	-0.8
	0.5nm,0.9s,baz=286,slow=2.1,SNR=1.6						
	0.6nm,0.6s						
ASAR	Alice Springs	27.01	127	P	P	15 19 38.9	+0.6
	0.8nm,0.8s,baz=301,slow=8.9,SNR=8.7						
ASAR				PcP	PcP	15 23 00.1	0.0
	0.8nm,0.7s,baz=282,slow=3.7,SNR=10						
	0.8nm,0.8s						
STKA	Stephens Creek	37.09	133	P	P	15 21 05.9	-0.6
	2.4nm,0.8s,baz=280,slow=9.2,SNR=4.0						
	2.4nm,0.8s						

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*NEIC **22** 15:27:07±1.0,36°.54N±0°.07×70°.73E±0°.10,h194^{km}±6^{km}, mb4.4/4,Error ellipse: s-maj=11.5km s-min=10.2km az=108.0*

*IDC **22** 15:27:09.2±16.0,36°.15N×71°.22E,h252^{km}±198^{km}, mb2.9/4,mbtmp3.5/5,MS3.2/1,Error ellipse: s-maj=107.6km s-min=59.1km az=94.0*

*NNC **22** 15:27:09.8±4.8,37°.06N×71°.09E,h0^{km},mb4.1,mpv3.7, Error ellipse: s-maj=42.0km s-min=37.8km az=75.0*

ISC 22 15:27:06.1±0.7,**36°.57N**±0°.07×**70°.99E**±0°.07,**h188**^{km}**,n38, σ2^{s}.28**/41**,mb4.2**/9**,5C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.48	348		Pn	15 27 50.4	+1.2
CHGR	Chuyangaron	2.54	326	Pn	Pn	15 27 50.2	+0.4
KBL	Kabul	2.57	219	Pn	Pn	15 27 49.8	-0.6
DRK	Karamyk	2.97	12		Pn	15 27 57.3	+2.2
NIL	Nilore	3.45	147	Pn	Pn	15 28 01.8	+1.0
BTK	Batken	3.48	358	Pn	Pn	15 28 03.4	+2.3
KSH	Kashi	4.91	52	Pn	Pn	15 28 17.4	-1.8
KSH				Sn	Sn	15 29 09.6	-7.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				smax	smax		
	comp=N,40nm,0.6s						
KSH				smax	smax		
	comp=E,29nm,0.5s						
AML	Almayashu	5.93	20	P	Pn	15 28 34.4	+1.7
	SNR=47						
UCH	Uchtor	6.27	25	P	Pn	15 28 39.0	+1.8
	SNR=14						
EKS2	Erkin-Say	6.45	19	P	Pn	15 28 41.0	+1.9
	SNR=9.6						
KK31	Karatay Array	6.54	357	Pn	Pn	15 28 40.8	+0.7
KK31	Karatay Array	6.54	357	P	Pn	15 28 41.1	+1.0
	comp=E,2.1nm,0.3s,baz=194,slow=15,SNR=112						
KK31				⇓S	Sn	15 29 51.2	-3.3
	comp=E,11nm,0.6s,baz=180,slow=20,SNR=14						
KKAR	Karatay Array	6.54	357		Pn	15 28 40.9	+0.7
KKAR	Karatay Array	6.54	357	Pn	Pn	15 28 40.9	+0.7
AAK	Ala-Archa	6.63	23	P	Pn	15 28 43.2	+1.7
	SNR=7.7						
AAK	Ala-Archa	6.63	23	Pn	Pn	15 28 43.3	+1.7
CHMS	Chumysh	7.04	23	⇑P	Pn	15 28 47.9	+1.1
	comp=E,2.7nm,0.5s						
CHMS				⇑S	Sn	15 30 06.4	-0.1
	comp=E,3.2nm,0.6s						
USP	Ospenovka	7.21	21	P	Pn	15 28 50.8	+1.8
	SNR=7.3						
TKM2	Tokmak 2	7.26	28	P	Pn	15 28 51.9	+2.0
	SNR=18						
TKM2	Tokmak 2	7.26	28	⇑P	Pn	15 28 51.7	+1.8
	comp=E,5.7nm,0.5s						
TKM2				⇑S	Sn	15 30 08.7	-3.4
	comp=E,2.2nm,0.6s						
SMLA	Simla	7.47	135	*e*P	Pn	15 28 52.5	+0.1
SMLA				*e*S	Sn	15 30 12.9	-3.9
SMLA				IAML		15 30 15.4	
	comp=E,55nm,0.1s						
SMLA				IAML		15 30 15.5	
	comp=N,55nm,0.3s						
MDOK	Medeo	8.06	33	⇑P	Pn	15 29 00.7	+0.4
	comp=N,1.1nm,0.4s						
MKAR	Makanchi Array	13.24	36	P	P	15 30 10.8	+0.7
	comp=N,0.5nm,0.8s,baz=222,slow=12,SNR=3.6						
WMQ	Urumqi	14.66	55	*e*P	P	15 30 31.6	+5.6
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
ABKAR	Akbulak array	15.02	331	P	Pn	15 30 28.9	0.0
ZALV	Zalesovo Beam	19.85	25	P	Pn	15 31 24.6	-1.9
	comp=Z,0.7nm,0.4s,baz=220,slow=14,SNR=4.3						
	comp=Z,0.7nm,0.4s						
GTA	Gaotai	22.85	74	*e*P	P	15 31 54.3	+1.1
GTA				sP	PP	15 32 47.0	-2.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LZH	Lanzhou	26.41	81	⇓P	P	15 32 31.1	+5.7
LZH				pP	pP	15 33 09.1	+4.1
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
PZH	PanZhiHua	27.96	102	P	P	15 32 43.1	+3.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.8s						
BRTR	Keskin Array B	29.41	288	LR	LR	15 48 34.5	
	comp=Z,46nm,20.9s,baz=302,slow=43						
HHC	Hu-ho-hao-te	31.75	70	*e*P	P	15 33 13.4	+0.9
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
FINES	FINESS Array B	37.42	326	P	P	15 34 01.5	+0.8
	comp=Z,0.7nm,0.8s,baz=107,slow=9.3,SNR=1.1						
	comp=Z,0.7nm,0.8s						
NOA	NORSAR Array B	44.32	323	P	P	15 34 57.7	+0.6
	comp=Z,0.3nm,0.6s,baz=95,slow=7.8,SNR=3.3						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	65.71	269	P	P	15 37 28.4	-2.5
	comp=Z,0.5nm,0.5s,baz=49,slow=5.4,SNR=7.2						
	comp=Z,0.5nm,0.5s						
TORD	Torodi Ar. Bea	65.71	269	P	P	15 37 29.5	-1.4

ILULI	**Ilulissat**	**66.33**	**341**	P	**P**	**15 37 32.7**	**-1.2**
TOLK	**Toolik Lake Re**	**70.86**	**15**	P	**P**	**15 38 03.3**	**+1.2**
TOLK				IAmb	IAmb	15 38 23.1	
	comp=Z,6.3nm,1.4s						
C36M	**Paulatuk**	**73.81**	**6**	P	**P**	**15 38 20.3**	**+0.9**
C36M				IAmb	IAmb	15 38 47.9	
	comp=Z,14nm,1.2s						

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*IDC **22** 15:31:57.5±7.2, 25°.76S×129°.83E, h0^{km}, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=75.1km s-min=40.9km az=82.0*

*AUST **22** 15:31:59.9±0.8, 25°.62S×129°.89E, h0^{km}, Error ellipse: s-maj=9.9km s-min=8.2km az=3.0*

ISC 22 15:32:01.0±1.1**, 25°.63S**±0°.06×**129°.93E**±0°.05**, h10^{km}, n9, σ2^{s}.07**/17**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.59**	**291**	P	**Pn**	**15 32 29.3**	**0.0**
	baz=1.6						
WRKA				S	**Sn**	**15 32 50.5**	**+0.5**
	baz=1.6						
ASPA	**Alice Springs**	**4.11**	**62**	P	**Pn**	**15 33 05.0**	**+1.1**
	baz=4.1						
ASPA				S	**Sn**	**15 33 53.8**	**+1.7**
	baz=4.1						
ASAR	**Alice Springs**	**4.11**	**62**	Pn	**Pn**	**15 33 04.8**	**+0.8**
	0.9nm,0.3s,baz=243,slow=11,SNR=60						
ASAR				Pg	**Pb**	**15 33 14.6**	**+1.1**
	2.2nm,0.3s,baz=241,slow=16,SNR=27						
ASAR				Sn	**Sn**	**15 33 53.3**	**+1.1**
	1.3nm,0.3s,baz=241,slow=14,SNR=5.7						
ASAR				Lg	Lg	15 34 05.4	
	5.1nm,0.3s,baz=243,slow=26,SNR=10						
	2.0nm,0.4s						
FORT	**Forrest**	**5.39**	**197**	P	**Pn**	**15 33 23.5**	**+2.0**
	baz=5.5						
FORT				S	**Sn**	**15 34 24.4**	**+0.8**
	baz=5.5						
OOD	**Oodnadatta**	**5.58**	**114**	P	**Pn**	**15 33 25.5**	**+1.3**
	baz=5.6						
MULG	**Mulgathing**	**5.90**	**143**	P	**Pn**	**15 33 30.8**	**+2.3**
	baz=6.0						
MULG				S	**Sn**	**15 34 36.2**	**0.0**
	baz=6.0						
WRA	**Warramunga Arr**	**6.97**	**37**	Pn	**Pn**	**15 33 43.6**	**+0.4**
	0.4nm,0.3s,baz=218,slow=14,SNR=37						
WRA				Sn	**Sn**	**15 35 01.5**	**-1.1**
	0.7nm,0.3s,baz=215,slow=25,SNR=2.2						
WRA				Lg	Lg	15 35 34.5	
	1.3nm,0.3s,baz=215,slow=29,SNR=7.9						
	1.2nm,0.6s						
WB2	**Warramunga Arr**	**6.98**	**37**	P	**Pn**	**15 33 43.6**	**+0.3**
	baz=7.0						
WB2				S	**Sn**	**15 35 00.9**	**-1.9**
	baz=7.0						
STKA	**Stephens Creek**	**11.97**	**124**	Pn	Pn	15 34 48.4	-3.4
	0.4nm,0.3s,baz=303,slow=15,SNR=4.0						
STKA				Sn	**Sn**	**15 36 59.5**	**-6.0**
	0.5nm,0.3s,baz=262,slow=7.3,SNR=3.2						
	1.1nm,0.4s						

JMA 22 15:48:05.3±0.4**, 25°N**±2°×**123°.5E**±0°.6**, h20^{km}, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.69**	**161**	P	Pb	15 48 18.4	-0.2
IRIF				*e*S	Sb	15 48 27.4	-0.3
JIJ	**Ishigaki jima**	**0.87**	**136**	P	Pb	15 48 21.1	-0.6
JIJ				*e*S	Sb	15 48 32.1	-0.7
JKRS	**Kuro-shima**	**0.89**	**147**	P	Pb	15 48 22.2	+0.2

TAP 22 15:48:11.5, 24°.23N×121°.71E, h11^{km}, ML2.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**19**	P	Pg	15 48 14.7	+0.7
	baz=24						
EHP				*e*S	Sg	15 48 16.8	+1.0
	baz=24						
ETL	**Fush Village**	**0.11**	**228**	P	Pb	15 48 15.1	-0.6
	baz=227						
ETL				S	Sg	15 48 17.4	+1.0
	baz=227						
NACB	**Ninganchiao**	**0.12**	**241**	*i* P	Pb	15 48 15.3	-0.6
	baz=241						
NACB				S	Sg	15 48 17.7	+1.0
	baz=241						
TWD	**Chiawan**	**0.19**	**215**	P	Pg	15 48 16.0	+0.5
	baz=213						
TWD				S	Sg	15 48 19.1	+0.7
	baz=213						
ENA	**Nanau**	**0.20**	**8**	P	Pb	15 48 16.5	-0.7
	baz=9.0						
ENA				*e*S	Sg	15 48 19.7	+1.1
	baz=9.0						
ETLH	**Xiulin Townshi**	**0.21**	**263**	*e*P	Pb	15 48 17.0	-0.5
	baz=262						
ETLH				*e*S	Sg	15 48 20.6	+1.4
	baz=262						
EWUT	**Wuta**	**0.22**	**16**	P	Pb	15 48 16.9	-0.7
	baz=15						
EWUT				*e*S	Sg	15 48 20.4	+1.1
	baz=15						
HWA	**Hwalien**	**0.27**	**201**	*e*P	Pb	15 48 18.6	+0.1
	baz=199						
HWA				*e*S	Sb	15 48 24.6	+1.5
	baz=199						
LATG	**Datong**	**0.34**	**330**	P	Pb	15 48 19.6	-0.2
	baz=330						
LATG				S	Sb	15 48 24.8	-0.5
	baz=330						
NNSB	**Datong**	**0.36**	**303**	P	Pb	15 48 20.0	0.0
	baz=302						
NNSB				*e*S	Sb	15 48 25.2	-0.5
	baz=302						
NNS	**Nan Shan**	**0.37**	**304**	P	Pb	15 48 20.2	0.0
	baz=303						
NNS				*e*S	Sb	15 48 25.7	-0.4
	baz=303						
TWC	**Suao**	**0.39**	**18**	*e*P	Pb	15 48 20.1	-0.5
	baz=19						
TWC				*e*S	Sg	15 48 25.4	+0.8
	baz=19						
NDS	**Dongshan**	**0.40**	**0**	*e*P	Pb	15 48 20.4	-0.2
NDS				*e*S	Sb	15 48 26.0	-0.7
WHF	**Hehuan Shan**	**0.42**	**258**	*e*P	Pg	15 48 20.4	+0.5
	baz=257						
WHF				*e*S	Sg	15 48 26.6	+1.1
	baz=257						
ENTT	**Nioudou**	**0.43**	**342**	*e*P	Pb	15 48 21.2	+0.1
	baz=342						
ENTT				*e*S	Sb	15 48 27.5	-0.1
	baz=342						
FUSS	**Fushou**	**0.43**	**272**	*e*P	Pb	15 48 22.0	+0.7
	baz=271						
FUSS				*e*S	Sb	15 48 27.6	-0.2
	baz=271						
TWE	**Neicheng**	**0.49**	**355**	*e*P	Pb	15 48 22.2	+0.1
	baz=356						
TWE				*e*S	Sb	15 48 29.1	-0.2
	baz=356						
ESL	**Shilin**	**0.49**	**212**	*e*P	Pg	15 48 21.3	+0.2
	baz=210						
ESL				*e*S	Sb	15 48 29.4	0.0
	baz=210						
TDCB	**Techi**	**0.51**	**272**	*e*P	Pn	15 48 24.0	-0.8
	baz=272						
TDCB				*e*S	Sb	15 48 29.7	-0.3
	baz=272						
CHGB	**Renai**	**0.52**	**251**	*e*P	Pb	15 48 22.8	0.0
	baz=250						
CHGB				*e*S	Sb	15 48 30.3	-0.2
	baz=250						
YHNB	**Yeheng**	**0.53**	**325**	*e*P	Pb	15 48 23.4	+0.5
	baz=324						
YHNB				*e*S	Sb	15 48 30.5	-0.2
	baz=324						
FUSB	**Fushanzhiwuyua**	**0.54**	**348**	*e*P	Pb	15 48 23.3	+0.3
	baz=347						
FUSB				*e*S	Sb	15 48 30.1	-0.6
	baz=347						
NSK	**Sanguang**	**0.55**	**324**	*e*P	Pb	15 48 23.7	+0.5
	baz=324						
NSK				*e*S	Sb	15 48 31.1	0.0
	baz=324						
OWD	**Renai**	**0.56**	**241**	*e*P	Pb	15 48 23.6	0.0
	baz=240						
OWD				*e*S	Sb	15 48 31.6	0.0
	baz=240						
NWLT	**Wulai**	**0.57**	**341**	*e*P	Pb	15 48 24.3	+0.6
	baz=340						
NWLT				*e*S	Sb	15 48 31.9	+0.1
	baz=340						
WUSB	**Renai**	**0.59**	**246**	*e*P	Pb	15 48 23.9	-0.1
	baz=246						
WUSB				*e*S	Sb	15 48 32.4	-0.2
	baz=246						
EGFH	**Guangfu**	**0.62**	**205**	*e*P	Pb	15 48 24.7	+0.3
	baz=204						
EGFH				*e*S	Sb	15 48 34.5	+1.4
	baz=204						
NTC	**Toucheng**	**0.63**	**10**	*e*P	Pb	15 48 24.6	+0.1
	baz=9.0						
NTC				*e*S	Sb	15 48 33.3	0.0
	baz=9.0						
NFF	**Wufeng Townshi**	**0.67**	**306**	*e*P	Pn	15 48 26.6	-0.5
	baz=306						
NFF				*e*S	Sb	15 48 35.3	+0.6
	baz=306						
WHP	**Taichung City**	**0.70**	**274**	*e*P	Pn	15 48 28.4	+0.9
	baz=273						
WHP				*e*S	Sb	15 48 36.8	+1.2
	baz=273						
VWDT	**VWDT**	**0.71**	**228**	*e*P	Pb	15 48 26.4	+0.5
	baz=227						
VWDT				*e*S	Sb	15 48 36.4	+0.7
	baz=227						
TIPB	**Shuangxi**	**0.74**	**8**	*e*P	Pb	15 48 26.9	+0.4
	baz=7.0						
TIPB				*e*S	Sb	15 48 36.2	-0.5
	baz=7.0						
WCS	**Beigang Elemen**	**0.75**	**257**	*e*P	Pn	15 48 27.7	-0.4
	baz=256						
WCS				*e*S	Sb	15 48 38.2	+1.3
	baz=256						
LIOB	**Emei**	**0.76**	**303**	*e*P	Pn	15 48 29.1	+0.9
	baz=302						
LIOB				*e*S	Sn	15 48 39.1	-0.5
	baz=302						
NSTT	**Nanjuang**	**0.76**	**301**	*e*P	Pn	15 48 27.9	-0.3
	baz=301						
NSTT				*e*S	Sb	15 48 38.3	+1.2
	baz=301						
HGSD	**Ruisui**	**0.79**	**200**	*e*P	Pn	15 48 28.1	-0.4
	baz=199						
HGSD				*e*S	Sn	15 48 41.3	+1.0
	baz=199						
EHY	**Hungye**	**0.81**	**206**	*e*P	Pb	15 48 27.6	0.0
	baz=205						
EHY				*e*S	Sb	15 48 39.0	+0.5
	baz=205						
TWB1	**Santiao Chiao**	**0.81**	**18**	*e*P	Pb	15 48 27.7	+0.1
	baz=18						
TWB1				*e*S	Sb	15 48 38.3	-0.3
	baz=18						
SMLT	**Sun Moon Lake**	**0.82**	**245**	*e*P	Pn	15 48 28.9	-0.2
	baz=244						
SMLT				*e*S	Sb	15 48 40.0	+1.0
	baz=244						
SSLB	**Suanglung**	**0.82**	**238**	*e*P	Pb	15 48 28.2	+0.3
	baz=237						
SSLB				*e*S	Sb	15 48 38.9	-0.1
	baz=237						
NWF	**Wu-fen Shan**	**0.84**	**4**	*e*P	Pn	15 48 29.1	-0.3
	baz=4.0						
NWF				*e*S	Sb	15 48 40.2	+0.7
	baz=4.0						
SXI1	**Grass Mountain**	**0.87**	**10**	*e*P	Pn	15 48 29.4	-0.4
	baz=9.0						
SXI1				*e*S	Sn	15 48 41.6	-0.9
	baz=9.0						
YM01	**YM01**	**0.92**	**352**	*e*P	Pn	15 48 31.1	+0.6
	baz=351						
YM01				*e*S	Sn	15 48 43.1	-0.5
	baz=351						
YULB	**Yu-li**	**0.92**	**205**	*e*P	Pg	15 48 28.7	-0.6
	baz=204						
YULB				*e*S	Sb	15 48 41.8	0.0
	baz=204						
YUS	**Yu-Shan**	**1.02**	**223**	*e*P	Pn	15 48 32.1	-0.1
	baz=222						
YUS				*e*S	Sn	15 48 46.2	-0.5
	baz=222						
ALS	**Alishan**	**1.10**	**229**	*e*P	Pn	15 48 33.6	+0.5
	baz=228						
ALS				*e*S	Sn	15 48 49.5	+0.9
	baz=228						

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*SOME **22** 15:51:18.0, 40°.20N×75°.83E, h15^{km}*

*NNC **22** 15:51:19.2±1.9, 40°.19N×75°.89E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=14.5km s-min=10.8km az=162.0*

*KRNET **22** 15:51:19.1±0.1, 40°.12N×75°.90E, mb3.9*

ISC 22 15:51:15.7±0.9**, 40°.01N**±0°.04×**75°.89E**±0°.02**, h10^{km}, n80, σ2^{s}.14**/116**, 31C-26D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.50**	**172**	Pg	Pn	15 51 36.3	+7.2
KSH				Sg		15 51 49.3	
KSH				pmax	pmax		
	comp=Z,490nm,0.6s						
KSH				smax	smax		
	comp=N,700nm,0.6s						
KSH				smax	smax		
	comp=E,880nm,0.6s						
ARLS	**Aral**	**2.19**	**328**	⇓*e*P	**Pg**	**15 51 57.2**	**-0.6**
	baz=26						
ARLS				⇓*i*S	**Sg**	**15 52 24.9**	**-1.4**
	baz=26						
ULHL	**Ulahol**	**2.25**	**7**	P	**Pg**	**15 51 58.1**	**-0.7**
	SNR=148						
ULHL	**Ulahol**	**2.25**	**7**	⇓*i*P	**Pg**	**15 51 57.7**	**-1.1**
	baz=7.0						
ULHL				⇓*e*S	**Sg**	**15 52 25.6**	**-2.4**
	baz=7.0						
KDJ	**Kajisay**	**2.33**	**24**	⇑*e*P	**Pg**	**15 51 59.1**	**-1.3**
	baz=26						
KDJ				⇑*i*S	**Sg**	**15 52 27.9**	**-2.7**
	baz=26						
OHH	**Osh**	**2.43**	**283**	⇑*e*P	**Pg**	**15 52 01.5**	**-0.8**
	baz=81						
OHH				⇑*e*S	**Sg**	**15 52 32.7**	**-1.1**
	baz=81						
UCH	**Uchtor**	**2.44**	**335**	P	**Pg**	**15 52 00.9**	**-1.7**
	SNR=398						
UCH	**Uchtor**	**2.44**	**335**	⇓*i*P	**Pg**	**15 52 00.8**	**-1.8**
	baz=34						
UCH				⇓*e*S	**Sg**	**15 52 31.4**	**-2.9**
	baz=34						
BOOM	**Boomskoye usch**	**2.48**	**1**	⇓*i*P	**Pg**	**15 52 00.9**	**-2.3**
	baz=1.0						
BOOM				⇓*i*S	**Sg**	**15 52 31.6**	**-3.7**
	baz=1.0						
AML	**Almayashu**	**2.69**	**323**	P	**Pb**	**15 52 04.7**	**+0.5**
	SNR=22						
KBK	**Karagaybulak**	**2.73**	**345**	P	**Pg**	**15 52 05.8**	**-2.4**
	SNR=24						
KBK	**Karagaybulak**	**2.73**	**345**	⇑*i*P	**Pb**	**15 52 04.5**	**-0.3**
	baz=44						
KBK				⇑*e*S	**Sb**	**15 52 37.9**	**-0.6**
	baz=44						
AAK	**Ala-Archa**	**2.83**	**339**	P	**Pb**	**15 52 06.5**	**+0.1**
	SNR=8.0						
AAK	**Ala-Archa**	**2.83**	**339**	⇑*e*P	**Pb**	**15 52 06.0**	**-0.4**
	baz=38						
AAK				⇑*e*S	**Sb**	**15 52 39.9**	**-1.2**
	baz=38						
TKM2	**Tokmak 2**	**2.91**	**356**	P	**Pb**	**15 52 07.9**	**0.0**
	SNR=102						
TKM2	**Tokmak 2**	**2.91**	**356**	⇑Pn	**Pb**	**15 52 07.6**	**-0.3**
	comp=E,66nm,0.6s						
TKM2				⇑Lg	Lg	15 52 47.4	
	comp=E,264nm,1.1s						
TKM2	**Tokmak 2**	**2.91**	**356**	⇑*e*P	**Pb**	**15 52 06.8**	**-1.1**
	baz=55						
TKM2				⇑*e*S	**Sb**	**15 52 42.0**	**-1.7**
	baz=55						
FRU1	**Bishkek**	**2.95**	**342**	⇓*i*P	**Pb**	**15 52 07.9**	**-0.6**
	baz=41						
FRU1				⇓*e*S	**Sb**	**15 52 43.3**	**-1.3**
	baz=41						
KST	**Kastek**	**3.03**	**1**	*e*P	**Pg**	**15 52 12.8**	**-1.0**
	comp=E,25nm,0.8s						
KST				*e*S	**Sg**	**15 52 52.8**	**-0.2**
	comp=E,215nm,0.7s						
KST	**Kastek**	**3.03**	**1**	Pg	**Pb**	**15 52 09.5**	**-0.3**
	comp=E,47nm,0.6s						
KST				Lg	Lg	15 52 52.8	
	comp=E,215nm,0.7s						
ANVS	**Anan'yevo**	**3.07**	**25**	⇓*i*P	**Pb**	**15 52 09.4**	**-1.2**
	baz=26						
ANVS				⇓*i*S	**Sb**	**15 52 46.2**	**-2.1**
	baz=26						
EKS2	**Erkin-Say**	**3.09**	**330**	P	**Pb**	**15 52 10.6**	**-0.2**
	SNR=33						
EKS2	**Erkin-Say**	**3.09**	**330**	⇑*e*P	**Pb**	**15 52 09.5**	**-1.3**
	baz=28						
EKS2				⇑*i*S	**Sb**	**15 52 46.3**	**-2.3**
	baz=28						
CHMS	**Chumysh**	**3.10**	**344**	P	**Pb**	**15 52 09.4**	**-1.7**
	SNR=27						
CHMS	**Chumysh**	**3.10**	**344**	⇑Pn	**Pb**	**15 52 10.1**	**-1.0**
	comp=E,27nm,0.5s						
CHMS				⇑Lg	Lg	15 52 53.1	
	comp=E,41nm,0.5s						
CHMS	**Chumysh**	**3.10**	**344**	⇓*e*P	**Pb**	**15 52 09.5**	**-1.5**
	baz=44						
CHMS				⇓*e*S	**Sb**	**15 52 46.3**	**-2.6**
	baz=44						
PRZ	**Przheval'sk**	**3.11**	**37**	⇑*e*P	**Pb**	**15 52 10.1**	**-1.2**
	baz=38						
PRZ				⇑*e*S	**Sb**	**15 52 47.3**	**-2.0**
	baz=38						
TNSS	**Tian-Shan**	**3.12**	**14**	*e*P	**Pg**	**15 52 14.2**	**-1.4**
	comp=E,29nm,0.4s						
TNSS				*e*S	**Sg**	**15 52 55.1**	**-1.0**
	comp=E,36nm,0.6s						
TNSS	**Tian-Shan**	**3.12**	**14**	Pg	**Pb**	**15 52 10.6**	**-1.1**
	comp=E,48nm,0.6s						
TNSS				Lg	Lg	15 52 54.3	
	comp=E,36nm,0.6s						
MTBS	**Maitube**	**3.14**	**7**	*e*P	**Pg**	**15 52 14.4**	**-1.6**
	comp=E,67nm,0.6s						
MTBS				*e*S	**Sg**	**15 52 55.6**	**-1.0**
	comp=E,89nm,0.6s						
MTBS	**Maitube**	**3.14**	**7**	Pg	**Pb**	**15 52 11.0**	**-0.7**
	comp=E,67nm,0.6s						
MTBS				Lg	Lg	15 52 55.2	
	comp=E,89nm,0.6s						
DRK	**Karamyk**	**3.20**	**262**	⇑*i*P	**Pb**	**15 52 12.4**	**-0.4**
	baz=60						
DRK				⇑*i*S	**Sb**	**15 52 51.8**	**-0.1**
	baz=60						
MDOK	**Medeo**	**3.27**	**15**	*e*P	**Pg**	**15 52 16.5**	**-1.8**
	comp=E,33nm,0.8s						
MDOK				*e*S	**Sg**	**15 52 58.6**	**-2.0**
	comp=E,128nm,1.0s						
MDOK	**Medeo**	**3.27**	**15**	⇑Pn	**Pb**	**15 52 12.1**	**-1.7**
	comp=E,27nm,0.6s						
MDOK				⇑Lg	Lg	15 52 57.7	
	comp=E,142nm,0.9s						
MDOK	**Medeo**	**3.27**	**15**	Pg	**Pb**	**15 52 12.3**	**-1.5**
	comp=E,21nm,0.8s						
MDOK				Lg	Lg	15 52 57.5	
	comp=E,128nm,1.0s						
AAA	**Alma-Ata**	**3.29**	**13**	*e*P	**Pg**	**15 52 17.0**	**-1.7**
	comp=E,20nm,0.3s						
AAA				*e*S	**Sg**	**15 53 00.0**	**-1.2**
	comp=E,129nm,0.7s						
AAA	**Alma-Ata**	**3.29**	**13**	Pg	**Pb**	**15 52 13.3**	**-0.8**
	comp=E,37nm,0.4s						
AAA				Lg	Lg	15 52 58.8	
	comp=E,129nm,0.7s						
KNDC	**Almaty**	**3.30**	**14**	⇓Pn	**Pb**	**15 52 13.2**	**-1.3**
	comp=E,74nm,0.8s						
KNDC				⇓Lg	Lg	15 53 00.8	
	comp=E,171nm,0.5s						
MRKS	**Merke**	**3.39**	**325**	*e*P	**Pg**	**15 52 20.8**	**+0.2**
	comp=E,30nm,0.7s						
MRKS				*e*S	**Sg**	**15 53 06.0**	**+1.5**
	comp=E,64nm,0.5s						
MRKS	**Merke**	**3.39**	**325**	Pg	**Pb**	**15 52 16.2**	**+0.3**
	comp=E,8.3nm,0.5s						
MRKS				Lg	Lg	15 53 03.9	
	comp=E,64nm,0.5s						
USP	**Ospenovka**	**3.41**	**343**	P	**Pb**	**15 52 14.8**	**-1.5**
	SNR=20						
USP	**Ospenovka**	**3.41**	**343**	⇓*i*P	**Pb**	**15 52 13.9**	**-2.4**
	baz=42						
USP				⇓*e*S	**Sb**	**15 52 53.7**	**-4.2**
	baz=42						
SGDS	**Sogindy**	**3.56**	**345**	*e*P	**Pg**	**15 52 21.8**	**-2.2**
	comp=E,11nm,0.5s						
SGDS				*e*S	**Sg**	**15 53 08.0**	**-2.2**
	comp=E,49nm,0.4s						
SGDS	**Sogindy**	**3.56**	**345**	Pg	**Pb**	**15 52 18.8**	**-0.1**
	comp=E,11nm,0.5s						
SGDS				Lg	Lg	15 53 08.0	
	comp=E,49nm,0.4s						
SATY	**Saty**	**3.58**	**31**	*e*P	**Pg**	**15 52 22.3**	**-2.1**
	comp=E,28nm,0.8s						
SATY				*e*S	**Sg**	**15 53 09.0**	**-1.8**
	comp=E,107nm,0.8s						
SATY	**Saty**	**3.58**	**31**	Pg	**Pb**	**15 52 19.4**	**+0.2**
	comp=E,28nm,0.8s						
SATY				Lg	Lg	15 53 09.0	
	comp=E,107nm,0.8s						
KRBS	**Karabastau**	**3.68**	**358**	*e*P	**Pg**	**15 52 23.8**	**-2.5**
	comp=E,0.1nm,0.4s						
KRBS				*e*S	**Sg**	**15 53 11.6**	**-2.4**
	comp=E,100nm,0.6s						
KRBS	**Karabastau**	**3.68**	**358**	Pg	**Pb**	**15 52 20.6**	**-0.3**
KRBS				Lg	Lg	15 53 11.6	
	comp=E,100nm,0.6s						
ZHN	**Zhinishke**	**3.69**	**30**	*e*P	**Pg**	**15 52 24.2**	**-2.2**
	comp=E,8.9nm,0.2s						
ZHN				*e*S	**Sg**	**15 53 11.7**	**-2.4**
	comp=E,36nm,0.7s						
ZHN	**Zhinishke**	**3.69**	**30**	Pg	**Pb**	**15 52 20.9**	**-0.1**
	comp=E,8.8nm,0.2s						
ZHN				Lg	Lg	15 53 11.7	
	comp=E,36nm,0.7s						
KTBS	**Karatobe**	**3.74**	**9**	*e*P	**Pg**	**15 52 25.6**	**-1.8**
	comp=E,36nm,0.5s						
KTBS				*e*S	**Sg**	**15 53 14.7**	**-1.3**
	comp=E,321nm,0.6s						
KTBS	**Karatobe**	**3.74**	**9**	Pg	**Pb**	**15 52 22.6**	**+0.6**
	comp=E,36nm,0.5s						
KTBS				Lg	Lg	15 53 14.7	
	comp=E,321nm,0.6s						
KURS	**Kuram**	**3.87**	**25**	*e*P	**Pg**	**15 52 28.0**	**-1.9**
	comp=E,18nm,1.1s						
KURS				*e*S	**Sg**	**15 53 17.8**	**-2.1**
	comp=E,69nm,0.7s						
KURS	**Kuram**	**3.87**	**25**	Pg	**Pb**	**15 52 24.5**	**+0.4**
	comp=E,18nm,1.1s						
KURS				Lg	Lg	15 53 17.8	
	comp=E,69nm,0.7s						
KUU	**Kurty**	**3.89**	**5**	*e*P	**Pg**	**15 52 28.1**	**-2.2**
	comp=E,24nm,0.9s						
KUU				*e*S	**Sg**	**15 53 18.4**	**-2.2**
	comp=E,193nm,0.6s						
KUU	**Kurty**	**3.89**	**5**	Pg	**Pb**	**15 52 24.9**	**+0.4**
	comp=E,24nm,0.9s						
KUU				Lg	Lg	15 53 18.4	
	comp=E,193nm,0.6s						
BTK	**Batken**	**3.89**	**272**	⇑*e*P	**Pb**	**15 52 22.3**	**-2.2**
	baz=71						
BTK				⇑*i*S	**Sb**	**15 53 08.3**	**-3.4**
	baz=71						
TRKS	**Terek-Say**	**3.91**	**294**	⇑*e*P	**Pb**	**15 52 21.4**	**-3.5**
	baz=92						
TRKS				⇑*e*S	**Sn**	**15 53 06.6**	**+4.5**
	baz=92						
UZB	**Uzynbulak**	**3.92**	**36**	*e*P	**Pg**	**15 52 28.1**	**-2.7**
	comp=E,5.9nm,0.5s						
UZB				*e*S	**Sg**	**15 53 18.9**	**-2.6**
	comp=E,62nm,0.7s						
UZB	**Uzynbulak**	**3.92**	**36**	Pg	**Pb**	**15 52 25.6**	**+0.6**
	comp=E,4.2nm,0.2s						
UZB				Lg	Lg	15 53 19.8	
	comp=E,62nm,0.7s						
CHKK	**Chushkaly**	**3.92**	**12**	*e*P	**Pg**	**15 52 29.1**	**-1.8**
	comp=E,19nm,0.4s						
CHKK				*e*S	**Sg**	**15 53 19.9**	**-1.8**
	comp=E,44nm,0.4s						
CHKK	**Chushkaly**	**3.92**	**12**	Pg	**Pb**	**15 52 25.6**	**+0.6**
	comp=E,13nm,0.5s						

CHKK				Lg	Lg	15 53 20.5	
	comp=E,44nm,0.4s						
KPKS	**Kokpek**	**4.04**	**30**	*e*P	**Pg**	**15 52 30.4**	**-2.6**
	comp=E,13nm,0.1s						
KPKS				*e*S	**Sg**	**15 53 22.1**	**-3.1**
	comp=E,163nm,0.5s						
PDGK	**Podgornoye**	**4.27**	**38**	Pg	**Pb**	**15 52 31.4**	**+0.4**
	comp=E,8.5nm,0.8s						
PDGK				Lg	Lg	15 53 29.9	
	comp=E,27nm,0.8s						
PDGK	**Podgornoye**	**4.27**	**38**	⇓Pn	**Pn**	**15 52 25.0**	**+4.1**
	comp=E,5.1nm,0.8s						
PDGK				⇓Pg	**Pg**	**15 52 37.1**	**-0.4**
	comp=E,23nm,0.8s						
PDGK				⇑Lg	Lg	15 53 30.8	
	comp=E,50nm,0.6s						
GAR	**Garm**	**4.43**	**259**	⇓*e*P	**Pb**	**15 52 29.9**	**-3.7**
	baz=57						
GAR				⇓*e*S	**Sb**	**15 53 21.8**	**-5.3**
	baz=57						
KTMS	**Ketmen**	**4.79**	**43**	*e*P	**Pg**	**15 52 43.9**	**-3.5**
	comp=E,4.3nm,0.5s						
KTMS				*e*S	**Sg**	**15 53 45.7**	**-3.7**
	comp=E,22nm,0.6s						
KTMS	**Ketmen**	**4.79**	**43**	Pg	**Pb**	**15 52 40.7**	**+0.9**
	comp=E,4.3nm,0.5s						
KTMS				Lg	Lg	15 53 45.7	
	comp=E,22nm,0.6s						
IUG	**Iuzhnay**	**4.91**	**298**	*e*P	**Pg**	**15 52 47.2**	**-2.6**
	comp=E,130nm,0.7s						
IUG				*e*S	**Sg**	**15 53 50.8**	**-2.7**
	comp=E,44nm,0.3s						
IUG	**Iuzhnay**	**4.91**	**298**	Pg	**Pb**	**15 52 44.4**	**+2.4**
	comp=E,130nm,0.7s						
IUG				Lg	Lg	15 53 52.5	
	comp=E,43nm,1.0s						
KK31	**Karatay Array**	**5.08**	**309**	Pn	Pn	15 52 36.7	+4.8
	comp=E,0.4nm,0.5s,baz=125,slow=12,SNR=11						
KK31				Pg	**Pb**	**15 52 48.1**	**+3.5**
	comp=E,4.3nm,0.6s,baz=131,slow=13,SNR=20						
KK31				⇓Lg	Lg	15 53 56.3	
	comp=E,10.0nm,0.6s,baz=136,slow=28,SNR=5.9						
KKAR	**Karatay Array**	**5.08**	**309**	⇑*i*P	Pn	15 52 37.7	+5.8
	baz=8.0						
KKAR				⇑*e*S	**Sn**	**15 53 34.8**	**+4.2**
	baz=8.0						
BTLS	**Baital**	**5.21**	**345**	*e*P	**Pg**	**15 52 51.2**	**-4.2**
	comp=E,6.5nm,0.4s						
BTLS				*e*S	**Sg**	**15 53 57.7**	**-5.1**
	comp=E,26nm,0.7s						
BTLS	**Baital**	**5.21**	**345**	Pg	**Pb**	**15 52 47.7**	**+0.9**
	comp=E,6.7nm,0.5s						
BTLS				Lg	Lg	15 53 58.6	
	comp=E,26nm,0.7s						
MAKZ	**Makanchi**	**8.11**	**31**	⇑Pn	Pn	15 53 18.7	+5.2
	comp=E,2.4nm,1.1s						
MAKZ				⇑Lg	Lg	15 55 33.4	
	comp=E,5.9nm,1.4s						
MK31	**Makanchi Array**	**8.22**	**32**	Pn	**Pn**	**15 53 18.9**	**+3.8**
	comp=E,1.0nm,0.5s,baz=207,slow=14,SNR=12						
MK31				⇓Lg	Lg	15 55 37.4	
	comp=E,3.3nm,0.8s,baz=200,slow=30,SNR=3.5						
OTUK	**Ortayu**	**8.62**	**344**	⇓Lg	Lg	15 55 46.4	
	comp=E,19nm,1.1s						
WMQ	**Urumqi**	**9.59**	**63**	*e*Pn	**Pn**	**15 53 37.3**	**+3.5**
WMQ				smax	smax		
	comp=N,18nm,0.7s						
WMQ				smax	smax		
	comp=E,23nm,0.7s						
GOMU	**GeErMu**	**15.38**	**98**	P	**Pn**	**15 54 53.4**	**+0.3**
GOMU				pP	P	15 54 58.1	+0.3
GOMU				sP	pP	15 54 59.0	-2.3
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,32nm,4.5s						
NACGM	**Naroch**	**35.59**	**311**	⇓*e*P	**P**	**15 58 15.1**	**+2.0**
	baz=94						

IDC 22 15:54:29.6±46.0**, 17°.34S**×**179°.21W, h584**^{km}±116^{km}**, mb2.9**/3**, mbtmp3.8**/4**, Error ellipse: s-maj=915.8km s-min=117.0km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.64**	**261**	P	P	15 55 45.6	0.0
	13nm,0.7s,baz=90,slow=20,SNR=12						
STKA	**Stephens Creek**	**38.23**	**240**	P	P	16 01 00.6	-0.3
	3.1nm,0.8s,baz=92,slow=14,SNR=2.2						
	3.1nm,0.8s						
WRA	**Warramunga Arr**	**43.98**	**259**	P	P	16 01 46.4	-0.1
	0.3nm,0.5s,baz=92,slow=7.4,SNR=13						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**44.21**	**254**	P	P	16 01 48.0	-0.2
	1.8nm,0.5s,baz=88,slow=8.1,SNR=55						
	1.8nm,0.5s						

IDC 22 15:56:42.2±34.0**, 4°.65N**×**62°.11E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, MS3.4**/1**, Error ellipse: s-maj=1106.0km s-min=43.2km az=75.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**38.99**	**239**	LR	LR	16 20 17.1	
	comp=Z,44nm,18.1s,baz=141,slow=36						
MKAR	**Makanchi Array**	**45.47**	**19**	P	P	16 05 03.1	-0.1
	0.4nm,0.7s,baz=216,slow=8.9,SNR=4.0						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**75.00**	**112**	P	P	16 08 26.3	+0.1
	1.0nm,0.8s,baz=288,slow=5.3,SNR=6.1						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**75.33**	**116**	P	P	16 08 28.1	0.0
	0.8nm,0.8s,baz=274,slow=4.9,SNR=5.5						
	0.8nm,0.8s						

NOU 22 16:16:44.0, 19°.09S×**175°.32W, h189**^{km}**, MLv4.5**/7**, Tonga Islands, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**3.42**	**284**	P	Pn	16 17 38.2	0.0
NIUE	**Niue**	**5.10**	**91**	P	Pn	16 17 59.5	0.0
DGTI	**Dogotuki**	**5.47**	**300**	P	Pn	16 18 04.2	-0.1
AFI	**Afiamalu**	**6.17**	**34**	P	Pn	16 18 12.9	-0.6
MSVF	**Nonsavu**	**6.44**	**281**	P	Pn	16 18 16.7	-0.2

CNRM ***22*** *16:34:59.7, 35°.64N×3°.70W, h16*^{km}*, ml2.0*

SFS ***22*** *16:35:00.0, 35°.59N×3°.77W, ML2.6, ALBORAN SUR*

INMG ***22*** *16:35:00.9±1.6, 35°.63N×3°.80W, h0*^{km}*±6*^{km}*, ML1.7, Error ellipse: s-maj=5.3km s-min=4.9km az=32.0*

MDD ***22*** *16:35:00.0±0.6, 35°.60N×3°.77W, h0*^{km}*, mb_Lg2.6/3, Error ellipse: s-maj=6.0km s-min=2.9km az=33.0*

ISC 22 16:35:00.5±1.1**, 35°.60N**±0°.03×**3°.73W**±0°.03**, h16**^{km}±9^{km}**, n28,** σ**1**^{s}**.14**/44**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.42**	**204**	P	**Pg**	**16 35 08.8**	**-0.3**
PALE				S	**Sg**	**16 35 15.0**	**+0.2**
PVLZ	**Peæn de**	**0.63**	**228**	P	**Pn**	**16 35 15.7**	**+0.9**
PVLZ				S	**Sb**	**16 35 21.9**	**+0.2**
EALB	**Alboran**	**0.66**	**59**	Pg	**Pb**	**16 35 14.3**	**+0.8**
EALB				Sg	**Sb**	**16 35 23.2**	**+0.8**
EALB				*i* Vmb_Lg		16 35 24.8	
EMEL	**Melilla**	**0.70**	**115**	Pg	**Pg**	**16 35 14.6**	**+0.4**
EMEL				Sg	**Sg**	**16 35 23.7**	**+0.3**
CHAS	**Isla Isabel II**	**1.14**	**111**	P	**Pb**	**16 35 21.1**	**-0.7**
CHAS				S	**Sb**	**16 35 35.0**	**-1.3**
ELGU	**Los Guajares,**	**1.27**	**4**	Pg	**Pn**	**16 35 23.1**	**-0.5**
ELGU				Sg	**Sb**	**16 35 38.9**	**-1.2**
ELGU				*i* Vmb_Lg		16 35 42.5	
EMIJ	**Mijas**	**1.28**	**319**	Pg	**Pn**	**16 35 23.0**	**-0.7**
EMIJ				Sg	**Sb**	**16 35 39.2**	**-1.1**
EMIJ				*i* Vmb_Lg		16 35 41.0	
EMAL	**Malaga-Limoner**	**1.29**	**334**	P	**Pn**	**16 35 23.4**	**-0.3**
EMAL				S	**Sb**	**16 35 39.9**	**-0.7**
TAF	**Taforalt**	**1.33**	**126**	P	**Pn**	**16 35 24.3**	**-0.2**
SMIR	**Smir Dam**	**1.35**	**274**	P	**Pn**	**16 35 22.4**	**-2.2**
EBER	**Berja**	**1.46**	**27**	Pn	**Pn**	**16 35 26.6**	**+0.3**
EBER				Sn	**Sg**	**16 35 46.9**	**-0.8**
EGOR	**Sierra Gorda,**	**1.54**	**349**	Sn	**Sb**	**16 35 47.8**	**-0.1**
JBK	**JBK**	**1.58**	**143**	P	**Pn**	**16 35 27.1**	**-0.9**
JBK				S	**Sn**	**16 35 46.6**	**-1.6**
EQES	**Quesada**	**2.26**	**13**	Pn	**Pb**	**16 35 39.8**	**-1.2**
EQES				Sn	**Sb**	**16 36 08.8**	**+0.2**
EADA	**Adamuz**	**2.65**	**345**	Pn	**Pb**	**16 35 47.7**	**+0.2**
EADA				Sn	**Sn**	**16 36 17.0**	**+2.7**
ECAB	**El Cabril**	**2.81**	**332**	Pn	**Pn**	**16 35 47.1**	**+2.3**
ECAB				Sn	**Sn**	**16 36 19.3**	**+0.9**
MD31	**MD31**	**2.86**	**198**	P	**Pn**	**16 35 47.4**	**+1.9**
MDT	**Midelt**	**2.88**	**195**	P	**Pn**	**16 35 48.1**	**+2.4**
EGRO	**El Granado**	**3.58**	**304**	Pn	**Pn**	**16 35 55.7**	**+0.4**
PVAQ	**Vaqueiros**	**3.68**	**300**	*e*Pn	**Pn**	**16 35 57.3**	**+0.6**
PVAQ				*e*Sn	**Sn**	**16 36 38.8**	**-0.9**
PBDV	**Barranco-do-Ve**	**3.76**	**297**	*e*Pn	**Pn**	**16 35 58.3**	**+0.5**
PBDV				*e*Sn	**Sn**	**16 36 41.5**	**-0.3**
PCVE	**Castro Verde**	**4.01**	**302**	*e*Sn	**Sn**	**16 36 46.6**	**-1.4**
EBAD	**Badajoz**	**4.10**	**321**	Pn	**Pn**	**16 36 03.1**	**+0.7**
MESJ	**Messejana**	**4.24**	**303**	*e*Pn	**Pn**	**16 36 05.7**	**+1.3**
MESJ				*e*Sn	**Sn**	**16 36 53.1**	**-0.4**
PESTR	**Estremoz**	**4.48**	**318**	*e*Sn	**Sn**	**16 36 59.9**	**+0.4**
EVO	**Evora**	**4.50**	**312**	*e*Sn	**Sn**	**16 36 59.2**	**-0.8**
PNCL	**Nicolau / Gran**	**4.59**	**304**	*e*Pn	**Pn**	**16 36 09.9**	**+0.7**
PMRV	**Marv??o**	**4.80**	**324**	*e*Pn	**Pn**	**16 36 13.8**	**+1.7**

MAN ***22*** *16:47:27.3, 4°.70N×126°.48E, h26*^{km}*, mb4.7, ML3.6, MS3.5, Hypocentre not reviewed by the ISC*

IDC ***22*** *16:47:29.8±2.1, 4°.87N×127°.03E, h111*^{km}*±20*^{km}*, mb3.5/8, mbtmp3.8/10, Error ellipse: s-maj=59.9km s-min=14.0km az=67.0*

NEIC ***22*** *16:47:29.3±2.5, 4°.72N±0°.08×126°.76E±0°.04, h99*^{km}*±9*^{km}*, mb4.2/19, Error ellipse: s-maj=12.3km s-min=1.8km az=204.0*

DJA ***22*** *16:47:34.4±0.8, 4°N±7°×12°7E±°, h66*^{km}*±10*^{km}*, M4.0/13, mb4.1/7, mB4.7/1, MLv3.9/13, Mw(mB)4.0/1*

ISC 22 16:47:28.7±0.6**, 4°.76N**±0°.05×**126°.63E**±0°.08**, h100**^{km}**, n49,** σ**1**^{s}**.66**/54**, mb4.1**/18**, 2C-3D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.53**	**226**	P	**Pn**	**16 47 54.9**	**-0.4**
DDMP	**Don Marcelino,**	**1.61**	**326**	⇓*e*P	**Pn**	**16 47 53.7**	**-2.6**
DDMP				*e*S	**Sn**	**16 48 14.2**	**-3.2**
GSPH	**General Santos**	**2.13**	**308**	⇓*i*P	**Pn**	**16 48 00.3**	**-2.7**
MATI	**Mati**	**2.20**	**350**	⇑*e*P	**Pn**	**16 48 02.9**	**-0.9**
MATI				*e*S	**Sn**	**16 48 30.9**	**+0.1**
DAV	**Davao City (W)**	**2.52**	**336**	P	**Pn**	**16 48 11.5**	**+3.4**
	53nm,0.3s,baz=268,slow=18,SNR=1.3						
DAV	**Davao City (W)**	**2.52**	**336**	Pn	**Pn**	**16 48 10.9**	**+2.9**
KCP	**Kidapawan**	**2.71**	**326**	⇑*i*P	**Pn**	**16 48 09.5**	**-1.1**
KCP				*i* S	**Sn**	**16 48 43.4**	**+0.6**
TNTI	**Ternate**	**4.03**	**169**	Pn	**Pn**	**16 48 26.6**	**-1.7**
TNTI	**Ternate**	**4.03**	**169**	P	**Pn**	**16 48 26.7**	**-1.7**
ZCP	**Zamboanga City**	**5.01**	**296**	⇓*e*P	**Pn**	**16 48 41.8**	**+0.2**
ZCP				*e*S	**Sn**	**16 49 37.9**	**-0.5**
LBMI	**Labuha**	**5.44**	**171**	P	**Pn**	**16 48 44.6**	**-2.8**
GTOI	**Gorontalo**	**5.46**	**221**	P	**Pn**	**16 48 47.8**	**+0.1**
MRSI	**Marisa**	**6.33**	**228**	P	**Pn**	**16 49 00.6**	**+1.1**
	0.1nm23nm,0.5s						
SANI	**Sanana**	**6.80**	**185**	P	**Pn**	**16 49 02.4**	**-3.5**
SANI				S	Sn	16 50 10.9	-11
TOLI2	**Tolitoli**	**6.87**	**238**	Pn	**Pn**	**16 49 06.3**	**-0.6**
LUWI	**Luwuk**	**6.94**	**214**	Pn	**Pn**	**16 49 09.2**	**+1.5**
LUWI	**Luwuk**	**6.94**	**214**	P	**Pn**	**16 49 04.0**	**-3.7**
	0.1nm20nm,0.5s						
SWI	**Sorong**	**7.26**	**140**	P	**Pn**	**16 49 10.0**	**-2.1**
	0.1nm18nm,0.7s						
SIJI	**Sorong**	**7.26**	**140**	P	**Pn**	**16 49 10.4**	**-1.8**
	6.0nm,0.3s,baz=294,slow=23,SNR=14						
APSI	**Ampana**	**7.52**	**222**	P	**Pn**	**16 49 12.2**	**-3.4**
MYLDM	**Lahad Datu**	**8.11**	**273**	Pn	**Pn**	**16 49 26.5**	**+2.8**
FAKI	**Fak Fak**	**9.48**	**144**	Pn	**Pn**	**16 49 40.6**	**-1.7**
KSM	**Kuching**	**16.62**	**259**		**P**	**16 51 17.9**	**+1.5**
KSM				IAmb	IAmb	16 51 27.6	
	comp=Z,17nm,1.3s						
MTN	**Manton Dam**	**18.06**	**166**	P	**P**	**16 51 31.7**	**-0.6**
KNRA	**Kununurra**	**20.42**	**174**	P	**P**	**16 51 58.5**	**+0.5**
YHNB	**Yeheng**	**20.43**	**346**	P	**P**	**16 51 58.2**	**+0.1**
WB0	**Warramunga Arr**	**25.55**	**163**	P	**P**	**16 52 48.5**	**+0.2**
WRAB	**Tennant Creek**	**25.69**	**163**	P	**P**	**16 52 49.8**	**+0.2**
WRAB				IAmb	IAmb	16 53 10.1	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**25.70**	**163**	P	**P**	**16 52 49.5**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=343,slow=10,SNR=15						
	comp=Z,1.0nm,0.6s						
WB2	**Warramunga Arr**	**25.70**	**163**	P	**P**	**16 52 50.1**	**+0.4**
WB2				IAmb	IAmb	16 53 01.8	
	comp=Z,6.3nm,1.1s						
WR0	**Warramunga Arr**	**25.77**	**163**	P	**P**	**16 52 50.3**	**0.0**
WR0				IAmb	IAmb	16 53 02.6	
	comp=Z,12nm,1.2s						
AS31	**Alice Springs**	**29.13**	**166**	P	**P**	**16 53 20.7**	**+0.3**
ASAR	**Alice Springs**	**29.14**	**166**	P	**P**	**16 53 20.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=344,slow=7.5,SNR=8.1						
ASAR				PcP	**PcP**	**16 56 27.0**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=350,slow=2.1,SNR=5.6						
	comp=Z,0.2nm,0.5s						
SONM	**Songino Array**	**46.29**	**341**	P	**P**	**16 55 45.2**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=147,slow=8.6,SNR=2.3						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**56.66**	**325**	P	**P**	**16 57 01.5**	**-0.1**
MK31				IAmb	IAmb	16 57 13.4	
	comp=Z,2.1nm,1.5s						
MKAR	**Makanchi Array**	**56.66**	**325**	P	**P**	**16 57 01.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=119,slow=7.3,SNR=10						
	comp=Z,0.5nm,0.4s						
KDJ	**Kajisay**	**57.51**	**318**	P	**P**	**16 57 08.5**	**+0.6**
KDJ				IAmb	IAmb	16 57 33.9	
	comp=Z,2.1nm,1.3s						
ZAA0	**Zalesovo Array**	**59.63**	**333**	P	**P**	**16 57 22.6**	**+0.5**
ZAA0				IAmb	IAmb	16 57 51.5	
	comp=Z,2.4nm,1.2s						
ZALV	**Zalesovo Beam**	**59.63**	**333**	P	**P**	**16 57 24.4**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=127,slow=9.2,SNR=1.8						
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**60.82**	**327**	P	**P**	**16 57 30.2**	**-0.1**
KURK				IAmb	IAmb	16 57 32.6	
	comp=Z,4.0nm,1.4s						
TIXI	**Tiksi**	**66.82**	**1**	P	**P**	**16 58 09.3**	**0.0**
TIXI				IAmb	IAmb	16 58 13.7	
	comp=Z,4.4nm,1.4s						
ABKAR	**Akbulak array**	**71.29**	**321**	P	**P**	**16 58 36.6**	**-0.7**
RND	**Reindeer**	**83.31**	**27**	P	**P**	**16 59 44.1**	**-0.1**
RND				IAmb	IAmb	16 59 44.3	
	comp=Z,4.1nm,1.2s						
H24K	**Noodor Dome**	**83.83**	**24**	P	**P**	**16 59 47.5**	**+0.6**
H24K				IAmb	IAmb	17 00 03.8	
	comp=Z,3.9nm,1.4s						
ILAR	**Eielson Array**	**84.22**	**25**	P	**P**	**16 59 47.1**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=263,slow=7.0,SNR=4.4						
	comp=Z,0.5nm,0.8s						
RIDG	**Independent Ri**	**85.11**	**27**	P	**P**	**16 59 54.0**	**+0.7**
BMAR	**Burnt Mountain**	**85.17**	**23**	P	**P**	**16 59 54.9**	**+1.3**
ARCES	**ARCESS Array B**	**89.45**	**340**	P	**P**	**17 00 13.2**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=78,slow=7.6,SNR=4.7						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**90.88**	**332**	P	**P**	**17 00 19.9**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=49,slow=8.6,SNR=4.5						
	comp=Z,1.2nm,0.8s						

IDC ***22*** *17:28:45.0±0.9, 19°.51N×145°.07E, h0*^{km}*, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=73.3km s-min=21.2km az=108.0*

ISC 22 17:28:50.3±1.0**, 19°.5N**±0°.2×**145°.1E**±0°.5**, h35**^{km}**, n6,** σ**0**^{s}**.27**/6**, mb3.7**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.56**	**196**	P	**P**	**17 36 26.8**	**+0.3**
	3.5nm,0.7s,baz=17,slow=9.0,SNR=45						
	3.5nm,0.7s						
ASAR	**Alice Springs**	**44.24**	**195**	P	**P**	**17 36 56.1**	**-0.3**
	0.5nm,0.6s,baz=12,slow=6.3,SNR=22						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**63.22**	**26**	P	**P**	**17 39 14.8**	**0.0**
	0.3nm,0.6s,baz=254,slow=6.0,SNR=4.3						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**77.58**	**28**	P	**P**	**17 40 42.6**	**+0.1**
	0.5nm,0.7s,baz=301,slow=5.8,SNR=2.3						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**83.13**	**52**	P	**P**	**17 41 13.2**	**0.0**
	0.4nm,0.6s,baz=262,slow=6.7,SNR=4.5						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**85.94**	**335**	P	**P**	**17 41 26.5**	**0.0**
	0.8nm,0.8s,baz=64,slow=4.4,SNR=7.2						
	0.8nm,0.8s						

IDC ***22*** *17:35:37.9±1.1, 26°.79N×144°.32E, h0*^{km}*, mb3.7/9, mbtmp3.7/11, ML3.1/2, Error ellipse: s-maj=32.3km s-min=21.6km az=69.0*

JMA ***22*** *17:35:43.5±0.1, 27°.0N±0°.3×144°.0E±0°.2, h60*^{km}*, MV3.9/9, NEAR CHICHIJIMA ISLAND*

ISC 22 17:35:40.2±1.0**, 26°.8N**±0°.1×**143°.99E**±0°.08**, h10**^{km}**, n16,** σ**1**^{s}**.23**/18**, mb3.8**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.63**	**265**	P	**Pb**	**17 36 10.8**	**+0.4**
JHH2				*e*S	**Sb**	**17 36 31.2**	**+0.1**
CBIJ	**Chichi jima**	**1.65**	**281**	P	**Pb**	**17 36 10.2**	**-0.4**
JCJ	**Chichijima**	**1.65**	**281**	Pn	**Pb**	**17 36 10.1**	**-0.5**
	13nm,0.3s,baz=280,slow=23,SNR=14						
JCJ				Sn	**Sn**	**17 36 27.6**	**-2.8**
	64nm,0.3s,baz=271,slow=23,SNR=8.9						
JHU	**Hanno**	**9.89**	**337**	*e*P	**Pn**	**17 38 02.1**	**-0.3**
JRY	**Ryogami san**	**10.18**	**336**	P	**Pn**	**17 38 06.0**	**-0.4**
MJAR	**Matsushiro Arr**	**10.90**	**335**	Pn	**Pn**	**17 38 16.3**	**0.0**
	0.1nm,0.3s,baz=163,slow=12,SNR=13						
	0.9nm,0.4s						
KSRS	**Korea Array**	**17.25**	**312**	P	**P**	**17 39 44.0**	**+1.3**
	0.1nm,0.3s,baz=112,slow=12,SNR=4.7						
	0.6nm,0.8s						
KLR	**Kul'dur**	**24.34**	**340**	P	**P**	**17 40 58.1**	**0.0**
	1.2nm,0.6s,baz=141,slow=9.7,SNR=5.4						
	1.2nm,0.6s						
SONM	**Songino Array**	**36.06**	**316**	P	**P**	**17 42 43.3**	**+1.3**
	0.7nm,0.6s,baz=108,slow=6.8,SNR=5.5						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**47.38**	**192**	P	**P**	**17 44 14.8**	**+0.1**
	0.8nm,0.9s,baz=16,slow=8.6,SNR=2.7						
	0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**50.78**	**319**	P	**P**	**17 44 41.3**	**+0.9**
	0.7nm,0.6s,baz=104,slow=6.1,SNR=2.5						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**51.09**	**192**	P	**P**	**17 44 42.8**	**-0.3**
	0.3nm,0.8s,baz=0.0,slow=6.7,SNR=2.0						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**51.92**	**310**	P	**P**	**17 44 50.6**	**+1.6**
	1.0nm,0.7s,baz=96,slow=8.6,SNR=6.8						
	1.0nm,0.7s						
FINES	**FINESS Array B**	**78.93**	**334**	P	**P**	**17 47 43.7**	**+0.1**
	1.2nm,0.9s,baz=46,slow=4.0,SNR=1.7						
	1.2nm,0.9s						
KBZ	**Khabaz**	**79.40**	**314**	P	**P**	**17 47 47.2**	**+0.7**
	1.4nm,0.7s,baz=99,slow=8.3,SNR=5.2						
	1.4nm,0.7s						
NVAR	**Mina Array Bea**	**79.44**	**52**	P	**P**	**17 47 44.6**	**-2.6**
	0.3nm,0.7s,baz=294,slow=6.5,SNR=1.6						
	0.3nm,0.7s						

IDC ***22*** *18:24:50.4±2.4, 21°.16S×68°.86W, h0*^{km}*, mb3.6/1, mbtmp3.6/2, ML3.4/1, MS3.1/1, Error ellipse: s-maj=88.9km s-min=48.9km az=99.0*

GUC ***22*** *18:25:07.4±0.7, 19°.94S×69°.18W, h97*^{km}*±3*^{km}*, ML3.6*

ISC 22 18:25:05.7±1.0**, 19°.96S**±0°.04×**69°.27W**±0°.09**, h108**^{km}±7^{km}**, n17,** σ**1**^{s}**.52**/26**, 5C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.21**	**149**	⇓*i*P	**Pn**	**18 25 21.1**	**-0.3**
PB08				*i* S	**Sn**	**18 25 32.5**	**-0.7**
PB08				IAML		18 25 34.8	
	comp=E,4µm,0.2s						
PB11	**IPOC Station P**	**0.41**	**299**	⇓*i*P	**Pn**	**18 25 22.2**	**+0.2**
PB11				*i* S	**Sn**	**18 25 34.4**	**+0.1**
PB11				IAML		18 25 35.0	
	comp=E,3µm,0.4s						
HMBC	**Humberstone**	**0.66**	**241**	⇑*i*P	**Pn**	**18 25 24.3**	**+0.5**
HMBC				*i* S	**Sn**	**18 25 37.8**	**+0.6**
HMBC				IAML		18 25 41.6	
	comp=N,3µm,0.5s						
TA01	**Diego Aracena**	**1.05**	**235**	⇑*i*P	**Pn**	**18 25 28.0**	**+0.7**
TA01				*i* S	**Sn**	**18 25 44.1**	**+0.6**
TA01				IAML		18 25 45.0	
	comp=E,978nm,0.3s						
PB01	**IPOC Station P**	**1.10**	**191**	⇑*i*P	**Pn**	**18 25 28.6**	**+0.6**
PB01				*i* S	**Sn**	**18 25 45.3**	**+0.6**
PB01				IAML		18 25 46.8	
	comp=N,3µm,0.3s						
PATCX	**Punta Patache**	**1.19**	**224**	⇑*i*P	**Pn**	**18 25 29.7**	**+0.8**
PATCX				*i* S	**Sn**	**18 25 47.5**	**+1.0**
PATCX				IAML		18 25 53.6	
	comp=E,871nm,0.6s						
PB02	**IPOC Station P**	**1.47**	**203**	⇑*e*P	**Pn**	**18 25 33.3**	**+1.0**
PB02				*i* S	**Sn**	**18 25 53.9**	**+1.5**
PB02				IAML		18 26 00.0	
	comp=E,2µm,0.5s						
PB16	**IPOC Station P**	**1.63**	**352**	⇓*i*P	**Pn**	**18 25 36.1**	**+1.4**
PB16				*i* S	**Sn**	**18 25 58.6**	**+2.0**
PB12	**IPOC Station P**	**1.67**	**323**	*e*P	**Pn**	**18 25 35.4**	**+0.7**
PB12				*i* S	**Sn**	**18 25 57.1**	**+0.5**
PB12				IAML		18 26 06.4	
	comp=N,730nm,0.3s						
PB09	**IPOC Station P**	**1.83**	**179**	*e*P	**Pn**	**18 25 38.0**	**+1.4**
PB09				*i* S	**Sn**	**18 26 01.9**	**+1.8**
PB09				IAML		18 26 08.5	
	comp=N,352nm,0.8s						
PB07	**IPOC Station P**	**1.85**	**198**	*e*P	**Pn**	**18 25 38.0**	**+1.0**
PB07				*i* S	**Sn**	**18 26 01.9**	**+1.2**
PB07				IAML		18 26 09.3	
	comp=E,662nm,0.4s						
AP01	**Chacalluta**	**1.88**	**327**	IAML		18 26 12.3	
	comp=N,1µm,0.1s						
PB04	**IPOC Station P**	**2.50**	**199**	*e*P	**Pn**	**18 25 47.9**	**+2.6**
LPAZ	**La Paz**	**3.81**	**17**	Pn	**Pn**	**18 26 05.9**	**+2.8**
	comp=N,0.8nm,0.3s,baz=188,slow=7.6,SNR=38						
	comp=N,6.4nm,0.6s						
CMIG	**Matias Romero**	**44.59**	**324**	LR	LR	18 49 39.5	
	comp=N,20nm,20.0s,baz=202,slow=32						
TORD	**Torodi Ar. Bea**	**77.16**	**71**	P	**P**	**18 36 46.8**	**-1.3**
	comp=N,0.3nm,0.5s,baz=241,slow=5.3,SNR=4.1						
	comp=N,0.3nm,0.5s						
ASAR	**Alice Springs**	**131.10**	**209**	PKP	**PKiKP**	**18 44 03.1**	**-3.5**
	comp=N,0.5nm,1.1s,baz=143,slow=2.3,SNR=2.0						

GUC 22 18:29:10.4±0.7**, 24°.28S**×**69°.52W, h81**^{km}±6^{km}**, ML3.9, 8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**0.88**	**247**	⇑*i*P	Pn	18 29 28.7	+0.3
PB14				*i* S	Sn	18 29 42.1	+0.2
GO02	**Mina Guanaco**	**0.88**	**184**	*e*P	Pn	18 29 28.6	+0.1
GO02				*i* S	Sn	18 29 42.3	+0.3
PB15	**IPOC Station P**	**1.07**	**2**	⇓*i*P	Pn	18 29 30.7	+0.1
PB15				*i* S	Sn	18 29 46.0	+0.3
PB10	**IPOC Station P**	**1.22**	**309**	⇑*i*P	Pn	18 29 32.7	+0.5
PB10				*i* S	Sn	18 29 48.8	+0.3
PB10				IAML		18 29 53.8	
	comp=N,775nm,0.3s						
PB06	**IPOC Station P**	**1.57**	**358**	⇑*i*P	Pn	18 29 37.0	+0.1
PB06				*i* S	Sn	18 29 56.9	+0.1
PB06				IAML		18 30 00.6	
	comp=N,1µm,0.2s						
LVC	**Limon Verde**	**1.75**	**19**	*e*P	Pn	18 29 39.7	+0.2
LVC				*i* S	Sn	18 30 01.8	+0.4
AF01	**San Pedro de A**	**1.81**	**43**	*e*P	Pn	18 29 41.0	+0.9
AF01				*i* S	Sn	18 30 03.5	+1.0
AF01				IAML		18 30 07.7	
	comp=E,2µm,0.5s						
PB04	**IPOC Station P**	**2.02**	**343**	⇑*i*P	Pn	18 29 42.3	-0.5
PB04				IAML		18 30 15.6	
	comp=E,839nm,0.2s						
AC01	**Pan de Azucar**	**2.10**	**208**	*e*P	Pn	18 29 43.7	-0.1
AC01				*i* S	Sn	18 30 10.0	+0.9
AC01				IAML		18 30 15.3	
	comp=E,1µm,0.4s						
PB09	**IPOC Station P**	**2.48**	**6**	*e*P	Pn	18 29 49.4	+0.4
PB09				IAML		18 30 29.5	
	comp=N,455nm,0.5s						
PB07	**IPOC Station P**	**2.56**	**352**	⇑*i*P	Pn	18 29 49.4	-0.7
PB07				*i* S	Sn	18 30 21.5	+1.1
PB07				IAML		18 30 32.9	
	comp=E,504nm,0.7s						
AC02	**Maricunga**	**2.57**	**172**	*e*P	Pn	18 29 52.2	+1.8
AC02				IAML		18 30 32.8	

	comp=E,413nm,0.2s						
PB02	**IPOC Station P**	**2.97**	**353**	⇑*i*P	Pn	18 29 54.6	-0.8
PB02				IAML		18 30 42.7	
	comp=E,663nm,0.4s						
AC06	**Mina Casimiro**	**3.16**	**194**	*e*P	Pn	18 29 57.1	-0.9
AC06				IAML		18 30 47.7	
	comp=E,294nm,0.5s						
PB01	**IPOC Station P**	**3.22**	**1**	⇑*i*P	Pn	18 29 58.1	-0.8
PB01				*i*S	Sn	18 30 37.2	+1.0
PB01				IAML		18 30 45.2	
	comp=E,552nm,0.5s						
GO03	**Copiap**	**3.36**	**191**	*e*P	Pn	18 30 00.3	-0.5
GO03				*i*S	Sn	18 30 40.9	+1.2
PATCX	**Punta Patache**	**3.49**	**350**	⇑*i*P	Pn	18 30 00.5	-2.0
PATCX				*i*S	Sn	18 30 43.3	+0.4
PATCX				IAML		18 30 59.5	
	comp=N,1μm,0.9s						
TA01	**Diego Aracena**	**3.75**	**350**	*e*P	Pn	18 30 03.6	-2.4
TA01				*i*S	Sn	18 30 54.6	+5.7
PB08	**IPOC Station P**	**4.13**	**5**	*e*P	Pn	18 30 10.3	-1.2
AC04	**Llanos de Chal**	**4.15**	**199**	*e*P	Pn	18 30 09.6	-1.8

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*IDC **22** 18:29:25.3±1.2, 5°.66N×125°.48E, h219km±12km, mb3.1/5, mbtmp3.7/5, Error ellipse: s-maj=67.2km s-min=17.0km az=72.0*

*DJA **22** 18:29:25.5±0.6, 6°N±4°×12°6E±°, h217km±5km, M4.1/7, mb3.9/3, mB4.5/2, MLv4.2/7, Mw(mB)3.7/2*

*MAN **22** 18:29:26.1, 5°.68N×125°.61E, h208km, mb4.7, ML3.6, MS3.5, Hypocentre not reviewed by the ISC*

ISC 22 18:29:25.1±0.8, **5°.57N**±0°.05×**125°.6E**±0°.1, **h215**km±7km, **n15**, σ**1§11**/22, **mb3.5**/5, **4C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.55**	**13**	⇑*e*P	**Pn**	**18 29 54.5**	**+0.4**
DDMP				*e*S	**S**	**18 30 16.4**	**-0.5**
GSPH	**General Santos**	**0.82**	**309**	⇑*i*P	**Pn**	**18 29 55.6**	**+0.1**
GSPH				*i*S	**S**	**18 30 19.0**	**-0.2**
DAV	**Davao City (W)**	**1.49**	**360**	P	**Pn**	**18 30 01.0**	**+0.9**
	130nm,0.3s,baz=257,slow=3.8,SNR=9.9						
DAV				S	**S**	**18 30 27.1**	**-0.2**
	409nm,0.4s,baz=96,slow=19,SNR=8.8						
KCP	**Kidapawan**	**1.51**	**341**	⇑*i*P	**Pn**	**18 30 00.6**	**+0.3**
KCP				*i*S	**S**	**18 30 26.7**	**-1.0**
MATI	**Mati**	**1.52**	**26**	⇑*e*P	**Pn**	**18 30 00.6**	**+0.3**
MATI				*e*S	**S**	**18 30 27.5**	**-0.1**
SGSI	**Sangihe**	**1.87**	**182**	S	**S**	**18 30 33.7**	**+0.4**
TNTI	**Ternate**	**5.09**	**160**	P	**Pn**	**18 30 42.3**	**+1.3**
TNTI				S	**S**	**18 31 39.3**	**-1.5**
GTOI	**Gorontalo**	**5.54**	**208**	P	**Pn**	**18 30 47.7**	**+1.0**
	0.1nm23nm,1.0s						
LBMI	**Labuha**	**6.46**	**163**	P	**Pn**	**18 30 59.3**	**+0.8**
LBMI				S	**S**	**18 32 10.4**	**-2.2**
SANI	**Sanana**	**7.58**	**177**	P	**Pn**	**18 31 10.7**	**-2.2**
WRA	**Warramunga Arr**	**26.77**	**161**	P	**P**	**18 34 45.5**	**+0.1**
	0.6nm,0.6s,baz=343,slow=9.3,SNR=3.1						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**30.17**	**165**	P	**P**	**18 35 16.4**	**+1.0**
	0.5nm,0.5s,baz=342,slow=7.2,SNR=26						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**40.24**	**159**	P	**P**	**18 36 42.1**	**+1.1**
	1.7nm,0.5s,baz=337,slow=7.7,SNR=3.0						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**55.41**	**325**	P	**P**	**18 38 35.9**	**-1.3**
	0.2nm,0.4s,baz=121,slow=7.5,SNR=5.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**83.94**	**26**	P	**P**	**18 41 30.5**	**-0.2**
	0.2nm,0.4s,baz=253,slow=4.6,SNR=4.5						
	0.2nm,0.4s						

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*JMA **22** 18:36:21.1±0.3, 24°.0N±0°.8×12°2E±°, h0km, MV2.9/9, TAIWAN REGION*

*TAP **22** 18:36:23.3, 24°.03N×121°.60E, h8km, ML3.7, B*

ISC 22 18:36:22.9±0.8, **24°.01N**±0°.01×**121°.65E**±0°.02, **h11**km±4km, **n95**, σ**0§77**/175, **4C-27D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**231**	⇑*i*P	**Pg**	**18 36 25.4**	**+0.3**
	baz=162						
HWA				*i*S	**Sg**	**18 36 27.2**	**+0.5**
	baz=162						
TWD	**Chiawan**	**0.09**	**324**	*i*P	**Pg**	**18 36 25.5**	**0.0**
	baz=9.0						
TWD				*i*S	**Sg**	**18 36 27.0**	**-0.4**
	baz=9.0						
ETL	**Fush Village**	**0.15**	**350**	⇓*i*P	**Pg**	**18 36 26.6**	**+0.2**
	baz=11						
ETL				*i*S	**Sg**	**18 36 29.1**	**+0.3**
	baz=11						
TEYL	**Yanliau Villag**	**0.15**	**199**	⇑P	**Pg**	**18 36 26.5**	**+0.1**
	baz=177						
TEYL				*e*S	**Sg**	**18 36 29.6**	**+0.8**
	baz=177						
ETM	**Tongmen**	**0.15**	**253**	*i*P	**Pg**	**18 36 26.2**	**-0.1**
	baz=237						
ETM				*i*S	**Sg**	**18 36 28.3**	**-0.6**
	baz=237						
NACB	**Ninganchiao**	**0.17**	**343**	⇓*i*P	**Pg**	**18 36 26.8**	**+0.1**
	baz=360						
NACB				*i*S	**Sg**	**18 36 29.2**	**-0.2**
	baz=360						
ETLH	**Xiulin Townshi**	**0.25**	**322**	⇓*i*P	**Pg**	**18 36 28.2**	**+0.1**
	baz=330						
ETLH				*e*S	**Sg**	**18 36 31.5**	**-0.1**
	baz=330						
ESL	**Shilin**	**0.28**	**226**	⇑P	**Pg**	**18 36 28.4**	**-0.2**
	baz=213						
ESL				*e*S	**Sg**	**18 36 32.0**	**-0.4**
	baz=213						
EHP	**Heping Village**	**0.31**	**15**	*i*P	**Pb**	**18 36 29.6**	**-0.8**
	baz=27						
EHP				S	**Sb**	**18 36 34.2**	**-1.3**
	baz=27						
TEGC	**Jichi Village**	**0.32**	**199**	P	**Pb**	**18 36 30.6**	**+0.1**
	baz=188						
TEGC				*e*S	**Sb**	**18 36 36.9**	**+1.2**
	baz=188						
WHF	**Hehuan Shan**	**0.38**	**291**	⇓*i*P	**Pg**	**18 36 30.5**	**0.0**
	baz=292						
WHF				S	**Sg**	**18 36 35.5**	**-0.1**
	baz=292						
EGFH	**Guangfu**	**0.40**	**211**	⇑*i*P	**Pg**	**18 36 30.9**	**+0.1**
	baz=203						
EGFH				*e*S	**Sg**	**18 36 36.4**	**+0.4**
	baz=203						
ENA	**Nanau**	**0.42**	**11**	⇓*i*P	**Pb**	**18 36 31.7**	**-0.7**
	baz=19						
ENA				*i*S	**Sg**	**18 36 37.3**	**+0.4**
	baz=19						
OWD	**Renai**	**0.44**	**263**	*i*P	**Pg**	**18 36 31.6**	**0.0**
	baz=259						
OWD				*e*S	**Sg**	**18 36 36.9**	**-0.5**
	baz=259						
CHGB	**Renai**	**0.44**	**277**	*i*P	**Pb**	**18 36 31.8**	**-0.9**
	baz=275						
CHGB				*e*S	**Sg**	**18 36 37.5**	**+0.1**
	baz=275						
FUSS	**Fushou**	**0.44**	**302**	⇓*i*P	**Pb**	**18 36 32.0**	**-0.8**
	baz=304						
FUSS				*e*S	**Sb**	**18 36 38.1**	**-1.4**
	baz=304						
EWUT	**Wuta**	**0.45**	**15**	⇓*i*P	**Pb**	**18 36 32.1**	**-0.7**
	baz=22						
EWUT				*e*S	**Sg**	**18 36 38.0**	**+0.3**
	baz=22						
NNSB	**Datong**	**0.48**	**330**	⇓*i*P	**Pb**	**18 36 32.7**	**-0.7**
	baz=334						
NNSB				*e*S	**Sg**	**18 36 39.0**	**+0.2**
	baz=334						
WUSB	**Renai**	**0.49**	**268**	*i*P	**Pb**	**18 36 32.8**	**-0.7**
	baz=265						
WUSB				*e*S	**Sb**	**18 36 39.6**	**-1.1**
	baz=265						
NNS	**Nan Shan**	**0.50**	**329**	⇓*i*P	**Pb**	**18 36 33.0**	**-0.7**
	baz=334						
NNS				*e*S	**Sg**	**18 36 39.5**	**+0.2**
	baz=334						
TWT	**Tachien**	**0.50**	**299**	⇓*i*P	**Pb**	**18 36 33.4**	**-0.3**
	baz=299						
TWT				*e*S	**Sb**	**18 36 40.4**	**-0.7**
	baz=299						
TDCB	**Techi**	**0.51**	**298**	⇓*i*P	**Pb**	**18 36 33.4**	**-0.5**
	baz=299						
TDCB				*e*S	**Sb**	**18 36 40.4**	**-1.0**
	baz=299						
VWDT	**VWDT**	**0.53**	**241**	*e*P	**Pb**	**18 36 33.5**	**-0.7**
	baz=237						
VWDT				*e*S	**Sb**	**18 36 41.1**	**-0.8**
	baz=237						
LATG	**Datong**	**0.53**	**348**	⇓*i*P	**Pb**	**18 36 33.7**	**-0.6**
	baz=353						
LATG				*e*S	**Sb**	**18 36 40.8**	**-1.3**
	baz=353						
HGSD	**Ruisui**	**0.56**	**202**	*e*P	**Pb**	**18 36 34.8**	**+0.2**
	baz=196						
EHY	**Hungye**	**0.59**	**211**	*e*P	**Pg**	**18 36 34.2**	**-0.1**
	baz=205						
EHY				*e*S	**Sb**	**18 36 42.6**	**-0.8**
	baz=205						
NDT	**Datong Townshi**	**0.60**	**348**	⇓*e*P	**Pb**	**18 36 35.0**	**-0.5**
	baz=353						
NDT				*e*S	**Sb**	**18 36 43.2**	**-0.7**
	baz=353						
NDS	**Dongshan**	**0.62**	**5**	⇓*i*P	**Pb**	**18 36 35.5**	**-0.3**
	baz=10.0						
NDS				*e*S	**Sb**	**18 36 44.3**	**-0.2**
	baz=10.0						
TWC	**Suao**	**0.62**	**17**	P	**Pb**	**18 36 35.4**	**-0.3**
	baz=23						
TWC				*e*S	**Sb**	**18 36 44.6**	**+0.1**
	baz=23						
ENTT	**Nioudou**	**0.63**	**353**	⇓*i*P	**Pb**	**18 36 35.8**	**-0.2**
	baz=358						
ENTT				*e*S	**Sb**	**18 36 44.2**	**-0.6**
	baz=358						
WPL	**Puli Township**	**0.63**	**270**	⇓*e*P	**Pb**	**18 36 35.7**	**-0.3**
	baz=269						
WPL				*e*S	**Sg**	**18 36 43.6**	**0.0**
	baz=269						
DPDB	**Guoxing**	**0.66**	**272**	⇓P	**Pb**	**18 36 36.4**	**-0.1**
	baz=271						
DPDB				*e*S	**Sb**	**18 36 46.0**	**+0.3**
	baz=271						
SSLB	**Suanglung**	**0.68**	**251**	*e*P	**Pb**	**18 36 36.2**	**-0.5**
	baz=248						
SSLB				*e*S	**Sg**	**18 36 44.1**	**-0.8**
	baz=248						
WCS	**Beigang Elemen**	**0.68**	**274**	*e*P	**Pb**	**18 36 36.5**	**-0.2**
	baz=273						
WCS				*e*S	**Sb**	**18 36 46.1**	**0.0**
	baz=273						
YULB	**Yu-li**	**0.69**	**208**	*e*P	**Pg**	**18 36 35.9**	**-0.4**
	baz=203						
YULB				*e*S	**Sb**	**18 36 46.4**	**-0.2**
	baz=203						
WHP	**Taichung City**	**0.70**	**293**	*e*P	**Pb**	**18 36 37.2**	**+0.1**
	baz=293						
WHP				*e*S	**Sb**	**18 36 47.1**	**+0.4**
	baz=293						
SMLT	**Sun Moon Lake**	**0.70**	**260**	⇓*e*P	**Pb**	**18 36 36.9**	**-0.2**
	baz=257						
SMLT				*e*S	**Sg**	**18 36 45.8**	**+0.2**
	baz=257						
YHNB	**Yeheng**	**0.70**	**339**	⇓*e*P	**Pb**	**18 36 37.1**	**-0.1**
	baz=343						
YHNB				*e*S	**Sb**	**18 36 46.4**	**-0.5**
	baz=343						
NSK	**Sanguang**	**0.71**	**338**	⇓P	**Pb**	**18 36 37.2**	**-0.1**
	baz=342						
NSK				*e*S	**Sb**	**18 36 46.4**	**-0.8**
	baz=342						
EYUL	**Yuli**	**0.73**	**205**	*e*P	**Pb**	**18 36 37.0**	**-0.6**
	baz=201						
TWF1	**Yuli**	**0.73**	**206**	*e*P	**Pg**	**18 36 36.5**	**-0.5**
	baz=202						
TWF1				*e*S	**Sb**	**18 36 48.0**	**+0.3**
	baz=202						
TYC	**Yuchr**	**0.73**	**262**	*e*P	**Pb**	**18 36 37.3**	**-0.3**
	baz=260						
TYC				*e*S	**Sg**	**18 36 46.7**	**0.0**
	baz=260						
FUSB	**Fushanzhiwuyua**	**0.75**	**356**	⇓*e*P	**Pb**	**18 36 38.0**	**0.0**
	baz=359						
FUSB				*e*S	**Sb**	**18 36 47.9**	**-0.3**
	baz=359						
ILA	**Ilan**	**0.76**	**7**	*e*P	**Pb**	**18 36 38.3**	**+0.3**
	baz=11						
ILA				*e*S	**Sn**	**18 36 49.4**	**-1.5**
	baz=11						
NWLT	**Wulai**	**0.78**	**350**	⇓*e*P	**Pb**	**18 36 38.5**	**+0.1**
	baz=354						
NWLT				*e*S	**Sb**	**18 36 48.2**	**-0.7**
	baz=354						
NFF	**Wufeng Townshi**	**0.79**	**322**	⇓*e*P	**Pb**	**18 36 38.8**	**+0.2**
	baz=324						
NFF				*e*S	**Sb**	**18 36 48.7**	**-0.6**
	baz=324						
YUS	**Yu-Shan**	**0.82**	**231**	*e*P	**Pb**	**18 36 39.3**	**-0.2**
	baz=227						
NSTT	**Nanjuang**	**0.86**	**316**	⇓*e*P	**Pn**	**18 36 40.3**	**-0.5**
	baz=318						
NSTT				*e*S	**Sb**	**18 36 51.4**	**+0.1**
	baz=318						
NTC	**Toucheng**	**0.86**	**11**	*e*P	**Pb**	**18 36 39.9**	**+0.1**
	baz=15						
NTC				*e*S	**Sb**	**18 36 52.0**	**+0.7**
	baz=15						
LIOB	**Emei**	**0.86**	**318**	⇓*e*P	**Pn**	**18 36 40.5**	**-0.3**
	baz=319						
LIOB				*e*S	**Sb**	**18 36 52.1**	**+0.8**
	baz=319						
WJS	**Zhushan**	**0.86**	**258**	*e*P	**Pn**	**18 36 40.6**	**-0.3**
	baz=256						
WJS				*e*S	**Sn**	**18 36 53.1**	**-0.5**
	baz=256						
TWQ1	**Liyutan**	**0.87**	**293**	*e*P	**Pn**	**18 36 41.3**	**+0.2**
	baz=293						
TWQ1				*e*S	**Sn**	**18 36 53.3**	**-0.4**
	baz=293						
WWF	**Wufeng**	**0.87**	**272**	*e*P	**Pn**	**18 36 41.9**	**+0.8**
	baz=271						
FULB	**Fuli**	**0.87**	**202**	*e*P	**Pb**	**18 36 40.0**	**0.0**
	baz=199						
NJD	**Zhudong**	**0.89**	**325**	*e*P	**Pn**	**18 36 41.4**	**+0.2**
	baz=327						
WNT	**Mingjian**	**0.89**	**262**	*e*P	**Pn**	**18 36 41.7**	**+0.3**
	baz=260						
NSY	**Sanyi**	**0.91**	**297**	*e*P	**Pn**	**18 36 42.1**	**+0.6**
	baz=297						
NSY				*e*S	**Sn**	**18 36 55.2**	**+0.5**
	baz=297						
ALS	**Alishan**	**0.92**	**237**	⇓*e*P	**Pb**	**18 36 41.1**	**+0.1**
	baz=234						
ALS				*e*S	**Sb**	**18 36 53.2**	**-0.1**
	baz=234						
CHKT	**Chengkung**	**0.94**	**196**	*e*P	**Pb**	**18 36 40.9**	**-0.4**
	baz=192						
CHKT				*e*S	**Sn**	**18 36 55.9**	**+0.4**
	baz=192						
NMLH	**Miaoli**	**0.94**	**304**	*e*P	**Pn**	**18 36 42.7**	**+0.7**
	baz=305						
NHDH	**Xindian Distri**	**0.95**	**353**	*e*P	**Pn**	**18 36 42.1**	**-0.1**
	baz=356						
NHDH				*e*S	**Sb**	**18 36 54.0**	**-0.1**
	baz=356						
TWA	**Mucha**	**0.97**	**356**	*e*P	**Pn**	**18 36 42.4**	**0.0**
	baz=360						
TWA				*e*S	**Sb**	**18 36 54.6**	**+0.1**
	baz=360						
TIPB	**Shuangxi**	**0.97**	**9**	*e*P	**Pn**	**18 36 42.1**	**-0.4**
	baz=13						
CHN5	**Tsauling**	**0.98**	**245**	*e*P	**Pn**	**18 36 43.0**	**+0.3**
	baz=243						
CHN5				*e*S	**Sn**	**18 36 57.3**	**+0.8**
	baz=243						
SBCB	**Hsinchu**	**0.99**	**322**	*e*P	**Pn**	**18 36 43.0**	**+0.3**
	baz=324						
WCHH	**Zhanghua**	**1.00**	**274**	*e*P	**Pn**	**18 36 43.7**	**+0.9**
	baz=273						
WCHH				*e*S	**Sn**	**18 36 58.0**	**+1.1**
	baz=273						
ELDTW	**Lidau**	**1.00**	**216**	*e*P	**Pg**	**18 36 41.0**	**-1.2**
	baz=212						
ELDTW				*e*S	**Sn**	**18 36 56.9**	**-0.2**
	baz=212						
TWB1	**Santiao Chiao**	**1.04**	**17**	*e*P	**Pn**	**18 36 43.4**	**+0.1**
	baz=21						
TWB1				*e*S	**Sn**	**18 36 57.0**	**-0.9**
	baz=21						
NWF	**Wu-fen Shan**	**1.06**	**6**	*e*P	**Pn**	**18 36 44.2**	**+0.4**
	baz=9.0						
EDH	**Donghe**	**1.08**	**197**	*e*P	**Pg**	**18 36 42.8**	**-0.9**
	baz=194						
EDH				*e*S	**Sn**	**18 36 59.8**	**+0.9**
	baz=194						
SXI1	**Grass Mountain**	**1.10**	**11**	*e*P	**Pn**	**18 36 44.8**	**+0.5**
	baz=13						
TWS1	**Kuangyinshan**	**1.11**	**349**	*e*P	**Pn**	**18 36 45.6**	**+1.3**
	baz=352						
TWS1				*e*S	**Sn**	**18 37 01.0**	**+1.5**
	baz=352						
YM01	**YM01**	**1.13**	**356**	*e*P	**Pn**	**18 36 45.8**	**+1.1**
	baz=359						
YM01				*e*S	**Sn**	**18 37 01.6**	**+1.3**
	baz=359						
STYH	**Taoyuan**	**1.16**	**224**	*e*P	**Pb**	**18 36 44.6**	**-0.3**
	baz=222						
STYH				*e*S	**Sn**	**18 37 00.6**	**-0.2**
	baz=222						
TPUB	**Ta-pu**	**1.17**	**233**	*e*P	**Pn**	**18 36 45.9**	**+0.7**
	baz=231						
TPUB				*e*S	**Sn**	**18 37 01.8**	**+0.5**
	baz=231						
LONT	**Longtian**	**1.20**	**204**	*e*P	**Pb**	**18 36 43.9**	**-1.7**
	baz=201						
LONT				*e*S	**Sn**	**18 37 05.1**	**+3.3**
	baz=201						
WTP	**Ta-pu**	**1.22**	**232**	*e*P	**Pg**	**18 36 46.6**	**+0.3**
	baz=229						
WTP				*e*S	**Sn**	**18 37 03.8**	**+1.5**
	baz=229						
JYNG	**Yonagunijimaku**	**1.26**	**69**	P	**Pg**	**18 36 47.0**	**-0.2**
JYNG				*e*S	**Sn**	**18 37 04.8**	**+1.5**
TWGBT	**Beinan**	**1.30**	**204**	⇓*e*P	**Pn**	**18 36 45.1**	**-1.9**
	baz=201						
TWK	**Hsinying**	**1.30**	**235**	*e*P	**Pg**	**18 36 48.2**	**+0.4**
	baz=233						
TWK				*e*S	**Sn**	**18 37 06.4**	**+2.1**
	baz=233						
CHN1	**Nanshi**	**1.32**	**232**	*e*P	**Pg**	**18 36 48.5**	**+0.3**
	baz=229						
CHN1				*e*S	**Sg**	**18 37 07.6**	**+2.3**
	baz=229						
YOJ	**Yonaguni jima**	**1.32**	**70**	P	**Pg**	**18 36 47.8**	**-0.5**
	baz=71						
YOJ				*e*S	**Sn**	**18 37 04.7**	**-0.1**
	baz=71						
YOJ	**Yonaguni jima**	**1.32**	**70**	*e*P	**Pg**	**18 36 47.8**	**-0.5**
YOJ				*e*S	**Sg**	**18 37 06.1**	**+0.7**
LDUT	**Ludao**	**1.34**	**187**	*e*P	**Pn**	**18 36 45.5**	**-2.0**
	baz=185						
LDUT				*e*S	**Sb**	**18 37 05.1**	**-0.1**
	baz=185						
SCST	**Cishan**	**1.54**	**224**	*e*P	**Pg**	**18 36 52.8**	**+0.2**
	baz=222						
SCST				*e*S	**Sg**	**18 37 15.1**	**+2.5**
	baz=222						
ECL	**Taimali**	**1.55**	**205**	*e*P	**Pn**	**18 36 49.4**	**-1.0**
	baz=202						
ECL				*e*S	**Sg**	**18 37 12.6**	**0.0**
	baz=202						
SSD	**Sandimen**	**1.57**	**217**	*e*P	**Pn**	**18 36 51.0**	**+0.4**
	baz=215						
SSD				*e*S	**Sg**	**18 37 13.0**	**-0.3**
	baz=215						
MASBT	**Mashibuluo**	**1.68**	**214**	*e*P	**Pn**	**18 36 52.2**	**+0.1**
	baz=212						
MASBT				*e*S	**Sg**	**18 37 16.4**	**-0.5**
	baz=212						
EAST	**Anshuo**	**1.78**	**205**	*e*P	**Pn**	**18 36 52.2**	**-1.4**
	baz=203						
EAST				*e*S	**Sb**	**18 37 18.3**	**+0.4**
	baz=203						
IRIF	**Iriomote-Funau**	**1.93**	**80**	*e*P	**Pn**	**18 36 56.5**	**+0.9**
PHUB	**P'eng-hu**	**1.97**	**256**	*e*P	**Pb**	**18 36 57.4**	**-1.4**
	baz=254						
PHUB				*e*S	**Sb**	**18 37 22.4**	**-0.9**
	baz=254						
HATJ	**Hateruma jima**	**1.97**	**88**	*e*S	**Sb**	**18 37 23.1**	**-0.2**
WDGT	**Dungji**	**1.97**	**248**	*e*P	**Pb**	**18 36 57.5**	**-1.3**
	baz=247						
WDGT				*e*S	**Sn**	**18 37 22.0**	**+1.1**
	baz=247						
JKRS	**Kuro-shima**	**2.17**	**84**	P	**Pn**	**18 37 00.1**	**+1.2**
JKRS				*e*S	**Sb**	**18 37 28.0**	**-1.0**
JIJ	**Ishigaki jima**	**2.30**	**81**	P	**Pn**	**18 37 01.1**	**+0.4**
JIJ				S	**Sn**	**18 37 29.2**	**+0.1**

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*IDC **22** 18:58:37.2±1.6, 17°.04S×152°.41E, h0km, mb3.5/2, mbtmp3.7/8, ML3.2/5, MS3.1/1, Error ellipse: s-maj=35.4km s-min=27.3km az=134.0*

ISC 22 18:58:38.6±0.9, **16°.94S**±0°.09×**152°.36E**±0°.09, **h10**km, **n10**, σ**1§60**/11, **Coral Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**6.59**	**241**	Pn	**Pn**	**19 00 14.5**	**-1.1**
	1.4nm,0.3s,baz=73,slow=15,SNR=7.5						
CTA				Sn	**Sn**	**19 01 32.0**	**+1.2**
	2.0nm,0.3s,baz=66,slow=17,SNR=1.7						
CTA				Lg	Lg	19 02 01.3	
	3.2nm,0.3s,baz=144,slow=19,SNR=4.0						
	3.3nm,0.3s						
PMG	**Port Moresby**	**9.04**	**325**	Pn	**Pn**	**19 00 51.1**	**+1.9**
	1.8nm,0.3s,baz=234,slow=12,SNR=12						
PMG				Sn	**Sn**	**19 02 27.7**	**-3.4**
	1.9nm,0.3s,baz=278,slow=20,SNR=2.2						
	14nm,0.5s						
HNR	**Honiara**	**10.49**	**46**	LR	LR	19 04 04.9	
	comp=Z,87nm,18.4s,baz=218,slow=31						
DZM	**Mont Dzumac**	**14.22**	**113**	Pn	**Pn**	**19 01 59.7**	**-0.6**
	9.0nm,0.5s,baz=297,slow=9.1,SNR=16						
WRA	**Warramunga Arr**	**17.36**	**257**	P	**P**	**19 02 42.6**	**+0.1**
	0.1nm,0.3s,baz=83,slow=11,SNR=2.6						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**17.80**	**211**	P	**P**	**19 02 46.2**	**-1.0**
	0.1nm,0.3s,baz=12,slow=9.3,SNR=1.7						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**18.55**	**246**	P	**Pn**	**19 02 56.0**	**+0.1**
	baz=71,slow=11,SNR=1.8						
	0.3nm,0.7s						
SONM	**Songino Array**	**76.45**	**330**	P	**P**	**19 10 29.3**	**+0.7**
	0.2nm,0.4s,baz=143,slow=5.0,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**89.21**	**320**	P	**P**	**19 11 35.6**	**+0.9**
	0.2nm,0.8s,baz=109,slow=6.0,SNR=2.8						
	0.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**151.44**	**266**	PKPbc	**PKPbc**	**19 18 33.3**	**-0.4**
	0.3nm,0.6s,baz=112,slow=3.6,SNR=1.5						

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*DDA **22** 19:09:47.7±0.0, 35°.26N×31°.06E, h15km±3km, ML2.3*

*ISK **22** 19:09:47.0, 35°.12N×31°.09E, h14km, ML2.7/13*

*NIC **22** 19:09:49.4±0.0, 35°.32N×31°.09E, h28km±5km, Ml2.9/5*

ISC 22 19:09:48.3±1.3, **35°.37N**±0°.04×**31°.17E**±0°.03, **h14**km±10km, **n44**, σ**1§48**/55, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**1.02**	**110**	P	**Pb**	**19 10 08.2**	**+0.5**
AKMS				S	**Sn**	**19 10 22.9**	**+0.6**
AKMS				AML	AML	19 10 25.0	
	1.1nm,0.4s						
AKMS				AML	AML	19 10 25.0	
	1.1nm,0.4s						
AKMS				AML	AML	19 10 26.9	
	1.1nm,0.4s						
AKMS				AML	AML	19 10 26.9	
	1.1nm,0.4s						
AKUM	**Antalya-Kumluc**	**1.16**	**325**	P	Pg	19 10 16.8	+6.1
ALFC	**Alefka**	**1.19**	**100**	P	**Pb**	**19 10 11.2**	**+0.5**
ALFC				S	**Sg**	**19 10 27.5**	**+0.7**
ALFC				AML	AML	19 10 33.2	
	0.8nm,0.6s						
ALFC				AML	AML	19 10 33.2	
	0.8nm,0.6s						
ALFC				AML	AML	19 10 36.1	
	0.8nm,0.8s						
ALFC				AML	AML	19 10 36.1	
	0.8nm,0.8s						
GAZI	**Gazipasa**	**1.27**	**47**	P	**Pg**	**19 10 13.8**	**+1.0**
NATA	**Nata**	**1.29**	**117**	P	**Pn**	**19 10 12.0**	**0.0**
NATA				S	**Sg**	**19 10 30.6**	**+0.5**
NATA				AML	AML	19 10 41.9	
	1.8nm,0.6s						
NATA				AML	AML	19 10 41.9	
	1.8nm,0.6s						

NATA				AML	AML	19 10 43.5	
	2.5nm,0.5s						
NATA				AML	AML	19 10 43.5	
	2.5nm,0.5s						
LEF	Lefka	1.43	100	PN	Pn	19 10 13.4	-0.5
LEF				SN	Sn	19 10 32.5	0.0
LEF	Lefka	1.43	100	P	Pg	19 10 15.9	0.0
LEF				S	Sn	19 10 30.8	-1.7
AKAS	Kas	1.53	305	P	Pn	19 10 15.8	+0.4
SZAC	Souni	1.54	113	P	Pn	19 10 15.4	0.0
SZAC				S	Sn	19 10 35.9	+0.8
SZAC				AML	AML	19 10 46.5	
	0.5nm,1.2s						
SZAC				AML	AML	19 10 46.5	
	0.5nm,1.2s						
SZAC				AML	AML	19 10 54.0	
	0.4nm,0.5s						
SZAC				AML	AML	19 10 54.0	
	0.4nm,0.5s						
ELL	Elmali	1.71	324	PN	Pb	19 10 19.7	+0.1
KORT	Korkueli	1.76	338	P	Pg	19 10 22.3	+0.3
KORT				S	Sg	19 10 54.7	+10
KORT				*i* AML	AML	19 11 13.0	
	comp=E,32nm,0.7s						
TEKE	Tekeli-Mersin	1.76	63	PN	Pb	19 10 20.3	-0.1
ASGA	Asgata	1.80	108	P	Pn	19 10 19.1	+0.1
ASGA				S	Sn	19 10 42.2	+0.5
ASGA				AML	AML	19 10 55.3	
	0.4nm,0.7s						
ASGA				AML	AML	19 10 55.3	
	0.4nm,0.7s						
ASGA				AML	AML	19 11 00.7	
	0.3nm,0.8s						
ASGA				AML	AML	19 11 00.7	
	0.3nm,0.8s						
CSS	Mathiatis	1.82	102	PN	Pn	19 10 19.2	0.0
CSS	Mathiatis	1.82	102	P	Pn	19 10 19.4	+0.2
CSS				S	Sn	19 10 42.4	+0.3
OSC1	CSNet OBS 1	1.87	177	S	Sn	19 10 41.6	-1.6
ERMK	Ermenek	1.90	48	P	Pg	19 10 24.3	-0.5
ERMK				S	Sg	19 10 51.7	+2.2
ERMK				*i* AML	AML	19 11 00.0	
	comp=N,28nm,0.7s						
HDMB	Hadim	1.92	33	PN	Pg	19 10 23.6	-1.5
BERE	Bereket-Mersin	1.93	59	PN	Pb	19 10 23.3	-0.1
LFK	Lefkose	1.94	92	PN	Pn	19 10 21.3	+0.4
MVOU	Mavrovouni	2.05	99	P	Pn	19 10 22.5	+0.1
AKKU	Akkuyu-Mersin	2.09	67	PN	Pb	19 10 25.2	-0.8
GULN	MERSIN_Gulnar	2.10	67	P	Pb	19 10 25.7	-0.4
SEYD	Seydisehir-KON	2.10	15	PN	Pg	19 10 26.5	-2.2
FETY	Fethiye	2.11	307	P	Pb	19 10 26.4	+0.1
IKL	Isikli	2.22	66	PN	Pb	19 10 27.1	-1.2
GOLH	Golhisar	2.27	326	P	Pb	19 10 29.6	+0.4
KEBE	Keben-Mersin	2.33	62	PN	Pb	19 10 28.4	-1.7
KKBE	Karaman, Kazim	2.34	37	P	Pg	19 10 31.8	-1.3
KKBE				S	Sg	19 11 02.2	-1.2
OSC2	CSNet OBS 4	2.46	158	S	Sn	19 10 57.1	-0.8
KRMN	Karaman	2.47	43	PN	Pb	19 10 31.3	-1.3
BASM	Basmaki-Afyon	2.70	341	PN	Pb	19 10 34.6	-1.8
KONT	Konya--Tatoy	2.74	20	PN	Pb	19 10 35.8	-1.4
KONT	Konya--Tatoy	2.74	20	P	Pb	19 10 37.5	+0.4
TURN	Turunc	2.75	301	P	Pn	19 10 33.8	+1.8
TURN				S	Sn	19 11 01.5	-3.6
TURN				*i* AML	AML	19 11 08.0	
	comp=N,14nm,1.1s						
DOGA	KONYA_Doganhis	2.76	8	P	Pb	19 10 36.7	-0.8
TAVA	DENIZLI_Tavas	2.77	320	P	Pn	19 10 35.1	+2.7
YVAC	Isparta, Yalva	2.90	1	P	Pb	19 10 38.0	-1.8
MULA	Mugla, Merkez-	2.97	310	P	Pn	19 10 36.6	+1.5
KZIL	AFYON_Kizioren	3.00	344	P	Pb	19 10 39.5	-2.0
DAT	Datca	3.21	296	P	Pn	19 10 39.1	+0.7
KDHN	Kadinhani	3.23	13	P	Pb	19 10 41.8	-3.7
PASA	Karahalli, USA	3.26	336	P	Pn	19 10 41.9	+2.7
PASA				S	Sn	19 11 20.4	+2.6
CMRD	Camardi-Nigde	3.84	52	PN	Pn	19 10 50.4	+3.4

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*IDC **22** 19:12:25.9±2.4, 17.°24S×178.°94W, h564^{km}±18^{km}, mb3.5/4, mbtmp4.4/5, Error ellipse: s-maj=59.8km s-min=31.5km az=145.0*

ISC 22 19:12:22.8±0.9**, 17.°1S**±0.°4×**178.°6W**±0.°2**, h550**^{km}**, n8,** σ**1.^{s}02**/10**, mb4.0**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.29	259	P	P	19 13 41.6	+1.9
	52nm,0.7s,baz=135,slow=22,SNR=33						
AFI	Afiamalu	7.29	65	P	P	19 14 13.6	-0.1
	13nm,0.5s,baz=2.4,slow=9.9,SNR=2.5						
STKA	Stephens Creek	38.87	240	P	P	19 19 00.9	-0.5
	2.3nm,0.5s,baz=82,slow=10,SNR=12						
	2.3nm,0.5s						
WRA	Warramunga Arr	44.63	259	P	P	19 19 45.6	-1.4
	1.9nm,0.5s,baz=96,slow=7.9,SNR=61						
WRA				PcP	PcP	19 21 18.2	+0.3
	0.3nm,0.6s,baz=102,slow=2.4,SNR=2.0						
	1.9nm,0.5s						
ASAR	Alice Springs	44.86	254	P	P	19 19 47.9	-0.9
	16nm,0.5s,baz=90,slow=7.8,SNR=517						
ASAR				PcP	PcP	19 21 19.1	+0.4
	0.5nm,0.4s,baz=106,slow=4.0,SNR=4.0						
	16nm,0.5s						
MAW	Mawson	84.53	200	P	P	19 23 57.8	+0.1
	1.0nm,0.6s,baz=146,slow=3.6,SNR=1.5						
	1.0nm,0.6s						
BRTR	Keskin Array B	144.14	315	PKP	PKPdf	19 30 57.0	+0.4
	0.3nm,0.4s,baz=58,slow=1.7,SNR=4.5						
GERES	GERESS Array B	146.84	345	PKPbc	PKiKP	19 31 04.9	-0.7
	0.1nm,0.3s,baz=50,slow=4.2,SNR=4.4						

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*IDC **22** 19:20:16.2±0.9, 6.°91N×73.°11W, h148^{km}±34^{km}, mb3.2/4, mbtmp3.8/6, Error ellipse: s-maj=81.5km s-min=7.9km az=133.0*

*RSNC **22** 19:20:17.0±1.0, 6.°82N×73.°15W, h150^{km}±3^{km}, ML3.5, Mw3.8*

ISC 22 19:20:16.1±0.8**, 6.°84N**±0.°03×**73.°12W**±0.°04**, h154**^{km}±6^{km}**, n39,** σ**1.^{s}38**/73**, mb3.5**/4**, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	193	⇓*i*P	Pn	19 20 37.2	0.0
BARC				*e*S	Sn	19 20 52.5	-0.9
BARC				*i*		19 20 53.4	
	comp=Z,923nm,0.3s						
BRRC	Barranca, Sant	0.64	295	⇑*i*P	Pn	19 20 39.0	+0.4
BRRC				*e*S	Sn	19 20 56.3	+0.5
BRRC				*i*		19 20 59.0	
	comp=Z,566nm,0.3s						
PAMC	Pamplona, Colo	0.65	40	*e*P	Pn	19 20 40.1	+0.8
PAMC				*e*S	Sn	19 20 57.4	+0.4
PAMC				*i*		19 21 00.3	
	comp=Z,386nm,0.4s						
RUSC	La Rusia	0.94	177	⇓*e*P	Pn	19 20 41.1	-0.2
RUSC				*e*S	Sn	19 21 00.1	-0.4
RUSC				*i*		19 21 02.7	
	comp=Z,262nm,0.4s						
PTBC	PUERTO BERRIO,	1.36	257	*e*P	Pn	19 20 43.6	-0.9
PTBC				*e*S	Sn	19 21 05.1	-1.1
PTBC				*i*		19 21 10.1	
	comp=Z,370nm,0.6s						
TAMC	Tame, Arauca	1.38	107	*e*P	Pn	19 20 45.7	+0.9
TAMC				*e*S	Sn	19 21 07.4	+0.7
TAMC				*i*		19 21 08.0	
	comp=Z,223nm,0.3s						
OCAC	Ocana	1.41	352	*e*P	Pn	19 20 45.3	+0.2
OCAC				*e*S	Sn	19 21 07.3	-0.1
OCAC				*i*		19 21 16.5	
	comp=Z,616nm,0.2s						
SPBC	San Pablo de B	1.51	219	*e*P	Pn	19 20 46.0	-0.1
SPBC				*e*S	Sn	19 21 08.3	-0.8
SPBC				*i*		19 21 16.9	
	comp=Z,506nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	19 20 49.7	+0.1
ZARC				*e*S	Sn	19 21 14.5	-0.9
ZARC				*i*		19 21 21.5	
	comp=Z,406nm,0.3s						
NORC	Norcasia	2.15	234	*e*P	Pn	19 20 53.0	-0.2
NORC				*e*S	Sn	19 21 21.0	-0.8
NORC				*i*		19 21 26.6	
	comp=Z,243nm,0.2s						
CHIC	Chingaza	2.27	195	*e*P	Pn	19 20 55.4	+0.3
CHIC				*e*S	Sn	19 21 24.8	-0.3
CHIC				*i*		19 21 29.9	
	comp=Z,239nm,0.4s						
ROSC	El Rosal	2.31	211	P	Pn	19 20 57.6	+2.1
	comp=Z,75nm,0.3s,baz=48,slow=15,SNR=39						
ROSC				S	Sn	19 21 27.1	+1.2
	comp=Z,660nm,0.4s,baz=41,slow=21,SNR=25						
ROSC	El Rosal	2.31	211	*e*P	Pn	19 20 57.0	+1.5
ROSC				*e*S	Sn	19 21 27.3	+1.4
ROSC				*i*		19 21 31.8	
	comp=Z,644nm,0.4s						
HELC	Santa Helena	2.47	255	*e*P	Pn	19 20 57.9	+0.5
HELC				*e*S	Sn	19 21 29.7	+0.4
HELC				*i*		19 21 35.7	
	comp=Z,203nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	19 20 57.7	-0.4
UREC				*e*S	Sn	19 21 27.4	-3.1
UREC				*i*		19 21 39.3	
	comp=Z,228nm,0.2s						
LL1C	La Loma 1 Cana	2.72	351	*e*P	Pn	19 21 02.4	+2.3
LL1C				*e*S	Sn	19 21 37.8	+3.6
VILC	Villavicencio,	2.77	192	*e*P	Pn	19 21 00.6	-0.2
VILC				*e*S	Sn	19 21 35.1	-0.3
PTGC	Puerto Gaitan,	2.80	159	*e*P	Pn	19 21 00.5	-0.7
PTGC				*e*S	Sn	19 21 34.3	-1.6
PTGC				*i*		19 21 36.4	
	comp=Z,122nm,0.4s						
LL6C	La Loma 6 Bece	2.88	357	*e*P	Pn	19 21 02.2	+0.1
LL6C				*e*S	Sn	19 21 37.2	-0.6
LL6C				*i*		19 21 44.4	
	comp=Z,66nm,0.4s						
CBOC	Ciudad Bolivar	3.03	252	*e*P	Pn	19 21 04.7	+0.5
CBOC				*e*S	Sn	19 21 39.5	-1.7
CBOC				*i*		19 21 46.9	
	comp=Z,54nm,0.3s						
SDV	Santo Domingo	3.20	50	P	Pn	19 21 07.0	+0.7
	comp=Z,75nm,0.3s,baz=238,slow=0.8,SNR=22						
SDV				S	Sn	19 21 43.5	-1.7
	comp=Z,48nm,0.3s,baz=73,slow=21,SNR=9.5						
SDV	Santo Domingo	3.20	50	*e*P	Pn	19 21 06.8	+0.5
SDV				*e*S	Sn	19 21 43.8	-1.4
SDV				*i*		19 21 47.3	
	comp=Z,51nm,0.3s						
ARGC	Ariguani, Magd	3.20	340	*e*P	Pn	19 21 07.3	+1.1
ARGC				*e*S	Sn	19 21 46.4	+1.4
ARGC				*i*		19 21 52.9	
	comp=Z,52nm,0.3s						
ANIL	Santa Ana	3.25	224	*e*P	Pn	19 21 08.4	+1.4
ANIL				*e*S	Sn	19 21 48.4	+1.8
PRAC	Prado	3.56	210	*e*P	Pn	19 21 11.2	+0.3
PRAC				*e*S	Sn	19 21 52.7	-0.7
PRAC				*i*		19 21 57.4	
	comp=Z,195nm,0.3s						
ORTC	Ortega, Tolima	3.59	216	*e*P	Pn	19 21 11.5	+0.3
ORTC				*e*S	Sn	19 21 54.9	+0.8
ORTC				*i*		19 22 01.0	
	comp=Z,98nm,0.5s						
SJCC	San Jacinto, C	3.66	326	*e*P	Pn	19 21 10.8	-1.3
SJCC				*e*S	Sn	19 21 52.5	-3.1
SJCC				*i*		19 22 06.8	
	comp=Z,50nm,0.6s						
PLMC	San Jos del P	3.68	239	*e*P	Pn	19 21 12.8	+0.4
PLMC				*e*S	Sn	19 21 54.5	-1.6
PLMC				*i*		19 22 02.5	
	comp=Z,37nm,0.2s						
CRJC	Cerrejon, Guaj	4.16	3	*e*P	Pn	19 21 17.6	-1.0
CRJC				*e*S	Sn	19 22 05.4	-2.0
CRJC				*i*		19 22 12.4	
	comp=Z,70nm,0.4s						
YOTC	Yotoco, Valle	4.28	229	*e*P	Pn	19 21 19.7	-0.5
YOTC				*e*S	Sn	19 22 14.2	+4.0
GUVC	San Jose del G	4.29	173	*e*P	Pn	19 21 19.0	-1.3
GUVC				*e*S	Sn	19 22 09.2	-1.1
GUVC				*i*		19 22 12.4	
	comp=Z,80nm,0.2s						
SMRC	Santa Marta, M	4.43	346	*e*P	Pn	19 21 22.5	+0.4
SMRC				*e*S	Sn	19 22 10.5	-3.1
SMRC				*i*		19 22 12.9	
	comp=Z,26nm,0.2s						
GARC	Garzon, Huila	5.19	207	*e*P	Pn	19 21 31.2	-1.2
GARC				*e*S	Sn	19 22 28.4	-3.4
PCON	Cinco Dias	5.54	216	*e*P	Pn	19 21 38.3	+1.0
FLOC	Florencia	5.80	206	*e*P	Pn	19 21 39.5	-0.7
FLOC				*e*S	Sn	19 22 46.4	+0.4
FLOC				*i*		19 22 50.2	
	comp=Z,12nm,0.5s						
TXAR	Lajitas Array	36.45	312	P	P	19 27 06.9	+0.5
	comp=Z,0.2nm,0.4s,baz=123,slow=8.5,SNR=5.2						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	48.06	324	P	P	19 28 40.7	+0.4
	comp=Z,0.2nm,0.4s,baz=126,slow=9.1,SNR=2.3						
	comp=Z,0.2nm,0.4s						
SCHQ	Schefferville	48.13	5	P	P	19 28 40.4	+0.1
	comp=Z,2.1nm,0.8s,baz=203,slow=6.6,SNR=3.7						
	comp=Z,2.1nm,0.8s						
YKA	Yellowknife Ar	63.25	340	P	P	19 30 27.6	-0.3
	comp=Z,0.8nm,0.6s,baz=131,slow=6.3,SNR=6.3						
	comp=Z,0.8nm,0.6s						

IDC 22 19:25:24.5±1.3**, 5.°26S**×**150.°75E, h90**^{km}±21^{km}**, mb2.5**/2**, mbtmp3.1**/3**, Error ellipse: s-maj=75.7km s-min=11.4km az=134.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.58	53	P	Pn	19 25 51.4	0.0
	42nm,0.3s,baz=236,slow=0.9,SNR=19						
KRVT				S	Sn	19 26 11.7	0.0
	179nm,0.7s,baz=110,slow=23,SNR=35						
PMG	Port Moresby	5.45	221	P	Pn	19 26 45.0	+1.8
	5.0nm,0.4s,baz=330,slow=6.1,SNR=6.1						
PMG				S	Sn	19 27 44.8	+0.3
	30nm,0.5s,baz=203,slow=20,SNR=8.8						
WRA	Warramunga Arr	21.63	226	P	P	19 30 07.2	-0.4
	0.3nm,0.7s,baz=49,slow=9.7,SNR=1.7						
	0.3nm,0.7s						
ASAR	Alice Springs	24.46	220	P	P	19 30 34.6	-0.6
	0.2nm,0.6s,baz=54,slow=9.0,SNR=6.3						
	0.2nm,0.6s						
TORD	Torodi Ar. Bea	148.50	287	PKPbc	PKPbc	19 45 01.9	-0.1
	0.4nm,0.9s,baz=83,slow=3.5,SNR=1.8						

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*IDC **22** 19:32:20.3±9.9, 25.°78S×129.°36E, h0^{km}, mbtmp3.9/3, ML3.7/3, Error ellipse: s-maj=110.2km s-min=45.3km az=81.0*

*NOU **22** 19:32:27.4, 25.°51S×129.°85E, h10^{km}, mb4.2/15, Northern Territory, Australia*

ISC 22 19:32:26.6±0.9**, 25.°56S**±0.°07×**129.°91E**±0.°06**, h10**^{km}**, n18,** σ**1.^{s}89**/22**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.55	289	P	Pn	19 32 55.0	+0.6
ASAR	Alice Springs	4.10	63	Pn	Pn	19 33 31.9	+2.5
	2.1nm,0.3s,baz=244,slow=12,SNR=61						
ASAR				Pg	Pg	19 33 44.8	-0.3
	6.4nm,0.3s,baz=241,slow=16,SNR=46						
ASAR				Sn	Sn	19 34 18.9	+1.5
	6.8nm,0.3s,baz=248,slow=22,SNR=9.8						
ASAR				Lg	Lg	19 34 32.9	
	12nm,0.3s,baz=250,slow=26,SNR=9.1						
	10.0nm,0.5s						
FORT	Forrest	5.45	197	P	Pn	19 33 50.9	+3.0
OOD	Oodnadatta	5.62	115	P	Pn	19 33 52.1	+1.8
WRA	Warramunga Arr	6.93	37	Pn	Pn	19 34 09.8	+1.5
	1.1nm,0.3s,baz=219,slow=11,SNR=34						
WRA				Sn	Sn	19 35 25.8	-1.5
	2.2nm,0.3s,baz=216,slow=23,SNR=7.6						
WRA				Lg	Lg	19 36 03.3	
	3.8nm,0.3s,baz=213,slow=27,SNR=9.2						
	4.0nm,0.5s						
WRAB	Tennant Creek	6.94	37	P	Pn	19 34 10.1	+1.6
LCRK	Leigh Creek	8.80	125	P	Pn	19 34 35.6	+1.6
BBOO	Buckleboo	9.00	145	P	Pn	19 34 39.0	+2.4
KNRA	Kununurra	9.90	354	P	Pn	19 34 49.5	+0.5
INKA	Innaminka	9.93	105	P	Pn	19 34 51.8	+2.3
MEEK	Meekatharra	10.21	262	P	Pn	19 34 52.3	-1.0
NAPP	Napperby	10.45	139	P	Pn	19 34 57.9	+1.4
	23nm,1.0s						
HTT	Hallett	11.09	137	P	Pn	19 35 06.9	+1.6
STKA	Stephens Creek	12.03	124	Pn	Pn	19 35 17.1	-1.0
	0.4nm,0.3s,baz=304,slow=15,SNR=8.4						
STKA				Sn	Sn	19 37 28.1	-4.2
	1.3nm,0.3s,baz=204,slow=16,SNR=7.4						
STKA				Lg	Lg	19 38 43.0	
	0.1nm,0.3s,baz=59,slow=22,SNR=1.1						
	1.9nm,0.4s						
STKA	Stephens Creek	12.03	124	P	Pn	19 35 18.4	+0.3
KLBR	Kellerberrin	12.25	238	P	Pn	19 35 20.8	-0.4
MTN	Manton Dam	12.71	5	P	Pn	19 35 27.2	-0.3
KDU	Kakadu	13.04	11	P	Pn	19 35 31.0	-1.0

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*JMA **22** 20:15:02.4±0.3, 23°N±1°×12°2E±°, h4^{km}±4^{km}, MV3.3/14, TAIWAN REGION*

*TAP **22** 20:15:03.3, 22.°98N×121.°51E, h20^{km}, ML3.2, B*

ISC 22 20:15:02.5±0.9**, 22.°95N**±0.°02×**121.°59E**±0.°02**, h18**^{km}±2^{km}**, n81,** σ**0.^{s}84**/147**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.26	306	P	Pg	20 15 09.0	+0.5
	baz=313						
CHKT				S	Sb	20 15 12.1	-0.5
	baz=313						
EDH	Donghe	0.27	276	P	Pb	20 15 09.1	+0.4
	baz=267						
EDH				S	Sb	20 15 12.7	-0.1
	baz=267						
LDUT	Ludao	0.29	203	*i* P	Pn	20 15 10.7	-1.2
	baz=186						
LDUT				S	Sn	20 15 16.1	-1.7
	baz=186						
FULB	Fuli	0.37	313	*i* P	Pg	20 15 10.4	0.0
	baz=318						
FULB				S	Sg	20 15 15.3	-0.4
	baz=318						
ECS	Chishang	0.38	294	P	Pb	20 15 10.9	+0.2
	baz=293						
ECS				*e*S	Sb	20 15 16.8	+0.5
	baz=293						
LONT	Longtian	0.43	265	P	Pb	20 15 11.1	-0.5
	baz=257						
LONT				*e*S	Sg	20 15 17.3	+0.1
	baz=257						
TTN	Taitung	0.45	245	*i* P	Pg	20 15 12.3	+0.5
	baz=234						
EYUL	Yuli	0.47	328	P	Pb	20 15 12.2	-0.2
	baz=334						
EYUL				S	Sg	20 15 19.7	+1.0
	baz=334						
TWF1	Yuli	0.49	326	P	Pg	20 15 12.7	+0.3
	baz=333						
TWF1				*e*S	Sb	20 15 19.1	-0.3
	baz=333						
TWGBT	Beinan	0.49	255	P	Pb	20 15 12.5	-0.1
	baz=247						
TWGBT				S	Sb	20 15 19.1	-0.3
	baz=247						
TWG	Pinlang	0.50	256	P	Pb	20 15 12.2	-0.5
	baz=247						
TWG				*e*S	Sb	20 15 19.4	-0.2
	baz=247						
YULB	Yu-li	0.52	329	P	Pg	20 15 13.4	+0.3
	baz=334						
YULB				S	Sb	20 15 20.2	-0.1
	baz=334						
HGSD	Ruisui	0.57	344	P	Pb	20 15 13.8	-0.1
	baz=351						
ELDTW	Lidau	0.58	295	*i* P	Pb	20 15 13.1	-1.1
	baz=294						
EHY	Hungye	0.61	336	P	Pg	20 15 14.9	+0.2
	baz=342						
EHY				*e*S	Sb	20 15 23.1	+0.3
	baz=342						
ECL	Taimali	0.68	240	*e*P	Pg	20 15 16.1	+0.1
	baz=232						
ECL				*e*S	Sg	20 15 25.6	+0.4
	baz=232						
EGFH	Guangfu	0.74	348	P	Pb	20 15 16.7	-0.1
	baz=353						
EGFH				*e*S	Sg	20 15 27.4	+0.6
	baz=353						
STYH	Taoyuan	0.79	287	P	Pb	20 15 16.8	-0.8
	baz=286						
STYH				*e*S	Sb	20 15 26.1	-1.8
	baz=286						
YUS	Yu-Shan	0.80	313	*e*P	Pb	20 15 17.6	-0.6
	baz=315						
YUS				S	Sb	20 15 27.7	-1.2
	baz=315						
TAW	Tawu	0.87	228	*e*P	Pb	20 15 18.2	-0.9
	baz=221						
TAW				*e*S	Sb	20 15 29.8	-0.6
	baz=221						
ESL	Shilin	0.88	350	P	Pb	20 15 19.2	0.0
	baz=355						
ESL				*e*S	Sn	20 15 32.5	+0.2
	baz=355						
EAST	Anshuo	0.89	231	*e*P	Pn	20 15 19.8	-0.3
	baz=225						
EAST				*e*S	Sg	20 15 32.0	+0.4
	baz=225						
TAWH	Dawu Township	0.89	227	*e*P	Pb	20 15 18.5	-0.9
	baz=221						
LAY	Lan-yu	0.90	182	*e*P	Pg	20 15 21.3	+1.1
	baz=177						
LAY				*e*S	Sn	20 15 34.5	+1.6
	baz=177						
VWDT	VWDT	0.91	333	P	Pb	20 15 19.6	-0.1
	baz=336						
VWDT				*e*S	Sb	20 15 30.7	-0.7
	baz=336						
TSMG	Majia	0.91	255	*e*P	Pb	20 15 19.8	+0.1
	baz=250						
TSMG				*e*S	Sb	20 15 31.9	+0.5
	baz=250						
SSD	Sandimen	0.91	258	*e*P	Pb	20 15 19.6	-0.1
	baz=253						
SSD				*e*S	Sb	20 15 31.7	+0.2
	baz=253						
ALS	Alishan	0.92	308	P	Pb	20 15 19.7	-0.3
	baz=309						
ALS				*e*S	Sb	20 15 31.6	-0.4
	baz=309						
TEYL	Yanliau Villag	0.92	0	P	Pg	20 15 20.4	-0.1
	baz=5.0						
TEYL				S	Sn	20 15 33.9	+0.7
	baz=5.0						
LYUB	Lan-yu	0.94	180	*e*P	Pb	20 15 19.2	-1.0
	baz=175						
SGST	Jiashian	0.94	279	P	Pb	20 15 19.5	-0.8
	baz=276						
SGST				*e*S	Sb	20 15 32.2	-0.2
	baz=276						
MASBT	Mashibuluo	0.95	250	P	Pb	20 15 19.5	-0.9
	baz=245						
WTP	Ta-pu	0.95	289	P	Pb	20 15 20.3	-0.2
	baz=287						
WTP				*e*S	Sb	20 15 32.4	-0.3
	baz=287						
TPUB	Ta-pu	0.95	292	P	Pb	20 15 20.3	-0.3
	baz=291						
TPUB				S	Sb	20 15 32.6	-0.2
	baz=291						
CHN1	Nanshi	1.01	284	P	Pb	20 15 21.7	+0.2
	baz=282						
CHN1				*e*S	Sb	20 15 34.4	-0.1
	baz=282						
SCST	Cishan	1.01	267	P	Pn	20 15 21.8	0.0
	baz=264						
SCST				*e*S	Sb	20 15 34.7	+0.2
	baz=264						
ETM	Tongmen	1.02	355	P	Pb	20 15 21.1	-0.5
	baz=359						
ETM				S	Sb	20 15 35.1	+0.4
	baz=359						
SSLB	Suanglung	1.02	325	P	Pb	20 15 21.4	-0.3
	baz=327						
SSLB				S	Sb	20 15 34.7	-0.1
	baz=327						
SLIU	Shizi	1.03	225	P	Pg	20 15 22.4	-0.2
	baz=220						
SLIU				*e*S	Sg	20 15 36.4	+0.3
	baz=220						
SGLT	Jiouru	1.04	258	P	Pb	20 15 22.0	+0.1
	baz=254						
SGLT				*e*S	Sb	20 15 35.4	+0.2
	baz=254						
SNST	Tainan City	1.04	285	P	Pb	20 15 22.1	0.0
	baz=284						
SNST				S	Sb	20 15 35.7	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=284						
CHN5	**Tsauling** baz=308	1.06	308	P	Pn	20 15 22.7	+0.1
CHN5	baz=308			eS	Sb	20 15 35.9	-0.1
SCZT	**Fangliau** baz=233	1.06	238	P	Pn	20 15 22.6	+0.1
SCZT	baz=233			eS	Sb	20 15 34.4	-1.6
TWK	**Hsinying** baz=286	1.07	288	P	Pn	20 15 22.3	-0.3
TWK	baz=286			eS	Sb	20 15 35.6	-0.4
OWD	**Renai** baz=342	1.07	339	P	Pb	20 15 22.2	-0.5
OWD	baz=342			eS	Sb	20 15 36.9	+0.5
TWM1	**Shoushan** baz=260	1.09	264	eP	Pn	20 15 22.4	-0.4
TWM1	baz=260			eS	Sb	20 15 36.6	0.0
SMLT	**Sun Moon Lake** baz=328	1.13	326	P	Pn	20 15 23.5	-0.1
SMLT	baz=328			eS	Sb	20 15 37.9	-0.1
TWD	**Chiawan** baz=4.0	1.13	0	eP	Pb	20 15 23.9	+0.4
TWD	baz=4.0			eS	Sg	20 15 39.0	-0.2
WUSB	**Renai** baz=340	1.13	337	P	Pn	20 15 23.0	-0.5
WUSB	baz=340			eS	Sb	20 15 36.7	-1.3
CHN3	**Shinhua** baz=275	1.14	277	eP	Pn	20 15 23.3	-0.3
CHN3	baz=275			eS	Sb	20 15 38.0	-0.1
TYC	**Yuchr** baz=327	1.17	325	eP	Pg	20 15 24.9	-0.3
CHGB	**Renai** baz=344	1.18	341	P	Pn	20 15 23.9	-0.3
CHGB	baz=344			S	Sb	20 15 39.3	-0.1
WJS	**Zhushan** baz=319	1.18	318	eP	Pn	20 15 23.9	-0.2
WJS	baz=319			eS	Sb	20 15 39.1	-0.2
HEN	**Hengchun** baz=215	1.22	220	P	Pb	20 15 25.2	+0.1
HEN	baz=215			eS	Sn	20 15 41.4	+0.6
WHF	**Hehuan Shan** baz=349	1.23	346	P	Pn	20 15 24.9	-0.3
WHF	baz=349			eS	Sb	20 15 41.0	-0.2
DPDB	**Guoxing** baz=333	1.24	331	P	Pb	20 15 25.4	-0.1
DPDB	baz=333			S	Sn	20 15 40.7	-0.7
WCS	**Beigang Elemen** baz=333	1.27	331	P	Pb	20 15 25.7	-0.2
CHN8	**Yiju** baz=287	1.33	288	eP	Pn	20 15 25.9	-0.3
CHN8	baz=287			eS	Sn	20 15 42.5	-1.0
FUSS	**Fushou** baz=349	1.33	346	P	Pn	20 15 26.3	-0.1
FUSS	baz=349			eS	Sn	20 15 43.6	-0.3
NNS	**Nan Shan** baz=355	1.50	352	eP	Pn	20 15 29.0	+0.3
NNS	baz=355			eS	Sn	20 15 47.9	0.0
TWQ1	**Liyutan** baz=333	1.59	332	eP	Pn	20 15 29.9	+0.2
TWQ1	baz=333			eS	Sn	20 15 49.4	-0.3
YHNB	**Yeheng** baz=355	1.73	353	P	Pb	20 15 32.7	-1.1
YHNB	baz=355			S	Sn	20 15 53.7	+0.4
NSK	**Sanguang** baz=355	1.74	353	P	Pn	20 15 32.7	+0.8
NSK	baz=355			eS	Sn	20 15 53.7	+0.2
TWE	**Neicheng** baz=5.0	1.77	2	eP	Pn	20 15 33.0	+0.8
TWE	baz=5.0			eS	Sn	20 15 54.9	+0.6
JYNG	**Yonagunijimaku**	1.95	39	eP	Pb	20 15 35.9	-1.5
JYNG				S	Sb	20 16 00.1	-1.3
PNG	**Penghu** baz=288	1.97	289	P	Pn	20 15 35.0	0.0
YOJ	**Yonaguni jima** baz=42	1.99	40	eP	Pb	20 15 36.5	-1.7
YOJ	**Yonaguni jima**	1.99	40	P	Pb	20 15 36.5	-1.7
YOJ				eS	Sb	20 16 00.9	-1.8
VCHM	**Qimei** baz=276	2.01	278	P	Pn	20 15 35.7	+0.2
TIPB	**Shuangxi** baz=8.0	2.03	6	eP	Pb	20 15 37.7	-1.2
TIPB	baz=8.0			eS	Sn	20 16 01.4	+0.7
SXI1	**Grass Mountain** baz=9.0	2.15	7	eP	Pb	20 15 39.2	-1.9
YM01	**YM01** baz=1.0	2.19	359	eP	Pb	20 15 39.7	-1.9
HATJ	**Hateruma jima**	2.31	61	P	Pn	20 15 41.0	+1.4
HATJ				eS	Sn	20 16 08.5	+0.8
IRIF	**Iriomote-Funau**	2.40	54	P	Pb	20 15 43.0	-2.1
IRIF				eS	Sb	20 16 11.6	-2.8
JKRS	**Kuro-shima**	2.56	59	P	Pn	20 15 44.8	+1.7
JKRS				eS	Sn	20 16 15.2	+1.4
JIJ	**Ishigaki jima**	2.73	58	P	Pn	20 15 46.8	+1.4
JIJ				eS	Sn	20 16 18.1	+0.1
JTJ	**Tarama**	3.31	59	P	Pn	20 15 54.9	+1.5
JTJ				S	Sn	20 16 33.3	+1.0
JIRB	**Irabujima**	3.77	60	P	Pn	20 16 01.1	+1.3
JMJ2	**Miyako jima3**	3.86	62	P	Pn	20 16 02.6	+1.7
JMJ2				eS	Sn	20 16 47.1	+1.3
JIKM	**Ikemajima**	3.88	59	P	Pn	20 16 02.7	+1.5
JIKM				eS	Sn	20 16 48.4	+2.0
JOGS	**Gusukube**	3.93	62	P	Pn	20 16 03.9	+2.0

TAP 22 20:28:58.7, 24°.02N×121°.63E, h8^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien** baz=194	0.05	205	eP	Pg	20 29 00.4	+0.1
TWD	**Chiawan** baz=341	0.07	334	i P	Pg	20 29 00.5	-0.1
TWD	baz=341			eS	Sg	20 29 02.0	+0.1
ETL	**Fush Village** baz=358	0.14	358	eP	Pg	20 29 01.7	0.0
ETL	baz=358			eS	Sg	20 29 03.9	+0.1
NACB	**Ninganchiao** baz=349	0.15	349	P	Pg	20 29 01.9	-0.1
NACB	baz=349			eS	Sg	20 29 04.2	0.0
ETLH	**Xiulin Townshi** baz=324	0.23	324	eP	Pg	20 29 03.3	0.0
ETLH	baz=324			eS	Sg	20 29 06.6	+0.1
ESL	**Shilin** baz=219	0.27	221	eP	Pg	20 29 03.6	-0.5
WHF	**Hehuan Shan** baz=290	0.35	291	eP	Pg	20 29 05.6	-0.3
WHF	baz=290			eS	Sg	20 29 10.4	-0.1
EGFH	**Guangfu** baz=207	0.40	208	eP	Pg	20 29 06.3	-0.1
CHGB	**Renai** baz=275	0.42	275	eP	Pg	20 29 06.9	0.0
CHGB	baz=275			eS	Sg	20 29 12.8	+0.4
FUSS	**Fushou** baz=302	0.42	303	eP	Pg	20 29 07.3	+0.3
FUSS	baz=302			eS	Sg	20 29 12.8	+0.4
ENA	**Nanau** baz=15	0.42	14	eP	Pg	20 29 06.8	-0.1
ENA	baz=15			eS	Sg	20 29 12.7	+0.3
OWD	**Renai** baz=260	0.42	261	eP	Pg	20 29 07.2	+0.3
EWUT	**Wuta** baz=18	0.44	18	eP	Pg	20 29 07.4	0.0
WUSB	**Renai** baz=266	0.47	267	eP	Pg	20 29 08.0	+0.2
WUSB	baz=266			eS	Sg	20 29 14.1	+0.2
LATG	**Datong** baz=349	0.52	350	eP	Pg	20 29 09.2	+0.4
LATG	baz=349			eS	Sg	20 29 16.2	+0.6
ENTT	**Nioudou** baz=355	0.62	355	eP	Pg	20 29 11.0	+0.3

JMA 22 20:29:37.7±0.1, 24°.2N±0°.5×123°.7E±0°.5, h18^{km}±1^{km}, MV1.0/10, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	0.10	30	i P	Pb	20 29 41.2	+0.1
IRIF				S	Sg	20 29 44.2	+0.4
HATJ	**Hateruma jima**	0.22	147	P	Pg	20 29 42.7	-0.2
JKRS	**Kuro-shima**	0.31	91	P	Pg	20 29 44.3	0.0
JKRS				eS	Sb	20 29 49.8	+0.4
JIJ	**Ishigaki jima**	0.45	74	P	Pg	20 29 46.4	-0.4
YOJ	**Yonaguni jima**	0.64	290	S	Sb	20 29 59.3	+0.3
JISG	**Ishigakijimahi**	0.67	59	eS	Sg	20 29 59.9	-0.1
JYNG	**Yonagunijimaku**	0.69	287	eP	Pb	20 29 51.1	-0.2
JYNG				S	Sb	20 29 59.2	-1.3
JTJ	**Tarama**	1.02	67	eP	Pb	20 29 56.6	-0.2
JTJ				eS	Sg	20 30 10.4	-0.4

*JMA **22** 21:07:53.8±0.1, 24°.0N±0°.3×121°.6E±0°.4, h14^{km}, MV2.6/11, TAIWAN REGION*

*TAP **22** 21:07:56.8, 24°.20N×121°.69E, h13^{km}, ML3.3, B*

ISC 22 21:07:56.7±0.8, 24°.14N±0°.02×121°.75E±0°.02, h12^{km}±5^{km}, n88, σ0^{s}.76/151, 4C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village** baz=235	0.12	278	i P	Pg	21 07 59.6	-0.2
ETL	baz=235			i S	Sg	21 08 01.7	-0.4
NACB	**Ninganchiao** baz=253	0.14	282	⇓iP	Pg	21 07 59.8	-0.4
NACB	baz=253			i S	Sg	21 08 02.0	-0.7
TWD	**Chiawan** baz=213	0.15	246	⇓iP	Pg	21 08 00.3	0.0
TWD	baz=213			S	Sg	21 08 02.9	+0.1
EHP	**Heping Village** baz=28	0.17	358	i P	Pg	21 08 00.1	-0.4
EHP	baz=28			S	Sg	21 08 02.6	-0.6
HWA	**Hwalien** baz=197	0.21	219	⇑iP	Pg	21 08 02.2	+0.9
HWA	baz=197			eS	Sg	21 08 06.2	+1.9
ETLH	**Xiulin Townshi** baz=272	0.25	285	⇓iP	Pg	21 08 01.4	-0.6
ETLH	baz=272			i S	Sg	21 08 04.8	-0.8
ENA	**Nanau** baz=14	0.28	359	⇓iP	Pg	21 08 01.9	-0.6
ENA	baz=14			i S	Sg	21 08 05.7	-0.8
ETM	**Tongmen** baz=217	0.29	233	P	Pb	21 08 02.7	-1.2
ETM	baz=217			eS	Sg	21 08 07.0	+0.2
EWUT	**Wuta** baz=19	0.30	5	⇓iP	Pg	21 08 02.3	-0.6
EWUT	baz=19			i S	Sg	21 08 06.2	-0.9
TEYL	**Yanliau Villag** baz=195	0.31	207	eP	Pb	21 08 04.1	0.0
TEYL	baz=195			eS	Sb	21 08 09.4	+0.4
ESL	**Shilin** baz=210	0.44	222	⇓P	Pb	21 08 05.3	-1.0
ESL	baz=210			eS	Sb	21 08 12.6	-0.2
NNSB	**Datong** baz=309	0.44	310	⇓iP	Pg	21 08 04.7	-0.7
NNSB	baz=309			eS	Sg	21 08 10.2	-1.1
LATG	**Datong** baz=336	0.44	333	⇓iP	Pg	21 08 04.7	-0.7
LATG	baz=336			S	Sg	21 08 10.2	-1.2
WHF	**Hehuan Shan** baz=262	0.44	270	⇓iP	Pg	21 08 05.1	-0.5
WHF	baz=262			eS	Sg	21 08 10.8	-0.8
NNS	**Nan Shan** baz=310	0.45	311	⇓iP	Pg	21 08 04.9	-0.7
NNS	baz=310			S	Sg	21 08 10.7	-1.1
TEGC	**Jichi Village** baz=195	0.47	204	eP	Pn	21 08 07.8	-1.5
FUSS	**Fushou** baz=277	0.47	283	⇓iP	Pg	21 08 05.7	-0.3
FUSS	baz=277			S	Sg	21 08 11.7	-0.7
TWC	**Suao** baz=21	0.47	11	⇓P	Pg	21 08 05.5	-0.5
TWC	baz=21			eS	Sg	21 08 11.6	-0.8
NDS	**Dongshan** baz=4.0	0.49	356	⇓iP	Pg	21 08 05.8	-0.5
NDS	baz=4.0			S	Sg	21 08 11.8	-1.0
NDT	**Datong Townshi** baz=338	0.51	335	⇓eP	Pg	21 08 06.2	-0.4
NDT	baz=338			eS	Sg	21 08 12.7	-0.7
ENTT	**Nioudou** baz=347	0.52	341	⇓eP	Pg	21 08 06.4	-0.5
ENTT	baz=347			eS	Sg	21 08 13.0	-0.9
CHGB	**Renai** baz=254	0.53	261	⇓iP	Pg	21 08 07.0	-0.1
CHGB	baz=254			eS	Sg	21 08 13.8	-0.4
TWT	**Tachien** baz=276	0.54	282	⇓eP	Pg	21 08 07.2	0.0
TWT	baz=276			eS	Sg	21 08 14.1	-0.3
TDCB	**Techi** baz=276	0.55	282	⇓P	Pg	21 08 07.3	-0.2
TDCB	baz=276			eS	Sg	21 08 13.8	-1.0
EGFH	**Guangfu** baz=204	0.56	212	eP	Pb	21 08 07.9	-0.4
EGFH	baz=204			eS	Sb	21 08 17.7	+1.5
OWD	**Renai** baz=242	0.56	250	⇓iP	Pg	21 08 07.3	-0.3
OWD	baz=242			eS	Sg	21 08 14.4	-0.6
TWE	**Neicheng** baz=360	0.58	353	⇓P	Pg	21 08 07.6	-0.4
TWE	baz=360			S	Sg	21 08 15.3	-0.4
WUSB	**Renai** baz=248	0.60	256	⇓iP	Pb	21 08 08.3	-0.8
WUSB	baz=248			eS	Sg	21 08 15.9	-0.4
ILA	**Ilan** baz=6.0	0.62	360	eP	Pg	21 08 08.9	+0.1
ILA	baz=6.0			eS	Sg	21 08 16.7	-0.3
YHNB	**Yeheng** baz=329	0.62	327	P	Pg	21 08 08.2	-0.7
YHNB	baz=329			eS	Sg	21 08 15.7	-1.5
FUSB	**Fushanzhiwuyua** baz=351	0.63	347	⇓P	Pg	21 08 08.6	-0.5
FUSB	baz=351			eS	Sg	21 08 16.3	-1.1
NSK	**Sanguang** baz=328	0.64	326	eP	Pg	21 08 08.4	-0.7
NSK	baz=328			eS	Sg	21 08 16.6	-1.1
NWLT	**Wulai** baz=344	0.67	340	⇓P	Pg	21 08 09.1	-0.7
NWLT	baz=344			eS	Sg	21 08 17.2	-1.4
VWDT	**VWDT** baz=228	0.68	235	eP	Pb	21 08 09.8	-0.6
VWDT	baz=228			eS	Sb	21 08 19.4	-0.3
NTC	**Toucheng** baz=11	0.71	6	eP	Pg	21 08 10.1	-0.4
NTC	baz=11			eS	Sg	21 08 19.3	-0.6
HGSD	**Ruisui** baz=199	0.71	205	eP	Pn	21 08 11.7	-0.8
EGS	baz=20	0.72	13	eP	Pb	21 08 11.3	+0.2
WPL	**Puli Township** baz=255	0.73	260	eP	Pb	21 08 10.8	-0.6
WPL	baz=255			eS	Sg	21 08 20.0	-0.6
EHY	**Hungye** baz=205	0.74	212	eP	Pb	21 08 10.7	-0.8
EHY	baz=205			eS	Sb	21 08 21.8	+0.1
WHP	**Taichung City** baz=277	0.75	281	eP	Pg	21 08 10.9	-0.3
WHP	baz=277			eS	Sg	21 08 20.8	-0.2
NFF	**Wufeng Townshi** baz=310	0.75	310	P	Pg	21 08 10.7	-0.6
NFF	baz=310			eS	Sg	21 08 20.1	-1.2
DPDB	**Guoxing** baz=257	0.76	262	eP	Pb	21 08 11.4	-0.4
DPDB	baz=257			eS	Sg	21 08 21.1	-0.3
WCS	**Beigang Elemen** baz=259	0.77	264	eP	Pb	21 08 11.5	-0.5
WCS	baz=259			eS	Sg	21 08 21.3	-0.4
SSLB	**Suanglung** baz=239	0.81	244	⇓P	Pb	21 08 12.1	-0.6
SSLB	baz=239			eS	Sg	21 08 22.3	-0.7
SMLT	**Sun Moon Lake** baz=246	0.82	252	⇑eP	Pb	21 08 12.5	-0.4
SMLT	baz=246			eS	Sg	21 08 23.1	-0.1
TIPB	**Shuangxi** baz=9.0	0.83	5	eP	Pg	21 08 12.3	-0.4
TIPB	baz=9.0			eS	Sg	21 08 22.0	-1.6
LIOB	**Emei** baz=306	0.83	307	⇓eP	Pg	21 08 12.7	-0.2
LIOB	baz=306			eS	Sg	21 08 23.4	-0.4
NSTT	**Nanjuang** baz=305	0.84	306	⇓eP	Pg	21 08 12.5	-0.4
NSTT	baz=305			eS	Sg	21 08 22.4	-1.4
NHDH	**Xindian Distri** baz=349	0.84	346	eP	Pg	21 08 12.6	-0.4
NHDH	baz=349			eS	Sg	21 08 23.2	-0.8
TWA	**Mucha** baz=354	0.85	350	eP	Pg	21 08 12.6	-0.5
TWA	baz=354			eS	Sg	21 08 23.5	-0.7
TYC	**Yuchr** baz=249	0.85	254	eP	Pb	21 08 12.9	-0.4
YULB	**Yu-li** baz=204	0.85	209	eP	Pg	21 08 12.2	-1.0
YULB	baz=204			eS	Sn	21 08 26.4	-0.6
TATO	**Taipei** baz=347	0.86	344	eP	Pg	21 08 12.8	-0.5
TATO	baz=347			eS	Sg	21 08 23.4	-1.3
TWB1	**Santiao Chiao** baz=19	0.89	14	eP	Pg	21 08 12.8	-1.1
TWB1	baz=19			eS	Sg	21 08 24.4	-1.1
TWF1	**Yuli** baz=202	0.89	208	eP	Pg	21 08 12.9	-1.0
TWF1	baz=202			eS	Sn	21 08 27.1	-0.7
TWQ1	**Liyutan** baz=280	0.91	283	eP	Pb	21 08 14.8	+0.4
TWQ1	baz=280			eS	Sn	21 08 29.3	+0.9
NWF	**Wu-fen Shan** baz=6.0	0.93	2	eP	Pb	21 08 14.5	-0.2
WFSB	**Wu-fen Shan** baz=6.0	0.93	2	eP	Pg	21 08 14.5	-0.1
WFSB	baz=6.0			eS	Sg	21 08 26.5	-0.2
NSY	**Sanyi** baz=284	0.94	287	eP	Pb	21 08 15.4	+0.5
NSY	baz=284			eS	Sb	21 08 28.6	+1.2
SBCB	**Hsinchu** baz=313	0.95	313	eP	Pn	21 08 15.9	+0.1
SXI1	**Grass Mountain** baz=11	0.95	7	⇑eP	Pg	21 08 14.8	-0.3
SXI1	baz=11			eS	Sg	21 08 27.4	-0.2
NMLH	**Miaoli** baz=292	0.96	294	eP	Pb	21 08 15.7	+0.5
NMLH	baz=292			eS	Sg	21 08 27.5	-0.2
WWF	**Wufeng** baz=260	0.96	264	eP	Pn	21 08 16.5	+0.5
NCU	**National Centr** baz=330	0.97	328	eP	Pb	21 08 15.6	+0.2
YUS	**Yu-Shan** baz=223	0.98	228	eP	Pb	21 08 15.4	-0.4
TCU	**Taichung** baz=267	0.98	270	eP	Pn	21 08 16.7	+0.5
WJS	**Zhushan** baz=247	0.99	251	eP	Pn	21 08 16.4	0.0
TWS1	**Kuangyinshan** baz=345	1.00	343	eP	Pb	21 08 16.3	+0.4
YM01	**YM01** baz=354	1.01	351	eP	Pg	21 08 15.8	-0.4
FULB	**Fuli** baz=200	1.03	204	eP	Pn	21 08 16.8	-0.1
ALS	**Alishan** baz=229	1.07	234	⇑eP	Pb	21 08 17.2	-0.1
ALS	baz=229			eS	Sb	21 08 32.0	+0.7
WCHH	**Zhanghua** baz=263	1.09	267	eP	Pn	21 08 17.9	+0.2
CHN5	**Tsauling** baz=237	1.12	241	eP	Pn	21 08 18.4	+0.2
CHN5	baz=237			eS	Sn	21 08 34.9	+1.3
JYNG	**Yonagunijimaku**	1.13	74	P	Pn	21 08 18.2	-0.2
JYNG				eS	Sn	21 08 35.3	+1.5
ELDTW	**Lidau** baz=211	1.16	215	eP	Pg	21 08 17.4	-1.7
YOJ	**Yonaguni jima** baz=77	1.19	74	i P	Pn	21 08 19.1	0.0
YOJ	baz=77			eS	Sn	21 08 36.2	+0.9
YOJ	**Yonaguni jima**	1.19	74	P	Pn	21 08 19.1	0.0
YOJ				S	Sn	21 08 37.6	+2.3
WDLH	**Douliu** baz=244	1.20	248	eP	Pn	21 08 19.8	+0.6
WRL	**Guolierlin Hig** baz=256	1.28	259	eP	Pb	21 08 20.8	+0.1
STYH	**Taoyuan** baz=219	1.32	223	eP	Pb	21 08 20.9	-0.4
CHN4	**Tsaushan** baz=230	1.32	234	eP	Pg	21 08 21.6	-0.5
CHN4	baz=230			eS	Sn	21 08 40.9	+2.4
TPUB	**Ta-pu** baz=227	1.32	231	eP	Pg	21 08 21.9	-0.3
IRIF	**Iriomote-Funau**	1.82	84	P	Pn	21 08 27.7	-0.1
JKRS	**Kuro-shima**	2.07	87	P	Pn	21 08 31.6	+0.4
JKRS				eS	Sb	21 08 59.3	-0.4
JIJ	**Ishigaki jima**	2.20	84	P	Pn	21 08 32.9	-0.1
JISG	**Ishigakijimahi**	2.38	79	P	Pn	21 08 35.8	+0.3
JIRB	**Irabujima**	3.19	77	P	Pn	21 08 47.5	+0.8
JMJ2	**Miyako jima3**	3.32	79	eP	Pn	21 08 49.7	+1.4

*AUST **22** 21:11:32.5±1.3, 33°.93S×136°.29E, h10km, Error ellipse: s-maj=14.2km s-min=7.8km az=44.0*

*NOU **22** 21:11:32.4, 33°.98S×136°.34E, h0km, ML3.6/8, Near Coast of South Australia*

*IDC **22** 21:11:36.3±6.9, 33°.28S×136°.42E, h0km, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=72.3km s-min=25.1km az=19.0*

ISC 22 21:11:33.0±1.9, **33°.95S**±0°.09×**136°.3E**±0°.1, **h10km, n15,** σ**0s.70**/17, **Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBOO	Buckleboo	1.16	349	P	Pb	21 11 54.4	-0.8
	baz=1.2						
BBOO				S	Sg	21 12 10.6	+0.2
	baz=1.2						
BBOO	Buckleboo	1.16	349	P	Pb	21 11 54.4	-0.8
NAPP	Napperby	1.71	64	P	Pn	21 12 03.3	+0.4
TWOA	Tennyson Woods	2.16	121	P	Pn	21 12 09.6	+0.6
HTT	Hallett	2.23	77	P	Pn	21 12 10.2	0.0
	baz=2.3						
HTT				S	Sn	21 12 38.5	+0.7
	baz=2.3						
HTT	Hallett	2.23	77	P	Pn	21 12 10.3	+0.1
LCRK	Leigh Creek	3.85	25	P	Pn	21 12 32.6	+0.3
	baz=3.9						
LCRK				S	Sn	21 13 18.5	+0.8
	baz=3.9						
LCRK	Leigh Creek	3.85	25	P	Pn	21 12 32.1	-0.2
MULG	Mulgathing	4.13	332	P	Pn	21 12 35.6	-0.6
	baz=4.2						
MULG	Mulgathing	4.13	332	P	Pn	21 12 37.7	+1.5
STKA	Stephens Creek	4.90	66	Pn	Pn	21 12 46.5	-0.2
	0.1nm,0.3s,baz=254,slow=15,SNR=4.3						
STKA				Sn	Sn	21 13 43.6	+0.1
	0.5nm,0.3s,baz=255,slow=18,SNR=4.5						
STKA				Lg	Lg	21 14 01.6	
	1.2nm,0.3s,baz=319,slow=18,SNR=7.2						
	2.9nm,1.1s						
STKA	Stephens Creek	4.90	66	P	Pn	21 12 47.4	+0.6
ARPS	Mount Arapiles	5.32	123	P	Pn	21 12 51.5	-1.0
ASAR	Alice Springs	10.47	348	Pn	Pn	21 13 59.6	-3.7
	0.1nm,0.3s,baz=164,slow=14,SNR=1.7						
ASAR				Sn	Sn	21 15 52.1	-8.5
	0.1nm,0.3s,baz=166,slow=22,SNR=1.7						
	0.3nm,0.6s						
WRA	Warramunga Arr	14.07	352	Pn	Pn	21 14 48.1	-4.4
	0.1nm,0.3s,baz=177,slow=13,SNR=1.7						
WRA				Sn	Sn	21 17 17.5	-11
	baz=176,slow=22,SNR=1.1						
	0.3nm,0.9s						

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*MOS **22** 21:33:27.3±0.9, 43°.14N×143°.55E, h151km, mb4.6/1, Error ellipse: s-maj=19.8km s-min=15.0km az=65.1*

*SKHL **22** 21:33:28.9±0.4, 43°.10N×143°.60E, h141km±4km, mb5.2/2, msha5.9/2*

*JMA **22** 21:33:28.8±0.1, 43°.1N±0°.5×143°.6E±0°.7, h138km±1km, MV3.5/39, TOKACHI REGION*

*IDC **22** 21:33:29.4±2.1, 43°.18N×143°.42E, h146km±7km, mb3.2/5, mbtmp3.6/6, Error ellipse: s-maj=49.3km s-min=21.0km az=82.0*

ISC 22 21:33:28.3±0.8, **43°.10N**±0°.05×**143°.61E**±0°.04, **h143**km±6km, **n39,** σ**1s.13**/55, **mb3.3**/5, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAR	Ashorobuto	0.23	31	P	Pn	21 33 47.8	0.0
JAR				eS	Sn	21 34 01.8	-0.7
JOB	Onbets	0.26	140	P	Pn	21 33 48.5	+0.6
JOB				eS	Sn	21 34 03.0	+0.4
JCH	Churui	0.52	200	P	Pn	21 33 48.8	-0.1
JCH				eS	Sn	21 34 03.6	-0.9
JFR	Furan	0.74	275	P	Pn	21 33 50.2	-0.1
JFR				eS	Sn	21 34 06.7	-0.4
JAK	Akkeshi	0.81	97	P	Pn	21 33 50.8	0.0
JAK				eS	Sn	21 34 07.8	0.0
JTKR	Abashiri--Toko	0.90	14	P	Pn	21 33 51.6	+0.1
JTKR				eS	Sn	21 34 08.4	-0.7
AKK	Akkeshi	0.91	95	i P	Pn	21 33 51.8	+0.2
AKK				i S	Sn	21 34 09.0	-0.2
JMP	Maruseppu	0.92	349	P	Pn	21 33 51.7	0.0
JMP				eS	Sn	21 34 08.5	-1.2
JNK	Nakash	0.94	59	P	Pn	21 33 52.1	+0.2
JNK				eS	Sn	21 34 10.1	+0.3
JBT2	Biratori 2	0.97	251	eS	Sn	21 34 09.7	-0.5
JKK2	Kamakawa 2	0.99	321	P	Pn	21 33 52.3	0.0
JKK2				eS	Sn	21 34 09.8	-0.9
JNBK	Urakawa-nobuka	1.03	218	P	Pn	21 33 52.9	+0.2
JNBK				eS	Sn	21 34 11.2	0.0
ERM	Erimo	1.14	197	ePN	Pn	21 33 54.2	+0.6
ASAJ	Asahikawa	1.25	324	P	Pn	21 33 54.7	0.0
	44nm,0.3s,baz=188,slow=11,SNR=81						
ASAJ				S	Sn	21 34 14.3	-0.6
	54nm,0.6s,baz=300,slow=33,SNR=14						
JRA	Rausu	1.38	52	eP	Pn	21 33 56.8	+0.8
JRA				eS	Sn	21 34 18.3	+1.1
JHR	Hokuryu	1.51	296	eP	Pn	21 33 58.1	+0.6
GLVR	Golovnino	1.53	65	eS	Sn	21 34 19.0	-1.0
RUSJ	Misakicho	1.56	49	ePN	Pn	21 33 59.3	+1.4
RUSJ				eS	Sn	21 34 25.7	+5.2
NMR	Nemuro--Hokkai	1.57	79	ePN	Pn	21 33 57.6	-0.4
NMR				eS	Sn	21 34 19.2	-1.6
NMR	Nemuro--Hokkai	1.57	79	i P	Pn	21 33 58.0	0.0
NMR				i S	Sn	21 34 19.5	-1.3
NEM2	Nemuro 2	1.58	80	P	Pn	21 33 58.0	-0.2
NEM2				eS	Sn	21 34 19.4	-1.5
JSS	Shosan	1.82	316	P	Pn	21 34 01.6	+0.8
YUK	Yuzh-Kuril'sk	1.89	60	ePN	Pn	21 34 02.7	+1.1
YUK				eS	Sn	21 34 28.2	+1.1
YUK				pmax	pmax		
	comp=E,95nm,0.3s						
YUK				pmax	pmax		
	comp=Z,186nm,0.3s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,856nm,0.1s						
YUK	Yuzh-Kuril'sk	1.89	60	eP	Pn	21 34 02.1	+0.5
YUK				AMB	AMB	21 34 04.7	
	comp=E,230nm,0.2s						
YUK				eS	Sn	21 34 27.0	-0.1
YUK				A	A	21 34 32.0	
	comp=E,1μm,0.3s						
YUK				A	A	21 34 32.0	
	comp=E,860nm,0.3s						
JSE	Soyaes	2.00	339	P	Pn	21 34 02.8	-0.1
JSE				eS	Sn	21 34 28.6	-0.9
SHO	Shikotan	2.47	71	ePN	Pn	21 34 08.4	-0.2
SHO				eS	Sn	21 34 37.1	-2.5
SHO				pmax	pmax		
	comp=N,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,27nm,0.2s						
SHO				pmax	pmax		
	comp=Z,134nm,0.2s						
SHO				smax	smax		
	comp=N,278nm,0.2s						
SHO				smax	smax		
	comp=E,752nm,0.2s						
SHO	Shikotan	2.47	71	i P	Pn	21 34 08.3	-0.3
SHO				AMB	AMB	21 34 09.0	
	comp=E,180nm,0.2s						
SHO				i S	Sn	21 34 37.6	-2.0
SHO				A	A	21 34 39.7	
	comp=E,280nm,0.2s						
SHO				A	A	21 34 39.7	
	comp=E,750nm,0.2s						
MJAR	Matsushiro Arr	7.75	214	P	Pn	21 35 17.9	-0.6
	comp=E,1.2nm,0.7s,baz=42,slow=13,SNR=5.7						
SONM	Songino Array	26.35	293	P	P	21 38 50.9	-0.1
	comp=E,0.5nm,0.6s,baz=81,slow=8.9,SNR=4.1						
	comp=E,0.5nm,0.6s						
H11N2	WAKE ISLAND Hy	30.43	133	T	T	22 11 03.0	
	baz=328,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	30.44	133	T	T	22 11 02.0	
	baz=328,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	30.45	133	T	T	22 11 03.0	
	baz=328,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	31.33	134	T	T	22 12 10.5	
	baz=328,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	31.34	134	T	T	22 12 13.5	
	baz=328,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	31.35	134	T	T	22 12 14.3	
	baz=328,slow=76,SNR=30						
ZALV	Zalesovo Beam	39.33	307	P	P	21 40 42.3	-0.9
	comp=E,0.4nm,0.4s,baz=92,slow=8.7,SNR=2.1						
	comp=E,0.4nm,0.4s						
MKAR	Makanchi Array	42.59	297	P	P	21 41 09.8	-0.2
	comp=E,0.4nm,0.6s,baz=81,slow=8.3,SNR=4.3						
	comp=E,0.4nm,0.6s						
WRA	Warramunga Arr	63.31	190	P	P	21 43 43.9	+2.0
	comp=E,0.2nm,0.5s,baz=7.4,slow=7.3,SNR=1.2						
	comp=E,0.2nm,0.5s						
FINES	FINESS Array B	64.25	332	P	P	21 43 47.0	-0.6
	comp=E,1.0nm,0.6s,baz=55,slow=6.9,SNR=11						
	comp=E,1.0nm,0.6s						

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*IDC **22** 21:35:30.2±9.7, 25°.52S×129°.55E, h0km, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=106.6km s-min=45.6km az=81.0*

*AUST **22** 21:35:33.1±1.1, 25°.48S×129°.87E, h0km, Error ellipse: s-maj=14.7km s-min=10.1km az=24.0*

ISC 22 21:35:35.5±1.2, **25°.44S**±0°.08×**129°.86E**±0°.05, **h10km, n8,** σ**1s.51**/13, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.47	286	P	Pn	21 36 01.1	-1.1
	baz=1.5						
WRKA				S	Sn	21 36 21.9	+0.3
	baz=1.5						
ASPA	Alice Springs	4.08	65	P	Pn	21 36 38.4	+0.4
	baz=4.1						
ASAR	Alice Springs	4.08	65	Pn	Pn	21 36 37.6	-0.5
	0.3nm,0.3s,baz=244,slow=12,SNR=18						
ASAR				Pg	Pb	21 36 50.5	+3.0
	0.6nm,0.3s,baz=240,slow=17,SNR=14						
ASAR				Sn	Sn	21 37 24.4	-1.6
	0.7nm,0.3s,baz=248,slow=22,SNR=7.9						
ASAR				Lg	Lg	21 37 37.6	
	1.2nm,0.3s,baz=249,slow=25,SNR=8.6						
	1.0nm,0.5s						
FORT	Forrest	5.55	196	P	Pn	21 36 58.2	-0.1
	baz=5.5						
OOD	Oodnadatta	5.72	115	P	Pn	21 36 60.0	-0.6
	baz=5.7						
OOD				S	Sn	21 38 04.6	-1.6
	baz=5.7						
MULG	Mulgathing	6.09	143	P	Pn	21 37 05.1	-0.5
	baz=6.1						
WRA	Warramunga Arr	6.86	38	Pn	Pn	21 37 15.0	-1.2
	0.2nm,0.3s,baz=219,slow=11,SNR=12						
WRA				Sn	Sn	21 38 32.3	-2.1
	0.3nm,0.3s,baz=22,slow=5.1,SNR=6.9						
WRA				Lg	Lg	21 39 04.5	
	0.3nm,0.3s,baz=209,slow=29,SNR=2.4						
	0.7nm,0.8s						
STKA	Stephens Creek	12.13	125	Pn	Pn	21 38 27.7	-0.8
	0.1nm,0.3s,baz=305,slow=18,SNR=1.4						
STKA				Sn	Sn	21 40 34.5	-9.3
	0.1nm,0.3s,baz=41,slow=9.5,SNR=1.4						
	2.5nm,0.9s						

IDC 22 21:37:55.2±1.5, **6°.18S**×**150°.55E, h74**km±19km, **mb3.6**/2, **mbtmp3.9**/4, **Error ellipse: s-maj=107.1km s-min=10.5km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.37	38	P	Pn	21 38 30.3	-1.7
	90nm,0.5s,baz=266,slow=2.8,SNR=9.2						
KRVT				S	Sn	21 39 01.1	+1.0
	97nm,0.6s,baz=354,slow=23,SNR=5.2						
PMG	Port Moresby	4.65	226	P	Pn	21 39 03.8	+0.9
	3.0nm,0.3s,baz=126,slow=22,SNR=1.3						
PMG				S	Sn	21 39 56.9	+1.2
	8.2nm,0.5s,baz=252,slow=21,SNR=2.0						
WRA	Warramunga Arr	20.87	228	P	P	21 42 31.1	-0.3
	1.6nm,0.4s,baz=52,slow=11,SNR=18						
	1.6nm,0.4s						
ASAR	Alice Springs	23.64	221	P	P	21 42 59.4	-0.6
	1.9nm,0.4s,baz=56,slow=8.9,SNR=41						
	1.9nm,0.4s						
TORD	Torodi Ar. Bea	148.55	285	PKPbc	PKPbc	21 57 34.7	0.0
	0.4nm,0.8s,baz=60,slow=3.5,SNR=4.3						

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*IDC **22** 22:20:36.2±2.7, 18°.04S×178°.29W, h579km±24km, mb2.8/6, mbtmp3.7/7, Error ellipse: s-maj=96.9km s-min=19.7km az=150.0*

ISC 22 22:20:36.2±1.5, **18°.0S**±0°.5×**178°.3W**±0°.3, **h579km, n7,** σ**0s.29**/7, **mb3.4**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.48	275	P	P	22 21 56.9	+0.2
	3.8nm,0.4s,baz=175,slow=22,SNR=4.9						
STKA	Stephens Creek	38.65	241	P	P	22 27 10.9	-0.3
	0.9nm,0.4s,baz=32,slow=8.6,SNR=4.5						
	0.9nm,0.4s						
WRA	Warramunga Arr	44.70	260	P	P	22 27 59.1	+0.2
	0.9nm,0.4s,baz=98,slow=6.8,SNR=31						
	0.9nm,0.4s						
ASAR	Alice Springs	44.85	254	P	P	22 28 00.2	+0.1
	3.5nm,0.6s,baz=88,slow=8.6,SNR=34						
	3.5nm,0.6s						
NVAR	Mina Array Bea	79.45	44	P	P	22 31 43.6	0.0
	0.2nm,0.6s,baz=198,slow=5.4,SNR=2.1						
	0.2nm,0.6s						
TXAR	Lajitas Array	85.98	58	P	P	22 32 16.6	+0.2
	0.3nm,0.8s,baz=214,slow=5.6,SNR=4.1						
	0.3nm,0.8s						
ILAR	Eielson Array	86.00	13	P	P	22 32 15.1	-0.3
	0.1nm,0.4s,baz=222,slow=5.3,SNR=1.7						
	0.1nm,0.4s						

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*KRSC **22** 22:24:15.8±1.1, 51°.04N×158°.00E, h45km±16km, ML4.1*

*MOS **22** 22:24:15.8±0.6, 50°.92N×157°.97E, h47km, mb4.1/4, Error ellipse: s-maj=16.0km s-min=4.4km az=85.4*

*IDC **22** 22:24:20.3±3.7, 51°.09N×157°.78E, h77km±36km, mb3.3/6, mbtmp3.5/8, MS2.5/3, Error ellipse: s-maj=38.0km s-min=22.3km az=137.0*

ISC 22 22:24:16.3±1.1, **50°.96N**±0°.07×**157°.99E**±0°.06, **h38**km±2km, **n77,** σ**1s.16**/81, **mb3.7**/8, **1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.85	4	PN	Pn	22 24 31.7	0.0
KDTR				S	Sn	22 24 41.6	-1.4
KDTR	Khodutka, Kamc	0.85	4	eP	Pn	22 24 31.7	0.0
KDTR				eS	Sn	22 24 41.6	-1.4
PAU	Pauzhetka	0.90	305	PN	Pn	22 24 32.7	+0.3
PAU				S	Sn	22 24 44.5	+0.3
PAU	Pauzhetka	0.90	305	eP	Pn	22 24 32.7	+0.3
PAU				eS	Sn	22 24 44.5	+0.3
SKR	Severo-Kuril's	1.22	258	d iPN	Pn	22 24 37.3	+0.5
SKR				i S	Sn	22 24 52.2	+0.2
SKR	Severo-Kuril's	1.22	258	eP	Pn	22 24 37.4	+0.6
SKR				eS	Sn	22 24 52.4	+0.4
ASAK	Asacha	1.43	358	PN	Pn	22 24 40.1	+0.4
ASAK				S	Sn	22 24 56.6	-0.6
ASAK	Asacha	1.43	358	eP	Pn	22 24 40.1	+0.4
ASAK				eS	Sn	22 24 56.6	-0.6
RUS	Russkaya	1.51	12	PN	Pn	22 24 40.6	-0.1
RUS				S	Sn	22 24 57.6	-1.5
RUS	Russkaya	1.51	12	eP	Pn	22 24 40.6	-0.1
RUS				eS	Sn	22 24 57.6	-1.5
MIPR	Malaya Ipel'ka	1.53	330	PN	Pn	22 24 41.8	+0.8
MIPR				S	Sn	22 24 59.6	0.0
MIPR	Malaya Ipel'ka	1.53	330	eP	Pn	22 24 41.8	+0.8
MIPR				eS	Sn	22 24 59.6	0.0
MTVR	Mutnovka	1.53	4	PN	Pn	22 24 41.4	+0.2
MTVR				S	Sn	22 24 59.3	-0.6
MTVR	Mutnovka	1.53	4	eP	Pn	22 24 41.4	+0.2
MTVR				eS	Sn	22 24 59.3	-0.6
GRL	Gorelyy	1.59	2	PN	Pn	22 24 42.7	+0.7
GRL				S	Sn	22 25 01.5	+0.1
GRL	Gorelyy	1.59	2	eP	Pn	22 24 42.7	+0.7
GRL				eS	Sn	22 25 01.5	+0.1
KRMR	Karymshinskiy	1.88	3	PN	Pn	22 24 46.7	+1.0
KRMR	Karymshinskiy	1.88	3	eP	Pn	22 24 46.7	+1.0
APC	Apacha	2.04	346	PN	Pn	22 24 49.3	+1.4
APC	Apacha	2.04	346	eP	Pn	22 24 49.3	+1.4
PET	Petropavlovsk	2.11	11	PN	Pn	22 24 49.8	+0.9
PET				S	Sn	22 25 13.8	0.0
PET	Petropavlovsk	2.11	11	eP	Pn	22 24 49.8	+0.9
PET				eS	Sn	22 25 13.8	0.0
DALK	Dalny	2.13	12	PN	Pn	22 24 49.8	+0.6
DALK				S	Sn	22 25 13.9	-0.4
DALK	Dalny	2.13	12	eP	Pn	22 24 49.8	+0.6
DALK				eS	Sn	22 25 13.9	-0.4
PEA0B	Petropavlovsk-	2.16	355	i PN	Pn	22 24 51.0	+1.3
PETK	Petropavlovsk-	2.16	355	P	Pn	22 24 50.9	+1.2
	11nm,0.6s,baz=147,slow=16,SNR=22						
PETK				S	Sn	22 25 17.8	+2.6
	27nm,0.5s,baz=254,slow=42,SNR=3.6						
PETK				LR	LR	22 25 54.4	
	comp=Z,70nm,19.1s,baz=204,slow=47						
UGLR	Uglovaya	2.31	12	PN	Pn	22 24 53.4	+1.6
UGLR	Uglovaya	2.31	12	eP	Pn	22 24 53.4	+1.6
AVH	Avacha	2.35	11	PN	Pn	22 24 54.0	+1.6
AVH	Avacha	2.35	11	eP	Pn	22 24 54.0	+1.6
SMAR	Somma	2.36	12	PN	Pn	22 24 55.0	+2.4
SMAR	Somma	2.36	12	eP	Pn	22 24 55.0	+2.4
KOK	Koryaka	2.37	9	PN	Pn	22 24 54.4	+1.8
KOK	Koryaka	2.37	9	eP	Pn	22 24 54.4	+1.8
SDLR	Sedlovina	2.39	13	PN	Pn	22 24 53.4	+0.5
SDLR	Sedlovina	2.39	13	eP	Pn	22 24 53.4	+0.5
KRER	Koryakskii	2.39	11	PN	Pn	22 24 54.5	+1.4
KRER	Koryakskii	2.39	11	eP	Pn	22 24 54.5	+1.4
KRX	Arik	2.44	9	PN	Pn	22 24 55.1	+1.5
KRX	Arik	2.44	9	eP	Pn	22 24 55.1	+1.5
SPN	Mys Shipunski	2.48	30	PN	Pn	22 24 55.2	+1.1
SPN	Mys Shipunski	2.48	30	eP	Pn	22 24 55.2	+1.1
GNL	Ganaly	2.74	359	PN	Pn	22 24 59.2	+1.5
GNL	Ganaly	2.74	359	eP	Pn	22 24 59.2	+1.5
KII	Karymskiy	3.21	16	PN	Pn	22 25 07.7	+3.6
KII	Karymskiy	3.21	16	eP	Pn	22 25 07.7	+3.6
MKZ	Mys Kozlova	4.26	31	PN	Pn	22 25 19.4	+1.0
MKZ	Mys Kozlova	4.26	31	eP	Pn	22 25 19.4	+1.0
TUMD	Tumrok D	4.49	18	eP	Pn	22 25 26.1	+4.4
TUMR	Tumrok	4.52	16	PN	Pn	22 25 26.1	+3.9
TUMR	Tumrok	4.52	16	eP	Pn	22 25 24.0	+1.8
KBTR	Krutoberegovo	5.99	27	PN	Pn	22 25 44.8	+2.6
KBTR	Krutoberegovo	5.99	27	eP	Pn	22 25 44.8	+2.6
KLR	Kul'dur	16.90	274	P	P	22 28 11.2	-0.2
	0.7nm,0.6s,baz=58,slow=11,SNR=4.1						
KLR				LR	LR	22 35 60.0	
	comp=Z,34nm,20.4s,baz=68,slow=42						
YAK	Yakutsk	18.98	317	i P	Pn	22 28 35.0	0.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	20.20	232	P	Pn	22 28 49.0	-0.8
	comp=Z,1.1nm,0.6s,baz=18,slow=8.3,SNR=4.3						
	comp=Z,1.1nm,0.6s						
MJAR	Matsushiro Arr	20.20	232	P	Pn	22 28 49.0	-0.8
KSRS	Korea Array	25.23	249	LR	LR	22 39 52.9	
	comp=Z,7.9nm,20.2s,baz=135,slow=37						
H11N2	WAKE ISLAND Hy	31.95	164	T	T	23 04 36.0	
	baz=349,slow=75,SNR=99						
H11N3	WAKE ISLAND Hy	31.96	164	T	T	23 04 35.1	
	baz=349,slow=75,SNR=75						
H11N1	WAKE ISLAND Hy	31.96	164	T	T	23 04 34.6	
	baz=349,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	33.11	165	T	T	23 05 59.0	
	baz=349,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	33.12	165	T	T	23 05 56.3	
	baz=349,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	33.13	165	T	T	23 05 55.6	
	baz=349,slow=76,SNR=26						
NRIK	Noril'sk	36.93	326	i P	P	22 31 22.3	+1.3
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	47.92	296	P	P	22 32 47.9	-2.8
	comp=Z,0.1nm,0.3s,baz=48,slow=7.5,SNR=1.4						
	comp=Z,0.1nm,0.3s						
AAK	Ala-Archa	54.86	296	i P	P	22 33 42.4	-0.3
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR	Chiang Mai Arr	56.46	258	P	P	22 33 53.9	-0.4
	comp=Z,0.8nm,0.3s,baz=34,slow=6.6,SNR=4.8						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	56.46	258	i P	P	22 33 54.5	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	Obninsk	63.60	327	i P	P	22 34 46.2	+3.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TXAR	Lajitas Array	72.69	65	P	P	22 35 40.7	+0.4
	comp=Z,0.2nm,0.4s,baz=309,slow=5.7,SNR=4.0						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	73.60	203	P	P	22 35 45.0	-0.4
	comp=Z,0.8nm,0.8s,baz=18,slow=6.2,SNR=3.2						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	73.60	203	P	P	22 35 45.0	-0.4
ASAR	Alice Springs	77.28	203	P	P	22 36 07.0	+0.6
	comp=Z,0.4nm,0.7s,baz=15,slow=5.7,SNR=4.4						
	comp=Z,0.4nm,0.7s						
H03N2	Juan Fernandez	135.52	89	T	T	01 14 09.9	
	baz=314,slow=77,SNR=12						
H03N1	Juan Fernandez	135.53	89	T	T	01 14 04.6	
	baz=314,slow=77,SNR=10						
H03N3	Juan Fernandez	135.53	89	T	T	01 14 05.0	
	baz=314,slow=77,SNR=11						

IDC 22 22:25:55.0±1.8, **10°.66S**×**123°.38E, h0km, mb3.9**/1, **mbtmp3.6**/3, **ML3.3**/2, **MS3.7**/1, **Error ellipse: s-maj=35.1km s-min=12.7km az=122.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.53	31	LR	LR	22 25 56.9	
	comp=Z,187nm,20.2s,baz=327,slow=3.6						
BATI				Pg	Pg	22 26 05.3	+0.2
	560nm,0.3s,baz=203,slow=3.7,SNR=27						
BATI				Lg	Lg	22 26 12.2	
	751nm,0.3s,baz=3.6,slow=22,SNR=10						
WRA	Warramunga Arr	14.02	132	Pn	Pn	22 29 13.9	-1.2
	0.1nm,0.3s,baz=306,slow=14,SNR=2.8						
WRA				Sn	Sn	22 31 43.8	-7.9
	0.5nm,0.3s,baz=336,slow=18,SNR=7.3						
	0.8nm,0.9s						
ASAR	Alice Springs	16.37	144	Pn	Pn	22 29 47.1	+0.8
	0.2nm,0.3s,baz=318,slow=11,SNR=4.9						
ASAR				Sn	Sn	22 32 40.8	-8.0
	0.1nm,0.3s,baz=319,slow=24,SNR=7.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	67.95	331	P	P	22 36 55.7	0.0
	0.7nm,0.6s,baz=136,slow=6.7,SNR=7.7						
	0.7nm,0.6s						
SHEM	Shemya Is, Ala	76.55	29	LR	LR	23 10 10.8	
	comp=Z,45nm,20.7s,baz=280,slow=35						

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*IDC **22** 22:26:04.3±2.2, 1°.75N×126°.03E, h0km, mb3.4/3, mbtmp3.5/3, MS2.8/1, Error ellipse: s-maj=201.1km s-min=26.4km az=65.0*

*DJA **22** 22:26:27.9±0.6, 0°N±4°×12°4E±°, h163km±6km, M3.1/7, MLv3.1/7*

ISC 22 22:26:29.8±1.2, **0°.04N**±0°.08×**124°.24E**±0°.06, **h150km, n11,** σ**1s.51**/13, **mb3.4**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.59	334	P	Pn	22 26 52.2	+0.6
KMSI				S	Sn	22 27 10.3	+2.0
GTOI	Gorontalo	1.36	296	P	Pn	22 26 57.9	0.0
GTOI				S	Sn	22 27 20.5	+1.1
LUWI	Luwuk	1.82	234	P	Pn	22 27 03.5	+0.7
LUWI				S	Sn	22 27 30.2	+2.1
MRSI	Marisa	2.34	281	P	Pn	22 27 07.6	-1.3
SANI	Sanana	2.71	140	P	Pn	22 27 13.8	+0.2
SANI				S	Sn	22 27 48.8	+1.4
APSI	Ampana	2.75	250	P	Pn	22 27 13.6	-0.5
LBMI	Labuha	3.33	102	P	Pn	22 27 21.3	-0.1
WRA	Warramunga Arr	22.19	154	P	P	22 31 11.2	-2.9
	0.9nm,0.6s,baz=338,slow=10,SNR=6.1						
	0.9nm,0.6s						
GUMO	Guam	24.47	56	LR	LR	22 38 14.8	
	comp=Z,22nm,19.3s,baz=140,slow=33						
ASAR	Alice Springs	25.37	159	P	P	22 31 42.6	-0.6
	0.3nm,0.5s,baz=341,slow=11,SNR=1.8						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.23	328	P	P	22 36 04.5	-11
	0.2nm,0.3s,baz=124,slow=8.7,SNR=6.1						
	0.2nm,0.3s						

*NEIC **22** 22:28:46.4±1.7, 19°.9S±0°.1×172°.86W±0°.07, h25^{km}±4^{km}, mb4.6/14, Error ellipse: s-maj=15.9km s-min=7.4km az=158.0*

*IDC **22** 22:28:47.1±1.9, 18°.99S×173°.85W, h0^{km}, mb4.3/6, mbtmp4.2/8, ML4.4/2, MS3.5/3, Error ellipse: s-maj=72.9km s-min=21.3km az=148.0*

ISC 22 22:28:39.9±0.7**, 19°.18S**±0°.08×**172°.64W**±0°.06**, h10**^{km}**, n32, σ1**^{s}**.58**/23**, mb4.5**/13**, MS3.6**/3**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.57**	**88**	Pn	**Pg**	**22 29 30.6**	**+1.4**
NIUE				Sn	**Sg**	**22 30 01.1**	**-1.4**
AFI	**Afiamalu**	**5.30**	**9**	Pn	**Pb**	**22 30 08.6**	**-4.2**
	6.3nm,0.3s,baz=348,slow=12,SNR=3.6						
AFI				Sn	**Sn**	**22 31 04.0**	**+3.5**
	4.4nm,0.3s,baz=178,slow=20,SNR=1.6						
	14nm,0.3s						
AFI	**Afiamalu**	**5.30**	**9**		**Pb**	**22 30 11.8**	**-1.0**
MSVF	**Nonsavu**	**8.95**	**278**	Pn	Pn	22 30 43.7	-5.7
	0.2nm,0.3s,baz=17,slow=22,SNR=2.5						
	3.3nm,0.7s						
RAR	**Rarotonga**	**12.25**	**102**	Pn	Pn	22 31 41.7	+7.1
DZM	**Mont Dzumac**	**19.78**	**258**	P	**Pn**	**22 33 12.1**	**0.0**
	14nm,1.0s,baz=83,slow=18,SNR=2.4						
DZM	**Mont Dzumac**	**19.78**	**258**	P	**Pn**	**22 33 11.8**	**-0.2**
URZ	**Urewera**	**21.00**	**203**	P	**P**	**22 33 24.9**	**+1.3**
	8.3nm,0.9s,baz=278,slow=3.0,SNR=2.1						
URZ	**Urewera**	**21.00**	**203**	Pn	**P**	**22 33 20.8**	**-2.8**
URZ				IAmb	IAmb	22 33 38.8	
	comp=Z,22nm,1.1s						
PPT	**Papeete**	**21.95**	**90**	LR	LR	22 40 54.8	
	comp=Z,67nm,19.5s,baz=220,slow=32						
ARMA	**Armidale**	**34.17**	**244**	P	**P**	**22 35 26.2**	**+0.5**
CTA	**Charters Tower**	**38.66**	**262**	P	**P**	**22 36 03.5**	**-0.5**
	comp=Z,3.6nm,0.5s,baz=103,slow=9.1,SNR=6.0						
	comp=Z,3.6nm,0.5s						
CTAO	**Charters Tower**	**38.66**	**262**	P	**P**	**22 36 04.2**	**+0.2**
WR0	**Warramunga Arr**	**49.60**	**260**	P	**P**	**22 37 32.3**	**+0.6**
WR0				IAmb	IAmb	22 37 32.5	
	comp=Z,4.5nm,0.9s						
AS31	**Alice Springs**	**49.73**	**255**	P	**P**	**22 37 32.8**	**0.0**
ASAR	**Alice Springs**	**49.73**	**255**	P	**P**	**22 37 33.1**	**+0.4**
	comp=Z,7.7nm,1.0s,baz=88,slow=8.5,SNR=35						
	comp=Z,7.7nm,1.0s						
WB0	**Warramunga Arr**	**49.76**	**260**	P	**P**	**22 37 33.2**	**+0.1**
WB2	**Warramunga Arr**	**49.78**	**260**	P	**P**	**22 37 33.3**	**+0.1**
WB2				IAmb	IAmb	22 37 33.4	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**49.78**	**260**	P	**P**	**22 37 33.0**	**-0.2**
WRAB				IAmb	IAmb	22 37 51.0	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**49.79**	**260**	P	**P**	**22 37 32.9**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=96,slow=7.7,SNR=38						
	comp=Z,1.8nm,0.6s						
WRA	**Warramunga Arr**	**49.79**	**260**	P	**P**	**22 37 33.2**	**0.0**
SIJI	**Sorong**	**57.85**	**281**	P	**P**	**22 38 32.4**	**0.0**
	comp=Z,7.1nm,0.5s,baz=101,slow=9.3,SNR=4.1						
	comp=Z,7.1nm,0.5s						
NVAR	**Mina Array Bea**	**76.66**	**41**	P	P	22 40 43.1	+12
	comp=Z,0.3nm,0.5s,baz=205,slow=7.8,SNR=3.8						
	comp=Z,0.3nm,0.5s						
WRH	**Wood River Hil**	**85.51**	**10**	P	P	22 41 26.4	+8.7
WRH				IAmb	IAmb	22 41 30.3	
	comp=Z,5.4nm,0.9s						
CCB	**Clear Creek Bu**	**85.72**	**10**	P	P	22 41 27.3	+8.6
CCB				IAmb	IAmb	22 41 30.5	
	comp=Z,3.2nm,0.8s						
ILAR	**Eielson Array**	**86.00**	**11**	P	P	22 41 29.7	+10
	comp=Z,0.8nm,0.7s,baz=220,slow=5.9,SNR=9.8						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**86.00**	**11**	P	P	22 41 28.3	+8.3
J25K	**Salcha River,**	**86.13**	**11**	P	P	22 41 28.7	+7.9
J25K				IAmb	IAmb	22 41 34.5	
	comp=Z,4.3nm,1.3s						
SEY	**Seymchan**	**86.33**	**345**	LR	LR	23 15 56.7	
	comp=Z,25nm,20.1s,baz=20,slow=33						
YKA	**Yellowknife Ar**	**93.26**	**23**	LR	LR	23 17 22.9	
	comp=Z,49nm,18.6s,baz=293,slow=31						
BRTR	**Keskin Array B**	**149.48**	**318**	PKPbc	**PKPab**	**22 48 36.9**	**+2.1**
	comp=Z,1.3nm,0.7s,baz=162,slow=4.8,SNR=7.8						
BRTR	**Keskin Array B**	**149.48**	**318**		**PKPab**	**22 48 34.3**	**-0.4**

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*IDC **22** 22:32:31.3±2.0, 10°.25N×92°.28E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=92.6km s-min=22.2km az=59.0*

*NEIC **22** 22:32:36.4±0.4, 10°.26N±0°.10×92°.2E±0°.1, h30^{km}±7^{km}, mb4.1/6, Error ellipse: s-maj=15.3km s-min=14.1km az=62.0*

ISC 22 22:32:36.4±1.2**, 10°.2N**±0°.1×**92°.3E**±0°.2**, h35**^{km}**, n19, σ0**^{s}**.30**/17**, mb3.9**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.49**	**18**		**Pn**	**22 33 00.2**	**-0.6**
PBA				Sn	**Sn**	**22 33 19.5**	**+0.5**
PBA	**Port Blair**	**1.49**	**18**	*e*P	**Pn**	**22 33 00.5**	**-0.2**
PBA				*e*S	**Sn**	**22 33 19.1**	**+0.1**
DGPR	**DIGLIPUR**	**3.00**	**13**	*e*P	Pn	22 33 29.6	+8.1
H08S3	**Diego Garcia H**	**26.50**	**229**	T	T	23 05 51.6	
	baz=48,slow=76,SNR=146						
H08S2	**Diego Garcia H**	**26.51**	**229**	T	T	23 05 51.3	
	baz=48,slow=76,SNR=140						
H08S1	**Diego Carcia H**	**26.52**	**229**	T	T	23 05 55.2	
	baz=48,slow=76,SNR=116						
MKAR	**Makanchi Array**	**37.41**	**349**	P	**P**	**22 39 46.2**	**+0.1**
	0.6nm,0.7s,baz=176,slow=8.5,SNR=6.0						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**37.41**	**349**	P	**P**	**22 39 45.9**	**-0.2**
SONM	**Songino Array**	**39.33**	**15**	P	**P**	**22 40 01.9**	**-0.4**
	0.4nm,0.4s,baz=196,slow=6.8,SNR=3.0						
	0.4nm,0.4s						
SONM	**Songino Array**	**39.33**	**15**	IAmb	IAmb	22 40 02.8	
	comp=Z,1.0nm,1.2s						
SONM				P	**P**	**22 40 02.9**	**+0.6**
ULN	**Ulaanbaatar**	**39.53**	**16**	P	**P**	**22 40 04.0**	**-0.1**
ULN				IAmb	IAmb	22 40 04.7	
	comp=Z,1.1nm,0.6s						
WB0	**Warramunga Arr**	**51.09**	**126**	P	**P**	**22 41 35.8**	**-0.1**
WB0				IAmb	IAmb	22 42 13.0	
	comp=Z,9.1nm,1.2s						
WRA	**Warramunga Arr**	**51.13**	**126**	P	**P**	**22 41 36.2**	**0.0**
	comp=Z,1.0nm,0.7s,baz=310,slow=7.7,SNR=25						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**51.13**	**126**	P	**P**	**22 41 36.1**	**-0.1**
WB2	**Warramunga Arr**	**51.15**	**126**	P	**P**	**22 41 36.3**	**0.0**
WB2				IAmb	IAmb	22 42 01.9	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**51.30**	**126**	P	**P**	**22 41 37.6**	**+0.1**
ASAR	**Alice Springs**	**52.84**	**130**	P	**P**	**22 41 49.1**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=309,slow=6.8,SNR=9.7						
	comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**69.77**	**332**	P	**P**	**22 43 42.9**	**0.0**
	comp=Z,1.2nm,1.0s,baz=115,slow=6.3,SNR=3.6						
	comp=Z,1.2nm,1.0s						
FINES	**FINESS Array B**	**69.77**	**332**	P	**P**	**22 43 43.0**	**+0.2**

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*DNK **22** 22:46:07.7±1.5, 51°.52N×15°.88E, h0^{km}±76^{km}, ML1.7*

*IDC **22** 22:46:09.8±1.2, 51°.42N×16°.12E, h0^{km}, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=17.1km s-min=9.6km az=126.0*

*UPP **22** 22:46:09.7±3.3, 51°.54N×15°.52E, h0^{km}, ML2.0, Suspected explosion*

*PRU **22** 22:46:09.4±0.0, 51°.45N×16°.19E, h0^{km}*

*VIE **22** 22:46:10.1±0.7, 51°.39N×16°.05E, h0^{km}, mb2.4/8, ml2.6/7, Error ellipse: s-maj=8.3km s-min=2.3km az=48.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 22 22:46:07.0±0.7**, 51°.57N**±0°.03×**16°.23E**±0°.03**, h0**^{km}**, n51, σ1**^{s}**.20**/89**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**177**	*e*Pg	**Pg**	**22 46 21.0**	**+0.2**
KSP				*e*Sg	**Sg**	**22 46 29.5**	**-0.7**
CHVC	**Chvalec**	**0.99**	**186**	*e*PG	**Pg**	**22 46 26.0**	**+0.2**
CHVC				*e*SG	**Sg**	**22 46 37.7**	**-0.9**
	comp=Z,47nm,0.4s						
OSTC	**Ostas**	**1.01**	**180**	*e*PG	**Pg**	**22 46 26.5**	**+0.2**
OSTC				*e*SG	**Sg**	**22 46 38.1**	**-1.3**
	comp=Z,54nm,0.4s						
UPC	**Upice**	**1.07**	**187**	*e*PG	**Pg**	**22 46 27.2**	**-0.2**
UPC				*e*SG	**Sg**	**22 46 40.3**	**-1.0**
	comp=Z,130nm,0.3s						
DPC	**Dobruska-Polom**	**1.22**	**177**	*e*PG	**Pg**	**22 46 29.9**	**-0.4**
DPC				*e*SG	**Sg**	**22 46 44.2**	**-1.9**
	comp=Z,36nm,0.3s						
PVCC	**Panska Ves**	**1.48**	**226**	*e*PG	**Pn**	**22 46 35.0**	**+0.2**
PVCC				*e*SG	**Sg**	**22 46 54.2**	**-0.1**
	comp=Z,94nm,0.3s						
KRLC	**Kraliky**	**1.53**	**167**	*e*PG	**Pn**	**22 46 35.3**	**-0.3**
KRLC				*e*SG	**Sg**	**22 46 54.6**	**-1.6**
	comp=Z,34nm,0.5s						
BRG	**Berggiesshubel**	**1.59**	**245**	Pn	**Pn**	**22 46 36.5**	**+0.1**
BRG				Pg	**Pg**	**22 46 38.3**	**+0.8**
BRG				Sg	**Sn**	**22 46 58.2**	**+0.5**
BRG				Amp		22 46 59.6	
	comp=Z,37nm,0.4s						
PRU	**Pruhonice**	**1.91**	**215**	*e*PG	**Pn**	**22 46 41.5**	**+0.8**
PRU				*e*SG	**Sn**	**22 47 06.0**	**+0.6**
	comp=Z,18nm,0.3s						
MORC	**Moravsky Berou**	**1.98**	**154**	*e*PN	**Pn**	**22 46 41.6**	**-0.1**
MORC				*e*SG	**Sn**	**22 47 07.2**	**0.0**
CLL	**Collm**	**2.03**	**264**	*e*Pg	**Pb**	**22 46 45.0**	**+0.2**
CLL				*e*Sg	**Sg**	**22 47 13.0**	**+0.7**
	comp=Z,28nm,0.7s						
OKC	**Ostrava-Krasne**	**2.12**	**144**	*e*PG	**Pb**	**22 46 46.2**	**0.0**
OKC				*e*SG	**Sb**	**22 47 13.1**	**+0.1**
	comp=Z,56nm,1.1s						
VRAC	**Vranov**	**2.27**	**174**	Pn	**Pn**	**22 46 47.0**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=354,slow=11,SNR=13						
VRAC				Lg	Lg	22 47 16.7	
	comp=Z,6.2nm,0.3s,baz=77,slow=21,SNR=15						
	comp=Z,2.9nm,0.3s						
VRAC	**Vranov**	**2.27**	**174**	*e*PN	**Pn**	**22 46 46.7**	**+0.9**
VRAC				*e*SG	**Sb**	**22 47 17.6**	**+0.1**
TREC	**Trest**	**2.32**	**192**	*e*PG	**Pb**	**22 46 49.3**	**-0.4**
TREC				*e*SG	**Sb**	**22 47 18.7**	**-0.2**
	comp=Z,14nm,0.4s						
MAUC	**Maruska**	**2.43**	**154**	*e*PN	**Pn**	**22 46 48.9**	**+1.0**
MAUC				*e*SG	**Sb**	**22 47 22.8**	**+0.8**
	comp=Z,50nm,0.7s						
KRUC	**Moravsky**	**2.51**	**177**	*e*PN	**Pn**	**22 46 49.5**	**+0.5**
KRUC				*e*SG	**Sb**	**22 47 25.3**	**+1.0**
OJC	**Ojcow**	**2.63**	**119**	*e*Pg	**Pg**	**22 46 58.3**	**+0.9**
OJC				*e*Sg	**Sg**	**22 47 32.8**	**+1.3**
NKC	**Novy Kostel**	**2.74**	**242**	*e*PN	**Pn**	**22 46 53.2**	**+1.0**
NKC				*e*PG	**Pb**	**22 46 58.6**	**+1.8**
NKC				*e*SG	**Sg**	**22 47 35.1**	**+0.2**
	comp=Z,16nm,0.3s						
KHC	**Kasperske Hory**	**2.97**	**216**	*e*PN	**Pn**	**22 46 55.9**	**+0.5**
KHC				*e*PG	**Pb**	**22 47 00.5**	**-0.3**
KHC				*e*SN	**Sn**	**22 47 30.7**	**-1.0**
KHC				*e*SG	**Sg**	**22 47 40.2**	**-2.1**
	comp=Z,8.3nm,0.3s						
CKRC	**Cesky Krumlov**	**3.01**	**205**	*e*PN	**Pn**	**22 46 56.6**	**+0.7**
CKRC				*e*PG	**Pb**	**22 47 01.6**	**+0.1**
CKRC				*e*SG	**Sb**	**22 47 41.0**	**+2.2**
GERES	**GERESS Array B**	**3.17**	**212**	Pn	**Pn**	**22 46 59.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=29,slow=13,SNR=12						
GERES				Pg	**Pb**	**22 47 04.8**	**+0.6**
	comp=Z,3.5nm,0.3s,baz=32,slow=16,SNR=31						
GERES				Sn	**Sn**	**22 47 35.4**	**-1.3**
	comp=Z,2.0nm,0.3s,baz=28,slow=27,SNR=6.0						
GERES				Lg	Lg	22 47 43.4	
	comp=Z,4.6nm,0.3s,baz=32,slow=30,SNR=11						
	comp=Z,0.8nm,0.3s						
LANS	**Liptovska Anna**	**3.19**	**138**	*e*PN	**Pn**	**22 46 59.5**	**+1.1**
LANS				*e*PG	**Pg**	**22 47 08.1**	**+0.1**
LANS				*e*SG	**Sg**	**22 47 47.8**	**-1.5**
MODS	**Modra-Piesok**	**3.27**	**168**	*e*PG	**Pg**	**22 47 09.8**	**+0.2**
MODS				*e*SG	**Sg**	**22 47 51.8**	**-0.1**
KOLL	**Kolacno**	**3.30**	**154**	*e*PN	**Pn**	**22 47 00.8**	**+0.9**
KOLL				*e*PG	**Pg**	**22 47 12.7**	**+2.5**
KOLL				*e*SG	**Sb**	**22 47 49.8**	**+2.7**
ZST	**Bratislava**	**3.42**	**170**	*e*SG	**Sg**	**22 47 55.1**	**-1.7**
VYHS	**Vyhne**	**3.51**	**150**	*e*SG	**Sg**	**22 47 58.0**	**-1.5**
BSD	**Bornholm Skovb**	**3.64**	**348**	*i* P	**Pn**	**22 47 05.7**	**+1.3**
BSD				*i* S	**Sn**	**22 47 48.4**	**+0.3**
BSD				IAML		22 47 57.8	
	comp=Z,0.9nm,0.1s						
CONA	**Conrad Observa**	**3.65**	**184**	*e*Pn	**Pn**	**22 47 05.3**	**+0.5**
	comp=Z,0.2nm,0.2s						
MOA	**Molln**	**3.93**	**200**	*e*Pn	**Pn**	**22 47 09.0**	**+0.5**
	comp=Z,0.5nm,0.1s,SNR=6.4						
MOA				Sg	**Sg**	**22 48 12.8**	**-0.4**
	comp=Z,4.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.23**	**204**	*e*Pn	**Pn**	**22 47 13.5**	**+0.8**
ARSA	**Arzberg**	**4.34**	**186**	*e*Pn	**Pn**	**22 47 15.9**	**+1.7**
	comp=Z,1.0nm,0.3s						
LUNU	**Lund**	**4.40**	**339**	*i* P	**Pn**	**22 47 15.0**	**+0.1**
LUNU				P	Pb	22 47 15.3	-10
LUNU				*i* S	**Sn**	**22 48 04.9**	**-1.8**
LUNU				S	Sb	22 48 05.6	-13
LUNU	**Lund**	**4.40**	**339**	P	**Pn**	**22 47 15.3**	**+0.5**
LUNU				S	**Sn**	**22 48 05.6**	**-1.1**
BLEU	**Blekinge**	**4.75**	**357**	*i* P	**Pn**	**22 47 20.7**	**+0.9**
BLEU				P	Pb	22 47 21.4	-10
BLEU				*i* S	**Sn**	**22 48 14.6**	**-0.9**
BLEU	**Blekinge**	**4.75**	**357**	P	**Pn**	**22 47 21.4**	**+1.6**
KBA	**Koelnbreinsper**	**4.87**	**204**	Pn	**Pn**	**22 47 22.4**	**+0.8**
	comp=Z,1.1nm,0.5s						
BJUU	**Bjuv**	**4.90**	**338**	*i* S	**Sn**	**22 48 17.8**	**-1.3**
DEL	**Delary**	**5.11**	**345**	*i* P	**Pn**	**22 47 25.0**	**+0.4**
DEL				P	Pb	22 47 25.8	-11
DEL				*i* S	**Sn**	**22 48 22.1**	**-2.2**
DEL				IAML		22 48 26.2	
	comp=Z,0.4nm,0.2s						
DEL	**Delary**	**5.11**	**345**	P	**Pn**	**22 47 25.8**	**+1.2**
WATA	**Walderalm**	**5.21**	**217**	*e*Pn	**Pn**	**22 47 27.1**	**+0.9**
	comp=Z,1.4nm,0.5s						
MOTA	**Moosalm**	**5.39**	**220**	*e*Pn	**Pn**	**22 47 30.3**	**+1.7**
	comp=Z,0.2nm,0.2s						
VXJU	**Vaexsjoe**	**5.42**	**353**	P	**Pn**	**22 47 30.7**	**+1.8**
VXJU	**Vaexsjoe**	**5.42**	**353**	P	**Pn**	**22 47 30.7**	**+1.8**
OSKU	**Oskarshamn**	**5.64**	**359**	P	**Pn**	**22 47 33.9**	**+1.9**
OSKU	**Oskarshamn**	**5.64**	**359**	P	**Pn**	**22 47 33.9**	**+1.9**
BYXU	**Byxelkrok**	**5.75**	**4**	P	**Pn**	**22 47 36.2**	**+2.7**
BYXU	**Byxelkrok**	**5.75**	**4**	P	**Pn**	**22 47 36.2**	**+2.7**
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**22 48 07.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=284,slow=12,SNR=2.7						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**22 48 48.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=217,slow=11,SNR=4.1						
	comp=Z,0.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**12.15**	**296**	Pn	**Pn**	**22 48 58.7**	**-2.4**
	baz=103,slow=13						

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*RHSSO **22** 23:01:53.5±0.4, 45°.32N×17°.86E, h4^{km}±2^{km}, ML2.0/11*

*KRSZO **22** 23:01:53.2±0.7, 45°.28N×17°.83E, h9^{km}±1^{km}, ML2.6/10, Error ellipse: s-maj=2.7km s-min=2.4km az=11.0*

*VIE **22** 23:01:55.2±0.8, 45°.37N×17°.58E, h8^{km}, mb2.1/2, ml1.9/6, Error ellipse: s-maj=9.3km s-min=8.4km az=31.0 42 km NW of Slavonski Brod*

*BEO **22** 23:01:56.2±0.6, 45°.11N×17°.96E, h4^{km}±4^{km}, ML1.7/7*

ISC 22 23:01:53.3±0.9**, 45°.31N**±0°.02×**17°.86E**±0°.02**, h10**^{km}±7^{km}**, n67, σ0**^{s}**.69**/116**, 3C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A252A	**Venje**	**0.13**	**357**	*i* Pg	**Pg**	**23 01 56.8**	**+0.4**
A252A				Sg	**Sg**	**23 01 59.2**	**+0.6**
A052A	**Srbac**	**0.32**	**230**	⇑*i*Pg	**Pg**	**23 01 59.4**	**-0.3**
A052A				*e*Sg	**Sg**	**23 02 03.8**	**-0.1**
A051A	**Mrakovica**	**0.73**	**247**	*e*Pg	**Pg**	**23 02 07.1**	**-0.4**
A051A				*e*Sg	**Sg**	**23 02 17.5**	**+0.4**
BLY	**Banja Luka**	**0.73**	**221**	*e*Pg	**Pg**	**23 02 07.3**	**-0.2**
BLY				*e*Sg	**Sg**	**23 02 17.4**	**+0.3**
BLY	**Banja Luka**	**0.73**	**221**	*e*Pg	**Pg**	**23 02 07.4**	**-0.1**
BLY				*e*Sg	**Sg**	**23 02 17.3**	**+0.2**
BLY	**Banja Luka**	**0.73**	**221**	Pg	**Pg**	**23 02 07.6**	**+0.1**
	comp=Z,0.1nm,SNR=7.0						
BLY				Lg	Lg	23 02 16.7	
MOSL	**Moslavina**	**0.83**	**292**	*e*Pg	**Pg**	**23 02 09.4**	**0.0**
MOSL				Sg	**Sg**	**23 02 19.8**	**-0.5**
PRIJ	**Prijedor**	**0.87**	**248**	*e*Pg	**Pg**	**23 02 09.7**	**-0.5**
PRIJ				*e*Sg	**Sg**	**23 02 21.1**	**-0.4**
A264A	**Tarany**	**0.94**	**335**	Pg	**Pn**	**23 02 12.5**	**0.0**
	comp=Z,0.2nm,SNR=4.6						
MGRS	**Mrkonjic Grad**	**1.05**	**212**	⇑*i*Pg	**Pg**	**23 02 13.3**	**-0.1**
MGRS				*e*Sg	**Sg**	**23 02 27.3**	**+0.3**
A265A	**Kaposfured**	**1.12**	**358**	Pn	**Pn**	**23 02 15.6**	**+0.6**
	comp=Z,0.4nm,SNR=14						
BLJ	**Bijeljina**	**1.13**	**117**	*e*Sg	**Sg**	**23 02 28.6**	**-1.1**
A251A	**Rujevac**	**1.14**	**262**	*e*Pg	**Pb**	**23 02 14.3**	**-0.8**
A251A				Sg	**Sg**	**23 02 28.9**	**-1.1**
A050A	**Klekovaca**	**1.25**	**229**	⇑*i*Pg	**Pn**	**23 02 16.1**	**-0.8**
A050A				*e*Sg	**Sb**	**23 02 33.9**	**+0.7**
A266A	**Gyulaj**	**1.25**	**13**	Pn	**Pg**	**23 02 18.1**	**+0.7**
	comp=Z,0.2nm,SNR=5.9						
KALN	**Kalnik**	**1.28**	**311**	*e*Pg	**Pb**	**23 02 17.7**	**+0.1**
KALN				Sg	**Sb**	**23 02 34.1**	**0.0**
SRKY	**Kupres RS**	**1.33**	**202**	*e*Pg	**Pn**	**23 02 18.0**	**-0.1**
SRKY				*e*Sg	**Sb**	**23 02 35.8**	**+0.2**
FRGS	**Fruska Gora**	**1.39**	**95**	*e*Pg	**Pg**	**23 02 20.2**	**+0.2**
FRGS				*e*Sg	**Sg**	**23 02 38.0**	**0.0**
FRGS	**Fruska Gora**	**1.39**	**95**	*e*Pg	**Pn**	**23 02 18.2**	**-0.5**
FRGS				*e*Sg	**Sg**	**23 02 37.6**	**-0.4**
ZAG	**Zagreb**	**1.41**	**292**	*e*Pn	**Pn**	**23 02 19.3**	**+0.3**
ZAG				Sg	**Sn**	**23 02 37.6**	**-0.1**
PTJ	**Puntijarka**	**1.46**	**295**	*e*Pn	**Pn**	**23 02 18.8**	**-0.9**
PTJ				Sn	**Sn**	**23 02 39.2**	**+0.3**
LOBO	**Lobor**	**1.51**	**305**	*e*Pn	**Pn**	**23 02 19.8**	**-0.6**
LOBO				Sn	**Sn**	**23 02 40.6**	**+0.4**
TIH	**Tihany**	**1.59**	**1**	Pn	**Pn**	**23 02 21.0**	**-0.5**
	comp=Z,0.4nm,SNR=6.4						
TIH				Sn	**Sg**	**23 02 45.4**	**+0.8**
TIH	**Tihany**	**1.59**	**1**	P	**Pn**	**23 02 21.0**	**-0.5**
TIH				S	**Sg**	**23 02 45.4**	**+0.8**
KOGS	**Kog**	**1.60**	**316**	Pn	**Pg**	**23 02 24.4**	**+0.3**
	comp=Z,0.2nm,SNR=2.0						
KOGS				Sn	**Sn**	**23 02 42.2**	**-0.2**
PLIT	**Plitvice**	**1.64**	**256**	*e*Pn	**Pn**	**23 02 21.5**	**-0.7**
PLIT				Sn	**Sn**	**23 02 43.5**	**+0.2**
KIJV	**Kijevo**	**1.66**	**219**	*e*Pn	**Pn**	**23 02 22.7**	**+0.2**
KIJV				Sn	**Sn**	**23 02 43.9**	**0.0**
UDBI	**Udbina**	**1.68**	**243**	*e*Pn	**Pn**	**23 02 23.2**	**+0.4**
UDBI				Sn	**Sn**	**23 02 44.8**	**+0.4**
OZLJ	**Ozalj**	**1.71**	**281**	*e*Pn	**Pn**	**23 02 22.9**	**-0.2**
OZLJ				Sn	**Sn**	**23 02 45.5**	**+0.5**
CRES	**Cresnjev**	**1.76**	**288**	*e*Pn	**Pn**	**23 02 25.0**	**+1.1**
CRES				*e*Sn	**Sb**	**23 02 47.6**	**-0.3**
CRES	**Cresnjev**	**1.76**	**288**	Pn	**Pb**	**23 02 26.5**	**+0.8**
	comp=Z,0.1nm,SNR=2.6						
CRES				Sn	**Sg**	**23 02 50.3**	**+0.3**
BBLS	**Lazići**	**1.82**	**142**	*e*Pg	**Pn**	**23 02 24.6**	**-0.1**
BBLS				*e*Sg	**Sn**	**23 02 48.1**	**+0.4**
BBLS	**Lazići**	**1.82**	**142**	*e*Pn	**Pn**	**23 02 25.3**	**+0.6**
BBLS				*e*Sn	**Sn**	**23 02 49.1**	**+1.4**
MPLH	**Magyarpolny**	**1.88**	**353**	Pn	**Pb**	**23 02 26.6**	**-1.1**
	SNR=2.1						
MPLH	**Magyarpolny**	**1.88**	**353**	P	**Pb**	**23 02 26.6**	**-1.1**
RICI	**Ricice**	**1.89**	**196**	*e*Pn	**Pn**	**23 02 25.7**	**+0.1**
RICI				Sn	**Sn**	**23 02 50.9**	**+1.5**
DIVS	**Divibare**	**1.94**	**128**	*e*Pg	**Pn**	**23 02 27.8**	**+1.4**
DIVS				*e*Sg	**Sb**	**23 02 52.5**	**-0.6**
DIVS	**Divibare**	**1.94**	**128**	*e*Pn	**Pn**	**23 02 27.8**	**+1.4**
DIVS				*e*Sn	**Sn**	**23 02 51.6**	**+0.7**
RUDO	**Rudo**	**2.01**	**147**	*e*Pn	**Pn**	**23 02 27.7**	**+0.5**
RUDO				*e*Sn	**Sb**	**23 02 54.2**	**-0.7**
CSKK	**Cskako**	**2.08**	**8**	Pn	**Pb**	**23 02 30.1**	**-1.0**
	comp=Z,0.3nm,SNR=1.7						
CSKK	**Cskako**	**2.08**	**8**	P	**Pb**	**23 02 30.1**	**-1.0**
A250A	**Rusevo Krmpots**	**2.10**	**265**	*e*Pn	**Pn**	**23 02 28.2**	**-0.3**
A250A				Sn	**Sn**	**23 02 55.1**	**+0.5**
MAKA	**Makarska**	**2.11**	**197**	*e*Pn	**Pn**	**23 02 29.7**	**+1.1**
MAKA				Sn	**Sn**	**23 02 55.3**	**+0.5**
MORI	**Morici**	**2.11**	**228**	*e*Pn	**Pn**	**23 02 29.0**	**+0.5**
MORI				Sn	**Sn**	**23 02 55.5**	**+0.7**
TRUS	**Trudelj**	**2.11**	**120**	*e*Pg	**Pb**	**23 02 31.1**	**-0.6**
TRUS				*e*Sg	**Sb**	**23 02 58.1**	**+0.1**
VIRC	**Vir**	**2.24**	**244**	*e*Pn	**Pn**	**23 02 30.7**	**+0.3**
VIRC				Sn	**Sn**	**23 02 58.6**	**+0.6**
ZIRJ	**Zirje**	**2.29**	**225**	*e*Pn	**Pn**	**23 02 31.0**	**-0.1**
ZIRJ				Sn	**Sn**	**23 02 59.6**	**+0.4**
HVAR	**Hvar**	**2.36**	**206**	*e*Pn	**Pn**	**23 02 32.7**	**+0.7**
HVAR				Sn	**Sn**	**23 03 02.2**	**+1.2**
IVAS	**Ivanjica**	**2.39**	**136**	*e*Pn	**Pn**	**23 02 31.9**	**-0.6**
IVAS				*e*Sn	**Sn**	**23 03 01.3**	**-0.5**
DUGI	**Dugi Otok**	**2.39**	**238**	*e*Pn	**Pn**	**23 02 33.0**	**+0.5**
DUGI				Sn	**Sn**	**23 03 02.0**	**+0.1**
SOKA	**Soboth**	**2.40**	**306**	*e*Pn	**Pn**	**23 02 32.0**	**-0.7**
	comp=Z,0.3nm,0.2s						
SOKA				Sn	**Sn**	**23 03 01.3**	**-0.9**
	comp=Z,0.6nm,0.3s						
STON	**Ston**	**2.44**	**183**	*i* Pn	**Pn**	**23 02 33.8**	**+0.7**
STON				Sn	**Sn**	**23 03 04.4**	**+1.5**
CEY	**Cerknica**	**2.45**	**281**	*e*Pn	**Pn**	**23 02 34.8**	**+1.4**
CEY				*e*Sn	**Sn**	**23 03 04.6**	**+1.3**
GRUS	**Gruza**	**2.48**	**124**	*e*Pn	**Pb**	**23 02 36.6**	**-1.4**
ARSA	**Arzberg**	**2.53**	**321**	*e*Pn	**Pn**	**23 02 34.6**	**+0.2**
	comp=Z,0.7nm,0.3s						
ARSA	**Arzberg**	**2.53**	**321**	*e*Pn	**Pn**	**23 02 34.4**	**-0.1**
ARSA	**Arzberg**	**2.53**	**321**	Pn	**Pn**	**23 02 34.1**	**-0.3**
	SNR=2.0						
OBKA	**Obir**	**2.60**	**299**	Pn	**Pn**	**23 02 35.2**	**-0.3**
	comp=Z,0.1nm,0.1s						
OBKA	**Obir**	**2.60**	**299**	*e*Pn	**Pn**	**23 02 35.8**	**+0.3**
OBKA				*e*Sn	**Sn**	**23 03 09.2**	**+2.0**
RONA	**Rosalia, Austr**	**2.63**	**336**	*e*Pn	**Pn**	**23 02 36.2**	**+0.5**
LSTV	**Lastovo**	**2.63**	**196**	*e*Pn	**Pn**	**23 02 35.9**	**+0.1**
LSTV				Sn	**Sn**	**23 03 08.2**	**+0.5**
SMRN	**Sveta Marina**	**2.63**	**265**	*e*Pn	**Pn**	**23 02 35.4**	**-0.4**
SMRN				Sn	**Sn**	**23 03 06.6**	**-1.1**
DBRK	**Dubrovnik**	**2.65**	**175**	*e*Pn	**Pn**	**23 02 36.6**	**+0.6**
DBRK				Sn	**Sn**	**23 03 09.2**	**+1.1**
SKDS	**Skadanscina**	**2.72**	**276**	*e*Sn	**Sn**	**23 03 10.5**	**+0.6**
BRJN	**Brijuni**	**2.94**	**264**	*e*Pn	**Pn**	**23 02 39.9**	**0.0**
BRJN				Sn	**Sn**	**23 03 15.5**	**+0.2**
CONA	**Conrad Observa**	**2.96**	**333**	Pn	**Pn**	**23 02 40.1**	**-0.3**
	comp=Z,0.1nm,0.1s						
MOA	**Molln**	**3.55**	**317**	*e*Pn	**Pn**	**23 02 48.4**	**-0.1**
	comp=Z,0.2nm,0.1s						

TAP 22 23:15:40.9, 24°.04N×121°.61E, h8^{km}**, ML1.7, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.04**	**345**	P	Pg	23 15 43.2	+0.7
	baz=357						
HWA	**Hwalien**	**0.07**	**182**	P	Pg	23 15 43.4	+0.6
	baz=174						
HWA				S	Sg	23 15 45.1	+0.9
	baz=174						
ETL	**Fush Village**	**0.12**	**7**	P	Pg	23 15 44.4	+0.7
	baz=7.0						
NACB	**Ninganchiao**	**0.13**	**355**	*i* P	Pg	23 15 44.5	+0.7
	baz=355						
NACB				*e*S	Sg	23 15 47.0	+1.1
	baz=355						
ETLH	**Xiulin Townshi**	**0.20**	**325**	*e*P	Pg	23 15 46.0	+0.9
	baz=325						
ETLH				*e*S	Sg	23 15 49.6	+1.7
	baz=325						
WHF	**Hehuan Shan**	**0.33**	**288**	*e*P	Pg	23 15 48.3	+0.7
	baz=288						
WHF				*e*S	Sg	23 15 53.4	+1.4
	baz=288						
FUSS	**Fushou**	**0.39**	**302**	*e*P	Pb	23 15 50.0	-0.2
	baz=301						
FUSS				*e*S	Sb	23 15 55.9	-0.5
	baz=301						
CHGB	**Renai**	**0.40**	**273**	*e*P	Pb	23 15 49.8	-0.5
	baz=272						
ENA	**Nanau**	**0.40**	**18**	*e*P	Pg	23 15 49.5	+0.7
	baz=18						
ENA				*e*S	Sg	23 15 55.3	+1.2
	baz=18						
OWD	**Renai**	**0.40**	**258**	*e*P	Pb	23 15 49.9	-0.5
	baz=257						
TWT	**Tachien**	**0.45**	**298**	*e*P	Pb	23 15 51.1	-0.1
	baz=296						
TWT				*e*S	Sb	23 15 58.3	+0.3
	baz=296						
WUSB	**Renai**	**0.45**	**264**	*e*P	Pb	23 15 50.7	-0.5
	baz=263						
WUSB				*e*S	Sb	23 15 57.8	-0.3
	baz=263						
LATG	**Datong**	**0.50**	**351**	*e*P	Pb	23 15 51.4	-0.5
	baz=351						
LATG				*e*S	Sb	23 15 59.7	+0.2
	baz=351						
VWDT	**VWDT**	**0.51**	**236**	*e*P	Pb	23 15 52.2	+0.1
	baz=236						
VWDT				*e*S	Sb	23 15 59.1	-0.6
	baz=236						
ENTT	**Nioudou**	**0.60**	**356**	*e*P	Pb	23 15 53.7	+0.1

baz=357

IDC 22 23:18:00.8±2.3, 1°.86S×132°.96E, h0km, mb3.0/2, mbtmp3.1/3, ML2.7/1, Error ellipse: s-maj=54.0km s-min=16.7km az=45.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	1.96	300	Pg	Pb	23 18 37.2	-0.2
	1.7nm,0.3s,baz=99,slow=19,SNR=2.6						
SIJI				Lg	Lg	23 19 02.9	
	4.3nm,0.3s,baz=69,slow=22,SNR=6.7						
WRA	Warramunga Arr	18.02	176	P	Pn	23 22 11.5	-1.3
	baz=352,slow=11,SNR=1.8						
	0.4nm,0.9s						
ASAR	Alice Springs	21.70	178	P	P	23 22 53.8	+0.4
	0.2nm,0.4s,baz=359,slow=9.3,SNR=1.7						
	0.2nm,0.4s						
MKAR	Makanchi Array	65.69	324	P	P	23 28 47.2	0.0
	0.2nm,0.6s,baz=127,slow=9.0,SNR=1.9						
	0.2nm,0.6s						

IDC 22 23:19:34.6±1.2, 20°.50N×99°.65E, h0km, mb3.7/4, mbtmp3.7/5, ML4.4/1, MS3.2/1, Error ellipse: s-maj=28.9km s-min=15.4km az=91.0

ISC 22 23:19:35.9±1.0, 20°.25N±0°.07×99°.1E±0°.2, h10km, n8, σ0s.98/8, mb3.8/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	1.79	185	Pn	Pg	23 20 11.2	+1.0
	32nm,0.3s,baz=11,slow=13,SNR=52						
CMAR				Lg	Lg	23 20 43.0	
	60nm,0.3s,baz=48,slow=34,SNR=4.4						
	22nm,0.4s						
PZH	PanZhiHua	6.68	21	Pg	Pb	23 21 32.4	+0.1
PZH				Sg	Sb	23 22 53.5	+1.2
PZH				smax	smax		
	comp=N,20nm,1.0s						
PZH				smax	smax		
	comp=E,20nm,0.9s						
WMQ	Urumqi	25.37	340	*e*P	P	23 25 03.5	+0.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
MKAR	Makanchi Array	29.83	336	P	P	23 25 43.4	+0.2
	comp=Z,0.4nm,0.6s,baz=146,slow=8.9,SNR=5.4						
	comp=Z,0.4nm,0.6s						
KAPI	Kappang	32.28	139	LR	LR	23 43 03.9	
	comp=Z,43nm,19.6s,baz=112,slow=44						
ZALV	Zalesovo Beam	35.38	345	P	P	23 26 30.7	-0.9
	comp=Z,0.8nm,0.5s,baz=153,slow=10.0,SNR=5.3						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	52.78	137	P	P	23 28 50.6	-1.0
	comp=Z,0.8nm,0.8s,baz=326,slow=7.4,SNR=4.8						
	comp=Z,0.8nm,0.8s						
ASAR	Alice Springs	55.27	140	P	P	23 29 09.0	-0.7
	comp=Z,0.7nm,0.8s,baz=334,slow=7.2,SNR=4.9						
	comp=Z,0.7nm,0.8s						

NEIC 22 23:31:45.5±0.9, 4°.3S±0°.1×138°.56E±0°.04, h108km±18km, mb4.1/15, Error ellipse: s-maj=20.9km s-min=2.4km az=193.0

IDC 22 23:31:52.4±4.0, 4°.87S×137°.87E, h115km±50km, mb3.8/1, mbtmp4.5/6, Error ellipse: s-maj=44.6km s-min=28.0km az=55.0

ISC 22 23:31:45.1±0.9, 4°.51S±0°.08×138°.50E±0°.07, h100km, n28, σ1s.96/32, mb4.2/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	6.43	284	Pn	Pn	23 33 18.7	+1.3
FAKI					Sn	23 34 29.8	+0.3
SIJI	Sorong	8.08	296	P	Pn	23 33 41.0	+1.2
	18nm,0.4s,baz=118,slow=6.9,SNR=12						
SIJI				S	Sn	23 35 07.3	-2.3
	4.7nm,0.3s,baz=313,slow=18,SNR=3.5						
MANU	Manus Island	9.18	75	Pn	Pn	23 33 53.3	-1.5
PMG	Port Moresby	9.88	120	Pn	Pn	23 34 04.5	+0.3
COEN	Coen	10.46	154	Pn	Pn	23 34 14.8	+2.6
MTN	Manton Dam	11.03	221	Pn	Pn	23 34 21.8	+2.0
KNRA	Kununurra	14.66	220		Pn	23 35 09.2	+1.6
SOEI	Soe	15.05	249		Pn	23 35 13.5	+0.7
WB0	Warramunga Arr	15.69	194		Pn	23 35 22.5	+1.8
WB0				IAmb	IAmb	23 35 24.4	
	comp=Z,9.1nm,0.6s						
BATI	Baumata	15.76	248	P	Pn	23 35 20.8	-0.8
	comp=Z,11nm,0.3s,baz=90,slow=7.1,SNR=4.1						
WR0	Warramunga Arr	15.84	194		Pn	23 35 24.1	+1.6
WR0				IAmb	IAmb	23 35 26.1	
	comp=Z,7.4nm,0.6s						
WRAB	Tennant Creek	15.86	194		Pn	23 35 24.3	+1.6
WRAB				IAmb	IAmb	23 35 27.0	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	15.87	194	P	Pn	23 35 24.7	+1.8
WB2				IAmb	IAmb	23 35 28.2	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	15.87	194	P	Pn	23 35 23.5	+0.6
	comp=Z,9.7nm,0.7s,baz=15,slow=11,SNR=108						
WRA				S	Sn	23 38 13.1	-5.5
	comp=Z,3.7nm,0.8s,baz=13,slow=23,SNR=6.2						
WRA	Warramunga Arr	15.87	194		Pn	23 35 23.2	+0.3
CTAO	Charters Tower	17.23	155		P	23 35 40.7	+1.0
CTAO				IAmb	IAmb	23 35 51.5	
	comp=Z,8.8nm,1.1s						
TOLI2	Tolitoli	18.56	287	P	P	23 35 53.7	-0.7
TOLI2				IAmb	IAmb	23 35 58.2	
	comp=Z,4.4nm,0.6s						
KAPI	Kappang	18.69	268	P	P	23 35 56.2	+0.4
	comp=Z,4.1nm,0.7s,baz=66,slow=20,SNR=3.5						
AS31	Alice Springs	19.56	193	P	P	23 36 06.6	+1.4
AS31				IAmb	IAmb	23 36 07.5	
	comp=Z,5.4nm,0.8s						
ASAR	Alice Springs	19.56	193	P	P	23 36 06.5	+1.3
	comp=Z,5.1nm,0.4s,baz=16,slow=12,SNR=64						
ASAR				S	S	23 39 36.5	-4.2
	comp=Z,10nm,0.9s,baz=10,slow=23,SNR=18						
ASAR	Alice Springs	19.56	193	P	P	23 36 06.7	+1.5
EIDS	Eidsvold	24.00	151	P	P	23 36 51.1	+0.4
MBWA	Marble Bar	24.62	226	P	P	23 36 56.6	+0.2
MBWA				IAmb	IAmb	23 36 57.1	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	24.81	225	P	P	23 36 57.1	-1.0
STKA	Stephens Creek	27.38	174	P	P	23 37 24.3	+3.1
	comp=Z,2.7nm,0.8s,baz=336,slow=12,SNR=2.9						
	comp=Z,2.7nm,0.8s						
FORT	Forrest	27.92	199	P	P	23 37 23.9	-2.1
ARMA	Armidale	28.60	156	P	P	23 37 32.4	+0.3
ARMA				IAmb	IAmb	23 37 48.7	
	comp=Z,6.6nm,1.1s						
DZM	Mont Dzumac	32.21	125	P	P	23 38 02.5	-1.6

IDC 22 23:31:52.3±7.7, 2°.54S×140°.57E, h0km, mb4.4/2, mbtmp4.5/4, ML4.5/1, Error ellipse: s-maj=112.9km s-min=57.4km az=169.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	9.46	136	Pn	Pn	23 34 10.0	0.0
	7.1nm,0.3s,baz=328,slow=19,SNR=2.0						
WRA	Warramunga Arr	18.34	199	P	Pn	23 36 08.2	-0.1
	1.6nm,0.3s,baz=17,slow=12,SNR=11						
	8.6nm,0.6s						
ASAR	Alice Springs	21.97	197	P	P	23 36 49.9	+1.9
	11nm,0.8s,baz=18,slow=11,SNR=10						
	11nm,0.8s						
STKA	Stephens Creek	29.20	178	P	P	23 37 54.4	-1.4
	3.7nm,0.6s,baz=353,slow=12,SNR=8.4						
	3.7nm,0.6s						

TIR 22 23:40:14.8, 41°.92N×20°.31E, h8km±1km, Md3.2, Ml3.1

PDG 22 23:40:14.6±0.1, 41°.89N×20°.28E, h8km, ML2.9/13, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0

THE 22 23:40:15.3, 41°.93N×20°.31E, h0km±2km, ML2.7/3, Error ellipse: s-maj=3.8km s-min=1.5km az=336.0

BEO 22 23:40:16.5±0.2, 41°.91N×20°.34E, h4km±3km, ML2.7/12

ISC 22 23:40:15.2±0.9, 41°.91N±0°.01×20°.30E±0°.02, h9km±7km, n103, σ1s.82/169, 23C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKS	Kukesi	0.19	27	P	Pg	23 40 19.5	+0.4
	baz=26						
KKS				S	Sg	23 40 22.2	+0.5
	baz=26						
PHP	Peshkopia	0.25	155	P	Pg	23 40 20.2	0.0
PHP				S	Sg	23 40 24.4	+0.9
PHP	Peshkopia	0.25	155	P	Pg	23 40 20.2	0.0
	baz=156						
PHP				S	Sg	23 40 23.9	+0.4
	baz=156						
PHP				AMP			
	comp=N,11nm,0.4s,baz=156						
BCI	Bajram Curri	0.49	339	P	Pg	23 40 24.2	-0.5
	baz=339						
BCI				S	Sg	23 40 31.9	+0.7
	baz=339						
BCI				AMP			
	comp=E,7.0nm,0.4s,baz=339						
TIR	Tirane	0.65	210	⇓P	Pb	23 40 27.9	-0.7
TIR				⇑S	Sn	23 40 38.4	-2.5
TIR	Tirane	0.65	210	*e*Pg	Pb	23 40 28.2	-0.5
TIR				*e*Sg	Sn	23 40 38.9	-2.0
TIR	Tirane	0.65	210	P	Pb	23 40 28.0	-0.7
TIR				S	Sb	23 40 37.5	-0.3
	comp=E,430nm,0.5s						
TIR	Tirane	0.65	210	P	Pb	23 40 28.0	-0.7
	baz=211						
TIR				S	Sb	23 40 37.9	+0.1
	baz=211						
TIR				AMP			
	comp=N,0.9nm,0.4s,baz=211						
PVY	Plav	0.73	340	⇑*i*Pg	Pg	23 40 28.4	-0.9
PVY				*i* Sg	Sb	23 40 40.3	0.0
ULC	Ulcinj	0.79	274	⇓*i*Pg	Pg	23 40 29.1	-1.3
ULC				*i* Sg	Sb	23 40 41.5	-0.4
DRME	Dracevica, Mon	0.88	289	*e*Pg	Pg	23 40 31.2	-0.8
DRME	Dracevica, Mon	0.88	289	⇑*i*Pg	Pg	23 40 30.6	-1.4
DRME				*i* Sg	Sn	23 40 44.7	-1.9
OHR	Ohrid	0.88	155	*e*Pg	Pb	23 40 31.9	-0.8
OHR				*e*Sg	Sn	23 40 45.7	-1.1
PDG	Podgorica	0.93	304	⇑P	Pb	23 40 32.9	-0.7
PDG				⇑S	Sb	23 40 46.1	+0.1
PDG	Podgorica	0.93	304	*e*Pg	Pg	23 40 32.3	-0.8
PDG				*e*Sg	Sn	23 40 47.0	-1.0
PDG	Podgorica	0.93	304	*e*Pg	Pg	23 40 31.3	-1.8
TTG	Podgorica	0.93	304	⇑*i*Pg	Pg	23 40 31.5	-1.6
TTG				*i* Sg	Sn	23 40 46.5	-1.5
IVA	Berane	1.01	343	⇓*i*Pg	Pg	23 40 33.6	-1.0
IVA				*i* Sg	Sn	23 40 49.7	-0.3
KOME	Kolasin	1.11	329	⇓*i*Pg	Pb	23 40 35.3	-1.2
KOME				*i* Sg	Sn	23 40 53.0	+0.6
BUM	Brajici-Budva	1.12	291	⇑*i*Pg	Pb	23 40 35.2	-1.5
BUM				*i* Sg	Sn	23 40 52.9	+0.3
CEME	Cevo	1.21	302	⇓*i*Pg	Pb	23 40 36.9	-1.4
CEME				*i* Sg	Sn	23 40 55.9	+1.0
NKY	Niksic	1.32	313	⇓*i*Pg	Pn	23 40 39.1	-0.9
NKY				*i* Sg	Sg	23 41 00.2	+2.4
KBN	Korca	1.34	164	P	Pg	23 40 40.7	-0.1
KBN				S	Sg	23 41 00.5	+2.4
	comp=N,260nm,0.6s						
KBN	Korca	1.34	164	P	Pg	23 40 40.6	-0.2
	baz=164						
KBN				S	Sg	23 41 00.3	+2.2
	baz=164						
KBN				AMP			
	comp=N,1.2nm,0.8s,baz=164						
SJES	Sjenica	1.37	350	*e*Pg	Pb	23 40 40.6	-0.6
SJES				*e*Sg	Sg	23 41 01.5	+2.2
SJES	Sjenica	1.37	350	*e*Pn	Pb	23 40 40.5	-0.6
FNA	Florina	1.39	144	*e*Pg	Pn	23 40 40.0	-0.8
FNA				*e*Sg	Sg	23 41 00.3	+0.6
FNA	Florina	1.39	144	P	Pb	23 40 40.4	-0.9
FNA				S	Sg	23 41 00.7	+1.0
	comp=N,548nm,0.7s						
FNA	Florina	1.39	144	P	Pb	23 40 40.3	-0.9
	baz=144						
FNA				S	Sg	23 41 00.8	+1.0
	baz=144						
SELS	Selova	1.44	25	*e*Pg	Pn	23 40 41.5	0.0
SELS				*e*Sg	Sg	23 41 01.6	0.0
BARS	Barje	1.44	51	*e*Pg	Pg	23 40 42.4	-0.5
BARS	Barje	1.44	51	*e*Pn	Sn	23 40 57.3	-3.3
BARS				*e*Sg	Sg	23 41 02.0	+0.4
HCY	Herceg Novi	1.45	292	*e*Pn	Pn	23 40 40.7	-0.8
HCY	Herceg Novi	1.45	292	⇑*i*Pg	Pn	23 40 40.9	-0.6
HCY				*i* Sg	Sg	23 41 03.9	+2.3
VLO	Vlora	1.56	203	P	Pg	23 40 45.3	+0.2
	baz=204						
VLO				S	Sg	23 41 07.5	+2.1
	baz=204						
VLO				AMP			
	comp=E,2.0nm,0.5s,baz=204						
PLE	Pljevlja	1.57	335	⇑*i*Pn	Pb	23 40 44.0	-0.5
PLE				*i* Sn	Sg	23 41 07.1	+1.4
NEST	Nestorio	1.60	159	P	Pg	23 40 44.7	-1.1
NEST				S	Sg	23 41 07.0	+0.5
BRY	Bratogost	1.64	308	*e*Pn	Pb	23 40 45.3	-0.4
BRY	Bratogost	1.64	308	⇓*i*Pn	Pb	23 40 45.2	-0.4
BRY				*i* Sn	Sg	23 41 08.9	+1.1
UPM	Unac-Piva	1.65	322	*e*Pn	Pg	23 40 46.4	-0.5
UPM	Unac-Piva	1.65	322	⇑*i*Pn	Pb	23 40 45.0	-0.9
UPM				*i* Sn	Sg	23 41 09.3	+1.0
TREB	Trebinje	1.66	300	*e*Pn	Pb	23 40 45.6	-0.3
IVAS	Ivanjica	1.67	356	*e*Pg	Pn	23 40 45.0	+0.3
IVAS				*e*Sg	Sg	23 41 09.8	+0.9
BOSS	Bosilegrad	1.72	69	*e*Pg	Pb	23 40 46.5	-0.5
BOSS				*e*Sg	Sb	23 41 09.4	+0.6
DBRK	Dubrovnik	1.77	296	*e*Pn	Pb	23 40 47.2	-0.6
DBRK				Sn	Sg	23 41 11.9	-0.1
LSK	Leskovik	1.77	173	P	Pg	23 40 48.8	-0.4
	baz=172						
LSK				S	Sg	23 41 13.8	+1.7
	baz=172						
LSK				AMP			
	comp=N,1.1nm,1.0s,baz=172						
VAY	Valandovo	1.80	108	*e*Pn	Pb	23 40 47.3	-1.0
RUDO	Rudo	1.84	338	*e*Pn	Pn	23 40 47.1	+0.1
GRUS	Gruza	2.00	9	*e*Pn	Pb	23 40 50.7	-1.1
BOVS	Bovan	2.01	31	⇑P	Pg	23 40 54.4	+0.6
BOVS				⇑S	Sg	23 41 21.5	+1.6
BOVS	Bovan	2.01	31	*e*Pn	Pb	23 40 52.5	+0.6
SRN	Sarande	2.04	186	P	Pg	23 40 52.7	-1.5
	baz=187						
SRN				S	Sg	23 41 21.5	+0.8
	baz=187						
SRN				AMP			
	comp=N,0.2nm,1.5s,baz=187						
BBLS	Lazići	2.06	342	*e*Pn	Pb	23 40 51.1	-1.8
BBLS	Lazići	2.06	342	*e*Pn	Pb	23 40 51.0	-1.8
KKB	Krupnik	2.08	90	P	Pb	23 40 51.9	-1.2
KNT	Kendrikon	2.09	110	P	Pb	23 40 51.3	-1.9
STON	Ston	2.15	297	*e*Pn	Pb	23 40 52.9	-1.4
STON				Sn	Sb	23 41 20.6	-0.5
DIVS	Divibare	2.20	354	*e*Pn	Pn	23 40 53.1	+1.1
DIVS	Divibare	2.20	354	*e*Pn	Pn	23 40 52.2	+0.2
VTS	Vitosha	2.29	71	⇑P	Pg	23 40 58.5	-0.6
VTS				⇓S	Sg	23 41 28.2	-0.6
VTS	Vitosha	2.29	71	P	Pb	23 40 56.0	-0.8
TRUS	Trudelj	2.31	2	*e*Pn	Pb	23 40 57.0	-0.1
BLKB	Belogradchik	2.45	45	⇑P	Pb	23 40 59.6	+0.2
BLKB				⇓S	Sg	23 41 32.6	-1.2
SVIS	Svilajnac	2.45	16	*e*Pn	Pb	23 40 57.6	-1.8
MMB	Musomiste	2.59	96	P	Pg	23 41 04.0	-0.7
LSTV	Lastovo	2.67	290	*e*Pn	Pb	23 41 00.4	-2.7
LSTV				Sn	Sb	23 41 32.6	-3.3
KUBS	Kucevo	2.70	21	*e*Pn	Pn	23 41 00.1	+1.3
MAKA	Makarska	2.79	301	*e*Pn	Pb	23 41 02.0	-3.1
MAKA				Sn	Sb	23 41 36.5	-2.8
RICI	Ricice	2.82	305	*e*Pn	Pb	23 41 03.2	-2.6
RICI				Sn	Sb	23 41 37.5	-2.8
MATE	Matera	2.99	246	⇑P	Pb	23 41 04.8	-3.7
MATE				⇓S	Sn	23 41 39.5	+0.9
MDVR	Moldovita	3.05	19	⇓P	Pb	23 41 06.8	-2.8
MDVR				⇑S	Sb	23 41 46.8	-0.2
HVAR	Hvar	3.12	295	*e*Pn	Pn	23 41 05.9	+1.4
HVAR				Sn	Sn	23 41 43.6	+1.8
SRKY	Kupres RS	3.15	314	*e*Pn	Pb	23 41 08.9	-2.5
FRGS	Fruska Gora	3.27	354	⇑P	Pb	23 41 10.0	-3.4
FRGS				⇓S	Sb	23 41 50.8	-2.4
FRGS	Fruska Gora	3.27	354	*e*Pn	Pn	23 41 02.2	-4.4
HERR	Herculane	3.35	27	⇑P	Pb	23 41 12.2	-2.5
HERR				⇑S	Sb	23 41 54.1	-1.4
MGRS	Mrkonjic Grad	3.44	318	*e*Pn	Pn	23 41 08.2	-0.7
KIJV	Kijevo	3.54	308	*e*Pn	Pn	23 41 13.0	+2.6
KIJV				Sn	Sn	23 41 55.8	+3.4
BLY	Banja Luka	3.64	322	*e*Pn	Pn	23 41 14.8	+3.2
VLAD	Vladila	3.67	54	⇑P	Pb	23 41 16.8	-3.4
BZS	Buzias	3.83	14	⇓P	Pn	23 41 18.2	+3.9
BZS				⇑S	Sb	23 42 05.3	-4.0
ZIRJ	Zirje	3.84	299	*e*Pn	Pn	23 41 16.3	+1.8
ZIRJ				Sn	Sn	23 42 01.5	+1.7
MORI	Morici	3.90	302	*e*Pn	Pn	23 41 17.7	+2.5
MORI				Sn	Sn	23 42 04.3	+3.2
UDBI	Udbina	4.22	310	*e*Pn	Pn	23 41 21.4	+1.6
UDBI				Sn	Sn	23 42 12.6	+3.4
LOT	Lotru	4.34	34	⇑P	Pn	23 41 25.2	+3.7
DUGI	Dugi Otok	4.37	300	*e*Pn	Pn	23 41 23.6	+1.8
DUGI				Sn	Sn	23 42 15.4	+2.5
PLIT	Plitvice	4.52	313	*e*Pn	Pn	23 41 26.2	+2.4
PLIT				Sn	Sn	23 42 19.3	+2.8
VIRC	Vir	4.52	304	*e*Pn	Pn	23 41 25.2	+1.5
VIRC				Sn	Sn	23 42 18.5	+2.1
A250A	Rusevo Krmpots	5.04	311	*e*Pn	Pn	23 41 33.5	+2.4
A250A				Sn	Sn	23 42 32.0	+2.6
DRGR		5.18	19	⇑P	Pn	23 41 36.0	+3.1
CRES	Cresnjev	5.25	320	*e*Pn	Pn	23 41 36.0	+2.2
MLR	Muntele Rosu	5.44	47	⇓P	Pn	23 41 41.1	+4.6
SMRN	Sveta Marina	5.45	307	*e*Pn	Pn	23 41 38.8	+2.2
SMRN				Sn	Sn	23 42 41.2	+1.7
MPLH	Magyarpolny	5.62	340	P	Pn	23 41 40.7	+1.9
BRJN	Brijuni	5.63	304	*e*Pn	Pn	23 41 40.6	+1.6
BRJN				Sn	Sn	23 42 45.5	+1.7
CEY	Cerknica	5.72	314	*e*Pn	Pn	23 41 43.4	+3.1
SOKA	Soboth	6.08	323	*e*Pn	Pn	23 41 47.4	+2.1
	comp=N,0.6nm,0.4s						
SOKA				*e*Sn	Sn	23 42 55.4	+0.4
	comp=N,1.5nm,0.5s						
OBKA	Obir	6.18	320	*e*Pn	Pn	23 41 49.4	+2.7
	comp=N,1.1nm,0.5s						
ARSA	Arzberg	6.33	329	*e*Pn	Pn	23 41 52.0	+3.3
	comp=N,2.2nm,0.5s						
ARSA				*e*Sn	Sn	23 43 02.9	+1.6
	comp=N,0.9nm,0.5s						
MOA	Molln	7.32	326	*i* Pn	Pn	23 42 06.3	+4.1
	comp=N,0.4nm,0.2s						
MOA				*e*Sn	Sn	23 43 28.1	+2.6
	comp=N,3.1nm,0.6s						
ABTA	Abfaltersbach	7.38	314	*e*Pn	Pn	23 42 05.5	+2.3
	comp=N,2.1nm,0.5s						
ABTA				*e*Sn	Sn	23 43 27.8	+0.6
	comp=N,0.7nm,0.4s						
WTTA	Wattenberg	8.18	314	*e*Pn	Pn	23 42 17.4	+3.3
	comp=N,1.0nm,0.5s						
MOTA	Moosalm	8.51	313	*e*Pn	Pn	23 42 21.8	+3.0
	comp=N,0.3nm,0.3s						
MOTA				*e*Sn	Sn	23 43 56.0	+1.1
	comp=N,1.3nm,0.5s						

IDC 22 23:58:10.8±0.5, 20°.47N×120°.47E, h0km, mb4.2/22, mbtmp4.2/23, MS3.4/26, Error ellipse: s-maj=19.3km s-min=11.1km az=74.0

BJI 22 23:58:11.1±0.0, 20°.46N×120°.49E, h11km, mb4.2/38, mB4.5/24, ML4.0/1, Ms4.1/29, Ms7 3.8/26

MAN 22 23:58:13.6, 20°.49N×120°.43E, h33km, mb5.1, ML4.1, MS4.2, Hypocentre not reviewed by the ISC

NEIC 22 23:58:14.0±1.0, 20°.56N±0°.05×120°.49E±0°.09, h15km±3km, mb4.5/96, Error ellipse: s-maj=12.9km s-min=7.1km az=96.0

ISC 22 23:58:12.4±0.3, 20°.47N±0°.04×120°.54E±0°.05, h10km, n177, σ1s.10/167, mb4.5/69, MS3.4/29, 5C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	2.39	12	Pn	Pn	23 58 51.3	-0.4
TWG				Sn	Sn	23 59 20.4	-0.7
SGCP	Gonzaga	2.63	147	⇓*e*P	Pn	23 58 55.9	+0.9
SGCP				*e*S	Sg	00 00 08.9	+32
TPUB	Ta-pu	2.82	2		Pn	23 58 55.6	-2.0
YULB	Yu-li	2.99	13		Pn	23 59 00.3	+0.3
SSLB	Suanglung	3.32	7		Pn	23 59 03.3	-1.3
SAMP	Sagada Mountai	3.39	174	⇑*e*P	Pn	23 59 06.4	+1.0
SAMP				*e*S	Sn	23 59 45.6	-0.1
YHNB	Yeheng	4.25	10		Pn	23 59 18.1	+0.8
SMPP	San Manuel, Pa	4.30	178	⇑*e*P	Pn	23 59 18.1	+0.2
KNMB	Chin-men Tao	4.44	334	Pn	Pn	23 59 20.3	+0.4
YOJ	Yonaguni jima	4.58	29	Pn	Pn	23 59 21.7	-0.1
BALP	Baler	4.81	168	⇑*e*P	Pn	23 59 26.6	+1.7
BALP				*e*S	Sn	00 00 05.0	-16
TGY	Tagaytay City	6.34	176	Pn	Pn	23 59 48.6	+2.5
	28nm,0.3s,baz=267,slow=2.6,SNR=3.7						
JCNP	Jose Panganiba	6.48	161	⇑*e*P	Pn	23 59 49.4	+1.4
JCNP				*e*S	Sn	00 00 55.8	-6.3
QIZ	Qiongzhong	10.17	264	P	Pn	00 00 38.4	-0.2
QIZ				S	Sn	00 02 33.6	+0.8
QIZ				LR	LR		
	comp=N,550nm,12.1s						
QIZ				LR	LR		
	comp=E,640nm,10.5s						
QIZ				LR	LR		
	comp=Z,750nm,10.5s						
SSE	Sheshan	10.60	3	P	Pn	00 00 44.5	+0.1
SSE				S	Sn	00 02 44.8	+1.7
SSE				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,130nm,3.4s						
SSE				LR	LR		
	comp=N,130nm,6.9s						
SSE				LR	LR		
	comp=E,190nm,8.1s						
GYA	Guiyang	14.05	298	*e*P	Pn	00 01 34.5	+2.7
GYA				pmax	pmax		
	comp=Z,12nm,1.2s						
GYA				LR	LR		
	comp=N,220nm,9.5s						
GYA				LR	LR		
	comp=E,470nm,11.2s						
GYA				LR	LR		
	comp=Z,550nm,11.0s						
MYLDM	Lahad Datu	15.33	188	Pn	Pn	00 01 50.6	+1.6
MYLDM				IAmb	IAmb	00 02 02.8	
	comp=Z,40nm,1.2s						
LYN	LuoYang	15.74	335	*e*P	P	00 01 57.8	-0.4
LYN				sP	pwP	00 02 03.5	-0.2
LYN				pmax	pmax		
	comp=Z,150nm,4.9s						
LYN				LR	LR		
	comp=Z,480nm,9.6s						
LYN				LR	LR		
	comp=Z,390nm,11.4s						
LYN				LR	LR		
	comp=Z,420nm,11.0s						
XAN	Xi'an	16.99	325	P	P	00 02 12.0	-0.2
XAN				pP	pwP	00 02 16.5	-1.5
XAN				sP	sP	00 02 19.6	+4.5
XAN				S	Sn	00 05 22.8	+3.5
XAN				sS	S	00 05 30.0	+0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,5.7s						
XAN				LR	LR		
	comp=Z,490nm,12.2s						
XAN				LR	LR		
	comp=Z,370nm,12.7s						
XAN				LR	LR		
	comp=Z,570nm,12.5s						
HNS	HongShan	17.62	344	⇓P	P	00 02 21.4	+2.4
HNS				LR	LR		
	comp=Z,170nm,8.8s						
HNS				LR	LR		
	comp=Z,340nm,11.9s						
HNS				LR	LR		
	comp=Z,240nm,11.4s						
KSAR	Wonju Array Be	18.08	19	P	Pn	00 02 22.8	-0.9
KSRS	Korea Array	18.10	19	P	Pn	00 02 23.8	-0.2
	comp=Z,2.8nm,0.8s,baz=202,slow=11,SNR=12						
KSRS				LR	LR	00 10 25.8	
	comp=Z,36nm,18.2s,baz=205,slow=41						
KS19	Wonju Array Si	18.13	19		Pn	00 02 23.9	-0.5
PZH	PanZhiHua	18.25	293	P	P	00 02 27.3	+1.1
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		

	comp=Z,100nm,5.2s						
CD2	**Chengdu**	**18.33**	**308**	P	**P**	**00 02 26.3**	**-0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,460nm,10.6s						
CD2				LR	LR		
	comp=Z,300nm,10.3s						
SEHB	**SEOHWA**	**18.95**	**19**	P	**P**	**00 02 33.6**	**-0.1**
TOLI2	**Tolitoli**	**19.24**	**179**		**Pn**	**00 02 38.6**	**+0.6**
BJT	**Baijiatuau**	**19.84**	**350**	P	**P**	**00 02 42.9**	**-0.5**
BJI	**Beijing**	**19.86**	**350**	P	**Pn**	**00 02 44.4**	**-0.8**
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI				LR	LR		
	comp=Z,260nm,12.0s						
BJI				LR	LR		
	comp=Z,91nm,11.1s						
BJI				LR	LR		
	comp=Z,240nm,12.4s						
CHTO	**Chiang Mai**	**20.41**	**269**	P	**P**	**00 02 49.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**20.46**	**268**	P	**P**	**00 02 50.3**	**-0.1**
	comp=Z,3.9nm,0.3s,baz=79,slow=10.0,SNR=7.0						
CMAR				LR	LR	00 10 46.4	
	comp=Z,164nm,19.2s,baz=85,slow=37						
	comp=Z,3.9nm,0.3s						
TNTI	**Ternate**	**20.68**	**160**	P	**P**	**00 02 54.3**	**+1.5**
INU	**Inuyama**	**20.73**	**41**	P	**P**	**00 02 53.1**	**-0.1**
INU				IAmb	IAmb	00 03 10.6	
	comp=Z,22nm,1.1s						
JCJ	**Chichijima**	**20.86**	**67**	LR	LR	00 09 22.6	
	comp=Z,85nm,20.4s,baz=324,slow=32						
JGF	**Kuroka**	**21.11**	**41**	P	**P**	**00 02 57.2**	**-0.1**
JGF				IAmb	IAmb	00 02 59.3	
	comp=Z,20nm,1.1s						
JHJ	**Hachijo jima 2**	**21.26**	**50**	LR	LR	00 10 34.7	
	comp=Z,79nm,21.6s,baz=236,slow=35						
LZH	**Lanzhou**	**21.35**	**320**	*e*P	**P**	**00 03 01.8**	**+1.7**
LZH				pP	pwP	00 03 08.9	+3.0
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				LR	LR		
	comp=Z,360nm,11.9s						
LZH				LR	LR		
	comp=Z,310nm,11.9s						
LZH				LR	LR		
	comp=Z,400nm,14.6s						
LUWI	**Luwuk**	**21.49**	**174**	P	**P**	**00 03 02.3**	**+0.9**
MAJO	**Matsushiro**	**22.25**	**40**	P	**P**	**00 03 09.1**	**-0.4**
MAJO				IAmb	IAmb	00 03 14.2	
	comp=Z,17nm,1.2s						
MJAR	**Matsushiro Arr**	**22.25**	**40**	P	**P**	**00 03 09.7**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=214,slow=7.7,SNR=10						
MJAR				LR	LR	00 12 28.0	
	comp=Z,31nm,19.0s,baz=226,slow=38						
	comp=Z,5.4nm,0.9s						
MJAR	**Matsushiro Arr**	**22.25**	**40**	P	**P**	**00 03 08.9**	**-0.6**
MJB9	**Matsu-Tunnel**	**22.25**	**40**	P	**P**	**00 03 09.1**	**-0.4**
MJB9				IAmb	IAmb	00 03 14.1	
	comp=Z,17nm,1.2s						
JSD	**Sado**	**23.29**	**37**	P	**P**	**00 03 21.0**	**+0.6**
SRIT	**Nakonsritamara**	**23.42**	**243**	P	**P**	**00 03 22.0**	**+0.1**
SRIT				IAmb	IAmb	00 03 25.6	
	comp=Z,24nm,1.2s						
SIJI	**Sorong**	**23.67**	**152**	P	**P**	**00 03 25.3**	**+0.9**
	comp=Z,16nm,0.6s,baz=357,slow=4.4,SNR=14						
	comp=Z,16nm,0.6s						
GUMO	**Guam**	**24.23**	**103**	LR	LR	00 11 10.7	
	comp=Z,65nm,21.7s,baz=220,slow=32						
KULM	**Kulim**	**24.52**	**235**	P	**P**	**00 03 32.1**	**-0.2**
KULM				IAmb	IAmb	00 03 35.7	
	comp=Z,8.1nm,1.0s						
IPM	**Ipoh**	**24.76**	**233**	P	**P**	**00 03 33.7**	**-0.8**
IPM				IAmb	IAmb	00 03 35.0	
	comp=Z,14nm,1.0s						
MDJ	**Mudanjiang**	**25.23**	**15**	P	**P**	**00 03 38.2**	**-0.2**
MDJ				IAmb	IAmb	00 03 43.0	
	comp=Z,10nm,1.0s						
MDJ	**Mudanjiang**	**25.23**	**15**	P	**P**	**00 03 38.9**	**+0.5**
MDJ				S	**S**	**00 08 06.1**	**+2.3**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,95nm,5.1s						
MDJ				LR	LR		
	comp=Z,120nm,13.2s						
MDJ				LR	LR		
	comp=Z,200nm,16.7s						
MDJ				LR	LR		
	comp=Z,150nm,15.1s						
KAPI	**Kappang**	**25.34**	**182**	P	**P**	**00 03 39.4**	**-0.2**
	comp=Z,8.0nm,0.8s,baz=328,slow=10,SNR=5.5						
KAPI				LR	LR	00 14 19.0	
	comp=Z,62nm,19.2s,baz=332,slow=38						
	comp=Z,8.0nm,0.8s						
KAPI	**Kappang**	**25.34**	**182**	P	**P**	**00 03 40.2**	**+0.6**
KAPI				IAmb	IAmb	00 03 44.2	
	comp=Z,9.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**25.51**	**19**	P	**P**	**00 03 40.2**	**-0.8**
BNX	**BinXian**	**25.83**	**11**	⇑P	**P**	**00 03 44.6**	**+0.7**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,120nm,4.3s						
FAKI	**Fak Fak**	**25.93**	**152**	P	**P**	**00 03 45.7**	**+0.6**
GTA	**Gaotai**	**25.95**	**321**	*e*P	**P**	**00 03 42.0**	**-3.2**
GTA				sP	pwP	00 03 51.5	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,51nm,5.8s						
GTA				LR	LR		
	comp=Z,120nm,14.2s						
GTA				LR	LR		
	comp=Z,130nm,14.2s						
GTA				LR	LR		
	comp=Z,160nm,13.5s						
JTM	**Tenmabayashi**	**26.75**	**36**	P	**P**	**00 03 50.1**	**-2.2**
SHL	**Shillong**	**26.83**	**286**	P	**P**	**00 03 53.7**	**+0.3**
GOMU	**GeErMu**	**27.42**	**310**	P	**P**	**00 03 58.6**	**-0.2**
GOMU				pP	sP	00 04 02.5	+0.6
GOMU				sP	pwP	00 04 03.5	-1.2
GOMU				S	**S**	**00 08 42.3**	**+2.9**
GOMU				sS	sS	00 08 48.4	+5.2
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,51nm,3.9s						
GOMU				LR	LR		
	comp=Z,180nm,12.9s						
GOMU				LR	LR		
	comp=Z,89nm,8.9s						
GOMU				LR	LR		
	comp=Z,93nm,11.3s						
PSI	**Prapat**	**27.43**	**233**	P	**P**	**00 03 57.9**	**-0.9**
	comp=Z,3.8nm,0.5s,baz=54,slow=10.0,SNR=4.1						
PSI				LR	LR	00 14 21.3	
	comp=Z,112nm,18.1s,baz=62,slow=35						
	comp=Z,3.8nm,0.5s						
RPSI	**Rantau Prapat**	**27.50**	**233**	P	**P**	**00 03 57.9**	**-1.4**
LSA	**Lhasa**	**28.09**	**295**	P	**P**	**00 04 05.6**	**+0.6**
LSA				IAmb	IAmb	00 04 15.4	
	comp=Z,7.8nm,1.1s						
JEW	**Eniwo**	**28.39**	**34**	P	**P**	**00 04 08.2**	**+1.3**
SONM	**Songino Array**	**29.60**	**341**	P	**P**	**00 04 17.1**	**-0.7**
	comp=Z,1.5nm,1.1s,baz=163,slow=10,SNR=5.8						
SONM				LR	LR	00 16 29.4	
	comp=Z,88nm,19.6s,baz=130,slow=37						
	comp=Z,1.5nm,1.1s						
SONM	**Songino Array**	**29.60**	**341**	P	**P**	**00 04 17.5**	**-0.3**
ASAJ	**Asahikawa**	**29.88**	**33**	LR	LR	00 17 18.4	
	comp=Z,94nm,19.9s,baz=312,slow=38						
KLR	**Kul'dur**	**30.07**	**15**	P	**P**	**00 04 21.4**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=178,slow=5.1,SNR=4.3						
KLR				LR	LR	00 16 20.2	
	comp=Z,59nm,20.1s,baz=182,slow=36						
	comp=Z,0.7nm,0.5s						
BATI	**Baumata**	**30.64**	**174**	P	**P**	**00 04 26.5**	**-0.6**
	comp=Z,28nm,0.7s,baz=302,slow=9.5,SNR=2.7						
WMQ	**Urumqi**	**35.90**	**318**	*e*P	**P**	**00 05 13.8**	**+1.0**
WMQ				pP	pwP	00 05 19.6	+1.1
WMQ				sP	sP	00 05 22.3	+6.2
WMQ				PP	**PnPn**	**00 06 32.3**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
MK31	**Makanchi Array**	**40.66**	**319**	P	**P**	**00 05 52.0**	**-0.9**
MKAR	**Makanchi Array**	**40.66**	**319**	P	**P**	**00 05 52.6**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=114,slow=9.9,SNR=8.9						
MKAR				PcP	**PcP**	**00 07 54.1**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=134,slow=4.2,SNR=1.6						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**40.66**	**319**	P	**P**	**00 05 51.6**	**-1.3**
PALK	**Pallekele**	**40.71**	**257**	LR	LR	00 23 00.7	
	comp=Z,49nm,18.1s,baz=184,slow=37						
COEN	**Coen**	**40.81**	**145**		**P**	**00 05 55.5**	**+1.1**
MAKZ	**Makanchi**	**40.86**	**319**	P	**P**	**00 05 53.8**	**-0.7**
MBWA	**Marble Bar**	**41.38**	**181**		**P**	**00 05 59.6**	**+0.7**
PRZ	**Przheval'sk**	**41.56**	**312**	P	**P**	**00 06 01.5**	**+1.0**
TARG	**Taragay, Kyrgy**	**41.75**	**310**	P	**P**	**00 06 02.3**	**-0.1**
YAK	**Yakutsk**	**42.01**	**6**	LR	LR	00 26 29.6	
	comp=Z,48nm,20.2s,baz=258,slow=40						
WB0	**Warramunga Arr**	**42.23**	**160**	P	**P**	**00 06 05.3**	**-0.6**
KDJ	**Kajisay**	**42.31**	**311**	P	**P**	**00 06 05.5**	**-1.2**
WRAB	**Tennant Creek**	**42.37**	**161**	P	**P**	**00 06 06.9**	**-0.2**
WRA	**Warramunga Arr**	**42.38**	**161**	P	**P**	**00 06 06.8**	**-0.4**
	comp=Z,9.9nm,0.9s,baz=341,slow=8.9,SNR=34						
WRA				PcP	**PcP**	**00 08 00.6**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=352,slow=3.5,SNR=3.3						
	comp=Z,9.9nm,0.9s						
WB2	**Warramunga Arr**	**42.38**	**161**	P	**P**	**00 06 07.0**	**-0.2**
WR0	**Warramunga Arr**	**42.46**	**160**	P	**P**	**00 06 07.9**	**+0.1**
WR0				IAmb	IAmb	00 06 22.1	
	comp=Z,14nm,0.8s						
KSH	**Kashi**	**42.52**	**307**	P	**P**	**00 06 11.6**	**+3.3**
KSH				sP	pwP	00 06 20.8	+6.1
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAA0	**Zalesovo Array**	**43.08**	**330**	P	**P**	**00 06 12.1**	**-0.4**
ZAA0				IAmb	IAmb	00 06 12.8	
	comp=Z,7.7nm,0.9s						
ZALV	**Zalesovo Beam**	**43.08**	**330**	P	**P**	**00 06 12.1**	**-0.5**
	comp=Z,5.7nm,0.8s,baz=116,slow=8.4,SNR=20						
ZALV				LR	LR	00 23 57.6	
	comp=Z,42nm,18.1s,baz=106,slow=36						
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**43.08**	**330**	P	**P**	**00 06 12.0**	**-0.5**
PETK	**Petropavlovsk-**	**43.29**	**32**	LR	LR	00 24 52.4	
	comp=Z,44nm,19.5s,baz=220,slow=37						
H11S3	**WAKE ISLAND Hy**	**43.44**	**84**	T	T	00 52 54.3	
	baz=281,slow=74,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**43.45**	**84**	T	T	00 52 58.2	
	baz=281,slow=74,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	**43.46**	**84**	T	T	00 52 56.8	
	baz=281,slow=74,SNR=6.8						
NIL	**Nilore**	**43.76**	**298**	P	**P**	**00 06 17.3**	**-1.0**
NIL				IAmb	IAmb	00 06 26.8	
	comp=Z,5.5nm,0.8s						
AAK	**Ala-Archa**	**44.37**	**311**	P	**P**	**00 06 22.8**	**-0.5**
KURK	**Kurchatov**	**44.61**	**323**	P	**P**	**00 06 24.2**	**-0.6**
KURK				IAmb	IAmb	00 06 25.7	
	comp=Z,5.0nm,1.0s						
KURBB	**Kurchatov Arra**	**44.62**	**323**	P	**P**	**00 06 25.1**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=124,slow=7.7,SNR=23						
	comp=Z,3.6nm,0.9s						
MA2	**Magadan**	**44.64**	**21**	LR	LR	00 27 26.9	
	comp=Z,30nm,18.2s,baz=120,slow=39						
AS31	**Alice Springs**	**45.76**	**163**	P	**P**	**00 06 34.3**	**0.0**
ASAR	**Alice Springs**	**45.76**	**163**	P	**P**	**00 06 34.4**	**0.0**
	comp=Z,7.4nm,0.9s,baz=334,slow=6.7,SNR=39						
	comp=Z,7.4nm,0.9s						
GAR	**Garm**	**46.74**	**305**	P	**P**	**00 06 42.3**	**+0.3**
KBL	**Kabul**	**47.30**	**298**	P	**P**	**00 06 46.0**	**-0.6**
KBL				IAmb	IAmb	00 06 54.8	
	comp=Z,2.6nm,0.5s						
KK31	**Karatay Array**	**47.32**	**310**	P	**P**	**00 06 46.2**	**-0.2**
KK31				IAmb	IAmb	00 06 47.5	
	comp=Z,3.4nm,1.0s						
KKAR	**Karatay Array**	**47.32**	**310**	P	**P**	**00 06 46.4**	**0.0**
KKAR	**Karatay Array**	**47.32**	**310**	P	**P**	**00 06 46.1**	**-0.3**
KKAR				IAmb	IAmb	00 06 47.5	
	comp=Z,3.4nm,1.0s						
CTAO	**Charters Tower**	**47.52**	**146**	P	**P**	**00 06 49.4**	**+1.2**
BRVK	**Borovoye**	**50.28**	**323**	P	**P**	**00 07 07.8**	**-1.1**
BRVK				IAmb	IAmb	00 07 19.8	
	comp=Z,5.3nm,1.1s						
TIXI	**Tiksi**	**51.42**	**3**	P	**P**	**00 07 16.9**	**-0.3**
NRIK	**Noril'sk**	**52.83**	**346**	P	**P**	**00 07 27.2**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=100,slow=6.6,SNR=1.9						
	comp=Z,1.3nm,0.4s						
NRIK	**Noril'sk**	**52.83**	**346**	P	**P**	**00 07 27.4**	**-0.4**
NRIK				IAmb	IAmb	00 07 42.0	
	comp=Z,4.5nm,0.9s						
BBOO	**Buckleboo**	**55.02**	**164**	P	**P**	**00 07 45.1**	**+0.9**
BILL	**Bilibino**	**55.37**	**19**	P	**P**	**00 07 47.8**	**+1.5**
BILL				IAmb	IAmb	00 07 56.3	
	comp=Z,4.1nm,0.9s						
ABKAR	**Akbulak array**	**55.65**	**316**	P	**P**	**00 07 48.5**	**-0.2**
ABKAR				IAmb	IAmb	00 07 49.5	
	comp=Z,3.6nm,1.1s						
ABKAR	**Akbulak array**	**55.65**	**316**	P	**P**	**00 07 47.6**	**-1.0**
STKA	**Stephens Creek**	**55.83**	**158**	P	**P**	**00 07 49.5**	**-0.5**
	comp=Z,6.0nm,0.9s,baz=14,slow=4.4,SNR=6.6						
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**55.83**	**158**	P	**P**	**00 07 50.3**	**+0.2**
GEYT	**Alibeck**	**56.22**	**303**	P	**P**	**00 07 52.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=212,slow=27,SNR=1.7						
	comp=Z,1.1nm,0.6s						
AKTO	**Aktyubinsk**	**57.05**	**317**	LR	LR	00 33 40.7	
	comp=Z,36nm,19.2s,baz=98,slow=37						
ARU	**Arti**	**57.74**	**325**	P	**P**	**00 08 02.1**	**-1.3**
ARU				IAmb	IAmb	00 08 03.5	
	comp=Z,4.1nm,1.0s						
GNI	**Garni**	**66.44**	**306**	LR	LR	00 41 46.4	
	comp=Z,23nm,19.0s,baz=100,slow=39						
KBZ	**Khabaz**	**67.36**	**310**	P	**P**	**00 09 08.3**	**+0.4**
	comp=Z,4.4nm,1.0s,baz=178,slow=1.1,SNR=5.5						
	comp=Z,4.4nm,1.0s						
KVAR	**Kislovodsk Arr**	**67.47**	**310**	LR	LR	00 40 48.7	
	comp=Z,42nm,20.1s,baz=303,slow=38						
KIV	**Kislovodsk**	**67.48**	**310**	P	**P**	**00 09 08.3**	**-0.5**
KLMR	**Klimovskoe**	**67.99**	**329**	*e*P	**P**	**00 09 09.6**	**-1.9**
KLMR				AMP		00 09 10.9	
	comp=Z,5.0nm,0.9s						
GURO	**Guroymak-BITLI**	**68.76**	**304**	P	**P**	**00 09 16.9**	**-0.1**
GURO				IAmb	IAmb	00 09 18.2	
	comp=Z,2.5nm,0.9s						
RAYN	**Ar Rayn**	**68.89**	**288**	P	**P**	**00 09 17.3**	**-0.6**
RAYN				IAmb	IAmb	00 09 18.1	
	comp=Z,5.3nm,1.2s						
H21K	**Melozitna Rive**	**70.18**	**26**	P	**P**	**00 09 26.0**	**+0.9**
H21K				IAmb	IAmb	00 09 27.9	
	comp=Z,4.5nm,1.0s						
SPU	**Mount Spurr**	**71.05**	**31**	P	**P**	**00 09 29.4**	**-1.2**
BPAW	**Bear Paw Mtn.**	**71.14**	**28**	P	**P**	**00 09 31.6**	**+0.6**
H23K	**Yukon River**	**71.50**	**26**	P	**P**	**00 09 34.3**	**+1.1**
H23K				IAmb	IAmb	00 09 50.5	
	comp=Z,4.4nm,0.8s						
I23K	**Minto, Yukon-K**	**71.68**	**26**	P	**P**	**00 09 35.4**	**+1.2**
I23K				IAmb	IAmb	00 09 37.8	
	comp=Z,8.7nm,1.4s						
NEA2	**Nenana**	**71.89**	**27**	P	**P**	**00 09 36.0**	**+0.5**
NEA2				IAmb	IAmb	00 09 36.9	
	comp=Z,5.7nm,1.1s						
H24K	**Noodor Dome**	**72.17**	**26**	P	**P**	**00 09 37.9**	**+0.7**
H24K				IAmb	IAmb	00 09 41.9	
	comp=Z,8.8nm,1.4s						
MDM	**Murphy Dome**	**72.18**	**27**	P	**P**	**00 09 37.8**	**+0.6**
MDM				IAmb	IAmb	00 09 47.8	
	comp=Z,4.8nm,0.8s						
RND	**Reindeer**	**72.18**	**28**	P	**P**	**00 09 37.2**	**-0.2**
WRH	**Wood River Hil**	**72.33**	**27**	P	**P**	**00 09 37.7**	**-0.4**
WRH				IAmb	IAmb	00 09 40.1	
	comp=Z,3.0nm,0.8s						
IL31		**72.78**	**27**	P	**P**	**00 09 40.9**	**+0.1**
ILAR	**Eielson Array**	**72.78**	**27**	P	**P**	**00 09 40.7**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=284,slow=5.1,SNR=9.0						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**72.78**	**27**	P	**P**	**00 09 39.7**	**-1.1**
SPITS	**Spitsbergen Ar**	**72.97**	**348**	LR	LR	00 47 55.5	
	comp=Z,23nm,19.1s,baz=7.5,slow=41						
BMAR	**Burnt Mountain**	**73.15**	**24**	P	**P**	**00 09 43.0**	**0.0**
GLI	**Glacier Island**	**73.48**	**31**	P	**P**	**00 09 45.3**	**+0.3**
PAX	**Paxson**	**73.77**	**28**	P	**P**	**00 09 47.6**	**+0.8**
RIDG	**Independent Ri**	**73.87**	**27**	P	**P**	**00 09 47.7**	**+0.4**
RIDG				IAmb	IAmb	00 09 49.0	
	comp=Z,6.0nm,1.0s						
KLU	**Klutina**	**73.90**	**30**	P	**P**	**00 09 47.9**	**+0.3**
KLU				IAmb	IAmb	00 10 05.0	
	comp=Z,8.6nm,1.1s						
DIV	**Divide**	**74.06**	**30**	P	**P**	**00 09 48.5**	**+0.1**
SCRK	**Sand Creek**	**74.19**	**27**	P	**P**	**00 09 49.0**	**-0.2**
FINES	**FINESS Array B**	**74.34**	**330**	P	**P**	**00 09 50.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=46,slow=8.0,SNR=1.2						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**74.90**	**307**	P	**P**	**00 09 53.7**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=96,slow=5.8,SNR=1.7						
	comp=Z,0.3nm,0.5s						
K27K	**Chicken**	**74.98**	**27**	P	**P**	**00 09 54.6**	**+0.9**
K27K				IAmb	IAmb	00 09 56.1	
	comp=Z,5.6nm,1.0s						
M26K	**Nabesna, AK**	**75.02**	**29**	P	**P**	**00 09 54.4**	**+0.4**
M26K				IAmb	IAmb	00 10 11.0	
	comp=Z,9.4nm,1.1s						
EGAK	**Eagle**	**75.16**	**26**	P	**P**	**00 09 54.4**	**-0.3**
EGAK				IAmb	IAmb	00 09 56.1	
	comp=Z,3.7nm,0.8s						
AKASG	**Malin Array Be**	**75.25**	**319**	P	**P**	**00 09 54.0**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=61,slow=4.8,SNR=2.2						
	comp=Z,0.3nm,0.4s						
MCARA	**McCarthy VSAT**	**75.28**	**30**	P	**P**	**00 09 56.1**	**+0.6**
MCARA				IAmb	IAmb	00 09 57.2	
	comp=Z,4.3nm,0.7s						
L27K	**Beaver Creek,**	**75.36**	**28**	P	**P**	**00 09 56.9**	**+0.9**
L27K				IAmb	IAmb	00 10 13.2	
	comp=Z,5.5nm,0.9s						
BCAR	**Beaver Creek A**	**75.38**	**28**	P	**P**	**00 09 56.7**	**+0.6**
DAWY	**Dawson**	**76.11**	**26**	P	**P**	**00 10 00.5**	**+0.3**
DAWY				IAmb	IAmb	00 10 01.9	
	comp=Z,5.8nm,0.9s						
I29M	**Ogilvie Camp,**	**76.14**	**25**	P	**P**	**00 10 01.1**	**+0.7**
I29M				IAmb	IAmb	00 10 16.7	
	comp=Z,4.2nm,0.8s						
CTGM	**Chitina Glacie**	**76.18**	**30**	P	**P**	**00 10 01.5**	**+0.6**
LOGN	**Logan Glacier**	**76.38**	**30**	P	**P**	**00 10 02.4**	**+0.4**
EPYK	**Eagle Plains**	**76.42**	**24**	P	**P**	**00 10 02.0**	**0.0**
INK	**Inuvik**	**76.88**	**22**	P	**P**	**00 10 04.6**	**+0.2**
INK				IAmb	IAmb	00 10 14.4	
	comp=Z,4.7nm,1.0s						
M30M	**Minto, Yukon**	**77.70**	**28**	P	**P**	**00 10 10.1**	**+0.8**
M30M				IAmb	IAmb	00 10 11.7	
	comp=Z,6.8nm,1.1s						
HYT	**Haines Junctio**	**78.00**	**29**	P	**P**	**00 10 11.8**	**+0.7**
HYT				IAmb	IAmb	00 10 12.9	
	comp=Z,9.0nm,1.2s						
THZ	**Tophouse**	**78.60**	**143**	P	**P**	**00 10 15.6**	**+1.1**
BURAR	**Bucovina Array**	**78.63**	**317**	P	**P**	**00 10 14.2**	**-0.5**
HFS	**Hagfors**	**80.50**	**331**	LR	LR	00 47 40.5	
	comp=Z,33nm,18.1s,baz=72,slow=37						
NOA	**NORSAR Array B**	**81.22**	**332**	LR	LR	00 49 23.8	
	comp=Z,38nm,18.1s,baz=70,slow=38						
VTS	**Vitosha**	**81.57**	**312**	P	**P**	**00 10 30.7**	**-0.1**
VTS				IAmb	IAmb	00 10 31.9	
	comp=Z,5.2nm,1.0s						
JMIC	**Jan Mayen**	**82.25**	**345**	LR	LR	00 51 04.6	
	comp=Z,9.3nm,20.5s,baz=68,slow=39						
KMBO	**Kilima Mbogo**	**84.10**	**267**	LR	LR	00 47 06.7	
	comp=Z,27nm,19.1s,baz=72,slow=35						
KEK	**Kerkira**	**85.04**	**310**	P	**P**	**00 10 48.8**	**+0.3**
GERES	**GERESS Array B**	**85.32**	**321**	P	**P**	**00 10 49.3**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=79,slow=2.5,SNR=5.5						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**86.61**	**22**	P	**P**	**00 10 56.0**	**+0.2**
	comp=Z,3.0nm,0.9s,baz=312,slow=4.7,SNR=23						
	comp=Z,3.0nm,0.9s						
BORG	**Borgarnes**	**90.13**	**345**	LR	LR	00 56 23.8	
	comp=Z,21nm,19.0s,baz=49,slow=39						
LSZ	**Lusaka**	**97.36**	**256**	LR	LR	00 53 49.4	
	comp=Z,33nm,19.5s,baz=153,slow=34						
ROSC	**El Rosal**	**150.92**	**32**	PKPbc	**PKiKP**	**00 18 08.8**	**+1.3**
	comp=Z,3.6nm,0.4s,baz=196,slow=6.9,SNR=4.4						

TUL ***23*** *00:22:57.4±1.3, 35.°978N±0.°010×97.°20W±0.°01, h5*^{km}*±6*^{km}*, ML3.0, mb_Lg2.7/58(NEIC), Error ellipse: s-maj=1.7km s-min=0.5km az=140.0*

ANF ***23*** *00:22:57.5±0.3, 35.°99N×97.°18W, h5*^{km}*, ML3.1/8, Error ellipse: s-maj=2.7km s-min=2.2km az=143.0*

NEIC ***23*** *00:22:57.8±1.1, 35.°99N±0.°01×97.°20W±0.°01, h5*^{km}*±2*^{km}*, Error ellipse: s-maj=3.0km s-min=2.0km az=145.0*

ISC 23 00:22:57.8±1.2**, 35.°99N**±0.°02×**97.°19W**±0.°03**, h1**^{km}±13^{km}**, n58,** σ**0.**^{s}**77**/54**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.37**	**204**	Pg	**Pg**	**00 23 04.5**	**-0.4**
ADOK				Sg	**Sg**	**00 23 09.8**	**0.0**
OK001	**Jones High Sch**	**0.44**	**191**	Pg	**Pg**	**00 23 05.8**	**-0.4**
OK001				Sg	**Sg**	**00 23 12.2**	**+0.3**
OK009	**Oakdale Elemen**	**0.45**	**205**	Pg	**Pg**	**00 23 06.3**	**-0.2**
OK009				Sg	**Sg**	**00 23 12.7**	**+0.4**
OKCFA	**Oklahoma City**	**0.61**	**201**	Pg	**Pg**	**00 23 09.2**	**-0.4**
OKCFA				Sg	**Sg**	**00 23 17.6**	**+0.1**
OKCFA	**Oklahoma City**	**0.61**	**201**	S	**Sg**	**00 23 17.7**	**+0.2**
	baz=20						
OKCSW	**OKLAHOMA CITY**	**0.62**	**199**		**Pg**	**00 23 09.3**	**-0.4**
OKCSW				Sg	**Sg**	**00 23 17.8**	**+0.1**
FNO	**Franklin**	**0.75**	**193**		**Pg**	**00 23 11.6**	**-0.7**
FNO				Sg	**Sg**	**00 23 21.9**	**-0.1**
T35A	**Sooner Cattle**	**1.07**	**30**	Pg	**Pg**	**00 23 18.1**	**-0.3**
T35B	**Sooner Cattle**	**1.07**	**30**	P	**Pg**	**00 23 18.0**	**-0.4**
	baz=211						
T35B				S	**Sg**	**00 23 32.5**	**+0.2**
	baz=211						
TUL1	**Leonard**	**1.14**	**94**		**Pg**	**00 23 18.5**	**-1.1**
TUL1	**Leonard**	**1.14**	**94**	P	**Pg**	**00 23 18.4**	**-1.1**
	baz=274						
TUL1				S	**Sg**	**00 23 34.5**	**+0.2**
	baz=274						
X34A	**Smith Ranch, M**	**1.48**	**201**	Pn	**Pn**	**00 23 24.9**	**-0.7**
U32A	**Winter Ranch,**	**1.52**	**285**	Pn	**Pn**	**00 23 25.3**	**-0.9**
U32A	**Winter Ranch,**	**1.52**	**285**	P	**Pn**	**00 23 25.3**	**-0.9**
	baz=105						
U32A				S	**Sg**	**00 23 46.5**	**-0.1**
	baz=105						
WMOK	**Wichita Mounta**	**1.81**	**227**		**Pn**	**00 23 29.7**	**-0.4**
WMOK	**Wichita Mounta**	**1.81**	**227**	P	**Pn**	**00 23 29.7**	**-0.4**
	baz=46						
X37A	**Clayton**	**2.04**	**133**	Pn	**Pn**	**00 23 33.3**	**0.0**
X37A	**Clayton**	**2.04**	**133**	P	**Pn**	**00 23 33.4**	**+0.1**
	baz=314						
X37A				Sb	**Sb**	**00 24 02.2**	**+0.7**
	baz=314						
HHAR	**Hobbs**	**2.64**	**83**		**Pn**	**00 23 41.6**	**+0.1**
Z35A	**Perchaven, San**	**2.66**	**181**	Pn	**Pn**	**00 23 41.5**	**-0.2**
Z35A	**Perchaven, San**	**2.66**	**181**	P	**Pn**	**00 23 41.3**	**-0.4**
	baz=0.9						
Z35A				Sb	**Sb**	**00 24 18.5**	**-0.7**
	baz=0.9						
R32A	**Long Quarter,**	**2.71**	**334**		**Pn**	**00 23 41.7**	**-0.8**
W39A	**Magazine**	**2.88**	**105**		**Pn**	**00 23 44.3**	**-0.6**
W39A				IAmb_Lg		00 24 35.8	
	comp=Z,28nm,0.8s						
W39A	**Magazine**	**2.88**	**105**	P	**Pn**	**00 23 45.0**	**+0.1**
	baz=287						
KSU1	**Kansas State U**	**3.14**	**8**	Pg	**Pb**	**00 23 55.7**	**+1.3**
Z38A	**Mt. Pleasant**	**3.27**	**146**	Pn	**Pn**	**00 23 49.1**	**-1.1**
Z38A				Pg	**Pb**	**00 23 58.5**	**+1.8**
Z38A				IAmb_Lg		00 24 50.4	
	comp=Z,14nm,0.8s						
MIAR	**Mount Ida**	**3.29**	**115**	Pn	**Pn**	**00 23 50.1**	**-0.3**
CBKS	**Cedar Bluff**	**3.47**	**325**	IAmb_Lg		00 24 54.3	
	comp=Z,15nm,0.7s						
U40A	**Yellville**	**3.52**	**83**		**Pn**	**00 23 53.4**	**-0.3**
U40A				IAmb_Lg		00 24 51.3	
	comp=Z,23nm,0.8s						
U40A	**Yellville**	**3.52**	**83**	P	**Pn**	**00 23 53.1**	**-0.5**
	baz=265						
U40A				P	**Pn**	**00 23 53.1**	**-0.5**
	baz=265						
S39A	**Bolivar**	**3.53**	**60**		**Pn**	**00 23 53.5**	**-0.4**
AMTX	**Amarillo**	**3.83**	**255**		**Pn**	**00 23 57.8**	**-0.2**
AMTX				IAmb_Lg		00 25 00.7	
	comp=Z,13nm,0.7s						
X40A	**Basin Creek Fa**	**3.87**	**112**		**Pn**	**00 23 58.2**	**-0.2**
ABTX	**Abilene, Hawle**	**3.93**	**212**	Pg	**Pb**	**00 24 08.8**	**+1.0**
ABTX				IAmb_Lg		00 25 03.4	
	comp=Z,12nm,1.0s						
WHTX	**Lake Whitney,**	**4.00**	**183**	Pg	**Pb**	**00 24 09.6**	**+0.5**
WHTX				IAmb_Lg		00 25 08.4	
	comp=Z,12nm,0.8s						
WHAR	**Wooly Hollow**	**4.05**	**99**		**Pn**	**00 24 00.5**	**-0.5**
WHAR				IAmb_Lg		00 25 10.7	
	comp=Z,16nm,0.8s						
WLAR	**White Oak Lake**	**4.06**	**123**	Pn	**Pn**	**00 24 00.4**	**-0.7**
WLAR				IAmb_Lg		00 25 08.4	
	comp=Z,16nm,0.8s						
W41B	**Gary Mavity, V**	**4.11**	**100**		**Pn**	**00 24 01.2**	**-0.4**

W41B				IAmb_Lg		00 25 19.7	
	comp=Z,13nm,0.7s						
FCAR	Ozark Folk Cen	4.11	90		Pn	00 24 01.4	-0.3
FCAR				IAmb_Lg		00 25 12.2	
	comp=Z,12nm,0.8s						
MGMO	Mountain Grove	4.12	72	Pn	Pn	00 24 00.7	-1.3
UALR	University of	4.14	106	Pn	Pn	00 24 01.8	-0.3
UALR				IAmb_Lg		00 25 10.0	
	comp=Z,16nm,0.8s						
Z41A	Richland Creek	4.53	126	Pn	Pn	00 24 04.4	-3.0
Z41A				IAmb_Lg		00 25 22.9	
	comp=Z,14nm,0.8s						
LCAR	Lake Charles	4.89	87	IAmb_Lg		00 25 30.7	
	comp=Z,15nm,1.2s						
CCM	Cathedral Cave	5.18	65	IAmb_Lg		00 25 47.3	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock'	5.27	306	IAmb_Lg		00 25 57.3	
	comp=Z,14nm,0.8s						
P40A	Paris	5.39	48	IAmb_Lg		00 26 00.6	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	5.51	80	IAmb_Lg		00 26 01.5	
	comp=Z,18nm,0.9s						
JCT	Junction City	5.92	202	IAmb_Lg		00 26 19.9	
	comp=Z,14nm,0.8s						
T25A	Trinidad	5.93	283	IAmb_Lg		00 26 09.7	
	comp=Z,17nm,1.0s						
SLM	Saint Louis	6.14	62	IAmb_Lg		00 26 09.6	
	comp=Z,14nm,0.7s						
S44A	Carbondale	6.58	73	IAmb_Lg		00 26 29.7	
	comp=Z,14nm,0.7s						
Q24A	Divide	6.99	297	IAmb_Lg		00 26 51.2	
	comp=Z,13nm,1.0s						
PLAL	Pickwick Lake	7.50	95	IAmb_Lg		00 26 58.4	
	comp=Z,8.1nm,1.1s						
L40A	Anamosa	7.63	36	IAmb_Lg		00 27 03.2	
	comp=Z,9.7nm,0.9s						
ISCO	Idaho Springs	7.67	302	IAmb_Lg		00 27 06.9	
	comp=Z,8.6nm,1.1s						
PHWY	Pilot Hill	8.36	312	IAmb_Lg		00 27 28.4	
	comp=Z,5.8nm,0.7s						
N23A	Red Feather La	8.43	308	IAmb_Lg		00 27 36.9	
	comp=Z,7.3nm,0.8s						
JFWS	Jewell Farm	8.75	36	IAmb_Lg		00 27 56.8	
	comp=Z,8.6nm,0.7s						

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*HLW **23** 00:32:46.8, 36°.67N×27°.25E, h11^{km}±37^{km}, Md3.9*
*ATH **23** 00:32:48.0, 36°.73N×27°.58E, h111^{km}±2^{km}, ML3.6/7, Error ellipse: s-maj=3.3km s-min=1.7km az=70.0*
*ISK **23** 00:32:47.7, 36°.76N×27°.60E, h114^{km}±1^{km}, ML3.5/24*
*IDC **23** 00:32:48.3±1.4, 36°.60N×27°.66E, h120^{km}±17^{km}, mb3.6/7, mbtmp3.8/17, Error ellipse: s-maj=19.5km s-min=11.7km az=161.0*
*DDA **23** 00:32:49.3±0.0, 36°.85N×27°.68E, h98^{km}±1^{km}, MW3.5*
*THE **23** 00:32:50.4, 36°.77N×27°.61E, h113^{km}±3^{km}, ML3.5/5, Error ellipse: s-maj=3.0km s-min=1.4km az=243.0*
*GII **23** 00:32:51.4±0.9, 36°.51N×28°.03E, h100^{km}, MD3.2/2, Mm3.6/2*
ISC 23 00:32:47.6±0.6, **36°.69N**±0°.03×**27°.68E**±0°.03, **h118**^{km}±5^{km}, **n140**, σ1^{s}**66**/194, **mb3.7**/7, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	Datca	0.09	294	PG	Pn	00 33 03.8	-0.2
DAT				SG	Sn	00 33 15.4	-0.9
DAT	Datca	0.09	294	P	Pn	00 33 03.3	-0.6
DAT				S	Sn	00 33 12.8	-3.5
DAT				i AML	AML	00 33 15.0	
	comp=E,2μm,0.5s						
DAT				i AML	AML	00 33 17.0	
	comp=N,2μm,0.6s						
NIS1	Nisyros Isl.	0.41	257	P	Pn	00 33 04.8	-0.1
NIS1				S	Sn	00 33 16.7	-1.2
NIS1				AML	AML	00 33 18.1	
	comp=E,6162μm,0.5s						
NIS1				AML	AML	00 33 19.9	
	comp=N,7928μm,0.4s						
NIS1	Nisyros Isl.	0.41	257	P	Pn	00 33 04.8	-0.1
NIS1				S	Sn	00 33 16.7	-1.2
	comp=N,4μm,0.5s						
NIS1	Nisyros Isl.	0.41	257	PG	Pn	00 33 04.9	0.0
NIS1				SG	Sn	00 33 17.5	-0.4
BDRM	Kayabasi	0.42	333	P	Pn	00 33 04.3	-0.6
BDRM				S	Sn	00 33 15.6	-2.5
BDRM				i AML	AML	00 33 16.0	
	comp=N,2μm,0.5s						
BDRM				i AML	AML	00 33 16.0	
	comp=N,1μm,0.9s						
TURN	Turunc	0.46	80	P	Pn	00 33 05.0	-0.2
TURN				S	Sn	00 33 17.4	-1.0
TURN				i AML	AML	00 33 18.0	
	comp=N,2μm,0.2s						
TURN				i AML	AML	00 33 18.0	
	comp=N,2μm,0.3s						
BODT	Bodrum	0.47	322	P	Pn	00 33 04.7	-0.6
BODT				S	Sn	00 33 16.6	-2.0
BODT	Bodrum	0.47	322	PG	Pn	00 33 04.7	-0.6
BODT				SG	Sn	00 33 16.2	-2.4
KOSK	Kos Island	0.56	276	P	Pn	00 33 05.4	-0.4
KOSK				S	Sn	00 33 17.8	-1.7
KOSK				AML	AML	00 33 19.4	
	comp=N,3778μm,0.5s						
KOSK				AML	AML	00 33 21.5	
	comp=E,3086μm,0.5s						
KOSK	Kos Island	0.56	276	P	Pn	00 33 05.4	-0.4
KOSK				S	Sn	00 33 17.8	-1.7
	comp=E,582nm,0.5s						
KOSK	Kos Island	0.56	276	PG	Pn	00 33 05.5	-0.3
KOSK				SG	Sn	00 33 18.3	-1.1
ARG	Arkhangelos	0.60	143	P	Pn	00 33 06.8	+0.7
ARG				S	Sn	00 33 20.4	+0.5
ARG				AML	AML	00 33 21.2	
	comp=E,21300μm,0.3s						
ARG				AML	AML	00 33 21.8	
	comp=N,8693μm,0.2s						
ARG	Arkhangelos	0.60	143	P	Pn	00 33 06.8	+0.7
ARG				S	Sn	00 33 20.4	+0.5
	comp=N,8μm,0.2s						
ARG	Arkhangelos	0.60	143	PG	Pn	00 33 07.0	+0.9
ARG				SG	Sn	00 33 20.7	+0.8
MLSB	Milas	0.61	8	PG	Pn	00 33 05.8	-0.4
MLSB				SG	Sn	00 33 18.3	-1.9
YER	Yerkesik	0.66	48	P	Pn	00 33 06.6	0.0
YER				S	Sn	00 33 18.5	-2.3
YER	Yerkesik	0.66	48	PG	Pn	00 33 06.7	+0.1
MULA	Mugla, Merkez-	0.76	42	P	Pn	00 33 07.3	-0.2
MULA				S	Sn	00 33 19.5	-2.9
MULA				i AML	AML	00 33 22.0	
	comp=N,400nm,0.3s						
MULA				i AML	AML	00 33 23.0	
	comp=N,888nm,0.4s						
DALY	Dalyan (Mula)	0.80	81	PG	Pn	00 33 08.6	+1.0
DALY				SG	Sn	00 33 23.2	+0.6
DDIM	Aydin, Didim	0.84	336	P	Pn	00 33 07.4	-0.6
DDIM				S	Sn	00 33 20.2	-3.2
DDIM				i AML	AML	00 33 35.0	
	comp=N,453nm,0.6s						
AYDN	Tasoluk	0.98	9	P	Pn	00 33 08.9	-0.5
AYDN				S	Sn	00 33 23.0	-2.8
AYDN				i AML	AML	00 33 24.0	
	comp=N,333nm,0.3s						
AYDN				i AML	AML	00 33 24.0	
	comp=N,512nm,0.5s						
GCAM	G?zelcaml?	1.07	341	P	Pn	00 33 08.8	-1.4
GCAM				S	Sn	00 33 24.9	-2.3
GCAM				i AML	AML	00 33 26.0	
	comp=N,379nm,1.0s						
FETY	Fethiye	1.13	92	PN	Pn	00 33 11.8	+0.9
FETY				SN	Sn	00 33 29.2	+0.7
FETY	Fethiye	1.13	92	P	Pn	00 33 12.5	+1.6
FETY				S	Sn	00 33 29.1	+0.7
SMG	Samos	1.22	327	P	Pn	00 33 11.0	-0.7
SMG				S	Sn	00 33 27.8	-2.3
SMG	Samos	1.22	327	P	Pn	00 33 11.0	-0.7
SMG				S	Sn	00 33 27.8	-2.3
	comp=N,595nm,0.5s						
KARP	Karpathos	1.22	200	P	Pn	00 33 12.4	+0.6
KARP				S	Sn	00 33 29.6	-0.5
KARP				AML	AML	00 33 30.9	
	comp=N,6004μm,0.2s						
KARP				AML	AML	00 33 31.8	
	comp=E,4782μm,0.2s						
KARP	Karpathos	1.22	200	P	Pn	00 33 12.4	+0.6
KARP				S	Sn	00 33 29.6	-0.5
	comp=E,3μm,0.2s						
KARP	Karpathos	1.22	200	PN	Pn	00 33 12.2	+0.4
TAVA	DENIZLI_Tavas	1.25	52	P	Pn	00 33 12.2	-0.1
TAVA				S	Sn	00 33 29.2	-1.7
TAVA				i AML	AML	00 33 30.0	
	comp=E,508nm,0.1s						
TAVA				i AML	AML	00 33 31.0	
	comp=E,391nm,0.6s						
AYDB	Zeytinkoy-Aydi	1.26	8	PN	Pn	00 33 11.8	-0.6
AYDB				SN	Sn	00 33 29.9	-1.3
CAME	Cameli-Denizli	1.33	79	PN	Pn	00 33 13.9	+0.8
CAME				SN	Sn	00 33 33.3	+0.8
CAEL	Denizli, Camel	1.39	71	P	Pn	00 33 14.3	+0.6
CAEL				S	Sn	00 33 33.3	-0.3
CAEL				i AML	AML	00 33 37.0	
	comp=E,862nm,0.6s						
CAEL				i AML	AML	00 33 40.0	
	comp=E,1μm,0.3s						
DGB	zmir	1.50	335	P	Pn	00 33 13.1	-1.8
GOLH	Golhisar	1.60	70	P	Pn	00 33 17.0	+0.8
GOLH				S	Sn	00 33 38.8	+0.7
GOLH				i AML	AML	00 33 40.0	
	comp=E,540nm,0.4s						
GOLH				i AML	AML	00 33 41.0	
	comp=E,566nm,0.4s						
AKAS	Kas	1.62	106	P	Pn	00 33 16.0	-0.5
APE	Apeiranthos	1.76	283	P	Pn	00 33 18.2	+0.1
APE	Apeiranthos	1.76	283	P	Pn	00 33 18.2	+0.1
APE	Apeiranthos	1.76	283	PN	Pn	00 33 18.2	+0.1
BLCB	Balcova	1.76	344	PN	Pn	00 33 17.4	-0.7
THR8	Santorini-Mono	1.79	261	P	Pn	00 33 18.6	+0.2
THR8	Santorini-Mono	1.79	261	P	Pn	00 33 18.6	+0.2
ELL	Elmali	1.79	88	PN	Pn	00 33 20.3	+1.7
ZEYE	Izmir, Urla-Ze	1.80	329	P	Pn	00 33 16.0	-2.5
SANT	Santorini	1.81	260	P	Pn	00 33 19.0	+0.2
SANT	Santorini	1.81	260	P	Pn	00 33 19.0	+0.2
SANT	Santorini	1.81	260	PN	Pn	00 33 18.9	+0.2
DEMR	Demre-Antalya	1.85	104	PN	Pn	00 33 20.1	+0.9
THR3	Thira Island,	1.85	262	P	Pn	00 33 19.6	+0.4
THR3	Thira Island,	1.85	262	P	Pn	00 33 19.6	+0.4
SNT5	Nea Kammeni, S	1.86	262	P	Pn	00 33 19.6	+0.3
THR6	Thira Island,	1.87	260	P	Pn	00 33 19.5	+0.2
THR6	Thira Island,	1.87	260	P	Pn	00 33 19.5	+0.2
ZKR	Zakros	1.97	217	P	Pn	00 33 21.5	+0.8
ZKR				S	Sn	00 33 45.7	-0.2
ZKR				AML	AML	00 33 46.8	
	comp=E,1239μm,0.3s						
ZKR				AML	AML	00 33 48.4	
	comp=N,560μm,0.3s						
ZKR	Zakros	1.97	217	P	Pn	00 33 21.4	+0.8
ZKR				S	Sn	00 33 45.7	-0.2
ZKR	Zakros	1.97	217	PN	Pn	00 33 21.5	+0.8
KULA	Kula-Manisa	1.98	23	PN	Pn	00 33 20.7	-0.1
CHOS	Chios island	2.13	323	PN	Pn	00 33 22.3	-0.3
KORT	Korkueli	2.17	81	P	Pn	00 33 24.7	+1.5
KORT				S	Sn	00 33 51.7	+1.2
KORT				i AML	AML	00 33 53.0	
	comp=N,461nm,0.5s						
KORT				i AML	AML	00 33 57.0	
	comp=N,270nm,0.6s						
AKUM	Antalya-Kumluc	2.18	99	P	Pn	00 33 24.3	+1.1
AKUM				S	Sn	00 33 47.3	-3.2
AKUM				i AML	AML	00 33 54.0	
	comp=N,365nm,0.3s						
AKUM				i AML	AML	00 33 55.0	
	comp=N,330nm,0.3s						
AKHS	Akhisar	2.19	3	P	Pn	00 33 19.1	-4.2
PASA	Karahalli, USA	2.19	41	P	Pn	00 33 23.9	+0.4
PASA				S	Sn	00 33 49.0	-2.0
PASA				i AML	AML	00 33 50.0	
	comp=N,92nm,0.8s						
PASA				i AML	AML	00 33 51.0	
	comp=N,116nm,0.6s						
NPS	Neapolis	2.20	230	P	Pn	00 33 23.6	+0.1
NPS	Neapolis	2.20	230	P	Pn	00 33 23.6	+0.1
BASM	Basmaki-Afyon	2.25	56	PN	Pn	00 33 24.8	+0.5
USAK	Uak-Merkez	2.28	27	P	Pn	00 33 23.0	-1.6
USAK				S	Sn	00 33 48.1	-4.9
USAK				i AML	AML	00 33 51.0	
	comp=N,95nm,0.9s						
FRMA	Ierapetra Chan	2.30	224	P	Pn	00 33 24.9	+0.1
FRMA				AML	AML	00 33 57.8	
	comp=N,1027μm,0.7s						
FRMA				AML	AML	00 33 59.6	
	comp=E,1027μm,0.4s						
FRMA	Ierapetra Chan	2.30	224	P	Pn	00 33 24.9	+0.1
KEMT	Kemer-ANTALYA	2.32	91	PN	Pn	00 33 26.8	+1.8
ZEDA	zmir-Bergama	2.32	348	P	Pn	00 33 23.0	-2.0
BUCA	Burdur, Bucak-	2.39	74	P	Pn	00 33 26.4	+0.3
ANTB	Antalya	2.40	84	PN	Pn	00 33 28.1	+2.1
BCK	Bucak	2.45	71	PN	Pn	00 33 28.4	+1.6
DEMI	Demirci	2.49	19	P	Pn	00 33 26.4	-0.9
HRKL	Herakleio	2.50	237	P	Pn	00 33 27.4	0.0
HRKL	Herakleio	2.50	237	P	Pn	00 33 27.4	0.0
HRKL	Herakleio	2.50	237	PN	Pn	00 33 27.7	+0.3
KZIL	AFYON_Kizioren	2.51	51	P	Pn	00 33 27.2	-0.3
ISP	Isparta	2.54	63	PN	Pn	00 33 29.1	+1.2
SIMA	Simav-Kutahya	2.60	23	PN	Pn	00 33 28.7	0.0
IDI	Anoyia	2.66	239	P	Pn	00 33 29.3	-0.2
	comp=E,27nm,0.3s,baz=58,slow=7.8,SNR=172						
IDI				S	Sn	00 33 58.7	-3.0
	comp=E,61nm,0.3s,baz=148,slow=19,SNR=14						
IDI	Anoyia	2.66	239	P	Pn	00 33 29.3	-0.2
IDI				AML	AML	00 34 01.1	
	comp=N,480μm,0.4s						
IDI				AML	AML	00 34 04.8	
	comp=E,584μm,0.5s						
IDI	Anoyia	2.66	239	P	Pn	00 33 29.3	-0.2
IDI	Anoyia	2.66	239	PN	Pn	00 33 29.5	0.0
GDZ	Gediz	2.79	30	P	Pn	00 33 30.1	-1.1
GDZ				S	Sn	00 33 59.5	-5.2
GDZ				i AML	AML	00 34 03.0	
	comp=E,25nm,0.8s						
BUHA	Balikesir, Bur	2.84	351	P	Pn	00 33 28.4	-3.4
AFYO	Afyonkarahisar	2.95	44	P	Pn	00 33 30.1	-3.2
YVAC	Isparta, Yalva	3.24	60	P	Pn	00 33 38.3	+1.1
ANDZ	Kutahya, Merke	3.31	31	P	Pn	00 33 36.2	-1.9
SEDI	Konya, Seydise	3.35	76	P	Pn	00 33 39.0	+0.5
SEDI				S	Sn	00 34 16.0	-1.9
SEDI				i AML	AML	00 34 21.0	
	comp=E,49nm,0.5s						
GVD	Gavdhos	3.46	239	P	Pn	00 33 40.8	+1.0
DOGA	KONYA_Doganhis	3.48	65	P	Pn	00 33 41.6	+1.3
GAZI	Gazipasa	3.77	96	P	Pn	00 33 42.4	-1.6
GAZI				S	Sn	00 34 25.3	-2.4
GAZI				i AML	AML	00 34 30.0	
	comp=E,90nm,0.3s						
GAZI				i AML	AML	00 34 32.0	
	comp=E,113nm,0.4s						
KMER	Konya-Meram	3.90	73	P	Pn	00 33 45.7	-0.1
KONT	Konya--Tatoy	3.94	70	P	Pn	00 33 47.3	+1.0
MATC	Matruh	5.35	184	P	Pn	00 34 06.1	+0.9
	baz=181						
SLUM	Salum	5.58	202	P	Pn	00 34 08.2	-0.1
	baz=199						
SLUM				S	Sn	00 35 06.5	-4.7
	baz=199						
BRTR	Keskin Array B	5.59	55	P	Pn	00 34 10.7	+2.1
	comp=E,20nm,0.6s,baz=223,slow=14,SNR=148						
BRTR				S	Sn	00 35 11.9	+0.3
	comp=E,4.7nm,0.7s,baz=228,slow=26,SNR=8.6						
HNTI	Hanita	7.13	118	Pn	Pn	00 34 28.8	-0.6
HNTI				Sn	Sn	00 35 45.7	-3.3
MMA0B	Mount Meron ar	7.33	118	Pn	Pn	00 34 31.7	-0.5
MMA0B				Sn	Sn	00 35 51.1	-2.8
MMAI	Mount Meron Ar	7.33	118	P	Pn	00 34 31.9	-0.3
	comp=E,0.9nm,0.3s,baz=136,slow=33,SNR=20						
MMAI				S	Sn	00 35 52.2	-1.6
	comp=E,5.2nm,0.4s,baz=358,slow=19,SNR=8.7						
GEM	Giv'at Ha'Em	7.42	116	Pn	Pn	00 34 32.3	-0.9
NATI	Neve Ativ	7.45	115	Pn	Pn	00 34 32.5	-1.1
SLTI	Sal'it	7.53	124	Pn	Pn	00 34 34.1	-0.6
SLTI				Sn	Sn	00 35 54.0	-4.5
SWA2		7.66	195	P	Pn	00 34 36.1	-0.4
	baz=193						
MMLI	Mount Malkishu	7.67	121	Pn	Pn	00 34 35.6	-1.0
HSAF	As Saff	7.77	154	P	Pn	00 34 38.6	+0.6
	baz=151						
HMDT	Nahal Hemdat	7.85	122	Pn	Pn	00 34 38.8	-0.2
GLL	Jalalah	7.86	153	P	Pn	00 34 39.7	+0.4
	baz=150						
AMAZ	Amatzia	7.91	129	Pn	Pn	00 34 39.4	-0.4
KZIT	Kziot	8.04	134	Pn	Pn	00 34 41.1	-0.5
KZIT				Sn	Sn	00 36 06.8	-4.0
YTIR	Yattir	8.15	129	Pn	Pn	00 34 43.2	0.0
DSI	Dead Sea	8.18	126	Pn	Pn	00 34 44.1	+0.6
DSI				Sn	Sn	00 36 10.5	-3.7
GHAJ	Ghor Haditha	8.47	127	Pn	Pn	00 34 46.8	-0.6
PRNI	Paran	8.80	134	Pn	Pn	00 34 51.1	-0.8
KRMI	Paran Flat	8.81	136	Pn	Pn	00 34 51.6	-0.5
ASF	Jabal al Asfar	8.85	118	P	Pn	00 34 52.3	-0.4
	comp=E,1.1nm,0.3s,baz=285,slow=23,SNR=2.2						
ASF				S	Sn	00 36 26.3	-4.4
	comp=E,3.2nm,0.6s,baz=22,slow=16,SNR=2.6						
HRFI	Mount Harif	9.05	135	Pn	Pn	00 34 54.9	-0.4
HRFI				Sn	Sn	00 36 31.3	-4.2
EIL	Elat	9.28	137	P	Pn	00 34 58.1	-0.3
	comp=E,3.3nm,0.6s,baz=250,slow=3.3,SNR=16						
EIL				S	Sn	00 36 36.2	-4.8
	comp=E,6.0nm,0.3s,baz=107,slow=3.2,SNR=9.5						
EIL	Elat	9.28	137	Pn	Pn	00 34 57.8	-0.6
HKAT	Jabal Katrina	9.73	145	P	Pn	00 35 04.4	-0.3
	baz=143						
VAE	Valguarnera	10.63	278	S	Sn	00 37 07.0	-6.7
	comp=E,2.7nm,0.4s,baz=115,slow=17,SNR=1.4						
KBZ	Khabaz	13.58	54	P	Pn	00 35 57.8	+2.5
	comp=E,1.8nm,0.9s,baz=248,slow=9.4,SNR=1.8						
KEST	Kesra	14.83	272	P	Pn	00 36 12.8	+1.3
	comp=E,2.5nm,0.8s,baz=72,slow=6.7,SNR=5.8						
KBA	Koelnbreinsper	14.86	319	ePn	P	00 36 15.6	+1.0
	comp=E,2.5nm,0.6s						
VRAC	Vranov	14.97	331	P	P	00 36 15.2	-0.3
	comp=E,0.9nm,0.4s,baz=173,slow=7.4,SNR=2.1						
GERES	GERESS Array B	15.87	324	P	P	00 36 25.4	-0.1
	comp=E,0.6nm,0.5s,baz=139,slow=12,SNR=5.2						
SQTA	Sankt Quirin	16.11	316	ePn	P	00 36 28.6	+0.3
	comp=E,2.1nm,0.6s						
MOTA	Moosalm	16.24	316	ePn	P	00 36 30.4	+0.6
	comp=E,3.4nm,1.0s						
FETA	Feichten	16.27	315	ePn	P	00 36 31.4	+1.3
	comp=E,5.3nm,1.1s						
DAVOX	Davos/Dischmat	16.64	313	P	P	00 36 35.9	+1.6
	comp=E,0.5nm,0.3s,baz=108,slow=16,SNR=1.9						
DAVA	Damuels	16.90	314	ePn	P	00 36 38.4	+1.3
	comp=E,1.2nm,0.2s						
ESDC	Sonseca Array	24.98	287	P	P	00 37 60.0	-0.3
	comp=E,1.3nm,0.7s,baz=80,slow=9.5,SNR=16						
	comp=E,1.3nm,0.7s						
AKTO	Aktyubinsk	25.71	48	P	P	00 38 09.2	+2.6
	comp=E,1.1nm,0.5s,baz=239,slow=9.3,SNR=4.8						
	comp=E,1.1nm,0.5s						
TORD	Torodi Ar. Bea	33.04	232	P	P	00 39 12.4	+0.6
	comp=E,5.0nm,0.4s,baz=34,slow=9.0,SNR=133						
	comp=E,5.0nm,0.4s						
MKAR	Makanchi Array	41.23	58	P	P	00 40 21.6	+0.9
	comp=E,0.5nm,0.4s,baz=272,slow=9.0,SNR=8.6						
	comp=E,0.5nm,0.4s						
DBIC	Dimbokro	42.12	233	P	P	00 40 28.3	0.0
	comp=E,8.7nm,1.2s,baz=73,slow=9.1,SNR=4.3						
	comp=E,8.7nm,1.2s						
ZALV	Zalesovo Beam	42.47	47	P	P	00 40 30.4	-0.3
	comp=E,0.4nm,0.3s,baz=280,slow=8.6,SNR=2.7						
	comp=E,0.4nm,0.3s						
SONM	Songino Array	56.94	52	P	P	00 42 21.2	+0.7
	comp=E,0.4nm,0.5s,baz=294,slow=8.7,SNR=2.6						
	comp=E,0.4nm,0.5s						

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*KRNET **23** 00:32:51.5±0.1, 42°.28N×79°.87E, h15^{km}, mb3.1*
*NNC **23** 00:32:51.2±0.7, 42°.28N×79°.85E, h0^{km}, mb2.9, mpv3.4, Error ellipse: s-maj=4.3km s-min=2.8km az=148.0*
*SOME **23** 00:32:51.8, 42°.32N×79°.78E, h10^{km}*
ISC 23 00:32:49.8±1.6, **42°.24N**±0°.05×**79°.87E**±0°.04, **h0**^{km}±10^{km}, **n50**, σ1^{s}**09**/109, **10C-15D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	1.10	326	eP	Pb	00 33 12.0	+0.1
	8.3nm,0.1s						
UZB				eS	Sb	00 33 26.3	-0.5
	58nm,0.2s						
UZB	Uzynbulak	1.10	326	P	Pb	00 33 12.0	+0.1
	8.3nm,0.1s						
UZB				P	Pn	00 33 12.1	-0.6
	8.3nm,0.1s						
UZB				S	Sb	00 33 26.2	-0.5
	60nm,0.1s						
UZB				S	Sb	00 33 26.4	-0.5
	58nm,0.2s						
UZB	Uzynbulak	1.10	326	eP	Pb	00 33 12.0	+0.1
	baz=24						
UZB				eS	Sb	00 33 26.3	-0.5
	baz=24						
PRZ	Przheval'sk	1.12	283	⇓iP	Pg	00 33 12.2	+1.0
	baz=82						
PRZ				⇓iS	Sb	00 33 26.9	-0.4
	baz=82						
PDGK	Podgornoye	1.12	346	P	Pn	00 33 12.6	-0.4
	3.5nm,0.1s						
PDGK				P	Pn	00 33 12.6	-0.4
	3.5nm,0.1s						
PDGK				S	Sn	00 33 27.2	-1.9
	14nm,0.2s						
PDGK				S	Sn	00 33 27.3	-1.9
	14nm,0.3s						
PDGK	Podgornoye	1.12	346	⇑P	Pg	00 33 11.6	+0.3
	2.0nm,0.3s						
PDGK				⇓S	Sb	00 33 26.9	-0.5
	13nm,0.3s						
KTMS	Ketmen	1.26	16	eP	Pn	00 33 14.0	-0.8
	4.9nm,0.1s						
KTMS				eS	Sb	00 33 30.3	-1.0
	23nm,0.1s						
KTMS	Ketmen	1.26	16	P	Pn	00 33 13.9	-0.8
	4.9nm,0.1s						
KTMS				P	Pn	00 33 14.0	-0.8
	4.9nm,0.1s						
KTMS				S	Sg	00 33 30.7	+0.5
	23nm,0.1s						
KTMS				S	Sg	00 33 30.7	+0.5
	25nm,0.1s						
KTMS	Ketmen	1.26	16	eP	Pn	00 33 14.0	-0.8
	baz=17						
KTMS				eS	Sb	00 33 30.3	-1.0
	baz=17						
SATY	Saty	1.35	308	eP	Pg	00 33 16.5	+0.7
	4.4nm,0.1s						
SATY				eS	Sg	00 33 34.2	+0.9
	40nm,0.1s						
SATY	Saty	1.35	308	P	Pb	00 33 16.3	+0.1
	4.2nm,0.1s						
SATY				P	Pb	00 33 16.3	+0.1
	4.4nm,0.1s						
SATY				S	Sn	00 33 33.6	-1.3
	25nm,0.1s						
SATY				S	Sg	00 33 33.7	+0.3
	29nm,0.1s						
SATY	Saty	1.35	308	eP	Pg	00 33 16.5	+0.7
	baz=6.0						
SATY				eS	Sg	00 33 34.3	+0.9
	baz=6.0						
ZHN	Zhinishke	1.41	312	eP	Pg	00 33 17.3	+0.5
	16nm,0.1s						
ZHN				eS	Sg	00 33 35.5	+0.5
	40nm,0.1s						
ZHN	Zhinishke	1.41	312	P	Pg	00 33 17.3	+0.5
	16nm,0.1s						
ZHN				P	Pg	00 33 17.3	+0.5
	29nm,0.1s						
ZHN				S	Sg	00 33 35.4	+0.4
	40nm,0.2s						
ZHN				S	Sn	00 33 36.5	+0.4
	40nm,0.1s						
ZHN	Zhinishke	1.41	312	eP	Pg	00 33 17.3	+0.5
	baz=11						
ZHN				eS	Sg	00 33 35.6	+0.5
	baz=11						
KPKS	Kokpek	1.50	325	eP	Pg	00 33 19.2	+0.6
	12nm,0.1s						
KPKS				eS	Sg	00 33 38.5	+0.4
	27nm,0.3s						
KPKS	Kokpek	1.50	325	eP	Pg	00 33 19.2	+0.6
	baz=24						
KPKS				eS	Sg	00 33 38.5	+0.4
	baz=24						
TARG	Taragay, Kyrgy	1.62	252	⇓iP	Pb	00 33 21.2	+0.3
	baz=51						
TARG				⇓iS	Sg	00 33 43.7	+1.8
	baz=51						
ANVS	Anan'yevo	1.72	289	⇓iP	Pb	00 33 22.7	+0.3

	baz=88						
ANVS				⇓iS	**Sg**	**00 33 45.3**	**+0.3**
	baz=88						
KURS	**Kuram**	**1.77**	**316**	eP	**Pg**	**00 33 23.9**	**+0.2**
	11nm,0.2s						
KURS				eS	**Sg**	**00 33 47.1**	**+0.5**
	6.0nm,0.3s						
KURS	**Kuram**	**1.77**	**316**	P	**Pg**	**00 33 23.9**	**+0.2**
	11nm,0.2s						
KURS				P	**Pb**	**00 33 24.1**	**+1.0**
	10.0nm,0.2s						
KURS				S	**Sg**	**00 33 46.9**	**+0.4**
	4.9nm,0.3s						
KURS				S	**Sg**	**00 33 47.1**	**+0.5**
	6.0nm,0.3s						
KURS	**Kuram**	**1.77**	**316**	eP	**Pg**	**00 33 23.9**	**+0.2**
	baz=15						
KURS				eS	**Sg**	**00 33 47.1**	**+0.5**
	baz=15						
KDJ	**Kajisay**	**2.00**	**268**	⇑eP	**Pb**	**00 33 27.2**	**0.0**
	baz=67						
KDJ				⇑iS	**Sg**	**00 33 53.9**	**-0.2**
	baz=67						
DJR	**Jarkent**	**2.09**	**358**	eP	**Pg**	**00 33 30.1**	**+0.3**
	2.0nm,0.1s						
DJR				eS	**Sg**	**00 33 57.8**	**+0.8**
	87nm,0.3s						
DJR	**Jarkent**	**2.09**	**358**	Pg	**Pg**	**00 33 29.6**	**-0.3**
	1.7nm,0.2s						
DJR				Pg	**Pg**	**00 33 30.2**	**+0.3**
	2.3nm,0.1s						
DJR				Lg	Lg	00 33 57.6	
	87nm,0.3s						
DJR				Lg	Lg	00 33 57.6	
	87nm,0.3s						
MDOK	**Medeo**	**2.27**	**295**	eP	**Pb**	**00 33 31.8**	**0.0**
	10nm,0.1s						
MDOK				eS	**Sb**	**00 34 00.9**	**+0.3**
	11nm,0.1s						
MDOK	**Medeo**	**2.27**	**295**	⇓Pg	**Pb**	**00 33 31.4**	**-0.5**
	2.0nm,0.2s						
MDOK				⇓Lg	Lg	00 34 01.1	
	7.6nm,0.5s						
MDOK	**Medeo**	**2.27**	**295**	Pg	**Pb**	**00 33 31.8**	**0.0**
	10nm,0.1s						
MDOK				Pg	**Pb**	**00 33 31.9**	**0.0**
	10nm,0.2s						
MDOK				Lg	Lg	00 34 00.9	
	11nm,0.1s						
MDOK				Lg	Lg	00 34 01.3	
	8.6nm,0.5s						
TNSS	**Tian-Shan**	**2.30**	**291**	eP	**Pb**	**00 33 32.4**	**0.0**
	4.5nm,0.1s						
TNSS				eS	**Sb**	**00 34 02.0**	**+0.5**
	6.9nm,0.2s						
TNSS	**Tian-Shan**	**2.30**	**291**	Pg	**Pb**	**00 33 32.4**	**0.0**
	4.5nm,0.1s						
TNSS				Pg	**Pg**	**00 33 32.5**	**-1.4**
	4.5nm,0.1s						
TNSS				Lg	Lg	00 34 02.0	
	6.9nm,0.2s						
TNSS				Lg	Lg	00 34 02.2	
	7.8nm,0.2s						
CHKK	**Chushkaly**	**2.66**	**308**	eP	**Pb**	**00 33 39.3**	**+1.0**
	1.7nm,0.1s						
CHKK				eS	**Sg**	**00 34 13.3**	**-1.9**
	20nm,0.2s						
CHKK	**Chushkaly**	**2.66**	**308**	Pg	**Pb**	**00 33 39.3**	**+1.0**
	1.7nm,0.1s						
CHKK				Pg	**Pg**	**00 33 39.7**	**-1.1**
	3.0nm,0.1s						
CHKK				Lg	Lg	00 34 13.3	
	20nm,0.2s						
CHKK				Lg	Lg	00 34 13.3	
	20nm,0.2s						
MTBS	**Maitube**	**2.69**	**290**	eP	**Pb**	**00 33 39.6**	**+0.7**
	5.0nm,0.1s						
MTBS				eS	**Sb**	**00 34 13.8**	**+1.4**
	17nm,0.2s						
MTBS	**Maitube**	**2.69**	**290**	Pg	**Pb**	**00 33 39.6**	**+0.7**
	5.0nm,0.1s						
MTBS				Pg	**Pg**	**00 33 39.7**	**-1.7**
	5.2nm,0.1s						
MTBS				Lg	Lg	00 34 13.8	
	17nm,0.3s						
MTBS				Lg	Lg	00 34 13.8	
	17nm,0.2s						
ULHL	**Ulahol**	**2.69**	**271**	⇑iP	**Pb**	**00 33 37.1**	**-1.9**
	baz=71						
ULHL				⇑iS	**Sb**	**00 34 10.6**	**-2.1**
	baz=71						
KTBS	**Karatobe**	**2.76**	**303**	eP	**Pb**	**00 33 40.9**	**+0.8**
	6.4nm,0.1s						
KTBS				eS	**Sg**	**00 34 16.3**	**-2.3**
	44nm,0.2s						
KTBS	**Karatobe**	**2.76**	**303**	Pg	**Pb**	**00 33 40.9**	**+0.8**
	6.4nm,0.1s						
KTBS				Pg	**Pb**	**00 33 40.9**	**+0.8**
	6.1nm,0.1s						
KTBS				Lg	Lg	00 34 16.3	
	44nm,0.2s						
KTBS				Lg	Lg	00 34 16.5	
	44nm,0.1s						
BOOM	**Boomskoye usch**	**2.92**	**276**	⇓eP	**Pn**	**00 33 40.1**	**+2.4**
	baz=76						
BOOM				⇓iS	**Sb**	**00 34 16.0**	**-3.3**
	baz=76						
TDK	**Taldyqorghan**	**2.96**	**339**	eP	**Pb**	**00 33 45.0**	**+1.6**
	18nm,0.2s						
TDK				eS	**Sg**	**00 34 23.1**	**-1.7**
	23nm,0.4s						
TDK	**Taldyqorghan**	**2.96**	**339**	Pg	**Pb**	**00 33 44.6**	**+1.2**
	11nm,0.1s						
TDK				Lg	Lg	00 34 22.6	
	23nm,0.4s						
KST	**Kastek**	**2.99**	**287**	eP	**Pb**	**00 33 44.6**	**+0.6**
	3.0nm,0.2s						
KST				eS	**Sb**	**00 34 22.5**	**+1.3**
	15nm,0.5s						
KST	**Kastek**	**2.99**	**287**	Pg	**Pb**	**00 33 44.2**	**+0.1**
	2.8nm,0.1s						
KST				Pg	**Pg**	**00 33 45.6**	**-1.6**
	2.8nm,0.1s						
KST				Lg	Lg	00 34 22.9	
	15nm,0.5s						
KST				Lg	Lg	00 34 24.0	
	15nm,0.4s						
KAPS	**Kapalarasan**	**3.07**	**353**	eP	**Pb**	**00 33 47.1**	**+1.9**
	0.7nm,0.2s						
KAPS				eS	**Sg**	**00 34 26.7**	**-1.6**
	35nm,0.3s						
KAPS	**Kapalarasan**	**3.07**	**353**	Pg	**Pb**	**00 33 46.5**	**+1.2**
	0.7nm,0.2s						
KAPS				Pg	**Pg**	**00 33 46.8**	**-1.8**
	1.2nm,0.1s						
KAPS				Lg	Lg	00 34 26.3	
	35nm,0.2s						
KAPS				Lg	Lg	00 34 26.5	
	35nm,0.3s						
TKM2	**Tokmak 2**	**3.23**	**284**	⇓Pg	**Pb**	**00 33 46.7**	**-1.5**
	2.5nm,0.9s						
TKM2				⇑Lg	Lg	00 34 30.2	
	6.0nm,0.6s						
TKM2	**Tokmak 2**	**3.23**	**284**	⇑iP	**Pn**	**00 33 44.5**	**+2.5**
	baz=83						
TKM2				⇑iS	**Sn**	**00 34 22.5**	**+1.3**
	baz=83						
KRBS	**Karabastau**	**3.41**	**297**	eP	**Pb**	**00 33 51.7**	**+0.7**
	1.1nm,0.2s						
KRBS				eS	**Sb**	**00 34 34.7**	**+1.7**
	7.3nm,0.2s						
KRBS	**Karabastau**	**3.41**	**297**	Pg	**Pb**	**00 33 51.7**	**+0.7**
	1.1nm,0.2s						
KRBS				Pg	**Pg**	**00 33 51.9**	**-3.1**
	1.1nm,0.1s						
KRBS				Lg	Lg	00 34 34.7	
	7.3nm,0.2s						
KRBS				Lg	Lg	00 34 34.8	
	7.1nm,0.2s						
MAKZ	**Makanchi**	**4.81**	**18**	⇓Sn	**Sn**	**00 35 00.3**	**+0.4**
	0.5nm,0.4s						
MAKZ				⇓Lg	Lg	00 35 23.4	
	0.7nm,0.6s						
MK31	**Makanchi Array**	**4.87**	**20**	⇑Pn	**Pn**	**00 34 05.4**	**+1.1**
	0.2nm,0.4s,baz=199,slow=15,SNR=7.8						
MK31				Pg	**Pb**	**00 34 17.0**	**+1.0**
	0.1nm,0.2s,baz=202,slow=14,SNR=8.2						
MK31				⇑Sn	**Sn**	**00 35 02.4**	**+1.0**
	0.2nm,0.3s,baz=206,slow=26,SNR=3.9						
MK31				⇓Lg	Lg	00 35 23.7	
	0.3nm,0.3s,baz=210,slow=29,SNR=4.8						

*CNRM **23** 00:56:41.2, 35°.69N×3°.85W, h0^{km}, ml2.0*
*MDD **23** 00:56:45.2±1.2, 35°.60N×3°.77W, h0^{km}, mb_Lg2.6/7, Error ellipse: s-maj=9.4km s-min=4.4km az=54.0*
*SFS **23** 00:56:45.0, 35°.59N×3°.76W, ML2.6, ALBORAN SUR*
ISC 23 00:56:43.5±1.0, **35°.57N**±0°.03×**3°.79W**±0°.03, **h11**^{km}±10^{km}, **n20**, σ1^{s}.**46**/33, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.37**	**200**	P	**Pg**	**00 56 51.5**	**+0.6**
PALE				S	**Sg**	**00 56 55.4**	**-0.4**
PVLZ	**Peæn de**	**0.57**	**227**	P	**Pg**	**00 56 55.3**	**+0.6**
PVLZ				S	**Sg**	**00 57 01.7**	**-0.6**
EALB	**Alboran**	**0.72**	**58**	Pg	**Pb**	**00 56 58.2**	**+0.1**
EALB				Sg	**Sb**	**00 57 07.6**	**-0.3**
EALB				i Vmb_Lg		00 57 10.7	
WMELI	**Melilla**	**0.72**	**110**	P	**Pg**	**00 56 58.2**	**+0.6**
WMELI				S	**Sg**	**00 57 06.8**	**-0.3**
EMEL	**Melilla**	**0.73**	**111**	Pg	**Pg**	**00 56 58.2**	**+0.6**
EMEL				Sg	**Sg**	**00 57 07.9**	**+0.8**
EMEL				i Vmb_Lg		00 57 09.7	
GOG	**Mont Gurugu**	**0.73**	**118**	P	**Pg**	**00 56 58.6**	**+0.9**
CHAS	**Isla Isabel II**	**1.17**	**109**	P	**Pb**	**00 57 04.8**	**-1.0**
CHAS				S	**Sg**	**00 57 18.6**	**-2.7**
EMAL	**Malaga-Limoner**	**1.30**	**337**	P	**Pg**	**00 57 11.2**	**+2.6**
EMAL				S	**Sn**	**00 57 27.0**	**+1.9**
SMIR	**Smir Dam**	**1.30**	**276**	P	**Pn**	**00 57 06.8**	**-0.9**
SMIR				S	**Sb**	**00 57 20.5**	**-4.4**
ELGU	**Los Guajares,**	**1.31**	**6**	Pg	**Pn**	**00 57 07.9**	**+0.1**
ELGU				Sg	**Sn**	**00 57 26.5**	**+1.2**
ELGU				i Vmb_Lg		00 57 31.3	
TAF	**Taforalt**	**1.35**	**123**	P	**Pn**	**00 57 08.3**	**-0.2**
EBER	**Berja**	**1.52**	**28**	Pg	**Pn**	**00 57 10.4**	**-0.4**
EBER				Sg	**Sg**	**00 57 32.0**	**-0.3**
EBER				i Vmb_Lg		00 57 35.5	
EGOR	**Sierra Gorda,**	**1.56**	**350**	Pg	**Pg**	**00 57 13.4**	**-0.2**
EGOR				i Vmb_Lg		00 57 18.3	
EGOR				Sg	**Sg**	**00 57 32.9**	**-1.0**
JBK	**JBK**	**1.58**	**140**	P	**Pn**	**00 57 11.8**	**+0.1**
LCRM	**LCR**	**2.07**	**206**	P	**Pn**	**00 57 21.4**	**+3.0**
EQES	**Quesada**	**2.31**	**14**	Pn	**Pb**	**00 57 24.8**	**-0.4**
EQES				Sn	**Sn**	**00 57 50.7**	**+0.7**
EQES				i Vmb_Lg		00 57 56.1	
MD31	**MD31**	**2.81**	**197**	P	**Pn**	**00 57 28.8**	**+0.3**
MDT	**Midelt**	**2.83**	**194**	P	**Pn**	**00 57 30.3**	**+1.6**
ZHG	**ZHG**	**3.17**	**229**	P	**Pn**	**00 57 34.9**	**+1.5**
ETOB	**Tobarra**	**3.56**	**30**	Pn	**Pn**	**00 57 40.2**	**+1.4**
ETOB				Sn	**Sn**	**00 58 20.3**	**-0.6**
ETOB				i Vmb_Lg		01 00 16.8	

*IDC **23** 00:58:25.5±1.4, 34°.20N×25°.32E, h0^{km}, mb3.3/2, mbtmp3.3/8, ML3.4/5, MS3.0/1, Error ellipse: s-maj=19.9km s-min=13.5km az=73.0*
*ATH **23** 00:58:28.4, 34°.31N×25°.30E, h27^{km}±5^{km}, ML3.2/4, Error ellipse: s-maj=8.0km s-min=1.9km az=359.0*
*ISK **23** 00:58:28.3, 34°.26N×25°.38E, h82^{km}, ML3.3/10*
*THE **23** 00:58:29.2, 34°.33N×25°.33E, h2^{km}±4^{km}, ML3.2/8, Error ellipse: s-maj=5.0km s-min=1.1km az=169.0*
*DDA **23** 00:58:34.0±0.0, 34°.77N×25°.98E, h15^{km}, ML3.1*
ISC 23 00:58:28.1±1.4, **34°.22N**±0°.06×**25°.38E**±0°.03, **h29**^{km}±11^{km}, **n53**, σ1^{s}.**58**/73, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.85**	**20**	P	**Pn**	**00 58 45.2**	**+1.1**
FRMA				S	**Sn**	**00 58 56.6**	**+1.0**
	450nm,0.6s						
SIVA	**Sivas**	**0.93**	**330**	P	**Pb**	**00 58 44.1**	**-1.6**
SIVA				S	**Sb**	**00 58 56.2**	**-1.4**
SIVA				AML	AML	00 58 58.1	
	comp=N,11756µm,0.6s						
SIVA				AML	AML	00 58 58.6	
	comp=E,17244µm,0.8s						
SIVA	**Sivas**	**0.93**	**330**	P	**Pb**	**00 58 44.2**	**-1.5**
SIVA				S	**Sb**	**00 58 57.1**	**-0.5**
	comp=E,7µm,0.6s						
TMBK	**Timbaki Herakl**	**0.99**	**330**	P	**Pn**	**00 58 46.0**	**-0.1**
TMBK				S	**Sn**	**00 58 59.8**	**+0.7**
	comp=E,1µm,0.7s						
NPS	**Neapolis**	**1.06**	**10**	P	**Pn**	**00 58 47.0**	**-0.1**
NPS	**Neapolis**	**1.06**	**10**	P	**Pn**	**00 58 47.0**	**-0.1**
NPS				S	**Sn**	**00 59 01.3**	**+0.4**
	comp=E,6µm,0.8s						
HRKL	**Herakleio**	**1.12**	**348**	P	**Pb**	**00 58 48.5**	**-0.3**
HRKL				S	**Sn**	**00 59 03.3**	**+1.1**
	comp=E,2µm,0.7s						
HRKL	**Herakleio**	**1.12**	**348**	PG	**Pb**	**00 58 48.6**	**-0.3**
HRKL				SG	**Sn**	**00 59 04.7**	**+2.5**
ZKR	**Zakros**	**1.13**	**37**	P	**Pb**	**00 58 50.0**	**+0.9**
ZKR				AML	AML	00 59 07.1	
	comp=N,738µm,0.5s						
ZKR				AML	AML	00 59 11.1	
	comp=E,1541µm,0.6s						
ZKR	**Zakros**	**1.13**	**37**	P	**Pb**	**00 58 50.0**	**+0.9**
ZKR	**Zakros**	**1.13**	**37**	PN	**Pb**	**00 58 49.4**	**+0.3**
ZKR				SN	**Sb**	**00 59 04.9**	**+1.4**
IDI	**Anoyia**	**1.14**	**340**	Pg	**Pn**	**00 58 48.2**	**-0.1**
	comp=E,39nm,0.3s,baz=164,slow=19,SNR=127						
IDI				Lg	Lg	00 59 03.4	
	comp=E,54nm,0.3s,baz=255,slow=20,SNR=16						
IDI	**Anoyia**	**1.14**	**340**	P	**Pn**	**00 58 48.0**	**-0.2**
IDI				S	**Sn**	**00 59 03.1**	**+0.1**
IDI				AML	AML	00 59 04.0	
	comp=E,1497µm,0.4s						
IDI				AML	AML	00 59 04.6	
	comp=N,1080µm,0.6s						
IDI	**Anoyia**	**1.14**	**340**	P	**Pn**	**00 58 48.0**	**-0.2**
IDI				S	**Sn**	**00 59 03.1**	**+0.1**
	comp=N,645nm,0.5s						
GVD	**Gavdhos**	**1.23**	**301**	P	**Pb**	**00 58 50.4**	**-0.3**
GVD				AML	AML	00 59 20.0	
	comp=E,2641µm,0.5s						
GVD				AML	AML	00 59 21.0	
	comp=N,2021µm,0.4s						
GVD	**Gavdhos**	**1.23**	**301**	P	**Pb**	**00 58 50.5**	**-0.3**
GVD				S	**Sb**	**00 59 06.7**	**+0.3**
	comp=N,1µm,0.5s						
GVD	**Gavdhos**	**1.23**	**301**	PN	**Pb**	**00 58 50.9**	**+0.1**
IMMV	**Iera Moni Meta**	**1.69**	**318**	P	**Pn**	**00 58 56.5**	**+0.8**
IMMV	**Iera Moni Meta**	**1.69**	**318**	P	**Pn**	**00 58 56.5**	**+0.8**
IMMV				S	**Sb**	**00 59 18.6**	**-0.9**
	comp=N,580nm,0.6s						
IMMV	**Iera Moni Meta**	**1.69**	**318**	PN	**Pb**	**00 58 56.9**	**-1.7**
KNDR	**Palaiochora Ch**	**1.73**	**307**	PN	**Pb**	**00 58 58.1**	**-1.0**
KARP	**Karpathos**	**1.98**	**47**	P	**Pb**	**00 59 02.2**	**-1.3**
KARP	**Karpathos**	**1.98**	**47**	P	**Pb**	**00 59 02.2**	**-1.3**
KARP	**Karpathos**	**1.98**	**47**	PN	**Pn**	**00 59 01.0**	**+1.3**
APE	**Apeiranthos**	**2.85**	**2**	PN	**Pn**	**00 59 12.8**	**+1.1**
ARG	**Arkhangelos**	**3.01**	**48**	PN	**Pn**	**00 59 15.4**	**+1.6**
DAT	**Datca**	**3.08**	**35**	PN	**Pn**	**00 59 15.9**	**+0.9**
DAT	**Datca**	**3.08**	**35**	P	**Pn**	**00 59 16.1**	**+1.2**
MLSB	**Milas**	**3.64**	**32**	PN	**Pn**	**00 59 23.6**	**+1.1**
DALY	**Dalyan (Mula)**	**3.73**	**45**	PN	**Pn**	**00 59 24.8**	**+1.2**
YER	**Yerkesik**	**3.75**	**38**	PN	**Pn**	**00 59 25.2**	**+1.1**
MULA	**Mugla, Merkez-**	**3.87**	**37**	P	**Pn**	**00 59 26.9**	**+1.3**
FETY	**Fethiye**	**3.87**	**50**	P	**Pn**	**00 59 25.8**	**+0.1**
FETY				S	**Sn**	**01 00 06.8**	**-3.4**
AYDN	**Tasoluk**	**3.99**	**30**	P	**Pn**	**00 59 27.2**	**-0.2**
AKAS	**Kas**	**4.00**	**59**	P	**Pn**	**00 59 29.2**	**+1.6**
AKAS				i AML	AML	01 00 28.0	
	comp=N,87nm,1.1s						
AKAS				i AML	AML	01 00 45.0	
	comp=N,58nm,1.4s						
CAEL	**Denizli, Camel**	**4.33**	**47**	P	**Pn**	**00 59 31.3**	**-0.8**
TAVA	**DENIZLI_Tavas**	**4.33**	**41**	P	**Pn**	**00 59 31.9**	**-0.1**
TAVA				S	**Sn**	**01 00 18.2**	**-3.5**
GOLH	**Golhisar**	**4.55**	**47**	P	**Pn**	**00 59 35.5**	**+0.4**
GOLH				S	**Sn**	**01 00 23.8**	**-3.2**
AKUM	**Antalya-Kumluc**	**4.57**	**61**	P	**Pn**	**00 59 35.8**	**+0.5**
AKUM				S	**Sn**	**01 00 22.7**	**-4.8**
AKUM				i AML	AML	01 00 53.0	
	comp=N,26nm,1.5s						
KORT	**Korkueli**	**4.91**	**54**	P	**Pn**	**00 59 42.3**	**+2.2**
KORT				S	**Sn**	**01 00 32.5**	**-3.5**
PASA	**Karahalli, USA**	**5.29**	**38**	P	**Pn**	**00 59 43.6**	**-1.7**
USAK	**Uak-Merkez**	**5.36**	**32**	P	**Pn**	**00 59 45.2**	**-1.0**
USAK				i AML	AML	01 00 37.0	
	comp=N,21nm,1.2s						
USAK				i AML	AML	01 02 27.0	
	comp=N,37nm,6.5s						
KZIL	**AFYON_Kizioren**	**5.58**	**42**	P	**Pn**	**00 59 48.9**	**-0.3**
SEDI	**Konya, Seydise**	**6.10**	**56**	P	**Pn**	**00 59 58.1**	**+1.7**
SEDI				S	**Sn**	**01 01 05.9**	**+0.5**
SEDI				i AML	AML	01 01 10.0	
	comp=N,12nm,0.6s						
SEDI				i AML	AML	01 01 11.0	
	comp=N,11nm,0.9s						
MMAI	**Mount Meron Ar**	**8.45**	**95**	Pn	**Pn**	**01 00 30.6**	**+2.0**
	comp=N,1.1nm,0.3s,baz=276,slow=13,SNR=3.0						
MMAI				Sn	**Sn**	**01 02 01.8**	**-1.2**
	comp=N,1.7nm,0.3s,baz=262,slow=32,SNR=5.8						
	comp=N,0.8nm,0.5s						
BRTR	**Keskin Array B**	**8.60**	**48**	Pn	**Pn**	**01 00 32.0**	**+1.3**
	comp=N,0.2nm,0.6s,baz=218,slow=17,SNR=1.8						
EIL	**Elat**	**9.31**	**117**	Pn	**Pn**	**01 00 41.9**	**+1.5**
	comp=N,0.3nm,0.3s,baz=236,slow=3.6,SNR=6.6						
EIL				Sn	**Sn**	**01 02 19.7**	**-4.4**
	comp=N,0.7nm,0.3s,baz=221,slow=19,SNR=5.9						
	comp=N,2.2nm,0.6s						
VAE	**Valguarnera**	**9.48**	**293**	Pn	**Pn**	**01 00 43.4**	**+0.7**
	comp=N,0.4nm,0.3s,baz=135,slow=6.7,SNR=1.5						
VAE				Sn	**Sn**	**01 02 24.9**	**-3.3**
	comp=N,0.4nm,0.3s,baz=172,slow=19,SNR=1.7						
	comp=N,2.8nm,0.8s						
AKASG	**Malin Array Be**	**16.71**	**9**	Pn	**Pn**	**01 02 20.4**	**+0.3**
	comp=N,0.6nm,0.3s,baz=200,slow=10,SNR=4.8						
	comp=N,0.2nm,0.3s						
GERES	**GERESS Array B**	**17.00**	**333**	Pn	**Pn**	**01 02 24.2**	**+0.5**
	comp=N,0.1nm,0.3s,baz=142,slow=11,SNR=5.5						
	comp=N,0.3nm,0.5s						
ESDC	**Sonseca Array**	**24.02**	**292**	P	**P**	**01 03 40.9**	**+0.5**
	comp=N,0.3nm,0.8s,baz=87,slow=10.0,SNR=1.3						
	comp=N,0.3nm,0.8s						
MDT	**Midelt**	**25.00**	**275**	LR	LR	01 14 14.6	
	comp=N,31nm,19.1s,baz=253,slow=38						
TORD	**Torodi Ar. Bea**	**30.03**	**231**	P	**P**	**01 04 36.4**	**+1.8**
	comp=N,0.3nm,0.3s,baz=37,slow=8.8,SNR=10.0						
	comp=N,0.3nm,0.3s						

*IDC **23** 01:02:45.8±1.7, 33°.74N×137°.39E, h340^{km}±17^{km}, mb3.0/7, mbtmp3.6/10, Error ellipse: s-maj=21.6km s-min=16.6km az=92.0*
*JMA **23** 01:02:45.3±0.3, 34°N±1°×13°7E±°, h352^{km}±2^{km}, MV2.9/27, SE OFF KII PENINSULA*
ISC 23 01:02:46.3±0.9, **33°.86N**±0°.10×**137°.32E**±0°.08, **h342**^{km}±6^{km}, **n26**, σ0^{s}.**79**/31, **mb3.1**/7, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	**0.07**	**84**	P	**Pn**	**01 03 29.8**	**+0.9**
TTO4	**TONANKAI O.B.S**	**0.24**	**50**	P	**Pn**	**01 03 29.6**	**+0.8**
TTO2	**TONANKAI O.B.S**	**0.27**	**244**	P	**Pn**	**01 03 29.6**	**+0.7**
TK02	**Tokai 2**	**0.38**	**76**	P	**Pn**	**01 03 29.9**	**+0.8**
TTO1	**TONANKAI O.B.S**	**0.50**	**242**	P	**Pn**	**01 03 29.9**	**+0.5**
TTO5	**TONANKAI O.B.S**	**0.52**	**40**	P	**Pn**	**01 03 30.2**	**+0.8**
JIE	**Ise**	**0.74**	**317**	P	**Pn**	**01 03 30.6**	**+0.3**
JIE				S	**S**	**01 04 05.4**	**0.0**
JTNC	**Tanabenakahech**	**1.42**	**269**	P	**Pn**	**01 03 33.2**	**0.0**
JTNC				eS	**S**	**01 04 10.6**	**-0.2**
JWY	**Kouya**	**1.48**	**285**	P	**Pn**	**01 03 33.9**	**+0.3**
JYTA	**Yamagatataniai**	**1.80**	**345**	eP	**Pn**	**01 03 35.6**	**+0.2**
JOD2	**Odawara 2**	**2.02**	**46**	eP	**Pn**	**01 03 37.0**	**0.0**
JWT	**Wachi**	**2.13**	**313**	P	**Pn**	**01 03 37.9**	**+0.2**
JWT				eS	**S**	**01 04 18.2**	**-0.8**
JAI	**Aioi**	**2.39**	**269**	P	**Pn**	**01 03 39.7**	**-0.1**
JAI				eS	**S**	**01 04 21.7**	**-1.0**
JRY	**Ryogami san**	**2.52**	**31**	eP	**Pn**	**01 03 41.2**	**+0.4**
JRY				eS	**S**	**01 04 23.7**	**-0.9**
MJAR	**Matsushiro Arr**	**2.78**	**15**	P	**Pn**	**01 03 43.1**	**+0.1**
	0.9nm,0.3s,baz=188,slow=9.0,SNR=4.3						
JMN	**Monobe**	**2.87**	**268**	P	**Pn**	**01 03 43.9**	**0.0**
JAG	**Ashikaga**	**3.10**	**34**	P	**Pn**	**01 03 44.6**	**-1.3**
KSRS	**Korea Array**	**8.45**	**298**	P	**Pn**	**01 04 46.4**	**+0.8**
	3.8nm,0.5s,baz=110,slow=12,SNR=17						
USRK	**Ussuriysk Ar.**	**11.13**	**340**	P	**Pn**	**01 05 17.8**	**+0.3**
	1.7nm,0.6s,baz=136,slow=13,SNR=3.4						
PETK	**Petropavlovsk-**	**24.12**	**31**	P	**P**	**01 07 32.4**	**+0.4**
	0.9nm,0.5s,baz=215,slow=9.8,SNR=2.0						
	0.9nm,0.5s						
SONM	**Songino Array**	**27.03**	**310**	P	**P**	**01 08 00.7**	**+2.4**
	0.5nm,0.5s,baz=123,slow=9.6,SNR=3.9						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**43.06**	**304**	P	**P**	**01 10 13.3**	**-0.2**
	0.5nm,0.6s,baz=84,slow=13,SNR=6.3						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**53.57**	**183**	P	**P**	**01 11 31.9**	**-1.3**
	0.2nm,0.3s,baz=1.1,slow=7.5,SNR=16						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**53.95**	**31**	P	**P**	**01 11 35.5**	**+0.1**
	0.4nm,0.9s,baz=261,slow=5.0,SNR=4.9						
	0.4nm,0.9s						
YKA	**Yellowknife Ar**	**68.21**	**28**	P	**P**	**01 13 10.4**	**+0.2**
	1.1nm,1.1s,baz=314,slow=4.5,SNR=2.1						
	1.1nm,1.1s						
FINES	**FINESS Array B**	**70.03**	**332**	P	**P**	**01 13 21.1**	**-0.3**
	1.1nm,1.0s,baz=28,slow=8.6,SNR=4.4						
	1.1nm,1.0s						

*ATH **23** 01:18:51.8, 41°.22N×20°.98E, h7^{km}±5^{km}, ML1.9/3, Error ellipse: s-maj=5.6km s-min=1.5km az=147.0*
*SKO **23** 01:18:51.5, 41°.15N×20°.98E, h25^{km}*
*TIR **23** 01:18:51.6, 41°.19N×20°.98E, h10^{km}±1^{km}, Md2.6, Ml2.0*
*BEO **23** 01:18:52.7±0.4, 41°.16N×21°.02E, h10^{km}±4^{km}, ML1.8/6*
ISC 23 01:18:52.7±0.9, **41°.18N**±0°.02×**21°.01E**±0°.02, **h18**^{km}±8^{km}, **n37**, σ1^{s}.**14**/65, **2C**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.17**	**247**	ePg	**Pb**	**01 18 56.7**	**+0.1**
OHR				eSg	**Sb**	**01 19 00.1**	**+0.9**
OHR	**Ohrid**	**0.17**	**247**	⇑iPg	**Pb**	**01 18 56.8**	**+0.1**
OHR				i Sg	**Sb**	**01 19 00.1**	**+0.9**
OHR				eLg	Lg	01 19 00.1	
	comp=N,453nm,0.3s						
FNA	**Florina**	**0.48**	**144**	P	**Pg**	**01 19 01.9**	**-0.6**
FNA				S	**Sb**	**01 19 09.2**	**-0.3**
FNA				AML	AML	01 19 13.1	
	comp=N,524µm,0.2s						
FNA				AML	AML	01 19 13.4	
	comp=E,495µm,0.5s						
FNA	**Florina**	**0.48**	**144**	⇑iPg	**Pg**	**01 19 01.9**	**-0.6**
FNA				i Sg	**Sb**	**01 19 09.5**	**0.0**
FNA	**Florina**	**0.48**	**144**	P	**Pg**	**01 19 01.9**	**-0.6**
	baz=142						
FNA				S	**Sb**	**01 19 09.5**	**0.0**
	baz=142						
KBN	**Korca**	**0.58**	**197**	P	**Pb**	**01 19 03.8**	**-0.5**
	baz=195						
KBN				S	**Sb**	**01 19 12.0**	**-0.1**
	baz=195						
KBN				AMP			
	comp=N,0.4nm,0.4s,baz=195						
PHP	**Peshkopia**	**0.66**	**320**	P	**Pb**	**01 19 03.6**	**-2.0**
	baz=322						
PHP				S	**Sb**	**01 19 13.8**	**-0.7**
	baz=322						
PHP				AMP			
	comp=N,0.3nm,0.6s,baz=322						
NEST	**Nestorio**	**0.76**	**177**	P	**Pb**	**01 19 06.6**	**-0.9**
NEST				S	**Sg**	**01 19 18.2**	**+0.4**
NEST				AML	AML	01 19 22.4	
	comp=E,219µm,0.4s						
NEST				AML	AML	01 19 22.8	
	comp=N,224µm,0.3s						
TIR	**Tirane**	**0.88**	**281**	ePg	**Pb**	**01 19 08.8**	**-0.5**
TIR				eSg	**Sg**	**01 19 21.9**	**+0.6**
TIR	**Tirane**	**0.88**	**281**	P	**Pb**	**01 19 08.6**	**-0.7**
	baz=282						
TIR				S	**Sg**	**01 19 21.3**	**-0.1**
	baz=282						
TIR				AMP			
	comp=N,0.1nm,0.2s,baz=282						
PENT	**Pentalofos**	**0.99**	**174**	P	**Pn**	**01 19 11.4**	**-0.3**
STIP	**Stip**	**1.03**	**59**	i Pg	**Pg**	**01 19 14.9**	**+2.3**
STIP				i Sg	**Sg**	**01 19 32.1**	**+6.0**
KZN	**Kozani**	**1.05**	**146**	P	**Pg**	**01 19 12.4**	**-0.6**
LSK	**Leskovik**	**1.07**	**197**	P	**Pg**	**01 19 13.4**	**-0.1**
	baz=196						

LSK				S	Sg	01 19 28.8	+1.2
	baz=196						
LSK				AMP			
	comp=N,0.4nm,0.6s,baz=196						
GRG	Griva	1.08	101	P	Pg	01 19 12.6	-1.0
GRG				AML	AML	01 19 31.3	
	comp=N,60µm,0.4s						
GRG				AML	AML	01 19 31.8	
	comp=E,42µm,0.3s						
GRG	Griva	1.08	101	*i* Pg	Pg	01 19 12.6	-1.0
GRG				*i* Sg	Sg	01 19 28.1	+0.3
VAY	Valandovo	1.19	83	*e*Pg	Pb	01 19 14.3	-0.4
VAY				*e*Sg	Sg	01 19 30.9	-0.3
VAY	Valandovo	1.19	83	*i* Pg	Pg	01 19 14.5	-1.2
VAY				*i* Sg	Sg	01 19 31.3	0.0
VAY				*e*Lg	Lg	01 19 31.3	
	comp=E,7.9nm,0.4s						
KPRO	Kipourio	1.25	167	P	Pb	01 19 15.9	+0.1
BCI	Bajram Curri	1.38	330	P	Pg	01 19 18.6	-0.7
	baz=331						
BCI				S	Sg	01 19 37.6	+0.3
	baz=331						
BCI				AMP			
	comp=E,0.2nm,1.0s,baz=331						
KNT	Kendrikon	1.43	90	P	Pb	01 19 18.3	-0.5
SRN	Sarande	1.51	211	P	Pg	01 19 22.1	+0.4
	baz=211						
SRN				S	Sg	01 19 41.8	+0.4
	baz=211						
SRN				AMP			
	comp=E,0.1nm,1.4s,baz=211						
BOSS	Bosilegrad	1.72	39	*e*Pg	Pb	01 19 22.3	-1.4
BOSS				*e*Sg	Sg	01 19 47.0	-1.1
IGT	Igoumenitsa	1.72	198	P	Pb	01 19 23.8	+0.1
IGT	Igoumenitsa	1.72	198	P	Pg	01 19 26.2	+0.4
	baz=197						
IGT				S	Sg	01 19 48.5	+0.2
	baz=197						
KEK	Kerkira	1.73	213	P	Pb	01 19 23.6	-0.3
PDG	Podgorica	1.81	314	*e*Pg	Pb	01 19 25.7	+0.5
PDG				*e*Sg	Sg	01 19 51.2	+0.2
SELS	Selova	2.04	2	*e*Pn	Pb	01 19 28.4	-0.8
SJES	Sjenica	2.22	340	*e*Pn	Pn	01 19 29.3	+0.7
SJES				*e*Sg	Sg	01 20 04.4	+0.3
IVAS	Ivanjica	2.48	346	*e*Pn	Pn	01 19 32.3	+0.1
DBRK	Dubrovnik	2.60	306	*e*Pn	Pn	01 19 35.5	+1.7
DBRK				Sn	Sn	01 20 06.5	+1.6
STON	Ston	2.99	306	*e*Pn	Pn	01 19 39.8	+0.7
STON				Sn	Sn	01 20 14.1	-0.3
LSTV	Lastovo	3.45	299	*e*Pn	Pn	01 19 46.1	+0.6
LSTV				Sn	Sn	01 20 24.7	-1.2
RICI	Ricice	3.69	310	*i* Pn	Pn	01 19 50.1	+1.4
RICI				Sn	Sn	01 20 33.2	+1.5
HVAR	Hvar	3.93	302	*e*Pn	Pn	01 19 51.8	-0.2
HVAR				Sn	Sn	01 20 36.6	-1.1
ZIRJ	Zirje	4.68	304	*e*Pn	Pn	01 20 03.2	+0.9
ZIRJ				Sn	Sn	01 20 55.1	-1.0
DUGI	Dugi Otok	5.21	305	*e*Pn	Pn	01 20 10.5	+0.8
DUGI				Sn	Sn	01 21 08.5	-0.8

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*TUL **23** 01:24:17.4±0.5, 35.°98N±0.°02×97.°20W±0.°01, h5^{km}±6^{km}, ML3.1, mb_Lg2.8/56(NEIC), Error ellipse: s-maj=2.3km s-min=1.1km az=156.0*

*ANF **23** 01:24:17.7±0.4, 36.°02N×97.°20W, h5^{km}, ML3.2/10, Error ellipse: s-maj=4.5km s-min=3.4km az=124.0*

*NEIC **23** 01:24:18.1±0.5, 35.°98N±0.°01×97.°20W±0.°01, h3^{km}±6^{km}, Error ellipse: s-maj=2.1km s-min=1.1km az=155.0*

ISC 23 01:24:17.2±1.3**, 35.°99N**±0.°03×**97.°18W**±0.°03**, h1**^{km}±14^{km}**, n58, σ0.^{s}86**/47**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.61	201	Pg	Pg	01 24 29.1	+0.1
OKCFA				Sg	Sg	01 24 37.3	+0.4
OKCFA	Oklahoma City	0.61	201	S	Sg	01 24 37.6	+0.7
	baz=20						
OKCSW	OKLAHOMA CITY	0.62	200		Pg	01 24 29.2	+0.1
OKCSW				Sg	Sg	01 24 37.7	+0.6
FNO	Franklin	0.75	194		Pg	01 24 31.5	-0.2
FNO				Sg	Sg	01 24 41.9	+0.5
T35A	Sooner Cattle	1.07	30	Pg	Pg	01 24 37.8	+0.1
T35A				Sg	Sg	01 24 52.2	+0.6
T35B	Sooner Cattle	1.07	30	P	Pg	01 24 37.9	+0.2
	baz=211,SNR=56						
T35B				S	Sg	01 24 52.4	+0.8
	baz=211						
TUL1	Leonard	1.13	94	Pg	Pg	01 24 38.3	-0.5
TUL1	Leonard	1.13	94	P	Pg	01 24 38.4	-0.5
	baz=274						
X34A	Smith Ranch, M	1.48	201		Pn	01 24 44.6	-0.4
U32A	Winter Ranch,	1.52	285		Pn	01 24 44.9	-0.7
U32A	Winter Ranch,	1.52	285	P	Pn	01 24 45.0	-0.6
	baz=105						
U32A				S	Sb	01 25 06.4	+0.2
	baz=105						
WMOK	Wichita Mounta	1.81	227	Pn	Pn	01 24 49.4	-0.1
WMOK	Wichita Mounta	1.81	227	P	Pn	01 24 50.0	+0.5
	baz=46						
X37A	Clayton	2.03	133	Pn	Pn	01 24 52.9	+0.3
X37A				IAmb_Lg		01 25 24.4	
	comp=Z,62nm,0.9s						
X37A	Clayton	2.03	133	P	Pn	01 24 53.3	+0.7
	baz=314,SNR=24						
X37A				Sb	Sb	01 25 22.2	+1.5
	baz=314						
HHAR	Hobbs	2.64	83	Pn	Pn	01 25 01.0	+0.1
Z35A	Perchaven, San	2.65	181	Pn	Pn	01 25 00.8	-0.3
Z35A	Perchaven, San	2.65	181	S	Sb	01 25 38.4	-0.2
	baz=0.9						
R32A	Long Quarter,	2.72	334	Pn	Pn	01 25 03.2	+1.1
W39A	Magazine	2.88	105	Pn	Pn	01 25 04.9	+0.7
W39A				IAmb_Lg		01 25 55.8	
	comp=Z,27nm,0.8s						
Z38A	Mt. Pleasant	3.27	146	IAmb_Lg		01 26 10.0	
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	3.28	115	Pn	Pn	01 25 10.4	+0.7
MIAR				IAmb_Lg		01 26 09.6	
	comp=Z,24nm,0.8s						
MIAR	Mount Ida	3.28	115	P	Pn	01 25 10.7	+0.9
	baz=297,SNR=12						
CBKS	Cedar Bluff	3.48	325	IAmb_Lg		01 26 08.3	
	comp=Z,30nm,1.0s						
U40A	Yellville	3.52	83	Pn	Pn	01 25 13.3	+0.3
U40A				IAmb_Lg		01 26 13.7	
	comp=Z,26nm,0.7s						
U40A	Yellville	3.52	83	P	Pn	01 25 13.1	0.0
	baz=265						
U40A				P	Pn	01 25 13.1	0.0
	baz=265						
S39A	Bolivar	3.53	60	Pn	Pn	01 25 13.6	+0.4
S39A	Bolivar	3.53	60	P	Pn	01 25 13.6	+0.4
	baz=242						
X40A	Basin Creek Fa	3.86	112	Pn	Pn	01 25 16.7	-0.9
ABTX	Abilene, Hawle	3.93	212	Pn	Pn	01 25 18.0	-0.7
WHAR	Wooly Hollow	4.04	99	Pn	Pn	01 25 20.8	+0.6
W41B	Gary Mavity, V	4.10	100	Pn	Pn	01 25 20.9	-0.1
W41B	Gary Mavity, V	4.10	100	P	Pn	01 25 21.4	+0.4
	baz=283,SNR=12						
W41B				Sb	Sg	01 26 26.0	-3.0
	baz=283						
FCAR	Ozark Folk Cen	4.10	90	Pn	Pn	01 25 22.8	+1.7
MGMO	Mountain Grove	4.12	72	Pn	Pn	01 25 21.5	+0.2
UALR	University of	4.13	106	IAmb_Lg		01 26 40.3	
	comp=Z,25nm,1.0s						
Z41A	Richland Creek	4.52	126	IAmb_Lg		01 26 42.4	
	comp=Z,16nm,0.8s						
R40A	Maddies Statio	4.55	58	Pn	Pn	01 25 27.3	+0.2
R40A				IAmb_Lg		01 26 40.8	
	comp=Z,22nm,0.8s						
P38A	Dawn	4.64	37	IAmb_Lg		01 26 46.8	
	comp=Z,21nm,0.7s						
LCAR	Lake Charles	4.88	87	Pn	Pn	01 25 32.0	+0.3
CCM	Cathedral Cave	5.18	65	Pn	Pn	01 25 36.1	+0.3
CCM				IAmb_Lg		01 26 59.7	
	comp=Z,12nm,0.7s						
435B	Jarrell	5.20	184	IAmb_Lg		01 27 07.1	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock'	5.28	306	IAmb_Lg		01 27 17.2	
	comp=Z,18nm,0.8s						
P40A	Paris	5.39	47	IAmb_Lg		01 27 15.4	
	comp=Z,13nm,0.7s						
PBMO	Poplar Bluff	5.50	80	IAmb_Lg		01 27 21.4	
	comp=Z,22nm,0.9s						
FVM	French Village	5.76	68	IAmb_Lg		01 27 24.3	
	comp=Z,14nm,1.0s						
JCT	Junction City	5.92	203	IAmb_Lg		01 27 33.4	
	comp=Z,17nm,0.8s						
T25A	Trinidad	5.93	283	Pn	Pn	01 25 44.8	-1.6
T25A				IAmb_Lg		01 27 29.6	
	comp=Z,17nm,0.9s						
OXF	Oxford	6.53	101	IAmb_Lg		01 27 55.8	
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	6.90	287	IAmb_Lg		01 27 57.4	
	comp=Z,9.2nm,0.9s						
PLAL	Pickwick Lake	7.49	95	IAmb_Lg		01 28 18.9	
	comp=Z,7.4nm,0.9s						
L40A	Anamosa	7.63	36	IAmb_Lg		01 28 20.2	
	comp=Z,13nm,0.9s						
ISCO	Idaho Springs	7.68	302	IAmb_Lg		01 28 26.7	
	comp=Z,8.9nm,1.1s						
ECSD	EROS Data Cent	7.75	3	Pn	Pn	01 26 09.0	-2.1
PHWY	Pilot Hill	8.37	312	IAmb_Lg		01 29 04.8	
	comp=Z,10nm,1.0s						
N23A	Red Feather La	8.44	308	IAmb_Lg		01 28 53.5	
	comp=Z,8.7nm,0.7s						
JFWS	Jewell Farm	8.75	36	IAmb_Lg		01 28 57.1	
	comp=Z,12nm,0.8s						
K22A	Casper	9.83	315	IAmb_Lg		01 29 52.1	
	comp=Z,7.7nm,0.9s						

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*IDC **23** 01:28:51.8±1.0, 33.°34N×131.°69E, h116^{km}±7^{km}, mb3.4/10, mbtmp3.7/12, Error ellipse: s-maj=24.4km s-min=16.9km az=74.0*

*JMA **23** 01:28:54.5±0.1, 33.°4N±0.°4×131.°6E±0.°4, h117^{km}, MV3.5/39, NORTHERN OITA PREF*

JMA Felt I J1 at NORTHERN OITA PREF .

*NIED **23** 01:28:54.5, 33.°42N×131.°59E, h117^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.76; M$_{\theta\theta}$-1.65; M$_{\phi\phi}$-1.10; M$_{r\theta}$0.95; M$_{\theta\phi}$-1.32; M$_{\phi r}$1.95; Fault plane solution: M$_0$3.49000×10^{14} NP1: φ$_s$244.00000°, δ28.00000°, λ114.00000°. NP2: φ$_s$36.00000°, δ64.00000°, λ77.00000°.*

ISC 23 01:28:53.1±0.7**, 33.°39N**±0.°05×**131.°62E**±0.°05**, h126**^{km}±5^{km}**, n26, σ0.^{s}78**/38**, mb3.5**/10**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OIT2	Oita 2	0.18	232	*i* P	Pn	01 29 11.0	+0.5
JBEP	Beppuamama	0.19	253	*i* P	Pn	01 29 10.9	+0.4
JKI	Kunimi	0.24	349	*i* P	Pn	01 29 10.9	+0.3
JKI				S	Sn	01 29 23.1	-0.7
JUS	Usuki	0.34	162	*i* P	Pn	01 29 11.7	+0.7
JUS				S	Sn	01 29 23.8	-0.5
JNU	Nakatsue	0.68	247	P	Pn	01 29 12.3	-0.6
	96nm,0.3s,baz=132,slow=4.9,SNR=148						
JNU				S	Sn	01 29 26.3	-1.6
	311nm,0.5s,baz=216,slow=14,SNR=47						
JNA	Nagahama	0.73	77	*i* P	Pn	01 29 14.0	+0.7
JNA				S	Sn	01 29 28.9	+0.3
UWA2	Uwa jima 2	0.86	102	*i* P	Pn	01 29 14.9	+0.5
UWA2				S	Sn	01 29 30.5	+0.1
JHM	Kurahashi	1.06	45	*i* P	Pn	01 29 16.9	+0.7
JHM				*e*S	Sn	01 29 34.3	+0.5
JIU3	Izumi3	1.08	219	*i* P	Pn	01 29 17.1	+0.7
JIU3				*e*S	Sn	01 29 34.1	0.0
JTO	Tosashimizu	1.12	118	*i* P	Pn	01 29 17.4	+0.5
JTO				S	Sn	01 29 35.0	+0.1
JHT	Toyohira	1.43	27	*i* P	Pn	01 29 21.1	+0.9
JHT				S	Sn	01 29 40.3	-0.5
JTZ	Takazaki	1.55	197	P	Pn	01 29 22.8	+1.3
JTZ				S	Sn	01 29 43.9	+0.7
JGT2	ShimaneMisato	1.82	23	*i* P	Pn	01 29 25.6	+1.0
JGT2				S	Sn	01 29 48.4	-0.4
JMN	Monobe	1.91	79	*i* P	Pn	01 29 27.3	+1.5
JMN				S	Sn	01 29 51.3	+0.4
KSRS	Korea Array	5.05	324	P	Pn	01 30 08.4	+1.6
	4.5nm,0.5s,baz=143,slow=14,SNR=20						
MJAR	Matsushiro Arr	6.25	58	P	Pn	01 30 21.6	-1.4
	1.0nm,0.3s,baz=257,slow=30,SNR=1.1						
SONM	Songino Array	23.84	315	P	P	01 33 55.6	+0.9
	1.1nm,0.7s,baz=126,slow=10,SNR=6.4						
	1.1nm,0.7s						
ZALV	Zalesovo Beam	38.71	316	P	P	01 36 04.8	+0.3
	0.2nm,0.3s,baz=80,slow=9.2,SNR=1.5						
	0.2nm,0.3s						
WRA	Warramunga Arr	53.10	177	P	P	01 37 57.2	-0.5
	0.5nm,0.6s,baz=0.2,slow=8.0,SNR=5.2						
	0.5nm,0.6s						
ASAR	Alice Springs	56.78	177	P	P	01 38 23.5	-0.7
	0.3nm,0.4s,baz=7.7,slow=7.6,SNR=4.6						
	0.3nm,0.4s						
ARCES	ARCESS Array B	64.46	338	P	P	01 39 15.5	-0.2
	1.1nm,0.7s,baz=63,slow=16,SNR=5.7						
	1.1nm,0.7s						
FINES	FINESS Array B	68.12	330	P	P	01 39 39.1	0.0
	0.4nm,0.4s,baz=67,slow=6.6,SNR=9.2						
	0.4nm,0.4s						
YKA	Yellowknife Ar	70.82	27	P	P	01 39 54.8	-0.8
	0.3nm,0.8s,baz=306,slow=4.5,SNR=3.6						
	0.3nm,0.8s						
AKASG	Malin Array Be	72.03	319	P	P	01 40 03.2	0.0
	0.3nm,0.4s,baz=30,slow=7.4,SNR=2.2						
	0.3nm,0.4s						
BRTR	Keskin Array B	74.98	308	P	P	01 40 20.7	-0.2
	0.5nm,0.7s,baz=93,slow=6.2,SNR=3.8						
	0.5nm,0.7s						
ASF	Jabal al Asfar	76.59	300	P	P	01 40 30.4	+0.2
	4.5nm,0.9s,baz=39,slow=6.5,SNR=4.2						
	4.5nm,0.9s						

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*IDC **23** 01:33:07.9±4.1, 36.°56N×71.°16E, h53^{km}±30^{km}, mb3.5/9, mbtmp3.9/15, ML4.0/5, MS3.7/1, Error ellipse: s-maj=41.6km s-min=17.8km az=151.0*

*NNC **23** 01:33:09.8±2.5, 37.°10N×70.°70E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=23.8km s-min=11.6km az=149.0*

*NEIC **23** 01:33:12.8±2.6, 36.°77N±0.°07×71.°07E±0.°05, h82^{km}±6^{km}, mb4.2/4, Error ellipse: s-maj=10.8km s-min=4.7km az=160.0*

ISC 23 01:33:12.5±0.6**, 36.°79N**±0.°06×**70.°98E**±0.°05**, h100**^{km}**, n56, σ1.^{s}91**/62**, mb3.6**/9**, 6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.26	347	Pn	Pn	01 33 49.8	+1.1
CHGR	Chuyangaron	2.35	323	Pn	Pn	01 33 50.7	+0.9
KBL	Kabul	2.75	216	Pn	Pn	01 33 57.0	+1.9
DRK	Karamyk	2.76	13	Pn	Pn	01 33 56.6	+1.3
BTK	Batken	3.26	358	Pn	Pn	01 34 03.6	+1.7
NIL	Nilore	3.65	149	Pn	Pn	01 34 07.3	+0.3
JMU	Jammu	5.19	140	*e*x	x	01 35 10.8	
AML	Almayashu	5.73	21	P	Pn	01 34 35.8	+0.3
	SNR=78						
THN	Thein Dam	5.85	137	*e*x	x	01 35 40.3	
UCH	Uchtor	6.08	26	P	Pn	01 34 40.7	+0.5
	SNR=31						
EKS2	Erkin-Say	6.24	19	P	Pn	01 34 42.9	+0.7
	SNR=26						
KK31	Karatay Array	6.31	357	Pn	Pn	01 34 43.3	+0.3
KK31	Karatay Array	6.31	357	⇑Pn	Pn	01 34 40.6	-2.4
	12nm,0.6s,baz=230,slow=21,SNR=124						
KK31				⇑Sn	Sn	01 35 51.3	-2.3
	4.3nm,0.3s,baz=185,slow=24,SNR=4.6						
KK31				⇑Lg	Lg	01 36 23.1	
	13nm,0.7s,baz=174,slow=31,SNR=6.8						
KKAR	Karatay Array	6.31	357	Pn	Pn	01 34 43.2	+0.2
KKAR	Karatay Array	6.31	357		Pn	01 34 43.4	+0.4
AAK	Ala-Archa	6.43	24	P	Pn	01 34 44.7	-0.1
	SNR=11						
AAK	Ala-Archa	6.43	24	P	Pn	01 34 44.4	-0.5
	10nm,0.3s,baz=204,slow=6.9,SNR=22						
AAK				S	Sn	01 35 56.0	-0.9
	4.4nm,0.3s,baz=358,slow=18,SNR=6.2						
	19nm,0.3s						
AAK	Ala-Archa	6.43	24	Pn	Pn	01 34 45.4	+0.5
KBK	Karagaybulak	6.61	26	P	Pn	01 34 48.0	+0.9
	SNR=9.2						
ULHL	Ulahol	6.79	35	P	Pn	01 34 49.3	-0.5
	SNR=11						
CHMS	Chumysh	6.84	24	P	Pn	01 34 50.8	+0.5
	SNR=16						
CHMS	Chumysh	6.84	24	⇑Pn	Pn	01 34 50.2	-0.1
	34nm,1.0s						
CHMS				⇓Sn	Sn	01 36 06.1	-0.5
	9.9nm,0.6s						
BOOM	Boomskoye usch	6.86	32	Pn	Pn	01 34 50.4	-0.1
USP	Ospenovka	7.01	22	P	Pn	01 34 52.4	-0.1
	SNR=21						
TKM2	Tokmak 2	7.07	29	P	Pn	01 34 53.8	+0.3
	SNR=30						
TKM2	Tokmak 2	7.07	29	⇓Pn	Pn	01 34 53.4	-0.1
	14nm,0.8s						
TKM2				⇓Sn	Sn	01 36 11.0	-1.5
	6.8nm,0.8s						
KDJ	Kajisay	7.17	40	Pn	Pn	01 34 54.4	-0.4
TARG	Taragay, Kyrgy	7.23	45	Pn	Pn	01 34 55.9	-0.1
SMLA	Simla	7.64	136	*e*P	Pn	01 35 00.9	-0.2
SMLA				*e*S	Sn	01 36 19.9	-6.1
SMLA				IAmb	IAmb	01 36 25.8	
	comp=N,28nm,0.2s						
SMLA				IAmb	IAmb	01 36 27.0	
	comp=E,26nm,0.4s						
GEYT	Alibeck	10.30	280	P	Pn	01 35 35.5	-1.9
	comp=E,1.1nm,0.3s,baz=86,slow=22,SNR=10.0						
GEYT				S	Sn	01 37 26.2	-4.6
	comp=E,1.7nm,0.3s,baz=129,slow=52,SNR=3.9						
	comp=E,1.7nm,0.3s						
GEYT	Alibeck	10.30	280		Pn	01 35 36.0	-1.3
GYA0B	ALIBECK ARRAY	10.30	280	Pn	Pn	01 35 35.9	-1.4
GYA0B	ALIBECK ARRAY	10.30	280	⇑Pn	Pn	01 35 34.9	-2.4
GYA0B				⇓Sn	Sn	01 37 28.2	-2.6
MK31	Makanchi Array	13.06	37		Pn	01 36 12.7	-1.5
MKAR	Makanchi Array	13.06	37	P	Pn	01 36 12.4	-1.7
	comp=E,0.3nm,0.3s,baz=225,slow=15,SNR=14						
	comp=E,1.4nm,0.6s						
AB31	Akbulak array	14.82	331	Pn	Pn	01 36 35.4	-1.4
	comp=E,1.0nm,0.5s,baz=137,slow=12,SNR=32						
AB31				⇑Sn	Sn	01 39 15.7	-4.4
	comp=E,2.7nm,0.8s,baz=146,slow=23,SNR=3.8						
ABKAR	Akbulak array	14.82	331	Pn	Pn	01 36 36.5	-0.3
KURBB	Kurchatov Arra	14.85	19	P	Pn	01 36 35.7	-1.4
	comp=E,1.2nm,0.6s,baz=209,slow=12,SNR=4.2						
BRVK	Borovoye	16.27	359	Pn	Pn	01 36 54.8	-0.2
AKTO	Aktyubinsk	16.52	330	P	Pn	01 36 58.2	+0.2
	comp=E,0.6nm,0.3s,baz=130,slow=11,SNR=9.9						
AKTO				S	Sn	01 39 56.5	-4.6
	comp=E,0.7nm,0.5s,baz=248,slow=18,SNR=1.7						
	comp=E,2.3nm,0.4s						
ZAA0	Zalesovo Array	19.66	25	P	P	01 37 33.5	+0.2
ZAA0				IAmb	IAmb	01 37 33.7	
	comp=Z,6.4nm,0.4s						
ZALV	Zalesovo Beam	19.66	25	P	P	01 37 33.1	-0.1
	comp=Z,2.2nm,0.3s,baz=213,slow=10,SNR=35						
	comp=Z,5.9nm,0.3s						
ZALV	Zalesovo Beam	19.66	25	P	P	01 37 33.4	+0.2
SONM	Songino Array	28.18	56	P	P	01 38 55.2	-0.4
	comp=Z,0.4nm,0.5s,baz=272,slow=9.7,SNR=2.1						
	comp=Z,0.4nm,0.5s						
BRTR	Keskin Array B	29.33	287	P	P	01 39 07.4	+1.5
	comp=Z,0.4nm,0.5s,baz=104,slow=9.3,SNR=2.3						
	comp=Z,0.4nm,0.5s						
NRIK	Noril'sk	33.84	10	P	P	01 39 47.2	+2.3
	comp=Z,1.0nm,0.3s,baz=203,slow=8.7,SNR=3.8						
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	37.23	326	P	P	01 40 16.6	+2.6
	comp=Z,1.4nm,1.0s,baz=124,slow=7.5,SNR=2.6						
	comp=Z,1.4nm,1.0s						
FINES	FINESS Array B	37.23	326	P	P	01 40 18.2	+4.3
ARCES	ARCESS Array B	40.87	337	P	P	01 40 46.8	+2.6
	comp=Z,3.9nm,1.0s,baz=97,slow=9.9,SNR=6.6						
	comp=Z,3.9nm,1.0s						
NOA	NORSAR Array B	44.13	323	P	P	01 41 12.8	+2.0
	comp=Z,0.4nm,0.5s,baz=97,slow=7.7,SNR=2.4						
	comp=Z,0.4nm,0.5s						
ESDC	Sonseca Array	57.30	298	P	P	01 42 52.1	+2.1
	comp=Z,0.6nm,0.8s,baz=65,slow=6.7,SNR=4.6						
	comp=Z,0.6nm,0.8s						
DAV	Davao City (W)	57.70	107	LR	LR	02 08 23.5	
	comp=Z,69nm,19.8s,baz=160,slow=37						
TOA0	Torodi Ar. Sit	65.71	268	P	P	01 43 48.0	+1.2
TORD	Torodi Ar. Bea	65.71	268	P	P	01 43 48.0	+1.2
	comp=Z,0.4nm,0.5s,baz=48,slow=6.0,SNR=16						
	comp=Z,0.4nm,0.5s						
TORD	Torodi Ar. Bea	65.71	268	P	P	01 43 48.2	+1.4
TORD				IAmb	IAmb	01 43 57.1	
	comp=Z,3.3nm,1.4s						
YKA	Yellowknife Ar	80.95	3	P	P	01 45 17.7	+2.2
	comp=Z,0.3nm,0.8s,baz=350,slow=5.8,SNR=3.8						
	comp=Z,0.3nm,0.8s						

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*SKHL **23** 01:58:25.5±0.0, 44.°70N×147.°20E, h144^{km}±2^{km}, mb5.1/5, msha5.8/4*

*MOS **23** 01:58:25.5±1.0, 44.°64N×147.°08E, h168^{km}, mb3.9/7, Error ellipse: s-maj=12.2km s-min=8.7km az=73.1*

*JMA **23** 01:58:26.8±0.5, 45°N±2°×14°7E±°, h151^{km}, MV3.5/29, NEAR ETOROFU ISLAND*

*IDC **23** 01:58:28.2±1.5, 44.°82N×146.°99E, h176^{km}±13^{km}, mb3.3/18, mbtmp3.8/21, MS3.7/1, Error ellipse: s-maj=19.6km s-min=12.7km az=168.0*

ISC 23 01:58:25.8±0.7**, 44.°56N**±0.°07×**147.°22E**±0.°05**, h162**^{km}±5^{km}**, n82, σ1.^{s}37**/94**, mb3.6**/22**, 6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.74	202	*d i*PN	Pn	01 58 49.6	-0.2
SHO				*i* S	Sn	01 59 06.4	-1.7
SHO				pmax	pmax		
	comp=Z,230nm,0.2s						
SHO				pmax	pmax		
	comp=E,76nm,0.1s						
SHO				pmax	pmax		
	comp=N,60nm,0.2s						
SHO				smax	smax		
	comp=N,5µm,0.3s						
SHO				smax	smax		
	comp=E,4µm,0.2s						
SHO	Shikotan	0.74	202	*i* P	Pn	01 58 49.6	-0.2
SHO				AMB	AMB	01 58 50.2	
	comp=E,270nm,0.2s						
SHO				*i* S	Sn	01 59 06.8	-1.3
SHO				A	A	01 59 07.3	
	comp=E,5µm,0.4s						
SHO				A	A	01 59 07.3	
	comp=E,4µm,0.4s						
KUR	Kuril'sk	0.82	34	*d i*PN	Pn	01 58 49.7	-0.5
KUR	Kuril'sk	0.82	34	*e*P	Pn	01 58 49.7	-0.5
KUR				AMB	AMB	01 58 50.3	
	comp=E,70nm,0.2s						
KUR				AMB	AMB	01 58 50.3	
	comp=E,40nm,0.2s						
KUR				AMB	AMB	01 58 50.3	
	comp=E,190nm,0.2s						
KUR				*e*S	Sn	01 59 07.8	-1.3
KUR				A	A	01 59 08.8	
	comp=E,1µm,2.3s						
KUR				A	A	01 59 08.8	
	comp=E,2µm,2.3s						
KUR				A	A	01 59 08.9	
	comp=E,630nm,0.4s						
KUR				A	A	01 59 08.9	
	comp=E,710nm,0.4s						
YUK	Yuzh-Kuril'sk	1.11	242	*d i*PN	Pn	01 58 52.9	+0.4
YUK	Yuzh-Kuril'sk	1.11	242	*i* P	Pn	01 58 52.7	+0.2
YUK				AMB	AMB	01 58 53.3	
	comp=E,80nm,0.2s						
YUK				AMB	AMB	01 58 53.3	
	comp=E,70nm,0.2s						
YUK				AMB	AMB	01 58 53.3	
	comp=E,680nm,0.2s						
YUK				*i* S	Sn	01 59 13.1	+0.1
YUK				A	A	01 59 14.5	
	comp=E,2µm,1.2s						
YUK				A	A	01 59 14.5	
	comp=E,1µm,1.2s						
YUK				A	A	01 59 15.2	
	comp=E,880nm,0.3s						
YUK				A	A	01 59 15.2	
	comp=E,2µm,0.3s						
GLVR	Golovnino	1.48	237	*e*PN	Pn	01 58 56.9	+0.9
GLVR				*e*S	Sn	01 59 19.8	+0.7
GLVR				pmax	pmax		
	comp=Z,836nm,0.2s						
GLVR				smax	smax		
	comp=E,675nm,0.4s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR	Golovnino	1.48	237	*e*P	Pn	01 58 56.9	+0.9
GLVR				AMB	AMB	01 58 57.1	
	comp=N,840nm,0.2s						
GLVR				*e*S	Sn	01 59 19.8	+0.7
GLVR				A	A	01 59 20.8	

	comp=N,2µm,0.4s						
GLVR				A	A	01 59 20.8	
	comp=N,680nm,0.4s						
RUSJ	Misakicho	1.49	253	⇓iPN	Pn	01 58 56.6	+0.5
RUSJ				iS	Sn	01 59 25.3	+5.9
NEM2	Nemuro 2	1.60	222	eP	Pn	01 58 57.3	0.0
NEM2				eS	Sn	01 59 19.6	-1.8
NMR	Nemuro--Hokkai	1.60	223	⇓iPN	Pn	01 58 57.3	0.0
NMR				iS	Sn	01 59 19.8	-1.7
NMR	Nemuro--Hokkai	1.60	223	iP	Pn	01 58 57.3	0.0
NMR				iS	Sn	01 59 20.0	-1.5
JRA	Rausu	1.63	248	eP	Pn	01 58 58.1	+0.5
JNSB	Nemuroshibetsu	1.78	245	eP	Pn	01 59 00.2	+1.1
JNK	Nakash	2.05	243	eP	Pn	01 59 03.1	+0.9
JKHN	Kushirohamanak	2.10	226	eP	Pn	01 59 03.2	+0.4
AKK	Akkeshi	2.31	229	eP	Pn	01 59 05.5	+0.3
JAK	Akkeshi	2.41	230	eP	Pn	01 59 06.7	+0.4
JAK				eS	Sn	01 59 37.2	-0.4
JTKR	Abashiri--Toko	2.45	257	eP	Pn	01 59 07.4	+0.5
JTKR				eS	Sn	01 59 38.4	-0.2
JAR	Ashorobuto	2.79	244	eP	Pn	01 59 12.6	+1.5
JMP	Maruseppu	2.83	260	eP	Pn	01 59 12.1	+0.6
JOB	Onbets	2.96	237	eP	Pn	01 59 14.2	+1.1
JOB				eS	Sn	01 59 49.5	-0.2
JKK2	Kamakawa 2	3.29	260	eP	Pn	01 59 18.7	+1.5
JKK2				eS	Sn	01 59 58.3	+1.1
JSE	Soyaes	3.33	279	eP	Pn	01 59 18.4	+0.7
JKA	Kamikawa-asahi	3.35	264	iP	Pn	01 59 19.2	+1.3
ASAJ	Asahikawa	3.35	264	P	Pn	01 59 19.2	+1.2
	comp=N,26nm,0.6s,baz=85,slow=15,SNR=24						
ASAJ				S	Sn	01 59 59.9	+1.4
	comp=N,7.7nm,0.6s,baz=43,slow=19,SNR=6.6						
ASAJ	Asahikawa	3.35	264	eP	Pn	01 59 19.4	+1.5
JCH	Churui	3.41	237	eP	Pn	01 59 19.4	+0.6
JCH				eS	Sn	01 59 58.4	-1.6
ERM	Erimo	3.91	231	iPN	Pn	01 59 26.5	+1.4
YSS	Yuzh-Sakhalins	3.94	309	ePN	Pn	01 59 24.9	-0.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	3.94	309	eP	Pn	01 59 24.9	-0.6
YSS				AMB	AMB	01 59 25.4	
	comp=Z,10.0nm,0.5s						
JNBK	Urakawa-nobuka	3.97	237	eP	Pn	01 59 25.9	-0.1
JNBK				eS	Sn	02 00 10.5	-2.3
TYV	Tymovskoe	7.02	336	eP	Pn	02 00 06.0	0.0
TYV				AMB	AMB	02 00 07.8	
	comp=Z,30nm,0.4s						
SKR	Severo-Kuril's	8.58	41	iPN	Pn	02 00 28.0	+1.4
SKR	Severo-Kuril's	8.58	41	iP	Pn	02 00 28.1	+1.4
SKR				AMB	AMB	02 00 33.0	
	comp=Z,90nm,0.6s						
MAJO	Matsushiro	10.54	224	iPN	Pn	02 00 52.2	-0.5
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
USRK	Ussuriysk Ar.	10.91	273	P	Pn	02 00 53.9	-3.6
	comp=Z,2.6nm,0.7s,baz=69,slow=11,SNR=4.6						
PETK	Petropavlovsk-	10.98	35	P	Pn	02 00 58.8	+0.4
	comp=Z,2.9nm,0.9s,baz=172,slow=11,SNR=3.5						
KLR	Kul'dur	11.57	299	P	Pn	02 01 03.9	-2.1
	comp=Z,1.4nm,0.8s,baz=115,slow=12,SNR=4.6						
KLR	Kul'dur	11.57	299	iPN	Pn	02 01 05.3	-0.7
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLR	Kul'dur	11.57	299	iP	Pn	02 01 05.3	-0.7
KLR				AMB	AMB	02 01 07.4	
	comp=Z,10.0nm,0.8s						
BILL	Bilibino	25.57	17	eP	P	02 03 40.6	+1.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SONM	Songino Array	28.22	291	P	P	02 04 01.9	-1.5
	comp=Z,0.6nm,0.4s,baz=80,slow=10,SNR=6.2						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	28.22	291	eP	P	02 04 04.1	+0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
H11N2	WAKE ISLAND Hy	29.68	140	T	T	02 35 34.2	
	baz=331,slow=75,SNR=118						
H11N1	WAKE ISLAND Hy	29.70	140	T	T	02 35 34.9	
	baz=331,slow=75,SNR=89						
H11N3	WAKE ISLAND Hy	29.70	140	T	T	02 35 32.4	
	baz=331,slow=75,SNR=124						
H11S1	WAKE ISLAND Hy	30.66	142	T	T	02 36 45.0	
	baz=332,slow=76,SNR=175						
H11S3	WAKE ISLAND Hy	30.67	142	T	T	02 36 48.7	
	baz=332,slow=76,SNR=104						
H11S2	WAKE ISLAND Hy	30.68	142	T	T	02 36 46.3	
	baz=332,slow=76,SNR=129						
NRIK	Noril'sk	38.57	331	iP	P	02 05 31.7	-0.6
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KDAK	Kodiak Island	38.67	48	LR	LR	02 19 57.4	
	comp=Z,118nm,20.5s,baz=74,slow=33						
ZALV	Zalesovo Beam	40.56	306	P	P	02 05 47.5	-1.4
	comp=Z,0.6nm,0.4s,baz=26,slow=11,SNR=2.6						
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	40.81	37	P	P	02 05 50.5	-0.3
	comp=Z,0.3nm,0.5s,baz=273,slow=9.6,SNR=5.9						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	40.81	37	eP	P	02 05 52.3	+1.4
MKAR	Makanchi Array	44.26	297	P	P	02 06 18.4	-0.6
	comp=Z,1.5nm,0.5s,baz=80,slow=8.6,SNR=18						
	comp=Z,1.5nm,0.5s						
MKAR	Makanchi Array	44.26	297	eP	P	02 06 19.5	+0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	44.26	297	eP	P	02 06 19.5	+0.5
KURK	Kurchatov	45.12	303	iP	P	02 06 26.7	+1.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	45.12	303	eP	P	02 06 26.7	+1.0
KURBB	Kurchatov Arra	45.21	303	P	P	02 06 25.9	-0.5
	comp=Z,0.7nm,0.4s,baz=73,slow=8.5,SNR=7.2						
	comp=Z,0.7nm,0.4s						
INK	Inuvik	45.68	31	P	P	02 06 30.5	+0.7
	comp=Z,2.2nm,1.0s,baz=283,slow=8.4,SNR=5.6						
	comp=Z,2.2nm,1.0s						
ARU	Arti	53.79	317	P	P	02 07 29.6	-1.7
	comp=Z,0.8nm,0.4s,baz=102,slow=2.1,SNR=4.7						
	comp=Z,0.8nm,0.4s						
ARU	Arti	53.79	317	d iP	P	02 07 30.3	-0.9
ARU						02 09 30.1	
ARU				S	S	02 14 52.0	-0.9
ARU				SS	SS	02 18 31.5	-3.9
ARU				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ARU	Arti	53.79	317	iP	P	02 07 30.3	-0.9
YKA	Yellowknife Ar	55.10	34	P	P	02 07 40.6	0.0
	comp=Z,0.6nm,0.8s,baz=303,slow=7.6,SNR=4.6						
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	55.10	34	iP	P	02 07 43.2	+2.6
AKTO	Aktyubinsk	57.05	310	P	P	02 07 52.5	-2.1
	comp=Z,1.1nm,0.5s,baz=60,slow=20,SNR=5.7						
	comp=Z,1.1nm,0.5s						
ARCES	ARCESS Array B	58.51	339	P	P	02 08 03.0	-1.5
	comp=Z,1.5nm,0.9s,baz=29,slow=8.5,SNR=4.2						
	comp=Z,1.5nm,0.9s						
ARCES	ARCESS Array B	58.51	339	P	P	02 08 03.0	-1.5
FINES	FINESS Array B	64.18	333	P	P	02 08 41.1	-1.5
	comp=Z,1.8nm,0.6s,baz=40,slow=6.4,SNR=16						
	comp=Z,1.8nm,0.6s						
FINES	FINESS Array B	64.18	333	eP	P	02 08 41.2	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OBN	Obninsk	64.69	324	eP	P	02 08 46.1	+0.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	Obninsk	64.69	324	eP	P	02 08 46.1	+0.1
WRA	Warramunga Arr	65.26	193	P	P	02 08 52.1	+2.1
	comp=Z,0.4nm,0.5s,baz=9.6,slow=6.6,SNR=6.6						
	comp=Z,0.4nm,0.5s						
NVAR	Mina Array Bea	67.11	58	P	P	02 09 02.8	+0.8
	comp=Z,0.6nm,0.6s,baz=286,slow=5.5,SNR=5.6						
	comp=Z,0.6nm,0.6s						
NOA	NORSAR Array B	68.87	339	P	P	02 09 11.1	-1.3
	comp=Z,0.4nm,0.6s,baz=27,slow=6.9,SNR=2.4						
	comp=Z,0.4nm,0.6s						
HFS	Hagfors	68.97	337	P	P	02 09 12.5	-0.5
	comp=Z,0.4nm,0.5s,baz=108,slow=9.3,SNR=4.6						
	comp=Z,0.4nm,0.5s						
PDAR	Pinedale Array	69.35	50	P	P	02 09 16.7	+0.7
	comp=Z,0.3nm,0.5s,baz=305,slow=5.2,SNR=3.5						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	78.48	331	P	P	02 10 08.9	+0.2
	comp=Z,0.4nm,0.4s,baz=44,slow=5.9,SNR=4.2						
	comp=Z,0.4nm,0.4s						
GERES	GERESS Array B	78.48	331	eP	P	02 10 09.3	+0.6
TXAR	Lajitas Array	82.16	56	P	P	02 10 29.6	+0.9
	comp=Z,0.4nm,0.5s,baz=296,slow=3.5,SNR=7.7						
	comp=Z,0.4nm,0.5s						

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*IDC **23** 02:04:37.1±0.7, 43°.39N×40°.96E, h0^{km}, mb3.3/5, mbtmp3.3/10, ML3.6/4, MS2.7/3, Error ellipse: s-maj=11.9km s-min=7.3km az=1.0*

*ISK **23** 02:04:39.3, 43°.52N×40°.80E, h19^{km}, ML3.9/6*

*MOS **23** 02:04:39.7±0.0, 43°.47N×41°.03E, h3^{km}, MPVA4.2*

*AZER **23** 02:04:48.0±2.6, 43°.14N×40°.17E, h2^{km}, Error ellipse: s-maj=30.7km s-min=18.9km az=46.0*

ISC 23 02:04:39.6±1.0**, 43°.43N**±0°.02×**41°.01E**±0°.01**, h8**^{km}±7^{km}**, n128, σ1^{s}.54**/202**, mb3.4**/4**, 10C-11D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXR	Arkhyz	0.23	55	iPG	Pg	02 04 44.9	+0.6
ARXR				pmax	pmax		
	comp=Z,3µm,0.8s						
ARXR	Arkhyz	0.23	55	iPg	Pg	02 04 44.7	+0.3
ARXR				eSg	Sg	02 04 47.4	-0.2
RPOR	Krasnaya Polya	0.60	297	ePG	Pg	02 04 51.0	-0.2
RPOR				eS	Sg	02 04 59.4	+0.3
RPOR	Krasnaya Polya	0.60	297	ePg	Pg	02 04 51.0	-0.2
RPOR				eSg	Sg	02 04 59.4	+0.3
VSLR	Vesyoloye	0.71	273	⇑iPG	Pg	02 04 52.8	-0.5
VSLR				iS	Sg	02 05 02.7	+0.1
VSLR	Vesyoloye	0.71	273	iPg	Pg	02 04 52.8	-0.5
VSLR				iSg	Sg	02 05 03.2	+0.6
AHMR	Akhmetovskaya	0.73	2	iPG	Pg	02 04 53.6	0.0
AHMR				eS	Sg	02 05 03.1	0.0
AHMR	Akhmetovskaya	0.73	2	iPg	Pg	02 04 53.6	0.0
AHMR				eSg	Sg	02 05 03.1	0.0
GUZR	Guzeripl'	0.86	312	⇓iPG	Pg	02 04 55.1	-1.0
GUZR				iS	Sg	02 05 06.5	-0.8
GUZR	Guzeripl'	0.86	312	iPg	Pg	02 04 55.1	-1.0
GUZR				eSg	Sg	02 05 06.8	-0.5
SOC	Sochi	0.95	280	⇑iPG	Pg	02 04 56.3	-1.6
SOC				eS	Sg	02 05 09.9	-0.3
SOC	Sochi	0.95	280	iPg	Pg	02 04 56.3	-1.6
SOC				eSg	Sg	02 05 09.9	-0.3
LABN	Labinsk	1.23	350	iPG	Pn	02 05 04.1	+1.0
LABN				pmax	pmax		
	comp=Z,1µm,0.4s						
LABN	Labinsk	1.23	350	iPg	Pn	02 05 04.1	+1.0
LABN				eSg	Sn	02 05 20.0	+0.1
SHA1	Shidzhatmaz	1.24	75	⇑iPG	Pg	02 05 02.5	-0.8
SHA1	Shidzhatmaz	1.24	75	ePg	Pg	02 05 02.5	-0.8
SHA1				iSg	Sb	02 05 19.1	-0.4
LZRR	Lazarevskoye	1.29	294	⇓iPG	Pb	02 05 04.5	+0.5
LZRR				eS	Sn	02 05 22.6	+1.4
LZRR	Lazarevskoye	1.29	294	iPg	Pb	02 05 04.5	+0.5
LZRR				eSg	Sn	02 05 22.6	+1.4
KIV	Kislovodsk	1.33	66	ePG	Pg	02 05 03.5	-1.5
KIV	Kislovodsk	1.33	66	ePg	Pg	02 05 03.5	-1.5
KIV				eSg	Sb	02 05 21.9	-0.1
KIV0	Kislovodsk Arr	1.33	66	ePg	Pg	02 05 03.4	-1.7
KIV0				eSg	Sg	02 05 21.3	-1.1
NVNR	Nevinnomyssk	1.37	30	ePG	Pb	02 05 05.5	0.0
NVNR				eS	Sn	02 05 24.4	+1.0
NVNR	Nevinnomyssk	1.37	30	ePg	Pb	02 05 05.5	0.0
NVNR				eSg	Sn	02 05 24.4	+1.0
KBZ	Khabaz	1.41	77	Pg	Pn	02 05 05.4	-0.1
	comp=Z,18nm,0.3s,baz=266,slow=8.7,SNR=111						
KBZ				Lg	Lg	02 05 24.2	
	comp=Z,26nm,0.3s,baz=211,slow=20,SNR=12						
KBZ	Khabaz	1.41	77	ePG	Pn	02 05 05.3	-0.1
KBZ	Khabaz	1.41	77	ePg	Pn	02 05 05.3	-0.1
KBZ				iSg	Sn	02 05 25.4	+1.3
BEYR	Belyy Ugol+	1.44	65	iPG	Pn	02 05 06.1	+0.2
BEYR	Belyy Ugol+	1.44	65	iPg	Pn	02 05 06.1	+0.2
BEYR				iSg	Sg	02 05 24.7	-1.0
GOYR	Goytkh	1.44	305	⇑iPG	Pn	02 05 06.6	+0.7
GOYR				eS	Sn	02 05 27.4	+2.4
GOYR	Goytkh	1.44	305	ePg	Pn	02 05 06.6	+0.7
GOYR				eSg	Sn	02 05 27.4	+2.4
PYA1	Pyatigorsk	1.64	67	ePN	Pb	02 05 09.9	-0.2
PYA1	Pyatigorsk	1.64	67	ePg	Pb	02 05 09.9	-0.2
PYA1				iSg	Sb	02 05 31.0	+0.1
KBTC	Kuba-Taba	1.79	77	ePN	Pb	02 05 12.1	-0.5
KBTC	Kuba-Taba	1.79	77	ePg	Pb	02 05 12.1	-0.5
KBTC				eSg	Sg	02 05 36.4	-0.5
NCK	Nalchik	1.89	87	ePN	Pg	02 05 15.9	+0.2
NCK	Nalchik	1.89	87	ePg	Pg	02 05 15.9	+0.2
NCK				eSg	Sb	02 05 38.0	+0.1
BATM	Batumi	1.89	164	PN	Pn	02 05 13.6	+1.4
BATM				SN	Sn	02 05 38.3	+2.1
ALER	Alexandrovskoy	1.91	45	ePN	Pn	02 05 13.4	+0.9
ALER	Alexandrovskoy	1.91	45	ePg	Pn	02 05 13.4	+0.9
ALER				eSg	Sb	02 05 38.1	-0.7
DIGR	Digorskoe uzhe	1.96	105	ePN	Pg	02 05 17.2	+0.2
DIGR				eS	Sg	02 05 45.7	+3.3
DIGR	Digorskoe uzhe	1.96	105	ePg	Pg	02 05 17.2	+0.2
DIGR				eSg	Sg	02 05 45.5	+3.1
LSNR	Lesken	2.06	93	ePN	Pg	02 05 18.8	-0.2
LSNR				eS	Sg	02 05 45.1	-0.7
LSNR	Lesken	2.06	93	ePg	Pg	02 05 18.2	-0.8
LSNR				eSg	Sb	02 05 43.9	+0.9
GOF	Gofitskoye	2.19	41	⇑ePN	Pg	02 05 20.9	-0.6
GOF				eS	Sg	02 05 50.2	+0.3
GOF				pmax	pmax		
	comp=Z,85nm,0.6s						
GOF				smax	smax		
	comp=E,286nm,0.6s						
GOF	Gofitskoye	2.19	41	ePg	Pg	02 05 20.2	-1.3
GOF				eSg	Sn	02 05 44.6	+1.0
ZEI	Tsey	2.21	106	ePN	Pb	02 05 21.0	+1.0
ZEI	Tsey	2.21	106	ePg	Pb	02 05 21.0	+1.0
ZEI				eSg	Sn	02 05 45.8	+1.4
STDR	Stavd-Durt	2.23	90	ePN	Pg	02 05 23.1	+0.9
STDR				eS	Sb	02 05 48.0	+0.2
STDR	Stavd-Durt	2.23	90	ePg	Pg	02 05 23.1	+0.9
STDR				eSg	Sb	02 05 48.0	+0.2
KORR	Kora	2.26	98	ePN	Pg	02 05 22.9	0.0
KORR				eS	Sb	02 05 49.2	+0.4
KORR	Kora	2.26	98	ePn	Pg	02 05 22.9	0.0
KORR				eSn	Sb	02 05 49.2	+0.4
ERBR	Yeremizino-Bor	2.32	351	ePN	Pn	02 05 19.5	+1.5
ERBR				eS	Sb	02 05 50.3	-0.1
ERBR	Yeremizino-Bor	2.32	351	ePn	Pn	02 05 19.5	+1.5
ERBR				eSn	Sb	02 05 50.3	-0.1
CHOM	Cayeli-Rize	2.34	185	PN	Pn	02 05 19.1	+0.8
CHOM				SN	Sn	02 05 47.7	+0.5
GL1R	Gelendzhik	2.40	299	ePN	Pb	02 05 23.3	+0.4
GL1R				eS	Sb	02 05 54.8	+2.1
GL1R	Gelendzhik	2.40	299	ePn	Pb	02 05 23.3	+0.4
GL1R				eSn	Sb	02 05 54.8	+2.1
SPGR	Shapsug	2.49	303	ePn	Pn	02 05 21.4	+1.0
SPGR				eSn	Sn	02 05 53.7	+2.8
BTKR	Batakoyurt	2.58	90	ePN	Pb	02 05 25.8	-0.2
BTKR				eS	Sb	02 05 56.8	-1.1
BTKR	Batakoyurt	2.58	90	ePn	Pb	02 05 25.8	-0.2
BTKR				eSn	Sb	02 05 56.8	-1.1
AKH	Akhalkalaki	2.73	137	PN	Pn	02 05 25.8	+1.9
AKH				SN	Sn	02 05 59.8	+2.7
KMGR	Komgaron	2.84	96	ePN	Pg	02 05 33.2	-0.8
KMGR				eS	Sb	02 06 08.1	+2.6
ANN	Anapa	2.92	299	ePN	Pn	02 05 28.4	+2.2
ANN				e		02 06 05.6	
ANN				e		02 06 08.9	
ANN				pmax	pmax		
	comp=Z,41nm,0.6s						
ANN				smax	smax		
	comp=N,98nm,0.6s						
ANN				smax	smax		
	comp=N,121nm,0.9s						
ANN	Anapa	2.92	299	ePn	Pn	02 05 28.2	+2.0
ANN				eSn	Sn	02 06 05.3	+3.9
ESPY	Espiye-Giresun	3.03	215	PN	Pn	02 05 27.6	-0.2
ESPY				SN	Sn	02 06 02.9	-1.4
SENK	Senkaya-Erzuru	3.04	160	PN	Pn	02 05 29.8	+1.7
BAYT	Aydıntepe-Bayb	3.10	192	PN	Pn	02 05 29.6	+0.6
GROC	Groznyy	3.50	92	ePN	Pb	02 05 44.1	+2.3
GROC				pmax	pmax		
	comp=Z,15nm,0.6s						
GROC				MLR	MLR		
	comp=Z,36nm,2.0s						
DVE	Vedeno	3.77	95	ePN	Pn	02 05 41.6	+3.5
DVE				eS	Sn	02 06 25.6	+3.0
DVE	Vedeno	3.77	95	ePn	Pn	02 05 41.6	+3.5
DVE				eSn	Sn	02 06 25.6	+3.0
YEDI	Yedisu-Bingol	4.00	185	PN	Pn	02 05 42.6	+1.3
QZX	Qazax, Azerbai	4.01	125	P	Pg	02 05 54.6	-1.8
	SNR=11						
QZX				S	Sg	02 06 46.9	-1.5
RSDY	Resadiye-TOKAT	4.09	223	PN	Pn	02 05 42.3	-0.1
DBC	Dubki	4.27	93	ePN	Pb	02 05 51.0	-4.0
UNCR	Uncukul	4.30	98	ePN	Pb	02 05 51.4	-4.0
UNCR				eS	Sn	02 06 37.6	+2.0
UNCR	Uncukul	4.30	98	eSn	Sn	02 06 37.6	+2.0
GNI	Garni	4.30	138	Pn	Pn	02 05 45.3	-0.2
	comp=Z,1.7nm,0.6s,baz=276,slow=12,SNR=1.7						
GNI				Pg	Pb	02 05 54.7	-0.9
	comp=Z,0.5nm,0.3s,baz=345,slow=19,SNR=3.2						
GNI				Lg	Lg	02 06 57.3	
	comp=Z,0.7nm,0.3s,baz=276,slow=24,SNR=1.5						
GNI				LR	LR	02 07 45.2	
	comp=Z,60nm,18.7s,baz=303,slow=44						
GNI	Garni	4.30	138	eSn	Sn	02 06 38.0	+2.0
FEO	Feodosiya	4.34	293	ePn	Pn	02 05 46.0	+0.2
FEO				eSn	Sn	02 06 36.6	+0.1
KRNR	Karanay	4.36	96	ePN	Pb	02 05 52.0	-4.5
GDB	GEDABAY	4.45	126	P	Pb	02 05 60.0	+1.9
	SNR=7.8						
GDB				S	Sg	02 06 58.4	-4.0
ZKTA	Zakatala	4.52	111	P	Pg	02 06 03.5	-2.6
	SNR=5.3						
ZKTA				S	Sg	02 07 05.0	+0.4
SUDU	Sudak	4.56	291	ePn	Pn	02 05 50.5	+1.6
SUDU				eSn	Sn	02 06 41.2	-0.8
DIKM	Dikmen	4.61	249	⇓P	Pn	02 05 49.5	0.0
GANJ	Ganja	4.84	123	P	Pb	02 06 06.7	+2.1
	SNR=2.9						
GANJ				S	Sb	02 07 08.0	+5.1
ALU	Alushta	4.92	287	ePN	Pn	02 05 56.4	+2.6
ALU				eS	Sn	02 06 52.9	+2.0
ALU	Alushta	4.92	287	ePn	Pn	02 05 56.4	+2.6
ALU				eSn	Sn	02 06 52.9	+2.0
YAL	Yalta	5.06	284	ePN	Pn	02 05 56.5	+0.8
YAL				eS	Sn	02 06 53.9	-0.4
YAL	Yalta	5.06	284	ePn	Pn	02 05 56.5	+0.8
YAL				eSn	Sn	02 06 53.9	-0.4
SEKA	Sheki	5.10	114	P	Pg	02 06 13.9	-3.3
	SNR=3.0						
SIM	Simferopol'	5.18	289	ePN	Pn	02 05 58.1	+0.7
SIM				eS	Sn	02 06 57.0	-0.4
SIM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SIM				smax	smax		
	comp=E,19nm,1.1s						
SIM	Simferopol'	5.18	289	ePn	Pn	02 05 59.0	+1.6
SIM				eSn	Sn	02 06 57.3	-0.1
SBZ	Shahbuz	5.28	138	P	Pb	02 06 12.1	-0.1
	SNR=4.5						
SBZ				S	Sb	02 07 15.1	-0.6
BZK	Bozkurt	5.37	257	⇓P	Pn	02 06 00.3	+0.4
SEV	Sevastopol'	5.41	284	⇓iPN	Pn	02 06 01.5	+1.0
SEV				iS	Sn	02 07 03.8	+0.8
SEV	Sevastopol'	5.41	284	iPn	Pn	02 06 01.5	+1.0
SEV				eSn	Sn	02 07 03.8	+0.8
NAX	Nakhchivan	5.43	140	P	Pb	02 06 14.8	+0.2
NAX				S	Sb	02 07 21.3	+1.4
ORD	Ordubad	5.86	138	P	Pb	02 06 21.7	-0.3
	SNR=2.7						
BRTR	Keskin Array B	6.65	239	Pn	Pn	02 06 18.1	+0.5
	comp=E,0.6nm,0.3s,baz=40,slow=11,SNR=14						
BRTR				Pg	Pb	02 06 29.6	-5.8
	comp=E,0.6nm,0.3s,baz=25,slow=12,SNR=8.7						
BRTR				Sn	Sn	02 07 32.6	-1.1
	comp=E,0.2nm,0.3s,baz=57,slow=26,SNR=3.3						
	comp=E,0.8nm,0.3s						
VORD	Divnogorie	7.63	352	eP	Pn	02 06 35.0	+4.1
VORD				pmax	pmax		
	comp=Z,3.0nm,0.4s						
VRH	Novokhopyorsk	7.79	3	eP	Pn	02 06 35.1	+1.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	7.89	352	eP	Pn	02 06 35.0	+0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
VORR	Voronezh	8.34	352	eP	Pn	02 06 36.2	-4.4
VORR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIRR	Tirgusor	9.15	281	⇑P	Pn	02 06 50.6	-1.2
TIRR	Tirgusor	9.15	281	⇑P	Pn	02 06 50.6	-1.2
TPGR	Topolog	9.17	283	⇑P	Pn	02 06 51.3	-0.7
LPSR	Galich'ya Gora	9.28	352	eP	Pn	02 06 53.1	-0.5
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HARR	Harsova	9.50	282	⇑P	Pn	02 06 55.0	-1.6
HARR	Harsova	9.50	282	⇑P	Pn	02 06 55.0	-1.6
PLOR	Plostina	10.52	288	⇓P	Pn	02 07 20.0	+9.4
PLOR	Plostina	10.52	288	⇓P	Pn	02 07 20.0	+9.4
AKASG	Malin Array Be	10.83	316	Pn	Pn	02 07 10.2	-4.6
	comp=Z,0.9nm,0.3s,baz=118,slow=13,SNR=2.7						
AKASG				Sn	Sn	02 09 03.6	-13
	comp=Z,0.2nm,0.3s,baz=107,slow=19,SNR=1.1						
	comp=Z,0.5nm,0.4s						
MLR	Muntele Rosu	10.96	286	⇓P	Pn	02 07 16.4	-0.4
MLR	Muntele Rosu	10.96	286	Pn	Pn	02 07 15.6	-1.2
	comp=Z,0.2nm,0.3s,baz=140,slow=9.6,SNR=6.7						
MLR				Sn	Sn	02 09 17.2	-2.4
	baz=83,slow=19						
	comp=Z,3.0nm,0.7s						
VOIR		11.59	285	⇓P	Pn	02 07 25.9	+0.6
VOIR		11.59	285	⇓P	Pn	02 07 25.9	+0.6
BUR01	Bucovina Ar. S	11.84	296	⇓P	Pn	02 07 28.2	-0.5
MNK	Minsk	14.01	327	iP	Pn	02 07 58.2	0.0
MNK				iS	Sn	02 10 32.5	-1.3
MNK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,2.0nm,0.6s						
MNK	Minsk	14.01	327	iP	Pn	02 07 58.3	0.0
MNK				iP	Pn	02 07 58.3	0.0
	comp=N,2.0nm,0.7s						
MNK				iP	Pn	02 07 58.3	0.0
	comp=Z,2.0nm,0.8s,baz=137						
MNK				iS	Sn	02 10 32.5	-1.3
MNK				iLR	LR	02 13 07.1	
GERES	GERESS Array B	19.63	296	P	P	02 09 07.7	-0.8
	baz=89,slow=11,SNR=4.5						
	comp=Z,0.2nm,0.3s						
GERES	GERESS Array B	19.63	296	eP	Pn	02 09 11.6	+1.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	20.12	339	P	P	02 09 13.1	-0.4
	comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=3.2						
	comp=Z,0.3nm,0.3s						
HFS	Hagfors	23.51	325	P	P	02 09 49.1	-0.5
	comp=Z,0.3nm,0.4s,baz=74,slow=5.2,SNR=2.8						
HFS				LR	LR	02 19 14.6	
	comp=Z,36nm,19.1s,baz=80,slow=37						
	comp=Z,0.3nm,0.4s						
NB2	NORSAR Subarra	25.03	325	P	P	02 10 04.7	+0.9
	comp=Z,1.3nm,0.8s,baz=123,slow=9.3						
NOA	NORSAR Array B	25.03	325	P	P	02 10 02.1	-1.7
	comp=Z,0.8nm,0.8s,baz=62,slow=8.6,SNR=3.1						
NOA				LR	LR	02 20 20.7	
	comp=Z,13nm,18.6s,baz=95,slow=38						
	comp=Z,0.8nm,0.8s						
NOA	NORSAR Array B	25.03	325	eP	P	02 10 07.8	+4.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	26.35	61	P	P	02 10 15.6	-0.3
	comp=Z,0.4nm,0.9s,baz=226,slow=6.3,SNR=1.4						
	comp=Z,0.4nm,0.9s						
KURK	Kurchatov	26.41	61	P	P	02 10 15.6	-0.8
TORD	Torodi Ar. Bea	45.26	240	P	P	02 12 55.5	-2.2
	comp=Z,0.6nm,0.9s,baz=62,slow=7.7,SNR=2.9						
	comp=Z,0.6nm,0.9s						

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*AEIC **23** 02:18:29±1.9, 58°.15N±0°.05×151°.3W±0°.1, h49^{km}±9^{km}, ML3.5, ML3.7/90(NEIC), Error ellipse: s-maj=9.2km s-min=5.3km az=127.0*

*NEIC **23** 02:18:30.0±1.3, 58°.21N±0°.04×151°.4W±0°.1, h38^{km}±43^{km}, Error ellipse: s-maj=8.7km s-min=5.2km az=124.0*

ISC 23 02:18:29.9±1.2**, 58°.21N**±0°.05×**151°.44W**±0°.05**, h48**^{km}±33^{km}**, n129, σ0^{s}.67**/134**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.74	235		Pn	02 18 43.9	-0.2

KDAK				Sn	Sn	02 18 54.1	-0.3
KDAK				IAML		02 18 57.7	
	4µm,0.6s						
KDAK				IAML		02 18 58.9	
	3µm,0.6s						
KDAK	Kodiak Island	0.74	235	P	Pn	02 18 43.9	-0.2
	baz=62						
KDAK				S	Sn	02 18 54.5	+0.1
	baz=62						
CNPM	China Poot	1.32	5	Pn	Pn	02 18 51.9	-0.1
CNPM					Sn	02 19 08.1	-0.4
CNPM				IAML		02 19 16.2	
	comp=E,1µm,1.0s						
CNPM				IAML		02 19 26.2	
	comp=N,855nm,0.9s						
Q19K	Cape Douglas,	1.36	303		Pn	02 18 52.3	-0.2
Q19K					Sn	02 19 09.7	+0.3
Q19K	Cape Douglas,	1.36	303	P	Pn	02 18 52.3	-0.2
	baz=122						
Q19K				S	Sn	02 19 11.2	+1.8
	baz=122						
OHAK	Old Harbor	1.40	226	Pn	Pn	02 18 52.4	-0.5
OHAK				IAML		02 19 24.2	
	comp=E,782nm,1.1s						
OHAK	Old Harbor	1.40	226	P	Pn	02 18 52.8	-0.2
	baz=49						
HOM	Homer	1.46	356	Pn	Pn	02 18 53.6	-0.2
HOM	Homer	1.46	356	P	Pn	02 18 54.2	+0.5
	baz=172						
AU22	Augustine Moun	1.53	320		Pn	02 18 55.9	+1.1
AU2	Augustine Isla	1.54	320		Pn	02 18 56.0	+1.1
AUQ	Augustine Qik'	1.54	319		Pn	02 18 56.0	+1.1
AUCH	Augustine Cone	1.56	319		Pn	02 18 56.4	+1.2
BRSE	Bradley Lake S	1.58	13		Pn	02 18 55.3	-0.2
BRSE	Bradley Lake S	1.58	13	P	Pn	02 18 55.3	-0.2
	baz=190						
BRLK	Bradley Lake	1.59	10		Pn	02 18 55.2	-0.3
KCG	Knife Ck. Glac	1.94	274		Pn	02 19 00.6	+0.1
O20K	Slope Mountain	1.98	343		Pn	02 19 01.4	+0.5
O20K	Slope Mountain	1.98	343	P	Pn	02 19 01.4	+0.5
	baz=160						
CAHL	Cahill	2.05	267		Pn	02 19 02.5	+0.5
ANCK	Angle Creek	2.15	271		Pn	02 19 03.9	+0.7
SEW	Seward	2.16	27	Pn	Pn	02 19 02.7	-0.6
SEW	Seward	2.16	27	P	Pn	02 19 02.8	-0.5
	baz=206						
KJL	Kejulik	2.20	268		Pn	02 19 04.3	+0.4
SII	Sitkinak Islan	2.22	223	Pn	Pn	02 19 04.1	-0.2
SII				IAML		02 20 00.9	
	comp=N,492nm,0.8s						
KELA	Mount Kelaz	2.28	278		Pn	02 19 05.2	+0.1
P18K	Big Mountain,	2.30	303	Pn	Pn	02 19 05.0	-0.3
P18K				IAML		02 19 49.8	
	comp=N,266nm,1.1s						
RED	Redoubt Volcan	2.32	343		Pn	02 19 05.3	-0.4
RSO	Redoubt South	2.36	344	Pn	Pn	02 19 06.0	-0.3
SLKM	Skilak Lake	2.39	15		Pn	02 19 06.1	-0.4
RDWB	Redoubt West	2.40	343		Pn	02 19 06.8	+0.1
O22K	Cooper Landing	2.44	20	Pn	Pn	02 19 07.2	-0.1
DFR	Drift River	2.47	346		Pn	02 19 07.6	-0.1
NCT	North Crescent	2.48	343		Pn	02 19 07.8	-0.1
O19K	Port Alsworth	2.48	325		Pn	02 19 07.0	-0.8
O19K	Port Alsworth	2.48	325	P	Pn	02 19 07.5	-0.2
	baz=142						
RDJH	Redoubt Jeurge	2.49	344		Pn	02 19 08.0	0.0
SPU	Mount Spurr	3.00	354	Pn	Pn	02 19 14.3	-0.6
RC01	Rabbit Creek A	3.02	16	Pn	Pn	02 19 15.1	-0.1
RC01				IAML		02 20 06.6	
	comp=E,149nm,1.6s						
RC01	Rabbit Creek A	3.02	16	P	Pn	02 19 15.0	-0.1
	baz=195						
N19K	Bonanza Creek	3.04	331		Pn	02 19 15.5	0.0
N19K				IAML		02 20 06.0	
	comp=E,200nm,1.1s						
N19K				IAML		02 20 08.3	
	comp=N,175nm,0.9s						
N19K	Bonanza Creek	3.04	331	P	Pn	02 19 15.1	-0.4
	baz=147						
SPCG	Spurr Capps Gl	3.11	355		Pn	02 19 16.7	+0.2
SPWE	Spurr West	3.13	350		Pn	02 19 17.2	+0.5
CHIR	Chirikof Islan	3.31	225	Pn	Pn	02 19 18.1	-1.0
HIN	Hinchinbrook I	3.35	47	Pn	Pn	02 19 19.9	+0.2
HIN				IAML		02 19 57.8	
	comp=N,188nm,1.0s						
HIN				IAML		02 20 29.4	
	comp=E,122nm,1.1s						
N18K	Kilae Creek	3.36	319	Pn	Pn	02 19 19.4	-0.4
N18K				IAML		02 20 17.0	
	comp=N,116nm,1.5s						
N18K				IAML		02 20 20.5	
	comp=E,128nm,1.1s						
N18K	Kilae Creek	3.36	319	P	Pn	02 19 19.5	-0.4
	baz=135						
GLI	Glacier Island	3.47	38	Pn	Pn	02 19 20.2	-1.1
GLI	Glacier Island	3.47	38	P	Pn	02 19 20.6	-0.7
	baz=220						
KNK	Knik Glacier	3.55	24	Pn	Pn	02 19 21.9	-0.5
KNK				IAML		02 20 30.2	
	comp=N,161nm,0.8s						
KNK	Knik Glacier	3.55	24	P	Pn	02 19 21.9	-0.5
	baz=205						
SVW2	Sparrevohn	3.58	326	Pn	Pn	02 19 22.4	-0.4
SVW2				IAML		02 20 24.9	
	comp=N,92nm,1.4s						
SVW2				IAML		02 20 29.2	
	comp=E,102nm,0.9s						
PMR	Palmer	3.59	18	Pn	Pn	02 19 22.7	-0.2
PMR				IAML		02 20 29.5	
	comp=E,94nm,1.9s						
PMR				IAML		02 20 29.6	
	comp=N,91nm,1.1s						
FID	Port Fidalgo	3.59	43		Pn	02 19 22.0	-1.0
FID				IAML		02 20 43.4	
	comp=N,101nm,0.8s						
EYAK	Cordova Ski Ar	3.74	49	Pn	Pn	02 19 24.7	-0.3
EYAK	Cordova Ski Ar	3.74	49	P	Pn	02 19 25.1	+0.1
	baz=232						
JPK	Jack Peak	3.77	39		Pn	02 19 25.5	0.0
M20K	Styx River	3.78	348	Pn	Pn	02 19 26.7	+1.0
M20K	Styx River	3.78	348	P	Pn	02 19 26.6	+0.9
	baz=165						
SML	Sawmill	3.93	22	Pn	Pn	02 19 26.9	-0.8
SML				IAML		02 20 49.2	
	comp=E,116nm,1.3s						
SML	Sawmill	3.93	22	P	Pn	02 19 27.5	-0.2
	baz=203						
M19K	Big River Lodg	3.99	340	Pn	Pn	02 19 28.8	+0.3
DIV	Divide	4.10	42	Pn	Pn	02 19 30.1	+0.1
SCM	Sheep Creek Mo	4.18	28		Pn	02 19 31.3	+0.2
SCM	Sheep Creek Mo	4.18	28	P	Pn	02 19 31.6	+0.5
	baz=210						
CHGN	Chignik	4.24	246	Pn	Pn	02 19 29.8	-2.0
CHGN				IAML		02 20 43.6	
	comp=N,89nm,1.1s						
CHGN				IAML		02 20 49.0	
	comp=E,56nm,0.6s						
HMT	Hamilton	4.26	57	Pn	Pn	02 19 32.6	+0.5
HMT				IAML		02 20 22.7	
	comp=N,62nm,1.0s						
KLU	Klutina	4.31	38	Pn	Pn	02 19 33.1	+0.2
KLU	Klutina	4.31	38	P	Pn	02 19 33.4	+0.4
	baz=221						
L19K	White Mountain	4.33	338		Pn	02 19 33.1	-0.1
L19K				IAML		02 20 51.6	
	comp=E,82nm,1.5s						
L19K				IAML		02 21 02.3	
	comp=N,88nm,1.0s						
L19K	White Mountain	4.33	338	P	Pn	02 19 33.1	-0.1
	baz=155						
SUCK	Suckling Hills	4.37	61	Pn	Pn	02 19 33.7	+0.1
SUCK				IAML		02 22 29.5	
	comp=E,56nm,2.7s						
BMRM	Bremner River	4.44	49	Pn	Pn	02 19 34.2	-0.5
BMRM				IAML		02 20 25.2	
	comp=E,62nm,0.8s						
BMRM				IAML		02 20 25.3	
	comp=N,68nm,0.9s						
BMRM	Bremner River	4.44	49	P	Pn	02 19 34.8	+0.1
	baz=233						
M24K	Tolsona, Glenn	4.71	32		Pn	02 19 39.6	+1.2
PPLA	Purkeypile	4.72	356	Pn	Pn	02 19 38.8	+0.2
WAT6	Susitna Watana	4.75	21		Pn	02 19 39.0	-0.1
WAT6	Susitna Watana	4.75	21	P	Pn	02 19 39.0	-0.1
	baz=203						
N25K	Chitina, Valde	4.84	42	Pn	Pn	02 19 40.9	+0.6
N25K	Chitina, Valde	4.84	42	P	Pn	02 19 40.8	+0.5
	baz=227						
SNH	Sunshine Point	4.84	62	Pn	Pn	02 19 41.2	+1.0
SNH				IAML		02 20 34.1	
	comp=E,52nm,1.8s						
SNH				IAML		02 21 40.7	
	comp=N,53nm,1.7s						
WAX	Waxell Ridge	4.94	59	Pn	Pn	02 19 42.0	+0.5
WAX				IAML		02 20 37.6	
	comp=E,59nm,0.5s						
WAX				IAML		02 20 38.6	
	comp=N,55nm,0.5s						
GLB	Gilahina Butte	5.03	47		Pn	02 19 43.0	+0.2
VRDI	Verde Repeater	5.05	50	Pn	Pn	02 19 43.5	+0.4
TGL	Tana Glacier	5.08	56	Pn	Pn	02 19 43.4	-0.1
TGL				IAML		02 20 41.1	
	comp=N,38nm,1.2s						
ISLE	Juniper Island	5.23	59	Pn	Pn	02 19 46.0	+0.4
ISLE				IAML		02 20 46.7	
	comp=E,32nm,1.3s						
ISLE				IAML		02 21 02.9	
	comp=N,49nm,1.0s						
TTA	Tatalina	5.25	336	Pn	Pn	02 19 45.5	-0.3
TTA				IAML		02 21 19.5	
	comp=N,33nm,1.5s						
TTA				IAML		02 21 25.8	
	comp=E,38nm,1.2s						
MESA	MESA	5.26	64	Pn	Pn	02 19 47.0	+0.9
MESA				IAML		02 22 39.3	
	comp=N,51nm,0.8s						
MESA				IAML		02 23 02.1	
	comp=E,42nm,2.2s						
DHY	Denali Highway	5.28	21	Pn	Pn	02 19 46.5	+0.2
DHY				IAML		02 21 26.6	
	comp=N,36nm,1.5s						
DHY				IAML		02 21 32.8	
	comp=E,44nm,1.3s						
TRF	Thorofare Moun	5.29	6	Pn	Pn	02 19 46.0	-0.4
MCARA	McCarthy VSAT	5.31	50	Pn	Pn	02 19 47.9	+1.4
K20K	Telida	5.32	347	Pn	Pn	02 19 46.6	-0.1
YAH	Yahtse	5.42	62	Pn	Pn	02 19 49.0	+0.7
YAH				IAML		02 20 51.3	
	comp=E,38nm,1.2s						
YAH				IAML		02 20 51.6	
	comp=N,46nm,1.0s						
GRNC	Granite Creek	5.55	59	Pn	Pn	02 19 50.1	+0.1
PAX	Paxson	5.61	29	Pn	Pn	02 19 50.9	+0.2
BARN	Barnard Glacie	5.72	56	Pn	Pn	02 19 53.4	+0.9
TABL	Table Mountain	5.73	63	Pn	Pn	02 19 53.0	+0.5
CTGM	Chitina Glacie	5.83	57	Pn	Pn	02 19 54.5	+0.7
BPAW	Bear Paw Mtn.	5.92	2	Pn	Pn	02 19 53.9	-0.9
LOGN	Logan Glacier	5.92	59	Pn	Pn	02 19 53.8	-1.4
PCA	Pinnacle	6.06	67	Pn	Pn	02 19 57.8	+0.9
J20K	Nowinta River	6.13	349	Pn	Pn	02 19 57.4	-0.3
M27K	Edge Creek, AK	6.32	45	Pn	Pn	02 20 01.8	+1.3
BCPM	Bancas Point	6.33	69	Pn	Pn	02 20 01.5	+1.0
RIDG	Independent Ri	6.41	27	Pn	Pn	02 20 02.2	+0.5
WRH	Wood River Hil	6.49	13	Pn	Pn	02 20 02.9	+0.3
HDA	Harding Lake	6.58	17	Pn	Pn	02 20 04.7	+0.7
CCB	Clear Creek Bu	6.69	14	Pn	Pn	02 20 04.7	-0.7
L27K	Beaver Creek,	6.78	40	Pn	Pn	02 20 07.9	+1.1
BCAR	Beaver Creek A	6.80	40	Pn	Pn	02 20 05.0	-2.0
IL31		6.94	16	Pn	Pn	02 20 09.2	+0.5
ILAR	Eielson Array	6.94	16	Pn	Pn	02 20 08.7	-0.1
MDM	Murphy Dome	6.94	11	Pn	Pn	02 20 08.5	-0.4
I21K	Tanana	7.00	358	Pn	Pn	02 20 09.1	-0.6
I23K	Minto, Yukon-K	7.03	7		Pn	02 20 08.9	-1.2
J25K	Salcha River,	7.05	22	Pn	Pn	02 20 09.9	-0.6
POKR	Poker Plat Res	7.19	14	Pn	Pn	02 20 11.1	-1.2
H21K	Melozitna Rive	7.50	356	Pn	Pn	02 20 16.2	-0.4
H23K	Yukon River	7.70	6	Pn	Pn	02 20 19.1	-0.2
H24K	Noodor Dome	7.84	11	Pn	Pn	02 20 22.5	+1.3
IMAR	Indian Mountai	7.88	353	Pn	Pn	02 20 22.3	+0.6
EGAK	Eagle	8.21	32	Pn	Pn	02 20 25.4	-0.8
SKAG	Skagway	8.45	75	Pn	Pn	02 20 30.4	+0.9
M30M	Minto, Yukon	8.46	53	Pn	Pn	02 20 30.1	+0.3
BESE	Bessie Mountai	8.72	81	Pn	Pn	02 20 34.4	+1.0
AKUT	Akutan	8.97	249	Pn	Pn	02 20 37.1	+0.4
UNV	Unalaska Valle	9.49	249	Pn	Pn	02 20 43.4	-0.4
BMAR	Burnt Mountain	9.76	16	Pn	Pn	02 20 47.1	-0.4

IDC ***23*** *02:51:26.7±2.9, 10°.85S×161°.60E, h62km±24km, mb3.3/6, mbtmp3.8/9, ML4.0/3, MS3.4/4, Error ellipse: s-maj=28.7km s-min=18.6km az=67.0*

ISC 23 02:51:25.6±0.9**, 10°.8S**±0°.1×**161°.6E**±0°.1**, h50km, n12, σ1^{s}.17**/10**, mb3.6**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.16	309	P	Pn	02 51 58.6	-0.5
	184nm,0.3s,baz=154,slow=3.9,SNR=21						
HNR				S	Sn	02 52 26.9	+2.1
	2µm,0.3s,baz=181,slow=23,SNR=18						
	636nm,0.5s						
KRVT	Keravat (AS076	11.52	303	LR	LR	02 58 49.9	
	comp=Z,189nm,21.7s,baz=261,slow=38						
DZM	Mont Dzumac	12.10	158	P	Pn	02 54 16.3	+0.8
	0.6nm,0.3s,baz=334,slow=20,SNR=2.1						
	3.2nm,0.5s						
PMG	Port Moresby	14.33	274	LR	LR	02 59 16.7	
	comp=Z,158nm,19.3s,baz=106,slow=33						
CTA	Charters Tower	17.45	236	P	P	02 55 27.1	+0.8
	0.2nm,0.3s,baz=64,slow=13,SNR=1.8						
	5.7nm,0.7s						
WRA	Warramunga Arr	27.81	248	P	P	02 57 10.1	-0.3
	1.0nm,0.7s,baz=78,slow=9.1,SNR=2.1						
	1.0nm,0.7s						
ASAR	Alice Springs	29.34	241	P	P	02 57 22.9	-1.1
	0.1nm,0.3s,baz=63,slow=10,SNR=1.9						
ASAR				LR	LR	03 07 41.0	
	comp=Z,107nm,18.0s,baz=120,slow=33						
	0.1nm,0.3s						
GUMO	Guam	29.41	325	LR	LR	03 09 06.5	
	comp=Z,42nm,19.6s,baz=110,slow=36						
SONM	Songino Array	76.14	325	P	P	03 03 07.7	-0.7
	0.7nm,0.9s,baz=106,slow=4.4,SNR=3.1						
	0.7nm,0.9s						
ILAR	Eielson Array	84.61	20	P	P	03 03 53.7	+0.3
	0.2nm,0.7s,baz=243,slow=4.0,SNR=2.3						
	0.2nm,0.7s						
NVAR	Mina Array Bea	88.97	51	P	P	03 04 16.1	+0.7
	0.2nm,0.5s,baz=236,slow=6.4,SNR=2.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	90.61	318	P	P	03 04 21.6	-1.1
	0.2nm,0.6s,baz=23,slow=28,SNR=1.4						
	0.2nm,0.6s						

IDC ***23*** *03:01:14.2±1.0, 51°.71N×173°.18E, h0km, mb3.9/14, mbtmp3.9/15, ML2.3/1, MS3.6/1, Error ellipse: s-maj=26.8km s-min=14.0km az=164.0*

NEIC ***23*** *03:01:16.7±1.4, 51°.72N±0°.06×173°.1E±0°.1, h10km±1km, mb4.4/62, Error ellipse: s-maj=16.7km s-min=7.6km az=297.0*

ISC 23 03:01:19.9±0.6**, 51°.7N**±0°.1×**173°.09E**±0°.07**, h35km, n99, σ0^{s}.96**/96**, mb4.3**/41**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	Shemya Is, Ala	1.18	32	Pn	Pn	03 01 39.1	-0.7
	27nm,0.3s,baz=186,slow=9.5,SNR=28						
SHEM				Sn	Sn	03 01 53.6	-1.0
	157nm,0.3s,baz=178,slow=3.4,SNR=15						
SHEM				LR	LR	03 02 08.1	
	comp=Z,172nm,20.5s,baz=4.5,slow=46						
SMY	Shemya	1.18	32		Pn	03 01 38.9	-0.9
SMY				Sn	Sn	03 01 55.2	+0.6
KIWB	Kanaga Island	6.06	85	Pn	Pn	03 02 45.4	-1.5
ADK	Adak	6.35	85	Pn	Pn	03 02 49.8	-1.0
PETK	Petropavlovsk-	9.51	284	Pn	Pn	03 03 33.0	-1.2
	0.1nm,0.3s,baz=96,slow=22,SNR=1.7						
	0.8nm,0.6s						
NIKH	Nikolski High	11.12	76	Pn	Pn	03 03 56.7	+0.5
UNV	Unalaska Valle	12.53	72	Pn	Pn	03 04 18.3	+2.8
CHIR	Chirikof Islan	18.85	65	P	P	03 05 35.0	-1.5
TTA	Tatalina	19.87	44	P	P	03 05 47.9	+0.1
Q19K	Cape Douglas,	20.08	56	P	P	03 05 50.4	+0.3
Q19K				IAmb	IAmb	03 05 54.9	
	comp=Z,20nm,0.8s						
KDAK	Kodiak Island	20.55	59	P	P	03 05 53.0	-2.1
	comp=Z,5.8nm,0.4s,baz=278,slow=6.6,SNR=24						
	comp=Z,5.8nm,0.4s						
KDAK	Kodiak Island	20.55	59	P	P	03 05 53.5	-1.5
KDAK				IAmb	IAmb	03 06 05.7	
	comp=Z,24nm,1.1s						
J20K	Nowinta River	21.09	41	P	P	03 06 00.7	-0.2
SPU	Mount Spurr	21.21	50	P	P	03 06 05.7	+3.5
CNPM	China Poot	21.37	55	P	P	03 06 03.9	0.0
CNPM				IAmb	IAmb	03 06 13.7	
	comp=Z,31nm,1.2s						
PPLA	Purkeypile	21.53	45	P	P	03 06 08.1	+2.4
PPLA				IAmb	IAmb	03 06 21.7	
	comp=Z,13nm,1.2s						
BRLK	Bradley Lake	21.57	54	P	P	03 06 08.3	+2.2
IMAR	Indian Mountai	21.94	37	P	P	03 06 10.0	0.0
H21K	Melozitna Rive	22.17	38	P	P	03 06 12.5	+0.1
RC01	Rabbit Creek A	22.30	51	P	P	03 06 14.7	+0.8
RC01				IAmb	IAmb	03 06 14.9	
	comp=Z,9.8nm,0.9s						
SEW	Seward	22.33	53	P	P	03 06 14.5	+0.4
SEW				IAmb	IAmb	03 06 25.4	
	comp=Z,23nm,1.2s						
BPAW	Bear Paw Mtn.	22.38	43	P	P	03 06 15.6	+0.9
TRF	Thorofare Moun	22.50	44	P	P	03 06 16.7	+0.5
PMR	Palmer	22.66	50	P	P	03 06 16.9	-0.8
PMR				IAmb	IAmb	03 06 42.8	
	comp=Z,9.3nm,1.2s						
SML	Sawmill	23.07	49	P	P	03 06 21.6	-0.4
SML				IAmb	IAmb	03 06 22.2	
	comp=Z,13nm,0.6s						
I23K	Minto, Yukon-K	23.35	41	P	P	03 06 25.5	+0.8
SCM	Sheep Creek Mo	23.55	49	P	P	03 06 25.9	-0.8
SCM				IAmb	IAmb	03 06 29.1	
	comp=Z,22nm,1.4s						
GLI	Glacier Island	23.56	52	P	P	03 06 25.8	-0.9
GLI				IAmb	IAmb	03 06 38.1	
	comp=Z,12nm,1.2s						
WRH	Wood River Hil	23.70	43	P	P	03 06 28.0	0.0
DHY	Denali Highway	23.71	46	P	P	03 06 27.7	-0.7
MDM	Murphy Dome	23.76	41	P	P	03 06 28.4	-0.2
FID	Port Fidalgo	23.85	52	P	P	03 06 27.6	-2.0
FID				IAmb	IAmb	03 06 49.5	
	comp=Z,12nm,1.1s						
M24K	Tolsona, Glenn	24.12	49	P	P	03 06 33.4	+1.3
POKR	Poker Plat Res	24.13	41	P	P	03 06 33.1	+1.1
POKR				IAmb	IAmb	03 06 33.9	
	comp=Z,9.4nm,1.4s						
H24K	Noodor Dome	24.14	39	P	P	03 06 32.3	0.0
KLU	Klutina	24.18	50	P	P	03 06 32.0	-0.6
KLU				IAmb	IAmb	03 06 33.7	
	comp=Z,4.5nm,0.6s						
ILAR	Eielson Array	24.27	42	P	P	03 06 31.6	-1.8
	comp=Z,0.4nm,0.5s,baz=243,slow=8.1,SNR=9.6						
	comp=Z,0.4nm,0.5s						
ILAR	Eielson Array	24.27	42	P	P	03 06 33.7	+0.3
TOLK	Toolik Lake Re	24.52	32	P	P	03 06 35.7	0.0
N25K	Chitina, Valde	24.82	50	P	P	03 06 38.7	+0.2
N25K				IAmb	IAmb	03 06 39.7	
	comp=Z,4.2nm,0.8s						
GLB	Gilahina Butte	25.18	51	P	P	03 06 41.5	-0.2
GLB				IAmb	IAmb	03 06 43.8	
	comp=Z,4.6nm,0.9s						
VRDI	Verde Repeater	25.35	51	P	P	03 06 43.1	-0.3
VRDI				IAmb	IAmb	03 06 57.4	
	comp=Z,10.0nm,1.3s						
SCRK	Sand Creek	25.36	45	P	P	03 06 42.0	-1.4
SCRK				IAmb	IAmb	03 06 57.4	
	comp=Z,4.8nm,1.1s						
WAX	Waxell Ridge	25.63	53	P	P	03 06 45.2	-0.5
WAX				IAmb	IAmb	03 06 53.0	
	comp=Z,9.2nm,0.9s						
BMAR	Burnt Mountain	25.86	37	P	P	03 06 48.4	+0.6
GRNC	Granite Creek	26.17	52	P	P	03 06 50.4	-0.5
GRNC				IAmb	IAmb	03 06 51.7	
	comp=Z,10nm,0.9s						
KLR	Kul'dur	26.17	281	P	P	03 06 50.5	-0.3
	comp=Z,1.0nm,0.7s,baz=333,slow=19,SNR=1.8						
	comp=Z,1.0nm,0.7s						
BARN	Barnard Glacie	26.21	51	P	P	03 06 51.5	+0.2
BCAR	Beaver Creek A	26.23	47	P	P	03 06 51.5	+0.3
EGAK	Eagle	26.69	43	P	P	03 06 54.4	-0.8
DAWY	Dawson	27.38	45	P	P	03 07 01.7	+0.2
HYT	Haines Junctio	28.25	52	P	P	03 07 09.5	+0.1
HYT				IAmb	IAmb	03 07 22.2	
	comp=Z,11nm,1.4s						
INK	Inuvik	30.14	36	P	P	03 07 26.3	+0.5
INK				IAmb	IAmb	03 07 45.6	
	comp=Z,6.0nm,1.4s						
JHJ	Hachijo jima 2	30.45	245	P	P	03 07 28.5	-0.5
	comp=Z,52nm,0.4s,baz=26,slow=16,SNR=1.4						
H11N2	WAKE ISLAND Hy	32.30	191	T	T	03 43 19.0	
	baz=8.7						
H11N3	WAKE ISLAND Hy	32.31	191	T	T	03 43 10.8	
	baz=8.7						
H11N1	WAKE ISLAND Hy	32.32	191	T	T	03 43 24.3	
	baz=8.7						
KS19	Wonju Array Si	34.60	264	P	P	03 08 06.0	+0.7
KSAR	Wonju Array Be	34.63	264	P	P	03 08 06.7	+1.2
YKA	Yellowknife Ar	38.62	45	P	P	03 08 38.7	-0.5
	comp=Z,1.9nm,0.6s,baz=288,slow=7.7,SNR=19						
	comp=Z,1.9nm,0.6s						
YKA	Yellowknife Ar	38.62	45	P	P	03 08 38.5	-0.7
EUNU	Eureka	41.28	15	P	P	03 09 01.8	+0.6
EUNU				IAmb	IAmb	03 09 27.2	
	comp=Z,9.1nm,1.4s						
YBH	Yreka Blue Hor	43.79	77	P	P	03 09 22.7	+0.7
YBH				IAmb	IAmb	03 09 36.2	
	comp=Z,5.5nm,1.4s						
BCYI	Bear Canyon	47.79	68	P	P	03 09 53.2	-0.6
NVAR	Mina Array Bea	48.48	78	P	P	03 09 58.9	-0.2
	comp=Z,0.5nm,0.5s,baz=296,slow=7.0,SNR=5.3						
	comp=Z,0.5nm,0.5s						
NVAR	Mina Array Bea	48.48	78	P	P	03 09 59.6	+0.5
FCC	Fort Churchill	49.28	43	P	P	03 10 05.0	+0.3
FCC				IAmb	IAmb	03 10 17.7	
	comp=Z,4.6nm,1.1s						
SPB2	Spitsbergen Ar	49.58	354	P	P	03 10 07.4	+0.7
R11A	Troy Canyon, C	50.18	76	P	P	03 10 11.9	-0.2
PDAR	Pinedale Array	50.95	68	P	P	03 10 15.2	-2.7
	comp=Z,0.7nm,0.8s,baz=299,slow=3.7,SNR=4.0						
	comp=Z,0.7nm,0.8s						
ULM	Lac du Bonnet	53.62	53	P	P	03 10 37.2	0.0
	comp=Z,1.9nm,0.5s,baz=295,slow=5.5,SNR=3.2						
	comp=Z,1.9nm,0.5s						
ULM	Lac du Bonnet	53.62	53	P	P	03 10 37.4	+0.1
ULM				IAmb	IAmb	03 11 03.1	
	comp=Z,3.0nm,0.9s						
SUMG	Summit	54.05	11	P	P	03 10 41.4	+0.8
SUMG				IAmb	IAmb	03 10 54.7	
	comp=Z,5.6nm,1.3s						
PV13	Radium Mtn., P	54.34	72	P	P	03 10 42.9	-0.1
PV13				IAmb	IAmb	03 10 43.9	
	comp=Z,4.2nm,0.7s						
KURK	Kurchatov	54.99	309	P	P	03 10 47.7	+0.4
KURK				IAmb	IAmb	03 10 47.9	
	comp=Z,3.5nm,0.8s						
KURBB	Kurchatov Arra	55.09	309	P	P	03 10 48.0	0.0
	comp=Z,2.4nm,0.7s,baz=53,slow=7.0,SNR=11						
	comp=Z,2.4nm,0.7s						
MKAR	Makanchi Array	55.73	304	P	P	03 10 51.8	-0.9
	comp=Z,0.4nm,0.6s,baz=57,slow=8.8,SNR=3.9						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	55.73	304	P	P	03 10 52.2	-0.4
ARCES	ARCESS Array B	56.74	347	P	P	03 10 59.8	+0.2
	comp=Z,3.0nm,1.0s,baz=37,slow=9.1,SNR=1.5						
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	57.24	316	P	P	03 11 03.8	+0.6
BRVK				IAmb	IAmb	03 11 04.0	
	comp=Z,2.2nm,0.7s						
EYMN	Ely	57.30	53	P	P	03 11 04.2	+0.4
EYMN				IAmb	IAmb	03 11 04.4	
	comp=Z,3.4nm,0.8s						
MNTX	Cornudas Mount	60.82	75	P	P	03 11 29.1	+0.7
SCHQ	Schefferville	62.72	34	P	P	03 11 39.9	-0.9
	comp=Z,1.6nm,0.6s,baz=336,slow=6.4,SNR=7.0						
	comp=Z,1.6nm,0.6s						
SCHQ	Schefferville	62.72	34	P	P	03 11 40.6	-0.3
TXAR	Lajitas Array	63.54	76	P	P	03 11 46.5	-0.3
	comp=Z,0.5nm,0.6s,baz=308,slow=3.6,SNR=9.0						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	63.54	76	P	P	03 11 46.9	+0.1
FIA1	FINESS Array S	64.14	343	P	P	03 11 50.8	+0.7
FINES	FINESS Array B	64.14	343	P	P	03 11 50.5	+0.4
	comp=Z,1.2nm,0.8s,baz=0.0,slow=6.9,SNR=2.8						
	comp=Z,1.2nm,0.8s						
ABKAR	Akbulak array	64.44	318	P	P	03 11 52.9	+0.6
SFIN	Lafayette	64.89	56	P	P	03 11 55.0	-0.3
M53A	WI Miller and	67.32	51	P	P	03 12 10.7	-0.2

M55A	Ridgway	68.22	50	P	P	03 12 16.7	+0.1
PLAL	Pickwick Lake	68.38	61	P	P	03 12 17.0	-0.7
H62A	Milan	69.23	44	P	P	03 12 22.6	-0.3
PSI	Prapat	78.02	259	LR	LR	03 48 51.8	
	comp=Z,36nm,20.0s,baz=142,slow=37						
WR0	Warramunga Arr	78.94	217	P	P	03 13 19.7	0.0
BRTR	Keskin Array B	82.30	330	P	P	03 13 38.0	+0.2
	comp=Z,0.9nm,0.8s,baz=85,slow=3.4,SNR=7.4						
	comp=Z,0.9nm,0.8s						
BRTR	Keskin Array B	82.30	330	P	P	03 13 38.8	+1.0
TORD	Torodi Ar. Bea	114.96	351	PKP	PKPdf	03 19 58.0	+0.9
	comp=Z,0.3nm,1.0s,baz=341,slow=3.1,SNR=1.1						

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*DMN **23** 03:03:47.3±0.0,28°.16N×88°.43E,h60^{km},Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*IDC **23** 03:03:50.6±1.0,28°.33N×87°.45E,h0^{km},mb3.7/13, mbtmp3.7/15,ML3.8/1,MS3.2/10,Error ellipse: s-maj=32.2km s-min=19.4km az=55.0*

ISC 23 03:03:57.4±0.9,**28°.5N**±0°.1×**87°.70E**±0°.08,**h50**^{km},**n27, σ1^s.87**/25,**mb3.6**/13,**MS3.2**/8,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKIN	Phulchoki	2.22	247	*e*Pg	Pn	03 04 29.5	-2.6
PKIN				*e*Sg	Sn	03 04 59.9	+1.4
	1µm,0.7s						
KKN	Kakani	2.24	253	*e*Pg	Pn	03 04 29.9	-2.4
GKN	Gorkha	2.74	261	*e*Pg	Pn	03 04 38.0	-1.1
GKN				*e*Sg	Sn	03 05 14.6	+3.5
	750nm,0.3s						
DANN	Dangsing	3.47	269	*e*Pg	Pn	03 04 47.4	-1.8
DANN				*e*Sg	Sn	03 05 33.0	+3.8
	122nm,0.3s						
KOLN	Koldanda	3.69	260	*e*Pg	Pn	03 04 50.0	-2.1
PYUN	Piuthan	4.17	266	*e*Pg	Pn	03 04 56.8	-1.9
PYUN				*e*Sg	Sn	03 05 48.4	+2.1
CMAR	Chiang Mai Arr	14.34	132	LR	LR	03 13 38.3	
	comp=Z,40nm,20.0s,baz=305,slow=41						
AAK	Ala-Archa	17.72	326	Pn	Pn	03 07 58.8	-1.8
	0.3nm,0.3s,baz=155,slow=10,SNR=1.5						
AAK				LR	LR	03 15 02.3	
	comp=Z,26nm,19.4s,baz=148,slow=38						
	0.7nm,0.3s						
MKAR	Makanchi Array	18.77	348	P	P	03 08 11.2	-1.1
	1.8nm,0.9s,baz=166,slow=12,SNR=11						
KURBB	Kurchatov Arra	23.18	345	P	P	03 09 00.3	+0.7
	5.3nm,1.1s,baz=165,slow=9.0,SNR=12						
	5.3nm,1.1s						
SONM	Songino Array	24.17	32	P	P	03 09 11.4	+2.4
	1.1nm,0.8s,baz=219,slow=11,SNR=5.0						
	1.1nm,0.8s						
ZALV	Zalesovo Beam	25.54	356	P	P	03 09 22.4	+1.2
	1.3nm,0.5s,baz=187,slow=10,SNR=6.0						
	1.3nm,0.5s						
AKTO	Aktyubinsk	31.38	323	LR	LR	03 23 17.0	
	comp=Z,28nm,18.4s,baz=126,slow=37						
ARU	Arti	34.76	332	LR	LR	03 27 30.3	
	comp=Z,27nm,18.7s,baz=68,slow=41						
KLR	Kul'dur	39.38	46	LR	LR	03 30 27.3	
	comp=Z,29nm,19.2s,baz=246,slow=40						
AKASG	Malin Array Be	48.79	314	P	P	03 12 35.5	-1.8
	0.2nm,0.4s,baz=100,slow=11,SNR=1.4						
	0.2nm,0.4s						
FINES	FINESS Array B	51.90	328	P	P	03 13 00.9	+0.3
	0.6nm,0.6s,baz=90,slow=8.0,SNR=7.3						
FINES				LR	LR	03 36 13.6	
	comp=Z,29nm,20.2s,baz=46,slow=37						
	0.6nm,0.6s						
ARCES	ARCESS Array B	53.95	337	P	P	03 13 16.8	+1.1
	0.6nm,0.5s,baz=94,slow=5.0,SNR=5.2						
	0.6nm,0.5s						
HFS	Hagfors	57.85	325	LR	LR	03 40 35.8	
	comp=Z,37nm,19.3s,baz=58,slow=38						
GERES	GERESS Array B	58.91	312	P	P	03 13 51.2	-0.2
	0.8nm,0.8s,baz=70,slow=8.5,SNR=3.8						
	0.8nm,0.8s						
NOA	NORSAR Array B	59.04	327	P	P	03 13 52.0	0.0
	0.9nm,0.8s,baz=120,slow=8.0,SNR=3.3						
NOA				LR	LR	03 40 21.9	
	comp=Z,14nm,21.8s,baz=15,slow=37						
	0.9nm,0.8s						
WRA	Warramunga Arr	65.93	131	P	P	03 14 39.8	+1.3
	0.4nm,0.9s,baz=314,slow=9.1,SNR=3.2						
	0.4nm,0.9s						
ASAR	Alice Springs	68.33	135	P	P	03 14 53.9	+0.2
	0.6nm,0.8s,baz=307,slow=4.6,SNR=4.1						
ASAR				LR	LR	03 48 22.6	
	comp=Z,66nm,19.2s,baz=346,slow=39						
	0.6nm,0.8s						
ESDC	Sonseca Array	73.63	306	P	P	03 15 24.9	-0.8
	0.8nm,0.9s,baz=79,slow=13,SNR=2.6						
	0.8nm,0.9s						
ILAR	Eielson Array	77.88	21	P	P	03 15 49.7	+0.2
	0.6nm,1.0s,baz=296,slow=4.6,SNR=4.5						
	0.6nm,1.0s						
TORD	Torodi Ar. Bea	80.39	280	P	P	03 16 04.1	+0.1
	0.6nm,0.8s,baz=29,slow=3.2,SNR=2.8						
	0.6nm,0.8s						
FRB	Frobisher Bay	86.19	350	LR	LR	04 01 29.5	
	comp=Z,35nm,18.6s,baz=232,slow=40						

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*IDC **23** 03:19:13.2±2.8,8°.18N×104°.20W,h0^{km},mb3.4/6, mbtmp3.5/6,MS3.4/11,Error ellipse: s-maj=115.5km s-min=26.9km az=58.0*

ISC 23 03:19:18.0±2.4,**8°.1N**±0°.4×**104°.3W**±0°.6,**h35**^{km},**n19, σ1^s.52**/6,**mb3.5**/6,**MS3.5**/9,**Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	16.89	341	LR	LR	03 27 56.9	
	comp=Z,65nm,18.4s,baz=68,slow=31						
JTS	Las Juntas de	19.21	82	LR	LR	03 28 46.7	
	comp=Z,40nm,20.4s,baz=307,slow=30						
TXAR	Lajitas Array	21.10	2	P	P	03 23 58.7	-1.0
	1.2nm,0.8s,baz=184,slow=13,SNR=14						
TXAR				LR	LR	03 31 30.6	
	comp=Z,172nm,18.9s,baz=177,slow=35						
	1.2nm,0.8s						
NVAR	Mina Array Bea	32.71	339	P	P	03 25 45.6	-1.8
	0.3nm,0.8s,baz=174,slow=9.9,SNR=1.4						
	0.3nm,0.8s						
TKL	Tuckaleechee C	33.21	31	LR	LR	03 40 13.4	
	comp=Z,44nm,21.3s,baz=208,slow=38						
PDAR	Pinedale Array	34.81	353	P	P	03 26 06.0	+0.3
	0.2nm,0.3s,baz=170,slow=11,SNR=2.4						
	0.2nm,0.3s						
SJG	San Juan	38.38	71	LR	LR	03 41 44.6	
	comp=Z,34nm,18.6s,baz=109,slow=35						
SADO	Sadowa	42.52	27	LR	LR	03 46 58.2	
	comp=Z,36nm,18.3s,baz=234,slow=39						
ULM	Lac du Bonnet	42.57	8	LR	LR	03 44 23.9	
	comp=Z,58nm,18.9s,baz=169,slow=36						
LPAZ	La Paz	43.24	124	P	P	03 27 16.6	-0.4
	1.3nm,0.8s,baz=280,slow=6.1,SNR=4.9						
	1.3nm,0.8s						
H03N2	Juan Fernandez	47.86	151	T	T	04 19 20.7	
	baz=327,slow=77,SNR=8.9						
H03N1	Juan Fernandez	47.87	151	T	T	04 19 24.2	
	baz=327,slow=77,SNR=14						
H03N3	Juan Fernandez	47.87	151	T	T	04 19 21.6	
	baz=327,slow=77,SNR=11						
YKA	Yellowknife Ar	54.78	354	P	P	03 28 44.7	+0.7
	0.3nm,0.6s,baz=169,slow=7.1,SNR=3.5						
	0.3nm,0.6s						
SCHQ	Schefferville	55.30	25	LR	LR	03 52 44.8	
	comp=Z,37nm,18.4s,baz=204,slow=36						
CPUP	Villa Florida	57.02	129	LR	LR	03 51 01.6	
	comp=Z,173nm,19.5s,baz=252,slow=34						
ILAR	Eielson Array	63.94	341	P	P	03 29 48.6	+1.4
	0.3nm,0.6s,baz=134,slow=6.4,SNR=4.2						
	0.3nm,0.6s						
SFJD	Kangerlussuaq	68.92	20	LR	LR	04 00 14.2	
	comp=Z,32nm,18.9s,baz=277,slow=36						
NOA	NORSAR Array B	94.86	26	LR	LR	04 16 41.5	
	comp=Z,8.4nm,19.2s,baz=100,slow=36						

IDC 23 03:24:55.3±2.1,**3°.62N**×**127°.53E**,**h0**^{km},**mb3.8**/3, **mbtmp3.8**/3,**MS3.7**/2,**Error ellipse: s-maj=141.1km s-min=26.6km az=67.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.36	164	P	P	03 30 15.2	-0.1
	1.4nm,0.6s,baz=344,slow=10,SNR=23						
	1.4nm,0.6s						
ASAR	Alice Springs	27.83	167	P	P	03 30 46.8	+0.2
	1.0nm,0.5s,baz=359,slow=8.7,SNR=18						
	1.0nm,0.5s						
JNU	Nakatsue	29.51	6	LR	LR	03 42 56.7	
	comp=Z,260nm,19.5s,baz=222,slow=37						
MKAR	Makanchi Array	58.10	325	P	P	03 34 50.5	-0.2
	0.4nm,0.4s,baz=123,slow=8.6,SNR=4.5						
	0.4nm,0.4s						
MMAI	Mount Meron Ar	89.83	303	LR	LR	04 25 04.9	
	comp=Z,21nm,18.0s,baz=6.5,slow=40						

IDC 23 03:25:07.2±2.8,**17°.59S**×**178°.56W**,**h573**^{km}±21^{km}, **mb2.8**/4,**mbtmp3.6**/5,**Error ellipse: s-maj=113.9km s-min=23.9km az=150.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.24	267	P	P	03 26 25.6	0.0
	15nm,0.7s,baz=73,slow=19,SNR=9.5						
WRA	Warramunga Arr	44.55	259	P	P	03 32 28.9	-0.3
	0.3nm,0.5s,baz=95,slow=7.1,SNR=6.6						
	0.3nm,0.5s						
ASAR	Alice Springs	44.74	254	P	P	03 32 30.6	0.0
	1.2nm,0.5s,baz=88,slow=8.4,SNR=16						
	1.2nm,0.5s						
ILAR	Eielson Array	85.61	13	P	P	03 36 45.1	-0.1
	0.3nm,0.4s,baz=224,slow=5.1,SNR=9.7						
	0.3nm,0.4s						
TXAR	Lajitas Array	85.94	58	P	P	03 36 47.7	-0.1
	0.3nm,0.8s,baz=208,slow=5.1,SNR=3.5						
	0.3nm,0.8s						

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*IDC **23** 03:28:39.5±1.4,1°.11N×125°.49E,h0^{km},mb3.6/4, mbtmp3.7/4,MS2.6/1,Error ellipse: s-maj=139.5km s-min=17.6km az=69.0*

*DJA **23** 03:28:44.6±0.4,1°N±5°×12°6E±°,h10^{km},M3.8/7,mb4.0/2, mB4.6/1,MLv3.7/7,Mw(mB)3.8/1*

ISC 23 03:28:46.4±1.1,**1°.5N**±0°.1×**126°.40E**±0°.08,**h50**^{km},**n10, σ2^s.11**/10,**mb3.7**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.21	127	P	Pn	03 29 07.1	+0.2
LBMI	Labuha	2.39	153	P	Pn	03 29 24.0	+0.8
GTOI	Gorontalo	3.50	256	P	Pn	03 29 38.6	+0.4
SANI	Sanana	3.55	187	P	Pn	03 29 38.1	-0.9
APSI	Ampana	5.32	243	P	Pn	03 30 04.0	+0.7
DAV	Davao City (W)	5.59	352	LR	LR	03 32 40.4	
	comp=Z,49nm,18.8s,baz=140,slow=41						
WRA	Warramunga Arr	22.69	160	P	P	03 33 41.5	-2.4
	1.9nm,0.5s,baz=337,slow=11,SNR=21						
	1.9nm,0.5s						
ASAR	Alice Springs	26.06	164	P	P	03 34 14.2	-1.1
	0.8nm,0.6s,baz=344,slow=8.9,SNR=8.2						
ASAR				S	S	03 38 47.2	+4.0
	0.7nm,0.6s,baz=344,slow=19,SNR=3.8						
	0.8nm,0.6s						
SONM	Songino Array	49.30	342	P	P	03 37 32.0	+1.6
	0.2nm,0.3s,baz=152,slow=6.0,SNR=1.6						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.20	326	P	P	03 38 40.6	-1.8
	0.4nm,0.6s,baz=113,slow=7.8,SNR=4.4						
	0.4nm,0.6s						

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*DJA **23** 03:31:06.4±0.4,10°S±2°×11°9E±°,h12^{km}±3^{km},M4.5/17, mb4.7/14,mB5.0/7,MLv4.6/17,Mw(mB)4.3/7*

*IDC **23** 03:31:07.7±2.1,9°.76S×119°.30E,h46^{km}±21^{km},mb4.0/7, mbtmp4.3/11,ML4.2/5,MS3.2/9,Error ellipse: s-maj=22.5km s-min=12.5km az=47.0*

*NEIC **23** 03:31:08.8±1.9,9°.79S±0°.07×119°.35E±0°.07,h62^{km}±4^{km}, mb4.3/19,Error ellipse: s-maj=11.6km s-min=8.6km az=221.0*

ISC 23 03:31:07.8±0.5,**9°.81S**±0°.05×**119°.38E**±0°.05,**h50**^{km},**n100, σ1^s.72**/92,**mb4.4**/20,**MS3.2**/6,**1C,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.17	6	P	Pn	03 31 13.5	-2.5
WBSI				S	Sn	03 31 16.1	-5.7
BASI	Baing, Sumba	1.25	109	P	Pn	03 31 29.2	+0.2
PLAI	Plampang	1.85	302	P	Pn	03 31 36.7	-0.5
PLAI	Plampang	1.85	302	P	Pn	03 31 37.2	0.0
EDFI	Ende, Flores	2.52	66	P	Pn	03 31 45.1	-1.2
MMRI	Maumere	3.06	68		Pn	03 31 55.0	+1.3
MMRI	Maumere	3.06	68	P	Pn	03 31 53.5	-0.2
MMRI	Maumere	3.06	68	P	Pn	03 31 55.8	+2.1
BSSI	Bau Bau, Buton	3.80	17	P	Pn	03 32 04.4	+0.5
BATI	Baumata	4.24	96	P	Pn	03 32 11.8	+1.8
	55nm,0.3s,baz=286,slow=3.4,SNR=19						
BATI				S	Sn	03 33 00.3	+2.0
	93nm,0.4s,baz=20,slow=22,SNR=7.8						
BATI	Baumata	4.24	96	P	Pn	03 32 12.0	+2.0
IGBI	Denpasar	4.29	283	P	Pn	03 32 13.6	+3.0
BKSI	Bulukumba	4.52	9	P	Pn	03 32 15.1	+1.4
KAPI	Kappang	4.78	5	P	Pn	03 32 17.0	-0.3
	18nm,0.3s,baz=176,slow=9.1,SNR=29						
KAPI				S	Sn	03 33 11.9	+0.5
	52nm,0.5s,baz=35,slow=22,SNR=1.9						
KAPI				LR	LR	03 34 24.6	
	comp=Z,433nm,20.2s,baz=159,slow=42						
	62nm,0.5s						
KAPI	Kappang	4.78	5		Pn	03 32 18.5	+1.2
KAPI	Kappang	4.78	5	P	Pn	03 32 19.0	+1.7
SOEI	Soe	4.82	90		Pn	03 32 19.7	+1.7
SOEI	Soe	4.82	90	P	Pn	03 32 19.4	+1.4
JAGI	Jajag, Banyuwa	5.33	284	Pn	Pn	03 32 25.8	+1.0
JAGI	Jajag, Banyuwa	5.33	284	P	Pn	03 32 27.7	+2.9
	0.5nm69nm,0.6s						
JAGI	Jajag, Banyuwa	5.33	284	P	Pn	03 32 24.7	-0.1
BBSI	Bau Bau	5.33	37	P	Pn	03 32 26.6	+1.7
	0.1nm216nm20nm,0.7s						
BNSI	Bone	5.42	8	P	Pn	03 32 28.9	+2.8
	0.6nm1µm177nm,0.8s						
SPSI	Sidrap Palu	5.82	4	P	Pn	03 32 32.8	+1.2
	0.3nm928nm79nm,0.6s						
GMJI	Gumukmas	6.05	284	P	Pn	03 32 37.8	+3.0
	0.4nm43nm,1.2s						
TTSI	Tana Toraja	6.73	4	P	Pn	03 32 47.1	+3.0
	0.2nm2µm65nm,0.8s						
PWJI	Pagerwojo	7.69	283	P	Pn	03 33 01.2	+4.0
	0.2nm39nm,0.9s						
BBKI	Banjar Baru	7.75	324	P	Pn	03 33 01.8	+3.8
	1.0nm5µm23nm,0.6s						
PCJI	Pacitan	8.25	281	P	Pn	03 33 07.8	+2.8
	53nm,1.1s						
KNRA	Kununurra	10.86	123	Pn	Pn	03 33 40.5	-0.2
KNRA	Kununurra	10.86	123	P	Pn	03 33 41.1	+0.5
TOLI2	Tolitoli	10.94	7	P	Pn	03 33 44.1	+2.4
MBWA	Marble Bar	11.29	178	Pn	Pn	03 33 44.8	-1.8
MBWA	Marble Bar	11.29	178	P	Pn	03 33 45.2	-1.4
PSA00	Pilbara Seismi	11.71	178	Pn	Pn	03 33 50.6	-1.6
PSA00	Pilbara Seismi	11.71	178	P	Pn	03 33 50.9	-1.4
MTN	Manton Dam	11.92	106	Pn	Pn	03 33 53.5	-1.6
LEM	Lembang	12.00	283	P	Pn	03 33 53.3	-3.2
	170nm,0.3s,baz=149,slow=9.2,SNR=24						
GIRL	Giralia	13.68	200	Pn	Pn	03 34 18.3	-0.9
GIRL	Giralia	13.68	200	P	Pn	03 34 17.9	-1.3
FAKI	Fak Fak	14.50	63	Pn	Pn	03 34 28.5	-1.8
FAKI	Fak Fak	14.50	63	P	Pn	03 34 28.8	-1.5
	32nm,0.7s						
SIJI	Sorong	14.79	54	P	Pn	03 34 33.2	-0.9
	1.2nm,0.3s,baz=217,slow=7.8,SNR=6.3						
SIJI				LR	LR	03 40 06.9	
	comp=Z,94nm,21.5s,baz=72,slow=36						
	12nm,0.6s						
MEEK	Meekatharra	16.76	182	P	Pn	03 34 58.9	-0.3
WB0	Warramunga Arr	17.56	126	P	P	03 35 10.6	+0.8
WB0				IAmb	IAmb	03 35 12.1	
	comp=Z,6.2nm,0.7s						
WRA	Warramunga Arr	17.61	127	P	P	03 35 10.5	+0.2
	comp=Z,0.4nm,0.3s,baz=299,slow=13,SNR=18						
WRA				S	Sn	03 38 08.3	-17
	comp=Z,0.6nm,0.5s,baz=349,slow=30,SNR=4.3						
	comp=Z,4.6nm,0.7s						
WRA	Warramunga Arr	17.61	127	P	Pn	03 35 09.8	0.0
WB2	Warramunga Arr	17.62	127	P	Pn	03 35 09.4	-0.5
WB2				IAmb	IAmb	03 35 14.4	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	17.78	126	P	Pn	03 35 12.0	+0.1
DAV	Davao City (W)	17.87	20	LR	LR	03 43 17.2	
	comp=Z,41nm,18.5s,baz=162,slow=41						
AS31	Alice Springs	19.56	137		Pn	03 35 33.5	+0.2
ASAR	Alice Springs	19.56	137	P	Pn	03 35 33.0	-0.3
	comp=Z,0.4nm,0.3s,baz=317,slow=11,SNR=14						
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	19.56	137	P	P	03 35 30.9	-0.7
BLDU	Ballidu	20.85	186	P	Pn	03 35 47.1	-1.4
QIS	Mount Isa	22.23	121	P	P	03 36 02.3	+1.8
NWAO	Narrogin (SRO)	23.09	185	P	P	03 36 11.1	+1.7
NWAO				IAmb	IAmb	03 36 15.2	
	comp=Z,22nm,1.1s						
OOD	Oodnadatta	23.58	142	P	P	03 36 16.2	+2.1
COEN	Coen	23.65	102	P	P	03 36 14.8	0.0
COEN				IAmb	IAmb	03 36 27.6	
	comp=Z,43nm,1.5s						
COEN	Coen	23.65	102	P	P	03 36 18.1	+3.2
	comp=Z,22nm,1.8s						
RPSI	Rantau Prapat	23.86	300	P	P	03 36 16.3	-0.5
PSI	Prapat	23.91	301	P	P	03 36 16.3	-1.1
	comp=Z,2.8nm,0.3s,baz=118,slow=9.6,SNR=4.7						
	comp=Z,2.8nm,0.3s						
PMG	Port Moresby	27.39	92	LR	LR	03 48 18.2	
	comp=Z,70nm,21.2s,baz=128,slow=38						
CTA	Charters Tower	27.87	115	LR	LR	03 48 09.2	
	comp=Z,92nm,19.1s,baz=302,slow=37						
STKA	Stephens Creek	30.10	140	P	P	03 37 14.5	+1.8
CMAR	Chiang Mai Arr	34.57	324	P	P	03 37 52.6	+0.6
	comp=Z,1.2nm,0.6s,baz=162,slow=6.5,SNR=6.1						
CMAR				LR	LR	03 52 58.6	
	comp=Z,48nm,20.4s,baz=175,slow=38						
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	34.57	324	P	P	03 37 52.1	0.0
JOW	Kunigami	37.43	13	LR	LR	03 52 14.5	
	comp=Z,42nm,21.8s,baz=134,slow=34						
PZH	PanZhiHua	39.95	335	P	P	03 38 39.8	+2.1
PZH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
PALK	Pallekele	42.09	292	LR	LR	03 58 03.7	
	comp=Z,40nm,18.2s,baz=228,slow=38						
CD2	Chengdu	43.17	340	P	P	03 39 03.3	-0.6
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
XAN	Xi'an	44.72	348	P	P	03 39 15.6	-0.6
XAN				pP	pP	03 39 25.0	-4.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H08S2	Diego Garcia H	46.36	269	T	T	04 28 53.7	
	baz=96,slow=75,SNR=50						
H08S3	Diego Garcia H	46.37	269	T	T	04 28 48.8	
	baz=96,slow=75,SNR=32						
H08S1	Diego Carcia H	46.38	269	T	T	04 28 58.6	
	baz=96,slow=75,SNR=41						
KSRS	Korea Array	47.69	9	LR	LR	03 59 37.9	
	comp=Z,14nm,20.2s,baz=120,slow=36						
LZH	Lanzhou	47.94	343	⇑P	P	03 39 44.6	+3.0
LZH				pP	pP	03 39 54.3	-1.0
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC	Hu-ho-hao-te	50.91	352	*e*P	P	03 40 07.6	+3.4
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
GTA	Gaotai	52.23	341	*e*P	P	03 40 15.6	+1.5
GTA				pP	pP	03 40 23.8	-4.0
GTA				sP	sP	03 40 27.1	-6.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
USRK	Ussuriysk Ar.	54.95	11	P	P	03 40 33.0	-0.7
	comp=Z,1.7nm,0.6s,baz=206,slow=7.6,SNR=2.7						
	comp=Z,1.7nm,0.6s						
USRK	Ussuriysk Ar.	54.95	11	P	P	03 40 31.3	-2.5
SONM	Songino Array	58.53	350	P	P	03 40 59.1	-0.1
	comp=Z,2.5nm,0.7s,baz=166,slow=8.3,SNR=12						
	comp=Z,2.5nm,0.7s						
SONM	Songino Array	58.53	350	P	P	03 40 59.1	-0.1
SONM				IAmb	IAmb	03 40 59.6	
	comp=Z,1.7nm,0.7s						
WMQ	Urumqi	60.64	334	*e*P	P	03 41 14.9	+1.2
KSH	Kashi	63.47	324	P	P	03 41 33.3	+0.4
KSH				pP	pP	03 41 39.6	-7.5
KSH				sP	sP	03 41 46.0	-6.8
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KBL	Kabul	64.92	315	P	P	03 41 41.3	-1.3
MK31	Makanchi Array	65.34	333	P	P	03 41 43.4	-1.5
MK31				IAmb	IAmb	03 41 45.4	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	65.34	333	P	P	03 41 44.2	-0.6
	comp=Z,3.2nm,0.7s,baz=145,slow=7.3,SNR=23						
	comp=Z,3.2nm,0.7s						
MKAR	Makanchi Array	65.34	333	P	P	03 41 43.6	-1.2
AAK	Ala-Archa	66.35	325	P	P	03 41 51.2	-0.4
AAK				IAmb	IAmb	03 41 52.5	
	comp=Z,3.3nm,0.8s						
GAR	Garm	66.60	320	P	P	03 41 51.7	-1.5
CHGR	Chuyangaron	67.14	319	P	P	03 41 54.7	-1.9
KK31	Karatay Array	68.92	324	P	P	03 42 07.3	-0.4
KK31				IAmb	IAmb	03 42 08.6	
	comp=Z,1.9nm,1.1s						
KKAR	Karatay Array	68.92	324	P	P	03 42 07.1	-0.5
ZAA0	Zalesovo Array	69.92	339	P	P	03 42 12.8	-0.7
ZAA0				IAmb	IAmb	03 42 13.7	
	comp=Z,3.3nm,0.7s						
ZALV	Zalesovo Beam	69.92	339	P	P	03 42 12.1	-1.4
	comp=Z,2.1nm,0.5s,baz=146,slow=6.2,SNR=7.2						
	comp=Z,2.1nm,0.5s						
ABKAR	Akbulak array	78.43	325	P	P	03 43 01.6	-1.6
BOSA	Boshof	88.95	241	P	P	03 43 58.7	+1.0
	comp=Z,2.7nm,1.0s,baz=63,slow=9.0,SNR=3.6						
	comp=Z,2.7nm,1.0s						
BOSA	Boshof	88.95	241	P	P	03 43 58.8	+1.0
BOSA				IAmb	IAmb	03 44 04.8	
	comp=Z,5.8nm,1.4s						
FINES	FINESS Array B	100.11	331	P	Pdif	03 44 48.1	+0.3
	comp=Z,0.8nm,0.7s,baz=63,slow=6.4,SNR=2.1						
TORD	Torodi Ar. Bea	118.96	280	PKP	PKiKP	03 49 53.6	+1.6
	comp=Z,1.2nm,0.6s,baz=81,slow=2.9,SNR=9.0						

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*SJA **23** 03:43:11.3±0.6,22°.04S×67°.45W,h210^{km}±3^{km},ML4.8, MW4.6*

*NEIC **23** 03:43:12.9±2.3,22°.03S±0°.06×67°.33W±0°.08,h175^{km}±5^{km}, mb4.9/357,Mww5.0,Mwr5.2(GUC),Error ellipse: s-maj=10.9km s-min=8.4km az=79.0*

*IDC **23** 03:43:12.6±0.6,21°.99S×67°.27W,h171^{km}±5^{km},mb4.3/16, mbtmp4.8/22,MS3.6/8,Error ellipse: s-maj=9.6km s-min=8.5km az=95.0*

*VAO **23** 03:43:13.3±0.3,21°.97S×67°.33W,h175^{km},mb5.0*

*GUC **23** 03:43:14.3±0.8,22°.02S×67°.69W,h190^{km}±5^{km},ML5.2*

*SCB **23** 03:43:15.7±2.0,22°.04S×67°.47W,h143^{km}±26^{km},ML4.8/10, MW4.4,Error ellipse: s-maj=9.2km s-min=4.9km az=0.0*

*NEIC **23** 03:43:17,22°.03S×67°.47W,h180^{km},Moment Tensor Solution. Duration: 10^s.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.23; M$_{\theta\theta}$0.27; M$_{\phi\phi}$0.96; M$_{r\theta}$-0.55; M$_{\theta\phi}$0.20; M$_{\phi r}$-3.42; Fault plane solution: M$_0$3.65000×10^{16} NP1: φ$_s$197.00000°,δ9.00000°,λ-82.00000°. NP2:φ$_s$9.00000°, δ81.00000°,λ-91.00000°. Principal axes: T 3.5295, Plg36.0000°, Azm100.0000°; N 0.2270, Plg1.0000°, Azm10.0000°; P -3.7564, Plg54.0000°, Azm278.0000°;*

*GCMT **23** 03:43:18.9±0.3,22°.24S±0°.02×67°.57W±0°.02,h186^{km}±3^{km}, MW5.0/97,Moment Tensor Solution. s15,c16; s97,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.98±.12; M$_{\theta\theta}$-0.14±.16; M$_{\phi\phi}$1.12±.19; M$_{r\theta}$0.19±.08; M$_{\theta\phi}$1.85±.18; M$_{\phi r}$-3.34±.12; Best double couple: M$_0$3.96300×10^{16} NP1:φ$_s$254.00000°,δ29.00000°,λ-17.00000°. NP2: φ$_s$360.00000°,δ82.00000°,λ-118.00000°. Principal axes: T 4.0500, Plg31.0000°, Azm112.0000°; N -0.1740, Plg28.0000°, Azm4.0000°; P -3.8760, Plg46.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 03:43:14.0±0.4,**22°.05S**±0°.03×**67°.43W**±0°.03,**h190**^{km}±3^{km}, **n730, σ1^s.52**/682,**mb4.8**/186,**54C-56D,Fault plane solution: NP1:**φ$_s$247.11638°,δ45.84692°,λ-21.56845°. **NP2:**φ$_s$352.51132°,δ74.70701°,λ-133.76778°. **Principal axes:** T Plg17.8215°, Azm113.4277°; N Plg41.8546°, Azm6.6902°; P Plg42.7701°, Azm220.7280°; **Fault plane solution: NP1:**φ$_s$0.58657°,δ80.04135°,

λ-94.21016°. **NP2:**ϕs203.64439°,δ10.80376°,
λ-67.30915°. **Principal axes:** T Plg34.9099°,
Azm94.2160°; N Plg4.1466°, Azm1.3159°; P Plg54.7715°,
Azm265.4233°; **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.14	218		Pn	03 43 44.2	+0.1
AF01	San Pedro de A	1.14	218	⇑*i*P	Pn	03 43 44.3	+0.1
AF01				*i* S	Sn	03 44 07.6	+0.1
LVC	Limon Verde	1.48	248	P	Pn	03 43 46.6	-0.5
	4µm,0.5s,baz=74,slow=6.0,SNR=5885						
LVC				S	Sn	03 44 10.7	-2.0
	788nm,0.3s,baz=247,slow=19,SNR=40						
LVC	Limon Verde	1.48	248	*e*P	Pn	03 43 46.6	-0.5
LVC				*i* S	Sn	03 44 10.5	-2.2
LVC	Limon Verde	1.48	248	P	Pn	03 43 46.6	-0.5
LVC	Limon Verde	1.48	248	*e*P	Pn	03 43 46.6	-0.5
LVC				*e*S	Sn	03 44 13.2	+0.5
LVC				IAML		03 44 15.9	
	comp=Z,1µm,0.2s						
LVC	Limon Verde	1.48	248	*e*P	Pn	03 43 46.6	-0.5
PB09	IPOC Station P	1.71	278	Pn	Pn	03 43 48.8	-0.2
PB09	IPOC Station P	1.71	278	⇑*i*P	Pn	03 43 48.2	-0.7
PB09				*i* S	Sn	03 44 13.8	-2.3
PB09	IPOC Station P	1.71	278	P	Pn	03 43 48.8	-0.2
PB09				IAML		03 44 17.2	
	comp=Z,3µm,1.8s						
PB09	IPOC Station P	1.71	278	*e*P	Pn	03 43 48.0	-1.0
PB09				*e*S	Sn	03 44 16.2	+0.2
PB09				*e*S	Sn	03 44 17.7	+1.7
PB09				IAML		03 44 18.5	
	comp=Z,3µm,0.1s						
YJA	Yavi	1.78	95	P	Pn	03 43 49.7	-0.3
YJA	Yavi	1.78	95	*e*P	Pn	03 43 50.1	+0.2
YJA				*e*S	Sn	03 44 18.7	+0.9
YJA				IAML		03 44 21.1	
	comp=Z,890nm,0.6s						
MOCB	Mochara	1.84	65	P	Pn	03 43 50.5	-0.1
MOCB				S	Sn	03 44 15.1	-3.9
MOCB				IAML		03 44 17.4	
	comp=Z,6µm,1.4s						
PB06	IPOC Station P	2.09	251	Pn	Pn	03 43 52.2	-0.8
PB06	IPOC Station P	2.09	251	⇑*i*P	Pn	03 43 52.1	-0.8
PB06				*i* S	Sn	03 44 21.5	-1.7
PB06	IPOC Station P	2.09	251	P	Pn	03 43 52.2	-0.8
PB06				IAML		03 44 23.2	
	comp=Z,3µm,1.0s						
PB06	IPOC Station P	2.09	251	*e*P	Pn	03 43 52.0	-0.9
PB06				*e*S	Sn	03 44 22.0	-1.1
PB06				*e*S	Sn	03 44 22.1	-1.1
PB06				IAML		03 44 25.5	
	comp=Z,2µm,0.3s						
PB01	IPOC Station P	2.16	297	Pn	Pn	03 43 53.0	-0.7
PB01	IPOC Station P	2.16	297	⇑*i*P	Pn	03 43 53.0	-0.7
PB01				*i* S	Sn	03 44 21.9	-2.6
PB01				IAML		03 44 23.8	
	comp=E,13µm,0.1s						
PB01	IPOC Station P	2.16	297	P	Pn	03 43 53.2	-0.4
PB01				IAML		03 44 23.3	
	comp=E,4µm,0.2s						
PB01	IPOC Station P	2.16	297	*e*P	Pn	03 43 52.8	-0.8
PB01				*e*S	Sn	03 44 23.1	-1.3
PB01				IAML		03 44 26.7	
	comp=Z,5µm,0.2s						
HJA	Humahuaca	2.19	122	*e*P	Pn	03 43 54.4	+0.1
HJA				*e*S	Sn	03 44 25.9	+0.3
HJA				IAML		03 44 32.0	
	comp=Z,1µm,0.5s						
PB15	IPOC Station P	2.22	238		Pn	03 43 53.9	-0.5
PB15	IPOC Station P	2.22	238	⇑*i*P	Pn	03 43 53.9	-0.5
PB15				*i* S	Sn	03 44 23.7	-2.0
PB15	IPOC Station P	2.22	238	P	Pn	03 43 53.5	-0.8
PB15				IAML		03 44 26.8	
	comp=Z,18µm,0.2s						
PB15	IPOC Station P	2.22	238	*e*P	Pn	03 43 53.8	-0.5
PB15				*e*S	Sn	03 44 24.6	-1.1
PB15				IAML		03 44 26.7	
	comp=Z,23µm,0.2s						
PB07	IPOC Station P	2.31	277	Pn	Pn	03 43 54.6	-0.7
PB07	IPOC Station P	2.31	277	⇑*i*P	Pn	03 43 54.4	-0.9
PB07				*i* S	Sn	03 44 24.5	-2.9
PB07				IAML		03 44 27.7	
	comp=E,9µm,0.2s						
PB07	IPOC Station P	2.31	277	P	Pn	03 43 54.8	-0.5
PB07				IAML		03 44 29.3	
	comp=E,4µm,0.2s						
PB07	IPOC Station P	2.31	277	*e*P	Pn	03 43 54.3	-1.0
PB07				*e*S	Sn	03 44 25.7	-1.7
PB07				IAML		03 44 28.9	
	comp=Z,5µm,0.7s						
PB02	IPOC Station P	2.41	287	Pn	Pn	03 43 55.5	-0.9
PB02	IPOC Station P	2.41	287	⇑*i*P	Pn	03 43 55.4	-0.9
PB02				*i* S	Sn	03 44 26.6	-2.7
PB02				IAML		03 44 28.3	
	comp=E,11µm,0.2s						
PB02	IPOC Station P	2.41	287	P	Pn	03 43 55.6	-0.8
PB02				S	Sn	03 44 24.5	-4.8
PB02				IAML		03 44 32.0	
	comp=E,7µm,0.2s						
PB02	IPOC Station P	2.41	287	*e*P	Pn	03 43 55.3	-1.0
PB02				*e*P	Pn	03 43 55.4	-0.9
PB02				*e*S	Sn	03 44 27.8	-1.5
PB02				IAML		03 44 31.9	
	comp=Z,8µm,0.2s						
PB08	IPOC Station P	2.49	319	Pn	Pn	03 43 57.9	+0.3
PB08	IPOC Station P	2.49	319	⇑*i*P	Pn	03 43 57.9	+0.3
PB08				*i* S	Sn	03 44 30.6	-0.9
PB08				IAML		03 44 32.2	
	comp=E,5µm,0.3s						
PB08	IPOC Station P	2.49	319	P	Pn	03 43 58.0	+0.4
PB08				IAML		03 44 31.8	
	comp=E,4µm,0.9s						
PB08	IPOC Station P	2.49	319	*e*P	Pn	03 43 57.0	-0.6
PB08				*e*S	Sn	03 44 31.3	-0.2
PB08				IAML		03 44 33.3	
	comp=Z,2µm,0.4s						
PB04	IPOC Station P	2.54	263	Pn	Pn	03 43 57.0	-0.9
PB04	IPOC Station P	2.54	263	⇑*i*P	Pn	03 43 56.9	-0.9
PB04				*i* S	Sn	03 44 29.5	-2.6
PB04				IAML		03 44 34.6	
	comp=E,5µm,0.3s						
PB04	IPOC Station P	2.54	263	P	Pn	03 43 57.0	-0.9
PB04				IAML		03 44 34.7	
	comp=E,3µm,0.2s						
PB04	IPOC Station P	2.54	263	*e*P	Pn	03 43 56.9	-0.9
PB04				*e*P	Pn	03 43 57.0	-0.9
PB04				*e*S	Sn	03 44 30.3	-1.8
PB04				IAML		03 44 33.3	
	comp=Z,3µm,0.1s						
PATCX	Punta Patache	2.82	295	Pn	Pn	03 43 60.0	-1.1
PATCX	Punta Patache	2.82	295	⇑*i*P	Pn	03 43 59.8	-1.3
PATCX				*i* S	Sn	03 44 34.6	-3.1
PATCX				IAML		03 44 35.8	
	comp=N,8µm,0.2s						
PATCX	Punta Patache	2.82	295	*e*P	Pn	03 43 59.8	-1.3
PATCX				*e*P	Pn	03 43 59.9	-1.1
PATCX				*e*P	Pn	03 44 00.0	-1.1
PATCX				*e*P	Pn	03 44 00.0	-1.1
PATCX				*e*P	Pn	03 44 00.0	-1.1
PATCX				*e*S	Sn	03 44 35.6	-2.2
PATCX				IAML		03 44 38.1	
	comp=Z,4µm,1.1s						
HMBC	Humberstone	2.89	307	⇑*i*P	Pn	03 44 00.5	-1.5
HMBC				*i* S	Sn	03 44 36.2	-3.3
HMBC				IAML		03 44 39.6	
	comp=N,9µm,0.7s						
TA01	Diego Aracena	2.96	299	Pn	Pn	03 44 01.2	-1.5
TA01	Diego Aracena	2.96	299	⇑*i*P	Pn	03 44 01.1	-1.6
TA01				*i* S	Sn	03 44 37.5	-3.2
TA01				IAML		03 44 38.7	
	comp=E,10µm,0.3s						
TA01	Diego Aracena	2.96	299	*e*P	Pn	03 44 01.2	-1.5
TA01				*e*S	Sn	03 44 38.2	-2.5
TA01				IAML		03 44 40.7	
	comp=Z,2µm,0.2s						
PB11	IPOC Station P	3.08	317	Pn	Pn	03 44 03.2	-1.2
PB11	IPOC Station P	3.08	317	⇑*i*P	Pn	03 44 03.1	-1.3
PB11				*i* S	Sn	03 44 40.5	-3.2
PB11	IPOC Station P	3.08	317	*e*P	Pn	03 44 03.1	-1.3
PB11				*e*S	Sn	03 44 35.9	-7.7
PB11				*e*S	Sn	03 44 41.2	-2.4
PB11				IAML		03 44 43.7	
	comp=Z,4µm,0.2s						
SLA	San Lorenzo	3.19	147	*e*P	Pn	03 44 05.8	+0.2
SLA				*e*S	Sn	03 44 45.2	-0.8
SLA				IAML		03 45 33.4	
	comp=Z,259nm,2.8s						
PB10	IPOC Station P	3.24	243	Pn	Pn	03 44 04.7	-1.2
PB10	IPOC Station P	3.24	243	⇑*i*P	Pn	03 44 04.7	-1.2
PB10				*i* S	Sn	03 44 42.5	-4.1
PB10				IAML		03 44 49.0	
	comp=E,3µm,0.3s						
PB10	IPOC Station P	3.24	243	P	Pn	03 44 04.7	-1.2
PB10				IAML		03 44 48.8	
	comp=E,1µm,0.6s						
PB10	IPOC Station P	3.24	243	*e*P	Pn	03 44 04.8	-1.2
PB10				*e*S	Sn	03 44 44.0	-2.7
PB10				IAML		03 44 47.1	
	comp=Z,1µm,0.2s						
GO02	Mina Guanaco	3.68	212	Pn	Pn	03 44 11.1	-0.7
GO02	Mina Guanaco	3.68	212	⇑*i*P	Pn	03 44 11.1	-0.7
GO02				*i* S	Sn	03 44 54.1	-3.0
GO02	Mina Guanaco	3.68	212	*e*P	Pn	03 44 11.0	-0.7
GO02				*e*S	Sn	03 44 54.2	-2.9
PB14	IPOC Station P	3.75	226	Pn	Pn	03 44 11.4	-1.2
PB14	IPOC Station P	3.75	226	*e*P	Pn	03 44 11.4	-1.2
PB14				*e*S	Sn	03 44 54.5	-4.1
PB14				IAML		03 44 58.0	
	comp=E,1µm,0.2s						
PB14	IPOC Station P	3.75	226	*e*P	Pn	03 44 11.0	-1.6
PB14				*e*P	Pn	03 44 11.6	-1.1
PB14				*e*S	Sn	03 44 55.4	-3.2
PB14				IAML		03 44 58.1	
	comp=Z,2µm,0.6s						
PB16	IPOC Station P	4.18	332	Pn	Pn	03 44 18.1	-0.1
PB16	IPOC Station P	4.18	332	P	Pn	03 44 18.2	-0.1
PB16	IPOC Station P	4.18	332	*e*P	Pn	03 44 18.0	-0.3
PB16				*e*S	Sn	03 45 07.1	-1.5
PB16				IAML		03 45 17.2	
	comp=Z,602nm,0.4s						
FSA	Cafayete	4.26	162	*e*P	Pn	03 44 19.0	+0.2
FSA				*e*S	Sn	03 44 48.5	-21
PB12	IPOC Station P	4.37	321	Pn	Pn	03 44 17.8	-2.5
PB12	IPOC Station P	4.37	321	*e*P	Pn	03 44 17.7	-2.5
PB12				*e*S	Sn	03 45 08.0	-4.2
PB12				IAML		03 45 09.4	
	comp=Z,950nm,0.3s						
AP01	Chacalluta	4.57	323	Pn	Pn	03 44 20.4	-2.3
AP01	Chacalluta	4.57	323	*e*P	Pn	03 44 21.0	-1.7
AP01				IAML		03 45 21.8	
	comp=Z,2µm,0.2s						
AC01	Pan de Azucar	5.01	215	Pn	Pn	03 44 25.9	-2.3
AC01	Pan de Azucar	5.01	215	*e*P	Pn	03 44 26.0	-2.3
AC01				*e*S	Sn	03 45 22.1	-4.7
AC01				IAML		03 45 27.8	
	comp=Z,568nm,0.7s						
AC02	Maricunga	5.01	198	Pn	Pn	03 44 27.9	-1.0
AC02	Maricunga	5.01	198	*e*S	Sn	03 45 21.4	-6.3
AC02				*e*S	Sn	03 45 21.4	-6.3
AC02				IAML		03 46 02.5	
	comp=Z,349nm,0.7s						
BBOE	La Paz, Chanca	5.23	354	P	Pn	03 44 32.9	+1.1
BBOD	La Paz, Gloria	5.49	348	P	Pn	03 44 36.1	+1.0
LPAZ	La Paz	5.77	353	P	Pn	03 44 37.8	-1.0
	comp=Z,81nm,0.3s,baz=172,slow=9.7,SNR=763						
LPAZ				S	Sn	03 45 41.1	-4.4
	comp=Z,24nm,0.7s,baz=138,slow=18,SNR=1.2						
LPAZ				LR	LR	03 47 23.8	
	comp=Z,387nm,19.7s,baz=149,slow=44						
LPAZ	La Paz	5.77	353	Pn	Pn	03 44 39.0	+0.3
LPAZ	La Paz	5.77	353	P	Pn	03 44 39.3	+0.6
AC06	Mina Casimiro	5.92	206		Pn	03 44 36.7	-3.4
GO03	Copiap	6.08	204		Pn	03 44 39.3	-3.0
AC04	Llanos de Chal	6.97	208		Pn	03 44 49.3	-4.4
LCO	Las Campanas	7.54	202		Pn	03 44 57.5	-4.0
CO01	Juntas del Tor	8.26	196		Pn	03 45 08.7	-2.1
SIV	San Ignacio	8.51	46	P	Pn	03 45 10.6	-3.4
	comp=Z,421nm,0.3s,baz=226,slow=10.0,SNR=1546						
SIV				S	Sn	03 46 35.1	-14
	comp=Z,34nm,0.4s,baz=236,slow=16,SNR=11						
CO05	La Serena	8.56	203	Pn	Pn	03 45 10.0	-4.5
GO04	Tololo Observa	8.64	200		Pn	03 45 11.8	-4.0
CO06	Fray Jorge	9.38	203	Pn	Pn	03 45 20.1	-5.2
ZON	Zonda	9.53	186	Pn	Pn	03 45 25.1	-2.2
CO02	Combarbal	9.66	199	Pn	Pn	03 45 24.6	-4.5
CPUP	Villa Florida	10.15	117	P	Pn	03 45 32.8	-2.6
	comp=Z,13nm,0.9s,baz=294,slow=11,SNR=22						
CPUP				S	Sn	03 47 04.8	-24
	comp=Z,7.5nm,0.4s,baz=295,slow=15,SNR=1.6						
CPUP	Villa Florida	10.15	117	*e*P	Pn	03 45 32.9	-2.4
PTLB	Pontes e Lacer	10.23	52	*e*P	Pn	03 45 33.1	-3.3
VA06	Catapilco	11.02	197	Pn	Pn	03 45 42.5	-4.1
VA03	San Esteban	11.03	194	Pn	Pn	03 45 43.2	-3.6
ROC1	El Roble	11.34	196	Pn	Pn	03 45 49.5	-1.4
VILB	Vilhena	11.37	38	*e*P	Pn	03 45 49.7	-1.5
PEL	Peldehue	11.43	194	Pn	Pn	03 45 51.2	-0.6
MT02	Curacav	11.64	196	Pn	Pn	03 45 50.8	-3.7
MT03	Universidad Ad	11.72	193	Pn	Pn	03 45 53.5	-2.2
MT09	Talagante	12.10	194	Pn	Pn	03 45 58.1	-2.4
VA05	Santo Domingo	12.14	197	Pn	Pn	03 45 56.7	-4.2
ETMB	Extrema	12.22	6	*e*P	Pn	03 45 59.6	-2.4
BO04	La Punta	12.22	193	Pn	Pn	03 46 01.4	-0.7
MT01	Popeta	12.25	195	Pn	Pn	03 46 00.8	-1.4
ITQB	Itaqui	12.33	130	Pn	Pn	03 46 02.4	-0.9
ITQB	Itaqui	12.33	130	*e*P	Pn	03 46 02.5	-0.9
SALV	Santo Antonio	12.67	63	*e*P	Pn	03 46 05.4	-2.3
BO01	Tunca	12.71	194	Pn	Pn	03 46 05.5	-2.6
NNA	Nana	13.45	317	P	Pn	03 46 18.4	+0.7
	comp=Z,93nm,0.8s,baz=150,slow=12,SNR=14						
NNA				S	S	03 48 52.2	+2.8
	comp=Z,9.4nm,0.3s,baz=205,slow=16,SNR=5.7						
NNA	Nana	13.45	317	Pn	Pn	03 46 17.7	+0.1
GO05	Huala	13.51	196	Pn	Pn	03 46 16.0	-2.1
SAML	Samuel	13.65	18	Pn	Pn	03 46 17.1	-3.0
SAML					P	03 46 17.6	-5.0
TRCB	Terra Rica	13.70	96	Pn	Pn	03 46 19.5	-1.2
TRCB	Terra Rica	13.70	96	*e*P	Pn	03 46 19.2	-1.5
ML02	Panimavida	14.11	193	Pn	Pn	03 46 23.9	-1.7
PTGB	Pitanga	14.35	104	*e*P	Pn	03 46 27.8	-1.1
PDRB	Porto dos Gac	14.57	46	*e*P	Pn	03 46 29.0	-2.5
ITAB	Concordia	14.83	113		Pn	03 46 34.0	-0.6
ITAB	Concordia	14.83	113	*e*P	Pn	03 46 34.2	-0.4
PCMB	Pacaembu	15.02	91	*e*P	Pn	03 46 35.5	-1.4
CPSB	Cacapava Do Su	15.05	126	*e*P	Pn	03 46 35.5	-1.7
CZSB	Cruzeiro do Su	15.12	340	*e*P	Pn	03 46 36.2	-2.0
BI05	Punta Hualpn	15.48	198	IAmb	IAmb	03 46 44.6	
	comp=Z,82nm,1.4s						
PLTB	Pedras Altas	15.66	131		Pn	03 46 42.1	-2.5
PLTB				IAmb	IAmb	03 46 45.2	
	comp=Z,61nm,0.8s						
CLDB	Colider	15.73	47	*e*P	Pn	03 46 44.2	-1.4
ITRB	Iturama	16.12	85	*e*P	P	03 46 49.4	-0.7
CNLB	Canela	16.59	119	*e*P	P	03 46 53.8	-1.3
TRQA	Tornquist	16.63	165	P	P	03 46 53.8	-1.7
TRQA				IAmb	IAmb	03 46 57.5	
	comp=Z,25nm,0.7s						
TIJ01	Guaruva-PR	17.18	105	*e*P	P	03 47 02.1	+0.4
BB19B	Bebedouro	17.61	90	*e*P	P	03 47 06.3	-0.1
TER01	Tubaro-SC	17.75	115	*e*P	P	03 47 06.8	-1.0
LR03	Panguipulli	18.03	192		P	03 47 09.8	-0.9
ATAH	Atahualpa	18.21	323	P	Pn	03 47 14.5	-1.1
	comp=Z,23nm,1.0s,baz=165,slow=4.6,SNR=18						
SNDB	Serra Nova Dou	18.38	60	*e*P	P	03 47 13.8	-0.9
RCLB	Rio Claro- Sao	18.42	95	*e*P	P	03 47 14.6	-0.7
LR04	Corral	18.50	195	P	P	03 47 15.7	0.0
IPMB	Ipameri, GO	18.50	81	*e*P	P	03 47 15.8	-0.3
PET01	Itanhaem-SP	18.66	101	*e*P	P	03 47 16.9	-0.8
PLCA	Paso Flores	18.82	187	P	P	03 47 19.3	0.0
	comp=Z,7.9nm,0.7s,baz=7.5,slow=12,SNR=42						
PLCA				PcP	PcP	03 51 39.5	+1.7
	comp=Z,1.7nm,0.8s,baz=285,slow=3.2,SNR=3.6						
PLCA				ScP	ScP	03 54 56.5	+0.9
	comp=Z,1.4nm,0.9s,baz=6.3,slow=9.2,SNR=3.3						
PLCA	Paso Flores	18.82	187	P	P	03 47 18.8	-0.6
PLCA	Paso Flores	18.82	187	*e*P	P	03 47 19.9	+0.6
VAO	Valinhos	18.93	97	*e*P	P	03 47 19.4	-1.3
LL04	Puerto Octay	19.27	192	P	P	03 47 24.1	-0.1
LL04				IAmb	IAmb	03 47 25.2	
	comp=Z,35nm,0.7s						
BDFB	Brasilia	19.44	74	P	P	03 47 24.9	-1.4
	comp=Z,53nm,0.7s,baz=253,slow=12,SNR=106						
BDFB	Brasilia	19.44	74	P	P	03 47 25.3	-1.0
BDFB	Brasilia	19.44	74	*e*P	P	03 47 25.2	-1.1
LL03	Petrohue	19.49	191	P	P	03 47 27.0	+0.5
MACA	Manacapuru-AM	19.88	20	*e*P	P	03 47 28.9	-2.0
LL05	Los Muermos	19.96	193	P	P	03 47 31.7	+0.1
LL05				IAmb	IAmb	03 47 34.9	
	comp=Z,48nm,0.9s						
PARB	Paraibuna	20.16	98	*e*P	P	03 47 32.4	-1.5
PEXB	Peixe	20.76	65	*e*P	P	03 47 38.9	-1.4
ITTB	Itaituba	20.91	34	*e*P	P	03 47 39.5	-2.4
LL02	Futaleuf	21.41	189	P	P	03 47 46.9	0.0
GO07	Milladeo Hill,	21.64	192	P	P	03 47 48.5	-0.8
GO07				IAmb	IAmb	03 47 51.2	
	comp=Z,40nm,0.7s						
MAN01	Angra dos Reis	21.70	97	*e*P	P	03 47 48.6	-1.5
DIAM	Diamantina, MG	22.60	85	*e*P	P	03 47 57.5	-1.5
AY01	Puyuhuapi	22.73	190	P	P	03 47 59.2	-0.3
JANB	Januaria	22.97	76	*e*P	P	03 48 00.4	-1.8
SMTB	Santa Maria do	23.14	59	*e*P	P	03 48 02.5	-1.2
PRPB	Parauapebas	23.21	50	*e*P	P	03 48 02.6	-1.6
DUB01	Friburgo-RJ	23.21	95	*e*P	P	03 48 03.4	-1.0
SDBA	SAO DESIDERIO	23.52	70	*e*P	P	03 48 05.4	-1.7
MALB	Monte Alegre	23.81	34	*e*P	P	03 48 09.1	-0.6
CAM01	Campos-RJ	23.90	94	*e*P	P	03 48 09.4	-1.1
OTAV	Otavalo	24.62	333	P	P	03 48 19.5	+1.9
OTAV	Otavalo	24.62	333	*e*P	P	03 48 17.8	+0.2
OTAV	Otavalo	24.62	333	*e*P	P	03 48 18.8	+1.2
SJMB	Sao Joao De Ma	24.81	87	*e*P	P	03 48 14.9	-3.9
FLOC	Florencia	24.82	340	*e*P	P	03 48 18.8	-0.1
ALF01	Guarapari-ES	24.90	92	*e*P	P	03 48 18.8	-0.8
GUVC	San Jose del G	24.96	348	*e*P	P	03 48 18.7	-1.4
BOAV	Boa Vista	25.21	16	*e*P	P	03 48 22.2	-0.2
GARC	Garzon, Huila	25.34	341	*e*P	P	03 48 24.1	+0.2
RIB01	Linhares ES	25.42	89	*e*P	P	03 48 22.6	-1.8
NAN01	Guarapari, ES	25.98	86	*e*P	P	03 48 27.4	-2.0
MCPB	Macapa, AP	26.25	37	*e*P	P	03 48 30.6	-1.2
GUA01	Guaratinga, BA	26.60	83	*e*P	P	03 48 33.7	-1.2
TMAB	Tom-Au,PA,Br	27.12	47	*e*P	P	03 48 39.0	-0.5
CHIC	Chingaza	27.22	346	*e*P	P	03 48 40.7	-0.2
CMC01	Camacan, BA	27.23	81	*e*P	P	03 48 39.5	-1.0
YOTC	Yotoco, Valle	27.30	340	*e*P	P	03 48 40.5	-0.8
ROSC	El Rosal	27.56	345	LR	LR	03 59 58.3	
	comp=Z,107nm,18.8s,baz=228,slow=36						
GDU01	Guandu, BA	27.73	77	*e*P	P	03 48 43.1	-1.9
SPBC	San Pablo de B	28.29	346	*e*P	P	03 48 50.4	+0.4
RUSC	La Rusia	28.31	348	*e*P	P	03 48 50.8	+0.1
PTBC	PUERTO BERRIO,	29.23	346	*e*P	P	03 48 53.3	-5.0
GO09	Cerro Castillo	29.42	186	P	P	03 48 58.4	-1.2
GO09				IAmb	IAmb	03 49 19.6	
	comp=Z,28nm,1.4s						
ROSB	Rosrio	29.57	53	*e*P	P	03 49 01.9	+0.6
ZARC	Zaragoza, Cauc	30.25	345	P	P	03 49 04.4	-2.8
ZARC	Zaragoza, Cauc	30.25	345	*e*P	P	03 49 04.8	-2.4
EFI	East Falkland	30.46	168	P	P	03 49 08.9	+0.3
MDP	Montagnes des	30.62	30	LR	LR	04 03 21.3	
	comp=Z,125nm,20.1s,baz=224,slow=40						
OCAC	Ocana	30.65	348	P	P	03 49 08.3	-2.6
NBPS	Pedro II - PI	30.68	59	*e*P	P	03 49 09.8	-1.4
BAUV	El Baul	30.80	359	P	P	03 49 11.1	-0.9
SDV	Santo Domingo	30.90	354	P	P	03 49 12.2	-0.9
	comp=Z,4.6nm,0.4s,baz=143,slow=5.1						
SDV				LR	LR	04 05 13.6	
	comp=Z,70nm,18.6s,baz=175,slow=43						
	comp=Z,4.6nm,0.4s						
SDV	Santo Domingo	30.90	354	P	P	03 49 10.5	-2.7
SDV				IAmb	IAmb	03 49 13.3	
	comp=Z,16nm,1.3s						
SDV	Santo Domingo	30.90	354	*e*P	P	03 49 11.7	-1.4
SDV	Santo Domingo	30.90	354	*e*P	P	03 49 12.6	-0.5
SDV	Santo Domingo	30.90	354	P	P	03 49 12.1	-1.0
SDV				pP	pP	03 49 48.7	-4.8
NBMA	Muriti-CE	31.24	67	*e*P	P	03 49 15.0	-1.1
NBPB	Pedra_Branca-C	31.53	63	*e*P	P	03 49 17.0	-1.5
MG03	Isla Dawson	31.84	183	P	P	03 49 21.2	+0.6
BIRV	Birongo	32.34	2	P	P	03 49 25.1	-0.4
BIRV				IAmb	IAmb	03 49 28.4	
	comp=Z,16nm,0.9s						
NBMO	Morrinhos-CE	32.45	59	*e*P	P	03 49 26.0	-0.6
SJCC	San Jacinto, C	32.64	346	P	P	03 49 27.1	-1.1
SJCC				IAmb	IAmb	03 49 29.2	
	comp=Z,32nm,1.3s						
SJCC	San Jacinto, C	32.64	346	*e*P	P	03 49 26.9	-1.4
USHA	Ushuaia	32.75	181	P	P	03 49 29.9	+1.3
	comp=Z,8.4nm,0.8s,baz=66,slow=7.4,SNR=2.0						
	comp=Z,8.4nm,0.8s						
BCIP	Isla Barro Col	33.32	337	P	P	03 49 35.0	+0.9
NBRF	Rio Formoso -	33.77	72	*e*P	P	03 49 36.4	-1.6
TOSP	Speyside	33.82	12	P	P	03 49 38.0	-0.3
URIC	Uribia, Colomb	33.84	352	P	P	03 49 35.8	-2.7
CDITO	Canoas	33.99	332	P	P	03 49 39.6	-0.3
CDITO				IAmb	IAmb	03 49 43.8	
	comp=Z,30nm,1.1s						
GRGR	Grenville	34.44	10	P	P	03 49 41.8	-1.8
RCBR	Riachuelo	34.47	67	P	P	03 49 42.5	-1.6
RCBR				IAmb	IAmb	03 49 45.5	
	comp=Z,32nm,0.9s						
RCBR	Riachuelo	34.47	67	*e*P	P	03 49 43.5	-0.6
RCBR	Riachuelo	34.47	67	P	P	03 49 43.5	-0.6
RCBR				pP	pP	03 50 27.1	+2.3
DRK0	Durika	34.77	332	P	P	03 49 48.6	+1.9
SRBA	San Rafael, Bu	34.79	332	P	P	03 49 49.0	+2.2
SRBA				IAmb	IAmb	03 49 50.7	
	comp=Z,29nm,1.3s						
HDC	Heredia	35.81	331	P	P	03 49 58.0	+2.4
HDC				IAmb	IAmb	03 50 00.8	
	comp=Z,35nm,0.9s						
JTS	Las Juntas de	36.45	330	P	P	03 50 02.9	+2.1
	comp=Z,9.2nm,0.7s,baz=218,slow=13,SNR=8.2						
	comp=Z,9.2nm,0.7s						
JTS	Las Juntas de	36.45	330	P	P	03 50 02.9	+2.1
JTS	Las Juntas de	36.45	330	P	P	03 50 03.6	+2.8
ORTG	Ortega, Santa	36.75	329	P	P	03 50 02.8	-0.6
ORTG				IAmb	IAmb	03 50 06.7	
	comp=Z,16nm,0.8s						
MPOM	Morne Pois Mar	36.83	11	*e*	P	03 50 03.8	-0.1
FDF	Fort de France	37.07	10	P	P	03 50 04.6	-1.5
DSLB	Salisbury	37.71	9	*e*	P	03 50 12.7	+1.3
MAGL	Barre de l’ile	38.24	10	*e*	P	03 50 16.8	+1.0
CBE	Ff, Capester	38.31	9	*e*	P	03 50 17.6	+1.2
RPN	Rapa Nui	38.32	254	LR	LR	04 02 59.6	
	comp=Z,115nm,18.2s,baz=122,slow=31						
ABD	La Joyeuse, An	38.72	9	*e*	P	03 50 17.2	-2.6
BPA	Boggy Peak	39.23	8	*e*	P	03 50 22.9	-1.2
ANBD	Bethesda, Anti	39.25	9	*e*	P	03 50 22.3	-1.8
PDPR	Patillas Dam,	39.84	2	IAmb	IAmb	03 50 28.4	
	comp=Z,22nm,0.8s						
OBIP	Obispado Ponce	39.85	1	P	P	03 50 27.0	-2.1
ANWB	Willy Bob	39.85	8	*e*	P	03 50 28.2	-1.0
SJG	San Juan	39.93	2	P	P	03 50 27.7	-2.1
	comp=Z,23nm,0.6s,baz=130,slow=7.9						
	comp=Z,23nm,0.6s						
SJG	San Juan	39.93	2	P	P	03 50 27.7	-2.1
SJG	San Juan	39.93	2	P	P	03 50 28.6	-1.2
GCPR	Guaynabo City	40.13	2	P	P	03 50 29.0	-2.4
GCPR				IAmb	IAmb	03 50 32.9	
	comp=Z,22nm,0.8s						
AOPR	Arecibo Observ	40.15	1	P	P	03 50 29.5	-2.1
TGUH	Tegucigalpa,Un	40.82	330	P	P	03 50 37.6	+0.3
TGUH				IAmb	IAmb	03 50 39.7	
	comp=Z,54nm,1.2s						
ORCD	Orcadas	41.79	163	P	P	03 50 43.9	-0.6
MTO3	Montecristo	42.12	327	IAmb	IAmb	03 50 50.7	
	comp=Z,49nm,1.5s						
PETF	Flores	44.53	329	P	P	03 51 06.2	-0.7
PETF				IAmb	IAmb	03 51 09.5	
	comp=Z,55nm,1.3s						
CMIG	Matias Romero	47.29	323	P	P	03 51 28.4	-0.2
	comp=Z,4.9nm,0.7s,baz=158,slow=3.3,SNR=7.2						
	comp=Z,4.9nm,0.7s						
TLIG	Tlapa	49.79	320	P	P	03 51 49.1	+1.4
DWPF	Disney Wildern	51.67	344	P	P	03 52 01.8	+0.4
	baz=163						
TIGA	Tifton	55.39	343	P	P	03 52 28.5	0.0
	baz=162						
352A	Blakely	55.80	342	P	P	03 52 31.4	0.0
	baz=160						
BRAL	Brewton	56.16	340	P	P	03 52 34.4	+0.5
	baz=158						
BRAL	Brewton	56.16	340	P	P	03 52 34.1	+0.2
	baz=158						
ZAIG	Zacatecas	56.18	320	IAmb	IAmb	03 52 37.3	
	comp=Z,12nm,0.8s						
NHSC	New Hope	56.18	347	P	P	03 52 34.5	+0.5
	baz=166						
154A	Montrose	56.38	344	P	P	03 52 35.7	+0.3
	baz=162						

250A	Grady	56.67	341	IAmb	IAmb	03 52 37.9	
	comp=Z,13nm,0.8s						
250A	Grady	56.67	341	P	P	03 52 37.5	0.0
	baz=159						
HAW	Hawthorne Fire	56.73	346	P	P	03 52 38.4	+0.4
	baz=164						
152A	Waverly Hall	56.86	343	IAmb	IAmb	03 52 39.2	
	comp=Z,10nm,0.8s						
152A	Waverly Hall	56.86	343	P	P	03 52 38.6	-0.3
	baz=161						
Y57A	Sumter	57.10	347	P	P	03 52 41.0	+0.5
	baz=166						
Y57A				P	P	03 52 41.0	+0.5
	baz=166						
GOGA	Godfrey	57.23	344	IAmb	IAmb	03 52 42.3	
	comp=Z,35nm,1.5s						
GOGA	Godfrey	57.23	344	P	P	03 52 41.4	0.0
	baz=162						
GOGA	Godfrey	57.23	344	P	P	03 52 41.2	-0.2
	baz=162,SNR=5.3						
JSC	Jenkinsville	57.54	346	P	P	03 52 44.1	+0.5
	baz=165						
HODGE	Hodges	57.72	345	P	P	03 52 45.2	+0.3
	baz=164						
BIRD	Birdtown, Kers	57.72	347	P	P	03 52 45.3	+0.5
	baz=166						
Y52A	Lilburn	57.81	344	IAmb	IAmb	03 52 46.0	
	comp=Z,11nm,0.8s						
Y52A	Lilburn	57.81	344	P	P	03 52 45.6	+0.1
	baz=162						
Y52A				P	P	03 52 45.6	+0.1
	baz=162						
LRAL	Lakeview Retre	57.87	341	P	P	03 52 44.8	-1.1
LRAL	Lakeview Retre	57.87	341	P	P	03 52 45.6	-0.3
	baz=158						
LRAL	Lakeview Retre	57.87	341	P	P	03 52 45.6	-0.3
	baz=158,SNR=5.4						
W57A	Gilead	58.12	348	IAmb	IAmb	03 52 49.7	
	comp=Z,29nm,1.3s						
146A	Union	58.17	339	P	P	03 52 48.1	+0.1
	baz=156						
PAULI	Pauline	58.18	346	IAmb	IAmb	03 52 49.3	
	comp=Z,15nm,0.6s						
PAULI	Pauline	58.18	346	P	P	03 52 47.7	-0.3
	baz=164						
Z47A	Carrollton	58.36	340	P	P	03 52 48.9	-0.4
	baz=157						
KMSC	Kings Mountain	58.39	347	IAmb	IAmb	03 52 51.8	
	comp=Z,26nm,1.1s						
KMSC	Kings Mountain	58.39	347	P	P	03 52 49.8	+0.3
	baz=165						
KMSC	Kings Mountain	58.39	347	P	P	03 52 50.1	+0.7
	baz=165,SNR=8.8						
Y49A	Blount Mountai	58.46	341	IAmb	IAmb	03 52 50.2	
	comp=Z,9.6nm,0.8s						
HKT	Hockley	58.48	331	P	P	03 52 50.8	+0.7
BG3	Lake Jocassee	58.60	345	IAmb	IAmb	03 52 52.1	
	comp=Z,13nm,0.7s						
CASEE	Lake Jocassee	58.60	345	P	P	03 52 51.6	+0.6
	baz=163						
X51A	Calhoun	58.69	343	P	P	03 52 51.3	-0.3
	baz=161						
X51A				P	P	03 52 51.3	-0.3
	baz=161						
833A	Chaparral WMA,	58.82	327	P	P	03 52 53.3	+0.7
	baz=145						
833A	Chaparral WMA,	58.82	327	P	P	03 52 53.6	+1.0
	baz=145,SNR=17						
FPAL	Fort Paine	58.87	342	IAmb	IAmb	03 52 53.2	
	comp=Z,9.6nm,0.8s						
W52A	Murphy	58.95	344	P	P	03 52 53.8	+0.4
	baz=162						
V55A	Taylorsville	59.04	347	P	P	03 52 54.8	+0.8
	baz=165						
V55A				P	P	03 52 54.8	+0.8
	baz=165						
VNA3	Neumayer Olymp	59.12	161	P	P	03 52 55.6	+1.4
X48A	Hartselle	59.20	341	IAmb	IAmb	03 52 55.7	
	comp=Z,19nm,0.8s						
X48A	Hartselle	59.20	341	P	P	03 52 54.8	-0.3
	baz=159						
V53A	Saluda	59.22	345	IAmb	IAmb	03 52 56.2	
	comp=Z,17nm,0.7s						
V53A	Saluda	59.22	345	P	P	03 52 55.7	+0.5
	baz=163						
V53A				P	P	03 52 55.7	+0.5
	baz=163						
VNA1	Neumayer--Stat	59.31	161	P	P	03 52 57.2	+1.9
U56A	King	59.35	348	IAmb	IAmb	03 52 57.6	
	comp=Z,15nm,0.7s						
U56A	King	59.35	348	P	P	03 52 57.1	+1.0
	baz=166						
U56A				P	P	03 52 57.1	+1.0
	baz=166						
W50A	Signal Mountai	59.41	343	P	P	03 52 56.1	-0.5
	baz=161						
CPCT	Cooper Cave	59.44	344	IAmb	IAmb	03 52 57.3	
	comp=Z,14nm,0.8s						
TKL	Tuckaleechee C	59.44	345	P	P	03 52 56.8	+0.1
	comp=Z,15nm,0.6s,baz=166,slow=8.1,SNR=44						
TKL				PcP	PcP	03 53 44.5	+2.2
	comp=Z,2.2nm,0.5s,baz=117,slow=1.2,SNR=3.7						
TKL				LR	LR	04 22 41.1	
	comp=Z,31nm,18.1s,baz=180,slow=40						
	comp=Z,15nm,0.6s						
TKL	Tuckaleechee C	59.44	345	P	P	03 52 56.2	-0.6
TKL	Tuckaleechee C	59.44	345	P	P	03 52 56.8	+0.1
	baz=162						
Y45A	Yeager Farm, C	59.46	339	IAmb	IAmb	03 52 59.0	
	comp=Z,26nm,1.0s						
Y45A	Yeager Farm, C	59.46	339	P	P	03 52 56.8	0.0
	baz=156						
NATX	Nacogdoches	59.52	333	P	P	03 52 58.6	+1.2
	baz=150						
V52A	Sevierville	59.57	345	P	P	03 52 57.7	+0.1
	baz=162						
VNA2	Neumayer--Watz	59.68	161	P	P	03 52 59.3	+1.4
	baz=288,slow=8.0						
V51A	Loudon	59.73	344	IAmb	IAmb	03 53 00.5	
	comp=Z,12nm,0.8s						
V51A	Loudon	59.73	344	P	P	03 52 58.8	+0.1
	baz=162						
T57A	Hurt	59.78	349	IAmb	IAmb	03 53 00.7	
	comp=Z,11nm,0.9s						
T57A	Hurt	59.78	349	P	P	03 52 59.3	+0.3
	baz=167						
T57A				P	P	03 52 59.3	+0.3
	baz=167						
U54A	Nelsons Funny	59.82	347	P	P	03 53 00.1	+0.7
	baz=164						
U54A				P	P	03 53 00.1	+0.7
	baz=164						
435B	Jarrell	59.98	330	IAmb	IAmb	03 53 01.8	
	comp=Z,12nm,0.7s						
435B	Jarrell	59.98	330	P	P	03 53 01.1	+0.6
	baz=148						
435B	Jarrell	59.98	330	P	P	03 53 01.2	+0.6
	baz=148						
OXF	Oxford	60.00	339	P	P	03 52 60.0	-0.6
	baz=156						
OXF	Oxford	60.00	339	P	P	03 52 59.6	-1.0
	baz=156,SNR=7.9						
PLAL	Pickwick Lake	60.01	340	IAmb	IAmb	03 53 01.2	
	comp=Z,37nm,1.4s						
Z41A	Richland Creek	60.09	336	P	P	03 53 01.9	+0.7
	baz=153						
BLA	Blacksburg	60.20	348	P	P	03 53 01.9	0.0
BLA				IAmb	IAmb	03 53 04.2	
	comp=Z,24nm,1.0s						
BLA	Blacksburg	60.20	348	P	P	03 53 02.8	+0.8
	baz=166						
BLA	Blacksburg	60.20	348	P	P	03 53 02.7	+0.8
	baz=166,SNR=5.9						
237A	Washetta, Mont	60.22	332	IAmb	IAmb	03 53 04.0	
	comp=Z,24nm,1.0s						
237A	Washetta, Mont	60.22	332	P	P	03 53 03.6	+1.5
	baz=150						
TZTN	Tazewell	60.23	345	IAmb	IAmb	03 53 02.6	
	comp=Z,11nm,0.8s						
TZTN	Tazewell	60.23	345	P	P	03 53 02.1	0.0
	baz=163						
V48A	Smith Brothers	60.34	342	IAmb	IAmb	03 53 03.4	
	comp=Z,19nm,0.7s						
V48A	Smith Brothers	60.34	342	P	P	03 53 02.7	-0.1
	baz=159						
S57A	Dark Hollow, R	60.47	350	IAmb	IAmb	03 53 05.5	
	comp=Z,9.7nm,0.7s						
W45A	Hickory Valley	60.52	340	P	P	03 53 03.7	-0.4
	baz=157						
CLTN	Cedars of Leba	60.53	342	IAmb	IAmb	03 53 05.1	
	comp=Z,25nm,1.0s						
U49A	Red Boiling Sp	60.77	343	IAmb	IAmb	03 53 06.0	
	comp=Z,11nm,0.8s						
U49A	Red Boiling Sp	60.77	343	P	P	03 53 05.3	-0.4
	baz=160						
JCT	Junction City	60.79	328	P	P	03 53 06.2	+0.1
JCT				IAmb	IAmb	03 53 07.7	
	comp=Z,20nm,0.8s						
JCT	Junction City	60.79	328	P	P	03 53 06.8	+0.8
	baz=145						
JCT	Junction City	60.79	328	P	P	03 53 06.3	+0.3
	baz=145,SNR=7.4						
WHTX	Lake Whitney,	60.94	331	IAmb	IAmb	03 53 08.2	
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	60.94	331	P	P	03 53 07.7	+0.8
	baz=148						
WHTX	Lake Whitney,	60.94	331	P	P	03 53 07.4	+0.5
	baz=148,SNR=5.3						
S54A	Dingess, Beckl	60.94	347	P	P	03 53 07.5	+0.6
	baz=165						
S54A				P	P	03 53 07.5	+0.6
	baz=165						
Z38A	Mt. Pleasant	60.96	334	IAmb	IAmb	03 53 08.7	
	comp=Z,20nm,0.8s						
Z38A	Mt. Pleasant	60.96	334	P	P	03 53 07.9	+0.8
	baz=151						
WVT	Waverly	61.00	341	P	P	03 53 06.2	-1.1
WVT				IAmb	IAmb	03 53 07.3	
	comp=Z,22nm,0.8s						
WVT	Waverly	61.00	341	P	P	03 53 06.5	-0.7
	baz=158						
WVT	Waverly	61.00	341	P	P	03 53 06.1	-1.2
	baz=158						
WVT	Waverly	61.00	341	P	P	03 53 06.9	-0.4
T50A	Nancy	61.00	344	IAmb	IAmb	03 53 07.6	
	comp=Z,12nm,0.8s						
T50A	Nancy	61.00	344	P	P	03 53 07.0	-0.2
	baz=162						
T50A				P	P	03 53 07.0	-0.2
	baz=162						
HPIG		61.16	321	IAmb	IAmb	03 53 10.6	
	comp=Z,8.8nm,0.7s						
R55A	Marlinton	61.18	349	IAmb	IAmb	03 53 11.1	
	comp=Z,17nm,0.8s						
X40A	Basin Creek Fa	61.19	336	P	P	03 53 08.2	-0.4
	baz=153						
UALR	University of	61.27	337	IAmb	IAmb	03 53 10.4	
	comp=Z,28nm,1.3s						
S51A	Beattyville	61.29	345	P	P	03 53 08.7	-0.4
	baz=163						
S51A				P	P	03 53 08.7	-0.4
	baz=163						
SNAA	Sanae	61.32	161	P	P	03 53 10.2	+1.1
SNAA	Sanae	61.32	161	P	P	03 53 09.6	+0.5
SLBS	Sierra La Lagu	61.46	315	P	P	03 53 12.2	+1.4
MIAR	Mount Ida	61.53	336	P	P	03 53 11.2	+0.3
	baz=152						
MIAR	Mount Ida	61.53	336	P	P	03 53 10.9	+0.1
	baz=152,SNR=11						
T47A	Sharon Grove	61.58	342	P	P	03 53 10.4	-0.8
	baz=159						
R53A	Hurricane	61.59	347	IAmb	IAmb	03 53 13.3	
	comp=Z,17nm,0.8s						
R53A	Hurricane	61.59	347	P	P	03 53 11.5	+0.3
	baz=165						
R53A				P	P	03 53 11.5	+0.3
	baz=165						
W41B	Gary Mavity, V	61.59	337	P	P	03 53 10.9	-0.3
	baz=154						
WHAR	Wooly Hollow	61.71	337	IAmb	IAmb	03 53 14.2	
	comp=Z,16nm,1.5s						
TX31	Lajitas Ar. Si	61.87	324	P	P	03 53 13.0	-0.4
TX31				IAmb	IAmb	03 53 14.7	
	comp=Z,8.3nm,0.8s						
TX31	Lajitas Ar. Si	61.87	324	P	P	03 53 14.0	+0.6
	baz=142						
TXAR	Lajitas Array	61.87	324	P	P	03 53 14.1	+0.7
	comp=Z,1.7nm,0.6s,baz=151,slow=8.9,SNR=32						
TXAR				PcP	PcP	03 53 54.3	+1.8
	comp=Z,0.3nm,0.5s,baz=141,slow=8.1,SNR=1.4						
	comp=Z,1.7nm,0.6s						
Z35A	Perchaven, San	61.98	332	P	P	03 53 14.9	+0.9
	baz=148						
Q54A	Coxs Mills	61.99	348	IAmb	IAmb	03 53 15.5	
	comp=Z,37nm,1.4s						
Q54A	Coxs Mills	61.99	348	P	P	03 53 14.2	+0.4
	baz=166						
Q54A				P	P	03 53 14.2	+0.4
	baz=166						
LCAR	Lake Charles	62.01	338	IAmb	IAmb	03 53 15.0	
	comp=Z,23nm,1.5s						
R50A	Paris	62.07	345	IAmb	IAmb	03 53 15.5	
	comp=Z,26nm,1.2s						
R50A	Paris	62.07	345	P	P	03 53 15.0	+0.5
	baz=162						
R50A				P	P	03 53 15.0	+0.5
	baz=162						
W39A	Magazine	62.18	336	IAmb	IAmb	03 53 17.2	
	comp=Z,13nm,0.8s						
W39A	Magazine	62.18	336	P	P	03 53 16.1	+0.9
	baz=152						
W39A	Magazine	62.18	336	P	P	03 53 15.9	+0.8
	baz=152,SNR=7.5						
Q52A	Bidwell	62.26	347	IAmb	IAmb	03 53 17.6	
	comp=Z,15nm,0.8s						
X37A	Clayton	62.27	334	P	P	03 53 16.8	+1.0
	baz=151						
R49A	Shelbyville	62.29	344	P	P	03 53 15.6	-0.2
	baz=161						
R49A				P	P	03 53 15.6	-0.2
	baz=161						
PBMO	Poplar Bluff	62.41	339	P	P	03 53 16.3	-0.3
PBMO				IAmb	IAmb	03 53 17.8	
	comp=Z,20nm,1.1s						
PBMO	Poplar Bluff	62.41	339	P	P	03 53 16.4	-0.3
	baz=156						
MCWV	Mont Chateau	62.47	349	IAmb	IAmb	03 53 18.5	
	comp=Z,12nm,0.8s						
MCWV	Mont Chateau	62.47	349	P	P	03 53 17.1	+0.1
	baz=167						
MCWV	Mont Chateau	62.47	349	P	P	03 53 17.8	+0.8
	baz=167						
ABTX	Abilene, Hawle	62.48	330	P	P	03 53 17.8	+0.5
	baz=146						
Q51A	Peebles	62.55	346	IAmb	IAmb	03 53 19.3	
	comp=Z,24nm,1.2s						
P53A	Whipple	62.59	348	P	P	03 53 18.3	+0.4
	baz=165						
P53A				P	P	03 53 18.3	+0.4
	baz=165						
U40A	Yellville	62.86	337	IAmb	IAmb	03 53 21.0	
	comp=Z,24nm,1.5s						
U40A	Yellville	62.86	337	P	P	03 53 19.4	-0.4
	baz=153						
U40A				P	P	03 53 19.4	-0.4
	baz=153						
U40A	Yellville	62.86	337	P	P	03 53 19.6	-0.1
	baz=153,SNR=6.6						
S44A	Carbondale	62.87	341	IAmb	IAmb	03 53 20.7	
	comp=Z,10nm,0.6s						
S44A	Carbondale	62.87	341	P	P	03 53 18.8	-0.9
	baz=157						
P52A	Corning	62.88	347	P	P	03 53 19.9	+0.2
	baz=165						
P51A	Williamsport	62.93	346	IAmb	IAmb	03 53 21.8	
	comp=Z,25nm,1.3s						
P51A	Williamsport	62.93	346	P	P	03 53 19.8	-0.3
	baz=164						
P51A				P	P	03 53 19.8	-0.3
	baz=164						
TROLL	Troll, Antarti	63.03	161	P	P	03 53 22.1	+1.5
SSPA	Standing Stone	63.12	351	P	P	03 53 22.0	+0.8
	baz=169						
HHAR	Hobbs	63.20	336	IAmb	IAmb	03 53 23.2	
	comp=Z,27nm,1.5s						
HHAR	Hobbs	63.20	336	P	P	03 53 22.0	0.0
	baz=152						
O52A	Adamsville	63.28	348	IAmb	IAmb	03 53 23.1	
	comp=Z,14nm,0.8s						
O52A	Adamsville	63.28	348	P	P	03 53 22.6	+0.2
	baz=165						
O52A				P	P	03 53 22.6	+0.2
	baz=165						
O53A	New Philadelph	63.29	348	IAmb	IAmb	03 53 24.6	
	comp=Z,22nm,1.1s						
O53A	New Philadelph	63.29	348	P	P	03 53 22.7	+0.2
	baz=166,SNR=6.9						
X34A	Smith Ranch, M	63.31	332	IAmb	IAmb	03 53 23.9	
	comp=Z,13nm,0.9s						
M65A	Busby, Falmout	63.35	357	P	P	03 53 22.7	-0.1
	baz=177						
P49A	Miami Univ. Ec	63.36	345	IAmb	IAmb	03 53 22.8	
	comp=Z,12nm,0.7s						
P49A	Miami Univ. Ec	63.36	345	P	P	03 53 21.9	-1.0
	baz=162						
P49A	Miami Univ. Ec	63.36	345	P	P	03 53 22.3	-0.6
	baz=162,SNR=5.6						
MGMO	Mountain Grove	63.37	338	P	P	03 53 23.2	+0.1
MGMO				IAmb	IAmb	03 53 23.7	
	comp=Z,8.5nm,0.8s						
FVM	French Village	63.51	340	P	P	03 53 23.7	-0.2
	baz=156						
TUL1	Leonard	63.59	334	IAmb	IAmb	03 53 26.1	
	comp=Z,20nm,1.2s						
TUL1	Leonard	63.59	334	P	P	03 53 24.6	+0.1
	baz=150						
TUL1	Leonard	63.59	334	P	P	03 53 24.9	+0.4
	baz=150						
ACSO	Alum Creek Sta	63.63	347	P	P	03 53 24.6	-0.1
	baz=164						
ACSO	Alum Creek Sta	63.63	347	P	P	03 53 24.5	-0.1
	baz=164,SNR=7.8						
N53A	Lisbon	63.76	349	IAmb	IAmb	03 53 27.8	
	comp=Z,17nm,1.1s						
CCM	Cathedral Cave	63.84	339	P	P	03 53 25.2	-0.9
CCM	Cathedral Cave	63.84	339	P	P	03 53 25.8	-0.3
	baz=155						
CCM	Cathedral Cave	63.84	339	P	P	03 53 26.0	0.0
	baz=155						
CCM	Cathedral Cave	63.84	339	P	P	03 53 26.0	0.0
CCM				x	x	03 54 01.9	
WMOK	Wichita Mounta	63.85	331	P	P	03 53 26.1	-0.2
	baz=148						
O49A	Covington	63.89	346	P	P	03 53 26.2	-0.1
	baz=162						
O49A				P	P	03 53 26.2	-0.1
	baz=162						
Q44A	Meyer Farm, Va	63.92	341	IAmb	IAmb	03 53 27.5	
	comp=Z,12nm,0.9s						
Q44A	Meyer Farm, Va	63.92	341	P	P	03 53 25.7	-0.8
	baz=158						
O48B	Farmland	64.15	345	P	P	03 53 27.5	-0.5
	baz=162						
O48B	Farmland	64.15	345	P	P	03 53 27.5	-0.5
	baz=162,SNR=7.0						
S39A	Bolivar	64.22	337	IAmb	IAmb	03 53 29.4	
	comp=Z,17nm,0.8s						
S39A	Bolivar	64.22	337	P	P	03 53 28.8	+0.2
	baz=153						
M53A	WI Miller and	64.35	349	P	P	03 53 30.4	+1.1
	baz=166						
R40A	Maddies Statio	64.39	338	P	P	03 53 29.3	-0.4
	baz=154						
BINY	Binghamton	64.41	353	P	P	03 53 30.7	+1.0
	baz=171						
N49A	Columbus Grove	64.55	346	IAmb	IAmb	03 53 32.2	
	comp=Z,22nm,0.9s						
N49A	Columbus Grove	64.55	346	P	P	03 53 30.2	-0.4
	baz=163						
N49A				P	P	03 53 30.2	-0.4
	baz=163						
MNTX	Cornudas Mount	64.63	325	P	P	03 53 31.1	-0.2
MNTX				IAmb	IAmb	03 53 32.7	
	comp=Z,21nm,1.3s						
MNTX	Cornudas Mount	64.63	325	P	P	03 53 31.2	-0.2
	baz=141						
MNTX	Cornudas Mount	64.63	325	P	P	03 53 31.6	+0.2
	baz=141,SNR=18						
P43A	Skaggs, Pawnee	64.75	341	P	P	03 53 31.4	-0.6
	baz=157						
SFIN	Lafayette	64.75	343	IAmb	IAmb	03 53 32.1	
	comp=Z,32nm,1.5s						
SFIN	Lafayette	64.75	343	P	P	03 53 31.2	-0.7
	baz=160						
SFIN	Lafayette	64.75	343	P	P	03 53 32.2	+0.3
	baz=160						
N47A	Urbana	64.87	345	P	P	03 53 32.0	-0.7
	baz=161						
N47A				P	P	03 53 32.0	-0.7
	baz=161						
ERPA	Erie	64.89	350	P	P	03 53 33.1	+0.4
	baz=167						
ERPA	Erie	64.89	350	P	P	03 53 33.2	+0.4
	baz=167,SNR=5.7						
MSTX	Muleshoe	65.08	328	P	P	03 53 35.1	+0.8
	baz=144						
MSTX	Muleshoe	65.08	328	P	P	03 53 34.7	+0.4
	baz=144,SNR=15						
MMNY	Mt. Morris Dam	65.17	352	IAmb	IAmb	03 53 36.7	
	comp=Z,36nm,1.5s						
AMTX	Amarillo	65.30	329	IAmb	IAmb	03 53 37.1	
	comp=Z,24nm,1.5s						
AMTX	Amarillo	65.30	329	P	P	03 53 36.0	+0.3
	baz=145						
P40A	Paris	65.44	339	IAmb	IAmb	03 53 37.4	
	comp=Z,17nm,1.1s						
P40A	Paris	65.44	339	P	P	03 53 36.4	0.0
	baz=155						
HDIL	Hopedale	65.52	342	P	P	03 53 35.8	-1.1
HDIL				IAmb	IAmb	03 53 37.4	
	comp=Z,28nm,1.4s						
HDIL	Hopedale	65.52	342	P	P	03 53 36.0	-0.9
	baz=158						
L48A	N Adams	65.58	346	P	P	03 53 36.8	-0.5
	baz=163						
L48A				P	P	03 53 36.8	-0.5
	baz=163						
AAM	Ann Arbor	65.76	347	P	P	03 53 38.0	-0.3
	baz=163						
HSIG		65.85	319	P	P	03 53 40.7	+1.4
HSIG				IAmb	IAmb	03 53 42.3	
	comp=Z,19nm,1.1s						
K50A	Casco	66.00	348	IAmb	IAmb	03 53 41.3	
	comp=Z,26nm,0.9s						
P38A	Dawn	66.02	338	IAmb	IAmb	03 53 40.7	
	comp=Z,14nm,0.7s						
P38A	Dawn	66.02	338	P	P	03 53 39.6	-0.5
	baz=153						
L46A	Eue Claire	66.08	345	IAmb	IAmb	03 53 40.2	
	comp=Z,37nm,1.4s						
319A	Douglas	66.57	322	IAmb	IAmb	03 53 46.8	
	comp=Z,33nm,1.1s						
121A	Cookes Peak, D	66.58	323	P	P	03 53 46.1	+2.1
	baz=139,SNR=15						
L44A	Lake County Fo	66.65	344	P	P	03 53 43.4	-0.6
	baz=159						
LONY	Lake Ozonia	66.66	354	P	P	03 53 44.8	+0.7
	baz=173						
KSU1	Kansas State U	66.68	336	P	P	03 53 44.4	+0.1
	baz=150						
J47A	Sunmer	66.91	346	IAmb	IAmb	03 53 45.7	
	comp=Z,13nm,0.8s						
R32A	Long Quarter,	66.93	334	P	P	03 53 46.6	+0.6
	baz=148						
Y22A	Socorro	67.20	325	P	P	03 53 48.8	+0.9
	baz=140						
LIC	Lamto	67.22	73	*e*P	P	03 53 48.0	-0.3
	comp=Z,21nm,0.7s						
K43A	Burlington	67.25	343	IAmb	IAmb	03 53 48.0	
	comp=Z,17nm,0.6s						
K43A	Burlington	67.25	343	P	P	03 53 47.5	-0.4
	baz=159						
SADO	Sadowa	67.35	351	LR	LR	04 25 25.2	
	comp=Z,53nm,20.2s,baz=232,slow=38						
TIC	Toumodi	67.42	72	*e*P	P	03 53 48.9	-0.6
	comp=Z,71nm,1.0s						
L40A	Anamosa	67.48	341	IAmb	IAmb	03 53 50.1	
	comp=Z,16nm,0.9s						
L40A	Anamosa	67.48	341	P	P	03 53 49.0	-0.3
	baz=156						
KIC	Kosan Boka	67.54	73	*e*P	P	03 53 49.7	-0.6
	comp=Z,58nm,0.7s						
DBIC	Dimbokro	67.58	73	P	P	03 53 50.2	-0.3
	comp=Z,38nm,0.7s,baz=250,slow=6.8,SNR=32						
	comp=Z,38nm,0.7s						
DBIC	Dimbokro	67.58	73	P	P	03 53 49.6	-0.9
DBIC	Dimbokro	67.58	73	P	P	03 53 50.1	-0.4
CBKS	Cedar Bluff	67.69	333	P	P	03 53 51.8	+1.0
	baz=148						
ANMO	Albuquerque	67.71	326	P	P	03 53 51.9	+0.8
ANMO	Albuquerque	67.71	326	P	P	03 53 52.6	+1.4
	baz=141						
ANMO	Albuquerque	67.71	326	P	P	03 53 52.5	+1.3
	baz=141						

ANMO	Albuquerque	67.71	326	P	P	03 53 52.9	+1.7
ANMO				pP	pP	03 54 39.9	+2.6
JFWS	Jewell Farm	67.97	342	IAmb	IAmb	03 53 53.5	
	comp=Z,44nm,1.4s						
JFWS	Jewell Farm	67.97	342	P	P	03 53 52.3	0.0
	baz=157						
JFWS	Jewell Farm	67.97	342	P	P	03 53 52.3	0.0
	baz=157,SNR=8.8						
TUC	Tucson	68.12	321	P	P	03 53 53.9	+0.3
TUC				IAmb	IAmb	03 53 56.7	
	comp=Z,29nm,1.4s						
TUC	Tucson	68.12	321	P	P	03 53 55.6	+2.0
	baz=137						
TUC	Tucson	68.12	321	P	P	03 53 55.4	+1.8
TUC				pP	pP	03 54 42.5	+2.6
QSPA	South Pole Qui	68.15	180	P	P	03 53 54.2	+0.8
QSPA	South Pole Qui	68.15	180	P	P	03 53 55.2	+1.8
QSPA				pP	pP	03 54 42.5	+2.8
QSPA				sP	sP	03 55 03.9	+3.1
TRQ	Mont Tremblant	68.25	355	IAmb	IAmb	03 53 56.7	
	comp=Z,16nm,1.1s						
T25A	Trinidad	68.42	329	P	P	03 53 57.1	+1.6
	baz=143,SNR=9.8						
I42A	Draeger Farm,	68.51	343	P	P	03 53 55.6	0.0
	baz=159						
H43A	Windswept, Lux	68.76	345	IAmb	IAmb	03 53 57.5	
	comp=Z,10.0nm,0.8s						
H43A	Windswept, Lux	68.76	345	P	P	03 53 56.9	-0.2
	baz=160						
I40A	Norwalk	68.98	342	IAmb	IAmb	03 53 58.9	
	comp=Z,26nm,1.4s						
I40A	Norwalk	68.98	342	P	P	03 53 58.4	-0.2
	baz=157						
214A	Organ Pipe Nat	69.06	320	IAmb	IAmb	03 54 02.3	
	comp=Z,16nm,0.8s						
214A	Organ Pipe Nat	69.06	320	P	P	03 54 01.6	+2.2
	baz=135,SNR=14						
KSCO	Kaye Shedlock’	69.11	331	P	P	03 54 00.9	+1.3
	baz=145						
BGNE	Belgrade	69.27	336	P	P	03 54 01.1	+0.7
BGNE	Belgrade	69.27	336	P	P	03 54 01.2	+0.7
	baz=150						
BGNE	Belgrade	69.27	336	P	P	03 54 01.2	+0.7
	baz=150,SNR=7.4						
SDCO	Great Sand Dun	69.42	329	IAmb	IAmb	03 54 04.2	
	comp=Z,13nm,0.8s						
SDCO	Great Sand Dun	69.42	329	P	P	03 54 03.5	+1.7
	baz=142						
SDCO	Great Sand Dun	69.42	329	P	P	03 54 03.6	+1.7
	baz=142,SNR=36						
W18A	Petrified Fore	69.59	324	IAmb	IAmb	03 54 05.9	
	comp=Z,42nm,1.4s						
W18A	Petrified Fore	69.59	324	P	P	03 54 04.7	+2.0
	baz=138,SNR=7.4						
I37A	Lemond, Waseca	69.92	340	IAmb	IAmb	03 54 05.0	
	comp=Z,12nm,0.7s						
S22A	4UR Ranch, Cre	70.08	328	P	P	03 54 07.4	+1.6
	baz=141,SNR=8.1						
Q24A	Divide	70.22	330	P	P	03 54 08.3	+1.6
	baz=143,SNR=12						
VLDQ	Val d'Or	70.41	353	IAmb	IAmb	03 54 09.7	
	comp=Z,18nm,1.4s						
MVCO	Mesa Verde	70.51	326	P	P	03 54 09.2	+0.8
MVCO	Mesa Verde	70.51	326	P	P	03 54 10.2	+1.8
	baz=140,SNR=24						
ECSD	EROS Data Cent	70.73	338	P	P	03 54 09.5	+0.2
	baz=151						
ECSD	EROS Data Cent	70.73	338	P	P	03 54 09.2	0.0
	baz=151,SNR=7.3						
WUAZ	Wupatki	70.79	323	IAmb	IAmb	03 54 13.5	
	comp=Z,32nm,1.1s						
WUAZ	Wupatki	70.79	323	P	P	03 54 12.2	+2.2
	baz=137,SNR=17						
SPMN	Marine on St.	70.83	341	IAmb	IAmb	03 54 10.9	
	comp=Z,30nm,1.4s						
SPMN	Marine on St.	70.83	341	P	P	03 54 09.5	-0.2
	baz=155						
SPMN	Marine on St.	70.83	341	P	P	03 54 09.6	-0.2
	baz=155						
GLA	Glamis	71.05	319	P	P	03 54 13.1	+1.6
	baz=134						
ISCO	Idaho Springs	71.11	330	IAmb	IAmb	03 54 14.9	
	comp=Z,23nm,1.4s						
ISCO	Idaho Springs	71.11	330	P	P	03 54 13.8	+1.8
	baz=143						
ISCO	Idaho Springs	71.11	330	P	P	03 54 13.5	+1.5
	baz=143,SNR=14						
SMCO	Snowmass	71.26	328	IAmb	IAmb	03 54 15.7	
	comp=Z,12nm,0.8s						
BLYC	Blythe	71.35	320	P	P	03 54 15.3	+2.2
BLYC				IAmb	IAmb	03 54 16.6	
	comp=Z,29nm,1.3s						
PV15	Paradox Valley	71.36	327	IAmb	IAmb	03 54 16.9	
	comp=Z,35nm,1.1s						
D41A	Chassel	71.38	345	IAmb	IAmb	03 54 14.1	
	comp=Z,16nm,0.9s						
PV13	Radium Mtn., P	71.40	327	IAmb	IAmb	03 54 16.7	
	comp=Z,40nm,1.4s						
YUH	Yuha Desert	71.44	318	P	P	03 54 13.2	-0.6
PV07	Paradox Valley	71.52	327	IAmb	IAmb	03 54 17.5	
	comp=Z,19nm,1.3s						
PV11	David Mesa, Pa	71.53	327	IAmb	IAmb	03 54 17.5	
	comp=Z,33nm,1.4s						
IKP	In-Ko-Pah, Jac	71.56	318	P	P	03 54 16.6	+2.0
	baz=133						
SWSC	Sam W. Stewart	71.57	319	P	P	03 54 16.5	+2.0
	baz=133						
F36A	Milaca	71.62	341	IAmb	IAmb	03 54 15.5	
	comp=Z,31nm,1.4s						
F36A	Milaca	71.62	341	P	P	03 54 14.6	0.0
	baz=154						
PV10	Paradox Valley	71.67	327	IAmb	IAmb	03 54 17.8	
	comp=Z,19nm,1.0s						
BC3	Big Chuckawall	71.84	319	P	P	03 54 18.3	+2.0
	baz=134,SNR=10						
MONP2	Monument Peak	71.92	318	P	P	03 54 18.5	+1.6
	baz=133						
BAR	Barrett	71.93	318	IAmb	IAmb	03 54 19.9	
	comp=Z,31nm,1.4s						
U15A	North Rim	71.96	323	IAmb	IAmb	03 54 20.9	
	comp=Z,36nm,1.4s						
KOWA	Kowa	71.98	66	P	P	03 54 16.5	-0.8
KOWA	Kowa	71.98	66	P	P	03 54 17.1	-0.2
IRM	Iron Mountain	72.00	320	P	P	03 54 19.3	+2.2
	baz=134,SNR=12						
N23A	Red Feather La	72.13	330	IAmb	IAmb	03 54 20.9	
	comp=Z,26nm,1.3s						
N23A	Red Feather La	72.13	330	P	P	03 54 19.7	+1.7
	baz=143,SNR=9.4						
109C	Camp Elliot, M	72.34	318	P	P	03 54 20.3	+1.2
	baz=132						
BELC	Belle Mtn. Jos	72.41	319	P	P	03 54 21.7	+2.0
	baz=133,SNR=6.4						
TPFO	Pinon Flats	72.42	319	P	P	03 54 21.6	+1.8
	baz=133						
PFO	Pinyon Flats O	72.42	319	P	P	03 54 21.4	+1.7
PFO	Pinyon Flats O	72.42	319	P	P	03 54 21.6	+1.8
	baz=133						
O20A	White River Ci	72.62	328	IAmb	IAmb	03 54 23.9	
	comp=Z,32nm,1.0s						
O20A	White River Ci	72.62	328	P	P	03 54 22.8	+1.9
	baz=141,SNR=18						
GMRC	Granite Mounta	72.74	320	P	P	03 54 24.0	+2.4
	baz=134,SNR=18						
MURC	Murrieta	72.87	318	P	P	03 54 24.2	+1.9
	baz=132						
LCMT	Little Creek M	72.91	323	IAmb	IAmb	03 54 26.0	
	comp=Z,19nm,1.3s						
EYMN	Ely	72.95	343	P	P	03 54 22.2	-0.2
	baz=157						
EYMN	Ely	72.95	343	P	P	03 54 22.5	+0.2
	baz=157						
SRU	San Rafael Swe	72.99	326	IAmb	IAmb	03 54 25.8	
	comp=Z,24nm,0.7s						
MTPU	Mount Pierson	73.07	324	P	P	03 54 24.7	+0.9
BBRC	Big Bear Solar	73.15	319	P	P	03 54 26.8	+2.6
	baz=133						
HEC	Hector,Ludlow	73.17	320	P	P	03 54 26.6	+2.5
	baz=133,SNR=9.2						
Q16A	Castle Valley	73.18	326	IAmb	IAmb	03 54 27.6	
	comp=Z,13nm,0.8s						
RWWY	Rawlins	73.34	330	IAmb	IAmb	03 54 27.1	
	comp=Z,19nm,1.0s						
TUQ	Turquoise Moun	73.34	320	P	P	03 54 27.1	+2.0
	baz=134						
CCUT	Cedar City	73.36	323	IAmb	IAmb	03 54 29.3	
	comp=Z,35nm,1.2s						
BFSC	Mount Baldy Ra	73.58	318	P	P	03 54 28.6	+2.0
	baz=132						
RDMU	Red Mountain	73.61	328	IAmb	IAmb	03 54 28.9	
	comp=Z,17nm,0.8s						
FMP	Fort Macarthur	73.63	318	P	P	03 54 27.6	+1.0
	baz=131						
GSC	Goldstone, Bar	73.78	320	P	P	03 54 29.7	+2.1
	baz=133,SNR=7.0						
K22A	Casper	73.78	331	P	P	03 54 29.2	+1.7
	baz=142						
K22A	Casper	73.78	331	P	P	03 54 29.3	+1.7
	baz=142,SNR=6.1						
SHOC	Shoshone, Teco	73.87	320	P	P	03 54 29.9	+1.8
	baz=133						
RSSD	Black Hills	73.89	333	P	P	03 54 29.3	+1.0
RSSD	Black Hills	73.89	333	P	P	03 54 29.4	+1.1
	baz=145						
RSSD	Black Hills	73.89	333	P	P	03 54 29.3	+1.1
	baz=145						
B35A	Bob, Littlefor	73.94	342	P	P	03 54 28.4	+0.3
	baz=155						
DECC	Green Verdugo	74.01	318	P	P	03 54 31.0	+2.0
	baz=132						
PRN	Pahroc Range	74.21	322	IAmb	IAmb	03 54 34.0	
	comp=Z,28nm,1.4s						
EDW2	Edwards Air Fo	74.22	319	P	P	03 54 31.9	+1.7
	baz=132,SNR=5.2						
MPU	Maple Canyon	74.23	326	IAmb	IAmb	03 54 33.4	
	comp=Z,24nm,1.2s						
QSM	Queen of Sheba	74.27	320	IAmb	IAmb	03 54 33.4	
	comp=Z,23nm,1.4s						
GWY	Greenwater Val	74.30	320	IAmb	IAmb	03 54 33.7	
	comp=Z,18nm,1.1s						
CCAC	Calif City Air	74.41	319	IAmb	IAmb	03 54 34.3	
	comp=Z,16nm,0.7s						
AGMN	Agassiz Nation	74.52	341	P	P	03 54 32.1	+0.7
	baz=153						
AGMN	Agassiz Nation	74.52	341	P	P	03 54 32.2	+0.7
	baz=153						
JLU	Jordanelle	74.57	327	P	P	03 54 33.9	+1.6
JLU				IAmb	IAmb	03 54 34.9	
	comp=Z,15nm,0.8s						
TPNV	Topopah Spring	74.58	321	IAmb	IAmb	03 54 36.1	
	comp=Z,36nm,1.4s						
TPNV	Topopah Spring	74.58	321	P	P	03 54 34.8	+2.5
	baz=134,SNR=14						
FURC	Furnace Creek,	74.61	321	P	P	03 54 34.6	+2.4
	baz=133,SNR=12						
E28A	Huff	74.64	337	IAmb	IAmb	03 54 34.0	
	comp=Z,26nm,0.9s						
E28A	Huff	74.64	337	P	P	03 54 33.6	+1.3
	baz=148						
SCZ2	Santa Cruz Isl	74.66	317	P	P	03 54 34.1	+1.5
	baz=131						
ARVC	Arvin	74.89	318	P	P	03 54 36.2	+2.2
	baz=131						
DUG	Dugway, Tooele	74.98	326	P	P	03 54 36.5	+2.0
	baz=137,SNR=13						
ISA	Isabella, Lake	75.03	319	IAmb	IAmb	03 54 37.7	
	comp=Z,12nm,0.8s						
ISA	Isabella, Lake	75.03	319	P	P	03 54 37.1	+2.3
	baz=132,SNR=12						
R11A	Troy Canyon, C	75.17	323	P	P	03 54 38.1	+2.4
	baz=134,SNR=20						
GRAC	Grapevine Rang	75.26	321	P	P	03 54 38.5	+2.4
	baz=133,SNR=6.0						
BW06	Boulder Array	75.28	329	P	P	03 54 37.5	+1.2
	baz=140,SNR=10						
PDAR	Pinedale Array	75.28	329	P	P	03 54 37.5	+1.2
	comp=Z,3.4nm,0.6s,baz=126,slow=7.8,SNR=34						
	comp=Z,3.4nm,0.6s						
PDAR	Pinedale Array	75.28	329	P	P	03 54 36.8	+0.5
CWC	Cottonwood Cre	75.31	320	P	P	03 54 38.4	+1.9
	baz=132						
MDND	Maddock	75.34	338	P	P	03 54 37.3	+1.1
	baz=149						
PKM	Mcpherson Peak	75.35	318	P	P	03 54 38.9	+2.1
	baz=131,SNR=6.4						
HWUT	Hardware Ranch	75.38	327	IAmb	IAmb	03 54 38.9	
	comp=Z,12nm,0.8s						
VES	Vestal, Richgr	75.52	319	P	P	03 54 39.4	+1.9
	baz=131,SNR=9.3						
SMMC	Simmler	75.74	318	P	P	03 54 41.1	+2.3
	baz=131						
TIN	Tinemaha, Big	75.81	320	P	P	03 54 40.8	+1.6
	baz=132						
VOG	Valley Oaks Go	76.02	319	P	P	03 54 39.8	-0.5
	baz=131						
PAGB	Antelope Grade	76.16	318	IAmb	IAmb	03 54 44.6	
	comp=Z,40nm,1.5s						
TORD	Torodi Ar. Bea	76.25	70	P	P	03 54 42.0	-0.1
	comp=Z,86nm,0.7s,baz=262,slow=6.1,SNR=529						
TORD				S	S	04 04 09.7	-1.4
	comp=Z,0.7nm,0.7s,baz=246,slow=7.9,SNR=4.0						
ULM	Lac du Bonnet	76.26	342	P	P	03 54 41.5	+0.2
	comp=Z,9.7nm,0.5s,baz=156,slow=5.9,SNR=18						
	comp=Z,9.7nm,0.5s						
ULM	Lac du Bonnet	76.26	342	P	P	03 54 41.0	-0.3
ULM				IAmb	IAmb	03 54 42.1	
	comp=Z,12nm,0.7s						
REDW	Red Top Meadow	76.34	329	IAmb	IAmb	03 54 44.7	
	comp=Z,12nm,0.8s						
SNOW	Snow King Moun	76.37	329	IAmb	IAmb	03 54 45.4	
	comp=Z,14nm,0.9s						
LOHW	Long Hollow	76.42	329	IAmb	IAmb	03 54 45.1	
	comp=Z,12nm,0.8s						
TPAW	Teton Pass	76.49	329	IAmb	IAmb	03 54 46.2	
	comp=Z,12nm,0.8s						
MLAC	Mammoth, Mammo	76.55	320	P	P	03 54 45.2	+1.6
	baz=132						
SCHQ	Schefferville	76.56	0	P	P	03 54 43.0	0.0
	comp=Z,3.1nm,0.6s,baz=161,slow=3.7,SNR=12						
	comp=Z,3.1nm,0.6s						
OMMB	Old Mammoth Mi	76.64	320	IAmb	IAmb	03 54 47.3	
	comp=Z,36nm,1.4s						
ELK	Elko	76.66	325	P	P	03 54 45.5	+1.4
NVAR	Mina Array Bea	76.78	321	P	P	03 54 46.7	+1.9
	comp=Z,2.8nm,0.6s,baz=152,slow=6.8,SNR=30						
	comp=Z,2.8nm,0.6s						
FLWY	Flagg Ranch	76.82	330	IAmb	IAmb	03 54 47.8	
	comp=Z,18nm,0.8s						
LAO	LASA Array	76.88	334	IAmb	IAmb	03 54 47.6	
	comp=Z,42nm,1.5s						
LAO	LASA Array	76.88	334	P	P	03 54 46.2	+1.2
	baz=143						
LAO	LASA Array	76.88	334	P	P	03 54 46.2	+1.2
	baz=143,SNR=6.6						
RLMT	Red Lodge	76.95	331	IAmb	IAmb	03 54 48.0	
	comp=Z,14nm,0.7s						
RLMT	Red Lodge	76.95	331	P	P	03 54 47.4	+1.7
	baz=141,SNR=21						
H17A	Grant Village	77.00	330	P	P	03 54 48.2	+2.2
	baz=139						
KVN	Kaiserville	77.08	322	IAmb	IAmb	03 54 49.3	
	comp=Z,21nm,1.1s						
SUR	Sutherland	77.11	120	P	P	03 54 48.2	+1.2
YMR	Madison River	77.38	330	IAmb	IAmb	03 54 52.6	
	comp=Z,27nm,1.0s						
DGMT	Dagmar	77.52	336	IAmb	IAmb	03 54 50.8	
	comp=Z,26nm,0.8s						
DGMT	Dagmar	77.52	336	P	P	03 54 50.5	+2.0
	baz=145						
DGMT	Dagmar	77.52	336	P	P	03 54 49.8	+1.3
	baz=145						
YHL	Hebgen Lake	77.62	330	IAmb	IAmb	03 54 52.5	
	comp=Z,11nm,0.7s						
GCMT	Greycliff	77.65	331	P	P	03 54 50.4	+1.0
PNTR	Pine Nut	77.97	321	IAmb	IAmb	03 54 54.4	
	comp=Z,17nm,0.8s						
VCNR	Virginia City	78.14	321	IAmb	IAmb	03 54 55.9	
	comp=Z,24nm,1.4s						
HLID	Hailey	78.24	327	IAmb	IAmb	03 54 56.3	
	comp=Z,16nm,0.8s						
HLID	Hailey	78.24	327	P	P	03 54 54.9	+2.1
	baz=136,SNR=35						
BOZ	Bozeman (W)	78.39	330	P	P	03 54 55.0	+1.5
	baz=139,SNR=7.7						
TSUM	Tsumeb	78.56	106	P	P	03 54 55.2	+0.1
DLMT	Dillon	78.67	329	IAmb	IAmb	03 54 59.0	
	comp=Z,20nm,1.3s						
EGMT	Eagleton	79.41	333	IAmb	IAmb	03 55 01.8	
	comp=Z,37nm,1.1s						
PLID	Pearl Lake	80.13	327	IAmb	IAmb	03 55 05.3	
	comp=Z,15nm,0.8s						
J08A	Circle Bar Ran	80.21	325	IAmb	IAmb	03 55 06.7	
	comp=Z,30nm,1.4s						
MOD	Modoc Plateau	80.23	323	IAmb	IAmb	03 55 06.7	
	comp=Z,26nm,1.4s						
MSO	Missoula	80.38	330	P	P	03 55 05.7	+1.5
MSO	Missoula	80.38	330	P	P	03 55 06.0	+1.8
	baz=137,SNR=7.0						
BMO	Blue Mountains	80.62	327	IAmb	IAmb	03 55 08.5	
	comp=Z,23nm,1.2s						
K05A	Summer Lake	81.10	323	IAmb	IAmb	03 55 11.0	
	comp=Z,20nm,0.9s						
KMRM	Mail Ridge	81.12	320	IAmb	IAmb	03 55 11.8	
	comp=Z,43nm,1.5s						
PCVE	Castro Verde	81.48	44	*e*P	P	03 55 11.9	+1.9
	comp=Z,39nm,1.5s						
MESJ	Messejana	81.48	43	*e*P	P	03 55 11.9	+1.8
	comp=Z,29nm,1.7s						
KMPM	Mount Pierce	81.49	320	IAmb	IAmb	03 55 13.5	
	comp=Z,32nm,1.4s						
K04D	Chiloquin, OR	81.52	323	P	P	03 55 11.4	+1.1
	baz=130						
PVAQ	Vaqueiros	81.55	44	*e*P	P	03 55 12.2	+1.8
	comp=Z,30nm,1.8s						
L04D	Klamath Falls	81.57	322	P	P	03 55 11.7	+1.1
	baz=130						
J05D	Fort Rock, OR	81.66	323	P	P	03 55 12.3	+1.2
	baz=131,SNR=7.6						
PBEJ	Beja	81.82	43	*e*P	P	03 55 13.6	+1.8
PINE	Pine Mountain	81.83	324	IAmb	IAmb	03 55 14.8	
	comp=Z,17nm,0.8s						
BOSA	Boshof	81.97	118	P	P	03 55 13.4	+0.3
	comp=Z,9.0nm,0.5s,baz=261,slow=3.5,SNR=66						
	comp=Z,9.0nm,0.5s						
BOSA	Boshof	81.97	118	IAmb	IAmb	03 55 14.8	
	comp=Z,15nm,0.7s						
BOSA	Boshof	81.97	118	*i* P	P	03 55 13.7	+0.5
BOSA	Boshof	81.97	118	*i* P	P	03 55 13.7	+0.5
J04D	Umpqua Nationa	82.11	323	IAmb	IAmb	03 55 15.7	
	comp=Z,19nm,0.7s						
J04D	Umpqua Nationa	82.11	323	P	P	03 55 14.3	+0.8
	baz=130,SNR=6.0						
PMTG	Montargil	82.21	42	*e*P	P	03 55 15.5	+1.7
	comp=Z,35nm,1.8s						
L02F	Cave Junction	82.23	321	P	P	03 55 15.4	+1.5
	baz=129						
I05D	Terrebonne, OR	82.40	324	P	P	03 55 16.5	+1.7
	baz=131,SNR=6.0						
PBAR	Barrancos	82.44	44	*e*P	P	03 55 16.4	+1.4
I04A	Tendick Farm,	82.64	323	P	P	03 55 16.6	+0.6
	baz=130						
K02D	Willamette Mer	82.65	322	P	P	03 55 17.9	+1.8
	baz=129						
HAWA	Hanford	82.82	327	P	P	03 55 18.0	+1.2
HAWA				IAmb	IAmb	03 55 19.2	
	comp=Z,12nm,0.8s						
NEW	Newport	82.92	329	P	P	03 55 17.9	+0.6
	baz=134						
G05D	Wamic, OR	82.98	325	P	P	03 55 18.8	+1.0
	baz=131						
J01E	Myrtle Point	83.09	322	P	P	03 55 19.5	+1.3
	baz=129						
I03D	Drain, OR	83.10	323	P	P	03 55 20.2	+2.0
	baz=129						
PCBR	Castelo Branco	83.13	42	*e*P	P	03 55 17.9	-0.7
H04D	Lebanon	83.29	324	P	P	03 55 20.5	+1.3
	baz=130						
MAW	Mawson	83.41	163	P	P	03 55 20.4	+0.8
	comp=Z,4.6nm,0.7s,baz=206,slow=5.2,SNR=7.8						
	comp=Z,4.6nm,0.7s						
MTE	Manteigas	83.42	42	*e*P	P	03 55 21.2	+1.1
	comp=Z,36nm,1.7s						
LBTB	Lobatse	83.54	114	LR	LR	04 29 10.1	
	comp=Z,33nm,20.2s,baz=178,slow=33						
LBTB	Lobatse	83.54	114	P	P	03 55 21.3	+0.1
LBTB				IAmb	IAmb	03 55 23.1	
	comp=Z,22nm,1.0s						
LBTB	Lobatse	83.54	114	*i* P	P	03 55 21.8	+0.5
LBTB	Lobatse	83.54	114	*i* P	P	03 55 21.8	+0.5
E04D	Cinebar	84.50	325	P	P	03 55 26.9	+1.5
	baz=130						
PBRG	Braganca	84.73	41	*e*P	P	03 55 26.8	+0.1
EDM	Edmonton	84.84	334	IAmb	IAmb	03 55 28.1	
	comp=Z,28nm,1.5s						
ESDC	Sonseca Array	85.26	44	P	P	03 55 30.2	+0.8
	comp=Z,4.3nm,1.0s,baz=244,slow=5.0,SNR=14						
	comp=Z,4.3nm,1.0s						
LLLB	Lillooet	86.79	329	IAmb	IAmb	03 55 39.0	
	comp=Z,27nm,1.4s						
MATP	Matopo	87.73	111	*i* P	P	03 55 43.7	+1.7
MATP	Matopo	87.73	111	*i* P	P	03 55 43.7	+1.7
BLWY	Bulawayo	87.93	111	*i* P	P	03 55 44.4	+1.4
BLWY	Bulawayo	87.93	111	*i* P	P	03 55 44.4	+1.4
YKA	Yellowknife Ar	92.16	340	P	P	03 56 02.3	+0.9
	comp=Z,6.7nm,0.6s,baz=134,slow=4.7,SNR=52						
	comp=Z,6.7nm,0.6s						
YKA	Yellowknife Ar	92.16	340	P	P	03 56 01.6	+0.2
CRAG	Craig	95.13	329	P	P	03 56 16.0	+0.8
	baz=122						
SKAG	Skagway	98.20	331	P	Pdif	03 56 30.5	+1.5
	baz=120						
BRTR	Keskin Array B	112.02	55	PP	PP	04 02 11.1	-2.9
	comp=Z,1.0nm,0.9s,baz=242,slow=7.8,SNR=5.8						
CTA	Charters Tower	126.74	221	PKP	PKiKP	04 01 56.1	0.0
	comp=Z,6.6nm,1.0s,baz=85,slow=8.3,SNR=2.6						
ASAR	Alice Springs	130.05	206	PKP	PKPdf	04 02 02.2	+0.3
	comp=Z,1.9nm,0.6s,baz=138,slow=2.2,SNR=19						
ASAR				SKPbc	SKPbc	04 05 08.5	+1.7
	comp=Z,4.5nm,1.0s,baz=146,slow=4.5,SNR=15						
ASAR	Alice Springs	130.05	206		PKPdf	04 02 01.7	-0.2
SEY	Seymchan	131.14	337	PKP	PKPdf	04 02 02.9	+0.2
	comp=Z,0.8nm,0.3s,baz=40,slow=7.9,SNR=2.9						
SEY				SKPbc	SKPab	04 05 10.3	+0.4
	comp=Z,2.0nm,0.3s,baz=51,slow=5.9,SNR=5.2						
WRA	Warramunga Arr	133.16	209	PKP	PKPdf	04 02 07.9	0.0
	comp=Z,2.4nm,0.6s,baz=169,slow=1.7,SNR=26						
WRA				SKPbc	SKPab	04 05 19.9	-0.1
	comp=Z,7.7nm,1.0s,baz=147,slow=3.0,SNR=22						
PETK	Petropavlovsk-	133.82	324	PKP	PKPdf	04 02 07.2	-0.8
	comp=Z,1.7nm,0.5s,baz=56,slow=6.3,SNR=2.5						
PETK				SKPbc	SKPab	04 05 21.5	-0.4
	comp=Z,6.2nm,0.9s,baz=78,slow=13,SNR=5.5						
ZALV	Zalesovo Beam	141.84	26	PKP	PKPdf	04 02 23.7	+1.0
	comp=Z,1.3nm,0.3s,baz=264,slow=2.3,SNR=4.8						
KSH	Kashi	144.35	52	PKP	PKPdf	04 02 27.8	0.0
KSH				pPKP	pPKPdf	04 03 12.3	-6.5
KSH				sPKP		04 03 31.5	
KSH				PP	PP	04 05 43.8	-1.5
MKAR	Makanchi Array	145.25	37	PKPbc	PKPab	04 02 29.9	+0.5
	comp=Z,7.1nm,0.6s,baz=313,slow=4.2,SNR=48						
MKAR				PP	PP	04 05 49.1	-0.8
	comp=Z,0.1nm,0.3s,baz=228,slow=1.7,SNR=3.6						
MKAR	Makanchi Array	145.25	37		PKPab	04 02 29.5	+0.1
ASAJ	Asahikawa	146.87	319	PKPbc	PKPab	04 02 35.4	-0.3
	comp=Z,9.9nm,0.9s,baz=321,slow=6.5,SNR=7.1						
HYBB	Hyderabad (bro	147.69	92	*e*PKiKP	PKiKP	04 02 38.1	-0.7
WMQ	Urumqi	150.08	38	*e*P	PKPdf	04 02 37.3	+0.2
MJAR	Matsushiro Arr	153.49	309	PKP	PKPdf	04 02 42.0	-0.3
	comp=Z,0.7nm,0.3s,baz=96,slow=11,SNR=1.6						
MJAR				PKPbc	PKiKP	04 02 51.1	+0.9
	comp=Z,1.2nm,0.8s,baz=343,slow=2.5,SNR=5.5						
SONM	Songino Array	153.79	9	PKP	PKPdf	04 02 42.8	+0.2
	comp=Z,0.4nm,0.6s,baz=42,slow=2.4,SNR=4.3						
SONM				PKPbc	PKiKP	04 02 51.8	+1.1
	comp=Z,0.5nm,0.4s,baz=302,slow=1.2,SNR=5.3						
SONM	Songino Array	153.79	9		PKPdf	04 02 43.0	+0.4
KSRS	Korea Array	159.71	323	PKP	PKPdf	04 02 50.2	0.0
	comp=Z,0.4nm,0.3s,baz=96,slow=1.3,SNR=6.2						
KSRS				PKPab	PKPab	04 03 29.8	-0.2
	comp=Z,1.3nm,0.9s,baz=61,slow=4.6,SNR=4.8						
HHC	Hu-ho-hao-te	161.23	2	*e*P	PKPdf	04 02 52.8	+0.8
LZH	Lanzhou	164.08	27	⇑PKP	PKPdf	04 02 52.0	-3.0
CMAR	Chiang Mai Arr	166.72	103	PKPab	PKPab	04 04 01.6	+0.2
	comp=Z,0.8nm,0.3s,baz=246,slow=7.9,SNR=4.9						
XAN	Xi'an	167.63	14	P	PKPdf	04 02 57.8	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NJ2	Nanjing	168.57	332	*e*P	PKPdf	04 02 59.3	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	PanZhiHua	169.17	64	PKP	PKPdf	04 02 57.6	-1.5

IDC ***23*** *03:51:14.7±1.5, 5.°51N×78.°20W, h0km, mb3.9/5, mbtmp3.9/6, ML2.2/2, MS3.5/4 Error ellipse: s-maj=50.5km s-min=28.9km az=12.0*

RSNC ***23*** *03:51:17.5±1.2, 5.°65N×78.°19W, h32km±10km, ML2.9, Mw3.2*

ISC 23 03:51:15.6±0.7**, 5.°67N**±0.°03×**78.°25W**±0.°04**, h10**km**, n38, σ2.ˢ09**/57**, mb3.7**/5**, MS3.8**/4**, 2C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	1.00	57	*e*P	Pg	03 51 33.7	-1.1
SOLC				*e*S	Sg	03 51 45.6	-2.3
SOLC				*i*		03 51 46.4	
	comp=Z,600nm,0.3s						
PIZC	Pizarro, Choco	1.13	129	⇑*e*P	Pb	03 51 35.5	-1.7
PIZC				*e*S	Sg	03 51 48.9	-3.1
PIZC				*i*		03 51 52.6	
	comp=Z,354nm,0.4s						
PTAC	Punta Ardita,	1.53	17	*e*P	Pn	03 51 41.6	-1.4
PTAC				*e*S	Sn	03 51 58.5	-4.5
MALC	Bahia Malaga	1.88	151	*e*P	Pn	03 51 45.7	-2.2
MALC				*e*S	Sn	03 52 08.2	-3.5
MALC				*i*		03 52 16.7	
	comp=Z,57nm,0.5s						
PLMC	San Jos del P	2.10	111	⇓*e*P	Pn	03 51 49.0	-2.0
PLMC				*e*S	Sn	03 52 13.3	-3.8
PLMC				*i*		03 52 16.0	
	comp=Z,132nm,0.4s						
CBOC	Ciudad Bolivar	2.23	85	*e*P	Pn	03 51 51.2	-1.6
CBOC				*e*S	Sn	03 52 16.5	-4.1
CBOC				*i*		03 52 17.1	
	comp=Z,49nm,0.1s						
DBBC	Dabeiba	2.42	56	*e*P	Pn	03 51 55.6	+0.2
DBBC				*i*		03 52 27.5	
	comp=Z,186nm,0.3s						
YOTC	Yotoco, Valle	2.53	131	⇑*e*P	Pn	03 51 55.5	-1.5
YOTC				*e*S	Sn	03 52 23.6	-4.3
YOTC				*i*		03 52 24.8	
	comp=Z,43nm,0.7s						
HELC	Santa Helena	2.75	79	*e*P	Pn	03 51 59.7	-0.5
HELC				*e*S	Sn	03 52 30.2	-3.4
AZU	Azuero	2.91	316	*e*P	Pn	03 52 01.0	-1.1
AZU				*e*S	Sn	03 52 35.4	-1.7
AZU				*i*		03 52 38.6	
	comp=Z,85nm,0.3s						
ANIL	Santa Ana	3.07	112	*e*P	Pn	03 52 04.6	+0.1
ANIL				*e*S	Sn	03 52 40.5	-0.9
ANIL				*i*		03 52 49.6	
	comp=Z,74nm,0.4s						
NORC	Norcasia	3.36	92	*e*P	Pn	03 52 08.8	+0.5
NORC				*e*S	Sn	03 52 46.5	-1.8
NORC				*i*		03 52 49.9	
	comp=Z,17nm,0.5s						
UREC	San Jos de Ur	3.40	52	*e*P	Pn	03 52 09.8	+1.0
UREC				*e*S	Sn	03 52 47.8	-1.3
UREC				*i*		03 52 54.0	
	comp=Z,14nm,0.4s						
ORTC	Ortega, Tolima	3.46	120	*e*P	Pn	03 52 10.7	+1.0
ORTC				*e*S	Sn	03 52 49.5	-1.4
ORTC				*i*		03 53 01.3	
	comp=Z,52nm,0.7s						
BCIP	Isla Barro Col	3.81	336	*e*P	Pn	03 52 12.1	-2.3
BCIP				*e*S	Sn	03 52 58.0	-1.4
ZARC	Zaragoza, Cauc	3.82	62	*e*P	Pn	03 52 16.0	+1.5
ZARC				*e*S	Sn	03 52 59.4	-0.2
ZARC				*i*		03 53 03.8	
	comp=Z,12nm,0.3s						
PTBC	PUERTO BERRIO,	3.87	77	*e*P	Pn	03 52 16.7	+1.5
PTBC				*e*S	Sn	03 53 00.1	-0.6
PTBC				*i*		03 53 07.3	
	comp=Z,10nm,0.6s						
PRAC	Prado	3.87	120	*e*P	Pn	03 52 16.6	+1.3
PRAC				*e*S	Sn	03 52 60.0	-1.0
PRAC				*i*		03 53 03.7	
	comp=Z,32nm,0.5s						
ROSC	El Rosal	4.00	102	Pn	Pn	03 52 17.1	-0.2
	comp=Z,1.5nm,0.3s,baz=337,slow=22,SNR=2.4						
SPBC	San Pablo de B	4.15	90	*e*P	Pn	03 52 20.4	+1.2
SPBC				*e*S	Sn	03 53 07.7	-0.2
SPBC				*i*		03 53 11.2	
	comp=Z,7.9nm,0.5s						
GARC	Garzon, Huila	4.42	141	*e*P	Pn	03 52 24.4	+1.4
GARC				*e*S	Sn	03 53 14.4	-0.4
GARC				*i*		03 53 19.2	
	comp=Z,13nm,0.5s						
CHIC	Chingaza	4.61	103	*e*P	Pn	03 52 27.7	+1.9
CHIC				*e*S	Sn	03 53 22.1	+2.3
VILC	Villavicencio,	4.79	109	*e*P	Pn	03 52 32.3	+4.2
VILC				*e*S	Sn	03 53 27.4	+3.6
FLOC	Florencia	4.82	147	*e*P	Pn	03 52 30.7	+2.4
BARC	Barichara	5.12	79	*e*P	Pn	03 52 35.1	+2.5
BARC				*e*S	Sn	03 53 33.8	+1.9
BARC				*i*		03 53 39.5	
	comp=Z,7.9nm,0.2s						
SJCC	San Jacinto, C	5.18	36	*e*P	Pn	03 52 33.8	+0.5
SJCC				*e*S	Sn	03 53 31.9	-1.4
SJCC				*i*		03 53 36.0	
	comp=Z,3.3nm,0.5s						
SDV	Santo Domingo	8.20	67	Pn	Pn	03 53 16.7	+1.8
	comp=Z,0.8nm,0.3s,baz=316,slow=22,SNR=3.9						
	comp=Z,1.6nm,0.3s						
LPAZ	La Paz	24.01	156	LR	LR	04 06 44.7	
	comp=Z,41nm,20.7s,baz=302,slow=39						
YKA	Yellowknife Ar	62.67	342	P	P	04 01 41.5	+1.3
	comp=Z,0.9nm,0.7s,baz=136,slow=6.9,SNR=5.5						
	comp=Z,0.9nm,0.7s						
ESDC	Sonseca Array	74.31	51	P	P	04 02 55.6	+2.0
	comp=Z,0.6nm,0.7s,baz=250,slow=30,SNR=4.6						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	75.87	336	P	P	04 03 04.5	+2.5
	comp=Z,0.3nm,0.6s,baz=110,slow=5.4,SNR=4.3						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	78.96	78	P	P	04 03 19.5	-0.8
	comp=Z,0.2nm,0.5s,baz=285,slow=9.2,SNR=1.1						
	comp=Z,0.2nm,0.5s						
VAE	Valguarnera	88.69	53	LR	LR	04 40 58.6	
	comp=Z,48nm,19.9s,baz=151,slow=34						
ARCES	ARCESS Array B	89.50	20	P	P	04 04 13.2	+0.4
	comp=Z,7.4nm,1.2s,baz=300,slow=3.9,SNR=2.8						
	comp=Z,7.4nm,1.2s						
SHEM	Shemya Is, Ala	96.06	324	LR	LR	04 52 47.2	
	comp=Z,31nm,18.1s,baz=148,slow=38						
IDI	Anoyia	97.39	53	LR	LR	04 46 14.1	
	comp=Z,27nm,21.6s,baz=274,slow=34						
ASAR	Alice Springs	144.26	237	PKP	PKPab	04 10 51.4	+0.6
	comp=Z,0.5nm,0.5s,baz=120,slow=3.7,SNR=2.9						
WRA	Warramunga Arr	145.30	243	PKPbc	PKPdf	04 10 55.7	+0.9
	comp=Z,0.4nm,0.8s,baz=116,slow=1.3,SNR=2.0						

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*NNC **23** 03:53:12.9±2.7, 50°.25N×85°.00E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=26.2km s-min=12.6km az=50.0*

IDC 23 03:53:09.4±2.0**, 50°.37N×85°.37E, h0^{km}, mbtmp2.6**/3**, ML2.2**/3**, 3C-3D, Error ellipse: s-maj=25.0km s-min=12.3km az=95.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.60	355	*i*		04 15 25.5	
	baz=176,slow=318,SNR=2.7						
ZALV	Zalesovo Beam	3.60	355	Pn	Pn	03 54 06.8	+0.4
	0.4nm,0.3s,baz=175,slow=15,SNR=2.4						
ZALV				Pg	Pb	03 54 14.4	+0.6
	0.4nm,0.3s,baz=178,slow=16,SNR=3.0						
ZALV				Lg	Lg	03 55 02.5	
	0.5nm,0.3s,baz=171,slow=20,SNR=1.7						
	0.8nm,0.3s						
MK31	Makanchi Array	4.12	211	⇓Pn	Pn	03 54 14.8	+1.2
	0.2nm,0.5s,baz=30,slow=12,SNR=8.0						
MK31				⇑Pg	Pb	03 54 22.7	-0.1
	0.1nm,0.3s,baz=22,slow=14,SNR=4.4						
MK31				⇓Lg	Lg	03 55 16.8	
	0.3nm,0.4s,baz=26,slow=28						
MKAR	Makanchi Array	4.12	211	Pn	Pn	03 54 15.0	+1.4
	0.2nm,0.3s,baz=29,slow=13,SNR=4.5						
MKAR				Pg	Pb	03 54 21.6	-1.2
	0.3nm,0.3s,baz=33,slow=16,SNR=5.6						
MKAR				Lg	Lg	03 55 16.0	
	0.3nm,0.3s,baz=31,slow=34,SNR=2.4						
	0.3nm,0.3s						
KURK	Kurchatov	4.32	277	⇑Lg	Lg	03 55 24.2	
	3.3nm,1.0s						
KURBB	Kurchatov Arra	4.37	276	Pn	Pn	03 54 17.5	+0.5
	0.2nm,0.3s,baz=90,slow=14,SNR=12						
KURBB				Lg	Lg	03 55 29.0	
	0.1nm,0.3s,baz=84,slow=30,SNR=6.3						
	1.0nm,0.3s						
KURBB	Kurchatov Arra	4.37	276	⇓Pn	Pn	03 54 17.0	0.0
	1.2nm,0.4s						
KURBB				⇑Lg	Lg	03 55 25.2	
	7.1nm,0.8s						

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*IDC **23** 04:00:39.4±4.2, 20°.23S×169°.44E, h99^{km}±37^{km}, mb3.5/5, mbtmp4.0/7, MS3.3/2, Error ellipse: s-maj=41.4km s-min=26.1km az=3.0*

*NOU **23** 04:00:39.1, 20°.37S×169°.68E, h85^{km}, MLv4.8/13, Vanuatu Islands*

*NEIC **23** 04:00:39.1±1.3, 20°.32S±0°.09×169°.6E±0°.2, h93^{km}±9^{km}, mb4.3/9, Error ellipse: s-maj=21.0km s-min=12.1km az=101.0*

ISC 23 04:00:38.8±0.7**, 20°.35S**±0°.06×**169°.60E**±0°.10**, h100^{km}, n41, σ0^{s}82**/42**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.85	232	Pn	Pn	04 01 08.9	-0.5
MARNC	Mare, Loyalty	1.85	232	P	Pn	04 01 09.4	0.0
RTV	Rentapao	2.77	336	P	Pn	04 01 22.8	+1.3
DVP	Devils Point	2.93	333	P	Pn	04 01 24.3	+0.7
PINNC	Pines Island,	3.02	221		Pn	04 01 25.0	+0.2
PINNC	Pines Island,	3.02	221	P	Pn	04 01 25.1	+0.4
YATNC	Mamie plateau,	3.05	235	P	Pn	04 01 24.7	-0.5
OUENC	Ouen Island, N	3.29	231	Pn	Pn	04 01 29.2	+0.7
OUENC	Ouen Island, N	3.29	231	P	Pn	04 01 29.7	+1.2
DZM	Mont Dzumac	3.41	239	P	Pn	04 01 30.4	+0.4
	196nm,0.4s,baz=124,slow=22,SNR=600						
DZM				S	Sn	04 02 08.9	-0.8
	258nm,0.4s,baz=344,slow=22,SNR=24						
DZM				LR	LR	04 02 46.3	
	comp=Z,184nm,20.7s,baz=22,slow=38						
DZM	Mont Dzumac	3.41	239	P	Pn	04 01 30.8	+0.7
ONTNC	Ouen Toro	3.52	236	Pn	Pn	04 01 32.5	+1.0
ONTNC	Ouen Toro	3.52	236	P	Pn	04 01 32.7	+1.2
NOUC	Port Laguerre	3.53	240	P	Pn	04 01 32.9	+1.2
SANVU	Saraoutou	5.38	335	Pn	Pn	04 01 56.4	-0.2
SANVU	Saraoutou	5.38	335	P	Pn	04 01 57.1	+0.4
LHI	Lord Howe Isla	14.60	218	Pn	Pn	04 04 01.3	+0.9
URZ	Urewera	19.00	162	P	Pn	04 04 55.1	+0.7
	6.0nm,0.5s,baz=323,slow=5.1,SNR=6.0						
URZ	Urewera	19.00	162		Pn	04 04 55.3	+1.0
URZ				IAmb	IAmb	04 05 17.9	
	comp=Z,28nm,1.3s						
BKZ	Black Stump Fm	19.68	164	P	Pn	04 05 02.0	-0.3
BKZ				IAmb	IAmb	04 05 21.1	
	comp=Z,16nm,1.3s						
BFZ	Birch Farm	21.05	166	P	P	04 05 15.0	+0.3
WB0	Warramunga Arr	33.04	265	P	P	04 07 04.6	-0.3
WB0				IAmb	IAmb	04 07 05.8	
	comp=Z,6.9nm,1.3s						
WB2	Warramunga Arr	33.05	264	P	P	04 07 04.7	-0.4
WB2				IAmb	IAmb	04 07 32.5	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	33.07	264	P	P	04 07 04.2	-0.9
	comp=Z,0.4nm,0.4s,baz=91,slow=8.4,SNR=9.6						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	33.07	264	P	P	04 07 04.2	-0.9
ASAR	Alice Springs	33.20	258	P	P	04 07 06.5	+0.1
	comp=Z,1.9nm,0.6s,baz=81,slow=9.4,SNR=19						
ASAR				PcP	PcP	04 09 46.7	-0.2
	comp=Z,0.3nm,0.3s,baz=132,slow=6.4,SNR=2.3						
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	33.20	258	P	P	04 07 06.6	+0.3
SIJI	Sorong	42.16	293	LR	LR	04 25 35.7	
	comp=Z,84nm,19.7s,baz=214,slow=36						
QSPA	South Pole Qui	69.71	180	P	P	04 11 38.1	+0.3
QSPA				IAmb	IAmb	04 11 38.6	
	comp=Z,3.2nm,0.8s						
TROLL	Troll, Antarti	87.46	184	P	P	04 13 14.6	-0.3
SNAA	Sanae	88.08	182	P	P	04 13 16.7	-1.0
SONM	Songino Array	88.30	323	P	P	04 13 19.9	+0.8
	comp=Z,0.2nm,0.3s,baz=165,slow=6.0,SNR=2.4						
	comp=Z,0.2nm,0.3s						
SONM	Songino Array	88.30	323	P	P	04 13 19.6	+0.4
VNA3	Neumayer Olymp	88.65	180	P	P	04 13 19.6	-0.8
VNA2	Neumayer--Watz	88.95	181	P	P	04 13 21.4	-0.4
	baz=177,slow=5.0						
NVAR	Mina Array Bea	89.28	48	P	P	04 13 24.9	+0.8
	comp=Z,0.3nm,0.5s,baz=223,slow=6.2,SNR=4.0						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	91.18	17	P	P	04 13 31.6	-0.5
	comp=Z,0.3nm,0.7s,baz=234,slow=4.6,SNR=4.4						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	91.18	17	P	P	04 13 30.6	-1.5
L27K	Beaver Creek,	91.43	20	P	P	04 13 31.1	-2.2
GERES	GERESS Array B	145.62	331	PKPbc	PKPdf	04 20 05.4	-0.1
	comp=Z,0.7nm,0.7s,baz=37,slow=5.2,SNR=5.0						
GERES	GERESS Array B	145.62	331		PKPdf	04 20 05.0	-0.5

IDC 23 04:01:39.0±6.0**, 23°.06S×148°.38E, h0^{km}, mbtmp3.1**/3**, ML3.2**/3**, Error ellipse: s-maj=56.9km s-min=35.1km az=90.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	3.56	326	Pn	Pn	04 02 36.2	+0.7
	3.8nm,0.3s,baz=143,slow=17,SNR=24						
CTA				Pg	Pb	04 02 43.7	+0.8
	4.3nm,0.3s,baz=141,slow=19,SNR=14						
CTA				Lg	Lg	04 03 31.2	
	4.2nm,0.3s,baz=72,slow=20,SNR=7.4						
	7.3nm,0.3s						
ASAR	Alice Springs	13.31	265	Pn	Pn	04 04 48.8	-0.6
	0.1nm,0.3s,baz=88,slow=13,SNR=2.1						
	0.1nm,0.3s						
WRA	Warramunga Arr	13.44	281	Pn	Pn	04 04 51.2	+0.2
	0.1nm,0.3s,baz=102,slow=11,SNR=4.6						
WRA				Lg	Lg	04 08 47.1	
	baz=110,slow=28,SNR=4.2						
	0.2nm,0.6s						
I22FR	PORTLAGUERRE I	17.07	91	*i*		05 44 10.0	
	baz=266,slow=311,SNR=2.8						

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*IDC **23** 04:53:23.5±2.0, 20°.68S×178°.83W, h629^{km}±18^{km}, mb3.3/10, mbtmp4.2/11, Error ellipse: s-maj=39.1km s-min=12.0km az=157.0*

*NEIC **23** 04:53:23.5±1.8, 20°.8S±0°.1×178°.77W±0°.09, h621^{km}±8^{km}, mb4.2/21, Error ellipse: s-maj=19.3km s-min=8.5km az=209.0*

ISC 23 04:53:24.8±0.6**, 20°.7S**±0°.1×**178°.9W**±0°.1**, h645^{km}, n51, σ1^{s}07**/55**, mb4.0**/21**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.16	315	P	P	04 54 51.8	-3.0
	67nm,0.7s,baz=148,slow=11,SNR=40						
MSVF	Nonsavu	4.16	315	P	P	04 54 51.7	-3.1
BHW	Baring Head	21.31	193	P	P	04 57 26.9	-1.1
WHZ	Wether Hill Ro	27.35	200	P	P	04 58 20.8	-0.4
WR0	Warramunga Arr	43.59	262	P	P	05 00 35.3	+0.6
WR0				IAmb	IAmb	05 00 48.9	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	43.69	257	P	P	05 00 35.6	+0.1
	comp=Z,1.2nm,0.6s,baz=91,slow=7.6,SNR=6.6						
ASAR				PcP	PcP	05 02 08.3	+0.8
	comp=Z,0.7nm,0.6s,baz=102,slow=3.8,SNR=5.6						
ASAR				S	S	05 06 22.1	+1.1
	comp=Z,1.0nm,0.8s,baz=92,slow=15,SNR=6.9						
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	43.69	257	P	P	05 00 35.7	+0.2
WB0	Warramunga Arr	43.75	263	P	P	05 00 36.1	+0.1
WB0				IAmb	IAmb	05 00 39.9	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	43.76	262	P	P	05 00 36.3	+0.2
WB2				IAmb	IAmb	05 00 44.0	
	comp=Z,7.5nm,1.3s						
WRA	Warramunga Arr	43.77	262	P	P	05 00 36.3	+0.1
	comp=Z,0.8nm,0.3s,baz=97,slow=7.7,SNR=41						
WRA				PcP	PcP	05 02 08.7	+0.8
	comp=Z,0.5nm,1.1s,baz=131,slow=4.7,SNR=1.9						
WRA				S	S	05 06 22.5	+0.3
	comp=Z,0.6nm,0.9s,baz=103,slow=15,SNR=4.7						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	43.77	262	P	P	05 00 36.5	+0.3
MTN	Manton Dam	48.36	271	P	P	05 01 10.9	+0.2
MTN				IAmb	IAmb	05 01 11.0	
	comp=Z,5.6nm,0.8s						
MBWA	Marble Bar	57.02	258	P	P	05 02 11.8	-0.1
MBWA				IAmb	IAmb	05 02 31.3	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	69.36	180	P	P	05 03 29.5	-0.1
MJAR	Matsushiro Arr	69.91	324	P	P	05 03 33.3	+0.2
	comp=Z,1.4nm,0.6s,baz=114,slow=15,SNR=4.7						
	comp=Z,1.4nm,0.6s						
JHS	Saijyo	71.75	320	P	P	05 03 45.7	+1.7
JHS				IAmb	IAmb	05 03 46.3	
	comp=Z,8.6nm,1.0s						
KIWB	Kanaga Island	72.27	1	P	P	05 03 46.7	+0.2
ADK	Adak	72.31	1	P	P	05 03 46.5	-0.2
UNV	Unalaska Valle	75.01	8	P	P	05 04 01.4	-0.5
PEA0B	Petropavlovsk-	76.27	346	P	P	05 04 09.6	+0.7
PETK	Petropavlovsk-	76.27	346	P	P	05 04 08.9	0.0
	comp=Z,2.4nm,0.6s,baz=102,slow=6.2,SNR=5.3						
	comp=Z,2.4nm,0.6s						
PETK	Petropavlovsk-	76.27	346	P	P	05 04 10.1	+1.2
KSRS	Korea Array	76.52	319	P	P	05 04 11.4	+0.8
	comp=Z,0.4nm,0.3s,baz=143,slow=8.9,SNR=4.2						
	comp=Z,0.4nm,0.3s						
YBH	Yreka Blue Hor	80.96	39	P	P	05 04 35.5	+1.5
PNTR	Pine Nut	81.28	43	P	P	05 04 36.5	+0.5
PNTR				IAmb	IAmb	05 04 37.6	
	comp=Z,5.4nm,0.8s						
HUMO	Hull Mountain	81.36	38	P	P	05 04 37.4	+1.4
NVAR	Mina Array Bea	81.73	44	P	P	05 04 38.3	0.0
	comp=Z,1.1nm,0.6s,baz=225,slow=7.4,SNR=9.1						
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	81.73	44	P	P	05 04 39.3	+1.0
KVN	Kaiserville	82.22	43	P	P	05 04 41.1	+0.5
K05A	Summer Lake	82.63	39	P	P	05 04 43.9	+1.3
K05A				IAmb	IAmb	05 04 49.6	
	comp=Z,12nm,1.4s						
PINE	Pine Mountain	83.25	38	P	P	05 04 47.0	+1.3
PINE				IAmb	IAmb	05 04 47.7	
	comp=Z,4.9nm,0.7s						
U15A	North Rim	84.70	48	P	P	05 04 54.3	+1.2
F10A	Beach Ranch, E	86.66	38	P	P	05 05 02.5	+0.6
F10A				IAmb	IAmb	05 05 03.0	
	comp=Z,6.2nm,0.9s						
TRF	Thorofare Moun	86.83	12	P	P	05 05 01.6	-0.8
TXAR	Lajitas Array	87.85	58	P	P	05 05 07.4	-0.5
	comp=Z,0.8nm,0.8s,baz=218,slow=6.2,SNR=12						
	comp=Z,0.8nm,0.8s						
TXAR	Lajitas Array	87.85	58	P	P	05 05 08.7	+0.9
CCB	Clear Creek Bu	88.40	13	P	P	05 05 08.9	-0.5
CCB				IAmb	IAmb	05 05 09.6	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	88.70	13	P	P	05 05 10.2	-0.6
	comp=Z,0.9nm,0.5s,baz=216,slow=5.2,SNR=16						
	comp=Z,0.9nm,0.5s						
ILAR	Eielson Array	88.70	13	P	P	05 05 10.6	-0.2
CMAR	Chiang Mai Arr	89.43	290	P	P	05 05 16.6	+1.3
	comp=Z,1.7nm,0.3s,baz=142,slow=1.2,SNR=5.1						
	comp=Z,1.7nm,0.3s						
PDAR	Pinedale Array	89.67	44	P	P	05 05 15.5	-0.6
	comp=Z,0.8nm,0.6s,baz=231,slow=3.8,SNR=8.8						
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	128.98	349	PKP	PKPdf	05 11 20.6	+0.4
	comp=Z,2.7nm,1.0s,baz=5.7,slow=1.2,SNR=9.2						
ARCES	ARCESS Array B	128.98	349		PKPdf	05 11 19.4	-0.8
FINES	FINESS Array B	135.75	343	PKP	PKPdf	05 11 34.6	+1.5
	comp=Z,0.4nm,0.4s,baz=76,slow=2.4,SNR=5.4						
FINES	FINESS Array B	135.75	343	PKPdf	PKPdf	05 11 33.6	+0.5
AKASG	Malin Array Be	142.80	330	PKP	PKPdf	05 11 43.8	-2.4
	comp=Z,3.7nm,0.4s,baz=43,slow=4.4,SNR=32						
AKASG	Malin Array Be	142.80	330	PKPdf	PKPdf	05 11 43.7	-2.5
BRTR	Keskin Array B	146.38	312	PKPbc	PKPbc	05 11 56.0	+0.4
	comp=Z,1.2nm,0.5s,baz=134,slow=5.1,SNR=8.4						
CLL	Collm	148.08	346	⇑*i*PKPbc	PKPab	05 12 05.0	+0.3
	comp=Z,5.0nm,0.8s						
GERES	GERESS Array B	150.18	343	PKPbc	PKPbc	05 12 04.4	-0.2
	comp=Z,0.8nm,0.5s,baz=44,slow=4.1,SNR=8.4						
GERES	GERESS Array B	150.18	343	PKPbc	PKPbc	05 12 05.0	+0.4

NOU 23 04:53:39.0, 17°.09S×168°.17E, h21^{km}, MLv4.4/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.63	179	P	Pb	04 53 52.0	+0.6
RTV	Rentapao	0.74	161	P	Pb	04 53 53.5	+0.3
MARNC	Mare, Loyalty	4.37	182	P	Pn	04 54 44.9	+0.7
YATNC	Mamie plateau,	5.09	194	P	Pn	04 54 52.7	-1.4
DZM	Mont Dzumac	5.21	198	P	Pn	04 54 56.0	+0.1
NOUC	Port Laguerre	5.29	199	P	Pn	04 54 56.3	-0.5
ONTNC	Ouen Toro	5.44	197	P	Pn	04 54 59.8	+1.0
OUENC	Ouen Island, N	5.45	193	P	Pn	04 54 59.5	+0.5

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*IDC **23** 05:13:56.3±1.5, 61°.05S×25°.74W, h0^{km}, mb4.0/2, mbtmp3.9/2, MS3.0/3, Error ellipse: s-maj=106.1km s-min=56.5km az=93.0*

*NEIC **23** 05:14:01.6±2.3, 61°.20S±0°.08×22°.3W±0°.3, h10^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=23.3km s-min=12.2km az=68.0*

ISC 23 05:14:01.3±0.8**, 61°.1S**±0°.1×**22°.3W**±0°.1**, h10^{km}, n21, σ1^{s}09**/17**, mb4.2**/3**, MS2.9**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	10.21	306	Pn	Pn	05 16 29.3	+1.7
ORCD	Orcadas	10.91	262	Pn	Pn	05 16 37.2	+0.1
VNA1	Neumayer--Stat	11.11	155	P	Pn	05 16 41.5	+1.6
VNA3	Neumayer Olymp	11.33	159	P	Pn	05 16 43.6	+0.6
VNA3				S	Sn	05 18 40.4	-9.1
VNA2	Neumayer--Watz	11.51	155	P	Pn	05 16 45.9	+0.6
	baz=321,slow=13						
SNAA	Sanae	13.05	152	P	Pn	05 17 07.3	+0.8
SNAA	Sanae	13.05	152	Pn	Pn	05 17 07.2	+0.8
TROLL	Troll, Antarti	14.56	149	P	Pn	05 17 28.1	+1.0
ESPZ	Base Esperanza	16.18	247	Pn	Pn	05 17 48.8	+0.4
ESPZ				IAmb	IAmb	05 18 00.5	
	comp=Z,42nm,1.5s						
BELA	Belgrano 2	17.29	189	P	P	05 18 04.0	+0.1
SBA	Scott Base	41.15	183	P	P	05 21 43.6	-1.3
MT09	Talagante	41.34	289	P	P	05 21 45.9	-1.3
MT09				IAmb	IAmb	05 21 59.7	
	comp=Z,10nm,1.4s						
CPUP	Villa Florida	42.06	310	LR	LR	05 40 29.0	
	comp=Z,15nm,18.6s,baz=192,slow=39						
LPAZ	La Paz	55.35	303	LR	LR	05 51 28.3	
	comp=Z,6.8nm,18.1s,baz=46,slow=42						
TORD	Torodi Ar. Bea	76.45	24	P	P	05 25 51.5	+0.7
	comp=Z,1.4nm,0.9s,baz=191,slow=5.1,SNR=3.9						
	comp=Z,1.4nm,0.9s						
TORD	Torodi Ar. Bea	76.45	24	IAmb	IAmb	05 26 00.2	
	comp=Z,4.0nm,1.5s						
ROSC	El Rosal	77.03	306	LR	LR	06 02 11.8	
	comp=Z,19nm,18.3s,baz=262,slow=38						
ASAR	Alice Springs	93.34	158	P	P	05 27 16.8	+0.5
	comp=Z,0.4nm,0.6s,baz=176,slow=6.0,SNR=1.7						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	127.73	27	PKP	PKPdf	05 33 04.6	-0.5
	comp=Z,1.5nm,0.8s,baz=224,slow=3.8,SNR=3.9						
SONM	Songino Array	148.27	91	PKPbc	PKPbc	05 33 45.3	-1.3
	comp=Z,0.8nm,0.7s,baz=205,slow=3.0,SNR=3.7						
INK	Inuvik	151.28	314	PKPbc	PKPdf	05 33 45.6	-1.4
	comp=Z,2.2nm,1.0s,baz=105,slow=2.8,SNR=2.1						

NOU 23 05:17:17.9, 17°.07S×168°.07E, h15^{km}, MLv3.8/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.66	170	P	Pb	05 17 31.2	0.0
RTV	Rentapao	0.79	155	P	Pn	05 17 34.1	-0.5
YATNC	Mamie plateau,	5.09	192	P	Pn	05 18 33.7	+0.1
DZM	Mont Dzumac	5.21	197	P	Pn	05 18 35.2	-0.2
OUENC	Ouen Island, N	5.45	192	P	Pn	05 18 38.7	+0.1

IDC 23 05:27:05.7±1.9**, 55°.70N×158°.28E, h0^{km}, mb3.3**/3**, mbtmp3.4**/4**, ML3.2**/1**, Error ellipse: s-maj=70.0km s-min=22.1km az=122.0, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	2.62	188	Pn	Pn	05 27 49.4	+0.2
	21nm,0.3s,baz=89,slow=17,SNR=253						
PETK				Sn	Sb	05 28 23.9	-2.2
	13nm,0.3s,baz=88,slow=37,SNR=3.8						
	28nm,0.4s						
ASAJ	Asahikawa	15.33	227	Pn	P	05 30 47.9	-0.2
	0.7nm,0.3s,baz=18,slow=9.6,SNR=1.8						
MJAR	Matsushiro Arr	23.52	224	P	P	05 32 17.2	0.0
	1.0nm,0.3s,baz=17,slow=10,SNR=4.9						
	1.0nm,0.3s						
ILAR	Eielson Array	27.81	49	P	P	05 32 57.6	+1.6
	0.1nm,0.7s,baz=263,slow=7.2,SNR=1.8						
	0.1nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TXAR	Lajitas Array	70.58	66	P	P	05 38 21.2	-1.4
	0.1nm,0.6s,baz=303,slow=5.7,SNR=2.3						
	0.1nm,0.6s						

IDC 23 05:46:24.6±3.0**, 54°.32N**×**86°.85E, h0^{km}, mbtmp3.0**/2**, ML2.4**/2**, Error ellipse: s-maj=23.9km s-min=15.1km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.25	254	i		05 54 00.0	
	baz=70,slow=311,SNR=1.7						
ZALV	Zalesovo Beam	1.25	254	Pg	Pg	05 46 47.5	-1.0
	1.3nm,0.3s,baz=68,slow=16,SNR=14						
ZALV				Lg	Lg	05 47 04.5	
	1.7nm,0.3s,baz=75,slow=28,SNR=14						
KURBB	Kurchatov Arra	6.29	237	Pn	Pn	05 48 00.5	+2.0
	0.1nm,0.3s,baz=53,slow=14,SNR=6.8						
KURBB				Sn	Sn	05 49 10.7	-0.2
	0.1nm,0.3s,baz=49,slow=21,SNR=1.7						
KURBB				Lg	Lg	05 49 42.5	
	baz=56,slow=33,SNR=1.6						
	1.8nm,0.5s						
MKAR	Makanchi Array	8.07	203	Pn	Pn	05 48 22.4	-0.6
	baz=19,slow=9.2,SNR=2.7						
MKAR				Sn	Sn	05 49 55.4	+0.5
	0.1nm,0.3s,baz=27,slow=26,SNR=3.8						
MKAR				Lg	Lg	05 50 40.6	
	baz=16,slow=32,SNR=2.6						
	0.2nm,0.4s						

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*IDC **23** 05:47:45.6±0.7, 27°.94N×101°.41E, h0^{km}, mb3.9/12, mbtmp3.9/13, ML4.2/1, MS3.3/12, Error ellipse: s-maj=27.5km s-min=13.8km az=73.0*

*BJI **23** 05:47:46.0±0.0, 27°.91N×101°.16E, h13^{km}, mb3.8/4, ML3.8/17, Ms3.6/8, Ms7 3.5/7*

*NEIC **23** 05:47:52.0±1.4, 27°.89N±0°.08×101°.36E±0°.04, h35^{km}±1^{km}, mb4.3/18, Error ellipse: s-maj=14.1km s-min=6.3km az=185.0*

ISC 23 05:47:47.5±0.5**, 27°.99N**±0°.03×**101°.22E**±0°.05**, h10^{km}, n59,** σ**2^s.33**/64**, mb4.2**/20**, MS3.3**/12**, 2C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZH	PanZhiHua	1.55	163	Pg	Pn	05 48 12.8	-2.5
PZH				Sg	Sg	05 48 34.9	-2.5
PZH				smax	smax		
	comp=N,1µm,0.7s						
PZH				smax	smax		
	comp=E,2µm,0.8s						
KMI	Kunming	3.16	154	⇓Pn	Pn	05 48 39.1	+1.5
KMI				Pg	Pb	05 48 43.3	-0.6
KMI				Sg	Sb	05 49 22.8	+0.2
KMI				smax	smax		
	comp=N,350nm,1.3s						
KMI				smax	smax		
	comp=E,390nm,0.9s						
KMI				LR	LR		
	comp=E,1µm,9.9s						
KMI				LR	LR		
	comp=Z,660nm,7.1s						
CD2	Chengdu	3.66	37	Pn	Pn	05 48 39.5	-4.7
CD2				Pg	Pb	05 48 52.9	+0.7
CD2				Sg	Sg	05 49 42.4	-2.5
CD2				smax	smax		
	comp=E,830nm,0.8s						
GYA	Guiyang	5.08	106	⇑Pg	Pg	05 49 26.8	+2.0
GYA				Sn	Sn	05 50 06.8	+4.2
GYA				Sg	Sg	05 50 36.3	+5.6
GYA				smax	smax		
	comp=N,100nm,1.1s						
GYA				smax	smax		
	comp=E,98nm,0.9s						
GYA				LR	LR		
	comp=N,180nm,3.8s						
GYA				LR	LR		
	comp=E,230nm,3.8s						
GYA				LR	LR		
	comp=Z,100nm,2.0s						
ENH	Enshi	7.58	71		Pn	05 49 38.2	+0.1
LZH	Lanzhou	8.37	15	eP	Pn	05 49 47.5	-1.6
LZH				pP	Pb	05 49 54.3	-18
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				LR	LR		
	comp=Z,610nm,7.0s						
LZH				LR	LR		
	comp=Z,520nm,11.4s						
SHL	Shillong	8.69	256	Pn	Pn	05 49 54.7	+1.2
XAN	Xi'an	8.94	46	P	Pn	05 49 59.9	+3.1
XAN				S	Sn	05 51 40.4	+2.8
XAN				smax	smax		
	comp=Z,110nm,1.0s						
XAN				smax	smax		
	comp=Z,66nm,0.9s						
XAN				LR	LR		
	comp=Z,540nm,8.8s						
XAN				LR	LR		
	comp=Z,230nm,9.6s						
LSA	Lhasa	9.00	283	Pn	Pn	05 50 01.6	+3.7
CMAR	Chiang Mai Arr	9.72	193	Pn	Pn	05 50 08.7	+1.3
	comp=Z,0.6nm,0.3s,baz=4.4,slow=13,SNR=4.5						
CMAR				Pg		05 50 46.6	
	comp=Z,0.2nm,0.3s,baz=5.5,slow=17,SNR=13						
CMAR				Lg	Lg	05 52 56.2	
	baz=30,slow=29						
	comp=Z,1.1nm,0.3s						
GOMU	GeErMu	9.82	328	P	Pn	05 50 11.6	+2.5
GOMU				pP		05 50 15.4	
GOMU				sP		05 50 16.9	
GOMU				S	Sn	05 51 54.3	-5.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GOMU				LR	LR		
	comp=Z,170nm,7.3s						
GOMU				LR	LR		
	comp=Z,92nm,6.5s						
CNSH	ChangSha	10.34	86	⇑P	Pn	05 50 18.4	+2.4
CNSH				S	Sn	05 52 10.9	-1.1
LYN	LuoYang	11.63	53	⇓P	Pn	05 50 30.6	-2.9
LYN				sP		05 50 35.9	
LYN				PP	PnPn	05 50 37.6	-3.7
LYN				S	Sn	05 52 37.8	-5.6
LYN				SS	SnSn	05 52 55.3	-0.2
LYN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LYN				LR	LR		
	comp=N,200nm,8.6s						
LYN				LR	LR		
	comp=E,250nm,7.8s						
LYN				LR	LR		
	comp=Z,200nm,9.2s						
QIZ	Qiongzhong	11.91	137	Pn	Pn	05 50 36.5	-1.1
QIZ	Qiongzhong	11.91	137	P	Pn	05 50 34.6	-2.9
QIZ				S	Sn	05 52 49.0	-1.6
QIZ				LR	LR		
	comp=Z,360nm,13.5s						
QIZ				LR	LR		
	comp=Z,260nm,10.4s						
WMQ	Urumqi	19.18	329	eP	P	05 52 11.8	+0.4
SONM	Songino Array	20.22	10	P	P	05 52 23.6	+0.9
	comp=Z,2.2nm,0.9s,baz=207,slow=12,SNR=7.9						
SONM				LR	LR	06 00 46.4	
	comp=Z,62nm,19.8s,baz=170,slow=39						
	comp=Z,2.2nm,0.9s						
SONM	Songino Array	20.22	10	P	Pn	05 52 24.0	-0.6
MK31	Makanchi Array	23.94	327	P	P	05 53 03.7	+1.9
MK31				IAmb	IAmb	05 53 13.0	
	comp=Z,3.3nm,0.8s						
MKAR	Makanchi Array	23.94	327	P	P	05 53 02.7	+0.9
	comp=Z,3.3nm,0.8s,baz=129,slow=11,SNR=21						
	comp=Z,3.3nm,0.8s						
MKAR	Makanchi Array	23.94	327	P	P	05 53 04.5	+2.7
JOW	Kunigami	24.03	86	LR	LR	06 02 54.6	
	comp=Z,98nm,19.1s,baz=173,slow=38						
MAKZ	Makanchi	24.11	326	P	P	05 53 05.2	+1.8
KSRS	Korea Array	24.30	60	P	P	05 53 04.8	-0.3
	comp=Z,0.8nm,0.6s,baz=262,slow=8.5,SNR=2.2						
KSRS				LR	LR	06 03 06.6	
	comp=Z,41nm,18.6s,baz=215,slow=38						
	comp=Z,0.8nm,0.6s						
PSI	Prapat	25.14	185	P	P	05 53 13.6	+0.5
	comp=Z,2.3nm,0.5s,baz=343,slow=11,SNR=2.3						
	comp=Z,2.3nm,0.5s						
RPSI	Rantau Prapat	25.25	185	P	P	05 53 13.6	-0.3
AAK	Ala-Archa	26.11	311	LR	LR	06 05 14.6	
	comp=Z,56nm,18.1s,baz=154,slow=40						
KURBB	Kurchatov Arra	28.41	329	P	P	05 53 42.7	+0.7
	comp=Z,3.3nm,0.2s,baz=140,slow=8.5,SNR=6.4						
	comp=Z,3.3nm,0.2s						
KURK	Kurchatov	28.43	329	P	P	05 53 45.0	+2.7
KURK				IAmb	IAmb	05 53 50.1	
	comp=Z,4.9nm,1.0s						
ZAA0	Zalesovo Array	28.59	340	P	P	05 53 46.2	+2.5
ZALV	Zalesovo Beam	28.59	340	P	P	05 53 44.4	+0.7
	comp=Z,0.7nm,0.5s,baz=123,slow=10,SNR=2.2						
ZALV				LR	LR	06 06 08.3	
	comp=Z,61nm,22.0s,baz=159,slow=38						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	28.59	340	P	P	05 53 45.4	+1.7
KLR	Kul'dur	31.58	39	LR	LR	06 07 16.1	
	comp=Z,34nm,20.8s,baz=224,slow=37						
MJAR	Matsushiro Arr	32.26	65	LR	LR	06 08 19.0	
	comp=Z,58nm,18.5s,baz=162,slow=38						
ABKAR	Akbulak array	37.99	315	P	P	05 55 07.7	+2.2
YAK	Yakutsk	38.90	21	LR	LR	06 12 00.9	
	comp=Z,52nm,18.1s,baz=124,slow=37						
BATI	Baumata	43.75	147	LR	LR	06 17 03.9	
	comp=Z,116nm,20.2s,baz=221,slow=40						
TIXI	Tiksi	46.29	12	P	P	05 56 12.9	0.0
TIXI				IAmb	IAmb	05 56 17.4	
	comp=Z,2.6nm,1.1s						
PETK	Petropavlovsk-	48.17	42	LR	LR	06 20 09.5	
	comp=Z,39nm,18.4s,baz=182,slow=40						
PSA00	Pilbara Seismi	52.46	158	P	P	05 56 57.1	-3.4
PSA00				IAmb	IAmb	05 57 19.4	
	comp=Z,4.1nm,1.4s						
WB0	Warramunga Arr	57.30	142	P	P	05 57 34.4	-1.3
WB0				IAmb	IAmb	05 57 46.7	
	comp=Z,8.3nm,1.4s						
WRA	Warramunga Arr	57.42	142	P	P	05 57 35.1	-1.4
	comp=Z,2.2nm,0.6s,baz=329,slow=7.9,SNR=25						
	comp=Z,2.2nm,0.6s						
WB2	Warramunga Arr	57.42	142	P	P	05 57 35.7	-0.9
WR0	Warramunga Arr	57.54	142	P	P	05 57 36.3	-1.1
WR0				IAmb	IAmb	05 58 03.5	
	comp=Z,5.2nm,1.1s						
AKASG	Malin Array Be	57.72	314	P	P	05 57 39.5	+1.2
	comp=Z,0.3nm,0.3s,baz=71,slow=6.6,SNR=3.3						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	60.26	145	P	P	05 57 55.2	-1.0
	comp=Z,0.9nm,0.4s,baz=327,slow=6.8,SNR=16						
	comp=Z,0.9nm,0.4s						
NOA	NORSAR Array B	65.94	328	P	P	05 58 33.1	-0.5
	comp=Z,0.4nm,0.6s,baz=77,slow=6.3,SNR=1.8						
NOA				LR	LR	06 28 57.7	
	comp=Z,22nm,19.0s,baz=250,slow=37						
	comp=Z,0.4nm,0.6s						
BBOO	Buckleboo	68.93	149	P	P	05 58 50.5	-2.3
JMIC	Jan Mayen	69.93	341	LR	LR	06 32 38.5	
	comp=Z,17nm,20.5s,baz=98,slow=38						
IMAR	Indian Mountai	70.60	25	P	P	05 59 03.1	+0.4
TOLK	Toolik Lake Re	70.86	21	P	P	05 59 06.2	+1.9
STKA	Stephens Creek	70.86	144	P	P	05 59 02.3	-2.3
	comp=Z,1.9nm,0.8s,baz=303,slow=5.9,SNR=4.1						
	comp=Z,1.9nm,0.8s						
STKA	Stephens Creek	70.86	144	P	P	05 59 04.0	-0.7
STKA				IAmb	IAmb	05 59 11.8	
	comp=Z,3.4nm,1.4s						
H21K	Melozitna Rive	71.09	25	P	P	05 59 07.8	+2.1
H21K				IAmb	IAmb	05 59 14.4	
	comp=Z,6.7nm,1.4s						
H23K	Yukon River	72.21	24	P	P	05 59 14.5	+2.0
H23K				IAmb	IAmb	05 59 19.0	
	comp=Z,7.2nm,1.5s						
PPLA	Purkeypile	72.58	27	P	P	05 59 16.3	+1.4
BMAR	Burnt Mountain	73.10	22	P	P	05 59 17.9	+0.2
MDM	Murphy Dome	73.12	25	P	P	05 59 19.5	+1.6
MDM				IAmb	IAmb	05 59 27.8	
	comp=Z,4.6nm,1.0s						
ILAR	Eielson Array	73.71	24	P	P	05 59 20.6	-0.7
	comp=Z,0.9nm,1.1s,baz=302,slow=6.5,SNR=5.0						
	comp=Z,0.9nm,1.1s						

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*AZER **23** 06:04:55.7±0.2, 37°.59N×49°.07E, h20^{km}, Error ellipse: s-maj=5.9km s-min=1.7km az=276.0*

*TEH **23** 06:04:56.9, 37°.49N×48°.95E, h8^{km}, ML3.8*

ISC 23 06:04:57.8±0.9**, 37°.55N**±0°.03×**49°.01E**±0°.03**, h11^{km}**±6^{km}**, n67,** σ**1^s.62**/89**, 3C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSN1	Caspian	0.07	78	ePg	Pg	06 05 00.2	0.0
CSN1				eSg	Sg	06 05 02.7	+0.8
RST1	Rasht - Gilan	0.59	122	eSg	Sb	06 05 18.2	-0.1
RST1				ePg	Pg	06 05 09.5	+0.3
ZNJK	Zanjan	0.92	197	ePg	Pg	06 05 14.1	-1.4
LHJ2	Lahijan - Gila	0.92	114	ePg	Pb	06 05 14.8	-1.0
LHJ2				eSg	Sb	06 05 28.5	+0.5
ASTR	Astara	1.02	350	P	Pb	06 05 16.7	-0.8
	SNR=174						
ASTR				S	Sg	06 05 31.8	+0.9
JIR1	Jirandeh	1.05	143	ePg	Pb	06 05 16.6	-1.5
ISRB	Sarab	1.10	285	ePg	Pb	06 05 18.1	-0.8
ISRB				eSg	Sb	06 05 33.7	+0.3
ISRB				e		06 05 35.4	
	comp=Z,18µm,0.3s						
LKRN	Lenkeran, Azer	1.17	351	P	Pn	06 05 19.4	-0.7
	SNR=6.8						
LKRN				S	Sg	06 05 36.1	+0.5
LRK	Lerik	1.21	334	P	Pn	06 05 19.8	-1.0
	SNR=332						
LRK				S	Sb	06 05 37.0	+0.4
IHSH	Hashtrud	1.41	261	ePg	Pn	06 05 23.4	-0.3
IHSH				e		06 05 45.1	
	comp=Z,17µm,0.2s						
QCNT	Qazvin	1.49	147	ePg	Pn	06 05 24.9	+0.3
QCNT				eSg	Sn	06 05 44.5	+0.4
YRD	Yardimli	1.49	336	P	Pn	06 05 24.5	-0.2
	SNR=80						
YRD				S	Sn	06 05 44.9	+0.7
IGZV	Ghazvin	1.51	140	ePn	Pn	06 05 24.6	-0.4
IGZV				e		06 05 25.9	
	comp=Z,16µm,0.2s						
GRMI	Germi	1.53	325	ePn	Pn	06 05 25.6	+0.4
IBST	Bostanabad	1.69	276	ePg	Pn	06 05 27.8	+0.4
IBST				e		06 05 54.6	
	comp=Z,7µm,0.2s						
IHRS	Heris	1.73	297	ePg	Pn	06 05 29.0	+0.9
GLBA	Clilabad	1.76	344	P	Pn	06 05 28.1	-0.1
	SNR=19						
GLBA				S	Sn	06 05 51.4	+0.9
TVRZ	Varzaqan	2.08	298	ePn	Pn	06 05 33.1	+0.3
IRAZ	Razeghan	2.27	161	ePn	Pn	06 05 35.5	+0.2
IRAZ				e		06 06 11.3	
	comp=Z,4µm,0.6s						
IMHD	Mahdasht	2.29	144	ePn	Pn	06 05 37.1	+1.5
IMHD				e		06 06 12.0	
	comp=Z,4µm,0.1s						
QRD	Qoradiz	2.32	326	P	Pn	06 05 37.1	+1.1
	SNR=13						
QRD				S	Sn	06 06 07.0	+2.5
CHTH	Charan	2.36	133	ePn	Pn	06 05 37.9	+1.2
ITBZ	Tabriz	2.37	288	ePn	Pn	06 05 37.7	+1.0
ALIB	Äli-Bayra	2.41	360	P	Pn	06 05 36.8	-0.2
IAZR	Azarshahr	2.41	274	ePn	Pn	06 05 37.1	-0.3
IAZR				e		06 06 22.1	
	comp=Z,7µm,0.5s						
BLQ	Beylaqan	2.45	333	P	Pn	06 05 37.7	+0.1
	SNR=14						
BLQ				S	Sb	06 06 11.3	-0.6
HAGD	Aghdareh	2.72	178	ePn	Pn	06 05 42.7	+1.0
ORD	Ordubad	2.74	301	P	Pn	06 05 43.9	+2.1
	SNR=47						
ORD				S	Sb	06 06 20.0	-0.5
ISHB	Shabestar	2.78	286	ePn	Pn	06 05 44.0	+1.5
ISHB				e		06 06 28.9	
	comp=Z,2µm,0.5s						
IHSB	Hasanabad	2.79	138	ePn	Pn	06 05 44.2	+1.8
SNGE	Sanandaj	2.79	209	ePn	Pn	06 05 43.3	+0.7
IMRD	Marand	2.85	295	ePn	Pn	06 05 46.2	+2.8
IMRD				e		06 06 33.5	
	comp=Z,5µm,0.7s						
ZRD	Zardab	2.92	340	S	Sn	06 06 21.7	+2.6
AGDM	Agdam	2.96	330	P	Pn	06 05 48.0	+3.4
	SNR=7.6						
AGDM				S	Sn	06 06 23.7	+3.6
IPRN	Peran	2.97	115	ePn	Pn	06 05 44.4	-0.6
BRDA	Brd	3.06	333	P	Pn	06 05 48.4	+2.3
	SNR=4.5						
BRDA				S	Sn	06 06 24.8	+2.1
ILIN	Lien	3.10	213	ePn	Pn	06 05 47.9	+1.0
ASAO	Ashtian	3.11	164	ePn	Pn	06 05 48.4	+1.5
IDMV	Damavand	3.13	128	ePn	Pn	06 05 49.1	+1.8
IDMV				e		06 06 40.2	
	comp=Z,892nm,0.5s						
IQOM	Qom	3.17	148	ePn	Pn	06 05 49.7	+1.8
NAX	Nakhchivan	3.20	301	P	Pn	06 05 49.0	+0.9
	SNR=3.2						
NAX				S	Sn	06 06 28.1	+1.8
SBZ	Shahbuz	3.28	305	P	Pn	06 05 52.4	+3.2
	SNR=17						
SBZ				S	Sn	06 06 31.3	+3.0
HSAM	Samen	3.35	186	ePn	Pn	06 05 52.1	+1.8
SIZA	Siyzn	3.52	359	P	Pn	06 05 53.2	+0.7
SIZA				S	Sn	06 06 35.7	+1.5
IDHR	Dehrash	3.55	218	ePn	Pn	06 05 53.9	+0.9
IFIR	Firoozkooh	3.56	121	ePn	Pn	06 05 55.3	+2.0
GHVR	GHOM	3.58	148	ePn	Pn	06 05 54.5	+1.2
XNQ	Khinaliq	3.68	350	P	Pn	06 05 54.6	-0.2
	SNR=3.0						
XNQ				S	Sn	06 06 39.8	+1.5
GANJ	Ganja	3.73	327	P	Pn	06 05 56.4	+1.0
	SNR=3.4						
GANJ				S	Sn	06 06 42.1	+2.9
IDOB	Doab	3.81	190	ePn	Pn	06 05 59.4	+2.8
ISHM	Shahmirzad	3.86	116	ePn	Pn	06 05 58.3	+1.0
ISHM				e		06 06 50.1	
	comp=Z,2µm,0.4s						
KHMZ	Khomeyn	3.88	168	ePn	Pn	06 05 59.5	+1.9
HYR	Heyderabad	3.91	305	S	Sn	06 06 46.2	+2.4
SEKA	Sheki	3.92	340	P	Pn	06 05 58.9	+1.0
	SNR=3.9						
SEKA				S	Sn	06 06 44.6	+0.8
IGLO	Ghaloghah	4.00	104	ePn	Pn	06 06 01.5	+2.3
IGLO				e		06 06 54.0	
	comp=Z,1µm,0.5s						
GDB	GEDABAY	4.05	322	P	Pn	06 06 02.7	+2.8
	SNR=8.4						
GDB				S	Sn	06 06 48.6	+1.2
IKFM	Kafar-mosalman	4.13	194	ePn	Pn	06 06 01.3	+0.6
ISFB	Sefidab	4.13	140	ePn	Pn	06 06 01.6	+0.7
KRSH	Karshahi	4.38	144	ePn	Pn	06 06 06.5	+2.1
IANJ	Anjilo	4.46	116	ePn	Pn	06 06 06.9	+1.3
IKLH	Kolahrood	4.71	153	ePn	Pn	06 06 10.6	+1.6
IZEF	Zefreh	5.38	149	ePn	Pn	06 06 20.2	+2.0
NASN	Na'in	5.67	146	ePn	Pn	06 06 24.1	+1.9
SHRO	Shahrood	5.83	103	ePn	Pn	06 06 27.3	+3.0
SBZV	Sabzevar	6.98	97	ePn	Pn	06 06 39.3	-0.9
AB31	Akbulak array	14.12	31	⇓P	P	06 08 22.5	-2.8
	comp=Z,0.3nm,0.4s,baz=220,slow=14,SNR=4.2						
AB31				⇑S	Sn	06 10 39.6	-15
	comp=Z,0.8nm,0.7s,baz=216,slow=24,SNR=4.7						
AKTO	Aktyubinsk	14.40	24	⇑P	P	06 08 25.6	-2.8
	comp=Z,1.0nm,0.5s						
AKTO				⇑S	Sn	06 10 48.1	-13
	comp=Z,3.4nm,1.3s						

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*SSNC **23** 06:10:56.0±1.6, 18°.63N×76°.78W, h7^{km}±10^{km}, MD3.0, ML2.2, MW2.9*

*JSN **23** 06:10:56.4±0.4, 18°.58N×76°.76W, h18^{km}±4^{km}, MD3.5*

ISC 23 06:10:55.0±1.4**, 18°.64N**±0°.06×**76°.82W**±0°.05**, h29^{km}**±17^{km}**, n14,** σ**1^s.18**/22**, 2C-2D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STH	Stony Hill	0.56	179	⇑iP	Pb	06 11 05.6	-0.8
GWJ	Greenwich	0.57	171	⇑iP	Pb	06 11 05.9	-0.7
HOJ	Hope	0.63	174	i P	Pb	06 11 07.0	-0.6
MTDJ	Mount Denham	0.79	239	eP	Pn	06 11 10.4	+0.1
MTDJ				eS	Sn	06 11 21.1	-0.1
CVJ	Coleyville	0.79	239	⇓iP	Pn	06 11 11.1	+0.8
MCJ	Malvern	1.08	229	⇓iP	Pb	06 11 15.4	+0.2
MCJ				i S	Sb	06 11 29.8	+0.7
LMGC	Las Mercedes	1.43	353	eP	Pn	06 11 18.8	-0.2
LMGC				eS	Sn	06 11 35.7	-1.1
LMGC				IAML		06 11 39.4	
	comp=E,38nm,0.0s						
LMGC				IAML		06 11 41.0	
	comp=N,57nm,0.1s						
RCC	Rio Carpintero	1.72	38	eP	Pn	06 11 23.6	+0.7
RCC				eS	Sn	06 11 42.9	-1.1
RCC				IAML		06 11 45.5	
	comp=E,16nm,0.2s						
RCC				IAML		06 11 46.6	
	comp=N,15nm,0.2s						
GTBY	Guantanamo Bay	2.06	51	eP	Pn	06 11 28.2	+0.5
GTBY				eS	Sn	06 11 51.6	-0.9
GTMO	Guantanamo	2.14	48	eP	Pn	06 11 29.4	+0.6
HLGC	Holguin	2.35	18	eP	Pn	06 11 33.7	+2.0
HLGC				IAML		06 12 03.0	
	comp=E,21nm,0.4s						
HLGC				IAML		06 12 03.5	
	comp=N,22nm,0.4s						
MOAC	Moa	2.67	41	eP	Pn	06 11 39.1	+3.0
MOAC				eS	Sn	06 12 07.2	-0.3
MOAC				IAML		06 12 13.4	
	comp=E,14nm,0.5s						
MOAC				IAML		06 12 14.2	
	comp=N,27nm,0.3s						
CCCC	Cccc	2.70	341	eP	Pn	06 11 37.2	+0.7
CCCC				eS	Sn	06 12 06.3	-1.9
CCCC				IAML		06 12 10.8	
	comp=N,6.4nm,0.4s						
CCCC				IAML		06 12 13.6	
	comp=E,7.3nm,0.3s						
MASC	Masc	2.89	58	eP	Pn	06 11 39.3	+0.3
MASC				eS	Sn	06 12 12.2	-0.6
MASC				IAML		06 12 21.4	
	comp=E,6.8nm,0.3s						
MASC				IAML		06 12 21.7	
	comp=N,7.5nm,0.1s						

IDC 23 06:15:25.1±2.7**, 54°.14N**×**86°.40E, h0^{km}, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=21.6km s-min=12.9km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.95	259	i		06 21 20.0	
	baz=80,slow=313,SNR=3.1						
ZALV	Zalesovo Beam	0.95	259	Pg	Pg	06 15 42.1	-1.2
	1.7nm,0.3s,baz=76,slow=16,SNR=12						
ZALV				Lg	Lg	06 15 57.0	
	1.8nm,0.3s,baz=74,slow=29,SNR=7.9						
KURBB	Kurchatov Arra	5.97	237	Pn	Pn	06 16 55.8	+1.2
	0.2nm,0.3s,baz=54,slow=13,SNR=7.2						
	0.9nm,0.3s						
MKAR	Makanchi Array	7.81	201	Pn	Pn	06 17 20.8	+0.9
	0.1nm,0.3s,baz=24,slow=13,SNR=5.0						
MKAR				Lg	Lg	06 19 30.6	
	baz=22,slow=28,SNR=1.7						
	0.3nm,0.4s						

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*ATH **23** 06:22:02.8, 41°.63N×23°.29E, h7^{km}±2^{km}, ML2.5/10, Error ellipse: s-maj=2.4km s-min=1.0km az=330.0*

*BEO **23** 06:22:02.4±0.3, 41°.59N×23°.25E, h16^{km}±4^{km}, ML2.5/7*

*SKO **23** 06:22:03.5, 41°.64N×23°.26E, h0^{km}*

*ISK **23** 06:22:03.8, 41°.56N×23°.20E, h13^{km}, ML2.6/8*

*THE **23** 06:22:03.3, 41°.59N×23°.29E, h6^{km}±1^{km}, ML2.5/12, Error ellipse: s-maj=1.4km s-min=0.5km az=181.0*

ISC 23 06:22:01.1±1.1**, 41°.62N**±0°.02×**23°.23E**±0°.02**, h2^{km}**±10^{km}**, n63,** σ**1^s.04**/108**, 12C-7D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNT	Kendrikon	0.52	208	P	Pb	06 22 13.2	+0.2
KNT				S	Sb	06 22 20.9	-0.2
KNT	Kendrikon	0.52	208	P	Pb	06 22 13.2	+0.2
KNT				S	Sb	06 22 20.9	-0.2
	1µm,0.2s						
KNT	Kendrikon	0.52	208	PG	Pb	06 22 13.2	+0.2
KNT				SG	Sb	06 22 20.5	-0.5
KNT	Kendrikon	0.52	208	⇑iPg	Pb	06 22 13.2	+0.2
KNT				i Sg	Sb	06 22 20.8	-0.2
NVR	Nevrokopi	0.55	120	P	Pb	06 22 12.5	-1.0
NVR				S	Sg	06 22 19.5	+0.7
NVR				AML	AML	06 22 20.1	
	comp=N,790µm,0.4s						

NVR				AML	AML	06 22 21.0	
	comp=E,695µm,0.2s						
NVR	Nevrokopi	0.55	120	P	Pb	06 22 12.5	-1.0
NVR				S	Sg	06 22 19.5	+0.7
	comp=E,375nm,0.3s						
SRS	Serrai	0.58	151	*e*Pg	Pb	06 22 13.3	-0.6
SRS				*e*Sg	Sb	06 22 21.1	-1.4
SRS	Serrai	0.58	151	P	Pb	06 22 13.3	-0.6
SRS				S	Sb	06 22 21.3	-1.2
SRS				AML	AML	06 22 21.4	
	comp=E,458µm,0.3s						
SRS				AML	AML	06 22 22.5	
	comp=N,543µm,0.3s						
SRS	Serrai	0.58	151	P	Pb	06 22 13.3	-0.6
SRS				S	Sb	06 22 21.3	-1.2
	comp=N,252nm,0.3s						
SRS	Serrai	0.58	151	⇑*i*Pg	Pb	06 22 13.4	-0.5
SRS				*i* Sg	Sb	06 22 21.6	-1.0
STIP	Stip	0.78	276	*i* Pg	Pg	06 22 14.5	-1.6
STIP				*i* Sg	Sg	06 22 22.9	-3.3
SOH	Sokhos	0.81	173	P	Pb	06 22 17.8	0.0
SOH				S	Sb	06 22 29.3	+0.1
SOH				AML	AML	06 22 30.2	
	comp=E,984µm,0.4s						
SOH				AML	AML	06 22 32.5	
	comp=N,822µm,0.2s						
SOH	Sokhos	0.81	173	P	Pb	06 22 17.8	0.0
SOH				S	Sb	06 22 29.3	+0.1
	comp=N,362nm,0.3s						
SOH	Sokhos	0.81	173	⇑*i*Pg	Pb	06 22 17.9	0.0
SOH				*i* Sg	Sb	06 22 29.3	+0.1
GRG	Griva	0.91	223	P	Pb	06 22 20.5	+0.8
GRG				S	Sb	06 22 33.2	+0.9
GRG				AML	AML	06 22 34.3	
	comp=N,900µm,0.3s						
GRG				AML	AML	06 22 35.1	
	comp=E,662µm,0.2s						
GRG	Griva	0.91	223	P	Pb	06 22 20.5	+0.8
GRG				S	Sb	06 22 33.2	+0.9
	comp=E,392nm,0.2s						
GRG	Griva	0.91	223	PG	Pb	06 22 20.5	+0.8
GRG				SG	Sb	06 22 33.1	+0.9
GRG	Griva	0.91	223	⇑*i*Pg	Pb	06 22 20.5	+0.8
GRG				*i* Sg	Sb	06 22 33.6	+1.4
KOKK	Kokkinochori,	0.99	144	P	Pb	06 22 20.8	-0.2
KOKK				S	Sb	06 22 34.2	-0.4
KOKK	Kokkinochori,	0.99	144	P	Pb	06 22 20.8	-0.2
KOKK				S	Sb	06 22 34.2	-0.4
	comp=E,318nm,0.4s						
VTS	Vitosha	0.99	0	⇑P	Pn	06 22 21.1	-1.1
VTS				⇑S	Sg	06 22 32.9	-0.2
VTS	Vitosha	0.99	0	*e*Pg	Pb	06 22 20.9	-0.2
VTS				*e*Sg	Sb	06 22 33.5	-1.3
VTS	Vitosha	0.99	0	*i* Pg	Pn	06 22 21.2	-1.1
VTS				*i* Sg	Sb	06 22 33.8	-1.0
THE	Thessaloniki	1.01	191	P	Pn	06 22 22.2	0.0
THE				S	Sb	06 22 36.1	+1.1
THE				AML	AML	06 22 36.5	
	comp=E,504µm,0.2s						
THE				AML	AML	06 22 37.0	
	comp=N,572µm,0.3s						
THE	Thessaloniki	1.01	191	P	Pn	06 22 22.2	0.0
THE				S	Sb	06 22 36.1	+1.1
	comp=N,270nm,0.3s						
THE	Thessaloniki	1.01	191	*i* Pg	Pn	06 22 22.3	0.0
THE				*i* Sg	Sb	06 22 36.2	+1.1
HORT	Hortiatis	1.03	185	P	Pn	06 22 22.2	-0.4
HORT				S	Sb	06 22 36.2	+0.5
HORT				AML	AML	06 22 37.0	
	comp=N,473µm,0.4s						
HORT				AML	AML	06 22 37.7	
	comp=E,645µm,0.5s						
HORT	Hortiatis	1.03	185	P	Pn	06 22 22.2	-0.4
HORT				S	Sb	06 22 36.2	+0.5
	comp=E,280nm,0.5s						
HORT	Hortiatis	1.03	185	PG	Pn	06 22 22.3	-0.4
HORT				SG	Sb	06 22 36.5	+0.8
BOSS	Bosilegrad	1.03	328	*e*Pg	Pn	06 22 22.5	-0.2
BOSS				*e*Sg	Sn	06 22 37.4	-0.3
KVLA	Kavala	1.11	128	P	Pb	06 22 22.9	-0.1
KVLA				S	Sg	06 22 36.7	-0.1
KAVA	Kavala	1.15	122	P	Pn	06 22 23.7	-0.5
KAVA				S	Sn	06 22 39.4	-1.2
KAVA				AML	AML	06 22 39.9	
	comp=E,629µm,0.4s						
KAVA				AML	AML	06 22 40.5	
	comp=N,574µm,0.6s						
KAVA	Kavala	1.15	122	P	Pn	06 22 23.7	-0.5
KAVA				S	Sn	06 22 39.4	-1.2
	comp=N,240nm,0.5s						
PLD	Plovdiv	1.20	66	PN	Pn	06 22 28.0	+3.1
PLG	Polygyros	1.26	172	P	Pb	06 22 26.2	+0.6
PLG				S	Sn	06 22 43.2	-0.1
PLG				AML	AML	06 22 44.7	
	comp=N,319µm,0.4s						
PLG				AML	AML	06 22 44.9	
	comp=E,310µm,0.7s						
PLG	Polygyros	1.26	172	P	Pb	06 22 26.2	+0.6
PLG				S	Sn	06 22 43.2	-0.1
	comp=E,158nm,0.6s						
OUR	Ouranopolis	1.41	156	P	Pg	06 22 28.5	+0.4
OUR				S	Sg	06 22 47.5	+1.2
OUR				AML	AML	06 22 49.0	
	comp=N,568µm,0.5s						
OUR				AML	AML	06 22 52.0	
	comp=E,368µm,0.4s						
OUR	Ouranopolis	1.41	156	P	Pg	06 22 28.5	+0.4
OUR				S	Sg	06 22 47.5	+1.2
	comp=E,235nm,0.4s						
OUR	Ouranopolis	1.41	156	PN	Pg	06 22 28.7	+0.6
THAS	Thassos island	1.52	132	P	Pg	06 22 30.3	+0.1
THAS				S	Sn	06 22 48.9	-0.7
THAS				AML	AML	06 22 51.7	
	comp=N,238µm,0.4s						
THAS				AML	AML	06 22 51.9	
	comp=E,233µm,0.3s						
THAS	Thassos island	1.52	132	P	Pg	06 22 30.3	+0.1
THAS				S	Sn	06 22 48.9	-0.7
	comp=E,118nm,0.3s						
BARS	Barje	1.59	319	*e*Pg	Pg	06 22 32.5	+1.0
BARS	Barje	1.59	319	*e*Pn	Pg	06 22 44.9	+13
BARS				*e*Sg	Sg	06 22 53.5	+1.4
FNA	Florina	1.63	240	*e*Pn	Pn	06 22 29.3	-1.6
FNA	Florina	1.63	240	PN	Pb	06 22 31.7	-0.2
PAIG	Paliouri	1.73	168	P	Pb	06 22 33.9	+0.4
PAIG	Paliouri	1.73	168	P	Pn	06 22 31.8	-0.4
RDO	Rodhopi	1.80	105	PN	Pg	06 22 35.5	-0.1
BLKB	Belogradchik	2.04	349	⇓P	Pg	06 22 40.3	+0.1
BLKB				⇑S	Sg	06 23 05.8	-0.8
SELS	Selova	2.23	316	*e*Pn	Pn	06 22 40.0	+0.9
SELS				*e*Sn	Sn	06 23 06.8	-0.5
ALN	Alexandroupoli	2.25	108	PN	Pb	06 22 42.1	-0.3
BOVS	Bovan	2.30	331	⇑P	Pb	06 22 43.0	-0.4
BOVS				⇑S	Sb	06 23 13.1	+0.8
BOVS	Bovan	2.30	331	*e*Pn	Pb	06 22 41.7	-1.6
BOVS				*e*Sn	Sn	06 23 08.2	-0.8
ZAGS	Zajecar	2.31	342	*e*Pn	Pn	06 22 40.0	-0.1
GRUS	Gruza	2.92	322	*e*Pn	Pn	06 22 49.7	+1.1
IVAS	Ivanjica	2.99	312	*e*Pn	Pn	06 22 49.7	+0.1
DIVS	Divibare	3.43	317	*e*Pn	Pn	06 22 55.5	-0.2
GZR	Gura Zlata	3.78	355	⇑P	Pn	06 23 03.4	+2.9
GZR				⇑S	Sb	06 23 55.8	+0.9
VOIR		4.04	19	⇓S	Sb	06 24 04.6	+2.4
BZS	Buzias	4.16	344	⇓S	Sb	06 24 08.4	+2.8
ISR	Istrita	4.25	34	⇑P	Pb	06 23 11.2	-5.3
ISR				⇓S	Sg	06 24 15.0	-2.5
MLR	Muntele Rosu	4.34	26	⇓P	Pn	06 23 10.4	+2.2
MLR				⇓S	Sg	06 24 21.4	+0.9
TPGR	Topolog	4.98	48	⇓S	Sg	06 24 39.1	-2.0

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*TRN **23** 06:26:34.1, 10°.74N×62°.64W, h107^{km}, MD3.3*
*FUNV **23** 06:26:34.3, 10°.76N×62°.79W, h87^{km}, MW3.1*
ISC 23 06:26:31.8±1.5**, 10°.75N**±0°.08×**62°.82W**±0°.05**, h105**^{km}±12^{km}**, n11,** σ**1^{s}80**/21**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.42	259	*e*P	Pn	06 26 49.2	+1.6
CRUV				*e*S	Sn	06 26 57.4	-2.1
TRN	Trinidad (W)	1.39	94	*e*P	Pn	06 26 57.6	+0.6
TRN				*e*S	Sn	06 27 14.7	-1.5
GRFF	Grenada Fort F	1.67	39	*e*P	Pn	06 27 01.3	+0.9
GRFF				*e*S	Sn	06 27 22.6	+0.4
GRGR	Grenville	1.78	40	*e*P	Pn	06 27 03.1	+1.2
GRGR				*e*S	Sn	06 27 24.0	-0.8
PCRV	Puerto La Cruz	1.88	252	*e*P	Pn	06 27 04.4	+1.3
PCRV				⇓*e*S	Sn	06 27 26.0	-1.0
TOSP	Speyside	2.30	76	*e*S	Sn	06 27 34.5	-2.2
PRGV	PARIAGUAN	2.68	222	*e*P	Pn	06 27 15.9	+2.4
PRGV				*e*S	Sn	06 27 45.2	-0.3
BIRV	Birongo	3.41	266	*e*P	Pn	06 27 24.8	+1.7
BIRV				*e*S	Sn	06 28 02.6	-0.2
MERV	Las Mercedes	3.74	247	*e*P	Pn	06 27 29.0	+1.4
MERV				*e*S	Sn	06 28 09.9	-0.9
BENV	Beln	4.77	261	*e*P	Pn	06 27 42.5	+0.9
BENV				*e*S	Sn	06 28 32.6	-3.3
BAUV	El Baul	5.46	251	*e*P	Pn	06 27 51.4	+0.7
BAUV				*e*S	Sn	06 28 48.9	-3.4

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*IDC **23** 06:33:53.4±1.9, 10°.71S×123°.55E, h0^{km}, mb3.6/1, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=45.4km s-min=12.8km az=99.0*
*DJA **23** 06:33:57.6±0.5, 10°S±5°×12°4E±°, h10^{km}, M3.7/6, mb3.9/2, MLv3.6/6*
ISC 23 06:33:53.4±1.0**, 10°.73S**±0°.10×**123°.7E**±0°.1**, h10**^{km}**, n9,** σ**1^{s}81**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.52	354	Pg	Pg	06 34 03.4	-0.2
	412nm,0.3s,baz=118,slow=1.1,SNR=121						
BATI				Lg	Lg	06 34 10.3	
	761nm,0.3s,baz=69,slow=22,SNR=18						
BATI				LR	LR	06 34 29.7	
	comp=Z,357nm,19.1s,baz=63,slow=71						
BATI	Baumata	0.52	354	P	Pg	06 34 03.3	-0.3
SOEI	Soe	1.11	29	P	Pn	06 34 15.9	+0.7
MMRI	Maumere	2.54	325	P	Pn	06 34 36.2	+1.4
EDFI	Ende, Flores	2.81	314	P	Pb	06 34 41.5	-2.2
BKSI	Bulukumba	6.45	326	P	Pn	06 35 29.1	+0.6
	0.1nm6.8nm,0.5s						
WRA	Warramunga Arr	13.73	133	Pn	Pn	06 37 09.8	+1.5
	0.1nm,0.3s,baz=309,slow=15,SNR=1.5						
WRA				Sn	Sn	06 39 37.8	-3.4
	0.3nm,0.3s,baz=49,slow=20,SNR=8.8						
	0.5nm,1.1s						
ASAR	Alice Springs	16.12	144	Pn	P	06 37 44.3	+0.7
	0.1nm,0.3s,baz=318,slow=12,SNR=4.5						
	0.2nm,0.5s						
MKAR	Makanchi Array	68.17	331	P	P	06 44 54.9	+1.0
	0.6nm,0.8s,baz=140,slow=7.6,SNR=4.0						
	0.6nm,0.8s						

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*IDC **23** 06:53:58.6±0.6, 44°.24N×152°.48E, h0^{km}, mb4.2/19, mbtmp4.2/26, ML3.5/7, MS3.2/17, Error ellipse: s-maj=17.4km s-min=12.3km az=158.0*
*JMA **23** 06:54:02.9±0.9, 45°N±5°×15°2E±°, h30^{km}, MV5.1/14, FAR SE OFF KURILE ISL*
*SKHL **23** 06:54:03.3±0.8, 44°.40N×152°.30E, h44^{km}±4^{km}, mb5.3/4*
*MOS **23** 06:54:03.1±1.0, 44°.33N×152°.26E, h41^{km}, mb4.7/45, Error ellipse: s-maj=6.9km s-min=6.7km az=15.2*
*NEIC **23** 06:54:04.5±1.2, 44°.31N±0°.10×152°.4E±0°.1, h32^{km}±4^{km}, mb4.5/144, Error ellipse: s-maj=15.8km s-min=10.5km az=142.0*
ISC 23 06:54:02.7±0.5**, 44°.27N**±0°.06×**152°.31E**±0°.05**, h25**^{km}**, n324,** σ**1^{s}52**/325**, mb4.5**/115**, MS3.4**/12**, 10C-5D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.31	289	*e*PN	Pn	06 54 52.5	-0.3
KUR				*e*S	Sn	06 55 29.1	-2.2
KUR				pmax	pmax		
	comp=Z,151nm,0.7s						
KUR				pmax	pmax		
	comp=E,45nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,482nm,0.2s						
KUR	Kuril'sk	3.31	289	*e*P	Pn	06 54 52.5	-0.3
KUR				AMB	AMB	06 54 53.8	
	comp=E,50nm,0.2s						
KUR				AMB	AMB	06 54 53.8	
	comp=E,150nm,0.2s						
KUR				*e*S	Sn	06 55 29.2	-2.1
KUR				A	A	06 55 31.3	
	comp=E,1µm,0.4s						
KUR				A	A	06 55 31.3	
	comp=E,480nm,0.4s						
SHO	Shikotan	3.97	266	*e*PN	Pn	06 55 00.9	-1.0
SHO				pmax	pmax		
	comp=N,29nm,0.2s						
SHO				pmax	pmax		
	comp=E,49nm,0.2s						
SHO				pmax	pmax		
	comp=Z,65nm,0.2s						
SHO	Shikotan	3.97	266	*e*P	Pn	06 55 00.9	-1.0
SHO				AMB	AMB	06 55 11.9	
	comp=Z,30nm,0.2s						
SHO				AMB	AMB	06 55 11.9	
	comp=Z,50nm,0.2s						
SHO				AMB	AMB	06 55 11.9	
	comp=Z,120nm,0.2s						
SHO				*e*S	Sn	06 55 43.6	-4.0
SHO				A	A	06 55 49.6	
	comp=Z,150nm,0.3s						
SHO				A	A	06 55 49.6	
	comp=Z,460nm,0.3s						
YUK	Yuzh-Kuril'sk	4.64	269	*e*PN	Pn	06 55 10.7	-0.5
YUK				pmax	pmax		
	comp=E,74nm,0.2s						
YUK				pmax	pmax		
	comp=Z,220nm,0.2s						
YUK	Yuzh-Kuril'sk	4.64	269	*e*P	Pn	06 55 10.7	-0.5
YUK				AMB	AMB	06 55 15.7	
	comp=Z,70nm,0.3s						
YUK				AMB	AMB	06 55 15.7	
	comp=Z,220nm,0.3s						
YUK				*e*S	Sn	06 56 01.9	-2.3
YUK				A	A	06 56 11.0	
	comp=Z,990nm,0.5s						
YUK				A	A	06 56 11.0	
	comp=Z,300nm,0.5s						
NEM2	Nemuro 2	4.83	262	*e*P	Pn	06 55 11.9	-1.9
NEM2				*e*S	Sn	06 56 03.2	-5.7
NMR	Nemuro--Hokkai	4.84	262	*e*PN	Pn	06 55 11.9	-2.0
NMR	Nemuro--Hokkai	4.84	262	*e*P	Pn	06 55 12.1	-1.8
NMR				*e*S	Sn	06 56 03.8	-5.4
RUSJ	Misakicho	5.08	271	*e*PN	Pn	06 55 17.8	+0.6
JRA	Rausu	5.19	269	*e*P	Pn	06 55 18.6	0.0
JNK	Nakash	5.52	266	*e*P	Pn	06 55 22.3	-0.9
JNK				*e*S	Sn	06 56 21.4	-4.5
AKK	Akkeshi	5.56	260	*e*P	Pn	06 55 22.7	-1.0
JAK	Akkeshi	5.67	260	*e*P	Pn	06 55 23.8	-1.5
JAK				*e*S	Sn	06 56 23.9	-5.6
JAR	Ashorobuto	6.26	264	*e*P	Pn	06 55 32.9	-0.5
JOB	Onbets	6.30	260	*e*P	Pn	06 55 33.8	-0.2
JOB				*e*S	Sn	06 56 40.4	-4.7
JCH	Churui	6.72	259	*e*P	Pn	06 55 39.4	-0.3
JCH				*e*S	Sn	06 56 50.4	-4.9
JKK2	Kamakawa 2	6.90	270	*e*P	Pn	06 55 44.4	+2.3
SKR	Severo-Kuril’s	6.92	21	*e*PN	Pn	06 55 41.2	-1.1
SKR				pmax	pmax		
	comp=Z,35nm,0.4s						
SKR				pmax	pmax		
	comp=Z,100nm,2.1s						
SKR				MLR	MLR		
	comp=Z,100nm,17.0s						
SKR				MLR	MLR		
	comp=Z,100nm,16.0s						
SKR	Severo-Kuril’s	6.92	21	*e*P	Pn	06 55 41.6	-0.7
SKR				AMB	AMB	06 55 42.0	
	comp=Z,40nm,0.3s						
SKR				AMB	AMB	06 55 43.4	
	comp=Z,100nm,2.1s						
SKR				*e*S	Sn	06 56 54.5	-5.7
SKR				A	A	06 56 58.6	
	comp=Z,50nm,0.5s						
SKR				A	A	06 56 58.6	
	comp=Z,40nm,0.5s						
JKA	Kamikawa-asahi	6.98	272	Pn	Pn	06 55 45.2	+2.0
JKA	Kamikawa-asahi	6.98	272	*e*P	Pn	06 55 45.5	+2.2
ASAJ	Asahikawa	6.98	272	Pn	Pn	06 55 45.5	+2.2
	comp=Z,3.8nm,0.3s,baz=94,slow=15,SNR=8.3						
ASAJ				Sn	Sn	06 57 04.8	+2.9
	comp=Z,0.9nm,0.3s,baz=3.0,slow=7.8,SNR=4.3						
	comp=Z,19nm,0.5s						
ERM	Erimo	7.06	255	Pn	Pn	06 55 45.1	+0.7
ERM	Erimo	7.06	255	PN	Pn	06 55 45.1	+0.7
YSS	Yuzh-Sakhalins	7.22	295	Pn	Pn	06 55 48.0	+1.5
YSS	Yuzh-Sakhalins	7.22	295	*ce*PN	Pn	06 55 44.6	-1.9
YSS	Yuzh-Sakhalins	7.22	295	*e*P	Pn	06 55 48.0	+1.5
YSS				AMB	AMB	06 55 49.5	
	comp=Z,30nm,0.4s						
JNBK	Urakawa-nobuka	7.25	257	*e*P	Pn	06 55 46.3	-0.7
JNBK				*e*S	Sn	06 57 00.6	-7.8
PAU	Pauzhetka	7.81	21	*e*P	Pn	06 55 55.4	+0.8
PAU				AMB	AMB	06 55 56.2	
	comp=Z,30nm,0.3s						
JEW	Eniwo	8.02	264	Pn	Pn	06 55 57.2	-0.2
JANG	Nango	8.89	248	*e*P	Pn	06 56 06.8	-2.7
JANG				*e*S	Sn	06 57 40.0	-8.8
TYV	Tymovskoe	9.27	319	*e*P	Pn	06 56 15.1	+0.4
TYV				AMB	AMB	06 56 17.2	
	comp=Z,20nm,0.7s						
PEA0B	Petropavlovsk-	9.54	20	Pn	Pn	06 56 16.8	-1.5
PEA0B	Petropavlovsk-	9.54	20	PN	Pn	06 56 16.8	-1.5
PETK	Petropavlovsk-	9.54	20	Pn	Pn	06 56 15.4	-2.9
	comp=Z,0.8nm,0.3s,baz=184,slow=12,SNR=13						
PETK				LR	LR	07 00 41.0	
	comp=Z,54nm,19.2s,baz=198,slow=42						
	comp=Z,5.4nm,0.8s						
PETK	Petropavlovsk-	9.54	20	Pn	Pn	06 56 15.5	-2.8
PETK	Petropavlovsk-	9.54	20	PN	Pn	06 56 15.5	-2.8
OKH	Okha	11.14	330	*e*P	Pn	06 56 41.3	+1.1
OKH				AMB	AMB	06 56 45.0	
	comp=Z,50nm,0.4s						
TEY	Ternei	11.22	279	*e*P	Pn	06 56 40.7	-0.6
TEY				AMB	AMB	06 56 44.3	
	comp=Z,10.0nm,0.8s						
GRNR	Gornyy	12.54	307	⇓*i*PN	Pn	06 57 00.7	+1.3
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,140nm,15.0s						
GRNR				MLR	MLR		
	comp=N,90nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,14.0s						
GRNR	Gornyy	12.54	307	*e*P	Pn	06 56 57.5	-1.9
GRNR				AMB	AMB	06 57 01.0	
	comp=Z,10.0nm,0.7s						
KHBR	Khabarovsk	12.63	296	*e*P	Pn	06 57 00.3	-0.3
KHBR				AMB	AMB	06 57 03.0	
	comp=Z,30nm,0.3s						
MAJO	Matsushiro	13.22	239	Pn	Pn	06 57 07.0	-1.7
MAJO	Matsushiro	13.22	239	⇑*e*PN	Pn	06 57 07.2	-1.5
MJAR	Matsushiro Arr	13.22	239	Pn	Pn	06 57 07.7	-0.9
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=6.8						
	comp=Z,1.8nm,0.8s						
MJAR	Matsushiro Arr	13.22	239	Pn	Pn	06 57 08.5	-0.2
MJAR	Matsushiro Arr	13.22	239	PN	Pn	06 57 08.5	-0.2
MJB9	Matsu-Tunnel	13.22	239		Pn	06 57 07.1	-1.6
GRTR	Gornotajezhnoj	14.52	275	*e*P	Pn	06 57 24.7	-1.7
GRTR				AMB	AMB	06 57 28.0	
	comp=Z,10.0nm,0.9s						
USRK	Ussuriysk Ar.	14.57	277	Pn	Pn	06 57 28.0	+0.9
	comp=Z,0.4nm,0.3s,baz=90,slow=13,SNR=8.8						
	comp=Z,8.3nm,0.8s						
USRK	Ussuriysk Ar.	14.57	277	Pn	Pn	06 57 29.3	+2.2
USRK	Ussuriysk Ar.	14.57	277	P	Pn	06 57 29.3	+2.2
KLR	Kul'dur	14.93	297	Pn	Pn	06 57 32.1	+0.2
	comp=Z,0.1nm,0.3s,baz=100,slow=6.1,SNR=3.2						
KLR				LR	LR	07 05 19.3	
	comp=Z,25nm,20.5s,baz=96,slow=45						
	comp=Z,0.4nm,0.3s						
KLR	Kul'dur	14.93	297	*e*P	Pn	06 57 30.0	-1.9
MA2	Magadan	15.36	357	LR	LR	07 03 27.8	
	comp=Z,46nm,19.9s,baz=178,slow=37						
MSHR	Mys Shultsa	15.46	271	⇓*e*P	Pn	06 57 39.1	+0.2
BNX	BinXian	17.66	284	⇑P	Pn	06 58 06.5	-0.2
BNX				pmax	pmax		
	comp=Z,14nm,0.6s						
BNX				pmax	pmax		
	comp=Z,290nm,4.2s						
SEY	Seymchan	18.70	0	P	P	06 58 17.8	-1.1
	comp=Z,0.6nm,0.3s,baz=170,slow=8.6,SNR=8.3						
SEY				LR	LR	07 06 26.1	
	comp=Z,40nm,18.6s,baz=348,slow=40						
	comp=Z,10nm,0.9s						
ZEA	Zeya	18.88	309	*e*P	P	06 58 20.4	-0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,100nm,18.0s						
ZEA	Zeya	18.88	309	*e*P	Pn	06 58 20.6	-1.1
ZEA				AMB	AMB	06 58 21.5	
	comp=Z,10.0nm,0.7s						
JCJ	Chichijima	18.98	209	LR	LR	07 05 10.2	
	comp=Z,52nm,19.8s,baz=333,slow=35						
KSRS	Korea Array	19.62	258	P	Pn	06 58 30.9	+0.3
	comp=Z,0.2nm,0.3s,baz=76,slow=10,SNR=1.8						
KSRS				LR	LR	07 05 24.3	
	comp=Z,26nm,20.8s,baz=105,slow=35						
	comp=Z,0.5nm,0.3s						
YAK	Yakutsk	22.17	331	LR	LR	07 07 03.8	
	comp=Z,32nm,21.7s,baz=84,slow=35						
YAK	Yakutsk	22.17	331	*i* P	P	06 58 49.6	-6.8
BILL	Bilibino	24.94	12	P	P	06 59 23.4	-0.1
BILL				IAmb	IAmb	06 59 30.2	
	comp=Z,16nm,1.3s						
BILL	Bilibino	24.94	12	⇑*e*P	P	06 59 23.2	-0.3
BILL				*e*		06 59 56.8	
BILL				*e*S	S	07 03 41.1	-4.1
BILL				*e*SS	SnSn	07 04 41.9	+7.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XLT	XiLinHaoTe	25.90	282	*e*P	P	06 59 33.0	+0.4
XLT				pP	sP	06 59 42.3	+1.8
XLT				sP	pwP	06 59 46.0	0.0
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,79nm,6.0s						
H11N2	WAKE ISLAND Hy	27.33	149	T	T	07 28 19.4	
	baz=337,slow=76,SNR=4.0						
H11N1	WAKE ISLAND Hy	27.34	149	T	T	07 28 19.5	
	baz=337,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	27.34	149	T	T	07 28 22.2	
	baz=337,slow=76,SNR=3.6						
H11S1	WAKE ISLAND Hy	28.38	150	T	T	07 29 38.0	
	baz=339						
H11S3	WAKE ISLAND Hy	28.39	150	T	T	07 29 38.2	
	baz=339,slow=74						
H11S2	WAKE ISLAND Hy	28.40	150	T	T	07 29 40.8	
	baz=339,slow=74						
NJ2	Nanjing	28.79	256	*e*P	P	07 00 02.0	+3.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIXI	Tiksi	29.71	345	LR	LR	07 10 52.5	
	comp=Z,52nm,21.5s,baz=181,slow=34						
TIXI	Tiksi	29.71	345	⇑*e*P	P	07 00 06.6	+0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TIXI	Tiksi	29.71	345	*e*P	P	07 00 06.6	+0.4
HHC	Hu-ho-hao-te	29.99	278	*e*P	P	07 00 10.9	+1.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
ULN	Ulaanbaatar	31.26	293	P	P	07 00 21.7	+1.3
ULN				IAmb	IAmb	07 00 42.6	
	comp=Z,5.0nm,0.6s						
ULN	Ulaanbaatar	31.26	293	P	P	07 00 21.7	+1.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	Ulaanbaatar	31.26	293	*e*P	P	07 00 21.7	+1.3
SONM	Songino Array	31.70	293	P	P	07 00 25.8	+1.6
	comp=Z,0.9nm,0.4s,baz=75,slow=8.1,SNR=11						
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	31.70	293	P	P	07 00 25.4	+1.1
ZAK	Zakamensk	33.29	298	*e*P	P	07 00 35.9	-2.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
N18K	Kilae Creek	34.50	43	P	P	07 00 49.2	+0.9
N18K				IAmb	IAmb	07 00 52.9	
	comp=Z,6.5nm,0.9s						
SVW2	Sparrevohn	34.68	42	P	P	07 00 50.6	+0.6

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TTA   Tatalina           34.68  39   P      P      07 00 50.3 +0.3
TTA   Tatalina           34.68  39   P      P      07 00 50.3 +0.3
TTA                                  pmax   pmax
      comp=Z,3.0nm,1.0s
P18K  Big Mountain,      34.75  45   P      P      07 00 50.9 +0.3
K20K  Telida             35.61  39   P      P      07 00 58.3 +0.4
K20K                                 IAmb   IAmb   07 01 06.0
      comp=Z,6.2nm,1.4s
J20K  Nowinta River      35.68  37   P      P      07 00 58.3 -0.1
J20K                                 IAmb   IAmb   07 01 21.5
      comp=Z,6.9nm,1.4s
IMAR  Indian Mountai     36.12  34   P      P      07 01 02.5 +0.3
PPLA  Purkeypile         36.42  39   P      P      07 01 05.8 +0.8
PPLA                                 IAmb   IAmb   07 01 13.9
      comp=Z,16nm,1.4s
H21K  Melozitna Rive     36.46  35   P      P      07 01 05.8 +0.7
H21K                                 IAmb   IAmb   07 01 09.4
      comp=Z,3.4nm,0.7s
TRF   Thorofare Moun     37.31  39   P      P      07 01 13.7 +1.1
TRF                                  IAmb   IAmb   07 01 31.1
      comp=Z,11nm,1.4s
LZH   Lanzhou            37.46 274  eP      P      07 01 16.5 +2.3
LZH                                  pP     sP     07 01 23.3 +1.2
LZH                                  sP     pwP    07 01 27.0 -0.8
LZH                                  pmax   pmax
      comp=Z,16nm,1.2s
H23K  Yukon River        37.81  35   P      P      07 01 18.0 +1.3
I23K  Minto, Yukon-K     37.83  36   P      P      07 01 16.6 -0.1
NEA2  Nenana             37.92  37   P      P      07 01 17.8 +0.3
TOLK  Toolik Lake Re     38.16  30   P      P      07 01 19.6 -0.1
SML   Sawmill            38.18  41   P      P      07 01 19.6 -0.3
MDM   Murphy Dome        38.30  36   P      P      07 01 20.9 +0.1
WRH   Wood River Hil     38.33  37   P      P      07 01 20.2 -0.8
CCB   Clear Creek Bu     38.46  37   P      P      07 01 21.9 -0.2
H24K  Noodor Dome        38.50  35   P      P      07 01 22.9 +0.5
DHY   Denali Highway     38.62  39   P      P      07 01 23.3 -0.3
HDA   Harding Lake       38.83  37   P      P      07 01 24.9 -0.3
GTA   Gaotai             38.86 282  eP      P      07 01 27.5 +1.6
GTA                                  sP     pwP    07 01 40.1 +0.6
GTA                                  pmax   pmax
      comp=Z,5.0nm,0.9s
GTA                                  pmax   pmax
      comp=Z,57nm,5.1s
GTA                                  LR     LR
      comp=N,66nm,13.8s
GTA                                  LR     LR
      comp=E,98nm,15.6s
GTA                                  LR     LR
      comp=Z,92nm,14.9s
ILAR  Eielson Array      38.86  37   P      P      07 01 24.3 -1.1
      comp=Z,0.7nm,0.7s,baz=252,slow=8.8,SNR=9.8
      comp=Z,0.7nm,0.7s
M24K  Tolsona, Glenn     39.20  41   P      P      07 01 28.6 +0.3
J25K  Salcha River,      39.51  37   P      P      07 01 29.6 -1.4
RIDG  Independent Ri     39.75  38   P      P      07 01 32.5 -0.5
BMAR  Burnt Mountain     39.91  32   P      P      07 01 34.2 +0.1
SCRK  Sand Creek         40.12  38   P      P      07 01 35.8 -0.4
NRIK  Noril'sk           40.62 330   P      P      07 01 39.2 -0.8
      comp=Z,1.1nm,0.5s,baz=101,slow=8.2,SNR=1.5
      comp=Z,1.1nm,0.5s
NRIK  Noril'sk           40.62 330⇑eP      P      07 01 39.2 -0.8
NRIK                                 pmax   pmax
      comp=Z,4.0nm,1.3s
M26K  Nabesna, AK        40.66  40   P      P      07 01 41.1 +0.6
K27K  Chicken            40.96  38   P      P      07 01 43.5 +0.6
L27K  Beaver Creek,      41.14  39   P      P      07 01 45.4 +0.9
ISLE  Juniper Island     41.16  43   P      P      07 01 44.3 -0.4
ISLE                                 IAmb   IAmb   07 02 01.9
      comp=Z,12nm,1.0s
BCAR  Beaver Creek A     41.16  39   P      P      07 01 45.6 +0.9
EGAK  Eagle              41.32  37   P      P      07 01 45.7  0.0
BARN  Barnard Glacie     41.43  42   P      P      07 01 47.6 +0.5
BARN                                 IAmb   IAmb   07 01 48.6
      comp=Z,15nm,1.4s
CTGM  Chitina Glacie     41.60  42   P      P      07 01 49.2 +0.8
CTGM                                 IAmb   IAmb   07 01 51.5
      comp=Z,8.8nm,1.1s
DAWY  Dawson             42.14  38   P      P      07 01 53.2 +0.7
I29M  Ogilvie Camp,      42.48  36   P      P      07 01 56.5 +1.2
EPYK  Eagle Plains       43.03  34   P      P      07 02 00.8 +1.0
HYT   Haines Junctio     43.47  42   P      P      07 02 05.0 +1.5
M30M  Minto, Yukon       43.50  39   P      P      07 02 03.9 +0.2
ZALV  Zalesovo Beam      43.64 308   PcP    PcP    07 03 51.3 -0.4
      comp=Z,1.0nm,0.3s,baz=72,slow=4.7,SNR=3.0
GOMU  GeErMu             43.84 280   P      P      07 02 08.1 +1.0
GOMU                                 pP     pP     07 02 12.8  0.0
GOMU                                 sP     sP     07 02 15.5 +0.4
GOMU                                 pmax   pmax
      comp=Z,5.0nm,0.8s
GOMU                                 pmax   pmax
      comp=Z,80nm,6.1s
INK   Inuvik             44.06  31   P      P      07 02 07.3 -0.7
      comp=Z,5.2nm,0.6s,baz=284,slow=4.1,SNR=15
      comp=Z,5.2nm,0.6s
INK   Inuvik             44.06  31   P      P      07 02 08.6 +0.7
INK                                  IAmb   IAmb   07 02 12.6
      comp=Z,6.3nm,0.7s
INK   Inuvik             44.06  31   P      P      07 02 08.6 +0.7
INK                                  pmax   pmax
      comp=Z,6.0nm,0.7s
PZH   PanZhiHua          44.14 264   P      P      07 02 11.0 +1.7
PZH                                  pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                  pmax   pmax
      comp=Z,100nm,4.7s
N31M  Braeburn, Yuko     44.17  41   P      P      07 02 10.8 +1.8
N31M                                 IAmb   IAmb   07 02 29.4
      comp=Z,14nm,1.4s
WMQ   Urumqi             45.34 293  eP      P      07 02 22.0 +3.4
P33M  Teslin, Yukon      45.87  42   P      P      07 02 22.6  0.0
P33M                                 IAmb   IAmb   07 02 28.4
      comp=Z,10nm,1.4s
C36M  Paulatuk           47.26  29   P      P      07 02 33.9 +0.7
MK31  Makanchi Array     47.62 299   P      P      07 02 37.6 +1.2
MK31                                 IAmb   IAmb   07 02 42.7
      comp=Z,4.6nm,0.7s
MK31  Makanchi Array     47.62 299   P      P      07 02 37.6 +1.2
MK31                                 pmax   pmax
      comp=Z,5.0nm,0.7s
MKAR  Makanchi Array     47.62 299   P      P      07 02 37.5 +1.1
      comp=Z,4.9nm,0.7s,baz=74,slow=7.7,SNR=23
MKAR                                 PcP    PcP    07 04 05.8  0.0
      comp=Z,1.0nm,0.5s,baz=100,slow=0.6,SNR=6.4
      comp=Z,4.9nm,0.7s
MKAR  Makanchi Array     47.62 299   P      P      07 02 37.6 +1.2
KURK  Kurchatov          48.30 305   P      P      07 02 42.1 +0.6
KURK  Kurchatov          48.30 305   P      P      07 02 42.1 +0.6
KURK                                 pmax   pmax
      comp=Z,7.0nm,0.9s
KURK  Kurchatov          48.30 305  eP      P      07 02 42.1 +0.6
CMAR  Chiang Mai Arr     51.26 258   P      P      07 03 05.7 +1.2
      comp=Z,1.8nm,0.5s,baz=38,slow=7.6,SNR=8.3
      comp=Z,1.8nm,0.5s
CMAR  Chiang Mai Arr     51.26 258 i P      P      07 03 06.3 +1.8
CMAR                                 pmax   pmax
      comp=Z,2.0nm,0.6s
BRVK  Borovoye           52.07 311   P      P      07 03 10.9 +0.8
BRVK  Borovoye           52.07 311ceP      P      07 03 11.1 +1.0
BRVK                                 pmax   pmax
      comp=Z,3.0nm,1.0s
BRVK  Borovoye           52.07 311  eP      P      07 03 11.1 +1.0
YKA   Yellowknife Ar     53.27  35   P      P      07 03 18.8  0.0
      comp=Z,1.9nm,0.6s,baz=295,slow=6.9,SNR=7.4
      comp=Z,1.9nm,0.6s
BOOM  Boomskoye usch     53.60 297   P      P      07 03 23.3 +1.5
BOOM  Boomskoye usch     53.60 297   P      P      07 03 23.3 +1.5
BOOM                                 pmax   pmax
      comp=Z,11nm,0.8s
AAK   Ala-Archa          54.45 298   LR     LR     07 28 20.9
      comp=Z,27nm,18.8s,baz=137,slow=38
AAK   Ala-Archa          54.45 298   P      P      07 03 28.8 +0.8
AAK                                  IAmb   IAmb   07 03 36.2
      comp=Z,4.7nm,0.8s
AAK   Ala-Archa          54.45 298   P      P      07 03 28.8 +0.8
AAK                                  pmax   pmax
      comp=Z,5.0nm,0.9s
AAK   Ala-Archa          54.45 298  eP      P      07 03 28.8 +0.8
KBS   Kingsbay           54.87 351⇑eP      P      07 03 31.1 +0.9
KBS                                  pmax   pmax
      comp=Z,6.0nm,1.0s
KSH   Kashi              55.10 294   P      P      07 03 37.8 +5.1
KSH                                  pP     sP     07 03 43.0 +2.1
KSH                                  sP     pwP    07 03 49.3 +3.0
KSH                                  PP     PP     07 05 42.0 +6.2
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KSH                                  pmax   pmax
      comp=Z,4.0nm,0.8s
ARU   Arti               56.48 318   LR     LR     07 30 19.0
      comp=Z,31nm,18.3s,baz=168,slow=38
ARU   Arti               56.48 318   P      P      07 03 42.5 +0.5
ARU                                  IAmb   IAmb   07 03 48.3
      comp=Z,5.5nm,0.8s
ARU   Arti               56.48 318c iP      P      07 03 42.6 +0.5
ARU                                                07 05 45.7
ARU                                  S      S      07 11 33.8 +2.4
ARU                                  SS     SS     07 15 18.7 +0.6
ARU                                  pmax   pmax
      comp=Z,5.0nm,0.7s
ARU   Arti               56.48 318  eP      P      07 03 42.6 +0.5
KK31  Karatay Array      56.72 300   P      P      07 03 45.0 +0.9
KK31                                 IAmb   IAmb   07 03 49.4
      comp=Z,3.1nm,0.8s
KK31  Karatay Array      56.72 300   P      P      07 03 45.0 +0.9
KK31                                 pmax   pmax
      comp=Z,3.0nm,0.8s
KKAR  Karatay Array      56.72 300   P      P      07 03 45.0 +0.9
KKAR                                 IAmb   IAmb   07 03 49.4
      comp=Z,3.1nm,0.8s
KKAR  Karatay Array      56.72 300   P      P      07 03 45.0 +0.9
KKAR                                 pmax   pmax
      comp=Z,3.0nm,0.8s
KAPI  Kappang            57.12 220   P      P      07 03 47.9 +0.8
KAPI                                 IAmb   IAmb   07 04 05.6
      comp=Z,4.4nm,0.8s
KAPI  Kappang            57.12 220   P      P      07 03 47.9 +0.8
KAPI                                 pmax   pmax
      comp=Z,4.0nm,0.9s
B08A  Colville Reser     57.86  52   P      P      07 03 50.5 -1.5
B08A                                 IAmb   IAmb   07 03 52.7
      comp=Z,4.9nm,1.2s
BTK   Batken             58.16 297   P      P      07 03 54.1 -0.3
BTK   Batken             58.16 297   P      P      07 03 54.1 -0.3
BTK                                  pmax   pmax
      comp=Z,7.0nm,0.9s
EDM   Edmonton           58.46  45   P      P      07 03 55.7 -0.5
EDM   Edmonton           58.46  45   P      P      07 03 55.7 -0.5
EDM                                  pmax   pmax
      comp=Z,8.0nm,0.8s
GAR   Garm               59.07 296   P      P      07 04 01.5 +0.7
NEW   Newport            59.15  51   P      P      07 04 01.0 -0.1
NEW                                  IAmb   IAmb   07 04 02.3
      comp=Z,3.3nm,0.9s
NEW   Newport            59.15  51   P      P      07 04 01.0 -0.1
NEW                                  pmax   pmax
      comp=Z,3.0nm,1.0s
PINE  Pine Mountain      59.39  57   P      P      07 04 03.0  0.0
PINE                                 IAmb   IAmb   07 04 06.2
      comp=Z,5.1nm,0.8s
L04D  Klamath Falls      59.43  59   P      P      07 04 04.0 +0.7
YBH   Yreka Blue Hor     59.45  60   P      P      07 04 04.6 +1.3
YBH                                  IAmb   IAmb   07 04 06.9
      comp=Z,5.0nm,1.2s
YBH   Yreka Blue Hor     59.45  60   P      P      07 04 04.6 +1.3
YBH                                  pmax   pmax
      comp=Z,5.0nm,1.3s
ABKAR Akbulak array      59.60 311   P      P      07 04 05.1 +1.0
ABKAR                                IAmb   IAmb   07 04 05.8
      comp=Z,4.9nm,0.8s
AKTO  Aktyubinsk         59.97 313   LR     LR     07 32 22.3
      comp=Z,35nm,18.5s,baz=58,slow=38
CHGR  Chuyangaron        60.01 296   P      P      07 04 07.6 +0.4
CHGR  Chuyangaron        60.01 296   P      P      07 04 07.6 +0.4
CHGR                                 pmax   pmax
      comp=Z,15nm,0.7s
K05A  Summer Lake        60.01  58   P      P      07 04 08.3 +1.0
ARCES ARCESS Array B     60.01 341   P      P      07 04 08.6 +1.9
      comp=Z,0.9nm,0.6s,baz=41,slow=11,SNR=5.4
      comp=Z,0.9nm,0.6s
NIL   Nilore             60.17 289   P      P      07 04 08.9 +0.7
NIL   Nilore             60.17 289   P      P      07 04 09.0 +0.7
NIL                                  pmax   pmax
      comp=Z,13nm,1.1s
MOD   Modoc Plateau      60.84  59   P      P      07 04 13.4 +0.5
MOD                                  IAmb   IAmb   07 04 13.7
      comp=Z,4.2nm,0.8s
J08A  Circle Bar Ran     61.12  56   P      P      07 04 15.3 +0.6
J08A                                 IAmb   IAmb   07 04 19.3
      comp=Z,3.4nm,1.0s
WVOR  Wild Horse Val     61.55  57   P      P      07 04 17.6 -0.1
WVOR                                 IAmb   IAmb   07 04 18.8
      comp=Z,6.0nm,1.1s
WVOR  Wild Horse Val     61.55  57   P      P      07 04 17.6 -0.1
WVOR                                 pmax   pmax
      comp=Z,6.0nm,1.2s
PLID  Pearl Lake         61.58  54   P      P      07 04 18.0  0.0
MSO   Missoula           61.74  51   P      P      07 04 18.9 +0.1
KLMR  Klimovskoe         61.95 329  eP      P      07 04 18.0 -1.8
KLMR                                 pmax   pmax
      comp=Z,9.0nm,1.2s
KLMR  Klimovskoe         61.95 329  eP      P      07 04 18.1 -1.8
KLMR                                 AMP           07 04 23.2
      comp=Z,9.0nm,1.2s
BEKR  Beckworth          61.98  61   P      P      07 04 20.7 +0.1
KBL   Kabul              62.47 292   P      P      07 04 24.2 +0.1
KBL   Kabul              62.47 292   P      P      07 04 24.2 +0.1
KBL                                  pmax   pmax
      comp=Z,7.0nm,0.6s
PAHR  Pah Rah Range      62.68  60   P      P      07 04 25.4 +0.1
PAHR                                 IAmb   IAmb   07 04 26.3
      comp=Z,3.4nm,1.1s
VCNR  Virginia City      62.75  61   P      P      07 04 26.2 +0.3
VCNR                                 IAmb   IAmb   07 04 30.3
      comp=Z,2.7nm,0.7s
PNTR  Pine Nut           62.91  61   P      P      07 04 27.6 +0.6
PNTR                                 IAmb   IAmb   07 04 28.1
      comp=Z,4.1nm,0.9s
HRY   Holter Researc     62.98  50   P      P      07 04 26.7 -0.5
CMB   Columbia Colle     63.03  62   P      P      07 04 27.0 -0.6
CMB                                  IAmb   IAmb   07 04 29.3
      comp=Z,4.1nm,1.4s
CMB   Columbia Colle     63.03  62   P      P      07 04 27.0 -0.6
CMB                                  pmax   pmax
      comp=Z,4.0nm,1.4s
LRM   Limekiln Ridge     63.17  51   P      P      07 04 28.9 +0.3
YERR  Yerington          63.20  61   P      P      07 04 26.7 -2.1
YERR                                 IAmb   IAmb   07 04 33.2
      comp=Z,4.1nm,1.0s
SUMG  Summit             63.22   4   P      P      07 04 28.0 -0.7
SUMG  Summit             63.22   4   P      P      07 04 28.0 -0.7
SUMG                                 pmax   pmax
      comp=Z,11nm,1.0s
EGMT  Eagleton           63.32  48   P      P      07 04 28.6 -0.8
DLMT  Dillon             63.36  52   P      P      07 04 29.9 +0.1
DLMT                                 IAmb   IAmb   07 04 31.4
      comp=Z,2.3nm,0.7s
HLID  Hailey             63.40  54   P      P      07 04 30.5 +0.5
HLID                                 IAmb   IAmb   07 04 31.1
      comp=Z,3.2nm,1.1s
BCYI  Bear Canyon        63.53  53   P      P      07 04 30.9 -0.1
MCMT  McKenzie Canyo     63.54  52   P      P      07 04 31.2 +0.1
BMN   Battle Mountai     63.59  58   P      P      07 04 31.5 +0.1
BMN   Battle Mountai     63.59  58   P      P      07 04 31.5 +0.1
BMN                                  pmax   pmax
      comp=Z,5.0nm,0.7s
FCC   Fort Churchill     63.66  32   P      P      07 04 30.9 -0.3
FCC                                  IAmb   IAmb   07 04 53.0
      comp=Z,4.7nm,1.1s
FCC   Fort Churchill     63.66  32   P      P      07 04 30.9 -0.3
FCC                                  pmax   pmax
      comp=Z,5.0nm,1.2s
BOZ   Bozeman (W)        63.77  51   P      P      07 04 32.6 +0.2
BOZ   Bozeman (W)        63.77  51   P      P      07 04 32.6 +0.2
BOZ                                  pmax   pmax
      comp=Z,5.0nm,0.6s
KVN   Kaiserville        63.87  60   P      P      07 04 33.8 +0.5
KVN                                  IAmb   IAmb   07 04 38.1
      comp=Z,4.9nm,1.1s
KVN   Kaiserville        63.87  60   P      P      07 04 33.8 +0.5
KVN                                  pmax   pmax
      comp=Z,5.0nm,1.1s
NVAR  Mina Array Bea     64.11  61   P      P      07 04 34.9  0.0
      comp=Z,7.0nm,1.2s,baz=293,slow=7.4,SNR=13
      comp=Z,7.0nm,1.2s
NV11  Mina Array Sit     64.20  61   P      P      07 04 35.7 +0.3
NV11                                 IAmb   IAmb   07 04 42.1
      comp=Z,6.5nm,1.4s
QLMT  Earthquake Lak     64.34  52   P      P      07 04 36.8 +0.5
YHL   Hebgen Lake        64.47  52   P      P      07 04 37.8 +0.6
YHL                                  IAmb   IAmb   07 04 38.0
      comp=Z,3.1nm,0.8s
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ELK   Elko               64.60  57   P      P      07 04 38.2 +0.1
ELK   Elko               64.60  57   P      P      07 04 38.2 +0.1
ELK                                  pmax   pmax
      comp=Z,2.0nm,1.2s
TPH   Tonopah            65.01  61   P      P      07 04 40.5 -0.2
TPH   Tonopah            65.01  61   P      P      07 04 40.5 -0.2
TPH                                  pmax   pmax
      comp=Z,13nm,0.9s
YMP   Mirror Lake Pl     65.11  51   P      P      07 04 40.0 -1.4
FLWY  Flagg Ranch        65.22  52   P      P      07 04 41.5 -0.5
FLWY                                 IAmb   IAmb   07 04 57.7
      comp=Z,5.4nm,0.9s
RLMT  Red Lodge          65.37  50   P      P      07 04 42.8 -0.2
RLMT                                 IAmb   IAmb   07 04 48.2
      comp=Z,5.9nm,1.1s
MOOW  Moose Ponds        65.40  52   P      P      07 04 43.5 +0.3
MOOW                                 IAmb   IAmb   07 04 49.2
      comp=Z,3.3nm,0.8s
HVU   Hansel Valley      65.44  55   P      P      07 04 43.9 +0.5
HVU                                  IAmb   IAmb   07 04 47.8
      comp=Z,2.9nm,0.9s
HVU   Hansel Valley      65.44  55   P      P      07 04 43.9 +0.5
HVU                                  pmax   pmax
      comp=Z,3.0nm,0.9s
TPAW  Teton Pass         65.44  53   P      P      07 04 44.5 +0.9
LOHW  Long Hollow        65.56  52   P      P      07 04 44.5 +0.2
LOHW                                 IAmb   IAmb   07 04 49.0
      comp=Z,2.8nm,0.8s
REDW  Red Top Meadow     65.58  53   P      P      07 04 45.3 +0.9
R11A  Troy Canyon, C     65.86  59   P      P      07 04 45.7 -0.5
R11A                                 IAmb   IAmb   07 04 50.3
      comp=Z,4.3nm,1.1s
WB2   Warramunga Arr     65.98 199   P      P      07 04 46.9 +0.1
WB2                                  IAmb   IAmb   07 05 06.7
      comp=Z,9.3nm,1.4s
WRA   Warramunga Arr     65.98 199   P      P      07 04 45.9 -0.9
      comp=Z,0.9nm,0.6s,baz=16,slow=6.8,SNR=6.9
      comp=Z,0.9nm,0.6s
WRA   Warramunga Arr     65.98 199 i P      P      07 04 48.0 +1.2
WRA                                  pmax   pmax
      comp=Z,1.0nm,0.6s
FIA1  FINESS Array S     66.05 335   P      P      07 04 46.7  0.0
FIA1                                 IAmb   IAmb   07 04 54.6
      comp=Z,4.2nm,0.8s
FINES FINESS Array B     66.05 335   P      P      07 04 46.6 -0.1
      comp=Z,2.4nm,0.7s,baz=36,slow=7.8,SNR=8.7
      comp=Z,2.4nm,0.7s
S11A  Rachel             66.19  60   P      P      07 04 48.9 +0.5
S11A                                 IAmb   IAmb   07 04 54.7
      comp=Z,5.5nm,0.8s
HWUT  Hardware Ranch     66.26  55   P      P      07 04 49.0 +0.3
HWUT                                 IAmb   IAmb   07 04 49.8
      comp=Z,6.9nm,1.4s
TPNV  Topopah Spring     66.31  61   P      P      07 04 48.9 -0.2
TPNV                                 IAmb   IAmb   07 04 50.1
      comp=Z,9.6nm,1.4s
TPNV  Topopah Spring     66.31  61   P      P      07 04 48.9 -0.2
TPNV                                 pmax   pmax
      comp=Z,10.0nm,1.5s
DUG   Dugway, Tooele     66.40  56   P      P      07 04 50.5 +0.9
DUG                                  IAmb   IAmb   07 04 54.1
      comp=Z,4.2nm,0.9s
DUG   Dugway, Tooele     66.40  56   P      P      07 04 50.5 +0.9
DUG                                  pmax   pmax
      comp=Z,4.0nm,1.0s
BW06  Boulder Array      66.69  53   P      P      07 04 51.4 -0.2
BW06                                 IAmb   IAmb   07 04 52.1
      comp=Z,4.5nm,1.1s
PD31  Pinedale Array     66.69  53   P      P      07 04 50.1 -1.4
PD31                                 IAmb   IAmb   07 04 52.1
      comp=Z,3.7nm,1.1s
PDAR  Pinedale Array     66.69  53   P      P      07 04 51.1 -0.4
      comp=Z,3.5nm,1.0s,baz=267,slow=2.5,SNR=15
      comp=Z,3.5nm,1.0s
PDAR  Pinedale Array     66.69  53   P      P      07 04 50.6 -1.0
NLU   North Lily Min     66.99  56   P      P      07 04 54.0 +0.5
NLU                                  IAmb   IAmb   07 04 58.2
      comp=Z,4.3nm,0.9s
OBN   Obninsk            67.04 326⇓eP      P      07 04 53.0 -0.2
OBN                                 e              07 07 18.7
OBN                                  pmax   pmax
      comp=Z,7.0nm,0.9s
OBN   Obninsk            67.04 326  eP      P      07 04 53.0 -0.2
MPU   Maple Canyon       67.22  56   P      P      07 04 55.3 +0.4
MPU                                  IAmb   IAmb   07 04 59.1
      comp=Z,4.5nm,0.9s
HEL   Helsinki           67.38 335   P      P      07 04 46.7 -8.6
HEL                                  pmax   pmax
      comp=Z,1.0nm,0.6s
CCUT  Cedar City         67.73  59   P      P      07 04 58.8 +0.6
CCUT                                 IAmb   IAmb   07 04 59.4
      comp=Z,2.9nm,0.9s
MSU   Marysvale          67.84  57   P      P      07 04 59.6 +0.7
MSU   Marysvale          67.84  57   P      P      07 04 59.6 +0.7
SZCU  Shurtz Canyon      67.87  59   P      P      07 04 59.4 +0.3
TMUT  Trail Mountain     67.92  56   P      P      07 05 00.0 +0.5
TMUT                                 IAmb   IAmb   07 05 03.6
      comp=Z,3.6nm,1.1s
RDMU  Red Mountain       68.08  54   P      P      07 05 01.0 +0.6
MTPU  Mount Pierson      68.14  58   P      P      07 05 01.3 +0.4
MTPU                                 IAmb   IAmb   07 05 05.6
      comp=Z,3.6nm,0.9s
LCMT  Little Creek M     68.14  59   P      P      07 05 01.2 +0.5
LCMT                                 IAmb   IAmb   07 05 02.0
      comp=Z,4.4nm,0.8s
Q16A  Castle Valley      68.19  57   P      P      07 05 01.3 +0.2
Q16A                                 IAmb   IAmb   07 05 02.2
      comp=Z,4.0nm,0.9s
SRU   San Rafael Swe     68.45  56   P      P      07 05 02.9 +0.2
SRU   San Rafael Swe     68.45  56   P      P      07 05 02.9 +0.2
SRU                                  pmax   pmax
      comp=Z,8.0nm,0.9s
ULM   Lac du Bonnet      68.78  40   P      P      07 05 03.3 -1.0
      comp=Z,2.7nm,0.7s,baz=270,slow=6.4,SNR=3.7
      comp=Z,2.7nm,0.7s
RSSD  Black Hills        68.87  49   P      P      07 05 04.7 -0.6
RSSD                                 IAmb   IAmb   07 05 08.7
      comp=Z,4.2nm,0.7s
RSSD  Black Hills        68.87  49   P      P      07 05 04.7 -0.6
RSSD                                 pmax   pmax
      comp=Z,4.0nm,0.7s
W13A  Hualapai Mount     68.96  61   P      P      07 05 05.8 -0.1
U15A  North Rim          69.10  59   P      P      07 05 07.5 +0.6
U15A                                 IAmb   IAmb   07 05 11.5
      comp=Z,3.6nm,0.9s
ASAR  Alice Springs      69.67 198   P      P      07 05 09.9 -0.1
      comp=Z,0.8nm,0.7s,baz=17,slow=5.9,SNR=6.9
ASAR                                 LR     LR     07 38 23.6
      comp=Z,37nm,18.0s,baz=133,slow=38
      comp=Z,0.8nm,0.7s
PV23  Carpenter Ridg     69.78  56   P      P      07 05 10.5 -0.5
PV10  Paradox Valley     69.81  56   P      P      07 05 11.7 +0.5
PV11  David Mesa, Pa     69.96  56   P      P      07 05 12.3 +0.3
PV13  Radium Mtn., P     70.08  56   P      P      07 05 12.8 -0.1
NOA   NORSAR Array B     70.39 341   P      P      07 05 14.1  0.0
      comp=Z,0.8nm,0.5s,baz=28,slow=6.1,SNR=4.1
NOA                                  LR     LR     07 42 52.4
      comp=Z,10nm,18.3s,baz=245,slow=42
      comp=Z,0.8nm,0.5s
SMCO  Snowmass           70.50  54   P      P      07 05 15.7 +0.1
SMCO                                 IAmb   IAmb   07 05 19.1
      comp=Z,3.1nm,0.8s
HFS   Hagfors            70.58 339   LR     LR     07 42 24.3
      comp=Z,13nm,18.2s,baz=21,slow=41
MVCO  Mesa Verde         70.90  57   P      P      07 05 18.0 +0.2
MVCO                                 IAmb   IAmb   07 05 21.9
      comp=Z,6.2nm,0.9s
OGNE  Ogallala           72.11  50   P      P      07 05 24.7 -0.2
KBZ   Khabaz             72.18 314   P      P      07 05 25.8 +0.7
      comp=Z,4.9nm,0.8s,baz=50,slow=6.9,SNR=9.1
      comp=Z,4.9nm,0.8s
KBZ   Khabaz             72.18 314deP      P      07 05 26.3 +1.2
SDCO  Great Sand Dun     72.32  54   P      P      07 05 27.8 +1.3
AKASG Malin Array Be     73.30 326   P      P      07 05 31.3 -0.3
      comp=Z,2.1nm,0.5s,baz=37,slow=6.2,SNR=8.0
AKASG                                LR     LR     07 40 34.1
      comp=Z,34nm,18.3s,baz=56,slow=38
      comp=Z,2.1nm,0.5s
AKBB  Malin Array Si     73.30 326   P      P      07 05 31.7 +0.1
AKBB                                 IAmb   IAmb   07 05 32.2
      comp=Z,5.2nm,0.9s
AKBB  Malin Array Si     73.30 326   P      P      07 05 31.7 +0.1
AKBB                                 pmax   pmax
      comp=Z,5.0nm,0.9s
ANMO  Albuquerque        73.64  57   P      P      07 05 34.0 -0.2
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANMO	Albuquerque	73.64	57	P	P	07 05 34.0	-0.2
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	Garni	73.71	310	LR	LR	07 41 14.7	
	comp=Z,35nm,18.9s,baz=58,slow=38						
BNM	Barren Site	74.08	58	P	P	07 05 36.9	0.0
CRNM	Carthage	74.15	58	P	P	07 05 37.7	+0.6
319A	Douglas	74.31	62	P	P	07 05 38.0	0.0
319A				IAmb	IAmb	07 05 39.0	
	comp=Z,3.9nm,0.9s						
I37A	Lemond, Waseca	74.43	43	P	P	07 05 38.0	-0.4
MNTX	Cornudas Mount	76.52	59	P	P	07 05 50.5	-0.1
AMTX	Amarillo	76.52	54	P	P	07 05 50.8	+0.1
AMTX				IAmb	IAmb	07 05 54.7	
	comp=Z,7.4nm,0.9s						
BUR08	Bucovina Ar. S	77.33	326	P	P	07 05 55.6	+0.6
VRAC	Vranov	79.09	332	LR	LR	07 48 26.8	
	comp=Z,16nm,18.5s,baz=334,slow=41						
TX31	Lajitas Ar. Si	79.22	60	P	P	07 06 05.5	-0.3
TX32	Lajitas Array	79.22	60	P	P	07 06 05.5	-0.3
TX32				IAmb	IAmb	07 06 06.3	
	comp=Z,3.8nm,0.8s						
TXAR	Lajitas Array	79.22	60	P	P	07 06 05.5	-0.3
	comp=Z,2.6nm,0.6s,baz=304,slow=4.1,SNR=56						
	comp=Z,2.6nm,0.6s						
R40A	Maddies Statio	79.25	46	P	P	07 06 04.6	-1.1
R40A				IAmb	IAmb	07 06 08.5	
	comp=Z,9.0nm,1.2s						
BR131	Keskin Array S	79.81	317	⇑ *i*P	P	07 06 09.5	+0.6
BRTR	Keskin Array B	79.81	317	P	P	07 06 08.1	-0.8
	comp=Z,1.2nm,0.9s,baz=111,slow=5.4,SNR=5.4						
	comp=Z,1.2nm,0.9s						
BRTR	Keskin Array B	79.81	317	*i* P	P	07 06 09.0	+0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
U40A	Yellville	80.39	48	P	P	07 06 11.2	-0.8
U40A				IAmb	IAmb	07 06 12.1	
	comp=Z,5.6nm,1.0s						
HKT	Hockley	83.49	54	⇓ *e*P	P	07 06 27.2	-1.0
HKT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LPAZ	La Paz	135.97	64	PKP	PKiKP	07 13 23.2	-0.8
	comp=Z,1.0nm,0.8s,baz=166,slow=2.6,SNR=4.4						
LPAZ	La Paz	135.97	64		PKPdf	07 13 22.2	-0.2
BDFB	Brasilia	146.66	38	PKPbc	PKPdf	07 13 41.3	+0.4
	comp=Z,3.6nm,0.8s,baz=277,slow=4.0,SNR=5.7						
PLCA	Paso Flores	148.47	99	PKPbc	PKPbc	07 13 45.9	-0.8
	comp=Z,2.5nm,0.8s,baz=298,slow=3.2,SNR=15						
TROLL	Troll, Antarti	148.66	198	PKPbc	PKPbc	07 13 46.4	0.0
SNAA	Sanae	150.01	195	PKPbc	PKPbc	07 13 49.1	-0.5
CPUP	Villa Florida	150.14	63	PKPbc	PKPbc	07 13 50.1	-1.1
	comp=Z,1.2nm,0.7s,baz=274,slow=3.3,SNR=4.9						
VNA2	Neumayer--Watz	151.46	194	PKPbc	PKPbc	07 13 52.8	-0.1
	baz=116,slow=1.0						
VNA3	Neumayer Olymp	151.55	192	PKPbc	PKPbc	07 13 52.8	-0.4

*ISK **23** 07:03:50.1, 41°.57N×23°.29E, h9^{km}, ML2.8/11*
*SOF **23** 07:03:50.1, 41°.63N×23°.28E, h15^{km}, MD2.7*
*SKO **23** 07:03:51.6, 41°.63N×23°.26E, h0^{km}*
*THE **23** 07:03:51.6, 41°.57N×23°.29E, h10^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=1.1km s-min=0.5km az=183.0*
*BEO **23** 07:03:51.0±0.3, 41°.64N×23°.29E, h7^{km}±3^{km}, ML2.6/6*
*ATH **23** 07:03:51.2, 41°.61N×23°.29E, h12^{km}±1^{km}, ML2.6/12, Error ellipse: s-maj=2.0km s-min=0.9km az=334.0*
ISC 23 07:03:49.7±1.0**, 41°.62N**±0°.02×**23°.20E**±0°.02**, h8**^{km}±8^{km}**, n80, σ0^{s}.78**/124**, 10C-4D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.26	341	P	Pg	07 03 55.7	+0.8
MMB	Musomiste	0.40	94	P	Pg	07 03 57.6	0.0
KNT	Kendrikon	0.51	206	P	Pb	07 04 01.4	+0.5
KNT				S	Sb	07 04 08.9	+0.5
KNT	Kendrikon	0.51	206	P	Pb	07 04 01.4	+0.5
KNT				S	Sb	07 04 08.9	+0.5
	1µm,0.3s						
KNT	Kendrikon	0.51	206	PG	Pb	07 04 01.3	+0.5
KNT				SG	Sb	07 04 07.9	-0.5
KNT	Kendrikon	0.51	206	⇑ *i*Pg	Pb	07 04 01.4	+0.5
KNT				*i* Sg	Sb	07 04 08.8	+0.4
NVR	Nevrokopi	0.57	118	P	Pg	07 04 00.7	0.0
NVR				S	Sg	07 04 08.1	-0.1
NVR				AML	AML	07 04 08.3	
	comp=N,765µm,0.3s						
NVR				AML	AML	07 04 09.4	
	comp=E,1034µm,0.3s						
NVR	Nevrokopi	0.57	118	P	Pg	07 04 00.7	0.0
NVR				S	Sg	07 04 08.1	-0.1
	comp=E,455nm,0.3s						
SRS	Serrai	0.58	149	*e*Pg	Pg	07 04 01.5	+0.5
SRS				*e*Sg	Sg	07 04 09.5	+0.8
SRS	Serrai	0.58	149	P	Pb	07 04 01.7	-0.5
SRS				S	Sg	07 04 09.2	+0.5
SRS				AML	AML	07 04 09.6	
	comp=E,578µm,0.3s						
SRS				AML	AML	07 04 10.7	
	comp=N,647µm,0.2s						
SRS	Serrai	0.58	149	P	Pb	07 04 01.7	-0.5
SRS				S	Sg	07 04 09.2	+0.5
	comp=N,310nm,0.2s						
SRS	Serrai	0.58	149	⇑ *i*Pg	Pb	07 04 01.6	-0.5
SRS				*i* Sg	Sb	07 04 09.7	-0.9
STIP	Stip	0.76	276	*i* Pg	Pg	07 04 02.6	-1.8
STIP				*i* Sg	Sg	07 04 11.3	-3.0
SOH	Sokhos	0.81	171	P	Pb	07 04 06.0	0.0
SOH				S	Sb	07 04 17.4	+0.4
SOH				AML	AML	07 04 18.0	
	comp=N,1008µm,0.3s						
SOH				AML	AML	07 04 18.4	
	comp=E,1263µm,0.4s						
SOH	Sokhos	0.81	171	P	Pb	07 04 06.0	0.0
SOH				S	Sb	07 04 17.4	+0.4
	comp=E,455nm,0.4s						
SOH	Sokhos	0.81	171	⇑ *i*Pg	Pb	07 04 06.0	0.0
SOH				*i* Sg	Sb	07 04 17.5	+0.5
GRG	Griva	0.89	222	P	Pn	07 04 08.4	-0.2
GRG				S	Sn	07 04 21.1	-0.5
GRG				AML	AML	07 04 22.4	
	comp=N,1063µm,0.3s						
GRG				AML	AML	07 04 23.2	
	comp=E,623µm,0.2s						
GRG	Griva	0.89	222	P	Pn	07 04 08.4	-0.2
GRG				S	Sn	07 04 21.1	-0.5
	comp=E,425nm,0.3s						
GRG	Griva	0.89	222	PG	Pb	07 04 07.6	+0.2
GRG				SG	Sn	07 04 20.6	-1.0
GRG	Griva	0.89	222	*i* Pg	Pn	07 04 08.6	0.0
GRG				*i* Sg	Sn	07 04 21.7	0.0
VTS	Vitosha	1.00	2	⇑P	Pg	07 04 08.9	0.0
VTS				⇑S	Sb	07 04 22.4	-0.2
VTS	Vitosha	1.00	2	*e*Pg	Pb	07 04 09.3	0.0
VTS				*e*Sg	Sg	07 04 21.0	-0.9
VTS	Vitosha	1.00	2	*i* Pg	Pb	07 04 09.3	0.0
VTS				*i* Sg	Sg	07 04 22.0	+0.1
VTS	Vitosha	1.00	2	P	Pg	07 04 08.8	-0.1
THE	Thessaloniki	1.00	190	P	Pn	07 04 10.3	+0.4
THE				S	Sn	07 04 23.4	-0.8
THE				AML	AML	07 04 24.7	
	comp=E,646µm,0.3s						
THE				AML	AML	07 04 25.2	
	comp=N,721µm,0.3s						
THE	Thessaloniki	1.00	190	P	Pn	07 04 10.3	+0.4
THE				S	Sn	07 04 23.4	-0.8
	comp=N,342nm,0.3s						
THE	Thessaloniki	1.00	190	*i* Pg	Pn	07 04 10.4	+0.4
THE				*i* Sg	Sn	07 04 24.4	+0.1
KOKK	Kokkinochori,	1.00	143	P	Pg	07 04 08.9	-0.1
KOKK				S	Sg	07 04 22.2	+0.1
KOKK	Kokkinochori,	1.00	143	P	Pg	07 04 08.9	-0.1
KOKK				S	Sg	07 04 22.2	+0.1
	comp=N,415nm,0.3s						
BOSS	Bosilegrad	1.02	329	*e*Pg	Pn	07 04 10.2	-0.2
BOSS				*e*Sg	Sn	07 04 24.7	-0.2
HORT	Hortiatis	1.02	184	P	Pn	07 04 10.4	0.0
HORT				S	Sn	07 04 24.3	-0.7
HORT				AML	AML	07 04 25.2	
	comp=N,550µm,0.5s						
HORT				AML	AML	07 04 25.9	
	comp=E,753µm,0.5s						
HORT	Hortiatis	1.02	184	P	Pn	07 04 10.4	0.0
HORT				S	Sn	07 04 24.3	-0.7
	comp=E,325nm,0.5s						
HORT	Hortiatis	1.02	184	PG	Pb	07 04 09.4	-0.3
HORT				SG	Sb	07 04 23.2	-0.1
KVLA	Kavala	1.13	127	P	Pg	07 04 11.1	-0.2
KVLA				S	Sg	07 04 25.4	-0.6
KAVA	Kavala	1.17	122	P	Pg	07 04 11.9	-0.3
KAVA				S	Sg	07 04 26.1	-1.3
KAVA				AML	AML	07 04 28.1	
	comp=E,743µm,0.3s						
KAVA				AML	AML	07 04 28.7	
	comp=N,719µm,0.6s						
KAVA	Kavala	1.17	122	P	Pg	07 04 11.9	-0.3
KAVA				S	Sb	07 04 27.5	0.0
	comp=N,292nm,0.5s						
PGB	Panagyurishte	1.18	38	P	Pg	07 04 11.7	-0.6
PLD	Plovdiv	1.23	66	PN	Pb	07 04 13.1	0.0
PLD	Plovdiv	1.23	66	P	Pg	07 04 13.6	+0.4
PLG	Polygyros	1.26	171	P	Pg	07 04 13.9	0.0
PLG				S	Sn	07 04 30.7	0.0
PLG				AML	AML	07 04 32.9	
	comp=N,396µm,0.4s						
PLG				AML	AML	07 04 33.7	
	comp=E,335µm,0.6s						
PLG	Polygyros	1.26	171	P	Pg	07 04 13.9	0.0
PLG				S	Sn	07 04 30.7	0.0
	comp=E,185nm,0.5s						
OUR	Ouranopolis	1.42	155	P	Pn	07 04 15.8	+0.1
OUR				S	Sb	07 04 34.2	-0.3
OUR				AML	AML	07 04 37.2	
	comp=N,769µm,0.5s						
OUR				AML	AML	07 04 40.2	
	comp=E,461µm,0.4s						
OUR	Ouranopolis	1.42	155	P	Pn	07 04 15.8	+0.1
OUR				S	Sb	07 04 34.2	-0.3
	comp=E,305nm,0.5s						
OUR	Ouranopolis	1.42	155	PN	Pn	07 04 15.3	-0.4
THAS	Thassos island	1.53	131	P	Pb	07 04 18.4	+0.1
THAS				S	Sn	07 04 37.4	0.0
THAS				AML	AML	07 04 39.9	
	comp=N,307µm,0.3s						
THAS				AML	AML	07 04 40.1	
	comp=E,306µm,0.4s						
THAS	Thassos island	1.53	131	P	Pn	07 04 16.9	-0.4
THAS				S	Sn	07 04 37.4	0.0
	comp=E,155nm,0.3s						
BARS	Barje	1.57	320	*e*Pg	Pg	07 04 20.3	+0.4
BARS	Barje	1.57	320	*e*Pn	Pg	07 04 34.3	+14
BARS				*e*Sg	Sg	07 04 41.6	+1.3
FNA	Florina	1.61	239	PN	Pb	07 04 19.8	+0.2
KDZ	Kurdzhali	1.67	88	P	Pn	07 04 18.7	-0.5
PAIG	Paliouri	1.73	168	P	Pb	07 04 22.0	+0.3
PAIG	Paliouri	1.73	168	P	Pn	07 04 20.1	+0.1
DIM	Dimitrovgrad	1.80	75	P	Pb	07 04 23.1	+0.2
RDO	Rodhopi	1.82	104	P	Pn	07 04 21.8	+0.5
RDO				S	Sb	07 04 46.0	-0.3
RDO				AML	AML	07 04 48.8	
	comp=E,355µm,0.4s						
RDO				AML	AML	07 04 48.9	
	comp=N,331µm,0.4s						
RDO	Rodhopi	1.82	104	P	Pn	07 04 21.8	+0.5
RDO				S	Sn	07 04 45.0	+0.4
	comp=N,172nm,0.4s						
RDO	Rodhopi	1.82	104	PN	Pn	07 04 21.3	0.0
BLKB	Belogradchik	2.04	349	⇑P	Pn	07 04 24.3	0.0
BLKB				⇓S	Sn	07 04 49.6	-0.3
SMTH	Samothraki Isl	2.11	122	P	Pb	07 04 27.9	-0.2
SMTH	Samothraki Isl	2.11	122	P	Pn	07 04 24.7	-0.5
SELS	Selova	2.22	317	*e*Pn	Pb	07 04 30.1	+0.1
SELS				*e*Sn	Sb	07 04 56.0	-1.6
ALN	Alexandroupoli	2.27	108	P	Pb	07 04 30.2	-0.6
ALN				AML	AML	07 05 04.7	
	comp=E,142µm,0.8s						
ALN				AML	AML	07 05 07.1	
	comp=N,132µm,0.6s						
ALN	Alexandroupoli	2.27	108	P	Pn	07 04 27.1	-0.3
ALN	Alexandroupoli	2.27	108	PN	Pn	07 04 27.7	+0.3
BOVS	Bovan	2.29	332	⇑P	Pn	07 04 27.7	-0.1
BOVS	Bovan	2.29	332	*e*Pn	Pb	07 04 29.7	-1.6
BOVS				*e*Sn	Sn	07 04 57.8	+1.6
ZAGS	Zajecar	2.30	342	*e*Pn	Pn	07 04 27.9	0.0
EDRB	Edirne	2.67	84	PN	Pn	07 04 33.5	+0.6
ERIK	Erikli-Kesan	2.68	110	PN	Pn	07 04 33.4	+0.3
GELI	Tayfur-Gelibol	2.77	115	PN	Pn	07 04 34.4	+0.2
GRUS	Gruza	2.91	322	*e*Pn	Pn	07 04 38.5	+2.2
IVAS	Ivanjica	2.98	312	*e*Pn	Pb	07 04 40.2	-2.8
HERR	Herculane	3.31	350	⇓P	Pn	07 04 41.6	-0.2
TRUS	Trudelj	3.31	323	*e*Pn	Pn	07 04 44.2	+2.4
MDVR	Moldovita	3.34	342	⇓P	Pn	07 04 42.1	-0.1
DIVS	Divibare	3.42	318	*e*Pn	Pn	07 04 43.8	+0.5
GZR	Gura Zlata	3.78	356	⇑P	Pn	07 04 48.6	+0.3
VOIR		4.05	19	⇑P	Pn	07 04 52.7	+0.7
BZS	Buzias	4.16	345	⇓P	Pn	07 04 53.2	-0.1
MLR	Muntele Rosu	4.35	26	⇑P	Pn	07 04 58.0	+1.8
KIJV	Kijevo	5.53	298	*e*Pg	Pg	07 05 39.0	+3.4

*SNET **23** 07:09:15.6±1.3, 12°.67N×88°.36W, h28^{km}±5^{km}, ML2.6*
*INET **23** 07:09:17.6±0.4, 12°.88N×88°.12W, h20^{km}±12^{km}, MW2.7*
ISC 23 07:09:13.8±2.9**, 13°.1N**±0°.2×**88°.1W**±0°.1**, h112**^{km}±21^{km}**, n16, σ1^{s}.22**/27**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	La Caada	0.28	43	⇓ *i*P	Pn	07 09 29.9	+0.3
LCND				*e*S	Sn	07 09 41.4	-0.2
LCND				IAML		07 09 44.2	
	comp=Z,308nm,0.4s						
CNCH	Conchagua	0.30	55	*i* P	Pn	07 09 30.0	+0.1
CNCH				*e*S	Sn	07 09 42.0	0.0
CNCH				IAML		07 09 45.0	
	comp=Z,1µm,0.2s						
PACA	Pacayal	0.43	327	*e*P	Pn	07 09 31.0	+0.4
PACA				*e*S	Sn	07 09 43.0	-0.1
COEB	Comit de Eme	0.58	312	*e*P	Pn	07 09 31.6	+0.1
COEB				*e*S	Sn	07 09 44.0	-0.9
COEB				IAML		07 09 47.2	
	comp=Z,160nm,0.3s						
COEB	Comit de Eme	0.58	312	*e*P	Pn	07 09 31.5	-0.1
COEB				*e*S	Sn	07 09 43.8	-1.1
FAGO	Alcalda de S	0.59	358	*e*P	Pn	07 09 29.6	-1.9
FAGO				*e*S	Sn	07 09 43.7	-1.0
PQSS	Presa 15 de Se	0.69	318	*e*P	Pn	07 09 33.5	+1.3
PQSS				*e*S	Sn	07 09 47.3	+1.1
PQSS				IAML		07 09 50.2	
	comp=Z,89nm,0.1s						
SCLA	Alcaldia de Sa	0.86	314	*e*P	Pn	07 09 35.5	+1.6
SCLA				*e*S	Sn	07 09 50.8	+1.8
SCLA				IAML		07 09 52.7	
	comp=Z,48nm,0.2s						
COEG	Centro de Oper	0.93	304	*e*P	Pn	07 09 35.4	+0.9
COEG				*e*S	Sn	07 09 49.9	-0.2
COEG				IAML		07 09 52.0	
	comp=Z,213nm,0.1s						
PAVA	Las Pavas	1.03	306	*e*P	Pn	07 09 37.0	+1.4
PAVA				*e*S	Sn	07 09 52.6	+0.7
PAVA	Las Pavas	1.03	306	*e*P	Pn	07 09 37.7	+2.2
SJTE	Alcalda de S	1.03	300	*e*P	Pn	07 09 35.9	+0.4
SJTE				*e*S	Sn	07 09 50.8	-1.1
LFRS	El Faro	1.08	299	*e*P	Pn	07 09 36.6	+0.5
CRIN	San Cristobal	1.09	112	*e*P	Pn	07 09 36.6	+0.6
TGUH	Tegucigalpa,Un	1.23	40	*e*P	Pn	07 09 44.8	+7.0
JAYA	Jayaque - finc	1.44	293	*e*P	Pn	07 09 38.8	-1.3
JAYA				*e*S	Sn	07 09 57.5	-2.5

*IDC **23** 07:15:34.0±2.9, 53°.76N×88°.19E, h0^{km}, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=24.4km s-min=16.5km az=54.0*
*NNC **23** 07:15:35.4±3.0, 53°.67N×88°.01E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=22.4km s-min=13.9km az=60.0, Suspected Mining explosion.*
ISC 23 07:15:36.2±3.8**, 53°.7N**±0°.1×**88°.0E**±0°.2**, h0**^{km}**, n8, σ0^{s}.67**/11**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.89	278	*i*		07 28 16.9	
	0.1nm,0.8s,baz=94,slow=322,SNR=2.9						
ZAA0	Zalesovo Array	1.89	278	⇑Pg	Pn	07 16 09.6	-0.1
	2.8nm,0.7s						
ZAA0				⇑Lg	Lg	07 16 37.5	
	4.7nm,0.5s						
ZALV	Zalesovo Beam	1.89	278	Pg	Pn	07 16 09.5	-0.2
	3.1nm,0.3s,baz=90,slow=13,SNR=45						
ZALV				Lg	Lg	07 16 37.5	
	9.0nm,0.3s,baz=92,slow=24,SNR=22						
KURK	Kurchatov	6.49	246	⇑Sn	Sn	07 18 27.2	-0.5
	1.2nm,0.6s						
KURK				⇓Lg	Lg	07 19 00.1	
	3.8nm,0.7s						
KURBB	Kurchatov Arra	6.59	246	Pn	Pn	07 17 14.8	+0.6
	0.3nm,0.3s,baz=62,slow=14,SNR=27						
KURBB				Sn	Sn	07 18 30.6	+0.6
	0.1nm,0.3s,baz=200,slow=24,SNR=1.6						
KURBB				Lg	Lg	07 19 06.7	
	0.1nm,0.3s,baz=349,slow=24,SNR=6.6						
	2.0nm,0.3s						
KURBB	Kurchatov Arra	6.59	246	⇓Pn	Pn	07 17 14.4	+0.2
	2.2nm,0.3s						
KURBB				⇑Sn	Sn	07 18 30.1	+0.1
	4.3nm,0.5s						
KURBB				⇓Lg	Lg	07 19 06.8	
	7.4nm,0.7s						
MK31	Makanchi Array	7.83	210	⇑Pn	Pn	07 17 32.3	+0.9
	0.1nm,0.3s,baz=32,slow=13,SNR=9.1						
MK31				⇑Sn	Sn	07 18 59.4	-1.3
	0.9nm,0.7s,baz=34,slow=27,SNR=2.7						
MK31				⇑Lg	Lg	07 19 41.1	
	2.3nm,0.8s						
MKAR	Makanchi Array	7.83	210	Pn	Pn	07 17 31.2	-0.1
	0.3nm,0.3s,baz=28,slow=14,SNR=11						
MKAR				Sn	Sn	07 19 00.5	-0.2
	0.2nm,0.3s,baz=35,slow=26,SNR=2.3						
MKAR				Lg	Lg	07 19 43.1	
	0.1nm,0.3s,baz=35,slow=32,SNR=4.1						
	0.5nm,0.4s						

*IDC **23** 07:19:17.9±1.8, 8°.31S×117°.27E, h0^{km}, mb3.3/3, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=31.6km s-min=21.9km az=92.0*
*DJA **23** 07:19:19.2±0.8, 8°S±6°×11°7E±°, h14^{km}±8^{km}, M3.9/9, mb4.1/1, MLv3.9/9*
ISC 23 07:19:21.6±1.1**, 8°.35S**±0°.07×**117°.14E**±0°.05**, h35**^{km}**, n14, σ1^{s}.12**/15**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.79	127	P	Pn	07 19 34.4	-1.9
SRBI	Singaraja	1.93	278	P	Pn	07 19 50.5	-1.4
IGBI	Denpasar	2.03	257	P	Pn	07 19 51.7	-1.6
WBSI	Waikabubak, Su	2.57	120	P	Pn	07 20 00.9	+0.1
JAGI	Jajag, Banyuwa	2.96	267	P	Pn	07 20 06.1	0.0
GMJI	Gumukmas	3.66	271	P	Pn	07 20 15.9	+0.1
BSSI	Bau Bau, Buton	3.98	57	P	Pn	07 20 19.9	-0.3
KAPI	Kappang	4.21	38	Pn	Pn	07 20 22.5	-0.8
	7.3nm,0.3s,baz=174,slow=5.0,SNR=7.3						
KAPI				Sn	Sn	07 21 09.9	-1.4
	11nm,0.3s,baz=52,slow=23,SNR=12						
KAPI				Lg	Lg	07 21 28.2	
	3.4nm,0.3s,baz=225,slow=23,SNR=1.4						
	14nm,0.3s						
BKSI	Bulukumba	4.22	45	P	Pn	07 20 22.8	-0.7
EDFI	Ende, Flores	4.52	95	P	Pn	07 20 28.0	+0.3
SPSI	Sidrap Palu	5.08	31	P	Pn	07 20 34.6	-0.7
WRA	Warramunga Arr	20.25	127	P	P	07 23 54.1	0.0
	1.0nm,0.7s,baz=301,slow=12,SNR=20						
	1.0nm,0.7s						
ASAR	Alice Springs	22.13	135	P	P	07 24 14.4	+0.1
	0.8nm,0.8s,baz=312,slow=9.0,SNR=13						
	0.8nm,0.8s						
MKAR	Makanchi Array	63.06	334	P	P	07 29 47.1	+1.8
	0.5nm,0.8s,baz=128,slow=7.9,SNR=4.4						
	0.5nm,0.8s						

*JMA **23** 07:27:56.1±0.2, 38°.3N±0°.5×14°2E±°, h38^{km}±2^{km}, MV3.7/38, E OFF MIYAGI PREF*
*NIED **23** 07:27:56.1, 38°.28N×142°.45E, h38^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.73; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$1.77; $M_{r\theta}$0.61; $M_{\theta\phi}$0.19; $M_{\phi r}$-0.65; Fault plane solution: $M_0$1.97000×10^{14} NP1: ϕ_s203.00000°, δ38.00000°, λ-61.00000°. NP2: ϕ_s348.00000°, δ57.00000°, λ-111.00000°.*
*IDC **23** 07:28:09.1±3.2, 37°.74N×141°.88E, h110^{km}±28^{km}, mb3.1/4, mbtmp3.5/6 Error ellipse: s-maj=30.0km s-min=19.1km az=78.0*
ISC 23 07:27:56.4±2.5**, 38°.26N**±0°.05×**142°.4E**±0°.1**, h25**^{km}±15^{km}**, n25, σ1^{s}.30**/25**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.75	274	*i* P	Pb	07 28 10.5	-0.2
JIO	Ouri	0.86	283	*i* P	Pn	07 28 12.3	-0.5
JIO				S	Sb	07 28 23.6	-0.1
JKMT	Kesennumamotoy	0.92	307	*i* P	Pn	07 28 13.1	-0.6
JKMT				S	Sn	07 28 24.9	-1.2
OFUJ	Ofunato	1.00	325	*i* P	Pn	07 28 14.0	-0.8
OFUJ				S	Sn	07 28 26.6	-1.6
JMK	Ichinoseki	1.16	307	*i* P	Pn	07 28 16.7	-0.3
JMM	Marumori	1.34	253	*i* P	Pn	07 28 18.9	-0.5
JMM				S	Sn	07 28 35.6	-0.8
JOU	Okura	1.38	275	*i* P	Pn	07 28 20.4	+0.4
JOM	Ohasama	1.49	324	*i* P	Pn	07 28 21.6	+0.1
JOM				S	Sn	07 28 40.3	+0.1
JFK	Kawauchi	1.51	234	P	Pn	07 28 20.8	-1.1
JYK	Kaneyama	1.74	293	P	Pn	07 28 25.4	+0.4
JRG	Rokugo	1.79	310	P	Pn	07 28 26.5	+0.8
JFT	Otama	1.80	246	P	Pn	07 28 26.2	+0.3
JYS	Shirataka	1.85	269	P	Pn	07 28 27.0	+0.5
MJAR	Matsushiro Arr	3.76	244	P	Pn	07 28 55.5	+2.7
	2.3nm,0.4s,baz=53,slow=10.0,SNR=6.2						
MJAR				S	Sn	07 29 35.5	-0.8
	1.3nm,0.4s,baz=263,slow=21,SNR=4.1						
JHJ	Hachijo jima 2	5.56	203	P	Pn	07 29 19.1	+1.5
	49nm,0.6s,baz=60,slow=18,SNR=1.7						
JHJ				S	Sn	07 30 17.5	-3.1
	73nm,0.6s,baz=131,slow=19,SNR=1.4						
H11N2	WAKE ISLAND Hy	28.14	124	T	T	08 03 25.2	
	baz=315						
H11N1	WAKE ISLAND Hy	28.15	124	T	T	08 03 26.5	
	baz=315,slow=74						
H11N3	WAKE ISLAND Hy	28.16	124	T	T	08 03 26.7	
	baz=315,slow=74						
H11S1	WAKE ISLAND Hy	28.90	126	T	T	08 04 53.6	
	baz=318,slow=76						
H11S3	WAKE ISLAND Hy	28.90	126	T	T	08 04 25.1	
	baz=318,slow=76						
H11S2	WAKE ISLAND Hy	28.92	126	T	T	08 04 38.7	
	baz=318,slow=76						
MKAR	Makanchi Array	44.15	301	P	P	07 36 05.1	+2.3
	0.2nm,0.4s,baz=67,slow=11,SNR=4.8						
	0.2nm,0.4s						
ILAR	Eielson Array	48.03	33	P	P	07 36 42.8	+10
	0.4nm,0.7s,baz=256,slow=6.4,SNR=4.5						
	0.4nm,0.7s						
WRA	Warramunga Arr	58.39	189	P	P	07 37 48.7	-1.1
	0.3nm,0.5s,baz=6.7,slow=6.9,SNR=7.3						
	0.3nm,0.5s						
ASAR	Alice Springs	62.12	189	P	P	07 38 14.6	-0.7
	0.3nm,0.7s,baz=10,slow=7.6,SNR=4.4						
	0.3nm,0.7s						

IDC 23 07:51:09.2±2.7**, 53°.74N×87°.00E, h0**^{km}**, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=25.4km s-min=15.9km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.31	280	*i*		07 59 05.0	
	baz=102,slow=313,SNR=8.3						
ZALV	Zalesovo Beam	1.31	280	Pg	Pg	07 51 33.0	-1.3
	1.3nm,0.3s,baz=98,slow=18,SNR=12						
ZALV				Lg	Lg	07 51 51.0	
	1.6nm,0.3s,baz=104,slow=27,SNR=13						
KURBB	Kurchatov Arra	6.07	242	Pn	Pn	07 52 41.2	+1.0
	0.1nm,0.3s,baz=59,slow=14,SNR=6.0						
KURBB				Lg	Lg	07 54 24.6	
	baz=356,slow=22,SNR=4.4						
	0.7nm,0.6s						
MKAR	Makanchi Array	7.58	205	Pn	Pn	07 53 02.1	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=7.4						
MKAR				Lg	Lg	07 55 09.7	
	0.1nm,0.3s,baz=22,slow=32,SNR=5.6						
	0.6nm,0.6s						

IDC 23 07:55:32.3±3.6, 55°.46N×86°.24E, h0^{km}, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=28.6km s-min=27.3km az=104.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.72	209	*i*		08 06 43.8	
	baz=25,slow=321,SNR=5.9						
ZALV	Zalesovo Beam	1.72	209	Pg	Pn	07 56 02.4	-1.2
	3.2nm,0.3s,baz=33,slow=16,SNR=27						
ZALV				Lg	Lg	07 56 27.9	
	1.5nm,0.3s,baz=16,slow=23,SNR=6.9						
KURBB	Kurchatov Arra	6.71	227	Pn	Pn	07 57 12.4	+0.4
	0.1nm,0.3s,baz=43,slow=13,SNR=3.4						
KURBB				Lg	Lg	07 59 04.4	
	baz=48,slow=32,SNR=2.2						
	0.4nm,0.4s						
MKAR	Makanchi Array	9.02	198	Pn	Pn	07 57 44.0	+0.2
	0.1nm,0.3s,baz=22,slow=12,SNR=2.8						
MKAR				Lg	Lg	08 00 18.3	
	0.1nm,0.3s,baz=19,slow=20,SNR=1.9						
	0.2nm,0.5s						

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*IDC **23** 07:57:51.6±1.2, 0°.30N×97°.91E, h0^{km}, mb4.1/10, mbtmp4.1/12, ML4.4/2, MS3.5/6, Error ellipse: s-maj=34.5km s-min=19.9km az=65.0*
*DJA **23** 07:57:55.2±0.4, 0°N±3°×9°8E±°, h10^{km}, M4.5/13, mb4.5/4, mB4.6/1, MLv4.5/13, Mw(mB)3.8/1*
*NEIC **23** 07:57:57.8±2.2, 0°.52N±0°.09×97°.8E±0°.1, h30^{km}±6^{km}, mb4.3/16, Error ellipse: s-maj=20.8km s-min=7.5km az=53.0*
ISC 23 07:57:57.5±0.6, 0°.56N±0°.05×98°.09E±0°.05, h29^{km}, n63, σ1ˢ51/55, mb4.3/20, MS3.6/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.90	325		Pb	07 58 13.7	-0.8
GSI	Gunungsitoli	0.90	325	P	Pb	07 58 13.6	-0.9
GSI				S	Sn	07 58 27.7	+1.5
GSI	Gunungsitoli	0.90	325	P	Pb	07 58 13.8	-0.8
MNSI	Mandailing Nat	1.51	81	P	Pb	07 58 24.0	-0.9
MNSI				S	Sb	07 58 45.2	+1.5
SISI	Saibi	2.13	152	P	Pn	07 58 29.6	-1.5
PSI	Prapat	2.38	21	Pn	Pn	07 58 34.5	-0.1
	12nm,0.3s,baz=216,slow=2.4,SNR=44						
PSI				Sn	Sb	07 59 07.8	-1.0
	35nm,0.3s,baz=174,slow=9.5,SNR=7.3						
PSI				LR	LR	07 59 52.6	
	comp=Z,245nm,19.7s,baz=333,slow=47						
	17nm,0.3s						
PPI	Padang Panjang	2.52	114	P	Pn	07 58 36.4	-0.1
KCSI	Kotacane, Aceh	2.96	354	P	Pn	07 58 43.6	+1.0
TSI	Tuntungan	2.96	9	P	Pb	07 58 45.5	-4.1
BKNI	Bangkinang	2.96	94		Pb	07 58 45.8	-3.8
BKNI	Bangkinang	2.96	94	P	Pb	07 58 50.0	+0.4
PPSI	Pulau Pagai	3.82	150	P	Pn	07 58 53.8	-0.6
KRJI	Kerinci	4.28	128	P	Pn	07 58 59.9	-1.0
IPM	Ipoh	4.88	37	Pn	Pn	07 59 10.6	+1.6
IPM	Ipoh	4.88	37	P	Pn	07 59 13.4	+4.4
KULM	Kulim	5.35	29	Pn	Pn	07 59 17.9	+2.4
MNAI	Manna	6.90	135	Pn	Pn	07 59 39.1	+2.4
MNAI	Manna	6.90	135	P	Pn	07 59 36.0	-0.7
	0.9nm121nm,1.8s						
MNAI	Manna	6.90	135	P	Pn	07 59 44.4	+7.7
MDSI	Maura Dua	7.89	130	P	Pn	07 59 49.8	-0.5
CMAR	Chiang Mai Arr	17.81	3	P	P	08 02 03.0	-0.9
	1.3nm,0.3s,baz=190,slow=10,SNR=5.7						
	1.9nm,0.4s						
PALK	Pallekele	18.57	291	LR	LR	08 08 00.4	
	comp=Z,43nm,19.2s,baz=202,slow=33						
SHL	Shillong	25.57	347	P	P	08 03 25.0	+0.6
SHL				IAmb	IAmb	08 03 34.1	
	comp=Z,9.5nm,0.8s						
H08S2	Diego Garcia H	26.79	252	T	T	08 30 59.1	
	baz=73,slow=75,SNR=751						
H08S3	Diego Garcia H	26.80	252	T	T	08 30 54.1	
	baz=73,slow=75,SNR=779						
H08S1	Diego Carcia H	26.81	252	T	T	08 31 00.6	
	baz=73,slow=75,SNR=933						
SIJI	Sorong	33.21	92	LR	LR	08 20 30.6	
	comp=Z,95nm,18.6s,baz=65,slow=41						
XAN	Xi'an	34.82	16	P	P	08 04 46.4	+0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NJ2	Nanjing	36.96	30	*e*P	P	08 05 03.0	-1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JOW	Kunigami	39.04	46	P	P	08 05 21.7	-0.2
WB0	Warramunga Arr	40.92	122	P	P	08 05 36.5	-1.1
WB0				IAmb	IAmb	08 06 01.1	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	40.95	122	P	P	08 05 36.1	-1.8
	comp=Z,0.4nm,0.8s,baz=305,slow=8.6,SNR=2.5						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	40.95	122	P	P	08 05 36.1	-1.8
WB2	Warramunga Arr	40.96	122	P	P	08 05 36.7	-1.3
WR0	Warramunga Arr	41.13	122	P	P	08 05 39.3	-0.1
WR0				IAmb	IAmb	08 05 42.6	
	comp=Z,8.6nm,1.4s						
ASAR	Alice Springs	42.30	127	P	P	08 05 47.3	-1.7
	comp=Z,0.2nm,0.5s,baz=323,slow=6.9,SNR=5.9						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	42.30	127	P	P	08 05 51.6	+2.5
KSAR	Wonju Array Be	45.85	33	P	P	08 06 18.7	+1.5
KSRS	Korea Array	45.88	33	P	P	08 06 17.6	+0.2
	comp=Z,3.7nm,0.7s,baz=221,slow=8.7,SNR=16						
	comp=Z,3.7nm,0.7s						
KS19	Wonju Array Si	45.88	33	P	P	08 06 17.9	+0.4
JHS	Saijyo	47.33	40	P	P	08 06 29.6	+0.7
SONM	Songino Array	47.64	8	P	P	08 06 32.0	+0.8
	comp=Z,1.2nm,0.4s,baz=196,slow=9.1,SNR=11						
SONM				LR	LR	08 27 27.7	
	comp=Z,46nm,20.9s,baz=26,slow=37						
	comp=Z,1.2nm,0.4s						
SONM	Songino Array	47.64	8	IAmb	IAmb	08 06 33.5	
	comp=Z,2.7nm,1.0s						
MK31	Makanchi Array	48.08	345	P	P	08 06 33.9	-0.6
MKAR	Makanchi Array	48.08	345	P	P	08 06 35.0	+0.5
	comp=Z,2.0nm,0.6s,baz=156,slow=7.3,SNR=21						
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	48.08	345	P	P	08 06 34.2	-0.3
STKA	Stephens Creek	52.27	132	P	P	08 07 09.4	+2.9
	comp=Z,1.1nm,0.4s,baz=308,slow=6.1,SNR=6.1						
STKA				LR	LR	08 31 52.5	
	comp=Z,66nm,19.1s,baz=212,slow=39						
KURBB	Kurchatov Arra	52.58	344	P	P	08 07 07.8	-0.6
	comp=Z,1.0nm,0.4s,baz=165,slow=6.7,SNR=11						
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	52.64	345	P	P	08 07 07.8	-1.1
KURK	Kurchatov	52.64	345	IAmb	IAmb	08 07 10.7	
	comp=Z,2.5nm,0.9s						
ZAA0	Zalesovo Array	54.33	350	P	P	08 07 21.0	-0.2
ZAA0				IAmb	IAmb	08 07 22.7	
	comp=Z,4.5nm,0.8s						
ZALV	Zalesovo Beam	54.33	350	P	P	08 07 21.5	+0.3
	comp=Z,4.0nm,0.4s,baz=181,slow=7.3,SNR=15						
	comp=Z,4.0nm,0.4s						
ZALV	Zalesovo Beam	54.33	350	P	P	08 07 21.8	+0.6
KLR	Kul'dur	56.43	26	P	P	08 07 38.3	+1.8
	comp=Z,2.8nm,0.5s,baz=233,slow=6.2,SNR=11						
	comp=Z,2.8nm,0.5s						
BRVK	Borovoye	57.21	340	P	P	08 07 39.5	-2.4
BRVK				IAmb	IAmb	08 07 42.7	
	comp=Z,3.4nm,0.7s						
ABKAR	Akbulak array	58.49	332	P	P	08 07 49.2	-1.7
ABKAR				IAmb	IAmb	08 07 52.6	
	comp=Z,1.5nm,0.8s						
RPZ	Rata Peaks	78.13	135	LR	LR	08 45 43.2	
	comp=Z,171nm,18.6s,baz=316,slow=37						
CRVS	Cervenica-Dubn	80.80	319	*e*P	P	08 10 08.0	-0.5
FINES	FINESS Array B	80.97	332	P	P	08 10 08.3	-0.8
	comp=Z,0.5nm,0.4s,baz=101,slow=6.0,SNR=5.5						
	comp=Z,0.5nm,0.4s						
KECS	Kecovo	81.37	319	*e*P	P	08 10 14.0	+2.4
ARCES	ARCESS Array B	83.43	340	P	P	08 10 22.0	+0.1
	comp=Z,2.0nm,0.8s,baz=94,slow=6.7,SNR=2.2						
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	83.43	340	IAmb	IAmb	08 10 24.5	
	comp=Z,6.8nm,1.2s						
TXAR	Lajitas Array	143.73	33	PKP	PKPdf	08 17 28.6	-2.1
	comp=Z,0.2nm,0.5s,baz=222,slow=0.9,SNR=5.2						

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*INET **23** 08:26:20.1±1.2, 10°.51N×86°.28W, h8^{km}±13^{km}, MW3.3*
*UCR **23** 08:26:21.1±1.5, 10°.56N×86°.32W, h5^{km}, MW4.1*
ISC 23 08:26:20.3±1.9, 10°.55N±0°.06×86°.35W±0°.06, h19^{km}±4^{km}, n28, σ0ˢ51/46, 4C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	0.76	77⇓	*e*P	Pg	08 26 35.5	+0.3
HZTE				*e*S	Sn	08 26 47.2	+0.2
SAJU	San Juanillo,	0.79	127⇓	*e*P	Pg	08 26 36.0	+0.2
GUAI	GUAI	0.87	108	*e*P	Pg	08 26 37.3	0.0
GUAI				*e*S	Sn	08 26 49.1	-0.6
GBS3	Finca Las Img	0.91	75⇓	*e*P	Pb	08 26 37.5	0.0
GBS3				*e*S	Sg	08 26 50.2	+0.2
BUEV	Buena Vista	0.96	75⇑	*i*P	Pb	08 26 38.4	0.0
BUEV				*e*S	Sg	08 26 51.7	0.0
GB1A	Borinquen Arri	0.97	74⇑	*i*P	Pb	08 26 38.6	0.0
GB1A				*e*S	Sg	08 26 52.2	+0.1
GPS2	Hotel Rincn d	1.00	78	*e*P	Pb	08 26 39.1	0.0
GPS2				*e*S	Sg	08 26 52.8	-0.2
LIM1	Limonal	1.09	82	*e*P	Pb	08 26 40.6	0.0
LIM1				*e*S	Sn	08 26 55.3	0.0
GUAB	Guayabo de Bag	1.11	82	*e*P	Pb	08 26 41.1	+0.1
GUAB				*e*S	Sn	08 26 55.9	+0.1
COLC	Colonia	1.13	84	*e*P	Pn	08 26 41.2	0.0
HORNC	Hornillas	1.16	82	*e*P	Pn	08 26 41.5	-0.2
HORNC				*e*S	Sn	08 26 57.1	0.0
CUI	Cuipilapa	1.17	84⇑	*i*P	Pn	08 26 41.8	0.0
CUI				*e*S	Sg	08 26 58.3	-0.1
CONN	Concepcion	1.23	35	*e*P	Pn	08 26 42.3	-0.4
VMAR	Armenia, Volca	1.23	78⇑	*e*P	Pn	08 26 43.1	+0.4
VMAR				*e*S	Sg	08 27 01.3	+0.9
ACAL	Aguas Claras	1.29	86	*e*P	Pb	08 26 44.1	0.0
ACAL				*e*S	Sg	08 27 02.3	0.0
PTEN	Parque Tenorio	1.35	83	*e*P	Pb	08 26 45.0	-0.1
PTEN				*e*S	Sg	08 27 04.6	+0.6
JTS	Las Juntas de	1.40	100	*e*P	Pn	08 26 45.0	+0.1
TISN	Laguna Tiscapa	1.59	3	*e*P	Pn	08 26 47.3	-0.2
CASO	Castillo	1.59	94	*e*P	Pb	08 26 49.1	-0.1
MGAN	Managua	1.59	4	*e*P	Pn	08 26 47.3	-0.3
MGAN				*e*P	Pb	08 26 48.4	-0.8
CEDE	Laguna Cedeo	1.62	92	*e*P	Pb	08 26 49.1	-0.5
FORC	Fortuna	1.65	93	*e*P	Pg	08 26 51.3	-0.9
HUEN		1.79	5	*e*P	Pn	08 26 50.0	-0.2
HUEN				*e*S	Sn	08 27 13.6	+1.1
ACON	Acoyapa	1.82	39	*e*P	Pn	08 26 50.3	-0.4
ACON				*e*S	Sn	08 27 13.1	-0.2
CNGN	Cerro Negro	1.97	350	*e*P	Pn	08 26 51.9	-0.9
CNGN				*e*S	Sn	08 27 19.2	+2.1
BOAB	BOACO BROADBAN	2.00	19	*e*P	Pn	08 26 52.9	-0.3
BOAB				*e*S	Sn	08 27 18.0	+0.2
CRIN	San Cristobal	2.25	342	*e*P	Pn	08 26 56.6	0.0
MATN	Matagalpa	2.40	10	*e*P	Pn	08 26 58.5	-0.3

IDC 23 08:55:10.3±2.6, 53°.52N×86°.89E, h0^{km}, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=23.8km s-min=15.4km az=77.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.30	290	*i*		09 03 10.0	
	baz=105,slow=315,SNR=3.1						
ZALV	Zalesovo Beam	1.30	290	Pg	Pg	08 55 34.4	-0.8
	0.8nm,0.3s,baz=116,slow=12,SNR=7.4						
ZALV				Lg	Lg	08 55 53.4	
	2.0nm,0.3s,baz=112,slow=30,SNR=10						
KURBB	Kurchatov Arra	5.91	244	Pn	Pn	08 56 37.6	-1.4
	baz=63,slow=4.1,SNR=2.2						
KURBB				Lg	Lg	08 58 18.4	
	baz=60,slow=32,SNR=5.5						
	0.4nm,0.6s						
MKAR	Makanchi Array	7.35	205	Pn	Pn	08 57 01.6	+2.7
	0.1nm,0.3s,baz=21,slow=13,SNR=3.3						
	0.2nm,0.3s						

IDC 23 09:04:52.7±2.6, 53°.70N×86°.75E, h0^{km}, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=22.9km s-min=13.7km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.17	283	*i*		09 10 50.0	
	baz=101,slow=314,SNR=1.5						
ZALV	Zalesovo Beam	1.17	283	Pg	Pg	09 05 13.8	-1.4
	0.8nm,0.3s,baz=106,slow=11,SNR=14						
ZALV				Lg	Lg	09 05 31.9	
	1.3nm,0.3s,baz=104,slow=30,SNR=11						
KURBB	Kurchatov Arra	5.92	242	Pn	Pn	09 06 22.5	+0.9
	0.1nm,0.3s,baz=60,slow=14,SNR=4.2						
KURBB				Lg	Lg	09 08 00.6	
	baz=56,slow=32,SNR=4.6						
	0.5nm,0.5s						
MKAR	Makanchi Array	7.47	204	Pn	Pn	09 06 44.3	+1.3
	0.1nm,0.3s,baz=25,slow=14,SNR=5.8						
MKAR				Lg	Lg	09 08 49.9	
	baz=23,slow=27,SNR=1.8						
	0.2nm,0.3s						

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*MDD **23** 09:12:29.4±0.3, 35°.67N×3°.65W, h0^{km}, mb_Lg2.6/17, Error ellipse: s-maj=2.8km s-min=2.1km az=4.0*
*CNRM **23** 09:12:29.1, 35°.67N×3°.56W, h18^{km}, ml2.5*
*INMG **23** 09:12:29.3±1.7, 35°.71N×3°.63W, h0^{km}±6^{km}, ML2.2, Error ellipse: s-maj=4.5km s-min=3.9km az=81.0*
*SFS **23** 09:12:29.0, 35°.66N×3°.64W, ML2.7, ALBORAN SUR*
*LDG **23** 09:12:30.7±0.4, 35°.59N×3°.50W, h20^{km}, Ml3.0/3, Error ellipse: s-maj=10.6km s-min=6.9km az=178.0*
ISC 23 09:12:29.3±1.1, 35°.66N±0°.02×3°.62W±0°.02, h24^{km}±12^{km}, n52, σ1ˢ41/90, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.51	211	P	Pb	09 12 40.0	+0.3
PALE	Palemas	0.51	211	P	Pb	09 12 40.3	+0.6
PALE				S	Sn	09 12 49.1	-0.1
EALB	Alboran	0.55	59	Pg	Pb	09 12 39.8	-0.5
EALB				Sg	Sb	09 12 48.2	+0.4
EALB				*i* Vmb_Lg		09 12 51.1	
WMELI	Melilla	0.64	122	P	Pb	09 12 41.6	-0.3
WMELI				S	Sb	09 12 50.2	-0.2
EMEL	Melilla	0.65	123	Pg	Pb	09 12 41.8	-0.1
EMEL				Sg	Sb	09 12 50.6	0.0
GOG	Mont Gurugu	0.67	130	P	Pb	09 12 42.1	-0.3
GOG	Mont Gurugu	0.67	130	P	Pb	09 12 42.3	0.0
GOG				S	Sb	09 12 51.1	-0.2
PVLZ	Peæn de	0.74	229	P	Pn	09 12 44.3	+0.1
PVLZ				S	Sb	09 12 53.5	+0.3
CHAS	Isla Isabel II	1.08	116	P	Pn	09 12 47.7	-1.2
CHAS				S	Sb	09 13 02.5	-0.4
ELGU	Los Guajares,	1.21	360	Pg	Pn	09 12 50.0	-0.7
ELGU				Sg	Sn	09 13 05.6	-0.8
ELGU				*i* Vmb_Lg		09 13 09.8	
EMAL	Malaga-Limoner	1.28	329	P	Pn	09 12 51.9	+0.2
EMAL				S	Sn	09 13 06.5	-1.6
TAF	Taforalt	1.30	130	P	Pn	09 12 52.1	+0.1
TAF	Taforalt	1.30	130	P	Pn	09 12 51.9	-0.1
TAF				S	Sn	09 13 08.8	+0.1
EMIJ	Mijas	1.30	314	Pg	Pn	09 12 51.5	-0.5
EMIJ				Sg	Sn	09 13 07.5	-1.1
EMIJ				*i* Vmb_Lg		09 13 08.4	
EBER	Berja	1.37	25	Pn	Pn	09 12 52.6	-0.5
EBER				Sn	Sb	09 13 12.0	+0.6
EBER				*i* Vmb_Lg		09 13 12.8	
CEU	Ceuta	1.45	280	P	Pn	09 12 52.5	-1.4
CEU				S	Sn	09 13 07.8	-4.3
ECEU	Ceuta	1.45	280	Sn	Sn	09 13 12.9	+0.6
EGOR	Sierra Gorda,	1.50	345	Pn	Pn	09 12 55.2	+0.4
EGOR				Sn	Sb	09 13 15.3	+0.1
EGOR				*i* Vmb_Lg		09 13 20.2	
EQUE	Quentar	1.55	5	Pn	Pb	09 12 57.0	-0.3
EQUE				Sn	Sn	09 13 15.1	+0.2
JBK	JBK	1.58	147	P	Pn	09 12 56.0	0.0
JBK	JBK	1.58	147	P	Pn	09 12 56.1	+0.1
JBK				S	Sn	09 13 14.7	-1.0
EJIF	Jimena Fronter	1.69	298	Pn	Pn	09 12 58.3	+0.9
EJIF				Sn	Sb	09 13 20.8	+0.1
ENIJ	Nijar	1.74	41	Pn	Pn	09 12 58.9	+0.9
ENIJ				Sn	Sn	09 13 19.1	-0.3
ENIJ				*i* Vmb_Lg		09 13 20.4	
ESPR	Espera	2.17	304	Sn	Sb	09 13 32.8	-1.6
EQES	Quesada	2.18	11	Pn	Pb	09 13 06.8	-1.3
EQES				Sn	Sb	09 13 33.8	-1.0
EQES				*i* Vmb_Lg		09 13 35.8	
TLOR	Lorca, Murcia	2.52	37	Sn	Sb	09 13 42.8	-1.7
EADA	Adamuz	2.62	343	Pn	Pn	09 13 11.9	+1.8
EADA				Sn	Sn	09 13 43.9	+2.7
EADA				*i* Vmb_Lg		09 13 51.6	
ECAB	El Cabril	2.81	330	Pn	Pn	09 13 14.4	+1.6
ECAB				Sn	Sn	09 13 47.4	+1.5
ECAB				*i* Vmb_Lg		09 13 57.3	
EMUR	La Murta	2.90	41	Pn	Pn	09 13 14.5	+0.6
EMUR				*i* Vmb_Lg		09 13 50.4	
TDRA	Tendrara	2.93	153	P	Pn	09 13 15.8	+1.3
TDRA				S	Sn	09 13 47.9	-1.1
MD31	MD31	2.94	199	P	Pn	09 13 16.0	+1.4
MD31				S	Sn	09 13 50.7	+1.5
MDT	Midelt	2.96	196	P	Pn	09 13 15.2	+0.4
MDT				S	Sn	09 13 48.1	-1.4
EMIN	Mina Concepcio	3.23	312	Pn	Pn	09 13 19.3	+0.7
EMIN				Sn	Sn	09 13 56.6	+0.4
EMIN				*i* Vmb_Lg		09 13 58.6	
ETOB	Tobarra	3.41	28	Pn	Pn	09 13 23.3	+2.2
ETOB				Sn	Sn	09 14 03.7	+3.0
EGRO	El Granado	3.63	302	Pn	Pn	09 13 24.6	+0.7
EGRO				Sn	Sn	09 14 06.5	+0.4
EGRO				*i* Vmb_Lg		09 14 08.9	
PBAR	Barrancos	3.72	313	*e*Pn	Pn	09 13 26.1	+0.9
PBAR				*e*Sn	Sn	09 14 08.3	+0.1
PBAR				A	A	09 14 10.1	
	3.6nm,0.3s						
PVAQ	Vaqueiros	3.73	299	*e*Pn	Pn	09 13 26.3	+1.0
PVAQ				*e*Sn	Sn	09 14 08.0	-0.6
PVAQ				A	A	09 14 12.7	
	4.2nm,0.6s						
PVAQ	Vaqueiros	3.73	299	P	Pn	09 13 26.4	+1.0
PAB	San Pablo	3.92	352	Pn	Pn	09 13 29.7	+1.6
PAB				Sn	Sn	09 14 16.3	+2.9
PAB				*i* Vmb_Lg		09 15 41.5	
EBAD	Badajoz	4.11	320	Pn	Pn	09 13 31.6	+1.0
EBAD				Sn	Sn	09 14 18.0	+0.1
EBAD				*i* Vmb_Lg		09 14 20.4	
PBEJ	Beja	4.14	306	*e*Sn	Sn	09 14 19.0	+0.2
MESJ	Messejana	4.29	302	*e*Pn	Pn	09 13 34.5	+1.5
MESJ				*e*Sn	Sn	09 14 21.9	-0.4
MESJ				A	A	09 14 28.4	
	3.2nm,0.5s						
ECHE	Chera	4.45	27	Sn	Sn	09 14 29.9	+3.5
PESTR	Estremoz	4.50	316	*e*Pn	Pn	09 13 37.4	+1.4
PESTR				*e*Sn	Sn	09 14 28.2	+0.6
PESTR				A	A	09 14 31.8	
	2.9nm,0.5s						
PNCL	Nicolau / Gran	4.63	303	*e*Pn	Pn	09 13 38.8	+1.0
PNCL				*e*Sn	Sn	09 14 30.0	-0.8
PNCL				A	A	09 14 37.5	
	2.2nm,0.4s						
EPLA	Plasencia	4.81	337	Pn	Pn	09 13 41.7	+1.4
EPLA				*i* Vmb_Lg		09 15 50.7	
PMRV	Marv??o	4.81	323	*e*Pn	Pn	09 13 41.8	+1.6
PMRV				*e*Sn	Sn	09 14 35.5	+0.3
GUD	Guadarrama	4.99	355	Pn	Pn	09 13 44.5	+1.6
PMTG	Montargil	5.00	314	*e*Pn	Pn	09 13 44.7	+1.8
PMTG				*e*Sn	Sn	09 14 39.7	-0.2
PMTG				A	A	09 15 07.8	
	2.0nm,0.6s						
ETSF	Etsaut	7.61	17	*e*Pn	Pn	09 14 17.8	-0.9
ETSF				*e*Sn	Sn	09 15 39.6	-4.6
	0.7nm,0.4s						
EPF	Esparros	7.97	21	*e*Pn	Pn	09 14 23.2	-0.5
EPF				*e*Sn	Sn	09 15 48.4	-4.7
	2.3nm,0.4s						
MTLF	Montolieu	8.90	29	*e*Pn	Pn	09 14 35.3	-1.0

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*IDC **23** 09:18:36.0±1.4, 24°.32S×180°.00E, h503^{km}±13^{km}, mb3.5/11, mbtmp4.3/13, Error ellipse: s-maj=21.1km s-min=13.6km az=136.0*
*NEIC **23** 09:18:35.2±2.8, 24°.3S±0°.1×179°.8W±0°.1, h492^{km}±8^{km}, mb4.2/26, Error ellipse: s-maj=20.6km s-min=15.2km az=134.0*
*NOU **23** 09:18:36.7, 24°.29S×179°.70W, h537^{km}, mb4.2/20, South of Fiji Islands*
ISC 23 09:18:35.6±0.5, 24°.37S±0°.06×179°.95W±0°.08, h500^{km}, n109, σ1ˢ99/120, mb4.2/24, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	5.18	160	S	S	09 21 02.0	-14
GLKZ	Green Lake	5.20	160	P	P	09 20 08.7	+4.5
GLKZ				S	S	09 20 54.5	-22
MSVF	Nonsavu	6.86	344	P	P	09 20 20.9	+0.3
	18nm,0.4s,baz=206,slow=22,SNR=39						
MSVF	Nonsavu	6.86	344	P	P	09 20 21.4	+0.7
MSVF	Nonsavu	6.86	344	P	P	09 20 22.6	+2.0
DGTI	Dogotuki	8.04	358	P	P	09 20 35.2	+2.7
MARNC	Mare, Loyalty	11.45	282	P	P	09 21 09.8	+1.5
MARNC	Mare, Loyalty	11.45	282	P	P	09 21 10.5	+2.2
PINNC	Pines Island,	11.70	276	P	P	09 21 14.4	+3.4
OUZ	Omahuta	12.17	206	P	P	09 21 19.5	+3.7
OUENC	Ouen Island, N	12.29	276		P	09 21 19.8	+2.6
OUENC	Ouen Island, N	12.29	276	P	P	09 21 21.3	+4.1
YATNC	Mamie plateau,	12.32	278	P	P	09 21 21.3	+3.7
LIFNC	LIFOU	12.36	284	P	P	09 21 18.2	+0.1
LIFNC	LIFOU	12.36	284	P	P	09 21 20.2	+2.2
DZM	Mont Dzumac	12.72	278	P	P	09 21 24.5	+2.6
	26nm,0.7s,baz=90,slow=17,SNR=17						
DZM	Mont Dzumac	12.72	278		P	09 21 24.7	+2.7
DZM	Mont Dzumac	12.72	278	P	P	09 21 25.1	+3.2
AFI	Afiamalu	12.95	38	P	P	09 21 19.9	-4.5
	7.0nm,0.7s,baz=273,slow=20,SNR=1.7						
AFI				S	S	09 23 33.3	-10
	12nm,0.6s,baz=65,slow=22,SNR=2.0						
URZ	Urewera	14.07	190	P	P	09 21 37.7	+1.9
	6.0nm,0.5s,baz=271,slow=1.2,SNR=14						
URZ	Urewera	14.07	190	P	P	09 21 37.5	+1.7
URZ				S	S	09 24 02.4	-2.1
URZ	Urewera	14.07	190	P	P	09 21 38.2	+2.4
KNZ	Kokohu	14.74	187	P	P	09 21 33.4	-9.5
BKZ	Black Stump Fm	15.05	191	P	P	09 21 47.8	+1.6
BKZ				S	S	09 24 18.7	-4.7
BKZ	Black Stump Fm	15.05	191	P	P	09 21 48.2	+2.0
TWVZ	Taurewa	15.17	194	P	P	09 21 50.1	+2.7
OTVZ	Oturere	15.21	193	P	P	09 21 49.8	+1.8
SNVZ	South Ngauruho	15.23	193	P	P	09 21 50.3	+2.0
MCHZ	McNeill Hill	15.29	190	P	P	09 21 51.4	+2.8
FWVZ	Far West T-bar	15.32	193	P	P	09 21 50.8	+1.7
WNVZ	Wahianoa	15.38	193	P	P	09 21 50.3	+0.5
MOVZ	Moawhango	15.43	193	P	P	09 21 51.9	+1.8
BHHZ	Black Hill Sta	15.45	192	P	P	09 21 50.1	-0.2
KRHZ	Kereru	15.54	191	P	P	09 21 52.1	+0.9
KRHZ				S	S	09 24 27.0	-5.7
KAHZ	Kahuranaki	15.61	189	P	P	09 21 52.3	+0.3
KAHZ				S	S	09 24 34.3	+0.3
PNHZ	Pukenui	15.83	191	P	P	09 21 55.0	+0.7
PNHZ				S	S	09 24 33.9	-4.4
PXZ	Pawanui	15.84	189	P	P	09 21 56.1	+1.8
PXZ				S	S	09 24 34.1	-4.2
WPHZ	Waipukurau	15.94	190	P	P	09 21 51.3	-4.1
WPHZ				S	S	09 24 39.1	-1.1
BFZ	Birch Farm	16.57	190	P	P	09 22 02.2	+0.2
MRZ	Mangatainoka R	16.67	192	P	P	09 22 02.2	-0.8
MRZ				S	S	09 24 48.7	-4.7
TIWZ	Tintock	16.73	191	P	P	09 22 05.5	+1.9
TIWZ				S	S	09 24 52.4	-1.9
KIW	Kapiti Island	17.00	193	P	P	09 22 06.1	-0.3
TMWZ	Te Maipa	17.05	191	P	P	09 22 06.9	0.0
TMWZ				S	S	09 24 56.4	-3.4
MTW	Mount Morrison	17.17	192	P	P	09 22 07.8	-0.2
CAW	Cannon Point	17.20	193	P	P	09 22 07.0	-1.3
CAW				S	S	09 25 01.0	-1.4
MSWZ	Moikau Station	17.46	192	P	P	09 22 09.0	-1.8
TCW	Tory Channel	17.47	195	P	P	09 22 10.9	0.0
QRZ	Quartz Range	17.58	199	P	P	09 22 12.4	+0.5
QRZ	Quartz Range	17.58	199	P	P	09 22 12.7	+0.8
BSWZ	Blackbirch Sta	18.04	195	P	P	09 22 15.5	-0.7
KHZ	Kahutara	18.79	195	P	P	09 22 23.3	+0.4
RPZ	Rata Peaks	20.66	199	P	P	09 22 39.7	-0.3
	8.3nm,0.8s,baz=89,slow=22,SNR=1.4						
	8.3nm,0.8s						
ARMA	Armidale	25.90	250	P	P	09 23 29.2	+2.0
ARMA				IAmb	IAmb	09 23 44.9	
	comp=Z,15nm,1.4s						

EIDS	Eidsvold	26.28	262	P	P	09 23 30.8	+0.3
EIDS				IAmb	IAmb	09 23 31.8	
	comp=Z,4.4nm,0.8s						
CMSA	Cobar Meteorol	31.09	249	P	P	09 24 13.1	+0.8
CTA	Charters Tower	31.53	271	P	P	09 24 17.3	+1.1
CTAO	Charters Tower	31.53	271	P	P	09 24 17.4	+1.1
CTAO	Charters Tower	31.53	271	P	P	09 24 17.2	+0.9
STKA	Stephens Creek	34.59	249	P	P	09 24 42.5	+0.4
	comp=Z,2.8nm,0.7s,baz=97,slow=9.4,SNR=7.6						
	comp=Z,2.8nm,0.7s						
LCRK	Leigh Creek	37.47	251	P	P	09 25 06.5	+0.5
BBOO	Buckleboo	39.30	247	P	P	09 25 20.6	-0.3
BBOO	Buckleboo	39.30	247	P	P	09 25 20.7	-0.3
OOD	Oodnadatta	39.83	255	P	P	09 25 26.4	+1.2
AS31	Alice Springs	42.01	261	P	P	09 25 42.8	+0.1
ASAR	Alice Springs	42.01	261	P	P	09 25 42.6	0.0
	comp=Z,1.4nm,0.6s,baz=94,slow=6.7,SNR=33						
ASAR				ScP	ScP	09 30 28.3	-0.8
	comp=Z,0.9nm,0.9s,baz=102,slow=4.7,SNR=4.9						
ASAR				S	S	09 31 19.3	-5.9
	comp=Z,0.2nm,0.7s,baz=100,slow=14,SNR=2.4						
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	42.01	261	P	P	09 25 42.5	-0.2
WR0	Warramunga Arr	42.23	267	P	P	09 25 43.6	-0.9
WR0				IAmb	IAmb	09 25 48.8	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	42.41	267	P	P	09 25 45.4	-0.5
WB2				IAmb	IAmb	09 25 50.0	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	42.41	267	P	P	09 25 45.5	-0.4
WRAB				IAmb	IAmb	09 25 45.7	
	comp=Z,3.4nm,0.4s						
WB0	Warramunga Arr	42.42	267	P	P	09 25 45.5	-0.5
WB0				IAmb	IAmb	09 25 46.0	
	comp=Z,5.2nm,0.7s						
WRA	Warramunga Arr	42.42	267	P	P	09 25 45.4	-0.6
	comp=Z,3.0nm,0.4s,baz=97,slow=8.3,SNR=114						
WRA				ScP	ScP	09 30 31.6	+0.9
	comp=Z,2.4nm,0.9s,baz=103,slow=4.3,SNR=9.4						
WRA				S	S	09 31 25.8	-5.3
	comp=Z,1.2nm,1.1s,baz=106,slow=15,SNR=4.0						
	comp=Z,3.0nm,0.4s						
WRA	Warramunga Arr	42.42	267	P	P	09 25 44.6	-1.4
FORT	Forrest	46.19	250	P	P	09 26 14.6	-0.4
KNRA	Kununurra	48.73	270	P	P	09 26 34.1	-0.2
KNRA				IAmb	IAmb	09 26 47.8	
	comp=Z,9.3nm,1.1s						
QSPA	South Pole Qui	65.71	180	P	P	09 28 31.4	+1.3
QSPA				IAmb	IAmb	09 28 33.8	
	comp=Z,5.5nm,1.0s						
MAW	Mawson	77.33	200	P	P	09 29 37.9	+0.2
	comp=Z,1.9nm,0.5s,baz=98,slow=8.8,SNR=7.6						
	comp=Z,1.9nm,0.5s						
MAW	Mawson	77.33	200	IAmb	IAmb	09 29 41.0	
	comp=Z,0.8nm,0.9s						
CMB	Columbia Colle	83.51	43	P	P	09 30 10.2	-0.3
TROLL	Troll, Antarti	83.86	181	P	P	09 30 12.2	+0.3
SNAA	Sanae	84.20	179	P	P	09 30 13.1	-0.4
VNA3	Neumayer Olymp	84.40	177	P	P	09 30 14.5	+0.1
BEKR	Beckworth	84.65	42	P	P	09 30 16.0	-0.3
VNA2	Neumayer--Watz	84.82	178	P	P	09 30 15.8	-0.6
NVAR	Mina Array Bea	85.06	44	P	P	09 30 18.5	+0.2
	comp=Z,1.4nm,0.9s,baz=222,slow=8.5,SNR=11						
	comp=Z,1.4nm,0.9s						
TPH	Tonopah	85.54	45	P	P	09 30 19.8	-0.9
PINE	Pine Mountain	86.73	38	P	P	09 30 25.9	-0.3
PINE				IAmb	IAmb	09 30 28.7	
	comp=Z,12nm,1.2s						
TUC	Tucson	86.77	52	P	P	09 30 26.9	+0.4
TUC				IAmb	IAmb	09 30 29.5	
	comp=Z,4.8nm,0.8s						
I07A	Izee	87.73	39	P	P	09 30 30.2	-0.6
I07A				IAmb	IAmb	09 30 33.0	
	comp=Z,7.8nm,1.0s						
SEY	Seymchan	89.74	348	P	P	09 30 38.8	-0.7
	comp=Z,2.4nm,0.7s,baz=355,slow=1.6,SNR=12						
	comp=Z,2.4nm,0.7s						
MNTX	Cornudas Mount	90.44	55	P	P	09 30 44.3	+0.8
MNTX				IAmb	IAmb	09 30 45.3	
	comp=Z,1.7nm,0.8s						
HVU	Hansel Valley	90.45	44	P	P	09 30 43.6	+0.1
HVU				IAmb	IAmb	09 30 45.3	
	comp=Z,3.1nm,0.7s						
TX31	Lajitas Ar. Si	90.64	58	P	P	09 30 43.8	-0.8
TX32	Lajitas Array	90.64	58	P	P	09 30 44.5	-0.2
TX32				IAmb	IAmb	09 30 47.0	
	comp=Z,2.5nm,0.8s						
TXAR	Lajitas Array	90.64	58	P	P	09 30 46.2	+1.6
	comp=Z,2.2nm,0.7s,baz=213,slow=6.6,SNR=33						
	comp=Z,2.2nm,0.7s						
TXAR	Lajitas Array	90.64	58	P	P	09 30 44.0	-0.7
ANMO	Albuquerque	91.21	52	P	P	09 30 46.8	-0.5
	comp=Z,1.2nm,0.8s,baz=175,slow=5.1,SNR=6.4						
	comp=Z,1.2nm,0.8s						
ILAR	Eielson Array	92.48	14	P	P	09 30 50.9	-1.2
	comp=Z,0.6nm,0.8s,baz=223,slow=4.8,SNR=7.8						
	comp=Z,0.6nm,0.8s						
PDAR	Pinedale Array	93.00	44	P	P	09 30 55.5	+0.2
	comp=Z,0.7nm,0.8s,baz=207,slow=3.0,SNR=6.1						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	112.50	313	PKiKP	PKiKP	09 36 12.4	-2.0
	comp=Z,0.3nm,0.5s,baz=97,slow=1.9,SNR=2.9						
ARCES	ARCESS Array B	132.35	348	PKP	PKPdf	09 36 50.9	-0.9
	comp=Z,1.2nm,0.6s,baz=60,slow=2.9,SNR=8.8						
FINES	FINESS Array B	138.91	341	PKhKP	PKPpre	09 36 54.6	
	comp=Z,0.6nm,0.5s,baz=64,slow=4.4,SNR=6.5						
FINES				PKP	PKPdf	09 37 04.3	+0.3
	comp=Z,1.1nm,0.5s,baz=114,slow=2.3,SNR=5.0						
FINES				SKP		09 39 50.1	
	comp=Z,0.5nm,0.5s,baz=355,slow=2.1,SNR=4.2						
PABE	Paberze	144.27	337		PKPbc	09 37 13.2	-0.2
AKASG	Malin Array Be	145.39	327	PKPbc	PKPdf	09 37 15.9	+0.1
	comp=Z,2.5nm,0.5s,baz=44,slow=4.3,SNR=13						
AKBB	Malin Array Si	145.39	327		PKPdf	09 37 16.2	+0.3
BR131	Keskin Array S	147.90	307		PKPbc	09 37 23.6	-0.8
BRTR	Keskin Array B	147.90	307	PKPbc	PKPbc	09 37 23.9	-0.5
	comp=Z,1.4nm,0.7s,baz=138,slow=4.7,SNR=7.8						
CLL	Collm	151.32	343	⇓*i*PKPbc	PKPbc	09 37 32.0	0.0
	comp=Z,11nm,0.7s						
GERES	GERESS Array B	153.31	340	PKPbc	PKPbc	09 37 36.1	-0.5
	comp=Z,0.2nm,0.3s,baz=349,slow=2.7,SNR=4.2						
TORD	Torodi Ar. Bea	168.73	188	PKPab	PKPab	09 38 58.6	-0.4
	comp=Z,0.6nm,0.6s,baz=220,slow=3.5,SNR=5.0						

IDC 23 09:33:17.5±5.9**, 18°.45S**×**178°.66W, h0km, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=379.5km s-min=66.5km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.30	260	P	P	09 41 30.5	+1.0
	0.2nm,0.4s,baz=91,slow=8.1,SNR=15						
	0.2nm,0.4s						
ASAR	Alice Springs	44.41	255	P	P	09 41 28.6	-1.8
	0.2nm,0.6s,baz=94,slow=6.9,SNR=4.3						
	0.2nm,0.6s						
FINES	FINESS Array B	133.64	344	PKP	PKPdf	09 52 35.3	-0.3
	0.6nm,0.4s,baz=36,slow=3.6,SNR=5.5						

IDC 23 09:44:07.1±560.0**, 56°.80N**×**40°.94E, h0km, Error ellipse: s-maj=171.0km s-min=45.6km az=92.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.05	269	*i*		09 57 56.1	
	0.2nm,0.9s,baz=86,slow=324,SNR=1.7						
I37NO	I37NO	15.82	330	*i*		11 21 00.0	
	baz=130,slow=320,SNR=0.5						
I26DE	FREYUNG INFRAS	18.18	256	*i*		11 34 20.0	
	baz=54,slow=325,SNR=0.7						

DDA ***23*** *10:00:19.8±0.0, 37°.93N×26°.72E, h7km±3km, ML2.2*

ISK ***23*** *10:00:19.3, 37°.92N×26°.70E, h15km, ML2.5/5*

ISC 23 10:00:19.3±1.1**, 37°.93N**±0°.03×**26°.75E**±0°.04**, h16km**±9km**, n14,** σ1ˢ.02/24**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.16	40	P	Pb	10 00 23.9	0.0
DGB				S	Sb	10 00 26.6	-0.3
ZEYE	Izmir, Urla-Ze	0.37	327	P	Pb	10 00 27.0	-0.4
ZEYE				S	Sg	10 00 32.0	0.0
ZEYE				*i* AML	AML	10 00 33.0	
	comp=N,159nm,1.1s						
GCAM	G?zelcaml?	0.44	121	P	Pb	10 00 29.2	+0.5
GCAM				S	Sb	10 00 36.0	+0.9
URLA	Izmir	0.45	344	P	Pg	10 00 28.2	-0.1
URLA				S	Sb	10 00 34.5	-0.8
BLCB	Balcova	0.51	27	PG	Pb	10 00 30.1	+0.3
DDIM	Aydin, Didim	0.61	141	P	Pn	10 00 32.5	-0.7
DDIM				S	Sn	10 00 41.5	-1.2
DDIM				*i* AML	AML	10 00 57.0	
	comp=E,161nm,1.8s						
DDIM				*i* AML	AML	10 00 59.0	
	comp=N,181nm,2.3s						
CHOS	Chios island	0.71	310	PG	Pg	10 00 33.5	+0.2
CHOS				SG	Sg	10 00 42.9	+0.1
FOCM	Foa	0.78	359	PG	Pn	10 00 35.7	+0.1
AYDB	Zeytinkoy-Aydi	0.90	89	PG	Pn	10 00 38.0	+0.6
AYDN	Tasoluk	0.93	106	P	Pb	10 00 33.7	-3.4
AYDN				S	Sn	10 00 51.1	+0.3
AYDN				*i* AML	AML	10 00 55.0	
	comp=N,48nm,0.2s						
AYDN				*i* AML	AML	10 00 55.0	
	comp=E,44nm,0.1s						
BODT	Bodrum	0.97	153	PG	Pg	10 00 38.7	+0.5
BODT				SG	Sn	10 00 52.8	+1.0
BDRM	Kayabasi	1.02	147	P	Pg	10 00 39.7	+0.5
BDRM				S	Sn	10 00 54.5	+1.5
BDRM				*i* AML	AML	10 00 56.0	
	comp=E,48nm,0.3s						
BDRM				*i* AML	AML	10 01 24.0	
	comp=N,47nm,1.6s						
ZEDA	zmir-Bergama	1.06	14	P	Pn	10 00 39.4	-0.1
ZEDA				S	Sg	10 00 54.7	+0.8
APE	Apeiranthos	1.30	229	PN	Pn	10 00 42.9	+0.1

IDC ***23*** *10:02:57.5±1.7, 36°.84N×137°.84E, h0km, mb3.3/2, mbtmp3.3/3, ML2.9/1, MS2.7/1, Error ellipse: s-maj=16.6km s-min=10.9km az=24.0*

JMA ***23*** *10:03:00.0±0.1, 36°.8N±0°.2×137°.9E±0°.3, h3km±1km, MV3.3/20, NORTHERN NAGANO PREF*

JMA Felt II J1 at NORTHERN NAGANO PREF .

ISC 23 10:02:58.6±0.9**, 36°.86N**±0°.07×**137°.89E**±0°.06**, h10km, n10,** σ**0ˢ.39**/13**, 4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	0.41	141	P	Pg	10 03 06.8	+0.2
MAT				S	Sg	10 03 11.6	-0.4
MJAR	Matsushiro Arr	0.41	141	Pg	Pg	10 03 06.6	0.0
	18nm,0.3s,baz=315,slow=17,SNR=237						
MJAR				Lg	Lg	10 03 12.2	
	58nm,0.3s,baz=353,slow=29,SNR=66						
MJAR				LR	LR	10 03 34.9	
	comp=Z,197nm,21.7s,baz=184,slow=90						
JNG	Nsakai	0.48	159	P	Pg	10 03 08.3	+0.2
JNG				S	Sg	10 03 14.1	-0.3
JGK	Kuni	0.67	116	⇓P	Pb	10 03 12.3	-0.2
JGK				⇓S	Sg	10 03 21.0	+0.5
JSZ	Suzu	0.72	325	⇓P	Pn	10 03 14.8	0.0
JSZ				⇓S	Sn	10 03 25.9	-0.1
JGN	Niukaw	0.78	216	P	Pg	10 03 14.2	+0.5
KSRS	Korea Array	7.98	277	Pn	Pn	10 04 53.9	-0.7
	0.1nm,0.3s,baz=86,slow=14,SNR=1.9						
	0.5nm,0.3s						
ASAJ	Asahikawa	8.09	25	LR	LR	10 07 57.2	
	comp=Z,46nm,19.9s,baz=172,slow=37						
WRA	Warramunga Arr	56.59	184	P	P	10 12 41.8	+0.2
	0.2nm,0.4s,baz=359,slow=7.8,SNR=7.3						
	0.2nm,0.4s						
ASAR	Alice Springs	60.32	184	P	P	10 13 08.0	+0.5
	0.3nm,0.9s,baz=12,slow=4.7,SNR=2.2						
	0.3nm,0.9s						

IDC ***23*** *10:08:23.3±0.8, 4°.82N×62°.26E, h0km, mb4.0/8, mbtmp4.0/8, MS3.3/19, Error ellipse: s-maj=27.4km s-min=22.1km az=151.0*

ISC 23 10:08:24.7±0.9**, 4°.8N**±0°.2×**62°.3E**±0°.2**, h10km, n25,** σ**0ˢ.85**/9**, mb4.0**/8**, MS3.3**/17**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	18.50	81	LR	LR	10 18 06.2	
	comp=Z,87nm,18.8s,baz=18,slow=32						
WSAR	Wadi Sarin	18.67	349	LR	LR	10 18 13.5	
	comp=Z,126nm,19.7s,baz=174,slow=32						
ATD	Arta Tunnel	20.35	290	LR	LR	10 19 30.3	
	comp=Z,40nm,20.4s,baz=51,slow=33						
KMBO	Kilima Mbogo	25.68	257	P	P	10 13 55.5	+0.1
	1.2nm,0.3s,baz=48,slow=15,SNR=2.1						
KMBO				LR	LR	10 24 18.3	
	comp=Z,53nm,18.2s,baz=89,slow=37						
	1.2nm,0.3s						
MBAR	Mbarara	31.95	261	LR	LR	10 27 12.1	
	comp=Z,40nm,18.5s,baz=136,slow=35						
CMAR	Chiang Mai Arr	38.30	66	LR	LR	10 29 56.7	
	comp=Z,26nm,20.8s,baz=205,slow=34						
LSZ	Lusaka	39.21	239	LR	LR	10 28 23.6	
	comp=Z,48nm,21.7s,baz=104,slow=31						
MKAR	Makanchi Array	45.28	19	P	P	10 16 42.1	-0.5
	1.4nm,0.9s,baz=193,slow=8.7,SNR=7.5						
MKAR				LR	LR	10 37 22.4	
	comp=Z,21nm,18.6s,baz=214,slow=38						
	1.4nm,0.9s						
LBTB	Lobatse	46.35	228	LR	LR	10 32 56.8	
	comp=Z,69nm,21.6s,baz=72,slow=32						
BOSA	Boshof	48.69	225	P	P	10 17 08.8	-0.9
	1.5nm,0.6s,baz=118,slow=11,SNR=3.6						
	1.5nm,0.6s						
ARU	Arti	51.58	357	LR	LR	10 40 04.8	
	comp=Z,32nm,19.4s,baz=167,slow=37						
ZALV	Zalesovo Beam	52.34	17	P	P	10 17 36.1	-0.5
	1.1nm,0.6s,baz=235,slow=5.2,SNR=4.2						
ZALV				LR	LR	10 40 12.8	
	comp=Z,34nm,20.4s,baz=179,slow=36						
	1.1nm,0.6s						
AKASG	Malin Array Be	53.47	334	LR	LR	10 45 15.1	
	comp=Z,22nm,18.3s,baz=12,slow=41						
SONM	Songino Array	57.09	34	P	P	10 18 11.6	+0.2
	1.0nm,0.7s,baz=230,slow=6.4,SNR=5.8						
	1.0nm,0.7s						
TORD	Torodi Ar. Bea	60.28	282	P	P	10 18 35.3	+1.2
	0.4nm,0.3s,baz=79,slow=7.5,SNR=3.1						
	0.4nm,0.3s						
FINES	FINESS Array B	62.66	341	LR	LR	10 45 53.2	
	comp=Z,37nm,18.6s,baz=93,slow=36						
NRIK	Noril'sk	66.58	10	LR	LR	10 50 14.0	
	comp=Z,42nm,18.3s,baz=192,slow=38						
DBIC	Dimbokro	66.77	275	LR	LR	10 48 13.5	
	comp=Z,21nm,18.3s,baz=138,slow=36						
NOA	NORSAR Array B	67.83	336	LR	LR	10 50 22.1	
	comp=Z,13nm,20.7s,baz=95,slow=37						
KSRS	Korea Array	67.84	52	LR	LR	10 50 53.6	
	comp=Z,19nm,19.7s,baz=215,slow=38						
WRA	Warramunga Arr	74.90	112	P	P	10 20 07.3	+0.8
	2.2nm,0.8s,baz=291,slow=4.9,SNR=19						
	2.2nm,0.8s						
ASAR	Alice Springs	75.24	116	P	P	10 20 08.6	+0.3
	1.0nm,0.8s,baz=289,slow=5.5,SNR=11						
	1.0nm,0.8s						
JMIC	Jan Mayen	79.28	342	LR	LR	10 57 17.5	
	comp=Z,19nm,18.6s,baz=225,slow=37						
PETK	Petropavlovsk-	89.46	37	LR	LR	11 01 46.6	
	comp=Z,46nm,20.7s,baz=221,slow=36						
TXAR	Lajitas Array	143.48	339	PKP	PKPdf	10 27 59.6	-0.9
	0.1nm,0.6s,baz=25,slow=2.4,SNR=1.6						

IDC 23 10:22:00.3±679.0**, 56°.00N**×**38°.71E, h0km, Error ellipse: s-maj=235.2km s-min=24.3km az=133.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	1.10	312	*i*		10 29 05.0	
	0.4nm,1.2s,baz=128,slow=328,SNR=0.9						
I37NO	I37NO	15.93	333	*i*		12 00 20.0	
	baz=138,slow=324,SNR=1.2						
I26DE	FREYUNG INFRAS	16.77	255	*i*		12 02 00.0	
	baz=58,slow=327,SNR=0.7						

RSNC 23 10:31:56.2±0.9**, 3°.66N**×**76°.12W, h159km**±4km**, ML3.0, Mw3.6, 1C-9D, Fault plane solution: NP1:**φs118.00000°, δ74.00000°, λ133.00000°.**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.39	325	⇑*e*P	Pn	10 32 17.1	-1.3
YOTC				*e*S	Sn	10 32 33.2	-2.1
YOTC				*i*		10 32 34.9	
	comp=Z,211nm,0.1s						
MARP	Paez Belalcaza	0.83	168	*e*P	Pn	10 32 21.0	+0.1
MARP				*e*S	Sn	10 32 39.3	-0.6
MARP				*i*		10 32 40.5	
	comp=Z,52nm,0.3s						
ORTC	Ortega, Tolima	0.91	74	⇓*i*P	Pn	10 32 20.9	-0.3
ORTC				*e*S	Sn	10 32 39.8	-0.5
ORTC				*i*		10 32 42.1	
	comp=Z,205nm,0.4s						
ANIL	Santa Ana	1.09	41	⇓*e*P	Pn	10 32 22.7	-0.3
ANIL				*e*S	Sn	10 32 43.5	0.0
PRAC	Prado	1.23	87	⇓*e*P	Pn	10 32 24.0	0.0
PRAC				*e*S	Sn	10 32 44.9	-0.3
PRAC				*i*		10 32 48.4	
	comp=Z,67nm,0.5s						
PLMC	San Jos del P	1.25	353	⇓*e*P	Pn	10 32 23.3	-0.9
PLMC				*e*S	Sn	10 32 44.9	-0.8
MALC	Bahia Malaga	1.26	286	*e*P	Pn	10 32 24.2	0.0
MALC				*e*S	Sn	10 32 45.6	0.0
MALC				*i*		10 32 51.0	
	comp=Z,189nm,0.3s						
PCON	Cinco Dias	1.35	192	*e*P	Pn	10 32 25.7	+0.1
PCON				*e*S	Sn	10 32 48.4	+0.2
PCON				*i*		10 32 52.6	
	comp=Z,153nm,0.7s						
SOTA	Rioblanco	1.59	198	*e*P	Pn	10 32 27.8	-0.2
SOTA				*e*S	Sn	10 32 51.3	-1.1
SOTA				*i*		10 32 55.5	
	comp=Z,266nm,0.5s						
GARC	Garzon, Huila	1.59	157	⇓*i*P	Pn	10 32 27.0	-0.8
GARC				*e*S	Sn	10 32 51.0	-0.9
GARC				*i*		10 32 52.4	
	comp=Z,58nm,0.3s						
PIZC	Pizarro, Choco	1.79	316	*e*P	Pn	10 32 29.6	0.0
PIZC				*e*S	Sn	10 32 54.6	-0.7
PIZC				*i*		10 32 58.8	
	comp=Z,170nm,0.3s						
FLOC	Florencia	2.12	167	⇓*i*P	Pn	10 32 32.7	-0.6
FLOC				*e*S	Sn	10 33 00.9	-1.1
FLOC				*i*		10 33 03.4	
	comp=Z,78nm,0.9s						
CBOC	Ciudad Bolivar	2.19	3	*e*P	Pn	10 32 33.7	-0.6
CBOC				*e*S	Sn	10 33 03.0	-0.9
CBOC				*i*		10 33 10.4	
	comp=Z,50nm,0.4s						
CRUC	La Cruz	2.24	202	*e*P	Pn	10 32 34.2	-0.9
CRUC				*e*S	Sn	10 33 02.4	-2.6
NORC	Norcasia	2.27	33	⇓*i*P	Pn	10 32 35.0	-0.1
NORC				*e*S	Sn	10 33 05.1	0.0
CHIC	Chingaza	2.57	68	*e*P	Pn	10 32 40.3	+1.2
CHIC				*e*S	Sn	10 33 13.6	+1.5
CHIC				*i*		10 33 18.4	
	comp=Z,22nm,0.6s						
HELC	Santa Helena	2.58	13	*e*P	Pn	10 32 38.7	-0.5
HELC				*e*S	Sn	10 33 12.1	-0.3
HELC				*i*		10 33 15.8	
	comp=Z,23nm,0.4s						
GCUF	Volcan Galeras	2.71	207	*e*P	Pn	10 32 41.0	+0.1
GCUF				*e*S	Sn	10 33 12.8	-2.5
GCUF				*i*		10 33 19.5	
	comp=Z,92nm,0.4s						
SPBC	San Pablo de B	2.84	46	*e*P	Pn	10 32 42.2	+0.1
SPBC				*e*S	Sn	10 33 17.2	-0.5
SOLC	Bahia Solano	2.85	333	⇓*e*P	Pn	10 32 41.4	-0.8
SOLC				*e*S	Sn	10 33 16.0	-1.8
SOLC				*i*		10 33 19.1	
	comp=Z,19nm,0.2s						
PTBC	PUERTO BERRIO,	3.31	30	*e*P	Pn	10 32 47.1	-0.8
PTBC				*e*S	Sn	10 33 27.4	-0.6
PTBC				*i*		10 33 30.2	
	comp=Z,14nm,0.3s						
DBBC	Dabeiba	3.34	358	*e*P	Pn	10 32 47.5	-0.8
DBBC				*e*S	Sn	10 33 22.9	-5.9
DBBC				*i*		10 33 37.8	
	comp=Z,46nm,0.6s						
ZARC	Zaragoza, Cauc	4.01	18	⇓*e*P	Pn	10 32 56.0	-0.9
ZARC				*e*S	Sn	10 33 42.7	-1.5
ZARC				*i*		10 33 43.9	
	comp=Z,25nm,0.3s						
UREC	San Jos de Ur	4.11	8	*e*P	Pn	10 32 58.0	-0.2
UREC				*e*S	Sn	10 33 44.3	-2.1
UREC				*i*		10 33 47.7	
	comp=Z,10nm,0.4s						
BARC	Barichara	4.13	45	*e*P	Pn	10 32 59.1	+0.4
BARC				*e*S	Sn	10 33 44.8	-2.5

TEH ***23*** *10:32:21.6, 39°.47N×52°.06E, h10km, ML3.4*

AZER ***23*** *10:32:26.6±0.1, 39°.23N×51°.81E, h57km±38km, Error ellipse: s-maj=4.9km s-min=2.4km az=262.0*

ISC 23 10:32:20.9±1.0**, 39°.46N**±0°.05×**52°.06E**±0°.05**, h10km, n33,** σ**2ˢ.45**/49**, 2C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	Nardaran	1.94	306	Sn	Sg	10 33 24.5	+1.1
ASTR	Astara	2.70	252	Pn	Pn	10 33 05.7	+1.4
ASTR				Sn	Sn	10 33 34.8	-2.3
GLBA	Clilabad	2.85	267	Pn	Pn	10 33 08.8	+2.4
GLBA				Sn	Sn	10 33 39.9	-0.9
SIZA	Siyzn	2.91	305	Pn	Pn	10 33 10.1	+2.8
SIZA				Sn	Sb	10 33 46.1	-2.4
PQL	Pirkuli	2.97	298	Sn	Sn	10 33 47.6	+3.6
LRK	Lerik	3.01	255	Pn	Pn	10 33 10.2	+1.5
LRK				Sn	Sn	10 33 43.0	-1.9
YRD	Yardimli	3.01	261	Pn	Pn	10 33 10.4	+1.5
YRD				Sn	Sn	10 33 43.2	-1.9
KDMR	Kurdemir	3.12	288	Sn	Sn	10 33 50.8	+3.5
IPRN	Peran	3.22	176	*e*Pn	Pn	10 33 13.2	+1.5
IML	Ismayilli	3.25	295	Sn	Sn	10 33 52.2	+1.4
IGLO	Ghaloghah	3.27	154	*e*Pn	Pn	10 33 13.1	+0.7
IGLO				*e*		10 34 02.1	
	comp=Z,706nm,0.5s						
QUBA	Quba, Azerbaij	3.31	306	Pn	Pb	10 33 18.3	-1.5
QUBA				Sn	Sn	10 33 54.5	+2.2
XNQ	Khinaliq	3.45	301	Pn	Pn	10 33 17.2	+2.3
XNQ				Sn	Sn	10 33 55.9	+0.1
ZRD	Zardab	3.46	285	Pn	Pn	10 33 17.7	+2.8
ZRD				Sn	Sn	10 33 56.7	+0.8
BLQ	Beylaqan	3.48	276	Pn	Pn	10 33 18.0	+2.8
BLQ				Sn	Sn	10 33 54.0	-2.4
QSAR	Qusar	3.55	307	Pn	Pb	10 33 21.7	-2.1
QSAR				Sn	Sn	10 33 59.8	+1.7
ISHM	Shahmirzad	3.78	165	*e*Pn	Pn	10 33 22.2	+2.8
BRDA	Brd	3.84	284	Pn	Pn	10 33 20.7	+0.7
BRDA				Sn	Sn	10 34 08.2	+3.0
IFIR	Firoozkooh	3.85	172	*e*Pn	Pn	10 33 22.9	+2.4
IFIR				*e*		10 34 09.2	
	comp=Z,620nm,0.4s						
IDMV	Damavand	3.88	180	*e*Pn	Pn	10 33 24.1	+3.3
IDMV				*e*		10 34 11.6	
	comp=Z,389nm,0.6s						
IHRS	Heris	4.08	255	*e*Pn	Pn	10 33 26.3	+2.8
IHRS				*e*		10 34 16.0	
	comp=Z,485nm,0.2s						
SEKA	Sheki	4.10	297	Pn	Pn	10 33 26.6	+2.8
SEKA				Sn	Sn	10 34 12.5	+0.7
IANJ	Anjilo	4.25	159	*e*Pn	Pn	10 33 28.4	+2.5
IANJ				*e*		10 34 26.5	
	comp=Z,273nm,0.6s						
IRAZ	Razeghan	4.39	203	*e*Pn	Pn	10 33 30.4	+2.6
GANJ	Ganja	4.56	287	Pn	Pn	10 33 31.6	+1.6
GANJ				Sn	Sn	10 34 20.8	-2.2
ZKTA	Zakatala	4.68	299	Sn	Sn	10 34 27.1	+1.2
ORD	Ordubad	4.74	265	Sn	Sn	10 34 27.0	-0.6
GDB	GEDABAY	5.00	287	Pn	Pn	10 33 38.3	+2.2
GDB				Sn	Sn	10 34 34.5	+0.5
ISFB	Sefidab	5.10	178	*e*Pn	Pn	10 33 40.8	+3.3
QZX	Qazax, Azerbai	5.36	289	Pn	Pn	10 33 44.6	+3.6
QZX				Sn	Sn	10 34 42.3	-0.4
IEMG	Emamgholi	5.57	109	*e*Pn	Pn	10 33 47.0	+2.9
IEMG				*e*		10 34 49.5	
	comp=E,458nm,0.3s						
AB31	Akbulak array	11.30	27	⇑P	Pn	10 35 01.7	-0.6
	comp=E,1.1nm,0.8s,baz=207,slow=13,SNR=4.0						
AB31				⇓S	Sn	10 36 58.3	-10
	comp=E,0.4nm,0.3s,baz=206,slow=26,SNR=11						

AKTO	Aktyubinsk	11.75	19	⇑P	Pn	10 35 11.3	+2.8
	comp=E,3.8nm,1.2s						
AKTO				⇓S	Sn	10 37 12.9	-6.9
	comp=E,4.6nm,0.8s						

IDC 23 10:37:28.0±462.0, 56°.59N×37°.44E, h0km, Error ellipse: s-maj=197.9km s-min=4.2km az=136.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	0.18	316	*i*		10 38 50.0	
	0.1nm,0.8s,baz=136,slow=323,SNR=0.6						
I37NO	I37NO	15.09	334	*i*		12 10 00.0	
	baz=138,slow=325,SNR=0.9						
I26DE	FREYUNG INFRAS	16.27	252	*i*		12 12 00.0	
	baz=58,slow=322,SNR=0.7						

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*IDC **23** 10:45:39.7±3.6, 15°.62N×105°.00W, h0km, mb3.1/2, mbtmp3.2/3, ML3.1/1, MS3.3/12, Error ellipse: s-maj=159.7km s-min=50.7km az=91.0*

*MEX **23** 10:45:43.3±8.5, 15°.26N×103°.91W, h10km, MD4.1*

ISC 23 10:45:38.1±1.8, **15°.8N**±0°.2×**103°.59W**±0°.10, **h10km, n23, σ0ˢ.88**/8, **MS3.2**/10, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	2.48	5	*e*P	Pb	10 46 23.3	+0.5
ZIIG	Zihuatanejo	2.71	48	*i* P	Pg	10 46 30.6	+0.6
	baz=234,slow=11						
ZIIG				*e*S	Sg	10 47 22.3	+17
CAIG	El Cayaco	3.42	68	*e*P	Pb	10 46 39.1	+0.4
ARIG	Puente Sto Nin	3.96	51	*e*P	Pb	10 46 47.2	-0.8
H06E1	SOCORRO T-PHAS	7.61	294	T	T	10 54 36.8	
	SNR=68						
TXAR	Lajitas Array	13.46	360	Pn	P	10 48 57.7	-1.1
	baz=180,slow=14,SNR=9.4						
TXAR				LR	LR	10 54 12.9	
	comp=Z,85nm,18.7s,baz=180,slow=37						
	0.9nm,0.9s						
ANMO	Albuquerque	19.23	353	LR	LR	10 57 33.3	
	comp=Z,90nm,19.3s,baz=182,slow=37						
PFO	Pinyon Flats O	21.20	329	LR	LR	10 57 36.3	
	comp=Z,101nm,18.1s,baz=174,slow=35						
NVAR	Mina Array Bea	26.00	333	P	P	10 51 10.7	-0.7
	0.2nm,0.7s,baz=152,slow=7.9,SNR=1.4						
	0.2nm,0.7s						
TKL	Tuckaleechee C	26.54	38	LR	LR	11 05 28.3	
	comp=Z,40nm,18.1s,baz=196,slow=43						
ELK	Elko	26.83	340	LR	LR	11 00 36.1	
	comp=Z,36nm,19.4s,baz=188,slow=34						
PDAR	Pinedale Array	27.35	350	LR	LR	11 02 19.1	
	comp=Z,48nm,19.2s,baz=207,slow=37						
ATAH	Atahualpa	33.79	131	LR	LR	11 03 35.5	
	comp=Z,56nm,18.8s,baz=285,slow=31						
NEW	Newport	34.23	344	LR	LR	11 06 44.8	
	comp=Z,37nm,18.5s,baz=189,slow=37						
SADO	Sadowa	35.49	31	LR	LR	11 08 51.5	
	comp=Z,42nm,18.3s,baz=243,slow=38						
NNA	Nana	38.25	135	LR	LR	11 06 08.0	
	comp=Z,34nm,19.2s,baz=288,slow=31						
BBB	Bella Bella	41.19	337	LR	LR	11 07 58.7	
	comp=Z,42nm,19.7s,baz=20,slow=33						
DLBC	Dease Lake	46.87	341	LR	LR	11 13 14.5	
	comp=Z,55nm,19.1s,baz=170,slow=36						
ILAR	Eielson Array	56.99	339	P	P	10 55 24.5	+0.9
	0.3nm,0.9s,baz=146,slow=6.6,SNR=2.8						
	0.3nm,0.9s						
H11S1	WAKE ISLAND Hy	84.84	288	T	T	12 31 05.6	
	baz=76,slow=75,SNR=5.1						
H11S2	WAKE ISLAND Hy	84.84	288	T	T	12 31 04.2	
	baz=76,slow=75,SNR=3.5						
H11S3	WAKE ISLAND Hy	84.85	288	T	T	12 31 02.9	
	baz=76,slow=75,SNR=4.2						
WRA	Warramunga Arr	124.94	257	PKP	PKiKP	11 04 39.8	+0.1
	0.3nm,0.8s,baz=70,slow=1.5,SNR=1.7						

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*IDC **23** 11:08:38.7±3.1, 18°.29N×147°.43E, h0km, mb3.5/6, mbtmp3.6/7, ML3.9/1, MS3.7/1, Error ellipse: s-maj=108.3km s-min=23.0km az=86.0*

ISC 23 11:08:44.8±2.1, **18°.2N**±0°.1×**147°.2E**±0°.4, **h35km, n14, σ0ˢ.63**/8, **mb3.4**/6, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.13	206	Pn	Pn	11 09 59.5	+0.4
	3.7nm,0.3s,baz=215,slow=20,SNR=1.5						
GUMO				Sn	Sn	11 10 56.9	-0.3
	2.3nm,0.3s,baz=42,slow=21,SNR=1.6						
	12nm,0.4s						
H11S3	WAKE ISLAND Hy	18.53	86	T	T	11 32 19.1	
	baz=274						
H11S1	WAKE ISLAND Hy	18.54	86	T	T	11 32 20.9	
	baz=274						
H11S2	WAKE ISLAND Hy	18.54	86	T	T	11 32 24.6	
	baz=274						
H11N1	WAKE ISLAND Hy	18.71	82	T	T	11 32 36.6	
	baz=268						
H11N2	WAKE ISLAND Hy	18.71	82	T	T	11 32 36.2	
	baz=268						
H11N3	WAKE ISLAND Hy	18.73	82	T	T	11 32 39.3	
	baz=268						
KSRS	Korea Array	25.52	322	P	P	11 14 10.0	0.0
	0.6nm,0.6s,baz=139,slow=8.1,SNR=2.1						
	0.6nm,0.6s						
WRA	Warramunga Arr	39.98	199	P	P	11 16 15.1	-1.1
	0.5nm,0.9s,baz=22,slow=8.4,SNR=2.1						
	0.5nm,0.9s						
ASAR	Alice Springs	43.62	198	P	P	11 16 46.7	+0.7
	0.5nm,1.2s,baz=17,slow=7.2,SNR=2.7						
	0.5nm,1.2s						
DZM	Mont Dzumac	44.28	154	LR	LR	11 35 24.2	
	comp=Z,82nm,18.9s,baz=23,slow=36						
SONM	Songino Array	44.38	321	P	P	11 16 51.9	-0.1
	0.3nm,0.3s,baz=149,slow=6.7,SNR=2.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	59.79	314	P	P	11 18 46.7	+0.2
	0.4nm,0.7s,baz=98,slow=8.9,SNR=2.7						
	0.4nm,0.7s						
FINES	FINESS Array B	87.88	336	P	P	11 21 30.4	-0.1
	0.4nm,0.3s,baz=29,slow=4.4,SNR=4.5						
	0.4nm,0.3s						

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*NEIC **23** 11:10:49.9±1.2, 21°.2S±0°.2×179°.1W±0°.1, h627km±10km, mb4.4/21, Error ellipse: s-maj=25.0km s-min=17.8km az=153.0*

*IDC **23** 11:10:50.6±2.2, 21°.02S×179°.23W, h632km±18km, mb3.3/7, mbtmp4.3/10, Error ellipse: s-maj=56.6km s-min=12.7km az=159.0*

ISC 23 11:10:49.2±0.6, **21°.2S**±0°.1×**179°.13W**±0°.09, **h619km, n40, σ0ˢ.70**/43, **mb4.4**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.35	322	P	P	11 12 18.9	+0.2
	55nm,0.5s,baz=182,slow=22,SNR=89						
MSVF				S	S	11 13 32.9	+1.3
	4.7nm,0.8s,baz=236,slow=18,SNR=0.7						
MSVF	Nonsavu	4.35	322	P	P	11 12 19.1	+0.4
AFI	Afiamalu	10.08	45	P	P	11 13 10.8	+1.4
	13nm,0.8s,baz=232,slow=16,SNR=2.9						
AFI	Afiamalu	10.08	45	P	P	11 13 09.8	+0.5
MARNC	Mare, Loyalty	11.97	266	P	P	11 13 28.2	+0.5
PINNC	Pines Island,	12.54	261	P	P	11 13 33.8	+0.5
DZM	Mont Dzumac	13.45	264	P	P	11 13 42.5	+0.3
	4.9nm,0.7s,baz=86,slow=19,SNR=2.5						
DZM	Mont Dzumac	13.45	264	P	P	11 13 42.0	-0.3
WHZ	Wether Hill Ro	26.81	200	P	P	11 15 43.5	+1.3
EIDS	Eidsvold	27.65	256	P	P	11 15 50.5	+0.8
EIDS				IAmb	IAmb	11 17 15.0	
	comp=Z,21nm,1.8s						
ARMA	Armidale	27.82	245	P	P	11 15 51.8	+0.6
CTA	Charters Tower	32.38	266	P	P	11 16 30.9	+0.6
	comp=Z,6.2nm,0.5s,baz=88,slow=10,SNR=16						
	comp=Z,6.2nm,0.5s						
CTAO	Charters Tower	32.38	266	P	P	11 16 30.5	+0.2
STKA	Stephens Creek	36.54	245	P	P	11 17 05.1	+0.5
COEN	Coen	36.58	275	P	P	11 17 05.6	+0.4
BBOO	Buckleboo	41.29	244	P	P	11 17 42.8	0.0
WR0	Warramunga Arr	43.27	263	P	P	11 17 58.0	-0.3
WR0				IAmb	IAmb	11 19 06.4	
	comp=Z,34nm,1.9s						
AS31	Alice Springs	43.33	258	P	P	11 17 58.7	-0.1
ASAR	Alice Springs	43.33	258	P	P	11 17 59.1	+0.3
	comp=Z,3.8nm,0.5s,baz=93,slow=7.6,SNR=101						
ASAR				ScP	ScP	11 22 27.4	+0.8
	comp=Z,0.5nm,0.7s,baz=99,slow=4.3,SNR=8.4						
ASAR				S	S	11 23 42.1	-1.2
	comp=Z,0.6nm,0.7s,baz=96,slow=16,SNR=4.8						
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	43.33	258	P	P	11 17 58.7	-0.1
WB0	Warramunga Arr	43.44	263	P	P	11 17 58.9	-0.8
WB0				IAmb	IAmb	11 18 00.1	
	comp=Z,5.9nm,0.6s						
WB2	Warramunga Arr	43.45	263	P	P	11 17 59.4	-0.3
WRAB	Tennant Creek	43.45	263	P	P	11 17 59.4	-0.4
WRAB				IAmb	IAmb	11 18 27.0	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	43.46	263	P	P	11 17 59.5	-0.3
	comp=Z,2.8nm,0.5s,baz=97,slow=7.6,SNR=101						
WRA				S	S	11 23 45.0	-0.2
	comp=Z,0.3nm,0.8s,baz=100,slow=14,SNR=1.9						
	comp=Z,2.8nm,0.5s						
WRA	Warramunga Arr	43.46	263	P	P	11 17 59.1	-0.8
FORT	Forrest	48.05	247	P	P	11 18 34.5	+0.2
FORT				IAmb	IAmb	11 19 45.4	
	comp=Z,28nm,1.1s						
MTN	Manton Dam	48.12	272	P	P	11 18 34.3	-0.7
MTN				IAmb	IAmb	11 18 35.2	
	comp=Z,5.3nm,0.7s						
KNRA	Kununurra	49.56	267	P	P	11 18 45.7	+0.1
KNRA				IAmb	IAmb	11 19 29.6	
	comp=Z,15nm,1.2s						
SIJI	Sorong	52.40	286	P	P	11 19 05.5	-0.7
	comp=Z,15nm,0.7s,baz=134,slow=23,SNR=3.0						
	comp=Z,15nm,0.7s						
SOEI	Soe	55.47	273	P	P	11 19 33.0	+5.2
SOEI				IAmb	IAmb	11 20 45.1	
	comp=Z,39nm,1.6s						
PSA00	Pilbara Seismi	56.48	258	P	P	11 19 34.0	-0.5
PSA00				IAmb	IAmb	11 20 47.5	
	comp=Z,38nm,1.6s						
QSPA	South Pole Qui	68.88	180	P	P	11 20 53.9	+0.6
QSPA				IAmb	IAmb	11 23 15.4	
	comp=Z,36nm,1.9s						
BELA	Belgrano 2	79.01	173	P	P	11 21 49.4	-0.6
NVAR	Mina Array Bea	82.25	44	P	P	11 22 07.8	+0.3
	comp=Z,0.5nm,0.6s,baz=224,slow=8.6,SNR=5.6						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	82.25	44	P	P	11 22 06.8	-0.8
SNAA	Sanae	87.34	179	P	P	11 22 30.8	-0.6
SNAA				IAmb	IAmb	11 25 39.4	
	comp=Z,13nm,1.6s						
TXAR	Lajitas Array	88.32	58	P	P	11 22 36.8	+0.1
	comp=Z,0.7nm,0.8s,baz=223,slow=6.1,SNR=9.9						
	comp=Z,0.7nm,0.8s						
ILAR	Eielson Array	89.23	13	P	P	11 22 38.7	-1.3
	comp=Z,0.1nm,0.5s,baz=219,slow=5.7,SNR=1.9						
	comp=Z,0.1nm,0.5s						
ARCES	ARCESS Array B	129.41	349	PKP	PKPdf	11 28 46.5	-1.4
	comp=Z,0.7nm,0.9s,baz=52,slow=1.5,SNR=3.9						
ARCES	ARCESS Array B	129.41	349		PKPdf	11 28 47.5	-0.5

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*IDC **23** 11:26:48.3±1.1, 30°.19N×66°.25E, h0km, mb3.6/10, mbtmp3.7/12, ML3.7/2, MS2.8/1, Error ellipse: s-maj=31.2km s-min=22.1km az=127.0*

ISC 23 11:26:53.0±0.8, **30°.2N**±0°.1×**66°.2E**±0°.2, **h35km, n12, σ1ˢ.56**/13, **mb3.6**/9, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	9.65	226	Pn	Pn	11 29 10.2	+0.7
	0.6nm,0.3s,baz=64,slow=7.6,SNR=5.0						
WSAR				Sn	Sn	11 30 54.1	-2.6
	0.2nm,0.3s,baz=170,slow=10,SNR=1.9						
WSAR				LR	LR	11 33 11.0	
	comp=Z,51nm,19.0s,baz=60,slow=39						
	1.7nm,0.4s						
AAK	Ala-Archa	14.12	26	Pn	Pn	11 30 08.2	-2.3
	0.5nm,0.3s,baz=224,slow=11,SNR=6.5						
	2.8nm,0.5s						
MKAR	Makanchi Array	20.78	32	P	P	11 31 29.9	-1.1
	2.0nm,0.7s,baz=213,slow=9.8,SNR=15						
	2.0nm,0.7s						
AKTO	Aktyubinsk	21.16	345	P	P	11 31 35.5	+0.5
	0.9nm,0.4s,baz=150,slow=8.8,SNR=1.7						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	22.43	21	P	P	11 31 47.3	-1.4
	0.8nm,0.7s,baz=211,slow=11,SNR=2.9						
	0.8nm,0.7s						
ZALV	Zalesovo Beam	27.33	24	P	P	11 32 35.4	+1.0
	0.3nm,0.3s,baz=231,slow=9.1,SNR=2.4						
	0.3nm,0.3s						
ARCES	ARCESS Array B	45.65	341	P	P	11 35 10.8	+1.1
	1.7nm,0.9s,baz=128,slow=7.3,SNR=1.2						
	1.7nm,0.9s						
KSRS	Korea Array	51.01	64	P	P	11 35 50.6	-0.9
	0.3nm,0.5s,baz=284,slow=7.0,SNR=1.8						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	61.56	269	P	P	11 37 06.5	-0.6
	0.5nm,0.7s,baz=48,slow=5.8,SNR=3.4						
	0.5nm,0.7s						
ILAR	Eielson Array	81.91	14	P	P	11 39 09.8	+1.2
	0.5nm,0.7s,baz=317,slow=5.0,SNR=1.7						
	0.5nm,0.7s						
ASAR	Alice Springs	84.17	121	P	P	11 39 22.0	+1.1
	0.3nm,0.7s,baz=305,slow=5.3,SNR=6.1						
	0.3nm,0.7s						
YKA	Yellowknife Ar	87.66	0	P	P	11 39 39.0	+1.5
	0.4nm,0.6s,baz=349,slow=5.1,SNR=2.9						
	0.4nm,0.6s						

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*NEIC **23** 12:06:49.5±1.9, 24°.12S±0°.07×67°.1W±0°.1, h192km±8km, mb4.1/11, ML4.8(GUC), Error ellipse: s-maj=14.0km s-min=10.2km az=94.0*

*IDC **23** 12:06:49.4±1.6, 24°.04S×66°.87W, h177km±16km, mb3.6/3, mbtmp4.3/9, Error ellipse: s-maj=24.2km s-min=20.6km az=154.0*

*VAO **23** 12:06:50.6±0.8, 23°.92S×67°.23W, h222km±9km, mb4.3*

*GUC **23** 12:06:50.0±0.7, 24°.07S×67°.25W, h209km±9km, ML4.8*

ISC 23 12:06:49.0±0.6, **24°.03S**±0°.04×**67°.15W**±0°.07, **h194km**±8km, **n75, σ1ˢ.26**/96, **mb3.9**/6, **15C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.43	318		Pn	12 07 23.5	+1.7
AF01	San Pedro de A	1.43	318	*e*P	Pn	12 07 23.7	+1.9
LVC	Limon Verde	2.14	311	P	Pn	12 07 30.6	+1.7
	163nm,0.5s,baz=163,slow=6.6,SNR=868						
LVC				S	S	12 08 00.3	+0.4
	376nm,0.4s,baz=292,slow=19,SNR=52						
LVC	Limon Verde	2.14	311	*e*P	Pn	12 07 30.5	+1.6
LVC				*i* S	S	12 08 01.1	+1.1
LVC	Limon Verde	2.14	311	*e*P	Pn	12 07 30.7	+1.7
PB15	IPOC Station P	2.28	290		Pn	12 07 32.1	+1.9
PB15	IPOC Station P	2.28	290	⇑*i*P	Pn	12 07 32.0	+1.7
PB15				*i* S	S	12 08 03.2	+1.0
GO02	Mina Guanaco	2.49	242		Pn	12 07 34.0	+1.3
GO02	Mina Guanaco	2.49	242	⇑*i*P	Pn	12 07 33.8	+1.1
GO02				*i* S	S	12 08 07.1	+0.5
GO02				IAML		12 08 09.0	
	comp=N,5µm,0.4s						
PB06	IPOC Station P	2.58	300	⇑*i*P	Pn	12 07 35.3	+1.7
PB06				*i* S	S	12 08 08.9	+0.7
PB06				IAML		12 08 11.0	
	comp=N,2µm,0.1s						
PB09	IPOC Station P	2.94	319	⇑*i*P	Pn	12 07 39.7	+1.9
PB09				*i* S	S	12 08 16.7	+0.9
PB09				IAML		12 08 18.8	
	comp=N,955nm,0.5s						
PB14	IPOC Station P	3.03	258	⇑*i*P	Pn	12 07 39.8	+0.9
PB10	IPOC Station P	3.16	279	⇑*i*P	Pn	12 07 41.6	+1.4
PB10				*i* S	S	12 08 20.5	+0.4
PB04	IPOC Station P	3.23	301	⇑*i*P	Pn	12 07 42.4	+1.2
PB04				*i* S	S	12 08 21.2	-0.8
AC02	Maricunga	3.32	212		Pn	12 07 43.5	+0.9
AC02	Maricunga	3.32	212	⇑*i*P	Pn	12 07 43.5	+0.9
AC02				*i* S	S	12 08 24.4	-0.1
PB07	IPOC Station P	3.41	312	⇑*i*P	Pn	12 07 44.5	+1.1
PB07				*i* S	S	12 08 25.3	-0.5
PB01	IPOC Station P	3.67	324	⇑*i*P	Pn	12 07 47.4	+0.8
PB01				*i* S	S	12 08 30.5	-1.1
PB02	IPOC Station P	3.70	316	⇑*i*P	Pn	12 07 47.6	+0.7
PB02				*i* S	S	12 08 30.7	-1.5
AC01	Pan de Azucar	3.77	235	⇑*i*P	Pn	12 07 47.3	-0.3
AC01				*i* S	S	12 08 31.7	-2.1
PATCX	Punta Patache	4.23	318		Pn	12 07 54.5	+1.0
PATCX	Punta Patache	4.23	318	⇑*i*P	Pn	12 07 53.5	0.0
PATCX				*i* S	S	12 08 41.0	-3.2
PB08	IPOC Station P	4.29	334	⇑*i*P	Pn	12 07 56.1	+1.5
PB08				*i* S	S	12 08 45.5	-0.5
AC06	Mina Casimiro	4.40	220	*e*P	Pn	12 07 55.0	-0.6
AC06				*i* S	S	12 08 46.1	-1.9
TA01	Diego Aracena	4.44	320	Pn	Pn	12 07 56.6	+0.5
TA01	Diego Aracena	4.44	320	*e*P	Pn	12 07 55.7	-0.4
TA01				*i* S	S	12 08 47.0	-1.8
GO03	Copiap	4.51	217	*e*P	Pn	12 07 56.0	-1.0
GO03				*i* S	S	12 08 47.7	-2.9
PB11	IPOC Station P	4.84	331	⇑*i*P	Pn	12 08 01.2	-0.2
PB11				*i* S	S	12 08 56.1	-2.2
AC04	Llanos de Chal	5.46	219	*e*P	Pn	12 08 07.3	-1.7
LCO	Las Campanas	5.90	212		Pn	12 08 13.5	-1.5
CO01	Juntas del Tor	6.48	203		Pn	12 08 22.7	+0.1
GO04	Tololo Observa	6.93	207		Pn	12 08 26.9	-1.6
LPAZ	La Paz	7.75	353	P	Pn	12 08 40.7	+1.0
	comp=N,16nm,0.4s,baz=154,slow=8.6,SNR=92						
LPAZ				S	S	12 10 06.6	-0.8
	comp=N,3.2nm,0.5s,baz=240,slow=20,SNR=2.0						
LPAZ	La Paz	7.75	353	Pn	Pn	12 08 40.4	+0.8
LPAZ	La Paz	7.75	353	*e*P	Pn	12 08 40.9	+1.2
LPAZ				*e*S	S	12 10 06.1	-1.4
CPUP	Villa Florida	9.19	107	P	Pn	12 08 55.1	-2.6
	comp=N,3.6nm,0.9s,baz=296,slow=11,SNR=4.7						
CPUP	Villa Florida	9.19	107		Pn	12 08 55.8	-1.9
SIV	San Ignacio	9.82	37	P	Pn	12 09 04.3	-1.9
	comp=N,7.6nm,0.3s,baz=211,slow=13,SNR=26						
SIV				S		12 10 45.5	
	comp=N,1.1nm,0.4s,baz=174,slow=18,SNR=1.7						
MT02	Curacav	9.84	200		Pn	12 09 05.5	-0.7
BO04	La Punta	10.38	196		Pn	12 09 12.1	-1.1
VILB	Vilhena	12.83	32	*e*P	Pn	12 09 44.2	-0.5
TRCB	Terra Rica	13.39	88	*e*P	Pn	12 09 54.4	+2.8
BI05	Punta Hualpn	13.70	201	P	Pn	12 09 54.5	-0.8
PTGB	Pitanga	13.77	96	*e*P	P	12 09 59.3	+0.5
TRQA	Tornquist	14.67	164	P	Pn	12 10 06.5	-0.8
SAML	Samuel	15.46	15	P	P	12 10 17.4	-0.1
LR04	Corral	16.67	197	P	P	12 10 29.7	-0.8
LR04				IAmb	IAmb	12 10 31.6	
	comp=Z,20nm,1.1s						
PLCA	Paso Flores	16.90	189	P	Pn	12 10 34.4	0.0
	comp=Z,2.3nm,0.6s,baz=2.0,slow=12,SNR=6.2						
PLCA	Paso Flores	16.90	189	P	P	12 10 32.5	-0.7
PLCA				IAmb	IAmb	12 10 40.8	
	comp=Z,7.2nm,1.1s						
CLDB	Colider	16.97	42	*e*P	P	12 10 34.2	+0.1
LL04	Puerto Octay	17.40	193		P	12 10 38.1	-0.5
LL04				IAmb	IAmb	12 10 40.7	
	comp=Z,11nm,0.8s						
VAO	Valinhos	18.54	91	*e*P	P	12 10 50.4	-0.9
IPMB	Ipameri, GO	18.67	75	*e*P	P	12 10 52.6	-0.1
SNDB	Serra Nova Dou	19.24	54	*e*P	P	12 10 59.0	+0.2
GO07	Milladeo Hill,	19.79	194	P	P	12 11 02.7	-1.6
BDFB	Brasilia	19.82	69	P	P	12 11 05.2	0.0
	comp=Z,24nm,0.7s,baz=243,slow=10,SNR=27						
BDFB	Brasilia	19.82	69	P	P	12 11 05.4	+0.2
BDFB	Brasilia	19.82	69	*e*P	P	12 11 05.7	+0.6
PEXB	Peixe	21.45	60	*e*P	P	12 11 21.4	-1.0
JANB	Januaria	23.27	72	*e*P	P	12 11 38.9	-0.6
SMTB	Santa Maria do	24.02	54	*e*P	P	12 11 46.2	-0.1
SDBA	SAO DESIDERIO	24.04	65	*e*P	P	12 11 46.0	-0.6
GDU01	Guandu, BA	27.98	74	*e*P	P	12 12 21.0	-0.9
ORCD	Orcadas	39.83	163	P	P	12 14 03.2	+0.1
ORCD				IAmb	IAmb	12 14 09.9	
	comp=Z,3.8nm,0.9s						
SNAA	Sanae	59.37	161	P	P	12 16 30.9	+0.4
SNAA				IAmb	IAmb	12 16 34.1	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	66.18	180	P	P	12 17 16.9	+1.3
QSPA				IAmb	IAmb	12 17 41.8	
	comp=Z,5.0nm,1.4s						
TOA0	Torodi Ar. Sit	76.71	69	P	P	12 18 19.2	0.0
TORD	Torodi Ar. Bea	76.71	69	P	P	12 18 19.6	+0.4
	comp=Z,0.9nm,0.5s,baz=255,slow=5.7,SNR=11						
	comp=Z,0.9nm,0.5s						
TORD	Torodi Ar. Bea	76.71	69	P	P	12 18 19.1	-0.1
TORD				IAmb	IAmb	12 18 20.9	
	comp=Z,3.7nm,1.4s						
BOSA	Boshof	80.84	117	P	P	12 18 42.2	+0.5
	comp=Z,0.8nm,0.4s,baz=245,slow=7.4,SNR=1.6						
	comp=Z,0.8nm,0.4s						
MAW	Mawson	81.45	163	P	P	12 18 46.6	+2.6
	comp=Z,1.7nm,0.8s,baz=249,slow=8.6,SNR=1.9						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	128.38	205	PKP	PKiKP	12 25 35.1	+1.2
	comp=Z,0.4nm,0.9s,baz=144,slow=3.3,SNR=2.3						
WRA	Warramunga Arr	131.54	207	PKP	PKiKP	12 25 41.5	+1.2
	comp=Z,0.2nm,0.5s,baz=151,slow=1.9,SNR=1.7						
MKAR	Makanchi Array	146.63	39	PKPbc	PKiKP	12 26 09.8	-0.4
	comp=Z,0.5nm,0.5s,baz=328,slow=2.8,SNR=5.0						
MKAR	Makanchi Array	146.63	39		PKPab	12 26 08.1	-1.2

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*IDC **23** 12:11:49.3±0.8, 19°.04S×174°.56W, h0km, mb4.1/7, mbtmp4.1/8, ML3.9/1, MS3.4/2, Error ellipse: s-maj=39.6km s-min=18.9km az=132.0*

*NEIC **23** 12:11:52.2±1.8, 19°.22S±0°.08×174°.19W±0°.08, h21km±4km, mb4.6/25, Error ellipse: s-maj=13.3km s-min=7.8km az=142.0*

ISC 23 12:11:50.2±0.5, **19°.25S**±0°.10×**174°.24W**±0°.09, **h10km, n58, σ1ˢ.00**/47, **mb4.5**/16, **MS3.2**/3, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.08	88	Pn	Pn	12 12 52.4	-0.3
AFI	Afiamalu	5.81	24	Pn	Pn	12 13 17.3	+0.8
	3.0nm,0.3s,baz=182,slow=7.7,SNR=6.5						
AFI				Sn	Sn	12 14 14.6	-8.6
	15nm,0.3s,baz=105,slow=20,SNR=7.7						
	7.1nm,0.3s						
AFI	Afiamalu	5.81	24		Pn	12 13 17.0	+0.5
MSVF	Nonsavu	7.47	280		Pb	12 13 49.2	-11
RAR	Rarotonga	13.72	101	Pn	Pn	12 15 03.7	-1.2
	3.4nm,0.3s,baz=278,slow=8.1,SNR=17						
RAR				Sn	Sn	12 17 22.2	-15
	0.7nm,0.3s,baz=323,slow=16,SNR=1.6						
RAR	Rarotonga	13.72	101		Pn	12 15 00.2	-4.7
DZM	Mont Dzumac	18.29	258	*e*LR	LR	12 21 16.9	
DZM	Mont Dzumac	18.29	258	LR	LR	12 21 09.9	
	comp=Z,157nm,19.6s,baz=40,slow=31						
URZ	Urewera	20.39	200	P	Pn	12 16 28.5	-0.7
	3.6nm,0.3s,baz=317,slow=5.5,SNR=10						
	3.6nm,0.3s						
URZ	Urewera	20.39	200	P	Pn	12 16 28.7	-0.5
URZ				IAmb	IAmb	12 16 30.4	
	comp=Z,26nm,1.3s						
BKZ	Black Stump Fm	21.41	200	P	P	12 16 38.9	+0.6
BKZ				IAmb	IAmb	12 16 51.9	
	comp=Z,31nm,1.4s						
TBI	Tubuai	23.43	104	*e*LR	LR	12 22 07.3	
	comp=Z,71nm,29.5s						
PPT2	Papeete2	23.45	90	*e*LR	LR	12 22 03.4	
	comp=Z,121nm,26.0s						
TUWZ	Tuamarina	24.30	202	P	P	12 17 07.7	-0.2
CTAO	Charters Tower	37.15	262	P	P	12 19 01.8	+0.2
COEN	Coen	41.07	271	P	P	12 19 34.4	0.0
COEN				IAmb	IAmb	12 19 39.7	
	comp=Z,26nm,1.4s						
WR0	Warramunga Arr	48.10	260	P	P	12 20 29.5	-1.0
WR0				IAmb	IAmb	12 20 37.4	
	comp=Z,11nm,1.5s						
AS31	Alice Springs	48.25	255	P	P	12 20 32.6	+0.8
ASAR	Alice Springs	48.25	255	P	P	12 20 30.2	-1.5
	comp=Z,1.4nm,0.5s,baz=96,slow=7.7,SNR=42						
ASAR				PcP	PcP	12 21 58.6	-0.2
	comp=Z,1.0nm,0.5s,baz=100,slow=4.2,SNR=8.9						
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	48.25	255	P	P	12 20 30.9	-0.9
WB0	Warramunga Arr	48.27	260	P	P	12 20 30.4	-1.5
WB2	Warramunga Arr	48.28	260	P	P	12 20 30.2	-1.7
WB2				IAmb	IAmb	12 20 31.0	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	48.29	260	P	P	12 20 30.5	-1.5
	comp=Z,1.0nm,0.5s,baz=98,slow=8.0,SNR=27						
WRA				PcP	PcP	12 21 58.9	-0.1
	comp=Z,0.5nm,0.5s,baz=97,slow=3.3,SNR=3.2						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	48.29	260	P	P	12 20 31.0	-1.0
MTN	Manton Dam	52.71	268	P	P	12 21 04.9	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN				IAmb	IAmb	12 21 08.1	
	comp=Z,9.7nm,0.9s						
KNRA	Kununurra	54.29	264	P	P	12 21 16.6	-0.5
VNDA	Vanda	59.49	186	P	P	12 21 55.2	+2.2
	comp=Z,2.5nm,0.7s,baz=32,slow=5.2,SNR=2.8						
	comp=Z,2.5nm,0.7s						
VNDA	Vanda	59.49	186	P	P	12 21 54.5	+1.5
VNDA				IAmb	IAmb	12 22 02.1	
	comp=Z,6.6nm,1.4s						
DAV	Davao City (W)	64.77	288	LR	LR	12 49 47.4	
	comp=Z,22nm,18.1s,baz=150,slow=35						
QSPA	South Pole Qui	70.82	180	P	P	12 23 07.9	+0.9
QSPA				IAmb	IAmb	12 23 24.4	
	comp=Z,5.2nm,1.4s						
NVAR	Mina Array Bea	77.71	42	P	P	12 23 48.6	+1.0
	comp=Z,0.9nm,0.7s,baz=227,slow=8.8,SNR=10.0						
	comp=Z,0.9nm,0.7s						
NV11	Mina Array Sit	77.81	42	P	P	12 23 49.3	+1.2
H03S2	Juan Fernandez	83.76	124	T	T	13 56 53.2	
	baz=248						
H03S1	Juan Fernandez	83.77	124	T	T	13 56 54.6	
	baz=248						
H03S3	Juan Fernandez	83.77	124	T	T	13 56 53.4	
	baz=248						
K20K	Telida	83.83	9	P	P	12 24 19.7	+0.2
K20K				IAmb	IAmb	12 24 30.8	
	comp=Z,6.7nm,1.4s						
H03N2	Juan Fernandez	83.88	123	T	T	13 56 57.2	
	baz=257,slow=71						
H03N3	Juan Fernandez	83.88	123	T	T	13 56 59.8	
	baz=257,slow=71						
H03N1	Juan Fernandez	83.89	123	T	T	13 56 58.9	
	baz=257,slow=71						
J20K	Nowinta River	84.60	9	P	P	12 24 24.2	+0.9
J20K				IAmb	IAmb	12 24 40.3	
	comp=Z,6.0nm,1.4s						
PDAR	Pinedale Array	85.65	42	P	P	12 24 29.9	+0.5
	comp=Z,0.6nm,0.8s,baz=207,slow=3.0,SNR=4.8						
	comp=Z,0.6nm,0.8s						
I21K	Tanana	85.87	9	P	P	12 24 30.3	+0.7
HDA	Harding Lake	86.01	12	P	P	12 24 30.6	+0.2
CCB	Clear Creek Bu	86.07	11	P	P	12 24 30.4	-0.2
TCOL	CIGO, UAF Yank	86.27	11	P	P	12 24 31.2	-0.4
COLA	College	86.27	11	P	P	12 24 31.2	-0.4
IL31		86.35	11	P	P	12 24 31.6	-0.4
ILAR	Eielson Array	86.35	11	P	P	12 24 31.9	-0.2
	comp=Z,1.0nm,0.6s,baz=228,slow=6.1,SNR=39						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	86.35	11	P	P	12 24 31.0	-1.1
IMAR	Indian Mountai	86.37	8	P	P	12 24 32.2	+0.1
J25K	Salcha River,	86.50	12	P	P	12 24 33.2	+0.3
J25K				IAmb	IAmb	12 24 34.4	
	comp=Z,2.5nm,0.7s						
DAWY	Dawson	87.32	15	P	P	12 24 38.5	+1.6
DAWY				IAmb	IAmb	12 24 38.5	
	comp=Z,3.6nm,1.1s						
BMAR	Burnt Mountain	89.16	11	P	P	12 24 45.1	-0.4
FINES	FINESS Array B	135.49	346	PKP	PKPdf	12 31 10.7	+0.7
	comp=Z,1.5nm,1.1s,baz=316,slow=5.3,SNR=3.8						
CLL	Collm	147.50	352	iPKPbc	PKPbc	12 31 34.7	+0.3
CLL				iPKiKP	pPKPbc	12 31 37.5	-0.3
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	148.50	316	PKPbc	PKPbc	12 31 37.5	-0.2
	comp=Z,1.1nm,0.8s,baz=116,slow=2.9,SNR=6.1						
BRTR	Keskin Array B	148.50	316		PKPbc	12 31 36.9	-0.8
KARP	Karpathos	155.09	315		PKPdf	12 31 41.1	-2.9
KARP				PKPbc		12 31 51.3	
KARP				PKPab	PKPab	12 32 07.3	-1.2

IDC ***23*** *12:33:19.8±1.2,28.°32N×87.°74E,h0^{km},mb3.5/5, mbtmp3.4/7,ML3.6/2,MS2.7/1,Error ellipse: s-maj=58.0km s-min=20.9km az=60.0*

ISC 23 12:33:24.8±1.2**,28.°4N**±0.°2×**87.°9E**±0.°3**,h35**^{km}**,n7,**σ**1**^{s}**27**/7**, mb3.5**/5**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.13	132	Pn	Pn	12 36 41.7	-0.9
	0.2nm,0.3s,baz=314,slow=14,SNR=2.1						
CMAR				LR	LR	12 42 34.1	
	comp=Z,32nm,19.8s,baz=190,slow=39						
	0.9nm,0.8s						
MKAR	Makanchi Array	18.91	348	P	P	12 37 41.6	-0.8
	0.1nm,0.3s,baz=163,slow=11,SNR=2.6						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	23.33	345	P	P	12 38 28.6	-1.1
	0.6nm,0.7s,baz=164,slow=9.4,SNR=4.5						
	0.6nm,0.7s						
ZALV	Zalesovo Beam	25.65	356	P	P	12 38 52.6	+1.5
	0.6nm,0.5s,baz=188,slow=9.9,SNR=2.0						
	0.6nm,0.5s						
WRA	Warramunga Arr	65.73	132	P	P	12 44 07.0	+0.7
	0.3nm,0.7s,baz=326,slow=6.5,SNR=4.9						
	0.3nm,0.7s						
ASAR	Alice Springs	68.12	135	P	P	12 44 22.4	+0.9
	0.4nm,0.7s,baz=321,slow=6.8,SNR=6.4						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	80.59	280	P	P	12 45 34.1	-0.1
	0.4nm,0.7s,baz=66,slow=3.5,SNR=2.0						
	0.4nm,0.7s						

FUNV ***23*** *12:36:04.2,10.°65N×72.°61W,h9^{km},MW3.1*

RSNC ***23*** *12:36:04.7±1.0,10.°63N×72.°56W,h0^{km}±8^{km},ML2.2*

ISC 23 12:36:04.0±1.1**,10.°65N**±0.°03×**72.°55W**±0.°03**,h11**^{km}±9^{km}**, n13,**σ**1**^{s}**46**/26**,1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	0.49	319	⇓iP	Pg	12 36 13.6	-0.1
CRJC				eS	Sb	12 36 22.4	+0.4
CRJC				i		12 36 23.8	
	comp=Z,269nm,0.2s						
MCQV	Machiques	0.59	178	eP	Pg	12 36 15.7	0.0
MCQV				eS	Sg	12 36 23.4	-0.1
LL6C	La Loma 6 Bece	1.15	218	eP	Pg	12 36 25.8	-0.4
LL6C				eS	Sg	12 36 40.5	-0.7
LL6C				i		12 36 46.0	
	comp=Z,27nm,0.4s						
URIC	Uribia, Colomb	1.18	28	eP	Pg	12 36 26.6	-0.2
URIC				eS	Sg	12 36 42.7	+0.5
URIC				i		12 36 44.1	
	comp=Z,94nm,0.4s						
SMRC	Santa Marta, M	1.72	287	eP	Pn	12 36 34.4	+0.4
SMRC				eS	Sn	12 36 53.1	-2.9
SMRC				i		12 36 58.6	
	comp=Z,17nm,0.1s						
ARGC	Ariguani, Magd	1.84	245	eP	Pb	12 36 37.7	-0.1
ARGC				eS	Sn	12 36 58.6	-0.3
DABV	Dabajuro	1.90	82	eP	Pn	12 36 37.7	+1.2
DABV				eS	Sn	12 37 02.2	+1.7
OCAC	Ocana	2.51	198	eP	Pn	12 36 46.2	+1.2
OCAC				eS	Sb	12 37 20.5	+0.3
CURV	Curarigua	2.63	104	eP	Pn	12 36 47.8	+1.3
CURV				eS	Sn	12 37 18.1	-0.3
SJCC	San Jacinto, C	2.69	254	eP	Pn	12 36 49.6	+2.2
SJCC				eS	Sb	12 37 23.8	-1.6
SJCC				i		12 37 29.4	
	comp=Z,6.0nm,0.1s						
SOCV	Socops	2.88	144	eP	Pn	12 36 49.7	-0.3
SOCV				eS	Sn	12 37 24.4	-0.3
PTBC	PUERTO BERRIO,	4.50	205	eP	Pn	12 37 13.4	+1.3
PTBC				eS	Sn	12 38 07.0	+2.5
PTBC				i		12 38 13.9	
	comp=Z,2.4nm,0.6s						
BAUV	El Baul	4.76	110	eP	Pn	12 37 15.2	-0.5
BAUV				eS	Sn	12 38 07.2	-3.7

IDC ***23*** *12:39:33.9±1.0,32.°06S×72.°00W,h0^{km},mb3.8/3, mbtmp3.8/6,ML4.0/3,MS3.2/5,Error ellipse: s-maj=43.6km s-min=26.0km az=85.0*

SJA ***23*** *12:39:34.8±0.7,32.°14S×71.°93W,h10^{km}±4^{km},ML4.0, MW4.0*

NEIC ***23*** *12:39:36.0±1.8,32.°07S±0.°04×71.°90W±0.°09,h11^{km}±1^{km}, mb4.4/6,ML4.0(GUC),Error ellipse: s-maj=11.1km s-min=5.1km az=81.0*

GUC ***23*** *12:39:38.3±0.8,32.°13S×71.°77W,h23^{km}±8^{km},ML4.0*

ISC 23 12:39:35.6±1.2**,32.°09S**±0.°02×**71.°92W**±0.°04**,h12**^{km}±7^{km}**, n89,**σ**1**^{s}**14**/105**,mb4.1**/4**,MS2.9**/3**,9C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.71	132		Pg	12 39 49.6	+0.2
VA06	Catapilco	0.71	132	iP	Pg	12 39 49.8	+0.4
VA06				iS	Sg	12 39 57.3	-1.4
VA06				IAML		12 40 01.4	
	comp=E,33µm,0.5s						
VA01	Torpederas	0.96	166		Pg	12 39 54.4	+0.3
VA01	Torpederas	0.96	166	eP	Pg	12 39 54.7	+0.5
VA01				iS	Sg	12 40 06.5	-0.3
VA01				IAML		12 40 09.9	
VA01	Torpederas	0.96	166	eP	Pg	12 39 54.0	-0.2
ROCH	El Roble	1.17	139	⇑iP	Pb	12 39 57.6	-0.3
ROCH				iS	Sb	12 40 11.8	-1.3
ROCH				IAML		12 40 13.7	
	comp=N,15µm,0.5s						
ROCH				IAML		12 40 13.7	
	comp=N,8µm,0.3s						
ROC1	El Roble	1.17	139		Pb	12 39 57.5	-0.4
ROC1	El Roble	1.17	139	eP	Pb	12 39 57.0	-0.9
ROC1				eS	Sb	12 40 12.6	-0.6
CO02	Combarbal	1.18	42		Pb	12 39 58.1	+0.1
CO02	Combarbal	1.18	42	⇓iP	Pb	12 39 57.9	0.0
CO02				iS	Sg	12 40 13.6	0.0
CO02				IAML		12 40 20.1	
	comp=E,7µm,0.1s						
CO02	Combarbal	1.18	42	eP	Pb	12 39 58.0	+0.1
CO02				eS	Sn	12 40 15.1	+1.1
CO02				IAML		12 40 16.1	
	comp=Z,4µm,0.3s						
VA03	San Esteban	1.34	121		Pn	12 39 59.7	-0.5
VA03	San Esteban	1.34	121	⇑iP	Pn	12 39 59.8	-0.5
VA03				iS	Sb	12 40 16.0	-1.9
VA03				IAML		12 40 19.7	
	comp=E,14µm,0.2s						
VA03	San Esteban	1.34	121	eP	Pn	12 40 00.0	-0.2
VA03				eS	Sb	12 40 17.3	-0.6
VA03				IAML		12 40 21.2	
	comp=Z,6µm,0.6s						
MT02	Curacav	1.34	151		Pn	12 40 00.3	+0.2
MT02	Curacav	1.34	151	⇑iP	Pn	12 40 00.2	0.0
MT02				iS	Sb	12 40 16.3	-1.6
MT02				IAML		12 40 19.2	
	comp=E,3µm,0.4s						
MT02	Curacav	1.34	151	eP	Pn	12 40 00.0	-0.2
MT02				eS	Sb	12 40 17.0	-0.9
MT02				IAML		12 40 18.7	
	comp=Z,3µm,0.5s						
CO06	Fray Jorge	1.43	10	Pn	Pn	12 40 02.0	+0.7
CO06	Fray Jorge	1.43	10	eP	Pn	12 40 01.7	+0.4
CO06				iS	Sg	12 40 22.3	+0.7
CO06				IAML		12 40 27.9	
	comp=E,1µm,0.3s						
PEL	Peldehue	1.48	136		Pn	12 40 02.4	+0.2
PEL	Peldehue	1.48	136	⇑iP	Pn	12 40 02.3	+0.2
PEL				iS	Sn	12 40 19.9	-1.6
PEL				IAML		12 40 26.3	
	comp=E,10µm,0.9s						
PEL	Peldehue	1.48	136	eP	Pn	12 40 02.4	+0.2
PEL				eS	Sn	12 40 21.5	0.0
VA05	Santo Domingo	1.59	171	eP	Pn	12 40 03.9	+0.5
VA05				IAML		12 40 32.6	
	comp=E,10µm,0.4s						
MT03	Universidad Ad	1.84	140	Pn	Pn	12 40 08.2	+1.1
MT03	Universidad Ad	1.84	140	⇑iP	Pn	12 40 07.9	+0.9
MT03				iS	Sn	12 40 30.5	+0.2
MT03				IAML		12 40 33.3	
	comp=E,5µm,0.2s						
MT03	Universidad Ad	1.84	140	eP	Pn	12 40 08.0	+0.9
MT03				eS	Sb	12 40 33.3	+1.1
MT03				IAML		12 40 34.9	
	comp=Z,3µm,0.2s						
FCH	Farellones	1.85	132	⇑iP	Pn	12 40 07.9	+0.5
FCH				iS	Sn	12 40 30.9	0.0
FCH				IAML		12 40 32.8	
	comp=E,2µm,0.2s						
MT09	Talagante	1.86	155	⇑iP	Pn	12 40 08.6	+1.2
MT09				iS	Sn	12 40 31.0	+0.2
MT09				IAML		12 40 38.7	
	comp=E,4µm,0.5s						
MT01	Popeta	1.86	163	eP	Pn	12 40 08.0	+0.7
MT01				iS	Sn	12 40 31.4	+0.8
MT01				IAML		12 40 39.8	
	comp=E,2µm,0.2s						
MT01	Popeta	1.86	163	eP	Pn	12 40 08.0	+0.7
MT01				eP	Pn	12 40 08.0	+0.7
MT01				eS	Sb	12 40 32.7	0.0
MT01				IAML		12 40 37.3	
	comp=Z,2µm,0.8s						
GO04	Tololo Observa	2.14	27	eP	Pn	12 40 12.8	+1.5
GO04				iS	Sb	12 40 42.2	+1.3
GO04	Tololo Observa	2.14	27	eP	Pn	12 40 13.0	+1.7
GO04				eS	Sg	12 40 43.8	-0.5
AUSP	Uspallata	2.15	94	eP	Pb	12 40 14.7	0.0
AUSP				eS	Sb	12 40 42.2	+0.8
BO04	La Punta	2.19	150		Pn	12 40 13.3	+1.4
BO04	La Punta	2.19	150	⇑iP	Pn	12 40 13.4	+1.5
BO04				iS	Sn	12 40 40.9	+1.9
BO04				IAML		12 40 46.0	
	comp=N,2µm,0.3s						
CO05	La Serena	2.24	15	IAML		12 40 53.6	
	comp=E,1µm,0.7s						
RTLS	Leoncito	2.25	83	eP	Pb	12 40 16.0	-0.3
RTLS				eS	Sg	12 40 46.5	-1.5
RTLS				IAML		12 40 48.1	
	comp=Z,939nm,0.4s						
BO01	Tunca	2.40	163	eP	Pn	12 40 15.5	+0.7
BO01				IAML		12 40 52.5	
	comp=E,837nm,0.5s						
BO01	Tunca	2.40	163	eP	Pn	12 40 15.6	+0.9
BO01				IAML		12 40 56.7	
	comp=Z,1µm,0.9s						
BO03	Pichilemu	2.40	181	eP	Pn	12 40 14.5	-0.2
BO03				IAML		12 41 02.3	
	comp=N,651nm,0.4s						
CO01	Juntas del Tor	2.62	37	eP	Pb	12 40 20.9	-1.8
CO01				IAML		12 41 01.4	
	comp=N,542nm,0.8s						
CO01	Juntas del Tor	2.62	37	eP	Pb	12 40 20.7	-2.0
CO01				IAML		12 41 03.0	
	comp=Z,411nm,0.5s						
ZON	Zonda	2.81	80	eP	Pb	12 40 25.3	-0.5
ZON				eS	Sb	12 40 58.3	-1.9
ZON				IAML		12 41 17.0	
	comp=Z,461nm,0.7s						
GO05	Huala	2.92	180		Pn	12 40 21.8	0.0
GO05	Huala	2.92	180	⇑iP	Pn	12 40 21.8	0.0
GO05				IAML		12 41 19.3	
	comp=N,389nm,0.6s						
GO05	Huala	2.92	180	eP	Pn	12 40 22.2	+0.4
GO05				eS	Sn	12 40 55.3	-1.5
LCO	Las Campanas	3.24	19	Pn	Pn	12 40 27.9	+1.5
LCO	Las Campanas	3.24	19	eP	Pn	12 40 27.3	+0.8
LCO				iS	Sb	12 41 10.6	-2.1
LCO	Las Campanas	3.24	19	eP	Pn	12 40 28.0	+1.5
ML02	Panimavida	3.69	174		Pn	12 40 31.2	-1.2
AC04	Llanos de Chal	3.94	11	eP	Pn	12 40 36.1	+0.3
AC04	Llanos de Chal	3.94	11	eP	Pn	12 40 20.2	-16
AC04				eS	Sb	12 41 32.3	-0.2
AC04				IAML		12 41 56.8	
	comp=Z,135nm,1.2s						
RFA	San Rafael	3.94	134	eP	Pn	12 40 39.0	+3.1
RFA				eS	Sb	12 41 35.8	+3.2
RFA				IAML		12 41 41.7	
	comp=Z,199nm,1.5s						
BI05	Punta Hualpn	4.77	192		Pn	12 40 46.2	-1.0
H03N1	Juan Fernandez	6.04	255	T	T	12 47 38.0	
	baz=85,slow=73						
H03N3	Juan Fernandez	6.05	255	T	T	12 47 44.4	
	baz=85,slow=73						
H03N2	Juan Fernandez	6.06	255	T	T	12 47 37.8	
	baz=85,slow=73						
H03S3	Juan Fernandez	6.12	252	T	T	12 47 43.6	
	baz=82						
H03S1	Juan Fernandez	6.13	252	T	T	12 47 42.2	
	baz=82						
H03S2	Juan Fernandez	6.14	252	T	T	12 47 43.8	
	baz=82						
PLCA	Paso Flores	8.70	173	Pn	Pn	12 41 42.4	+1.2
	comp=Z,0.8nm,0.3s,baz=333,slow=12,SNR=19						
PLCA				Lg	Lg	12 44 06.1	
	comp=Z,0.1nm,0.3s,baz=255,slow=20,SNR=3.1						
	comp=Z,2.2nm,0.3s						
PLCA	Paso Flores	8.70	173		Pn	12 41 41.9	+0.6
LVC	Limon Verde	9.81	17	LR	LR	12 46 08.4	
	comp=Z,53nm,19.2s,baz=216,slow=40						
TRQA	Tornquist	10.09	129	Pn	Pn	12 42 02.7	+2.5
CPUP	Villa Florida	13.97	69	Pn	Pn	12 42 55.7	+2.4
	comp=Z,0.2nm,0.3s,baz=216,slow=8.7,SNR=1.3						
CPUP				Sn	Sn	12 45 24.8	-3.6
	comp=Z,0.1nm,0.3s,baz=160,slow=17,SNR=1.6						
CPUP				LR	LR	12 48 42.4	
	comp=Z,277nm,18.2s,baz=245,slow=39						
	comp=Z,1.2nm,0.6s						
CPUP	Villa Florida	13.97	69		Pn	12 42 52.0	-1.3
LPAZ	La Paz	16.10	13	Pn	Pn	12 43 24.0	+1.6
	comp=Z,0.1nm,0.3s,baz=204,slow=5.3,SNR=6.0						
	comp=Z,1.3nm,0.6s						
LPAZ	La Paz	16.10	13	P	P	12 43 24.6	-1.2
NNA	Nana	20.51	346	LR	LR	12 50 47.9	
	comp=Z,51nm,18.9s,baz=163,slow=33						
JTS	Las Juntas de	43.94	341	LR	LR	13 03 24.8	
	comp=Z,11nm,19.1s,baz=223,slow=33						
SNAA	Sanae	53.32	158	P	P	12 48 55.1	+0.9
	comp=Z,1.0nm,0.7s,baz=256,slow=12,SNR=2.2						
	comp=Z,1.0nm,0.7s						
SNAA	Sanae	53.32	158	P	P	12 48 54.7	+0.6
SNAA				IAmb	IAmb	12 49 21.6	
	comp=Z,4.1nm,1.2s						
QSPA	South Pole Qui	58.15	180	P	P	12 49 30.1	+1.1
QSPA				IAmb	IAmb	12 49 43.4	
	comp=Z,7.7nm,1.4s						
TXAR	Lajitas Array	68.12	330	P	P	12 50 36.1	+0.6
	comp=Z,0.5nm,0.8s,baz=150,slow=9.2,SNR=4.8						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	68.12	330	P	P	12 50 36.7	+1.3
U49A	Red Boiling Sp	69.47	348	P	P	12 50 42.9	-0.6
BOSA	Boshof	80.87	118	LR	LR	13 25 05.5	
	comp=Z,26nm,19.3s,baz=185,slow=34						
TORD	Torodi Ar. Bea	83.47	70	P	P	12 52 03.6	+0.1
	comp=Z,0.7nm,0.7s,baz=247,slow=4.6,SNR=3.5						
	comp=Z,0.7nm,0.7s						
TORD	Torodi Ar. Bea	83.47	70	P	P	12 52 02.8	-0.7
TORD				IAmb	IAmb	12 52 22.3	
	comp=Z,2.1nm,1.1s						
WRA	Warramunga Arr	122.47	210	PKP	PKPdf	12 58 31.2	-0.2
	comp=Z,0.4nm,0.7s,baz=158,slow=1.6,SNR=5.4						
H11S2	WAKE ISLAND Hy	125.88	270	T	T	15 17 44.2	
	baz=118,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	125.89	270	T	T	15 17 40.0	
	baz=118,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	125.89	270	T	T	15 17 45.9	
	baz=118,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	126.24	272	T	T	15 18 00.1	
	baz=119,slow=74						
H11N1	WAKE ISLAND Hy	126.25	272	T	T	15 18 07.7	
	baz=119						
H11N2	WAKE ISLAND Hy	126.26	272	T	T	15 18 07.2	
	baz=119,slow=74						
KURBB	Kurchatov Arra	151.39	41	PKPbc	PKPbc	12 59 28.8	+0.1
	comp=Z,0.5nm,0.6s,baz=308,slow=3.1,SNR=6.7						
KURBB				PKPab	PKPab	12 59 36.9	-0.1
	comp=Z,0.7nm,0.6s,baz=298,slow=3.1,SNR=9.2						
ZALV	Zalesovo Beam	152.54	30	PKPbc	PKPbc	12 59 31.9	+0.6
	comp=Z,0.7nm,0.5s,baz=292,slow=4.5,SNR=2.1						
ZALV				PKPab	PKPab	12 59 41.0	-0.8
	comp=Z,1.4nm,0.4s,baz=325,slow=2.3,SNR=5.0						
ZALV	Zalesovo Beam	152.54	30	PKPdf	PKPdf	12 59 23.6	-0.7
ZALV					PKPab	12 59 41.0	-0.8

HEL ***23*** *12:48:35.1±0.5,67.°90N×34.°32E,h0^{km},ML2.1,Explosion*

KOLA ***23*** *12:48:36.9,67.°69N×34.°18E,h0^{km},ML2.2*

IDC ***23*** *12:48:39.5±2.0,67.°61N×33.°42E,h0^{km},mbtmp3.4/3, ML2.3/3,Error ellipse: s-maj=18.8km s-min=10.6km az=92.0*

ISC 23 12:48:35.2±1.0**,67.°65N**±0.°05×**34.°20E**±0.°05**,h0**^{km}**,n24,** σ**1**^{s}**00**/40**,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVZ	Lovozero	0.30	34	P	Pg	12 48 41.7	+0.7
LVZ				S	Sg	12 48 45.5	+0.6
APA	Apatity	0.32	256	P	Pb	12 48 43.1	-0.6
APA				S	Sg	12 48 46.8	+1.4
APA0	Apatity Array	0.47	265	P	Pg	12 48 44.5	+0.5
APA0				S	Sg	12 48 51.3	+1.2
TERR	Teriberka	1.60	12	P	Pn	12 49 04.6	0.0
TERR				S	Sn	12 49 24.8	-1.2
VRF	Varrio	1.76	275	PG	Pn	12 49 07.4	+0.6
	baz=82						
VRF				MSG		12 49 28.5	
	comp=Z,21nm,0.2s						
VRF				SG	Sn	12 49 30.2	+0.3
PRVG	Vayda Guba	2.23	342	P	Pn	12 49 14.2	+0.9
PRVG				S	Sn	12 49 40.9	-0.8
OLKF	Oulanka, Finla	2.31	237	PN	Pb	12 49 17.1	-0.6
OLKF				SN	Sb	12 49 47.2	+0.5
KU6	Riekki	2.36	228	PN	Pn	12 49 16.9	+1.7
KU6				SN	Sb	12 49 48.1	0.0
KU6				MSG		12 49 50.8	
	comp=Z,4.6nm,0.2s						
MSF	Maaselka	2.69	232	PB	Pb	12 49 22.8	-1.4
	baz=43						
MSF				SB	Sb	12 49 58.0	+0.4
SGF	Sodankyl	2.96	270	PG	Pb	12 49 28.3	-0.4
SGF				SB	Sb	12 50 04.7	-0.6
RNF	Rovaniemi	3.36	256	PN	Pn	12 49 29.6	+0.7
RNF				SN	Sn	12 50 10.4	+0.9
KEV	Kevo	3.37	312	eP	Pn	12 49 29.6	+0.6
KEV	Kevo	3.37	312	PB	Pn	12 49 30.1	+1.1
KEV				SB	Sn	12 50 09.9	+0.3
ARA0	ARCESS Array S	3.71	305	eP	Pn	12 49 34.1	+0.4
ARCES	ARCESS Array B	3.71	305	Pn	Pn	12 49 34.4	+0.7
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=46						
ARCES				Pg	Pb	12 49 42.1	+0.6
	comp=Z,0.3nm,0.3s,baz=116,slow=16,SNR=14						
ARCES				Sn	Sn	12 50 15.2	-2.8
	comp=Z,0.4nm,0.3s,baz=121,slow=26,SNR=11						
ARCES				Lg	Lg	12 50 28.9	
	comp=Z,1.3nm,0.3s,baz=121,slow=33,SNR=8.8						
	comp=Z,0.9nm,0.5s						
ARCES	ARCESS Array B	3.71	305	P	Pn	12 49 34.3	+0.7
ARCES				S	Sn	12 50 18.7	+0.7
KLF	Kolari	3.97	269	PN	Pn	12 49 38.5	+1.3
HEF	Hetta	4.04	286	PN	Pn	12 49 38.8	+0.6
HEF				SN	Sn	12 50 25.2	-0.8
TOF	Tornio	4.20	253	PG	Pg	12 49 53.6	-2.1
PAJU	Pajala	4.34	267	PG	Pb	12 49 52.1	-0.1
PAJU				SN	Sn	12 50 33.0	-0.6
LANU	Lannavaara	4.64	281	PN	Pn	12 49 46.5	0.0
I37NO	I37NO	5.94	291	i		13 24 50.0	
	baz=98,slow=324,SNR=10						
FINES	FINESS Array B	7.14	213	Pn	Pn	12 50 21.2	+0.5
	comp=Z,0.1nm,0.3s,baz=20,slow=13,SNR=2.4						
FINES				Lg	Lg	12 52 13.6	
	comp=Z,0.2nm,0.3s,baz=32,slow=27,SNR=5.1						
	comp=Z,1.4nm,1.0s						
SPITS	Spitsbergen Ar	11.71	342	Pn	Pn	12 51 21.6	-1.6
	baz=148,slow=14						
	comp=Z,8.6nm,1.0s						

NOU 23 12:51:24.1,14.°13S×167.°07E,h107^{km}**,mb3.8**/11**, Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.32	174	P	Pn	12 51 49.2	+0.6
LIFNC	LIFOU	6.61	179	P	Pn	12 52 59.6	+0.8
	40nm,1.0s						
MARNC	Mare, Loyalty	7.37	173	P	Pn	12 53 09.9	+0.9
	0.4nm,1.0s						
YATNC	Mamie plateau,	7.89	181	P	Pn	12 53 13.5	-2.6
DZM	Mont Dzumac	7.92	184	P	Pn	12 53 15.5	-1.1
OUENC	Ouen Island, N	8.25	181	P	Pn	12 53 22.1	+1.2
PINNC	Pines Island,	8.45	178	P	Pn	12 53 24.5	+0.9

IDC 23 13:01:19.9±2.7**,32.°15N×95.°39E,h0**^{km}**,mb3.4**/3**, mbtmp3.3**/4**,ML3.2**/1**,Error ellipse: s-maj=475.2km s-min=24.5km az=57.0,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.74	329	P	P	13 05 29.6	+0.4
	0.1nm,0.3s,baz=134,slow=12,SNR=1.9						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	22.28	331	P	P	13 06 17.8	-0.7

	0.7nm,0.9s,baz=142,slow=11,SNR=6.2						
	0.7nm,0.9s						
WRA	Warramunga Arr	63.83	139	P	P	13 11 55.0	+0.7
	0.4nm,0.9s,baz=328,slow=8.1,SNR=1.3						
	0.4nm,0.9s						
ASAR	Alice Springs	66.60	142	P	P	13 12 11.8	-0.4
	0.4nm,0.5s,baz=326,slow=6.8,SNR=11						
	0.4nm,0.5s						

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*IDC **23** 13:05:02.7±1.1, 2°.67N×31°.33W, h0km, mb3.8/6, mbtmp3.8/6, MS3.5/8, Error ellipse: s-maj=35.5km s-min=27.1km az=143.0*

*NEIC **23** 13:05:04.7±1.0, 2°.8N±0°.2×31°.4W±0°.2, h10km±2km, mb4.4/7, Error ellipse: s-maj=35.2km s-min=12.5km az=313.0*

ISC 23 13:05:04.1±0.8**, 2°.8N**±0°.1×**31°.4W**±0°.2**, h10km, n28, σ0s.85**/12**, mb4.0**/10**, MS3.5**/8**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	9.65	208	Pn	Pn	13 07 23.9	+0.7
H10N3	ASCENSION HYDR	19.86	122	T	T	13 30 03.2	
	baz=301,slow=75,SNR=221						
H10N2	ASCENSION HYDR	19.86	122	T	T	13 30 03.6	
	baz=301,slow=75,SNR=197						
H10N1	ASCENSION HYDR	19.88	122	T	T	13 30 04.7	
	baz=301,slow=75,SNR=201						
H10S3	ASCENSION HYDR	20.32	125	T	T	13 30 28.3	
	baz=301,slow=74,SNR=68						
H10S2	ASCENSION HYDR	20.34	125	T	T	13 30 35.9	
	baz=279,slow=74,SNR=26						
MDP	Montagnes des	21.34	277	LR	LR	13 16 25.9	
	comp=Z,51nm,21.4s,baz=348,slow=32						
DBIC	Dimbokro	26.71	81	LR	LR	13 19 30.0	
	comp=Z,117nm,18.3s,baz=272,slow=32						
H05S1	Guadeloupe/Mar	31.30	293	T	T	13 44 23.5	
	SNR=5.0						
TOA0	Torodi Ar. Sit	34.29	71	P	P	13 11 50.4	-0.6
TOA0				IAmb	IAmb	13 12 08.9	
	comp=Z,4.8nm,1.3s						
TORD	Torodi Ar. Bea	34.29	71	P	P	13 11 50.1	-0.9
	comp=Z,1.0nm,0.8s,baz=263,slow=7.3,SNR=4.3						
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	34.29	71	IAmb	IAmb	13 12 05.2	
	comp=Z,2.2nm,1.2s						
CPUP	Villa Florida	38.29	219	P	P	13 12 24.4	-0.6
	comp=Z,1.9nm,0.8s,baz=53,slow=15,SNR=2.5						
CPUP				LR	LR	13 27 08.7	
	comp=Z,39nm,18.8s,baz=43,slow=35						
	comp=Z,1.9nm,0.8s						
LPAZ	La Paz	40.95	241	LR	LR	13 29 26.8	
	comp=Z,104nm,19.8s,baz=52,slow=36						
ESDC	Sonseca Array	44.38	31	P	P	13 13 15.7	+0.8
	comp=Z,0.8nm,0.9s,baz=230,slow=9.4,SNR=4.3						
	comp=Z,0.8nm,0.9s						
ESDC	Sonseca Array	44.38	31	IAmb	IAmb	13 13 24.7	
	comp=Z,1.6nm,1.4s						
LVC	Limon Verde	44.47	233	LR	LR	13 32 38.5	
	comp=Z,46nm,18.1s,baz=32,slow=37						
NNA	Nana	47.50	251	LR	LR	13 33 20.5	
	comp=Z,41nm,19.2s,baz=69,slow=36						
ATAH	Atahualpa	47.94	258	LR	LR	13 34 06.9	
	comp=Z,55nm,20.4s,baz=52,slow=36						
LSZ	Lusaka	61.59	109	LR	LR	13 36 25.3	
	comp=Z,50nm,21.5s,baz=277,slow=31						
BOSA	Boshof	62.60	124	P	P	13 15 29.2	+0.1
	comp=Z,3.8nm,0.9s,baz=294,slow=13,SNR=3.6						
	comp=Z,3.8nm,0.9s						
BOSA	Boshof	62.60	124	IAmb	IAmb	13 15 30.4	
	comp=Z,9.7nm,1.1s						
NOA	NORSAR Array B	66.44	21	P	P	13 15 54.0	+0.5
	comp=Z,0.2nm,0.4s,baz=232,slow=6.1,SNR=1.9						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	73.22	300	P	P	13 16 36.9	+0.8
	comp=Z,0.4nm,0.9s,baz=105,slow=6.9,SNR=4.2						
	comp=Z,0.4nm,0.9s						
TXAR	Lajitas Array	73.22	300	P	P	13 16 35.3	-0.7
TX31	Lajitas Ar. Si	73.23	300	P	P	13 16 34.7	-1.3
TX31				IAmb	IAmb	13 16 48.2	
	comp=Z,9.9nm,1.5s						
TX32	Lajitas Array	73.23	300	P	P	13 16 35.1	-0.9
TX32				IAmb	IAmb	13 16 48.3	
	comp=Z,3.1nm,1.4s						
FCC	Fort Churchill	73.77	331	P	P	13 16 38.5	+0.1
FCC				IAmb	IAmb	13 16 48.8	
	comp=Z,10nm,1.2s						

IDC 23 13:18:08.2±1.9**, 22°.26N×45°.04W, h0km, mb3.6**/6**, mbtmp3.6**/6**, MS3.2**/2**, Error ellipse: s-maj=73.8km s-min=25.1km az=7.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	18.57	204	LR	LR	13 28 01.9	
	comp=Z,65nm,19.4s,baz=316,slow=32						
SJG	San Juan	20.24	262	LR	LR	13 28 52.7	
	comp=Z,97nm,21.1s,baz=86,slow=32						
H10N3	ASCENSION HYDR	42.31	132	T	T	14 10 57.7	
	baz=315,slow=75,SNR=78						
H10N2	ASCENSION HYDR	42.31	132	T	T	14 10 57.8	
	baz=315,slow=75,SNR=76						
H10N1	ASCENSION HYDR	42.33	132	T	T	14 10 59.0	
	baz=315,slow=75,SNR=120						
H10S3	ASCENSION HYDR	43.00	133	T	T	14 11 54.8	
	baz=315,slow=74,SNR=9.5						
H10S2	ASCENSION HYDR	43.02	133	T	T	14 11 57.0	
	baz=265,slow=74,SNR=6.0						
TORD	Torodi Ar. Bea	45.28	93	P	P	13 26 27.8	-0.2
	0.8nm,0.8s,baz=296,slow=10.0,SNR=4.2						
	0.8nm,0.8s						
TXAR	Lajitas Array	52.80	291	P	P	13 27 26.2	+0.6
	0.3nm,0.8s,baz=98,slow=9.0,SNR=3.9						
TXAR				PcP	PcP	13 28 34.3	-0.9
	0.1nm,0.5s,baz=111,slow=2.0,SNR=1.5						
	0.3nm,0.8s						
PDAR	Pinedale Array	56.75	307	P	P	13 27 54.0	-0.3
	0.4nm,0.7s,baz=90,slow=8.9,SNR=3.8						
	0.4nm,0.7s						
AKASG	Malin Array Be	63.23	43	P	P	13 28 37.9	-0.5
	0.3nm,0.4s,baz=280,slow=5.7,SNR=4.4						
	0.3nm,0.4s						
BRTR	Keskin Array B	67.67	55	P	P	13 29 08.4	+0.9
	0.6nm,0.7s,baz=308,slow=7.1,SNR=2.5						
	0.6nm,0.7s						
ILAR	Eielson Array	75.00	334	P	P	13 29 51.3	0.0
	1.5nm,0.8s,baz=72,slow=4.9,SNR=14						
	1.5nm,0.8s						

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*SOME **23** 13:25:14.9, 43°.78N×87°.17E, h15km*

*NNC **23** 13:25:14.1±3.0, 44°.01N×87°.21E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=23.7km s-min=18.2km az=93.0*

ISC 23 13:25:10.6±3.0**, 43°.64N**±0°.10×**87°.3E**±0°.1**, h10km, n13, σ2s.05**/19**, 8C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	4.16	337	*e*P	Pg	13 26 30.3	+0.1
	4.5nm,0.9s						
ZSN				*e*S	Sg	13 27 24.8	+0.6
	36nm,0.9s						
ZSN	Zaisan	4.16	337	Pg	Pg	13 26 30.3	+0.1
	4.5nm,0.9s						
ZSN				Lg	Lg	13 27 24.8	
	36nm,0.9s						
MK31	Makanchi Array	4.72	314	⇑Pn	Pn	13 26 22.9	+1.1
	0.4nm,0.2s,baz=125,slow=14,SNR=61						
MK31				⇓Sn	Sn	13 27 14.6	-1.9
	7.0nm,0.7s,baz=120,slow=27,SNR=5.1						
MK31				⇑Lg	Lg	13 27 36.8	
	13nm,0.6s,baz=129,slow=31,SNR=9.0						
MAKZ	Makanchi	4.89	312	⇓Pn	Pn	13 26 25.2	+1.0
	3.6nm,0.8s						
MAKZ				⇑Lg	Lg	13 27 40.2	
	17nm,1.1s						
KTMS	Ketmen	5.03	270	*e*P	Pg	13 26 43.8	-3.1
	1.1nm,0.5s						
KTMS				*e*S	Sg	13 27 47.9	-4.0
	5.1nm,0.5s						
DJR	Jarkent	5.43	280	*e*P	Pg	13 26 53.9	-0.8
	1.4nm,0.1s						
DJR				*e*S	Sg	13 28 05.0	+0.1
	8.0nm,0.5s						
DJR	Jarkent	5.43	280	Pg	Pg	13 26 53.9	-0.8
	1.4nm,0.1s						
DJR				Lg	Lg	13 28 05.0	
	8.0nm,0.5s						
PDGK	Podgornoye	5.66	269	Pg	Pg	13 26 59.8	+0.8
	1.4nm,0.5s						
PDGK				Lg	Lg	13 28 14.9	
	4.3nm,0.7s						
PDGK	Podgornoye	5.66	269	⇑Pn	Pn	13 26 38.6	+3.7
	2.8nm,0.5s						
PDGK				⇑Lg	Lg	13 28 14.2	
	10nm,0.8s						
KAPS	Kapalarasan	5.89	289	*e*P	Pg	13 27 04.4	+1.1
	1.6nm,0.0s						
KAPS				*e*S	Sg	13 28 23.3	+3.7
	7.5nm,0.2s						
KAPS	Kapalarasan	5.89	289	Pg	Pg	13 27 04.4	+1.1
	1.6nm,0.0s						
KAPS				Lg	Lg	13 28 23.3	
	7.5nm,0.2s						
KURBB	Kurchatov Arra	9.17	323	⇓Pn	Pn	13 27 21.4	-1.4
	0.7nm,0.4s						
KURBB				⇑Lg	Lg	13 29 55.8	
	13nm,0.7s						
KURK	Kurchatov	9.20	323	⇑Pn	Pn	13 27 21.9	-1.3
	3.4nm,1.3s						
KURK				⇑Sn	Sn	13 29 06.0	-0.6
	2.3nm,1.0s						
KURK				⇓Lg	Lg	13 29 54.8	
	6.8nm,0.9s						

IDC 23 13:28:09.8±2.5**, 22°.20N×45°.08W, h0km, mb3.7**/5**, mbtmp3.7**/5**, Error ellipse: s-maj=98.8km s-min=29.2km az=12.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	42.30	132	T	T	14 21 07.3	
	baz=315,slow=75,SNR=58						
H10N2	ASCENSION HYDR	42.30	131	T	T	14 21 21.1	
	baz=315,slow=75,SNR=41						
H10N1	ASCENSION HYDR	42.32	131	T	T	14 21 13.0	
	baz=315,slow=75,SNR=93						
TORD	Torodi Ar. Bea	45.31	93	P	P	13 36 29.5	-0.4
	0.4nm,0.8s,baz=295,slow=7.8,SNR=2.0						
	0.4nm,0.8s						
TXAR	Lajitas Array	52.78	291	P	P	13 37 27.8	+0.6
	0.3nm,0.7s,baz=87,slow=5.6,SNR=3.3						
	0.3nm,0.7s						
PDAR	Pinedale Array	56.76	307	P	P	13 37 55.5	-0.6
	0.4nm,0.6s,baz=112,slow=9.8,SNR=5.0						
	0.4nm,0.6s						
ILAR	Eielson Array	75.04	334	P	P	13 39 53.0	-0.2
	1.3nm,0.8s,baz=74,slow=4.7,SNR=15						
	1.3nm,0.8s						
AKTO	Aktyubinsk	81.11	39	P	P	13 40 27.6	+0.5
	1.5nm,0.7s,baz=311,slow=8.9,SNR=5.3						
	1.5nm,0.7s						

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*IDC **23** 13:33:34.9±0.5, 22°.32N×45°.09W, h0km, mb4.3/33, mbtmp4.3/33, MS3.8/69, Error ellipse: s-maj=15.7km s-min=11.4km az=136.0*

*NEIC **23** 13:33:36.9±1.4, 22°.3N±0°.1×45°.1W±0°.1, h10km±1km, mb4.7/104, Error ellipse: s-maj=19.5km s-min=17.1km az=121.0*

*GCMT **23** 13:33:38.8±0.3, 22°.60N±0°.04×44°.95W±0°.02, h15km±1km, MW4.8/93, Moment Tensor Solution. s15,c16; s93,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.14; $M_{\theta\theta}$0.21±.10; $M_{\phi\phi}$1.53±.10; $M_{r\theta}$0.96±.29; $M_{\theta\phi}$0.19±.06; $M_{\phi r}$-0.40±.19; Best double couple: $M_0$1.88900×10^{16} NP1:ϕ_s207.00000°, δ44.00000°, λ-57.00000°. NP2: ϕ_s344.00000°, δ55.00000°, λ-118.00000°. Principal axes: T 1.5840, Plg6.0000°, Azm94.0000°; N 0.6050, Plg22.0000°, Azm1.0000°; P -2.1950, Plg67.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 13:33:36.8±0.4**, 22°.29N**±0°.08×**45°.04W**±0°.08**, h14km, n215, σ0s.75**/163**, mb4.6**/92**, MS3.9**/70**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	18.61	204	LR	LR	13 43 28.9	
	comp=Z,145nm,21.7s,baz=70,slow=32						
SJG	San Juan	20.24	262	LR	LR	13 44 18.3	
	comp=Z,359nm,21.5s,baz=96,slow=32						
SDV	Santo Domingo	27.96	246	P	P	13 39 29.2	+1.8
	3.3nm,0.3s,baz=53,slow=5.1,SNR=3.6						
SDV				LR	LR	13 49 35.7	
	comp=Z,126nm,21.7s,baz=48,slow=34						
	3.3nm,0.3s						
RCBR	Riachuelo	29.34	161	LR	LR	13 48 08.7	
	comp=Z,234nm,21.7s,baz=133,slow=30						
ZARC	Zaragoza, Cauc	32.27	247	P	P	13 40 04.7	-0.6
ROSC	El Rosal	33.22	243	LR	LR	13 54 34.4	
	comp=Z,123nm,20.6s,baz=71,slow=38						
SADO	Sadowa	35.81	317	LR	LR	13 52 09.7	
	comp=Z,230nm,21.5s,baz=157,slow=31						
TKL	Tuckaleechee C	36.18	300	LR	LR	13 52 17.0	
	comp=Z,260nm,21.9s,baz=116,slow=31						
SCHQ	Schefferville	36.38	339	P	P	13 40 40.5	0.0
	4.1nm,0.8s,baz=147,slow=9.0,SNR=5.7						
SCHQ				LR	LR	13 53 35.6	
	comp=Z,125nm,21.6s,baz=275,slow=33						
	4.1nm,0.8s						
SCHQ	Schefferville	36.38	339	P	P	13 40 41.0	+0.5
MDT	Midelt	37.15	65	LR	LR	13 53 07.8	
	comp=Z,176nm,19.6s,baz=340,slow=32						
BDFB	Brasilia	37.81	185	P	P	13 40 53.8	+0.7
	6.1nm,0.7s,baz=32,slow=6.7,SNR=7.0						
	6.1nm,0.7s						
BDFB	Brasilia	37.81	185	IAmb	IAmb	13 40 54.8	
	comp=Z,12nm,1.0s						
ESDC	Sonseca Array	38.86	54	P	P	13 41 00.8	-1.0
	comp=Z,1.4nm,1.0s,baz=253,slow=8.8,SNR=8.0						
ESDC				PcP	PcP	13 43 13.0	+0.3
	comp=Z,1.1nm,1.0s,baz=270,slow=2.6,SNR=4.7						
ESDC				LR	LR	13 54 25.8	
	comp=Z,150nm,19.0s,baz=244,slow=32						
	comp=Z,1.4nm,1.0s						
PLAL	Pickwick Lake	39.55	298	P	P	13 41 07.9	+0.4
JTS	Las Juntas de	40.00	259	LR	LR	13 54 45.2	
	comp=Z,112nm,21.0s,baz=148,slow=32						
SIV	San Ignacio	41.16	204	P	P	13 41 21.2	+0.2
	comp=Z,0.6nm,0.4s,baz=93,slow=12,SNR=1.4						
	comp=Z,0.6nm,0.4s						
DBIC	Dimbokro	41.72	106	LR	LR	13 55 33.4	
	comp=Z,178nm,21.7s,baz=292,slow=32						
H10N3	ASCENSION HYDR	42.33	132	T	T	14 26 24.8	
	baz=315,slow=75,SNR=142						
H10N2	ASCENSION HYDR	42.33	132	T	T	14 26 25.2	
	baz=315,slow=75,SNR=152						
H10N1	ASCENSION HYDR	42.35	132	T	T	14 26 26.1	
	baz=315,slow=75,SNR=207						
CCM	Cathedral Cave	42.48	302	P	P	13 41 31.7	0.0
D41A	Chassel	42.75	316	P	P	13 41 33.1	-0.6
D41A				IAmb	IAmb	13 41 42.4	
	comp=Z,11nm,1.0s						
W41B	Gary Mavity, V	42.97	298	P	P	13 41 34.9	-0.7
WHAR	Wooly Hollow	43.01	298	P	P	13 41 35.3	-0.7
WHAR				IAmb	IAmb	13 41 49.9	
	comp=Z,19nm,1.3s						
H10S3	ASCENSION HYDR	43.02	133	T	T	14 27 23.2	
	baz=315,slow=74,SNR=20						
H10S2	ASCENSION HYDR	43.04	133	T	T	14 27 22.7	
	baz=265,slow=74,SNR=9.6						
U40A	Yellville	43.56	300	P	P	13 41 39.6	-0.9
U40A				IAmb	IAmb	13 41 42.1	
	comp=Z,7.0nm,0.8s						
ATAH	Atahualpa	43.85	232	LR	LR	14 00 21.6	
	comp=Z,101nm,21.2s,baz=37,slow=37						
S39A	Bolivar	44.07	302	P	P	13 41 44.2	-0.2
FRB	Frobisher Bay	44.31	345	P	P	13 41 45.6	-0.4
	comp=Z,3.1nm,0.8s,baz=190,slow=6.1,SNR=3.0						
FRB				LR	LR	13 58 37.8	
	comp=Z,150nm,20.3s,baz=178,slow=34						
	comp=Z,3.1nm,0.8s						
N38A	Joes South For	44.43	306	P	P	13 41 47.5	+0.2
N38A				IAmb	IAmb	13 41 48.7	
	comp=Z,11nm,0.8s						
HHAR	Hobbs	44.43	300	P	P	13 41 47.7	+0.2
LPAZ	La Paz	44.52	212	P	P	13 41 49.2	+0.3
	comp=Z,1.4nm,0.7s,baz=19,slow=9.5,SNR=6.4						
LPAZ				LR	LR	13 59 31.4	
	comp=Z,128nm,20.5s,baz=6.0,slow=35						
	comp=Z,1.4nm,0.7s						
LPAZ	La Paz	44.52	212	P	P	13 41 48.6	-0.3
SFJD	Kangerlussuaq	44.84	357	LR	LR	13 56 52.3	
	comp=Z,80nm,20.3s,baz=193,slow=31						
BORG	Borgarnes	45.22	14	LR	LR	13 56 31.2	
	comp=Z,54nm,18.7s,baz=248,slow=30						
TOA0	Torodi Ar. Sit	45.28	93	P	P	13 41 53.4	-1.1
TOA0				IAmb	IAmb	13 41 54.4	
	comp=Z,10nm,1.2s						
TORD	Torodi Ar. Bea	45.28	93	P	P	13 41 53.6	-0.9
	comp=Z,3.3nm,0.9s,baz=300,slow=7.2,SNR=13						
TORD				LR	LR	13 58 33.9	
	comp=Z,251nm,19.8s,baz=250,slow=33						
	comp=Z,3.3nm,0.9s						
TORD	Torodi Ar. Bea	45.28	93	P	P	13 41 53.5	-0.9
TORD				IAmb	IAmb	13 42 03.1	
	comp=Z,8.6nm,1.2s						
EKA	Eskdalemuir Ar	45.29	32	LR	LR	13 56 35.8	
	comp=Z,79nm,18.1s,baz=244,slow=30						
NNA	Nana	46.19	226	LR	LR	14 00 09.7	
	comp=Z,64nm,20.9s,baz=41,slow=34						
ICESG	Greenland Ices	46.92	3	*i* P	P	13 42 06.3	-0.6
ICESG				IAmb	IAmb	13 42 07.9	
	comp=Z,6.1nm,0.7s						
CMIG	Matias Romero	47.05	273	LR	LR	14 00 18.7	
	comp=Z,98nm,21.4s,baz=46,slow=34						
Z35A	Perchaven, San	47.05	295	P	P	13 42 09.0	+0.8
PB11	IPOC Station P	48.22	212	P	P	13 42 15.5	-2.0
ULM	Lac du Bonnet	48.34	318	LR	LR	14 00 04.7	
	comp=Z,211nm,21.0s,baz=102,slow=33						
KEST	Kesra	48.84	61	P	P	13 42 23.2	+1.1
	comp=Z,12nm,1.0s,baz=221,slow=3.7,SNR=6.8						
KEST				LR	LR	14 00 17.9	
	comp=Z,102nm,21.7s,baz=249,slow=33						
	comp=Z,12nm,1.0s						
KEST	Kesra	48.84	61	P	P	13 42 22.9	+0.8
CPUP	Villa Florida	49.78	194	P	P	13 42 28.3	-0.8
	comp=Z,4.3nm,0.8s,baz=19,slow=8.6,SNR=5.5						
CPUP				LR	LR	14 03 24.0	
	comp=Z,35nm,18.8s,baz=28,slow=36						
	comp=Z,4.3nm,0.8s						
CPUP	Villa Florida	49.78	194	P	P	13 42 28.6	-0.5
CPUP				IAmb	IAmb	13 42 29.6	
	comp=Z,13nm,1.1s						
VLC	Villacollemand	50.20	50	P	P	13 42 32.9	+0.7
DAVOX	Davos/Dischmat	50.22	47	LR	LR	14 00 02.7	
	comp=Z,101nm,20.8s,baz=263,slow=32						
LVC	Limon Verde	50.33	209	LR	LR	14 04 07.7	
	comp=Z,52nm,20.3s,baz=7.5,slow=36						
FCC	Fort Churchill	50.34	329	P	P	13 42 33.5	+0.5
FCC				IAmb	IAmb	13 42 34.1	
	comp=Z,7.9nm,0.9s						
SUMG	Summit	50.45	3	P	P	13 42 34.6	+0.5
SUMG				IAmb	IAmb	13 42 38.7	
	comp=Z,7.6nm,1.1s						
SUMG	Summit	50.45	3	*i* P	P	13 42 33.1	-1.0
SUMG				IAmb	IAmb	13 42 34.9	
	comp=Z,7.7nm,1.1s						
AMTX	Amarillo	50.70	297	P	P	13 42 36.3	0.0
FETA	Feichten	50.84	47	*e*P	P	13 42 37.7	+0.5
	comp=Z,9.2nm,1.1s						
MOTA	Moosalm	51.14	46	*e*P	P	13 42 40.3	+0.8
	comp=Z,7.6nm,1.3s						
SQTA	Sankt Quirin	51.19	47	*e*P	P	13 42 40.7	+0.9
	comp=Z,17nm,1.1s						
TEOL	Teolo	51.25	49	P	P	13 42 40.1	-0.1
CTI	Castel Tesino	51.32	48	P	P	13 42 40.9	0.0
CTI				IAmb	IAmb	13 42 41.4	
	comp=Z,14nm,1.1s						
WATA	Walderalm	51.45	47	*e*P	P	13 42 42.5	+0.6
	comp=Z,14nm,1.3s						
WTTA	Wattenberg	51.48	47	*e*P	P	13 42 42.9	+0.8
	comp=Z,10.0nm,1.0s						
MSTX	Muleshoe	51.64	296	P	P	13 42 43.7	+0.3
MSTX				IAmb	IAmb	13 42 45.8	
	comp=Z,5.4nm,0.8s						
KBA	Koelnbreinsper	52.61	47	*e*P	P	13 42 50.7	+0.2
	comp=Z,8.6nm,1.1s						
TXAR	Lajitas Array	52.79	291	P	P	13 42 51.6	-0.3
	comp=Z,1.3nm,0.8s,baz=91,slow=7.3,SNR=15						
TXAR				PcP	PcP	13 44 01.6	+0.1
	comp=Z,0.4nm,0.8s,baz=101,slow=4.8,SNR=1.6						
TXAR				LR	LR	14 04 29.4	
	comp=Z,81nm,21.1s,baz=90,slow=35						
	comp=Z,1.3nm,0.8s						
TX31	Lajitas Ar. Si	52.79	291	P	P	13 42 51.6	-0.4
TX31				IAmb	IAmb	13 42 52.6	
	comp=Z,9.1nm,1.1s						
TX32	Lajitas Array	52.79	291	P	P	13 42 51.7	-0.2
ITQB	Itaqui	52.85	193	P	P	13 42 51.5	-0.6
VAE	Valguarnera	52.91	59	LR	LR	14 01 35.8	
	comp=Z,64nm,22.0s,baz=342,slow=32						
CLL	Collm	53.03	42	*i* P	P	13 42 53.8	+0.5
	comp=Z,12nm,1.2s						
CLL				*i* x	x	13 42 59.7	
CLL				Lm	MLR	14 01 00.0	
	comp=Z,100nm,19.5s						
GEC2	GERESS Array S	53.08	45	P	P	13 42 53.9	0.0
GEC2				IAmb	IAmb	13 42 55.0	
	comp=Z,12nm,1.5s						
GERES	GERESS Array B	53.08	45	P	P	13 42 53.9	0.0
	comp=Z,0.7nm,0.7s,baz=258,slow=5.3,SNR=5.8						
	comp=Z,0.7nm,0.7s						
GERES	GERESS Array B	53.08	45	P	P	13 42 53.7	-0.1
JMIC	Jan Mayen	53.11	14	LR	LR	14 00 11.4	
	comp=Z,39nm,18.2s,baz=244,slow=30						
OBKA	Obir	53.37	48	*e*P	P	13 42 56.4	+0.4
	comp=Z,11nm,1.1s						
SOKA	Soboth	53.72	48	*e*P	P	13 42 57.0	-1.6
	comp=Z,6.2nm,1.3s						
ARSA	Arzberg	54.11	47	*i* P	P	13 43 01.3	-0.1
	comp=Z,10nm,1.4s						
CONA	Conrad Observa	54.40	46	*e*P	P	13 43 03.6	0.0
	comp=Z,7.6nm,1.5s						
NOA	NORSAR Array B	54.56	30	P	P	13 43 04.5	+0.2
	comp=Z,2.4nm,0.9s,baz=250,slow=7.2,SNR=4.7						
NOA				LR	LR	14 02 04.2	
	comp=Z,117nm,20.6s,baz=255,slow=31						
	comp=Z,2.4nm,0.9s						
ANMO	Albuquerque	54.62	298	LR	LR	14 06 45.5	
	comp=Z,56nm,18.1s,baz=106,slow=36						
VRAC	Vranov	55.03	45	LR	LR	14 02 26.4	
	comp=Z,28nm,21.4s,baz=234,slow=32						
HFS	Hagfors	55.45	31	P	P	13 43 11.1	+0.3
	comp=Z,1.7nm,0.8s,baz=296,slow=17,SNR=6.7						
HFS				LR	LR	14 02 51.8	
	comp=Z,95nm,19.0s,baz=252,slow=32						
	comp=Z,1.7nm,0.8s						
O20A	White River Ci	55.79	304	P	P	13 43 14.9	+1.1
O20A				IAmb	IAmb	13 43 16.0	
	comp=Z,8.9nm,1.3s						
RLMT	Red Lodge	56.54	310	P	P	13 43 19.3	+0.2
RLMT				IAmb	IAmb	13 43 21.1	
	comp=Z,5.0nm,1.0s						
BW06	Boulder Array	56.73	307	P	P	13 43 19.7	-0.8
PD31	Pinedale Array	56.73	307	P	P	13 43 19.7	-0.9
PDAR	Pinedale Array	56.73	307	P	P	13 43 20.1	-0.5
	comp=Z,2.8nm,0.9s,baz=95,slow=7.9,SNR=19						
PDAR				LR	LR	14 05 46.6	
	comp=Z,93nm,19.9s,baz=96,slow=34						
	comp=Z,2.8nm,0.9s						
PDAR	Pinedale Array	56.73	307	P	P	13 43 19.7	-0.9
RDMU	Red Mountain	56.79	305	P	P	13 43 20.6	-0.4
SRU	San Rafael Swe	57.59	303	P	P	13 43 27.0	+0.3
SRU				IAmb	IAmb	13 43 28.5	
	comp=Z,4.7nm,0.9s						
TPAW	Teton Pass	57.74	308	P	P	13 43 27.6	-0.1
YHL	Hebgen Lake	57.89	310	P	P	13 43 28.8	0.0
YHL				IAmb	IAmb	13 43 38.8	
	comp=Z,10nm,1.3s						
BOZ	Bozeman (W)	58.20	311	P	P	13 43 30.8	0.0
HWUT	Hardware Ranch	58.26	306	P	P	13 43 30.8	-0.5
HWUT				IAmb	IAmb	13 43 44.0	
	comp=Z,5.2nm,1.1s						
TUC	Tucson	58.48	295	P	P	13 43 32.7	-0.1
RES	Resolute Bay	58.52	346	LR	LR	14 07 38.1	
	comp=Z,81nm,18.1s,baz=68,slow=35						
WUAZ	Wupatki	58.58	299	P	P	13 43 33.5	0.0
WUAZ				IAmb	IAmb	13 43 35.8	
	comp=Z,6.0nm,1.0s						
NLU	North Lily Min	58.74	304	P	P	13 43 35.0	+0.3
LRM	Limekiln Ridge	58.78	311	P	P	13 43 34.9	0.0
MSU	Marysvale	58.93	302	P	P	13 43 36.7	+0.7
MCMT	McKenzie Canyo	59.08	310	P	P	13 43 37.9	+0.9
U15A	North Rim	59.22	300	P	P	13 43 38.5	+0.3
DUG	Dugway, Tooele	59.28	304	P	P	13 43 37.8	-0.6
DUG				IAmb	IAmb	13 43 39.7	

	comp=Z,5.2nm,0.8s						
LPIG	La Paz	59.52	286	LR	LR	14 08 31.6	
	comp=Z,58nm,21.5s,baz=28,slow=35						
EDM	Edmonton	59.53	320	P	P	13 43 39.2	-0.5
CCUT	Cedar City	59.95	301	P	P	13 43 43.6	+0.4
PSUT	Pine Spring	60.23	303	P	P	13 43 45.6	+0.5
HLID	Hailey	60.26	308	P	P	13 43 45.2	+0.1
NOR	Nord	60.47	5	*i* P	P	13 43 44.6	-1.1
NOR				IAmb	IAmb	13 43 46.3	
	comp=Z,6.7nm,1.1s						
BURAR	Bucovina Array	60.70	47	P	P	13 43 48.4	+0.6
MT09	Talagante	60.99	205	P	P	13 43 49.6	-0.4
YKA	Yellowknife Ar	61.04	330	P	P	13 43 49.0	-0.8
	comp=Z,2.5nm,0.8s,baz=101,slow=7.3,SNR=10						
YKA				LR	LR	14 08 32.2	
	comp=Z,103nm,20.2s,baz=84,slow=34						
	comp=Z,2.5nm,0.8s						
ELK	Elko	61.08	305	LR	LR	14 07 42.6	
	comp=Z,204nm,21.7s,baz=90,slow=34						
ELK	Elko	61.08	305	P	P	13 43 50.6	-0.2
ELK				IAmb	IAmb	13 43 53.0	
	comp=Z,3.6nm,0.9s						
MLR	Muntele Rosu	61.29	49	P	P	13 43 53.2	+1.2
	comp=Z,8.0nm,0.8s,baz=253,slow=5.3,SNR=12						
MLR				LR	LR	14 06 58.1	
	comp=Z,74nm,21.8s,baz=246,slow=33						
	comp=Z,8.0nm,0.8s						
MLR	Muntele Rosu	61.29	49	P	P	13 43 52.5	+0.5
PLID	Pearl Lake	61.30	310	P	P	13 43 52.1	-0.1
PLID				IAmb	IAmb	13 43 54.2	
	comp=Z,3.8nm,0.9s						
RDO	Rodhopi	61.32	54	P	P	13 43 52.6	+0.5
FINES	FINESS Array B	61.65	31	P	P	13 43 53.6	-0.3
	comp=Z,1.3nm,0.8s,baz=316,slow=8.0,SNR=4.3						
FINES				LR	LR	14 06 51.8	
	comp=Z,104nm,18.3s,baz=264,slow=32						
	comp=Z,1.3nm,0.8s						
NEW	Newport	61.90	314	LR	LR	14 08 24.4	
	comp=Z,182nm,21.1s,baz=90,slow=34						
NEW	Newport	61.90	314	P	P	13 43 55.8	-0.2
NEW				IAmb	IAmb	13 44 05.9	
	comp=Z,5.5nm,0.8s						
MNK	Minsk	62.29	39	*i* P	P	13 43 56.2	-2.2
	comp=E,1.0nm,0.5s						
MNK				*i* P	P	13 43 56.2	-2.2
	comp=N,3.0nm,0.4s						
MNK				*i* P	P	13 43 56.2	-2.2
	comp=Z,17nm,0.8s,baz=270						
MNK				*i* PcP	pwP	13 44 15.9	+9.0
MNK				*i* PP	PP	13 46 33.9	+19
MNK				*i* PPP	PPP	13 48 16.9	
MNK				*i* S	S	13 52 21.8	-2.2
MNK				*i* SS	SS	13 57 19.9	+53
MNK				*i* SSS	SSS	14 01 08.0	
MNK				*i* LQ	LQ	14 10 56.4	
MNK				*i* LR	LR	14 15 44.7	
MNK				*i* LRM	MLR	14 17 45.6	
	comp=E,26nm,16.6s						
MNK				*i* LRM	MLR	14 17 55.2	
	comp=Z,202nm,17.9s						
MNK				*i* LRM	MLR	14 17 55.8	
	comp=N,157nm,20.4s						
TPNV	Topopah Spring	62.31	301	P	P	13 43 59.9	+0.8
TPNV				IAmb	IAmb	13 44 01.3	
	comp=Z,5.3nm,1.1s						
ARCES	ARCESS Array B	62.51	22	P	P	13 43 59.5	-0.1
	comp=Z,2.7nm,0.9s,baz=267,slow=6.0,SNR=5.8						
	comp=Z,2.7nm,0.9s						
PFO	Pinyon Flats O	63.00	297	LR	LR	14 08 45.2	
	comp=Z,37nm,21.6s,baz=82,slow=34						
TIRR	Tirgusor	63.12	50	P	P	13 44 03.5	-0.6
D08A	Wollman Farm,	63.19	313	P	P	13 44 04.2	-0.4
AKASG	Malin Array Be	63.20	43	P	P	13 44 04.1	-0.4
	comp=Z,3.3nm,0.8s,baz=278,slow=5.6,SNR=14						
AKASG				LR	LR	14 07 27.5	
	comp=Z,40nm,21.8s,baz=334,slow=32						
	comp=Z,3.3nm,0.8s						
AKBB	Malin Array Si	63.20	43	P	P	13 44 03.9	-0.6
AKBB				IAmb	IAmb	13 44 05.2	
	comp=Z,7.7nm,1.1s						
NVAR	Mina Array Bea	63.71	303	P	P	13 44 08.1	-0.4
	comp=Z,0.7nm,0.8s,baz=85,slow=6.1,SNR=5.6						
NVAR				LR	LR	14 09 57.6	
	comp=Z,226nm,20.5s,baz=88,slow=34						
	comp=Z,0.7nm,0.8s						
NVAR	Mina Array Bea	63.71	303	P	P	13 44 07.6	-0.8
RYN	Ryan	63.85	303	P	P	13 44 09.0	-0.3
RYN				IAmb	IAmb	13 44 11.8	
	comp=Z,3.5nm,0.9s						
K05A	Summer Lake	65.06	308	P	P	13 44 17.7	+0.6
J04D	Umpqua Nationa	65.87	309	P	P	13 44 22.4	0.0
A36M	Sachs Harbour	65.96	340	P	P	13 44 23.0	+0.9
YBH	Yreka Blue Hor	66.54	307	LR	LR	14 12 09.8	
	comp=Z,123nm,19.4s,baz=86,slow=35						
PLCA	Paso Flores	67.05	201	P	P	13 44 29.6	+0.1
	comp=Z,1.8nm,0.8s,baz=49,slow=3.3,SNR=4.2						
PLCA				LR	LR	14 13 59.4	
	comp=Z,31nm,19.2s,baz=27,slow=36						
	comp=Z,1.8nm,0.8s						
CBB	Campbell River	67.13	316	P	P	13 44 30.1	0.0
OBN	Obninsk	67.27	38	P	P	13 44 31.4	+0.6
	comp=Z,2.9nm,0.4s,baz=183,slow=19,SNR=3.8						
OBN				LR	LR	14 11 34.7	
	comp=Z,26nm,18.3s,baz=184,slow=34						
	comp=Z,2.9nm,0.4s						
BR131	Keskin Array S	67.64	55	P	P	13 44 34.1	+0.4
BRTR	Keskin Array B	67.64	55	P	P	13 44 34.4	+0.6
	comp=Z,2.8nm,0.9s,baz=264,slow=4.7,SNR=12						
	comp=Z,2.8nm,0.9s						
BRTR	Keskin Array B	67.64	55	P	P	13 44 33.8	+0.1
KLMR	Klimovskoe	68.17	32	*e*P	P	13 44 34.6	-1.8
KLMR				AMP		13 44 43.8	
	comp=Z,9.0nm,1.1s						
BBB	Bella Bella	68.53	319	LR	LR	14 13 50.8	
	comp=Z,136nm,18.2s,baz=88,slow=35						
DLBC	Dease Lake	68.70	326	LR	LR	14 12 14.3	
	comp=Z,56nm,21.0s,baz=136,slow=34						
INK	Inuvik	68.95	337	LR	LR	14 14 13.7	
	comp=Z,139nm,18.6s,baz=82,slow=35						
INK	Inuvik	68.95	337	P	P	13 44 40.8	-0.4
INK				IAmb	IAmb	13 44 41.5	
	comp=Z,4.5nm,0.9s						
EIL	Elat	70.98	65	LR	LR	14 16 49.0	
	comp=Z,130nm,19.3s,baz=274,slow=36						
N31M	Braeburn, Yuko	71.03	330	P	P	13 44 54.3	+0.2
M30M	Minto, Yukon	71.27	331	P	P	13 44 55.2	-0.3
M30M				IAmb	IAmb	13 45 12.3	
	comp=Z,8.8nm,1.4s						
HYT	Haines Junctio	71.99	329	P	P	13 45 00.0	0.0
HYT				IAmb	IAmb	13 45 15.7	
	comp=Z,9.8nm,1.3s						
DAWY	Dawson	72.07	333	P	P	13 45 00.1	-0.2
DAWY				IAmb	IAmb	13 45 01.2	
	comp=Z,5.4nm,1.0s						
BMAR	Burnt Mountain	73.22	337	P	P	13 45 07.3	+0.1
KIV	Kislovodsk	73.29	49	P	P	13 45 09.2	+1.1
BCAR	Beaver Creek A	73.37	332	P	P	13 45 07.3	-0.8
L27K	Beaver Creek,	73.39	332	P	P	13 45 08.0	-0.3
L27K				IAmb	IAmb	13 45 09.2	
	comp=Z,6.1nm,0.9s						
KBZ	Khabaz	73.50	49	P	P	13 45 11.0	+1.8
	comp=Z,6.3nm,1.0s,baz=308,slow=3.5,SNR=8.6						
	comp=Z,6.3nm,1.0s						
KIRV	Kirov	73.52	33	LR	LR	14 13 16.5	
	comp=Z,74nm,21.7s,baz=295,slow=32						
M27K	Edge Creek, AK	73.61	331	P	P	13 45 09.2	-0.5
M27K				IAmb	IAmb	13 45 11.7	
	comp=Z,3.9nm,0.8s						
TSUM	Tsumeb	73.79	119	LR	LR	14 09 51.9	
	comp=Z,102nm,20.9s,baz=332,slow=30						
BELG	Belogornoye	74.23	40	P	P	13 45 14.0	+0.7
	comp=Z,26nm,0.8s,baz=250,slow=8.2,SNR=6.4						
BELG				LR	LR	14 15 56.1	
	comp=Z,103nm,18.1s,baz=319,slow=34						
	comp=Z,26nm,0.8s						
J25K	Salcha River,	74.41	334	P	P	13 45 13.9	-0.3
MCARA	McCarthy VSAT	74.42	330	P	P	13 45 14.8	+0.5
TOLK	Toolik Lake Re	74.59	338	P	P	13 45 15.1	-0.1
TOLK				IAmb	IAmb	13 45 18.0	
	comp=Z,10nm,1.2s						
WAX	Waxell Ridge	74.62	329	P	P	13 45 16.6	+1.1
GLB	Gilahina Butte	74.76	331	P	P	13 45 16.2	-0.1
GLB				IAmb	IAmb	13 45 17.4	
	comp=Z,5.2nm,1.0s						
IL31		74.97	334	P	P	13 45 17.1	-0.2
IL31				IAmb	IAmb	13 45 18.3	
	comp=Z,7.8nm,0.8s						
ILAR	Eielson Array	74.97	334	P	P	13 45 17.3	-0.1
	comp=Z,6.6nm,0.8s,baz=72,slow=4.8,SNR=56						
ILAR				LR	LR	14 17 39.7	
	comp=Z,128nm,19.8s,baz=62,slow=35						
	comp=Z,6.6nm,0.8s						
ILAR	Eielson Array	74.97	334	P	P	13 45 17.0	-0.4
H24K	Noodor Dome	74.99	335	P	P	13 45 17.3	-0.2
CCB	Clear Creek Bu	75.39	334	P	P	13 45 19.4	-0.3
CCB				IAmb	IAmb	13 45 20.6	
	comp=Z,9.1nm,1.0s						
MDM	Murphy Dome	75.44	335	P	P	13 45 19.9	-0.2
MDM				IAmb	IAmb	13 45 21.2	
	comp=Z,8.8nm,1.2s						
H23K	Yukon River	75.63	336	P	P	13 45 21.9	+0.7
H23K				IAmb	IAmb	13 45 23.1	
	comp=Z,9.8nm,0.9s						
GNI	Garni	75.82	52	P	P	13 45 24.6	+1.7
	comp=Z,5.7nm,0.5s,baz=278,slow=7.1,SNR=3.1						
	comp=Z,5.7nm,0.5s						
GNI	Garni	75.82	52	IAmb	IAmb	13 45 25.5	
	comp=Z,36nm,1.4s						
I23K	Minto, Yukon-K	75.82	335	P	P	13 45 21.6	-0.5
I23K				IAmb	IAmb	13 45 23.6	
	comp=Z,5.9nm,0.9s						
I21K	Tanana	76.82	336	P	P	13 45 28.0	+0.1
I21K				IAmb	IAmb	13 45 29.3	
	comp=Z,9.7nm,1.2s						
TRF	Thorofare Moun	76.85	334	P	P	13 45 28.5	+0.1
TRF				IAmb	IAmb	13 45 29.3	
	comp=Z,6.3nm,0.9s						
BPAW	Bear Paw Mtn.	76.88	334	P	P	13 45 27.0	-1.3
H21K	Melozitna Rive	76.93	336	P	P	13 45 28.4	-0.2
H21K				IAmb	IAmb	13 45 30.2	
	comp=Z,3.9nm,0.9s						
MBAR	Mbarara	77.08	96	LR	LR	14 17 12.9	
	comp=Z,166nm,21.2s,baz=188,slow=34						
IMAR	Indian Mountai	77.14	337	P	P	13 45 30.3	+0.6
CUT	Chulitna	77.26	333	P	P	13 45 30.4	0.0
ARU	Arti	78.89	33	P	P	13 45 40.5	+0.9
	comp=Z,0.5nm,0.3s,baz=278,slow=4.1,SNR=5.3						
ARU				LR	LR	14 16 45.2	
	comp=Z,79nm,20.4s,baz=279,slow=33						
	comp=Z,0.5nm,0.3s						
ARU	Arti	78.89	33	IAmb	IAmb	13 45 48.3	
	comp=Z,14nm,1.4s						
M19K	Big River Lodg	79.23	333	P	P	13 45 41.2	-0.1
M19K				IAmb	IAmb	13 45 42.8	
	comp=Z,8.6nm,1.0s						
N19K	Bonanza Creek	79.77	332	P	P	13 45 44.0	-0.4
N19K				IAmb	IAmb	13 45 46.2	
	comp=Z,7.3nm,0.8s						
KDAK	Kodiak Island	80.28	329	LR	LR	14 20 51.6	
	comp=Z,81nm,20.4s,baz=85,slow=35						
LSZ	Lusaka	80.84	111	LR	LR	14 20 25.6	
	comp=Z,53nm,18.1s,baz=310,slow=35						
AKTO	Aktyubinsk	81.01	39	P	P	13 45 52.1	+0.9
	comp=Z,7.4nm,0.9s,baz=286,slow=6.5,SNR=19						
AKTO				LR	LR	14 20 29.8	
	comp=Z,44nm,18.5s,baz=307,slow=35						
	comp=Z,7.4nm,0.9s						
NRIK	Noril'sk	82.52	15	P	P	13 46 00.3	+1.5
	comp=Z,1.5nm,0.3s,baz=348,slow=6.7,SNR=4.6						
	comp=Z,1.5nm,0.3s						
ABKAR	Akbulak array	82.64	40	P	P	13 46 00.3	+0.5
ABKAR				IAmb	IAmb	13 46 01.9	
	comp=Z,5.9nm,1.0s						
ABKAR	Akbulak array	82.64	40	P	P	13 46 00.3	+0.5
LBTB	Lobatse	83.11	120	LR	LR	14 16 18.4	
	comp=Z,117nm,21.9s,baz=290,slow=31						
SUR	Sutherland	83.13	129	LR	LR	14 16 19.6	
	comp=Z,57nm,19.5s,baz=336,slow=31						
KMBO	Kilima Mbogo	83.29	94	LR	LR	14 23 18.2	
	comp=Z,94nm,18.0s,baz=91,slow=36						
ATD	Arta Tunnel	83.78	80	LR	LR	14 23 27.4	
	comp=Z,39nm,19.4s,baz=343,slow=36						
BOSA	Boshof	84.55	124	LR	LR	14 17 53.4	
	comp=Z,49nm,20.0s,baz=3.0,slow=31						
TIXI	Tiksi	86.21	2	P	P	13 46 17.5	+0.1
	comp=Z,4.9nm,1.0s,baz=90,slow=24,SNR=6.8						
	comp=Z,4.9nm,1.0s						
TIXI	Tiksi	86.21	2	P	P	13 46 17.6	+0.2
TIXI				IAmb	IAmb	13 46 18.8	
	comp=Z,8.6nm,1.1s						
BRVK	Borovoye	86.47	33	P	P	13 46 19.7	+0.6
BRVK				IAmb	IAmb	13 46 21.1	
	comp=Z,6.4nm,0.9s						
KURK	Kurchatov	92.02	32	P	P	13 46 45.6	+0.3
KURK				IAmb	IAmb	13 46 46.7	
	comp=Z,4.1nm,1.1s						
ZALV	Zalesovo Beam	92.67	27	P	P	13 46 48.4	+0.1
	comp=Z,4.2nm,1.0s,baz=316,slow=6.2,SNR=7.0						
	comp=Z,4.2nm,1.0s						
WSAR	Wadi Sarin	93.06	64	LR	LR	14 29 12.6	
	comp=Z,50nm,21.9s,baz=308,slow=36						
AAK	Ala-Archa	94.72	40	LR	LR	14 28 00.2	
	comp=Z,28nm,21.5s,baz=324,slow=34						
MKAR	Makanchi Array	96.42	33	LR	LR	14 28 24.5	
	comp=Z,47nm,19.0s,baz=304,slow=34						
KSH	Kashi	97.47	42	P	Pdif	13 47 12.9	+2.1
KSH				pP	pwP	13 47 18.8	-0.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SHEM	Shemya Is, Ala	97.90	337	LR	LR	14 31 59.7	
	comp=Z,44nm,19.3s,baz=304,slow=36						
WMQ	Urumqi	101.22	33	*e*P	Pdif	13 47 29.8	+2.5
CMAR	Chiang Mai Arr	126.32	44	PKP	PKPdf	13 52 40.1	+0.1
	comp=Z,2.0nm,0.9s,baz=282,slow=3.4,SNR=8.7						
WRA	Warramunga Arr	177.59	14	PKPab	PKPab	13 55 33.2	-0.1
	comp=Z,1.2nm,0.9s,baz=334,slow=4.6,SNR=6.3						
ASAR	Alice Springs	178.32	145	PKPab		13 55 35.8	
	comp=Z,1.1nm,1.0s,baz=200,slow=4.4,SNR=5.4						

IDC ***23*** *13:33:35.1±1.7, 35°.86N×28°.04E, h0^{km}, mb3.6/3, mbtmp3.5/4, ML3.1/1, MS2.9/2, Error ellipse: s-maj=64.5km s-min=23.4km az=150.0*

GII ***23*** *13:33:35.4±0.0, 35°.76N×27°.73E, h10^{km}*

ISK ***23*** *13:33:36.5, 36°.11N×27°.82E, h18^{km}, ML3.6/15*

ATH ***23*** *13:33:36.8, 36°.16N×27°.75E, h16^{km}±3^{km}, ML3.3/7, Error ellipse: s-maj=3.5km s-min=1.1km az=33.0*

DDA ***23*** *13:33:37.6±0.0, 36°.15N×27°.85E, h14^{km}±2^{km}, ML3.4*

NIC ***23*** *13:33:37.0±0.0, 36°.00N×27°.92E, h4^{km}±1^{km}, Ml3.4/4*

THE ***23*** *13:33:37.0, 36°.11N×27°.80E, h7^{km}±2^{km}, ML3.4/2, Error ellipse: s-maj=2.8km s-min=0.7km az=130.0*

ISC 23 13:33:37.2±0.9, **36°.11N**±0°.02×**27°.82E**±0°.02, **h15**^{km}±6^{km}, **n90, σ0^{s}.80**/121, **mb3.4**/3, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.27	68	P	Pg	13 33 43.1	+0.1
ARG				S	Sg	13 33 47.1	+0.2
ARG				AML	AML	13 33 47.9	
	comp=N,17673µm,0.3s						
ARG				AML	AML	13 33 48.9	
	comp=E,25089µm,0.2s						
ARG	Arkhangelos	0.27	68	P	Pg	13 33 43.1	+0.1
ARG				S	Sg	13 33 47.1	+0.2
	comp=E,10µm,0.2s						
ARG	Arkhangelos	0.27	68	PG	Pg	13 33 43.2	+0.1
ARG				SG	Sg	13 33 47.2	+0.2
ARG	Arkhangelos	0.27	68	P	Pg	13 33 43.1	+0.1
ARG				S	Sg	13 33 47.0	0.0
DAT	Datca	0.64	343	P	Pg	13 33 49.6	-0.3
DAT				S	Sb	13 33 59.1	+0.1
DAT	Datca	0.64	343	PG	Pg	13 33 49.6	-0.3
DAT	Datca	0.64	343	P	Pg	13 33 49.8	-0.1
DAT				S	Sb	13 33 58.9	-0.1
DAT				*i* AML	AML	13 34 01.0	
	comp=E,1µm,0.2s						
NIS1	Nisyros Isl.	0.71	314	P	Pg	13 33 49.9	-1.1
NIS1	Nisyros Isl.	0.71	314	P	Pg	13 33 50.9	-0.1
NIS1	Nisyros Isl.	0.71	314	PG	Pg	13 33 50.8	-0.2
NIS1				SG	Sb	13 34 01.4	+0.6
TURN	Turunc	0.75	27	P	Pg	13 33 51.0	-0.8
TURN				S	Sg	13 34 01.1	-0.5
TURN				*i* AML	AML	13 34 02.0	
	comp=E,2µm,0.2s						
KARP	Karpathos	0.78	224	P	Pb	13 33 52.2	-0.2
KARP				S	Sb	13 34 02.8	+0.1
KARP				AML	AML	13 34 04.3	
	comp=N,6320µm,0.2s						
KARP				AML	AML	13 34 05.4	
	comp=E,10227µm,0.4s						
KARP	Karpathos	0.78	224	P	Pb	13 33 52.1	-0.2
KARP				S	Sb	13 34 02.5	-0.2
	comp=E,4µm,0.3s						
KARP	Karpathos	0.78	224	PG	Pb	13 33 52.4	0.0
KARP				SG	Sb	13 34 02.9	+0.2
KARP	Karpathos	0.78	224	P	Pb	13 33 52.2	-0.2
KARP				S	Sb	13 34 03.2	+0.5
KARP				AML	AML	13 34 03.9	
	comp=E,6.2nm,0.2s						
KARP				AML	AML	13 34 03.9	
	comp=E,6.2nm,0.2s						
KARP				AML	AML	13 34 05.0	
	comp=E,10nm,0.4s						
KARP				AML	AML	13 34 05.0	
	comp=E,10nm,0.4s						
KOSK	Kos Island	0.93	314	P	Pb	13 33 53.3	-1.6
KOSK				AML	AML	13 34 17.0	
	comp=E,3688µm,0.4s						
KOSK				AML	AML	13 34 17.2	
	comp=N,3878µm,0.4s						
KOSK	Kos Island	0.93	314	P	Pb	13 33 54.4	-0.5
KOSK	Kos Island	0.93	314	PG	Pb	13 33 54.9	0.0
DALY	Dalyan (Mula)	0.97	44	PG	Pb	13 33 55.3	-0.4
BDRM	Kayabasi	1.00	343	P	Pb	13 33 55.9	-0.2
BDRM				S	Sb	13 34 09.0	0.0
BDRM				*i* AML	AML	13 34 11.0	
	comp=N,972nm,0.4s						
BDRM				*i* AML	AML	13 34 12.0	
	comp=N,909nm,0.3s						
BODT	Bodrum	1.03	337	P	Pb	13 33 56.4	-0.3
BODT				S	Sg	13 34 10.5	-0.1
BODT	Bodrum	1.03	337	PG	Pb	13 33 56.4	-0.3
YER	Yerkesik	1.09	20	P	Pb	13 33 57.5	-0.2
YER				S	Sn	13 34 12.7	0.0
YER	Yerkesik	1.09	20	PN	Pb	13 33 57.4	-0.2
FETY	Fethiye	1.15	63	PN	Pb	13 33 58.2	-0.5
FETY	Fethiye	1.15	63	P	Pn	13 33 58.9	+0.2
MLSB	Milas	1.18	358	PN	Pn	13 33 58.4	-0.7
MULA	Mugla, Merkez-	1.21	19	P	Pb	13 33 59.8	-0.1
MULA				S	Sg	13 34 16.3	0.0
DDIM	Aydin, Didim	1.42	341	P	Pn	13 34 02.1	-0.3
KSL	Kastellorizon	1.43	88	P	Pg	13 34 04.1	-0.6
KSL				S	Sg	13 34 22.7	-0.7
KSL				AML	AML	13 34 27.5	
	comp=E,1260µm,0.6s						
KSL				AML	AML	13 34 30.9	
	comp=N,525µm,0.7s						
KSL	Kastellorizon	1.43	88	S	Sg	13 34 22.8	-0.5
KSL				AML	AML	13 34 27.2	
	comp=N,1.3nm,0.6s						
KSL				AML	AML	13 34 27.5	
	comp=N,0.8nm,0.5s						
AKAS	Kas	1.45	85	P	Pb	13 34 04.1	+0.1
AKAS				S	Sb	13 34 22.6	+0.3
AKAS				*i* AML	AML	13 34 27.0	
	comp=N,553nm,0.4s						
CAME	Cameli-Denizli	1.46	55	PN	Pn	13 34 02.9	-0.1
AYDN	Tasoluk	1.55	2	P	Pn	13 34 04.2	+0.1
AYDN				S	Sn	13 34 24.6	+0.6
AYDN				*i* AML	AML	13 34 29.0	
	comp=N,316nm,0.3s						
AYDN				*i* AML	AML	13 34 29.0	
	comp=N,427nm,0.4s						
CAEL	Denizli, Camel	1.57	50	P	Pb	13 34 06.0	-0.1
CAEL				S	Sg	13 34 28.9	+0.9
CAEL				*i* AML	AML	13 34 35.0	
	comp=N,909nm,0.7s						
CAEL				*i* AML	AML	13 34 38.0	
	comp=N,1µm,0.6s						
TAVA	DENIZLI_Tavas	1.61	33	P	Pb	13 34 07.0	+0.4
TAVA				S	Sb	13 34 26.5	-0.3
TAVA				*i* AML	AML	13 34 32.0	
	comp=N,656nm,0.3s						
TAVA				*i* AML	AML	13 34 33.0	
	comp=N,462nm,0.2s						
ZKR	Zakros	1.64	233	P	Pb	13 34 06.7	-0.3
ZKR				S	Sn	13 34 25.8	-0.4
ZKR				AML	AML	13 34 31.3	
	comp=N,758µm,0.5s						
ZKR				AML	AML	13 34 33.2	
	comp=E,1698µm,0.4s						
ZKR	Zakros	1.64	233	PN	Pn	13 34 05.6	+0.2
ZKR	Zakros	1.64	233	P	Pb	13 34 06.5	-0.6
ZKR				AML	AML	13 34 29.6	
	comp=E,1.0nm,0.5s						
ZKR				AML	AML	13 34 29.6	
	comp=E,1.0nm,0.5s						
ZKR				S	Sg	13 34 29.7	-0.3
ZKR				AML	AML	13 34 31.9	
	comp=E,1.6nm,0.5s						
ZKR				AML	AML	13 34 31.9	
	comp=E,1.6nm,0.5s						
DEMR	Demre-Antalya	1.69	85	PN	Pn	13 34 06.1	-0.1
SMG	Samos	1.78	334	P	Pn	13 34 06.8	-0.5
SMG				AML	AML	13 34 37.2	
	comp=N,704µm,0.5s						
SMG				AML	AML	13 34 39.0	
	comp=E,1410µm,0.4s						
SMG	Samos	1.78	334	P	Pn	13 34 06.8	-0.5
GOLH	Golhisar	1.80	51	P	Pb	13 34 09.9	+0.1
GOLH				S	Sg	13 34 34.6	-0.4
GOLH				*i* AML	AML	13 34 38.0	
	comp=E,688nm,0.4s						
GOLH				*i* AML	AML	13 34 39.0	
	comp=E,514nm,0.4s						
AYDB	Zeytinkoy-Aydi	1.83	2	PN	Pn	13 34 07.9	-0.3
THR8	Santorini-Mono	1.91	280	P	Pn	13 34 09.2	0.0
SANT	Santorini	1.92	278	P	Pn	13 34 09.3	0.0
SANT	Santorini	1.92	278	PN	Pn	13 34 09.2	-0.1
THR6	Thira Island,	1.97	278	P	Pn	13 34 10.4	+0.5
THR3	Thira Island,	1.97	279	P	Pn	13 34 10.2	+0.2
SNT5	Nea Kammeni, S	1.98	279	P	Pn	13 34 10.3	+0.2
NPS	Neapolis	1.98	245	P	Pn	13 34 10.5	+0.4
THR9	Santorini-Faro	2.00	278	P	Pn	13 34 10.9	+0.5
THR5	Thira Island,	2.02	279	P	Pn	13 34 11.1	+0.5
FRMA	Ierapetra Chan	2.02	238	P	Pn	13 34 11.4	+0.8
FRMA				S	Sn	13 34 34.6	-1.0
FRMA				AML	AML	13 34 44.4	
	comp=E,1391µm,0.6s						
FRMA				AML	AML	13 34 45.9	
	comp=N,1307µm,0.4s						
APE	Apeiranthos	2.07	298	P	Pn	13 34 11.4	0.0
APE	Apeiranthos	2.07	298	PN	Pn	13 34 11.4	0.0
APE	Apeiranthos	2.07	298	Pn	Pn	13 34 11.5	+0.1
BLCB	Balcova	2.35	345	PN	Pn	13 34 14.9	-0.3
BRDR	BURDUR-Merkez	2.40	48	P	Pb	13 34 18.4	-1.6
BRDR				S	Sb	13 34 48.7	-0.7
BRDR				*i* AML	AML	13 34 58.0	
	comp=N,187nm,0.7s						
KULA	Kula-Manisa	2.49	15	PN	Pn	13 34 17.4	+0.2
IDI	Anoyia	2.52	252	PN	Pn	13 34 17.6	0.0
PASA	Karahalli, USA	2.60	30	P	Pn	13 34 20.4	+1.7
PASA				S	Sb	13 34 53.5	-1.8
CHOS	Chios island	2.67	329	PN	Pn	13 34 19.3	-0.3
SIVA	Sivas	2.68	247	P	Pn	13 34 21.9	+2.2
ISP	Isparta	2.76	51	P	Pb	13 34 25.1	-1.1
ISP	Isparta	2.76	51	PN	Pn	13 34 21.5	+0.6
MHLO	Agia Marina, M	2.81	283	P	Pb	13 34 25.6	-1.4
SIMA	Simav-Kutahya	3.11	17	PN	Pn	13 34 25.8	+0.1
SHUT	Suhut-Afyon	3.27	41	PN	Pn	13 34 28.6	+0.7
AKMS	Akamas	3.84	105	P	Pn	13 34 36.1	+0.4
AKMS				AML	AML	13 35 20.5	
	comp=N,0.7nm,0.6s						
AKMS				AML	AML	13 35 20.5	
	comp=N,0.7nm,0.6s						
AKMS				S	Sn	13 35 21.5	+0.9
AKMS				AML	AML	13 35 23.5	
	comp=N,0.7nm,0.7s						
AKMS				AML	AML	13 35 23.5	
	comp=N,0.7nm,0.7s						
OSC1	CSNet OBS 1	3.86	131	P	Pn	13 34 35.6	-0.4
OSC1				S	Sn	13 35 21.1	+0.2
ALFC	Alefka	4.01	102	P	Pn	13 34 38.1	+0.1
NATA	Nata	4.10	108	P	Pn	13 34 39.6	+0.3
SZAC	Souni	4.35	107	P	Pn	13 34 42.9	+0.2
ASGA	Asgata	4.63	105	P	Pn	13 34 46.7	+0.2
CSS	Mathiatis	4.64	103	P	Pn	13 34 46.6	-0.1
CSS	Mathiatis	4.64	103	Pn	Pn	13 34 46.4	-0.3
CSS				Sn	Sn	13 35 40.3	0.0
OSC2	CSNet OBS 4	4.76	128	P	Pn	13 34 48.7	+0.4
MVOU	Mavrovouni	4.87	101	P	Pn	13 34 50.8	+1.0
BRTR	Keskin Array B	5.85	50	Pn	Pn	13 35 05.6	+2.2
	comp=N,0.4nm,0.3s,baz=230,slow=15,SNR=9.9						
BRTR				Sn	Sn	13 36 10.8	+0.6

	comp=N,0.1nm,0.3s,baz=218,slow=26,SNR=1.8						
	comp=N,2.4nm,0.6s						
OFRI	`Ofer	6.87	118	Pn	Pn	13 35 15.6	-1.8
MMA0B	Mount Meron ar	6.98	114	Pn	Pn	13 35 17.5	-1.4
GEM	Giv'at Ha'Em	7.08	112	Pn	Pn	13 35 18.7	-1.5
GEM				Sn	Sn	13 36 38.1	-2.4
NATI	Neve Ativ	7.12	111	Pn	Pn	13 35 20.0	-0.7
NATI				Sn	Sn	13 36 38.6	-2.6
MDBI	Mazsada	7.90	125	Pn	Pn	13 35 29.0	-2.4
GNI	Garni	13.92	68	LR	LR	13 42 53.0	
	comp=N,28nm,19.5s,baz=202,slow=40						
ESDC	Sonseca Array	25.26	288	P	P	13 39 05.3	+2.6
	comp=N,0.3nm,0.5s,baz=81,slow=10.0,SNR=1.5						
	comp=N,0.3nm,0.5s						
FINES	FINESS Array B	25.38	358	LR	LR	13 50 47.4	
	comp=N,44nm,20.5s,baz=230,slow=40						
TORD	Torodi Ar. Bea	32.77	232	P	P	13 40 09.8	+0.1
	comp=N,1.1nm,0.6s,baz=48,slow=9.6,SNR=8.1						
	comp=N,1.1nm,0.6s						
MKAR	Makanchi Array	41.44	58	P	P	13 41 23.5	+0.4
	comp=N,0.4nm,0.5s,baz=279,slow=6.8,SNR=2.4						
	comp=N,0.4nm,0.5s						

IDC 23 13:40:38.0±4.3**,22°.90N**×**44°.72W,h0^{km},mb3.5**/4**,**
mbtmp3.5/4**,Error ellipse: s-maj=190.2km**
s-min=34.2km az=25.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	42.52	132	T	T	14 33 26.6	
	baz=315,slow=75,SNR=30						
H10N2	ASCENSION HYDR	42.52	132	T	T	14 33 33.0	
	baz=315,slow=75,SNR=26						
H10N1	ASCENSION HYDR	42.54	132	T	T	14 33 30.2	
	baz=315,slow=75,SNR=38						
TORD	Torodi Ar. Bea	45.03	94	P	P	13 48 55.8	0.0
	0.6nm,0.8s,baz=299,slow=9.7,SNR=2.5						
	0.6nm,0.8s						
PDAR	Pinedale Array	56.60	307	P	P	13 50 22.7	-0.3
	0.2nm,0.7s,baz=83,slow=10,SNR=1.8						
	0.2nm,0.7s						
YKA	Yellowknife Ar	60.66	330	P	P	13 50 50.9	+0.2
	0.5nm,0.8s,baz=83,slow=5.5,SNR=1.9						
	0.5nm,0.8s						
ILAR	Eielson Array	74.55	334	P	P	13 52 18.4	0.0
	0.7nm,0.8s,baz=73,slow=4.9,SNR=7.0						
	0.7nm,0.8s						

IDC ***23*** *13:46:03.7±5.9,3°.65S×100°.51E,h0^{km},mb3.7/3,*
mbtmp3.7/3,Error ellipse: s-maj=219.1km s-min=29.6km
az=60.0
DJA ***23*** *13:46:09.4±2.2,3°S±4°×10°1E±°,h22^{km}±23^{km},M3.8/7,*
MLv3.8/7
ISC 23 13:46:10.3±1.1**,3°.47S**±0°.09×**100°.83E**±0°.08**,h35^{km},n15,**
σ0^{s}.67/13**,mb3.8**/3**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	1.08	310	P	Pn	13 46 29.1	+0.1
PPSI				S	Sn	13 46 43.4	+0.7
KRJI	Kerinci	1.50	25	P	Pn	13 46 36.2	+1.3
MNAI	Manna	2.30	113	P	Pn	13 46 46.1	+0.3
SISI	Saibi	2.75	321	P	Pn	13 46 51.6	-0.3
PPI	Padang Panjang	3.02	352	P	Pn	13 46 56.1	+0.4
LWLI	Liwa	3.57	116	P	Pn	13 47 03.7	+0.4
KASI	Kota Agung	4.19	119	P	Pn	13 47 12.2	+0.5
DSRI	Dabo	4.78	52	P	Pn	13 47 18.7	-1.2
H08S2	Diego Garcia H	28.50	260	T	T	14 21 34.7	
	baz=83,slow=76,SNR=149						
H08S3	Diego Garcia H	28.51	260	T	T	14 21 37.2	
	baz=83,slow=76,SNR=170						
H08S1	Diego Carcia H	28.52	260	T	T	14 21 36.0	
	baz=83,slow=76,SNR=71						
WRA	Warramunga Arr	36.55	119	P	P	13 53 12.8	-0.3
	0.2nm,0.3s,baz=284,slow=10,SNR=14						
	0.2nm,0.3s						
ASAR	Alice Springs	37.73	125	P	P	13 53 23.0	-0.1
	0.8nm,0.5s,baz=299,slow=7.7,SNR=24						
	0.8nm,0.5s						
SONM	Songino Array	51.32	5	P	P	13 55 10.9	-0.3
	0.7nm,0.6s,baz=196,slow=9.3,SNR=4.1						
	0.7nm,0.6s						
TXAR	Lajitas Array	145.32	40	PKPbc	PKPbc	14 05 45.1	-0.1
	0.3nm,0.4s,baz=270,slow=0.9,SNR=7.3						

SKO 23 13:52:18.5,41°.24N×**21°.04E,h4^{km},Northwestern**
Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.22	235	i Pg	Pg	13 52 22.6	-0.2
OHR				eSg	Sg	13 52 26.5	+0.8
OHR				eLg	Lg	13 52 26.6	
	comp=E,29nm,0.5s						
OHR				eLg	Lg	13 52 26.7	
	comp=N,28nm,0.3s						
FNA	Florina	0.52	151	i Pg	Pg	13 52 27.8	-0.7
FNA				eSg	Sg	13 52 35.7	+0.5
STIP	Stip	0.97	62	ePg	Pn	13 52 39.5	+0.6

PRU ***23*** *13:54:33.7±0.0,49°.85N×18°.40E,h0^{km},Mining Induced*
Event Lazy, E=9.2e+04
IPEC 23 13:54:32.0±0.2**,49°.82N**×**18°.49E,h0^{km},ML1.4**/3**,Error**
ellipse: s-maj=1.6km s-min=1.1km az=163.0,Czech and
Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.22	274	ePG	Pg	13 54 36.5	+0.2
OKC				eSG	Sg	13 54 39.8	+0.6
	comp=Z,162nm,0.7s						
MORC	Moravsky Berou	0.62	266	ePg	Pg	13 54 44.1	+0.3
	baz=85						
MORC				eSg	Sg	13 54 51.4	-0.4
	11nm,0.3s,baz=85						
MORC	Moravsky Berou	0.62	266	ePG	Pg	13 54 44.2	+0.4
MORC				eSG	Sg	13 54 51.4	-0.4
MAUC	Maruska	0.63	224	ePG	Pb	13 54 45.3	-0.6
MAUC				eSG	Sg	13 54 53.3	+1.1
	comp=Z,42nm,0.8s						
LANS	Liptovska Anna	0.93	136	ePG	Pn	13 54 51.7	-0.6
LANS				eSG	Sn	13 55 07.0	+0.7
LANS				eLG	Lg	13 55 09.3	
OJC	Ojcow	0.93	64	ePg	Pg	13 54 50.0	+0.1
OJC				eSg	Sb	13 55 03.0	-0.9
JAVC	Velka Javorina	1.10	209	ePg	Pg	13 54 53.4	+0.2
	baz=29						
JAVC	Velka Javorina	1.10	209	ePG	Pg	13 54 53.4	+0.2
NIE	Niedzica	1.24	108	ePg	Pn	13 54 58.0	+1.3
NIE				eSg	Sn	13 55 17.0	+2.9
VRAC	Vranov	1.34	248	ePg	Pg	13 54 57.0	-0.7
	baz=67						
VRAC				eSg	Sg	13 55 14.1	-0.9
	4.0nm,0.2s,baz=67						
VRAC	Vranov	1.34	248	ePG	Pg	13 54 57.1	-0.6
VRAC				eSG	Sg	13 55 14.1	-0.9
VYHS	Vyhne	1.35	170	ePG	Pg	13 54 57.8	0.0
VYHS				eSG	Sn	13 55 16.5	-0.2
DPC	Dobruska-Polom	1.49	291	ePG	Pn	13 54 59.2	-0.9
DPC				eSG	Sg	13 55 19.1	-0.9
	comp=Z,7.0nm,0.7s						
KRUC	Moravsky	1.57	242	ePg	Pn	13 55 00.4	-0.7
	baz=60						
KRUC				eSg	Sn	13 55 21.1	-1.0
	3.3nm,0.3s,baz=60						
KRUC	Moravsky	1.57	242	ePG	Pn	13 55 00.4	-0.7
KRUC				eSG	Sn	13 55 21.2	-0.9
OSTC	Ostas	1.64	297	ePG	Pn	13 55 02.1	0.0
OSTC				eSG	Sb	13 55 24.3	0.0
	comp=Z,5.9nm,0.4s						
UPC	Upice	1.74	294	ePG	Pn	13 55 03.6	+0.2
UPC				eSG	Sb	13 55 26.8	-0.3
	comp=Z,3.9nm,0.3s						
CHVC	Chvalec	1.74	297	ePG	Pn	13 55 03.6	+0.1
CHVC				eSG	Sn	13 55 25.7	-0.8
	comp=Z,5.2nm,0.7s						
KHC	Kasperske Hory	3.28	260	eSG	Sg	13 56 16.5	-0.8

UCR ***23*** *13:54:32.8±2.2,8°.52N×83°.21W,h3^{km},MW4.4*
UPA ***23*** *13:54:33.9±2.4,8°.58N×83°.15W,h10^{km}±7^{km},MW4.6*
IDC ***23*** *13:54:33.4±5.0,8°.89N×83°.03W,h0^{km},mb3.6/3,*
mbtmp3.6/3,MS3.2/1,Error ellipse: s-maj=159.1km
s-min=45.3km az=15.0
ISC 23 13:54:33.2±1.1**,8°.58N**±0°.03×**83°.17W**±0°.02**,h5^{km}**±8^{km}**,n40,**
σ0^{s}.94/56**,mb3.7**/3**,8D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIRO	Carate, Puerto	0.23	224	eP	Pg	13 54 38.0	+0.2
PIRO				eS	Sg	13 54 42.2	+1.3
EDSV	San Vito	0.31	39	⇓iP	Pb	13 54 41.4	0.0
EDSV				eS	Sb	13 54 48.1	+1.2
MLIR3	Monte Lirio, C	0.41	58	eP	Pb	13 54 43.1	+0.2
MLIR3				eS	Sb	13 54 50.3	+0.8
LESP3	La Esperanza,	0.41	114	eP	Pb	13 54 42.7	-0.3
PTPM	Petroterminale	0.47	142	eP	Pb	13 54 43.8	-0.2
PTPM				eS	Sb	13 54 52.1	+0.9
EDPN	Palmar Norte	0.48	324	⇓iP	Pg	13 54 42.6	+0.2
BRU2	Volcan	0.52	65	⇓iP	Pb	13 54 44.8	-0.2
BRU2				eS	Sb	13 54 53.0	+0.1
LIMO3	Limones	0.56	147	eP	Pb	13 54 45.1	-0.4
EDBA	Buenos Aires	0.59	350	eP	Pg	13 54 45.3	+0.7
BC3P	Paso Ancho	0.60	67	⇓eP	Pb	13 54 46.0	-0.4
BAGA3	Bagala, Chiriq	0.65	99	eP	Pb	13 54 46.8	-0.2
BAGA3				eS	Sb	13 54 55.1	-1.2
BCO2	Palmira	0.65	77	⇓iP	Pb	13 54 46.9	-0.3
BCO2				eS	Sg	13 54 55.0	+0.7
PTAR3	Potrerillos Ar	0.68	80	eP	Pb	13 54 47.3	-0.3
PTAR3				eS	Sb	13 54 57.0	-0.3
DRK0	Durika	0.69	354	⇓iP	Pg	13 54 46.8	+0.3
DRK0				eS	Sg	13 54 55.4	0.0
DVD	David	0.73	101	eP	Pb	13 54 47.8	-0.6
DVD				eS	Sb	13 54 58.8	+0.2
LNBQ3	Los Naranjos,	0.75	73	eP	Pg	13 54 48.0	+0.3
LOCO3	Loma Colorada,	0.76	102	eP	Pg	13 54 48.4	+0.5
LOCO3				eS	Sb	13 54 59.6	-0.1
PSOM3	Paja de Sombre	0.85	83	eP	Pg	13 54 49.7	+0.2
PSOM3				eS	Sg	13 54 59.4	-1.2
PEZE	Perez Zeledon,	0.94	328	eP	Pg	13 54 50.1	-1.3
EDDO	Dominical	0.96	315	eP	Pg	13 54 50.7	-0.9
EDDO				eS	Sb	13 55 05.9	+0.5
CHGR2	Aguacate	1.08	70	eP	Pg	13 54 53.0	-0.9
CHGR2				eS	Sg	13 55 06.0	-1.9
CDM	Cerro de Muert	1.14	329	⇓eP	Pg	13 54 53.7	-1.4
RGM0	Gandoca	1.15	29	⇓eP	Pn	13 54 56.4	+0.4
RGM0				eS	Sn	13 55 14.3	+2.2
BATAN	Batan	1.53	352	eP	Pn	13 55 01.0	-0.2
BATAN				eS	Sg	13 55 22.7	+0.4
HDC	Heredia	1.69	327	eP	Pn	13 55 02.6	-1.0
JACO	JACO, Garabito	1.82	306	eP	Pn	13 55 03.4	-1.9
LAFE	Finca La Fe, P	2.11	306	eP	Pn	13 55 08.7	-0.5
CASO	Castillo	2.41	320	eP	Pn	13 55 13.8	+0.5
CEDE	Laguna Cedeo	2.43	322	eP	Pn	13 55 15.5	+1.9
JTS	Las Juntas de	2.45	314	eP	Pn	13 55 15.1	+1.2
JTS				eS	Sn	13 55 43.3	-1.0
PTEN	Parque Tenorio	2.78	320	eP	Pn	13 55 20.1	+1.6
GUAI	GUAI	2.86	306	eP	Pn	13 55 19.8	+0.3
HORNC	Hornillas	2.90	317	eP	Pn	13 55 21.7	+1.5
SAJU	San Juanillo,	2.91	301	eP	Pn	13 55 19.2	-1.0
HZTE	Horizontes, Gu	3.20	312	eP	Pn	13 55 25.7	+1.5
TKL	Tuckaleechee C	26.96	359	LR	LR	14 10 56.7	
	comp=Z,44nm,19.2s,baz=164,slow=37						
NVAR	Mina Array Bea	43.37	319	P	P	14 02 37.7	+0.7
	0.2nm,0.5s,baz=125,slow=7.8,SNR=3.0						
	0.2nm,0.5s						
ILAR	Eielson Array	71.25	336	P	P	14 05 52.1	-1.1
	0.5nm,0.8s,baz=122,slow=4.5,SNR=7.4						
	0.5nm,0.8s						
ESDC	Sonseca Array	76.28	51	P	P	14 06 23.0	-0.4
	1.1nm,0.9s,baz=280,slow=6.0,SNR=6.5						
	1.1nm,0.9s						
ASAR	Alice Springs	141.50	243	PKP	PKPdf	14 14 07.0	+0.6
	0.3nm,0.7s,baz=124,slow=3.3,SNR=2.2						

KRSC 23 14:06:01.4±1.1**,48°.84N**×**156°.30E,h43^{km}**±22^{km}**,ML3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.85	356	P	Pn	14 06 32.9	+2.3
SKR				S	Sn	14 06 54.7	+1.9
KDTR	Khodutka, Kamc	3.19	20	S	Sn	14 07 30.4	+4.8
MIPR	Malaya Ipel'ka	3.46	5	P	Pn	14 06 55.6	+2.9
ASAK	Asacha	3.69	15	P	Pn	14 07 00.2	+4.2
MTVR	Mutnovka	3.84	17	P	Pn	14 07 01.8	+3.7
MTVR				S	Sn	14 07 46.7	+4.7
RUS	Russkaya	3.87	21	P	Pn	14 07 01.6	+3.3
RUS				S	Sn	14 07 46.4	+4.0
GRL	Gorelyy	3.89	16	P	Pn	14 07 03.0	+4.3
GRL				S	Sn	14 07 48.4	+5.3
UGLR	Uglovaya	4.66	19	P	Pn	14 07 13.6	+4.3
KOK	Koryaka	4.70	17	P	Pn	14 07 14.1	+4.3
SDLR	Sedlovina	4.74	19	P	Pn	14 07 14.6	+4.3
KRX	Arik	4.76	17	P	Pn	14 07 15.5	+4.8
KBTR	Krutoberegovo	8.38	26	P	Pn	14 08 04.9	+4.7

NOU ***23*** *14:11:54.7,37°.66S×179°.84W,h16^{km},MLv4.8/7,East of*
North Island, N.Z.
WEL ***23*** *14:12:04.9±1.0,38°S±6°×17°9E±°,h33^{km},M3.7/31,*
ML3.8/32,MLv3.7/31,Error ellipse: s-maj=0.0km
s-min=0.0km az=57.9
IDC ***23*** *14:12:09.3±4.4,38°.37S×179°.15E,h83^{km}±30^{km},mb3.0/2,*
mbtmp3.5/3,Error ellipse: s-maj=40.0km s-min=31.6km
az=90.0
ISC 23 14:12:01.1±2.1**,37°.61S**±0°.06×**179°.38E**±0°.08**,h16^{km}**±10^{km}**,**
n105,σ1^{s}.14/110**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	0.79	255	P	Pn	14 12 17.8	+0.3
WMGZ				S	Sn	14 12 28.6	-0.3
MXZ	Matakaoa Point	0.85	273	P	Pb	14 12 17.6	+0.2
MXZ				S	Sg	14 12 28.1	-0.7
PUZ	Puketiti	1.00	242	P	Pn	14 12 21.4	+1.0
PUZ				S	Sn	14 12 34.9	+0.8
PKGZ	Pakihiroa	1.07	255	P	Pn	14 12 21.7	+0.4
PKGZ				S	Sb	14 12 35.0	+0.2
TWGZ	Tauwhareparae	1.24	243	P	Pg	14 12 25.0	0.0
TWGZ				S	Sg	14 12 41.5	+0.3
CNGZ	Carnagh Statio	1.27	226	P	Pg	14 12 26.5	+1.0
HAZ	Te Kaha	1.27	263	P	Pg	14 12 24.9	-0.7
HAZ				S	Sb	14 12 40.2	-0.5
RUGZ	Raukumara Rang	1.39	255	P	Pb	14 12 26.5	-0.2
TKGZ	Te Karaka	1.46	235	P	Pb	14 12 28.0	+0.2
MWZ	Matawai	1.63	243	P	Pn	14 12 29.7	+0.7
RIGZ	Rimuhau	1.68	229	P	Pb	14 12 31.3	-0.2
WIZ	White Island	1.74	272	P	Pn	14 12 31.3	+0.7
RAGZ	Rawiri	1.78	240	P	Pn	14 12 32.3	+1.1
URZ	Urewera	1.90	250	P	Pn	14 12 34.1	+1.4
	137nm,0.3s,baz=60,slow=8.5,SNR=747						
URZ				S	Sn	14 12 56.8	+0.4
	148nm,0.4s,baz=77,slow=15,SNR=6.5						
URZ	Urewera	1.90	250	P	Pn	14 12 33.9	+1.1
URZ	Urewera	1.90	250	P	Pn	14 12 34.2	+1.4
WHRZ	Whale Island	1.92	262	P	Pn	14 12 34.4	+1.3
MHGZ	Mahia Peninsul	1.92	216	P	Pb	14 12 34.9	-0.8
KNZ	Kokohu	1.94	223	P	Pn	14 12 34.4	+1.1
SNGZ	Shannon Statio	1.98	233	P	Pn	14 12 34.8	+0.9
RTZ	Ruatahuna	2.14	241	P	Pn	14 12 37.6	+1.5
EDRZ	Edgecumbe	2.14	256	P	Pn	14 12 37.3	+1.1
RAHZ	Arahi	2.22	233	P	Pn	14 12 38.6	+1.4
MUGZ	Murupara	2.23	246	P	Pn	14 12 38.3	+1.0
OPRZ	Ohinepanea	2.25	263	P	Pn	14 12 37.9	+0.4
MTHZ	Maungataniwha	2.35	237	P	Pn	14 12 40.1	+1.1
TARZ	Mount Tarawera	2.35	254	P	Pn	14 12 40.3	+1.2
RRRZ	Republican Roa	2.37	251	P	Pn	14 12 40.3	+1.0
LIRZ	Lichensteins R	2.40	260	P	Pn	14 12 40.7	+1.0
OMRZ	Omania	2.43	257	P	Pn	14 12 41.4	+1.3
HLRZ	Highlands Stat	2.47	254	P	Pn	14 12 41.8	+1.1
TGRZ	Tauranga	2.47	266	P	Pn	14 12 41.0	+0.4
ARHZ	Aropaoanui	2.49	228	P	Pn	14 12 42.4	+1.6
NMHZ	Naumai	2.50	233	P	Pn	14 12 42.6	+1.4
KARZ	Kaharoa	2.51	260	P	Pn	14 12 41.8	+0.6
PRRZ	Plateau Road	2.52	249	P	Pn	14 12 42.0	+0.8
HRRZ	Handcock Road	2.56	251	P	Pn	14 12 42.2	+0.3
HSRZ	Hossack Road	2.57	253	P	Pn	14 12 43.1	+1.1
ALRZ	Allen Road	2.57	247	P	Pn	14 12 43.0	+1.0
MRHZ	Matea Rd	2.63	241	P	Pn	14 12 43.8	+1.0
GRRZ	Galatos Road	2.68	253	P	Pn	14 12 44.8	+1.2
CKHZ	Cape Kidnapper	2.72	221	P	Pn	14 12 44.8	+0.8
BKZ	Black Stump Fm	2.75	235	P	Pn	14 12 45.5	+1.1
BKZ	Black Stump Fm	2.75	235	P	Pn	14 12 45.7	+1.3
MCHZ	McNeill Hill	2.79	228	P	Pn	14 12 46.0	+1.1
HATZ	Hinemaiaia	2.88	243	P	Pn	14 12 46.7	+0.4
KAHZ	Kahuranaki	2.93	221	P	Pn	14 12 47.6	+0.7
KUTZ	Kaahu Road	2.94	252	P	Pn	14 12 47.9	+0.9
KWHZ	Kaweka Forest	2.94	231	P	Pn	14 12 47.8	+0.7
KUZ	Kuaotunu	3.04	285	P	Pn	14 12 48.3	-0.2
KUZ				S	Sn	14 13 21.0	-3.6
TOZ	Tahuroa Road	3.08	267	P	Pn	14 12 49.2	+0.3
RITZ	Rihia Road	3.08	243	P	Pn	14 12 50.1	+1.1
RATZ	Rangitukua	3.10	245	P	Pn	14 12 50.4	+1.1
KRHZ	Kereru	3.11	228	P	Pn	14 12 49.7	+0.3
PXZ	Pawanui	3.11	218	P	Pn	14 12 49.7	+0.3
BHHZ	Black Hill Sta	3.20	233	P	Pn	14 12 51.2	+0.5
TMVZ	Te Maari	3.25	241	P	Pn	14 12 52.0	+0.5
ETVZ	East Tongariro	3.26	241	P	Pn	14 12 52.0	+0.5
NTVZ	North Tongarir	3.26	242	P	Pn	14 12 52.2	+0.6
KRVZ	Karewarewa	3.29	242	P	Pn	14 12 52.6	+0.7
NNVZ	North Ngauruho	3.32	242	P	Pn	14 12 53.5	+1.1
NGZ	Ngauruhoe	3.35	241	P	Pn	14 12 53.5	+0.6
WPHZ	Waipukurau	3.35	222	P	Pn	14 12 52.8	+0.1
MOVZ	Moawhango	3.36	237	P	Pn	14 12 53.2	+0.4
PNHZ	Pukenui	3.38	226	P	Pn	14 12 53.0	-0.1
MKAZ	Moumakai	3.40	277	P	Pn	14 12 53.8	+0.5
PRHZ	Porangahau	3.40	218	P	Pn	14 12 53.2	-0.3
WHVZ	Whangaehu Hut	3.41	240	P	Pn	14 12 54.3	+0.6
FWVZ	Far West T-bar	3.42	240	P	Pn	14 12 54.6	+0.7
GRZ	Great Barrier	3.42	292	P	Pn	14 12 54.6	+0.9
TWVZ	Taurewa	3.42	244	P	Pn	14 12 54.4	+0.7
WNVZ	Wahianoa	3.42	239	P	Pn	14 12 54.2	+0.4
TRVZ	Turoa	3.44	240	P	Pn	14 12 55.8	+1.6
ETAZ	East Tamaki Re	3.61	279	P	Pn	14 12 57.2	+0.9
TSZ	Takapari Road	3.62	226	P	Pn	14 12 55.8	-0.6
ANWZ	Angora Road	3.63	218	P	Pn	14 12 56.1	-0.4
DVHZ	Dannevirke	3.67	222	P	Pn	14 12 56.5	-0.5
MBAZ	Motutapu North	3.67	282	P	Pn	14 12 58.2	+1.1
HIZ	Hauiti	3.68	254	P	Pn	14 12 58.7	+1.4
HIZ	Hauiti	3.68	254	P	Pn	14 12 58.9	+1.7
EPAZ	Eden Park BICE	3.77	280	P	Pn	14 13 00.1	+1.6
HBAZ	Herne Bay Bore	3.79	280	P	Pn	14 12 59.9	+1.3
AWAZ	Awhitu Peninsu	3.81	277	P	Pn	14 13 00.4	+1.4
BFZ	Birch Farm	3.91	217	P	Pn	14 12 59.3	-1.1
RVAZ	Riverhead Bore	3.92	281	P	Pn	14 13 01.8	+1.3
VRZ	Vera Road	3.93	246	P	Pn	14 13 02.0	+1.3
POWZ	Post Office Ro	3.95	224	P	Pn	14 13 00.9	-0.1
PRWZ	Pori Road	3.96	221	P	Pn	14 13 00.9	-0.1
WAZ	Wanganui	4.05	237	P	Pn	14 13 03.4	+1.1
LREZ	Lake Rotokare	4.31	243	P	Pn	14 13 07.6	+1.7
WCZ	Waipu Caves	4.37	291	P	Pn	14 13 08.1	+1.3
KHEZ	Kahui Hut	4.53	247	P	Pn	14 13 11.4	+2.4
SNZO	South Karori	5.17	223	P	Pn	14 13 16.1	-1.5
	91nm,1.8s						
OUZ	Omahuta	5.24	295	P	Pn	14 13 19.8	+1.2
OUZ	Omahuta	5.24	295	P	Pn	14 13 20.3	+1.7
	56nm,2.8s						
KHZ	Kahutara	6.56	221	P	Pn	14 13 36.2	-0.6
CTZ	Chatham Island	6.83	155	P	Pn	14 13 44.9	+4.5
RPZ	Rata Peaks	8.78	223	P	Pn	14 14 04.9	-2.3
	15nm,0.9s,baz=63,slow=11,SNR=2.0						
RPZ				S	Sn	14 15 35.2	-11
	6.2nm,0.3s,baz=5.3,slow=22,SNR=9.0						
ASAR	Alice Springs	41.13	276	P	P	14 19 43.8	-0.7
	0.2nm,0.4s,baz=117,slow=6.8,SNR=8.1						
	0.2nm,0.4s						
WRA	Warramunga Arr	42.78	281	P	P	14 19 57.4	-0.6
	0.3nm,0.6s,baz=121,slow=8.0,SNR=4.9						
	0.3nm,0.6s						
H03N3	Juan Fernandez	78.53	123	T	T	15 50 34.9	
	baz=234,slow=72,SNR=18						
H03N2	Juan Fernandez	78.53	123	T	T	15 50 34.5	
	baz=234,slow=72,SNR=14						
H03N1	Juan Fernandez	78.55	123	T	T	15 50 34.7	
	baz=234,slow=72,SNR=20						
ARCES	ARCESS Array B	145.05	344	PKPbc	PKPdf	14 31 37.6	+1.2
	2.7nm,0.8s,baz=42,slow=2.8,SNR=7.8						
FINES	FINESS Array B	150.91	334	PKPbc	PKiKP	14 31 53.4	+0.9
	0.5nm,0.6s,baz=352,slow=2.8,SNR=4.0						

BJI ***23*** *14:17:12.7±0.0,36°.46N×141°.01E,h40^{km},mb4.5/28,*
mB4.7/15,Ms4.0/3,Ms7 3.8/3
MOS ***23*** *14:17:14.6±1.1,36°.62N×141°.09E,h49^{km},mb4.5/22,Error*
ellipse: s-maj=9.5km s-min=5.3km az=83.8
JMA ***23*** *14:17:16.6±0.1,36°.4N±0°.3×140°.9E±0°.8,h62^{km}±1^{km},*
MD4.1/33,MV4.3/33,E OFF IBARAKI PREF
JMA Felt III J1 at E OFF IBARAKI PREF .
NIED ***23*** *14:17:16.6,36°.42N×140°.94E,h62^{km},MW4.2,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M_{rr}1.76; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-1.93; $M_{r\theta}$0.60; $M_{\theta\phi}$-0.71; $M_{\phi r}$-0.29;
Fault plane solution: $M_0$2.09000×10^{15} NP1:ϕ_s37.00000°,
δ47.00000°,λ120.00000°. NP2:ϕ_s177.00000°,δ50.00000°,
λ61.00000°.
NEIC ***23*** *14:17:16.5±1.9,36°.42N±0°.06×140°.98E±0°.08,h53^{km}±6^{km},*
mb4.5/69 Error ellipse: s-maj=9.8km s-min=8.1km
az=121.0
IDC ***23*** *14:17:17.6±1.5,36°.34N×140°.91E,h70^{km}±15^{km},mb3.9/24,*
mbtmp4.2/28,MS3.0/8,Error ellipse: s-maj=13.7km
s-min=9.1km az=69.0
ISC 23 14:17:15.3±0.7**,36°.43N**±0°.04×**141°.17E**±0°.05**,h47^{km}**±6^{km}**,**
n208,σ1^{s}.64/200**,mb4.5**/70**,MS3.5**/4**,10C-9D,Near east**
coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.47	260	i P	Pn	14 17 26.9	+0.8
JHYU				eS	Sn	14 17 34.3	+0.5
JHYU	Hitachinakayam	0.47	260	A	A	14 17 26.9	
	comp=E,77nm,0.3s,comp=E,155nm,0.3s						
JHO	Hitachi	0.51	291	⇓P	Pn	14 17 27.3	+0.7
JHO				⇓S	Sn	14 17 34.9	+0.3
JHO	Hitachi	0.51	291	A	A	14 17 27.3	
	comp=E,31nm,1.8s,comp=E,23nm,2.1s						
JIHU	Itakohorinouch	0.69	228	i P	Pn	14 17 30.0	+1.1
JIHU				eS	Sn	14 17 40.2	+1.6
JIHU	Itakohorinouch	0.69	228	A	A	14 17 30.0	
	comp=E,79nm,0.9s,comp=E,41nm,0.5s						
ONAJ	Iwakimizuishiy	0.73	336	P	Pn	14 17 30.5	+1.0
ONAJ				S	Sn	14 17 40.6	+0.8
ONAJ	Iwakimizuishiy	0.73	336	A	A	14 17 30.5	
	comp=E,20nm,0.8s,comp=E,10.0nm,0.4s						
CHOJ	Chosi	0.77	199	A	A	14 17 31.2	
	comp=E,6.0nm,0.9s,comp=E,6.0nm,1.1s						
JYT	Yasato	0.81	256		Pn	14 17 30.1	-0.3
JYT				Sn	Sn	14 17 39.2	-2.2
JYT	Yasato	0.81	256	⇓P	Pn	14 17 30.1	-0.3
JYT				⇓S	Sn	14 17 39.6	-1.8
JYT	Yasato	0.81	256	A	A	14 17 30.1	
	comp=E,59nm,0.4s,comp=E,61nm,0.3s						
JFFD	Fukushimafurud	0.82	324	A	A	14 17 31.4	
	comp=E,16nm,1.8s,comp=E,9.0nm,0.9s						
JFK	Kawauchi	0.96	346	⇓P	Pn	14 17 33.5	+0.9
JFK	Kawauchi	0.96	346	A	A	14 17 33.5	
	comp=E,4.0nm,1.1s,comp=E,4.0nm,0.5s						
JSMT	Sammumatsuo	0.97	217	A	A	14 17 33.2	
	comp=E,17nm,0.6s,comp=E,11nm,0.8s						
JFT	Otama	1.27	329	⇓P	Pn	14 17 38.0	+1.2
JFT				⇓S	Sn	14 17 53.8	+1.1
JFT	Otama	1.27	329	A	A	14 17 38.0	
	comp=E,16nm,1.0s,comp=E,24nm,0.6s						
JMST	Minamisoumatoc	1.31	350	A	A	14 17 39.1	
	comp=E,4.0nm,1.2s,comp=E,5.0nm,0.4s						
JAG	Ashikaga	1.38	270	⇓P	Pn	14 17 37.7	-0.5
JAG	Ashikaga	1.38	270	A	A	14 17 37.7	
	comp=E,6.0nm,0.7s,comp=E,5.0nm,0.5s						
JMM	Marumori	1.47	348		Pn	14 17 40.5	+1.1
JMM	Marumori	1.47	348	A	A	14 17 41.1	
	comp=E,4.0nm,1.2s,comp=E,5.0nm,0.5s						
JFY	Yanaizu	1.52	310	A	A	14 17 40.4	
	comp=E,3.0nm,1.8s,comp=E,8.0nm,0.9s						
JKT	Katashina	1.58	283	A	A	14 17 40.5	
	comp=E,11nm,0.3s,comp=E,10.0nm,0.3s						
MJAR	Matsushiro Arr	2.38	274	P	Pn	14 17 51.0	-1.0
	70nm,0.3s,baz=111,slow=11,SNR=779						
MJAR				S	Sn	14 18 19.4	-0.6
	141nm,0.8s,baz=92,slow=31,SNR=2.9						
MJAR				LR	LR	14 19 01.0	
	comp=Z,188nm,21.6s,baz=101,slow=47						
MJAR	Matsushiro Arr	2.38	274	Pn	Pn	14 17 51.6	-0.4
MAJO	Matsushiro	2.39	274	Pn	Pn	14 17 51.8	-0.2

MAJO	**Matsushiro**	**2.39**	**274**	P	**Pn**	**14 17 51.8**	**-0.2**
MJB9	**Matsu-Tunnel**	**2.39**	**274**		**Pn**	**14 17 51.9**	**-0.1**
JSD	**Sado**	**2.82**	**306**	Pn	**Pn**	**14 17 57.7**	**-0.2**
JHJ2	**Mitsune**	**3.49**	**199**	Pn	**Pn**	**14 18 05.8**	**-1.3**
JHJ	**Hachijo jima 2**	**3.49**	**199**	P	**Pn**	**14 18 07.2**	**+0.1**
	93nm,0.3s,baz=78,slow=20,SNR=31						
JHJ				S	**Sn**	**14 18 45.6**	**-1.6**
	428nm,0.3s,baz=221,slow=23,SNR=23						
INU	**Inuyama**	**3.54**	**253**	Pn	**Pn**	**14 18 06.9**	**-0.8**
JTM	**Tenmabayashi**	**4.35**	**359**	Pn	**Pn**	**14 18 20.8**	**+1.8**
ERM	**Erimo**	**5.79**	**15**	Pn	**Pn**	**14 18 38.6**	**0.0**
ERM	**Erimo**	**5.79**	**15**	P	**Pn**	**14 18 38.6**	**0.0**
JEW	**Eniwo**	**6.41**	**2**	Pn	**Pn**	**14 18 47.5**	**+0.4**
JHS	**Saijyo**	**6.70**	**260**	Pn	**Pn**	**14 18 50.8**	**-0.4**
ASAJ	**Asahikawa**	**7.76**	**8**	P	**Pn**	**14 19 04.8**	**-0.8**
	19nm,0.4s,baz=222,slow=9.8,SNR=66						
ASAJ				S	**Sn**	**14 20 28.7**	**-3.3**
	9.8nm,0.7s,baz=324,slow=27,SNR=1.9						
ASAJ				LR	LR	14 23 14.3	
	comp=Z,24nm,20.9s,baz=139,slow=45						
ASAJ	**Asahikawa**	**7.76**	**8**	P	**Pn**	**14 19 04.9**	**-0.7**
JKA	**Kamikawa-asahi**	**7.76**	**8**	Pn	**Pn**	**14 19 04.9**	**-0.7**
NMR	**Nemuro--Hokkai**	**7.77**	**25**	*e*P	**Pn**	**14 19 04.0**	**-1.7**
NMR				*e*S	Sn	14 20 26.0	-6.3
GLVR	**Golovnino**	**8.03**	**23**	*e*P	**Pn**	**14 19 08.4**	**-0.9**
GLVR				*e*S	**Sn**	**14 20 32.9**	**-5.7**
RUSJ	**Misakicho**	**8.28**	**21**	*e*P	**Pn**	**14 19 12.2**	**-0.5**
RUSJ				*e*S	**Sn**	**14 20 41.4**	**-3.4**
YUK	**Yuzh-Kuril'sk**	**8.40**	**24**	*e*P	**Pn**	**14 19 13.3**	**-1.1**
YUK				*e*S	**Sn**	**14 20 42.4**	**-5.4**
YUK				pmax	pmax		
	comp=E,19nm,0.3s						
YUK				pmax	pmax		
	comp=Z,91nm,0.3s						
SHO	**Shikotan**	**8.60**	**29**	*e*P	**Pn**	**14 19 15.1**	**-2.1**
SHO				*e*S	Sn	14 20 43.7	-9.1
SHO				pmax	pmax		
	comp=Z,9.0nm,0.4s						
SHO				pmax	pmax		
	comp=N,3.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.4s						
JCJ	**Chichijima**	**9.35**	**174**	P	**Pn**	**14 19 24.9**	**-2.5**
	comp=E,31nm,0.3s,baz=0.6,slow=20,SNR=16						
JCJ				S	Sn	14 21 00.8	-10
	comp=E,57nm,0.4s,baz=259,slow=22,SNR=9.7						
JCJ	**Chichijima**	**9.35**	**174**	Pn	**Pn**	**14 19 25.3**	**-2.1**
KUR	**Kuril'sk**	**10.15**	**28**	*e*P	**Pn**	**14 19 37.5**	**-0.8**
KUR				*e*S	**Sn**	**14 21 25.0**	**-5.7**
KUR				smax	smax		
	comp=E,64nm,0.7s						
KUR				smax	smax		
	comp=N,43nm,0.6s						
USRK	**Ussuriysk Ar.**	**10.45**	**321**	P	**Pn**	**14 19 44.4**	**+2.0**
	comp=N,2.1nm,0.5s,baz=141,slow=13,SNR=3.3						
USRK				LR	LR	14 23 14.7	
	comp=N,58nm,19.8s,baz=157,slow=34						
YSS	**Yuzh-Sakhalins**	**10.58**	**6**	Pn	**Pn**	**14 19 43.4**	**-0.9**
YSS	**Yuzh-Sakhalins**	**10.58**	**6**	*ce*P	**Pn**	**14 19 44.4**	**+0.2**
YSS				pmax	pmax		
	comp=Z,33nm,0.7s						
KSRS	**Korea Array**	**10.65**	**279**	P	**Pn**	**14 19 48.5**	**+3.3**
	comp=Z,5.0nm,0.6s,baz=93,slow=14,SNR=26						
KSRS				LR	LR	14 23 44.2	
	comp=Z,53nm,18.5s,baz=210,slow=37						
TYV	**Tymovskoe**	**14.47**	**4**	*e*P	**Pn**	**14 20 35.0**	**-2.1**
TYV				pmax	pmax		
	comp=Z,20nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,4.2s						
KLR	**Kul'dur**	**14.52**	**335**	P	**Pn**	**14 20 40.0**	**+2.2**
	comp=Z,0.9nm,0.6s,baz=215,slow=13,SNR=2.3						
KLR				LR	LR	14 25 32.0	
	comp=Z,57nm,20.5s,baz=145,slow=34						
ZEA	**Zeya**	**19.84**	**335**	*e*P	**P**	**14 21 39.2**	**-2.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	**Petropavlovsk-**	**20.31**	**30**	P	**P**	**14 21 49.0**	**+1.9**
	comp=Z,2.8nm,0.9s,baz=209,slow=12,SNR=3.7						
	comp=Z,2.8nm,0.9s						
XLT	**XiLinHaoTe**	**20.52**	**299**	*e*P	**P**	**14 21 46.8**	**-2.8**
XLT				pmax	pmax		
	comp=Z,13nm,0.8s						
XLT				pmax	pmax		
	comp=Z,100nm,4.6s						
HNS	**HongShan**	**21.16**	**281**	⇓P	**P**	**14 21 54.3**	**-2.1**
HNS				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC	**Hu-ho-hao-te**	**23.48**	**290**	*e*P	**P**	**14 22 19.9**	**-0.9**
HHC				pmax	pmax		
	comp=Z,26nm,1.2s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
MA2	**Magadan**	**23.99**	**12**	P	**P**	**14 22 25.6**	**+0.4**
	comp=Z,8.6nm,0.7s,baz=193,slow=8.2,SNR=9.9						
	comp=Z,8.6nm,0.7s						
MA2	**Magadan**	**23.99**	**12**	P	**P**	**14 22 26.2**	**+1.0**
MA2				IAmb	IAmb	14 22 27.2	
	comp=Z,15nm,0.9s						
MA2	**Magadan**	**23.99**	**12**	*ce*P	**P**	**14 22 27.7**	**+2.5**
MA2				pmax	pmax		
	comp=Z,16nm,1.7s						
XAN	**Xi'an**	**26.38**	**274**	P	**P**	**14 22 44.6**	**-2.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK	**Yakutsk**	**26.62**	**348**	P	**P**	**14 22 48.2**	**-0.8**
	comp=Z,3.9nm,0.4s,baz=101,slow=1.4,SNR=4.3						
YAK				LR	LR	14 34 17.9	
	comp=Z,40nm,19.1s,baz=84,slow=38						
	comp=Z,3.9nm,0.4s						
YAK	**Yakutsk**	**26.62**	**348**	IAmb	IAmb	14 22 48.8	
	comp=Z,9.6nm,0.7s						
YAK	**Yakutsk**	**26.62**	**348**	*e*P	**P**	**14 22 47.8**	**-1.2**
YAK				*e**PP	**pP**	**14 23 02.5**	**+1.2**
YAK				*e*		14 23 29.9	
YAK				*e*		14 26 10.4	
YAK				*e*S	**S**	**14 27 19.1**	**-1.2**
YAK				*e*SS	**SnSn**	**14 28 31.6**	**+5.3**
YAK				*e*		14 33 36.6	
YAK				pmax	pmax		
	comp=Z,11nm,1.4s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,64nm,4.2s						
YAK				pmax	pmax		
	comp=E,41nm,4.1s						
YAK				smax	smax		
	comp=E,52nm,3.5s						
YAK				smax	smax		
	comp=N,28nm,3.2s						
SEY	**Seymchan**	**27.42**	**11**	P	**P**	**14 22 57.6**	**+1.3**
	comp=N,2.0nm,0.6s,baz=212,slow=19,SNR=7.5						
	comp=N,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**27.53**	**305**	*ce*P	**P**	**14 22 57.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**14 22 59.4**	**-2.0**
	comp=Z,2.4nm,0.8s,baz=120,slow=10,SNR=11						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**14 23 01.6**	**+0.2**
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**14 23 01.6**	**+0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.02**	**119**	T	T	14 52 30.3	
	baz=312,slow=75,SNR=49						
H11N1	**WAKE ISLAND Hy**	**28.02**	**119**	T	T	14 52 43.9	
	baz=312,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.04**	**119**	T	T	14 52 39.4	
	baz=312,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hy**	**28.71**	**122**	T	T	14 53 56.4	
	baz=317,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.71**	**122**	T	T	14 54 03.3	
	baz=317,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.72**	**122**	T	T	14 53 59.0	
	baz=317						
LZH	**Lanzhou**	**29.98**	**281**	*e*P	**P**	**14 23 22.0**	**+2.5**
LZH				pP	pP	14 23 35.3	+3.5
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,5.4s						
LZH				LR	LR		
	comp=Z,130nm,12.5s						
LZH				LR	LR		
	comp=Z,130nm,14.2s						
LZH				LR	LR		
	comp=Z,190nm,16.5s						
GTA	**Gaotai**	**32.55**	**288**	*e*P	**P**	**14 23 42.9**	**+0.8**
GTA				pP	pP	14 23 47.9	-6.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PZH	**PanZhiHua**	**34.84**	**265**	P	**P**	**14 24 02.6**	**+0.5**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
TIXI	**Tiksi**	**35.87**	**353**	P	**P**	**14 24 09.7**	**-0.4**
TIXI	**Tiksi**	**35.87**	**353**	*ce*P	**P**	**14 24 10.4**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GOMU	**GeErMu**	**37.07**	**284**	P	**P**	**14 24 21.4**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,74nm,5.9s						
UNV	**Unalaska Valle**	**39.80**	**47**	P	**P**	**14 24 44.4**	**+0.8**
AKUT	**Akutan**	**40.25**	**47**	P	**P**	**14 24 46.9**	**-0.3**
WMQ	**Urumqi**	**40.94**	**297**	*e*P	**P**	**14 24 55.5**	**+2.3**
ZAA0	**Zalesovo Array**	**42.18**	**313**	P	**P**	**14 25 02.1**	**-1.0**
ZALV	**Zalesovo Beam**	**42.18**	**313**	P	**P**	**14 25 02.4**	**-0.7**
	comp=Z,3.1nm,0.4s,baz=86,slow=6.5,SNR=14						
ZALV				PcP	**PcP**	**14 26 56.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=90,slow=2.9,SNR=1.9						
	comp=Z,3.1nm,0.4s						
ZALV	**Zalesovo Beam**	**42.18**	**313**	P	**P**	**14 25 01.8**	**-1.3**
MK31	**Makanchi Array**	**44.27**	**303**	P	**P**	**14 25 18.7**	**-1.5**
MK31	**Makanchi Array**	**44.27**	**303**	P	**P**	**14 25 18.7**	**-1.5**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**44.27**	**303**	P	**P**	**14 25 19.4**	**-0.8**
	comp=Z,4.2nm,1.0s,baz=90,slow=9.5,SNR=16						
	comp=Z,4.2nm,1.0s						
MKAR	**Makanchi Array**	**44.27**	**303**	P	**P**	**14 25 18.8**	**-1.4**
MKAR	**Makanchi Array**	**44.27**	**303**	*ce*P	**P**	**14 25 20.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
N18K	**Kilae Creek**	**45.96**	**38**	P	**P**	**14 25 35.5**	**+2.1**
TTA	**Tatalina**	**46.03**	**34**	P	**P**	**14 25 35.9**	**+1.9**
TTA				IAmb	IAmb	14 25 37.1	
	comp=Z,5.6nm,1.4s						
TTA	**Tatalina**	**46.03**	**34**	P	**P**	**14 25 35.9**	**+1.9**
TTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SVW2	**Sparrevohn**	**46.12**	**37**	P	**P**	**14 25 37.2**	**+2.6**
SVW2				IAmb	IAmb	14 25 38.3	
	comp=Z,7.5nm,0.9s						
KURK	**Kurchatov**	**46.15**	**309**	P	**P**	**14 25 33.8**	**-1.2**
KURK				IAmb	IAmb	14 25 34.4	
	comp=Z,5.9nm,0.8s						
KURK	**Kurchatov**	**46.15**	**309**	P	**P**	**14 25 34.2**	**-0.7**
KURBB	**Kurchatov Arra**	**46.22**	**308**	P	**P**	**14 25 34.2**	**-1.3**
	comp=Z,3.8nm,0.4s,baz=83,slow=7.7,SNR=49						
	comp=Z,3.8nm,0.4s						
L19K	**White Mountain**	**46.52**	**36**	P	**P**	**14 25 40.0**	**+2.2**
L19K				IAmb	IAmb	14 26 03.5	
	comp=Z,10nm,1.4s						
N19K	**Bonanza Creek**	**46.65**	**37**	P	**P**	**14 25 40.6**	**+1.7**
N19K				IAmb	IAmb	14 25 40.7	
	comp=Z,11nm,1.3s						
K20K	**Telida**	**46.94**	**34**	P	**P**	**14 25 43.5**	**+2.5**
K20K				IAmb	IAmb	14 25 44.4	
	comp=Z,7.3nm,0.7s						
J20K	**Nowinta River**	**46.96**	**33**	P	**P**	**14 25 43.2**	**+2.1**
J20K				IAmb	IAmb	14 25 44.1	
	comp=Z,5.6nm,0.8s						
IMAR	**Indian Mountai**	**47.27**	**30**	P	**P**	**14 25 45.2**	**+1.7**
M20K	**Styx River**	**47.32**	**36**	P	**P**	**14 25 46.7**	**+2.6**
M20K				IAmb	IAmb	14 25 47.7	
	comp=Z,4.1nm,0.8s						
H21K	**Melozitna Rive**	**47.63**	**31**	P	**P**	**14 25 48.3**	**+1.9**
H21K				IAmb	IAmb	14 25 49.4	
	comp=Z,3.3nm,0.8s						
KDAK	**Kodiak Island**	**47.68**	**42**	P	**P**	**14 25 47.7**	**+0.9**
KDAK	**Kodiak Island**	**47.68**	**42**	P	**P**	**14 25 47.7**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,41nm,1.4s						
PPLA	**Purkeypile**	**47.78**	**35**	P	**P**	**14 25 48.8**	**+1.1**
TOLK	**Toolik Lake Re**	**49.10**	**27**	P	**P**	**14 25 59.3**	**+1.7**
TOLK				IAmb	IAmb	14 26 00.6	
	comp=Z,4.2nm,0.9s						
SEW	**Seward**	**49.16**	**38**	P	**P**	**14 25 59.0**	**+0.9**
RND	**Reindeer**	**49.29**	**34**	P	**P**	**14 26 00.1**	**+0.9**
RND				IAmb	IAmb	14 26 01.4	
	comp=Z,4.3nm,1.0s						
RND	**Reindeer**	**49.29**	**34**	P	**P**	**14 26 00.1**	**+0.9**
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MDM	**Murphy Dome**	**49.53**	**32**	P	**P**	**14 26 02.0**	**+1.0**
SML	**Sawmill**	**49.60**	**36**	P	**P**	**14 26 03.7**	**+2.1**
H24K	**Noodor Dome**	**49.67**	**31**	P	**P**	**14 26 04.4**	**+2.4**
H24K				IAmb	IAmb	14 26 05.5	
	comp=Z,4.0nm,0.9s						
DHY	**Denali Highway**	**49.97**	**34**	P	**P**	**14 26 06.5**	**+2.0**
DHY				IAmb	IAmb	14 26 19.9	
	comp=Z,10.0nm,1.4s						
SCM	**Sheep Creek Mo**	**50.07**	**36**	P	**P**	**14 26 06.9**	**+1.7**
SCM	**Sheep Creek Mo**	**50.07**	**36**	P	**P**	**14 26 06.9**	**+1.7**
SCM				pmax	pmax		
	comp=Z,26nm,1.5s						
HDA	**Harding Lake**	**50.10**	**33**	P	**P**	**14 26 06.3**	**+1.1**
HDA				IAmb	IAmb	14 26 07.1	
	comp=Z,6.3nm,0.8s						
IL31		**50.11**	**32**	P	**P**	**14 26 06.0**	**+0.8**
ILAR	**Eielson Array**	**50.11**	**32**	P	**P**	**14 26 06.5**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=270,slow=6.3,SNR=53						
	comp=Z,5.1nm,0.8s						
AAK	**Ala-Archa**	**50.60**	**299**	LR	LR	14 48 48.8	
	comp=Z,30nm,19.3s,baz=102,slow=38						
KLU	**Klutina**	**50.77**	**36**	P	**P**	**14 26 11.2**	**+0.8**
KLU				IAmb	IAmb	14 26 25.2	
	comp=Z,7.8nm,1.2s						
J25K	**Salcha River,**	**50.77**	**32**	P	**P**	**14 26 10.7**	**+0.3**
BRVK	**Borovoye**	**50.89**	**313**	P	**P**	**14 26 11.0**	**-0.3**
BRVK				IAmb	IAmb	14 26 11.7	
	comp=Z,2.3nm,0.6s						
BRVK	**Borovoye**	**50.89**	**313**	*ce*P	**P**	**14 26 11.1**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BMAR	**Burnt Mountain**	**50.96**	**29**	P	**P**	**14 26 14.2**	**+2.4**
SCRK	**Sand Creek**	**51.42**	**33**	P	**P**	**14 26 16.3**	**+0.9**
SCRK				IAmb	IAmb	14 26 17.6	
	comp=Z,5.4nm,0.9s						
MENT	**Mentasta**	**51.65**	**34**	P	**P**	**14 26 19.3**	**+2.3**
MENT				IAmb	IAmb	14 26 43.7	
	comp=Z,5.9nm,1.2s						
VRDI	**Verde Repeater**	**51.98**	**36**	P	**P**	**14 26 21.6**	**+1.9**
VRDI				IAmb	IAmb	14 26 23.0	
	comp=Z,4.9nm,1.0s						
WAX	**Waxell Ridge**	**52.39**	**37**	P	**P**	**14 26 24.6**	**+2.0**
L27K	**Beaver Creek,**	**52.49**	**34**	P	**P**	**14 26 24.6**	**+1.4**
L27K				IAmb	IAmb	14 26 26.5	
	comp=Z,4.5nm,1.0s						
BCAR	**Beaver Creek A**	**52.51**	**34**	P	**P**	**14 26 24.3**	**+1.0**
EGAK	**Eagle**	**52.56**	**32**	P	**P**	**14 26 24.5**	**+0.9**
EGAK				IAmb	IAmb	14 26 26.2	
	comp=Z,4.3nm,1.1s						
M27K	**Edge Creek, AK**	**52.56**	**35**	P	**P**	**14 26 25.9**	**+2.0**
M27K				IAmb	IAmb	14 26 42.6	
	comp=Z,7.2nm,1.3s						
DAWY	**Dawson**	**53.42**	**33**	P	**P**	**14 26 31.6**	**+1.5**
DAWY				IAmb	IAmb	14 26 34.6	
	comp=Z,5.0nm,1.4s						
EPYK	**Eagle Plains**	**54.15**	**30**	P	**P**	**14 26 37.6**	**+2.2**
M30M	**Minto, Yukon**	**54.85**	**34**	P	**P**	**14 26 43.1**	**+2.6**
INK	**Inuvik**	**55.02**	**27**	P	**P**	**14 26 42.8**	**+1.3**
	comp=Z,5.6nm,0.6s,baz=287,slow=5.9,SNR=27						
	comp=Z,5.6nm,0.6s						
INK	**Inuvik**	**55.02**	**27**	P	**P**	**14 26 42.8**	**+1.3**
INK				IAmb	IAmb	14 26 43.8	
	comp=Z,6.1nm,0.7s						
WHY	**Whitehorse**	**56.19**	**36**	P	**P**	**14 26 51.2**	**+0.9**
WHY				IAmb	IAmb	14 26 53.7	
	comp=Z,4.8nm,0.9s						
WB0	**Warramunga Arr**	**56.26**	**188**	P	**P**	**14 26 50.0**	**-0.9**
WB0				IAmb	IAmb	14 27 08.1	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**56.43**	**187**	P	**P**	**14 26 51.3**	**-0.9**
WR0				IAmb	IAmb	14 27 16.8	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**56.44**	**188**	P	**P**	**14 26 51.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=2.6,slow=7.3,SNR=12						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**56.44**	**188**	P	**P**	**14 26 51.2**	**-1.1**
ARU	**Arti**	**56.68**	**319**	P	**P**	**14 26 52.7**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=91,slow=5.9,SNR=8.0						
	comp=Z,2.1nm,0.5s						
ARU	**Arti**	**56.68**	**319**	*c i*P	**P**	**14 26 52.5**	**-1.1**
ARU				S	**S**	**14 34 44.0**	**+1.6**
ARU				SS	**SS**	**14 38 24.4**	**-5.7**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
A36M	**Sachs Harbour**	**56.89**	**22**	P	**P**	**14 26 56.5**	**+1.6**
P33M	**Teslin, Yukon**	**57.30**	**36**	P	**P**	**14 27 00.3**	**+2.3**
P33M				IAmb	IAmb	14 27 01.7	
	comp=Z,5.8nm,1.1s						
C36M	**Paulatuk**	**58.06**	**25**	P	**P**	**14 27 04.3**	**+1.2**
ABKAR	**Akbulak array**	**58.18**	**310**	P	**P**	**14 27 02.8**	**-1.5**
AKTO	**Aktyubinsk**	**58.93**	**312**	P	**P**	**14 27 08.2**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=51,slow=6.5,SNR=2.3						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**60.16**	**188**	P	**P**	**14 27 17.6**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=11,slow=8.9,SNR=3.2						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**60.16**	**188**	P	**P**	**14 27 17.9**	**-0.3**
ASAR	**Alice Springs**	**60.16**	**188**	P	**P**	**14 27 17.9**	**-0.3**
SPITS	**Spitsbergen Ar**	**61.08**	**349**	P	**P**	**14 27 24.8**	**+1.0**
SPITS				pmax	pmax		
	comp=Z,31nm,1.3s						
RES	**Resolute Bay**	**63.24**	**14**	P	**P**	**14 27 38.3**	**+0.1**
RES				IAmb	IAmb	14 27 50.2	
	comp=Z,6.8nm,1.1s						
RES	**Resolute Bay**	**63.24**	**14**	P	**P**	**14 27 38.3**	**+0.1**
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
YKA	**Yellowknife Ar**	**64.43**	**30**	P	**P**	**14 27 47.0**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=297,slow=6.8,SNR=5.5						
	comp=Z,1.8nm,0.7s						
YKA	**Yellowknife Ar**	**64.43**	**30**	*ce*P	**P**	**14 27 48.2**	**+1.9**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**64.49**	**339**	P	**P**	**14 27 46.2**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=61,slow=7.3,SNR=3.8						
	comp=Z,2.8nm,1.0s						
ARCES	**ARCESS Array B**	**64.49**	**339**	IAmb	IAmb	14 27 47.1	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**64.49**	**339**	P	**P**	**14 27 46.2**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,13nm,1.4s						
AFI	**Afiamalu**	**66.90**	**129**	P	**P**	**14 28 04.9**	**+2.0**
	comp=Z,17nm,0.7s,baz=311,slow=18,SNR=3.9						
	comp=Z,17nm,0.7s						
FORT	**Forrest**	**67.98**	**192**	P	**P**	**14 28 09.4**	**+0.1**
LTY	**Liberty**	**69.22**	**46**	P	**P**	**14 28 18.3**	**+1.2**
LTY				IAmb	IAmb	14 28 19.3	
	comp=Z,10nm,1.4s						
FINES	**FINESS Array B**	**69.26**	**332**	P	**P**	**14 28 15.8**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=29,slow=9.4,SNR=9.3						
	comp=Z,2.9nm,0.8s						
FINES	**FINESS Array B**	**69.26**	**332**	P	**P**	**14 28 16.3**	**-0.7**
FINES	**FINESS Array B**	**69.26**	**332**	P	**P**	**14 28 16.3**	**-0.7**
HFS	**Hagfors**	**74.56**	**336**	LR	LR	15 04 12.9	
	comp=Z,30nm,18.3s,baz=36,slow=38						
NC204	**NORSAR Array S**	**74.62**	**338**	P	**P**	**14 28 49.3**	**+0.1**
FCC	**Fort Churchill**	**74.63**	**26**	P	**P**	**14 28 49.6**	**+0.4**
FCC				IAmb	IAmb	14 28 50.5	
	comp=Z,12nm,1.2s						
FCC	**Fort Churchill**	**74.63**	**26**	P	**P**	**14 28 49.6**	**+0.4**
FCC				pmax	pmax		
	comp=Z,12nm,1.3s						
AKASG	**Malin Array Be**	**74.65**	**322**	P	**P**	**14 28 48.3**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=45,slow=6.4,SNR=9.6						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**74.65**	**322**	P	**P**	**14 28 48.3**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NB2	**NORSAR Subarra**	**74.67**	**337**	P	**P**	**14 28 48.8**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**74.67**	**337**	P	**P**	**14 28 49.0**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=38,slow=5.8,SNR=5.5						
	comp=Z,1.8nm,0.7s						
LRM	**Limekiln Ridge**	**74.72**	**44**	P	**P**	**14 28 49.7**	**-0.6**
DLMT	**Dillon**	**74.91**	**45**	P	**P**	**14 28 53.0**	**+1.6**
DLMT				IAmb	IAmb	14 28 53.7	
	comp=Z,4.0nm,0.6s						
KVN	**Kaiserville**	**75.29**	**52**	P	**P**	**14 28 53.7**	**0.0**
KVN	**Kaiserville**	**75.29**	**52**	P	**P**	**14 28 53.7**	**0.0**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	**Bozeman (W)**	**75.31**	**44**	P	**P**	**14 28 53.1**	**-0.6**
BOZ	**Bozeman (W)**	**75.31**	**44**	P	**P**	**14 28 53.1**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**75.51**	**53**	P	**P**	**14 28 56.5**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=282,slow=6.2,SNR=12						
	comp=Z,1.4nm,0.8s						
NV11	**Mina Array Sit**	**75.61**	**53**	P	**P**	**14 28 56.5**	**+1.0**
BW06	**Boulder Array**	**78.23**	**45**	P	**P**	**14 29 10.8**	**+0.5**
PD31	**Pinedale Array**	**78.23**	**45**	P	**P**	**14 29 10.9**	**+0.6**
PDAR	**Pinedale Array**	**78.23**	**45**	P	**P**	**14 29 11.1**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=280,slow=2.3,SNR=8.3						
	comp=Z,0.7nm,0.6s						
BUR08	**Bucovina Ar. S**	**78.65**	**322**	P	**P**	**14 29 11.6**	**-0.8**
BURAR	**Bucovina Array**	**78.66**	**322**	P	**P**	**14 29 11.8**	**-0.6**
BRTR	**Keskin Array B**	**79.10**	**312**	P	**P**	**14 29 14.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=112,slow=1.6,SNR=3.8						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**79.10**	**312**	*ce*P	**P**	**14 29 15.5**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SRU	**San Rafael Swe**	**79.96**	**49**	P	**P**	**14 29 20.7**	**+0.9**
SRU	**San Rafael Swe**	**79.96**	**49**	P	**P**	**14 29 20.7**	**+0.9**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**81.52**	**330**	*i* P	**P**	**14 29 27.0**	**-0.6**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	**Collm**	**81.52**	**330**	*i* P	**P**	**14 29 27.0**	**-0.6**
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**83.12**	**328**	P	**P**	**14 29 35.1**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=40,slow=6.7,SNR=3.5						
	comp=Z,0.6nm,0.5s						
ANMO	**Albuquerque**	**85.13**	**50**	*ce*P	**P**	**14 29 50.1**	**+3.4**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
H03N2	**Juan Fernandez**	**147.16**	**97**	T	T	17 21 47.8	
	baz=291,slow=76,SNR=12						
H03N3	**Juan Fernandez**	**147.17**	**97**	T	T	17 22 00.2	
	baz=291,slow=76,SNR=14						
LPAZ	**La Paz**	**147.17**	**60**	PKPbc	**PKPbc**	**14 36 54.8**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=0.7,slow=4.1,SNR=8.9						
LPAZ	**La Paz**	**147.17**	**60**	PKPbc	**PKPbc**	**14 36 54.5**	**0.0**
H03N1	**Juan Fernandez**	**147.17**	**97**	T	T	17 21 49.3	
	baz=291,slow=76,SNR=11						

BER ***23*** *14:17:23.9±0.5, 71°.18N×7°.98W, h0km±203km, ML2.7,*
Confirmed Earthquake
DNK ***23*** *14:17:26.0±2.8, 71°.25N×8°.63W, h6km±110km, ML0.8*
ISC 23 14:17:23.5±1.1**, 71°.28N**±0°.05×**8°.3W**±0°.1**, h10**km**, n8,**
σ**1s.15**/15**, 4D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.26**	**191**	⇓*i*P	**Pb**	**14 17 29.6**	**-0.5**
JNW				*e*S	**Sb**	**14 17 34.1**	**-0.6**
JNW				IAML		14 17 35.0	
	comp=Z,1µm,0.3s						
JNE	**Jan Mayen East**	**0.29**	**181**	⇓*i*P	**Pg**	**14 17 29.3**	**-0.1**
JNE				*e*S	**Sg**	**14 17 33.4**	**+0.2**
JNE				IAML		14 17 33.8	
	comp=Z,1µm,0.1s						
JMIC	**Jan Mayen**	**0.30**	**194**	⇓*i*P	**Pg**	**14 17 30.0**	**+0.4**
JMIC				*e*S	**Sg**	**14 17 34.6**	**+1.0**
JMIC				IAML		14 17 35.1	
	comp=Z,482nm,0.3s						
JMI	**Jan Mayen**	**0.38**	**203**	⇓*i*P	**Pb**	**14 17 31.6**	**-0.7**
JMI				*e*P	**Pg**	**14 17 31.7**	**+0.7**
JMI				*e*S	**Sb**	**14 17 37.5**	**-0.7**
JMI				IAML		14 17 40.4	
	comp=Z,313nm,0.2s						
DBG	**Daneborg**	**4.66**	**316**	*i* P	**Pn**	**14 18 34.6**	**+0.8**
DBG				*i* S	**Sn**	**14 19 27.1**	**-0.7**
DBG				IAML		14 19 29.0	
	comp=Z,0.4nm,0.2s						

DAG	Danmarks Havn	6.20	337	iP	Pn	14 18 56.0	+1.1
DAG				iS	Sn	14 20 03.2	-2.5
DAG				IAML		14 20 07.3	
	comp=Z,0.5nm,0.3s						
KBS	Kingsbay	9.19	25	iP	Pn	14 19 36.2	+0.4
NOR	Nord	10.54	353	iP	Pn	14 19 56.2	+1.9
NOR				IAML		14 21 56.2	
	comp=Z,0.2nm,0.2s						

*JMA **23** 14:34:22.5±0.4, 24°N±1°×122°.3E±0°.3, h0^{km}±2^{km}, MV2.6/10, TAIWAN REGION*
*TAP **23** 14:34:24.9, 24°.08N×122°.30E, h26^{km}, ML2.6, D*
ISC 23 14:34:22.8±1.2, 23°.96N±0°.03×122°.31E±0°.02, h6^{km}±10^{km}, n49, σ0^{s}.80/90, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.63	304	eP	Pg	14 34 35.7	+0.8
	baz=294						
ETL	Fush Village	0.66	288	P	Pb	14 34 37.1	+0.3
	baz=262						
ETL				S	Sb	14 34 46.2	0.0
	baz=262						
EWUT	Wuta	0.69	315	P	Pg	14 34 36.2	+0.1
	baz=313						
EWUT				iS	Sg	14 34 45.7	+0.7
	baz=313						
NACB	Ninganchiao	0.69	288	P	Pb	14 34 37.6	+0.4
	baz=264						
NACB				eS	Sb	14 34 47.6	+0.6
	baz=264						
ENA	Nanau	0.70	312	P	Pg	14 34 36.6	+0.3
	baz=311						
ENA				S	Sg	14 34 45.9	+0.5
	baz=311						
ETM	Tongmen	0.75	271	iP	Pb	14 34 38.6	+0.3
	baz=252						
ETM				iS	Sb	14 34 49.4	+0.7
	baz=252						
TEGC	Jichi Village	0.75	251	P	Pb	14 34 38.9	+0.6
	baz=242						
TEGC				S	Sb	14 34 50.3	+1.6
	baz=242						
JYNG	Yonagunijimaku	0.76	50	P	Pb	14 34 38.4	-0.1
JYNG				S	Sb	14 34 50.0	+0.8
TWC	Suao	0.77	327	P	Pg	14 34 37.3	-0.4
	baz=322						
TWC				eS	Sg	14 34 47.1	-0.6
	baz=322						
ETLH	Xiulin Townshi	0.80	288	P	Pb	14 34 39.2	+0.1
	baz=267						
ETLH				S	Sb	14 34 50.4	+0.2
	baz=267						
YOJ	Yonaguni jima	0.81	52	iP	Pb	14 34 39.6	+0.2
	baz=59						
YOJ				S	Sb	14 34 51.3	+0.6
	baz=59						
YOJ	Yonaguni jima	0.81	52	P	Pg	14 34 39.3	+0.8
YOJ				S	Sb	14 34 51.2	+0.6
EGFH	Guangfu	0.86	251	P	Pb	14 34 40.7	+0.6
	baz=233						
EGFH				iS	Sb	14 34 53.4	+1.5
	baz=233						
NDS	Dongshan	0.86	321	P	Pg	14 34 39.4	-0.1
	baz=315						
NDS				eS	Sg	14 34 50.0	-0.6
	baz=315						
LATG	Datong	0.92	309	P	Pg	14 34 40.9	+0.4
	baz=302						
LATG				S	Sg	14 34 52.9	+0.5
	baz=302						
HGSD	Ruisui	0.93	240	P	Pb	14 34 42.3	+0.8
	baz=235						
HGSD				S	Sn	14 34 56.0	-0.2
	baz=235						
EGS		0.95	339	P	Pg	14 34 41.3	+0.3
	baz=327						
EGS				eS	Sg	14 34 51.8	-1.6
	baz=327						
ENTT	Nioudou	0.96	315	P	Pg	14 34 41.6	+0.3
	baz=320						
ENTT				S	Sg	14 34 54.2	+0.4
	baz=320						
TWE	Neicheng	0.96	323	iP	Pg	14 34 41.1	-0.2
	baz=324						
TWE				S	Sg	14 34 53.2	-0.6
	baz=324						
NNSB	Datong	0.97	299	P	Pb	14 34 42.0	-0.1
	baz=292						
NNSB				S	Sg	14 34 54.5	+0.5
	baz=292						
WHF	Hehuan Shan	0.97	281	P	Pb	14 34 42.4	0.0
	baz=261						
EHY	Hungye	1.01	244	iP	Pb	14 34 43.6	+0.9
	baz=253						
FUSB	Fushanzhiwuyua	1.03	321	P	Pg	14 34 42.7	0.0
	baz=315						
FUSB				S	Sg	14 34 56.6	+0.4
	baz=315						
OWD	Renai	1.04	270	iP	Pb	14 34 43.5	+0.3
	baz=263						
OWD				S	Sb	14 34 57.5	+0.3
	baz=263						
CHGB	Renai	1.04	276	iP	Pg	14 34 43.4	+0.5
	baz=257						
CHGB				iS	Sb	14 34 57.6	+0.1
	baz=257						
YULB	Yu-li	1.08	239	P	Pb	14 34 44.4	+0.4
	baz=249						
YULB				S	Sb	14 34 59.3	+0.8
	baz=249						
TWB1	Santiao Chiao	1.09	344	eP	Pg	14 34 43.9	+0.2
	baz=341						
TWB1				S	Sg	14 34 56.3	-1.5
	baz=341						
VWDT	VWDT	1.09	260	P	Pb	14 34 44.4	+0.3
	baz=242						
VWDT				eS	Sb	14 34 59.6	+1.1
	baz=242						
WUSB	Renai	1.09	272	P	Pb	14 34 44.4	+0.2
	baz=255						
TIPB	Shuangxi	1.10	337	P	Pg	14 34 43.6	-0.4
	baz=332						
TIPB				eS	Sg	14 34 55.8	-2.5
	baz=332						
TWF1	Yuli	1.11	237	P	Pg	14 34 44.7	+0.6
	baz=221						
TWF1				S	Sb	14 34 60.0	+0.9
	baz=221						
YHNB	Yeheng	1.11	310	P	Pg	14 34 44.0	-0.1
	baz=292						
YHNB				eS	Sg	14 34 58.7	+0.2
	baz=292						
FULB	Fuli	1.20	231	P	Pg	14 34 45.7	-0.2
	baz=215						
FULB				eS	Sg	14 35 01.1	-0.3
	baz=215						
SXI1	Grass Mountain	1.20	341	P	Pg	14 34 44.8	-1.1
	baz=337						
SXI1				S	Sg	14 35 00.0	-1.4
	baz=337						
NWF	Wu-fen Shan	1.21	337	P	Pg	14 34 45.3	-0.7
	baz=333						
NWF				S	Sg	14 35 00.5	-1.3
	baz=333						
WFSB	Wu-fen Shan	1.21	337	P	Pg	14 34 45.3	-0.7
	baz=332						
WFSB				S	Sg	14 35 00.3	-1.5
	baz=332						
TWA	Mucha	1.22	327	eP	Pb	14 34 46.5	+0.3
	baz=322						
TWA				eS	Sg	14 35 01.6	-0.4
	baz=322						
SSLB	Suanglung	1.25	263	eP	Pg	14 34 47.0	+0.2
	baz=246						
TATO	Taipei	1.26	324	eP	Pn	14 34 48.1	+1.1
	baz=319						
TATO				eS	Sg	14 35 02.9	-0.5
	baz=319						
EDH	Donghe	1.35	223	eP	Pn	14 34 47.5	-0.7
	baz=212						
EDH				eS	Sg	14 35 04.1	-2.0
	baz=212						
IRIF	Iriomote-Funau	1.35	74	eP	Pn	14 34 48.2	0.0
IRIF				S	Sn	14 35 07.1	+0.6
HATJ	Hateruma jima	1.37	86	S	Sb	14 35 06.3	-0.4
ELDTW	Lidau	1.41	237	eP	Pn	14 34 48.6	-0.5
	baz=233						
LDUT	Ludao	1.49	211	eP	Pn	14 34 49.5	-0.7
	baz=210						
LDUT				eS	Sn	14 35 08.1	-1.9
	baz=210						
LONT	Longtian	1.50	226	P	Pn	14 34 49.9	-0.5
	baz=237						
LONT				S	Sn	14 35 09.6	-0.8
	baz=237						
JKRS	Kuro-shima	1.58	79	P	Pb	14 34 52.7	+0.3
JKRS				S	Sb	14 35 13.3	+0.6
TWGBT	Beinan	1.60	225	P	Pn	14 34 51.2	-0.5
	baz=234						
TWGBT				eS	Sn	14 35 10.8	-1.9
	baz=234						
JIJ	Ishigaki jima	1.72	76	P	Pn	14 34 53.8	+0.4
JIJ				S	Sn	14 35 15.8	+0.1
JTJ	Tarama	2.29	72	S	Sn	14 35 30.5	+0.9

*IDC **23** 14:36:22.2±1.3, 17°.96N×120°.03E, h0^{km}, mb3.4/4, mbtmp3.5/4, MS2.7/1, Error ellipse: s-maj=43.4km s-min=27.9km az=75.0*
*MAN **23** 14:36:25.0, 18°.15N×119°.81E, h25^{km}, mb4.4, ML3.2, MS3.0, Hypocentre not reviewed by the ISC*
ISC 23 14:36:23.8±1.1, 18°.15N±0°.10×119°.9E±0°.1, h10^{km}, n10, σ1^{s}.37/13, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.56	114	⇑iP	Pn	14 36 38.1	+0.2
SIPP				iS	Sn	14 36 59.9	+13
APYP	Conner	1.29	103	⇓eP	Pn	14 36 48.8	+0.9
SAMP	Sagada Mountai	1.42	138	⇓eP	Pn	14 36 50.3	+0.6
SAMP				eS	Sb	14 37 09.2	+0.7
SMPP	San Manuel, Pa	2.12	160	⇑eP	Pn	14 36 59.8	+0.5
PCPH	Palayan	2.81	156	⇓eP	Pn	14 37 10.4	+1.6
BALP	Baler	2.88	146	⇑eP	Pn	14 37 11.5	+1.8
CMAR	Chiang Mai Arr	19.92	274	P	P	14 40 56.8	+0.9
	0.4nm,0.6s,baz=100,slow=8.3,SNR=3.0						
CMAR				LR	LR	14 48 58.5	
	comp=Z,21nm,18.1s,baz=270,slow=38						
	0.4nm,0.6s						
KSRS	Korea Array	20.48	18	P	P	14 41 02.6	+0.9
	1.4nm,0.8s,baz=200,slow=11,SNR=5.8						
	1.4nm,0.8s						
WRA	Warramunga Arr	40.42	159	P	P	14 43 59.7	-2.7
	0.3nm,0.4s,baz=340,slow=9.1,SNR=12						
WRA				PcP	PcP	14 46 05.2	-0.3
	0.4nm,0.7s,baz=341,slow=3.3,SNR=2.1						
	0.3nm,0.4s						
ASAR	Alice Springs	43.75	161	P	P	14 44 28.2	-1.4
	0.6nm,0.4s,baz=340,slow=6.9,SNR=28						
ASAR				PcP	PcP	14 46 16.0	-0.5
	0.2nm,0.3s,baz=338,slow=3.2,SNR=4.2						
	0.6nm,0.4s						

*TUL **23** 14:54:37.1±0.7, 36°.29N±0°.02×97°.51W±0°.02, h6^{km}±7^{km}, ML2.7, mb_Lg2.7/55(NEIC), Error ellipse: s-maj=2.5km s-min=1.6km az=215.0*
NEIC 23 14:54:36.8±0.4, 36°.284N±0°.010×97°.52W±0°.02, h10^{km}±7^{km}, Error ellipse: s-maj=1.9km s-min=1.4km az=73.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.87	176	Pg	Pg	14 54 53.5	-0.1
OKCSW	OKLAHOMA CITY	0.88	176		Pg	14 54 53.8	0.0
T35A	Sooner Cattle	1.03	52	Pg	Pg	14 54 56.5	-0.1
FNO	Franklin	1.03	174	Pg	Pg	14 54 56.3	-0.3
U32A	Winter Ranch,	1.20	275		Pb	14 54 59.4	-0.3
TUL1	Leonard	1.45	104	Pn	Pn	14 55 03.0	-0.2
TUL1				IAmb_Lg		14 55 24.2	
	comp=Z,37nm,0.9s						
WMOK	Wichita Mounta	1.85	214		Pn	14 55 08.9	+0.2
X37A	Clayton	2.44	133	IAmb_Lg		14 55 56.1	
	comp=Z,28nm,0.7s						
KSU1	Kansas State U	2.90	14	Pn	Pn	14 55 23.1	0.0
KSU1				IAmb_Lg		14 56 11.1	
	comp=Z,15nm,1.1s						
CBKS	Cedar Bluff	3.08	326	IAmb_Lg		14 56 18.5	
	comp=Z,17nm,0.8s						
W39A	Magazine	3.23	109	IAmb_Lg		14 56 26.3	
	comp=Z,23nm,0.8s						
S39A	Bolivar	3.64	66	IAmb_Lg		14 56 32.7	
	comp=Z,21nm,0.8s						
AMTX	Amarillo	3.67	249	IAmb_Lg		14 56 36.5	
	comp=Z,17nm,0.7s						
U40A	Yellville	3.77	88	IAmb_Lg		14 56 35.3	
	comp=Z,21nm,0.8s						
X40A	Basin Creek Fa	4.23	114	Pn	Pn	14 55 40.8	-0.5
X40A				IAmb_Lg		14 57 02.6	
	comp=Z,9.5nm,0.8s						
WHTX	Lake Whitney,	4.28	179	Pn	Pn	14 55 41.8	-0.3
MGMO	Mountain Grove	4.31	77	IAmb_Lg		14 56 57.0	
	comp=Z,15nm,0.8s						
FCAR	Ozark Folk Cen	4.39	94	IAmb_Lg		14 56 53.9	
	comp=Z,10.0nm,0.8s						
N33A	J Bar K, Exete	4.45	1	Pn	Pn	14 55 44.4	0.0
UALR	University of	4.48	108	IAmb_Lg		14 57 01.5	
	comp=Z,8.7nm,0.7s						
P38A	Dawn	4.59	42	IAmb_Lg		14 57 04.5	
	comp=Z,16nm,0.8s						
KSCO	Kaye Shedlock'	4.88	305	IAmb_Lg		14 57 17.4	
	comp=Z,12nm,0.7s						
LCAR	Lake Charles	5.16	91	IAmb_Lg		14 57 24.5	
	comp=Z,9.4nm,0.9s						
CCM	Cathedral Cave	5.32	69	IAmb_Lg		14 57 25.0	
	comp=Z,18nm,0.7s						
P40A	Paris	5.41	52	IAmb_Lg		14 57 31.7	
	comp=Z,20nm,0.7s						
T25A	Trinidad	5.60	281	IAmb_Lg		14 57 41.1	
	comp=Z,8.0nm,0.8s						
N38A	Joes South For	5.62	35	IAmb_Lg		14 57 36.5	
	comp=Z,16nm,0.9s						
FVM	French Village	5.92	71	IAmb_Lg		14 57 44.2	
	comp=Z,18nm,1.0s						
JCT	Junction City	6.09	199	IAmb_Lg		14 57 52.2	
	comp=Z,18nm,1.1s						
SCIA	State Center	6.54	29	IAmb_Lg		14 58 17.6	
	comp=Z,14nm,0.7s						
Q24A	Divide	6.62	296	IAmb_Lg		14 58 17.1	
	comp=Z,8.6nm,0.8s						
K38A	Parkersburg	7.34	29	IAmb_Lg		14 58 39.5	
	comp=Z,14nm,0.7s						
L40A	Anamosa	7.56	38	IAmb_Lg		14 58 41.8	
	comp=Z,11nm,1.0s						
WVT	Waverly	7.84	88	IAmb_Lg		14 58 57.1	
	comp=Z,9.7nm,1.0s						
N23A	Red Feather La	8.04	307	IAmb_Lg		14 59 01.5	
	comp=Z,10.0nm,1.0s						
RSSD	Black Hills	9.28	330	IAmb_Lg		14 59 40.0	
	comp=Z,6.8nm,1.3s						

KRSC 23 15:15:57.9±1.3, 48°.20N×156°.72E, h16^{km}±27^{km}, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.52	351	P	Pn	15 16 39.0	+0.9
PAU	Pauzhetka	3.27	1	eP	Pn	15 16 51.3	+2.9
PAU				eS	Sn	15 17 29.6	+2.6
KDTR	Khodutka, Kamc	3.72	13	eP	Pn	15 16 58.4	+3.8
KDTR				eS	Sn	15 17 42.8	+4.8
ASAK	Asacha	4.25	10	eP	Pn	15 17 06.6	+4.5
MTVR	Mutnovka	4.39	12	eP	Pn	15 17 08.4	+4.4
MTVR				eS	Sn	15 18 00.6	+5.8
RUS	Russkaya	4.39	15	eP	Pn	15 17 07.7	+3.9
RUS				eS	Sn	15 17 59.5	+4.9
GRL	Gorelyy	4.44	11	eP	Pn	15 17 09.3	+4.6
APC	Apacha	4.74	3	eP	Pn	15 17 12.9	+4.3
PET	Petropavlovsk	4.98	14	eP	Pn	15 17 16.4	+4.4
SPN	Mys Shipunski	5.33	22	eP	Pn	15 17 22.4	+5.6
GNL	Ganaly	5.55	8	eP	Pn	15 17 24.4	+4.5
MKZ	Mys Kozlova	7.09	24	eP	Pn	15 17 45.1	+4.2
TUMR	Tumrok	7.40	15	eP	Pn	15 17 50.8	+5.5

*JMA **23** 15:17:37.6±0.3, 31°.1N±0°.5×129°.0E±0°.9, h5^{km}±2^{km}, MD4.9/36, MW4.9/36, SW OFF KYUSHU*
JMA Felt II J1 at SW OFF KYUSHU .
*NIED **23** 15:17:37.6, 31°.06N×129°.01E, h5^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.32; M$_{\theta\theta}$1.38; M$_{\phi\phi}$-1.06; M$_{r\theta}$-0.51; M$_{\theta\phi}$1.96; M$_{\phi r}$0.71; Fault plane solution: M$_0$2.48000×10^{16} NP1: φ$_s$198.00000°, δ73.00000°, λ-166.00000°. NP2: φ$_s$104.00000°, δ76.00000°, λ-17.00000°.*
*NEIC **23** 15:17:42.6±1.4, 31°.18N±0°.05×129°.26E±0°.07, h15^{km}±4^{km}, mb4.8/50 Error ellipse: s-maj=9.4km s-min=5.0km az=125.0*
*BJI **23** 15:17:42.5±0.0, 30°.96N×129°.23E, h26^{km}, mb4.5/67, mB4.8/47, Ms5.2/80, Ms7 4.9/75*
*IDC **23** 15:17:45.0±2.0, 31°.11N×129°.30E, h40^{km}±18^{km}, mb3.9/22, mbtmp4.2/30, ML3.6/7, MS4.4/72, Error ellipse: s-maj=15.5km s-min=12.5km az=81.0*
*GCMT **23** 15:17:54.6±0.2, 31°.09N±0°.01×129°.09E±0°.01, h14^{km}±1^{km}, MW5.0/132, Moment Tensor Solution. s42,c50; s132,c223; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.03±.09; M$_{\theta\theta}$2.36±.08; M$_{\phi\phi}$-2.39±.09; M$_{r\theta}$-0.59±.17; M$_{\theta\phi}$3.22±.08; M$_{\phi r}$0.02±.16; Best double couple: M$_0$4.04500×10^{16} NP1: φ$_s$198.00000°, δ82.00000°, λ178.00000°. NP2: φ$_s$288.00000°, δ88.00000°, λ8.00000°. Principal axes: T 4.0530, Plg7.0000°, Azm153.0000°; N -0.0230, Plg82.0000°, Azm305.0000°; P -4.0360, Plg4.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 15:17:41.4±0.4, 31°.11N±0°.03×129°.35E±0°.04, h10^{km}, n209, σ2^{s}.09/178, mb4.6/56, MS4.5/76, 2C-10D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.65	29	eP	Pg	15 17 53.7	-0.3
JSJ	Shimokoshiki	0.65	29	A	A	15 17 53.7	
	comp=E,70nm,1.2s,comp=E,91nm,1.4s						
JKC	Kuchinoerabu	0.97	131	P	Pg	15 18 00.0	-0.1
JKC				S	Sn	15 18 15.7	+0.8
JKC	Kuchinoerabu	0.97	131	A	A	15 18 00.0	
	comp=E,55nm,2.5s,comp=E,65nm,1.9s						
JSU	Suzuyama	1.02	67	Pn	Pn	15 18 02.4	+0.5
JSU	Suzuyama	1.02	67	⇓iP	Pn	15 18 02.3	+0.4
JYAK	Yakushimahirau	1.32	131	P	Pn	15 18 05.0	-0.9
JYAK	Yakushimahirau	1.32	131	A	A	15 18 05.0	
	comp=E,15nm,2.3s,comp=E,19nm,2.3s						
JNN	Nakanoshima	1.34	160	eP	Pn	15 18 04.0	-2.3
JNN	Nakanoshima	1.34	160	A	A	15 18 04.0	
	comp=E,36nm,1.3s,comp=E,33nm,3.4s						
JTN	Tanegashima 3	1.47	107	⇓P	Pn	15 18 08.4	+0.4
JZO	Okuchi	1.48	46	A	A	15 18 08.7	
	comp=E,24nm,2.5s,comp=E,32nm,1.2s						
JHD	Hondo	1.51	26	A	A	15 18 08.2	
	comp=E,24nm,2.4s,comp=E,15nm,2.9s						
JMTN	Minamitane	1.51	118	eP	Pn	15 18 08.7	+0.2
JFU	Fukue jima 2	1.62	342	P	Pn	15 18 07.3	-2.9
JTZ	Takazaki	1.68	62	iP	Pn	15 18 11.9	+1.0
JNKG	Nichinankitago	1.82	72	A	A	15 18 14.3	
	comp=E,27nm,4.0s,comp=E,45nm,2.7s						
JIU3	Izumi3	1.90	41	⇓iP	Pn	15 18 14.5	+0.5
JNU	Nakatsue	2.39	32	Pn	Pn	15 18 20.9	+0.2
	16nm,0.3s,baz=276,slow=7.6,SNR=22						
JNU				Sn	Sn	15 18 48.9	-1.2
	70nm,0.3s,baz=151,slow=12,SNR=8.8						
JNU				LR	LR	15 18 56.4	
	comp=Z,2μm,20.8s,baz=222,slow=30						
	54nm,0.8s						
JNU	Nakatsue	2.39	32		Pn	15 18 20.7	0.0
JTU	Tsushima	3.41	1	Pn	Pn	15 18 34.1	-0.6
JOW	Kunigami	4.36	193	Pn	Pn	15 18 48.5	+0.6
	6.9nm,0.3s,baz=9.9,slow=15,SNR=9.7						
JOW				LR	LR	15 20 56.2	
	comp=Z,4μm,19.1s,baz=66,slow=44						
	31nm,0.6s						
JOW	Kunigami	4.36	193	Pn	Pn	15 18 48.9	+1.1
NAWB	Namwon	4.60	340	Pn	Pn	15 18 49.3	-1.8
TJN	Taejon	5.51	343	Pn	Pn	15 19 02.5	-1.1
KSCHJ	Chungju	5.86	349		Pn	15 19 07.4	-1.0
KSAR	Wonju Array Be	6.43	350		Pn	15 19 15.6	-0.6
KSRS	Korea Array	6.44	350	Pn	Pn	15 19 15.8	-0.4
	1.5nm,0.3s,baz=176,slow=15,SNR=41						
KSRS				Sn	Sn	15 20 27.9	-1.9
	5.2nm,0.3s,baz=171,slow=24,SNR=10						
KSRS				LR	LR	15 22 00.9	
	comp=Z,6μm,18.6s,baz=170,slow=40						
	12nm,0.8s						
KS19	Wonju Array Si	6.50	350		Pn	15 19 15.6	-1.5
INCN	Inchon	6.75	341	Pn	Pn	15 19 19.2	-1.3
SSE	Sheshan	7.00	272	Pn	Pn	15 19 25.1	+1.1
SSE				Sn	Sn	15 20 46.0	+2.3
SSE				LR	LR		
	comp=N,9μm,16.5s						
SSE				LR	LR		
	comp=E,2μm,16.6s						
SEHB	SEOHWA	7.20	353	Pn	Pn	15 19 26.2	-0.6
INU	Inuyama	7.69	55	Pn	Pn	15 19 34.8	+1.3
JGF	Kuroka	8.06	54	Pn	Pn	15 19 40.0	+1.4
YOJ	Yonaguni jima	8.68	222	Pn	Pn	15 19 47.1	0.0
NJ2	Nanjing	9.00	279	eP	Pn	15 19 48.4	-3.1
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
NJ2				LR	LR		
	comp=N,7μm,8.5s						
NJ2				LR	LR		
	comp=E,6μm,10.4s						
NJ2				LR	LR		
	comp=Z,6μm,11.8s						
JHJ	Hachijo jima 2	9.07	75	Pn	Pn	15 19 54.8	+2.3
	comp=Z,12nm,0.3s,baz=204,slow=14,SNR=1.8						
JHJ				LR	LR	15 22 09.9	
	comp=Z,304nm,20.8s,baz=258,slow=29						
	comp=Z,29nm,0.3s						
MAJO	Matsushiro	9.14	51	Pn	Pn	15 19 54.4	+0.9
MJAR	Matsushiro Arr	9.14	51	Pn	Pn	15 19 56.2	+2.7
	comp=Z,0.1nm,0.3s,baz=239,slow=12,SNR=12						
MJAR				LR	LR	15 24 09.6	
	comp=Z,5μm,18.9s,baz=240,slow=42						
	comp=Z,2.6nm,0.6s						
MJAR	Matsushiro Arr	9.14	51	Pn	Pn	15 19 54.3	+0.8
DL2	Dalian	10.03	323	eP	Pn	15 20 13.4	+7.9
DL2				pmax	pmax		
	comp=Z,18nm,0.9s						
DL2				pmax	pmax		
	comp=Z,190nm,6.5s						
DL2				LR	LR		
	comp=Z,4μm,8.1s						
DL2				LR	LR		
	comp=Z,4μm,8.9s						
DL2				LR	LR		
	comp=Z,3μm,8.6s						
TIA	Tai'an	11.38	300	⇓P	Pn	15 20 22.8	-1.3
TIA				S	Sn	15 22 41.0	+10
TIA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TIA				pmax	pmax		
	comp=Z,47nm,2.9s						
TIA				LR	LR		
	comp=Z,10μm,14.0s						
TIA				LR	LR		
	comp=Z,6μm,16.6s						
TIA				LR	LR		
	comp=Z,3μm,13.7s						
JMM	Marumori	11.60	51	Pn	Pn	15 20 26.9	-0.1
SNY	Shenyang	11.66	338	⇓P	Pn	15 20 34.0	+6.2
SNY				pmax	pmax		
	comp=Z,150nm,5.2s						
SNY				LR	LR		
	comp=Z,9μm,12.2s						
SNY				LR	LR		
	comp=Z,9μm,9.4s						
SNY				LR	LR		
	comp=Z,15μm,11.2s						
JCJ	Chichijima	11.91	106	LR	LR	15 24 51.3	
	comp=Z,544nm,19.1s,baz=287,slow=36						
WHN	Wuhan	12.91	271	P	Pn	15 20 55.3	+10
WHN				S	Sn	15 23 19.8	+11
WHN				LR	LR		
	comp=N,8μm,6.4s						
WHN				LR	LR		
	comp=E,6μm,10.8s						
WHN				LR	LR		
	comp=Z,7μm,11.1s						
CN2	Changchun	13.04	347	eP	P	15 20 54.8	-2.4
CN2				PP	PnPn	15 21 05.3	+11
CN2				S	Sn	15 23 20.3	+8.4

CN2				*e*sS	S	15 23 25.6	-12
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,3µm,14.0s						
CN2				LR	LR		
	comp=Z,9µm,14.0s						
CN2				LR	LR		
	comp=Z,8µm,16.0s						
USRK	**Ussuriysk Ar.**	**13.23**	**8**	Pn	**Pn**	**15 20 51.8**	**+2.4**
	comp=Z,4.2nm,0.9s,baz=184,slow=13,SNR=8.8						
USRK				LR	LR	15 25 55.6	
	comp=Z,2µm,18.2s,baz=178,slow=37						
MDJ	**Mudanjiang**	**13.49**	**1**	P	**Pn**	**15 20 52.0**	**-0.8**
MDJ				S	**Sn**	**15 23 27.3**	**+4.6**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,220nm,6.1s						
MDJ				LR	LR		
	comp=Z,3µm,16.7s						
MDJ				LR	LR		
	comp=Z,5µm,19.6s						
MDJ				LR	LR		
	comp=Z,3µm,18.1s						
HNS	**HongShan**	**13.63**	**301**	*e*P	**Pn**	**15 20 56.6**	**+1.8**
HNS				S	**Sn**	**15 23 30.3**	**+3.9**
HNS				LR	LR		
	comp=Z,7µm,15.7s						
HNS				LR	LR		
	comp=Z,5µm,17.3s						
HNS				LR	LR		
	comp=Z,2µm,17.3s						
BJI	**Beijing**	**13.93**	**313**	P	**Pn**	**15 21 01.8**	**+2.9**
BJI				pmax	pmax		
	comp=Z,11nm,1.9s						
BJI				LR	LR		
	comp=Z,6µm,16.5s						
BJI				LR	LR		
	comp=Z,4µm,16.6s						
BJI				LR	LR		
	comp=Z,6µm,15.9s						
CNSH	**ChangSha**	**14.57**	**263**	⇓P	**P**	**15 21 10.3**	**-4.0**
CNSH				S	**Sn**	**15 23 53.4**	**+4.0**
CNSH				LR	LR		
	comp=Z,8µm,15.6s						
CNSH				LR	LR		
	comp=Z,5µm,12.6s						
CNSH				LR	LR		
	comp=Z,5µm,12.2s						
LYN	**LuoYang**	**14.60**	**288**	⇓P	**Pn**	**15 21 09.3**	**+1.2**
LYN				sP	P	15 21 16.0	+1.4
LYN				S	**Sn**	**15 23 54.3**	**+4.2**
LYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LYN				pmax	pmax		
	comp=Z,110nm,3.7s						
LYN				LR	LR		
	comp=Z,18µm,15.9s						
LYN				LR	LR		
	comp=Z,6µm,15.7s						
LYN				LR	LR		
	comp=Z,3µm,12.0s						
BNX	**BinXian**	**14.69**	**355**	⇓P	**P**	**15 21 18.8**	**+3.3**
BNX				pmax	pmax		
	comp=Z,12nm,0.5s						
BNX				pmax	pmax		
	comp=Z,600nm,5.0s						
TIY	**Taiyuan**	**15.43**	**300**	*e*P	**P**	**15 21 28.0**	**+4.2**
TIY				LR	LR		
	comp=N,8µm,13.6s						
TIY				LR	LR		
	comp=E,3µm,15.1s						
TIY				LR	LR		
	comp=Z,2µm,14.1s						
XLT	**XiLinHaoTe**	**16.52**	**324**	*e*P	**P**	**15 21 34.0**	**-1.9**
XLT				pP	pP	15 21 37.9	-0.6
XLT				sP	sP	15 21 42.8	+3.0
XLT				S	**S**	**15 24 42.3**	**-6.4**
XLT				pmax	pmax		
	comp=Z,190nm,5.8s						
XLT				LR	LR		
	comp=Z,4µm,12.8s						
XLT				LR	LR		
	comp=Z,6µm,14.7s						
ASAJ	**Asahikawa**	**16.67**	**35**	Pn	**Pn**	**15 21 36.1**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=223,slow=18,SNR=4.9						
	comp=Z,7.5nm,0.8s						
JKA	**Kamikawa-asahi**	**16.67**	**35**	Pn	**Pn**	**15 21 35.2**	**+0.1**
HHC	**Hu-ho-hao-te**	**17.34**	**309**	*e*P	**P**	**15 21 43.8**	**-1.3**
HHC				pP	sP	15 21 51.4	+2.5
HHC				S	**Sn**	**15 24 58.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,290nm,6.8s						
HHC				LR	LR		
	comp=Z,8µm,13.3s						
HHC				LR	LR		
	comp=Z,7µm,13.0s						
HHC				LR	LR		
	comp=Z,9µm,14.6s						
XAN	**Xi'an**	**17.46**	**285**	P	**P**	**15 21 45.8**	**-0.6**
XAN				pP	sP	15 21 50.3	+0.1
XAN				PP	**PnPn**	**15 22 01.1**	**+5.7**
XAN				S	**S**	**15 25 03.3**	**-4.7**
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN				pmax	pmax		
	comp=Z,170nm,3.9s						
XAN				LR	LR		
	comp=Z,8µm,13.6s						
XAN				LR	LR		
	comp=Z,5µm,13.7s						
XAN				LR	LR		
	comp=Z,2µm,15.5s						
KLR	**Kul'dur**	**18.19**	**5**	P	**P**	**15 21 55.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=196,slow=7.1,SNR=45						
KLR				LR	LR	15 28 52.3	
	comp=Z,717nm,18.1s,baz=181,slow=37						
	comp=Z,18nm,0.9s						
BTO	**Baotou**	**18.28**	**307**	*e*P	**P**	**15 22 01.3**	**+5.9**
HIA	**Hailar**	**19.54**	**341**		**Pn**	**15 22 09.8**	**-0.5**
GYA	**Guiyang**	**20.41**	**263**	⇓P	**P**	**15 22 18.3**	**-0.5**
GYA				S	**S**	**15 26 05.8**	**-1.7**
GYA				pmax	pmax		
	comp=Z,22nm,1.0s						
GYA				pmax	pmax		
	comp=Z,170nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,10.6s						
GYA				LR	LR		
	comp=Z,2µm,13.5s						
GYA				LR	LR		
	comp=Z,3µm,12.7s						
QIZ	**Qiongzhong**	**21.33**	**240**	P	**P**	**15 22 28.8**	**0.0**
QIZ				PP	**PnPn**	**15 22 51.3**	**+2.8**
QIZ				S	**S**	**15 26 26.9**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				LR	LR		
	comp=Z,3µm,11.1s						
QIZ				LR	LR		
	comp=Z,2µm,10.6s						
QIZ				LR	LR		
	comp=Z,2µm,11.4s						
LZH	**Lanzhou**	**21.79**	**290**	⇓P	**P**	**15 22 37.3**	**+3.5**
LZH				sP	sP	15 22 44.1	+6.5
LZH				S	**S**	**15 26 34.3**	**-0.6**
LZH				sS	Sn	15 26 45.3	+1.1
LZH				SS	**SnSn**	**15 27 02.0**	**+2.5**
LZH				pmax	pmax		
	comp=Z,33nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.5s						
LZH				LR	LR		
	comp=Z,12µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,13.2s						
LZH				LR	LR		
	comp=Z,4µm,15.3s						
CD2	**Chengdu**	**21.93**	**276**	P	**P**	**15 22 33.8**	**-1.3**
CD2				S	**S**	**15 26 34.4**	**-2.9**
CD2				pmax	pmax		
	comp=Z,130nm,1.3s						
CD2				pmax	pmax		
	comp=Z,160nm,4.4s						
CD2				LR	LR		
	comp=Z,5µm,13.9s						
CD2				LR	LR		
	comp=Z,5µm,14.9s						
GUMO	**Guam**	**22.54**	**137**	LR	LR	15 30 53.9	
	comp=Z,860nm,18.3s,baz=322,slow=35						
ULN	**Ulaanbaatar**	**23.87**	**321**	P	**P**	**15 22 54.0**	**-1.2**
ULN				IAmb	IAmb	15 23 13.6	
	comp=Z,17nm,1.0s						
DAV	**Davao City (W)**	**24.17**	**189**	LR	LR	15 34 43.0	
	comp=Z,1µm,18.1s,baz=2.0,slow=42						
KMI	**Kunming**	**24.18**	**262**	⇑P	**P**	**15 22 58.3**	**-0.1**
KMI				pP	sP	15 23 08.6	+6.2
KMI				S	**S**	**15 27 13.3**	**-3.5**
KMI				pmax	pmax		
	comp=Z,24nm,1.5s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=Z,2µm,13.5s						
KMI				LR	LR		
	comp=Z,3µm,15.9s						
KMI				LR	LR		
	comp=Z,3µm,15.2s						
SONM	**Songino Array**	**24.21**	**320**	P	**P**	**15 22 57.7**	**-0.6**
	comp=Z,6.7nm,1.0s,baz=131,slow=8.9,SNR=18						
SONM				LR	LR	15 32 59.2	
	comp=Z,2µm,19.8s,baz=129,slow=38						
	comp=Z,6.7nm,1.0s						
SONM	**Songino Array**	**24.21**	**320**	P	**P**	**15 22 56.8**	**-1.5**
PZH	**PanZhiHua**	**24.59**	**266**	⇑P	**P**	**15 23 01.8**	**-0.2**
PZH				pP	**sP**	**15 23 06.1**	**+0.1**
PZH				S	**S**	**15 27 19.0**	**-4.2**
PZH				sS	**pS**	**15 27 25.6**	**-0.8**
PZH				SS	**SnSn**	**15 28 12.9**	**+4.7**
PZH				pmax	pmax		
	comp=Z,40nm,1.7s						
PZH				pmax	pmax		
	comp=Z,110nm,4.2s						
PZH				LR	LR		
	comp=Z,3µm,16.5s						
PZH				LR	LR		
	comp=Z,1µm,15.3s						
PZH				LR	LR		
	comp=Z,2µm,16.1s						
GTA	**Gaotai**	**25.42**	**297**	*e*P	**P**	**15 23 09.4**	**+0.1**
GTA				pP	sP	15 23 21.3	+8.0
GTA				sP	pP	15 23 25.4	+13
GTA				S	**S**	**15 27 37.8**	**+1.6**
GTA				sS	sS	15 27 46.0	+5.1
GTA				SS	**SnSn**	**15 28 38.4**	**+10**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
GTA				LR	LR		
	comp=Z,4µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,15.3s						
GTA				LR	LR		
	comp=Z,2µm,17.1s						
UBPT	**Khong Chiam**	**26.93**	**240**	P	**P**	**15 23 23.8**	**+0.7**
UBPT				IAmb	IAmb	15 23 42.6	
	comp=Z,31nm,1.2s						
GOMU	**GeErMu**	**29.09**	**289**	P	**P**	**15 23 44.3**	**+1.6**
GOMU				pP	sP	15 23 48.3	+1.6
GOMU				S	**S**	**15 28 33.1**	**-1.7**
GOMU				sS	sS	15 28 50.6	+11
GOMU				pmax	pmax		
	comp=Z,12nm,1.1s						
GOMU				LR	LR		
	comp=Z,2µm,15.7s						
GOMU				LR	LR		
	comp=Z,1µm,15.6s						
GOMU				LR	LR		
	comp=Z,700nm,14.2s						
CHTO	**Chiang Mai**	**30.06**	**253**	P	**P**	**15 23 50.8**	**-0.2**
CHTO				IAmb	IAmb	15 24 10.9	
	comp=Z,11nm,0.8s						
PETK	**Petropavlovsk-**	**30.09**	**35**	LR	LR	15 35 16.7	
	comp=Z,723nm,21.5s,baz=155,slow=35						
CMAR	**Chiang Mai Arr**	**30.24**	**253**	P	**P**	**15 23 52.5**	**0.0**
	comp=Z,1.6nm,0.9s,baz=45,slow=7.2,SNR=7.7						
CMAR				LR	LR	15 37 22.1	
	comp=Z,1µm,19.0s,baz=55,slow=39						
	comp=Z,1.6nm,0.9s						
SIJI	**Sorong**	**31.85**	**176**	LR	LR	15 36 57.2	
	comp=Z,880nm,18.5s,baz=14,slow=36						
MA2	**Magadan**	**31.91**	**21**	LR	LR	15 35 42.3	
	comp=Z,154nm,21.9s,baz=222,slow=34						
SANI	**Sanana**	**33.13**	**186**	P	P	15 24 32.7	+15
	comp=Z,14nm,1.2s						
WMQ	**Urumqi**	**35.06**	**303**	*e*P	**P**	**15 24 36.5**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,30nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.1s						
WMQ				LR	LR		
	comp=Z,3µm,16.5s						
WMQ				LR	LR		
	comp=Z,2µm,13.1s						
WMQ				LR	LR		
	comp=Z,1µm,16.5s						
SEY	**Seymchan**	**35.09**	**18**	LR	LR	15 40 25.6	
	comp=Z,967nm,18.0s,baz=212,slow=39						
KAPI	**Kappang**	**37.07**	**196**	LR	LR	15 39 47.2	
	comp=Z,312nm,19.9s,baz=3.0,slow=36						
SHEM	**Shemya Is, Ala**	**38.87**	**43**	LR	LR	15 42 01.4	
	comp=Z,253nm,21.1s,baz=300,slow=37						
ZALV	**Zalesovo Beam**	**39.09**	**319**	P	**P**	**15 25 07.1**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=105,slow=9.7,SNR=4.6						
ZALV				LR	LR	15 43 19.2	
	comp=Z,865nm,19.1s,baz=108,slow=39						
	comp=Z,0.5nm,0.3s						
MK31	**Makanchi Array**	**39.19**	**307**	P	**P**	**15 25 08.2**	**-1.4**
MKAR	**Makanchi Array**	**39.19**	**307**	P	**P**	**15 25 09.2**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=96,slow=9.0,SNR=13						
MKAR				LR	LR	15 42 34.5	
	comp=Z,807nm,18.4s,baz=92,slow=38						
	comp=Z,2.8nm,1.0s						
MKAR	**Makanchi Array**	**39.19**	**307**	P	**P**	**15 25 08.2**	**-1.4**
PSI	**Prapat**	**40.21**	**232**	LR	LR	15 43 44.7	
	comp=Z,648nm,18.1s,baz=58,slow=39						
TIXI	**Tiksi**	**40.60**	**360**	P	**P**	**15 25 19.9**	**-1.0**
KRVT	**Keravat (AS076**	**41.33**	**144**	LR	LR	15 42 33.0	
	comp=Z,304nm,18.4s,baz=109,slow=36						
KURK	**Kurchatov**	**42.10**	**313**	P	**P**	**15 25 32.1**	**-1.4**
KURBB	**Kurchatov Arra**	**42.14**	**313**	P	**P**	**15 25 32.3**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=100,slow=9.1,SNR=18						
KURBB				LR	LR	15 43 33.9	
	comp=Z,1µm,20.0s,baz=78,slow=37						
	comp=Z,1.8nm,0.7s						
BILL	**Bilibino**	**42.75**	**19**	P	**P**	**15 25 37.4**	**-1.2**
PMG	**Port Moresby**	**43.75**	**154**	LR	LR	15 41 53.8	
	comp=Z,498nm,20.6s,baz=313,slow=33						
KSH	**Kashi**	**43.81**	**296**	P	P	15 25 54.8	+7.1
KSH				sP	sP	15 26 01.1	+9.3
KSH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KSH				LR	LR		
	comp=Z,1µm,16.6s						
KSH				LR	LR		
	comp=Z,1µm,16.2s						
KSH				LR	LR		
	comp=Z,2µm,15.4s						
AAK	**Ala-Archa**	**44.66**	**301**	P	**P**	**15 25 54.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=198,slow=4.6,SNR=4.2						
AAK				LR	LR	15 45 38.0	
	comp=Z,773nm,18.4s,baz=98,slow=38						
	comp=Z,0.8nm,0.3s						
NRIK	**Noril'sk**	**44.96**	**340**	P	**P**	**15 25 55.0**	**-1.3**
	comp=Z,2.1nm,0.4s,baz=114,slow=9.8,SNR=5.5						
NRIK				LR	LR	15 46 59.7	
	comp=Z,813nm,18.3s,baz=117,slow=39						
	comp=Z,2.1nm,0.4s						
NRIK	**Noril'sk**	**44.96**	**340**	P	**P**	**15 25 55.8**	**-0.6**
NRIK				IAmb	IAmb	15 26 14.2	
	comp=Z,9.4nm,1.1s						
NIL	**Nilore**	**46.95**	**289**	P	**P**	**15 26 12.7**	**+0.1**
NIL				IAmb	IAmb	15 26 14.1	
	comp=Z,10.0nm,0.9s						
BRVK	**Borovoye**	**47.47**	**315**	P	**P**	**15 26 15.2**	**-1.1**
KK31	**Karatay Array**	**47.54**	**302**	P	**P**	**15 26 16.0**	**-1.1**
KK31				IAmb	IAmb	15 26 34.8	
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**47.54**	**302**	P	**P**	**15 26 15.8**	**-1.2**
GAR	**Garm**	**48.23**	**296**	P	**P**	**15 26 20.9**	**-1.6**
GAR				IAmb	IAmb	15 26 25.0	
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**50.98**	**174**	P	**P**	**15 26 41.8**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=351,slow=8.1,SNR=6.4						
WRA				LR	LR	15 47 11.8	
	comp=Z,262nm,21.4s,baz=35,slow=35						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**50.98**	**174**	P	**P**	**15 26 42.6**	**-0.8**
WR0	**Warramunga Arr**	**51.02**	**174**	P	**P**	**15 26 42.9**	**-0.8**
WR0				IAmb	IAmb	15 27 00.1	
	comp=Z,23nm,1.4s						
PALK	**Pallekele**	**51.18**	**253**	LR	LR	15 49 46.9	
	comp=Z,527nm,20.1s,baz=151,slow=38						
PCHI	**Peechi**	**53.06**	**259**	*e*P	P	15 27 09.4	+10
PCHI				*e*S	S	15 34 48.4	+19
CTA	**Charters Tower**	**53.43**	**160**	LR	LR	15 49 27.2	
	comp=Z,366nm,19.5s,baz=335,slow=36						
ABKAR	**Akbulak array**	**54.12**	**311**	P	**P**	**15 27 04.8**	**-1.7**
ARU	**Arti**	**54.25**	**320**	P	**P**	**15 27 06.7**	**-0.6**
ARU				IAmb	IAmb	15 27 10.9	
	comp=Z,19nm,1.3s						
AS31	**Alice Springs**	**54.64**	**175**	P	**P**	**15 27 10.5**	**+0.1**
ASAR	**Alice Springs**	**54.64**	**175**	P	**P**	**15 27 09.7**	**-0.8**
	comp=Z,1.6nm,1.0s,baz=359,slow=7.0,SNR=21						
ASAR				LR	LR	15 49 58.4	
	comp=Z,165nm,20.7s,baz=349,slow=35						
	comp=Z,1.6nm,1.0s						
ASAR	**Alice Springs**	**54.64**	**175**	P	**P**	**15 27 10.1**	**-0.4**
J20K	**Nowinta River**	**56.64**	**31**	P	**P**	**15 27 25.1**	**+0.7**
IMAR	**Indian Mountai**	**56.73**	**28**	P	**P**	**15 27 25.2**	**+0.2**
K20K	**Telida**	**56.73**	**32**	P	**P**	**15 27 25.4**	**+0.3**
K20K				IAmb	IAmb	15 27 46.9	
	comp=Z,8.1nm,1.0s						
N19K	**Bonanza Creek**	**56.73**	**35**	P	**P**	**15 27 26.2**	**+1.0**
N19K				IAmb	IAmb	15 27 49.1	
	comp=Z,6.8nm,1.1s						
H21K	**Melozitna Rive**	**57.13**	**29**	P	**P**	**15 27 27.7**	**-0.2**
H21K				IAmb	IAmb	15 27 40.5	
	comp=Z,13nm,1.5s						
PPLA	**Purkeypile**	**57.62**	**32**	P	**P**	**15 27 31.7**	**+0.2**
PPLA				IAmb	IAmb	15 27 47.9	
	comp=Z,18nm,1.4s						
GEYT	**Alibeck**	**57.80**	**298**	LR	LR	15 56 07.3	
	comp=Z,484nm,18.7s,baz=96,slow=40						
KDAK	**Kodiak Island**	**58.05**	**38**	LR	LR	15 53 31.8	
	comp=Z,497nm,20.6s,baz=260,slow=37						
H23K	**Yukon River**	**58.46**	**29**	P	**P**	**15 27 38.0**	**+0.8**
KIRV	**Kirov**	**58.91**	**323**	P	**P**	**15 27 41.0**	**+0.7**
	comp=Z,5.4nm,0.3s,baz=78,slow=15,SNR=5.5						
	comp=Z,5.4nm,0.3s						
RND	**Reindeer**	**59.06**	**31**	P	**P**	**15 27 40.9**	**-0.6**
RND				IAmb	IAmb	15 27 46.9	
	comp=Z,12nm,1.2s						
MDM	**Murphy Dome**	**59.11**	**29**	P	**P**	**15 27 42.2**	**+0.5**
H24K	**Noodor Dome**	**59.14**	**28**	P	**P**	**15 27 42.9**	**+0.9**
H24K				IAmb	IAmb	15 27 48.8	
	comp=Z,16nm,1.4s						
IL31		**59.71**	**30**	P	**P**	**15 27 45.6**	**-0.2**
IL31				IAmb	IAmb	15 28 07.5	
	comp=Z,4.5nm,1.0s						
ILAR	**Eielson Array**	**59.71**	**30**	P	**P**	**15 27 45.5**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=280,slow=7.3,SNR=8.5						
ILAR				LR	LR	15 54 10.2	
	comp=Z,232nm,19.5s,baz=276,slow=37						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**59.71**	**30**	P	**P**	**15 27 45.2**	**-0.7**
BMAR	**Burnt Mountain**	**60.20**	**26**	P	**P**	**15 27 50.4**	**+1.1**
MENT	**Mentasta**	**61.43**	**31**	P	**P**	**15 27 58.2**	**+0.5**
M26K	**Nabesna, AK**	**61.88**	**32**	P	**P**	**15 28 00.7**	**-0.1**
SUCK	**Suckling Hills**	**62.08**	**35**	P	**P**	**15 28 02.8**	**+0.8**
L27K	**Beaver Creek,**	**62.24**	**31**	P	**P**	**15 28 03.5**	**+0.3**
L27K				IAmb	IAmb	15 28 23.3	
	comp=Z,6.2nm,1.1s						
BCAR	**Beaver Creek A**	**62.26**	**31**	P	**P**	**15 28 03.9**	**+0.5**
M27K	**Edge Creek, AK**	**62.40**	**32**	P	**P**	**15 28 04.8**	**+0.4**
M27K				IAmb	IAmb	15 28 25.4	
	comp=Z,5.9nm,1.0s						
WSAR	**Wadi Sarin**	**62.47**	**282**	LR	LR	15 58 27.4	
	comp=Z,206nm,19.6s,baz=92,slow=39						
KLMR	**Klimovskoe**	**63.29**	**327**	*e*P	**P**	**15 28 12.9**	**+2.8**
KLMR				AMP		15 28 17.4	
	comp=Z,16nm,1.5s						
KLMR				LQ	LQ	15 51 30.6	
KLMR				LQ	LQ	15 51 30.6	
KLMR				LR	LR	15 55 26.6	
STKA	**Stephens Creek**	**63.71**	**168**	P	**P**	**15 28 13.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=236,slow=21,SNR=1.2						
STKA				LR	LR	15 54 40.9	
	comp=Z,76nm,21.5s,baz=9.2,slow=35						
	comp=Z,0.4nm,0.3s						
DZM	**Mont Dzumac**	**63.73**	**141**	*e*LR	LR	15 47 17.4	
	comp=Z,260nm,23.9s						
DZM	**Mont Dzumac**	**63.73**	**141**	LR	LR	15 52 59.2	
	comp=Z,74nm,20.9s,baz=354,slow=33						
INK	**Inuvik**	**64.04**	**24**	LR	LR	15 59 46.8	
	comp=Z,419nm,18.4s,baz=276,slow=39						
SPITS	**Spitsbergen Ar**	**64.28**	**348**	LR	LR	15 58 52.5	
	comp=Z,616nm,18.4s,baz=8.5,slow=38						
M30M	**Minto, Yukon**	**64.60**	**31**	P	**P**	**15 28 19.8**	**+1.0**
M30M				IAmb	IAmb	15 28 34.9	
	comp=Z,7.3nm,1.4s						
ARCES	**ARCESS Array B**	**65.85**	**338**	P	**P**	**15 28 26.0**	**-0.8**
	comp=Z,3.8nm,1.1s,baz=44,slow=11,SNR=4.1						
ARCES				LR	LR	16 01 21.2	
	comp=Z,810nm,18.7s,baz=57,slow=40						
	comp=Z,3.8nm,1.1s						
ARCES	**ARCESS Array B**	**65.85**	**338**	IAmb	IAmb	15 28 33.4	
	comp=Z,15nm,1.4s						
OBN	**Obninsk**	**66.62**	**321**	LR	LR	16 00 19.3	
	comp=Z,347nm,18.2s,baz=34,slow=38						
C36M	**Paulatuk**	**66.81**	**22**	P	**P**	**15 28 32.7**	**-0.1**
C36M				IAmb	IAmb	15 28 56.2	
	comp=Z,7.1nm,0.8s						
KBZ	**Khabaz**	**66.88**	**308**	P	**P**	**15 28 33.8**	**+0.1**
	comp=Z,11nm,1.0s,baz=192,slow=24,SNR=10						
KBZ				LR	LR	15 59 12.2	
	comp=Z,512nm,18.1s,baz=102,slow=37						
	comp=Z,11nm,1.0s						
GNI	**Garni**	**66.92**	**304**	LR	LR	15 59 17.6	
	comp=Z,320nm,19.8s,baz=66,slow=37						
FIA1	**FINESS Array S**	**69.13**	**330**	P	**P**	**15 28 46.2**	**-1.3**
FINES	**FINESS Array B**	**69.13**	**330**	P	**P**	**15 28 46.1**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=64,slow=4.4,SNR=4.6						
FINES				LR	LR	16 02 04.1	
	comp=Z,713nm,19.4s,baz=54,slow=38						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	**69.13**	**330**	P	**P**	**15 28 45.9**	**-1.6**
DLBC	**Dease Lake**	**69.26**	**34**	LR	LR	15 59 48.3	
	comp=Z,209nm,19.1s,baz=309,slow=36						
RES	**Resolute Bay**	**70.59**	**11**	LR	LR	16 03 09.8	
	comp=Z,171nm,18.2s,baz=295,slow=39						
RES	**Resolute Bay**	**70.59**	**11**	P	**P**	**15 28 56.6**	**+0.3**
RES				IAmb	IAmb	15 29 08.8	
	comp=Z,7.7nm,1.1s						
MNK	**Minsk**	**71.45**	**323**	*i* P	**P**	**15 29 03.2**	**+1.3**
	comp=E,3.0nm,0.8s						
MNK				*i* P	**P**	**15 29 03.2**	**+1.3**
	comp=N,11nm,1.0s						
MNK				*i* P	**P**	**15 29 03.2**	**+1.3**
	comp=Z,11nm,0.7s,baz=62						
MNK				*i* PcP	**PcP**	**15 29 22.8**	**+1.4**
MNK				*i* PP	**PP**	**15 31 41.1**	**+1.2**
MNK				*i* PPP	PPP	15 33 24.6	
MNK				*i* S	**S**	**15 38 15.0**	**-5.2**
MNK				*i* SS	**SS**	**15 42 53.8**	**-0.3**
MNK				*i* SSS	SSS	15 46 13.3	
MNK				*i* LQ	LQ	15 55 29.9	
MNK				*i* LR	LR	16 00 55.3	
MNK				*i* LRM	MLR	16 03 15.3	
	comp=N,248nm,18.5s						
MNK				*i* LRM	MLR	16 03 24.9	
	comp=Z,977nm,15.3s						
MNK				*i* LRM	MLR	16 03 27.5	
	comp=E,169nm,17.2s						
NACGM	**Naroch**	**71.83**	**324**	*e*P	**P**	**15 29 02.4**	**-1.7**
	baz=62						
AKASG	**Malin Array Be**	**72.49**	**319**	P	**P**	**15 29 07.0**	**-1.2**
	comp=E,0.4nm,0.5s,baz=52,slow=4.1,SNR=1.9						
	comp=E,0.4nm,0.5s						
BBB	**Bella Bella**	**73.11**	**39**	LR	LR	16 00 31.7	
	comp=E,117nm,20.4s,baz=312,slow=35						
YKA	**Yellowknife Ar**	**73.71**	**26**	P	**P**	**15 29 14.9**	**-0.3**
	comp=E,1.5nm,0.8s,baz=302,slow=5.6,SNR=6.5						
YKA				LR	LR	16 05 15.7	
	comp=E,215nm,18.1s,baz=297,slow=39						

	comp=E,1.5nm,0.8s						
JMIC	**Jan Mayen**	**73.90**	**347**	LR	LR	16 05 38.1	
	comp=E,187nm,18.2s,baz=78,slow=39						
BR131	**Keskin Array S**	**74.84**	**307**	P	**P**	**15 29 21.2**	**-1.3**
BRTR	**Keskin Array B**	**74.84**	**307**	P	**P**	**15 29 20.4**	**-2.1**
	comp=E,5.4nm,1.1s,baz=104,slow=5.2,SNR=14						
BRTR				LR	LR	16 07 28.5	
	comp=E,248nm,18.9s,baz=64,slow=40						
	comp=E,5.4nm,1.1s						
BRTR	**Keskin Array B**	**74.84**	**307**	P	**P**	**15 29 21.2**	**-1.3**
NB2	**NORSAR Subarra**	**75.39**	**334**	P	**P**	**15 29 23.0**	**-2.0**
	comp=Z,4.8nm,0.9s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**75.39**	**334**	P	**P**	**15 29 23.1**	**-2.0**
	comp=Z,1.7nm,1.0s,baz=103,slow=17,SNR=3.7						
NOA				LR	LR	16 06 47.6	
	comp=Z,274nm,18.3s,baz=70,slow=39						
	comp=Z,1.7nm,1.0s						
MLR	**Muntele Rosu**	**76.97**	**315**	LR	LR	16 06 40.1	
	comp=Z,672nm,18.3s,baz=48,slow=38						
OJC	**Ojcow**	**77.90**	**322**	*e*P	P	15 29 44.0	+4.6
EIL	**Elat**	**78.70**	**298**	LR	LR	16 09 55.6	
	comp=Z,294nm,18.2s,baz=86,slow=40						
KSP	**Ksiaz**	**79.36**	**324**	*e*P	**P**	**15 29 50.9**	**+3.4**
CLL	**Collm**	**80.72**	**325**	*e*Px	Px	15 29 58.0	
	comp=Z,14nm,1.7s						
CLL				*i* x	x	15 30 08.4	
CLL				*i* x	x	15 30 15.2	
CLL				*e*(PP)		15 33 11.0	
CLL				*e*PS	**PnS**	**15 40 48.0**	**+0.4**
ATD	**Arta Tunnel**	**81.18**	**278**	LR	LR	16 08 26.8	
	comp=Z,114nm,18.4s,baz=24,slow=38						
BORG	**Borgarnes**	**81.74**	**348**	LR	LR	16 06 43.1	
	comp=Z,137nm,21.2s,baz=23,slow=36						
YBH	**Yreka Blue Hor**	**81.77**	**46**	LR	LR	16 04 12.8	
	comp=Z,49nm,18.9s,baz=306,slow=34						
GERES	**GERESS Array B**	**81.91**	**323**	LR	LR	16 11 20.6	
	comp=Z,501nm,18.1s,baz=63,slow=39						
URZ	**Urewera**	**82.13**	**144**	LR	LR	16 03 09.1	
	comp=Z,120nm,20.6s,baz=31,slow=33						
SFJD	**Kangerlussuaq**	**82.20**	**360**	LR	LR	16 07 39.4	
	comp=Z,317nm,19.6s,baz=352,slow=36						
IDI	**Anoyia**	**83.08**	**307**	LR	LR	16 14 26.4	
	comp=Z,203nm,18.1s,baz=83,slow=41						
RPZ	**Rata Peaks**	**83.67**	**151**	LR	LR	16 07 48.8	
	comp=Z,186nm,18.0s,baz=301,slow=36						
FRB	**Frobisher Bay**	**84.41**	**8**	LR	LR	16 12 04.6	
	comp=Z,284nm,18.1s,baz=360,slow=39						
EKA	**Eskdalemuir Ar**	**84.79**	**335**	LR	LR	16 13 47.3	
	comp=Z,535nm,18.1s,baz=32,slow=40						
EGMT	**Eagleton**	**85.10**	**35**	P	**P**	**15 30 17.7**	**0.0**
RAR	**Rarotonga**	**85.57**	**118**	LR	LR	16 02 22.3	
	comp=Z,126nm,19.7s,baz=333,slow=31						
KVN	**Kaiserville**	**86.19**	**46**	P	**P**	**15 30 23.6**	**+0.2**
KVN				IAmb	IAmb	15 30 29.2	
	comp=Z,5.4nm,1.1s						
LHV	**Little Huntoon**	**86.42**	**47**	P	**P**	**15 30 25.4**	**+1.1**
LHV				IAmb	IAmb	15 30 30.7	
	comp=Z,4.1nm,1.0s						
NVAR	**Mina Array Bea**	**86.44**	**47**	P	**P**	**15 30 24.2**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=300,slow=4.4,SNR=6.2						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**86.44**	**47**	P	**P**	**15 30 24.9**	**+0.1**
ELK	**Elko**	**86.87**	**43**	LR	LR	16 11 14.9	
	comp=Z,61nm,18.0s,baz=334,slow=37						
VAE	**Valguarnera**	**88.64**	**314**	LR	LR	16 14 50.5	
	comp=Z,324nm,19.1s,baz=82,slow=39						
PDAR	**Pinedale Array**	**88.76**	**39**	P	**P**	**15 30 34.9**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=350,slow=1.7,SNR=5.5						
PDAR				LR	LR	16 11 58.2	
	comp=Z,59nm,18.9s,baz=347,slow=37						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**88.76**	**39**	P	**P**	**15 30 35.4**	**-0.4**
ULM	**Lac du Bonnet**	**89.64**	**27**	P	**P**	**15 30 38.3**	**-1.1**
	comp=Z,5.2nm,0.7s,baz=326,slow=4.9,SNR=5.3						
ULM				LR	LR	16 13 55.5	
	comp=Z,149nm,18.6s,baz=1.5,slow=38						
	comp=Z,5.2nm,0.7s						
ULM	**Lac du Bonnet**	**89.64**	**27**	P	**P**	**15 30 38.5**	**-0.9**
MSU	**Marysvale**	**90.11**	**44**	P	**P**	**15 30 43.1**	**+0.8**
P18A	**Preston Nutter**	**90.50**	**42**	P	**P**	**15 30 44.5**	**+0.5**
P18A				IAmb	IAmb	15 31 05.7	
	comp=Z,4.5nm,0.9s						
PFO	**Pinyon Flats O**	**90.58**	**50**	LR	LR	16 04 30.4	
	comp=Z,247nm,21.7s,baz=290,slow=31						
RSSD	**Black Hills**	**90.67**	**35**	P	**P**	**15 30 45.0**	**+0.3**
PPT	**Papeete**	**91.56**	**109**	LR	LR	16 11 42.9	
	comp=Z,40nm,18.3s,baz=312,slow=35						
PPT2	**Papeete2**	**91.57**	**110**	*e*LR	LR	16 00 02.2	
	comp=Z,75nm,21.8s						
SCHQ	**Schefferville**	**93.28**	**9**	LR	LR	16 15 24.2	
	comp=Z,269nm,19.3s,baz=292,slow=37						
TAOE	**Nuku Hiva Isla**	**94.94**	**97**	*e*LR	LR	16 01 37.7	
ANMO	**Albuquerque**	**95.90**	**43**	LR	LR	16 16 41.8	
	comp=Z,58nm,18.3s,baz=340,slow=37						
MBAR	**Mbarara**	**97.69**	**274**	LR	LR	16 19 27.0	
	comp=Z,198nm,18.2s,baz=20,slow=38						

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*JMA **23** 15:27:20.0±0.2, 31°.0N±0°.4×129°.0E±0°.8, h17^{km}±2^{km}, MV3.9/27, SW OFF KYUSHU*

*IDC **23** 15:27:22.5±1.5, 31°.01N×128°.93E, h0^{km}, mb3.4/2, mbtmp3.5/6, ML3.2/4, Error ellipse: s-maj=55.0km s-min=18.8km az=103.0*

ISC 23 15:27:22.7±1.1**, 31°.07N**±0°.04×**129°.27E**±0°.08**, h11**^{km}**, n14,** σ**1**^{s}**.40**/17**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.72**	**32**	P	**Pg**	**15 27 36.3**	**-0.3**
JSJ				S	**Sn**	**15 27 48.7**	**-1.2**
JSJ	**Shimokoshiki**	**0.72**	**32**	A	A	15 27 36.3	
	comp=E,5.0nm,1.8s,comp=E,5.0nm,1.0s						
JKC	**Kuchinoerabu**	**1.00**	**127**	*e*P	**Pg**	**15 27 41.2**	**-0.8**
JKC				*e*S	**Sb**	**15 27 55.8**	**+0.6**
JSU	**Suzuyama**	**1.10**	**66**	*e*P	**Pb**	**15 27 43.7**	**-0.1**
JNN	**Nakanoshima**	**1.33**	**157**	*e*P	**Pn**	**15 27 44.7**	**-2.6**
JYAK	**Yakushimahirau**	**1.35**	**128**	P	**Pn**	**15 27 46.0**	**-1.5**
JYAK				S	**Sb**	**15 28 05.2**	**-0.1**
JTN	**Tanegashima 3**	**1.52**	**105**	*e*P	**Pn**	**15 27 49.5**	**-0.4**
JFU	**Fukue jima 2**	**1.64**	**344**	P	**Pn**	**15 27 49.4**	**-2.2**
JNU	**Nakatsue**	**2.46**	**33**	Pn	**Pb**	**15 28 08.3**	**+1.3**
	10.0nm,0.3s,baz=281,slow=6.9,SNR=34						
JNU				Sn	**Sg**	**15 28 40.9**	**-0.9**
	18nm,0.3s,baz=208,slow=16,SNR=9.5						
	36nm,0.5s						
JOW	**Kunigami**	**4.31**	**192**	Pn	**Pn**	**15 28 29.1**	**+0.9**
	2.0nm,0.3s,baz=15,slow=29,SNR=4.0						
	18nm,0.8s						
KSRS	**Korea Array**	**6.47**	**350**	Pn	**Pn**	**15 28 57.5**	**-0.3**
	0.3nm,0.3s,baz=172,slow=14,SNR=5.6						
KSRS				Lg	Lg	15 30 41.1	
	0.6nm,0.3s,baz=177,slow=30,SNR=7.0						
	1.7nm,0.5s						
KLR	**Kul'dur**	**18.24**	**5**	P	**P**	**15 31 38.1**	**+2.2**
	0.1nm,0.3s,baz=190,slow=8.1,SNR=4.6						
	2.6nm,1.0s						
WRA	**Warramunga Arr**	**50.95**	**174**	P	**P**	**15 36 26.1**	**+1.8**
	0.5nm,0.8s,baz=354,slow=7.7,SNR=3.0						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**54.60**	**175**	P	**P**	**15 36 51.6**	**+0.3**
	0.3nm,0.8s,baz=5.3,slow=15,SNR=5.6						
	0.3nm,0.8s						

NOU 23 15:59:18.1, 14°.36S×167°.49E, h191^{km}**, MLv3.6**/5**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.12**	**194**	P	Pn	15 59 47.5	-0.3
MARNC	**Mare, Loyalty**	**7.10**	**176**	P	Pn	16 00 59.6	0.0

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*TUL **23** 16:15:35±0.9, 36°.95N±0°.01×98°.01W±0°.02, h4^{km}±6^{km}, ML2.6, mb_Lg2.4/31(NEIC), Error ellipse: s-maj=3.0km s-min=1.2km az=110.0*

NEIC 23 16:15:35.1±0.3**, 36°.93N**±0°.01×**98°.00W**±0°.02**, h6**^{km}±3^{km}**, Error ellipse: s-maj=2.8km s-min=1.4km az=119.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.97**	**236**	Pg	Pg	16 15 53.7	-0.1
T35A	**Sooner Cattle**	**1.19**	**90**		Pg	16 15 57.5	-0.5
R32A	**Long Quarter,**	**1.59**	**339**		Pn	16 16 04.4	+0.4
FNO	**Franklin**	**1.74**	**164**	Pn	Pn	16 16 06.1	+0.2
TUL1	**Leonard**	**2.05**	**119**	Pn	Pn	16 16 10.3	+0.1
CBKS	**Cedar Bluff**	**2.33**	**324**	IAmb_Lg		16 16 47.7	
	comp=Z,12nm,0.8s						
KSU1	**Kansas State U**	**2.43**	**26**	Pn	Pn	16 16 15.3	-0.1
X37A	**Clayton**	**3.17**	**137**	Pn	Pn	16 16 25.4	-0.1
X37A				IAmb_Lg		16 17 23.7	
	comp=Z,12nm,0.8s						
AMTX	**Amarillo**	**3.62**	**237**	IAmb_Lg		16 17 38.7	
	comp=Z,7.3nm,0.7s						
S39A	**Bolivar**	**3.81**	**77**	Pn	Pn	16 16 34.3	0.0
W39A	**Magazine**	**3.83**	**116**	IAmb_Lg		16 17 45.1	
	comp=Z,8.3nm,0.9s						
U40A	**Yellville**	**4.18**	**96**	IAmb_Lg		16 17 59.0	
	comp=Z,5.2nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.21**	**301**	IAmb_Lg		16 17 59.1	
	comp=Z,8.5nm,0.7s						
MIAR	**Mount Ida**	**4.31**	**122**	IAmb_Lg		16 17 53.2	
	comp=Z,9.9nm,1.1s						
R40A	**Maddies Statio**	**4.75**	**72**	IAmb_Lg		16 18 12.9	
	comp=Z,4.4nm,0.8s						
X40A	**Basin Creek Fa**	**4.86**	**119**	IAmb_Lg		16 18 19.7	
	comp=Z,5.8nm,0.8s						
WHAR	**Wooly Hollow**	**4.90**	**108**	IAmb_Lg		16 18 14.1	
	comp=Z,6.6nm,0.8s						
W41B	**Gary Mavity, V**	**4.98**	**109**	IAmb_Lg		16 18 21.0	
	comp=Z,11nm,1.2s						
T25A	**Trinidad**	**5.13**	**274**	IAmb_Lg		16 18 30.3	
	comp=Z,6.1nm,0.9s						
P40A	**Paris**	**5.36**	**59**	IAmb_Lg		16 18 26.4	
	comp=Z,7.0nm,0.9s						
FVM	**French Village**	**6.12**	**78**	IAmb_Lg		16 18 46.3	
	comp=Z,5.7nm,0.8s						
ISCO	**Idaho Springs**	**6.63**	**298**	IAmb_Lg		16 19 10.9	
	comp=Z,3.8nm,1.1s						
N23A	**Red Feather La**	**7.35**	**305**	IAmb_Lg		16 19 32.6	
	comp=Z,4.9nm,0.9s						

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*IDC **23** 16:36:29.6±0.8, 7°.28S×125°.89E, h0^{km}, mb4.2/11, mbtmp4.2/13, ML4.4/2, MS3.5/8, Error ellipse: s-maj=29.8km s-min=18.1km az=81.0*

*DJA **23** 16:36:31.7±0.2, 7°S±2°×12°6E±°, h10^{km}, M4.2/15, mB4.8/5, mb4.5/15, MLv4.2/14, Mw(mB)4.1/5*

*NEIC **23** 16:36:41.3±0.9, 8°.0S±0°.1×125°.79E±0°.10, h124^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=20.4km s-min=12.3km az=154.0*

ISC 23 16:36:29.7±0.5**, 7°.54S**±0°.05×**125°.92E**±0°.06**, h10**^{km}**, n55,** σ**2**^{s}**.04**/50**, mb4.2**/14**, MS3.5**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.74**	**216**	Pn	**Pb**	**16 37 19.1**	**+0.1**
SOEI	**Soe**	**2.74**	**216**	P	**Pb**	**16 37 19.0**	**+0.1**
BATI	**Baumata**	**3.47**	**220**	Pn	**Pb**	**16 37 29.1**	**-2.1**
	52nm,0.3s,baz=104,slow=1.8,SNR=44						
BATI				Sn	**Sb**	**16 38 11.6**	**-1.9**
	27nm,0.3s,baz=65,slow=5.3,SNR=9.9						
	166nm,0.4s						
BATI	**Baumata**	**3.47**	**220**	P	**Pb**	**16 37 29.1**	**-2.1**
MMRI	**Maumere**	**3.81**	**253**	Pn	**Pn**	**16 37 29.4**	**+0.9**
MMRI	**Maumere**	**3.81**	**253**	P	**Pn**	**16 37 29.8**	**+1.3**
BBSI	**Bau Bau**	**3.90**	**301**	P	**Pn**	**16 37 28.7**	**-1.1**
EDFI	**Ende, Flores**	**4.36**	**254**	P	**Pn**	**16 37 37.2**	**+1.0**
AAI	**Ambon**	**4.44**	**31**	P	**Pn**	**16 37 37.3**	**+0.1**
SANI	**Sanana**	**5.45**	**1**	P	**Pn**	**16 37 49.9**	**-1.2**
	0.1nm9.4nm,0.5s						
BSSI	**Bau Bau, Buton**	**5.57**	**284**	P	**Pn**	**16 37 52.3**	**-0.4**
	0.2nm556nm52nm,1.0s						
BKSI	**Bulukumba**	**6.17**	**291**	P	**Pn**	**16 38 00.3**	**-0.7**
	0.2nm715nm80nm,0.8s						
BNSI	**Bone**	**6.57**	**298**	P	**Pn**	**16 38 06.1**	**-0.4**
	0.2nm753nm47nm,0.7s						
WBSI	**Waikabubak, Su**	**6.79**	**252**	P	**Pn**	**16 38 13.1**	**+3.6**
	62nm,0.8s						
SPSI	**Sidrap Palu**	**7.08**	**300**	P	**Pn**	**16 38 13.0**	**-0.4**
	0.1nm35nm,0.7s						
MTN	**Manton Dam**	**7.35**	**136**		Pn	16 38 22.5	+5.3
FAKI	**Fak Fak**	**7.79**	**54**	P	**Pn**	**16 38 25.2**	**+1.9**
	0.1nm12nm,1.4s						
APSI	**Ampana**	**7.84**	**327**	P	**Pn**	**16 38 23.3**	**-0.6**
	0.1nm14nm,0.9s						
KNRA	**Kununurra**	**8.55**	**161**	Pn	**Pn**	**16 38 37.5**	**+3.8**
MPSI	**Mapaga**	**9.86**	**322**	P	**Pn**	**16 38 51.9**	**+0.2**
	12nm,0.8s						
DAV	**Davao City (W)**	**14.52**	**359**	LR	LR	16 45 32.1	
	comp=Z,122nm,18.2s,baz=216,slow=38						
MYLDM	**Lahad Datu**	**14.64**	**329**	Pn	**P**	**16 40 00.6**	**-2.9**
WB0	**Warramunga Arr**	**14.67**	**147**	Pn	**Pn**	**16 39 57.6**	**0.0**
WRA	**Warramunga Arr**	**14.79**	**147**	Pn	**Pn**	**16 39 58.3**	**-0.8**
	0.4nm,0.3s,baz=318,slow=14,SNR=21						
WRA				Sn	**Sn**	**16 42 36.4**	**-6.8**
	0.8nm,0.3s,baz=320,slow=25,SNR=8.8						
WRA				LR	LR	16 46 41.6	
	comp=Z,167nm,21.2s,baz=190,slow=41						
WRA	**Warramunga Arr**	**14.79**	**147**		**Pn**	**16 39 58.2**	**-0.9**
WB2	**Warramunga Arr**	**14.79**	**147**	P	**Pn**	**16 39 58.5**	**-0.7**
PSA00	**Pilbara Seismi**	**15.14**	**202**	P	**Pn**	**16 40 05.5**	**+1.7**
AS31	**Alice Springs**	**17.77**	**155**	P	**Pn**	**16 40 36.1**	**-1.3**
AS31				IAmb	IAmb	16 40 44.5	
	comp=Z,6.4nm,0.7s						
ASAR	**Alice Springs**	**17.77**	**155**	P	**P**	**16 40 40.0**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=335,slow=11,SNR=44						
ASAR				S	**Sn**	**16 43 48.8**	**-6.9**
	comp=Z,1.6nm,0.9s,baz=326,slow=18,SNR=4.9						
ASAR				LR	LR	16 47 52.2	
	comp=Z,204nm,21.7s,baz=328,slow=38						
	comp=Z,18nm,0.6s						
ASAR	**Alice Springs**	**17.77**	**155**	P	**Pn**	**16 40 36.0**	**-1.4**
LEM	**Lembang**	**18.18**	**271**	LR	LR	16 50 49.5	
	comp=Z,67nm,18.3s,baz=110,slow=47						
CTA	**Charters Tower**	**23.32**	**124**	LR	LR	16 52 05.6	
	comp=Z,144nm,19.5s,baz=288,slow=40						
STKA	**Stephens Creek**	**28.28**	**151**	P	**P**	**16 42 27.3**	**+3.9**
	comp=Z,1.9nm,0.6s,baz=329,slow=9.7,SNR=7.5						
STKA				LR	LR	16 55 17.1	
	comp=Z,132nm,18.9s,baz=8.7,slow=40						
	comp=Z,1.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.09**	**314**	P	**P**	**16 43 40.8**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=140,slow=6.4,SNR=9.3						
	comp=Z,1.3nm,0.7s						
ULN	**Ulaanbaatar**	**57.63**	**345**	P	**P**	**16 46 20.0**	**-0.2**
ULN				IAmb	IAmb	16 46 21.3	
	comp=Z,3.5nm,1.0s						
SONM	**Songino Array**	**57.77**	**345**	P	**P**	**16 46 21.4**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=167,slow=6.6,SNR=8.2						
	comp=Z,1.9nm,0.9s						
SONM	**Songino Array**	**57.77**	**345**	IAmb	IAmb	16 46 22.2	
	comp=Z,3.1nm,1.1s						
PEA0B	**Petropavlovsk-**	**66.16**	**20**	P	**P**	**16 47 19.1**	**+1.8**
PETK	**Petropavlovsk-**	**66.16**	**20**	P	**P**	**16 47 19.0**	**+1.6**
	comp=Z,4.1nm,0.8s,baz=177,slow=12,SNR=7.3						
	comp=Z,4.1nm,0.8s						
MKAR	**Makanchi Array**	**66.52**	**329**	P	**P**	**16 47 19.4**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=134,slow=7.4,SNR=8.5						
	comp=Z,0.8nm,0.7s						
YAK	**Yakutsk**	**69.42**	**2**	P	**P**	**16 47 37.6**	**0.0**
	comp=Z,8.1nm,1.0s,baz=360,slow=3.0,SNR=6.8						
	comp=Z,8.1nm,1.0s						
YAK	**Yakutsk**	**69.42**	**2**	P	**P**	**16 47 37.8**	**+0.2**
ZAA0	**Zalesovo Array**	**70.34**	**336**	P	**P**	**16 47 42.2**	**-1.3**
ZAA0				IAmb	IAmb	16 47 43.8	
	comp=Z,4.6nm,1.1s						
ZALV	**Zalesovo Beam**	**70.34**	**336**	P	**P**	**16 47 42.5**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=125,slow=4.2,SNR=8.8						
	comp=Z,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**70.34**	**336**	P	**P**	**16 47 41.8**	**-1.6**
KURBB	**Kurchatov Arra**	**70.91**	**330**	P	**P**	**16 47 46.4**	**-0.7**
	comp=Z,1.3nm,1.0s,baz=132,slow=5.3,SNR=7.2						
	comp=Z,1.3nm,1.0s						
KURK	**Kurchatov**	**70.92**	**330**	P	**P**	**16 47 45.6**	**-1.5**
KURK				IAmb	IAmb	16 47 48.1	
	comp=Z,4.0nm,1.1s						
GEYT	**Alibeck**	**77.50**	**311**	LR	LR	17 28 40.3	
	comp=Z,24nm,18.9s,baz=5.0,slow=40						
TIXI	**Tiksi**	**79.05**	**1**	P	**P**	**16 48 33.7**	**0.0**
	comp=Z,1.2nm,0.6s,baz=269,slow=23,SNR=11						
	comp=Z,1.2nm,0.6s						
TIXI	**Tiksi**	**79.05**	**1**	P	**P**	**16 48 33.6**	**0.0**
ABKAR	**Akbulak array**	**80.45**	**323**	P	**P**	**16 48 41.0**	**-0.8**
NRIK	**Noril'sk**	**81.14**	**347**	P	**P**	**16 48 45.5**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=134,slow=5.3,SNR=3.7						
	comp=Z,1.4nm,0.4s						
NRIK	**Noril'sk**	**81.14**	**347**	IAmb	IAmb	16 48 46.8	
	comp=Z,2.7nm,0.9s						
GNI	**Garni**	**88.12**	**311**	LR	LR	17 39 03.9	
	comp=Z,17nm,18.8s,baz=54,slow=43						
ILAR	**Eielson Array**	**95.56**	**25**	P	**P**	**16 49 53.9**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=282,slow=4.5,SNR=3.4						
	comp=Z,0.4nm,0.8s						

DJA 23 16:41:38.8±0.2**, 7°S**±3°×**12°6E**±°**, h10**^{km}**, M4.1**/12**, mB5.0**/2**, mb4.2**/12**, MLv4.0**/11**, Mw(mB)4.3**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.81**	**212**	P	Pn	16 42 25.7	+1.7
BATI	**Baumata**	**3.52**	**216**	P	Pn	16 42 35.0	+1.4
MMRI	**Maumere**	**3.73**	**250**	P	Pn	16 42 37.2	+0.7
EDFI	**Ende, Flores**	**4.28**	**251**	P	Pn	16 42 44.7	+0.6
SANI	**Sanana**	**5.28**	**2**	P	Pn	16 42 57.7	-0.1
	0.0nm4.7nm,1.0s						
BSSI	**Bau Bau, Buton**	**5.39**	**283**	P	Pn	16 42 59.6	+0.3
	0.1nm682nm20nm,0.5s						
BKSI	**Bulukumba**	**5.98**	**289**	P	Pn	16 43 07.8	+0.4
	0.1nm19nm,0.8s						
BNSI	**Bone**	**6.36**	**297**	P	Pn	16 43 11.1	-1.6
	0.1nm20nm,1.0s						
LUWI	**Luwuk**	**6.96**	**334**	P	Pn	16 43 21.1	+0.2
	0.1nm2μm25nm,0.9s						
APSI	**Ampana**	**7.62**	**327**	P	Pn	16 43 30.3	+0.4
	0.0nm9.1nm,1.1s						
FAKI	**Fak Fak**	**7.81**	**56**	P	Pn	16 43 32.8	+0.2
	0.1nm11nm,1.0s						

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*MOS **23** 16:42:54.7±1.3, 35°.54N×140°.37E, h50^{km}, mb4.7/10, Error ellipse: s-maj=8.2km s-min=4.9km az=101.2*

*BJI **23** 16:42:55.9±0.0, 35°.51N×140°.12E, h56^{km}, mb4.5/43, mB4.6/23, Ms3.7/5, Ms7 3.5/4*

*NEIC **23** 16:42:57.6±2.1, 35°.59N±0°.05×140°.30E±0°.08, h50^{km}±5^{km}, mb4.5/49, Error ellipse: s-maj=9.3km s-min=6.5km az=102.0*

*JMA **23** 16:42:58.3±0.3, 35°.7N±0°.7×140°.1E±0°.9, h69^{km}±2^{km}, MD4.2/31, MV4.0/31, CENTRAL CHIBA PREF*

JMA Felt II J1 at CENTRAL CHIBA PREF .

*NIED **23** 16:42:58.3, 35°.65N×140°.14E, h69^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.39; M$_{\theta\theta}$0.26; M$_{\phi\phi}$0.13; M$_{r\theta}$0.58; M$_{\theta\phi}$0.78; M$_{\phi r}$3.16; Fault plane solution: M$_0$3.32000×10^{15} NP1:φ$_s$86.00000°, δ13.00000°, λ-16.00000°. NP2:φ$_s$191.00000°, δ86.00000°, λ-103.00000°.*

*IDC **23** 16:42:59.2±1.1, 35°.49N×140°.08E, h68^{km}±11^{km}, mb4.0/22, mbtmp4.2/26, MS3.3/13 Error ellipse: s-maj=14.1km s-min=6.5km az=71.0*

ISC 23 16:42:58.3±0.5**, 35°.54N**±0°.04×**140°.23E**±0°.05**, h65**^{km}±4^{km}**, n251,** σ**1**^{s}**.77**/216**, mb4.4**/60**, 10C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.12**	**191**	⇓P	**Pn**	**16 43 09.5**	**+1.5**
JCN				⇓S	**Sn**	**16 43 18.5**	**+3.4**
JCN	**Nagara**	**0.12**	**191**	A	A	16 43 09.5	
	comp=E,127nm,3.0s,comp=E,56nm,0.8s						
JSMT	**Sammumatsuo**	**0.21**	**59**	P	**Pn**	**16 43 09.6**	**+1.2**
JSMT				S	**Sn**	**16 43 18.9**	**+3.2**
JSMT	**Sammumatsuo**	**0.21**	**59**	A	A	16 43 09.6	
	comp=E,178nm,1.3s,comp=E,50nm,2.9s						
JKUC	**kamogawauchiur**	**0.38**	**184**	A	A	16 43 10.9	
	comp=E,30nm,1.6s,comp=E,14nm,0.6s						
TOK	**Tokyo**	**0.41**	**292**	P	**Pn**	**16 43 10.4**	**+0.6**
TOK	**Tokyo**	**0.41**	**292**	A	A	16 43 10.4	
	comp=E,70nm,0.4s,comp=E,57nm,0.3s						
JIHU	**Itakohorinouch**	**0.49**	**29**	A	A	16 43 10.6	
	comp=E,79nm,1.4s,comp=E,57nm,3.2s						
CHOJ	**Chosi**	**0.54**	**72**	A	A	16 43 11.9	
	comp=E,24nm,1.3s,comp=E,16nm,2.0s						
JYO	**Yokosk**	**0.56**	**236**	A	A	16 43 11.8	
	comp=E,52nm,0.3s,comp=E,67nm,0.5s						
TATJ	**Tateyama 2**	**0.57**	**209**	A	A	16 43 12.6	
	comp=E,24nm,1.0s,comp=E,16nm,1.9s						
JYT	**Yasato**	**0.69**	**358**		**Pn**	**16 43 11.8**	**-1.0**
JYT				Sn	**Sn**	**16 43 19.7**	**-3.7**
JYT	**Yasato**	**0.69**	**358**	A	A	16 43 11.9	
	comp=E,25nm,0.4s,comp=E,38nm,0.3s						
BSO3	**Boso 3**	**0.77**	**162**	P	**Pn**	**16 43 14.9**	**+1.5**
JHU	**Hanno**	**0.83**	**293**	A	A	16 43 13.6	
	comp=E,16nm,0.5s,comp=E,19nm,0.8s						
JSGW	**Sagamiharawaka**	**0.83**	**275**	A	A	16 43 13.9	
	comp=E,47nm,0.9s,comp=E,48nm,0.8s						
JHYU	**Hitachinakayam**	**0.85**	**20**	A	A	16 43 14.2	
	comp=E,9.0nm,1.0s,comp=E,9.0nm,0.8s						
JOD2	**Odawara 2**	**0.97**	**254**	⇓P	**Pn**	**16 43 16.0**	**-0.2**
JOD2				⇓S	**Sn**	**16 43 28.8**	**-0.7**
JOD2	**Odawara 2**	**0.97**	**254**	A	A	16 43 16.0	
	comp=E,31nm,0.4s,comp=E,18nm,0.8s						
JIM2	**Oshima 3**	**1.05**	**219**	A	A	16 43 18.1	
	comp=E,20nm,1.1s,comp=E,21nm,0.4s						
BSO1	**Boso 1**	**1.07**	**145**	P	**Pn**	**16 43 18.5**	**+1.5**
JAG	**Ashikaga**	**1.09**	**325**	P	**Pn**	**16 43 16.8**	**-0.9**
JAG	**Ashikaga**	**1.09**	**325**	A	A	16 43 16.8	
	comp=E,9.0nm,0.3s,comp=E,12nm,1.3s						
JHO	**Hitachi**	**1.11**	**14**	A	A	16 43 17.2	
	comp=E,5.0nm,2.6s,comp=E,6.0nm,1.0s						
JHTM	**Izuhatsuma**	**1.15**	**240**	A	A	16 43 18.9	
	comp=E,31nm,0.3s,comp=E,36nm,0.7s						
JRY	**Ryogami san**	**1.18**	**294**	⇓P	**Pn**	**16 43 18.8**	**-0.1**
JRY				⇓S	**Sn**	**16 43 33.9**	**-0.5**
JRY	**Ryogami san**	**1.18**	**294**	A	A	16 43 18.8	
	comp=E,9.0nm,1.2s,comp=E,9.0nm,2.6s						
JTHY	**Toshimahigashi**	**1.27**	**218**	A	A	16 43 21.1	
	comp=E,9.0nm,0.9s,comp=E,13nm,2.1s						
JFNN	**Fujinakano**	**1.31**	**255**	P	**Pn**	**16 43 20.6**	**0.0**
JFNN				S	**Sn**	**16 43 37.0**	**-0.2**
JFNN	**Fujinakano**	**1.31**	**255**	A	A	16 43 20.6	
	comp=E,19nm,0.9s,comp=E,12nm,0.8s						
JYN	**Shimob**	**1.38**	**269**	A	A	16 43 21.0	
	comp=E,10.0nm,3.4s,comp=E,11nm,0.9s						
JIZS	**Izushimoda**	**1.38**	**234**	A	A	16 43 22.0	
	comp=E,8.0nm,1.1s,comp=E,7.0nm,2.5s						
JNIO	**Niijimaoohara**	**1.42**	**214**	A	A	16 43 23.1	
	comp=E,14nm,1.1s,comp=E,9.0nm,1.8s						
JSB	**Shiboa**	**1.45**	**350**	A	A	16 43 21.4	
	comp=E,7.0nm,3.7s,comp=E,8.0nm,1.2s						
JKT	**Katashina**	**1.46**	**327**	A	A	16 43 21.2	
	comp=E,16nm,0.3s,comp=E,13nm,1.1s						
JFFD	**Fukushimafurud**	**1.57**	**10**	A	A	16 43 23.4	
	comp=E,5.0nm,1.5s,comp=E,7.0nm,0.9s						
ONAJ	**Iwakimizuishiy**	**1.63**	**16**	A	A	16 43 24.2	
	comp=E,10.0nm,0.3s,comp=E,5.0nm,0.2s						
JGK	**Kuni**	**1.65**	**309**	A	A	16 43 23.9	
	comp=E,6.0nm,1.1s,comp=E,6.0nm,0.6s						
SHZ3	**Shizuoka 3**	**1.72**	**255**	A	A	16 43 26.1	
	comp=E,21nm,0.9s,comp=E,20nm,0.9s						
JNT	**Takato**	**1.74**	**282**	A	A	16 43 25.6	
	comp=E,6.0nm,0.2s,comp=E,7.0nm,0.9s						
JSG	**Sagara**	**1.88**	**243**	A	A	16 43 28.6	
	comp=E,8.0nm,1.0s,comp=E,7.0nm,1.6s						
JFY	**Yanaizu**	**1.92**	**347**	A	A	16 43 27.6	
	comp=E,3.0nm,2.5s,comp=E,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**1.92**	**302**	P	**Pn**	**16 43 27.7**	**-1.1**
	63nm,0.3s,baz=282,slow=5.5,SNR=373						
MJAR				S	**Sn**	**16 43 51.2**	**-0.8**
	273nm,0.5s,baz=135,slow=21,SNR=4.0						
MJAR				LR	LR	16 44 27.9	
	comp=Z,505nm,21.8s,baz=110,slow=48						
MJAR	**Matsushiro Arr**	**1.92**	**302**	Pn	**Pn**	**16 43 28.2**	**-0.6**
MAJO	**Matsushiro**	**1.92**	**302**		**Pn**	**16 43 29.0**	**+0.2**
MAJO	**Matsushiro**	**1.92**	**302**	P	**Pn**	**16 43 29.0**	**+0.2**
MJB9	**Matsu-Tunnel**	**1.93**	**302**		**Pn**	**16 43 28.9**	**0.0**
JNG	**Nsakai**	**1.93**	**297**	A	A	16 43 28.0	
	comp=E,5.0nm,0.9s,comp=E,7.0nm,1.4s						
JNY	**Yasuok**	**1.94**	**265**	A	A	16 43 28.9	
	comp=E,6.0nm,1.4s,comp=E,8.0nm,0.8s						
JJN	**Nakama**	**2.29**	**314**	A	A	16 43 32.8	
	comp=E,5.0nm,1.0s,comp=E,4.0nm,1.0s						
JGF	**Kuroka**	**2.34**	**272**		**Pn**	**16 43 35.1**	**+0.6**
JMM	**Marumori**	**2.37**	**11**		**Pn**	**16 43 34.0**	**-0.8**
JHJ	**Hachijo jima 2**	**2.44**	**189**	P	**Pn**	**16 43 37.0**	**+1.2**
	419nm,0.3s,baz=187,slow=23,SNR=92						
JHJ				S	**Sn**	**16 44 04.2**	**-0.3**
	680nm,0.3s,baz=34,slow=23,SNR=13						
JHJ2	**Mitsune**	**2.44**	**188**		**Pn**	**16 43 36.8**	**+0.9**
INU	**Inuyama**	**2.63**	**267**	Pn	**Pn**	**16 43 38.7**	**+0.3**
JSD	**Sado**	**2.96**	**328**	Pn	**Pn**	**16 43 42.2**	**-0.6**
JTM	**Tenmabayashi**	**5.28**	**7**	Pn	**Pn**	**16 44 14.3**	**-0.4**
JHS	**Saijyo**	**5.84**	**267**	Pn	**Pn**	**16 44 23.9**	**+1.5**
ERM	**Erimo**	**6.86**	**19**	Pn	**Pn**	**16 44 34.4**	**-1.8**

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ERM    Erimo             6.86  19   P      Pn      16 44 34.4 -1.8
JEW    Eniwo             7.36   7   Pn     Pn      16 44 40.9 -2.1
JNU    Nakatsue          8.10 255   P      Pn      16 44 56.0 +2.7
       38nm,1.1s,baz=70,slow=6.1,SNR=6.2
JNU    Nakatsue          8.10 255          Pn      16 44 54.2 +0.9
JCJ    Chichijima        8.58 168   P      Pn      16 44 57.6 -2.1
       87nm,0.4s,baz=76,slow=12,SNR=27
JCJ                                 S      Sn      16 46 30.1 -4.9
       35nm,0.3s,baz=284,slow=23,SNR=1.9
JCJ    Chichijima        8.58 168   Pn     Pn      16 44 57.9 -1.9
ASAJ   Asahikawa         8.76  11   P      Pn      16 45 00.0 -2.2
       6.7nm,0.4s,baz=210,slow=15,SNR=22
ASAJ                                S      Sn      16 46 32.9 -6.4
       14nm,0.7s,baz=349,slow=26,SNR=2.7
ASAJ   Asahikawa         8.76  11   P      Pn      16 44 59.0 -3.2
JKA    Kamikawa-asahi    8.76  11   Pn     Pn      16 44 59.0 -3.2
NMR    Nemuro--Hokkai    8.90  27  eP      Pn      16 45 00.4 -3.7
JTU    Tsushima          8.94 267   Pn     Pn      16 45 05.5 +0.8
JSU    Suzuyama          9.10 247   Pn     Pn      16 45 08.0 +1.2
GLVR   Golovnino         9.15  25  eP      Pn      16 45 04.4 -3.1
GLVR                               eS      Sn      16 46 41.1 -7.7
RUSJ   Misakicho         9.39  23  eP      Pn      16 45 08.4 -2.3
RUSJ                               eS      Sn      16 46 45.1 -9.5
YUK    Yuzh-Kuril'sk     9.53  25  eP      Pn      16 45 10.0 -2.6
YUK                                eS      Sn      16 46 48.2  -10
YUK                                 pmax   pmax
       comp=N,39nm,0.3s
YUK                                 pmax   pmax
       comp=Z,71nm,0.3s
YUK                                 pmax   pmax
       comp=E,24nm,0.2s
SHO    Shikotan          9.75  29  eP      Pn      16 45 12.0 -3.7
MSHR   Mys Shultsa       9.96 318⇑eP      Pn      16 45 21.4 +2.9
SEHB   SEOHWA            9.97 289   Pn     Pn      16 45 18.9 +0.1
KSRS   Korea Array      10.09 285   P      Pn      16 45 22.1 +1.8
       comp=E,5.6nm,0.8s,baz=100,slow=14,SNR=21
KSRS                                LR     LR      16 49 21.6
       comp=E,98nm,18.4s,baz=90,slow=38
KS19   Wonju Array Si   10.14 285          Pn      16 45 21.1  0.0
USA0B  Ussuriysk Arra   10.72 326ceP      Pn      16 45 30.9 +2.0
USRK   Ussuriysk Ar.    10.72 326   P      Pn      16 45 30.7 +1.8
       comp=E,6.2nm,0.8s,baz=144,slow=11,SNR=15
USRK   Ussuriysk Ar.    10.72 326   Pn     Pn      16 45 28.4 -0.5
KUR    Kuril'sk         11.30  29   P      Pn      16 45 34.6 -2.2
KUR                                eS      Sn      16 47 30.7  -11
KUR                                 smax   smax
       comp=E,38nm,0.6s
KUR                                 smax   smax
       comp=N,27nm,0.5s
YSS    Yuzh-Sakhalins   11.56   9   Pn     Pn      16 45 38.7 -1.7
YSS    Yuzh-Sakhalins   11.56   9  eP      Pn      16 45 38.6 -1.8
YSS                                eS      Sn      16 47 39.3 -8.5
YSS                                 pmax   pmax
       comp=Z,10.0nm,0.8s
MDJ    Mudanjiang       12.18 321   P      Pn      16 45 49.5 +0.6
MDJ                                 pmax   pmax
       comp=Z,3.0nm,0.5s
MDJ                                 pmax   pmax
       comp=Z,97nm,3.6s
JOW    Kunigami         13.41 233   LR     LR      16 50 43.3
       comp=Z,145nm,20.6s,baz=166,slow=35
CN2    Changchun        14.05 310  eP      Pn      16 46 15.4 +1.4
CN2                                 pmax   pmax
       comp=Z,10.0nm,0.7s
BNX    BinXian          14.08 320 ⇑P      Pn      16 46 15.3 +0.9
BNX                                 pmax   pmax
       comp=Z,42nm,1.0s
BNX                                 pmax   pmax
       comp=Z,160nm,3.9s
KLR    Kul'dur          15.04 338   P      Pn      16 46 26.4 -0.5
       comp=Z,1.1nm,0.4s,baz=173,slow=7.2,SNR=6.1
KLR                                 LR     LR      16 52 05.9
       comp=Z,65nm,18.6s,baz=124,slow=36
NJ2    Nanjing          18.10 265  eP      P       16 47 00.0 -4.8
NJ2                                 pmax   pmax
       comp=Z,7.0nm,0.5s
BJI    Beijing          19.52 290   P      Pn      16 47 21.1 -1.0
BJI                                 pmax   pmax
       comp=Z,13nm,1.0s
YHNB   Yeheng           19.55 241   P      Pn      16 47 21.0 -1.6
YHNB                                IAmb   IAmb    16 47 21.4
       comp=Z,29nm,1.3s
XLT    XiLinHaoTe       20.32 302  eP      P       16 47 26.6 -2.4
XLT                                 pP     pP      16 47 43.1 +0.3
XLT                                 sP     sP      16 47 50.6 -0.4
XLT                                 pmax   pmax
       comp=Z,7.0nm,1.0s
XLT                                 pmax   pmax
       comp=Z,84nm,4.2s
ZEA    Zeya             20.35 337  eP      P       16 47 29.4 +0.2
ZEA                                 pmax   pmax
       comp=N,10.0nm,0.9s
ZEA                                 pmax   pmax
       comp=Z,10.0nm,0.8s
SSLB   Suanglung        20.39 240   P      P       16 47 28.1 -1.8
SSLB                                IAmb   IAmb    16 47 49.8
       comp=Z,35nm,1.2s
YULB   Yu-li            20.41 239   P      P       16 47 28.2 -1.9
YULB                                IAmb   IAmb    16 47 47.2
       comp=Z,30nm,1.4s
HNS    HongShan         20.59 283  eP      P       16 47 31.0 -1.0
TPUB   Ta-pu            20.93 240   P      P       16 47 33.8 -2.0
TPUB                                IAmb   IAmb    16 47 55.3
       comp=Z,53nm,1.3s
PEA0B  Petropavlovsk-   21.46  30deP      P       16 47 42.5 +1.4
PETK   Petropavlovsk-   21.46  30   P      P       16 47 41.8 +0.6
       comp=Z,5.0nm,0.9s,baz=202,slow=6.4,SNR=5.0
PETK                                LR     LR      16 55 28.4
       comp=Z,29nm,20.6s,baz=226,slow=35
       comp=Z,5.0nm,0.9s
LYN    LuoYang          22.73 276  eP      P       16 47 53.5 -1.3
LYN                                 pmax   pmax
       comp=Z,10.0nm,0.8s
LYN                                 LR     LR
       comp=Z,150nm,12.4s
LYN                                 LR     LR
       comp=Z,130nm,16.3s
HHC    Hu-ho-hao-te     23.09 292  eP      P       16 47 58.0 -0.6
HHC                                 pmax   pmax
       comp=Z,40nm,0.7s
HHC                                 pmax   pmax
       comp=Z,110nm,4.9s
MA2    Magadan          25.02  13   P      P       16 48 16.3 +0.4
       comp=Z,6.6nm,0.8s,baz=188,slow=12,SNR=6.7
       comp=Z,6.6nm,0.8s
XAN    Xi'an            25.70 276   P      P       16 48 22.0 -0.5
XAN                                 pP     pP      16 48 38.6 +0.5
XAN                                 pmax   pmax
       comp=Z,7.0nm,1.1s
ENH    Enshi            26.28 267   P      P       16 48 27.6 -0.1
ENH                                 IAmb   IAmb    16 48 30.6
       comp=Z,8.5nm,0.6s
YAK    Yakutsk          27.34 349   LR     LR      16 58 12.8
       comp=Z,41nm,20.8s,baz=90,slow=33
YAK    Yakutsk          27.34 349  eP      P       16 48 38.2 +1.4
YAK                                e*PP    pP      16 48 54.3 +1.8
YAK                                e               16 49 27.4
YAK                                e               16 51 56.4
YAK                                eS      S       16 53 14.4 +2.7
YAK                                e*SS    sS      16 53 39.4 +0.9
YAK                                e               16 59 21.9
YAK                                 pmax   pmax
       comp=Z,7.0nm,1.1s
YAK                                 pmax   pmax
       comp=N,4.0nm,1.3s
YAK                                 pmax   pmax
       comp=Z,88nm,4.7s
YAK                                 smax   smax
       comp=N,38nm,2.7s
YAK                                 smax   smax
       comp=E,21nm,2.5s
SONM   Songino Array    27.87 307   P      P       16 48 40.8 -1.1
       comp=E,2.0nm,0.7s,baz=112,slow=9.7,SNR=11
SONM                                LR     LR      16 59 57.8
       comp=E,70nm,18.8s,baz=87,slow=37
       comp=E,2.0nm,0.7s
SONM   Songino Array    27.87 307   P      P       16 48 41.0 -0.9
SONM   Songino Array    27.87 307   P      P       16 48 41.0 -0.9
SONM                                pmax   pmax
       comp=Z,2.0nm,1.0s
H11N2  WAKE ISLAND Hy   28.27 117   T      T       17 18 25.3
       baz=308,slow=75,SNR=149
H11N1  WAKE ISLAND Hy   28.27 117   T      T       17 18 24.3
       baz=308,slow=75,SNR=119
H11N3  WAKE ISLAND Hy   28.28 117   T      T       17 18 27.9
       baz=308,slow=75,SNR=146
H11S1  WAKE ISLAND Hy   28.91 119   T      T       17 19 04.0
       baz=311,slow=76,SNR=57
H11S3  WAKE ISLAND Hy   28.91 119   T      T       17 19 14.3
       baz=311,slow=76,SNR=41
H11S2  WAKE ISLAND Hy   28.93 119   T      T       17 19 15.5
       baz=311,slow=76,SNR=34
LZH    Lanzhou          29.41 282  eP      P       16 48 55.5 -0.2
LZH                                 pmax   pmax
       comp=Z,19nm,1.3s
GTA    Gaotai           32.12 289  eP      P       16 49 20.8 +1.2
GTA                                 pP     pP      16 49 34.3 -1.1
GTA                                 sP     sP      16 49 39.3 -3.7
GTA                                 pmax   pmax
       comp=Z,3.0nm,0.7s
PZH    PanZhiHua        34.01 266   P      P       16 49 34.3 -1.9
PZH                                 pmax   pmax
       comp=Z,10.0nm,0.7s
PZH                                 pmax   pmax
       comp=Z,100nm,4.9s
BILL   Bilibino         35.73  16⇑eP      P       16 49 52.6 +2.3
BILL                                pmax   pmax
       comp=Z,5.0nm,1.7s
TIXI   Tiksi            36.67 354   P      P       16 49 58.3  0.0
       comp=Z,1.3nm,0.4s,baz=266,slow=21,SNR=11
       comp=Z,1.3nm,0.4s
TIXI   Tiksi            36.67 354   P      P       16 49 58.0 -0.2
TIXI   Tiksi            36.67 354ceP      P       16 50 01.6 +3.3
TIXI                                pmax   pmax
       comp=Z,5.0nm,2.5s
UBPT   Khong Chiam      37.04 246   P      P       16 50 01.8 -0.3
UBPT                                IAmb   IAmb    16 50 13.8
       comp=Z,9.7nm,1.3s
SIJI   Sorong           37.17 195   P      P       16 50 03.0 -0.2
       comp=Z,2.5nm,0.4s,baz=6.1,slow=12,SNR=5.0
       comp=Z,2.5nm,0.4s
FAKI   Fak Fak          38.98 193   P      P       16 50 18.1 -0.3
FAKI                                IAmb   IAmb    16 50 19.1
       comp=Z,23nm,1.5s
CMAR   Chiang Mai Arr   40.20 256   P      P       16 50 27.4 -1.1
       comp=Z,0.4nm,0.4s,baz=60,slow=7.5,SNR=5.7
       comp=Z,0.4nm,0.4s
WMQ    Urumqi           40.68 298  eP      P       16 50 34.6 +2.3
ZAA0   Zalesovo Array   42.23 314   P      P       16 50 44.4 -0.4
ZAA0                                IAmb   IAmb    16 50 46.1
       comp=Z,6.8nm,0.8s
ZALV   Zalesovo Beam    42.23 314   P      P       16 50 44.9 +0.1
       comp=Z,8.9nm,0.9s,baz=98,slow=6.4,SNR=21
ZALV                                LR     LR      17 09 42.6
       comp=Z,28nm,18.3s,baz=64,slow=38
       comp=Z,8.9nm,0.9s
ZALV   Zalesovo Beam    42.23 314   P      P       16 50 44.2 -0.6
ZALV   Zalesovo Beam    42.23 314 i P      P       16 50 44.9 +0.1
ZALV                                pmax   pmax
       comp=Z,6.0nm,0.7s
MK31   Makanchi Array   44.12 303   P      P       16 51 00.0 -0.1
MK31                                IAmb   IAmb    16 51 01.2
       comp=Z,10nm,1.1s
MK31   Makanchi Array   44.12 303 i P      P       16 51 00.2  0.0
MKAR   Makanchi Array   44.12 303   P      P       16 51 00.3 +0.1
       comp=Z,5.8nm,0.7s,baz=85,slow=9.7,SNR=54
MKAR                                LR     LR      17 09 42.7
       comp=Z,32nm,20.9s,baz=120,slow=36
       comp=Z,5.8nm,0.7s
MKAR   Makanchi Array   44.12 303   P      P       16 50 59.9 -0.2
MKAR   Makanchi Array   44.12 303ceP      P       16 51 00.3 +0.1
MKAR                                pmax   pmax
       comp=Z,7.0nm,0.7s
NRIK   Noril'sk         44.24 336   P      P       16 51 01.0 +0.3
       comp=Z,2.9nm,0.5s,baz=95,slow=9.3,SNR=5.7
       comp=Z,2.9nm,0.5s
MAKZ   Makanchi         44.33 303   P      P       16 51 00.8 -1.1
MAKZ                                IAmb   IAmb    16 51 03.0
       comp=Z,11nm,1.1s
MAKZ   Makanchi         44.33 303   P      P       16 51 00.8 -1.1
MAKZ                                pmax   pmax
       comp=Z,11nm,1.1s
KURK   Kurchatov        46.12 309   P      P       16 51 15.4 -0.5
KURK   Kurchatov        46.12 309   P      P       16 51 16.2 +0.3
KURBB  Kurchatov Arra   46.18 309   P      P       16 51 16.1 -0.2
       comp=Z,6.1nm,0.6s,baz=86,slow=7.7,SNR=58
       comp=Z,6.1nm,0.6s
KURBB  Kurchatov Arra   46.18 309   P      P       16 51 15.8 -0.6
JIRN   Jiri             46.21 276  eP      P       16 51 17.0 -0.4
GUN    Gumba            46.36 276  eP      P       16 51 18.5  0.0
PDGK   Podgornoye       46.64 299   P      P       16 51 20.4 +0.1
PKI    Pulchoki         46.88 276  eP      P       16 51 22.1 -0.5
       comp=Z,12nm,0.8s
PKIN   Phulchoki        46.89 276  eP      P       16 51 22.1 -0.5
       comp=Z,12nm,0.7s
DMN    Daman            47.11 276  eP      P       16 51 23.9 -0.4
GKN    Gorkha           47.33 277  eP      P       16 51 25.9  0.0
       comp=Z,30nm,0.8s
DANN   Dangsing         47.90 278  eP      P       16 51 30.6 +0.1
K20K   Telida           48.10  34   P      P       16 51 33.3 +2.1
K20K                                IAmb   IAmb    16 51 34.5
       comp=Z,3.5nm,0.8s
J20K   Nowinta River    48.12  32   P      P       16 51 32.9 +1.7
J20K                                IAmb   IAmb    16 51 34.6
       comp=Z,3.5nm,1.0s
Q19K   Cape Douglas,    48.25  39   P      P       16 51 33.4 +1.0
MDOK   Medeo            48.42 299   P      P       16 51 34.6 +0.5
IMAR   Indian Mountai   48.42  30   P      P       16 51 35.3 +1.7
PYUN   Piuthan          48.62 278  eP      P       16 51 36.0 +0.1
H21K   Melozitna Rive   48.79  30   P      P       16 51 38.1 +1.7
KDAK   Kodiak Island    48.85  41   P      P       16 51 38.2 +1.2
       comp=Z,5.6nm,0.6s,baz=282,slow=5.4,SNR=6.3
       comp=Z,5.6nm,0.6s
KDAK   Kodiak Island    48.85  41   P      P       16 51 38.1 +1.2
MTN    Manton Dam       48.88 192   P      P       16 51 37.8 +0.2
MTN                                 IAmb   IAmb    16 51 42.7
       comp=Z,9.9nm,1.1s
BOOM   Boomskoye usch   49.37 299   P      P       16 51 40.9 -0.6
BOOM                                IAmb   IAmb    16 51 47.7
       comp=Z,9.5nm,1.0s
BOOM   Boomskoye usch   49.37 299   P      P       16 51 40.9 -0.6
BOOM                                pmax   pmax
       comp=Z,9.0nm,1.0s
TKM2   Tokmak 2         49.51 299   P      P       16 51 43.6 +1.1
AAK    Ala-Archa        50.37 299   LR     LR      17 14 13.7
       comp=Z,49nm,18.9s,baz=96,slow=37
AAK    Ala-Archa        50.37 299ceP      P       16 51 49.7 +0.7
AAK                                 pmax   pmax
       comp=Z,6.0nm,1.3s
RND    Reindeer         50.45  33   P      P       16 51 49.8 +0.6
RND                                 IAmb   IAmb    16 52 12.5
       comp=Z,2.7nm,0.8s
RND    Reindeer         50.45  33   P      P       16 51 49.8 +0.6
RND                                 pmax   pmax
       comp=Z,3.0nm,0.8s
OTUK   Ortayu           50.54 307   P      P       16 51 49.9 -0.1
MDM    Murphy Dome      50.69  31   P      P       16 51 52.9 +2.0
MDM                                 IAmb   IAmb    16 52 12.0
       comp=Z,5.3nm,0.9s
H24K   Noodor Dome      50.83  30   P      P       16 51 52.5 +0.5
BRVK   Borovoye         50.94 313   P      P       16 51 54.2 +1.3
BRVK                                IAmb   IAmb    16 51 56.1
       comp=Z,4.2nm,1.0s
BRVK   Borovoye         50.94 313   P      P       16 51 54.2 +1.3
BRVK                                pmax   pmax
       comp=Z,4.0nm,1.0s
SCM    Sheep Creek Mo   51.24  35   P      P       16 51 55.9 +0.8
SCM    Sheep Creek Mo   51.24  35   P      P       16 51 55.9 +0.8
SCM                                 pmax   pmax
       comp=Z,17nm,1.4s
IL31                    51.27  32   P      P       16 51 56.7 +1.6
IL31                                IAmb   IAmb    16 52 09.6
       comp=Z,3.4nm,0.8s
ILAR   Eielson Array    51.27  32   P      P       16 51 56.5 +1.3
       comp=Z,1.5nm,0.7s,baz=271,slow=6.4,SNR=19
       comp=Z,1.5nm,0.7s
ILAR   Eielson Array    51.27  32   P      P       16 51 56.3 +1.1
KNRA   Kununurra        52.08 194   P      P       16 52 02.3 +0.6
KK31   Karatay Array    53.06 301   P      P       16 52 08.2 -0.6
KK31                                IAmb   IAmb    16 52 14.7
       comp=Z,6.7nm,1.1s
KK31   Karatay Array    53.06 301 i P      P       16 52 09.1 +0.3
KKAR   Karatay Array    53.06 301   P      P       16 52 08.2 -0.6
KKAR   Karatay Array    53.06 301   P      P       16 52 08.2 -0.6
L27K   Beaver Creek,    53.65  34   P      P       16 52 14.8 +1.9
L27K                                IAmb   IAmb    16 52 29.2
       comp=Z,3.5nm,1.1s
BCAR   Beaver Creek A   53.67  34   P      P       16 52 13.8 +0.8
WB0    Warramunga Arr   55.28 187   P      P       16 52 25.3 +0.2
WB0                                 IAmb   IAmb    16 52 36.6
       comp=Z,7.0nm,0.8s
WR0    Warramunga Arr   55.45 187   P      P       16 52 26.4 +0.1
WB2    Warramunga Arr   55.45 187   P      P       16 52 26.2 -0.2
WRA    Warramunga Arr   55.46 187   P      P       16 52 26.4 +0.1
       comp=Z,3.0nm,0.4s,baz=0.3,slow=7.6,SNR=67
       comp=Z,3.0nm,0.4s
WRA    Warramunga Arr   55.46 187   P      P       16 52 26.0 -0.3
ARU    Arti             56.85 319   P      P       16 52 36.0  0.0
ARU    Arti             56.85 319c iP      P       16 52 35.9  0.0
ARU                                                16 53 29.8
ARU                                                16 54 42.8
ARU                                 S      S       17 00 31.2 +6.9
ARU                                 SS     SS      17 04 19.5 +6.8
ARU                                 pmax   pmax
       comp=Z,7.0nm,0.6s
AB31   Akbulak array    58.18 311 i P      P       16 52 45.1 -0.3
ABKAR  Akbulak array    58.18 311   P      P       16 52 45.6 +0.2
AS31   Alice Springs    59.18 187   P      P       16 52 53.4 +0.8
ASAR   Alice Springs    59.18 187   P      P       16 52 53.2 +0.6
       comp=Z,0.9nm,0.4s,baz=19,slow=9.1,SNR=40
       comp=Z,0.9nm,0.4s
ASAR   Alice Springs    59.18 187   P      P       16 52 53.4 +0.8
ASAR   Alice Springs    59.18 187   P      P       16 52 53.4 +0.8
C36M   Paulatuk         59.19  24   P      P       16 52 53.1 +1.1
C36M                                IAmb   IAmb    16 53 20.9
       comp=Z,7.5nm,0.9s
MBWA   Marble Bar       59.64 202   P      P       16 52 56.2 +0.5
PSA00  Pilbara Seismi   59.99 202   P      P       16 52 58.8 +0.6
KIRV   Kirov            60.87 323ceP      P       16 53 04.4 +0.7
PRGR   Permogore        61.50 327  eP      P       16 53 07.9  0.0
KLMR   Klimovskoe       64.51 328  eP      P       16 53 26.9 -0.9
KLMR                                pmax   pmax
       comp=Z,5.0nm,0.7s
KLMR   Klimovskoe       64.51 328  eP      P       16 53 27.0 -0.9
KLMR                                AMP            16 53 28.6
       comp=Z,5.0nm,0.7s
ARCES  ARCESS Array B   65.06 339   P      P       16 53 32.0 +0.6
       comp=Z,1.4nm,0.8s,baz=26,slow=6.3,SNR=2.0
       comp=Z,1.4nm,0.8s
ARCES  ARCESS Array B   65.06 339   IAmb   IAmb    16 53 33.6
       comp=Z,14nm,1.5s
ARCES  ARCESS Array B   65.06 339   P      P       16 53 32.0 +0.6
ARCES                               pmax   pmax
       comp=Z,14nm,1.5s
FIA1   FINESS Array S   69.69 332   P      P       16 54 00.6 -0.1
FINES  FINESS Array B   69.69 332   P      P       16 54 00.5 -0.2
       comp=Z,3.7nm,0.8s,baz=98,slow=3.9,SNR=14
       comp=Z,3.7nm,0.8s
FINES  FINESS Array B   69.69 332   P      P       16 54 00.9 +0.2
FINES  FINESS Array B   69.69 332   P      P       16 54 00.9 +0.2
KBZ    Khabaz           71.15 311   P      P       16 54 10.7 +0.7
       comp=Z,3.9nm,0.9s,baz=119,slow=4.2,SNR=6.6
       comp=Z,3.9nm,0.9s
KIV    Kislovodsk       71.16 311  eP      P       16 54 09.7 -0.4
KIV                                 pmax   pmax
       comp=Z,10.0nm,1.1s
GNI    Garni            71.83 307   LR     LR      17 27 43.5
       comp=Z,22nm,18.1s,baz=52,slow=37
AKASG  Malin Array Be   74.89 322   P      P       16 54 31.4 -0.4
       comp=Z,3.0nm,0.6s,baz=47,slow=5.9,SNR=18
       comp=Z,3.0nm,0.6s
AKASG  Malin Array Be   74.89 322   IAmb   IAmb    16 54 32.9
       comp=Z,4.2nm,1.1s
AKASG  Malin Array Be   74.89 322   P      P       16 54 31.5 -0.4
AKASG                               pmax   pmax
       comp=Z,4.0nm,1.1s
AKBB   Malin Array Si   74.89 322   P      P       16 54 31.5 -0.4
AKBB                                IAmb   IAmb    16 54 32.5
       comp=Z,6.5nm,0.8s
AKBB   Malin Array Si   74.89 322ceP      P       16 54 32.0 +0.1
NB2    NORSAR Subarra   75.19 337   P      P       16 54 33.5  0.0
       comp=Z,3.7nm,1.1s,baz=42,slow=5.3
NOA    NORSAR Array B   75.19 337   P      P       16 54 33.6  0.0
       comp=Z,1.3nm,0.8s,baz=39,slow=5.8,SNR=3.7
NOA                                 LR     LR      17 30 34.4
       comp=Z,9.0nm,18.0s,baz=110,slow=38
       comp=Z,1.3nm,0.8s
KVN    Kaiserville      76.43  52   P      P       16 54 42.5 +1.3
KVN                                 IAmb   IAmb    16 54 44.3
       comp=Z,6.3nm,1.3s
KVN    Kaiserville      76.43  52   P      P       16 54 42.5 +1.3
KVN                                 pmax   pmax
       comp=Z,6.0nm,1.3s
NVAR   Mina Array Bea   76.66  52   P      P       16 54 44.5 +2.0
       comp=Z,1.3nm,0.8s,baz=290,slow=5.6,SNR=10.0
       comp=Z,1.3nm,0.8s
KWP    Kalwaria Pacla   78.78 324  eP      P       16 54 55.1 +1.2
BUR08  Bucovina Ar. S   78.88 321   P      P       16 54 54.3 -0.2
BURAR  Bucovina Array   78.89 321   P      P       16 54 54.1 -0.5
BRTR   Keskin Array B   79.12 311   P      P       16 54 56.8 +0.7
       comp=Z,1.3nm,0.8s,baz=63,slow=2.5,SNR=5.6
       comp=Z,1.3nm,0.8s
BRTR   Keskin Array B   79.12 311   P      P       16 54 56.2 +0.1
BW06   Boulder Array    79.40  45   P      P       16 54 58.4 +0.7
PD31   Pinedale Array   79.40  45   P      P       16 54 58.4 +0.7
PDAR   Pinedale Array   79.40  45   P      P       16 54 59.4 +1.7
       comp=Z,1.0nm,0.6s,baz=235,slow=1.3,SNR=10
       comp=Z,1.0nm,0.6s
PDAR   Pinedale Array   79.40  45   P      P       16 54 59.0 +1.3
KOLS   Kolonicke sedl   79.47 324  eP      P       16 54 55.9 -1.7
KOLS   Kolonicke sedl   79.47 324  eP      P       16 54 55.8 -1.8
CRVS   Cervenica-Dubn   79.88 324  eP      P       16 54 57.3 -2.5
CRVS   Cervenica-Dubn   79.88 324  eP      P       16 54 57.3 -2.5
RAYN   Ar Rayn          80.33 292   P      P       16 55 03.2 +0.4
RAYN   Ar Rayn          80.33 292   P      P       16 55 03.2 +0.4
RAYN                                pmax   pmax
       comp=Z,3.0nm,0.8s
PFO    Pinyon Flats O   80.67  55   LR     LR      17 23 48.1
       comp=Z,26nm,19.6s,baz=216,slow=30
CLL    Collm            81.91 330 i P      P       16 55 10.6  0.0
CLL                                 pmax   pmax
       comp=Z,3.0nm,0.7s
CLL    Collm            81.91 330 i P      P       16 55 10.6  0.0
       comp=Z,3.0nm,0.7s
CLL                                 Lm     MLR     17 59 00.0
       comp=Z,100nm,19.6s
PPT    Papeete          84.83 116   LR     LR      17 27 43.5
       comp=Z,38nm,21.8s,baz=289,slow=32
NRCA   Norcia           88.28 324   P      P       16 55 43.2 +0.5
H03N2  Juan Fernandez  147.79  98   T      T       19 47 26.6
       baz=289,slow=76,SNR=4.4
H03N3  Juan Fernandez  147.81  98   T      T       19 47 34.1
       baz=289,slow=76,SNR=5.0
H03N1  Juan Fernandez  147.81  98   T      T       19 47 36.4
       baz=289,slow=76,SNR=5.4
LPAZ   La Paz          148.27  60   PKPbc  PKiKP   17 02 40.1 +0.1
       comp=Z,1.6nm,1.1s,baz=358,slow=12,SNR=3.7
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*IDC **23** 17:31:48.3±2.6, 22°.09N×45°.03W, h0km, mb4.0/9, mbtmp4.0/9, MS3.9/65, Error ellipse: s-maj=80.3km s-min=25.3km az=13.0*

*NEIC **23** 17:31:51.6±1.5, 22°.3N±0°.1×45°.1W±0°.1, h10km±2km, mb4.5/13, Error ellipse: s-maj=28.7km s-min=9.7km az=144.0*

*GCMT **23** 17:31:52.6±0.3, 22°.54N±0°.04×45°.00W±0°.02, h14km±1km, MW4.8/109, Moment Tensor Solution. s23,c24; s109,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.27±.15; $M_{\theta\theta}$0.36±.09; $M_{\phi\phi}$1.91±.10; $M_{r\theta}$1.02±.33; $M_{\theta\phi}$0.24±.06; $M_{\phi r}$0.13±.24; Best double couple: $M_0$2.29400×10^{16} NP1:ϕ_s352.00000°, δ44.00000°, λ-117.00000°. NP2:ϕ_s208.00000°, δ52.00000°, λ-66.00000°. Principal axes: T 1.9680, Plg4.0000°, Azm281.0000°; N 0.6480, Plg18.0000°, Azm13.0000°; P -2.6200, Plg71.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 17:31:50.5±1.2**, 22°.2N**±0°.3×**45°.0W**±0°.1**, h10km, n85, σ0s.78**/19**, mb4.2**/13**, MS3.9**/64**, Northern Mid-Atlantic Ridge**

```
Code   Station Name      Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC     h  m  s     ISC
MDP    Montagnes des    18.50 205   LR     LR      17 42 02.6
       comp=Z,81nm,18.2s,baz=43,slow=33
SJG    San Juan         20.22 262   LR     LR      17 42 33.7
       comp=Z,428nm,21.6s,baz=86,slow=32
CELP   Cerrillos        20.63 262   P      P       17 36 31.2 +0.9
CELP                                IAmb   IAmb    17 36 32.5
       comp=Z,50nm,1.3s
OBIP   Obispado Ponce   20.66 262   P      P       17 36 30.6  0.0
SDV    Santo Domingo    27.91 246   LR     LR      17 47 50.0
       comp=Z,128nm,20.1s,baz=36,slow=34
RCBR   Riachuelo        29.24 161   LR     LR      17 46 24.3
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	comp=Z,249nm,21.8s,baz=130,slow=30						
ROSC	**El Rosal**	33.17	243	LR	LR	17 52 49.8	
	comp=Z,175nm,19.9s,baz=232,slow=38						
SADO	**Sadowa**	35.89	317	LR	LR	17 50 25.4	
	comp=Z,282nm,21.4s,baz=142,slow=31						
TKL	**Tuckaleechee C**	36.23	300	LR	LR	17 51 43.3	
	comp=Z,270nm,19.3s,baz=113,slow=33						
SCHQ	**Schefferville**	36.48	339	LR	LR	17 52 01.4	
	comp=Z,112nm,20.6s,baz=119,slow=33						
MDT	**Midelt**	37.20	65	LR	LR	17 51 33.0	
	comp=Z,216nm,19.0s,baz=333,slow=32						
ESDC	**Sonseca Array**	38.93	54	LR	LR	17 52 41.4	
	comp=Z,179nm,18.5s,baz=250,slow=32						
JTS	**Las Juntas de**	39.98	259	LR	LR	17 53 11.6	
	comp=Z,135nm,21.5s,baz=110,slow=32						
DBIC	**Dimbokro**	41.70	106	LR	LR	17 53 48.3	
	comp=Z,225nm,21.6s,baz=297,slow=32						
H10N3	**ASCENSION HYDR**	42.26	132	T	T	18 24 46.7	
	baz=315,slow=75,SNR=104						
H10N2	**ASCENSION HYDR**	42.27	132	T	T	18 24 43.2	
	baz=315,slow=75,SNR=104						
H10N1	**ASCENSION HYDR**	42.28	132	T	T	18 24 47.6	
	baz=315,slow=75,SNR=149						
H10S3	**ASCENSION HYDR**	42.95	133	T	T	18 25 37.3	
	baz=315,slow=74,SNR=28						
H10S2	**ASCENSION HYDR**	42.97	133	T	T	18 25 41.9	
	baz=265,slow=74,SNR=10						
ATAH	**Atahualpa**	43.78	232	LR	LR	17 58 36.8	
	comp=Z,119nm,21.8s,baz=42,slow=37						
S39A	**Bolivar**	44.12	302	P	**P**	**17 39 58.8**	**-0.5**
S39A				IAmb	IAmb	17 40 02.8	
	comp=Z,8.3nm,1.4s						
FRB	**Frobisher Bay**	44.42	345	LR	LR	17 56 21.4	
	comp=Z,212nm,21.6s,baz=173,slow=33						
LPAZ	**La Paz**	44.42	213	LR	LR	17 57 46.9	
	comp=Z,161nm,20.4s,baz=27,slow=35						
SFJD	**Kangerlussuaq**	44.95	357	LR	LR	17 55 07.5	
	comp=Z,89nm,20.9s,baz=168,slow=31						
TOA0	**Torodi Ar. Sit**	45.28	93	P	**P**	**17 40 09.1**	**+0.4**
TOA0				IAmb	IAmb	17 40 09.9	
	comp=Z,7.8nm,1.2s						
TORD	**Torodi Ar. Bea**	45.28	93	P	**P**	**17 40 07.5**	**-1.3**
	comp=Z,3.3nm,1.0s,baz=284,slow=3.4,SNR=9.4						
TORD				LR	LR	17 56 49.6	
	comp=Z,323nm,20.8s,baz=243,slow=33						
	comp=Z,3.3nm,1.0s						
TORD	**Torodi Ar. Bea**	45.28	93	P	**P**	**17 40 08.0**	**-0.8**
BORG	**Borgarnes**	45.32	14	LR	LR	17 54 45.9	
	comp=Z,64nm,18.0s,baz=205,slow=30						
EKA	**Eskdalemuir Ar**	45.38	32	LR	LR	17 55 10.1	
	comp=Z,107nm,19.4s,baz=242,slow=31						
NNA	**Nana**	46.11	226	LR	LR	17 58 47.7	
	comp=Z,88nm,21.7s,baz=38,slow=35						
CMIG	**Matias Romero**	47.05	273	LR	LR	17 58 23.1	
	comp=Z,124nm,21.4s,baz=26,slow=34						
ULM	**Lac du Bonnet**	48.42	318	LR	LR	17 58 20.0	
	comp=Z,218nm,21.4s,baz=92,slow=33						
KEST	**Kesra**	48.90	61	P	**P**	**17 40 37.7**	**+0.8**
	comp=Z,7.3nm,1.0s,baz=280,slow=2.2,SNR=3.8						
KEST				LR	LR	17 58 54.5	
	comp=Z,121nm,21.2s,baz=252,slow=33						
	comp=Z,7.3nm,1.0s						
KEST	**Kesra**	48.90	61	IAmb	IAmb	17 40 42.2	
	comp=Z,14nm,1.2s						
CPUP	**Villa Florida**	49.67	195	LR	LR	18 00 43.4	
	comp=Z,41nm,19.6s,baz=24,slow=35						
LVC	**Limon Verde**	50.23	209	LR	LR	18 02 13.8	
	comp=Z,58nm,21.1s,baz=16,slow=36						
DAVOX	**Davos/Dischmat**	50.30	47	LR	LR	17 58 17.8	
	comp=Z,105nm,20.4s,baz=260,slow=32						
TXAR	**Lajitas Array**	52.82	291	LR	LR	18 02 54.6	
	comp=Z,104nm,20.4s,baz=86,slow=35						
VAE	**Valguarnera**	52.97	59	LR	LR	18 00 24.7	
	comp=Z,53nm,21.6s,baz=308,slow=32						
GERES	**GERESS Array B**	53.16	45	P	**P**	**17 41 08.6**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=231,slow=8.4,SNR=3.5						
	comp=Z,0.6nm,0.9s						
JMIC	**Jan Mayen**	53.22	14	LR	LR	17 58 34.5	
	comp=Z,45nm,19.6s,baz=246,slow=30						
NOA	**NORSAR Array B**	54.66	30	LR	LR	18 00 29.6	
	comp=Z,156nm,20.2s,baz=250,slow=32						
ANMO	**Albuquerque**	54.66	298	LR	LR	18 04 16.4	
	comp=Z,68nm,18.7s,baz=100,slow=36						
VRAC	**Vranov**	55.11	45	LR	LR	18 01 39.4	
	comp=Z,29nm,18.0s,baz=250,slow=32						
HFS	**Hagfors**	55.55	31	LR	LR	18 01 16.4	
	comp=Z,109nm,18.1s,baz=252,slow=32						
PDAR	**Pinedale Array**	56.80	307	P	**P**	**17 41 35.6**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=111,slow=8.1,SNR=5.6						
PDAR				LR	LR	18 04 02.3	
	comp=Z,89nm,20.7s,baz=99,slow=34						
	comp=Z,1.1nm,0.9s						
RES	**Resolute Bay**	58.62	346	LR	LR	18 05 44.3	
	comp=Z,83nm,18.7s,baz=86,slow=35						
LPIG	**La Paz**	59.55	286	LR	LR	18 07 08.6	
	comp=Z,57nm,21.8s,baz=38,slow=36						
YKA	**Yellowknife Ar**	61.14	330	LR	LR	18 06 48.4	
	comp=Z,115nm,20.7s,baz=82,slow=34						
ELK	**Elko**	61.14	305	LR	LR	18 05 58.0	
	comp=Z,237nm,22.0s,baz=84,slow=34						
MLR	**Muntele Rosu**	61.37	49	LR	LR	18 05 25.1	
	comp=Z,58nm,21.2s,baz=253,slow=33						
MLR	**Muntele Rosu**	61.37	49	P	**P**	**17 42 07.5**	**+0.7**
FINES	**FINESS Array B**	61.75	31	LR	LR	18 05 43.6	
	comp=Z,117nm,18.4s,baz=260,slow=33						
PFO	**Pinyon Flats O**	63.04	297	LR	LR	18 07 41.4	
	comp=Z,31nm,20.6s,baz=107,slow=34						
AKASG	**Malin Array Be**	63.29	43	P	**P**	**17 42 18.2**	**-1.2**
	comp=Z,0.3nm,0.2s,baz=283,slow=4.1,SNR=8.5						
AKASG				LR	LR	18 06 05.6	
	comp=Z,59nm,21.3s,baz=317,slow=32						
	comp=Z,0.3nm,0.2s						
AKASG	**Malin Array Be**	63.29	43	IAmb	IAmb	17 42 28.5	
	comp=Z,4.0nm,1.4s						
NVAR	**Mina Array Bea**	63.77	303	LR	LR	18 08 02.4	
	comp=Z,251nm,20.8s,baz=98,slow=34						
YBH	**Yreka Blue Hor**	66.60	307	LR	LR	18 10 25.2	
	comp=Z,164nm,19.7s,baz=82,slow=35						
PLCA	**Paso Flores**	66.94	201	LR	LR	18 14 06.7	
	comp=Z,36nm,18.1s,baz=29,slow=38						
BRTR	**Keskin Array B**	67.71	55	P	**P**	**17 42 48.0**	**-0.5**
	comp=Z,2.0nm,1.0s,baz=294,slow=3.9,SNR=7.2						
	comp=Z,2.0nm,1.0s						
BBB	**Bella Bella**	68.61	319	LR	LR	18 12 15.5	
	comp=Z,145nm,18.2s,baz=92,slow=35						
DLBC	**Dease Lake**	68.78	326	LR	LR	18 10 51.9	
	comp=Z,97nm,21.3s,baz=154,slow=34						
INK	**Inuvik**	69.05	337	LR	LR	18 11 50.9	
	comp=Z,175nm,20.1s,baz=79,slow=35						
EIL	**Elat**	71.03	65	LR	LR	18 15 14.1	
	comp=Z,142nm,19.2s,baz=276,slow=37						
KBZ	**Khabaz**	73.58	49	P	**P**	**17 43 25.4**	**+1.5**
	comp=Z,1.9nm,0.8s,baz=300,slow=8.1,SNR=2.8						
	comp=Z,1.9nm,0.8s						
KIRV	**Kirov**	73.62	33	LR	LR	18 11 42.6	
	comp=Z,83nm,20.9s,baz=272,slow=32						
TSUM	**Tsumeb**	73.74	119	LR	LR	18 09 52.2	
	comp=Z,105nm,21.3s,baz=285,slow=31						
ILAR	**Eielson Array**	75.07	334	P	**P**	**17 43 31.9**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=78,slow=5.2,SNR=10						
ILAR				LR	LR	18 15 45.0	
	comp=Z,154nm,20.2s,baz=64,slow=35						
	comp=Z,1.4nm,0.7s						
H23K	**Yukon River**	75.73	336	P	**P**	**17 43 36.1**	**0.0**
H23K				IAmb	IAmb	17 43 44.2	
	comp=Z,4.7nm,1.2s						
MBAR	**Mbarara**	77.07	96	LR	LR	18 15 38.7	
	comp=Z,200nm,20.6s,baz=266,slow=34						
ARU	**Arti**	78.99	33	LR	LR	18 16 38.4	
	comp=Z,78nm,18.0s,baz=289,slow=34						
RPN	**Rapa Nui**	79.16	235	LR	LR	18 16 34.3	
	comp=Z,13nm,20.3s,baz=329,slow=34						
KDAK	**Kodiak Island**	80.37	329	LR	LR	18 19 07.5	
	comp=Z,105nm,19.8s,baz=82,slow=35						
LSZ	**Lusaka**	80.80	111	LR	LR	18 14 38.7	
	comp=Z,55nm,18.9s,baz=308,slow=32						
ABKAR	**Akbulak array**	82.73	40	P	**P**	**17 44 14.7**	**+0.1**
LBTB	**Lobatse**	83.05	120	LR	LR	18 14 22.1	
	comp=Z,140nm,21.6s,baz=304,slow=31						
SUR	**Sutherland**	83.06	129	LR	LR	18 13 23.3	
	comp=Z,64nm,18.8s,baz=327,slow=30						
ATD	**Arta Tunnel**	83.80	80	LR	LR	18 21 33.9	
	comp=Z,46nm,20.5s,baz=341,slow=36						
BOSA	**Boshof**	84.50	124	LR	LR	18 18 35.7	
	comp=Z,70nm,18.2s,baz=7.0,slow=33						
TIXI	**Tiksi**	86.32	2	P	**P**	**17 44 32.0**	**-0.3**
BRVK	**Borovoye**	86.56	33	P	**P**	**17 44 34.4**	**+0.5**
BRVK				IAmb	IAmb	17 44 36.3	
	comp=Z,3.3nm,1.1s						
KURBB	**Kurchatov Arra**	92.13	32	LR	LR	18 23 58.2	
	comp=Z,66nm,19.6s,baz=284,slow=34						
ZALV	**Zalesovo Beam**	92.77	27	P	**P**	**17 45 02.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=289,slow=4.4,SNR=2.2						
ZALV				LR	LR	18 24 45.8	
	comp=Z,49nm,18.6s,baz=290,slow=34						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	96.51	33	LR	LR	18 26 20.2	
	comp=Z,60nm,19.2s,baz=286,slow=34						
SHEM	**Shemya Is, Ala**	98.00	337	LR	LR	18 29 43.9	
	comp=Z,54nm,20.4s,baz=274,slow=35						

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*JMA **23** 17:32:54.1±0.1, 42°.9N±0°.5×145°.6E±0°.6, h45^{km}, MV2.6/38, OFF NEMURO PENINSULA*
*SKHL **23** 17:32:54.0±0.2, 42°.80N×145°.70E, h40^{km}±2^{km}, mb4.3/3*
ISC 23 17:32:53.8±2.1**, 42°.8N**±0°.1×**145°.59E**±0°.06**, h42**^{km}±17^{km}**, n14,** σ**0^{s}.37**/24**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	0.40	308	P	**Pn**	**17 33 03.6**	**+0.2**
JKHN				*e*S	**Sn**	**17 33 10.1**	**0.0**
NEM2	**Nemuro 2**	0.54	12	P	**Pn**	**17 33 05.2**	**+0.1**
NEM2				*e*S	**Sn**	**17 33 13.1**	**-0.1**
NMR	**Nemuro--Hokkai**	0.54	11	*e*P	**Pn**	**17 33 05.0**	**-0.1**
NMR				*e*S	**Sn**	**17 33 13.0**	**-0.2**
AKK	**Akkeshi**	0.58	288	*e*P	**Pn**	**17 33 05.5**	**-0.1**
JAK	**Akkeshi**	0.68	284	P	**Pn**	**17 33 07.0**	**+0.1**
JAK				*e*S	**Sn**	**17 33 16.4**	**0.0**
GLVR	**Golovnino**	0.90	357	*e*P	**Pn**	**17 33 10.1**	**+0.1**
GLVR				AMB	AMB	17 33 10.6	
	140nm,0.2s						
GLVR				*e*S	**Sn**	**17 33 22.2**	**+0.3**
GLVR				A	A	17 33 26.7	
	330nm,0.2s						
GLVR				A	A	17 33 26.7	
	560nm,0.2s						
JNK	**Nakash**	0.98	320	*e*P	**Pn**	**17 33 11.1**	**-0.1**
JNK				*e*S	**Sn**	**17 33 22.9**	**-0.9**
JNSB	**Nemuroshibetsu**	1.03	336	*e*P	**Pn**	**17 33 12.1**	**+0.3**
JNSB				*e*S	**Sn**	**17 33 25.2**	**+0.2**
JRA	**Rausu**	1.15	343	*e*P	**Pn**	**17 33 13.9**	**+0.4**
JRA				*e*S	**Sn**	**17 33 27.6**	**-0.4**
YUK	**Yuzh-Kuril'sk**	1.21	9	*e*P	**Pn**	**17 33 14.1**	**-0.2**
YUK				AMB	AMB	17 33 16.1	
	90nm,0.2s						
YUK				*e*S	**Sn**	**17 33 29.3**	**-0.2**
YUK				A	A	17 33 33.2	
	290nm,0.2s						
YUK				A	A	17 33 33.2	
	260nm,0.2s						
JOB	**Onbets**	1.29	274	*e*P	**Pn**	**17 33 15.4**	**+0.1**
SHO	**Shikotan**	1.37	41	*e*P	**Pn**	**17 33 16.3**	**-0.1**
SHO				AMB	AMB	17 33 19.4	
	30nm,0.2s						
SHO				*e*S	**Sn**	**17 33 32.9**	**-0.5**
SHO				A	A	17 33 36.5	
	80nm,0.2s						
SHO				A	A	17 33 36.5	
	150nm,0.2s						
JAR	**Ashorobuto**	1.41	290	*e*P	**Pn**	**17 33 17.2**	**+0.2**
KUR	**Kuril'sk**	2.90	34	*e*S	**Sn**	**17 34 12.0**	**+0.9**
KUR				A	A	17 34 17.6	
	10.0nm,0.4s						
KUR				A	A	17 34 17.6	
	10.0nm,0.4s						

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*TIR **23** 17:43:28.9, 41°.78N×20°.46E, h7^{km}, Md2.9, Ml2.9*
*ATH **23** 17:43:29.2, 41°.85N×20°.42E, h30^{km}±16^{km}, ML2.9/6, Error ellipse: s-maj=16.5km s-min=1.9km az=239.0*
*SKO **23** 17:43:29.8, 41°.75N×20°.38E, h15^{km}*
*PDG **23** 17:43:30.4±0.3, 41°.76N×20°.41E, h8^{km}, MD3.3/2, ML3.2/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **23** 17:43:31.3±0.3, 41°.79N×20°.43E, h1^{km}±4^{km}, ML2.7/16*
*THE **23** 17:43:32.4, 41°.66N×20°.44E, h0^{km}±4^{km}, ML2.8/3, Error ellipse: s-maj=4.5km s-min=0.8km az=2.0*
ISC 23 17:43:30.6±1.0**, 41°.76N**±0°.01×**20°.38E**±0°.02**, h3**^{km}±8^{km}**, n119,** σ**1^{s}.07**/189**, 14C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	0.08	147	P	**Pg**	**17 43 32.3**	**0.0**
PHP				S	**Sg**	**17 43 33.8**	**+0.3**
	27µm,0.3s						
PHP	**Peshkopia**	0.08	147	P	**Pg**	**17 43 32.3**	**0.0**
	baz=189						
PHP				S	**Sg**	**17 43 33.2**	**-0.3**
	baz=189						
PHP				AMP			
	comp=E,126nm,0.2s,baz=189						
PHP	**Peshkopia**	0.08	147	P	**Pg**	**17 43 32.5**	**+0.2**
	baz=158						
PHP				S	**Sg**	**17 43 33.5**	**0.0**
	baz=158						
PHP				AMP			
	comp=N,78nm,0.2s,baz=158						
TIR	**Tirane**	0.56	224	*e*Pg	**Pg**	**17 43 41.7**	**+0.3**
TIR				*e*Sg	**Sb**	**17 43 51.0**	**-0.6**
TIR	**Tirane**	0.56	224	P	**Pg**	**17 43 41.7**	**+0.3**
TIR				S	**Sb**	**17 43 50.9**	**-0.6**
TIR	**Tirane**	0.56	224	P	**Pg**	**17 43 41.7**	**+0.3**
TIR				S	**Sb**	**17 43 50.5**	**-1.0**
	comp=N,560nm,0.6s						
TIR	**Tirane**	0.56	224	*i* Pg	**Pg**	**17 43 41.7**	**+0.3**
TIR	**Tirane**	0.56	224	P	**Pg**	**17 43 41.6**	**+0.3**
	baz=227						
TIR				S	**Sb**	**17 43 50.5**	**-1.0**
	baz=227						
TIR				AMP			
	comp=E,2.7nm,0.7s,baz=227						
TIR	**Tirane**	0.56	224	P	**Pg**	**17 43 41.2**	**-0.2**
	baz=226						
TIR				S	**Sg**	**17 43 49.5**	**+0.8**
	baz=226						
TIR				AMP			
	comp=N,2.3nm,0.5s,baz=226						
BCI	**Bajram Curri**	0.65	339	P	**Pg**	**17 43 42.3**	**-0.9**
	baz=334						
BCI				S	**Sg**	**17 43 51.9**	**+0.2**
	baz=334						
BCI				AMP			
	comp=E,2.4nm,0.2s,baz=334						
BCI	**Bajram Curri**	0.65	339	P	**Pg**	**17 43 42.1**	**-1.1**
	baz=338						
BCI				S	**Sb**	**17 43 53.7**	**-0.6**
	baz=338						
OHR	**Ohrid**	0.72	154	*e*Pg	**Pg**	**17 43 44.0**	**-0.3**
OHR				*e*Sg	**Sb**	**17 43 55.5**	**-0.5**
OHR	**Ohrid**	0.72	154	⇑*i*Pg	**Pg**	**17 43 43.9**	**-0.5**
OHR				*i* Sg	**Sb**	**17 43 55.5**	**-0.5**
OHR				*e*Lg	Lg	17 43 56.0	
	comp=E,713nm,0.3s						
OHR				*e*Lg	Lg	17 43 56.0	
	comp=N,585nm,0.3s						
SKO	**Skopje**	0.82	74	⇑*i*Pg	**Pg**	**17 43 46.2**	**-0.2**
SKO				*i* Sg	**Sb**	**17 43 58.7**	**-0.3**
ULC	**Ulcinj**	0.87	284	⇑*i*Pg	**Pg**	**17 43 46.8**	**-0.6**
ULC				*i* Sg	**Sb**	**17 44 00.7**	**+0.1**
PVY	**Plav**	0.90	340	⇑*i*Pg	**Pg**	**17 43 46.8**	**-1.0**
PVY				*i* Sg	**Sb**	**17 44 01.0**	**-0.3**
DRME	**Dracevica, Mon**	0.99	296	*e*Pg	**Pg**	**17 43 48.4**	**-1.2**
DRME	**Dracevica, Mon**	0.99	296	⇑*i*Pg	**Pg**	**17 43 48.3**	**-1.3**
DRME				*i* Sg	**Sn**	**17 44 04.8**	**-1.2**
PDG	**Podgorica**	1.07	309	*e*Pg	**Pg**	**17 43 50.3**	**-1.0**
PDG				*e*Sg	**Sb**	**17 44 06.5**	**+0.2**
PDG	**Podgorica**	1.07	309	*e*Pg	**Pg**	**17 43 50.0**	**-1.2**
TTG	**Podgorica**	1.07	309	⇑*i*Pg	**Pg**	**17 43 50.2**	**-1.0**
TTG				*i* Sg	**Sn**	**17 44 07.7**	**-0.3**
KBN	**Korca**	1.17	165	P	**Pb**	**17 43 52.6**	**-1.0**
KBN	**Korca**	1.17	165	P	**Pn**	**17 43 53.6**	**-0.4**
	baz=167						
KBN				S	**Sn**	**17 44 09.5**	**-1.0**
	baz=167						
KBN				AMP			
	comp=E,1.1nm,0.4s,baz=167						
KBN	**Korca**	1.17	165	P	**Pn**	**17 43 54.2**	**+0.3**
	baz=165						
KBN				S	**Sn**	**17 44 09.9**	**-0.6**
	baz=165						
KBN				AMP			
	comp=N,1.9nm,0.8s,baz=165						
BEY	**Berane**	1.17	342	*i* Pg	**Pb**	**17 43 52.3**	**-1.3**
IVA	**Berane**	1.17	342	⇑*i*Pg	**Pb**	**17 43 51.9**	**-1.7**
IVA				*i* Sg	**Sn**	**17 44 10.5**	**-0.1**
FNA	**Florina**	1.23	142	P	**Pn**	**17 43 52.5**	**-2.3**
FNA				S	**Sb**	**17 44 09.3**	**-1.5**
FNA				AML	AML	17 44 17.7	
	comp=N,3266µm,0.7s						
FNA				AML	AML	17 44 17.7	
	comp=E,4576µm,0.6s						
FNA	**Florina**	1.23	142	P	**Pn**	**17 43 52.7**	**-2.1**
FNA				S	**Sb**	**17 44 09.9**	**-0.8**
	comp=E,1µm,0.4s						
FNA	**Florina**	1.23	142	⇑*i*Pg	**Pn**	**17 43 52.6**	**-2.1**
FNA				*i* Sg	**Sn**	**17 44 11.5**	**-0.3**
FNA	**Florina**	1.23	142	P	**Pn**	**17 43 52.6**	**-2.1**
	baz=144						
FNA				S	**Sg**	**17 44 10.7**	**+0.6**
	baz=144						
FNA	**Florina**	1.23	142	P	**Pn**	**17 43 52.5**	**-2.3**
	baz=142						
FNA				S	**Sn**	**17 44 10.8**	**-1.0**
	baz=142						
BUM	**Brajici-Budva**	1.23	297	⇓*i*Pg	**Pn**	**17 43 53.3**	**-1.6**
BUM				*i* Sg	**Sn**	**17 44 13.3**	**+1.2**
KOME	**Kolasin**	1.27	330	⇑*i*Pg	**Pn**	**17 43 53.8**	**-1.6**
KOME				*i* Sg	**Sn**	**17 44 14.2**	**+1.2**
CEME	**Cevo**	1.34	306	⇓*i*Pg	**Pn**	**17 43 54.6**	**-1.8**
CEME				*i* Sg	**Sg**	**17 44 16.9**	**+3.1**
STIP	**Stip**	1.35	92	⇓*e*Pg	**Pg**	**17 43 58.0**	**+1.4**
STIP				*i* Sg	**Sg**	**17 44 19.6**	**+5.5**
NEST	**Nestorio**	1.43	159	P	**Pn**	**17 43 57.1**	**-0.5**
NEST				AML	AML	17 44 22.9	
	comp=N,531µm,0.3s						
NEST				AML	AML	17 44 24.0	
	comp=E,704µm,0.3s						
NEST	**Nestorio**	1.43	159	P	**Pn**	**17 43 57.5**	**-0.1**
BARS	**Barje**	1.50	45	*e*Pn	**Pn**	**17 43 58.6**	**+0.1**
BARS	**Barje**	1.50	45	*e*Pn	Pg	17 44 14.7	+15
BARS				*e*Sn	**Sg**	**17 44 19.5**	**+0.6**
BARS				*e*Sn	Sb	17 44 46.3	+28
BARS	**Barje**	1.50	45	*i* Pg	**Pn**	**17 43 58.5**	**+0.1**
BARS				*i* Sg	**Sg**	**17 44 20.7**	**+1.8**
SJES	**Sjenica**	1.54	349	*e*Pn	**Pn**	**17 43 58.9**	**-0.1**
SJES				*e*Sn	**Sb**	**17 44 19.3**	**-0.4**
SJES	**Sjenica**	1.54	349	*e*Pn	**Pn**	**17 43 58.7**	**-0.3**
SELS	**Selova**	1.56	20	*e*Pn	**Pn**	**17 43 58.6**	**-0.7**
SELS				*e*Sn	**Sb**	**17 44 20.4**	**0.0**
HCY	**Herceg Novi**	1.56	297	*e*Pn	**Pn**	**17 43 58.2**	**-1.1**
HCY	**Herceg Novi**	1.56	297	⇓*i*Pn	**Pn**	**17 43 58.6**	**-0.7**
HCY				*i* Sn	**Sg**	**17 44 23.0**	**+2.1**
LSK	**Leskovik**	1.61	174	P	**Pn**	**17 44 00.3**	**+0.2**
LSK	**Leskovik**	1.61	174	P	**Pb**	**17 44 01.0**	**-0.1**
	baz=176						
LSK				S	**Sg**	**17 44 23.6**	**+1.2**
	baz=176						
LSK	**Leskovik**	1.61	174	P	**Pb**	**17 44 00.6**	**-0.5**
	baz=174						
LSK				S	**Sg**	**17 44 23.9**	**+1.5**
	baz=174						
VAY	**Valandovo**	1.70	104	*e*Pn	**Pn**	**17 44 01.1**	**-0.1**
VAY				*e*Sn	**Sb**	**17 44 24.3**	**0.0**
VAY	**Valandovo**	1.70	104	⇑*i*Pg	**Pn**	**17 44 01.1**	**-0.1**
VAY				*i* Sg	**Sg**	**17 44 26.1**	**+0.9**
VAY				*e*Lg	Lg	17 44 27.2	
	comp=E,61nm,0.5s						
VAY				*e*Lg	Lg	17 44 28.4	
	comp=N,52nm,0.6s						
GRG	**Griva**	1.72	117	P	**Pn**	**17 44 01.0**	**-0.5**
GRG	**Griva**	1.72	117	P	**Pn**	**17 44 01.6**	**+0.1**
GRG	**Griva**	1.72	117	⇑*i*Pg	**Pn**	**17 44 01.4**	**0.0**
GRG				*i* Sg	**Sg**	**17 44 26.3**	**+0.5**
BOSS	**Bosilegrad**	1.73	64	*e*Pn	**Pn**	**17 44 01.6**	**0.0**
BOSS				*e*Sn	**Sb**	**17 44 24.5**	**-0.7**
PLE	**Pljevlja**	1.74	335	⇑*i*Pn	**Pn**	**17 44 02.4**	**+0.6**
PLE				*i* Sn	**Sg**	**17 44 27.0**	**+0.6**
BRY	**Bratogost**	1.78	311	*e*Pn	**Pb**	**17 44 03.6**	**-0.4**
BRY	**Bratogost**	1.78	311	⇓*i*Pn	**Pn**	**17 44 02.9**	**+0.4**
BRY				*i* Sn	**Sg**	**17 44 28.5**	**+0.6**
TREB	**Trebinje**	1.79	303	*e*Pn	**Pb**	**17 44 04.0**	**0.0**
TREB				*e*Sn	**Sb**	**17 44 26.8**	**-0.1**
TREB	**Trebinje**	1.79	303	*e*Pn	**Pn**	**17 44 02.5**	**+0.1**
KZN	**Kozani**	1.79	144	P	**Pn**	**17 44 02.4**	**-0.1**
KZN				AML	AML	17 44 32.0	
	comp=E,550µm,0.6s						
KZN				AML	AML	17 44 32.8	
	comp=N,414µm,0.6s						
KZN	**Kozani**	1.79	144	P	**Pn**	**17 44 02.4**	**-0.1**
UPM	**Unac-Piva**	1.81	323	*e*Pn	**Pb**	**17 44 04.7**	**+0.1**
UPM	**Unac-Piva**	1.81	323	⇑*i*Pn	**Pn**	**17 44 03.1**	**+0.2**
UPM				*i* Sn	**Sg**	**17 44 29.2**	**+0.4**
IVAS	**Ivanjica**	1.83	355	*e*Pn	**Pn**	**17 44 02.5**	**-0.5**
IVAS				*e*Sn	**Sb**	**17 44 27.6**	**-0.5**
KTI	**Kastanea**	1.89	135	P	**Pn**	**17 44 04.2**	**+0.3**
DBRK	**Dubrovnik**	1.89	300	*e*Pn	**Pn**	**17 44 03.9**	**0.0**
DBRK				Sn	**Sg**	**17 44 31.4**	**-0.1**
SRN	**Sarande**	1.90	189	P	**Pb**	**17 44 06.2**	**+0.3**
	baz=191						
SRN				S	**Sg**	**17 44 33.0**	**+1.5**
	baz=191						
SRN				AMP			
	comp=E,0.3nm,0.5s,baz=191						
SRN	**Sarande**	1.90	189	P	**Pb**	**17 44 06.0**	**+0.2**
	baz=190						
SRN				S	**Sb**	**17 44 30.3**	**+0.4**
	baz=190						
KPRO	**Kipourio**	1.95	157	P	**Pn**	**17 44 04.3**	**-0.4**
KPRO				AML	AML	17 44 48.9	
	comp=N,274µm,0.5s						
KPRO				AML	AML	17 44 51.2	
	comp=E,405µm,0.7s						
KNT	**Kendrikon**	1.98	107	P	**Pn**	**17 44 05.1**	**0.0**
KNT	**Kendrikon**	1.98	107	P	**Pn**	**17 44 04.9**	**-0.2**
KNT	**Kendrikon**	1.98	107	⇑*i*Pn	**Pn**	**17 44 05.0**	**-0.2**
KNT				*i* Sg	**Sb**	**17 44 33.2**	**+0.8**
RUDO	**Rudo**	2.00	339	*e*Pn	**Pn**	**17 44 05.3**	**-0.1**
KEK	**Kerkira**	2.09	192	P	**Pb**	**17 44 07.7**	**-1.5**
BOVS	**Bovan**	2.12	27	*e*Pn	**Pn**	**17 44 06.2**	**-0.7**
BOVS				*e*Sn	**Sn**	**17 44 33.4**	**-0.4**
GRUS	**Gruza**	2.15	6	*e*Pn	**Pn**	**17 44 07.3**	**0.0**
GRUS				*e*Sn	**Sn**	**17 44 34.0**	**-0.5**
IGT	**Igoumenitsa**	2.22	181	P	**Pb**	**17 44 09.9**	**-1.5**
IGT				AML	AML	17 44 51.5	
	comp=E,253µm,0.7s						
IGT				AML	AML	17 44 52.1	
	comp=N,178µm,0.9s						
IGT	**Igoumenitsa**	2.22	181	P	**Pb**	**17 44 09.9**	**-1.5**
	baz=183						
BBLS	**Lazići**	2.23	342	*e*Pn	**Pn**	**17 44 09.1**	**+0.6**
BBLS				*e*Sn	**Sn**	**17 44 37.6**	**+1.0**
BBLS	**Lazići**	2.23	342	*e*Pn	**Pn**	**17 44 09.3**	**+0.8**
THE	**Thessaloniki**	2.25	119	*e*Pn	**Pn**	**17 44 08.7**	**0.0**
STON	**Ston**	2.28	300	*e*Pn	**Pn**	**17 44 10.3**	**+1.2**
STON				Sn	**Sb**	**17 44 39.7**	**-1.3**
VTS	**Vitosha**	2.29	67	*i* Pn	**Pn**	**17 44 09.5**	**+0.1**
VTS				*e*Sn	**Sn**	**17 44 35.0**	**-3.2**
HORT	**Hortiatis**	2.36	119	P	**Pn**	**17 44 10.4**	**+0.1**
DIVS	**Divibare**	2.36	353	*e*Pn	**Pn**	**17 44 10.0**	**-0.4**
DIVS				*e*Sn	**Sn**	**17 44 39.7**	**-0.2**
DIVS	**Divibare**	2.36	353	*e*Pn	**Pn**	**17 44 09.9**	**-0.4**
SOH	**Sokhos**	2.43	112	*i* Pn	**Pn**	**17 44 11.5**	**+0.3**
TRUS	**Trudelj**	2.47	0	*e*Pn	**Pn**	**17 44 12.6**	**+0.9**
ZAGS	**Zajecar**	2.47	33	*e*Pn	**Pn**	**17 44 12.3**	**+0.6**
ZAGS				*e*Sn	**Sn**	**17 44 42.7**	**+0.3**
TYRN	**Tyrnavos**	2.48	145	P	**Pn**	**17 44 12.9**	**+1.0**
SRS	**Serrai**	2.50	104	P	**Pn**	**17 44 12.2**	**+0.1**
SRS	**Serrai**	2.50	104	P	**Pn**	**17 44 12.3**	**+0.1**
SRS	**Serrai**	2.50	104	*i* Pn	**Pn**	**17 44 12.3**	**+0.1**
THL	**Klokotos Trika**	2.52	150	P	**Pn**	**17 44 13.0**	**+0.6**
THL				AML	AML	17 44 55.1	
	comp=E,127µm,0.4s						
THL				AML	AML	17 44 57.1	
	comp=N,95µm,0.6s						
NVR	**Nevrokopi**	2.64	98	P	**Pn**	**17 44 14.2**	**0.0**
NOCI	**Noci**	2.68	250	P	**Pb**	**17 44 17.6**	**-1.6**
	baz=251						
PLG	**Polygyros**	2.70	120	P	**Pn**	**17 44 15.8**	**+0.8**
LSTV	**Lastovo**	2.78	293	*e*Pn	**Pn**	**17 44 17.1**	**+1.1**
LSTV				Sn	**Sn**	**17 44 51.6**	**+1.5**
KUBS	**Kucevo**	2.82	19	*e*Pn	**Pn**	**17 44 16.3**	**-0.3**
TEKS	**Tekeris**	2.86	348	*e*Pn	**Pn**	**17 44 18.4**	**+1.2**
TEKS	**Tekeris**	2.86	348	*e*Pn	**Pn**	**17 44 18.4**	**+1.2**
MAKA	**Makarska**	2.92	303	*e*Pn	**Pn**	**17 44 18.6**	**+0.7**
MAKA				Sn	**Sb**	**17 44 55.9**	**-3.4**

RICI	Ricice	2.96	307	ePn	Pn	17 44 19.6	+1.0
RICI				Sn	Sn	17 44 57.1	+2.5
HVAR	Hvar	3.24	297	ePn	Pn	17 44 23.2	+0.9
HVAR				Sn	Sn	17 45 03.5	+2.1
FRGS	Fruska Gora	3.43	353	ePn	Pn	17 44 24.8	-0.1
FRGS				eSn	Sn	17 45 06.2	+0.1
FRGS	Fruska Gora	3.43	353	ePn	Pn	17 44 25.2	+0.3
KIJV	Kijevo	3.69	309	ePn	Pn	17 44 29.7	+1.2
KIJV				Sn	Sn	17 45 14.4	+1.9
ZIRJ	Zirje	3.97	300	ePn	Pn	17 44 33.0	+0.6
ZIRJ				Sn	Sn	17 45 20.8	+1.3
MORI	Morici	4.03	303	ePn	Pn	17 44 34.8	+1.5
MORI				Sn	Sn	17 45 22.7	+1.7
DUGI	Dugi Otok	4.50	302	ePn	Pn	17 44 40.5	+0.8
DUGI				Sn	Sn	17 45 33.5	+0.9
MORH	Mrgy, Hungar	4.63	345	ePn	Pn	17 44 41.0	-0.5
VIRC	Vir	4.66	305	ePn	Pn	17 44 41.7	-0.1
VIRC				Sn	Sn	17 45 37.0	+0.7
MOSL	Moslavina	4.67	327	ePn	Pn	17 44 42.6	+0.6
MOSL				Sn	Sn	17 45 36.5	-0.2
PLIT	Plitvice	4.67	314	ePn	Pn	17 44 41.8	-0.2
PLIT				Sn	Sn	17 45 37.1	+0.4
RABC	Rab	5.07	308	ePn	Pn	17 44 47.3	-0.1
RABC				Sn	Sn	17 45 47.8	+1.4
A250A	Rusevo Krmpots	5.19	312	ePn	Pn	17 44 49.9	+0.7
A250A				Sn	Sn	17 45 50.7	+1.1
CRES	Cresnjev	5.41	320	ePn	Pn	17 44 53.8	+1.6
CEY	Cerknica	5.87	315	ePn	Pn	17 44 59.7	+1.2
SKDS	Skadanscina	5.97	312	ePn	Pn	17 45 00.5	+0.6

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*KRSC **23** 17:51:26.8±1.4, 51°.33N×153°.66E, h462^{km}±23^{km}, ML4.6*

*MOS **23** 17:51:28.3±0.9, 51°.84N×152°.82E, h425^{km}, mb3.7/16, Error ellipse: s-maj=11.2km s-min=5.0km az=58.5*

*SKHL **23** 17:51:28.0±0.1, 51°.80N×152°.80E, h413^{km}±13^{km}, mb5.0/9, msha5.1/4*

*IDC **23** 17:51:29.7±1.2, 51°.91N×152°.79E, h425^{km}±14^{km}, mb3.3/20, mbtmp4.0/26, Error ellipse: s-maj=12.2km s-min=8.7km az=138.0*

*NEIC **23** 17:51:29.5±1.9, 51°.9N±0°.1×152°.9E±0°.2, h419^{km}±7^{km}, mb4.0/78, Error ellipse: s-maj=19.6km s-min=5.6km az=137.0*

ISC 23 17:51:28.6±0.4**, 51°.76N**±0°.06×**152°.98E**±0°.05**, h426**^{km}**, n254,** σ1ˢ**64**/276**, mb4.0**/60**, 3C-4D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.25	117	ePN	P	17 52 29.1	+0.8
SKR				eS	S	17 53 18.5	+1.7
SKR				smax	smax		
	comp=E,32nm,0.2s						
SKR				smax	smax		
	comp=N,44nm,0.2s						
SKR	Severo-Kuril's	2.25	117	eP	P	17 52 28.4	+0.1
SKR	Severo-Kuril's	2.25	117	eP	P	17 52 28.8	+0.5
SKR				AMB	AMB	17 52 29.3	
	comp=N,40nm,0.3s						
SKR				eS	S	17 53 16.8	0.0
SKR				A	A	17 53 21.6	
	comp=N,200nm,2.5s						
SKR				A	A	17 53 21.6	
	comp=N,200nm,2.5s						
SKR				A	A	17 53 24.0	
	comp=N,50nm,0.2s						
SKR				A	A	17 53 24.0	
	comp=N,30nm,0.2s						
MIPR	Malaya Ipel'ka	2.39	76	PN	P	17 52 29.9	+0.7
MIPR	Malaya Ipel'ka	2.39	76	eP	P	17 52 29.9	+0.7
PAU	Pauzhetka	2.41	95	PN	P	17 52 29.9	+0.6
PAU	Pauzhetka	2.41	95	eP	P	17 52 29.9	+0.6
PAU	Pauzhetka	2.41	95	eP	P	17 52 29.8	+0.5
PAU				AMB	AMB	17 52 30.4	
	comp=N,190nm,0.6s						
PAU				eS	S	17 53 18.9	+0.2
PAU				A	A	17 53 19.9	
	comp=N,700nm,1.4s						
PAU				A	A	17 53 19.9	
	comp=N,200nm,1.4s						
PAU				A	A	17 53 20.2	
	comp=N,290nm,0.8s						
PAU				A	A	17 53 20.2	
	comp=N,160nm,0.8s						
APC	Apacha	2.82	64	PN	P	17 52 32.5	+0.3
APC	Apacha	2.82	64	eP	P	17 52 32.5	+0.3
ASAK	Asacha	3.10	76	PN	P	17 52 35.3	+0.8
ASAK	Asacha	3.10	76	eP	P	17 52 35.3	+0.8
KDTR	Khodutka, Kamc	3.17	87	PN	P	17 52 34.7	-0.2
KDTR				S	S	17 53 25.6	-3.3
KDTR	Khodutka, Kamc	3.17	87	eP	P	17 52 34.7	-0.2
KDTR				eS	S	17 53 25.6	-3.3
PEB5	Petropavlovsk-	3.18	63		P	17 52 34.9	-0.1
PEA3	Petropavlovsk-	3.19	63		P	17 52 33.7	-1.3
PEA0	Petropavlovsk-	3.19	63		P	17 52 34.6	-0.5
PEA0B	Petropavlovsk-	3.19	63		P	17 52 34.4	-0.6
PEA0B	Petropavlovsk-	3.19	63	d iPN	P	17 52 35.4	+0.3
PETK	Petropavlovsk-	3.19	63	P	P	17 52 34.6	-0.5
	comp=N,34nm,0.6s,baz=225,slow=5.9,SNR=161						
PETK				S	S	17 53 25.5	-3.8
	comp=N,2.3nm,0.5s,baz=258,slow=19,SNR=1.6						
PETK	Petropavlovsk-	3.19	63		P	17 52 33.9	-1.2
PETK	Petropavlovsk-	3.19	63	PN	P	17 52 33.9	-1.2
PETK				S	S	17 53 25.5	-3.8
PEB1	Petropavlovsk-	3.19	63		P	17 52 35.0	-0.1
GRL	Gorelyy	3.24	74	PN	P	17 52 36.9	+1.3
GRL	Gorelyy	3.24	74	eP	P	17 52 36.9	+1.3
MTVR	Mutnovka	3.29	75	PN	P	17 52 36.9	+0.8
MTVR	Mutnovka	3.29	75	eP	P	17 52 36.9	+0.8
KRMR	Karymshinskiy	3.34	69	PN	P	17 52 36.9	+0.6
KRMR	Karymshinskiy	3.34	69	eP	P	17 52 36.9	+0.6
RUS	Russkaya	3.48	77	PN	P	17 52 37.9	+0.5
RUS				S	S	17 53 31.1	-2.5
RUS	Russkaya	3.48	77	eP	P	17 52 37.9	+0.5
RUS				eS	S	17 53 31.1	-2.5
RUS	Russkaya	3.48	77	eP	P	17 52 37.9	+0.5
GNL	Ganaly	3.59	55	PN	P	17 52 39.0	+0.5
GNL	Ganaly	3.59	55	eP	P	17 52 39.0	+0.5
PET	Petropavlovsk	3.70	68	P	P	17 52 39.1	-0.2
PET	Petropavlovsk	3.70	68	ePN	P	17 52 38.2	-1.1
PET				eS	S	17 53 36.1	-0.9
PET				pmax	pmax		
	comp=Z,144nm,1.0s						
PET				smax	smax		
	comp=E,58nm,0.5s						
PET				smax	smax		
	comp=N,45nm,0.8s						
PET	Petropavlovsk	3.70	68	eP	P	17 52 40.4	+1.1
PET	Petropavlovsk	3.70	68	eP	P	17 52 39.9	+0.6
PET				AMB	AMB	17 52 41.2	
	comp=N,90nm,0.6s						
PET				eS	S	17 53 37.3	+0.3
PET				A	A	17 53 40.4	
	comp=N,160nm,0.3s						
PET				A	A	17 53 40.4	
	comp=N,110nm,0.3s						
KOK	Koryaka	3.78	64	PN	P	17 52 41.5	+1.3
KOK	Koryaka	3.78	64	eP	P	17 52 41.5	+1.3
KOK	Koryaka	3.78	64	eP	P	17 52 41.5	+1.3
KRX	Arik	3.81	63	PN	P	17 52 41.5	+1.0
KRX	Arik	3.81	63	eP	P	17 52 41.5	+1.0
AVH	Avacha	3.83	65	PN	P	17 52 41.7	+1.1
AVH	Avacha	3.83	65	eP	P	17 52 41.7	+1.1
KRER	Koryakskii	3.85	64	PN	P	17 52 42.0	+1.1
KRER	Koryakskii	3.85	64	eP	P	17 52 42.0	+1.1
UGLR	Uglovaya	3.86	66	PN	P	17 52 42.6	+1.8
UGLR	Uglovaya	3.86	66	eP	P	17 52 42.6	+1.8
SMAR	Somma	3.86	65	PN	P	17 52 42.3	+1.3
SMAR	Somma	3.86	65	eP	P	17 52 42.3	+1.3
SDLR	Sedlovina	3.92	65	PN	P	17 52 42.6	+1.2
SDLR	Sedlovina	3.92	65	eP	P	17 52 42.6	+1.2
NLC	Nalytchevo	4.14	68	PN	P	17 52 43.3	0.0
NLC	Nalytchevo	4.14	68	eP	P	17 52 43.3	0.0
NLC	Nalytchevo	4.14	68	eP	P	17 52 43.3	0.0
SPN	Mys Shipunski	4.52	70	PN	P	17 52 46.2	-0.6
SPN				S	S	17 53 45.2	-5.5
SPN	Mys Shipunski	4.52	70	eP	P	17 52 46.2	-0.6
SPN				eS	S	17 53 45.2	-5.5
KII	Karymskiy	4.53	57	PN	P	17 52 48.4	+1.4
KII	Karymskiy	4.53	57	eP	P	17 52 48.4	+1.4
ESO	Esso	5.38	37	PN	P	17 52 59.4	+4.1
ESO	Esso	5.38	37	eP	P	17 52 59.4	+4.1
TUMR	Tumrok	5.54	48	PN	P	17 52 59.5	+2.4
TUMR	Tumrok	5.54	48	eP	P	17 52 59.5	+2.4
TUMD	Tumrok D	5.62	49	eP	P	17 52 59.1	+1.4
KMNR	Kamenistaya	5.88	44	PN	P	17 53 03.0	+2.5
KMNR	Kamenistaya	5.88	44	eP	P	17 53 03.0	+2.5
MKZ	Mys Kozlova	5.96	59	PN	P	17 53 00.7	-0.6
MKZ	Mys Kozlova	5.96	59	eP	P	17 53 00.7	-0.6
KRSR	Krestovskiy	6.32	42	PN	P	17 53 08.3	+3.1
KRSR	Krestovskiy	6.32	42	eP	P	17 53 08.3	+3.1
KLY	Klyuchi	6.42	42	PN	P	17 53 08.9	+2.8
KLY	Klyuchi	6.42	42	eP	P	17 53 08.9	+2.8
BDR	Baidarnaya	6.82	42	PN	P	17 53 13.5	+2.6
BDR	Baidarnaya	6.82	42	eP	P	17 53 13.5	+2.6
SRKR	Sorokina	6.86	41	PN	P	17 53 14.3	+3.0
SRKR	Sorokina	6.86	41	eP	P	17 53 14.3	+3.0
SMKR	Semkarok	6.94	43	PN	P	17 53 14.6	+2.4
SMKR	Semkarok	6.94	43	eP	P	17 53 14.6	+2.4
KBG	Krutoberegovo	7.29	48	PN	P	17 53 16.5	+0.7
KBG	Krutoberegovo	7.29	48	eP	P	17 53 16.5	+0.7
KBG	Krutoberegovo	7.29	48	eP	P	17 53 16.5	+0.7
KBG				AMB	AMB	17 53 17.1	
	comp=N,60nm,0.8s						
KBG				AMB	AMB	17 53 22.4	
	comp=N,100nm,3.0s						
KBTR	Krutoberegovo	7.32	49	PN	P	17 53 15.2	-0.9
KBTR	Krutoberegovo	7.32	49	eP	P	17 53 15.2	-0.9
KUR	Kuril'sk	7.36	209	d iPN	P	17 53 17.3	+0.5
KUR				pmax	pmax		
	comp=Z,33nm,0.4s						
KUR				pmax	pmax		
	comp=N,23nm,0.5s						
KUR	Kuril'sk	7.36	209	i P	P	17 53 16.5	-0.3
KUR				AMB	AMB	17 53 18.4	
	comp=N,40nm,0.4s						
KUR				eS	S	17 54 45.0	-0.1
KUR				A	A	17 54 54.8	
	comp=N,30nm,0.3s						
KUR				A	A	17 54 54.8	
	comp=N,30nm,0.3s						
YSS	Yuzh-Sakhalins	8.22	238	P	P	17 53 26.8	+0.7
YSS	Yuzh-Sakhalins	8.22	238	ePN	P	17 53 28.0	+1.9
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	Yuzh-Sakhalins	8.22	238	eP	P	17 53 24.8	-1.3
YSS				AMB	AMB	17 53 29.6	
	comp=Z,30nm,0.4s						
BKI	Bering	8.48	61	PN	P	17 53 30.3	+1.5
BKI				S	S	17 55 03.0	-4.7
BKI	Bering	8.48	61	eP	P	17 53 30.3	+1.5
BKI				eS	S	17 55 03.0	-4.7
SHO	Shikotan	8.91	210	ePN	P	17 53 30.9	-2.8
SHO				pmax	pmax		
	comp=E,58nm,0.4s						
SHO				pmax	pmax		
	comp=Z,182nm,0.4s						
SHO				pmax	pmax		
	comp=N,68nm,0.3s						
SHO	Shikotan	8.91	210	eP	P	17 53 31.9	-1.8
SHO				AMB	AMB	17 53 32.5	
	comp=N,180nm,0.5s						
YUK	Yuzh-Kuril'sk	9.08	214	ePN	P	17 53 36.1	+0.5
YUK				eS	S	17 55 18.2	-2.1
YUK				pmax	pmax		
	comp=N,27nm,0.3s						
YUK				pmax	pmax		
	comp=E,34nm,0.3s						
YUK				pmax	pmax		
	comp=Z,162nm,0.3s						
YUK	Yuzh-Kuril'sk	9.08	214	eP	P	17 53 36.1	+0.5
YUK				AMB	AMB	17 53 36.7	
	comp=Z,30nm,0.4s						
YUK				AMB	AMB	17 53 36.7	
	comp=Z,30nm,0.4s						
YUK				AMB	AMB	17 53 36.7	
	comp=Z,160nm,0.4s						
YUK				eS	S	17 55 17.8	-2.5
YUK				A	A	17 55 21.0	
	comp=Z,2µm,2.0s						
YUK				A	A	17 55 21.0	
	comp=Z,1µm,2.0s						
RUSJ	Misakicho	9.24	217	ePN	P	17 53 38.6	+1.2
OSSR	Ossora	9.43	33	PN	P	17 53 41.4	+2.3
OSSR	Ossora	9.43	33	eP	P	17 53 41.4	+2.3
GLVR	Golovnino	9.46	215	ePN	P	17 53 41.1	+1.3
GLVR				eS	S	17 55 25.0	-3.0
GLVR				pmax	pmax		
	comp=N,33nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,46nm,0.3s						
GLVR				pmax	pmax		
	comp=E,41nm,0.2s						
GLVR	Golovnino	9.46	215	eP	P	17 53 41.1	+1.3
GLVR				AMB	AMB	17 53 42.3	
	comp=E,50nm,0.3s						
GLVR				eS	S	17 55 25.0	-3.0
NMR	Nemuro--Hokkai	9.71	213	ePN	P	17 53 38.1	-4.4
JKA	Kamikawa-asahi	10.33	226	P	P	17 53 52.0	+2.7
JKA	Kamikawa-asahi	10.33	226	eP	P	17 53 52.1	+2.7
ASAJ	Asahikawa	10.33	226	P	P	17 53 52.0	+2.7
	comp=E,2.9nm,0.4s,baz=62,slow=3.8,SNR=12						
SEY	Seymchan	11.21	359	P	P	17 53 60.0	+1.3
	comp=E,3.6nm,0.4s,baz=184,slow=9.8,SNR=30						
SEY	Seymchan	11.21	359	PN	P	17 54 00.0	+1.3
SEY	Seymchan	11.21	359	eP	P	17 54 00.0	+1.3
ERM	Erimo	11.82	218	P	P	17 54 06.6	+0.9
ERM	Erimo	11.82	218	PN	P	17 54 06.6	+0.9
JEW	Eniwo	11.85	226	P	P	17 54 07.5	+1.4
KMSK	Kamenskaya	12.88	28	PN	P	17 54 19.4	+2.4
KMSK	Kamenskaya	12.88	28	eP	P	17 54 19.4	+2.4
KLR	Kul'dur	13.74	268	P	P	17 54 27.4	+0.9
	comp=E,1.4nm,0.3s,baz=84,slow=11,SNR=10						
KLR	Kul'dur	13.74	268	d iP	P	17 54 28.0	+1.5
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLR	Kul'dur	13.74	268	eP	P	17 54 25.1	-1.4
ZEA	Zeya	15.68	287	eP	P	17 54 46.0	-1.3
USRK	Ussuriysk Ar.	15.92	250	P	P	17 54 50.9	+0.9
	comp=Z,2.2nm,0.6s,baz=61,slow=12,SNR=4.3						
YAK	Yakutsk	16.26	318	⇑eP	P	17 54 51.7	-1.6
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK	Yakutsk	16.26	318	eP	P	17 54 51.7	-1.6
JMM	Marumori	16.33	216	P	P	17 54 56.7	+2.3
BILL	Bilibino	17.57	17	P	P	17 55 06.3	-0.8
BILL				IAmb	IAmb	17 55 07.2	
	comp=Z,5.1nm,0.6s						
BILL	Bilibino	17.57	17	ceP	P	17 55 06.5	-0.6
BILL				pmax	pmax		
	comp=Z,12nm,2.5s						
BILL	Bilibino	17.57	17	eP	P	17 55 06.5	-0.6
BNX	BinXian	17.86	260	⇑P	P	17 55 10.0	-0.5
BNX				pmax	pmax		
	comp=Z,26nm,0.6s						
BNX				pmax	pmax		
	comp=Z,100nm,3.6s						
MJB2	Matsu-Sugadair	18.44	220	P	P	17 55 16.4	-0.4
MJB1	Matsu-Takimoto	18.45	220	P	P	17 55 16.7	0.0
MJA0	Matsu Arr-Jizo	18.47	220	P	P	17 55 16.7	-0.2
MJA0				IAmb	IAmb	17 55 19.4	
	comp=Z,7.3nm,1.3s						
MJA0	Matsu Arr-Jizo	18.47	220	P	P	17 55 16.7	-0.2
MJA0				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MJB9	Matsu-Tunnel	18.48	220	P	P	17 55 17.9	+0.9
MJB9				IAmb	IAmb	17 55 18.8	
	comp=Z,4.0nm,0.7s						
MAJO	Matsushiro	18.48	220	P	P	17 55 17.9	+0.9
MAJO				IAmb	IAmb	17 55 18.8	
	comp=Z,4.1nm,0.7s						
MAJO	Matsushiro	18.48	220	P	P	17 55 18.0	+0.9
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	Matsushiro Arr	18.48	220	P	P	17 55 18.2	+1.2
	comp=Z,3.4nm,0.8s,baz=22,slow=9.1,SNR=12						
MJAR	Matsushiro Arr	18.48	220	P	P	17 55 17.9	+0.8
TIXI	Tiksi	22.67	340	P	P	17 55 54.8	-0.3
	comp=Z,1.3nm,0.6s,baz=269,slow=23,SNR=5.9						
	comp=Z,1.3nm,0.6s						
TIXI	Tiksi	22.67	340	P	P	17 55 54.8	-0.3
TIXI	Tiksi	22.67	340	P	P	17 55 54.8	-0.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSRS	Korea Array	22.71	241	P	P	17 55 57.1	+1.3
	comp=Z,2.0nm,0.8s,baz=41,slow=10,SNR=5.0						
	comp=Z,2.0nm,0.8s						
CNBA	Chernabura Isl	28.09	65	P	P	17 56 43.6	+0.2
TTA	Tatalina	28.90	47	P	P	17 56 48.9	-1.6
TTA	Tatalina	28.90	47	P	P	17 56 48.9	-1.6
TTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
N18K	Kilae Creek	29.09	52	P	P	17 56 52.9	+0.8
N18K				IAmb	IAmb	17 57 08.4	
	comp=Z,7.6nm,1.2s						
L19K	White Mountain	29.46	49	P	P	17 56 56.1	+0.7
J20K	Nowinta River	29.71	45	P	P	17 56 58.6	+1.1
N19K	Bonanza Creek	29.76	52	P	P	17 56 59.9	+1.8
N19K				IAmb	IAmb	17 57 14.4	
	comp=Z,9.3nm,1.2s						
K20K	Telida	29.77	46	P	P	17 56 58.7	+0.7
IM02	Indian Mountai	29.88	41	P	P	17 56 59.9	+0.9
IM04	Indian Mountai	29.89	41	P	P	17 56 59.9	+0.8
IMAR	Indian Mountai	29.90	41	P	P	17 56 59.9	+0.7
SONM	Songino Array	29.92	281	P	P	17 57 00.5	+0.8
	comp=Z,0.4nm,0.4s,baz=211,slow=7.0,SNR=4.6						
	comp=Z,0.4nm,0.4s						
H21K	Melozitna Rive	30.28	42	P	P	17 57 03.6	+1.2
Q19K	Cape Douglas,	30.45	55	P	P	17 57 05.4	+1.4
PPLA	Purkeypile	30.65	47	P	P	17 57 07.8	+2.0
PPLA				IAmb	IAmb	17 57 36.5	
	comp=Z,16nm,1.5s						
KDAK	Kodiak Island	31.23	57	P	P	17 57 11.0	+0.3
KDAK	Kodiak Island	31.23	57	P	P	17 57 11.0	+0.3
KDAK				pmax	pmax		
	comp=Z,31nm,1.3s						
TRF	Thorofare Moun	31.46	46	P	P	17 57 14.2	+1.4
TRF				IAmb	IAmb	17 57 36.9	
	comp=Z,8.4nm,1.3s						
CNPM	China Poot	31.56	54	P	P	17 57 14.1	+0.5
H23K	Yukon River	31.63	41	P	P	17 57 15.8	+1.7
TOLK	Toolik Lake Re	31.63	36	P	P	17 57 15.2	+1.0
TOLK				IAmb	IAmb	17 57 15.9	
	comp=Z,3.4nm,0.6s						
BRLK	Bradley Lake	31.69	53	P	P	17 57 15.3	+0.6
BRLK				IAmb	IAmb	17 57 41.7	
	comp=Z,13nm,1.2s						
RND	Reindeer	32.10	46	P	P	17 57 19.1	+0.8
RND				IAmb	IAmb	17 57 44.1	
	comp=Z,9.8nm,1.4s						
RND	Reindeer	32.10	46	P	P	17 57 19.1	+0.8
RND				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GHO	Glory Hole Cre	32.29	49	P	P	17 57 21.2	+1.3
GHO				IAmb	IAmb	17 57 28.4	
	comp=Z,12nm,1.2s						
CCB	Clear Creek Bu	32.44	44	P	P	17 57 21.8	+0.8
SML	Sawmill	32.56	49	P	P	17 57 23.6	+1.4
KNK	Knik Glacier	32.57	50	P	P	17 57 23.5	+1.2
IL14	Eielson Array	32.77	43	P	P	17 57 24.8	+0.9
DHY	Denali Highway	32.81	46	P	P	17 57 24.9	+0.5
IL31		32.81	43	P	P	17 57 24.9	+0.6
ILAR	Eielson Array	32.81	43	P	P	17 57 25.1	+0.8
	comp=Z,1.7nm,0.8s,baz=270,slow=9.5,SNR=25						
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	32.81	43	P	P	17 57 24.3	0.0
HDA	Harding Lake	32.83	44	P	P	17 57 24.9	+0.5
HDA				IAmb	IAmb	17 57 26.3	
	comp=Z,3.0nm,0.5s						
SCM	Sheep Creek Mo	33.03	49	P	P	17 57 27.6	+1.4
SCM	Sheep Creek Mo	33.03	49	P	P	17 57 27.6	+1.4
SCM				pmax	pmax		
	comp=Z,15nm,1.1s						
BM03	Burnt Mountain	33.52	38	P	P	17 57 31.9	+1.7
BMAR	Burnt Mountain	33.52	38	P	P	17 57 31.9	+1.5
KLU	Klutina	33.75	49	P	P	17 57 33.8	+1.3
KLU				IAmb	IAmb	17 57 36.6	
	comp=Z,9.6nm,1.3s						
SCRK	Sand Creek	34.17	44	P	P	17 57 36.2	+0.2
SCRK				IAmb	IAmb	17 57 36.7	
	comp=Z,3.7nm,0.5s						
BMRM	Bremner River	34.49	50	P	P	17 57 40.2	+1.6
BMRM				IAmb	IAmb	17 57 43.3	
	comp=Z,11nm,1.1s						
GLB	Gilahina Butte	34.75	49	P	P	17 57 42.5	+1.7
GLB				IAmb	IAmb	17 57 57.8	
	comp=Z,8.6nm,1.3s						
HMT	Hamilton	34.81	51	P	P	17 57 43.3	+2.0
M26K	Nabesna, AK	34.91	47	P	P	17 57 44.4	+2.2
M26K				IAmb	IAmb	17 57 45.3	
	comp=Z,4.0nm,0.8s						
K27K	Chicken	34.99	44	P	P	17 57 43.9	+1.2
BC01	Beaver Creek A	35.30	46	P	P	17 57 47.5	+2.2
L27K	Beaver Creek,	35.30	46	P	P	17 57 47.1	+1.7
L27K				IAmb	IAmb	17 57 48.3	
	comp=Z,7.7nm,0.8s						
BCAR	Beaver Creek A	35.31	46	P	P	17 57 46.9	+1.3
M27K	Edge Creek, AK	35.43	47	P	P	17 57 48.9	+2.2
M27K				IAmb	IAmb	17 57 49.7	
	comp=Z,9.0nm,0.8s						
WAX	Waxell Ridge	35.45	50	P	P	17 57 49.0	+2.3
BARN	Barnard Glacie	35.86	49	P	P	17 57 52.3	+2.0
BARN				IAmb	IAmb	17 57 53.1	
	comp=Z,7.1nm,0.7s						
GRNC	Granite Creek	35.90	50	P	P	17 57 52.6	+1.9
GRNC				IAmb	IAmb	17 57 53.0	
	comp=Z,4.7nm,0.6s						
CTGM	Chitina Glacie	36.03	49	P	P	17 57 53.7	+2.0
CTGM				IAmb	IAmb	17 57 54.1	
	comp=Z,4.7nm,0.6s						
LOGN	Logan Glacier	36.23	49	P	P	17 57 54.8	+1.5
LOGN				IAmb	IAmb	17 57 55.5	
	comp=Z,12nm,1.2s						
I29M	Ogilvie Camp,	36.31	41	P	P	17 57 55.1	+1.3
I29M				IAmb	IAmb	17 57 56.0	
	comp=Z,4.5nm,0.7s						
EPYK	Eagle Plains	36.74	39	P	P	17 57 58.3	+1.0
INK	Inuvik	37.55	36	P	P	17 58 04.8	+0.9
INK	Inuvik	37.55	36	P	P	17 58 04.8	+0.9
INK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GTA	Gaotai	38.37	273	eP	P	17 58 12.5	+1.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WHY	Whitehorse	39.14	48	P	P	17 58 18.4	+1.2
WHY				IAmb	IAmb	17 58 43.6	
	comp=Z,9.0nm,1.4s						
ZALV	Zalesovo Beam	39.78	301	P	P	17 58 22.3	0.0
	comp=Z,0.5nm,0.4s,baz=64,slow=5.4,SNR=2.6						
	comp=Z,0.5nm,0.4s						
GOMU	GeErMu	43.46	273	P	P	17 58 49.8	-2.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,60nm,4.7s						
MKAR	Makanchi Array	44.73	293	P	P	17 59 02.1	+0.3
	comp=Z,0.2nm,0.3s,baz=48,slow=6.1,SNR=7.4						
	comp=Z,0.2nm,0.3s						
YKAR1	New YK Array r	46.89	39	P	P	17 59 18.8	+0.7
YKA	Yellowknife Ar	47.03	39	P	P	17 59 20.2	+1.0
	comp=Z,3.3nm,0.4s,baz=304,slow=6.9,SNR=27						
	comp=Z,3.3nm,0.4s						
SPITS	Spitsbergen Ar	47.67	349	P	P	17 59 23.2	-0.6
SPITS				pmax	pmax		
	comp=Z,31nm,1.5s						
ARU	Arti	51.33	315	P	P	17 59 51.1	-0.2
ARU				IAmb	IAmb	17 59 51.8	
	comp=Z,4.0nm,0.6s						
ARU	Arti	51.33	315	d iP	P	17 59 51.3	0.0
ARU				*PP	pP	18 01 12.4	-3.6
ARU				S	S	18 06 37.7	+0.6
ARU				SS	SS	18 10 15.7	-3.0
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SHL	Shillong	52.58	265	P	P	18 00 01.0	-0.1
SHL				IAmb	IAmb	18 00 02.5	
	comp=Z,6.1nm,0.9s						
SHL	Shillong	52.58	265	P	P	18 00 01.0	-0.1
SHL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	ARCESS Array B	53.11	340	P	P	18 00 03.2	-0.7
	comp=Z,0.7nm,0.4s,baz=37,slow=7.6,SNR=10						
	comp=Z,0.7nm,0.4s						
ARCES	ARCESS Array B	53.11	340	IAmb	IAmb	18 00 03.4	
	comp=Z,10.0nm,1.4s						
ARCES	ARCESS Array B	53.11	340	P	P	18 00 03.3	-0.7
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ARD7	ARCESS Array S	53.12	340	P	P	18 00 03.0	-1.0
ARD7				IAmb	IAmb	18 00 03.8	
	comp=Z,8.8nm,1.1s						

CMAR	Chiang Mai Arr	53.63	253	P	P	18 00 09.2	+0.8
	comp=Z,0.7nm,0.7s,baz=30,slow=6.7,SNR=5.6						
	comp=Z,0.7nm,0.7s						
PLID	Pearl Lake	56.97	58	P	P	18 00 33.3	+1.5
PLID				IAmb	IAmb	18 00 34.8	
	comp=Z,6.0nm,1.1s						
FCC	Fort Churchill	57.16	35	P	P	18 00 32.8	+0.3
FCC				IAmb	IAmb	18 00 53.6	
	comp=Z,8.6nm,1.2s						
FCC	Fort Churchill	57.16	35	P	P	18 00 32.8	+0.3
FCC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HRY	Holter Researc	58.01	54	P	P	18 00 40.3	+1.4
BOZ	Bozeman (W)	58.88	55	P	P	18 00 46.7	+1.9
BOZ	Bozeman (W)	58.88	55	P	P	18 00 46.7	+1.9
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FIC4	FINESS Array S	59.48	334	P	P	18 00 47.7	-0.6
FINES	FINESS Array B	59.49	334	P	P	18 00 48.0	-0.4
	comp=Z,1.9nm,0.5s,baz=40,slow=6.7,SNR=24						
	comp=Z,1.9nm,0.5s						
FINES	FINESS Array B	59.49	334	P	P	18 00 47.9	-0.5
H17A	Grant Village	60.26	55	P	P	18 00 54.6	+0.5
NV02	Mina Array Sit	60.27	65	P	P	18 00 56.5	+2.2
NVAR	Mina Array Bea	60.28	65	P	P	18 00 56.5	+2.1
	comp=Z,1.2nm,0.6s,baz=301,slow=7.0,SNR=9.0						
	comp=Z,1.2nm,0.6s						
PD01	Pinedale Array	61.91	56	P	P	18 01 06.2	+1.0
BW06	Boulder Array	61.93	56	P	P	18 01 07.0	+1.7
BW06				IAmb	IAmb	18 01 07.7	
	comp=Z,6.2nm,1.2s						
PD31	Pinedale Array	61.93	56	P	P	18 01 06.9	+1.6
PD31				IAmb	IAmb	18 01 07.7	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	61.93	56	P	P	18 01 06.9	+1.6
	comp=Z,1.2nm,0.4s,baz=338,slow=1.7,SNR=19						
	comp=Z,1.2nm,0.4s						
PDAR	Pinedale Array	61.93	56	P	P	18 01 06.6	+1.4
NB2	NORSAR Subarra	63.47	340	P	P	18 01 14.0	-0.7
	comp=Z,0.8nm,0.4s,baz=26,slow=6.5						
NOA	NORSAR Array B	63.47	340	P	P	18 01 14.2	-0.5
	comp=Z,1.3nm,0.6s,baz=25,slow=6.4,SNR=6.5						
	comp=Z,1.3nm,0.6s						
SRU	San Rafael Swe	64.06	59	P	P	18 01 20.7	+1.6
SRU				IAmb	IAmb	18 01 22.1	
	comp=Z,2.9nm,0.9s						
SRU	San Rafael Swe	64.06	59	P	P	18 01 20.7	+1.6
SRU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MTN	Manton Dam	67.07	203	P	P	18 01 38.0	0.0
AKASG	Malin Array Be	67.36	325	P	P	18 01 38.4	-1.0
	comp=Z,1.0nm,0.4s,baz=32,slow=6.8,SNR=6.1						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	67.36	325	P	P	18 01 38.4	-1.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KBZ	Khabaz	67.36	312	P	P	18 01 40.0	+0.6
	comp=Z,2.2nm,0.8s,baz=102,slow=5.9,SNR=4.7						
	comp=Z,2.2nm,0.8s						
AK11	Malin Array Si	67.40	325	P	P	18 01 38.9	-0.7
AK11				IAmb	IAmb	18 01 39.7	
	comp=Z,4.6nm,1.1s						
ECSD	EROS Data Cent	67.51	47	P	P	18 01 41.2	+0.8
SCHQ	Schefferville	68.73	23	P	P	18 01 47.2	-0.6
	comp=Z,1.7nm,0.3s,baz=347,slow=6.3,SNR=8.8						
	comp=Z,1.7nm,0.3s						
BUR08	Bucovina Ar. S	71.36	326	P	P	18 02 02.7	-1.0
BUR08				IAmb	IAmb	18 02 04.0	
	comp=Z,1.7nm,0.5s						
VLDQ	Val d'Or	71.57	33	P	P	18 02 03.6	-1.2
WB2	Warramunga Arr	73.23	198	P	P	18 02 15.6	+0.8
WB2				IAmb	IAmb	18 02 30.3	
	comp=Z,6.6nm,1.2s						
WRA	Warramunga Arr	73.23	198	P	P	18 02 15.9	+1.2
	comp=Z,1.4nm,0.4s,baz=13,slow=6.0,SNR=33						
	comp=Z,1.4nm,0.4s						
GERES	GERESS Array B	73.92	333	P	P	18 02 18.6	0.0
	comp=Z,0.5nm,0.5s,baz=51,slow=8.7,SNR=4.9						
	comp=Z,0.5nm,0.5s						
U40A	Yellville	75.11	50	P	P	18 02 25.8	+0.3
TX31	Lajitas Ar. Si	75.14	62	P	P	18 02 27.6	+1.8
TX32	Lajitas Array	75.14	62	P	P	18 02 27.7	+1.9
TX32				IAmb	IAmb	18 02 28.4	
	comp=Z,2.0nm,0.6s						
TXAR	Lajitas Array	75.14	62	P	P	18 02 27.9	+2.1
	comp=Z,1.4nm,0.4s,baz=292,slow=3.7,SNR=9.1						
	comp=Z,1.4nm,0.4s						
AS16	Alice Springs	76.91	198	P	P	18 02 37.7	+2.3
AS31	Alice Springs	76.94	198	P	P	18 02 37.3	+1.7
ASAR	Alice Springs	76.94	198	P	P	18 02 37.5	+2.0
	comp=Z,1.8nm,0.5s,baz=11,slow=5.2,SNR=51						
	comp=Z,1.8nm,0.5s						
PLAL	Pickwick Lake	78.46	47	P	P	18 02 43.9	+0.1
PLAL				IAmb	IAmb	18 02 45.2	
	comp=Z,5.2nm,1.1s						
R55A	Marlinton	79.07	40		P	18 02 50.2	+3.0

DJA 23 18:06:06.3±0.3**, 3˚S**±3˚×**12˚1E**±˚**, h10^{km}, M3.6**/7**, mb3.8**/2**, MLv3.6**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.49	249	P	Pn	18 06 29.4	-3.7
APSI	Ampana	1.65	15	P	Pn	18 06 35.4	+0.1
SPSI	Sidrap Palu	2.04	225	P	Pn	18 06 39.7	-1.0
LUWI	Luwuk	2.14	47	P	Pn	18 06 41.5	-0.5
BNSI	Bone	2.18	210	P	Pn	18 06 42.3	-0.3
BKSI	Bulukumba	3.00	201	P	Pn	18 06 55.1	+1.2
MRSI	Marisa	3.06	14	P	Pn	18 06 54.8	+0.1
GTOI	Gorontalo	3.61	30	P	Pn	18 07 02.9	+0.6
BSSI	Bau Bau, Buton	3.68	191	P	Pn	18 07 04.1	+0.8
SANI	Sanana	4.80	85	P	Pn	18 07 16.9	-1.8
EDFI	Ende, Flores	6.22	176	P	Pn	18 07 38.4	+0.1
	3.4nm,0.9s						
LBMI	Labuha	6.56	74	P	Pn	18 07 43.0	+0.1

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*DMN **23** 18:09:00.8±0.1, 28˚.35N×87˚.62E, h2^{km}, Ml5.3/9, Error ellipse: s-maj=3.1km s-min=2.1km az=168.0*

*BJI **23** 18:09:01.8±0.0, 28˚.45N×87˚.59E, h7^{km}, mb4.1/14, mB4.2/4, Ms3.9/11, Ms7 3.8/6*

*IDC **23** 18:09:01.0±0.7, 28˚.38N×87˚.53E, h0^{km}, mb4.0/19, mbtmp4.0/22, ML3.6/3, MS3.5/32, Error ellipse: s-maj=22.1km s-min=13.3km az=46.0*

*NEIC **23** 18:09:03.3±1.4, 28˚.42N±0˚.07×87˚.49E±0˚.06, h10^{km}±1^{km}, mb4.2/32, ML4.2(BJI), Error ellipse: s-maj=12.8km s-min=8.0km az=157.0*

*NDI **23** 18:09:06.4±2.8, 28˚.44N×87˚.70E, h10^{km}, ML3.8*

ISC 23 18:09:05.4±1.2**, 28˚.43N**±0˚.04×**87˚.58E**±0˚.03**, h29**^{km}±10^{km}**, n127, σ1^{s}67**/121**, mb4.0**/28**, MS3.5**/30**, 5C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	1.43	140	eP	Pn	18 09 27.7	-1.8
GTK				eS	Sn	18 09 44.3	-3.2
GTK				IAML		18 09 55.2	
	comp=E,2µm,0.4s						
GTK				IAML		18 09 55.9	
	comp=N,3µm,0.2s						
JIRN	Jiri	1.45	238	ePg	Pn	18 09 28.1	-1.9
JIRN				eSg	Sn	18 09 46.4	-1.9
	comp=N,11µm,0.4s						
PKI	Pulchoki	2.10	247	ePg	Pn	18 09 40.4	+1.4
PKI				eSg	Sb	18 10 07.6	-1.3
	comp=N,8µm,0.5s						
PKIN	Phulchoki	2.11	247	ePg	Pn	18 09 40.4	+1.4
PKIN				eSg	Sb	18 10 07.6	-1.4
	comp=N,6µm,0.4s						
KKN	Kakani	2.13	253	ePg	Pn	18 09 40.7	+1.4
KKN				eSg	Sb	18 10 08.5	-1.1
	comp=N,8µm,0.5s						
DMN	Daman	2.33	250	ePg	Pb	18 09 44.6	-2.4
DMN				eSg	Sb	18 10 15.1	-0.4
	comp=N,5µm,0.5s						
GKN	Gorkha	2.63	261	ePg	Pb	18 09 50.4	-1.6
GKN				eSg	Sb	18 10 24.5	+0.6
	comp=N,7µm,0.4s						
DHUB	DHUBRI	3.22	138	eP	Pn	18 09 56.6	+2.6
DHUB				ex	x	18 10 39.2	
DHUB				IAML		18 10 45.5	
	comp=N,554nm,0.5s						
DHUB				IAML		18 10 49.7	
	comp=E,612nm,0.2s						
DANN	Dangsing	3.37	270	ePg	Pb	18 10 04.2	-0.4
DANN				eSg	Sb	18 10 47.6	+2.4
	comp=E,1µm,0.5s						
LSA	Lhasa	3.37	67	Pn	Pn	18 09 59.0	+2.4
LSA	Lhasa	3.37	67	Pn	Pn	18 09 59.6	+3.0
LSA				Sg	Sb	18 10 44.0	-1.5
LSA				LR	LR		
	comp=E,1µm,4.6s						
LSA				LR	LR		
	comp=E,1µm,8.2s						
LSA				LR	LR		
	comp=E,2µm,5.7s						
VLK	Valmikinagar	3.47	252	eP	Pn	18 10 00.1	+2.6
VLK				ex	x	18 10 47.1	
KOLN	Koldanda	3.58	260	eSg	Sb	18 10 53.8	+2.6
	comp=E,668nm,0.4s						
TURI	Tura	3.77	139	eP	Pn	18 10 03.5	+1.7
TURI				ex	x	18 10 51.5	
PYUN	Piuthan	4.06	266	ePg	Pb	18 10 16.7	+0.3
PYUN				eSg	Sb	18 11 09.4	+4.3
	comp=E,3µm,0.7s						
GUWA	GUWAHATI	4.28	120	eP	Pn	18 10 10.7	+2.0
GUWA				ex	x	18 10 21.0	
GUWA				ex	x	18 11 04.5	
GUWA				IAML		18 11 18.1	
	comp=N,441nm,1.1s						
GUWA				IAML		18 11 20.3	
	comp=Z,322nm,0.7s						
SHL	Shillong	4.78	126		Pn	18 10 15.7	0.0
SHL	Shillong	4.78	126	eP	Pn	18 10 17.4	+1.7
SHL				ex	x	18 11 16.3	
SHL				IAML		18 11 35.1	
	comp=E,268nm,0.8s						
SHL				IAML		18 11 36.5	
	comp=N,262nm,0.8s						
BOK	Bokaro	4.86	199	eP	Pn	18 10 17.9	+1.3
BOK				eS	Sn	18 11 14.2	+2.2
TEZP	TEZPUR	4.97	110	ex	Pn	18 10 18.4	+0.2
TEZP				ex	Pn	18 10 18.5	+0.3
TEZP				IAML		18 11 38.6	
	comp=N,128nm,0.5s						
TEZP				IAML		18 11 39.2	
	comp=E,114nm,0.6s						
VAR	Varanasi	5.13	234	eS	Sn	18 11 22.3	+3.6
BRCI	Bahraich	5.37	262	ex	Pb	18 10 41.5	+3.0
AGT	Agartala	5.60	143	eP	Pn	18 10 30.1	+3.3
AZL	Aizawl	6.55	134	eP	Pn	18 10 41.5	+1.5
AZL				ex	x	18 11 57.5	
AZL				IAML		18 12 02.1	
	comp=N,131nm,0.5s						
AZL				IAML		18 12 02.6	
	comp=E,137nm,0.2s						
BLSP	Bilaspur	7.98	219	eP	Pn	18 11 01.4	+2.0
BLSP				eS	Sn	18 12 27.9	-0.9
BWNR	Bhubaneshwar	8.26	192	eP	Pn	18 11 04.8	+1.5
BWNR				eS	Sn	18 12 36.8	+1.2
DDI	Dehra Dun	8.52	285	eS	Sn	18 12 43.1	+0.9
JBP	Jabalpur	8.62	234	eP	Pn	18 11 08.6	+0.3
JBP				ex	Pn	18 11 08.6	+0.3
JBP				eS	Sn	18 12 43.3	-1.3
GOMU	GeErMu	9.87	36	P	Pn	18 11 27.5	+1.8
GOMU				pP		18 11 31.8	
GOMU				sP		18 11 33.4	
GOMU				pmax	pmax		
	comp=E,2.0nm,1.0s						
GOMU				pmax	pmax		
	comp=E,79nm,4.9s						
GOMU				LR	LR		
	comp=E,440nm,10.5s						
RAGD	RAYAGADA	9.89	203	ex	Pn	18 11 24.7	-1.0
RAGD				eS	Sn	18 13 12.7	-3.0
BHPL	Bhopal	10.50	243	ex	Pn	18 11 31.7	-2.4
BHPL				ex	x	18 13 23.4	
AJM	Ajmer	11.65	263	ex	Pn	18 12 06.0	+16
AJM				ex	x	18 13 53.0	
CHCP	Chirah Chowk	13.33	297	P	Pn	18 12 13.8	+1.0
NIL	Nilore	13.34	297	Pn	Pn	18 12 10.5	-2.4
HYBB	Hyderabad (bro	13.75	219	eP	Pn	18 12 16.0	-2.6
HYBB				e		18 14 44.4	
CHTO	Chiang Mai	14.13	130	P	P	18 12 31.1	+0.1
THW	Thamme Wali	14.31	292	P	Pn	18 12 24.9	-1.3
CMAR	Chiang Mai Arr	14.38	131	Pn	Pn	18 12 24.8	-2.4
	comp=E,0.1nm,0.3s,baz=311,slow=10,SNR=5.9						
CMAR				LR	LR	18 19 19.0	
	comp=E,181nm,18.6s,baz=305,slow=43						
	comp=E,1.2nm,0.9s						
CM07	Chiang Mai Arr	14.39	131	Pn	Pn	18 12 28.0	+0.7
CEP	Cherat	14.46	296	P	Pn	18 12 27.4	-0.8
KSH	Kashi	14.65	322	P	Pn	18 12 27.8	-3.0
KSH				pP	P	18 12 38.8	+2.0
KSH				PP	PnPn	18 12 42.0	+3.2
KSH				S	Sn	18 15 05.3	-6.9
KSH				pmax	pmax		
	comp=E,12nm,0.9s						
KSH				LR	LR		
	comp=E,400nm,16.7s						
WMQ	Urumqi	15.36	0	eP	Pn	18 12 38.3	-1.9
WMQ				LR	LR		
	comp=E,230nm,7.9s						
WMQ				LR	LR		
	comp=E,120nm,12.5s						
BOOM	Boomskoye usch	16.91	329		Pn	18 12 58.9	-1.2
BOOM				IAmb	IAmb	18 13 07.1	
	comp=Z,29nm,1.1s						
KBL	Kabul	16.94	296	Pn	Pn	18 12 56.5	-4.1
GYA	Guiyang	17.05	92	⇓P	P	18 13 04.8	+1.2
GYA				S	Sn	18 16 11.8	+1.0
GYA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GYA				LR	LR		
	comp=Z,77nm,3.8s						
AAK	Ala-Archa	17.70	327	P	P	18 13 11.2	+0.6
	comp=Z,0.3nm,0.3s,baz=136,slow=14,SNR=10						
AAK				LR	LR	18 20 59.9	
	comp=Z,126nm,20.0s,baz=232,slow=41						
	comp=Z,1.4nm,0.4s						
AAK	Ala-Archa	17.70	327	P	P	18 13 11.8	+1.2
AAK				IAmb	IAmb	18 13 16.5	
	comp=Z,18nm,1.4s						
GAR	Garm	17.79	311	P	Pn	18 13 10.9	0.0
BTK	Batken	18.04	314		Pn	18 13 12.0	-2.0
BTK				IAmb	IAmb	18 13 16.7	
	comp=Z,22nm,1.4s						
CHGR	Chuyangaron	18.40	308		P	18 13 16.1	-2.2
MK31	Makanchi Array	18.80	349	P	P	18 13 22.4	-0.1
MKAR	Makanchi Array	18.80	349	P	P	18 13 22.4	-0.1
	comp=Z,0.2nm,0.3s,baz=162,slow=12,SNR=14						
	comp=Z,4.2nm,1.1s						
MKAR	Makanchi Array	18.80	349	P	P	18 13 21.9	-0.6
KK31	Karatay Array	20.10	321		P	18 13 36.2	-0.6
KKAR	Karatay Array	20.10	321	P	P	18 13 36.7	0.0
UBPT	Khong Chiam	21.10	125	P	P	18 13 47.7	-0.1
UBPT				IAmb	IAmb	18 13 48.7	
	comp=Z,21nm,1.3s						
KURBB	Kurchatov Arra	23.20	345	P	P	18 14 09.4	-0.4
	comp=Z,2.6nm,0.8s,baz=163,slow=9.5,SNR=14						
	comp=Z,2.6nm,0.8s						
KURK	Kurchatov	23.27	345	P	P	18 14 10.4	-0.1
KURK				IAmb	IAmb	18 14 13.3	
	comp=Z,13nm,1.2s						
SONM	Songino Array	24.26	32	P	P	18 14 20.9	+0.8
	comp=Z,1.7nm,0.7s,baz=222,slow=10.0,SNR=13						
SONM				LR	LR	18 25 38.5	
	comp=Z,37nm,21.5s,baz=232,slow=41						
	comp=Z,1.7nm,0.7s						
SONM	Songino Array	24.26	32	P	P	18 14 20.9	+0.8
SONM				IAmb	IAmb	18 14 27.3	
	comp=Z,4.1nm,1.1s						
ULN	Ulaanbaatar	24.59	33	P	P	18 14 24.3	+1.1
ULN				IAmb	IAmb	18 14 26.4	
	comp=Z,5.3nm,1.1s						
ZAA0	Zalesovo Array	25.58	356	P	P	18 14 31.6	-0.2
ZAA0				IAmb	IAmb	18 14 33.9	
	comp=Z,4.5nm,1.1s						
ZALV	Zalesovo Beam	25.58	356	P	P	18 14 31.9	+0.1
	comp=Z,2.1nm,0.8s,baz=186,slow=8.9,SNR=8.9						
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	25.58	356	P	P	18 14 31.7	-0.1
KULM	Kulim	26.14	149	P	P	18 14 37.7	+0.4
GEYT	Alibeck	26.33	299	P	P	18 14 39.3	+0.5
	comp=Z,2.2nm,0.8s,baz=36,slow=46,SNR=2.4						
GEYT				LR	LR	18 26 56.2	
	comp=Z,232nm,19.9s,baz=164,slow=41						
	comp=Z,2.2nm,0.8s						
GEYT	Alibeck	26.33	299	IAmb	IAmb	18 14 53.0	
	comp=Z,2.6nm,0.7s						
GSI	Gunungsitoli	28.61	159	P	P	18 14 59.5	0.0
ABKAR	Akbulak array	29.66	322	P	P	18 15 08.6	+0.2
ABKAR				IAmb	IAmb	18 15 11.9	
	comp=Z,2.3nm,0.7s						
ABKAR	Akbulak array	29.66	322	P	P	18 15 08.7	+0.3
AKTO	Aktyubinsk	31.35	323	LR	LR	18 28 28.8	
	comp=Z,29nm,21.4s,baz=137,slow=37						
KSRS	Korea Array	34.81	64	LR	LR	18 31 43.1	
	comp=Z,59nm,18.4s,baz=250,slow=39						
JOW	Kunigami	35.97	83	LR	LR	18 32 25.9	
	comp=Z,58nm,18.3s,baz=340,slow=39						
GNI	Garni	36.95	300	LR	LR	18 34 11.1	
	comp=Z,28nm,19.5s,baz=102,slow=41						
BELG	Belogornoye	38.00	320	LR	LR	18 32 57.0	
	comp=Z,70nm,18.7s,baz=144,slow=38						
KBZ	Khabaz	38.72	305	P	P	18 16 27.1	+0.2
	comp=Z,2.9nm,0.8s,baz=160,slow=5.8,SNR=6.9						
KBZ				LR	LR	18 34 56.6	
	comp=Z,81nm,20.4s,baz=82,slow=40						
	comp=Z,2.9nm,0.8s						
KLR	Kul'dur	39.49	46	P	P	18 16 33.6	+0.3
	comp=Z,1.7nm,0.9s,baz=280,slow=8.6,SNR=5.4						
	comp=Z,1.7nm,0.9s						
NRIK	Noril'sk	40.94	360	P	P	18 16 45.4	+0.4
	comp=Z,2.3nm,0.7s,baz=176,slow=7.1,SNR=3.6						
NRIK				LR	LR	18 35 11.1	
	comp=Z,72nm,18.1s,baz=323,slow=38						
	comp=Z,2.3nm,0.7s						
MJAR	Matsushiro Arr	43.05	66	LR	LR	18 35 50.5	
	comp=Z,56nm,21.8s,baz=280,slow=37						
YAK	Yakutsk	43.47	27	LR	LR	18 36 38.0	
	comp=Z,42nm,19.3s,baz=268,slow=38						
JHJ	Hachijo jima 2	44.72	70	LR	LR	18 36 21.8	
	comp=Z,92nm,19.2s,baz=275,slow=37						
KAPI	Kappang	45.45	132	LR	LR	18 40 53.7	
	comp=Z,73nm,18.1s,baz=282,slow=42						
BRTR	Keskin Array B	45.47	299	P	P	18 17 22.6	+0.4
	comp=Z,0.5nm,0.6s,baz=81,slow=6.3,SNR=3.1						
BRTR				LR	LR	18 40 50.9	
	comp=Z,42nm,18.6s,baz=130,slow=42						
	comp=Z,0.5nm,0.6s						
EIL	Elat	45.69	285	LR	LR	18 39 59.5	
	comp=Z,76nm,19.7s,baz=61,slow=41						
ASAJ	Asahikawa	46.19	55	LR	LR	18 37 27.3	
	comp=Z,96nm,21.5s,baz=336,slow=37						
AKASG	Malin Array Be	48.75	314	P	P	18 17 46.3	-1.2
	comp=Z,0.9nm,0.6s,baz=74,slow=8.5,SNR=9.7						
AKASG				LR	LR	18 41 20.0	
	comp=Z,46nm,19.0s,baz=55,slow=40						
	comp=Z,0.9nm,0.6s						
AKBB	Malin Array Si	48.75	314	P	P	18 17 46.3	-1.1
TIXI	Tiksi	48.79	16	P	P	18 17 48.4	+1.0
TIXI				IAmb	IAmb	18 17 50.5	
	comp=Z,2.2nm,1.2s						
VRI	Vrincioaia	50.32	308	⇑P	P	18 18 00.4	+0.9
PLOR	Plostina	50.37	308	⇑P	P	18 18 01.0	+1.1
BIZ	Bicaz	50.72	309	⇑P	P	18 18 02.7	+0.2
MLR	Muntele Rosu	50.88	307	⇑P	P	18 18 05.2	+1.3
MLR	Muntele Rosu	50.88	307	LR	LR	18 44 16.4	
	comp=Z,59nm,19.0s,baz=64,slow=42						
MLR	Muntele Rosu	50.88	307	P	P	18 18 04.6	+0.7
BUR06	Bucovina Ar. S	51.29	310	P	P	18 18 06.5	-0.4
BUR06				IAmb	IAmb	18 18 07.7	
	comp=Z,1.8nm,0.9s						
BUR03	Bucovina Ar. S	51.31	310	P	P	18 18 06.7	-0.4
BUR03				IAmb	IAmb	18 18 08.3	
	comp=Z,2.0nm,0.8s						
BURAR	Bucovina Array	51.31	310	⇑P	P	18 18 07.2	+0.1
FINES	FINESS Array B	51.88	328	P	P	18 18 10.5	-0.5
	comp=Z,2.4nm,0.9s,baz=101,slow=7.4,SNR=4.2						
FINES				LR	LR	18 43 08.9	
	comp=Z,131nm,22.0s,baz=104,slow=40						
	comp=Z,2.4nm,0.9s						
MA2	Magadan	52.42	35	LR	LR	18 44 18.3	
	comp=Z,39nm,18.2s,baz=334,slow=40						
VTS	Vitosha	53.06	304	⇓P	P	18 18 21.5	+1.3
VTS	Vitosha	53.06	304	P	P	18 18 20.8	+0.6
VTS				IAmb	IAmb	18 18 22.8	
	comp=Z,3.2nm,0.9s						
ARCES	ARCESS Array B	53.96	337	P	P	18 18 26.1	-0.1
	comp=Z,0.8nm,0.7s,baz=95,slow=7.3,SNR=1.5						
	comp=Z,0.8nm,0.7s						
KBN	Korca	55.16	302	P	P	18 18 34.3	-1.2
KMBO	Kilima Mbogo	56.43	247	LR	LR	18 42 56.7	
	comp=Z,59nm,18.2s,baz=93,slow=36						
VRAC	Vranov	56.92	312	LR	LR	18 44 57.3	
	comp=Z,44nm,18.2s,baz=82,slow=38						
HFS	Hagfors	57.84	325	LR	LR	18 46 25.9	
	comp=Z,70nm,20.6s,baz=86,slow=39						
GERES	GERESS Array B	58.86	312	P	P	18 19 01.9	+0.3
	comp=Z,2.0nm,0.9s,baz=77,slow=8.4,SNR=10						
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	58.86	312	P	P	18 19 00.6	-1.0
NOA	NORSAR Array B	59.02	327	P	P	18 19 02.2	-0.2
	comp=Z,0.8nm,0.7s,baz=87,slow=7.1,SNR=4.0						
NOA				LR	LR	18 47 25.6	
	comp=Z,68nm,19.9s,baz=100,slow=39						
	comp=Z,0.8nm,0.7s						
DAVOX	Davos/Dischmat	61.77	310	LR	LR	18 48 43.6	
	comp=Z,32nm,21.2s,baz=81,slow=39						
WB0	Warramunga Arr	65.89	131	P	P	18 19 47.9	-0.9
WRA	Warramunga Arr	65.98	131	P	P	18 19 49.5	+0.2
	comp=Z,2.1nm,0.8s,baz=327,slow=6.6,SNR=13						
	comp=Z,2.1nm,0.8s						
WRA	Warramunga Arr	65.98	131	IAmb	IAmb	18 19 58.9	
	comp=Z,0.2nm,1.2s						
WR6	Warramunga Arr	66.06	131	P	P	18 19 50.3	+0.3
EKA	Eskdalemuir Ar	67.53	322	LR	LR	18 52 33.2	
	comp=Z,55nm,20.5s,baz=64,slow=39						
ASAR	Alice Springs	68.37	134	P	P	18 20 04.9	+0.4
	comp=Z,2.9nm,0.8s,baz=314,slow=5.8,SNR=28						
	comp=Z,2.9nm,0.8s						
AS18	Alice Springs	68.43	134	P	P	18 20 05.0	+0.1
LSZ	Lusaka	72.01	241	LR	LR	18 52 28.0	
	comp=Z,28nm,18.1s,baz=144,slow=36						
BORG	Borgarnes	72.22	335	LR	LR	18 54 54.0	
	comp=Z,26nm,19.5s,baz=154,slow=38						
ESDC	Sonseca Array	73.57	306	P	P	18 20 35.3	-0.7
	comp=Z,1.1nm,0.9s,baz=59,slow=6.8,SNR=8.9						
	comp=Z,1.1nm,0.9s						
BMAR	Burnt Mountain	76.80	18	P	P	18 20 55.2	+1.1
MDT	Midelt	76.87	300	LR	LR	19 00 28.2	
	comp=Z,13nm,20.0s,baz=162,slow=40						
ILAR	Eielson Array	77.96	21	P	P	18 21 01.0	+0.4
	comp=Z,0.7nm,0.8s,baz=303,slow=5.8,SNR=5.8						
	comp=Z,0.7nm,0.8s						
STKA	Stephens Creek	78.97	135	P	P	18 21 06.9	+0.4
	comp=Z,3.9nm,1.0s,baz=308,slow=1.8,SNR=3.6						
	comp=Z,3.9nm,1.0s						
LBTB	Lobatse	79.85	234	LR	LR	18 52 26.7	
	comp=Z,43nm,21.4s,baz=72,slow=33						
TORD	Torodi Ar. Bea	80.29	280	P	P	18 21 14.1	-0.1
	comp=Z,1.7nm,1.0s,baz=89,slow=9.3,SNR=6.5						
	comp=Z,1.7nm,1.0s						
TORD	Torodi Ar. Bea	80.29	280	IAmb	IAmb	18 21 18.2	
	comp=Z,3.3nm,1.1s						

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*NEIC **23** 18:13:59.3±1.5, 21˚.83N±0˚.09×144˚.0E±0˚.1, h127^{km}±6^{km}, mb4.5/55, Error ellipse: s-maj=18.1km s-min=12.1km az=77.0*

*IDC **23** 18:14:00.3±0.8, 21˚.79N×143˚.98E, h142^{km}±7^{km}, mb3.9/27, mbtmp4.3/29, MS2.8/2, Error ellipse: s-maj=13.1km s-min=9.2km az=83.0*

ISC 23 18:13:55.2±0.5**, 21˚.75N**±0˚.06×**144˚.10E**±0˚.10**, h100**^{km}**, n105, σ1^{s}35**/106**, mb4.5**/57**, 1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.60	342	P	Pn	18 15 20.8	+4.7
	62nm,0.4s,baz=326,slow=20,SNR=21						
JCJ				S	Sn	18 16 20.1	+0.9
	208nm,0.4s,baz=140,slow=24,SNR=14						
JCJ	Chichijima	5.60	342		Pn	18 15 19.8	+3.7
JCJ					Sn	18 16 20.0	+0.9
GUMO	Guam	8.15	175	LR	LR	18 18 24.0	
	comp=Z,29nm,20.5s,baz=5.5,slow=32						
INU	Inuyama	14.90	337		P	18 17 21.9	-1.9
JGF	Kuroka	15.01	338		Pn	18 17 22.8	+0.7
MJB2	Matsu-Sugadair	15.58	342	Pn	P	18 17 30.3	-1.1
MJAR	Matsushiro Arr	15.61	342	P	P	18 17 30.4	-1.2
	2.2nm,0.9s,baz=159,slow=11,SNR=5.3						
KS12	Wonju Array Si	20.99	322	P	P	18 18 30.0	-0.4
KSRS	Korea Array	20.99	322	P	Pn	18 18 33.2	-0.8
	12nm,0.8s,baz=144,slow=8.6,SNR=49						
	12nm,0.8s						
KSAR	Wonju Array Be	21.01	322	P	P	18 18 31.4	+0.7

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KS19  Wonju Array Si   21.06 322   P      P       18 18 31.9 +0.6
KS19                               IAmb   IAmb    18 18 35.3
      comp=Z,22nm,0.9s
SSLB  Suanglung        21.44 280   P      P       18 18 37.5 +2.1
SSLB                               IAmb   IAmb    18 18 40.5
      comp=Z,32nm,0.8s
KLR   Kul'dur          29.13 343   P      P       18 19 47.3 +0.8
      comp=Z,3.6nm,0.6s,baz=149,slow=7.3,SNR=19
KLR                                pP     sP      18 20 17.5 -1.5
      comp=Z,1.7nm,0.8s,baz=148,slow=8.2,SNR=3.0
      comp=Z,3.6nm,0.6s
COEN  Coen             35.49 182   P      P       18 20 44.4 +1.9
BATI  Baumata          37.56 214   P      P       18 21 00.0 -0.1
      comp=Z,11nm,0.4s,baz=48,slow=1.2,SNR=6.7
      comp=Z,11nm,0.4s
ULN   Ulaanbaatar      39.47 320   P      P       18 21 16.1 +0.2
SONM  Songino Array    39.84 320   P      P       18 21 19.4 +0.4
      comp=Z,1.1nm,0.5s,baz=135,slow=8.1,SNR=9.0
      comp=Z,1.1nm,0.5s
SONM  Songino Array    39.84 320   IAmb   IAmb    18 21 22.8
      comp=Z,1.1nm,0.8s
YAK   Yakutsk          41.46 350   P      P       18 21 31.6 -0.3
YAK                                IAmb   IAmb    18 21 33.1
      comp=Z,6.9nm,0.8s
GTA   Gaotai           41.54 305 ⇓P      P       18 21 33.6 +0.6
GTA                                pP     pP      18 21 40.1  -15
GTA                                sP     pwP     18 21 42.8  -16
GTA                                pmax   pmax
      comp=Z,6.0nm,0.8s
WB0   Warramunga Arr   42.34 194   P      P       18 21 40.5 +1.0
WB0                                IAmb   IAmb    18 21 45.5
      comp=Z,7.1nm,1.1s
CMAR  Chiang Mai Arr   42.42 274   P      P       18 21 41.5 +1.2
      comp=Z,0.5nm,0.5s,baz=101,slow=5.9,SNR=10
      comp=Z,0.5nm,0.5s
WB5   Warramunga Arr   42.45 194   P      P       18 21 40.9 +0.5
WB5                                IAmb   IAmb    18 21 45.5
      comp=Z,15nm,1.3s
WR0   Warramunga Arr   42.49 193   P      P       18 21 41.2 +0.5
WR0                                IAmb   IAmb    18 22 02.8
      comp=Z,7.8nm,1.3s
WRAB  Tennant Creek    42.51 194   P      P       18 21 42.4 +1.6
WRAB                               IAmb   IAmb    18 21 52.8
      comp=Z,8.9nm,0.5s
WB2   Warramunga Arr   42.52 194   P      P       18 21 41.5 +0.5
WB2                                IAmb   IAmb    18 21 58.0
      comp=Z,16nm,1.3s
WRA   Warramunga Arr   42.52 194   P      P       18 21 42.0 +1.0
      comp=Z,3.4nm,0.5s,baz=16,slow=9.0,SNR=42
WRA                                PcP    PcP     18 23 32.2 +0.2
      comp=Z,1.6nm,0.6s,baz=3.5,slow=3.2,SNR=7.8
WRA                                ScP    ScP     18 27 09.6 -4.1
      comp=Z,0.2nm,0.6s,baz=7.5,slow=4.4,SNR=5.5
      comp=Z,3.4nm,0.5s
WRA   Warramunga Arr   42.52 194   P      P       18 21 42.4 +1.4
GOMU  GeErMu           45.00 300   P      P       18 22 03.0 +1.8
GOMU                               pP     pP      18 22 06.4  -18
GOMU                               sP     pwP     18 22 08.1  -19
GOMU                               pmax   pmax
      comp=Z,21nm,0.7s
GOMU                               pmax   pmax
      comp=Z,42nm,4.2s
KULM  Kulim            45.10 255   P      P       18 22 03.5 +1.6
IPM   Ipoh             45.12 254   P      P       18 22 03.1 +1.1
AS07  Alice Springs    46.20 193   P      P       18 22 11.2 +0.9
AS31  Alice Springs    46.22 193   P      P       18 22 11.2 +0.8
ASAR  Alice Springs    46.22 193   P      P       18 22 11.0 +0.6
      comp=Z,1.4nm,0.6s,baz=11,slow=6.5,SNR=24
ASAR                               PcP    PcP     18 23 44.8 +0.2
      comp=Z,1.5nm,0.7s,baz=16,slow=4.2,SNR=7.8
ASAR                               ScP    ScP     18 27 24.5 -4.4
      comp=Z,0.5nm,0.7s,baz=18,slow=6.2,SNR=4.2
      comp=Z,1.4nm,0.6s
SHL   Shillong         47.73 285   P      P       18 22 21.2 -1.3
SHL                                IAmb   IAmb    18 22 22.6
      comp=Z,6.8nm,0.8s
PSI   Prapat           47.74 253   P      P       18 22 23.2 +0.6
      comp=Z,4.8nm,0.3s,baz=74,slow=7.8,SNR=4.7
      comp=Z,4.8nm,0.3s
RPSI  Rantau Prapat    47.79 253   P      P       18 22 23.2 +0.4
LSA   Lhasa            48.01 291   P      P       18 22 25.5 +0.5
LSA                                IAmb   IAmb    18 22 28.9
      comp=Z,5.6nm,0.8s
DZM   Mont Dzumac      48.70 152   P      P       18 22 30.6 +0.8
      comp=Z,3.6nm,0.7s,baz=95,slow=20,SNR=2.1
      comp=Z,3.6nm,0.7s
GSI   Gunungsitoli     49.62 252   P      P       18 22 37.2 +0.3
JIRN  Jiri             52.54 289  eP      P       18 22 59.4 +0.3
      comp=Z,22nm,0.6s
PKI   Pulchoki         53.24 289  eP      P       18 23 03.2 -1.0
PKIN  Phulchoki        53.25 289  eP      P       18 23 03.4 -0.8
      comp=Z,12nm,0.7s
STKA  Stephens Creek   53.38 183   P      P       18 23 04.5 +0.1
      comp=Z,3.2nm,0.5s,baz=0.1,slow=8.2,SNR=17
      comp=Z,3.2nm,0.5s
STKA  Stephens Creek   53.38 183   IAmb   IAmb    18 23 06.0
      comp=Z,2.7nm,1.2s
DMN   Daman            53.50 289  eP      P       18 23 05.8 -0.2
      comp=Z,33nm,1.1s
GKN   Gorkha           53.86 289  eP      P       18 23 07.9 -0.6
      comp=Z,26nm,0.9s
DANN  Dangsing         54.58 290  eP      P       18 23 13.9  0.0
ZAA0  Zalesovo Array   54.70 321   P      P       18 23 12.9 -1.0
ZAA0                               IAmb   IAmb    18 23 14.0
      comp=Z,4.1nm,0.7s
ZALV  Zalesovo Beam    54.70 321   P      P       18 23 13.2 -0.7
      comp=Z,4.4nm,0.7s,baz=105,slow=7.7,SNR=20
      comp=Z,4.4nm,0.7s
ZALV  Zalesovo Beam    54.70 321   P      P       18 23 12.5 -1.4
MK31  Makanchi Array   55.29 313   P      P       18 23 18.3  0.0
MKAR  Makanchi Array   55.29 313   P      P       18 23 18.4  0.0
      comp=Z,2.0nm,0.5s,baz=91,slow=9.6,SNR=20
MKAR                               PcP    PcP     18 24 17.2 -0.7
      comp=Z,1.6nm,0.7s,baz=90,slow=6.1,SNR=4.9
MKAR                               ScP    ScP     18 28 01.3 -6.3
      comp=Z,0.9nm,0.9s,baz=95,slow=3.9,SNR=4.0
      comp=Z,2.0nm,0.5s
MKAR  Makanchi Array   55.29 313   P      P       18 23 18.1 -0.3
PYUN  Piuthan          55.29 290  eP      P       18 23 18.6 -0.3
MK09  Makanchi Array   55.30 313   P      P       18 23 18.1 -0.3
KDAK  Kodiak Island    57.68  35   P      P       18 23 35.9 +0.9
      comp=Z,4.1nm,0.6s,baz=332,slow=15,SNR=4.2
KDAK                               LR     LR      18 47 31.7
      comp=Z,23nm,19.6s,baz=253,slow=35
      comp=Z,4.1nm,0.6s
KURK  Kurchatov        58.02 317   P      P       18 23 36.8 -0.8
KURK                               IAmb   IAmb    18 23 42.9
      comp=Z,7.5nm,0.8s
KURBB Kurchatov Arra   58.07 317   P      P       18 23 37.5 -0.4
      comp=Z,6.8nm,0.7s,baz=94,slow=7.8,SNR=57
      comp=Z,6.8nm,0.7s
TARG  Taragay, Kyrgy   58.40 306   P      P       18 23 41.1 +0.3
TARG                               IAmb   IAmb    18 23 43.4
      comp=Z,10nm,1.1s
KSH   Kashi            59.91 304   P      P       18 23 54.6 +3.6
KSH                                sP     pP      18 24 09.8 -5.0
KSH                                pmax   pmax
      comp=Z,15nm,0.8s
AAK   Ala-Archa        60.81 308   P      P       18 23 56.6 -0.5
      comp=Z,1.0nm,0.3s,baz=120,slow=7.8,SNR=4.3
      comp=Z,1.0nm,0.3s
AAK   Ala-Archa        60.81 308   P      P       18 23 57.0 -0.1
AAK                                IAmb   IAmb    18 23 58.4
      comp=Z,3.3nm,0.8s
ILAR  Eielson Array    61.61  27   P      P       18 24 01.6 -0.3
      comp=Z,1.4nm,0.8s,baz=254,slow=6.0,SNR=13
      comp=Z,1.4nm,0.8s
RIDG  Independent Ri   62.34  28   P      P       18 24 07.3 +0.4
RIDG                               IAmb   IAmb    18 24 21.0
      comp=Z,6.7nm,1.2s
SCRK  Sand Creek       62.75  28   P      P       18 24 10.2 +0.5
NIL   Nilore           62.77 298   P      P       18 24 09.8 -0.4
BRVK  Borovoye         63.25 320   P      P       18 24 12.4 -0.7
KK06  Karatay Array    63.68 308   P      P       18 24 15.6 -0.5
KK31  Karatay Array    63.69 308   P      P       18 24 16.1 -0.1
KK31                               IAmb   IAmb    18 24 17.3
      comp=Z,10nm,1.1s
KKAR  Karatay Array    63.69 308   P      P       18 24 15.9 -0.3
KKAR                               IAmb   IAmb    18 24 17.3
      comp=Z,10nm,1.1s
KKAR  Karatay Array    63.69 308   P      P       18 24 15.8 -0.4
BTK   Batken           63.81 305   P      P       18 24 16.8 -0.2
BTK                                IAmb   IAmb    18 24 18.0
      comp=Z,7.7nm,1.1s
GAR   Garm             64.33 304   P      P       18 24 20.5  0.0
CHGR  Chuyangaron      65.27 304   P      P       18 24 26.2 -0.4
KBL   Kabul            66.06 299   P      P       18 24 31.6 -0.3
INK   Inuvik           67.18  24   P      P       18 24 38.1  0.0
      comp=Z,1.8nm,0.8s,baz=307,slow=7.4,SNR=3.5
      comp=Z,1.8nm,0.8s
INK   Inuvik           67.18  24   IAmb   IAmb    18 24 39.1
      comp=Z,9.0nm,1.4s
ABKAR Akbulak array    70.10 316   P      P       18 24 55.5 -1.2
ABKAR                              IAmb   IAmb    18 24 56.8
      comp=Z,5.1nm,0.8s
ABKAR Akbulak array    70.10 316   P      P       18 24 55.6 -1.0
HRA   Herat            71.58 300   P      P       18 25 05.5 -0.7
HRA                                IAmb   IAmb    18 25 07.2
      comp=Z,10nm,0.8s
GYB1  ALIBECK ARRAY    73.91 305   P      P       18 25 19.6 -0.2
GYB1                               IAmb   IAmb    18 25 21.5
      comp=Z,5.8nm,0.8s
GEYT  Alibeck          73.92 305   P      P       18 25 19.9 +0.1
      comp=Z,5.0nm,0.9s,baz=204,slow=2.9,SNR=6.1
      comp=Z,5.0nm,0.9s
GEYT  Alibeck          73.92 305   IAmb   IAmb    18 25 21.6
      comp=Z,4.6nm,0.9s
YKA   Yellowknife Ar   76.01  28   P      P       18 25 31.8 +0.6
      comp=Z,1.0nm,0.6s,baz=309,slow=2.7,SNR=7.4
      comp=Z,1.0nm,0.6s
PINE  Pine Mountain    78.71  47   P      P       18 25 48.9 +1.9
PINE                               IAmb   IAmb    18 25 49.6
      comp=Z,6.9nm,0.8s
ARCES ARCESS Array B   79.14 342   P      P       18 25 47.4 -1.1
      comp=Z,1.1nm,0.6s,baz=73,slow=8.1,SNR=6.7
      comp=Z,1.1nm,0.6s
ARCES ARCESS Array B   79.14 342   IAmb   IAmb    18 26 08.3
      comp=Z,8.4nm,1.4s
J08A  Circle Bar Ran   80.54  47   P      P       18 25 58.1 +1.3
MFID  Camas Ranch      82.31  46   P      P       18 26 07.4 +1.3
KVN   Kaiserville      82.36  51   P      P       18 26 07.3 +0.7
NVAR  Mina Array Bea   82.44  52   P      P       18 26 08.3 +1.3
      comp=Z,2.6nm,0.7s,baz=273,slow=5.7,SNR=16
NVAR                               pP     sP      18 26 42.2 -0.1
      comp=Z,1.0nm,0.7s,baz=272,slow=5.3,SNR=3.6
      comp=Z,2.6nm,0.7s
KBZ   Khabaz           82.94 314   P      P       18 26 09.4 +0.3
      comp=Z,6.3nm,0.8s,baz=112,slow=4.5,SNR=13
      comp=Z,6.3nm,0.8s
FINES FINESS Array B   83.50 335   P      P       18 26 10.1 -1.6
      comp=Z,1.3nm,0.5s,baz=70,slow=5.5,SNR=9.6
      comp=Z,1.3nm,0.5s
QSM   Queen of Sheba   84.43  54   P      P       18 26 17.9 +0.9
QSM                                IAmb   IAmb    18 26 18.9
      comp=Z,5.3nm,1.0s
PSUT  Pine Spring      85.62  50   P      P       18 26 23.8 +0.7
PSUT                               IAmb   IAmb    18 26 24.9
      comp=Z,3.9nm,0.9s
PDAR  Pinedale Array   86.75  45   P      P       18 26 30.4 +1.7
      comp=Z,0.3nm,0.5s,baz=285,slow=1.8,SNR=2.9
      comp=Z,0.3nm,0.5s
AKASG Malin Array Be   87.96 325   P      P       18 26 31.6 -2.3
      comp=Z,0.3nm,0.4s,baz=50,slow=2.9,SNR=4.2
      comp=Z,0.3nm,0.4s
RAYN  Ar Rayn          88.93 295   P      P       18 26 37.5 -1.7
RAYN                               IAmb   IAmb    18 26 40.8
      comp=Z,2.7nm,0.9s
BRTR  Keskin Array B   90.92 314   P      P       18 26 46.2 -2.1
      comp=Z,0.7nm,0.7s,baz=68,slow=7.7,SNR=3.2
      comp=Z,0.7nm,0.7s
TXAR  Lajitas Array    97.33  55   P      Pdif    18 27 19.8 +2.0
      comp=Z,0.2nm,0.7s,baz=339,slow=4.8,SNR=2.8
TXAR                               pP     sP      18 27 55.5 +1.8
      comp=Z,0.5nm,1.0s,baz=17,slow=0.9,SNR=2.9
      comp=Z,0.2nm,0.7s
TORD  Torodi Ar. Bea  129.37 310   PKP    PKPdf   18 32 52.2 -0.7
      comp=Z,0.4nm,0.5s,baz=77,slow=1.9,SNR=4.3
PLCA  Paso Flores     145.15 131   PKPbc  PKPbc   18 33 21.8 +0.7
      comp=Z,4.8nm,0.8s,baz=224,slow=4.3,SNR=8.3
PLCA  Paso Flores     145.15 131          PKPbc   18 33 21.3 +0.3
LPAZ  La Paz          149.09  86   PKPbc  PKPbc   18 33 34.4 +0.9
      comp=Z,1.2nm,0.6s,baz=256,slow=5.1,SNR=5.5
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*DNK **23** 19:00:23.0±2.0, 55.°81N×20.°35E, h11^{km}±38^{km}, ML2.6*
*UPP **23** 19:00:24.6±1.8, 55.°90N×20.°06E, h0^{km}, ML2.8, Suspected explosion*
*HEL **23** 19:00:26.8±0.1, 55.°91N×19.°76E, h0^{km}, ML3.3, ML2.8(UPP), Explosion*
*IDC **23** 19:00:27.6±1.3, 56.°05N×19.°69E, h0^{km}, mbtmp3.0/5, ML2.8/5, Error ellipse: s-maj=17.0km s-min=9.4km az=47.0*
ISC 23 19:00:24.7±0.7**, 55.°96N**±0.°03×**19.°66E**±0.°02**, h0^{km}, n65, σ1.^{s}91**/95**, Baltic Sea**

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Code  Station Name      Δ°   AZ°     Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
PBUR  Paburge          1.28  86   eP      Pg      19 00 48.9 -0.3
PBUR                               IAML           19 01 12.9
      comp=Z,86nm,0.2s
PBUR  Paburge          1.28  86   eP      Pg      19 00 48.8 -0.3
GOTU  Gotland          1.83 341    P      Pb      19 00 59.4 +0.4
GOTU                               S      Sg      19 01 24.5 +1.0
GOTU  Gotland          1.83 341    P      Pb      19 00 59.4 +0.4
GOTU                               S      Sg      19 01 24.5 +1.0
GOTU  Gotland          1.83 341   eP      Pg      19 00 59.7 -0.1
GOTU                              eSN     Sg      19 01 24.7 +1.3
BYXU  Byxelkrok        1.98 313    P      Pb      19 01 02.3 +0.8
BYXU                               S      Sg      19 01 29.8 +1.6
BYXU  Byxelkrok        1.98 313    P      Pb      19 01 02.3 +0.8
BYXU                               S      Sg      19 01 29.8 +1.6
BYXU  Byxelkrok        1.98 313   eP      Pb      19 01 02.3 +0.8
BYXU                              eS      Sg      19 01 29.8 +1.6
BLEU  Blekinge         2.18 281    P      Pb      19 01 05.4 +0.5
BLEU                              i P     Pg      19 01 05.9 -0.5
BLEU                               S      Sg      19 01 35.8 +1.2
BLEU                              i S     Sb      19 01 36.3 +3.9
BLEU  Blekinge         2.18 281    P      Pb      19 01 05.4 +0.5
BLEU                               S      Sg      19 01 35.8 +1.2
BLEU  Blekinge         2.18 281   eP      Pb      19 01 05.4 +0.5
BLEU                              eS      Sg      19 01 35.8 +1.2
SLIT  Slitere, Latvi   2.21  40   eP      Pn      19 01 04.0 +1.4
SLIT                              eS      Sb      19 01 34.0 +0.6
OSKU  Oskarshamn       2.33 304    P      Pb      19 01 07.2 -0.2
OSKU                               S      Sg      19 01 40.4 +1.1
OSKU  Oskarshamn       2.33 304    P      Pb      19 01 07.2 -0.2
OSKU                               S      Sg      19 01 40.4 +1.1
OSKU  Oskarshamn       2.33 304   eP      Pb      19 01 07.2 -0.2
PABE  Paberze          2.48  99   eP      Pb      19 01 09.6 -0.5
PABE                               IAML           19 01 45.8
      comp=Z,26nm,0.4s
PABE  Paberze          2.48  99   ePG     Pb      19 01 09.8 -0.2
PABE                              eSG     Sb      19 01 41.3 +0.2
VXJU  Vaexsjoe         2.79 292    P      Pb      19 01 13.6 -1.8
VXJU  Vaexsjoe         2.79 292    P      Pb      19 01 13.6 -1.8
VXJU  Vaexsjoe         2.79 292   eP      Pb      19 01 13.6 -1.8
SUW   Suwalki          2.82 132   eP      Pb      19 01 16.3 +0.5
BSD   Bornholm Skovb   2.83 255   i P     Pn      19 01 13.0 +2.0
BSD                               i S     Sb      19 01 49.8 -1.2
BSD                                IAML           19 02 06.4
      comp=Z,9.0nm,0.5s
BSD   Bornholm Skovb   2.83 255   eP      Pn      19 01 13.7 +2.7
BSD                               eS      Sb      19 01 49.6 -1.4
VIKU  Vikbolandet      3.01 329   eP      Pb      19 01 17.5 -1.7
LNKU  Linkoeping       3.21 317    P      Pb      19 01 19.7 -2.7
LNKU  Linkoeping       3.21 317    P      Pb      19 01 19.7 -2.7
LNKU  Linkoeping       3.21 317   eP      Pb      19 01 19.7 -2.7
DEL   Delary           3.27 281   eP      Pn      19 01 19.7 +2.5
DEL   Delary           3.27 281   i P     Pn      19 01 19.0 +1.9
DEL                                P      Pn      19 01 19.9 +2.8
DEL                               i S     Sg      19 02 09.7 -0.1
DEL                                IAML           19 02 15.7
      comp=Z,6.1nm,0.5s
DEL   Delary           3.27 281    P      Pn      19 01 19.9 +2.8
DEL   Delary           3.27 281   eP      Pn      19 01 19.9 +2.8
MTSE  Matsula          3.56  37   eP      Pn      19 01 23.0 +1.9
MTSE  Matsula          3.56  37   eP      Pn      19 01 23.4 +2.3
ISAL  Salakas          3.67  93   eP      Pn      19 01 25.3 +2.6
BJUU  Bjuv             3.73 275   i P     Pn      19 01 25.9 +2.6
BJUU                              i S     Sb      19 02 13.8 -3.1
IIGN  Ignalina         3.77  97   eP      Pn      19 01 26.4 +2.4
FABU  Falkenberg       3.99 288   i P     Pn      19 01 29.0 +2.1
AAL   Aland            4.23   2   eP      Pn      19 01 32.0 +1.6
AAL   Aland            4.23   2   eP      Pn      19 01 33.1 +2.8
ONAU  Onsala           4.50 292   i P     Pn      19 01 37.1 +3.0
ONAU                              i S     Sn      19 02 29.8 +2.7
VSU   Vasula           4.59  54   eP      Pn      19 01 36.9 +1.6
VSU   Vasula           4.59  54   eP      Pn      19 01 37.1 +1.8
MEF   Metsahovi        4.95  29   eP      Pn      19 01 42.8 +2.5
MEF   Metsahovi        4.95  29   eP      Pn      19 01 43.0 +2.8
MEF                               eS      Sn      19 02 38.5 +0.3
MEF   Metsahovi        4.95  29    SB     Sn      19 02 38.4 +0.3
RAF   Rauma            5.20  11   eP      Pn      19 01 45.6 +2.1
RAF   Rauma            5.20  11   eP      Pn      19 01 45.7 +2.2
RAF                                MPN            19 01 47.4
      comp=Z,4.5nm,0.2s
HFS   Hagfors          5.25 325    Pn     Pn      19 01 45.8 +1.5
      comp=Z,0.5nm,0.3s,baz=190,slow=23,SNR=2.6
HFS                                Sn     Sn      19 02 42.8 -2.6
      comp=Z,0.4nm,0.3s,baz=225,slow=19,SNR=1.9
HFS                                Lg     Lg      19 03 04.5
      comp=Z,0.6nm,0.3s,baz=218,slow=49,SNR=4.4
      comp=Z,0.4nm,0.3s
NUR   Nurmijrvi        5.27  28   eP      Pn      19 01 47.2 +2.7
NUR   Nurmijrvi        5.27  28    PN     Pn      19 01 47.3 +2.7
STRU  Stroemstad       5.51 307   i P     Pn      19 01 49.5 +1.7
STRU                              i S     Sn      19 02 53.2 +1.3
PVF   Pernaja          5.64  33   eP      Pn      19 01 51.8 +2.1
PVF                               eS      Sn      19 02 54.9 -0.2
PVF   Pernaja          5.64  33    MSG            19 02 28.4
      comp=Z,1.1nm,0.2s
PVF   Pernaja          5.64  33    PG     Pn      19 01 51.6 +1.9
VJF   Virojoki         6.20  39   eP      Pn      19 01 58.6 +1.3
VJF                               eS      Sn      19 03 08.3 -0.4
FIA0  FINESS Array S   6.43  29   eP      Pn      19 02 02.1 +1.6
FIA0                              eS      Sn      19 03 13.8 -0.8
FIA0  FINESS Array S   6.43  29    SN     Pn      19 02 01.8 +1.3
FINES FINESS Array B   6.43  29    Pn     Pn      19 02 01.9 +1.3
      comp=Z,1.0nm,0.3s,baz=212,slow=12,SNR=37
FINES                              Pg     Pb      19 02 11.9 -5.4
      comp=Z,0.8nm,0.3s,baz=198,slow=12,SNR=9.3
FINES                              Sn     Sn      19 03 13.1 -1.5
      comp=Z,0.7nm,0.3s,baz=213,slow=22,SNR=8.1
FINES                              Lg     Lg      19 03 39.6
      comp=Z,0.4nm,0.3s,baz=222,slow=25,SNR=5.7
      comp=Z,1.5nm,0.3s
NOA   NORSAR Array B   6.74 323    Pn     Pn      19 02 04.6 -0.2
      baz=139,slow=11,SNR=6.7
NOA                                Sn     Sn      19 03 17.4 -4.8
      baz=0.0,slow=16,SNR=2.6
NOA                                Lg     Lg      19 03 55.1
      comp=Z,0.1nm,0.3s,baz=46,slow=22,SNR=5.7
      comp=Z,0.2nm,0.4s
KEF   Keuruu           6.78  21   eP      Pn      19 02 08.4 +3.1
KEF                               eS      Sn      19 03 23.3 +0.2
KAF   Kangasniemi      7.06  26   eP      Pn      19 02 10.8 +1.7
KAF                                MPN            19 02 12.0
      comp=Z,3.8nm,0.2s
KAF                               eS      Sn      19 03 29.5 -0.4
VAF   Ylistaro         7.27  11   eP      Pn      19 02 14.2 +2.3
AKASG Malin Array Be   7.78 129    Pn     Pn      19 02 19.1 +0.1
      comp=Z,0.5nm,0.3s,baz=302,slow=12,SNR=3.4
AKASG                              Sn     Sn      19 03 44.2 -3.5
      comp=Z,0.4nm,0.3s,baz=19,slow=8.1,SNR=1.3
AKASG                              Lg     Lg      19 04 25.7
      comp=Z,0.6nm,0.3s,baz=207,slow=6.3,SNR=2.0
      comp=Z,0.1nm,0.2s
OUF   Merijarvi        8.80  15    MPN            19 02 36.3
      comp=Z,1.2nm,0.2s
ARCES ARCESS Array B  13.88   9    Pn     Pn      19 03 38.3 -4.1
      comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=1.3
ARCES                              Sn     Sn      19 06 06.6  -10
      baz=190,slow=19,SNR=1.2
      comp=Z,0.9nm,0.8s
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HEL 23 19:00:55.4±0.2**, 63.°69N×26.°14E, h0^{km}, ML1.0, Explosion, Finland**

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Code  Station Name      Δ°   AZ°     Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
OUF   Merijarvi        0.92 318    PG     Pg      19 01 12.0 -0.9
      baz=130
OUF                                MSG            19 01 23.7
      comp=Z,0.6nm,0.2s
OUF                                SB     Sg      19 01 24.6 -0.3
SUF   Sumiainen        0.98 180    PG     Pg      19 01 13.9 -0.2
SUF                                MSG            19 01 25.5
      comp=Z,0.7nm,0.2s
SUF                                SG     Sg      19 01 25.7 -1.1
OBF0  Syolatti, Pyha   1.16 315    SN     Sb      19 01 34.6 +0.7
OUL   Oulu             1.40 356    SN     Sn      19 01 43.2 +1.9
KAF   Kangasniemi      1.59 177    SG     Sn      19 01 44.4 -1.5
VAF   Ylistaro         1.70 249    PN     Pn      19 01 26.2  0.0
      baz=67
VAF                                MSG            19 01 46.2
      comp=Z,0.8nm,0.2s
FIA0  FINESS Array S   2.26 181    PG     Pb      19 01 35.7 -1.3
JOF   Joensuu          2.46 106    SG     Sb      19 02 11.0 -0.2
KU6   Riekki           2.83  33    SG     Sb      19 02 22.5 +0.5
LANU  Lannavaara       4.69 341    SG     Sb      19 03 18.9 +3.5
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*IDC **23** 19:05:46.0±1.2, 36.°37N×68.°72E, h0^{km}, mb3.8/8, mbtmp3.8/12, ML3.3/3, MS2.6/2, Error ellipse: s-maj=20.1km s-min=19.3km az=39.0*
*NNC **23** 19:05:50.7±3.1, 36.°85N×68.°53E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=25.1km s-min=18.2km az=173.0*
ISC 23 19:05:50.5±0.7**, 36.°62N**±0.°06×**68.°48E**±0.°07**, h24^{km}, n28, σ1.^{s}66**/36**, mb3.8**/6**, 7C-4D, Hindu Kush region**

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Code  Station Name      Δ°   AZ°     Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
CEP   Cherat           3.96 134    P      Pn      19 06 51.9 +2.0
CEP                                S      Sb      19 07 45.0 -2.2
THW   Thamme Wali      4.67 144    P      Pn      19 07 02.0 +2.4
CHCP  Chirah Chowk     4.91 126    P      Pn      19 07 04.3 +1.4
KK31  Karatay Array    6.66  13  ⇓Pn      Pn      19 07 28.2 +1.3
      1.1nm,0.3s,baz=202,slow=15,SNR=34
KK31                             ⇑Sn      Sn      19 08 42.5 +0.5
      2.4nm,0.3s,baz=217,slow=58,SNR=4.1
KK31                             ⇓Lg      Lg      19 09 16.9
      18nm,0.6s,baz=196,slow=26,SNR=4.3
AML   Almayashu        6.83  35    P      Pn      19 07 30.3 +0.8
      SNR=31
UCH   Uchtor           7.29  38    P      Pn      19 07 36.8 +0.9
      SNR=26
AAK   Ala-Archa        7.59  36    P      Pn      19 07 40.8 +1.0
      SNR=7.4
AAK   Ala-Archa        7.59  36    Pn     Pn      19 07 40.8 +1.0
      31nm,0.5s,baz=239,slow=6.6,SNR=78
AAK                                Sn     Sn      19 09 04.9 -0.2
      1.2nm,0.3s,baz=220,slow=16,SNR=1.6
AAK                                Lg     Lg      19 09 45.4
      0.9nm,0.3s,baz=333,slow=18,SNR=1.8
AAK                                LR     LR      19 11 00.3
      comp=Z,58nm,19.7s,baz=202,slow=41
KBK   Karagaybulak     7.82  38    P      Pn      19 07 44.4 +1.4
      SNR=33
CHMS  Chumysh          7.99  35    P      Pn      19 07 45.8 +0.6
      SNR=24
CHMS  Chumysh          7.99  35  ⇓Pn      Pn      19 07 45.8 +0.6
      22nm,0.6s
CHMS                             ⇑Sn      Sn      19 09 15.5 +0.7
      5.9nm,0.5s
USP   Ospenovka        8.09  33    P      Pn      19 07 47.2 +0.7
      SNR=7.6
TKM2  Tokmak 2         8.34  39    P      Pn      19 07 50.5 +0.4
      SNR=11
TKM2  Tokmak 2         8.34  39  ⇓Pn      Pn      19 07 49.9 -0.2
      5.4nm,0.3s
TKM2                             ⇑Sn      Sn      19 09 22.1 -1.5
      7.4nm,0.7s
GEYT  Alibeck          8.36 282    Pn     Pn      19 07 48.4 -1.9
      0.2nm,0.3s,baz=102,slow=19,SNR=2.4
GEYT                               Sn     Sn      19 09 21.2 -2.7
      0.4nm,0.3s,baz=183,slow=12,SNR=1.6
GEYT                               LR     LR      19 12 24.1
      comp=Z,35nm,19.9s,baz=148,slow=46
AB31  Akbulak array   14.08 336  ⇑Pn      Pn      19 09 06.9 -1.4
      2.2nm,0.7s,baz=160,slow=13,SNR=24
AB31                             ⇑Sn      Sn      19 11 43.9 +0.2
      2.1nm,0.7s,baz=153,slow=23,SNR=8.2
MKAR  Makanchi Array  14.46  41    Pn     Pn      19 09 12.1 -1.6
      0.2nm,0.3s,baz=231,slow=14,SNR=19
      2.1nm,0.7s
AKTO  Aktyubinsk      15.73 335    Pn     Pn      19 09 30.5  0.0
      0.2nm,0.3s,baz=173,slow=10,SNR=2.1
AKTO                               Sn     Sn      19 12 20.7 -3.3
      0.1nm,0.3s,baz=307,slow=23,SNR=1.7
      0.6nm,0.4s
AKTO  Aktyubinsk      15.73 335  ⇑Pn      Pn      19 09 30.8 +0.4
      3.5nm,0.9s
AKTO                             ⇑Sn      Sn      19 12 23.3 -0.6
      4.4nm,1.2s
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KURBB	Kurchatov Arra	15.75	24	Pn	Pn	19 09 27.4	-3.3
	baz=215,slow=11,SNR=4.3						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	20.71	28	P	P	19 10 28.4	-0.4
	3.8nm,0.5s,baz=219,slow=11,SNR=28						
	3.8nm,0.5s						
ARU	Arti	20.91	344	P	P	19 10 32.4	+1.3
	0.8nm,0.5s,baz=154,slow=3.0,SNR=6.0						
	0.8nm,0.5s						
BELG	Belogornoye	21.56	324	P	P	19 10 39.4	+1.4
	20nm,0.7s,baz=157,slow=5.1,SNR=12						
	20nm,0.7s						
SONM	Songino Array	29.94	56	P	P	19 11 57.5	+0.6
	1.2nm,0.8s,baz=267,slow=8.9,SNR=10.0						
	1.2nm,0.8s						
FINES	FINESS Array B	36.26	327	P	P	19 12 53.8	+2.3
	0.9nm,0.8s,baz=118,slow=11,SNR=1.9						
	0.9nm,0.8s						
TORD	Torodi Ar. Bea	63.69	267	P	P	19 16 21.6	+1.3
	0.5nm,0.7s,baz=35,slow=7.2,SNR=3.1						
	0.5nm,0.7s						
WRA	Warramunga Arr	83.79	120	P	P	19 18 15.1	-2.9
	0.3nm,0.9s,baz=326,slow=4.9,SNR=1.6						
	0.3nm,0.9s						
ASAR	Alice Springs	86.00	123	P	P	19 18 26.2	-2.9
	0.7nm,1.1s,baz=310,slow=4.8,SNR=4.7						
	0.7nm,1.1s						

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*MOS **23** 19:09:51.5±1.1, 27°.72N×84°.94E, h13^{km}, mb4.4/9, Error ellipse: s-maj=10.5km s-min=6.5km az=112.1*

*IDC **23** 19:09:51.2±0.7, 27°.66N×84°.94E, h0^{km}, mb4.1/18, mbtmp4.1/20, ML4.1/1, MS3.0/5, Error ellipse: s-maj=20.8km s-min=15.0km az=63.0*

*NEIC **23** 19:09:52.8±2.5, 27°.70N±0°.03×85°.09E±0°.03, h10^{km}±1^{km}, mb4.3/42, Error ellipse: s-maj=5.6km s-min=5.0km az=161.0*

*DMN **23** 19:09:52.7±0.1, 27°.73N×85°.14E, h10^{km}, Ml5.1/3, Error ellipse: s-maj=1.9km s-min=0.9km az=17.0*

*BJI **23** 19:09:53.0±0.0, 27°.88N×85°.16E, h7^{km}, mb4.4/39, mB4.6/20, Ms3.8/17, Ms7 3.7/16*

*NDI **23** 19:09:55.7±3.3, 27°.68N×85°.12E, h10^{km}, mb3.8, ML4.0, mb4.3(NEIC)*

ISC 23 19:09:53.0±0.7**, 27°.68N**±0°.03×**85°.10E**±0°.02**, h12**^{km}±5^{km}**, n136, σ1^s.57**/144**, mb4.3**/41**, MS3.0**/4**, 7C-5D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMN	Daman	0.07	173	*e*Pg	Pg	19 09 56.1	+0.2
DMN				*e*Sg	Sg	19 09 58.4	+0.5
KKN	Kakani	0.20	57	*e*Pg	Pg	19 09 56.4	-1.1
KKN				*e*Sg	Sg	19 09 58.6	-2.0
PKIN	Phulchoki	0.29	112	*e*Pg	Pg	19 09 58.6	-0.5
PKIN				*e*Sg	Sg	19 10 02.7	-0.4
PKI	Pulchoki	0.30	112	*e*Pg	Pg	19 09 58.7	-0.6
PKI				*e*Sg	Sg	19 10 02.9	-0.7
GKN	Gorkha	0.52	308	*e*Pg	Pg	19 10 02.7	-0.5
GKN				*e*Sg	Sg	19 10 08.6	-1.5
	10μm,0.3s						
JIRN	Jiri	0.97	91	*e*Pg	Pg	19 10 10.7	-1.2
JIRN				*e*Sg	Sg	19 10 23.3	-1.3
	5μm,0.5s						
KOLN	Koldanda	1.33	274	*e*Pg	Pg	19 10 18.6	0.0
KOLN				*e*Sg	Sg	19 10 35.9	0.0
DANN	Dangsing	1.35	300	*e*Pg	Pb	19 10 18.6	0.0
DANN				*e*Sg	Sg	19 10 36.7	-0.1
	8μm,0.4s						
PYUN	Piuthan	1.91	283	*e*Pg	Pb	19 10 28.7	+0.7
PYUN				*e*Sg	Sb	19 10 52.7	+0.8
	5μm,0.5s						
VAR	Varanasi	3.02	219	*e*P	Pb	19 10 45.9	-0.9
VAR				*e*S	Sb	19 11 22.3	-1.2
SLGI	Shiliguri	3.12	108	*e*x	x	19 10 49.8	
SLGI				*e*S	Sn	19 11 22.5	+3.3
ALBI	Allahabad	3.78	232	*e*P	Pn	19 10 52.8	+1.7
ALBI				*e*S	Sn	19 11 37.4	+1.9
BOK	Bokaro	3.94	169	*e*P	Pn	19 10 55.9	+2.6
BOK				*i* x	x	19 11 04.8	
LGTI	Lohaghat	4.61	294	*e*P	Pn	19 11 07.3	+4.7
PTH	Pithoragarh	4.67	295	*e*P	Pn	19 11 06.9	+3.3
PTH				*e*S	Sn	19 11 59.6	+1.7
LSA	Lhasa	5.69	68	Pn	Pn	19 11 19.6	+1.8
LSA	Lhasa	5.69	68	P	Pn	19 11 19.6	+1.8
LSA	Lhasa	5.69	68	Pn	Pn	19 11 20.1	+2.3
LSA				Sg	Sg	19 12 53.4	-2.3
LSA				LR	LR		
	comp=N,250nm,7.1s						
LSA				LR	LR		
	comp=E,630nm,8.2s						
LSA				LR	LR		
	comp=Z,840nm,8.9s						
SHL	Shillong	6.43	108		Pn	19 11 27.9	+0.2
SHL	Shillong	6.43	108	P	Pn	19 11 28.0	+0.2
SHL	Shillong	6.43	108	*e*P	Pn	19 11 28.6	+0.8
SHL				*e*S	Sn	19 12 38.0	-3.2
SHL				IAML		19 12 41.7	
	comp=E,94nm,0.4s						
SHL				IAML		19 12 42.2	
	comp=N,232nm,0.8s						
BWNR	Bhubaneshwar	7.38	175	*e*P	Pn	19 11 43.7	+3.0
BWNR				*e*x	x	19 13 07.5	
SMLA	Simla	7.72	298	*e*P	Pn	19 11 47.1	+1.9
SMLA				*e*S	Sn	19 13 12.4	-0.3
SMLA				IAML		19 13 14.8	
	comp=E,73nm,0.3s						
SMLA				IAML		19 13 14.9	
	comp=N,79nm,0.3s						
BHPL	Bhopal	8.22	239	*e*P	Pn	19 11 51.7	-0.6
BHPL				*e*S	Sn	19 13 20.2	-5.0
BHPL				IAML		19 13 23.5	
	comp=E,116nm,0.5s						
BHPL				IAML		19 13 24.0	
	comp=N,134nm,0.3s						
AJM	Ajmer	9.39	265	*e*P	Pn	19 12 07.0	-1.3
CHCP	Chirah Chowk	11.79	303	P	Pn	19 12 41.5	+0.3
NIL	Nilore	11.80	303	Pn	Pn	19 12 39.1	-2.1
NIL	Nilore	11.80	303	P	Pn	19 12 39.1	-2.1
GOMU	GeErMu	11.83	42	P	Pn	19 12 43.8	+1.8
GOMU				pP		19 12 48.4	
GOMU				sP		19 12 51.3	
GOMU				pmax	pmax		
	comp=N,3.0nm,1.0s						
GOMU				pmax	pmax		
	comp=N,64nm,3.7s						
GOMU				LR	LR		
	comp=N,170nm,10.8s						
GOMU				LR	LR		
	comp=N,170nm,11.0s						
GOMU				LR	LR		
	comp=N,260nm,10.7s						
CEP	Cherat	12.88	302	P	Pn	19 12 55.5	-0.6
CEP				S	Sn	19 15 13.0	-6.5
POO	Poona	13.78	231	*e*P	Pn	19 13 02.0	-6.3
	comp=N,15nm,1.0s						
POO				*i* S	Sn	19 15 28.0	-13
KSH	Kashi	14.03	330	P	Pn	19 13 08.1	-3.6
KSH				sP	P	19 13 14.8	-4.9
KSH				S	Sn	19 15 36.6	-11
KSH				pmax	pmax		
	comp=N,7.0nm,1.0s						
KSH				LR	LR		
	comp=N,490nm,20.3s						
KSH				LR	LR		
	comp=N,410nm,18.4s						
PZH	PanZhiHua	14.88	91	P	Pn	19 13 23.9	+0.5
PZH				pmax	pmax		
	comp=N,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=N,100nm,5.6s						
TARG	Taragay, Kyrgy	15.23	339	Pn	Pn	19 13 26.8	-1.5
TARG				IAmb	IAmb	19 13 29.0	
	comp=Z,12nm,1.1s						
TARG	Taragay, Kyrgy	15.23	339	P	Pn	19 13 26.8	-1.5
TARG				pmax	pmax		
	comp=Z,13nm,1.1s						
KBL	Kabul	15.35	300	Pn	Pn	19 13 27.8	-1.9
KBL				IAmb	IAmb	19 13 42.1	
	comp=Z,9.3nm,1.0s						
KBL	Kabul	15.35	300	P	Pn	19 13 27.8	-1.9
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	Chiang Mai	15.48	122	P	P	19 13 34.7	-1.1
CHTO	Chiang Mai	15.48	122	P	P	19 13 34.7	-1.1
CHTO				pmax	pmax		
	comp=Z,13nm,1.5s						
CMAR	Chiang Mai Arr	15.70	123	Pn	Pn	19 13 34.8	+0.6
	comp=Z,1.2nm,0.8s,baz=310,slow=9.8,SNR=2.3						
CMAR				LR	LR	19 21 27.2	
	comp=Z,28nm,19.6s,baz=155,slow=44						
KMI	Kunming	16.02	95	⇓P	P	19 13 42.8	+0.9
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
DRK	Karamyk	16.14	320	Pn	Pn	19 13 37.6	-2.4
WMQ	Urumqi	16.24	7	*e*P	Pn	19 13 42.3	+1.2
BOOM	Boomskoye usch	16.55	336	P	Pn	19 13 45.8	+0.7
BOOM				IAmb	IAmb	19 14 04.2	
	comp=Z,38nm,1.5s						
BOOM	Boomskoye usch	16.55	336	P	Pn	19 13 45.8	+0.7
BOOM				pmax	pmax		
	comp=Z,38nm,1.5s						
CD2	Chengdu	16.59	74	P	P	19 13 48.6	+0.4
GAR	Garm	16.70	316	Pn	Pn	19 13 44.6	-2.5
GTA	Gaotai	16.92	43	⇑P	P	19 13 51.8	0.0
GTA				sP	sP	19 14 00.6	+3.2
GTA				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA				pmax	pmax		
	comp=Z,63nm,4.4s						
GTA				LR	LR		
	comp=Z,71nm,14.2s						
GTA				LR	LR		
	comp=Z,90nm,13.8s						
GTA				LR	LR		
	comp=Z,120nm,11.3s						
BTK	Batken	17.09	320	Pn	Pn	19 13 49.6	-2.3
BTK	Batken	17.09	320	P	Pn	19 13 49.6	-2.3
BTK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAK	Ala-Archa	17.23	333	LR	LR	19 20 60.0	
	comp=Z,35nm,21.1s,baz=177,slow=39						
LZH	Lanzhou	17.97	58	*e*P	Pn	19 14 01.8	-1.2
LZH				pP	sP	19 14 09.3	+0.3
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.7s						
LZH				LR	LR		
	comp=Z,200nm,11.3s						
LZH				LR	LR		
	comp=Z,230nm,11.4s						
LZH				LR	LR		
	comp=Z,220nm,13.6s						
MK31	Makanchi Array	19.20	354		Pn	19 14 17.2	-0.5
MK31	Makanchi Array	19.20	354	P	Pn	19 14 17.2	-0.5
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	19.20	354	P	Pn	19 14 17.4	-0.3
	comp=Z,0.5nm,0.3s,baz=172,slow=11,SNR=31						
	comp=Z,6.8nm,0.8s						
MKAR	Makanchi Array	19.20	354	P	P	19 14 16.1	-0.7
GYA	Guiyang	19.25	89	⇓P	Pn	19 14 19.0	+0.5
GYA				pmax	pmax		
	comp=Z,23nm,0.5s						
MAKZ	Makanchi	19.25	353	P	P	19 14 16.6	-0.7
MAKZ	Makanchi	19.25	353	P	P	19 14 16.6	-0.7
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KK31	Karatay Array	19.40	326	P	P	19 14 16.6	-2.3
KK31	Karatay Array	19.40	326	P	P	19 14 16.6	-2.3
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	19.40	326	P	P	19 14 17.6	-1.3
KKAR	Karatay Array	19.40	326	P	P	19 14 16.7	-2.3
KKAR				IAmb	IAmb	19 14 21.4	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	19.40	326	P	P	19 14 17.6	-1.3
PALK	Pallekele	20.72	192	LR	LR	19 22 12.4	
	comp=Z,40nm,19.7s,baz=166,slow=36						
XAN	Xi'an	21.39	67	P	P	19 14 39.9	-0.8
XAN				pP	pP	19 14 45.0	+0.5
XAN				sP	sP	19 14 47.4	+1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ENH	Enshi	21.49	77	P	P	19 14 41.4	-0.3
ENH				IAmb	IAmb	19 14 47.0	
	comp=Z,17nm,1.0s						
UBPT	Khong Chiam	22.58	119	P	P	19 14 53.2	-0.3
UBPT				IAmb	IAmb	19 15 19.0	
	comp=Z,9.3nm,1.2s						
KURBB	Kurchatov Arra	23.45	349	P	P	19 15 02.0	-0.1
	comp=Z,3.4nm,0.9s,baz=176,slow=9.4,SNR=11						
	comp=Z,3.4nm,0.9s						
KURK	Kurchatov	23.52	350	P	P	19 15 03.3	+0.4
KURK				IAmb	IAmb	19 15 05.1	
	comp=Z,7.9nm,1.0s						
KURK	Kurchatov	23.52	350	*de*P	P	19 15 03.9	+1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WSAR	Wadi Sarin	24.28	265	LR	LR	19 26 13.5	
	comp=Z,41nm,18.4s,baz=113,slow=41						
HHC	Hu-ho-hao-te	25.40	52	*e*P	P	19 15 22.0	+1.5
HHC				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,6.0s						
HHC				LR	LR		
	comp=Z,210nm,13.3s						
HHC				LR	LR		
	comp=Z,220nm,13.3s						
HHC				LR	LR		
	comp=Z,280nm,13.3s						
SONM	Songino Array	26.08	34	P	P	19 15 27.6	+1.0
	comp=Z,12nm,0.6s,baz=221,slow=10.0,SNR=57						
SONM				LR	LR	19 26 51.4	
	comp=Z,63nm,20.2s,baz=239,slow=39						
	comp=Z,12nm,0.6s						
SONM	Songino Array	26.08	34	P	P	19 15 28.0	+1.4
SONM	Songino Array	26.08	34	P	P	19 15 28.0	+1.4
SONM				pmax	pmax		
	comp=Z,14nm,0.6s						
ZAA0	Zalesovo Array	26.24	360	P	P	19 15 28.3	+0.5
ZAA0				IAmb	IAmb	19 15 29.1	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	26.24	360	P	P	19 15 28.8	+1.0
	comp=Z,2.9nm,0.5s,baz=185,slow=9.2,SNR=14						
	comp=Z,2.9nm,0.5s						
ZALV	Zalesovo Beam	26.24	360	P	P	19 15 28.4	+0.6
ULN	Ulaanbaatar	26.43	34	*de*P	P	19 15 30.9	+1.1
ULN				pmax	pmax		
	comp=Z,38nm,1.3s						
ZAK	Zakamensk	26.57	27	*e*P	P	19 15 31.4	+0.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KULM	Kulim	26.74	144	P	P	19 15 33.0	+0.3
MOY	Mondy	26.78	22	*e*P	P	19 15 36.4	+3.5
MOY				pmax	pmax		
	comp=Z,14nm,2.2s						
NJ2	Nanjing	29.52	73	*e*P	P	19 15 58.0	+0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BNX	BinXian	37.89	50	⇓P	P	19 17 12.9	+2.9
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,130nm,3.6s						
KLR	Kul'dur	41.58	46	P	P	19 17 41.1	+0.5
	comp=Z,1.2nm,0.7s,baz=278,slow=10,SNR=4.8						
	comp=Z,1.2nm,0.7s						
KLR	Kul'dur	41.58	46	⇑*e*P	P	19 17 41.4	+0.8
KLR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NRIK	Noril'sk	41.71	1	P	P	19 17 41.6	+0.2
	comp=Z,6.7nm,0.6s,baz=166,slow=6.4,SNR=7.9						
	comp=Z,6.7nm,0.6s						
NRIK	Noril'sk	41.71	1	P	P	19 17 41.8	+0.4
NRIK				IAmb	IAmb	19 17 43.1	
	comp=Z,6.7nm,0.7s						
NRIK	Noril'sk	41.71	1	*ce*P	P	19 17 42.3	+0.9
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	45.14	28	P	P	19 18 08.2	-1.0
YAK	Yakutsk	45.14	28	*ce*P	P	19 18 09.3	+0.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	Malin Array Be	47.70	315	P	P	19 18 28.4	-1.0
	comp=Z,0.2nm,0.3s,baz=79,slow=7.3,SNR=3.5						
	comp=Z,0.2nm,0.3s						
AKASG	Malin Array Be	47.70	315	*ce*P	P	19 18 35.2	+5.8
YSS	Yuzh-Sakhalins	48.57	51	*e*P	P	19 18 27.2	-9.1
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MLR	Muntele Rosu	49.58	308	P	P	19 18 44.5	+0.3
	comp=Z,2.5nm,0.9s,baz=70,slow=2.6,SNR=4.0						
	comp=Z,2.5nm,0.9s						
MLR	Muntele Rosu	49.58	308	IAmb	IAmb	19 18 48.9	
	comp=Z,2.8nm,1.0s						
TIXI	Tiksi	50.12	17	P	P	19 18 47.4	-0.3
TIXI				IAmb	IAmb	19 18 49.0	
	comp=Z,4.1nm,0.7s						
TIXI	Tiksi	50.12	17	P	P	19 18 47.4	-0.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA1	FINESS Array S	51.34	328	P	P	19 18 56.1	-0.9
FINES	FINESS Array B	51.34	328	P	P	19 18 56.5	-0.5
	comp=Z,1.9nm,1.0s,baz=108,slow=12,SNR=5.0						
	comp=Z,1.9nm,1.0s						
FINES	FINESS Array B	51.34	328	P	P	19 18 55.4	-1.7
FINES	FINESS Array B	51.34	328	*i* P	P	19 19 03.0	+5.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	53.81	338	P	P	19 19 15.3	+0.1
	comp=Z,1.7nm,0.8s,baz=106,slow=7.7,SNR=7.1						
	comp=Z,1.7nm,0.8s						
ARCES	ARCESS Array B	53.81	338	P	P	19 19 13.8	-1.5
SEY	Seymchan	55.42	31	⇑*e*P	P	19 19 27.0	0.0
SEY				pmax	pmax		
	comp=Z,9.0nm,2.5s						
CLL	Collm	57.93	315	*e*P	P	19 19 49.0	+3.9
WB0	Warramunga Arr	67.09	129	P	P	19 20 47.1	+0.4
WRA	Warramunga Arr	67.17	129	P	P	19 20 48.1	+0.9
	comp=Z,2.1nm,0.7s,baz=323,slow=6.4,SNR=20						
	comp=Z,2.1nm,0.7s						
WRA	Warramunga Arr	67.17	129	P	P	19 20 47.1	-0.1
WRA	Warramunga Arr	67.17	129	*ce*P	P	19 20 59.9	+13
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB2	Warramunga Arr	67.18	129	P	P	19 20 48.1	+0.8
WR0	Warramunga Arr	67.32	129	P	P	19 20 48.5	+0.3
AS31	Alice Springs	69.45	133	P	P	19 21 01.8	+0.3
AS31				IAmb	IAmb	19 21 05.3	
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	69.45	133	P	P	19 21 02.1	+0.6
	comp=Z,2.0nm,0.7s,baz=315,slow=5.7,SNR=19						
	comp=Z,2.0nm,0.7s						
ESDC	Sonseca Array	72.23	306	P	P	19 21 17.1	-1.2
	comp=Z,1.5nm,1.2s,baz=78,slow=8.1,SNR=3.2						
	comp=Z,1.5nm,1.2s						
TOLK	Toolik Lake Re	75.99	18	P	P	19 21 40.6	+0.9
TOLK				IAmb	IAmb	19 21 44.4	
	comp=Z,3.9nm,0.9s						
LBTB	Lobatse	77.64	233	P	P	19 21 49.8	+0.1
LBTB				IAmb	IAmb	19 21 57.6	
	comp=Z,3.3nm,0.8s						
LBTB	Lobatse	77.64	233	P	P	19 21 49.8	+0.1
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H23K	Yukon River	77.89	20	P	P	19 21 50.0	-0.4
H23K				IAmb	IAmb	19 21 58.9	
	comp=Z,2.7nm,1.2s						
K20K	Telida	78.02	23	P	P	19 21 51.3	+0.1
K20K				IAmb	IAmb	19 22 14.7	
	comp=Z,4.8nm,1.2s						
BMAR	Burnt Mountain	78.18	17	P	P	19 21 53.0	+1.0
TORD	Torodi Ar. Bea	78.24	279	P	P	19 21 52.3	-1.0
	comp=Z,0.5nm,0.7s,baz=63,slow=3.7,SNR=8.3						
	comp=Z,0.5nm,0.7s						
TORD	Torodi Ar. Bea	78.24	279	P	P	19 21 52.2	-1.0
TORD				IAmb	IAmb	19 22 10.9	
	comp=Z,2.2nm,1.3s						
BPAW	Bear Paw Mtn.	78.59	22	P	P	19 21 54.6	+0.2
BPAW				IAmb	IAmb	19 22 14.9	
	comp=Z,4.4nm,1.3s						
MDM	Murphy Dome	78.89	20	P	P	19 21 56.8	+0.8
MDM				IAmb	IAmb	19 22 03.2	
	comp=Z,2.2nm,0.9s						
PPLA	Purkeypile	78.97	23	P	P	19 21 56.7	+0.1
ILAR	Eielson Array	79.43	20	P	P	19 21 58.4	-0.6
	comp=Z,0.8nm,0.7s,baz=310,slow=4.7,SNR=6.8						
	comp=Z,0.8nm,0.7s						
BOSA	Boshof	80.12	230	P	P	19 22 02.6	-0.7
	comp=Z,1.0nm,0.5s,baz=174,slow=21,SNR=1.6						
	comp=Z,1.0nm,0.5s						
BOSA	Boshof	80.12	230	P	P	19 22 03.0	-0.3
BOSA				IAmb	IAmb	19 22 11.5	
	comp=Z,3.9nm,1.4s						
BOSA	Boshof	80.12	230	P	P	19 22 03.0	-0.3
BOSA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
INK	Inuvik	80.13	14	P	P	19 22 03.4	+0.8
	comp=Z,2.7nm,0.9s,baz=302,slow=7.1,SNR=2.4						
	comp=Z,2.7nm,0.9s						
RIDG	Independent Ri	80.79	20	P	P	19 22 05.7	-0.6
RIDG				IAmb	IAmb	19 22 26.1	
	comp=Z,7.3nm,1.5s						
BCAR	Beaver Creek A	82.22	20	P	P	19 22 14.3	+0.4
YKA	Yellowknife Ar	88.76	9	P	P	19 22 46.0	-0.3
	comp=Z,1.1nm,0.7s,baz=339,slow=4.5,SNR=4.4						
	comp=Z,1.1nm,0.7s						
MAW	Mawson	96.45	188	P	P	19 23 22.4	+1.0
	comp=Z,1.3nm,0.5s,baz=34,slow=3.6,SNR=2.0						
	comp=Z,1.3nm,0.5s						

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*MOS **23** 19:20:37.7±1.1, 16°.72N×93°.77W, h124^{km}, mb5.1/22, MS4.5/12, Error ellipse: s-maj=7.0km s-min=4.0km az=103.6*

*IDC **23** 19:20:38.6±0.5, 16°.72N×93°.64W, h123^{km}±3^{km}, mb4.5/26, mbtmp4.9/29, MS4.1/47, Error ellipse: s-maj=12.2km s-min=6.5km az=61.0*

*MEX **23** 19:20:39.8±0.9, 16°.64N×94°.04W, h130^{km}±6^{km}, MD5.4*

*GCMT **23** 19:20:39.5±0.1, 16°.73N±0°.01×93°.98W±0°.01, h131^{km}, MW5.4/141, Moment Tensor Solution. s135,c210; s141,c254; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.12±.02; M$_{\theta\theta}$-0.21±.03; M$_{\phi\phi}$1.33±.03; M$_{r\theta}$0.72±.02; M$_{\theta\phi}$-0.90±.02; M$_{\phi r}$-0.45±.02; Best double couple: M$_0$1.71800×10^{17} NP1:ϕ_s183.00000°, δ39.00000°, λ-46.00000°. NP2:ϕ_s312.00000°, δ63.00000°, λ-119.00000°. Principal axes: T 1.9200, Plg14.0000°, Azm63.0000°; N -0.4030, Plg26.0000°, Azm326.0000°; P -1.5160, Plg61.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 19:20:39.5±2.4, 16°.71N±0°.05×93°.90W±0°.04, h124^{km}±4^{km}, mb5.2/646, Mww5.4, Md5.4/88(MEX) Error ellipse: s-maj=7.5km s-min=5.4km az=213.0*

*GCG **23** 19:20:40.8±2.8, 16°.78N×93°.78W, h140^{km}, MD5.1*

*NEIC **23** 19:20:42, 16°.95N×93°.82W, h120^{km}, Moment Tensor Solution. Duration: 6^s.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.32; M$_{\theta\theta}$-1.09; M$_{\phi\phi}$1.41; M$_{r\theta}$-0.62; M$_{\theta\phi}$0.43; M$_{\phi r}$0.26; Fault plane solution: M$_0$1.51000×10^{17} NP1:ϕ_s51.00000°, δ66.00000°, λ-17.00000°. NP2:ϕ_s148.00000°, δ74.00000°, λ-155.00000°. Principal axes: T 1.4965, Plg5.0000°, Azm278.0000°; N 0.0253, Plg61.0000°, Azm179.0000°; P -1.5218, Plg29.0000°, Azm11.0000°;*

*UCR **23** 19:21:23.2±1.9, 15°.21N×90°.65W, h0^{km}±249^{km}, MW4.1*

ISC 23 19:20:38.7±0.2**, 16°.62N**±0°.03×**93°.93W**±0°.03**, h128**^{km}±1^{km}**, h128**^{km}**:pP-P, n1611, σ1^s.84**/1933**, mb5.1**/361**, 103C-143D, Fault plane solution: NP1:**ϕ_s153.31900°**,** δ46.41557°**,** λ-90.23103°. **NP2:**ϕ_s333.65411°**,** δ43.58492°**,** λ-89.75726°. **Principal axes:** T Plg1.4153°**,** Azm243.4824°**;** N Plg0.1674°**,** Azm153.4783°**;** P Plg88.5748°**,** Azm56.7361°**; Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UXUV	UXUV	0.73	343	⇓*i*P	Pn	19 20 58.8	-0.3
UXUV				*i* S	Sn	19 21 13.3	-1.3
TGIG		0.79	78		Pn	19 21 00.4	+0.8
TGIG					Sn	19 21 16.4	+1.0
TGIG		0.79	78	*e*P	Pn	19 21 00.4	+0.8
TGIG				*i* S	Sn	19 21 16.4	+1.0
CMIG	Matias Romero	1.03	297	P	Pn	19 21 00.4	-1.3
	3μm,0.3s,baz=154,slow=7.4,SNR=8447						
CMIG				S	Sn	19 21 16.1	-3.0
	21μm,0.5s,baz=288,slow=20,SNR=21						
CMIG				LR	LR	19 21 24.5	
	comp=Z,7μm,20.2s,baz=146,slow=37						
CMIG	Matias Romero	1.03	297		Pn	19 21 00.6	-1.1
CMIG					Sn	19 21 17.2	-2.0
CMIG	Matias Romero	1.03	297	⇓*e*P	Pn	19 21 00.6	-1.1

CMIG				i S	Sn	19 21 17.2	-2.0
PCIG		1.13	143		Pn	19 21 03.4	+0.7
PCIG					Sn	19 21 21.8	+0.9
PCIG		1.13	143	⇓eP	Pn	19 21 03.4	+0.7
PCIG				eS	Sn	19 21 21.8	+0.9
TUIG	Tuzandepetl	1.49	341		Pn	19 21 06.1	-0.3
TUIG					Sn	19 21 26.9	-0.8
TUIG	Tuzandepetl	1.49	341	⇓eP	Pn	19 21 06.1	-0.3
TUIG				eS	Sn	19 21 26.9	-0.8
CCIG	Comitan	1.75	101		Pn	19 21 10.8	+1.1
CCIG				Sn	Sn	19 21 31.5	-1.9
CCIG	Comitan	1.75	101	⇑iP	Pn	19 21 11.4	+1.8
CCIG				i S	Sn	19 21 35.2	+1.8
NEUV	Arroyo Zacate	2.10	302	eP	Pn	19 21 12.4	-1.3
NEUV				i S	Sn	19 21 37.6	-3.0
PAVE	Pavencul	2.20	130	⇓eP	Pn	19 21 17.2	+1.9
PAVE				i S	Sn	19 21 45.4	+2.2
PATR	El Naranjo	2.21	132	⇓eP	Pn	19 21 16.7	+1.3
PATR				eS	Sn	19 21 41.5	-1.9
CHUJ	Union Juarez	2.31	131	⇓eP	Pn	19 21 18.1	+1.3
CHUJ				eS	Sn	19 21 47.1	+1.3
HUEH	Huehuetenango	2.67	119		Pn	19 21 22.2	+1.0
VHO	Vista Hermosa	2.73	280	eP	Pn	19 21 21.5	-0.4
VHO				eS	Sn	19 21 50.5	-4.6
STG3	Santiaguito 3,	2.96	130	eP	Pn	19 21 27.5	+2.7
RTAL	Retalhuleu	2.99	134	Pn	Pn	19 21 27.0	+1.9
RTAL				Sn	Sn	19 21 56.2	-4.8
PEIG	Puerto Escondi	3.15	259	⇑eP	Pn	19 21 23.8	-3.5
PEIG				eS	Sn	19 21 58.4	-6.4
TOIG	Toxpalan	3.34	297	eP	Pn	19 21 29.3	-0.5
TOIG				eS	Sn	19 22 02.5	-6.7
YOIG	Yosondua	3.48	274	⇑iP	Pn	19 21 30.4	-1.3
YOIG				i S	Sn	19 22 08.1	-4.6
SCIG	Sabancuy	3.50	48		Pn	19 21 32.1	+0.3
SCIG					Sn	19 22 10.2	-2.7
SCIG	Sabancuy	3.50	48	⇑eP	Pn	19 21 32.1	+0.3
SCIG				eS	Sn	19 22 10.2	-2.7
FUG	Fuego 3	3.67	126	eP	Pn	19 21 37.7	+3.5
TXIG	Tlaxiaco	3.73	280	⇑eP	Pn	19 21 34.6	-0.5
TXIG				i S	Sn	19 22 12.7	-6.1
TPIG	Tehuac#an	3.74	299		Pn	19 21 35.2	+0.2
TPIG					Sn	19 22 14.0	-4.7
TPIG	Tehuac#an	3.74	299	⇓eP	Pn	19 21 35.2	+0.2
TPIG				eS	Sn	19 22 14.0	-4.7
JAUV	Jalcomulco	3.87	315	⇓eP	Pn	19 21 34.8	-1.9
JAUV				eS	Sn	19 22 16.4	-5.2
PCG	Pacaya	3.89	124	eP	Pn	19 21 38.9	+1.7
HLIG	Huajuapan de L	3.90	289	⇑eP	Pn	19 21 37.1	-0.1
HLIG				eS	Sn	19 22 10.5	-12
PETF	Flores	3.90	85		Pn	19 21 37.7	+0.7
NBG	Las Nubes	4.00	120	eP	Pn	19 21 41.2	+2.6
PNIG	Pinotepa	4.04	267		Pn	19 21 36.3	-2.6
PNIG					Sn	19 22 14.5	-11
PNIG	Pinotepa	4.04	267	⇑eP	Pn	19 21 36.3	-2.6
PNIG				eS	Sn	19 22 14.5	-11
FTIG	Fresnillo de T	4.22	288	eP	Pn	19 21 41.6	+0.2
FTIG				eS	Sn	19 22 18.6	-12
MRL	Marmol	4.36	110	eP	Pn	19 21 44.2	+0.8
TLIG	Tlapa	4.54	283		Pn	19 21 45.1	-0.5
TLIG	Tlapa	4.54	283		Sn	19 22 30.9	-6.8
TLIG	Tlapa	4.54	283	⇑eP	Pn	19 21 45.2	-0.5
TLIG				eS	Sn	19 22 30.9	-6.8
NUBE	Las Nubes	4.83	123	eP	Pn	19 21 51.0	+1.4
NUBE	Las Nubes	4.83	123	eP	Pn	19 21 51.0	+1.4
ESQI	Esquipulas	4.87	114		Pn	19 21 49.9	-0.2
ESQI	Esquipulas	4.87	114	eP	Pn	19 21 50.1	0.0
MTO3	Montecristo	4.92	116		Pn	19 21 50.5	-0.4
MTO3	Montecristo	4.92	116	eP	Pn	19 21 50.8	-0.1
MTO3	Montecristo	4.92	116	eP	Pn	19 21 50.8	-0.1
SNJE	San Jose	4.99	123	eP	Pn	19 21 54.5	+2.7
SNJE	San Jose	4.99	123	eP	Pn	19 21 54.5	+2.7
CRIG	Cruz Grande	4.99	272		Pn	19 21 49.3	-2.3
CRIG					Sn	19 22 35.4	-13
CRIG	Cruz Grande	4.99	272	⇑eP	Pn	19 21 49.3	-2.3
CRIG				eS	Sn	19 22 35.4	-13
CEVE	Cerro Verde	4.99	123	eP	Pn	19 21 55.0	+3.0
CEVE	Cerro Verde	4.99	123	eP	Pn	19 21 55.0	+3.0
PPM	Popocatepetl	5.10	299	⇑eP	Pn	19 21 55.1	+1.6
PPM				eS	Sn	19 22 47.1	-4.5
BOQS	Boqueron	5.32	122	eP	Pn	19 21 58.7	+2.4
BOQS	Boqueron	5.32	122	eP	Pn	19 21 58.7	+2.4
YAIG	Yautepec	5.38	295		Pn	19 21 58.1	+1.1
YAIG					Sn	19 22 52.4	-5.7
YAIG	Yautepec	5.38	295	⇑eP	Pn	19 21 58.1	+1.1
YAIG				eS	Sn	19 22 52.4	-5.7
SNET	Serv Nac Est T	5.39	122		Pn	19 21 58.7	+1.6
SNET	Serv Nac Est T	5.39	122	eP	Pn	19 21 59.0	+2.0
SNET	Serv Nac Est T	5.39	122	eP	Pn	19 21 59.0	+2.0
LALI	Alcalda de L	5.43	124	eP	Pn	19 21 59.5	+2.0
LALI	Alcalda de L	5.43	124	eP	Pn	19 21 59.5	+2.0
LFU	La Fuente	5.45	121	eP	Pn	19 21 59.5	+1.6
LFU	La Fuente	5.45	121	eP	Pn	19 21 59.5	+1.6
DAIG	Los Arroyos	5.50	275		Pn	19 21 56.6	-1.8
DAIG					Sn	19 22 52.0	-8.6
DAIG	Los Arroyos	5.50	275	⇑iP	Pn	19 21 56.6	-1.8
DAIG				eS	Sn	19 22 52.0	-8.6
LFRS	El Faro	5.56	122	eP	Pn	19 22 01.6	+2.2
LFRS	El Faro	5.56	122	eP	Pn	19 22 01.6	+2.2
MEIG	Mezcala	5.59	284		Pn	19 21 60.0	+0.2
MEIG					Sn	19 22 51.3	-12
MEIG	Mezcala	5.59	284	⇑eP	Pn	19 21 60.0	+0.2
MEIG				i S	Sn	19 22 51.3	-12
PLIG	Platanillo	5.61	289		Pn	19 22 00.5	+0.5
PLIG					Sn	19 22 51.8	-12
PLIG	Platanillo	5.61	289	⇑eP	Pn	19 22 00.5	+0.5
PLIG				eS	Sn	19 22 51.8	-12
SJTE	Alcalda de S	5.61	122	eP	Pn	19 22 03.3	+3.2
PAVA	Las Pavas	5.62	120	eP	Pn	19 22 02.0	+1.9
PAVA	Las Pavas	5.62	120	eP	Pn	19 22 02.0	+1.9
UNM	Universidad Na	5.68	299	Pn	Pn	19 22 02.9	+1.8
UNM	Universidad Na	5.68	299	P	Pn	19 22 02.9	+1.8
UNM	Universidad Na	5.68	299	eP	Pn	19 22 02.5	+1.3
UNM				eS	Sn	19 23 03.7	-1.6
COEG	Centro de Oper	5.71	121	eP	Pn	19 22 03.4	+2.0
COEG	Centro de Oper	5.71	121	eP	Pn	19 22 03.4	+2.0
SCLA	Alcaldia de Sa	5.80	119	eP	Pn	19 22 04.4	+1.9
SCLA	Alcaldia de Sa	5.80	119	eP	Pn	19 22 04.4	+1.9
MYIG	Mrida	5.86	42		Pn	19 22 03.6	+0.3
MYIG					Sn	19 23 04.3	-5.0
MYIG	Mrida	5.86	42	⇑iP	Pn	19 22 03.6	+0.3
MYIG				eS	Sn	19 23 04.3	-5.0
COEB	Comit de Eme	6.07	120	eP	Pn	19 22 08.9	+2.7
COEB	Comit de Eme	6.07	120	eP	Pn	19 22 08.9	+2.7
DEIG	Demacu	6.08	308	eP	Pn	19 22 07.0	+0.5
DEIG				i S	Sn	19 23 13.8	-1.1
CAIG	El Cayaco	6.09	275		Pn	19 22 04.7	-1.7
CAIG					Sn	19 23 06.5	-8.3
CAIG	El Cayaco	6.09	275	⇑iP	Pn	19 22 04.7	-1.7
CAIG				eS	Sn	19 23 06.5	-8.3
PACA	Pacayal	6.25	119	eP	Pn	19 22 10.7	+2.0
PACA	Pacayal	6.25	119	eP	Pn	19 22 10.7	+2.0
RANC	El Ranchito	6.30	119	eP	Pn	19 22 11.6	+2.2
RANC	El Ranchito	6.30	119	eP	Pn	19 22 11.6	+2.2
ARIG	Puente Sto Nin	6.35	286		Pn	19 22 10.5	+0.6
ARIG					Sn	19 23 15.2	-6.0
ARIG	Puente Sto Nin	6.35	286	⇑eP	Pn	19 22 10.5	+0.6
ARIG				i S	Sn	19 23 15.2	-6.0
LCND	La Caada	6.70	119	eP	Pn	19 22 16.1	+1.5
LCND	La Caada	6.70	119	eP	Pn	19 22 16.1	+1.5
CNCH	Conchagua	6.76	119	eP	Pn	19 22 16.7	+1.1
CNCH	Conchagua	6.76	119	eP	Pn	19 22 16.7	+1.1
TGUH	Tegucigalpa,Un	6.91	111		Pn	19 22 19.2	+1.7
TGUH	Tegucigalpa,Un	6.91	111	eP	Pn	19 22 19.3	+1.8
TGUH	Tegucigalpa,Un	6.91	111	eP	Pn	19 22 18.3	+0.8
TGUH	Tegucigalpa,Un	6.91	111	eP	Pn	19 22 18.3	+0.8
ZIIG	Zihuatanejo	7.28	279		Pn	19 22 21.9	-0.5
ZIIG					Sn	19 23 40.1	-3.4
ZIIG	Zihuatanejo	7.28	279	⇑iP	Pn	19 22 21.9	-0.5
ZIIG				eS	Sn	19 23 40.1	-3.4
JRQG	Juriquilla Cam	7.40	304		Pn	19 22 25.2	+1.0
JRQG					Sn	19 23 49.0	+2.2
JRQG	Juriquilla Cam	7.40	304	i P	Pn	19 22 25.2	+1.0
JRQG				eS	Sn	19 23 49.0	+2.2
MOIG	Morelia	7.55	295	Pn	Pn	19 22 28.0	+1.8
MOIG	Morelia	7.55	295		Sn	19 23 37.2	-13
MOIG	Morelia	7.55	295	eP	Pn	19 22 28.1	+1.9
MOIG				eS	Sn	19 23 37.2	-13
CRIN	San Cristobal	7.71	119		Pn	19 22 30.6	+2.3
RPIG	Rio Verde	7.76	313	i P	Pn	19 22 30.9	+2.0
RPIG				i S	Sn	19 23 56.4	+1.1
GTIG	Gomez Farias	8.09	323	eP	Pn	19 22 34.1	+0.7
GTIG				eS	Sn	19 24 02.7	-0.6
CNGN	Cerro Negro	8.11	119		Pn	19 22 35.5	+1.9
MATN	Matagalpa	8.56	114		Pn	19 22 40.4	+0.6
BOAB	BOACO BROADBAN	9.01	116	Pn	Pn	19 22 47.1	+1.4
MMIG	Aquila	9.14	282		Pn	19 22 47.7	+0.2
MMIG					Sn	19 24 23.4	-5.3
MMIG	Aquila	9.14	282	⇑eP	Pn	19 22 47.7	+0.2
MMIG				eS	Sn	19 24 23.4	-5.3
AAIG	Aguscalientes	9.59	305	eP	Pn	19 23 00.5	+6.7
ACON	Acoyapa	9.66	117		Pn	19 22 56.2	+1.7
HZTE	Horizontes, Gu	10.00	125	Pn	Pn	19 23 00.8	+1.7
HZTE	Horizontes, Gu	10.00	125	eP	Pn	19 23 00.9	+1.9
ZAIG	Zacatecas	10.18	308	Pn	Pn	19 23 03.5	+1.8
ZAIG	Zacatecas	10.18	308	i P	Pn	19 23 04.7	+2.9
ESPN	Las Esperanzas	10.31	114		Pn	19 23 04.7	+1.5
ORTG	Ortega, Santa	10.32	126	Pn	Pn	19 23 05.2	+1.8
COLC	Colonia	10.34	124	eP	Pn	19 23 05.8	+2.2
PLVR	Palo Verde	10.41	126	eP	Pn	19 23 06.8	+2.0
DUNO	Dulce Nombre,	10.46	127		Pn	19 23 06.6	+1.2
JTS	Las Juntas de	10.76	125	P	Pn	19 23 06.6	-2.6
	11nm,0.3s,baz=30,slow=12,SNR=24						
JTS				S	Sn	19 25 05.8	-2.1
	6.1nm,0.3s,baz=323,slow=23,SNR=0.9						
CJM	Chamela	10.96	287	eP	Pn	19 23 10.6	-1.3
CJM				i S	Sn	19 25 16.8	+4.1
ANIG	Ahuacatlan	10.96	295		Pn	19 23 14.0	+2.0
ANIG	Ahuacatlan	10.96	295	i P	Pn	19 23 14.0	+2.0
JACO	JACO, Garabito	11.37	126		Pn	19 23 18.8	+1.4
KVTX	Kingsville	11.48	342		Pn	19 23 20.4	+1.7
KVTX	Kingsville	11.48	342	P	P	19 23 23.2	-3.9
	baz=160,SNR=12						
HDC	Heredia	11.59	123	Pn	Pn	19 23 21.8	+1.4
RIMA	Rio Macho	11.93	124		Pn	19 23 25.2	+0.2
SOR	Soroa	11.97	57	Pn	Pn	19 23 23.3	-2.0
SOR	Soroa	11.97	57	P	Pn	19 23 23.3	-2.0
PEZE	Perez Zeledon,	12.30	125		Pn	19 23 31.2	+1.5
SRBA	San Rafael, Bu	12.64	124	Pn	Pn	19 23 34.4	+0.2
735A	Kenedy	12.69	344		Pn	19 23 35.7	+1.1
735A	Kenedy	12.69	344	P	P	19 23 38.1	-2.6
	baz=163,SNR=38						
833A	Chaparral WMA,	12.70	338	Pn	Pn	19 23 37.0	+2.4
833A	Chaparral WMA,	12.70	338	P	P	19 23 38.1	-2.7
	baz=155,SNR=232						
833A	Chaparral WMA,	12.70	338	P	Pn	19 23 36.5	+1.9
	baz=155,SNR=232						
DRK0	Durika	12.72	124		Pn	19 23 36.0	+0.8
RIOS	Rincon, Osa	12.85	127		Pn	19 23 35.4	-1.3
HKT	Hockley	13.38	353	Pn	Pn	19 23 43.6	+0.2
HKT	Hockley	13.38	353	P	Pn	19 23 43.7	+0.2
HKT	Hockley	13.38	353	P	Pn	19 23 43.7	+0.2
	baz=172						
CDITO	Canoas	13.42	125		Pn	19 23 45.0	+0.8
BRU2	Volcan	13.43	124		Pn	19 23 44.8	+0.3
BRU2	Volcan	13.43	124	eP	Pn	19 23 43.5	-1.0
LCCY	Blossom Villag	13.50	75	Pn	Pn	19 23 44.5	-0.7
PDIG	Papasquiaro	13.60	310	eP	P	19 23 49.4	-1.7
CBCY	The Bluff, Cay	13.82	75	Pn	Pn	19 23 38.8	-10
441A	DeRidder	14.08	3		Pn	19 23 52.3	-0.2
441A	DeRidder	14.08	3	S	Sn	19 26 31.8	+3.7
	baz=183						
435B	Jarrell	14.49	347	Pn	Pn	19 23 57.8	+0.1
435B	Jarrell	14.49	347	P	Pn	19 23 58.8	+1.1
	baz=166,SNR=29						
435B	Jarrell	14.49	347	P	Pn	19 23 59.0	+1.3
	baz=166						
342A	Flagon Creek P	14.76	5		Pn	19 24 00.9	-0.2
342B	Flagon Creek P	14.76	5	P	Pn	19 24 01.5	+0.4
	baz=186,SNR=6.3						
JCT	Junction City	14.81	340	Pn	Pn	19 24 01.9	+0.2
JCT	Junction City	14.81	340	P	Pn	19 24 01.9	+0.2
JCT	Junction City	14.81	340	P	P	19 24 03.0	-1.3
	baz=157,SNR=64						
JCT	Junction City	14.81	340	P	P	19 24 03.3	-1.0
	baz=157,SNR=64						
HPIG		14.96	315	P	Pn	19 24 02.5	-1.4
344A	Westbrook Farm	15.05	11	Pn	Pn	19 24 04.7	0.0
344A	Westbrook Farm	15.05	11	P	Pn	19 24 05.3	+0.6
	baz=192,SNR=9.1						
344A				S	Sn	19 26 53.5	+2.1
	baz=192						
NATX	Nacogdoches	15.09	358	Pn	Pn	19 24 05.0	-0.2
NATX	Nacogdoches	15.09	358	P	Pn	19 24 06.1	+0.9
	baz=177,SNR=9.5						
NATX	Nacogdoches	15.09	358	P	Pn	19 24 05.0	-0.2
	baz=177,SNR=9.5						
061Z	Ochoppi	15.22	51		Pn	19 24 05.5	-1.3
061Z	Ochoppi	15.22	51	P	Pn	19 24 06.8	0.0
	baz=235,SNR=49						
061Z				S	S	19 27 05.2	+2.5
	baz=235						
346A	Big Creek Wild	15.25	15	P	Pn	19 24 07.5	+0.2
346A	Big Creek Wild	15.25	15	P	Pn	19 24 07.9	+0.6
	baz=196						
346A				S	Sn	19 26 58.2	+1.9
	baz=196						
237A	Washetta, Mont	15.41	354		Pn	19 24 08.6	-0.6
237A	Washetta, Mont	15.41	354	P	P	19 24 10.0	-0.9
	baz=173,SNR=16						
TX32	Lajitas Array	15.50	326	P	P	19 24 12.7	+0.6
TXAR	Lajitas Array	15.50	326	P	P	19 24 12.5	+0.4
	41nm,0.8s,baz=149,slow=14,SNR=225						
TXAR				pP	pP	19 24 38.5	+3.8
	20nm,0.9s,baz=157,slow=16,SNR=3.6						
TXAR				S	S	19 27 05.4	-2.6
	1.0nm,0.4s,baz=43,slow=26,SNR=1.1						
TXAR				LR	LR	19 31 37.5	
	comp=Z,195nm,18.3s,baz=138,slow=42						
TXAR	Lajitas Array	15.50	326		P	19 24 11.7	-0.4
TX31	Lajitas Ar. Si	15.50	326	P	P	19 24 12.0	-0.1
TX31				IAmb	IAmb	19 24 13.6	
	comp=Z,155nm,0.8s						
TX31	Lajitas Ar. Si	15.50	326	P	P	19 24 11.5	-0.6
	baz=142,SNR=42						
TX31				S	S	19 27 09.7	+1.7
	baz=142						
WHTX	Lake Whitney,	15.64	349	P	Pn	19 24 12.0	0.0
WHTX	Lake Whitney,	15.64	349	P	Pn	19 24 12.3	+0.3
	baz=167,SNR=37						
WHTX	Lake Whitney,	15.64	349	P	Pn	19 24 12.2	+0.3
	baz=167,SNR=37						
MTDJ	Mount Denham	15.72	82	Pn	Pn	19 24 12.6	-0.7
MTDJ	Mount Denham	15.72	82	eP	P	19 24 14.4	-0.2
BRAL	Brewton	15.78	22	P	P	19 24 15.6	+0.6
BRAL	Brewton	15.78	22	P	P	19 24 16.3	+1.3
	baz=205						
BRAL				S	Sn	19 27 07.7	-1.3
	baz=205						
BRAL	Brewton	15.78	22	P	P	19 24 14.4	-0.6
	baz=205						
451A	Vernon	15.81	27		Pn	19 24 13.1	-1.1
451A	Vernon	15.81	27	P	P	19 24 15.0	-0.3
	baz=210,SNR=40						
451A				S	Sn	19 27 11.1	+1.4
	baz=210						
VBMS	Vicksburg	15.84	11	P	Pn	19 24 14.6	+0.1
VBMS	Vicksburg	15.84	11	P	Pn	19 24 14.9	+0.5
	baz=192,SNR=6.3						
VBMS				S	Sn	19 27 12.0	+1.7
	baz=192						
VBMS	Vicksburg	15.84	11	P	Pn	19 24 15.0	+0.5
	baz=192,SNR=6.3						
553A	Crawfordville	16.06	31	P	Pn	19 24 16.7	-0.6
553A	Crawfordville	16.06	31	P	P	19 24 17.9	-0.3
	baz=215,SNR=39						
553A				S	Sn	19 27 16.3	+0.6
	baz=215						
143A	Socs Landing,	16.18	8	P	Pn	19 24 17.9	-0.7
143A	Socs Landing,	16.18	8	P	Pn	19 24 17.9	-0.7
	baz=189						
DWPF	Disney Wildern	16.24	43	P	Pn	19 24 18.8	-0.6
DWPF	Disney Wildern	16.24	43	P	Pn	19 24 19.7	+0.2
	baz=228,SNR=11						
DWPF	Disney Wildern	16.24	43	P	P	19 24 19.9	-0.2
	baz=228						
060A	Indiantown	16.30	48	P	Pn	19 24 18.9	-1.3
060A	Indiantown	16.30	48	P	P	19 24 21.1	+0.3
	baz=233						
060A				S	S	19 27 25.1	+1.5
	baz=233						
656A	Willston	16.45	38	P	P	19 24 22.2	-0.2
656A	Willston	16.45	38	P	P	19 24 22.6	+0.2
	baz=222,SNR=59						
656A				S	S	19 27 27.1	+0.2
	baz=222						
146A	Union	16.55	15	P	Pn	19 24 21.4	-1.8
146A	Union	16.55	15	P	P	19 24 23.6	+0.1
	baz=196						
146A				S	Sn	19 27 20.3	-7.1
	baz=196						
SLBS	Sierra La Lagu	16.59	298		P	19 24 25.8	+1.6
Z38A	Mt. Pleasant	16.60	357	P	P	19 24 24.1	0.0
Z38A	Mt. Pleasant	16.60	357	P	P	19 24 24.2	+0.2
	baz=176,SNR=19						
Z41A	Richland Creek	16.60	3	P	P	19 24 24.0	-0.1
Z41A	Richland Creek	16.60	3	P	P	19 24 24.3	+0.2
	baz=184,SNR=7.6						
Z41A				P	P	19 24 24.3	+0.2
	baz=184,SNR=7.6						
Z41A	Richland Creek	16.60	3	P	P	19 24 24.2	+0.2
	baz=184,SNR=7.6						
ABTX	Abilene, Hawle	16.76	343		P	19 24 25.8	0.0
ABTX	Abilene, Hawle	16.76	343	P	P	19 24 27.0	+1.2
	baz=161,SNR=40						
ABTX				S	Sn	19 27 30.8	-1.6
	baz=161						
ABTX	Abilene, Hawle	16.76	343	P	P	19 24 27.1	+1.2
	baz=161,SNR=40						
250A	Grady	16.80	23	P	P	19 24 26.3	0.0
250A	Grady	16.80	23	P	P	19 24 26.3	0.0
	baz=206,SNR=17						
250A				S	Sn	19 27 31.1	-2.3
	baz=206						
352A	Blakely	16.91	27	P	P	19 24 27.4	-0.1
352A	Blakely	16.91	27	P	Pn	19 24 28.9	+1.3
	baz=211,SNR=28						
352A				S	Sn	19 27 35.9	-0.2
	baz=211						
Z35A	Perchaven, San	16.91	350	P	Pn	19 24 27.6	0.0
Z35A	Perchaven, San	16.91	350	P	Pn	19 24 28.0	+0.4
	baz=169,SNR=13						
WLAR	White Oak Lake	17.01	2		Pn	19 24 28.7	-0.2
LPIG	La Paz	17.06	299	P	Pn	19 24 33.0	+3.6
	comp=Z,41nm,0.4s,baz=335,slow=4.3,SNR=6.7						
LPIG				S	S	19 27 43.1	+2.5
	comp=Z,18nm,0.4s,baz=254,slow=7.3,SNR=1.3						
CCAR	Cane Creek	17.34	6	P	Pn	19 24 33.0	+0.3
CCAR				IAmb	IAmb	19 24 47.6	
	comp=Z,126nm,1.0s						
CCAR	Cane Creek	17.34	6	P	Pn	19 24 33.3	+0.6
	baz=187						
Z47A	Carrollton	17.34	17	P	Pn	19 24 32.6	-0.2
Z47A				IAmb	IAmb	19 24 39.8	
	comp=Z,118nm,0.8s						
Z47A	Carrollton	17.34	17	P	Pn	19 24 32.7	0.0
	baz=199,SNR=16						
Z47A				S	S	19 27 45.0	-1.2
	baz=199						
TIGA	Tifton	17.50	31	P	Pn	19 24 35.1	+0.4
TIGA	Tifton	17.50	31	P	Pn	19 24 35.4	+0.7
	baz=215,SNR=31						
TIGA				S	Sn	19 27 50.1	-0.1
	baz=215						
TIGA	Tifton	17.50	31	P	P	19 24 34.1	+0.1
	baz=215,SNR=31						
LRAL	Lakeview Retre	17.50	20	P	P	19 24 34.2	+0.2
LRAL				IAmb	IAmb	19 24 40.5	
	comp=Z,142nm,1.2s						
LRAL	Lakeview Retre	17.50	20	P	Pn	19 24 34.7	0.0
	baz=202,SNR=50						
LRAL				S	S	19 27 47.7	-1.9
	baz=202						
LRAL	Lakeview Retre	17.50	20	P	Pn	19 24 34.6	-0.2
	baz=202,SNR=50						
Y45A	Yeager Farm, C	17.62	12		Pn	19 24 36.3	+0.2
Y45A	Yeager Farm, C	17.62	12	P	Pn	19 24 36.0	-0.2
	baz=194,SNR=20						
Y45A				S	S	19 27 48.6	-3.3
	baz=194						
456A	Hilliard	17.76	36	P	Pn	19 24 38.3	+0.5
	baz=220,SNR=5.3						
X40A	Basin Creek Fa	17.82	3	P	P	19 24 37.9	+0.3
X40A				IAmb	IAmb	19 25 04.0	
	comp=Z,164nm,1.2s						
X40A	Basin Creek Fa	17.82	3	P	Pn	19 24 38.0	-0.5
	baz=183,SNR=14						
X40A				P	Pn	19 24 38.0	-0.5
	baz=183,SNR=14						
X40A				S	S	19 27 53.1	-2.9
	baz=183						
X40A				S	S	19 27 53.1	-2.9
	baz=183						
X40A	Basin Creek Fa	17.82	3	P	P	19 24 37.8	+0.3
	baz=183,SNR=14						
MIAR	Mount Ida	17.86	1	P	P	19 24 37.8	0.0
MIAR	Mount Ida	17.86	1	P	P	19 24 37.8	0.0
MIAR				pmax	pmax		
	comp=Z,315nm,1.3s						
MIAR	Mount Ida	17.86	1	P	Pn	19 24 38.6	-0.3
	baz=181,SNR=61						
MIAR				S	S	19 27 50.8	-5.8
	baz=181						
MIAR	Mount Ida	17.86	1	P	Pn	19 24 38.4	-0.5
	baz=181,SNR=61						
X37A	Clayton	17.94	356		Pn	19 24 39.5	-0.6
X37A				IAmb	IAmb	19 25 05.9	
	comp=Z,287nm,1.4s						
X37A	Clayton	17.94	356	P	Pn	19 24 39.7	-0.3
	baz=175,SNR=43						
X37A				S	S	19 27 48.4	-10
	baz=175						
152A	Waverly Hall	18.02	26	P	P	19 24 39.6	-0.1
152A				IAmb	IAmb	19 24 44.7	
	comp=Z,250nm,1.1s						
152A	Waverly Hall	18.02	26	P	P	19 24 40.2	+0.4
	baz=210,SNR=52						
152A				S	S	19 27 55.5	-4.5
	baz=210						
UALR	University of	18.14	4	P	P	19 24 40.9	-0.1
UALR				IAmb	IAmb	19 25 07.9	
	comp=Z,197nm,1.1s						
GTBY	Guantanamo Bay	18.17	77	P	P	19 24 40.6	-0.8
GTBY	Guantanamo Bay	18.17	77	eP	Pn	19 24 43.2	+0.4
X34A	Smith Ranch, M	18.25	350		Pn	19 24 43.7	+0.1
MNTX	Cornudas Mount	18.27	327	P	Pn	19 24 43.4	-0.6
MNTX	Cornudas Mount	18.27	327	P	Pn	19 24 43.8	-0.2
	baz=142,SNR=42						
MNTX	Cornudas Mount	18.27	327	P	Pn	19 24 43.8	-0.2
	baz=142,SNR=42						
OXF	Oxford	18.27	12	P	P	19 24 41.6	-0.9
OXF				IAmb	IAmb	19 25 09.7	
	comp=Z,180nm,1.1s						
OXF	Oxford	18.27	12	P	P	19 24 41.6	-0.9
OXF				pmax	pmax		
	comp=Z,180nm,1.1s						
OXF	Oxford	18.27	12	P	P	19 24 42.5	0.0
	baz=194,SNR=16						
OXF	Oxford	18.27	12	P	P	19 24 42.2	-0.2
	baz=194,SNR=16						
Z51A	Franklin	18.41	24	P	P	19 24 44.1	+0.2
Z51A				IAmb	IAmb	19 24 54.6	
	comp=Z,102nm,0.9s						
Z51A	Franklin	18.41	24	P	Pn	19 24 46.6	+1.0
	baz=207,SNR=8.3						
Z51A				S	S	19 28 04.1	-3.5
	baz=207						
255A	Hazlehurst	18.45	32	P	P	19 24 44.6	+0.2
255A	Hazlehurst	18.45	32	P	P	19 24 45.1	+0.7
	baz=217,SNR=44						
255A				S	S	19 28 08.8	+0.3
	baz=217						
Y49A	Blount Mountai	18.45	20	P	P	19 24 44.1	-0.3
Y49A				IAmb	IAmb	19 25 13.2	
	comp=Z,174nm,1.3s						
Y49A	Blount Mountai	18.45	20	P	P	19 24 44.8	+0.4
	baz=203,SNR=16						
Y49A				S	S	19 28 07.2	-1.3
	baz=203						
W39A	Magazine	18.50	0	P	P	19 24 45.2	+0.3
W39A	Magazine	18.50	0	P	Pn	19 24 45.9	-0.7
	baz=180,SNR=19						
W39A				S	S	19 28 07.0	-2.4
	baz=180						
W39A	Magazine	18.50	0	P	Pn	19 24 45.8	-0.8
	baz=180,SNR=19						
W41B	Gary Mavity, V	18.54	4	P	P	19 24 45.6	+0.2
W41B	Gary Mavity, V	18.54	4	P	P	19 24 45.7	+0.3
	baz=185,SNR=22						
W41B				S	S	19 28 09.2	-1.0
	baz=185						

W41B	Gary Mavity, V	18.54	4	P	P	19 24 45.7	+0.3
	baz=185,SNR=22						
WMOK	Wichita Mounta	18.56	347	P	Pn	19 24 46.7	-0.7
	baz=165						
WMOK	Wichita Mounta	18.56	347	P	Pn	19 24 46.6	-0.7
	baz=165						
WHAR	Wooly Hollow	18.65	4	P	P	19 24 46.5	-0.1
WHAR				IAmb	IAmb	19 24 58.9	
	comp=Z,82nm,0.9s						
154A	Montrose	18.70	30		P	19 24 47.0	-0.1
154A	Montrose	18.70	30	P	Pn	19 24 49.5	+0.6
	baz=214						
154A				S	S	19 28 13.2	-0.1
	baz=214						
X48A	Hartselle	18.80	18	P	P	19 24 47.5	-0.7
X48A	Hartselle	18.80	18	P	P	19 24 48.0	-0.2
	baz=201,SNR=43						
X48A				S	S	19 28 15.4	0.0
	baz=201						
FNO	Franklin	18.82	351		P	19 24 49.1	+0.7
W45A	Hickory Valley	18.94	12	P	P	19 24 48.9	-0.9
W45A	Hickory Valley	18.94	12	P	Pn	19 24 53.5	+1.7
	baz=194						
W45A				S	S	19 28 14.8	-3.3
	baz=194						
OKCSW	OKLAHOMA CITY	18.97	351	P	P	19 24 49.4	-0.7
OKCFA	Oklahoma City	18.98	351		P	19 24 50.6	+0.4
OKCFA	Oklahoma City	18.98	351	P	P	19 24 51.0	+0.8
	baz=170,SNR=5.6						
MSTX	Muleshoe	19.02	337	P	P	19 24 51.4	+0.6
MSTX				IAmb	IAmb	19 24 55.7	
	comp=Z,123nm,0.9s						
MSTX	Muleshoe	19.02	337	P	P	19 24 51.4	+0.6
	baz=153,SNR=41						
MSTX	Muleshoe	19.02	337	P	P	19 24 51.4	+0.6
	baz=153,SNR=41						
PLAL	Pickwick Lake	19.02	15	P	P	19 24 49.3	-1.3
PLAL				IAmb	IAmb	19 25 17.3	
	comp=Z,64nm,0.9s						
GOGA	Godfrey	19.20	28	P	P	19 24 51.8	-0.7
GOGA				IAmb	IAmb	19 25 01.8	
	comp=Z,179nm,1.1s						
GOGA	Godfrey	19.20	28	P	P	19 24 51.8	-0.7
GOGA				pmax	pmax		
	comp=Z,179nm,1.2s						
GOGA	Godfrey	19.20	28	P	P	19 24 52.1	-0.4
	baz=212,SNR=23						
GOGA				S	S	19 28 21.3	-1.9
	baz=212						
GOGA	Godfrey	19.20	28	P	P	19 24 51.8	-0.7
	baz=212,SNR=23						
257A	Skidaway Islan	19.26	35	P	P	19 24 53.0	-0.2
257A	Skidaway Islan	19.26	35	P	P	19 24 54.1	+0.9
	baz=220						
257A				S	S	19 28 24.1	-0.4
	baz=220						
FCAR	Ozark Folk Cen	19.26	4	P	P	19 24 52.8	-0.4
FCAR				IAmb	IAmb	19 25 19.8	
	comp=Z,69nm,0.9s						
TUL1	Leonard	19.29	355	P	P	19 24 53.1	-0.4
TUL1	Leonard	19.29	355	P	P	19 24 53.0	-0.4
	baz=174,SNR=5.9						
TUL1				S	S	19 28 23.9	-1.1
	baz=174						
TUL1	Leonard	19.29	355	P	P	19 24 53.2	-0.4
	baz=174,SNR=5.9						
Y52A	Lilburn	19.33	26	P	P	19 24 53.7	-0.3
Y52A	Lilburn	19.33	26	P	P	19 24 54.0	0.0
	baz=210,SNR=26						
Y52A				P	P	19 24 54.0	0.0
	baz=210,SNR=26						
Y52A				S	S	19 28 25.0	-0.9
	baz=210						
Y52A				S	S	19 28 25.0	-0.9
	baz=210						
FPAL	Fort Paine	19.34	21	P	P	19 24 53.3	-0.8
SJCC	San Jacinto, C	19.42	108	P	P	19 24 55.4	+0.2
SJCC				IAmb	IAmb	19 25 00.6	
	comp=Z,131nm,1.2s						
SJCC	San Jacinto, C	19.42	108	*e*P	Pn	19 24 57.9	+0.2
AMTX	Amarillo	19.47	341	P	P	19 24 56.1	+0.5
AMTX	Amarillo	19.47	341	P	P	19 24 56.5	+0.9
	baz=157,SNR=96						
AMTX	Amarillo	19.47	341	P	P	19 24 56.5	+0.9
	baz=157						
LCAR	Lake Charles	19.53	7	P	P	19 24 55.3	-0.8
LCAR				IAmb	IAmb	19 25 09.6	
	comp=Z,89nm,0.9s						
LCAR	Lake Charles	19.53	7	P	P	19 24 55.8	-0.3
	baz=188,SNR=23						
GNAR	Gosnell	19.58	9	P	P	19 24 56.2	-0.4
HHAR	Hobbs	19.59	360	P	P	19 24 56.4	-0.3
HHAR				IAmb	IAmb	19 25 13.4	
	comp=Z,103nm,1.1s						
HHAR	Hobbs	19.59	360	P	P	19 24 56.9	+0.2
	baz=180						
HHAR				S	S	19 28 28.8	-2.1
	baz=180						
X51A	Calhoun	19.64	23	P	P	19 24 56.6	-0.7
X51A	Calhoun	19.64	23	P	P	19 24 57.1	-0.1
	baz=207,SNR=20						
X51A				P	P	19 24 57.1	-0.1
	baz=207,SNR=20						
X51A				S	S	19 28 31.8	-0.1
	baz=207						
X51A				S	S	19 28 31.8	-0.1
	baz=207						
U40A	Yellville	19.68	3	P	P	19 24 57.8	0.0
U40A				IAmb	IAmb	19 25 25.6	
	comp=Z,258nm,1.4s						
U40A	Yellville	19.68	3	P	P	19 24 58.0	+0.2
	baz=183,SNR=28						
U40A				P	P	19 24 58.0	+0.2
	baz=183,SNR=28						
U40A				S	S	19 28 32.9	+0.1
	baz=183						
U40A				S	S	19 28 32.9	+0.1
	baz=183						
U40A	Yellville	19.68	3	P	P	19 24 57.8	0.0
	baz=183,SNR=28						
PEBM	Pemiscott Bayo	19.75	10	P	P	19 24 58.0	-0.4
DBBC	Dabeiba	19.77	117	*e*P	P	19 24 58.8	-0.3
LNXT	Lenox	19.80	11	P	P	19 24 59.0	-0.1
	baz=193						
SWET	Sewanee	19.85	20	P	P	19 24 58.7	-0.9
SWET				IAmb	IAmb	19 25 07.4	
	comp=Z,75nm,0.9s						
HSIG		19.93	311	P	Pn	19 25 02.1	-1.4
HSIG				IAmb	IAmb	19 25 03.9	
	comp=Z,127nm,1.0s						
UREC	San Jos de Ur	20.01	114	*e*P	P	19 24 59.9	-1.6
SRIG	Santa Rosalia	20.02	305	P	Pn	19 25 02.9	-1.6
SRIG				IAmb	IAmb	19 25 08.1	
	comp=Z,137nm,0.9s						
HAW	Hawthorne Fire	20.03	31	P	P	19 25 00.3	-1.3
	baz=217						
HAW				S	S	19 28 38.1	-1.6
	baz=217						
W50A	Signal Mountai	20.04	21	P	P	19 25 00.1	-1.6
W50A				IAmb	IAmb	19 25 08.9	
	comp=Z,168nm,1.1s						
W50A	Signal Mountai	20.04	21	P	P	19 25 00.9	-0.8
	baz=205,SNR=28						
W50A				S	S	19 28 39.2	-0.8
	baz=205						
V48A	Smith Brothers	20.07	17	P	P	19 25 00.8	-1.1
V48A				IAmb	IAmb	19 25 11.1	
	comp=Z,88nm,1.1s						
V48A					S	19 28 39.0	-1.5
V48A	Smith Brothers	20.07	17	P	P	19 25 01.0	-0.9
	baz=200,SNR=16						
V48A				S	S	19 28 38.3	-2.2
	baz=200						
UTMT	University of	20.15	12	P	P	19 25 02.4	-0.4
WVT	Waverly	20.18	14	P	P	19 25 01.4	-1.6
WVT				IAmb	IAmb	19 25 16.6	
	comp=Z,86nm,1.2s						
WVT	Waverly	20.18	14	P	P	19 25 01.4	-1.6
WVT				pmax	pmax		
	comp=Z,86nm,1.2s						
WVT	Waverly	20.18	14	P	P	19 25 01.6	-1.4
	baz=197,SNR=31						
WVT				S	S	19 28 42.5	-0.1
	baz=197						
WVT	Waverly	20.18	14	P	P	19 25 01.9	-1.2
	baz=197						
WVT				S	S	19 28 41.0	-1.5
	baz=197						
U32A	Winter Ranch,	20.19	348		P	19 25 02.6	-0.7
U32A	Winter Ranch,	20.19	348	P	P	19 25 03.2	-0.1
	baz=166,SNR=10						
U32A				S	Sn	19 28 51.5	-3.2
	baz=166						
121A	Cookes Peak, D	20.21	324	P	Pn	19 25 06.0	-0.9
121A	Cookes Peak, D	20.21	324	P	Pn	19 25 06.5	-0.4
	baz=138,SNR=195						
121A	Cookes Peak, D	20.21	324	P	Pn	19 25 06.6	-0.3
	baz=138,SNR=195						
319A	Douglas	20.28	319	P	Pn	19 25 06.8	-0.8
HICK	Hickman	20.28	11	P	P	19 25 02.8	-1.4
PBMO	Poplar Bluff	20.32	8	P	P	19 25 03.2	-1.4
PBMO				IAmb	IAmb	19 25 15.1	
	comp=Z,81nm,1.1s						
PBMO	Poplar Bluff	20.32	8	P	P	19 25 04.3	-0.3
	baz=190,SNR=6.8						
T35A	Sooner Cattle	20.35	354	P	P	19 25 02.5	-2.4
T35B	Sooner Cattle	20.35	354	P	P	19 25 04.0	-0.9
	baz=173,SNR=21						
T35B				S	S	19 28 42.7	-3.3
	baz=173						
HODGE	Hodges	20.43	29	P	P	19 25 03.4	-2.4
HODGE				IAmb	IAmb	19 25 20.9	
	comp=Z,66nm,0.9s						
HODGE	Hodges	20.43	29	P	P	19 25 04.5	-1.3
	baz=214,SNR=19						
W52A	Murphy	20.46	24	P	P	19 25 05.2	-1.0
W52A				IAmb	IAmb	19 25 22.4	
	comp=Z,54nm,0.8s						
W52A	Murphy	20.46	24	P	P	19 25 06.1	0.0
	baz=208						
W52A				S	S	19 28 45.8	-2.4
	baz=208						
MGMO	Mountain Grove	20.51	4	P	P	19 25 05.6	-1.1
MGMO				IAmb	IAmb	19 25 34.4	
	comp=Z,153nm,1.3s						
CLTN	Cedars of Leba	20.54	18	P	P	19 25 05.6	-1.4
CBOC	Ciudad Bolivar	20.54	119	*e*P	P	19 25 06.9	-0.5
CPCT	Cooper Cave	20.55	22	P	P	19 25 05.9	-1.2
CSU	Charleston Sou	20.55	35	P	P	19 25 06.6	-0.5
NHSC	New Hope	20.58	35	P	P	19 25 06.0	-1.4
NHSC	New Hope	20.58	35	P	P	19 25 08.0	+0.6
	baz=220						
NHSC				S	S	19 28 51.4	+0.8
	baz=220						
NHSC	New Hope	20.58	35	P	P	19 25 08.7	+1.2
	baz=220						
ZARC	Zaragoza, Cauc	20.72	114	P	P	19 25 06.0	-3.1
ZARC	Zaragoza, Cauc	20.72	114	*e*P	P	19 25 06.8	-2.4
CRNM	Carthage	20.75	329	P	Pn	19 25 11.7	-1.5
BG3	Lake Jocassee	20.77	26	P	P	19 25 08.3	-1.2
CASEE	Lake Jocassee	20.77	26	P	P	19 25 10.8	+1.3
	baz=211,SNR=11						
CASEE				S	S	19 28 47.9	-6.5
	baz=211						
T45B	Paducah	20.85	12	S	S	19 28 56.7	+1.0
	baz=194						
T45A	Paducah	20.85	12	P	P	19 25 09.4	-0.9
PLMC	San Jos del P	20.85	122	*e*P	P	19 25 09.2	-1.4
Y22A	Socorro	20.85	328	P	P	19 25 11.9	+1.3
	baz=142,SNR=70						
Y22A				S	Sn	19 29 03.7	-7.0
	baz=142						
BNM	Barren Site	20.86	329	P	Pn	19 25 13.3	-1.2
V51A	Loudon	20.93	22	P	P	19 25 09.0	-2.2
V51A				IAmb	IAmb	19 25 19.6	
	comp=Z,150nm,1.2s						
V51A	Loudon	20.93	22	P	P	19 25 09.3	-1.8
	baz=206,SNR=12						
V51A				S	S	19 28 57.4	+0.1
	baz=206						
Y22D	IRIS PASSCAL I	20.94	329	P	P	19 25 12.0	+0.5
Y22D	IRIS PASSCAL I	20.94	329	P	P	19 25 13.1	+1.6
	baz=143						
JSC	Jenkinsville	20.94	31	P	P	19 25 12.0	+0.7
JSC				IAmb	IAmb	19 25 23.1	
	comp=Z,123nm,1.4s						
JSC	Jenkinsville	20.94	31	P	P	19 25 12.0	+0.7
JSC				pmax	pmax		
	comp=Z,123nm,1.4s						
JSC	Jenkinsville	20.94	31	P	P	19 25 11.8	+0.5
	baz=216						
S39A	Bolivar	21.00	1	P	P	19 25 10.9	-1.0
S39A	Bolivar	21.00	1	P	P	19 25 11.3	-0.6
	baz=182,SNR=45						
S39A				S	S	19 28 55.7	-2.9
	baz=182						
TKL	Tuckaleechee C	21.01	24	P	P	19 25 10.7	-1.4
	comp=Z,17nm,0.8s,baz=193,slow=11,SNR=15						
TKL				S	S	19 28 57.6	-1.4
	comp=Z,11nm,0.8s,baz=30,slow=23,SNR=5.5						
	comp=Z,17nm,0.8s						
TKL	Tuckaleechee C	21.01	24	P	P	19 25 10.6	-1.4
TKL				IAmb	IAmb	19 25 29.9	
	comp=Z,154nm,0.9s						
TKL	Tuckaleechee C	21.01	24	P	P	19 25 11.6	-0.4
	baz=208,SNR=23						
TKL				S	S	19 29 03.1	+4.1
	baz=208						
LENM	Lemitar	21.04	329	P	P	19 25 14.2	+1.6
U49A	Red Boiling Sp	21.09	18	P	P	19 25 11.1	-1.8
U49A				IAmb	IAmb	19 25 19.7	
	comp=Z,114nm,1.0s						
U49A	Red Boiling Sp	21.09	18	P	P	19 25 11.6	-1.3
	baz=202,SNR=24						
U49A				S	S	19 28 54.9	-5.5
	baz=202						
PAULI	Pauline	21.12	29	P	P	19 25 13.5	+0.3
PAULI				IAmb	IAmb	19 25 22.1	
	comp=Z,159nm,1.2s						
PAULI	Pauline	21.12	29	P	P	19 25 14.5	+1.3
	baz=214						
T47A	Sharon Grove	21.17	15	P	P	19 25 11.8	-1.9
T47A				IAmb	IAmb	19 25 33.8	
	comp=Z,80nm,0.6s						
T47A	Sharon Grove	21.17	15	P	P	19 25 12.6	-1.2
	baz=198,SNR=16						
T47A				S	S	19 29 00.5	-1.3
	baz=198						
Y57A	Sumter	21.17	33	P	P	19 25 11.7	-2.0
Y57A				IAmb	IAmb	19 25 34.5	
	comp=Z,106nm,1.1s						
Y57A	Sumter	21.17	33	P	P	19 25 13.5	-0.3
	baz=218						
Y57A				P	P	19 25 13.5	-0.3
	baz=218						
Y57A				S	S	19 29 01.6	-0.3
	baz=218						
Y57A				S	S	19 29 01.6	-0.3
	baz=218						
CRJC	Cerrejon, Guaj	21.17	103	*e*P	P	19 25 16.4	+2.4
V52A	Sevierville	21.24	24	P	P	19 25 13.9	-0.7
V52A				IAmb	IAmb	19 25 32.9	
	comp=Z,129nm,1.1s						
V52A	Sevierville	21.24	24	P	P	19 25 14.3	-0.2
	baz=208,SNR=6.7						
V52A				S	S	19 29 02.9	-0.4
	baz=208						
YOTC	Yotoco, Valle	21.34	124	*e*P	P	19 25 15.5	-0.5
S44A	Carbondale	21.39	10	P	P	19 25 15.1	-1.0
S44A				IAmb	IAmb	19 25 34.9	
	comp=Z,86nm,0.8s						
S44A	Carbondale	21.39	10	P	P	19 25 16.1	0.0
	baz=192,SNR=6.5						
S44A				S	S	19 29 02.9	-3.1
	baz=192						
V53A	Saluda	21.41	25	P	P	19 25 15.6	-0.8
V53A				IAmb	IAmb	19 25 38.0	
	comp=Z,145nm,1.1s						
V53A	Saluda	21.41	25	P	P	19 25 16.6	+0.2
	baz=210,SNR=35						
V53A				P	P	19 25 16.6	+0.2
	baz=210,SNR=35						
V53A				S	S	19 29 05.9	-0.5
	baz=210						
V53A				S	S	19 29 05.9	-0.5
	baz=210						
ANMO	Albuquerque	21.42	331	P	P	19 25 17.6	+0.9
	comp=Z,23nm,0.8s,baz=148,slow=11,SNR=63						
ANMO				S	S	19 29 09.9	+3.0
	comp=Z,6.4nm,1.0s,baz=184,slow=23,SNR=1.4						
	comp=Z,23nm,0.8s						
ANMO	Albuquerque	21.42	331	P	P	19 25 17.5	+0.8
ANMO	Albuquerque	21.42	331	P	P	19 25 18.1	+1.4
	baz=145,SNR=38						
ANMO				S	S	19 29 05.9	-1.1
	baz=145						
ANMO	Albuquerque	21.42	331	P	P	19 25 18.4	+1.7
	baz=145						
ANMO				S	S	19 29 09.4	+2.4
	baz=145						
SIUC	Southern Illin	21.42	10	P	P	19 25 15.2	-1.3
SIUC				IAmb	IAmb	19 25 35.1	
	comp=Z,98nm,0.9s						
Y58A	Scranton	21.47	34	P	P	19 25 15.6	-1.4
Y58A				IAmb	IAmb	19 25 31.0	
	comp=Z,131nm,1.0s						
Y58A	Scranton	21.47	34	S	S	19 29 03.0	-4.4
	baz=220						
Y58A				S	S	19 29 03.0	-4.4
	baz=220						
CCM	Cathedral Cave	21.49	6	P	P	19 25 15.6	-1.5
CCM				IAmb	IAmb	19 25 44.1	
	comp=Z,107nm,1.1s						
CCM	Cathedral Cave	21.49	6	P	P	19 25 15.6	-1.5
CCM				pmax	pmax		
	comp=Z,107nm,1.2s						
CCM	Cathedral Cave	21.49	6	P	P	19 25 15.9	-1.2
	baz=187,SNR=16						
CCM				S	S	19 29 05.2	-2.4
	baz=187						
CCM	Cathedral Cave	21.49	6	P	P	19 25 15.8	-1.3
	baz=187						
CCM				S	S	19 29 06.4	-1.3
	baz=187						
FVM	French Village	21.51	8	P	P	19 25 15.0	-2.3
FVM				IAmb	IAmb	19 25 34.0	
	comp=Z,78nm,1.1s						
FVM	French Village	21.51	8	P	P	19 25 15.0	-2.3
FVM				pmax	pmax		
	comp=Z,78nm,1.1s						
FVM	French Village	21.51	8	P	P	19 25 16.7	-0.6
	baz=189						
FVM				S	S	19 29 04.1	-4.0
	baz=189						
PTBC	PUERTO BERRIO,	21.52	115	*e*P	P	19 25 16.5	-1.2
KMSC	Kings Mountain	21.61	29	P	P	19 25 18.1	-0.3
KMSC				IAmb	IAmb	19 25 37.3	
	comp=Z,142nm,1.0s						
KMSC	Kings Mountain	21.61	29	P	P	19 25 18.7	+0.2
	baz=214,SNR=9.5						
KMSC	Kings Mountain	21.61	29	P	P	19 25 19.3	+0.9
	baz=214,SNR=9.5						
KMSC				S	S	19 29 07.1	-2.9
	baz=214						
BIRD	Birdtown, Kers	21.63	31	P	P	19 25 16.9	-1.7
BIRD				IAmb	IAmb	19 25 37.4	
	comp=Z,91nm,1.0s						
BIRD	Birdtown, Kers	21.63	31	P	P	19 25 20.0	+1.3
	baz=217						
R40A	Maddies Statio	21.64	4	P	P	19 25 16.8	-1.9
R40A				IAmb	IAmb	19 25 45.1	
	comp=Z,119nm,1.4s						
R40A	Maddies Statio	21.64	4	P	P	19 25 17.9	-0.8
	baz=184,SNR=24						
R40A				S	S	19 29 11.2	+0.8
	baz=184						
NORC	Norcasia	21.66	118	*e*P	P	19 25 18.8	-0.5
SDDR	Presa de Saban	21.68	80	P	P	19 25 17.7	-1.8
SDDR				IAmb	IAmb	19 25 42.8	
	comp=Z,109nm,1.4s						
SDDR	Presa de Saban	21.68	80	*e*P	P	19 25 18.2	-1.2
OCAC	Ocana	21.76	110	P	P	19 25 18.6	-1.8
URIC	Uribia, Colomb	21.81	100	P	P	19 25 19.5	-1.3
TUC	Tucson	21.85	319	P	P	19 25 21.9	+0.8
TUC	Tucson	21.85	319	P	P	19 25 21.9	+0.8
TUC				pmax	pmax		
	comp=Z,51nm,1.1s						
TUC	Tucson	21.85	319	P	P	19 25 23.0	+1.8
	baz=132						
TUC				S	S	19 29 17.9	+3.3
	baz=132						
T50A	Nancy	21.86	20	P	P	19 25 18.8	-2.3
T50A	Nancy	21.86	20	P	P	19 25 19.2	-1.8
	baz=204						
T50A				P	P	19 25 19.2	-1.8
	baz=204						
T50A				S	S	19 29 05.1	-9.2
	baz=204						
T50A				S	S	19 29 05.1	-9.2
	baz=204						
TZTN	Tazewell	21.88	23	P	P	19 25 19.4	-1.9
TZTN				IAmb	IAmb	19 25 42.1	
	comp=Z,90nm,0.8s						
TZTN	Tazewell	21.88	23	P	P	19 25 20.1	-1.2
	baz=208						
TZTN				S	S	19 29 12.3	-2.5
	baz=208						
TZTN	Tazewell	21.88	23	P	P	19 25 20.1	-1.2
	baz=208						
TZTN				S	S	19 29 11.2	-3.5
	baz=208						
Y59A	Loris	21.96	35	P	P	19 25 21.3	-0.9
Y59A	Loris	21.96	35	S	S	19 29 16.0	-0.1
	baz=222						
Y59A				S	S	19 29 16.0	-0.1
	baz=222						
R32A	Long Quarter,	22.12	350	P	P	19 25 23.0	-0.8
R32A				IAmb	IAmb	19 25 25.4	
	comp=Z,125nm,1.0s						
R32A	Long Quarter,	22.12	350	P	P	19 25 23.8	-0.1
	baz=168,SNR=14						
R32A				S	S	19 29 20.8	+1.8
	baz=168						
X58A	Rowland	22.14	33	P	P	19 25 23.5	-0.4
X58A				IAmb	IAmb	19 25 39.1	
	comp=Z,76nm,0.8s						
X58A	Rowland	22.14	33	S	S	19 29 17.9	-1.2
	baz=220						
X58A				S	S	19 29 17.9	-1.2
	baz=220						
SLM	Saint Louis	22.17	8	P	P	19 25 22.3	-2.0
SLM				IAmb	IAmb	19 25 42.5	
	comp=Z,54nm,0.5s						
SLM	Saint Louis	22.17	8	P	P	19 25 22.3	-2.0
SLM				pmax	pmax		
	comp=Z,54nm,0.5s						
SLM	Saint Louis	22.17	8	S	S	19 29 17.7	-1.9
	baz=189						
SC01	Santiago de lo	22.23	79	P	P	19 25 24.8	-0.3
V55A	Taylorsville	22.25	28	P	P	19 25 23.5	-1.6
V55A	Taylorsville	22.25	28	P	P	19 25 24.2	-0.9
	baz=214,SNR=6.1						
V55A				P	P	19 25 24.2	-0.9
	baz=214,SNR=6.1						
V55A				S	S	19 29 20.5	-0.6
	baz=214						
V55A				S	S	19 29 20.5	-0.6
	baz=214						
W57A	Gilead	22.27	31	P	P	19 25 22.8	-2.4
W57A				IAmb	IAmb	19 25 35.5	
	comp=Z,85nm,1.1s						
W57A	Gilead	22.27	31	P	P	19 25 23.9	-1.3
	baz=218,SNR=5.8						
W57A				P	P	19 25 23.9	-1.3
	baz=218,SNR=5.8						
W57A				S	S	19 29 21.9	+0.6
	baz=218						
W57A				S	S	19 29 21.9	+0.6
	baz=218						
ORTC	Ortega, Tolima	22.27	123	*e*P	P	19 25 25.3	-0.3
SOTA	Rioblanco	22.30	128	*e*P	P	19 25 30.7	+4.4
OTAV	Otavalo	22.31	135	P	P	19 25 28.2	+1.8
OTAV	Otavalo	22.31	135	P	P	19 25 28.2	+1.8
OTAV				pmax	pmax		
	comp=Z,63nm,1.5s						
PCON	Cinco Dias	22.34	128	*e*P	P	19 25 29.8	+3.0
Y60A	Bolivia	22.34	36	S	S	19 29 22.2	-0.3
	baz=223						
Y60A				S	S	19 29 22.2	-0.3
	baz=223						
MARP	Paez Belalcaza	22.35	126	*e*P	P	19 25 28.0	+1.4
GCUF	Volcan Galeras	22.37	131	*e*P	P	19 25 29.1	+2.1
T25A	Trinidad	22.45	338	P	P	19 25 28.7	+1.5
T25A				IAmb	IAmb	19 25 33.6	
	comp=Z,89nm,1.1s						
T25A	Trinidad	22.45	338	P	P	19 25 29.2	+1.9
	baz=153,SNR=57						
T25A				S	S	19 29 26.9	+2.2

	baz=153						
ROSC	El Rosal	22.51	119	P	P	19 25 25.9	-2.4
	comp=Z,5.5nm,0.3s,baz=100,slow=22,SNR=1.4						
	comp=Z,5.5nm,0.3s						
ROSC	El Rosal	22.51	119	P	P	19 25 29.0	+0.7
ROSC	El Rosal	22.51	119	P	P	19 25 29.0	+0.7
ROSC				pmax	pmax		
	comp=Z,55nm,1.5s						
KSU1	Kansas State U	22.52	355	P	P	19 25 26.0	-1.7
KSU1				IAmb	IAmb	19 25 51.1	
	comp=Z,83nm,0.8s						
KSU1	Kansas State U	22.52	355	P	P	19 25 26.2	-1.5
	baz=173						
KSU1	Kansas State U	22.52	355	P	P	19 25 27.5	-0.2
	baz=173						
KSU1				S	S	19 29 23.1	-2.3
	baz=173						
U54A	Nelsons Funny	22.55	26	P	P	19 25 26.9	-1.2
U54A				IAmb	IAmb	19 25 51.0	
	comp=Z,160nm,1.1s						
U54A	Nelsons Funny	22.55	26	S	S	19 29 29.2	+3.3
	baz=212						
U54A				S	S	19 29 29.2	+3.3
	baz=212						
BARC	Barichara	22.61	114	*e*P	P	19 25 28.4	-0.6
Q44A	Meyer Farm, Va	22.61	10	P	P	19 25 26.9	-1.8
Q44A				IAmb	IAmb	19 25 51.7	
	comp=Z,129nm,1.1s						
Q44A	Meyer Farm, Va	22.61	10	P	P	19 25 27.9	-0.8
	baz=192,SNR=9.3						
OLIL	Olney	22.62	12	P	P	19 25 27.4	-1.2
OLIL				IAmb	IAmb	19 25 56.4	
	comp=Z,105nm,1.1s						
OLIL	Olney	22.62	12	P	P	19 25 27.8	-0.9
	baz=195,SNR=5.3						
OLIL				S	S	19 29 25.3	-1.6
	baz=195						
CBKS	Cedar Bluff	22.69	348	P	P	19 25 29.1	-0.4
CBKS				IAmb	IAmb	19 25 31.8	
	comp=Z,108nm,0.9s						
CBKS	Cedar Bluff	22.69	348	P	P	19 25 29.1	-0.4
CBKS				pmax	pmax		
	comp=Z,108nm,0.9s						
CBKS	Cedar Bluff	22.69	348	P	P	19 25 29.8	+0.3
	baz=165,SNR=18						
CBKS				S	S	19 29 28.7	+0.5
	baz=165						
CBKS	Cedar Bluff	22.69	348	P	P	19 25 29.0	-0.4
	baz=165,SNR=18						
CBKS				S	S	19 29 27.5	-0.7
	baz=165						
PAMC	Pamplona, Colo	22.70	111	*e*P	P	19 25 28.9	-1.3
S51A	Beattyville	22.84	22	P	P	19 25 29.2	-1.6
S51A				IAmb	IAmb	19 25 51.7	
	comp=Z,187nm,1.4s						
S51A	Beattyville	22.84	22	P	P	19 25 29.7	-1.1
	baz=206,SNR=8.2						
S51A				P	P	19 25 29.7	-1.1
	baz=206,SNR=8.2						
S51A				S	S	19 29 28.5	-1.9
	baz=206						
S51A				S	S	19 29 28.5	-1.9
	baz=206						
P40A	Paris	22.89	4	P	P	19 25 29.5	-1.8
P40A				IAmb	IAmb	19 25 58.4	
	comp=Z,122nm,1.0s						
P40A	Paris	22.89	4	P	P	19 25 30.0	-1.3
	baz=185,SNR=16						
P40A				S	S	19 29 28.7	-2.4
	baz=185						
X18A	Snowflake	22.90	324	P	P	19 25 32.4	+0.7
X18A				IAmb	IAmb	19 25 35.6	
	comp=Z,92nm,1.0s						
R49A	Shelbyville	22.92	18	P	P	19 25 29.8	-1.8
R49A				IAmb	IAmb	19 25 43.5	
	comp=Z,177nm,1.5s						
R49A	Shelbyville	22.92	18	P	P	19 25 30.3	-1.3
	baz=202,SNR=7.0						
R49A				P	P	19 25 30.3	-1.3
	baz=202,SNR=7.0						
R49A				S	S	19 29 29.3	-2.4
	baz=202						
R49A				S	S	19 29 29.3	-2.4
	baz=202						
P38A	Dawn	22.93	1	P	P	19 25 30.0	-1.6
P38A				IAmb	IAmb	19 25 58.8	
	comp=Z,110nm,1.1s						
P38A	Dawn	22.93	1	P	P	19 25 31.3	-0.4
	baz=181						
P38A				S	S	19 29 30.4	-1.4
	baz=181						
214A	Organ Pipe Nat	22.95	315	P	P	19 25 32.6	+0.5
214A				IAmb	IAmb	19 25 36.9	
	comp=Z,162nm,1.5s						
214A	Organ Pipe Nat	22.95	315	P	P	19 25 33.7	+1.7
	baz=127,SNR=32						
214A				S	S	19 29 36.1	+3.6
	baz=127						
RUSC	La Rusia	23.03	115	*e*P	P	19 25 32.0	-1.4
U56A	King	23.04	29	P	P	19 25 31.4	-1.3
U56A				IAmb	IAmb	19 25 57.9	
	comp=Z,124nm,1.1s						
CHIC	Chingaza	23.12	119	*e*P	P	19 25 33.1	-1.0
GARC	Garzon, Huila	23.12	126	*e*P	P	19 25 35.6	+1.6
R50A	Paris	23.17	19	P	P	19 25 32.6	-1.3
R50A				IAmb	IAmb	19 25 46.1	
	comp=Z,105nm,1.1s						
R50A	Paris	23.17	19	P	P	19 25 32.4	-1.5
	baz=204,SNR=5.1						
R50A				P	P	19 25 32.4	-1.5
	baz=204,SNR=5.1						
R50A				S	S	19 29 34.2	-1.5
	baz=204						
R50A				S	S	19 29 34.2	-1.5
	baz=204						
V58A	Windy Hill, Pi	23.21	32	P	P	19 25 35.2	+0.9
V58A				IAmb	IAmb	19 25 57.9	
	comp=Z,92nm,1.1s						
W18A	Petrified Fore	23.22	325	P	P	19 25 34.5	-0.1
W18A				IAmb	IAmb	19 25 39.2	
	comp=Z,131nm,1.4s						
W18A	Petrified Fore	23.22	325	P	P	19 25 36.6	+2.0
	baz=138,SNR=24						
W18A				S	S	19 29 41.3	+4.3
	baz=138						
P43A	Skaggs, Pawnee	23.26	9	P	P	19 25 33.4	-1.3
P43A				IAmb	IAmb	19 25 35.1	
	comp=Z,88nm,1.1s						
P43A	Skaggs, Pawnee	23.26	9	P	P	19 25 33.7	-1.0
	baz=191,SNR=7.9						
P43A				S	S	19 29 36.4	-0.7
	baz=191						
BLO	Bloomington	23.38	15	P	P	19 25 34.7	-1.2
BLO	Bloomington	23.38	15	P	P	19 25 34.7	-1.2
BLO				pmax	pmax		
	comp=Z,44nm,0.8s						
FLOC	Florencia	23.38	128	*e*P	P	19 25 37.2	+1.1
SDCO	Great Sand Dun	23.39	336	P	P	19 25 37.9	+1.6
SDCO	Great Sand Dun	23.39	336	P	P	19 25 38.5	+2.3
	baz=151,SNR=26						
SDCO				S	S	19 29 47.6	+7.8
	baz=151						
SDCO	Great Sand Dun	23.39	336	P	P	19 25 36.8	+0.5
	baz=151,SNR=26						
SDCO				S	S	19 29 42.8	+3.0
	baz=151						
KSCO	Kaye Shedlock’	23.57	343	P	P	19 25 37.5	-0.3
KSCO				IAmb	IAmb	19 26 06.3	
	comp=Z,87nm,0.9s						
KSCO	Kaye Shedlock’	23.57	343	P	P	19 25 39.0	+1.2
	baz=159,SNR=6.6						
KSCO				S	S	19 29 46.3	+3.8
	baz=159						
KSCO	Kaye Shedlock’	23.57	343	P	P	19 25 38.8	+1.0
	baz=159,SNR=6.6						
P46A	Rosedale	23.65	13	P	P	19 25 36.8	-1.5
P46A				IAmb	IAmb	19 25 38.9	
	comp=Z,137nm,1.2s						
P46A	Rosedale	23.65	13	P	P	19 25 37.3	-1.0
	baz=196,SNR=13						
BLA	Blacksburg	23.73	28	P	P	19 25 38.3	-0.8
BLA	Blacksburg	23.73	28	P	P	19 25 38.3	-0.8
BLA				pmax	pmax		
	comp=Z,192nm,1.2s						
BLA	Blacksburg	23.73	28	S	S	19 29 43.2	-1.8
	baz=214						
BLA	Blacksburg	23.73	28	P	P	19 25 37.6	-1.6
	baz=214						
S54A	Dingess, Beckl	23.85	25	P	P	19 25 38.9	-1.3
S54A				IAmb	IAmb	19 26 05.5	
	comp=Z,104nm,1.5s						
S54A	Dingess, Beckl	23.85	25	S	S	19 29 54.2	+7.4
	baz=211						
S54A				S	S	19 29 54.2	+7.4
	baz=211						
SFX	San Felipe	23.86	311	P	P	19 25 41.4	+1.1
SFX				IAmb	IAmb	19 25 44.7	
	comp=Z,59nm,1.1s						
S22A	4UR Ranch, Cre	23.92	334	P	P	19 25 41.5	+0.4
S22A	4UR Ranch, Cre	23.92	334	P	P	19 25 40.9	-0.3
	baz=148						
O44A	Mansfield	23.93	10	P	P	19 25 39.0	-1.7
O44A				IAmb	IAmb	19 25 58.4	
	comp=Z,58nm,1.1s						
P48A	Milroy	23.94	16	P	P	19 25 38.5	-2.4
P48A	Milroy	23.94	16	P	P	19 25 38.8	-2.1
	baz=200,SNR=6.2						
P48A				P	P	19 25 38.8	-2.1
	baz=200,SNR=6.2						
P48A				S	S	19 29 44.3	-3.8
	baz=200						
P48A				S	S	19 29 44.3	-3.8
	baz=200						
SDV	Santo Domingo	23.96	106	P	P	19 25 38.6	-3.0
	comp=Z,18nm,0.5s,baz=308,slow=3.9,SNR=10						
	comp=Z,18nm,0.5s						
SDV	Santo Domingo	23.96	106	P	P	19 25 39.5	-2.1
SDV	Santo Domingo	23.96	106	*e*P	P	19 25 40.9	-0.8
R53A	Hurricane	24.05	24	P	P	19 25 40.2	-1.8
R53A				IAmb	IAmb	19 26 09.4	
	comp=Z,75nm,1.3s						
R53A	Hurricane	24.05	24	S	S	19 29 49.6	-0.4
	baz=209						
R53A				S	S	19 29 49.6	-0.4
	baz=209						
113A	Mohawk Valley,	24.09	316	P	P	19 25 43.3	+1.0
113A				IAmb	IAmb	19 25 47.0	
	comp=Z,102nm,1.1s						
N38A	Joes South For	24.10	1	P	P	19 25 41.4	-0.9
N38A	Joes South For	24.10	1	P	P	19 25 42.5	+0.2
	baz=182,SNR=13						
T57A	Hurt	24.10	30	P	P	19 25 42.3	0.0
T57A	Hurt	24.10	30	P	P	19 25 42.9	+0.6
	baz=216,SNR=6.2						
T57A				P	P	19 25 42.9	+0.6
	baz=216,SNR=6.2						
T57A				S	S	19 29 49.0	-1.7
	baz=216						
T57A				S	S	19 29 49.0	-1.7
	baz=216						
N41A	Harden Midland	24.15	6	P	P	19 25 41.8	-0.9
N41A				IAmb	IAmb	19 26 10.8	
	comp=Z,112nm,1.1s						
N41A	Harden Midland	24.15	6	P	P	19 25 43.3	+0.5
	baz=187						
Q51A	Peebles	24.17	20	P	P	19 25 41.5	-1.5
Q51A				IAmb	IAmb	19 25 59.8	
	comp=Z,121nm,1.1s						
Q51A	Peebles	24.17	20	P	P	19 25 42.6	-0.4
	baz=205						
Q51A				P	P	19 25 42.6	-0.4
	baz=205						
Q51A				S	S	19 29 50.2	-1.6
	baz=205						
Q51A				S	S	19 29 50.2	-1.6
	baz=205						
HDIL	Hopedale	24.19	9	P	P	19 25 41.9	-1.3
HDIL	Hopedale	24.19	9	P	P	19 25 42.6	-0.5
	baz=191						
HDIL				S	S	19 29 51.0	-1.1
	baz=191						
HDIL	Hopedale	24.19	9	P	P	19 25 41.8	-1.3
	baz=191						
N35A	Tabor	24.20	357	P	P	19 25 42.2	-1.1
N35A				IAmb	IAmb	19 26 02.1	
	comp=Z,77nm,1.1s						
P49A	Miami Univ. Ec	24.20	18	P	P	19 25 40.8	-2.5
P49A				IAmb	IAmb	19 25 56.8	
	comp=Z,68nm,1.2s						
P49A	Miami Univ. Ec	24.20	18	P	P	19 25 42.2	-1.1
	baz=202						
P49A				S	S	19 29 48.4	-4.0
	baz=202						
P49A	Miami Univ. Ec	24.20	18	P	P	19 25 41.6	-1.7
	baz=202						
MVCO	Mesa Verde	24.22	331	P	P	19 25 43.9	+0.1
MVCO				IAmb	IAmb	19 26 13.0	
	comp=Z,158nm,1.2s						
MVCO	Mesa Verde	24.22	331	P	P	19 25 44.9	+1.1
	baz=144,SNR=19						
MVCO				S	S	19 29 58.6	+5.5
	baz=144						
N33B	J Bar K, Exete	24.23	353	P	P	19 25 43.9	+0.3
	baz=172						
N33A	J Bar K, Exete	24.23	353	P	P	19 25 42.3	-1.2
Y14A	Wickenburg	24.32	319	P	P	19 25 44.7	+0.2
U59A	Littleton	24.32	33	P	P	19 25 45.3	+1.0
U59A				IAmb	IAmb	19 26 14.3	
	comp=Z,94nm,1.4s						
Q24A	Divide	24.33	338	P	P	19 25 44.6	-0.2
Q24A	Divide	24.33	338	P	P	19 25 45.0	+0.2
	baz=153,SNR=7.7						
SFIN	Lafayette	24.41	13	P	P	19 25 43.4	-1.7
SFIN	Lafayette	24.41	13	P	P	19 25 45.2	+0.1
	baz=196						
SFIN				S	S	19 29 54.2	-1.3
	baz=196						
SFIN	Lafayette	24.41	13	P	P	19 25 43.9	-1.2
	baz=196						
WUAZ	Wupatki	24.42	324	P	P	19 25 46.9	+1.4
WUAZ				IAmb	IAmb	19 25 51.0	
	comp=Z,68nm,0.9s						
WUAZ	Wupatki	24.42	324	P	P	19 25 46.8	+1.3
	baz=136,SNR=36						
MACC	Macarena, Meta	24.43	124	*e*P	P	19 25 42.5	-3.2
Q52A	Bidwell	24.49	22	P	P	19 25 43.5	-2.4
Q52A				IAmb	IAmb	19 26 11.1	
	comp=Z,101nm,1.2s						
Q52A	Bidwell	24.49	22	P	P	19 25 44.6	-1.3
	baz=208,SNR=6.1						
Q52A				P	P	19 25 44.6	-1.3
	baz=208,SNR=6.1						
P51A	Williamsport	24.67	20	P	P	19 25 45.2	-2.4
P51A				IAmb	IAmb	19 26 14.5	
	comp=Z,64nm,1.0s						
O48B	Farmland	24.76	16	P	P	19 25 46.2	-2.1
	baz=200						
O48B				S	S	19 29 57.0	-4.1
	baz=200						
R55A	Marlinton	24.76	27	P	P	19 25 45.9	-2.6
R55A				IAmb	IAmb	19 26 10.9	
	comp=Z,91nm,1.4s						
R55A	Marlinton	24.76	27	P	P	19 25 46.1	-2.3
	baz=213						
R55A				P	P	19 25 46.1	-2.3
	baz=213						
O49A	Covington	24.92	18	P	P	19 25 47.8	-2.0
O49A				IAmb	IAmb	19 25 49.5	
	comp=Z,43nm,0.5s						
O49A	Covington	24.92	18	P	P	19 25 48.1	-1.7
	baz=202,SNR=13						
O49A				P	P	19 25 48.1	-1.7
	baz=202,SNR=13						
O49A				S	S	19 30 01.0	-2.7
	baz=202						
O49A				S	S	19 30 01.0	-2.7
	baz=202						
BGNE	Belgrade	24.97	352	P	P	19 25 49.5	-0.8
BGNE				IAmb	IAmb	19 25 51.9	
	comp=Z,47nm,0.7s						
BGNE	Belgrade	24.97	352	P	P	19 25 49.0	-1.3
	baz=170						
GLA	Glamis	24.97	315	P	P	19 25 51.9	+1.5
GLA				IAmb	IAmb	19 25 53.6	
	comp=Z,68nm,1.1s						
GLA	Glamis	24.97	315	P	P	19 25 51.9	+1.5
GLA				pmax	pmax		
	comp=Z,68nm,1.2s						
GLA	Glamis	24.97	315	P	P	19 25 51.3	+0.9
	baz=126,SNR=9.4						
Q54A	Coxs Mills	25.05	25	P	P	19 25 49.1	-1.9
Q54A				IAmb	IAmb	19 26 08.5	
	comp=Z,67nm,1.4s						
P52A	Corning	25.13	22	P	P	19 25 49.7	-2.0
P52A				IAmb	IAmb	19 26 13.1	
	comp=Z,62nm,1.1s						
P52A	Corning	25.13	22	P	P	19 25 49.8	-1.9
	baz=207						
PV15	Paradox Valley	25.14	332	P	P	19 25 53.5	+1.5
PV15				IAmb	IAmb	19 26 22.3	
	comp=Z,116nm,1.4s						
PV13	Radium Mtn., P	25.14	332	P	P	19 25 53.9	+1.8
PV13				IAmb	IAmb	19 26 23.2	
	comp=Z,72nm,0.9s						
BLYC	Blythe	25.19	316	P	P	19 25 53.7	+1.4
M44A	Midewin, Midew	25.20	10	P	P	19 25 50.6	-1.7
M44A				IAmb	IAmb	19 26 12.6	
	comp=Z,54nm,1.1s						
N47A	Urbana	25.20	15	P	P	19 25 49.6	-2.8
SMCO	Snowmass	25.20	336	P	P	19 25 53.3	+0.4
SCIA	State Center	25.21	1	P	P	19 25 51.1	-1.3
SCIA				IAmb	IAmb	19 25 54.4	
	comp=Z,76nm,0.6s						
SCIA	State Center	25.21	1	P	P	19 25 52.0	-0.4
	baz=182						
SCIA	State Center	25.21	1	P	P	19 25 51.6	-0.8
	baz=182						
OGNE	Ogallala	25.23	345	P	P	19 25 53.4	+0.6
OGNE	Ogallala	25.23	345	P	P	19 25 53.9	+1.0
	baz=162,SNR=28						
OGNE	Ogallala	25.23	345	P	P	19 25 53.8	+1.0
	baz=162,SNR=28						
ISCO	Idaho Springs	25.24	339	P	P	19 25 54.1	+1.0
ISCO	Idaho Springs	25.24	339	P	P	19 25 54.1	+1.0
ISCO				pmax	pmax		
	comp=Z,26nm,1.2s						
ISCO	Idaho Springs	25.24	339	P	P	19 25 54.9	+1.8
	baz=153,SNR=15						
ISCO				S	S	19 30 17.5	+8.0
	baz=153						
ISCO	Idaho Springs	25.24	339	P	P	19 25 54.8	+1.7
	baz=153,SNR=15						
P53A	Whipple	25.27	23	P	P	19 25 51.1	-1.9
P53A				IAmb	IAmb	19 26 15.1	
	comp=Z,49nm,0.9s						
P53A	Whipple	25.27	23	P	P	19 25 51.5	-1.5
	baz=209						
P53A				P	P	19 25 51.5	-1.5
	baz=209						
P53A				S	S	19 30 06.7	-2.6
	baz=209						
P53A				S	S	19 30 06.7	-2.6
	baz=209						
PV11	David Mesa, Pa	25.28	332	P	P	19 25 54.4	+1.1
PV11				IAmb	IAmb	19 26 22.8	
	comp=Z,56nm,0.9s						
PDMCI	Parker Dam,Lak	25.28	318	P	P	19 25 55.1	+2.0
	baz=129,SNR=16						
PV07	Paradox Valley	25.29	332	P	P	19 25 55.2	+1.8
PV07				IAmb	IAmb	19 26 24.1	
	comp=Z,55nm,1.0s						
JSRW	J. Sargeant Re	25.31	31	P	P	19 25 51.8	-1.5
L34A	Svendsen Farm,	25.35	356	P	P	19 25 53.0	-0.7
L34A				IAmb	IAmb	19 25 55.7	
	comp=Z,72nm,0.8s						
ACSO	Alum Creek Sta	25.38	20	P	P	19 25 52.1	-1.9
ACSO				IAmb	IAmb	19 26 14.9	
	comp=Z,64nm,0.9s						
ACSO	Alum Creek Sta	25.38	20	P	P	19 25 52.1	-1.9
	baz=205						
ACSO	Alum Creek Sta	25.38	20	P	P	19 25 55.1	+1.1
	baz=205						
PV10	Paradox Valley	25.41	331	P	P	19 25 54.5	-0.1
PV10				IAmb	IAmb	19 25 57.0	
	comp=Z,57nm,1.2s						
L40A	Anamosa	25.46	5	P	P	19 25 52.8	-1.9
L40A				IAmb	IAmb	19 26 10.9	
	comp=Z,78nm,1.3s						
L40A	Anamosa	25.46	5	P	P	19 25 53.8	-0.9
	baz=186,SNR=8.3						
PV23	Carpenter Ridg	25.46	332	P	P	19 25 56.2	+1.2
YUH	Yuha Desert	25.50	313	P	P	19 25 57.2	+2.0
R58B	Mineral	25.53	30	P	P	19 25 55.3	0.0
R58B	Mineral	25.53	30	P	P	19 25 55.6	+0.3
	baz=218,SNR=6.3						
R58B				P	P	19 25 55.6	+0.3
	baz=218,SNR=6.3						
R58B				S	S	19 30 13.3	-0.1
	baz=218						
R58B				S	S	19 30 13.3	-0.1
	baz=218						
L42A	Oliver, Polo	25.56	7	P	P	19 25 54.2	-1.4
L42A				IAmb	IAmb	19 26 23.6	
	comp=Z,89nm,1.2s						
L42A	Oliver, Polo	25.56	7	P	P	19 25 53.9	-1.7
	baz=189,SNR=6.9						
SWSC	Sam W. Stewart	25.58	313	P	P	19 25 58.0	+2.1
	baz=124,SNR=11						
U15A	North Rim	25.59	324	P	P	19 25 58.0	+1.7
W13A	Hualapai Mount	25.63	320	P	P	19 25 56.5	0.0
IKP	In-Ko-Pah, Jac	25.64	313	P	P	19 25 58.2	+1.7
	baz=123,SNR=11						
N49A	Columbus Grove	25.64	17	P	P	19 25 53.9	-2.4
O52A	Adamsville	25.66	22	P	P	19 25 54.3	-2.2
O52A				IAmb	IAmb	19 26 05.5	
	comp=Z,43nm,0.9s						
O52A	Adamsville	25.66	22	P	P	19 25 54.1	-2.4
	baz=208,SNR=8.4						
O52A				P	P	19 25 54.1	-2.4
	baz=208,SNR=8.4						
O52A				S	S	19 30 09.0	-6.5
	baz=208						
O52A				S	S	19 30 09.0	-6.5
	baz=208						
BC3	Big Chuckawall	25.75	315	P	P	19 25 59.5	+2.0
	baz=126,SNR=76						
IRM	Iron Mountain	25.84	316	P	P	19 26 00.3	+2.0
	baz=127,SNR=30						
IRM				S	S	19 30 24.6	+6.0
	baz=127						
CBX	Cerro Bola	25.85	311	P	P	19 25 58.3	-0.2
NEE2	Needles Airpor	25.88	318	P	P	19 25 59.4	+0.8
	baz=129						
TKX	Tecate	25.94	312	P	P	19 26 01.4	+2.1
TKX				IAmb	IAmb	19 26 02.6	
	comp=Z,45nm,1.1s						
K38A	Parkersburg	25.96	2	P	P	19 25 57.9	-1.3
K38A				IAmb	IAmb	19 26 26.8	
	comp=Z,79nm,1.2s						
CBN	Corbin Frederi	25.96	31	P	P	19 25 57.6	-1.6
CBN				IAmb	IAmb	19 26 26.1	
	comp=Z,46nm,0.9s						
MONP2	Monument Peak	25.99	313	P	P	19 26 02.0	+2.2
	baz=123,SNR=8.4						
L44A	Lake County Fo	25.99	10	P	P	19 25 57.8	-1.7
L44A				IAmb	IAmb	19 26 26.9	
	comp=Z,43nm,0.9s						
L44A	Lake County Fo	25.99	10	P	P	19 25 58.8	-0.7
	baz=193						
O53A	New Philadelph	26.01	23	P	P	19 25 57.7	-2.0
O53A	New Philadelph	26.01	23	P	P	19 25 58.9	-0.8
	baz=209						
MCWV	Mont Chateau	26.03	25	P	P	19 25 58.4	-1.4
MCWV				IAmb	IAmb	19 26 27.3	
	comp=Z,54nm,1.3s						
MCWV	Mont Chateau	26.03	25	P	P	19 25 59.2	-0.6
	baz=212						
BAR	Barrett	26.05	312	P	P	19 26 01.3	+1.2
L46A	Eue Claire	26.14	13	P	P	19 25 58.4	-2.4
L46A				IAmb	IAmb	19 25 59.7	
	comp=Z,77nm,1.4s						
K31A	O'Neill	26.25	352	P	P	19 26 01.7	-0.1
K31A				IAmb	IAmb	19 26 23.6	
	comp=Z,84nm,1.0s						
O54A	Avella	26.26	24	P	P	19 25 60.0	-2.0
BELC	Belle Mtn. Jos	26.32	315	P	P	19 26 04.5	+1.8
	baz=126,SNR=22						
N23A	Red Feather La	26.33	339	P	P	19 26 03.4	+0.5
N23A	Red Feather La	26.33	339	P	P	19 26 03.9	+1.0
	baz=153						
PKCU	Pink Cliffs	26.34	326	P	P	19 26 03.1	+0.1
BAUV	El Baul	26.35	104	P	P	19 26 01.0	-2.0
JFWS	Jewell Farm	26.40	6	P	P	19 26 01.6	-1.5
JFWS				IAmb	IAmb	19 26 03.2	
	comp=Z,45nm,0.8s						
JFWS	Jewell Farm	26.40	6	P	P	19 26 01.6	-1.5
JFWS				pmax	pmax		
	comp=Z,45nm,0.9s						
JFWS	Jewell Farm	26.40	6	P	P	19 26 01.7	-1.4
	baz=188,SNR=7.6						

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JFWS  Jewell Farm        26.40   6  P      P      19 26 01.5  -1.6
      baz=188,SNR=7.6
TPFO  Pinon Flats        26.41 314  P      P      19 26 04.4 +0.9
      baz=124,SNR=8.3
PFO   Pinyon Flats O     26.41 314  P      P      19 26 05.1 +1.6
      comp=Z,26nm,1.0s,baz=112,slow=8.0,SNR=16
PFO                                 PcP    PcP    19 29 26.6 +0.8
      comp=Z,5.9nm,0.9s,baz=138,slow=2.4,SNR=2.7
PFO                                 LR     LR     19 37 46.8
      comp=Z,645nm,18.2s,baz=133,slow=39
      comp=Z,26nm,1.0s
PFO   Pinyon Flats O     26.41 314  P      P      19 26 04.8 +1.3
PFO                                 IAmb   IAmb   19 26 07.0
      comp=Z,51nm,1.1s
PFO   Pinyon Flats O     26.41 314  P      P      19 26 04.3 +0.8
      baz=124,SNR=8.0
M50A  Fremont            26.42  19  P      P      19 26 00.2  -3.1
K43A  Burlington         26.44   9  P      P      19 26 01.1  -2.4
K43A                                IAmb   IAmb   19 26 03.1
      comp=Z,43nm,1.1s
K43A  Burlington         26.44   9  P      P      19 26 01.1  -2.4
      baz=192
109C  Camp Elliot, M     26.47 312  P      P      19 26 04.8 +0.9
109C  Camp Elliot, M     26.47 312  P      P      19 26 05.7 +1.9
      baz=122
L48A  N Adams            26.52  16  P      P      19 26 02.1  -2.2
L48A                                IAmb   IAmb   19 26 21.1
      comp=Z,44nm,0.9s
O20A  White River Ci     26.53 335  P      P      19 26 05.3 +0.8
O20A  White River Ci     26.53 335  P      P      19 26 05.5 +0.9
      baz=148
PHWY  Pilot Hill         26.53 340  P      P      19 26 05.3 +0.6
LCMT  Little Creek M     26.54 324  P      P      19 26 04.3  -0.4
GMRC  Granite Mounta     26.56 317  P      P      19 26 06.3 +1.5
      baz=127,SNR=39
N53A  Lisbon             26.63  23  P      P      19 26 03.0  -2.2
N53A                                IAmb   IAmb   19 26 32.3
      comp=Z,56nm,1.1s
N53A  Lisbon             26.63  23  P      P      19 26 03.8  -1.4
      baz=209,SNR=5.3
N53A                                P      P      19 26 03.8  -1.4
      baz=209,SNR=5.3
P57A  Homestead Farm     26.68  28  P      P      19 26 04.6  -1.0
SRU   San Rafael Swe     26.70 330  P      P      19 26 07.3 +1.3
SRU   San Rafael Swe     26.70 330  P      P      19 26 07.4 +1.3
SRU                                 pmax   pmax
      comp=Z,49nm,1.4s
MTPU  Mount Pierson      26.71 327  P      P      19 26 07.4 +1.0
Q16A  Castle Valley      26.86 329  P      P      19 26 09.2 +1.7
Q16A                                IAmb   IAmb   19 26 37.8
      comp=Z,76nm,1.5s
SZCU  Shurtz Canyon      26.87 325  P      P      19 26 09.4 +1.7
MURC  Murrieta           26.92 313  P      P      19 26 10.0 +2.0
      baz=123,SNR=7.6
P18A  Preston Nutter     26.98 331  P      P      19 26 09.3 +0.6
CCUT  Cedar City         26.99 324  P      P      19 26 10.0 +1.2
HEC   Hector,Ludlow      27.03 316  P      P      19 26 11.1 +2.1
      baz=126,SNR=32
HEC                                 S      S      19 30 40.8 +3.4
      baz=126
MSU   Marysvale          27.05 327  P      P      19 26 11.1 +1.7
MSU   Marysvale          27.05 327  P      P      19 26 11.1 +1.7
AAM   Ann Arbor          27.07  17  P      P      19 26 06.4  -2.7
AAM   Ann Arbor          27.07  17  P      P      19 26 06.4  -2.7
AAM                                 pmax   pmax
      comp=Z,36nm,1.1s
AAM   Ann Arbor          27.07  17  P      P      19 26 12.2 +3.1
      baz=202
P17A  Butcher Ranch,     27.09 331  P      P      19 26 09.3  -0.2
M52A  Chesterland        27.09  21  P      P      19 26 07.1  -2.2
BBRC  Big Bear Solar     27.09 315  P      P      19 26 11.8 +2.1
      baz=125
ELS   Elsinore Mount     27.10 313  P      P      19 26 10.1 +0.5
ECSD  EROS Data Cent     27.12 356  P      P      19 26 08.2  -1.4
ECSD                                IAmb   IAmb   19 26 11.6
      comp=Z,28nm,0.7s
ECSD  EROS Data Cent     27.12 356  P      P      19 26 08.5  -1.1
      baz=174,SNR=34
ECSD  EROS Data Cent     27.12 356  P      P      19 26 08.4  -1.3
      baz=174,SNR=34
ECSD                                S      S      19 30 35.4  -3.1
      baz=174
TUQ   Turquoise Moun     27.13 318  P      P      19 26 12.0 +2.0
      baz=128,SNR=13
TMUT  Trail Mountain     27.17 330  P      P      19 26 10.5 +0.1
M53A  WI Miller and      27.25  22  P      P      19 26 07.9  -2.8
M53A  WI Miller and      27.25  22  P      P      19 26 08.3  -2.4
      baz=209
TCRU  Three Creeks R     27.27 327  P      P      19 26 12.0 +0.7
I37A  Lemond, Waseca     27.31   1  P      P      19 26 09.1  -2.2
SHPR  Sheep Range        27.33 321  P      P      19 26 12.9 +1.2
SHPR                                IAmb   IAmb   19 26 15.2
      comp=Z,48nm,1.2s
I40A  Norwalk            27.33   5  P      P      19 26 09.9  -1.6
I40A                                IAmb   IAmb   19 26 39.0
      comp=Z,59nm,1.2s
RDMU  Red Mountain       27.45 334  P      P      19 26 12.6  -0.2
RWWY  Rawlins            27.48 338  P      P      19 26 14.0 +0.9
RWWY                                IAmb   IAmb   19 26 41.6
      comp=Z,56nm,1.2s
RRX   Edison Barstow     27.50 316  P      P      19 26 14.5 +1.4
      baz=126
I42A  Draeger Farm,      27.52   8  P      P      19 26 11.2  -1.9
I42A  Draeger Farm,      27.52   8  P      P      19 26 11.5  -1.6
      baz=190,SNR=6.8
SCI2  San Clemente I     27.55 311  P      P      19 26 14.0 +0.5
      baz=120
BFSC  Mount Baldy Ra     27.59 314  P      P      19 26 15.8 +1.8
      baz=124,SNR=8.1
ALLY  Alegheny Colle     27.62  23  P      P      19 26 13.2  -0.9
GSC   Goldstone, Bar     27.62 317  P      P      19 26 15.7 +1.4
GSC   Goldstone, Bar     27.62 317  P      P      19 26 15.7 +1.4
GSC                                 pmax   pmax
      comp=Z,23nm,1.2s
GSC   Goldstone, Bar     27.62 317  P      P      19 26 16.5 +2.2
      baz=126,SNR=9.8
SHOC  Shoshone, Teco     27.64 318  P      P      19 26 16.5 +2.2
      baz=128
SSPA  Standing Stone     27.67  27         P      19 26 12.9  -1.6
SSPA  Standing Stone     27.67  27  P      P      19 26 14.8 +0.3
      baz=215
CIS   Catalina Islan     27.67 312  P      P      19 26 15.9 +1.2
      baz=121
K50A  Casco              27.80  18  P      P      19 26 12.8  -2.9
K50A                                IAmb   IAmb   19 26 32.8
      comp=Z,28nm,0.8s
MVL   Millersville       27.86  30  P      P      19 26 12.6  -3.5
PRN   Pahroc Range       27.86 322  P      P      19 26 18.4 +1.9
PASC  Pasadena Art C     27.92 313  P      P      19 26 18.2 +1.4
PASC                                IAmb   IAmb   19 26 20.3
      comp=Z,59nm,1.4s
MPU   Maple Canyon       27.94 330  P      P      19 26 18.9 +1.7
PSUT  Pine Spring        27.96 325  P      P      19 26 19.4 +1.9
M55A  Ridgway            28.00  25  P      P      19 26 17.0  -0.5
QSM   Queen of Sheba     28.06 318  P      P      19 26 19.7 +1.6
QSM                                 IAmb   IAmb   19 26 21.5
      comp=Z,42nm,1.1s
QSM                                 PcP    PcP    19 29 30.8 +1.2
SUSD  Miller             28.06 352  P      P      19 26 17.6  -0.4
SUSD                                IAmb   IAmb   19 26 19.8
      comp=Z,67nm,0.9s
SUSD  Miller             28.06 352  P      P      19 26 17.9   0.0
      baz=170
SUSD  Miller             28.06 352  P      P      19 26 17.6  -0.4
      baz=170
SUSD                                S      S      19 30 50.4  -2.8
      baz=170
DECC  Green Verdugo      28.07 313  P      P      19 26 19.0 +0.9
      baz=123
GWY   Greenwater Val     28.07 318  P      P      19 26 20.1 +1.8
GWY                                 IAmb   IAmb   19 26 21.6
      comp=Z,36nm,1.0s
GWY                                 PcP    PcP    19 29 30.9 +1.1
ERPA  Erie               28.09  22  P      P      19 26 16.7  -1.5
ERPA  Erie               28.09  22  P      P      19 26 17.8  -0.4
      baz=209
K22A  Casper             28.09 340  P      P      19 26 17.1  -1.3
K22A  Casper             28.09 340  P      P      19 26 19.1 +0.6
      baz=154
NLU   North Lily Min     28.10 329  P      P      19 26 20.5 +1.9
ATAH  Atahualpa          28.16 146  P      P      19 26 19.9 +0.3
      comp=Z,11nm,0.7s,baz=334,slow=8.8,SNR=12
ATAH                                PcP    PcP    19 29 31.4 +0.7
      comp=Z,7.1nm,0.9s,baz=314,slow=4.1,SNR=3.1
ATAH                                LR     LR     19 36 20.2
      comp=Z,113nm,19.2s,baz=311,slow=34
      comp=Z,11nm,0.7s
EDW2  Edwards Air Fo     28.18 315  P      P      19 26 20.8 +1.7
      baz=124,SNR=8.2
TPNV  Topopah Spring     28.28 320  P      P      19 26 22.3 +2.1
TPNV                                IAmb   IAmb   19 26 24.2
      comp=Z,36nm,1.1s
TPNV  Topopah Spring     28.28 320  P      P      19 26 22.3 +2.1
TPNV                                pmax   pmax
      comp=Z,36nm,1.1s
TPNV  Topopah Spring     28.28 320  P      P      19 26 22.4 +2.1
      baz=130,SNR=24
LRMC  Laurel Mtn Rad     28.30 316  P      P      19 26 22.2 +1.8
      baz=125,SNR=6.9
JLU   Jordanelle         28.31 331  P      P      19 26 21.5 +1.0
CCAC  Calif City Air     28.34 315  P      P      19 26 22.8 +2.1
CCAC                                IAmb   IAmb   19 26 23.5
      comp=Z,25nm,0.8s
FURC  Furnace Creek,     28.36 319  P      P      19 26 22.7 +2.0
      baz=128,SNR=16
SNCC  San Nicolas Is     28.40 310  P      P      19 26 20.9  -0.2
      baz=119
S11A  Rachel             28.43 322  P      P      19 26 22.9 +1.4
S11A                                IAmb   IAmb   19 26 25.6
      comp=Z,46nm,1.2s
OSI   Osito Audit: C     28.53 314  P      P      19 26 22.0  -0.3
      baz=123
SPMN  Marine on St.      28.54   2  P      P      19 26 21.1  -1.1
SPMN                                IAmb   IAmb   19 26 22.2
      comp=Z,67nm,0.8s
SPMN  Marine on St.      28.54   2  P      P      19 26 21.1  -1.1
      baz=182,SNR=10.0
SPMN  Marine on St.      28.54   2  P      P      19 26 20.8  -1.3
      baz=182,SNR=10.0
DUG   Dugway, Tooele     28.65 329  P      P      19 26 24.9 +1.5
DUG   Dugway, Tooele     28.65 329  P      P      19 26 24.9 +1.5
DUG                                 pmax   pmax
      comp=Z,20nm,1.2s
DUG   Dugway, Tooele     28.65 329  P      P      19 26 24.6 +1.2
      baz=140,SNR=5.2
DUG                                 S      S      19 31 07.4 +4.6
      baz=140
RSSD  Black Hills        28.72 345  P      P      19 26 25.0 +0.9
RSSD  Black Hills        28.72 345  P      P      19 26 25.0 +0.9
RSSD                                pmax   pmax
      comp=Z,14nm,0.7s
RSSD  Black Hills        28.72 345  P      P      19 26 25.1 +1.1
      baz=160,SNR=17
RSSD  Black Hills        28.72 345  P      P      19 26 25.1 +0.9
      baz=160
RSSD  Black Hills        28.72 345  P      P      19 26 25.4 +1.4
G40A  Rib Lake           28.73   5  P      P      19 26 21.9  -2.0
G40A  Rib Lake           28.73   5  P      P      19 26 22.7  -1.2
      baz=187,SNR=7.0
LUPA  Lehigh Univers     28.80  30  P      P      19 26 23.7  -0.8
R11A  Troy Canyon, C     28.81 323  P      P      19 26 26.8 +1.9
R11A  Troy Canyon, C     28.81 323  P      P      19 26 26.8 +1.9
      baz=133,SNR=33
R11A                                S      S      19 31 12.7 +7.2
      baz=133
I49A  Point Hope         28.82  17  P      P      19 26 21.7  -3.0
SCZ2  Santa Cruz Isl     28.85 312  P      P      19 26 26.2 +1.1
      baz=120
ARVC  Arvin              28.88 314  P      P      19 26 27.3 +2.0
      baz=123,SNR=6.1
ISA   Isabella, Lake     28.94 316  P      P      19 26 28.1 +2.1
ISA   Isabella, Lake     28.94 316  P      P      19 26 28.1 +2.1
ISA                                 pmax   pmax
      comp=Z,30nm,1.2s
ISA   Isabella, Lake     28.94 316  P      P      19 26 27.7 +1.8
      baz=124,SNR=8.3
GRAC  Grapevine Rang     29.01 319  P      P      19 26 29.3 +2.8
GRAC                                IAmb   IAmb   19 26 30.6
      comp=Z,82nm,1.1s
GRAC  Grapevine Rang     29.01 319  P      P      19 26 27.9 +1.4
      baz=128
CWC   Cottonwood Cre     29.13 317  P      P      19 26 29.3 +1.5
      baz=126
SBC   Santa Barbara      29.13 312  P      P      19 26 28.7 +1.1
      baz=121
F36A  Milaca             29.16   1  P      P      19 26 26.2  -1.5
F36A                                IAmb   IAmb   19 26 27.6
      comp=Z,35nm,1.1s
F36A  Milaca             29.16   1  P      P      19 26 26.8  -0.9
      baz=181,SNR=17
HWUT  Hardware Ranch     29.16 332  P      P      19 26 29.3 +1.3
G45A  Suttons Bay        29.18  12  P      P      19 26 24.9  -2.9
G45A                                IAmb   IAmb   19 26 28.3
      comp=Z,21nm,0.7s
GLMI  Grayling           29.19  14  P      P      19 26 26.0  -2.0
F33A  5 Mile Ranch,      29.20 357  P      P      19 26 26.2  -1.8
BW06  Boulder Array      29.28 336  P      P      19 26 29.7 +0.6
BW06  Boulder Array      29.28 336  P      P      19 26 30.1 +1.0
      baz=148
BW06                                S      S      19 31 15.2 +2.3
      baz=148
PD31  Pinedale Array     29.28 336  P      P      19 26 29.0  -0.1
PDAR  Pinedale Array     29.28 336  P      P      19 26 30.1 +1.0
      comp=Z,2.8nm,0.8s,baz=134,slow=11,SNR=19
PDAR                                PcP    PcP    19 29 32.2  -0.6
      comp=Z,3.9nm,1.0s,baz=85,slow=3.3,SNR=3.2
PDAR                                LR     LR     19 41 59.2
      comp=Z,147nm,20.6s,baz=152,slow=44
      comp=Z,2.8nm,0.8s
PDAR  Pinedale Array     29.28 336  P      P      19 26 29.7 +0.6
BGU   Big Grassy Mou     29.31 330  P      P      19 26 30.1 +0.8
LCH   Last Change Ra     29.33 319  P      P      19 26 31.4 +2.0
LCH                                 IAmb   IAmb   19 26 33.0
      comp=Z,46nm,1.3s
PKM   Mcpherson Peak     29.44 313  P      P      19 26 32.7 +2.2
      baz=122,SNR=9.4
VES   Vestal, Richgr     29.45 315  P      P      19 26 33.1 +2.8
      baz=124,SNR=16
F42A  Maple Grove Fa     29.45   8  P      P      19 26 28.3  -2.0
TIN   Tinemaha, Big      29.59 318  P      P      19 26 33.7 +1.9
      baz=127,SNR=8.5
TPH   Tonopah            29.60 321  P      P      19 26 33.5 +1.6
TPH   Tonopah            29.60 321  P      P      19 26 33.5 +1.6
TPH                                 pmax   pmax
      comp=Z,175nm,1.2s
COWI  Conover            29.67   7  P      P      19 26 30.4  -1.7
PAL   Palisades          29.82  31  P      P      19 26 33.5  -0.1
      baz=221
HVU   Hansel Valley      29.85 331  P      P      19 26 35.8 +1.7
HVU                                 IAmb   IAmb   19 26 37.2
      comp=Z,26nm,1.0s
HVU   Hansel Valley      29.85 331  P      P      19 26 35.8 +1.7
HVU                                 pmax   pmax
      comp=Z,26nm,1.0s
AHID  Auburn Hatcher     29.91 334  P      P      19 26 35.0 +0.4
E38A  The Farm, Brul     29.96   3  P      P      19 26 33.4  -1.4
E38A                                IAmb   IAmb   19 26 34.7
      comp=Z,47nm,0.8s
E38A  The Farm, Brul     29.96   3  P      P      19 26 33.8  -1.0
      baz=184,SNR=5.3
Q09A  Carvers            30.06 322  P      P      19 26 36.6 +0.6
Q09A                                IAmb   IAmb   19 26 40.0
      comp=Z,49nm,1.1s
PAGB  Antelope Grade     30.18 314  P      P      19 26 39.5 +2.6
PAGB                                IAmb   IAmb   19 26 40.9
      comp=Z,94nm,1.4s
E43A  Lone Tree Farm     30.23  10  P      P      19 26 34.5  -2.6
E43A  Lone Tree Farm     30.23  10  P      P      19 26 34.8  -2.2
      baz=193,SNR=5.9
ECR   Eagle Creek        30.26 334  P      P      19 26 39.3 +1.6
J56A  Wolcott            30.28  25  P      P      19 26 35.5  -2.1
ELK   Elko               30.30 327  P      P      19 26 39.2 +1.2
ELK                                        PcP    19 29 36.5 +1.0
ELK   Elko               30.30 327  P      P      19 26 39.3 +1.2
ELK                                               19 29 36.5
ELK                                 pmax   pmax
      comp=Z,15nm,1.0s
REDW  Red Top Meadow     30.30 335  P      P      19 26 39.2 +1.2
REDW                                IAmb   IAmb   19 27 08.1
      comp=Z,64nm,1.2s
SNOW  Snow King Moun     30.34 335  P      P      19 26 39.8 +1.3
SNOW                                IAmb   IAmb   19 27 08.5
      comp=Z,45nm,0.9s
NV11  Mina Array Sit     30.39 320  P      P      19 26 41.5 +2.6
NV11                                IAmb   IAmb   19 26 42.9
      comp=Z,82nm,1.1s
E28A  Huff               30.39 351  P      P      19 26 38.2  -0.4
E28A  Huff               30.39 351  P      P      19 26 37.4  -1.2
      baz=167,SNR=9.0
LOHW  Long Hollow        30.41 336  P      P      19 26 39.8 +0.8
OMMB  Old Mammoth Mi     30.42 318  P      P      19 26 41.3 +2.0
OMMB                                IAmb   IAmb   19 26 43.0
      comp=Z,44nm,1.1s
TPAW  Teton Pass         30.44 335  P      P      19 26 41.1 +1.7
TPAW                                IAmb   IAmb   19 27 09.5
      comp=Z,47nm,1.3s
MDPB  Devils Postpil     30.48 318  P      P      19 26 42.2 +2.4
MDPB                                IAmb   IAmb   19 26 43.5
      comp=Z,56nm,1.0s
NVAR  Mina Array Bea     30.48 320  P      P      19 26 42.4 +2.7
      comp=Z,67nm,0.8s,baz=136,slow=8.8,SNR=221
NVAR                                PcP    PcP    19 29 36.5 +0.5
      comp=Z,6.0nm,0.9s,baz=126,slow=3.8,SNR=5.7
NVAR                                pPcP          19 30 10.4
      comp=Z,2.5nm,0.8s,baz=130,slow=4.8,SNR=3.5
NVAR                                ScP    ScP    19 33 07.4 +0.7
      comp=Z,1.4nm,0.9s,baz=150,slow=4.7,SNR=4.9
NVAR                                LR     LR     19 39 37.6
      comp=Z,250nm,18.2s,baz=126,slow=37
NVAR  Mina Array Bea     30.48 320  P      P      19 26 41.7 +2.0
NVAR                                       PcP    19 29 36.8 +0.8
LHV   Little Huntoon     30.49 320  P      P      19 26 42.4 +2.9
LHV                                 IAmb   IAmb   19 26 44.0
      comp=Z,80nm,1.0s
D32A  Dogwood Acres,     30.54 356  P      P      19 26 38.3  -1.5
MOOW  Moose Ponds        30.58 336  P      P      19 26 41.3 +0.8
SADO  Sadowa             30.70  21  LR     LR     19 41 12.9
      comp=Z,309nm,18.4s,baz=206,slow=40
SADO  Sadowa             30.70  21  P      P      19 26 38.9  -2.5
RYN   Ryan               30.74 320  P      P      19 26 44.0 +2.1
RYN                                 IAmb   IAmb   19 26 45.8
      comp=Z,42nm,1.0s
KVN   Kaiserville        30.75 321  P      P      19 26 43.9 +1.9
KVN                                 IAmb   IAmb   19 26 45.7
      comp=Z,48nm,1.1s
KVN   Kaiserville        30.75 321  P      P      19 26 43.9 +1.9
KVN                                 pmax   pmax
      comp=Z,48nm,1.1s
PMPB  Monarch Peak       30.82 314  P      P      19 26 44.7 +2.1
FLWY  Flagg Ranch        30.84 336  P      P      19 26 43.4 +0.6
DELO  Deloro Mine        31.03  23  P      P      19 26 42.0  -2.2
DELO                                IAmb   IAmb   19 26 55.9
      comp=Z,17nm,0.6s
BMN   Battle Mountai     31.15 324  P      P      19 26 47.8 +2.3
BMN                                 IAmb   IAmb   19 26 49.0
      comp=Z,36nm,1.0s
BMN   Battle Mountai     31.15 324  P      P      19 26 47.8 +2.3
BMN                                 pmax   pmax
      comp=Z,36nm,1.0s
YFT   Old Faithful       31.20 336  P      P      19 26 49.3 +3.2
RLMT  Red Lodge          31.20 339  P      P      19 26 47.7 +1.7
RLMT  Red Lodge          31.20 339  P      P      19 26 47.2 +1.2
      baz=151,SNR=7.2
EYMN  Ely                31.31   3  P      P      19 26 44.5  -2.1
EYMN                                IAmb   IAmb   19 26 46.1
      comp=Z,20nm,0.8s
EYMN  Ely                31.31   3  P      P      19 26 44.7  -1.9
      baz=184,SNR=8.3
EYMN  Ely                31.31   3  P      P      19 26 44.3  -2.2
      baz=184,SNR=8.3
EYMN                                S      S      19 31 40.0  -4.0
      baz=184
YERR  Yerington          31.40 320  P      P      19 26 50.1 +2.3
YERR                                IAmb   IAmb   19 26 51.5
      comp=Z,43nm,1.0s
YMR   Madison River      31.44 336  P      P      19 26 49.4 +1.3
YMR                                 IAmb   IAmb   19 26 53.1
      comp=Z,32nm,1.2s
MDND  Maddock            31.49 353  P      P      19 26 47.9  -0.4
MDND  Maddock            31.49 353  P      P      19 26 48.3 +0.1
      baz=170,SNR=11
MDND  Maddock            31.49 353  P      P      19 26 47.7  -0.5
      baz=170,SNR=11
L61B  Northampton        31.51  31  P      P      19 26 47.8  -0.7
      baz=222
SAO   San Andreas Ge     31.55 315  P      P      19 26 50.3 +1.4
SAO                                 IAmb   IAmb   19 26 51.9
      comp=Z,41nm,1.5s
SAO   San Andreas Ge     31.55 315  P      P      19 26 50.3 +1.4
SAO                                 pmax   pmax
      comp=Z,41nm,1.5s
CMB   Columbia Colle     31.55 318  P      P      19 26 50.1 +1.1
CMB                                 IAmb   IAmb   19 26 52.1
      comp=Z,33nm,1.1s
CMB   Columbia Colle     31.55 318  P      P      19 26 50.1 +1.1
CMB                                 pmax   pmax
      comp=Z,33nm,1.1s
AGMN  Agassiz Nation     31.63 358  P      P      19 26 47.9  -1.5
AGMN                                IAmb   IAmb   19 26 49.6
      comp=Z,47nm,0.9s
AGMN  Agassiz Nation     31.63 358  P      P      19 26 48.5  -0.9
      baz=176,SNR=20
AGMN  Agassiz Nation     31.63 358  P      P      19 26 48.2  -1.2
      baz=176,SNR=20
B35A  Bob, Littlefor     31.66   0  P      P      19 26 48.0  -1.6
B35A                                IAmb   IAmb   19 26 49.4
      comp=Z,55nm,0.9s
B35A  Bob, Littlefor     31.66   0  P      P      19 26 48.5  -1.1
      baz=180,SNR=22
YHL   Hebgen Lake        31.67 336  P      P      19 26 49.9  -0.3
LAO   LASA Array         31.68 344  P      P      19 26 50.2 +0.3
LAO   LASA Array         31.68 344  P      P      19 26 51.1 +1.1
      baz=157
LAO   LASA Array         31.68 344  P      P      19 26 50.3 +0.3
      baz=157
PNTR  Pine Nut           31.68 320  P      P      19 26 52.3 +2.0
PNTR                                IAmb   IAmb   19 26 54.2
      comp=Z,51nm,0.9s
QLMT  Earthquake Lak     31.75 336  P      P      19 26 53.4 +2.6
VCNR  Virginia City      31.84 320  P      P      19 26 54.5 +2.9
VCNR                                IAmb   IAmb   19 26 55.5
      comp=Z,26nm,1.0s
EMB   Emerald Bay        31.93 319  P      P      19 26 55.3 +2.8
PAHR  Pah Rah Range      31.93 321  P      P      19 26 54.5 +2.1
PAHR                                IAmb   IAmb   19 26 56.0
      comp=Z,38nm,1.1s
HLID  Hailey             32.00 331  P      P      19 26 54.0 +1.0
HLID                                IAmb   IAmb   19 26 58.1
      comp=Z,21nm,0.8s
HLID  Hailey             32.00 331  P      P      19 26 54.5 +1.6
      baz=141,SNR=40
HLID                                S      S      19 31 59.6 +4.4
      baz=141
CZSB  Cruzeiro do Su     32.03 137  eP     P      19 26 55.0 +1.7
MPK   Martis Peak        32.07 320  P      P      19 26 56.6 +2.8
MCMT  McKenzie Canyo     32.32 334  P      P      19 26 58.3 +2.5
LONY  Lake Ozonia        32.33  26  P      P      19 26 52.9  -2.7
LONY  Lake Ozonia        32.33  26  P      P      19 26 54.0  -1.6
      baz=216
BOZ   Bozeman (W)        32.47 337  P      P      19 26 58.0 +1.0
BOZ   Bozeman (W)        32.47 337  P      P      19 26 58.0 +1.0
BOZ                                 pmax   pmax
      comp=Z,12nm,1.1s
BOZ   Bozeman (W)        32.47 337  P      P      19 26 58.3 +1.3
      baz=147,SNR=6.3
BOZ                                 S      S      19 32 07.1 +4.6
      baz=147
MFID  Camas Ranch        32.56 330  P      P      19 26 58.7 +1.0
BEKR  Beckworth          32.62 321  P      P      19 27 00.4 +1.9
BEKR                                IAmb   IAmb   19 27 02.1
      comp=Z,41nm,1.0s
DLMT  Dillon             32.66 335  P      P      19 27 00.1 +1.4
DLMT                                IAmb   IAmb   19 27 03.8
      comp=Z,37nm,1.1s
DGMT  Dagmar             32.86 347  P      P      19 27 00.6 +0.4
DGMT                                IAmb   IAmb   19 27 01.8
      comp=Z,29nm,0.7s
DGMT  Dagmar             32.86 347  P      P      19 27 00.5 +0.3
      baz=162
FRNY  Flat Rock          32.93  27  P      P      19 26 58.4  -2.4
LRM   Limekiln Ridge     32.98 336  P      P      19 27 03.0 +1.5
NNA   Nana               33.06 148  LR     LR     19 38 57.9
      comp=Z,158nm,20.6s,baz=337,slow=33
NNA   Nana               33.06 148  P      P      19 27 03.9 +1.6
NNA                                 IAmb   IAmb   19 27 05.4
      comp=Z,94nm,1.4s
NNA   Nana               33.06 148  eP     P      19 27 04.4 +2.1
ORV   Oroville           33.14 319  P      P      19 27 05.0 +2.3
ORV                                 IAmb   IAmb   19 27 06.7
      comp=Z,32nm,1.2s
ORV   Oroville           33.14 319  P      P      19 27 05.1 +2.3
LBNH  Lisbon             33.22  29  P      P      19 27 02.8  -0.5
      baz=221
WVOR  Wild Horse Val     33.30 326  P      P      19 27 05.1 +0.9
WVOR                                IAmb   IAmb   19 27 33.9
      comp=Z,61nm,1.2s
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WVOR	Wild Horse Val	33.30	326	P	P	19 27 05.1	+0.9
WVOR				pmax	pmax		
	comp=Z,61nm,1.3s						
GDXM	Geysers	33.55	317	P	P	19 27 08.2	+1.8
ULM	Lac du Bonnet	33.58	358	P	P	19 27 05.0	-1.4
	comp=Z,20nm,0.7s,baz=179,slow=9.3,SNR=26						
ULM				pP	pP	19 27 32.6	-1.8
	comp=Z,16nm,0.9s,baz=176,slow=9.8,SNR=4.2						
ULM				S	S	19 32 15.8	-3.5
	comp=Z,7.5nm,0.8s,baz=325,slow=17,SNR=5.0						
ULM				LR	LR	19 43 54.0	
	comp=Z,214nm,18.3s,baz=178,slow=42						
	comp=Z,20nm,0.7s						
ULM	Lac du Bonnet	33.58	358	P	P	19 27 04.8	-1.6
ULM				IAmb	IAmb	19 27 06.0	
	comp=Z,72nm,1.4s						
TRQ	Mont Tremblant	33.64	25	P	P	19 27 04.5	-2.6
HOPS	Hopland Field	33.83	317	P	P	19 27 10.2	+1.5
HOPS				IAmb	IAmb	19 27 11.9	
	comp=Z,29nm,1.1s						
J08A	Circle Bar Ran	33.85	327	P	P	19 27 10.0	+1.1
MOD	Modoc Plateau	33.87	323	P	P	19 27 10.3	+1.1
MOD				IAmb	IAmb	19 27 11.8	
	comp=Z,45nm,1.3s						
PLID	Pearl Lake	33.90	331	P	P	19 27 10.2	+0.7
PLID				IAmb	IAmb	19 27 12.0	
	comp=Z,55nm,1.1s						
VLDQ	Val d'Or	34.20	20	P	P	19 27 08.6	-3.2
BMO	Blue Mountains	34.34	330	P	P	19 27 13.1	0.0
BMO				IAmb	IAmb	19 27 15.2	
	comp=Z,31nm,1.2s						
BMO	Blue Mountains	34.34	330	P	P	19 27 13.1	0.0
BMO				pmax	pmax		
	comp=Z,31nm,1.2s						
MSO	Missoula	34.39	335	P	P	19 27 14.0	+0.4
MSO	Missoula	34.39	335	P	P	19 27 14.6	+1.0
	baz=144,SNR=15						
KCPM	Cahto Peak	34.54	318	P	P	19 27 16.1	+1.1
KCPM				IAmb	IAmb	19 27 18.4	
	comp=Z,33nm,0.9s						
K05A	Summer Lake	34.73	324	P	P	19 27 18.0	+1.3
I07A	Izee	34.89	327	P	P	19 27 18.3	+0.4
KMRM	Mail Ridge	34.92	318	P	P	19 27 19.6	+1.4
KMRM				IAmb	IAmb	19 27 21.7	
	comp=Z,59nm,0.9s						
F10A	Beach Ranch, E	35.13	331	P	P	19 27 20.6	+0.6
YBH	Yreka Blue Hor	35.17	321	P	P	19 27 20.1	-0.2
YBH	Yreka Blue Hor	35.17	321	P	P	19 27 20.1	-0.2
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
L04D	Klamath Falls	35.23	322	P	P	19 27 21.4	+0.6
L04D				IAmb	IAmb	19 27 23.3	
	comp=Z,60nm,1.1s						
L04D	Klamath Falls	35.23	322	P	P	19 27 22.0	+1.1
	baz=128,SNR=12						
PKME	Peaks-Kenny Pk	35.24	31	P	P	19 27 20.3	-0.4
	baz=224						
JTMT	Jette	35.28	336	P	P	19 27 22.6	+1.3
JTMT				IAmb	IAmb	19 27 24.7	
	comp=Z,27nm,1.0s						
J05D	Fort Rock, OR	35.29	325	P	P	19 27 22.2	+0.8
	baz=130						
KMPM	Mount Pierce	35.29	318	P	P	19 27 23.4	+2.1
KMPM				IAmb	IAmb	19 27 26.0	
	comp=Z,60nm,1.0s						
KHMM	Horse Mountain	35.30	319	P	P	19 27 22.9	+1.4
KHMM				IAmb	IAmb	19 27 24.7	
	comp=Z,57nm,0.9s						
KHMM					PcP	19 29 51.0	+1.7
JCC	Jacoby Creek,	35.45	319	P	P	19 27 25.0	+2.4
PINE	Pine Mountain	35.46	325	P	P	19 27 23.5	+0.6
PINE				IAmb	IAmb	19 27 25.1	
	comp=Z,23nm,1.0s						
G08A	Pilot Rock	35.46	329	P	P	19 27 23.7	+0.9
G08A					PcP	19 29 50.5	+0.8
KRPM	Rodgers	35.64	319	P	P	19 27 26.6	+2.2
J04D	Umpqua Nationa	35.75	324	P	P	19 27 26.7	+1.3
J04D				IAmb	IAmb	19 27 28.3	
	comp=Z,54nm,0.9s						
J04D	Umpqua Nationa	35.75	324	P	P	19 27 26.5	+1.1
	baz=129,SNR=12						
L02F	Cave Junction	35.92	321	P	P	19 27 27.9	+1.3
	baz=126						
KSXB	Camp Six Broad	35.94	321	P	P	19 27 27.9	+1.0
E09A	Wood Farm, Sta	35.96	331	P	P	19 27 27.1	+0.2
E09A				IAmb	IAmb	19 27 28.6	
	comp=Z,28nm,1.1s						
I05D	Terrebonne, OR	36.03	326	P	P	19 27 28.7	+1.0
	baz=131						
I05D				S	S	19 33 01.6	+4.4
	baz=131						
WALA	Waterton Lakes	36.22	338	P	P	19 27 32.0	+2.7
I04A	Tendick Farm,	36.27	324	P	P	19 27 31.0	+1.4
	baz=129						
K02D	Willamette Mer	36.31	322	P	P	19 27 31.2	+1.1
	baz=126						
KBO	Bosley Butte	36.37	321	P	P	19 27 32.9	+2.3
G05D	Wamic, OR	36.62	327	P	P	19 27 34.6	+2.0
	baz=132						
D62A	Allapoint, All	36.69	29	P	P	19 27 31.4	-1.6
H04A	Detroit Lake	36.72	326	P	P	19 27 34.6	+1.2
H04A				IAmb	IAmb	19 27 35.8	
	comp=Z,55nm,0.9s						
D08A	Wollman Farm,	36.72	331	P	P	19 27 34.0	+0.6
D08A				IAmb	IAmb	19 27 36.6	
	comp=Z,28nm,1.1s						
I03D	Drain, OR	36.74	323	P	P	19 27 34.9	+1.3
	baz=128,SNR=7.8						
J01E	Myrtle Point	36.75	322	P	P	19 27 35.5	+1.9
J01E				IAmb	IAmb	19 27 37.9	
	comp=Z,54nm,0.9s						
J01E	Myrtle Point	36.75	322	P	P	19 27 35.3	+1.7
	baz=127						
E07A	Sunnyside	36.80	330	P	P	19 27 35.1	+1.0
KEBM	Edson Butte	36.82	322	P	P	19 27 36.4	+2.1
NEW	Newport	36.84	334	P	P	19 27 34.4	0.0
NEW	Newport	36.84	334	P	P	19 27 34.4	0.0
NEW				pmax	pmax		
	comp=Z,15nm,1.1s						
NEW	Newport	36.84	334	P	P	19 27 34.9	+0.5
	baz=141,SNR=9.6						
BUCK	Buck Mountain	36.84	324	P	P	19 27 35.3	+0.7
BUCK				IAmb	IAmb	19 27 36.6	
	comp=Z,52nm,1.1s						
HOOD	Mount Hood Mea	36.85	327	P	P	19 27 36.6	+1.9
H04D	Lebanon	36.91	325	P	P	19 27 35.7	+0.7
H04D				IAmb	IAmb	19 27 36.8	
	comp=Z,42nm,0.9s						
H04D	Lebanon	36.91	325	P	P	19 27 35.4	+0.4
	baz=130						
C09A	Chrisman Ranch	36.98	332	P	P	19 27 36.2	+0.6
C09A				IAmb	IAmb	19 27 39.3	
	comp=Z,36nm,0.9s						
F05D	White Salmon	37.13	328	P	P	19 27 38.9	+2.0
F05D				IAmb	IAmb	19 27 40.2	
	comp=Z,47nm,1.0s						
F05D	White Salmon	37.13	328	P	P	19 27 38.7	+1.9
	baz=133,SNR=9.5						
COR	Corvallis	37.27	325	P	P	19 27 40.1	+2.2
COR				pP	pP	19 28 07.5	+1.1
COR				sP	sP	19 28 23.4	+2.3
I02E	Swisshome, OR	37.27	324	P	P	19 27 39.8	+1.8
	baz=128						
G03D	McMinnville, O	37.64	325	P	P	19 27 42.7	+1.6
G03D	McMinnville, O	37.64	325	P	P	19 27 42.5	+1.3
	baz=130						
LTY	Liberty	37.69	330	P	P	19 27 42.7	+1.1
LTY				IAmb	IAmb	19 27 44.2	
	comp=Z,54nm,1.2s						
B08A	Colville Reser	37.87	332	P	P	19 27 43.5	+0.4
ETMB	Extrema	37.97	132	*e*P	P	19 27 43.6	-0.6
F04D	Rainier, OR	38.07	327	P	P	19 27 45.5	+0.7
	baz=131						
E04D	Cinebar	38.15	328	P	P	19 27 46.2	+0.8
E04D				IAmb	IAmb	19 28 04.3	
	comp=Z,46nm,1.4s						
E04D	Cinebar	38.15	328	P	P	19 27 46.4	+1.0
	baz=132						
D05A	Enumclaw	38.29	329	P	P	19 27 46.7	+0.1
D05A				IAmb	IAmb	19 27 49.1	
	comp=Z,39nm,1.1s						
E03A	Lebam	38.66	327	P	P	19 27 51.8	+2.1
E03A				IAmb	IAmb	19 27 52.5	
	comp=Z,73nm,1.2s						
D04E	Lakebay	38.67	328	P	P	19 27 50.6	+0.9
	baz=132						
B06A	Marblemount	38.97	331	P	P	19 27 50.5	-1.7
D03D	Eldon	39.07	328	P	P	19 27 53.7	+0.6
	baz=132,SNR=5.2						
WISH	Wishkah	39.14	327	P	P	19 27 55.9	+2.3
WISH				IAmb	IAmb	19 28 00.1	
	comp=Z,70nm,1.4s						
NLWA	Neilton Lookou	39.37	328	P	P	19 27 57.1	+1.5
NLWA				IAmb	IAmb	19 27 59.9	
	comp=Z,50nm,1.2s						
EDM	Edmonton	39.58	342	P	P	19 27 57.4	+0.1
EDM				IAmb	IAmb	19 27 58.7	
	comp=Z,31nm,0.6s						
EDM	Edmonton	39.58	342	P	P	19 27 57.4	+0.1
EDM				pmax	pmax		
	comp=Z,31nm,0.6s						
SAML	Samuel	39.63	128	P	P	19 27 56.1	-2.0
SAML	Samuel	39.63	128	P	P	19 27 56.1	-2.0
SAML				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SAML	Samuel	39.63	128	P	P	19 27 55.8	-2.3
CLRS	Cowichan Lake	40.45	329	P	P	19 28 06.0	+1.5
CLRS				IAmb	IAmb	19 28 07.2	
	comp=Z,42nm,1.4s						
LLLB	Lillooet	40.65	333	P	P	19 28 06.9	+0.7
LPAZ	La Paz	41.43	141	P	P	19 28 14.4	+0.8
	comp=Z,14nm,0.5s,baz=328,slow=4.7,SNR=58						
LPAZ				S	S	19 34 19.8	+0.1
	comp=Z,2.3nm,1.1s,baz=121,slow=20,SNR=3.3						
LPAZ				LR	LR	19 43 33.2	
	comp=Z,151nm,19.1s,baz=313,slow=33						
	comp=Z,14nm,0.5s						
LPAZ	La Paz	41.43	141	P	P	19 28 13.8	+0.2
LPAZ				IAmb	IAmb	19 28 15.6	
	comp=Z,60nm,1.4s						
LPAZ	La Paz	41.43	141	*e*P	P	19 28 14.5	+0.9
LPAZ	La Paz	41.43	141	P	P	19 28 14.4	+0.9
LPAZ				sP	sP	19 28 56.0	-1.4
AP01	Chacalluta	41.81	145	P	P	19 28 17.5	+1.6
CBB	Campbell River	41.86	330	P	P	19 28 17.7	+1.7
CBB				IAmb	IAmb	19 28 19.1	
	comp=Z,36nm,1.3s						
PB12	IPOC Station P	42.01	145	P	P	19 28 18.4	+0.8
PB12				IAmb	IAmb	19 28 20.1	
	comp=Z,67nm,1.3s						
MDP	Montagnes des	42.03	101	LR	LR	19 46 39.7	
	comp=Z,159nm,19.2s,baz=296,slow=37						
FCC	Fort Churchill	42.08	360	P	P	19 28 16.6	-1.0
FCC				IAmb	IAmb	19 28 17.9	
	comp=Z,44nm,0.8s						
FCC	Fort Churchill	42.08	360	P	P	19 28 16.6	-1.0
FCC				pmax	pmax		
	comp=Z,44nm,0.8s						
PB16	IPOC Station P	42.24	144	P	P	19 28 21.6	+1.6
PB16				IAmb	IAmb	19 28 22.7	
	comp=Z,52nm,1.3s						
ITTB	Itaituba	43.12	116	*e*P	P	19 28 26.0	-0.6
MALB	Monte Alegre	43.23	111	*e*P	P	19 28 27.0	-0.6
PB11	IPOC Station P	43.31	146	P	P	19 28 28.9	+0.7
SCHQ	Schefferville	43.48	23	P	P	19 28 26.6	-2.4
	comp=Z,3.8nm,0.6s,baz=226,slow=8.2,SNR=8.1						
SCHQ				pP	pP	19 28 56.1	-2.0
	comp=Z,46nm,1.0s,baz=223,slow=6.1,SNR=19						
SCHQ				PcP	PP	19 30 13.3	+0.7
	comp=Z,4.5nm,0.6s,baz=283,slow=3.6,SNR=1.5						
SCHQ				LR	LR	19 48 09.7	
	comp=Z,394nm,18.2s,baz=256,slow=38						
	comp=Z,3.8nm,0.6s						
TA01	Diego Aracena	43.69	147	P	P	19 28 31.8	+0.8
PB08	IPOC Station P	43.89	145	P	P	19 28 34.5	+1.4
PB08				IAmb	IAmb	19 28 35.5	
	comp=Z,29nm,1.0s						
PATCX	Punta Patache	43.92	147	P	P	19 28 33.9	+1.0
PATCX				IAmb	IAmb	19 28 35.9	
	comp=Z,101nm,1.4s						
VILB	Vilhena	44.43	129	*e*P	P	19 28 37.6	+0.5
PB01	IPOC Station P	44.45	147	P	P	19 28 37.7	+0.5
PB02	IPOC Station P	44.46	147	P	P	19 28 38.2	+0.9
BBB	Bella Bella	44.58	330	LR	LR	19 49 26.6	
	comp=Z,76nm,18.1s,baz=118,slow=39						
PB07	IPOC Station P	44.80	147	P	P	19 28 40.6	+0.5
PB07				IAmb	IAmb	19 28 42.2	
	comp=Z,39nm,1.0s						
PB04	IPOC Station P	45.17	148	P	P	19 28 43.7	+0.6
PB09	IPOC Station P	45.20	147	P	P	19 28 44.4	+1.1
PB09				IAmb	IAmb	19 28 46.6	
	comp=Z,45nm,1.0s						
PB06	IPOC Station P	45.78	148	P	P	19 28 48.8	+1.0
PB10	IPOC Station P	45.96	150	P	P	19 28 50.6	+1.6
PB10				IAmb	IAmb	19 28 53.0	
	comp=Z,53nm,1.4s						
RPN	Rapa Nui	45.98	199	P	P	19 28 50.8	+1.7
	comp=Z,97nm,1.1s,baz=265,slow=5.4,SNR=4.2						
RPN				LR	LR	19 43 49.7	
	comp=Z,169nm,21.6s,baz=342,slow=30						
	comp=Z,97nm,1.1s						
RPN	Rapa Nui	45.98	199	IAmb	IAmb	19 28 51.6	
	comp=Z,200nm,1.3s						
RPN	Rapa Nui	45.98	199	P	P	19 28 50.8	+1.7
RPN				pmax	pmax		
	comp=Z,200nm,1.3s						
LVC	Limon Verde	46.04	147	LR	LR	19 47 06.3	
	comp=Z,88nm,18.1s,baz=306,slow=34						
LVC	Limon Verde	46.04	147	P	P	19 28 51.0	+0.9
LVC				IAmb	IAmb	19 28 53.4	
	comp=Z,47nm,1.4s						
LVC	Limon Verde	46.04	147	P	P	19 28 51.0	+0.9
LVC				pmax	pmax		
	comp=Z,47nm,1.4s						
LVC	Limon Verde	46.04	147	*e*P	P	19 28 51.9	+1.9
LVC	Limon Verde	46.04	147	P	P	19 28 52.0	+1.9
LVC				pP	pP	19 29 21.9	+2.2
LVC				sP	sP	19 29 34.6	+0.4
PB15	IPOC Station P	46.24	148	P	P	19 28 52.4	+0.9
GRNB	Grenville Isla	46.50	331	P	P	19 28 51.7	-1.2
GRNB				IAmb	IAmb	19 28 56.1	
	comp=Z,39nm,1.4s						
AF01	San Pedro de A	46.70	147	P	P	19 28 57.0	+1.8
PTLB	Pontes e Lacer	46.84	131	*e*P	P	19 28 55.5	-0.5
PB14	IPOC Station P	46.98	150	P	P	19 28 58.4	+1.0
PB14				IAmb	IAmb	19 29 00.0	
	comp=Z,87nm,1.2s						
GO02	Mina Guanaco	47.82	150	P	P	19 29 04.9	+1.1
YKA	Yellowknife Ar	48.07	347	P	P	19 29 05.1	+0.2
	comp=Z,42nm,0.7s,baz=149,slow=7.6,SNR=144						
YKA				pP	pP	19 29 33.7	-0.8
	comp=Z,21nm,0.9s,baz=148,slow=7.8,SNR=5.0						
YKA				LR	LR	19 52 04.5	
	comp=Z,59nm,20.5s,baz=78,slow=39						
	comp=Z,42nm,0.7s						
AC01	Pan de Azucar	48.19	151	P	P	19 29 07.4	+1.2
AC01				IAmb	IAmb	19 29 08.0	
	comp=Z,39nm,1.1s						
T35M	Bob Quinn	48.64	334	P	P	19 29 10.9	+1.4
	baz=131						
CRAG	Craig	48.95	331	P	P	19 29 12.5	+0.8
	baz=126						
PRPB	Parauapebas	49.15	114	*e*P	P	19 29 13.3	-0.6
WRAK	Wrangell Islan	49.18	333	P	P	19 29 15.4	+2.0
	baz=128						
AC06	Mina Casimiro	49.33	152	P	P	19 29 16.1	+1.0
AC02	Maricunga	49.45	150	P	P	19 29 18.2	+1.7
AC02				IAmb	IAmb	19 29 20.0	
	comp=Z,56nm,1.0s						
DLBC	Dease Lake	49.52	336	LR	LR	19 51 22.8	
	comp=Z,177nm,19.0s,baz=146,slow=37						
DLBC	Dease Lake	49.52	336	P	P	19 29 18.4	+2.3
DLBC				IAmb	IAmb	19 29 20.0	
	comp=Z,54nm,1.2s						
GO03	Copiap	49.59	152	P	P	19 29 17.9	+0.8
GO03				IAmb	IAmb	19 29 19.8	
	comp=Z,13nm,0.6s						
S34M	Telegraph Cree	49.61	335	P	P	19 29 18.9	+2.1
	baz=130,SNR=5.2						
SALV	Santo Antonio	49.66	129	*e*P	P	19 29 17.1	-0.6
FRB	Frobisher Bay	50.22	14	LR	LR	19 53 05.7	
	comp=Z,160nm,18.2s,baz=191,slow=39						
LCO	Las Campanas	50.61	153	P	P	19 29 26.0	+1.0
LCO	Las Campanas	50.61	153	*e*P	P	19 29 26.5	+1.5
LCO	Las Campanas	50.61	153	P	P	19 29 26.4	+1.5
LCO				pP	pP	19 29 56.5	+1.7
LCO				sP	sP	19 30 09.6	+0.5
SNDB	Serra Nova Dou	50.83	121	*e*P	P	19 29 26.2	-0.3
SIT	Sitka	50.88	332	P	P	19 29 28.3	+2.1
	baz=125						
TGTN	Hyland Airport	51.04	340	P	P	19 29 29.9	+2.4
	baz=136						
CO05	La Serena	51.18	155	P	P	19 29 29.8	+1.0
CO05				IAmb	IAmb	19 29 31.5	
	comp=Z,46nm,0.9s						
GO04	Tololo Observa	51.58	154	P	P	19 29 33.2	+1.1
CO06	Fray Jorge	51.68	155	P	P	19 29 33.4	+0.9
CO06				IAmb	IAmb	19 29 34.5	
	comp=Z,46nm,1.3s						
CO01	Juntas del Tor	51.71	153	P	P	19 29 34.6	+1.5
CO01				IAmb	IAmb	19 29 36.3	
	comp=Z,41nm,1.2s						
P33M	Teslin, Yukon	51.77	336	P	P	19 29 34.4	+1.5
P33M				IAmb	IAmb	19 29 37.4	
	comp=Z,32nm,1.2s						
P33M	Teslin, Yukon	51.77	336	P	P	19 29 34.2	+1.2
	baz=130,SNR=17						
P33M				S	S	19 36 51.2	+6.2
	baz=130						
SKAG	Skagway	52.29	335	P	P	19 29 38.4	+1.7
	baz=127						
SMTB	Santa Maria do	52.36	115	*e*P	P	19 29 38.3	+0.3
CO02	Combarbal	52.40	155	P	P	19 29 38.8	+0.7
PLBC	Pleasant Camp	52.72	334	P	P	19 29 41.6	+1.7
	baz=126						
WHY	Whitehorse	52.84	336	P	P	19 29 42.3	+1.3
WHY	Whitehorse	52.84	336	P	P	19 29 42.4	+1.5
	baz=128,SNR=6.3						
WHY				S	S	19 37 05.2	+5.5
	baz=128						
PEXB	Peixe	53.38	119	*e*P	P	19 29 45.6	+0.2
O30N	Mendenhall	53.38	336	P	P	19 29 45.5	+0.7
	baz=127						
VA06	Catapilco	53.48	156	P	P	19 29 46.7	+0.9
M31M	Drury Creek, Y	53.63	338	P	P	19 29 48.1	+1.6
M31M				IAmb	IAmb	19 29 51.6	
	comp=Z,29nm,1.4s						
M31M	Drury Creek, Y	53.63	338	P	P	19 29 47.3	+0.7
	baz=129,SNR=9.6						
N31M	Braeburn, Yuko	53.70	337	P	P	19 29 48.5	+1.5
N31M				IAmb	IAmb	19 29 52.0	
	comp=Z,37nm,1.0s						
N31M	Braeburn, Yuko	53.70	337	P	P	19 29 48.8	+1.7
	baz=127,SNR=15						
N31M				S	S	19 37 16.0	+4.9
	baz=127						
VA01	Torpederas	53.76	157	P	P	19 29 48.9	+1.1
VA03	San Esteban	53.95	156	P	P	19 29 50.8	+1.4
ROC1	El Roble	53.96	156	P	P	19 29 50.5	+0.9
HYT	Haines Junctio	53.98	335	P	P	19 29 50.4	+1.2
HYT				IAmb	IAmb	19 29 53.0	
	comp=Z,34nm,1.3s						
HYT	Haines Junctio	53.98	335	P	P	19 29 50.5	+1.2
	baz=125,SNR=9.4						
PNL	Peninsula	54.12	333	P	P	19 29 51.4	+1.2
	baz=122						
PNL				S	S	19 37 21.9	+5.1
	baz=122						
MT02	Curacav	54.16	156	P	P	19 29 52.0	+1.2
N30M	Aishikik Lake	54.19	336	P	P	19 29 51.8	+1.1
	baz=126,SNR=16						
N30M				S	S	19 37 23.7	+6.0
	baz=126						
PEL	Peldehue	54.24	156	P	P	19 29 52.5	+1.1
PEL	Peldehue	54.24	156	P	P	19 29 52.5	+1.1
PEL				pmax	pmax		
	comp=Z,84nm,1.1s						
VA05	Santo Domingo	54.34	157	P	P	19 29 52.8	+0.8
YUK6	Outpost Mounta	54.39	335	P	P	19 29 53.8	+1.5
	baz=124,SNR=10						
MT03	Universidad Ad	54.61	156	P	P	19 29 55.5	+1.3
MT01	Popeta	54.66	157	P	P	19 29 54.8	+0.5
MT01				IAmb	IAmb	19 29 56.5	
	comp=Z,32nm,0.7s						
MT09	Talagante	54.68	157	P	P	19 29 55.4	+0.7
PINM	Pinnacle	54.71	334	P	P	19 29 56.0	+1.5
	baz=122						
PCA	Pinnacle	54.71	334	P	P	19 29 56.5	+2.0
PCA				IAmb	IAmb	19 29 57.9	
	comp=Z,32nm,0.9s						
YUK4	Talbot Arm	54.73	335	P	P	19 29 55.9	+1.1
	baz=124,SNR=11						
M30M	Minto, Yukon	54.74	337	P	P	19 29 55.5	+0.9
M30M				IAmb	IAmb	19 29 59.3	
	comp=Z,20nm,1.0s						
M30M	Minto, Yukon	54.74	337	P	P	19 29 55.9	+1.3
	baz=127,SNR=16						
M30M				S	S	19 37 29.4	+4.3
	baz=127						
BO04	La Punta	55.01	156	P	P	19 29 57.8	+0.8
LMEL	Las Melosas	55.05	156	P	P	19 29 59.0	+1.7
BO01	Tunca	55.19	157	P	P	19 29 58.8	+0.6
TABL	Table Mountain	55.27	334	P	P	19 29 59.5	+0.8
TABL				IAmb	IAmb	19 30 02.1	
	comp=Z,28nm,1.0s						
LOGN	Logan Glacier	55.41	334	P	P	19 30 01.2	+1.6
LOGN				IAmb	IAmb	19 30 03.1	
	comp=Z,40nm,1.4s						
GO05	Huala	55.43	158	P	P	19 30 00.4	+0.5
MESA	MESA	55.48	333	P	P	19 30 02.2	+2.0
	baz=120						
YAH	Yahtse	55.49	333	P	P	19 30 02.0	+1.8
BDFB	Brasilia	55.49	123	P	P	19 29 59.7	-1.1
	comp=Z,6.8nm,0.6s,baz=292,slow=11,SNR=7.2						
	comp=Z,6.8nm,0.6s						
BDFB	Brasilia	55.49	123	*e*P	P	19 30 00.8	0.0
CPUP	Villa Florida	55.57	140	P	P	19 30 00.4	-0.6
	comp=Z,7.7nm,0.6s,baz=323,slow=7.3,SNR=11						
CPUP				pP	pP	19 30 29.9	-1.7
	comp=Z,6.5nm,0.5s,baz=343,slow=7.7,SNR=2.8						
	comp=Z,7.7nm,0.6s						
CPUP	Villa Florida	55.57	140	P	P	19 29 59.8	-1.3
CPUP				IAmb	IAmb	19 30 01.6	
	comp=Z,17nm,0.9s						
CPUP	Villa Florida	55.57	140	*e*P	P	19 30 00.5	-0.6
CPUP	Villa Florida	55.57	140	P	P	19 30 00.6	-0.4
CPUP				pP	pP	19 30 30.9	-0.8
CPUP				sP	sP	19 30 43.5	-2.3
CTGM	Chitina Glacie	55.62	334	P	P	19 30 01.9	+0.8
CTGM				IAmb	IAmb	19 30 06.2	
	comp=Z,47nm,1.4s						
CTG	Chitna Glacier	55.62	334	P	P	19 30 02.5	+1.4
	baz=121,SNR=7.5						
GRNC	Granite Creek	55.68	334	P	P	19 30 03.8	+2.2
GRNC				IAmb	IAmb	19 30 04.9	
	comp=Z,44nm,1.0s						
YUK3	Moose Creek	55.69	335	P	P	19 30 02.7	+0.9
	baz=123,SNR=11						
YUK3				S	S	19 37 40.4	+2.2
	baz=123						
BARN	Barnard Glacie	55.81	334	P	P	19 30 04.7	+2.2
BARN				IAmb	IAmb	19 30 06.8	
	comp=Z,34nm,1.3s						
ISLE	Juniper Island	55.86	334	P	P	19 30 04.7	+1.9
ISLE				IAmb	IAmb	19 30 05.5	
	comp=Z,30nm,1.0s						
NBPS	Pedro II - PI	55.90	107	*e*P	P	19 30 02.9	-0.9
C36M	Paulatuk	55.95	348	P	P	19 30 05.2	+2.1
	baz=144						
TGL	Tana Glacier	56.15	334	P	P	19 30 06.3	+1.5
NRS	Narsarsuaq	56.18	26	P	P	19 30 03.0	-1.8
NRS				IAmb	IAmb	19 30 04.2	
	comp=Z,25nm,0.6s						
NRS	Narsarsuaq	56.18	26	P	P	19 30 03.1	-1.8
NRS				pmax	pmax		
	comp=Z,25nm,0.6s						
NRS	Narsarsuaq	56.18	26	*i* P	P	19 30 01.2	-3.6
NRS				IAmb	IAmb	19 30 03.7	
	comp=Z,20nm,0.5s						
BVCY	Beaver Creek	56.20	336	P	P	19 30 06.7	+1.6
	baz=122						
ML02	Panimavida	56.29	158	P	P	19 30 06.9	+1.0
SDBA	SAO DESIDERIO	56.39	118	*e*P	P	19 30 08.1	+0.9
PCMB	Pacaembu	56.50	131	*e*P	P	19 30 07.5	-0.2
MCARA	McCarthy VSAT	56.54	334	P	P	19 30 09.7	+2.2
MCARA				IAmb	IAmb	19 30 10.9	
	comp=Z,27nm,0.8s						
MCARA	McCarthy VSAT	56.54	334	P	P	19 30 09.0	+1.5
	baz=120,SNR=7.5						
DAWY	Dawson	56.57	338	P	P	19 30 08.3	+0.6
DAWY	Dawson	56.57	338	P	P	19 30 08.1	+0.5
	baz=125						
M27K	Edge Creek, AK	56.57	335	P	P	19 30 09.2	+1.3
M27K	Edge Creek, AK	56.57	335	P	P	19 30 08.5	+0.6
	baz=121,SNR=6.1						

BI05	Punta Hualpn	56.57	160	P	P	19 30 08.5	+0.6
IPMB	Ipameri, GO	56.64	125	eP	P	19 30 08.8	0.0
VRDI	Verde Repeater	56.64	334	P	P	19 30 10.0	+1.5
VRDI				IAmb	IAmb	19 30 10.9	
	comp=Z,15nm,0.9s						
GLB	Gilahina Butte	56.90	334	P	P	19 30 11.6	+1.6
GLB				IAmb	IAmb	19 30 12.7	
	comp=Z,19nm,0.8s						
BCAR	Beaver Creek A	56.91	336	P	P	19 30 11.1	+1.0
L27K	Beaver Creek,	56.92	336	P	P	19 30 11.6	+1.4
	baz=122						
I29M	Ogilvie Camp,	56.95	340	P	P	19 30 10.6	+0.2
I29M	Ogilvie Camp,	56.95	340	P	P	19 30 11.0	+0.6
	baz=127						
BMRM	Bremner River	57.01	333	P	P	19 30 12.8	+2.0
BMRM				IAmb	IAmb	19 30 15.0	
	comp=Z,41nm,1.2s						
BMRM	Bremner River	57.01	333	P	P	19 30 11.9	+1.1
	baz=118,SNR=5.9						
BMRM				S	S	19 38 00.4	+5.2
	baz=118						
M26K	Nabesna, AK	57.04	335	P	P	19 30 12.5	+1.4
M26K				IAmb	IAmb	19 30 14.0	
	comp=Z,30nm,1.4s						
M26K	Nabesna, AK	57.04	335	P	P	19 30 11.7	+0.7
	baz=120,SNR=10						
M26K				S	S	19 38 01.0	+5.5
	baz=120						
EPYK	Eagle Plains	57.06	341	P	P	19 30 11.0	-0.1
EPYK				IAmb	IAmb	19 30 14.9	
	comp=Z,16nm,1.0s						
EPYK	Eagle Plains	57.06	341	P	P	19 30 12.1	+0.9
	baz=129,SNR=8.1						
N25K	Chitina, Valde	57.31	334	P	P	19 30 14.5	+1.5
N25K				IAmb	IAmb	19 30 15.8	
	comp=Z,21nm,0.8s						
N25K	Chitina, Valde	57.31	334	P	P	19 30 14.7	+1.8
	baz=118,SNR=8.6						
N25K				S	S	19 38 03.6	+4.4
	baz=118						
EYAK	Cordova Ski Ar	57.32	333	P	P	19 30 14.6	+1.7
EYAK				IAmb	IAmb	19 30 17.3	
	comp=Z,32nm,0.9s						
EYAK	Cordova Ski Ar	57.32	333	P	P	19 30 14.5	+1.6
	baz=116						
EYAK				S	S	19 38 03.5	+4.4
	baz=116						
INK	Inuvik	57.42	344	P	P	19 30 14.2	+0.8
INK				S	S	19 37 59.8	-0.3
	comp=Z,1.5nm,1.0s,baz=293,slow=29,SNR=1.2						
INK	Inuvik	57.42	344	P	P	19 30 13.8	+0.3
INK	Inuvik	57.42	344	P	P	19 30 13.8	+0.3
	baz=134,SNR=56						
INK				S	S	19 38 00.1	0.0
	baz=134						
L26K	Log Cabin Wild	57.50	336	P	P	19 30 15.1	+0.9
L26K	Log Cabin Wild	57.50	336	P	P	19 30 15.2	+1.0
	baz=120						
DIV	Divide	57.59	333	P	P	19 30 16.4	+1.4
DIV				IAmb	IAmb	19 30 18.1	
	comp=Z,55nm,1.4s						
MENT	Mentasta	57.60	336	P	P	19 30 16.0	+1.0
SFJD	Kangerlussuaq	57.62	19	LR	LR	19 58 06.0	
	comp=Z,245nm,18.8s,baz=235,slow=39						
SFJD	Kangerlussuaq	57.62	19	P	P	19 30 13.8	-1.1
SFJD				IAmb	IAmb	19 30 14.5	
	comp=Z,18nm,0.9s						
SFJD	Kangerlussuaq	57.62	19	P	P	19 30 13.8	-1.1
SFJD				pmax	pmax		
	comp=Z,18nm,0.9s						
SFJD	Kangerlussuaq	57.62	19	i P	P	19 30 12.6	-2.3
SFJD				IAmb	IAmb	19 30 13.8	
	comp=Z,9.8nm,0.7s						
SFJD	Kangerlussuaq	57.62	19	P	P	19 30 13.7	-1.2
SFJD				pP	pP	19 30 45.2	-0.3
SFJD				sP	sP	19 30 59.8	+0.2
FID	Port Fidalgo	57.73	333	P	P	19 30 17.8	+2.0
KLU	Klutina	57.82	333	P	P	19 30 18.2	+1.7
KLU				IAmb	IAmb	19 30 25.2	
	comp=Z,37nm,1.2s						
KLU	Klutina	57.82	333	P	P	19 30 18.0	+1.4
	baz=117,SNR=10.0						
KLU				S	S	19 38 10.9	+5.0
	baz=117						
PTGB	Pitanga	57.91	134	eP	P	19 30 18.1	+0.4
HARP	HAARP	57.92	335	P	P	19 30 18.1	+0.9
	baz=118,SNR=5.7						
HARP				S	S	19 38 12.6	+5.7
	baz=118						
GLI	Glacier Island	58.06	333	P	P	19 30 18.8	+0.7
	baz=115						
GLI				S	S	19 38 13.6	+4.8
	baz=115						
DOT	Dot Lake	58.09	336	P	P	19 30 20.0	+1.6
DOT				IAmb	IAmb	19 30 21.0	
	comp=Z,63nm,1.5s						
BB19B	Bebedouro	58.18	129	eP	P	19 30 19.3	-0.4
M24K	Tolsona, Glenn	58.20	334	P	P	19 30 20.6	+1.4
M24K	Tolsona, Glenn	58.20	334	P	P	19 30 20.3	+1.1
	baz=117,SNR=7.1						
JANB	Januaria	58.21	120	eP	P	19 30 20.2	+0.3
SCRK	Sand Creek	58.22	337	P	P	19 30 20.3	+1.0
SCRK				IAmb	IAmb	19 30 22.9	
	comp=Z,25nm,1.5s						
SCRK	Sand Creek	58.22	337	P	P	19 30 20.6	+1.3
	baz=120,SNR=13						
SCRK				S	S	19 38 16.3	+5.2
	baz=120						
MLH	Mauna Loa	58.24	283	P	P	19 30 21.9	+1.6
HMH	Humu‘ula Sheep	58.31	283	P	P	19 30 22.2	+1.2
PAX	Paxson	58.31	335	P	P	19 30 20.8	+0.8
PAX				IAmb	IAmb	19 30 21.7	
	comp=Z,16nm,0.8s						
PAX	Paxson	58.31	335	P	P	19 30 20.8	+0.8
PAX				pmax	pmax		
	comp=Z,16nm,0.8s						
PAX	Paxson	58.31	335	P	P	19 30 20.9	+0.9
	baz=118,SNR=18						
PAX				S	S	19 38 16.5	+4.2
	baz=118						
J26L	Joseph Creek	58.33	337	P	P	19 30 21.4	+1.3
	baz=121,SNR=19						
J26L				S	S	19 38 17.5	+5.0
	baz=121						
A36M	Sachs Harbour	58.34	349	P	P	19 30 19.4	-0.4
A36M				IAmb	IAmb	19 30 20.6	
	comp=Z,30nm,0.9s						
A36M	Sachs Harbour	58.34	349	P	P	19 30 20.3	+0.5
	baz=144						
POHA	Pohakuloa	58.34	283	P	P	19 30 22.2	+1.2
POHA	Pohakuloa	58.34	283	P	P	19 30 22.4	+1.4
POHA				pP	pP	19 30 54.0	+2.0
POHA				sP	sP	19 31 07.8	+1.6
ITQB	Itaqui	58.42	142	P	P	19 30 20.3	-0.7
ITQB	Itaqui	58.42	142	eP	P	19 30 21.5	+0.5
RIDG	Independent Ri	58.44	336	P	P	19 30 21.4	+0.6
RIDG				IAmb	IAmb	19 30 23.5	
	comp=Z,36nm,1.1s						
RIDG	Independent Ri	58.44	336	P	P	19 30 21.9	+1.1
	baz=119						
RIDG				S	S	19 38 17.1	+3.4
	baz=119						
HPAH	Hawaii Prepara	58.45	284	P	P	19 30 22.2	+0.5
SCM	Sheep Creek Mo	58.57	333	P	P	19 30 22.6	+0.8
SCM				IAmb	IAmb	19 30 25.3	
	comp=Z,45nm,1.2s						
SCM	Sheep Creek Mo	58.57	333	P	P	19 30 22.6	+0.8
SCM				pmax	pmax		
	comp=Z,45nm,1.2s						
SCM	Sheep Creek Mo	58.57	333	P	P	19 30 23.1	+1.3
	baz=116						
SCM				S	S	19 38 20.5	+4.9
	baz=116						
DY2G	Dye2	58.70	20	i P	P	19 30 19.8	-3.0
DY2G				IAmb	IAmb	19 30 21.3	
	comp=Z,6.7nm,0.7s						
M23K	Glacier View	58.73	333	P	P	19 30 23.9	+1.1
	baz=115						
M23K				S	S	19 38 21.3	+3.8
	baz=115						
SEW	Seward	58.81	331	P	P	19 30 24.3	+1.0
	baz=112						
K24K	Donnelly Dome	58.83	336	P	P	19 30 24.6	+1.1
	baz=118,SNR=13						
K24K				S	S	19 38 24.0	+5.2
	baz=118						
KNK	Knik Glacier	58.88	333	P	P	19 30 25.1	+1.2
KNK				IAmb	IAmb	19 30 26.5	
	comp=Z,56nm,1.4s						
KNK	Knik Glacier	58.88	333	P	P	19 30 24.4	+0.6
	baz=114						
KNK				S	S	19 38 22.8	+3.3
	baz=114						
SML	Sawmill	58.99	333	P	P	19 30 25.1	+0.5
SML	Sawmill	58.99	333	P	P	19 30 25.9	+1.2
	baz=114,SNR=6.9						
SML				S	S	19 38 24.9	+3.9
	baz=114						
J25K	Salcha River,	59.06	337	P	P	19 30 25.6	+0.5
J25K	Salcha River,	59.06	337	P	P	19 30 26.3	+1.2
	baz=119,SNR=11						
J25K				S	S	19 38 25.1	+3.3
	baz=119						
WAT6	Susitna Watana	59.07	334	P	P	19 30 26.1	+0.8
	baz=116,SNR=24						
WAT6				S	S	19 38 25.0	+2.8
	baz=116						
O22K	Cooper Landing	59.08	331	P	P	19 30 25.3	+0.2
	baz=112						
DHY	Denali Highway	59.14	335	P	P	19 30 26.2	+0.5
DHY	Denali Highway	59.14	335	P	P	19 30 26.3	+0.5
	baz=116						
BRSE	Bradley Lake S	59.28	330	P	P	19 30 27.5	+0.9
	baz=111						
RC01	Rabbit Creek A	59.32	332	P	P	19 30 27.1	+0.3
RC01				IAmb	IAmb	19 30 32.9	
	comp=Z,27nm,0.8s						
RC01	Rabbit Creek A	59.32	332	P	P	19 30 28.1	+1.3
	baz=113						
RC01				S	S	19 38 28.5	+3.4
	baz=113						
BRLK	Bradley Lake	59.36	330	P	P	19 30 28.4	+1.2
LR04	Corral	59.37	162	P	P	19 30 28.6	+1.2
WAT1	Susitna Watana	59.52	334	P	P	19 30 29.0	+0.8
	baz=115						
KDAK	Kodiak Island	59.52	328	LR	LR	19 55 10.3	
	comp=Z,71nm,19.1s,baz=111,slow=35						
KDAK	Kodiak Island	59.52	328	P	P	19 30 29.8	+1.5
	baz=108						
ITAB	Concordia	59.53	136	P	P	19 30 28.6	-0.2
ITAB	Concordia	59.53	136	eP	P	19 30 28.8	0.0
NBMA	Muriti-CE	59.53	109	eP	P	19 30 28.1	-1.0
HDA	Harding Lake	59.57	336	P	P	19 30 29.1	+0.6
HDA				IAmb	IAmb	19 30 29.8	
	comp=Z,14nm,0.7s						
HDA	Harding Lake	59.57	336	P	P	19 30 28.9	+0.4
	baz=117,SNR=8.1						
HDA				S	S	19 38 31.0	+2.8
	baz=117						
HDA				S	S	19 38 31.0	+2.8
	baz=117						
IL31		59.71	337	P	P	19 30 29.5	+0.1
IL31				IAmb	IAmb	19 30 31.5	
	comp=Z,20nm,0.8s						
ILAR	Eielson Array	59.71	337	P	P	19 30 30.1	+0.6
	comp=Z,5.7nm,0.6s,baz=149,slow=5.3,SNR=63						
	comp=Z,5.7nm,0.6s						
ILAR	Eielson Array	59.71	337	P	P	19 30 29.8	+0.3
OHAK	Old Harbor	59.72	327	P	P	19 30 30.7	+1.2
	baz=107						
NBPN	Ponto Novo - B	59.73	114	eP	P	19 30 28.9	-1.5
RCLB	Rio Claro- Sao	59.73	129	eP	P	19 30 30.8	+0.5
M22K	Willow	59.75	333	P	P	19 30 30.6	+0.9
M22K	Willow	59.75	333	P	P	19 30 31.3	+1.5
	baz=113						
CAPN	Captain Cook N	59.84	331	P	P	19 30 31.5	+1.1
	baz=111						
RND	Reindeer	59.88	335	P	P	19 30 31.7	+0.9
RND	Reindeer	59.88	335	P	P	19 30 31.7	+0.9
RND				pmax	pmax		
	comp=Z,83nm,1.1s						
NUUG	Nuugaatsiaq	59.94	14	i P	P	19 30 29.7	-1.2
NUUG				IAmb	IAmb	19 30 31.7	
	comp=Z,55nm,0.9s						
SII	Sitkinak Islan	60.00	326	P	P	19 30 32.9	+1.3
	baz=106						
CCB	Clear Creek Bu	60.01	336	P	P	19 30 30.9	-0.6
WRH	Wood River Hil	60.04	336	P	P	19 30 31.8	+0.1
CUT	Chulitna	60.07	333	P	P	19 30 32.7	+0.8
CUT	Chulitna	60.07	333	P	P	19 30 33.0	+1.1
	baz=113,SNR=6.0						
CUT				S	S	19 38 37.9	+3.3
	baz=113						
POKR	Poker Plat Res	60.08	337	P	P	19 30 32.8	+0.8
POKR				IAmb	IAmb	19 30 34.0	
	comp=Z,42nm,1.4s						
POKR	Poker Plat Res	60.08	337	P	P	19 30 32.2	+0.2
	baz=117						
POKR				S	S	19 38 36.7	+1.9
	baz=117						
COLA	College	60.13	337	P	P	19 30 32.6	+0.3
COLA	College	60.13	337	d iP	P	19 30 32.8	+0.5
COLA				pmax	pmax		
	comp=Z,15nm,0.9s						
COLA	College	60.13	337	P	P	19 30 32.6	+0.3
	baz=117						
TCOL	CIGO, UAF Yank	60.13	337	P	P	19 30 32.7	+0.4
TCOL				IAmb	IAmb	19 30 33.3	
	comp=Z,25nm,0.8s						
TCOL	CIGO, UAF Yank	60.13	337	P	P	19 30 32.6	+0.3
	baz=117						
BMAR	Burnt Mountain	60.21	340	P	P	19 30 33.6	+0.7
O20K	Slope Mountain	60.29	330	P	P	19 30 34.1	+0.6
	baz=109						
MDM	Murphy Dome	60.31	337	P	P	19 30 33.7	+0.1
MDM				IAmb	IAmb	19 30 35.3	
	comp=Z,26nm,1.5s						
SPU	Mount Spurr	60.40	332	P	P	19 30 35.2	+0.9
Q19K	Cape Douglas,	60.41	329	P	P	19 30 35.6	+1.2
	baz=108						
DIAM	Diamantina, MG	60.41	123	eP	P	19 30 34.7	-0.4
BWN	Browne	60.45	335	P	P	19 30 35.2	+0.6
NEA2	Nenana	60.47	336	P	P	19 30 34.6	0.0
NEA2				IAmb	IAmb	19 30 36.5	
	comp=Z,19nm,1.2s						
NEA2	Nenana	60.47	336	P	P	19 30 34.9	+0.2
	baz=115,SNR=6.2						
NEA2				S	S	19 38 40.7	+0.9
	baz=115						
RSO	Redoubt South	60.48	331	P	P	19 30 35.7	+0.7
SPCR	Spurr Chakacha	60.48	332	P	P	19 30 35.4	+0.6
	baz=110,SNR=6.0						
SPCR				S	S	19 38 43.3	+3.3
	baz=110						
TRF	Thorofare Moun	60.49	335	P	P	19 30 35.5	+0.4
TRF	Thorofare Moun	60.49	335	P	P	19 30 35.6	+0.6
	baz=113,SNR=32						
TRF				S	S	19 38 42.8	+2.4
	baz=113						
VAO	Valinhos	60.49	129	eP	P	19 30 36.0	+0.5
H24K	Noodor Dome	60.58	338	P	P	19 30 36.0	+0.6
H24K				IAmb	IAmb	19 30 37.5	
	comp=Z,35nm,1.1s						
H24K	Noodor Dome	60.58	338	P	P	19 30 36.1	+0.6
	baz=117,SNR=25						
H24K				S	S	19 38 42.7	+1.5
	baz=117						
CHIR	Chirikof Islan	60.58	325	P	P	19 30 36.2	+0.6
	baz=104						
LL04	Puerto Octay	60.62	161	P	P	19 30 36.3	+0.4
LL04				IAmb	IAmb	19 30 37.7	
	comp=Z,32nm,1.0s						
LL05	Los Muermos	60.76	162	P	P	19 30 38.3	+1.5
I23K	Minto, Yukon-K	60.83	337	P	P	19 30 37.6	+0.6
I23K	Minto, Yukon-K	60.83	337	P	P	19 30 37.9	+0.9
	baz=115,SNR=24						
I23K				S	S	19 38 45.7	+1.5
	baz=115						
CPSB	Cacapava Do Su	60.87	140	eP	P	19 30 37.5	-0.3
BPAW	Bear Paw Mtn.	61.03	335	P	P	19 30 38.7	+0.2
BPAW				IAmb	IAmb	19 30 40.3	
	comp=Z,45nm,1.2s						
BPAW	Bear Paw Mtn.	61.03	335	P	P	19 30 39.0	+0.5
	baz=113,SNR=20						
BPAW				S	S	19 38 48.6	+1.6
	baz=113						
PET01	Itanhaem-SP	61.03	131	eP	P	19 30 39.6	+0.5
PLCA	Paso Flores	61.05	160	P	P	19 30 40.0	+1.1
	comp=Z,37nm,1.0s,baz=338,slow=7.7,SNR=56						
PLCA				LR	LR	19 53 26.1	
	comp=Z,93nm,18.2s,baz=328,slow=32						
	comp=Z,37nm,1.0s						
PLCA	Paso Flores	61.05	160	P	P	19 30 39.9	+0.9
PLCA	Paso Flores	61.05	160	eP	P	19 30 40.3	+1.4
PLCA	Paso Flores	61.05	160	P	P	19 30 40.1	+1.1
PLCA				pP	pP	19 31 10.5	+0.7
PLCA				sP	sP	19 31 24.6	+0.8
PPLA	Purkeypile	61.08	334	P	P	19 30 39.4	+0.5
PPLA				IAmb	IAmb	19 30 41.7	
	comp=Z,62nm,1.4s						
PPLA	Purkeypile	61.08	334	P	P	19 30 39.2	+0.3
	baz=111,SNR=8.5						
M20K	Styx River	61.13	332	P	P	19 30 39.6	+0.3
	baz=110						
O19K	Port Alsworth	61.13	330	P	P	19 30 40.0	+0.8
O19K				IAmb	IAmb	19 30 42.5	
	comp=Z,38nm,1.1s						
O19K	Port Alsworth	61.13	330	S	S	19 38 50.6	+2.4
	baz=108						
H23K	Yukon River	61.19	337	P	P	19 30 40.5	+1.1
H23K	Yukon River	61.19	337	P	P	19 30 39.6	+0.1
	baz=115,SNR=9.3						
H23K				S	S	19 38 50.5	+1.7
	baz=115						
P18K	Big Mountain,	61.33	329	P	P	19 30 40.8	+0.2
P18K				IAmb	IAmb	19 30 43.4	
	comp=Z,51nm,1.3s						
P18K	Big Mountain,	61.33	329	P	P	19 30 40.5	-0.1
	baz=106						
TULEG	Thule	61.33	7	i P	P	19 30 38.3	-2.0
TULEG				IAmb	IAmb	19 30 40.1	
	comp=Z,13nm,0.6s						
N19K	Bonanza Creek	61.40	331	P	P	19 30 41.2	+0.1
N19K				IAmb	IAmb	19 30 42.9	
	comp=Z,43nm,1.0s						
N19K	Bonanza Creek	61.40	331	P	P	19 30 41.4	+0.3
	baz=108,SNR=13						
N19K				S	S	19 38 54.3	+2.6
	baz=108						
CHUM	Lake Minchumin	61.49	335	P	P	19 30 41.8	+0.3
	baz=112						
RCBR	Riachuelo	61.55	106	LR	LR	19 58 21.6	
	comp=Z,253nm,20.1s,baz=86,slow=37						
RCBR	Riachuelo	61.55	106	P	P	19 30 41.8	-1.0
RCBR				IAmb	IAmb	19 30 43.4	
	comp=Z,30nm,1.4s						
RCBR	Riachuelo	61.55	106	P	P	19 30 41.8	-1.0
RCBR				pmax	pmax		
	comp=Z,30nm,1.5s						
RCBR	Riachuelo	61.55	106	eP	P	19 30 42.2	-0.6
L20K	Farewell, AK	61.66	333	P	P	19 30 42.9	+0.2
	baz=109,SNR=24						
L20K				S	S	19 38 57.0	+2.0
	baz=109						
M19K	Big River Lodg	61.70	332	P	P	19 30 43.5	+0.5
M19K				IAmb	IAmb	19 30 45.2	
	comp=Z,38nm,1.2s						
M19K	Big River Lodg	61.70	332	P	P	19 30 43.9	+0.9
	baz=109						
PLTB	Pedras Altas	61.72	141	P	P	19 30 43.3	-0.3
PLTB	Pedras Altas	61.72	141	eP	P	19 30 43.7	+0.1
I21K	Tanana	61.85	336	P	P	19 30 43.9	0.0
I21K				IAmb	IAmb	19 30 46.8	
	comp=Z,17nm,0.8s						
I21K	Tanana	61.85	336	P	P	19 30 43.7	-0.2
	baz=113						
I21K				S	S	19 38 58.2	+1.1
	baz=113						
SVW2	Sparrevohn	61.99	331	P	P	19 30 44.8	-0.2
SVW2				IAmb	IAmb	19 30 46.4	
	comp=Z,16nm,0.9s						
L19K	White Mountain	61.99	332	P	P	19 30 45.1	+0.1
L19K				IAmb	IAmb	19 30 46.8	
	comp=Z,17nm,1.1s						
L19K	White Mountain	61.99	332	P	P	19 30 44.9	-0.1
	baz=108,SNR=8.4						
L19K				S	S	19 39 01.2	+2.0
	baz=108						
N18K	Kilae Creek	62.02	331	P	P	19 30 45.2	+0.1
N18K				IAmb	IAmb	19 30 47.1	
	comp=Z,31nm,1.1s						
N18K	Kilae Creek	62.02	331	P	P	19 30 44.9	-0.3
	baz=107,SNR=5.2						
N18K				S	S	19 39 01.5	+2.1
	baz=107						
COLD	Coldfoot	62.03	338	P	P	19 30 46.3	+1.2
COLD				IAmb	IAmb	19 30 47.9	
	comp=Z,31nm,1.5s						
COLD	Coldfoot	62.03	338	P	P	19 30 46.5	+1.4
	baz=115						
COLD				S	S	19 39 02.0	+2.7
	baz=115						
K20K	Telida	62.04	334	P	P	19 30 45.2	0.0
K20K				IAmb	IAmb	19 30 46.4	
	comp=Z,28nm,0.8s						
K20K	Telida	62.04	334	P	P	19 30 44.8	-0.5
	baz=110,SNR=28						
K20K				S	S	19 39 00.4	+0.7
	baz=110						
ICESG	Greenland Ices	62.21	19	i P	P	19 30 44.0	-2.7
ICESG				IAmb	IAmb	19 30 45.5	
	comp=Z,15nm,0.7s						
CHGN	Chignik	62.22	325	P	P	19 30 47.2	+0.7
CHGN	Chignik	62.22	325	P	P	19 30 46.8	+0.3
	baz=102,SNR=9.8						
GO07	Milladeo Hill,	62.28	163	P	P	19 30 48.5	+1.4
H21K	Melozitna Rive	62.35	336	P	P	19 30 47.0	-0.3
H21K				IAmb	IAmb	19 30 48.7	
	comp=Z,29nm,1.5s						
H21K	Melozitna Rive	62.35	336	P	P	19 30 47.4	+0.1
	baz=112,SNR=13						
H21K				S	S	19 39 02.6	-0.8
	baz=112						
J20K	Nowinta River	62.35	335	P	P	19 30 47.4	+0.1
J20K				IAmb	IAmb	19 30 48.3	
	comp=Z,21nm,0.9s						
J20K	Nowinta River	62.35	335	P	P	19 30 47.6	+0.3
	baz=110,SNR=18						
J20K				S	S	19 39 03.5	+0.1
	baz=110						
TER01	Tubaro-SC	62.38	136	eP	P	19 30 48.5	+0.5
CMC01	Camacan, BA	62.38	118	eP	P	19 30 48.9	+0.6
TOLK	Toolik Lake Re	62.44	340	P	P	19 30 48.8	+0.9
TOLK	Toolik Lake Re	62.44	340	P	P	19 30 49.1	+1.2
	baz=117,SNR=9.5						
TOLK				S	S	19 39 07.6	+3.0
	baz=117						
CHNA	Chernabura Isl	62.59	324	P	P	19 30 49.1	+0.2
	baz=100						
SJMB	Sao Joao De Ma	62.64	122	eP	P	19 30 50.2	+0.3
NBAN	Anadia - AL	62.72	110	eP	P	19 30 51.5	+0.9
GUA01	Guaratinga, BA	62.73	119	eP	P	19 30 51.5	+1.0
TTA	Tatalina	62.74	333	P	P	19 30 49.4	-0.6
TTA				IAmb	IAmb	19 30 51.3	
	comp=Z,27nm,1.1s						
TTA	Tatalina	62.74	333	P	P	19 30 49.4	-0.6
TTA				pmax	pmax		
	comp=Z,27nm,1.1s						
TTA	Tatalina	62.74	333	P	P	19 30 50.2	+0.2
	baz=108,SNR=14						
TTA				S	S	19 39 09.4	+0.9
	baz=108						
IMAR	Indian Mountai	62.83	337	P	P	19 30 50.5	0.0
LL02	Futaleuf	62.87	162	P	P	19 30 51.8	+0.8
LL02				IAmb	IAmb	19 30 53.4	
	comp=Z,48nm,1.1s						
SDPT	Sand Point	63.18	324	P	P	19 30 53.4	+0.5
	baz=100						
EUNU	Eureka	63.57	1	P	P	19 30 55.0	-0.1
EUNU				IAmb	IAmb	19 30 56.1	
	comp=Z,35nm,0.8s						
RIB01	Linhares ES	63.59	122	eP	P	19 30 56.3	+0.1
GCSA	Galena City Sc	63.66	335	S	S	19 39 21.3	+1.7
	baz=108						
AY01	Puyuhuapi	63.77	163	P	P	19 30 57.3	+0.5
CAM01	Campos-RJ	63.89	125	eP	P	19 30 58.4	+0.3
ALF01	Guarapari-ES	63.99	123	eP	P	19 30 59.3	+0.5
SUMG	Summit	64.23	16	P	P	19 30 59.1	-0.9
SUMG				IAmb	IAmb	19 31 00.6	
	comp=Z,24nm,0.7s						
SUMG	Summit	64.23	16	P	P	19 30 59.1	-0.9
SUMG				pmax	pmax		
	comp=Z,24nm,0.7s						
SUMG	Summit	64.23	16	i P	P	19 30 58.3	-1.8
SUMG				IAmb	IAmb	19 31 00.2	
	comp=Z,24nm,0.7s						
PPT	Papeete	64.48	241	LR	LR	19 51 45.4	
	comp=Z,195nm,21.6s,baz=22,slow=29						

FALS	False Pass	64.78	323	P	P	19 31 03.4	0.0
FALS	False Pass	64.78	323	P	P	19 31 03.7	+0.4
	baz=97						
COYC	Coyhaique	64.99	163	P	P	19 31 05.6	+0.9
COYC	Coyhaique	64.99	163	P	P	19 31 06.0	+1.3
COYC				sP	sP	19 31 50.0	+0.2
A21K	Barrow	65.75	342	P	P	19 31 09.4	+0.1
	baz=111						
A21K				S	S	19 39 47.0	+1.9
	baz=111						
UNV	Unalaska Valle	66.48	322	P	P	19 31 15.0	+0.7
UNV	Unalaska Valle	66.48	322	P	P	19 31 15.2	+0.9
	baz=94,SNR=5.3						
ALE	Alert	67.11	4	P	P	19 31 17.0	-0.9
ALE				pP	pP	19 31 48.7	-0.6
GO08	Villa O'Higgin	67.53	165	P	P	19 31 22.4	+1.5
GO08				IAmb	IAmb	19 31 23.5	
	comp=Z,37nm,1.2s						
NIKH	Nikolski High	67.84	321	P	P	19 31 23.1	+0.2
	baz=92						
NIKH				S	S	19 40 10.9	0.0
	baz=92						
TNA	Tin City	68.38	335	P	P	19 31 27.0	+1.0
	baz=98						
SCO	Scoresbysund	68.44	20	*i* P	P	19 31 24.6	-1.7
SCO				IAmb	IAmb	19 31 32.2	
	comp=Z,12nm,1.2s						
DBG	Daneborg	69.71	16	*i* P	P	19 31 32.9	-1.3
DBG				IAmb	IAmb	19 31 34.5	
	comp=Z,10.0nm,0.7s						
GAMB	Gambell	69.83	332	P	P	19 31 36.1	+1.0
	baz=93						
GO09	Cerro Castillo	70.19	166	P	P	19 31 39.8	+2.5
GO09				IAmb	IAmb	19 31 40.6	
	comp=Z,56nm,1.4s						
PMAR	Madeira	70.45	61	*e*pP	pP	19 32 09.8	-1.8
MG05	Puerto Natales	70.53	166	P	P	19 31 40.9	+1.6
MG05				IAmb	IAmb	19 31 42.3	
	comp=Z,65nm,1.3s						
DAG	Danmarks Havn	70.56	14	*i* P	P	19 31 38.0	-1.3
DAG				IVmB_BB		19 31 38.6	
	comp=Z,427nm,0.7s						
NOR	Nord	71.80	9	*i* P	P	19 31 45.3	-1.4
NOR				IVmB_BB		19 31 46.8	
	comp=Z,349nm,0.8s						
ADK	Adak	72.67	320	P	P	19 31 52.6	+0.3
ADK	Adak	72.67	320	P	P	19 31 52.6	+0.3
ADK				pmax	pmax		
	comp=Z,104nm,1.0s						
JMIC	Jan Mayen	72.92	20	LR	LR	20 06 12.7	
	comp=Z,232nm,18.3s,baz=247,slow=38						
USHA	Ushuaia	74.40	165	LR	LR	19 59 42.8	
	comp=Z,131nm,21.5s,baz=286,slow=32						
KPL	Plockton	75.26	34	*e*P	P	19 32 06.8	-0.5
KPL				IAmb	IAmb	19 32 07.7	
	comp=Z,23nm,0.8s						
KAC	Achnashellach	75.42	34	*e*P	P	19 32 08.1	-0.2
PGAV	Gavieira, Arco	75.91	50	*e*pP	pP	19 32 39.5	-4.3
MDO	Dochfour	75.93	34	*e*P	P	19 32 10.9	-0.3
PCAS	Casmilo, Conde	76.06	52	*e*P	P	19 32 11.8	-0.5
PCAS				*e*pP	pP	19 32 44.3	-0.3
PGBU	Glenifferbraes	76.12	36	*e*P	P	19 32 12.4	+0.2
PGBU				IAmb	IAmb	19 32 13.3	
	comp=Z,22nm,0.9s						
EAB	Aberfoyle	76.14	35	*e*P	P	19 32 12.2	-0.1
GAL1	Galloway	76.14	37	*e*P	P	19 32 12.4	0.0
GAL1				IAmb	IAmb	19 32 13.4	
	comp=Z,13nm,0.8s						
INVG	Invergeldie, C	76.26	35	*e*P	P	19 32 12.4	-0.7
INVG				IAmb	IAmb	19 32 14.0	
	comp=Z,14nm,0.8s						
MLA1	Latheron	76.33	33	*e*P	P	19 32 13.6	+0.3
PFVI	Vila Bisbo	76.33	55	*e*P	P	19 32 17.4	+3.6
PFVI				*e*pP	pP	19 32 46.1	-0.1
PTEO	Sao Teotonio	76.34	55	*e*P	P	19 32 16.4	+2.5
PTEO				*e*pP	pP	19 32 43.8	-2.4
NEWG	New Galloway	76.37	36	*e*P	P	19 32 13.6	-0.1
NEWG				IAmb	IAmb	19 32 14.9	
	comp=Z,20nm,1.0s						
PNCL	Nicolau / Gran	76.39	54	*e*pP	pP	19 32 45.0	-1.4
PVIS	Viseu	76.40	51	*e*P	P	19 32 13.6	-0.6
PVIS				*e*pP	pP	19 32 47.2	+0.6
PMTG	Montargil	76.45	53	*e*P	P	19 32 13.2	-1.2
PMTG				*e*pP	pP	19 32 45.9	-0.9
MCD	Coleburn Disti	76.50	34	*e*P	P	19 32 14.8	+0.4
MESJ	Messejana	76.67	54	*e*P	P	19 32 11.1	-4.7
MESJ				*e*pP	pP	19 32 48.8	+0.7
MTE	Manteigas	76.72	52	*e*P	P	19 32 14.6	-1.5
MTE				*e*pP	pP	19 32 47.9	-0.5
KBS	Kingsbay	76.81	11	P	P	19 32 16.9	+1.1
KBS				IAmb	IAmb	19 32 18.1	
	comp=Z,31nm,0.8s						
KBS	Kingsbay	76.81	11	*de*P	P	19 32 17.5	+1.7
KBS				pmax	pmax		
	comp=Z,45nm,1.7s						
KBS	Kingsbay	76.81	11	*i* P	P	19 32 15.3	-0.5
KBS	Kingsbay	76.81	11	*e*P	P	19 32 16.9	+1.1
EDI	Edinburgh	76.82	35	*e*P	P	19 32 16.3	+0.1
EDI				IAmb	IAmb	19 32 16.8	
	comp=Z,29nm,0.8s						
PCBR	Castelo Branco	76.87	52	*e*pP	pP	19 32 50.2	+1.0
PBEJ	Beja	76.92	54	*e*pP	pP	19 32 50.1	+0.6
ESK	Eskdalemuir	76.92	36	*e*P	P	19 32 16.6	-0.2
ESK				IAmb	IAmb	19 32 17.3	
	comp=Z,21nm,0.8s						
ESK	Eskdalemuir	76.92	36	P	P	19 32 15.9	-0.9
ESK				IAmb	IAmb	19 32 17.5	
	comp=Z,20nm,0.8s						
ESK	Eskdalemuir	76.92	36	P	P	19 32 15.9	-0.9
ESK				pmax	pmax		
	comp=Z,20nm,0.9s						
EBL	Broad Law	76.93	35	*e*P	P	19 32 16.2	-0.7
EKA	Eskdalemuir Ar	76.94	36	LR	LR	20 06 44.8	
	comp=Z,154nm,19.2s,baz=273,slow=36						
MVO	Moncorvo	76.96	51	*e*pP	pP	19 32 49.5	-0.3
PMRV	Marv??o	77.02	53	*e*P	P	19 32 15.9	-1.8
PMRV				*e*pP	pP	19 32 49.0	-1.0
DRUM	Mains of Drumt	77.03	34	*e*P	P	19 32 17.5	+0.1
DRUM				IAmb	IAmb	19 32 18.3	
	comp=Z,40nm,0.7s						
ESY	Stoneypath	77.14	35	*e*P	P	19 32 17.6	-0.4
PVAQ	Vaqueiros	77.15	55	*e*P	P	19 32 17.4	-1.0
PVAQ				*e*pP	pP	19 32 49.1	-1.7
HLM1	Long Mynd	77.62	39	*e*P	P	19 32 20.8	0.0
HLM1				IAmb	IAmb	19 32 21.6	
	comp=Z,21nm,1.0s						
EDMD	Edmundbyers	77.71	36	*e*P	P	19 32 21.5	+0.3
EDMD				IAmb	IAmb	19 32 22.6	
	comp=Z,41nm,0.9s						
SPA0	Spitsbergen Ar	77.90	11	*e*P	P	19 32 22.2	+0.3
SPB2	Spitsbergen Ar	77.91	11	P	P	19 32 21.9	0.0
LBWR	Ladybower, Pea	78.14	38	*e*P	P	19 32 24.8	+1.2
HSPB	Hornsund (broa	78.20	13	*e*P	P	19 32 23.6	+0.2
BILL	Bilibino	78.35	338	P	P	19 32 25.3	+0.8
BILL	Bilibino	78.35	338	*c i*P	P	19 32 25.0	+0.5
BILL				*e*S	S	19 42 13.8	+4.6
BILL				pmax	pmax		
	comp=Z,47nm,1.7s						
BILL				MLR	MLR		
	comp=Z,58nm,18.0s						
ESDC	Sonseca Array	79.56	52	P	P	19 32 30.1	-1.6
	comp=Z,2.2nm,1.1s,baz=295,slow=5.1,SNR=9.3						
ESDC				pP	pP	19 33 02.1	-2.2
	comp=Z,3.1nm,1.1s,baz=285,slow=5.9,SNR=2.7						
ESDC				LR	LR	20 04 51.0	
	comp=Z,227nm,19.2s,baz=274,slow=34						
	comp=Z,2.2nm,1.1s						
ESDC	Sonseca Array	79.56	52	P	P	19 32 30.2	-1.6
FOO	Floro	79.74	29	*e*P	P	19 32 32.5	+0.4
SUE	Sulen	79.75	29	*e*P	P	19 32 32.9	+0.7
BER	Bergen	80.21	30	*e*P	P	19 32 34.9	+0.3
HYA	Hoyanger	80.39	29	*e*P	P	19 32 36.3	+0.7
MOL	Molde	80.58	27	*e*P	P	19 32 36.4	-0.2
MDT	Midelt	80.62	59	LR	LR	20 02 34.4	
	comp=Z,150nm,20.9s,baz=293,slow=31						
BLS5	Blasjo	81.03	31	*e*P	P	19 32 37.3	-1.8
LOF	Lofoten	81.04	21	*e*P	P	19 32 39.4	+0.5
DOMB	Dombas	81.42	28	*e*P	P	19 32 42.0	+0.8
KONS	Konsvik	81.51	23	*e*P	P	19 32 41.2	-0.2
STOK	Stokkvaagen	81.53	23	*e*P	P	19 32 41.9	+0.3
TBLU	Trondheim	81.54	26	*e*P	P	19 32 42.9	+1.2
STEI	Steigen	81.71	21	*e*P	P	19 32 43.6	+1.1
NSS	Namsos	81.79	25	*e*P	P	19 32 43.5	+0.5
CLF	Chambon-Foret	81.88	42	P	P	19 32 44.0	+0.3
FAUS	Fauske	81.95	22	*e*P	P	19 32 43.5	-0.2
TRO	Tromso	82.19	19	*e*P	P	19 32 45.9	+0.9
HOMB	Homborsund	82.40	31	*e*P	P	19 32 47.4	+1.1
NC204	NORSAR Array S	82.45	28	P	P	19 32 47.0	+0.4
NC204				IAmb	IAmb	19 32 48.4	
	comp=Z,34nm,0.8s						
KONO	Kongsberg	82.47	30	P	P	19 32 47.4	+0.8
KONO	Kongsberg	82.47	30	⇓*e*P	P	19 32 47.8	+1.1
KONO				pmax	pmax		
	comp=Z,22nm,1.0s						
NBO00	NORSAR Array S	82.54	28	P	P	19 32 47.8	+0.8
AFI	Afiamalu	82.64	253	LR	LR	20 00 39.3	
	comp=Z,150nm,20.9s,baz=140,slow=29						
NAO01	NORSAR Array S	82.66	29	P	P	19 32 48.5	+0.9
NAO01				IAmb	IAmb	19 32 49.8	
	comp=Z,52nm,0.9s						
JETT	Jettan, Norway	82.69	19	*e*P	P	19 32 49.1	+1.4
NB2	NORSAR Subarra	82.74	28	P	P	19 32 48.8	+0.7
	comp=Z,32nm,0.9s,baz=292,slow=5.3						
NB2	NORSAR Subarra	82.74	28	P	P	19 32 48.8	+0.7
	baz=292,slow=5.3						
NOA	NORSAR Array B	82.74	28	P	P	19 32 49.1	+1.0
	comp=Z,19nm,0.8s,baz=292,slow=5.1,SNR=63						
NOA				pP	pP	19 33 19.0	-1.8
	comp=Z,0.7nm,0.7s,baz=216,slow=20,SNR=1.4						
NOA				LR	LR	20 09 57.6	
	comp=Z,100nm,20.0s,baz=280,slow=36						
	comp=Z,19nm,0.8s						
NC303	NORSAR Array S	82.74	28	P	P	19 32 49.0	+0.9
DOU	Dourbes	82.76	40	*d*P	P	19 32 49.2	+0.8
NB201	NORSAR Array S	82.77	28	P	P	19 32 49.4	+1.2
NB201				IAmb	IAmb	19 32 50.4	
	comp=Z,51nm,0.8s						
BMRD	Maredsous	82.81	40	*d*P	P	19 32 49.4	+0.8
BMRD				*d*pP	pP	19 33 22.2	+0.8
NC405	NORSAR Array S	82.94	28	P	P	19 32 49.6	+0.5
NC405				IAmb	IAmb	19 32 51.2	
	comp=Z,51nm,0.9s						
BGES	Gesves	82.98	40	*d*P	P	19 32 50.1	+0.7
NC602	NORSAR Array S	83.00	28	P	P	19 32 50.6	+1.2
NC602				IAmb	IAmb	19 32 51.2	
	comp=Z,56nm,1.1s						
BCLA	Clavier	83.10	39	*d*P	P	19 32 50.6	+0.5
HAMF	Hammerfest	83.12	17	*e*P	P	19 32 49.6	-0.2
RCHB	Rochefort	83.14	40	*d*P	P	19 32 51.2	+1.0
	comp=Z,7.1nm,0.9s						
RCHB				*d*pP	pP	19 33 24.4	+1.3
BSTI	Sart Tilman	83.21	39	*d*P	P	19 32 51.7	+1.0
BSTI				*d*pP	pP	19 33 25.2	+1.8
MEM	Membach	83.47	39	*d*P	P	19 32 53.0	+1.0
	comp=Z,10nm,0.8s						
KTK1	Kautokeino	83.83	19	*e*P	P	19 32 54.1	+0.6
WLF	Walferdange	83.86	40	P	P	19 32 55.2	+1.3
WLF				IAmb	IAmb	19 32 56.7	
	comp=Z,24nm,0.9s						
WLF	Walferdange	83.86	40	P	P	19 32 55.3	+1.3
WLF				pmax	pmax		
	comp=Z,24nm,0.9s						
WLF	Walferdange	83.86	40	*d*P	P	19 32 55.7	+1.7
HFS	Hagfors	84.21	29	LR	LR	20 10 59.4	
	comp=Z,123nm,18.7s,baz=286,slow=36						
ARA0	ARCESS Array S	84.24	18	*e*P	P	19 32 56.0	+0.4
ARCES	ARCESS Array B	84.24	18	P	P	19 32 56.4	+0.8
	comp=Z,44nm,0.8s,baz=300,slow=5.1,SNR=149						
ARCES				LR	LR	20 12 03.9	
	comp=Z,88nm,18.6s,baz=294,slow=37						
	comp=Z,44nm,0.8s						
ARCES	ARCESS Array B	84.24	18	P	P	19 32 55.7	+0.1
PMSA	Palmer Station	84.29	168	LR	LR	20 02 57.7	
	comp=Z,80nm,19.2s,baz=315,slow=30						
KEV	Kevo	84.55	17	P	P	19 32 57.1	0.0
KEV				IAmb	IAmb	19 32 59.0	
	comp=Z,34nm,0.8s						
KEV	Kevo	84.55	17	P	P	19 32 57.1	0.0
KEV				pmax	pmax		
	comp=Z,34nm,0.8s						
ECH	Echery	84.95	41	P	P	19 32 59.5	-0.1
ECH	Echery	84.95	41	P	P	19 32 59.5	-0.1
ECH				pmax	pmax		
	comp=Z,12nm,0.9s						
SEY	Seymchan	85.61	335	LR	LR	20 17 05.5	
	comp=Z,69nm,18.1s,baz=70,slow=40						
SEY	Seymchan	85.61	335	⇓*e*P	P	19 33 03.6	+1.1
SEY				pmax	pmax		
	comp=Z,14nm,1.7s						
BFO	Black Forest	85.65	41	P	P	19 33 02.6	-0.5
BFO	Black Forest	85.65	41	P	P	19 33 02.6	-0.5
BFO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SENIN	Lac Senin/Sane	85.65	43	P	P	19 33 03.7	+0.4
DEL	Delary	85.77	32	*e*P	P	19 33 03.9	+0.5
KOWA	Kowa	85.86	76	P	P	19 33 05.8	+1.2
STU	Stuttgart	86.03	40	P	P	19 33 04.9	0.0
STU				IAmb	IAmb	19 33 07.5	
	comp=Z,22nm,0.7s						
STU	Stuttgart	86.03	40	P	P	19 33 04.9	0.0
STU				pmax	pmax		
	comp=Z,22nm,0.7s						
UPP	Uppsala	86.12	28	*e*P	P	19 33 06.1	+1.1
VIKU	Vikbolandet	86.30	29	*e*P	P	19 33 05.9	0.0
ORCD	Orcadas	86.54	158	P	P	19 33 06.4	-0.5
ORCD				IAmb	IAmb	19 33 07.3	
	comp=Z,48nm,1.3s						
TUE	Stuetta	86.94	42	P	P	19 33 10.2	+0.5
TUE				IAmb	IAmb	19 33 12.0	
	comp=Z,16nm,0.9s						
PET	Petropavlovsk	86.95	325	⇑*e*P	P	19 33 10.3	+1.0
PET				pmax	pmax		
	comp=Z,45nm,1.6s						
DAVA	Damuels	86.99	41	*i* P	P	19 33 11.1	+1.3
	comp=Z,24nm,0.9s						
DAVA				*e*P	pP	19 33 45.0	+2.1
	comp=Z,25nm,1.4s						
DAVOX	Davos/Dischmat	87.18	42	LR	LR	20 11 37.4	
	comp=Z,164nm,18.4s,baz=264,slow=35						
DBIC	Dimbokro	87.23	84	LR	LR	20 08 04.5	
	comp=Z,102nm,20.8s,baz=294,slow=33						
TIXI	Tiksi	87.32	348	LR	LR	20 18 15.2	
	comp=Z,143nm,19.2s,baz=0.0,slow=40						
TIXI	Tiksi	87.32	348	P	P	19 33 09.9	-0.8
TIXI	Tiksi	87.32	348	P	P	19 33 09.9	-0.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL	Collm	87.36	37	P	P	19 33 11.5	+0.2
CLL	Collm	87.36	37	*e*P	P	19 33 11.0	-0.3
CLL				*i* *PP	pP	19 33 46.2	+1.8
CLL				*e*		19 43 24.0	
CLL				*e*S	S	19 43 39.0	-2.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	87.36	37	*e*P	P	19 33 11.0	-0.3
	comp=Z,6.0nm,0.9s						
CLL				*i* pP	pP	19 33 46.2	+1.8
	comp=Z,17nm,1.2s						
CLL				*e*SKSac	SKSac	19 43 24.0	-3.0
CLL				*e*S	S	19 43 39.0	-2.0
CLL				*e*pS	pS	19 44 26.0	+3.5
CLL				*e*SP	SP	19 44 48.0	+5.6
CLL				*e*x	x	19 48 30.0	
CLL				*e*SS	SS	19 49 24.0	-3.8
CLL				*e*SSS	SSS	19 53 06.0	
RAF	Rauma	87.37	26	*e*P	P	19 33 10.8	-0.3
PEA0B	Petropavlovsk-	87.45	325	⇓*e*P	P	19 33 12.2	+0.5
PETK	Petropavlovsk-	87.45	325	P	P	19 33 13.0	+1.3
	comp=Z,6.3nm,1.0s,baz=101,slow=4.7,SNR=7.5						
	comp=Z,6.3nm,1.0s						
PETK	Petropavlovsk-	87.45	325	P	P	19 33 12.6	+0.9
PETK	Petropavlovsk-	87.45	325	P	P	19 33 13.0	+1.3
NKC	Novy Kostel	87.46	38	*e*P	P	19 33 14.0	+2.2
NKC				*e*S	S	19 43 45.9	+3.8
NKC				MLR	MLR		
	comp=Z,200nm,17.5s						
NKC	Novy Kostel	87.46	38	*e*P	P	19 33 14.0	+2.2
NKC				*e*S	S	19 43 45.9	+3.8
NKC				AMS	AMS	20 13 30.0	
	comp=Z,200nm,17.5s						
RETA	Reutte	87.48	41	*i* P	P	19 33 12.8	+0.7
	comp=Z,15nm,1.1s						
RETA				*e*P	pP	19 33 47.2	+2.1
	comp=Z,19nm,1.1s						
FETA	Feichten	87.63	41	*e*P	P	19 33 14.0	+1.1
	comp=Z,6.0nm,0.7s,SNR=4.2						
FETA				*e*P	pP	19 33 48.3	+2.3
	comp=Z,7.9nm,0.9s						
APA	Apatity	87.75	18	⇓*i*P	P	19 33 10.8	-2.0
APA				*i* *PP	pP	19 33 45.0	-0.7
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,300nm,22.0s						
MOTA	Moosalm	87.75	41	*i* P	P	19 33 14.4	+0.9
	comp=Z,6.8nm,0.8s						
MOTA				*e*P	pP	19 33 48.5	+2.0
	comp=Z,17nm,1.0s						
SQTA	Sankt Quirin	87.86	41	*i* P	P	19 33 14.7	+0.7
	comp=Z,9.3nm,1.3s						
SQTA				*e*P	pP	19 33 48.8	+1.8
	comp=Z,22nm,1.4s						
LVZ	Lovozero	87.89	17	P	P	19 33 13.1	-0.4
LVZ				IAmb	IAmb	19 33 15.6	
	comp=Z,25nm,1.0s						
LVZ	Lovozero	87.89	17	*de*P	P	19 33 13.6	+0.1
LVZ				pmax	pmax		
	comp=Z,21nm,1.0s						
MA2	Magadan	87.93	333	P	P	19 33 14.2	+0.4
MA2				IAmb	IAmb	19 33 15.9	
	comp=Z,31nm,1.0s						
MA2	Magadan	87.93	333	⇑*e*P	P	19 33 14.9	+1.1
MA2				pmax	pmax		
	comp=Z,22nm,1.0s						
WATA	Walderalm	88.05	41	*i* P	P	19 33 15.7	+0.8
	comp=Z,7.5nm,1.2s						
WATA				*e*P	pP	19 33 50.2	+2.2
	comp=Z,13nm,1.2s						
BRG	Berggiesshubel	88.08	37	*e*P	P	19 33 15.4	+0.7
BRG				Amp		19 33 17.5	
	comp=Z,4.6nm,0.7s						
BRG				pP	pP	19 33 50.6	+2.8
BRG				Amp		19 33 52.7	
	comp=Z,3.9nm,1.0s						
BRG	Berggiesshubel	88.08	37	*e*P	P	19 33 15.4	+0.7
BRG						19 33 50.6	
BRG						19 43 33.0	
BRG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WTTA	Wattenberg	88.11	41	*e*P	pP	19 33 50.2	+1.9
	comp=Z,13nm,1.4s						
KHC	Kasperske Hory	88.57	39	P	P	19 33 17.1	0.0
KHC	Kasperske Hory	88.57	39	*e*P	P	19 33 17.9	+0.8
KHC				*e*S	SKSac	19 43 36.3	+1.8
KHC				MLR	MLR		
	comp=Z,300nm,19.1s						
KHC	Kasperske Hory	88.57	39	*e*P	P	19 33 17.9	+0.8
KHC				*e*SKS	SKSac	19 43 36.3	+1.8
KHC				AMS	AMS	20 11 30.0	
	comp=Z,300nm,19.1s						
PVCC	Panska Ves	88.58	37	*e*S	SKSac	19 43 36.3	+1.9
PVCC				AMS	AMS	20 12 00.0	
	comp=Z,200nm,18.6s						
GEC2	GERESS Array S	88.76	39	P	P	19 33 17.6	-0.5
GERES	GERESS Array B	88.76	39	P	P	19 33 18.1	0.0
	comp=Z,4.3nm,0.8s,baz=336,slow=2.9,SNR=31						
GERES				PKKPbc	PKKPbc	19 50 57.0	-1.7
	comp=Z,0.4nm,0.6s,baz=168,slow=6.8,SNR=4.5						
GERES				LR	LR	20 14 04.4	
	comp=Z,193nm,18.2s,baz=284,slow=36						
	comp=Z,4.3nm,0.8s						
PRU	Pruhonice	88.79	38	*e*P	P	19 33 19.0	+0.9
PRU				*e*S	SKSac	19 43 36.1	+0.4
PRU				MLR	MLR		
	comp=Z,200nm,21.6s						
PRU	Pruhonice	88.79	38	*e*P	P	19 33 19.0	+0.9
PRU				*e*SKS	SKSac	19 43 36.1	+0.4
PRU				AMS	AMS	20 15 30.0	
	comp=Z,200nm,21.6s						
ABTA	Abfaltersbach	88.86	41	*e*P	P	19 33 19.4	+0.8
	comp=Z,12nm,1.1s						
ABTA				*e*P	pP	19 33 55.1	+3.3
	comp=Z,23nm,1.3s						
MEF	Metsahovi	88.90	26	*e*P	P	19 33 17.9	-0.4
FINES	FINESS Array B	88.92	25	P	P	19 33 18.3	-0.1
	comp=Z,6.3nm,0.8s,baz=276,slow=2.9,SNR=28						
	comp=Z,6.3nm,0.8s						
FINES	FINESS Array B	88.92	25	P	P	19 33 17.5	-0.9
FIA1	FINESS Array S	88.92	25	P	P	19 33 17.2	-1.2
FIA1				IAmb	IAmb	19 33 19.8	
	comp=Z,34nm,1.5s						
CKRC	Cesky Krumlov	89.14	39	*e*P	P	19 33 20.3	+0.5
CKRC				*e*SKS	SKSac	19 43 38.5	+0.6
CKRC				AMS	AMS	20 13 50.0	
	comp=Z,300nm,20.4s						
BIOA	Bad Ischl, Aus	89.19	40	*e*P	P	19 33 20.8	+0.7
KBA	Koelnbreinsper	89.26	41	*e*P	P	19 33 21.3	+0.7
	comp=Z,12nm,1.4s						
CHVC	Chvalec	89.42	37	*e*P	P	19 33 22.0	+1.0
CHVC				AMS	AMS	20 12 20.0	
	comp=Z,200nm,24.9s						
UPC	Upice	89.43	37	*e*P	P	19 33 22.5	+1.4
UPC				*e*S	SKSac	19 43 40.5	+1.1
UPC				MLR	MLR		
	comp=Z,200nm,18.3s						
UPC	Upice	89.43	37	*e*P	P	19 33 22.5	+1.4
UPC				*e*SKS	SKSac	19 43 40.5	+1.1
UPC				AMS	AMS	20 12 40.0	
	comp=Z,200nm,18.3s						
KSP	Ksiaz	89.44	37	*e*P	P	19 33 21.8	+0.6
KSP				*e*S	SKSac	19 43 40.0	+0.5
MTSE	Matsula	89.45	28	*e*P	P	19 33 22.1	+1.2
MOA	Molln	89.51	40	*e*P	P	19 33 22.4	+0.8
	comp=Z,7.4nm,1.0s						
OSTC	Ostas	89.52	37	*e*P	P	19 33 22.4	+0.9
OSTC				*e*S	SKSac	19 43 42.3	+2.3
OSTC				AMS	AMS	20 12 40.0	
	comp=Z,200nm,16.5s						
MYKA	Terra Mystica	89.62	41	*e*P	pP	19 33 58.7	+3.3
	comp=Z,14nm,1.8s						
TREC	Trest	89.64	38	AMS	AMS	20 12 10.0	
	comp=Z,300nm,23.0s						
DPC	Dobruska-Polom	89.67	37	*e*P	P	19 33 23.4	+1.1
DPC				*e*S	SKSac	19 43 42.4	+1.4
DPC				MLR	MLR		
	comp=Z,200nm,21.4s						
DPC	Dobruska-Polom	89.67	37	*e*P	P	19 33 23.4	+1.1
DPC				*e*SKS	SKSac	19 43 42.4	+1.4
DPC				AMS	AMS	20 14 40.0	
	comp=Z,200nm,21.4s						
KRLC	Kraliky	90.06	37	*e*P	P	19 33 25.2	+1.1
KRLC				*e*S	SKSac	19 43 45.9	+2.7
KRLC				MLR	MLR		
	comp=Z,100nm,16.3s						
KRLC	Kraliky	90.06	37	*e*P	P	19 33 25.2	+1.1
KRLC				*e*SKS	SKSac	19 43 45.9	+2.7
KRLC				AMS	AMS	20 16 20.0	
	comp=Z,100nm,16.3s						
OBKA	Obir	90.25	41	*e*P	P	19 33 25.3	+0.3
	comp=Z,28nm,2.0s						
KRUC	Moravsky	90.28	38	*e*P	P	19 33 25.2	+0.1
VRAC	Vranov	90.29	38	LR	LR	20 13 47.2	
	comp=Z,139nm,19.3s,baz=292,slow=35						
VRAC	Vranov	90.29	38	*e*P	P	19 33 25.1	0.0
CONA	Conrad Observa	90.45	39	*i* P	P	19 33 27.2	+1.2
	comp=Z,6.0nm,1.0s						
SOKA	Soboth	90.48	41	*i* P	P	19 33 27.7	+1.5
	comp=Z,9.4nm,1.1s						
ARSA	Arzberg	90.54	40	*e*P	P	19 33 26.7	+0.4
	comp=Z,11nm,1.2s						
MORC	Moravsky Berou	90.63	37	P	P	19 33 27.0	+0.2
MORC	Moravsky Berou	90.63	37	P	P	19 33 27.0	+0.2
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	90.63	37	*e*P	P	19 33 27.4	+0.6
KEST	Kesra	90.79	52	P	P	19 33 27.2	-0.6
	comp=Z,2.7nm,0.9s,baz=200,slow=13,SNR=1.8						
KEST				LR	LR	20 11 21.6	
	comp=Z,108nm,18.5s,baz=128,slow=34						
	comp=Z,2.7nm,0.9s						
KEST	Kesra	90.79	52	IAmb	IAmb	19 33 38.6	
	comp=Z,18nm,1.4s						
RONA	Rosalia, Austr	90.82	39	*e*P	P	19 33 28.7	+1.1
VSU	Vasula	90.87	27	⇑*e*P	P	19 33 29.0	+1.5
VSU				pmax	pmax		
	comp=Z,21nm,1.3s						
OKC	Ostrava-Krasne	90.95	37	*e*P	P	19 33 29.1	+0.9
OKC				*e*S	SKSac	19 43 49.4	+1.1
OKC				MLR	MLR		
	comp=Z,200nm,16.3s						
OKC	Ostrava-Krasne	90.95	37	*e*P	P	19 33 29.1	+0.9
OKC				*e*SKS	SKSac	19 43 49.4	+1.1

OKC				AMS	AMS	20 18 10.0	
	comp=Z,200nm,16.3s						
MAUC	Maruska	90.99	37	eP	P	19 33 29.7	+1.3
MAUC				AMS	AMS	20 12 20.0	
ZST	Bratislava	91.08	39	eP	P	19 33 29.9	+1.1
ZST				pmax	pmax		
	comp=Z,35nm,0.9s						
ZST	Bratislava	91.08	39	eP	P	19 33 29.9	+1.1
MODS	Modra-Piesok	91.11	38	eP	P	19 33 30.4	+1.4
MODS				pmax	pmax		
	comp=Z,25nm,1.2s						
MODS	Modra-Piesok	91.11	38	eP	P	19 33 30.4	+1.4
TORD	Torodi Ar. Bea	91.56	76	P	P	19 33 31.3	-0.4
	comp=Z,0.9nm,0.8s,baz=304,slow=4.3,SNR=4.7						
TORD				S	SKSac	19 43 51.4	-1.5
	comp=Z,0.6nm,1.0s,baz=186,slow=4.2,SNR=1.8						
TORD				PKKPbc	PKKPbc	19 50 51.8	+1.2
	comp=Z,1.0nm,0.8s,baz=99,slow=3.3,SNR=5.1						
TORD				PKPPKP		19 59 00.5	
	comp=Z,1.5nm,1.0s,baz=109,slow=3.5,SNR=5.2						
TORD				LR	LR	20 09 50.5	
	comp=Z,176nm,21.2s,baz=210,slow=32						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	91.56	76	IAmb	IAmb	19 33 32.8	
	comp=Z,5.4nm,1.4s						
SUW	Suwalki	91.63	32	eP	P	19 33 31.0	-0.1
SUW	Suwalki	91.63	32	P	P	19 33 30.8	-0.4
SUW				IAmb	IAmb	19 33 32.2	
	comp=Z,20nm,0.8s						
SUW	Suwalki	91.63	32	P	P	19 33 30.8	-0.4
SUW				pmax	pmax		
	comp=Z,20nm,0.8s						
SUW	Suwalki	91.63	32	eP	P	19 33 30.8	-0.4
OJC	Ojcow	91.72	36	eP	P	19 33 32.1	+0.3
OJC				eS	SKSac	19 43 35.9	-17
OJC	Ojcow	91.72	36	P	P	19 33 29.8	-1.9
OJC				IAmb	IAmb	19 33 33.2	
	comp=Z,12nm,0.9s						
OJC	Ojcow	91.72	36	P	P	19 33 29.8	-1.9
OJC				pmax	pmax		
	comp=Z,12nm,0.9s						
VYHS	Vyhne	91.98	38	eP	P	19 33 33.8	+0.8
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VYHS	Vyhne	91.98	38	eP	P	19 33 33.8	+0.8
LANS	Liptovska Anna	92.04	37	eP	P	19 33 35.2	+1.9
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	Liptovska Anna	92.04	37	eP	P	19 33 35.2	+1.9
ISAL	Salakas	92.22	29	eP	P	19 33 33.9	0.0
NIE	Niedzica	92.39	37	eP	P	19 33 36.8	+2.0
NIE				eS	SKSac	19 43 56.7	+0.2
IIGN	Ignalina	92.39	30	eP	P	19 33 34.8	+0.1
PSZ	Piszkesteto	92.87	38	P	P	19 33 37.4	+0.2
PSZ				IAmb	IAmb	19 33 41.2	
	comp=Z,15nm,1.3s						
PSZ	Piszkesteto	92.87	38	P	P	19 33 37.4	+0.2
PSZ				pmax	pmax		
	comp=Z,15nm,1.3s						
NACGM	Naroch	92.91	30	⇓eP	P	19 33 36.6	-0.5
	baz=304						
MORH	Mrgy, Hungar	92.92	40	⇑P	P	19 33 37.9	+0.6
MSVF	Nonsavu	93.13	253	LR	LR	20 05 55.6	
	comp=Z,99nm,19.3s,baz=23,slow=29						
CRVS	Cervenica-Dubn	93.31	37	eP	P	19 33 40.5	+1.4
CRVS				pmax	pmax		
	comp=Z,15nm,0.9s						
CRVS	Cervenica-Dubn	93.31	37	eP	P	19 33 40.5	+1.4
MNK	Minsk	93.66	30	i P	P	19 33 39.8	-0.7
MNK				i		19 37 24.7	
MNK				i PPP	PPP	19 39 26.7	
MNK				i S	SKSac	19 43 59.3	-3.8
MNK				i SS	SS	19 50 51.8	-6.4
MNK				i SSS	SSS	19 54 44.4	
MNK				pmax	pmax		
	comp=N,8.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,16nm,0.9s						
MNK				MLR	MLR		
	comp=Z,151nm,22.0s						
MNK				MLR	MLR		
	comp=N,50nm,15.0s						
MNK				MLR	MLR		
	comp=E,9.0nm,14.0s						
MNK	Minsk	93.66	30	i P	P	19 33 39.8	-0.7
	comp=E,1.0nm,0.9s						
MNK				i P	P	19 33 39.8	-0.7
	comp=N,8.0nm,0.7s						
MNK				i P	P	19 33 39.8	-0.7
	comp=Z,16nm,0.9s,baz=305						
MNK				i pP	pP	19 34 17.9	+4.1
MNK				i sP	sP	19 34 34.8	+7.4
MNK				i PP	PP	19 37 24.7	-1.8
MNK				i PPP	PPP	19 39 26.8	
MNK				i SKS		19 43 34.2	
MNK				i S	SKSac	19 43 59.4	-3.8
MNK				i sS	pS	19 45 08.8	-12
MNK				i SS	SS	19 50 51.9	-6.4
MNK				i SSS	SSS	19 54 44.4	
MNK				i LR	LR	20 09 45.9	
MNK				i LRM	MLR	20 16 41.2	
	comp=Z,151nm,21.7s						
MNK				i LRM	MLR	20 16 51.4	
	comp=E,9.0nm,14.1s						
MNK				i LRM	MLR	20 16 51.4	
	comp=N,50nm,15.3s						
KOLS	Kolonicke sedl	93.75	36	eP	P	19 33 42.4	+1.3
KOLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLS	Kolonicke sedl	93.75	36	eP	P	19 33 42.4	+1.3
VAE	Valguarnera	93.89	49	LR	LR	20 14 03.7	
	comp=Z,212nm,19.0s,baz=98,slow=34						
UZH	Uzhgorod	93.92	37	c iP	P	19 33 41.7	-0.2
FRGS	Fruska Gora	94.14	40	⇑P	P	19 33 44.1	+1.1
NRIK	Noril'sk	94.27	359	P	P	19 33 42.9	-0.1
	comp=Z,1.8nm,0.4s,baz=356,slow=3.4,SNR=4.6						
NRIK				LR	LR	20 21 39.0	
	comp=Z,137nm,18.8s,baz=18,slow=39						
	comp=Z,1.8nm,0.4s						
NRIK	Noril'sk	94.27	359	deP	P	19 33 45.4	+2.4
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LVV	L'vov	94.28	35	eP	P	19 33 43.7	+0.2
KLMR	Klimovskoe	94.30	21	eP	P	19 33 41.7	-1.6
KLMR				e*PP	pP	19 34 14.9	-1.6
KLMR				pmax	pmax		
	comp=Z,15nm,1.0s						
KLMR	Klimovskoe	94.30	21	eP	P	19 33 41.7	-1.6
KLMR				AMP		19 33 44.3	
	comp=Z,15nm,1.0s						
KLMR				epP	pP	19 34 15.0	-1.6
YAK	Yakutsk	94.39	341	LR	LR	20 24 49.5	
	comp=Z,60nm,18.4s,baz=160,slow=41						
YAK	Yakutsk	94.39	341	deP	P	19 33 43.6	-0.1
YAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BZS	Buzias	95.03	39	⇑P	P	19 33 47.5	+0.5
PRGR	Permogore	95.66	18	eP	P	19 33 48.1	-1.4
PRGR				e*PP	pP	19 34 21.3	-1.5
GZR	Gura Zlata	95.85	39	⇑P	P	19 33 50.2	-0.7
BUR08	Bucovina Ar. S	96.09	36	P	P	19 33 51.6	-0.4
BURAR	Bucovina Array	96.12	36	⇓P	P	19 33 52.4	+0.3
AKASG	Malin Array Be	96.55	32	P	P	19 33 52.4	-1.4
	comp=Z,1.2nm,0.6s,baz=313,slow=2.6,SNR=7.9						
AKASG				S	SKSac	19 44 16.0	-2.6
	comp=Z,0.2nm,0.4s,baz=107,slow=38,SNR=1.5						
AKASG				PKKPbc	PKKPbc	19 50 36.7	-2.0
	comp=Z,0.3nm,0.5s,baz=57,slow=0.2,SNR=1.3						
	comp=Z,1.2nm,0.6s						
AKASG	Malin Array Be	96.55	32	IAmb	IAmb	19 33 54.5	
	comp=Z,5.0nm,1.4s						
AKASG	Malin Array Be	96.55	32	P	P	19 33 52.4	-1.4
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.4s						
AKBB	Malin Array Si	96.55	32	⇓eP	P	19 33 52.7	-1.1
OBN	Obninsk	97.18	26	LR	LR	20 18 58.2	
	comp=Z,26nm,20.0s,baz=345,slow=36						
OBN	Obninsk	97.18	26	⇓eP	Pdif	19 33 56.7	+0.1
OBN				e*PP	pP	19 34 28.0	-1.8
OBN				e		19 38 00.7	
OBN				i S	SKSac	19 44 24.7	+3.0
OBN				eSS	SS	19 51 41.2	-6.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,99nm,19.0s						
VOIR		97.19	38	⇑P	Pdif	19 33 57.8	+0.7
MOS	Moscow	97.19	25	eP	P	19 33 55.7	-0.9
VTS	Vitosha	97.55	41	⇑P	Pdif	19 33 59.3	+0.6
MLR	Muntele Rosu	97.69	38	⇑P	Pdif	19 34 00.1	+0.8
MLR	Muntele Rosu	97.69	38	P	P	19 33 59.2	-0.1
MLR				IAmb	IAmb	19 34 00.9	
	comp=Z,7.4nm,1.0s						
MLR	Muntele Rosu	97.69	38	P	P	19 33 59.2	-0.1
MLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIRV	Kirov	99.25	18	LR	LR	20 21 50.2	
	comp=Z,78nm,18.4s,baz=321,slow=37						
URZ	Urewera	99.30	233	LR	LR	20 10 36.0	
	comp=Z,124nm,19.4s,baz=30,slow=30						
BRTR	Keskin Array B	105.66	39	PKKPbc	PKKPbc	19 50 12.3	-0.2
	comp=Z,1.0nm,0.8s,baz=193,slow=4.9,SNR=4.6						
ZALV	Zalesovo Beam	109.71	1	PKiKP	PKiKP	19 38 53.8	-0.5
	comp=Z,0.7nm,0.6s,baz=270,slow=2.9,SNR=2.4						
ZALV				PP	PP	19 39 25.4	-1.2
	comp=Z,1.7nm,0.8s,baz=333,slow=5.0,SNR=5.4						
MAK	Makhachkala	110.93	29	eP	Pdif	19 34 53.1	-5.0
MAK				i		19 38 57.0	
MAK				e		19 39 31.2	
MAK				e		19 39 34.7	
MAK				pmax	pmax		
	comp=Z,198nm,1.1s						
SONM	Songino Array	113.31	345	PKiKP	PKiKP	19 39 01.2	-0.4
	comp=Z,1.3nm,1.0s,baz=97,slow=2.7,SNR=5.4						
SONM				PP	PP	19 39 52.6	-0.1
	comp=Z,1.8nm,1.0s,baz=70,slow=2.5,SNR=6.0						
SONM				PKKPbc	PKKPbc	19 49 46.0	-2.4
	comp=Z,0.8nm,0.8s,baz=182,slow=4.5,SNR=4.8						
MKAR	Makanchi Array	116.79	3	PKP	PKPdf	19 39 07.0	-1.1
	comp=Z,0.6nm,0.6s,baz=5.2,slow=2.1,SNR=7.1						
MKAR				PP	PP	19 40 14.1	-2.8
	comp=Z,1.2nm,0.8s,baz=15,slow=5.0,SNR=5.5						
MKAR				PKKPbc	PKKPbc	19 49 33.8	-2.6
	comp=Z,0.7nm,0.9s,baz=210,slow=7.9,SNR=3.8						
MKAR	Makanchi Array	116.79	3		PKPdf	19 39 07.1	-1.0
HHC	Hu-ho-hao-te	118.12	338	ePKP	PKiKP	19 39 14.0	+3.0
GEYT	Alibeck	119.72	25	PKP	PKPdf	19 39 13.1	-0.9
	comp=Z,0.9nm,0.4s,baz=233,slow=42,SNR=2.4						
WMQ	Urumqi	119.84	359	ePKP	PKiKP	19 39 15.3	+1.1
WMQ				LR	LR		
	comp=Z,130nm,19.9s						
NJ2	Nanjing	122.30	327	ePKP	PKiKP	19 39 20.0	+0.7
GAR	Garm	122.74	15		PKiKP	19 39 20.2	+0.1
GTA	Gaotai	122.80	347	ePKP	PKiKP	19 39 20.3	0.0
GTA				LR	LR		
	comp=Z,68nm,15.3s						
GTA				LR	LR		
	comp=Z,86nm,15.3s						
GTA				LR	LR		
	comp=Z,81nm,16.4s						
BOSA	Boshof	123.12	114	PKP	PKPdf	19 39 20.5	-0.3
	comp=Z,8.3nm,0.9s,baz=282,slow=1.1,SNR=9.6						
BOSA				pPKP	pPKPdf	19 39 53.5	-2.1
	comp=Z,4.4nm,1.0s,baz=288,slow=2.3,SNR=2.6						
HRA	Herat	124.44	24	PKPdf	PKPdf	19 39 21.9	-1.5
LZH	Lanzhou	124.95	342	ePKP	PKiKP	19 39 24.9	+0.2
MAW	Mawson	126.89	169	PKP	PKPdf	19 39 26.4	-0.3
	comp=Z,3.8nm,0.6s,baz=172,slow=3.5,SNR=7.9						
MAW				pPKP	pPKPdf	19 39 59.5	-1.8
	comp=Z,3.8nm,0.6s,baz=164,slow=2.9,SNR=3.8						
MAW	Mawson	126.89	169	PKPdf	PKPdf	19 39 26.8	+0.1
STKA	Stephens Creek	127.67	242	PKP	PKiKP	19 39 29.7	-0.2
	comp=Z,14nm,0.9s,baz=122,slow=2.5,SNR=18						
STKA				pPKP	pPKPdf	19 40 02.8	-1.3
	comp=Z,6.8nm,0.9s,baz=89,slow=3.2,SNR=3.6						
STKA	Stephens Creek	127.67	242	PKPdf	PKPdf	19 39 29.4	0.0
CASY	Casey	127.81	192	PKPdf	PKiKP	19 39 28.8	-0.3
ENH	Enshi	128.21	334		PKPdf	19 39 29.9	-0.6
GYA	Guiyang	132.74	335	⇑PKP	PKPdf	19 39 39.8	+0.5
SIJI	Sorong	132.83	285	PKP	PKiKP	19 39 41.0	+0.2
	comp=Z,10nm,1.0s,baz=47,slow=4.3,SNR=10						
WR0	Warramunga Arr	133.98	258	PKPdf	PKPdf	19 39 41.8	+0.2
WB0	Warramunga Arr	134.11	258		PKPdf	19 39 42.2	+0.4
WB2	Warramunga Arr	134.16	258	PKPdf	PKPdf	19 39 41.9	-0.1
WRA	Warramunga Arr	134.17	258	PKhKP	PKPpre	19 39 25.9	
	comp=Z,0.6nm,0.9s,baz=79,slow=2.1,SNR=4.5						
WRA				PKP	PKPdf	19 39 42.2	+0.2
	comp=Z,9.3nm,0.8s,baz=78,slow=1.8,SNR=27						
WRA				pPKP	pPKPdf	19 40 15.8	-1.0
	comp=Z,3.7nm,0.6s,baz=79,slow=1.7,SNR=3.7						
WRA	Warramunga Arr	134.17	258	PKPdf	PKPdf	19 39 41.6	-0.3
PZH	PanZhiHua	134.51	340	PKP	PKPdf	19 39 41.8	-0.9
ASAR	Alice Springs	134.72	253	PKhKP	PKPpre	19 39 27.2	
	comp=Z,1.2nm,1.0s,baz=120,slow=3.3,SNR=4.6						
ASAR				PKP	PKPdf	19 39 43.0	+0.1
	comp=Z,7.1nm,0.9s,baz=102,slow=2.2,SNR=21						
ASAR				pPKP	pPKPdf	19 40 16.9	-0.8
	comp=Z,4.6nm,0.9s,baz=98,slow=1.9,SNR=4.2						
ASAR				SKPbc	SKPbc	19 43 02.7	+1.2
	comp=Z,0.9nm,0.8s,baz=100,slow=3.9,SNR=2.8						
ASAR				PKKP	PKKPdf	19 49 26.7	-1.1
	comp=Z,0.1nm,0.4s,baz=277,slow=1.4,SNR=5.0						
ASAR	Alice Springs	134.72	253	PKPdf	PKPdf	19 39 42.5	-0.4
KMI	Kunming	135.44	338	⇑PKP	PKPdf	19 39 45.1	+0.5
CM31	Chiang Mai Arr	142.91	339		PKPpre	19 39 54.3	
CMAR	Chiang Mai Arr	142.91	339	PKhKP	PKPpre	19 39 54.3	
	comp=Z,5.3nm,0.9s,baz=343,slow=4.7,SNR=18						
CMAR				SKPbc	SKPbc	19 43 25.1	+0.5
	comp=Z,1.6nm,1.1s,baz=279,slow=0.5,SNR=4.5						
HYBB	Hyderabad (bro	145.38	13	ePKPdf	PKPdf	19 40 01.6	-0.7
PSA00	Pilbara Seismi	147.75	256		PKPbc	19 40 09.4	+0.2
PSA00	Pilbara Seismi	147.75	256		PKPdf	19 40 06.2	0.0
MORW	Morawa	149.83	240		PKPdf	19 40 09.2	-0.1
KSM	Kuching	150.08	305	PKPdf	PKPdf	19 40 10.3	+0.1

IDC 23 19:25:31.9±2.4**, 26°.42N**×**142°.61E, h0**^{km}**, mb3.7**/4**, mbtmp3.7**/4**, MS4.0**/1 **Error ellipse: s-maj=119.7km s-min=17.9km az=78.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	0.77	330	Pn	Pn	19 25 50.0	-0.1
	75nm,0.3s,baz=285,slow=23,SNR=60						
JCJ				Sn	Sb	19 25 59.8	+0.5
	136nm,0.3s,baz=300,slow=23,SNR=8.7						
KSRS	Korea Array	16.61	315	LR	LR	19 35 28.9	
	comp=Z,22nm,19.0s,baz=120,slow=36						
H11N2	WAKE ISLAND Hy	23.29	102	T	T	19 54 57.6	
	baz=296						
H11N1	WAKE ISLAND Hy	23.29	102	T	T	19 54 53.5	
	baz=296						
H11N3	WAKE ISLAND Hy	23.31	102	T	T	19 54 56.3	
	baz=296						
H11S3	WAKE ISLAND Hy	23.58	105	T	T	19 55 13.8	
	baz=294,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	23.58	105	T	T	19 55 14.6	
	baz=294,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	23.59	105	T	T	19 55 13.9	
	baz=294,slow=75,SNR=14						
KLR	Kul'dur	24.28	343	P	P	19 30 51.0	+0.2
	0.8nm,0.5s,baz=169,slow=10,SNR=4.2						
	0.8nm,0.5s						
WRA	Warramunga Arr	46.78	191	P	P	19 34 04.3	+1.0
	1.1nm,0.6s,baz=12,slow=8.6,SNR=13						
	1.1nm,0.6s						
ASAR	Alice Springs	50.50	190	P	P	19 34 30.3	-1.7
	0.1nm,0.3s,baz=11,slow=4.9,SNR=4.2						
	0.1nm,0.3s						
FINES	FINESS Array B	78.72	334	P	P	19 37 36.1	+0.2
	1.7nm,0.8s,baz=72,slow=6.2,SNR=4.8						
	1.7nm,0.8s						
BRTR	Keskin Array B	86.74	313	LR	LR	20 22 08.8	
	comp=Z,79nm,18.4s,baz=304,slow=39						

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*MEX **23** 19:45:40.3±0.7, 14°.71N×92°.32W, h81^{km}±6^{km}, MD4.1*

*GCG **23** 19:45:42.7±0.8, 14°.90N×92°.23W, h54^{km}±26^{km}, MD3.9*

ISC 23 19:45:40.8±1.6**, 14°.76N**±0°.09×**92°.42W**±0°.07**, h67**^{km}±9^{km}**, n13, σ0ˢ.66**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.21	45	i P	Pn	19 45 51.4	+0.2
THIG				eS	Sn	19 45 58.7	0.0
PATR	El Naranjo	0.40	26	eP	Pn	19 45 52.1	-0.7
PATR				eS	Sn	19 46 01.4	-0.1
CHUJ	Union Juarez	0.45	42	eP	Pn	19 45 52.5	-0.7
CHUJ				i S	Sn	19 46 02.7	+0.5
PAVE	Pavencul	0.49	28	eP	Pn	19 45 53.2	-0.3
PAVE				i S	Sn	19 46 03.9	+1.0
STG3	Santiaguito 3,	0.82	93	eP	Pn	19 45 56.9	-0.3
PCIG		1.22	321	eP	Pn	19 46 02.2	+0.2
PCIG				i S	Sn	19 46 19.0	+1.2
CCIG	Comitan	1.54	10	i P	Pn	19 46 07.3	+0.8
CCIG				i S	Sn	19 46 25.0	-0.7
FUG	Fuego 3	1.56	101	eP	Pn	19 46 07.1	+0.5
FUG				eS	Sn	19 46 25.2	-0.8
PCG	Pacaya	1.79	102	eP	Pn	19 46 09.7	-0.1
PCG				eS	Sn	19 46 32.5	+0.7
TGIG		2.12	341	i P	Pn	19 46 14.3	+0.2
TGIG				eS	Sn	19 46 38.5	-1.0
UXUV	UXUV	3.04	327	eP	Pn	19 46 26.9	+0.3
UXUV				eS	Sn	19 47 01.8	-0.1
CMIG	Matias Romero	3.32	315	eP	Pn	19 46 30.1	-0.3
CMIG				eS	Sn	19 47 08.1	-0.6
NEUV	Arroyo Zacate	4.38	313	eP	Pn	19 46 44.2	-0.7
NEUV				eS	Sn	19 47 35.4	+0.7

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*IDC **23** 19:47:17.8±3.0, 3°.60S×139°.87E, h69^{km}±28^{km}, mb3.8/9, mbtmp4.3/13, MS3.4/6, Error ellipse: s-maj=26.6km s-min=16.5km az=60.0*

*DJA **23** 19:47:18.3±0.8, 4°S±6°×14°0E±°, h59^{km}±22^{km}, M4.9/5, mB4.7/1, mb4.5/3, MLv5.1/5, Mw(mB)3.9/1*

*NEIC **23** 19:47:18.6±1.2, 3°.6S±0°.1×139°.86E±0°.09, h68^{km}±6^{km}, mb4.5/53, Error ellipse: s-maj=15.3km s-min=12.5km az=213.0*

ISC 23 19:47:16.5±0.4**, 3°.68S**±0°.05×**139°.82E**±0°.05**, h56**^{km}**, n104, σ1ˢ.84**/104**, mb4.5**/26**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	2.01	327	P	Pn	19 47 50.7	+2.6
SRPI	Serui, Papua	4.00	297	P	Pn	19 48 19.4	+4.1
BAKI	Biak	4.46	304	P	Pn	19 48 25.6	+4.0
MMPI	Merauke	4.79	173	P	Pn	19 48 28.9	+2.8
FAKI	Fak Fak	7.59	275	Pn	Pn	19 49 07.6	+2.9
FAKI	Fak Fak	7.59	275	P	Pn	19 49 06.9	+2.3
	0.2nm56nm,0.8s						
FAKI	Fak Fak	7.59	275	P	Pn	19 49 07.5	+2.9
SIJI	Sorong	8.99	288	P	Pn	19 49 26.3	+2.6
	3.5nm,0.3s,baz=152,slow=21,SNR=9.5						
SIJI				S	Sn	19 50 58.9	-4.7
	3.8nm,0.7s,baz=265,slow=22,SNR=1.5						
SIJI				LR	LR	19 53 25.7	
	comp=Z,100nm,19.8s,baz=145,slow=41						
SWI	Sorong	9.00	288	P	Pn	19 49 27.8	+4.0
PMG	Port Moresby	9.25	128	P	Pn	19 49 28.4	+1.1
	44nm,0.8s,baz=307,slow=7.5,SNR=14						
PMG				S	Sn	19 51 05.6	-4.3
	11nm,0.7s,baz=333,slow=24,SNR=1.7						
PMG	Port Moresby	9.25	128		Pn	19 49 29.2	+1.9
PMG	Port Moresby	9.25	128	P	Pn	19 49 29.4	+2.1
PMG	Port Moresby	9.25	128	P	Pn	19 49 29.6	+2.3
COEN	Coen	10.74	162	Pn	Pn	19 49 48.4	+0.7
COEN	Coen	10.74	162	P	Pn	19 49 48.1	+0.4
MTN	Manton Dam	12.51	223	Pn	Pn	19 50 10.7	-1.2
MTN	Manton Dam	12.51	223	P	Pn	19 50 11.2	-0.7
SANI	Sanana	13.91	276	P	Pn	19 50 34.7	+3.8
	12nm,0.8s						
MTSU	Mount Surprise	15.03	163	P	Pn	19 50 45.8	+0.2
KNRA	Kununurra	16.14	222	Pn	Pn	19 50 59.5	-0.3
KNRA				IAmb	IAmb	19 51 07.8	
	comp=Z,28nm,0.9s						
KNRA	Kununurra	16.14	222	P	Pn	19 50 59.6	-0.3
SOEI	Soe	16.57	248		Pn	19 51 06.6	+1.2
SOEI				IAmb	IAmb	19 51 11.3	
	comp=Z,50nm,1.1s						
SOEI					Sn	19 54 07.4	-1.4
SOEI	Soe	16.57	248	P	Pn	19 51 07.3	+1.9
QIS	Mount Isa	16.78	181	P	Pn	19 51 06.9	-0.9
WB0	Warramunga Arr	16.84	198	P	Pn	19 51 06.6	-2.0
WB0				IAmb	IAmb	19 51 28.3	
	comp=Z,26nm,0.8s						
WR0	Warramunga Arr	16.98	197	Pn	Pn	19 51 08.3	-2.1
WR0				IAmb	IAmb	19 51 29.9	
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	17.01	198		Pn	19 51 07.3	-3.4
WRAB				IAmb	IAmb	19 51 29.7	
	comp=Z,26nm,0.8s						
WRAB	Tennant Creek	17.01	198	P	Pn	19 51 09.4	-1.4
WB2	Warramunga Arr	17.02	198		Pn	19 51 09.0	-1.9
WB2				IAmb	IAmb	19 51 29.8	
	comp=Z,25nm,0.7s						
WRA	Warramunga Arr	17.02	198	P	Pn	19 51 09.1	-1.8
	comp=Z,5.4nm,0.5s,baz=26,slow=14,SNR=99						
WRA				S	Sn	19 54 07.6	-12
	comp=Z,5.9nm,0.8s,baz=16,slow=24,SNR=5.5						
WRA				LR	LR	19 57 27.5	
	comp=Z,111nm,20.8s,baz=30,slow=36						
WRA	Warramunga Arr	17.02	198	P	Pn	19 51 07.1	-3.8
LUWI	Luwuk	17.23	278	Pn	Pn	19 51 11.1	-2.4
LUWI				IAmb	IAmb	19 51 19.4	
	comp=Z,43nm,1.1s						
BATI	Baumata	17.29	247	P	P	19 51 16.6	+1.6
	comp=Z,24nm,0.6s,baz=152,slow=2.2,SNR=11						
CTA	Charters Tower	17.48	159	P	Pn	19 51 18.0	+1.5
	comp=Z,6.8nm,0.8s,baz=140,slow=18,SNR=2.6						
CTA				LR	LR	19 58 16.8	
	comp=Z,150nm,21.2s,baz=24,slow=38						
GUMO	Guam	17.87	16	LR	LR	19 57 09.5	
	comp=Z,56nm,21.2s,baz=144,slow=33						
TOLI2	Tolitoli	19.61	284	P	P	19 51 40.6	+0.1
TOLI2				IAmb	IAmb	19 51 44.7	
	comp=Z,27nm,0.9s						
TOLI2	Tolitoli	19.61	284	P	Pn	19 51 43.8	+1.5
AS31	Alice Springs	20.67	196		P	19 51 52.4	+0.4
ASAR	Alice Springs	20.68	196	P	P	19 51 52.0	0.0
	comp=Z,7.5nm,0.5s,baz=28,slow=8.5,SNR=263						
ASAR				S	S	19 55 32.5	-7.5
	comp=Z,4.1nm,0.8s,baz=13,slow=27,SNR=5.3						
	comp=Z,7.5nm,0.5s						
ASAR	Alice Springs	20.68	196		P	19 51 52.3	+0.3
INKA	Innaminka	23.94	178	P	P	19 52 25.9	+0.3
EIDS	Eidsvold	24.13	154	P	P	19 52 28.6	+1.2
EIDS				IAmb	IAmb	19 52 31.6	
	comp=Z,15nm,0.7s						
EIDS	Eidsvold	24.13	154	P	P	19 52 29.6	+2.3
OOD	Oodnadatta	24.30	189	P	P	19 52 30.5	+1.7
MBWA	Marble Bar	26.14	227	P	P	19 52 46.8	+1.2
MBWA				IAmb	IAmb	19 52 50.9	
	comp=Z,22nm,1.4s						
LCRK	Leigh Creek	26.67	183	P	P	19 52 51.2	+0.9
MULG	Mulgathing	27.01	191	P	P	19 52 54.2	+0.8
STKA	Stephens Creek	28.10	177	P	P	19 53 03.7	+0.6
	comp=Z,0.5nm,0.4s,baz=318,slow=16,SNR=1.2						
STKA				LR	LR	20 05 18.3	
	comp=Z,252nm,19.1s,baz=28,slow=38						
	comp=Z,0.5nm,0.4s						
CMSA	Cobar Meteorol	28.26	169	P	P	19 53 06.2	+1.7
JNU	Nakatsue	37.57	348	P	P	19 54 24.0	-1.6
KULM	Kulim	40.12	283	P	P	19 54 48.0	+0.7
GSI	Gunungsitoli	42.51	276	P	P	19 55 06.6	-0.2
CMAR	Chiang Mai Arr	45.88	300	P	P	19 55 33.4	-0.3
	comp=Z,0.6nm,0.4s,baz=120,slow=5.3,SNR=4.9						
	comp=Z,0.6nm,0.4s						
MCQ	Macquarie Isla	53.01	166	P	P	19 56 30.2	+2.8
JOHN	Johnston Islan	53.98	66	P	P	19 56 36.4	+1.1
SHL	Shillong	54.79	305	P	P	19 56 40.8	-0.5
SHL				IAmb	IAmb	19 56 42.3	
	comp=Z,4.9nm,0.8s						
PETK	Petropavlovsk-	58.55	13	P	P	19 57 07.4	+0.2
	comp=Z,1.2nm,0.6s,baz=186,slow=4.2,SNR=2.6						
	comp=Z,1.2nm,0.6s						
ULN	Ulaanbaatar	58.81	335	P	P	19 57 08.1	-1.2
SONM	Songino Array	59.06	334	P	P	19 57 11.0	0.0
	comp=Z,0.8nm,0.8s,baz=154,slow=7.3,SNR=5.7						
	comp=Z,0.8nm,0.8s						
SONM	Songino Array	59.06	334	IAmb	IAmb	19 57 12.0	
	comp=Z,0.8nm,1.0s						
YAK	Yakutsk	65.99	355	P	P	19 57 56.7	0.0
YAK				IAmb	IAmb	19 57 57.9	
	comp=Z,8.9nm,1.0s						
MKAR	Makanchi Array	71.23	322	P	P	19 58 29.9	+0.1
	comp=Z,2.5nm,0.8s,baz=94,slow=9.1,SNR=16						
	comp=Z,2.5nm,0.8s						
ZAA0	Zalesovo Array	73.33	330	P	P	19 58 40.8	-1.3
ZALV	Zalesovo Beam	73.33	330	P	P	19 58 41.0	-1.1
	comp=Z,1.1nm,0.6s,baz=134,slow=6.4,SNR=5.9						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	73.33	330	P	P	19 58 40.9	-1.2
KURK	Kurchatov	75.14	325	P	P	19 58 52.5	-0.3

TIXI	Tiksi	75.53	356	P	P	19 58 53.1	-1.4
BRVK	Borovoye	80.81	325	P	P	19 59 23.9	-0.2
NRIK	Noril'sk	80.96	343	P	P	19 59 23.2	-1.4
	comp=Z,1.5nm,0.4s,baz=125,slow=3.5,SNR=1.9						
	comp=Z,1.5nm,0.4s						
NRIK	Noril'sk	80.96	343	P	P	19 59 23.8	-0.8
L19K	White Mountain	82.00	25	P	P	19 59 30.4	+0.1
L19K				IAmb	IAmb	19 59 31.8	
	comp=Z,9.5nm,1.2s						
WSAR	Wadi Sarin	83.36	294	LR	LR	20 42 05.8	
	comp=Z,27nm,19.3s,baz=80,slow=39						
IMAR	Indian Mountai	83.97	22	P	P	19 59 38.9	-1.5
I23K	Minto, Yukon-K	85.37	24	P	P	19 59 46.9	-0.5
H23K	Yukon River	85.52	23	P	P	19 59 48.1	-0.1
H23K				IAmb	IAmb	19 59 49.8	
	comp=Z,4.7nm,0.8s						
DHY	Denali Highway	85.55	26	P	P	19 59 47.9	-0.7
DHY				IAmb	IAmb	19 59 48.7	
	comp=Z,5.1nm,0.8s						
DIV	Divide	85.73	28	P	P	19 59 49.0	-0.4
COLD	Coldfoot	85.74	22	P	P	19 59 49.9	+0.6
KLU	Klutina	85.76	28	P	P	19 59 49.3	-0.3
M24K	Tolsona, Glenn	85.81	27	P	P	19 59 49.9	+0.1
CCB	Clear Creek Bu	85.84	24	P	P	19 59 48.2	-1.6
CCB				IAmb	IAmb	19 59 49.3	
	comp=Z,4.1nm,0.7s						
HDA	Harding Lake	86.12	25	P	P	19 59 51.4	+0.2
HDA				IAmb	IAmb	19 59 52.0	
	comp=Z,4.1nm,1.0s						
ABKAR	Akbulak array	86.17	320	P	P	19 59 50.2	-1.5
ABKAR	Akbulak array	86.17	320	P	P	19 59 51.4	-0.4
ABKAR				IAmb	IAmb	20 00 19.4	
	comp=Z,2.2nm,1.2s						
H24K	Noodor Dome	86.17	23	P	P	19 59 51.2	-0.3
H24K				IAmb	IAmb	19 59 52.1	
	comp=Z,2.7nm,0.8s						
BMRM	Bremner River	86.24	28	P	P	19 59 51.8	-0.1
IL31		86.25	24	P	P	19 59 49.8	-2.0
IL31				IAmb	IAmb	19 59 50.6	
	comp=Z,2.5nm,0.7s						
ILAR	Eielson Array	86.25	24	P	P	19 59 49.9	-2.0
	comp=Z,2.5nm,0.7s,baz=264,slow=4.5,SNR=23						
	comp=Z,2.5nm,0.7s						
QSPA	South Pole Qui	86.27	180	P	P	19 59 51.5	-0.6
QSPA				IAmb	IAmb	20 00 13.8	
	comp=Z,4.7nm,1.5s						
PAX	Paxson	86.36	26	P	P	19 59 52.5	0.0
TOLK	Toolik Lake Re	86.44	20	P	P	19 59 53.1	+0.3
TOLK				IAmb	IAmb	19 59 53.9	
	comp=Z,4.1nm,0.7s						
GLB	Gilahina Butte	86.73	28	P	P	19 59 54.1	-0.2
GLB				IAmb	IAmb	19 59 54.5	
	comp=Z,2.7nm,0.8s						
RIDG	Independent Ri	86.83	26	P	P	19 59 54.3	-0.4
RIDG				IAmb	IAmb	19 59 55.4	
	comp=Z,4.5nm,1.0s						
J25K	Salcha River,	86.84	25	P	P	19 59 54.5	-0.3
J25K				IAmb	IAmb	19 59 57.7	
	comp=Z,4.0nm,1.2s						
BARN	Barnard Glacie	87.66	28	P	P	19 59 58.7	-0.3
CTGM	Chitina Glacie	87.79	29	P	P	19 59 59.5	-0.1
BMAR	Burnt Mountain	87.88	22	P	P	20 00 00.5	+0.7
L27K	Beaver Creek,	88.00	27	P	P	20 00 00.8	+0.4
L27K				IAmb	IAmb	20 00 01.7	
	comp=Z,2.8nm,0.8s						
BCAR	Beaver Creek A	88.02	27	P	P	20 00 00.3	-0.2
K27K	Chicken	88.09	26	P	P	20 00 01.4	+0.6
BELA	Belgrano 2	98.49	181	P	Pdif	20 00 50.9	+2.5
BELA				IAmb	IAmb	20 00 52.9	
	comp=Z,1.6nm,0.6s						
DBIC	Dimbokro	144.70	276	PKP	PKPab	20 06 47.3	+0.3
	comp=Z,19nm,0.6s,baz=98,slow=3.5,SNR=30						
CPUP	Villa Florida	145.86	152	PKPbc	PKPdf	20 06 50.0	+0.2
	comp=Z,1.1nm,0.4s,baz=214,slow=2.8,SNR=3.5						
LPAZ	La Paz	145.98	126	PKPbc	PKPbc	20 06 52.4	+0.6
	comp=Z,2.2nm,0.7s,baz=219,slow=2.9,SNR=9.7						

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*MAN **23** 20:19:43.6, 8°.97N×126°.26E, h32^{km}, mb4.7, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

*IDC **23** 20:19:43.7±5.1, 9°.03N×126°.54E, h66^{km}±43^{km}, mb3.4/4, mbtmp3.7/6, ML3.8/2, MS3.4/1, Error ellipse: s-maj=42.3km s-min=33.0km az=62.0*

ISC 23 20:19:42.3±1.1, **9°.02N**±0°.05×**126°.38E**±0°.08, **h53**^{km}±12^{km}, **n21**, σ**2^{s}.08**/29, **mb3.5**/4, **9C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.75	266	⇓eP	Pn	20 19 56.6	-0.2
GLSP	General Luna,	0.80	342	⇑eP	Pn	20 19 58.9	+1.4
GLSP				eS	Sn	20 20 44.0	+35
BIPH	Bislig	0.83	181	⇑iP	Pn	20 19 58.4	+0.6
BIPH				iS	Sn	20 20 09.9	+0.8
SCPH	Surigao	1.16	311	⇑eP	Pn	20 20 02.4	+0.1
MSLP	Maasin	1.87	307	⇑eP	Pn	20 20 13.2	+1.4
MSLP				eS	Sn	20 21 07.0	+33
MATI	Mati	2.06	183	⇑eP	Pn	20 20 16.6	+2.0
MATI				eS	Sn	20 20 33.3	-5.7
DAV	Davao City (W)	2.09	202	P	Pn	20 20 17.0	+2.1
	45nm,0.3s,baz=20,slow=6.0,SNR=3.7						
DAV				S	Sn	20 20 44.2	+4.4
	162nm,0.5s,baz=315,slow=22,SNR=6.8						
	96nm,0.3s						
KCP	Kidapawan	2.37	213	⇑iP	Pn	20 20 19.5	+0.7
KCP				iS	Sn	20 20 46.8	+0.1
TBP	Tagbilaran	2.58	285	⇑eP	Pn	20 20 22.0	+0.5
TBP				iS	Sn	20 20 51.2	-0.5
LLP	Lapu-Lapu	2.71	299	⇑eP	Pn	20 20 24.8	+1.5
LLP				iS	Sn	20 20 56.3	+1.3
CTBH	Cotabato--PC H	2.77	230	⇓iP	Pn	20 20 24.4	+0.3
CTBH				iS	Sn	20 20 47.4	-9.0
DDMP	Don Marcelino,	2.97	193	⇓eP	Pn	20 20 28.0	+1.1
DDMP				eS	Sn	20 21 00.4	-0.9
PAGZ	Pagadian	3.19	249	⇑eP	Pn	20 20 31.1	+1.2
GSPH	General Santos	3.24	206	eP	Pn	20 20 33.5	+2.8
CNOP	Candoni, Negro	3.78	283	⇓eP	Pn	20 20 39.3	+1.2
CNOP				eS	Sn	20 21 18.2	-3.1
SIJI	Sorong	10.96	153	P	Pn	20 22 17.9	+1.4
	0.5nm,0.3s,baz=287,slow=22,SNR=2.5						
SIJI				S	Sn	20 24 14.2	-3.5
	1.5nm,0.3s,baz=249,slow=23,SNR=2.4						
	1.6nm,0.3s						
WRA	Warramunga Arr	29.82	165	P	P	20 25 43.8	-0.8
	0.3nm,0.5s,baz=347,slow=9.4,SNR=2.7						
	0.3nm,0.5s						
ASAR	Alice Springs	33.30	167	P	P	20 26 14.9	-0.2
	0.2nm,0.4s,baz=349,slow=6.6,SNR=5.2						
	0.2nm,0.4s						
ASAJ	Asahikawa	37.70	19	LR	LR	20 44 14.8	
	comp=Z,46nm,18.4s,baz=32,slow=39						
STKA	Stephens Creek	43.19	161	P	P	20 27 38.4	+0.3
	1.1nm,0.7s,baz=321,slow=13,SNR=1.3						
	1.1nm,0.7s						
FINES	FINESS Array B	87.04	332	P	P	20 32 22.2	+0.3
	0.7nm,0.7s,baz=90,slow=6.9,SNR=3.7						
	0.7nm,0.7s						

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*NEIC **23** 21:11:31.9±1.2, 43°.77N±0°.05×105°.27W±0°.06, h0^{km}±2^{km}, ML3.5/50, Error ellipse: s-maj=9.3km s-min=6.8km az=333.0*

*IDC **23** 21:11:31.6±1.2, 43°.77N×105°.52W, h0^{km}, mb4.0/1, mbtmp3.7/6, ML3.5/5, MS3.4/4, Error ellipse: s-maj=24.4km s-min=8.4km az=149.0*

ISC 23 21:11:31.4±0.9, **43°.79N**±0°.07×**105°.25W**±0°.07, **h0**^{km}, **n73**, σ**0^{s}.87**/68, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	69	Pg	Pb	21 11 50.5	-0.2
K22A	Casper	1.47	220		Pn	21 11 57.5	-1.8
K22A				IAML		21 12 22.4	
	comp=N,763nm,0.3s						
K22A				IAML		21 12 22.8	
	comp=E,535nm,0.3s						
PHWY	Pilot Hill	2.49	184	Pn	Pn	21 12 13.6	+0.1
RWWY	Rawlins	2.55	215		Pn	21 12 14.2	0.0
N23A	Red Feather La	2.94	190	Pn	Pn	21 12 19.9	+0.3
N23A				IAML		21 13 03.7	
	comp=N,147nm,0.7s						
N23A				IAML		21 13 08.0	
	comp=E,152nm,0.6s						
LAO	LASA Array	2.98	347	Pn	Pn	21 12 20.8	+0.8
RLMT	Red Lodge	3.17	296	Pn	Pn	21 12 22.9	+0.1
RLMT				IAML		21 13 15.3	
	comp=E,105nm,0.7s						
RLMT				IAML		21 13 15.9	
	comp=E,117nm,0.9s						
BW06	Boulder Array	3.31	254	Pn	Pn	21 12 24.6	-0.1
BW06				IAML		21 13 14.7	
	comp=E,74nm,0.7s						
BW06				IAML		21 13 23.7	
	comp=E,79nm,1.0s						
PD31	Pinedale Array	3.31	254	Pn	Pn	21 12 24.4	-0.2
PDAR	Pinedale Array	3.31	254	Pn	Pn	21 12 24.8	+0.1
	comp=E,3.4nm,0.3s,baz=74,slow=16,SNR=65						
PDAR				Lg	Lg	21 13 10.2	
	comp=E,24nm,0.3s,baz=73,slow=31,SNR=15						
	comp=E,6.9nm,0.5s						
PDAR	Pinedale Array	3.31	254	Pn	Pn	21 12 24.1	-0.5
OGNE	Ogallala	3.71	139	Pn	Pn	21 12 30.9	+0.9
GCMT	Greycliff	3.73	304	Pn	Pn	21 12 30.4	+0.1
H17A	Grant Village	3.88	281	Pn	Pn	21 12 33.8	+1.2
H17A				IAML		21 13 36.0	
	comp=N,48nm,0.8s						
LOHW	Long Hollow	3.89	269	Pn	Pn	21 12 32.5	-0.1
FLWY	Flagg Ranch	3.95	276	Pn	Pn	21 12 33.4	0.0
FLWY				IAML		21 13 46.8	
	comp=N,86nm,1.1s						
MOOW	Moose Ponds	3.98	271	Pn	Pn	21 12 34.2	+0.4
ISCO	Idaho Springs	3.99	184	Pn	Pn	21 12 34.7	+0.5
ISCO				IAML		21 13 40.1	
	comp=N,41nm,1.1s						
YPP	Pitchstone Pla	4.03	279	Pn	Pn	21 12 35.2	+0.5
REDW	Red Top Meadow	4.09	266	Pn	Pn	21 12 36.0	+0.6
REDW				IAML		21 13 44.8	
	comp=N,69nm,1.5s						
REDW				IAML		21 13 47.3	
	comp=N,100nm,1.2s						
TPAW	Teton Pass	4.15	268	Pn	Pn	21 12 36.7	+0.4
TPAW				IAML		21 13 52.9	
	comp=N,58nm,0.9s						
TPAW				IAML		21 14 04.3	
	comp=N,89nm,1.0s						
E28A	Huff	4.26	48	Pn	Pn	21 12 37.8	+0.3
E28A				IAML		21 13 53.5	
	comp=E,88nm,0.7s						
O20A	White River Ci	4.28	212	Pn	Pn	21 12 38.0	+0.1
O20A				IAML		21 13 49.0	
	comp=E,69nm,0.8s						
O20A				IAML		21 14 02.8	
	comp=N,76nm,1.5s						
YHL	Hebgen Lake	4.39	286	Pn	Pn	21 12 39.7	+0.1
YHL				IAML		21 13 55.2	
	comp=N,68nm,1.0s						
YHL				IAML		21 13 57.2	
	comp=E,72nm,1.0s						
AHID	Auburn Hatcher	4.39	259	Pn	Pn	21 12 40.0	+0.5
AHID				IAML		21 13 51.1	
	comp=E,55nm,1.0s						
AHID				IAML		21 13 56.0	
	comp=E,52nm,0.8s						
ECR	Eagle Creek	4.52	263	Pn	Pn	21 12 42.4	+1.1
DGMT	Dagmar	4.74	9	Pn	Pn	21 12 44.4	+0.3
Q24A	Divide	4.82	179	Pn	Pn	21 12 45.4	-0.1
Q24A				IAML		21 14 09.4	
	comp=N,22nm,1.0s						
Q24A				IAML		21 14 10.1	
	comp=E,36nm,1.0s						
BOZ	Bozeman (W)	4.89	294	Pn	Pn	21 12 46.0	-0.4
BOZ				IAML		21 14 04.6	
	comp=E,28nm,1.0s						
BOZ				IAML		21 14 05.4	
	comp=E,42nm,1.4s						
HWUT	Hardware Ranch	5.14	247	Pn	Pn	21 12 49.1	-0.6
KSCO	Kaye Shedlock'	5.16	157	Pn	Pn	21 12 49.8	-0.3
HRY	Holter Researc	5.49	304	Pn	Pn	21 12 54.5	0.0
LRM	Limekiln Ridge	5.51	294	Pn	Pn	21 12 55.5	+0.5
MCMT	McKenzie Canyo	5.55	283	Pn	Pn	21 12 55.5	0.0
P18A	Preston Nutter	5.59	224	Pn	Pn	21 12 56.3	+0.2
JLU	Jordanelle	5.60	237	Pn	Pn	21 12 56.1	-0.1
PV07	Paradox Valley	5.93	207	Pn	Pn	21 13 00.9	+0.3
P17A	Butcher Ranch,	5.96	226	Pn	Pn	21 13 01.0	0.0
PV15	Paradox Valley	5.96	205	Pn	Pn	21 13 01.5	+0.4
PV10	Paradox Valley	6.12	209	Pn	Pn	21 13 03.8	+0.5
PV20	West Nyswonger	6.12	209	Pn	Pn	21 13 03.6	+0.3
SRU	San Rafael Swe	6.12	222		Pn	21 13 03.1	-0.3
PV11	David Mesa, Pa	6.13	208	Pn	Pn	21 13 03.6	+0.3
PV13	Radium Mtn., P	6.24	207	Pn	Pn	21 13 04.5	-0.4
ECSD	EROS Data Cent	6.25	88	Pn	Pn	21 13 04.7	-0.2
TMUT	Trail Mountain	6.33	227	Pn	Pn	21 13 06.3	+0.1
BGU	Big Grassy Mou	6.43	246	Pn	Pn	21 13 07.2	-0.3
Q16A	Castle Valley	6.60	224	Pn	Pn	21 13 09.1	-0.6
DUG	Dugway, Tooele	6.68	240	Pn	Pn	21 13 10.3	-0.6
MSU	Marysvale	7.42	227	Pn	Pn	21 13 20.0	-1.1
JTMT	Jette	7.45	305	Pn	Pn	21 13 22.3	+0.8
MTPU	Mount Pierson	7.78	225	Pn	Pn	21 13 25.6	-0.5
AGMN	Agassiz Nation	7.94	52	Pn	Pn	21 13 27.5	-0.5
WALA	Waterton Lakes	7.97	314	Pn	Pn	21 13 28.4	-0.2
ELK	Elko	8.01	251	Pn	Pn	21 13 28.1	-1.1
	comp=E,0.5nm,0.3s,baz=56,slow=11,SNR=6.7						
	comp=E,0.9nm,0.3s						
ELK	Elko	8.01	251	Pn	Pn	21 13 31.0	+1.8
PSUT	Pine Spring	8.34	234	Pn	Pn	21 13 34.5	+0.7
F36A	Milaca	8.59	72	Pn	Pn	21 13 38.1	+1.1
CCUT	Cedar City	8.76	227	Pn	Pn	21 13 40.2	+0.7
ULM	Lac du Bonnet	9.09	41	Pn	Pn	21 13 44.4	+0.6
	comp=E,1.5nm,0.3s,baz=232,slow=12,SNR=10.0						
ULM				Pg		21 14 15.6	
	comp=E,1.1nm,0.3s,baz=223,slow=14,SNR=6.3						
ULM				Lg	Lg	21 16 14.9	
	comp=E,0.4nm,0.3s,baz=123,slow=22,SNR=1.9						
	comp=E,3.6nm,0.3s						
ULM	Lac du Bonnet	9.09	41	Pn	Pn	21 13 43.6	-0.2
NEW	Newport	9.39	303	Pn	Pn	21 13 45.6	-2.3
	comp=E,0.4nm,0.3s,baz=110,slow=15,SNR=2.5						
NEW				Lg	Lg	21 16 16.5	
	comp=E,0.1nm,0.3s,baz=200,slow=23,SNR=1.8						
NEW				LR	LR	21 17 47.9	
	comp=E,63nm,20.7s,baz=150,slow=41						
	comp=E,1.0nm,0.4s						
I56US	NEWPORT INFRAS	9.39	303	i		22 10 09.1	
	baz=115,slow=323,SNR=6.0						
T35A	Sooner Cattle	9.57	133	Pn	Pn	21 13 49.1	-1.2
KVN	Kaiserville	10.74	248	Pn	Pn	21 14 07.9	+1.2
EDM	Edmonton	10.85	333	Pn	Pn	21 14 06.7	-1.3
NVAR	Mina Array Bea	11.20	246	Pn	Pn	21 14 14.2	+1.2
	comp=E,0.3nm,0.3s,baz=54,slow=12,SNR=6.3						
	comp=E,0.4nm,0.3s						
YBH	Yreka Blue Hor	13.00	267	Pn	Pn	21 14 41.3	+4.0
	comp=E,0.1nm,0.3s,baz=155,slow=9.2,SNR=4.2						
PFO	Pinyon Flats O	13.40	224	LR	LR	21 19 52.1	
	comp=E,52nm,19.4s,baz=200,slow=38						
TXAR	Lajitas Array	14.48	174	Lg	Lg	21 19 01.4	
	baz=358,slow=33						
TKL	Tuckaleechee C	18.37	109	Lg	Lg	21 21 14.2	
	comp=E,0.1nm,0.3s,baz=52,slow=14,SNR=1.4						
AFI	Afiamalu	83.37	244	LR	LR	21 53 00.4	
	comp=E,158nm,21.1s,baz=246,slow=30						
MKAR	Makanchi Array	89.56	355	P	P	21 24 30.3	-0.3
	comp=E,0.7nm,0.7s,baz=9.5,slow=4.4,SNR=3.7						
MKAR				LR	LR	22 06 16.9	
	comp=E,26nm,19.1s,baz=126,slow=37						
	comp=E,0.7nm,0.7s						

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*NEIC **23** 21:14:00.8±2.1, 7°.01S±0°.09×125°.2E±0°.1, h509^{km}±6^{km}, mb4.5/55, Error ellipse: s-maj=14.6km s-min=12.4km az=70.0*

*DJA **23** 21:14:01.4±0.2, 7°S±3°×12°5E±°, h510^{km}±3^{km}, M4.3/26, mB4.8/18, mb4.7/26, MLv4.8/22, Mw(mB)4.1/18*

*IDC **23** 21:14:01.1±0.9, 7°.01S×125°.16E, h519^{km}±11^{km}, mb3.8/16, mbtmp4.6/21, Error ellipse: s-maj=16.3km s-min=9.5km az=67.0*

ISC 23 21:14:00.3±0.5, **6°.99S**±0°.05×**125°.18E**±0°.06, **h512**^{km}±6^{km}, **n183**, σ**1^{s}.26**/193, **mb4.4**/51, **5C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	2.89	198	P	P	21 15 12.1	+0.4
SOEI	Soe	2.89	198	P	P	21 15 12.3	+0.6
SOEI	Soe	2.89	198	P	P	21 15 12.6	+0.9
BBSI	Bau Bau	2.99	300	P	P	21 15 15.5	+3.3
MMRI	Maumere	3.34	241		P	21 15 13.8	-0.7
MMRI	Maumere	3.34	241	P	P	21 15 14.2	-0.4
MMRI	Maumere	3.34	241	P	P	21 15 14.8	+0.2
BATI	Baumata	3.52	205	P	P	21 15 16.8	+0.8
	1μm,0.3s,baz=95,slow=3.1,SNR=480						
BATI				S	S	21 16 15.5	-2.0
	169nm,0.3s,baz=105,slow=17,SNR=1.7						
BATI	Baumata	3.52	205	P	P	21 15 16.5	+0.6
EDFI	Ende, Flores	3.87	243	P	P	21 15 17.5	-1.1
AAI	Ambon	4.45	43	P	P	21 15 24.5	+1.2
BSSI	Bau Bau, Buton	4.73	280	P	P	21 15 27.4	+1.8
SANI	Sanana	4.98	9	P	P	21 15 28.6	+0.8
	2.1nm5μm591nm,0.8s						
SANI	Sanana	4.98	9	P	P	21 15 29.2	+1.4
BKSI	Bulukumba	5.29	288	P	P	21 15 32.1	+1.5
	0.4nm1μm94nm,0.7s						
BNSI	Bone	5.66	297	P	P	21 15 36.2	+2.2
	0.6nm2μm152nm,0.7s						
KAPI	Kappang	5.74	290	P	P	21 15 37.2	+2.4
	48nm,0.5s,baz=127,slow=6.8,SNR=29						
KAPI				S	S	21 16 48.7	-3.1
	4.3nm,0.4s,baz=73,slow=13,SNR=0.9						
KAPI	Kappang	5.74	290	P	P	21 15 36.8	+2.1
KAPI	Kappang	5.74	290	P	P	21 15 36.9	+2.1
SAUI	Saumlaki	6.15	100	P	P	21 15 38.8	+0.1
SPSI	Sidrap Palu	6.17	299	P	P	21 15 40.3	+1.5
	0.2nm614nm54nm,0.5s						
LUWI	Luwuk	6.38	338	P	P	21 15 42.9	+2.0
LUWI	Luwuk	6.38	338	P	P	21 15 43.0	+2.1
	0.9nm3μm307nm,0.9s						
LUWI	Luwuk	6.38	338	P	P	21 15 43.2	+2.3
TTSI	Tana Toraja	6.62	306	P	P	21 15 46.4	+3.2
	0.3nm2μm75nm,0.7s						
LBMI	Labuha	6.73	20	P	P	21 15 45.5	+1.2
	0.2nm44nm,0.7s						
APSI	Ampana	6.99	330	P	P	21 15 48.8	+1.9
	0.6nm2μm201nm,1.0s						
PLAI	Plampang	7.55	256	P	P	21 15 52.3	-0.2
KMSI	Cibinong	7.61	351	P	P	21 15 55.3	+2.2
	1.9nm6μm541nm,0.6s						
GTOI	Gorontalo	7.88	344	P	P	21 15 59.1	+3.2
	0.3nm1μm103nm,1.0s						
MRSI	Marisa	8.09	336	P	P	21 15 59.5	+1.5
	0.7nm2μm209nm,0.8s						
FAKI	Fak Fak	8.13	60	P	P	21 15 57.2	-1.2
FAKI	Fak Fak	8.13	60	P	P	21 16 00.3	+1.9
	0.3nm780nm46nm,0.8s						
FAKI	Fak Fak	8.13	60	P	P	21 15 57.7	-0.7
MTN	Manton Dam	8.26	135	P	P	21 16 00.0	+0.3
MTN	Manton Dam	8.26	135	P	P	21 16 00.5	+0.8
SIJI	Sorong	8.60	45	P	P	21 16 04.5	+1.3
	32nm,0.6s,baz=221,slow=8.0,SNR=33						
SIJI				S	S	21 17 40.8	-3.4
	7.0nm,0.6s,baz=117,slow=23,SNR=2.2						
KDU	Kakadu	9.15	129	P	P	21 16 09.0	+0.1
TOLI2	Tolitoli	9.17	331	P	P	21 16 09.8	+0.6
TOLI2	Tolitoli	9.17	331	P	P	21 16 10.3	+1.1
KNRA	Kununurra	9.32	158	P	P	21 16 11.0	+0.3
KNRA	Kununurra	9.32	158	P	P	21 16 11.4	+0.7
BKB	Balikpapan	10.03	304	P	P	21 16 21.9	+3.7
SMKI	Samarinda	10.27	309	P	P	21 16 24.4	+3.7
	2μm93nm,1.0s						
BBKI	Banjar Baru	10.87	288	P	P	21 16 29.6	+2.5
	46nm,0.9s						
JAGI	Jajag, Banyuwa	11.02	262	P	P	21 16 27.4	-1.2
JAGI	Jajag, Banyuwa	11.02	262	P	P	21 16 28.3	-0.3
BLJI	Banyuglugur	11.51	266	P	P	21 16 35.0	+1.2
	50nm,0.8s						
MBWA	Marble Bar	15.04	200	P	P	21 17 10.2	-0.5
MBWA				IAmb	IAmb	21 17 12.9	
	comp=Z,15nm,0.9s						
MBWA	Marble Bar	15.04	200	P	P	21 17 10.4	-0.3
PSA00	Pilbara Seismi	15.38	199	P	P	21 17 13.8	-0.5
PSA00				IAmb	IAmb	21 17 14.6	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	15.38	199	P	P	21 17 14.6	+0.2
WB0	Warramunga Arr	15.53	146	P	P	21 17 15.3	-0.7
WRAB	Tennant Creek	15.64	146	P	P	21 17 15.3	-1.8
WRAB	Tennant Creek	15.64	146	P	P	21 17 16.5	-0.6
WRA	Warramunga Arr	15.64	146	P	P	21 17 15.6	-1.5
	comp=Z,11nm,0.5s,baz=216,slow=8.4,SNR=190						
WRA				S	S	21 19 57.7	-1.6
	comp=Z,3.2nm,0.9s,baz=325,slow=17,SNR=4.7						
WRA	Warramunga Arr	15.64	146	P	P	21 17 15.5	-1.7
WB2	Warramunga Arr	15.65	146	P	P	21 17 16.2	-1.0
WR0	Warramunga Arr	15.77	146	P	P	21 17 17.8	-0.7
KSM	Kuching	17.05	299	P	P	21 17 30.6	-0.9
KSM	Kuching	17.05	299	P	P	21 17 32.2	+0.7
LEM	Lembang	17.43	269	P	P	21 17 35.0	-0.2
	comp=Z,12nm,0.4s,baz=61,slow=12,SNR=1.7						
WRKA	Warakurna	18.19	171	P	P	21 17 42.6	+0.7
AS31	Alice Springs	18.58	154	P	P	21 17 46.1	+0.6
ASAR	Alice Springs	18.58	154	P	P	21 17 46.1	+0.7
	comp=Z,32nm,0.6s,baz=331,slow=7.8,SNR=402						
ASAR				S	S	21 20 48.6	-0.2
	comp=Z,4.2nm,1.0s,baz=348,slow=24,SNR=6.7						
ASAR				ScP	ScP	21 24 33.9	-1.5
	comp=Z,0.8nm,0.4s,baz=340,slow=2.1,SNR=4.8						
GIRL	Giralia	18.79	213	P	P	21 17 48.2	+0.9
GIRL	Giralia	18.79	213	P	P	21 17 47.7	+0.3
COEN	Coen	19.00	113	P	P	21 17 48.9	-0.4
COEN	Coen	19.00	113	P	P	21 17 50.2	+0.9
QIS	Mount Isa	19.42	135	P	P	21 17 53.9	+0.7
MEEK	Meekatharra	20.51	197	P	P	21 18 03.1	+0.1
MTSU	Mount Surprise	21.69	122	P	P	21 18 14.3	+0.5
OOD	Oodnadatta	22.96	156	P	P	21 18 25.7	+0.6
MORW	Morawa	23.59	200	P	P	21 18 28.9	-1.7
MORW				IAmb	IAmb	21 18 34.5	
	comp=Z,20nm,1.1s						
FORT	Forrest	23.82	174	P	P	21 18 32.5	-0.1
FORT				IAmb	IAmb	21 18 33.4	
	comp=Z,22nm,0.7s						
FORT	Forrest	23.82	174	P	P	21 18 33.0	+0.4
CTA	Charters Tower	24.23	125	P	P	21 18 37.3	+0.8
	comp=Z,7.4nm,0.9s,baz=326,slow=17,SNR=4.4						
	comp=Z,7.4nm,0.9s						
CTAO	Charters Tower	24.23	125	P	P	21 18 37.4	+0.8
CTAO				IAmb	IAmb	21 18 38.2	
	comp=Z,14nm,1.1s						
MULG	Mulgathing	24.62	161	P	P	21 18 40.6	+0.8
BLDU	Ballidu	24.80	198	P	P	21 18 41.6	+0.2
INKA	Innaminka	25.37	146	P	P	21 18 46.9	+0.4
KLBR	Kellerberrin	25.44	195	P	P	21 18 47.2	+0.2
MUN	Mundaring	26.23	197	P	P	21 18 53.9	-0.1
LCRK	Leigh Creek	26.35	154	P	P	21 18 55.7	+0.6
QLP	Quilpie	26.62	139	P	P	21 18 59.0	+1.5
NWAO	Narrogin (SRO)	26.84	195	P	P	21 18 59.3	-0.1
NWAO				IAmb	IAmb	21 19 26.7	
	comp=Z,28nm,1.1s						
NWAO	Narrogin (SRO)	26.84	195	P	P	21 18 59.6	+0.2
KULM	Kulim	27.35	296	P	P	21 19 04.0	-0.1
KULM				IAmb	IAmb	21 19 26.7	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	27.61	160	P	P	21 19 06.5	+0.4
BBOO	Buckleboo	27.61	160	P	P	21 19 06.5	+0.4
COCO	West Island	28.40	257	P	P	21 19 10.8	-2.5
NAPP	Napperby	28.71	157	P	P	21 19 16.6	+0.9
STKA	Stephens Creek	29.11	150	P	P	21 19 20.1	+0.9
	comp=Z,13nm,0.3s,baz=328,slow=8.9,SNR=99						
	comp=Z,13nm,0.3s						
STKA	Stephens Creek	29.11	150	P	P	21 19 20.2	+0.9
STKA	Stephens Creek	29.11	150	P	P	21 19 20.2	+0.9
HTT	Hallett	29.23	156	P	P	21 19 21.5	+1.1
TPUB	Ta-pu	30.43	352	P	P	21 19 29.9	-0.9
TPUB				IAmb	IAmb	21 19 31.2	
	comp=Z,27nm,0.8s						
TPUB	Ta-pu	30.43	352	P	P	21 19 31.2	+0.4
YULB	Yu-li	30.44	353	P	P	21 19 28.7	-2.2
YULB				IAmb	IAmb	21 19 29.6	
	comp=Z,13nm,0.9s						
EIDS	Eidsvold	30.76	129	P	P	21 19 33.4	-0.2
SSLB	Suanglung	30.87	352	P	P	21 19 34.8	+0.2
CMSA	Cobar Meteorol	31.04	145	P	P	21 19 37.3	+1.3
ARPS	Mount Arapiles	33.31	155	P	P	21 19 56.4	+1.2
ARMA	Armidale	34.04	137	P	P	21 20 03.8	+2.1
ARMA				IAmb	IAmb	21 20 04.9	
	comp=Z,8.9nm,0.6s						
ARMA	Armidale	34.04	137	P	P	21 20 03.7	+2.1
TOO	Toolangi	35.60	152	P	P	21 20 16.3	+1.9
TOO				IAmb	IAmb	21 20 41.5	
	comp=Z,22nm,1.1s						
TOO	Toolangi	35.60	152	P	P	21 20 16.6	+2.1
CAN	Canberra	35.69	146	P	P	21 20 17.6	+2.3
CAN				IAmb	IAmb	21 20 18.0	
	comp=Z,16nm,0.7s						
CAN	Canberra	35.69	146	P	P	21 20 16.3	+1.0
CNB	Canberra Magne	35.89	145	P	P	21 20 17.2	+0.2
CMAR	Chiang Mai Arr	36.18	315	P	P	21 20 19.6	+0.1
	comp=Z,0.4nm,0.4s,baz=134,slow=6.1,SNR=4.4						

CMAR				PcP	PcP	21 22 32.8	+1.4
	comp=Z,1.3nm,0.5s,baz=173,slow=3.1,SNR=8.4						
CMAR				ScP	ScP	21 25 29.8	+0.6
	comp=Z,1.3nm,0.8s,baz=163,slow=3.1,SNR=6.3						
JCJ	Chichijima	37.68	25	P	P	21 20 30.2	-1.5
JCJ	Chichijima	37.68	25	P	P	21 20 31.8	+0.1
JSU	Suzuyama	38.61	7	P	P	21 20 39.2	-0.1
JSU				IAmb	IAmb	21 21 08.4	
	comp=Z,29nm,1.0s						
PZH	PanZhiHua	40.32	327	P	P	21 20 54.6	+1.4
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
JHS	Saijyo	42.43	10	P	P	21 21 11.0	+1.2
JHS				IAmb	IAmb	21 21 12.2	
	comp=Z,12nm,0.7s						
DZM	Mont Dzumac	42.50	115	P	P	21 21 11.2	+0.6
DZM				IAmb	IAmb	21 21 28.1	
	comp=Z,6.8nm,1.0s						
YATNC	Mamie plateau,	42.90	115	P	P	21 21 15.1	+1.4
CD2	Chengdu	42.91	333	P	P	21 21 13.9	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	Xi'an	43.62	340	⇑P	P	21 21 18.8	-0.3
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
KSCHJ	Chungju	43.71	3	P	P	21 21 19.0	-0.7
KSCHJ				IAmb	IAmb	21 21 21.3	
	comp=Z,10nm,0.7s						
KSRS	Korea Array	44.29	3	P	P	21 21 24.6	+0.4
	comp=Z,2.7nm,0.5s,baz=178,slow=9.8,SNR=12						
KSRS				PcP	PcP	21 22 58.1	+0.6
	comp=Z,1.5nm,0.5s,baz=182,slow=3.2,SNR=4.5						
	comp=Z,2.7nm,0.5s						
KS19	Wonju Array Si	44.34	3	P	P	21 21 24.9	+0.4
MJAR	Matsushiro Arr	45.00	15	P	P	21 21 29.3	-0.4
	comp=Z,4.7nm,0.7s,baz=188,slow=8.8,SNR=17						
	comp=Z,4.7nm,0.7s						
SEHB	SEOHWA	45.12	3	P	P	21 21 32.7	+2.1
SEHB				IAmb	IAmb	21 21 33.1	
	comp=Z,7.8nm,0.8s						
HNS	HongShan	45.23	348	⇑P	P	21 21 31.9	+0.5
HNS				pmax	pmax		
	comp=Z,17nm,0.8s						
JSD	Sado	46.43	14	P	P	21 21 41.1	+0.6
JSD				IAmb	IAmb	21 21 58.0	
	comp=Z,12nm,0.6s						
LZH	Lanzhou	47.31	336	*e*P	P	21 21 47.8	+0.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC	Hu-ho-hao-te	49.23	346	*e*P	P	21 22 04.1	+2.5
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.5s						
HHC				LR	LR		
	comp=N,260nm,17.8s						
HHC				LR	LR		
	comp=E,240nm,17.8s						
HHC				LR	LR		
	comp=Z,200nm,16.5s						
JTM	Tenmabayashi	49.74	16	P	P	21 22 06.2	+0.9
JTM				IAmb	IAmb	21 22 07.8	
	comp=Z,31nm,1.1s						
XLT	XiLinHaoTe	51.32	352	⇑*i*P	P	21 22 17.6	+0.7
XLT				pmax	pmax		
	comp=Z,15nm,0.8s						
XLT				pmax	pmax		
	comp=Z,120nm,7.4s						
USA0B	Ussuriysk Arra	51.33	6	P	P	21 22 17.2	+0.4
USA0B				IAmb	IAmb	21 22 18.1	
	comp=Z,8.8nm,0.7s						
USRK	Ussuriysk Ar.	51.33	6	P	P	21 22 17.3	+0.5
	comp=Z,6.8nm,0.6s,baz=189,slow=6.7,SNR=13						
	comp=Z,6.8nm,0.6s						
USRK	Ussuriysk Ar.	51.33	6	P	P	21 22 17.5	+0.7
MDJ	Mudanjiang	51.52	4	P	P	21 22 18.6	+0.4
MDJ				IAmb	IAmb	21 22 20.0	
	comp=Z,22nm,1.0s						
GTA	Gaotai	51.80	335	⇑P	P	21 22 21.6	+1.1
GTA				PcP	PcP	21 23 26.1	+1.1
GTA				pP	pP	21 23 58.4	+0.6
GTA				sP	sP	21 24 57.8	+4.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BNX	BinXian	52.53	2	⇑P	P	21 22 25.3	-0.2
BNX				pmax	pmax		
	comp=Z,14nm,1.1s						
BNX				pmax	pmax		
	comp=Z,160nm,4.3s						
WHZ	Wether Hill Ro	53.45	144	P	P	21 22 32.4	+0.3
RPZ	Rata Peaks	54.24	140	P	P	21 22 38.2	+0.5
	comp=Z,17nm,0.7s,baz=8.5,slow=3.9,SNR=4.5						
	comp=Z,17nm,0.7s						
THZ	Tophouse	54.56	137	P	P	21 22 39.8	-0.3
THZ				IAmb	IAmb	21 22 49.3	
	comp=Z,26nm,1.1s						
URZ	Urewera	56.19	132	P	P	21 22 51.1	-0.4
URZ				IAmb	IAmb	21 22 56.4	
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	56.92	346	P	P	21 22 56.5	+0.1
SONM	Songino Array	57.06	345	P	P	21 22 57.9	+0.6
	comp=Z,4.1nm,0.7s,baz=163,slow=8.6,SNR=26						
SONM				PcP	PcP	21 23 45.5	+0.3
	comp=Z,0.3nm,0.5s,baz=171,slow=3.3,SNR=3.6						
	comp=Z,4.1nm,0.7s						
SONM	Songino Array	57.06	345	P	P	21 22 58.0	+0.6
CASY	Casey	60.06	187	P	P	21 23 17.4	+0.3
WMQ	Urumqi	60.87	330	*e*P	P	21 23 25.4	+2.4
KSH	Kashi	64.85	320	P	P	21 23 50.1	+1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	65.68	329	P	P	21 23 54.4	+0.6
MK31				IAmb	IAmb	21 23 55.1	
	comp=Z,4.3nm,0.8s						
MKAR	Makanchi Array	65.68	329	P	P	21 23 54.4	+0.6
	comp=Z,5.2nm,0.5s,baz=125,slow=7.7,SNR=89						
MKAR				PcP	PcP	21 24 19.4	-0.9
	comp=Z,0.9nm,0.7s,baz=129,slow=3.9,SNR=2.2						
	comp=Z,5.2nm,0.5s						
PEA0B	Petropavlovsk-	65.91	21	P	P	21 23 56.0	+0.9
PEA0B				IAmb	IAmb	21 24 13.4	
	comp=Z,22nm,1.1s						
PETK	Petropavlovsk-	65.91	21	P	P	21 23 55.7	+0.6
	comp=Z,6.6nm,0.7s,baz=212,slow=3.2,SNR=17						
	comp=Z,6.6nm,0.7s						
PETK	Petropavlovsk-	65.91	21	P	P	21 23 55.4	+0.3
BOOM	Boomskoye usch	66.55	322	P	P	21 23 59.9	+0.4
KBL	Kabul	67.15	312	P	P	21 24 04.0	+0.6
KBL				IAmb	IAmb	21 24 04.4	
	comp=Z,4.2nm,0.5s						
YAK	Yakutsk	68.91	2	P	P	21 24 13.4	+0.2
ZAA0	Zalesovo Array	69.54	336	P	P	21 24 16.9	-0.3
ZAA0				IAmb	IAmb	21 24 17.7	
	comp=Z,6.1nm,0.8s						
ZALV	Zalesovo Beam	69.54	336	P	P	21 24 16.9	-0.4
	comp=Z,5.7nm,0.5s,baz=140,slow=4.9,SNR=27						
	comp=Z,5.7nm,0.5s						
ZALV	Zalesovo Beam	69.54	336	P	P	21 24 16.6	-0.7
KURK	Kurchatov	70.09	331	P	P	21 24 21.1	+0.5
KURK				IAmb	IAmb	21 24 21.8	
	comp=Z,6.2nm,0.8s						
BRVK	Borovoye	75.63	329	P	P	21 24 52.9	+0.4
GEYT	Alibeck	76.59	312	P	P	21 24 57.8	-0.3
	comp=Z,2.2nm,0.8s,baz=91,slow=5.8,SNR=2.8						
	comp=Z,2.2nm,0.8s						
GEYT	Alibeck	76.59	312	P	P	21 24 58.6	+0.4
TIXI	Tiksi	78.52	1	P	P	21 25 07.3	-0.4
TIXI				IAmb	IAmb	21 25 08.5	
	comp=Z,8.6nm,0.6s						
ABKAR	Akbulak array	79.57	323	P	P	21 25 13.6	-0.3
QSPA	South Pole Qui	82.98	180	P	P	21 25 30.5	-0.8
	comp=Z,0.9nm,0.4s,baz=273,slow=4.0,SNR=1.9						
	comp=Z,0.9nm,0.4s						
QSPA	South Pole Qui	82.98	180	P	P	21 25 31.3	0.0
RAYN	Ar Rayn	83.38	295	P	P	21 25 34.2	+0.2
ILAR	Eielson Array	95.39	25	P	P	21 26 27.4	-1.9
	comp=Z,0.6nm,0.8s,baz=271,slow=4.1,SNR=5.1						
	comp=Z,0.6nm,0.8s						
BRTR	Keskin Array B	95.60	309	P	P	21 26 29.9	-1.1
	comp=Z,0.5nm,0.7s,baz=93,slow=7.5,SNR=3.6						
	comp=Z,0.5nm,0.7s						
AKASG	Malin Array Be	99.14	320	P	Pdif	21 26 45.6	-0.7
	comp=Z,0.2nm,0.2s,baz=80,slow=0.3,SNR=1.8						
	comp=Z,0.2nm,0.2s						
ARCES	ARCESS Array B	99.90	339	P	Pdif	21 26 48.0	-1.3
	comp=Z,0.6nm,0.5s,baz=64,slow=5.5,SNR=5.1						
ARCES				PKiKP	PKiKP	21 31 13.0	-1.2
	comp=Z,1.4nm,0.9s,baz=180,slow=1.6,SNR=1.5						
	comp=Z,0.6nm,0.5s						
FCC	Fort Churchill	120.25	22	PKPdf	PKPdf	21 31 51.3	-1.4
PDAR	Pinedale Array	120.26	44	PKP	PKiKP	21 31 53.7	-0.1
	comp=Z,0.2nm,0.4s,baz=264,slow=3.4,SNR=1.4						
ESDC	Sonseca Array	124.09	314	PKP	PKiKP	21 31 59.9	-1.3
	comp=Z,0.2nm,0.7s,baz=43,slow=3.2,SNR=2.6						
TORD	Torodi Ar. Bea	124.11	281	PKP	PKiKP	21 32 01.3	-0.5
	comp=Z,1.0nm,0.7s,baz=68,slow=1.8,SNR=6.1						
TORD	Torodi Ar. Bea	124.11	281		PKiKP	21 32 01.0	-0.8
GBN	Guysborough	141.29	8	PKPpre	PKPpre	21 32 28.7	
GOGA	Godfrey	142.65	41	PKPdf	PKPdf	21 32 33.7	-1.8
HODGE	Hodges	142.91	39	PKPdf	PKPdf	21 32 34.0	-2.0
W57A	Gilead	143.66	36	PKPbc	PKPdf	21 32 35.9	-1.4
TIGA	Tifton	143.76	44	PKPbc	PKPdf	21 32 37.0	-0.6
SOR	Soroa	148.66	57	PKPbc	PKiKP	21 32 51.4	-0.1
ORTG	Ortega, Santa	149.54	81	PKPbc	PKiKP	21 32 53.9	+0.2

SNET ***23*** *21:22:22.5±0.8, 12°.21N×88°.16W, h5^{km}±9^{km}, ML3.2*
INET ***23*** *21:22:22.2±0.7, 12°.13N×88°.05W, h10^{km}±11^{km}, MW3.6*
ISC 23 21:22:20.4±2.7**, 12°.1N**±0°.1×**88°.05W**±0°.08**, h10**^{km}±13^{km}**,**
n13, σ0^s.**54**/18**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.99	29	*e*P	Pg	21 22 40.1	+0.6
CRIN	San Cristobal	1.14	59	*e*P	Pg	21 22 43.2	+0.8
CNCH	Conchagua	1.18	10	*e*P	Pg	21 22 43.1	-0.1
CNCH				*e*S	Sn	21 23 00.1	+0.6
CNCH				IAML		21 23 03.5	
	comp=Z,1μm,0.3s						
LCND	La Caada	1.21	7	*e*P	Pg	21 22 43.3	-0.3
LCND				*e*S	Sg	21 22 58.7	-0.6
LCND				IAML		21 23 04.4	
	comp=Z,403nm,0.3s						
RANC	El Ranchito	1.34	350	*e*P	Pn	21 22 45.4	0.0
RANC				*e*S	Sb	21 23 02.8	-0.3
RANC				IAML		21 23 08.7	
	comp=Z,294nm,0.2s						
CNGN	Cerro Negro	1.38	73	*e*P	Pn	21 22 45.1	-0.7
PACA	Pacayal	1.38	349	*e*P	Pn	21 22 46.0	0.0
PACA				*e*S	Sb	21 23 03.9	-0.3
PACA	Pacayal	1.38	349	*e*P	Pn	21 22 46.0	0.0
COPN	Copaltepe	1.43	87	*e*P	Pn	21 22 46.0	-0.4
MOMN	Momotombo	1.50	78	*e*P	Pn	21 22 47.6	+0.1
SCLA	Alcaldia de Sa	1.72	337	*e*P	Pn	21 22 51.4	+0.9
NUBE	Las Nubes	2.46	317	*e*P	Pn	21 23 00.5	-0.3
NUBE				*e*S	Sn	21 23 30.8	-0.2
MTO3	Montecristo	2.61	331	*e*P	Pn	21 23 03.7	+0.7

IDC ***23*** *21:31:09.4±9.8, 25°.78S×129°.22E, h0^{km}, mbtmp3.7/3, ML3.5/3, Error ellipse: s-maj=108.5km s-min=46.7km az=80.0*
AUST ***23*** *21:31:16.0±0.8, 25°.63S×129°.71E, h0^{km}, Error ellipse: s-maj=12.2km s-min=8.8km az=26.0*
NOU ***23*** *21:31:17.9, 25°.58S×129°.80E, h10^{km}, mb4.0/9, Northern Territory, Australia*
ISC 23 21:31:18.1±0.9**, 25°.56S**±0°.06×**129°.78E**±0°.05**, h10**^{km}**, n17,**
σ**1^s.28**/25**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	Warakurna	1.44	291	P	Pn	21 31 44.8	+0.5
	baz=1.4						
WRKA				S	Sn	21 32 04.1	+0.8
	baz=1.4						
WRKA	Warakurna	1.44	291	P	Pn	21 31 44.6	+0.3
ASPA	Alice Springs	4.20	64	P	Pn	21 32 22.5	+0.2
	baz=4.2						
ASPA				S	Sn	21 33 12.1	+0.6
	baz=4.2						
ASAR	Alice Springs	4.20	64	Pn	Pn	21 32 22.6	+0.3
	1.1nm,0.3s,baz=242,slow=12,SNR=53						
ASAR				Pg	Pb	21 32 34.9	+2.7
	2.1nm,0.3s,baz=240,slow=16,SNR=25						
ASAR				Sn	Sn	21 33 10.6	-1.0
	4.3nm,0.3s,baz=247,slow=22,SNR=13						
ASAR				Lg	Lg	21 33 24.9	
	4.0nm,0.3s,baz=244,slow=25,SNR=5.1						
	3.5nm,0.4s						
FORT	Forrest	5.41	196	P	Pn	21 32 39.0	+0.1
	baz=5.4						
FORT				S	Sn	21 33 41.5	+0.2
	baz=5.4						
FORT	Forrest	5.41	196	P	Pn	21 32 39.2	+0.3
OOD	Oodnadatta	5.74	114	P	Pn	21 32 43.6	+0.2
	baz=5.7						
OOD				S	Sn	21 33 48.8	-0.4
	baz=5.7						
OOD	Oodnadatta	5.74	114	P	Pn	21 32 43.6	+0.2
MULG	Mulgathing	6.04	142	P	Pn	21 32 48.2	+0.7
	baz=6.0						
MULG				S	Sn	21 33 58.9	+2.2
	baz=6.0						
MULG	Mulgathing	6.04	142	P	Pn	21 32 47.2	-0.3
WRA	Warramunga Arr	7.00	38	Pn	Pn	21 33 00.6	-0.1
	0.9nm,0.3s,baz=224,slow=14,SNR=21						
WRA				Sn	Sn	21 34 18.7	-1.8
	1.6nm,0.3s,baz=218,slow=23,SNR=9.2						
WRA				Lg	Lg	21 34 53.0	
	1.4nm,0.3s,baz=212,slow=30,SNR=4.9						
	2.6nm,0.4s						
WRAB	Tennant Creek	7.01	38	P	Pn	21 33 00.6	-0.3
LCRK	Leigh Creek	8.90	125	P	Pn	21 33 25.7	-1.1
BBOO	Buckleboo	9.07	144	P	Pn	21 33 27.6	-1.5
KNRA	Kununurra	9.88	354	P	Pn	21 33 40.3	0.0
MEEK	Meekatharra	10.09	261	P	Pn	21 33 42.0	-1.2
STKA	Stephens Creek	12.13	124	Pn	Pn	21 34 07.5	-3.4
	0.2nm,0.3s,baz=299,slow=12,SNR=4.6						
STKA				Sn	Sn	21 36 15.1	-11
	0.7nm,0.3s,baz=21,slow=20,SNR=5.0						
	2.0nm,0.9s						

NOU ***23*** *21:40:07.0, 14°.82S×167°.55E, h135^{km}, mb4.6/30, Vanuatu Islands*
NEIC ***23*** *21:40:07.9±2.6, 14°.99S±0°.09×167°.53E±0°.08, h134^{km}±5^{km}, mb4.7/35, Error ellipse: s-maj=13.2km s-min=10.7km az=145.0*
IDC ***23*** *21:40:08.7±2.4, 14°.98S×167°.43E, h146^{km}±20^{km}, mb4.1/20, mbtmp4.5/22, Error ellipse: s-maj=18.8km s-min=10.6km az=76.0*
ISC 23 21:40:06.7±0.4**, 14°.92S**±0°.05×**167°.53E**±0°.08**, h129**^{km}**,**
n115, σ**1^s.13**/123**, mb4.6**/38**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.61	211		Pn	21 40 27.6	+1.3
SANVU	Saraoutou	0.61	211	P	Pn	21 40 27.9	+1.6
DVP	Devils Point	2.86	167	P	Pn	21 40 53.5	+2.1
LIFNC	LIFOU	5.83	183	Pn	Pn	21 41 30.4	-0.5
LIFNC	LIFOU	5.83	183	P	Pn	21 41 31.2	+0.3
MARNC	Mare, Loyalty	6.54	176	Pn	Pn	21 41 40.1	-0.4
YATNC	Mamie plateau,	7.13	185	P	Pn	21 41 48.8	+0.4
DZM	Mont Dzumac	7.19	188	*e*P	Pn	21 41 49.2	-0.1
	86nm,1.2s						
DZM				*e*S	Sn	21 43 09.3	-0.2
	74nm,1.0s						
DZM	Mont Dzumac	7.19	188	P	Pn	21 41 49.6	+0.3
	18nm,0.3s,baz=19,slow=12,SNR=55						
DZM				S	Sn	21 43 09.5	0.0
	18nm,0.4s,baz=148,slow=22,SNR=7.6						
DZM	Mont Dzumac	7.19	188	Pn	Pn	21 41 50.4	+1.1
DZM	Mont Dzumac	7.19	188	P	Pn	21 41 51.4	+2.1
NOUC	Port Laguerre	7.24	189	P	Pn	21 41 51.5	+1.7
OUENC	Ouen Island, N	7.49	185	Pn	Pn	21 41 54.7	+1.5
OUENC	Ouen Island, N	7.49	185	P	Pn	21 41 55.7	+2.5
PINNC	Pines Island,	7.65	181	Pn	Pn	21 41 56.8	+1.4
HNR	Honiara	9.21	305	P	Pn	21 42 19.0	+2.6
	103nm,0.4s,baz=164,slow=10,SNR=4.4						
HNR				S	Sn	21 43 58.1	-0.2
	92nm,0.5s,baz=101,slow=5.2,SNR=1.9						
HNR	Honiara	9.21	305	Pn	Pn	21 42 18.8	+2.4
HNR	Honiara	9.21	305	P	Pn	21 42 16.4	0.0
EIDS	Eidsvold	18.60	233	P	Pn	21 44 15.6	-0.2
EIDS				IAmb	IAmb	21 44 16.8	
	comp=Z,33nm,0.8s						
EIDS	Eidsvold	18.60	233	P	Pn	21 44 15.9	+0.1
AFI	Afiamalu	20.06	90	P	P	21 44 30.2	+0.1
	comp=Z,30nm,0.8s						
CTA	Charters Tower	20.93	253	P	P	21 44 39.3	0.0
	comp=Z,21nm,0.9s,baz=71,slow=9.8,SNR=14						
	comp=Z,21nm,0.9s						
CTAO	Charters Tower	20.93	253	P	P	21 44 40.0	+0.7
CTAO				IAmb	IAmb	21 44 40.8	
	comp=Z,23nm,0.8s						
OUZ	Omahuta	20.93	166	P	Pn	21 44 41.8	-1.3
OUZ				IAmb	IAmb	21 44 42.9	
	comp=Z,29nm,0.8s						
OUZ	Omahuta	20.93	166	P	P	21 44 40.0	+0.9
RMQ	Roma	20.97	234	P	P	21 44 40.4	+0.8
ARMA	Armidale	21.25	221	P	P	21 44 43.7	+1.0
URZ	Urewera	24.74	162	P	P	21 45 16.7	+0.6
	comp=Z,10.0nm,0.5s,baz=269,slow=3.2,SNR=5.6						
	comp=Z,10.0nm,0.5s						
BKZ	Black Stump Fm	25.41	164	P	P	21 45 23.0	+0.9
BKZ	Black Stump Fm	25.41	164	P	P	21 45 23.1	+0.9
CMSA	Cobar Meteorol	25.93	227	P	P	21 45 27.1	+0.2
BFZ	Birch Farm	26.77	165	P	P	21 45 34.0	-0.4
THZ	Tophouse	27.15	171	P	P	21 45 38.5	+0.7
THZ				IAmb	IAmb	21 45 49.9	
	comp=Z,27nm,1.1s						
INKA	Innaminka	27.95	238	P	P	21 45 45.8	+0.7
LTZ	Lake Taylor	28.06	173	P	P	21 45 46.8	+0.8
RPZ	Rata Peaks	28.86	175	P	P	21 45 53.4	+0.4
	comp=Z,20nm,0.7s,baz=318,slow=3.4,SNR=6.9						
	comp=Z,20nm,0.7s						
STKA	Stephens Creek	29.07	230	P	P	21 45 55.8	+0.8
	comp=Z,15nm,0.5s,baz=46,slow=8.9,SNR=59						
STKA				PcP	PcP	21 48 59.9	-0.2
	comp=Z,4.9nm,0.8s,baz=105,slow=5.4,SNR=5.6						
	comp=Z,15nm,0.5s						
STKA	Stephens Creek	29.07	230	P	P	21 45 55.7	+0.8
STKA	Stephens Creek	29.07	230	P	P	21 45 55.6	+0.6
DCZ	Deep Cove	30.45	181	P	P	21 46 08.2	+1.2
LCRK	Leigh Creek	31.03	235	P	P	21 46 12.7	+0.4
HTT	Hallett	31.79	229	P	P	21 46 19.6	+0.6
WR0	Warramunga Arr	31.84	256	P	P	21 46 17.7	-1.9
WR0				IAmb	IAmb	21 46 32.1	
	comp=Z,8.7nm,1.2s						
WB0	Warramunga Arr	31.97	257	P	P	21 46 19.0	-1.7
WB0				IAmb	IAmb	21 46 25.9	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	32.02	256	P	P	21 46 19.7	-1.5
WB2				IAmb	IAmb	21 46 43.9	
	comp=Z,23nm,1.5s						
WRAB	Tennant Creek	32.02	256	P	P	21 46 19.6	-1.5
WRA	Warramunga Arr	32.03	256	P	P	21 46 19.6	-1.6
	comp=Z,1.6nm,0.6s,baz=84,slow=8.5,SNR=18						
WRA				PcP	PcP	21 49 07.3	-0.8
	comp=Z,1.1nm,0.8s,baz=90,slow=3.2,SNR=5.9						
WRA				PKiKP	PKiKP	21 56 34.7	-1.6
	comp=Z,0.4nm,0.5s,baz=13,slow=0.4,SNR=8.8						
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	32.03	256	P	P	21 46 19.3	-1.9
OOD	Oodnadatta	32.20	241	P	P	21 46 23.1	+0.5
AS31	Alice Springs	32.84	249	P	P	21 46 26.9	-1.5
ASAR	Alice Springs	32.84	249	P	P	21 46 26.9	-1.4
	comp=Z,4.7nm,0.4s,baz=78,slow=9.1,SNR=61						
ASAR				PcP	PcP	21 49 09.4	-0.9
	comp=Z,1.1nm,0.8s,baz=94,slow=2.8,SNR=6.7						
ASAR				PKiKP	PKiKP	21 56 34.9	-2.0
	comp=Z,0.1nm,0.3s,baz=126,slow=1.1,SNR=4.3						
	comp=Z,4.7nm,0.4s						
ASAR	Alice Springs	32.84	249	P	P	21 46 26.1	-2.2
BBOO	Buckleboo	33.66	232	P	P	21 46 35.3	0.0
BBOO				IAmb	IAmb	21 46 36.8	
	comp=Z,21nm,1.1s						
BBOO	Buckleboo	33.66	232	P	P	21 46 35.7	+0.4
MULG	Mulgathing	34.32	238	P	P	21 46 41.0	0.0
MTN	Manton Dam	35.37	269	P	P	21 46 50.0	-0.2
MTN				IAmb	IAmb	21 47 14.2	
	comp=Z,19nm,1.2s						
KNRA	Kununurra	37.37	264	P	P	21 47 05.5	-1.7
KNRA	Kununurra	37.37	264	P	P	21 47 06.3	-0.9
WRKA	Warakurna	38.10	248	P	P	21 47 12.6	-0.7
FORT	Forrest	39.42	240	P	P	21 47 23.6	-0.6
FORT				IAmb	IAmb	21 47 24.0	
	comp=Z,20nm,0.8s						
FORT	Forrest	39.42	240	P	P	21 47 23.9	-0.3
PPT2	Papeete2	41.20	100	*e*LR	LR	21 59 11.5	
	comp=Z,119nm,28.5s						
TBI	Tubuai	41.36	108	*e*LR	LR	21 59 18.6	
	comp=Z,137nm,29.8s						
MEEK	Meekatharra	46.95	247	P	P	21 48 24.5	-0.3
STKI	Sintang	57.35	280	P	P	21 49 57.2	+15
MAJO	Matsushiro	58.19	332	P	P	21 49 47.1	-0.2
MAJO				IAmb	IAmb	21 49 47.2	
	comp=Z,4.0nm,0.4s						
MJB9	Matsu-Tunnel	58.20	332	P	P	21 49 46.8	-0.5
MJB9				IAmb	IAmb	21 49 47.2	
	comp=Z,3.6nm,0.4s						
JSD	Sado	59.41	333	P	P	21 49 56.2	+0.6
JSD				IAmb	IAmb	21 49 58.7	
	comp=Z,4.5nm,0.8s						
JHS	Saijyo	59.43	327	P	P	21 49 56.1	+0.2
JHS				IAmb	IAmb	21 50 00.9	
	comp=Z,5.5nm,0.9s						
TPUB	Ta-pu	59.56	309	P	P	21 49 56.2	-0.8
JTM	Tenmabayashi	60.62	337	P	P	21 50 03.8	0.0
VNDA	Vanda	62.68	181	P	P	21 50 17.4	+0.3
	comp=Z,3.7nm,0.5s,baz=358,slow=8.1,SNR=8.9						
	comp=Z,3.7nm,0.5s						
VNDA	Vanda	62.68	181	P	P	21 50 17.7	+0.6
VNDA				IAmb	IAmb	21 50 17.9	
	comp=Z,4.8nm,0.6s						
JKA	Kamikawa-asahi	63.01	340	P	P	21 50 21.5	+1.7
ASAJ	Asahikawa	63.01	340	P	P	21 50 21.2	+1.5
	comp=Z,3.2nm,0.5s,baz=180,slow=4.3,SNR=7.8						
	comp=Z,3.2nm,0.5s						
CASY	Casey	63.45	202	P	P	21 50 22.8	+0.4
KSRS	Korea Array	64.04	326	P	P	21 50 26.6	-0.1
	comp=Z,1.8nm,0.9s,baz=138,slow=7.7,SNR=5.5						
	comp=Z,1.8nm,0.9s						
USRK	Ussuriysk Ar.	67.17	333	P	P	21 50 46.8	+0.1
	comp=Z,2.2nm,0.7s,baz=126,slow=9.7,SNR=4.0						
	comp=Z,2.2nm,0.7s						
PETK	Petropavlovsk-	68.28	354	P	P	21 50 53.9	+0.5
	comp=Z,1.3nm,0.6s,baz=132,slow=8.2,SNR=4.0						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	68.28	354	P	P	21 50 54.7	+1.3
KULM	Kulim	69.24	282	P	P	21 51 00.0	-0.2
KULM				IAmb	IAmb	21 51 01.3	
	comp=Z,9.6nm,1.0s						
CN2	Changchun	69.94	329	*e*P	P	21 51 02.0	-1.9
CN2				*e*PP	PP	21 53 41.3	+0.8
CN2				*e*S	S	22 00 00.8	-2.8
BNX	BinXian	70.43	331	⇓P	P	21 51 06.9	+0.1
BNX				pmax	pmax		
	comp=Z,15nm,0.5s						
BNX				pmax	pmax		
	comp=Z,110nm,4.0s						
KLR	Kul'dur	71.28	336	P	P	21 51 12.6	+0.7
	comp=Z,2.4nm,0.6s,baz=147,slow=3.6,SNR=11						
	comp=Z,2.4nm,0.6s						
QSPA	South Pole Qui	75.11	180	P	P	21 51 34.2	-0.2
QSPA				IAmb	IAmb	21 51 35.3	
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	75.26	294	P	P	21 51 36.0	+0.1
	comp=Z,1.5nm,0.6s,baz=129,slow=4.5,SNR=12						
	comp=Z,1.5nm,0.6s						
CMAR	Chiang Mai Arr	75.26	294	P	P	21 51 36.2	+0.3
CHTO	Chiang Mai	75.39	294	P	P	21 51 37.3	+0.6
HHC	Hu-ho-hao-te	75.89	320	*e*P	P	21 51 41.3	+2.1
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,6.0s						
HHC				LR	LR		
	comp=N,200nm,14.0s						
HHC				LR	LR		
	comp=E,170nm,14.0s						
HHC				LR	LR		
	comp=Z,200nm,13.0s						
PZH	PanZhiHua	76.02	303	P	P	21 51 42.6	+2.4
PZH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.6s						
MAW	Mawson	81.80	202	P	P	21 52 10.8	-0.1
	comp=Z,5.3nm,0.8s,baz=129,slow=4.8,SNR=7.1						
	comp=Z,5.3nm,0.8s						
MAW	Mawson	81.80	202	P	P	21 52 12.0	+1.1
YAK	Yakutsk	82.29	343	P	P	21 52 13.6	+0.2

	comp=Z,4.6nm,0.4s,baz=344,slow=1.8,SNR=5.6						
	comp=Z,4.6nm,0.4s						
YAK	**Yakutsk**	82.29	343	P	P	21 52 13.5	+0.2
ULN	**Ulaanbaatar**	82.44	324	P	P	21 52 14.7	-0.1
ULN				IAmb	IAmb	21 52 17.3	
	comp=Z,12nm,1.5s						
SONM	**Songino Array**	82.80	324	P	P	21 52 16.5	0.0
	comp=Z,1.3nm,0.6s,baz=153,slow=6.5,SNR=8.7						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	82.80	324	P	P	21 52 16.4	-0.1
GTA	**Gaotai**	82.98	314	*e*P	P	21 52 18.8	+1.1
GTA				pP	pwP	21 52 53.4	+1.4
GTA				sP	sP	21 53 09.9	+6.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,75nm,5.1s						
GTA				LR	LR		
	comp=N,81nm,16.0s						
GTA				LR	LR		
	comp=E,200nm,18.2s						
GTA				LR	LR		
	comp=Z,77nm,18.5s						
SHL	**Shillong**	83.88	298	P	P	21 52 22.3	-0.3
SHL				IAmb	IAmb	21 52 23.4	
	comp=Z,13nm,0.9s						
ILAR	**Eielson Array**	86.63	18	P	P	21 52 34.4	-0.9
	comp=Z,0.4nm,0.7s,baz=230,slow=7.9,SNR=5.8						
ILAR				pP	pwP	21 53 12.7	+1.8
	comp=Z,1.3nm,0.7s,baz=234,slow=5.6,SNR=7.4						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	87.20	49	P	P	21 52 39.7	+0.8
	comp=Z,0.1nm,0.3s,baz=248,slow=6.5,SNR=1.7						
	comp=Z,0.1nm,0.3s						
NVAR	**Mina Array Bea**	87.20	49	P	P	21 52 38.8	-0.1
TROLL	**Troll, Antarti**	92.69	185	P	P	21 53 03.0	-0.9
WMQ	**Urumqi**	93.04	314	*e*P	P	21 53 07.8	+1.9
SNAA	**Sanae**	93.37	183	P	P	21 53 05.5	-1.4
VNA3	**Neumayer Olymp**	94.03	181	P	P	21 53 08.3	-1.5
VNA2	**Neumayer--Watz**	94.30	182	P	P	21 53 09.1	-2.0
	baz=182,slow=4.0						
MKAR	**Makanchi Array**	97.52	316	P	P	21 53 25.9	-0.2
	comp=Z,1.7nm,0.7s,baz=88,slow=6.3,SNR=16						
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	97.70	324	P	P	21 53 25.2	-1.5
	comp=Z,0.8nm,0.6s,baz=134,slow=4.2,SNR=3.4						
ZALV				pP	pwP	21 54 02.4	+0.4
	comp=Z,0.4nm,0.5s,baz=35,slow=3.5,SNR=2.1						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	97.70	324	P	P	21 53 24.8	-1.9
ARCES	**ARCESS Array B**	120.50	345	PKP	PKPdf	21 58 41.5	-0.9
	comp=Z,1.6nm,0.3s,baz=80,slow=2.0,SNR=42						
BOSA	**Boshof**	123.39	220	PKP	PKPdf	21 58 47.8	-1.6
	comp=Z,1.3nm,0.8s,baz=72,slow=4.7,SNR=3.9						
FINES	**FINESS Array B**	125.99	338	PKP	PKPdf	21 58 52.6	-0.4
	comp=Z,0.7nm,0.4s,baz=81,slow=1.8,SNR=13						
KEST	**Kesra**	151.52	321	PKPbc	PKPbc	21 59 46.2	+0.1
	comp=Z,3.0nm,0.6s,baz=138,slow=2.7,SNR=14						
TORD	**Torodi Ar. Bea**	166.15	264	PKP	PKPdf	21 59 56.6	-0.7
	comp=Z,1.0nm,0.6s,baz=356,slow=1.1,SNR=7.4						

IDC 23 21:58:48.4±3.2,9°.19S×109°.85E,h0^{km},mb3.6/4,
mbtmp3.6/4,MS3.7/1,Error ellipse: s-maj=134.7km
s-min=29.6km az=48.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	25.96	117	P	P	22 04 23.1	+0.1
	0.6nm,1.0s,baz=290,slow=12,SNR=5.3						
	0.6nm,1.0s						
SONM	**Songino Array**	56.86	357	P	P	22 08 35.1	+0.1
	0.2nm,0.5s,baz=176,slow=6.2,SNR=1.9						
SONM				LR	LR	22 34 14.4	
	comp=Z,71nm,19.0s,baz=247,slow=37						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	60.91	339	P	P	22 09 03.5	+0.4
	0.4nm,0.4s,baz=153,slow=7.4,SNR=9.7						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	66.37	344	P	P	22 09 38.0	-0.9
	0.4nm,0.4s,baz=141,slow=4.8,SNR=2.3						
	0.4nm,0.4s						

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*IDC **23** 22:08:53.1±1.7,31°.63N×140°.08E,h0^{km},mb3.8/2,*
mbtmp3.7/4,ML2.9/2,Error ellipse: s-maj=67.0km
s-min=20.2km az=76.0
*JMA **23** 22:08:56.8±0.2,32°.3N±0°.5×141°.1E±0°.7,h13^{km},MV3.7/15,*
E OFF HACHIJOJIMA ISLAND
*NEIC **23** 22:08:57.4±1.2,31°.8N±0°.1×140°.6E±0°.2,h37^{km}±7^{km},*
mb4.3/10,Error ellipse: s-maj=26.7km s-min=12.4km
az=65.0
ISC 23 22:08:55.3±0.8,31°.93N±0°.05×141°.01E±0°.09,h35^{km},n29,
σ1^{s}.45/34,mb4.3/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	1.18	297	P	Pn	22 09 17.7	+2.4
JHCJ	**Hachijojimakas**	1.53	318	P	Pn	22 09 20.9	+0.8
JHCJ				*e*S	Sn	22 09 38.3	-0.4
JHJ2	**Mitsune**	1.55	320	Pn	Pn	22 09 21.1	+0.7
JHJ2				Sn	Sn	22 09 38.4	-0.8
JHJ2	**Mitsune**	1.55	320	P	Pn	22 09 21.2	+0.9
JHJ2				*e*S	Sn	22 09 39.1	-0.1
JHJ	**Hachijo jima 2**	1.57	319	Pn	Pn	22 09 21.4	+0.7
	29nm,0.3s,baz=62,slow=21,SNR=22						
JHJ				Sn	Sn	22 09 38.0	-1.7
	78nm,0.3s,baz=79,slow=23,SNR=14						
JMKN	**Mikurajimanish**	2.29	329	P	Pn	22 09 31.4	+0.8
JMKN				S	Sn	22 09 56.7	-0.8
BSO1	**Boso 1**	2.71	359	P	Pn	22 09 36.4	+0.5
BSO1				*e*S	Sn	22 10 04.4	-2.8
BSO3	**Boso 3**	2.89	352	*e*P	Pn	22 09 39.9	+1.3
BSO3				*e*S	Sn	22 10 10.4	-1.5
JGF	**Kuroka**	4.76	321	Pn	Pn	22 10 06.9	+2.4
JCJ	**Chichijima**	4.93	168	Pn	Pn	22 10 08.6	+1.7
	2.5nm,0.3s,baz=9.1,slow=16,SNR=7.5						
JCJ				Sn	Sn	22 11 01.7	-1.0
	4.2nm,0.3s,baz=98,slow=20,SNR=1.8						
	25nm,0.6s						
MJAR	**Matsushiro Arr**	5.15	334	Pn	Pn	22 10 09.9	0.0
	0.1nm,0.3s,baz=155,slow=13,SNR=3.3						
	0.9nm,0.3s						
MJAR	**Matsushiro Arr**	5.15	334	Pn	Pn	22 10 12.1	+2.2
TWG	**Pinlang**	19.87	248	P	P	22 13 20.1	-3.4
TWG				IAmb	IAmb	22 13 28.6	
	comp=Z,15nm,0.7s						
PEA0B	**Petropavlovsk-**	24.36	25	P	P	22 14 13.4	+3.6
PEA0B				IAmb	IAmb	22 14 42.1	
	comp=Z,25nm,1.4s						
H11S3	**WAKE ISLAND Hy**	26.73	114	T	T	22 43 17.7	
	baz=304,slow=74,SNR=2.9						
H11S1	**WAKE ISLAND Hy**	26.73	114	T	T	22 43 20.0	
	baz=304,slow=74,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	26.74	114	T	T	22 43 23.0	
	baz=304						
MK31	**Makanchi Array**	46.70	306	P	P	22 17 20.8	+0.1
MKAR	**Makanchi Array**	46.70	306	P	P	22 17 20.4	-0.3
	comp=Z,1.0nm,0.4s,baz=86,slow=9.3,SNR=21						
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	46.92	306	P	P	22 17 22.2	-0.1
MAKZ				IAmb	IAmb	22 17 28.7	
	comp=Z,2.5nm,0.6s						
KURK	**Kurchatov**	48.94	312	P	P	22 17 37.5	-0.4
KURK				IAmb	IAmb	22 17 43.3	
	comp=Z,4.3nm,1.4s						
WB0	**Warramunga Arr**	51.80	188	P	P	22 17 59.6	-0.1
WB0				IAmb	IAmb	22 18 09.5	
	comp=Z,3.8nm,1.1s						
WR0	**Warramunga Arr**	51.97	188	P	P	22 18 00.8	-0.2
WB2	**Warramunga Arr**	51.97	188	P	P	22 18 01.1	+0.1
WRA	**Warramunga Arr**	51.98	188	P	P	22 18 00.6	-0.5
	comp=Z,0.2nm,0.3s,baz=2.8,slow=7.7,SNR=5.7						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	51.98	188	P	P	22 18 00.8	-0.3
KK31	**Karatay Array**	55.51	303	P	P	22 18 26.9	0.0
KK31				IAmb	IAmb	22 18 35.3	
	comp=Z,2.3nm,1.2s						
KKAR	**Karatay Array**	55.51	303	P	P	22 18 26.9	0.0
ABKAR	**Akbulak array**	61.04	312	P	P	22 19 05.0	-0.3

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*JMA **23** 23:06:05.2±0.1,23°.9N±0°.5×121°.7E±0°.6,h28^{km},MV2.7/11,*
TAIWAN REGION
*TAP **23** 23:06:07.1,24°.15N×121°.81E,h20^{km},ML3.5,B*
ISC 23 23:06:06.8±1.0,24°.08N±0°.02×121°.89E±0°.02,h9^{km}±9^{km},
n91,σ0^{s}.62/165,23C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	0.26	288	⇓*i*P	Pg	23 06 11.9	0.0
	baz=272						
ETL				S	Sg	23 06 16.0	+0.6
	baz=272						
EHP	**Heping Village**	0.27	329	*i* P	Pg	23 06 11.7	-0.4
	baz=342						
EHP				S	Sg	23 06 15.7	0.0
	baz=342						
TWD	**Chiawan**	0.27	270	⇓*i*P	Pg	23 06 12.4	+0.2
	baz=248						
TWD				*i* S	Sg	23 06 17.0	+1.2
	baz=248						
HWA	**Hwalien**	0.28	248	P	Pb	23 06 13.8	-0.2
	baz=224						
HWA				*e*S	Sb	23 06 19.9	+1.1
	baz=224						
NACB	**Ninganchiao**	0.28	289	⇓*i*P	Pg	23 06 12.2	-0.3
	baz=276						
NACB				*i* S	Sg	23 06 16.3	0.0
	baz=276						
TEYL	**Yanliau Villag**	0.34	232	P	Pb	23 06 14.8	-0.3
	baz=217						
TEYL				*e*S	Sb	23 06 21.1	+0.5
	baz=217						
ENA	**Nanau**	0.37	338	⇓*i*P	Pg	23 06 13.6	-0.4
	baz=349						
ENA				*i* S	Sg	23 06 18.8	-0.2
	baz=349						
EWUT	**Wuta**	0.38	344	⇓*i*P	Pg	23 06 13.8	-0.4
	baz=355						
EWUT				S	Sg	23 06 18.9	-0.3
	baz=355						
ETM	**Tongmen**	0.38	252	⇑*i*P	Pg	23 06 14.7	+0.5
	baz=237						
ETM				*e*S	Sg	23 06 20.4	+1.1
	baz=237						
ETLH	**Xiulin Townshi**	0.39	289	⇓*i*P	Pg	23 06 14.1	-0.4
	baz=280						
ETLH				*i* S	Sg	23 06 19.4	-0.3
	baz=280						
TEGC	**Jichi Village**	0.49	221	*e*P	Pb	23 06 17.5	-0.1
	baz=208						
TEGC				*e*S	Sb	23 06 26.8	+1.9
	baz=208						
ESL	**Shilin**	0.50	238	*i* P	Pg	23 06 16.7	+0.3
	baz=224						
ESL				*e*S	Sb	23 06 25.4	+0.3
	baz=224						
TWC	**Suao**	0.53	356	*i* P	Pg	23 06 16.8	-0.2
	baz=6.0						
TWC				*e*S	Sg	23 06 24.3	+0.4
	baz=6.0						
LATG	**Datong**	0.56	324	⇓*i*P	Pg	23 06 17.1	-0.6
	baz=326						
LATG				*e*S	Sg	23 06 24.3	-0.8
	baz=326						
NDS	**Dongshan**	0.57	344	⇓*i*P	Pg	23 06 17.5	-0.3
	baz=351						
NDS				*e*S	Sg	23 06 25.1	-0.3
	baz=351						
WHF	**Hehuan Shan**	0.57	276	⇑*i*P	Pg	23 06 17.7	-0.3
	baz=269						
WHF				S	Sg	23 06 25.5	-0.1
	baz=269						
NNSB	**Datong**	0.58	307	⇑P	Pg	23 06 17.4	-0.5
	baz=305						
NNSB				*e*S	Sg	23 06 24.9	-0.7
	baz=305						
EGFH	**Guangfu**	0.59	226	*e*P	Pb	23 06 18.8	-0.5
	baz=216						
NNS	**Nan Shan**	0.59	307	⇑P	Pg	23 06 17.6	-0.6
	baz=306						
NNS				*e*S	Sg	23 06 25.4	-0.7
	baz=306						
FUSS	**Fushou**	0.61	286	⇑P	Pg	23 06 18.4	-0.3
	baz=280						
FUSS				*e*S	Sg	23 06 26.6	-0.2
	baz=280						
NDT	**Datong Townshi**	0.62	326	⇑*i*P	Pg	23 06 18.1	-0.7
	baz=329						
NDT				*e*S	Sg	23 06 26.8	-0.2
	baz=329						
ENTT	**Nioudou**	0.63	332	⇑P	Pg	23 06 18.4	-0.6
	baz=336						
ENTT				*e*S	Sg	23 06 27.1	-0.1
	baz=336						
CHGB	**Renai**	0.66	268	⇑P	Pg	23 06 19.6	+0.1
	baz=261						
CHGB				*e*S	Sg	23 06 28.2	+0.1
	baz=261						
OWD	**Renai**	0.67	259	⇑P	Pg	23 06 19.6	0.0
	baz=251						
OWD				*e*S	Sg	23 06 28.5	+0.1
	baz=251						
TWE	**Neicheng**	0.67	342	⇑*e*P	Pg	23 06 19.2	-0.4
	baz=349						
TWE				*e*S	Sg	23 06 28.0	-0.4
	baz=349						
TWT	**Tachien**	0.68	285	*e*P	Pg	23 06 19.9	+0.1
	baz=279						
TWT				*e*S	Sg	23 06 28.8	+0.2
	baz=279						
TDCB	**Techi**	0.69	284	⇑P	Pg	23 06 20.0	-0.2
	baz=279						
TDCB				*e*S	Sg	23 06 28.8	-0.3
	baz=279						
ILA	**Ilan**	0.69	349	*e*P	Pg	23 06 20.4	+0.3
	baz=356						
ILA				*e*S	Sg	23 06 29.8	+0.6
	baz=356						
WUSB	**Renai**	0.71	263	⇑*e*P	Pg	23 06 20.6	+0.1
	baz=256						
WUSB				*e*S	Sg	23 06 29.9	0.0
	baz=256						
HGSD	**Ruisui**	0.73	216	*e*P	Pb	23 06 21.8	+0.1
	baz=208						
HGSD				*e*S	Sb	23 06 33.3	+1.6
	baz=208						
FUSB	**Fushanzhiwuyua**	0.73	338	⇑*e*P	Pg	23 06 20.3	-0.6
	baz=342						
FUSB				*e*S	Sg	23 06 29.8	-0.6
	baz=342						
YHNB	**Yeheng**	0.75	321	⇑*i*P	Pg	23 06 20.6	-0.6
	baz=323						
YHNB				*e*S	Sg	23 06 30.1	-1.0
	baz=323						
VWDT	**VWDT**	0.76	245	⇑P	Pg	23 06 21.5	+0.1
	baz=237						
VWDT				*e*S	Sb	23 06 32.4	-0.3
	baz=237						
EGS		0.76	3	*e*P	Pb	23 06 22.1	-0.2
	baz=10.0						
NSK	**Sanguang**	0.77	321	⇑P	Pg	23 06 20.8	-0.7
	baz=322						
NSK				*e*S	Sg	23 06 30.7	-0.9
	baz=322						
NTC	**Toucheng**	0.77	356	*e*P	Pg	23 06 21.5	-0.1
	baz=2.0						
NTC				*e*S	Sg	23 06 31.7	0.0
	baz=2.0						
EHY	**Hungye**	0.77	222	*e*P	Pg	23 06 21.4	-0.3
	baz=214						
EHY				*e*S	Sb	23 06 33.9	+0.8
	baz=214						
NWLT	**Wulai**	0.78	333	⇑*e*P	Pg	23 06 21.0	-0.8
	baz=336						
NWLT				*e*S	Sg	23 06 31.1	-0.9
	baz=336						
WPL	**Puli Township**	0.86	266	*e*P	Pg	23 06 22.9	-0.4
	baz=260						
WPL				*e*S	Sg	23 06 34.7	+0.3
	baz=260						
YULB	**Yu-li**	0.88	218	*e*P	Pg	23 06 23.1	-0.5
	baz=212						
YULB				*e*S	Sb	23 06 37.2	+1.2
	baz=212						
DPDB	**Guoxing**	0.88	267	*e*P	Pg	23 06 23.5	-0.3
	baz=262						
DPDB				*e*S	Sg	23 06 35.3	0.0
	baz=262						
WHP	**Taichung City**	0.88	283	*e*P	Pg	23 06 23.5	-0.3
	baz=279						
WHP				*e*S	Sg	23 06 35.7	+0.4
	baz=279						
TIPB	**Shuangxi**	0.89	356	⇑*e*P	Pg	23 06 23.7	-0.2
	baz=1.0						
TIPB				*e*S	Sg	23 06 34.7	-0.7
	baz=1.0						
NFF	**Wufeng Townshi**	0.89	308	⇑*e*P	Pg	23 06 23.1	-0.8
	baz=307						
NFF				*e*S	Sg	23 06 34.7	-0.8
	baz=307						
WCS	**Beigang Elemen**	0.90	269	*e*P	Pg	23 06 23.5	-0.5
	baz=263						
WCS				*e*S	Sg	23 06 35.1	-0.6
	baz=263						
EYUL	**Yuli**	0.90	216	*e*P	Pb	23 06 24.4	-0.2
	baz=209						
EYUL				*e*S	Sb	23 06 37.5	+0.8
	baz=209						
SSLB	**Suanglung**	0.91	251	*e*P	Pg	23 06 23.6	-0.6
	baz=245						
SSLB				*e*S	Sg	23 06 35.7	-0.3
	baz=245						
TWF1	**Yuli**	0.91	217	*e*P	Pg	23 06 23.6	-0.6
	baz=210						
TWF1				*e*S	Sb	23 06 37.1	+0.2
	baz=210						
SMLT	**Sun Moon Lake**	0.93	258	*e*P	Pg	23 06 24.2	-0.4
	baz=252						
SMLT				*e*S	Sg	23 06 36.7	0.0
	baz=252						
TWB1	**Santiao Chiao**	0.93	6	*e*P	Pg	23 06 24.6	0.0
	baz=12						
TWB1				*e*S	Sb	23 06 37.8	+0.3
	baz=12						
TWA	**Mucha**	0.94	343	*e*P	Pg	23 06 24.2	-0.6
	baz=347						
TWA				*e*S	Sg	23 06 36.6	-0.5
	baz=347						
NHDH	**Xindian Distri**	0.94	339	*e*P	Pg	23 06 24.4	-0.4
	baz=342						
NHDH				*e*S	Sg	23 06 36.4	-0.7
	baz=342						
TATO	**Taipei**	0.96	338	⇑*e*P	Pg	23 06 24.4	-0.8
	baz=341						
TATO				*e*S	Sg	23 06 36.8	-1.0
	baz=341						
TYC	**Yuchr**	0.96	260	*e*P	Pg	23 06 24.5	-0.7
	baz=254						
TYC				*e*S	Sg	23 06 37.2	-0.5
	baz=254						
LIOB	**Emei**	0.97	305	⇑*e*P	Pg	23 06 25.2	-0.3
	baz=304						
LIOB				*e*S	Sg	23 06 38.1	-0.1
	baz=304						
NSTT	**Nanjuang**	0.98	304	*e*P	Pg	23 06 25.0	-0.6
	baz=303						
NSTT				*e*S	Sg	23 06 37.0	-1.3
	baz=303						
NWF	**Wu-fen Shan**	0.99	354	*e*P	Pg	23 06 25.7	-0.1
	baz=359						
NWF				*e*S	Sg	23 06 38.2	-0.5
	baz=359						
WFSB	**Wu-fen Shan**	0.99	354	⇑*e*P	Pg	23 06 25.7	-0.1
	baz=359						
WFSB				*e*S	Sg	23 06 38.5	-0.2
	baz=359						
SXI1	**Grass Mountain**	1.01	359	⇑*e*P	Pg	23 06 26.1	-0.1
	baz=4.0						
SXI1				*e*S	Sg	23 06 39.3	0.0
	baz=4.0						
JYNG	**Yonagunijimaku**	1.03	69	P	Pn	23 06 27.6	+0.2
JYNG				*e*S	Sn	23 06 43.4	+1.3
FULB	**Fuli**	1.03	212	*e*P	Pg	23 06 26.4	-0.3
	baz=206						
FULB				*e*S	Sn	23 06 42.0	-0.3
	baz=206						
YUS	**Yu-Shan**	1.04	236	*e*P	Pg	23 06 26.6	-0.3
	baz=229						
YUS				*e*S	Sb	23 06 41.7	+0.4
	baz=229						
TWQ1	**Liyutan**	1.05	285	*e*P	Pb	23 06 27.1	-0.1
	baz=282						
TWQ1				*e*S	Sg	23 06 40.7	0.0
	baz=282						
TNOU	**National Taiwa**	1.07	354	*e*P	Pg	23 06 27.2	-0.1
	baz=358						
NSY	**Sanyi**	1.08	288	*e*P	Pb	23 06 28.1	+0.3
	baz=285						
SBCB	**Hsinchu**	1.09	311	*e*P	Pb	23 06 27.8	0.0
	baz=310						
YOJ	**Yonaguni jima**	1.09	69	*i* P	Pb	23 06 28.1	+0.2
	baz=74						
YOJ				*e*S	Sn	23 06 43.9	+0.4
	baz=74						
YOJ	**Yonaguni jima**	1.09	69	P	Pb	23 06 28.0	+0.2
YOJ				S	Sn	23 06 44.0	+0.5
NCUH	**Zhongli**	1.09	324	*e*P	Pg	23 06 27.3	-0.5
	baz=325						
NCU	**National Centr**	1.09	324	*e*P	Pg	23 06 27.5	-0.3
	baz=326						
YM01	**YM01**	1.10	345	*e*P	Pg	23 06 27.3	-0.6
	baz=348						
YM01				*e*S	Sg	23 06 41.7	-0.5
	baz=348						
NMLH	**Miaoli**	1.10	295	*e*P	Pb	23 06 28.2	+0.2
	baz=292						
TWS1	**Kuangyinshan**	1.10	337	*e*P	Pg	23 06 27.2	-0.7
	baz=340						
YM08	**YM08**	1.14	346	*e*P	Pg	23 06 27.9	-0.7
	baz=349						
ALS	**Alishan**	1.15	240	*e*P	Pg	23 06 28.3	-0.5
	baz=235						
ALS				*e*S	Sb	23 06 44.2	+0.1
	baz=235						
ELDTW	**Lidau**	1.20	222	*e*P	Pg	23 06 28.1	-1.7
	baz=217						
EDH	**Donghe**	1.23	206	*e*P	Pg	23 06 29.4	-1.0
	baz=201						
EDH				*e*S	Sg	23 06 45.2	-1.1
	baz=201						
STYH	**Taoyuan**	1.37	229	*e*P	Pn	23 06 31.8	-0.3
	baz=224						
TPUB	**Ta-pu**	1.39	236	*e*P	Pb	23 06 33.0	-0.1
	baz=232						
WTP	**Ta-pu**	1.44	235	*e*P	Pb	23 06 33.6	-0.2
	baz=230						
WTP				*e*S	Sg	23 06 54.0	+1.0
	baz=230						
LDUT	**Ludao**	1.45	196	*e*P	Pn	23 06 31.4	-1.8
	baz=192						
LDUT				*e*S	Sb	23 06 50.1	-2.6
	baz=192						
TWGBT	**Beinan**	1.46	211	*e*P	Pn	23 06 32.4	-1.0
	baz=207						
TWK	**Hsinying**	1.52	238	*e*P	Pn	23 06 34.9	+0.6
	baz=233						
TWK				*e*S	Sg	23 06 55.8	+0.1
	baz=233						
CHN1	**Nanshi**	1.54	235	*e*P	Pn	23 06 34.4	0.0
	baz=231						
CHN1				*e*S	Sg	23 06 56.5	+0.4
	baz=231						
WSL	**Shuilin Townsh**	1.62	250	*e*P	Pn	23 06 36.2	+0.6
	baz=246						
WSL				*e*S	Sg	23 06 58.8	-0.1
	baz=246						
IRIF	**Iriomote-Funau**	1.70	81	*e*S	Sb	23 07 00.3	+0.6
HATJ	**Hateruma jima**	1.75	90	P	Pn	23 06 37.6	+0.3
HATJ				*e*S	Sb	23 07 01.2	0.0
JKRS	**Kuro-shima**	1.94	85	S	Sb	23 07 06.4	-0.3
JIJ	**Ishigaki jima**	2.08	82	P	Pn	23 06 41.8	-0.1
JIJ				S	Sn	23 07 07.8	-0.1
JISG	**Ishigakijimahi**	2.26	77	P	Pn	23 06 44.6	+0.2
JTJ	**Tarama**	2.62	77	P	Pn	23 06 50.0	+0.6
JTJ				*e*S	Sn	23 07 22.7	+1.3

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*NOU **23** 23:36:22.6,40°.42S×174°.24E,h0^{km},MLv3.9/4,Cook*
Strait, New Zealand
*WEL **23** 23:36:26.3±0.6,40°S±3°×17°4E±°,h76^{km}±7^{km},M3.2/26,*
ML3.5/28,MLv3.2/26,Error ellipse: s-maj=0.0km
s-min=0.0km az=88.3
ISC 23 23:36:23.9±1.4,40°.43S±0°.03×174°.10E±0°.04,h106^{km}±9^{km},
n99,σ0^{s}.87/107,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	0.40	200	P	Pn	23 36 39.6	-0.2
DUWZ				S	Sn	23 36 50.4	-1.2

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KIW   Kapiti Island      0.75 125   P      Pn     23 36 42.8 +0.4
KIW                                 S      Sn     23 36 55.1 -1.3
TCW   Tory Channel       0.79 170   P      Pn     23 36 43.5 +0.7
TCW                                 S      Sn     23 36 55.7 -1.3
OGWZ  Otaki Gorge        0.90 116   P      Pn     23 36 44.7 +0.9
OGWZ                                S      Sn     23 36 57.3 -1.5
OHWZ  Ohakea             0.96  77   P      Pn     23 36 45.8 +1.5
OHWZ                                S      Sn     23 37 00.3 +0.6
NNZ   Nelson             0.96 214   P      Pn     23 36 44.8 +0.5
NNZ                                 S      Sn     23 36 59.2 -0.6
WAZ   Wanganui           0.96  46   P      Pn     23 36 45.2 +0.8
WAZ                                 S      Sn     23 37 00.0 +0.2
LREZ  Lake Rotokare      1.00  14   P      Pn     23 36 45.4 +0.7
LREZ                                S      Sn     23 37 01.1 +0.7
CAW   Cannon Point       1.00 133   P      Pn     23 36 45.6 +0.8
TUWZ  Tuamarina          1.01 187   P      Pn     23 36 45.5 +0.7
NMEZ  Namu Road          1.03 350   P      Pn     23 36 45.3 +0.2
NMEZ                                S      Sn     23 37 00.4 -0.6
TKNZ  Takaka Hill        1.05 235   P      Pn     23 36 45.6 +0.2
PREZ  Palmer Road        1.09   2   P      Pn     23 36 46.2 +0.4
KHEZ  Kahui Hut          1.14 357   P      Pn     23 36 46.7 +0.3
BHW   Baring Head        1.14 149   P      Pn     23 36 48.3 +2.0
MRZ   Mangatainoka R     1.15 102   P      Pn     23 36 46.8 +0.4
NEZ   North Egmont       1.16 360   P      Pn     23 36 46.7  0.0
NBEZ  Newall Road No     1.17 351   P      Pn     23 36 47.1 +0.4
HOWZ  Holdsworth Sta     1.18 114   P      Pn     23 36 47.2 +0.5
PKE   Pukeiti            1.24 356   P      Pn     23 36 47.8 +0.3
DREZ  Durham Road        1.24   4   P      Pn     23 36 47.9 +0.5
QRZ   Quartz Range       1.26 251   P      Pn     23 36 47.3 -0.3
QRZ   Quartz Range       1.26 251   P      Pn     23 36 47.5 -0.1
POWZ  Post Office Ro     1.27  89   P      Pn     23 36 49.3 +1.5
MTW   Mount Morrison     1.29 125   P      Pn     23 36 49.3 +1.3
BSWZ  Blackbirch Sta     1.30 187   P      Pn     23 36 49.7 +1.6
MSWZ  Moikau Station     1.32 139   P      Pn     23 36 49.9 +1.6
MHEZ  Mangahewa          1.36   7   P      Pn     23 36 49.6 +0.7
VRZ   Vera Road          1.40  22   P      Pn     23 36 50.0 +0.7
MRNZ  Matariki Terra     1.40 226   P      Pn     23 36 50.2 +0.8
TIWZ  Tintock            1.40 105   P      Pn     23 36 49.9 +0.5
PRWZ  Pori Road          1.43  96   P      Pn     23 36 50.4 +0.7
PLWZ  Palliser           1.44 143   P      Pn     23 36 50.8 +1.0
TSZ   Takapari Road      1.47  76   P      Pn     23 36 50.3 +0.1
MTVZ  Mangateitei        1.48  46   P      Pn     23 36 51.2 +0.8
PKVZ  Pokaka             1.49  41   P      Pn     23 36 51.0 +0.5
TMWZ  Te Maipa           1.52 117   P      Pn     23 36 51.6 +0.8
TRWZ  Traveller          1.54 129   P      Pn     23 36 54.0 +3.0
DVHZ  Dannevirke         1.59  86   P      Pn     23 36 51.6  0.0
TRVZ  Turoa              1.59  45   P      Pn     23 36 52.5 +0.7
WNVZ  Wahianoa           1.59  47   P      Pn     23 36 52.6 +0.7
THZ   Tophouse           1.61 214   P      Pn     23 36 53.1 +1.2
FWVZ  Far West T-bar     1.62  44   P      Pn     23 36 52.7 +0.5
WHVZ  Whangaehu Hut      1.62  46   P      Pn     23 36 53.2 +0.9
MOVZ  Moawhango          1.63  52   P      Pn     23 36 52.4 +0.2
BFZ   Birch Farm         1.66  99   P      Pn     23 36 52.8 +0.4
PNHZ  Pukenui            1.69  73   P      Pn     23 36 52.8  0.0
NGZ   Ngauruhoe          1.71  43   P      Pn     23 36 53.5 +0.4
TWVZ  Taurewa            1.71  38   P      Pn     23 36 53.5 +0.4
SNVZ  South Ngauruho     1.72  44   P      Pn     23 36 54.0 +0.6
WTVZ  West Tongariro     1.74  42   P      Pn     23 36 53.9 +0.3
NNVZ  North Ngauruho     1.75  43   P      Pn     23 36 54.0 +0.3
BHHZ  Black Hill Sta     1.78  59   P      Pn     23 36 53.9 -0.1
ETVZ  East Tongariro     1.79  44   P      Pn     23 36 54.7 +0.5
TMVZ  Te Maari           1.80  44   P      Pn     23 36 55.0 +0.7
ANWZ  Angora Road        1.81  92   P      Pn     23 36 54.6 +0.2
WPHZ  Waipukurau         1.83  79   P      Pn     23 36 54.6 +0.1
KATZ  Kakaramea          1.90  41   P      Pn     23 36 56.7 +1.1
KRHZ  Kereru             1.91  67   P      Pn     23 36 55.4 -0.2
PRHZ  Porangahau         1.95  86   P      Pn     23 36 56.2 +0.2
HIZ   Hauiti             2.00  17   P      Pn     23 36 57.1 +0.4
HIZ   Hauiti             2.00  17   P      Pn     23 36 57.2 +0.4
RATZ  Rangitukua         2.03  40   P      Pn     23 36 58.5 +1.4
KHZ   Kahutara           2.03 192   P      Pn     23 36 58.5 +1.4
KHZ   Kahutara           2.03 192   P      Pn     23 36 58.6 +1.5
WATZ  Wairara            2.13  37   P      Pn     23 36 60.0 +1.5
DSZ   Denniston Nort     2.18 232   P      Pn     23 36 59.7 +0.6
KAHZ  Kahuranaki         2.22  74   P      Pn     23 36 59.5 -0.1
MCHZ  McNeill Hill       2.23  65   P      Pn     23 36 59.3 -0.3
BKZ   Black Stump Fm     2.23  56   P      Pn     23 36 59.4 -0.4
TLZ   Tolley Road        2.38  28   P      Pn     23 37 01.9 +0.3
MTHZ  Maungataniwha      2.64  54   P      Pn     23 37 04.1 -1.0
GVZ   Greta Valley S     2.66 197   P      Pn     23 37 05.9 +0.6
LTZ   Lake Taylor        2.72 210   P      Pn     23 37 06.4 +0.3
RAHZ  Arahi              2.76  58   P      Pn     23 37 10.7 +4.1
TOZ   Tahuroa Road       2.91  23   P      Pn     23 37 09.0 +0.4
AMCZ  Amberley           2.95 201   P      Pn     23 37 09.4 +0.3
URZ   Urewera            3.19  48   P      Pn     23 37 10.7 -1.6
URZ   Urewera            3.19  48   P      Pn     23 37 12.2 -0.1
MHGZ  Mahia Peninsul     3.20  68   P      Pn     23 37 11.0 -1.4
OKCZ  Okains Bay         3.38 193   P      Pn     23 37 14.7 -0.2
AWAZ  Awhitu Peninsu     3.39   7   P      Pn     23 37 15.9 +1.0
MKAZ  Moumakai           3.42  14   P      Pn     23 37 16.2 +0.7
MQZ   McQueen's Vall     3.45 198   P      Pn     23 37 14.7 -1.0
WTAZ  Waiatarua          3.51   6   P      Pn     23 37 17.9 +1.2
AKCZ  Akaroa Harbour     3.55 194   P      Pn     23 37 17.1 -0.1
RACZ  Rakaia             3.60 203   P      Pn     23 37 17.3 -0.5
MBAZ  Motutapu North     3.71  10   P      Pn     23 37 20.2 +0.9
WIAZ  Waiheke Island     3.72  13   P      Pn     23 37 20.8 +1.3
TWGZ  Tauwhareparae      3.76  54   P      Pn     23 37 18.7 -1.3
ABAZ  Army Bay           3.87   9   P      Pn     23 37 22.6 +1.2
KUZ   Kuaotunu           3.89  20   P      Pn     23 37 21.8 +0.1
WACZ  Wakanui South      3.89 205   P      Pn     23 37 22.1 +0.4
ARCZ  Arundel            4.13 211   P      Pn     23 37 25.8 +0.9
GRZ   Great Barrier      4.31  15   P      Pn     23 37 28.2 +0.9
FOZ   Fox Glacier        4.45 224   P      Pn     23 37 29.9 +0.7
TMZ   Timaru             4.57 209   P      Pn     23 37 31.2 +0.4
ODZ   Otahua Downs       5.27 208   P      Pn     23 37 40.7 +0.5
JCZ   Jackson Bay        5.37 226   P      Pn     23 37 42.7 +1.1
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MAN **23** *23:57:32.5, 17°.43N×120°.43E, h48^{km}, mb5.6, ML4.6, MS4.9, Hypocentre not reviewed by the ISC*

MAN INTENSITY IV - SANTA MARIA SANTA NARVACAN BURGOS AND VIGAN CITY ILOCOS SUR; INTENSITY III - SINAIT ILOCOS SUR; SARRAT LAOAG CITY AND PASIQUIN ILOCOS NORTE.

BJI **23** *23:57:32.8±0.0, 17°.53N×120°.49E, h70^{km}, mb4.4/56, mB4.6/33, Ms4.1/40, Ms7 3.8/37*

GCMT **23** *23:57:32.3±0.3, 17°.41N±0°.02×120°.56E±0°.02, h80^{km}±6^{km}, MW4.8/77, Moment Tensor Solution. s19,c20; s77,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.33±.13; $M_{\theta\theta}$0.57±.12; $M_{\phi\phi}$-0.90±.12; $M_{r\theta}$-1.25±.05; $M_{\theta\phi}$-0.45±.11; $M_{\phi r}$1.46±.06; Best double couple: $M_0$2.10200×10^{16} NP1:ϕ_s229.00000°, δ25.00000°, λ171.00000°. NP2: ϕ_s327.00000°, δ86.00000°, λ66.00000°. Principal axes: T 2.2820, Plg43.0000°, Azm213.0000°; N -0.3600, Plg24.0000°, Azm329.0000°; P -1.9220, Plg37.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **23** *23:57:33.3±1.4, 17°.39N±0°.06×120°.58E±0°.09, h75^{km}±5^{km}, mb4.7/124 Error ellipse: s-maj=12.9km s-min=8.2km az=91.0*

IDC **23** *23:57:34.5±1.2, 17°.32N×120°.67E, h96^{km}±12^{km}, mb4.1/25, mbtmp4.5/27, MS3.6/57, Error ellipse: s-maj=12.7km s-min=8.3km az=87.0*

ISC 23 23:57:32.9±0.4, **17°.41N**±0°.03×**120°.46E**±0°.04, **h76**^{km}±3^{km}, **h76**^{km}**:pP-P, n365,** σ1^{s}**.46**/345, **mb4.7**/108, **23C-16D, Luzon**

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Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC          h  m  s    ISC
SIPP  Brgy, Tapao        0.51 360⇑iP     Pn     23 57 45.6 -0.7
SIPP                                iS     Sn     23 58 00.7 +4.5
SAMP  Sagada Mountai     0.54 128⇓eP     Pn     23 57 45.9 -0.6
SMPP  San Manuel, Pa     1.27 170⇓eP     Pn     23 57 55.1  0.0
CAUP  Cauayan            1.38 109⇑eP     Pn     23 57 59.0 +2.5
SGCP  Gonzaga            1.72  61⇓eP     Pn     23 58 01.9 +0.9
PCPH  Palayan            1.94 162⇑eP     Pn     23 58 04.4 +0.6
PCPH                                eS     Sn     23 58 30.7 +3.3
BALP  Baler              1.98 147⇑eP     Pn     23 58 05.5 +1.1
QVP   Quezon City--P     2.82 169⇑eP     Pn     23 58 16.5 +0.7
QVP                                 eS     Sn     23 58 51.1 +2.3
MACP  Maragondon, Ca     3.14 175⇑eP     Pn     23 58 20.8 +0.7
TGY   Tagaytay City      3.32 172   P      Pn     23 58 23.6 +1.0
      2µm,0.5s,baz=335,slow=3.5,SNR=29
TGY                                 S      Sn     23 59 02.6 +1.6
      2µm,0.5s,baz=106,slow=5.4,SNR=3.5
TGY   Tagaytay City      3.32 172⇓eP     Pn     23 58 24.2 +1.6
TGY                                 eS     Sn     23 59 06.5 +5.4
LUBP  Lubang             3.66 183⇑eP     Pn     23 58 28.4 +1.3
LUBP                                eS     Sn     23 58 58.3  -11
JCNP  Jose Panganiba     3.78 145⇓eP     Pn     23 58 29.9 +1.1
JCNP                                eS     Sn     23 59 13.2 +1.1
GQP   Guinayangan        3.98 151⇑eP     Pn     23 58 32.4 +0.9
BOAC  Boac               4.15 161⇓eP     Pn     23 58 35.4 +1.5
SJMP  San Jose           4.96 173⇓eP     Pn     23 58 47.6 +2.6
PVCP  Virac              5.20 136⇓eP     Pn     23 58 48.7 +0.5
TWG   Pinlang            5.41   6          Pn     23 58 50.3 -0.7
TWG                                 Sn     Sn     23 59 51.1 -0.9
TPUB  Ta-pu              5.86   2          Pn     23 58 57.6 +0.4
TPUB                                Sn     Sn     00 00 05.3 +2.3
TPUB  Ta-pu              5.86   2   P      Pn     23 59 00.9 +3.7
YULB  Yu-li              6.00   7   Pn     Pn     23 58 59.9 +0.7
SSLB  Suanglung          6.36   4          Pn     23 59 05.4 +1.3
SSLB  Suanglung          6.36   4   P      Pn     23 59 05.3 +1.3
NACB  Ninganchiao        6.81   9          Pn     23 59 11.0 +0.8
YHNB  Yeheng             7.27   7          Pn     23 59 17.2 +0.6
YHNB  Yeheng             7.27   7   P      Pn     23 59 18.3 +1.7
KNMB  Chin-men Tao       7.28 345   Pn     Pn     23 59 15.0 -1.6
YOJ   Yonaguni jima      7.41  18   Pn     Pn     23 59 18.7 +0.4
YOJ   Yonaguni jima      7.41  18   P      Pn     23 59 20.1 +1.8
TATO  Taipei             7.59   7          Pn     23 59 20.3 -0.4
HKPS  Hong Kong Po S     7.67 310   Pn     Pn     23 59 20.9 -0.9
QZH   Quanzhou           7.69 347   eP     Pn     23 59 21.4 -0.8
QZH                                 S      Sn     00 00 41.6 -6.2
QZH                                 smax   smax
      comp=N,67nm,0.3s
QZH                                 smax   smax
      comp=E,89nm,0.3s
QZH                                 LR     LR
      comp=N,280nm,7.7s
QZH                                 LR     LR
      comp=Z,320nm,9.7s
JMJ   Miyako jima 2      8.64  31   P      Pn     23 59 35.6 +0.5
QIZ   Qiongzhong        10.22 281   Pn     Pn     23 59 55.6 -1.1
QIZ   Qiongzhong        10.22 281   P      Pn     23 59 55.6 -1.1
QIZ                                 S      Sn     00 01 45.5 -4.1
QIZ                                 pmax   pmax
      comp=Z,22nm,0.9s
QIZ                                 pmax   pmax
      comp=Z,55nm,3.3s
QIZ                                 LR     LR
      comp=N,280nm,10.0s
QIZ                                 LR     LR
      comp=E,400nm,18.8s
QIZ                                 LR     LR
      comp=Z,580nm,24.5s
KCP   Kidapawan         11.28 156⇓eP     Pn     00 00 21.0  +10
DAV   Davao City (W)    11.43 153   LR     LR     00 05 28.2
      comp=Z,371nm,19.5s,baz=36,slow=42
JOW   Kunigami          11.84  36   P      Pn     00 00 18.6 -0.3
      22nm,0.7s,baz=243,slow=15,SNR=9.0
JOW                                 LR     LR     00 05 14.4
      comp=Z,144nm,18.4s,baz=232,slow=39
JOW   Kunigami          11.84  36          Pn     00 00 17.8 -1.1
JOW   Kunigami          11.84  36   P      Pn     00 00 18.5 -0.3
MYLDM Lahad Datu        12.31 189   Pn     Pn     00 00 25.9 +0.7
CNSH  ChangSha          12.77 328 ⇓P     Pn     00 00 29.9 -1.5
CNSH                                S      Sn     00 02 49.9 -1.7
WHN   Wuhan             14.21 338 ⇓P     P      00 01 00.8 +5.2
SLVN  Son La            16.10 287   P      P      00 01 16.2 -0.5
TOLI2 Tolitoli          16.20 179   Pn     Pn     00 01 14.1 -1.9
TOLI2                               IAmb   IAmb   00 01 19.2
      comp=Z,53nm,1.1s
TOLI2 Tolitoli          16.20 179   P      P      00 01 18.1 +0.3
JSU   Suzuyama          16.71  31          Pn     00 01 20.8 -1.4
JSU                                 IAmb   IAmb   00 01 23.1
      comp=Z,66nm,1.1s
GTOI  Gorontalo         16.86 171   P      Pn     00 01 22.4 -1.7
      comp=Z,9.5nm,0.7s
MRSI  Marisa            16.89 175   P      P      00 01 39.5  +14
TNTI  Ternate           17.88 157   P      Pn     00 01 37.1 +0.5
      comp=Z,34nm,0.8s,comp=Z,2µm
TNTI  Ternate           17.88 157   P      Pn     00 01 36.7 +0.1
KMI   Kunming           18.20 298 ⇑P     Pn     00 01 44.0 +3.3
KMI                                 pP     pwP    00 01 58.8 +0.5
KMI                                 pmax   pmax
      comp=Z,11nm,1.3s
KMI                                 pmax   pmax
      comp=Z,64nm,3.5s
KMI                                 LR     LR
      comp=Z,490nm,16.4s
KMI                                 LR     LR
      comp=Z,230nm,14.0s
KMI                                 LR     LR
      comp=Z,310nm,16.8s
JNU   Nakatsue          18.24  29   P      P      00 01 40.6 +0.4
      comp=Z,48nm,0.8s,baz=208,slow=5.8,SNR=17
JNU                                 LR     LR     00 08 38.0
      comp=Z,300nm,19.5s,baz=64,slow=36
JNU   Nakatsue          18.24  29   P      P      00 01 40.1 -0.1
JNU                                 IAmb   IAmb   00 01 55.2
      comp=Z,105nm,1.2s
JNU   Nakatsue          18.24  29   P      Pn     00 01 41.3 +0.3
LUWI  Luwuk             18.48 173   P      P      00 01 42.9  0.0
LUWI                                IAmb   IAmb   00 01 59.8
      comp=Z,51nm,0.9s
LUWI  Luwuk             18.48 173   P      Pn     00 01 44.0 +0.2
      comp=Z,55nm,0.8s,comp=Z,5µm
LUWI  Luwuk             18.48 173   P      Pn     00 01 44.1 +0.2
LYN   LuoYang           18.50 339   eP     Pn     00 01 46.3 +2.2
LYN                                 pP     sP     00 02 04.0 -3.7
LYN                                 sP     pP     00 02 12.4  +14
LYN                                 pmax   pmax
      comp=Z,10.0nm,0.7s
LYN                                 pmax   pmax
      comp=Z,160nm,5.3s
LYN                                 LR     LR
      comp=Z,170nm,8.2s
LYN                                 LR     LR
      comp=Z,220nm,9.0s
LYN                                 LR     LR
      comp=Z,150nm,10.8s
KSM   Kuching           18.72 213   P      Pn     00 01 46.4 -0.4
KSM                                 IAmb   IAmb   00 01 53.5
      comp=Z,42nm,0.7s
KSM   Kuching           18.72 213   P      Pn     00 01 47.2 +0.4
JTU   Tsushima          18.82  23   P      P      00 01 46.8 +0.2
JTU                                 IAmb   IAmb   00 01 50.0
      comp=Z,89nm,1.2s
BKB   Balikpapan        18.88 191   P      P      00 01 46.3 -1.1
BKB   Balikpapan        18.88 191   P      Pn     00 01 48.8  0.0
      comp=Z,153nm,0.7s
BKB   Balikpapan        18.88 191   P      Pn     00 01 48.7  0.0
TIA   Tai'an            18.96 352 ⇓P     Pn     00 01 50.0 +0.5
TIA                                 S      Sn     00 05 21.5 +0.1
TIA                                 pmax   pmax
      comp=Z,16nm,1.0s
TIA                                 pmax   pmax
      comp=Z,97nm,3.6s
TIA                                 LR     LR
      comp=Z,160nm,20.6s
TIA                                 LR     LR
      comp=Z,240nm,22.4s
NAWB  Namwon            18.97  18          Pn     00 01 49.6 -0.1
NAWB                                IAmb   IAmb   00 01 52.7
      comp=Z,94nm,1.0s
MTKI  Muara Teweh, K    19.04 197   P      Pn     00 01 52.3 +1.7
LBMI  Labuha            19.23 158   P      Pn     00 02 11.9  +19
STKI  Sintang           19.37 208   P      Pn     00 01 54.3 -0.2
      comp=Z,73nm,1.2s,comp=Z,8µm
XAN   Xi'an             19.52 330 ⇑P     Pn     00 01 59.5 +3.3
XAN                                 pP     pP     00 02 10.5 +1.7
XAN                                 pmax   pmax
      comp=Z,15nm,1.3s
XAN                                 pmax   pmax
      comp=Z,94nm,5.3s
XAN                                 LR     LR
      comp=Z,250nm,12.9s
XAN                                 LR     LR
      comp=Z,260nm,12.9s
XAN                                 LR     LR
      comp=Z,280nm,13.4s
PZH   PanZhiHua         19.56 301 ⇓P     Pn     00 01 58.4 +1.6
PZH                                 S      Sn     00 05 34.5 -1.6
PZH                                 sS     sS     00 05 54.6 -2.2
PZH                                 pmax   pmax
      comp=Z,10.0nm,1.5s
PZH                                 pmax   pmax
      comp=Z,120nm,6.7s
PZH                                 LR     LR
      comp=Z,940nm,15.2s
PZH                                 LR     LR
      comp=Z,780nm,15.6s
PZH                                 LR     LR
      comp=Z,820nm,16.3s
TJN   Taejon            19.86  17   P      P      00 01 58.2 +0.4
SANI  Sanana            20.09 164   P      P      00 01 56.9 -3.6
CD2   Chengdu           20.28 315   P      Pn     00 02 04.5 -0.7
CD2                                 pmax   pmax
      comp=Z,20nm,0.9s
CD2                                 LR     LR
      comp=Z,680nm,16.7s
CD2                                 LR     LR
      comp=Z,310nm,14.7s
TTSI  Tana Toraja       20.34 182   P      Pn     00 02 08.3 +2.5
KSCHJ Chungju           20.49  17   P      P      00 02 04.4 -0.3
KSCHJ                               IAmb   IAmb   00 02 06.1
      comp=Z,38nm,0.6s
CHTO  Chiang Mai        20.50 277   P      Pn     00 02 06.5 -1.3
CHTO                                IAmb   IAmb   00 02 08.1
      comp=Z,30nm,1.1s
CHTO  Chiang Mai        20.50 277   P      Pn     00 02 06.9 -0.9
CM31  Chiang Mai Arr    20.50 276   P      Pn     00 02 06.4 -1.3
CM31                                IAmb   IAmb   00 02 08.4
      comp=Z,34nm,0.9s
CMAR  Chiang Mai Arr    20.50 276   P      Pn     00 02 07.4 -0.4
      comp=Z,23nm,0.8s,baz=87,slow=8.5,SNR=98
CMAR                                LR     LR     00 09 37.1
      comp=Z,143nm,20.6s,baz=90,slow=35
      comp=Z,23nm,0.8s
CMAR  Chiang Mai Arr    20.50 276   P      Pn     00 02 07.0 -0.8
HNS   HongShan          20.55 347 ⇓P     Pn     00 02 07.5 -0.6
HNS                                 pP     pP     00 02 23.6 +3.1
HNS                                 sP     sP     00 02 32.6 +2.6
HNS                                 pmax   pmax
      comp=Z,49nm,1.1s
HNS                                 LR     LR
      comp=Z,210nm,15.9s
HNS                                 LR     LR
      comp=Z,270nm,18.4s
INCN  Inchon            20.72  14   P      P      00 02 06.5 -0.7
INCN  Inchon            20.72  14   P      P      00 02 07.6 +0.4
KSRS  Korea Array       21.02  17   P      P      00 02 10.1 -0.3
      comp=Z,58nm,1.0s,baz=196,slow=11,SNR=97
      comp=Z,58nm,1.0s
KS19  Wonju Array Si    21.05  17   P      P      00 02 09.7 -1.0
KS19                                IAmb   IAmb   00 02 11.9
      comp=Z,52nm,0.9s
SIJI  Sorong            21.06 149   P      P      00 02 09.5 -1.4
      comp=Z,5.3nm,0.3s,baz=239,slow=9.4,SNR=1.1
SIJI                                LR     LR     00 10 54.3
      comp=Z,100nm,20.4s,baz=244,slow=38
      comp=Z,5.3nm,0.3s
SPSI  Sidrap Palu       21.25 182   P      P      00 02 17.5 +4.5
      comp=Z,29nm,0.9s
BBKI  Banjar Baru       21.47 195   P      P      00 02 16.2 +0.9
      comp=Z,145nm,1.0s,comp=Z,7µm
SEHB  SEOHWA            21.87  17   P      P      00 02 19.6 +0.2
JWT   Wachi             22.22  34   P      P      00 02 20.6 -2.7
JCJ   Chichijima        22.27  61   P      P      00 02 22.2 -1.6
      comp=Z,152nm,0.6s,baz=153,slow=17,SNR=17
JCJ                                 LR     LR     00 09 26.5
      comp=Z,84nm,20.6s,baz=236,slow=32
JCJ   Chichijima        22.27  61   P      P      00 02 22.6 -1.3
JCJ   Chichijima        22.27  61   P      P      00 02 23.9 +0.1
KAPI  Kappang           22.29 182   LR     LR     00 10 59.4
      comp=Z,192nm,21.4s,baz=2.5,slow=36
KAPI  Kappang           22.29 182   P      P      00 02 24.7 +0.5
KAPI                                IAmb   IAmb   00 02 32.3
      comp=Z,42nm,1.1s
KAPI  Kappang           22.29 182   P      P      00 02 25.9 +1.7
MYKOM Kota Tinggi       22.53 228   P      P      00 02 26.7  0.0
KULM  Kulim             22.82 240   P      P      00 02 29.9 +0.1
BJT   Baijiatuau        22.83 351   P      P      00 02 30.2 +0.5
BJT                                 IAmb   IAmb   00 02 32.1
      comp=Z,43nm,0.9s
BJI   Beijing           22.85 352   P      P      00 02 30.6 +0.7
BJI                                 pP     pP     00 02 45.4 -0.1
BJI                                 pmax   pmax
      comp=Z,49nm,1.0s
IPM   Ipoh              22.97 238   P      P      00 02 30.7 -0.6
IPM   Ipoh              22.97 238   P      P      00 02 31.5 +0.2
INU   Inuyama           23.16  36   P      P      00 02 31.6 -1.3
INU                                 IAmb   IAmb   00 02 34.1
      comp=Z,61nm,1.0s
INU   Inuyama           23.16  36   P      P      00 02 32.3 -0.6
FAKI  Fak Fak           23.31 149   P      P      00 02 32.0 -2.5
FAKI                                IAmb   IAmb   00 02 33.5
      comp=Z,37nm,1.2s
FAKI  Fak Fak           23.31 149   P      P      00 02 34.0 -0.5
      comp=Z,27nm,1.1s
FAKI  Fak Fak           23.31 149   P      P      00 02 34.0 -0.5
      comp=Z,27nm,1.2s
JHJ   Hachijo jima 2    23.39  44   P      P      00 02 33.9 -1.2
      comp=Z,193nm,1.0s,baz=229,slow=11,SNR=5.0
JHJ                                 LR     LR     00 09 49.0
      comp=Z,169nm,20.8s,baz=259,slow=32
JHJ2  Mitsune           23.41  44   P      P      00 02 33.5 -1.8
JHJ2  Mitsune           23.41  44   P      P      00 02 35.1 -0.2
DSRI  Dabo              23.68 223   P      P      00 02 38.7 +0.8
      comp=Z,68nm,1.1s
LZH   Lanzhou           23.73 325   eP     P      00 02 38.0 -0.3
LZH                                 pP     pP     00 02 54.9 +0.4
LZH                                 sP     sP     00 03 05.5 +1.9
LZH                                 sS     sS     00 07 17.3 -0.7
LZH                                 pmax   pmax
      comp=Z,33nm,1.1s
LZH                                 LR     LR
      comp=Z,280nm,12.0s
LZH                                 LR     LR
      comp=Z,250nm,12.5s
LZH                                 LR     LR
      comp=Z,300nm,14.2s
GUMO  Guam              23.82  96   LR     LR     00 10 02.6
      comp=Z,183nm,19.3s,baz=296,slow=32
PPBI  Pangkal Pinang    24.04 217   P      P      00 02 43.8 +2.7
HHC   Hu-ho-hao-te      24.59 344   eP     P      00 02 48.0 +2.0
HHC                                 S      S      00 07 02.1 +0.4
HHC                                 pmax   pmax
      comp=Z,34nm,0.8s
HHC                                 pmax   pmax
      comp=Z,150nm,4.9s
HHC                                 LR     LR
      comp=Z,380nm,13.3s
HHC                                 LR     LR
      comp=Z,310nm,14.0s
HHC                                 LR     LR
      comp=Z,460nm,14.6s
MAJO  Matsushiro        24.69  36   P      P      00 02 45.7 -1.1
MAJO  Matsushiro        24.69  36   P      P      00 02 45.4 -1.4
MJAR  Matsushiro Arr    24.69  36   P      P      00 02 45.3 -1.5
      comp=Z,4.9nm,0.6s,baz=206,slow=8.9,SNR=20
MJAR                                LR     LR     00 10 54.8
      comp=Z,69nm,21.8s,baz=228,slow=32
      comp=Z,4.9nm,0.6s
MJAR  Matsushiro Arr    24.69  36   P      P      00 02 44.9 -2.0
MJB9  Matsu-Tunnel      24.69  36   P      P      00 02 45.5 -1.4
TSI   Tuntungan         25.54 240   P      P      00 02 58.4 +3.7
      comp=Z,113nm,0.6s,comp=Z,8µm
BKNI  Bangkinang        25.56 230   P      P      00 02 54.9 -0.1
BKNI  Bangkinang        25.56 230   P      P      00 02 55.8 +0.8
      comp=Z,117nm,1.0s,comp=Z,2µm
BKNI  Bangkinang        25.56 230   P      P      00 02 55.7 +0.8
PSI   Prapat            25.64 238   P      P      00 02 55.9 +0.1
      comp=Z,33nm,0.8s,baz=47,slow=9.1,SNR=10
PSI                                 LR     LR     00 12 18.2
      comp=Z,219nm,18.9s,baz=54,slow=34
      comp=Z,33nm,0.8s
JSD   Sado              25.80  34   IAmb   IAmb   00 02 59.3
      comp=Z,20nm,0.9s
BLJI  Banyuglugur       25.90 196   P      P      00 02 58.5 +0.6
      comp=Z,57nm,0.8s
EDFI  Ende, Flores      26.02 177   P      P      00 03 03.0 +3.8
      comp=Z,12nm,0.6s
KCSI  Kotacane, Aceh    26.18 241   P      P      00 03 00.1 -0.5
      comp=Z,45nm,0.9s
SMRI  Semarang          26.24 203   P      P      00 03 00.7 -0.4
SMRI  Semarang          26.24 203   P      P      00 03 04.4 +3.3
      comp=Z,68nm,0.9s
SMRI  Semarang          26.24 203   P      P      00 03 02.1 +1.0
MNSI  Mandailing Nat    26.35 233   P      P      00 03 04.0 +1.9
      comp=Z,36nm,0.8s
PPI   Padang Panjang    26.56 230   P      P      00 03 04.7 +0.7
      comp=Z,41nm,1.3s
XLT   XiLinHaoTe        26.66 353⇑iP     P      00 03 06.1 +1.4
XLT                                 pP     pP     00 03 24.0 +1.8
XLT                                 sP     sP     00 03 33.9 +2.7
XLT                                 PP     PnPn   00 03 49.6 -0.1
XLT                                 S      S      00 07 35.8 +1.3
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XLT				sS	sS	00 08 00.0	-5.0
XLT				pmax	pmax		
	comp=Z,33nm,1.1s						
XLT				pmax	pmax		
	comp=Z,150nm,5.2s						
XLT				LR	LR		
	comp=Z,500nm,19.2s						
XLT				LR	LR		
	comp=Z,190nm,15.6s						
LEM	**Lembang**	**27.22**	**209**	LR	LR	00 14 25.5	
	comp=Z,130nm,19.1s,baz=352,slow=37						
GSI	**Gunungsitoli**	**27.61**	**237**	P	**P**	**00 03 12.5**	**-0.9**
GSI	**Gunungsitoli**	**27.61**	**237**	P	**P**	**00 03 13.6**	**+0.2**
	comp=Z,51nm,0.8s						
GSI	**Gunungsitoli**	**27.61**	**237**	P	**P**	**00 03 12.7**	**-0.7**
BATI	**Baumata**	**27.62**	**173**	P	**P**	**00 03 10.6**	**-2.9**
	comp=Z,12nm,0.4s,baz=258,slow=8.9,SNR=4.1						
	comp=Z,12nm,0.4s						
MDJ	**Mudanjiang**	**28.19**	**14**	P	**P**	**00 03 17.6**	**-0.6**
MDJ				IAmb	IAmb	00 03 19.8	
	comp=Z,12nm,0.9s						
MDJ	**Mudanjiang**	**28.19**	**14**	P	**P**	**00 03 19.3**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,15nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,90nm,3.5s						
GTA	**Gaotai**	**28.33**	**325**	*e*P	P	00 03 27.4	+7.6
GTA				pP	sP	00 03 44.8	-0.6
GTA				sP	pwP	00 03 54.6	+15
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,14nm,4.7s						
GTA				LR	LR		
	comp=N,110nm,13.8s						
GTA				LR	LR		
	comp=E,110nm,14.9s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
USA0B	**Ussuriysk Arra**	**28.42**	**18**	P	**P**	**00 03 20.1**	**-0.2**
USA0B				IAmb	IAmb	00 03 21.9	
	comp=Z,16nm,0.9s						
USRK	**Ussuriysk Ar.**	**28.42**	**18**	P	**P**	**00 03 20.1**	**-0.2**
	comp=Z,12nm,0.7s,baz=195,slow=7.4,SNR=20						
USRK				LR	LR	00 15 05.5	
	comp=Z,94nm,21.4s,baz=160,slow=37						
	comp=Z,12nm,0.7s						
USRK	**Ussuriysk Ar.**	**28.42**	**18**	P	**P**	**00 03 20.6**	**+0.3**
GOMU	**GeErMu**	**29.42**	**315**	P	**P**	**00 03 31.0**	**+1.3**
GOMU				S	**S**	**00 08 26.3**	**+7.7**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,34nm,4.8s						
GOMU				LR	LR		
	comp=Z,200nm,9.2s						
GOMU				LR	LR		
	comp=Z,98nm,8.8s						
GOMU				LR	LR		
	comp=Z,55nm,8.0s						
HIA	**Hailar**	**31.78**	**359**	P	**P**	**00 03 49.8**	**-0.1**
HIA				IAmb	IAmb	00 03 51.0	
	comp=Z,6.5nm,0.7s						
ODAN	**Odare**	**31.96**	**293**	*e*Pg	**P**	**00 03 53.0**	**+0.9**
ULN	**Ulaanbaatar**	**32.30**	**343**	P	**P**	**00 03 55.5**	**+0.8**
SONM	**Songino Array**	**32.46**	**342**	P	**P**	**00 03 57.4**	**+1.3**
	comp=Z,3.4nm,0.7s,baz=161,slow=10,SNR=20						
SONM				ScP	**ScP**	**00 10 17.3**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=180,slow=2.3,SNR=2.7						
SONM				LR	LR	00 18 46.7	
	comp=Z,146nm,18.2s,baz=132,slow=39						
	comp=Z,3.4nm,0.7s						
SONM	**Songino Array**	**32.46**	**342**	P	**P**	**00 03 56.7**	**+0.6**
ASAJ	**Asahikawa**	**32.51**	**30**	LR	LR	00 16 49.1	
	comp=Z,165nm,21.4s,baz=284,slow=36						
JKA	**Kamikawa-asahi**	**32.51**	**30**	P	**P**	**00 03 55.5**	**-0.9**
JKA				IAmb	IAmb	00 04 05.8	
	comp=Z,16nm,0.8s						
RAMN	**Ramite**	**32.67**	**293**	*e*P	**P**	**00 03 59.5**	**+1.2**
	comp=Z,54nm,0.6s						
KLR	**Kul'dur**	**33.03**	**14**	LR	LR	00 17 42.8	
	comp=Z,67nm,18.9s,baz=218,slow=36						
JIRN	**Jiri**	**33.16**	**294**	*e*P	**P**	**00 04 03.8**	**+1.1**
	comp=Z,35nm,0.6s						
PKI	**Pulchoki**	**33.82**	**294**	*e*P	**P**	**00 04 08.6**	**+0.1**
PKIN	**Phulchoki**	**33.84**	**294**	*e*P	**P**	**00 04 08.8**	**+0.3**
KKN	**Kakani**	**33.97**	**294**	*e*Pg	**P**	**00 04 10.1**	**+0.5**
DMN	**Daman**	**34.09**	**294**	*e*P	**P**	**00 04 11.1**	**+0.4**
GKN	**Gorkha**	**34.57**	**294**	*e*P	**P**	**00 04 14.9**	**+0.2**
	comp=Z,45nm,0.7s						
YSS	**Yuzh-Sakhalins**	**34.73**	**27**	P	**P**	**00 04 14.8**	**-0.8**
DANN	**Dangsing**	**35.39**	**295**	*e*P	**P**	**00 04 22.2**	**+0.2**
	comp=Z,40nm,0.7s						
KOLN	**Koldanda**	**35.44**	**294**	*e*Pg	**P**	**00 04 22.7**	**+0.4**
PYUN	**Piuthan**	**36.02**	**294**	*e*P	**P**	**00 04 27.7**	**+0.4**
	comp=Z,68nm,0.9s						
WMQ	**Urumqi**	**38.16**	**321**	*e*P	**P**	**00 04 47.9**	**+2.9**
WRA	**Warramunga Arr**	**39.54**	**159**	P	**P**	**00 04 53.3**	**-3.4**
	comp=Z,4.6nm,0.8s,baz=324,slow=12,SNR=19						
WRA				PcP	**PcP**	**00 07 02.9**	**0.0**
	comp=Z,1.3nm,0.8s,baz=343,slow=3.4,SNR=1.6						
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**39.54**	**159**	P	**P**	**00 04 54.4**	**-2.3**
WB2	**Warramunga Arr**	**39.55**	**159**	P	**P**	**00 04 56.2**	**-0.5**
WB2				IAmb	IAmb	00 04 57.4	
	comp=Z,15nm,1.2s						
AS31	**Alice Springs**	**42.89**	**162**	P	**P**	**00 05 22.2**	**-1.8**
ASAR	**Alice Springs**	**42.89**	**162**	P	**P**	**00 05 21.8**	**-2.3**
	comp=Z,2.5nm,0.3s,baz=339,slow=7.0,SNR=38						
ASAR				ScP	**ScP**	**00 10 54.9**	**-3.4**
	comp=Z,0.3nm,0.4s,baz=334,slow=6.2,SNR=1.6						
ASAR				LR	LR	00 25 47.3	
	comp=Z,85nm,18.2s,baz=324,slow=40						
	comp=Z,2.5nm,0.3s						
MK31	**Makanchi Array**	**42.96**	**321**	P	**P**	**00 05 25.8**	**+1.3**
MKAR	**Makanchi Array**	**42.96**	**321**	P	**P**	**00 05 26.1**	**+1.6**
	comp=Z,2.9nm,0.8s,baz=124,slow=7.9,SNR=18						
MKAR				PcP	**PcP**	**00 07 14.1**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=116,slow=5.3,SNR=2.2						
MKAR				ScP	**ScP**	**00 10 55.3**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=113,slow=3.3,SNR=1.7						
	comp=Z,2.9nm,0.8s						
KSH	**Kashi**	**44.33**	**309**	P	**P**	**00 05 39.6**	**+3.9**
KSH				pP	pwP	00 05 55.8	-0.2
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YAK	**Yakutsk**	**45.04**	**6**	LR	LR	00 25 34.5	
	comp=Z,53nm,19.9s,baz=265,slow=37						
YAK	**Yakutsk**	**45.04**	**6**	P	**P**	**00 05 40.4**	**-0.4**
NIL	**Nilore**	**45.16**	**300**	P	**P**	**00 05 41.9**	**-0.4**
NIL				IAmb	IAmb	00 05 42.8	
	comp=Z,16nm,0.8s						
ZAA0	**Zalesovo Array**	**45.69**	**331**	P	**P**	**00 05 46.3**	**+0.2**
ZALV	**Zalesovo Beam**	**45.69**	**331**	P	**P**	**00 05 46.4**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=118,slow=8.2,SNR=7.8						
ZALV				LR	LR	00 25 06.4	
	comp=Z,46nm,19.1s,baz=94,slow=36						
	comp=Z,1.0nm,0.3s						
PEA0B	**Petropavlovsk-**	**45.93**	**31**	P	**P**	**00 05 47.6**	**-0.4**
PETK	**Petropavlovsk-**	**45.93**	**31**	P	**P**	**00 05 47.7**	**-0.3**
	comp=Z,20nm,0.9s,baz=216,slow=7.3,SNR=19						
PETK				LR	LR	00 23 40.0	
	comp=Z,78nm,21.3s,baz=236,slow=34						
	comp=Z,20nm,0.9s						
AAK	**Ala-Archa**	**46.34**	**313**	LR	LR	00 26 56.4	
	comp=Z,94nm,19.5s,baz=107,slow=38						
AAK	**Ala-Archa**	**46.34**	**313**	P	**P**	**00 05 52.4**	**+0.9**
PET	**Petropavlovsk**	**46.35**	**31**	P	**P**	**00 05 50.2**	**-1.0**
KURK	**Kurchatov**	**47.02**	**325**	P	**P**	**00 05 57.1**	**+0.6**
KURK				IAmb	IAmb	00 06 01.9	
	comp=Z,9.5nm,0.8s						
MA2	**Magadan**	**47.51**	**20**	LR	LR	00 26 10.8	
	comp=Z,59nm,21.3s,baz=204,slow=36						
GAR	**Garm**	**48.46**	**307**	P	**P**	**00 06 09.1**	**+1.0**
KBL	**Kabul**	**48.75**	**301**	P	**P**	**00 06 11.0**	**+0.6**
KBL				IAmb	IAmb	00 06 12.3	
	comp=Z,7.9nm,0.8s						
KK31	**Karatay Array**	**49.27**	**312**	P	**P**	**00 06 14.9**	**+0.8**
KK31				IAmb	IAmb	00 06 16.0	
	comp=Z,5.5nm,0.9s						
KKAR	**Karatay Array**	**49.27**	**312**	P	**P**	**00 06 15.0**	**+0.9**
KKAR				IAmb	IAmb	00 06 16.0	
	comp=Z,5.5nm,0.9s						
CHGR	**Chuyangaron**	**49.28**	**306**	P	**P**	**00 06 14.2**	**-0.1**
CHGR				IAmb	IAmb	00 06 30.7	
	comp=Z,11nm,0.9s						
SEY	**Seymchan**	**50.57**	**18**	LR	LR	00 29 56.4	
	comp=Z,33nm,19.4s,baz=162,slow=38						
BRVK	**Borovoye**	**52.69**	**324**	P	**P**	**00 06 40.0**	**+0.5**
BRVK				IAmb	IAmb	00 06 44.2	
	comp=Z,4.8nm,0.8s						
STKA	**Stephens Creek**	**53.03**	**157**	P	**P**	**00 06 40.2**	**-2.0**
	comp=Z,6.4nm,0.6s,baz=335,slow=7.9,SNR=15						
	comp=Z,6.4nm,0.6s						
STKA	**Stephens Creek**	**53.03**	**157**	P	**P**	**00 06 40.8**	**-1.4**
HRA	**Herat**	**54.33**	**300**	P	**P**	**00 06 52.5**	**+0.4**
HRA				IAmb	IAmb	00 06 53.8	
	comp=Z,8.7nm,1.4s						
TIXI	**Tiksi**	**54.46**	**3**	P	**P**	**00 06 51.3**	**-0.8**
SHEM	**Shemya Is, Ala**	**54.53**	**37**	LR	LR	00 30 17.9	
	comp=Z,9.4nm,21.1s,baz=194,slow=36						
NRIK	**Noril'sk**	**55.77**	**347**	P	**P**	**00 07 01.9**	**+0.3**
	comp=Z,10nm,0.8s,baz=132,slow=7.1,SNR=26						
NRIK				LR	LR	00 32 47.2	
	comp=Z,115nm,18.1s,baz=157,slow=38						
	comp=Z,10nm,0.8s						
NRIK	**Noril'sk**	**55.77**	**347**	IAmb	IAmb	00 07 03.0	
	comp=Z,12nm,0.8s						
ABKAR	**Akbulak array**	**57.82**	**318**	P	**P**	**00 07 17.1**	**+0.6**
ABKAR	**Akbulak array**	**57.82**	**318**	IAmb	IAmb	00 07 21.3	
	comp=Z,3.2nm,0.7s						
GEYT	**Alibeck**	**57.83**	**304**	P	**P**	**00 07 18.5**	**+1.7**
	comp=Z,6.6nm,0.8s,baz=127,slow=4.3,SNR=9.0						
GEYT				LR	LR	00 35 38.3	
	comp=Z,67nm,18.2s,baz=112,slow=39						
	comp=Z,6.6nm,0.8s						
GEYT	**Alibeck**	**57.83**	**304**	P	**P**	**00 07 17.4**	**+0.6**
GEYT				IAmb	IAmb	00 07 19.5	
	comp=Z,6.5nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**57.83**	**304**	P	**P**	**00 07 17.9**	**+1.1**
GYA0B				IAmb	IAmb	00 07 24.7	
	comp=Z,12nm,1.1s						
WSAR	**Wadi Sarin**	**57.91**	**287**	LR	LR	00 37 51.2	
	comp=Z,27nm,18.2s,baz=112,slow=42						
BILL	**Bilibino**	**58.27**	**18**	P	**P**	**00 07 19.1**	**-0.2**
ARU	**Arti**	**60.19**	**326**	LR	LR	00 35 45.5	
	comp=Z,43nm,18.4s,baz=78,slow=38						
ARU	**Arti**	**60.19**	**326**	P	**P**	**00 07 33.0**	**+0.3**
ARU				IAmb	IAmb	00 07 33.5	
	comp=Z,4.1nm,0.6s						
KIRV	**Kirov**	**65.43**	**327**	LR	LR	00 37 06.8	
	comp=Z,60nm,20.4s,baz=108,slow=36						
GNI	**Garni**	**68.19**	**307**	P	**P**	**00 08 26.8**	**+1.1**
GNI				IAmb	IAmb	00 08 33.5	
	comp=Z,14nm,1.2s						
AKH	**Akhalkalaki**	**69.03**	**308**	⇑P	**P**	**00 08 32.3**	**+1.4**
KBZ	**Khabaz**	**69.27**	**311**	P	**P**	**00 08 33.0**	**+0.9**
	comp=Z,5.8nm,0.9s,baz=108,slow=3.3,SNR=10						
KBZ				LR	LR	00 43 50.4	
	comp=Z,31nm,18.5s,baz=76,slow=40						
	comp=Z,5.8nm,0.9s						
KIV	**Kislovodsk**	**69.41**	**311**	⇑P	**P**	**00 08 33.9**	**+0.8**
KIV	**Kislovodsk**	**69.41**	**311**	P	**P**	**00 08 33.5**	**+0.5**
KIV				IAmb	IAmb	00 08 35.3	
	comp=Z,11nm,0.8s						
RAYN	**Ar Rayn**	**69.79**	**289**	P	**P**	**00 08 35.6**	**-0.1**
RAYN				IAmb	IAmb	00 08 37.1	
	comp=Z,8.9nm,0.9s						
GURO	**Guroymak-BITLI**	**70.44**	**305**	P	**P**	**00 08 40.0**	**+0.4**
GURO				IAmb	IAmb	00 08 41.9	
	comp=Z,7.1nm,0.9s						
KLMR	**Klimovskoe**	**70.55**	**329**	*e*P	**P**	**00 08 38.3**	**-1.3**
KLMR				AMP		00 08 40.1	
	comp=Z,9.0nm,1.1s						
A21K	**Barrow**	**71.37**	**20**	P	**P**	**00 08 45.0**	**+0.6**
A21K				pP	**PcP**	**00 09 03.9**	**+0.3**
MARD	**Mardin**	**71.59**	**304**	P	**P**	**00 08 46.8**	**+0.3**
MARD				IAmb	IAmb	00 08 48.2	
	comp=Z,11nm,0.6s						
TTA	**Tatalina**	**71.72**	**29**	P	**P**	**00 08 47.0**	**+0.3**
TTA				pP	**PcP**	**00 09 05.0**	**-0.4**
L19K	**White Mountain**	**72.30**	**29**	P	**P**	**00 08 50.7**	**+0.6**
L19K				IAmb	IAmb	00 08 52.3	
	comp=Z,7.5nm,1.1s						
L19K					**pP**	**00 09 10.9**	**+0.8**
M19K	**Big River Lodg**	**72.53**	**30**	P	**P**	**00 08 51.3**	**-0.2**
M19K				IAmb	IAmb	00 08 52.4	
	comp=Z,9.2nm,1.3s						
IMAR	**Indian Mountai**	**72.54**	**25**	P	**P**	**00 08 51.9**	**+0.5**
IMAR				pP	**pP**	**00 09 11.2**	**-0.4**
N19K	**Bonanza Creek**	**72.57**	**31**	P	**P**	**00 08 51.2**	**-0.6**
H21K	**Melozitna Rive**	**72.95**	**26**	P	**P**	**00 08 54.8**	**+0.9**
H21K				IAmb	IAmb	00 09 00.3	
	comp=Z,8.3nm,1.1s						
CAST	**Castle Rocks**	**73.46**	**28**	P	**P**	**00 08 57.9**	**+0.9**
CAST				IAmb	IAmb	00 09 02.2	
	comp=Z,8.7nm,0.7s						
CAST					**pP**	**00 09 16.2**	**-0.8**
AFI	**Afiamalu**	**73.75**	**111**	LR	LR	00 37 44.0	
	comp=Z,88nm,20.6s,baz=200,slow=33						
KDAK	**Kodiak Island**	**73.84**	**34**	LR	LR	00 44 11.0	
	comp=Z,14nm,18.5s,baz=247,slow=38						
COLD	**Coldfoot**	**73.85**	**24**	P	**P**	**00 08 59.9**	**+0.8**
COLD				pP	**pP**	**00 09 19.0**	**-0.3**
BPAW	**Bear Paw Mtn.**	**73.87**	**27**	P	**P**	**00 08 59.6**	**+0.2**
BPAW				IAmb	IAmb	00 09 01.1	
	comp=Z,6.9nm,0.9s						
BPAW				pP	**pP**	**00 09 19.2**	**-0.2**
TOLK	**Toolik Lake Re**	**73.92**	**22**	P	**P**	**00 09 00.1**	**+0.5**
TOLK				IAmb	IAmb	00 09 06.1	
	comp=Z,6.4nm,0.9s						
TOLK				pP	**pP**	**00 09 19.9**	**+0.2**
H23K	**Yukon River**	**74.28**	**25**	P	**P**	**00 09 02.2**	**+0.6**
H23K				IAmb	IAmb	00 09 07.8	
	comp=Z,11nm,1.0s						
H23K					**pP**	**00 09 22.0**	**+0.2**
NEA2	**Nenana**	**74.64**	**27**	P	**P**	**00 09 04.2**	**+0.4**
NEA2				IAmb	IAmb	00 09 09.3	
	comp=Z,5.7nm,0.8s						
RND	**Reindeer**	**74.91**	**28**	P	**P**	**00 09 05.5**	**+0.1**
RND				IAmb	IAmb	00 09 06.6	
	comp=Z,7.6nm,0.9s						
RND				pP	**pP**	**00 09 24.9**	**-0.7**
MDM	**Murphy Dome**	**74.94**	**26**	P	**P**	**00 09 06.2**	**+0.6**
ATD	**Arta Tunnel**	**74.94**	**278**	LR	LR	00 42 58.1	
	comp=Z,24nm,18.2s,baz=340,slow=36						
H24K	**Noodor Dome**	**74.95**	**25**	P	**P**	**00 09 06.4**	**+0.8**
H24K				pP	**pP**	**00 09 27.1**	**+1.3**
SML	**Sawmill**	**75.39**	**29**	P	**P**	**00 09 08.8**	**+0.5**
SML				IAmb	IAmb	00 09 27.7	
	comp=Z,25nm,1.4s						
ILAR	**Eielson Array**	**75.54**	**26**	P	**P**	**00 09 08.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=275,slow=5.3,SNR=4.7						
ILAR				LR	LR	00 44 55.4	
	comp=Z,20nm,18.1s,baz=271,slow=38						
	comp=Z,0.5nm,0.4s						
ARA0	**ARCESS Array S**	**75.56**	**339**	*e*P	**P**	**00 09 09.6**	**+0.6**
ARCES	**ARCESS Array B**	**75.56**	**339**	P	**P**	**00 09 09.4**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=76,slow=7.8,SNR=22						
	comp=Z,4.5nm,0.7s						
ARCES	**ARCESS Array B**	**75.56**	**339**	IAmb	IAmb	00 09 17.6	
	comp=Z,9.7nm,1.2s						
SPB2	**Spitsbergen Ar**	**75.93**	**348**	P	**P**	**00 09 11.6**	**+0.6**
SPA0	**Spitsbergen Ar**	**75.93**	**348**	*e*P	**P**	**00 09 11.8**	**+0.8**
SPITS	**Spitsbergen Ar**	**75.93**	**348**	LR	LR	00 47 45.8	
	comp=Z,36nm,19.5s,baz=24,slow=40						
HAMF	**Hammerfest**	**75.95**	**340**	*e*P	**P**	**00 09 12.4**	**+1.3**
BMAR	**Burnt Mountain**	**75.97**	**23**	P	**P**	**00 09 11.7**	**+0.3**
BMAR				pP	**pP**	**00 09 31.4**	**-0.2**
KTK1	**Kautokeino**	**76.46**	**338**	*e*P	**P**	**00 09 13.8**	**-0.2**
MMAI	**Mount Meron Ar**	**76.68**	**301**	LR	LR	00 47 14.4	
	comp=Z,46nm,19.4s,baz=242,slow=39						
BRTR	**Keskin Array B**	**76.69**	**308**	P	**P**	**00 09 16.0**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=131,slow=4.7,SNR=11						
BRTR				LR	LR	00 46 34.7	
	comp=Z,29nm,18.4s,baz=130,slow=38						
	comp=Z,0.8nm,0.5s						
FIA1	**FINESS Array S**	**76.95**	**331**	P	**P**	**00 09 18.6**	**+1.6**
FIA1				IAmb	IAmb	00 09 23.4	
	comp=Z,15nm,1.3s						
FINES	**FINESS Array B**	**76.95**	**331**	P	**P**	**00 09 16.9**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=43,slow=5.7,SNR=20						
FINES				LR	LR	00 48 13.9	
	comp=Z,49nm,18.5s,baz=69,slow=39						
	comp=Z,2.4nm,0.6s						
JETT	**Jettan, Norway**	**77.30**	**339**	*e*P	**P**	**00 09 19.4**	**+0.5**
AKASG	**Malin Array Be**	**77.50**	**319**	P	**P**	**00 09 19.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=62,slow=5.5,SNR=5.7						
	comp=Z,0.5nm,0.4s						
M26K	**Nabesna, AK**	**77.73**	**28**	P	**P**	**00 09 21.4**	**0.0**
M26K				IAmb	IAmb	00 09 24.3	
	comp=Z,6.1nm,0.7s						
TRO	**Tromso**	**77.77**	**339**	*e*P	**P**	**00 09 22.1**	**+0.7**
IDID	**Didziasalis**	**77.96**	**324**	*e*P	**P**	**00 09 23.7**	**+1.0**
MEF	**Metsahovi**	**78.03**	**330**	*e*P	**P**	**00 09 23.9**	**+0.8**
L27K	**Beaver Creek,**	**78.09**	**27**	P	**P**	**00 09 23.8**	**+0.4**
BCAR	**Beaver Creek A**	**78.11**	**27**	P	**P**	**00 09 23.9**	**+0.4**
BCAR				pP	**pP**	**00 09 43.7**	**-0.1**
IIGN	**Ignalina**	**78.24**	**324**	*e*P	**P**	**00 09 26.0**	**+1.7**
ISAL	**Salakas**	**78.24**	**325**	*e*P	**P**	**00 09 26.8**	**+2.5**
M27K	**Edge Creek, AK**	**78.25**	**28**	P	**P**	**00 09 24.7**	**+0.3**
M27K				IAmb	IAmb	00 09 30.5	
	comp=Z,8.2nm,1.2s						
SNH	**Sunshine Point**	**78.35**	**30**	P	**P**	**00 09 22.4**	**-2.5**
SORM	**Soroca**	**78.62**	**317**	P	**P**	**00 09 26.2**	**-0.3**
MTSE	**Matsula**	**78.69**	**328**	*e*P	**P**	**00 09 27.0**	**+0.3**
YAH	**Yahtse**	**78.83**	**30**	P	**P**	**00 09 25.7**	**-2.1**
CTGM	**Chitina Glacie**	**78.86**	**29**	P	**P**	**00 09 28.1**	**+0.2**
CTGM				IAmb	IAmb	00 09 29.6	
	comp=Z,21nm,1.4s						
DAWY	**Dawson**	**78.86**	**26**	P	**P**	**00 09 27.3**	**-0.4**
I29M	**Ogilvie Camp,**	**78.93**	**25**	P	**P**	**00 09 27.0**	**-1.0**
I29M					**pP**	**00 09 48.1**	**-0.1**
JURR	**Jurilovca**	**79.05**	**314**	P	**P**	**00 09 29.0**	**+0.1**
LOGN	**Logan Glacier**	**79.06**	**30**	P	**P**	**00 09 27.6**	**-1.3**
LOGN				IAmb	IAmb	00 09 30.7	
	comp=Z,15nm,1.2s						
EPYK	**Eagle Plains**	**79.24**	**24**	P	**P**	**00 09 29.5**	**-0.1**
EPYK				IAmb	IAmb	00 09 43.9	
	comp=Z,19nm,1.5s						
EPYK					**pP**	**00 09 48.6**	**-1.4**
VLDR	**Vladesti**	**79.34**	**315**	⇑P	**P**	**00 09 30.9**	**+0.3**
TPGR	**Topolog**	**79.34**	**314**	⇑P	**P**	**00 09 31.0**	**+0.4**
PABE	**Paberze**	**79.44**	**325**	P	**P**	**00 09 31.6**	**+0.7**
PABE				IAmb	IAmb	00 09 34.6	
	comp=Z,14nm,1.1s						
PABE	**Paberze**	**79.44**	**325**	*e*P	**P**	**00 09 32.6**	**+1.8**
STEI	**Steigen**	**79.59**	**338**	*e*P	**P**	**00 09 31.4**	**0.0**
INK	**Inuvik**	**79.74**	**21**	LR	LR	00 48 48.7	
	comp=Z,30nm,18.4s,baz=272,slow=38						
FAUS	**Fauske**	**79.77**	**338**	*e*P	**P**	**00 09 32.8**	**+0.4**
TESR	**Tescani**	**80.14**	**316**	⇑P	**P**	**00 09 35.1**	**+0.2**
VRI	**Vrincioaia**	**80.25**	**315**	⇑P	**P**	**00 09 36.5**	**+1.0**
SUW	**Suwalki**	**80.29**	**324**	*e*P	**P**	**00 09 37.5**	**+2.0**
SUW	**Suwalki**	**80.29**	**324**	P	**P**	**00 09 36.7**	**+1.3**
SUW	**Suwalki**	**80.29**	**324**	*e*P	**P**	**00 09 36.4**	**+1.0**
PLOR	**Plostina**	**80.31**	**315**	⇑P	**P**	**00 09 36.6**	**+0.8**
BIZ	**Bicaz**	**80.39**	**316**	⇑P	**P**	**00 09 36.6**	**+0.4**
M30M	**Minto, Yukon**	**80.44**	**27**	P	**P**	**00 09 37.0**	**+0.8**
M30M				pP	**pP**	**00 09 57.2**	**+0.6**
HYT	**Haines Junctio**	**80.69**	**29**	P	**P**	**00 09 38.3**	**+0.6**
HYT				pP	**pP**	**00 09 59.6**	**+1.5**
BURAR	**Bucovina Array**	**80.79**	**317**	⇑P	**P**	**00 09 39.2**	**+0.7**
MLR	**Muntele Rosu**	**80.88**	**315**	⇑P	**P**	**00 09 40.2**	**+1.1**
MLR	**Muntele Rosu**	**80.88**	**315**	pP	pP	00 09 58.3	-0.9
KONS	**Konsvik**	**80.89**	**337**	*e*P	**P**	**00 09 39.0**	**+0.6**
UPP	**Uppsala**	**81.39**	**330**	*e*P	**P**	**00 09 41.9**	**+0.7**
M31M	**Drury Creek, Y**	**81.62**	**27**	P	**P**	**00 09 43.1**	**+0.6**
M31M					**pP**	**00 10 03.0**	**0.0**
EUNU	**Eureka**	**81.67**	**5**	P	**P**	**00 09 42.8**	**+0.3**
EUNU					**pP**	**00 10 03.0**	**+0.1**
COPA	**Copaceanca**	**81.75**	**314**	P	**P**	**00 09 43.0**	**-0.4**
HUMR	**Humele**	**81.80**	**314**	P	**P**	**00 09 43.6**	**-0.2**
KWP	**Kalwaria Pacla**	**81.82**	**319**	*e*P	**P**	**00 09 46.2**	**+2.4**
KWP				*e*pP	**pP**	**00 10 02.3**	**-1.7**
WHY	**Whitehorse**	**81.96**	**29**	P	**P**	**00 09 44.5**	**+0.1**
WHY				IAmb	IAmb	00 09 53.5	
	comp=Z,8.5nm,1.2s						
NSS	**Namsos**	**82.11**	**336**	*e*P	**P**	**00 09 45.1**	**+0.2**
DRGR		**82.67**	**317**	⇑P	**P**	**00 09 49.1**	**+0.8**
DAG	**Danmarks Havn**	**82.92**	**351**	*i* P	**P**	**00 09 47.0**	**-2.0**
DAG				IAmb	IAmb	00 10 15.8	
	comp=Z,4.2nm,0.7s						
HFS	**Hagfors**	**83.13**	**331**	LR	LR	00 51 16.8	
	comp=Z,37nm,20.0s,baz=60,slow=39						
VTS	**Vitosha**	**83.57**	**313**	⇓P	**P**	**00 09 53.6**	**+0.5**
VTS	**Vitosha**	**83.57**	**313**	P	**P**	**00 09 53.8**	**+0.6**
VTS				pP	**pP**	**00 10 13.2**	**-0.2**
NC405	**NORSAR Array S**	**83.63**	**332**	IAmb	IAmb	00 10 09.4	
	comp=Z,8.6nm,1.0s						
NC405				pP	pP	00 10 11.4	-1.9
CASY	**Casey**	**83.77**	**184**	P	**P**	**00 09 53.2**	**-0.1**
CASY				IAmb	IAmb	00 09 54.7	
	comp=Z,8.2nm,1.0s						
KMBO	**Kilima Mbogo**	**83.85**	**267**	LR	LR	00 43 03.9	
	comp=Z,33nm,20.7s,baz=98,slow=32						
NB2	**NORSAR Subarra**	**83.88**	**332**	P	**P**	**00 09 53.5**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**83.88**	**332**	P	**P**	**00 09 53.5**	**-0.7**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**83.88**	**332**	P	**P**	**00 09 53.7**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=66,slow=4.7,SNR=6.9						
NOA				LR	LR	00 52 20.1	
	comp=Z,40nm,19.4s,baz=50,slow=39						
	comp=Z,1.0nm,0.7s						
DOMB	**Dombas**	**84.37**	**334**	*e*P	**P**	**00 09 57.0**	**+0.3**
MORC	**Moravsky Berou**	**84.95**	**321**	*e*P	**P**	**00 10 01.8**	**+1.9**
FRGS	**Fruska Gora**	**85.11**	**316**	⇑P	**P**	**00 10 01.2**	**+0.4**
DLBC	**Dease Lake**	**85.11**	**30**	LR	LR	00 47 06.8	
	comp=Z,33nm,21.8s,baz=306,slow=35						
DBG	**Daneborg**	**85.11**	**350**	*i* P	**P**	**00 09 58.8**	**-1.3**
DBG				IAmb	IAmb	00 10 27.1	
	comp=Z,2.6nm,0.8s						
JMIC	**Jan Mayen**	**85.17**	**345**	LR	LR	00 51 45.3	
	comp=Z,29nm,21.5s,baz=258,slow=38						
JAVC	**Velka Javorina**	**85.20**	**320**	*e*P	**P**	**00 10 03.6**	**+2.5**
KRLC	**Kraliky**	**85.30**	**321**	*e*P	**P**	**00 10 03.5**	**+1.9**
KRLC				*e*x	x	00 10 09.5	
KSP	**Ksiaz**	**85.31**	**322**	*e*P	**P**	**00 10 00.3**	**-1.2**
KSP				*e*pP	**pP**	**00 10 22.0**	**+0.1**
RES	**Resolute Bay**	**85.42**	**9**	LR	LR	00 52 38.9	
	comp=Z,18nm,19.6s,baz=328,slow=39						
OSTC	**Ostas**	**85.46**	**322**	*e*P	**P**	**00 10 05.4**	**+3.0**
OSTC				*e*x	x	00 10 20.2	
DPC	**Dobruska-Polom**	**85.47**	**321**	*e*P	**P**	**00 10 01.3**	**-1.2**
DPC				*e*x	x	00 10 17.5	
CHVC	**Chvalec**	**85.54**	**322**	*e*P	**P**	**00 10 04.5**	**+1.7**
CHVC				*e*x	x	00 10 20.4	
UPC	**Upice**	**85.60**	**322**	*e*P	**P**	**00 10 06.9**	**+3.9**
UPC				*e*x	x	00 10 23.8	
VRAC	**Vranov**	**85.69**	**320**	⇓P	**P**	**00 10 04.5**	**+0.9**
VRAC	**Vranov**	**85.69**	**320**	LR	LR	00 51 53.2	
	comp=Z,27nm,20.5s,baz=55,slow=38						
VRAC	**Vranov**	**85.69**	**320**	*e*pP	pP	00 10 21.4	-2.5
VRAC	**Vranov**	**85.69**	**320**	*e*P	**P**	**00 10 05.1**	**+1.6**
CONA	**Conrad Observa**	**86.66**	**319**	*e*P	pP	00 10 28.7	-0.1
	comp=Z,3.0nm,1.0s						
RAR	**Rarotonga**	**87.06**	**113**	LR	LR	00 44 39.2	
	comp=Z,92nm,19.2s,baz=168,slow=32						
CKRC	**Cesky Krumlov**	**87.27**	**321**	*e*P	**P**	**00 10 15.4**	**+4.1**
CKRC				*e*x	x	00 10 30.4	
KHC	**Kasperske Hory**	**87.58**	**321**	*e*P	**P**	**00 10 14.8**	**+2.0**
GERES	**GERESS Array B**	**87.63**	**321**	P	**P**	**00 10 14.1**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=101,slow=5.6,SNR=3.9						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**87.63**	**321**	P	**P**	**00 10 13.8**	**+0.8**
MOA	**Molln**	**87.68**	**320**	*e*P	pP	00 10 34.4	+0.8
	comp=Z,11nm,1.6s						
MYKA	**Terra Mystica**	**88.56**	**319**	*e*P	pP	00 10 39.2	+1.3
	comp=Z,8.1nm,1.2s						
BBB	**Bella Bella**	**88.88**	**35**	LR	LR	00 52 42.7	
	comp=Z,14nm,18.1s,baz=354,slow=37						
SUMG	**Summit**	**89.13**	**354**	*i* P	**P**	**00 10 17.3**	**-2.8**
SUMG				IAmb	IAmb	00 11 02.5	
	comp=Z,2.0nm,1.0s						
YKA	**Yellowknife Ar**	**89.45**	**22**	P	**P**	**00 10 21.2**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=314,slow=4.3,SNR=6.0						
YKA				LR	LR	00 53 46.8	
	comp=Z,22nm,18.0s,baz=294,slow=38						
	comp=Z,1.4nm,0.9s						
YKA	**Yellowknife Ar**	**89.45**	**22**	P	**P**	**00 10 21.7**	**+0.5**
YKA					**pP**	**00 10 42.8**	**+0.8**
WTTA	**Wattenberg**	**89.54**	**320**	*e*P	pP	00 10 42.6	0.0
	comp=Z,15nm,1.2s						
SQTA	**Sankt Quirin**	**89.83**	**320**	*e*P	pP	00 10 43.4	-0.4
	comp=Z,4.7nm,0.7s						
MOTA	**Moosalm**	**89.84**	**320**	*e*P	pP	00 10 43.8	-0.2
	comp=Z,6.3nm,0.9s						
MBAR	**Mbarara**	**89.91**	**269**	LR	LR	00 50 55.5	
	comp=Z,30nm,18.8s,baz=82,slow=36						
FETA	**Feichten**	**90.21**	**320**	*e*P	pP	00 10 45.9	+0.2
	comp=Z,6.0nm,1.0s						
DAVOX	**Davos/Dischmat**	**90.84**	**320**	LR	LR	00 54 54.0	
	comp=Z,31nm,18.6s,baz=82,slow=38						
BORG	**Borgarnes**	**93.05**	**345**	LR	LR	00 57 27.1	
	comp=Z,25nm,18.4s,baz=201,slow=39						

MAW	Mawson	94.51	199	LR	LR	00 51 30.4	
	comp=Z,71nm,20.1s,baz=25,slow=34						
PPT2	Papeete2	95.09	107	eS	SKSac	00 20 59.2	-19
	comp=Z,1µm,34.2s						
PPT2	Papeete2	95.09	107	eLR	LR	00 41 05.6	
	comp=Z,160nm,31.2s						
LSZ	Lusaka	96.57	256	LR	LR	00 54 11.7	
	comp=Z,25nm,19.2s,baz=105,slow=35						
TBI	Tubuai	96.80	112	eLR	LR	00 41 29.8	
	comp=Z,103nm,32.8s						
NEW	Newport	96.94	35	LR	LR	00 54 50.1	
	comp=Z,8.6nm,19.6s,baz=238,slow=36						
YBH	Yreka Blue Hor	97.20	42	LR	LR	00 46 58.7	
	comp=Z,31nm,21.6s,baz=292,slow=30						
MOD	Modoc Plateau	98.64	41	P	P	00 11 03.1	-0.9
MOD				IAmb	IAmb	00 11 05.7	
	comp=Z,3.3nm,1.1s						
FRB	Frobisher Bay	98.80	4	LR	LR	01 00 16.0	
	comp=Z,26nm,18.6s,baz=347,slow=38						
TAOE	Nuku Hiva Isla	101.51	96	eLR	LR	00 43 31.0	
	comp=Z,140nm,31.4s						
NVAR	Mina Array Bea	101.82	43	P	Pdif	00 11 18.6	+0.3
	comp=Z,0.9nm,0.8s,baz=277,slow=4.7,SNR=5.1						
TXAR	Lajitas Array	116.97	43	PKP	PKiKP	00 16 09.8	+0.1
	comp=Z,0.3nm,0.5s,baz=340,slow=2.2,SNR=4.5						

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*CRAAG **24** 00:06:14.0, 36°.35N×3°.43E, Ml3.0*
*MDD **24** 00:06:15.7±0.9, 36°.17N×3°.66E, h24^{km}±25^{km}, Mb3.7/12, Error ellipse: s-maj=26.4km s-min=5.9km az=138.0*
ISC 24 00:06:15.0±1.3**, 36°.33N**±0°.06×**3°.55E**±0°.08**, h13**^{km}±12^{km}**, n14, σ1^{s}15**/19**, 8C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.19	206	P	Pg	00 06 19.0	-0.4
AKET	Djebel Ketaf	0.39	136	P	Pb	00 06 23.9	-0.1
ABMS	Boumerdes	0.42	353	P	Pg	00 06 23.3	-0.1
EIBI	Ibiza	3.21	328	⇑iVmb_V		00 07 05.9	
	240nm,SNR=1.1						
EIBI				Pn	Pn	00 07 06.3	+1.1
EIBI				Sn	Sn	00 07 42.0	-1.2
ETOS	Mallorca	3.48	351	Pn	Pn	00 07 09.2	+0.4
ETOS				⇑iVmb_V		00 07 10.3	
	176nm,SNR=0.9						
ETOS				Sn	Sn	00 07 49.2	-0.7
EMUR	La Murta	4.11	293	Pn	Pn	00 07 18.5	+0.9
EMUR				⇑iVmb_V		00 07 22.6	
	34nm,SNR=1.4						
ECOL	Islas Columbre	4.21	329	Pn	Pn	00 07 19.5	+0.5
ECOL				Sn	Sn	00 08 06.9	-1.1
EZAR	Zarzadilla de	4.46	292	Pn	Pn	00 07 23.1	+0.6
ETOB	Tobarra	4.66	301	Pn	Pn	00 07 25.9	+0.7
ETOB				⇑iVmb_V		00 07 29.9	
	38nm,SNR=2.7						
ETOB				Sn	Sn	00 08 19.1	-0.1
ECHE	Chera	4.83	314	Pn	Pn	00 07 28.3	+0.9
ECHE				⇑iVmb_V		00 07 32.2	
	46nm,SNR=1.9						
EMOS	Mosqueruela	5.12	323	Pn	Pn	00 07 32.5	+1.0
EMOS				⇑iVmb_V		00 07 34.4	
	40nm,SNR=2.1						
EMOS				Sn	Sn	00 08 28.2	-2.4
EPOB	Poblet	5.37	340	Pn	Pn	00 07 36.2	+1.3
EPOB				⇑iVmb_V		00 07 37.1	
	24nm,SNR=1.3						
EJON	La Jonquera	6.13	355	Pn	Pn	00 07 46.0	+0.7
EJON				⇑iVmb_V		00 07 47.8	
	56nm,SNR=2.0						
EARI	Arriondas	9.68	319	Pn	Pn	00 08 35.9	+1.9

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*INET **24** 00:28:43.6±0.5, 11°.04N×86°.84W, h24^{km}±999^{km}, MW3.7*
*UCR **24** 00:28:43.1±1.6, 10°.82N×86°.77W, h10^{km}, MW4.0*
ISC 24 00:28:36.3±2.0**, 10°.86N**±0°.07×**87°.06W**±0°.09**, h30**^{km}**, n28, σ1^{s}09**/30**, 1C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.40	19	eP	Pb	00 29 02.5	+0.7
HZTE	Horizontes, Gu	1.45	95	eP	Pb	00 29 04.3	+1.7
HZTE				eS	Sb	00 29 20.8	+0.2
TISN	Laguna Tiscapa	1.50	31	eP	Pb	00 29 04.1	+0.7
MGAN	Managua	1.51	32	eP	Pb	00 29 04.3	+0.6
SAJU	San Juanillo,	1.54	120	⇓iP	Pb	00 29 05.9	+1.7
SAJU				eS	Sb	00 29 22.7	-0.6
WILN	Americas 2	1.56	33	eP	Pb	00 29 04.8	+0.4
GBS3	Finca Las Img	1.58	92	eP	Pb	00 29 05.8	+0.9
LAPC	Finca la Perla	1.60	93	eP	Pb	00 29 05.9	+0.6
BUEV	Buena Vista	1.62	92	eP	Pb	00 29 06.7	+1.0
GUAI	GUAI	1.63	111	eP	Pb	00 29 07.1	+1.4
GB1A	Borinquen Arri	1.63	91	eP	Pb	00 29 07.0	+1.2
CNGN	Cerro Negro	1.67	12	eP	Pb	00 29 07.1	+0.6
GPS2	Hotel Rincn d	1.68	93	eP	Pb	00 29 07.4	+0.8
BUAI	Buenos Aires	1.70	89	⇑eP	Pb	00 29 07.7	+0.8
HUEN		1.71	30	eP	Pb	00 29 06.9	-0.2
LIM1	Limonal	1.78	95	eP	Pb	00 29 09.0	+0.6
CRIN	San Cristobal	1.83	0	eP	Pb	00 29 10.2	+1.0
HORNC	Hornillas	1.85	94	eP	Pb	00 29 10.1	+0.5
VMAR	Armenia, Volca	1.91	91	eP	Pb	00 29 10.8	+0.3
ACAL	Aguas Claras	2.00	96	eP	Pb	00 29 12.8	+0.7
CSGN	Cosiguina Volc	2.16	347	eP	Pb	00 29 15.7	+0.8
MATN	Matagalpa	2.34	28	eP	Pb	00 29 15.6	-2.3
CEDE	Laguna Cedeo	2.34	99	eP	Pb	00 29 19.2	+1.3
LAFE	Finca La Fe, P	2.36	116	eP	Pb	00 29 17.0	-1.1
CNCH	Conchagua	2.52	343	eP	Pb	00 29 20.9	-0.1
LCR2	La Lucha 2	3.20	110	eP	Pb	00 29 32.0	-0.6
RIMA	Rio Macho	3.33	109	eP	Pb	00 29 33.3	-1.5
CDM	Cerro de Muert	3.49	111	eP	Pb	00 29 35.9	-1.8

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*SJA **24** 00:29:33.1±0.7, 18°.65S×69°.50W, h138^{km}±5^{km}, ML4.7, MW4.4*
*IDC **24** 00:29:35.9±0.5, 18°.63S×69°.17W, h126^{km}±3^{km}, mb4.3/16, mbtmp4.7/20, MS2.9/2, Error ellipse: s-maj=13.1km s-min=7.2km az=92.0*
*VAO **24** 00:29:35.7±0.4, 18°.62S×69°.26W, h123^{km}, mb4.6*
*GUC **24** 00:29:35.7±0.7, 18°.62S×69°.31W, h109^{km}±4^{km}, ML4.8*
*NEIC **24** 00:29:35.7±1.5, 18°.63S±0°.04×69°.39W±0°.06, h126^{km}±5^{km}, mb4.9/370, ML4.9(GUC), Error ellipse: s-maj=8.7km s-min=6.2km az=72.0*
ISC 24 00:29:34.4±0.4**, 18°.65S**±0°.03×**69°.34W**±0°.04**, h118**^{km}±3^{km}**, h118**^{km}**:pP-P, n617, σ1^{s}18**/613**, mb4.9**/199**, 8C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.35	333	Pn	Pn	00 29 52.3	+0.2
PB16				Sn	Sn	00 30 05.7	+0.3
PB16	IPOC Station P	0.35	333	⇓iP	Pn	00 29 52.5	+0.4
PB16				eS	Sn	00 30 05.4	+0.1
PB16	IPOC Station P	0.35	333	eP	Pn	00 29 52.0	-0.1
PB16				eS	Sn	00 29 52.2	-13
PB16				IAML		00 30 06.4	
	comp=Z,28µm,0.6s						
PB12	IPOC Station P	0.94	272	Pn	Pn	00 29 55.8	+0.1
PB12				Sn	Sn	00 30 11.5	-0.3
PB12	IPOC Station P	0.94	272	⇑iP	Pn	00 29 55.9	+0.1
PB12				eS	Sn	00 30 11.4	-0.5
PB12				IAML		00 30 13.2	
	comp=E,27µm,0.5s						
PB12	IPOC Station P	0.94	272	eP	Pn	00 29 56.0	+0.3
PB12				IAML		00 30 18.2	
	comp=Z,9µm,0.6s						
AP01	Chacalluta	0.99	286		Pn	00 29 56.7	+0.6
AP01				Sn	Sn	00 30 12.9	+0.3
AP01	Chacalluta	0.99	286	⇑iP	Pn	00 29 56.5	+0.4
AP01				eS	Sn	00 30 12.8	+0.3
AP01	Chacalluta	0.99	286	eP	Pn	00 29 56.0	-0.1
AP01				IAML		00 30 17.1	
	comp=Z,27µm,0.2s						
PB11	IPOC Station P	1.15	195		Pn	00 29 58.6	+0.7
PB11				Sn	Sn	00 30 16.5	+0.7
PB11	IPOC Station P	1.15	195	⇓iP	Pn	00 29 58.6	+0.7
PB11				eS	Sn	00 30 15.9	+0.2
PB11				IAML		00 30 17.7	
	comp=E,25µm,0.4s						
PB11	IPOC Station P	1.15	195	eP	Pn	00 29 58.0	+0.1
PB11				eS	Sn	00 30 17.2	+1.5
PB11				IAML		00 30 19.5	
	comp=Z,7µm,0.4s						
PB08	IPOC Station P	1.50	173		Pn	00 30 03.3	+1.2
PB08				Sn	Sn	00 30 24.2	+1.2
PB08	IPOC Station P	1.50	173	⇑iP	Pn	00 30 03.3	+1.2
PB08				eS	Sn	00 30 23.9	+0.8
PB08	IPOC Station P	1.50	173	eP	Pn	00 29 58.0	-4.0
PB08				eP	Pn	00 30 03.0	+1.0
PB08				eS	Sn	00 30 25.5	+2.5
PB08				IAML		00 30 28.1	
	comp=Z,3µm,0.7s						
HMBC	Humberstone	1.70	198	⇑iP	Pn	00 30 04.5	+0.3
HMBC				i S	Sn	00 30 26.6	-0.4
HMBC				IAML		00 30 32.2	
	comp=E,7µm,0.7s						
TA01	Diego Aracena	2.06	202		Pn	00 30 08.4	-0.2
TA01	Diego Aracena	2.06	202	eP	Pn	00 30 08.5	0.0
TA01				eS	Sn	00 30 32.8	-1.9
TA01	Diego Aracena	2.06	202	eP	Pn	00 30 09.0	+0.4
TA01				eS	Sn	00 30 33.2	-1.5
TA01				IAML		00 30 44.0	
	comp=Z,1µm,0.4s						
PATCX	Punta Patache	2.29	199		Pn	00 30 11.6	+0.1
PATCX				Sn	Sn	00 30 37.1	-2.9
PATCX	Punta Patache	2.29	199	eP	Pn	00 30 11.1	-0.5
PATCX				eS	Sn	00 30 36.7	-3.3
PATCX				IAML		00 30 49.6	
	comp=E,3µm,0.5s						
PATCX	Punta Patache	2.29	199	eP	Pn	00 30 11.0	-0.5
PATCX				eS	Sn	00 30 37.6	-2.4
PATCX				IAML		00 30 40.0	
	comp=Z,2µm,0.4s						
PB01	IPOC Station P	2.39	183		Pn	00 30 12.7	0.0
PB01	IPOC Station P	2.39	183	⇑iP	Pn	00 30 13.1	+0.4
PB01				i S	Sn	00 30 42.0	-0.1
PB01				IAML		00 30 43.7	
	comp=E,4µm,0.3s						
PB01	IPOC Station P	2.39	183	eP	Pn	00 30 12.1	-0.6
PB01				eS	Sn	00 30 42.9	+0.7
PB01				IAML		00 30 51.4	
	comp=Z,1µm,0.4s						
LPAZ	La Paz	2.62	26	P	Pn	00 30 18.3	+2.0
	comp=Z,85nm,0.4s,baz=216,slow=6.8,SNR=407						
LPAZ				S	Sn	00 30 50.5	+2.2
	comp=Z,126nm,0.6s,baz=130,slow=7.5,SNR=6.5						
LPAZ	La Paz	2.62	26		Pn	00 30 17.3	+1.0
LPAZ	La Paz	2.62	26	eP	Pn	00 30 17.5	+1.3
PB02	IPOC Station P	2.71	191		Pn	00 30 16.9	0.0
PB02	IPOC Station P	2.71	191	eP	Pn	00 30 16.9	0.0
PB02				IAML		00 31 00.4	
	comp=E,4µm,0.5s						
PB02	IPOC Station P	2.71	191	eP	Pn	00 30 17.0	+0.1
PB02				eS	Sn	00 30 49.9	+0.3
PB02				IAML		00 30 57.9	
	comp=Z,4µm,0.4s						
PB07	IPOC Station P	3.10	189		Pn	00 30 22.1	-0.1
PB07	IPOC Station P	3.10	189	eP	Pn	00 30 22.7	+0.6
PB07				IAML		00 31 10.3	
	comp=N,1µm,0.5s						
PB09	IPOC Station P	3.13	178		Pn	00 30 23.0	+0.5
PB09	IPOC Station P	3.13	178	⇑iP	Pn	00 30 23.2	+0.7
PB09				IAML		00 31 06.8	
	comp=E,2µm,0.7s						
PB09	IPOC Station P	3.13	178	eP	Pn	00 30 23.0	+0.5
PB09				eS	Sn	00 30 48.5	-11
PB09				IAML		00 31 06.9	
	comp=Z,1µm,0.4s						
PB04	IPOC Station P	3.74	192		Pn	00 30 30.7	0.0
PB04	IPOC Station P	3.74	192	i P	Pn	00 30 30.9	+0.2
PB04	IPOC Station P	3.74	192	eP	Pn	00 30 31.0	+0.4
PB04				eS	Sn	00 31 10.9	-3.3
PB04				IAML		00 31 32.8	
	comp=Z,1µm,1.1s						
LVC	Limon Verde	3.96	174	P	Pn	00 30 35.2	+1.4
	comp=Z,701nm,0.6s,baz=346,slow=9.8,SNR=354						
LVC				S	Sn	00 31 22.1	+2.5
	comp=Z,440nm,0.4s,baz=126,slow=17,SNR=20						
LVC	Limon Verde	3.96	174	eP	Pn	00 30 35.1	+1.4
LVC	Limon Verde	3.96	174	eP	Pn	00 30 34.6	+0.9
PB06	IPOC Station P	4.04	183		Pn	00 30 34.6	-0.1
PB06	IPOC Station P	4.04	183	i P	Pn	00 30 34.6	-0.1
PB06	IPOC Station P	4.04	183	eP	Pn	00 30 35.0	+0.4
PB06				eS	Sn	00 31 16.5	-4.8
PB06				IAML		00 31 31.2	
	comp=Z,613nm,0.8s						
AF01	San Pedro de A	4.42	166		Pn	00 30 40.8	+1.1
PB15	IPOC Station P	4.54	182		Pn	00 30 40.5	-0.8
PB15	IPOC Station P	4.54	182	eP	Pn	00 30 41.0	-0.3
PB15				eS	Sn	00 31 32.0	-1.3
PB15				IAML		00 31 37.0	
	comp=Z,2µm,0.2s						
PB10	IPOC Station P	4.97	193	Pn	Pn	00 30 45.8	-1.1
PB10	IPOC Station P	4.97	193	eP	Pn	00 30 45.0	-1.9
PB10				eS	Sn	00 31 51.0	+7.6
PB10				IAML		00 32 10.3	
	comp=Z,185nm,0.8s						
YJA	Yavi	5.02	135	eP	Pn	00 30 45.0	-3.0
YJA				eP	Pn	00 30 50.0	+2.0
YJA				eS	Sn	00 31 31.4	-14
GO02	Mina Guanaco	6.49	182	Pn	Pn	00 31 06.3	-1.4
AC01	Pan de Azucar	7.55	189	Pn	Pn	00 31 18.9	-2.9
AC02	Maricunga	8.15	179	Pn	Pn	00 31 29.3	-1.0
SIV	San Ignacio	8.33	73	P	Pn	00 31 30.2	-2.2
	comp=Z,21nm,0.4s,baz=274,slow=8.9,SNR=92						
SIV				S	Sn	00 33 00.5	-4.3
	comp=Z,12nm,0.6s,baz=324,slow=21,SNR=6.6						
AC04	Llanos de Chal	9.64	189	Pn	Pn	00 31 45.0	-5.1
NNA	Nana	9.81	311	P	Pn	00 31 51.0	-1.4
	comp=Z,58nm,0.3s,baz=130,slow=11,SNR=40						
NNA				S	Sn	00 33 32.8	-7.9
	comp=Z,12nm,0.3s,baz=221,slow=9.2,SNR=1.7						
NNA				LR	LR	00 36 21.6	
	comp=Z,63nm,18.2s,baz=149,slow=41						
NNA	Nana	9.81	311	Pn	Pn	00 31 49.3	-3.1
LCO	Las Campanas	10.39	187	Pn	Pn	00 31 56.3	-4.1
VILB	Vilhena	10.46	59	eP	Pn	00 31 59.5	-1.7
CO01	Juntas del Tor	11.30	183		Pn	00 32 09.5	-3.1
CO05	La Serena	11.35	188	Pn	Pn	00 32 11.3	-1.7
GO04	Tololo Observa	11.55	186		Pn	00 32 11.6	-4.3
CO02	Combarbal	12.59	187		Pn	00 32 25.9	-3.5
SALV	Santo Antonio	13.32	80	eP	Pn	00 32 37.8	-1.1
CPUP	Villa Florida	13.47	127	P	Pn	00 32 39.4	-1.5
	comp=Z,7.2nm,0.6s,baz=311,slow=12,SNR=23						
VA06	Catapilco	13.96	187	P	Pn	00 32 46.4	-0.7
PDRB	Porto dos Gac	14.04	62	eP	Pn	00 32 47.8	-0.4
VA03	San Esteban	14.10	184	P	Pn	00 32 48.9	0.0
ROC1	El Roble	14.35	186	Pn	Pn	00 32 52.4	+0.1
ATAH	Atahualpa	14.44	321	P	Pn	00 32 53.7	0.0
	comp=Z,4.9nm,0.6s,baz=164,slow=8.9,SNR=3.1						
ATAH				LR	LR	00 39 11.4	
	comp=Z,55nm,18.9s,baz=149,slow=40						
PEL	Peldehue	14.48	185		Pn	00 32 53.0	-0.8
MT02	Curacav	14.64	186	Pn	Pn	00 32 54.5	-1.2
MT03	Universidad Ad	14.82	184	P	P	00 32 59.9	-1.1
LMEL	Las Melosas	15.16	183	IAmb	IAmb	00 33 05.2	
	comp=Z,31nm,0.8s						
CLDB	Colider	15.20	61	eP	Pn	00 33 02.9	-0.1
ITQB	Itaqui	15.96	136	eP	Pn	00 33 10.7	-1.5
TRCB	Terra Rica	16.16	108		P	00 33 16.3	+0.5
TRCB				IAmb	IAmb	00 33 18.6	
	comp=Z,76nm,1.0s						
ML02	Panimavida	17.15	186	P	Pn	00 33 27.7	+1.0
PTGB	Pitanga	17.15	114	eP	Pn	00 33 27.3	+0.3
MACA	Manacapuru-AM	17.57	30	eP	P	00 33 30.0	-1.3
ITRB	Iturama	17.96	96	eP	P	00 33 35.7	0.0
ITAB	Concordia	17.99	121	IAmb	IAmb	00 33 39.0	
	comp=Z,58nm,0.9s						
ITAB	Concordia	17.99	121	eP	Pn	00 33 36.9	-0.1
CPSB	Cacapava Do Su	18.58	132	eP	P	00 33 42.7	+0.4
SNDB	Serra Nova Dou	18.62	72	eP	P	00 33 42.5	-0.3
PLTB	Pedras Altas	19.29	136	eP	P	00 33 50.9	+0.9
ITTB	Itaituba	19.45	45	eP	P	00 33 50.5	-1.4
BB19B	Bebedouro	19.72	100	eP	P	00 33 54.0	-0.8
CNLB	Canela	19.93	126	eP	P	00 33 56.6	-0.4
IPMB	Ipameri, GO	20.07	91	eP	P	00 33 57.7	-1.0
TRQA	Tornquist	20.38	163	P	P	00 34 02.2	+0.4
TRQA				IAmb	IAmb	00 34 03.5	
	comp=Z,43nm,0.7s						
BDFB	Brasilia	20.60	85	P	P	00 34 03.0	-1.4
	comp=Z,8.3nm,0.8s,baz=257,slow=11,SNR=8.4						
	comp=Z,8.3nm,0.8s						
BDFB	Brasilia	20.60	85	eP	P	00 34 03.6	-0.8
RCLB	Rio Claro- Sao	20.76	104	eP	P	00 34 04.7	-1.4
OTAV	Otavalo	20.79	334	P	P	00 34 07.3	+0.5
OTAV	Otavalo	20.79	334	⇑eP	Pn	00 34 11.4	+1.0
MACC	Macarena, Meta	21.13	347	eP	P	00 34 10.0	0.0
GCUF	Volcan Galeras	21.26	337	⇑eP	P	00 34 15.4	+3.5
PEXB	Peixe	21.29	75	eP	P	00 34 10.9	-0.8
VAO	Valinhos	21.35	106	eP	P	00 34 11.1	-1.3
SOTA	Rioblanco	21.86	340	eP	P	00 34 24.3	+6.1
PLCA	Paso Flores	22.03	182	P	P	00 34 20.5	+1.0
	comp=Z,15nm,1.0s,baz=12,slow=11,SNR=23						
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	22.03	182	P	P	00 34 19.8	+0.3
PLCA	Paso Flores	22.03	182	eP	P	00 34 20.7	+1.3
LL04	Puerto Octay	22.34	186	P	P	00 34 22.4	-0.1
LL03	Petrohue	22.57	186	P	P	00 34 25.2	+0.5
LL03				IAmb	IAmb	00 34 33.6	
	comp=Z,26nm,0.8s						
BOAV	Boa Vista	22.64	23	eP	P	00 34 24.7	-1.0
ORTC	Ortega, Tolima	23.16	345	eP	P	00 34 28.5	-2.2
SMTB	Santa Maria do	23.23	68	eP	P	00 34 31.2	-0.2
YOTC	Yotoco, Valle	23.52	342	eP	P	00 34 32.6	-1.5
JANB	Januaria	24.21	85	eP	P	00 34 39.9	-0.4
SDBA	SAO DESIDERIO	24.34	79	eP	P	00 34 40.9	-0.6
DIAM	Diamantina, MG	24.34	93	eP	P	00 34 40.7	-0.9
RUSC	La Rusia	24.66	351	eP	P	00 34 43.6	-1.2
MCPB	Macapa, AP	24.87	45	eP	P	00 34 45.4	-0.8
AY01	Puyuhuapi	25.84	185	P	P	00 34 54.8	+0.1
TMAB	Tom-Au,PA,Br	26.36	55	eP	P	00 35 02.0	+2.3
ZARC	Zaragoza, Cauc	26.54	348	P	P	00 34 58.3	-3.0
SDV	Santo Domingo	27.39	357	P	P	00 35 08.1	-1.0
	comp=Z,5.3nm,0.4s,baz=269,slow=9.0,SNR=3.8						
	comp=Z,5.3nm,0.4s						
SDV	Santo Domingo	27.39	357	eP	P	00 35 08.7	-0.4
BAUV	El Baul	27.45	3	P	P	00 35 07.9	-1.5
BAUV				IAmb	IAmb	00 35 10.0	
	comp=Z,32nm,0.8s						
NAN01	Guarapari, ES	27.75	93	eP	P	00 35 11.9	-0.2
GDU01	Guandu, BA	28.98	85	eP	P	00 35 22.4	-0.7
NBPN	Ponto Novo - B	29.20	79	eP	P	00 35 24.2	-0.8
NBLA	Lagarto - SE	31.40	80	eP	P	00 35 43.8	-0.7
NBMA	Muriti-CE	31.77	73	eP	P	00 35 47.4	-0.4
NBPB	Pedra_Branca-C	31.81	70	eP	P	00 35 48.3	+0.2
NBAN	Anadia - AL	33.23	79	eP	P	00 36 00.3	-0.2
RCBR	Riachuelo	34.99	73	eP	P	00 36 15.2	-0.5
OBIP	Obispado Ponce	36.56	4	P	P	00 36 27.3	-1.6
CELP	Cerrillos	36.59	4	P	P	00 36 28.0	-1.2
SJG	San Juan	36.66	5	P	P	00 36 27.4	-2.3
SJG				IAmb	IAmb	00 36 28.2	
	comp=Z,28nm,0.9s						
HUMP	Col San Antoni	36.72	6	P	P	00 36 29.1	-1.2
HUMP				IAmb	IAmb	00 36 31.6	
	comp=Z,13nm,0.7s						
MTO3	Montecristo	38.31	328	P	P	00 36 43.8	-0.2
SOR	Soroa	43.30	341	P	P	00 37 24.2	-0.4
SOR				IAmb	IAmb	00 37 26.1	
	comp=Z,25nm,0.9s						
ORCD	Orcadas	45.54	163	P	P	00 37 39.9	-2.1
DWPF	Disney Wildern	47.93	346	P	P	00 38 01.4	+0.4
	baz=165						
656A	Willston	49.41	345	P	P	00 38 11.5	-0.7
553A	Crawfordville	50.68	343	P	P	00 38 22.4	+0.6
451A	Vernon	51.46	342	P	P	00 38 27.2	-0.4
TIGA	Tifton	51.65	344	P	P	00 38 28.2	-0.8
TIGA	Tifton	51.65	344	P	P	00 38 29.4	+0.4
	baz=163						
352A	Blakely	52.04	343	P	P	00 38 31.9	0.0
BRAL	Brewton	52.37	341	P	P	00 38 34.0	-0.4
BRAL	Brewton	52.37	341	P	P	00 38 34.7	+0.3
	baz=159						
ZAIG	Zacatecas	52.43	320	P	P	00 38 36.1	+0.8
ZAIG				IAmb	IAmb	00 38 38.5	
	comp=Z,7.4nm,0.7s						
NHSC	New Hope	52.50	349	P	P	00 38 35.3	0.0
	baz=167						
154A	Montrose	52.65	345	P	P	00 38 36.0	-0.4
250A	Grady	52.89	342	P	P	00 38 37.9	-0.3
250A				IAmb	IAmb	00 38 39.1	
	comp=Z,24nm,0.9s						
152A	Waverly Hall	53.11	344	P	P	00 38 39.4	-0.4
152A				IAmb	IAmb	00 38 40.4	
	comp=Z,19nm,0.8s						
Y57A	Sumter	53.42	349	P	P	00 38 41.6	-0.4
Y57A				IAmb	IAmb	00 38 42.8	
	comp=Z,20nm,0.9s						
GOGA	Godfrey	53.50	345	P	P	00 38 42.1	-0.5
GOGA				IAmb	IAmb	00 38 43.2	
	comp=Z,16nm,1.1s						
GOGA	Godfrey	53.50	345	P	P	00 38 42.1	-0.5
	baz=163,SNR=5.8						
Z51A	Franklin	53.84	344	P	P	00 38 44.5	-0.7
Z51A				IAmb	IAmb	00 38 45.8	
	comp=Z,12nm,0.9s						
JSC	Jenkinsville	53.85	348	IAmb	IAmb	00 38 45.9	
	comp=Z,7.9nm,0.8s						
HODGE	Hodges	54.01	347	P	P	00 38 46.0	-0.3
HODGE				IAmb	IAmb	00 38 46.8	
	comp=Z,9.0nm,0.7s						
BIRD	Birdtown, Kers	54.04	349	P	P	00 38 46.2	-0.4
Y52A	Lilburn	54.07	345	P	P	00 38 46.3	-0.5
Y52A				IAmb	IAmb	00 38 47.4	
	comp=Z,16nm,1.1s						
LRAL	Lakeview Retre	54.09	342	IAmb	IAmb	00 38 47.5	
	comp=Z,14nm,1.1s						
LRAL	Lakeview Retre	54.09	342	P	P	00 38 46.5	-0.4
	baz=159,SNR=7.0						
342A	Flagon Creek P	54.41	336	P	P	00 38 49.2	-0.1
W57A	Gilead	54.45	349	P	P	00 38 48.3	-1.3
W57A				IAmb	IAmb	00 38 50.0	
	comp=Z,11nm,0.8s						
PAULI	Pauline	54.48	347	P	P	00 38 50.0	+0.2
PAULI				IAmb	IAmb	00 38 50.7	
	comp=Z,14nm,0.6s						
Z47A	Carrollton	54.57	341	P	P	00 38 49.0	-1.4
Z47A				IAmb	IAmb	00 38 50.5	
	comp=Z,13nm,0.6s						
Y49A	Blount Mountai	54.69	343	P	P	00 38 50.6	-0.7
Y49A				IAmb	IAmb	00 38 51.6	
	comp=Z,13nm,1.0s						
KMSC	Kings Mountain	54.69	348	P	P	00 38 51.2	-0.1
KMSC				IAmb	IAmb	00 38 52.2	
	comp=Z,18nm,0.7s						
KMSC	Kings Mountain	54.69	348	P	P	00 38 51.2	-0.1
	baz=166,SNR=9.1						
BG3	Lake Jocassee	54.89	346	P	P	00 38 52.1	-0.6
BG3				IAmb	IAmb	00 38 53.8	
	comp=Z,12nm,0.9s						
V58A	Windy Hill, Pi	54.93	350	P	P	00 38 52.2	-0.8
V58A				IAmb	IAmb	00 38 53.3	
	comp=Z,13nm,1.0s						
X51A	Calhoun	54.94	344	P	P	00 38 52.6	-0.5
X51A				IAmb	IAmb	00 38 54.3	
	comp=Z,23nm,1.0s						
833A	Chaparral WMA,	55.01	327	P	P	00 38 53.9	+0.2
833A	Chaparral WMA,	55.01	327	P	P	00 38 54.7	+1.0
	baz=145,SNR=7.6						
FPAL	Fort Paine	55.11	344	P	P	00 38 53.8	-0.6
FPAL				IAmb	IAmb	00 38 54.7	
	comp=Z,14nm,1.1s						
V55A	Taylorsville	55.36	348	P	P	00 38 55.7	-0.4
X48A	Hartselle	55.43	342	P	P	00 38 55.6	-0.9
X48A				IAmb	IAmb	00 38 57.1	
	comp=Z,17nm,0.7s						
V53A	Saluda	55.51	347	P	P	00 38 56.8	-0.5
V53A				IAmb	IAmb	00 38 58.1	
	comp=Z,11nm,0.8s						
W50A	Signal Mountai	55.66	344	P	P	00 38 57.9	-0.4
W50A				IAmb	IAmb	00 38 59.0	
	comp=Z,23nm,0.9s						
U56A	King	55.69	349	P	P	00 38 58.0	-0.4
U56A				IAmb	IAmb	00 38 59.6	
	comp=Z,13nm,0.7s						
CPCT	Cooper Cave	55.70	345	P	P	00 38 57.7	-0.8
CPCT				IAmb	IAmb	00 38 59.1	
	comp=Z,12nm,0.9s						
NATX	Nacogdoches	55.70	334	P	P	00 38 58.0	-0.5
TKL	Tuckaleechee C	55.72	346	P	P	00 38 58.0	-0.6
TKL				IAmb	IAmb	00 38 59.1	
	comp=Z,19nm,0.8s						
SWET	Sewanee	55.84	344	P	P	00 38 59.0	-0.6
T59A	Double "B" Far	55.86	352	IAmb	IAmb	00 39 00.3	
	comp=Z,13nm,0.8s						
V51A	Loudon	55.99	345	P	P	00 38 59.6	-0.9
V51A				IAmb	IAmb	00 39 01.1	
	comp=Z,10nm,0.8s						
U54A	Nelsons Funny	56.12	348	P	P	00 39 01.4	-0.3
T57A	Hurt	56.13	350	P	P	00 39 01.1	-0.4
T57A				IAmb	IAmb	00 39 01.8	
	comp=Z,11nm,0.8s						

435B	Jarrell	56.15	331	P	P	00 39 01.8	0.0
435B				IAmb	IAmb	00 39 03.6	
	comp=Z,13nm,0.7s						
OXF	Oxford	56.21	340	P	P	00 39 01.5	-0.7
OXF				IAmb	IAmb	00 39 02.7	
	comp=Z,22nm,0.9s						
OXF	Oxford	56.21	340	P	P	00 39 00.9	-1.3
	baz=157						
PLAL	Pickwick Lake	56.23	342	IAmb	IAmb	00 39 02.4	
	comp=Z,12nm,0.9s						
237A	Washetta, Mont	56.39	333	P	P	00 39 03.7	+0.2
TZTN	Tazewell	56.51	346	IAmb	IAmb	00 39 04.8	
	comp=Z,14nm,0.9s						
TZTN	Tazewell	56.51	346	P	P	00 39 04.1	-0.2
	baz=164						
BLA	Blacksburg	56.53	349	P	P	00 39 03.9	-0.6
BLA				IAmb	IAmb	00 39 05.3	
	comp=Z,9.6nm,0.7s						
BLA	Blacksburg	56.53	349	P	P	00 39 04.8	+0.4
	baz=168						
V48A	Smith Brothers	56.57	343	IAmb	IAmb	00 39 05.3	
	comp=Z,21nm,0.9s						
W45A	Hickory Valley	56.73	341	P	P	00 39 05.3	-0.5
WLAR	White Oak Lake	56.77	336	P	P	00 39 07.0	+0.9
JCT	Junction City	56.97	329	P	P	00 39 06.7	-1.0
JCT				IAmb	IAmb	00 39 09.2	
	comp=Z,12nm,1.1s						
JCT	Junction City	56.97	329	P	P	00 39 08.6	+0.9
	baz=145						
U49A	Red Boiling Sp	57.02	344	IAmb	IAmb	00 39 08.1	
	comp=Z,12nm,0.6s						
WHTX	Lake Whitney,	57.11	332	P	P	00 39 08.4	-0.1
WHTX	Lake Whitney,	57.11	332	P	P	00 39 09.1	+0.5
	baz=148						
WVT	Waverly	57.22	342	P	P	00 39 08.4	-0.9
WVT	Waverly	57.22	342	P	P	00 39 08.3	-1.0
	baz=159						
S54A	Dingess, Beckl	57.27	349	P	P	00 39 09.4	-0.2
T50A	Nancy	57.27	345	IAmb	IAmb	00 39 09.8	
	comp=Z,10nm,0.8s						
X40A	Basin Creek Fa	57.38	337	P	P	00 39 11.3	+0.9
	baz=154						
R55A	Marlinton	57.53	350	P	P	00 39 11.4	-0.1
R55A				IAmb	IAmb	00 39 14.0	
	comp=Z,12nm,0.9s						
S51A	Beattyville	57.57	347	IAmb	IAmb	00 39 12.5	
	comp=Z,8.9nm,0.9s						
MIAR	Mount Ida	57.71	336	P	P	00 39 12.4	-0.3
MIAR				IAmb	IAmb	00 39 13.4	
	comp=Z,4.8nm,0.6s						
MIAR	Mount Ida	57.71	336	P	P	00 39 12.9	+0.2
	baz=153,SNR=7.2						
W41B	Gary Mavity, V	57.78	338	P	P	00 39 12.9	-0.3
W41B	Gary Mavity, V	57.78	338	P	P	00 39 13.2	+0.1
	baz=154						
T47A	Sharon Grove	57.82	343	P	P	00 39 12.8	-0.6
WHAR	Wooly Hollow	57.90	338	P	P	00 39 13.9	-0.2
R53A	Hurricane	57.90	348	P	P	00 39 13.9	-0.1
R53A				IAmb	IAmb	00 39 14.8	
	comp=Z,20nm,0.9s						
HICK	Hickman	58.02	341	P	P	00 39 14.2	-0.6
TX32	Lajitas Array	58.08	325	P	P	00 39 15.3	-0.3
TXAR	Lajitas Array	58.08	325	P	P	00 39 16.2	+0.6
	comp=Z,2.8nm,0.9s,baz=147,slow=7.8,SNR=23						
	comp=Z,2.8nm,0.9s						
TXAR	Lajitas Array	58.08	325	P	P	00 39 15.6	0.0
TX31	Lajitas Ar. Si	58.08	325	P	P	00 39 15.7	+0.2
TX31				IAmb	IAmb	00 39 17.2	
	comp=Z,9.6nm,0.9s						
Z35A	Perchaven, San	58.16	333	P	P	00 39 15.9	0.0
LCAR	Lake Charles	58.21	339	P	P	00 39 15.6	-0.5
LCAR				IAmb	IAmb	00 39 16.6	
	comp=Z,9.1nm,0.8s						
Q54A	Coxs Mills	58.33	349	P	P	00 39 16.9	-0.1
Q54A				IAmb	IAmb	00 39 17.8	
	comp=Z,17nm,1.0s						
R50A	Paris	58.35	346	P	P	00 39 16.6	-0.6
R50A				IAmb	IAmb	00 39 17.6	
	comp=Z,12nm,0.8s						
W39A	Magazine	58.36	337	P	P	00 39 17.1	-0.2
W39A				IAmb	IAmb	00 39 19.0	
	comp=Z,8.0nm,0.8s						
W39A	Magazine	58.36	337	P	P	00 39 17.9	+0.6
	baz=153						
FCAR	Ozark Folk Cen	58.38	338	P	P	00 39 16.7	-0.7
FCAR				IAmb	IAmb	00 39 17.7	
	comp=Z,6.3nm,0.8s						
P57A	Homestead Farm	58.39	352	P	P	00 39 17.3	-0.1
P57A				IAmb	IAmb	00 39 18.7	
	comp=Z,9.0nm,0.8s						
X37A	Clayton	58.45	335		P	00 39 18.2	+0.4
X37A				IAmb	IAmb	00 39 19.9	
	comp=Z,20nm,1.1s						
R49A	Shelbyville	58.56	345	P	P	00 39 18.0	-0.6
R49A				IAmb	IAmb	00 39 19.2	
	comp=Z,12nm,1.1s						
WUPA	West Chester U	58.57	354	P	P	00 39 17.9	-0.7
WUPA				IAmb	IAmb	00 39 19.0	
	comp=Z,7.7nm,0.7s						
Q52A	Bidwell	58.57	348	P	P	00 39 18.4	-0.3
Q52A				IAmb	IAmb	00 39 19.4	
	comp=Z,18nm,1.0s						
PBMO	Poplar Bluff	58.62	340	IAmb	IAmb	00 39 19.5	
	comp=Z,19nm,0.8s						
ABTX	Abilene, Hawle	58.65	330	P	P	00 39 19.6	+0.2
ABTX				IAmb	IAmb	00 39 21.0	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	58.65	330	P	P	00 39 20.0	+0.6
	baz=146						
MVL	Millersville	58.71	354	P	P	00 39 19.2	-0.3
MVL				IAmb	IAmb	00 39 20.3	
	comp=Z,11nm,0.7s						
MCWV	Mont Chateau	58.83	351	P	P	00 39 20.2	-0.2
MCWV	Mont Chateau	58.83	351	P	P	00 39 20.8	+0.4
	baz=168,SNR=5.6						
Q51A	Peebles	58.85	347	P	P	00 39 19.9	-0.7
Q51A				IAmb	IAmb	00 39 21.1	
	comp=Z,12nm,0.9s						
U40A	Yellville	59.05	338	IAmb	IAmb	00 39 22.8	
	comp=Z,9.6nm,0.8s						
U40A	Yellville	59.05	338	P	P	00 39 21.8	-0.3
	baz=154,SNR=9.5						
P52A	Corning	59.20	349	IAmb	IAmb	00 39 23.4	
	comp=Z,17nm,0.9s						
P52A	Corning	59.20	349	P	P	00 39 22.6	-0.4
	baz=166						
P51A	Williamsport	59.23	348	P	P	00 39 22.5	-0.7
P51A				IAmb	IAmb	00 39 23.4	
	comp=Z,14nm,0.9s						
HHAR	Hobbs	59.38	337	P	P	00 39 23.9	-0.5
HHAR				IAmb	IAmb	00 39 25.8	
	comp=Z,11nm,1.2s						
X34A	Smith Ranch, M	59.49	333		P	00 39 25.4	+0.3
PAL	Palisades	59.50	356	P	P	00 39 24.4	-0.5
	baz=175						
SSPA	Standing Stone	59.51	352	P	P	00 39 24.9	-0.2
	baz=171						
MGMO	Mountain Grove	59.57	339	P	P	00 39 25.0	-0.6
MGMO				IAmb	IAmb	00 39 26.4	
	comp=Z,16nm,1.1s						
N58A	Sunbury	59.58	354	IAmb	IAmb	00 39 26.3	
	comp=Z,14nm,0.8s						
O52A	Adamsville	59.61	349	IAmb	IAmb	00 39 26.1	
	comp=Z,12nm,0.8s						
O53A	New Philadelph	59.63	349	P	P	00 39 25.4	-0.5
O53A	New Philadelph	59.63	349	P	P	00 39 25.2	-0.7
	baz=167						
P49A	Miami Univ. Ec	59.64	346	P	P	00 39 24.9	-1.0
	baz=163,SNR=5.5						
P48A	Milroy	59.73	346	P	P	00 39 25.4	-1.3
P48A				IAmb	IAmb	00 39 26.2	
	comp=Z,14nm,0.9s						
TUL1	Leonard	59.77	335	P	P	00 39 27.2	+0.2
TUL1				IAmb	IAmb	00 39 28.3	
	comp=Z,18nm,1.1s						
TUL1	Leonard	59.77	335	P	P	00 39 26.9	0.0
	baz=151						
FNO	Franklin	59.86	334		P	00 39 27.8	+0.2
FNO				IAmb	IAmb	00 39 28.7	
	comp=Z,16nm,0.8s						
ACSO	Alum Creek Sta	59.94	348	P	P	00 39 27.5	-0.6
	baz=165,SNR=7.5						
WMOK	Wichita Mounta	60.02	332	P	P	00 39 28.5	-0.3
	baz=148						
CCM	Cathedral Cave	60.04	340	P	P	00 39 28.8	0.0
CCM				IAmb	IAmb	00 39 29.9	
	comp=Z,12nm,0.7s						
CCM	Cathedral Cave	60.04	340	P	P	00 39 28.3	-0.5
	baz=156						
N53A	Lisbon	60.11	350	P	P	00 39 28.7	-0.5
M57A	Sunshine Farm,	60.12	353	P	P	00 39 29.3	+0.1
M57A				IAmb	IAmb	00 39 30.4	
	comp=Z,20nm,1.1s						
O49A	Covington	60.18	347	IAmb	IAmb	00 39 29.8	
	comp=Z,19nm,1.0s						
BRYW	Bryant College	60.29	358	P	P	00 39 29.8	-0.7
P46A	Rosedale	60.32	344	P	P	00 39 29.1	-1.5
P46A				IAmb	IAmb	00 39 30.6	
	comp=Z,13nm,1.0s						
S39A	Bolivar	60.41	338	IAmb	IAmb	00 39 32.1	
	comp=Z,13nm,0.8s						
O48B	Farmland	60.43	346	P	P	00 39 30.5	-0.8
	baz=163						
M55A	Ridgway	60.45	352	IAmb	IAmb	00 39 32.4	
	comp=Z,12nm,0.8s						
N51A	Ashland	60.49	349	P	P	00 39 30.7	-1.1
N51A				IAmb	IAmb	00 39 32.2	
	comp=Z,16nm,0.9s						
R40A	Maddies Statio	60.59	339	IAmb	IAmb	00 39 33.0	
	comp=Z,8.2nm,0.8s						
M53A	WI Miller and	60.70	350	P	P	00 39 32.7	-0.5
M53A	WI Miller and	60.70	350	P	P	00 39 33.1	-0.1
	baz=168,SNR=5.3						
L59A	Walton	60.76	355	P	P	00 39 33.2	-0.5
L59A				IAmb	IAmb	00 39 34.6	
	comp=Z,18nm,0.9s						
ALLY	Alegheny Colle	60.82	351	P	P	00 39 33.5	-0.5
MNTX	Cornudas Mount	60.84	325	P	P	00 39 34.3	0.0
MNTX	Cornudas Mount	60.84	325	P	P	00 39 34.2	-0.2
	baz=140,SNR=16						
BINY	Binghamton	60.85	354	IAmb	IAmb	00 39 35.3	
	comp=Z,19nm,0.8s						
BINY	Binghamton	60.85	354	P	P	00 39 34.3	0.0
	baz=173,SNR=5.3						
L61B	Northampton	60.87	357	P	P	00 39 33.7	-0.7
	baz=176						
HRV	Adam Dziewonsk	60.88	358	P	P	00 39 34.4	0.0
HRV				IAmb	IAmb	00 39 36.1	
	comp=Z,16nm,0.8s						
HRV	Adam Dziewonsk	60.88	358	P	P	00 39 34.3	-0.1
	baz=178						
M52A	Chesterland	60.91	350	P	P	00 39 34.0	-0.6
M52A				IAmb	IAmb	00 39 35.4	
	comp=Z,19nm,1.0s						
T35A	Sooner Cattle	60.93	335	P	P	00 39 34.4	-0.5
T35A				IAmb	IAmb	00 39 36.9	
	comp=Z,18nm,1.1s						
L56A	Greenwood	60.95	353	IAmb	IAmb	00 39 35.7	
	comp=Z,12nm,0.7s						
SFIN	Lafayette	61.01	345	P	P	00 39 34.0	-1.3
	baz=161						
M50A	Fremont	61.08	348	P	P	00 39 35.0	-0.8
N47A	Urbana	61.14	346	IAmb	IAmb	00 39 35.7	
	comp=Z,17nm,0.8s						
O44A	Mansfield	61.16	343	P	P	00 39 34.6	-1.7
TRY	Troy	61.20	356	P	P	00 39 35.9	-0.6
TRY				IAmb	IAmb	00 39 37.7	
	comp=Z,19nm,0.9s						
ERPA	Erie	61.26	351	P	P	00 39 36.8	-0.2
ERPA	Erie	61.26	351	P	P	00 39 36.5	-0.4
	baz=169						
MSTX	Muleshoe	61.26	329	P	P	00 39 36.8	-0.5
MSTX				IAmb	IAmb	00 39 38.5	
	comp=Z,22nm,0.9s						
MSTX	Muleshoe	61.26	329	P	P	00 39 37.4	+0.1
	baz=144,SNR=8.6						
WVNY	West Valley, N	61.35	352	IAmb	IAmb	00 39 38.6	
	comp=Z,14nm,0.8s						
K57A	Scipio Center	61.43	354	P	P	00 39 38.2	+0.1
K57A				IAmb	IAmb	00 39 38.6	
	comp=Z,12nm,0.8s						
AMTX	Amarillo	61.47	330	P	P	00 39 38.1	-0.5
	baz=145						
BELA	Belgrano 2	61.61	172	P	P	00 39 39.8	+0.8
P40A	Paris	61.64	340	IAmb	IAmb	00 39 40.2	
	comp=Z,13nm,0.8s						
HDIL	Hopedale	61.76	343	P	P	00 39 39.4	-0.9
	baz=159,SNR=5.2						
J59A	Piesco	61.99	356	P	P	00 39 41.7	-0.1
J59A				IAmb	IAmb	00 39 43.0	
	comp=Z,12nm,0.9s						
J56A	Wolcott	62.00	354	P	P	00 39 41.0	-0.9
J56A				IAmb	IAmb	00 39 42.4	
	comp=Z,11nm,0.8s						
HSIG		62.13	319	P	P	00 39 42.5	-0.6
HSIG				IAmb	IAmb	00 39 46.3	
	comp=Z,8.1nm,1.1s						
M44A	Midewin, Midew	62.20	344	P	P	00 39 41.6	-1.7
M44A				IAmb	IAmb	00 39 42.4	
	comp=Z,9.8nm,0.7s						
P38A	Dawn	62.22	339	IAmb	IAmb	00 39 44.1	
	comp=Z,9.5nm,0.7s						
L46A	Eue Claire	62.36	346	P	P	00 39 42.8	-1.5
LBNH	Lisbon	62.62	358	P	P	00 39 46.3	+0.3
	baz=177						
121A	Cookes Peak, D	62.80	324	P	P	00 39 48.1	+0.5
121A				IAmb	IAmb	00 39 49.9	
	comp=Z,7.2nm,0.7s						
121A	Cookes Peak, D	62.80	324	P	P	00 39 49.3	+1.6
	baz=139,SNR=7.1						
319A	Douglas	62.80	322	P	P	00 39 47.7	+0.1
319A				IAmb	IAmb	00 39 50.2	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	62.86	336	P	P	00 39 47.8	0.0
KSU1				IAmb	IAmb	00 39 48.7	
	comp=Z,24nm,0.9s						
KSU1	Kansas State U	62.86	336	P	P	00 39 47.6	-0.2
	baz=151						
VNA3	Neumayer Olymp	62.89	162	P	P	00 39 48.8	+1.2
L44A	Lake County Fo	62.91	345	P	P	00 39 46.2	-1.8
L44A				IAmb	IAmb	00 39 47.9	
	comp=Z,18nm,0.8s						
L44A	Lake County Fo	62.91	345	P	P	00 39 47.0	-0.9
	baz=160						
VNA1	Neumayer--Stat	63.09	161	P	P	00 39 50.8	+1.9
VNA1	Neumayer--Stat	63.09	161	PcP	PcP	00 40 27.6	+2.1
R32A	Long Quarter,	63.11	334	P	P	00 39 49.6	+0.2
R32A				IAmb	IAmb	00 39 50.9	
	comp=Z,21nm,0.8s						
LONY	Lake Ozonia	63.14	356	P	P	00 39 49.5	0.0
	baz=174						
N38A	Joes South For	63.17	340	P	P	00 39 49.1	-0.6
J47A	Sunmer	63.20	347	P	P	00 39 49.4	-0.5
FRNY	Flat Rock	63.29	357	P	P	00 39 50.3	-0.2
FRNY				IAmb	IAmb	00 39 51.0	
	comp=Z,9.2nm,0.9s						
BNM	Barren Site	63.38	326	P	P	00 39 52.3	+0.7
VNA2	Neumayer--Watz	63.46	161	P	P	00 39 52.3	+1.0
	baz=303,slow=7.0						
VNA2	Neumayer--Watz	63.46	161	pP	pP	00 40 24.1	+2.5
G65A	Princeton	63.56	1	P	P	00 39 52.0	-0.2
G65A				IAmb	IAmb	00 39 53.1	
	comp=Z,13nm,0.7s						
G62A	West of Eustis	63.57	359	P	P	00 39 52.0	-0.3
G62A				IAmb	IAmb	00 39 53.8	
	comp=Z,18nm,0.8s						
PKME	Peaks-Kenny Pk	63.60	0	P	P	00 39 52.1	-0.4
	baz=180						
L40A	Anamosa	63.70	342	IAmb	IAmb	00 39 54.2	
	comp=Z,20nm,0.9s						
CBKS	Cedar Bluff	63.87	334	P	P	00 39 54.6	+0.2
CBKS	Cedar Bluff	63.87	334	P	P	00 39 54.9	+0.5
	baz=148						
ANMO	Albuquerque	63.91	326	P	P	00 39 54.8	-0.2
ANMO	Albuquerque	63.91	326	P	P	00 39 56.1	+1.1
	baz=141						
MNTQ	Montreal, Queb	63.96	357	P	P	00 39 55.1	+0.3
MNTQ				IAmb	IAmb	00 39 55.9	
	comp=Z,22nm,0.8s						
N35A	Tabor	64.05	338	P	P	00 39 55.6	0.0
N35A				IAmb	IAmb	00 39 56.4	
	comp=Z,24nm,0.9s						
SCIA	State Center	64.17	340	P	P	00 39 55.4	-0.9
JFWS	Jewell Farm	64.21	343	P	P	00 39 56.0	-0.6
JFWS	Jewell Farm	64.21	343	P	P	00 39 56.2	-0.3
	baz=158,SNR=9.4						
LMN	Caledonia Moun	64.32	4	P	P	00 39 57.0	-0.2
LMN				IAmb	IAmb	00 39 57.6	
	comp=Z,27nm,1.1s						
TUC	Tucson	64.36	322	P	P	00 39 58.2	+0.4
TUC	Tucson	64.36	322	P	P	00 39 58.9	+1.1
	baz=136						
T25A	Trinidad	64.59	329	P	P	00 39 59.3	-0.1
T25A	Trinidad	64.59	329	P	P	00 40 00.7	+1.3
	baz=143,SNR=5.3						
N33A	J Bar K, Exete	64.61	337	P	P	00 39 58.3	-0.8
GLMI	Grayling	64.69	348	P	P	00 39 58.8	-0.8
	baz=164						
K38A	Parkersburg	64.70	341	IAmb	IAmb	00 40 00.2	
	comp=Z,14nm,0.8s						
TRQ	Mont Tremblant	64.73	356	IAmb	IAmb	00 40 00.6	
	comp=Z,9.8nm,0.7s						
H43A	Windswept, Lux	65.03	346	P	P	00 40 01.5	-0.3
SNAA	Sanae	65.09	161	P	P	00 40 03.2	+1.2
SNAA	Sanae	65.09	161	P	P	00 40 03.3	+1.2
	comp=Z,6.3nm,0.6s,baz=285,slow=7.3,SNR=24						
	comp=Z,6.3nm,0.6s						
SNAA	Sanae	65.09	161	P	P	00 40 02.8	+0.8
SNAA				IAmb	IAmb	00 40 04.3	
	comp=Z,9.6nm,0.8s						
I40A	Norwalk	65.22	343	IAmb	IAmb	00 40 03.7	
	comp=Z,22nm,1.1s						
KSCO	Kaye Shedlock'	65.28	332	P	P	00 40 03.5	-0.3
KSCO				IAmb	IAmb	00 40 05.7	
	comp=Z,18nm,0.8s						
KSCO	Kaye Shedlock'	65.28	332	P	P	00 40 04.8	+1.1
	baz=145						
214A	Organ Pipe Nat	65.32	320	P	P	00 40 05.0	+1.0
214A				IAmb	IAmb	00 40 07.1	
	comp=Z,9.4nm,0.8s						
214A	Organ Pipe Nat	65.32	320	P	P	00 40 06.0	+2.0
	baz=134,SNR=5.9						
D62A	Allapoint, All	65.42	0	P	P	00 40 04.3	+0.1
D62A				IAmb	IAmb	00 40 05.8	
	comp=Z,17nm,1.1s						
BGNE	Belgrade	65.45	337	P	P	00 40 04.9	+0.3
	baz=150						
X18A	Snowflake	65.48	324	P	P	00 40 03.8	-1.5
SDCO	Great Sand Dun	65.60	329	P	P	00 40 06.8	+0.8
SDCO				IAmb	IAmb	00 40 08.3	
	comp=Z,11nm,0.7s						
SDCO	Great Sand Dun	65.60	329	P	P	00 40 07.3	+1.3
	baz=142,SNR=22						
W18A	Petrified Fore	65.80	324	P	P	00 40 06.9	-0.3
W18A				IAmb	IAmb	00 40 09.3	
	comp=Z,5.9nm,0.7s						
W18A	Petrified Fore	65.80	324	P	P	00 40 08.7	+1.4
	baz=138,SNR=5.9						
E46A	Sault Ste Mari	66.11	349	P	P	00 40 07.9	-0.8
I37A	Lemond, Waseca	66.14	341	P	P	00 40 08.1	-0.8
S22A	4UR Ranch, Cre	66.26	328	P	P	00 40 11.0	+0.7
S22A	4UR Ranch, Cre	66.26	328	P	P	00 40 11.2	+1.0
	baz=141,SNR=8.2						
Q24A	Divide	66.40	330	P	P	00 40 10.9	-0.2
Q24A				IAmb	IAmb	00 40 13.3	
	comp=Z,11nm,0.8s						
Q24A	Divide	66.40	330	P	P	00 40 12.1	+1.0
	baz=143,SNR=7.9						
113A	Mohawk Valley,	66.47	320	P	P	00 40 11.4	+0.1
E43A	Lone Tree Farm	66.66	347	P	P	00 40 11.5	-0.7
E43A				IAmb	IAmb	00 40 12.6	
	comp=Z,17nm,0.7s						
MVCO	Mesa Verde	66.70	327	P	P	00 40 13.1	+0.1
MVCO				IAmb	IAmb	00 40 15.2	
	comp=Z,9.0nm,0.7s						
MVCO	Mesa Verde	66.70	327	P	P	00 40 14.2	+1.2
	baz=140,SNR=7.9						
K31A	O'Neill	66.72	337	P	P	00 40 12.9	+0.2
K31A				IAmb	IAmb	00 40 14.9	
	comp=Z,19nm,0.7s						
TROLL	Troll, Antarti	66.81	161	P	P	00 40 14.5	+1.3
Y14A	Wickenburg	66.82	321	P	P	00 40 13.1	-0.5
VLDQ	Val d'Or	66.85	354	IAmb	IAmb	00 40 14.6	
	comp=Z,7.2nm,0.7s						
COWI	Conover	66.89	345	P	P	00 40 12.7	-1.1
COWI				IAmb	IAmb	00 40 14.0	
	comp=Z,7.1nm,0.7s						
ECSD	EROS Data Cent	66.93	339	P	P	00 40 14.1	+0.1
	baz=152,SNR=7.1						
WUAZ	Wupatki	67.00	324	P	P	00 40 14.7	-0.2
WUAZ				IAmb	IAmb	00 40 17.9	
	comp=Z,9.2nm,0.9s						
WUAZ	Wupatki	67.00	324	P	P	00 40 16.7	+1.8
	baz=137,SNR=6.4						
SPMN	Marine on St.	67.06	342	P	P	00 40 13.8	-0.9
SPMN				IAmb	IAmb	00 40 15.9	
	comp=Z,22nm,1.0s						
SPMN	Marine on St.	67.06	342	P	P	00 40 14.5	-0.3
	baz=156,SNR=7.3						
ISCO	Idaho Springs	67.28	330	P	P	00 40 16.2	-0.5
ISCO				IAmb	IAmb	00 40 18.9	
	comp=Z,7.6nm,0.8s						
ISCO	Idaho Springs	67.28	330	P	P	00 40 17.9	+1.2
	baz=143,SNR=12						
SMCO	Snowmass	67.44	329	P	P	00 40 17.6	-0.2
SMCO				IAmb	IAmb	00 40 20.4	
	comp=Z,9.5nm,0.7s						
PV15	Paradox Valley	67.55	328	P	P	00 40 19.7	+1.3
PV15				IAmb	IAmb	00 40 21.1	
	comp=Z,15nm,0.8s						
PV13	Radium Mtn., P	67.58	327	P	P	00 40 19.1	+0.5
BLYC	Blythe	67.60	320	P	P	00 40 18.9	+0.4
PV07	Paradox Valley	67.71	327	P	P	00 40 19.2	-0.1
PDMCI	Parker Dam,Lak	67.75	321	P	P	00 40 20.9	+1.6
	baz=134						
IKP	In-Ko-Pah, Jac	67.84	318	P	P	00 40 22.1	+2.0
	baz=132						
F36A	Milaca	67.85	342	P	P	00 40 19.2	-0.5
F36A				IAmb	IAmb	00 40 21.1	
	comp=Z,14nm,1.1s						
E38A	The Farm, Brul	67.98	344	P	P	00 40 20.2	-0.3
E38A				IAmb	IAmb	00 40 21.7	
	comp=Z,17nm,1.0s						
LIC	Lamto	68.02	75	*e*P	P	00 40 20.7	-0.8
	comp=Z,43nm,1.7s						
BC3	Big Chuckawall	68.10	320	P	P	00 40 23.7	+1.9
	baz=133						
W13A	Hualapai Mount	68.15	322	P	P	00 40 22.6	+0.4
U15A	North Rim	68.17	324	P	P	00 40 22.9	+0.5
U15A				IAmb	IAmb	00 40 25.6	
	comp=Z,11nm,1.0s						
TIC	Toumodi	68.19	75	*e*P	P	00 40 21.3	-1.3
	comp=Z,57nm,1.1s						
IRM	Iron Mountain	68.26	320	P	P	00 40 23.7	+1.1
	baz=133						
N23A	Red Feather La	68.30	331	P	P	00 40 22.8	-0.3
N23A				IAmb	IAmb	00 40 25.2	
	comp=Z,9.3nm,0.8s						
N23A	Red Feather La	68.30	331	P	P	00 40 24.4	+1.3
	baz=143,SNR=9.2						
KIC	Kosan Boka	68.33	75	*e*P	P	00 40 22.4	-1.1
	comp=Z,35nm,0.6s						
DBIC	Dimbokro	68.34	75	P	P	00 40 22.6	-1.0
	comp=Z,23nm,0.7s,baz=250,slow=5.7,SNR=21						
	comp=Z,23nm,0.7s						
DBIC	Dimbokro	68.34	75	P	P	00 40 22.5	-1.0
PHWY	Pilot Hill	68.40	331	P	P	00 40 23.1	-0.5
F33A	5 Mile Ranch,	68.68	340	IAmb	IAmb	00 40 25.6	
	comp=Z,12nm,0.7s						
PFO	Pinyon Flats O	68.70	319	P	P	00 40 25.5	0.0
	baz=132						
O20A	White River Ci	68.80	329	P	P	00 40 26.3	+0.2
O20A				IAmb	IAmb	00 40 28.5	
	comp=Z,11nm,0.9s						
O20A	White River Ci	68.80	329	P	P	00 40 27.5	+1.4
	baz=140,SNR=6.1						
GMRC	Granite Mounta	68.99	320	P	P	00 40 29.3	+2.0
	baz=133,SNR=8.1						
LCMT	Little Creek M	69.13	324	P	P	00 40 28.7	+0.6
SRU	San Rafael Swe	69.18	327	P	P	00 40 29.1	+0.7
SRU				IAmb	IAmb	00 40 30.6	
	comp=Z,9.7nm,0.7s						
EYMN	Ely	69.20	344	IAmb	IAmb	00 40 28.7	
	comp=Z,12nm,0.8s						
EYMN	Ely	69.20	344	P	P	00 40 27.8	-0.3
	baz=158						
MTPU	Mount Pierson	69.28	325	P	P	00 40 29.6	+0.3
Q16A	Castle Valley	69.37	326	P	P	00 40 30.6	+0.9
P18A	Preston Nutter	69.42	327	P	P	00 40 31.1	+1.1
P18A				IAmb	IAmb	00 40 32.6	
	comp=Z,9.7nm,0.7s						
HEC	Hector,Ludlow	69.43	320	P	P	00 40 31.5	+1.5
	baz=132						
SZCU	Shurtz Canyon	69.45	324	P	P	00 40 30.4	+0.2
RWWY	Rawlins	69.51	331	P	P	00 40 30.4	-0.1
P17A	Butcher Ranch,	69.56	327	P	P	00 40 31.3	+0.6
P17A				IAmb	IAmb	00 40 33.1	
	comp=Z,12nm,0.8s						

CCUT	Cedar City	69.58	324	P	P	00 40 32.5	+1.6
CCUT				IAmb	IAmb	00 40 34.6	
	comp=Z,12nm,0.8s						
MSU	Marysvale	69.61	325	P	P	00 40 32.5	+1.3
TMUT	Trail Mountain	69.67	326	P	P	00 40 32.8	+1.2
RDMU	Red Mountain	69.79	328	P	P	00 40 32.8	+0.6
RDMU				IAmb	IAmb	00 40 34.2	
	comp=Z,11nm,0.8s						
TCRU	Three Creeks R	69.83	325	P	P	00 40 33.6	+1.0
TCRU				IAmb	IAmb	00 40 35.5	
	comp=Z,9.0nm,0.8s						
SHPR	Sheep Range	69.87	322	P	P	00 40 32.6	-0.1
K22A	Casper	69.96	332	P	P	00 40 33.0	-0.1
K22A				IAmb	IAmb	00 40 35.2	
	comp=Z,8.7nm,0.8s						
K22A	Casper	69.96	332	P	P	00 40 34.1	+1.1
	baz=143						
GSC	Goldstone, Bar	70.04	320	P	P	00 40 35.3	+1.6
	baz=132						
RSSD	Black Hills	70.07	334	P	P	00 40 34.6	+0.8
RSSD				IAmb	IAmb	00 40 35.8	
	comp=Z,9.4nm,0.8s						
RSSD	Black Hills	70.07	334	P	P	00 40 34.8	+1.0
	baz=145						
B35A	Bob, Littlefor	70.18	343	IAmb	IAmb	00 40 34.3	
	comp=Z,12nm,0.6s						
MPU	Maple Canyon	70.42	327	P	P	00 40 36.2	+0.2
PRN	Pahroc Range	70.43	323	P	P	00 40 36.1	0.0
QSM	Queen of Sheba	70.52	321	P	P	00 40 37.0	+0.5
GWY	Greenwater Val	70.55	321	P	P	00 40 37.3	+0.5
PSUT	Pine Spring	70.55	324	P	P	00 40 37.5	+0.7
PSUT				IAmb	IAmb	00 40 39.8	
	comp=Z,8.9nm,0.8s						
NLU	North Lily Min	70.61	326	P	P	00 40 37.9	+0.7
AGMN	Agassiz Nation	70.74	342	P	P	00 40 35.9	-1.6
AGMN				IAmb	IAmb	00 40 38.0	
	comp=Z,9.4nm,0.6s						
AGMN	Agassiz Nation	70.74	342	P	P	00 40 37.5	0.0
	baz=154,SNR=9.8						
JLU	Jordanelle	70.76	327	P	P	00 40 38.4	+0.3
JLU				IAmb	IAmb	00 40 40.8	
	comp=Z,8.5nm,0.7s						
TPNV	Topopah Spring	70.81	322	P	P	00 40 38.1	-0.3
TPNV	Topopah Spring	70.81	322	P	P	00 40 40.4	+2.0
	baz=133,SNR=6.2						
FURC	Furnace Creek,	70.85	321	P	P	00 40 40.2	+1.8
	baz=132						
S11A	Rachel	70.99	323	P	P	00 40 39.8	+0.3
DUG	Dugway, Tooele	71.17	326	P	P	00 40 40.9	+0.4
DUG	Dugway, Tooele	71.17	326	P	P	00 40 42.2	+1.7
	baz=137,SNR=10						
SBC	Santa Barbara	71.29	318	P	P	00 40 42.1	+1.0
	baz=130						
ISA	Isabella, Lake	71.30	319	P	P	00 40 42.3	+1.0
ISA	Isabella, Lake	71.30	319	P	P	00 40 43.3	+2.1
	baz=131						
R11A	Troy Canyon, C	71.39	323	P	P	00 40 41.7	-0.2
R11A	Troy Canyon, C	71.39	323	P	P	00 40 44.2	+2.3
	baz=134,SNR=9.7						
BW06	Boulder Array	71.45	330	P	P	00 40 42.6	+0.3
	baz=140,SNR=5.0						
PDAR	Pinedale Array	71.45	330	P	P	00 40 42.9	+0.6
	comp=Z,1.5nm,0.5s,baz=128,slow=7.9,SNR=19						
	comp=Z,1.5nm,0.5s						
QSPA	South Pole Qui	71.53	180	P	P	00 40 44.1	+1.8
	comp=Z,8.7nm,0.5s,baz=330,slow=0.7,SNR=128						
	comp=Z,8.7nm,0.5s						
QSPA	South Pole Qui	71.53	180		P	00 40 43.9	+1.6
QSPA				IAmb	IAmb	00 40 44.7	
	comp=Z,11nm,0.6s						
MDND	Maddock	71.54	339	P	P	00 40 43.2	+0.9
MDND	Maddock	71.54	339	P	P	00 40 43.0	+0.7
	baz=150						
HWUT	Hardware Ranch	71.56	328	P	P	00 40 43.2	+0.4
PKM	Mcpherson Peak	71.63	318	P	P	00 40 45.2	+1.7
	baz=130						
BGU	Big Grassy Mou	71.81	327	P	P	00 40 45.7	+1.3
LCH	Last Change Ra	71.83	321	P	P	00 40 43.4	-1.1
TPH	Tonopah	72.14	322	P	P	00 40 46.0	-0.5
TPH				IAmb	IAmb	00 40 49.5	
	comp=Z,34nm,1.1s						
AHID	Auburn Hatcher	72.19	329	P	P	00 40 46.6	0.0
KOWA	Kowa	72.28	68	P	P	00 40 45.8	-1.6
KOWA				IAmb	IAmb	00 40 47.4	
	comp=Z,13nm,0.8s						
HVU	Hansel Valley	72.30	327	P	P	00 40 47.4	+0.1
ULM	Lac du Bonnet	72.49	342	P	P	00 40 47.8	-0.2
	comp=Z,14nm,0.6s,baz=156,slow=6.0,SNR=21						
	comp=Z,14nm,0.6s						
ULM	Lac du Bonnet	72.49	342	P	P	00 40 47.1	-0.8
ULM				IAmb	IAmb	00 40 48.6	
	comp=Z,15nm,0.7s						
REDW	Red Top Meadow	72.52	330	P	P	00 40 48.0	-0.6
LOHW	Long Hollow	72.59	330	P	P	00 40 48.8	-0.2
TPAW	Teton Pass	72.67	330	P	P	00 40 49.3	-0.2
MOOW	Moose Ponds	72.76	330	P	P	00 40 50.0	0.0
ELK	Elko	72.86	325	P	P	00 40 50.5	-0.2
OMMB	Old Mammoth Mi	72.89	321	P	P	00 40 50.5	-0.5
NV11	Mina Array Sit	72.93	322	P	P	00 40 51.0	0.0
MDPB	Devils Postpil	72.95	321	P	P	00 40 51.0	-0.3
FLWY	Flagg Ranch	72.99	330	P	P	00 40 52.0	+0.7
FLWY				IAmb	IAmb	00 40 54.1	
	comp=Z,17nm,0.8s						
LHV	Little Huntoon	73.01	321	P	P	00 40 50.8	-0.5
NVAR	Mina Array Bea	73.01	322	P	P	00 40 53.5	+1.9
	comp=Z,2.6nm,0.9s,baz=148,slow=7.7,SNR=8.3						
NVAR				pP	pP	00 41 24.4	+2.1
	comp=Z,1.6nm,0.8s,baz=150,slow=7.3,SNR=2.5						
	comp=Z,2.6nm,0.9s						
NVAR	Mina Array Bea	73.01	322	P	P	00 40 51.5	-0.1
LAO	LASA Array	73.05	334	P	P	00 40 51.2	-0.3
LAO	LASA Array	73.05	334	P	P	00 40 52.3	+0.8
	baz=144						
RLMT	Red Lodge	73.12	332	P	P	00 40 52.0	-0.1
RLMT				IAmb	IAmb	00 40 54.5	
	comp=Z,9.7nm,0.7s						
RLMT	Red Lodge	73.12	332	P	P	00 40 53.5	+1.4
	baz=141,SNR=11						
H17A	Grant Village	73.17	330	P	P	00 40 54.7	+2.2
	baz=139						
SCHQ	Schefferville	73.22	2	P	P	00 40 51.8	-0.4
	comp=Z,4.3nm,0.7s,baz=192,slow=3.6,SNR=7.7						
	comp=Z,4.3nm,0.7s						
RYN	Ryan	73.27	322	P	P	00 40 52.5	-0.6
KVN	Kaiserville	73.31	322	P	P	00 40 52.6	-0.7
YNR	Norris Junctio	73.46	331	P	P	00 40 54.1	0.0
YNR				IAmb	IAmb	00 40 57.1	
	comp=Z,8.8nm,0.6s						
YMR	Madison River	73.56	330	P	P	00 40 55.2	+0.6
YMR				IAmb	IAmb	00 40 58.4	
	comp=Z,13nm,1.0s						
DGMT	Dagmar	73.71	337	P	P	00 40 56.4	+1.1
	baz=146						
YHL	Hebgen Lake	73.80	330	P	P	00 40 56.8	+0.6
YHL				IAmb	IAmb	00 40 59.3	
	comp=Z,8.5nm,0.7s						
GCMT	Greycliff	73.82	332	P	P	00 40 56.2	+0.1
YERR	Yerington	73.93	322	P	P	00 40 56.8	-0.2
HLID	Hailey	74.43	328	P	P	00 41 00.4	+0.7
HLID	Hailey	74.43	328	P	P	00 41 01.6	+1.9
	baz=136,SNR=27						
BCYI	Bear Canyon	74.46	329	P	P	00 41 00.6	+0.7
PAHR	Pah Rah Range	74.49	322	P	P	00 41 01.1	+1.0
PAHR				IAmb	IAmb	00 41 03.3	
	comp=Z,13nm,0.8s						
BOZ	Bozeman (W)	74.57	331	P	P	00 41 01.2	+0.8
BOZ	Bozeman (W)	74.57	331	P	P	00 41 01.8	+1.4
	baz=139,SNR=8.3						
MCMT	McKenzie Canyo	74.57	329	P	P	00 41 02.1	+1.5
DLMT	Dillon	74.85	330	P	P	00 41 02.1	+0.1
MFID	Camas Ranch	75.05	327	P	P	00 41 03.4	+0.2
MFID				IAmb	IAmb	00 41 06.3	
	comp=Z,13nm,1.0s						
LRM	Limekiln Ridge	75.12	330	P	P	00 41 04.4	+0.7
BEKR	Beckworth	75.16	322	P	P	00 41 03.7	-0.3
HRY	Holter Researc	75.50	331	P	P	00 41 06.0	+0.3
EGMT	Eagleton	75.58	333	P	P	00 41 05.1	-1.0
EGMT	Eagleton	75.58	333	P	P	00 41 07.1	+1.0
	baz=141,SNR=6.1						
ORV	Oroville	75.64	321	P	P	00 41 06.6	+0.1
PLID	Pearl Lake	76.31	328	P	P	00 41 11.0	+0.5
PLID				IAmb	IAmb	00 41 12.9	
	comp=Z,13nm,0.8s						
J08A	Circle Bar Ran	76.41	325	P	P	00 41 11.7	+0.8
MOD	Modoc Plateau	76.45	323	P	P	00 41 11.1	-0.2
MSO	Missoula	76.56	330	P	P	00 41 11.8	0.0
MSO	Missoula	76.56	330	P	P	00 41 13.1	+1.4
	baz=137						
TORD	Torodi Ar. Bea	76.80	71	P	P	00 41 12.3	-1.4
	comp=Z,7.0nm,0.5s,baz=247,slow=4.8,SNR=114						
TORD				pP	pP	00 41 44.8	+0.1
	comp=Z,6.4nm,0.9s,baz=250,slow=7.1,SNR=4.4						
	comp=Z,7.0nm,0.5s						
BMO	Blue Mountains	76.81	327	P	P	00 41 13.7	+0.5
BMO				IAmb	IAmb	00 41 15.7	
	comp=Z,11nm,0.8s						
I07A	Izee	77.44	325	P	P	00 41 17.3	+0.5
F10A	Beach Ranch, E	77.55	328	P	P	00 41 17.9	+0.6
K04D	Chiloquin, OR	77.74	323	P	P	00 41 20.0	+1.5
	baz=130						
L04D	Klamath Falls	77.79	323	P	P	00 41 19.5	+0.7
	baz=129						
J05D	Fort Rock, OR	77.87	324	P	P	00 41 20.7	+1.5
	baz=130						
G08A	Pilot Rock	77.97	327	P	P	00 41 19.8	+0.1
PINE	Pine Mountain	78.04	325	P	P	00 41 21.4	+1.2
WALA	Waterton Lakes	78.18	332	P	P	00 41 21.4	+0.7
J04D	Umpqua Nationa	78.33	324	P	P	00 41 21.7	-0.1
J04D				IAmb	IAmb	00 41 24.3	
	comp=Z,9.8nm,0.8s						
J04D	Umpqua Nationa	78.33	324	P	P	00 41 23.0	+1.2
	baz=130						
E09A	Wood Farm, Sta	78.38	328	P	P	00 41 22.1	+0.4
L02F	Cave Junction	78.47	322	P	P	00 41 23.9	+1.6
	baz=128						
I05D	Terrebonne, OR	78.61	325	P	P	00 41 25.3	+2.2
	baz=130						
K02D	Willamette Mer	78.88	322	P	P	00 41 26.2	+1.5
	baz=128						
HAWA	Hanford	79.00	327	P	P	00 41 25.2	0.0
HAWA				IAmb	IAmb	00 41 28.1	
	comp=Z,9.2nm,0.8s						
NEW	Newport	79.09	330	P	P	00 41 26.5	+0.8
	baz=134						
G05D	Wamic, OR	79.18	325	P	P	00 41 28.4	+2.2
	baz=131						
H04A	Detroit Lake	79.30	325	P	P	00 41 27.7	+0.9
I03D	Drain, OR	79.32	323	P	P	00 41 28.6	+1.7
	baz=129						
J01E	Myrtle Point	79.32	323	P	P	00 41 26.4	-0.5
J01E				IAmb	IAmb	00 41 29.9	
	comp=Z,16nm,1.1s						
C09A	Chrisman Ranch	79.33	329	P	P	00 41 27.2	+0.3
C09A				IAmb	IAmb	00 41 29.5	
	comp=Z,18nm,0.7s						
H04D	Lebanon	79.50	324	P	P	00 41 29.0	+1.2
	baz=129						
PFVI	Vila Bisbo	79.52	45	eP	P	00 41 29.1	+1.0
FCC	Fort Churchill	79.78	347	P	P	00 41 28.7	-0.3
FCC				IAmb	IAmb	00 41 30.0	
	comp=Z,8.9nm,0.7s						
PTEO	Sao Teotonio	79.81	45	eP	P	00 41 31.8	+2.1
	comp=Z,32nm,1.4s						
LTY	Liberty	80.16	327	P	P	00 41 32.2	+0.7
PBDV	Barranco-do-Ve	80.18	45	eP	P	00 41 32.7	+0.9
	comp=Z,28nm,1.5s						
F04A	Amboy	80.22	326	P	P	00 41 32.3	+0.6
F04A				IAmb	IAmb	00 41 34.1	
	comp=Z,19nm,0.8s						
B08A	Colville Reser	80.23	329	P	P	00 41 32.1	+0.3
MESJ	Messejana	80.31	45	eP	P	00 41 33.0	+0.7
MESJ				IAmb	IAmb	00 41 34.1	
	comp=Z,7.2nm,0.8s						
MESJ	Messejana	80.31	45	eP	P	00 41 33.5	+1.1
PVAQ	Vaqueiros	80.41	45	eP	P	00 41 34.0	+1.1
	comp=Z,18nm,1.7s						
PBEJ	Beja	80.64	45	eP	P	00 41 35.2	+1.0
E04D	Cinebar	80.70	326	P	P	00 41 36.4	+2.1
	baz=130						
D05A	Enumclaw	80.80	327	P	P	00 41 35.1	+0.3
D05A				IAmb	IAmb	00 41 37.1	
	comp=Z,20nm,0.8s						
PSBE	So Bento	80.84	43	eP	P	00 41 37.9	+2.7
PMTG	Montargil	80.97	44	eP	P	00 41 36.7	+0.8
	comp=Z,16nm,1.1s						
EDM	Edmonton	81.02	335	P	P	00 41 36.0	+0.1
EDM				IAmb	IAmb	00 41 37.0	
	comp=Z,35nm,1.1s						
D04E	Lakebay	81.20	326	P	P	00 41 39.0	+2.2
	baz=130						
PESTR	Estremoz	81.28	44	eP	P	00 41 39.3	+1.8
	comp=Z,12nm,1.9s						
PCAS	Casmilo, Conde	81.32	43	eP	P	00 41 40.3	+2.5
B06A	Marblemount	81.41	328	P	P	00 41 38.0	0.0
B06A				IAmb	IAmb	00 41 39.6	
	comp=Z,21nm,0.9s						
D03D	Eldon	81.59	326	P	P	00 41 40.4	+1.4
	baz=130						
PCBR	Castelo Branco	81.87	43	eP	P	00 41 40.8	+0.2
MTE	Manteigas	82.13	43	eP	P	00 41 42.7	+0.7
PCAB	Cabril	82.53	41	eP	P	00 41 44.5	+0.5
MVO	Moncorvo	82.86	42	eP	P	00 41 46.3	+0.4
LLLB	Lillooet	82.97	329	P	P	00 41 46.0	-0.2
LLLB				IAmb	IAmb	00 41 47.4	
	comp=Z,7.2nm,0.8s						
PBRG	Braganca	83.39	42	eP	P	00 41 48.9	+0.4
	comp=Z,20nm,1.8s						
PAB	San Pablo	83.78	45	P	P	00 41 51.1	+0.5
PAB				IAmb	IAmb	00 41 52.0	
	comp=Z,17nm,0.9s						
ESDC	Sonseca Array	84.10	45	P	P	00 41 53.1	+0.9
	comp=Z,9.6nm,0.9s,baz=253,slow=5.3,SNR=53						
ESDC				pP	pP	00 42 25.6	+1.4
	comp=Z,2.2nm,0.8s,baz=258,slow=5.8,SNR=4.2						
	comp=Z,9.6nm,0.9s						
ESDC	Sonseca Array	84.10	45	P	P	00 41 51.9	-0.4
ESDC				IAmb	IAmb	00 41 53.9	
	comp=Z,13nm,1.1s						
ESDC				pP	pP	00 42 25.6	+1.4
ESBB	Sonseca Array	84.10	45	P	P	00 41 52.0	-0.2
ESBB				IAmb	IAmb	00 41 53.8	
	comp=Z,14nm,1.0s						
BOSA	Boshof	85.15	118	P	P	00 41 57.5	-0.4
	comp=Z,2.2nm,0.8s,baz=292,slow=8.9,SNR=3.8						
	comp=Z,2.2nm,0.8s						
BOSA	Boshof	85.15	118	IAmb	IAmb	00 41 59.1	
	comp=Z,2.5nm,0.8s						
DY2G	Dye2	86.62	9	i P	P	00 42 03.1	-1.2
DY2G				IAmb	IAmb	00 42 05.0	
	comp=Z,29nm,0.6s						
MAW	Mawson	87.16	163	P	P	00 42 08.0	+1.1
	comp=Z,7.4nm,0.9s,baz=223,slow=6.5,SNR=8.3						
	comp=Z,7.4nm,0.9s						
MAW	Mawson	87.16	163	P	P	00 42 06.7	-0.1
YKA	Yellowknife Ar	88.38	341	P	P	00 42 13.2	+0.7
	comp=Z,12nm,0.5s,baz=131,slow=4.9,SNR=118						
YKA				pP	pP	00 42 44.3	-0.3
	comp=Z,5.2nm,0.6s,baz=134,slow=4.8,SNR=7.7						
	comp=Z,12nm,0.5s						
YKA	Yellowknife Ar	88.38	341	P	P	00 42 12.8	+0.4
YKA				pP	pP	00 42 44.8	+0.2
ICESG	Greenland Ices	90.06	10	i P	P	00 42 19.3	-1.3
ICESG				IAmb	IAmb	00 42 21.6	
	comp=Z,8.9nm,0.5s						
DLBC	Dease Lake	91.50	333	P	P	00 42 27.4	+0.1
DLBC				IAmb	IAmb	00 42 30.0	
	comp=Z,8.5nm,1.0s						
S34M	Telegraph Cree	91.69	332	P	P	00 42 29.6	+1.6
	baz=123						
SUMG	Summit	93.32	9	P	P	00 42 35.9	+0.1
SUMG	Summit	93.32	9	i P	P	00 42 35.3	-0.5
SUMG				IAmb	IAmb	00 42 38.2	
	comp=Z,6.0nm,0.7s						
P33M	Teslin, Yukon	93.67	333	P	P	00 42 38.5	+1.2
	baz=122						
PLBC	Pleasant Camp	94.83	332	P	P	00 42 43.8	+1.4
	baz=119						
TULEG	Thule	94.98	0	i P	P	00 42 31.5	-11
TULEG				IAmb	IAmb	00 42 34.7	
	comp=Z,5.8nm,0.8s						
PNL	Peninsula	96.30	331	P	P	00 42 50.6	+1.3
	baz=116						
J26L	Joseph Creek	100.08	335	P	Pdif	00 43 07.1	+0.9
	baz=112						
CHIR	Chirikof Islan	103.16	325	P	Pdif	00 43 21.9	+2.0
	baz=104						
M20K	Styx River	103.38	331	P	Pdif	00 43 21.6	+0.8
	baz=104						
P18K	Big Mountain,	103.79	328	P	Pdif	00 43 24.0	+1.3
	baz=103						
TTA	Tatalina	104.92	332	P	PKiKP	00 47 42.6	+0.6
	baz=102						
TNA	Tin City	110.36	334	P	PKiKP	00 47 52.7	+0.8
	baz=90						
SPIA	Saint Paul Isl	111.36	325	P	PKiKP	00 47 55.0	+0.9
	baz=91						
KBZ	Khabaz	118.62	50	PKP	PKiKP	00 48 08.8	+0.3
	comp=Z,1.6nm,0.7s,baz=115,slow=5.1,SNR=4.7						
STKA	Stephens Creek	121.66	211	PKP	PKiKP	00 48 15.3	+0.4
	comp=Z,1.3nm,0.7s,baz=100,slow=3.4,SNR=5.2						
H11S2	WAKE ISLAND Hy	127.07	279	T	T	03 07 54.5	
	baz=100,slow=74,SNR=69						
H11N3	WAKE ISLAND Hy	127.07	281	T	T	03 08 05.0	
	baz=101,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	127.08	279	T	T	03 07 52.9	
	baz=100,slow=74,SNR=59						
H11S3	WAKE ISLAND Hy	127.08	279	T	T	03 07 53.6	
	baz=100,slow=74,SNR=67						
H11N2	WAKE ISLAND Hy	127.09	281	T	T	03 07 54.4	
	baz=101,slow=74,SNR=20						
H11N1	WAKE ISLAND Hy	127.09	281	T	T	03 07 57.6	
	baz=101,slow=74,SNR=8.1						
PETK	Petropavlovsk-	130.03	325	PKP	PKiKP	00 48 30.6	-0.2
	comp=Z,3.3nm,0.8s,baz=116,slow=5.1,SNR=5.8						
ASAR	Alice Springs	132.21	209	PKP	PKPdf	00 48 35.7	+0.5
	comp=Z,2.0nm,0.7s,baz=138,slow=1.7,SNR=22						
ASAR				pPKP	pPKPdf	00 49 07.5	-1.0
	comp=Z,0.4nm,0.5s,baz=102,slow=1.7,SNR=1.7						
WRA	Warramunga Arr	135.16	212	PKP	PKiKP	00 48 41.7	-0.6
	comp=Z,3.4nm,0.6s,baz=148,slow=1.7,SNR=29						
WRA				pPKP	pPKPdf	00 49 13.6	-0.4
	comp=Z,0.9nm,0.6s,baz=146,slow=1.5,SNR=2.6						
ZALV	Zalesovo Beam	139.53	23	PKP	PKPdf	00 48 48.7	+1.0
	comp=Z,9.0nm,0.6s,baz=288,slow=2.7,SNR=33						
ZALV				pPKP	pPKPdf	00 49 20.3	-1.0
	comp=Z,2.2nm,0.7s,baz=280,slow=2.7,SNR=2.6						
MKAR	Makanchi Array	143.53	33	PKhKP	PKPpre	00 48 52.5	
	comp=Z,1.6nm,0.6s,baz=305,slow=3.2,SNR=11						
MKAR				pPKP	pPKPdf	00 49 27.4	-1.4
	comp=Z,1.0nm,0.8s,baz=298,slow=3.1,SNR=2.7						
USRK	Ussuriysk Ar.	148.88	330	PKPbc	PKiKP	00 49 09.6	0.0
	comp=Z,12nm,0.7s,baz=16,slow=2.4,SNR=16						
USRK				pPKPbc	pPKPbc	00 49 42.3	+0.8
	comp=Z,3.6nm,0.7s,baz=62,slow=4.1,SNR=2.9						
MJAR	Matsushiro Arr	149.93	312	PKPbc	PKiKP	00 49 12.4	+0.3
	comp=Z,7.8nm,0.7s,baz=102,slow=2.6,SNR=23						
SONM	Songino Array	150.68	6	PKPbc	PKiKP	00 49 13.8	+0.4
	comp=Z,19nm,0.7s,baz=315,slow=1.4,SNR=81						
SONM				pPKPbc	pPKPbc	00 49 47.4	+1.3
	comp=Z,5.1nm,0.8s,baz=319,slow=1.8,SNR=4.2						
KSRS	Korea Array	155.93	325	PKPab	PKPab	00 49 42.8	+0.5
	comp=Z,2.2nm,0.9s,baz=36,slow=3.8,SNR=5.1						
LZH	Lanzhou	161.62	18	ePKP	PKPdf	00 49 21.5	-0.4
PZH	PanZhiHua	168.65	45	PKP	PKPdf	00 49 27.1	-0.9

NNC 24 00:38:57.4±3.2, 36°.77N×70°.37E, $h173^{km}\pm51^{km}$, mb2.8, mpv3.5, 5C-1D, Error ellipse: s-maj=30.2km s-min=19.2km az=15.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.32	1	P	Pn	00 40 29.0	+0.4
	0.8nm,0.3s,baz=171,slow=9.2,SNR=28						
KK31				S	Sn	00 41 40.4	+0.1
	1.9nm,0.4s,baz=321,slow=79,SNR=8.6						
CHMS	Chumysh	7.07	27	⇑P	Pn	00 40 37.9	-0.5
	1.7nm,0.5s						
CHMS				⇑S	Sn	00 41 59.3	+1.3
	4.8nm,0.5s						
TKM2	Tokmak 2	7.34	32	⇑P	Pn	00 40 42.0	-0.1
	3.2nm,0.5s						
TKM2				⇑S	Sn	00 42 04.8	+0.2
	3.4nm,0.8s						
AB31	Akbulak array	14.60	332	⇓P	Pn	00 42 16.3	+0.6
	0.4nm,0.4s,baz=151,slow=11,SNR=13						
AKTO	Aktyubinsk	16.29	331	⇑P	P	00 42 35.7	-0.5
	2.7nm,0.8s						

NOU 24 00:47:22.8, 16°.27S×167°.28E, $h9^{km}$, MLv4.5/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.82	355	P	Pb	00 47 39.2	-0.1
DVP	Devils Point	1.69	149	P	Pn	00 47 52.6	+0.1
RTV	Rentapao	1.87	144	P	Pn	00 47 55.5	+0.5
LIFNC	LIFOU	4.48	180	P	Pn	00 48 31.6	+0.7
MARNC	Mare, Loyalty	5.23	172	P	Pn	00 48 42.1	+0.9
DZM	Mont Dzumac	5.82	188	P	Pn	00 48 48.2	-1.3
NOUC	Port Laguerre	5.87	189	P	Pn	00 48 49.2	-0.9
OUENC	Ouen Island, N	6.13	184	P	Pn	00 48 53.7	+0.1

IDC 24 00:56:14.4±1.6, 36°.98N×92°.41E, $h0^{km}$, mb3.6/2, mbtmp3.6/5, ML3.3/3, MS3.1/1, Error ellipse: s-maj=52.5km s-min=27.7km az=58.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	12.35	326	Pn	Pn	00 59 08.3	-3.2
	0.3nm,0.3s,baz=139,slow=14,SNR=12						
MKAR				Sn	Sn	01 01 21.9	-7.9
	0.2nm,0.3s,baz=137,slow=24,SNR=3.1						
	0.6nm,0.5s						
SONM	Songino Array	14.95	39	Pn	Pn	00 59 47.1	0.0
	0.3nm,0.3s,baz=226,slow=11,SNR=6.3						
	1.0nm,0.4s						
ZALV	Zalesovo Beam	17.76	345	P	Pn	01 00 23.2	+0.3
	0.1nm,0.3s,baz=163,slow=10,SNR=1.5						
	0.3nm,0.3s						
KLR	Kul'dur	30.87	54	LR	LR	01 16 43.4	
	comp=Z,37nm,20.6s,baz=100,slow=40						
ASAR	Alice Springs	71.89	140	P	P	01 07 39.5	+0.1
	0.2nm,0.3s,baz=339,slow=7.0,SNR=1.8						
	0.2nm,0.3s						
TORD	Torodi Ar. Bea	82.78	281	P	P	01 08 40.6	-0.1
	0.5nm,0.9s,baz=57,slow=6.0,SNR=2.0						
	0.5nm,0.9s						

GUC ***24*** *01:01:19.3±0.7, 41°.11S×75°.19W, $h36^{km}\pm4^{km}$, ML3.7*

NEIC ***24*** *01:01:19.4±1.5, 41°.12S±0°.03×75°.21W±0°.10, $h28^{km}\pm6^{km}$, mb4.2/6, ML3.7(GUC), Error ellipse: s-maj=11.1km s-min=2.5km az=70.0*

IDC ***24*** *01:01:28.9±3.7, 40°.37S×74°.20W, $h0^{km}$, mb3.3/1, mbtmp3.5/3, ML4.1/2, MS2.3/1, Error ellipse: s-maj=91.0km s-min=20.4km az=18.0*

ISC 24 01:01:17.3±1.9, 41°.13S±0°.04×75°.18W±0°.06, $h16^{km}\pm12^{km}$, n54, $\sigma 1^{s}.37$/66, 5C-2D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LL05	Los Muermos	1.31	103		Pg	01 01 42.4	-0.2
LL05				Sn	Sn	01 01 57.0	-1.1
LL05	Los Muermos	1.31	103	eP	Pb	01 01 41.6	0.0
LL05				i S	Sb	01 01 58.5	+0.3
LL05				IAML		01 02 00.1	
	comp=N,625nm,0.2s						
LR04	Corral	1.83	48		Pb	01 01 49.6	-0.8
LR04				Sn	Sn	01 02 10.4	-0.4
LR04	Corral	1.83	48	⇑eP	Pn	01 01 49.0	+1.0
LR04				i S	Sn	01 02 11.0	+0.1
LR04				IAML		01 02 13.0	
	comp=N,1µm,0.4s						
LR02	Universidad Au	1.98	49	eP	Pn	01 01 51.2	+1.1
LR02				IAML		01 02 18.2	
	comp=N,2µm,0.4s						
LL03	Petrohue	2.10	91		Pn	01 01 52.9	+1.2
LL03				Sn	Sn	01 02 18.4	+0.9
LL03	Petrohue	2.10	91	⇓iP	Pn	01 01 53.0	+1.3
LL03				i S	Sn	01 02 18.7	+1.2
LL03				IAML		01 02 28.6	
	comp=N,1µm,0.8s						
LL04	Puerto Octay	2.11	85		Pn	01 01 53.2	+1.3
LL04	Puerto Octay	2.11	85	⇑iP	Pn	01 01 53.2	+1.3
LL04				i S	Sn	01 02 18.6	+0.8
LL04				IAML		01 02 19.7	
	comp=N,897nm,0.2s						
LL07	Hotel Espejo d	2.12	144	Pn	Pn	01 01 52.8	+0.7
LL07	Hotel Espejo d	2.12	144	eP	Pn	01 01 53.4	+1.3
LL07				i S	Sn	01 02 17.6	-0.5
LL07				IAML		01 02 19.6	
	comp=E,261nm,0.4s						
GO07	Milladeo Hill,	2.28	151		Pn	01 01 54.9	+0.6
GO07	Milladeo Hill,	2.28	151	⇑iP	Pn	01 01 55.4	+1.1

GO07				i S	Sn	01 02 20.7	-1.3
GO07				IAML		01 02 33.4	
	comp=N,508nm,0.5s						
LL01	San Ignacio de	2.42	122		Pn	01 01 56.8	+0.7
LL01	San Ignacio de	2.42	122	eP	Pn	01 01 57.4	+1.2
LR03	Panguipulli	2.63	56	Pn	Pn	01 02 00.8	+1.7
LR03	Panguipulli	2.63	56	eP	Pn	01 02 00.8	+1.7
LR03				i S	Sn	01 02 31.4	+0.7
LR03				IAML		01 02 37.9	
	comp=E,463nm,0.4s						
LC02	Puerto Saavedr	2.71	31	Pn	Pn	01 02 01.4	+1.3
LC02	Puerto Saavedr	2.71	31	⇓i P	Pn	01 02 01.0	+0.8
LC02				i S	Sn	01 02 32.5	-0.1
LC02				IAML		01 02 34.1	
	comp=N,863nm,0.3s						
LL02	Futaleuf	3.22	131		Pn	01 02 09.1	+1.9
LL02	Futaleuf	3.22	131	⇑i P	Pn	01 02 07.7	+0.5
LL02				eS	Sn	01 02 45.4	+0.2
PLCA	Paso Flores	3.53	85	Pn	Pn	01 02 14.1	+2.6
	comp=N,7.5nm,0.3s,baz=280,slow=10,SNR=131						
PLCA				Sn	Sn	01 02 49.9	-3.0
	comp=N,2.6nm,0.3s,baz=251,slow=13,SNR=1.4						
PLCA				LR	LR	01 02 55.1	
	comp=N,56nm,18.5s,baz=253,slow=31						
PLCA				Lg	Lg	01 02 59.2	
	comp=N,1.0nm,0.3s,baz=315,slow=9.0,SNR=1.2						
	comp=N,17nm,0.3s						
PLCA	Paso Flores	3.53	85		Pn	01 02 13.1	+1.6
AY01	Puyuhuapi	3.78	151		Pn	01 02 16.2	+1.4
AY01	Puyuhuapi	3.78	151	⇑i P	Pn	01 02 16.4	+1.5
AY01				i S	Sn	01 02 56.9	-2.1
BI05	Punta Hualpn	4.64	20	Pn	Pn	01 02 28.1	+1.4
COYC	Coyhaique	4.98	154	Pn	Pn	01 02 32.2	+0.9
GO05	Huala	6.62	24		Pn	01 02 54.9	+0.9
BO01	Tunca	7.46	27		Pn	01 03 06.3	+0.8
GO08	Villa O'Higgin	7.57	167		Pn	01 03 08.6	+1.7
H03S1	Juan Fernandez	7.85	337	Pn	Pn	01 03 12.2	+1.7
H03S1				T	T	01 11 34.5	
	baz=152						
H03S2	Juan Fernandez	7.86	337	Pn	Pn	01 03 12.0	+1.3
H03S2				T	T	01 11 25.6	
	baz=152						
H03S3	Juan Fernandez	7.87	337	Pn	Pn	01 03 12.1	+1.3
H03S3				T	T	01 11 33.2	
	baz=152						
MT01	Popeta	7.89	25		Pn	01 03 11.8	+0.4
BO04	La Punta	8.00	28		Pn	01 03 13.5	+0.7
MT09	Talagante	8.06	26		Pn	01 03 14.5	+0.7
H03N3	Juan Fernandez	8.22	338	Pn	Pn	01 03 17.9	+2.2
	baz=160,slow=29						
H03N1	Juan Fernandez	8.23	338	Pn	Pn	01 03 17.4	+1.6
	baz=160,slow=29						
H03N2	Juan Fernandez	8.24	338	Pn	Pn	01 03 17.8	+2.0
	baz=160,slow=29						
LMEL	Las Melosas	8.27	30		Pn	01 03 18.8	+2.0
MT03	Universidad Ad	8.48	27	Pn	Pn	01 03 19.8	+0.2
MT02	Curacav	8.49	24		Pn	01 03 18.8	-0.8
PEL	Peldehue	8.74	26	Pn	Pn	01 03 23.5	+0.5
ROC1	El Roble	8.79	24	Pn	Pn	01 03 25.1	+1.1
VA03	San Esteban	9.13	25		Pn	01 03 27.0	-1.5
TRQA	Tornquist	10.64	78	Pn	Pn	01 03 51.0	+2.0
MG05	Puerto Natales	10.71	171	Pn	Pn	01 03 50.1	+0.2
AC02	Maricunga	15.11	21	Pn	Pn	01 04 46.9	-3.6
PB09	IPOC Station P	19.92	16	P	P	01 05 48.0	-0.5
PB09				IAmb	IAmb	01 06 10.8	
	comp=Z,7.8nm,1.2s						
CPUP	Villa Florida	20.87	51	P	Pn	01 06 00.9	-0.2
	comp=Z,0.1nm,0.3s,baz=228,slow=8.8,SNR=3.3						
	comp=Z,2.2nm,1.0s						
CPUP	Villa Florida	20.87	51	P	P	01 05 56.9	-1.7
CPUP				IAmb	IAmb	01 06 00.6	
	comp=Z,18nm,1.5s						
SNAA	Sanae	46.05	155	P	P	01 09 39.7	-0.1
QSPA	South Pole Qui	49.12	180	P	P	01 10 04.9	+1.0
QSPA				IAmb	IAmb	01 10 08.1	
	comp=Z,3.1nm,1.0s						
TXAR	Lajitas Array	74.91	334	P	P	01 13 09.9	+13
	comp=Z,0.2nm,0.7s,baz=155,slow=9.0,SNR=2.7						
	comp=Z,0.2nm,0.7s						

*MAN **24** 01:18:22.1, 9°.34N×125°.64E, h9^{km}, mb4.1, ML2.9, MS2.6, Hypocentre not reviewed by the ISC*

ISC 24 01:18:22.1±1.1**, 9°.31N**±0°.05×**125°.61E**±0°.06**, h23^{km}, n6, σ0^{s}93**/10**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.34	178	⇓eP	Pb	01 18 29.2	-0.5
SCPH	Surigao	0.48	346	⇑eP	Pb	01 18 32.2	+0.2
SCPH				eS	Sn	01 18 40.1	-1.3
GLSP	General Luna,	0.69	47	⇑eP	Pb	01 18 35.6	0.0
MSLP	Maasin	1.10	318	⇓eP	Pn	01 18 41.6	-0.6
MSLP				eS	Sn	01 18 58.6	+1.8
BIPH	Bislig	1.34	146	⇓i P	Pb	01 18 46.8	+0.1
BIPH				i S	Sb	01 19 03.9	+0.5
TBP	Tagbilaran	1.77	283	eP	Pn	01 18 51.4	+0.1
TBP				i S	Sb	01 19 15.2	-0.4

*IDC **24** 01:53:24.8±0.6, 18°.61N×145°.82E, h133^{km}±6^{km}, mb4.0/23, mbtmp4.3/24, MS2.9/8, Error ellipse: s-maj=15.4km s-min=9.3km az=100.0*

*NEIC **24** 01:53:27.1±1.3, 18°.56N±0°.08×145°.8E±0°.1, h148^{km}±7^{km}, mb4.6/141, Error ellipse: s-maj=20.8km s-min=11.5km az=99.0*

ISC 24 01:53:23.7±0.6**, 18°.72N**±0°.05×**145°.80E**±0°.09**, h117^{km}**±4^{km}**, h117^{km}:pP-P, n185, σ1^{s}15**/193**, mb4.7**/88**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.18	190	P	Pn	01 54 40.4	+1.4
	baz=191,slow=10						
GUMO				LR	LR	01 55 37.0	
	comp=Z,53nm,21.7s,baz=104,slow=26						
GUMO				S	Sn	01 55 37.8	0.0
	54nm,0.3s,baz=144,slow=22,SNR=1.8						
GUMO	Guam	5.18	190	Pn	Pn	01 54 40.3	+1.2
GUMO				Sn	Sn	01 55 40.2	+2.5
JCJ	Chichijima	8.98	339	P	Pn	01 55 36.9	+6.5
	18nm,0.5s,baz=0.5,slow=22,SNR=1.2						
JCJ				S	Sn	01 57 08.9	-0.8
	33nm,0.3s,baz=272,slow=22,SNR=6.4						
JOW	Kunigami	18.05	300	P	Pn	01 57 30.6	+3.5
	16nm,0.6s,baz=138,slow=12,SNR=5.0						
JOW	Kunigami	18.05	300	P	Pn	01 57 28.2	+1.1
JOW				IAmb	IAmb	01 57 33.1	
	comp=Z,18nm,0.7s						
JGF	Kuroka	18.40	338	P	Pn	01 57 31.7	+0.5
MJAR	Matsushiro Arr	18.97	341	P	P	01 57 36.9	+0.9
	comp=Z,1.4nm,0.4s,baz=175,slow=11,SNR=4.8						
MJAR				LR	LR	02 04 45.1	
	comp=Z,26nm,18.5s,baz=102,slow=36						
MJAR	Matsushiro Arr	18.97	341	P	P	01 57 37.5	+1.6
MAJO	Matsushiro	18.97	341	P	Pn	01 57 39.2	+1.2
MJB9	Matsu-Tunnel	18.98	341	P	Pn	01 57 38.8	+0.9
H11S3	WAKE ISLAND Hy	19.80	87	T	T	02 18 47.3	
	baz=275,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	19.81	87	T	T	02 18 35.1	
	baz=275,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	19.82	87	T	T	02 18 35.7	
	baz=275,slow=74,SNR=14						
JSD	Sado	20.34	343	P	P	01 57 52.4	+1.6
JSD				IAmb	IAmb	01 57 56.3	
	comp=Z,21nm,1.3s						
JTM	Tenmabayashi	22.36	351	P	P	01 58 14.9	+2.8
SIJI	Sorong	24.14	218	P	P	01 58 28.1	-1.0
	comp=Z,5.3nm,0.4s,baz=175,slow=23,SNR=1.6						
	comp=Z,5.3nm,0.4s						
KSRS	Korea Array	24.36	324	P	P	01 58 31.4	+0.6
	comp=Z,2.6nm,0.8s,baz=149,slow=9.4,SNR=8.8						
KSRS				LR	LR	02 07 26.9	
	comp=Z,19nm,20.2s,baz=220,slow=34						
	comp=Z,2.6nm,0.8s						
ASAJ	Asahikawa	25.46	355	P	P	01 58 42.8	+2.1
	comp=Z,6.3nm,0.4s,baz=240,slow=11,SNR=4.2						
	comp=Z,6.3nm,0.4s						
JKA	Kamikawa-asahi	25.46	355	P	P	01 58 43.0	+2.3
JKA				IAmb	IAmb	01 58 53.3	
	comp=Z,19nm,1.1s						
KLR	Kul'dur	32.48	343	P	P	01 59 44.0	+1.0
	comp=Z,3.6nm,0.5s,baz=152,slow=7.6,SNR=15						
	comp=Z,3.6nm,0.5s						
PETK	Petropavlovsk-	35.55	12	P	P	02 00 09.7	+0.2
	comp=Z,2.2nm,0.6s,baz=129,slow=2.1,SNR=4.9						
PETK				LR	LR	02 17 46.7	
	comp=Z,13nm,18.1s,baz=207,slow=41						
	comp=Z,2.2nm,0.6s						
SBUM	Sibu	36.64	248	P	P	02 00 19.1	0.0
SBUM				IAmb	IAmb	02 00 22.0	
	comp=Z,26nm,1.5s						
WRA	Warramunga Arr	40.03	197	P	P	02 00 45.8	-1.7
	comp=Z,5.5nm,0.9s,baz=16,slow=9.1,SNR=21						
	comp=Z,5.5nm,0.9s						
WRA	Warramunga Arr	40.03	197	P	P	02 00 46.1	-1.4
MA2	Magadan	40.96	4	P	P	02 00 56.6	+1.9
	comp=Z,8.9nm,0.6s,baz=114,slow=5.3,SNR=4.5						
MA2				LR	LR	02 16 06.4	
	comp=Z,14nm,19.6s,baz=104,slow=33						
	comp=Z,8.9nm,0.6s						
MA2	Magadan	40.96	4	P	P	02 00 56.3	+1.6
MA2				IAmb	IAmb	02 01 27.0	
	comp=Z,17nm,1.0s						
SONM	Songino Array	43.19	321	P	P	02 01 13.3	+0.2
	comp=Z,0.7nm,0.4s,baz=135,slow=8.8,SNR=2.2						
	comp=Z,0.7nm,0.4s						
AS31	Alice Springs	43.70	196	P	P	02 01 15.0	-2.2
ASAR	Alice Springs	43.70	196	P	P	02 01 15.8	-1.4
	comp=Z,2.5nm,0.7s,baz=17,slow=8.3,SNR=25						
	comp=Z,2.5nm,0.7s						
CMAR	Chiang Mai Arr	44.31	278	P	P	02 01 23.8	+1.5
	comp=Z,1.2nm,0.3s,baz=76,slow=7.5,SNR=2.1						
CMAR				pP	pwP	02 01 52.6	-0.5
	comp=Z,1.2nm,0.3s,baz=94,slow=4.5,SNR=1.7						
	comp=Z,1.2nm,0.3s						
CMAR	Chiang Mai Arr	44.31	278	P	P	02 01 21.8	-0.5
BILL	Bilibino	50.98	10	P	P	02 02 14.5	+1.4
BILL				IAmb	IAmb	02 02 15.6	
	comp=Z,16nm,1.0s						
ZALV	Zalesovo Beam	58.06	322	P	P	02 03 04.1	-0.3
	comp=Z,0.5nm,0.3s,baz=122,slow=11,SNR=2.6						
	comp=Z,0.5nm,0.3s						
MKAR	Makanchi Array	58.52	314	P	P	02 03 08.2	+0.4
	comp=Z,0.8nm,0.5s,baz=86,slow=8.8,SNR=5.6						
	comp=Z,0.8nm,0.5s						
SVW2	Sparrevohn	58.76	29	P	P	02 03 10.3	+1.0
SVW2				IAmb	IAmb	02 03 12.2	
	comp=Z,9.1nm,1.1s						
N19K	Bonanza Creek	59.18	30	P	P	02 03 11.8	-0.5
TTA	Tatalina	59.19	27	P	P	02 03 13.6	+1.4
TTA				IAmb	IAmb	02 03 14.5	
	comp=Z,5.9nm,0.9s						
KDAK	Kodiak Island	59.29	33	LR	LR	02 27 46.9	
	comp=Z,15nm,19.0s,baz=220,slow=35						
L19K	White Mountain	59.44	28	P	P	02 03 15.5	+1.5
L19K				IAmb	IAmb	02 03 16.4	
	comp=Z,8.1nm,1.1s						
M20K	Styx River	60.12	29	P	P	02 03 18.8	+0.1
M20K				IAmb	IAmb	02 03 21.4	
	comp=Z,6.3nm,0.8s						
K20K	Telida	60.16	27	P	P	02 03 19.2	+0.3
K20K				IAmb	IAmb	02 03 21.7	
	comp=Z,10nm,0.8s						
J20K	Nowinta River	60.40	26	P	P	02 03 21.4	+1.1
PPLA	Purkeypile	60.84	28	P	P	02 03 24.3	+0.7
PPLA				IAmb	IAmb	02 03 29.6	
	comp=Z,6.7nm,0.8s						
CAST	Castle Rocks	61.03	27	P	P	02 03 25.3	+0.6
IMAR	Indian Mountai	61.16	24	P	P	02 03 26.4	+0.9
KURBB	Kurchatov Arra	61.37	318	P	P	02 03 26.6	-0.6
	comp=Z,2.3nm,0.5s,baz=96,slow=6.9,SNR=10						
	comp=Z,2.3nm,0.5s						
H21K	Melozitna Rive	61.42	24	P	P	02 03 28.7	+1.4
H21K				IAmb	IAmb	02 03 29.9	
	comp=Z,9.4nm,0.9s						
M22K	Willow	61.47	29	P	P	02 03 27.3	-0.3
RC01	Rabbit Creek A	61.49	30	P	P	02 03 27.7	-0.1
KTH	Kantishna Hill	61.57	27	P	P	02 03 29.5	+1.1
NRIK	Noril'sk	61.62	340	P	P	02 03 28.6	0.0
	comp=Z,5.0nm,0.6s,baz=112,slow=8.5,SNR=9.2						
	comp=Z,5.0nm,0.6s						
NRIK	Noril'sk	61.62	340	P	P	02 03 28.1	-0.4
NRIK				IAmb	IAmb	02 03 29.6	
	comp=Z,5.0nm,0.7s						
BPAW	Bear Paw Mtn.	61.69	26	P	P	02 03 29.4	+0.2
TRF	Thorofare Moun	61.82	27	P	P	02 03 30.8	+0.6
RND	Reindeer	62.43	27	P	P	02 03 35.3	+1.1
RND				IAmb	IAmb	02 03 36.3	
	comp=Z,8.3nm,0.8s						
NEA2	Nenana	62.63	26	P	P	02 03 35.4	0.0
NEA2				IAmb	IAmb	02 03 37.4	
	comp=Z,8.2nm,0.8s						
I23K	Minto, Yukon-K	62.65	26	P	P	02 03 36.9	+1.4
GLI	Glacier Island	62.70	30	P	P	02 03 36.8	+0.9
H23K	Yukon River	62.76	25	P	P	02 03 37.4	+1.1
H23K				IAmb	IAmb	02 03 38.6	
	comp=Z,9.1nm,0.8s						
SCM	Sheep Creek Mo	62.78	29	P	P	02 03 37.0	+0.5
FID	Port Fidalgo	62.98	31	P	P	02 03 38.1	+0.3
DHY	Denali Highway	63.01	28	P	P	02 03 39.0	+0.9
DHY				IAmb	IAmb	02 03 41.6	
	comp=Z,4.3nm,0.5s						
WRH	Wood River Hil	63.01	26	P	P	02 03 37.6	-0.3
WRH				IAmb	IAmb	02 03 38.9	
	comp=Z,7.3nm,0.6s						
MDM	Murphy Dome	63.07	26	P	P	02 03 38.7	+0.4
CCB	Clear Creek Bu	63.17	26	P	P	02 03 39.4	+0.5
CCB				IAmb	IAmb	02 03 40.1	
	comp=Z,12nm,1.5s						
KLU	Klutina	63.37	30	P	P	02 03 40.9	+0.4
H24K	Noodor Dome	63.42	25	P	P	02 03 41.4	+0.7
H24K				IAmb	IAmb	02 03 42.7	
	comp=Z,7.0nm,0.6s						
HDA	Harding Lake	63.48	27	P	P	02 03 40.5	-0.5
HDA				IAmb	IAmb	02 03 41.5	
	comp=Z,11nm,1.1s						
TOLK	Toolik Lake Re	63.54	22	P	P	02 03 42.9	+1.5
IL31		63.58	26	P	P	02 03 41.3	-0.3
IL31				IAmb	IAmb	02 03 42.2	
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	63.58	26	P	P	02 03 41.3	-0.4
	comp=Z,6.3nm,0.6s,baz=249,slow=6.2,SNR=89						
	comp=Z,6.3nm,0.6s						
ILAR	Eielson Array	63.58	26	P	P	02 03 41.4	-0.3
PAX	Paxson	63.84	28	P	P	02 03 44.4	+0.9
BMRM	Bremner River	63.92	31	P	P	02 03 45.5	+1.4
N25K	Chitina, Valde	64.02	30	P	P	02 03 45.8	+1.1
N25K				IAmb	IAmb	02 03 47.0	
	comp=Z,9.0nm,0.8s						
J25K	Salcha River,	64.19	27	P	P	02 03 45.4	-0.3
J25K				IAmb	IAmb	02 03 46.1	
	comp=Z,5.2nm,0.6s						
RIDG	Independent Ri	64.25	28	P	P	02 03 46.5	+0.4
GLB	Gilahina Butte	64.37	30	P	P	02 03 46.6	-0.3
GLB				IAmb	IAmb	02 03 49.6	
	comp=Z,12nm,0.8s						
VRDI	Verde Repeater	64.51	30	P	P	02 03 48.7	+0.6
VRDI				IAmb	IAmb	02 03 49.9	
	comp=Z,10nm,0.7s						
DOT	Dot Lake	64.58	28	P	P	02 03 48.5	+0.2
SCRK	Sand Creek	64.67	27	P	P	02 03 49.6	+0.7
SCRK				IAmb	IAmb	02 03 50.5	
	comp=Z,14nm,1.1s						
MCARA	McCarthy VSAT	64.73	30	P	P	02 03 50.1	+0.8
L26K	Log Cabin Wild	64.81	28	P	P	02 03 50.1	+0.4
L26K				IAmb	IAmb	02 03 51.7	
	comp=Z,6.7nm,0.9s						
M26K	Nabesna, AK	64.88	29	P	P	02 03 50.8	+0.5
M26K				IAmb	IAmb	02 03 52.4	
	comp=Z,6.4nm,1.1s						
BMAR	Burnt Mountain	65.06	24	P	P	02 03 53.3	+2.0
YAH	Yahtse	65.24	31	P	P	02 03 53.6	+0.8
GRNC	Granite Creek	65.27	31	P	P	02 03 53.8	+0.8
M27K	Edge Creek, AK	65.39	29	P	P	02 03 53.7	0.0
M27K				IAmb	IAmb	02 03 55.6	
	comp=Z,5.1nm,0.7s						
L27K	Beaver Creek,	65.50	28	P	P	02 03 54.5	+0.3
L27K				IAmb	IAmb	02 03 56.1	
	comp=Z,5.9nm,0.6s						
CTGM	Chitina Glacie	65.50	31	P	P	02 03 53.6	-0.8
K27K	Chicken	65.51	27	P	P	02 03 54.1	-0.1
BCAR	Beaver Creek A	65.52	28	P	P	02 03 54.6	+0.2
TABL	Table Mountain	65.55	31	P	P	02 03 55.3	+0.5
LOGN	Logan Glacier	65.65	31	P	P	02 03 54.7	-0.7
EGAK	Eagle	66.00	27	P	P	02 03 58.4	+1.0
EGAK				IAmb	IAmb	02 03 59.6	
	comp=Z,4.3nm,0.5s						
DAWY	Dawson	66.69	28	P	P	02 04 03.0	+1.2
KKAR	Karatay Array	66.83	310	P	P	02 04 02.7	-0.4
HYT	Haines Junctio	67.36	31	P	P	02 04 07.2	+1.0
M30M	Minto, Yukon	67.76	29	P	P	02 04 10.0	+1.4
EPYK	Eagle Plains	67.99	25	P	P	02 04 10.9	+0.9
EPYK				IAmb	IAmb	02 04 11.8	
	comp=Z,7.6nm,0.7s						
N31M	Braeburn, Yuko	68.21	30	P	P	02 04 13.1	+1.6
WHY	Whitehorse	68.64	31	P	P	02 04 15.5	+1.3
WHY				IAmb	IAmb	02 04 16.8	
	comp=Z,8.6nm,1.0s						
M31M	Drury Creek, Y	68.88	30	P	P	02 04 16.6	+1.0
M31M				IAmb	IAmb	02 04 17.5	
	comp=Z,5.0nm,0.8s						
INK	Inuvik	69.31	23	P	P	02 04 18.5	+0.4
	comp=Z,5.6nm,0.7s,baz=286,slow=8.0,SNR=13						
	comp=Z,5.6nm,0.7s						
INK	Inuvik	69.31	23	P	P	02 04 18.5	+0.4
INK				IAmb	IAmb	02 04 19.4	
	comp=Z,6.5nm,0.8s						
P33M	Teslin, Yukon	69.68	32	P	P	02 04 21.1	+0.5
P33M				IAmb	IAmb	02 04 22.2	
	comp=Z,4.5nm,0.7s						
DLBC	Dease Lake	71.22	34	P	P	02 04 31.2	+1.2
DLBC				IAmb	IAmb	02 04 32.5	
	comp=Z,9.7nm,0.8s						
ARU	Arti	73.11	325	P	P	02 04 40.2	-0.9
	comp=Z,0.9nm,0.4s,baz=25,slow=9.3,SNR=5.0						
	comp=Z,0.9nm,0.4s						
ARU	Arti	73.11	325	P	P	02 04 41.6	+0.4
YKA	Yellowknife Ar	77.92	28	P	P	02 05 08.6	+0.1
	comp=Z,5.2nm,0.7s,baz=290,slow=5.4,SNR=20						
YKA				pP	pwP	02 05 40.6	-0.5
	comp=Z,1.9nm,0.8s,baz=286,slow=5.0,SNR=3.8						
	comp=Z,5.2nm,0.7s						
D05A	Enumclaw	77.97	44	P	P	02 05 09.6	+0.5
D05A				IAmb	IAmb	02 05 11.6	
	comp=Z,12nm,0.8s						
F04A	Amboy	78.00	45	P	P	02 05 09.3	+0.1
F04A				IAmb	IAmb	02 05 11.3	
	comp=Z,13nm,0.8s						
KMPM	Mount Pierce	78.17	51	P	P	02 05 10.9	+0.5
KMPM				IAmb	IAmb	02 05 13.1	
	comp=Z,14nm,0.8s						
HUMO	Hull Mountain	78.46	49	P	P	02 05 12.8	+0.8
H04A	Detroit Lake	78.47	47	P	P	02 05 12.8	+0.8
H04A				IAmb	IAmb	02 05 13.2	
	comp=Z,9.8nm,0.8s						
LTY	Liberty	78.82	44	P	P	02 05 14.7	+0.8
LTY				IAmb	IAmb	02 05 15.4	
	comp=Z,7.5nm,0.8s						
J04D	Umpqua Nationa	78.90	48	P	P	02 05 15.2	+0.6
B08A	Colville Reser	79.39	43	P	P	02 05 17.8	+0.8
B08A				IAmb	IAmb	02 05 18.5	
	comp=Z,8.8nm,0.8s						
PINE	Pine Mountain	79.57	47	P	P	02 05 18.6	+0.4
HAWA	Hanford	79.81	44	P	P	02 05 20.1	+1.0
HAWA				IAmb	IAmb	02 05 21.1	
	comp=Z,8.8nm,1.1s						
K05A	Summer Lake	79.90	48	P	P	02 05 19.1	-0.9
K05A				IAmb	IAmb	02 05 22.1	
	comp=Z,13nm,0.7s						
D08A	Wollman Farm,	80.03	44	P	P	02 05 21.2	+0.9
D08A				IAmb	IAmb	02 05 22.0	
	comp=Z,9.8nm,1.0s						
C09A	Chrisman Ranch	80.23	43	P	P	02 05 22.2	+0.8
G08A	Pilot Rock	80.51	45	P	P	02 05 23.9	+0.7
MOD	Modoc Plateau	80.55	49	P	P	02 05 23.9	+0.4
NEW	Newport	80.83	42	P	P	02 05 25.5	+0.8
NEW				IAmb	IAmb	02 05 26.2	
	comp=Z,10.0nm,1.1s						
BEKR	Beckworth	81.09	51	P	P	02 05 25.8	-0.6
BEKR				IAmb	IAmb	02 05 27.8	
	comp=Z,11nm,0.7s						
J08A	Circle Bar Ran	81.42	47	P	P	02 05 27.1	-0.8
WVOR	Wild Horse Val	81.58	48	P	P	02 05 29.5	+0.7
CMB	Columbia Colle	81.61	53	P	P	02 05 28.8	-0.2
BMO	Blue Mountains	81.76	46	P	P	02 05 30.0	+0.3
VCNR	Virginia City	81.78	51	P	P	02 05 30.1	0.0
PAHR	Pah Rah Range	81.86	51	P	P	02 05 30.1	-0.3
PNTR	Pine Nut	81.88	52	P	P	02 05 29.7	-1.0
PNTR				IAmb	IAmb	02 05 32.5	
	comp=Z,13nm,0.8s						
ARCES	ARCESS Array B	82.50	342	P	P	02 05 32.3	-0.6
	comp=Z,1.5nm,0.6s,baz=80,slow=8.2,SNR=10.0						
	comp=Z,1.5nm,0.6s						
PLID	Pearl Lake	82.56	45	P	P	02 05 33.5	-0.5
WALA	Waterton Lakes	82.59	41	P	P	02 05 34.6	+0.6
KVN	Kaiserville	83.01	51	P	P	02 05 36.1	-0.3
KVN				IAmb	IAmb	02 05 37.9	
	comp=Z,6.9nm,0.7s						
NVAR	Mina Array Bea	83.05	52	P	P	02 05 37.4	+0.6
	comp=Z,5.8nm,0.7s,baz=269,slow=5.9,SNR=21						
NVAR				pP	pwP	02 06 10.1	0.0
	comp=Z,1.1nm,0.5s,baz=267,slow=5.3,SNR=3.1						
	comp=Z,5.8nm,0.7s						
NVAR	Mina Array Bea	83.05	52	P	P	02 05 36.5	-0.2
NV11	Mina Array Sit	83.16	52	P	P	02 05 37.0	-0.2
NV11				IAmb	IAmb	02 05 38.8	
	comp=Z,5.1nm,0.8s						
MFID	Camas Ranch	83.23	47	P	P	02 05 37.0	-0.4
MFID				IAmb	IAmb	02 05 39.0	
	comp=Z,7.3nm,0.9s						
LCH	Last Change Ra	83.92	53	P	P	02 05 40.3	-0.8
TPH	Tonopah	83.97	52	P	P	02 05 41.3	-0.1
HLID	Hailey	84.15	46	P	P	02 05 42.1	-0.1
ELK	Elko	84.53	49	P	P	02 05 43.9	-0.3
ELK				IAmb	IAmb	02 05 45.8	
	comp=Z,7.4nm,0.9s						
LRM	Limekiln Ridge	84.66	43	P	P	02 05 44.6	-0.2
HRY	Holter Researc	84.73	42	P	P	02 05 45.0	0.0
MCMT	McKenzie Canyo	84.76	44	P	P	02 05 44.0	-1.2
TPNV	Topopah Spring	85.07	53	P	P	02 05 46.0	-0.9
TPNV				IAmb	IAmb	02 05 48.2	
	comp=Z,5.0nm,0.7s						
R11A	Troy Canyon, C	85.10	51	P	P	02 05 45.6	-1.4
S11A	Rachel	85.21	52	P	P	02 05 48.0	+0.4
BOZ	Bozeman (W)	85.28	43	P	P	02 05 47.6	-0.2
YHL	Hebgen Lake	85.85	44	P	P	02 05 50.9	+0.1
YHL				IAmb	IAmb	02 05 52.8	
	comp=Z,7.3nm,0.8s						
HVU	Hansel Valley	85.91	47	P	P	02 05 49.3	-1.6
HVU				IAmb	IAmb	02 05 52.7	
	comp=Z,10nm,1.2s						
PSUT	Pine Spring	86.31	51	P	P	02 05 51.6	-1.5
PSUT				IAmb	IAmb	02 05 54.3	
	comp=Z,5.6nm,0.8s						
DUG	Dugway, Tooele	86.46	49	P	P	02 05 53.0	-0.7
DUG				IAmb	IAmb	02 05 55.0	
	comp=Z,5.5nm,0.7s						
FLWY	Flagg Ranch	86.46	45	P	P	02 05 50.5	-3.2
FLWY				IAmb	IAmb	02 06 28.4	
	comp=Z,6.9nm,0.9s						
TPAW	Teton Pass	86.52	45	P	P	02 05 53.7	-0.4
MOOW	Moose Ponds	86.56	45	P	P	02 05 54.0	-0.2
HWUT	Hardware Ranch	86.81	47	P	P	02 05 54.2	-1.2
HWUT				IAmb	IAmb	02 05 56.7	
	comp=Z,6.4nm,0.8s						
FINES	FINESS Array B	86.91	335	P	P	02 05 53.0	-2.2
	comp=Z,1.6nm,0.5s,baz=71,slow=5.2,SNR=25						
	comp=Z,1.6nm,0.5s						
NLU	North Lily Min	87.08	49	P	P	02 05 56.4	-0.4
JLU	Jordanelle	87.28	48	P	P	02 05 57.1	-0.6
JLU				IAmb	IAmb	02 05 59.0	
	comp=Z,6.2nm,0.8s						
PDAR	Pinedale Array	87.74	45	P	P	02 05 59.4	-0.5
	comp=Z,0.4nm,0.4s,baz=171,slow=1.5,SNR=7.4						
PDAR				pP	pwP	02 06 32.5	-0.8
	comp=Z,0.8nm,0.7s,baz=244,slow=2.2,SNR=4.1						
	comp=Z,0.4nm,0.4s						
TMUT	Trail Mountain	87.94	49	P	P	02 06 01.9	+0.8
Q16A	Castle Valley	88.11	50	P	P	02 06 02.7	+1.0
Q16A				IAmb	IAmb	02 06 03.3	
	comp=Z,4.8nm,0.7s						
P18A	Preston Nutter	88.50	49	P	P	02 06 04.3	+0.6
SRU	San Rafael Swe	88.50	49	P	P	02 06 03.4	-0.2
SRU				IAmb	IAmb	02 06 04.5	
	comp=Z,6.6nm,0.7s						
RDMU	Red Mountain	88.61	48	P	P	02 06 02.6	-1.4
RDMU				IAmb	IAmb	02 06 38.0	
	comp=Z,3.7nm,0.8s						
PV23	Carpenter Ridg	89.85	49	P	P	02 06 08.5	-1.5
MNK	Minsk	89.98	329	i P	P	02 06 09.2	-0.6
	comp=E,1.0nm,1.1s						
MNK				i P	P	02 06 09.2	-0.6
	comp=N,5.0nm,0.9s						
MNK				i P	P	02 06 09.2	-0.6

	comp=Z,7.0nm,1.1s,baz=237						
MNK				*i* pP	**pP**	**02 06 39.5**	**+0.3**
MNK				*i* sP	**sP**	**02 06 52.1**	**+0.8**
MNK				*i* PP	**PP**	**02 09 42.6**	**-1.2**
MNK				*i* S	S	02 16 28.1	-25
MNK				*i* sS	**pS**	**02 17 25.2**	**-4.8**
MNK				*i* SP	**SPn**	**02 18 01.4**	**+2.9**
MNK				*i* PS	**PS**	**02 18 13.4**	**-0.4**
MNK				*i* SS	**SS**	**02 22 47.2**	**-5.2**
MNK				*i* SSS	SSS	02 26 33.3	
MNK				*i* LR	LR	02 39 54.5	
MNK				*i* LRM	MLR	02 47 21.9	
	comp=N,270nm,23.6s						
MNK				*i* LRM	MLR	02 48 10.5	
	comp=Z,204nm,24.2s						
MNK				*i* LRM	MLR	02 49 04.3	
	comp=E,23nm,21.0s						
PV11	**David Mesa, Pa**	**90.01**	**49**	P	**P**	**02 06 09.5**	**-1.2**
PV13	**Radium Mtn., P**	**90.11**	**49**	P	**P**	**02 06 10.6**	**-0.6**
PV13				IAmb	IAmb	02 06 12.0	
	comp=Z,6.5nm,0.7s						
N23A	**Red Feather La**	**90.98**	**46**	P	**P**	**02 06 14.3**	**-0.8**
N23A				IAmb	IAmb	02 06 49.8	
	comp=Z,4.9nm,0.9s						
SMCO	**Snowmass**	**91.00**	**48**	P	**P**	**02 06 14.2**	**-1.3**
SMCO				IAmb	IAmb	02 06 16.8	
	comp=Z,4.1nm,0.8s						
ISCO	**Idaho Springs**	**91.68**	**47**	P	**P**	**02 06 17.8**	**-0.7**
SDCO	**Great Sand Dun**	**92.66**	**49**	P	**P**	**02 06 22.1**	**-1.0**
ANMO	**Albuquerque**	**93.17**	**52**	P	**P**	**02 06 24.3**	**-1.0**
ANMO				IAmb	IAmb	02 06 26.7	
	comp=Z,2.7nm,1.1s						
LPIG	**La Paz**	**94.50**	**63**	LR	LR	02 41 58.7	
	comp=Z,20nm,19.6s,baz=340,slow=31						
BORG	**Borgarnes**	**96.21**	**354**	LR	LR	02 48 35.8	
	comp=Z,14nm,21.5s,baz=189,slow=34						
TXAR	**Lajitas Array**	**97.75**	**56**	P	Pdif	02 06 46.5	+0.3
	comp=Z,0.3nm,0.7s,baz=290,slow=5.7,SNR=5.7						
TXAR				pP	pwP	02 07 20.0	-0.1
	comp=Z,0.3nm,0.7s,baz=343,slow=2.8,SNR=3.0						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**97.75**	**56**	P	**P**	**02 06 45.6**	**-0.6**
LPAZ	**La Paz**	**147.58**	**91**	PKPbc	**PKPdf**	**02 12 52.8**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=320,slow=3.6,SNR=9.7						
LPAZ	**La Paz**	**147.58**	**91**	PKPdf	**PKPdf**	**02 12 50.5**	**-2.7**

KRNET ***24*** *01:54:34.3±0.1, 39°.16N×72°.72E, h15^{km}, mb4.4*

SOME ***24*** *01:54:34.0, 39°.15N×72°.82E, h15^{km}*

IDC ***24*** *01:54:35.2±0.8, 38°.98N×72°.72E, h0^{km}, mb3.8/16, mbtmp3.9/23, ML3.3/7, MS3.0/4, Error ellipse: s-maj=16.5km s-min=12.0km az=157.0*

BJI ***24*** *01:54:37.5±0.0, 39°.10N×72°.70E, h15^{km}, mb3.8/2, ML3.6/4*

NNC ***24*** *01:54:40.3±1.5, 39°.07N×72°.61E, h23^{km}±6^{km}, mb4.6, mpv4.4, Error ellipse: s-maj=12.8km s-min=7.5km az=174.0*

ISC 24 01:54:35.7±0.6**, 39°.21N**±0°.02×**72°.73E**±0°.02**, h9**^{km}±3^{km}**, n116, σ2^{s}.57**/132**, mb3.8**/16**, 40C-23D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.77**	**291**	⇑*i*P	**Pg**	**01 54 49.4**	**-1.2**
	baz=95						
DRK				⇑*i*S	**Sb**	**01 55 00.4**	**-1.8**
	baz=95						
OHH	**Osh**	**1.31**	**2**	⇑*i*P	**Pg**	**01 55 00.3**	**-0.6**
	baz=2.0						
OHH				⇑*i*S	**Sg**	**01 55 19.0**	**+1.1**
	baz=2.0						
BTK	**Batken**	**1.70**	**300**	⇑*i*P	**Pb**	**01 55 06.4**	**-0.9**
	baz=2.0						
BTK				⇑*i*S	**Sg**	**01 55 29.8**	**-0.7**
	baz=2.0						
GAR	**Garm**	**1.89**	**264**	⇑*i*P	**Pb**	**01 55 09.2**	**-1.3**
	baz=66						
GAR				⇑*i*S	**Sg**	**01 55 34.7**	**-1.8**
	baz=66						
KSH	**Kashi**	**2.53**	**82**	Pn	**Pn**	**01 55 16.6**	**-0.5**
KSH				Sn	**Sn**	**01 55 45.1**	**-3.0**
KSH				smax	smax		
	comp=N,720nm,0.6s						
KSH				smax	smax		
	comp=E,490nm,1.0s						
TRKS	**Terek-Say**	**2.62**	**333**	⇑*e*P	**Pb**	**01 55 19.3**	**-3.6**
	baz=33						
TRKS				⇑*i*S	**Sb**	**01 55 52.2**	**-3.0**
	baz=33						
ARK	**Arkit**	**2.65**	**347**	⇑*e*P	**Pb**	**01 55 20.9**	**-2.5**
	baz=48						
ARK				⇑*i*S	**Sb**	**01 55 55.0**	**-1.1**
	baz=48						
CHGR	**Chuyangaron**	**2.84**	**260**	⇑*i*P	**Pb**	**01 55 22.7**	**-4.0**
	baz=61						
CHGR				⇑*i*S	**Sb**	**01 55 57.9**	**-3.7**
	baz=61						
ARLS	**Aral**	**2.91**	**24**	⇑*i*P	**Pb**	**01 55 24.5**	**-3.4**
	baz=24						
ARLS				⇑*i*S	**Sb**	**01 56 01.1**	**-2.5**
	baz=24						
AML	**Almayashu**	**3.01**	**14**	P	**Pb**	**01 55 30.6**	**+1.0**
	SNR=184						
UCH	**Uchtor**	**3.30**	**24**	P	**Pb**	**01 55 34.4**	**-0.4**
	SNR=40						
UCH	**Uchtor**	**3.30**	**24**	⇑*e*P	Pb	01 55 30.3	-4.4
	baz=23						
UCH				⇑*i*S	**Sb**	**01 56 10.8**	**-4.4**
	baz=23						
TAS	**Tashkent**	**3.37**	**310**	⇓*i*P	Pb	01 55 30.6	-5.1
	baz=11						
TAS				⇓*i*S	**Sb**	**01 56 11.9**	**-4.9**
	baz=11						
EKS2	**Erkin-Say**	**3.54**	**13**	P	**Pb**	**01 55 37.5**	**-1.0**
	SNR=12						
EKS2	**Erkin-Say**	**3.54**	**13**	⇓*e*P	**Pn**	**01 55 33.2**	**+2.3**
	baz=13						
EKS2				⇓*i*S	**Sb**	**01 56 16.4**	**-5.2**
	baz=13						
MRKS	**Merke**	**3.55**	**6**	*e*P	**Pg**	**01 55 43.2**	**-0.5**
	58nm,0.6s						
MRKS				*e*S	**Sg**	**01 56 33.0**	**+3.3**
	168nm,0.3s						
MRKS	**Merke**	**3.55**	**6**	Pg	**Pg**	**01 55 46.7**	**+3.0**
	137nm,0.4s						
MRKS				Lg	Lg	01 56 26.5	
	106nm,0.4s						
IUG	**Iuzhnay**	**3.58**	**326**	*e*P	**Pg**	**01 55 43.0**	**-1.3**
	2µm,0.4s						
IUG				*e*S	**Sg**	**01 56 32.0**	**+1.3**
	267nm,0.6s						
IUG	**Iuzhnay**	**3.58**	**326**	Pg	**Pg**	**01 55 47.2**	**+2.9**
	8µm,0.8s						
IUG				Lg	Lg	01 56 26.5	
	309nm,0.4s						
AAK	**Ala-Archa**	**3.67**	**21**	P	**Pb**	**01 55 39.5**	**-1.3**
	SNR=44						
AAK	**Ala-Archa**	**3.67**	**21**	Pn	**Pb**	**01 55 39.6**	**-1.3**
	14nm,0.3s,baz=195,slow=7.6,SNR=45						
AAK				Sn	**Sb**	**01 56 27.4**	**+1.8**
	14nm,0.3s,baz=36,slow=15,SNR=16						
	27nm,0.3s						
AAK	**Ala-Archa**	**3.67**	**21**	⇑*i*P	**Pn**	**01 55 35.2**	**+2.4**
	baz=21						
AAK				⇑*i*S	**Sn**	**01 56 19.7**	**+3.4**
	baz=21						
DZA	**Taraz**	**3.83**	**344**	*e*P	**Pb**	**01 55 41.3**	**-2.1**
	226nm,0.2s						
DZA				*e*S	**Sb**	**01 56 29.7**	**-0.2**
	603nm,0.5s						
DZA	**Taraz**	**3.83**	**344**	Pg	**Pg**	**01 55 48.8**	**-0.2**
	143nm,0.1s						
DZA				Lg	Lg	01 56 29.7	
	603nm,0.5s						
KBK	**Karagaybulak**	**3.83**	**25**	P	**Pb**	**01 55 41.8**	**-1.8**
	SNR=19						
KBK	**Karagaybulak**	**3.83**	**25**	⇑*e*P	**Pn**	**01 55 37.2**	**+2.2**
	baz=25						
KBK				⇑*i*S	**Sn**	**01 56 23.4**	**+3.2**
	baz=25						
CHM	**Chimkent**	**3.91**	**324**	*e*P	**Pg**	**01 55 47.5**	**-3.0**
	6.0nm,0.5s						
CHM				*e*S	**Sg**	**01 56 40.7**	**-0.5**
	677nm,0.4s						
ULHL	**Ulahol**	**4.04**	**40**	P	**Pb**	**01 55 44.1**	**-2.9**
	SNR=20						
ULHL	**Ulahol**	**4.04**	**40**	⇓*e*P	**Pn**	**01 55 40.2**	**+2.3**
	baz=40						
ULHL				⇓*i*S	**Sn**	**01 56 28.4**	**+3.0**
	baz=40						
BOOM	**Boomskoye usch**	**4.08**	**36**	⇓*e*P	**Pn**	**01 55 41.0**	**+2.6**
	baz=35						
BOOM				⇓*i*S	**Sn**	**01 56 29.4**	**+3.0**
	baz=35						
CHMS	**Chumysh**	**4.08**	**21**	P	**Pb**	**01 55 44.9**	**-2.8**
	SNR=27						
CHMS	**Chumysh**	**4.08**	**21**	⇓Pn	Pb	01 55 43.8	-3.9
	29nm,0.5s						
CHMS				⇑Sn	**Sb**	**01 56 34.1**	**-3.0**
	65nm,0.6s						
CHMS	**Chumysh**	**4.08**	**21**	⇓*e*P	**Pn**	**01 55 41.0**	**+2.7**
	baz=21						
CHMS				⇓*i*S	**Sn**	**01 56 29.4**	**+3.2**
	baz=21						
KK31	**Karatay Array**	**4.24**	**337**	Pn	Pb	01 55 44.4	-6.0
	19nm,0.3s,baz=149,slow=11,SNR=460						
KK31				⇓Sn	**Sb**	**01 56 36.0**	**-5.6**
	48nm,0.5s,baz=151,slow=24,SNR=4.3						
KKAR	**Karatay Array**	**4.24**	**337**	⇑*e*P	**Pn**	**01 55 42.8**	**+2.4**
	baz=38						
KKAR				⇑*i*S	**Sn**	**01 56 33.0**	**+3.0**
	baz=38						
USP	**Ospenovka**	**4.26**	**18**	P	**Pb**	**01 55 47.6**	**-3.2**
	SNR=12						
USP	**Ospenovka**	**4.26**	**18**	⇑*i*P	**Pn**	**01 55 43.2**	**+2.4**
	baz=18						
USP				⇑*i*S	**Sn**	**01 56 33.9**	**+3.1**
	baz=18						
TKM2	**Tokmak 2**	**4.29**	**29**	P	Pb	01 55 47.5	-4.0
	SNR=22						
TKM2	**Tokmak 2**	**4.29**	**29**	⇓Pn	Pb	01 55 47.4	-4.0
	13nm,0.6s						
TKM2				⇑Pg	**Pg**	**01 55 58.9**	**+1.1**
	17nm,0.5s						
TKM2				⇑Lg	Lg	01 56 58.4	
	88nm,0.7s						
BRLS	**Borolday**	**4.40**	**331**	*e*P	**Pb**	**01 55 54.0**	**+0.9**
	11nm,0.3s						
BRLS				*e*S	**Sg**	**01 56 51.9**	**-5.0**
	74nm,0.4s						
BRLS	**Borolday**	**4.40**	**331**	Pg	**Pg**	**01 56 01.2**	**+1.2**
	16nm,0.2s						
BRLS				Lg	Lg	01 56 52.5	
	74nm,0.4s						
KDJ	**Kajisay**	**4.46**	**48**	⇓*i*P	**Pn**	**01 55 45.9**	**+2.2**
	baz=48						
KDJ				⇓*i*S	**Sn**	**01 56 38.8**	**+2.9**
	baz=48						
SGDS	**Sogindy**	**4.47**	**18**	*e*P	**Pg**	**01 55 58.4**	**-2.9**
	17nm,0.5s						
SGDS				*e*S	**Sg**	**01 56 58.8**	**-0.5**
	66nm,0.5s						
SGDS	**Sogindy**	**4.47**	**18**	Pg	Pg	01 56 06.0	+4.6
	18nm,0.3s						
SGDS				Lg	Lg	01 56 58.8	
	66nm,0.5s						
KST	**Kastek**	**4.54**	**31**	*e*P	Pg	01 55 59.1	-3.5
	13nm,0.4s						
KST				*e*S	**Sg**	**01 57 01.4**	**0.0**
	93nm,0.8s						
KST	**Kastek**	**4.54**	**31**	Pg	Pg	01 56 07.3	+4.7
	25nm,0.7s						
KST				Lg	Lg	01 57 01.4	
	93nm,0.8s						
MTBS	**Maitube**	**4.81**	**34**	*e*P	**Pg**	**01 56 04.4**	**-3.3**
	24nm,0.3s						
MTBS				*e*S	**Sg**	**01 57 09.7**	**-0.3**
	51nm,0.6s						
MTBS	**Maitube**	**4.81**	**34**	Pg	**Pg**	**01 56 10.9**	**+3.2**
	24nm,0.3s						
MTBS				Lg	Lg	01 57 07.3	
	51nm,0.6s						
TNSS	**Tian-Shan**	**4.97**	**38**	*e*P	Pg	01 56 07.2	-3.7
	13nm,0.3s						
TNSS				*e*S	**Sg**	**01 57 15.2**	**-0.2**
	31nm,0.5s						
TNSS	**Tian-Shan**	**4.97**	**38**	Pg	Pg	01 56 16.2	+5.3
	33nm,0.3s						
TNSS				Lg	Lg	01 57 16.4	
	31nm,0.5s						
KRBS	**Karabastau**	**5.00**	**25**	*e*P	Pg	01 56 07.3	-4.0
	9.7nm,0.6s						
KRBS				*e*S	**Sg**	**01 57 15.1**	**-1.0**
	26nm,0.5s						
KRBS	**Karabastau**	**5.00**	**25**	Pg	**Pg**	**01 56 14.8**	**+3.4**
	14nm,0.4s						
KRBS				Lg	Lg	01 57 15.1	
	26nm,0.5s						
AAA	**Alma-Ata**	**5.09**	**37**	*e*P	**Pg**	**01 56 11.2**	**-1.9**
	50nm,0.3s						
AAA				*e*S	**Sg**	**01 57 20.8**	**+1.8**
	76nm,0.5s						
AAA	**Alma-Ata**	**5.09**	**37**	Pg	Pg	01 56 18.7	+5.5
	50nm,0.3s						
AAA				Lg	Lg	01 57 20.8	
	76nm,0.5s						
MDOK	**Medeo**	**5.12**	**38**	*e*P	**Pg**	**01 56 10.5**	**-3.1**
	15nm,0.3s						
MDOK				*e*S	**Sg**	**01 57 20.4**	**+0.4**
	34nm,0.7s						
MDOK	**Medeo**	**5.12**	**38**	⇑Pn	Pb	01 55 58.1	-7.4
	13nm,0.6s						
MDOK				Pg	**Pg**	**01 56 13.1**	**-0.6**
	31nm,0.8s						
MDOK				⇓Lg	Lg	01 57 24.5	
	119nm,0.9s						
MDOK	**Medeo**	**5.12**	**38**	Pg	Pg	01 56 18.5	+4.8
	24nm,0.5s						
MDOK				Lg	Lg	01 57 20.4	
	34nm,0.7s						
KNDC	**Almaty**	**5.12**	**37**	⇑Lg	Lg	01 57 24.5	
	470nm,1.2s						
ANVS	**Anan'yevo**	**5.16**	**45**	⇑*i*P	**Pn**	**01 55 55.8**	**+2.5**
	baz=44						
ANVS				⇑*i*S	**Sn**	**01 56 55.3**	**+2.2**
	baz=44						
KTBS	**Karatobe**	**5.39**	**32**	*e*P	Pg	01 56 15.1	-3.8
	11nm,0.6s						
KTBS				*e*S	**Sg**	**01 57 27.9**	**-0.7**
	76nm,0.5s						
KTBS	**Karatobe**	**5.39**	**32**	Pg	**Pg**	**01 56 22.7**	**+3.9**
	19nm,0.4s						
KTBS				Lg	Lg	01 57 27.9	
	76nm,0.5s						
KUU	**Kurty**	**5.40**	**29**	*e*P	Pg	01 56 14.9	-4.2
	7.7nm,0.5s						
KUU				*e*S	**Sg**	**01 57 27.0**	**-2.1**
	86nm,0.6s						
KUU	**Kurty**	**5.40**	**29**	Pg	**Pg**	**01 56 23.1**	**+4.0**
	10nm,0.7s						
KUU				Lg	Lg	01 57 28.3	
	86nm,0.6s						
CEP	**Cherat**	**5.42**	**187**	P	Pb	01 56 02.2	-8.4
CEP				S	**Sb**	**01 57 11.0**	**-4.8**
CHCP	**Chirah Chowk**	**5.56**	**175**	P	Pb	01 56 03.9	-9.0
CHKK	**Chushkaly**	**5.63**	**33**	*e*P	Pg	01 56 19.5	-4.0
	7.5nm,0.6s						
CHKK				*e*S	**Sg**	**01 57 35.8**	**-0.6**
	35nm,0.5s						
CHKK	**Chushkaly**	**5.63**	**33**	Pg	**Pg**	**01 56 27.3**	**+3.8**
	12nm,0.6s						
CHKK				Lg	Lg	01 57 35.8	
	35nm,0.5s						
SATY	**Saty**	**5.75**	**46**	*e*P	Pg	01 56 22.1	-3.7
	20nm,0.5s						
SATY				*e*S	**Sg**	**01 57 39.3**	**-1.1**
	54nm,1.3s						
SATY	**Saty**	**5.75**	**46**	Pg	**Pg**	**01 56 29.2**	**+3.3**
	20nm,0.5s						
SATY				Lg	Lg	01 57 39.3	
	54nm,1.3s						
BTLS	**Baital**	**5.91**	**9**	*e*P	**Pb**	**01 56 22.3**	**+3.5**
	3.8nm,0.4s						
BTLS				*e*S	**Sg**	**01 57 39.4**	**-5.9**
	31nm,0.6s						
BTLS	**Baital**	**5.91**	**9**	Pg	**Pg**	**01 56 30.9**	**+2.1**
	9.8nm,0.4s						
BTLS				Lg	Lg	01 57 42.0	
	31nm,0.6s						
KURS	**Kuram**	**5.91**	**42**	*e*P	Pg	01 56 25.4	-3.5
	12nm,1.0s						
KURS				*e*S	**Sg**	**01 57 45.9**	**+0.4**
	37nm,0.9s						
KURS	**Kuram**	**5.91**	**42**	Pg	Pg	01 56 33.4	+4.5
	26nm,0.8s						
KURS				Lg	Lg	01 57 45.9	
	37nm,0.9s						
UZB	**Uzynbulak**	**6.16**	**48**	*e*P	Pg	01 56 29.0	-4.6
	8.8nm,0.4s						
UZB				*e*S	**Sg**	**01 57 50.8**	**-2.7**
	20nm,0.7s						
UZB	**Uzynbulak**	**6.16**	**48**	Pg	**Pg**	**01 56 36.0**	**+2.3**
	8.8nm,0.4s						
UZB				Lg	Lg	01 57 51.4	
	20nm,0.7s						
KPKS	**Kokpek**	**6.17**	**45**	*e*P	**Pg**	**01 56 30.8**	**-3.1**
	8.9nm,0.3s						
KPKS				*e*S	**Sg**	**01 57 53.4**	**-0.4**
	36nm,0.6s						
THW	**Thamme Wali**	**6.45**	**187**	P	Pn	01 56 14.1	+3.2
PDGK	**Podgornoye**	**6.54**	**49**	Pg	Pg	01 56 45.8	+4.8
	7.0nm,0.7s						
PDGK				Lg	Lg	01 58 07.1	
	14nm,1.1s						
PDGK	**Podgornoye**	**6.54**	**49**	⇑Pn	Pn	01 56 16.8	+4.5
	5.1nm,0.6s						
PDGK				⇑Pg	**Pg**	**01 56 39.8**	**-1.1**
	9.6nm,0.7s						
PDGK				⇓Lg	Lg	01 58 10.5	
	48nm,0.8s						
TDK	**Taldyqorghan**	**7.16**	**34**	*e*P	Pg	01 56 49.0	-3.7
	40nm,0.4s						
TDK				*e*S	**Sg**	**01 58 24.7**	**-0.7**
	68nm,0.4s						
TDK	**Taldyqorghan**	**7.16**	**34**	Pg	**Pg**	**01 56 56.1**	**+3.4**
	71nm,0.6s						
TDK				Lg	Lg	01 58 24.7	
	68nm,0.4s						
DJR	**Jarkent**	**7.35**	**44**	*e*P	Pg	01 56 50.9	-5.4
	3.5nm,0.8s						
DJR				*e*S	**Sg**	**01 58 28.7**	**-2.7**
	12nm,1.0s						
DJR	**Jarkent**	**7.35**	**44**	Pg	**Pg**	**01 56 58.2**	**+1.9**
	4.6nm,0.5s						
DJR				Lg	Lg	01 58 28.7	
	14nm,1.0s						
KAPS	**Kapalarasan**	**7.81**	**37**	*e*P	Pb	01 56 57.5	+6.3
	2.5nm,0.8s						
KAPS				*e*S	Sb	01 58 40.6	+16
	16nm,0.8s						
KAPS	**Kapalarasan**	**7.81**	**37**	Pg	Pb	01 57 05.1	+14
	4.1nm,0.6s						
KAPS				Lg	Lg	01 58 40.6	
	16nm,0.8s						
OTUK	**Ortayu**	**9.04**	**358**	⇓Pn	Pn	01 56 50.0	+3.7
	4.2nm,0.7s						
OTUK				⇓Lg	Lg	01 59 26.9	
	21nm,0.8s						
MK31	**Makanchi Array**	**10.31**	**40**	Pn	Pn	01 57 08.5	+4.8
	2.8nm,0.8s,baz=216,slow=13,SNR=9.3						
MKAR	**Makanchi Array**	**10.31**	**40**	Pn	Pn	01 57 09.5	+5.8
	0.2nm,0.3s,baz=213,slow=10,SNR=8.9						
MKAR				Lg	Lg	02 00 03.7	
	0.2nm,0.3s,baz=244,slow=22,SNR=2.8						
	2.9nm,1.0s						
GEYT	**Alibeck**	**11.52**	**268**	Pn	**Pn**	**01 57 19.1**	**-1.2**
	1.3nm,0.3s,baz=99,slow=9.2,SNR=9.9						
GEYT				Sn	**Sn**	**01 59 28.4**	**-0.7**
	0.6nm,0.3s,baz=78,slow=28,SNR=3.8						
	2.4nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**11.52**	**268**	⇑Pn	**Pn**	**01 57 21.2**	**+0.8**
GYA0B				⇑Sn	**Sn**	**01 59 30.2**	**+1.2**
KURBB	**Kurchatov Arra**	**12.12**	**18**	Pn	**Pn**	**01 57 31.7**	**+3.2**
	0.1nm,0.3s,baz=211,slow=12,SNR=5.3						
KURBB				Lg	Lg	02 00 54.1	
	0.1nm,0.3s,baz=209,slow=30,SNR=4.1						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**12.12**	**18**	⇑Pn	**Pn**	**01 57 31.8**	**+3.3**
	2.0nm,0.8s						
KURBB				⇓Lg	Lg	02 01 05.6	
	21nm,0.9s						
AB31	**Akbulak array**	**13.58**	**322**	Pn	**Pn**	**01 57 48.8**	**+0.4**
	5.6nm,0.6s,baz=134,slow=12,SNR=106						
AB31				Sn	**Sn**	**02 00 20.9**	**+1.6**
	2.7nm,0.5s,baz=131,slow=26,SNR=5.9						
BRVK	**Borovoye**	**13.95**	**354**	⇑Pn	**Pn**	**01 57 54.9**	**+1.5**
	5.6nm,1.3s						
BRVK				⇑Lg	Lg	02 02 05.5	
	12nm,1.3s						
AKTO	**Aktyubinsk**	**15.30**	**322**	Pn	**P**	**01 58 13.3**	**-3.2**
	0.6nm,0.3s,baz=133,slow=14,SNR=6.9						
AKTO				LR	LR	02 04 34.2	
	comp=Z,32nm,19.9s,baz=142,slow=39						
	1.8nm,0.4s						
AKTO	**Aktyubinsk**	**15.30**	**322**	⇓Pn	**P**	**01 58 12.5**	**-4.1**
	17nm,0.6s						
AKTO				⇓Sn	**Sn**	**02 01 05.6**	**+4.5**
	5.8nm,0.9s						
ZALV	**Zalesovo Beam**	**16.88**	**25**	P	**P**	**01 58 35.6**	**+1.5**
	0.7nm,0.3s,baz=231,slow=11,SNR=9.9						
	1.8nm,0.4s						
ARU	**Arti**	**19.61**	**336**	P	**Pn**	**01 59 07.3**	**+1.9**
	baz=124,slow=7.4,SNR=6.4						
ARU				LR	LR	02 07 10.7	
	comp=Z,34nm,20.3s,baz=139,slow=38						
	1.5nm,0.7s						
GTA	**Gaotai**	**20.93**	**81**	⇓P	Pn	01 59 22.5	+1.2
GTA				pP	sP	01 59 25.8	+1.3
GTA				sP	pP	01 59 29.9	+7.2
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	**Garni**	**21.53**	**281**	P	**P**	**01 59 25.4**	**+0.1**
	1.3nm,0.4s,baz=182,slow=13,SNR=1.6						
	1.3nm,0.4s						
BELG	**Belogornoye**	**21.77**	**315**	P	**P**	**01 59 30.0**	**+2.5**
	6.5nm,0.6s,baz=290,slow=5.3,SNR=6.2						
	6.5nm,0.6s						
KBZ	**Khabaz**	**22.74**	**291**	P	**P**	**01 59 41.5**	**+3.5**
	1.1nm,0.6s,baz=299,slow=12,SNR=2.1						
	1.1nm,0.6s						
KVAR	**Kislovodsk Arr**	**22.89**	**292**	P	**P**	**01 59 43.2**	**+3.5**
	1.0nm,0.3s,baz=297,slow=19,SNR=1.6						
	1.0nm,0.3s						
SONM	**Songino Array**	**25.72**	**59**	P	**P**	**02 00 09.3**	**+3.0**
	1.8nm,0.4s,baz=265,slow=7.8,SNR=11						
	1.8nm,0.4s						
FINES	**FINESS Array B**	**36.06**	**324**	P	**P**	**02 01 38.7**	**+1.5**
	1.1nm,0.7s,baz=112,slow=10,SNR=7.2						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**39.20**	**336**	P	**P**	**02 02 05.8**	**+2.1**
	2.4nm,0.9s,baz=113,slow=8.5,SNR=11						
	2.4nm,0.9s						
HFS	**Hagfors**	**41.83**	**320**	LR	LR	02 19 53.3	
	comp=Z,32nm,19.2s,baz=140,slow=36						
KLR	**Kul'dur**	**42.47**	**56**	P	**P**	**02 02 32.7**	**+1.8**
	0.5nm,0.3s,baz=314,slow=11,SNR=2.3						
	0.5nm,0.3s						
GERES	**GERESS Array B**	**42.54**	**303**	P	P	02 02 34.8	+3.2
	0.5nm,0.7s,baz=64,slow=9.2,SNR=4.6						
	0.5nm,0.7s						
NOA	**NORSAR Array B**	**43.09**	**321**	P	**P**	**02 02 36.2**	**+0.4**
	0.5nm,0.6s,baz=31,slow=19,SNR=2.5						
NOA				LR	LR	02 21 12.4	
	comp=Z,18nm,19.2s,baz=95,slow=37						
	0.5nm,0.6s						
ESDC	**Sonseca Array**	**57.43**	**297**	P	**P**	**02 04 26.9**	**+2.1**
	0.4nm,0.5s,baz=56,slow=7.2,SNR=8.1						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.16**	**269**	P	**P**	**02 05 30.5**	**+0.3**
	2.0nm,0.7s,baz=49,slow=5.5,SNR=16						
	2.0nm,0.7s						
ILAR	**Eielson Array**	**71.80**	**17**	P	**P**	**02 05 59.4**	**+1.3**
	0.5nm,0.8s,baz=253,slow=26,SNR=3.6						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**78.47**	**3**	P	**P**	**02 06 38.4**	**+1.8**
	0.4nm,0.4s,baz=351,slow=5.4,SNR=3.6						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**82.29**	**123**	P	**P**	**02 06 57.8**	**0.0**
	0.7nm,0.7s,baz=327,slow=5.2,SNR=9.2						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**84.71**	**126**	P	**P**	**02 07 11.2**	**+1.1**
	0.4nm,0.6s,baz=347,slow=7.2,SNR=4.0						
	0.4nm,0.6s						

ANF ***24*** *02:28:25.8±0.1, 34°.16N×117°.62W, h10^{km}±1^{km}, ML3.5/34, ML3.5/34, Error ellipse: s-maj=1.2km s-min=1.1km az=12.0*

IASPEI ***24*** *02:28:26.1±0.8, 34°.16N±0°.02×117°.63W±0°.02, h13^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=3.0km az=31.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472,* *2009*

NEIC ***24*** *02:28:26.7±1.1, 34.°18N±0.°01×117.°63W±0.°01, h12^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=1.4km az=204.0*

PAS ***24*** *02:28:26.9±1.5, 34.°17N±0.°01×117.°631W±0.°008, h10^{km}±4^{km}, ML3.5/276, ML3.2/82(NEIC), Error ellipse: s-maj=1.7km s-min=0.7km az=204.0*

ISC 24 02:28:26.3±0.8**, 34.°15N**±0.°02×**117.°63W**±0.°02**, h11**^{km}±6^{km}**, n90, σ0^{s}.73**/117**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFSC	**Mount Baldy Ra**	**0.09**	**345**	P	**Pg**	**02 28 29.0**	**-0.1**
	baz=161,SNR=1000						
BFSC				S	**Sg**	**02 28 30.6**	**-0.6**
	baz=161						
CFSC	**Central Fire S**	**0.29**	**99**		**Pg**	**02 28 33.0**	**+0.7**
CFSC					**Sb**	**02 28 37.8**	**-0.6**
RSBC	**Riverside Bore**	**0.31**	**126**		**Pg**	**02 28 33.0**	**+0.3**
RSBC					**Sg**	**02 28 37.6**	**+0.8**
CBCC	**Caltech Broad**	**0.41**	**268**		**Sg**	**02 28 40.9**	**+0.9**
GVRC	**Garvey Reservo**	**0.42**	**256**		**Pg**	**02 28 35.1**	**+0.4**
PASC	**Pasadena Art C**	**0.46**	**272**		**Pg**	**02 28 35.3**	**-0.1**
PASC	**Pasadena Art C**	**0.46**	**272**		**Sg**	**02 28 41.8**	**+0.3**
PASC	**Pasadena Art C**	**0.46**	**272**	IAML		02 28 42.0	
	comp=E,936nm,0.6s						
PASC				IAML		02 28 42.1	
	comp=N,1µm,0.3s						
ELS	**Elsinore Mount**	**0.53**	**161**		**Pg**	**02 28 36.3**	**-0.4**
ELS				IAML		02 28 46.4	
	comp=E,942nm,0.3s						
DECC	**Green Verdugo**	**0.59**	**280**	P	**Pg**	**02 28 37.8**	**0.0**
	baz=98,SNR=64						
DECC				S	**Sg**	**02 28 45.6**	**0.0**
	baz=98						
BBRC	**Big Bear Solar**	**0.60**	**79**	P	**Pg**	**02 28 38.2**	**+0.2**
	baz=261,SNR=68						
BBRC				S	**Sg**	**02 28 45.1**	**-0.9**
	baz=261						
MURC	**Murrieta**	**0.66**	**147**	P	**Pg**	**02 28 39.0**	**-0.1**
	baz=328,SNR=49						
MURC				S	**Sg**	**02 28 48.1**	**+0.2**
	baz=328						
DJJ	**Donna J Jenkin**	**0.69**	**266**		**Pg**	**02 28 39.3**	**-0.4**
FMP	**Fort Macarthur**	**0.71**	**232**	P	**Pg**	**02 28 40.2**	**+0.1**
	baz=50						
FMP				S	**Sg**	**02 28 49.4**	**+0.2**
	baz=50						
EDW2	**Edwards Air Fo**	**0.79**	**338**	P	**Pg**	**02 28 41.1**	**-0.5**
	baz=157,SNR=244						
EDW2				S	**Sg**	**02 28 51.1**	**-0.8**
	baz=157						
RRX	**Edison Barstow**	**0.89**	**36**	P	**Pg**	**02 28 43.2**	**-0.4**
	baz=217,SNR=13						
RRX				S	**Sg**	**02 28 55.2**	**+0.1**
	baz=217						
CIS	**Catalina Islan**	**0.99**	**221**	P	**Pg**	**02 28 45.1**	**-0.4**
	baz=40,SNR=13						
CIS				S	**Sg**	**02 28 58.8**	**+0.4**
	baz=40						
OSI	**Osito Audit: C**	**1.01**	**297**	P	**Pg**	**02 28 45.0**	**-0.9**
	baz=116						
OSI				S	**Sg**	**02 28 58.8**	**-0.4**
	baz=116						
CCAC	**Calif City Air**	**1.05**	**342**		**Pb**	**02 28 45.8**	**-0.7**
CCAC				IAML		02 29 01.9	
	comp=E,794nm,0.8s						
PFO	**Pinyon Flats O**	**1.11**	**119**		**Pb**	**02 28 46.8**	**-0.9**
PFO				IAML		02 29 02.6	
	comp=E,452nm,0.4s						
PFO				IAML		02 29 03.3	
	comp=E,482nm,0.2s						
PFO	**Pinyon Flats O**	**1.11**	**119**	P	**Pb**	**02 28 46.8**	**-0.9**
	baz=300,SNR=38						
PFO				S	**Sb**	**02 29 01.2**	**-1.0**
	baz=300						
HEC	**Hector,Ludlow**	**1.26**	**57**	P	**Pn**	**02 28 49.6**	**-0.3**
	baz=239,SNR=60						
HEC				S	**Sn**	**02 29 06.9**	**-0.1**
	baz=239						
LRMC	**Laurel Mtn Rad**	**1.32**	**358**	P	**Pn**	**02 28 50.7**	**-0.2**
	baz=178,SNR=122						
LRMC				S	**Sb**	**02 29 07.9**	**-0.4**
	baz=178						
GSC	**Goldstone, Bar**	**1.33**	**30**	Pn	**Pn**	**02 28 51.0**	**+0.1**
GSC	**Goldstone, Bar**	**1.33**	**30**	P	**Pn**	**02 28 51.0**	**+0.1**
	baz=211,SNR=165						
GSC				S	**Sb**	**02 29 08.1**	**-0.3**
	baz=211						
109C	**Camp Elliot, M**	**1.34**	**161**		**Pn**	**02 28 50.2**	**-0.6**
109C	**Camp Elliot, M**	**1.34**	**161**	P	**Pn**	**02 28 50.3**	**-0.6**
	baz=341,SNR=25						
109C				S	**Sb**	**02 29 07.6**	**-0.8**
	baz=341						
BELC	**Belle Mtn. Jos**	**1.36**	**96**	P	**Pn**	**02 28 51.3**	**-0.1**
	baz=278,SNR=349						
BELC				S	**Sg**	**02 29 10.2**	**0.0**
	baz=278						
ARVC	**Arvin**	**1.39**	**315**	P	**Pn**	**02 28 51.7**	**+0.1**
	baz=134,SNR=30						
ARVC				S	**Sn**	**02 29 09.8**	**-0.1**
	baz=134						
SCI2	**San Clemente I**	**1.40**	**213**	P	**Pn**	**02 28 51.5**	**-0.3**
	baz=32,SNR=7.2						
SCI2				S	**Sn**	**02 29 10.0**	**-0.2**
	baz=32						
MONP2	**Monument Peak**	**1.61**	**141**	P	**Pn**	**02 28 55.0**	**+0.1**
	baz=322,SNR=18						
MONP2				S	**Sn**	**02 29 15.9**	**+0.1**
	baz=322						
ISA	**Isabella, Lake**	**1.66**	**336**	Pn	**Pn**	**02 28 55.1**	**-0.3**
ISA	**Isabella, Lake**	**1.66**	**336**	P	**Pn**	**02 28 55.3**	**-0.1**
	baz=155,SNR=74						
ISA				S	**Sn**	**02 29 16.6**	**-0.1**
	baz=155						
BCW	**Bitter Crk WRg**	**1.67**	**299**		**Pn**	**02 28 55.5**	**-0.1**
SCZ2	**Santa Cruz Isl**	**1.67**	**265**	Pg	**Pb**	**02 28 57.9**	**+0.8**
	baz=83						
SCZ2				Sb	**Sg**	**02 29 19.7**	**-0.4**
	baz=83						
BAR	**Barrett**	**1.67**	**151**		**Pn**	**02 28 55.7**	**+0.1**
TJX	**Tijuana**	**1.71**	**163**		**Pn**	**02 28 56.8**	**+0.8**
GMRC	**Granite Mounta**	**1.75**	**68**	P	**Pn**	**02 28 56.0**	**-0.6**
	baz=250,SNR=101						
GMRC				Sb	**Sg**	**02 29 21.6**	**-0.9**
	baz=250						
SBC	**Santa Barbara**	**1.75**	**280**	P	**Pn**	**02 28 56.6**	**+0.1**
	baz=98,SNR=5.6						
SBC				S	**Sb**	**02 29 19.9**	**-0.4**
	baz=98						
TKX	**Tecate**	**1.80**	**151**		**Pn**	**02 28 57.7**	**+0.4**
BC3	**Big Chuckawall**	**1.88**	**105**	P	**Pn**	**02 28 58.5**	**+0.1**
	baz=287,SNR=44						
BC3				Sb	**Sb**	**02 29 25.3**	**+1.1**
	baz=287						
TUQ	**Turquoise Moun**	**1.90**	**47**	P	**Pn**	**02 28 58.6**	**-0.2**
	baz=228,SNR=12						
TUQ				Sb	**Sb**	**02 29 26.0**	**+1.2**
	baz=228						
QSM	**Queen of Sheba**	**1.91**	**19**	Pn	**Pn**	**02 28 58.6**	**-0.2**
QSM				IAML		02 29 32.0	
	comp=N,264nm,0.6s						
QSM				IAML		02 29 32.5	
	comp=E,294nm,0.6s						
PKM	**Mcpherson Peak**	**1.95**	**293**	P	**Pn**	**02 28 59.7**	**+0.2**
	baz=111,SNR=22						
PKM				S	**Sn**	**02 29 25.1**	**+1.1**
	baz=111						
SWSC	**Sam W. Stewart**	**1.95**	**128**	P	**Pn**	**02 28 58.9**	**-0.4**
	baz=309						
SWSC				Sb	**Sb**	**02 29 27.2**	**+1.2**
	baz=309						
IKP	**In-Ko-Pah, Jac**	**1.97**	**139**	Pb	**Pb**	**02 29 01.6**	**-0.5**
	baz=321						
CBX	**Cerro Bola**	**2.01**	**156**		**Pn**	**02 29 00.5**	**+0.3**
CBX				IAML		02 29 30.0	
	comp=E,241nm,0.4s						
CBX				IAML		02 29 33.8	
	comp=N,258nm,0.5s						
RMX	**La Rumorosa**	**2.02**	**140**	Pn	**Pn**	**02 29 01.8**	**+1.3**
RMX				IAML		02 29 33.9	
	comp=N,178nm,0.6s						
IRM	**Iron Mountain**	**2.06**	**89**	Pg	**Pb**	**02 29 04.3**	**+0.6**
	baz=271,SNR=42						
VES	**Vestal, Richgr**	**2.06**	**325**	P	**Pn**	**02 29 01.4**	**+0.5**
	baz=144,SNR=22						
YUH	**Yuha Desert**	**2.07**	**136**	Pn	**Pn**	**02 29 01.6**	**+0.6**
YUH				IAML		02 29 32.1	
	comp=N,158nm,0.5s						
YUH				IAML		02 29 32.3	
	comp=E,117nm,0.9s						
GWY	**Greenwater Val**	**2.17**	**21**	Pn	**Pn**	**02 29 02.6**	**0.0**
GWY				IAML		02 29 40.7	
	comp=N,209nm,0.6s						
SMMC	**Simmler**	**2.27**	**301**	P	**Pn**	**02 29 04.5**	**+0.8**
	baz=120						
CCX	**Cicese**	**2.42**	**160**	Pn	**Pn**	**02 29 04.8**	**-0.9**
CCX				IAML		02 29 42.5	
	comp=E,143nm,0.5s						
CCX				IAML		02 29 43.4	
	comp=N,124nm,0.4s						
NEE2	**Needles Airpor**	**2.56**	**75**	P	**Pn**	**02 29 07.9**	**+0.2**
	baz=257,SNR=8.3						
GLA	**Glamis**	**2.58**	**114**		**Pn**	**02 29 06.9**	**-1.2**
GLA				IAML		02 29 49.4	
	comp=E,150nm,0.7s						
GLA				IAML		02 29 50.5	
	comp=N,115nm,0.4s						
BLYC	**Blythe**	**2.61**	**98**	Pn	**Pn**	**02 29 07.7**	**-0.7**
BLYC				IAML		02 29 52.3	
	comp=N,84nm,0.7s						
BLYC				IAML		02 29 53.3	
	comp=E,72nm,0.7s						
PAGB	**Antelope Grade**	**2.67**	**307**	Pn	**Pn**	**02 29 09.2**	**0.0**
PAGB				IAML		02 30 00.2	
	comp=N,83nm,0.8s						
PAGB				IAML		02 30 03.9	
	comp=E,71nm,1.1s						
GRAC	**Grapevine Rang**	**2.84**	**4**		**Pn**	**02 29 11.9**	**+0.2**
GRAC				IAML		02 30 03.7	
	comp=E,57nm,1.0s						
GRAC				IAML		02 30 08.2	
	comp=N,64nm,0.5s						
GRAC	**Grapevine Rang**	**2.84**	**4**	P	**Pn**	**02 29 12.7**	**+1.0**
	baz=184,SNR=7.2						
TIN	**Tinemaha, Big**	**2.94**	**351**	P	**Pn**	**02 29 13.6**	**+0.6**
	baz=170						
TPNV	**Topopah Spring**	**3.01**	**22**		**Pn**	**02 29 14.4**	**+0.4**
TPNV	**Topopah Spring**	**3.01**	**22**	P	**Pn**	**02 29 15.2**	**+1.1**
	baz=202,SNR=8.8						
LCH	**Last Change Ra**	**3.07**	**360**		**Pn**	**02 29 16.0**	**+1.1**
SHPR	**Sheep Range**	**3.10**	**40**	Pn	**Pn**	**02 29 15.6**	**+0.4**
SHPR				IAML		02 30 05.5	
	comp=E,39nm,0.7s						
W13A	**Hualapai Mount**	**3.23**	**72**	Pn	**Pn**	**02 29 17.1**	**0.0**
113A	**Mohawk Valley,**	**3.51**	**112**	Pn	**Pn**	**02 29 20.0**	**-0.8**
OMMB	**Old Mammoth Mi**	**3.63**	**343**	Pn	**Pn**	**02 29 22.8**	**+0.1**
OMMB				IAML		02 30 22.6	
	comp=N,32nm,0.7s						
OMMB				IAML		02 30 25.1	
	comp=E,32nm,1.5s						
MDPB	**Devils Postpil**	**3.67**	**342**	Pn	**Pn**	**02 29 23.3**	**+0.1**
MDPB				IAML		02 30 23.3	
	comp=E,57nm,0.8s						
MDPB				IAML		02 30 29.5	
	comp=N,42nm,1.0s						
S11A	**Rachel**	**3.80**	**23**	Pn	**Pn**	**02 29 25.4**	**+0.5**
S11A				IAML		02 30 32.3	
	comp=N,46nm,0.7s						
S11A				IAML		02 30 44.1	
	comp=E,54nm,0.9s						
Y14A	**Wickenburg**	**3.85**	**92**		**Pn**	**02 29 25.3**	**-0.2**
Y14A				IAML		02 30 29.5	
	comp=N,28nm,0.3s						
PRN	**Pahroc Range**	**3.86**	**32**	Pn	**Pn**	**02 29 26.1**	**+0.3**
PRN				IAML		02 30 34.0	
	comp=N,54nm,0.7s						
PRN				IAML		02 30 39.7	
	comp=E,55nm,0.7s						
LHV	**Little Huntoon**	**4.15**	**350**	Pn	**Pn**	**02 29 31.8**	**+2.2**
LHV				IAML		02 30 43.2	
	comp=E,25nm,0.6s						
LHV				IAML		02 30 52.1	
	comp=N,24nm,1.1s						
NV11	**Mina Array Sit**	**4.29**	**354**	Pn	**Pn**	**02 29 32.6**	**+0.9**
NVAR	**Mina Array Bea**	**4.30**	**353**	Pn	**Pn**	**02 29 31.7**	**-0.2**
CMB	**Columbia Colle**	**4.47**	**331**	Pn	**Pn**	**02 29 34.8**	**+0.8**
CMB				IAML		02 30 50.1	
	comp=N,14nm,0.7s						
R11A	**Troy Canyon, C**	**4.50**	**21**	Pn	**Pn**	**02 29 35.8**	**+1.2**
RYN	**Ryan**	**4.52**	**351**	Pn	**Pn**	**02 29 36.3**	**+1.4**
LCMT	**Little Creek M**	**4.57**	**50**		**Pn**	**02 29 36.8**	**+1.3**
CCUT	**Cedar City**	**4.85**	**44**	Pn	**Pn**	**02 29 41.1**	**+1.7**
KVN	**Kaiserville**	**4.90**	**356**	Pn	**Pn**	**02 29 40.7**	**+0.6**
U15A	**North Rim**	**4.92**	**61**	Pn	**Pn**	**02 29 40.9**	**+0.5**
SZCU	**Shurtz Canyon**	**5.04**	**46**	Pn	**Pn**	**02 29 43.4**	**+1.4**
PNTR	**Pine Nut**	**5.17**	**343**	Pn	**Pn**	**02 29 42.8**	**-1.1**
EMB	**Emerald Bay**	**5.21**	**338**	Pn	**Pn**	**02 29 43.2**	**-1.1**
WUAZ	**Wupatki**	**5.32**	**73**	Pn	**Pn**	**02 29 46.1**	**+0.3**
WUAZ				IAML		02 31 15.7	
	comp=N,12nm,0.4s						
WUAZ				IAML		02 31 29.9	
	comp=N,10nm,0.9s						
PSUT	**Pine Spring**	**5.33**	**34**	Pn	**Pn**	**02 29 47.6**	**+1.6**
PKCU	**Pink Cliffs**	**5.43**	**51**	Pn	**Pn**	**02 29 49.8**	**+2.3**
MTPU	**Mount Pierson**	**5.87**	**47**	Pn	**Pn**	**02 29 53.4**	**-0.2**
X18A	**Snowflake**	**6.36**	**84**	Pn	**Pn**	**02 30 01.3**	**+1.1**

NEIC ***24*** *02:57:45.1±1.2, 17.°8S±0.°2×178.°6W±0.°1, h589^{km}±6^{km}, mb4.5/24, Error ellipse: s-maj=26.9km s-min=12.0km az=144.0*

IDC ***24*** *02:57:46.3±1.9, 17.°50S×178.°88W, h593^{km}±17^{km}, mb3.3/6, mbtmp4.3/8, Error ellipse: s-maj=72.6km s-min=15.2km az=148.0*

ISC 24 02:57:45.5±0.6**, 17.°8S**±0.°1×**178.°6W**±0.°1**, h600**^{km}**, n45, σ0^{s}.66**/48**, mb4.4**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.16**	**270**	P	**P**	**02 59 04.8**	**-0.8**
	73nm,0.8s,baz=121,slow=6.2,SNR=44						
PINNC	**Pines Island,**	**13.92**	**247**	P	**P**	**03 00 43.0**	**-0.7**
OUENC	**Ouen Island, N**	**14.40**	**249**	P	**P**	**03 00 48.8**	**+0.6**
DZM	**Mont Dzumac**	**14.66**	**251**	P	**P**	**03 00 51.3**	**+0.5**
	9.5nm,0.7s,baz=81,slow=17,SNR=19						
DZM	**Mont Dzumac**	**14.66**	**251**	P	**P**	**03 00 50.8**	**0.0**
KNTN	**Kanton**	**16.38**	**25**	P	**P**	**03 01 04.8**	**-1.7**
OUZ	**Omahuta**	**18.70**	**200**	P	**P**	**03 01 28.0**	**+0.6**
OUZ				IAmb	IAmb	03 01 29.2	
	comp=Z,14nm,0.9s						
EIDS	**Eidsvold**	**29.11**	**250**	P	**P**	**03 02 59.6**	**-0.1**
EIDS				IAmb	IAmb	03 03 00.2	
	comp=Z,9.5nm,0.8s						
ARMA	**Armidale**	**29.82**	**239**	P	**P**	**03 03 06.6**	**+0.7**
ARMA				IAmb	IAmb	03 03 09.9	
	comp=Z,10.0nm,1.1s						
CTAO	**Charters Tower**	**33.25**	**260**	P	**P**	**03 03 34.8**	**-0.2**
CTAO				IAmb	IAmb	03 03 36.0	
	comp=Z,7.6nm,0.7s						
CAN	**Canberra**	**33.62**	**232**	P	**P**	**03 03 37.9**	**0.0**
COEN	**Coen**	**36.88**	**270**	P	**P**	**03 04 05.8**	**+0.7**
TOO	**Toolangi**	**37.09**	**231**	P	**P**	**03 04 06.4**	**-0.1**
TOO				IAmb	IAmb	03 04 10.1	
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**03 04 18.6**	**+0.6**
	comp=Z,12nm,0.5s,baz=90,slow=10,SNR=37						
	comp=Z,12nm,0.5s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**03 04 18.9**	**+0.9**
BBOO	**Buckleboo**	**43.28**	**241**	P	**P**	**03 04 56.0**	**+0.2**
HMH	**Humuʻula Sheep**	**43.55**	**33**	P	**P**	**03 04 58.4**	**+0.2**
WR0	**Warramunga Arr**	**44.25**	**259**	P	**P**	**03 05 02.8**	**-0.7**
WB0	**Warramunga Arr**	**44.41**	**260**	P	**P**	**03 05 04.2**	**-0.4**
WB0				IAmb	IAmb	03 05 04.6	
	comp=Z,15nm,1.1s						
WB2	**Warramunga Arr**	**44.43**	**259**	P	**P**	**03 05 04.5**	**-0.3**
WB2				IAmb	IAmb	03 05 05.2	
	comp=Z,9.3nm,0.6s						
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**	**03 05 04.4**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=96,slow=7.2,SNR=177						
WRA				PcP	**PcP**	**03 06 35.7**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=98,slow=3.4,SNR=4.0						
	comp=Z,5.9nm,0.5s						
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**	**03 05 04.2**	**-0.7**
WRA					**PcP**	**03 06 34.1**	**-1.1**
AS31	**Alice Springs**	**44.62**	**254**	P	**P**	**03 05 06.5**	**+0.2**
AS31				IAmb	IAmb	03 05 07.0	
	comp=Z,15nm,0.8s						
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**03 05 06.4**	**+0.1**
	comp=Z,56nm,0.6s,baz=88,slow=8.4,SNR=474						
ASAR				PcP	**PcP**	**03 06 36.0**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=106,slow=4.4,SNR=4.1						
MTN	**Manton Dam**	**48.58**	**268**	P	**P**	**03 05 36.2**	**+0.1**
MTN				IAmb	IAmb	03 05 36.6	
	comp=Z,8.5nm,0.7s						
FORT	**Forrest**	**49.87**	**244**	P	**P**	**03 05 44.9**	**-0.4**
KNRA	**Kununurra**	**50.28**	**264**	P	**P**	**03 05 48.4**	**-0.1**
KNRA				IAmb	IAmb	03 05 49.4	
	comp=Z,15nm,0.7s						
SOEI	**Soe**	**55.85**	**270**	P	**P**	**03 06 29.0**	**+0.9**
SOEI				IAmb	IAmb	03 06 30.9	
	comp=Z,24nm,0.9s						
PSA00	**Pilbara Seismi**	**57.73**	**255**	P	**P**	**03 06 40.6**	**-0.1**
PSA00				IAmb	IAmb	03 06 41.1	
	comp=Z,10.0nm,0.6s						
MBWA	**Marble Bar**	**57.90**	**256**	P	**P**	**03 06 41.8**	**0.0**
MORW	**Morawa**	**60.34**	**246**	P	**P**	**03 06 57.7**	**-0.3**
QSPA	**South Pole Qui**	**72.28**	**180**	P	**P**	**03 08 11.3**	**+0.1**
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**03 08 52.5**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=231,slow=8.1,SNR=9.0						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**03 09 21.9**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=221,slow=5.2,SNR=8.8						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**03 09 26.4**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=225,slow=5.0,SNR=5.4						
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**03 09 23.9**	**-0.6**
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**	**03 09 30.8**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=209,slow=4.8,SNR=6.5						
	comp=Z,0.6nm,0.6s						
TROLL	**Troll, Antarti**	**90.44**	**180**	P	**P**	**03 09 43.5**	**-0.4**
SNAA	**Sanae**	**90.74**	**179**	P	**P**	**03 09 44.0**	**-1.2**
VNA3	**Neumayer Olymp**	**90.89**	**176**	P	**P**	**03 09 45.3**	**-0.5**
BNN	**Bunyan**	**143.40**	**312**		**PKPdf**	**03 16 12.9**	**-0.1**
BR131	**Keskin Array S**	**144.53**	**315**	PKPdf	**PKPdf**	**03 16 15.2**	**+0.2**
BRTR	**Keskin Array B**	**144.53**	**315**	PKP	**PKPab**	**03 16 16.1**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=108,slow=3.8,SNR=9.8						
BRTR	**Keskin Array B**	**144.53**	**315**	PKPdf	**PKPdf**	**03 16 15.3**	**+0.3**
GERES	**GERESS Array B**	**147.42**	**345**	PKPbc	**PKiKP**	**03 16 24.0**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=29,slow=3.0,SNR=9.5						

IDC 24 03:20:40.2±2.4**, 7.°07S**×**129.°69E, h0**^{km}**, mb3.4**/1**, mbtmp3.3**/3**, ML3.5**/2**, Error ellipse: s-maj=135.2km s-min=33.8km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.57**	**161**	Pn	Pn	03 23 53.9	-0.2
	0.3nm,0.3s,baz=344,slow=12,SNR=12						
WRA				Sn	Sn	03 26 16.6	-9.2
	0.4nm,0.3s,baz=332,slow=22,SNR=8.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.00**	**167**	Pn	Pn	03 24 39.7	+0.2
	0.1nm,0.3s,baz=340,slow=9.8,SNR=5.7						
ASAR				Sn	Sn	03 27 38.4	-11
	0.1nm,0.3s,baz=355,slow=29,SNR=2.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**68.11**	**327**	P	P	03 31 42.0	0.0
	0.2nm,0.4s,baz=132,slow=6.4,SNR=2.4						
	0.2nm,0.4s						

CNRM ***24*** *03:55:19.9, 35.°49N×3.°84W, h21^{km}, ml2.5*

INMG ***24*** *03:55:20.8±1.7, 35.°44N×3.°79W, h1^{km}±8^{km}, ML1.8, Error ellipse: s-maj=6.6km s-min=3.8km az=87.0*

MDD ***24*** *03:55:21.1±0.6, 35.°49N×3.°83W, h0^{km}, mb_Lg2.5/6, Error ellipse: s-maj=4.5km s-min=3.8km az=140.0*

SFS ***24*** *03:55:21.0, 35.°48N×3.°82W, ML2.5, ALBORAN SUR*

ISC 24 03:55:20.6±1.0**, 35.°44N**±0.°03×**3.°78W**±0.°02**, h14**^{km}±8^{km}**, n28, σ1^{s}.48**/50**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.26**	**210**	P	**Pg**	**03 55 25.8**	**-0.4**
PALE				S	**Sg**	**03 55 29.6**	**-0.4**
PVLZ	**Peæn de**	**0.50**	**238**	P	**Pg**	**03 55 30.4**	**-0.1**
PVLZ				S	**Sg**	**03 55 37.4**	**+0.2**
GOG	**Mont Gurugu**	**0.68**	**109**	P	**Pg**	**03 55 33.6**	**-0.3**
GOG				S	**Sg**	**03 55 43.6**	**+0.7**
EMEL	**Melilla**	**0.69**	**102**	Pg	**Pg**	**03 55 33.6**	**-0.4**
EMEL				Sg	**Sb**	**03 55 44.8**	**+1.1**
EMEL				*i* Vmb_Lg		03 55 48.9	
WMELI	**Melilla**	**0.69**	**100**	P	**Pg**	**03 55 33.9**	**-0.1**
WMELI				S	**Sg**	**03 55 43.7**	**+0.6**
EALB	**Alboran**	**0.79**	**50**	Pg	**Pb**	**03 55 35.2**	**-0.8**
EALB				Sg	**Sn**	**03 55 47.6**	**-1.1**
EALB				*i* Vmb_Lg		03 55 58.8	
TAF	**Taforalt**	**1.28**	**119**	P	**Pn**	**03 55 44.0**	**-0.2**
TAF				S	**Sb**	**03 55 60.0**	**-0.9**
SMIR	**Smir Dam**	**1.33**	**281**	P	**Pn**	**03 55 43.1**	**-1.6**
SMIR				S	**Sn**	**03 55 57.9**	**-4.2**
EMIJ	**Mijas**	**1.38**	**325**	Pg	**Pb**	**03 55 45.9**	**-0.3**
EMIJ				Sg	**Sb**	**03 56 03.2**	**-0.4**
EMIJ				*i* Vmb_Lg		03 56 12.8	
ELGU	**Los Guajares,**	**1.43**	**5**	Pg	**Pn**	**03 55 45.4**	**-0.7**
ELGU				Sg	**Sn**	**03 56 03.7**	**-1.1**
ELGU				*i* Vmb_Lg		03 56 08.0	
JBK	**JBK**	**1.49**	**138**	P	**Pn**	**03 55 47.4**	**+0.4**
JBK				S	**Sn**	**03 56 05.2**	**-1.1**
EBER	**Berja**	**1.62**	**26**	Pg	**Pn**	**03 55 48.8**	**-0.1**
EBER				Sg	**Sg**	**03 56 12.4**	**-0.5**
EBER				*i* Vmb_Lg		03 56 23.3	
LCRM	**LCR**	**1.96**	**207**	P	**Pn**	**03 55 55.5**	**+2.0**
LCRM				S	**Sb**	**03 56 21.1**	**+0.6**
EQES	**Quesada**	**2.42**	**13**	Pn	**Pn**	**03 56 01.7**	**+1.8**
EQES				Sn	**Sn**	**03 56 30.2**	**+0.8**
EQES				*i* Vmb_Lg		03 56 34.7	
MD31	**MD31**	**2.69**	**198**	P	**Pn**	**03 56 04.8**	**+1.2**
MD31				S	**Sn**	**03 56 35.5**	**-0.5**
MDT	**Midelt**	**2.71**	**195**	P	**Pn**	**03 56 04.3**	**+0.5**
MDT				S	**Sn**	**03 56 35.9**	**-0.4**
TDRA	**Tendrara**	**2.80**	**148**	P	**Pn**	**03 56 06.3**	**+1.2**
TDRA				S	**Sn**	**03 56 38.4**	**-0.4**
PVAQ	**Vaqueiros**	**3.73**	**303**	*e*Pn	**Pn**	**03 56 18.5**	**+0.8**
PVAQ				*e*Sn	**Sn**	**03 57 00.1**	**-1.3**
PVAQ				A	A	03 57 06.6	
	1.8nm,0.7s						
PBAR	**Barrancos**	**3.78**	**317**	*e*Sn	**Sn**	**03 57 02.9**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.80**	**299**	*e*Pn	**Pn**	**03 56 20.3**	**+1.6**
PBDV				*e*Sn	**Sn**	**03 57 02.4**	**-0.8**
MESJ	**Messejana**	**4.30**	**305**	*e*Pn	**Pn**	**03 56 27.9**	**+2.4**
MESJ				*e*Sn	**Sn**	**03 57 15.2**	**-0.2**
PTEO	**Sao Teotonio**	**4.50**	**299**	*e*Sn	**Sn**	**03 57 19.1**	**-1.3**
PESTR	**Estremoz**	**4.58**	**319**	*e*Sn	**Sn**	**03 57 19.6**	**-2.7**
PNCL	**Nicolau / Gran**	**4.65**	**306**	*e*Pn	**Pn**	**03 56 33.3**	**+2.9**
PNCL				*e*Sn	**Sn**	**03 57 23.7**	**-0.4**
PMRV	**Marv??o**	**4.91**	**325**	*e*Pn	**Pn**	**03 56 37.6**	**+3.7**
PMTG	**Montargil**	**5.07**	**317**	*e*Pn	**Pn**	**03 56 38.3**	**+2.2**
PMTG				*e*Sn	**Sn**	**03 57 33.6**	**-0.8**
OUZM	**OUZ**	**5.16**	**210**	P	**Pn**	**03 56 38.5**	**+1.0**
PSBE	**So Bento**	**5.69**	**317**	*e*Pn	**Pn**	**03 56 48.1**	**+3.4**

ISK ***24*** *04:09:04.7, 38.°13N×26.°11E, h7^{km}, ML2.6/11*

THE ***24*** *04:09:05.9, 38.°17N×26.°15E, h10^{km}±1^{km}, ML2.3/5, Error ellipse: s-maj=2.3km s-min=0.9km az=73.0*

ATH ***24*** *04:09:05.9, 38.°15N×26.°05E, h10^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=4.8km s-min=1.5km az=79.0*

DDA ***24*** *04:09:06.0±0.0, 38.°14N×26.°13E, h7^{km}±2^{km}, ML2.2*

ISC 24 04:09:05.6±0.9**, 38.°15N**±0.°02×**26.°10E**±0.°03**, h13**^{km}±7^{km}**, n35, σ0^{s}.59**/50**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.23**	**351**	P	**Pg**	**04 09 10.5**	**-0.2**
CHOS				S	**Sg**	**04 09 14.3**	**+0.1**
CHOS				AML	AML	04 09 15.7	
	comp=E,7615µm,0.2s						
CHOS				AML	AML	04 09 15.7	
	comp=N,6011µm,0.2s						
CHOS	**Chios island**	**0.23**	**351**	P	**Pg**	**04 09 10.6**	**-0.2**
CHOS				S	**Sg**	**04 09 14.1**	**-0.1**
	comp=N,3µm,0.2s						
CHOS	**Chios island**	**0.23**	**351**	PG	**Pg**	**04 09 10.5**	**-0.2**
CHOS				SG	**Sg**	**04 09 14.2**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**0.33**	**75**	P	**Pg**	**04 09 12.3**	**0.0**
ZEYE				S	**Sg**	**04 09 16.9**	**+0.1**
ZEYE				*i* AML	AML	04 09 18.0	
	comp=N,257nm,0.4s						
ZEYE				*i* AML	AML	04 09 19.0	
	comp=N,226nm,0.1s						
URLA	**Izmir**	**0.44**	**62**	P	**Pg**	**04 09 14.1**	**-0.3**
URLA				S	**Sg**	**04 09 20.8**	**+0.5**

URLA				i AML	AML	04 09 23.0	
	comp=N,143nm,0.3s						
URLA				i AML	AML	04 09 25.0	
	comp=N,166nm,0.3s						
DGB	zmir	0.63	99	P	Pg	04 09 17.7	-0.2
DGB				S	Sb	04 09 26.5	-0.6
SMG	Samos	0.73	127	P	Pb	04 09 20.1	-0.1
SMG				AML	AML	04 09 32.7	
	comp=N,720µm,0.6s						
SMG				AML	AML	04 09 33.5	
	comp=E,328µm,0.2s						
SMG	Samos	0.73	127	P	Pb	04 09 20.2	-0.1
SMG				S	Sg	04 09 29.5	0.0
	comp=E,260nm,0.5s						
FOCM	Foa	0.75	41	PG	Pg	04 09 19.8	-0.3
FOCM				SG	Sb	04 09 30.5	-0.1
BLCB	Balcova	0.78	72	PG	Pg	04 09 20.2	-0.5
BLCB				SG	Sb	04 09 31.5	0.0
GCAM	G?zelcaml?	1.00	116	P	Pg	04 09 24.3	-0.7
SIGR	SIGRI	1.07	350	P	Pg	04 09 25.6	-0.7
SIGR				S	Sg	04 09 40.1	-0.2
SIGR				AML	AML	04 09 42.4	
	comp=N,154µm,0.3s						
SIGR				AML	AML	04 09 45.9	
	comp=E,234µm,0.5s						
SIGR	SIGRI	1.07	350	P	Pg	04 09 25.6	-0.7
SIGR				S	Sg	04 09 40.7	+0.4
	comp=E,95nm,0.4s						
PRK	Paraskevi	1.10	7	P	Pb	04 09 27.1	+0.6
PRK				AML	AML	04 09 48.7	
	comp=E,363µm,0.7s						
PRK				AML	AML	04 09 50.6	
	comp=N,293µm,0.6s						
PRK	Paraskevi	1.10	7	P	Pg	04 09 26.7	-0.1
PRK				S	Sb	04 09 41.5	+0.7
	comp=N,162nm,0.7s						
DKL	Dikili	1.11	34	PN	Pb	04 09 26.4	-0.3
ZEDA	zmir-Bergama	1.12	43	P	Pg	04 09 26.9	-0.3
ZEDA				S	Sn	04 09 42.2	0.0
ZEDA				i AML	AML	04 09 43.0	
	comp=N,85nm,0.5s						
ZEDA				i AML	AML	04 09 43.0	
	comp=N,59nm,0.5s						
DDIM	Aydin, Didim	1.14	127	P	Pn	04 09 28.2	+0.9
APE	Apeiranthos	1.17	203	P	Pb	04 09 27.5	-0.3
APE	Apeiranthos	1.17	203	P	Pb	04 09 27.5	-0.3
APE				S	Sb	04 09 43.9	+0.9
APE	Apeiranthos	1.17	203	PN	Pb	04 09 27.3	-0.5
AYVA	Ayvalik	1.24	22	P	Pn	04 09 27.2	-1.5
KARY	Karystos	1.32	265	P	Pn	04 09 30.4	+0.6
KOCA	Canakkale, Ayv	1.35	1	P	Pn	04 09 29.8	-0.4
KOCA				i AML	AML	04 09 53.0	
	comp=N,35nm,0.7s						
AYDB	Zeytinkoy-Aydi	1.43	98	PN	Pn	04 09 31.9	+0.5
BODT	Bodrum	1.45	138	PN	Pn	04 09 31.6	0.0
AYDN	Tasoluk	1.49	109	P	Pg	04 09 34.1	-0.1
AKHS	Akhisar	1.53	61	P	Pn	04 09 32.2	-0.5
AKHS				i AML	AML	04 09 57.0	
	comp=N,24nm,0.4s						
DAT	Datca	1.85	140	PN	Pn	04 09 37.2	+0.1
LIA	Limnos Island	1.88	338	P	Pn	04 09 37.4	-0.1
LIA				S	Sn	04 10 00.4	-0.7
	comp=N,12nm,0.6s						
KULA	Kula-Manisa	2.05	79	PN	Pn	04 09 40.7	+0.8
DALY	Dalyan (Mula)	2.43	123	PN	Pn	04 09 45.3	+0.3
ERIK	Erikli-Kesan	2.53	7	PN	Pn	04 09 47.3	+0.8
MAR3	Marsite Statio	2.75	19	PN	Pn	04 09 50.9	+1.5
GZKV	Gazikoy-Tekird	2.76	20	PN	Pn	04 09 51.1	+1.5

INET ***24*** *04:20:00.9±1.5, 9°.18N×84°.05W, h13^{km}±9^{km}, MW2.6*
UPA ***24*** *04:20:02.6±1.6, 9°.28N×83°.77W, h31^{km}±16^{km}, MW3.8*
ISC 24 04:20:02.6±1.5, **9°.29N**±0°.04×**83°.75W**±0°.06, **h49**^{km}±9^{km}, **n19**, σ**0^s.93**/33, **1C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEZE	Perez Zeledon,	0.11	37	eP	Pn	04 20 10.3	-0.2
PEZE				eS	Sn	04 20 17.0	+0.9
CDM	Cerro de Muert	0.26	356	i P	Pn	04 20 11.4	-0.4
CDM				eS	Sn	04 20 19.0	+0.6
DRK0	Durika	0.50	93	⇓iP	Pn	04 20 13.3	-0.7
DRK0				i S	Sn	04 20 21.8	-0.3
RIOS	Rincon, Osa	0.63	159	eP	Pn	04 20 14.5	-1.0
RIOS				eS	Sn	04 20 25.5	+0.9
HDC	Heredia	0.79	333	⇑iP	Pn	04 20 17.4	-0.3
HDC				i S	Sn	04 20 28.2	-0.4
HDC3	Heredia 3	0.79	333	eP	Pn	04 20 17.2	-0.5
HDC3				eS	Sn	04 20 29.3	+0.7
BATAN	Batan	0.88	25	eP	Pn	04 20 19.4	+0.7
BATAN				eS	Sn	04 20 30.2	-0.3
PIRO	Carate, Puerto	0.97	155	eP	Pn	04 20 19.2	-0.7
PIRO	Carate, Puerto	0.97	155	eP	Pn	04 20 18.7	-1.2
MLIR3	Monte Lirio, C	1.04	118	eP	Pn	04 20 22.4	+1.5
MLIR3				i S	Sn	04 20 34.5	+0.1
BRU2	Volcan	1.16	115	i P	Pn	04 20 22.0	-0.5
BRU2				i S	Sn	04 20 35.7	-1.6
BC3P	Paso Ancho	1.22	113	eP	Pn	04 20 23.8	+0.3
BC3P				i S	Sn	04 20 39.2	+0.2
CNI2	El Empalme, Bo	1.27	84	eP	Pn	04 20 23.7	-0.2
CNI2				i S	Sn	04 20 38.9	-0.9
BCO2	Palmira	1.33	115	eP	Pn	04 20 25.1	+0.1
BCO2				i S	Sn	04 20 40.7	-1.0
PTAR3	Potrerillos Ar	1.37	116	eP	Pn	04 20 23.5	-1.9
PTPM	Petroterminale	1.38	141	i P	Pn	04 20 26.0	+0.5
PTPM				i S	Sn	04 20 44.9	+2.3
LNBQ3	Los Naranjos,	1.38	111	eP	Pn	04 20 26.7	+1.1
LNBQ3				eS	Sn	04 20 43.3	+0.5
DVD	David	1.54	123	eP	Pn	04 20 28.0	+0.3
LOCO3	Loma Colorada,	1.58	124	eP	Pn	04 20 28.6	+0.4

IDC ***24*** *04:43:05.1±0.8, 30°.89S×177°.94W, h0^{km}, mb4.3/6, mbtmp4.3/6, MS3.4/2, Error ellipse: s-maj=24.1km s-min=19.7km az=90.0*
NEIC ***24*** *04:43:11.4±1.4, 30°.80S±0°.07×178°.1W±0°.2, h35^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=24.0km s-min=11.5km az=101.0*
ISC 24 04:43:11.5±0.7, **30°.89S**±0°.07×**178°.2W**±0°.1, **h46**^{km}, **n42**, σ**1^s.74**/35, **mb4.4**/12, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.65	8	Pn	Pn	04 43 36.6	-1.4
	76nm,0.3s,baz=233,slow=20,SNR=2.1						
RAO				Sn	Sn	04 43 59.3	+1.3
	485nm,0.3s,baz=181,slow=24,SNR=8.4						
RAO	Raoul Island	1.65	8	Pn	Pn	04 43 34.1	-3.9
RAO					Sn	04 43 57.0	-1.1
URZ	Urewera	8.31	207	Pn	Pn	04 45 04.4	-5.0
	0.5nm,0.3s,baz=343,slow=7.4,SNR=1.9						
URZ				Sn	Sn	04 46 35.8	-6.0
	3.1nm,0.3s,baz=64,slow=10,SNR=4.3						
MSVF	Nonsavu	13.54	344	LR	LR	04 50 38.3	
	comp=Z,322nm,18.2s,baz=125,slow=33						
PINNC	Pines Island,	15.25	299	Pn	Pn	04 46 42.0	-1.8
PINNC				IAmb	IAmb	04 46 51.5	
	comp=Z,40nm,1.4s						
OUENC	Ouen Island, N	15.82	299	Pn	Pn	04 46 48.3	-2.8
CTA	Charters Tower	33.73	280	P	P	04 49 51.5	+2.8
	comp=Z,2.2nm,0.2s,baz=105,slow=10,SNR=2.6						
	comp=Z,2.2nm,0.2s						
STKA	Stephens Creek	34.22	258	P	P	04 49 54.7	+1.9
	comp=Z,1.9nm,0.4s,baz=95,slow=12,SNR=5.8						
	comp=Z,1.9nm,0.4s						
STKA	Stephens Creek	34.22	258	P	P	04 49 53.4	+0.6
AS31	Alice Springs	42.93	268	P	P	04 51 07.0	+1.0
AS31				IAmb	IAmb	04 51 07.5	
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	42.93	268	P	P	04 51 07.0	+1.0
	comp=Z,5.4nm,0.6s,baz=105,slow=7.2,SNR=63						
	comp=Z,5.4nm,0.6s						
ASAR	Alice Springs	42.93	268	P	P	04 51 06.3	+0.2
MANU	Manus Island	43.41	305	P	P	04 51 10.8	+0.9
WR0	Warramunga Arr	43.79	273	P	P	04 51 13.3	+0.4
WR0				IAmb	IAmb	04 51 30.4	
	comp=Z,20nm,1.5s						
WB2	Warramunga Arr	43.96	273	P	P	04 51 14.5	+0.2
WB2				IAmb	IAmb	04 51 16.0	
	comp=Z,7.9nm,0.8s						
WRA	Warramunga Arr	43.97	273	P	P	04 51 15.3	+1.0
	comp=Z,5.1nm,0.6s,baz=112,slow=7.7,SNR=62						
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	43.97	273	P	P	04 51 14.8	+0.4
WB0	Warramunga Arr	43.99	273	P	P	04 51 15.0	+0.4
WB0				IAmb	IAmb	04 51 16.5	
	comp=Z,8.7nm,0.8s						
MTN	Manton Dam	49.91	279	P	P	04 52 01.9	+1.1
KNRA	Kununurra	50.59	275	P	P	04 52 07.2	+1.3
QSPA	South Pole Qui	59.22	180	P	P	04 53 08.9	+1.2
	comp=Z,0.7nm,0.5s,baz=11,slow=5.7,SNR=16						
	comp=Z,0.7nm,0.5s						
QSPA	South Pole Qui	59.22	180	P	P	04 53 09.9	+2.1
QSPA				IAmb	IAmb	04 53 15.4	
	comp=Z,3.2nm,0.8s						
JOW	Kunigami	76.88	312	LR	LR	05 25 40.8	
	comp=Z,12nm,19.5s,baz=115,slow=33						
SNAA	Sanae	77.67	178	P	P	04 55 03.6	+0.8
SNAA	Sanae	77.67	178	P	P	04 55 03.4	+0.6
SNAA				IAmb	IAmb	04 55 27.5	
	comp=Z,5.7nm,1.5s						
VNA3	Neumayer Olymp	77.82	176	P	P	04 55 04.1	+0.6
VNA2	Neumayer--Watz	78.26	177	P	P	04 55 07.0	+1.0
	baz=183,slow=4.0						
MJAR	Matsushiro Arr	78.56	325	P	P	04 55 08.6	+0.6
MJAR				IAmb	IAmb	04 55 18.9	
	comp=Z,3.5nm,1.4s						
H03S2	Juan Fernandez	80.32	124	T	T	06 24 18.2	
	baz=238,SNR=57						
H03S1	Juan Fernandez	80.33	124	T	T	06 24 18.8	
	baz=238,SNR=47						
H03S3	Juan Fernandez	80.34	124	T	T	06 24 17.7	
	baz=238,SNR=51						
H03N3	Juan Fernandez	80.52	123	T	T	06 24 25.8	
	baz=241,slow=72,SNR=14						
H03N2	Juan Fernandez	80.52	123	T	T	06 24 24.7	
	baz=241,slow=72,SNR=14						
H03N1	Juan Fernandez	80.53	123	T	T	06 24 27.2	
	baz=241,slow=72,SNR=23						
PLCA	Paso Flores	82.28	133	P	P	04 55 28.0	-0.3
	comp=Z,1.5nm,0.9s,baz=231,slow=14,SNR=2.6						
	comp=Z,1.5nm,0.9s						
ARCES	ARCESS Array B	139.04	348	PKhKP	PKPpre	05 02 26.9	
	comp=Z,1.0nm,0.8s,baz=46,slow=3.5,SNR=4.4						
FINES	FINESS Array B	145.55	340	PKPbc	PKPbc	05 02 44.2	+0.2
	comp=Z,3.6nm,0.4s,baz=50,slow=4.1,SNR=22						
NOA	NORSAR Array B	149.21	351	PKPbc	PKPbc	05 02 54.1	-0.2
	comp=Z,0.5nm,0.5s,baz=15,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	151.60	322	PKPbc	PKPbc	05 03 00.0	-0.2
	comp=Z,1.3nm,0.5s,baz=53,slow=1.9,SNR=2.0						
BRTR	Keskin Array B	152.70	298	PKPbc	PKPbc	05 03 02.6	-0.6
	comp=Z,0.3nm,0.4s,baz=90,slow=4.3,SNR=1.8						
TORD	Torodi Ar. Bea	162.34	180	PKPab	PKPab	05 03 56.2	+0.3
	comp=Z,0.6nm,0.7s,baz=174,slow=3.9,SNR=5.8						
ESDC	Sonseca Array	170.05	27	PKPab	PKPab	05 04 28.2	-1.3
	comp=Z,0.3nm,0.4s,baz=312,slow=2.9,SNR=3.1						

IDC ***24*** *05:08:01.9±1.0, 38°.03N×143°.98E, h0^{km}, mb3.8/7, mbtmp3.8/9, ML3.5/2, MS2.1/2, Error ellipse: s-maj=30.7km s-min=19.0km az=106.0*
JMA ***24*** *05:08:06.6±0.2, 38°.0N±0°.7×143°.8E±0°.9, h43^{km}, MV4.0/31, FAR E OFF MIYAGI PREF*
NIED ***24*** *05:08:06.6, 38°.02N×143°.78E, h43^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.59; $M_{\theta\theta}$-0.96; $M_{\phi\phi}$2.55; $M_{r\theta}$-1.29; $M_{\theta\phi}$1.03; $M_{\phi r}$0.59; Fault plane solution: $M_0$2.84000×10^{14} NP1:ϕ_s49.00000°, δ55.00000°, λ-37.00000°. NP2:ϕ_s162.00000°, δ61.00000°, λ-139.00000°.*
ISC 24 05:08:03.4±1.0, **38°.06N**±0°.06×**143°.91E**±0°.07, **h10**^{km}, **n26**, σ**1^s.40**/33, **mb3.9**/7, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.94	278	P	Pn	05 08 36.8	+0.3
JIKH				eS	Sn	05 08 58.6	-2.3
OFUJ	Ofunato	2.03	301	P	Pn	05 08 38.6	+0.9
JIO	Ouri	2.06	282	P	Pn	05 08 38.5	+0.4
JIO				eS	Sn	05 09 01.8	-1.9
JKMT	Kesennumamotoy	2.06	292	P	Pn	05 08 38.6	+0.6
JKMT				eS	Sn	05 09 02.5	-1.3
JMK	Ichinoseki	2.29	294	P	Pn	05 08 42.0	+0.7
JMK				eS	Sn	05 09 08.9	-0.7
JOM	Ohasama	2.49	305	P	Pn	05 08 45.6	+1.6
JOM				eS	Sn	05 09 14.5	+0.1
JFT	Otama	2.88	260	P	Pn	05 08 50.6	+1.2
JFT				eS	Sn	05 09 22.9	-1.2
JYK	Kaneyama	2.92	288	P	Pn	05 08 51.7	+1.8
JYK				eS	Sn	05 09 24.8	-0.2
JANG	Nango	2.97	322	eS	Sn	05 09 25.5	-0.8
JAG	Ashikaga	3.91	247	eP	Pn	05 09 04.4	+0.8
JOT	Ohata	3.99	327	eP	Pn	05 09 04.9	+0.3
JOT				eS	Sn	05 09 49.7	-1.7
JRY	Ryogami san	4.49	245	P	Pn	05 09 12.0	+0.4
JRY				S	Sn	05 09 59.8	-4.2
JCH	Churui	4.57	355	P	Pn	05 09 13.5	+0.9
JCH				S	Sn	05 10 02.8	-3.0
MJAR	Matsushiro Arr	4.79	253	Pn	Pn	05 09 17.2	+1.6
	0.2nm,0.3s,baz=59,slow=7.5,SNR=5.6						
MJAR				Sn	Sn	05 10 11.5	+0.3
	0.1nm,0.3s,baz=191,slow=18,SNR=4.7						
MJAR				LR	LR	05 10 42.3	
	comp=Z,9.9nm,19.4s,baz=54,slow=33						
	1.2nm,0.3s						
ASAJ	Asahikawa	6.14	351	Pn	Pn	05 09 34.5	+0.4
	3.1nm,0.3s,baz=203,slow=16,SNR=6.1						
	9.1nm,0.4s						
KSRS	Korea Array	12.67	272	LR	LR	05 16 06.7	
	comp=Z,17nm,20.9s,baz=50,slow=38						
SEY	Seymchan	25.44	9	P	P	05 13 32.2	+1.1
	1.8nm,0.8s,baz=141,slow=5.1,SNR=4.0						
	1.8nm,0.8s						
H11N2	WAKE ISLAND Hy	27.05	126	T	T	05 42 03.3	
	baz=312						
H11N1	WAKE ISLAND Hy	27.06	126	T	T	05 42 05.9	
	baz=312						
H11N3	WAKE ISLAND Hy	27.07	126	T	T	05 42 01.4	
	baz=312						
MKAR	Makanchi Array	45.26	302	P	P	05 16 21.1	+0.1
	0.5nm,0.7s,baz=81,slow=8.7,SNR=3.9						
	0.5nm,0.7s						
ILAR	Eielson Array	47.57	33	P	P	05 16 38.3	-0.5
	0.7nm,0.7s,baz=265,slow=6.8,SNR=9.9						
	0.7nm,0.7s						
WRA	Warramunga Arr	58.39	191	P	P	05 17 58.5	-0.5
	1.6nm,0.8s,baz=10,slow=7.2,SNR=11						
	1.6nm,0.8s						
ASAR	Alice Springs	62.11	190	P	P	05 18 25.3	+0.7
	0.3nm,0.5s,baz=9.2,slow=7.5,SNR=2.2						
	0.3nm,0.5s						
ARCES	ARCESS Array B	63.73	340	P	P	05 18 35.6	+0.7
	2.0nm,1.0s,baz=59,slow=9.5,SNR=2.0						
	2.0nm,1.0s						
FINES	FINESS Array B	68.82	333	P	P	05 19 07.3	-0.2
	0.7nm,0.6s,baz=64,slow=9.4,SNR=2.2						
	0.7nm,0.6s						

IDC 24 05:46:38.5±3.5, **5°.87S**×**131°.18E**, **h0**^{km}, **mb3.9**/1, **mbtmp3.9**/3, **ML3.8**/2, **Error ellipse: s-maj=248.1km s-min=30.2km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.33	168	Pn	Pn	05 50 03.2	+0.5
	0.4nm,0.3s,baz=350,slow=11,SNR=16						
WRA				Sn	Sn	05 52 28.4	-14
	0.4nm,0.3s,baz=335,slow=23,SNR=9.6						
	1.3nm,0.8s						
ASAR	Alice Springs	17.89	172	P	Pn	05 50 48.7	-0.3
	0.4nm,0.3s,baz=341,slow=9.5,SNR=27						
ASAR				S	Sn	05 53 55.0	-14
	0.5nm,0.6s,baz=358,slow=26,SNR=4.4						
	2.6nm,0.6s						
MKAR	Makanchi Array	67.93	326	P	P	05 57 39.2	0.0
	0.4nm,0.4s,baz=123,slow=7.9,SNR=14						
	0.4nm,0.4s						

INET ***24*** *05:55:42.1±1.2, 11°.86N×88°.82W, h0^{km}±2^{km}, MW3.4*
SNET ***24*** *05:55:42.5±1.1, 11°.82N×88°.88W, h16^{km}±86^{km}, ML3.5*
ISC 24 05:55:41.0±2.7, **11°.8N**±0°.1×**88°.9W**±0°.1, **h10**^{km}, **n22**, σ**0^s.53**/23, **1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	1.76	11	eP	Pn	05 56 11.5	-0.2
COEB				eS	Sn	05 56 34.4	+0.2
COEB				IAML		05 56 42.9	
	comp=Z,175nm,0.3s						
CSGN	Cosiguina Volc	1.76	47	eP	Pn	05 56 11.1	-0.6
LCND	La Caada	1.81	32	eP	Pn	05 56 12.1	-0.2
CNCH	Conchagua	1.82	34	eP	Pn	05 56 12.5	0.0
SJTE	Alcalda de S	1.85	356	eP	Pn	05 56 12.3	-0.5
COEG	Centro de Oper	1.85	360	eP	Pn	05 56 12.5	-0.4
PQSS	Presa 15 de Se	1.88	9	eP	Pn	05 56 13.5	+0.3
SCLA	Alcaldia de Sa	1.94	4	eP	Pn	05 56 14.4	+0.4
PAVA	Las Pavas	1.94	358	eP	Pn	05 56 14.0	-0.2
PAVA	Las Pavas	1.94	358	eP	Pn	05 56 14.1	-0.2
JAYA	Jayaque - finc	1.96	343	⇑eP	Pn	05 56 13.2	-1.3
JAYA				IAML		05 56 40.1	
	comp=Z,555nm,0.2s						
CRIN	San Cristobal	2.01	62	eP	Pn	05 56 15.7	+0.6
CEDA	San Andres	2.09	346	eP	Pn	05 56 16.7	+0.5
CEDA				IAML		05 56 46.9	
	comp=Z,342nm,0.7s						
CEVE	Cerro Verde	2.18	340	eP	Pn	05 56 17.5	-0.2
CEVE				IAML		05 56 46.0	
	comp=Z,540nm,0.6s						
CNGN	Cerro Negro	2.25	71	eP	Pn	05 56 18.5	+0.1
COPN	Copaltepe	2.27	79	i P	Pn	05 56 18.7	+0.1
NUBE	Las Nubes	2.31	338	eP	Pn	05 56 19.1	-0.2
SLOZ	Alcaldia de Sa	2.42	339	eP	Pn	05 56 21.2	+0.5
APYN	Apoyeque	2.51	79	eP	Pn	05 56 21.1	-0.9
TISN	Laguna Tiscapa	2.58	81	eP	Pn	05 56 23.4	+0.6
MTO3	Montecristo	2.67	350	eP	Pn	05 56 25.0	+0.7
MATN	Matagalpa	3.11	68	eP	Pn	05 56 29.8	-0.4

IDC 24 06:01:50.3±1.8, **23°.52S**×**66°.76W**, **h206**^{km}±38^{km}, **mb3.2**/1, **mbtmp3.7**/5, **MS2.4**/1, **Error ellipse: s-maj=47.9km s-min=22.0km az=119.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.18	294	P	Pn	06 02 31.8	+0.3
	32nm,0.3s,baz=123,slow=7.0,SNR=102						
LVC				S	S	06 03 03.5	+0.4
	8.9nm,0.3s,baz=104,slow=22,SNR=7.3						
LPAZ	La Paz	7.31	350	P	Pn	06 03 37.1	+1.8
	0.8nm,0.3s,baz=168,slow=6.8,SNR=16						
CPUP	Villa Florida	9.00	110	LR	LR	06 07 08.8	
	comp=Z,26nm,19.3s,baz=206,slow=35						
PLCA	Paso Flores	17.45	190	P	P	06 05 40.5	+0.7
	2.3nm,1.1s,baz=1.5,slow=9.3,SNR=5.8						
BDFB	Brasilia	19.31	69	P	P	06 05 60.0	-0.2
	2.2nm,0.6s,baz=236,slow=9.3,SNR=6.5						
TORD	Torodi Ar. Bea	76.19	69	P	P	06 13 15.6	-0.7
	0.6nm,0.8s,baz=250,slow=5.9,SNR=2.2						
	0.6nm,0.8s						

IDC 24 06:20:52.7±3.5, **54°.31N**×**87°.06E**, **h0**^{km}, **mbtmp2.7**/1, **ML2.5**/1, **Error ellipse: s-maj=29.0km s-min=17.9km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.36	256	i		06 29 10.0	
	0.1nm,0.9s,baz=75,slow=313,SNR=11						
ZALV	Zalesovo Beam	1.36	256	Pg	Pg	06 21 16.8	-2.1
	1.7nm,0.3s,baz=74,slow=17,SNR=12						
ZALV				Lg	Lg	06 21 36.9	
	2.0nm,0.3s,baz=75,slow=30,SNR=10						
MKAR	Makanchi Array	8.11	204	Pn	Pn	06 22 53.8	+2.1
	0.1nm,0.3s,baz=26,slow=12,SNR=1.6						
MKAR				Lg	Lg	06 25 08.0	
	0.1nm,0.3s,baz=24,slow=28,SNR=3.5						
	0.1nm,0.3s						

NOU 24 06:25:50.8, 16°.73S×**167°.34E**, **h21**^{km}, **MLv3.7**/12, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.28	141	P	Pn	06 26 13.5	+0.1
SANVU	Saraoutou	1.28	354	P	Pn	06 26 12.3	-1.2
RTV	Rentapao	1.48	136	P	Pn	06 26 16.5	+0.3
KOUNC	Koumac, New Ca	4.78	217	P	Pn	06 27 02.2	+0.6
YATNC	Mamie plateau,	5.32	184	P	Pn	06 27 09.8	+0.8
DZM	Mont Dzumac	5.38	189	P	Pn	06 27 10.0	0.0
NOUC	Port Laguerre	5.43	190	P	Pn	06 27 09.5	-1.1

VAO ***24*** *06:42:59.6±7.7, 15°.03S×73°.40W, h119^{km}±21^{km}, mb4.2*
ARE ***24*** *06:43:09±2.8, 15°.16S±0°.09×72°.37W±0°.10, h124^{km}±7^{km}, Error ellipse: s-maj=14.9km s-min=10.9km az=47.0*
NEIC ***24*** *06:43:10.0±2.4, 15°.16S±0°.09×72°.34W±0°.10, h119^{km}±10^{km}, mb4.0/5, ML4.4(ARE), Error ellipse: s-maj=15.6km s-min=11.4km az=49.0*
IDC ***24*** *06:43:14.8±7.8, 15°.14S×72°.11W, h156^{km}±54^{km}, mb3.5/2, mbtmp3.9/4, Error ellipse: s-maj=73.5km s-min=34.4km az=126.0*
ISC 24 06:43:09.0±1.0, **15°.17S**±0°.09×**72°.44W**±0°.10, **h114**^{km}, **n30**, σ**1^s.48**/29, **mb3.9**/3, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.76	148	Pn	Pn	06 44 06.6	+1.3
PB12	IPOC Station P	3.97	150	Pn	Pn	06 44 08.6	+0.4
PB16	IPOC Station P	4.21	139		Pn	06 44 13.9	+2.1
LPAZ	La Paz	4.29	106	P	Pn	06 44 15.6	+2.6
	9.2nm,0.4s,baz=290,slow=11,SNR=72						
LPAZ				S	Sn	06 45 03.9	+1.4
	5.8nm,0.5s,baz=286,slow=18,SNR=6.5						
LPAZ	La Paz	4.29	106		Pn	06 44 15.1	+2.1
LPAZ	La Paz	4.29	106	eP	Pn	06 44 15.7	+2.7
PB11	IPOC Station P	5.28	150	Pn	Pn	06 44 25.4	-0.4
NNA	Nana	5.33	306	Pn	Pn	06 44 29.2	+2.8
TA01	Diego Aracena	5.78	158	Pn	Pn	06 44 31.8	-0.6
PB08	IPOC Station P	5.85	148	Pn	Pn	06 44 34.0	+0.3
PATCX	Punta Patache	6.02	159	Pn	Pn	06 44 35.0	-0.8
PB02	IPOC Station P	6.57	159	Pn	Pn	06 44 42.9	-0.4
PB07	IPOC Station P	6.95	160	Pn	Pn	06 44 48.1	-0.4
PB09	IPOC Station P	7.25	156		Pn	06 44 52.5	-0.1
ETMB	Extrema	8.08	49	eP	Pn	06 45 02.8	-0.8
LVC	Limon Verde	8.11	156		Pn	06 45 04.1	-0.3
PB10	IPOC Station P	8.48	168	Pn	Pn	06 45 08.5	-0.6
GO02	Mina Guanaco	10.29	165	Pn	Pn	06 45 32.7	-1.2
SAML	Samuel	10.96	57		Pn	06 45 40.4	-2.2
AC02	Maricunga	12.01	166		Pn	06 45 57.2	+0.2
CPUP	Villa Florida	17.95	131	P	P	06 47 09.8	-0.5
	1.9nm,0.8s,baz=290,slow=15,SNR=2.0						
CPUP	Villa Florida	17.95	131	IAmb	IAmb	06 47 19.1	
	comp=Z,7.6nm,1.2s						
ITTB	Itaituba	19.63	59	eP	P	06 47 27.1	-1.8
SNDB	Serra Nova Dou	20.80	84	eP	P	06 47 41.2	-0.2
ITAB	Concordia	22.38	126	P	P	06 47 58.4	+0.4
ITAB				IAmb	IAmb	06 48 13.2	
	comp=Z,15nm,1.2s						
PLTB	Pedras Altas	23.84	137	P	P	06 48 11.4	-0.3
PLCA	Paso Flores	25.52	177	P	P	06 48 29.3	+2.3
	comp=Z,1.4nm,0.9s,baz=7.9,slow=2.6,SNR=3.2						
	comp=Z,1.4nm,0.9s						
PLCA	Paso Flores	25.52	177	IAmb	IAmb	06 48 37.6	
	comp=Z,1.8nm,1.1s						
JANB	Januaria	27.15	93	eP	P	06 48 40.2	-1.7
TORD	Torodi Ar. Bea	78.56	73	P	P	06 54 58.0	-0.5
	comp=Z,2.0nm,0.9s,baz=264,slow=5.9,SNR=6.4						
	comp=Z,2.0nm,0.9s						

IDC ***24*** *06:48:48.0±1.1, 0°.68N×26°.26W, h0^{km}, mb3.6/5, mbtmp3.6/5, MS3.4/17, Error ellipse: s-maj=43.1km s-min=36.6km az=139.0*
ISC 24 06:48:49.2±1.4, **0°.6N**±0°.3×**26°.2W**±0°.3, **h10**^{km}, **n29**, σ**0^s.18**/7, **mb3.6**/5, **MS3.5**/17, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	14.38	126	T	T	07 07 03.3	
	baz=306,slow=74,SNR=57						
H10N2	ASCENSION HYDR	14.38	126	T	T	07 07 04.9	
	baz=306,slow=74,SNR=83						
H10N1	ASCENSION HYDR	14.40	126	T	T	07 07 04.8	
	baz=306,slow=74,SNR=87						
H10S3	ASCENSION HYDR	14.91	130	T	T	07 07 44.7	
	baz=307,slow=74,SNR=16						
H10S2	ASCENSION HYDR	14.93	130	T	T	07 07 45.8	
	baz=273,slow=74,SNR=6.1						
DBIC	Dimbokro	22.15	74	LR	LR	07 00 44.3	

	comp=Z,72nm,18.8s,baz=283,slow=32						
MDP	Montagnes des	26.76	280	LR	LR	07 02 53.1	
	comp=Z,26nm,19.3s,baz=53,slow=32						
BDFB	Brasilia	26.90	232	LR	LR	07 03 55.5	
	comp=Z,131nm,21.5s,baz=22,slow=34						
MDT	Midelt	37.97	30	LR	LR	07 10 59.7	
	comp=Z,62nm,19.4s,baz=258,slow=35						
SIV	San Ignacio	38.15	243	LR	LR	07 11 21.4	
	comp=Z,110nm,18.5s,baz=102,slow=36						
CPUP	Villa Florida	40.20	226	LR	LR	07 12 45.6	
	comp=Z,72nm,18.8s,baz=69,slow=36						
ESDC	Sonseca Array	43.88	25	P	P	06 56 56.1	0.0
	0.4nm,0.7s,baz=243,slow=8.4,SNR=3.2						
	0.4nm,0.7s						
LPAZ	La Paz	44.62	246	LR	LR	07 15 17.5	
	comp=Z,110nm,18.5s,baz=78,slow=36						
LVC	Limon Verde	47.52	238	LR	LR	07 18 23.4	
	comp=Z,28nm,18.6s,baz=102,slow=37						
KEST	Kesra	48.11	39	LR	LR	07 17 05.2	
	comp=Z,61nm,21.0s,baz=264,slow=35						
NNA	Nana	51.78	254	LR	LR	07 18 33.4	
	comp=Z,27nm,18.9s,baz=80,slow=34						
VAE	Valguarnera	52.42	41	LR	LR	07 21 27.6	
	comp=Z,88nm,18.3s,baz=300,slow=37						
ATAH	Atahualpa	52.60	261	LR	LR	07 19 48.2	
	comp=Z,47nm,18.3s,baz=52,slow=35						
DAVOX	Davos/Dischmat	55.76	29	LR	LR	07 20 43.8	
	comp=Z,21nm,18.4s,baz=264,slow=34						
PLCA	Paso Flores	57.52	219	LR	LR	07 21 49.5	
	comp=Z,34nm,18.6s,baz=138,slow=34						
MLR	Muntele Rosu	63.98	38	LR	LR	07 29 49.3	
	comp=Z,43nm,18.8s,baz=270,slow=38						
NOA	NORSAR Array B	66.71	19	LR	LR	07 27 22.0	
	comp=Z,6.8nm,18.0s,baz=245,slow=35						
BRTR	Keskin Array B	66.81	47	P	P	06 59 41.5	-0.1
	0.6nm,0.6s,baz=233,slow=6.2,SNR=2.8						
	0.6nm,0.6s						
AKASG	Malin Array Be	68.38	34	P	P	06 59 51.2	+0.2
	0.4nm,0.4s,baz=240,slow=7.2,SNR=5.9						
	0.4nm,0.4s						
FINES	FINESS Array B	72.38	24	LR	LR	07 32 04.7	
	comp=Z,17nm,18.1s,baz=290,slow=36						
TXAR	Lajitas Array	78.77	300	P	P	07 00 53.0	+0.2
	0.4nm,0.8s,baz=132,slow=7.4,SNR=4.4						
	0.4nm,0.8s						
PDAR	Pinedale Array	84.70	313	P	P	07 01 23.8	-0.2
	0.3nm,0.7s,baz=104,slow=7.6,SNR=2.3						
	0.3nm,0.7s						
ASAR	Alice Springs	150.03	141	PKPbc	PKiKP	07 08 42.0	-0.1
	1.8nm,0.6s,baz=205,slow=1.9,SNR=25						
WRA	Warramunga Arr	152.94	137	PKPbc	PKPbc	07 08 48.0	+0.1
	0.1nm,0.4s,baz=234,slow=1.6,SNR=6.8						

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*NIED **24** 06:53:50.1, 31°.03N×129°.05E, h17^{km}, MW3.8, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-2.76; $M_{\theta\theta}$4.51; $M_{\phi\phi}$-1.74; $M_{r\theta}$0.63; $M_{\theta\phi}$2.74; $M_{\phi r}$2.85;
Fault plane solution: $M_0$5.59000×10^{14} NP1:
ϕ_s105.00000°, δ50.00000°, λ-29.00000°. NP2:
ϕ_s215.00000°, δ68.00000°, λ-136.00000°.
JMA 24 06:53:50.1±0.2, **31°.0N**±0°.3×**129°.1E**±0°.6, **h17**^{km}±1^{km},
MD4.0/28, **MV4.2**/28, **SW OFF KYUSHU, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.86	41	*i*P	Pb	06 54 06.0	-0.5
JSJ				S	Sb	06 54 17.7	-0.1
JSJ	Shimokoshiki	0.86	41	A	A	06 54 06.0	
	comp=E,10.0nm,0.2s,comp=E,8.0nm,1.4s						
JKC	Kuchinoerabu	1.13	120	A	A	06 54 10.7	
	comp=E,5.0nm,0.5s,comp=E,6.0nm,0.7s						
JSU	Suzuyama	1.29	68	*i*P	Pn	06 54 13.5	+0.2
JNN	Nakanoshima	1.38	149	*e*P	Pn	06 54 14.7	+0.2
JNN	Nakanoshima	1.38	149	A	A	06 54 14.7	
	comp=E,5.0nm,2.2s,comp=E,5.0nm,1.6s						
JYAK	Yakushimahirau	1.48	122	P	Pn	06 54 15.9	0.0
JYAK				*e*S	Sn	06 54 35.0	+0.1
JFU	Fukue jima 2	1.64	351	*e*P	Pn	06 54 18.6	+0.4
JTN	Tanegashima 3	1.70	102	P	Pn	06 54 19.4	+0.5
JMTN	Minamitane	1.71	111	P	Pn	06 54 19.6	+0.5
JMTN				*e*S	Sb	06 54 41.4	-0.9
JZO	Okuchi	1.72	50	P	Pn	06 54 19.9	+0.6

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*INET **24** 06:55:40.7±0.4, 11°.75N×88°.96W, h15^{km}±2^{km}, MW3.0*
*SNET **24** 06:55:41.5±1.3, 11°.92N×88°.86W, h11^{km}±72^{km}, ML3.0*
ISC 24 06:55:40.2±2.8, **11°.9N**±0°.1×**88°.9W**±0°.1, **h10**^{km}, **n12**,
σ**0**^{s}.**50**/14, **1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEB	Comit de Eme	1.66	11	*e*P	Pn	06 56 09.7	+0.2
COEB				*e*S	Sn	06 56 30.9	0.0
LCND	La Caada	1.73	33	*e*P	Pn	06 56 10.3	0.0
LCND				IAML		06 56 38.7	
	comp=Z,85nm,0.3s						
SJTE	Alcalda de S	1.75	356	*e*P	Pn	06 56 10.4	-0.3
COEG	Centro de Oper	1.75	360	*e*P	Pn	06 56 10.4	-0.2
COEG				*e*S	Sb	06 56 34.2	-0.3
COEG				IAML		06 56 37.6	
	comp=Z,90nm,0.4s						
PQSS	Presa 15 de Se	1.78	10	*e*P	Pn	06 56 11.6	+0.6
SCLA	Alcaldia de Sa	1.83	4	*e*P	Pn	06 56 12.5	+0.7
PAVA	Las Pavas	1.84	358	*e*P	Pn	06 56 12.0	+0.1
JAYA	Jayaque - finc	1.87	342	⇑*i*P	Pn	06 56 11.4	-1.0
JAYA				IAML		06 56 36.9	
	comp=Z,293nm,0.2s						
CEVE	Cerro Verde	2.09	339	*e*P	Pn	06 56 15.7	+0.2
CEVE				IAML		06 56 47.1	
	comp=Z,288nm,0.5s						
NUBE	Las Nubes	2.22	336	*e*P	Pn	06 56 17.4	+0.2
COPN	Copaltepe	2.25	82	*e*P	Pn	06 56 17.4	0.0
SLOZ	Alcaldia de Sa	2.33	338	*e*P	Pn	06 56 19.4	+0.8

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*IDC **24** 07:03:30.0±5.9, 55°.57N×162°.24W, h81^{km}±43^{km}, mb3.5/8,*
mbtmp3.8/11, ML3.8/3, Error ellipse: s-maj=45.2km
s-min=26.5km az=24.0
*ANF **24** 07:03:30.6±0.4, 55°.03N×161°.99W, h113^{km}±5^{km}, ML3.9/9,*
Error ellipse: s-maj=8.4km s-min=2.9km az=158.0
*NEIC **24** 07:03:31.0±1.8, 55°.05N±0°.08×161°.97W±0°.08,*
h111^{km}±4^{km}, mb4.2/8, ML3.7/16, ML3.7(AEIC), Error ellipse:
s-maj=12.3km s-min=4.5km az=152.0
*AEIC **24** 07:03:32±2.8, 55°.04N±0°.10×161°.99W±0°.08, h104^{km}±5^{km},*
Error ellipse: s-maj=14.4km s-min=5.0km az=161.0
ISC 24 07:03:31.1±0.7, **55°.09N**±0°.07×**161°.99W**±0°.05,
h114^{km}±7^{km}, **n207**, σ**1**^{s}.**35**/215, **mb3.9**/10, **Alaska**
Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DT1	Dutton Round H	0.17	276		Pn	07 03 46.6	-0.3
DRIA	Deer Island	0.20	231		Pn	07 03 46.6	-0.4
HAG	Hague Volcano	0.23	12		Pn	07 03 47.3	+0.2
PS4A	Pavlof South-4	0.27	17		Pn	07 03 47.2	+0.1
PVV	Pavlof Volcano	0.31	22		Pn	07 03 47.4	+0.1
PS1A	Pavlof South-1	0.36	23		Pn	07 03 47.8	+0.2
PN6	Pavlof North-6	0.36	6		Pn	07 03 48.2	+0.5
BALA	Baldy Mountain	0.47	283		Pn	07 03 48.3	+0.2
BLHA	Black Hill	0.61	356		Pn	07 03 49.3	+0.1
FALS	False Pass	0.85	255		Pn	07 03 50.5	-0.5
FALS					Sn	07 04 05.4	-0.9
FALS	False Pass	0.85	255	P	Pn	07 03 50.6	-0.5
	baz=76,SNR=30						
FALS				S	Sn	07 04 05.2	-1.1
	baz=76						
SDPT	Sand Point	0.91	73		Pn	07 03 51.8	+0.2
SDPT	Sand Point	0.91	73		Sn	07 04 07.2	+0.1
SDPT	Sand Point	0.91	73	IAML		07 04 07.5	
	comp=E,6μm,0.4s						
SDPT				IAML		07 04 07.5	
	comp=N,8μm,0.3s						
SDPT	Sand Point	0.91	73	P	Pn	07 03 51.9	+0.4
	baz=251,SNR=30						
SDPT				S	Sn	07 04 07.2	+0.1
	baz=251						
ISLZ	Isanotski Laza	1.06	250		Pn	07 03 53.1	-0.1
ISLZ					Sn	07 04 09.3	-0.7
ISNN	Isanotski Nort	1.06	257		Pn	07 03 53.5	+0.2
BRPK	Brown Peak	1.11	247		Pn	07 03 53.6	-0.1
SSLN	Shishaldin Nor	1.19	257		Pn	07 03 54.8	+0.2
SSLW	Shishaldin Wes	1.27	256		Pn	07 03 55.4	-0.1
WTUG	Tugumak	1.40	261		Pn	07 03 56.7	-0.2
CHNA	Chernabura Isl	1.41	100	P	Pn	07 03 56.8	-0.2
	baz=280,SNR=35						
CHNA				S	Sn	07 04 15.7	-1.0
	baz=280						
CNBA	Chernabura Isl	1.41	100		Pn	07 03 56.8	-0.2
CNBA					Sn	07 04 15.3	-1.5
WESN	West Dahl Nort	1.59	252		Sn	07 04 20.9	+0.3
WESE	West Dahl East	1.63	249		Pn	07 04 00.1	+0.5
WEBT	Westdahl Beart	1.67	254		Pn	07 04 00.2	0.0
WECS	Westdahl Cape	1.71	252		Pn	07 04 00.8	+0.1
VNFG	Fog Glacier, M	1.83	48		Pn	07 04 03.4	+1.3
VNHG	Veniaminof 1	1.96	54		Pn	07 04 05.1	+1.3
AKSA	Akutan Strait	2.36	248		Pn	07 04 09.3	+0.5
AKSA					Sn	07 04 37.2	-0.4
AKSA	Akutan Strait	2.36	248		Pn	07 04 09.1	+0.4
AKSA					Sn	07 04 37.5	-0.2
CHGN	Chignik	2.36	58		Pn	07 04 09.5	+0.8
CHGN	Chignik	2.36	58	IAML		07 04 39.5	
	comp=N,279nm,0.3s						
CHGN				IAML		07 04 40.0	
	comp=E,352nm,0.1s						
CHGN	Chignik	2.36	58	P	Pn	07 04 09.5	+0.8
	baz=240,SNR=40						
CHGN				S	Sn	07 04 38.3	+0.6
	baz=240						
AKUT	Akutan	2.40	248		Pn	07 04 09.4	+0.1
AKUT	Akutan	2.40	248	IAML		07 04 41.5	
	comp=E,345nm,0.4s						
HSB	Akutan Spr's B	2.45	250		Pn	07 04 10.0	0.0
AKBBA	Akutan Broad B	2.50	248		Pn	07 04 10.6	+0.1
AZAC	Aniakchak	2.78	48		Pn	07 04 15.7	+1.3
UNV	Unalaska Valle	2.92	246		Pn	07 04 15.7	-0.3
UNV	Unalaska Valle	2.92	246	P	Pn	07 04 15.7	-0.3
	baz=64,SNR=19						
UNV				S	Sn	07 04 48.1	-2.5
	baz=64						
MTBL	Makushin Table	2.95	250		Pn	07 04 16.5	-0.1
MNAT	Makushin Natee	2.99	248		Pn	07 04 16.8	-0.2
MSW	Makushin Switc	3.03	249		Pn	07 04 17.4	-0.2
MGOD	Makushin Gods	3.13	247		Pn	07 04 19.3	+0.3
CHIR	Chirikof Islan	3.70	76		Pn	07 04 26.4	0.0
CHIR	Chirikof Islan	3.70	76	IAML		07 05 48.4	
	comp=E,103nm,1.7s						
CHIR	Chirikof Islan	3.70	76	P	Pn	07 04 26.4	0.0
	baz=260						
CHIR				S	Sn	07 05 07.6	-1.5
	baz=260						
OKFG	Magazine Ridge	3.86	247		Pn	07 04 28.8	+0.2
OKSO	Okmok South	4.02	247		Pn	07 04 30.7	+0.1
NIKH	Nikolski High	4.57	245	Pn	Pn	07 04 38.1	+0.1
NIKH	Nikolski High	4.57	245	P	Pn	07 04 37.9	-0.1
	baz=60,SNR=6.0						
NIKH				S	Sn	07 05 28.0	-2.0
	baz=60						
SII	Sitkinak Islan	4.64	68		Pn	07 04 38.8	-0.2
SII				IAML		07 05 35.1	
	comp=N,90nm,0.6s						
SII				IAML		07 05 35.5	
	comp=E,84nm,0.5s						
SII	Sitkinak Islan	4.64	68	P	Pn	07 04 39.0	0.0
	baz=254						
SII				S	Sn	07 05 30.6	-1.2
	baz=254						
ANCK	Angle Creek	4.75	46		Pn	07 04 41.9	+1.4
SPIA	Saint Paul Isl	5.07	298	Pn	Pn	07 04 45.9	+1.2
OHAK	Old Harbor	5.31	63	Pn	Pn	07 04 47.3	-0.7
OHAK				IAML		07 05 47.0	
	comp=N,50nm,0.5s						
OHAK				IAML		07 05 48.9	
	comp=E,36nm,1.2s						
OHAK	Old Harbor	5.31	63	P	Pn	07 04 47.3	-0.7
	baz=250						
OHAK				S	Sn	07 05 43.4	-4.5
	baz=250						
P18K	Big Mountain,	5.66	38		Pn	07 04 53.8	+1.1
P18K	Big Mountain,	5.66	38	P	Pn	07 04 54.1	+1.4
	baz=223						
KDAK	Kodiak Island	5.87	59	P	Pn	07 04 54.8	-0.7
	comp=E,10nm,0.3s,baz=215,slow=3.1,SNR=254						
KDAK				S	Sn	07 05 55.7	-5.8
	comp=E,9.9nm,0.3s,baz=330,slow=22,SNR=9.8						
	comp=E,20nm,0.3s						
KDAK	Kodiak Island	5.87	59	P	Pn	07 04 54.9	-0.6
	baz=246						
KDAK				S	Sn	07 05 56.7	-4.8
	baz=246						
Q19K	Cape Douglas,	5.96	46	Pn	Pn	07 04 57.6	+0.8
Q19K	Cape Douglas,	5.96	46	P	Pn	07 04 57.3	+0.4
	baz=233						
N18K	Kilae Creek	6.48	28	Pn	Pn	07 05 04.3	+0.5
N18K	Kilae Creek	6.48	28	P	Pn	07 05 04.3	+0.5
	baz=213						
SVW2	Sparrevohn	6.91	27		Pn	07 05 11.1	+1.4
N19K	Bonanza Creek	6.99	32		Pn	07 05 12.0	+1.3
N19K	Bonanza Creek	6.99	32	P	Pn	07 05 12.1	+1.3
	baz=218,SNR=6.1						
O20K	Slope Mountain	7.09	41	P	Pn	07 05 13.9	+1.7
	baz=229						
CNPM	China Poot	7.32	48	Pn	Pn	07 05 15.3	+0.1
BRLK	Bradley Lake	7.60	47	Pn	Pn	07 05 19.6	+0.6
BRSE	Bradley Lake S	7.65	48	P	Pn	07 05 19.2	-0.4
	baz=237						
ATKA	Atka Island	7.81	253		Pn	07 05 21.6	-0.1
M19K	Big River Lodg	7.90	27		Pn	07 05 24.1	+1.1
M19K	Big River Lodg	7.90	27	P	Pn	07 05 22.9	-0.1
	baz=213						
M19K				S	Sn	07 06 50.8	+0.2
	baz=213						
L19K	White Mountain	8.02	25	Pn	Pn	07 05 25.3	+0.7
L19K	White Mountain	8.02	25	P	Pn	07 05 25.2	+0.6
	baz=211						
SPU	Mount Spurr	8.05	37		Pn	07 05 26.8	+1.8
M20K	Styx River	8.23	31		Pn	07 05 30.0	+2.4
M20K	Styx River	8.23	31	P	Pn	07 05 28.0	+0.4
	baz=218						
SLKM	Skilak Lake	8.30	44		Pn	07 05 28.6	+0.2
SEW	Seward	8.39	48		Pn	07 05 29.3	-0.4
SEW	Seward	8.39	48	P	Pn	07 05 29.2	-0.4
	baz=238						
SEW				S	Sn	07 06 58.2	-4.3
	baz=238						
TTA	Tatalina	8.44	19	Pn	Pn	07 05 31.4	+1.0
TTA	Tatalina	8.44	19	P	Pn	07 05 31.3	+1.0
	baz=204						
RC01	Rabbit Creek A	8.84	42		Pn	07 05 35.8	+0.2
RC01	Rabbit Creek A	8.84	42	P	Pn	07 05 34.7	-1.0
	baz=232,SNR=5.4						
RC01				S	Sn	07 07 07.3	-6.1
	baz=232						
GSTD	Great Sitkin T	8.95	256		Pn	07 05 37.3	-0.1
M22K	Willow	9.12	38	Pn	Pn	07 05 40.8	+1.4
K20K	Telida	9.22	23	Pn	Pn	07 05 42.3	+1.5
K20K	Telida	9.22	23	P	Pn	07 05 41.1	+0.3
	baz=210						
PPLA	Purkeypile	9.31	29	Pn	Pn	07 05 44.9	+2.7
ADK	Adak	9.33	256	Pn	Pn	07 05 41.8	-0.5
CUT	Chulitna	9.52	35	Pn	Pn	07 05 44.9	0.0
KNK	Knik Glacier	9.53	43	Pn	Pn	07 05 45.0	0.0
KNK	Knik Glacier	9.53	43	P	Pn	07 05 43.4	-1.6
	baz=234						
KIWB	Kanaga Island	9.60	256		Pn	07 05 45.8	-0.3
GLI	Glacier Island	9.79	48		Pn	07 05 46.6	-2.0
GLI	Glacier Island	9.79	48	P	Pn	07 05 46.2	-2.4
	baz=240						
SML	Sawmill	9.81	41	Pn	Pn	07 05 48.0	-0.9
SML	Sawmill	9.81	41	P	Pn	07 05 46.4	-2.5
	baz=233						
HIN	Hinchinbrook I	9.83	51		Pn	07 05 48.5	-0.6
J20K	Nowinta River	9.93	20	Pn	Pn	07 05 52.2	+1.8
J20K	Nowinta River	9.93	20	P	Pn	07 05 51.1	+0.7
	baz=207						
FID	Port Fidalgo	10.00	49	Pn	Pn	07 05 48.7	-2.7
M23K	Glacier View	10.03	42	P	Pn	07 05 50.3	-1.6
	baz=234						
JPK	Jack Peak	10.09	47		Pn	07 05 51.5	-1.1
SCM	Sheep Creek Mo	10.21	43	Pn	Pn	07 05 52.3	-2.0
SCM	Sheep Creek Mo	10.21	43	P	Pn	07 05 52.3	-2.0
	baz=235						
EYAK	Cordova Ski Ar	10.23	51		Pn	07 05 53.5	-1.0
EYAK	Cordova Ski Ar	10.23	51	P	Pn	07 05 52.9	-1.6
	baz=245						
TRF	Thorofare Moun	10.28	31	Pn	Pn	07 05 55.0	-0.3
TRF	Thorofare Moun	10.28	31	P	Pn	07 05 54.2	-1.1
	baz=221						
WAT1	Susitna Watana	10.39	36	P	Pn	07 05 54.0	-2.7
	baz=228						
DIV	Divide	10.48	48		Pn	07 05 56.7	-1.2
WAT6	Susitna Watana	10.51	39	P	Pn	07 05 55.7	-2.7
	baz=231						
KLU	Klutina	10.59	46		Pn	07 05 58.7	-0.8
KLU	Klutina	10.59	46	P	Pn	07 05 57.8	-1.7
	baz=240,SNR=43						
BPAW	Bear Paw Mtn.	10.60	27	Pn	Pn	07 05 60.0	+0.5
BPAW	Bear Paw Mtn.	10.60	27	P	Pn	07 05 57.5	-1.9
	baz=216						
RND	Reindeer	10.69	33	Pn	Pn	07 05 60.0	-0.8
M24K	Tolsona, Glenn	10.82	43		Pn	07 06 00.9	-1.6
M24K	Tolsona, Glenn	10.82	43	P	Pn	07 06 00.8	-1.6
	baz=236						
HMT	Hamilton	10.82	54		Pn	07 06 01.8	-0.7
BMRM	Bremner River	10.92	50	Pn	Pn	07 06 03.1	-0.7
BMRM	Bremner River	10.92	50	P	Pn	07 06 01.4	-2.4
	baz=245						
DHY	Denali Highway	10.95	37	Pn	Pn	07 06 01.6	-2.8
DHY	Denali Highway	10.95	37	P	Pn	07 06 02.2	-2.2
	baz=230						
SUCK	Suckling Hills	10.96	56	Pn	Pn	07 06 03.6	-0.8
N25K	Chitina, Valde	11.20	47	Pn	Pn	07 06 06.8	-0.9
N25K	Chitina, Valde	11.20	47	P	Pn	07 06 06.2	-1.5
	baz=242,SNR=6.4						
HARP	HAARP	11.38	43	P	Pn	07 06 09.1	-0.8
	baz=237						
SNH	Sunshine Point	11.44	56	Pn	Pn	07 06 10.8	0.0
GLB	Gilahina Butte	11.47	49		Pn	07 06 09.8	-1.3
H21K	Melozitna Rive	11.51	19	Pn	Pn	07 06 13.7	+1.9
WAX	Waxell Ridge	11.52	54	Pn	Pn	07 06 11.3	-0.6
VRDI	Verde Repeater	11.54	50	Pn	Pn	07 06 10.9	-1.3
PAX	Paxson	11.58	40	Pn	Pn	07 06 12.2	-0.4
PAX	Paxson	11.58	40	P	Pn	07 06 11.0	-1.6
	baz=234						
TGL	Tana Glacier	11.63	53	Pn	Pn	07 06 13.5	+0.1
IMAR	Indian Mountai	11.64	17	Pn	Pn	07 06 13.9	+0.5
MCARA	McCarthy VSAT	11.79	50	P	Pn	07 06 13.8	-1.5
	baz=246						
ISLE	Juniper Island	11.81	54	Pn	Pn	07 06 16.0	+0.2
K24K	Donnelly Dome	11.97	37	P	Pn	07 06 17.3	-0.5
	baz=230						
HDA	Harding Lake	11.99	33	Pn	Pn	07 06 17.2	-0.9
MDM	Murphy Dome	12.02	29	Pn	Pn	07 06 18.0	-0.4
GRNC	Granite Creek	12.12	54		Pn	07 06 19.9	-0.1
M26K	Nabesna, AK	12.25	46	Pn	Pn	07 06 20.6	-0.8
M26K	Nabesna, AK	12.25	46	P	Pn	07 06 20.1	-1.3
	baz=242,SNR=7.0						
RIDG	Independent Ri	12.26	38		Pn	07 06 21.9	+0.3
RIDG	Independent Ri	12.26	38	P	Pn	07 06 20.3	-1.3
	baz=233						
IL31		12.27	32	Pn	Pn	07 06 20.6	-1.0
ILAR	Eielson Array	12.27	32	P	Pn	07 06 17.4	-4.2
	comp=E,0.1nm,0.3s,baz=214,slow=14,SNR=5.6						
ILAR				S	Sn	07 08 26.9	-10
	comp=E,0.1nm,0.5s,baz=213,slow=25,SNR=1.6						
	comp=E,0.1nm,0.4s						
ILAR	Eielson Array	12.27	32	Pn	Pn	07 06 21.3	-0.4
BARN	Barnard Glacie	12.28	53	Pn	Pn	07 06 21.8	-0.2
TABL	Table Mountain	12.32	56	Pn	Pn	07 06 22.9	+0.3
H23K	Yukon River	12.36	24	Pn	Pn	07 06 23.4	+0.6
CTG	Chitna Glacier	12.39	53	P	Pn	07 06 22.5	-0.9
	baz=251						
CTGM	Chitina Glacie	12.40	53	Pn	Pn	07 06 23.5	0.0
L26K	Log Cabin Wild	12.42	43		Pn	07 06 23.3	-0.3
L26K	Log Cabin Wild	12.42	43	P	Pn	07 06 22.2	-1.4
	baz=239						
J25K	Salcha River,	12.64	34		Pn	07 06 25.8	-0.7
J25K	Salcha River,	12.64	34	P	Pn	07 06 24.4	-2.1
	baz=229						
PCA	Pinnacle	12.66	58	Pn	Pn	07 06 26.7	-0.1
PINM	Pinnacle	12.66	58	P	Pn	07 06 26.7	-0.2
	baz=256						
M27K	Edge Creek, AK	12.69	47	Pn	Pn	07 06 26.9	-0.4
M27K	Edge Creek, AK	12.69	47	P	Pn	07 06 26.8	-0.4
	baz=244						
PNL	Peninsula	12.99	60	P	Pn	07 06 31.4	+0.3
	baz=259						
L27K	Beaver Creek,	13.04	44		Pn	07 06 31.3	-0.4
YUK3	Moose Creek	13.07	50	P	Pn	07 06 31.2	-1.1
	baz=249						
BVCY	Beaver Creek	13.14	48	P	Pn	07 06 32.2	-0.9
	baz=246						
J26L	Joseph Creek	13.17	37	P	Pn	07 06 33.6	+0.1
	baz=233,SNR=6.6						
COLD	Coldfoot	13.40	20		Pn	07 06 36.1	-0.2
YUK4	Talbot Arm	13.75	53	P	Pn	07 06 40.6	-0.5
	baz=253						
DAWY	Dawson	14.47	43	Pn	Pn	07 06 49.6	-0.6
PLBC	Pleasant Camp	14.49	62	P	Pn	07 06 52.3	+2.0
	baz=264						
N30M	Aishikik Lake	14.51	54	P	Pn	07 06 51.2	+0.5
	baz=255						
TOLK	Toolik Lake Re	14.75	18	P	P	07 06 58.0	+1.3
TOLK	Toolik Lake Re	14.75	18	P	Pn	07 06 55.3	+1.6
	baz=209,SNR=9.7						
BMAR	Burnt Mountain	14.86	27	P	P	07 06 57.5	-0.3
M30M	Minto, Yukon	14.96	50		Pn	07 06 57.9	+1.5
JIS	Juneau Island	15.45	67	P	P	07 07 06.4	+2.0
JIS				IAmb	IAmb	07 07 10.8	
	comp=Z,18nm,1.3s						
I29M	Ogilvie Camp,	15.51	39	P	P	07 07 05.8	+0.6
M31M	Drury Creek, Y	15.93	52	P	P	07 07 12.4	+2.6
INK	Inuvik	18.65	34	P	P	07 07 38.8	-0.7
	comp=Z,0.3nm,0.3s,baz=230,slow=16,SNR=26						
	comp=Z,0.8nm,0.3s						
INK	Inuvik	18.65	34	P	P	07 07 38.5	-1.1
INK				IAmb	IAmb	07 07 39.5	
	comp=Z,8.4nm,1.5s						
INK	Inuvik	18.65	34	P	P	07 07 39.0	-0.5
	baz=239						
C36M	Paulatuk	22.19	35	P	P	07 08 17.6	+0.1
C36M				IAmb	IAmb	07 08 45.5	
	comp=Z,14nm,1.3s						
A36M	Sachs Harbour	22.93	29	P	P	07 08 24.3	-0.6
A36M				IAmb	IAmb	07 08 42.1	
	comp=Z,24nm,1.1s						
YKA	Yellowknife Ar	25.12	54	P	P	07 08 47.0	+2.2
	comp=Z,0.6nm,0.4s,baz=278,slow=9.0,SNR=12						
	comp=Z,0.6nm,0.4s						
YKA	Yellowknife Ar	25.12	54	P	P	07 08 46.3	+1.5
H11N2	WAKE ISLAND Hy	42.42	226	T	T	07 56 03.7	
	baz=27,slow=76,SNR=6.2						
H11N3	WAKE ISLAND Hy	42.43	226	T	T	07 55 60.0	
	baz=27,slow=76,SNR=4.9						
H11N1	WAKE ISLAND Hy	42.44	226	T	T	07 55 56.4	
	baz=27,slow=76,SNR=6.2						
H11S1	WAKE ISLAND Hy	43.59	226	T	T	07 57 30.9	
	baz=26,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	43.61	226	T	T	07 57 32.0	
	baz=26,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	43.61	226	T	T	07 57 33.1	
	baz=26,slow=76,SNR=8.0						
TXAR	Lajitas Array	48.52	97	P	P	07 12 05.2	+2.8
	comp=Z,0.2nm,0.5s,baz=308,slow=6.1,SNR=3.7						
	comp=Z,0.2nm,0.5s						
SCHQ	Schefferville	50.39	48	P	P	07 12 17.2	+1.0
	comp=Z,3.2nm,1.0s,baz=25,slow=14,SNR=1.7						
	comp=Z,3.2nm,1.0s						
SCHQ	Schefferville	50.39	48	P	P	07 12 17.0	+0.9
ARCES	ARCESS Array B	55.56	357	P	P	07 12 52.7	-1.2
	comp=Z,0.8nm,0.5s,baz=15,slow=6.3,SNR=7.9						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	55.56	357	P	P	07 12 53.4	-0.5
FINES	FINESS Array B	63.63	356	P	P	07 13 48.8	-0.4
	comp=Z,1.5nm,0.3s,baz=1.1,slow=7.1,SNR=9.9						
	comp=Z,1.5nm,0.3s						
MKAR	Makanchi Array	64.97	317	P	P	07 13 56.9	-1.3
	comp=Z,0.2nm,0.5s,baz=37,slow=6.0,SNR=2.3						
	comp=Z,0.2nm,0.5s						
AKASG	Malin Array Be	74.16	353	P	P	07 14 53.8	-0.8
	comp=Z,1.0nm,0.6s,baz=11,slow=6.5,SNR=4.3						
	comp=Z,1.0nm,0.6s						
ESDC	Sonseca Array	83.75	17	P	P	07 15 47.7	+0.5
	comp=Z,0.7nm,0.7s,baz=350,slow=3.3,SNR=4.6						
	comp=Z,0.7nm,0.7s						

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*IDC **24** 07:13:13.4±1.6, 37°.29N×142°.03E, h0^{km}, mb3.4/3,*
mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=40.1km
s-min=28.2km az=138.0
*JMA **24** 07:13:15.8±0.2, 37°.3N±0°.6×14°2E±°, h32^{km}, MV3.5/34, E*
OFF FUKUSHIMA PREF
*NIED **24** 07:13:15.8, 37°.28N×141°.94E, h32^{km}, MW3.4, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;

M_{rr}-0.52; $M_{\theta\theta}$0.57; $M_{\phi\phi}$-0.05; $M_{r\theta}$-0.05; $M_{\theta\phi}$1.21; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.40000×10^{14} NP1: ϕ_s275.00000°,δ61.00000°,λ-16.00000°. NP2:ϕ_s12.00000°, δ76.00000°,λ-151.00000°.

ISC 24 07:13:13.4±2.1**,37°.27N**±0°.06×**141°.88E**±0°.08**,h1**^{km}±13^{km}**, n21,**σ**1^{s}00**/23**,mb3.5**/3**,4D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.88**	**259**	⇓*i*P	**Pn**	**07 13 32.7**	**-0.3**
ONAJ				⇓S	**Sb**	**07 13 44.2**	**+0.5**
JMST	**Minamisoumatoc**	**0.91**	**300**	P	**Pn**	**07 13 33.1**	**-0.2**
JMST				S	**Sb**	**07 13 44.6**	**+0.1**
JMM	**Marumori**	**1.04**	**305**	P	**Pn**	**07 13 35.1**	**-0.1**
JMM				S	**Sb**	**07 13 48.3**	**-0.2**
JFFD	**Fukushimafurud**	**1.07**	**261**	P	**Pn**	**07 13 35.6**	**+0.2**
JFFD				S	**Sb**	**07 13 48.9**	**-0.2**
JIKH	**Ishinomakikobu**	**1.08**	**343**	P	**Pg**	**07 13 34.9**	**+0.7**
JHO	**Hitachi**	**1.24**	**238**	P	**Pn**	**07 13 37.6**	**-0.2**
JHO				S	**Sg**	**07 13 52.5**	**-0.6**
JFT	**Otama**	**1.25**	**282**	⇓*i*P	**Pn**	**07 13 39.2**	**+1.2**
JFT				⇓*e*S	**Sb**	**07 13 55.1**	**+0.7**
JIO	**Ouri**	**1.25**	**341**	P	**Pg**	**07 13 37.6**	**+0.3**
JIO				S	**Sg**	**07 13 52.2**	**-1.4**
JOU	**Okura**	**1.45**	**319**	P	**Pg**	**07 13 41.8**	**+0.5**
JYS	**Shirataka**	**1.72**	**304**	P	**Pg**	**07 13 47.0**	**+0.6**
JFY	**Yanaizu**	**1.74**	**275**	P	**Pb**	**07 13 46.1**	**+0.1**
MJAR	**Matsushiro Arr**	**3.03**	**257**	Pn	**Pn**	**07 14 04.1**	**+1.6**
	0.3nm,0.3s,baz=77,slow=15,SNR=5.9						
MJAR				Sn	**Sb**	**07 14 42.6**	**-3.0**
	0.3nm,0.3s,baz=74,slow=24,SNR=5.1 2.1nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	07 48 25.2	
	baz=314,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**27.96**	**122**	T	T	07 48 22.4	
	baz=314,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**27.97**	**122**	T	T	07 48 26.9	
	baz=314,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	07 49 21.7	
	baz=316,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	07 49 22.3	
	baz=316,slow=76,SNR=25						
H11S2	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	07 49 22.4	
	baz=316,slow=76,SNR=25						
ILAR	**Eielson Array**	**49.09**	**32**	P	**P**	**07 22 01.3**	**-0.6**
	0.2nm,0.7s,baz=269,slow=5.4,SNR=2.3 0.2nm,0.7s						
WRA	**Warramunga Arr**	**57.35**	**188**	P	**P**	**07 23 03.1**	**-0.1**
	1.1nm,1.3s,baz=7.4,slow=7.4,SNR=1.6 1.1nm,1.3s						
ASAR	**Alice Springs**	**61.08**	**188**	P	**P**	**07 23 29.8**	**+0.9**
	0.3nm,0.7s,baz=18,slow=3.6,SNR=2.4 0.3nm,0.7s						

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*NEIC **24** 07:23:27.9±1.6, 34°.0S±0°.1×177°.5W±0°.2, h14^{km}±6^{km}, mb4.7/18, Error ellipse: s-maj=23.4km s-min=13.1km az=49.0*

*IDC **24** 07:23:32.5±0.9, 34°.11S×178°.64W, h0^{km}, mb4.5/8, mbtmp4.5/10, ML3.3/2, MS3.9/50, Error ellipse: s-maj=28.3km s-min=25.2km az=179.0*

*GCMT **24** 07:23:38.9±0.4, 33°.78S±0°.04×178°.50W±0°.03, h18^{km}±1^{km}, MW4.8/64, Moment Tensor Solution. s22,c24; s64,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.09±.18; $M_{\theta\theta}$-0.27±.11; $M_{\phi\phi}$-1.82±.11; $M_{r\theta}$0.64±.35; $M_{\theta\phi}$-0.27±.07; $M_{\phi r}$1.16±.23; Best double couple: $M_0$2.37500×10^{16} NP1:ϕ_s182.00000°,δ29.00000°,λ75.00000°. NP2: ϕ_s19.00000°,δ62.00000°,λ98.00000°. Principal axes: T 2.5150, Plg72.0000°, Azm309.0000°; N -0.2760, Plg7.0000°, Azm195.0000°; P -2.2360, Plg16.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 07:23:29.8±0.8**,34°.08S**±0°.08×**177°.9W**±0°.1**,h10**^{km}**,n95,**σ**2^{s}11**/48**,mb4.7**/19**,MS4.0**/49**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.66**	**221**	Pn	**Pn**	**07 24 39.2**	**-1.0**
RAO	**Raoul Island**	**4.81**	**360**	LR	LR	07 26 16.6	
	comp=Z,585nm,20.3s,baz=190,slow=34						
URZ	**Urewera**	**5.81**	**223**	Pn	**Pn**	**07 24 57.4**	**+1.4**
	18nm,0.3s,baz=37,slow=3.7,SNR=98						
URZ				Sn	**Sn**	**07 26 01.9**	**-0.9**
	28nm,0.3s,baz=190,slow=19,SNR=8.8						
URZ	**Urewera**	**5.81**	**223**	Pn	**Pn**	**07 24 59.0**	**+2.9**
BKZ	**Black Stump Fm**	**6.80**	**220**	Pn	**Pn**	**07 25 11.7**	**+2.0**
OUZ	**Omahuta**	**7.12**	**258**	Pn	**Pn**	**07 25 15.2**	**+1.2**
TUWZ	**Tuamarina**	**9.78**	**219**	Pn	**Pn**	**07 25 49.5**	**-1.0**
THZ	**Tophouse**	**10.57**	**221**	Pn	**Pn**	**07 26 02.5**	**+1.2**
RPZ	**Rata Peaks**	**12.91**	**219**	Pn	Pn	07 26 29.9	-3.3
	0.3nm,0.3s,baz=55,slow=19,SNR=3.1						
RPZ				Sn	Sn	07 28 44.2	-13
	1.3nm,0.3s,baz=304,slow=20,SNR=7.5						
RPZ				LR	LR	07 32 16.0	
	comp=Z,939nm,18.4s,baz=40,slow=42 6.0nm,0.7s						
MSVF	**Nonsavu**	**16.68**	**346**	LR	LR	07 32 18.0	
	comp=Z,492nm,19.6s,baz=170,slow=32						
OUENC	**Ouen Island, N**	**17.75**	**307**		**Pn**	**07 27 37.1**	**0.0**
OUENC				IAmb	IAmb	07 27 40.6	
	comp=Z,48nm,1.1s						
DZM	**Mont Dzumac**	**18.26**	**307**	*e*P	**P**	**07 27 44.5**	**+0.9**
	comp=Z,67nm,1.3s						
DZM				*e*LR	LR	07 31 44.0	
	comp=Z,1μm,24.9s						
DZM	**Mont Dzumac**	**18.26**	**307**	P	**P**	**07 27 42.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=140,slow=16,SNR=5.5						
DZM				LR	LR	07 33 38.1	
	comp=Z,1μm,18.3s,baz=126,slow=34 comp=Z,14nm,1.0s						
DZM	**Mont Dzumac**	**18.26**	**307**		**P**	**07 27 43.8**	**+0.1**
RAR	**Rarotonga**	**20.49**	**56**	LR	LR	07 37 57.6	
	comp=Z,152nm,18.1s,baz=208,slow=41						
KOUNC	**Koumac, New Ca**	**20.76**	**306**	P	**P**	**07 28 09.9**	**-0.9**
KOUNC				IAmb	IAmb	07 28 12.0	
	comp=Z,27nm,1.0s						
AFI	**Afiamalu**	**20.83**	**17**	LR	LR	07 37 02.8	
	comp=Z,105nm,21.0s,baz=195,slow=38						
TBI	**Tubuai**	**27.04**	**74**	*e*LR	LR	07 35 27.4	
	comp=Z,379nm,30.5s,baz=243						
EIDS	**Eidsvold**	**28.23**	**280**	P	**P**	**07 29 23.5**	**+0.5**
EIDS				IAmb	IAmb	07 29 37.7	
	comp=Z,16nm,1.2s						
TOO	**Toolangi**	**29.78**	**253**	P	**P**	**07 29 37.0**	**+0.3**
TOO				IAmb	IAmb	07 29 41.9	
	comp=Z,14nm,1.1s						
PPT2	**Papeete2**	**30.17**	**64**	*e*LR	LR	07 36 56.2	
	comp=Z,431nm,28.8s,baz=237						
PPT	**Papeete**	**30.18**	**64**	LR	LR	07 42 42.7	
	comp=Z,154nm,18.0s,baz=184,slow=37						
STKA	**Stephens Creek**	**33.91**	**262**	P	**P**	**07 30 13.0**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=114,slow=18,SNR=3.1						
STKA				LR	LR	07 43 24.8	
	comp=Z,567nm,18.1s,baz=62,slow=36 comp=Z,1.7nm,0.7s						
CTA	**Charters Tower**	**34.65**	**284**	P	**P**	**07 30 18.9**	**-0.6**
	comp=Z,6.5nm,0.9s,baz=134,slow=7.5,SNR=3.3						
CTA				LR	LR	07 43 32.5	
	comp=Z,161nm,18.1s,baz=86,slow=35 comp=Z,6.5nm,0.9s						
PMG	**Port Moresby**	**40.38**	**299**	LR	LR	07 45 37.8	
	comp=Z,316nm,19.4s,baz=136,slow=33						
KRVT	**Keravat (AS076**	**40.73**	**310**	P	**P**	**07 31 11.1**	**+0.1**
	comp=Z,47nm,0.8s,baz=204,slow=6.7,SNR=7.3 comp=Z,47nm,0.8s						
TAOE	**Nuku Hiva Isla**	**42.78**	**63**	*e*S	S	07 37 55.0	+3.0
	comp=Z,64nm,25.4s						
TAOE				*e*LR	LR	07 42 46.7	
	comp=Z,194nm,29.5s						
AS31	**Alice Springs**	**43.14**	**271**	P	**P**	**07 31 29.9**	**-0.8**
ASAR	**Alice Springs**	**43.14**	**271**	P	**P**	**07 31 29.7**	**-1.0**
	comp=Z,7.3nm,0.8s,baz=111,slow=7.5,SNR=56						
ASAR				LR	LR	07 48 35.0	
	comp=Z,214nm,19.7s,baz=128,slow=35 comp=Z,7.3nm,0.8s						
ASAR	**Alice Springs**	**43.14**	**271**	P	**P**	**07 31 29.5**	**-1.2**
WR0	**Warramunga Arr**	**44.28**	**276**	P	**P**	**07 31 39.2**	**-0.7**
WR0				IAmb	IAmb	07 32 02.1	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**44.44**	**276**	P	**P**	**07 31 40.5**	**-0.7**
WB2				IAmb	IAmb	07 31 40.8	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**44.45**	**276**	P	**P**	**07 31 40.7**	**-0.5**
WRA	**Warramunga Arr**	**44.45**	**276**	P	**P**	**07 31 40.0**	**-1.3**
	comp=Z,8.7nm,0.8s,baz=120,slow=7.4,SNR=42						
WRA				LR	LR	07 50 12.0	
	comp=Z,178nm,18.1s,baz=113,slow=36 comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**44.45**	**276**	P	**P**	**07 31 40.1**	**-1.2**
WB0	**Warramunga Arr**	**44.49**	**276**	P	**P**	**07 31 40.5**	**-1.1**
WB0				IAmb	IAmb	07 31 41.2	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	**45.31**	**259**	P	**P**	**07 31 46.5**	**-1.4**
KNRA	**Kununurra**	**51.17**	**277**	P	**P**	**07 32 33.4**	**0.0**
KNRA				IAmb	IAmb	07 32 58.5	
	comp=Z,16nm,1.2s						
CASY	**Casey**	**51.97**	**209**	P	**P**	**07 32 38.9**	**+0.2**
CASY				IAmb	IAmb	07 32 45.1	
	comp=Z,9.8nm,0.9s						
NWAO	**Narrogin (SRO)**	**53.27**	**252**	P	**P**	**07 32 48.7**	**-0.1**
MORW	**Morawa**	**55.65**	**256**	P	**P**	**07 33 05.8**	**-0.4**
QSPA	**South Pole Qui**	**56.04**	**180**	P	P	07 33 17.0	+8.4
	comp=Z,7.9nm,1.0s,baz=331,slow=1.3,SNR=10						
QSPA	**South Pole Qui**	**56.04**	**180**		**P**	**07 33 04.8**	**-3.9**
QSPA				IAmb	IAmb	07 33 29.2	
	comp=Z,9.9nm,1.0s						
SIJI	**Sorong**	**57.84**	**294**	LR	LR	07 55 58.1	
	comp=Z,100nm,21.9s,baz=108,slow=34						
BATI	**Baumata**	**58.29**	**280**	LR	LR	07 55 59.3	
	comp=Z,80nm,21.2s,baz=172,slow=34						
RPN	**Rapa Nui**	**58.43**	**103**	LR	LR	07 55 55.5	
	comp=Z,126nm,18.0s,baz=350,slow=33						
GUMO	**Guam**	**59.19**	**317**	LR	LR	07 58 22.0	
	comp=Z,35nm,18.4s,baz=144,slow=36						
KAPI	**Kappang**	**64.41**	**282**	LR	LR	08 02 09.6	
	comp=Z,126nm,18.5s,baz=118,slow=36						
DAV	**Davao City (W)**	**67.30**	**296**	LR	LR	08 02 22.0	
	comp=Z,17nm,20.1s,baz=204,slow=35						
MAW	**Mawson**	**68.92**	**201**	P	**P**	**07 34 38.2**	**+3.8**
	comp=Z,2.9nm,0.9s,baz=74,slow=19,SNR=2.3 comp=Z,2.9nm,0.9s						
JCJ	**Chichijima**	**71.66**	**323**	LR	LR	08 01 26.5	
	comp=Z,53nm,21.4s,baz=126,slow=32						
USHA	**Ushuaia**	**72.84**	**145**	LR	LR	08 01 34.1	
	comp=Z,139nm,20.0s,baz=180,slow=31						
LEM	**Lembang**	**73.38**	**273**	LR	LR	08 08 24.5	
	comp=Z,108nm,18.8s,baz=185,slow=37						
SNAA	**Sanae**	**74.49**	**178**	P	**P**	**07 35 05.7**	**-2.3**
PLCA	**Paso Flores**	**79.94**	**133**	LR	LR	08 06 43.6	
	comp=Z,36nm,18.8s,baz=213,slow=32						
MJAR	**Matsushiro Arr**	**81.32**	**326**	LR	LR	08 04 54.0	
	comp=Z,20nm,21.8s,baz=166,slow=31						
JNU	**Nakatsue**	**82.37**	**319**	LR	LR	08 07 30.0	
	comp=Z,280nm,20.2s,baz=202,slow=32						
ASAJ	**Asahikawa**	**85.74**	**333**	LR	LR	08 10 30.3	
	comp=Z,79nm,18.8s,baz=166,slow=33						
PSI	**Prapat**	**85.92**	**276**	LR	LR	08 15 26.9	
	comp=Z,91nm,18.0s,baz=126,slow=36						
LPIG	**La Paz**	**86.39**	**58**	LR	LR	08 09 18.5	
	comp=Z,94nm,18.2s,baz=198,slow=32						
SHEM	**Shemya Is, Ala**	**86.73**	**355**	LR	LR	08 12 25.8	
	comp=Z,49nm,18.3s,baz=134,slow=34						
KSRS	**Korea Array**	**87.21**	**320**	LR	LR	08 14 19.8	
	comp=Z,20nm,18.4s,baz=115,slow=35						
PFO	**Pinyon Flats O**	**88.62**	**47**	LR	LR	08 12 51.5	
	comp=Z,91nm,18.1s,baz=230,slow=33						
PETK	**Petropavlovsk-**	**89.39**	**346**	P	P	07 36 29.4	+3.3
	comp=Z,2.1nm,0.7s,baz=148,slow=5.8,SNR=2.4						
PETK				LR	LR	08 12 04.2	
	comp=Z,50nm,19.8s,baz=162,slow=33 comp=Z,2.1nm,0.7s						
YBH	**Yreka Blue Hor**	**90.86**	**38**	LR	LR	08 12 48.7	
	comp=Z,63nm,18.4s,baz=218,slow=32						
NVAR	**Mina Array Bea**	**90.87**	**43**	P	P	07 36 40.7	+6.9
	comp=Z,0.1nm,0.3s,baz=231,slow=6.9,SNR=2.3						
NVAR				LR	LR	08 13 33.5	
	comp=Z,77nm,18.3s,baz=246,slow=33 comp=Z,0.1nm,0.3s						
LVC	**Limon Verde**	**92.07**	**119**	LR	LR	08 10 11.4	
	comp=Z,52nm,20.5s,baz=208,slow=30						
NNA	**Nana**	**92.31**	**106**	LR	LR	08 12 04.5	
	comp=Z,88nm,18.1s,baz=239,slow=31						
CN2	**Changchun**	**93.12**	**323**	*e*P	**P**	**07 36 42.6**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMIG	**Matias Romero**	**93.79**	**72**	LR	LR	08 11 20.7	
	comp=Z,41nm,19.2s,baz=202,slow=30						
ATAH	**Atahualpa**	**93.84**	**101**	LR	LR	08 13 29.0	
	comp=Z,33nm,18.2s,baz=206,slow=32						
KDAK	**Kodiak Island**	**93.95**	**13**	LR	LR	08 12 02.7	
	comp=Z,43nm,21.8s,baz=228,slow=31						
ELK	**Elko**	**94.17**	**43**	LR	LR	08 15 45.6	
	comp=Z,86nm,18.5s,baz=231,slow=33						
KLR	**Kul'dur**	**94.25**	**330**	LR	LR	08 16 02.5	
	comp=Z,97nm,19.9s,baz=195,slow=34						
TXAR	**Lajitas Array**	**94.28**	**57**	LR	LR	08 16 10.1	
	comp=Z,58nm,18.2s,baz=230,slow=33						
CMAR	**Chiang Mai Arr**	**94.70**	**289**	LR	LR	08 22 08.4	
	comp=Z,32nm,18.9s,baz=135,slow=37						
ANMO	**Albuquerque**	**95.79**	**52**	LR	LR	08 12 27.2	
	comp=Z,48nm,20.7s,baz=242,slow=30						
LPAZ	**La Paz**	**96.54**	**115**	LR	LR	08 13 35.5	
	comp=Z,11nm,18.6s,baz=251,slow=31						
MA2	**Magadan**	**96.86**	**345**	LR	LR	08 13 45.2	
	comp=Z,50nm,21.9s,baz=150,slow=31						
PZH	**PanZhiHua**	**97.08**	**297**	P	**P**	**07 37 01.3**	**-1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
CPUP	**Villa Florida**	**97.62**	**129**	LR	LR	08 17 29.4	
	comp=Z,98nm,18.7s,baz=219,slow=33						
JTS	**Las Juntas de**	**98.09**	**83**	LR	LR	08 14 10.1	
	comp=Z,58nm,18.7s,baz=358,slow=31						
NEW	**Newport**	**98.28**	**36**	LR	LR	08 15 42.0	
	comp=Z,131nm,19.3s,baz=221,slow=32						
PDAR	**Pinedale Array**	**98.72**	**44**	LR	LR	08 19 13.0	
	comp=Z,64nm,18.2s,baz=254,slow=34						
HHC	**Hu-ho-hao-te**	**98.85**	**314**	*e*P	**Pdif**	**07 37 10.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,7.2s						
SEY	**Seymchan**	**99.57**	**347**	LR	LR	08 15 25.9	
	comp=Z,71nm,21.9s,baz=172,slow=31						
MKAR	**Makanchi Array**	**120.17**	**308**	PKP	**PKiKP**	**07 42 24.1**	**+3.4**
	comp=Z,0.3nm,0.6s,baz=82,slow=3.1,SNR=3.8						
KBZ	**Khabaz**	**147.12**	**299**	PKPbc	**PKiKP**	**07 43 14.8**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=10,slow=4.2,SNR=3.1						
FINES	**FINESS Array B**	**148.60**	**338**	PKPbc	**PKPab**	**07 43 19.4**	**-0.4**
	comp=Z,9.7nm,0.9s,baz=79,slow=4.1,SNR=19						
NB2	**NORSAR Subarra**	**152.39**	**350**	PKP	**PKPab**	**07 43 29.8**	**-5.7**
	comp=Z,4.3nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.39**	**350**	PKPbc	**PKPab**	**07 43 29.9**	**-5.7**
	comp=Z,1.0nm,0.7s,baz=14,slow=4.1,SNR=4.3						
AKASG	**Malin Array Be**	**154.20**	**318**	PKPbc	**PKiKP**	**07 43 33.0**	**+3.4**
	comp=Z,2.9nm,0.8s,baz=57,slow=2.8,SNR=12						
BRTR	**Keskin Array B**	**154.25**	**292**	PKPbc	**PKiKP**	**07 43 33.0**	**+2.7**
	comp=Z,2.7nm,0.9s,baz=116,slow=2.9,SNR=9.1						
TORD	**Torodi Ar. Bea**	**159.16**	**179**	PKP	**PKPdf**	**07 43 34.2**	**+5.3**
	comp=Z,0.8nm,1.1s,baz=174,slow=4.3,SNR=2.4						
TORD				PKPab	**sPKPab**	**07 44 07.9**	**+0.9**
	comp=Z,1.3nm,1.1s,baz=177,slow=2.6,SNR=2.9						
CLL	**Collm**	**161.05**	**339**	*e*PKPab	**PKPab**	**07 44 15.0**	**+2.1**
	comp=Z,4.0nm,0.7s						

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*NOU **24** 07:31:03.9, 31°.80S×138°.82E, h9^{km}, MLv3.7/11, South Australia*

*AUST **24** 07:31:03.2±0.7, 31°.81S×138°.76E, h10^{km}, Error ellipse: s-maj=9.3km s-min=6.7km az=70.0*

*IDC **24** 07:31:06.4±3.5, 31°.04S×139°.31E, h0^{km}, mbtmp3.3/4, ML3.1/4, Error ellipse: s-maj=70.0km s-min=15.0km az=39.0*

ISC 24 07:31:02.5±0.8**,31°.79S**±0°.04×**138°.80E**±0°.04**,h10**^{km}**,n24,**σ**1^{s}66**/32**,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**1.43**	**339**	P	**Pn**	**07 31 29.9**	**+1.4**
	baz=1.4,SNR=407						
LCRK				S	**Sg**	**07 31 50.1**	**+1.7**
	baz=1.4						
LCRK	**Leigh Creek**	**1.43**	**339**	P	**Pn**	**07 31 30.1**	**+1.6**
NAPP	**Napperby**	**1.50**	**202**	P	**Pn**	**07 31 30.5**	**+1.1**
WHYH	**Whyalla**	**1.62**	**220**	P	**Pn**	**07 31 32.3**	**+1.3**
HTT	**Hallett**	**1.64**	**177**	P	**Pn**	**07 31 31.7**	**+0.2**
	baz=1.6,SNR=24						
HTT				S	**Sb**	**07 31 55.0**	**+1.4**
	baz=1.6						
HTT	**Hallett**	**1.64**	**177**	P	**Pn**	**07 31 31.9**	**+0.5**
STKA	**Stephens Creek**	**2.38**	**93**	Pn	**Pn**	**07 31 42.7**	**+1.2**
	2.2nm,0.3s,baz=278,slow=15,SNR=23						
STKA				Pg	**Pb**	**07 31 46.7**	**+1.3**
	3.9nm,0.3s,baz=283,slow=14,SNR=13						
STKA				Lg	Lg	07 32 12.5	
	18nm,0.3s,baz=286,slow=19,SNR=8.1 5.3nm,0.3s						
STKA	**Stephens Creek**	**2.38**	**93**	P	**Pn**	**07 31 42.8**	**+1.3**
	baz=2.4,SNR=6.5						
STKA				S	**Sb**	**07 32 15.4**	**+0.6**
	baz=2.4						
STKA	**Stephens Creek**	**2.38**	**93**	P	**Pn**	**07 31 43.0**	**+1.5**
BBOO	**Buckleboo**	**2.54**	**246**	P	**Pn**	**07 31 45.6**	**+1.9**
	baz=2.5,SNR=22						
BBOO				S	**Sn**	**07 32 15.0**	**+0.3**
	baz=2.5						
BBOO	**Buckleboo**	**2.54**	**246**	P	**Pn**	**07 31 44.8**	**+1.1**
TWOA	**Tennyson Woods**	**3.24**	**183**	P	**Pn**	**07 31 55.6**	**+2.2**
MULG	**Mulgathing**	**4.34**	**289**	P	**Pn**	**07 32 09.5**	**+1.0**
	baz=4.3,SNR=15						
MULG				S	**Sn**	**07 33 00.0**	**+0.9**
	baz=4.3						
MULG	**Mulgathing**	**4.34**	**289**	P	**Pn**	**07 32 10.1**	**+1.6**
INKA	**Innaminka**	**4.37**	**23**	P	**Pn**	**07 32 10.7**	**+1.7**
	baz=4.4,SNR=8.4						
INKA				S	**Sn**	**07 32 58.8**	**-1.1**
	baz=4.4						
OOD	**Oodnadatta**	**4.81**	**325**	P	**Pn**	**07 32 16.9**	**+1.9**
	baz=4.8,SNR=24						
OOD				S	**Sn**	**07 33 11.2**	**+0.3**
	baz=4.8						
OOD	**Oodnadatta**	**4.81**	**325**	P	**Pn**	**07 32 17.1**	**+2.1**
ARPS	**Mount Arapiles**	**5.57**	**154**	P	**Pn**	**07 32 25.5**	**+0.2**
	baz=5.6						
ARPS	**Mount Arapiles**	**5.57**	**154**	P	**Pn**	**07 32 27.0**	**+1.7**
CMSA	**Cobar Meteorol**	**5.88**	**89**	P	**Pn**	**07 32 30.4**	**+0.7**
	baz=5.9						
CMSA	**Cobar Meteorol**	**5.88**	**89**	P	**Pn**	**07 32 30.3**	**+0.7**
ASAR	**Alice Springs**	**9.18**	**331**	Pn	**Pn**	**07 33 14.7**	**-0.4**
	0.2nm,0.3s,baz=151,slow=12,SNR=7.7						
ASAR				Sn	**Sn**	**07 34 53.8**	**-4.7**
	0.4nm,0.3s,baz=150,slow=21,SNR=5.1 0.9nm,0.9s						
WRA	**Warramunga Arr**	**12.46**	**340**	Pn	**Pn**	**07 33 57.1**	**-2.8**
	0.2nm,0.3s,baz=152,slow=13,SNR=6.1						
WRA				Sn	Sn	07 36 08.9	-10
	0.1nm,0.3s,baz=166,slow=24,SNR=1.8 0.7nm,1.0s						
CTA	**Charters Tower**	**13.44**	**32**	Pn	Pn	07 34 07.3	-6.0
	0.1nm,0.3s,baz=210,slow=20,SNR=2.1 2.1nm,0.7s						

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*IDC **24** 07:39:03.1±3.0, 31°.41S×178°.37W, h0^{km}, mb4.2/2, mbtmp4.1/3, ML3.2/1, Error ellipse: s-maj=69.6km s-min=46.6km az=120.0*

*NEIC **24** 07:39:08.0±1.7, 31°.46S±0°.09×178°.2W±0°.2, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=25.7km s-min=15.4km az=82.0*

ISC 24 07:39:12.3±1.2**,31°.68S**±0°.10×**178°.6W**±0°.2**,h61**^{km}**,n27,**σ**1^{s}09**/22**,mb4.3**/9**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.43**	**207**	Pn	**Pn**	**07 40 55.9**	**-2.1**
	0.4nm,0.3s,baz=196,slow=21,SNR=1.3						
URZ				Sn	**Sn**	**07 42 18.9**	**-1.9**
	0.5nm,0.3s,baz=8.1,slow=15,SNR=1.0 7.5nm,0.9s						
URZ	**Urewera**	**7.43**	**207**		**Pn**	**07 40 58.6**	**+0.6**
BKZ	**Black Stump Fm**	**8.46**	**207**	Pn	**Pn**	**07 41 14.1**	**+2.0**
ARMA	**Armidale**	**25.48**	**265**	P	**P**	**07 44 36.4**	**+1.5**
CTAO	**Charters Tower**	**33.50**	**282**	P	**P**	**07 45 47.0**	**+0.9**
CTAO				IAmb	IAmb	07 45 50.8	
	comp=Z,17nm,1.5s						
AS31	**Alice Springs**	**42.52**	**269**	P	**P**	**07 47 02.0**	**0.0**
ASAR	**Alice Springs**	**42.52**	**269**	P	**P**	**07 47 02.5**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=105,slow=7.1,SNR=21 comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**42.52**	**269**	P	**P**	**07 47 01.8**	**-0.2**
WR0	**Warramunga Arr**	**43.45**	**274**	P	**P**	**07 47 09.6**	**+0.2**
WR0				IAmb	IAmb	07 47 32.7	
	comp=Z,5.5nm,1.2s						
WB2	**Warramunga Arr**	**43.62**	**274**	P	**P**	**07 47 10.8**	**-0.1**
WB2				IAmb	IAmb	07 47 21.2	
	comp=Z,7.8nm,1.3s						
WRA	**Warramunga Arr**	**43.63**	**274**	P	**P**	**07 47 11.1**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=111,slow=8.0,SNR=70 comp=Z,2.1nm,0.4s						
WRA	**Warramunga Arr**	**43.63**	**274**	P	**P**	**07 47 10.8**	**-0.1**
WB0	**Warramunga Arr**	**43.65**	**274**	P	**P**	**07 47 11.1**	**-0.1**
PATS	**Pohnpei**	**44.19**	**326**	P	**P**	**07 47 13.5**	**-1.8**
VNDA	**Vanda**	**46.77**	**186**	P	**P**	**07 47 34.6**	**-0.4**
VNDA				IAmb	IAmb	07 47 55.4	
	comp=Z,4.8nm,1.5s						
KNRA	**Kununurra**	**50.28**	**276**	P	**P**	**07 48 03.4**	**+0.6**
KNRA				IAmb	IAmb	07 48 04.7	
	comp=Z,13nm,1.4s						
SAUI	**Saumlaki**	**52.12**	**286**	P	**P**	**07 48 16.2**	**-0.4**
QSPA	**South Pole Qui**	**58.43**	**180**	P	**P**	**07 49 03.0**	**+1.5**
QSPA				IAmb	IAmb	07 49 09.1	
	comp=Z,2.9nm,1.1s						
SNAA	**Sanae**	**76.89**	**179**	P	**P**	**07 50 57.2**	**-0.2**
SNAA				IAmb	IAmb	07 51 16.3	
	comp=Z,8.4nm,1.4s						
H03S2	**Juan Fernandez**	**80.20**	**124**	T	T	09 20 02.8	
	baz=236						
H03S1	**Juan Fernandez**	**80.22**	**124**	T	T	09 20 02.7	
	baz=236						
H03S3	**Juan Fernandez**	**80.22**	**124**	T	T	09 20 02.7	
	baz=236						
H03N3	**Juan Fernandez**	**80.41**	**123**	T	T	09 20 11.9	
	baz=240,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**80.41**	**123**	T	T	09 20 11.5	
	baz=240,slow=72,SNR=13						
H03N1	**Juan Fernandez**	**80.42**	**123**	T	T	09 20 12.0	
	baz=240,slow=72,SNR=37						
FINES	**FINESS Array B**	**146.15**	**339**	PKPbc	**PKPdf**	**07 58 43.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=25,slow=3.7,SNR=6.3						
FINES	**FINESS Array B**	**146.15**	**339**		**PKPdf**	**07 58 43.5**	**-0.3**

IDC 24 07:47:16.4±6.0**,16°.82S**×**179°.50W,h535**^{km}±30^{km}**, mb2.7**/3**,mbtmp3.5**/4**,Error ellipse: s-maj=329.7km s-min=32.2km az=143.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.51**	**249**	P	P	07 48 27.4	0.0
	5.7nm,0.7s,baz=123,slow=23,SNR=4.8						
WRA	**Warramunga Arr**	**43.81**	**259**	P	P	07 54 34.7	-0.6
	0.1nm,0.4s,baz=93,slow=7.8,SNR=1.3 0.1nm,0.4s						
ASAR	**Alice Springs**	**44.09**	**253**	P	P	07 54 37.5	0.0
	1.7nm,0.5s,baz=88,slow=8.1,SNR=29 1.7nm,0.5s						
ILAR	**Eielson Array**	**85.08**	**13**	P	P	07 58 55.2	-0.1
	0.2nm,0.4s,baz=205,slow=6.0,SNR=4.8 0.2nm,0.4s						

IDC 24 07:48:29.2±3.3**,14°.40S**×**178°.03W,h371**^{km}±63^{km}**, mb2.8**/3**,mbtmp3.6**/4**,Error ellipse: s-maj=303.8km s-min=30.8km az=141.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.02**	**228**	P	Pn	07 49 50.1	+0.1
	6.6nm,0.4s,baz=71,slow=18,SNR=15						
WRA	**Warramunga Arr**	**45.72**	**256**	P	P	07 56 15.0	-0.3
	0.3nm,0.8s,baz=90,slow=7.5,SNR=1.2 0.3nm,0.8s						
ASAR	**Alice Springs**	**46.18**	**251**	P	P	07 56 18.7	-0.1
	0.6nm,0.3s,baz=83,slow=8.3,SNR=17 0.6nm,0.3s						
ILAR	**Eielson Array**	**82.41**	**13**	P	P	08 00 10.3	0.0
	0.2nm,0.5s,baz=223,slow=5.8,SNR=5.4 0.2nm,0.5s						

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*INET **24** 07:55:46.7±1.4, 13°.61N×90°.39W, h16^{km}±20^{km}, MW3.2*

*NEIC **24** 07:55:47.4±1.7, 13°.7N±0°.2×90°.35W±0°.04, h97^{km}±27^{km}, Error ellipse: s-maj=27.5km s-min=5.0km az=185.0*

SNET ***24*** *07:55:47.5±0.8, 13.°57N×90.°33W, h73^{km}±7^{km}, ML4.0*
UCR ***24*** *07:55:52.8±1.6, 13.°45N×89.°98W, h33^{km}±7^{km}, ML3.7, MW3.2, mb4.0(NEIC)*
GCG ***24*** *07:55:52.3±0.5, 14.°01N×90.°51W, h77^{km}±8^{km}, MD3.7*
ISC 24 07:55:47.0±1.5**, 13.°59N**±0.°08×**90.°37W**±0.°07**, h82**^{km}±13^{km}**, n103, σ1.^{s}12**/113**, 11C-12D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.66**	**62**	⇑*i*P	**Pn**	**07 56 02.4**	**0.0**
NUBE	**Las Nubes**	**0.66**	**62**	⇑*i*P	**Pn**	**07 56 02.4**	**0.0**
SLOZ	**Alcaldia de Sa**	**0.72**	**53**	⇑*e*P	**Pn**	**07 56 03.1**	**+0.1**
SLOZ				*e*S	**Sn**	**07 56 15.2**	**+0.3**
CEVE	**Cerro Verde**	**0.77**	**72**	⇑*e*P	**Pn**	**07 56 03.8**	**+0.1**
CEVE				IAML		07 56 19.4	
	comp=Z,7μm,0.2s						
CEVE	**Cerro Verde**	**0.77**	**72**	⇑*e*P	**Pn**	**07 56 03.8**	**+0.1**
CEVE				IAML		07 56 19.4	
	comp=Z,7μm,0.2s						
RTR	**El Retiro**	**0.77**	**66**	*e*P	**Pn**	**07 56 04.0**	**+0.4**
RTR	**El Retiro**	**0.77**	**66**	*e*P	**Pn**	**07 56 04.0**	**+0.4**
SBLS	**San Blas**	**0.77**	**71**	⇑*e*P	**Pn**	**07 56 03.8**	**+0.1**
SBLS	**San Blas**	**0.77**	**71**	⇑*e*P	**Pn**	**07 56 03.8**	**+0.1**
SNJE	**San Jose**	**0.80**	**69**	⇑*i*P	**Pn**	**07 56 04.1**	**+0.2**
SNJE	**San Jose**	**0.80**	**69**	⇑*i*P	**Pn**	**07 56 04.1**	**+0.2**
SNJE				*e*S	**Sn**	**07 56 16.7**	**0.0**
PCG	**Pacaya**	**0.83**	**344**	*e*P	**Pn**	**07 56 05.6**	**+1.2**
JAYA	**Jayaque - finc**	**0.90**	**86**	⇑*e*P	**Pn**	**07 56 03.9**	**-1.2**
JAYA				IAML		07 56 18.7	
	comp=Z,6μm,0.2s						
JAYA	**Jayaque - finc**	**0.90**	**86**	⇑*e*P	**Pn**	**07 56 03.9**	**-1.2**
JAYA				IAML		07 56 18.7	
	comp=Z,6μm,0.2s						
FUG	**Fuego 3**	**0.97**	**332**	*e*P	**Pn**	**07 56 06.7**	**+0.8**
CEDA	**San Andres**	**0.97**	**77**	⇓*e*P	**Pn**	**07 56 05.9**	**+0.1**
CEDA				IAML		07 56 23.6	
	comp=Z,4μm,0.6s						
CEDA	**San Andres**	**0.97**	**77**	⇓*e*P	**Pn**	**07 56 05.9**	**+0.1**
CEDA				IAML		07 56 23.6	
	comp=Z,4μm,0.6s						
NBG	**Las Nubes**	**0.99**	**1**	*e*P	**Pn**	**07 56 08.0**	**+1.7**
LALI	**Alcalda de L**	**1.03**	**95**	*e*P	**Pn**	**07 56 06.3**	**-0.1**
LALI	**Alcalda de L**	**1.03**	**95**	*e*P	**Pn**	**07 56 06.3**	**-0.1**
BOQS	**Boqueron**	**1.07**	**82**	*e*P	**Pn**	**07 56 07.2**	**0.0**
BOQS	**Boqueron**	**1.07**	**82**	*e*P	**Pn**	**07 56 07.2**	**0.0**
UEES	**Universidad Ev**	**1.11**	**83**	*e*P	**Pn**	**07 56 08.0**	**+0.5**
UEES	**Universidad Ev**	**1.11**	**83**	*e*P	**Pn**	**07 56 08.0**	**+0.5**
SNET	**Serv Nac Est T**	**1.11**	**85**	Pn	**Pn**	**07 56 07.5**	**0.0**
SNET	**Serv Nac Est T**	**1.11**	**85**	*e*P	**Pn**	**07 56 07.5**	**0.0**
SNET				*e*S	**Sn**	**07 56 23.1**	**+0.2**
SNET				IAML		07 56 25.7	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.11**	**85**	*e*P	**Pn**	**07 56 07.5**	**0.0**
SNET				*e*S	**Sn**	**07 56 23.1**	**+0.2**
SNET				IAML		07 56 25.7	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.11**	**85**	*e*P	**Pn**	**07 56 07.3**	**-0.2**
SNET				*e*S	**Sn**	**07 56 23.2**	**+0.2**
MTO3	**Montecristo**	**1.27**	**51**	Pn	**Pn**	**07 56 09.6**	**-0.1**
MTO3	**Montecristo**	**1.27**	**51**	*e*P	**Pn**	**07 56 09.7**	**+0.1**
MTO3	**Montecristo**	**1.27**	**51**	*e*P	**Pn**	**07 56 09.7**	**+0.1**
MTO3				*e*S	**Sn**	**07 56 26.8**	**+0.2**
LFRS	**El Faro**	**1.27**	**88**	*e*P	**Pn**	**07 56 09.7**	**+0.1**
LFRS	**El Faro**	**1.27**	**88**	*e*P	**Pn**	**07 56 09.7**	**+0.1**
SJTE	**Alcalda de S**	**1.33**	**89**	⇓*e*P	**Pn**	**07 56 10.3**	**+0.1**
SJTE	**Alcalda de S**	**1.33**	**89**	⇓*e*P	**Pn**	**07 56 10.3**	**+0.1**
ESQI	**Esquipulas**	**1.39**	**46**	Pn	**Pn**	**07 56 11.6**	**+0.5**
PAVA	**Las Pavas**	**1.40**	**85**	*e*P	**Pn**	**07 56 11.3**	**+0.2**
PAVA	**Las Pavas**	**1.40**	**85**	*e*P	**Pn**	**07 56 11.3**	**+0.2**
PAVA	**Las Pavas**	**1.40**	**85**	*e*P	**Pn**	**07 56 11.4**	**+0.2**
COEG	**Centro de Oper**	**1.45**	**89**	*e*P	**Pn**	**07 56 11.9**	**+0.2**
COEG				IAML		07 56 36.0	
	comp=Z,968nm,0.3s						
COEG	**Centro de Oper**	**1.45**	**89**	*e*P	**Pn**	**07 56 11.9**	**+0.2**
COEG				IAML		07 56 36.0	
	comp=Z,968nm,0.3s						
COEG	**Centro de Oper**	**1.45**	**89**	*e*P	**Pn**	**07 56 11.8**	**+0.1**
RTAL	**Retalhuleu**	**1.58**	**306**	Pn	**Pn**	**07 56 13.5**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.60**	**86**	*e*P	**Pn**	**07 56 13.8**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.60**	**86**	*e*P	**Pn**	**07 56 13.8**	**+0.1**
STG3	**Santiaguito 3,**	**1.61**	**314**	*e*P	**Pn**	**07 56 15.2**	**+1.2**
STG3				*e*S	**Sn**	**07 56 32.5**	**-1.9**
MRL	**Marmol**	**1.63**	**24**	*e*P	**Pn**	**07 56 16.0**	**+1.8**
PQSS	**Presa 15 de Se**	**1.76**	**89**	*e*P	**Pn**	**07 56 15.7**	**0.0**
PQSS	**Presa 15 de Se**	**1.76**	**89**	*e*P	**Pn**	**07 56 15.7**	**0.0**
COEB	**Comit de Eme**	**1.79**	**93**	*e*P	**Pn**	**07 56 16.4**	**+0.2**
COEB	**Comit de Eme**	**1.79**	**93**	*e*P	**Pn**	**07 56 16.4**	**+0.2**
COEB	**Comit de Eme**	**1.79**	**93**	*e*P	**Pn**	**07 56 16.5**	**+0.2**
COEB				*e*S	**Sn**	**07 56 38.7**	**+0.2**
PACA	**Pacayal**	**2.00**	**93**	*e*P	**Pn**	**07 56 19.5**	**+0.5**
PACA	**Pacayal**	**2.00**	**93**	*e*P	**Pn**	**07 56 19.5**	**+0.5**
LCND	**La Caada**	**2.43**	**96**	⇓*e*P	**Pn**	**07 56 24.7**	**0.0**
LCND	**La Caada**	**2.43**	**96**	⇓*e*P	**Pn**	**07 56 24.7**	**0.0**
CNCH	**Conchagua**	**2.49**	**97**	⇓*i*P	**Pn**	**07 56 25.6**	**0.0**
CNCH	**Conchagua**	**2.49**	**97**	⇓*i*P	**Pn**	**07 56 25.6**	**0.0**
CSGN	**Cosiguina Volc**	**2.81**	**102**	*e*P	**Pn**	**07 56 30.0**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.05**	**81**	Pn	**Pn**	**07 56 33.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**3.05**	**81**	⇓*i*P	**Pn**	**07 56 33.2**	**+0.1**
CRIN	**San Cristobal**	**3.35**	**105**	Pn	**Pn**	**07 56 38.0**	**+0.7**
CRIN	**San Cristobal**	**3.35**	**105**	*e*P	**Pn**	**07 56 37.9**	**+0.7**
CNGN	**Cerro Negro**	**3.74**	**106**	Pn	**Pn**	**07 56 42.1**	**-0.3**
MATN	**Matagalpa**	**4.38**	**98**	Pn	**Pn**	**07 56 50.7**	**-0.4**
BOAB	**BOACO BROADBAN**	**4.72**	**103**	Pn	**Pn**	**07 56 55.5**	**-0.3**
ACON	**Acoyapa**	**5.32**	**107**	Pn	**Pn**	**07 57 02.7**	**-1.3**
HZTE	**Horizontes, Gu**	**5.48**	**121**	Pn	**Pn**	**07 57 07.1**	**+1.1**
HZTE	**Horizontes, Gu**	**5.48**	**121**	⇓*e*P	**Pn**	**07 57 07.8**	**+1.8**
HZTE				*e*S	**Sn**	**07 58 03.9**	**-3.8**
GBS3	**Finca Las Img**	**5.56**	**120**	*e*P	**Pn**	**07 57 08.8**	**+1.6**
LAPC	**Finca la Perla**	**5.58**	**120**	*e*P	**Pn**	**07 57 08.7**	**+1.2**
GB1A	**Borinquen Arri**	**5.59**	**119**	*e*P	**Pn**	**07 57 08.4**	**+0.8**
BUEV	**Buena Vista**	**5.59**	**119**	*e*P	**Pn**	**07 57 08.2**	**+0.5**
BUEV				*e*S	**Sn**	**07 58 07.6**	**-3.1**
VRLE	**La Escondida,**	**5.63**	**119**	*e*P	**Pn**	**07 57 10.3**	**+2.0**
SAJU	**San Juanillo,**	**5.75**	**127**	⇓*i*P	**Pn**	**07 57 10.9**	**+1.0**
LIM1	**Limonal**	**5.77**	**119**	*e*P	**Pn**	**07 57 11.1**	**+1.0**
ORTG	**Ortega, Santa**	**5.78**	**123**	Pn	**Pn**	**07 57 11.6**	**+1.3**
ORTG	**Ortega, Santa**	**5.78**	**123**	*e*P	**Pn**	**07 57 11.7**	**+1.4**
GUAI	**GUAI**	**5.79**	**124**	*e*P	**Pn**	**07 57 11.7**	**+1.4**
COLC	**Colonia**	**5.83**	**119**	*e*P	**Pn**	**07 57 12.0**	**+1.1**
CUI	**Cuipilapa**	**5.87**	**119**	*e*P	**Pn**	**07 57 12.4**	**+1.0**
PLVR	**Palo Verde**	**5.88**	**123**	*e*P	**Pn**	**07 57 13.2**	**+1.6**
GRZA	**Playa Garza**	**5.90**	**128**	*e*P	**Pn**	**07 57 13.2**	**+1.4**
DUNO	**Dulce Nombre,**	**5.91**	**126**	Pn	**Pn**	**07 57 13.4**	**+1.3**
DUNO	**Dulce Nombre,**	**5.91**	**126**	*e*P	**Pn**	**07 57 13.3**	**+1.3**
DUNO	**Dulce Nombre,**	**5.91**	**126**	*e*P	**Pn**	**07 57 13.4**	**+1.3**
ACAL	**Aguas Claras**	**5.99**	**119**	*e*P	**Pn**	**07 57 13.9**	**+0.8**
JTS	**Las Juntas de**	**6.24**	**121**	Pn	**Pn**	**07 57 17.4**	**+0.9**
LAFE	**Finca La Fe, P**	**6.54**	**125**	⇓*e*P	**Pn**	**07 57 21.6**	**+1.0**
JACO	**JACO, Garabito**	**6.82**	**124**	Pn	**Pn**	**07 57 25.1**	**+0.7**
JACO	**JACO, Garabito**	**6.82**	**124**	*e*P	**Pn**	**07 57 26.5**	**+2.0**
LCR2	**La Lucha 2**	**7.32**	**121**	*e*P	**Pn**	**07 57 33.9**	**+2.5**
RIMA	**Rio Macho**	**7.42**	**120**		**Pn**	**07 57 34.4**	**+1.5**
RIMA	**Rio Macho**	**7.42**	**120**	*e*P	**Pn**	**07 57 34.8**	**+2.0**
CDM	**Cerro de Muert**	**7.62**	**121**	*e*P	**Pn**	**07 57 37.8**	**+2.1**
PEZE	**Perez Zeledon,**	**7.78**	**122**	Pn	**Pn**	**07 57 39.3**	**+1.7**
SRBA	**San Rafael, Bu**	**8.12**	**121**	Pn	**Pn**	**07 57 43.3**	**+1.0**
SRBA	**San Rafael, Bu**	**8.12**	**121**	*e*P	**Pn**	**07 57 43.8**	**+1.5**
PLAN	**Los Planes de**	**8.19**	**126**	*e*P	**Pn**	**07 57 46.0**	**+2.9**
DRK0	**Durika**	**8.20**	**121**	Pn	**Pn**	**07 57 45.3**	**+1.8**
RIOS	**Rincon, Osa**	**8.30**	**125**	Pn	**Pn**	**07 57 46.1**	**+1.5**
RIOS	**Rincon, Osa**	**8.30**	**125**	*e*P	**Pn**	**07 57 46.9**	**+2.3**
PIRO	**Carate, Puerto**	**8.62**	**126**	*e*P	**Pn**	**07 57 51.9**	**+3.0**

IDC 24 08:26:24.1±3.3**, 54.°12N×87.°35E, h0**^{km}**, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=27.8km s-min=19.4km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**264**	*i*		08 35 30.0	
	baz=82,slow=319,SNR=5.0						
ZALV	**Zalesovo Beam**	**1.50**	**264**	Pg	Pn	08 26 50.5	-1.7
	1.1nm,0.3s,baz=83,slow=16,SNR=9.4						
ZALV				Lg	Lg	08 27 11.9	
	5.2nm,0.3s,baz=80,slow=25,SNR=13						
KURBB	**Kurchatov Arra**	**6.44**	**241**	Pn	Pn	08 28 01.4	+1.4
	baz=55,slow=13,SNR=2.4						
KURBB				Lg	Lg	08 29 48.4	
	baz=60,slow=28,SNR=6.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.01**	**206**	Pn	Pn	08 28 22.7	+1.0
	baz=18,slow=14,SNR=1.5						
MKAR				Lg	Lg	08 30 37.0	
	0.1nm,0.3s,baz=34,slow=21,SNR=2.6						
	0.1nm,0.4s						

NEIC ***24*** *08:41:04.0±2.1, 21.°4S±0.°1×177.°51W±0.°08, h354^{km}±7^{km}, mb4.3/32, Error ellipse: s-maj=17.7km s-min=9.7km az=163.0*
NOU ***24*** *08:41:04.4, 21.°29S×177.°32W, h369^{km}, mb4.6/16, Fiji Islands Region*
IDC ***24*** *08:41:06.8±1.1, 21.°47S×177.°87W, h377^{km}±9^{km}, mb3.5/8, mbtmp4.2/10, Error ellipse: s-maj=28.3km s-min=14.4km az=147.0*
ISC 24 08:41:03.7±0.5**, 21.°43S**±0.°07×**177.°56W**±0.°07**, h350**^{km}**, n72, σ1.^{s}50**/77**, mb4.2**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.40**	**339**	P	**Pn**	**08 42 08.7**	**+1.9**
MSVF	**Nonsavu**	**5.54**	**311**	P	**Pn**	**08 42 31.0**	**+1.5**
	15nm,0.6s,baz=136,slow=8.1,SNR=18						
MSVF				S	**S**	**08 43 37.6**	**-1.3**
	6.1nm,0.6s,baz=20,slow=23,SNR=0.8						
MSVF	**Nonsavu**	**5.54**	**311**		**Pn**	**08 42 31.1**	**+1.5**
MSVF	**Nonsavu**	**5.54**	**311**	P	**Pn**	**08 42 31.0**	**+1.5**
DGTI	**Dogotuki**	**5.71**	**333**	P	**Pn**	**08 42 33.5**	**+2.1**
NIUE	**Niue**	**7.54**	**73**		**Pn**	**08 42 51.9**	**-0.5**
NIUE	**Niue**	**7.54**	**73**	P	**Pn**	**08 42 51.6**	**-0.9**
AFI	**Afiamalu**	**9.29**	**37**	P	**Pn**	**08 43 09.5**	**-3.9**
	19nm,0.4s,baz=211,slow=3.5,SNR=8.5						
AFI				S	S	08 44 47.8	-12
	31nm,0.4s,baz=270,slow=20,SNR=3.3						
AFI	**Afiamalu**	**9.29**	**37**	Pn	**Pn**	**08 43 10.2**	**-3.2**
AFI	**Afiamalu**	**9.29**	**37**	P	**Pn**	**08 43 10.4**	**-3.0**
MARNC	**Mare, Loyalty**	**13.42**	**267**	P	**Pn**	**08 44 02.7**	**+0.5**
RTV	**Rentapao**	**13.69**	**283**	P	**Pn**	**08 44 06.2**	**+0.7**
PINNC	**Pines Island,**	**13.96**	**262**	P	**P**	**08 44 07.9**	**+0.9**
LIFNC	**LIFOU**	**14.20**	**270**	P	**P**	**08 44 09.3**	**-0.4**
LIFNC	**LIFOU**	**14.20**	**270**	P	**Pn**	**08 44 12.2**	**+0.8**
YATNC	**Mamie plateau,**	**14.46**	**265**	P	**Pn**	**08 44 14.7**	**+0.3**
OUENC	**Ouen Island, N**	**14.51**	**263**	P	**P**	**08 44 13.3**	**+0.3**
DZM	**Mont Dzumac**	**14.88**	**265**	P	**P**	**08 44 17.4**	**+0.2**
	25nm,0.9s,baz=81,slow=17,SNR=17						
DZM	**Mont Dzumac**	**14.88**	**265**	P	**P**	**08 44 18.7**	**+1.6**
DZM	**Mont Dzumac**	**14.88**	**265**	P	**Pn**	**08 44 19.4**	**+0.1**
KOUNC	**Koumac, New Ca**	**16.98**	**270**	P	**P**	**08 44 40.5**	**+0.6**
KOUNC				IAmb	IAmb	08 45 01.4	
	comp=Z,19nm,1.1s						
URZ	**Urewera**	**17.39**	**194**	P	**P**	**08 44 39.6**	**-4.5**
	comp=Z,12nm,0.7s,baz=58,slow=11,SNR=2.0						
URZ				S	**S**	**08 47 46.4**	**-0.3**
	comp=Z,9.1nm,0.8s,baz=71,slow=8.0,SNR=1.2						
URZ	**Urewera**	**17.39**	**194**	P	**P**	**08 44 42.8**	**-1.2**
URZ	**Urewera**	**17.39**	**194**	P	**P**	**08 44 45.2**	**+1.2**
BKZ	**Black Stump Fm**	**18.40**	**195**	P	**P**	**08 44 54.6**	**-0.2**
QRZ	**Quartz Range**	**21.08**	**201**	P	**P**	**08 45 19.8**	**-1.7**
QRZ	**Quartz Range**	**21.08**	**201**	P	**P**	**08 45 23.3**	**+1.9**
TUWZ	**Tuamarina**	**21.19**	**198**	P	**P**	**08 45 21.7**	**-0.7**
LTZ	**Lake Taylor**	**22.93**	**199**	P	**P**	**08 45 39.2**	**+0.9**
RPZ	**Rata Peaks**	**24.16**	**200**	P	**P**	**08 45 48.3**	**-1.0**
	comp=Z,6.9nm,0.7s,baz=68,slow=16,SNR=1.7						
	comp=Z,6.9nm,0.7s						
WHZ	**Wether Hill Ro**	**27.13**	**203**	P	**P**	**08 46 18.8**	**+3.0**
WHZ				IAmb	IAmb	08 46 19.7	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**29.01**	**256**	P	**P**	**08 46 31.6**	**-1.0**
EIDS				IAmb	IAmb	08 46 47.4	
	comp=Z,16nm,1.4s						
ARMA	**Armidale**	**29.05**	**246**	P	**P**	**08 46 32.4**	**-0.7**
ARMA				IAmb	IAmb	08 46 58.6	
	comp=Z,15nm,1.2s						
CTAO	**Charters Tower**	**33.82**	**266**	P	**P**	**08 47 14.2**	**-0.2**
CTAO				IAmb	IAmb	08 47 15.0	
	comp=Z,9.2nm,0.8s						
TOO	**Toolangi**	**35.69**	**235**	P	**P**	**08 47 30.1**	**0.0**
TOO				IAmb	IAmb	08 47 41.9	
	comp=Z,16nm,1.2s						
STKA	**Stephens Creek**	**37.76**	**245**	P	**P**	**08 47 45.2**	**-2.3**
	comp=Z,1.4nm,0.4s,baz=100,slow=12,SNR=6.9						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**37.76**	**245**	P	**P**	**08 47 46.6**	**-0.9**
COEN	**Coen**	**38.06**	**275**	P	**P**	**08 47 49.8**	**-0.3**
COEN				IAmb	IAmb	08 48 10.2	
	comp=Z,34nm,1.5s						
BBOO	**Buckleboo**	**42.51**	**244**	P	**P**	**08 48 25.1**	**-0.9**
BBOO				IAmb	IAmb	08 48 46.4	
	comp=Z,34nm,1.5s						
WR0	**Warramunga Arr**	**44.70**	**263**	P	**P**	**08 48 41.3**	**-2.3**
AS31	**Alice Springs**	**44.71**	**258**	P	**P**	**08 48 43.0**	**-0.6**
ASAR	**Alice Springs**	**44.71**	**258**	P	**P**	**08 48 42.2**	**-1.5**
	comp=Z,3.7nm,0.8s,baz=99,slow=8.0,SNR=32						
ASAR				pP	**pwP**	**08 49 58.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=96,slow=7.7,SNR=3.9						
ASAR				PcP	**PcP**	**08 50 19.4**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=100,slow=5.1,SNR=1.7						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**44.71**	**258**	P	**P**	**08 48 42.4**	**-1.3**
WB0	**Warramunga Arr**	**44.87**	**263**	P	**P**	**08 48 42.6**	**-2.3**
WB2	**Warramunga Arr**	**44.88**	**263**	P	**P**	**08 48 42.9**	**-2.0**
WRA	**Warramunga Arr**	**44.89**	**263**	P	**P**	**08 48 43.0**	**-2.1**
	comp=Z,2.5nm,0.8s,baz=94,slow=8.0,SNR=20						
WRA				pP	**pwP**	**08 49 59.2**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=98,slow=7.6,SNR=3.7						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**44.89**	**263**	P	**P**	**08 48 43.1**	**-1.9**
FORT	**Forrest**	**49.31**	**247**	P	**P**	**08 49 18.2**	**-0.4**
MTN	**Manton Dam**	**49.59**	**271**	P	**P**	**08 49 19.7**	**-1.3**
KNRA	**Kununurra**	**51.01**	**267**	P	**P**	**08 49 30.8**	**-0.7**
KNRA				IAmb	IAmb	08 49 37.9	
	comp=Z,14nm,1.3s						
VNDA	**Vanda**	**57.02**	**185**	P	**P**	**08 50 14.3**	**+0.7**
MBWA	**Marble Bar**	**58.06**	**258**	P	**P**	**08 50 20.4**	**-1.3**
MBWA				IAmb	IAmb	08 50 39.1	
	comp=Z,27nm,1.4s						
NWAO	**Narrogin (SRO)**	**58.32**	**244**	P	**P**	**08 50 24.0**	**+0.7**
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**08 51 30.4**	**+0.6**
QSPA				IAmb	IAmb	08 51 31.9	
	comp=Z,8.6nm,1.2s						
NVAR	**Mina Array Bea**	**81.42**	**43**	P	**P**	**08 52 44.5**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=222,slow=7.7,SNR=8.1						
	comp=Z,1.7nm,0.8s						
KVN	**Kaiserville**	**81.91**	**43**	P	**P**	**08 52 45.9**	**+0.7**
KVN				IAmb	IAmb	08 52 47.8	
	comp=Z,4.9nm,1.1s						
MOD	**Modoc Plateau**	**82.27**	**39**	P	**P**	**08 52 48.2**	**+1.3**
MOD				IAmb	IAmb	08 52 49.7	
	comp=Z,5.0nm,1.0s						
H04A	**Detroit Lake**	**82.93**	**36**	P	**P**	**08 52 51.2**	**+1.1**
H04A				IAmb	IAmb	08 52 52.0	
	comp=Z,4.8nm,0.8s						
F10A	**Beach Ranch, E**	**86.49**	**37**	P	**P**	**08 53 07.5**	**-0.2**
SNAA	**Sanae**	**87.07**	**178**	P	**P**	**08 53 08.8**	**-1.4**
TXAR	**Lajitas Array**	**87.21**	**57**	P	**P**	**08 53 13.6**	**+2.1**
	comp=Z,1.5nm,0.8s,baz=217,slow=6.6,SNR=20						
	comp=Z,1.5nm,0.8s						
TXAR	**Lajitas Array**	**87.21**	**57**	P	**P**	**08 53 13.4**	**+1.9**
BCAR	**Beaver Creek A**	**88.81**	**15**	P	**P**	**08 53 18.5**	**+0.4**
CCB	**Clear Creek Bu**	**88.83**	**12**	P	**P**	**08 53 17.3**	**-0.9**
CCB				IAmb	IAmb	08 53 18.4	
	comp=Z,1.3nm,0.6s						
IMAR	**Indian Mountai**	**89.00**	**10**	P	**P**	**08 53 18.6**	**-0.3**
ILAR	**Eielson Array**	**89.13**	**13**	P	**P**	**08 53 19.0**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=225,slow=4.8,SNR=4.2						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**89.36**	**43**	P	**P**	**08 53 22.4**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=222,slow=2.0,SNR=7.1						
	comp=Z,0.8nm,0.7s						
DAWY	**Dawson**	**90.24**	**16**	P	**P**	**08 53 25.6**	**+0.8**
DAWY				IAmb	IAmb	08 53 35.8	
	comp=Z,3.2nm,1.4s						
AKASG	**Malin Array Be**	**144.03**	**331**	PKhKP	PKPpre	08 59 54.2	
	comp=Z,0.5nm,0.5s,baz=42,slow=3.1,SNR=4.3						
BRTR	**Keskin Array B**	**147.77**	**311**	PKPbc	**PKPbc**	**09 00 06.8**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=101,slow=2.9,SNR=3.0						
BRTR				pPKPbc	**pPKPab**	**09 01 37.3**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=55,slow=5.5,SNR=1.6						
GERES	**GERESS Array B**	**151.21**	**344**	PKPbc	**PKPbc**	**09 00 15.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=45,slow=0.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**171.73**	**175**	PKPab	**PKPab**	**09 01 55.1**	**-0.2**
	comp=Z,1.2nm,1.1s,baz=188,slow=3.9,SNR=2.2						

TAP 24 08:41:33.2, 23.°18N×120.°97E, h8^{km}**, ML1.3, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.04**	**83**	P	Pg	08 41 35.4	+0.5
	baz=86						
ELDTW				S	Sg	08 41 36.4	+0.3
	baz=86						
STYH	**Taoyuan**	**0.18**	**266**	P	Pg	08 41 37.2	+0.3
	baz=266						
STYH				S	Sg	08 41 39.7	+0.3
	baz=266						
STYT	**Tauyuan**	**0.20**	**264**	P	Pg	08 41 37.8	+0.5
	baz=264						
STYT				S	Sg	08 41 40.6	+0.6
	baz=264						
YUS	**Yu-Shan**	**0.30**	**356**	*e*P	Pg	08 41 39.8	+0.4
	baz=6.0						
YUS				*e*S	Sg	08 41 43.9	+0.4
	baz=6.0						
LONT	**Longtian**	**0.31**	**152**	*e*P	Pg	08 41 39.9	+0.5
	baz=143						
LONT				*e*S	Sg	08 41 44.3	+0.8
	baz=143						
TPUB	**Ta-pu**	**0.34**	**290**	*e*S	Sb	08 41 46.1	-0.9
	baz=299						
WTP	**Ta-pu**	**0.34**	**281**	*e*P	Pg	08 41 40.5	+0.7
	baz=281						
WTP				S	Sb	08 41 46.2	-0.9
	baz=281						
ALS	**Alishan**	**0.36**	**335**	*e*P	Pg	08 41 41.0	+0.6
	baz=336						
ALS				*e*S	Sb	08 41 46.9	-1.1
	baz=336						
CHN1	**Nanshi**	**0.41**	**270**	*e*P	Pb	08 41 42.8	0.0
	baz=267						
CHN1				*e*S	Sb	08 41 49.2	0.0
	baz=267						
HGSD	**Ruisui**	**0.52**	**53**	*e*P	Pb	08 41 44.3	-0.2
	baz=47						
HGSD				*e*S	Sb	08 41 52.6	+0.4
	baz=47						

TAP 24 08:41:34.5, 23.°29N×121.°40E, h34^{km}**, ML1.0, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYUL	**Yuli**	**0.09**	**307**	*e*P	Pb	08 41 41.0	+0.7
	baz=306						
TWF1	**Yuli**	**0.11**	**303**	*e*P	Pb	08 41 40.5	+0.1
	baz=61						
TWF1				*e*S	Sb	08 41 45.0	+0.5
	baz=61						
TWF1	**Yuli**	**0.11**	**303**	*i* P	Pb	08 41 40.7	+0.3
	baz=304						
TWF1				*i* S	Sb	08 41 45.0	+0.5
	baz=304						
FULB	**Fuli**	**0.13**	**227**	*e*P	Pb	08 41 40.5	-0.1
	baz=77						
FULB				*e*S	Sb	08 41 45.3	+0.6
	baz=77						
FULB	**Fuli**	**0.13**	**227**	*e*P	Pb	08 41 40.4	-0.2
	baz=226						
FULB				*e*S	Sb	08 41 45.5	+0.8
	baz=226						
YULB	**Yu-li**	**0.14**	**317**	*e*P	Pb	08 41 40.5	-0.1
	baz=55						
YULB	**Yu-li**	**0.14**	**317**	*i* P	Pb	08 41 40.8	+0.2
	baz=316						
YULB				*e*S	Sb	08 41 45.5	+0.7
	baz=316						
HGSD	**Ruisui**	**0.20**	**6**	P	Pb	08 41 41.4	+0.2
	baz=6.0						
HGSD				*e*S	Sb	08 41 45.0	-0.6
	baz=6.0						
EHY	**Hungye**	**0.23**	**342**	*e*S	Sb	08 41 46.4	+0.3
	baz=343						
VWDT	**VWDT**	**0.52**	**333**	*e*P	Pn	08 41 45.5	0.0
	baz=7.0						
VWDT	**VWDT**	**0.52**	**333**	P	Pn	08 41 45.6	+0.2
	baz=332						

IDC ***24*** *08:51:06.5±3.0, 53.°52N×87.°74E, h0^{km}, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=27.8km s-min=15.7km az=55.0*
NNC ***24*** *08:51:06.5±3.7, 53.°46N×87.°83E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=30.4km s-min=16.2km az=52.0, Suspected Mining explosion.*
ISC 24 08:51:06.3±3.7**, 53.°6N**±0.°2×**87.°8E**±0.°2**, h0**^{km}**, n8, σ0.^{s}75**/8**, 5C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**282**	*i*		09 02 40.0	
	baz=100,slow=328,SNR=1.7						
ZAA0	**Zalesovo Array**	**1.79**	**282**	⇑P	**Pn**	**08 51 38.1**	**-0.3**
	0.5nm,0.4s						
ZAA0				⇑S	**Sg**	**08 52 04.7**	**+1.0**
	1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**1.79**	**282**	Pg	**Pn**	**08 51 38.2**	**-0.1**
	2.8nm,0.3s,baz=102,slow=15,SNR=16						
ZALV				Lg	Lg	08 52 03.4	
	3.9nm,0.3s,baz=108,slow=23,SNR=11						
KURK	**Kurchatov**	**6.34**	**246**	⇑Lg	Lg	08 54 25.3	
	2.5nm,0.6s						
KURBB	**Kurchatov Arra**	**6.44**	**246**	Pn	**Pn**	**08 52 42.3**	**0.0**
	0.2nm,0.3s,baz=63,slow=14,SNR=8.5						
KURBB				Lg	Lg	08 54 28.1	
	baz=64,slow=33,SNR=2.4						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**6.44**	**246**	⇑Pn	**Pn**	**08 52 42.5**	**+0.2**
	1.0nm,0.3s						
KURBB				⇓Sn	**Sn**	**08 53 55.2**	**-1.2**
	2.7nm,0.6s						
KURBB				⇑Lg	Lg	08 54 29.1	
	4.9nm,0.7s						
MK31	**Makanchi Array**	**7.69**	**209**	Pn	**Pn**	**08 52 59.9**	**+0.4**
	0.3nm,0.2s,baz=29,slow=12,SNR=15						
MK31				Lg	Lg	08 55 09.4	
	1.2nm,0.8s,baz=37,slow=32,SNR=4.2						
MKAR	**Makanchi Array**	**7.69**	**209**	Pn	**Pn**	**08 52 59.6**	**+0.1**
	0.3nm,0.3s,baz=27,slow=13,SNR=9.9						
MKAR				Lg	Lg	08 55 06.6	
	baz=31,slow=34,SNR=4.7						
	0.3nm,0.3s						

NNC ***24*** *09:01:57.6±2.9, 54.°44N×86.°94E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=42.8km s-min=13.7km az=170.0, Suspected Mining explosion.*
IDC ***24*** *09:01:58.8±2.8, 54.°38N×86.°95E, h0^{km}, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=23.6km s-min=17.0km az=60.0*
ISC 24 09:02:00.1±4.3**, 54.°3N**±0.°2×**86.°7E**±0.°2**, h0**^{km}**, n8, σ1.^{s}31**/12**, 7C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**251**	*i*		09 10 00.0	
	baz=70,slow=317,SNR=6.4						
ZAA0	**Zalesovo Array**	**1.18**	**251**	⇓P	**Pg**	**09 02 21.8**	**-0.9**
	0.6nm,0.6s						
ZAA0				⇓S	**Sn**	**09 02 41.2**	**+0.7**
	2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**1.18**	**251**	Pg	**Pb**	**09 02 22.2**	**-1.1**
	1.8nm,0.3s,baz=66,slow=15,SNR=11						
ZALV				Lg	Lg	09 02 41.9	
	2.5nm,0.3s,baz=72,slow=26,SNR=5.5						
KURK	**Kurchatov**	**6.13**	**237**	⇑Pn	**Pn**	**09 03 31.9**	**+0.2**
	3.3nm,0.8s						
KURK				⇑Sn	**Sn**	**09 04 44.7**	**+2.2**
	1.5nm,0.7s						
KURK				⇑Lg	Lg	09 05 17.4	
	5.2nm,0.9s						
KURBB	**Kurchatov Arra**	**6.23**	**237**	Pn	**Pn**	**09 03 34.6**	**+1.4**
	0.2nm,0.3s,baz=54,slow=14,SNR=18						
KURBB				Sn	**Sn**	**09 04 45.1**	**+0.1**
	0.1nm,0.3s,baz=46,slow=21,SNR=2.1						
KURBB				Lg	Lg	09 05 24.8	
	0.1nm,0.3s,baz=46,slow=31,SNR=1.4						
	2.1nm,0.5s						
KURBB	**Kurchatov Arra**	**6.23**	**237**	⇑Pn	**Pn**	**09 03 34.0**	**+0.8**
	1.7nm,0.4s						
KURBB				⇑Sn	**Sn**	**09 04 45.7**	**+0.7**
	3.6nm,0.6s						
KURBB				⇑Lg	Lg	09 05 19.4	
	3.7nm,0.7s						

MK31	Makanchi Array	8.06	202	⇑Pn	Pn	09 03 59.1	+0.8
	baz=24,slow=13,SNR=4.5						
MKAR	Makanchi Array	8.06	202	Pn	Pn	09 03 59.9	+1.5
	0.1nm,0.3s,baz=26,slow=14,SNR=5.0						
MKAR				Sn	Sn	09 05 28.7	-1.5
	baz=18,slow=28,SNR=2.1						
MKAR				Lg	Lg	09 06 17.8	
	baz=21,slow=25,SNR=2.4						
	0.2nm,0.3s						

IDC ***24*** *09:11:01.4±4.7,25°.62S×129°.98E,h0*^{km}*,mbtmp3.6/3, ML3.5/3,Error ellipse: s-maj=37.1km s-min=23.8km az=78.0*

NOU ***24*** *09:11:02.8,25°.59S×129°.88E,h10*^{km}*,MLv4.4/13, Northern Territory, Australia*

ISC 24 09:11:02.6±1.0**,25°.59S**±0°.09×**129°.86E**±0°.08**,h10**^{km}**,n16, σ1**^{s}**.15**/19**,Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	Warakurna	1.52	291	P	Pn	09 11 30.5	+0.6
ASAR	Alice Springs	4.15	63	Pn	Pn	09 12 06.7	+0.7
	1.8nm,0.3s,baz=242,slow=12,SNR=70						
ASAR				Pg	Pb	09 12 17.4	+1.7
	2.9nm,0.3s,baz=234,slow=17,SNR=15						
ASAR				Sn	Sn	09 12 54.9	+0.2
	4.2nm,0.3s,baz=245,slow=24,SNR=9.0						
ASAR				Lg	Lg	09 13 09.9	
	4.4nm,0.3s,baz=235,slow=27,SNR=5.0						
	3.4nm,0.3s						
FORT	Forrest	5.41	197	P	Pn	09 12 24.2	+0.8
OOD	Oodnadatta	5.66	114	P	Pn	09 12 27.5	+0.7
MULG	Mulgathing	5.97	142	P	Pn	09 12 31.8	+0.7
WRA	Warramunga Arr	6.97	37	Pn	Pn	09 12 44.8	-0.1
	0.7nm,0.3s,baz=215,slow=13,SNR=40						
WRA				Sn	Sn	09 14 02.7	-1.7
	1.1nm,0.3s,baz=219,slow=24,SNR=8.0						
WRA				Lg	Lg	09 14 38.1	
	1.7nm,0.3s,baz=216,slow=29,SNR=9.6						
	1.7nm,0.6s						
WRAB	Tennant Creek	6.99	37	P	Pn	09 12 45.0	-0.1
LCRK	Leigh Creek	8.83	125	P	Pn	09 13 10.0	-0.3
BBOO	Buckleboo	9.01	144	P	Pn	09 13 12.5	-0.3
KNRA	Kununurra	9.91	354	P	Pn	09 13 25.1	-0.1
INKA	Innaminka	9.97	105	P	Pn	09 13 25.5	-0.5
QIS	Mount Isa	10.27	63	P	Pn	09 13 30.5	+0.3
NAPP	Napperby	10.46	138	P	Pn	09 13 31.9	-0.8
HTT	Hallett	11.11	137	P	Pn	09 13 41.2	-0.4
STKA	Stephens Creek	12.05	124	Pn	Pn	09 13 51.0	-3.4
	0.4nm,0.3s,baz=306,slow=13,SNR=4.0						
STKA				Lg	Lg	09 17 20.4	
	0.5nm,0.3s,baz=306,slow=19,SNR=1.9						
	0.9nm,0.3s						
KLBR	Kellerberrin	12.20	238	P	Pn	09 13 56.2	-0.3

IDC ***24*** *09:38:21.0±0.7,49°.28S×30°.54E,h0*^{km}*,mb4.0/11, mbtmp4.0/12,ML3.9/1,MS3.5/13,Error ellipse: s-maj=37.1km s-min=14.5km az=79.0*

NEIC ***24*** *09:38:23.1±1.3,49°.26S±0°.08×30°.5E±0°.3,h10*^{km}*±1*^{km}*, mb4.6/12,Error ellipse: s-maj=32.2km s-min=10.3km az=71.0*

ISC 24 09:38:22.6±0.7**,49°.26S**±0°.09×**30°.5E**±0°.2**,h10**^{km}**,n35, σ0**^{s}**.65**/28**,mb4.2**/11**,MS3.5**/12**,South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	18.36	333	P	P	09 42 38.9	+1.6
	0.5nm,0.3s,baz=151,slow=10,SNR=5.9						
SUR				S	Sn	09 45 51.5	-11
	5.5nm,0.8s,baz=210,slow=20,SNR=1.9						
SUR				LR	LR	09 47 56.2	
	comp=Z,182nm,21.3s,baz=162,slow=31						
	8.7nm,1.0s						
SUR	Sutherland	18.36	333	P	Pn	09 42 36.4	-1.0
SUR				IAmb	IAmb	09 43 38.9	
	comp=Z,50nm,1.1s						
BOSA	Boshof	21.00	347	P	P	09 43 07.4	+1.2
	comp=Z,1.5nm,0.7s,baz=157,slow=12,SNR=3.9						
BOSA				LR	LR	09 49 51.6	
	comp=Z,118nm,20.8s,baz=190,slow=33						
	comp=Z,1.5nm,0.7s						
BOSA	Boshof	21.00	347	IAmb	IAmb	09 43 10.0	
	comp=Z,51nm,1.9s						
LBTB	Lobatse	24.50	349	P	P	09 43 42.2	+0.1
	comp=Z,2.0nm,0.7s,baz=184,slow=6.9,SNR=2.1						
LBTB				LR	LR	09 51 45.7	
	comp=Z,85nm,21.0s,baz=161,slow=33						
	comp=Z,2.0nm,0.7s						
LBTB	Lobatse	24.50	349	P	P	09 43 42.2	+0.1
LBTB				IAmb	IAmb	09 44 06.7	
	comp=Z,17nm,1.4s						
MAW	Mawson	24.52	150	P	P	09 43 41.9	+0.1
	comp=Z,1.8nm,0.8s,baz=297,slow=15,SNR=2.5						
MAW				LR	LR	09 52 43.5	
	comp=Z,48nm,18.6s,baz=316,slow=35						
	comp=Z,1.8nm,0.8s						
MAW	Mawson	24.52	150	P	P	09 43 42.1	+0.4
TROLL	Troll, Antarti	26.12	199	P	P	09 43 56.6	+0.3
SNAA	Sanae	27.14	202	P	P	09 44 05.3	-0.2
SNAA	Sanae	27.14	202	P	P	09 44 05.8	+0.2
	comp=Z,4.1nm,0.8s,baz=333,slow=3.9,SNR=15						
SNAA				LR	LR	09 52 05.6	
	comp=Z,72nm,21.6s,baz=180,slow=30						
	comp=Z,4.1nm,0.8s						
SNAA	Sanae	27.14	202	P	P	09 44 05.8	+0.2
VNA2	Neumayer--Watz	27.93	206	P	P	09 44 12.4	-0.2
	baz=50,slow=10.0						
VNA1	Neumayer--Stat	28.05	206	P	P	09 44 14.1	+0.6
VNA3	Neumayer Olymp	28.74	206	P	P	09 44 19.2	-0.5
MATP	Matopo	28.81	356	P	P	09 44 19.9	-1.0
	comp=Z,2.0nm,0.7s,baz=170,slow=8.5,SNR=4.2						
	comp=Z,2.0nm,0.7s						
TSUM	Tsumeb	31.73	336	LR	LR	09 56 30.8	
	comp=Z,140nm,20.3s,baz=145,slow=34						
LSZ	Lusaka	33.94	356	P	P	09 45 06.0	-0.1
	comp=Z,2.6nm,0.7s,baz=176,slow=6.5,SNR=4.2						
LSZ				LR	LR	09 57 19.9	
	comp=Z,122nm,21.0s,baz=168,slow=34						
	comp=Z,2.6nm,0.7s						
QSPA	South Pole Qui	40.96	180	P	P	09 46 04.4	-0.7
	comp=Z,6.3nm,0.7s,baz=251,slow=4.2,SNR=12						
	comp=Z,6.3nm,0.7s						
QSPA	South Pole Qui	40.96	180	P	P	09 46 04.7	-0.5
QSPA				IAmb	IAmb	09 46 05.5	
	comp=Z,18nm,1.2s						
KMBO	Kilima Mbogo	48.30	9	LR	LR	10 05 57.7	
	comp=Z,40nm,19.0s,baz=94,slow=34						
VNDA	Vanda	49.97	168	P	P	09 47 15.5	-0.6
	comp=Z,1.8nm,0.7s,baz=256,slow=6.1,SNR=8.8						
VNDA				LR	LR	10 08 37.4	
	comp=Z,63nm,18.4s,baz=232,slow=36						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	49.97	168	P	P	09 47 16.5	+0.4
VNDA				IAmb	IAmb	09 48 31.0	
	comp=Z,12nm,1.9s						
SBA	Scott Base	50.35	169	P	P	09 47 20.0	+1.1
MG05	Puerto Natales	60.04	224	P	P	09 48 29.4	+0.2
PLCA	Paso Flores	66.69	234	P	P	09 49 13.4	-0.2
TORD	Torodi Ar. Bea	67.14	329	P	P	09 49 16.7	+0.3
	comp=Z,0.3nm,0.5s,baz=180,slow=5.0,SNR=2.5						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	67.14	329	P	P	09 49 16.5	+0.1
TORD				IAmb	IAmb	09 51 21.1	
	comp=Z,12nm,1.6s						
SIV	San Ignacio	79.07	258	LR	LR	10 19 35.0	
	comp=Z,35nm,19.9s,baz=192,slow=31						
ASAR	Alice Springs	80.67	115	P	P	09 50 36.4	+0.6
	comp=Z,0.6nm,0.8s,baz=198,slow=5.7,SNR=4.8						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	83.76	113	P	P	09 50 51.7	-0.3
	comp=Z,1.1nm,0.9s,baz=210,slow=4.0,SNR=5.9						
	comp=Z,1.1nm,0.9s						
KBZ	Khabaz	93.24	9	LR	LR	10 36 18.8	
	comp=Z,28nm,18.1s,baz=182,slow=37						
DAVOX	Davos/Dischmat	97.32	346	LR	LR	10 37 24.8	
	comp=Z,37nm,18.4s,baz=265,slow=36						
AKASG	Malin Array Be	99.58	359	LR	LR	10 39 31.4	
	comp=Z,13nm,18.9s,baz=57,slow=37						
PDAR	Pinedale Array	151.76	272	PKPbc	PKPbc	09 58 16.3	-0.8
	comp=Z,0.2nm,0.5s,baz=125,slow=5.6,SNR=2.8						

BJI ***24*** *09:48:00.8±0.0,39°.91N×142°.26E,h45*^{km}*,mb4.7/47, mB4.7/23,Ms3.6/8,Ms7 3.4/8*

MOS ***24*** *09:48:01.8±1.0,40°.07N×142°.07E,h44*^{km}*,mb4.8/41,Error ellipse: s-maj=6.9km s-min=4.4km az=96.5*

NEIC ***24*** *09:48:03.5±1.3,40°.13N±0°.05×141°.95E±0°.09,h35*^{km}*±1*^{km}*, mb4.6/98,Error ellipse: s-maj=11.2km s-min=8.4km az=96.0*

JMA ***24*** *09:48:04.2±0.1,40°.1N±0°.3×142°.1E±0°.7,h48*^{km}*,MD4.4/40, MV4.8/40,NE OFF IWATE PREF*

JMA Felt IV J1 at NE OFF IWATE PREF .

NIED ***24*** *09:48:04.2,40°.08N×142°.12E,h48*^{km}*,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*2.04;* $M_{\theta\theta}$*-0.10;* $M_{\phi\phi}$*-1.95;* $M_{r\theta}$*1.30;* $M_{\theta\phi}$*-0.54;* $M_{\phi r}$*2.43; Fault plane solution:* M_0*3.44000×*10^{15} *NP1:* ϕ_s*185.00000°,δ19.00000°,λ71.00000°. NP2:*ϕ_s*25.00000°, δ72.00000°,λ97.00000°.*

IDC ***24*** *09:48:05.0±1.8,40°.06N×142°.09E,h61*^{km}*±16*^{km}*,mb4.1/33, mbtmp4.4/40,MS3.2/24 Error ellipse: s-maj=14.0km s-min=10.3km az=108.0*

ISC 24 09:48:03.4±0.4**,40°.08N**±0°.03×**142°.10E**±0°.04**,h49**^{km}±3^{km}**, h49**^{km}**:pP-P,n386,σ1**^{s}**.68**/387**,mb4.6**/124**,MS3.5**/24**, 28C-24D,Fault plane solution: NP1:**ϕ_s31.76088°, δ60.63534°**,**λ76.84105°. **NP2:**ϕ_s237.25131°**,**δ31.93678°**,** λ112.02840°. **Principal axes:** T Plg71.2295°, Azm271.7432°**;** N Plg11.4436°, Azm38.3009°**;** P Plg14.6748°, Azm131.3397°**; Fault plane solution: NP1:**ϕ_s138.57488°**,**δ38.19942°**,**λ49.44331°. **NP2:** ϕ_s6.01404°**,**δ61.97623°**,**λ117.09639°. **Principal axes:** T Plg62.6124°, Azm320.4539°**;** N Plg23.7085°, Azm172.4971°**;** P Plg12.9126°, Azm76.7188°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.23	233	*i* P	Pn	09 48 12.8	+1.0
JTH				S	Sn	09 48 18.7	+1.0
JTH	Tanohata	0.23	233	A	A	09 48 12.8	
	comp=E,119nm,0.7s,comp=E,108nm,0.5s						
JKEN	Kujiedanarisaw	0.33	294	⇓*i*P	Pn	09 48 13.4	+0.8
JKEN				⇓S	Sn	09 48 20.1	+0.9
JKEN	Kujiedanarisaw	0.33	294	A	A	09 48 13.4	
	comp=E,181nm,0.4s,comp=E,191nm,0.3s						
JANG	Nango	0.54	304	⇓*i*P	Pn	09 48 15.8	+0.9
JANG				⇓S	Sn	09 48 24.0	+0.7
JANG	Nango	0.54	304	A	A	09 48 15.8	
	comp=E,35nm,0.9s,comp=E,16nm,0.2s						
MIYJ	Miyakonagasawa	0.54	203	*i* P	Pn	09 48 15.8	+0.7
MIYJ				S	Sn	09 48 23.9	+0.4
MIYJ	Miyakonagasawa	0.54	203	A	A	09 48 15.8	
	comp=E,30nm,1.0s,comp=E,38nm,0.6s						
JKZ	Kuzumaki	0.60	261	⇓*i*P	Pn	09 48 16.9	+1.1
JKZ				⇓S	Sn	09 48 25.8	+1.1
JKZ	Kuzumaki	0.60	261	A	A	09 48 16.9	
	comp=E,27nm,0.2s,comp=E,39nm,0.2s						
JOM	Ohasama	0.87	226	⇓*i*P	Pn	09 48 20.1	+0.9
JOM				⇓S	Sn	09 48 31.7	+0.9
JOM	Ohasama	0.87	226	A	A	09 48 20.1	
	comp=E,30nm,0.4s,comp=E,28nm,0.7s						
JSZI	Iwateshizukuis	0.94	250	A	A	09 48 21.5	
	comp=E,39nm,0.8s,comp=E,18nm,0.7s						
OFUJ	Ofunato	1.05	199	A	A	09 48 22.8	
	comp=E,8.0nm,1.3s,comp=E,8.0nm,0.4s						
JTM	Tenmabayashi	1.06	312	Pn	Pn	09 48 22.9	+1.1
JTM				Sn	Sn	09 48 36.6	+1.0
JTM	Tenmabayashi	1.06	312	⇓*i*P	Pn	09 48 22.9	+1.1
JTM				⇓S	Sn	09 48 36.5	+1.0
JTM	Tenmabayashi	1.06	312	A	A	09 48 22.9	
	comp=E,8.0nm,0.4s,comp=E,10.0nm,0.9s						
JARK	Aomorirokkasho	1.08	329	A	A	09 48 23.5	
	comp=E,11nm,1.2s,comp=E,11nm,0.2s						
JAH	Hinai	1.13	276	⇓*i*P	Pn	09 48 24.1	+1.4
JAH	Hinai	1.13	276	A	A	09 48 24.1	
	comp=E,26nm,0.4s,comp=E,12nm,0.4s						
JMK	Ichinoseki	1.31	211	⇓*i*P	Pn	09 48 26.3	+1.0
JMK				⇓*e*S	Sn	09 48 42.6	+0.9
JMK	Ichinoseki	1.31	211	A	A	09 48 26.3	
	comp=E,8.0nm,1.1s,comp=E,4.0nm,1.0s						
JRG	Rokugo	1.32	239	⇓*i*P	Pn	09 48 26.4	+1.0
JRG	Rokugo	1.32	239	A	A	09 48 26.4	
	comp=E,14nm,0.5s,comp=E,9.0nm,2.0s						
JAHD	Aomorihigashid	1.32	334	A	A	09 48 26.8	
	comp=E,26nm,1.0s,comp=E,18nm,1.0s						
JHHS	Hirosakihyakuz	1.45	294	A	A	09 48 28.8	
	comp=E,10.0nm,1.7s,comp=E,10.0nm,0.9s						
JNTW	Noshirotokiwa	1.50	278	A	A	09 48 29.5	
	comp=E,18nm,2.7s,comp=E,18nm,3.1s						
JOT	Ohata	1.53	329	A	A	09 48 29.9	
	comp=E,4.0nm,2.9s,comp=E,3.0nm,0.5s						
JYW	Yuwa	1.55	250	A	A	09 48 30.3	
	comp=E,17nm,0.6s,comp=E,15nm,0.8s						
JSI2	Shiura 2	1.62	308	A	A	09 48 31.2	
	comp=E,6.0nm,1.7s,comp=E,7.0nm,1.0s						
JOFO	Osakifurukawao	1.74	212	A	A	09 48 32.8	
	comp=E,14nm,4.1s,comp=E,12nm,1.6s						
JOU	Okura	2.04	214	A	A	09 48 37.1	
	comp=E,5.0nm,0.5s,comp=E,5.0nm,0.7s						
ERM	Erimo	2.10	22		Pn	09 48 37.6	+1.6
ERM	Erimo	2.10	22	P	Pn	09 48 37.6	+1.6
JNBK	Urakawa-nobuka	2.26	12	A	A	09 48 40.1	
	comp=E,4.0nm,1.3s,comp=E,5.0nm,0.6s						
JSHD	Hidakashinhida	2.35	7	A	A	09 48 41.4	
	comp=E,6.0nm,5.7s,comp=E,5.0nm,1.4s						
JYA	Atsumi	2.37	232	A	A	09 48 41.9	
	comp=E,7.0nm,1.6s,comp=E,6.0nm,0.5s						
JMM	Marumori	2.43	205		Pn	09 48 41.3	+0.7
JYS	Shirataka	2.44	221	A	A	09 48 42.8	
	comp=E,7.0nm,1.9s,comp=E,5.0nm,2.2s						
JEW	Eniwo	2.80	350		Pn	09 48 46.1	+0.4
JSD	Sado	3.62	237	Pn	Pn	09 48 57.4	+0.6
ASAJ	Asahikawa	4.05	5	P	Pn	09 49 04.8	+2.0
	34nm,0.3s,baz=207,slow=10,SNR=113						
ASAJ				S	Sn	09 49 51.2	+2.2
	71nm,0.6s,baz=100,slow=24,SNR=4.9						
ASAJ				LR	LR	09 51 03.1	
	comp=Z,278nm,21.9s,baz=151,slow=44						
JKA	Kamikawa-asahi	4.05	5		Pn	09 49 01.2	-1.6
JYT	Yasato	4.12	202	Pn	Pn	09 49 04.0	+0.2
NMR	Nemuro--Hokkai	4.27	38	*e*P	Pn	09 49 05.0	-0.7
NMR				*e*S	Sn	09 49 51.5	-2.7
GLVR	Golovnino	4.46	34	*e*P	Pn	09 49 08.9	+0.5
GLVR				*e*S	Sn	09 49 58.1	-0.9
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
RUSJ	Misakicho	4.66	29	*e*P	Pn	09 49 12.5	+1.4
RUSJ				*e*S	Sn	09 50 04.5	+0.7
MAJO	Matsushiro	4.67	222	Pn	Pn	09 49 11.3	0.0
MAJO	Matsushiro	4.67	222	*i* P	Pn	09 49 13.5	+2.2
MJAR	Matsushiro Arr	4.67	222	P	Pn	09 49 14.6	+3.3
	comp=E,28nm,0.5s,baz=30,slow=13,SNR=98						
MJAR				S	Sn	09 50 03.3	-0.9
	comp=E,13nm,0.7s,baz=270,slow=20,SNR=4.4						
MJAR				LR	LR	09 51 29.5	
	comp=E,136nm,18.3s,baz=33,slow=44						
MJAR	Matsushiro Arr	4.67	222	Pn	Pn	09 49 11.4	0.0
MJB9	Matsu-Tunnel	4.67	222		Pn	09 49 11.6	+0.3
YUK	Yuzh-Kuril'sk	4.85	34	*e*P	Pn	09 49 14.0	+0.3
YUK				*e*S	Sn	09 50 07.1	-1.3
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,956nm,0.3s						
SHO	Shikotan	5.18	41	*e*P	Pn	09 49 17.1	-1.1
SHO				*e*S	Sn	09 50 12.8	-3.8
SHO				smax	smax		
	comp=N,306nm,0.3s						
SHO				smax	smax		
	comp=E,383nm,0.2s						
TEY	Ternei	6.40	322	⇑*e*P	Pn	09 49 37.7	+2.7
TEY				pmax	pmax		
	comp=N,20nm,0.5s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.5s						
TEY				pmax	pmax		
	comp=Z,20nm,0.5s						
TEY				pmax	pmax		
	comp=N,100nm,0.8s						
TEY				pmax	pmax		
	comp=E,100nm,0.8s						
TEY				pmax	pmax		
	comp=Z,100nm,0.8s						
TEY				pmax	pmax		
	comp=N,80nm,0.8s						
TEY				pmax	pmax		
	comp=E,80nm,0.8s						
TEY				pmax	pmax		
	comp=Z,110nm,0.8s						
KUR	Kuril'sk	6.68	38	*e*P	Pn	09 49 39.3	+0.5
KUR				*e*S	Sn	09 50 50.8	-2.7
KUR				pmax	pmax		
	comp=Z,145nm,0.5s						
KUR				pmax	pmax		
	comp=N,29nm,0.3s						
KUR				smax	smax		
	comp=E,142nm,0.5s						
KUR				smax	smax		
	comp=N,64nm,0.2s						
YSS	Yuzh-Sakhalins	6.89	4	Pn	Pn	09 49 40.5	-1.2
YSS	Yuzh-Sakhalins	6.89	4	*e*P	Pn	09 49 44.0	+2.3
YSS				*e*S	Sn	09 50 58.4	-0.3
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JHJ	Hachijo jima 2	7.19	196	P	Pn	09 49 46.5	+0.7
	comp=Z,24nm,0.3s,baz=30,slow=21,SNR=8.9						
JHJ				S	Sn	09 51 01.4	-4.8
	comp=Z,38nm,0.4s,baz=75,slow=23,SNR=1.4						
JHJ	Hachijo jima 2	7.19	196		Pn	09 49 46.5	+0.7
JHJ					Sn	09 51 01.4	-4.8
JHJ2	Mitsune	7.19	195	Pn	Pn	09 49 44.8	-1.1
USRK	Ussuriysk Ar.	8.56	302	P	Pn	09 50 06.9	+2.3
	comp=Z,32nm,0.6s,baz=115,slow=14,SNR=32						
USRK	Ussuriysk Ar.	8.56	302	Pn	Pn	09 50 02.9	-1.7
USA0B	Ussuriysk Arra	8.57	302		Pn	09 50 02.6	-2.1
USA0B	Ussuriysk Arra	8.57	302	*i* P	Pn	09 50 06.9	+2.2
JHS	Saijyo	8.75	237	Pn	Pn	09 50 03.8	-3.4
MDJ	Mudanjiang	10.31	300	Pn	Pn	09 50 27.3	-1.2
MDJ	Mudanjiang	10.31	300	P	Pn	09 50 33.3	+4.8
MDJ				pmax	pmax		
	comp=Z,28nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,78nm,3.5s						
MDJ				LR	LR		
	comp=Z,200nm,12.6s						
MDJ				LR	LR		
	comp=Z,280nm,17.8s						
TYV	Tymovskoe	10.79	2	*e*P	Pn	09 50 38.4	+3.3
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				pmax	pmax		
	comp=Z,13nm,1.4s						
SEHB	SEOHWA	10.90	265	Pn	Pn	09 50 33.3	-3.4
KSRS	Korea Array	11.37	261	P	Pn	09 50 47.9	+4.9
	comp=Z,3.6nm,0.7s,baz=63,slow=14,SNR=12						
KSRS				LR	LR	09 54 54.8	
	comp=Z,106nm,19.0s,baz=65,slow=36						
KSRS	Korea Array	11.37	261		Pn	09 50 47.9	+4.9
KS19	Wonju Array Si	11.40	262	Pn	Pn	09 50 41.5	-2.0
GRNR	Gornyy	11.41	341	⇓*i*P	Pn	09 50 50.7	+7.2
GRNR				pmax	pmax		
	comp=N,7.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,440nm,20.0s						
GRNR				MLR	MLR		
	comp=N,110nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,100nm,12.0s						
KSAR	Wonju Array Be	11.41	261	Pn	Pn	09 50 42.2	-1.3
KSAR	Wonju Array Be	11.41	261	P	Pn	09 50 42.3	-1.3
KSCHJ	Chungju	11.52	258		Pn	09 50 44.6	-0.6
KLR	Kul'dur	11.74	325	P	Pn	09 50 51.9	+3.9
	comp=Z,3.2nm,0.6s,baz=140,slow=17,SNR=3.5						
KLR				LR	LR	09 55 24.8	
	comp=Z,129nm,19.6s,baz=156,slow=37						
KLR	Kul'dur	11.74	325	*ce*P	Pn	09 50 49.4	+1.4
KLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NAWB	Namwon	12.53	253		Pn	09 50 59.0	+0.1
JCJ	Chichijima	12.95	180	P	Pn	09 51 05.4	+0.7
	comp=Z,40nm,0.6s,baz=262,slow=14,SNR=2.6						
JCJ				LR	LR	09 59 46.9	
	comp=Z,12nm,18.1s,baz=102,slow=54						
JCJ	Chichijima	12.95	180		Pn	09 51 05.4	+0.7
PETK	Petropavlovsk-	16.83	34	P	Pn	09 51 55.1	-0.2
	comp=Z,4.1nm,1.0s,baz=64,slow=18,SNR=1.8						
PETK				LR	LR	09 58 56.7	
	comp=Z,24nm,19.4s,baz=228,slow=39						
ZEA	Zeya	16.97	329	*e*P	Pn	09 51 56.5	-0.6
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,100nm,17.0s						
JOW	Kunigami	17.51	225	P	P	09 52 04.2	-0.3
	comp=Z,9.5nm,0.9s,baz=88,slow=20,SNR=2.3						
JOW	Kunigami	17.51	225		Pn	09 52 03.9	-0.1
HIA	Hailar	18.31	308	P	P	09 52 12.4	-0.9
HIA	Hailar	18.31	308	P	P	09 52 12.4	-0.9
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT	XiLinHaoTe	19.68	290	⇓*i*P	P	09 52 28.0	-0.4
XLT				PP	sP	09 52 46.4	+0.4
XLT				S	S	09 56 08.1	+0.3
XLT				SS	SnSn	09 56 33.9	+8.9
XLT				pmax	pmax		
	comp=Z,28nm,0.8s						
XLT				pmax	pmax		
	comp=Z,130nm,5.7s						
XLT				LR	LR		
	comp=Z,240nm,17.5s						
XLT				LR	LR		
	comp=Z,100nm,14.1s						
BJI	Beijing	19.83	278	P	P	09 52 28.8	-1.1
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJT	Baijiatuau	19.84	278	P	P	09 52 29.2	-0.8
BJT	Baijiatuau	19.84	278	P	P	09 52 29.2	-0.8
BJT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIA	Tai'an	20.00	267	⇑P	P	09 52 31.8	0.0
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MA2	Magadan	20.27	13	P	P	09 52 35.0	+0.5
	comp=Z,9.6nm,0.7s,baz=184,slow=14,SNR=5.1						
MA2				LR	LR	10 00 57.2	
	comp=Z,34nm,19.2s,baz=237,slow=38						
	comp=Z,9.6nm,0.7s						
MA2	Magadan	20.27	13	P	P	09 52 35.6	+1.1
MA2	Magadan	20.27	13	P	P	09 52 35.6	+1.1
MA2				pmax	pmax		
	comp=Z,17nm,1.1s						
NJ2	Nanjing	20.39	254	⇓P	Pn	09 52 37.4	-1.1
NJ2				pmax	pmax		
	comp=Z,27nm,0.6s						
HHC	Hu-ho-hao-te	23.19	282	*e*P	P	09 53 05.4	-0.5
HHC				pmax	pmax		
	comp=Z,38nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,7.2s						
HHC				LR	LR		
	comp=Z,220nm,14.6s						
HHC				LR	LR		
	comp=Z,210nm,14.6s						
YAK	Yakutsk	23.25	345	P	P	09 53 06.0	-0.1
	comp=Z,20nm,0.4s,baz=345,slow=6.7,SNR=5.1						
YAK				LR	LR	10 02 05.3	
	comp=Z,28nm,18.9s,baz=270,slow=36						
	comp=Z,20nm,0.4s						
YAK	Yakutsk	23.25	345	P	P	09 53 05.7	-0.3
YAK	Yakutsk	23.25	345	*e*P	P	09 53 03.7	-2.4
YAK				*e**PP	pP	09 53 11.2	-6.6
YAK				*e*		09 53 32.3	
YAK				*e*		09 56 49.0	
YAK				*e*S	S	09 57 11.0	-3.3
YAK				*e*SS	SnSn	09 58 13.4	+22
YAK				pmax	pmax		
	comp=Z,36nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,147nm,4.2s						
YAK				pmax	pmax		
	comp=N,22nm,2.8s						

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YAK                                 pmax     pmax
        comp=E,45nm,3.8s
YAK                                 smax     smax
        comp=E,42nm,2.8s
YAK                                 smax     smax
        comp=N,25nm,2.0s
SEY     Seymchan          23.71  12  P        P        09 53 10.7 +0.3
        comp=N,11nm,0.9s,baz=214,slow=6.5,SNR=21
        comp=N,11nm,0.9s
SEY     Seymchan          23.71  12  P        P        09 53 10.7 +0.3
SEY     Seymchan          23.71  12ceP        P        09 53 10.8 +0.3
SEY                                 pmax     pmax
        comp=Z,9.0nm,0.9s
SHEM    Shemya Is, Ala    25.20  49  LR       LR       10 02 18.0
        comp=Z,36nm,21.4s,baz=134,slow=34
ULN     Ulaanbaatar       26.22 299 i P       P        09 53 33.1 -0.6
ULN                                 pmax     pmax
        comp=Z,5.0nm,1.1s
GUMO    Guam              26.50 174  LR       LR       10 04 18.6
        comp=Z,21nm,20.6s,baz=62,slow=37
SONM    Songino Array     26.66 299  P        P        09 53 38.2 +0.6
        comp=Z,2.9nm,0.5s,baz=93,slow=8.3,SNR=6.5
SONM                                LR       LR       10 04 45.6
        comp=Z,118nm,18.3s,baz=122,slow=38
        comp=Z,2.9nm,0.5s
SONM    Songino Array     26.66 299  P        P        09 53 38.2 +0.6
SONM    Songino Array     26.66 299  IAmb     IAmb     09 53 44.9
        comp=Z,2.5nm,0.8s
XAN     Xi'an             27.05 268  P        P        09 53 37.9 -3.2
XAN                                 pmax     pmax
        comp=Z,3.0nm,0.8s
ZAK     Zakamensk         28.91 304 eP        P        09 53 56.8 -0.8
ZAK                                 pmax     pmax
        comp=Z,9.0nm,1.1s
H11N2   WAKE ISLAND Hy    29.38 126  T        T        10 24 45.3
        baz=318,slow=75,SNR=491
H11N1   WAKE ISLAND Hy    29.39 126  T        T        10 24 49.2
        baz=318,slow=75,SNR=763
H11N3   WAKE ISLAND Hy    29.40 126  T        T        10 24 49.7
        baz=318,slow=75,SNR=416
H11S1   WAKE ISLAND Hy    30.19 128  T        T        10 25 45.0
        baz=319,slow=76,SNR=111
H11S3   WAKE ISLAND Hy    30.19 128  T        T        10 25 55.3
        baz=319,slow=76,SNR=85
H11S2   WAKE ISLAND Hy    30.21 128  T        T        10 25 56.3
        baz=319,slow=76,SNR=80
LZH     Lanzhou           30.22 275 eP        P        09 54 12.8 +3.4
LZH                                 pP       pP       09 54 20.5 -1.7
LZH                                 sP       sP       09 54 28.0  0.0
LZH                                 pmax     pmax
        comp=Z,17nm,1.3s
BILL    Bilibino          30.96  17⇓eP        P        09 54 14.8 -0.7
BILL                                e                 09 54 26.4
BILL                                *PP      pP       09 54 30.0 +2.0
BILL                                SS       SS       10 01 00.0  -30
BILL                                pmax     pmax
        comp=Z,8.0nm,1.8s
BILL                                MLR      MLR
        comp=Z,27nm,16.0s
GTA     Gaotai            32.30 283 ⇑P        P        09 54 29.3 +1.6
GTA                                 pmax     pmax
        comp=Z,6.0nm,0.9s
GTA                                 pmax     pmax
        comp=Z,54nm,4.4s
GTA                                 LR       LR
        comp=Z,72nm,16.4s
GTA                                 LR       LR
        comp=Z,190nm,17.1s
GTA                                 LR       LR
        comp=Z,130nm,16.4s
TIXI    Tiksi             32.34 352  P        P        09 54 27.3 -0.2
        comp=Z,1.7nm,0.5s,baz=272,slow=23,SNR=6.9
        comp=Z,1.7nm,0.5s
TIXI    Tiksi             32.34 352  P        P        09 54 27.2 -0.3
TIXI    Tiksi             32.34 352ceP        P        09 54 28.4 +0.9
TIXI                                pmax     pmax
        comp=Z,2.0nm,0.7s
PZH     PanZhiHua         36.04 260  P        P        09 55 01.8 +1.6
PZH                                 pmax     pmax
        comp=Z,11nm,0.8s
PZH                                 pmax     pmax
        comp=Z,100nm,5.2s
KMI     Kunming           36.04 258 ⇑P        P        09 55 02.1 +1.7
GOMU    GeErMu            37.05 279  P        P        09 55 11.3 +2.3
GOMU                                pmax     pmax
        comp=Z,6.0nm,0.7s
GOMU                                pmax     pmax
        comp=Z,63nm,5.0s
WMQ     Urumqi            40.03 294 eP        P        09 55 36.0 +2.5
WMQ                                 pmax     pmax
        comp=Z,30nm,0.7s
ZAA0    Zalesovo Array    40.32 310  P        P        09 55 35.9 +0.1
ZAA0                                IAmb     IAmb     09 55 36.9
        comp=Z,7.6nm,0.9s
ZALV    Zalesovo Beam     40.32 310  P        P        09 55 35.8 +0.1
        comp=Z,5.6nm,0.4s,baz=85,slow=7.9,SNR=16
ZALV                                PcP      PcP      09 57 38.9 +0.5
        comp=Z,2.6nm,0.4s,baz=100,slow=3.5,SNR=5.4
ZALV                                LR       LR       10 13 09.0
        comp=Z,65nm,18.7s,baz=122,slow=37
        comp=Z,5.6nm,0.4s
ZALV    Zalesovo Beam     40.32 310  P        P        09 55 36.2 +0.4
ZALV                                         PcP      09 57 38.8 +0.5
ZALV    Zalesovo Beam     40.32 310  P        P        09 55 36.2 +0.4
ZALV                                                  09 57 38.8
NRIK    Noril'sk          40.76 334  P        P        09 55 39.0 -0.1
        comp=Z,3.8nm,0.5s,baz=135,slow=7.7,SNR=4.5
NRIK                                LR       LR       10 13 26.9
        comp=Z,74nm,20.1s,baz=148,slow=37
        comp=Z,3.8nm,0.5s
NRIK    Noril'sk          40.76 334  P        P        09 55 39.0 -0.1
NRIK    Noril'sk          40.76 334  IAmb     IAmb     09 55 42.9
        comp=Z,3.9nm,0.6s
CHTO    Chiang Mai        42.63 253  P        P        09 55 55.4 +0.3
CHTO                                IAmb     IAmb     09 55 56.6
        comp=Z,6.8nm,0.8s
CHTO    Chiang Mai        42.63 253  P        P        09 55 55.4 +0.3
CHTO                                pmax     pmax
        comp=Z,7.0nm,0.9s
N18K    Kilae Creek       42.65  40  P        P        09 55 57.3 +2.6
SVW2    Sparrevohn        42.80  39  P        P        09 55 57.8 +1.8
SVW2                                IAmb     IAmb     09 56 24.3
        comp=Z,9.4nm,1.2s
CMAR    Chiang Mai Arr    42.85 253  P        P        09 55 58.0 +1.1
        comp=Z,1.8nm,0.8s,baz=38,slow=7.3,SNR=7.0
CMAR                                LR       LR       10 12 55.2
        comp=Z,10nm,20.9s,baz=80,slow=35
        comp=Z,1.8nm,0.8s
CMAR    Chiang Mai Arr    42.85 253  P        P        09 55 58.0 +1.1
CMAR    Chiang Mai Arr    42.85 253  P        P        09 55 58.0 +1.1
MK31    Makanchi Array    43.02 299  P        P        09 55 58.6 +0.7
MK31                                IAmb     IAmb     09 55 59.3
        comp=Z,6.7nm,1.0s
MK31    Makanchi Array    43.02 299  P        P        09 55 58.7 +0.7
MK31                                pmax     pmax
        comp=Z,7.0nm,1.0s
MKAR    Makanchi Array    43.02 299  P        P        09 55 58.4 +0.4
        comp=Z,5.8nm,0.8s,baz=85,slow=9.5,SNR=36
MKAR                                PcP      PcP      09 57 47.9 +0.5
        comp=Z,0.9nm,0.7s,baz=69,slow=7.9,SNR=3.5
MKAR                                LR       LR       10 14 43.2
        comp=Z,55nm,18.8s,baz=64,slow=37
        comp=Z,5.8nm,0.8s
MKAR    Makanchi Array    43.02 299  P        P        09 55 58.4 +0.4
L19K    White Mountain    43.16  38  P        P        09 55 59.1 +0.2
MAKZ    Makanchi          43.23 300  P        P        09 56 00.3 +0.7
MAKZ                                IAmb     IAmb     09 56 02.5
        comp=Z,11nm,1.1s
MAKZ    Makanchi          43.23 300  P        P        09 56 00.3 +0.7
MAKZ                                pmax     pmax
        comp=Z,11nm,1.1s
K20K    Telida            43.53  36  P        P        09 56 04.6 +2.8
IMAR    Indian Mountai    43.78  32  P        P        09 56 05.8 +2.1
H21K    Melozitna Rive    44.15  33  P        P        09 56 08.0 +1.3
KDAK    Kodiak Island     44.51  44  P        P        09 56 11.3 +1.6
KDAK    Kodiak Island     44.51  44  P        P        09 56 11.3 +1.6
KDAK                                pmax     pmax
        comp=Z,49nm,1.4s
KURK    Kurchatov         44.53 306  P        P        09 56 10.3 +0.3
KURK                                IAmb     IAmb     09 56 12.4
        comp=Z,11nm,0.6s
KURK    Kurchatov         44.53 306           PcP      09 57 52.6 +0.2
KURK    Kurchatov         44.53 306  P        P        09 56 10.9 +0.9
KURK                                                  09 57 52.6
KURBB   Kurchatov Arra    44.61 306  P        P        09 56 10.9 +0.3
        comp=Z,12nm,0.6s,baz=79,slow=8.8,SNR=70
KURBB                               PcP      PcP      09 57 52.6 -0.1
        comp=Z,1.9nm,0.7s,baz=85,slow=3.6,SNR=5.4
        comp=Z,12nm,0.6s
BPAW    Bear Paw Mtn.     44.91  35  P        P        09 56 14.2 +1.4
TRF     Thorofare Moun    45.23  36  P        P        09 56 17.1 +1.5
H23K    Yukon River       45.50  32  P        P        09 56 19.6 +2.1
TOLK    Toolik Lake Re    45.53  28  P        P        09 56 19.1 +1.4
TOLK                                IAmb     IAmb     09 56 28.9
        comp=Z,7.2nm,1.4s
NEA2    Nenana            45.73  34  P        P        09 56 21.4 +2.1
H24K    Noodor Dome       46.19  32  P        P        09 56 24.6 +1.7
COLA    College           46.24  34 i P       P        09 56 22.7 -0.5
COLA                                pmax     pmax
        comp=Z,8.0nm,2.3s
CCB     Clear Creek Bu    46.27  34  P        P        09 56 24.6 +1.1
TAPN    Taplejung         46.33 271 eP        P        09 56 25.5 +0.6
        comp=Z,9.8nm,0.4s
POKR    Poker Plat Res    46.40  33  P        P        09 56 25.4 +0.7
POKR                                IAmb     IAmb     09 56 47.6
        comp=Z,4.6nm,0.8s
DHY     Denali Highway    46.57  36  P        P        09 56 27.3 +1.1
HDA     Harding Lake      46.66  34  P        P        09 56 27.6 +1.0
IL31                      46.66  34  P        P        09 56 26.0 -0.5
ILAR    Eielson Array     46.66  34  P        P        09 56 28.1 +1.5
        comp=Z,1.3nm,0.7s,baz=264,slow=6.2,SNR=16
        comp=Z,1.3nm,0.7s
ILAR    Eielson Array     46.66  34  P        P        09 56 28.1 +1.5
J25K    Salcha River,     47.32  34  P        P        09 56 33.5 +1.7
JIRN    Jiri              47.34 273 eP        P        09 56 34.0 +1.1
RAMN    Ramite            47.39 272 eP        P        09 56 33.3 +0.2
        comp=Z,20nm,0.5s
BMAR    Burnt Mountain    47.42  30  P        P        09 56 33.8 +1.2
TARG    Taragay, Kyrgy    47.59 294  P        P        09 56 34.6 -0.1
TARG                                IAmb     IAmb     09 56 37.3
        comp=Z,6.9nm,1.0s
TARG    Taragay, Kyrgy    47.59 294  P        P        09 56 34.6 -0.1
TARG                                pmax     pmax
        comp=Z,7.0nm,1.0s
RIDG    Independent Ri    47.64  35  P        P        09 56 35.4 +1.0
RIDG                                IAmb     IAmb     09 57 03.2
        comp=Z,4.5nm,1.1s
KDJ     Kajisay           47.89 295  P        P        09 56 35.9 -0.8
KDJ                                 IAmb     IAmb     09 56 42.2
        comp=Z,4.0nm,0.6s
KDJ     Kajisay           47.89 295  P        P        09 56 35.9 -0.8
KDJ                                 pmax     pmax
        comp=Z,4.0nm,0.6s
PKI     Pulchoki          47.99 273 eP        P        09 56 37.8  0.0
SCRK    Sand Creek        47.99  35  P        P        09 56 37.8 +0.7
SCRK                                IAmb     IAmb     09 56 48.1
        comp=Z,3.2nm,0.8s
PKIN    Phulchoki         47.99 273 eP        P        09 56 38.0 +0.2
        comp=Z,14nm,0.5s
N25K    Chitina, Valde    48.04  38  P        P        09 56 38.6 +1.1
N25K                                IAmb     IAmb     09 56 42.1
        comp=Z,4.9nm,0.8s
BMRM    Bremner River     48.13  39  P        P        09 56 39.1 +1.0
BMRM                                IAmb     IAmb     09 56 60.0
        comp=Z,5.6nm,1.0s
GKN     Gorkha            48.36 274 eP        P        09 56 40.9 +0.4
        comp=Z,21nm,0.5s
L26K    Log Cabin Wild    48.40  36  P        P        09 56 42.9 +2.7
L26K                                IAmb     IAmb     09 56 43.4
        comp=Z,3.3nm,0.8s
BOOM    Boomskoye usch    48.63 296  P        P        09 56 43.2 +0.8
BOOM                                IAmb     IAmb     09 56 44.9
        comp=Z,6.9nm,0.8s
BOOM    Boomskoye usch    48.63 296  P        P        09 56 43.2 +0.8
BOOM                                pmax     pmax
        comp=Z,7.0nm,0.9s
K27K    Chicken           48.81  35  P        P        09 56 45.4 +2.1
DANN    Dangsing          48.86 275 eP        P        09 56 45.4 +0.9
BRVK    Borovoye          49.02 311  P        P        09 56 45.4 +0.4
BRVK                                IAmb     IAmb     09 56 52.3
        comp=Z,3.4nm,0.7s
BRVK    Borovoye          49.02 311  P        P        09 56 45.4 +0.4
BRVK                                pmax     pmax
        comp=Z,3.0nm,0.7s
L27K    Beaver Creek,     49.08  36  P        P        09 56 47.5 +2.1
L27K                                IAmb     IAmb     09 57 01.1
        comp=Z,5.9nm,1.3s
BCAR    Beaver Creek A    49.10  36  P        P        09 56 47.7 +2.1
M27K    Edge Creek, AK    49.18  37  P        P        09 56 48.4 +2.1
M27K                                IAmb     IAmb     09 56 49.5
        comp=Z,4.0nm,1.0s
AAK     Ala-Archa         49.57 296  P        P        09 56 49.2 -0.3
        comp=Z,2.2nm,0.3s,baz=104,slow=3.9,SNR=6.1
AAK                                 LR       LR       10 18 48.1
        comp=Z,36nm,19.5s,baz=135,slow=37
        comp=Z,2.2nm,0.3s
AAK     Ala-Archa         49.57 296  P        P        09 56 50.1 +0.5
AAK                                 IAmb     IAmb     09 56 55.2
        comp=Z,4.8nm,0.9s
AAK     Ala-Archa         49.57 296  P        P        09 56 50.1 +0.5
AAK                                 pmax     pmax
        comp=Z,5.0nm,1.0s
EPYK    Eagle Plains      50.63  31  P        P        09 56 59.5 +2.4
EPYK                                IAmb     IAmb     09 57 00.4
        comp=Z,4.2nm,0.8s
INK     Inuvik            51.45  28  P        P        09 57 04.2 +1.1
        comp=Z,1.5nm,0.5s,baz=312,slow=7.2,SNR=9.4
        comp=Z,1.5nm,0.5s
INK     Inuvik            51.45  28  P        P        09 57 04.8 +1.7
INK                                 IAmb     IAmb     09 57 23.6
        comp=Z,5.3nm,1.2s
INK     Inuvik            51.45  28  P        P        09 57 04.8 +1.7
INK                                 pmax     pmax
        comp=Z,5.0nm,1.2s
HYT     Haines Junctio    51.56  38  P        P        09 57 06.1 +1.9
HYT                                 IAmb     IAmb     09 57 23.4
        comp=Z,9.6nm,1.2s
PBA     Port Blair        51.80 251  P        P        09 57 07.0 +0.5
KK31    Karatay Array     52.11 298  P        P        09 57 08.2 -0.3
KK31                                IAmb     IAmb     09 57 09.1
        comp=Z,3.0nm,0.7s
KK31    Karatay Array     52.11 298  P        P        09 57 08.2 -0.3
KK31                                pmax     pmax
        comp=Z,3.0nm,0.7s
KKAR    Karatay Array     52.11 298  P        P        09 57 08.9 +0.4
KKAR    Karatay Array     52.11 298  P        P        09 57 08.9 +0.4
KKAR                                IAmb     IAmb     09 57 09.1
        comp=Z,3.0nm,0.7s
KKAR    Karatay Array     52.11 298  P        P        09 57 08.9 +0.4
M31M    Drury Creek, Y    52.62  36  P        P        09 57 13.4 +1.4
BTK     Batken            53.12 295  P        P        09 57 16.7 +0.6
BTK                                 IAmb     IAmb     09 57 22.8
        comp=Z,4.5nm,0.7s
BTK     Batken            53.12 295  P        P        09 57 16.7 +0.6
BTK                                 pmax     pmax
        comp=Z,5.0nm,0.7s
PSI     Prapat            53.84 238  P        P        09 57 21.9 +0.2
        comp=Z,3.1nm,0.2s,baz=74,slow=6.5,SNR=3.5
        comp=Z,3.1nm,0.2s
RPSI    Rantau Prapat     53.92 238  P        P        09 57 21.9 -0.2
GAR     Garm              53.92 294  P        P        09 57 22.5 +0.5
GAR                                 IAmb     IAmb     09 57 23.3
        comp=Z,16nm,1.2s
NIL     Nilore            54.22 286  P        P        09 57 24.5 +0.3
NIL     Nilore            54.22 286  P        P        09 57 24.5 +0.3
NIL                                 pmax     pmax
        comp=Z,24nm,0.9s
ARU     Arti              54.47 317  P        P        09 57 25.1 -0.5
        comp=Z,4.3nm,0.7s,baz=63,slow=4.7,SNR=12
ARU                                 LR       LR       10 23 11.7
        comp=Z,61nm,18.8s,baz=78,slow=39
        comp=Z,4.3nm,0.7s
ARU     Arti              54.47 317  P        P        09 57 26.2 +0.6
ARU     Arti              54.47 317c iP       P        09 57 26.0 +0.5
ARU                                 *PP      sP       09 57 42.1 -2.5
ARU                                                   09 59 23.9
ARU                                 S        S        10 05 01.8 +1.3
ARU                                 SS       SS       10 08 38.4 -4.4
ARU                                 pmax     pmax
        comp=Z,11nm,0.8s
CHGR    Chuyangaron       54.89 294  P        P        09 57 29.6 +0.6
CHGR    Chuyangaron       54.89 294  P        P        09 57 29.6 +0.6
CHGR                                pmax     pmax
        comp=Z,45nm,1.3s
ABKAR   Akbulak array     56.42 309  P        P        09 57 39.9 +0.2
KBL     Kabul             56.87 289  P        P        09 57 43.6 +0.2
KBL     Kabul             56.87 289  P        P        09 57 43.6 +0.2
KBL                                 pmax     pmax
        comp=Z,13nm,0.9s
AKTO    Aktyubinsk        57.07 311  LR       LR       10 24 16.8
        comp=Z,28nm,18.3s,baz=103,slow=38
SPB2    Spitsbergen Ar    57.65 349  P        P        09 57 49.1 +1.1
SPITS   Spitsbergen Ar    57.65 349  P        P        09 57 48.8 +0.8
        comp=Z,1.3nm,0.5s,baz=75,slow=7.1,SNR=9.0
        comp=Z,1.3nm,0.5s
SPITS   Spitsbergen Ar    57.65 349  P        P        09 57 49.2 +1.2
SPITS                               pmax     pmax
        comp=Z,39nm,1.5s
NOR     Nord              58.05 356 i P       P        09 57 50.2 -0.6
NOR                                 IAmb     IAmb     09 57 51.9
        comp=Z,1.8nm,0.9s
KIRV    Kirov             58.17 322  P        P        09 57 52.1 +0.3
        comp=Z,14nm,0.6s,baz=35,slow=22,SNR=4.8
        comp=Z,14nm,0.6s
KIRV    Kirov             58.17 322  P        P        09 57 52.1 +0.3
RES     Resolute Bay      59.53  15  P        P        09 58 01.7 +0.7
RES                                 IAmb     IAmb     09 58 12.4
        comp=Z,5.3nm,1.0s
RES     Resolute Bay      59.53  15  P        P        09 58 01.7 +0.7
RES                                 pmax     pmax
        comp=Z,5.0nm,1.0s
LVZ     Lovozero          59.57 335ceP        P        09 58 01.0 -0.5
LVZ                                 pmax     pmax
        comp=Z,35nm,2.5s
WB0     Warramunga Arr    59.97 188  P        P        09 58 04.5 -0.2
WB0                                 IAmb     IAmb     09 58 05.5
        comp=Z,10nm,1.2s
WR0     Warramunga Arr    60.14 188  P        P        09 58 05.4 -0.5
WR0                                 IAmb     IAmb     09 58 28.8
        comp=Z,17nm,1.4s
WB2     Warramunga Arr    60.14 188  P        P        09 58 05.3 -0.6
WB2                                 IAmb     IAmb     09 58 20.2
        comp=Z,9.0nm,1.2s
WRA     Warramunga Arr    60.14 188  P        P        09 58 05.6 -0.3
        comp=Z,2.0nm,0.6s,baz=5.8,slow=7.0,SNR=40
        comp=Z,2.0nm,0.6s
WRA     Warramunga Arr    60.14 188  P        P        09 58 05.8 -0.1
WRA     Warramunga Arr    60.14 188  P        P        09 58 05.8 -0.1
KEV     Kevo              60.80 339  P        P        09 58 10.6 +0.8
KEV     Kevo              60.80 339  P        P        09 58 10.6 +0.8
KEV                                 pmax     pmax
        comp=Z,23nm,1.5s
YKA     Yellowknife Ar    60.92  31  P        P        09 58 12.1 +1.3
        comp=Z,1.4nm,0.8s,baz=306,slow=6.9,SNR=4.8
        comp=Z,1.4nm,0.8s
YKA     Yellowknife Ar    60.92  31  P        P        09 58 12.1 +1.3
ARCES   ARCESS Array B    61.35 339  P        P        09 58 14.1 +0.6
        comp=Z,1.6nm,0.6s,baz=38,slow=6.1,SNR=16
        comp=Z,1.6nm,0.6s
ARCES   ARCESS Array B    61.35 339  P        P        09 58 14.3 +0.7
ARCES                               IAmb     IAmb     09 58 28.5
        comp=Z,14nm,1.3s
ARCES   ARCESS Array B    61.35 339  P        P        09 58 14.3 +0.7
ARCES                               pmax     pmax
        comp=Z,14nm,1.3s
KLMR    Klimovskoe        61.49 327 eP        P        09 58 13.1 -1.5
KLMR                                pmax     pmax
        comp=Z,10.0nm,1.0s
KLMR    Klimovskoe        61.49 327 eP        P        09 58 13.2 -1.4
KLMR                                AMP               09 58 15.5
        comp=Z,10.0nm,1.0s
BELG    Belogornoye       61.96 316  LR       LR       10 27 32.9
        comp=Z,52nm,19.4s,baz=309,slow=38
BELG    Belogornoye       61.96 316 i P       P        09 58 17.6 -0.3
BELG                                pmax     pmax
        comp=Z,3.0nm,0.7s
DAG     Danmarks Havn     62.79 355 i P       P        09 58 23.0 -0.1
DAG                                 IAmb     IAmb     09 58 23.9
        comp=Z,2.4nm,0.8s
GEYT    Alibeck           62.86 298  P        P        09 58 24.4 +0.1
        comp=Z,3.7nm,0.6s,baz=72,slow=9.5,SNR=3.0
        comp=Z,3.7nm,0.6s
AS31    Alice Springs     63.87 188  P        P        09 58 31.2 +0.3
ASAR    Alice Springs     63.87 188  P        P        09 58 31.1 +0.2
        comp=Z,1.1nm,0.5s,baz=2.3,slow=6.9,SNR=20
ASAR                                LR       LR       10 26 12.6
        comp=Z,44nm,18.1s,baz=154,slow=36
        comp=Z,1.1nm,0.5s
ASAR    Alice Springs     63.87 188  P        P        09 58 31.1 +0.2
OBN     Obninsk           65.99 323⇓eP        P        09 58 41.9 -2.4
OBN                                 e                 09 58 53.3
OBN                                 *PP      sP       09 59 02.0 -1.6
OBN                                                   09 59 14.0
OBN                                 S        S        10 07 35.0 +6.8
OBN                                 e*SS     sS       10 08 11.0  +20
OBN                                 pmax     pmax
        comp=Z,7.0nm,0.9s
OBN                                 MLR      MLR
        comp=Z,28nm,13.0s
FIA1    FINESS Array S    66.38 332  P        P        09 58 47.3 +0.6
FIA1                                IAmb     IAmb     09 58 48.0
        comp=Z,8.6nm,0.8s
FIA0    FINESS Array S    66.38 332  P        P        09 58 47.8 +1.1
FIA0    FINESS Array S    66.38 332  P        P        09 58 47.8 +1.1
FINES   FINESS Array B    66.38 332  P        P        09 58 47.1 +0.4
        comp=Z,7.5nm,0.7s,baz=46,slow=8.2,SNR=30
FINES                               LR       LR       10 29 20.3
        comp=Z,46nm,22.0s,baz=26,slow=37
        comp=Z,7.5nm,0.7s
FINES   FINESS Array B    66.38 332  P        P        09 58 47.2 +0.5
VORR    Voronezh          66.72 319 eP        P        09 58 50.6 +1.5
VORR                                pmax     pmax
        comp=Z,90nm,0.5s
MAK     Makhachkala       67.02 307 eP        P        09 58 50.9 -0.2
MAK                                 e*PP     sP       09 59 08.1 -2.4
MAK                                 e*SP     PcP      09 59 15.4 -3.8
MAK                                 eS       S        10 07 39.2 -1.8
MAK                                 e*SS     sS       10 08 08.7 +4.4
MAK                                 eSS      SS       10 11 54.7 -5.0
MAK                                 pmax     pmax
        comp=Z,32nm,0.4s
SUMG    Summit            67.65   0  P        P        09 58 56.7 +1.6
SUMG                                IAmb     IAmb     09 58 57.1
        comp=Z,5.6nm,0.7s
SUMG    Summit            67.65   0  P        P        09 58 56.7 +1.6
SUMG                                pmax     pmax
        comp=Z,6.0nm,0.7s
SUMG    Summit            67.65   0 i P       P        09 58 55.7 +0.6
SUMG                                IAmb     IAmb     09 58 56.6
        comp=Z,4.3nm,0.6s
KIV     Kislovodsk        69.33 310  P        P        09 59 07.0 +1.2
KIV     Kislovodsk        69.33 310 eP        P        09 59 06.7 +0.9
KIV                                 pmax     pmax
        comp=Z,30nm,1.1s
KIV                                 MLR      MLR
        comp=Z,26nm,17.0s
KBZ     Khabaz            69.34 310  P        P        09 59 06.8 +1.2
        comp=Z,6.6nm,0.5s,baz=94,slow=1.7,SNR=13
        comp=Z,6.6nm,0.5s
SHA1    Shidzhatmaz       69.48 310 i P       P        09 59 07.3 +0.5
MNK     Minsk             70.28 326 i P       P        09 59 08.2 -3.0
MNK                                 i *PP    pP       09 59 24.7 -0.4
MNK                                 i                 09 59 27.5
MNK                                 i                 10 01 44.7
MNK                                 i PPP    PPP      10 03 25.8
MNK                                 i S      S        10 08 12.8 -6.5
MNK                                 i SSS    SSS      10 15 54.0
MNK                                 pmax     pmax
        comp=Z,9.0nm,0.6s
MNK                                 pmax     pmax
        comp=N,44nm,0.9s
MNK                                 pmax     pmax
        comp=E,2.0nm,0.7s
MNK     Minsk             70.28 326 i P       P        09 59 08.2 -3.0
        comp=E,2.0nm,0.7s
MNK                                 i P      P        09 59 08.2 -3.0
        comp=N,44nm,0.9s
MNK                                 i P      P        09 59 08.2 -3.0
        comp=Z,9.0nm,0.7s,baz=228
MNK                                 i pP     pP       09 59 24.8 -0.4
MNK                                 i PP     PP       10 01 44.7 -2.0
MNK                                 i PPP    PPP      10 03 25.8
MNK                                 i S      S        10 08 12.8 -6.5
MNK                                 i sS     pS       10 08 36.0 -0.3
MNK                                 i SS     SS       10 12 41.1 -8.3
MNK                                 i SSS    SSS      10 15 54.1
MNK                                 i LQ     LQ       10 23 53.5
MNK                                 i LR     LR       10 29 43.2
MNK                                 i LRM    MLR      10 36 46.3
        comp=E,74nm,19.7s
MNK                                 i LRM    MLR      10 37 24.3
        comp=N,232nm,21.0s
MNK                                 i LRM    MLR      10 38 38.9
        comp=Z,129nm,23.7s
NACGM   Naroch            70.49 326⇓eP        P        09 59 13.7 +1.2
        baz=47
```

ICESG	Greenland Ices	71.14	1	iP	P	09 59 17.2	+0.5
ICESG				IAmb	IAmb	09 59 17.8	
	comp=Z,5.9nm,0.6s						
PABE	Paberze	71.24	328	P	P	09 59 18.1	+1.0
NC405	NORSAR Array S	71.39	337	P	P	09 59 18.7	+0.8
UOSS	Minazif	71.41	287	P	P	09 59 19.1	+0.5
UOSS				IAmb	IAmb	09 59 19.6	
	comp=Z,9.1nm,0.8s						
NC204	NORSAR Array S	71.54	338	P	P	09 59 19.9	+1.0
HFS	Hagfors	71.54	336	LR	LR	10 34 37.0	
	comp=Z,36nm,18.9s,baz=50,slow=39						
NB201	NORSAR Array S	71.56	337	P	P	09 59 19.6	+0.7
NB2	NORSAR Subarra	71.59	337	P	P	09 59 19.5	+0.3
	comp=Z,4.8nm,0.7s,baz=38,slow=6.2						
NOA	NORSAR Array B	71.59	337	P	P	09 59 19.7	+0.5
	comp=Z,4.1nm,0.7s,baz=39,slow=6.0,SNR=15						
NOA				LR	LR	10 33 39.8	
	comp=Z,13nm,21.9s,baz=200,slow=38						
	comp=Z,4.1nm,0.7s						
NBO00	NORSAR Array S	71.73	337	P	P	09 59 20.8	+0.9
NBO00				IAmb	IAmb	09 59 21.3	
	comp=Z,12nm,0.8s						
NC602	NORSAR Array S	71.74	337	P	P	09 59 21.0	+1.0
ANN	Anapa	71.82	314	eP	P	09 59 18.9	-1.8
ANN				e*PP	pP	09 59 34.6	0.0
ANN				eS	S	10 08 34.0	-3.4
ANN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NAO01	NORSAR Array S	71.85	337	P	P	09 59 21.8	+1.2
NAO01				IAmb	IAmb	09 59 38.9	
	comp=Z,16nm,1.0s						
AKASG	Malin Array Be	72.23	322	P	P	09 59 23.4	+0.3
	comp=Z,5.3nm,0.6s,baz=45,slow=6.9,SNR=31						
	comp=Z,5.3nm,0.6s						
AKASG	Malin Array Be	72.23	322	P	P	09 59 23.6	+0.5
AKASG				IAmb	IAmb	09 59 24.5	
	comp=Z,5.2nm,1.1s						
AKASG	Malin Array Be	72.23	322	P	P	09 59 23.6	+0.5
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKBB	Malin Array Si	72.23	322	P	P	09 59 23.5	+0.5
AKBB				IAmb	IAmb	09 59 24.2	
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	72.23	322	P	P	09 59 23.5	+0.5
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	72.75	54	P	P	09 59 27.0	+0.2
	comp=Z,0.4nm,0.8s,baz=298,slow=7.7,SNR=2.5						
	comp=Z,0.4nm,0.8s						
GURO	Guroymak-BITLI	72.97	306	P	P	09 59 28.4	+0.4
GURO				IAmb	IAmb	09 59 30.1	
	comp=Z,10.0nm,0.6s						
DY2G	Dye2	73.58	3	iP	P	09 59 31.6	+0.4
DY2G				IAmb	IAmb	09 59 32.1	
	comp=Z,3.1nm,0.6s						
MARD	Mardin	74.51	306	P	P	09 59 37.8	+0.8
BORG	Borgarnes	74.70	353	P	P	09 59 39.2	+1.9
BORG	Borgarnes	74.70	353	P	P	09 59 39.2	+1.9
BORG				pmax	pmax		
	comp=Z,46nm,1.2s						
PDAR	Pinedale Array	75.17	46	P	P	09 59 41.8	+1.0
	comp=Z,0.2nm,0.5s,baz=46,slow=1.1,SNR=2.5						
	comp=Z,0.2nm,0.5s						
KWP	Kalwaria Pacla	75.97	324	eP	P	09 59 44.8	-0.2
KWP	Kalwaria Pacla	75.97	324	P	P	09 59 46.1	+1.1
KWP	Kalwaria Pacla	75.97	324	P	P	09 59 46.1	+1.1
KWP				pmax	pmax		
	comp=Z,268nm,1.3s						
BNN	Bunyan	76.53	310	P	P	09 59 49.6	+1.1
KOLS	Kolonicke sedl	76.68	324	eP	P	09 59 50.6	+1.6
KOLS	Kolonicke sedl	76.68	324	eP	P	09 59 50.6	+1.6
OJC	Ojcow	76.82	326	eP	P	09 59 50.7	+1.0
OJC	Ojcow	76.82	326	P	P	09 59 51.0	+1.3
OJC				IAmb	IAmb	09 59 51.6	
	comp=Z,11nm,0.9s						
OJC	Ojcow	76.82	326	P	P	09 59 51.0	+1.3
NIE	Niedzica	77.20	325	eP	P	09 59 54.0	+2.1
BR131	Keskin Array S	77.24	311	P	P	09 59 53.2	+0.8
BR131				IAmb	IAmb	09 59 53.6	
	comp=Z,3.6nm,0.7s						
BR131	Keskin Array S	77.24	311	P	P	09 59 53.3	+0.8
BR131				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	77.24	311	P	P	09 59 53.2	+0.8
	comp=Z,2.0nm,0.6s,baz=88,slow=3.4,SNR=11						
	comp=Z,2.0nm,0.6s						
MLR	Muntele Rosu	77.41	320	LR	LR	10 37 40.0	
	comp=Z,38nm,18.6s,baz=51,slow=38						
LANS	Liptovska Anna	77.76	326	eP	P	09 59 57.4	+2.3
LANS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LANS	Liptovska Anna	77.76	326	eP	P	09 59 57.4	+2.3
KSP	Ksiaz	77.80	328	eP	P	09 59 56.8	+1.6
CHVC	Chvalec	78.09	328	eP	P	09 59 58.1	+1.2
MORC	Moravsky Berou	78.11	327	P	P	09 59 58.2	+1.2
MORC				IAmb	IAmb	09 59 59.1	
	comp=Z,8.0nm,0.7s						
MORC	Moravsky Berou	78.11	327	P	P	09 59 58.2	+1.2
MORC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MORC	Moravsky Berou	78.11	327	eP	P	09 59 58.1	+1.1
DPC	Dobruska-Polom	78.17	328	eP	P	09 59 58.5	+1.2
DPC	Dobruska-Polom	78.17	328	eP	P	09 59 58.5	+1.2
KRLC	Kraliky	78.19	328	eP	P	09 59 58.7	+1.2
KRLC	Kraliky	78.19	328	eP	P	09 59 58.7	+1.2
VYHS	Vyhne	78.53	325	eP	P	10 00 01.2	+1.9
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	78.53	325	eP	P	10 00 01.2	+1.9
BRG	Berggiesshubel	78.71	329	Amp		10 00 04.0	
	comp=Z,5.0nm,0.8s						
BRG	Berggiesshubel	78.71	329	eP	P	10 00 01.3	+1.1
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG	Berggiesshubel	78.71	329	eP	P	10 00 01.4	+1.1
CLL	Collm	78.73	330	P	P	10 00 01.3	+1.0
CLL				IAmb	IAmb	10 00 01.7	
	comp=Z,7.5nm,0.7s						
CLL	Collm	78.73	330	P	P	10 00 01.3	+1.0
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CLL	Collm	78.73	330	iP	P	10 00 00.7	+0.4
	comp=Z,8.0nm,0.6s						
JAVC	Velka Javorina	78.75	326	eP	P	10 00 02.7	+2.1
VRAC	Vranov	78.86	327	eP	P	10 00 02.5	+1.4
KRUC	Moravsky	79.14	327	eP	P	10 00 03.7	+1.1
PRU	Pruhonice	79.17	329	eP	P	10 00 04.1	+1.3
PRU	Pruhonice	79.17	329	eP	P	10 00 04.1	+1.3
TREC	Trest	79.33	328	eP	P	10 00 05.1	+1.4
TREC	Trest	79.33	328	eP	P	10 00 05.1	+1.4
CKRC	Cesky Krumlov	80.18	328	eP	P	10 00 08.8	+0.5
KHC	Kasperske Hory	80.23	329	P	P	10 00 09.9	+1.3
KHC				IAmb	IAmb	10 00 10.7	
	comp=Z,6.9nm,0.7s						
KHC	Kasperske Hory	80.23	329	P	P	10 00 09.9	+1.3
KHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KHC	Kasperske Hory	80.23	329	eP	P	10 00 09.7	+1.1
RONA	Rosalia, Austr	80.23	326	eP	P	10 00 10.4	+1.8
CONA	Conrad Observa	80.24	327	eP	P	10 00 10.6	+1.9
	comp=Z,4.6nm,0.9s						
GERES	GERESS Array B	80.41	328	P	P	10 00 10.2	+0.5
	comp=Z,1.9nm,0.5s,baz=39,slow=6.8,SNR=16						
	comp=Z,1.9nm,0.5s						
GERES	GERESS Array B	80.41	328	P	P	10 00 10.4	+0.8
GERES	GERESS Array B	80.41	328	P	P	10 00 10.4	+0.8
VTS	Vitosha	80.84	319	P	P	10 00 13.4	+1.3
VTS				IAmb	IAmb	10 00 14.5	
	comp=Z,9.9nm,0.9s						
VTS	Vitosha	80.84	319	P	P	10 00 13.4	+1.3
VTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BIOA	Bad Ischl, Aus	81.35	328	eP	P	10 00 16.0	+1.4
GROS	Grobnik	81.54	326	iP	P	10 00 16.2	+0.6
PERS	Pernice	81.57	326	iP	P	10 00 16.7	+0.9
SOKA	Soboth	81.57	326	eP	P	10 00 16.7	+0.9
	comp=Z,6.2nm,0.5s						
OBKA	Obir	81.91	326	eP	P	10 00 18.9	+1.3
	comp=Z,5.5nm,0.7s						
KBA	Koelnbreinsper	81.96	327	eP	P	10 00 19.6	+1.6
	comp=Z,8.2nm,1.1s						
PDKS	Podkum	82.07	326	eP	P	10 00 19.5	+1.1
MYKA	Terra Mystica	82.19	327	eP	P	10 00 19.6	+0.5
	comp=Z,3.6nm,0.5s						
SCHQ	Schefferville	82.27	16	P	P	10 00 19.6	+0.3
	comp=Z,2.5nm,0.9s,baz=269,slow=3.5,SNR=3.6						
	comp=Z,2.5nm,0.9s						
SCHQ	Schefferville	82.27	16	P	P	10 00 19.6	+0.3
SCHQ	Schefferville	82.27	16	IAmb	IAmb	10 00 40.5	
	comp=Z,7.9nm,1.4s						
WATA	Walderalm	82.47	329	eP	P	10 00 22.2	+1.5
	comp=Z,3.8nm,0.5s						
WTTA	Wattenberg	82.51	328	eP	P	10 00 21.8	+0.9
	comp=Z,4.4nm,0.5s						
ABTA	Abfaltersbach	82.57	328	eP	P	10 00 20.2	-0.9
	comp=Z,7.1nm,1.4s						
MOTA	Moosalm	82.65	329	eP	P	10 00 22.8	+1.2
	comp=Z,6.0nm,0.6s						
RETA	Reutte	82.67	329	eP	P	10 00 22.6	+1.0
	comp=Z,7.9nm,0.8s						
SQTA	Sankt Quirin	82.71	329	eP	P	10 00 22.9	+1.0
	comp=Z,4.7nm,0.6s						
STAL	STALIGIAL	82.88	327	P	P	10 00 22.2	-0.4
FETA	Feichten	83.07	329	eP	P	10 00 24.6	+0.9
	comp=Z,2.9nm,0.7s						
DAVA	Damuels	83.18	329	eP	P	10 00 24.6	+0.2
	comp=Z,6.4nm,0.8s						
ECH	Echery	83.44	332	P	P	10 00 25.6	+0.1
ECH				IAmb	IAmb	10 00 26.9	
	comp=Z,5.1nm,0.8s						
ECH	Echery	83.44	332	P	P	10 00 25.6	+0.1
ECH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SENIN	Lac Senin/Sane	84.94	330	P	P	10 00 33.6	+0.3
TXAR	Lajitas Array	87.85	53	P	P	10 00 46.2	-1.6
	comp=Z,0.2nm,0.6s,baz=282,slow=4.5,SNR=1.9						
	comp=Z,0.2nm,0.6s						
H06N1	SOCORRO T-PHAS	90.31	65	T	T	11 41 48.7	
	SNR=5.9						
ESDC	Sonseca Array	94.79	334	P	P	10 01 19.2	-0.6
	comp=Z,0.9nm,0.7s,baz=11,slow=3.5,SNR=5.7						
	comp=Z,0.9nm,0.7s						
ESDC	Sonseca Array	94.79	334	P	P	10 01 19.2	-0.6
ESDC	Sonseca Array	94.79	334	IAmb	IAmb	10 01 20.8	
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	115.53	317	PKP	PKiKP	10 06 39.3	-1.0
	comp=Z,0.3nm,0.6s,baz=83,slow=1.3,SNR=1.6						
TORD	Torodi Ar. Bea	115.53	317		PKiKP	10 06 39.3	-1.0
LPAZ	La Paz	144.63	57	PKP	PKPbc	10 07 34.6	+0.1
	comp=Z,0.8nm,0.5s,baz=350,slow=2.9,SNR=3.8						
LPAZ	La Paz	144.63	57		PKPbc	10 07 34.6	+0.1

IDC ***24*** *09:56:59.1±1.4, 3°.59N×125°.35E, h0^{km}, mb3.5/4, mbtmp3.5/4 Error ellipse: s-maj=74.9km s-min=24.9km az=76.0*

ISC 24 09:57:04.5±1.2**, 3°.6N**±0°.1×**125°.4E**±0°.4**, h35^{km}, n6, σ0^{s}.86**/6**, mb3.3**/4**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.54	7	⇑eP	Pn	09 57 40.0	-3.2
DDMP				eS	Sn	09 58 12.0	-0.9
KCP	Kidapawan	3.43	355	⇓eP	Pn	09 57 56.5	+1.0
KCP				iS	Sn	09 58 26.3	-8.7
WRA	Warramunga Arr	24.97	160	P	P	10 02 24.7	-0.2
	0.2nm,0.3s,baz=340,slow=10,SNR=7.9						
	0.2nm,0.3s						
ASAR	Alice Springs	28.32	163	P	P	10 02 55.1	0.0
	0.2nm,0.5s,baz=341,slow=7.1,SNR=5.1						
	0.2nm,0.5s						
PETK	Petropavlovsk-	56.09	23	P	P	10 06 40.3	+0.2
	3.5nm,1.0s,baz=234,slow=8.4,SNR=2.1						
	3.5nm,1.0s						
MKAR	Makanchi Array	56.93	326	P	P	10 06 45.6	-0.6
	0.2nm,0.5s,baz=132,slow=7.9,SNR=2.4						
	0.2nm,0.5s						

VIE 24 09:58:39.4±0.2**, 46°.86N×11°.00E, h4^{km}, mb1.0**/1**, ml1.1**/6**, Error ellipse: s-maj=1.8km s-min=1.0km az=39.0 3 km SW of Obergurgl, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETA	Feichten	0.25	312	ePg	Pg	09 58 44.6	+0.2
	SNR=6.5						
FETA				eSg	Sg	09 58 47.9	+0.2
SQTA	Sankt Quirin	0.39	21	ePg	Pg	09 58 47.4	+0.4
	SNR=4.1						
SQTA				eSg	Sg	09 58 52.6	+0.4
MOTA	Moosalm	0.49	8	ePg	Pg	09 58 49.3	+0.4
MOTA				eSg	Sg	09 58 56.0	+0.6
WATA	Walderalm	0.62	39	ePg	Pg	09 58 51.7	+0.3

GCG ***24*** *10:02:55.9±0.6, 14°.32N×91°.35W, h54^{km}±18^{km}, MD4.0*
SNET ***24*** *10:02:55.9±1.0, 14°.06N×91°.18W, h22^{km}±7^{km}, ML3.6*
UCR ***24*** *10:02:55.9±1.0, 14°.06N×91°.18W, h22^{km}±7^{km}, ML3.6*
IDC ***24*** *10:02:55.3±2.6, 14°.42N×91°.28W, h81^{km}±23^{km}, mb3.3/7, mbtmp3.6/10, MS3.1/2, Error ellipse: s-maj=36.7km s-min=22.3km az=38.0*

ISC 24 10:02:55.8±0.9**, 14°.3N**±0°.1×**91°.2W**±0°.1**, h101^{km}, n36, σ1^{s}.30**/37**, mb3.6**/7**, 3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.36	60	⇓iP	Pn	10 03 08.1	-2.9
PCG	Pacaya	0.55	77	eP	Pn	10 03 10.8	-1.6
STG3	Santiaguito 3,	0.59	318	eP	Pn	10 03 07.4	-5.2
NBG	Las Nubes	0.85	68	eP	Pn	10 03 15.3	+0.2
SLOZ	Alcaldia de Sa	1.36	100	eP	Pn	10 03 19.5	-0.9
SLOZ				IAML		10 03 43.2	
	comp=Z,446nm,0.5s						
NUBE	Las Nubes	1.39	105	⇓eP	Pn	10 03 19.8	-1.1
NUBE				IAML		10 03 42.1	
	comp=Z,756nm,0.3s						
NUBE	Las Nubes	1.39	105	⇓eP	Pn	10 03 19.8	-1.1
NUBE				IAML		10 03 42.1	
	comp=Z,756nm,0.3s						
CEVE	Cerro Verde	1.56	106	eP	Pn	10 03 22.5	-0.5
CEVE				IAML		10 03 52.6	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	1.56	106	eP	Pn	10 03 22.5	-0.5
CEVE				IAML		10 03 52.6	
	comp=Z,2μm,0.4s						
MRL	Marmol	1.65	60	eP	Pn	10 03 25.0	+0.9
JAYA	Jayaque - finc	1.77	110	eP	Pn	10 03 23.7	-2.0
JAYA				eS	Sn	10 03 46.8	-1.6
JAYA	Jayaque - finc	1.77	110	eP	Pn	10 03 23.7	-2.0
JAYA				eS	Sn	10 03 46.8	-1.6
LALI	Alcalda de L	1.95	113	eP	Pn	10 03 27.3	-0.5
LALI	Alcalda de L	1.95	113	eP	Pn	10 03 27.3	-0.5
SJTE	Alcalda de S	2.19	107	eP	Pn	10 03 31.0	0.0
SJTE	Alcalda de S	2.19	107	eP	Pn	10 03 31.0	0.0
COEG	Centro de Oper	2.31	106	eP	Pn	10 03 33.1	+0.7
COEG	Centro de Oper	2.31	106	eP	Pn	10 03 33.1	+0.7
COEB	Comit de Eme	2.67	106	eP	Pn	10 03 37.5	+0.2
COEB	Comit de Eme	2.67	106	eP	Pn	10 03 37.5	+0.2
LCND	La Caada	3.32	106	eP	Pn	10 03 46.4	+0.6
LCND	La Caada	3.32	106	eP	Pn	10 03 46.4	+0.6
CMIG	Matias Romero	4.55	309	P	Pn	10 03 58.4	-4.1
	comp=Z,13nm,0.3s,baz=114,slow=8.7,SNR=19						
CMIG				S	Sn	10 04 47.1	-7.2
	comp=Z,16nm,0.4s,baz=116,slow=19,SNR=2.2						
JTS	Las Juntas de	7.24	122	P	Pn	10 04 41.4	+2.4
	comp=Z,1.7nm,0.4s,baz=176,slow=22,SNR=11						
JTS				S	Sn	10 05 57.6	-2.2
	comp=Z,1.3nm,0.4s,baz=344,slow=20,SNR=1.1						
TXAR	Lajitas Array	18.94	324	P	P	10 07 08.2	-0.9
	comp=Z,0.5nm,0.7s,baz=138,slow=9.6,SNR=7.6						
TKL	Tuckaleechee C	22.31	16	P	P	10 07 46.9	+1.9
	comp=Z,3.0nm,0.6s,baz=173,slow=13,SNR=8.6						
	comp=Z,3.0nm,0.6s						
ANMO	Albuquerque	24.78	329	P	P	10 08 08.8	+0.3
	comp=Z,0.3nm,0.6s,baz=130,slow=8.2,SNR=2.1						
	comp=Z,0.3nm,0.6s						
SADO	Sadowa	32.08	16	LR	LR	10 22 51.5	
	comp=Z,22nm,18.6s,baz=263,slow=37						
PDAR	Pinedale Array	32.52	334	P	P	10 09 15.1	-2.2
	comp=Z,0.1nm,0.5s,baz=99,slow=8.3,SNR=1.7						
PDAR				PcP	PcP	10 12 02.2	+0.3
	comp=Z,0.1nm,0.4s,baz=180,slow=0.9,SNR=2.0						
	comp=Z,0.1nm,0.5s						
NVAR	Mina Array Bea	33.98	320	P	P	10 09 31.6	+1.5
	comp=Z,1.5nm,0.7s,baz=132,slow=8.2,SNR=17						
NVAR				PcP	PcP	10 12 07.3	+1.3
	comp=Z,0.4nm,0.7s,baz=151,slow=2.1,SNR=3.9						
	comp=Z,1.5nm,0.7s						
SCHQ	Schefferville	44.70	20	P	P	10 10 58.0	-0.6
	comp=Z,1.4nm,0.6s,baz=214,slow=11,SNR=3.8						
	comp=Z,1.4nm,0.6s						
YKA	Yellowknife Ar	50.96	346	P	P	10 11 46.5	-0.3
	comp=Z,0.4nm,0.6s,baz=145,slow=8.0,SNR=4.4						
	comp=Z,0.4nm,0.6s						
CPUP	Villa Florida	52.07	141	LR	LR	10 33 39.0	
	comp=Z,24nm,19.0s,baz=210,slow=35						
ILAR	Eielson Array	62.92	337	P	P	10 13 10.8	-0.4
	comp=Z,0.5nm,0.9s,baz=104,slow=4.9,SNR=7.4						
	comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	136.25	256	PKP	PKiKP	10 22 09.6	+1.5
	comp=Z,0.3nm,0.8s,baz=101,slow=3.4,SNR=1.6						
CMAR	Chiang Mai Arr	145.99	343	PKPbc	PKPbc	10 22 25.1	+0.4
	comp=Z,1.6nm,0.4s,baz=339,slow=4.0,SNR=7.8						

NIED ***24*** *10:16:20.3, 32°.72N×130°.68E, h13^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.73; $M_{\theta\theta}$2.52; $M_{\phi\phi}$-0.80; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.10; $M_{\phi r}$0.93; Fault plane solution: $M_0$2.44000×10^{14} NP1: ϕ_s240.00000°, δ49.00000°, λ-134.00000°. NP2: ϕ_s116.00000°, δ57.00000°, λ-52.00000°.*

JMA 24 10:16:20.3±0.0**, 32°.7N**±0°.1×**130°.7E**±0°.1**, h13^{km}, MV3.5**/20**, NW KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.20	147	P	Pg	10 16 24.8	0.0
JTA	Tamana	0.28	333	P	Pg	10 16 26.1	+0.1
JTA				S	Sg	10 16 30.1	+0.2

IDC ***24*** *10:17:52.6±0.9, 32°.91N×75°.91E, h0^{km}, mb3.8/12, mbtmp3.9/15, ML3.7/3, Error ellipse: s-maj=27.8km s-min=15.9km az=56.0*
NDI ***24*** *10:17:54.4±0.8, 33°.16N×75°.61E, h10^{km}, ML4.3, mb4.1(NEIC)*
BJI ***24*** *10:17:59.2±0.0, 33°.20N×75°.90E, h40^{km}, mb4.2/11, mB4.3/3, ML3.6/3*
NEIC ***24*** *10:17:59.3±1.5, 33°.08N±0°.10×76°.1E±0°.1, h35^{km}±2^{km}, mb4.1/10, Error ellipse: s-maj=16.1km s-min=15.0km az=166.0*
NNC ***24*** *10:17:59.4±3.3, 33°.56N×75°.79E, h0^{km}, mb3.9, Error ellipse: s-maj=42.9km s-min=38.6km az=52.0*

ISC 24 10:17:57.2±0.5**, 33°.08N**±0°.04×**76°.14E**±0°.06**, h28^{km}, n68, σ2^{s}.34**/82**, mb4.0**/17**, 1C-4D, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMLA	Simla	2.13	156	eP	Pb	10 18 34.3	-0.8
SMLA				eS	Sb	10 19 04.4	+3.4
SMLA				IAML		10 19 05.3	
	comp=E,5μm,0.4s						
SMLA				IAML		10 19 05.6	
	comp=N,3μm,0.4s						
NIL	Nilore	2.49	284		Pn	10 18 36.9	+1.0
NDI	New Delhi	4.47	168	eP	Pn	10 19 05.0	+1.8
NDI				eS	Sn	10 19 53.0	-1.3
KBL	Kabul	6.09	286	Pn	Pn	10 19 26.1	+0.6
KSH	Kashi	6.43	359	P	Pn	10 19 32.0	+1.9
KSH				S	Sn	10 20 42.8	+0.1
KSH				smax	smax		
	comp=N,29nm,0.8s						
KSH				smax	smax		
	comp=N,43nm,1.0s						
AJM	Ajmer	6.70	192	eP	Pn	10 19 34.0	+0.2
AJM				iS	Sb	10 21 26.0	+13
DRK	Karamyk	7.29	332	Pn	Pn	10 19 44.2	+2.1
GAR	Garm	7.56	323		Pn	10 19 45.8	+0.1
CHGR	Chuyangaron	7.95	316	Pn	Pn	10 19 52.0	+1.1
DANN	Dangsing	8.07	124	ePn	Pn	10 19 55.2	+2.3
DANN				eSn	Sn	10 21 21.8	-1.6
	comp=N,40nm,0.3s						
BTK	Batken	8.18	330	Pn	Pn	10 19 55.5	+1.4
KOLN	Koldanda	8.33	127	ePn	Pn	10 19 58.5	+2.2
KOLN				eSn	Sn	10 21 29.5	-0.1
	comp=N,54nm,0.3s						
TARG	Taragay, Kyrgy	8.74	8	Pn	Pn	10 20 04.2	+2.1
GKN	Gorkha	8.90	122	ePn	Pn	10 20 05.1	+1.0
GKN				eSn	Sn	10 21 40.4	-3.1
	comp=N,26nm,0.2s						
KDJ	Kajisay	9.08	5	Pn	Pn	10 20 10.0	+3.5
BOOM	Boomskoye usch	9.40	359		Pn	10 20 14.2	+3.3
DMN	Daman	9.47	123	ePn	Pn	10 20 12.7	+0.7
DMN				eSn	Sn	10 21 54.4	-3.2
	comp=N,16nm,0.3s						
KKN	Kakani	9.48	121	eSn	Sn	10 21 53.9	-4.0
	comp=N,16nm,0.2s						
PRZ	Przheval'sk	9.56	10	Pn	Pn	10 20 15.1	+2.0
AAK	Ala-Archa	9.63	353	Pn	Pn	10 20 16.4	+2.3
	comp=N,0.8nm,0.3s,baz=186,slow=11,SNR=13						
AAK				Sn	Sn	10 22 06.1	+4.7
	comp=N,0.3nm,0.3s,baz=359,slow=20,SNR=1.3						
	comp=N,4.5nm,0.5s						
AAK	Ala-Archa	9.63	353	Pn	Pn	10 20 15.2	+1.1
PKIN	Phulchoki	9.69	122	ePn	Pn	10 20 15.8	+0.7
PKIN				eSn	Sn	10 21 58.9	-4.2
	comp=N,14nm,0.2s						
PKI	Pulchoki	9.70	122	ePn	Pn	10 20 15.8	+0.5
PKI				eSn	Sn	10 21 59.6	-3.9
	comp=N,20nm,0.3s						
BHPL	Bhopal	9.86	173	eP	Pn	10 20 17.1	-0.1
BHPL				eS	Sn	10 22 01.6	-5.5
BHPL				IAML		10 22 03.9	
	comp=N,41nm,0.2s						
JIRN	Jiri	10.22	119	ePn	Pn	10 20 22.5	+0.2
JIRN				eSn	Sn	10 22 10.0	-6.2
	comp=N,47nm,0.4s						
RAMN	Ramite	10.92	121	ePn	Pn	10 20 31.9	0.0
RAMN				eSn	Sn	10 22 27.8	-5.5
	comp=N,22nm,0.3s						
KK31	Karatay Array	10.95	338		Pn	10 20 32.1	+0.1
KK31	Karatay Array	10.95	338	P	Pn	10 20 31.4	-0.6
	comp=N,1.1nm,0.3s,baz=167,slow=13,SNR=20						
KK31				⇓S	Sn	10 22 27.6	-5.8
	comp=N,6.0nm,0.7s,baz=163,slow=24,SNR=9.3						
KKAR	Karatay Array	10.95	338		Pn	10 20 32.1	+0.1
TAPN	Taplejung	11.51	117	ePn	Pn	10 20 39.1	-0.9
WMQ	Urumqi	14.02	37	eP	P	10 21 20.6	-1.0
MK31	Makanchi Array	14.48	17	Pn	Pn	10 21 23.1	+2.9
MK31	Makanchi Array	14.48	17	⇑P	Pn	10 21 22.2	+2.0
	comp=N,0.3nm,0.2s,baz=198,slow=14,SNR=17						
MKAR	Makanchi Array	14.48	17	Pn	Pn	10 21 21.6	+1.4
	comp=N,0.5nm,0.3s,baz=201,slow=12,SNR=18						
MKAR				Sn	Sn	10 23 55.1	-4.7
	comp=N,0.1nm,0.3s,baz=193,slow=25,SNR=2.1						
	comp=N,0.9nm,0.4s						
MKAR	Makanchi Array	14.48	17	Pn	Pn	10 21 21.2	+0.9
KURBB	Kurchatov Arra	17.62	5	Pn	Pn	10 21 59.3	-1.3
	comp=N,0.1nm,0.3s,baz=191,slow=12,SNR=17						
	comp=N,2.3nm,0.7s						
KURBB	Kurchatov Arra	17.62	5	⇓P	Pn	10 21 59.0	-1.6
	comp=N,3.6nm,0.9s						
KURK	Kurchatov	17.72	5	Pn	Pn	10 22 00.7	-1.1
AB31	Akbulak array	20.18	328	P	P	10 22 29.5	+0.1
	comp=N,1.8nm,0.7s,baz=131,slow=11,SNR=21						
ABKAR	Akbulak array	20.18	328	P	P	10 22 29.8	+0.4
BRVK	Borovoye	20.41	350	P	P	10 22 32.0	+0.1
BRVK				IAmb	IAmb	10 22 34.2	
	comp=Z,11nm,1.0s						
BRVK	Borovoye	20.41	350	⇓P	P	10 22 31.7	-0.2
	comp=Z,9.6nm,0.9s						
ZAA0	Zalesovo Array	21.76	14	P	P	10 22 47.0	+0.6
ZAA0				IAmb	IAmb	10 22 49.8	
	comp=Z,3.1nm,0.5s						
ZALV	Zalesovo Beam	21.76	14	P	P	10 22 46.5	+0.2
	comp=Z,1.8nm,0.3s,baz=206,slow=9.9,SNR=7.8						
	comp=Z,1.8nm,0.3s						
ZALV	Zalesovo Beam	21.76	14	P	P	10 22 46.8	+0.4
AKTO	Aktyubinsk	21.89	328	P	P	10 22 47.8	-0.1
	comp=Z,7.6nm,0.8s,baz=125,slow=8.1,SNR=24						
	comp=Z,7.6nm,0.8s						
AKTO	Aktyubinsk	21.89	328	⇓P	P	10 22 47.7	-0.1
	comp=Z,9.9nm,1.0s						
LZH	Lanzhou	22.98	75	eP	P	10 22 55.9	-3.8
LZH				pP	sP	10 23 12.4	0.0
LZH				sP	pP	10 23 17.6	+9.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
PZH	PanZhiHua	23.13	100	P	P	10 23 06.5	+5.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	Chiang Mai Arr	25.09	120	P	P	10 23 20.3	+0.7
	comp=Z,1.0nm,0.3s,baz=314,slow=11,SNR=4.5						

	comp=Z,1.0nm,0.3s						
ARU	Arti	26.32	338	P	P	10 23 30.9	+0.5
	comp=Z,2.0nm,0.6s,baz=158,slow=5.7,SNR=6.9						
	comp=Z,2.0nm,0.6s						
ARU	Arti	26.32	338	P	P	10 23 31.1	+0.7
HHC	Hu-ho-hao-te	29.20	64	*e*P	P	10 24 01.1	+4.7
AKASG	Malin Array Be	38.38	312	P	P	10 25 14.7	-1.1
	comp=Z,0.9nm,0.6s,baz=82,slow=8.2,SNR=5.4						
	comp=Z,0.9nm,0.6s						
AKASG	Malin Array Be	38.38	312	IAmb	IAmb	10 25 16.5	
	comp=Z,2.0nm,1.1s						
FINES	FINESS Array B	42.66	327	P	P	10 25 51.6	+0.5
	comp=Z,0.9nm,0.5s,baz=112,slow=10,SNR=8.3						
	comp=Z,0.9nm,0.5s						
FINES	FINESS Array B	42.66	327	P	P	10 25 51.8	+0.7
ARCES	ARCESS Array B	45.91	338	P	P	10 26 18.2	+1.2
	comp=Z,1.2nm,0.5s,baz=108,slow=7.8,SNR=16						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	45.91	338	P	P	10 26 18.5	+1.5
NOA	NORSAR Array B	49.63	325	P	P	10 26 44.3	-1.7
	comp=Z,0.7nm,0.6s,baz=127,slow=5.2,SNR=2.5						
	comp=Z,0.7nm,0.6s						
TORD	Torodi Ar. Bea	70.00	273	P	P	10 29 05.0	-1.6
	comp=Z,0.6nm,0.6s,baz=54,slow=5.4,SNR=5.1						
	comp=Z,0.6nm,0.6s						
TORD	Torodi Ar. Bea	70.00	273	P	P	10 29 05.6	-1.1
TORD				IAmb	IAmb	10 29 06.9	
	comp=Z,3.0nm,1.2s						
TOLK	Toolik Lake Re	73.10	16	P	P	10 29 25.0	+0.4
TOLK				IAmb	IAmb	10 29 27.6	
	comp=Z,2.4nm,0.8s						
IMAR	Indian Mountai	74.08	19	P	P	10 29 31.7	+1.4
H21K	Melozitna Rive	74.59	19	P	P	10 29 34.4	+1.1
H21K				IAmb	IAmb	10 29 43.0	
	comp=Z,2.5nm,1.2s						
WRA	Warramunga Arr	76.58	125	P	P	10 29 46.3	+1.0
	comp=Z,0.4nm,0.7s,baz=322,slow=5.9,SNR=5.4						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	76.84	17	P	P	10 29 46.9	+0.7
	comp=Z,0.7nm,0.7s,baz=316,slow=5.1,SNR=7.0						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	78.82	128	P	P	10 29 57.3	-0.4
	comp=Z,0.2nm,0.6s,baz=318,slow=5.3,SNR=1.7						
	comp=Z,0.2nm,0.6s						

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*SOME **24** 10:34:35.2, 40°.27N×77°.15E, h10km*

*KRNET **24** 10:34:35.8±0.1, 40°.15N×77°.40E, mb4.1*

*NNC **24** 10:34:38.8±0.6, 40°.32N×77°.23E, h0km, mb4.4, mpv4.1,*
Error ellipse: s-maj=4.3km s-min=3.3km az=155.0

ISC 24 10:34:41.2±1.1, **40°.45N**±0°.04×**77°.26E**±0°.03, **h10km, n90,**
σ**1s.68**/134, **53C-23D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.35	18	⇓*i*P	Pn	10 35 05.6	-0.9
	baz=11						
TARG				⇓*i*S	Sg	10 35 27.3	+2.7
	baz=11						
TARG	Taragay, Kyrgy	1.35	18	⇓*i*P	Pn	10 35 05.5	-0.9
	baz=5.0						
TARG				⇓*i*S	Sg	10 35 27.3	+2.7
	baz=5.0						
KSH	Kashi	1.36	227	Pg	Pn	10 35 05.1	-1.2
KSH				Sg	Sg	10 35 28.1	+3.2
KSH				pmax	pmax		
	comp=Z,130nm,0.7s						
KSH				smax	smax		
	comp=N,660nm,0.6s						
KSH				smax	smax		
	comp=E,970nm,0.6s						
KDJ	Kajisay	1.68	358	⇓*e*P	Pb	10 35 11.8	-0.6
	baz=56						
KDJ				⇓*i*S	Sg	10 35 38.2	+2.9
	baz=56						
KDJ	Kajisay	1.68	358	⇓*e*P	Pn	10 35 10.9	0.0
	baz=52						
KDJ				⇓*i*S	Sg	10 35 37.2	+1.9
	baz=52						
ULHL	Ulahol	1.96	337	P	Pb	10 35 16.1	-0.9
	SNR=21						
ULHL	Ulahol	1.96	337	⇑*i*P	Pb	10 35 15.9	-1.1
	baz=38						
ULHL				⇑*i*S	Sg	10 35 45.2	+1.1
	baz=38						
ULHL	Ulahol	1.96	337	⇑*i*P	Pn	10 35 15.4	+0.8
	baz=36						
ULHL				⇑*i*S	Sg	10 35 44.8	+0.7
	baz=36						
PRZ	Przheval'sk	2.21	22	⇑*e*P	Pn	10 35 18.7	+0.6
	baz=17						
PRZ				⇑*i*S	Sb	10 35 50.0	+1.2
	baz=17						
PRZ	Przheval'sk	2.21	22	⇑*i*P	Pn	10 35 16.4	-1.7
	baz=13						
PRZ				⇑*i*S	Sb	10 35 46.9	-1.9
	baz=13						
BOOM	Boomskoye usch	2.27	334	⇑*e*P	Pn	10 35 20.2	+1.3
	baz=35						
BOOM				⇑*i*S	Sb	10 35 52.8	+2.2
	baz=35						
BOOM	Boomskoye usch	2.27	334	⇓*i*P	Pn	10 35 19.7	+0.8
	baz=34						
BOOM				⇓*i*S	Sb	10 35 52.4	+1.8
	baz=34						
ANVS	Anan'yevo	2.35	7	⇓*i*P	Pn	10 35 21.3	+1.2
	baz=4.0						
ANVS				⇓*i*S	Sb	10 35 54.1	+1.1
	baz=4.0						
ANVS	Anan'yevo	2.35	7	⇑*e*P	Pn	10 35 19.7	-0.4
	baz=1.0						
ANVS				⇑*i*S	Sb	10 35 52.4	-0.6
	baz=1.0						
TNSS	Tian-Shan	2.60	355	*e*P	Pb	10 35 27.6	-0.5
	comp=E,59nm,0.5s						
TNSS				*e*S	Sg	10 36 04.9	+0.2
	comp=E,201nm,0.6s						
TNSS	Tian-Shan	2.60	355	Pg	Pb	10 35 28.5	+0.3
	comp=E,59nm,0.5s						
TNSS				Lg	Lg	10 36 05.8	
	comp=E,201nm,0.6s						
ARLS	Aral	2.63	303	⇑*i*P	Pn	10 35 24.2	+0.3
	baz=7.0						
ARLS				⇑*i*S	Sb	10 35 59.6	-1.3
	baz=7.0						
ARLS	Aral	2.63	303	⇑*i*P	Pn	10 35 23.9	0.0
	baz=8.0						
ARLS				⇑*i*S	Sb	10 35 59.6	-1.3
	baz=8.0						
MDOK	Medeo	2.72	357	*e*P	Pb	10 35 30.3	+0.2
	comp=E,74nm,0.5s						
MDOK				*e*S	Sg	10 36 10.2	+1.6
	comp=E,726nm,0.8s						
MDOK	Medeo	2.72	357	⇑Pn	Pn	10 35 26.0	+1.0
	comp=E,60nm,0.6s						
MDOK				⇓Lg	Lg	10 36 10.3	
	comp=E,858nm,0.8s						
MDOK	Medeo	2.72	357	Pg	Pg	10 35 31.3	-2.0
	comp=E,74nm,0.5s						
MDOK				Lg	Lg	10 36 10.2	
	comp=E,726nm,0.8s						
UCH	Uchtor	2.73	312	P	Pn	10 35 25.3	-0.2
	SNR=15						
UCH	Uchtor	2.73	312	⇑*e*P	Pn	10 35 26.2	+0.7
	baz=15						
UCH				⇑*i*S	Sb	10 36 03.1	-1.0
	baz=15						
UCH	Uchtor	2.73	312	⇑*e*P	Pn	10 35 26.1	+0.6
	baz=15						
UCH				⇑*i*S	Sb	10 36 03.0	-1.0
	baz=15						
SATY	Saty	2.75	18	*e*P	Pb	10 35 30.2	-0.3
	comp=E,46nm,0.5s						
SATY				*e*S	Sg	10 36 10.1	+0.6
	comp=E,295nm,0.5s						
SATY	Saty	2.75	18	Pg	Pb	10 35 31.3	+0.8
	comp=E,46nm,0.5s						
SATY				Lg	Lg	10 36 10.1	
	comp=E,295nm,0.5s						
MTBS	Maitube	2.75	347	*e*P	Pb	10 35 29.9	-0.6
	comp=E,42nm,0.5s						
MTBS				*e*S	Sg	10 36 09.5	-0.2
	comp=E,228nm,0.7s						
MTBS	Maitube	2.75	347	Pg	Pb	10 35 30.9	+0.4
	comp=E,42nm,0.5s						
MTBS				Lg	Lg	10 36 09.5	
	comp=E,228nm,0.7s						
TKM2	Tokmak 2	2.77	334	P	Pn	10 35 27.2	+1.4
	SNR=40						
TKM2	Tokmak 2	2.77	334	⇑Pn	Pn	10 35 26.6	+0.7
	comp=E,46nm,0.9s						
TKM2				⇑Lg	Lg	10 36 10.4	
	comp=E,262nm,0.6s						
TKM2	Tokmak 2	2.77	334	⇑*e*P	Pn	10 35 27.2	+1.4
	baz=35						
TKM2				⇑*i*S	Sb	10 36 04.7	-0.3
	baz=35						
TKM2	Tokmak 2	2.77	334	⇑*e*P	Pn	10 35 27.0	+1.2
	baz=34						
TKM2				⇑*i*S	Sb	10 36 04.6	-0.4
	baz=34						
AAA	Alma-Ata	2.77	355	*e*P	Pb	10 35 31.8	+0.9
	comp=E,95nm,0.2s						
AAA				*e*S	Sg	10 36 12.7	+2.4
	comp=E,761nm,0.7s						
AAA	Alma-Ata	2.77	355	Pg	Pg	10 35 32.7	-1.6
	comp=E,95nm,0.2s						
AAA				Lg	Lg	10 36 12.4	
	comp=E,761nm,0.7s						
KNDC	Almaty	2.78	356	⇓Pg	Pb	10 35 31.8	+0.9
	comp=E,144nm,0.7s						
KNDC				⇓Lg	Lg	10 36 12.4	
	comp=E,2µm,0.6s						
KBK	Karagaybulak	2.81	323	P	Pn	10 35 27.4	+1.1
	SNR=112						
KBK	Karagaybulak	2.81	323	⇑*e*P	Pn	10 35 27.3	+0.9
	baz=24						
KBK				⇑*i*S	Sb	10 36 05.1	-1.0
	baz=24						
KBK	Karagaybulak	2.81	323	⇓*i*P	Pn	10 35 27.2	+0.9
	baz=24						
KBK				⇓*i*S	Sb	10 36 05.1	-1.0
	baz=24						
ZHN	Zhinishke	2.86	17	*e*P	Pb	10 35 32.4	0.0
	comp=E,45nm,0.1s						
ZHN				*e*S	Sg	10 36 13.7	+0.7
	comp=E,566nm,0.5s						
ZHN	Zhinishke	2.86	17	Pg	Pb	10 35 33.2	+0.8
	comp=E,45nm,0.1s						
ZHN				Lg	Lg	10 36 13.7	
	comp=E,566nm,0.5s						
UZB	Uzynbulak	3.00	25	*e*P	Pb	10 35 35.1	+0.3
	comp=E,30nm,0.8s						
UZB				*e*S	Sg	10 36 18.3	+0.7
	comp=E,151nm,0.8s						
UZB	Uzynbulak	3.00	25	Pg	Pb	10 35 35.3	+0.5
	comp=E,38nm,0.7s						
UZB				Lg	Lg	10 36 17.3	
	comp=E,151nm,0.8s						
AAK	Ala-Archa	3.02	317	P	Pn	10 35 30.0	+0.8
	SNR=40						
AAK	Ala-Archa	3.02	317	⇑*e*P	Pn	10 35 30.3	+1.1
	baz=20						
AAK				⇑*i*S	Sb	10 36 10.2	-1.9
	baz=20						
AAK	Ala-Archa	3.02	317	⇓*e*P	Pn	10 35 29.8	+0.6
	baz=20						
AAK				⇓*i*S	Sb	10 36 10.1	-2.0
	baz=20						
FRU1	Bishkek	3.08	321	⇑*e*P	Pn	10 35 31.2	+1.3
	baz=23						
FRU1				⇑*i*S	Sb	10 36 12.0	-1.7
	baz=23						
KURS	Kuram	3.11	12	*e*P	Pb	10 35 36.7	0.0
	comp=E,60nm,1.0s						
KURS				*e*S	Sg	10 36 21.4	+0.2
	comp=E,150nm,0.6s						
KURS	Kuram	3.11	12	Pg	Pb	10 35 38.0	+1.3
	comp=E,60nm,1.0s						
KURS				Lg	Lg	10 36 21.4	
	comp=E,150nm,0.6s						
CHMS	Chumysh	3.17	324	P	Pn	10 35 32.1	+1.0
	SNR=21						
CHMS	Chumysh	3.17	324	⇑Pn	Pn	10 35 31.8	+0.7
	comp=E,48nm,0.7s						
CHMS				⇑Lg	Lg	10 36 22.2	
	comp=E,262nm,0.6s						
CHMS	Chumysh	3.17	324	⇑*i*P	Pn	10 35 32.2	+1.0
	baz=26						
CHMS				⇑*i*S	Sb	10 36 13.7	-2.6
	baz=26						
CHMS	Chumysh	3.17	324	⇑*e*P	Pn	10 35 31.9	+0.8
	baz=26						
CHMS				⇑*i*S	Sb	10 36 13.7	-2.6
	baz=26						
AML	Almayashu	3.17	303	P	Pn	10 35 31.3	-0.2
	SNR=93						
KPKS	Kokpek	3.20	19	*e*P	Pb	10 35 38.6	+0.4
	comp=E,43nm,0.4s						
KPKS				*e*S	Sg	10 36 24.5	+0.6
	comp=E,317nm,0.4s						
KTBS	Karatobe	3.29	353	*e*P	Pb	10 35 40.2	+0.5
	comp=E,39nm,0.6s						
KTBS				*e*S	Sg	10 36 27.1	+0.2
	comp=E,397nm,0.7s						
KTBS	Karatobe	3.29	353	Pg	Pb	10 35 41.3	+1.6
	comp=E,39nm,0.6s						
KTBS				Lg	Lg	10 36 27.1	
	comp=E,397nm,0.7s						
PDGK	Podgornoye	3.33	29	Pg	Pb	10 35 40.8	+0.5
	comp=E,18nm,0.4s						
PDGK				Lg	Lg	10 36 27.2	
	comp=E,101nm,0.5s						
PDGK	Podgornoye	3.33	29	⇑Pn	Pn	10 35 33.4	0.0
	comp=E,4.2nm,0.5s						
PDGK				⇓Pg	Pb	10 35 40.8	+0.5
	comp=E,46nm,0.8s						
PDGK				⇓Lg	Lg	10 36 27.6	
	comp=E,173nm,0.7s						
CHKK	Chushkaly	3.41	357	*e*P	Pb	10 35 42.8	+1.1
	comp=E,34nm,0.5s						
CHKK				*e*S	Sg	10 36 31.7	+1.0
	comp=E,254nm,0.4s						
CHKK	Chushkaly	3.41	357	Pg	Pg	10 35 44.0	-2.5
	comp=E,34nm,0.5s						
CHKK				Lg	Lg	10 36 31.7	
	comp=E,254nm,0.4s						
EKS2	Erkin-Say	3.43	311	P	Pn	10 35 35.8	+1.0
	SNR=10						
EKS2	Erkin-Say	3.43	311	⇑*i*P	Pn	10 35 35.3	+0.5
	baz=14						
EKS2				⇑*i*S	Sn	10 36 19.4	+3.9
	baz=14						
USP	Ospenovka	3.49	325	P	Pn	10 35 36.0	+0.4
	SNR=11						
USP	Ospenovka	3.49	325	⇑*e*P	Pn	10 35 36.7	+1.1
	baz=26						
USP				⇑*i*S	Sn	10 36 21.6	+4.5
	baz=26						
USP	Ospenovka	3.49	325	⇑*e*P	Pn	10 35 36.5	+0.9
	baz=26						
USP				⇑*i*S	Sn	10 36 21.5	+4.5
	baz=26						
KUU	Kurty	3.51	349	*e*P	Pb	10 35 44.0	+0.6
	comp=E,14nm,0.7s						
KUU				*e*S	Sg	10 36 33.0	-0.9
	comp=E,183nm,1.1s						
KUU	Kurty	3.51	349	Pg	Pb	10 35 44.7	+1.3
	comp=E,14nm,0.7s						
KUU				Lg	Lg	10 36 33.0	
	comp=E,183nm,1.1s						
SGDS	Sogindy	3.59	328	*e*P	Pb	10 35 43.9	-0.9
	comp=E,32nm,0.6s						
SGDS				*e*S	Sg	10 36 33.1	-3.3
	comp=E,137nm,0.7s						
SGDS	Sogindy	3.59	328	Pg	Pb	10 35 44.7	0.0
	comp=E,32nm,0.6s						
SGDS				Lg	Lg	10 36 33.1	
	comp=E,137nm,0.7s						
MRKS	Merke	3.80	309	*e*P	Pb	10 35 48.6	+0.3
	comp=E,26nm,0.5s						
MRKS				*e*S	Sg	10 36 40.9	-2.3
	comp=E,82nm,0.7s						
MRKS	Merke	3.80	309	Pg	Pb	10 35 49.2	+0.9
	comp=E,26nm,0.5s						
MRKS				Lg	Lg	10 36 40.9	
	comp=E,82nm,0.7s						
DJR	Jarkent	4.31	25	*e*P	Pb	10 35 57.7	+0.7
	comp=E,7.6nm,0.6s						
DJR				*e*S	Sg	10 36 57.1	-2.5
	comp=E,76nm,0.6s						
DJR	Jarkent	4.31	25	Pg	Pg	10 35 59.7	-4.1
	comp=E,7.6nm,0.6s						
DJR				Lg	Lg	10 36 58.6	
	comp=E,76nm,0.6s						
TDK	Taldyqorghan	4.63	10	*e*P	Pb	10 36 04.6	+2.1
	comp=E,60nm,0.3s						
TDK				*e*S	Sg	10 37 08.3	-1.6
	comp=E,235nm,0.5s						
TDK	Taldyqorghan	4.63	10	Pg	Pg	10 36 05.8	-4.1
	comp=E,60nm,0.3s						
TDK				Lg	Lg	10 37 09.5	
	comp=E,235nm,0.5s						
KAPS	Kapalarasan	5.08	17	*e*P	Pg	10 36 14.1	-4.2
	comp=E,9.6nm,0.4s						
KAPS				*e*S	Sg	10 37 25.5	+1.4
	comp=E,70nm,0.7s						
KAPS	Kapalarasan	5.08	17	Pg	Pg	10 36 15.4	-3.0
	comp=E,9.6nm,0.4s						
KAPS				Lg	Lg	10 37 25.5	
	comp=E,70nm,0.7s						
BTLS	Baital	5.17	334	*e*P	Pb	10 36 12.7	+1.1
	comp=E,6.0nm,0.3s						
BTLS				*e*S	Sg	10 37 23.3	-3.7
	comp=E,15nm,0.6s						
BTLS	Baital	5.17	334	Pg	Pb	10 36 14.1	+2.5
	comp=E,6.0nm,0.3s						
BTLS				Lg	Lg	10 37 23.3	
	comp=E,15nm,0.6s						
KK31	Karatay Array	5.70	300	Pn	Pn	10 36 04.0	-1.9
	comp=E,1.4nm,0.7s,baz=123,slow=13,SNR=9.6						
KK31				⇑Pg	Pb	10 36 22.6	+1.8
	comp=E,6.1nm,0.6s,baz=129,slow=16,SNR=17						
KK31				⇑Lg	Lg	10 37 40.1	
	comp=E,9.2nm,0.6s,baz=113,slow=27,SNR=6.2						
IUG	Iuzhnay	5.71	290	*e*P	Pb	10 36 23.2	+2.4
	comp=E,404nm,0.5s						
IUG				*e*S	Sg	10 37 40.2	-4.1
	comp=E,71nm,0.8s						
IUG	Iuzhnay	5.71	290	Pg	Pb	10 36 24.0	+3.1
	comp=E,404nm,0.5s						
IUG				Lg	Lg	10 37 40.2	
	comp=E,71nm,0.8s						
MAKZ	Makanchi	7.22	27	⇑Lg	Lg	10 38 32.4	
	comp=E,9.4nm,0.9s						
MK31	Makanchi Array	7.32	28	⇓Pn	Pn	10 36 28.7	+0.6
	comp=E,1.3nm,0.7s,baz=144,slow=43,SNR=7.0						
MK31				⇑Pg	Pb	10 36 53.8	+5.6
	comp=E,3.0nm,0.7s						
MK31				⇑Lg	Lg	10 38 35.3	
	comp=E,4.7nm,0.7s,baz=210,slow=20,SNR=4.4						
CHCP	Chirah Chowk	7.49	206	P	Pn	10 36 23.2	-7.3
CEP	Cherat	7.87	215	P	Pn	10 36 26.7	-9.1
CEP				S	Sn	10 37 53.0	-12
WMQ	Urumqi	8.45	63	*e*P	Pn	10 36 41.9	-1.8
WMQ				smax	smax		
	comp=N,27nm,0.7s						
WMQ				smax	smax		
	comp=E,25nm,0.7s						
OTUK	Ortayu	8.56	337	⇑Lg	Lg	10 39 12.6	
	comp=E,66nm,0.8s						
KURBB	Kurchatov Arra	10.22	5	⇓Lg	Lg	10 40 09.0	
	comp=E,39nm,0.8s						
KURK	Kurchatov	10.31	5	⇑Lg	Lg	10 40 09.4	
	comp=E,33nm,1.0s						

IDC 24 10:45:15.5±7.3, **22°.10S**×**178°.82E, h640**km±70km, **mb2.7**/3,
mbtmp3.7/5, **Error ellipse: s-maj=230.6km**
s-min=24.2km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.40	350	P	P	10 46 46.7	-0.2
	8.1nm,0.6s,baz=140,slow=20,SNR=6.7						
DZM	Mont Dzumac	11.48	268	P	P	10 47 49.2	-0.3
	2.4nm,0.7s,baz=143,slow=18,SNR=2.2						
ASAR	Alice Springs	41.28	259	P	P	10 52 07.2	-0.7
	0.6nm,0.6s,baz=94,slow=6.6,SNR=13						
	0.6nm,0.6s						
WRA	Warramunga Arr	41.47	265	P	P	10 52 10.1	+0.7
	0.8nm,0.4s,baz=98,slow=8.2,SNR=34						
	0.8nm,0.4s						
TXAR	Lajitas Array	90.41	58	P	P	10 57 11.0	0.0
	0.3nm,0.7s,baz=209,slow=6.6,SNR=4.9						
	0.3nm,0.7s						

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*FUNV **24** 10:50:44.4, 9°.23N×70°.72W, h13km, MW3.6*

ISC 24 10:50:43.9±1.0, **9°.18N**±0°.03×**70°.67W**±0°.03, **h23**km±10km,
n32, σ**1s.78**/63, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	0.30	174	⇓*i*P	Pb	10 50 50.7	-0.2
SDV				*e*S	Sb	10 50 56.1	+0.4
SDV				*i*		10 50 56.4	
	comp=Z,2µm,0.3s						
CURV	Curarigua	1.08	40	*e*P	Pb	10 51 05.8	+1.9
CURV				*e*S	Sb	10 51 18.9	+1.3
SIQV	Siquisique	1.68	30	*e*P	Pn	10 51 13.2	+1.2
SIQV				*e*S	Sn	10 51 34.2	+1.4
DABV	Dabajuro	1.73	1	*e*P	Pn	10 51 12.0	-0.5
DABV				*e*S	Sn	10 51 33.6	-0.3
MCQV	Machiques	2.03	295	*e*P	Pn	10 51 16.7	-0.1
MCQV				*e*S	Sn	10 51 41.0	-0.5
MAPV	Macapo	2.27	73	*e*P	Pn	10 51 21.6	+1.6
MAPV				*e*S	Sn	10 51 49.0	+1.7
BAUV	El Baul	2.60	95	*e*P	Pn	10 51 26.2	+1.6
BAUV				*e*S	Sn	10 51 56.9	+1.4
JACV	Jacura	2.62	44	*e*P	Pn	10 51 25.7	+0.9
JACV				*e*S	Sn	10 51 56.2	+0.3
PAMC	Pamplona, Colo	2.72	228	*e*P	Pb	10 51 33.6	+1.4
PAMC				*e*S	Sb	10 52 02.2	-3.2
PAMC				*i*		10 52 11.5	
	comp=Z,108nm,0.4s						
OCAC	Ocana	2.79	251	*e*P	Pb	10 51 32.9	-0.2
OCAC				*e*S	Sb	10 52 07.3	+0.5
OCAC				*i*		10 52 10.3	
	comp=Z,379nm,0.3s						
URIC	Uribia, Colomb	2.82	333	*e*P	Pb	10 51 32.7	-0.9
URIC				*e*S	Sb	10 52 05.5	-2.2
URIC				*i*		10 52 09.3	
	comp=Z,113nm,0.3s						
CRJC	Cerrejon, Guaj	2.84	310	*e*P	Pn	10 51 26.0	-2.0
CRJC				*e*S	Sn	10 51 57.7	-3.9
CRJC				*i*		10 52 10.6	
	comp=Z,98nm,0.4s						
TAMC	Tame, Arauca	2.95	202	*e*P	Pb	10 51 38.0	+2.2
TAMC				*e*S	Sb	10 52 07.4	-4.1
TAMC				*i*		10 52 24.8	
	comp=Z,85nm,0.6s						
TURV	Turiamo	3.06	65	*e*P	Pn	10 51 32.2	+1.4
TURV				*e*S	Sn	10 52 07.3	+0.7
BENV	Beln	3.12	75	*e*P	Pn	10 51 33.4	+1.6
BENV				*e*S	Sn	10 52 08.8	+0.4
BARC	Barichara	3.58	224	*e*P	Pb	10 51 48.6	+1.9
BARC				*e*S	Sb	10 52 28.4	-1.6
BARC				*i*		10 52 39.6	
	comp=Z,47nm,0.5s						
ARGC	Ariguani, Magd	3.59	281	*e*P	Pn	10 51 37.6	-0.7
ARGC				*e*S	Sb	10 52 32.3	+2.3
ARGC				*i*		10 52 34.0	
	comp=Z,13nm,0.2s						
RUSC	La Rusia	4.05	216	*e*P	Pn	10 51 47.9	+2.9
RUSC				*e*S	Sn	10 52 32.4	+0.4
RUSC				*i*		10 52 36.3	
	comp=Z,16nm,0.3s						
MERV	Las Mercedes	4.31	89	*e*P	Pn	10 51 49.8	+1.6
MERV				*e*S	Sn	10 52 37.3	-0.5
CACV	CAICARA DEL OR	4.39	111	*e*P	Pb	10 51 57.0	-3.3
CACV				*e*S	Sb	10 52 51.6	-1.2
ZARC	Zaragoza, Cauc	4.48	248	*e*P	Pn	10 51 50.0	-0.4
ZARC				*e*S	Sn	10 52 45.0	+3.2
ZARC				*i*		10 53 10.1	
	comp=Z,25nm,0.3s						
SJCC	San Jacinto, C	4.51	279	*e*P	Pn	10 51 50.8	0.0
SJCC				*e*S	Sn	10 52 45.0	+2.3
SJCC				*i*		10 52 53.6	
	comp=Z,9.0nm,0.4s						
BIRV	Birongo	4.52	73	*e*P	Pn	10 51 52.3	+1.4
BIRV				*e*S	Sn	10 52 41.1	-1.7
PTBC	PUERTO BERRIO,	4.58	235	*e*P	Pn	10 51 51.2	-0.6
PTBC				*e*S	Sn	10 52 44.7	+0.3
PTBC				*i*		10 53 08.0	
	comp=Z,29nm,0.5s						
SPBC	San Pablo de B	4.87	224	*e*P	Pn	10 51 56.6	+0.7
SPBC				*e*S	Sn	10 52 52.0	+0.4
SPBC				*i*		10 53 05.2	
	comp=Z,16nm,0.3s						
PTGC	Puerto Gaitan,	5.16	197	*e*P	Pn	10 51 59.7	-0.2
PTGC				*e*S	Sn	10 52 59.0	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHIC	Chingaza	5.45	214	eP	Pn	10 52 05.7	+1.5
CHIC				eS	Sn	10 53 06.3	-0.1
CHIC	comp=Z,15nm,0.5s			i		10 53 16.4	
PCRV	Puerto La Cruz	6.03	80	eP	Pn	10 52 12.9	+1.2
PCRV				eS	Sn	10 53 17.7	-2.3
CBOC	Ciudad Bolivar	6.24	238	eP	Pn	10 52 18.8	+4.0
CBOC				eS	Sn	10 53 28.6	+3.0
CBOC	comp=Z,3.7nm,0.4s			i		10 54 05.4	
GUVC	San Jose del G	6.88	197	eP	Pb	10 53 16.4	+34
GUVC				eS	Sn	10 53 40.6	-0.4
GUVC	comp=Z,62nm,0.3s			i		10 53 43.0	
PLMC	San Jos del P	7.01	233	eP	Pn	10 52 27.4	+2.1
PLMC				eS	Sn	10 53 42.7	-1.7
PLMC	comp=Z,2.6nm,0.4s			i		10 53 50.1	
MACC	Macarena, Meta	7.68	205	eP	Pn	10 52 33.6	-0.8
MACC				eS	Sn	10 53 59.0	-1.7
MACC	comp=Z,11nm,0.5s			i		10 54 04.9	

*DDA **24** 10:57:58.4±0.0, 37°.73N×37°.44E, h7^{km}±3^{km}, ML2.5*
*ISK **24** 10:57:58.1, 37°.74N×37°.49E, h15^{km}, ML2.8/11*
ISC 24 10:57:58.2±1.1, **37°.72N**±0°.03×**37°.49E**±0°.03, **h11**^{km}±10^{km}, **n20**, σ0^{s}.**51**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.37	171	P	Pn	10 58 08.7	-0.9
GZT	comp=N,1μm,0.2s			i AML	AML	10 58 12.0	
GZT	comp=E,620nm,0.3s			i AML	AML	10 58 12.0	
GZT				S	Sb	10 58 12.3	-0.3
KAHM	Kahramanmaras,	0.45	244	P	Pg	10 58 07.4	+0.5
KAHM	comp=E,439nm,0.2s			i AML	AML	10 58 13.0	
KAHM	comp=N,743nm,0.5s			i AML	AML	10 58 13.0	
KAHM				S	Sg	10 58 13.4	+0.5
HCB	Kahramanmara	0.59	231	P	Pg	10 58 09.5	-0.3
HCB	comp=N,168nm,0.5s			i AML	AML	10 58 18.0	
HCB				S	Sg	10 58 18.2	+0.6
HCB	comp=E,145nm,0.2s			i AML	AML	10 58 19.0	
AKCD	Akcadag	0.67	30	P	Pg	10 58 11.3	+0.1
AKCD				S	Sb	10 58 21.4	0.0
AKCD	comp=E,163nm,0.3s			i AML	AML	10 58 25.0	
AKCD	comp=N,203nm,0.6s			i AML	AML	10 58 26.0	
KAMA	Osmaniye	0.84	231	P	Pb	10 58 14.9	0.0
KAMA				S	Sg	10 58 25.4	-0.1
KAMA	comp=E,154nm,0.3s			i AML	AML	10 58 29.0	
KAMA	comp=N,156nm,0.6s			i AML	AML	10 58 29.0	
DARE	Darende-Malaty	0.85	360	PG	Pg	10 58 14.6	-0.1
DARE				SG	Sb	10 58 26.5	-0.1
ANDN	Andirin	0.92	262	P	Pg	10 58 15.7	-0.2
ANDN				S	Sg	10 58 27.5	-0.5
ANDN	comp=N,189nm,0.3s			i AML	AML	10 58 32.0	
ANDN	comp=E,162nm,0.3s			i AML	AML	10 58 32.0	
MALT	Malatya	0.95	51	PG	Pg	10 58 16.7	+0.2
MALT				SG	Sb	10 58 30.1	+0.7
SARI	SarD1z-Kayseri	1.09	309	PG	Pn	10 58 19.4	-0.2
SARI				SG	Sn	10 58 34.7	-0.1
SAIM	ADANA	1.15	283	P	Pb	10 58 19.5	-0.6
SAIM				S	Sn	10 58 37.2	+1.2
SAIM	comp=E,246nm,0.5s			i AML	AML	10 58 40.0	
SAIM	comp=N,190nm,0.2s			i AML	AML	10 58 41.0	
KOZT	Kozan	1.34	260	PN	Pb	10 58 23.0	-0.4
KOZT				SN	Sg	10 58 40.9	-0.5
ARPR	Arapgir-MALATY	1.52	26	PN	Pn	10 58 24.9	-0.7
SVRC	Sivrice-ELAZID	1.58	65	PN	Pn	10 58 25.7	-0.6
AKO	Adana	1.65	262	P	Pb	10 58 28.3	-0.3
AKO				S	Sn	10 58 47.9	-0.3
AKO	comp=N,17nm,0.4s			i AML	AML	10 58 54.0	
TAHT	Tahtakopru-Hat	1.70	218	PN	Pn	10 58 28.5	+0.7
BNN	Bunyan	1.72	312	PN	Pn	10 58 28.1	-0.1
CMRD	Camardi-Nigde	1.98	269	PN	Pn	10 58 32.2	+0.4
SVSK	Karacayir	2.23	350	PN	Pn	10 58 35.5	+0.4
MAZI	Mazidag	2.36	95	PN	Pn	10 58 37.7	+0.7
YOZ	Yozgat	2.56	319	PN	Pn	10 58 40.1	+0.3

*KRNET **24** 11:08:02.1±0.1, 39°.70N×75°.68E, mb3.6*
*SOME **24** 11:08:06.1, 40°.07N×75°.42E, h0^{km}*
*NNC **24** 11:08:07.4±0.7, 40°.01N×75°.40E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=5.0km s-min=3.5km az=161.0*
ISC 24 11:07:57.8±1.5, **39°.68N**±0°.05×**75°.55E**±0°.03, **h11**^{km}±15^{km}, **n68**, σ1^{s}.**46**/99, **32C-17D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh baz=91	2.28	293	⇑iP	Pg	11 08 43.9	+2.3
OHH	baz=91			⇑iS	Sg	11 09 14.4	+3.2
ARLS	Aral baz=35	2.37	337	⇑iP	Pg	11 08 44.1	+0.8
ARLS	baz=35			⇑iS	Sg	11 09 14.8	+0.8
ULHL	Ulahol SNR=7.8	2.62	11	P	Pg	11 08 50.1	+2.2
ULHL	Ulahol baz=9.0	2.62	11	⇑eP	Pg	11 08 47.0	-1.0
ULHL	baz=9.0			⇑iS	Sg	11 09 19.7	-2.2
UCH	Uchtor SNR=26	2.67	343	P	Pg	11 08 48.4	-0.4
UCH	Uchtor baz=41	2.67	343	⇓eP	Pg	11 08 48.5	-0.4
UCH	baz=41			⇓iS	Sg	11 09 22.2	-1.3
KDJ	Kajisay baz=25	2.74	26	⇓iP	Pb	11 08 48.6	+1.6
KDJ	baz=25			⇓iS	Sb	11 09 22.4	+1.7
BOOM	Boomskoye usch baz=4.0	2.83	6	⇓iP	Pb	11 08 49.9	+1.5
BOOM	baz=4.0			⇓iS	Sb	11 09 24.8	+1.8
AML	Almayashu SNR=35	2.83	331	P	Pb	11 08 50.2	+1.7
DRK	Karamyk baz=67	2.91	267	⇑iP	Pg	11 08 52.9	-0.6
DRK	baz=67			⇑iS	Sg	11 09 30.0	-1.1
KBK	Karagaybulak SNR=35	3.01	352	P	Pb	11 08 53.6	+2.1
KBK	Karagaybulak baz=50	3.01	352	⇑eP	Pb	11 08 52.9	+1.4
KBK	baz=50			⇑iS	Sb	11 09 29.8	+1.4
AAK	Ala-Archa SNR=30	3.06	345	P	Pb	11 08 53.9	+1.4
AAK	Ala-Archa baz=43	3.06	345	⇓iP	Pb	11 08 53.8	+1.4
AAK	baz=43			⇓iS	Sb	11 09 31.3	+1.4
FRU1	Bishkek baz=46	3.21	348	⇑eP	Pb	11 08 55.8	+1.0
FRU1	baz=46			⇑iS	Sb	11 09 35.0	+1.1
TKM2	Tokmak 2 SNR=11	3.24	1	P	Pb	11 08 57.2	+1.7
TKM2	Tokmak 2 6.3nm,0.3s	3.24	1	⇓Pn	Pb	11 08 56.3	+0.9
TKM2	119nm,0.8s			⇑Lg	Lg	11 09 40.3	
TKM2	Tokmak 2 baz=59	3.24	1	⇓eP	Pb	11 08 55.8	+0.3
TKM2	baz=59			⇓iS	Sb	11 09 35.0	0.0
EKS2	Erkin-Say baz=35	3.27	336	⇑iP	Pb	11 08 56.5	+0.6
EKS2	baz=35			⇑iS	Sb	11 09 36.6	+0.9
CHMS	Chumysh SNR=11	3.37	350	P	Pb	11 08 58.1	+0.5
CHMS	Chumysh 16nm,0.5s	3.37	350	⇑Pn	Pb	11 08 57.4	-0.2
CHMS	22nm,0.7s			⇑Lg	Lg	11 09 43.4	
KST	Kastek 16nm,0.4s	3.38	5	eP	Pg	11 09 03.4	+0.9
KST	169nm,0.5s			eS	Sg	11 09 44.6	-1.7
KST	Kastek 16nm,0.4s	3.38	5	Pg	Pg	11 09 03.4	+0.9
KST	169nm,0.5s			Lg	Lg	11 09 45.1	
ARK	Arkit baz=8.0	3.45	309	⇑iP	Pb	11 09 00.2	+1.2
ARK	baz=8.0			⇑iS	Sb	11 09 42.2	+1.2
ANVS	Anan'yevo baz=25	3.49	27	⇑iP	Pb	11 08 58.7	-1.0
ANVS	baz=25			⇑iS	Sb	11 09 39.9	-2.3
MTBS	Maitube 16nm,0.5s	3.51	11	eP	Pg	11 09 06.2	+1.1
MTBS	39nm,0.4s			eS	Sg	11 09 49.4	-1.1
MTBS	Maitube 16nm,0.5s	3.51	11	Pg	Pg	11 09 06.2	+1.1
MTBS	39nm,0.4s			Lg	Lg	11 09 50.9	
TNSS	Tian-Shan 14nm,0.3s	3.52	17	eP	Pg	11 09 06.3	+1.1
TNSS	16nm,0.6s			eS	Sg	11 09 49.7	-1.1
TNSS	Tian-Shan 14nm,0.3s	3.52	17	Pg	Pg	11 09 06.3	+1.1
TNSS	16nm,0.6s			Lg	Lg	11 09 50.4	
MRKS	Merke 13nm,0.6s	3.53	331	eP	Pg	11 09 04.3	-1.1
MRKS	23nm,0.8s			eS	Sb	11 09 46.3	+3.1
MRKS	Merke 13nm,0.6s	3.53	331	Pg	Pg	11 09 04.4	-1.1
MRKS	23nm,0.8s			Lg	Lg	11 09 47.2	
PRZ	Przheval'sk baz=35	3.53	37	⇓iP	Pb	11 08 59.5	-1.0
PRZ	baz=35			⇓iS	Sb	11 09 40.9	-2.6
MDOK	Medeo 10nm,0.4s	3.66	17	eP	Pg	11 09 09.2	+1.3
MDOK	43nm,0.6s			eS	Sg	11 09 54.8	-0.5
MDOK	Medeo 7.3nm,0.5s	3.66	17	Pn	Pb	11 09 02.0	-0.6
MDOK	54nm,0.8s			⇑Lg	Lg	11 09 55.2	
MDOK	Medeo 10nm,0.4s	3.66	17	Pg	Pg	11 09 09.2	+1.3
MDOK	43nm,0.6s			Lg	Lg	11 09 54.8	
BTK	Batken baz=77	3.66	277	⇑eP	Pb	11 09 03.4	+0.8
BTK	baz=77			⇑iS	Sb	11 09 47.9	+0.9
USP	Ospenovka SNR=6.8	3.67	348	P	Pb	11 09 01.9	-0.8
KNDC	Almaty 129nm,0.6s	3.69	16	⇑Lg	Lg	11 09 55.7	
SGDS	Sogindy 11nm,0.6s	3.83	350	eP	Pg	11 09 11.6	+0.4
SGDS	20nm,0.8s			eS	Sg	11 09 58.6	-2.3
SGDS	Sogindy 11nm,0.6s	3.83	350	Pg	Pg	11 09 11.6	+0.4
SGDS	20nm,0.8s			Lg	Lg	11 09 58.6	
TRKS	Terek-Say baz=99	3.83	300	⇑iP	Pb	11 09 04.6	-1.0
TRKS	baz=99			⇑iS	Sb	11 09 50.2	-1.9
SATY	Saty 7.0nm,0.3s	4.00	32	eP	Pg	11 09 16.4	+1.9
SATY	14nm,0.9s			eS	Sg	11 10 07.1	+0.7
SATY	Saty 7.0nm,0.3s	4.00	32	Pg	Pg	11 09 16.4	+1.9
SATY	14nm,0.9s			Lg	Lg	11 10 07.1	
KRBS	Karabastau 10.0nm,0.4s	4.02	1	eP	Pg	11 09 15.5	+0.8
KRBS	13nm,0.4s			eS	Sg	11 10 05.6	-1.1
KRBS	Karabastau 10.0nm,0.4s	4.02	1	Pg	Pg	11 09 15.5	+0.8
KRBS	13nm,0.4s			Lg	Lg	11 10 05.6	
GAR	Garm baz=62	4.11	262	⇑iP	Pb	11 09 09.5	-0.8
GAR	baz=62			⇑iS	Sb	11 09 59.0	-1.1
KTBS	Karatobe 13nm,0.4s	4.12	12	eP	Pg	11 09 17.0	+0.3
KTBS	55nm,0.4s			eS	Sg	11 10 07.9	-2.1
KTBS	Karatobe 13nm,0.4s	4.12	12	Pg	Pg	11 09 17.0	+0.3
KTBS	55nm,0.4s			Lg	Lg	11 10 09.5	
KUU	Kurty 5.5nm,0.4s	4.25	8	eP	Pg	11 09 19.9	+0.7
KUU	26nm,0.4s			eS	Sg	11 10 13.2	-1.2
KUU	Kurty 5.5nm,0.4s	4.25	8	Pg	Pg	11 09 19.9	+0.7
KUU	26nm,0.4s			Lg	Lg	11 10 13.1	
CHKK	Chushkaly 11nm,0.6s	4.31	14	eP	Pg	11 09 20.8	+0.5
CHKK	41nm,0.8s			eS	Sg	11 10 14.4	-1.7
CHKK	Chushkaly 11nm,0.6s	4.31	14	Pg	Pg	11 09 20.8	+0.5
CHKK	41nm,0.8s			Lg	Lg	11 10 15.7	
UZB	Uzynbulak 3.4nm,0.4s	4.34	36	eP	Pg	11 09 22.9	+2.0
UZB	7.4nm,0.5s			eS	Sg	11 10 18.2	+1.1
UZB	Uzynbulak 3.4nm,0.4s	4.34	36	Pg	Pg	11 09 22.9	+2.0
UZB	7.4nm,0.5s			Lg	Lg	11 10 18.2	
KPKS	Kokpek 4.3nm,0.2s	4.46	31	eP	Pg	11 09 23.9	+0.8
KPKS	30nm,0.6s			eS	Sg	11 10 20.0	-0.8
PDGK	Podgornoye 3.2nm,0.6s	4.70	38	Pg	Pg	11 09 28.5	+0.8
PDGK	7.3nm,0.7s			Lg	Lg	11 10 27.9	
PDGK	Podgornoye 6.6nm,0.8s	4.70	38	⇓Pg	Pg	11 09 30.8	+3.0
PDGK	19nm,0.7s			⇓Lg	Lg	11 10 29.0	
IUG	Iuzhnay 174nm,0.6s	4.86	302	eP	Pg	11 09 31.1	+0.4
IUG	22nm,0.6s			eS	Sg	11 10 32.5	-1.1
IUG	Iuzhnay 174nm,0.6s	4.86	302	Pg	Pg	11 09 31.1	+0.4
IUG	22nm,0.6s			Lg	Lg	11 10 32.5	
KK31	Karatay Array 1.3nm,0.3s,baz=126,slow=12,SNR=15	5.11	314	Pn	Pn	11 09 19.5	+5.2
KK31	1.2nm,0.8s,baz=124,slow=13,SNR=5.4			⇑Pg	Pg	11 09 34.5	-1.1
KK31	1.3nm,0.3s,baz=131,slow=27,SNR=4.7			⇓Lg	Lg	11 10 38.6	
BTLS	Baital 3.3nm,0.4s	5.47	349	eP	Pg	11 09 41.5	-1.1
BTLS	13nm,0.7s			eS	Sg	11 10 50.3	-3.2
BTLS	Baital 3.3nm,0.4s	5.47	349	Pg	Pg	11 09 41.5	-1.1
BTLS	13nm,0.7s			Lg	Lg	11 10 50.3	
DJR	Jarkent 1.0nm,0.3s	5.62	33	eP	Pg	11 09 46.1	+0.7
DJR	4.3nm,0.5s			eS	Sg	11 10 58.1	-0.1
DJR	Jarkent 1.0nm,0.3s	5.62	33	Pg	Pg	11 09 46.1	+0.7
DJR	4.3nm,0.5s			Lg	Lg	11 10 58.1	
KAPS	Kapalarasan 2.5nm,0.4s	6.27	25	eP	Pg	11 09 56.1	-1.7
KAPS	4.5nm,0.6s			eS	Sg	11 11 14.6	-4.3
OTUK	Ortayu 10.0nm,0.8s	8.87	346	⇓Lg	Lg	11 12 38.3	
KURBB	Kurchatov Arra 8.3nm,0.8s	11.14	10	⇑Lg	Lg	11 13 49.2	
KURK	Kurchatov 10nm,1.0s	11.25	10	⇑Lg	Lg	11 13 54.4	

*STR **24** 11:38:39.9±0.3, 43°N±2°×°±°, h1^{km}, MLv1.6/6, preliminary*
*LDG **24** 11:38:40.5±0.1, 43°.03N×0°.33W, h2^{km}, Md2.5/3, Ml2.5/11, Error ellipse: s-maj=1.0km s-min=0.8km az=142.0*
*MDD **24** 11:38:41.4±0.3, 43°.03N×0°.33W, h0^{km}, mb_Lg2.1/6, Error ellipse: s-maj=2.9km s-min=1.7km az=1.0*
ISC 24 11:38:39.0±0.9, **43°.04N**±0°.02×**0°.35W**±0°.02, **h13**^{km}±7^{km}, **n34**, σ1^{s}.**31**/66, **2C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETSF	Etsaut	0.21	227	ePg	Pb	11 38 44.8	0.0
ETSF	55nm,0.2s			eSg	Sg	11 38 48.0	+1.0
PYLO	Lourdes	0.23	76	Pg	Pg	11 38 43.8	-0.2
PYLO				Sg	Sg	11 38 46.6	-0.7
ATE	Arette	0.26	279	Pg	Pb	11 38 45.6	0.0
ATE				Sg	Sb	11 38 49.8	-0.2
CANF	Canfranc	0.31	204	⇑Pg	Pb	11 38 46.4	0.0
CANF				Sg	Sb	11 38 51.0	-0.4
VIEF	Viey	0.32	120	⇑Pg	Pb	11 38 46.0	-0.6
VIEF				Sg	Sb	11 38 50.0	-1.7
EPF	Esparros	0.51	91	ePg	Pb	11 38 49.2	-0.6
EPF	16nm,0.3s			eSg	Sb	11 38 56.3	-0.8
ECHI	Chisagues Biel	0.55	133	Pg	Pb	11 38 50.3	-0.3
ECHI				Sg	Sb	11 38 57.1	-1.4
ECHI				i Vmb_Lg		11 38 58.5	
ECHI	Chisagues Biel	0.55	133	Pg	Pb	11 38 50.4	-0.3
ECHI				Sg	Sb	11 38 57.7	-0.7
SJPF	Ste Jean	0.65	277	ePg	Pn	11 38 53.2	-0.7
SJPF	12nm,0.3s			eSg	Sb	11 39 02.0	+0.9
OSSF	Osses	0.70	288	Pg	Pn	11 38 53.6	-1.0
EORO	Oroz-Betelu	0.72	258	Pg	Pn	11 38 54.7	-0.2
EORO				Sg	Sn	11 39 05.2	-0.7
EORO				i Vmb_Lg		11 39 07.6	
ESAC	San Caprasio	1.32	184	Pg	Pg	11 39 06.0	+1.5
ESAC				Sg	Sn	11 39 24.1	+3.4
MONQ	Montcuq	1.73	40	Pn	Pb	11 39 10.4	-0.3
MONQ				Pg	Pg	11 39 13.0	+0.6
MONQ				Sn	Sg	11 39 35.5	+0.6
MONQ				Sg	Sb	11 39 36.6	+4.2
FNEB	Nbias	1.81	94	Pg	Pg	11 39 14.1	+0.3
FNEB				Sg	Sg	11 39 39.1	+1.8
MTLF	Montolieu	1.90	80	ePn	Pb	11 39 12.4	-1.2
MTLF	Montolieu	1.90	80	ePg	Pg	11 39 15.6	+0.1
MTLF	5.9nm,0.3s			eSg	Sg	11 39 39.9	-0.3
EPOB	Poblet	2.00	147	Pg	Pg	11 39 17.4	+0.1
EPOB				i Vmb_Lg		11 39 43.2	
EPOB				Sg	Sg	11 39 43.6	+0.4
LFF	La Frestale	2.05	22	ePn	Pn	11 39 14.0	+0.8
LFF	La Frestale	2.05	22	ePg	Pg	11 39 18.9	+0.5
LFF				eSn	Sn	11 39 39.2	+0.5
LFF	13nm,0.3s			eSg	Sg	11 39 45.4	+0.4
ELAN	Lanestosa	2.27	276	Sg	Sg	11 39 50.9	-1.0
EJON	La Jonquera	2.46	103	Sg	Sg	11 39 59.2	+1.2
ETOR	Torete	2.56	210	Pn	Pb	11 39 22.9	-2.0
ETOR				Sn	Sb	11 39 53.2	-3.1
CAF	Calviac	2.56	42	ePn	Pn	11 39 21.3	+1.0
CAF	Calviac	2.56	42	ePg	Pg	11 39 28.5	+0.3
CAF				eSn	Sn	11 39 51.7	+0.3
CAF	3.5nm,0.2s			eSg	Sg	11 40 01.3	-0.1
RJF	Les Rejaudoux	2.63	30	ePn	Pn	11 39 22.2	+1.0
RJF	Les Rejaudoux	2.63	30	ePg	Pg	11 39 29.4	0.0
RJF				eSn	Sn	11 39 53.0	+0.1
RJF	4.4nm,0.2s			eSg	Sg	11 40 03.0	-0.5
LASF	Ste Croix	3.23	70	ePn	Pn	11 39 30.4	+1.0
LASF	Ste Croix	3.23	70	ePg	Pg	11 39 40.1	-0.8
LASF				eSn	Sn	11 40 06.8	-0.9
LASF	1.7nm,0.3s			eSg	Sg	11 40 21.5	-1.2
MFF	Saint Martin d	3.56	2	ePg	Pg	11 39 46.8	-0.5
MFF				eSn	Sn	11 40 15.5	-0.4
MFF	1.7nm,0.2s			eSg	Sg	11 40 33.0	-0.4
TCF	Toulx Ste Croi	3.72	28	ePn	Pn	11 39 37.2	+1.0
TCF	Toulx Ste Croi	3.72	28	ePg	Pg	11 39 49.6	-0.7
TCF	1.6nm,0.2s			eSg	Sg	11 40 37.6	-0.9
BGF	Bois d'Agland	4.19	32	ePg	Pg	11 39 58.1	-1.1
BGF	9.3nm,0.4s			eSg	Sg	11 40 51.9	-1.5
AVF	Avril sur Loir	4.58	34	ePg	Pg	11 40 05.3	-1.4
AVF				eSn	Sn	11 40 39.5	-1.4
AVF	1.5nm,0.3s			eSg	Sg	11 41 04.2	-1.7
ROSF	Rostrenen	5.68	340	eP	Pn	11 40 07.7	+4.7

*ISU **24** 11:46:06, 41°.30N×70°.41E, h5^{km}*
*NNC **24** 11:46:06.0±3.2, 40°.88N×70°.15E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=23.7km s-min=15.7km az=41.0*
*KRNET **24** 11:46:07.2±0.1, 41°.09N×70°.22E, h14^{km}, mb3.0*
ISC 24 11:46:06.8±1.2, **41°.09N**±0°.02×**70°.31E**±0°.04, **h4**^{km}±11^{km}, **n17**, σ2^{s}.**08**/31, **14C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHDK	Chadak	0.36	110	P	Pg	11 46 14.5	+0.7
CHDK				S	Sb	11 46 20.9	-0.9
CHMG	Chimgan	0.51	334	P	Pg	11 46 16.3	-0.3
CHMG				S	Sg	11 46 22.5	-0.7
TRKS	Terek-Say baz=63	0.77	55	⇑iP	Pb	11 46 23.0	+0.2
TRKS	baz=63			⇑iS	Sb	11 46 33.8	+0.2
IUG	Iuzhnay 535nm,0.2s	1.07	349	P	Pn	11 46 30.6	+1.8
IUG	181nm,0.3s			S	Sn	11 46 49.1	+5.0
BTK	Batken baz=56	1.10	159	⇑iP	Pn	11 46 28.9	-0.2
BTK	baz=56			⇑iS	Sn	11 46 44.4	-0.4
CHMI	Chimion	1.24	131	P	Pg	11 46 33.1	+2.5
CHMI				S	Sn	11 46 52.3	+4.2
ARK	Arkit baz=61	1.43	60	⇑iP	Pg	11 46 35.2	+0.9
ARK	baz=61			⇑iS	Sg	11 46 55.3	+2.5
BRLS	Borolday 33nm,0.3s	1.97	350	P	Pn	11 46 39.8	-1.2
BRLS	13nm,0.3s			S	Sn	11 47 04.0	-2.1
DRK	Karamyk baz=42	1.98	144	⇓iP	Pg	11 46 44.3	-0.4
DRK	baz=42			⇓iS	Sg	11 47 11.4	+1.1
KK31	Karatay Array 4.0nm,0.3s,baz=193,slow=15,SNR=41	2.02	4	Pn	Pb	11 46 44.5	+0.4
KK31	12nm,0.6s,baz=192,slow=26,SNR=10.0			⇓Sn	Sg	11 47 13.5	+1.9
KKAR	Karatay Array baz=6.0	2.02	4	⇑iP	Pb	11 46 44.2	+0.2
KKAR	baz=6.0			⇑iS	Sg	11 47 11.4	-0.2
GAR	Garm baz=78	2.09	180	⇑eP	Pb	11 46 45.1	-0.2

GAR				⇑*i*S	**Sg**	**11 47 13.0**	**-1.0**
	baz=78						
MRKS	**Merke**	**2.73**	**52**	Pg	**Pg**	**11 47 01.7**	**+2.5**
	9.2nm,0.4s						
MRKS				Lg	Lg	11 47 41.1	
	14nm,0.4s						
ARLS	**Aral**	**3.11**	**74**	⇑*i*P	**Pb**	**11 47 00.3**	**-2.5**
	baz=75						
ARLS				⇑*i*S	**Sb**	**11 47 38.9**	**-2.3**
	baz=75						
UCH	**Uchtor**	**3.35**	**69**	⇑*i*P	**Pb**	**11 47 03.8**	**-3.2**
	baz=69						
UCH				⇑*i*S	**Sb**	**11 47 45.1**	**-3.2**
	baz=69						
SGDS	**Sogindy**	**3.98**	**52**	Pg	**Pg**	**11 47 21.8**	**-1.3**
	1.3nm,0.3s						
SGDS				Lg	Lg	11 48 14.7	
	3.1nm,0.5s						
KRBS	**Karabastau**	**4.75**	**55**	Pg	**Pg**	**11 47 36.1**	**-1.7**
	1.1nm,0.3s						
KRBS				Lg	Lg	11 48 39.4	
	2.3nm,0.5s						

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*IDC **24** 11:56:39.0±0.6, 30°.61N×132°.83E, h0^{km}, mb4.0/14, mbtmp3.9/19, ML3.5/5, MS3.1/10, Error ellipse: s-maj=21.5km s-min=14.5km az=82.0*

*JMA **24** 11:56:41.3±0.2, 30°.6N±0°.8×13°3E±°, h69^{km}, MV3.7/28, N PHILIPPINE BASIN*

*NIED **24** 11:56:41.3, 30°.58N×132°.80E, h69^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.06; M$_{\theta\theta}$0.76; M$_{\phi\phi}$1.30; M$_{r\theta}$0.29; M$_{\theta\phi}$0.26; M$_{\phi r}$0.89; Fault plane solution: M$_0$1.97000×10^{15} NP1:ϕ_s23.00000°, δ31.00000°, λ-88.00000°. NP2:ϕ_s200.00000°, δ59.00000°, λ-91.00000°.*

*NEIC **24** 11:56:41.6±1.5, 30°.59N±0°.07×132°.73E±0°.09, h10^{km}±1^{km}, mb4.4/34 Error ellipse: s-maj=13.0km s-min=11.5km az=119.0*

ISC 24 11:56:39.9±2.8**, 30°.57N**±0°.05×**132°.69E**±0°.05**, h4**^{km}±17^{km}**, n90, σ0^{s}90**/86**, mb4.3**/31**, MS3.4**/7**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**1.48**	**274**	P	**Pn**	**11 57 07.5**	**+0.2**
JTN				*e*S	**Sg**	**11 57 26.9**	**-0.5**
JNAR	**Kushima--Naru**	**1.55**	**308**	P	**Pn**	**11 57 08.4**	**+0.2**
JNAR				*e*S	**Sn**	**11 57 28.7**	**0.0**
JMTN	**Minamitane**	**1.55**	**264**	P	**Pn**	**11 57 08.8**	**+0.4**
JMTN				*e*S	**Sn**	**11 57 29.4**	**+0.5**
JNKG	**Nichinankitago**	**1.57**	**314**	P	**Pn**	**11 57 08.6**	**+0.1**
JNKG				S	**Sn**	**11 57 28.6**	**-0.7**
JTSR	**Tashiro 2**	**1.63**	**292**	*e*P	**Pn**	**11 57 09.3**	**-0.1**
JTZ	**Takazaki**	**1.91**	**314**	P	**Pn**	**11 57 13.2**	**0.0**
JTZ				*e*S	**Sn**	**11 57 36.9**	**-0.8**
JSU	**Suzuyama**	**2.13**	**297**		**Pn**	**11 57 17.0**	**+0.7**
JTO	**Tosashimizu**	**2.29**	**2**	*e*P	**Pn**	**11 57 16.0**	**-2.4**
JTO				S	Sn	11 57 39.4	-7.6
JSJ	**Shimokoshiki**	**2.78**	**294**	P	**Pn**	**11 57 25.0**	**-0.2**
JSJ				*e*S	**Sn**	**11 57 58.3**	**-0.9**
JNU	**Nakatsue**	**2.98**	**329**	Pn	**Pn**	**11 57 28.1**	**+0.2**
	13nm,0.3s,baz=208,slow=1.1,SNR=18						
JNU				Sn	**Sn**	**11 58 03.4**	**-0.7**
	14nm,0.3s,baz=110,slow=2.3,SNR=3.9						
	37nm,0.4s						
JNU	**Nakatsue**	**2.98**	**329**		**Pn**	**11 57 29.0**	**+1.0**
JNA	**Nagahama**	**2.98**	**357**	P	**Pn**	**11 57 26.8**	**-1.3**
JMN	**Monobe**	**3.31**	**17**	P	**Pn**	**11 57 30.4**	**-2.1**
JHS	**Saijyo**	**4.43**	**5**	Pn	**Pn**	**11 57 46.8**	**-1.1**
JOW	**Kunigami**	**5.38**	**227**	Pn	**Pn**	**11 58 01.9**	**+1.0**
	9.8nm,0.3s,baz=119,slow=25,SNR=32						
JOW				Sn	**Sn**	**11 59 00.7**	**-2.5**
	4.4nm,0.3s,baz=108,slow=29,SNR=3.6						
	17nm,0.2s						
JOW	**Kunigami**	**5.38**	**227**	Pn	**Pn**	**11 58 01.7**	**+0.8**
INU	**Inuyama**	**5.99**	**36**	Pn	**Pn**	**11 58 08.8**	**-0.6**
JGF	**Kuroka**	**6.36**	**37**	Pn	**Pn**	**11 58 13.9**	**-0.6**
JHJ	**Hachijo jima 2**	**6.55**	**65**	LR	LR	12 00 19.9	
	comp=Z,140nm,19.7s,baz=86,slow=34						
MAJO	**Matsushiro**	**7.53**	**36**	Pn	**Pn**	**11 58 30.7**	**+0.2**
MJAR	**Matsushiro Arr**	**7.53**	**36**	Pn	**Pn**	**11 58 29.9**	**-0.6**
	0.2nm,0.3s,baz=196,slow=12,SNR=18						
MJAR				LR	LR	12 01 23.1	
	comp=Z,32nm,21.8s,baz=202,slow=38						
	3.0nm,0.6s						
MJAR	**Matsushiro Arr**	**7.53**	**36**	Pn	**Pn**	**11 58 30.4**	**-0.1**
MJB9	**Matsu-Tunnel**	**7.53**	**36**		**Pn**	**11 58 30.9**	**+0.5**
KSRS	**Korea Array**	**7.92**	**331**	Pn	**Pn**	**11 58 37.0**	**+1.2**
	0.3nm,0.3s,baz=146,slow=14,SNR=6.5						
	1.1nm,0.5s						
SEHB	**SEOHWA**	**8.51**	**336**	Pn	**Pn**	**11 58 45.2**	**+1.3**
JSD	**Sado**	**8.76**	**30**	Pn	**Pn**	**11 58 47.6**	**+0.3**
JCJ	**Chichijima**	**9.02**	**110**	LR	LR	12 01 42.3	
	comp=Z,81nm,18.8s,baz=139,slow=34						
JMM	**Marumori**	**9.89**	**40**		**Pn**	**11 59 04.6**	**+1.7**
KLR	**Kul'dur**	**18.65**	**358**	P	**P**	**12 00 58.2**	**-0.4**
	0.1nm,0.3s,baz=160,slow=10,SNR=6.1						
	2.2nm,0.9s						
GUMO	**Guam**	**20.29**	**144**	LR	LR	12 07 40.6	
	comp=Z,14nm,18.4s,baz=104,slow=33						
PETK	**Petropavlovsk-**	**28.96**	**32**		**P**	**12 02 39.7**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**32.67**	**101**	T	T	12 37 31.8	
	baz=296,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**32.68**	**101**	T	T	12 37 27.2	
	baz=296,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**32.69**	**101**	T	T	12 37 30.2	
	baz=296,slow=75,SNR=17						
CMAR	**Chiang Mai Arr**	**32.86**	**256**	LR	LR	12 19 33.6	
	comp=Z,19nm,19.1s,baz=15,slow=42						
MK31	**Makanchi Array**	**41.80**	**307**	P	**P**	**12 04 29.7**	**-0.9**
MKAR	**Makanchi Array**	**41.80**	**307**	P	**P**	**12 04 31.7**	**+1.1**
	1.0nm,0.9s,baz=94,slow=11,SNR=4.5						
	1.0nm,0.9s						
MKAR	**Makanchi Array**	**41.80**	**307**	P	**P**	**12 04 30.1**	**-0.5**
PSI	**Prapat**	**42.21**	**236**	LR	LR	12 21 19.7	
	comp=Z,46nm,18.5s,baz=199,slow=35						
BILL	**Bilibino**	**42.34**	**18**	P	**P**	**12 04 35.5**	**+0.8**
BILL				IAmb	IAmb	12 04 35.8	
	comp=Z,4.8nm,0.6s						
MTN	**Manton Dam**	**43.19**	**182**	P	**P**	**12 04 42.2**	**+0.2**
KURK	**Kurchatov**	**44.57**	**313**	P	**P**	**12 04 54.0**	**+1.2**
KURK	**Kurchatov**	**44.57**	**313**	IAmb	IAmb	12 05 17.4	
	comp=Z,5.1nm,0.9s						
KURBB	**Kurchatov Arra**	**44.62**	**313**	P	**P**	**12 04 54.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=98,slow=8.7,SNR=5.4						
	comp=Z,0.6nm,0.7s						
KNRA	**Kununurra**	**46.13**	**185**	P	**P**	**12 05 06.4**	**+0.9**
BRVK	**Borovoye**	**49.86**	**316**	P	**P**	**12 05 35.5**	**+1.3**
BRVK				IAmb	IAmb	12 05 44.1	
	comp=Z,3.6nm,0.6s						
WB0	**Warramunga Arr**	**50.07**	**178**	P	**P**	**12 05 36.3**	**+0.3**
WB0				IAmb	IAmb	12 05 54.6	
	comp=Z,6.0nm,1.2s						
WRAB	**Tennant Creek**	**50.24**	**178**	P	**P**	**12 05 37.5**	**+0.3**
WRAB				IAmb	IAmb	12 05 37.6	
	comp=Z,3.7nm,0.9s						
WB2	**Warramunga Arr**	**50.25**	**178**	P	**P**	**12 05 37.1**	**-0.2**
WRA	**Warramunga Arr**	**50.25**	**178**	P	**P**	**12 05 37.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=354,slow=8.6,SNR=15						
	comp=Z,1.3nm,0.7s						
KKAR	**Karatay Array**	**50.25**	**303**	P	**P**	**12 05 38.8**	**+1.5**
WR0	**Warramunga Arr**	**50.27**	**178**	P	**P**	**12 05 38.1**	**+0.6**
WR0				IAmb	IAmb	12 05 41.5	
	comp=Z,5.6nm,1.1s						
AS31	**Alice Springs**	**53.94**	**179**	P	**P**	**12 06 05.3**	**+0.6**
ASAR	**Alice Springs**	**53.94**	**179**	P	**P**	**12 06 05.0**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=10,slow=12,SNR=29						
	comp=Z,1.3nm,0.7s						
J20K	**Nowinta River**	**55.64**	**31**	P	**P**	**12 06 17.1**	**+0.4**
J20K				IAmb	IAmb	12 06 18.2	
	comp=Z,2.4nm,0.8s						
K20K	**Telida**	**55.68**	**32**	P	**P**	**12 06 17.9**	**+0.9**
K20K				IAmb	IAmb	12 06 18.5	
	comp=Z,3.0nm,0.9s						
IMAR	**Indian Mountai**	**55.83**	**28**	P	**P**	**12 06 18.5**	**+0.5**
ARU	**Arti**	**56.51**	**320**	LR	LR	12 34 44.2	
	comp=Z,34nm,18.4s,baz=142,slow=40						
I21K	**Tanana**	**56.57**	**29**	P	**P**	**12 06 24.4**	**+1.1**
I21K				IAmb	IAmb	12 06 24.9	
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**56.64**	**311**	P	**P**	**12 06 26.2**	**+2.1**
ABKAR				IAmb	IAmb	12 06 28.2	
	comp=Z,5.6nm,1.3s						
H23K	**Yukon River**	**57.56**	**28**	P	**P**	**12 06 30.8**	**+0.4**
H23K				IAmb	IAmb	12 06 32.2	
	comp=Z,2.9nm,0.8s						
AKTO	**Aktyubinsk**	**57.67**	**313**	LR	LR	12 33 58.5	
	comp=Z,26nm,20.2s,baz=93,slow=39						
NEA2	**Nenana**	**57.83**	**30**	P	**P**	**12 06 32.6**	**+0.3**
NEA2				IAmb	IAmb	12 06 33.3	
	comp=Z,3.5nm,0.8s						
RND	**Reindeer**	**58.02**	**31**	P	**P**	**12 06 33.2**	**-0.5**
RND				IAmb	IAmb	12 06 33.7	
	comp=Z,4.7nm,0.8s						
MDM	**Murphy Dome**	**58.16**	**29**	P	**P**	**12 06 35.0**	**+0.4**
H24K	**Noodor Dome**	**58.24**	**28**	P	**P**	**12 06 36.1**	**+0.9**
ILAR	**Eielson Array**	**58.75**	**30**	P	**P**	**12 06 37.5**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=278,slow=6.5,SNR=8.8						
	comp=Z,0.6nm,0.7s						
HDA	**Harding Lake**	**58.77**	**30**	P	**P**	**12 06 37.8**	**-0.9**
HDA				IAmb	IAmb	12 06 38.5	
	comp=Z,2.4nm,0.9s						
BMAR	**Burnt Mountain**	**59.41**	**26**	P	**P**	**12 06 44.1**	**+0.8**
SCRK	**Sand Creek**	**60.11**	**30**	P	**P**	**12 06 47.9**	**-0.3**
BCAR	**Beaver Creek A**	**61.24**	**31**	P	**P**	**12 06 56.1**	**+0.2**
M27K	**Edge Creek, AK**	**61.34**	**32**	P	**P**	**12 06 57.0**	**+0.3**
M27K				IAmb	IAmb	12 07 09.2	
	comp=Z,4.0nm,1.2s						
BARN	**Barnard Glacie**	**61.71**	**33**	P	**P**	**12 07 00.3**	**+1.0**
EPYK	**Eagle Plains**	**62.64**	**27**	P	**P**	**12 07 05.3**	**+0.1**
STKA	**Stephens Creek**	**62.68**	**171**	P	**P**	**12 07 05.9**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=321,slow=7.8,SNR=5.5						
	comp=Z,2.8nm,0.8s						
INK	**Inuvik**	**63.35**	**25**	P	**P**	**12 07 09.4**	**-0.4**
INK				IAmb	IAmb	12 07 30.6	
	comp=Z,4.8nm,1.2s						
M30M	**Minto, Yukon**	**63.58**	**31**	P	**P**	**12 07 12.5**	**+1.0**
A36M	**Sachs Harbour**	**64.86**	**20**	P	**P**	**12 07 20.0**	**+0.3**
C36M	**Paulatuk**	**66.23**	**22**	P	**P**	**12 07 28.7**	**+0.2**
KBZ	**Khabaz**	**69.46**	**309**	P	**P**	**12 07 50.3**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=125,slow=3.6,SNR=6.2						
KBZ				LR	LR	12 43 53.8	
	comp=Z,33nm,18.3s,baz=70,slow=41						
	comp=Z,3.7nm,0.8s						
FINES	**FINESS Array B**	**71.02**	**331**	P	**P**	**12 07 57.8**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=67,slow=6.7,SNR=6.2						
FINES				LR	LR	12 39 49.7	
	comp=Z,26nm,18.6s,baz=60,slow=36						
	comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**71.02**	**331**	P	**P**	**12 07 58.1**	**-0.4**
YKA	**Yellowknife Ar**	**72.92**	**27**	P	**P**	**12 08 09.4**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=304,slow=5.4,SNR=5.6						
	comp=Z,2.0nm,1.0s						
AKASG	**Malin Array Be**	**74.76**	**320**	P	**P**	**12 08 20.6**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=52,slow=6.1,SNR=8.9						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**74.76**	**320**	IAmb	IAmb	12 08 24.2	
	comp=Z,3.8nm,1.3s						
BRTR	**Keskin Array B**	**77.44**	**309**	P	**P**	**12 08 36.9**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=108,slow=4.0,SNR=6.5						
	comp=Z,1.2nm,0.8s						
GERES	**GERESS Array B**	**84.04**	**324**	P	**P**	**12 09 10.1**	**-1.7**
	comp=Z,0.3nm,0.2s,baz=354,slow=5.4,SNR=4.4						
	comp=Z,0.3nm,0.2s						
KVN	**Kaiserville**	**84.46**	**48**	P	**P**	**12 09 13.9**	**-0.4**
KVN				IAmb	IAmb	12 09 14.7	
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**84.69**	**48**	P	**P**	**12 09 15.2**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=300,slow=5.2,SNR=11						
	comp=Z,0.9nm,0.6s						
PDAR	**Pinedale Array**	**87.33**	**41**	P	**P**	**12 09 26.6**	**-1.8**
	comp=Z,0.2nm,0.7s,baz=350,slow=4.6,SNR=2.3						
	comp=Z,0.2nm,0.7s						

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*LDG **24** 12:08:34.1±0.0, 43°.05N×0°.21W, h2^{km}, Md2.4/2, Ml2.6/13, Error ellipse: s-maj=0.8km s-min=0.6km az=139.0*

*STR **24** 12:08:34.3±0.3, 43°N±2°×°±°, h2^{km}, MLv1.7/6, preliminary*

*MDD **24** 12:08:34.5±0.4, 43°.05N×0°.21W, h5^{km}±6^{km}, mb_Lg2.3/3, Error ellipse: s-maj=4.5km s-min=2.8km az=8.0*

ISC 24 12:08:32.9±1.0**, 43°.06N**±0°.03×**0°.21W**±0°.03**, h18**^{km}±4^{km}**, n24, σ1^{s}03**/52**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYLO	**Lourdes**	**0.12**	**71**	Pg	**Pg**	**12 08 36.8**	**0.0**
PYLO				Sg	**Sg**	**12 08 38.8**	**-0.7**
VIEF	**Viey**	**0.24**	**136**	Pg	**Pg**	**12 08 38.8**	**+0.3**
VIEF				Sg	**Sg**	**12 08 42.3**	**-0.1**
ETSF	**Etsaut**	**0.30**	**238**	*e*Pg	**Pb**	**12 08 40.0**	**+0.2**
ETSF				*e*Sg	**Sb**	**12 08 44.2**	**-0.2**
	68nm,0.2s						
ATE	**Arette**	**0.36**	**275**	Pg	**Pb**	**12 08 41.1**	**+0.3**
ATE				Sg	**Sb**	**12 08 46.7**	**+0.5**
CANF	**Canfranc**	**0.37**	**218**	Pg	**Pb**	**12 08 41.1**	**0.0**
CANF				Sg	**Sb**	**12 08 46.6**	**+0.1**
EPF	**Esparros**	**0.40**	**94**	*e*Pg	**Pb**	**12 08 41.8**	**+0.3**
EPF				*e*Sg	**Sb**	**12 08 47.3**	**-0.1**
	25nm,0.2s						
ECHI	**Chisagues Biel**	**0.49**	**143**	Pg	**Pb**	**12 08 43.0**	**-0.1**
ECHI				Sg	**Sb**	**12 08 49.4**	**-0.6**
ECHI				*i* Vmb_Lg		12 08 50.2	
ECHI	**Chisagues Biel**	**0.49**	**143**	Pg	**Pb**	**12 08 43.3**	**+0.2**
ECHI				Sg	**Sb**	**12 08 49.7**	**-0.3**
SJPF	**Ste Jean**	**0.75**	**275**	*e*Pg	**Pb**	**12 08 48.1**	**+0.8**
SJPF				*e*Sg	**Sb**	**12 08 58.0**	**+0.8**
	8.6nm,0.2s						
EORO	**Oroz-Betelu**	**0.82**	**259**	Pg	**Pn**	**12 08 49.9**	**+0.2**
EORO				Sg	**Sb**	**12 09 00.3**	**+0.8**
EORO				*i* Vmb_Lg		12 09 05.4	
MONQ	**Montcuq**	**1.66**	**37**	Pn	**Pg**	**12 09 03.6**	**-1.2**
MONQ				Pg	**Pb**	**12 09 05.3**	**+2.5**
MONQ				Sg	**Sg**	**12 09 27.6**	**+1.3**
MTLF	**Montolieu**	**1.80**	**80**	*e*Pg	**Pg**	**12 09 08.0**	**+0.6**
MTLF				*e*Sg	**Sg**	**12 09 31.9**	**+1.2**
	6.5nm,0.2s						
LFF	**La Frestale**	**2.00**	**20**	*e*Pg	**Pg**	**12 09 11.3**	**0.0**
LFF				*e*Sg	**Sg**	**12 09 37.2**	**-0.1**
	15nm,0.3s						
CAF	**Calviac**	**2.49**	**41**	*e*Pn	**Pn**	**12 09 13.9**	**+1.4**
CAF	**Calviac**	**2.49**	**41**	*e*Pg	**Pg**	**12 09 20.2**	**-0.3**
CAF				*e*Sn	**Sn**	**12 09 42.9**	**+0.6**
CAF				*e*Sg	**Sg**	**12 09 52.3**	**-0.5**
	5.0nm,0.2s						
RJF	**Les Rejaudoux**	**2.57**	**28**	*e*Pg	**Pg**	**12 09 21.6**	**-0.5**
RJF				*e*Sg	**Sg**	**12 09 54.7**	**-0.6**
	5.2nm,0.2s						
LASF	**Ste Croix**	**3.12**	**70**	*e*Pg	**Pg**	**12 09 32.0**	**-0.7**
LASF				*e*Sg	**Sg**	**12 10 11.9**	**-1.3**
	1.3nm,0.3s						
MFF	**Saint Martin d**	**3.54**	**1**	*e*Pg	**Pg**	**12 09 39.5**	**-1.2**
MFF				*e*Sn	**Sn**	**12 10 09.1**	**+0.7**
MFF				*e*Sg	**Sg**	**12 10 25.4**	**-1.3**
	1.5nm,0.2s						
TCF	**Toulx Ste Croi**	**3.66**	**27**	*e*Pg	**Pg**	**12 09 42.0**	**-1.0**
TCF				*e*Sn	**Sn**	**12 10 11.0**	**-0.3**
TCF				*e*Sg	**Sg**	**12 10 28.9**	**-1.5**
	3.9nm,0.3s						
VIVF	**Saint-Julien-l**	**3.96**	**61**	*e*Pg	**Pg**	**12 09 47.3**	**-1.3**
VIVF				*e*Sg	**Sg**	**12 10 38.9**	**-1.0**
	2.0nm,0.3s						
BGF	**Bois d'Agland**	**4.12**	**31**	*e*Pg	**Pg**	**12 09 50.3**	**-1.4**
BGF				*e*Sg	**Sg**	**12 10 43.4**	**-1.7**
	11nm,0.4s						
AVF	**Avril sur Loir**	**4.51**	**33**	*e*Pn	**Pn**	**12 09 41.3**	**+1.1**
AVF	**Avril sur Loir**	**4.51**	**33**	*e*Pg	**Pg**	**12 09 58.3**	**-0.9**
AVF				*e*Sn	**Sn**	**12 10 31.4**	**-0.7**
AVF				*e*Sg	**Sg**	**12 10 55.3**	**-2.2**
	1.8nm,0.4s						
SMF	**Signal de Mont**	**4.60**	**37**	*e*Pg	**Pg**	**12 09 59.3**	**-1.6**
SMF				*e*Sn	**Sn**	**12 10 33.3**	**-1.1**
SMF				*e*Sg	**Sg**	**12 10 58.2**	**-2.2**
	1.3nm,0.3s						

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*SOME **24** 12:12:06.8, 40°.82N×79°.10E, h5^{km}, MS3.5*

*IDC **24** 12:12:08.2±1.0, 40°.81N×79°.27E, h0^{km}, mb3.8/7, mbtmp3.7/12, ML3.0/5, Error ellipse: s-maj=16.5km s-min=13.5km az=46.0*

*KRNET **24** 12:12:09.4±0.1, 40°.89N×79°.16E, mb4.2*

*NNC **24** 12:12:11.2±1.0, 40°.99N×79°.13E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=7.4km s-min=5.7km az=164.0*

ISC 24 12:12:10.3±0.7**, 40°.91N**±0°.04×**79°.15E**±0°.03**, h10**^{km}**, n89, σ2^{s}14**/116**, mb3.8**/5**, 27C-25D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.67**	**341**	⇑*i*P	**Pg**	**12 12 41.5**	**-0.9**
	baz=41						
PRZ				⇑*i*S	**Sg**	**12 13 05.1**	**+1.0**
	baz=41						
KDJ	**Kajisay**	**1.92**	**310**	⇓*e*P	**Pg**	**12 12 45.5**	**-1.6**
	baz=11						
KDJ				⇓*i*S	**Sg**	**12 13 11.6**	**-0.4**
	baz=11						
ANVS	**Anan'yevo**	**2.18**	**330**	⇑*e*P	**Pb**	**12 12 49.6**	**-0.3**
	baz=30						
ANVS				⇑*i*S	**Sg**	**12 13 18.9**	**-1.4**
	baz=30						
SATY	**Saty**	**2.22**	**346**	*e*P	**Pb**	**12 12 50.5**	**-0.1**
	474nm,0.4s						
SATY				*e*S	**Sg**	**12 13 22.3**	**+0.6**
	881nm,0.9s						
SATY	**Saty**	**2.22**	**346**	Pg	**Pb**	**12 12 50.5**	**-0.1**
	474nm,0.4s						
SATY				Lg	Lg	12 13 22.3	
	881nm,0.9s						
UZB	**Uzynbulak**	**2.24**	**358**	*e*P	**Pb**	**12 12 50.7**	**-0.3**
	183nm,0.2s						
UZB				*e*S	**Sg**	**12 13 22.0**	**-0.3**
	466nm,0.5s						
UZB	**Uzynbulak**	**2.24**	**358**	Pg	**Pb**	**12 12 50.7**	**-0.3**
	183nm,0.2s						
UZB				Lg	Lg	12 13 22.0	
	466nm,0.5s						
ZHN	**Zhinishke**	**2.32**	**347**	*e*P	**Pb**	**12 12 51.3**	**-1.0**
	209nm,0.1s						
ZHN				*e*S	**Sg**	**12 13 23.5**	**-1.5**
	899nm,0.2s						
ZHN	**Zhinishke**	**2.32**	**347**	Pg	**Pb**	**12 12 51.3**	**-1.0**
	209nm,0.1s						
ZHN				Lg	Lg	12 13 23.5	
	899nm,0.2s						
PDGK	**Podgornoye**	**2.43**	**6**	Pg	**Pb**	**12 12 53.3**	**-1.0**
	115nm,0.2s						
PDGK				Lg	Lg	12 13 26.8	
	323nm,0.3s						
PDGK	**Podgornoye**	**2.43**	**6**	⇑Pn	**Pb**	**12 12 51.9**	**-2.3**
	150nm,0.5s						
PDGK				⇓Lg	Lg	12 13 25.7	
	583nm,0.6s						
ULHL	**Ulahol**	**2.56**	**302**	⇓*i*P	**Pb**	**12 12 54.9**	**-1.5**
	baz=3.0						
ULHL				⇓*i*S	**Sb**	**12 13 27.6**	**-0.4**
	baz=3.0						
KPKS	**Kokpek**	**2.58**	**353**	*e*P	**Pb**	**12 12 56.3**	**-0.5**
	321nm,0.4s						
KPKS				*e*S	**Sg**	**12 13 31.6**	**-1.6**
	1µm,0.4s						
KURS	**Kuram**	**2.68**	**345**	*e*P	**Pb**	**12 12 57.7**	**-0.7**
	244nm,0.5s						
KURS				*e*S	**Sg**	**12 13 34.3**	**-2.1**
	466nm,0.8s						
KURS	**Kuram**	**2.68**	**345**	Pg	**Pb**	**12 12 57.7**	**-0.7**
	244nm,0.5s						
KURS				Lg	Lg	12 13 34.3	
	466nm,0.8s						
TNSS	**Tian-Shan**	**2.69**	**323**	*e*P	**Pb**	**12 12 57.7**	**-1.0**
	146nm,0.4s						
TNSS				*e*S	**Sg**	**12 13 34.6**	**-2.0**
	178nm,0.4s						
TNSS	**Tian-Shan**	**2.69**	**323**	Pg	**Pb**	**12 12 57.7**	**-1.0**
	146nm,0.4s						
TNSS				Lg	Lg	12 13 34.6	
	178nm,0.4s						
MDOK	**Medeo**	**2.74**	**326**	*e*P	**Pb**	**12 12 59.6**	**+0.1**
	121nm,0.4s						
MDOK				*e*S	**Sg**	**12 13 37.8**	**-0.7**
	316nm,0.9s						
MDOK	**Medeo**	**2.74**	**326**	⇑Pn	**Pb**	**12 12 57.0**	**-2.6**
	125nm,0.7s						
MDOK				⇓Lg	Lg	12 13 36.8	
	457nm,0.7s						
MDOK	**Medeo**	**2.74**	**326**	Pg	**Pb**	**12 12 59.6**	**+0.1**
	121nm,0.4s						
MDOK				Lg	Lg	12 13 37.8	
	316nm,0.9s						
KSH	**Kashi**	**2.80**	**241**	Pn	Pg	12 13 08.3	+4.3
KSH				pP	Pb	12 13 13.3	+13
KSH				Sn	Sg	12 13 54.6	+14
KSH				pmax	pmax		
	comp=Z,20nm,0.9s						
KSH				smax	smax		
	comp=N,250nm,1.3s						
KSH				smax	smax		
	comp=E,350nm,1.0s						
KSH				LR	LR		
	comp=N,1µm,11.7s						
KSH				LR	LR		
	comp=E,850nm,9.4s						
KSH				LR	LR		
	comp=Z,490nm,7.8s						
KNDC	**Almaty**	**2.82**	**326**	⇑Pg	**Pb**	**12 13 01.8**	**+1.0**
	comp=Z,195nm,0.7s						
KNDC				⇓Lg	Lg	12 13 39.7	
	comp=Z,2µm,0.9s						
AAA	**Alma-Ata**	**2.84**	**325**	*e*P	**Pb**	**12 13 01.6**	**+0.4**
	comp=Z,225nm,0.2s						
AAA				*e*S	**Sg**	**12 13 41.2**	**-0.3**
	comp=Z,784nm,0.4s						
AAA	**Alma-Ata**	**2.84**	**325**	Pg	**Pb**	**12 13 01.6**	**+0.4**
	comp=Z,225nm,0.2s						
AAA				Lg	Lg	12 13 41.2	
	comp=Z,784nm,0.4s						
BOOM	**Boomskoye usch**	**2.88**	**304**	⇑*i*P	**Pb**	**12 12 59.3**	**-2.5**
	baz=5.0						
BOOM				⇑*i*S	**Sb**	**12 13 35.5**	**-1.6**
	baz=5.0						
MTBS	**Maitube**	**3.00**	**319**	*e*P	**Pb**	**12 13 01.9**	**-2.1**
	comp=Z,52nm,0.3s						
MTBS				*e*S	**Sb**	**12 13 41.5**	**+0.7**
	comp=Z,173nm,0.5s						
MTBS	**Maitube**	**3.00**	**319**	Pg	**Pb**	**12 13 01.9**	**-2.1**
	comp=Z,52nm,0.3s						
MTBS				Lg	Lg	12 13 41.4	
	comp=Z,173nm,0.5s						
KST	**Kastek**	**3.19**	**313**	*e*P	**Pb**	**12 13 06.6**	**-0.6**
	comp=Z,79nm,0.5s						
KST				*e*S	**Sb**	**12 13 49.3**	**+3.1**
	comp=Z,312nm,0.7s						
KST	**Kastek**	**3.19**	**313**	Pg	**Pb**	**12 13 06.6**	**-0.6**
	comp=Z,79nm,0.5s						
KST				Lg	Lg	12 13 49.3	
	comp=Z,312nm,0.7s						
TKM2	**Tokmak 2**	**3.33**	**308**	⇓Pn	**Pb**	**12 13 06.2**	**-3.4**
	comp=Z,16nm,0.4s						
TKM2				⇓Lg	Lg	12 13 56.4	
	comp=Z,130nm,0.6s						
TKM2	**Tokmak 2**	**3.33**	**308**	⇑*e*P	Pb	12 13 05.3	-4.2
	baz=9.0						
TKM2				⇑*i*S	**Sb**	**12 13 46.1**	**-4.0**
	baz=9.0						
KTBS	**Karatobe**	**3.35**	**328**	*e*P	**Pb**	**12 13 09.0**	**-0.8**
	comp=Z,30nm,0.5s						
KTBS				*e*S	**Sb**	**12 13 53.9**	**+3.4**
	comp=Z,0.8nm,0.4s						
KTBS	**Karatobe**	**3.35**	**328**	Pg	**Pb**	**12 13 09.0**	**-0.8**
	comp=Z,30nm,0.5s						
KTBS				Lg	Lg	12 13 53.9	
	comp=Z,0.8nm,0.4s						
CHKK	**Chushkaly**	**3.35**	**332**	⇑*i*P	**Pb**	**12 13 09.9**	**0.0**
	comp=Z,122nm,0.3s						
CHKK				⇑*i*S	**Sg**	**12 13 56.0**	**-1.9**
	comp=Z,1µm,0.4s						
CHKK	**Chushkaly**	**3.35**	**332**	Pg	**Pb**	**12 13 09.9**	**0.0**
	comp=Z,122nm,0.3s						
CHKK				Lg	Lg	12 13 56.0	
	comp=Z,1µm,0.4s						
DJR	**Jarkent**	**3.46**	**8**	*e*P	**Pb**	**12 13 10.9**	**-0.8**
	comp=Z,48nm,0.4s						
DJR				*e*S	**Sb**	**12 13 56.7**	**+3.0**
	comp=Z,165nm,0.3s						
DJR	**Jarkent**	**3.46**	**8**	Pg	**Pb**	**12 13 10.9**	**-0.8**
	comp=Z,48nm,0.4s						
DJR				Lg	Lg	12 13 56.7	
	comp=Z,165nm,0.3s						
KBK	**Karagaybulak**	**3.59**	**300**	⇓*i*P	Pb	12 13 09.0	-5.1
	baz=1.0						
KBK				⇓*i*S	**Sn**	**12 13 52.4**	**+3.6**
	baz=1.0						
KUU	**Kurty**	**3.64**	**326**	*e*P	**Pb**	**12 13 14.5**	**-0.2**
	comp=Z,24nm,0.4s						
KUU				*e*S	**Sg**	**12 14 03.4**	**-3.7**
	comp=Z,170nm,0.5s						
KUU	**Kurty**	**3.64**	**326**	Pg	**Pb**	**12 13 14.5**	**-0.2**
	comp=Z,24nm,0.4s						
KUU				Lg	Lg	12 14 03.3	

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       comp=Z,170nm,0.5s
UCH    Uchtor             3.72 292⇑eP     Pn      12 13 11.0 +2.8
       baz=93
UCH                           ⇑iS         Sn      12 13 55.6 +3.3
       baz=93
ARLS   Aral               3.75 286⇑iP     Pn      12 13 10.7 +2.3
       baz=86
ARLS                          ⇑iS         Sn      12 13 56.7 +4.0
       baz=86
KRBS   Karabastau         3.79 318 eP     Pb      12 13 18.3 +0.9
       comp=Z,54nm,0.3s
KRBS                           eS         Sg      12 14 09.4 -2.8
       comp=Z,102nm,0.9s
KRBS   Karabastau         3.79 318  Pg    Pb      12 13 18.3 +0.9
       comp=Z,54nm,0.3s
KRBS                            Lg        Lg      12 14 09.4
       comp=Z,102nm,0.9s
FRU1   Bishkek            3.87 301⇓eP     Pb      12 13 13.2 -5.6
       baz=1.0
FRU1                          ⇓iS         Sn      12 13 59.6 +4.0
       baz=1.0
AAK    Ala-Archa          3.88 298  Pn    Pb      12 13 15.3 -3.7
       comp=Z,1.3nm,0.3s,baz=126,slow=8.8,SNR=8.1
AAK                             Pg        Pg      12 13 21.9 -2.9
       comp=Z,3.2nm,0.3s,baz=166,slow=11,SNR=21
AAK                             Lg        Lg      12 14 12.8
       comp=Z,4.1nm,0.3s,baz=257,slow=17,SNR=11
       comp=Z,4.4nm,0.5s
AAK    Ala-Archa          3.88 298⇓eP     Pn      12 13 13.1 +2.8
       baz=98
AAK                           ⇓iS         Sn      12 13 59.6 +3.6
       baz=98
CHMS   Chumysh            3.89 304 ⇑Pg    Pg      12 13 22.6 -2.1
       comp=Z,22nm,0.7s
CHMS                           ⇓Lg        Lg      12 14 14.0
       comp=Z,54nm,0.9s
CHMS   Chumysh            3.89 304⇓iP     Pn      12 13 12.9 +2.7
       baz=4.0
CHMS                          ⇓iS         Sn      12 13 59.5 +3.6
       baz=4.0
TDK    Taldyqorghan       4.13 353 eP     Pb      12 13 24.6 +1.5
       comp=Z,298nm,0.3s
TDK                            eS         Sg      12 14 20.9 -2.0
       comp=Z,292nm,0.6s
TDK    Taldyqorghan       4.13 353  Pg    Pb      12 13 24.6 +1.5
       comp=Z,298nm,0.3s
TDK                             Lg        Lg      12 14 20.8
       comp=Z,292nm,0.6s
USP    Ospenovka          4.18 306⇑eP     Pn      12 13 17.0 +2.7
       baz=6.0
USP                           ⇑eS         Sn      12 14 06.5 +3.3
       baz=6.0
SGDS   Sogindy            4.21 309 eP     Pb      12 13 25.0 +0.5
       comp=Z,44nm,0.7s
SGDS                           eS         Sg      12 14 20.9 -4.6
       comp=Z,56nm,0.8s
KAPS   Kapalarasan        4.38   2 eP     Pb      12 13 29.2 +1.8
       comp=Z,66nm,0.5s
KAPS                           eS         Sg      12 14 28.6 -2.3
       comp=Z,95nm,0.3s
KAPS   Kapalarasan        4.38   2  Pg    Pb      12 13 29.2 +1.8
       comp=Z,66nm,0.5s
KAPS                            Lg        Lg      12 14 28.6
       comp=Z,95nm,0.3s
EKS2   Erkin-Say          4.38 295⇓eP     Pn      12 13 20.0 +3.0
       baz=96
EKS2                          ⇓eS         Sn      12 14 11.5 +3.3
       baz=96
MRKS   Merke              4.79 294 eP     Pb      12 13 35.8 +1.3
       comp=Z,36nm,0.4s
MRKS                           eS         Sg      12 14 40.0 -4.0
       comp=Z,41nm,0.5s
MRKS   Merke              4.79 294  Pg    Pb      12 13 35.8 +1.3
       comp=Z,36nm,0.4s
MRKS                            Lg        Lg      12 14 40.0
       comp=Z,41nm,0.5s
BTLS   Baital             5.57 320 eP     Pb      12 13 51.2 +3.5
       comp=Z,12nm,0.5s
BTLS                           eS         Sg      12 15 06.7 -2.5
       comp=Z,29nm,0.7s
BTLS   Baital             5.57 320  Pg    Pb      12 13 51.2 +3.5
       comp=Z,12nm,0.5s
BTLS                            Lg        Lg      12 15 06.7
       comp=Z,29nm,0.7s
MAKZ   Makanchi           6.24  18 ⇑Pn    Pn      12 13 44.5 +2.0
       comp=Z,2.5nm,0.4s
MAKZ                           ⇑Pg        Pg      12 14 03.4 -6.5
       comp=Z,5.8nm,0.6s
MAKZ                           ⇓Lg        Lg      12 15 25.4
       comp=Z,16nm,1.1s
MK31   Makanchi Array     6.31  20  Pn    Pn      12 13 44.6 +1.2
       comp=Z,1.2nm,0.4s,baz=201,slow=13,SNR=53
MK31                           ⇓Pg        Pb      12 14 04.4 +4.2
       comp=Z,2.4nm,0.4s,baz=206,slow=13,SNR=5.3
MK31                           ⇓Sn        Sn      12 14 55.8 +0.3
       comp=Z,17nm,0.8s,baz=156,slow=41,SNR=4.3
MK31                           ⇑Lg        Lg      12 15 27.7
       comp=Z,11nm,0.5s
MKAR   Makanchi Array     6.31  20  Pn    Pn      12 13 44.9 +1.5
       comp=Z,0.9nm,0.3s,baz=204,slow=13,SNR=34
MKAR                            Sn        Sn      12 14 56.2 +0.7
       comp=Z,2.6nm,0.3s,baz=226,slow=23,SNR=4.7
MKAR                            Lg        Lg      12 15 29.6
       comp=Z,1.4nm,0.3s,baz=199,slow=21,SNR=1.9
       comp=Z,2.6nm,0.4s
KK31   Karatay Array      6.79 292 ⇑Pg    Pg      12 14 16.9 -3.5
       comp=Z,5.2nm,0.7s,baz=104,slow=16,SNR=8.6
IUG    Iuzhnay            6.95 283 eP     Pg      12 14 17.0 -6.4
       comp=Z,150nm,0.3s
IUG                            eS         Sg      12 15 51.2 -2.2
       comp=Z,54nm,1.0s
IUG    Iuzhnay            6.95 283  Pg    Pg      12 14 17.0 -6.4
       comp=Z,150nm,0.3s
IUG                             Lg        Lg      12 15 51.2
       comp=Z,54nm,1.0s
WMQ    Urumqi             6.97  62 ePn    Pn      12 13 54.1 +1.6
WMQ                             Sn        Sn      12 15 13.5 +1.6
WMQ                             smax      smax
       comp=N,45nm,0.9s
WMQ                             smax      smax
       comp=E,64nm,0.9s
ZSN    Zaisan             7.72  30 eP     Pg      12 14 30.2 -8.0
       comp=E,7.3nm,0.4s
ZSN                            eS         Sg      12 16 12.8 -5.3
       comp=E,22nm,0.5s
ZSN    Zaisan             7.72  30  Pg    Pg      12 14 30.2 -8.0
       comp=E,7.3nm,0.4s
ZSN                             Lg        Lg      12 16 12.8
       comp=E,22nm,0.5s
CHCP   Chirah Chowk       8.62 215  P     Pn      12 14 17.2 +2.0
OTUK   Ortayu             8.79 329 ⇑Pn    Pn      12 14 19.6 +2.0
       comp=E,3.0nm,0.6s
OTUK                           ⇓Lg        Lg      12 16 49.4
       comp=E,64nm,1.2s
CEP    Cherat             9.12 221  P     Pn      12 14 23.9 +1.8
CEP                             S         Sn      12 16 08.0 +3.2
SEM    Semipalatinsk      9.53   4 eP     Pn      12 15 06.5  +39
       comp=E,3.3nm,0.1s
SEM                            eS                 12 17 15.2
       comp=E,24nm,0.1s
SEM    Semipalatinsk      9.53   4  Pg    Pn      12 15 06.5  +39
       comp=E,3.3nm,0.1s
SEM                             Lg        Lg      12 17 15.2
       comp=E,24nm,0.1s
KURBB  Kurchatov Arra     9.73 358  Pn    Pn      12 14 31.2 +1.0
       baz=179,slow=12,SNR=13
KURBB                           Lg        Lg      12 17 18.2
       comp=E,0.2nm,0.3s,baz=188,slow=27,SNR=12
       comp=E,0.9nm,0.7s
KURBB  Kurchatov Arra     9.73 358 ⇓Lg    Lg      12 17 15.1
       comp=E,46nm,0.8s
KURK   Kurchatov          9.82 358 ⇑Pn    Pn      12 14 32.3 +0.8
       comp=E,2.6nm,0.8s
KURK                           ⇑Pg                12 15 08.8
       comp=E,3.2nm,0.7s
BRZS   Berezniki         10.14 336 eP     Pn      12 15 15.4  +39
       comp=E,1.9nm,0.2s
BRZS                           eS                 12 17 31.1
       comp=E,16nm,0.6s
BRZS   Berezniki         10.14 336  Pg    Pn      12 15 15.4  +39
       comp=E,1.9nm,0.2s
BRZS                            Lg        Lg      12 17 31.1
       comp=E,16nm,0.6s
GOMU   GeErMu            13.13 106  P     Pn      12 15 14.0 -3.2
GOMU                            pP        P       12 15 17.4  -10
GOMU                            sP                12 15 18.6
GOMU                            pmax      pmax
       comp=Z,4.0nm,0.5s
GOMU                            pmax      pmax
       comp=Z,72nm,4.6s
ZALV   Zalesovo Beam     13.59  14  Pn    Pn      12 15 21.8 -1.3
       comp=Z,0.2nm,0.3s,baz=200,slow=13,SNR=4.7
       comp=Z,0.5nm,0.3s
AKTO   Aktyubinsk        17.52 310  P     P       12 16 15.4 -0.2
       comp=Z,0.1nm,0.3s,baz=90,slow=9.8,SNR=2.1
       comp=Z,0.9nm,0.6s
ARU    Arti              20.51 326  P     Pn      12 16 49.4 -1.2
       comp=Z,1.0nm,0.3s,baz=276,slow=17,SNR=3.7
       comp=Z,1.0nm,0.3s
SONM   Songino Array     20.61  61  P     P       12 16 48.7 -1.0
       comp=Z,3.7nm,0.7s,baz=263,slow=11,SNR=6.3
       comp=Z,3.7nm,0.7s
BRTR   Keskin Array B    34.42 283  P     P       12 18 58.9 +0.8
       comp=Z,0.6nm,0.5s,baz=81,slow=10,SNR=2.6
       comp=Z,0.6nm,0.5s
FINES  FINESS Array B    37.73 321  P     P       12 19 24.7 -1.2
       comp=Z,0.6nm,0.6s,baz=111,slow=7.6,SNR=1.8
       comp=Z,0.6nm,0.6s
ARCES  ARCESS Array B    39.76 334  P     P       12 19 42.5 -0.4
       comp=Z,2.0nm,0.9s,baz=96,slow=7.4,SNR=1.8
       comp=Z,2.0nm,0.9s
WRA    Warramunga Arr    79.29 128  P     P       12 24 15.0 -1.2
       comp=Z,0.6nm,0.7s,baz=327,slow=5.6,SNR=8.4
       comp=Z,0.6nm,0.7s
ASAR   Alice Springs     81.92 131  P     P       12 24 28.9 -1.3
       comp=Z,0.9nm,0.8s,baz=318,slow=5.0,SNR=11
       comp=Z,0.9nm,0.8s
```

IDC ***24*** *12:26:24.1±0.7, 34°.69S×72°.83E, h0^{km}, mb4.2/9, mbtmp4.2/9, MS3.6/6, Error ellipse: s-maj=27.5km s-min=19.4km az=83.0*

NEIC ***24*** *12:26:26.4±1.0, 34°.7S±0°.1×72°.8E±0°.2, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=23.3km s-min=20.7km az=244.0*

ISC 24 12:26:25.7±0.6**, 34°.7S**±0°.1×**72°.9E**±0°.2**, h10^{km}, n35, σ0^{s}.50**/25**, mb4.2**/13**, MS3.6**/6**, South Indian Ocean**

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Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op        ISC       h  m  s  ISC
H08S1  Diego Carcia H    26.93 359  T         T       13 00 04.4
       baz=180,slow=76,SNR=7.1
H08S2  Diego Garcia H    26.93 359  T         T       13 00 06.3
       baz=180,slow=76,SNR=12
H08S3  Diego Garcia H    26.95 359  T         T       13 00 06.4
       baz=180,slow=76,SNR=18
MAW    Mawson            33.44 187  P         P       12 33 04.5 +0.1
       2.8nm,0.8s,baz=33,slow=7.9,SNR=3.8
       2.8nm,0.8s
H01W2  Cape Leeuwin H    33.72 102  T         T       13 08 40.1
       baz=258,slow=74,SNR=7.3
H01W3  Cape Leeuwin H    33.73 102  T         T       13 08 37.2
       baz=258,slow=74,SNR=8.9
H01W1  Cape Leeuwin H    33.74 102  T         T       13 08 38.6
       baz=258,slow=74,SNR=6.8
BOSA   Boshof            40.67 265  LR        LR      12 46 19.5
       comp=Z,73nm,19.0s,baz=182,slow=29
LBTB   Lobatse           41.79 270  LR        LR      12 49 03.8
       comp=Z,76nm,18.8s,baz=124,slow=33
SUR    Sutherland        43.05 258  LR        LR      12 47 28.5
       comp=Z,64nm,21.2s,baz=126,slow=29
TSUM   Tsumeb            51.04 273  LR        LR      12 54 23.2
       comp=Z,58nm,18.2s,baz=158,slow=33
ASAR   Alice Springs     53.70  96  P         P       12 35 48.1  0.0
       1.9nm,0.8s,baz=238,slow=5.3,SNR=16
       1.9nm,0.8s
ASAR   Alice Springs     53.70  96  P         P       12 35 47.2 -0.9
AS31   Alice Springs     53.71  96  P         P       12 35 48.1 -0.1
AS31                                IAmb      IAmb    12 37 24.9
       comp=Z,3.4nm,1.5s
QSPA   South Pole Qui    55.45 180  P         P       12 36 00.2 -0.2
       comp=Z,6.9nm,0.7s,baz=275,slow=1.4,SNR=36
       comp=Z,6.9nm,0.7s
QSPA   South Pole Qui    55.45 180  P         P       12 36 00.3  0.0
QSPA                                IAmb      IAmb    12 36 01.3
       comp=Z,7.3nm,0.8s
WRA    Warramunga Arr    55.79  92  P         P       12 36 03.4 +0.1
       comp=Z,2.7nm,1.1s,baz=244,slow=7.0,SNR=4.8
WRA                                 LR        LR      12 57 08.3
       comp=Z,53nm,18.9s,baz=70,slow=33
       comp=Z,2.7nm,1.1s
WR0    Warramunga Arr    55.95  92  P         P       12 36 03.7 -0.7
VNDA   Vanda             56.20 165  P         P       12 36 05.6 +0.3
       comp=Z,3.2nm,0.9s,baz=272,slow=6.9,SNR=11
       comp=Z,3.2nm,0.9s
VNDA   Vanda             56.20 165  P         P       12 36 06.1 +0.7
VNDA                                IAmb      IAmb    12 36 06.9
       comp=Z,5.9nm,1.1s
CMAR   Chiang Mai Arr    58.40  29  P         P       12 36 21.9 +0.3
       comp=Z,0.9nm,0.7s,baz=219,slow=7.4,SNR=5.5
       comp=Z,0.9nm,0.7s
RAYN   Ar Rayn           63.47 332  P         P       12 36 56.3 +0.3
KDJ    Kajisay           76.57   3  P         P       12 38 16.3 +0.1
KDJ                                 IAmb      IAmb    12 38 18.4
       comp=Z,3.5nm,0.8s
KK31   Karatay Array     77.47 358            P       12 38 21.4 +0.3
KK31                                IAmb      IAmb    12 40 18.4
       comp=Z,6.2nm,0.7s
KKAR   Karatay Array     77.47 358            P       12 38 21.9 +0.9
MK31   Makanchi Array    81.57   7  P         P       12 38 42.6 -0.7
MK31                                IAmb      IAmb    12 38 43.5
       comp=Z,2.7nm,0.9s
MKAR   Makanchi Array    81.57   7  P         P       12 38 42.9 -0.4
       comp=Z,3.1nm,0.8s,baz=184,slow=5.8,SNR=20
       comp=Z,3.1nm,0.8s
MKAR   Makanchi Array    81.57   7  P         P       12 38 42.5 -0.8
BRTR   Keskin Array B    82.44 331  P         P       12 38 48.3 +0.1
       comp=Z,1.7nm,0.9s,baz=151,slow=7.9,SNR=7.1
       comp=Z,1.7nm,0.9s
TORD   Torodi Ar. Bea    82.47 292  P         P       12 38 48.1 -0.6
       comp=Z,0.9nm,0.7s,baz=131,slow=4.2,SNR=4.1
       comp=Z,0.9nm,0.7s
DBIC   Dimbokro          83.76 282  LR        LR      13 13 03.2
       comp=Z,20nm,19.6s,baz=159,slow=33
INK    Inuvik           143.18  16  PKP       PKPbc   12 45 56.1 +0.1
       comp=Z,2.1nm,0.9s,baz=348,slow=7.7,SNR=4.0
SCHQ   Schefferville    145.67 318  PKPbc     PKPab   12 46 04.5 +0.1
       comp=Z,7.2nm,0.8s,baz=73,slow=2.1,SNR=9.2
YKA    Yellowknife Ar   151.79   7  PKPbc     PKPbc   12 46 19.7 -0.1
       comp=Z,4.1nm,0.9s,baz=344,slow=2.8,SNR=13
YKA    Yellowknife Ar   151.79   7  PKPdf     PKPdf   12 46 12.9 -0.5
YKA                                           PKPbc   12 46 19.6 -0.2
YKA                                 PKPab     PKPab   12 46 29.3 +0.5
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JMA ***24*** *12:42:27.6±0.3, 44°N±1°×14°8E±°, h0^{km}, MV4.1/27, SE OFF ETOROFU*

SKHL ***24*** *12:42:28.7±0.2, 44°.30N×148°.20E, h30^{km}±5^{km}, mb4.6/3*

ISC 24 12:42:25.1±3.1**, 44°.2N**±0°.1×**148°.4E**±0°.2**, h26^{km}**±20^{km}**, n17, σ1^{s}.50**/28**, Kuril Islands**

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Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op        ISC       h  m  s  ISC
KUR    Kuril'sk           1.07 339 eP         Pn      12 42 45.0 +0.6
KUR                                 AMB       AMB     12 42 45.4
       160nm,0.2s
KUR                                eS         Sn      12 42 57.0 -1.4
KUR                                 A         A       12 42 57.6
       590nm,0.3s
KUR                                 A         A       12 42 57.6
       1μm,0.3s
SHO    Shikotan           1.20 253 eP         Pb      12 42 46.5 -0.7
SHO                                 AMB       AMB     12 42 48.4
       130nm,0.2s
SHO                                eS         Sn      12 42 59.9 -1.7
SHO                                 A         A       12 43 00.9
       590nm,0.3s
SHO                                 A         A       12 43 00.9
       1μm,0.3s
YUK    Yuzh-Kuril'sk      1.85 265 eP         Pn      12 42 55.9 +0.8
YUK                                 AMB       AMB     12 42 57.7
       140nm,0.2s
YUK                                i S        Sn      12 43 16.2 -1.4
YUK                                 A         A       12 43 21.7
       700nm,0.5s
YUK                                 A         A       12 43 21.7
       710nm,0.5s
NEM2   Nemuro 2           2.12 247  P         Pn      12 42 59.5 +0.6
NEM2                               eS         Sn      12 43 22.1 -2.2
NMR    Nemuro--Hokkai     2.13 247 eP         Pn      12 42 59.5 +0.5
NMR                                eS         Sn      12 43 22.8 -1.7
GLVR   Golovnino          2.15 258 eP         Pn      12 43 00.3 +1.1
GLVR                               eS         Sn      12 43 24.1 -0.9
GLVR                                A         A       12 43 29.9
       760nm,0.5s
GLVR                                A         A       12 43 29.9
       570nm,0.5s
JRA    Rausu              2.39 264 eP         Pn      12 43 04.5 +1.9
JRA                                eS         Sn      12 43 31.0  0.0
JNSB   Nemuroshibetsu     2.50 261 eP         Pn      12 43 05.7 +1.6
JKHN   Kushirohamanak     2.63 245 eP         Pn      12 43 07.0 +1.2
JNK    Nakash             2.75 258 eP         Pn      12 43 09.0 +1.5
JNK                                eS         Sn      12 43 38.9 -1.0
AKK    Akkeshi            2.87 246 eP         Pn      12 43 10.1 +1.0
JAK    Akkeshi            2.97 247 eP         Pn      12 43 11.7 +1.1
JAK                                eS         Sn      12 43 44.0 -1.2
JAR    Ashorobuto         3.50 256 eP         Pn      12 43 19.9 +2.2
JAR                                eS         Sn      12 43 58.2  0.0
JOB    Onbets             3.59 250 eP         Pn      12 43 20.8 +1.9
JOB                                eS         Sn      12 43 59.6 -0.9
JMP    Maruseppu          3.65 268 eP         Pn      12 43 22.4 +2.6
JCH    Churui             4.02 248 eP         Pn      12 43 26.3 +1.3
JNBK   Urakawa-nobuka     4.58 247 eP         Pn      12 43 34.2 +1.7
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ANF ***24*** *12:47:04.9±0.2, 63°.13N×150°.31W, h5^{km}±1^{km}, ML3.5/61, ML3.5/62, Error ellipse: s-maj=1.5km s-min=1.2km az=36.0*

AEIC ***24*** *12:47:05±1.9, 63°.13N±0°.02×150°.26W±0°.04, h6^{km}±6^{km}, ML3.1, ML3.3/157(NEIC), Error ellipse: s-maj=3.0km s-min=2.3km az=59.0*

NEIC ***24*** *12:47:06.4±2.1, 63°.13N±0°.02×150°.27W±0°.04, h14^{km}±4^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=52.0*

ISC 24 12:47:05.0±1.0**, 63°.14N**±0°.02×**150°.29W**±0°.02**, h8^{km}**±9^{km}**, n219, σ1^{s}.02**/243**, Central Alaska**

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Code   Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op        ISC       h  m  s  ISC
TRF    Thorofare Moun     0.31 360            Pg      12 47 11.1 -0.2
TRF                                           Sg      12 47 16.9 +1.5
TRF    Thorofare Moun     0.31 360  IAML              12 47 17.1
       comp=N,7μm,0.4s
TRF                                 IAML              12 47 17.3
       comp=E,2μm,0.3s
TRF    Thorofare Moun     0.31 360  P         Pg      12 47 12.0 +0.7
       baz=178,SNR=1000
TRF                                 S         Sg      12 47 16.5 +1.1
       baz=178
KTH    Kantishna Hill     0.51 326            Pg      12 47 15.1 +0.3
KTH                                           Sg      12 47 21.9 +0.4
KTH    Kantishna Hill     0.51 326  IAML              12 47 22.2
       comp=E,802nm,0.8s
KTH                                 IAML              12 47 22.5
       comp=N,1μm,0.6s
RND    Reindeer           0.70  67            Pg      12 47 18.5  0.0
RND                                           Sb      12 47 28.5 -0.9
CUT    Chulitna           0.74 179            Pb      12 47 19.6 -0.5
CUT                                           Sb      12 47 29.6 -0.7
CUT    Chulitna           0.74 179  IAML              12 47 32.6
       comp=N,2μm,0.4s
CUT                                 IAML              12 47 34.5
       comp=E,2μm,0.4s
CUT    Chulitna           0.74 179  P         Pb      12 47 19.6 -0.5
       baz=360,SNR=42
CUT                                 S         Sg      12 47 29.2 +0.5
       baz=360
WAT1   Susitna Watana     0.85 111            Pg      12 47 21.3 -0.1
WAT1                                          Sb      12 47 32.8 -0.8
WAT1   Susitna Watana     0.85 111  P         Pg      12 47 21.3 -0.1
       baz=292
WAT1                                S         Sb      12 47 32.9 -0.7
       baz=292
CAST   Castle Rocks       0.86 290            Pg      12 47 21.1 -0.4
CAST   Castle Rocks       0.86 290  IAML              12 47 36.1
       comp=E,709nm,0.3s
CAST                                IAML              12 47 36.5
       comp=N,696nm,0.2s
CAST   Castle Rocks       0.86 290  P         Pg      12 47 21.2 -0.4
       baz=108
CAST                                S         Sg      12 47 32.3 -0.4
       baz=108
PPLA   Purkeypile         0.90 255            Pg      12 47 22.1 -0.2
PPLA   Purkeypile         0.90 255  P         Pg      12 47 22.1 -0.2
       baz=74,SNR=240
PPLA                                S         Sg      12 47 34.0 -0.1
       baz=74
BPAW   Bear Paw Mtn.      1.01 342            Pg      12 47 24.4 -0.1
BPAW                                          Sg      12 47 38.0 +0.3
BPAW   Bear Paw Mtn.      1.01 342  IAML              12 47 39.5
       comp=E,623nm,0.7s
BPAW                                IAML              12 47 40.2
       comp=N,676nm,0.6s
BPAW   Bear Paw Mtn.      1.01 342  P         Pg      12 47 24.3 -0.1
       baz=161,SNR=165
BPAW                                S         Sg      12 47 36.9 -0.8
       baz=161
CHUM   Lake Minchumin     1.18 310            Pg      12 47 27.5 -0.1
CHUM   Lake Minchumin     1.18 310  P         Pg      12 47 27.2 -0.4
       baz=128,SNR=282
CHUM                                S         Sg      12 47 42.7 -0.2
       baz=128
WAT6   Susitna Watana     1.29 115            Pn      12 47 29.1 -0.5
WAT6                                          Sg      12 47 45.8 -0.8
WAT6   Susitna Watana     1.29 115  P         Pn      12 47 28.8 -0.8
       baz=297,SNR=219
WAT6                                S         Sg      12 47 45.6 -1.1
       baz=297
DHY    Denali Highway     1.32  91            Pn      12 47 29.6 -0.4
DHY                                           Sb      12 47 47.5 +0.1
DHY    Denali Highway     1.32  91  IAML              12 47 49.2
       comp=E,691nm,0.4s
DHY    Denali Highway     1.32  91  P         Pn      12 47 29.5 -0.5
       baz=274,SNR=111
DHY                                 S         Sb      12 47 47.3 -0.1
       baz=274
M22K   Willow             1.39 177            Pn      12 47 30.6 -0.1
M22K   Willow             1.39 177  P         Pn      12 47 30.1 -0.6
       baz=357,SNR=45
M22K                                S         Sb      12 47 48.6 -0.6
       baz=357
GHO    Glory Hole Cre     1.51 155            Pn      12 47 31.9 -0.5
NEA2   Nenana             1.56  20            Pn      12 47 32.7 -0.4
NEA2   Nenana             1.56  20  P         Pn      12 47 32.6 -0.4
       baz=200,SNR=36
NEA2                                S         Sn      12 47 52.8 -0.6
       baz=200
SML    Sawmill            1.62 145            Pn      12 47 33.4 -0.5
SML    Sawmill            1.62 145  IAML              12 47 56.1
       comp=N,528nm,0.6s
SML                                 IAML              12 47 57.9
       comp=E,555nm,0.7s
SML    Sawmill            1.62 145  P         Pn      12 47 33.4 -0.5
       baz=327,SNR=111
SML                                 S         Sn      12 47 54.5 -0.5
       baz=327
WRH    Wood River Hil     1.65  35            Pn      12 47 34.3 -0.1
K20K   Telida             1.73 279            Pn      12 47 35.2 -0.3
K20K   Telida             1.73 279  IAML              12 48 01.0
       comp=E,220nm,0.7s
K20K   Telida             1.73 279  P         Pn      12 47 35.1 -0.3
       baz=96,SNR=175
K20K                                S         Sn      12 47 56.7 -0.9
       baz=96
L20K   Farewell, AK       1.78 250            Pb      12 47 37.4 -0.5
L20K   Farewell, AK       1.78 250  P         Pn      12 47 36.2 +0.1
       baz=67,SNR=133
L20K                                S         Sn      12 47 59.4 +0.4
       baz=67
STLK   Strandline Lak     1.80 204            Pn      12 47 36.8 +0.3
M23K   Glacier View       1.80 138  P         Pn      12 47 35.8 -0.6
       baz=320,SNR=83
M23K                                S         Sn      12 47 59.8 +0.4
       baz=320
M20K   Styx River         1.83 228            Pn      12 47 37.1 +0.3
M20K   Styx River         1.83 228  IAML              12 48 03.6
       comp=N,314nm,0.8s
M20K                                IAML              12 48 04.2
       comp=E,449nm,0.3s
M20K   Styx River         1.83 228  P         Pn      12 47 36.9 +0.1
       baz=45,SNR=191
M20K                                S         Sn      12 48 00.1  0.0
       baz=45
CCB    Clear Creek Bu     1.87  35            Pn      12 47 37.2 -0.1
SCM    Sheep Creek Mo     1.90 132            Pn      12 47 37.5 -0.3
SCM    Sheep Creek Mo     1.90 132  IAML              12 48 06.8
       comp=E,392nm,0.7s
SCM    Sheep Creek Mo     1.90 132  P         Pn      12 47 37.2 -0.6
       baz=315,SNR=52
SCM                                 S         Sb      12 48 02.9 -0.9
       baz=315
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KNK	Knik Glacier	1.93	153		Pn	12 47 39.2	+1.0
KNK	Knik Glacier	1.93	153	IAML		12 48 05.2	
	comp=N,352nm,0.4s						
KNK	Knik Glacier	1.93	153	P	Pn	12 47 38.3	+0.1
	baz=335,SNR=58						
KNK				S	Sb	12 48 04.0	-0.7
	baz=335						
HDA	Harding Lake	1.96	48		Pn	12 47 39.2	+0.7
HDA	Harding Lake	1.96	48	IAML		12 48 09.4	
	comp=E,300nm,0.3s						
HDA				IAML		12 48 11.6	
	comp=N,397nm,0.5s						
HDA	Harding Lake	1.96	48	P	Pn	12 47 38.5	0.0
	baz=230,SNR=197						
HDA				S	Sn	12 48 03.8	+0.5
	baz=230						
HDA				S	Sn	12 48 03.8	+0.5
	baz=230						
FIS	Fire Island	2.00	179		Pn	12 47 38.9	-0.3
FIS				IAML		12 48 21.1	
	comp=N,332nm,0.6s						
J20K	Nowinta River	2.01	303		Pn	12 47 39.1	-0.2
J20K	Nowinta River	2.01	303	IAML		12 48 10.7	
	comp=N,177nm,0.5s						
J20K				IAML		12 48 13.6	
	comp=E,156nm,0.6s						
J20K	Nowinta River	2.01	303	P	Pn	12 47 39.1	-0.2
	baz=119,SNR=129						
J20K				S	Sn	12 48 04.5	-0.1
	baz=119						
SPCG	Spurr Capps Gl	2.02	204		Pn	12 47 40.2	+0.6
MDM	Murphy Dome	2.04	25		Pn	12 47 39.8	+0.1
TCOL	CIGO, UAF Yank	2.04	30		Pn	12 47 39.9	+0.2
TCOL	CIGO, UAF Yank	2.04	30	P	Pn	12 47 39.8	+0.1
	baz=212,SNR=23						
TCOL				S	Sb	12 48 07.1	-0.8
	baz=212						
COLA	College	2.04	31		Pn	12 47 39.8	+0.1
COLA	College	2.04	31	P	Pn	12 47 39.8	+0.1
	baz=212						
COLA				Sb	Sg	12 48 09.8	-0.9
	baz=212						
I23K	Minto, Yukon-K	2.06	11		Pn	12 47 39.9	0.0
I23K	Minto, Yukon-K	2.06	11	P	Pn	12 47 39.9	0.0
	baz=192,SNR=28						
I23K				Sb	Sb	12 48 09.5	+1.2
	baz=192						
PS10	TAPS Pump St10	2.06	80		Pb	12 47 41.5	-1.2
RC01	Rabbit Creek A	2.07	173		Pn	12 47 40.6	+0.5
RC01	Rabbit Creek A	2.07	173	IAML		12 48 11.1	
	comp=N,189nm,0.4s						
RC01				IAML		12 48 20.0	
	comp=E,183nm,0.5s						
RC01	Rabbit Creek A	2.07	173	P	Pn	12 47 40.7	+0.5
	baz=353,SNR=14						
RC01				S	Sn	12 48 06.9	+0.7
	baz=353						
PS08	TAPS Pump Stn8	2.08	46		Pn	12 47 40.5	+0.3
CKN	Chakachatna No	2.12	206		Pb	12 47 42.4	-1.3
K24K	Donnelly Dome	2.13	70	Pb	Pb	12 47 44.1	+0.3
	baz=254						
K24K				Sb	Sg	12 48 12.6	-0.8
	baz=254						
SPU	Mount Spurr	2.13	204		Pn	12 47 41.6	+0.6
SPCR	Spurr Chakacha	2.15	206		Pn	12 47 42.0	+0.8
SPCR	Spurr Chakacha	2.15	206	Pb	Pb	12 47 43.4	-0.8
	baz=24						
SPCR				Sb	Sb	12 48 12.1	+1.1
	baz=24						
SPWE	Spurr West	2.15	211		Pn	12 47 42.4	+1.1
M24K	Tolsona, Glenn	2.16	117		Pn	12 47 41.8	+0.3
M24K	Tolsona, Glenn	2.16	117	P	Pn	12 47 41.7	+0.3
	baz=300,SNR=76						
M24K				S	Sn	12 48 09.7	+1.2
	baz=300						
I21K	Tanana	2.18	341		Pn	12 47 41.7	+0.1
I21K	Tanana	2.18	341	P	Pn	12 47 41.7	+0.1
	baz=159,SNR=28						
I21K				S	Sn	12 48 09.0	+0.3
	baz=159						
PAX	Paxson	2.20	92		Pn	12 47 42.2	+0.2
PAX	Paxson	2.20	92	P	Pn	12 47 42.1	+0.1
	baz=276,SNR=91						
PAX				S	Sb	12 48 10.9	-1.6
	baz=276						
IL31		2.22	41		Pn	12 47 42.2	+0.1
ILAR	Eielson Array	2.22	41	Pn	Pn	12 47 41.9	-0.3
M19K	Big River Lodg	2.27	239		Pn	12 47 42.9	0.0
M19K	Big River Lodg	2.27	239	IAML		12 48 20.4	
	comp=N,202nm,0.7s						
L19K	White Mountain	2.32	248		Pn	12 47 43.7	+0.2
L19K				IAML		12 48 20.2	
	comp=E,148nm,0.9s						
L19K	White Mountain	2.32	248	P	Pn	12 47 43.5	0.0
	baz=64,SNR=59						
L19K				Sb	Sb	12 48 17.7	+1.9
	baz=64						
POKR	Poker Plat Res	2.35	31		Pn	12 47 44.2	+0.3
POKR	Poker Plat Res	2.35	31	P	Pn	12 47 44.2	+0.3
	baz=213,SNR=12						
POKR				S	Sn	12 48 12.9	0.0
	baz=213						
CAPN	Captain Cook N	2.42	190	Pb	Pb	12 47 48.4	-0.3
	baz=9.6						
CAPN				S	Sn	12 48 15.8	+1.3
	baz=9.6						
PS11	TAPS Pump St11	2.47	113		Pn	12 47 46.3	+0.8
HARP	HAARP	2.47	105		Pn	12 47 46.9	+1.2
HARP	HAARP	2.47	105	P	Pn	12 47 46.8	+1.2
	baz=290,SNR=41						
HARP				S	Sn	12 48 17.6	+1.6
	baz=290						
RIDG	Independent Ri	2.52	74		Pn	12 47 47.1	+0.8
RIDG				IAML		12 48 30.8	
	comp=N,159nm,1.0s						
RIDG				IAML		12 48 31.8	
	comp=E,152nm,0.6s						
RIDG	Independent Ri	2.52	74	P	Pn	12 47 47.1	+0.8
	baz=258,SNR=110						
RIDG				S	Sn	12 48 19.1	+1.9
	baz=258						
TTA	Tatalina	2.62	268		Pn	12 47 47.2	-0.5
TTA	Tatalina	2.62	268	P	Pn	12 47 47.3	-0.4
	baz=83,SNR=19						
TTA				S	Sn	12 48 19.3	-0.4
	baz=83						
KLU	Klutina	2.62	127		Pn	12 47 48.2	+0.4
KLU				IAML		12 48 27.8	
	comp=E,158nm,0.5s						
KLU				IAML		12 48 28.4	
	comp=N,135nm,0.5s						
KLU	Klutina	2.62	127	P	Pn	12 47 48.8	+1.0
	baz=311,SNR=39						
J25K	Salcha River,	2.63	54		Pn	12 47 48.0	+0.2
J25K				IAML		12 48 28.3	
	comp=E,126nm,0.7s						
J25K				IAML		12 48 29.4	
	comp=N,137nm,0.6s						
J25K	Salcha River,	2.63	54	P	Pn	12 47 48.2	+0.4
	baz=238,SNR=46						
SLKM	Skilak Lake	2.64	179		Pn	12 47 49.2	+1.3
O22K	Cooper Landing	2.68	174		Pn	12 47 49.0	+0.6
O22K	Cooper Landing	2.68	174	P	Pn	12 47 48.0	-0.5
	baz=355						
H23K	Yukon River	2.72	6		Pn	12 47 49.5	+0.5
H23K	Yukon River	2.72	6	P	Pn	12 47 49.4	+0.5
	baz=187						
JPK	Jack Peak	2.72	139		Pn	12 47 50.4	+1.4
GLI	Glacier Island	2.72	145		Pn	12 47 50.3	+1.3
GLI	Glacier Island	2.72	145	IAML		12 48 31.8	
	comp=N,183nm,0.5s						
GLI	Glacier Island	2.72	145	P	Pn	12 47 50.3	+1.3
	baz=328,SNR=19						
PS06	TAPS Pump Stn6	2.74	5		Pn	12 47 49.6	+0.4
H21K	Melozitna Rive	2.75	338		Pn	12 47 49.6	+0.1
H21K				IAML		12 48 31.4	
	comp=E,88nm,0.7s						
H21K				IAML		12 48 32.3	
	comp=N,96nm,0.3s						
H21K	Melozitna Rive	2.75	338	P	Pn	12 47 49.7	+0.1
	baz=155						
DFR	Drift River	2.80	205		Pn	12 47 51.3	+1.1
DOT	Dot Lake	2.85	77		Pn	12 47 51.2	+0.4
NCT	North Crescent	2.88	207		Pn	12 47 52.3	+1.0
H24K	Noodor Dome	2.90	20		Pn	12 47 51.9	+0.3
H24K	Noodor Dome	2.90	20	P	Pn	12 47 51.8	+0.3
	baz=202,SNR=16						
RDWB	Redoubt West	2.92	206		Pn	12 47 52.5	+0.6
DIV	Divide	2.93	132		Pn	12 47 52.8	+0.9
RSO	Redoubt South	2.93	205	Pn	Pn	12 47 53.9	+1.8
SCRK	Sand Creek	2.94	71		Pn	12 47 52.2	+0.1
SCRK				IAML		12 48 38.3	
	comp=E,78nm,0.5s						
SCRK	Sand Creek	2.94	71	P	Pn	12 47 52.3	+0.1
	baz=256,SNR=68						
FID	Port Fidalgo	3.00	141		Pn	12 47 53.7	+0.8
FID				IAML		12 48 41.6	
	comp=N,106nm,0.6s						
FID				IAML		12 48 43.1	
	comp=E,111nm,0.3s						
MENT	Mentasta	3.00	91		Pn	12 47 54.1	+1.2
N19K	Bonanza Creek	3.06	222		Pn	12 47 54.4	+0.6
N19K				IAML		12 48 44.8	
	comp=E,74nm,0.7s						
N19K	Bonanza Creek	3.06	222	P	Pn	12 47 53.8	0.0
	baz=39						
N25K	Chitina, Valde	3.06	118		Pn	12 47 55.1	+1.3
N25K	Chitina, Valde	3.06	118	IAML		12 48 44.0	
	comp=E,77nm,0.7s						
N25K				IAML		12 48 50.0	
	comp=N,80nm,0.7s						
N25K	Chitina, Valde	3.06	118	P	Pn	12 47 55.9	+2.1
	baz=303,SNR=18						
SEW	Seward	3.07	172	Pn	Pn	12 47 54.9	+1.1
L26K	Log Cabin Wild	3.16	89		Pn	12 47 56.2	+1.2
L26K	Log Cabin Wild	3.16	89	P	Pn	12 47 57.0	+1.9
	baz=275,SNR=30						
IMAR	Indian Mountai	3.22	334	Pn	Pn	12 47 56.3	+0.4
SVW2	Sparrevohn	3.22	233		Pn	12 47 56.1	+0.2
SVW2				IAML		12 48 47.2	
	comp=N,111nm,0.6s						
O20K	Slope Mountain	3.27	201		Pn	12 47 58.1	+1.6
J26L	Joseph Creek	3.28	62	P	Pn	12 47 57.4	+0.7
	baz=248,SNR=16						
HIN	Hinchinbrook I	3.29	145		Pn	12 47 58.0	+1.1
HIN				IAML		12 48 53.3	
	comp=E,106nm,0.8s						
HIN				IAML		12 48 58.9	
	comp=N,89nm,0.9s						
GCSA	Galena City Sc	3.33	302		Pn	12 47 58.1	+0.8
GCSA	Galena City Sc	3.33	302	P	Pn	12 47 58.0	+0.7
	baz=116						
EYAK	Cordova Ski Ar	3.37	138		Pn	12 47 59.6	+1.6
EYAK	Cordova Ski Ar	3.37	138	P	Pn	12 47 59.3	+1.4
	baz=322						
BRLK	Bradley Lake	3.40	185		Pn	12 47 59.1	+0.7
BRSE	Bradley Lake S	3.42	184		Pn	12 47 60.0	+1.4
BRSE	Bradley Lake S	3.42	184	P	Pn	12 48 01.8	+3.1
	baz=3.6						
M26K	Nabesna, AK	3.43	99		Pn	12 48 01.4	+2.5
M26K				IAML		12 48 53.4	
	comp=N,105nm,0.8s						
M26K				IAML		12 48 56.5	
	comp=E,82nm,0.4s						
M26K	Nabesna, AK	3.43	99	Pb	Pb	12 48 05.2	-0.9
	baz=286						
BMRM	Bremner River	3.45	127		Pn	12 47 59.0	-0.1
BMRM				IAML		12 48 56.6	
	comp=N,71nm,1.0s						
BMRM				IAML		12 48 58.4	
	comp=E,60nm,0.8s						
BMRM	Bremner River	3.45	127	P	Pn	12 47 60.0	+0.9
	baz=312						
GLB	Gilahina Butte	3.47	116		Pn	12 47 59.5	+0.1
GLB				IAML		12 48 57.2	
	comp=E,48nm,0.8s						
GLB				IAML		12 48 59.5	
	comp=N,61nm,0.8s						
O19K	Port Alsworth	3.52	215	Pn	Pn	12 48 02.0	+2.0
O19K	Port Alsworth	3.52	215	P	Pn	12 48 00.4	+0.4
	baz=31						
HOM	Homer	3.55	191	Pn	Pn	12 48 00.7	+0.3
N18K	Kilae Creek	3.62	230		Pn	12 48 01.9	+0.5
N18K				IAML		12 49 04.8	
	comp=E,62nm,0.6s						
N18K				IAML		12 49 05.0	
	comp=N,63nm,0.7s						
N18K	Kilae Creek	3.62	230	P	Pn	12 48 01.7	+0.3
	baz=45,SNR=16						
CNPM	China Poot	3.66	188		Pn	12 48 02.6	+0.7
CNPM				IAML		12 49 00.6	
	comp=N,42nm,2.1s						
CNPM				IAML		12 49 04.2	
	comp=E,39nm,1.1s						
VRDI	Verde Repeater	3.73	118		Pn	12 48 04.1	+1.0
VRDI				IAML		12 49 09.5	
	comp=N,38nm,1.3s						
K27K	Chicken	3.78	73		Pn	12 48 03.6	+0.1
K27K	Chicken	3.78	73	IAML		12 49 06.7	
	comp=N,49nm,0.5s						
K27K	Chicken	3.78	73	P	Pn	12 48 03.6	+0.1
	baz=260,SNR=6.6						
MCARA	McCarthy VSAT	3.82	114		Pn	12 48 04.5	+0.3
MCARA				IAML		12 49 09.3	
	comp=E,73nm,1.0s						
MCARA	McCarthy VSAT	3.82	114	P	Pn	12 48 06.4	+2.2
	baz=301						
L27K	Beaver Creek,	3.84	87		Pn	12 48 05.7	+1.1
L27K	Beaver Creek,	3.84	87	IAML		12 49 09.9	
	comp=E,33nm,0.5s						
L27K				IAML		12 49 10.0	
	comp=N,35nm,0.7s						
L27K	Beaver Creek,	3.84	87	P	Pn	12 48 05.6	+1.1
	baz=275,SNR=21						
BCAR	Beaver Creek A	3.86	87		Pn	12 48 05.9	+1.1
M27K	Edge Creek, AK	3.95	98		Pn	12 48 08.5	+2.5
M27K				IAML		12 49 15.9	
	comp=E,37nm,0.8s						
M27K				IAML		12 49 19.5	
	comp=N,40nm,1.0s						
M27K	Edge Creek, AK	3.95	98	P	Pn	12 48 08.0	+2.0
	baz=285						
HMT	Hamilton	4.01	132		Pn	12 48 06.8	0.0
PTPK	Patty Peak	4.16	115		Pn	12 48 11.5	+2.6
TGL	Tana Glacier	4.26	121		Pn	12 48 10.8	+0.6
TGL				IAML		12 49 22.1	
	comp=N,43nm,0.8s						
TGL				IAML		12 49 22.6	
	comp=E,35nm,0.9s						
BALM	Baldy	4.29	116		Pn	12 48 12.3	+1.7
KHIT	Khitrov Hills	4.30	126		Pn	12 48 12.2	+1.4
EGAK	Eagle	4.35	64		Pn	12 48 11.9	+0.5
EGAK	Eagle	4.35	64	P	Pn	12 48 12.0	+0.7
	baz=252						
SUCK	Suckling Hills	4.37	132	Pn	Pn	12 48 11.5	-0.2
SUCK				IAML		12 49 27.5	
	comp=N,41nm,1.2s						
SUCK				IAML		12 49 31.2	
	comp=E,32nm,2.5s						
WAX	Waxell Ridge	4.44	124	Pn	Pn	12 48 14.3	+1.5
WAX				IAML		12 49 26.7	
	comp=E,42nm,0.9s						
P18K	Big Mountain,	4.45	215	Pn	Pn	12 48 13.4	+0.6
Q19K	Cape Douglas,	4.53	203	Pn	Pn	12 48 15.6	+1.7
Q19K	Cape Douglas,	4.53	203	P	Pn	12 48 16.9	+3.0
	baz=20						
ISLE	Juniper Island	4.54	121	Pn	Pn	12 48 14.2	+0.1
ISLE				IAML		12 49 31.9	
	comp=E,37nm,1.1s						
BARN	Barnard Glacie	4.56	113		Pn	12 48 16.5	+2.1
BARN	Barnard Glacie	4.56	113	IAML		12 49 31.0	
	comp=N,23nm,1.0s						
YUK2	White River	4.59	103		Pn	12 48 17.0	+2.2
SNH	Sunshine Point	4.63	127	Pn	Pn	12 48 17.4	+2.2
SNH				IAML		12 49 36.3	
	comp=N,32nm,2.1s						
SNH				IAML		12 49 48.1	
	comp=E,30nm,1.9s						
GRNC	Granite Creek	4.70	117	Pn	Pn	12 48 17.5	+1.2
GRNC				IAML		12 49 36.9	
	comp=N,18nm,1.0s						
BAGL	Bagley Icefiel	4.71	121		Pn	12 48 17.7	+1.4
CTG	Chitna Glacier	4.74	113	P	Pn	12 48 17.5	+0.6
	baz=301						
CTGM	Chitina Glacie	4.74	113		Pn	12 48 19.0	+2.1
CTGM				IAML		12 49 37.5	
	comp=N,17nm,1.2s						
YUK3	Moose Creek	4.76	102		Pn	12 48 19.7	+2.4
YUK3	Moose Creek	4.76	102	P	Pn	12 48 16.6	-0.6
	baz=291						
YAH	Yahtse	4.92	121	Pn	Pn	12 48 21.1	+1.6
YAH				IAML		12 49 57.2	
	comp=E,15nm,2.4s						
YAH				IAML		12 50 50.1	
	comp=N,20nm,3.6s						
BMAR	Burnt Mountain	4.93	27	Pn	Pn	12 48 20.1	+0.7
DAWY	Dawson	4.95	74		Pn	12 48 20.2	+0.5
DAWY				IAML		12 49 49.5	
	comp=E,29nm,0.7s						
DAWY				IAML		12 49 57.8	
	comp=N,26nm,0.8s						
DAWY	Dawson	4.95	74	P	Pn	12 48 20.0	+0.3
	baz=264,SNR=8.8						
LOGN	Logan Glacier	4.96	114	Pn	Pn	12 48 21.6	+1.7
LOGN				IAML		12 49 41.8	
	comp=E,14nm,1.2s						
LOGN				IAML		12 49 44.4	
	comp=N,17nm,0.9s						
MESA	MESA	4.96	123	Pn	Pn	12 48 21.0	+1.1
MESA	MESA	4.96	123	P	Pn	12 48 21.6	+1.6
	baz=310						
TABL	Table Mountain	5.11	118	Pn	Pn	12 48 23.5	+1.4
TABL				IAML		12 49 57.1	
	comp=E,14nm,1.4s						
TABL				IAML		12 51 21.6	
	comp=N,14nm,3.7s						
KDAK	Kodiak Island	5.49	193	Pn	Pn	12 48 28.9	+1.8
TOLK	Toolik Lake Re	5.53	3		Pn	12 48 29.6	+1.9
TOLK	Toolik Lake Re	5.53	3	P	Pn	12 48 29.4	+1.8
	baz=183						
PCA	Pinnacle	5.67	118		Pn	12 48 31.6	+2.0
PINM	Pinnacle	5.67	118	P	Pn	12 48 31.6	+1.9
	baz=307						
I29M	Ogilvie Camp,	5.68	62		Pn	12 48 29.5	-0.1
BCPM	Bancas Point	6.01	117	Pn	Pn	12 48 36.0	+1.8
M30M	Minto, Yukon	6.20	89	Pn	Pn	12 48 38.2	+1.3
PNL	Peninsula	6.28	119	P	Pn	12 48 39.2	+1.3
	baz=308						
HYT	Haines Junctio	6.45	105	Pn	Pn	12 48 42.5	+2.1
HYT	Haines Junctio	6.45	105	P	Pn	12 48 42.9	+2.5
	baz=297						
RDOG	Red Dog Mine	7.18	319	Pn	Pn	12 48 49.9	-0.3
WHY	Whitehorse	7.68	102	Pn	Pn	12 48 58.4	+1.2
INK	Inuvik	8.61	46	Pn	Pn	12 49 11.6	+1.8
BESE	Bessie Mountai	8.80	114	Pn	Pn	12 49 13.4	+1.0
JIS	Juneau Island	9.18	115	Pn	Pn	12 49 18.8	+1.2
C36M	Paulatuk	12.18	48	Pn	Pn	12 49 58.8	+0.3

NNC ***24*** *13:03:03.9±0.3, 50°.04N×78°.77E, h0^{km}, mb3.1, mpv3.1,*
Error ellipse: s-maj=2.9km s-min=1.4km az=65.0,
Suspected Mining explosion.
IDC ***24*** *13:04.5±1.0, 50°.05N×78°.77E, h0^{km}, mbtmp2.9/2,*
ML2.5/2, Error ellipse: s-maj=13.8km s-min=6.5km
az=65.0
ISC 24 13:03:04.2±1.0, **50°.15N**±0°.04×**78°.83E**±0°.05, **h0^{km}, n20,**
σ**1^{s}.04**/34, **20C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.47	335	⇑P	Pb	13 03 15.0	-0.4
KUR07				⇑S	Sb	13 03 23.3	+0.4
KUR14	Kurchatov Arra	0.49	342	⇑P	Pb	13 03 15.2	-0.4
KUR14				⇓S	Sb	13 03 23.7	+0.4
KUR06	Kurchatov Arra	0.49	336	⇑P	Pb	13 03 15.2	-0.4
KUR06				⇑S	Sb	13 03 23.9	+0.5
KUR15	Kurchatov Arra	0.50	340	⇑P	Pb	13 03 15.2	-0.6
KUR15				⇓S	Sb	13 03 24.7	+1.2
KURBB	Kurchatov Arra	0.51	338	Pg	Pb	13 03 15.4	-0.5
	1.7nm,0.3s,baz=164,slow=18,SNR=115						
KURBB				Lg	Lg	13 03 25.0	
	1.6nm,0.3s,baz=162,slow=31,SNR=11						
KURBB	Kurchatov Arra	0.51	338	⇑P	Pb	13 03 15.5	-0.5
KURBB				⇑S	Sb	13 03 24.8	+0.9
	35nm,0.5s						
KUR16	Kurchatov Arra	0.52	336	⇑P	Pb	13 03 15.8	-0.4
KUR16				⇑S	Sb	13 03 24.5	+0.3
KUR05	Kurchatov Arra	0.53	339	⇑P	Pb	13 03 15.8	-0.4
KUR05				⇓S	Sb	13 03 24.7	+0.3
KUR17	Kurchatov Arra	0.53	334	⇑P	Pb	13 03 15.7	-0.7
KUR17				⇑S	Sb	13 03 24.7	+0.1
KUR04	Kurchatov Arra	0.54	340	⇑P	Pb	13 03 16.1	-0.4
KUR04				⇓S	Sb	13 03 25.3	+0.5
KURK	Kurchatov	0.58	346	⇓P	Pb	13 03 17.0	-0.2
KURK				⇑S	Sb	13 03 26.7	+0.8
	7.8nm,0.4s						
SEM	Semipalatinsk	0.94	74	P	Pn	13 03 24.3	-0.6
	6.3nm,0.1s						
SEM				S	Sn	13 03 37.7	-1.5
	18nm,0.1s						
MAKZ	Makanchi	3.95	147	⇓Pn	Pn	13 04 04.9	-1.1
	0.6nm,0.5s						
MAKZ				⇑Pg	Pb	13 04 15.2	+0.6
	2.1nm,0.7s						
MAKZ				⇓Lg	Lg	13 05 05.5	
	5.1nm,0.8s						
MK31	Makanchi Array	4.07	144	⇑Pn	Pn	13 04 07.0	-0.7
	baz=187,slow=8.9,SNR=12						
MK31				Pg	Pb	13 04 17.2	+0.5
	0.6nm,0.3s,baz=324,slow=14,SNR=13						
MK31				⇑Lg	Lg	13 05 10.5	
	4.6nm,0.7s,baz=335,slow=28,SNR=11						
MKAR	Makanchi Array	4.07	144	Pn	Pn	13 04 07.9	+0.2
	0.3nm,0.3s,baz=321,slow=10,SNR=14						
MKAR				Pg	Pb	13 04 14.6	-2.2
	0.8nm,0.3s,baz=328,slow=15,SNR=17						
MKAR				Lg	Lg	13 05 10.5	
	1.1nm,0.3s,baz=327,slow=27,SNR=11						
	0.2nm,0.3s						
OTUK	Ortayu	4.67	248	⇓Pn	Pn	13 04 15.2	-0.7
	0.4nm,0.1s						
OTUK				⇑Pg	Pb	13 04 27.5	+0.7
	0.8nm,0.4s						
OTUK				⇑Lg	Lg	13 05 30.0	
	2.2nm,0.6s						
ZSN	Zaisan	4.82	122	Pg	Pb	13 04 28.8	-0.6
	2.1nm,0.2s						
ZSN				Lg	Lg	13 05 27.8	
	3.5nm,0.4s						
KAPS	Kapalarasan	4.88	176	Pg	Pb	13 04 31.9	+1.3
	0.9nm,0.1s						
KAPS				Lg	Lg	13 05 33.4	
	3.2nm,0.6s						
I46RU	ZALESOVO INFRA	5.30	42	*i*		13 38 20.0	
	baz=226,slow=322,SNR=1.5						
ZALV	Zalesovo Beam	5.30	42	Pn	Pn	13 04 28.3	+3.9
	0.9nm,0.3s,baz=229,slow=14,SNR=5.3						
ZALV				Lg	Lg	13 05 56.5	
	0.2nm,0.3s,baz=233,slow=23,SNR=1.6						
	1.7nm,0.3s						

KRNET ***24*** *13:41:53.2±0.1, 40°.81N×69°.82E, h14^{km}, mb2.6*
SOME ***24*** *13:41:57.6, 41°.02N×69°.55E, h20^{km}*
NNC ***24*** *13:41:59.6±2.8, 41°.10N×69°.76E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=20.1km s-min=14.0km az=55.0
ISU ***24*** *13:42:07, 40°.44N×70°.16E, h27^{km}*
ISC 24 13:41:54.1±1.5, **40°.81N**±0°.05×**69°.64E**±0°.06, **h34^{km}**±3^{km},
n19, σ**1^{s}.86**/25, **10C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.58	333	⇑*e*P	Pb	13 42 05.8	-0.2
	baz=23						
TAS				⇑*e*S	Sb	13 42 14.8	+0.6
	baz=23						
MINT	Mingtut	1.07	108	P	Pn	13 42 28.1	+15
MINT				S	Sn	13 42 36.9	+10
BTK	Batken	1.17	130	⇑*i*P	Pn	13 42 13.7	-0.5
	baz=34						
BTK				⇑*i*S	Sb	13 42 28.3	-2.5
	baz=34						
TRKS	Terek-Say	1.34	57	⇑*i*P	Pn	13 42 15.8	-0.8
	baz=57						
TRKS				⇑*i*S	Sn	13 42 33.1	-0.2
	baz=57						
IUG	Iuzhnay	1.37	12	*e*P	Pb	13 42 18.6	-0.6
	271nm,0.4s						
IUG				*e*S	Sn	13 42 33.4	-0.5
	38nm,0.4s						
IUG	Iuzhnay	1.37	12	P	Pb	13 42 18.6	-0.6
	271nm,0.4s						
IUG				S	Sn	13 42 33.4	-0.5
	38nm,0.4s						
CHMI	Chimion	1.53	110	P	Pb	13 42 23.8	+1.8
CHMI				S	Sb	13 42 39.0	-2.1
FRG	Fergana	1.69	104	P	Pb	13 42 27.1	+2.5

FRG				S	Sb	13 42 45.4	-0.1
ARK	Arkit baz=58	2.01	60	⇑iP	Pb	13 42 28.0	-2.1
ARK	baz=58			⇑iS	Sb	13 42 53.9	-0.8
BRLS	Borolday 9.7nm,0.4s	2.22	4	eP	Pn	13 42 30.7	+2.1
BRLS	19nm,0.3s			eS	Sn	13 42 54.0	-0.9
BRLS	Borolday 9.7nm,0.4s	2.22	4	P	Pn	13 42 30.7	+2.1
BRLS	19nm,0.3s			S	Sn	13 42 53.9	-0.9
KK31	Karatay Array 1.6nm,0.4s,baz=200,slow=15,SNR=20	2.38	16	Pn	Pb	13 42 34.8	-1.6
KK31	3.5nm,0.5s,baz=195,slow=27,SNR=9.3			⇓Sn	Sb	13 43 04.6	-0.7
KKAR	Karatay Array baz=12	2.38	16	⇑iP	Pb	13 42 34.7	-1.6
KKAR	baz=12			⇑iS	Sb	13 43 05.5	+0.2
MRKS	Merke 3.1nm,0.4s	3.31	53	eP	Pb	13 42 55.9	+3.8
MRKS	6.7nm,0.5s			eS	Sb	13 43 37.3	+5.4
MRKS	Merke 3.1nm,0.4s	3.31	53	Pg	Pb	13 42 55.9	+3.8
MRKS	6.7nm,0.5s			Lg	Lg	13 43 37.3	
KST	Kastek 2.5nm,0.5s	5.22	63	eP	Pb	13 43 31.7	+7.1
KST	4.5nm,0.5s			eS	Sb	13 44 38.6	+12
KST	Kastek 2.5nm,0.5s	5.22	63	Pg	Pb	13 43 31.7	+7.1
KST	4.5nm,0.5s			Lg	Lg	13 44 38.6	
KRBS	Karabastau 0.8nm,0.3s	5.33	55	eP	Pb	13 43 32.9	+6.5
KRBS	1.5nm,0.5s			eS	Sb	13 44 40.7	+11
KRBS	Karabastau 0.8nm,0.3s	5.33	55	Pg	Pb	13 43 32.9	+6.5
KRBS	1.5nm,0.5s			Lg	Lg	13 44 40.7	

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*JMA **24** 13:44:57.4±0.3, 24°N±2°×122°.5E±0°.7, h18^{km}, MV2.3/8,*
NW OFF ISHIGAKIJIMA IS
*TAP **24** 13:44:57.0, 23°.99N×122°.55E, h45^{km}±1^{km}, ML3.0, D*
ISC 24 13:44:55.7±1.1**, 23°.95N**±0°.02×**122°.47E**±0°.02**, h9**^{km}±9^{km}**,**
n83, σ0^{s}.87/144**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.66	41	P	Pg	13 45 09.2	+0.6
JYNG				eS	Sg	13 45 16.9	-0.3
YOJ	Yonaguni jima baz=47	0.71	44	i P	Pg	13 45 10.1	+0.7
YOJ	baz=47			i S	Sg	13 45 18.5	-0.2
YOJ	Yonaguni jima	0.71	44	P	Pg	13 45 10.1	+0.7
YOJ				S	Sg	13 45 18.3	-0.4
EWUT	Wuta baz=303	0.80	308	P	Pb	13 45 12.2	+0.4
EWUT	baz=303			S	Sn	13 45 24.6	-0.7
ETL	Fush Village baz=271	0.80	285	eP	Pb	13 45 12.3	+0.4
ETL	baz=271			eS	Sn	13 45 24.2	-1.1
TWD	Chiawan baz=276	0.81	279	eS	Sb	13 45 23.5	+0.4
ENA	Nanau baz=301	0.82	306	P	Pb	13 45 12.6	+0.5
ENA	baz=301			eS	Sn	13 45 25.3	-0.4
NACB	Ninganchiao baz=272	0.83	286	P	Pb	13 45 12.4	+0.1
NACB	baz=272			S	Sb	13 45 24.5	+0.8
TWC	Suao baz=306	0.87	319	P	Pb	13 45 13.0	0.0
TWC	baz=306			S	Sb	13 45 25.4	+0.7
ETLH	Xiulin Townshi baz=275	0.94	286	eP	Pb	13 45 14.7	+0.5
ETLH	baz=275			eS	Sb	13 45 27.3	+0.5
ESL	Shilin baz=260	0.96	262	eP	Pn	13 45 16.1	+0.6
NDS	Dongshan baz=310	0.97	315	P	Pb	13 45 15.2	+0.5
NDS	baz=310			S	Sb	13 45 28.5	+0.9
EGFH	Guangfu baz=244	0.99	254	eS	Sb	13 45 29.5	+1.1
EGS	baz=316	1.02	331	eP	Pb	13 45 15.8	+0.3
EGS	baz=316			eS	Sb	13 45 29.6	+0.5
LATG	Datong baz=300	1.04	304	eP	Pb	13 45 16.2	+0.2
HGSD	Ruisui baz=245	1.06	245	P	Pg	13 45 16.4	+0.3
HGSD	baz=245			eS	Sg	13 45 30.0	+0.1
TWE	Neicheng baz=312	1.06	317	P	Pb	13 45 16.6	+0.3
TWE	baz=312			eS	Sn	13 45 31.6	-0.1
ENTT	Nioudou baz=295	1.07	310	eP	Pb	13 45 16.7	+0.2
ENTT	baz=295			eS	Sn	13 45 31.8	-0.3
NTC	Toucheng baz=322	1.07	327	P	Pb	13 45 16.9	+0.4
NTC	baz=322			S	Sb	13 45 31.1	+0.4
NNSB	Datong baz=292	1.10	296	P	Pb	13 45 17.2	+0.2
NNSB	baz=292			eS	Sb	13 45 31.9	+0.3
NNS	Nan Shan baz=293	1.11	296	P	Pb	13 45 17.4	+0.1
NNS	baz=293			eS	Sb	13 45 32.3	+0.4
WHF	Hehuan Shan baz=278	1.12	280	P	Pb	13 45 17.6	+0.1
WHF	baz=278			eS	Sb	13 45 32.7	+0.3
FUSB	Fushanzhiwuyua baz=300	1.14	315	eP	Pb	13 45 18.2	+0.5
EHY	Hungye baz=247	1.14	247	eP	Pg	13 45 17.7	+0.1
EHY	baz=247			eS	Sb	13 45 32.7	+0.1
TWB1	Santiao Chiao baz=333	1.14	338	eP	Pg	13 45 17.3	-0.3
FUSS	Fushou baz=283	1.16	285	eP	Pb	13 45 18.5	+0.4
FUSS	baz=283			eS	Sn	13 45 34.1	-0.4
TIPB	Shuangxi baz=326	1.17	330	eP	Pb	13 45 18.7	+0.4
TIPB	baz=326			eS	Sb	13 45 33.6	0.0
OWD	Renai baz=269	1.18	270	eP	Pb	13 45 18.7	+0.3
OWD	baz=269			eS	Sg	13 45 33.3	-0.5
CHGB	Renai baz=274	1.19	276	P	Pg	13 45 18.7	+0.1
CHGB	baz=274			eS	Sb	13 45 34.7	+0.5
NWLT	Wulai baz=309	1.21	313	eP	Pb	13 45 19.0	+0.2
YULB	Yu-li baz=235	1.21	243	eP	Pg	13 45 18.7	-0.2
YULB	baz=235			eS	Sg	13 45 34.4	-0.2
EYUL	Yuli baz=241	1.21	241	eP	Pg	13 45 18.9	-0.1
EYUL	baz=241			eS	Sb	13 45 35.3	+0.7
IRIF	Iriomote-Funau	1.22	71	P	Pg	13 45 19.0	-0.1
IRIF				S	Sg	13 45 34.4	-0.5
TWT	Tachien baz=273	1.22	285	eP	Pn	13 45 19.6	+0.4
TWT	baz=273			eS	Sn	13 45 36.6	+0.7
YHNB	Yeheng baz=292	1.23	306	eP	Pg	13 45 18.9	-0.4
VWDT	VWDT baz=260	1.23	261	eP	Pg	13 45 19.2	-0.1
VWDT	baz=260			eS	Sb	13 45 35.5	+0.3
TDCB	Techi baz=273	1.23	284	eP	Pb	13 45 19.6	+0.3
TDCB	baz=273			eS	Sg	13 45 34.2	-1.3
WUSB	Renai baz=271	1.24	272	eP	Pb	13 45 19.7	+0.3
WUSB	baz=271			eS	Sb	13 45 36.0	+0.5
NSK	Sanguang baz=302	1.24	306	eP	Pg	13 45 19.2	-0.4
NSK	baz=302			eS	Sn	13 45 36.2	-0.2
SXI1	Grass Mountain baz=330	1.26	335	P	Pg	13 45 19.1	-0.8
SXI1	baz=330			eS	Sg	13 45 35.5	-0.8
NWF	Wu-fen Shan baz=327	1.28	331	eP	Pg	13 45 19.3	-1.0
TWA	Mucha baz=332	1.30	322	eP	Pg	13 45 20.0	-0.8
FULB	Fuli baz=227	1.31	235	eP	Pn	13 45 19.8	-0.5
FULB	baz=227			eS	Sg	13 45 36.7	-1.3
SSLB	Suanglung baz=262	1.40	264	eP	Pg	13 45 23.9	+1.4
NFF	Wufeng Townshi baz=296	1.41	299	eP	Pg	13 45 23.1	+0.3
NFF	baz=296			eS	Sn	13 45 42.6	+2.2
WCS	Beigang Elemen baz=273	1.43	275	eP	Pb	13 45 22.8	+0.2
JKRS	Kuro-shima	1.44	78	P	Pn	13 45 22.7	+0.6
JKRS				S	Sn	13 45 40.7	-0.3
EDH	Donghe baz=223	1.45	228	eP	Pn	13 45 21.7	-0.5
EDH	baz=223			eS	Sb	13 45 38.9	-2.5
TYC	Yuchr baz=267	1.47	269	eP	Pg	13 45 24.6	+0.6
LIOB	Emei baz=295	1.50	298	eP	Pb	13 45 24.1	+0.4
NSTT	Nanjuang baz=295	1.50	297	eP	Pb	13 45 23.9	+0.1
NSTT	baz=295			eS	Sg	13 45 43.2	-0.8
ELDTW	Lidau baz=240	1.53	241	eP	Pn	13 45 23.2	-0.3
ELDTW	baz=240			eS	Sn	13 45 42.1	-1.4
LDUT	Ludao baz=217	1.57	216	eP	Pn	13 45 22.9	-0.9
LDUT	baz=217			eS	Sn	13 45 41.8	-2.5
ALS	Alishan baz=253	1.58	254	eP	Pn	13 45 24.7	+0.3
ALS	baz=253			eS	Sn	13 45 45.2	+0.1
JIJ	Ishigaki jima	1.58	75	P	Pn	13 45 23.6	-0.4
LONT	Longtian baz=226	1.61	230	eS	Sn	13 45 44.5	-0.8
CHN5	Tsauling baz=257	1.68	258	eP	Pg	13 45 28.9	+1.0
TWGBT	Beinan baz=242	1.70	229	eP	Pn	13 45 25.4	-0.2
TWGBT	baz=242			eS	Sn	13 45 46.2	-1.4
TWG	Pinlang baz=241	1.71	229	eP	Pn	13 45 25.8	+0.1
TWG	baz=241			eS	Sn	13 45 46.4	-1.3
STYH	Taoyuan baz=238	1.74	244	eP	Pn	13 45 26.6	+0.5
STYH	baz=238			eS	Sn	13 45 48.5	0.0
WDLH	Douliu baz=261	1.79	262	eP	Pb	13 45 28.7	0.0
WDLH	baz=261			eS	Sg	13 45 52.4	-0.8
TPUB	Ta-pu baz=249	1.81	249	eP	Pb	13 45 29.7	+0.7
TPUB	baz=249			eS	Sb	13 45 52.7	+0.9
WTP	Ta-pu baz=247	1.84	248	eP	Pb	13 45 29.4	-0.2
WTP	baz=247			eS	Sb	13 45 53.1	+0.3
WTK	Tuku baz=262	1.92	263	eS	Sb	13 45 54.9	-0.2
SGST	Jiashian baz=235	1.93	244	eP	Pn	13 45 30.5	+1.6
SGST	baz=235			eS	Sn	13 45 54.6	+1.3
CHN1	Nanshi baz=247	1.94	247	eP	Pn	13 45 30.8	+1.9
CHN1	baz=247			eS	Sb	13 45 56.1	+0.6
TWK	Hsinying baz=249	1.94	250	eP	Pn	13 45 30.8	+1.8
TWK	baz=249			eS	Sb	13 45 56.6	+0.9
SNST	Tainan City baz=248	1.95	248	eS	Sb	13 45 56.0	+0.1
SSD	Sandimen baz=231	2.07	235	eP	Pn	13 45 31.9	+1.2
SSD	baz=231			eS	Sn	13 45 58.6	+2.0
TSMG	Majia baz=231	2.08	234	eP	Pn	13 45 32.1	+1.1
TSMG	baz=231			eS	Sn	13 45 57.3	+0.3
LYUB	Lan-yu baz=204	2.10	203	eP	Pn	13 45 31.3	+0.2
LYUB	baz=204			eS	Sn	13 45 56.9	-0.6
MASBT	Mashibuluo baz=229	2.15	232	eP	Pn	13 45 32.6	+0.8
MASBT	baz=229			eS	Sb	13 46 01.3	-0.4
EAST	Anshuo baz=231	2.16	224	eP	Pn	13 45 31.9	-0.1
EAST	baz=231			eS	Sn	13 45 58.2	-0.7
TAWH	Dawu Township baz=230	2.16	223	eP	Pn	13 45 32.1	0.0
TAWH	baz=230			eS	Sn	13 45 58.4	-0.6
SLIU	Shizi baz=214	2.31	222	eP	Pn	13 45 34.4	+0.3
SLIU	baz=214			eS	Sn	13 46 01.3	-1.4
SCZT	Fangliau baz=223	2.31	228	eP	Pn	13 45 36.7	+2.6
SCZT	baz=223			eS	Sn	13 46 04.3	+1.6
HEN	Hengchun baz=220	2.51	220	eS	Sn	13 46 07.7	+0.2
WDGT	Dungji baz=254	2.67	256	eP	Pn	13 45 40.3	+1.4
WDGT	baz=254			eS	Sn	13 46 11.6	+0.2
PNG	Penghu baz=276	2.70	262	eS	Sn	13 46 12.5	+0.4
VCHM	Qimei baz=255	2.88	256	eP	Pn	13 45 42.9	+1.0
VCHM	baz=255			eS	Sn	13 46 16.6	-0.1
VWUC	VWUC baz=290	2.94	291	eP	Pn	13 45 42.4	-0.3
VWUC	baz=290			eS	Sn	13 46 15.5	-2.6
PTMZ	Houxiangcun baz=289	3.24	290	eP	Pn	13 45 46.3	-0.5
PTMZ	baz=289			eS	Sn	13 46 22.9	-2.6
KNMB	Chin-men Tao baz=279	3.76	279	eS	Sn	13 46 36.3	-2.1

NEIC 24 13:50:56.5±0.7**, 37°.29N**±0°.02×**98°.87W**±0°.03**, h5**^{km}±2^{km}**,**
mb_Lg2.6/50**, Error ellipse: s-maj=4.1km s-min=3.0km**
az=304.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.92	187	Pg	Pg	13 51 14.1	0.0
R32A	Long Quarter,	1.13	6		Pg	13 51 17.9	-0.4
X34A	Smith Ranch, M	2.81	162	Pn	Pn	13 51 41.8	-0.4
X34A	comp=Z,17nm,0.7s			IAmb_Lg		13 52 32.9	
TUL1	Leonard	2.83	118	Pn	Pn	13 51 43.1	+0.7
N33A	J Bar K, Exete	3.61	17	Pn	Pn	13 51 53.0	-0.1
X37A	Clayton	3.92	133	Pn	Pn	13 51 56.8	-0.5
X37A	comp=Z,11nm,0.8s			IAmb_Lg		13 53 07.2	
HHAR	Hobbs comp=Z,9.3nm,0.8s	4.08	103	IAmb_Lg		13 53 13.7	
Z35A	Perchaven, San comp=Z,8.4nm,0.7s	4.17	161	IAmb_Lg		13 53 12.4	
OGNE	Ogallala comp=Z,17nm,0.8s	4.40	327	IAmb_Lg		13 53 23.7	
S39A	Bolivar	4.43	83	Pn	Pn	13 52 04.4	+0.1
W39A	Magazine	4.61	115	Pn	Pn	13 52 06.8	-0.1
P38A	Dawn comp=Z,9.0nm,0.7s	4.79	59	IAmb_Lg		13 53 38.5	
U40A	Yellville	4.92	99	Pn	Pn	13 52 10.5	-0.5
U40A	comp=Z,14nm,0.8s			IAmb_Lg		13 53 33.6	
L34A	Svendsen Farm,	5.05	22	Pn	Pn	13 52 12.2	-0.6
MIAR	Mount Ida	5.09	121	Pn	Pn	13 52 13.7	+0.2
Q24A	Divide comp=Z,6.7nm,0.7s	5.23	291	IAmb_Lg		13 53 52.4	
MGMO	Mountain Grove	5.27	90	Pn	Pn	13 52 16.6	+0.7
MGMO	comp=Z,12nm,1.1s			IAmb_Lg		13 53 48.9	
R40A	Maddies Statio	5.32	77	Pn	Pn	13 52 16.8	+0.2
R40A	comp=Z,6.6nm,0.8s			IAmb_Lg		13 53 43.8	
FCAR	Ozark Folk Cen comp=Z,6.2nm,0.7s	5.60	102	IAmb_Lg		13 53 54.7	
N38A	Joes South For comp=Z,13nm,0.7s	5.61	50	IAmb_Lg		13 54 05.6	
X40A	Basin Creek Fa comp=Z,6.8nm,0.9s	5.64	118	IAmb_Lg		13 53 55.8	
W41B	Gary Mavity, V comp=Z,6.4nm,0.8s	5.75	110	IAmb_Lg		13 54 03.5	
P40A	Paris comp=Z,11nm,0.8s	5.80	65	IAmb_Lg		13 54 05.0	
UALR	University of comp=Z,7.2nm,0.8s	5.85	113	IAmb_Lg		13 54 16.4	
CCM	Cathedral Cave comp=Z,9.9nm,0.8s	6.09	81	IAmb_Lg		13 54 14.9	
LCAR	Lake Charles comp=Z,5.5nm,0.9s	6.32	99	IAmb_Lg		13 54 29.7	
SCIA	State Center comp=Z,12nm,0.7s	6.35	42	IAmb_Lg		13 54 33.7	
PHWY	Pilot Hill comp=Z,7.5nm,0.7s	6.49	310	IAmb_Lg		13 54 27.4	
FVM	French Village comp=Z,5.2nm,0.8s	6.74	82	IAmb_Lg		13 54 27.5	
PBMO	Poplar Bluff comp=Z,8.7nm,0.7s	6.77	92	IAmb_Lg		13 54 30.5	
JCT	Junction City comp=Z,10.0nm,0.8s	6.84	187	IAmb_Lg		13 54 46.7	
L40A	Anamosa comp=Z,7.5nm,0.7s	7.58	49	IAmb_Lg		13 55 02.0	
RSSD	Black Hills comp=Z,4.2nm,1.0s	7.87	332	IAmb_Lg		13 55 10.9	
K22A	Casper comp=Z,7.2nm,1.1s	7.95	315	IAmb_Lg		13 55 20.2	

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*JMA **24** 14:23:59.1±0.1, 30°.0N±0°.7×14°2E±°, h38^{km}, MV4.1/24,*
NEAR TORISHIMA IS
ISC 24 14:24:00.5±1.6**, 29°.96N**±0°.09×**142°.0E**±0°.3**, h26**^{km}**, n9,**
σ0^{s}.65/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.86	176	eP	Pn	14 24 44.1	-0.3
JHH2	Haha-jima-NKT2	3.32	177	eS	Sn	14 25 29.0	-0.4
JMKN	Mikurajimanish	4.42	333	eP	Pn	14 25 06.1	+0.3
JMKN				eS	Sn	14 25 55.6	-0.7
BSO1	Boso 1	4.76	350	eS	Sn	14 26 03.3	-0.7
BSO3	Boso 3	4.99	346	eP	Pn	14 25 14.3	+0.9
JHU	Hanno	6.30	340	eP	Pn	14 25 32.6	+0.9
JHU				eS	Sn	14 26 42.2	-0.6
JRY	Ryogami san	6.57	338	eS	Sn	14 26 49.6	+0.2
JHO	Hitachi	6.74	350	eP	Pn	14 25 37.5	-0.2
JAG	Ashikaga	6.79	343	eP	Pn	14 25 38.6	+0.2

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*NEIC **24** 14:36:41.4±1.8, 19°.6N±0°.1×64°.04W±0°.05, h41^{km}±55^{km},*
Error ellipse: s-maj=18.5km s-min=5.9km az=193.0
*RSPR **24** 14:36:43.4, 19°.16N×64°.12W, h127^{km}±6^{km}, MD3.6/10*
ISC 24 14:36:40.8±2.2**, 19°.5N**±0°.1×**64°.05W**±0°.07**, h34**^{km}**, n45,**
σ1^{s}.10/51**, 7C-3D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJVI	Gifft Hill Sch	1.38	210	⇓eP	Pb	14 37 05.5	-0.5
SJVI	Gifft Hill Sch	1.38	210	eS	Sb	14 37 23.9	+0.6
SJVI	Gifft Hill Sch	1.38	210		Pb	14 37 05.5	-0.5
SJVI					Sb	14 37 23.9	+0.6
STVI	Saint Thomas	1.45	216	⇓eP	Pb	14 37 07.1	-0.2
STVI	Saint Thomas	1.45	216	eS	Sb	14 37 24.9	-0.6
STVI	Saint Thomas	1.45	216		Pb	14 37 07.1	-0.2
STVI					Sb	14 37 24.9	-0.6
CUPR	Culebra, Puert	1.69	224	⇑eP	Pb	14 37 09.5	-1.7
CUPR	Culebra, Puert	1.69	224	eS	Sb	14 37 30.8	-1.3
CUPR	Culebra, Puert	1.69	224		Pb	14 37 09.5	-1.7
CUPR					Sb	14 37 30.8	-1.3
CDVI	St. Croix	1.90	201	Pn	Pn	14 37 11.0	+0.2
MTP	Monte Pirata	2.02	225	⇑eP	Pb	14 37 14.6	-2.2
MTP	Monte Pirata	2.02	225	eS	Sn	14 37 36.9	+0.5
MTP	Monte Pirata	2.02	225		Pb	14 37 14.6	-2.2
MTP					Sn	14 37 36.9	+0.5
CBYP	Canovanas	2.12	234	⇑eP	Pn	14 37 15.0	+1.1
CBYP	Canovanas	2.12	234	eS	Sn	14 37 40.1	+1.0
CBYP	Canovanas	2.12	234		Pn	14 37 15.0	+1.1
CBYP					Sn	14 37 40.1	+1.0
CBYP	Canovanas comp=E,350nm,0.2s	2.12	234	IAML		14 37 55.5	
HUMP	Col San Antoni	2.19	231	⇑eP	Pn	14 37 16.4	+1.5
HUMP	Col San Antoni	2.19	231	eS	Sn	14 37 41.1	+0.3
HUMP	Col San Antoni	2.19	231		Pn	14 37 16.4	+1.5
HUMP					Sn	14 37 41.1	+0.3
GCPR	Guaynabo City	2.28	238	Pn	Pn	14 37 16.7	+0.7
PDPR	Patillas Dam,	2.40	231		Pn	14 37 19.1	+1.4
SJG	San Juan	2.44	235	Pn	Pn	14 37 18.9	+0.7
SJG	comp=E,62nm,0.2s			IAML		14 37 54.0	
SKI	Saint Kitts	2.52	150	Pn	Pn	14 37 19.5	+0.2
CELP	Cerrillos	2.80	239		Pn	14 37 24.1	+0.9
AOPR	Arecibo Observ	2.82	246	⇑eP	Pn	14 37 24.3	+0.9
AOPR	Arecibo Observ	2.82	246	eS	Sn	14 37 57.5	+1.2
AOPR	Arecibo Observ	2.82	246		Pn	14 37 24.3	+0.9
AOPR					Sn	14 37 57.5	+1.2
UUPR	Utuado, UPR, P	2.83	244	⇓eP	Pn	14 37 25.2	+1.6
UUPR	Utuado, UPR, P	2.83	244	eS	Sn	14 37 58.0	+1.4
UUPR	Utuado, UPR, P	2.83	244		Pn	14 37 25.2	+1.6
UUPR					Sn	14 37 58.0	+1.4
ANWB	Willy Bob	2.84	130	Pn	Pn	14 37 25.2	+1.6
ANWB	comp=E,63nm,1.6s			IAML		14 38 15.2	
ANWB	comp=E,70nm,1.4s			IAML		14 38 23.0	
OBIP	Obispado Ponce	2.84	239		Pn	14 37 24.0	+0.3
OBIP	comp=N,46nm,1.0s			IAML		14 38 06.1	
AGPR	Aguadilla, PR	3.08	250	Pn	Pn	14 37 27.6	+0.5
AGPR	comp=N,134nm,2.2s			IAML		14 38 22.5	
MLPR	Magueyes Islan	3.23	242	⇑eP	Pn	14 37 30.5	+1.4
MLPR	Magueyes Islan	3.23	242	eS	Sn	14 38 06.8	+0.3
MLPR	Magueyes Islan	3.23	242		Pn	14 37 29.4	+0.3
MLPR	Magueyes Islan	3.23	242		Sn	14 38 06.8	+0.3
MLPR	Magueyes Islan comp=E,26nm,0.8s	3.23	242	IAML		14 38 15.2	
MLPR	comp=N,30nm,2.3s			IAML		14 38 32.7	
CRPR	Cabo Rojo, PR	3.27	243	⇑eP	Pn	14 37 31.1	+1.4
CRPR	Cabo Rojo, PR	3.27	243	eS	Sn	14 38 07.4	0.0

CRPR	Cabo Rojo, PR	3.27	243		Pn	14 37 31.1	+1.4
CRPR					Sn	14 38 07.4	0.0
CRPR	Cabo Rojo, PR	3.27	243	IAML		14 38 17.4	
	comp=E,28nm,1.2s						
CRPR				IAML		14 39 12.0	
	comp=N,48nm,2.8s						
DR12	Loma Pena Alta	5.09	263	Pn	Pn	14 37 55.0	+0.3
SDDR	Presa de Saban	6.86	267		Pn	14 38 20.1	+1.1

*ISK **24** 15:15:15.1, 36°.50N×26°.82E, h119^{km}±2^{km}, ML3.2/20*
*HLW **24** 15:15:16.3, 36°.21N×26°.98E, h24^{km}±24^{km}, Md4.5, Ml4.0*
*DDA **24** 15:15:16.3±0.0, 36°.41N×26°.89E, h12^{km}±3^{km}, ML2.8*
*THE **24** 15:15:16.6, 36°.48N×26°.80E, h137^{km}±6^{km}, ML3.4/6, Error ellipse: s-maj=6.3km s-min=1.0km az=116.0*
*ATH **24** 15:15:17.2, 36°.50N×26°.63E, h17^{km}±8^{km}, ML3.2/5, Error ellipse: s-maj=8.8km s-min=1.3km az=346.0*
ISC 24 15:15:13.7±1.4**, 36°.41N**±0°.04×**26°.84E**±0°.03**, h134**^{km}±9^{km}**, n66,** σ**1^{s}.50**/94**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.68	62	P	Pn	15 15 34.5	+0.1
DAT				S	Sn	15 15 49.0	-1.2
BODT	Bodrum	0.75	30	P	Pn	15 15 34.7	-0.2
BDRM	Kayabasi	0.82	36	P	Pn	15 15 35.2	-0.2
BDRM				S	Sn	15 15 50.4	-1.5
KARP	Karpathos	0.90	163	P	Pn	15 15 37.1	+1.0
KARP				S	Sn	15 15 50.4	-2.7
KARP				AML	AML	15 15 56.9	
	comp=N,3658µm,0.3s						
KARP				AML	AML	15 15 57.3	
	comp=E,2226µm,0.2s						
KARP	Karpathos	0.90	163	P	Pn	15 15 37.2	+1.0
KARP				S	Sn	15 15 53.1	-0.1
	comp=E,1µm,0.2s						
KARP	Karpathos	0.90	163	PG	Pn	15 15 37.2	+1.0
ARG	Arkhangelos	1.06	100	P	Pn	15 15 38.8	+1.3
ARG				S	Sn	15 15 55.6	0.0
ARG				AML	AML	15 15 56.7	
	comp=E,3504µm,0.4s						
ARG				AML	AML	15 15 56.9	
	comp=N,1417µm,0.3s						
ARG	Arkhangelos	1.06	100	P	Pn	15 15 38.6	+1.1
ARG				S	Sn	15 15 54.9	-0.7
	comp=N,1µm,0.3s						
ARG	Arkhangelos	1.06	100	PN	Pn	15 15 38.6	+1.1
THR8	Santorini-Mono	1.10	270	P	Pn	15 15 38.4	+0.6
SANT	Santorini	1.11	268	PN	Pn	15 15 38.7	+0.6
THR3	Thira Island,	1.16	270	P	Pn	15 15 39.2	+0.8
MLSB	Milas	1.16	40	PN	Pn	15 15 38.7	+0.2
TURN	Turunc	1.19	72	PN	Pn	15 15 39.2	+0.5
TURN	Turunc	1.19	72	P	Pn	15 15 39.3	+0.5
TURN				S	Sn	15 15 57.0	-0.8
TURN				*i* AML	AML	15 15 57.0	
	comp=N,376nm,0.4s						
TURN				*i* AML	AML	15 16 00.0	
	comp=N,149nm,0.1s						
APE	Apeiranthos	1.24	302	P	Pn	15 15 39.7	+0.4
APE	Apeiranthos	1.24	302	PN	Pn	15 15 39.7	+0.4
SMG	Samos	1.30	360	P	Pn	15 15 39.5	-0.4
SMG	Samos	1.30	360	P	Pn	15 15 39.5	-0.4
GCAM	G?zelcaml?	1.33	14	PN	Pn	15 15 40.1	0.0
YER	Yerkesik	1.37	58	P	Pn	15 15 41.2	+0.5
YER				S	Sn	15 16 00.8	-0.5
YER	Yerkesik	1.37	58	PN	Pn	15 15 41.6	+0.9
YER				SN	Sn	15 16 00.4	-0.9
ZKR	Zakros	1.39	202	P	Pn	15 15 42.8	+1.9
ZKR				S	Sn	15 16 01.2	-0.3
ZKR				AML	AML	15 16 05.5	
	comp=E,2312µm,0.3s						
ZKR				AML	AML	15 16 05.7	
	comp=N,876µm,0.4s						
ZKR	Zakros	1.39	202	P	Pn	15 15 42.8	+1.9
ZKR				S	Sn	15 16 03.7	+2.2
	comp=N,758nm,0.5s						
ZKR	Zakros	1.39	202	PN	Pn	15 15 42.8	+1.9
MULA	Mugla, Merkez-	1.46	54	P	Pn	15 15 42.6	+0.9
MULA				S	Sn	15 16 02.2	-0.9
MULA				*i* AML	AML	15 16 05.0	
	comp=N,96nm,0.6s						
MULA				*i* AML	AML	15 16 07.0	
	comp=N,61nm,0.4s						
DALY	Dalyan (Mula)	1.52	74	PN	Pn	15 15 43.8	+1.6
DALY				SN	Sn	15 16 03.7	-0.3
NPS	Neapolis	1.52	221	P	Pn	15 15 43.5	+1.2
NPS				S	Sn	15 16 03.1	-0.9
NPS	Neapolis	1.52	221	P	Pn	15 15 43.4	+1.1
NPS				S	Sn	15 16 03.7	-0.4
FRMA	Ierapetra Chan	1.66	213	P	Pn	15 15 45.6	+1.7
FRMA				S	Sn	15 16 06.6	-0.3
FRMA				AML	AML	15 16 09.3	
	comp=N,1543µm,0.4s						
FRMA				AML	AML	15 16 10.5	
	comp=E,1197µm,0.4s						
FRMA	Ierapetra Chan	1.66	213	P	Pn	15 15 45.6	+1.7
FRMA				S	Sn	15 16 07.6	+0.8
AYDB	Zeytinkoy-Aydi	1.75	28	PN	Pn	15 15 45.1	+0.1
HRKL	Herakleio	1.79	233	P	Pn	15 15 46.7	+1.4
HRKL	Herakleio	1.79	233	PN	Pn	15 15 46.8	+1.4
KSTL	Kastelli Herak	1.81	233	P	Pn	15 15 46.3	+0.7
KSTL				S	Sn	15 16 07.7	-2.3
KSTL				AML	AML	15 16 09.3	
	comp=N,1544µm,0.6s						
KSTL				AML	AML	15 16 10.3	
	comp=E,477µm,0.3s						
KSTL	Kastelli Herak	1.81	233	P	Pn	15 15 45.9	+0.3
KSTL				S	Sn	15 16 07.9	-2.1
	comp=E,170nm,0.5s						
FETY	Fethiye	1.82	82	PN	Pn	15 15 46.9	+1.1
FETY	Fethiye	1.82	82	P	Pn	15 15 47.9	+2.1
FETY				S	Sn	15 16 12.3	+2.0
IDI	Anoyia	1.94	235	P	Pn	15 15 48.1	+0.9
IDI				S	Sn	15 16 11.7	-1.1
	comp=E,305nm,0.3s						
IDI	Anoyia	1.94	235	PN	Pn	15 15 48.2	+1.0
URLA	Izmir	1.96	354	PN	Pn	15 15 47.6	+0.2
TAVA	DENIZLI_Tavas	1.97	57	P	Pn	15 15 48.5	+0.9
TAVA				S	Sn	15 16 12.9	-0.7
TAVA				*i* AML	AML	15 16 13.0	
	comp=E,38nm,0.3s						
TAVA				*i* AML	AML	15 16 14.0	
	comp=E,40nm,0.5s						
CAME	Cameli-Denizli	2.05	74	PN	Pn	15 15 49.6	+1.0
CHOS	Chios island	2.07	343	PN	Pn	15 15 48.8	0.0
CAEL	Denizli, Camel	2.12	70	P	Pn	15 15 50.8	+1.4
CAEL				S	Sn	15 16 17.1	+0.3
CAEL				*i* AML	AML	15 16 20.0	
	comp=E,199nm,0.6s						
CAEL				*i* AML	AML	15 16 21.0	
	comp=E,173nm,0.7s						
AKAS	Kas	2.24	94	P	Pn	15 15 52.2	+1.3
AKAS				S	Sn	15 16 19.9	+0.4
AKAS				*i* AML	AML	15 16 24.0	
	comp=E,526nm,0.6s						
AKAS				*i* AML	AML	15 16 24.0	
	comp=E,494nm,0.3s						
GOLH	Golhisar	2.34	68	P	Pn	15 15 53.5	+1.4
GOLH				S	Sn	15 16 21.5	-0.1
GOLH				*i* AML	AML	15 16 24.0	
	comp=E,58nm,0.5s						
GOLH				*i* AML	AML	15 16 26.0	
	comp=E,72nm,0.5s						
ELL	Elmali	2.50	81	PN	Pn	15 15 55.9	+1.8
IMMV	Iera Moni Meta	2.50	249	P	Pn	15 15 55.2	+1.1
IMMV				S	Sn	15 16 24.9	-0.3
	comp=E,295nm,0.4s						
IMMV	Iera Moni Meta	2.50	249	PN	Pn	15 15 55.9	+1.8
KULA	Kula-Manisa	2.55	34	PN	Pn	15 15 55.3	+0.5
GVD	Gavdhos	2.73	236	PN	Pn	15 15 59.4	+2.4
KNDR	Palaiochora Ch	2.82	246	PN	Pn	15 16 01.1	+3.0
AKUM	Antalya-Kumluc	2.83	91	P	Pn	15 15 59.8	+1.6
AKUM				*i* AML	AML	15 16 35.0	
	comp=E,111nm,0.3s						
AKUM				*i* AML	AML	15 16 38.0	
	comp=E,152nm,0.2s						
KORT	Korkueli	2.88	77	P	Pn	15 16 01.0	+2.0
KORT				*i* AML	AML	15 16 38.0	
	comp=E,68nm,0.6s						
KORT				*i* AML	AML	15 16 39.0	
	comp=E,43nm,0.3s						
MATC	Matruh	5.06	176	P	Pn	15 16 28.0	+0.3
	baz=177						
SLUM	Salum	5.09	196	P	Pn	15 16 29.4	+1.3
	baz=198						
SWA2		7.24	190	P	Pn	15 16 57.8	+0.9
	baz=191						
HMYD	Mayadein	7.38	152	P	Pn	15 17 00.2	+1.4
	baz=152						
HNAT	Natroun	7.46	154	P	Pn	15 17 01.3	+1.3
	baz=154						
HNAT				S	Sn	15 18 17.5	-5.6
	baz=154						
KOT	Kottamia	7.70	146	P	Pn	15 17 03.8	+0.7
	baz=145						
HHAG	Hagoal	7.80	144	P	Pn	15 17 05.9	+1.4
	baz=144						
HSAF	As Saff	7.84	148	P	Pn	15 17 06.0	+1.0
	baz=148						
RYAN	Fayoum	7.86	157	P	Pn	15 17 06.2	+0.9
	baz=157						
RYAN				S	Sn	15 18 26.5	-6.2
	baz=157						
GLL	Jalalah	7.95	148	P	Pn	15 17 06.9	+0.5
	baz=147						
SUZ	Suez	8.26	141	P	Pn	15 17 12.3	+1.7
	baz=140						

*AUST **24** 15:19:58.6±0.7, 25°.57S×129°.81E, h0^{km}, Error ellipse: s-maj=8.2km s-min=6.7km az=30.0*
*NOU **24** 15:19:59.4, 25°.57S×129°.72E, h10^{km}, mb4.1/18, Northern Territory, Australia*
*IDC **24** 15:20:01.7±4.7, 25°.60S×130°.16E, h0^{km}, mbtmp4.0/3, ML3.9/3, Error ellipse: s-maj=39.4km s-min=26.5km az=89.0*
ISC 24 15:19:58.8±0.8**, 25°.58S**±0°.05×**129°.81E**±0°.05**, h10**^{km}**, n41,** σ**2^{s}.00**/53**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.47	291	P	Pn	15 20 26.9	+1.4
	baz=1.5,SNR=148						
WRKA				S	Sn	15 20 46.5	+1.6
	baz=1.5						
WRKA	Warakurna	1.47	291	P	Pn	15 20 24.8	-0.7
ASPA	Alice Springs	4.18	64	P	Pn	15 21 04.9	+2.1
	baz=4.2						
ASPA				S	Sn	15 21 52.9	+1.1
	baz=4.2						
ASAR	Alice Springs	4.18	64	Pn	Pn	15 21 04.8	+2.0
	4.1nm,0.3s,baz=243,slow=12,SNR=228						
ASAR				Pg	Pb	15 21 15.8	+3.2
	4.3nm,0.3s,baz=242,slow=16,SNR=16						
ASAR				Sn	Sn	15 21 51.6	-0.2
	5.1nm,0.3s,baz=249,slow=22,SNR=6.3						
ASAR				Lg	Lg	15 22 06.3	
	8.2nm,0.3s,baz=252,slow=26,SNR=2.7						
	11nm,0.5s						
FORT	Forrest	5.41	196	P	Pn	15 21 22.3	+2.8
	baz=5.4,SNR=11						
FORT				S	Sn	15 22 24.7	+2.9
	baz=5.4						
FORT	Forrest	5.41	196	P	Pn	15 21 20.9	+1.4
OOD	Oodnadatta	5.70	114	P	Pn	15 21 25.8	+2.1
	baz=5.7,SNR=15						
OOD				S	Sn	15 22 32.1	+2.9
	baz=5.7						
OOD	Oodnadatta	5.70	114	P	Pn	15 21 25.9	+2.3
MULG	Mulgathing	6.00	142	P	Pn	15 21 29.9	+2.1
	baz=6.0,SNR=4.6						
MULG				S	Sn	15 22 38.6	+2.0
	baz=6.0						
MULG	Mulgathing	6.00	142	P	Pn	15 21 29.8	+2.1
WRA	Warramunga Arr	7.00	38	Pn	Pn	15 21 43.0	+1.6
	2.5nm,0.3s,baz=226,slow=15,SNR=135						
WRA				Sn	Sn	15 23 01.4	+0.2
	2.7nm,0.3s,baz=216,slow=22,SNR=9.4						
WRA				Lg	Lg	15 23 36.3	
	4.0nm,0.3s,baz=212,slow=27,SNR=12						
	5.6nm,0.5s						
WB2	Warramunga Arr	7.00	38	P	Pn	15 21 42.6	+1.1
	baz=7.0						
WB2				S	Sn	15 22 59.3	-2.0
	baz=7.0						
WRAB	Tennant Creek	7.01	38	P	Pn	15 21 43.7	+2.1
LCRK	Leigh Creek	8.87	125	P	Pn	15 22 07.7	+0.6
	baz=8.9,SNR=7.8						
LCRK				S	Sn	15 23 46.7	-0.4
	baz=8.9						
LCRK	Leigh Creek	8.87	125	P	Pn	15 22 08.5	+1.4
BBOO	Buckleboo	9.04	144	P	Pn	15 22 10.2	+0.8
	baz=9.1,SNR=12						
BBOO				S	Sn	15 23 47.6	-3.7
	baz=9.1						
BBOO	Buckleboo	9.04	144	P	Pn	15 22 10.2	+0.8
KNRA	Kununurra	9.90	354	P	Pn	15 22 22.3	+1.0
	baz=9.9,SNR=6.2						
KNRA	Kununurra	9.90	354	P	Pn	15 22 22.9	+1.6
INKA	Innaminka	10.02	105	P	Pn	15 22 23.2	+0.4
	baz=10.0,SNR=9.9						
INKA				S	Sn	15 24 12.1	-3.3
	baz=10.0						
INKA	Innaminka	10.02	105	P	Pn	15 22 25.7	+2.9
AUCAS	Cummins Area S	10.05	151	P	Pn	15 22 25.3	+2.0
	baz=10						
QIS	Mount Isa	10.31	63	P	Pn	15 22 27.8	+0.8
	baz=10,SNR=4.6						
QIS	Mount Isa	10.31	63	P	Pn	15 22 27.7	+0.8
NAPP	Napperby	10.50	138	P	Pn	15 22 30.5	+1.1
	15nm,0.8s						
HTT	Hallett	11.14	137	P	Pn	15 22 38.0	-0.3
	baz=11						
HTT	Hallett	11.14	137	P	Pn	15 22 38.3	0.0
AUKAT	Katherine High	11.30	12	P	Pn	15 22 37.8	-2.7
	baz=11						
STKA	Stephens Creek	12.09	124	Pn	Pn	15 22 50.2	-1.1
	0.7nm,0.3s,baz=305,slow=13,SNR=8.1						
STKA				Sn	Sn	15 24 59.5	-6.7
	0.2nm,0.3s,baz=212,slow=11,SNR=3.7						
STKA				Lg	Lg	15 26 16.4	
	0.2nm,0.3s,baz=354,slow=13,SNR=1.9						
	1.7nm,0.3s						
STKA	Stephens Creek	12.09	124	P	Pn	15 22 50.9	-0.4
	baz=12,SNR=5.1						
STKA	Stephens Creek	12.09	124	P	Pn	15 22 51.9	+0.6
	1.9nm,1.7s						
KLBR	Kellerberrin	12.16	238	P	Pn	15 22 50.6	-1.7
	baz=12						
BLDU	Ballidu	12.60	244	P	Pn	15 22 55.7	-2.6
	baz=13						
BLDU	Ballidu	12.60	244	P	Pn	15 22 57.6	-0.6
	39nm,2.3s						
MORW	Morawa	12.72	251	P	Pn	15 22 58.7	-1.2
	21nm,2.5s						
MTN	Manton Dam	12.73	6	P	Pn	15 22 59.9	-0.2
QLP	Quilpie	13.01	98	P	Pn	15 23 02.6	-1.2
	baz=13,SNR=5.5						
QLP	Quilpie	13.01	98	P	Pn	15 23 04.7	+0.9
KDU	Kakadu	13.07	12	P	Pn	15 23 03.5	-1.1
	baz=13,SNR=3.3						
KDU	Kakadu	13.07	12	P	Pn	15 23 04.3	-0.4
LUWI	Luwuk	25.32	343	P	P	15 25 17.9	-8.0
	baz=25,SNR=3.5						

*THE **24** 15:22:31.2, 38°.75N×20°.60E, h2^{km}±43^{km}, ML2.5/9, Error ellipse: s-maj=43.9km s-min=0.7km az=0.0*
*ATH **24** 15:22:31.4, 38°.74N×20°.62E, h6^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=3.0km s-min=0.9km az=78.0*
ISC 24 15:22:31.2±1.1**, 38°.75N**±0°.02×**20°.59E**±0°.04**, h6**^{km}±7^{km}**, n23,** σ**0^{s}.61**/39**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.07	191	P	Pg	15 22 32.5	-0.2
DRAG				S	Sg	15 22 34.4	+0.5
DRAG	Dragano-Lefkad	0.07	191	P	Pg	15 22 32.5	-0.2
DRAG				S	Sg	15 22 33.9	0.0
	183µm,0.4s						
LKD2	Lefkada island	0.07	52	P	Pg	15 22 32.6	-0.3
LKD2				S	Sg	15 22 34.4	+0.4
LKD2				AML	AML	15 22 36.5	
	comp=E,14440µm,0.5s						
LKD2				AML	AML	15 22 41.6	
	comp=N,15031µm,0.7s						
LKD2	Lefkada island	0.07	52	P	Pg	15 22 32.5	-0.3
NYDR	Nydri-Lefkada	0.09	112	P	Pg	15 22 32.8	-0.3
NYDR				S	Sg	15 22 34.2	-0.3
NYDR	Nydri-Lefkada	0.09	112	P	Pg	15 22 32.8	-0.3
NYDR				S	Sg	15 22 33.7	-0.8
	comp=N,5µm,0.9s						
TSLK	Tsoukalades, L	0.09	33	P	Pg	15 22 33.4	+0.2
TSLK				S	Sg	15 22 35.5	+0.9
TSLK				AML	AML	15 22 39.1	
	comp=N,23247µm,0.5s						
TSLK				AML	AML	15 22 40.7	
	comp=E,20319µm,0.7s						
TSLK	Tsoukalades, L	0.09	33	P	Pg	15 22 33.4	+0.2
TSLK				S	Sg	15 22 35.2	+0.6
	comp=E,10µm,0.6s						
EVGI	Lefkada island	0.14	158	P	Pg	15 22 33.8	-0.1
EVGI				S	Sg	15 22 36.2	+0.4
EVGI	Lefkada island	0.14	158	P	Pg	15 22 33.8	-0.1
EVGI				S	Sg	15 22 36.0	+0.2
	comp=E,4µm,0.4s						
FSK	Fiskardo	0.29	184	P	Pg	15 22 37.1	+0.3
FSK				S	Sg	15 22 41.3	+0.7
FSK				AML	AML	15 22 45.0	
	comp=E,1947µm,0.3s						
FSK				AML	AML	15 22 45.7	
	comp=N,1469µm,0.6s						
FSK	Fiskardo	0.29	184	P	Pg	15 22 37.3	+0.5
FSK				S	Sg	15 22 42.1	+1.5
	comp=N,842nm,0.3s						
KEF4	Livadi, Kephal	0.51	195	P	Pg	15 22 40.2	-0.7
KEF4	Livadi, Kephal	0.51	195	P	Pg	15 22 40.8	-0.1
KEF4				S	Sb	15 22 49.1	-1.0
	comp=N,2µm,0.6s						
DMLN	Damoulianata-K	0.54	199	P	Pg	15 22 40.9	-0.6
DMLN				S	Sg	15 22 49.6	+1.1
	comp=N,392nm,0.5s						
VLS	Valsamata	0.57	180	P	Pg	15 22 41.8	-0.3
VLS				S	Sg	15 22 49.7	+0.2
VLS				AML	AML	15 22 55.7	
	comp=N,501µm,0.4s						
VLS				AML	AML	15 22 55.8	
	comp=E,500µm,0.3s						
VLS	Valsamata	0.57	180	P	Pg	15 22 41.6	-0.5
VLS				S	Sg	15 22 50.3	+0.8
	comp=E,258nm,0.4s						
KEF3	Kipouria, Keph	0.58	199	P	Pg	15 22 41.4	-0.8
PSDA	Pessada-Kefalo	0.63	180	P	Pg	15 22 42.6	-0.7
PSDA				S	Sg	15 22 52.1	+0.6
	comp=E,35nm,0.4s						
PVO	Paravola	0.74	100	P	Pg	15 22 45.2	-0.3
PVO	Paravola	0.74	100	P	Pg	15 22 45.7	+0.3
IGT	Igoumenitsa	0.81	346	P	Pg	15 22 45.7	-1.0
KEK	Kerkira	1.14	328	P	Pb	15 22 53.7	+0.4

*TEH **24** 15:32:56.0, 36°.33N×54°.19E, h6^{km}, ML4.1*
*IDC **24** 15:32:57.3±3.3, 36°.38N×54°.00E, h0^{km}, mb3.1/4, mbtmp3.5/9, ML3.1/5, MS3.1/2, Error ellipse: s-maj=54.4km s-min=14.9km az=177.0*
*NNC **24** 15:32:59.7±3.0, 36°.75N×53°.96E, h18^{km}±12^{km}, mb3.8, Error ellipse: s-maj=21.1km s-min=15.8km az=60.0*
*AZER **24** 15:33:00.6±0.8, 36°.33N×53°.89E, h10^{km}, Error ellipse: s-maj=10.5km s-min=6.1km az=20.0*
ISC 24 15:32:56.8±0.6**, 36°.36N**±0°.03×**54°.19E**±0°.03**, h10**^{km}**, n90,** σ**2^{s}.00**/116**, mb3.2**/3**, 4C-3D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.33	297	*e*Pg	Pg	15 33 03.1	-0.3
IGLO				*e*Sg	Sb	15 33 09.1	-1.2
ISHM	Shahmirzad	0.91	233	*e*Pg	Pg	15 33 13.5	-0.9
ISHM				*e*		15 33 34.4	
	comp=Z,90µm,0.4s						
IANJ	Anjilo	0.91	194	*e*Pg	Pb	15 33 13.7	-1.2
IMND	Minoodasht	1.33	47	*e*Pg	Pb	15 33 21.2	-0.6
IFIR	Firoozkooh	1.37	239	*e*Pg	Pn	15 33 21.3	-0.9
IFIR				*e*Sg	Sg	15 33 42.4	+1.6
IFIR				*e*		15 33 45.0	
	comp=Z,19µm,0.4s						
ILAS	Lasjerd	1.40	226	*e*Pg	Pg	15 33 22.4	-1.2
ILAS				*e*Sg	Sg	15 33 44.3	+2.6
ILAS				*e*		15 33 49.3	
	comp=Z,20µm,0.6s						
IPRN	Peran	1.50	266	*e*Pn	Pg	15 33 24.4	-1.2
IPRN				*e*		15 33 54.8	
	comp=Z,46µm,0.6s						
IDMV	Damavand	1.92	247	*e*Pn	Pb	15 33 31.4	-0.6
IDMV				*e*		15 33 36.9	
	comp=Z,17µm,0.2s						
MRVT	Maraveh tapeh	2.00	49	*e*Pn	Pb	15 33 32.4	-0.9
TEHA	Amirabad Tehra	2.35	256	*e*Pn	Pb	15 33 37.9	-1.5
TEH	Tehran	2.36	256	*e*		15 34 15.9	
	comp=Z,15µm,0.7s						
IVRN	Varamin	2.42	237	*e*Pn	Pb	15 33 38.2	-2.3
IVRN				*e*		15 34 18.9	
	comp=Z,10µm,0.3s						
IHSB	Hasanabad	2.54	250	*e*Pn	Pb	15 33 40.7	-1.8
IHSB				*e*		15 33 47.7	
	comp=Z,5µm,0.3s						
ISFB	Sefidab	2.56	219	*e*Pn	Pb	15 33 39.7	-3.1
ISFB				*e*		15 34 25.1	
	comp=Z,5µm,0.4s						
SBZV	Sabzevar	2.76	88	*e*Pn	Pb	15 33 43.5	-2.8
QALM	Alamut, Qazvin	2.86	273	*e*Pn	Pn	15 33 44.3	+1.6
KRSH	Karshahi	2.92	216	*e*Pn	Pn	15 33 44.6	+1.2
IMHD	Mahdasht	2.94	258	*e*Pn	Pb	15 33 46.7	-2.6
IMHD				*e*		15 33 52.2	
	comp=Z,7µm,0.5s						
IQOM	Qom	2.96	240	*e*Pn	Pn	15 33 45.5	+1.4
IQOM				*e*		15 34 37.4	
	comp=Z,5µm,0.4s						
TNSJ	Nastanj	3.10	140	*e*Pn	Pb	15 33 48.5	-3.6
TNSJ				*e*		15 34 45.7	
	comp=Z,8µm,0.9s						
ISFR	Sfrayin	3.14	76	*e*Pn	Pb	15 33 49.1	-3.7
ISFR				*e*		15 34 13.4	
	comp=Z,2µm,0.6s						
ANAR	Anarak	3.18	187	*e*Pn	Pn	15 33 48.1	+1.1
IGZV	Ghazvin	3.21	272	*e*	Pg	15 33 57.6	-0.6
	comp=Z,6µm,0.6s						
QAMS	Qamsar	3.48	222	*e*Pn	Pn	15 33 52.4	+1.2
QAMS				*e*		15 34 51.6	
	comp=Z,3µm,0.4s						
GEYT	Alibeck	3.51	62	Pn	Pn	15 33 54.1	+2.7
	comp=Z,2.6nm,0.3s,baz=243,slow=18,SNR=25						
GEYT				Pg	Pg	15 34 04.1	+0.2
	comp=Z,5.0nm,0.3s,baz=226,slow=9.9,SNR=25						
GEYT				Lg	Lg	15 34 52.7	
	baz=217,slow=7.2						
	comp=Z,28nm,0.7s						
GYA0B	ALIBECK ARRAY	3.51	62	⇑Pn	Pn	15 33 53.5	+2.2
GYA0B				⇑Pg	Pg	15 34 03.5	-0.5
GYA0B				⇑Lg	Lg	15 34 52.8	
JIR1	Jirandeh	3.55	277	*e*Pn	Pn	15 33 54.6	+2.5
IRAZ	Razeghan	3.59	256	*e*Pn	Pn	15 33 55.2	+2.5
TKDS	Koohdasht(Taba	3.64	138	*e*Pn	Pn	15 33 55.7	+2.4
TKDS				*e*		15 35 04.1	
	comp=Z,3µm,1.0s						
IAKL	Akhelmad	3.69	85	*e*Pn	Pn	15 33 56.3	+2.2
IKLH	Kolahrood	3.71	216	*e*Pn	Pn	15 33 56.3	+1.9
IKLH				*e*		15 34 12.3	
	comp=Z,2µm,0.5s						
IEMG	Emamgholi	3.73	72	*e*Pn	Pn	15 33 58.0	+3.3
IEMG				*e*		15 35 12.4	
	comp=N,1µm,0.8s						
IZEF	Zefreh	3.78	205	*e*Pn	Pn	15 33 56.7	+1.4
IZEF				*e*		15 35 09.3	
	comp=Z,1µm,0.5s						
QABG	Abgarm-Qazvin	3.79	262	*e*Pn	Pn	15 33 56.4	+0.9
IPAY	Payeh	3.88	87	*e*Pn	Pn	15 33 59.1	+2.5
TPRV	Parvadeh(Tabas	3.90	148	*e*Pn	Pn	15 33 58.9	+2.0
TPRV				*e*		15 35 14.1	
	comp=Z,3µm,0.6s						
IMOG	Moghan	4.17	92	*e*Pn	Pn	15 34 03.6	+2.9
IKRD	Kardeh	4.30	83	*e*Pn	Pn	15 34 05.5	+3.0
IGAR	Gharneh	4.32	205	*e*Pn	Pn	15 34 05.0	+2.2
ISAD	Sadrabad	4.45	186	*e*Pn	Pn	15 34 06.2	+1.6
IPIR	Pirpir	4.56	218	*e*Pn	Pn	15 34 08.1	+1.9
IMYA	Miami	4.77	88	*e*Pn	Pn	15 34 11.4	+2.5
IRAM	Ramesheh	4.78	199	*e*Pn	Pn	15 34 11.1	+2.1
ASTR	Astara	4.83	299	P	Pn	15 34 09.8	+0.3
	SNR=5.8						
ASTR				S	Sn	15 35 04.2	-1.3
SHK1	Shahrekord	4.86	215	*e*Pn	Pn	15 34 12.8	+2.6
IBAF	Bafgh	4.89	166	*e*Pn	Pn	15 34 12.4	+1.9
LKRN	Lenkeran, Azer	4.90	300	P	Pn	15 34 10.9	+0.3

LKRN				S	Sn	15 35 06.1	-1.2
AFRZ	Afriz	4.92	125	*e*Pn	Pn	15 34 13.5	+2.5
IMEH	Mehriz	4.96	176	*e*Pn	Pn	15 34 13.1	+1.5
IBRJ	Brojen	5.06	210	*e*Pn	Pn	15 34 15.4	+2.5
LRK	Lerik	5.18	298	P	Pn	15 34 15.0	+0.4
	SNR=11						
LRK				S	Sn	15 35 12.7	-1.8
GOBA	Gobu	5.35	320	S	Sn	15 35 20.1	+1.9
YRD	Yardimli	5.37	300	P	Pn	15 34 17.6	+0.4
	SNR=3.6						
YRD				S	Sn	15 35 19.5	+0.3
ISRB	Sarab	5.42	288	*e*Pn	Pn	15 34 20.1	+2.3
GLBA	Clilabad	5.42	304	P	Pn	15 34 19.0	+1.4
	SNR=4.1						
GLBA				S	Sn	15 35 20.7	+0.6
ALIB	Äli-Bayra	5.44	313	P	Pn	15 34 19.8	+1.8
	SNR=3.1						
ALIB				S	Sn	15 35 20.5	-0.1
GRMI	Germi	5.57	298	*e*Pn	Pn	15 34 20.8	+1.0
KLNJ	Kolanjah	5.76	203	*e*Pn	Pn	15 34 25.3	+2.7
GBS	Qobustan	5.87	317	S	Sn	15 35 32.6	+1.5
IBST	Bostanabad	5.99	285	*e*Pn	Pn	15 34 27.7	+2.0
IHRS	Heris	6.03	291	*e*Pn	Pn	15 34 27.6	+1.4
PQL	Pirkuli	6.23	317	P	Pn	15 34 30.9	+2.0
	SNR=4.0						
PQL				S	Sn	15 35 42.6	+2.3
QRD	Qoradiz	6.26	302	P	Pn	15 34 30.2	+1.1
	SNR=5.6						
QRD				S	Sn	15 35 41.2	+0.5
KHGB	Koh Gabri	6.26	162	*e*Pn	Pn	15 34 31.3	+1.9
IML	Ismayilli	6.46	315	P	Pn	15 34 33.8	+1.7
IML				S	Sn	15 35 43.9	-2.0
QUBA	Quba, Azerbaij	6.69	320	P	Pn	15 34 37.2	+2.1
QUBA				S	Sn	15 35 51.2	-0.1
AGDM	Agdam	6.72	306	P	Pn	15 34 36.6	+1.2
	SNR=4.4						
AGDM				S	Sn	15 35 53.1	+1.0
XNQ	Khinaliq	6.74	317	P	Pn	15 34 37.2	+1.1
	SNR=6.4						
XNQ				S	Sn	15 35 53.0	0.0
QBL	Gabala	6.76	315	P	Pn	15 34 37.3	+1.2
QBL				S	Sn	15 35 53.9	+0.7
QSAR	Qusar	6.92	320	P	Pn	15 34 40.6	+2.3
QSAR				S	Sn	15 35 56.4	-0.7
ORD	Ordubad	6.99	294	P	Pn	15 34 42.0	+2.7
	SNR=19						
ORD				S	Sn	15 36 00.3	+1.4
NGRK	Negar Kerman	7.02	162	*e*Pn	Pn	15 34 41.5	+1.5
IMRD	Marand	7.14	292	*e*Pn	Pn	15 34 44.6	+3.1
SEKA	Sheki	7.30	314	P	Pn	15 34 44.7	+1.2
	SNR=3.8						
SEKA				S	Sn	15 36 06.1	-0.4
SBZ	Shahbuz	7.48	297	P	Pn	15 34 47.6	+1.6
SBZ				S	Sn	15 36 12.8	+1.9
GANJ	Ganja	7.51	307	P	Pn	15 34 47.5	+1.1
	SNR=5.2						
GANJ				S	Sn	15 36 09.8	-1.8
ZKTA	Zakatala	7.91	314	P	Pn	15 34 53.1	+1.2
ZKTA				S	Sn	15 36 21.2	-0.2
GDB	GEDABAY	7.92	306	P	Pn	15 34 53.1	+1.0
	SNR=5.5						
GDB				S	Sn	15 36 22.0	+0.2
QZX	Qazax, Azerbai	8.34	307	P	Pn	15 34 58.0	+0.2
QZX				S	Sn	15 36 31.6	-0.5
GNI	Garni	8.34	300	Pn	Pn	15 34 59.2	+1.3
	comp=Z,1.2nm,0.3s,baz=31,slow=12,SNR=2.1						
	comp=Z,15nm,0.9s						
KBZ	Khabaz	11.36	314	Pn	Pn	15 35 41.4	+2.3
	comp=Z,0.1nm,0.3s,baz=176,slow=7.4,SNR=2.2						
	comp=Z,1.3nm,0.5s						
AB31	Akbulak array	13.56	16	Pn	Pn	15 36 07.7	-1.3
	comp=Z,0.9nm,0.7s,baz=199,slow=11,SNR=4.7						
AB31				⇓Sn	Sn	15 38 33.4	-6.3
	comp=Z,0.7nm,0.5s						
KK31	Karatay Array	14.24	57	⇓Pn	Pn	15 36 19.5	+1.1
	comp=Z,1.2nm,0.8s,baz=255,slow=12,SNR=4.3						
AKTO	Aktyubinsk	14.34	10	Pn	Pn	15 36 17.8	-2.0
	comp=Z,0.3nm,0.3s,baz=194,slow=10.0,SNR=3.4						
AKTO				LR	LR	15 43 18.6	
	comp=Z,65nm,18.0s,baz=168,slow=43						
	comp=Z,1.4nm,0.5s						
AKTO	Aktyubinsk	14.34	10	⇓Pn	Pn	15 36 17.4	-2.3
	comp=Z,1.6nm,0.6s						
AKTO				⇑Sn	Sn	15 38 52.2	-6.7
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	16.54	288	Pn	P	15 36 50.9	-0.6
	comp=Z,0.1nm,0.3s,baz=81,slow=9.2,SNR=2.5						
	comp=Z,0.7nm,0.9s						
ARU	Arti	20.30	7	P	Pn	15 37 34.1	-0.4
	comp=Z,0.6nm,0.3s,baz=194,slow=17,SNR=4.9						
ARU				LR	LR	15 46 57.2	
	comp=Z,60nm,18.3s,baz=186,slow=41						
	comp=Z,0.6nm,0.3s						
KURBB	Kurchatov Arra	22.56	43	P	P	15 37 59.8	+2.8
	comp=Z,0.4nm,0.8s,baz=242,slow=11,SNR=2.9						
	comp=Z,0.4nm,0.8s						
AKASG	Malin Array Be	22.95	316	P	P	15 38 02.7	+1.7
	comp=Z,0.5nm,0.5s,baz=125,slow=8.3,SNR=5.5						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	23.35	55	P	P	15 38 08.6	+3.4
	comp=Z,0.5nm,0.7s,baz=249,slow=11,SNR=4.2						
	comp=Z,0.5nm,0.7s						

WEL ***24*** *15:38:00, 39°.46S×176°.91E, h15^{km}, ML4.2, Mw4.1, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.53; M$_{\theta\theta}$-0.15; M$_{\phi\phi}$-0.38; M$_{r\theta}$0.06; M$_{\theta\phi}$-1.37; M$_{\phi r}$1.39; Fault plane solution: M$_{0}$2.00000×10^{15} NP1: ϕ_s264.00000°, δ42.00000°, λ166.00000°. NP2: ϕ_s5.00000°, δ80.00000°, λ49.00000°. Principal axes: T -211.5800, Plg40.0000°, Azm238.0000°; N 22.5200, Plg40.0000°, Azm13.0000°; P 189.0600, Plg24.0000°, Azm126.0000°;*

IDC ***24*** *15:38:08.1±1.6, 39°.46S×176°.82E, h0^{km}, mb4.2/3, mbtmp4.1/4, ML3.5/1, MS3.5/2 Error ellipse: s-maj=40.6km s-min=19.3km az=122.0*

NEIC ***24*** *15:38:08.5±1.4, 39°.58S±0°.03×176°.94E±0°.06, h8^{km}±4^{km}, mb4.4/15, Error ellipse: s-maj=6.8km s-min=3.6km az=67.0*

NOU ***24*** *15:38:09.9, 39°.57S×176°.82E, h8^{km}, MLv4.7/10, North Island, New Zealand*

WEL ***24*** *15:38:10.7±0.5, 39°S±2°×17°7E±°, h13^{km}±3^{km}, M4.4/19, ML4.7/19, MLv4.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=107.5*

ISC 24 15:38:10.2±0.9**, 39°.52S**±0°.02×**176°.87E**±0°.02**, h17**^{km}±5^{km}**, n194, σ0^{s}.96**/206**, mb4.3**/10**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCHZ	McNeill Hill	0.16	301	P	Pg	15 38 14.6	+0.2
MCHZ				S	Sb	15 38 18.9	+1.2
CKHZ	Cape Kidnapper	0.21	130	P	Pb	15 38 16.8	+1.3
KAHZ	Kahuranaki	0.27	179	P	Pb	15 38 18.8	+2.1
KAHZ				S	Sb	15 38 26.0	+5.0
ARHZ	Aropaoanui	0.28	20	P	Pg	15 38 15.6	-0.7
ARHZ				S	Sg	15 38 20.6	+0.2
KWHZ	Kaweka Forest	0.36	286	P	Pb	15 38 18.3	+0.1
KWHZ				S	Sb	15 38 25.4	+1.8
KRHZ	Kereru	0.41	253	P	Pn	15 38 19.9	-1.4
KRHZ				S	Sn	15 38 28.0	-0.6
NMHZ	Naumai	0.43	353	P	Pg	15 38 18.4	-0.5
NMHZ				S	Sg	15 38 25.5	+0.7
BKZ	Black Stump Fm	0.46	321		Pg	15 38 19.0	-0.5
BKZ				Sg	Sg	15 38 26.0	+0.1
BKZ	Black Stump Fm	0.46	321	P	Pg	15 38 19.2	-0.4
BKZ				S	Sg	15 38 26.8	+1.0
BKZ	Black Stump Fm	0.46	321	P	Pg	15 38 19.2	-0.4
PXZ	Pawanui	0.51	181	P	Pn	15 38 23.3	+0.7
BHHZ	Black Hill Sta	0.63	273	P	Pb	15 38 23.1	+0.4
BHHZ				S	Sn	15 38 32.8	-1.2
RAHZ	Arahi	0.63	15	P	Pb	15 38 22.1	-0.7
RAHZ				S	Sg	15 38 31.8	+0.8
WPHZ	Waipukurau	0.63	211	P	Pn	15 38 25.0	+0.6
PNHZ	Pukenui	0.65	233	P	Pn	15 38 24.7	0.0
PNHZ				S	Sn	15 38 36.1	+1.6
MTHZ	Maungataniwha	0.67	358	P	Pb	15 38 22.5	-0.9
MTHZ				S	Sb	15 38 32.3	-0.3
PRHZ	Porangahau	0.76	194	P	Pn	15 38 27.3	+1.1
MRHZ	Matea Rd	0.78	333	P	Pb	15 38 24.6	-0.7
KNZ	Kokohu	0.80	51	P	Pb	15 38 25.9	+0.3
SNGZ	Shannon Statio	0.83	26	P	Pb	15 38 25.9	-0.2
MOVZ	Moawhango	0.87	277	P	Pg	15 38 27.4	+0.2
HATZ	Hinemaiaia	0.88	316	P	Pb	15 38 26.8	-0.1
TSZ	Takapari Road	0.88	232	P	Pn	15 38 28.5	+0.6
MHGZ	Mahia Peninsul	0.89	66	P	Pb	15 38 27.4	+0.3
RTZ	Ruatahuna	0.91	5	P	Pb	15 38 26.7	-0.8
DVHZ	Dannevirke	0.94	215	P	Pn	15 38 29.6	+0.9
RITZ	Rihia Road	0.96	304	P	Pb	15 38 28.9	+0.6
TUVZ	Tukino	0.98	285	P	Pg	15 38 29.6	+0.5
ETVZ	East Tongariro	0.98	293	P	Pn	15 38 29.4	+0.1
ANWZ	Angora Road	0.98	198	P	Pn	15 38 30.2	+1.0
TMVZ	Te Maari	0.99	294	P	Pn	15 38 29.6	+0.1
OTVZ	Oturere	1.00	291	P	Pg	15 38 29.9	+0.2
WNVZ	Wahianoa	1.00	281	P	Pg	15 38 30.0	+0.3
SNVZ	South Ngauruho	1.01	289	P	Pg	15 38 30.1	+0.3
NTVZ	North Tongarir	1.02	294	P	Pn	15 38 30.0	+0.1
WHVZ	Whangaehu Hut	1.02	283	P	Pg	15 38 30.3	+0.3
DRZ	Dome Shelter	1.04	283	P	Pg	15 38 30.9	+0.4
NGZ	Ngauruhoe	1.04	289	P	Pg	15 38 30.6	+0.2
ALRZ	Allen Road	1.04	337	P	Pb	15 38 29.5	-0.3
KRVZ	Karewarewa	1.05	294	P	Pn	15 38 30.5	+0.3
MUGZ	Murupara	1.05	356	P	Pb	15 38 29.0	-0.9
TRVZ	Turoa	1.05	282	P	Pg	15 38 30.8	+0.2
NNVZ	North Ngauruho	1.05	292	P	Pg	15 38 30.7	+0.1
FWVZ	Far West T-bar	1.06	284	P	Pg	15 38 30.8	+0.1
KATZ	Kakaramea	1.06	301	P	Pn	15 38 30.7	+0.3
RIGZ	Rimuhau	1.07	41	P	Pb	15 38 29.9	-0.4
WTVZ	West Tongariro	1.07	292	P	Pn	15 38 31.0	+0.4
RATZ	Rangitukua	1.08	307	P	Pn	15 38 31.0	+0.4
PRRZ	Plateau Road	1.09	340	P	Pn	15 38 30.2	-0.4
MTVZ	Mangateitei	1.09	277	P	Pg	15 38 31.7	+0.4
RAGZ	Rawiri	1.11	23	P	Pn	15 38 30.8	-0.2
WHTZ	Whakaora	1.11	320	P	Pb	15 38 31.8	+0.8
WPRZ	Whakapapatarin	1.15	331	P	Pn	15 38 31.5	0.0
TWVZ	Taurewa	1.20	292	P	Pb	15 38 33.1	+0.5
WATZ	Wairara	1.20	312	P	Pb	15 38 32.8	+0.3
PKVZ	Pokaka	1.20	281	P	Pg	15 38 33.5	0.0
POWZ	Post Office Ro	1.21	224	P	Pg	15 38 33.5	-0.1
RRRZ	Republican Roa	1.22	347	P	Pn	15 38 32.3	-0.1
HRRZ	Handcock Road	1.22	338	P	Pn	15 38 32.8	+0.3
PRWZ	Pori Road	1.24	214	P	Pg	15 38 33.8	-0.3
BFZ	Birch Farm	1.25	202		Pg	15 38 33.2	-1.2
BFZ	Birch Farm	1.25	202	P	Pg	15 38 33.4	-0.9
BFZ	Birch Farm	1.25	202	P	Pg	15 38 33.5	-0.9
URZ	Urewera	1.28	9	Pn	Pn	15 38 32.8	-0.4
	162nm,0.3s,baz=222,slow=7.0,SNR=704						
URZ				Sn	Sn	15 38 49.7	-0.2
	339nm,0.3s,baz=6.6,slow=21,SNR=8.8						
URZ				LR	LR	15 39 07.8	
	comp=Z,728nm,20.2s,baz=216,slow=49						
URZ	Urewera	1.28	9		Pn	15 38 32.7	-0.6
URZ	Urewera	1.28	9	P	Pn	15 38 32.8	-0.4
URZ	Urewera	1.28	9	P	Pn	15 38 33.4	+0.2
MWZ	Matawai	1.29	24	P	Pn	15 38 33.0	-0.5
HSRZ	Hossack Road	1.31	338	P	Pn	15 38 33.8	+0.1
GRRZ	Galatos Road	1.31	333	P	Pn	15 38 34.2	+0.4
KUTZ	Kaahu Road	1.32	321	P	Pn	15 38 34.2	+0.3
TARZ	Mount Tarawera	1.32	347	P	Pn	15 38 34.5	+0.6
TKGZ	Te Karaka	1.32	35	P	Pn	15 38 33.3	-0.6
HLRZ	Highlands Stat	1.33	342	P	Pb	15 38 35.1	+0.3
OHWZ	Ohakea	1.38	240	P	Pg	15 38 37.3	+0.6
MKRZ	Makatiti	1.42	347	P	Pg	15 38 38.5	+0.9
EDRZ	Edgecumbe	1.42	356	P	Pn	15 38 35.5	+0.2
UTU	Utuhina	1.45	338	P	Pn	15 38 36.6	+1.0
TIWZ	Tintock	1.46	211	P	Pg	15 38 37.5	-0.8
OMRZ	Omania	1.47	344	P	Pn	15 38 35.8	-0.1
CNGZ	Carnagh Statio	1.47	45	P	Pn	15 38 35.4	-0.5
WAZ	Wanganui	1.47	260	P	Pg	15 38 38.6	0.0
CPWZ	Castlepoint	1.48	200	P	Pg	15 38 38.2	-0.4
MRZ	Mangatainoka R	1.51	221	P	Pb	15 38 36.9	-0.8
NGRZ	Ngongotaha	1.52	339	P	Pb	15 38 38.2	+0.3
MARZ	Manawahe	1.54	354	P	Pn	15 38 37.7	+0.7
LIRZ	Lichensteins R	1.57	346	P	Pb	15 38 38.9	+0.2
KARZ	Kaharoa	1.58	342	P	Pn	15 38 37.7	+0.3
TLZ	Tolley Road	1.58	319	P	Pn	15 38 38.1	+0.6
TWGZ	Tauwhareparae	1.60	33	P	Pn	15 38 37.8	+0.1
WHRZ	Whale Island	1.67	3	P	Pn	15 38 38.8	+0.2
RUGZ	Raukumara Rang	1.68	22	P	Pn	15 38 38.5	-0.4
VRZ	Vera Road	1.69	283	P	Pb	15 38 40.6	-0.2
OPRZ	Ohinepanea	1.70	352	P	Pn	15 38 39.0	0.0
HOWZ	Holdsworth Sta	1.72	217	P	Pb	15 38 40.2	-1.1
TMWZ	Te Maipa	1.75	205	P	Pn	15 38 39.6	-0.1
PUZ	Puketiti	1.81	37	P	Pn	15 38 39.2	-1.4
KMRZ	Kaimai	1.83	336	P	Pn	15 38 41.2	+0.3
OGWZ	Otaki Gorge	1.83	225	P	Pb	15 38 41.6	-1.7
TGRZ	Tauranga	1.85	345	P	Pn	15 38 41.1	0.0
HIZ	Hauiti	1.87	302		Pn	15 38 42.2	+0.9
HIZ	Hauiti	1.87	302	P	Pn	15 38 42.2	+0.9
HIZ	Hauiti	1.87	302	P	Pn	15 38 42.5	+1.1
PKGZ	Pakihiroa	1.89	30	P	Pn	15 38 41.0	-0.7
HAZ	Te Kaha	1.90	22	P	Pn	15 38 41.0	-0.8
LREZ	Lake Rotokare	1.91	271	P	Pb	15 38 44.2	-0.4
MTW	Mount Morrison	1.94	212	P	Pn	15 38 41.9	-0.4
KIW	Kapiti Island	2.01	228	P	Pn	15 38 43.8	+0.4
WIZ	White Island	2.01	7	P	Pn	15 38 42.7	-0.6
MHEZ	Mangahewa	2.03	282	P	Pb	15 38 46.7	+0.2
TRWZ	Traveller	2.08	205	P	Pn	15 38 44.1	-0.2
TOZ	Tahuroa Road	2.09	329	P	Pn	15 38 44.4	0.0
WMGZ	Waiomatatini S	2.09	36	P	Pn	15 38 43.4	-1.0
DREZ	Durham Road	2.10	278	P	Pb	15 38 47.4	-0.3
CAW	Cannon Point	2.10	221	P	Pn	15 38 44.5	0.0
PREZ	Palmer Road	2.11	274	P	Pb	15 38 47.6	-0.4
NEZ	North Egmont	2.17	276	P	Pb	15 38 48.7	-0.3
KHEZ	Kahui Hut	2.23	275	P	Pb	15 38 50.0	0.0
MSWZ	Moikau Station	2.26	213		Pn	15 38 46.1	-0.7
MSWZ	Moikau Station	2.26	213	P	Pn	15 38 45.8	-0.9
MXZ	Matakaoa Point	2.26	30		Pn	15 38 46.4	-0.3
MXZ	Matakaoa Point	2.26	30	P	Pn	15 38 46.7	-0.1
PKE	Pukeiti	2.26	277	P	Pb	15 38 49.8	-0.8
NMEZ	Namu Road	2.32	272	P	Pb	15 38 50.9	-0.6
NBEZ	Newall Road No	2.34	275	P	Pb	15 38 50.8	-1.1
WEL	Wellington	2.38	222	P	Pn	15 38 48.4	0.0
PLWZ	Palliser	2.38	211		Pn	15 38 47.4	-1.1
PLWZ	Palliser	2.38	211	P	Pn	15 38 47.5	-1.1
BHW	Baring Head	2.42	218		Pn	15 38 48.1	-0.9
BHW	Baring Head	2.42	218	P	Pn	15 38 48.3	-0.7
SNZO	South Karori	2.43	222		Pn	15 38 48.2	-0.9
SNZO	South Karori	2.43	222	P	Pn	15 38 49.4	+0.3
DUWZ	D'Urville Isla	2.59	240	P	Pn	15 38 51.9	+0.5
TCW	Tory Channel	2.60	229	P	Pn	15 38 51.0	-0.5
MKAZ	Moumakai	2.77	330	P	Pn	15 38 54.7	+1.0
KUZ	Kuaotunu	2.92	342	P	Pn	15 38 56.5	+0.7
TUWZ	Tuamarina	2.93	229		Pn	15 38 55.0	-1.1
TUWZ	Tuamarina	2.93	229	P	Pn	15 38 54.9	-1.1
ETAZ	East Tamaki Re	2.99	329	P	Pn	15 38 58.1	+1.3
AWAZ	Awhitu Peninsu	3.02	324	P	Pn	15 38 58.3	+1.1
WTAZ	Waiatarua	3.16	324	P	Pn	15 39 00.5	+1.4
NNZ	Nelson	3.16	237	P	Pn	15 38 58.8	-0.3
BSWZ	Blackbirch Sta	3.16	225	Pn	Pn	15 38 57.8	-1.4
BSWZ	Blackbirch Sta	3.16	225	P	Pn	15 38 58.1	-1.0
MBAZ	Motutapu North	3.16	330	P	Pn	15 39 00.6	+1.4
RVAZ	Riverhead Bore	3.29	326	P	Pn	15 39 02.5	+1.6
ABAZ	Army Bay	3.33	331	P	Pn	15 39 02.7	+1.2
TKNZ	Takaka Hill	3.35	242	P	Pn	15 39 02.2	+0.5
QRZ	Quartz Range	3.57	247	Pn	Pn	15 39 03.5	-1.3
QRZ	Quartz Range	3.57	247	P	Pn	15 39 04.7	-0.1
QRZ	Quartz Range	3.57	247	P	Pn	15 39 04.1	-0.7
MRNZ	Matariki Terra	3.65	238	P	Pn	15 39 05.7	-0.3
THZ	Tophouse	3.75	232	Pn	Pn	15 39 06.0	-1.3
THZ	Tophouse	3.75	232	P	Pn	15 39 06.3	-1.1
KHZ	Kahutara	3.83	220	Pn	Pn	15 39 06.4	-2.0
KHZ	Kahutara	3.83	220	P	Pn	15 39 07.4	-1.0
WCZ	Waipu Caves	4.10	330	P	Pn	15 39 13.7	+1.6
DSZ	Denniston Nort	4.45	238	P	Pb	15 39 24.3	-3.5
OUZ	Omahuta	5.03	328	P	Pn	15 39 26.7	+1.9
OUZ	Omahuta	5.03	328	P	Pn	15 39 26.9	+2.1
OKCZ	Okains Bay	5.08	213	P	Pn	15 39 24.1	-1.4
AKCZ	Akaroa Harbour	5.26	213	P	Pn	15 39 26.7	-1.3
WVZ	Waitaha Valley	5.82	231	P	Pn	15 39 36.6	+0.9
RPZ	Rata Peaks	6.04	224	Pn	Pn	15 39 37.9	-0.9
	1.2nm,0.3s,baz=282,slow=1.5,SNR=9.7						
RPZ				Sn	Sn	15 40 43.6	-4.0
	8.8nm,0.3s,baz=98,slow=24,SNR=24						
	3.9nm,0.4s						
RPZ	Rata Peaks	6.04	224		Pn	15 39 36.9	-1.9
RPZ	Rata Peaks	6.04	224	P	Pn	15 39 38.2	-0.6
GCSZ	Gaunt Creek Bo	6.21	230	P	Pn	15 39 41.4	+0.4
CTZ	Chatham Island	6.44	133	P	Pn	15 39 44.1	-0.1
LBZ	Lake Benmore	6.96	224	Pn	Pn	15 39 49.4	-1.9
ODZ	Otahua Downs	7.19	218	P	Pn	15 39 53.9	-0.6
JCZ	Jackson Bay	7.56	230	P	Pn	15 39 59.5	-0.1
DZM	Mont Dzumac	19.54	330	LR	LR	15 49 35.7	
	comp=Z,107nm,18.2s,baz=151,slow=35						
DZM	Mont Dzumac	19.54	330	P	P	15 42 35.2	-1.9
DZM				IAmb	IAmb	15 42 53.7	
	comp=Z,13nm,1.5s						
LIFNC	LIFOU	20.43	333	P	P	15 42 46.8	+0.1
LIFNC				IAmb	IAmb	15 43 12.0	
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	29.50	274	P	P	15 44 15.3	+1.8
	comp=Z,1.4nm,0.6s,baz=60,slow=12,SNR=3.0						
	comp=Z,1.4nm,0.6s						
BBOO	Buckleboo	33.41	269	P	P	15 44 48.0	+0.1
AS31	Alice Springs	39.47	281	P	P	15 45 39.3	-0.5
ASAR	Alice Springs	39.47	281	P	P	15 45 39.5	-0.3
	comp=Z,3.7nm,0.8s,baz=114,slow=5.6,SNR=43						
ASAR				LR	LR	16 01 28.1	
	comp=Z,67nm,18.4s,baz=118,slow=36						
	comp=Z,3.7nm,0.8s						
ASAR	Alice Springs	39.47	281	P	P	15 45 39.0	-0.8
PMG	Port Moresby	40.02	310	P	P	15 45 42.4	-1.9
WR0	Warramunga Arr	41.15	286	P	P	15 45 53.3	-0.4
WR0				IAmb	IAmb	15 46 15.2	
	comp=Z,9.8nm,1.2s						
WB2	Warramunga Arr	41.30	286	P	P	15 45 54.3	-0.6
WB2				IAmb	IAmb	15 46 06.9	
	comp=Z,5.1nm,0.9s						
WRAB	Tennant Creek	41.31	286	P	P	15 45 54.5	-0.5
WRAB				IAmb	IAmb	15 45 55.6	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	41.31	286	P	P	15 45 54.6	-0.4
	comp=Z,3.5nm,0.8s,baz=122,slow=7.6,SNR=49						
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	41.31	286	IAmb	IAmb	15 46 02.9	
	comp=Z,0.5nm,1.5s						
WB0	Warramunga Arr	41.38	286	P	P	15 45 55.0	-0.5
WB0				IAmb	IAmb	15 45 56.0	
	comp=Z,8.3nm,1.0s						
KNRA	Kununurra	48.11	286	P	P	15 46 49.3	+0.1
KNRA				IAmb	IAmb	15 47 11.6	
	comp=Z,4.6nm,0.9s						
MTN	Manton Dam	48.20	290	P	P	15 46 49.3	-0.7
MTN				IAmb	IAmb	15 47 01.7	
	comp=Z,10nm,1.3s						
QSPA	South Pole Qui	50.60	180	P	P	15 47 08.7	+0.9
QSPA				IAmb	IAmb	15 47 16.3	
	comp=Z,4.6nm,1.2s						
LL02	Futaleuf	76.88	136	P	P	15 50 01.4	+0.1
ARCES	ARCESS Array B	146.32	342	PKPbc	PKPdf	15 57 47.5	0.0
	comp=Z,2.7nm,1.0s,baz=330,slow=7.0,SNR=3.7						
FINES	FINESS Array B	151.68	330	PKPbc	PKPbc	15 58 02.3	-0.3
	comp=Z,0.9nm,0.7s,baz=347,slow=5.7,SNR=2.0						
TORD	Torodi Ar. Bea	153.38	191	PKPbc	PKiKP	15 58 09.5	+1.5
	comp=Z,0.3nm,0.4s,baz=157,slow=3.7,SNR=1.7						
AKASG	Malin Array Be	154.78	307	PKP	PKPdf	15 58 02.4	+1.2
	comp=Z,0.6nm,0.4s,baz=30,slow=0.5,SNR=2.9						

DJA 24 15:49:46.5±0.4**, 0°S**±2°×**12°3E**±°**, h63**^{km}±8^{km}**, M3.6**/11**, mb3.4**/1**, mB4.1**/1**, MLv3.6**/11**, Mw(mB)3.2**/1**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.76	178	P	Pn	15 50 03.0	+1.4
LUWI				S	Sn	15 50 14.7	+2.0
GTOI	Gorontalo	0.95	16	P	Pn	15 50 05.6	+1.6
GTOI				S	Sn	15 50 19.7	+2.8
MRSI	Marisa	1.10	313	P	Pn	15 50 05.8	-0.2
MRSI				S	Sn	15 50 20.1	-0.5
APSI	Ampana	1.27	240	P	Pn	15 50 09.0	+0.8
KMSI	Cibinong	1.50	55	P	Pn	15 50 10.8	-0.4
MPSI	Mapaga	2.92	282	P	Pn	15 50 30.5	0.0
SANI	Sanana	3.68	119	P	Pn	15 50 39.9	-1.1
TTSI	Tana Toraja	4.02	227	P	Pn	15 50 45.6	0.0
LBMI	Labuha	4.76	94	P	Pn	15 50 54.7	-1.1
BBSI	Bau Bau	5.18	182	P	Pn	15 51 01.3	-0.2

JMA ***24*** *16:06:13.7±0.2, 24°.0N±0°.6×12°2E±°, h6^{km}±2^{km}, MV2.7/10, TAIWAN REGION*

TAP ***24*** *16:06:15.7, 24°.15N×121°.66E, h12^{km}, ML3.4, B*

ISC 24 16:06:15.7±0.8**, 24°.13N**±0°.01×**121°.69E**±0°.02**, h11**^{km}±4^{km}**, n92, σ0^{s}.73**/165**, 3C-27D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.07	299	⇓*i*P	Pg	16 06 18.1	0.0
	baz=290						
ETL				*i* S	Sg	16 06 19.9	0.0
	baz=290						
TWD	Chiawan	0.10	242	⇓*i*P	Pg	16 06 18.4	0.0
	baz=220						
TWD				*i* S	Sg	16 06 20.4	+0.1
	baz=220						
NACB	Ninganchiao	0.10	299	⇓*i*P	Pg	16 06 18.4	-0.1
	baz=295						
NACB				*i* S	Sg	16 06 20.3	-0.1
	baz=295						
HWA	Hwalien	0.17	208	*i* P	Pg	16 06 20.0	+0.6
	baz=195						
HWA				*e*S	Sg	16 06 23.4	+1.5
	baz=195						
EHP	Heping Village	0.19	14	P	Pg	16 06 19.8	-0.1
	baz=26						
EHP				*e*S	Sg	16 06 22.6	0.0
	baz=26						
ETLH	Xiulin Townshi	0.21	293	⇓*i*P	Pg	16 06 20.2	0.0
	baz=291						
ETLH				*i* S	Sg	16 06 23.4	+0.2
	baz=291						
ETM	Tongmen	0.24	229	P	Pg	16 06 20.7	+0.1
	baz=221						
ETM				*e*S	Sg	16 06 24.3	+0.3
	baz=221						
TEYL	Yanliau Villag	0.27	198	*e*P	Pg	16 06 21.9	+0.7
	baz=193						
TEYL				*e*S	Sb	16 06 27.8	+0.7
	baz=193						
ENA	Nanau	0.30	9	⇓*i*P	Pg	16 06 21.7	-0.1
	baz=16						
ENA				S	Sg	16 06 26.1	+0.1
	baz=16						
EWUT	Wuta	0.33	14	⇓*i*P	Pg	16 06 22.1	-0.2
	baz=19						
EWUT				S	Sg	16 06 26.6	-0.2
	baz=19						
ESL	Shilin	0.39	217	*i* P	Pg	16 06 23.3	-0.1
	baz=211						
ESL				*e*S	Sb	16 06 29.9	-0.7
	baz=211						
WHF	Hehuan Shan	0.39	273	⇓*i*P	Pg	16 06 23.6	0.0
	baz=270						
WHF				*e*S	Sb	16 06 29.3	-1.7
	baz=270						
NNSB	Datong	0.41	317	⇓*i*P	Pg	16 06 24.1	+0.2
	baz=318						
NNSB				*e*S	Sb	16 06 29.8	-1.6
	baz=318						
FUSS	Fushou	0.42	287	⇓*i*P	Pb	16 06 24.4	-0.9
	baz=285						
FUSS				*e*S	Sb	16 06 30.7	-1.1
	baz=285						
NNS	Nan Shan	0.43	317	⇓P	Pg	16 06 24.3	+0.1
	baz=319						
NNS				*e*S	Sb	16 06 30.3	-1.5
	baz=319						
LATG	Datong	0.43	340	⇓*i*P	Pg	16 06 24.3	0.0
	baz=342						
LATG				S	Sg	16 06 30.4	+0.3
	baz=342						
TEGC	Jichi Village	0.44	198	*e*P	Pb	16 06 25.5	+0.1
	baz=194						
CHGB	Renai	0.48	262	⇓*i*P	Pb	16 06 25.4	-0.8
	baz=259						
CHGB				*e*S	Sb	16 06 32.1	-1.1
	baz=259						
TWT	Tachien	0.49	285	*e*P	Pb	16 06 25.9	-0.4
	baz=283						
TWT				*e*S	Sb	16 06 33.0	-0.6
	baz=283						
OWD	Renai	0.50	250	⇓P	Pg	16 06 25.6	+0.1
	baz=247						
OWD				S	Sb	16 06 32.4	-1.5
	baz=247						
NDT	Datong Townshi	0.50	341	⇓P	Pg	16 06 25.4	-0.1
	baz=343						
NDT				*e*S	Sg	16 06 32.3	+0.1
	baz=343						

TDCB	**Techi** baz=283	**0.50**	**285**	⇓P	**Pb**	**16 06 26.0**	**-0.6**
TDCB	baz=283			*e*S	**Sb**	**16 06 33.1**	**-0.8**
TWC	**Suao** baz=21	**0.50**	**17**	*e*P	**Pg**	**16 06 25.4**	**-0.1**
TWC	baz=21			*e*S	**Sg**	**16 06 32.5**	**+0.3**
NDS	**Dongshan** baz=6.0	**0.51**	**3**	⇓*e*P	**Pg**	**16 06 25.6**	**0.0**
NDS	baz=6.0			*e*S	**Sg**	**16 06 32.1**	**-0.3**
EGFH	**Guangfu** baz=204	**0.51**	**208**	*e*P	**Pg**	**16 06 25.8**	**+0.1**
EGFH	baz=204			*e*S	**Sb**	**16 06 34.7**	**+0.5**
ENTT	**Nioudou** baz=351	**0.53**	**348**	⇓*i*P	**Pg**	**16 06 26.1**	**+0.2**
ENTT	baz=351			*e*S	**Sg**	**16 06 33.3**	**+0.4**
WUSB	**Renai** baz=253	**0.54**	**256**	⇓P	**Pb**	**16 06 26.6**	**-0.6**
WUSB	baz=253			S	**Sb**	**16 06 33.7**	**-1.4**
TWE	**Neicheng** baz=2.0	**0.59**	**358**	⇓*i*P	**Pg**	**16 06 27.4**	**+0.2**
TWE	baz=2.0			*e*S	**Sg**	**16 06 35.2**	**+0.1**
YHNB	**Yeheng** baz=333	**0.61**	**332**	⇓P	**Pg**	**16 06 27.8**	**+0.2**
YHNB	baz=333			*e*S	**Sb**	**16 06 36.2**	**-0.9**
VWDT	**VWDT** baz=231	**0.62**	**234**	⇓P	**Pg**	**16 06 28.0**	**+0.2**
VWDT	baz=231			*e*S	**Sb**	**16 06 36.9**	**-0.4**
NSK	**Sanguang** baz=333	**0.63**	**331**	*e*P	**Pg**	**16 06 27.9**	**+0.1**
NSK	baz=333			*e*S	**Sb**	**16 06 36.5**	**-1.0**
FUSB	**Fushanzhiwuyua** baz=354	**0.64**	**352**	⇓*i*P	**Pg**	**16 06 28.3**	**+0.2**
FUSB	baz=354			*e*S	**Sg**	**16 06 36.8**	**+0.3**
ILA	**Ilan** baz=8.0	**0.64**	**5**	*e*P	**Pg**	**16 06 28.6**	**+0.5**
NWLT	**Wulai** baz=347	**0.67**	**345**	⇓P	**Pg**	**16 06 28.8**	**+0.1**
NWLT	baz=347			*e*S	**Sg**	**16 06 37.5**	**0.0**
HGSD	**Ruisui** baz=199	**0.68**	**201**	*e*P	**Pg**	**16 06 29.4**	**+0.6**
WPL	**Puli Township** baz=259	**0.68**	**261**	*e*P	**Pb**	**16 06 29.4**	**-0.1**
WPL	baz=259			*e*S	**Sb**	**16 06 38.5**	**-0.4**
WHP	**Taichung City** baz=281	**0.70**	**283**	*e*P	**Pb**	**16 06 29.9**	**+0.1**
EHY	**Hungye** baz=206	**0.70**	**209**	*e*P	**Pg**	**16 06 28.7**	**-0.5**
EHY	baz=206			*e*S	**Sb**	**16 06 39.6**	**0.0**
DPDB	**Guoxing** baz=261	**0.70**	**263**	*e*P	**Pb**	**16 06 29.9**	**-0.1**
DPDB	baz=261			*e*S	**Sb**	**16 06 39.5**	**-0.2**
WCS	**Beigang Elemen** baz=263	**0.71**	**265**	⇓*e*P	**Pb**	**16 06 29.9**	**-0.2**
WCS	baz=263			*e*S	**Sb**	**16 06 39.8**	**-0.2**
NFF	**Wufeng Townshi** baz=314	**0.73**	**314**	*e*P	**Pb**	**16 06 30.1**	**-0.3**
NFF	baz=314			*e*S	**Sb**	**16 06 39.5**	**-0.9**
NTC	**Toucheng** baz=12	**0.74**	**10**	*e*P	**Pg**	**16 06 29.8**	**-0.1**
NTC	baz=12			*e*S	**Sb**	**16 06 40.4**	**-0.2**
EGS	baz=20	**0.75**	**17**	*e*P	**Pg**	**16 06 30.4**	**+0.2**
SSLB	**Suanglung** baz=241	**0.75**	**244**	⇓*e*P	**Pg**	**16 06 30.3**	**+0.1**
SSLB	baz=241			*e*S	**Sb**	**16 06 40.1**	**-1.0**
SMLT	**Sun Moon Lake** baz=249	**0.76**	**252**	⇓*e*P	**Pb**	**16 06 30.7**	**-0.3**
SMLT	baz=249			*e*S	**Sb**	**16 06 41.1**	**-0.3**
TYC	**Yuchr** baz=252	**0.79**	**254**	*e*P	**Pb**	**16 06 31.1**	**-0.3**
TYC	baz=252			*e*S	**Sb**	**16 06 41.0**	**-1.1**
LIOB	**Emei** baz=310	**0.80**	**310**	*e*P	**Pb**	**16 06 32.0**	**+0.3**
LIOB	baz=310			*e*S	**Sb**	**16 06 43.0**	**+0.4**
NSTT	**Nanjuang** baz=309	**0.81**	**309**	*e*P	**Pb**	**16 06 31.8**	**+0.1**
NSTT	baz=309			*e*S	**Sb**	**16 06 42.4**	**-0.2**
YULB	**Yu-li** baz=204	**0.81**	**206**	*e*P	**Pg**	**16 06 30.8**	**-0.6**
YULB	baz=204			*e*S	**Sg**	**16 06 42.2**	**+0.2**
EYUL	**Yuli** baz=202	**0.85**	**204**	*e*P	**Pg**	**16 06 31.9**	**-0.1**
EYUL	baz=202			*e*S	**Sb**	**16 06 44.5**	**+0.8**
NHDH	**Xindian Distri** baz=351	**0.85**	**350**	*e*P	**Pb**	**16 06 32.3**	**-0.1**
TWF1	**Yuli** baz=202	**0.85**	**205**	*e*P	**Pg**	**16 06 31.0**	**-1.1**
TWF1	baz=202			*e*S	**Sg**	**16 06 43.8**	**+0.6**
TIPB	**Shuangxi** baz=10.0	**0.85**	**8**	⇓*e*P	**Pg**	**16 06 32.1**	**-0.1**
TIPB	baz=10.0			*e*S	**Sg**	**16 06 42.8**	**-0.5**
TWA	**Mucha** baz=356	**0.86**	**354**	*e*P	**Pg**	**16 06 32.3**	**+0.1**
TWA	baz=356			*e*S	**Sg**	**16 06 43.2**	**-0.3**
TATO	**Taipei** baz=350	**0.87**	**348**	*e*P	**Pb**	**16 06 32.5**	**-0.2**
TWQ1	**Liyutan** baz=284	**0.87**	**285**	*e*P	**Pn**	**16 06 33.5**	**-0.3**
TWQ1	baz=284			*e*S	**Sn**	**16 06 46.4**	**0.0**
NSY	**Sanyi** baz=288	**0.90**	**289**	*e*P	**Pn**	**16 06 34.1**	**-0.1**
NMLH	**Miaoli** baz=296	**0.92**	**297**	*e*P	**Pn**	**16 06 35.0**	**+0.5**
TWB1	**Santiao Chiao** baz=20	**0.92**	**17**	*e*P	**Pg**	**16 06 33.5**	**+0.1**
TWB1	baz=20			*e*S	**Sg**	**16 06 45.8**	**+0.4**
SBCB	**Hsinchu** baz=316	**0.92**	**316**	⇑*e*P	**Pn**	**16 06 35.5**	**+0.9**
YUS	**Yu-Shan** baz=225	**0.93**	**227**	*e*P	**Pg**	**16 06 33.7**	**+0.1**
YUS	baz=225			*e*S	**Sb**	**16 06 46.8**	**+0.3**
WJS	**Zhushan** baz=249	**0.93**	**251**	*e*P	**Pn**	**16 06 34.8**	**+0.1**
WJS	baz=249			*e*S	**Sn**	**16 06 48.5**	**+0.6**
NWF	**Wu-fen Shan** baz=7.0	**0.94**	**5**	⇑*e*P	**Pb**	**16 06 34.4**	**+0.3**
NWF	baz=7.0			*e*S	**Sg**	**16 06 46.4**	**+0.2**
WFSB	**Wu-fen Shan** baz=7.0	**0.94**	**5**	*e*P	**Pb**	**16 06 34.2**	**+0.2**
WFSB	baz=7.0			*e*S	**Sg**	**16 06 46.3**	**0.0**
WNT	**Mingjian** baz=253	**0.95**	**255**	*e*P	**Pn**	**16 06 35.3**	**+0.3**
WNT	baz=253			*e*S	**Sn**	**16 06 49.6**	**+1.1**
NCUH	**Zhongli** baz=332	**0.96**	**331**	*e*P	**Pn**	**16 06 35.5**	**+0.4**
SXI1	**Grass Mountain** baz=12	**0.98**	**10**	*e*P	**Pg**	**16 06 34.7**	**+0.1**
WDJ	**Dajia District** baz=282	**0.98**	**283**	*e*P	**Pn**	**16 06 36.7**	**+1.3**
FULB	**Fuli** baz=200	**0.99**	**202**	*e*P	**Pg**	**16 06 34.3**	**-0.5**
FULB	baz=200			*e*S	**Sn**	**16 06 50.0**	**+0.5**
TWS1	**Kuangyinshan** baz=347	**1.00**	**346**	*e*P	**Pn**	**16 06 36.3**	**+0.6**
ALS	**Alishan** baz=231	**1.02**	**233**	⇑*e*P	**Pb**	**16 06 35.5**	**+0.1**
ALS	baz=231			*e*S	**Sn**	**16 06 49.9**	**-0.6**
YM01	**YM01** baz=355	**1.02**	**354**	*e*P	**Pb**	**16 06 35.8**	**+0.4**
YM08	**YM08** baz=356	**1.06**	**355**	*e*P	**Pg**	**16 06 36.0**	**-0.1**
CHKT	**Chengkung** baz=194	**1.06**	**196**	*e*P	**Pg**	**16 06 34.8**	**-1.4**
CHKT	baz=194			*e*S	**Sn**	**16 06 51.5**	**+0.3**
CHN5	**Tsauling** baz=239	**1.06**	**241**	*e*P	**Pn**	**16 06 36.8**	**+0.2**
CHN5	baz=239			*e*S	**Sn**	**16 06 53.0**	**+1.6**
ELDTW	**Lidau** baz=212	**1.12**	**214**	*e*P	**Pg**	**16 06 35.4**	**-1.8**
ELDTW	baz=212			*e*S	**Sb**	**16 06 52.1**	**+0.4**
JYNG	**Yonagunijimaku**	**1.19**	**74**	*e*P	**Pn**	**16 06 37.0**	**-1.3**
JYNG				*e*S	**Sb**	**16 06 53.7**	**0.0**
EDH	**Donghe** baz=196	**1.20**	**197**	*e*P	**Pb**	**16 06 37.0**	**-1.4**
EDH	baz=196			*e*S	**Sg**	**16 06 55.0**	**+0.7**
WRL	**Guolierlin Hig** baz=258	**1.22**	**260**	*e*P	**Pg**	**16 06 39.7**	**+0.6**
YOJ	**Yonaguni jima** baz=75	**1.25**	**74**	P	**Pn**	**16 06 38.7**	**-0.3**
YOJ	baz=75			*e*S	**Sb**	**16 06 56.0**	**+0.7**
YOJ	**Yonaguni jima**	**1.25**	**74**	P	**Pn**	**16 06 38.7**	**-0.3**
STYH	**Taoyuan** baz=220	**1.27**	**222**	*e*P	**Pn**	**16 06 39.2**	**-0.1**
STYH	baz=220			*e*S	**Sg**	**16 06 56.3**	**-0.2**
TPUB	**Ta-pu** baz=228	**1.27**	**230**	*e*P	**Pg**	**16 06 40.0**	**-0.1**
WTP	**Ta-pu** baz=227	**1.32**	**229**	*e*P	**Pg**	**16 06 41.1**	**+0.1**
WTP	baz=227			*e*S	**Sg**	**16 07 00.4**	**+2.2**
TWK	**Hsinying** baz=231	**1.39**	**232**	*e*P	**Pg**	**16 06 42.3**	**-0.2**
TWK	baz=231			*e*S	**Sg**	**16 07 02.9**	**+2.3**
CHN1	**Nanshi** baz=227	**1.42**	**229**	*e*P	**Pb**	**16 06 42.5**	**+0.3**
CHN1	baz=227			*e*S	**Sg**	**16 07 02.6**	**+1.2**
LDUT	**Ludao** baz=187	**1.46**	**188**	*e*P	**Pn**	**16 06 39.2**	**-2.7**
LDUT	baz=187			*e*S	**Sn**	**16 06 58.5**	**-2.5**
IRIF	**Iriomote-Funau**	**1.87**	**83**	*e*P	**Pn**	**16 06 47.3**	**-0.4**
IRIF				*e*S	**Sn**	**16 07 12.4**	**+1.1**
HATJ	**Hateruma jima**	**1.93**	**92**	*e*P	**Pn**	**16 06 48.9**	**+0.5**
HATJ				*e*S	**Sn**	**16 07 14.1**	**+1.4**
JKRS	**Kuro-shima**	**2.12**	**87**	P	**Pn**	**16 06 51.1**	**+0.1**
JKRS				*e*S	**Sn**	**16 07 18.9**	**+1.5**
JIJ	**Ishigaki jima**	**2.25**	**83**	P	**Pn**	**16 06 52.4**	**-0.5**
JIJ				S	**Sn**	**16 07 21.4**	**+0.8**
JISG	**Ishigakijimahi**	**2.43**	**79**	P	**Pn**	**16 06 54.9**	**-0.5**
JISG				*e*S	**Sn**	**16 07 25.3**	**+0.2**

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*JMA **24** 16:11:07.2±0.2, 24°.0N±0°.6×12°2E±°, h5^{km}±2^{km}, TAIWAN REGION*

*TAP **24** 16:11:08.9, 24°.14N×121°.70E, h9^{km}, ML2.9, B*

ISC 24 16:11:08.7±0.8**, 24°.13N**±0°.01×**121°.71E**±0°.02**, h10**^{km}±5^{km}**,
n96, σ0^{s}.66**/169**, 1C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=285	**0.09**	**291**	P	**Pg**	**16 11 11.4**	**+0.2**
ETL	baz=285			*i* S	**Sg**	**16 11 12.9**	**0.0**
TWD	**Chiawan** baz=237	**0.12**	**246**	⇑*i*P	**Pg**	**16 11 11.6**	**+0.1**
TWD	baz=237			*i* S	**Sg**	**16 11 13.6**	**+0.1**
NACB	**Ninganchiao** baz=289	**0.12**	**293**	⇓P	**Pg**	**16 11 11.6**	**+0.1**
NACB	baz=289			S	**Sg**	**16 11 13.4**	**-0.1**
HWA	**Hwalien** baz=216	**0.18**	**214**	*i* P	**Pg**	**16 11 13.4**	**+0.9**
EHP	**Heping Village** baz=14	**0.18**	**8**	P	**Pg**	**16 11 13.1**	**+0.4**
EHP	baz=14			S	**Sg**	**16 11 16.0**	**+0.7**
ETLH	**Xiulin Townshi** baz=289	**0.23**	**290**	P	**Pg**	**16 11 13.5**	**+0.1**
ETLH	baz=289			S	**Sg**	**16 11 16.6**	**0.0**
ETM	**Tongmen** baz=231	**0.26**	**231**	P	**Pg**	**16 11 14.1**	**+0.1**
TEYL	**Yanliau Villag** baz=215	**0.28**	**202**	P	**Pb**	**16 11 15.3**	**-0.5**
ENA	**Nanau** baz=8.0	**0.30**	**5**	⇓*i*P	**Pg**	**16 11 14.9**	**+0.2**
ENA	baz=8.0			*i* S	**Sg**	**16 11 19.2**	**+0.4**
EWUT	**Wuta** baz=12	**0.32**	**10**	P	**Pg**	**16 11 15.5**	**+0.4**
ESL	**Shilin** baz=218	**0.41**	**220**	*i* P	**Pg**	**16 11 16.7**	**0.0**
ESL	baz=218			*i* S	**Sg**	**16 11 22.7**	**+0.7**
WHF	**Hehuan Shan** baz=271	**0.41**	**273**	*i* P	**Pg**	**16 11 16.9**	**-0.1**
WHF	baz=271			*i* S	**Sg**	**16 11 22.5**	**+0.1**
NNSB	**Datong** baz=315	**0.43**	**315**	⇓P	**Pg**	**16 11 17.3**	**+0.2**
NNSB	baz=315			S	**Sg**	**16 11 23.1**	**+0.3**
NNS	**Nan Shan** baz=316	**0.44**	**315**	⇓*i*P	**Pg**	**16 11 17.6**	**+0.1**
NNS	baz=316			*i* S	**Sg**	**16 11 23.5**	**+0.2**
LATG	**Datong** baz=337	**0.44**	**337**	⇓P	**Pg**	**16 11 17.5**	**+0.1**
LATG	baz=337			S	**Sb**	**16 11 24.1**	**-1.4**
FUSS	**Fushou** baz=285	**0.45**	**286**	*i* P	**Pg**	**16 11 17.9**	**+0.3**
FUSS	baz=285			S	**Sg**	**16 11 23.9**	**+0.4**
TWC	**Suao** baz=10.0	**0.49**	**14**	*i* P	**Pg**	**16 11 18.8**	**+0.4**
TWC	baz=10.0			*i* S	**Sg**	**16 11 25.5**	**+0.6**
CHGB	**Renai** baz=252	**0.50**	**262**	P	**Pg**	**16 11 18.8**	**+0.3**
CHGB	baz=252			S	**Sg**	**16 11 25.1**	**0.0**
NDS	**Dongshan** baz=360	**0.50**	**0**	P	**Pg**	**16 11 19.0**	**+0.4**
NDS	baz=360			*e*S	**Sg**	**16 11 25.1**	**-0.1**
OWD	**Renai** baz=249	**0.52**	**251**	*i* P	**Pg**	**16 11 19.1**	**+0.2**
OWD	baz=249			S	**Sg**	**16 11 26.2**	**+0.4**
TDCB	**Techi** baz=283	**0.52**	**284**	P	**Pb**	**16 11 19.3**	**-0.8**
TDCB	baz=283			*e*S	**Sg**	**16 11 26.1**	**+0.2**
EGFH	**Guangfu** baz=219	**0.53**	**210**	P	**Pb**	**16 11 19.8**	**-0.3**
EGFH	baz=219			S	**Sb**	**16 11 27.9**	**+0.1**
ENTT	**Nioudou** baz=346	**0.53**	**345**	⇓*i*P	**Pg**	**16 11 19.4**	**+0.4**
ENTT	baz=346			*i* S	**Sg**	**16 11 26.6**	**+0.6**
WUSB	**Renai** baz=247	**0.56**	**256**	⇓P	**Pg**	**16 11 20.0**	**+0.3**
WUSB	baz=247			S	**Sg**	**16 11 27.0**	**-0.1**
TWE	**Neicheng** baz=357	**0.59**	**356**	⇓*i*P	**Pb**	**16 11 20.7**	**-0.6**
TWE	baz=357			S	**Sb**	**16 11 28.7**	**-1.0**
YHNB	**Yeheng** baz=330	**0.62**	**330**	⇓P	**Pb**	**16 11 21.1**	**-0.7**
YHNB	baz=330			*e*S	**Sg**	**16 11 29.3**	**+0.3**
NSK	**Sanguang** baz=330	**0.64**	**329**	*i* P	**Pb**	**16 11 21.4**	**-0.7**
NSK	baz=330			*i* S	**Sb**	**16 11 30.4**	**-0.6**
ILA	**Ilan** baz=3.0	**0.64**	**3**	*i* P	**Pb**	**16 11 21.5**	**-0.5**
ILA	baz=3.0			*i* S	**Sg**	**16 11 29.4**	**0.0**
FUSB	**Fushanzhiwuyua** baz=349	**0.64**	**350**	⇓P	**Pb**	**16 11 21.5**	**-0.6**
FUSB	baz=349			S	**Sg**	**16 11 29.9**	**+0.4**
VWDT	**VWDT** baz=234	**0.64**	**235**	P	**Pb**	**16 11 21.7**	**-0.4**
VWDT	baz=234			*e*S	**Sg**	**16 11 30.1**	**+0.5**
NWLT	**Wulai** baz=330	**0.68**	**343**	*i* P	**Pg**	**16 11 22.0**	**+0.2**
NWLT	baz=330			*i* S	**Sb**	**16 11 31.3**	**-0.8**
HGSD	**Ruisui** baz=191	**0.69**	**203**	*e*P	**Pn**	**16 11 23.8**	**-0.8**
HGSD	baz=191			*e*S	**Sb**	**16 11 33.6**	**+1.2**
EHY	**Hungye** baz=217	**0.72**	**210**	*i* P	**Pg**	**16 11 22.6**	**0.0**
EHY	baz=217			S	**Sb**	**16 11 33.5**	**+0.2**
WHP	**Taichung City** baz=282	**0.72**	**282**	P	**Pb**	**16 11 23.0**	**-0.5**
WHP	baz=282			S	**Sb**	**16 11 32.6**	**-0.8**
NTC	**Toucheng** baz=8.0	**0.73**	**8**	*e*P	**Pg**	**16 11 23.1**	**+0.2**
NTC	baz=8.0			*e*S	**Sb**	**16 11 34.2**	**+0.5**
WCS	**Beigang Elemen** baz=255	**0.74**	**265**	P	**Pb**	**16 11 23.7**	**0.0**
WCS	baz=255			S	**Sb**	**16 11 33.1**	**-0.7**
NFF	**Wufeng Townshi** baz=313	**0.74**	**313**	P	**Pb**	**16 11 23.5**	**-0.3**
NFF	baz=313			*e*S	**Sb**	**16 11 33.8**	**-0.2**
EGS	baz=24	**0.74**	**15**	P	**Pb**	**16 11 23.7**	**-0.1**
EGS	baz=24			*e*S	**Sg**	**16 11 33.1**	**+0.3**
SSLB	**Suanglung** baz=253	**0.77**	**244**	P	**Pg**	**16 11 23.6**	**0.0**
SSLB	baz=253			S	**Sg**	**16 11 33.4**	**-0.4**
SMLT	**Sun Moon Lake** baz=251	**0.78**	**252**	*i* P	**Pb**	**16 11 24.3**	**-0.3**
SMLT	baz=251			*i* S	**Sg**	**16 11 33.7**	**-0.4**
TYC	**Yuchr** baz=244	**0.81**	**254**	P	**Pb**	**16 11 25.2**	**+0.1**
TYC	baz=244			*i* S	**Sg**	**16 11 34.5**	**-0.6**
LIOB	**Emei** baz=309	**0.82**	**309**	*i* P	**Pb**	**16 11 25.2**	**0.0**
LIOB	baz=309			*i* S	**Sb**	**16 11 36.4**	**+0.1**
NSTT	**Nanjuang** baz=308	**0.82**	**308**	*i* P	**Pb**	**16 11 25.2**	**0.0**
NSTT	baz=308			S	**Sb**	**16 11 36.0**	**-0.3**
YULB	**Yu-li** baz=220	**0.83**	**208**	*e*P	**Pg**	**16 11 24.3**	**-0.3**
YULB	baz=220			*e*S	**Sg**	**16 11 35.4**	**0.0**
TIPB	**Shuangxi** baz=357	**0.85**	**7**	P	**Pg**	**16 11 25.2**	**+0.1**
TIPB	baz=357			S	**Sg**	**16 11 36.1**	**0.0**
NHDH	**Xindian Distri** baz=339	**0.85**	**348**	*e*P	**Pb**	**16 11 25.8**	**+0.2**
NHDH	baz=339			S	**Sb**	**16 11 37.3**	**+0.2**
EYUL	**Yuli** baz=221	**0.86**	**205**	*e*P	**Pb**	**16 11 25.8**	**+0.1**
TWB1	**Santiao Chiao** baz=7.0	**0.91**	**16**	*i* P	**Pb**	**16 11 26.9**	**+0.2**
TWB1	baz=7.0			S	**Sb**	**16 11 38.6**	**-0.3**
NSY	**Sanyi** baz=288	**0.92**	**288**	*e*P	**Pn**	**16 11 27.4**	**-0.4**
NSY	baz=288			*e*S	**Sn**	**16 11 40.1**	**-1.0**
TAP	**Taipei** baz=338	**0.93**	**348**	P	**Pb**	**16 11 26.9**	**0.0**
TAP	baz=338			S	**Sb**	**16 11 39.1**	**-0.2**
NMLH	**Miaoli** baz=295	**0.94**	**296**	*e*P	**Pn**	**16 11 29.1**	**+1.1**
NMLH	baz=295			*e*S	**Sn**	**16 11 41.0**	**-0.5**
SBCB	**Hsinchu** baz=314	**0.94**	**315**	*e*P	**Pb**	**16 11 27.1**	**-0.1**
NWF	**Wu-fen Shan** baz=353	**0.94**	**4**	P	**Pn**	**16 11 27.8**	**-0.4**
NWF	baz=353			S	**Sb**	**16 11 39.8**	**-0.1**
TCU	**Taichung** baz=271	**0.95**	**271**	P	**Pn**	**16 11 29.0**	**+0.8**
TCU	baz=271			S	**Sn**	**16 11 41.3**	**-0.5**
WJS	**Zhushan** baz=251	**0.95**	**252**	*e*P	**Pn**	**16 11 28.0**	**-0.2**
WJS	baz=251			*e*S	**Sn**	**16 11 40.8**	**-1.2**
HSN	**Hsinchu** baz=317	**0.95**	**315**	*e*P	**Pn**	**16 11 28.9**	**+0.6**
HSN	baz=317			S	**Sb**	**16 11 40.3**	**+0.2**
NCUH	**Zhongli** baz=330	**0.97**	**330**	*e*P	**Pn**	**16 11 29.0**	**+0.6**
NCUH	baz=330			*e*S	**Sn**	**16 11 42.8**	**+0.5**
SXI1	**Grass Mountain** baz=355	**0.97**	**9**	P	**Pb**	**16 11 27.9**	**+0.1**
SXI1	baz=355			S	**Sn**	**16 11 41.3**	**-1.3**
WNT	**Mingjian** baz=250	**0.97**	**255**	P	**Pn**	**16 11 28.6**	**0.0**
WNT	baz=250			*e*S	**Sn**	**16 11 41.3**	**-1.2**
FULB	**Fuli** baz=221	**1.00**	**203**	P	**Pg**	**16 11 27.9**	**-0.1**
FULB	baz=221			S	**Sn**	**16 11 42.7**	**-0.5**
WDJ	**Dajia District** baz=282	**1.00**	**283**	*e*P	**Pn**	**16 11 29.4**	**+0.4**
WDJ	baz=282			*e*S	**Sn**	**16 11 43.2**	**0.0**
TWS1	**Kuangyinshan** baz=344	**1.01**	**344**	P	**Pn**	**16 11 29.4**	**+0.4**
TWS1	baz=344			S	**Sn**	**16 11 42.1**	**-1.1**
YM01	**YM01** baz=1.0	**1.02**	**353**	P	**Pn**	**16 11 28.9**	**-0.3**
ALS	**Alishan** baz=234	**1.03**	**234**	P	**Pb**	**16 11 29.0**	**0.0**
ALS	baz=234			*i* S	**Sn**	**16 11 43.5**	**-0.9**
WCHH	**Zhanghua** baz=267	**1.06**	**268**	*e*S	**Sn**	**16 11 44.7**	**+0.2**
NTST	**Danshui** baz=355	**1.06**	**347**	*e*P	**Pn**	**16 11 30.2**	**+0.5**
NTST	baz=355			*e*S	**Sn**	**16 11 44.2**	**-0.4**
CHN5	**Tsauling** baz=242	**1.09**	**241**	P	**Pn**	**16 11 30.4**	**+0.2**
CHN5	baz=242			S	**Sn**	**16 11 46.8**	**+1.4**
ELDTW	**Lidau** baz=226	**1.13**	**215**	*e*P	**Pb**	**16 11 29.0**	**-1.5**
ELDTW	baz=226			*e*S	**Sn**	**16 11 46.4**	**-0.2**
TWY	**Chenhua** baz=340	**1.15**	**355**	P	**Pg**	**16 11 31.4**	**+0.6**

WDLH	Douliu	1.16	248	eP	Pg	16 11 31.7	+0.7
	baz=248						
WDLH				eS	Sn	16 11 47.9	+0.8
	baz=248						
EDH	Donghe	1.21	198	eP	Pn	16 11 30.2	-1.6
	baz=187						
EDH				eS	Sn	16 11 48.1	-0.1
	baz=187						
YOJ	Yonaguni jima	1.23	74	eP	Pg	16 11 32.8	+0.5
	baz=68						
WRL	Guolierlin Hig	1.24	260	eP	Pg	16 11 33.1	+0.5
	baz=260						
WRL				eS	Sg	16 11 50.9	+2.1
	baz=260						
CHN2	Minshiung	1.28	243	eS	Sg	16 11 51.7	+1.7
	baz=243						
STYH	Taoyuan	1.28	222	eP	Pb	16 11 33.0	-0.1
	baz=224						
STYH				eS	Sg	16 11 50.3	+0.2
	baz=224						
WTK	Tuku	1.29	250	eP	Pg	16 11 34.6	+1.1
	baz=252						
TPUB	Ta-pu	1.29	231	eP	Pb	16 11 33.1	-0.1
	baz=220						
TPUB				eS	Sg	16 11 51.4	+1.1
	baz=220						
LONT	Longtian	1.33	204	eP	Pn	16 11 31.6	-1.8
	baz=208						
LONT				eS	Sb	16 11 50.3	-0.6
	baz=208						
WTP	Ta-pu	1.34	229	P	Pg	16 11 34.3	-0.1
	baz=230						
WTP				eS	Sg	16 11 53.7	+1.9
	baz=230						
TWK	Hsinying	1.41	233	eP	Pg	16 11 35.5	-0.3
	baz=234						
TWK				eS	Sg	16 11 56.6	+2.4
	baz=234						
TWG	Pinlang	1.43	205	eP	Pn	16 11 34.7	-0.1
	baz=210						
TWGBT	Beinan	1.43	204	eP	Pn	16 11 34.2	-0.6
	baz=210						
SNST	Tainan City	1.44	231	eP	Pg	16 11 36.8	+0.5
	baz=232						
SNST				eS	Sg	16 11 56.3	+1.4
	baz=232						
CHN1	Nanshi	1.44	229	eP	Pg	16 11 36.2	-0.1
	baz=221						
CHN1				S	Sg	16 11 55.9	+0.9
	baz=221						
SGST	Jiashian	1.47	225	eS	Sg	16 11 57.7	+1.7
	baz=226						
WSL	Shuilin Townsh	1.49	246	eP	Pb	16 11 36.4	-0.1
	baz=248						
SCST	Cishan	1.67	222	eP	Pb	16 11 39.9	+0.3
	baz=227						
ECL	Taimali	1.68	205	eP	Pn	16 11 37.3	-0.9
	baz=196						
SSD	Sandimen	1.70	216	eP	Pb	16 11 39.2	-0.8
	baz=221						
TSMG	Majia	1.72	215	eP	Pb	16 11 39.6	-0.9
	baz=231						
MASBT	Mashibuluo	1.81	214	eP	Pb	16 11 42.1	+0.2
	baz=220						
IRIF	Iriomote-Funau	1.85	83	eP	Pn	16 11 41.1	+0.5
IRIF				eS	Sb	16 12 05.7	-0.3
EAST	Anshuo	1.91	205	P	Pn	16 11 41.3	-0.2
	baz=197						
TAWH	Dawu Township	1.94	203	eP	Pn	16 11 42.1	+0.4
	baz=196						
JKRS	Kuro-shima	2.10	87	P	Pn	16 11 44.8	+0.8
JKRS				S	Sb	16 12 12.2	-0.9
JIJ	Ishigaki jima	2.23	83	eP	Pn	16 11 45.7	-0.1
JIJ				eS	Sn	16 12 13.7	+0.2

TAP 24 16:11:13.2, 24°.16N×121°.66E, h16km±1km, ML3.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.04	276	P	Pg	16 11 16.6	+0.4
	baz=274						
ETL				S	Sg	16 11 18.7	+0.6
	baz=274						
NACB	Ninganchiao	0.07	287	P	Pg	16 11 16.5	+0.2
	baz=286						
NACB				S	Sg	16 11 19.2	+1.0
	baz=286						
TWD	Chiawan	0.10	219	P	Pg	16 11 17.0	+0.4
	baz=215						
TWD				S	Sg	16 11 19.5	+0.8
	baz=215						
EHP	Heping Village	0.17	25	eP	Pb	16 11 18.4	+0.3
	baz=27						
ETLH	Xiulin Townshi	0.17	287	eP	Pb	16 11 18.4	+0.2
	baz=287						
ETM	Tongmen	0.24	220	eP	Pg	16 11 18.8	+0.1
	baz=219						
ENA	Nanau	0.28	15	eP	Pb	16 11 20.0	0.0
	baz=16						
ENA				i S	Sb	16 11 24.9	+0.4
	baz=16						
EWUT	Wuta	0.31	20	eP	Pb	16 11 20.2	-0.2
	baz=20						

VAO ***24*** *16:35:16.3±0.4, 3°.08S×78°.56W, h10km, mb4.9*

GCMT ***24*** *16:35:19.5±0.6, 2°.90S±0°.03×79°.31W±0°.04, h109km±4km, MW4.9/63, Moment Tensor Solution. s26,c28; s63,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.98±.09; $M_{\theta\theta}$-0.74±.12; $M_{\phi\phi}$2.72±.15; $M_{r\theta}$0.32±.06; $M_{\theta\phi}$-1.10±.11; $M_{\phi r}$-0.63±.12; Best double couple: $M_0$2.61200×10^{16} NP1:ϕ_s172.00000°, δ38.00000°, λ-78.00000°. NP2: ϕ_s337.00000°, δ53.00000°, λ-99.00000°. Principal axes: T 3.1340, Plg8.0000°, Azm74.0000°; N -1.0430, Plg7.0000°, Azm343.0000°; P -2.0900, Plg80.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *16:35:21.4±1.6, 2°.80S±0°.06×78°.8W±0°.1, h91km±5km, mb4.7/303 Error ellipse: s-maj=14.8km s-min=8.2km az=81.0*

IDC ***24*** *16:35:21.2±0.6, 2°.82S×78°.85W, h95km±5km, mb4.1/17, mbtmp4.5/21, MS3.5/14, Error ellipse: s-maj=16.6km s-min=8.4km az=72.0*

IGQ ***24*** *16:35:22±0.3, 3°S±2°×7°9W±°, h70km*

ISC 24 16:35:20.6±0.4**, 2°.85S**±0°.04**×78°.97W**±0°.04**, h92**km±4km**, h91km:pP-P, n625, σ0s.99**/644**, mb4.7**/153**, 1C-1D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACUE	Ecuador-Cuenca	0.06	167	P	Pn	16 35 33.0	-0.9
BOSC	San Juan Bosco	0.56	122	P	Pn	16 35 37.0	+0.8
BOSC				S	Sn	16 35 49.0	+1.2
ACH2	Ecuador-Machal	0.93	244	P	Pn	16 35 39.0	-0.7
ACH2				S	Sn	16 35 53.0	-0.9
AMIL	Milagro (Trans	0.95	319	P	Pn	16 35 38.0	-1.8
AMIL				S	Sn	16 35 51.0	-3.2
SANGA	Volcan Sangay	1.00	37	P	Pn	16 35 41.0	+0.1
SANGA				S	Sn	16 35 56.0	0.0
ACH1	Ecuador-Univer	1.03	245	P	Pn	16 35 40.0	-0.8
ISPG	Isla Puna-Puer	1.20	265	P	Pn	16 35 43.0	+0.2
LOJ1	Universidad t	1.28	152	P	Pn	16 35 42.0	-2.0
LOJ1				S	Sn	16 35 59.0	-2.5
ARNL	Arenillas	1.29	238	P	Pn	16 35 43.0	-0.9
TAMH	Tambohuasha Ch	1.32	8	P	Pn	16 35 45.0	+0.3
CHSH	Refugio Sur-Vo	1.35	4	P	Pn	16 35 45.0	-0.3
IGUA	Igualata	1.40	14	P	Pn	16 35 46.0	+0.3
PORT	Chimborazo Vol	1.40	8	P	Pn	16 35 46.0	+0.2
BMAS	Trigal station	1.43	20	P	Pn	16 35 46.0	0.0
ARRY	Arrayan	1.43	21	P	Pn	16 35 46.0	0.0
GONZ	Gonzanam	1.44	197	P	Pn	16 35 47.0	+0.9
BPAT	Tungurahua Vol	1.45	22	P	Pn	16 35 46.0	-0.3
BIL2	Estacion Bilba	1.47	19	P	Pn	16 35 47.0	+0.6
BBIL	Ulba Tungurahu	1.48	19	P	Pn	16 35 47.0	+0.5
RETU	Refugio	1.49	21	P	Pn	16 35 47.0	+0.1
JUI6	Juive	1.51	19	P	Pn	16 35 47.0	+0.1
BRUN	Tungurahua Vol	1.53	21	P	Pn	16 35 47.0	-0.2
PUYO	Puyo, Santa Ro	1.65	35	P	Pn	16 35 49.0	+0.5
ZUMB	Zumba	2.00	185	P	Pn	16 35 54.0	+0.9
BRRN	Barrancas-Volc	2.12	14	P	Pn	16 35 55.0	+0.1
VCES	Cotopaxi	2.12	16	P	Pn	16 35 55.0	0.0
SLOR	San Lorenzo -	2.16	13	P	Pn	16 35 56.0	+0.5
BMOR	Cotopaxi Volca	2.17	14	P	Pn	16 35 56.0	+0.3
PAST	Pastocalle	2.17	9	P	Pn	16 35 57.0	+1.4
CAMI	Rancho Maria	2.21	12	P	Pn	16 35 57.0	+0.8
TAMB	Tambo	2.23	16	P	Pn	16 35 57.0	+0.6
BREF	Cotopaxi Volca	2.23	14	P	Pn	16 35 57.0	+0.4
BTAM	Cotopaxi Volca	2.24	15	P	Pn	16 35 57.0	+0.4
NAS2	Nasa	2.25	13	P	Pn	16 35 58.0	+1.3
VC1	Cotopaxi 1	2.27	15	P	Pn	16 35 57.0	0.0
ANTG	Antisana-Guama	2.44	17	P	Pn	16 36 00.0	+0.7
ANTS	Antisana-Sarah	2.47	19	P	Pn	16 36 00.0	+0.3
ANTI	Antisana	2.52	19	P	Pn	16 36 01.0	+0.6
ISPT	Isla de la Pla	2.63	307	P	Pn	16 36 00.0	-1.3
JUA2	San Juan 2	2.65	8	P	Pn	16 36 02.0	0.0
GGPC	Guagua Pichinc	2.68	8	P	Pn	16 36 03.0	+0.5
MAG1	Magdalena	2.88	344	P	Pn	16 36 03.0	-1.6
EC18	SOUTHEAST OF B	2.89	335	P	Pn	16 36 02.0	-2.7
OTAV	Otavalo	3.11	10	Pn	Pn	16 36 07.8	-0.4
OTAV	Otavalo	3.11	10	eP	Pn	16 36 08.6	+0.4
OTAV	Otavalo	3.11	10	eP	Pn	16 36 09.0	+0.8
CMBC	Cumbal	3.94	17	eP	Pn	16 36 19.2	-0.1
ATAH	Atahualpa	4.29	172	P	Pn	16 36 24.4	+0.3
	32nm,0.4s,baz=19,slow=12,SNR=23						
ATAH				S	Sn	16 37 11.9	-1.3
	165nm,0.6s,baz=88,slow=1.1,SNR=6.5						
GCUF	Volcan Galeras	4.37	22	eP	Pn	16 36 26.4	+1.3
TUMC	Tumaco	4.65	3	Pn	Pn	16 36 27.7	-0.9
CRUC	La Cruz	4.83	25	eP	Pn	16 36 31.4	+0.1
SOTA	Rioblanco	5.49	26	eP	Pn	16 36 41.4	+1.0
CFLOR	Florencia	5.52	37	eP	Pn	16 36 39.0	-1.3
FLOC	Florencia	5.52	37	eP	Pn	16 36 39.0	-1.3
PCON	Cinco Dias	5.75	27⇑	eP	Pn	16 36 45.2	+1.1
GR1C	Gorgona, Isla	5.87	8	eP	Pn	16 36 42.9	-2.3
GARC	Garzon, Huila	6.10	35	eP	Pn	16 36 47.5	-0.9
MARP	Paez Belalcaza	6.41	28	eP	Pn	16 36 53.3	+0.5
BETC	Betania	6.53	33	eP	Pn	16 36 53.8	-0.4
MACC	Macarena, Meta	7.13	46	eP	Pn	16 37 00.3	-2.1
MACC	Macarena, Meta	7.13	46	eP	Pn	16 37 00.5	-1.9
YOTC	Yotoco, Valle	7.28	21	eP	Pn	16 37 07.1	+2.6
ORTC	Ortega, Tolima	7.68	29	eP	Pn	16 37 07.8	-2.1
ANIL	Santa Ana	8.12	26	eP	Pn	16 37 14.4	-1.7
PLMC	San Jos del P	8.16	19	eP	Pn	16 37 18.1	+1.6
VILC	Villavicencio,	8.70	37	eP	Pn	16 37 24.0	+0.1
ROSC	El Rosal	8.94	31	P	Pn	16 37 33.3	+5.9
	18nm,0.5s,baz=93,slow=22,SNR=4.1						
ROSC				LR	LR	16 41 25.0	
	comp=Z,604nm,20.2s,baz=231,slow=41						
CHIC	Chingaza	9.09	35	eP	Pn	16 37 28.7	-0.7
CBOC	Ciudad Bolivar	9.15	19	eP	Pn	16 37 31.8	+1.8
NORC	Norcasia	9.31	26	eP	Pn	16 37 31.7	-0.4
NNA	Nana	9.32	167	P	Pn	16 37 32.1	0.0
	70nm,0.4s,baz=346,slow=13,SNR=27						
NNA				S	Sn	16 39 09.5	-5.8
	52nm,0.4s,baz=254,slow=14,SNR=2.8						
NNA	Nana	9.32	167		Pn	16 37 32.0	-0.2
HELC	Santa Helena	9.62	21	eP	Pn	16 37 45.8	+9.2
PTAC	Punta Ardita,	10.00	7	eP	Pn	16 37 40.5	-0.9
DBBC	Dabeiba	10.19	16	eP	Pn	16 37 44.1	0.0
PTBC	PUERTO BERRIO,	10.36	26	eP	Pn	16 37 47.4	+1.0
RUSC	La Rusia	10.49	34	eP	Pn	16 37 49.2	+0.6
BARC	Barichara	11.02	32	eP	Pn	16 37 54.3	-1.3
ZARC	Zaragoza, Cauc	11.07	22		Pn	16 37 55.1	-0.9
ZARC	Zaragoza, Cauc	11.07	22	eP	Pn	16 37 56.2	+0.2
UREC	San Jos de Ur	11.08	18	eP	Pn	16 37 57.1	+0.9
PAMC	Pamplona, Colo	11.90	32	eP	Pn	16 38 11.4	+3.6
SJCC	San Jacinto, C	13.22	17	Pn	Pn	16 38 23.9	-1.0
SJCC	San Jacinto, C	13.22	17	eP	Pn	16 38 24.1	-0.8
CVTR	Volcan Turrial	13.65	340	Pn	Pn	16 38 31.1	+0.3
SDV	Santo Domingo	14.32	35	P	Pn	16 38 38.5	-0.8
	9.0nm,0.4s,baz=245,slow=12,SNR=2.2						
SDV				LR	LR	16 45 17.9	
	comp=Z,151nm,18.9s,baz=208,slow=42						
SDV	Santo Domingo	14.32	35	Pn	Pn	16 38 37.7	-1.6
SDV	Santo Domingo	14.32	35	eP	Pn	16 38 38.8	-0.5
JTS	Las Juntas de	14.35	336	P	P	16 38 42.8	-1.1
	5.9nm,0.7s,baz=204,slow=10,SNR=5.2						
ETMB	Extrema	14.44	119	eP	Pn	16 38 35.0	-5.7
ORTG	Ortega, Santa	14.63	334	Pn	Pn	16 38 45.8	+2.6
HZTE	Horizontes, Gu	15.01	334	Pn	Pn	16 38 49.7	+1.8
HZTE				IAmb	IAmb	16 39 09.2	
	comp=Z,55nm,1.3s						
CRJC	Cerrejon, Guaj	15.06	24	eP	Pn	16 38 46.4	-2.3
BAUV	El Baul	16.00	43		Pn	16 38 57.9	-2.6
SAML	Samuel	16.82	112	P	Pn	16 39 06.3	-4.4
LPAZ	La Paz	17.09	142	P	Pn	16 39 14.6	+0.1
	comp=Z,5.7nm,0.8s,baz=325,slow=8.2,SNR=15						
LPAZ	La Paz	17.09	142		Pn	16 39 13.1	-1.3
CRIN	San Cristobal	17.41	333	P	Pn	16 39 18.9	+1.0
CRIN				IAmb	IAmb	16 39 38.6	
	comp=Z,43nm,0.9s						
PB12	IPOC Station P	17.80	152	P	P	16 39 22.1	-0.1
PB16	IPOC Station P	17.96	150	P	Pn	16 39 25.4	+0.3
PB16				IAmb	IAmb	16 39 29.4	
	comp=Z,31nm,0.8s						
MACA	Manacapuru-AM	18.27	91	eP	P	16 39 24.2	-3.0
BIRV	Birongo	18.31	44	P	P	16 39 26.1	-1.6
BIRV				IAmb	IAmb	16 39 32.8	
	comp=Z,29nm,0.8s						
PB11	IPOC Station P	19.11	152	P	P	16 39 35.9	-0.6
BOAV	Boa Vista	19.16	74	eP	P	16 39 36.1	-1.0
TA01	Diego Aracena	19.58	155	P	P	16 39 42.4	+0.9
PB08	IPOC Station P	19.67	152	P	P	16 39 43.1	+0.2
MTO3	Montecristo	20.00	329	P	P	16 39 48.2	+1.9
PB07	IPOC Station P	20.74	156	P	P	16 39 55.4	+1.2
PB09	IPOC Station P	21.07	154	P	P	16 39 58.7	+0.9
PB09				IAmb	IAmb	16 40 03.3	
	comp=Z,44nm,1.1s						
PB04	IPOC Station P	21.17	157	P	P	16 39 59.9	+1.0
PB04				IAmb	IAmb	16 40 04.2	
	comp=Z,33nm,0.9s						
LVC	Limon Verde	21.93	154	P	P	16 40 09.0	+1.9
	comp=Z,29nm,0.8s,baz=320,slow=6.1,SNR=22						
LVC				LR	LR	16 49 44.0	
	comp=Z,95nm,19.3s,baz=302,slow=39						
	comp=Z,29nm,0.8s						
LVC	Limon Verde	21.93	154	P	P	16 40 07.2	+0.1
LVC				IAmb	IAmb	16 40 12.4	
	comp=Z,64nm,1.2s						
PB10	IPOC Station P	22.09	159	P	P	16 40 09.8	+1.3
PB10				IAmb	IAmb	16 40 12.1	
	comp=Z,24nm,0.9s						
GTBY	Guantanamo Bay	22.95	9	P	P	16 40 17.2	-0.2
GTBY				IAmb	IAmb	16 40 20.5	
	comp=Z,29nm,1.1s						
TOSP	Speyside	23.11	52	P	P	16 40 17.1	-1.8
PB14	IPOC Station P	23.17	160	P	P	16 40 20.2	+0.4
PTLB	Pontes e Lacer	23.20	124	eP	P	16 40 20.2	+0.3
ITTB	Itaituba	23.24	94	eP	P	16 40 19.4	-0.8
DR12	Loma Pena Alta	23.49	23	P	P	16 40 21.4	-1.1
PDRB	Porto dos Gac	23.70	113	eP	P	16 40 25.3	+0.9
CRPR	Cabo Rojo, PR	23.80	29	P	P	16 40 23.8	-1.4
MLPR	Magueyes Islan	23.80	29	P	P	16 40 25.2	+0.1
MLPR				IAmb	IAmb	16 40 49.1	
	comp=Z,39nm,1.1s						
GO02	Mina Guanaco	23.95	159	P	P	16 40 27.5	+0.6
GO02				IAmb	IAmb	16 40 30.6	
	comp=Z,31nm,1.0s						
OBIP	Obispado Ponce	24.08	30	P	P	16 40 26.6	-1.1
OBIP				IAmb	IAmb	16 40 52.2	
	comp=Z,58nm,1.2s						
AOPR	Arecibo Observ	24.26	29	P	P	16 40 28.7	-0.7
AOPR				IAmb	IAmb	16 40 31.2	
	comp=Z,28nm,0.6s						
CLDB	Colider	24.33	110	eP	P	16 40 30.1	+0.1
PDPR	Patillas Dam,	24.35	31	P	P	16 40 29.3	-0.9
PDPR				IAmb	IAmb	16 40 30.5	
	comp=Z,31nm,0.7s						
SJG	San Juan	24.36	31	P	P	16 40 29.3	-1.0
	comp=Z,21nm,0.5s,baz=192,slow=8.1,SNR=10.0						
SJG				LR	LR	16 51 25.6	
	comp=Z,51nm,21.1s,baz=162,slow=40						
	comp=Z,21nm,0.5s						
SJG	San Juan	24.36	31	P	P	16 40 29.5	-0.8
SJG				IAmb	IAmb	16 40 30.3	
	comp=Z,32nm,0.8s						
AC01	Pan de Azucar	24.52	162	P	P	16 40 32.4	+0.7
HUMP	Col San Antoni	24.55	31	P	P	16 40 31.2	-0.7
HUMP				IAmb	IAmb	16 40 34.9	
	comp=Z,29nm,1.1s						
GCPR	Guaynabo City	24.56	31	P	P	16 40 31.1	-1.0
GCPR				IAmb	IAmb	16 40 57.2	
	comp=Z,35nm,1.1s						
CBYP	Canovanas	24.65	31	P	P	16 40 32.5	-0.5
MTP	Monte Pirata	24.66	32	P	P	16 40 31.9	-1.1
MTP				IAmb	IAmb	16 40 58.5	
	comp=Z,35nm,1.2s						
MALB	Monte Alegre	24.70	88	eP	P	16 40 33.1	-0.4
MPOM	Morne Pois Mar	24.85	46	P	P	16 40 32.0	-2.8
CUPR	Culebra, Puert	24.98	32	P	P	16 40 34.4	-1.5
CMIG	Matias Romero	25.29	322	P	P	16 40 39.2	+0.5
	comp=Z,5.5nm,1.1s,baz=121,slow=5.5,SNR=3.5						
	comp=Z,5.5nm,1.1s						
AC02	Maricunga	25.64	159	P	P	16 40 42.9	+0.5
SALV	Santo Antonio	26.33	121	eP	P	16 40 49.0	+0.8
ANWB	Willy Bob	26.52	39	P	P	16 40 48.0	-1.8
MCPB	Macapa, AP	27.02	85	eP	P	16 40 55.4	+1.0
MDP	Montagnes des	27.46	73	P	P	16 40 57.5	-0.9
	comp=Z,13nm,0.6s,baz=242,slow=10,SNR=10.0						
MDP				LR	LR	16 52 36.9	
	comp=Z,108nm,18.1s,baz=228,slow=38						
	comp=Z,13nm,0.6s						
GO04	Tololo Observa	28.25	165	P	P	16 41 06.5	+1.0
CO06	Fray Jorge	28.53	167	P	P	16 41 08.9	+1.2
SNDB	Serra Nova Dou	28.87	110	eP	P	16 41 11.4	+0.5
CO02	Combarbal	29.19	166	P	P	16 41 14.5	+0.9
CO02				IAmb	IAmb	16 41 16.2	
	comp=Z,16nm,1.2s						
VA06	Catapilco	30.42	167	P	P	16 41 25.7	+1.4
VA06				IAmb	IAmb	16 41 26.7	
	comp=Z,11nm,0.9s						
VA03	San Esteban	30.79	166	P	P	16 41 29.4	+1.7
VA03				IAmb	IAmb	16 41 30.1	
	comp=Z,12nm,0.9s						
ROC1	El Roble	30.88	167	P	P	16 41 30.1	+1.3
ROC1				IAmb	IAmb	16 41 31.0	
	comp=Z,14nm,0.7s						
PEL	Peldehue	31.12	166	P	P	16 41 32.0	+1.4
PEL				IAmb	IAmb	16 41 32.7	
	comp=Z,12nm,1.1s						
MT02	Curacav	31.12	167	P	P	16 41 31.8	+1.2
CPUP	Villa Florida	31.24	140	P	P	16 41 31.1	-0.6
	comp=Z,2.6nm,0.9s,baz=335,slow=13,SNR=3.2						
	comp=Z,2.6nm,0.9s						
CPUP	Villa Florida	31.24	140	eP	P	16 41 34.2	+2.4
MT09	Talagante	31.66	167	P	P	16 41 36.8	+1.3
MT09				IAmb	IAmb	16 41 38.0	
	comp=Z,23nm,1.4s						
SMTB	Santa Maria do	31.77	102	eP	P	16 41 38.5	+1.9
LMEL	Las Melosas	31.90	166	P	P	16 41 39.4	+1.7
LMEL				IAmb	IAmb	16 41 40.8	
	comp=Z,12nm,0.9s						
BO04	La Punta	31.95	167	P	P	16 41 39.1	+1.2
BO04				IAmb	IAmb	16 41 40.5	
	comp=Z,15nm,1.2s						
GO05	Huala	32.66	169	P	P	16 41 45.1	+1.0
GO05				IAmb	IAmb	16 41 46.0	
	comp=Z,12nm,0.8s						
BDFB	Brasilia	33.02	115	P	P	16 41 47.5	-0.1
	comp=Z,2.9nm,0.5s,baz=171,slow=17,SNR=3.8						
	comp=Z,2.9nm,0.5s						
IPMB	Ipameri, GO	33.69	119	eP	P	16 41 53.0	-0.4
PTGB	Pitanga	33.84	132	eP	P	16 41 54.3	-0.3
ITQB	Itaqui	34.07	144	P	P	16 41 57.0	+0.7
ITQB	Itaqui	34.07	144	eP	P	16 41 57.1	+0.7
ROSB	Rosrio	34.80	91	eP	P	16 42 03.0	0.0
SDBA	SAO DESIDERIO	35.03	108	eP	P	16 42 04.9	-0.1
ITAB	Concordia	35.31	136	P	P	16 42 06.8	-0.3
NHSC	New Hope	35.78	358	P	P	16 42 09.2	-1.8
	baz=178						
LRAL	Lakeview Retre	36.49	349	P	P	16 42 16.2	-0.9
LRAL	Lakeview Retre	36.49	349	P	P	16 42 16.2	-0.9
	baz=166						
CPSB	Cacapava Do Su	36.53	141	eP	P	16 42 17.7	+0.1
833A	Chaparral WMA,	36.69	329	P	P	16 42 20.3	+1.4
833A				IAmb	IAmb	16 42 21.1	
	comp=Z,7.0nm,0.8s						
833A	Chaparral WMA,	36.69	329	P	P	16 42 19.0	+0.1
	baz=144						
PLTB	Pedras Altas	37.38	143	P	P	16 42 24.6	-0.1
PLTB	Pedras Altas	37.38	143	eP	P	16 42 24.9	+0.2
NBPS	Pedro II - PI	37.48	93	eP	P	16 42 25.9	0.0
Y45A	Yeager Farm, C	37.86	346	P	P	16 42 28.5	-0.1
KMSC	Kings Mountain	37.86	357	P	P	16 42 27.0	-1.6
	baz=176						
435B	Jarrell	37.87	333	P	P	16 42 29.7	+0.9
	baz=148						
TRQA	Tornquist	38.34	158	P	P	16 42 32.8	+0.1
LL04	Puerto Octay	38.34	172	P	P	16 42 33.3	+0.7
PLCA	Paso Flores	38.47	170	P	P	16 42 35.0	+1.2
	comp=Z,5.8nm,0.8s,baz=335,slow=8.5,SNR=18						
PLCA				LR	LR	16 56 20.4	
	comp=Z,49nm,18.4s,baz=131,slow=33						
	comp=Z,5.8nm,0.8s						
PLCA	Paso Flores	38.47	170	P	P	16 42 35.0	+1.2
PLCA				IAmb	IAmb	16 42 35.7	
	comp=Z,15nm,1.1s						
PLCA	Paso Flores	38.47	170	eP	P	16 42 35.4	+1.6
JCT	Junction City	38.66	331	P	P	16 42 36.4	+0.9
JCT				IAmb	IAmb	16 43 02.8	
	comp=Z,16nm,1.4s						
JCT	Junction City	38.66	331	P	P	16 42 36.6	+1.1
	baz=145						
WHTX	Lake Whitney,	38.85	335	P	P	16 42 37.0	0.0
WHTX	Lake Whitney,	38.85	335	P	P	16 42 37.2	+0.2
	baz=150						
V48A	Smith Brothers	39.09	350	P	P	16 42 37.9	-1.1
V48A				IAmb	IAmb	16 42 38.7	
	comp=Z,7.2nm,0.8s						
NBPB	Pedra_Branca-C	39.37	95	eP	P	16 42 44.3	+2.6
X40A	Basin Creek Fa	39.37	342	P	P	16 42 41.3	0.0
	baz=158						
TZTN	Tazewell	39.43	354	P	P	16 42 40.2	-1.5
	baz=172						
WVT	Waverly	39.66	349	P	P	16 42 41.7	-1.9
	baz=166						
MIAR	Mount Ida	39.66	341	P	P	16 42 42.8	-0.9
	baz=156						
TX31	Lajitas Ar. Si	39.80	325	P	P	16 42 45.9	+0.8
TX31				IAmb	IAmb	16 42 47.2	
	comp=Z,24nm,1.4s						
TX31					PcP	16 44 50.0	+0.3
TX32	Lajitas Array	39.80	325	P	P	16 42 46.0	+0.8
TX32					PcP	16 44 50.2	+0.5
TXAR	Lajitas Array	39.80	325	P	P	16 42 45.8	+0.7
	comp=Z,1.1nm,0.7s,baz=144,slow=8.6,SNR=12						
TXAR				PcP	PcP	16 44 50.5	+0.8
	comp=Z,3.1nm,0.8s,baz=147,slow=6.4,SNR=23						
TXAR				LR	LR	16 59 16.3	
	comp=Z,39nm,18.3s,baz=105,slow=36						
	comp=Z,1.1nm,0.7s						
TXAR	Lajitas Array	39.80	325	P	P	16 42 45.5	+0.4
TXAR					PcP	16 44 50.1	+0.4
W41B	Gary Mavity, V	39.83	343	P	P	16 42 44.4	-0.7
W41B	Gary Mavity, V	39.83	343	P	P	16 42 44.4	-0.7
	baz=159						
WHAR	Wooly Hollow	39.95	343	P	P	16 42 45.3	-0.8
WHAR				IAmb	IAmb	16 42 46.2	
	comp=Z,6.4nm,0.7s						
SLBS	Sierra La Lagu	40.06	313	P	P	16 42 49.6	+2.3
SLBS				IAmb	IAmb	16 42 51.0	
	comp=Z,16nm,1.2s						
NBMA	Muriti-CE	40.28	98	eP	P	16 42 51.8	+2.5
X37A	Clayton	40.31	339	P	P	16 42 49.6	+0.5
W39A	Magazine	40.32	341	P	P	16 42 49.2	+0.1
W39A				IAmb	IAmb	16 42 50.3	
	comp=Z,8.1nm,0.8s						
W39A	Magazine	40.32	341	P	P	16 42 49.2	+0.1
	baz=156,SNR=5.1						
ABTX	Abilene, Hawle	40.36	333	P	P	16 42 50.4	+0.9
ABTX				IAmb	IAmb	16 42 51.5	
	comp=Z,9.7nm,0.8s						
ABTX	Abilene, Hawle	40.36	333	P	P	16 42 50.1	+0.5
	baz=147						
LCAR	Lake Charles	40.36	345	P	P	16 42 48.4	-1.1
LCAR				IAmb	IAmb	16 42 49.2	
	comp=Z,8.3nm,0.7s						
LL02	Futaleuf	40.66	172	P	P	16 42 52.9	+1.0
U40A	Yellville	41.10	343	P	P	16 42 55.0	-0.6
U40A				IAmb	IAmb	16 42 56.0	
	comp=Z,9.7nm,0.7s						
U40A	Yellville	41.10	343	P	P	16 42 55.1	-0.6
	baz=158,SNR=7.7						
R50A	Paris	41.23	354	P	P	16 42 55.2	-1.4
R50A				IAmb	IAmb	16 42 56.2	
	comp=Z,13nm,1.4s						
X34A	Smith Ranch, M	41.26	336	P	P	16 42 57.5	+0.5
X34A				IAmb	IAmb	16 42 59.1	
	comp=Z,21nm,1.1s						

S44A	Carbondale	41.46	348	P	P	16 42 56.9	-1.5
S44A				IAmb	IAmb	16 42 57.8	
	comp=Z,12nm,1.0s						
TUL1	Leonard	41.65	339	P	P	16 43 00.0	0.0
	baz=154						
MGMO	Mountain Grove	41.68	344	P	P	16 42 59.4	-0.9
MGMO				IAmb	IAmb	16 43 00.3	
	comp=Z,9.5nm,0.8s						
AY01	Puyuhuapi	41.77	173	P	P	16 43 01.6	+0.7
WMOK	Wichita Mounta	41.77	335	P	P	16 43 01.4	+0.3
	baz=149						
FVM	French Village	42.00	346	P	P	16 43 01.7	-1.2
FVM				IAmb	IAmb	16 43 02.9	
	comp=Z,10nm,1.1s						
CCM	Cathedral Cave	42.26	346	P	P	16 43 03.5	-1.5
CCM				IAmb	IAmb	16 43 05.0	
	comp=Z,5.3nm,0.6s						
CCM	Cathedral Cave	42.26	346	P	P	16 43 04.0	-1.0
	baz=161						
P52A	Corning	42.38	356	P	P	16 43 04.7	-1.2
	baz=175						
MNTX	Cornudas Mount	42.55	326	P	P	16 43 07.9	+0.4
MNTX	Cornudas Mount	42.55	326	P	P	16 43 08.1	+0.5
	baz=139,SNR=9.4						
T35A	Sooner Cattle	42.80	339	P	P	16 43 09.7	+0.2
T35A				IAmb	IAmb	16 43 11.0	
	comp=Z,10nm,0.9s						
O53A	New Philadelph	42.94	357	P	P	16 43 09.9	-0.6
	baz=176						
MSTX	Muleshoe	42.95	331	P	P	16 43 11.4	+0.6
MSTX				IAmb	IAmb	16 43 12.5	
	comp=Z,18nm,1.2s						
MSTX	Muleshoe	42.95	331	P	P	16 43 11.4	+0.6
	baz=144						
COYC	Coyhaique	42.97	173	P	P	16 43 11.9	+1.3
RCBR	Riachuelo	43.04	95	LR	LR	17 03 15.8	
	comp=Z,43nm,18.8s,baz=356,slow=39						
AMTX	Amarillo	43.17	332	P	P	16 43 12.6	0.0
	baz=146						
U32A	Winter Ranch,	43.28	336	P	P	16 43 13.6	+0.2
SSPA	Standing Stone	43.29	1	P	P	16 43 13.7	+0.4
	baz=181						
N58A	Sunbury	43.53	2	P	P	16 43 15.1	-0.2
N58A				IAmb	IAmb	16 43 15.8	
	comp=Z,12nm,1.2s						
121A	Cookes Peak, D	44.54	325	P	P	16 43 24.8	+1.1
121A				IAmb	IAmb	16 43 26.7	
	comp=Z,12nm,1.0s						
121A	Cookes Peak, D	44.54	325	P	P	16 43 25.2	+1.5
	baz=136,SNR=7.3						
319A	Douglas	44.61	322	P	P	16 43 25.4	+1.2
319A				IAmb	IAmb	16 43 26.8	
	comp=Z,15nm,1.0s						
L56A	Greenwood	44.80	1	P	P	16 43 24.8	-0.6
L56A				IAmb	IAmb	16 43 25.7	
	comp=Z,10nm,0.8s						
KSU1	Kansas State U	44.80	340	P	P	16 43 25.4	-0.1
KSU1	Kansas State U	44.80	340	P	P	16 43 25.2	-0.2
	baz=154						
R32A	Long Quarter,	44.94	338	P	P	16 43 27.4	+0.8
CRNM	Carthage	45.00	327	P	P	16 43 28.5	+1.3
WVNY	West Valley, N	45.05	0	P	P	16 43 26.3	-1.1
WVNY				IAmb	IAmb	16 43 43.9	
	comp=Z,16nm,1.1s						
BNM	Barren Site	45.09	327	P	P	16 43 29.2	+1.2
LENM	Lemitar	45.29	327	P	P	16 43 31.1	+1.5
N38A	Joes South For	45.35	345	P	P	16 43 28.5	-1.3
N38A				IAmb	IAmb	16 43 29.4	
	comp=Z,13nm,0.9s						
K57A	Scipio Center	45.43	3	P	P	16 43 29.9	-0.4
K57A				IAmb	IAmb	16 43 30.7	
	comp=Z,9.1nm,0.8s						
ANMO	Albuquerque	45.60	328	P	P	16 43 33.0	+1.0
ANMO				IAmb	IAmb	16 43 34.3	
	comp=Z,8.9nm,0.8s						
ANMO	Albuquerque	45.60	328	P	P	16 43 33.1	+1.0
	baz=140						
GO08	Villa O'Higgin	45.77	174	P	P	16 43 34.5	+1.6
GO08				IAmb	IAmb	16 43 36.4	
	comp=Z,15nm,1.0s						
J54A	Appleton	45.92	0	P	P	16 43 33.0	-1.1
J54A				IAmb	IAmb	16 43 33.5	
	comp=Z,10nm,0.8s						
J55A	Hilton	45.92	1	P	P	16 43 32.9	-1.2
J55A				IAmb	IAmb	16 43 34.0	
	comp=Z,7.0nm,0.8s						
TUC	Tucson	46.18	322	P	P	16 43 37.4	+0.9
TUC	Tucson	46.18	322	P	P	16 43 37.8	+1.3
	baz=133						
T25A	Trinidad	46.29	332	P	P	16 43 38.0	+0.5
T25A				IAmb	IAmb	16 43 40.0	
	comp=Z,12nm,1.1s						
T25A	Trinidad	46.29	332	P	P	16 43 38.6	+1.2
	baz=143,SNR=5.2						
N33A	J Bar K, Exete	46.56	341	P	P	16 43 38.9	-0.3
PECO	Prince Edward	46.61	2	P	P	16 43 38.4	-1.1
PECO				IAmb	IAmb	16 43 39.3	
	comp=Z,10nm,0.7s						
KSCO	Kaye Shedlock'	47.02	335	P	P	16 43 43.9	+0.9
KSCO				IAmb	IAmb	16 43 45.0	
	comp=Z,15nm,1.0s						
KSCO	Kaye Shedlock'	47.02	335	P	P	16 43 43.6	+0.6
	baz=147						
DELO	Deloro Mine	47.18	1	P	P	16 43 42.7	-1.3
DELO				IAmb	IAmb	16 43 43.5	
	comp=Z,7.7nm,0.9s						
214A	Organ Pipe Nat	47.22	320	P	P	16 43 45.8	+1.2
214A				IAmb	IAmb	16 43 47.1	
	comp=Z,12nm,1.1s						
214A	Organ Pipe Nat	47.22	320	P	P	16 43 46.0	+1.4
	baz=131						
SDCO	Great Sand Dun	47.29	331	P	P	16 43 46.3	+1.0
SDCO	Great Sand Dun	47.29	331	P	P	16 43 46.4	+1.0
	baz=142,SNR=12						
LONY	Lake Ozonia	47.42	4	P	P	16 43 46.4	+0.5
	baz=186						
W18A	Petrified Fore	47.53	325	P	P	16 43 48.3	+1.1
W18A				IAmb	IAmb	16 43 49.7	
	comp=Z,16nm,1.0s						
W18A	Petrified Fore	47.53	325	P	P	16 43 48.2	+1.1
	baz=136,SNR=6.0						
Q24A	Divide	48.10	332	P	P	16 43 52.4	+0.8
Q24A	Divide	48.10	332	P	P	16 43 52.1	+0.5
	baz=144						
MVCO	Mesa Verde	48.39	328	P	P	16 43 54.6	+0.8
	baz=139						
OGNE	Ogallala	48.41	337	P	P	16 43 54.4	+0.7
OGNE	Ogallala	48.41	337	P	P	16 43 54.1	+0.4
	baz=148						
GO09	Cerro Castillo	48.57	174	P	P	16 43 56.1	+1.5
PKME	Peaks-Kenny Pk	48.68	9	P	P	16 43 55.7	+0.2
PKME				IAmb	IAmb	16 44 09.5	
	comp=Z,14nm,1.3s						
WUAZ	Wupatki	48.75	324	P	P	16 43 58.1	+1.6
WUAZ	Wupatki	48.75	324	P	P	16 43 58.2	+1.6
	baz=134,SNR=12						
ISCO	Idaho Springs	48.99	333	P	P	16 43 59.1	+0.6
ISCO	Idaho Springs	48.99	333	P	P	16 43 59.0	+0.6
	baz=143						
ECSD	EROS Data Cent	49.02	343	P	P	16 43 57.4	-0.8
ECSD	EROS Data Cent	49.02	343	P	P	16 43 57.0	-1.2
	baz=156						
SMCO	Snowmass	49.13	331	P	P	16 44 00.4	+0.8
GLA	Glamis	49.23	319	P	P	16 44 01.2	+1.1
	baz=129						
PV15	Paradox Valley	49.24	329	P	P	16 44 01.4	+1.1
PV15				IAmb	IAmb	16 44 03.2	
	comp=Z,13nm,1.0s						
PV13	Radium Mtn., P	49.27	329	P	P	16 44 01.2	+0.7
PV07	Paradox Valley	49.39	329	P	P	16 44 02.2	+0.8
PV07				IAmb	IAmb	16 44 03.5	
	comp=Z,7.8nm,1.1s						
PV11	David Mesa, Pa	49.41	329	P	P	16 44 02.4	+0.9
PV11				IAmb	IAmb	16 44 03.3	
	comp=Z,17nm,1.3s						
PV23	Carpenter Ridg	49.59	329	P	P	16 44 03.8	+0.8
PV23				IAmb	IAmb	16 44 16.1	
	comp=Z,5.9nm,0.9s						
YUH	Yuha Desert	49.70	318	P	P	16 44 04.8	+1.2
IKP	In-Ko-Pah, Jac	49.82	318	P	P	16 44 05.6	+1.0
	baz=128						
U15A	North Rim	49.92	325	P	P	16 44 06.7	+1.1
W13A	Hualapai Mount	49.97	322	P	P	16 44 07.0	+1.2
W13A				IAmb	IAmb	16 44 08.4	
	comp=Z,9.1nm,0.8s						
BC3	Big Chuckawall	50.02	320	P	P	16 44 07.5	+1.4
	baz=129						
N23A	Red Feather La	50.02	333	P	P	16 44 06.9	+0.7
N23A				IAmb	IAmb	16 44 08.8	
	comp=Z,8.4nm,1.4s						
N23A	Red Feather La	50.02	333	P	P	16 44 06.8	+0.7
	baz=144						
PHWY	Pilot Hill	50.13	334	P	P	16 44 07.6	+0.5
PHWY				IAmb	IAmb	16 44 09.8	
	comp=Z,6.0nm,0.7s						
IRM	Iron Mountain	50.14	320	P	P	16 44 08.2	+1.3
	baz=130						
MONP2	Monument Peak	50.18	318	P	P	16 44 08.3	+0.9
	baz=128						
SUSD	Miller	50.37	341	P	P	16 44 08.6	+0.2
	baz=154						
BELC	Belle Mtn. Jos	50.59	320	P	P	16 44 11.0	+0.5
	baz=129						
TPFO	Pinon Flats	50.64	319	P	P	16 44 11.7	+0.9
	baz=128						
PFO	Pinyon Flats O	50.65	319	LR	LR	17 02 50.2	
	comp=Z,28nm,18.9s,baz=168,slow=32						
PFO	Pinyon Flats O	50.65	319	P	P	16 44 12.0	+1.1
	baz=128						
GMRC	Granite Mounta	50.87	321	P	P	16 44 13.6	+1.1
	baz=130,SNR=5.4						
SRU	San Rafael Swe	50.87	328	P	P	16 44 13.2	+0.6
SRU				IAmb	IAmb	16 44 14.9	
	comp=Z,6.1nm,1.1s						
LCMT	Little Creek M	50.88	324	P	P	16 44 13.6	+1.1
MTPU	Mount Pierson	50.99	326	P	P	16 44 14.5	+0.8
Q16A	Castle Valley	51.07	328	P	P	16 44 15.0	+1.0
Q16A				IAmb	IAmb	16 44 16.5	
	comp=Z,11nm,1.4s						
P18A	Preston Nutter	51.11	329	P	P	16 44 15.3	+0.8
SZCU	Shurtz Canyon	51.19	325	P	P	16 44 15.9	+1.0
SZCU				IAmb	IAmb	16 44 17.2	
	comp=Z,6.6nm,0.9s						
RWWY	Rawlins	51.23	333	P	P	16 44 15.0	-0.2
RWWY				IAmb	IAmb	16 44 15.9	
	comp=Z,14nm,1.2s						
P17A	Butcher Ranch,	51.25	328	P	P	16 44 15.5	+0.1
P17A				IAmb	IAmb	16 44 17.2	
	comp=Z,8.6nm,1.0s						
CCUT	Cedar City	51.31	325	P	P	16 44 17.1	+1.1
CCUT				IAmb	IAmb	16 44 18.7	
	comp=Z,6.2nm,0.9s						
MSU	Marysvale	51.32	327	P	P	16 44 17.0	+1.0
HEC	Hector,Ludlow	51.32	320	P	P	16 44 17.3	+1.4
	baz=129,SNR=5.2						
RDMU	Red Mountain	51.48	330	P	P	16 44 17.6	+0.5
RDMU				IAmb	IAmb	16 44 18.6	
	comp=Z,7.9nm,0.7s						
SHPR	Sheep Range	51.67	323	P	P	16 44 20.0	+1.4
SHPR				IAmb	IAmb	16 44 21.0	
	comp=Z,5.5nm,0.9s						
DSPA	Despedida	51.69	172	P	P	16 44 19.9	+1.8
K22A	Casper	51.69	334	P	P	16 44 19.0	+0.5
	baz=144						
EYMN	Ely	51.76	349	P	P	16 44 17.1	-1.8
EYMN				IAmb	IAmb	16 44 17.9	
	comp=Z,5.0nm,0.8s						
EYMN	Ely	51.76	349	P	P	16 44 17.2	-1.6
	baz=164						
BFSC	Mount Baldy Ra	51.82	319	P	P	16 44 20.0	+0.4
	baz=127						
CIS	Catalina Islan	51.82	317	P	P	16 44 20.2	+0.6
	baz=126						
RSSD	Black Hills	51.88	337	P	P	16 44 21.0	+0.9
RSSD				IAmb	IAmb	16 44 21.9	
	comp=Z,7.8nm,0.7s						
RSSD	Black Hills	51.88	337	P	P	16 44 20.5	+0.5
	baz=147						
GSC	Goldstone, Bar	51.92	320	P	P	16 44 21.9	+1.6
GSC				IAmb	IAmb	16 44 23.0	
	comp=Z,10nm,0.9s						
GSC	Goldstone, Bar	51.92	320	P	P	16 44 21.5	+1.2
	baz=129						
SHOC	Shoshone, Teco	51.96	321	P	P	16 44 22.3	+1.7
	baz=130						
PRN	Pahroc Range	52.20	324	P	P	16 44 23.8	+1.4
QSM	Queen of Sheba	52.38	321	P	P	16 44 24.8	+1.1
QSM				IAmb	IAmb	16 44 25.9	
	comp=Z,6.0nm,0.8s						
GWY	Greenwater Val	52.39	321	P	P	16 44 24.9	+1.1
GWY				IAmb	IAmb	16 44 26.0	
	comp=Z,5.8nm,0.8s						
EDW2	Edwards Air Fo	52.43	319	P	P	16 44 25.2	+1.1
	baz=127,SNR=7.1						
JLU	Jordanelle	52.45	329	P	P	16 44 25.0	+0.6
JLU				IAmb	IAmb	16 44 26.3	
	comp=Z,10nm,1.1s						
LRMC	Laurel Mtn Rad	52.59	320	P	P	16 44 26.9	+1.5
	baz=128						
CCAC	Calif City Air	52.61	319	P	P	16 44 26.7	+1.3
TPNV	Topopah Spring	52.62	322	P	P	16 44 27.2	+1.6
TPNV				IAmb	IAmb	16 44 28.8	
	comp=Z,5.9nm,0.8s						
TPNV	Topopah Spring	52.62	322	P	P	16 44 27.1	+1.6
	baz=130,SNR=9.3						
FURC	Furnace Creek,	52.69	322	P	P	16 44 27.3	+1.4
	baz=129						
E28A	Huff	52.82	341	P	P	16 44 27.2	+0.5
DUG	Dugway, Tooele	52.87	328	P	P	16 44 27.9	+0.6
DUG				IAmb	IAmb	16 44 29.7	
	comp=Z,14nm,1.4s						
DUG	Dugway, Tooele	52.87	328	P	P	16 44 27.9	+0.6
	baz=136						
AGMN	Agassiz Nation	53.03	346	P	P	16 44 27.0	-1.2
AGMN				IAmb	IAmb	16 44 28.2	
	comp=Z,6.5nm,0.8s						
AGMN	Agassiz Nation	53.03	346	P	P	16 44 28.1	-0.1
	baz=158,SNR=5.8						
R11A	Troy Canyon, C	53.15	324	P	P	16 44 30.4	+1.0
R11A	Troy Canyon, C	53.15	324	P	P	16 44 30.7	+1.3
	baz=132,SNR=11						
BW06	Boulder Array	53.15	332	P	P	16 44 29.2	-0.2
BW06	Boulder Array	53.15	332	P	P	16 44 29.3	-0.2
	baz=140,SNR=5.2						
PD31	Pinedale Array	53.15	332	P	P	16 44 29.3	-0.2
PDAR	Pinedale Array	53.15	332	P	P	16 44 29.5	0.0
	comp=Z,2.5nm,0.7s,baz=125,slow=8.6,SNR=27						
PDAR				PcP	PcP	16 45 36.0	-0.5
	comp=Z,0.9nm,0.7s,baz=142,slow=7.1,SNR=3.9						
	comp=Z,2.5nm,0.7s						
PDAR	Pinedale Array	53.15	332	P	P	16 44 28.8	-0.6
ISA	Isabella, Lake	53.21	320	P	P	16 44 31.0	+1.2
ISA				IAmb	IAmb	16 44 32.4	
	comp=Z,6.9nm,0.9s						
ISA	Isabella, Lake	53.21	320	P	P	16 44 31.2	+1.4
	baz=127						
HWUT	Hardware Ranch	53.25	330	P	P	16 44 30.4	+0.2
GRAC	Grapevine Rang	53.34	322	P	P	16 44 32.3	+1.6
GRAC				IAmb	IAmb	16 44 32.9	
	comp=Z,4.6nm,0.8s						
GRAC	Grapevine Rang	53.34	322	P	P	16 44 32.2	+1.6
	baz=129						
CWC	Cottonwood Cre	53.44	321	P	P	16 44 32.8	+1.2
	baz=128						
BGU	Big Grassy Mou	53.51	328	P	P	16 44 32.0	0.0
BGU				IAmb	IAmb	16 44 33.7	
	comp=Z,4.9nm,0.8s						
MDND	Maddock	53.63	343	P	P	16 44 32.3	-0.2
MDND	Maddock	53.63	343	P	P	16 44 33.4	+0.8
	baz=154						
PKM	Mcpherson Peak	53.63	318	P	P	16 44 34.1	+1.0
	baz=126						
LCH	Last Change Ra	53.66	322	P	P	16 44 34.0	+0.8
VES	Vestal, Richgr	53.72	320	P	P	16 44 34.8	+1.4
	baz=127						
AHID	Auburn Hatcher	53.88	331	P	P	16 44 35.0	+0.2
AHID				IAmb	IAmb	16 44 35.9	
	comp=Z,6.6nm,0.8s						
TIN	Tinemaha, Big	53.91	321	P	P	16 44 36.4	+1.4
	baz=128						
REDW	Red Top Meadow	54.22	332	P	P	16 44 37.9	+0.6
ECR	Eagle Creek	54.23	331	P	P	16 44 37.7	+0.4
LOHW	Long Hollow	54.29	332	P	P	16 44 38.0	+0.3
TPAW	Teton Pass	54.36	332	P	P	16 44 38.2	-0.1
MOOW	Moose Ponds	54.46	332	P	P	16 44 38.6	-0.4
ELK	Elko	54.57	327	P	P	16 44 40.2	+0.3
FLWY	Flagg Ranch	54.70	332	P	P	16 44 41.2	+0.6
FLWY				IAmb	IAmb	16 44 42.5	
	comp=Z,13nm,1.3s						
NV11	Mina Array Sit	54.73	323	P	P	16 44 41.8	+0.8
NV11				IAmb	IAmb	16 44 43.4	
	comp=Z,11nm,1.4s						
OMMB	Old Mammoth Mi	54.74	321	P	P	16 44 42.1	+0.9
OMMB				IAmb	IAmb	16 44 43.5	
	comp=Z,8.6nm,0.8s						
MDPB	Devils Postpil	54.80	321	P	P	16 44 42.6	+1.0
MDPB				IAmb	IAmb	16 44 44.3	
	comp=Z,8.3nm,1.0s						
NVAR	Mina Array Bea	54.82	322	P	P	16 44 43.0	+1.3
	comp=Z,3.8nm,0.7s,baz=124,slow=6.6,SNR=31						
NVAR				pP	pP	16 45 06.6	+2.4
	comp=Z,2.0nm,0.9s,baz=146,slow=7.5,SNR=3.2						
NVAR				PcP	PcP	16 45 43.4	+0.4
	comp=Z,1.3nm,0.7s,baz=133,slow=4.5,SNR=3.9						
	comp=Z,3.8nm,0.7s						
NVAR	Mina Array Bea	54.82	322	P	P	16 44 42.2	+0.5
LHV	Little Huntoon	54.83	322	P	P	16 44 42.9	+1.5
LHV				IAmb	IAmb	16 44 44.2	
	comp=Z,9.1nm,0.9s						
RLMT	Red Lodge	54.86	334	P	P	16 44 42.0	+0.2
RLMT				IAmb	IAmb	16 44 42.6	
	comp=Z,4.1nm,0.7s						
RLMT	Red Lodge	54.86	334	P	P	16 44 42.0	+0.2
	baz=142						
ULM	Lac du Bonnet	54.86	347	P	P	16 44 40.1	-1.3
	comp=Z,8.6nm,0.7s,baz=149,slow=6.4,SNR=12						
ULM				LR	LR	17 10 57.9	
	comp=Z,18nm,18.3s,baz=284,slow=39						
	comp=Z,8.6nm,0.7s						
ULM	Lac du Bonnet	54.86	347	P	P	16 44 39.8	-1.7
LAO	LASA Array	54.87	337	P	P	16 44 41.8	+0.1
	baz=146						
H17A	Grant Village	54.88	333	P	P	16 44 42.6	+0.6
	baz=140						
YPP	Pitchstone Pla	54.89	332	P	P	16 44 43.0	+0.8
PMPB	Monarch Peak	55.06	319	P	P	16 44 44.4	+1.2
PMPB				IAmb	IAmb	16 44 49.5	
	comp=Z,9.5nm,0.9s						
RYN	Ryan	55.08	323	P	P	16 44 44.2	+0.7
KVN	Kaiserville	55.09	323	P	P	16 44 44.0	+0.4
BMN	Battle Mountai	55.48	325	P	P	16 44 46.9	+0.6
BMN				IAmb	IAmb	16 44 48.2	
	comp=Z,6.9nm,0.8s						
YHL	Hebgen Lake	55.51	333	P	P	16 44 47.1	+0.6
GCMT	Greycliff	55.56	334	P	P	16 44 47.1	+0.4
QLMT	Earthquake Lak	55.60	332	P	P	16 44 48.1	+0.9
DGMT	Dagmar	55.64	340	P	P	16 44 47.5	+0.3
	baz=149						
YERR	Yerington	55.74	322	P	P	16 44 48.5	+0.2
YERR				IAmb	IAmb	16 44 49.9	
	comp=Z,3.5nm,0.6s						
HLID	Hailey	56.11	329	P	P	16 44 51.7	+0.9
HLID				IAmb	IAmb	16 44 52.7	
	comp=Z,5.4nm,0.9s						
HLID	Hailey	56.11	329	P	P	16 44 51.3	+0.5
	baz=136,SNR=9.9						
BCYI	Bear Canyon	56.15	331	P	P	16 44 52.0	+0.9
EMB	Emerald Bay	56.26	322	P	P	16 44 53.1	+1.1
EMB				IAmb	IAmb	16 44 54.0	
	comp=Z,4.3nm,0.8s						
MCMT	McKenzie Canyo	56.27	332	P	P	16 44 52.7	+0.8
PAHR	Pah Rah Range	56.28	323	P	P	16 44 53.0	+1.0
BOZ	Bozeman (W)	56.28	333	P	P	16 44 52.4	+0.5
BOZ				IAmb	IAmb	16 44 53.6	
	comp=Z,8.2nm,0.8s						
BOZ	Bozeman (W)	56.28	333	P	P	16 44 52.5	+0.6
	baz=140,SNR=17						
MPK	Martis Peak	56.41	322	P	P	16 44 54.5	+1.4
MPK				IAmb	IAmb	16 44 55.6	
	comp=Z,12nm,1.2s						
DLMT	Dillon	56.55	332	P	P	16 44 54.3	+0.5
DLMT				IAmb	IAmb	16 44 55.5	
	comp=Z,6.6nm,1.1s						
MFID	Camas Ranch	56.74	328	P	P	16 44 55.8	+0.6
LRM	Limekiln Ridge	56.83	333	P	P	16 44 56.2	+0.3
BEKR	Beckworth	56.97	323	P	P	16 44 57.9	+1.0
BEKR				IAmb	IAmb	16 44 59.0	
	comp=Z,7.6nm,0.8s						
HRY	Holter Researc	57.22	334	P	P	16 44 59.1	+0.6
EGMT	Eagleton	57.36	336	P	P	16 44 59.7	+0.3
EGMT	Eagleton	57.36	336	P	P	16 44 59.7	+0.3
	baz=142,SNR=8.6						
ORV	Oroville	57.48	322	P	P	16 45 01.7	+1.4
MCCM	Marconi Confer	57.52	320	P	P	16 45 01.7	+1.1
WVOR	Wild Horse Val	57.59	326	P	P	16 45 01.5	+0.3
PLID	Pearl Lake	58.00	330	P	P	16 45 03.8	-0.3
J08A	Circle Bar Ran	58.11	327	P	P	16 45 04.8	-0.1
J08A				IAmb	IAmb	16 45 05.7	
	comp=Z,4.8nm,0.8s						
MOD	Modoc Plateau	58.20	325	P	P	16 45 05.4	-0.1
MOD				IAmb	IAmb	16 45 07.7	
	comp=Z,14nm,1.4s						
MSO	Missoula	58.26	332	P	P	16 45 05.4	-0.4
MSO				IAmb	IAmb	16 45 07.5	
	comp=Z,9.3nm,1.1s						
MSO	Missoula	58.26	332	P	P	16 45 06.5	+0.7
	baz=138,SNR=5.6						
SCHQ	Schefferville	58.36	8	P	P	16 45 05.5	-0.6
	comp=Z,2.8nm,0.8s,baz=210,slow=9.8,SNR=5.0						
	comp=Z,2.8nm,0.8s						
SCHQ	Schefferville	58.36	8	P	P	16 45 05.3	-0.9
K05A	Summer Lake	59.06	325	P	P	16 45 12.4	+0.9
JTMT	Jette	59.10	333	P	P	16 45 12.3	+0.7
JTMT				IAmb	IAmb	16 45 13.5	
	comp=Z,7.5nm,0.9s						
I07A	Izee	59.15	327	P	P	16 45 12.8	+0.8
I07A				IAmb	IAmb	16 45 14.6	
	comp=Z,8.1nm,1.0s						
F10A	Beach Ranch, E	59.23	330	P	P	16 45 13.1	+0.6
F10A				IAmb	IAmb	16 45 17.3	
	comp=Z,7.5nm,1.0s						
KMRM	Mail Ridge	59.24	321	P	P	16 45 13.9	+1.3
YBH	Yreka Blue Hor	59.52	323	P	P	16 45 13.8	-0.8
YBH				IAmb	IAmb	16 45 15.0	
	comp=Z,5.2nm,0.8s						
L04D	Klamath Falls	59.57	324	P	P	16 45 14.9	-0.1
L04D	Klamath Falls	59.57	324	P	P	16 45 15.4	+0.4
	baz=127,SNR=5.6						
J05D	Fort Rock, OR	59.60	325	P	P	16 45 16.1	+0.9
	baz=129,SNR=12						
PINE	Pine Mountain	59.76	326	P	P	16 45 17.0	+0.7
WALA	Waterton Lakes	59.91	334	P	P	16 45 17.6	+0.4
J04D	Umpqua Nationa	60.08	325	P	P	16 45 19.2	+0.7
J04D	Umpqua Nationa	60.08	325	P	P	16 45 19.3	+0.8
	baz=128,SNR=7.9						
L02F	Cave Junction	60.26	323	P	P	16 45 20.4	+0.9
	baz=126						
KSXB	Camp Six Broad	60.28	323	P	P	16 45 20.9	+1.1
I05D	Terrebonne, OR	60.33	326	P	P	16 45 20.9	+0.9
	baz=129						
I04A	Tendick Farm,	60.59	325	P	P	16 45 21.7	-0.1
	baz=128						
K02D	Willamette Mer	60.66	324	P	P	16 45 23.2	+0.9
	baz=126,SNR=5.1						
DBO	Dodson Butte	60.66	324	P	P	16 45 22.8	+0.4
DBO				IAmb	IAmb	16 45 46.5	
	comp=Z,14nm,1.4s						
NEW	Newport	60.79	332	P	P	16 45 23.1	+0.1
NEW				IAmb	IAmb	16 45 24.4	
	comp=Z,6.7nm,0.8s						
NEW	Newport	60.79	332	P	P	16 45 23.3	+0.2
	baz=135						
G05D	Wamic, OR	60.89	327	P	P	16 45 24.3	+0.6
	baz=130						
H04A	Detroit Lake	61.01	326	P	P	16 45 24.7	0.0
H04A				IAmb	IAmb	16 45 25.6	
	comp=Z,4.9nm,0.9s						
I03D	Drain, OR	61.07	325	P	P	16 45 25.5	+0.5
	baz=127						
J01E	Myrtle Point	61.09	324	P	P	16 45 26.1	+1.0
J01E	Myrtle Point	61.09	324	P	P	16 45 26.3	+1.2
	baz=126						
KEBM	Edson Butte	61.16	323	P	P	16 45 27.1	+1.4
I02E	Swisshome, OR	61.60	325	P	P	16 45 29.9	+1.4
I02E	Swisshome, OR	61.60	325	P	P	16 45 29.6	+1.0
	baz=127						
B08A	Colville Reser	61.92	331	P	P	16 45 30.9	+0.3
F04A	Amboy	61.92	327	P	P	16 45 30.9	+0.2
HEBO	Mount Hebo	62.22	326	P	P	16 45 33.7	+1.0
EDM	Edmonton	62.86	338	P	P	16 45 36.4	-0.4
D03D	Eldon	63.29	328	P	P	16 45 40.4	+0.7
	baz=129						
ORCD	Orcadas	63.34	162	P	P	16 45 39.5	-0.3
OZB	Mount Ozzard	65.43	328	P	P	16 45 54.6	+0.9
SMAI	San Martin Ant	65.67	175	P	P	16 45 55.9	+1.1
SMAI				IAmb	IAmb	16 45 57.5	

	comp=Z,16nm,1.1s						
IVI	Ivigtut	68.16	15	P	P	16 46 09.7	-1.0
BBB	Bella Bella	68.70	330	P	P	16 46 14.2	0.0
YKA	Yellowknife Ar	70.54	343	P	P	16 46 24.8	-0.7
	comp=Z,2.7nm,0.6s,baz=138,slow=5.7,SNR=19						
YKA				pP	pP	16 46 50.1	+0.3
	comp=Z,1.8nm,0.8s,baz=132,slow=6.5,SNR=4.4						
	comp=Z,2.7nm,0.6s						
YKA	Yellowknife Ar	70.54	343	P	P	16 46 24.0	-1.4
DIB	Dawson Inlet,	71.47	329	P	P	16 46 32.2	+1.0
T35M	Bob Quinn	72.50	333	P	P	16 46 38.1	+0.7
	baz=125						
DLBC	Dease Lake	73.25	335	P	P	16 46 41.8	-0.1
DLBC				IAmb	IAmb	16 46 43.9	
	comp=Z,8.5nm,0.9s						
S34M	Telegraph Cree	73.43	334	P	P	16 46 43.1	+0.4
	baz=124						
SIT	Sitka	74.87	332	P	P	16 46 51.5	+0.4
	baz=120						
P33M	Teslin, Yukon	75.44	335	P	P	16 46 54.7	+0.2
	baz=123						
MMPY	Sheldon Lake,	76.20	338	P	P	16 46 59.7	+1.0
	baz=125						
WHY	Whitehorse	76.55	335	P	P	16 47 00.8	-0.1
	baz=122						
PLBC	Pleasant Camp	76.56	334	P	P	16 47 00.9	+0.1
	baz=120						
FARO	Faro, Yukon	76.78	337	P	P	16 47 02.5	+0.5
	baz=123						
O30N	Mendenhall	77.11	335	P	P	16 47 04.2	+0.3
	baz=120						
M31M	Drury Creek, Y	77.17	337	P	P	16 47 04.6	+0.4
M31M	Drury Creek, Y	77.17	337	P	P	16 47 04.6	+0.4
	baz=122						
N31M	Braeburn, Yuko	77.35	336	P	P	16 47 05.7	+0.5
	baz=121						
HYT	Haines Junctio	77.74	335	P	P	16 47 08.2	+0.7
HYT	Haines Junctio	77.74	335	P	P	16 47 08.4	+0.9
	baz=119						
N30M	Aishikik Lake	77.88	335	P	P	16 47 09.0	+0.8
	baz=120,SNR=5.0						
PNL	Peninsula	78.02	333	P	P	16 47 09.5	+0.5
	baz=117						
RES	Resolute Bay	78.02	356	LR	LR	17 22 30.1	
	comp=Z,26nm,18.8s,baz=68,slow=36						
YUK6	Outpost Mounta	78.17	335	P	P	16 47 09.6	-0.4
	baz=118						
C36M	Paulatuk	78.24	345	P	P	16 47 09.9	0.0
	baz=134						
M30M	Minto, Yukon	78.32	336	P	P	16 47 10.4	-0.2
M30M	Minto, Yukon	78.32	336	P	P	16 47 10.9	+0.3
	baz=120						
YUK4	Talbot Arm	78.48	335	P	P	16 47 12.3	+0.6
	baz=118						
BELA	Belgrano 2	78.50	171	P	P	16 47 11.4	+0.1
BELA				IAmb	IAmb	16 47 13.1	
	comp=Z,9.9nm,0.9s						
MESA	MESA	79.40	333	P	P	16 47 17.7	+1.0
	baz=115						
YUK3	Moose Creek	79.45	335	P	P	16 47 17.2	+0.2
	baz=117						
CTG	Chitna Glacier	79.47	334	P	P	16 47 17.3	+0.3
	baz=116						
GRNC	Granite Creek	79.55	334	P	P	16 47 18.1	+0.5
GRNC				IAmb	IAmb	16 47 19.3	
	comp=Z,8.8nm,1.1s						
BARN	Barnard Glacie	79.65	334	P	P	16 47 18.8	+0.7
WAX	Waxell Ridge	79.92	333	P	P	16 47 20.0	+0.6
DAWY	Dawson	80.07	337	P	P	16 47 19.9	-0.2
	baz=118						
SUCK	Suckling Hills	80.19	333	P	P	16 47 21.8	+1.0
INK	Inuvik	80.25	342	P	P	16 47 20.5	-0.3
INK				IAmb	IAmb	16 47 48.2	
	comp=Z,12nm,1.1s						
INK	Inuvik	80.25	342	P	P	16 47 20.5	-0.3
	baz=124						
I29M	Ogilvie Camp,	80.29	339	P	P	16 47 21.1	-0.1
I29M	Ogilvie Camp,	80.29	339	P	P	16 47 20.9	-0.3
	baz=119						
M27K	Edge Creek, AK	80.31	335	P	P	16 47 21.8	+0.3
M27K					pP	16 47 47.4	+1.2
M27K	Edge Creek, AK	80.31	335	P	P	16 47 21.8	+0.3
	baz=115						
ESDC	Sonseca Array	80.33	49	P	P	16 47 22.0	-0.1
	comp=Z,1.7nm,0.8s,baz=258,slow=6.2,SNR=8.1						
ESDC				pP	pP	16 47 46.8	-0.2
	comp=Z,1.0nm,0.8s,baz=266,slow=5.4,SNR=3.4						
	comp=Z,1.7nm,0.8s						
A36M	Sachs Harbour	80.34	347	P	P	16 47 21.0	-0.3
A36M	Sachs Harbour	80.34	347	P	P	16 47 20.5	-0.8
	baz=133						
MCARA	McCarthy VSAT	80.38	334	P	P	16 47 21.6	-0.2
MCARA				IAmb	IAmb	16 47 23.8	
	comp=Z,9.8nm,0.9s						
MCARA	McCarthy VSAT	80.38	334	P	P	16 47 22.4	+0.6
	baz=114						
VRDI	Verde Repeater	80.51	334	P	P	16 47 22.9	+0.2
HMT	Hamilton	80.52	333	P	P	16 47 22.9	+0.3
HMT				IAmb	IAmb	16 47 24.3	
	comp=Z,15nm,0.8s						
BCAR	Beaver Creek A	80.57	336	P	P	16 47 22.6	-0.2
L27K	Beaver Creek,	80.59	336	P	P	16 47 22.8	-0.1
	baz=116						
VNA3	Neumayer Olymp	80.74	162	P	P	16 47 24.3	+0.7
GLB	Gilahina Butte	80.75	334	P	P	16 47 22.7	-1.1
M26K	Nabesna, AK	80.80	335	P	P	16 47 22.8	-1.2
M26K	Nabesna, AK	80.80	335	P	P	16 47 24.2	+0.2
	baz=114						
BMRM	Bremner River	80.92	333	P	P	16 47 24.8	+0.1
BMRM				IAmb	IAmb	16 47 26.1	
	comp=Z,7.5nm,0.8s						
BMRM	Bremner River	80.92	333	P	P	16 47 24.6	-0.1
	baz=113						
VNA1	Neumayer--Stat	80.99	161	P	P	16 47 26.5	+1.7
EGAK	Eagle	81.08	337	P	P	16 47 25.4	0.0
EGAK				IAmb	IAmb	16 47 26.6	
	comp=Z,10nm,0.8s						
EGAK					pP	16 47 50.9	+0.8
EGAK	Eagle	81.08	337	P	P	16 47 25.4	0.0
	baz=116,SNR=9.1						
K27K	Chicken	81.11	337	P	P	16 47 26.3	+0.7
	baz=116						
Q23K	Middleton Isla	81.15	331	P	P	16 47 25.8	0.0
	baz=111						
N25K	Chitina, Valde	81.17	334	P	P	16 47 26.1	+0.1
	baz=113						
VNA2	Neumayer--Watz	81.35	162	P	P	16 47 27.2	+0.5
	baz=303,slow=4.0						
TORD	Torodi Ar. Bea	81.57	76	P	P	16 47 27.9	-1.1
	comp=Z,1.7nm,0.7s,baz=276,slow=5.1,SNR=7.4						
TORD				pP	pP	16 47 53.5	-0.4
	comp=Z,1.9nm,1.0s,baz=259,slow=5.6,SNR=3.3						
	comp=Z,1.7nm,0.7s						
TORD	Torodi Ar. Bea	81.57	76	P	P	16 47 27.8	-1.2
KLU	Klutina	81.71	334	P	P	16 47 28.9	0.0
KLU	Klutina	81.71	334	P	P	16 47 29.1	+0.2
	baz=112,SNR=5.4						
HARP	HAARP	81.72	334	P	P	16 47 28.9	+0.1
	baz=112						
SCRK	Sand Creek	81.85	336	P	P	16 47 29.2	-0.5
SCRK	Sand Creek	81.85	336	P	P	16 47 29.8	+0.1
	baz=114,SNR=5.6						
J26L	Joseph Creek	81.90	337	P	P	16 47 30.2	+0.4
	baz=114,SNR=11						
GLI	Glacier Island	82.02	333	P	P	16 47 30.0	-0.4
GLI	Glacier Island	82.02	333	P	P	16 47 30.7	+0.2
	baz=110						
M24K	Tolsona, Glenn	82.05	334	P	P	16 47 30.1	-0.6
M24K				IAmb	IAmb	16 47 32.1	
	comp=Z,12nm,0.9s						
M24K	Tolsona, Glenn	82.05	334	P	P	16 47 31.0	+0.4
	baz=111						
PAX	Paxson	82.07	335	P	P	16 47 30.1	-0.7
PAX	Paxson	82.07	335	P	P	16 47 30.5	-0.3
	baz=112,SNR=5.8						
RIDG	Independent Ri	82.11	336	P	P	16 47 30.8	-0.2
	baz=113						
SCO	Scoresbysund	82.18	17	P	P	16 47 30.9	-0.1
SCM	Sheep Creek Mo	82.46	334	P	P	16 47 32.6	-0.2
SCM				IAmb	IAmb	16 47 33.8	
	comp=Z,12nm,0.9s						
SCM	Sheep Creek Mo	82.46	334	P	P	16 47 32.7	-0.1
	baz=110						
K24K	Donnelly Dome	82.52	336	P	P	16 47 33.0	0.0
	baz=112						
M23K	Glacier View	82.62	333	P	P	16 47 33.4	-0.2
	baz=110						
J25K	Salcha River,	82.66	337	P	P	16 47 33.7	-0.1
J25K				IAmb	IAmb	16 47 34.8	
	comp=Z,5.5nm,0.7s						
J25K	Salcha River,	82.66	337	P	P	16 47 33.9	+0.1
	baz=112,SNR=9.4						
KNK	Knik Glacier	82.82	333	P	P	16 47 33.9	-0.7
	baz=109						
SML	Sawmill	82.90	333	P	P	16 47 34.1	-0.9
SML				IAmb	IAmb	16 47 35.9	
	comp=Z,9.4nm,0.8s						
SML	Sawmill	82.90	333	P	P	16 47 34.9	-0.1
	baz=110						
WAT6	Susitna Watana	82.90	334	P	P	16 47 35.0	-0.2
	baz=110,SNR=7.2						
EUNU	Eureka	82.91	359	P	P	16 47 35.4	+0.5
EUNU				IAmb	IAmb	16 47 40.3	
	comp=Z,11nm,1.4s						
DHY	Denali Highway	82.92	335	P	P	16 47 34.5	-0.8
DHY	Denali Highway	82.92	335	P	P	16 47 34.8	-0.5
	baz=110						
SNAA	Sanae	82.95	162	P	P	16 47 35.8	+0.5
SNAA	Sanae	82.95	162	P	P	16 47 35.1	-0.2
SNAA				IAmb	IAmb	16 47 36.8	
	comp=Z,14nm,1.3s						
PMR	Palmer	83.18	333	P	P	16 47 36.0	-0.4
	baz=109						
HDA	Harding Lake	83.22	336	P	P	16 47 36.1	-0.5
HDA				IAmb	IAmb	16 47 37.2	
	comp=Z,7.7nm,0.8s						
HDA	Harding Lake	83.22	336	P	P	16 47 36.0	-0.6
	baz=111						
RC01	Rabbit Creek A	83.30	332	P	P	16 47 35.8	-1.3
	baz=108						
IL31		83.32	336	P	P	16 47 36.3	-0.8
IL31					pP	16 48 02.1	+0.3
ILAR	Eielson Array	83.32	336	P	P	16 47 36.7	-0.4
	comp=Z,3.2nm,0.8s,baz=122,slow=4.1,SNR=28						
ILAR				pP	pP	16 48 02.3	+0.5
	comp=Z,2.8nm,0.9s,baz=119,slow=3.2,SNR=8.4						
ILAR				PP	PP	16 50 49.8	-0.3
	comp=Z,1.1nm,0.9s,baz=106,slow=6.7,SNR=5.8						
ILAR				LR	LR	17 28 15.9	
	comp=Z,20nm,18.1s,baz=68,slow=38						
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	83.32	336	P	P	16 47 36.4	-0.7
ILAR				pP	pP	16 48 02.1	+0.3
WAT1	Susitna Watana	83.34	334	P	P	16 47 36.4	-0.9
	baz=109						
BRSE	Bradley Lake S	83.36	331	P	P	16 47 37.5	0.0
	baz=107						
BMAR	Burnt Mountain	83.48	339	P	P	16 47 37.7	-0.3
CCB	Clear Creek Bu	83.65	336	P	P	16 47 38.0	-0.8
RND	Reindeer	83.66	335	P	P	16 47 38.8	-0.2
RND				IAmb	IAmb	16 47 41.5	
	comp=Z,8.6nm,1.0s						
POKR	Poker Plat Res	83.67	337	P	P	16 47 38.2	-0.7
POKR	Poker Plat Res	83.67	337	P	P	16 47 38.4	-0.5
	baz=111						
WRH	Wood River Hil	83.70	336	P	P	16 47 38.9	-0.2
KDAK	Kodiak Island	83.73	329	P	P	16 47 39.3	0.0
	baz=105						
MDM	Murphy Dome	83.93	336	P	P	16 47 39.6	-0.6
MDM				IAmb	IAmb	16 47 41.1	
	comp=Z,9.8nm,1.1s						
OHAK	Old Harbor	83.95	328	P	P	16 47 40.2	-0.2
	baz=105						
H24K	Noodor Dome	84.09	337	P	P	16 47 41.2	+0.1
H24K				IAmb	IAmb	16 47 42.4	
	comp=Z,9.1nm,1.1s						
H24K					pP	16 48 06.7	+0.9
H24K	Noodor Dome	84.09	337	P	P	16 47 41.2	+0.1
	baz=110,SNR=8.0						
NEA2	Nenana	84.14	336	P	P	16 47 40.6	-0.7
NEA2				IAmb	IAmb	16 47 42.1	
	comp=Z,11nm,0.8s						
NEA2					pP	16 48 06.6	+0.6
NEA2	Nenana	84.14	336	P	P	16 47 41.1	-0.2
	baz=109,SNR=14						
SII	Sitkinak Islan	84.26	327	P	P	16 47 40.7	-1.4
	baz=104						
TRF	Thorofare Moun	84.28	335	P	P	16 47 41.7	-0.6
TRF				IAmb	IAmb	16 48 09.2	
	comp=Z,8.1nm,1.2s						
TRF	Thorofare Moun	84.28	335	P	P	16 47 41.4	-0.9
	baz=108						
SPU	Mount Spurr	84.40	332	P	P	16 47 42.3	-0.4
I23K	Minto, Yukon-K	84.44	336	P	P	16 47 42.5	-0.3
I23K				IAmb	IAmb	16 47 43.4	
	comp=Z,7.3nm,0.8s						
I23K					pP	16 48 07.7	+0.2
I23K	Minto, Yukon-K	84.44	336	P	P	16 47 42.8	0.0
	baz=109,SNR=7.7						
KTH	Kantishna Hill	84.59	335	P	P	16 47 43.1	-0.6
KTH				IAmb	IAmb	16 47 44.3	
	comp=Z,16nm,1.3s						
TROLL	Troll, Antarti	84.67	162	P	P	16 47 44.8	+0.8
BPAW	Bear Paw Mtn.	84.78	335	P	P	16 47 43.8	-0.8
BPAW	Bear Paw Mtn.	84.78	335	P	P	16 47 44.2	-0.4
	baz=107,SNR=15						
CHIR	Chirikof Islan	84.88	327	P	P	16 47 44.1	-1.1
	baz=102						
PPLA	Purkeypile	84.94	334	P	P	16 47 44.9	-0.6
PPLA				IAmb	IAmb	16 47 46.3	
	comp=Z,8.5nm,0.8s						
PPLA	Purkeypile	84.94	334	P	P	16 47 45.0	-0.6
	baz=106						
M20K	Styx River	85.09	333	P	P	16 47 45.8	-0.5
	baz=105						
I21K	Tanana	85.51	336	P	P	16 47 46.9	-1.2
I21K	Tanana	85.51	336	P	P	16 47 47.3	-0.8
	baz=106						
L20K	Farewell, AK	85.58	333	P	P	16 47 47.5	-1.2
	baz=104						
TOLK	Toolik Lake Re	85.67	340	P	P	16 47 48.3	-0.7
TOLK				IAmb	IAmb	16 47 54.4	
	comp=Z,9.5nm,1.4s						
M19K	Big River Lodg	85.67	333	P	P	16 47 47.6	-1.5
	baz=104						
K20K	Telida	85.89	334	P	P	16 47 49.4	-0.8
K20K				IAmb	IAmb	16 47 50.2	
	comp=Z,5.9nm,1.0s						
K20K	Telida	85.89	334	P	P	16 47 49.3	-0.8
	baz=104						
L19K	White Mountain	85.95	333	P	P	16 47 49.5	-0.9
L19K	White Mountain	85.95	333	P	P	16 47 49.7	-0.7
	baz=104						
H21K	Melozitna Rive	85.97	336	P	P	16 47 49.9	-0.6
H21K	Melozitna Rive	85.97	336	P	P	16 47 49.7	-0.7
	baz=106						
N18K	Kilae Creek	86.09	331	P	P	16 47 50.5	-0.6
	baz=103						
J20K	Nowinta River	86.13	335	P	P	16 47 50.1	-1.1
J20K	Nowinta River	86.13	335	P	P	16 47 50.7	-0.6
	baz=104						
DAG	Danmarks Havn	86.23	12	*i* P	P	16 47 44.0	-7.5
IMAR	Indian Mountai	86.43	337	P	P	16 47 51.9	-0.8
FALS	False Pass	89.11	325	P	P	16 48 05.4	-0.3
FALS	False Pass	89.11	325	P	P	16 48 05.5	-0.2
	baz=96						
SPIA	Saint Paul Isl	93.07	327	P	P	16 48 23.3	-0.7
	baz=90						
VNDA	Vanda	93.31	191	P	P	16 48 26.4	+1.6
	comp=Z,1.9nm,0.7s,baz=120,slow=3.6,SNR=12						
VNDA				LR	LR	17 24 58.3	
	comp=Z,60nm,19.3s,baz=294,slow=32						
	comp=Z,1.9nm,0.7s						
RAO	Raoul Island	96.41	240	LR	LR	17 24 00.3	
	comp=Z,57nm,18.4s,baz=294,slow=30						
ZALV	Zalesovo Beam	127.36	12	PKP	PKPdf	16 54 14.6	-0.1
	comp=Z,5.8nm,0.7s,baz=282,slow=2.3,SNR=23						
ZALV	Zalesovo Beam	127.36	12	PKPdf	PKPdf	16 54 14.2	-0.5
GEYT	Alibeck	127.50	43	PKP	PKPdf	16 54 16.0	+0.5
	comp=Z,2.4nm,0.6s,baz=52,slow=22,SNR=4.1						
STKA	Stephens Creek	128.28	225	PKP	PKPdf	16 54 17.4	+0.2
	comp=Z,3.1nm,0.8s,baz=63,slow=6.8,SNR=4.9						
USRK	Ussuriysk Ar.	130.57	331	PKP	PKPdf	16 54 21.4	+0.3
	comp=Z,0.7nm,0.7s,baz=44,slow=0.7,SNR=4.1						
MJAR	Matsushiro Arr	132.08	319	PKP	PKPdf	16 54 22.9	-1.3
	comp=Z,1.2nm,0.6s,baz=98,slow=2.8,SNR=4.8						
MKAR	Makanchi Array	133.30	18	PKP	PKPdf	16 54 25.7	-0.5
	comp=Z,1.0nm,0.6s,baz=313,slow=2.3,SNR=14						
SONM	Songino Array	134.95	355	PKP	PKPdf	16 54 29.1	-0.3
	comp=Z,1.4nm,0.7s,baz=308,slow=3.5,SNR=3.7						
KSRS	Korea Array	137.63	328	PKP	PKPdf	16 54 35.0	+0.4
	comp=Z,3.7nm,0.7s,baz=14,slow=1.5,SNR=16						
ASAR	Alice Springs	138.54	229	PKhKP	PKPpre	16 54 26.9	
	comp=Z,0.6nm,0.7s,baz=124,slow=3.2,SNR=11						
ASAR				PKP	PKPdf	16 54 36.5	-0.1
	comp=Z,3.4nm,0.8s,baz=109,slow=2.0,SNR=21						
WRA	Warramunga Arr	140.22	234	PKhKP	PKPpre	16 54 31.3	
	comp=Z,2.0nm,0.7s,baz=127,slow=2.7,SNR=18						
WRA				PKP	PKPdf	16 54 39.4	-0.4
	comp=Z,3.8nm,0.8s,baz=118,slow=1.5,SNR=20						
LZH	Lanzhou	146.83	356	⇓PKP	PKPbc	16 54 53.5	+0.5
LZH				pPKP	pPKPbc	16 55 19.3	+0.1
LZH				sPKP		16 55 30.1	
XAN	Xi'an	148.11	348	PKPbc	PKPdf	16 54 53.6	+0.4
XAN				pPKP	pPKPbc	16 55 21.9	-1.1
CMAR	Chiang Mai Arr	164.36	7	PKP	PKPdf	16 55 15.0	+0.4
	comp=Z,2.6nm,0.9s,baz=305,slow=1.6,SNR=16						
CMAR				PKPab	PKPab	16 56 08.5	-0.4
	comp=Z,1.4nm,0.8s,baz=328,slow=5.7,SNR=6.0						
CMAR	Chiang Mai Arr	164.36	7		PKPdf	16 55 14.4	-0.1

IDC ***24*** *16:46:06.5±1.5, 12°.23N×86°.49W, h0^{km}, mb3.3/4, mbtmp3.3/5, ML2.6/1, MS2.3/1, Error ellipse: s-maj=121.9km s-min=26.2km az=53.0*

INET ***24*** *16:46:07.3±0.5, 11°.33N×87°.22W, h8^{km}±20^{km}, MW3.6*

ISC 24 16:46:05.8±1.0**, 11°.38N**±0°.09×**87°.22W**±0°.08**, h10^{km}, n17,** σ**1ˢ.35**/18**, mb3.2**/4**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.01	38	*e*P	Pg	16 46 26.2	+1.0
TISN	Laguna Tiscapa	1.20	51	*e*P	Pn	16 46 29.4	+0.7
MOMN	Momotombo	1.22	33	*e*P	Pn	16 46 29.6	+0.6
MGAN	Managua	1.22	51	*e*P	Pn	16 46 29.5	+0.5
TEL3	Telica 3	1.24	17	*e*P	Pn	16 46 30.1	+0.8
WILN	Americas 2	1.27	52	*e*P	Pn	16 46 30.3	+0.5
CRIN	San Cristobal	1.32	7	*e*P	Pn	16 46 31.3	+0.8
HUEN		1.40	47	*e*P	Pn	16 46 32.0	+0.6
CSGN	Cosiguina Volc	1.62	348	*e*P	Pn	16 46 35.0	+0.4
JTS	Las Juntas de	2.48	116	Pn	Pn	16 46 47.5	+1.2
	1.4nm,0.3s,baz=13,slow=20,SNR=3.3						
JTS				Sn	Sn	16 47 14.4	-2.3
	14nm,0.3s,baz=15,slow=22,SNR=9.2						
JTS				LR	LR	16 47 49.2	
	comp=Z,61nm,18.1s,baz=328,slow=42						
	6.8nm,0.4s						
TXAR	Lajitas Array	23.54	322	P	P	16 51 17.2	+0.6
	0.6nm,0.7s,baz=135,slow=10,SNR=8.3						
	0.6nm,0.7s						
PDAR	Pinedale Array	36.82	332	P	P	16 53 13.7	-0.7
	0.2nm,0.7s,baz=122,slow=9.7,SNR=2.8						
	0.2nm,0.7s						
NVAR	Mina Array Bea	38.65	320	P	P	16 53 29.7	-0.2
	0.2nm,0.4s,baz=123,slow=8.0,SNR=2.2						
	0.2nm,0.4s						
YKA	Yellowknife Ar	54.70	345	P	P	16 55 32.2	-2.8
	0.5nm,0.7s,baz=156,slow=6.5,SNR=2.9						
	0.5nm,0.7s						
ASAR	Alice Springs	139.07	247	PKP	PKiKP	17 05 36.8	+0.8
	0.2nm,0.7s,baz=107,slow=1.9,SNR=1.6						
WRA	Warramunga Arr	139.18	253	PKP	PKiKP	17 05 39.0	+2.8
	0.3nm,0.6s,baz=90,slow=1.7,SNR=6.9						
CMAR	Chiang Mai Arr	149.73	348	PKPbc	PKPbc	17 05 57.4	+0.4
	0.7nm,0.7s,baz=338,slow=3.9,SNR=3.6						

JMA 24 16:46:32.3±0.2**, 25°N**±2°×**12°5E**±°**, h67^{km}**±2^{km}**, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	Tarama	0.32	153	P	Pn	16 46 43.5	+0.2
JTJ				S	Sn	16 46 51.5	+0.2
JIRB	Irabujima	0.58	100	P	Pn	16 46 45.5	-0.2
JIRB				S	Sn	16 46 55.1	-0.4
JIKM	Ikemajima	0.64	90	*e*P	Pn	16 46 46.5	+0.1
JIKM				S	Sn	16 46 56.7	+0.1
JIJ	Ishigaki jima	0.67	213	*i* P	Pn	16 46 46.5	-0.2
JIJ				S	Sn	16 46 56.6	-0.5
JMJ2	Miyako jima3	0.74	104	P	Pn	16 46 47.7	+0.2
JMJ2				S	Sn	16 46 58.8	+0.2
JOGS	Gusukube	0.81	102	P	Pn	16 46 48.4	+0.2
JOGS				*e*S	Sn	16 47 00.4	+0.4
JKRS	Kuro-shima	0.84	215	P	Pn	16 46 48.9	+0.2
JKRS				*e*S	Sn	16 47 01.2	+0.5
IRIF	Iriomote-Funau	0.94	231	P	Pn	16 46 50.3	+0.3
IRIF				*e*S	Sn	16 47 03.8	+0.8

TAP 24 16:47:14.7, 24°.93N×122°.26E, h24^{km}, ML2.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.26	288	*e*P	Pb	16 47 21.1	0.0
	baz=288						
TWB1				*e*S	Sb	16 47 26.0	+0.6
	baz=288						
SXI1	Grass Mountain	0.39	296	P	Pb	16 47 23.7	+0.6
	baz=295						
SXI1				S	Sb	16 47 30.0	+1.2
	baz=295						
TIPB	Shuangxi	0.40	277	P	Pb	16 47 23.8	+0.6
	baz=276						
TIPB				S	Sb	16 47 30.3	+1.3
	baz=276						
NWF	Wu-fen Shan	0.46	288	*e*P	Pb	16 47 25.0	+0.8
	baz=288						
NWF				*e*S	Sn	16 47 32.5	-0.8
	baz=288						
TWC	Suao	0.49	230	*e*P	Pn	16 47 25.7	-0.5
	baz=228						
TWC				*e*S	Sn	16 47 33.4	-0.5
	baz=228						
NDS	Dongshan	0.57	239	*e*P	Pb	16 47 26.3	+0.2
	baz=239						
NDS				*e*S	Sb	16 47 34.2	+0.3
	baz=239						
FUSB	Fushanzhiwuyua	0.63	255	*e*P	Pb	16 47 27.7	+0.5
	baz=254						
FUSB				*e*S	Sn	16 47 37.8	+0.2
	baz=254						
EWUT	Wuta	0.65	222	*e*S	Sn	16 47 38.2	+0.3
	baz=222						
YM01	YM01	0.66	289	*e*P	Pn	16 47 28.1	-0.5
	baz=289						
YM01				*e*S	Sn	16 47 38.2	-0.1
	baz=289						
ENA	Nanau	0.68	224	*e*P	Pb	16 47 28.2	+0.2
	baz=222						
ENA				*e*S	Sn	16 47 38.5	-0.3
	baz=222						
ENTT	Nioudou	0.69	246	*e*P	Pn	16 47 28.6	-0.3
	baz=245						
ENTT				*e*S	Sn	16 47 38.9	0.0
	baz=245						
TWY	Chenhua	0.69	300	*e*P	Pb	16 47 28.1	0.0
	baz=300						
TWY				*e*S	Sn	16 47 38.3	-0.6
	baz=300						
NWLT	Wulai	0.70	258	*e*P	Pb	16 47 28.5	+0.2
	baz=257						
NWLT				*e*S	Sn	16 47 39.3	+0.1
	baz=257						
PCYT	Pengchaiyu	0.72	346	*e*P	Pb	16 47 28.5	-0.2
	baz=346						
PCYT				*e*S	Sn	16 47 39.0	-0.6
	baz=346						
LATG	Datong	0.77	240	P	Pn	16 47 30.1	-0.1
	baz=239						
LATG				S	Sn	16 47 40.6	-0.5
	baz=239						
YOJ	Yonaguni jima	0.83	124	*e*P	Pb	16 47 29.1	-1.3
	baz=123						
YOJ				*e*S	Sb	16 47 39.8	-1.4
	baz=123						
YHNB	Yeheng	0.84	252	*e*P	Pb	16 47 30.7	-0.1
	baz=252						
YHNB				*e*S	Sn	16 47 43.0	+0.2
	baz=252						
NNSB	Datong	0.94	238	*e*S	Sn	16 47 45.3	+0.1
	baz=238						
NACB	Ninganchiao	0.96	219	*e*P	Pn	16 47 32.3	-0.4
	baz=218						
NACB				*e*S	Sb	16 47 45.3	+0.3
	baz=218						
ETLH	Xiulin Townshi	1.01	225	*e*P	Pn	16 47 32.7	-0.7
	baz=224						
ETLH				*e*S	Sn	16 47 47.0	+0.2

	baz=224						
FUSS	**Fushou**	1.15	234	*e*P	Pn	16 47 35.3	-0.2
	baz=233						
FUSS				*e*S	Sn	16 47 50.4	-0.1
	baz=233						
WHF	**Hehuan Shan**	1.19	229	*e*P	Pn	16 47 35.9	-0.4
	baz=229						
WHF				*e*S	Sn	16 47 51.7	-0.3
	baz=229						
CHGB	**Renai**	1.31	229	*e*P	Pn	16 47 37.4	-0.3
	baz=228						
CHGB				*e*S	Sn	16 47 54.5	0.0
	baz=228						
OWD	**Renai**	1.38	226	*e*P	Pn	16 47 38.9	+0.3
	baz=225						
OWD				*e*S	Sn	16 47 55.9	-0.3
	baz=225						
WUSB	**Renai**	1.40	228	*e*P	Pn	16 47 38.7	-0.1
	baz=228						
WUSB				*e*S	Sn	16 47 56.4	-0.1
	baz=228						

IDC 24 17:07:08.7±5.2, 7°.04S×129°.95E, h150^{km}±69^{km}, mb3.3/1, mbtmp3.5/4, MS3.1/1, Error ellipse: s-maj=139.1km s-min=23.0km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	6.27	12	P	Pn	17 08 39.4	+0.3
	3.0nm,0.4s,baz=60,slow=22,SNR=16						
SIJI				S	Sn	17 09 43.7	-6.1
	2.4nm,0.4s,baz=242,slow=23,SNR=2.2						
WRA	**Warramunga Arr**	13.52	162	P	Pn	17 10 12.6	-1.9
	0.2nm,0.3s,baz=346,slow=13,SNR=14						
WRA				S	Sn	17 12 35.0	-9.3
	0.4nm,0.3s,baz=347,slow=21,SNR=9.6						
ASAR	**Alice Springs**	16.96	167	P	Pn	17 10 58.6	+1.3
	0.3nm,0.3s,baz=342,slow=9.6,SNR=23						
ASAR				S	S	17 14 00.1	-5.9
	0.1nm,0.3s,baz=141,slow=16,SNR=5.6						
JCJ	**Chichijima**	35.94	19	LR	LR	17 28 22.0	
	comp=Z,34nm,21.9s,baz=105,slow=35						
MKAR	**Makanchi Array**	68.23	327	P	P	17 17 53.1	-0.1
	0.3nm,0.4s,baz=123,slow=8.4,SNR=8.1						
	0.3nm,0.4s						

*IDC **24** 17:26:41.6±1.6, 38°.37S×177°.20E, h88^{km}±5^{km}, mb3.6/2, mbtmp3.9/3, Error ellipse: s-maj=35.8km s-min=20.1km az=114.0*

*WEL **24** 17:26:42.8±0.5, 38°S±3°×17°7E±°, h70^{km}±5^{km}, M3.7/60, ML3.9/61, MLv3.7/60, Error ellipse: s-maj=0.0km s-min=0.0km az=81.4*

ISC 24 17:26:40.6±0.9, 38°.05S±0°.04×177°.43E±0°.04, h99^{km}±6^{km}, n123, σ1^s.19/132, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUGZ	**Raukumara Rang**	0.21	68	P	Pn	17 26 54.5	-0.4
RUGZ				S	Sn	17 27 03.7	-1.8
MWZ	**Matawai**	0.30	164	P	Pn	17 26 55.6	+0.5
MWZ				S	Sn	17 27 06.1	+0.1
URZ	**Urewera**	0.33	229	P	Pn	17 26 54.9	-0.3
	1µm,0.3s,baz=262,slow=4.7,SNR=4067						
URZ				S	Sn	17 27 04.8	-1.3
	2µm,0.5s,baz=57,slow=23,SNR=14						
URZ	**Urewera**	0.33	229	P	Pn	17 26 55.2	0.0
URZ				S	Sn	17 27 05.2	-0.9
WHRZ	**Whale Island**	0.40	298	P	Pn	17 26 55.8	+0.2
HAZ	**Te Kaha**	0.40	45	P	Pn	17 26 55.6	0.0
HAZ				S	Sn	17 27 05.5	-1.3
RAGZ	**Rawiri**	0.45	181	P	Pn	17 26 56.8	+0.8
TWGZ	**Tauwhareparae**	0.46	107	P	Pn	17 26 57.0	+1.0
TKGZ	**Te Karaka**	0.52	140	P	Pn	17 26 57.2	+0.8
PKGZ	**Pakihiroa**	0.54	73	P	Pn	17 26 57.3	+0.7
PKGZ				S	Sn	17 27 09.0	+0.4
EDRZ	**Edgecumbe**	0.55	263	P	Pn	17 26 56.9	+0.3
WIZ	**White Island**	0.55	340	P	Pn	17 26 56.2	-0.4
WSRZ	**White Island S**	0.56	339	P	Pn	17 26 56.8	0.0
MARZ	**Manawahe**	0.60	276	P	Pn	17 26 57.1	+0.1
PUZ	**Puketiti**	0.66	93	P	Pn	17 26 58.1	+0.6
RTZ	**Ruatahuna**	0.67	211	P	Pn	17 26 57.9	+0.2
MUGZ	**Murupara**	0.67	230	P	Pn	17 26 58.0	+0.4
RIGZ	**Rimuhau**	0.71	158	P	Pn	17 26 59.3	+1.2
RIGZ				S	Sn	17 27 13.3	+2.1
OPRZ	**Ohinepanea**	0.72	286	P	Pn	17 26 58.1	0.0
OPRZ				S	Sn	17 27 09.9	-1.3
SNGZ	**Shannon Statio**	0.74	185	P	Pn	17 26 59.3	+1.0
SNGZ				S	Sn	17 27 12.8	+1.2
TARZ	**Mount Tarawera**	0.75	255	P	Pn	17 26 59.2	+0.7
CNGZ	**Carnagh Statio**	0.76	126	P	Pn	17 26 59.9	+1.5
MKRZ	**Makatiti**	0.76	263	P	Pn	17 26 59.6	+1.0
RRRZ	**Republican Roa**	0.78	247	P	Pn	17 26 59.2	+0.6
WMGZ	**Waiomatatini S**	0.81	74	P	Pn	17 26 59.9	+1.0
LIRZ	**Lichensteins R**	0.82	273	P	Pn	17 26 59.6	+0.6
OMRZ	**Omania**	0.83	265	P	Pn	17 26 59.8	+0.6
MXZ	**Matakaoa Point**	0.85	56	P	Pn	17 27 00.4	+1.1
MXZ				S	Sn	17 27 14.8	+1.5
HLRZ	**Highlands Stat**	0.87	256	P	Pn	17 27 00.4	+0.8
RAHZ	**Arahi**	0.91	197	P	Pn	17 27 01.3	+1.3
MTHZ	**Maungataniwha**	0.93	209	P	Pn	17 27 00.8	+0.6
MTHZ				S	Sn	17 27 15.6	+0.7
PRRZ	**Plateau Road**	0.93	241	P	Pn	17 27 00.8	+0.6
KARZ	**Kaharoa**	0.93	271	P	Pn	17 27 00.7	+0.5
HRRZ	**Handcock Road**	0.96	249	P	Pn	17 27 01.2	+0.7
HSRZ	**Hossack Road**	0.97	254	P	Pn	17 27 01.7	+1.1
TGRZ	**Tauranga**	0.97	289	P	Pn	17 27 00.8	+0.2
NGRZ	**Ngongotaha**	0.98	266	P	Pn	17 27 01.8	+1.0
UTU	**Utuhina**	0.98	262	P	Pn	17 27 02.2	+1.5
KNZ	**Kokohu**	0.99	169	P	Pn	17 27 01.8	+0.9
KNZ				S	Sn	17 27 16.5	+0.5
ALRZ	**Allen Road**	1.00	238	P	Pn	17 27 01.7	+0.8
GRRZ	**Galatos Road**	1.08	253	P	Pn	17 27 02.9	+1.1
WPRZ	**Whakapapatarin**	1.10	244	P	Pn	17 27 03.1	+1.1
MRHZ	**Matea Rd**	1.12	225	P	Pn	17 27 03.0	+0.8
NMHZ	**Naumai**	1.16	205	P	Pn	17 27 04.4	+1.6
MHGZ	**Mahia Peninsul**	1.17	161	P	Pn	17 27 04.1	+1.3
KMRZ	**Kaimai**	1.19	279	P	Pn	17 27 03.6	+0.6
MYRZ	**Mayor Island**	1.21	309	P	Pn	17 27 03.8	+0.5
ARHZ	**Aropaoanui**	1.26	195	P	Pn	17 27 05.2	+1.3
BKZ	**Black Stump Fm**	1.34	213	P	Pn	17 27 05.7	+0.9
KUTZ	**Kaahu Road**	1.34	250	P	Pn	17 27 06.0	+1.2
HATZ	**Hinemaiaia**	1.34	231	P	Pn	17 27 05.8	+0.9
WATZ	**Wairara**	1.49	243	P	Pn	17 27 07.8	+1.2
MCHZ	**McNeill Hill**	1.51	202	P	Pn	17 27 08.0	+1.2
TLZ	**Tolley Road**	1.51	259	P	Pn	17 27 08.0	+1.1
RATZ	**Rangitukua**	1.54	237	P	Pn	17 27 08.5	+1.3
RITZ	**Rihia Road**	1.54	232	P	Pn	17 27 08.7	+1.4
TOZ	**Tahuroa Road**	1.55	281	P	Pn	17 27 08.3	+0.9
KWHZ	**Kaweka Forest**	1.58	209	P	Pn	17 27 08.8	+0.9
CKHZ	**Cape Kidnapper**	1.63	189	P	Pn	17 27 09.1	+0.7
KATZ	**Kakaramea**	1.65	235	P	Pn	17 27 10.3	+1.6
TMVZ	**Te Maari**	1.72	231	P	Pn	17 27 10.8	+1.1
NTVZ	**North Tongarir**	1.73	232	P	Pn	17 27 10.9	+1.2
ETVZ	**East Tongariro**	1.73	230	P	Pn	17 27 10.8	+1.1
KRVZ	**Karewarewa**	1.75	233	P	Pn	17 27 08.9	-1.1
OTVZ	**Oturere**	1.77	230	P	Pn	17 27 11.4	+1.1
NNVZ	**North Ngauruho**	1.79	232	P	Pn	17 27 11.9	+1.4
WTVZ	**West Tongariro**	1.79	233	P	Pn	17 27 11.8	+1.3
BHHZ	**Black Hill Sta**	1.79	216	P	Pn	17 27 11.1	+0.6
KRHZ	**Kereru**	1.80	207	P	Pn	17 27 10.9	+0.4
KAHZ	**Kahuranaki**	1.80	194	P	Pn	17 27 11.3	+0.7
SNVZ	**South Ngauruho**	1.80	230	P	Pn	17 27 11.8	+1.1
NGZ	**Ngauruhoe**	1.82	231	P	Pn	17 27 12.2	+1.2
TWVZ	**Taurewa**	1.86	236	P	Pn	17 27 12.5	+1.0
KUZ	**Kuaotunu**	1.88	313	P	Pn	17 27 11.9	+0.4
MOVZ	**Moawhango**	1.89	223	P	Pn	17 27 12.2	+0.5
WHVZ	**Whangaehu Hut**	1.90	229	P	Pn	17 27 12.8	+0.8
FWVZ	**Far West T-bar**	1.90	230	P	Pn	17 27 12.9	+0.9
WNVZ	**Wahianoa**	1.92	228	P	Pn	17 27 13.0	+0.8
TRVZ	**Turoa**	1.93	229	P	Pn	17 27 13.3	+0.9
MKAZ	**Moumakai**	2.03	297	P	Pn	17 27 14.5	+1.0
PXZ	**Pawanui**	2.03	192	P	Pn	17 27 13.5	+0.1
HIZ	**Hauiti**	2.08	256	P	Pn	17 27 15.9	+1.8
PNHZ	**Pukenui**	2.10	207	P	Pn	17 27 14.3	-0.1
WPHZ	**Waipukurau**	2.16	201	P	Pn	17 27 15.0	-0.1
WIAZ	**Waiheke Island**	2.21	304	P	Pn	17 27 17.0	+1.1
ETAZ	**East Tamaki Re**	2.27	298	P	Pn	17 27 18.0	+1.5
PRHZ	**Porangahau**	2.30	195	P	Pn	17 27 16.8	-0.2
TSZ	**Takapari Road**	2.31	209	P	Pn	17 27 16.8	-0.4
VRZ	**Vera Road**	2.35	242	P	Pn	17 27 19.3	+1.7
MBAZ	**Motutapu North**	2.38	302	P	Pn	17 27 19.5	+1.4
GRZ	**Great Barrier**	2.38	318	P	Pn	17 27 18.9	+0.8
AWAZ	**Awhitu Peninsu**	2.42	293	P	Pn	17 27 20.1	+1.6
EPAZ	**Eden Park BICE**	2.43	298	P	Pn	17 27 20.3	+1.6
DVHZ	**Dannevirke**	2.45	203	P	Pn	17 27 18.4	-0.7
HBAZ	**Herne Bay Bore**	2.45	298	P	Pn	17 27 20.7	+1.8
ABAZ	**Army Bay**	2.52	304	P	Pn	17 27 21.5	+1.7
WTAZ	**Waiatarua**	2.53	295	P	Pn	17 27 21.7	+1.7
WAZ	**Wanganui**	2.56	227	P	Pn	17 27 21.7	+1.3
RVAZ	**Riverhead Bore**	2.60	298	P	Pn	17 27 22.5	+1.6
MHEZ	**Mangahewa**	2.64	246	P	Pn	17 27 27.9	+6.5
POWZ	**Post Office Ro**	2.67	208	P	Pn	17 27 21.6	-0.3
OHWZ	**Ohakea**	2.71	217	P	Pn	17 27 22.9	+0.5
PRWZ	**Pori Road**	2.75	204	P	Pn	17 27 22.7	-0.2
LREZ	**Lake Rotokare**	2.75	238	P	Pn	17 27 24.7	+1.7
BFZ	**Birch Farm**	2.79	199	P	Pn	17 27 22.4	-1.0
NEZ	**North Egmont**	2.88	244	P	Pn	17 27 29.0	+4.3
PKE	**Pukeiti**	2.93	246	P	Pn	17 27 32.6	+7.3
KHEZ	**Kahui Hut**	2.95	244	P	Pn	17 27 30.9	+5.3
TIWZ	**Tintock**	2.98	203	P	Pn	17 27 25.3	-0.6
MRZ	**Mangatainoka R**	2.98	208	P	Pn	17 27 24.9	-1.1
NBEZ	**Newall Road No**	3.04	245	P	Pn	17 27 34.6	+7.8
WCZ	**Waipu Caves**	3.24	310	P	Pn	17 27 31.0	+1.6
OGWZ	**Otaki Gorge**	3.27	212	P	Pn	17 27 28.9	-1.0
TMWZ	**Te Maipa**	3.28	201	P	Pn	17 27 28.7	-1.4
KIW	**Kapiti Island**	3.42	214	P	Pn	17 27 30.7	-1.2
OUZ	**Omahuta**	4.17	311	P	Pn	17 27 44.1	+2.1
TKNZ	**Takaka Hill**	4.56	228	P	Pn	17 27 46.9	-0.4
QRZ	**Quartz Range**	4.70	232	P	Pn	17 27 48.8	-0.4
CTZ	**Chatham Island**	7.26	143	P	Pn	17 28 26.5	+2.7
RPZ	**Rata Peaks**	7.44	218	P	Pn	17 28 23.6	-2.7
	4.5nm,0.4s,baz=290,slow=0.4,SNR=11						
RPZ				S	Sn	17 29 40.9	-8.2
	6.4nm,0.3s,baz=135,slow=21,SNR=14						
ASAR	**Alice Springs**	39.66	278	P	P	17 34 04.2	+1.3
	0.8nm,0.4s,baz=117,slow=6.2,SNR=68						
ASAR				PcP	PcP	17 36 07.7	-0.3
	0.2nm,0.4s,baz=118,slow=3.9,SNR=5.5						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	41.36	283	P	P	17 34 18.1	+1.1
	0.8nm,0.5s,baz=124,slow=7.1,SNR=29						
	0.8nm,0.5s						
FINES	**FINESS Array B**	150.59	332	PKPbc	PKPab	17 46 23.7	-3.3
	0.5nm,0.5s,baz=46,slow=4.0,SNR=4.2						

*ATH **24** 17:36:33.7, 37°.47N×19°.78E, h11^{km}±2^{km}, ML3.0/6, Error ellipse: s-maj=2.6km s-min=1.2km az=287.0*

*THE **24** 17:36:35.0, 37°.53N×19°.80E, h7^{km}±2^{km}, ML3.5/4, Error ellipse: s-maj=3.4km s-min=1.2km az=88.0*

ISC 24 17:36:31.9±1.4, 37°.74N±0°.05×19°.47E±0°.02, h16^{km}±11^{km}, n53, σ2^s.13/75, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	0.83	56	P	Pn	17 36 50.2	+1.2
KEF3				S	Sn	17 37 02.3	+1.6
KEF3	**Kipouria, Keph**	0.83	56	P	Pn	17 36 50.1	+1.2
KEF3				S	Sn	17 37 02.8	+2.0
	11µm,0.3s						
DMLN	**Damoulianata-K**	0.87	55	P	Pn	17 36 50.4	+1.0
DMLN				S	Sn	17 37 02.5	+0.8
LXRA	**Lixouri, Kepha**	0.89	59	P	Pn	17 36 50.6	+0.9
LXRA				S	Sn	17 37 03.0	+0.8
ARGA	**Argostoli. Kep**	0.91	61	P	Pn	17 36 51.6	+1.6
KEF4	**Livadi, Kephal**	0.91	55	P	Pn	17 36 51.0	+1.0
KEF4				S	Sn	17 37 03.7	+0.9
KEF4	**Livadi, Kephal**	0.91	55	P	Pn	17 36 50.9	+0.9
KEF4				S	Sn	17 37 04.2	+1.4
	14µm,0.2s						
PSDA	**Pessada-Kefalo**	0.95	67	P	Pn	17 36 50.7	+0.2
VLS	**Valsamata**	0.98	64	P	Pn	17 36 51.3	+0.3
VLS				S	Sn	17 37 04.8	+0.1
VLS	**Valsamata**	0.98	64	P	Pn	17 36 51.2	+0.2
VLS				S	Sn	17 37 04.6	0.0
FSK	**Fiskardo**	1.12	50	P	Pg	17 36 55.2	+1.7
FSK				S	Sn	17 37 10.7	+2.8
FSK				AML	AML	17 37 18.9	
	comp=E,3653µm,0.5s						
FSK				AML	AML	17 37 19.6	
	comp=N,2524µm,0.6s						
DRAG	**Dragano-Lefkad**	1.28	42	P	Pg	17 36 58.5	+2.0
EVGI	**Lefkada island**	1.28	46	P	Pg	17 36 57.9	+1.3
LKD2	**Lefkada island**	1.40	41	P	Pg	17 37 00.3	+1.5
LKD2				S	Sg	17 37 20.6	+3.5
LKD2				AML	AML	17 37 28.4	
	comp=N,2280µm,0.3s						
LKD2				AML	AML	17 37 29.9	
	comp=E,3334µm,0.7s						
LKD2	**Lefkada island**	1.40	41	P	Pg	17 36 59.5	+0.6
LKD2				S	Sg	17 37 20.2	+3.1
	comp=E,1µm,0.5s						
TSLK	**Tsoukalades, L**	1.43	40	P	Pg	17 37 01.3	+2.0
RLS	**Riolos of Patr**	1.61	78	P	Pn	17 37 00.5	+1.0
RLS				S	Sn	17 37 19.5	-0.5
RLS				AML	AML	17 37 39.0	
	comp=N,982µm,0.5s						
RLS				AML	AML	17 37 39.8	
	comp=E,714µm,0.5s						
RLS	**Riolos of Patr**	1.61	78	P	Pn	17 37 00.6	+1.0
DRO	**Drossia**	1.79	83	P	Pn	17 37 03.0	+0.9
DRO				S	Sn	17 37 23.8	-0.6
DRO				AML	AML	17 37 43.6	
	comp=E,621µm,0.9s						
DRO				AML	AML	17 37 46.9	
	comp=N,1052µm,0.5s						
DRO	**Drossia**	1.79	83	P	Pn	17 37 02.9	+0.9
PVO	**Paravola**	1.84	61	P	Pb	17 37 05.4	+0.3
PYL	**PYLOS**	2.00	114	P	Pn	17 37 03.5	-1.4
PYL				S	Sn	17 37 25.1	-4.5
PYL				AML	AML	17 37 29.9	
	comp=N,215µm,0.4s						
PYL				AML	AML	17 37 33.1	
	comp=E,194µm,0.4s						
PYL	**PYLOS**	2.00	114	P	Pn	17 37 04.8	-0.2
PYL				S	Sn	17 37 25.6	-4.0
	comp=E,115nm,0.3s						
ITM	**Ithomi**	2.03	105	P	Pn	17 37 04.7	-0.8
ITM				S	Sn	17 37 27.3	-3.2
ITM				AML	AML	17 37 50.6	
	comp=E,219µm,0.4s						
ITM				AML	AML	17 37 51.8	
	comp=N,347µm,0.4s						
ITM	**Ithomi**	2.03	105	P	Pn	17 37 04.7	-0.8
EFP	**Efpalio**	2.04	70	P	Pb	17 37 07.4	-1.1
ANX	**Ano Chora**	2.11	66	P	Pb	17 37 08.9	-0.9
KLV	**Kalavryta, Ach**	2.14	81	P	Pn	17 37 08.1	+1.1
KLV	**Kalavryta, Ach**	2.14	81	P	Pn	17 37 08.2	+1.2
SRN	**Sarande**	2.17	11	P	Pg	17 37 11.6	-2.0
EVR	**Evrytania**	2.18	57	P	Pb	17 37 10.7	-0.3
GUR	**Goura**	2.28	84	P	Pn	17 37 09.7	+0.8
SCTE	**Santa Cesarea**	2.45	342	P	Pg	17 37 15.4	-3.6
SCTE				S	Sg	17 37 45.0	-5.8
PLAC	**Placanica**	2.49	287	P	Pb	17 37 16.6	+0.3
SERS	**Sersale**	2.54	301	P	Pb	17 37 17.2	+0.1
TIP	**Timpagrande**	2.57	305	P	Pg	17 37 18.4	-2.7
THL	**Klokotos Trika**	2.70	47	P	Pb	17 37 18.0	-1.7
SOI	**Samo**	2.72	278	P	Pb	17 37 19.0	-1.1
CELI	**Celico**	2.85	306	P	Pb	17 37 21.0	-1.5
JOPP	**Joppolo**	2.95	288	P	Pb	17 37 23.1	-1.1
CAR1	**CAROLEI**	2.97	302	P	Pb	17 37 24.4	0.0
MTTG	**Motta San Giov**	3.00	276	P	Pb	17 37 23.2	-1.7
MESG	**Mesagne**	3.11	337	P	Pb	17 37 24.4	-2.4
MSRU	**Castanea**	3.17	281	P	Pb	17 37 26.1	-1.8
HAGA	**Augusta**	3.46	264	P	Pn	17 37 27.6	+2.5
HAGA				S	Sn	17 38 06.9	+1.2
LTRZ	**Laterza**	3.52	325	P	Pb	17 37 29.8	-4.0
SSY	**Sortino**	3.55	262	P	Pn	17 37 28.9	+2.6
SSY				S	Sn	17 38 10.1	+2.1
HAVL	**Avola**	3.55	259	P	Pn	17 37 29.4	+3.1
NOCI	**Noci**	3.57	329	P	Pb	17 37 30.7	-3.9
MEU	**Monte Lauro**	3.67	261	P	Pn	17 37 31.7	+3.6
MEU				S	Sn	17 38 14.1	+3.1
MEU				AML	AML		
	comp=E,306µm,1.5s						
MEU				AML	AML		
	comp=N,754µm,1.4s						
HLNI	**Lentini**	3.68	265	P	Pn	17 37 30.6	+2.6
HLNI				S	Sn	17 38 12.2	+1.2
HLNI				AML	AML		
	comp=E,196µm,0.2s						
HLNI				AML	AML		
	comp=N,117µm,0.9s						
HLNI				AML	AML		
	comp=E,213µm,0.3s						
HLNI				AML	AML		
	comp=N,186µm,1.5s						
HMDC	**Modica**	3.82	260	P	Pn	17 37 32.8	+2.8
HMDC				S	Sn	17 38 15.8	+1.2
CLTA	**Licata**	4.42	264	P	Pn	17 37 42.9	+4.6

*BJI **24** 17:43:25.3±0.0, 14°.18N×45°.11E, h5^{km}, mb4.7/53, mB4.9/30, Ms5.0/35, Ms7 4.6/33*

*GCMT **24** 17:43:27.7±0.3, 14°.11N±0°.02×45°.37E±0°.02, h19^{km}±1^{km}, MW4.8/75, Moment Tensor Solution. s21,c24; s75,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.15±.14; $M_{\theta\theta}$1.88±.10; $M_{\phi\phi}$-0.73±.08; $M_{r\theta}$0.61±.18; $M_{\theta\phi}$-0.86±.07; $M_{\phi r}$-1.31±.25; Best double couple: $M_0$2.34600×10^{16} NP1:ϕ_s72.00000°, δ43.00000°, λ-151.00000°. NP2: ϕ_s320.00000°, δ71.00000°, λ-51.00000°. Principal axes: T 2.4200, Plg16.0000°, Azm22.0000°; N -0.1550, Plg36.0000°, Azm125.0000°; P -2.2720, Plg49.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **24** 17:43:27.9±0.5, 14°.22N×45°.27E, h0^{km}, mb4.5/33, mbtmp4.5/35, ML3.6/2, MS4.3/19 Error ellipse: s-maj=14.2km s-min=10.9km az=117.0*

*MOS **24** 17:43:28.4±0.8, 13°.98N×45°.37E, h26^{km}, mb5.0/37, MS4.2/10, Error ellipse: s-maj=10.9km s-min=5.0km az=80.4*

*NEIC **24** 17:43:28.7±1.9, 14°.09N±0°.06×45°.33E±0°.06, h10^{km}±1^{km}, mb4.9/104, Error ellipse: s-maj=12.9km s-min=6.1km az=135.0*

*OMAN **24** 17:43:30.7±0.1, 14°.55N×45°.23E, h10^{km}, mb4.8/22, Error ellipse: s-maj=2.6km s-min=1.3km az=327.0*

*DSN **24** 17:43:35.4±3.2, 14°.87N×45°.71E, h10^{km}, mb5.3/1, Error ellipse: s-maj=38.0km s-min=16.8km az=16.0*

*AAE **24** 17:43:35.1±7.3, 14°.09N×45°.21E, h0^{km}±217^{km}, Ms4.6*

ISC 24 17:43:28.6±0.3, 14°.13N±0°.04×45°.32E±0°.04, h10^{km}, n430, σ1^s.85/432, mb4.8/128, MS4.4/44, 19C-13D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I19DJ	**I19DJ**	3.37	219	*i*		17 59 20.0	
	baz=34,slow=311,SNR=0.5						
ATD	**Arta Tunnel**	3.54	223	Pn	Pn	17 44 19.4	-4.3
	33nm,0.3s,baz=14,slow=6.2,SNR=50						
ATD				Sn	Sb	17 45 13.1	-1.3
	228nm,0.3s,baz=185,slow=23,SNR=10						
ATD				LR	LR	17 45 31.5	
	comp=Z,4µm,19.3s,baz=9.0,slow=35						
ATD	**Arta Tunnel**	3.54	223	Pn	Pn	17 44 19.0	-4.7
ATD	**Arta Tunnel**	3.54	223	P	Pn	17 44 27.0	+3.3
	SNR=32						
ATD				S	Sb	17 45 14.1	-0.3
ATD	**Arta Tunnel**	3.54	223	*e*P	Pn	17 44 24.7	+1.0
ATD				*e*S	Sn	17 45 04.5	-1.1
HARA	**HARA**	5.21	203	*e*P	Pn	17 44 51.5	+4.6
HARA				*e*S	Sn	17 45 44.6	-2.7
HARA	**HARA**	5.21	203	*e*P	Pn	17 44 49.7	+2.8
HARA	**HARA**	5.21	203	*e*S	Sn	17 45 47.7	+0.4
DESE	**Dese**	6.31	242	*e*P	Pn	17 45 06.6	+4.6
DESE				*e*S	Sn	17 46 15.4	+1.0
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 32.0	+4.2
AAE				*e*S	Sn	17 46 54.3	-6.2
AAE				IAMs		17 48 00.9	
	comp=N,26µm,14.1s						
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 29.5	+1.7
AAE				*e*S	Sb	17 47 26.8	-1.7
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 28.1	+0.3
AAE				⇓*e*S	Sb	17 47 26.9	-1.5
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 30.8	+3.0
AAE				⇓*e*S	Sb	17 47 30.4	+2.0
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 33.7	+5.9
AAE				*e*S	Sb	17 47 26.1	-2.4
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 28.1	+0.3
AAE				*e*S	Sb	17 47 19.0	-9.4
AAE	**Adis Abeba**	8.18	232	*e*P	Pn	17 45 30.8	+3.0
AAE				⇓*e*S	Sb	17 47 30.4	+2.0
AAE	**Adis Abeba**	8.18	232	*e*S	Sn	17 46 54.3	-6.2
AAE				IAMs_20	IAMs_20	17 48 00.9	
	comp=N,26µm,14.1s						
AAE	**Adis Abeba**	8.18	232	*e*S	Sb	17 47 26.1	-2.4
ABTO	**Aybut**	8.32	66	P	Pn	17 45 30.6	+1.2
	SNR=38						
FURI	**Furi**	8.33	232	Pn	Pn	17 45 29.0	-0.9
FURI	**Furi**	8.33	232	*e*P	Pn	17 45 27.2	-2.7
FURI				*e*S	Sn	17 47 01.2	-3.1
FURI				IAMs_20	IAMs_20	17 49 10.0	
	comp=N,7µm,7.1s						
FURI	**Furi**	8.33	232	*e*P	Pn	17 45 26.1	-3.8
FURI				*e*S	Sb	17 47 35.7	+2.9
FURI	**Furi**	8.33	232	*e*P	Pn	17 45 27.0	-2.9
FURI				*e*S	Sb	17 47 35.5	+2.8
FURI	**Furi**	8.33	232	*e*P	Pn	17 45 27.0	-2.9
FURI				*e*S	Sb	17 47 35.5	+2.8
FURI	**Furi**	8.33	232	*e*P	Pn	17 45 27.2	-2.7
FURI				*e*S	Sn	17 47 01.2	-3.1
FURI				IAMs_20	IAMs_20	17 49 10.0	
	comp=N,7µm,7.1s						
SOCY	**Socotra**	8.66	102	Pn	Pn	17 45 32.6	-1.6
SOCY	**Socotra**	8.66	102	P	Pn	17 45 37.3	+3.1
	SNR=10						
WHFO	**Wadi Hawf**	8.95	64	P	Pn	17 45 39.0	+0.8
	SNR=128						
RBK	**Rabkut**	9.18	67	P	Pn	17 45 43.3	+2.0
RAYN	**Ar Rayn**	9.35	1		Pn	17 45 41.0	-2.6
RAYN	**Ar Rayn**	9.35	1	P	Pn	17 45 40.9	-2.6
DOK	**Doka**	9.56	61	P	Pn	17 45 47.6	+1.3
	SNR=18						
DMTO	**DMTO**	9.92	68	P	Pn	17 45 53.2	+1.8
	SNR=11						
DMTO				S	Sn	17 47 42.8	0.0
SHAO	**Shalim**	10.63	67	P	Pn	17 46 01.0	-0.2
MZR	**Muzera**	11.73	40	P	Pn	17 46 15.2	-1.0
	SNR=20						
MZR				S	Sn	17 48 26.1	-1.1
MZR	**Muzera**	11.73	40	*i* P	Pn	17 46 13.9	-2.3
	SNR=27						
JAWL	**J.Aulia**	12.46	277	*i* P	Pn	17 46 30.9	+4.7
JAWL				*i*		17 46 43.9	
	baz=256,slow=10						
JAWL				*i* S		17 50 00.0	
UMZA	**Um Al Zommool**	12.64	46	P	Pn	17 46 27.7	-0.9
KHOR	**Al-Khor Airpor**	12.83	26	P	Pn	17 46 29.6	-1.5
DQM	**DQM**	13.03	62	P	Pn	17 46 34.9	+1.0
AJN	**Ajban**	13.81	40	P	Pn	17 46 41.7	-2.9
ALNE	**Al Ain**	13.94	43	P	Pn	17 46 45.2	-1.3
	SNR=28						
ALNE				S	Sn	17 49 18.7	-2.7
ARQ	**Araqi**	14.01	48	P	Pn	17 46 44.5	-2.8
ASUD	**Al Ashush, Dub**	14.07	41	P	Pn	17 46 45.1	-3.0
	SNR=55						
ASUD	**Al Ashush, Dub**	14.07	41	*i* P	Pn	17 46 45.3	-2.8
	SNR=10						
FAQ	**Al Faqa, Dubai**	14.32	41	P	Pn	17 46 48.2	-3.4
LODK	**Lodwar**	14.49	224	Pn	Pn	17 46 53.0	-0.9
LODK	**Lodwar**	14.49	224	P	P	17 46 59.9	-0.8
	SNR=7.1						
LODK	**Lodwar**	14.49	224	*e*P	Pn	17 46 57.6	+3.6
LODK	**Lodwar**	14.49	224	*e*P	Pn	17 46 56.8	+2.9
LODK	**Lodwar**	14.49	224	*e*P	Pn	17 46 57.6	+3.6
NAZ	**Nazwa, Dubai**	14.54	40	P	Pn	17 46 51.6	-3.0
	SNR=21						
NAZ	**Nazwa, Dubai**	14.54	40	*i* P	Pn	17 46 50.9	-3.7
	SNR=21						
ASHO	**Ashiyiah**	14.58	42	P	Pn	17 46 51.9	-3.2
	SNR=17						
ASHO	**Ashiyiah**	14.58	42	*i* P	Pn	17 46 51.5	-3.6
	SNR=17						
JMDO	**Jabal Madar**	14.64	54	P	Pn	17 46 52.9	-3.1
	SNR=7.7						
HATD	**Hatta, Dubai**	14.72	42	P	Pn	17 46 53.9	-3.2
	SNR=12						
HATD	**Hatta, Dubai**	14.72	42	*i* P	Pn	17 46 52.6	-4.5
	SNR=12						
HOQ	**Hoqain**	14.73	49	P	Pn	17 46 54.3	-2.9
	SNR=19						
UOSS	**Minazif**	14.85	42	Pn	Pn	17 46 54.9	-4.0

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UOSS  Minazif          14.85  42 i P      Pn       17 46 53.8 -5.0
      SNR=6.6
SMDO  Samad            14.97  52   P      Pn       17 46 57.0 -3.5
      SNR=7.7
MSFE  Esma-Masafi      15.12  41   P      Pn       17 46 57.7 -4.8
MASF  Masafi           15.12  41   P      Pn       17 46 58.5 -4.0
      SNR=13
BIDO  Bidbid           15.29  50   P      P        17 47 11.0 +1.4
      SNR=7.4
WBK   Wadi Bani Khal   15.45  55   P      Pn       17 47 03.1 -3.7
      SNR=9.2
WBK                                S      Sn       17 49 54.1 -4.0
WSAR  Wadi Sarin       15.52  52   Pn     Pn       17 47 03.2 -4.4
      comp=N,0.6nm,0.3s,baz=264,slow=8.9,SNR=24
WSAR                               Sn     Sn       17 49 55.3 -4.4
      comp=N,1.7nm,0.3s,baz=44,slow=22,SNR=2.3
WSAR                               Lg     Lg       17 51 38.9
      comp=N,1.0nm,0.3s,baz=15,slow=16,SNR=1.9
WSAR  Wadi Sarin       15.52  52   P      Pn       17 47 03.6 -4.1
      SNR=22
SHME  Shamm            15.60  39   P      P        17 47 12.3 -0.7
      SNR=5.7
SHME  Shamm            15.60  39   P      Pn       17 47 04.1 -4.7
BANOM Banah            15.61  40   P      Pn       17 47 04.7 -4.2
      SNR=15
BANOM                              S      Sn       17 49 56.6 -5.4
BANOM Banah            15.61  40 i P      Pn       17 47 04.2 -4.7
      SNR=18
KMBO  Kilima Mbogo     17.14 208   P      Pn       17 47 28.6 -0.1
      comp=N,0.1nm,0.3s,baz=30,slow=14,SNR=5.8
KMBO                               LR     LR       17 53 42.0
      comp=N,1µm,19.9s,baz=90,slow=36
      comp=N,5.1nm,0.9s
KMBO  Kilima Mbogo     17.14 208   P      Pn       17 47 29.9 +1.2
KMBO  Kilima Mbogo     17.14 208   P      Pn       17 47 29.9 +1.2
KMBO  Kilima Mbogo     17.14 208  eP      Pn       17 47 29.8 +1.1
KMBO                               IAMs            17 54 06.3
      comp=N,4µm,9.9s
KMBO  Kilima Mbogo     17.14 208  eP      Pn       17 47 23.8 -4.9
KMBO  Kilima Mbogo     17.14 208  eP      Pn       17 47 29.8 +1.1
KMBO                               IAMs_20 IAMs_20 17 54 06.3
      comp=N,4µm,9.9s
KIBK  Kibwezi          17.88 204          Pn       17 47 37.6 -0.2
KIBK  Kibwezi          17.88 204   P      P        17 47 38.8 +0.4
      SNR=9.1
EIL   Elat             18.20 330   P      P        17 47 44.1 +2.4
      comp=N,5.1nm,0.8s,baz=81,slow=7.5,SNR=3.5
EIL                                Lg     Lg       17 52 49.4
      comp=N,1.0nm,0.3s,baz=73,slow=22,SNR=17
ASF   Jabal al Asfar   19.55 338   P      Pn       17 47 57.8 -0.1
      comp=N,0.2nm,0.3s,baz=157,slow=5.2,SNR=5.3
ASF                                Lg     Lg       17 53 37.2
      comp=N,0.8nm,0.3s,baz=353,slow=22,SNR=13
      comp=N,8.4nm,1.0s
MBAR  Mbarara          20.56 226   P      P        17 48 07.6 -0.3
      comp=N,3.3nm,0.2s,baz=49,slow=11,SNR=14
MBAR                               LR     LR       17 55 36.2
      comp=N,1µm,20.0s,baz=30,slow=35
      comp=N,3.3nm,0.2s
MBAR  Mbarara          20.56 226   P      P        17 48 06.9 -1.1
MBAR  Mbarara          20.56 226 i P      P        17 48 06.1 -1.8
MMAI  Mount Meron Ar   20.86 336   Lg     Lg       17 54 24.1
      comp=N,0.9nm,0.3s,baz=109,slow=33,SNR=6.4
MARD  Mardin           23.44 351   P      P        17 48 39.8 +1.5
GEVA  Gevas            24.17 356   P      P        17 48 46.4 +1.0
GEVA                               IAmb   IAmb     17 49 14.5
      comp=Z,41nm,1.2s
GURO  Guroymak-BITLI   24.50 354   P      P        17 48 49.7 +1.4
HRA   Herat            25.32  34   P      P        17 48 56.3 +0.4
GNI   Garni            25.93 359   P      P        17 49 03.1 +1.8
      comp=Z,17nm,0.9s,baz=183,slow=3.6,SNR=8.4
      comp=Z,17nm,0.9s
GNI   Garni            25.93 359   P      P        17 49 02.4 +1.1
GNI                                IAmb   IAmb     17 49 46.6
      comp=Z,48nm,1.3s
GNI   Garni            25.93 359 i P      P        17 49 00.9 -0.4
GNI                                pmax   pmax
      comp=Z,34nm,1.1s
BNN   Bunyan           26.01 343   P      P        17 49 03.7 +1.7
BNN                                IAmb   IAmb     17 49 45.8
      comp=Z,20nm,0.9s
KOPT  Kop Dagi         26.14 352   P      P        17 49 07.0 +3.7
GEYT  Alibeck          26.29  23   P      P        17 49 04.8 +0.4
      comp=Z,11nm,1.0s,baz=197,slow=13,SNR=7.3
      comp=Z,11nm,1.0s
GYA0B ALIBECK ARRAY    26.29  23   P      P        17 49 04.8 +0.4
GYA0B                              IAmb   IAmb     17 49 21.7
      comp=Z,36nm,1.0s
ELL   Elmali           26.41 331   P      P        17 49 05.3 -0.3
BR131 Keskin Array S   27.49 340   P      P        17 49 16.4 +1.1
BR131 Keskin Array S   27.49 340 i P      P        17 49 16.4 +1.1
BRTR  Keskin Array B   27.49 340   P      P        17 49 15.9 +0.6
      comp=Z,3.7nm,1.1s,baz=162,slow=11,SNR=13
      comp=Z,3.7nm,1.1s
BRTR  Keskin Array B   27.49 340   P      P        17 49 16.5 +1.1
BRTR  Keskin Array B   27.49 340 i P      P        17 49 17.1 +1.7
BRTR                               pmax   pmax
      comp=Z,4.0nm,0.9s
ZEI   Tsey             28.59 358  eP      P        17 49 25.3 +0.1
ZEI                                pmax   pmax
      comp=Z,7.0nm,0.9s
ILGA  Ilgaz            28.67 342   P      P        17 49 25.2 -0.8
ILGA                               IAmb   IAmb     17 49 49.2
      comp=Z,42nm,1.2s
GROC  Groznyy          28.98   1  eP      P        17 49 29.3 +0.9
GROC                              e                17 52 36.4
GROC                               pmax   pmax
      comp=Z,34nm,0.9s
NCK   Nalchik          29.30 357 i P      P        17 49 33.1 +1.8
NCK                                pmax   pmax
      comp=Z,20nm,1.2s
KBL   Kabul            29.53  42   P      P        17 49 32.5 -1.2
KBL                                IAmb   IAmb     17 49 41.6
      comp=Z,41nm,1.8s
KBZ   Khabaz           29.57 356   P      P        17 49 35.7 +2.0
      comp=Z,2.8nm,0.8s,baz=182,slow=11,SNR=3.1
      comp=Z,2.8nm,0.8s
KBZ   Khabaz           29.57 356 i P      P        17 49 34.2 +0.6
KBZ                                pmax   pmax
      comp=Z,3.0nm,0.8s
SHA1  Shidzhatmaz      29.60 356 i P      P        17 49 34.7 +0.5
SOC   Sochi            29.75 352  eP      P        17 49 32.1 -3.1
SOC                               e                17 50 28.2
SOC                               eS      S        17 54 29.5 -1.9
SOC                               eSS     SnSn     17 56 04.1 +3.1
SOC                               eSSS    SSS      17 56 20.7
SOC                                MLR    MLR
      comp=Z,266nm,14.0s
KIV   Kislovodsk       29.81 356   P      P        17 49 36.1 +0.2
KIV                                IAmb   IAmb     17 49 43.6
      comp=Z,12nm,0.9s
KIV   Kislovodsk       29.81 356  eP      P        17 49 36.5 +0.6
KIV                               eS      S        17 54 35.2 +2.6
KIV                                pmax   pmax
      comp=Z,16nm,1.1s
KAAM  Kaadhehdhoo      30.55 114   P      P        17 49 39.4 -3.2
GOF   Gofitskoye       30.89 357⇑eP      P        17 49 51.2 +5.9
ANN   Anapa            31.30 349  eP      P        17 49 47.1 -1.8
ANN                               eS      S        17 54 56.0 +0.3
ANN                                pmax   pmax
      comp=Z,18nm,0.8s
NIL   Nilore           31.92  48   P      P        17 49 53.8 -0.8
NIL                                IAmb   IAmb     17 50 02.4
      comp=Z,26nm,1.1s
RDO   Rodhopi          31.96 331   P      P        17 49 53.7 -1.1
RDO                                IAmb   IAmb     17 50 39.9
      comp=Z,18nm,1.3s
CHGR  Chuyangaron      32.26  36   P      P        17 49 57.5  0.0
CHGR                               IAmb   IAmb     17 50 04.3
      comp=Z,19nm,0.8s
OPO   Ambohidratompo   32.54 177   LR     LR       18 02 54.2
      comp=Z,299nm,19.5s,baz=184,slow=36
GAR   Garm             33.16  37   P      P        17 50 05.0 -0.5
GAR                                IAmb   IAmb     17 50 13.2
      comp=Z,29nm,1.0s
LSZ   Lusaka           33.78 211   P      P        17 50 12.7 +1.7
      comp=Z,1.4nm,0.2s,baz=28,slow=12,SNR=6.2
LSZ                                LR     LR       18 03 14.8
      comp=Z,348nm,18.9s,baz=20,slow=35
      comp=Z,1.4nm,0.2s
BTK   Batken           34.15  36   P      P        17 50 15.0 +0.9
TAS   Tashkent         34.19  33   P      P        17 50 14.5 +0.2
VTS   Vitosha          34.19 330   P      P        17 50 14.8 +0.4
VTS   Vitosha          34.19 330   P      P        17 50 13.8 -0.6
CFR   Carcaliu         34.21 338 ⇓P      P        17 50 15.1 +0.7
DRK   Karamyk          34.34  38   P      P        17 50 16.5 +0.5
DRK                                IAmb   IAmb     17 50 24.2
      comp=Z,18nm,1.1s
IUG   Iuzhnay          35.16  33  eP      P        17 50 22.8  0.0
IUG   Iuzhnay          35.16  33  eP      P        17 50 22.9  0.0
      baz=32
MLR   Muntele Rosu     35.30 336 ⇓P      P        17 50 24.5 +0.5
MLR   Muntele Rosu     35.30 336   P      P        17 50 25.3 +1.4
MLR                                IAmb   IAmb     17 50 37.1
      comp=Z,13nm,0.9s
VRI   Vrincioaia       35.31 337 ⇑P      P        17 50 25.2 +1.2
PLOR  Plostina         35.33 337 ⇓P      P        17 50 24.7 +0.6
COVR  Voineasa-Covas   35.49 337 ⇑P      P        17 50 26.4 +0.9
VOIR                   35.61 335 ⇓P      P        17 50 27.9 +1.3
OZUR                   35.86 337 ⇓P      P        17 50 29.8 +1.1
TESR  Tescani          35.89 338 ⇓P      P        17 50 30.1 +1.2
DOPR  Dopca            35.91 336 ⇓P      P        17 50 29.5 +0.4
KK31  Karatay Array    36.09  32   P      P        17 50 30.9 +0.2
KKAR  Karatay Array    36.09  32   P      P        17 50 30.7 +0.1
KKAR  Karatay Array    36.09  32   P      P        17 50 30.6 -0.1
KKAR                               IAmb   IAmb     17 50 41.4
      comp=Z,4.4nm,0.9s
DZA   Taraz            36.36  33  eP      P        17 50 33.1 +0.1
DZA   Taraz            36.36  33  eP      P        17 50 33.2 +0.1
      baz=33
BIZ   Bicaz            36.45 338 ⇑P      P        17 50 35.1 +1.4
GZR   Gura Zlata       36.54 333 ⇑P      P        17 50 35.6 +1.1
KSH   Kashi            36.94  41   P      P        17 50 35.1 -3.0
KSH                                pP     pP       17 50 38.8 -3.0
KSH                                PP     PP       17 52 01.3 -0.9
KSH                                pmax   pmax
      comp=Z,4.0nm,0.9s
ABKAR Akbulak array    37.03  16   P      P        17 50 38.7 +0.1
ABKAR Akbulak array    37.03  16   P      P        17 50 39.4 +0.9
ABKAR                              IAmb   IAmb     17 50 45.1
      comp=Z,22nm,0.9s
VORD  Divnogorie       37.06 354  eP      P        17 50 39.6 +0.8
VORD                               pmax   pmax
      comp=Z,8.0nm,0.8s
VRH   Novokhopyorsk    37.09 356  eP      P        17 50 39.9 +0.9
VRH                                pmax   pmax
      comp=Z,30nm,0.8s
AML   Almayashu        37.15  36   P      P        17 50 41.6 +1.5
      SNR=16
AML   Almayashu        37.15  36 i P      P        17 50 40.0 -0.2
      SNR=26
VSR   Storozhevoye     37.33 354  eP      P        17 50 41.0  0.0
VSR                                pmax   pmax
      comp=Z,10.0nm,0.7s
BURAR Bucovina Array   37.35 337 ⇑P      P        17 50 42.9 +1.5
BURAR Bucovina Array   37.35 337   P      P        17 50 42.3 +0.9
BUR08 Bucovina Ar. S   37.38 337   P      P        17 50 42.0 +0.4
EKS2  Erkin-Say        37.54  35   P      P        17 50 44.6 +1.5
      SNR=12
AKTO  Aktyubinsk       37.65  13   P      P        17 50 44.2 +0.4
      comp=Z,11nm,1.0s,baz=210,slow=9.4,SNR=15
      comp=Z,11nm,1.0s
UCH   Uchtor           37.68  36   P      P        17 50 46.4 +1.7
      SNR=21
VORR  Voronezh         37.77 354  eP      P        17 50 42.5 -2.3
VORR                               pmax   pmax
      comp=Z,20nm,0.4s
AAK   Ala-Archa        37.93  36   P      P        17 50 48.1 +1.6
      SNR=10
AAK   Ala-Archa        37.93  36   P      P        17 50 47.7 +1.2
      comp=Z,14nm,1.0s,baz=250,slow=6.6,SNR=15
      comp=Z,14nm,1.0s
AAK   Ala-Archa        37.93  36   P      P        17 50 47.1 +0.6
AAK                                IAmb   IAmb     17 50 53.4
      comp=Z,21nm,1.1s
AAK   Ala-Archa        37.93  36ceP      P        17 50 45.9 -0.6
AAK                                pmax   pmax
      comp=Z,21nm,1.0s
AAK   Ala-Archa        37.93  36 i P      P        17 50 46.8 +0.3
      SNR=15
MATP  Matopo           38.11 206   P      P        17 50 50.7 +2.5
      comp=Z,2.7nm,0.9s,baz=24,slow=7.7,SNR=4.3
      comp=Z,2.7nm,0.9s
FRU1  Bishkek          38.12  36   P      P        17 50 48.9 +0.9
FRU1                               IAmb   IAmb     17 50 56.4
      comp=Z,20nm,0.9s
KBK   Karagaybulak     38.20  36   P      P        17 50 50.8 +2.0
      SNR=20
BELG  Belogornoye      38.21   2   P      P        17 50 48.8 +0.3
      comp=Z,28nm,0.9s,baz=207,slow=4.5,SNR=7.6
      comp=Z,28nm,0.9s
BELG  Belogornoye      38.21   2 i P      P        17 50 47.4 -1.1
BELG                               pmax   pmax
      comp=Z,7.0nm,1.0s
USP   Ospenovka        38.34  35   P      P        17 50 50.9 +1.1
      SNR=14
DANN  Dangsing         38.34  62  eP      P        17 50 50.4 +0.1
      comp=Z,173nm,1.0s
SGDS  Sogindy          38.53  35  eP      P        17 50 51.0 -0.4
SGDS  Sogindy          38.53  35  eP      P        17 50 51.0 -0.4
      baz=35
BOOM  Boomskoye usch   38.67  37   P      P        17 50 54.0 +1.3
BOOM                               IAmb   IAmb     17 51 01.4
      comp=Z,36nm,1.0s
ULHL  Ulahol           38.70  38   P      P        17 50 54.9 +1.9
      SNR=12
TKM2  Tokmak 2         38.74  36   P      P        17 50 55.0 +1.6
      SNR=6.5
AKASG Malin Array Be   38.75 344   P      P        17 50 53.4 +0.3
      comp=Z,2.6nm,0.7s,baz=149,slow=7.1,SNR=14
AKASG                              PcP    PcP      17 53 03.7 -0.9
      comp=Z,1.9nm,0.8s,baz=136,slow=3.1,SNR=2.0
      comp=Z,2.6nm,0.7s
AKASG Malin Array Be   38.75 344   P      P        17 50 51.9 -1.1
AKASG Malin Array Be   38.75 344 i P      P        17 50 53.4 +0.3
AKASG                              pmax   pmax
      comp=Z,5.0nm,0.8s
AKBB  Malin Array Si   38.75 344   P      P        17 50 53.2 +0.2
AKBB  Malin Array Si   38.75 344ceP      P        17 50 53.0  0.0
KEST  Kesra            38.76 310   P      P        17 50 53.9 +0.3
      comp=Z,3.7nm,0.9s,baz=114,slow=6.7,SNR=3.6
      comp=Z,3.7nm,0.9s
KEST  Kesra            38.76 310   P      P        17 50 53.2 -0.3
KDJ   Kajisay          39.19  38   P      P        17 50 57.9 +0.7
KDJ                                IAmb   IAmb     17 51 05.5
      comp=Z,36nm,1.0s
BTLS  Baital           39.26  33  eP      P        17 50 56.9 -0.6
BTLS  Baital           39.26  33  eP      P        17 50 56.9 -0.6
      baz=32
UZH   Uzhgorod         39.30 336d iP      P        17 50 58.0 +0.3
UZH                               i                17 51 02.2
UZH                               eS      S        17 57 02.0 +3.4
UZH                               i                17 57 11.5
DMN   Daman            39.34  64  eP      P        17 50 58.5 -0.2
TARG  Taragay, Kyrgy   39.34  39   P      P        17 50 58.8 +0.1
TARG                               IAmb   IAmb     17 51 14.8
      comp=Z,29nm,1.2s
KOLS  Kolonicke sedl   39.55 336  eP      P        17 51 01.9 +2.0
KOLS                               pmax   pmax
      comp=Z,11nm,1.2s
KOLS  Kolonicke sedl   39.55 336  eP      P        17 51 01.9 +2.0
PKIN  Phulchoki        39.59  64  eP      P        17 51 00.3 -0.4
TNSS  Tian-Shan        39.59  37  eP      P        17 51 00.1 -0.6
TNSS  Tian-Shan        39.59  37  eP      P        17 51 00.1 -0.6
      baz=37
PKI   Pulchoki         39.59  64  eP      P        17 51 00.3 -0.6
      comp=Z,91nm,1.1s
LVV   L'vov            39.62 338  eP      P        17 51 00.0 -0.4
AAA   Alma-Ata         39.67  37  eP      P        17 51 00.5 -0.5
AAA                                pmax   pmax
      comp=Z,18nm,1.2s
AAA   Alma-Ata         39.67  37  eP      P        17 51 00.5 -0.5
      comp=Z,18nm,1.2s,baz=37
MDOK  Medeo            39.73  37  eP      P        17 51 01.0 -0.5
MDOK  Medeo            39.73  37  eP      P        17 51 01.0 -0.5
      baz=37
KUU   Kurty            39.77  36  eP      P        17 51 00.6 -1.1
KUU   Kurty            39.77  36  eP      P        17 51 00.7 -1.1
      baz=36
CRVS  Cervenica-Dubn   39.85 335  eP      P        17 51 04.0 +1.6
CRVS  Cervenica-Dubn   39.85 335  eP      P        17 51 04.0 +1.6
KWP   Kalwaria Pacla   39.95 337  eP      P        17 51 04.7 +1.5
KWP   Kalwaria Pacla   39.95 337   P      P        17 51 03.5 +0.3
CHKK  Chushkaly        40.11  36  eP      P        17 51 04.0 -0.5
CHKK  Chushkaly        40.11  36  eP      P        17 51 04.1 -0.5
      baz=36
PRZ   Przheval'sk      40.13  39   P      P        17 51 05.3 +0.3
PRZ                                IAmb   IAmb     17 51 11.9
      comp=Z,42nm,1.2s
MPLH  Magyarpolny      40.28 331   P      P        17 51 07.4 +1.5
JIRN  Jiri             40.29  64  eP      P        17 51 06.0 -0.7
      comp=Z,89nm,1.1s
SATY  Saty             40.47  38  eP      P        17 51 06.9 -0.8
SATY  Saty             40.47  38  eP      P        17 51 06.9 -0.8
      baz=38
RAMN  Ramite           40.52  65  eP      P        17 51 07.4 -1.1
      comp=Z,34nm,0.9s
ZHN   Zhinishke        40.55  38  eP      P        17 51 07.9 -0.4
ZHN   Zhinishke        40.55  38  eP      P        17 51 07.1 -1.2
      baz=38
KPKS  Kokpek           40.87  38  eP      P        17 51 10.1 -0.8
KPKS                               pmax   pmax
      comp=Z,19nm,1.4s
KPKS  Kokpek           40.87  38  eP      P        17 51 10.2 -0.8
      comp=Z,19nm,1.4s,baz=38
LANS  Liptovska Anna   40.87 334  eP      P        17 51 11.7 +0.9
LANS  Liptovska Anna   40.87 334  eP      P        17 51 11.7 +0.9
UZB   Uzynbulak        40.89  38  eP      P        17 51 10.5 -0.7
UZB                                pmax   pmax
      comp=Z,26nm,1.4s
UZB   Uzynbulak        40.89  38  eP      P        17 51 10.6 -0.7
      comp=Z,26nm,1.4s,baz=38
SOKA  Soboth           41.18 328  eP      P        17 51 13.4  0.0
      comp=Z,4.2nm,0.8s
TRI   Trieste          41.21 326   P      P        17 51 12.6 -1.0
OBKA  Obir             41.31 328  eP      P        17 51 15.9 +1.4
      comp=Z,4.5nm,0.8s
ARSA  Arzberg          41.32 329  eP      P        17 51 14.5  0.0
      comp=Z,5.1nm,1.0s
JAVC  Velka Javorina   41.44 332  eP      P        17 51 16.4 +0.9
OBN   Obninsk          41.46 352          P        17 51 16.5 +1.1
OBN                                IAmb   IAmb     17 51 20.6
      comp=Z,13nm,0.7s
OBN   Obninsk          41.46 352⇑eP      P        17 51 17.1 +1.6
OBN                               e                17 51 28.5
OBN                                                17 53 11.0
OBN                               eS      S        17 57 36.6 +6.0
OBN                               eSSS    SSS      18 01 08.6
OBN                                pmax   pmax
      comp=Z,24nm,1.3s
OBN                                MLR    MLR
      comp=Z,188nm,15.0s
TAPN  Taplejung        41.56  65  eP      P        17 51 16.4 -0.8
      comp=Z,49nm,0.8s
TDK   Taldyqorghan     41.61  36  eP      P        17 51 16.9  0.0
TDK                                pmax   pmax
      comp=Z,23nm,1.0s
TDK   Taldyqorghan     41.61  36  eP      P        17 51 17.0  0.0
      comp=Z,23nm,1.0s,baz=36
CONA  Conrad Observa   41.62 330 i P      P        17 51 17.9 +0.8
      comp=Z,7.2nm,1.2s
MAUC  Maruska          41.74 333   AMS    AMS      18 12 20.0
      comp=Z,1µm,25.4s
MOS   Moscow           41.95 353  eP      P        17 51 19.6 +0.1
MOS                                pmax   pmax
      comp=Z,53nm,0.6s
OKC   Ostrava-Krasne   41.96 334   AMS    AMS      18 13 00.0
      comp=Z,300nm,13.3s
STAL  STALIGIAL        42.13 326   P      P        17 51 20.8 -0.4
BRZS  Berezniki        42.14  26  eP      P        17 51 20.7 -0.5
BRZS  Berezniki        42.14  26  eP      P        17 51 20.8 -0.5
      baz=26
KRUC  Moravsky         42.17 332  eP      P        17 51 21.2 -0.2
MORC  Moravsky Berou   42.17 333 ⇑P      P        17 51 21.7 +0.2
MORC  Moravsky Berou   42.17 333   P      P        17 51 20.4 -1.1
MORC  Moravsky Berou   42.17 333  eP      P        17 51 21.7 +0.2
VRAC  Vranov           42.25 332  eP      P        17 51 21.7 -0.4
MOA   Molln            42.35 329  eP      P        17 51 22.6 -0.3
      comp=Z,4.1nm,0.9s
TOA0  Torodi Ar. Sit   42.37 274   P      P        17 51 21.7 -1.8
TOA0                               IAmb   IAmb     17 51 29.3
      comp=Z,25nm,1.1s
TOA0  Torodi Ar. Sit   42.37 274   P      P        17 51 23.2 -0.2
      SNR=9.6
TORD  Torodi Ar. Bea   42.37 274   P      P        17 51 22.4 -1.1
      comp=Z,11nm,1.0s,baz=87,slow=8.1,SNR=34
      comp=Z,11nm,1.0s
TORD  Torodi Ar. Bea   42.37 274   P      P        17 51 21.8 -1.7
TORD                               IAmb   IAmb     17 51 29.3
      comp=Z,22nm,1.1s
BIOA  Bad Ischl, Aus   42.56 328  eP      P        17 51 24.9 +0.2
KRLC  Kraliky          42.73 333  eP      P        17 51 25.7 -0.3
KRLC                               MLR    MLR
      comp=Z,200nm,10.6s
KRLC  Kraliky          42.73 333  eP      P        17 51 25.7 -0.3
KRLC                               AMS    AMS      18 12 40.0
      comp=Z,200nm,10.6s
TREC  Trest            42.75 331   AMS    AMS      18 13 10.0
      comp=Z,300nm,20.1s
TSUM  Tsumeb           42.93 220   LR     LR       18 10 27.7
      comp=Z,424nm,18.7s,baz=52,slow=38
CKRC  Cesky Krumlov    42.98 330  eP      P        17 51 28.0 -0.1
DPC   Dobruska-Polom   43.13 333  eP      P        17 51 28.6 -0.7
DPC                                MLR    MLR
      comp=Z,300nm,17.6s
DPC   Dobruska-Polom   43.13 333  eP      P        17 51 28.6 -0.7
DPC                                AMS    AMS      18 12 50.0
      comp=Z,300nm,17.6s
NACGM Naroch           43.18 344⇓eP      P        17 51 29.6 +0.1
      baz=153
GEC2  GERESS Array S   43.30 330   P      P        17 51 30.1 -0.6
GERES GERESS Array B   43.30 330   P      P        17 51 30.4 -0.3
      comp=Z,2.5nm,0.8s,baz=120,slow=7.9,SNR=20
      comp=Z,2.5nm,0.8s
GERES GERESS Array B   43.30 330   P      P        17 51 29.2 -1.5
OSTC  Ostas            43.33 333  eP      P        17 51 35.6 +4.8
OSTC                              ex      x        17 51 41.2
OSTC                               AMS    AMS      18 13 00.0
      comp=Z,300nm,19.1s
UPC   Upice            43.38 333  eP      P        17 51 30.6 -0.6
UPC                                MLR    MLR
      comp=Z,300nm,13.0s
UPC   Upice            43.38 333  eP      P        17 51 30.6 -0.6
UPC                                AMS    AMS      18 13 00.0
      comp=Z,300nm,13.0s
LBTB  Lobatse          43.40 206   LR     LR       18 09 56.4
      comp=Z,451nm,18.8s,baz=42,slow=36
CHVC  Chvalec          43.42 333  eP      P        17 51 36.0 +4.4
CHVC                               AMS    AMS      18 13 00.0
      comp=Z,400nm,13.3s
ARU   Arti             43.42  11   P      P        17 51 31.8 +0.4
      comp=Z,3.2nm,0.7s,baz=203,slow=7.7,SNR=14
      comp=Z,3.2nm,0.7s
ARU   Arti             43.42  11   P      P        17 51 29.4 -2.0
ARU   Arti             43.42  11c iP      P        17 51 31.4  0.0
ARU                                                17 53 12.6
ARU                                S      S        17 58 03.7 +4.2
ARU                                SSS    SSS      18 01 57.3
ARU                                pmax   pmax
      comp=Z,7.0nm,0.9s
ARU                                MLR    MLR
      comp=Z,196nm,14.0s
SUW   Suwalki          43.44 341  eP      P        17 51 32.4 +0.8
SUW   Suwalki          43.44 341   P      P        17 51 30.3 -1.2
SUW   Suwalki          43.44 341  eP      P        17 51 31.9 +0.4
KSP   Ksiaz            43.50 333  eP      P        17 51 32.7 +0.5
KHC   Kasperske Hory   43.55 330   P      P        17 51 31.4 -1.3
KHC   Kasperske Hory   43.55 330  eP      P        17 51 32.1 -0.6
KHC                                MLR    MLR
      comp=Z,400nm,23.0s
KHC   Kasperske Hory   43.55 330  eP      P        17 51 32.1 -0.6
KHC                                AMS    AMS      18 14 00.0
      comp=Z,400nm,23.0s
BRVK  Borovoye         43.59  22   P      P        17 51 31.3 -1.6
BRVK                               IAmb   IAmb     17 51 38.8
      comp=Z,14nm,0.9s
BRVK  Borovoye         43.59  22ceP      P        17 51 32.8 -0.1
BRVK                               pmax   pmax
      comp=Z,22nm,1.3s
FETA  Feichten         43.67 326  eP      P        17 51 34.4 +0.6
      comp=Z,3.5nm,1.2s
PRU   Pruhonice        43.68 331   AMS    AMS      18 14 10.0
      comp=Z,300nm,11.6s
IIGN  Ignalina         43.72 344  eP      P        17 51 34.9 +1.0
ISAL  Salakas          43.95 344  eP      P        17 51 36.9 +1.3
PVCC  Panska Ves       44.04 332   AMS    AMS      18 13 40.0
      comp=Z,300nm,15.9s
SVE   Sverdlovsk       44.19  12  eP      P        17 51 38.7 +1.1
SVE                                pmax   pmax
      comp=Z,18nm,1.1s
DAVA  Damuels          44.30 326  eP      P        17 51 41.4 +2.5
      comp=Z,5.5nm,0.9s
PABE  Paberze          44.48 343   P      P        17 51 41.2 +1.3
PABE                               IAmb   IAmb     17 51 45.4
      comp=Z,39nm,1.3s
PABE  Paberze          44.48 343  eP      P        17 51 41.3 +1.3
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KIRV	Kirov	44.48	3	P	P	17 51 40.5	+0.6
	comp=Z,4.0nm,0.6s,baz=337,slow=21,SNR=1.4						
	comp=Z,4.0nm,0.6s						
BRG	Berggiesshubel	44.57	332	*e*P	P	17 51 48.2	+7.5
BRG				Amp		17 51 48.9	
	comp=Z,4.4nm,0.9s						
BRG	Berggiesshubel	44.57	332	*e*P	P	17 51 48.2	+7.4
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	44.69	36	P	P	17 51 40.4	-1.5
NKC	Novy Kostel	44.83	330	AMS	AMS	18 15 00.0	
	comp=Z,400nm,10.6s						
MK31	Makanchi Array	44.86	36	P	P	17 51 43.2	-0.1
MK31	Makanchi Array	44.86	36	*c i*P	P	17 51 43.5	+0.3
MKAR	Makanchi Array	44.86	36	P	P	17 51 43.6	+0.4
	comp=Z,42nm,1.0s,baz=224,slow=6.8,SNR=58						
	comp=Z,42nm,1.0s						
MKAR	Makanchi Array	44.86	36	P	P	17 51 43.3	0.0
MKAR	Makanchi Array	44.86	36	*i* P	P	17 51 43.5	+0.3
MKAR				pmax	pmax		
	comp=Z,42nm,1.0s						
BNI	Bardonecchia	44.91	321	P	P	17 51 42.9	-0.9
BNI				IAmb	IAmb	17 51 58.4	
	comp=Z,25nm,1.6s						
LSA	Lhasa	44.95	62	P	P	17 51 43.6	-1.1
SHL	Shillong	45.04	68	P	P	17 51 43.6	-1.5
SHL	Shillong	45.04	68	P	P	17 51 44.8	-0.3
	SNR=10						
SENIN	Lac Senin/Sane	45.23	323	P	P	17 51 45.5	-0.9
SENIN				IAmb	IAmb	17 52 01.4	
	comp=Z,34nm,1.8s						
KURBB	Kurchatov Arra	45.25	29	P	P	17 51 46.9	+0.8
	comp=Z,14nm,1.0s,baz=232,slow=8.2,SNR=27						
KURBB				LR	LR	18 14 20.5	
	comp=Z,1µm,18.2s,baz=210,slow=41						
	comp=Z,14nm,1.0s						
CLL	Collm	45.30	332	*e*P	P	17 51 47.0	+0.5
CLL	Collm	45.30	332	*e*P	P	17 51 47.0	+0.5
KURK	Kurchatov	45.35	29	P	P	17 51 47.2	+0.2
KURK				IAmb	IAmb	17 51 53.0	
	comp=Z,32nm,1.3s						
KURK	Kurchatov	45.35	29	*ce*P	P	17 51 47.4	+0.4
KURK				pmax	pmax		
	comp=Z,28nm,1.3s						
PBUR	Paburge	45.52	342	*e*P	P	17 51 49.3	+1.1
BFO	Black Forest	45.76	326	P	P	17 51 49.6	-0.7
SEM	Semipalatinsk	45.95	31	*e*P	P	17 51 51.0	-0.9
SEM				pmax	pmax		
	comp=Z,12nm,1.1s						
SEM	Semipalatinsk	45.95	31	*e*P	P	17 51 51.1	-0.9
	comp=Z,12nm,1.1s,baz=30						
WMQ	Urumqi	46.67	42	*e*P	P	17 51 59.3	+1.7
WMQ				pP	sP	17 52 02.8	-0.1
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				LR	LR		
	comp=Z,800nm,12.5s						
WMQ				LR	LR		
	comp=Z,910nm,12.3s						
WMQ				LR	LR		
	comp=Z,190nm,12.3s						
ZSN	Zaisan	46.69	36	*e*P	P	17 51 56.7	-1.0
ZSN	Zaisan	46.69	36	*e*P	P	17 51 56.7	-1.0
	baz=36						
BOSA	Boshof	46.72	204	P	P	17 52 01.4	+3.2
	comp=Z,3.5nm,0.7s,baz=31,slow=8.1,SNR=7.6						
	comp=Z,3.5nm,0.7s						
SLIT	Slitere, Latvi	46.78	343	*e*P	P	17 51 58.4	+0.3
KLMR	Klimovskoe	46.84	356	*e*P	P	17 51 56.2	-2.4
KLMR				*e*		17 53 46.1	
KLMR				pmax	pmax		
	comp=Z,43nm,1.3s						
KLMR	Klimovskoe	46.84	356	*e*P	P	17 51 56.2	-2.4
KLMR				AMP		17 52 03.8	
	comp=Z,43nm,1.3s						
KLMR				*e*PP	PP	17 53 46.1	-2.6
MTSE	Matsula	47.32	345	*e*P	P	17 52 03.5	+1.3
PRGR	Permogore	47.44	0	*e*P	P	17 52 03.1	-0.1
MEF	Metsahovi	48.51	346	*e*P	P	17 52 12.6	+1.1
CLF	Chambon-Foret	49.04	323	P	P	17 52 15.3	-0.5
FIA0	FINESS Array S	49.25	348	P	P	17 52 16.8	-0.3
FIA1	FINESS Array S	49.25	348	P	P	17 52 17.2	+0.1
FIA1				IAmb	IAmb	17 52 21.9	
	comp=Z,12nm,1.0s						
FINES	FINESS Array B	49.25	348	P	P	17 52 17.1	0.0
	comp=Z,6.2nm,0.9s,baz=140,slow=6.2,SNR=6.0						
	comp=Z,6.2nm,0.9s						
FINES	FINESS Array B	49.25	348	P	P	17 52 16.5	-0.6
FINES	FINESS Array B	49.25	348	*i* P	P	17 52 19.5	+2.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU	GeErMu	49.28	54	P	P	17 52 19.1	+0.8
GOMU				pP	sP	17 52 22.9	-0.7
GOMU				sP	pP	17 52 24.3	+2.2
GOMU				PcP	PcP	17 53 42.3	+1.1
GOMU				PP	PP	17 54 13.9	+1.7
GOMU				S	S	17 59 25.3	+0.3
GOMU				sS	sS	17 59 31.3	+0.1
GOMU				pmax	pmax		
	comp=Z,12nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,91nm,5.1s						
GOMU				LR	LR		
	comp=Z,530nm,16.9s						
GOMU				LR	LR		
	comp=Z,240nm,17.7s						
GOMU				LR	LR		
	comp=Z,170nm,19.4s						
DBIC	Dimbokro	49.83	267	P	P	17 52 21.7	-0.6
	comp=Z,17nm,1.0s,baz=91,slow=10,SNR=5.5						
DBIC				LR	LR	18 13 15.1	
	comp=Z,179nm,18.3s,baz=63,slow=36						
	comp=Z,17nm,1.0s						
DBIC	Dimbokro	49.83	267	P	P	17 52 21.2	-1.1
ESBB	Sonseca Array	50.01	310	P	P	17 52 23.2	-0.3
ESBB				IAmb	IAmb	17 52 29.9	
	comp=Z,15nm,1.4s						
ESDC	Sonseca Array	50.01	310	P	P	17 52 22.5	-1.0
	comp=Z,4.6nm,1.0s,baz=93,slow=6.2,SNR=22						
	comp=Z,4.6nm,1.0s						
ESDC	Sonseca Array	50.01	310	P	P	17 52 22.9	-0.6
PAB	San Pablo	50.26	310	P	P	17 52 24.5	-0.9
PAB				IAmb	IAmb	17 52 26.7	
	comp=Z,36nm,1.6s						
ZAA0	Zalesovo Array	50.34	29	P	P	17 52 24.9	-0.8
ZAA0				IAmb	IAmb	17 52 31.5	
	comp=Z,26nm,1.1s						
ZALV	Zalesovo Beam	50.34	29	P	P	17 52 25.2	-0.5
	comp=Z,6.3nm,0.6s,baz=236,slow=7.6,SNR=27						
ZALV				LR	LR	18 17 31.4	
	comp=Z,919nm,18.9s,baz=229,slow=41						
	comp=Z,6.3nm,0.6s						
ZALV	Zalesovo Beam	50.34	29	P	P	17 52 24.4	-1.3
CM31	Chiang Mai Arr	51.50	78	P	P	17 52 33.7	-1.2
CM31				IAmb	IAmb	17 52 41.4	
	comp=Z,37nm,1.2s						
CMAR	Chiang Mai Arr	51.50	78	P	P	17 52 34.6	-0.3
	comp=Z,13nm,0.9s,baz=277,slow=8.8,SNR=16						
	comp=Z,13nm,0.9s						
CMAR	Chiang Mai Arr	51.50	78	P	P	17 52 33.8	-1.1
CMAR	Chiang Mai Arr	51.50	78	*i* P	P	17 52 34.9	0.0
CMAR				pmax	pmax		
	comp=Z,13nm,0.9s						
SUR	Sutherland	51.86	207	LR	LR	18 13 30.7	
	comp=Z,185nm,20.1s,baz=22,slow=35						
NC602	NORSAR Array S	52.59	340	P	P	17 52 41.1	-1.3
NB2	NORSAR Subarra	52.93	340	P	P	17 52 44.3	-0.6
	comp=Z,13nm,1.2s,baz=135,slow=7.4						
NOA	NORSAR Array B	52.93	340	P	P	17 52 43.6	-1.3
	comp=Z,4.8nm,1.0s,baz=135,slow=7.4,SNR=4.2						
	comp=Z,4.8nm,1.0s						
GTA	Gaotai	53.85	51	*e*P	P	17 52 52.3	+0.1
GTA				pP	sP	17 52 56.8	-0.7
GTA				sP	pP	17 53 00.3	+4.3
GTA				PP	PP	17 54 53.3	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,84nm,4.7s						
GTA				LR	LR		
	comp=Z,630nm,18.2s						
GTA				LR	LR		
	comp=Z,370nm,20.4s						
GTA				LR	LR		
	comp=Z,490nm,18.2s						
PZH	PanZhiHua	53.95	67	P	P	17 52 55.9	+2.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
KMI	Kunming	54.83	69	⇑P	P	17 53 03.1	+3.4
KMI				LR	LR		
	comp=Z,480nm,19.0s						
KMI				LR	LR		
	comp=Z,330nm,14.4s						
KMI				LR	LR		
	comp=Z,230nm,21.6s						
MNSI	Mandailing Nat	55.25	99	P	P	17 53 06.5	+4.0
	comp=Z,18nm,0.5s						
SLVN	Son La	56.00	74	P	P	17 53 07.9	0.0
LZH	Lanzhou	56.45	56	*e*P	P	17 53 11.9	+0.8
LZH				pP	sP	17 53 16.5	+0.1
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,6.0s						
LZH				LR	LR		
	comp=Z,800nm,15.6s						
LZH				LR	LR		
	comp=Z,520nm,15.8s						
LZH				LR	LR		
	comp=Z,530nm,17.8s						
ARCES	ARCESS Array B	56.77	352	P	P	17 53 11.9	-0.6
	comp=Z,2.9nm,1.1s,baz=142,slow=10,SNR=2.4						
	comp=Z,2.9nm,1.1s						
ARCES	ARCESS Array B	56.77	352	P	P	17 53 12.5	0.0
ARCES				IAmb	IAmb	17 53 19.0	
	comp=Z,27nm,1.4s						
KEV	Kevo	56.77	352	P	P	17 53 14.9	+2.4
KEV				IAmb	IAmb	17 53 19.9	
	comp=Z,19nm,1.3s						
BKNI	Bangkinang	56.78	99	P	P	17 53 12.8	-0.7
KRJI	Kerinci	57.90	102	P	P	17 53 25.2	+3.6
	comp=Z,73nm,1.3s						
SHEL	Horse Pasture	58.66	241	P	P	17 53 24.9	-1.8
MYKOM	Kota Tinggi	59.08	96	P	P	17 53 28.6	-1.1
SONM	Songino Array	60.30	43	P	P	17 53 37.5	-0.3
	comp=Z,4.6nm,0.8s,baz=248,slow=7.0,SNR=25						
	comp=Z,4.6nm,0.8s						
SONM	Songino Array	60.30	43	P	P	17 53 36.7	-1.0
SONM				IAmb	IAmb	17 53 44.9	
	comp=Z,14nm,1.1s						
XAN	Xi'an	60.44	59	P	P	17 53 37.9	-0.9
XAN				pP	pP	17 53 41.3	-1.4
XAN				S	S	18 01 56.5	+2.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN				LR	LR		
	comp=Z,780nm,17.7s						
XAN				LR	LR		
	comp=Z,490nm,17.2s						
XAN				LR	LR		
	comp=Z,380nm,18.2s						
ULN	Ulaanbaatar	60.74	43	P	P	17 53 39.3	-1.5
ULN				IAmb	IAmb	17 53 45.8	
	comp=Z,8.4nm,1.1s						
ULN	Ulaanbaatar	60.74	43	*ce*P	P	17 53 40.2	-0.6
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
ENH	Enshi	60.83	63	P	P	17 53 41.2	-0.3
NRIK	Noril'sk	61.20	16	P	P	17 53 43.1	-0.2
	comp=Z,11nm,1.0s,baz=208,slow=3.9,SNR=8.0						
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	61.20	16	P	P	17 53 42.8	-0.5
NRIK				IAmb	IAmb	17 53 48.7	
	comp=Z,9.9nm,0.9s						
NRIK	Noril'sk	61.20	16	*ce*P	P	17 53 42.9	-0.4
NRIK				pmax	pmax		
	comp=Z,12nm,0.9s						
KASI	Kota Agung	61.86	104	P	P	17 53 52.2	+3.6
	comp=Z,53nm,1.2s						
HHC	Hu-ho-hao-te	62.96	51	*e*P	P	17 53 57.8	+2.0
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,260nm,5.0s						
HHC				LR	LR		
	comp=Z,690nm,14.0s						
HHC				LR	LR		
	comp=Z,600nm,14.6s						
HHC				LR	LR		
	comp=Z,570nm,13.3s						
TPI	Tanjungpandan	64.00	100	P	P	17 54 06.9	+4.0
	comp=Z,20nm,1.1s						
DBJI	Dramaga	64.31	104	P	P	17 54 08.9	+3.9
	comp=Z,3µmcomp=Z,15nm,0.4s						
CBJI	Citeko	64.36	104	P	P	17 54 10.7	+5.4
	comp=Z,68nm,1.1s						
LEM	Lembang	65.21	104	P	P	17 54 12.4	+1.4
	comp=Z,34nm,0.9s,baz=199,slow=20,SNR=4.7						
	comp=Z,34nm,0.9s						
HNS	HongShan	65.25	55	⇓P	P	17 54 15.5	+4.8
HNS				S	S	18 03 03.4	+9.1
HNS				LR	LR		
	comp=Z,440nm,17.7s						
HNS				LR	LR		
	comp=Z,420nm,19.2s						
KSM	Kuching	65.40	95	P	P	17 54 12.2	+0.1
KSM				IAmb	IAmb	17 54 18.8	
	comp=Z,12nm,1.0s						
SPB2	Spitsbergen Ar	65.64	354	P	P	17 54 15.1	+2.5
BJT	Baijiatuau	66.43	52	P	P	17 54 17.4	-0.9
BJT				IAmb	IAmb	17 54 23.7	
	comp=Z,11nm,1.1s						
BJI	Beijing	66.44	52	P	P	17 54 18.3	0.0
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJI				LR	LR		
	comp=Z,390nm,16.1s						
BJI				LR	LR		
	comp=Z,180nm,13.6s						
BJI				LR	LR		
	comp=Z,300nm,14.1s						
XLT	XiLinHaoTe	66.50	48	*e*P	P	17 54 23.5	+4.7
XLT				pP	sP	17 54 27.8	+3.6
XLT				sP	pP	17 54 30.4	+7.7
XLT				S	S	18 03 12.8	+3.1
XLT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,82nm,5.4s						
XLT				LR	LR		
	comp=Z,76nm,13.4s						
XLT				LR	LR		
	comp=Z,320nm,13.5s						
XLT				LR	LR		
	comp=Z,540nm,14.9s						
SBUM	Sibu	67.01	93	P	P	17 54 21.5	-0.9
SBUM				IAmb	IAmb	17 54 29.6	
	comp=Z,8.9nm,1.0s						
NJ2	Nanjing	68.80	61	*e*P	P	17 54 33.1	-0.3
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CN2	Changchun	73.28	48	*e*P	P	17 54 59.8	-0.6
CN2				S	S	18 04 26.3	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
ZEA	Zeya	73.97	38	*e*P	P	17 55 04.6	+0.3
ZEA				pmax	pmax		
	comp=E,100nm,13.8s						
ZEA				pmax	pmax		
	comp=N,100nm,14.0s						
TIXI	Tiksi	74.66	19	P	P	17 55 06.8	-1.0
TIXI				IAmb	IAmb	17 55 12.7	
	comp=Z,26nm,1.7s						
TIXI	Tiksi	74.66	19	*ce*P	P	17 55 06.9	-1.0
TIXI				pmax	pmax		
	comp=Z,22nm,2.5s						
INCN	Inchon	74.72	55	P	P	17 55 08.0	-1.0
SUMG	Summit	74.75	342	P	P	17 55 09.1	+0.1
SUMG				IAmb	IAmb	17 55 16.0	
	comp=Z,10.0nm,1.0s						
MPSI	Mapaga	74.96	93	P	P	17 55 14.0	+3.2
	comp=Z,11nm,1.1s						
YAK	Yakutsk	75.00	29	LR	LR	18 32 51.2	
	comp=Z,497nm,19.1s,baz=269,slow=40						
YAK	Yakutsk	75.00	29	P	P	17 55 09.4	-0.6
YAK	Yakutsk	75.00	29	*e*P	P	17 55 09.5	-0.6
YAK				*e**PP	PcP	17 55 20.4	-3.4
YAK				*e*		17 57 56.8	
YAK				*e*S	S	18 04 48.2	+0.5
YAK				*e*		18 05 21.8	
YAK				pmax	pmax		
	comp=Z,37nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,90nm,5.1s						
YAK				pmax	pmax		
	comp=N,46nm,4.2s						
YAK				pmax	pmax		
	comp=E,41nm,4.5s						
YAK				smax	smax		
	comp=E,32nm,3.0s						
YAK				smax	smax		
	comp=N,30nm,3.0s						
YAK				MLR	MLR		
	comp=Z,493nm,19.0s						
YAK				MLR	MLR		
	comp=N,194nm,17.0s						
YAK				MLR	MLR		
	comp=E,431nm,17.0s						
TOLI2	Tolitoli	75.63	92	P	P	17 55 11.5	-3.1
TOLI2				IAmb	IAmb	17 55 20.2	
	comp=Z,11nm,1.0s						
KSAR	Wonju Array Be	75.71	55	P	P	17 55 12.4	-2.3
KSRS	Korea Array	75.74	55	P	P	17 55 13.8	-1.1
	comp=Z,0.7nm,0.6s,baz=264,slow=5.3,SNR=2.2						
	comp=Z,0.7nm,0.6s						
KAPI	Kappang	76.21	99	P	P	17 55 15.6	-2.3
MRSI	Marisa	76.91	93	P	P	17 55 24.6	+2.7
	comp=Z,12nm,1.1s						
KLR	Kul'dur	77.13	42	*i* P	P	17 55 23.2	+0.7
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PSA00	Pilbara Seismi	81.24	115	P	P	17 55 44.5	-1.0
PSA00	Pilbara Seismi	81.24	115	P	P	17 55 44.3	-1.1
PSA00				IAmb	IAmb	17 55 49.8	
	comp=Z,5.7nm,0.8s						
SOEI	Soe	81.80	102	P	P	17 55 47.7	-1.0
MAW	Mawson	82.51	173	LR	LR	18 24 38.2	
	comp=Z,81nm,21.2s,baz=352,slow=30						
EUNU	Eureka	82.73	352	P	P	17 55 52.7	+0.4
EUNU				IAmb	IAmb	17 56 17.7	
	comp=Z,21nm,1.6s						
MJB9	Matsu-Tunnel	84.00	54	P	P	17 55 58.6	-1.1
MJB9				IAmb	IAmb	17 56 06.4	
	comp=Z,10nm,1.0s						
MJAR	Matsushiro Arr	84.00	54	P	P	17 55 59.2	-0.5
	comp=Z,2.6nm,0.8s,baz=266,slow=2.8,SNR=2.2						
MJAR				LR	LR	18 38 35.5	
	comp=Z,87nm,18.1s,baz=293,slow=39						
	comp=Z,2.6nm,0.8s						
MJAR	Matsushiro Arr	84.00	54	P	P	17 55 59.6	-0.1
MJAR				IAmb	IAmb	17 56 06.2	
	comp=Z,7.9nm,1.0s						
YSS	Yuzh-Sakhalins	84.79	43	P	P	17 56 02.8	-0.6
YSS				IAmb	IAmb	17 56 09.9	
	comp=Z,17nm,1.2s						
YSS	Yuzh-Sakhalins	84.79	43	*e*P	P	17 56 02.2	-1.2
YSS				*e*S	S	18 06 32.3	+0.7
SEY	Seymchan	85.09	26	LR	LR	18 39 39.4	
	comp=Z,819nm,18.9s,baz=294,slow=40						
SEY	Seymchan	85.09	26	*i* P	P	17 56 03.3	-1.3
SEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MA2	Magadan	85.57	29	LR	LR	18 39 37.8	
	comp=Z,294nm,18.0s,baz=290,slow=39						
MA2	Magadan	85.57	29	*i* P	P	17 56 08.3	+1.3
MA2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL	Bilibino	87.87	19	P	P	17 56 18.1	-0.1
BILL				IAmb	IAmb	17 56 26.8	
	comp=Z,6.8nm,1.3s						
BILL	Bilibino	87.87	19	⇑*e*P	P	17 56 19.3	+1.1
BILL				*e*		17 56 23.1	
BILL						17 59 42.0	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,84nm,14.0s						
JCJ	Chichijima	89.62	62	LR	LR	18 40 56.1	
	comp=Z,27nm,18.6s,baz=113,slow=38						
TROLL	Troll, Antarti	90.53	192	P	P	17 56 36.8	+6.3
SNAA	Sanae	91.45	194	P	P	17 56 37.8	+3.1
VNA2	Neumayer--Watz	92.06	195	P	P	17 56 43.2	+5.7
	baz=30,slow=10.0						
VNA1	Neumayer--Stat	92.11	196	P	P	17 56 42.9	+5.2
VNA3	Neumayer Olymp	92.84	195	P	P	17 56 41.5	+0.4
WRA	Warramunga Arr	93.82	109	P	P	17 56 49.4	+2.6
	comp=Z,4.1nm,1.1s,baz=300,slow=3.4,SNR=11						
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	93.82	109	P	P	17 56 45.0	-1.7
ASAR	Alice Springs	94.29	113	P	P	17 56 50.9	+2.0
	comp=Z,2.1nm,0.9s,baz=287,slow=4.5,SNR=14						
ASAR				LR	LR	18 35 17.9	
	comp=Z,51nm,18.9s,baz=306,slow=33						
	comp=Z,2.1nm,0.9s						
MDP	Montagnes des	96.46	277	LR	LR	18 37 40.8	
	comp=Z,144nm,21.4s,baz=96,slow=34						
PDAR	Pinedale Array	118.86	339	PKP	PKiKP	18 02 21.0	+2.9
	comp=Z,0.2nm,0.3s,baz=34,slow=3.4,SNR=2.8						
PDAR	Pinedale Array	118.86	339		PKiKP	18 02 21.0	+2.9
NVAR	Mina Array Bea	125.52	344	PKP	PKiKP	18 02 32.2	+0.9
	comp=Z,1.8nm,0.8s,baz=242,slow=0.3,SNR=11						
TXAR	Lajitas Array	127.43	325	PKP	PKPdf	18 02 33.2	-1.4
	comp=Z,1.0nm,0.9s,baz=109,slow=3.0,SNR=3.9						

NNC ***24*** *17:51:59.8±0.8, 37°.60N×57°.27E, h0km, mb4.9, Error ellipse: s-maj=14.0km s-min=3.5km az=161.0*

TEH ***24*** *17:51:59.6, 37°.43N×57°.47E, h8km, ML4.9*

THR ***24*** *17:52:00.9±1.5, 37°.46N×57°.47E, h15km±9km, ML4.5*

BJI ***24*** *17:52:00.0±0.0, 37°.60N×57°.60E, h5km, mb4.3/24, mB4.7/15, Ms4.6/16, Ms7 4.3/14*

IDC ***24*** *17:52:00.2±0.6, 37°.48N×57°.33E, h0km, mb4.3/30, mbtmp4.4/37, ML3.6/6, MS4.1/42, Error ellipse: s-maj=10.7km s-min=6.2km az=167.0*

GCMT ***24*** *17:52:01.9±0.3, 37°.48N±0°.02×57°.50E±0°.02, h18km±1km, MW4.8/83, Moment Tensor Solution. s11,c12; s83,c109; Duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-0.76±.13;* $M_{\theta\theta}$*-0.70±.10;* $M_{\phi\phi}$*1.46±.10;* $M_{r\theta}$*-0.28±.23;* $M_{\theta\phi}$*1.71±.08;* $M_{\phi r}$*-0.11±.20; Best double couple:* M_0*2.05000×*10^{16} *NP1:*ϕ_s*164.00000°, δ79.00000°, λ-175.00000°. NP2:* ϕ_s*73.00000°, δ85.00000°, λ-11.00000°. Principal axes: T 2.4200, Plg4.0000°, Azm119.0000°; N -0.7360, Plg78.0000°, Azm229.0000°; P -1.6790, Plg12.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***24*** *17:52:02.6±1.9, 37°.57N×57°.55E, h33km, mb4.8/21, MS4.0/12 Error ellipse: s-maj=3.8km s-min=3.5km az=21.5*

NEIC ***24*** *17:52:03.9±2.9, 37°.60N±0°.03×57°.56E±0°.06, h29km±4km, mb4.8/129, mb_Lg4.9(TEH), Error ellipse: s-maj=6.8km s-min=3.9km az=63.0*

ISC 24 17:52:01.3±0.6**, 37°.48N**±0°.03×**57°.45E**±0°.02**, h13**km±3km**, n561, σ1§93**/564**, mb4.7**/134**, MS4.1**/46**, 33C-25D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJRD	Bojnurd	0.22	352	*e*Pg	Pg	17 52 06.4	+0.2
BJRD				IAML		17 52 11.9	
	comp=E,149µm,0.6s						
BJRD				IAML		17 52 12.1	
	comp=N,84µm,0.6s						
ISFR	Sfrayin	0.62	134	*e*Pg	Pg	17 52 11.2	-2.2
ISFR				*e*Sg	Sg	17 52 19.1	-2.5
ISFR				*e*		17 52 20.8	
	comp=Z,1171µm,0.2s						
GEYT	Alibeck	0.69	50	Pg	Pg	17 52 14.2	-0.6
	comp=Z,594nm,0.3s,baz=224,slow=21,SNR=1724						
GEYT				Lg	Lg	17 52 25.7	

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       comp=Z,6µm,0.3s,baz=196,slow=37,SNR=23
GYA0B ALIBECK ARRAY   0.69  50         Pg     17 52 13.9  -0.9
GYA0B                           Sn     Sb     17 52 25.2  +0.3
GYA0B ALIBECK ARRAY   0.69  50 ⇑P      Pg     17 52 14.1  -0.8
GYA0B                          ⇑S      Sb     17 52 25.1  +0.3
IEMG  Emamgholi       0.96  94 ePg     Pg     17 52 18.3  -1.6
MRVT  Maraveh tapeh   1.09 280 ePg     Pb     17 52 21.4  -0.7
MRVT                           eSg     Sg     17 52 37.4  +0.8
MRVT  Maraveh tapeh   1.09 280 ePg     Pb     17 52 21.5  -0.7
MRVT                            IAML          17 52 43.9
       comp=E,9µm,0.3s
MRVT                            IAML          17 52 44.3
       comp=N,10µm,0.3s
SBZV  Sabzevar        1.10 173 ePg     Pb     17 52 20.3  -2.1
SBZV                           eSg     Sb     17 52 34.8  -2.0
IAKL  Akhelmad        1.37 130 ePg     Pn     17 52 24.3  -2.2
IAKL                           eSg     Sg     17 52 46.8  +1.3
IAKL                           e              17 52 58.0
       comp=Z,8µm,0.4s
IPAY  Payeh           1.61 129 ePg     Pn     17 52 28.5  -1.3
IPAY                           e              17 52 57.6
       comp=Z,41µm,0.4s
IMND  Minoodasht      1.64 263 ePg     Pb     17 52 31.2  -0.3
IKRD  Kardeh          1.80 113 ePn     Pn     17 52 32.2  -0.1
IKRD                           e              17 53 07.4
       comp=Z,57µm,0.5s
SHRO  Shahrood        1.89 218 ePn     Pn     17 52 34.5  +1.1
SHRO                           eSg     Sb     17 52 59.3   0.0
SHRO                            IAML          17 53 01.4
       comp=N,2µm,0.6s
SHRO                            IAML          17 53 02.3
       comp=E,3µm,0.7s
IMOG  Moghan          2.05 132 ePn     Pn     17 52 35.8   0.0
IMOG                           eSg     Sg     17 53 05.6  -1.6
IMOG                           e              17 53 12.5
       comp=Z,94µm,0.6s
IMYA  Miami           2.41 117 ePn     Pn     17 52 41.9  +1.1
TBHD  Torbat heydari  2.52 145 ePn     Pn     17 52 43.0  +0.8
IGLO  Ghaloghah       3.06 252 ePn     Pn     17 52 49.9  +0.3
TBJM  Torbat-e-JAM    3.21 133 ePn     Pn     17 52 52.3  +0.6
IANJ  Anjilo          3.49 236 ePn     Pn     17 52 57.3  +1.8
IANJ                           e              17 54 03.2
       comp=Z,17µm,0.9s
TNSJ  Nastanj         3.58 191 ePn     Pn     17 52 57.4  +0.7
TNSJ                           e              17 54 04.4
       comp=Z,26µm,0.8s
ISHM  Shahmirzad      3.74 245 ePn     Pn     17 53 01.9  +2.9
ISHM                           e              17 54 11.8
       comp=Z,26µm,0.7s
TABS  Tabas           3.84 184 ePn     Pn     17 53 01.2  +0.9
TABS                            IAML          17 54 11.2
       comp=N,902nm,0.8s
TKDS  Koohdasht(Taba  3.87 184 ePn     Pn     17 53 01.5  +0.8
TKDS                           e              17 54 14.8
       comp=Z,14µm,1.1s
ILAS  Lasjerd         4.18 241 ePn     Pn     17 53 06.7  +1.6
ILAS                           e              17 54 32.5
       comp=Z,21µm,1.1s
IFIR  Firoozkooh      4.20 245 ePn     Pn     17 53 07.6  +2.2
AFRZ  Afriz           4.25 162 ePn     Pn     17 53 06.8  +0.9
IPRN  Peran           4.28 255 ePn     Pn     17 53 07.6  +1.2
SHRT  Shahrakht       4.48 148 ePn     Pn     17 53 09.8  +0.8
SHRT                            IAML          17 54 37.3
       comp=N,292nm,0.7s
SHRT                            IAML          17 54 42.4
       comp=E,214nm,0.4s
TPRV  Parvadeh(Tabas  4.49 188 ePn     Pn     17 53 09.7  +0.5
TPRV                           e              17 54 50.2
       comp=Z,12µm,1.0s
ITEG  Tejag           4.70 167 ePn     Pn     17 53 13.3  +1.1
IDMV  Damavand        4.76 248 ePn     Pn     17 53 15.8  +2.7
HRA   Herat           4.97 127  Pn     Pn     17 53 15.7  -0.2
IDAH  Dahanechah      5.13 157 ePn     Pn     17 53 19.1  +0.9
IDAH                           e              17 55 07.6
       comp=Z,6µm,1.2s
IVRN  Varamin         5.25 243 ePn     Pn     17 53 21.4  +1.8
ANAR  Anarak          5.25 216 ePn     Pn     17 53 20.8  +1.1
ISFB  Sefidab         5.25 235 ePn     Pn     17 53 20.9  +1.2
CHTH  Charan          5.32 255 ePn     Pn     17 53 24.3  +3.6
QALM  Alamut, Qazvin  5.55 261 ePn     Pn     17 53 25.1  +1.2
KRSH  Karshahi        5.56 233 ePn     Pn     17 53 25.3  +1.2
YZKH  Yazd            5.60 206 ePn     Pn     17 53 25.6  +1.2
BSRN  Basiran         5.68 165 ePn     Pn     17 53 26.5  +0.9
IQOM  Qom             5.79 245 ePn     Pn     17 53 28.8  +1.5
ICHK  Chekchek        5.79 206 ePn     Pn     17 53 28.2  +0.9
ICHK                           e              17 53 29.6
       comp=Z,4µm,0.3s
GHVR  GHOM            5.82 241 ePn     Pn     17 53 29.4  +1.9
IGZV  Ghazvin         5.89 261 ePn     Pn     17 53 31.1  +2.5
LHJ2  Lahijan - Gila  5.89 269 ePn     Pn     17 53 28.2  -0.2
NASN  Na'in           6.02 220 ePn     Pn     17 53 31.6  +1.1
QCNT  Qazvin          6.08 261 ePn     Pn     17 53 32.1  +1.0
IBAF  Bafgh           6.08 195 ePn     Pn     17 53 32.5  +1.4
IBAF                           e              17 53 34.0
       comp=Z,5µm,0.8s
JIR1  Jirandeh        6.16 265 ePn     Pn     17 53 32.7  +0.5
QAMS  Qamsar          6.19 235 ePn     Pn     17 53 34.0  +1.3
IZEF  Zefreh          6.21 224 ePn     Pn     17 53 35.2  +2.3
IKLH  Kolahrood       6.34 231 ePn     Pn     17 53 36.8  +2.0
ISAD  Sadrabad        6.36 210 ePn     Pn     17 53 36.0  +0.9
NHDN  Nehbandan       6.45 160 ePn     Pn     17 53 37.9  +1.8
IMEH  Mehriz          6.51 202 ePn     Pn     17 53 38.5  +1.3
QABG  Abgarm-Qazvin   6.57 257 ePn     Pn     17 53 39.6  +1.7
CSN1  Caspian         6.64 273 ePn     Pn     17 53 39.5  +0.9
ASAO  Ashtian         6.69 246 ePn     Pn     17 53 42.0  +2.5
IGAR  Gharneh         6.74 223 ePn     Pn     17 53 42.5  +2.3
ZNJK  Zanjan          7.05 266 ePn     Pn     17 53 46.4  +1.8
KHGB  Koh Gabri       7.14 187 ePn     Pn     17 53 47.0  +1.3
IPIR  Pirpir          7.20 230 ePn     Pn     17 53 48.4  +1.8
KRBR  Kerman          7.50 185 ePn     Pn     17 53 52.1  +1.3
GRMI  Germi           7.64 283 ePn     Pn     17 53 51.8  -0.7
GRMI  Germi           7.64 283 ePn     Pn     17 53 52.1  -0.4
ISRB  Sarab           7.77 275 ePn     Pn     17 53 54.8  +0.5
IHSH  Hashtrud        8.11 272 ePn     Pn     17 54 00.3  +1.2
IHRS  Heris           8.27 279 ePn     Pn     17 54 01.9  +0.7
IBST  Bostanabad      8.38 275 ePn     Pn     17 54 03.8  +1.0
AKT   Akhty           8.51 301 i P     Pn     17 54 05.2  +0.8
ITBZ  Tabriz          8.97 278 ePn     Pn     17 54 11.6  +0.8
CHGR  Chuyangaron     9.31  79  Pn     Pn     17 54 13.6  -1.8
CHGR  Chuyangaron     9.31  79  P      Pn     17 54 13.6  -1.8
IMRD  Marand          9.34 281 ePn     Pn     17 54 17.2  +1.3
MAK   Makhachkala     9.36 309 eP      Pn     17 54 10.8  -5.2
MAK                            eS      Sn     17 55 54.0  -7.1
MAK                             pmax   pmax
       comp=Z,109nm,0.7s
MAK                             MLR    MLR
       comp=Z,882nm,11.0s
ISHB  Shabestar       9.39 278 ePn     Pn     17 54 16.9  +0.3
KBL   Kabul           9.84 104  Pn     Pn     17 54 23.0  +0.2
KBL   Kabul           9.84 104  P      Pn     17 54 23.0  +0.2
TAS   Tashkent        9.94  64  Pn     Pn     17 54 22.5  -1.4
TAS   Tashkent        9.94  64  P      Pn     17 54 22.5  -1.4
DVE   Vedeno         10.23 306 i P     Pn     17 54 29.4  +1.4
GAR   Garm           10.24  78         Pn     17 54 26.1  -2.0
GNI   Garni          10.27 289  Pn     Pn     17 54 28.4  -0.1
       comp=Z,2.6nm,0.3s,baz=139,slow=5.6,SNR=10
GNI                             Sn     Sn     17 56 22.3  -1.3
       comp=Z,0.6nm,0.3s,baz=3.3,slow=20,SNR=1.4
       comp=Z,57nm,0.9s
GNI   Garni          10.27 289  Pn     Pn     17 54 28.2  -0.4
GROC  Groznyy        10.56 306 eP      Pn     17 54 34.2  +1.8
GROC                           eS      Sn     17 56 32.6  +2.0
GROC                            pmax   pmax
       comp=Z,111nm,1.3s
IUG   Iuzhnay        10.74  60 eP      Pn     17 54 33.0  -1.9
IUG   Iuzhnay        10.74  60 eP      Pn     17 54 33.0  -1.9
       baz=62
BTK   Batken         10.75  72  Pn     Pn     17 54 33.9  -1.2
BTK   Batken         10.75  72  P      Pn     17 54 33.9  -1.2
GEVA  Gevas          11.40 279         Pn     17 54 45.2  +1.1
DRK   Karamyk        11.43  76         Pn     17 54 42.5  -2.0
KK31  Karatay Array  11.44  57  Pn     Pn     17 54 42.1  -2.4
KK31  Karatay Array  11.44  57 eP      Pn     17 54 43.3  -1.2
KK31                            S      Sn     17 56 47.0  -5.2
KK31  Karatay Array  11.44  57 ⇑Pn     Pn     17 54 44.9  +0.5
       comp=Z,17nm,0.8s,baz=270,slow=8.4,SNR=71
KK31                           ⇑Sn     Sn     17 56 54.5  +2.3
       comp=Z,32nm,0.8s,baz=305,slow=11,SNR=4.2
KKAR  Karatay Array  11.44  57  Pn     Pn     17 54 42.2  -2.3
KKAR  Karatay Array  11.44  57         Pn     17 54 42.1  -2.4
KKAR  Karatay Array  11.44  57  P      Pn     17 54 42.2  -2.3
KARS  Kars           11.60 290  Pn     Pn     17 54 46.5  -0.3
KARS  Kars           11.60 290  P      Pn     17 54 46.5  -0.3
ZEI   Tsey           11.64 301 eP      Pn     17 54 50.2  +2.9
ZEI                             pmax   pmax
       comp=Z,23nm,0.6s
AB31  Akbulak array  11.90   8  P      Pn     17 54 49.0  -1.7
AB31                           eS      Sn     17 56 55.0  -8.4
AB31  Akbulak array  11.90   8 ⇑Pn     Pn     17 54 49.1  -1.7
       comp=Z,6.1nm,0.4s,baz=192,slow=13,SNR=98
AB31                           ⇓Sn     Sn     17 57 02.8  -0.6
       comp=Z,53nm,0.8s,baz=196,slow=25,SNR=3.5
ABKAR Akbulak array  11.90   8  Pn     Pn     17 54 48.6  -2.1
ABKAR Akbulak array  11.90   8         Pn     17 54 48.6  -2.1
DZA   Taraz          11.91  59 eP      Pn     17 54 49.0  -1.9
DZA   Taraz          11.91  59 eP      Pn     17 54 48.1  -2.8
       baz=60
NCK   Nalchik        12.13 304 i P     Pn     17 54 53.7  -0.2
GURO  Guroymak-BITLI 12.21 280  Pn     P      17 55 05.4  -2.2
CEP   Cherat         12.32 103  P      Pn     17 54 56.4  -0.2
KBZ   Khabaz         12.69 304  Pn     Pn     17 54 59.5  -2.0
       comp=Z,1.2nm,0.3s,baz=130,slow=11,SNR=14
KBZ                             Sn     Sn     17 57 18.2  -4.3
       comp=Z,0.4nm,0.3s,baz=139,slow=11,SNR=1.9
       comp=Z,20nm,0.8s
SHA1  Shidzhatmaz    12.85 304 i P     Pn     17 55 02.5  -1.4
KVAR  Kislovodsk Arr 12.91 305  Pn     Pn     17 55 03.4  -1.3
       baz=77,slow=23
KVAR                            Sn     Sn     17 57 23.5  -4.8
       baz=219,slow=18
       comp=Z,6.5nm,0.5s
KIV   Kislovodsk     12.92 305  Pn     Pn     17 55 02.3  -2.5
KIV   Kislovodsk     12.92 305 eP      Pn     17 55 02.4  -2.3
KIV                            eS      Sn     17 57 24.5  -3.9
KIV                             pmax   pmax
       comp=Z,52nm,1.0s
KIV                             MLR    MLR
       comp=Z,242nm,12.0s
AKTO  Aktyubinsk     12.95   2  Pn     Pn     17 55 04.0  -1.0
       comp=Z,18nm,0.3s,baz=184,slow=9.5,SNR=45
AKTO                            Sn     Sn     17 57 23.2  -5.8
       comp=Z,3.5nm,0.3s,baz=246,slow=23,SNR=6.8
AKTO                            LR     LR     18 01 09.4
       comp=Z,2µm,18.5s,baz=172,slow=42
AKTO  Aktyubinsk     12.95   2 ⇑Pn     Pn     17 55 03.7  -1.4
       comp=Z,18nm,0.5s
AKTO                           ⇑Sn     Sn     17 57 27.3  -1.7
       comp=Z,66nm,0.9s
GOF   Gofitskoye     13.20 309⇑eP      Pn     17 55 04.9  -3.6
GOF                             pmax   pmax
       comp=Z,52nm,1.3s
MARD  Mardin         13.26 274  Pn     Pn     17 55 06.8  -2.7
AML   Almayashu      13.32  65  P      Pn     17 55 08.6  -2.0
       SNR=12
NIL   Nilore         13.42 102  Pn     Pn     17 55 09.3  -2.2
NIL   Nilore         13.42 102  P      Pn     17 55 09.4  -2.2
CHCP  Chirah Chowk   13.43 102  P      Pn     17 55 10.7  -1.0
KOPT  Kop Dagi       13.47 286  Pn     Pn     17 55 10.5  -2.0
EKS2  Erkin-Say      13.53  62  P      Pn     17 55 12.8  -0.3
       SNR=13
UCH   Uchtor         13.94  65  P      Pn     17 55 16.9  -2.0
       SNR=8.8
AAK   Ala-Archa      14.03  63  P      Pn     17 55 18.9  -1.0
       SNR=12
AAK   Ala-Archa      14.03  63  Pn     Pn     17 55 18.1  -1.8
       comp=Z,0.9nm,0.3s,baz=238,slow=6.8,SNR=16
AAK                             Sn     Sn     17 57 47.8  -7.7
       comp=Z,0.5nm,0.3s,baz=304,slow=13,SNR=2.3
AAK                             LR     LR     18 01 11.0
       comp=Z,796nm,21.2s,baz=264,slow=39
       comp=Z,15nm,0.7s
AAK   Ala-Archa      14.03  63  Pn     Pn     17 55 17.3  -2.7
FRU1  Bishkek        14.17  63         Pn     17 55 19.4  -2.4
FRU1  Bishkek        14.17  63  P      Pn     17 55 19.4  -2.4
USP   Ospenovka      14.22  61  P      Pn     17 55 20.1  -2.3
       SNR=9.5
CHMS  Chumysh        14.31  62 i P     Pn     17 55 22.9  -0.8
CHMS                            pmax   pmax
       comp=Z,32nm,1.0s
CHMS  Chumysh        14.31  62 ⇑P      Pn     17 55 24.2  +0.5
       comp=Z,32nm,1.0s
KBK   Karagaybulak   14.36  63  P      Pn     17 55 21.9  -2.6
       SNR=11
SGDS  Sogindy        14.37  60 eP      Pn     17 55 21.3  -3.1
SGDS  Sogindy        14.37  60 eP      Pn     17 55 21.4  -3.1
       baz=61
VSLR  Vesyoloye      14.53 300 i P     Pn     17 55 27.2  +0.6
BTLS  Baital         14.57  54 eP      Pn     17 55 25.6  -1.6
BTLS                            pmax   pmax
       comp=Z,15nm,1.1s
BTLS  Baital         14.57  54 eP      Pn     17 55 25.7  -1.6
       comp=Z,15nm,1.1s,baz=55
GUZR  Guzeripl'      14.65 302 i P     Pn     17 55 28.6  +0.3
KSH   Kashi          14.65  76  P      Pn     17 55 21.4  -7.1
KSH                             sP     P      17 55 27.1  -7.7
KSH                             PP     PnPn   17 55 34.6  -1.7
KSH                             S      Sn     17 57 53.8   -17
KSH                             pmax   pmax
       comp=Z,33nm,0.7s
KSH                             LR     LR
       comp=Z,2µm,10.3s
KSH                             LR     LR
       comp=Z,1µm,11.2s
KSH                             LR     LR
       comp=Z,1µm,15.4s
TKM2  Tokmak 2       14.89  63 i P     Pn     17 55 28.9  -2.8
TKM2                            pmax   pmax
       comp=Z,19nm,1.0s
TKM2  Tokmak 2       14.89  63 ⇑P      Pn     17 55 32.4  +0.7
       comp=Z,19nm,1.1s
BOOM  Boomskoye usch 15.03  65         Pn     17 55 31.0  -2.5
BOOM  Boomskoye usch 15.03  65  P      Pn     17 55 31.0  -2.5
ULHL  Ulahol         15.19  66  P      Pn     17 55 33.5  -2.3
       SNR=12
OTUK  Ortayu         15.30  41  P      Pn     17 55 35.7  -1.2
OTUK  Ortayu         15.30  41 ⇓P      Pn     17 55 35.7  -1.2
       comp=Z,71nm,1.1s
KUU   Kurty          15.68  60 eP      Pn     17 55 40.5  -1.5
KUU   Kurty          15.68  60 eP      Pn     17 55 40.6  -1.5
       baz=61
KDJ   Kajisay        15.85  67  Pn     Pn     17 55 41.6  -2.8
KDJ   Kajisay        15.85  67  P      Pn     17 55 41.6  -2.8
KDJ                             pmax   pmax
       comp=Z,34nm,1.0s
TNSS  Tian-Shan      15.88  63 eP      Pn     17 55 42.6  -2.2
TNSS  Tian-Shan      15.88  63 eP      Pn     17 55 42.7  -2.2
       baz=65
AAA   Alma-Ata       15.89  63 eP      Pn     17 55 43.3  -1.5
AAA   Alma-Ata       15.89  63 eP      Pn     17 55 43.4  -1.5
       baz=64
KNDC  Almaty         15.93  63 ⇓P      Pn     17 55 46.1  +0.8
       comp=Z,143nm,1.1s
MDOK  Medeo          15.98  63  P      P      17 55 50.4  +0.9
MDOK  Medeo          15.98  63 eP      Pn     17 55 44.7  -1.2
       baz=64
MDOK  Medeo          15.98  63 ⇓P      P      17 55 50.5  +0.9
       comp=Z,104nm,1.2s
CHKK  Chushkaly      16.12  61 eP      Pn     17 55 46.3  -1.3
CHKK  Chushkaly      16.12  61 eP      Pn     17 55 46.4  -1.3
       baz=62
TARG  Taragay, Kyrgy 16.25  69  P      Pn     17 55 47.2  -2.5
TARG  Taragay, Kyrgy 16.25  69  P      Pn     17 55 47.2  -2.5
TARG                            pmax   pmax
       comp=Z,37nm,0.8s
BELG  Belogornoye    16.43 338  Pn     Pn     17 55 49.2  -2.2
       comp=Z,3.9nm,0.3s,baz=340,slow=9.0,SNR=19
BELG                            Sn     Sn     17 58 44.5  -8.9
       comp=Z,4.3nm,0.3s,baz=91,slow=18,SNR=7.5
BELG                            LR     LR     18 04 04.9
       comp=Z,845nm,18.8s,baz=146,slow=44
BELG  Belogornoye    16.43 338 i P     Pn     17 55 49.3  -2.1
BELG                            pmax   pmax
       comp=Z,20nm,1.0s
TOKA  Tokat          16.56 286  P      Pn     17 55 53.3  -0.1
BRZS  Berezniki      16.61  36 eP      Pn     17 55 50.9  -2.9
BRZS  Berezniki      16.61  36 eP      Pn     17 55 51.0  -2.9
       baz=37
ANN   Anapa          16.73 302 eP      Pn     17 55 54.3  -1.1
ANN                            eS      Sn     17 58 59.2  -1.8
ANN                             pmax   pmax
       comp=Z,37nm,1.0s
ANN                             MLR    MLR
       comp=N,190nm,9.0s
ANN                             MLR    MLR
       comp=E,674nm,13.0s
ANN                             MLR    MLR
       comp=Z,472nm,11.0s
PRZ   Przheval'sk    16.80  66         Pn     17 55 53.5  -3.1
PRZ                             IAmb   IAmb   17 56 04.2
       comp=Z,132nm,1.8s
PRZ   Przheval'sk    16.80  66  P      Pn     17 55 53.5  -3.1
PRZ                             pmax   pmax
       comp=Z,132nm,1.8s
SATY  Saty           16.92  64 eP      Pn     17 55 56.1  -1.8
SATY  Saty           16.92  64 eP      Pn     17 55 56.1  -1.8
       baz=65
ZHN   Zhinishke      16.97  64 eP      Pn     17 55 56.9  -1.6
ZHN   Zhinishke      16.97  64 eP      Pn     17 55 56.9  -1.6
       baz=65
BNN   Bunyan         17.04 281  P      Pn     17 55 59.6  +0.1
KPKS  Kokpek         17.21  63 eP      Pn     17 55 59.9  -1.6
KPKS  Kokpek         17.21  63 eP      Pn     17 55 59.9  -1.6
       baz=64
RAYN  Ar Rayn        17.29 220  P      Pn     17 56 01.6  -0.9
RAYN                            IAmb   IAmb   17 56 06.8
       comp=Z,58nm,0.9s
RAYN  Ar Rayn        17.29 220  P      Pn     17 56 01.6  -0.9
RAYN                            pmax   pmax
       comp=Z,58nm,1.0s
UZB   Uzynbulak      17.38  64 eP      Pn     17 56 02.0  -1.7
UZB   Uzynbulak      17.38  64 eP      Pn     17 56 02.0  -1.7
       baz=65
TDK   Taldyqorghan   17.43  58 eP      Pn     17 56 02.7  -1.5
TDK                             pmax   pmax
       comp=Z,39nm,0.9s
TDK   Taldyqorghan   17.43  58 eP      Pn     17 56 02.7  -1.5
       comp=Z,39nm,0.9s,baz=59
VRH   Novokhopyorsk  17.68 326 eP      Pn     17 56 04.7  -2.5
VRH                             pmax   pmax
       comp=Z,70nm,1.5s
PDGK  Podgornoye     17.75  64  P      P      17 56 09.6  +0.5
PDGK  Podgornoye     17.75  64 ⇑P      P      17 56 09.6  +0.5
       comp=Z,29nm,1.1s
BRVK  Borovoye       17.96  26         Pn     17 56 08.6  -2.0
BRVK                            IAmb   IAmb   17 56 16.7
       comp=Z,69nm,1.1s
BRVK  Borovoye       17.96  26 i P     Pn     17 56 09.1  -1.5
BRVK                            pmax   pmax
       comp=Z,79nm,1.3s
BRVK  Borovoye       17.96  26 ⇓P      Pn     17 56 10.2  -0.5
       comp=Z,78nm,1.3s
MMAI  Mount Meron Ar 18.54 263  LR     LR     18 04 08.1
       comp=Z,138nm,19.6s,baz=248,slow=40
VORD  Divnogorie     18.66 322 eP      P      17 56 18.1  -0.8
VORD                            pmax   pmax
       comp=Z,40nm,1.2s
ILGA  Ilgaz          18.70 288  P      P      17 56 18.3  -1.4
ILGA                            IAmb   IAmb   17 56 50.0
       comp=Z,56nm,1.2s
BR131 Keskin Array S 18.73 284  P      P      17 56 18.6  -1.4
BR131 Keskin Array S 18.73 284 i P     Pn     17 56 21.9  +1.6
BRTR  Keskin Array B 18.73 284  P      P      17 56 20.1  +0.2
       comp=Z,0.2nm,0.3s,baz=100,slow=12,SNR=14
       comp=Z,4.0nm,1.0s
BRTR  Keskin Array B 18.73 284         P      17 56 18.9  -1.1
BRTR  Keskin Array B 18.73 284 i P     Pn     17 56 23.6  +3.2
BRTR                            pmax   pmax
       comp=Z,16nm,1.1s
VSR   Storozhevoye   18.88 322 eP      P      17 56 20.9  -0.4
VSR                             pmax   pmax
       comp=Z,30nm,0.5s
ARU   Arti           18.97   2  P      P      17 56 21.5  -0.7
       baz=205,slow=9.7,SNR=13
ARU                             S      Sn     17 59 42.2   -13
       comp=Z,0.8nm,0.3s,baz=180,slow=22,SNR=1.1
ARU                             LR     LR     18 04 25.7
       comp=Z,575nm,19.1s,baz=190,slow=39
       comp=Z,4.2nm,0.4s
ARU   Arti           18.97   2  P      P      17 56 19.7  -2.5
ARU                             IAmb   IAmb   17 56 29.1
       comp=Z,68nm,1.5s
ARU   Arti           18.97   2d iP     P      17 56 20.6  -1.6
ARU                             S      Sn     17 59 48.5  -6.5
ARU                             pmax   pmax
       comp=Z,22nm,1.7s
ARU                             MLR    MLR
       comp=Z,600nm,16.0s
SIM   Simferopol'    19.03 300 eP      Pn     17 56 23.7  -0.1
SIM                            eS      Sn     17 59 51.7  -5.0
SIM                             pmax   pmax
       comp=Z,61nm,1.1s
SIM                             MLR    MLR
       comp=Z,205nm,19.2s
VORR  Voronezh       19.16 324 eP      P      17 56 24.1  -0.2
VORR                            pmax   pmax
       comp=Z,77nm,1.4s
ANTO  Ankara         19.38 285         Pn     17 56 28.5  +0.4
ANTO  Ankara         19.38 285  P      Pn     17 56 28.5  +0.4
ANTO                            pmax   pmax
       comp=Z,39nm,1.2s
BR231 Keskin MP Arra 19.39 285  P      P      17 56 25.7  -1.5
SVE   Sverdlovsk     19.47   5 eP      Pn     17 56 30.8  +1.9
SVE                            eS      Sn     17 59 59.1  -8.0
SVE                             pmax   pmax
       comp=Z,36nm,1.5s
SVE                             MLR    MLR
       comp=Z,1µm,13.0s
CSS   Mathiatis      19.61 270  P      Pn     17 56 31.9  +1.1
CSS                             IAmb   IAmb   17 56 41.4
       comp=Z,46nm,1.2s
LPSR  Galich'ya Gora 19.90 325 eP      Pn     17 56 34.0  -0.1
LPSR                            pmax   pmax
       comp=Z,140nm,1.7s
KURBB Kurchatov Arra 19.96  42  P      Pn     17 56 35.0  +0.2
       comp=Z,6.3nm,0.7s,baz=239,slow=12,SNR=18
KURBB                           LR     LR     18 04 15.8
       comp=Z,222nm,21.4s,baz=210,slow=37
       comp=Z,6.3nm,0.7s
KURBB Kurchatov Arra 19.96  42  P      Pn     17 56 35.8  +1.0
KURBB Kurchatov Arra 19.96  42 ⇑P      Pn     17 56 34.6  -0.2
       comp=Z,32nm,1.3s
KURK  Kurchatov      20.06  42         P      17 56 34.5  +0.3
KURK  Kurchatov      20.06  42ceP      Pn     17 56 37.0  +1.0
KURK                            pmax   pmax
       comp=Z,29nm,1.1s
EIL   Elat           20.27 254  LR     LR     18 04 31.1
       comp=Z,560nm,20.6s,baz=74,slow=37
MAKZ  Makanchi       20.37  55  P      P      17 56 37.3  -0.3
MAKZ                            IAmb   IAmb   17 56 42.7
       comp=Z,52nm,1.1s
MAKZ  Makanchi       20.37  55  P      Pn     17 56 38.9  -0.8
MAKZ  Makanchi       20.37  55 ⇓P      Pn     17 56 38.9  -0.8
       comp=Z,52nm,1.1s
MK31  Makanchi Array 20.57  55         P      17 56 40.6  +0.8
MK31                            IAmb   IAmb   17 56 45.2
       comp=Z,41nm,1.1s
MK31  Makanchi Array 20.57  55 i P     Pn     17 56 41.2  -0.8
MK31                            pmax   pmax
       comp=Z,66nm,1.2s
MK31  Makanchi Array 20.57  55 ⇑P      Pn     17 56 41.2  -0.8
       comp=Z,66nm,1.2s,baz=244,slow=10,SNR=71
MKAR  Makanchi Array 20.57  55  P      Pn     17 56 41.8  -0.3
       comp=Z,22nm,0.8s,baz=243,slow=12,SNR=33
MKAR                            LR     LR     18 05 13.0
       comp=Z,207nm,21.3s,baz=243,slow=38
       comp=Z,22nm,0.8s
MKAR  Makanchi Array 20.57  55         P      17 56 40.4  +0.6
MDUB  Mudurnu        20.60 286  P      P      17 56 41.2  +0.9
SEM   Semipalatinsk  20.79  44 eP      P      17 56 42.9  +0.5
SEM   Semipalatinsk  20.79  44 eP      P      17 56 42.9  +0.5
       baz=45
BORA  Eskisehir      21.18 285  P      P      17 56 46.6  +0.1
KIRV  Kirov          21.76 349  P      P      17 56 53.0  +0.6
       comp=Z,25nm,0.7s,baz=152,slow=15,SNR=12
KIRV                            LR     LR     18 07 00.9
       comp=Z,720nm,21.1s,baz=173,slow=41
       comp=Z,25nm,0.7s
KIRV  Kirov          21.76 349ceP      P      17 56 53.5  +1.1
ELL   Elmali         21.95 277  P      P      17 56 54.8  -0.1
ELL   Elmali         21.95 277  P      P      17 56 54.8  -0.1
ELL                             pmax   pmax
       comp=Z,200nm,0.8s
PURM  Purcari        22.30 303 ⇓P      P      17 57 00.1  +1.7
ZSN   Zaisan         22.44  55 eP      P      17 57 00.8  +0.9
ZSN   Zaisan         22.44  55 eP      P      17 57 00.8  +0.9
       baz=56
OBN   Obninsk        22.63 328 ⇑P      P      17 57 03.0  +1.2
OBN   Obninsk        22.63 328  P      P      17 57 02.2  +0.4
       comp=Z,4.0nm,0.5s,baz=57,slow=3.9,SNR=10
OBN                             LR     LR     18 06 57.1
       comp=Z,65nm,20.7s,baz=44,slow=40
       comp=Z,4.0nm,0.5s
OBN   Obninsk        22.63 328  P      P      17 57 01.9  +0.1
OBN   Obninsk        22.63 328⇑eP      P      17 57 01.0  -0.8
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OBN				*SP	sP	17 57 09.0	+1.5
OBN				e		17 57 18.4	
OBN				PPP	PPP	17 57 29.0	
OBN						18 00 57.0	
OBN				S	S	18 01 07.0	-2.2
OBN				SSS	SSS	18 01 55.0	
OBN				pmax	pmax		
	comp=Z,54nm,1.3s						
OBN				MLR	MLR		
	comp=Z,206nm,14.0s						
MOS	Moscow	22.63	330	eP	P	17 57 02.2	+0.4
MOS				e		17 57 22.9	
MOS				pmax	pmax		
	comp=Z,128nm,1.6s						
MOS				pmax	pmax		
	comp=Z,300nm,2.3s						
TIRR	Tirgusor	22.92	297	P	P	17 57 02.4	-2.6
TIRR	Tirgusor	22.92	297	P	P	17 57 02.4	-2.6
TIRR				pmax	pmax		
	comp=Z,64nm,1.1s						
TPGR	Topolog	22.97	298	⇑P	P	17 57 07.6	+2.0
MILM	Milestii Mici	23.10	303	eP	P	17 57 08.0	+1.2
	comp=Z,230nm,3.2s						
MILM	Milestii Mici	23.10	303	⇓P	P	17 57 09.3	+2.4
MILM	Milestii Mici	23.10	303	eP	P	17 57 08.0	+1.2
MILM				e		17 57 37.0	
MILM				eS	S	18 01 17.0	-0.7
MILM				pmax	pmax		
	comp=Z,230nm,3.2s						
MILM				MLR	MLR		
	comp=Z,550nm,16.0s						
MILM				MLR	MLR		
	comp=E,500nm,18.0s						
KIS	Kishinev	23.12	303	eP	P	17 57 08.0	+1.0
KIS	Kishinev	23.12	303	ePP	P	17 57 28.0	+21
KIS				eS	S	18 01 12.0	-6.0
KIS				LRM	MLR	18 08 04.0	
	comp=E,250nm,16.0s						
KIS	Kishinev	23.12	303	eP	P	17 57 08.0	+1.0
KIS				e		17 57 12.0	
KIS				eS	S	18 01 12.0	-6.0
KIS				MLR	MLR		
	comp=Z,250nm,16.0s						
CFR	Carcaliu	23.22	299	⇑P	P	17 57 10.2	+2.1
ARG	Arkhangelos	23.46	276	P	P	17 57 07.8	-2.8
ARG	Arkhangelos	23.46	276	P	P	17 57 07.8	-2.8
ARG				pmax	pmax		
	comp=Z,51nm,1.1s						
DANN	Dangsing	23.83	105	eP	P	17 57 15.6	+1.0
	comp=Z,100nm,1.0s						
AKASG	Malin Array Be	24.02	312	P	P	17 57 15.8	0.0
	comp=Z,4.9nm,0.6s,baz=107,slow=8.1,SNR=57						
	comp=Z,4.9nm,0.6s						
AKASG	Malin Array Be	24.02	312	P	P	17 57 15.1	-0.8
AKASG				IAmb	IAmb	17 57 28.1	
	comp=Z,30nm,1.1s						
AKASG	Malin Array Be	24.02	312	i P	P	17 57 16.2	+0.4
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKBB	Malin Array Si	24.02	312	P	P	17 57 14.5	-1.3
AKBB	Malin Array Si	24.02	312	ceP	P	17 57 16.2	+0.4
RAZG	Razgrad	24.20	294	⇓P	P	17 57 19.4	+1.8
BISRR	Bisoca	24.27	299	⇓P	P	17 57 20.3	+1.9
VRI	Vrincioaia	24.31	300	⇓P	P	17 57 20.5	+1.9
PLOR	Plostina	24.36	300	⇓P	P	17 57 21.3	+2.2
KARP	Karpathos	24.37	275	P	P	17 57 14.6	-4.6
TESR	Tescani	24.47	301	⇑P	P	17 57 22.3	+2.2
NEHR	Nehoiu	24.54	299	⇑P	P	17 57 23.2	+2.5
SGRR	Singureni	24.64	296	⇑P	P	17 57 23.9	+2.3
COVR	Voineasa-Covas	24.67	300	⇓P	P	17 57 24.2	+2.4
GKN	Gorkha	24.68	105	eP	P	17 57 23.4	+1.2
	comp=Z,39nm,0.8s						
MLR	Muntele Rosu	24.80	299	⇓P	P	17 57 24.9	+1.8
MLR	Muntele Rosu	24.80	299	P	P	17 57 24.5	+1.3
	comp=Z,27nm,1.0s,baz=122,slow=5.9,SNR=14						
MLR				LR	LR	18 09 56.3	
	comp=Z,520nm,18.1s,baz=142,slow=44						
	comp=Z,27nm,1.0s						
MLR	Muntele Rosu	24.80	299	P	P	17 57 23.1	-0.1
RDO	Rodhopi	24.88	288	P	P	17 57 24.1	+0.3
BIZ	Bicaz	24.92	302	⇑P	P	17 57 26.4	+2.3
OZUR		24.99	300	⇓P	P	17 57 27.2	+2.4
ZAA0	Zalesovo Array	25.00	40	P	P	17 57 22.6	-2.1
ZAA0				IAmb	IAmb	17 57 29.6	
	comp=Z,37nm,1.4s						
ZAA0	Zalesovo Array	25.00	40	⇑P	P	17 57 25.6	+0.9
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	25.00	40	P	P	17 57 26.0	+1.3
	comp=Z,9.4nm,0.5s,baz=252,slow=9.3,SNR=20						
	comp=Z,9.4nm,0.5s						
ZALV	Zalesovo Beam	25.00	40	P	P	17 57 24.1	-0.6
COPA	Copaceanca	25.17	295	⇓P	P	17 57 28.4	+2.1
DMN	Daman	25.23	105	eP	P	17 57 28.3	+0.9
	comp=Z,78nm,1.0s						
DOPR	Dopca	25.25	300	⇓P	P	17 57 29.3	+2.3
HUMR	Humele	25.37	296	⇑P	P	17 57 29.8	+1.6
VOIR		25.41	298	⇓P	P	17 57 30.9	+2.2
PKIN	Phulchoki	25.47	105	eP	P	17 57 30.5	+1.0
	comp=Z,69nm,1.0s						
PKI	Pulchoki	25.48	105	eP	P	17 57 30.6	+0.9
	comp=Z,79nm,1.0s						
BURAR	Bucovina Array	25.64	304	⇑P	P	17 57 32.9	+2.1
BURAR	Bucovina Array	25.64	304	P	P	17 57 30.6	-0.2
BURAR				IAmb	IAmb	17 57 52.9	
	comp=Z,12nm,0.7s						
BUR08	Bucovina Ar. S	25.66	304	P	P	17 57 31.3	+0.4
KLMR	Klimovskoe	25.98	340	eP	P	17 57 33.1	-0.5
KLMR				pmax	pmax		
	comp=Z,52nm,1.3s						
KLMR	Klimovskoe	25.98	340	eP	P	17 57 33.1	-0.5
KLMR				AMP		17 57 50.0	
	comp=Z,52nm,1.3s						
KLMR				LQ	LQ	18 05 30.9	
KLMR				LQ	LQ	18 05 30.9	
KLMR				LR	LR	18 07 14.5	
JIRN	Jiri	26.04	104	eP	P	17 57 37.7	+2.8
	comp=Z,67nm,0.9s						
IDI	Anoyia	26.23	275	⇑P	P	17 57 39.4	+3.3
IDI	Anoyia	26.23	275	P	P	17 57 37.7	+1.6
	comp=Z,10nm,0.4s,baz=50,slow=9.6,SNR=14						
	comp=Z,10nm,0.4s						
IDI	Anoyia	26.23	275	P	P	17 57 37.6	+1.4
IDI				IAmb	IAmb	17 57 48.7	
	comp=Z,44nm,1.2s						
LOT	Lotru	26.31	298	⇓P	P	17 57 38.8	+1.9
MNK	Minsk	26.39	320	i P	P	17 57 35.5	-1.7
MNK				i		17 58 13.4	
MNK				i		18 01 02.8	
MNK				i S	S	18 02 07.7	-2.4
MNK				pmax	pmax		
	comp=N,13nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,19nm,1.0s						
MNK				MLR	MLR		
	comp=N,416nm,27.0s						
MNK				MLR	MLR		
	comp=Z,527nm,25.0s						
MNK				MLR	MLR		
	comp=E,74nm,21.0s						
MNK	Minsk	26.39	320	i P	P	17 57 35.6	-1.7
	comp=E,4.0nm,1.2s						
MNK				i P	P	17 57 35.6	-1.7
	comp=N,13nm,0.8s						
MNK				i P	P	17 57 35.6	-1.7
	comp=Z,19nm,1.0s,baz=297						
MNK				i PP	PnPn	17 58 13.5	-3.3
MNK				i S	S	18 02 07.8	-2.4
MNK				i SS	SnSn	18 03 06.7	-4.0
MNK				i LQ	LQ	18 05 50.0	
MNK				i LR	LR	18 07 49.1	
MNK				i LRM	MLR	18 08 42.7	
	comp=E,74nm,21.3s						
MNK				i LRM	MLR	18 08 42.7	
	comp=N,416nm,27.2s						
MNK				i LRM	MLR	18 08 42.7	
	comp=Z,527nm,24.9s						
VTS	Vitosha	26.57	292	⇑P	P	17 57 41.8	+2.5
VTS	Vitosha	26.57	292	P	P	17 57 39.9	+0.7
VTS	Vitosha	26.57	292	P	P	17 57 39.9	+0.7
VTS				pmax	pmax		
	comp=Z,16nm,1.0s						
RAMN	Ramite	26.71	105	eP	P	17 57 41.7	+0.9
	comp=Z,82nm,1.0s						
LVV	L'vov	26.91	308	eP	P	17 57 43.4	+1.4
GZR	Gura Zlata	27.00	298	⇓P	P	17 57 45.1	+2.1
NACGM	Naroch	27.14	320	⇓eP	P	17 57 45.3	+1.2
	baz=117						
DRGR		27.20	301	⇓P	P	17 57 47.1	+2.4
TAPN	Taplejung	27.37	103	eP	P	17 57 51.4	+4.6
	comp=Z,29nm,0.9s						
IIGN	Ignalina	27.63	320	eP	P	17 57 49.9	+1.5
BOVS	Bovan	27.69	294	⇑P	P	17 57 51.3	+2.2
KWP	Kalwaria Pacla	27.70	307	eP	P	17 57 48.1	-1.0
KWP	Kalwaria Pacla	27.70	307	P	P	17 57 49.9	+0.8
KWP	Kalwaria Pacla	27.70	307	P	P	17 57 49.9	+0.8
KWP				pmax	pmax		
	comp=Z,354nm,1.2s						
MDVR	Moldovita	27.72	297	⇑P	P	17 57 51.5	+2.1
UZH	Uzhgorod	27.76	305	c iP	P	17 57 51.0	+1.3
UZH				e		17 58 04.0	
UZH				eS	S	18 02 29.4	-2.5
ISAL	Salakas	27.78	321	eP	P	17 57 51.5	+1.7
KOLS	Kolonicke sedl	27.83	306	eP	P	17 57 54.7	+4.4
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KOLS	Kolonicke sedl	27.83	306	eP	P	17 57 54.7	+4.4
BZS	Buzias	27.83	298	⇓P	P	17 57 52.3	+2.0
CRVS	Cervenica-Dubn	28.35	305	eP	P	17 57 57.1	+2.1
CRVS	Cervenica-Dubn	28.35	305	eP	P	17 57 57.1	+2.1
SUW	Suwalki	28.70	316	eP	P	17 57 59.7	+1.8
SUW	Suwalki	28.70	316	P	P	17 57 58.6	+0.6
SUW	Suwalki	28.70	316	P	P	17 57 58.6	+0.6
SUW				pmax	pmax		
	comp=Z,40nm,1.1s						
SUW	Suwalki	28.70	316	eP	P	17 57 59.5	+1.5
PABE	Paberze	28.86	319	eP	P	17 58 01.5	+2.2
DIVS	Divibare	28.93	295	P	P	17 58 01.3	+1.0
VSU	Vasula	28.96	326	i P	P	17 58 01.5	+1.3
VSU				pmax	pmax		
	comp=Z,34nm,1.2s						
VSU	Vasula	28.96	326	eP	P	17 58 01.5	+1.3
ATD	Arta Tunnel	28.98	211	LR	LR	18 11 06.7	
	comp=Z,276nm,18.0s,baz=355,slow=40						
ATD	Arta Tunnel	28.98	211	P	P	17 58 00.7	-0.2
ATD				IAmb	IAmb	17 58 04.2	
	comp=Z,20nm,1.2s						
NIE	Niedzica	29.19	306	eP	P	17 58 05.0	+2.6
OJC	Ojcow	29.66	308	eP	P	17 58 08.2	+1.6
OJC	Ojcow	29.66	308	P	P	17 58 05.9	-0.7
OJC				IAmb	IAmb	17 58 11.6	
	comp=Z,14nm,1.2s						
OJC	Ojcow	29.66	308	P	P	17 58 05.9	-0.7
OJC				pmax	pmax		
	comp=Z,14nm,1.2s						
GOMU	GeErMu	29.81	81	P	P	17 58 10.5	+2.0
GOMU				pP	sP	17 58 14.5	+0.1
GOMU				sP	pP	17 58 16.4	+3.7
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,35nm,4.8s						
GOMU				LR	LR		
	comp=Z,530nm,16.9s						
GOMU				LR	LR		
	comp=Z,160nm,14.1s						
GOMU				LR	LR		
	comp=Z,110nm,14.9s						
MORH	Mrgy, Hungar	29.94	299	P	P	17 58 10.3	+1.2
VYHS	Vyhne	30.01	304	eP	P	17 58 12.0	+2.3
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VYHS	Vyhne	30.01	304	eP	P	17 58 12.0	+2.3
MTSE	Matsula	30.40	325	eP	P	17 58 14.3	+1.4
FIA0	FINESS Array S	30.93	331	P	P	17 58 16.8	-0.8
FIA0	FINESS Array S	30.93	331	P	P	17 58 16.8	-0.8
FIA1	FINESS Array S	30.93	331	P	P	17 58 15.2	-2.5
FIA1				IAmb	IAmb	17 59 07.0	
	comp=Z,16nm,1.4s						
FINES	FINESS Array B	30.93	331	P	P	17 58 18.9	+1.3
	comp=Z,1.6nm,0.6s,baz=116,slow=9.4,SNR=4.1						
	comp=Z,1.6nm,0.6s						
FINES	FINESS Array B	30.93	331	P	P	17 58 15.9	-1.8
MORC	Moravsky Berou	31.02	306	P	P	17 58 17.1	-1.5
MORC	Moravsky Berou	31.02	306	P	P	17 58 17.2	-1.5
MORC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MORC	Moravsky Berou	31.02	306	eP	P	17 58 20.3	+1.6
MODS	Modra-Piesok	31.03	303	eP	P	17 58 22.2	+3.5
MODS				pmax	pmax		
	comp=Z,20nm,1.2s						
MODS	Modra-Piesok	31.03	303	eP	P	17 58 22.2	+3.5
KNGR	Kungurtug, Tuv	31.25	52	i P	P	17 58 23.8	+3.0
KNGR				pmax	pmax		
	comp=Z,12nm,0.8s						
KRLC	Kraliky	31.55	307	eP	P	17 58 24.4	+1.1
KRLC	Kraliky	31.55	307	eP	P	17 58 24.4	+1.1
VRAC	Vranov	31.57	305	P	P	17 58 25.5	+2.0
	comp=Z,2.8nm,0.8s,baz=55,slow=9.2,SNR=3.2						
VRAC				LR	LR	18 13 16.1	
	comp=Z,312nm,20.2s,baz=94,slow=40						
	comp=Z,2.8nm,0.8s						
VRAC	Vranov	31.57	305	eP	P	17 58 25.4	+1.9
DPC	Dobruska-Polom	31.88	307	eP	P	17 58 27.8	+1.6
DPC	Dobruska-Polom	31.88	307	eP	P	17 58 27.8	+1.6
KSP	Ksiaz	31.97	308	eP	P	17 58 28.8	+1.8
OSTC	Ostas	31.97	307	eP	P	17 58 29.2	+2.2
CHVC	Chvalec	32.08	307	eP	P	17 58 30.2	+2.2
UPC	Upice	32.10	307	eP	P	17 58 29.4	+1.3
UPC	Upice	32.10	307	eP	P	17 58 29.4	+1.3
ARSA	Arzberg	32.13	301	eP	P	17 58 30.3	+1.9
	comp=Z,6.4nm,1.3s						
SOKA	Soboth	32.45	300	eP	P	17 58 32.6	+1.2
	comp=Z,6.2nm,1.2s						
OBKA	Obir	32.78	300	eP	P	17 58 37.8	+3.5
	comp=Z,8.4nm,1.3s						
PRU	Pruhonice	32.97	306	eP	P	17 58 39.6	+3.9
PRU	Pruhonice	32.97	306	eP	P	17 58 39.6	+3.9
GTA	Gaotai	33.02	73	⇑P	P	17 58 42.4	+6.0
GTA				pP	sP	17 58 47.8	+5.4
GTA				sP	pP	17 58 50.8	+10
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,30nm,5.8s						
GTA				LR	LR		
	comp=Z,310nm,17.1s						
GTA				LR	LR		
	comp=Z,370nm,20.0s						
GTA				LR	LR		
	comp=Z,490nm,17.8s						
CKRC	Cesky Krumlov	33.03	304	eP	P	17 58 39.9	+3.6
TRI	Trieste	33.34	298	P	P	17 58 38.2	-0.8
TRI				IAmb	IAmb	17 58 43.3	
	comp=Z,14nm,1.1s						
TRI	Trieste	33.34	298	P	P	17 58 38.2	-0.8
TRI				pmax	pmax		
	comp=Z,14nm,1.1s						
GEC2	GERESS Array S	33.43	304	P	P	17 58 39.8	-0.1
GERES	GERESS Array B	33.43	304	P	P	17 58 40.2	+0.4
	comp=Z,1.6nm,0.9s,baz=108,slow=8.6,SNR=7.0						
GERES				LR	LR	18 14 34.2	
	comp=Z,236nm,19.0s,baz=96,slow=41						
	comp=Z,1.6nm,0.9s						
GERES	GERESS Array B	33.43	304	P	P	17 58 39.7	-0.2
BRG	Berggiesshubel	33.45	308	eP	P	17 58 42.3	+2.4
BRG				Amp		17 58 46.0	
	comp=Z,13nm,1.2s						
BRG				Amp		18 14 21.0	
	comp=E,0.2nm,18.1s						
BRG				Amp		18 14 25.0	
	comp=Z,0.3nm,13.0s						
BRG				Amp		18 14 32.0	
	comp=N,0.3nm,22.1s						
BRG	Berggiesshubel	33.45	308	eP	P	17 58 42.3	+2.4
BRG				pmax	pmax		
	comp=Z,13nm,1.2s						
BRG				MLR	MLR		
	comp=E,200nm,18.1s						
BRG				MLR	MLR		
	comp=Z,300nm,13.0s						
BRG				MLR	MLR		
	comp=N,290nm,22.1s						
KHC	Kasperske Hory	33.53	305	P	P	17 58 40.8	+0.2
KHC	Kasperske Hory	33.53	305	eP	P	17 58 42.0	+1.3
KHC	Kasperske Hory	33.53	305	eP	P	17 58 42.0	+1.3
KBA	Koelnbreinsper	33.62	301	eP	P	17 58 43.2	+1.6
	comp=N,7.7nm,1.1s						
AQU	L'Aquila	33.84	292	P	P	17 58 44.1	+0.6
AQU	L'Aquila	33.84	292	P	P	17 58 44.1	+0.6
AQU				pmax	pmax		
	comp=Z,26nm,1.2s						
NRCA	Norcia	34.00	293	P	P	17 58 45.3	+0.4
NRCA				IAmb	IAmb	17 58 49.7	
	comp=Z,12nm,0.8s						
STAL	STALIGIAL	34.06	299	P	P	17 58 43.4	-1.9
STAL				IAmb	IAmb	17 58 50.1	
	comp=Z,12nm,1.3s						
CLL	Collm	34.09	308	P	P	17 58 44.9	-0.5
CLL				IAmb	IAmb	17 58 51.6	
	comp=Z,12nm,1.3s						
CLL	Collm	34.09	308	i P	P	17 58 43.6	-1.8
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	34.09	308	i P	P	17 58 43.6	-1.8
	comp=Z,5.0nm,1.0s						
CLL				i pP	sP	17 58 50.6	-0.8
	comp=Z,9.0nm,1.2s						
CLL				ePP	PnPn	17 59 59.0	+0.2
CLL				ePPP	PPP	18 00 05.0	
CLL				ePPPP		18 00 13.0	
ABTA	Abfaltersbach	34.19	300	eP	P	17 58 46.5	0.0
	comp=Z,3.8nm,0.9s						
MURB	Monte Urbino	34.38	294	P	P	17 58 48.3	+0.2
WTTA	Wattenberg	34.78	301	eP	P	17 58 52.2	+0.5
	comp=Z,9.6nm,0.9s						
CTI	Castel Tesino	34.80	299	P	P	17 58 51.2	-0.6
CTI				IAmb	IAmb	17 58 58.2	
	comp=Z,19nm,1.5s						
CTI	Castel Tesino	34.80	299	P	P	17 58 51.3	-0.6
CTI				pmax	pmax		
	comp=Z,19nm,1.5s						
WATA	Walderalm	34.82	301	eP	P	17 58 52.0	0.0
	comp=Z,2.8nm,0.6s						
ZAK	Zakamensk	34.88	53	eP	P	17 58 54.4	+1.9
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SQTA	Sankt Quirin	35.07	301	eP	P	17 58 55.0	+0.8
	comp=Z,6.9nm,1.3s						
FETA	Feichten	35.41	301	eP	P	17 58 57.3	+0.3
	comp=Z,4.7nm,1.0s						
NRIK	Noril'sk	35.83	18	P	P	17 59 02.5	+2.2
	comp=Z,1.7nm,0.3s,baz=214,slow=13,SNR=2.9						
NRIK				LR	LR	18 16 24.8	
	comp=Z,193nm,21.0s,baz=203,slow=41						
	comp=Z,1.7nm,0.3s						
NRIK	Noril'sk	35.83	18	P	P	17 59 01.5	+1.2
NRIK	Noril'sk	35.83	18	i P	P	17 59 02.7	+2.5
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAVA	Damuels	35.98	301	eP	P	17 59 02.2	+0.2
	comp=Z,9.2nm,0.9s						
DAVOX	Davos/Dischmat	36.00	300	P	P	17 59 02.3	+0.1
	comp=Z,1.9nm,0.4s,baz=164,slow=7.4,SNR=2.5						
DAVOX				LR	LR	18 16 35.4	
	comp=Z,240nm,18.5s,baz=98,slow=41						
	comp=Z,1.9nm,0.4s						
TUE	Stuetta	36.38	300	P	P	17 59 04.4	-1.1
STU	Stuttgart	36.41	304	P	P	17 59 05.4	0.0
STU				IAmb	IAmb	17 59 10.3	
	comp=Z,19nm,1.0s						
STU	Stuttgart	36.41	304	P	P	17 59 05.4	0.0
STU				pmax	pmax		
	comp=Z,19nm,1.0s						
ARCES	ARCESS Array B	36.42	342	P	P	17 59 07.0	+1.7
	comp=Z,10nm,1.2s,baz=137,slow=8.3,SNR=11						
ARCES				LR	LR	18 16 15.4	
	comp=Z,416nm,20.0s,baz=132,slow=40						
	comp=Z,10nm,1.2s						
PALK	Pallekele	36.75	139	LR	LR	18 17 20.8	
	comp=Z,140nm,18.3s,baz=68,slow=41						
SONM	Songino Array	36.89	58	P	P	17 59 12.3	+2.5
	comp=Z,1.4nm,0.8s,baz=259,slow=11,SNR=5.4						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	36.89	58	P	P	17 59 08.8	-0.9
LZH	Lanzhou	36.90	78	eP	P	17 59 18.6	+8.6
LZH				pP	sP	17 59 22.8	+6.9
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
NC405	NORSAR Array S	36.93	325	P	P	17 59 09.5	-0.3
BFO	Black Forest	36.99	303	P	P	17 59 06.9	-3.6
BFO	Black Forest	36.99	303	P	P	17 59 06.9	-3.6
BFO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NC303	NORSAR Array S	37.13	325	P	P	17 59 08.5	-2.9
NC303				IAmb	IAmb	17 59 20.8	
	comp=Z,13nm,1.1s						
NB2	NORSAR Subarra	37.14	324	P	P	17 59 12.1	+0.5
	comp=Z,16nm,1.2s,baz=111,slow=8.6						
NOA	NORSAR Array B	37.14	324	P	P	17 59 11.8	+0.2
	comp=Z,2.5nm,0.8s,baz=115,slow=8.0,SNR=9.0						
	comp=Z,2.5nm,0.8s						
NAO01	NORSAR Array S	37.23	324	P	P	17 59 10.6	-1.7
ULN	Ulaanbaatar	37.33	58	P	P	17 59 14.5	+1.0
ULN				IAmb	IAmb	17 59 20.6	
	comp=Z,18nm,1.2s						
ULN	Ulaanbaatar	37.33	58	i P	P	17 59 15.8	+2.3
ULN				pmax	pmax		
	comp=Z,14nm,1.2s						
ECH	Echery	37.77	303	P	P	17 59 17.0	-0.1
ECH				IAmb	IAmb	17 59 21.9	
	comp=Z,12nm,1.1s						
ECH	Echery	37.77	303	P	P	17 59 17.0	-0.1
ECH				pmax	pmax		
	comp=Z,12nm,1.1s						
SENIN	Lac Senin/Sane	37.80	300	P	P	17 59 16.8	-0.8
KEST	Kesra	38.32	282	P	P	17 59 22.4	+0.4
	comp=Z,9.4nm,1.0s,baz=307,slow=0.6,SNR=5.9						
	comp=Z,9.4nm,1.0s						
KEST	Kesra	38.32	282	P	P	17 59 22.6	+0.7
KEST				IAmb	IAmb	17 59 27.3	
	comp=Z,19nm,1.2s						
BNI	Bardonecchia	38.37	298	P	P	17 59 22.6	+0.3
BNI	Bardonecchia	38.37	298	P	P	17 59 22.6	+0.3
BNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LODK	Lodwar	39.49	216	P	P	17 59 32.0	+0.2
SSB	Saint Sauveur	39.84	298	P	P	17 59 33.2	-1.3
SSB				IAmb	IAmb	17 59 38.7	
	comp=Z,18nm,1.0s						
SSB	Saint Sauveur	39.84	298	P	P	17 59 33.2	-1.3
SSB				pmax	pmax		
	comp=Z,18nm,1.0s						
CMAR	Chiang Mai Arr	40.87	106	P	P	17 59 43.9	+0.6
	comp=Z,2.6nm,0.6s,baz=297,slow=7.9,SNR=16						
	comp=Z,2.6nm,0.6s						
CMAR	Chiang Mai Arr	40.87	106	P	P	17 59 42.8	-0.4
CMAR	Chiang Mai Arr	40.87	106	i P	P	17 59 45.7	+2.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN	Xi'an	41.49	79	P	P	17 59 50.6	+2.3
XAN				sP	sP	17 59 56.3	+2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,49nm,4.5s						
KMBO	Kilima Mbogo	42.73	211	P	P	17 59 59.0	+0.3
	comp=Z,7.4nm,1.0s,baz=32,slow=10.0,SNR=11						
KMBO				LR	LR	18 19 14.6	
	comp=Z,275nm,20.2s,baz=91,slow=38						
	comp=Z,7.4nm,1.0s						
KMBO	Kilima Mbogo	42.73	211	P	P	17 59 58.9	+0.3
KMBO	Kilima Mbogo	42.73	211	i P	P	17 59 59.6	+0.9
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIBK	Kibwezi	43.52	209	P	P	18 00 05.3	+0.4
KIBK				IAmb	IAmb	18 00 06.9	
	comp=Z,17nm,0.9s						
PBKT	Sadao Pong	43.54	107	P	P	18 00 04.0	-1.0
EKA	Eskdalemuir Ar	43.91	314	LR	LR	18 20 21.9	
	comp=Z,182nm,19.4s,baz=34,slow=39						
SPITS	Spitsbergen Ar	44.23	349	P	P	18 00 11.0	+1.2
	comp=Z,0.9nm,0.4s,baz=120,slow=10,SNR=6.2						
SPITS				LR	LR	18 21 39.4	
	comp=Z,253nm,19.8s,baz=114,slow=40						
	comp=Z,0.9nm,0.4s						
SPITS	Spitsbergen Ar	44.23	349	P	P	18 00 11.0	+1.2
MBAR	Mbarara	45.23	219	LR	LR	18 22 18.1	
	comp=Z,156nm,18.8s,baz=16,slow=40						
ESBB	Sonseca Array	47.22	293	P	P	18 00 33.3	-0.8
ESBB				IAmb	IAmb	18 00 53.3	
	comp=Z,25nm,1.8s						
ESDC	Sonseca Array	47.23	293	P	P	18 00 33.8	-0.3
	comp=Z,4.4nm,0.8s,baz=62,slow=8.0,SNR=22						

	comp=Z,4.4nm,0.8s						
ESDC	**Sonseca Array**	**47.23**	**293**	P	**P**	**18 00 34.3**	**+0.2**
PAB	**San Pablo**	**47.55**	**293**	P	**P**	**18 00 36.4**	**-0.2**
PAB				IAmb	IAmb	18 01 07.8	
	comp=Z,23nm,1.6s						
PAB	**San Pablo**	**47.55**	**293**	P	**P**	**18 00 36.4**	**-0.2**
PAB				pmax	pmax		
	comp=Z,23nm,1.7s						
TIXI	**Tiksi**	**49.08**	**23**	P	**P**	**18 00 48.8**	**+0.9**
TIXI				IAmb	IAmb	18 00 54.5	
	comp=Z,16nm,1.4s						
TIXI	**Tiksi**	**49.08**	**23**	*i* P	**P**	**18 00 49.9**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,11nm,1.3s						
ZEA	**Zeya**	**49.41**	**47**	*e*P	P	18 00 56.1	+5.4
ZEA				MLR	MLR		
	comp=N,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,12.0s						
YAK	**Yakutsk**	**49.55**	**36**	*i* P	**P**	**18 00 54.3**	**+2.8**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NJ2	**Nanjing**	**49.96**	**77**	*e*P	**P**	**18 00 55.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
PESTR	**Estremoz**	**50.15**	**293**	P	**P**	**18 00 57.5**	**+1.0**
PESTR				IAmb	IAmb	18 01 01.5	
	comp=Z,11nm,1.3s						
CN2	**Changchun**	**50.68**	**60**	*e*P	**P**	**18 01 02.3**	**+1.9**
CN2				S	**S**	**18 08 15.9**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
DAG	**Danmarks Havn**	**50.68**	**343**	*i* P	**P**	**18 01 01.0**	**+1.1**
DAG				IAmb	IAmb	18 01 04.9	
	comp=Z,2.2nm,0.8s						
DBG	**Daneborg**	**51.00**	**340**	*i* P	**P**	**18 01 06.4**	**+4.0**
DBG				IAmb	IAmb	18 01 08.2	
	comp=Z,3.1nm,0.7s						
PSI	**Prapat**	**51.34**	**122**	LR	LR	18 25 44.5	
	comp=Z,164nm,18.3s,baz=295,slow=39						
SCO	**Scoresbysund**	**51.69**	**335**	*i* P	P	18 01 12.5	+4.9
SCO				IAmb	IAmb	18 01 14.3	
	comp=Z,1.7nm,0.8s						
KLR	**Kul'dur**	**53.22**	**52**	P	**P**	**18 01 20.9**	**+1.5**
	comp=Z,3.9nm,0.9s,baz=289,slow=9.5,SNR=10.0						
	comp=Z,3.9nm,0.9s						
KLR	**Kul'dur**	**53.22**	**52**	*i* P	**P**	**18 01 22.2**	**+2.9**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KS19	**Wonju Array Si**	**54.59**	**67**	P	**P**	**18 01 30.3**	**+0.8**
KSAR	**Wonju Array Be**	**54.63**	**67**	P	**P**	**18 01 26.9**	**-2.8**
KSAR	**Wonju Array Be**	**54.63**	**67**	P	**P**	**18 01 27.0**	**-2.8**
KSRS	**Korea Array**	**54.65**	**67**	P	**P**	**18 01 30.6**	**+0.7**
	comp=Z,4.4nm,0.9s,baz=278,slow=6.2,SNR=14						
	comp=Z,4.4nm,0.9s						
TOA0	**Torodi Ar. Sit**	**55.04**	**259**	P	**P**	**18 01 32.9**	**-0.1**
TOA0				IAmb	IAmb	18 01 35.9	
	comp=Z,13nm,1.3s						
TORD	**Torodi Ar. Bea**	**55.04**	**259**	P	**P**	**18 01 32.7**	**-0.3**
	comp=Z,5.1nm,1.0s,baz=50,slow=4.2,SNR=11						
	comp=Z,5.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**55.04**	**259**	P	**P**	**18 01 33.0**	**0.0**
TORD				IAmb	IAmb	18 01 35.9	
	comp=Z,8.3nm,1.2s						
SUMG	**Summit**	**56.41**	**339**	*i* P	**P**	**18 01 45.9**	**+3.4**
SUMG				IAmb	IAmb	18 01 47.6	
	comp=Z,4.9nm,1.0s						
ICESG	**Greenland Ices**	**57.98**	**335**	*e*P	P	18 01 60.0	+6.4
ICESG				IAmb	IAmb	18 02 05.1	
	comp=Z,4.8nm,0.8s						
KOWA	**Kowa**	**58.75**	**264**	P	**P**	**18 01 59.7**	**+0.4**
ISOG	**Isortoq, Green**	**59.07**	**331**	*i* P	P	18 02 09.8	+8.9
JSU	**Suzuyama**	**59.09**	**72**	P	**P**	**18 01 59.4**	**-2.2**
LSZ	**Lusaka**	**59.26**	**213**	LR	LR	18 29 06.8	
	comp=Z,545nm,18.1s,baz=20,slow=38						
SEY	**Seymchan**	**59.50**	**32**	P	**P**	**18 02 06.5**	**+2.7**
	comp=Z,1.6nm,0.3s,baz=302,slow=9.3,SNR=7.7						
	comp=Z,1.6nm,0.3s						
YSS	**Yuzh-Sakhalins**	**60.92**	**51**	*e*P	**P**	**18 02 15.2**	**+1.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
DY2G	**Dye2**	**61.36**	**334**	*i* P	**P**	**18 02 19.4**	**+2.6**
DY2G				IAmb	IAmb	18 02 21.6	
	comp=Z,5.2nm,0.7s						
ASAJ	**Asahikawa**	**62.04**	**54**	LR	LR	18 31 27.9	
	comp=Z,351nm,18.1s,baz=312,slow=38						
BILL	**Bilibino**	**62.30**	**24**	P	**P**	**18 02 21.1**	**-1.7**
BILL				IAmb	IAmb	18 02 30.6	
	comp=Z,7.7nm,0.9s						
BILL	**Bilibino**	**62.30**	**24**	⇓*e*P	**P**	**18 02 25.6**	**+2.8**
BILL				*e*		18 02 32.8	
BILL				*e*		18 02 38.1	
BILL				S	**S**	**18 10 54.0**	**+5.7**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,159nm,13.0s						
DBIC	**Dimbokro**	**64.08**	**258**	LR	LR	18 33 51.6	
	comp=Z,142nm,18.0s,baz=52,slow=39						
KUR	**Kuril'sk**	**64.87**	**51**	*e*P	P	18 02 46.8	+6.7
TSUM	**Tsumeb**	**67.73**	**221**	LR	LR	18 36 23.0	
	comp=Z,143nm,18.2s,baz=44,slow=39						
MPSI	**Mapaga**	**68.19**	**107**	P	**P**	**18 03 02.1**	**+0.3**
LBTB	**Lobatse**	**69.01**	**211**	LR	LR	18 35 26.6	
	comp=Z,200nm,19.7s,baz=24,slow=38						
LBTB	**Lobatse**	**69.01**	**211**	P	**P**	**18 03 06.3**	**-0.4**
LBTB	**Lobatse**	**69.01**	**211**	P	**P**	**18 03 06.3**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,52nm,1.8s						
A36M	**Sachs Harbour**	**70.81**	**1**	P	**P**	**18 03 18.8**	**+1.7**
TOLK	**Toolik Lake Re**	**72.29**	**10**	P	**P**	**18 03 26.4**	**+0.3**
TOLK				IAmb	IAmb	18 03 37.3	
	comp=Z,8.6nm,0.8s						
BOSA	**Boshof**	**72.35**	**209**	P	**P**	**18 03 26.2**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=18,slow=7.5,SNR=5.9						
BOSA				LR	LR	18 34 45.5	
	comp=Z,186nm,20.7s,baz=6.5,slow=36						
	comp=Z,4.3nm,0.9s						
C36M	**Paulatuk**	**73.47**	**1**	P	**P**	**18 03 32.8**	**-0.2**
IMAR	**Indian Mountai**	**74.08**	**13**		**P**	**18 03 36.9**	**+0.2**
BMAR	**Burnt Mountain**	**74.08**	**9**	P	**P**	**18 03 39.0**	**+2.2**
INK	**Inuvik**	**74.21**	**4**	LR	LR	18 38 18.4	
	comp=Z,59nm,21.1s,baz=3.0,slow=37						
INK	**Inuvik**	**74.21**	**4**	P	**P**	**18 03 38.8**	**+1.4**
INK	**Inuvik**	**74.21**	**4**	P	**P**	**18 03 38.8**	**+1.4**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
H21K	**Melozitna Rive**	**74.54**	**13**	P	**P**	**18 03 40.2**	**+0.8**
H21K				IAmb	IAmb	18 03 47.1	
	comp=Z,7.5nm,1.1s						
H23K	**Yukon River**	**74.91**	**11**		**P**	**18 03 41.6**	**0.0**
H23K				IAmb	IAmb	18 03 53.6	
	comp=Z,8.2nm,1.2s						
I23K	**Minto, Yukon-K**	**75.57**	**11**	P	**P**	**18 03 46.0**	**+0.7**
I23K				IAmb	IAmb	18 03 52.9	
	comp=Z,17nm,1.5s						
J20K	**Nowinta River**	**75.64**	**14**	P	**P**	**18 03 45.9**	**+0.2**
MDM	**Murphy Dome**	**75.92**	**11**	P	**P**	**18 03 46.4**	**-1.0**
BPAW	**Bear Paw Mtn.**	**76.28**	**12**	P	**P**	**18 03 49.4**	**0.0**
IL31		**76.30**	**10**	P	**P**	**18 03 49.5**	**+0.1**
ILAR	**Eielson Array**	**76.30**	**10**	P	**P**	**18 03 51.4**	**+1.9**
	comp=Z,1.5nm,1.0s,baz=323,slow=3.7,SNR=5.1						
	comp=Z,1.5nm,1.0s						
ILAR	**Eielson Array**	**76.30**	**10**	P	**P**	**18 03 50.0**	**+0.4**
TTA	**Tatalina**	**76.40**	**15**	P	**P**	**18 03 50.2**	**0.0**
TTA				IAmb	IAmb	18 03 58.0	
	comp=Z,14nm,1.7s						
TTA	**Tatalina**	**76.40**	**15**	P	**P**	**18 03 50.2**	**0.0**
TTA				pmax	pmax		
	comp=Z,15nm,1.7s						
K20K	**Telida**	**76.40**	**14**	P	**P**	**18 03 50.9**	**+0.8**
K20K				IAmb	IAmb	18 03 57.3	
	comp=Z,15nm,1.6s						
WRH	**Wood River Hil**	**76.40**	**11**	P	**P**	**18 03 50.3**	**+0.2**
SCHQ	**Schefferville**	**76.41**	**331**	P	**P**	**18 03 48.9**	**-1.4**
SCHQ				IAmb	IAmb	18 04 01.7	
	comp=Z,18nm,1.4s						
J25K	**Salcha River,**	**76.66**	**10**	P	**P**	**18 03 53.0**	**+1.3**
J25K				IAmb	IAmb	18 03 58.7	
	comp=Z,14nm,1.4s						
CAST	**Castle Rocks**	**76.71**	**13**	P	**P**	**18 03 52.4**	**+0.5**
I29M	**Ogilvie Camp,**	**76.75**	**7**	P	**P**	**18 03 50.3**	**-1.8**
I29M				IAmb	IAmb	18 03 57.4	
	comp=Z,12nm,1.4s						
KTH	**Kantishna Hill**	**76.80**	**13**	P	**P**	**18 03 51.1**	**-1.4**
EGAK	**Eagle**	**77.03**	**8**	P	**P**	**18 03 54.2**	**+0.6**
EGAK				IAmb	IAmb	18 04 00.6	
	comp=Z,9.1nm,1.1s						
RND	**Reindeer**	**77.28**	**12**	P	**P**	**18 03 55.5**	**+0.3**
RND				IAmb	IAmb	18 04 05.3	
	comp=Z,11nm,1.1s						
RND	**Reindeer**	**77.28**	**12**	P	**P**	**18 03 55.5**	**+0.3**
RND				pmax	pmax		
	comp=Z,11nm,1.1s						
L19K	**White Mountain**	**77.31**	**15**	P	**P**	**18 03 55.6**	**+0.4**
L19K				IAmb	IAmb	18 04 01.4	
	comp=Z,7.6nm,1.2s						
SCRK	**Sand Creek**	**77.46**	**10**		**P**	**18 03 56.6**	**+0.4**
SCRK				IAmb	IAmb	18 04 03.5	
	comp=Z,22nm,1.6s						
SUR	**Sutherland**	**77.46**	**211**	LR	LR	18 40 12.2	
	comp=Z,238nm,18.7s,baz=14,slow=37						
RIDG	**Independent Ri**	**77.57**	**10**	P	**P**	**18 03 56.4**	**-0.3**
K27K	**Chicken**	**77.65**	**9**	P	**P**	**18 03 56.0**	**-1.1**
K27K				IAmb	IAmb	18 04 03.4	
	comp=Z,14nm,1.3s						
DHY	**Denali Highway**	**77.83**	**11**	P	**P**	**18 03 58.5**	**+0.2**
DHY				IAmb	IAmb	18 04 18.8	
	comp=Z,13nm,1.5s						
DAWY	**Dawson**	**77.91**	**7**	P	**P**	**18 03 58.8**	**+0.1**
DAWY				IAmb	IAmb	18 04 04.3	
	comp=Z,6.9nm,0.9s						
BATI	**Baumata**	**77.93**	**113**	LR	LR	18 44 14.8	
	comp=Z,140nm,18.4s,baz=276,slow=40						
PAX	**Paxson**	**78.21**	**10**	P	**P**	**18 03 59.5**	**-0.9**
PAX				IAmb	IAmb	18 04 05.0	
	comp=Z,12nm,1.4s						
PAX	**Paxson**	**78.21**	**10**	P	**P**	**18 03 59.5**	**-0.9**
PAX				pmax	pmax		
	comp=Z,12nm,1.4s						
L27K	**Beaver Creek,**	**78.61**	**9**	P	**P**	**18 04 03.6**	**+1.1**
L27K				IAmb	IAmb	18 04 08.1	
	comp=Z,24nm,1.6s						
BCAR	**Beaver Creek A**	**78.61**	**9**		**P**	**18 04 02.8**	**+0.2**
N19K	**Bonanza Creek**	**78.62**	**15**	P	**P**	**18 04 03.5**	**+0.8**
N19K				IAmb	IAmb	18 04 08.0	
	comp=Z,6.0nm,0.7s						
GHO	**Glory Hole Cre**	**78.80**	**12**	P	**P**	**18 04 01.0**	**-2.7**
GHO				IAmb	IAmb	18 04 23.0	
	comp=Z,10nm,1.0s						
SML	**Sawmill**	**78.87**	**12**	P	**P**	**18 04 03.2**	**-0.8**
SML				IAmb	IAmb	18 04 09.4	
	comp=Z,12nm,1.1s						
M24K	**Tolsona, Glenn**	**78.93**	**11**	P	**P**	**18 04 04.2**	**-0.1**
SCM	**Sheep Creek Mo**	**79.01**	**12**	P	**P**	**18 04 04.7**	**-0.1**
SCM				IAmb	IAmb	18 04 10.4	
	comp=Z,8.7nm,0.7s						
SCM	**Sheep Creek Mo**	**79.01**	**12**	P	**P**	**18 04 04.7**	**-0.1**
SCM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KNK	**Knik Glacier**	**79.22**	**12**	P	**P**	**18 04 05.5**	**-0.3**
M27K	**Edge Creek, AK**	**79.28**	**9**	P	**P**	**18 04 05.8**	**-0.6**
M27K				IAmb	IAmb	18 04 12.0	
	comp=Z,22nm,1.6s						
KLU	**Klutina**	**79.55**	**11**	P	**P**	**18 04 08.5**	**+0.7**
GUMO	**Guam**	**79.85**	**81**	LR	LR	18 42 48.5	
	comp=Z,34nm,19.8s,baz=315,slow=38						
DIV	**Divide**	**79.92**	**11**	P	**P**	**18 04 10.3**	**+0.6**
DIV				IAmb	IAmb	18 04 15.6	
	comp=Z,13nm,1.2s						
YKA	**Yellowknife Ar**	**80.16**	**356**	P	**P**	**18 04 11.4**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=2.0,slow=5.6,SNR=8.1						
YKA				LR	LR	18 43 39.6	
	comp=Z,141nm,20.7s,baz=0.5,slow=39						
	comp=Z,1.0nm,0.6s						
M31M	**Drury Creek, Y**	**80.20**	**6**	P	**P**	**18 04 12.1**	**+0.9**
BMRM	**Bremner River**	**80.25**	**11**	P	**P**	**18 04 11.2**	**-0.3**
BARN	**Barnard Glacie**	**80.57**	**9**	P	**P**	**18 04 11.3**	**-2.1**
BARN				IAmb	IAmb	18 04 19.7	
	comp=Z,22nm,1.7s						
ASCN	**Ascension**	**80.62**	**253**	P	**P**	**18 04 12.7**	**-1.5**
CTGM	**Chitina Glacie**	**80.70**	**9**	P	**P**	**18 04 15.0**	**+0.9**
CTGM				IAmb	IAmb	18 04 20.2	
	comp=Z,8.1nm,0.6s						
GRNC	**Granite Creek**	**80.87**	**9**	P	**P**	**18 04 12.5**	**-2.5**
GRNC				IAmb	IAmb	18 04 21.3	
	comp=Z,11nm,1.2s						
LOGN	**Logan Glacier**	**80.88**	**9**	P	**P**	**18 04 14.2**	**-0.8**
LOGN				IAmb	IAmb	18 04 21.1	
	comp=Z,8.9nm,0.8s						
HYT	**Haines Junctio**	**81.28**	**7**		**P**	**18 04 16.6**	**-0.5**
HYT				IAmb	IAmb	18 04 23.4	
	comp=Z,14nm,1.2s						
KDAK	**Kodiak Island**	**81.79**	**16**	LR	LR	18 46 55.5	
	comp=Z,114nm,18.2s,baz=12,slow=40						
KDAK	**Kodiak Island**	**81.79**	**16**	P	**P**	**18 04 21.9**	**+2.2**
KDAK	**Kodiak Island**	**81.79**	**16**	P	**P**	**18 04 21.9**	**+2.2**
KDAK				pmax	pmax		
	comp=Z,50nm,1.4s						
D62A	**Allapoint, All**	**83.16**	**326**	P	**P**	**18 04 27.8**	**+0.7**
D62A				IAmb	IAmb	18 04 38.4	
	comp=Z,11nm,1.2s						
DLBC	**Dease Lake**	**84.23**	**4**	LR	LR	18 44 53.2	
	comp=Z,81nm,20.2s,baz=336,slow=38						
SADO	**Sadowa**	**89.22**	**331**	LR	LR	18 47 17.8	
	comp=Z,112nm,18.2s,baz=318,slow=37						
ULM	**Lac du Bonnet**	**89.53**	**343**	LR	LR	18 47 58.0	
	comp=Z,96nm,18.3s,baz=33,slow=38						
BBB	**Bella Bella**	**90.57**	**3**	LR	LR	18 51 57.3	
	comp=Z,50nm,18.1s,baz=354,slow=40						
WRA	**Warramunga Arr**	**92.05**	**114**	P	**P**	**18 05 12.3**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=321,slow=4.4,SNR=1.7						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**94.08**	**117**	P	**P**	**18 05 19.8**	**+0.1**
	comp=Z,0.9nm,1.2s,baz=311,slow=4.1,SNR=4.2						
	comp=Z,0.9nm,1.2s						
NEW	**Newport**	**94.49**	**356**	LR	LR	18 51 32.8	
	comp=Z,106nm,22.0s,baz=16,slow=38						
TKL	**Tuckaleechee C**	**98.82**	**329**	LR	LR	18 52 11.3	
	comp=Z,97nm,18.5s,baz=32,slow=37						
PDAR	**Pinedale Array**	**99.25**	**350**	LR	LR	18 55 27.7	
	comp=Z,112nm,19.1s,baz=14,slow=38						

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*IDC **24** 18:00:54.4±2.1, 38°.58N×142°.11E, h60^{km}±19^{km}, mb3.7/4, mbtmp4.0/10, Error ellipse: s-maj=34.0km s-min=14.7km az=95.0*

*JMA **24** 18:00:54.6±0.1, 38°.6N±0°.2×141°.9E±0°.6, h48^{km}, MD3.9/39, MV3.9/39, KINKAZAN REGION*

JMA Felt II J1 at KINKAZAN REGION .

*NEIC **24** 18:00:54.3±1.3, 38°.61N±0°.06×142°.0E±0°.1, h50^{km}±11^{km}, mb4.1/4, Error ellipse: s-maj=15.7km s-min=7.9km az=107.0*

*NIED **24** 18:00:54.6, 38°.62N×141°.90E, h48^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.94; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.87; $M_{r\theta}$-0.30; $M_{\theta\phi}$-1.16; $M_{\phi r}$1.68; Fault plane solution: $M_0$2.81000×10^{14} NP1: ϕ_s229.00000°, δ34.00000°, λ130.00000°. NP2: ϕ_s4.00000°, δ65.00000°, λ67.00000°.*

ISC 24 18:00:53.4±1.0**, 38°.53N**±0°.04×**142°.06E**±0°.08**, h46**^{km}±11^{km}**, n48, σ1^s.75**/53**, mb4.0**/6**, 18D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.52**	**245**	⇓*i*P	**Pn**	**18 01 05.2**	**+0.6**
JIKH				⇓S	**Sn**	**18 01 12.4**	**-0.2**
JKMT	**Kesennumamotoy**	**0.54**	**302**	⇓*i*P	**Pn**	**18 01 04.5**	**-0.4**
JKMT				⇓S	**Sn**	**18 01 11.2**	**-1.8**
JIO	**Ouri**	**0.56**	**263**	⇓*i*P	**Pn**	**18 01 05.3**	**+0.1**
JIO				⇓S	**Sn**	**18 01 12.5**	**-1.2**
OFUJ	**Ofunato**	**0.63**	**331**	⇓P	**Pn**	**18 01 05.8**	**-0.3**
OFUJ				⇓S	**Sn**	**18 01 13.5**	**-1.7**
OFUJ	**Ofunato**	**0.63**	**331**	A	A	18 01 05.8	
	comp=E,10.0nm,0.3s,comp=E,7.0nm,0.2s						
JMK	**Ichinoseki**	**0.78**	**303**	⇓*i*P	**Pn**	**18 01 07.5**	**-0.6**
JMK				⇓S	**Sn**	**18 01 16.6**	**-2.1**
JOFO	**Osakifurukawao**	**0.91**	**275**	A	A	18 01 09.3	
	comp=E,12nm,0.2s,comp=E,17nm,0.3s						
JOU	**Okura**	**1.11**	**262**	⇓*i*P	**Pn**	**18 01 12.4**	**-0.2**
JOU				⇓S	**Sn**	**18 01 25.6**	**-1.1**
JOM	**Ohasama**	**1.12**	**328**	⇓*i*P	**Pn**	**18 01 12.2**	**-0.5**
JOM				⇓S	**Sn**	**18 01 25.1**	**-1.7**
JMM	**Marumori**	**1.20**	**237**		**Pn**	**18 01 13.7**	**0.0**
JMM					**Sn**	**18 01 24.1**	**-4.8**
JMM	**Marumori**	**1.20**	**237**	⇓*i*P	**Pn**	**18 01 13.9**	**+0.1**
JMM				⇓S	**Sn**	**18 01 28.1**	**-0.7**
JYK	**Kaneyama**	**1.39**	**287**	⇓*i*P	**Pn**	**18 01 15.8**	**-0.5**
JRG	**Rokugo**	**1.41**	**308**	⇓*i*P	**Pn**	**18 01 16.0**	**-0.6**
JFK	**Kawauchi**	**1.49**	**219**	P	**Pn**	**18 01 18.6**	**+0.8**
JFK				S	**Sn**	**18 01 36.2**	**+0.1**
JTM	**Tenmabayashi**	**2.38**	**342**		**Pn**	**18 01 30.1**	**+0.2**
JYT	**Yasato**	**2.74**	**214**		**Pn**	**18 01 35.5**	**+0.7**
JSD	**Sado**	**3.03**	**262**		**Pn**	**18 01 38.5**	**-0.4**
ERM	**Erimo**	**3.58**	**13**	Pn	**Pn**	**18 01 46.2**	**-0.2**
MAJO	**Matsushiro**	**3.65**	**238**		**Pn**	**18 01 48.5**	**+1.1**
MJAR	**Matsushiro Arr**	**3.65**	**238**	P	**Pn**	**18 01 49.0**	**+1.6**
	3.0nm,0.3s,baz=39,slow=12,SNR=24						
MJAR				S	Sn	18 02 42.6	+13
	4.1nm,0.5s,baz=313,slow=4.5,SNR=4.7						
MJAR	**Matsushiro Arr**	**3.65**	**238**		**Pn**	**18 01 48.5**	**+1.2**
MJB9	**Matsu-Tunnel**	**3.65**	**238**		**Pn**	**18 01 48.5**	**+1.1**
JEW	**Eniwo**	**4.33**	**354**	Pn	**Pn**	**18 01 55.2**	**-1.5**
JGF	**Kuroka**	**4.76**	**234**		**Pn**	**18 02 06.2**	**+3.5**
INU	**Inuyama**	**5.14**	**233**	Pn	**Pn**	**18 02 10.7**	**+2.9**
ASAJ	**Asahikawa**	**5.60**	**4**	P	**Pn**	**18 02 14.2**	**+0.1**
	2.4nm,0.4s,baz=203,slow=19,SNR=8.9						
ASAJ				S	**Sn**	**18 03 17.8**	**+0.8**
	4.9nm,0.6s,baz=199,slow=32,SNR=1.9						
JKA	**Kamikawa-asahi**	**5.60**	**4**		**Pn**	**18 02 14.2**	**+0.1**
JKA					**Sn**	**18 03 17.8**	**+0.8**
JHJ2	**Mitsune**	**5.71**	**199**	Pn	**Pn**	**18 02 17.3**	**+1.7**
JHJ	**Hachijo jima 2**	**5.71**	**200**	P	**Pn**	**18 02 17.0**	**+1.4**
	32nm,0.5s,baz=71,slow=20,SNR=2.0						
JHJ				S	**Sn**	**18 03 17.9**	**-1.9**
	28nm,0.3s,baz=263,slow=12,SNR=1.6						
JHS	**Saijyo**	**8.00**	**247**	Pn	**Pn**	**18 02 50.9**	**+3.9**
USA0B	**Ussuriysk Arra**	**9.45**	**310**	Pn	**Pn**	**18 03 07.1**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.45**	**310**	P	**Pn**	**18 03 07.0**	**+0.1**
	2.2nm,0.6s,baz=123,slow=14,SNR=1.8						
KSRS	**Korea Array**	**11.21**	**269**	P	**Pn**	**18 03 34.7**	**+3.7**
	1.2nm,0.8s,baz=84,slow=13,SNR=3.5						
JCJ	**Chichijima**	**11.40**	**179**	P	**Pn**	**18 03 34.0**	**+0.4**
	26nm,0.6s,baz=305,slow=21,SNR=1.6						
JCJ				S	**Sn**	**18 05 33.9**	**-5.8**
	46nm,0.8s,baz=295,slow=21,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	18 37 13.6	
	baz=317,slow=76,SNR=232						
H11N1	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	18 37 13.5	
	baz=317,slow=76,SNR=200						
H11N3	**WAKE ISLAND Hy**	**28.53**	**124**	T	T	18 37 14.6	
	baz=317,slow=76,SNR=126						
H11S1	**WAKE ISLAND Hy**	**29.28**	**126**	T	T	18 38 03.8	
	baz=318,slow=76,SNR=76						
H11S3	**WAKE ISLAND Hy**	**29.28**	**126**	T	T	18 38 05.9	
	baz=318,slow=76,SNR=144						
H11S2	**WAKE ISLAND Hy**	**29.30**	**126**	T	T	18 38 12.5	
	baz=318,slow=76,SNR=95						
ZALV	**Zalesovo Beam**	**41.30**	**311**	P	**P**	**18 08 33.8**	**-0.4**
	0.9nm,0.5s,baz=94,slow=7.3,SNR=4.1						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**43.78**	**301**	P	**P**	**18 08 52.8**	**-1.7**
	0.7nm,0.8s,baz=80,slow=10,SNR=5.0						
	0.7nm,0.8s						
MAKZ	**Makanchi**	**43.98**	**301**	P	**P**	**18 08 55.5**	**-0.6**
MAKZ				IAmb	IAmb	18 09 21.5	
	comp=Z,9.7nm,1.6s						
KURK	**Kurchatov**	**45.43**	**307**	P	**P**	**18 09 06.7**	**-0.7**
KURK				IAmb	IAmb	18 09 07.5	
	comp=Z,4.1nm,1.1s						
KURBB	**Kurchatov Arra**	**45.50**	**307**	P	**P**	**18 09 07.5**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=80,slow=7.8,SNR=39						
	comp=Z,3.1nm,0.5s						
WR0	**Warramunga Arr**	**58.61**	**188**	P	**P**	**18 10 46.4**	**+0.7**
WRA	**Warramunga Arr**	**58.61**	**189**	P	**P**	**18 10 46.2**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=2.6,slow=6.9,SNR=2.7						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**58.61**	**189**	IAmb	IAmb	18 11 00.8	
	comp=Z,0.4nm,1.4s						

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*IDC **24** 18:40:54.9±1.2, 7°.33S×155°.84E, h0^{km}, mb3.8/6, mbtmp3.9/7, ML4.0/1, MS3.4/2, Error ellipse: s-maj=31.1km s-min=28.1km az=42.0*

*NEIC **24** 18:40:56.3±0.8, 7°.4S±0°.1×156°.0E±0°.1, h10^{km}±1^{km}, mb4.3/4, Error ellipse: s-maj=29.6km s-min=9.9km az=229.0*

ISC 24 18:41:00.6±0.9**, 7°.3S**±0°.2×**155°.9E**±0°.1**, h44**^{km}**, n21, σ1^s.16**/14**, mb4.0**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.55**	**118**	Pn	**Pn**	**18 42 05.7**	**-1.3**
	6.7nm,0.3s,baz=262,slow=14,SNR=3.5						
HNR				Sn	**Sn**	**18 42 59.6**	**+1.0**
	7.8nm,0.3s,baz=28,slow=14,SNR=2.1						
	54nm,0.5s						
HNR	**Honiara**	**4.55**	**118**		Pn	18 42 01.7	-5.3
RABL	**Rabaul**	**4.81**	**309**	Pn	**Pn**	**18 42 08.8**	**-1.8**
PMG	**Port Moresby**	**8.90**	**256**	LR	LR	18 46 44.9	
	comp=Z,93nm,18.2s,baz=166,slow=40						
WR0	**Warramunga Arr**	**24.24**	**237**	P	**P**	**18 46 13.3**	**-0.3**
WB2	**Warramunga Arr**	**24.39**	**237**	P	**P**	**18 46 15.8**	**+0.8**
WB2				IAmb	IAmb	18 46 29.7	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**24.40**	**237**	P	**P**	**18 46 14.8**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=64,slow=9.1,SNR=5.9						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**26.66**	**230**	P	**P**	**18 46 34.7**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=56,slow=9.9,SNR=2.1						
	comp=Z,0.2nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.73**	**22**	T	T	19 15 13.8	
	baz=202,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**27.74**	**22**	T	T	19 15 19.0	
	baz=202,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**27.75**	**22**	T	T	19 15 14.7	
	baz=202,slow=75,SNR=9.7						
IPM	**Ipoh**	**55.98**	**280**		**S**	**18 58 22.2**	**+1.4**
SONM	**Songino Array**	**70.05**	**327**	P	**P**	**18 52 09.1**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=140,slow=6.5,SNR=5.5						
	comp=Z,1.1nm,0.8s						
SONM	**Songino Array**	**70.05**	**327**	IAmb	IAmb	18 52 11.5	
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**70.28**	**179**	LR	LR	19 16 09.3	
	comp=Z,70nm,20.8s,baz=285,slow=30						
MKAR	**Makanchi Array**	**84.20**	**319**	P	**P**	**18 53 29.2**	**+1.7**
	comp=Z,3.0nm,0.8s,baz=101,slow=6.3,SNR=17						
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**84.20**	**319**	P	**P**	**18 53 28.4**	**+0.9**
ZALV	**Zalesovo Beam**	**84.91**	**326**	P	**P**	**18 53 31.3**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=105,slow=4.5,SNR=6.4						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**87.60**	**322**	P	**P**	**18 53 44.8**	**+0.6**
KURK	**Kurchatov**	**87.60**	**322**	IAmb	IAmb	18 53 55.4	
	comp=Z,3.2nm,1.4s						
KURBB	**Kurchatov Arra**	**87.63**	**322**	P	**P**	**18 53 44.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=104,slow=4.3,SNR=4.8						
	comp=Z,0.4nm,0.7s						

IDC 24 18:42:26.0±1.4**, 10°.95N**×**91°.81E, h0**^{km}**, mb3.5**/4**, mbtmp3.7**/5**, ML3.7**/1**, MS3.5**/1**, Error ellipse: s-maj=47.4km s-min=26.1km az=56.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.56**	**253**	Pn	Pn	18 45 12.5	0.0
	0.5nm,0.3s,baz=69,slow=4.1,SNR=2.8						
PALK				Sn	Sn	18 47 10.4	-12
	0.6nm,0.3s,baz=289,slow=16,SNR=1.6						
	23nm,1.1s						
H08S3	**Diego Garcia H**	**26.65**	**227**	T	T	19 15 55.1	
	baz=46,slow=76,SNR=174						
H08S2	**Diego Garcia H**	**26.66**	**227**	T	T	19 15 56.9	
	baz=46,slow=76,SNR=108						
H08S1	**Diego Carcia H**	**26.67**	**227**	T	T	19 15 52.1	
	baz=46,slow=76,SNR=48						
MKAR	**Makanchi Array**	**36.63**	**349**	P	P	18 49 34.3	+0.2
	0.5nm,0.7s,baz=158,slow=6.8,SNR=4.7						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**41.04**	**347**	P	P	18 50 10.6	-0.4
	0.3nm,0.8s,baz=165,slow=7.7,SNR=2.0						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**51.91**	**126**	P	P	18 51 36.9	0.0

	0.5nm,0.3s,baz=309,slow=8.0,SNR=2.1						
	0.5nm,0.3s						
ASAR	Alice Springs	53.64	130	P	P	18 51 49.5	-0.2
	0.2nm,0.5s,baz=303,slow=7.6,SNR=2.3						
ASAR				LR	LR	19 13 48.1	
	comp=Z,46nm,21.9s,baz=189,slow=35						
	0.2nm,0.5s						

OSPL ***24*** *18:54:30.5±2.6, 18°.34N×66°.70W, h7km±9km, ML3.7*
NEIC ***24*** *18:54:32.8±1.1, 18°.34N±0°.03×67°.26W±0°.04, h25km±8km, Error ellipse: s-maj=5.7km s-min=3.1km az=118.0*
RSPR ***24*** *18:54:33.9, 18°.31N×67°.26W, h22km±1km, MD3.6/18*
ISC 24 18:54:32.7±0.7**, 18°.33N**±0°.04×**67°.27W**±0°.02**, h31**km±4km**, n85, σ0ˢ.96**/93**, 16C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRSN	Puerto Rico Se	0.17	132	⇑eP	Pb	18 54 38.4	-0.3
PRSN	Puerto Rico Se	0.17	132	eS	Sb	18 54 41.9	-0.8
PRSN	Puerto Rico Se	0.17	132		Pb	18 54 38.2	-0.4
PRSN				Sg	Sb	18 54 41.3	-1.4
IDE	Isla Desecheo	0.20	287	⇑eP	Pb	18 54 39.2	+0.2
IDE				eS	Sb	18 54 43.2	-0.1
AGPR	Aguadilla, PR	0.21	48	⇑eP	Pb	18 54 38.9	-0.2
AGPR	Aguadilla, PR	0.21	48		Pb	18 54 38.8	-0.2
AGPR	Aguadilla, PR	0.21	48	i P	Pb	18 54 38.9	-0.2
AGPR				eS	Sb	18 54 42.9	-0.5
AGPR				IAML		18 54 43.1	
	comp=Z,7µm,0.1s						
LSP	Las Mesas	0.23	130	⇑eP	Pb	18 54 39.2	-0.2
LSP	Las Mesas	0.23	130	eS	Sb	18 54 43.5	-0.5
CRPR	Cabo Rojo, PR	0.36	154	⇑eP	Pb	18 54 40.8	-0.3
CRPR	Cabo Rojo, PR	0.36	154		Pb	18 54 40.7	-0.3
CRPR	Cabo Rojo, PR	0.36	154		Sb	18 54 45.7	-0.9
CRPR	Cabo Rojo, PR	0.36	154	i P	Pb	18 54 40.7	-0.3
CRPR				eS	Sb	18 54 45.9	-0.7
MLPR	Magueyes Islan	0.42	148	⇑eP	Pb	18 54 41.5	-0.4
MLPR	Magueyes Islan	0.42	148	eS	Sb	18 54 47.4	-0.8
MLPR	Magueyes Islan	0.42	148		Pb	18 54 41.5	-0.4
MLPR	Magueyes Islan	0.42	148		Sb	18 54 47.4	-0.8
AOPR	Arecibo Observ	0.49	88	⇓eP	Pb	18 54 42.7	-0.4
AOPR	Arecibo Observ	0.49	88	eS	Sb	18 54 49.4	-0.8
AOPR	Arecibo Observ	0.49	88		Pb	18 54 42.6	-0.4
AOPR				IAML		18 54 49.9	
	comp=N,10µm,0.2s						
AOPR	Arecibo Observ	0.49	88		Sb	18 54 49.4	-0.8
GBPR	Guanica, Bosqu	0.51	133	⇑eP	Pb	18 54 43.1	-0.3
GBPR	Guanica, Bosqu	0.51	133	eS	Sb	18 54 50.3	-0.4
UUPR	Utuado, UPR, P	0.53	98	⇑eP	Pb	18 54 43.2	-0.4
UUPR	Utuado, UPR, P	0.53	98	eS	Sb	18 54 50.4	-0.8
UUPR	Utuado, UPR, P	0.53	98		Pb	18 54 43.2	-0.4
UUPR					Sb	18 54 50.4	-0.8
OBIP	Obispado Ponce	0.70	114	⇓eP	Pb	18 54 45.5	-0.8
OBIP	Obispado Ponce	0.70	114	eS	Sb	18 54 54.9	-0.8
OBIP	Obispado Ponce	0.70	114		Pb	18 54 45.6	-0.8
OBIP	Obispado Ponce	0.70	114		Sb	18 54 54.9	-0.8
CELP	Cerrillos	0.71	111		Pb	18 54 45.8	-0.8
CELP				IAML		18 54 55.7	
	comp=E,7µm,0.3s						
CELP				IAML		18 54 56.1	
	comp=N,5µm,0.2s						
EMPR	Esperanza - Ma	0.72	78	⇑eP	Pb	18 54 46.3	-0.5
EMPR	Esperanza - Ma	0.72	78	eS	Sb	18 54 56.1	-0.3
EMPR	Esperanza - Ma	0.72	78		Pb	18 54 46.4	-0.4
EMPR	Esperanza - Ma	0.72	78		Sb	18 54 56.1	-0.3
SJG	San Juan	1.09	101		Pn	18 54 51.8	0.0
SJG				IAML		18 55 07.0	
	comp=N,4µm,0.2s						
SJG				IAML		18 55 08.4	
	comp=N,6µm,0.3s						
GCPR	Guaynabo City	1.13	91	⇑eP	Pn	18 54 52.6	+0.2
GCPR	Guaynabo City	1.13	91	eS	Sb	18 55 07.2	-0.9
GCPR	Guaynabo City	1.13	91		Pn	18 54 52.4	0.0
GCPR				IAML		18 55 08.4	
	comp=E,4µm,0.2s						
GCPR				IAML		18 55 08.7	
	comp=N,4µm,0.3s						
GCPR	Guaynabo City	1.13	91		Sb	18 55 07.2	-0.9
IGPR	InterUniversit	1.17	108	⇑eP	Pn	18 54 53.2	+0.3
IGPR	InterUniversit	1.17	108	eS	Sb	18 55 07.5	-1.5
PDPR	Patillas Dam,	1.23	104		Pn	18 54 53.9	+0.2
PDPR				IAML		18 55 12.2	
	comp=E,3µm,0.1s						
CBYP	Canovanas	1.35	92	⇑eP	Pn	18 54 56.2	+0.8
CBYP	Canovanas	1.35	92	eS	Sn	18 55 13.2	+0.9
CBYP	Canovanas	1.35	92		Pn	18 54 55.9	+0.5
CBYP	Canovanas	1.35	92		Sn	18 55 13.2	+0.9
HUMP	Col San Antoni	1.37	98	⇑eP	Pn	18 54 56.2	+0.6
HUMP	Col San Antoni	1.37	98	eS	Sn	18 55 13.5	+0.8
HUMP	Col San Antoni	1.37	98		Pn	18 54 56.1	+0.5
HUMP	Col San Antoni	1.37	98		Sn	18 55 13.5	+0.8
MTP	Monte Pirata	1.65	98		Pn	18 55 00.6	+1.1
CUPR	Culebra, Puert	1.89	90	⇑eP	Pn	18 55 03.2	+0.4
CUPR	Culebra, Puert	1.89	90	eS	Sn	18 55 26.1	+0.5
CUPR	Culebra, Puert	1.89	90	Pn	Pn	18 55 03.3	+0.4
CUPR	Culebra, Puert	1.89	90		Sn	18 55 26.1	+0.5
DR12	Loma Pena Alta	2.05	283		Pn	18 55 06.6	+1.5
STVI	Saint Thomas	2.20	89	⇑eP	Pn	18 55 07.6	+0.5
STVI	Saint Thomas	2.20	89	eS	Sn	18 55 32.9	-0.5
STVI	Saint Thomas	2.20	89		Sn	18 55 32.9	-0.5
STVI	Saint Thomas	2.20	89	Pn	Pn	18 55 06.9	-0.2
STVI	Saint Thomas	2.20	89	IAML		18 55 35.3	
	comp=N,1µm,0.3s						
SJVI	Gifft Hill Sch	2.38	90	⇑eP	Pn	18 55 10.7	+1.2
SJVI	Gifft Hill Sch	2.38	90	eS	Sn	18 55 37.5	-0.1
SJVI	Gifft Hill Sch	2.38	90		Pn	18 55 10.7	+1.2
SJVI					Sn	18 55 37.5	-0.1
CDVI	St. Croix	2.45	103	Pn	Pn	18 55 12.0	+1.4
CDVI				IAML		18 55 50.3	
	comp=E,1µm,0.6s						
CDVI				IAML		18 55 57.1	
	comp=N,1µm,0.4s						
SDD	Santo Domingo	2.51	273	Pn	Pn	18 55 11.9	+0.5
BANI	BANI	2.93	272	Pn	Pn	18 55 17.2	0.0
BANI	BANI	2.93	272	i P	Pb	18 55 23.2	-1.1
BANI				eS	Sb	18 56 02.0	+2.2
BANI				IAML		18 56 12.9	
	comp=Z,115nm,0.4s						
SC01	Santiago de lo	3.45	289	i P	Pb	18 55 30.5	-2.6
SC01				eS	Sb	18 56 15.2	+0.6
SC01				IAML		18 56 29.0	
	comp=Z,154nm,0.3s						
SDDR	Presa de Saban	3.86	280	Pn	Pn	18 55 29.9	-0.1
SDDR				IAML		18 56 34.4	
	comp=Z,129nm,0.7s						
SDDR				IAML		18 56 35.0	
	comp=Z,146nm,0.7s						
SDDR	Presa de Saban	3.86	280	i P	Pb	18 55 37.0	-3.1
SDDR				eS	Sb	18 56 24.3	-2.1
SDDR				IAML		18 56 32.2	
	comp=Z,58nm,0.7s						
GRTK	Grand Turk	4.82	312	Pn	Pn	18 55 45.2	+2.2
GRTK				IAML		18 56 41.4	
	comp=Z,154nm,2.2s						
GRTK				IAML		18 56 42.1	
	comp=Z,155nm,0.7s						
GRTK	Grand Turk	4.82	312	i P	Pn	18 55 45.5	+2.4
GRTK				IAML		18 56 39.1	
	comp=Z,127nm,1.6s						
BIM	Bigot	7.06	122	Pn	Pn	18 56 14.4	+0.4
ILAM	Ilet Lapin Mar	7.08	119	Pn	Pn	18 56 14.2	0.0
MPOM	Morne Pois Mar	7.27	121	Pn	Pn	18 56 17.1	+0.3
BIRV	Birongo	7.87	173	Pn	Pn	18 56 26.6	+1.6
BAUV	El Baul	9.36	185	Pn	Pn	18 56 46.6	+1.1
BBSR	BB Station	14.18	9	Pn	Pn	18 57 49.4	-1.9
CPCT	Cooper Cave	22.91	322	P	P	18 59 35.4	+1.4
LRAL	Lakeview Retre	22.97	313		P	18 59 34.6	-0.1
MVL	Millersville	22.98	342	P	P	18 59 35.2	+0.6
Y49A	Blount Mountai	23.06	316	P	P	18 59 36.2	+0.6
INK	Inuvik	64.38	338	P	P	19 05 06.0	+0.7

CNRM ***24*** *18:56:13.8, 38°.29N×7°.11W, h0km, ml1.9*
INMG ***24*** *18:56:16.7±1.9, 38°.38N×7°.96W, h4km±3km, ML2.2, Error ellipse: s-maj=2.2km s-min=1.6km az=90.0*
IGIL ***24*** *18:56:16.8, 38°.38N×7°.96W, h2km, ML2.2*
MDD ***24*** *18:56:17.0±0.3, 38°.38N×7°.98W, h12km, mb_Lg2.6/12, Error ellipse: s-maj=2.4km s-min=2.0km az=106.0*
ISC 24 18:56:15.6±0.9**, 38°.39N**±0°.01×**7°.93W**±0°.02**, h17**km±8km**, n45, σ1ˢ.41**/87**, 6C-1D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBEJ	Beja	0.36	172	⇑ePg	Pg	18 56 23.3	+0.2
PBEJ				eSg	Sg	18 56 28.3	+0.1
PBEJ				A	A	18 56 29.1	
	75nm,0.3s						
PNCL	Nicolau / Gran	0.55	240	⇑ePg	Pg	18 56 26.1	-0.4
PNCL				eSg	Sg	18 56 33.3	-0.5
PNCL				A	A	18 56 34.4	
	19nm,0.1s						
PESTR	Estremoz	0.55	29	⇑ePg	Pb	18 56 27.4	+0.7
PESTR				eSg	Sb	18 56 34.9	+0.5
PESTR				A	A	18 56 35.2	
	58nm,0.2s						
PESTR	Estremoz	0.55	29	P	Pb	18 56 27.5	+0.7
PESTR				S	Sb	18 56 34.8	+0.4
MESJ	Messejana	0.59	203	eP	Pg	18 56 27.1	-0.1
MESJ				eS	Sg	18 56 34.6	-0.6
MESJ				IAML		18 56 36.3	
	comp=E,69nm,0.2s						
MESJ	Messejana	0.59	203	⇑ePg	Pg	18 56 27.2	-0.1
MESJ				eSg	Sg	18 56 34.6	-0.6
MESJ				A	A	18 56 37.0	
	comp=E,52nm,0.2s						
PMTG	Montargil	0.72	341	⇓eP	Pb	18 56 29.7	0.0
PMTG				eS	Sb	18 56 39.2	-0.1
PMTG				A	A	18 56 42.6	
	comp=E,42nm,0.2s						
PBAR	Barrancos	0.73	106	eP	Pb	18 56 30.7	+0.9
PBAR				eS	Sb	18 56 41.0	+1.5
PBAR				A	A	18 56 45.4	
	comp=E,57nm,0.3s						
PCVE	Castro Verde	0.76	187	eP	Pg	18 56 30.4	0.0
PCVE				eS	Sb	18 56 40.7	+0.4
PCVE				A	A	18 56 43.5	
	comp=E,83nm,0.2s						
EBAD	Badajoz	0.81	62	Pg	Pn	18 56 32.4	+0.3
EBAD				Sg	Sb	18 56 43.3	+1.6
PACT	Alcochete	0.81	299	eP	Pb	18 56 31.2	+0.1
PACT				eS	Sb	18 56 42.1	+0.4
PACT				A	A	18 56 45.4	
	comp=E,43nm,0.3s						
EGRO	El Granado	0.92	157	Pg	Pg	18 56 33.8	+0.3
EGRO				Sg	Sg	18 56 46.0	+0.5
EGRO				i Vmb_Lg		18 56 49.4	
PVAQ	Vaqueiros	0.99	170	eP	Pn	18 56 35.2	+0.5
PVAQ				eS	Sg	18 56 48.4	+0.5
PVAQ				A	A	18 56 50.1	
	comp=E,62nm,0.4s						
PVAQ	Vaqueiros	0.99	170	P	Pg	18 56 35.1	+0.2
PVAQ				S	Sb	18 56 46.0	-1.1
PMST	Lisbon--Monsan	1.04	290	eS	Sn	18 56 49.5	-0.1
PMST				A	A	18 56 52.3	
	comp=E,31nm,0.6s						
PTEO	Sao Teotonio	1.05	217	eP	Pn	18 56 36.0	+0.6
PTEO				eS	Sg	18 56 49.1	-0.5
PTEO				A	A	18 56 50.8	
	comp=E,35nm,0.3s						
PMRV	Marv??o	1.12	22	⇑eP	Pg	18 56 37.9	+0.6
PMRV				eS	Sn	18 56 52.8	+1.2
PMRV				A	A	18 56 53.8	
	comp=E,57nm,0.2s						
EMIN	Mina Concepcio	1.17	122	Pg	Pb	18 56 38.1	+0.9
EMIN				Sg	Sn	18 56 53.5	+0.9
EMIN				i Vmb_Lg		18 56 58.3	
PMAFR	Mafra	1.20	299	eP	Pg	18 56 38.4	-0.5
PMAFR				eS	Sg	18 56 54.1	-0.5
PMAFR				A	A	18 56 56.5	
	comp=E,33nm,0.2s						
MORF	Marmelete	1.22	208	eP	Pb	18 56 38.5	+0.3
MORF				eS	Sb	18 56 53.9	+0.2
MORF				IAML		18 56 56.6	
	comp=E,72nm,0.1s						
MORF	Marmelete	1.22	208	eP	Pb	18 56 38.5	+0.3
MORF				eS	Sg	18 56 55.2	+0.1
MORF				A	A	18 56 57.6	
	comp=E,36nm,0.2s						
PSBE	So Bento	1.31	329	⇑eP	Pg	18 56 40.9	-0.1
PSBE				eS	Sg	18 56 57.9	-0.2
PSBE				A	A	18 56 59.4	
	comp=E,22nm,0.4s						
PFVI	Vila Bisbo	1.44	210	eP	Pb	18 56 41.8	-0.1
PFVI				eS	Sb	18 57 00.4	+0.5
PFVI				A	A	18 57 03.0	
	comp=E,22nm,0.2s						
PCBR	Castelo Branco	1.50	13	ePg	Pg	18 56 44.9	+0.5
PCBR				eSn	Sg	18 57 03.7	-0.2
PCBR				A	A	18 57 04.5	
	comp=E,34nm,0.3s						
PCAS	Casmilo, Conde	1.72	345	ePg	Pg	18 56 48.2	-0.5
PCAS				eSg	Sg	18 57 10.8	-0.4
PCAS				A	A	18 57 13.4	
	comp=E,16nm,0.4s						
COI	Coimbra	1.86	348	eSg	Sg	18 57 15.0	-0.5
ECAB	El Cabril	2.00	98	Pn	Pb	18 56 50.7	-0.8
ECAB				Pg	Pg	18 56 53.2	-0.8
ECAB				Sg	Sg	18 57 20.0	0.0
ECAB				i Vmb_Lg		18 57 23.3	
MTE	Manteigas	2.03	8	eSg	Sg	18 57 19.6	-1.5
MTE				A	A	18 57 23.5	
	comp=E,8.6nm,0.3s						
EPLA	Plasencia	2.21	40	Pn	Pn	18 56 52.3	+0.9
EPLA				Sg	Sg	18 57 25.4	-1.2
EPLA				i Vmb_Lg		18 57 27.3	
PVIS	Viseu	2.33	1	eSg	Sg	18 57 30.9	+0.4
PVIS				A	A	18 57 34.0	
	comp=E,17nm,0.3s						
EADA	Adamuz	2.65	94	Pn	Pn	18 56 59.3	+1.9
EADA				Sg	Sg	18 57 39.9	-0.7
EADA				i Vmb_Lg		18 57 45.6	
MVO	Moncorvo	2.86	14	eSg	Sg	18 57 46.9	-0.6
MVO				A	A	18 57 50.1	
	comp=E,10nm,0.6s						
PVRL	Vila Real	2.89	3	eSn	Sn	18 57 37.0	+1.8
PVRL				A	A	18 57 51.1	
	comp=E,7.4nm,0.2s						
POLO	Lamas de Olo	2.99	2	eSg	Sg	18 57 49.9	-1.7
POLO				A	A	18 57 54.0	
	comp=E,3.4nm,0.8s						
PAB	San Pablo	3.02	66	Pn	Pn	18 57 04.1	+1.4
PAB				Sn	Sn	18 57 38.8	+0.3
PAB				Sg	Sg	18 57 51.3	-1.3
PAB				i Vmb_Lg		18 57 53.8	
ESDC	Sonseca Array	3.34	66	Sn	Sn	18 57 46.9	+0.5
ESDC				Sg	Sg	18 58 00.4	-2.6
ESDC				i Vmb_Lg		18 58 03.0	
ELOB	Lobios	3.48	358	Pn	Pn	18 57 10.1	+1.1
ELOB				Sn	Sn	18 57 49.9	+0.1
ELOB				Sg	Sg	18 58 04.4	-2.9
ELOB				i Vmb_Lg		18 58 09.1	
PBRG	Braganca	3.54	15	eSg	Sg	18 58 06.8	-2.3
PBRG				A	A	18 58 11.2	
	comp=E,2.6nm,0.2s						
PGAV	Gavieira, Arco	3.59	356	ePn	Pn	18 57 11.8	+1.3
PGAV				eSg	Sg	18 58 09.2	-1.5
PGAV				A	A	18 58 12.7	
	comp=E,5.0nm,0.4s						
ECAL	Calabor	3.67	14	Pn	Pn	18 57 12.4	+0.8
ECAL				Sn	Sn	18 57 54.5	+0.1
ECAL				Sg	Sg	18 58 10.7	-2.6
ECAL				i Vmb_Lg		18 58 14.7	
GUD	Guadarrama	3.69	51	Pn	Pn	18 57 12.8	+0.9
GUD				Sn	Sn	18 57 55.3	+0.3
GUD				Sg	Sg	18 58 11.6	-2.5
GUD				i Vmb_Lg		18 58 18.1	
EQES	Quesada	3.88	97	Pn	Pn	18 57 15.9	+1.5
EQES				Sn	Sn	18 58 00.4	+0.8
EQES				Sg	Sg	18 58 17.0	-3.0
EQES				i Vmb_Lg		18 58 30.1	
ZHG	ZHG	5.04	168	P	Pn	18 57 31.4	+1.0
ZHG				S	Sn	18 58 29.6	+1.3
MD31	MD31	6.08	154	P	Pn	18 57 42.4	-2.4
MD31				S	Sn	18 58 46.0	-7.9
MDT	Midelt	6.18	153	P	Pn	18 57 44.2	-1.9
MDT				S	Sn	18 58 47.5	-8.9

IDC ***24*** *19:07:52.8±2.7, 10°.24S×161°.07E, h99km±17km, mb3.3/3, mbtmp3.7/4, MS3.1/1, Error ellipse: s-maj=41.3km s-min=24.8km az=64.0*
ISC 24 19:07:52.5±1.7**, 10°.3S**±0°.2×**161°.1E**±0°.3**, h100**km**, n6, σ2ˢ.21**/7**, mb3.2**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.40	308	P	Pn	19 08 16.0	-1.5
	76nm,0.4s,baz=162,slow=6.9,SNR=8.8						
HNR				S	Sn	19 08 36.0	-0.4
	237nm,0.3s,baz=179,slow=22,SNR=13						
DZM	Mont Dzumac	12.79	157	P	Pn	19 10 52.6	+1.9
	1.5nm,0.6s,baz=26,slow=9.1,SNR=11						
DZM				S	Sn	19 13 08.1	-3.4
	1.8nm,0.8s,baz=311,slow=19,SNR=1.3						
WRA	Warramunga Arr	27.47	246	P	P	19 13 29.6	+0.1
	0.3nm,0.5s,baz=75,slow=9.1,SNR=5.5						
	0.3nm,0.5s						
ASAR	Alice Springs	29.10	239	P	P	19 13 45.3	+1.4
	0.6nm,1.1s,baz=62,slow=10,SNR=2.3						
	0.6nm,1.1s						
SIJI	Sorong	31.06	286	LR	LR	19 28 28.3	
	comp=Z,32nm,18.1s,baz=34,slow=40						
SONM	Songino Array	75.39	325	P	P	19 19 25.8	+0.4
	0.9nm,0.7s,baz=131,slow=7.2,SNR=6.6						
	0.9nm,0.7s						

NEIC ***24*** *19:15:30.2±1.8, 35°.41N±0°.03×121°.11W±0°.03, h7km±6km, Error ellipse: s-maj=5.1km s-min=2.6km az=211.0*
NCEDC 24 19:15:31.3±3.0**, 35°.44N**±0°.02×**121°.04W**±0°.03**, h5**km±5km**, ML3.1**/24**, ML2.7**/78(NEIC)**, Error ellipse: s-maj=3.6km s-min=2.6km az=217.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAMR	Ramage Ranch	0.24	34		Pg	19 15 36.6	+0.6
PAPM	Alder Peak	0.55	331		Pg	19 15 41.4	-0.4
TSCN	Private Proper	0.57	79		Pg	19 15 43.0	+0.7
TCHL	Shandon	0.58	64		Pg	19 15 43.0	+0.7
PMLM	Mount Lospe	0.64	147		Pg	19 15 44.1	+0.4
PKD	Bear Valley Ra	0.65	38		Pg	19 15 43.8	0.0
TRAM	Private Proper	0.67	69		Pg	19 15 44.6	+0.5
PAGB	Antelope Grade	0.70	65		Pg	19 15 44.9	+0.1
PAGB				Sg	Sg	19 15 54.7	+0.7
THIS	South End of C	0.72	66		Pg	19 15 45.5	+0.4
PMPB	Monarch Peak	0.80	14		Pg	19 15 46.8	+0.1
PMPB				Sg	Sb	19 15 58.2	-0.8
BSMM	Soledad Missio	1.00	342		Pg	19 15 49.5	-1.0
HAST	Hastings Reser	1.04	336		Pg	19 15 50.2	-1.0
PDRM	Domengine Ranc	1.05	31		Pg	19 15 51.3	-0.1
BBGB	Big Mountain B	1.14	360		Pg	19 15 52.2	-0.9
BBGB				Sg	Sg	19 16 07.2	-0.8
BJCM	Johnson Can.	1.15	346		Pg	19 15 51.5	-1.7
SCZ	Santa Cruz	1.20	346		Pg	19 15 52.3	-1.9
BLRM	Lewis Ranch	1.24	351		Pg	19 15 55.0	-0.2
SAO	San Andreas Ge	1.37	346		Pn	19 15 54.8	-2.3
SAO	San Andreas Ge	1.37	346		Pn	19 15 55.0	-2.1
SAO					Sb	19 16 13.4	-1.7
BCW	Bitter Crk WRg	1.42	110		Pn	19 15 57.2	-0.7
BCW				Sn	Sn	19 16 17.4	+0.4
HSFM	Saint Francis	1.42	345		Pn	19 15 56.4	-1.4
HCOM	Corn Cob Canyo	1.55	340		Pn	19 15 57.5	-2.1
MOBB	Monterey Bay O	1.55	324		Pn	19 15 57.0	-2.5
HFEM	San Felipe	1.57	349		Pn	19 15 58.1	-1.8
GHS	Gilroy Hot Spr	1.69	349		Pn	19 15 59.6	-2.0
MHC	Mount Hamilton	1.96	346		Pn	19 16 03.4	-2.0
ISA	Isabella, Lake	2.10	83		Pn	19 16 06.5	-0.7
ISA				IAML		19 16 38.8	
	comp=E,30nm,0.4s						
CCAC	Calif City Air	2.49	96		Pn	19 16 12.1	-0.4
CCAC				Sn	Sn	19 16 39.3	-4.0
CCAC				IAML		19 17 04.1	
	comp=E,55nm,0.8s						
CCAC				IAML		19 17 17.0	
	comp=N,56nm,1.2s						
SNCC	San Nicolas Is	2.52	150	Pn	Pn	19 16 12.1	-0.8
SNCC				IAML		19 16 49.1	
	comp=E,32nm,1.8s						
SNCC				IAML		19 17 03.6	
	comp=N,30nm,1.6s						
CMB	Columbia Colle	2.65	11		Pn	19 16 13.8	-0.9
PASC	Pasadena Art C	2.66	117	Pn	Pn	19 16 13.1	-1.8
PASC				IAML		19 17 02.6	
	comp=E,21nm,0.6s						
MDPB	Devils Postpil	2.70	35		Pn	19 16 16.0	+0.4
MDPB				IAML		19 16 51.4	
	comp=N,34nm,0.7s						
MDPB				IAML		19 17 07.1	
	comp=E,34nm,0.7s						
OMMB	Old Mammoth Mi	2.72	36		Pn	19 16 16.2	+0.2
OMMB				IAML		19 16 59.8	
	comp=N,30nm,0.6s						
OMMB				IAML		19 17 02.1	
	comp=E,22nm,0.7s						
MCCM	Marconi Confer	3.08	332	Pn	Pn	19 16 20.3	-0.4
LCH	Last Change Ra	3.27	56		Pn	19 16 23.5	+0.1
LCH				IAML		19 17 22.9	
	comp=N,11nm,0.7s						
LCH				IAML		19 17 29.9	
	comp=E,13nm,0.8s						
GRAC	Grapevine Rang	3.35	61		Pn	19 16 23.5	-0.9
GRAC				IAML		19 17 30.9	
	comp=N,29nm,1.4s						
QSM	Queen of Sheba	3.43	80		Pn	19 16 25.9	+0.4
GSC	Goldstone, Bar	3.46	91		Pn	19 16 23.7	-2.2
GSC				IAML		19 17 34.1	
	comp=N,11nm,0.8s						
GSC				IAML		19 17 35.5	
	comp=E,15nm,0.6s						
LHV	Little Huntoon	3.47	35		Pn	19 16 26.0	+0.1
LHV				IAML		19 17 21.3	
	comp=E,19nm,0.8s						
LHV				IAML		19 17 37.5	
	comp=N,14nm,0.9s						
ELS	Elsinore Mount	3.47	120		Pn	19 16 23.6	-2.5
EMB	Emerald Bay	3.61	12		Pn	19 16 26.9	-1.2
EMB				IAML		19 17 32.3	
	comp=E,16nm,0.6s						
GWY	Greenwater Val	3.63	77		Pn	19 16 26.0	-2.3
GDXM	Geysers	3.65	338	Pn	Pn	19 16 28.5	0.0
GDXM				IAML		19 16 53.0	
	comp=E,12nm,2.0s						
GDXM				IAML		19 18 13.5	
	comp=N,11nm,1.2s						
NVAR	Mina Array Bea	3.70	35	Pn	Pn	19 16 27.5	-1.9
RYN	Ryan	3.77	32	Pn	Pn	19 16 28.2	-2.0
RYN				IAML		19 17 39.2	
	comp=E,14nm,0.8s						
RYN				IAML		19 17 39.9	
	comp=N,14nm,0.8s						
NV11	Mina Array Sit	3.78	37		Pn	19 16 28.2	-2.1
PNTR	Pine Nut	3.82	17		Pn	19 16 29.0	-2.1
YERR	Yerington	3.82	21		Pn	19 16 29.9	-1.1
YERR				IAML		19 17 32.5	
	comp=N,15nm,0.6s						
MPK	Martis Peak	3.94	11	Pn	Pn	19 16 30.6	-2.0
VCNR	Virginia City	4.01	16		Pn	19 16 33.1	-0.5
VCNR				IAML		19 17 50.2	
	comp=E,15nm,1.1s						
VCNR				IAML		19 17 55.7	
	comp=N,15nm,0.9s						
TPH	Tonopah	4.04	48		Pn	19 16 32.7	-1.3
ORV	Oroville	4.13	355	Pn	Pn	19 16 33.3	-1.7
ORV				IAML		19 17 44.1	
	comp=N,5.3nm,1.6s						
ORV				IAML		19 17 47.6	
	comp=E,6.6nm,1.0s						
TPNV	Topopah Spring	4.16	67		Pn	19 16 35.6	+0.1
TPNV				IAML		19 17 13.6	
	comp=E,6.7nm,3.9s						
TPNV				IAML		19 18 36.8	
	comp=E,7.4nm,4.4s						
PFO	Pinyon Flats O	4.19	114	Pn	Pn	19 16 35.1	-0.9
PFO				IAML		19 19 02.7	
	comp=E,5.3nm,3.7s						
KVN	Kaiserville	4.30	32		Pn	19 16 36.5	-1.1
PAHR	Pah Rah Range	4.46	17	Pn	Pn	19 16 37.1	-2.6
PAHR				IAML		19 17 30.0	
	comp=E,6.1nm,3.7s						
PAHR				IAML		19 17 58.8	
	comp=N,4.9nm,1.2s						
BAR	Barrett	4.55	126	Pn	Pn	19 16 38.7	-2.2
BAR				IAML		19 17 34.6	
	comp=E,6.9nm,2.7s						
BAR				IAML		19 18 31.9	
	comp=N,7.1nm,2.9s						
SHPR	Sheep Range	4.88	76	Pn	Pn	19 16 44.7	-0.9

R11A	Troy Canyon, C	5.25	55		Pn	19 16 48.6	-2.0
R11A				IAML		19 17 28.8	
	comp=E,2.7nm,4.2s						
R11A				IAML		19 18 19.8	
	comp=N,2.4nm,4.2s						

JMA 24 19:24:02.8±0.1, 24°.4N±0°.2×124°.0E±0°.1, h18^{km}, MV2.7/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKRS	Kuro-shima	0.13	158	*i* P	Pb	19 24 06.7	0.0
JKRS				S	Sg	19 24 09.5	+0.1
JIJ	Ishigaki jima	0.17	89	*i* P	Pg	19 24 07.1	-0.1
JIJ				S	Sg	19 24 10.1	-0.2
IRIF	Iriomote-Funau	0.21	263	*i* P	Pg	19 24 07.8	-0.1
IRIF				S	Sb	19 24 11.5	-0.1
HATJ	Hateruma jima	0.33	205	*i* P	Pg	19 24 09.7	-0.2
HATJ				S	Sg	19 24 14.6	-0.1
JTJ	Tarama	0.73	67	P	Pb	19 24 16.9	-0.2
JTJ				S	Sg	19 24 27.7	+0.7
YOJ	Yonaguni jima	0.87	277	P	Pb	19 24 19.1	-0.3
YOJ				S	Sb	19 24 30.8	+0.1
JYNG	Yonagunijimaku	0.93	276	P	Pb	19 24 19.8	-0.6
JYNG				*e*S	Sb	19 24 32.0	-0.4

TAP 24 19:24:53.6, 23°.91N×121°.48E, h18^{km}, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETM	Tongmen	0.06	11	*i* P	Pg	19 24 56.9	0.0
	baz=10.0						
ETM				*i* S	Sg	19 24 59.3	+0.1
	baz=10.0						
ESL	Shilin	0.10	205	*i* P	Pg	19 24 57.3	0.0
	baz=201						
ESL				S	Sg	19 24 59.9	0.0
	baz=201						
HWA	Hwalien	0.13	59	P	Pg	19 24 58.1	+0.5
	baz=62						
HWA				*e*S	Sg	19 25 00.8	+0.5
	baz=62						
EGFH	Guangfu	0.24	192	*e*P	Pb	19 24 59.3	0.0
	baz=192						
EGFH				*e*S	Sb	19 25 03.2	+0.1
	baz=192						
OWD	Renai	0.28	279	*e*P	Pg	19 24 59.9	0.0
	baz=284						
OWD				*e*S	Sg	19 25 03.9	-0.4
	baz=284						
CHGB	Renai	0.32	298	*e*P	Pb	19 25 01.4	+0.6
	baz=303						
CHGB				*e*S	Sb	19 25 06.0	+0.3
	baz=303						
WUSB	Renai	0.34	284	*e*P	Pb	19 25 01.7	+0.4
	baz=288						
WUSB				*e*S	Sg	19 25 06.0	+0.1
	baz=288						
VWDT	VWDT	0.35	244	*e*P	Pb	19 25 01.5	+0.3
	baz=239						
VWDT				*e*S	Sb	19 25 06.3	-0.1
	baz=239						

NIC 24 19:25:34.0±0.0, 37°.27N×31°.48E, h18^{km}±5^{km}, Ml3.0/2
ISK 24 19:25:35.2, 37°.11N×31°.05E, h101^{km}±1^{km}, ML2.2/8
DDA 24 19:25:36.0±0.0, 37°.12N×31°.08E, h9^{km}±2^{km}, ML1.8
ISC 24 19:25:34.4±1.8, 37°.12N±0°.04×31°.08E±0°.04, h120^{km}±13^{km}, n29, σ0^{s}.87/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	Antalya	0.41	237	PG	Pn	19 25 50.7	-1.1
BUCA	Burdur, Bucak-	0.46	296	P	Pn	19 25 52.0	-0.2
BUCA				S	Sn	19 26 05.2	-0.4
KORT	Korkueli	0.59	258	PG	Pn	19 25 52.6	-0.5
SEDI	Konya, Seydise	0.63	59	P	Pn	19 25 53.5	+0.1
SEDI				S	Sn	19 26 07.3	-0.5
ISP	Isparta	0.82	328	PG	Pn	19 25 54.6	-0.3
ISP				SG	Sn	19 26 08.7	-1.8
ELL	Elmali	1.01	249	PG	Pn	19 25 56.4	-0.2
ELL	Elmali	1.01	249	P	Pn	19 25 57.9	+1.3
ELL				S	Sn	19 26 16.6	+3.1
DOGA	KONYA_Doganhis	1.09	25	P	Pn	19 25 58.0	+0.5
DOGA				S	Sn	19 26 14.7	-0.3
DOGA				*i* AML	AML	19 26 15.0	
	comp=N,62nm,0.2s						
DOGA				*i* AML	AML	19 26 15.0	
	comp=E,50nm,0.3s						
BASM	Basmaki-Afyon	1.14	315	PN	Pn	19 25 57.9	0.0
HDMB	Hadim	1.14	98	PN	Pn	19 25 58.2	+0.1
YVAC	Isparta, Yalva	1.15	6	P	Pn	19 25 58.3	+0.2
YVAC				S	Sn	19 26 15.9	-0.2
YVAC				*i* AML	AML	19 26 16.0	
	comp=E,30nm,0.5s						
YVAC				*i* AML	AML	19 26 16.0	
	comp=N,18nm,0.2s						
GOLH	Golhisar	1.22	276	P	Pn	19 25 59.3	+0.5
GOLH				S	Sn	19 26 17.5	+0.3
GOLH				*i* AML	AML	19 26 20.0	
	comp=E,8.3nm,0.4s						
GOLH				*i* AML	AML	19 26 21.0	
	comp=N,9.0nm,0.2s						
KONT	Konya--Tatoy	1.31	51	PN	Pn	19 26 00.4	+0.7
GAZI	Gazipasa	1.33	131	PN	Pn	19 26 00.4	+0.4
GAZI				SN	Sn	19 26 18.9	-0.5
GAZI	Gazipasa	1.33	131	P	Pn	19 26 00.5	+0.6
GAZI				S	Sn	19 26 19.8	+0.4
GAZI				*i* AML	AML	19 26 20.0	
	comp=N,30nm,0.3s						
GAZI				*i* AML	AML	19 26 21.0	
	comp=E,39nm,0.2s						
KZIL	AFYON_Kizioren	1.35	327	P	Pn	19 25 59.8	-0.5
KZIL				*i* AML	AML	19 26 20.0	
	comp=E,6.4nm,1.5s						
KZIL				S	Sn	19 26 20.1	+0.2
CAME	Cameli-Denizli	1.43	263	PN	Pn	19 26 01.5	+0.3
AKAS	Kas	1.48	234	PN	Pn	19 26 02.1	+0.4
KKBE	Karaman, Kazim	1.49	86	P	Pn	19 26 02.5	+0.7
KKBE				S	Sn	19 26 23.3	+0.6
KKBE				*i* AML	AML	19 26 24.0	
	comp=N,14nm,0.3s						
KKBE				*i* AML	AML	19 26 24.0	
	comp=E,21nm,0.3s						
ERMK	Ermenek	1.55	108	P	Pn	19 26 03.8	+1.1
ERMK				S	Sn	19 26 24.8	+0.8
ERMK				*i* AML	AML	19 26 25.0	
	comp=E,37nm,0.5s						
ERMK				*i* AML	AML	19 26 26.0	
	comp=N,28nm,0.4s						
KDHN	Kadinhani	1.62	30	P	Pn	19 26 03.4	+0.1
KDHN				*i* AML	AML	19 26 25.0	
	comp=N,6.7nm,0.8s						
KDHN				S	Sn	19 26 25.3	-0.1
KDHN				*i* AML	AML	19 26 26.0	
	comp=E,4.8nm,0.4s						
FETY	Fethiye	1.67	254	PN	Pn	19 26 04.4	+0.5
FETY				SN	Sn	19 26 25.2	-1.1
ALFC	Alefka	2.32	147	P	Pn	19 26 10.9	-1.0
AKMS	Akamas	2.33	154	P	Pn	19 26 11.4	-0.7
AKMS				AML	AML	19 26 43.0	
	0.2nm,0.5s						
AKMS				AML	AML	19 26 44.1	
	0.3nm,0.9s						
NATA	Nata	2.63	152	P	Pn	19 26 15.9	-0.1
SZAC	Souni	2.78	148	P	Pn	19 26 17.4	-0.5
CSS	Mathiatis	2.83	139	P	Pn	19 26 17.2	-1.3
ASGA	Asgata	2.92	142	P	Pn	19 26 19.7	0.0
MVOU	Mavrovouni	2.95	135	P	Pn	19 26 18.6	-1.5
MVOU				AML	AML	19 26 51.4	
	0.2nm,1.1s						
MVOU				AML	AML	19 26 52.1	
	0.1nm,0.8s						

NORS 24 19:33:39.3±0.0, 43°.82N×43°.43E, h12^{km}, MPVA4.0
MOS 24 19:33:41.9±0.0, 43°.74N×43°.54E, h16^{km}, MPVA3.6
ISC 24 19:33:42.1±0.9, 43°.73N±0°.02×43°.50E±0°.02, h19^{km}±2^{km}, n37, σ1^{s}.00/69, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTC	Kuba-Taba	0.11	323	*i* Pg	Pg	19 33 45.5	-0.6
KBTC				*e*Sg	Sg	19 33 48.5	-0.2
NCK	Nalchik	0.24	163	*i* Pg	Pb	19 33 47.1	-0.6
NCK				*e*Sg	Sg	19 33 52.1	+0.5
KBZ	Khabaz	0.44	270	*e*Pg	Pb	19 33 51.0	-0.3
KBZ				*e*Sg	Sb	19 33 58.4	+0.8
PYA1	Pyatigorsk	0.45	319	*i* Pg	Pg	19 33 50.7	-0.6
PYA1				*e*Sg	Sb	19 33 57.5	-0.4
LSNR	Lesken	0.51	152	*e*Pg	Pb	19 33 52.0	-0.5
LSNR				*e*Sg	Sg	19 34 00.1	+0.9
STDR	Stavd-Durt	0.54	131	*e*Pg	Pb	19 33 52.4	-0.6
STDR				*e*Sg	Sg	19 34 01.4	+1.1
PRTR	Priterechnaya	0.57	87	*e*Pg	Pb	19 33 52.1	-1.3
PRTR				*e*Sg	Sg	19 34 00.9	-0.1
BEYR	Belyy Ugol+	0.57	300	*e*Pg	Pg	19 33 53.3	-0.3
BEYR				*e*Sg	Sg	19 34 01.9	+0.6
SHA1	Shidzhatmaz	0.61	271	*e*Pg	Pg	19 33 54.6	+0.3
SHA1				*e*Sg	Sn	19 34 04.4	-1.1
KIV0	Kislovodsk Arr	0.63	292	*i* Pg	Pb	19 33 54.0	-0.4
KIV0				*e*Sg	Sg	19 34 03.2	+0.2
KIV	Kislovodsk	0.63	291	*e*Pg	Pb	19 33 54.1	-0.4
KIV				*e*Sg	Sg	19 34 03.2	+0.1
KORR	Kora	0.76	147	*e*Pg	Pb	19 33 56.5	-0.3
KORR				*e*Sg	Sn	19 34 08.3	-0.7
DIGR	Digorskoe uzhe	0.83	176	*i* Pg	Pb	19 33 57.2	-0.8
DIGR				*e*Sg	Sb	19 34 08.6	-0.3
BTKR	Batakoyurt	0.84	115	*e*Pg	Pb	19 33 57.5	-0.6
BTKR				*e*Sg	Sn	19 34 09.9	-0.8
TRKR	Terskaya	0.89	90	*i* Pg	Pb	19 33 58.2	-0.7
TRKR				*e*Sg	Sb	19 34 10.6	+0.1
ZEI	Tsey	0.98	163	*i* Pg	Pb	19 34 00.2	-0.4
ZEI				*e*Sg	Sg	19 34 14.0	-0.3
LACR	Lac	1.07	147	*e*Pg	Pb	19 34 01.6	-0.5
LACR				*e*Sg	Sg	19 34 18.0	+1.0
VLKR	Vladikavkaz	1.09	128	*e*Pg	Pb	19 34 02.5	0.0
VLKR				*e*Sg	Sg	19 34 19.1	+1.4
ALER	Alexandrovskoy	1.12	338	*e*Pg	Pg	19 34 03.6	-0.2
ALER				*e*Sg	Sg	19 34 19.4	+0.9
KMGR	Komgaron	1.20	123	*e*Pg	Pn	19 34 03.4	-0.5
KMGR				*e*Sg	Sn	19 34 20.1	+0.4
MTEO	Meteo	1.29	144	P	Pn	19 34 05.0	-0.6
MTEO				S	Sn	19 34 22.5	0.0
GOF	Gofitskoye	1.37	346	*e*Pg	Pb	19 34 07.3	+0.1
GOF				*i* Sg	Sg	19 34 27.8	+1.3
TKB	Tkibuli	1.43	195	P	Pg	19 34 09.8	+0.2
ARXR	Arkhyz	1.62	265	*e*Pg	Pb	19 34 10.5	-1.1
ARXR				*e*Sg	Sb	19 34 32.2	+0.4
GROC	Groznyy	1.75	107	*e*Pg	Pg	19 34 15.8	0.0
GROC				*e*Sg	Sb	19 34 34.8	-0.4
AHMR	Akhmetovskaya	1.83	284	*e*Pg	Pb	19 34 14.7	-0.3
AHMR				*e*Sg	Sg	19 34 39.4	-1.6
BKRG	Bakuriani	1.97	180	P	Pb	19 34 18.1	+0.7
ABS	Abastumani	2.04	195	P	Pg	19 34 20.3	-0.9
DVE	Vedeno	2.06	111	*e*Pg	Pb	19 34 17.2	-1.9
DVE				*e*Sg	Sb	19 34 43.6	-0.7
TRLG	Trialeti	2.23	168	P	Pb	19 34 20.1	-1.9
BTLR	Botlikh	2.26	117	*e*Pg	Pb	19 34 20.7	-1.6
BTLR				*e*Sg	Sn	19 34 45.2	-0.7
DLMR	Dylym	2.37	105	*e*Sn	Sn	19 34 48.8	+0.2
DBC	Dubki	2.53	105	*e*Pn	Pb	19 34 24.5	-2.4
DBC				*e*Sn	Sn	19 34 52.8	+0.2
UNCR	Uncukul	2.61	112	*e*Pn	Pb	19 34 25.8	-2.6
UNCR				*e*Sn	Sn	19 34 56.3	+1.7
XNZR	Khunzakh	2.63	116	*e*Pn	Pb	19 34 28.5	-0.2
XNZR				*e*Sn	Sn	19 34 54.6	-0.5
KRNR	Karanay	2.65	109	*e*Pn	Pn	19 34 26.1	+2.2
KRNR				*e*Sn	Sn	19 34 56.3	+0.8
GNBR	Gunib	2.87	117	*e*Pn	Pn	19 34 29.5	+2.5
GNBR				*e*Sn	Sn	19 35 02.6	+1.6

NEIC 24 19:54:17.8±1.7, 20°.82S±0°.09×178°.8W±0°.1, h578^{km}±5^{km}, mb4.5/59, Error ellipse: s-maj=14.6km s-min=12.9km az=100.0
IDC 24 19:54:19.1±1.2, 20°.68S×178°.88W, h595^{km}±14^{km}, mb3.4/15, mbtmp4.4/18, Error ellipse: s-maj=15.5km s-min=12.7km az=153.0
ISC 24 19:54:19.2±0.4, 20°.84S±0°.06×178°.84W±0°.07, h600^{km}, n97, σ1^{s}.35/103, mb4.3/42, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.26	316	P	P	19 55 46.9	+0.2
	170nm,0.6s,baz=150,slow=3.9,SNR=129						
MSVF	Nonsavu	4.26	316	P	P	19 55 47.1	+0.4
RAO	Raoul Island	8.42	174	P	P	19 56 20.5	-1.9
AFI	Afiamalu	9.64	46	P	P	19 56 31.8	-2.8
	13nm,0.5s,baz=57,slow=22,SNR=4.3						
AFI	Afiamalu	9.64	46	P	P	19 56 33.4	-1.2
MARNC	Mare, Loyalty	12.27	265	P	P	19 57 00.5	-0.1
LIFNC	LIFOU	13.02	268	P	P	19 57 06.9	-1.3
DZM	Mont Dzumac	13.76	262	P	P	19 57 14.7	-1.1
	2.3nm,0.6s,baz=108,slow=18,SNR=1.5						
SANVU	Saraoutou	14.30	290	P	P	19 57 19.8	-1.2
URZ	Urewera	17.71	191	S	S	20 00 38.3	-6.5
	18nm,0.9s,baz=217,slow=10,SNR=1.8						
URZ	Urewera	17.71	191	P	P	19 57 50.2	-1.8
BKZ	Black Stump Fm	18.70	191	P	P	19 57 58.7	-2.4
BKZ				IAmb	IAmb	19 58 14.4	
	comp=Z,48nm,1.5s						
KNTN	Kanton	19.25	22	P	P	19 58 01.6	-4.7
BFZ	Birch Farm	20.22	191	P	P	19 58 14.0	-0.7
LTZ	Lake Taylor	23.12	197	P	P	19 58 38.6	-2.0
MLZ	Mavora Lakes	26.72	201	P	P	19 59 11.4	-0.9
MLZ				IAmb	IAmb	19 59 12.4	
	comp=Z,14nm,1.2s						
ARMA	Armidale	28.21	244	P	P	19 59 26.9	+1.2
ARMA				IAmb	IAmb	19 59 54.0	
	comp=Z,26nm,1.2s						
CTA	Charters Tower	32.67	265	P	P	20 00 04.7	+0.9
	comp=Z,2.6nm,0.5s,baz=84,slow=9.3,SNR=8.1						
	comp=Z,2.6nm,0.5s						
CTAO	Charters Tower	32.67	265	P	P	20 00 04.8	+1.0
RABL	Rabaul	32.68	296	P	P	20 00 01.9	-2.1
KRVT	Keravat (AS076	32.73	296	P	P	20 00 04.0	-0.4
	comp=Z,26nm,0.6s,baz=120,slow=1.0,SNR=4.0						
	comp=Z,26nm,0.6s						
PMG	Port Moresby	34.65	284	P	P	20 00 20.8	+0.4
	comp=Z,17nm,0.7s,baz=75,slow=5.4,SNR=6.0						
	comp=Z,17nm,0.7s						
PMG	Port Moresby	34.65	284	P	P	20 00 20.0	-0.4
PMG				IAmb	IAmb	20 00 21.9	
	comp=Z,17nm,0.8s						
TOO	Toolangi	35.06	234	P	P	20 00 23.9	+0.3
TOO				IAmb	IAmb	20 00 36.9	
	comp=Z,12nm,1.2s						
PATS	Pohnpei	35.50	318	P	P	20 00 28.3	+0.9
COEN	Coen	36.82	274	P	P	20 00 39.3	+1.0
STKA	Stephens Creek	36.93	244	P	P	20 00 39.3	+0.3
	comp=Z,1.5nm,0.5s,baz=96,slow=14,SNR=6.1						
	comp=Z,1.5nm,0.5s						
STKA	Stephens Creek	36.93	244	P	P	20 00 39.2	+0.3
BBOO	Buckleboo	41.69	244	P	P	20 01 17.2	+0.1
BBOO				IAmb	IAmb	20 01 43.0	
	comp=Z,36nm,1.5s						
WR0	Warramunga Arr	43.58	263	P	P	20 01 32.4	+0.4
WR0				IAmb	IAmb	20 01 53.4	
	comp=Z,16nm,1.6s						
ASAR	Alice Springs	43.67	257	P	P	20 01 32.5	-0.1
	comp=Z,1.5nm,0.7s,baz=90,slow=7.8,SNR=27						
ASAR				PcP	PcP	20 03 06.4	+0.2
	comp=Z,0.6nm,0.6s,baz=88,slow=5.8,SNR=1.9						
ASAR				ScP	ScP	20 06 04.0	+2.7
	comp=Z,1.1nm,0.7s,baz=104,slow=4.4,SNR=12						
ASAR				S	S	20 07 20.4	+0.1
	comp=Z,0.5nm,0.7s,baz=97,slow=16,SNR=4.4						
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	43.67	257	P	P	20 01 33.2	+0.6
WB0	Warramunga Arr	43.75	263	P	P	20 01 33.4	+0.1
WB2	Warramunga Arr	43.76	263	P	P	20 01 33.4	0.0
WRAB	Tennant Creek	43.76	263	P	P	20 01 33.4	0.0
WRA	Warramunga Arr	43.77	263	P	P	20 01 33.2	-0.3
	comp=Z,0.5nm,0.3s,baz=97,slow=7.5,SNR=26						
WRA				ScP	ScP	20 06 03.5	+1.7
	comp=Z,0.3nm,0.7s,baz=95,slow=4.3,SNR=1.9						
	comp=Z,0.5nm,0.3s						
WRA	Warramunga Arr	43.77	263	P	P	20 01 32.9	-0.6
HMH	Humu'ula Sheep	46.24	31	P	P	20 01 52.4	-0.1
FORT	Forrest	48.44	247	P	P	20 02 08.7	+0.2
FORT				IAmb	IAmb	20 02 16.4	
	comp=Z,25nm,1.0s						
MIDW	Midway	48.78	2	P	P	20 02 12.5	+1.6
KNRA	Kununurra	49.85	267	P	P	20 02 19.3	+0.2
KNRA				IAmb	IAmb	20 02 39.7	
	comp=Z,14nm,1.2s						
SIJI	Sorong	52.56	286	P	P	20 02 38.2	-0.4
	comp=Z,13nm,0.7s,baz=115,slow=3.6,SNR=8.5						
	comp=Z,13nm,0.7s						
SBA	Scott Base	57.49	184	P	P	20 03 14.7	+2.9
VNDA	Vanda	57.51	185	P	P	20 03 13.7	+1.8
	comp=Z,1.0nm,0.4s,baz=16,slow=6.5,SNR=18						
	comp=Z,1.0nm,0.4s						
VNDA	Vanda	57.51	185	P	P	20 03 13.7	+1.8
NWAO	Narrogin (SRO)	57.51	244	P	P	20 03 13.3	+0.5
NWAO				IAmb	IAmb	20 03 24.8	
	comp=Z,63nm,1.4s						
CASY	Casey	63.32	205	P	P	20 03 51.0	+0.7
QSPA	South Pole Qui	69.23	180	P	P	20 04 28.2	+1.2
QSPA				IAmb	IAmb	20 04 28.6	
	comp=Z,10nm,0.7s						
JHS	Saijyo	71.85	320	P	P	20 04 42.5	-0.2
JHS				IAmb	IAmb	20 05 02.9	
	comp=Z,28nm,1.3s						
KIWB	Kanaga Island	72.39	1	P	P	20 04 45.2	-0.1
ADK	Adak	72.43	1	P	P	20 04 45.4	-0.2
TPUB	Ta-pu	73.50	303	P	P	20 04 51.5	-0.9
TPUB				IAmb	IAmb	20 04 53.5	
	comp=Z,46nm,1.6s						
SSLB	Suanglung	73.50	304	P	P	20 04 51.9	-0.5
SSLB				IAmb	IAmb	20 04 52.5	
	comp=Z,13nm,1.2s						
UNV	Unalaska Valle	75.13	8	P	P	20 05 00.3	-0.5
UNV				IAmb	IAmb	20 05 00.7	
	comp=Z,12nm,0.7s						
PEA0B	Petropavlovsk-	76.40	346	P	P	20 05 08.4	+0.7
PEA0B				IAmb	IAmb	20 05 27.9	
	comp=Z,32nm,1.5s						
PETK	Petropavlovsk-	76.40	346	P	P	20 05 06.4	-1.4
	comp=Z,3.4nm,0.6s,baz=116,slow=6.6,SNR=6.2						
	comp=Z,3.4nm,0.6s						
PETK	Petropavlovsk-	76.40	346	P	P	20 05 07.5	-0.3
CNBA	Chernabura Isl	77.13	11	P	P	20 05 11.6	-0.1
CNBA				IAmb	IAmb	20 05 17.3	
	comp=Z,24nm,1.4s						
SMAI	San Martin Ant	78.58	159	P	P	20 05 21.1	+1.7
SMAI				IAmb	IAmb	20 05 21.8	
	comp=Z,19nm,0.8s						
CHGN	Chignik	78.75	11	P	P	20 05 20.5	+0.2
CHGN				IAmb	IAmb	20 05 23.6	
	comp=Z,10nm,0.8s						
BELA	Belgrano 2	79.33	173	P	P	20 05 23.5	+0.3
MAW	Mawson	80.98	200	P	P	20 05 32.4	+0.4
	comp=Z,3.2nm,0.8s,baz=118,slow=5.2,SNR=7.5						
	comp=Z,3.2nm,0.8s						
MAW	Mawson	80.98	200	P	P	20 05 32.9	+1.0
KDAK	Kodiak Island	81.33	14	P	P	20 05 35.0	+1.3
NVAR	Mina Array Bea	81.81	44	P	P	20 05 38.1	+1.1
	comp=Z,0.5nm,0.6s,baz=230,slow=7.0,SNR=3.6						
	comp=Z,0.5nm,0.6s						
P18K	Big Mountain,	82.26	12	P	P	20 05 38.5	0.0
P18K				IAmb	IAmb	20 05 39.0	
	comp=Z,6.6nm,0.7s						
K05A	Summer Lake	82.72	39	P	P	20 05 43.2	+1.8
G03D	McMinnville, O	82.90	36	P	P	20 05 45.0	+3.0
CNPM	China Poot	83.21	14	P	P	20 05 43.2	0.0
CNPM				IAmb	IAmb	20 05 56.1	
	comp=Z,38nm,1.5s						
N19K	Bonanza Creek	83.72	12	P	P	20 05 45.2	-0.6
M19K	Big River Lodg	84.74	11	P	P	20 05 50.9	+0.3
GHO	Glory Hole Cre	85.73	14	P	P	20 05 55.7	+0.2
GHO				IAmb	IAmb	20 05 56.4	
	comp=Z,5.9nm,0.8s						
N25K	Chitina, Valde	86.62	16	P	P	20 05 59.8	+0.1
N25K				IAmb	IAmb	20 06 00.6	
	comp=Z,3.4nm,0.5s						
TRF	Thorofare Moun	86.94	12	P	P	20 06 00.8	-0.5
TRF				IAmb	IAmb	20 06 01.6	
	comp=Z,5.8nm,0.6s						
RND	Reindeer	87.20	13	P	P	20 06 02.5	+0.1
RND				IAmb	IAmb	20 06 03.2	
	comp=Z,7.2nm,0.7s						
TROLL	Troll, Antarti	87.39	180	P	P	20 06 03.3	-0.2
SNAA	Sanae	87.69	179	P	P	20 06 04.4	-0.3
VNA3	Neumayer Olymp	87.86	177	P	P	20 06 05.2	-0.3
TXAR	Lajitas Array	87.90	58	P	P	20 06 07.9	+1.4
	comp=Z,0.7nm,0.8s,baz=223,slow=6.2,SNR=7.5						
	comp=Z,0.7nm,0.8s						
M27K	Edge Creek, AK	87.95	16	P	P	20 06 06.6	+0.6
M27K				IAmb	IAmb	20 06 07.8	
	comp=Z,5.9nm,1.1s						
VNA2	Neumayer--Watz	88.29	177	P	P	20 06 07.5	0.0
	baz=191,slow=4.0						
HDA	Harding Lake	88.49	13	P	P	20 06 08.1	-0.2
HDA				IAmb	IAmb	20 06 08.7	
	comp=Z,3.0nm,0.7s						
VNA1	Neumayer--Stat	88.52	177	P	P	20 06 08.4	-0.1
MDM	Murphy Dome	88.70	13	P	P	20 06 08.6	-0.7
MDM				IAmb	IAmb	20 06 09.9	
	comp=Z,4.8nm,1.0s						
ILAR	Eielson Array	88.82	13	P	P	20 06 09.3	-0.5
	comp=Z,1.0nm,0.4s,baz=214,slow=5.3,SNR=15						
	comp=Z,1.0nm,0.4s						
M30M	Minto, Yukon	89.53	18	P	P	20 06 13.8	+0.6
M30M				IAmb	IAmb	20 06 14.7	
	comp=Z,6.5nm,1.2s						
PLCA	Paso Flores	89.61	134	P	P	20 06 15.7	+1.3
	comp=Z,1.4nm,0.7s,baz=238,slow=3.8,SNR=7.1						
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	89.75	44	P	P	20 06 15.4	+0.4
	comp=Z,0.3nm,0.6s,baz=235,slow=4.3,SNR=3.9						
	comp=Z,0.3nm,0.6s						
DAWY	Dawson	90.00	16	P	P	20 06 14.9	-0.5
T35A	Sooner Cattle	96.40	53	P	P	20 06 45.7	+0.5
FINES	FINESS Array B	135.87	343	PKP	PKPdf	20 12 32.7	+0.5
	comp=Z,0.4nm,0.3s,baz=116,slow=3.2,SNR=7.5						
NOA	NORSAR Array B	139.22	353	SKPbc	SKPbc	20 15 18.8	+0.9
	comp=Z,0.6nm,0.6s,baz=12,slow=4.8,SNR=3.6						
AKASG	Malin Array Be	142.92	330	PKP	PKPdf	20 12 42.6	-2.6
	comp=Z,3.7nm,0.3s,baz=43,slow=4.5,SNR=22						
BRTR	Keskin Array B	146.47	311	PKPbc	PKPbc	20 12 54.1	-0.4
	comp=Z,0.5nm,0.5s,baz=108,slow=3.1,SNR=4.1						
BUR08	Bucovina Ar. S	146.94	330		PKiKP	20 12 56.5	-0.8
CLL	Collm	148.20	346	*e*PKPbc	PKiKP	20 12 59.0	-0.6
CLL				*i* PKPab	PKPab	20 13 04.0	+0.3
TORD	Torodi Ar. Bea	172.34	184	PKP	PKPdf	20 13 18.6	-2.4
	comp=Z,0.5nm,0.8s,baz=142,slow=1.2,SNR=1.9						
TORD				PKPab	PKPab	20 14 49.1	-0.3
	comp=Z,0.5nm,0.5s,baz=171,slow=3.9,SNR=6.5						

IDC 24 20:08:42.1±3.1, 9°.52S×123°.96E, h119^{km}±42^{km}, mb3.2/1, mbtmp3.6/3, Error ellipse: s-maj=136.1km s-min=30.9km az=49.0
DJA 24 20:08:43.5±0.5, 10°S±23°×12°4E±°, h10^{km}, M4.0/3, mb4.5/1, MLv3.7/3
ISC 24 20:08:39.2±1.3, 9°.3S±0°.1×124°.2E±0°.1, h100^{km}, n7, σ3^{s}.21/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.49	177	P	Pn	20 08 57.0	+1.9
SOEI				S	Sn	20 09 05.7	-1.2
BATI	Baumata	1.10	211	P	Pn	20 09 03.0	+2.3
	34nm,0.3s,baz=50,slow=3.5,SNR=20						
BATI				S	Sn	20 09 17.5	+0.6
	162nm,0.4s,baz=78,slow=19,SNR=14						
MMRI	Maumere	2.08	287	P	Pn	20 09 12.3	-0.4
PLAI	Plampang	6.40	273	P	Pn	20 10 10.1	-0.8
WRA	Warramunga Arr	14.42	139	P	Pn	20 11 59.1	+0.5
	0.6nm,0.5s,baz=319,slow=14,SNR=23						
WRA				S	Sn	20 14 27.7	-10
	1.4nm,0.5s,baz=317,slow=27,SNR=11						
ASAR	Alice Springs	17.04	148	P	Pn	20 12 33.3	+1.9
	0.9nm,0.5s,baz=326,slow=10,SNR=17						
ASAR				S	Sn	20 15 33.5	-7.5
	1.4nm,0.8s,baz=306,slow=19,SNR=6.6						
MKAR	Makanchi Array	67.16	330	P	P	20 19 23.5	+1.1
	0.4nm,0.7s,baz=128,slow=8.1,SNR=4.3						
	0.4nm,0.7s						

TUL 24 20:10:57.6±1.4, 36°.47N±0°.02×98°.75W±0°.02, h7^{km}±4^{km}, ML2.8, mb_Lg2.5/28(NEIC), Error ellipse: s-maj=3.2km s-min=1.1km az=128.0
NEIC 24 20:10:57.5±1.0, 36°.48N±0°.02×98°.74W±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=157.0,

Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.23**	**244**	Pg	Pg	20 11 02.2	0.0
U32A				Sg	Sg	20 11 05.8	+0.3
OKCFA	**Oklahoma City**	**1.49**	**135**	Pn	Pn	20 11 24.5	+0.1
OKCSW	**OKLAHOMA CITY**	**1.51**	**135**	Pn	Pn	20 11 24.0	-0.6
FNO	**Franklin**	**1.64**	**138**	Pn	Pn	20 11 26.3	0.0
WMOK	**Wichita Mounta**	**1.74**	**181**	Pn	Pn	20 11 27.9	+0.1
T35A	**Sooner Cattle**	**1.85**	**76**	Pn	Pn	20 11 30.1	+0.9
R32A	**Long Quarter,**	**1.94**	**1**	Pn	Pb	20 11 32.1	-0.8
X34A	**Smith Ranch, M**	**2.02**	**158**	Pn	Pb	20 11 33.2	-1.0
TUL1	**Leonard**	**2.46**	**103**	Pn	Pn	20 11 38.7	+1.1
TUL1	comp=Z,13nm,0.9s			IAmb_Lg		20 12 14.8	
CBKS	**Cedar Bluff**	**2.46**	**342**	Pn	Pn	20 11 37.3	-0.4
AMTX	**Amarillo**	**2.87**	**237**	Pn	Pn	20 11 42.3	-1.1
AMTX	comp=Z,22nm,1.0s			IAmb_Lg		20 12 29.3	
KSU1	**Kansas State U**	**3.12**	**32**	Pn	Pn	20 11 45.6	-1.0
X37A	**Clayton**	**3.33**	**123**	Pn	Pn	20 11 48.1	-1.5
X37A	comp=Z,10nm,0.7s			IAmb_Lg		20 12 47.7	
HHAR	**Hobbs**	**3.88**	**92**	Pn	Pn	20 11 58.2	+1.0
KSCO	**Kaye Shedlock'**	**3.98**	**311**	Pn	Pn	20 11 58.2	-0.5
MSTX	**Muleshoe**	**4.14**	**234**	Pn	Pn	20 11 58.4	-2.4
MSTX	comp=Z,12nm,0.8s			IAmb_Lg		20 13 13.4	
W39A	**Magazine**	**4.23**	**106**	Pn	Pn	20 12 03.5	+1.5
W39A	comp=Z,11nm,0.8s			IAmb_Lg		20 13 18.1	
S39A	**Bolivar**	**4.50**	**73**	Pn	Pn	20 12 06.2	+0.5
T25A	**Trinidad**	**4.59**	**280**		Pn	20 12 06.5	-0.7
MIAR	**Mount Ida**	**4.64**	**113**	Pn	Pn	20 12 08.3	+0.8
U40A	**Yellville**	**4.75**	**90**	Pn	Pn	20 12 09.3	+0.1
U40A	comp=Z,8.4nm,0.7s			IAmb_Lg		20 13 28.4	
X40A	**Basin Creek Fa**	**5.22**	**111**	Pn	Pn	20 12 14.1	-1.4
X40A	comp=Z,5.9nm,0.9s			IAmb_Lg		20 13 53.0	
MGMO	**Mountain Grove**	**5.24**	**81**	Pn	Pn	20 12 15.9	0.0
MGMO	comp=Z,5.7nm,0.8s			IAmb_Lg		20 13 46.9	
FCAR	**Ozark Folk Cen**	**5.39**	**94**	Pn	Pn	20 12 18.1	+0.3
FCAR	comp=Z,6.6nm,0.8s			IAmb_Lg		20 13 48.6	
W41B	**Gary Mavity, V**	**5.44**	**102**	Pn	Pn	20 12 19.1	+0.6
R40A	**Maddies Statio**	**5.46**	**69**		Pn	20 12 18.4	-0.5
JCT	**Junction City** comp=Z,6.4nm,0.7s	**6.05**	**189**	IAmb_Lg		20 14 25.7	
P40A	**Paris**	**6.10**	**58**	Pn	Pn	20 12 27.3	-0.3
CCM	**Cathedral Cave**	**6.18**	**73**	Pn	Pn	20 12 26.9	-1.9
CCM	comp=Z,6.4nm,0.7s			IAmb_Lg		20 14 23.9	
ISCO	**Idaho Springs**	**6.35**	**304**	Pn	Pn	20 12 28.8	-2.5
ANMO	**Albuquerque**	**6.46**	**259**	Pn	Pn	20 12 29.8	-3.0
PBMO	**Poplar Bluff** comp=Z,6.5nm,0.7s	**6.69**	**85**	IAmb_Lg		20 14 42.0	
FVM	**French Village** comp=Z,4.9nm,0.8s	**6.80**	**75**	IAmb_Lg		20 14 37.7	

TAP 24 20:17:52.0, 23°.50N×120°.32E, h8^{km}, ML3.7, 34C-24D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSL	**Shuilin Townsh** baz=289	**0.08**	**288**	⇓*i*P	Pg	20 17 54.8	+0.7
WSL	baz=289			*i* S	Sg	20 17 57.0	+1.4
CHY	**Chiayi** baz=90	**0.10**	**89**	⇓*i*P	Pg	20 17 55.4	+1.0
CHY	baz=90			S	Sg	20 17 58.0	+2.0
ICHU	**Yijhu** baz=194	**0.14**	**194**	⇑*i*P	Pg	20 17 55.8	+0.8
ICHU	baz=194			*e*S	Sg	20 17 58.2	+1.3
CHN2	**Minshiung** baz=76	**0.15**	**76**	⇑*i*P	Pg	20 17 56.5	+1.4
CHN2	baz=76			S	Sg	20 18 00.0	+2.7
WSF	**Szhu** baz=331	**0.17**	**329**	⇓*i*P	Pg	20 17 56.4	+1.0
WSF	baz=331			*i* S	Sg	20 18 00.2	+2.5
CHN8	**Yiju** baz=210	**0.18**	**213**	⇑*i*P	Pg	20 17 56.7	+1.1
CHN8	baz=210			*i* S	Sg	20 18 00.9	+2.8
WTK	**Tuku** baz=20	**0.20**	**19**	⇑*i*P	Pg	20 17 57.1	+1.1
WTK	baz=20			*i* S	Sg	20 18 01.1	+2.2
TWK	**Hsinying** baz=143	**0.28**	**145**	⇓*i*P	Pb	20 17 58.9	-0.3
TWK	baz=143			S	Sb	20 18 04.0	-0.1
WDLH	**Douliu** baz=47	**0.28**	**47**	⇑*i*P	Pb	20 17 58.8	-0.4
WDLH	baz=47			S	Sb	20 18 04.0	-0.2
WGK	**Gukeng** baz=51	**0.29**	**50**	⇑*i*P	Pb	20 17 59.4	-0.1
WGK	baz=51			*e*S	Sb	20 18 05.2	+0.6
WMLT	**Mailiao** baz=345	**0.32**	**345**	P	Pg	20 17 59.1	+0.8
WMLT	baz=345			*e*S	Sb	20 18 04.8	-0.4
SNST	**Tainan City** baz=149	**0.32**	**149**	⇓*i*P	Pb	20 17 59.5	-0.5
SNST	baz=149			S	Sb	20 18 04.9	-0.4
SCLT	**Jiali** baz=198	**0.34**	**199**	⇑*i*P	Pb	20 17 59.9	-0.3
SCLT	baz=198			*e*S	Sb	20 18 06.7	+0.9
TPUB	**Ta-pu** baz=124	**0.35**	**124**	⇓*i*P	Pb	20 17 59.9	-0.5
TPUB	baz=124			S	Sb	20 18 05.8	-0.3
CHN1	**Nanshi** baz=148	**0.37**	**148**	⇓P	Pb	20 18 00.3	-0.4
CHN1	baz=148			*e*S	Sb	20 18 06.4	-0.2
WTCT	**Ta-ch'eng** baz=356	**0.37**	**355**	⇑P	Pb	20 18 00.0	-0.7
WTCT	baz=356			*e*S	Sb	20 18 06.4	-0.2
WTP	**Ta-pu** baz=132	**0.37**	**132**	⇓*i*P	Pb	20 18 00.4	-0.4
WTP	baz=132			*e*S	Sb	20 18 06.7	-0.1
WRL	**Guolierlin Hig** baz=8.0	**0.41**	**8**	⇑*i*P	Pb	20 18 00.8	-0.7
WRL	baz=8.0			*i* S	Sb	20 18 07.1	-0.7
CHN3	**Shinhua** baz=174	**0.42**	**174**	⇑*e*P	Pb	20 18 02.0	+0.3
CHN3	baz=174			*e*S	Sb	20 18 09.7	+1.6
ALS	**Alishan** baz=88	**0.45**	**88**	⇓P	Pb	20 18 02.2	-0.1
ALS	baz=88			*e*S	Sb	20 18 09.6	+0.3
TAI1	**Yung-k'ang** baz=189	**0.46**	**190**	*e*P	Pb	20 18 02.5	+0.2
TAI1	baz=189			*e*S	Sb	20 18 11.0	+1.8
SHHT	**Tainan City** baz=176	**0.47**	**176**	*e*P	Pb	20 18 02.9	+0.4
SHHT	baz=176			*e*S	Sb	20 18 11.4	+1.7
SGST	**Jiashian** baz=148	**0.48**	**149**	⇓*e*P	Pg	20 18 01.6	+0.3
SGST	baz=148			*e*S	Sb	20 18 09.6	-0.3
WJS	**Zhushan** baz=49	**0.50**	**49**	⇑P	Pb	20 18 02.7	-0.3
WJS	baz=49			*e*S	Sb	20 18 10.7	+0.3
WNT	**Mingjian** baz=42	**0.51**	**42**	⇑P	Pb	20 18 03.1	-0.1
WNT	baz=42			*e*S	Sb	20 18 11.3	+0.6
TAI	**Tainan** baz=192	**0.51**	**192**	*e*P	Pb	20 18 03.8	+0.6
WYL	**Yuanlin Townsh** baz=28	**0.52**	**28**	⇑*e*P	Pb	20 18 03.2	-0.2
WYL	baz=28			*e*S	Sb	20 18 11.7	+0.6
STYT	**Tauyuan** baz=129	**0.52**	**129**	⇓*e*P	Pb	20 18 03.1	-0.3
STYT	baz=129			*e*S	Sb	20 18 11.5	+0.3
WNT1	**Nantou City** baz=39	**0.53**	**39**	⇑*e*P	Pb	20 18 03.4	-0.1
WNT1	baz=39			*e*S	Sb	20 18 11.7	+0.4
STYH	**Taoyuan** baz=126	**0.53**	**127**	⇓P	Pb	20 18 03.1	-0.5
STYH	baz=126			*e*S	Sb	20 18 11.4	0.0
YUS	**Yu-Shan** baz=91	**0.58**	**91**	⇓*e*P	Pb	20 18 04.7	0.0
YUS	baz=91			*e*S	Sb	20 18 13.8	+0.5
SLGT	**Liugui** baz=149	**0.59**	**149**	*e*P	Pb	20 18 04.8	+0.4
SLGT	baz=149			*e*S	Sb	20 18 13.6	+0.6
WCHH	**Zhanghua** baz=21	**0.62**	**21**	⇑*i*P	Pb	20 18 05.0	-0.1
WCHH	baz=21			*e*S	Sb	20 18 14.3	+0.3
SCST	**Cishan** baz=165	**0.63**	**165**	*e*P	Pn	20 18 06.3	-0.9
SCST	baz=165			*e*S	Sn	20 18 16.7	-0.8
TYC	**Yuchr** baz=51	**0.64**	**51**	*e*P	Pb	20 18 05.3	-0.1
TYC	baz=51			*e*S	Sb	20 18 15.2	+0.7
WDGT	**Dungji** baz=248	**0.65**	**249**	⇓P	Pg	20 18 04.7	+0.2
WDGT	baz=248			*e*S	Sg	20 18 13.4	+0.5
WWF	**Wufeng** baz=33	**0.65**	**33**	⇑*e*P	Pb	20 18 05.5	0.0
WWF	baz=33			*e*S	Sb	20 18 15.5	+0.8
SSLB	**Suanglung** baz=64	**0.65**	**64**	⇑P	Pb	20 18 05.3	-0.4
SSLB	baz=64			*e*S	Sb	20 18 14.8	-0.2
SMLT	**Sun Moon Lake** baz=55	**0.66**	**54**	⇑P	Pb	20 18 05.7	-0.1
SMLT	baz=55			*e*S	Sb	20 18 15.7	+0.5
TWM1	**Shoushan** baz=171	**0.68**	**172**	*e*P	Pn	20 18 07.7	-0.1
PHUB	**P'eng-hu** baz=271	**0.68**	**272**	⇓*i*P	Pg	20 18 04.9	-0.2
PHUB	baz=271			*e*S	Sg	20 18 14.4	+0.4
PNG	**Penghu** baz=276	**0.70**	**276**	⇓*i*P	Pg	20 18 05.3	-0.1
PNG	baz=276			*e*S	Sg	20 18 15.1	+0.5
ELDTW	**Lidau** baz=115	**0.71**	**115**	⇓P	Pb	20 18 06.6	-0.2
ELDTW	baz=115			*e*S	Sb	20 18 17.3	+0.6
TCU	**Taichung** baz=28	**0.73**	**27**	⇑*e*P	Pb	20 18 06.9	0.0
TCU	baz=28			*e*S	Sb	20 18 17.8	+0.7
DPDB	**Guoxing** baz=46	**0.78**	**46**	⇑*e*P	Pb	20 18 07.3	-0.4
DPDB	baz=46			*e*S	Sb	20 18 18.6	+0.1
WCS	**Beigang Elemen** baz=44	**0.78**	**44**	⇑*e*P	Pg	20 18 07.3	+0.2
WCS	baz=44			*e*S	Sb	20 18 19.5	+0.9
WPL	**Puli Township** baz=48	**0.78**	**49**	*e*P	Pg	20 18 07.3	+0.3
WPL	baz=48			*e*S	Sb	20 18 18.6	0.0
SGLT	**Jiouru** baz=168	**0.78**	**168**	*e*P	Pb	20 18 08.2	+0.3
SGLT	baz=168			*e*S	Sn	20 18 22.9	+1.6
VWDT	**VWDT** baz=71	**0.80**	**71**	⇑*e*P	Pb	20 18 08.3	+0.2
VWDT	baz=71			*e*S	Sb	20 18 19.6	+0.5
SSD	**Sandimen** baz=158	**0.80**	**159**	*e*P	Pb	20 18 08.7	+0.5
SSD	baz=158			*e*S	Sn	20 18 20.5	-1.2
TSPT	**Pingtung City** baz=169	**0.83**	**168**	*e*P	Pn	20 18 09.9	-0.1
TSPT	baz=169			*e*S	Sn	20 18 24.4	+2.0
TSMG	**Majia** baz=159	**0.84**	**159**	*e*P	Pb	20 18 09.1	+0.2
TSMG	baz=159			*e*S	Sb	20 18 21.1	+0.7
WSSB	**Gushan** baz=183	**0.85**	**183**	*e*P	Pn	20 18 10.1	-0.1
WSSB	baz=183			*e*S	Sn	20 18 24.4	+1.5
VCHM	**Qimei** baz=251	**0.86**	**251**	*e*P	Pg	20 18 08.2	-0.4
VCHM	baz=251			*e*S	Sg	20 18 20.0	+0.2
WUSB	**Renai** baz=56	**0.89**	**56**	⇑*e*P	Pg	20 18 09.1	+0.1
WUSB	baz=56			*e*S	Sg	20 18 21.1	+0.6
WDJ	**Dajia District** baz=19	**0.90**	**19**	*e*P	Pb	20 18 10.0	+0.2
WDJ	baz=19			*e*S	Sn	20 18 23.2	-0.9
YULB	**Yu-li** baz=96	**0.91**	**96**	⇓*e*P	Pb	20 18 09.8	-0.1
YULB	baz=96			*e*S	Sb	20 18 22.1	-0.1
OWD	**Renai** baz=60	**0.91**	**60**	⇑*e*P	Pg	20 18 09.7	+0.2
OWD	baz=60			*e*S	Sb	20 18 22.0	-0.5
TWF1	**Yuli** baz=99	**0.91**	**99**	⇓*e*P	Pb	20 18 10.1	0.0
TWF1	baz=99			*e*S	Sb	20 18 22.9	+0.5
ECS	**Chishang** baz=116	**0.92**	**115**	*e*P	Pb	20 18 10.6	+0.3
ECS	baz=116			*e*S	Sn	20 18 23.9	-0.8
EHY	**Hungye** baz=89	**0.93**	**89**	*e*P	Pb	20 18 10.6	+0.3
EHY	baz=89			*e*S	Sb	20 18 23.5	+0.8
MASBT	**Mashibuluo** baz=162	**0.93**	**162**	*e*P	Pb	20 18 10.7	+0.4
MASBT	baz=162			*e*S	Sn	20 18 23.9	-0.9
EYUL	**Yuli** baz=99	**0.93**	**99**	*e*P	Pb	20 18 10.4	0.0
EYUL	baz=99			*e*S	Sb	20 18 23.1	+0.1
TWQ1	**Liyutan** baz=26	**0.95**	**26**	⇑*e*P	Pb	20 18 10.8	+0.2
TWQ1	baz=26			*e*S	Sb	20 18 24.3	+1.0
FULB	**Fuli** baz=108	**0.95**	**108**	⇓*e*P	Pn	20 18 11.3	-0.3
FULB	baz=108			*e*S	Sn	20 18 25.1	-0.3
LONT	**Longtian** baz=128	**0.95**	**128**	*e*P	Pb	20 18 10.9	+0.2
LONT	baz=128			*e*S	Sb	20 18 24.4	+0.9
CHGB	**Renai** baz=54	**0.97**	**54**	⇑*e*P	Pg	20 18 10.6	0.0
CHGB	baz=54			*e*S	Sb	20 18 24.3	+0.1
TWG	**Pinlang** baz=134	**0.97**	**134**	⇓*e*P	Pb	20 18 11.3	+0.3
TWG	baz=134			*e*S	Sn	20 18 25.5	-0.4
WHP	**Taichung City** baz=37	**0.97**	**36**	*e*P	Pg	20 18 10.8	+0.2
WHP	baz=37			*e*S	Sn	20 18 25.6	-0.4
TWGBT	**Beinan** baz=134	**0.97**	**134**	⇓*e*P	Pb	20 18 11.3	+0.2
TWGBT	baz=134			*e*S	Sn	20 18 25.5	-0.5
NSY	**Sanyi** baz=24	**1.00**	**24**	⇑*e*P	Pb	20 18 12.0	+0.4
NSY	baz=24			*e*S	Sn	20 18 26.4	-0.3
HGSD	**Ruisui** baz=90	**1.02**	**90**	*e*P	Pn	20 18 12.9	+0.4
HGSD	baz=90			*e*S	Sn	20 18 27.2	+0.2
SSPT	**Xinbi** baz=167	**1.03**	**167**	*e*P	Pb	20 18 12.4	+0.3
SSPT	baz=167			*e*S	Sn	20 18 28.7	+1.3
EGFH	**Guangfu** baz=80	**1.03**	**80**	*e*P	Pb	20 18 12.2	+0.1
EGFH	baz=80			*e*S	Sb	20 18 25.9	+0.1
CHKT	**Chengkung** baz=112	**1.04**	**112**	*e*P	Pn	20 18 13.2	+0.3
CHKT	baz=112			*e*S	Sn	20 18 29.3	+1.6
EDH	**Donghe** baz=120	**1.05**	**120**	⇓*e*P	Pn	20 18 12.8	-0.2
EDH	baz=120			*e*S	Sn	20 18 28.1	+0.3
TTN	**Taitung** baz=134	**1.06**	**134**	*e*P	Pn	20 18 13.7	+0.5
ECL	**Taimali** baz=146	**1.07**	**147**	*e*P	Pn	20 18 13.1	-0.1
ECL	baz=146			*e*S	Sn	20 18 28.3	-0.1
ESL	**Shilin** baz=73	**1.07**	**73**	*e*P	Pb	20 18 12.7	-0.1
ESL	baz=73			*e*S	Sb	20 18 26.8	-0.1
TDCB	**Techi** baz=46	**1.08**	**46**	⇑*e*P	Pg	20 18 12.4	-0.3
TDCB	baz=46			*e*S	Sb	20 18 27.4	+0.1
WHF	**Hehuan Shan** baz=54	**1.08**	**53**	*e*P	Pg	20 18 13.0	+0.2
WHF	baz=54			*e*S	Sb	20 18 28.3	+0.6
TWT	**Tachien** baz=46	**1.09**	**46**	*e*P	Pg	20 18 12.5	-0.4
TWT	baz=46			*e*S	Sn	20 18 29.8	+0.7
NMLH	**Miaoli** baz=23	**1.12**	**23**	*e*P	Pb	20 18 13.6	0.0
NMLH	baz=23			*e*S	Sn	20 18 29.4	-0.2
FUSS	**Fushou** baz=49	**1.13**	**48**	*e*P	Pg	20 18 13.3	-0.5
FUSS	baz=49			*e*S	Sn	20 18 30.3	+0.1
WLCH	**Liuqiu** baz=177	**1.14**	**177**	*e*P	Pn	20 18 15.0	+0.8
SCZT	**Fangliau** baz=166	**1.15**	**166**	*e*P	Pg	20 18 14.0	-0.1
SCZT	baz=166			*e*S	Sn	20 18 30.4	+0.1
ETM	**Tongmen** baz=67	**1.18**	**66**	*e*P	Pn	20 18 14.8	0.0
ETM	baz=67			*e*S	Sb	20 18 30.3	+0.3
EAST	**Anshuo** baz=156	**1.21**	**156**	*e*P	Pg	20 18 15.2	0.0
EAST	baz=156			*e*S	Sn	20 18 33.1	+1.2
TEYL	**Yanliau Villag** baz=71	**1.23**	**72**	*e*P	Pg	20 18 16.7	+1.0
TEYL	baz=71			*e*S	Sn	20 18 33.4	+1.1
TAW	**Tawu** baz=154	**1.25**	**155**	*e*P	Pg	20 18 16.1	+0.1
TAW	baz=154			*e*S	Sn	20 18 32.6	-0.2
TAWH	**Dawu Township** baz=155	**1.27**	**155**	*e*P	Pg	20 18 16.2	-0.1
TAWH	baz=155			*e*S	Sn	20 18 33.9	+0.8
ETLH	**Xiulin Townshi** baz=56	**1.28**	**56**	*e*P	Pn	20 18 15.8	-0.5
ETLH	baz=56			*e*S	Sn	20 18 34.0	+0.3
NJN	**Zhunan** baz=23	**1.29**	**23**	*e*P	Pn	20 18 16.3	+0.1
NJN	baz=23			*e*S	Sn	20 18 34.6	+0.9
NSTT	**Nanjuang** baz=29	**1.29**	**29**	*e*P	Pn	20 18 15.8	-0.6
NSTT	baz=29			*e*S	Sg	20 18 33.6	0.0
TWD	**Chiawan** baz=64	**1.31**	**63**	*e*P	Pg	20 18 17.0	-0.1
TWD	baz=64			*e*S	Sn	20 18 34.9	+0.7
LIOB	**Emei** baz=29	**1.31**	**29**	*e*P	Pn	20 18 16.1	-0.5
LIOB	baz=29			*e*S	Sg	20 18 34.2	+0.1
LDUT	**Ludao** baz=128	**1.34**	**127**	*e*P	Pn	20 18 16.9	-0.1
LDUT	baz=128			*e*S	Sg	20 18 36.7	+1.6
NNSB	**Datong** baz=46	**1.35**	**46**	*e*P	Pn	20 18 16.8	-0.4
NNSB	baz=46			*e*S	Sn	20 18 36.0	+0.6
NFF	**Wufeng Townshi** baz=33	**1.35**	**33**	⇑*e*P	Pn	20 18 16.6	-0.6
NFF	baz=33			*e*S	Sb	20 18 34.6	-0.3
NNS	**Nan Shan** baz=46	**1.35**	**46**	*e*P	Pn	20 18 17.2	0.0
NNS	baz=46			*e*S	Sn	20 18 36.5	+1.1
SLIU	**Shizi** baz=161	**1.35**	**161**	*e*P	Pb	20 18 17.5	0.0
SLIU	baz=161			*e*S	Sg	20 18 37.1	+1.7
NACB	**Ninganchiao** baz=60	**1.35**	**60**	⇑*e*P	Pn	20 18 17.1	-0.1
NACB	baz=60			*e*S	Sg	20 18 35.5	0.0
NSK	**Sanguang** baz=39	**1.51**	**39**	⇑*e*P	Pn	20 18 19.3	-0.1
NSK	baz=39			*e*S	Sn	20 18 39.2	-0.2
LATG	**Datong** baz=47	**1.52**	**47**	⇑*e*P	Pn	20 18 19.4	-0.1
LATG	baz=47			*e*S	Sb	20 18 40.0	+0.2
YHNB	**Yeheng** baz=40	**1.52**	**39**	⇑*e*P	Pn	20 18 19.3	-0.2
YHNB	baz=40			*e*S	Sb	20 18 40.0	+0.1
HEN	**Hengchun** baz=165	**1.53**	**165**	*e*P	Pn	20 18 20.0	+0.3
NDT	**Datong Townshi** baz=45	**1.55**	**45**	*e*P	Pn	20 18 20.0	+0.1
NDT	baz=45			*e*S	Sn	20 18 40.2	-0.1
ENTT	**Nioudou** baz=45	**1.61**	**45**	*e*P	Pn	20 18 21.2	+0.5
ENTT	baz=45			*e*S	Sb	20 18 42.8	+0.2
EWUT	**Wuta** baz=55	**1.64**	**54**	*e*P	Pb	20 18 22.0	-0.5
EWUT	baz=55			*e*S	Sg	20 18 44.6	0.0
NHW	**Xinwu Township** baz=24	**1.65**	**24**	*e*P	Pn	20 18 21.1	-0.1
NWLT	**Wulai** baz=40	**1.67**	**40**	*e*P	Pn	20 18 21.5	-0.1
NWLT	baz=40			*e*S	Sb	20 18 44.1	-0.2
VWUC	**VWUC** baz=332	**1.69**	**332**	*e*P	Pn	20 18 22.0	+0.3
VWUC	baz=332			*e*S	Sn	20 18 43.6	+0.1

NDS	Dongshan	1.71	48	eP	Pn	20 18 22.7	+0.6
	baz=49						
FUSB	Fushanzhiwuyua	1.71	42	⇑eP	Pn	20 18 22.4	+0.2
	baz=43						
FUSB				eS	Sb	20 18 45.3	-0.2
	baz=43						
TWE	Neicheng	1.74	45	eP	Pb	20 18 23.3	-0.8
	baz=46						
TWC	Suao	1.79	51	eP	Pn	20 18 23.4	+0.2
	baz=52						
TWA	Mucha	1.88	38	eP	Pn	20 18 24.4	0.0
	baz=38						
TWA				eS	Sn	20 18 49.0	+0.7
	baz=38						
PTMZ	Houxiangcun	1.89	325	eP	Pn	20 18 23.2	-1.3
	baz=325						
PTMZ				eS	Sb	20 18 49.6	-0.7
	baz=325						
TWS1	Kuangyinshan	1.89	32	eP	Pn	20 18 24.6	+0.1
	baz=32						
TWS1				eS	Sn	20 18 49.3	+0.8
	baz=32						
KNM	Kinmen	1.95	298	eP	Pb	20 18 26.6	-1.1
	baz=296						
KNM				eS	Sg	20 18 55.5	+0.8
	baz=296						
YM01	YM01	2.00	35	eP	Pn	20 18 25.8	-0.3
	baz=35						
YM01				eS	Sn	20 18 51.3	-0.1
	baz=35						
KNMB	Chin-men Tao	2.01	299	eP	Pn	20 18 25.3	-0.9
	baz=299						
TIPB	Shuangxi	2.02	43	eP	Pn	20 18 26.6	+0.3
	baz=43						
TIPB				eS	Sb	20 18 53.2	-1.0
	baz=43						
WFSB	Wu-fen Shan	2.06	40	eP	Pn	20 18 26.9	0.0
	baz=40						
WFSB				eS	Sn	20 18 53.9	+1.1
	baz=40						
SXI1	Grass Mountain	2.13	42	eP	Pn	20 18 27.9	-0.1
	baz=42						
TWB1	Santiao Chiao	2.15	45	eP	Pn	20 18 28.8	+0.7
	baz=46						
ZPLA	Ao Xicun	2.39	281	⇓eP	Pn	20 18 30.2	-1.2
	baz=280						
ZPLA				eS	Sn	20 19 00.5	-0.4
	baz=280						
AXDP	Jialang	2.56	304	eP	Pn	20 18 32.4	-1.3
	baz=303						
MATB	Ma-tsu	2.67	353	eP	Pn	20 18 34.1	-1.1
	baz=352						

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*UCR **24** 20:17:58.9±1.4, 10°.00N×83°.76W, h1km, MW4.0*
*INET **24** 20:17:59.0±1.7, 9°.94N×83°.70W, h2km±20km, MW3.4*
*UPA **24** 20:18:00.5±2.1, 10°.08N×83°.79W, h8km±13km, MW3.9*
ISC 24 20:17:58.8±0.9, **10°.01N**±0°.03×**83°.75W**±0°.02, **h6**km±5km, **n46**, σ**0s.84**/57, **3C-8D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVTR	Volcan Turrial	0.02	319	⇓eP	Pg	20 17 60.0	-0.4
VTUC	Crater, Volcan	0.02	320	⇓eP	Pg	20 17 59.9	-0.5
VTUN	Crater Central	0.02	315	⇓eP	Pg	20 17 60.0	-0.4
VTCV	VTCV, Calle Va	0.03	139	⇑eP	Pg	20 18 00.8	+0.6
VTRT	Volcan Turrial	0.05	266	⇓eP	Pg	20 18 00.7	+0.2
RAFA	San Farael, Vo	0.08	234	⇓eP	Pg	20 18 01.4	+0.6
RAFA				eS	Sg	20 18 03.4	+1.1
OCM	Ochomogo	0.24	243	⇓eP	Pg	20 18 04.4	+0.8
OCM				eS	Sg	20 18 09.1	+2.3
RIMA	Rio Macho	0.26	206	⇓eP	Pg	20 18 05.1	+1.1
RIMA				eS	Sg	20 18 09.6	+2.0
RIMA	Rio Macho	0.26	206	eP	Pg	20 18 05.1	+1.1
RIFO	Rio Frio, Sara	0.35	331	eP	Pg	20 18 06.8	+1.1
HDC3	Heredia 3	0.36	270	eP	Pb	20 18 07.0	-0.8
HDC3	Heredia 3	0.36	270	eP	Pb	20 18 07.0	-0.8
HDC	Heredia	0.36	269	eS	Sb	20 18 13.2	-0.6
HDC	Heredia	0.36	269	i P	Pb	20 18 07.0	-0.8
LCR2	La Lucha 2	0.37	224	⇓eP	Pb	20 18 06.7	-1.2
BATAN	Batan	0.38	76	eP	Pb	20 18 08.2	+0.3
CDM	Cerro de Muert	0.45	182	⇑eP	Pb	20 18 08.7	-0.7
CDM				eS	Sb	20 18 15.9	-0.7
CDM	Cerro de Muert	0.45	182	eP	Pb	20 18 08.5	-0.9
CDM				eS	Sb	20 18 16.2	-0.4
PEZE	Perez Zeledon,	0.62	174	eP	Pb	20 18 11.4	-0.8
PEZE	Perez Zeledon,	0.62	174	eP	Pb	20 18 11.3	-0.8
EDDO	Dominical	0.76	189	eP	Pn	20 18 15.2	-0.9
SRBA	San Rafael, Bu	0.86	154	⇑eP	Pg	20 18 15.4	+0.1
SRBA				eS	Sb	20 18 27.6	-0.4
DRK0	Durika	0.89	146	eP	Pg	20 18 16.1	+0.2
DRK0	Durika	0.89	146	i P	Pg	20 18 16.1	+0.2
DRK0				i S	Sb	20 18 28.9	-0.1
DRK0	Durika	0.89	146	eP	Pg	20 18 16.0	+0.2
JACO	JACO, Garabito	0.96	249	eP	Pb	20 18 17.4	-0.6
LAFE	Finca La Fe, P	1.16	260	eP	Pn	20 18 21.5	-0.2
LAFE	Finca La Fe, P	1.16	260	eP	Pn	20 18 21.3	-0.4
JTS	Las Juntas de	1.22	284	eP	Pg	20 18 21.5	-0.7
JTS	Las Juntas de	1.22	284	i P	Pg	20 18 21.6	-0.7
JTS				i S	Sb	20 18 38.1	-0.3
RIOS	Rincon, Osa	1.32	170	eP	Pn	20 18 23.6	-0.2
CUI	Cuipilapa	1.54	295	eP	Pb	20 18 27.4	-0.4
VMAR	Armenia, Volca	1.57	301	eP	Pn	20 18 27.5	+0.1
BRU2	Volcan	1.59	139	i P	Pg	20 18 29.8	+0.4
BRU2				eS	Sn	20 18 47.5	-1.3
BC3P	Paso Ancho	1.63	136	eP	Pn	20 18 26.0	-2.3
PIRO	Carate, Puerto	1.64	166	eP	Pg	20 18 30.2	-0.1
ORTG	Ortega, Santa	1.72	282	eP	Pn	20 18 29.9	+0.4
ORTG	Ortega, Santa	1.72	282	eP	Pn	20 18 29.7	+0.3
BCO2	Palmira	1.75	137	i P	Pb	20 18 32.2	+0.7
BCO2				eS	Sg	20 18 55.4	+0.1
PTAR3	Potrerillos Ar	1.79	136	eP	Pg	20 18 33.4	+0.2
PTAR3				i S	Sn	20 18 54.7	+1.0
PSOM3	Paja de Sombre	1.92	133	eP	Pb	20 18 34.6	+0.2
HZTE	Horizontes, Gu	1.95	291	eP	Pn	20 18 33.6	+1.1
HZTE	Horizontes, Gu	1.95	291	eP	Pb	20 18 34.0	-0.9
PTPM	Petroterminale	1.98	154	eP	Pb	20 18 35.0	-0.4
DVD	David	2.02	141	eP	Pb	20 18 36.5	+0.6
ACON	Acoyapa	2.40	324	eP	Pn	20 18 39.2	+0.4

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*IDC **24** 20:39:18.2±1.5, 7°.61S×126°.11E, h0km, mb3.9/2, mbtmp4.1/5, ML3.8/3, MS3.1/4, Error ellipse: s-maj=41.9km s-min=24.8km az=88.0*
*DJA **24** 20:39:21.7±0.4, 8°S±4°×12°6E±°, h10km, M4.0/9, mb4.2/5, MLv3.9/9*
*NEIC **24** 20:39:31.7±3.0, 8°.7S±0°.1×125°.6E±0°.1, h163km±10km, mb4.1/6, Error ellipse: s-maj=23.4km s-min=12.0km az=209.0*
ISC 24 20:39:29.4±1.0, **8°.4S**±0°.1×**125°.64E**±0°.10, **h150**km, **n33**, σ**2s.60**/30, **mb4.0**/5, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.93	225		Pn	20 40 05.7	+1.9
SOEI	Soe	1.93	225	P	Pn	20 40 05.7	+1.9
BATI	Baumata	2.67	227	Pn	Pn	20 40 15.5	+2.8
	15nm,0.3s,baz=95,slow=2.1,SNR=23						
BATI				Sn	Sn	20 40 56.8	+11
	6.9nm,0.3s,baz=14,slow=21,SNR=6.8						
BATI				LR	LR	20 41 46.8	
	comp=Z,269nm,20.4s,baz=222,slow=42						
	56nm,0.4s						
BATI	Baumata	2.67	227	P	Pn	20 40 15.3	+2.6
MMRI	Maumere	3.38	265		Pn	20 40 19.0	-2.6
MMRI	Maumere	3.38	265	P	Pn	20 40 18.7	-2.9
EDFI	Ende, Flores	3.93	264	P	Pn	20 40 26.9	-1.9
BBSI	Bau Bau	4.18	313	P	Pn	20 40 21.6	-10
BKSI	Bulukumba	6.26	299	P	Pn	20 40 51.8	-7.8
	0.1nm23nm,0.9s						
BNSI	Bone	6.77	305	P	Pn	20 40 58.6	-7.8
	0.1nm15nm,0.6s						
MTN	Manton Dam	6.99	130		Pn	20 41 09.1	-0.3
MTN				Sn	Sn	20 42 24.8	-3.0
SPSI	Sidrap Palu	7.30	307	P	Pn	20 41 06.0	-7.4
	0.1nm14nm,0.8s						
KNRA	Kununurra	7.88	158		Pn	20 41 19.5	-1.6
KNRA				Sn	Sn	20 42 51.3	+2.3
WB0	Warramunga Arr	14.15	144	P	Pn	20 42 43.1	-0.1
WRAB	Tennant Creek	14.25	145	P	Pn	20 42 44.7	+0.1
WRA	Warramunga Arr	14.26	145	Pn	Pn	20 42 44.9	+0.3
	0.3nm,0.3s,baz=317,slow=13,SNR=14						
WRA				Sn	Sn	20 45 21.5	-1.3
	0.3nm,0.3s,baz=322,slow=25,SNR=7.3						
	3.4nm,1.0s						
WRA	Warramunga Arr	14.26	145	P	Pn	20 42 44.1	-0.4
WB2	Warramunga Arr	14.26	145	P	Pn	20 42 44.2	-0.5
AS31	Alice Springs	17.15	153	P	P	20 43 17.6	-1.8
ASAR	Alice Springs	17.15	153	P	Pn	20 43 26.3	+6.2
	0.6nm,0.3s,baz=338,slow=12,SNR=71						
ASAR				S	Sn	20 46 33.6	+1.6
	1.5nm,0.8s,baz=320,slow=20,SNR=7.5						
	8.1nm,0.6s						
ASAR	Alice Springs	17.15	153	P	P	20 43 18.8	-0.6
COEN	Coen	18.07	109	P	Pn	20 43 31.2	0.0
COEN				IAmb	IAmb	20 43 47.1	
	comp=Z,19nm,1.3s						
MORW	Morawa	22.48	202	P	P	20 44 13.5	-2.8
CTA	Charters Tower	23.09	122	LR	LR	20 54 47.8	
	comp=Z,57nm,19.0s,baz=314,slow=40						
JCJ	Chichijima	38.73	24	LR	LR	20 59 29.5	
	comp=Z,28nm,21.3s,baz=112,slow=32						
SONM	Songino Array	58.50	345	LR	LR	21 18 02.1	
	comp=Z,13nm,18.7s,baz=161,slow=40						
MK31	Makanchi Array	67.09	329	P	P	20 50 09.5	+2.8
MK31				IAmb	IAmb	20 50 20.9	
	comp=Z,2.8nm,1.1s						
MKAR	Makanchi Array	67.09	329	P	P	20 50 11.3	+4.6
	comp=Z,1.2nm,0.8s,baz=114,slow=7.5,SNR=11						
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	67.09	329	P	P	20 50 09.8	+3.2
ZAA0	Zalesovo Array	70.98	336	P	P	20 50 33.0	+2.6
ZAA0				IAmb	IAmb	20 50 35.5	
	comp=Z,3.6nm,1.2s						
ZALV	Zalesovo Beam	70.98	336	P	P	20 50 33.7	+3.3
	comp=Z,0.3nm,0.3s,baz=134,slow=4.2,SNR=3.9						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	70.98	336	P	P	20 50 32.3	+1.9
VNDA	Vanda	71.65	172	P	P	20 50 31.1	-3.1
VNDA				IAmb	IAmb	20 50 43.1	
	comp=Z,9.0nm,1.6s						

KRSC 24 20:46:24.9±2.1, **52°.68N**×**169°.59E**, **h30**km±29km, **ML4.1**, **South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	5.81	278	eP	Pn	20 47 53.2	+4.3
SPN				eS	Sn	20 48 59.6	+5.2
TUMR	Tumrok	6.15	299	eP	Pn	20 47 57.1	+3.3
SDLR	Sedlovina	6.49	280	eP	Pn	20 48 03.4	+4.9
UGLR	Uglovaya	6.53	279	eP	Pn	20 48 03.7	+4.8
SMAR	Somma	6.54	279	eP	Pn	20 48 04.3	+5.1
AVH	Avacha	6.58	279	eP	Pn	20 48 04.7	+5.1
KRX	Arik	6.64	280	eP	Pn	20 48 05.1	+4.6
KOK	Koryaka	6.64	280	eP	Pn	20 48 05.1	+4.6
RUS	Russkaya	6.76	272	eP	Pn	20 48 06.6	+4.6
MTVR	Mutnovka	6.95	273	eP	Pn	20 48 10.0	+5.2
MTVR				eS	Sn	20 49 28.9	+6.0
GRL	Gorelyy	7.01	274	eP	Pn	20 48 11.9	+6.3
GNL	Ganaly	7.07	283	eP	Pn	20 48 12.8	+6.4
KDTR	Khodutka, Kamc	7.12	268	eP	Pn	20 48 11.9	+4.9
KDTR				eS	Sn	20 49 31.6	+4.8
ASAK	Asacha	7.14	272	eP	Pn	20 48 13.2	+5.9

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*IDC **24** 21:01:38.9±6.1, 36°.29N×71°.27E, h122km±54km, mb3.3/6, mbtmp3.7/9, Error ellipse: s-maj=45.4km s-min=25.7km az=31.0*
*NNC **24** 21:01:50.4±2.9, 37°.09N×71°.30E, h188km±32km, mb2.7, mpv3.6, Error ellipse: s-maj=33.1km s-min=10.7km az=34.0*
ISC 24 21:01:37.2±0.9, **36°.31N**±0°.08×**71°.22E**±0°.10, **h100**km, **n23**, σ**3s.05**/28, **mb3.4**/5, **2C-4D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.81	356	⇓P	Pn	21 03 18.3	+3.9
	3.1nm,0.3s,baz=174,slow=12,SNR=108						
KK31				S	Sn	21 04 27.9	-2.5
	3.7nm,0.4s,baz=182,slow=21,SNR=10						
AAK	Ala-Archa	6.81	21	P	Pn	21 03 16.5	+2.0
	2.0nm,0.4s,baz=210,slow=11,SNR=6.2						
AAK				S	Sn	21 04 27.6	-3.0
	1.9nm,0.3s,baz=158,slow=23,SNR=8.8						
CHMS	Chumysh	7.21	21	⇓P	Pn	21 03 23.0	+3.1
	1.4nm,0.3s						
TKM2	Tokmak 2	7.42	26	⇓P	Pn	21 03 26.8	+4.0
	2.5nm,0.6s						
MDOK	Medeo	8.19	31	⇓P	Pn	21 03 37.0	+3.8
	1.8nm,0.8s						
DANN	Dangsing	13.24	123	eP	P	21 04 48.5	+0.9
	5.3nm,0.2s						
DANN				eS	Sn	21 07 03.3	-3.9
	9.5nm,0.5s						
MK31	Makanchi Array	13.34	35	P	Pn	21 04 45.4	+3.0
	0.3nm,0.3s,baz=213,slow=12,SNR=6.1						
MKAR	Makanchi Array	13.34	35	P	Pn	21 04 43.6	+1.1
	0.2nm,0.5s,baz=217,slow=10,SNR=1.9						
GKN	Gorkha	14.05	122	eP	P	21 04 58.0	+1.4
	5.8nm,0.3s						
GKN				eS	Sn	21 07 22.0	-4.8
	8.9nm,0.5s						
DMN	Daman	14.62	122	eP	P	21 05 05.7	+2.7
PKIN	Phulchoki	14.84	122	eP	P	21 05 08.6	+3.2
	12nm,0.5s						
PKI	Pulchoki	14.86	122	eP	P	21 05 09.1	+3.5
	8.6nm,0.5s						
AB31	Akbulak array	15.33	331	P	Pn	21 05 08.7	+0.8
	0.7nm,0.5s,baz=142,slow=14,SNR=22						
AB31				⇑S	Sn	21 07 51.5	-5.7
	0.7nm,0.7s,baz=160,slow=23,SNR=3.0						
JIRN	Jiri	15.34	120	eP	P	21 05 14.5	+3.4
	18nm,0.4s						
RAMN	Ramite	16.07	121	eP	P	21 05 24.1	+5.1
	4.2nm,0.3s						
AKTO	Aktyubinsk	17.03	330	P	Pn	21 05 30.4	+1.5
	2.0nm,0.4s,baz=132,slow=10,SNR=7.3						
AKTO	Aktyubinsk	17.03	330	⇑P	Pn	21 05 30.2	+1.2
	1.6nm,0.5s						
ZALV	Zalesovo Beam	20.02	24	P	P	21 06 01.0	-0.7
	1.0nm,0.3s,baz=218,slow=9.6,SNR=5.1						
	1.0nm,0.3s						
FINES	FINESS Array B	37.74	326	P	P	21 08 42.5	-0.3
	1.8nm,1.1s,baz=116,slow=9.7,SNR=1.6						
	1.8nm,1.1s						
SPITS	Spitsbergen Ar	47.72	347	P	P	21 10 03.3	+0.1
	5.7nm,0.9s,baz=123,slow=5.3,SNR=1.6						
	5.7nm,0.9s						
TORD	Torodi Ar. Bea	65.89	269	P	P	21 12 11.8	-0.8
	0.6nm,1.1s,baz=46,slow=5.7,SNR=1.6						
	0.6nm,1.1s						
WRA	Warramunga Arr	81.74	122	P	P	21 13 43.9	-1.0
	0.1nm,0.4s,baz=323,slow=5.1,SNR=1.4						
	0.1nm,0.4s						
ASAR	Alice Springs	84.00	125	P	P	21 13 55.7	-0.9
	0.3nm,0.7s,baz=320,slow=5.4,SNR=4.3						
	0.3nm,0.7s						

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*NEIC **24** 21:03:17.6±1.6, 0°.47N±0°.07×79°.78W±0°.06, h10km±1km, mb4.6/61, Error ellipse: s-maj=12.0km s-min=9.1km az=200.0*
*IGQ **24** 21:03:18±0.4, 0°N±3°×8°0W±°, h21km*
*IDC **24** 21:03:24.4±1.9, 0°.50N×79°.68W, h70km±18km, mb3.9/15, mbtmp4.2/20, MS3.7/42, Error ellipse: s-maj=19.2km s-min=12.3km az=57.0*
*VAO **24** 21:03:32.5±0.3, 0°.51N×77°.99W, h10km, mb4.8*
ISC 24 21:03:18.1±0.3, **0°.51N**±0°.03×**79°.84W**±0°.03, **h17**km, **n283**, σ**1s.88**/247, **mb4.6**/40, **MS3.7**/40, **1D**, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AV21	Acelerografo,	0.33	63	P	Pn	21 03 27.0	-1.0
AV21				S	Sn	21 03 34.0	-0.4
AV18	Acelerografo,	0.41	119	P	Pb	21 03 28.0	+1.1
AMA1	Acelerografo,	0.43	15	P	Pn	21 03 29.0	-0.6
AMA1				S	Sn	21 03 37.0	-0.1
MAG1	Magdalena	0.58	174	P	Pg	21 03 30.0	+0.3
BV15	Puerto Quito-O	0.71	120	P	Pb	21 03 31.0	-1.0
JAMA	Jama	0.85	206	P	Pb	21 03 33.0	-1.5
FLF1	Flavio Alfaro-	0.86	180	P	Pb	21 03 35.0	+0.3
APR2	Miler	0.97	116	P	Pb	21 03 36.0	-0.5
ASDO	Santo Domingo	1.05	137	P	Pb	21 03 36.0	-1.9
CABP	Cabo Pasado	1.07	214	P	Pb	21 03 37.0	-1.2
PAC1	Pacto, Paraso	1.07	103	P	Pb	21 03 37.0	-1.3
APR1	Acelerografo,	1.34	114	P	Pn	21 03 42.0	-0.4
HPAL	Hacienda Las P	1.39	121	P	Pn	21 03 42.0	-1.0
PINO	Pino	1.40	118	P	Pn	21 03 42.0	-1.4
TERV	Terraza Guagua	1.41	119	P	Pn	21 03 43.0	-0.5
OTAV	Otavalo	1.41	101	Pn	Pn	21 03 43.6	+0.2
OTAV				Sn	Sn	21 04 01.3	-0.6
OTAV	Otavalo	1.41	101	⇓iP	Pn	21 03 43.7	+0.2
OTAV				eS	Sn	21 04 01.6	-0.3
OTAV	Otavalo	1.41	101	eP	Pn	21 03 43.7	+0.3
OTAV	Otavalo	1.41	101	P	Pn	21 03 43.0	-0.4
YANA	Yana	1.41	116	P	Pn	21 03 43.0	-0.5
GGPC	Guagua Pichinc	1.42	119	P	Pn	21 03 43.0	-0.6
JUA2	San Juan 2	1.43	120	P	Pn	21 03 43.0	-0.7
CUSE	Cuicocha Este	1.45	98	P	Pn	21 03 44.0	0.0
CUIC	Cuicocha-Domo	1.49	98	P	Pb	21 03 45.0	-0.6
ALIT	Ecuador-Imbabu	1.50	79	P	Pn	21 03 44.0	-0.4
CUSW	Cuicocha Oeste	1.50	99	P	Pn	21 03 45.0	+0.4
URCU	Urcuqui	1.58	93	P	Pn	21 03 45.0	-0.7
ILLI	Illinizas Sur	1.65	138	P	Pn	21 03 45.0	-1.7
AMNT	Manta-Manabi	1.70	212	P	Pn	21 03 46.0	-1.0
TUMC	Tumaco	1.71	40		Pb	21 03 48.1	-1.0
TUMC	Tumaco	1.71	40	eP	Pb	21 03 48.4	-0.7
TUMC	Tumaco	1.71	40	P	Pb	21 03 48.0	-1.1
AIB2	Ibarra (Univer	1.74	96	P	Pb	21 03 49.0	-0.8
SUCR	Mariscal Sucre	1.76	130	P	Pn	21 03 48.0	-0.3
YAHU	Yahuarcocha	1.77	95	P	Pb	21 03 50.0	-0.3
CAMI	Rancho Maria	1.78	132	P	Pn	21 03 49.0	+0.5
SRAM	San Ramn-Vol	1.79	135	P	Pn	21 03 49.0	+0.5
CHIS	Cerro-Chispas-	1.79	210	P	Pn	21 03 49.0	+0.8
NAS2	Nasa	1.79	130	P	Pb	21 03 50.0	-0.7
BNAS	Cotopaxi Volca	1.79	131	P	Pn	21 03 49.0	+0.2
CHMA	Chilma	1.81	79	P	Pn	21 03 47.0	-1.7
BREF	Cotopaxi Volca	1.82	130	P	Pn	21 03 50.0	+0.7
VC1	Cotopaxi 1	1.84	129	P	Pn	21 03 50.0	+0.7
BVC2	Cotopaxi Volca	1.84	129	P	Pn	21 03 50.0	+0.6
LNGL	El Angel-Carch	1.85	83	P	Pn	21 03 49.0	-0.5
BMOR	Cotopaxi Volca	1.85	132	P	Pn	21 03 50.0	+0.4
BTAM	Cotopaxi Volca	1.86	129	P	Pn	21 03 50.0	+0.3
BRRN	Barrancas-Volc	1.87	133	P	Pn	21 03 50.0	+0.2
ANTG	Antisana-Guama	1.88	123	P	Pn	21 03 50.0	+0.1
ANGU	Angureal	1.89	104	P	Pb	21 03 52.0	-0.4
ECEN	Cerro Negro	1.89	81	P	Pn	21 03 50.0	-0.1
CAYR	Refugio Cayamb	1.90	105	P	Pn	21 03 51.0	+0.8
TAMB	Tambo	1.90	129	P	Pn	21 03 51.0	+0.8
CAYA	Cayambe	1.90	103	P	Pb	21 03 52.0	-0.6
CHL1	Volc¡n Chiles	1.91	82	P	Pn	21 03 51.0	+0.6
ANTM	Antisana-La Mi	1.92	123	P	Pn	21 03 51.0	+0.5
ANTI	Antisana	1.93	120	P	Pn	21 03 51.0	+0.3
CHL2	Volc¡n Chiles	1.94	81	P	Pn	21 03 51.0	+0.2
VCES	Cotopaxi	1.94	132	P	Pn	21 03 51.0	+0.2
ANTS	Antisana-Sarah	1.94	121	P	Pn	21 03 51.0	+0.1
CMBC	Cumbal	2.06	78	eP	Pb	21 03 54.8	-0.5
CMBC	Cumbal	2.06	78	P	Pb	21 03 54.0	-1.2
TULM	Tulcn-Chalpat	2.06	84	P	Pb	21 03 54.0	-1.3
ATUL	Tulcn	2.13	83	P	Pb	21 03 56.0	-0.4
ISPT	Isla de la Pla	2.15	215	P	Pn	21 03 50.0	-3.2
PIAT	Ana Tenorio	2.17	134	P	Pn	21 03 54.0	+0.1
CHSH	Refugio Sur-Vo	2.22	154	P	Pn	21 03 55.0	+0.4
PORT	Chimborazo Vol	2.23	152	P	Pn	21 03 55.0	+0.2
PPLP	Puerto Lpez	2.25	205	P	Pn	21 03 56.0	+1.4
PPLP	Puerto Lpez	2.25	205	P	Pn	21 03 56.0	+1.4
TAMH	Tambohuasha Ch	2.30	153	P	Pn	21 03 56.0	+0.3
BONI	La Bonita	2.31	91	P	Pb	21 03 58.0	-1.4
IGUA	Igualata	2.32	149	P	Pn	21 03 57.0	+0.9
JUI6	Juive	2.36	145	P	Pn	21 03 58.0	+1.6
BBIL	Ulba Tungurahu	2.37	145	P	Pn	21 03 58.0	+1.5
BRUN	Tungurahua Vol	2.39	143	P	Pn	21 03 58.0	+1.2
RETU	Refugio	2.40	145	P	Pn	21 03 58.0	+1.0
BMAS	Trigal station	2.42	146	P	Pn	21 03 59.0	+1.8
BPAT	Tungurahua Vol	2.44	145	P	Pn	21 03 59.0	+1.3
CASC	Dorado de Casc	2.52	98	P	Pb	21 04 02.0	-1.1
GCUF	Volcan Galeras	2.59	74	eP	Pb	21 04 02.4	-2.0
PUYO	Puyo, Santa Ro	2.69	138	P	Pb	21 04 04.0	-1.9
SANGA	Volcan Sangay	2.94	150	P	Pn	21 04 07.0	+2.6
GR1C	Gorgona, Isla	2.98	34	eP	Pn	21 04 03.7	-1.0
CRUC	La Cruz	3.07	70	eP	Pb	21 04 09.9	-2.6
ISPG	Isla Puna-Puer	3.47	185	P	Pb	21 04 16.0	-3.2
SOTA	Rioblanco	3.61	63	eP	Pb	21 04 17.7	-4.1
SOTA				eS	Sb	21 05 06.1	+0.6
BOSC	San Juan Bosco	3.88	160	P	Pn	21 04 21.0	+3.9
PCON	Cinco Dias	3.88	62	eP	Pn	21 04 20.3	+2.7
ARNL	Arenillas	4.04	183	P	Pn	21 04 21.0	+1.8
MALC	Bahia Malaga	4.28	36	eP	Pb	21 04 30.5	-2.5
MALC	Bahia Malaga	4.28	36	P	Pb	21 04 28.0	-5.0
FLOC	Florencia	4.32	76	eP	Pn	21 04 26.7	+3.6
MARP	Paez Belalcaza	4.52	59	eP	Pn	21 04 29.0	+3.0
MARP				eS	Sb	21 05 27.9	-3.5
BETC	Betania	4.89	64	eP	Pn	21 04 35.1	+4.1
YOTC	Yotoco, Valle	4.91	45	eP	Pn	21 04 33.4	+2.2
ZUMB	Zumba	5.38	173	P	Pn	21 04 39.0	+1.1
PLMC	San Jos del P	5.62	39	eP	Pn	21 04 43.1	+2.1
ORTC	Ortega, Tolima	5.69	54	eP	Pn	21 04 45.9	+3.9
ORTC				eS	Sn	21 05 54.0	+6.9
PRAC	Prado	5.88	57	eP	Pn	21 04 47.4	+2.9
PRAC				eS	Sn	21 05 58.1	+6.4
ANIL	Santa Ana	5.94	48	eP	Pn	21 04 50.2	+4.6
MACC	Macarena, Meta	6.20	75	eP	Pn	21 04 52.2	+3.2
MACC				eP	Pn	21 04 52.3	+3.3
CBOC	Ciudad Bolivar	6.54	36	eP	Pn	21 04 58.1	+4.3
ROSC	El Rosal	6.99	52	P	Pn	21 05 03.3	+3.2
	18nm,0.4s,baz=56,slow=21,SNR=4.5						
ROSC				S	Sn	21 06 27.7	+8.2
	17nm,0.4s,baz=49,slow=20,SNR=1.3						
ROSC				LR	LR	21 07 53.1	
	comp=Z,912nm,19.0s,baz=228,slow=39						
ROSC	El Rosal	6.99	52	Pn	Pn	21 04 59.5	-0.6
ROSC	El Rosal	6.99	52	eP	Pn	21 05 04.1	+4.0
NORC	Norcasia	7.05	45	eP	Pn	21 05 05.3	+4.6
VILC	Villavicencio,	7.10	60	eP	Pn	21 05 06.0	+4.6
CHIC	Chingaza	7.34	56	eP	Pn	21 05 12.9	+8.0
CHIC				eS	Sb	21 06 41.5	-11
DBBC	Dabeiba	7.41	29	eP	Pn	21 05 10.9	+5.3
ATAH	Atahualpa	7.73	169	P	Pn	21 05 14.2	+3.8
	13nm,0.6s,baz=11,slow=8.2,SNR=11						
ATAH				S	Sn	21 06 44.5	+6.7
	44nm,0.6s,baz=269,slow=16,SNR=2.8						
ATAH				LR	LR	21 08 10.3	
	comp=Z,548nm,18.9s,baz=343,slow=37						
PTBC	PUERTO BERRIO,	8.04	42	eP	Pn	21 05 20.8	+6.6
UREC	San Jos de Ur	8.37	31	eP	Pb	21 05 31.4	-11
PTGC	Puerto Gaitan,	8.52	64	eP		21 05 35.9	
ZARC	Zaragoza, Cauc	8.53	35	Pn	Pn	21 05 23.0	+2.1
ZARC	Zaragoza, Cauc	8.53	35	eP	Pn	21 05 30.4	+9.5
BCIP	Isla Barro Col	8.60	360	Pn	Pn	21 05 24.3	+2.4
RUSC	La Rusia	8.60	51	eP	Pn	21 05 29.9	+7.5
RUSC				eS	Sn	21 07 12.6	+13
BRU2	Volcan	8.70	341	Pn	Pn	21 05 23.9	+0.4
RIOS	Rincon, Osa	8.92	336	Pn	Pn	21 05 27.2	+0.9
DRK0	Durika	9.33	339		Pn	21 05 34.2	+2.1
SRBA	San Rafael, Bu	9.35	338	Pn	Pn	21 05 33.0	+0.8
PEZE	Perez Zeledon,	9.61	337		Pn	21 05 37.0	+1.3
PAMC	Pamplona, Colo	9.83	46	eP	Pn	21 05 46.0	+6.9
RIMA	Rio Macho	10.03	337		Pn	21 05 45.0	+3.3
HDC	Heredia	10.34	336	Pn	Pn	21 05 48.7	+2.8
PAYG	Puerto Ayora	10.52	264	Pn	Pn	21 05 50.1	+1.9
CZSB	Cruzeiro do Su	10.85	139	eP	Pn	21 05 53.5	+0.8
JTS	Las Juntas de	10.96	333	P	Pn	21 05 59.1	+4.8
	9.8nm,0.7s,baz=194,slow=6.4,SNR=6.8						
JTS				LR	LR	21 09 33.9	
	comp=Z,487nm,18.6s,baz=186,slow=33						
JTS	Las Juntas de	10.96	333		Pn	21 05 56.0	+1.7
SDV	Santo Domingo	12.38	48	P	Pn	21 06 16.8	+3.0
	4.8nm,0.3s,baz=264,slow=9.2,SNR=1.4						
SDV				S	Sn	21 08 33.9	+2.4
	5.4nm,0.3s,baz=335,slow=10,SNR=1.5						
SDV				LR	LR	21 11 59.8	
	comp=Z,173nm,20.5s,baz=222,slow=42						
SDV	Santo Domingo	12.38	48	eP	Pn	21 06 11.0	-2.9
ACON	Acoyapa	12.55	335	Pn	Pn	21 06 18.2	+2.1
NNA	Nana	12.77	167	P	Pn	21 06 23.1	+4.0
	5.9nm,0.3s,baz=333,slow=12,SNR=3.6						
NNA				S	Sn	21 08 38.3	-2.7
	8.5nm,0.5s,baz=219,slow=14,SNR=2.1						
NNA				LR	LR	21 11 50.8	
	comp=Z,157nm,18.6s,baz=337,slow=40						
NNA	Nana	12.77	167		Pn	21 06 20.2	+1.2
BAUV	El Baul	14.43	54	Pn	Pn	21 06 41.5	-0.2
TGUH	Tegucigalpa,Un	15.34	332	Pn	Pn	21 06 54.9	+0.8
MTO3	Montecristo	16.71	326	Pn	Pn	21 07 12.3	+0.6

BIRV	**Birongo**	**16.73**	**53**		**Pn**	**21 07 11.6**	**-0.3**
BIRV				IAmb	IAmb	21 07 29.0	
	comp=Z,83nm,1.3s						
ESQI	**Esquipulas**	**16.83**	**326**	Pn	**Pn**	**21 07 13.9**	**+0.7**
ESQI				IAmb	IAmb	21 07 41.0	
	comp=Z,67nm,1.2s						
ETMB	**Extrema**	**17.00**	**127**	*e*P	**Pn**	**21 07 13.1**	**-2.2**
SAML	**Samuel**	**19.07**	**120**		**P**	**21 07 38.3**	**-1.6**
BOAV	**Boa Vista**	**19.40**	**84**	*e*P	**P**	**21 07 38.3**	**-5.2**
MACA	**Manacapuru-AM**	**19.49**	**101**	*e*P	**P**	**21 07 40.1**	**-4.4**
LPAZ	**La Paz**	**20.30**	**146**	P	**P**	**21 07 54.8**	**+0.8**
	comp=Z,4.3nm,0.7s,baz=326,slow=7.8,SNR=7.4						
LPAZ				LR	LR	21 17 26.1	
	comp=Z,550nm,18.3s,baz=320,slow=42						
	comp=Z,4.3nm,0.7s						
LPAZ	**La Paz**	**20.30**	**146**		**P**	**21 07 53.2**	**-0.8**
PB12	**IPOC Station P**	**21.18**	**154**	P	**P**	**21 08 02.0**	**-0.9**
PB12				IAmb	IAmb	21 08 16.0	
	comp=Z,28nm,1.2s						
PB16	**IPOC Station P**	**21.31**	**152**		**P**	**21 08 04.3**	**-0.5**
PB16				IAmb	IAmb	21 08 18.3	
	comp=Z,18nm,0.8s						
AOPR	**Arecibo Observ**	**21.89**	**35**	P	**P**	**21 08 11.0**	**+0.5**
SJG	**San Juan**	**22.06**	**37**	LR	LR	21 17 49.9	
	comp=Z,158nm,20.5s,baz=256,slow=39						
CMIG	**Matias Romero**	**22.16**	**319**	P	**P**	**21 08 15.3**	**+2.0**
	comp=Z,5.1nm,0.9s,baz=92,slow=7.2,SNR=8.0						
CMIG				LR	LR	21 15 25.1	
	comp=Z,160nm,19.3s,baz=194,slow=32						
	comp=Z,5.1nm,0.9s						
GCPR	**Guaynabo City**	**22.25**	**37**	P	**P**	**21 08 14.9**	**+0.5**
CBYP	**Canovanas**	**22.36**	**37**	P	**P**	**21 08 15.0**	**-0.6**
CBYP				IAmb	IAmb	21 08 30.6	
	comp=Z,34nm,1.1s						
PB11	**IPOC Station P**	**22.48**	**154**	P	**P**	**21 08 17.3**	**+0.3**
PB11				IAmb	IAmb	21 08 36.6	
	comp=Z,16nm,0.9s						
PB08	**IPOC Station P**	**23.04**	**154**	P	**P**	**21 08 23.2**	**+0.1**
VILB	**Vilhena**	**23.63**	**125**	*e*P	**P**	**21 08 27.6**	**-1.0**
PB01	**IPOC Station P**	**23.69**	**155**	P	**P**	**21 08 28.1**	**-1.2**
ITTB	**Itaituba**	**24.56**	**102**	*e*P	**P**	**21 08 36.2**	**-1.2**
LVC	**Limon Verde**	**25.33**	**156**	P	**P**	**21 08 48.2**	**+3.6**
	comp=Z,2.7nm,0.6s,baz=270,slow=19,SNR=2.4						
LVC				LR	LR	21 19 27.3	
	comp=Z,107nm,20.3s,baz=325,slow=38						
LVC	**Limon Verde**	**25.33**	**156**		**P**	**21 08 43.6**	**-1.0**
MALB	**Monte Alegre**	**25.68**	**95**	*e*P	**P**	**21 08 46.8**	**-0.7**
CLDB	**Colider**	**26.44**	**116**	*e*P	**P**	**21 08 53.7**	**-0.8**
GO02	**Mina Guanaco**	**27.38**	**159**	P	**P**	**21 09 02.2**	**-0.9**
MDP	**Montagnes des**	**27.54**	**80**	P	**P**	**21 09 02.1**	**-2.2**
	comp=Z,17nm,1.1s,baz=261,slow=12,SNR=2.6						
MDP				LR	LR	21 20 13.0	
	comp=Z,892nm,18.4s,baz=241,slow=37						
	comp=Z,17nm,1.1s						
MCPB	**Macapa, AP**	**27.79**	**92**	*e*P	**P**	**21 09 05.5**	**-1.0**
SALV	**Santo Antonio**	**28.89**	**125**	*e*P	**P**	**21 09 19.5**	**+3.3**
PRPB	**Parauapebas**	**30.70**	**103**	*e*P	**P**	**21 09 32.5**	**+0.2**
152A	**Waverly Hall**	**32.31**	**352**	P	**P**	**21 09 46.5**	**+0.2**
152A				IAmb	IAmb	21 09 55.7	
	comp=Z,5.9nm,0.8s						
PEXB	**Peixe**	**33.72**	**113**	*e*P	**P**	**21 09 58.3**	**-0.7**
FPAL	**Fort Paine**	**34.28**	**352**	P	**P**	**21 10 03.3**	**-0.2**
FPAL				IAmb	IAmb	21 10 12.4	
	comp=Z,9.3nm,0.9s						
CPUP	**Villa Florida**	**34.40**	**143**	LR	LR	21 26 03.8	
	comp=Z,250nm,18.6s,baz=322,slow=40						
CPUP	**Villa Florida**	**34.40**	**143**	*e*P	P	21 10 11.6	+6.9
BG3	**Lake Jocassee**	**34.42**	**356**	P	**P**	**21 10 04.9**	**+0.1**
BG3				IAmb	IAmb	21 10 14.5	
	comp=Z,11nm,0.9s						
W50A	**Signal Mountai**	**34.89**	**352**	P	**P**	**21 10 08.7**	**0.0**
W50A				IAmb	IAmb	21 10 17.9	
	comp=Z,8.2nm,0.8s						
SWET	**Sewanee**	**34.99**	**351**	P	**P**	**21 10 09.5**	**-0.2**
SWET				IAmb	IAmb	21 10 18.9	
	comp=Z,6.3nm,0.8s						
CPCT	**Cooper Cave**	**35.03**	**353**	P	**P**	**21 10 10.5**	**+0.5**
TKL	**Tuckaleechee C**	**35.16**	**354**	LR	LR	21 23 48.5	
	comp=Z,100nm,20.9s,baz=170,slow=35						
TKL	**Tuckaleechee C**	**35.16**	**354**	P	**P**	**21 10 11.3**	**+0.3**
TKL				IAmb	IAmb	21 10 19.8	
	comp=Z,7.8nm,0.9s						
ITRB	**Iturama**	**35.20**	**126**	*e*P	**P**	**21 10 13.8**	**+2.1**
BDFB	**Brasilia**	**35.29**	**118**	P	**P**	**21 10 11.1**	**-1.5**
	comp=Z,2.1nm,0.4s,baz=286,slow=13,SNR=3.1						
	comp=Z,2.1nm,0.4s						
BDFB	**Brasilia**	**35.29**	**118**	P	**P**	**21 10 11.7**	**-0.9**
BDFB				IAmb	IAmb	21 10 16.0	
	comp=Z,9.2nm,1.2s						
BDFB	**Brasilia**	**35.29**	**118**	*e*P	**P**	**21 10 14.4**	**+1.7**
PCMB	**Pacaembu**	**35.52**	**130**	*e*P	**P**	**21 10 18.3**	**+3.9**
V48A	**Smith Brothers**	**35.65**	**350**	P	**P**	**21 10 15.3**	**0.0**
CLTN	**Cedars of Leba**	**35.91**	**351**	P	**P**	**21 10 17.2**	**-0.3**
CLTN				IAmb	IAmb	21 10 26.4	
	comp=Z,9.2nm,0.9s						
TZTN	**Tazewell**	**36.02**	**355**	P	**P**	**21 10 18.1**	**-0.4**
IPMB	**Ipameri, GO**	**36.13**	**122**	*e*P	**P**	**21 10 18.9**	**-0.8**
U49A	**Red Boiling Sp**	**36.24**	**352**	P	**P**	**21 10 20.2**	**-0.2**
U49A				IAmb	IAmb	21 10 29.1	
	comp=Z,6.8nm,0.8s						
TXAR	**Lajitas Array**	**36.58**	**324**	P	**P**	**21 10 25.4**	**+2.0**
	comp=Z,0.8nm,1.0s,baz=138,slow=9.5,SNR=12						
TXAR				PcP	**PcP**	**21 12 47.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=139,slow=6.0,SNR=11						
TXAR				LR	LR	21 23 45.3	
	comp=Z,29nm,21.5s,baz=136,slow=33						
	comp=Z,0.8nm,1.0s						
TXAR	**Lajitas Array**	**36.58**	**324**	P	**P**	**21 10 25.2**	**+1.8**
LCAR	**Lake Charles**	**36.91**	**345**	P	**P**	**21 10 25.4**	**-0.6**
LCAR				IAmb	IAmb	21 10 34.5	
	comp=Z,11nm,0.9s						
SDBA	**SAO DESIDERIO**	**36.97**	**112**	*e*P	**P**	**21 10 26.7**	**-0.2**
FCAR	**Ozark Folk Cen**	**37.01**	**343**	P	**P**	**21 10 27.0**	**+0.1**
LPIG	**La Paz**	**37.70**	**311**	LR	LR	21 22 31.8	
	comp=Z,83nm,21.0s,baz=186,slow=30						
JANB	**Januaria**	**38.38**	**115**	*e*P	**P**	**21 10 40.0**	**+1.1**
CCM	**Cathedral Cave**	**38.81**	**346**	P	**P**	**21 10 41.2**	**-0.9**
CCM				IAmb	IAmb	21 10 50.2	
	comp=Z,11nm,0.8s						
MNTX	**Cornudas Mount**	**39.31**	**325**	P	**P**	**21 10 45.9**	**-0.6**
MNTX				IAmb	IAmb	21 10 56.7	
	comp=Z,12nm,1.0s						
CPSB	**Cacapava Do Su**	**39.70**	**143**	*e*P	P	21 10 55.2	+5.5
M57A	**Sunshine Farm,**	**40.71**	**3**	P	**P**	**21 10 57.5**	**-0.3**
M57A				IAmb	IAmb	21 11 07.9	
	comp=Z,14nm,0.8s						
PLCA	**Paso Flores**	**41.91**	**169**	P	**P**	**21 11 07.7**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=342,slow=9.4,SNR=8.9						
PLCA				LR	LR	21 26 02.8	
	comp=Z,68nm,20.7s,baz=10.0,slow=32						
	comp=Z,3.8nm,0.7s						
PLCA	**Paso Flores**	**41.91**	**169**	P	**P**	**21 11 07.2**	**-0.7**
PLCA				IAmb	IAmb	21 11 21.3	
	comp=Z,13nm,1.2s						
ANMO	**Albuquerque**	**42.31**	**327**	LR	LR	21 30 19.7	
	comp=Z,38nm,18.2s,baz=138,slow=38						
ANMO	**Albuquerque**	**42.31**	**327**	P	**P**	**21 11 12.5**	**+1.1**
RIB01	**Linhares ES**	**43.42**	**119**	*e*P	**P**	**21 11 22.9**	**+2.5**
SADO	**Sadowa**	**44.07**	**1**	LR	LR	21 30 15.2	
	comp=Z,77nm,20.2s,baz=302,slow=36						
RCBR	**Riachuelo**	**44.31**	**99**	LR	LR	21 32 51.5	
	comp=Z,133nm,18.5s,baz=64,slow=40						
SMCO	**Snowmass**	**45.79**	**330**	P	**P**	**21 11 40.2**	**+0.7**
SMCO				IAmb	IAmb	21 11 50.3	
	comp=Z,6.4nm,0.9s						
E43A	**Lone Tree Farm**	**46.10**	**353**	P	**P**	**21 11 40.2**	**-1.1**
PFO	**Pinyon Flats O**	**47.57**	**318**	LR	LR	21 30 20.0	
	comp=Z,77nm,18.5s,baz=210,slow=34						
PDAR	**Pinedale Array**	**49.80**	**331**	P	**P**	**21 12 11.0**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=112,slow=9.0,SNR=2.5						
PDAR				LR	LR	21 34 41.2	
	comp=Z,97nm,18.1s,baz=154,slow=38						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**49.80**	**331**	P	**P**	**21 12 10.6**	**+0.3**
ELK	**Elko**	**51.31**	**326**	LR	LR	21 34 19.4	
	comp=Z,74nm,18.8s,baz=129,slow=36						
ULM	**Lac du Bonnet**	**51.41**	**347**	P	**P**	**21 12 20.5**	**-1.5**
	comp=Z,2.7nm,0.6s,baz=173,slow=8.2,SNR=4.2						
	comp=Z,2.7nm,0.6s						
ULM	**Lac du Bonnet**	**51.41**	**347**	P	**P**	**21 12 20.9**	**-1.1**
NV11	**Mina Array Sit**	**51.56**	**322**	P	**P**	**21 12 24.7**	**+1.1**
NV11				IAmb	IAmb	21 12 34.4	
	comp=Z,7.7nm,1.0s						
NVAR	**Mina Array Bea**	**51.65**	**321**	P	**P**	**21 12 26.2**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=138,slow=7.3,SNR=10						
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**51.65**	**321**	P	**P**	**21 12 25.2**	**+0.9**
YHL	**Hebgen Lake**	**52.14**	**332**	P	**P**	**21 12 28.7**	**+0.7**
HLID	**Hailey**	**52.80**	**329**	P	**P**	**21 12 33.9**	**+1.1**
BOZ	**Bozeman (W)**	**52.91**	**332**	P	**P**	**21 12 34.0**	**+0.5**
MFID	**Camas Ranch**	**53.44**	**328**	P	**P**	**21 12 38.7**	**+1.3**
SCHQ	**Schefferville**	**55.18**	**9**	LR	LR	21 38 11.1	
	comp=Z,39nm,18.8s,baz=112,slow=38						
YBH	**Yreka Blue Hor**	**56.33**	**322**	LR	LR	21 36 07.2	
	comp=Z,63nm,21.2s,baz=150,slow=35						
G08A	**Pilot Rock**	**56.37**	**328**	P	**P**	**21 12 59.0**	**+0.5**
NEW	**Newport**	**57.44**	**331**	LR	LR	21 38 28.8	
	comp=Z,58nm,19.7s,baz=150,slow=37						
EDM	**Edmonton**	**59.44**	**337**	P	**P**	**21 13 20.1**	**+0.2**
TAOE	**Nuku Hiva Isla**	**60.79**	**260**	*e*LR	LR	21 31 25.6	
	comp=Z,229nm,26.4s						
FRB	**Frobisher Bay**	**63.64**	**6**	LR	LR	21 44 52.5	
	comp=Z,40nm,18.4s,baz=177,slow=39						
YKA	**Yellowknife Ar**	**67.09**	**343**	P	**P**	**21 14 10.4**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=135,slow=6.1,SNR=10.0						
	comp=Z,1.7nm,0.8s						
SFJD	**Kangerlussuaq**	**69.44**	**12**	LR	LR	21 43 54.6	
	comp=Z,34nm,21.2s,baz=228,slow=35						
DLBC	**Dease Lake**	**69.86**	**335**	LR	LR	21 47 46.1	
	comp=Z,30nm,18.3s,baz=71,slow=38						
DLBC	**Dease Lake**	**69.86**	**335**	P	**P**	**21 14 29.1**	**+1.2**
PPT	**Papeete**	**70.87**	**251**	LR	LR	21 37 09.1	
	comp=Z,117nm,18.2s,baz=7.0,slow=28						
PPT2	**Papeete2**	**70.88**	**251**	*e*LR	LR	21 36 07.7	
	comp=Z,133nm,24.5s						
ILULI	**Ilulissat**	**71.26**	**10**	*i* P	P	21 14 42.7	+6.6
ILULI				IAmb	IAmb	21 15 19.0	
	comp=Z,6.8nm,0.3s						
TBI	**Tubuai**	**71.55**	**245**	*e*LR	LR	21 36 33.3	
	comp=Z,127nm,27.2s						
NUUG	**Nuugaatsiaq**	**72.95**	**9**	*i* P	P	21 14 54.3	+8.1
NUUG				IAmb	IAmb	21 14 56.3	
	comp=Z,9.6nm,0.5s						
ICESG	**Greenland Ices**	**73.59**	**14**	*i* P	**P**	**21 14 46.5**	**-4.0**
ICESG				IAmb	IAmb	21 15 02.0	
	comp=Z,9.8nm,1.0s						
UPNV	**Upernavik**	**73.67**	**7**	*i* P	P	21 14 57.9	+7.5
UPNV				IAmb	IAmb	21 15 01.0	
	comp=Z,10nm,1.3s						
RES	**Resolute Bay**	**74.62**	**356**	LR	LR	21 49 42.4	
	comp=Z,48nm,18.1s,baz=76,slow=37						
DBIC	**Dimbokro**	**75.02**	**83**	LR	LR	21 44 56.1	
	comp=Z,65nm,21.2s,baz=292,slow=33						
SUMG	**Summit**	**76.44**	**12**	P	**P**	**21 15 06.0**	**-0.9**
SUMG	**Summit**	**76.44**	**12**	*i* P	**P**	**21 15 06.0**	**-0.9**
INK	**Inuvik**	**76.80**	**342**	P	**P**	**21 15 08.7**	**+0.2**
	comp=Z,4.3nm,1.1s,baz=109,slow=5.4,SNR=4.0						
INK				LR	LR	21 51 00.9	
	comp=Z,56nm,20.0s,baz=110,slow=37						
	comp=Z,4.3nm,1.1s						
INK	**Inuvik**	**76.80**	**342**	P	**P**	**21 15 09.0**	**+0.5**
INK				IAmb	IAmb	21 15 18.3	
	comp=Z,8.1nm,1.1s						
M27K	**Edge Creek, AK**	**76.91**	**335**	P	**P**	**21 15 09.9**	**+0.5**
M27K				IAmb	IAmb	21 15 19.8	
	comp=Z,4.4nm,0.9s						
BCAR	**Beaver Creek A**	**77.17**	**336**	P	**P**	**21 15 11.2**	**+0.4**
GLB	**Gilahina Butte**	**77.37**	**334**	P	**P**	**21 15 12.8**	**+0.9**
GLB				IAmb	IAmb	21 15 31.6	
	comp=Z,5.6nm,0.8s						
EGAK	**Eagle**	**77.66**	**337**	P	**P**	**21 15 13.8**	**+0.4**
EGAK				IAmb	IAmb	21 15 23.3	
	comp=Z,7.7nm,1.0s						
ESDC	**Sonseca Array**	**78.81**	**50**	P	**P**	**21 15 20.1**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=272,slow=5.9,SNR=14						
ESDC				LR	LR	21 48 54.2	
	comp=Z,40nm,18.5s,baz=234,slow=35						
	comp=Z,3.2nm,1.0s						
ILAR	**Eielson Array**	**79.91**	**336**	P	**P**	**21 15 25.4**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=119,slow=3.7,SNR=6.6						
ILAR				LR	LR	21 52 56.0	
	comp=Z,35nm,19.2s,baz=166,slow=37						
	comp=Z,0.8nm,0.9s						
BMAR	**Burnt Mountain**	**80.04**	**339**	P	**P**	**21 15 26.8**	**+0.2**
KDAK	**Kodiak Island**	**80.42**	**329**	LR	LR	21 50 45.0	
	comp=Z,32nm,21.4s,baz=206,slow=35						
RAR	**Rarotonga**	**80.80**	**249**	LR	LR	21 43 49.7	
	comp=Z,71nm,19.2s,baz=225,slow=30						
TOA0	**Torodi Ar. Sit**	**81.64**	**77**	P	**P**	**21 15 33.7**	**-2.4**
TORD	**Torodi Ar. Bea**	**81.64**	**77**	P	**P**	**21 15 34.9**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=281,slow=5.8,SNR=12						
TORD				LR	LR	21 50 49.4	
	comp=Z,62nm,19.7s,baz=214,slow=35						
	comp=Z,3.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**81.64**	**77**	P	**P**	**21 15 34.5**	**-1.5**
TORD				IAmb	IAmb	21 15 36.5	
	comp=Z,11nm,1.4s						
DAG	**Danmarks Havn**	**83.13**	**12**	*i* P	**P**	**21 15 39.8**	**-2.8**
JMIC	**Jan Mayen**	**83.49**	**18**	LR	LR	21 50 29.3	
	comp=Z,20nm,21.1s,baz=244,slow=34						
VNA3	**Neumayer Olymp**	**84.18**	**162**	P	**P**	**21 15 48.0**	**-0.2**
VNA3	**Neumayer Olymp**	**84.18**	**162**	sP	sP	21 16 05.4	+9.4
VNA1	**Neumayer--Stat**	**84.44**	**161**	P	**P**	**21 15 51.5**	**+2.1**
VNA2	**Neumayer--Watz**	**84.79**	**162**	P	**P**	**21 15 52.6**	**+1.4**
	baz=346,slow=5.0						
TROLL	**Troll, Antarti**	**88.12**	**162**	P	**P**	**21 16 07.0**	**-0.7**
DAVOX	**Davos/Dischmat**	**89.44**	**43**	P	**P**	**21 16 15.2**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=213,slow=6.1,SNR=4.6						
DAVOX				LR	LR	21 52 22.2	
	comp=Z,23nm,20.8s,baz=264,slow=33						
	comp=Z,2.1nm,0.8s						
NOA	**NORSAR Array B**	**90.07**	**29**	LR	LR	21 53 47.5	
	comp=Z,16nm,20.6s,baz=255,slow=34						
VRAC	**Vranov**	**93.82**	**41**	LR	LR	21 54 31.4	
	comp=Z,16nm,19.9s,baz=288,slow=33						
TSUM	**Tsumeb**	**97.18**	**109**	LR	LR	21 59 55.0	
	comp=Z,68nm,18.1s,baz=268,slow=35						
SUR	**Sutherland**	**99.27**	**123**	LR	LR	21 57 48.3	
	comp=Z,80nm,21.1s,baz=305,slow=33						
ZALV	**Zalesovo Beam**	**124.25**	**11**	PKP	**PKPdf**	**21 22 14.2**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=343,slow=3.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**124.25**	**11**		**PKPdf**	**21 22 14.0**	**-2.0**
MKAR	**Makanchi Array**	**130.35**	**16**	PKP	**PKPdf**	**21 22 24.6**	**-3.3**
	comp=Z,0.9nm,0.9s,baz=323,slow=2.2,SNR=5.5						
MKAR	**Makanchi Array**	**130.35**	**16**		**PKPdf**	**21 22 25.4**	**-2.5**
KSRS	**Korea Array**	**134.33**	**329**	PKP	**PKPdf**	**21 22 34.1**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=38,slow=1.4,SNR=2.4						
ASAR	**Alice Springs**	**139.99**	**232**	PKhKP	PKPpre	21 22 40.4	
	comp=Z,0.5nm,0.7s,baz=108,slow=4.1,SNR=2.5						
WRA	**Warramunga Arr**	**141.38**	**238**	PKP	**PKPdf**	**21 22 48.0**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=119,slow=2.7,SNR=2.9						
LZH	**Lanzhou**	**143.43**	**355**	*e*PKP	**PKPdf**	**21 22 53.9**	**+1.4**
XAN	**Xi'an**	**144.66**	**347**	pP	PKiKP	21 23 02.8	+4.5
XAN	**Xi'an**	**144.66**	**347**	pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**144.66**	**347**	P	**PKPab**	**21 22 52.5**	**-0.7**
PZH	**PanZhiHua**	**153.10**	**357**	PKPbc	**PKPdf**	**21 23 07.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**161.11**	**4**	PKPab	**PKPab**	**21 24 01.1**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=335,slow=5.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**161.11**	**4**		**PKPdf**	**21 23 16.4**	**-2.3**

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*IDC **24** 21:14:56.7±6.5, 6°.44S×129°.63E, h111^{km}±83^{km}, mb3.3/1, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=153.1km s-min=24.8km az=81.0*

ISC 24 21:14:55.3±1.3**, 6°.46S**±0°.07×**130°.0E**±0°.3**, h100^{km}, n4, σ3^{s}.74**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.70**	**13**	P	**Pn**	**21 16 20.1**	**+2.6**
	3.2nm,0.3s,baz=44,slow=23,SNR=26						
SIJI				S	**Sn**	**21 17 18.3**	**-3.3**
	7.8nm,0.2s,baz=217,slow=23,SNR=7.9						
	7.8nm,0.2s						
WRA	**Warramunga Arr**	**14.05**	**163**	P	**Pn**	**21 18 11.0**	**+1.1**
	0.5nm,0.3s,baz=344,slow=13,SNR=17						
WRA				S	Sn	21 20 40.0	-4.8
	0.6nm,0.4s,baz=341,slow=22,SNR=8.0						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**17.52**	**168**	P	**Pn**	**21 18 55.9**	**+2.6**
	0.2nm,0.3s,baz=346,slow=10,SNR=14						
ASAR				S	**Sn**	**21 22 04.6**	**-3.8**
	0.1nm,0.3s,baz=245,slow=38,SNR=1.5						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	**P**	**21 25 41.1**	**-1.2**
	0.3nm,0.5s,baz=119,slow=8.0,SNR=4.1						
	0.3nm,0.5s						

NEIC 24 21:46:43.6±0.6**, 37°.31N**±0°.03×**97°.84W**±0°.02**, h4^{km}**±4^{km}**,**
Error ellipse: s-maj=5.0km s-min=1.9km az=181.0,

Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**1.13**	**110**		Pg	21 47 04.2	-1.0
R32A	**Long Quarter,**	**1.31**	**328**		Pn	21 47 07.3	-1.4
U32A	**Winter Ranch,**	**1.31**	**226**		Pn	21 47 07.3	-1.3
OKCFA	**Oklahoma City**	**1.91**	**170**	Pn	Pn	21 47 15.5	-1.4
KSU1	**Kansas State U**	**2.04**	**28**	Pn	Pn	21 47 17.9	-0.7
FNO	**Franklin**	**2.08**	**170**	Pn	Pn	21 47 18.6	-0.5
TUL1	**Leonard**	**2.16**	**130**	Pn	Pn	21 47 20.9	+0.6
TUL1				IAmb_Lg		21 47 55.6	
	comp=Z,28nm,1.0s						
WMOK	**Wichita Mounta**	**2.67**	**197**	Pn	Pn	21 47 27.8	+0.4
X34A	**Smith Ranch, M**	**2.70**	**180**	Pn	Pn	21 47 28.1	+0.4
HHAR	**Hobbs**	**3.29**	**107**	Pn	Pn	21 47 36.3	+0.4
X37A	**Clayton**	**3.37**	**143**	Pn	Pn	21 47 36.6	-0.4
X37A				IAmb_Lg		21 48 35.1	
	comp=Z,10nm,0.9s						
S39A	**Bolivar**	**3.61**	**83**	Pn	Pn	21 47 40.0	-0.3
AMTX	**Amarillo**	**3.94**	**233**	Pn	Pn	21 47 45.3	+0.4
AMTX				IAmb_Lg		21 48 52.5	
	comp=Z,9.2nm,0.8s						
P38A	**Dawn**	**4.10**	**54**	IAmb_Lg		21 48 53.6	
	comp=Z,5.6nm,0.7s						
U40A	**Yellville**	**4.11**	**102**	Pn	Pn	21 47 47.1	-0.1
U40A				IAmb_Lg		21 49 01.8	
	comp=Z,6.5nm,0.7s						
MIAR	**Mount Ida**	**4.42**	**127**	Pn	Pn	21 47 50.7	-0.7
MIAR				IAmb_Lg		21 49 12.6	
	comp=Z,5.3nm,0.8s						
MGMO	**Mountain Grove**	**4.45**	**90**	Pn	Pn	21 47 50.4	-1.4
MGMO				IAmb_Lg		21 49 07.3	
	comp=Z,6.1nm,1.0s						
R40A	**Maddies Statio**	**4.52**	**76**	Pn	Pn	21 47 52.2	-0.5
R40A				IAmb_Lg		21 49 06.9	
	comp=Z,5.9nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.81**	**105**	Pn	Pn	21 47 55.7	-1.0
FCAR				IAmb_Lg		21 49 17.3	
	comp=Z,6.1nm,0.8s						
X40A	**Basin Creek Fa**	**4.94**	**123**	IAmb_Lg		21 49 23.4	
	comp=Z,5.6nm,0.8s						
W41B	**Gary Mavity, V**	**4.99**	**114**	IAmb_Lg		21 49 27.0	
	comp=Z,6.7nm,0.8s						
N38A	**Joes South For**	**5.00**	**44**	Pn	Pn	21 47 58.5	-0.8
P40A	**Paris**	**5.06**	**62**	IAmb_Lg		21 49 27.8	
	comp=Z,4.7nm,0.7s						
T25A	**Trinidad**	**5.25**	**270**	IAmb_Lg		21 49 31.8	
	comp=Z,3.8nm,0.9s						
Q24A	**Divide**	**6.00**	**288**	IAmb_Lg		21 49 50.7	
	comp=Z,4.0nm,0.7s						
SDCO	**Great Sand Dun**	**6.11**	**276**	IAmb_Lg		21 50 00.3	
	comp=Z,4.2nm,1.0s						
N23A	**Red Feather La**	**7.25**	**302**	IAmb_Lg		21 50 33.4	
	comp=Z,5.1nm,0.8s						
F33A	**5 Mile Ranch,**	**8.61**	**7**	IAmb_Lg		21 51 13.3	
	comp=Z,2.5nm,0.9s						

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*SOME **24** 21:59:50.6, 39°.67N×71°.85E, h10^{km}*
*KRNET **24** 21:59:51.4±0.1, 39°.59N×71°.80E, h22^{km}, mb3.4*
*ISU **24** 21:59:52, 39°.61N×71°.91E, h20^{km}*
*NNC **24** 21:59:54.2±1.8, 39°.70N×71°.99E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=14.1km s-min=7.5km az=1.0*

ISC 24 21:59:52.9±0.8**, 39°.57N**±0°.03×**71°.69E**±0°.02**, h10^{km}, n54, σ2^{s}.36**/86**, 22C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.12**	**137**	⇑*i*P	**Pg**	**21 59 54.3**	**-1.7**
	baz=76						
DRK				⇑*e*S	**Sg**	**21 59 56.2**	**-2.1**
	baz=76						
CHMI	**Chimion**	**0.71**	**350**	P	**Pg**	**22 00 04.9**	**-1.7**
CHMI				S	**Sg**	**22 00 15.5**	**-0.4**
FRG	**Fergana**	**0.81**	**5**	P	**Pg**	**22 00 06.7**	**-1.8**
FRG				S	**Sg**	**22 00 17.6**	**-1.4**
BTK	**Batken**	**0.83**	**306**	⇓*e*P	**Pg**	**22 00 08.1**	**-0.8**
	baz=2.0						
BTK				⇓*e*S	**Sb**	**22 00 20.4**	**-0.4**
	baz=2.0						
GAR	**Garm**	**1.21**	**242**	⇑*i*P	**Pn**	**22 00 15.4**	**-0.6**
	baz=43						
GAR				⇑*i*S	**Sn**	**22 00 32.8**	**+0.3**
	baz=43						
OHH	**Osh**	**1.27**	**41**	⇓*e*P	**Pn**	**22 00 13.9**	**-2.9**
	baz=39						
OHH				⇓*e*S	**Sb**	**22 00 30.1**	**-3.3**
	baz=39						
NAM	**Namangan**	**1.42**	**359**	P	**Pg**	**22 00 19.7**	**-0.4**
NAM				S	Sn	22 00 27.3	-10
NAM				S	**Sg**	**22 00 39.9**	**+1.3**
CHDK	**Chadak**	**1.57**	**333**	P	**Pg**	**22 00 22.8**	**-0.3**
CHDK				S	**Sg**	**22 00 44.8**	**+1.3**
TRKS	**Terek-Say**	**2.00**	**348**	⇑*e*P	**Pn**	**22 00 26.4**	**-0.5**
	baz=46						
TRKS				⇑*e*S	**Sn**	**22 00 51.8**	**-0.3**
	baz=46						
CHGR	**Chuyangaron**	**2.17**	**246**	⇓*e*P	**Pn**	**22 00 30.7**	**+1.5**
	baz=47						
CHGR				⇓*i*S	**Sb**	**22 00 59.2**	**-0.1**
	baz=47						
ARK	**Arkit**	**2.24**	**5**	⇓*i*P	**Pn**	**22 00 30.4**	**+0.3**
	baz=3.0						
ARK				⇓*e*S	**Sn**	**22 00 58.7**	**+0.9**
	baz=3.0						
CHRV	**Charvak**	**2.46**	**328**	P	**Pb**	**22 00 37.4**	**+0.2**
CHRV				S	**Sg**	**22 01 11.5**	**-0.3**
TAS	**Tashkent**	**2.53**	**315**	⇑*e*P	**Pn**	**22 00 35.2**	**+1.1**
	baz=13						
TAS				⇑*e*S	**Sb**	**22 01 07.4**	**-2.3**
	baz=13						
IUG	**Iuzhnay**	**2.87**	**334**	*e*P	**Pb**	**22 00 44.4**	**+0.2**
	226nm,0.2s						
IUG				*e*S	**Sg**	**22 01 23.4**	**-1.5**
	132nm,0.4s						
IUG	**Iuzhnay**	**2.87**	**334**	Pg	**Pb**	**22 00 44.4**	**+0.2**
	226nm,0.2s						
IUG				Lg	Lg	22 01 23.4	
	132nm,0.4s						
ARLS	**Aral**	**3.04**	**40**	⇓*e*P	**Pn**	**22 00 40.6**	**-0.6**
	baz=40						
ARLS				⇓*i*S	**Sn**	**22 01 16.4**	**-1.3**
	baz=40						
CHM	**Chimkent**	**3.17**	**331**	*e*P	**Pb**	**22 00 49.9**	**+0.7**
	6.2nm,0.3s						
CHM				*e*S	**Sg**	**22 01 32.9**	**-1.8**
	141nm,0.3s						
DZA	**Taraz**	**3.33**	**355**	*e*P	**Pb**	**22 00 51.3**	**-0.7**
	30nm,0.1s						
DZA				*e*S	**Sb**	**22 01 35.2**	**+2.6**
	162nm,0.3s						
DZA	**Taraz**	**3.33**	**355**	Pg	**Pb**	**22 00 51.3**	**-0.7**
	30nm,0.1s						
DZA				Lg	Lg	22 01 35.2	
	162nm,0.3s						
MRKS	**Merke**	**3.38**	**20**	*e*P	**Pb**	**22 00 50.9**	**-2.0**
	7.4nm,0.2s						
MRKS				*e*S	**Sb**	**22 01 34.4**	**+0.4**
	33nm,0.3s						
MRKS	**Merke**	**3.38**	**20**	Pg	**Pb**	**22 00 50.9**	**-2.0**
	7.4nm,0.2s						
MRKS				Lg	Lg	22 01 34.4	
	33nm,0.3s						
UCH	**Uchtor**	**3.41**	**38**	⇓*e*P	**Pn**	**22 00 46.2**	**-0.3**
	baz=37						
UCH				⇓*e*S	**Sn**	**22 01 26.0**	**-1.2**
	baz=37						
EKS2	**Erkin-Say**	**3.47**	**26**	⇑*e*P	**Pn**	**22 00 46.8**	**-0.2**
	baz=25						
EKS2				⇑*i*S	**Sn**	**22 01 27.3**	**-0.9**
	baz=25						
KK31	**Karatay Array**	**3.64**	**346**	⇑Pn	**Pn**	**22 00 51.1**	**+1.8**
	1.2nm,0.3s,baz=150,slow=11,SNR=67						
KK31				Pg	**Pg**	**22 01 00.3**	**-2.3**
	4.8nm,0.5s,baz=168,slow=16,SNR=11						
KK31				⇑Lg	Lg	22 01 46.5	
	20nm,0.6s,baz=170,slow=37,SNR=5.1						
AAK	**Ala-Archa**	**3.73**	**34**	⇑*e*P	**Pn**	**22 00 50.5**	**-0.1**
	baz=33						
AAK				⇑*e*S	**Sn**	**22 01 33.6**	**-1.0**
	baz=33						
BRLS	**Borolday**	**3.73**	**339**	*e*P	**Pb**	**22 00 56.5**	**-2.3**
	3.6nm,0.3s						
BRLS				*e*S	**Sb**	**22 01 44.4**	**+0.3**
	17nm,0.2s						
BRLS	**Borolday**	**3.73**	**339**	Pg	**Pb**	**22 00 56.5**	**-2.3**

	3.6nm,0.3s						
BRLS				Lg	Lg	22 01 44.4	
	17nm,0.2s						
CHMS	Chumysh	4.13	33	⇑Pn	Pn	22 00 55.5	-0.5
	3.2nm,0.4s						
CHMS				⇑Pg	Pb	22 01 06.0	+0.4
	12nm,1.1s						
CHMS				⇑Sn	Sn	22 01 43.5	-0.9
	10nm,0.6s						
CHMS				Lg	Lg	22 01 57.9	
TKM2	Tokmak 2	4.46	40	⇑Pn	Pn	22 01 02.0	+1.3
	2.4nm,0.7s						
TKM2				⇑Pg	Pb	22 01 12.1	+0.7
	3.7nm,0.5s						
TKM2				⇓Lg	Lg	22 02 09.8	
	12nm,0.7s						
SGDS	Sogindy	4.46	29	*e*P	Pb	22 01 10.5	-0.8
	5.5nm,0.4s						
SGDS				*e*S	Sb	22 02 08.3	+3.1
	30nm,0.5s						
SGDS	Sogindy	4.46	29	Pg	Pb	22 01 10.5	-0.8
	5.5nm,0.4s						
SGDS				Lg	Lg	22 02 08.3	
	30nm,0.5s						
KST	Kastek	4.73	41	*e*P	Pb	22 01 15.2	-0.8
	5.7nm,0.4s						
KST				*e*S	Sb	22 02 16.4	+3.4
	16nm,0.3s						
KST	Kastek	4.73	41	Pg	Pb	22 01 15.2	-0.8
	5.7nm,0.4s						
KST				Lg	Lg	22 02 16.4	
	16nm,0.3s						
MTBS	Maitube	5.04	44	*e*P	Pb	22 01 20.7	-0.5
	3.6nm,0.1s						
MTBS				*e*S	Sb	22 02 25.5	+3.8
	15nm,0.3s						
MTBS	Maitube	5.04	44	Pg	Pb	22 01 20.7	-0.5
	3.6nm,0.1s						
MTBS				Lg	Lg	22 02 25.5	
	15nm,0.3s						
KRBS	Karabastau	5.09	35	*e*P	Pb	22 01 22.1	+0.1
	2.9nm,0.4s						
KRBS				*e*S	Sb	22 02 28.3	+5.1
	13nm,0.5s						
KRBS	Karabastau	5.09	35	Pg	Pb	22 01 22.1	+0.1
	2.9nm,0.4s						
KRBS				Lg	Lg	22 02 28.3	
	13nm,0.5s						
KNDC	Almaty	5.39	46	⇑Lg	Lg	22 02 36.9	
	23nm,0.6s						
MDOK	Medeo	5.40	47	*e*P	Pb	22 01 27.9	+0.5
	4.8nm,0.3s						
MDOK				*e*S	Sb	22 02 38.2	+6.1
	16nm,0.4s						
MDOK	Medeo	5.40	47	⇑Lg	Lg	22 02 37.6	
	15nm,0.6s						
MDOK	Medeo	5.40	47	Pg	Pb	22 01 27.9	+0.5
	4.8nm,0.3s						
MDOK				Lg	Lg	22 02 38.2	
	16nm,0.4s						
KUU	Kurty	5.54	37	*e*P	Pb	22 01 30.3	+0.6
	2.6nm,0.3s						
KUU				*e*S	Sb	22 02 42.1	+5.8
	10nm,0.5s						
KUU	Kurty	5.54	37	Pg	Pb	22 01 30.3	+0.6
	2.6nm,0.3s						
KUU				Lg	Lg	22 02 42.1	
	10nm,0.5s						
KTBS	Karatobe	5.58	40	*e*P	Pb	22 01 31.1	+0.8
	2.1nm,0.3s						
KTBS				*e*S	Sb	22 02 43.3	+6.1
	27nm,0.5s						
KTBS	Karatobe	5.58	40	Pg	Pb	22 01 31.1	+0.8
	2.1nm,0.3s						
KTBS				Lg	Lg	22 02 43.3	
	27nm,0.5s						
BTLS	Baital	5.74	17	*e*P	Pb	22 01 34.9	+1.9
	1.7nm,0.2s						
BTLS				*e*S	Sg	22 02 50.2	-6.9
	1.8nm,0.3s						
BTLS	Baital	5.74	17	Pg	Pb	22 01 34.9	+1.9
	1.7nm,0.2s						
BTLS				Lg	Lg	22 02 50.2	
	1.8nm,0.3s						
CHKK	Chushkaly	5.83	41	*e*P	Pb	22 01 35.9	+1.2
	2.8nm,0.2s						
CHKK				*e*S	Sg	22 02 51.9	-8.2
	10nm,0.4s						
CHKK	Chushkaly	5.83	41	Pg	Pb	22 01 35.9	+1.2
	2.8nm,0.2s						
CHKK				Lg	Lg	22 02 51.9	
	10nm,0.4s						
SATY	Saty	6.14	53	*e*P	Pb	22 01 41.2	+1.2
	1.8nm,0.2s						
SATY				*e*S	Sb	22 03 01.1	+7.6
	8.3nm,0.5s						
SATY	Saty	6.14	53	Pg	Pb	22 01 41.2	+1.2
	1.8nm,0.2s						
SATY				Lg	Lg	22 03 01.1	
	8.3nm,0.5s						
PDGK	Podgornoye	6.96	55	⇑Lg	Lg	22 03 26.6	
	4.9nm,0.7s						
OTUK	Ortayu	8.69	3	⇓Lg	Lg	22 04 24.1	
	4.1nm,0.8s						
AB31	Akbulak array	12.80	323	⇓Pn	Pn	22 02 57.0	+2.2
	0.1nm,0.3s,baz=130,slow=13,SNR=8.1						

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*KRNET **24** 22:05:38.9±0.1, 39°.55N×73°.80E, mb3.0*
*SOME **24** 22:05:39.8, 39°.65N×73°.88E, h0^{km}*
*ISU **24** 22:05:40, 39°.62N×73°.88E, h30^{km}*
*NNC **24** 22:05:44.6±1.5, 39°.77N×73°.79E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=11.9km s-min=6.3km az=174.0*
ISC 24 22:05:40.5±1.1**, 39°.47N**±0°.05×**73°.68E**±0°.03**, h10**^{km}**, n48, σ1^{s}86**/84**, 33C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	1.26	327	⇑*e*P	Pn	22 06 02.6	-1.6
	baz=22						
OHH				⇑*e*S	Sb	22 06 19.7	-1.0
	baz=22						
OHH	Osh	1.26	327	P	Pn	22 06 02.8	-1.4
OHH				S	Sb	22 06 20.5	-0.2
DRK	Karamyk	1.46	271	⇑*i*P	Pg	22 06 08.0	-0.5
	baz=68						
DRK				⇑*i*S	Sg	22 06 29.4	+2.0
	baz=68						
CHMI	Chimion	1.84	296	P	Pg	22 06 14.8	-1.0
CHMI				S	Sg	22 06 42.1	+2.3
BTK	Batken	2.28	286	⇑*e*P	Pb	22 06 21.0	-0.9
	baz=83						
BTK				⇑*e*S	Sb	22 06 51.2	+1.0
	baz=83						
BTK	Batken	2.28	286	P	Pb	22 06 22.1	+0.2
BTK				S	Sg	22 06 53.4	-0.5
MINT	Mingtut	2.31	296	P	Pb	22 06 22.7	+0.5
MINT				S	Sn	22 06 27.5	-20
MINT				S	Sg	22 06 56.2	+1.6
ARLS	Aral	2.44	11	⇑*i*P	Pn	22 06 20.5	0.0
	baz=10.0						
ARLS				⇑*i*S	Sn	22 06 51.0	+0.5
	baz=10.0						
GAR	Garm	2.66	261	⇑*i*P	Pb	22 06 26.4	-1.8
	baz=60						
GAR				⇑*i*S	Sb	22 07 01.3	+0.4
	baz=60						
ARK	Arkit	2.67	331	⇑*i*P	Pn	22 06 24.9	+1.2
	baz=29						
ARK				⇑*i*S	Sn	22 06 58.4	+2.3
	baz=29						
ARK	Arkit	2.67	331	P	Pb	22 06 25.9	-2.5
ARK				S	Sb	22 07 01.0	-0.3
TRKS	Terek-Say	2.83	318	⇓*i*P	Pn	22 06 26.4	+0.5
	baz=14						
TRKS				⇓*e*S	Sn	22 07 01.3	+1.2
	baz=14						
UCH	Uchtor	2.83	13	⇑*i*P	Pn	22 06 26.3	+0.2
	baz=11						
UCH				⇑*i*S	Sn	22 07 00.6	+0.1
	baz=11						
EKS2	Erkin-Say	3.19	1	⇑*i*P	Pn	22 06 31.4	+0.6
	baz=60						
EKS2				⇑*e*S	Sn	22 07 09.5	+0.5
	baz=60						
AAK	Ala-Archa	3.23	11	⇑*i*P	Pn	22 06 31.7	+0.4
	baz=9.0						
AAK				⇑*i*S	Sn	22 07 10.1	+0.2
	baz=9.0						
MRKS	Merke	3.29	354	*e*P	Pb	22 06 38.8	-0.2
	4.5nm,0.2s						
MRKS				*e*S	Sb	22 07 21.4	+2.2
	38nm,0.3s						
MRKS	Merke	3.29	354	Pg	Pb	22 06 38.8	-0.2
	4.5nm,0.2s						
MRKS				Lg	Lg	22 07 21.4	
	38nm,0.3s						
KBK	Karagaybulak	3.33	16	⇓*i*P	Pn	22 06 32.9	+0.2
	baz=15						
KBK				⇓*e*S	Sn	22 07 12.2	-0.2
	baz=15						
ULHL	Ulahol	3.39	34	⇑*e*P	Pn	22 06 33.5	-0.1
	baz=34						
ULHL				⇑*i*S	Sn	22 07 13.6	-0.3
	baz=34						
FRU1	Bishkek	3.42	12	⇑*i*P	Pn	22 06 34.2	+0.3
	baz=11						
FRU1				⇑*i*S	Sn	22 07 14.8	+0.4
	baz=11						
BOOM	Boomskoye usch	3.47	29	⇑*i*P	Pn	22 06 34.6	-0.1
	baz=28						
BOOM				⇑*i*S	Sn	22 07 15.6	-0.3
	baz=28						
CHMS	Chumysh	3.62	13	⇑Pn	Pn	22 06 39.1	+2.5
	3.2nm,0.8s						
CHMS				⇑Pg	Pb	22 06 46.2	+1.7
	1.9nm,0.4s						
CHMS				⇑Lg	Lg	22 07 29.9	
	11nm,0.6s						
TKM2	Tokmak 2	3.74	22	⇓Pn	Pn	22 06 40.9	+2.5
	2.6nm,0.8s						
TKM2				⇑Pg	Pg	22 06 48.8	-3.4
	9.3nm,1.0s						
TKM2				⇑Lg	Lg	22 07 34.6	
	5.4nm,0.6s						
KDJ	Kajisay	3.76	44	⇓*i*P	Pn	22 06 38.4	-0.3
	baz=44						
KDJ				⇓*i*S	Sn	22 07 22.2	-0.9
	baz=44						
IUG	Iuzhnay	3.85	315	*e*P	Pg	22 06 51.0	-3.3
	223nm,0.5s						
IUG				*e*S	Sg	22 07 42.5	-1.6
	32nm,0.5s						
IUG	Iuzhnay	3.85	315	Pg	Pg	22 06 51.0	-3.3
	223nm,0.5s						
IUG				Lg	Lg	22 07 42.5	
	32nm,0.5s						
KST	Kastek	3.96	25	*e*P	Pb	22 06 49.9	-0.6
	1.7nm,0.2s						
KST				*e*S	Sb	22 07 40.8	+2.2
	16nm,0.7s						
KST	Kastek	3.96	25	Pg	Pb	22 06 49.9	-0.6
	1.7nm,0.2s						
KST				Lg	Lg	22 07 40.8	
	16nm,0.7s						
SGDS	Sogindy	4.04	10	*e*P	Pb	22 06 51.5	-0.3
	4.6nm,0.8s						
SGDS				*e*S	Sb	22 07 43.5	+2.7
	3.8nm,0.2s						
SGDS	Sogindy	4.04	10	Pg	Pb	22 06 51.6	-0.3
	4.6nm,0.8s						
SGDS				Lg	Lg	22 07 43.5	
	3.8nm,0.2s						
MTBS	Maitube	4.20	29	*e*P	Pb	22 06 54.1	-0.4
	3.0nm,0.1s						
MTBS				*e*S	Sb	22 07 47.8	+2.4
	5.0nm,0.1s						
MTBS	Maitube	4.20	29	Pg	Pb	22 06 54.1	-0.4
	3.0nm,0.1s						
MTBS				Lg	Lg	22 07 47.8	
	5.0nm,0.1s						
TNSS	Tian-Shan	4.33	34	*e*P	Pb	22 06 56.9	-0.1
	1.4nm,0.3s						
TNSS				*e*S	Sb	22 07 52.7	+3.3
	2.6nm,0.4s						
TNSS	Tian-Shan	4.33	34	Pg	Pb	22 06 56.9	-0.1
	1.4nm,0.3s						
TNSS				Lg	Lg	22 07 52.7	
	2.6nm,0.4s						
KK31	Karatay Array	4.35	328	⇑Pn	Pn	22 06 48.4	+1.8
	0.4nm,0.2s,baz=130,slow=12,SNR=23						
KK31				⇑Pg	Pb	22 06 58.6	+1.7
	1.1nm,0.4s,baz=139,slow=16,SNR=6.1						
KK31				⇓Sn	Sn	22 07 39.7	+2.4
	2.1nm,0.4s,baz=122,slow=19,SNR=5.5						
KK31				⇑Lg	Lg	22 07 56.5	
	2.7nm,0.5s,baz=142,slow=31,SNR=5.1						
MDOK	Medeo	4.48	33	*e*P	Pb	22 06 59.0	-0.3
	1.2nm,0.2s						
MDOK				*e*S	Sb	22 07 56.2	+2.8
	4.9nm,0.5s						
MDOK	Medeo	4.48	33	⇑Pg	Pg	22 07 03.3	-3.0
	2.1nm,0.6s						
MDOK				Lg	Lg	22 07 59.1	
	5.4nm,0.8s						
MDOK	Medeo	4.48	33	Pg	Pb	22 06 58.9	-0.3
	1.2nm,0.2s						
MDOK				Lg	Lg	22 07 56.2	
	4.9nm,0.5s						
KRBS	Karabastau	4.48	19	*e*P	Pb	22 06 59.6	+0.3
	2.3nm,0.2s						
KRBS				*e*S	Sb	22 07 57.4	+4.0
	6.1nm,0.3s						
KRBS	Karabastau	4.48	19	Pg	Pb	22 06 59.6	+0.3
	2.3nm,0.2s						
KRBS				Lg	Lg	22 07 57.4	
	6.1nm,0.3s						
BRLS	Borolday	4.59	322	*e*P	Pb	22 07 02.8	+1.7
	11nm,0.4s						
BRLS				*e*S	Sg	22 08 02.8	-5.0
	9.0nm,0.4s						
BRLS	Borolday	4.59	322	Pg	Pb	22 07 02.8	+1.7
	11nm,0.4s						
BRLS				Lg	Lg	22 08 02.8	
	9.0nm,0.4s						
KTBS	Karatobe	4.80	27	*e*P	Pb	22 07 04.5	-0.2
	1.9nm,0.4s						
KTBS				*e*S	Sb	22 08 05.8	+3.3
	13nm,0.4s						
KTBS	Karatobe	4.80	27	Pg	Pb	22 07 04.5	-0.2
	1.9nm,0.4s						
KTBS				Lg	Lg	22 08 05.8	
	13nm,0.4s						
KUU	Kurty	4.85	23	*e*P	Pb	22 07 05.8	+0.4
	1.7nm,0.2s						
KUU				*e*S	Sb	22 08 08.2	+4.3
	5.3nm,0.3s						
KUU	Kurty	4.85	23	Pg	Pb	22 07 05.9	+0.4
	1.7nm,0.2s						
KUU				Lg	Lg	22 08 08.2	
	5.3nm,0.3s						
KPKS	Kokpek	5.48	42	*e*P	Pb	22 07 17.4	+1.0
	0.6nm,0.1s						
KPKS				*e*S	Sb	22 08 27.3	+5.1
	6.2nm,0.6s						
PDGK	Podgornoye	5.83	47	⇓Pg	Pg	22 07 27.7	-4.4
	1.6nm,0.8s						
PDGK				⇓Lg	Lg	22 08 40.9	
	2.9nm,0.8s						

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*BJI **24** 22:20:16.6±0.0, 18°.74N×145°.46E, h523^{km}, mb4.7/72, mB4.6/38*
*NEIC **24** 22:20:17.7±1.5, 18°.57N±0°.08×145°.25E±0°.10, h517^{km}±5^{km}, mb4.8/226, Error ellipse: s-maj=13.3km s-min=11.4km az=90.0*
*IDC **24** 22:20:18.8±0.5, 18°.57N×145°.24E, h539^{km}±6^{km}, mb3.9/43, mbtmp4.9/49, Error ellipse: s-maj=8.9km s-min=5.6km az=84.0*
*GCMT **24** 22:20:18.7±0.3, 18°.56N±0°.02×145°.21E±0°.04, h524^{km}±2^{km}, MW5.1/89, Moment Tensor Solution. s89,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.19±.21; $M_{\theta\theta}$3.40±.33; $M_{\phi\phi}$2.79±.39; $M_{r\theta}$0.18±.39; $M_{\theta\phi}$0.85±.33; $M_{\phi r}$3.89±.45; Best double couple: $M_0$6.21200×10^{16} NP1:ϕ_s51.00000°, δ30.00000°, λ-67.00000°. NP2:ϕ_s204.00000°, δ63.00000°, λ-103.00000°. Principal axes: T 4.7820, Plg17.0000°, Azm304.0000°; N 2.8600, Plg11.0000°, Azm210.0000°; P -7.6420, Plg69.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 24 22:20:15.6±0.2**, 18°.55N**±0°.03×**145°.23E**±0°.04**, h500**^{km}**, h501**^{km}**:pP-P, n691, σ1^{s}37**/734**, mb4.7**/185**, 63C-81D, Fault plane solution: NP1:**ϕ_s184.92871°**,** δ86.88081°, λ-104.25412°. **NP2:**ϕ_s82.83931°**,** δ14.58450°, λ-12.47950°. **Principal axes:** T Plg40.2291°, Azm288.1108°; N Plg14.2326°, Azm185.7207°; P Plg46.2860°, Azm80.3363°; **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.95	184	P	P	22 21 46.1	+3.9
	156nm,0.4s,baz=140,slow=1.4,SNR=21						
GUMO				S	S	22 22 53.5	+0.7
	302nm,0.4s,baz=20,slow=23,SNR=25						
GUMO	Guam	4.95	184		P	22 21 45.4	+3.1
GUMO				S	S	22 22 53.9	+1.2
GUMO	Guam	4.95	184	P	P	22 21 45.8	+3.6
JCJ	Chichijima	8.95	342	P	P	22 22 25.9	+4.1
	685nm,0.4s,baz=204,slow=3.8,SNR=182						
JCJ				S	S	22 24 08.6	+2.9
	60nm,0.5s,baz=259,slow=21,SNR=1.4						
JCJ	Chichijima	8.95	342	P	P	22 22 25.4	+3.5
JCJ	Chichijima	8.95	342	P	P	22 22 26.4	+4.5
JHJ2	Mitsune	15.29	343	P	P	22 23 28.6	-0.1
JHJ	Hachijo jima 2	15.31	342	P	P	22 23 28.9	0.0
	56nm,0.3s,baz=137,slow=23,SNR=21						
JHJ				S	S	22 26 03.9	-4.5
	99nm,0.5s,baz=345,slow=18,SNR=7.6						
PATS	Pohnpei	17.26	131	P	P	22 23 50.4	+1.1
JOW	Kunigami	17.67	301	P	P	22 23 54.5	+1.5
	103nm,0.4s,baz=111,slow=22,SNR=65						
JOW	Kunigami	17.67	301	P	P	22 23 54.8	+1.9
JOW	Kunigami	17.67	301	P	P	22 23 55.4	+2.5
JYT	Yasato	18.16	347	P	P	22 23 57.3	0.0
INU	Inuyama	18.25	338	P	P	22 23 59.2	+1.1
INU	Inuyama	18.25	338	P	P	22 23 59.6	+1.5
JGF	Kuroka	18.36	339	P	P	22 24 00.2	+1.1
JSU	Suzuyama	18.56	317	P	P	22 24 02.2	+1.1
MJAR	Matsushiro Arr	18.96	342	P	P	22 24 04.4	-0.2
	18nm,0.5s,baz=166,slow=9.5,SNR=72						
MJAR				S	S	22 27 06.5	-4.7
	1.7nm,0.6s,baz=142,slow=13,SNR=2.9						
MJAR				ScP	ScP	22 30 47.0	-6.3
	0.8nm,0.3s,baz=148,slow=4.8,SNR=6.1						
MJAR	Matsushiro Arr	18.96	342	P	P	22 24 04.7	+0.1
MAJO	Matsushiro	18.96	342	P	P	22 24 05.2	+0.5
MAJO	Matsushiro	18.96	342	P	P	22 24 06.5	+1.9
MJB9	Matsu-Tunnel	18.96	342	P	P	22 24 04.9	+0.2
JNU	Nakatsue	19.39	321	P	P	22 24 09.1	+0.4
	72nm,0.7s,baz=100,slow=4.2,SNR=31						
JNU	Nakatsue	19.39	321	P	P	22 24 09.6	+0.9
JMJ	Miyako jima 2	19.54	292	P	P	22 24 11.5	+1.5
JHS	Saijyo	19.60	329	P	P	22 24 11.5	+0.9
JMM	Marumori	19.63	349	P	P	22 24 12.0	+1.3
JSD	Sado	20.35	344	P	P	22 24 17.9	+0.7
MANU	Manus Island	20.57	174	P	P	22 24 20.0	+0.4
MANU				IAmb	IAmb	22 24 21.1	
	comp=Z,15nm,0.8s						
YOJ	Yonaguni jima	21.48	290	P	P	22 24 28.6	+0.9
YOJ	Yonaguni jima	21.48	290	P	P	22 24 29.0	+1.3
NACB	Ninganchiao	22.70	288	P	P	22 24 39.8	+1.1
NACB				IAmb	IAmb	22 24 50.7	
	comp=Z,32nm,0.8s						
YULB	Yu-li	22.85	286	P	P	22 24 41.6	+1.6
YHNB	Yeheng	22.98	290	P	P	22 24 42.8	+1.5
YHNB	Yeheng	22.98	290	P	P	22 24 43.2	+1.9
TWG	Pinlang	22.99	285	P	P	22 24 42.5	+1.2
TWG				IAmb	IAmb	22 24 48.1	
	comp=Z,32nm,1.0s						
NAWB	Namwon	23.06	320	P	P	22 24 42.5	+0.8
SSLB	Suanglung	23.22	287	P	P	22 24 44.8	+1.4
SSLB	Suanglung	23.22	287	P	P	22 24 45.0	+1.6
TPUB	Ta-pu	23.45	286	P	P	22 24 46.4	+1.0
TPUB	Ta-pu	23.45	286	P	P	22 24 47.1	+1.7
SIJI	Sorong	23.68	217	P	P	22 24 48.0	+0.4
	comp=Z,5.8nm,0.5s,baz=18,slow=8.3,SNR=5.1						
	comp=Z,5.8nm,0.5s						
KSCHJ	Chungju	23.73	324	P	P	22 24 47.9	+0.1
KSCHJ				IAmb	IAmb	22 24 50.5	
	comp=Z,36nm,0.8s						
TJN	Taejon	23.73	322	P	P	22 24 48.3	+0.6
KSRS	Korea Array	24.18	325	P	P	22 24 52.6	+1.0
	comp=Z,24nm,0.8s,baz=147,slow=9.2,SNR=59						
KSRS				ScP	ScP	22 31 01.3	-5.3
	comp=Z,1.3nm,0.7s,baz=143,slow=4.6,SNR=4.1						
	comp=Z,24nm,0.8s						
KSAR	Wonju Array Be	24.19	325	P	P	22 24 52.0	+0.2
KS19	Wonju Array Si	24.24	325	P	P	22 24 52.2	-0.1
KS19				IAmb	IAmb	22 24 54.8	
	comp=Z,35nm,0.9s						
FAKI	Fak Fak	24.87	212	P	P	22 24 58.5	+0.4
FAKI	Fak Fak	24.87	212	P	P	22 24 58.7	+0.5
QZH	Quanzhou	25.52	289	⇑*i*P	P	22 25 05.1	+1.3
QZH				sP	sP	22 27 33.1	+8.7
QZH				S	S	22 28 52.3	-3.2
QZH				pmax	pmax		
	comp=Z,43nm,0.8s						
ASAJ	Asahikawa	25.58	356	P	P	22 25 05.3	+1.3
	comp=Z,11nm,0.6s,baz=199,slow=9.0,SNR=13						
	comp=Z,11nm,0.6s						
JKA	Kamikawa-asahi	25.58	356	P	P	22 25 05.7	+1.6
JKA				IAmb	IAmb	22 25 07.5	
	comp=Z,17nm,0.9s						
LBMI	Labuha	25.83	224	P	P	22 25 09.4	+2.7
	comp=Z,929nmcomp=Z,14nm,0.6s						
PMG	Port Moresby	27.85	176	P	P	22 25 24.9	+0.6
	comp=Z,18nm,0.5s,baz=303,slow=4.6,SNR=5.6						
	comp=Z,18nm,0.5s						
PMG	Port Moresby	27.85	176	P	P	22 25 24.7	+0.3
PMG				IAmb	IAmb	22 25 26.3	
	comp=Z,36nm,1.0s						
USA0B	Ussuriysk Arra	27.88	339	P	P	22 25 25.2	+0.9
USRK	Ussuriysk Ar.	27.88	339	P	P	22 25 25.5	+1.2
	comp=Z,6.3nm,0.6s,baz=156,slow=9.0,SNR=24						
	comp=Z,6.3nm,0.6s						
USRK	Ussuriysk Ar.	27.88	339	P	P	22 25 25.3	+1.0
YSS	Yuzh-Sakhalins	28.40	356	P	P	22 25 28.9	+0.2
YSS				IAmb	IAmb	22 25 30.2	
	comp=Z,19nm,0.4s						
MRSI	Marisa	29.08	234	P	P	22 25 36.5	+1.3
	comp=Z,618nmcomp=Z,49nm,1.1s						
MYLDM	Lahad Datu	29.28	246	P	P	22 25 39.5	+2.5
MYLDM				IAmb	IAmb	22 25 41.6	
	comp=Z,20nm,0.9s						
LUWI	Luwuk	29.44	231	P	P	22 25 37.9	-0.4
TOLI2	Tolitoli	29.59	237	P	P	22 25 40.7	+1.1
TOLI2				IAmb	IAmb	22 25 42.5	
	comp=Z,39nm,1.1s						
TOLI2	Tolitoli	29.59	237	P	P	22 25 41.1	+1.4
CN2	Changchun	30.18	331	*e*P	P	22 25 46.3	+2.0
CN2				*e*S	S	22 30 09.4	+1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
APSI	Ampana	30.19	233	P	P	22 25 46.2	+1.4
	comp=Z,769nmcomp=Z,43nm,0.8s						
TIA	Tai'an	30.37	311	⇓P	P	22 25 47.5	+1.4
TIA				S	S	22 30 08.3	-2.6
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,100nm,6.9s						
WHN	Wuhan	30.42	299	⇓P	P	22 25 48.9	+2.3
WHN				S	S	22 30 10.0	-1.7
MPSI	Mapaga	30.76	237	P	P	22 25 50.5	+0.7
BNX	BinXian	30.88	335	⇓P	P	22 25 51.3	+1.0
BNX				pmax	pmax		
	comp=Z,38nm,0.8s						
BNX				pmax	pmax		
	comp=Z,180nm,4.2s						
CNSH	ChangSha	31.08	294	⇑P	P	22 25 54.8	+2.5
CNSH				S	S	22 30 21.3	-0.7
CNSH				pmax	pmax		
	comp=Z,21nm,0.5s						
COEN	Coen	32.37	184	P	P	22 26 04.5	+1.1
COEN				IAmb	IAmb	22 26 06.0	
	comp=Z,19nm,0.8s						
COEN	Coen	32.37	184	P	P	22 26 04.9	+1.5
KLR	Kul'dur	32.48	343	P	P	22 26 04.8	+0.8
	comp=Z,5.4nm,0.3s,baz=165,slow=8.3,SNR=40						
KLR				ScP	ScP	22 31 26.2	-6.4
	comp=Z,1.4nm,0.8s,baz=172,slow=7.5,SNR=3.7						
	comp=Z,5.4nm,0.3s						
HNS	HongShan	32.64	311	⇑P	P	22 26 07.0	+1.5
HNS				S	S	22 30 38.1	-7.5

HNS				SS	SS	22 33 36.8	-20
HNS				pmax	pmax		
	comp=Z,39nm,0.9s						
BJT	Baijiatuau	32.93	317	P	P	22 26 08.8	+0.9
BJT				IAmb	IAmb	22 26 10.6	
	comp=Z,19nm,0.9s						
BJI	Beijing	32.93	317	P	P	22 26 09.1	+1.1
BJI				sP	sP	22 28 35.6	+4.1
BJI				S	S	22 30 47.8	-2.2
BJI				pmax	pmax		
	comp=Z,13nm,0.7s						
TTSI	Tana Toraja	32.96	232	P	P	22 26 11.0	+2.4
	comp=Z,1µmcomp=Z,52nm,0.8s						
LYN	LuoYang	33.17	305	⇓iP	P	22 26 10.9	+0.8
LYN				S	S	22 30 52.8	-1.1
LYN				SS	SS	22 33 42.0	-20
LYN				pmax	pmax		
	comp=Z,20nm,0.8s						
LYN				pmax	pmax		
	comp=Z,140nm,4.5s						
SMKI	Samarinda	33.38	239	P	P	22 26 14.5	+2.3
	comp=Z,7µmcomp=Z,49nm,0.7s						
QIZ	Qiongzhong	33.47	277	P	P	22 26 13.7	+0.8
QIZ				IAmb	IAmb	22 26 27.6	
	comp=Z,48nm,1.5s						
QIZ	Qiongzhong	33.47	277	P	P	22 26 19.8	+6.9
QIZ				S	S	22 30 58.8	0.0
KDU	Kakadu	33.49	203	P	P	22 26 13.9	+0.9
SPSI	Sidrap Palu	33.61	231	P	P	22 26 14.9	+0.8
	comp=Z,34nm,0.9s						
BNSI	Bone	33.66	230	P	P	22 26 16.4	+1.9
	comp=Z,30nm,1.1s						
MTN	Manton Dam	34.16	205	P	P	22 26 19.5	+0.9
KAPI	Kappang	34.34	229	P	P	22 26 21.5	+1.4
	comp=Z,10nm,0.4s,baz=20,slow=4.0,SNR=6.4						
	comp=Z,10nm,0.4s						
KAPI	Kappang	34.34	229	P	P	22 26 21.0	+0.8
KAPI				IAmb	IAmb	22 26 23.0	
	comp=Z,13nm,0.7s						
TIY	Taiyuan	34.40	311	*e*P	P	22 26 22.5	+2.0
TIY				S	S	22 31 11.6	-1.0
TIY				pmax	pmax		
	comp=Z,21nm,0.5s						
ENH	Enshi	34.44	297	P	P	22 26 21.4	+0.5
ENH				IAmb	IAmb	22 26 23.9	
	comp=Z,44nm,1.2s						
XLT	XiLinHaoTe	35.17	322	*e*P	P	22 26 28.0	+1.1
XLT				PcP	PcP	22 28 44.6	+0.2
XLT				S	S	22 31 22.8	-1.2
XLT				pmax	pmax		
	comp=Z,19nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,3.5s						
XAN	Xi'an	35.80	303	⇑P	P	22 26 33.3	+1.0
XAN				pP	pwP	22 28 05.6	+0.9
XAN				S	S	22 31 29.6	-4.1
XAN				pmax	pmax		
	comp=Z,23nm,0.6s						
XAN				pmax	pmax		
	comp=Z,140nm,5.2s						
PEA0B	Petropavlovsk-	35.83	13	P	P	22 26 33.4	+1.3
PEA0B				IAmb	IAmb	22 26 40.6	
	comp=Z,47nm,1.6s						
PETK	Petropavlovsk-	35.83	13	P	P	22 26 33.3	+1.2
	comp=Z,1.5nm,0.4s,baz=153,slow=8.2,SNR=8.5						
PETK				PcP	PcP	22 28 45.0	-1.0
	comp=Z,2.9nm,0.7s,baz=126,slow=4.1,SNR=2.9						
PETK				ScP	S	22 31 37.9	+4.5
	comp=Z,3.8nm,1.0s,baz=267,slow=2.8,SNR=3.4						
	comp=Z,1.5nm,0.4s						
PETK	Petropavlovsk-	35.83	13	P	P	22 26 32.7	+0.6
GYA	Guiyang	36.38	290	⇓P	P	22 26 39.6	+2.3
GYA				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC	Hu-ho-hao-te	36.39	315	*e*P	P	22 26 38.3	+1.2
HHC				S	S	22 31 37.6	-4.8
HHC				pmax	pmax		
	comp=Z,61nm,0.9s						
HHC				pmax	pmax		
	comp=Z,290nm,6.9s						
HIA	Hailar	36.88	332	P	P	22 26 42.0	+1.1
HIA				IAmb	IAmb	22 26 44.0	
	comp=Z,20nm,0.6s						
KNRA	Kununurra	37.68	207	P	P	22 26 48.3	+0.4
KNRA	Kununurra	37.68	207	P	P	22 26 49.0	+1.2
UBPT	Khong Chiam	38.13	271	P	P	22 26 52.7	+1.1
UBPT				IAmb	IAmb	22 26 55.4	
	comp=Z,12nm,0.7s						
KSM	Kuching	38.22	248	P	P	22 26 52.6	+0.3
KSM				IAmb	IAmb	22 26 53.8	
	comp=Z,36nm,1.5s						
PLAI	Plampang	38.39	227	P	P	22 26 54.1	+0.4
CTA	Charters Tower	38.41	178	P	P	22 26 54.8	+1.0
	comp=Z,16nm,0.6s,baz=0.5,slow=9.1,SNR=24						
	comp=Z,16nm,0.6s						
CTAO	Charters Tower	38.41	178	P	P	22 26 54.8	+1.0
CTAO				IAmb	IAmb	22 26 56.2	
	comp=Z,22nm,0.8s						
SLVN	Son La	38.87	281	P	P	22 26 58.9	+1.2
QIS	Mount Isa	39.26	188	P	P	22 27 01.9	+1.2
CD2	Chengdu	39.41	296	P	P	22 27 03.8	+1.9
CD2				S	S	22 32 24.8	-2.5
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
WB0	Warramunga Arr	39.54	196	P	P	22 27 03.5	+0.6
WB0				IAmb	IAmb	22 27 05.0	
	comp=Z,19nm,0.5s						
WR0	Warramunga Arr	39.68	196	P	P	22 27 04.3	+0.2
WRAB	Tennant Creek	39.71	196	P	P	22 27 04.9	+0.6
WRAB				IAmb	IAmb	22 27 06.5	
	comp=Z,22nm,0.5s						
WRAB	Tennant Creek	39.71	196	P	P	22 27 05.1	+0.8
WRA	Warramunga Arr	39.72	196	P	P	22 27 05.0	+0.6
	comp=Z,12nm,0.5s,baz=18,slow=8.3,SNR=55						
WRA				PcP	PcP	22 28 58.4	-0.4
	comp=Z,6.8nm,0.6s,baz=15,slow=3.7,SNR=14						
WRA				ScP	ScP	22 31 54.5	-5.4
	comp=Z,5.0nm,0.7s,baz=11,slow=4.3,SNR=15						
WRA				S	S	22 32 27.7	-4.2
	comp=Z,1.8nm,0.8s,baz=7.2,slow=12,SNR=4.6						
WRA				PKiKP	PKiKP	22 36 06.5	-2.3
	comp=Z,0.3nm,0.6s,baz=326,slow=1.5,SNR=2.2						
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	39.72	196	P	P	22 27 04.7	+0.3
WRA					ScP	22 31 56.2	-3.7
KMI	Kunming	39.85	287	⇓P	P	22 27 08.8	+3.0
KMI				pP	pwP	22 28 42.4	+1.6
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
SANVU	Saraoutou	40.12	146	P	P	22 27 08.3	+0.6
SANVU	Saraoutou	40.12	146	P	P	22 27 09.2	+1.6
LZH	Lanzhou	40.36	304	⇑P	P	22 27 11.9	+2.3
LZH				pP	pwP	22 28 44.8	+0.3
LZH				PcP	PP	22 29 00.3	+3.2
LZH				S	S	22 32 39.5	-1.8
LZH				SS	SS	22 35 58.8	-4.9
LZH				pmax	pmax		
	comp=Z,89nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,5.2s						
PZH	PanZhiHua	40.79	289	P	P	22 27 15.5	+2.4
PZH				pmax	pmax		
	comp=Z,30nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,5.8s						
SHEM	Shemya Is, Ala	40.86	27	P	P	22 27 14.0	+0.9
	comp=Z,50nm,0.6s,baz=280,slow=17,SNR=1.6						
	comp=Z,50nm,0.6s						
MA2	Magadan	41.17	4	P	P	22 27 15.5	+0.1
	comp=Z,5.7nm,0.4s,baz=176,slow=10,SNR=7.2						
	comp=Z,5.7nm,0.4s						
MA2	Magadan	41.17	4	P	P	22 27 15.8	+0.4
ULN	Ulaanbaatar	42.61	322	P	P	22 27 28.3	+1.0
SONM	Songino Array	42.98	322	P	P	22 27 31.0	+0.8
	comp=Z,8.1nm,0.6s,baz=136,slow=9.2,SNR=22						
SONM				PcP	pwP	22 29 09.0	+3.5
	comp=Z,2.7nm,0.6s,baz=115,slow=3.0,SNR=4.5						
SONM				ScP	ScP	22 32 07.3	-5.4
	comp=Z,1.2nm,0.6s,baz=148,slow=3.5,SNR=3.2						
	comp=Z,8.1nm,0.6s						
SONM	Songino Array	42.98	322	P	P	22 27 31.2	+1.1
AS31	Alice Springs	43.39	195	P	P	22 27 33.9	+0.4
ASAR	Alice Springs	43.39	195	P	P	22 27 33.9	+0.3
	comp=Z,6.8nm,0.4s,baz=14,slow=8.0,SNR=86						
ASAR				PcP	pwP	22 29 10.9	+1.0
	comp=Z,5.6nm,0.6s,baz=36,slow=3.3,SNR=16						
ASAR				ScP	ScP	22 32 10.2	-4.4
	comp=Z,1.4nm,0.7s,baz=12,slow=4.3,SNR=5.4						
ASAR				S	S	22 33 20.9	-4.0
	comp=Z,4.1nm,0.9s,baz=21,slow=17,SNR=15						
ASAR				PKiKP	PKiKP	22 36 09.1	-2.9
	comp=Z,0.3nm,0.4s,baz=264,slow=0.9,SNR=2.0						
	comp=Z,6.8nm,0.4s						
ASAR	Alice Springs	43.39	195	P	P	22 27 33.5	0.0
ASAR					ScP	22 32 10.6	-4.0
CHTO	Chiang Mai	43.75	278	P	P	22 27 37.4	+1.0
CHTO				IAmb	IAmb	22 27 38.4	
	comp=Z,31nm,1.4s						
CHTO	Chiang Mai	43.75	278	P	P	22 27 37.5	+1.1
CMAR	Chiang Mai Arr	43.80	278	P	P	22 27 38.2	+1.4
	comp=Z,25nm,0.8s,baz=69,slow=6.5,SNR=74						
CMAR				ScP	ScP	22 32 11.9	-4.5
	comp=Z,1.1nm,0.6s,baz=75,slow=2.5,SNR=4.2						
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	43.80	278	P	P	22 27 38.7	+1.9
CM31	Chiang Mai Arr	43.80	278	P	P	22 27 38.5	+1.7
CM31				IAmb	IAmb	22 27 40.2	
	comp=Z,31nm,0.8s						
EIDS	Eidsvold	44.03	172	P	P	22 27 39.1	+0.8
GTA	Gaotai	44.28	308	⇑P	P	22 27 41.8	+1.4
GTA				PcP	pP	22 29 14.3	+2.5
GTA				pP	pwP	22 29 18.6	+1.2
GTA				sP	sP	22 30 13.6	+6.2
GTA				ScP	ScP	22 32 15.0	-3.3
GTA				S	S	22 33 35.4	-2.1
GTA				sS	ScS	22 36 36.5	-6.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
SEY	Seymchan	44.62	5	P	P	22 27 43.4	+1.0
	comp=Z,2.7nm,0.5s,baz=173,slow=6.8,SNR=12						
	comp=Z,2.7nm,0.5s						
LIFNC	LIFOU	44.64	150	P	P	22 27 43.4	+0.2
LIFNC				IAmb	IAmb	22 27 45.2	
	comp=Z,32nm,0.8s						
ADK	Adak	44.68	33	P	P	22 27 44.2	+1.1
ADK				IAmb	IAmb	22 27 51.9	
	comp=Z,44nm,1.1s						
ADK	Adak	44.68	33	P	P	22 27 44.9	+1.8
YAK	Yakutsk	44.78	350	P	P	22 27 43.9	+0.2
RMQ	Roma	44.90	176	P	P	22 27 44.8	-0.3
	comp=Z,21nm,0.8s						
GSTR	Great Sitkin T	45.12	33	P	P	22 27 47.0	+0.5
IPM	Ipoh	45.37	258	P	P	22 27 49.9	+0.9
IPM				IAmb	IAmb	22 27 51.5	
	comp=Z,59nm,1.5s						
DZM	Mont Dzumac	45.40	152	P	P	22 27 50.1	+1.0
DZM				IAmb	IAmb	22 27 51.6	
	comp=Z,17nm,0.8s						
DZM	Mont Dzumac	45.40	152	P	P	22 27 51.1	+2.0
KULM	Kulim	45.43	259	P	P	22 27 51.0	+1.6
KULM				IAmb	IAmb	22 27 52.9	
	comp=Z,48nm,1.3s						
YATNC	Mamie plateau,	45.59	151	P	P	22 27 52.4	+1.9
OUENC	Ouen Island, N	45.88	152	P	P	22 27 53.7	+1.0
OUENC				IAmb	IAmb	22 27 55.1	
	comp=Z,19nm,0.8s						
OUENC	Ouen Island, N	45.88	152	P	P	22 27 53.5	+0.8
ATKA	Atka Island	46.15	34	P	P	22 27 55.2	+0.9
PINNC	Pines Island,	46.32	151	P	P	22 27 57.0	+0.9
PINNC				IAmb	IAmb	22 28 09.8	
	comp=Z,67nm,1.4s						
WRKA	Warakurna	46.36	201	P	P	22 27 56.7	+0.3
MBWA	Marble Bar	46.71	214	P	P	22 27 59.3	+0.3
MBWA	Marble Bar	46.71	214	P	P	22 27 59.4	+0.4
KASI	Kota Agung	46.74	243	P	P	22 27 57.7	-1.7
	comp=Z,48nm,0.7s						
PSA00	Pilbara Seismi	46.99	213	P	P	22 28 01.4	+0.3
PSA00	Pilbara Seismi	46.99	213	P	P	22 28 01.0	-0.1
PSA00				IAmb	IAmb	22 28 17.1	
	comp=Z,21nm,1.6s						
PSA00	Pilbara Seismi	46.99	213	P	P	22 28 01.7	+0.6
GOMU	GeErMu	47.55	302	P	P	22 28 08.5	+2.8
GOMU				pmax	pmax		
	comp=Z,24nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,56nm,5.2s						
PSI	Prapat	47.94	257	P	P	22 28 10.2	+1.5
	comp=Z,4.8nm,0.4s,baz=134,slow=8.3,SNR=3.7						
	comp=Z,4.8nm,0.4s						
MNSI	Mandailing Nat	48.13	254	P	P	22 28 11.1	+1.2
MSVF	Nonsavu	48.39	136	P	P	22 28 13.8	+2.0
	comp=Z,18nm,0.7s,baz=268,slow=6.0,SNR=16						
	comp=Z,18nm,0.7s						
MSVF	Nonsavu	48.39	136	P	P	22 28 13.0	+1.2
MSVF				IAmb	IAmb	22 28 15.0	
	comp=Z,30nm,0.8s						
MSVF	Nonsavu	48.39	136	P	P	22 28 13.6	+1.8
XMIS	Christmas Isla	48.55	237	P	P	22 28 12.2	-0.8
ARMA	Armidale	49.08	173	P	P	22 28 17.3	+0.6
ARMA				IAmb	IAmb	22 28 32.9	
	comp=Z,44nm,1.6s						
LCRK	Leigh Creek	49.18	188	P	P	22 28 17.9	+0.5
NIKH	Nikolski High	49.38	35	P	P	22 28 18.7	+0.2
	baz=244						
SISI	Saibi	49.47	252	P	P	22 28 19.5	-0.3
	comp=Z,47nm,0.7s						
SHL	Shillong	49.66	288	P	P	22 28 21.9	+0.5
MULG	Mulgathing	49.73	193	P	P	22 28 21.7	+0.3
GSI	Gunungsitoli	49.76	255	P	P	22 28 22.5	+0.4
GSI	Gunungsitoli	49.76	255	P	P	22 28 23.0	+1.0
GSI	Gunungsitoli	49.76	255	P	P	22 28 22.6	+0.6
CMSA	Cobar Meteorol	49.80	179	P	P	22 28 22.8	+0.8
LSA	Lhasa	50.20	293	P	P	22 28 27.8	+2.2
LSA				IAmb	IAmb	22 28 29.6	
	comp=Z,16nm,0.6s						
LSA	Lhasa	50.20	293	P	P	22 28 27.1	+1.5
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
STKA	Stephens Creek	50.26	184	P	P	22 28 24.8	-0.5
	comp=Z,3.9nm,0.4s,baz=0.3,slow=7.8,SNR=12						
	comp=Z,3.9nm,0.4s						
STKA	Stephens Creek	50.26	184	P	P	22 28 25.2	-0.1
STKA	Stephens Creek	50.26	184	P	P	22 28 25.6	+0.3
SPIA	Saint Paul Isl	50.68	30	P	P	22 28 27.9	-0.2
	baz=239						
GIRL	Giralia	50.94	218	P	P	22 28 31.6	+1.2
GIRL	Giralia	50.94	218	P	P	22 28 31.8	+1.4
UNV	Unalaska Valle	51.03	35	P	P	22 28 31.1	+0.5
	baz=246						
BILL	Bilibino	51.24	10	P	P	22 28 32.4	+0.4
AKUT	Akutan	51.54	35	P	P	22 28 35.0	+0.7
AKUT				IAmb	IAmb	22 29 03.1	
	comp=Z,89nm,1.3s						
FORT	Forrest	51.75	199	P	P	22 28 36.6	+0.4
FORT				IAmb	IAmb	22 28 38.0	
	comp=Z,40nm,0.7s						
FORT	Forrest	51.75	199	P	P	22 28 36.6	+0.4
BBOO	Buckleboo	51.82	190	P	P	22 28 36.5	-0.2
BBOO				IAmb	IAmb	22 29 01.5	
	comp=Z,74nm,1.7s						
BBOO	Buckleboo	51.82	190	P	P	22 28 36.7	0.0
NAPP	Napperby	51.89	188	P	P	22 28 37.7	+0.6
HTT	Hallett	52.04	187	P	P	22 28 38.8	+0.5
FALS	False Pass	53.09	34	P	P	22 28 45.1	-0.3
	baz=248						
TAPN	Taplejung	53.30	291	*e*P	P	22 28 49.0	+1.1
	comp=Z,22nm,0.4s						
CAN	Canberra	53.70	176	P	P	22 28 50.7	+0.5
CAN				IAmb	IAmb	22 28 53.3	
	comp=Z,90nm,1.6s						
CAN	Canberra	53.70	176	P	P	22 28 50.9	+0.8
GAMB	Gambell	53.75	22	P	P	22 28 51.0	+0.9
	baz=233						
TIXI	Tiksi	53.96	354	P	P	22 28 50.9	-0.5
	comp=Z,2.8nm,0.3s,baz=97,slow=12,SNR=12						
	comp=Z,2.8nm,0.3s						
TIXI	Tiksi	53.96	354	P	P	22 28 51.0	-0.4
WMQ	Urumqi	54.07	311	*e*P	P	22 28 55.1	+2.3
WMQ				pmax	pmax		
	comp=Z,48nm,0.8s						
RAMN	Ramite	54.31	290	*e*P	P	22 28 56.1	+1.1
	comp=Z,14nm,0.5s						
JIRN	Jiri	54.62	291	*e*P	P	22 28 58.4	+1.0
	comp=Z,85nm,0.5s						
SDPT	Sand Point	54.84	35	P	P	22 28 57.9	0.0
SDPT	Sand Point	54.84	35	P	P	22 28 57.7	-0.2
	baz=250						
MORW	Morawa	55.10	211	P	P	22 28 59.9	-0.2
MORW	Morawa	55.10	211	P	P	22 28 59.9	-0.2
ARPS	Mount Arapiles	55.12	183	P	P	22 29 00.4	+0.4
CHNA	Chernabura Isl	55.16	35	P	P	22 28 59.9	-0.2
	baz=252						
PKI	Pulchoki	55.32	291	*e*P	P	22 29 02.6	+0.4
	comp=Z,36nm,0.4s						
PKIN	Phulchoki	55.33	291	*e*P	P	22 29 02.6	+0.4
	comp=Z,26nm,0.3s						
DMN	Daman	55.59	291	*e*P	P	22 29 04.6	+0.6
	comp=Z,28nm,0.5s						
TOO	Toolangi	55.82	180	P	P	22 29 05.0	0.0
TOO				IAmb	IAmb	22 29 07.8	
	comp=Z,47nm,1.6s						
GKN	Gorkha	55.97	292	*e*P	P	22 29 07.2	+0.7
	comp=Z,30nm,0.4s						
BLDU	Ballidu	56.06	210	P	P	22 29 06.6	-0.1
TNA	Tin City	56.11	21	P	P	22 29 07.3	+0.8
	baz=236						
CHGN	Chignik	56.25	34	P	P	22 29 08.0	+0.4
CHGN				IAmb	IAmb	22 29 08.6	
	comp=Z,50nm,1.6s						
CHGN	Chignik	56.25	34	P	P	22 29 07.7	+0.1
	baz=252						
KLBR	Kellerberrin	56.40	208	P	P	22 29 08.8	-0.3
ANM	Nome	56.50	23	P	P	22 29 09.2	-0.1
	baz=240						
DANN	Dangsing	56.72	292	*e*P	P	22 29 12.8	+1.0
MUN	Mundaring	57.43	209	P	P	22 29 16.3	+0.1
CHIR	Chirikof Islan	57.61	35	P	P	22 29 17.0	0.0
	baz=255						
NWAO	Narrogin (SRO)	57.77	208	P	P	22 29 18.1	-0.3
NWAO				IAmb	IAmb	22 29 31.9	
	comp=Z,99nm,1.8s						
ZAA0	Zalesovo Array	57.86	323	P	P	22 29 18.7	-0.1
ZALV	Zalesovo Beam	57.86	323	P	P	22 29 18.7	-0.1
	comp=Z,7.2nm,0.5s,baz=107,slow=7.4,SNR=30						
ZALV				PcP	PcP	22 30 03.5	-1.1
	comp=Z,1.6nm,0.5s,baz=95,slow=2.8,SNR=3.9						
	comp=Z,7.2nm,0.5s						
ZALV	Zalesovo Beam	57.86	323	P	P	22 29 18.9	+0.1
MK31	Makanchi Array	58.24	314	P	P	22 29 22.7	+1.1
MKAR	Makanchi Array	58.24	314	P	P	22 29 22.5	+0.9
	comp=Z,11nm,0.4s,baz=89,slow=8.2,SNR=202						
MKAR				PcP	PcP	22 30 05.4	-0.9
	comp=Z,3.5nm,0.8s,baz=80,slow=6.4,SNR=3.6						
	comp=Z,11nm,0.4s						
MKAR	Makanchi Array	58.24	314	P	P	22 29 22.4	+0.8
MAKZ	Makanchi	58.46	314	P	P	22 29 24.1	+1.1
MAKZ				IAmb	IAmb	22 29 25.6	
	comp=Z,25nm,0.6s						
SII	Sitkinak Islan	58.58	34	P	P	22 29 24.3	+0.7
SII	Sitkinak Islan	58.58	34	P	P	22 29 22.9	-0.7
	baz=256						
SII	Sitkinak Islan	58.58	34	P	P	22 29 25.4	+1.8
P18K	Big Mountain,	58.81	31	P	P	22 29 25.5	+0.3
	baz=253						
N18K	Kilae Creek	58.89	29	P	P	22 29 26.3	+0.6
N18K	Kilae Creek	58.89	29	P	P	22 29 26.5	+0.8
	baz=252						
SVW2	Sparrevohn	59.17	29	P	P	22 29 28.1	+0.6
OHAK	Old Harbor	59.22	34	P	P	22 29 28.5	+0.6
	baz=256						
Q19K	Cape Douglas,	59.47	32	P	P	22 29 28.7	-1.0
	baz=255						
TTA	Tatalina	59.58	27	P	P	22 29 30.8	+0.4
	baz=250						
N19K	Bonanza Creek	59.59	30	P	P	22 29 31.6	+1.1
N19K	Bonanza Creek	59.59	30	P	P	22 29 31.4	+0.9
	baz=253,SNR=7.8						
KDAK	Kodiak Island	59.72	33	P	P	22 29 31.2	0.0
	comp=Z,6.1nm,0.3s,baz=278,slow=2.5,SNR=36						
	comp=Z,6.1nm,0.3s						
KDAK	Kodiak Island	59.72	33	P	P	22 29 31.5	+0.2
	baz=256						
L19K	White Mountain	59.84	28	P	P	22 29 32.7	+0.7
	baz=252,SNR=11						
GCSA	Galena City Sc	59.87	25	P	P	22 29 31.5	-0.6
	baz=248						
M19K	Big River Lodg	59.96	28	P	P	22 29 33.7	+0.9
	baz=252,SNR=6.3						
O20K	Slope Mountain	60.27	31	P	P	22 29 35.7	+0.7
	baz=255						
L20K	Farewell, AK	60.37	28	P	P	22 29 36.0	+0.5
	baz=252						
M20K	Styx River	60.53	29	P	P	22 29 36.9	+0.3
	baz=254						
K20K	Telida	60.55	27	P	P	22 29 37.7	+1.0
K20K	Telida	60.55	27	P	P	22 29 37.7	+1.0
	baz=252,SNR=16						
PRZ	Przheval'sk	60.73	309	P	P	22 29 40.3	+1.8
PRZ				IAmb	IAmb	22 29 42.1	
	comp=Z,41nm,0.7s						
J20K	Nowinta River	60.78	26	P	P	22 29 39.2	+1.0
	baz=251,SNR=23						
KURK	Kurchatov	61.08	318	P	P	22 29 41.0	+0.5
KURK				IAmb	IAmb	22 29 42.5	
	comp=Z,49nm,1.0s						
BRSE	Bradley Lake S	61.11	31	P	P	22 29 40.8	+0.3
	baz=257						
KURBB	Kurchatov Arra	61.13	318	P	P	22 29 41.2	+0.4
	comp=Z,48nm,0.5s,baz=95,slow=7.4,SNR=430						
	comp=Z,48nm,0.5s						
TARG	Taragay, Kyrgy	61.16	308	P	P	22 29 42.0	+0.3
PPLA	Purkeypile	61.23	28	P	P	22 29 41.8	+0.4
	baz=254,SNR=7.6						
CAST	Castle Rocks	61.43	27	P	P	22 29 43.0	+0.5
CAST	Castle Rocks	61.43	27	P	P	22 29 43.0	+0.5
	baz=254,SNR=14						
CHUM	Lake Minchumin	61.46	27	P	P	22 29 43.3	+0.7
	baz=253						
IMAR	Indian Mountai	61.53	24	P	P	22 29 43.6	+0.5
NRIK	Noril'sk	61.59	340	P	P	22 29 43.5	+0.1
	comp=Z,3.6nm,0.4s,baz=107,slow=8.9,SNR=6.6						
	comp=Z,3.6nm,0.4s						
NRIK	Noril'sk	61.59	340	P	P	22 29 43.5	+0.1
KDJ	Kajisay	61.63	308	P	P	22 29 45.7	+1.2
KDJ				IAmb	IAmb	22 29 47.2	
	comp=Z,30nm,1.2s						
H21K	Melozitna Rive	61.80	25	P	P	22 29 45.6	+0.7
	baz=252,SNR=13						
SEW	Seward	61.83	31	P	P	22 29 45.0	-0.1
	baz=258						
RC01	Rabbit Creek A	61.90	30	P	P	22 29 45.5	-0.1
RC01				IAmb	IAmb	22 29 47.0	
	comp=Z,15nm,0.6s						
RC01	Rabbit Creek A	61.90	30	P	P	22 29 45.2	-0.4
	baz=257,SNR=5.8						
CUT	Chulitna	61.96	28	P	P	22 29 45.4	-0.5
	baz=256						
I21K	Tanana	61.98	25	P	P	22 29 46.8	+0.8
	baz=253,SNR=12						
BPAW	Bear Paw Mtn.	62.08	26	P	P	22 29 47.1	+0.4
	baz=254,SNR=17						
TRF	Thorofare Moun	62.21	27	P	P	22 29 47.4	-0.4
TRF				IAmb	IAmb	22 29 48.6	
	comp=Z,32nm,1.4s						
TRF	Thorofare Moun	62.21	27	P	P	22 29 47.3	-0.6
	baz=255,SNR=8.0						
PMR	Palmer	62.30	29	P	P	22 29 47.4	-0.8
	baz=257						
ULHL	Ulahol	62.33	308	P	P	22 29 50.0	+1.0
	SNR=11						
BOOM	Boomskoye usch	62.55	309	P	P	22 29 51.4	+1.0
BOOM				IAmb	IAmb	22 29 53.0	
	comp=Z,18nm,0.6s						
A21K	Barrow	62.57	18	P	P	22 29 50.4	+0.7
	baz=245						
KNK	Knik Glacier	62.57	30	P	P	22 29 49.9	-0.1
	baz=258,SNR=6.4						
KSH	Kashi	62.59	305	P	P	22 29 54.6	+3.9
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
SML	Sawmill	62.72	29	P	P	22 29 50.8	-0.1
	baz=258,SNR=5.9						
TKM2	Tokmak 2	62.80	309	P	P	22 29 53.2	+1.1
	SNR=20						
RND	Reindeer	62.83	28	P	P	22 29 51.4	-0.3
WAT1	Susitna Watana	62.83	28	P	P	22 29 51.3	-0.4
	baz=257						
M23K	Glacier View	62.99	29	P	P	22 29 52.4	-0.3
	baz=259						
NEA2	Nenana	63.02	26	P	P	22 29 52.5	-0.3
	baz=256						
I23K	Minto, Yukon-K	63.03	26	P	P	22 29 53.6	+0.8
I23K				IAmb	IAmb	22 29 54.6	
	comp=Z,52nm,1.6s						
I23K	Minto, Yukon-K	63.03	26	P	P	22 29 53.2	+0.4

	baz=255,SNR=13						
GLI	Glacier Island	63.12	30	P	P	22 29 53.2	-0.3
	baz=260						
H23K	Yukon River	63.13	25	P	P	22 29 54.1	+0.6
	baz=255,SNR=8.7						
WAT6	Susitna Watana	63.15	29	P	P	22 29 53.6	-0.3
	baz=258,SNR=13						
SCM	Sheep Creek Mo	63.19	29	P	P	22 29 54.3	+0.3
	baz=259						
Q23K	Middleton Isla	63.24	32	P	P	22 29 54.7	+0.4
	baz=261						
COLD	Coldfoot	63.26	23	P	P	22 29 55.1	+0.8
	baz=254,SNR=7.2						
KBK	Karagaybulak	63.28	309	P	P	22 29 56.0	+0.9
	SNR=19						
DHY	Denali Highway	63.41	28	P	P	22 29 55.4	-0.1
DHY	Denali Highway	63.41	28	P	P	22 29 55.1	-0.5
	baz=258,SNR=7.5						
MDM	Murphy Dome	63.45	26	P	P	22 29 55.8	+0.2
FRU1	Bishkek	63.51	309	P	P	22 29 57.0	+0.6
FRU1				IAmb	IAmb	22 29 58.5	
	comp=Z,12nm,0.6s						
USP	Ospenovka	63.60	310	P	P	22 29 57.6	+0.6
	SNR=7.7						
PALK	Pallekele	63.61	269	P	P	22 29 57.8	+0.3
	comp=Z,12nm,0.9s,baz=23,slow=1.8,SNR=2.2						
	comp=Z,12nm,0.9s						
UCH	Uchtor	63.61	309	P	P	22 29 59.2	+1.6
	SNR=26						
AAK	Ala-Archa	63.62	309	P	P	22 29 58.2	+0.9
	SNR=8.9						
AAK	Ala-Archa	63.62	309	P	P	22 29 57.9	+0.7
EYAK	Cordova Ski Ar	63.72	31	P	P	22 29 57.8	+0.5
EYAK	Cordova Ski Ar	63.72	31	P	P	22 29 57.5	+0.2
	baz=261						
M24K	Tolsona, Glenn	63.77	29	P	P	22 29 58.1	+0.3
	baz=260						
KLU	Klutina	63.79	30	P	P	22 29 58.2	+0.3
	baz=260						
H24K	Noodor Dome	63.80	25	P	P	22 29 58.5	+0.6
H24K				IAmb	IAmb	22 29 59.8	
	comp=Z,11nm,0.7s						
H24K	Noodor Dome	63.80	25	P	P	22 29 58.3	+0.4
	baz=256,SNR=18						
POKR	Poker Plat Res	63.82	26	P	P	22 29 56.9	-1.0
	baz=257						
HDA	Harding Lake	63.87	27	P	P	22 29 56.7	-1.6
	baz=258						
TOLK	Toolik Lake Re	63.89	22	P	P	22 29 59.5	+1.0
TOLK				IAmb	IAmb	22 30 00.7	
	comp=Z,67nm,1.6s						
TOLK	Toolik Lake Re	63.89	22	P	P	22 29 59.4	+1.0
	baz=254,SNR=18						
URZ	Urewera	63.95	152	P	P	22 29 58.1	-1.0
	comp=Z,8.2nm,0.6s,baz=54,slow=2.2,SNR=5.6						
	comp=Z,8.2nm,0.6s						
URZ	Urewera	63.95	152	P	P	22 29 58.5	-0.6
URZ				IAmb	IAmb	22 30 26.2	
	comp=Z,50nm,1.2s						
URZ	Urewera	63.95	152	P	P	22 29 59.4	+0.3
IL31		63.97	26	P	P	22 29 57.9	-0.9
IL31				IAmb	IAmb	22 29 59.0	
	comp=Z,40nm,1.4s						
ILAR	Eielson Array	63.97	26	P	P	22 29 57.6	-1.3
	comp=Z,4.9nm,0.4s,baz=248,slow=5.9,SNR=60						
ILAR				pP	pwP	22 31 47.3	-0.5
	comp=Z,0.9nm,0.9s,baz=251,slow=5.9,SNR=1.6						
	comp=Z,4.9nm,0.4s						
EKS2	Erkin-Say	64.14	309	P	P	22 30 01.6	+1.0
	SNR=7.0						
AML	Almayashu	64.22	308	P	P	22 30 02.7	+1.2
	SNR=30						
PAX	Paxson	64.25	28	P	P	22 30 00.8	0.0
	baz=260,SNR=24						
K24K	Donnelly Dome	64.26	27	P	P	22 30 00.6	-0.2
	baz=260,SNR=7.3						
HARP	HAARP	64.29	29	P	P	22 30 01.5	+0.4
	baz=261,SNR=6.2						
BMRM	Bremner River	64.33	31	P	P	22 30 01.6	+0.2
	baz=262,SNR=8.3						
N25K	Chitina, Valde	64.43	30	P	P	22 30 02.4	+0.4
	baz=262						
BKZ	Black Stump Fm	64.44	153	P	P	22 30 01.8	-0.5
BKZ	Black Stump Fm	64.44	153	P	P	22 30 02.3	0.0
J25K	Salcha River,	64.58	27	P	P	22 30 01.8	-1.1
	baz=260,SNR=13						
RIDG	Independent Ri	64.65	28	P	P	22 30 03.1	-0.2
	baz=260						
BGLC	Bering Glacier	64.88	32	P	P	22 30 05.4	+0.7
	baz=264						
VRDI	Verde Repeater	64.92	30	P	P	22 30 05.3	+0.1
VRDI				IAmb	IAmb	22 30 06.7	
	comp=Z,37nm,1.5s						
SCRK	Sand Creek	65.07	27	P	P	22 30 05.9	-0.1
SCRK				IAmb	IAmb	22 30 07.0	
	comp=Z,35nm,1.5s						
SCRK	Sand Creek	65.07	27	P	P	22 30 05.8	-0.2
	baz=261,SNR=18						
MCARA	McCarthy VSAT	65.15	30	P	P	22 30 06.7	+0.2
	baz=263						
L26K	Log Cabin Wild	65.21	28	P	P	22 30 07.2	+0.4
	baz=262,SNR=8.9						
NIL	Nilore	65.21	299	P	P	22 30 07.3	-0.1
M26K	Nabesna, AK	65.29	29	P	P	22 30 07.3	-0.1
	baz=263,SNR=7.1						
J26L	Joseph Creek	65.33	27	P	P	22 30 07.4	-0.3
	baz=261,SNR=19						
BMAR	Burnt Mountain	65.43	24	P	P	22 30 09.2	+1.1
MESA	MESA	65.55	32	P	P	22 30 09.9	+0.8
	baz=265						
GRNC	Granite Creek	65.69	31	P	P	22 30 10.7	+0.5
GRNC				IAmb	IAmb	22 30 11.1	
	comp=Z,11nm,0.8s						
M27K	Edge Creek, AK	65.80	29	P	P	22 30 11.0	+0.3
	baz=264,SNR=11						
DRK	Karamyk	65.82	306	P	P	22 30 12.2	+0.7
L27K	Beaver Creek,	65.90	28	P	P	22 30 11.4	+0.2
L27K	Beaver Creek,	65.90	28	P	P	22 30 11.4	+0.2
	baz=264,SNR=18						
K27K	Chicken	65.91	27	P	P	22 30 11.5	+0.4
	baz=263						
CTG	Chitna Glacier	65.92	31	P	P	22 30 12.0	+0.6
	baz=265,SNR=7.8						
CTGM	Chitina Glacie	65.92	31	P	P	22 30 12.1	+0.7
CTGM				IAmb	IAmb	22 30 13.2	
	comp=Z,59nm,1.7s						
BCAR	Beaver Creek A	65.92	28	P	P	22 30 11.5	+0.2
LOGN	Logan Glacier	66.07	31	P	P	22 30 12.9	+0.4
LOGN				IAmb	IAmb	22 30 14.3	
	comp=Z,62nm,1.7s						
BVCY	Beaver Creek	66.28	29	P	P	22 30 13.5	-0.1
	baz=265						
RPZ	Rata Peaks	66.33	160	P	P	22 30 12.7	-1.3
	comp=Z,21nm,0.8s,baz=56,slow=4.0,SNR=6.8						
	comp=Z,21nm,0.8s						
BRVK	Borovoye	66.37	320	P	P	22 30 14.8	+0.6
BRVK				IAmb	IAmb	22 30 16.2	
	comp=Z,14nm,0.8s						
PINM	Pinnacle	66.39	32	P	P	22 30 14.6	+0.3
	baz=266						
EGAK	Eagle	66.39	27	P	P	22 30 14.4	+0.3
EGAK	Eagle	66.39	27	P	P	22 30 15.6	+1.4
	baz=263,SNR=9.6						
YUK3	Moose Creek	66.41	30	P	P	22 30 14.9	+0.3
	baz=265,SNR=16						
KK31	Karatay Array	66.52	310	P	P	22 30 16.1	+0.7
KK31				IAmb	IAmb	22 30 17.5	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	66.52	310	P	P	22 30 16.2	+0.8
BTK	Batken	66.52	306	P	P	22 30 15.5	-0.1
PNL	Peninsula	66.79	32	P	P	22 30 17.2	+0.4
	baz=267						
GAR	Garm	67.01	305	P	P	22 30 19.3	+0.7
GAR				IAmb	IAmb	22 30 20.2	
	comp=Z,22nm,0.5s						
DAWY	Dawson	67.09	28	P	P	22 30 18.9	+0.3
DAWY				IAmb	IAmb	22 30 20.4	
	comp=Z,45nm,1.6s						
DAWY	Dawson	67.09	28	P	P	22 30 19.1	+0.6
	baz=265,SNR=6.5						
YUK4	Talbot Arm	67.25	30	P	P	22 30 20.3	+0.6
	baz=267						
YUK6	Outpost Mounta	67.36	31	P	P	22 30 21.4	+0.9
	baz=268,SNR=6.4						
J29M	Klondike Camp	67.63	27	P	P	22 30 22.5	+0.6
	baz=266						
I29M	Ogilvie Camp,	67.65	26	P	P	22 30 22.2	+0.2
	baz=266,SNR=13						
HYT	Haines Junctio	67.78	31	P	P	22 30 24.0	+1.0
HYT				IAmb	IAmb	22 30 25.1	
	comp=Z,70nm,1.6s						
HYT	Haines Junctio	67.78	31	P	P	22 30 23.8	+0.9
	baz=268,SNR=15						
CHGR	Chuyangaron	67.94	305	P	P	22 30 24.9	+0.5
N30M	Aishikik Lake	68.00	30	P	P	22 30 25.1	+0.9
	baz=268,SNR=20						
M30M	Minto, Yukon	68.17	29	P	P	22 30 26.0	+0.8
	baz=268,SNR=12						
PLBC	Pleasant Camp	68.33	33	P	P	22 30 26.8	+0.7
	baz=270,SNR=7.1						
O30N	Mendenhall	68.47	31	P	P	22 30 26.7	-0.4
	baz=270						
KBL	Kabul	68.56	301	P	P	22 30 28.2	-0.1
N31M	Braeburn, Yuko	68.63	30	P	P	22 30 28.8	+0.8
	baz=270,SNR=6.0						
SKAG	Skagway	68.86	33	P	P	22 30 30.1	+0.8
	baz=271						
WHY	Whitehorse	69.07	31	P	P	22 30 31.3	+0.6
WHY				IAmb	IAmb	22 30 32.9	
	comp=Z,41nm,1.6s						
WHY	Whitehorse	69.07	31	P	P	22 30 31.3	+0.6
	baz=271,SNR=9.6						
M31M	Drury Creek, Y	69.29	30	P	P	22 30 32.3	+0.3
M31M	Drury Creek, Y	69.29	30	P	P	22 30 32.1	+0.2
	baz=270,SNR=7.4						
INK	Inuvik	69.68	23	P	P	22 30 34.0	-0.1
	comp=Z,10nm,0.9s,baz=288,slow=12,SNR=20						
	comp=Z,10nm,0.9s						
INK	Inuvik	69.68	23	P	P	22 30 34.0	-0.1
INK				IAmb	IAmb	22 30 35.1	
	comp=Z,45nm,1.6s						
INK	Inuvik	69.68	23	P	P	22 30 33.9	-0.1
	baz=269						
P33M	Teslin, Yukon	70.10	32	P	P	22 30 37.1	+0.2
	baz=273						
CRAG	Craig	70.22	37	P	P	22 30 37.0	-0.5
	baz=274						
WRAK	Wrangell Islan	70.58	36	P	P	22 30 40.2	+0.5
	baz=274						
MMPY	Sheldon Lake,	70.73	29	P	P	22 30 40.7	+0.2
	baz=273						
DIB	Dawson Inlet,	70.78	39	P	P	22 30 40.8	-0.1
DIB				IAmb	IAmb	22 30 42.7	
	comp=Z,19nm,1.0s						
S34M	Telegraph Cree	71.12	34	P	P	22 30 43.8	+0.9
	baz=275,SNR=7.2						
DLBC	Dease Lake	71.66	33	P	P	22 30 46.8	+0.7
DLBC				IAmb	IAmb	22 30 48.4	
	comp=Z,60nm,1.6s						
T35M	Bob Quinn	71.69	35	P	P	22 30 46.3	+0.1
	baz=276						
TGTN	Hyland Airport	72.22	30	P	P	22 30 49.1	-0.2
	baz=276						
A36M	Sachs Harbour	72.36	19	P	P	22 30 50.0	+0.2
A36M				IAmb	IAmb	22 30 50.5	
	comp=Z,17nm,0.8s						
A36M	Sachs Harbour	72.36	19	P	P	22 30 49.8	-0.1
	baz=276						
ARU	Arti	72.93	325	P	P	22 30 53.4	0.0
	comp=Z,5.8nm,0.4s,baz=89,slow=6.9,SNR=39						
	comp=Z,5.8nm,0.4s						
ARU	Arti	72.93	325	P	P	22 30 53.2	-0.2
ARU				IAmb	IAmb	22 30 55.0	
	comp=Z,16nm,0.6s						
C36M	Paulatuk	73.05	22	P	P	22 30 53.5	-0.3
C36M				IAmb	IAmb	22 30 54.7	
	comp=Z,52nm,1.6s						
C36M	Paulatuk	73.05	22	P	P	22 30 53.5	-0.3
	baz=277						
ABKAR	Akbulak array	73.14	317	P	P	22 30 54.8	0.0
ABKAR				IAmb	IAmb	22 30 55.3	
	comp=Z,12nm,0.5s						
ABKAR	Akbulak array	73.14	317	P	P	22 30 54.7	-0.1
HRA	Herat	74.12	301	P	P	22 31 01.2	+0.2
AKTO	Aktyubinsk	74.18	318	P	P	22 31 00.2	-0.4
	comp=Z,4.6nm,0.5s,baz=94,slow=7.3,SNR=17						
	comp=Z,4.6nm,0.5s						
GEYT	Alibeck	76.62	306	P	P	22 31 14.7	+0.1
	comp=Z,2.5nm,0.6s,baz=96,slow=12,SNR=4.8						
	comp=Z,2.5nm,0.6s						
GEYT	Alibeck	76.62	306	P	P	22 31 14.9	+0.2
GYA0B	ALIBECK ARRAY	76.62	306	P	P	22 31 14.9	+0.3
NLWA	Neilton Lookou	77.18	44	P	P	22 31 18.4	+0.9
E03A	Lebam	77.58	45	P	P	22 31 20.6	+1.0
D03D	Eldon	77.66	44	P	P	22 31 21.1	+1.1
	baz=284,SNR=17						
LLLB	Lillooet	77.68	41	P	P	22 31 20.7	+0.5
LLLB				IAmb	IAmb	22 31 22.0	
	comp=Z,49nm,1.6s						
EUNU	Eureka	77.93	8	P	P	22 31 21.3	+0.3
D04E	Lakebay	77.95	44	P	P	22 31 21.7	+0.1
	baz=284						
I02E	Swisshome, OR	77.97	47	P	P	22 31 22.2	+0.4
	baz=284						
G03D	McMinnville, O	78.11	46	P	P	22 31 23.2	+0.7
	baz=284						
J01E	Myrtle Point	78.15	48	P	P	22 31 23.6	+0.8
J01E	Myrtle Point	78.15	48	P	P	22 31 23.1	+0.4
	baz=284						
E04D	Cinebar	78.25	45	P	P	22 31 24.0	+0.8
	baz=284,SNR=5.6						
YKA	Yellowknife Ar	78.32	28	P	P	22 31 22.9	-0.4
	comp=Z,4.8nm,0.4s,baz=287,slow=5.1,SNR=40						
YKA				pP	pwP	22 33 16.9	+2.0
	comp=Z,1.6nm,0.8s,baz=288,slow=5.6,SNR=3.7						
	comp=Z,4.8nm,0.4s						
YKA	Yellowknife Ar	78.32	28	P	P	22 31 22.6	-0.7
I03D	Drain, OR	78.42	48	P	P	22 31 24.7	+0.5
	baz=285						
K02D	Willamette Mer	78.45	49	P	P	22 31 24.6	+0.1
	baz=285						
D05A	Enumclaw	78.47	44	P	P	22 31 25.1	+0.7
KSXB	Camp Six Broad	78.52	50	P	P	22 31 25.9	+1.0
KSXB				IAmb	IAmb	22 31 27.0	
	comp=Z,45nm,1.5s						
H04D	Lebanon	78.64	47	P	P	22 31 25.8	+0.5
H04D				IAmb	IAmb	22 31 27.6	
	comp=Z,106nm,1.6s						
H04D	Lebanon	78.64	47	P	P	22 31 25.6	+0.3
	baz=285						
L02F	Cave Junction	78.66	49	P	P	22 31 26.0	+0.4
	baz=285						
KMPM	Mount Pierce	78.69	51	P	P	22 31 25.8	-0.1
KMPM				IAmb	IAmb	22 31 28.1	
	comp=Z,102nm,1.6s						
HOPEN	Hopen	78.74	348	*e*P	P	22 31 24.4	-0.9
KHMM	Horse Mountain	78.86	51	P	P	22 31 27.3	+0.4
KHMM				IAmb	IAmb	22 31 29.2	
	comp=Z,70nm,1.5s						
HUMO	Hull Mountain	78.98	49	P	P	22 31 28.4	+1.1
HUMO				IAmb	IAmb	22 31 29.3	
	comp=Z,56nm,1.6s						
H04A	Detroit Lake	78.98	47	P	P	22 31 27.0	-0.3
I04A	Tendick Farm,	79.06	47	P	P	22 31 27.8	+0.1
	baz=285,SNR=7.0						
F05D	White Salmon	79.16	45	P	P	22 31 28.7	+0.5
F05D	White Salmon	79.16	45	P	P	22 31 27.7	-0.5
	baz=285						
HOOD	Mount Hood Mea	79.18	46	P	P	22 31 28.8	+0.3
HOOD				IAmb	IAmb	22 31 30.8	
	comp=Z,50nm,1.5s						
SPA0	Spitsbergen Ar	79.24	351	*e*P	P	22 31 28.0	0.0
SPB2	Spitsbergen Ar	79.24	351	P	P	22 31 27.8	-0.1
SPB2				IAmb	IAmb	22 31 44.3	
	comp=Z,39nm,1.5s						
KCPM	Cahto Peak	79.28	52	P	P	22 31 29.8	+0.7
KBS	Kingsbay	79.37	352	P	P	22 31 28.7	+0.2
KBS				IAmb	IAmb	22 31 49.0	
	comp=Z,34nm,1.2s						
KBS	Kingsbay	79.37	352	*e*P	P	22 31 28.8	+0.2
YBH	Yreka Blue Hor	79.39	50	P	P	22 31 29.8	+0.3
YBH				IAmb	IAmb	22 31 31.5	
	comp=Z,64nm,1.6s						
J04D	Umpqua Nationa	79.41	48	P	P	22 31 30.0	+0.2
	baz=286,SNR=5.1						
G05D	Wamic, OR	79.43	46	P	P	22 31 29.9	+0.3
	baz=286						
L04D	Klamath Falls	79.55	49	P	P	22 31 30.7	+0.2
L04D				IAmb	IAmb	22 31 32.0	
	comp=Z,39nm,1.2s						
L04D	Klamath Falls	79.55	49	P	P	22 31 30.6	+0.2
	baz=286,SNR=8.3						
I05D	Terrebonne, OR	79.66	47	P	P	22 31 31.0	+0.1
	baz=286						
RES	Resolute Bay	79.67	14	P	P	22 31 30.5	+0.3
RES				IAmb	IAmb	22 31 31.4	
	comp=Z,44nm,1.5s						
K04D	Chiloquin, OR	79.83	48	P	P	22 31 31.9	0.0
	baz=286						
J05D	Fort Rock, OR	80.02	48	P	P	22 31 33.4	+0.5
	baz=286,SNR=20						
PINE	Pine Mountain	80.08	47	P	P	22 31 33.8	+0.5
HSPB	Hornsund (broa	80.16	350	*e*P	P	22 31 33.0	+0.2
HAWA	Hanford	80.31	44	P	P	22 31 34.2	0.0
HAWA				IAmb	IAmb	22 31 35.8	
	comp=Z,58nm,1.8s						
ORV	Oroville	80.86	51	P	P	22 31 36.9	-0.3
ORV				IAmb	IAmb	22 31 39.0	
	comp=Z,31nm,1.1s						
MOD	Modoc Plateau	81.07	49	P	P	22 31 38.1	-0.3
NEW	Newport	81.32	42	P	P	22 31 39.4	-0.1
	baz=288						
KLMR	Klimovskoe	81.37	332	*e*P	P	22 31 36.9	-2.4
KLMR				AMP		22 31 39.0	
	comp=Z,12nm,0.9s						
BEKR	Beckworth	81.62	51	P	P	22 31 40.9	-0.4
BEKR				IAmb	IAmb	22 31 42.3	
	comp=Z,71nm,1.7s						
SAO	San Andreas Ge	81.70	54	P	P	22 31 41.8	+0.2
KEV	Kevo	81.93	342	P	P	22 31 41.3	-0.7
MPK	Martis Peak	82.03	51	P	P	22 31 43.5	-0.1
MPK				IAmb	IAmb	22 31 45.8	
	comp=Z,36nm,1.0s						
WVOR	Wild Horse Val	82.09	48	P	P	22 31 43.3	-0.4
BMO	Blue Mountains	82.26	45	P	P	22 31 44.0	-0.4
BMO				IAmb	IAmb	22 31 45.7	
	comp=Z,65nm,1.6s						
HAMF	Hammerfest	82.38	343	*e*P	P	22 31 44.7	+0.4
PNTR	Pine Nut	82.41	51	P	P	22 31 45.4	0.0
PNTR				IAmb	IAmb	22 31 47.7	
	comp=Z,27nm,0.7s						
ARA0	ARCESS Array S	82.50	342	*e*P	P	22 31 44.2	-0.8
ARCES	ARCESS Array B	82.50	342	P	P	22 31 44.2	-0.7
	comp=Z,4.9nm,0.6s,baz=69,slow=6.6,SNR=48						
	comp=Z,4.9nm,0.6s						
ARCES	ARCESS Array B	82.50	342	P	P	22 31 44.3	-0.7
TULEG	Thule	82.92	8	P	P	22 31 47.2	+0.3
TULEG	Thule	82.92	8	*i* P	P	22 31 46.9	-0.1
TULEG				IAmb	IAmb	22 31 47.7	
	comp=Z,2.8nm,0.5s						
PLID	Pearl Lake	83.06	45	P	P	22 31 48.0	-0.6
MDPB	Devils Postpil	83.25	53	P	P	22 31 49.5	-0.2
MDPB				IAmb	IAmb	22 31 51.1	
	comp=Z,35nm,1.6s						
KTK1	Kautokeino	83.46	342	*e*P	P	22 31 49.0	-0.8
PKM	Mcpherson Peak	83.53	56	P	P	22 31 51.0	-0.1
	baz=288						
NVAR	Mina Array Bea	83.58	52	P	P	22 31 51.6	+0.3
	comp=Z,10nm,0.6s,baz=274,slow=5.4,SNR=93						
NVAR				pP	pwP	22 33 47.0	+2.0
	comp=Z,1.2nm,0.7s,baz=286,slow=4.5,SNR=3.0						
	comp=Z,10nm,0.6s						
NVAR	Mina Array Bea	83.58	52	P	P	22 31 51.3	0.0
NV11	Mina Array Sit	83.69	52	P	P	22 31 51.6	-0.2
NV11				IAmb	IAmb	22 31 53.4	
	comp=Z,53nm,1.6s						
BMN	Battle Mountai	83.73	50	P	P	22 31 51.8	-0.1
MFID	Camas Ranch	83.73	46	P	P	22 31 51.7	-0.1
MFID				IAmb	IAmb	22 31 53.9	
	comp=Z,28nm,0.8s						
VES	Vestal, Richgr	83.80	54	P	P	22 31 52.4	+0.2
	baz=288						
MSO	Missoula	83.83	43	P	P	22 31 52.0	-0.2
	baz=290						
JETT	Jettan, Norway	83.93	343	*e*P	P	22 31 51.5	-0.6
TIN	Tinemaha, Big	84.07	53	P	P	22 31 53.7	0.0
	baz=289						
ARVC	Arvin	84.22	55	P	P	22 31 54.0	-0.3
	baz=289						
TRO	Tromso	84.28	344	*e*P	P	22 31 52.7	-1.1
ISA	Isabella, Lake	84.33	54	P	P	22 31 54.2	-0.7
	baz=289						
CWC	Cottonwood Cre	84.38	54	P	P	22 31 55.0	-0.3
	baz=289						
DAG	Danmarks Havn	84.38	356	*i* P	P	22 31 52.0	-2.2
DAG				IAmb	IAmb	22 31 54.7	
	comp=Z,5.0nm,0.6s						
OSI	Osito Audit: C	84.47	55	P	P	22 31 55.1	-0.5
	baz=289						
TPH	Tonopah	84.50	52	P	P	22 31 55.6	-0.3
HLID	Hailey	84.65	46	P	P	22 31 56.4	-0.1
HLID				IAmb	IAmb	22 31 58.5	
	comp=Z,16nm,1.1s						
HLID	Hailey	84.65	46	P	P	22 31 56.6	+0.1
	baz=290,SNR=24						
GRAC	Grapevine Rang	84.74	53	P	P	22 31 56.5	-0.3
	baz=289						
DECC	Green Verdugo	84.89	56	P	P	22 31 56.3	-1.4
	baz=289						
EDW2	Edwards Air Fo	84.95	55	P	P	22 31 57.5	-0.5
	baz=289						
LRMC	Laurel Mtn Rad	85.00	54	P	P	22 31 58.6	+0.3
	baz=289						
ELK	Elko	85.05	49	P	P	22 31 58.4	-0.1
ELK				IAmb	IAmb	22 32 00.0	
	comp=Z,65nm,1.6s						
CIS	Catalina Islan	85.10	57	P	P	22 31 57.9	-0.8
	baz=289						
SCI2	San Clemente I	85.13	57	P	P	22 31 57.2	-1.5
	baz=289						
FURC	Furnace Creek,	85.30	53	P	P	22 31 59.7	+0.3
	baz=290,SNR=12						
BFSC	Mount Baldy Ra	85.42	56	P	P	22 31 59.9	-0.5
	baz=289						
TPNV	Topopah Spring	85.60	53	P	P	22 32 00.9	-0.3
TPNV	Topopah Spring	85.60	53	P	P	22 32 01.2	0.0
	baz=290,SNR=31						
R11A	Troy Canyon, C	85.62	51	P	P	22 32 01.3	+0.1
	baz=290,SNR=9.1						
RRX	Edison Barstow	85.73	55	P	P	22 32 01.8	+0.1
	baz=290						
GSC	Goldstone, Bar	85.73	54	P	P	22 32 01.8	0.0
	baz=290,SNR=7.2						
BOZ	Bozeman (W)	85.77	43	P	P	22 32 01.6	-0.2
BOZ				IAmb	IAmb	22 32 03.0	
	comp=Z,20nm,1.4s						
BOZ	Bozeman (W)	85.77	43	P	P	22 32 01.3	-0.5
	baz=292,SNR=8.0						
KBZ	Khabaz	85.93	315	P	P	22 32 01.4	-1.0
	comp=Z,4.1nm,0.7s,baz=153,slow=2.8,SNR=9.1						
	comp=Z,4.1nm,0.7s						
SHOC	Shoshone, Teco	85.94	54	P	P	22 32 02.2	-0.5
	baz=290						
KIV	Kislovodsk	85.99	315	P	P	22 32 02.3	-0.6
KIV				IAmb	IAmb	22 32 04.5	
	comp=Z,18nm,1.5s						
BBRC	Big Bear Solar	85.99	55	P	P	22 32 02.1	-1.1
	baz=290						
MURC	Murrieta	86.00	56	P	P	22 32 02.3	-0.7
	baz=290						
EGMT	Eagleton	86.02	41	P	P	22 32 02.3	-0.6
	baz=293						
HEC	Hector,Ludlow	86.25	55	P	P	22 32 04.4	+0.1
	baz=290						
109C	Camp Elliot, M	86.30	57	P	P	22 32 04.1	-0.3
	baz=290						
TUQ	Turquoise Moun	86.36	54	P	P	22 32 04.8	-0.1
	baz=290						
HVU	Hansel Valley	86.42	47	P	P	22 32 04.8	-0.2
HVU				IAmb	IAmb	22 32 06.6	
	comp=Z,12nm,0.9s						
STEI	Steigen	86.42	343	*e*P	P	22 32 03.2	-1.0
PFO	Pinyon Flats O	86.57	56	P	P	22 32 05.4	-0.5
PFO				IAmb	IAmb	22 32 06.9	
	comp=Z,32nm,1.4s						
PFO	Pinyon Flats O	86.57	56	P	P	22 32 04.9	-1.0
	baz=290						
TPFO	Pinon Flats	86.58	56	P	P	22 32 05.0	-0.8
	baz=290						
LOF	Lofoten	86.74	344	*e*P	P	22 32 05.8	+0.1
FAUS	Fauske	86.79	343	*e*P	P	22 32 06.0	0.0
GMRC	Granite Mounta	86.79	54	P	P	22 32 06.8	-0.1
	baz=290,SNR=16						
BELC	Belle Mtn. Jos	86.80	55	P	P	22 32 06.5	-0.4
	baz=290,SNR=8.4						
FIA1	FINESS Array S	86.83	335	P	P	22 32 04.2	-2.1
FIA1				IAmb	IAmb	22 32 05.3	
	comp=Z,24nm,1.6s						
FINES	FINESS Array B	86.83	335	P	P	22 32 04.2	-2.1
	comp=Z,5.0nm,0.5s,baz=62,slow=4.5,SNR=58						

	comp=Z,5.0nm,0.5s						
FINES	FINESS Array B	86.83	335	P	P	22 32 04.4	-1.8
MONP2	Monument Peak	86.84	56	P	P	22 32 06.9	-0.3
	baz=290,SNR=5.6						
DBG	Daneborg	86.88	356	*i* P	P	22 32 04.7	-1.6
DBG				IAmb	IAmb	22 32 06.1	
	comp=Z,3.2nm,0.4s						
H17A	Grant Village	86.92	44	P	P	22 32 08.7	+1.2
H17A				IAmb	IAmb	22 32 10.5	
	comp=Z,21nm,1.4s						
H17A	Grant Village	86.92	44	P	P	22 32 07.1	-0.3
	baz=293						
FLWY	Flagg Ranch	86.96	44	P	P	22 32 08.1	+0.5
FLWY				IAmb	IAmb	22 32 10.3	
	comp=Z,38nm,1.5s						
DUG	Dugway, Tooele	86.97	49	P	P	22 32 07.3	-0.3
DUG	Dugway, Tooele	86.97	49	P	P	22 32 07.7	0.0
	baz=292,SNR=20						
IKP	In-Ko-Pah, Jac	87.17	57	P	P	22 32 08.7	+0.1
	baz=290						
SWSC	Sam W. Stewart	87.32	56	P	P	22 32 08.0	-1.1
	baz=290						
HWUT	Hardware Ranch	87.32	47	P	P	22 32 09.0	-0.3
HWUT				IAmb	IAmb	22 32 10.6	
	comp=Z,51nm,1.8s						
BC3	Big Chuckawall	87.34	55	P	P	22 32 09.5	0.0
	baz=290,SNR=5.4						
IRM	Iron Mountain	87.41	55	P	P	22 32 09.8	+0.1
	baz=291,SNR=10						
RLMT	Red Lodge	87.49	43	P	P	22 32 10.5	+0.4
RLMT				IAmb	IAmb	22 32 12.0	
	comp=Z,8.6nm,0.8s						
RLMT	Red Lodge	87.49	43	P	P	22 32 09.6	-0.5
	baz=294,SNR=9.9						
NEE2	Needles Airpor	87.60	54	P	P	22 32 10.4	-0.1
	baz=291						
UPNV	Upernavik	87.78	6	*i* P	P	22 32 07.9	-2.6
UPNV				IAmb	IAmb	22 32 10.0	
	comp=Z,2.8nm,0.4s						
KONS	Konsvik	88.02	343	*e*P	P	22 32 11.7	0.0
W13A	Hualapai Mount	88.04	54	P	P	22 32 12.4	-0.4
GLA	Glamis	88.05	56	P	P	22 32 12.5	-0.2
	baz=291						
PDMCI	Parker Dam,Lak	88.13	54	P	P	22 32 13.1	+0.1
	baz=291,SNR=7.3						
VSU	Vasula	88.22	332	*e*P	P	22 32 11.4	-1.4
BW06	Boulder Array	88.24	45	P	P	22 32 12.8	-0.9
	baz=294						
PD31	Pinedale Array	88.24	45	P	P	22 32 12.6	-1.0
PDAR	Pinedale Array	88.24	45	P	P	22 32 12.8	-0.9
	comp=Z,1.1nm,0.6s,baz=245,slow=1.5,SNR=14						
PDAR				pP	pwP	22 34 11.5	+3.5
	comp=Z,0.3nm,0.7s,baz=294,slow=4.6,SNR=2.6						
	comp=Z,1.1nm,0.6s						
GURO	Guroymak-BITLI	88.48	310	P	P	22 32 13.8	-1.0
LAO	LASA Array	88.76	41	P	P	22 32 15.4	-0.4
LAO	LASA Array	88.76	41	P	P	22 32 15.3	-0.4
	baz=296						
SUMG	Summit	89.06	1	P	P	22 32 16.6	-0.4
SUMG				IAmb	IAmb	22 32 23.3	
	comp=Z,14nm,1.7s						
SUMG	Summit	89.06	1	*i* P	P	22 32 16.7	-0.3
SUMG				IAmb	IAmb	22 32 19.4	
	comp=Z,2.5nm,0.6s						
DGMT	Dagmar	89.19	39	P	P	22 32 16.5	-1.1
	baz=297						
WUAZ	Wupatki	89.79	53	P	P	22 32 20.1	-0.8
	baz=293						
IDID	Didziasalis	89.95	330	*e*P	P	22 32 20.6	-0.4
214A	Organ Pipe Nat	90.03	56	P	P	22 32 22.3	+0.4
	baz=292,SNR=6.3						
ISAL	Salakas	90.10	330	*e*P	P	22 32 21.0	-0.7
NACGM	Naroch	90.16	329	⇑*e*P	P	22 32 21.0	-0.9
	baz=56						
IIGN	Ignalina	90.18	330	*e*P	P	22 32 21.2	-0.8
O20A	White River Ci	90.22	47	P	P	22 32 22.4	-0.4
	baz=295,SNR=5.2						
K22A	Casper	90.32	44	P	P	22 32 22.7	-0.5
	baz=296						
PABE	Paberze	91.15	331	P	P	22 32 25.2	-1.2
PABE	Paberze	91.15	331	*e*P	P	22 32 25.6	-0.9
W18A	Petrified Fore	91.18	52	P	P	22 32 26.7	-0.7
	baz=294						
TBLU	Trondheim	91.22	341	*e*P	P	22 32 25.5	-1.2
RAYN	Ar Rayn	91.24	295	P	P	22 32 26.2	-1.5
MVCO	Mesa Verde	91.25	50	P	P	22 32 27.4	-0.2
	baz=294						
RSSD	Black Hills	91.29	42	P	P	22 32 27.0	-0.7
RSSD	Black Hills	91.29	42	P	P	22 32 26.7	-1.0
	baz=298						
N23A	Red Feather La	91.48	46	P	P	22 32 28.9	+0.1
	baz=296						
TUC	Tucson	91.48	55	P	P	22 32 28.4	-0.3
TUC				IAmb	IAmb	22 32 30.4	
	comp=Z,26nm,1.8s						
TUC	Tucson	91.48	55	P	P	22 32 28.7	0.0
	baz=293						
SMCO	Snowmass	91.51	48	P	P	22 32 28.9	-0.2
SMCO				IAmb	IAmb	22 32 30.9	
	comp=Z,12nm,0.9s						
MDND	Maddock	92.18	38	P	P	22 32 30.9	-0.5
	baz=301						
ISCO	Idaho Springs	92.19	47	P	P	22 32 32.0	-0.1
ISCO	Idaho Springs	92.19	47	P	P	22 32 32.0	-0.1
	baz=296						
S22A	4UR Ranch, Cre	92.23	49	P	P	22 32 32.0	-0.2
S22A	4UR Ranch, Cre	92.23	49	P	P	22 32 32.3	0.0
	baz=296,SNR=7.6						
ICESG	Greenland Ices	92.53	2	*e*P	P	22 32 31.0	-2.1
ICESG				IAmb	IAmb	22 32 32.6	
	comp=Z,3.0nm,0.6s						
NB2	NORSAR Subarra	92.55	339	P	P	22 32 30.8	-2.1
	comp=Z,0.9nm,0.6s,baz=44,slow=4.4						
NB2	NORSAR Subarra	92.55	339	P	P	22 32 30.8	-2.1
	baz=44,slow=4.4						
NOA	NORSAR Array B	92.55	339	P	P	22 32 30.7	-2.2
	comp=Z,0.4nm,0.4s,baz=46,slow=4.5,SNR=3.3						
	comp=Z,0.4nm,0.4s						
BNN	Bunyan	92.77	312	P	P	22 32 32.9	-1.6
Q24A	Divide	92.88	47	P	P	22 32 34.3	-1.0
	baz=297						
AKN	Aaknes	93.02	342	*e*P	P	22 32 34.6	-0.4
SDCO	Great Sand Dun	93.17	49	P	P	22 32 36.2	-0.4
SDCO	Great Sand Dun	93.17	49	P	P	22 32 35.7	-0.9
	baz=296						
ANMO	Albuquerque	93.70	51	P	P	22 32 38.5	-0.4
ANMO				IAmb	IAmb	22 32 41.0	
	comp=Z,13nm,1.7s						
ANMO	Albuquerque	93.70	51	P	P	22 32 38.7	-0.2
	baz=296						
121A	Cookes Peak, D	93.72	54	P	P	22 32 38.4	-0.6
	baz=295						
BR131	Keskin Array S	93.89	314	P	P	22 32 38.0	-1.6
BRTR	Keskin Array B	93.89	314	P	P	22 32 37.2	-2.5
	comp=Z,1.7nm,0.7s,baz=78,slow=3.4,SNR=9.3						
BRTR				PKKPbc	PKKPdf	22 49 37.7	-0.6
	comp=Z,0.6nm,0.6s,baz=206,slow=4.9,SNR=3.9						
	comp=Z,1.7nm,0.7s						
BRTR	Keskin Array B	93.89	314	P	P	22 32 38.4	-1.2
FOO	Floro	94.05	342	*e*P	P	22 32 40.0	+0.4
AGMN	Agassiz Nation	94.06	36	P	P	22 32 38.5	-1.5
	baz=304						
T25A	Trinidad	94.22	49	P	P	22 32 40.0	-1.3
	baz=297						
SUE	Sulen	94.56	342	*e*P	P	22 32 39.8	-2.2
KSCO	Kaye Shedlock'	94.61	46	P	P	22 32 42.4	-0.5
	baz=298						
BLS5	Blasjo	95.33	340	*e*P	P	22 32 45.6	+0.1
MNTX	Cornudas Mount	95.92	54	P	P	22 32 48.6	-0.3
MNTX	Cornudas Mount	95.92	54	P	P	22 32 48.5	-0.3
	baz=296						
ECSD	EROS Data Cent	96.12	40	P	P	22 32 48.1	-1.4
	baz=303						
VNDA	Vanda	96.37	176	P	P	22 32 49.7	0.0
	comp=Z,0.8nm,0.9s,baz=332,slow=5.2,SNR=3.5						
	comp=Z,0.8nm,0.9s						
VNDA	Vanda	96.37	176	P	P	22 32 49.7	0.0
VNDA				IAmb	IAmb	22 33 20.9	
	comp=Z,7.7nm,1.8s						
EYMN	Ely	96.65	34	P	P	22 32 50.1	-1.6
	baz=307						
MSTX	Muleshoe	96.86	51	P	P	22 32 52.2	-0.9
	baz=298						
AMTX	Amarillo	97.23	50	P	P	22 32 53.7	-1.0
	baz=298						
TXAR	Lajitas Array	98.28	55	P	Pdif	22 32 59.4	-0.2
	comp=Z,0.4nm,0.5s,baz=263,slow=2.1,SNR=8.5						
TXAR				PKiKP	PKiKP	22 37 28.0	-1.1
	comp=Z,0.2nm,0.5s,baz=349,slow=0.9,SNR=2.2						
TXAR				PKKPbc	PKKPbc	22 49 28.4	-0.6
	comp=Z,0.3nm,0.7s,baz=123,slow=6.1,SNR=4.3						
	comp=Z,0.4nm,0.5s						
SCIA	State Center	99.21	40	P	Pdif	22 33 02.1	-1.2
	baz=305						
WMOK	Wichita Mounta	99.38	49	P	Pdif	22 33 03.0	-1.2
	baz=300						
GERES	GERESS Array B	100.26	330	PKKPbc	PKKPbc	22 49 20.6	-3.7
	comp=Z,0.1nm,0.3s,baz=211,slow=2.3,SNR=3.6						
JFWS	Jewell Farm	100.39	38	P	Pdif	22 33 07.3	-1.2
	baz=308						
CCM	Cathedral Cave	102.68	42	P	Pdif	22 33 17.5	-1.3
	baz=306						
MIAR	Mount Ida	103.12	46	P	Pdif	22 33 20.1	-0.7
	baz=304						
W41B	Gary Mavity, V	103.68	45	P	Pdif	22 33 22.3	-0.9
	baz=305						
SFIN	Lafayette	103.82	39	P	Pdif	22 33 23.5	-0.3
	baz=309						
TZTN	Tazewell	108.42	40	P	PKiKP	22 37 47.6	+0.3
	baz=311						
LRAL	Lakeview Retre	108.45	44	P	PKiKP	22 37 47.6	+0.2
	baz=308						
LBNH	Lisbon	108.88	27	P	PKiKP	22 37 48.6	+0.7
	baz=323						
HRV	Adam Dziewonsk	110.42	28	P	PKiKP	22 37 51.1	+0.2
	baz=323						
PAL	Palisades	110.50	31	P	PKiKP	22 37 51.2	+0.2
	baz=320						
NHSC	New Hope	112.77	40	P	PKiKP	22 37 55.7	+0.2
	baz=313						
ESDC	Sonseca Array	115.33	334	PKKPbc	PKKPbc	22 48 35.6	-1.9
	comp=Z,0.2nm,0.6s,baz=223,slow=2.2,SNR=4.5						
ESDC				PKKPab	PKKPbc	22 48 43.5	+6.0
	comp=Z,1.0nm,0.7s,baz=244,slow=4.4,SNR=7.7						
BELA	Belgrano 2	120.64	180	PKPdf	PKPdf	22 38 07.8	-1.6
TROLL	Troll, Antarti	122.35	193	PKPdf	PKPdf	22 38 12.1	-0.8
SNAA	Sanae	123.69	192	PKPdf	PKPdf	22 38 14.3	-1.2
SNAA	Sanae	123.69	192	PKPdf	PKPdf	22 38 14.2	-1.2
BOSA	Boshof	124.57	248	PKP	PKPdf	22 38 17.2	-1.3
	comp=Z,2.3nm,0.8s,baz=344,slow=1.4,SNR=3.6						
VNA2	Neumayer--Watz	125.14	191	PKPdf	PKPdf	22 38 17.5	-0.7
	baz=283,slow=1.0						
VNA2	Neumayer--Watz	125.14	191	SKPdf	SKPdf	22 41 02.3	-3.5
VNA3	Neumayer Olymp	125.25	190	PKPdf	PKPdf	22 38 17.2	-1.1
SMAI	San Martin Ant	126.41	166	PKPdf	PKPdf	22 38 19.9	-0.7
TORD	Torodi Ar. Bea	132.20	309	PKP	PKPdf	22 38 31.7	-1.5
	comp=Z,1.3nm,0.5s,baz=25,slow=1.9,SNR=27						
TORD				SKPbc	SKPbc	22 41 07.3	-5.6
	comp=Z,5.1nm,0.7s,baz=28,slow=2.6,SNR=19						
TORD	Torodi Ar. Bea	132.20	309		PKPdf	22 38 32.1	-1.1
ZARC	Zaragoza, Cauc	132.74	60	PKPdf	PKPdf	22 38 33.2	-1.1
BAUV	El Baul	137.29	53	PKPdf	PKPdf	22 38 40.8	-1.9
DBIC	Dimbokro	141.29	308	PKhKP	PKPpre	22 38 43.1	
	comp=Z,7.7nm,0.6s,baz=63,slow=3.5,SNR=15						
DBIC				SKPbc	SKPbc	22 41 34.5	-5.2
	comp=Z,3.7nm,0.5s,baz=31,slow=3.2,SNR=4.9						
PLCA	Paso Flores	142.22	134	PKhKP	PKPpre	22 38 47.0	
	comp=Z,10nm,0.9s,baz=227,slow=4.5,SNR=17						
PLCA				SKPbc	SKPbc	22 41 36.5	-4.8
	comp=Z,1.9nm,0.6s,baz=263,slow=2.5,SNR=4.1						
PLCA	Paso Flores	142.22	134	PKPdf	PKPdf	22 38 47.5	-3.5
GO05	Huala	143.25	124	PKPdf	PKPab	22 38 50.7	0.0
ML02	Panimavida	143.42	125		PKPab	22 38 51.3	0.0
VA05	Santo Domingo	143.87	122		PKPbc	22 38 52.1	-0.9
VA01	Torpederas	144.01	121		PKPbc	22 38 52.9	-0.5
BO01	Tunca	144.09	123		PKPbc	22 38 53.3	-0.4
MT01	Popeta	144.11	122		PKPbc	22 38 53.0	-0.8
MT09	Talagante	144.34	122		PKPbc	22 38 53.6	-1.1
MT02	Curacav	144.36	122		PKPbc	22 38 53.8	-0.8
VA06	Catapilco	144.41	120		PKPbc	22 38 53.6	-1.1
ROC1	El Roble	144.53	121		PKPbc	22 38 54.4	-1.1
CO06	Fray Jorge	144.53	117		PKPbc	22 38 53.9	-1.3
BO04	La Punta	144.59	123	PKPdf	PKPdf	22 38 54.8	-0.5
PEL	Peldehue	144.75	121		PKPdf	22 38 54.9	-0.7
LMEL	Las Melosas	144.95	123		PKPdf	22 38 56.0	0.0
CO02	Combarbal	144.96	118		PKPdf	22 38 55.9	-0.2
VA03	San Esteban	144.96	121		PKPdf	22 38 56.0	0.0
CO05	La Serena	145.01	116		PKPdf	22 38 55.8	-0.2
GO04	Tololo Observa	145.34	116		PKPdf	22 38 57.0	+0.1
LCO	Las Campanas	145.63	114		PKPdf	22 38 58.4	+0.9
CO01	Juntas del Tor	145.98	116		PKPdf	22 38 59.1	+1.0
AC01	Pan de Azucar	146.09	109		PKPdf	22 38 59.2	+1.2
AC06	Mina Casimiro	146.18	112		PKPdf	22 38 60.0	+1.8
GO03	Copiap	146.25	112		PKPdf	22 38 60.0	+1.7
PB10	IPOC Station P	146.29	105		PKPdf	22 39 00.3	+1.9
PB12	IPOC Station P	146.33	96		PKPdf	22 38 58.1	-0.6
PB14	IPOC Station P	146.38	107	PKPdf	PKPdf	22 38 58.5	-0.5
TA01	Diego Aracena	146.61	99		PKPdf	22 38 58.6	-0.4
PATCX	Punta Patache	146.65	100		PKPdf	22 38 59.0	-0.2
PB04	IPOC Station P	146.68	103		PKPdf	22 38 59.6	+0.3
ZON	Zonda	146.81	120		PKPdf	22 39 00.1	+1.0
PB02	IPOC Station P	146.90	101		PKPdf	22 38 59.6	0.0
PB07	IPOC Station P	146.92	101		PKPdf	22 38 59.6	-0.1
PB11	IPOC Station P	147.06	98		PKPdf	22 38 59.7	-0.3
PB16	IPOC Station P	147.07	95		PKPdf	22 39 00.3	-0.2
PB06	IPOC Station P	147.22	103		PKPdf	22 39 01.1	+0.9
PB01	IPOC Station P	147.28	100		PKPdf	22 38 59.2	-1.0
PB15	IPOC Station P	147.30	104		PKPdf	22 39 01.9	+1.5
PB09	IPOC Station P	147.52	102		PKPdf	22 39 02.6	+1.9
PB08	IPOC Station P	147.55	99		PKPdf	22 38 59.2	-1.9
LPAZ	La Paz	148.11	91	PKP	PKPdf	22 39 01.8	-0.6
	comp=Z,22nm,0.6s,baz=316,slow=2.8,SNR=33						
LPAZ				PKPbc	PKPbc	22 39 06.7	+0.4
	comp=Z,23nm,0.6s,baz=284,slow=2.2,SNR=54						
LPAZ	La Paz	148.11	91	PKPdf	PKPdf	22 39 01.3	-1.1
TRQA	Tornquist	149.33	135		PKPdf	22 39 06.9	+3.9
SAML	Samuel	150.84	75	PKPdf	PKPdf	22 39 04.8	-1.1
SAML				PKPbc	PKPbc	22 39 10.9	-1.2
SAML				PKPab	PKPab	22 39 19.7	-1.9
CPUP	Villa Florida	157.78	114	PKPab	PKPab	22 39 50.9	-0.2
	comp=Z,6.3nm,0.8s,baz=260,slow=4.7,SNR=9.6						

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*ANF **24** 22:37:58.9±0.4, 32°.79N×115°.44W, h20^{km}±3^{km}, ML2.6/8*
Error ellipse: s-maj=3.4km s-min=2.1km az=166.0
*ECX **24** 22:38:00.4±0.7, 32°.81N×115°.47W, h15^{km}±2^{km}, MD2.6, ML2.8*
ISC 24 22:37:58.9±0.9, **32°.81N**±0°.02×**115°.47W**±0°.02, **h17**^{km}±2^{km}, **n33**, σ**0^{s}.54**/50, **18C-8D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DREC	Desert Rsrch C	0.02	115	⇓*i*P	Pg	22 38 02.1	+0.3
DREC				*i* S	Sg	22 38 04.7	+0.8
ICBC	Inst. de Cultu	0.15	182	⇓*i*P	Pb	22 38 03.7	+0.4
ICBC				*i* S	Sb	22 38 07.0	+0.9
POT2	Potabilizadora	0.20	160	⇓*i*P	Pb	22 38 04.6	+0.5
POT2				*i* S	Sb	22 38 08.3	+0.9
COK2	Cook Ranch 2	0.23	280	⇑*i*P	Pb	22 38 05.4	+0.9
WESC	Westside Schoo	0.23	257	⇑*i*P	Pb	22 38 05.4	+0.7
SGL	Mount Signal	0.27	233	⇑*i*P	Pb	22 38 05.5	+0.2
SGL				*i* S	Sb	22 38 09.7	0.0
COA	Coachella	0.29	80	⇑*i*P	Pb	22 38 06.3	+0.6
SWSC	Sam W. Stewart	0.31	295	⇑*i*P	Pb	22 38 06.7	+0.6
SWSC				*e*S	Sb	22 38 11.1	+0.3
SWSC	Sam W. Stewart	0.31	295	P	Pb	22 38 06.6	+0.6
	baz=118,SNR=69						
SWSC				S	Sb	22 38 11.1	+0.3
	baz=118						
EMSC	East Mesa	0.41	100	*e*P	Pb	22 38 08.4	+0.7
CPBX	Cerro Prieto	0.41	161	⇓*i*P	Pb	22 38 08.0	+0.2
CPBX				IAML		22 38 18.2	
	comp=N,3μm,0.2s						
CPBX				⇑*e*		22 38 18.2	
CPBX				IAML		22 38 22.1	
	comp=E,2μm,0.3s						
CPBX				⇓*e*		22 38 22.1	
YUH2	Yuha Desert	0.42	247	⇑*i*P	Pb	22 38 08.0	+0.1
YUH2				*e*S	Sb	22 38 13.7	-0.2
CRR	Carrizo Plain	0.43	280	⇑*i*P	Pb	22 38 08.6	+0.5
MBIG	Mexicali	0.46	151	⇓*i*P	Pb	22 38 09.3	+0.6
RMX	La Rumorosa	0.56	248	⇑*e*P	Pg	22 38 10.2	+0.2
RMX				*e*S	Sg	22 38 17.4	-0.2
RMX				IAML		22 38 17.9	
	comp=E,729nm,0.2s						
RMX				⇓*e*		22 38 17.9	
IKP	In-Ko-Pah, Jac	0.57	254	⇑*i*P	Pb	22 38 10.8	+0.3
IKP				*i* S	Sb	22 38 18.4	+0.2
IKP	In-Ko-Pah, Jac	0.57	254	P	Pb	22 38 10.8	+0.3
	baz=75,SNR=40						
IKP				S	Sb	22 38 18.5	+0.2
	baz=75						
GLA	Glamis	0.59	66	⇑*i*P	Pb	22 38 10.8	0.0
GLA	Glamis	0.59	66	P	Pb	22 38 10.8	0.0
	baz=244,SNR=32						
GLA				S	Sg	22 38 18.7	+0.3
	baz=244						
SLH	Sleepy Hollow	0.76	300	*e*P	Pb	22 38 14.2	+0.5
MONP2	Monument Peak	0.81	276	⇑*i*P	Pg	22 38 14.9	+0.1
MONP2	Monument Peak	0.81	276	P	Pg	22 38 14.9	+0.1
	baz=97,SNR=28						
MONP2				S	Sb	22 38 25.9	+0.5
	baz=97						
YMD	Yuma Desert	0.82	108	*e*P	Pg	22 38 14.3	-0.5
ALAMX	Rancho Alamar	0.83	194	⇓*i*P	Pg	22 38 14.8	-0.3
ALAMX				*e*S	Sg	22 38 25.8	-0.3
ALAMX				IAML		22 38 26.5	
	comp=N,414nm,0.2s						
ALAMX				⇑*e*		22 38 26.5	
ALAMX				⇑*e*		22 38 27.4	
ALAMX				IAML		22 38 27.4	
	comp=E,317nm,0.2s						
BC3	Big Chuckawall	0.84	1	P	Pb	22 38 15.5	+0.3
	baz=180,SNR=30						
BC3				S	Sb	22 38 27.0	+0.8
	baz=180						
BAR	Barrett	1.03	263	⇑*i*P	Pb	22 38 18.1	-0.2
BAR				IAML		22 38 33.2	
	comp=N,206nm,0.2s						
BAR				*e*		22 38 33.2	
BAR				IAML		22 38 33.3	
	comp=E,264nm,0.2s						
BAR				⇑*e*		22 38 33.3	
MATG	Mataguay Scout	1.06	292	⇑*i*P	Pb	22 38 18.8	-0.2
CBX	Cerro Bola	1.13	244	*e*P	Pb	22 38 20.1	0.0
CBX				*e*S	Sb	22 38 35.0	+0.5
PFO	Pinyon Flats O	1.15	314	P	Pb	22 38 19.5	-1.0
	baz=134,SNR=7.9						
PFO				S	Sn	22 38 37.3	+1.4
	baz=134						
EML	El Monte Cty P	1.17	274	⇑*i*P	Pn	22 38 20.0	-0.5
SDRC	San Diego Road	1.25	267	*e*P	Pn	22 38 21.3	-0.2
109C	Camp Elliot, M	1.38	274	P	Pn	22 38 23.4	0.0
	baz=94						
109C				S	Sn	22 38 41.7	+0.3
	baz=94						
214A	Organ Pipe Nat	2.40	110	P	Pn	22 38 36.5	-1.0
	baz=291						

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*MAN **24** 22:43:59.3, 14°.90N×122°.60E, h19^{km}, mb4.1, ML2.9, MS2.6, Hypocentre not reviewed by the ISC*
ISC 24 22:43:57.8±1.1, **14°.99N**±0°.06×**122°.71E**±0°.07, **h32**^{km}, **n8**, σ**1^{s}.17**/12, **7C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCNP	Jose Panganiba	0.70	181	⇑*e*P	Pn	22 44 10.9	-0.5
GQP	Guinayangan	1.11	193	⇑*e*P	Pn	22 44 17.5	+0.4
GQP				*i* S	Sn	22 44 31.9	+0.6
BALP	Baler	1.32	304	⇑*e*P	Pn	22 44 21.4	+1.4
SCSP	San Jose Seism	1.55	149	⇓*e*P	Pb	22 44 25.2	-0.6
PCPH	Palayan	1.66	290	⇑*e*P	Pb	22 44 26.8	-0.9
PCPH				*e*S	Sb	22 44 47.5	-0.7
PVCP	Virac	1.97	135	⇑*e*P	Pb	22 44 32.5	-0.5
PVCP				*e*S	Sb	22 44 57.9	+0.7
CAUP	Cauayan	2.12	336	⇑*e*P	Pb	22 44 34.0	-1.6
CAUP				*e*S	Sb	22 45 00.8	-0.6
SMPP	San Manuel, Pa	2.27	301	⇑*e*P	Pn	22 44 35.2	+2.1

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*IDC **24** 23:26:06.8±1.0, 34°.40N×25°.69E, h0^{km}, mb3.7/11, mbtmp3.8/20, ML3.7/9, MS3.0/3, Error ellipse: s-maj=19.6km s-min=12.9km az=13.0*
*ISK **24** 23:26:08.4, 34°.24N×25°.73E, h19^{km}, ML3.7/21*
*ATH **24** 23:26:09.9, 34°.29N×25°.66E, h13^{km}±3^{km}, ML3.7/10, Error ellipse: s-maj=4.3km s-min=1.7km az=3.0*
*THE **24** 23:26:11.5, 34°.45N×25°.62E, h0^{km}±1^{km}, ML3.5/1, Error ellipse: s-maj=2.9km s-min=0.5km az=182.0*
*HLW **24** 23:26:11.9, 34°.43N×25°.76E, h31^{km}±42^{km}, Md4.0, Ml4.0*
*DDA **24** 23:26:13.1±0.0, 34°.64N×26°.10E, h8^{km}±2^{km}, ML2.8*
*NIC **24** 23:26:13.3±0.0, 34°.34N×26°.09E, h12^{km}±4^{km}, Ml3.6/4*
*GII **24** 23:26:17.3±0.0, 33°.96N×26°.43E, h1^{km}±1^{km}, MD3.4/3*
ISC 24 23:26:11.1±1.1, **34°.30N**±0°.04×**25°.74E**±0°.03, **h34**^{km}±3^{km}, **n119**, σ**1^{s}.56**/148, **mb3.7**/11, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.71	360	P	Pn	23 26 24.0	-0.7
FRMA				S	Sn	23 26 34.4	0.0
FRMA				AML	AML	23 26 42.8	
	comp=N,10747μm,0.4s						
FRMA				AML	AML	23 26 47.2	
	comp=E,13345μm,0.5s						
ZKR	Zakros	0.90	26	P	Pb	23 26 28.0	-0.4
ZKR				S	Sb	23 26 40.6	+0.4
ZKR				AML	AML	23 26 45.2	
	comp=E,8109μm,0.5s						
ZKR				AML	AML	23 26 46.1	
	comp=N,5907μm,0.8s						
ZKR	Zakros	0.90	26	P	Pb	23 26 27.8	-0.6
ZKR				S	Sb	23 26 40.5	+0.3
	comp=N,4μm,0.7s						
ZKR	Zakros	0.90	26	PG	Pb	23 26 28.2	-0.2
ZKR				SG	Sb	23 26 41.2	+1.0
ZKR	Zakros	0.90	26	P	Pb	23 26 27.9	-0.4
ZKR				S	Sb	23 26 40.1	-0.1
ZKR				AML	AML	23 26 44.9	
	comp=N,5.7nm,0.8s						
ZKR				AML	AML	23 26 44.9	
	comp=N,5.7nm,0.8s						
ZKR				AML	AML	23 26 45.6	
	comp=N,7.6nm,0.5s						
ZKR				AML	AML	23 26 45.6	
	comp=N,7.6nm,0.5s						
NPS	Neapolis	0.96	354	P	Pn	23 26 27.4	-0.8
NPS				S	Sn	23 26 41.1	+0.3
NPS	Neapolis	0.96	354	P	Pn	23 26 27.4	-0.8
NPS				S	Sn	23 26 40.0	-0.7
SIVA	Sivas	1.04	313	P	Pn	23 26 29.2	-0.1
SIVA				S	Sn	23 26 42.4	-0.3
SIVA				AML	AML	23 26 53.5	
	comp=E,17094μm,0.7s						
SIVA				AML	AML	23 26 55.2	
	comp=N,13045μm,0.6s						
SIVA	Sivas	1.04	313	P	Pn	23 26 28.9	-0.4
TMBK	Timbaki Herakl	1.11	314	P	Pn	23 26 30.2	+0.1
TMBK				AML	AML	23 26 50.4	
	comp=N,11033μm,0.6s						
TMBK				AML	AML	23 26 51.4	
	comp=E,9951μm,0.4s						
HRKL	Herakleio	1.14	333	P	Pn	23 26 31.2	+0.6
HRKL				AML	AML	23 26 59.1	
	comp=N,37446μm,0.6s						
HRKL				AML	AML	23 27 10.3	
	comp=E,44928μm,0.7s						
HRKL	Herakleio	1.14	333	PN	Pn	23 26 30.6	+0.1
HRKL				SN	Sb	23 26 46.9	+0.2
KSTL	Kastelli Herak	1.14	332	P	Pn	23 26 28.0	-2.6
KSTL				AML	AML	23 26 43.4	
	comp=E,4337μm,0.7s						
KSTL				AML	AML	23 26 43.4	
	comp=N,17124μm,0.8s						
IDI	Anoyia	1.21	325	Pn	Pn	23 26 31.5	-0.1
	comp=N,52nm,0.3s,baz=167,slow=8.2,SNR=194						
IDI				LR	LR	23 26 38.0	
	comp=N,21nm,22.0s,baz=206,slow=28						
IDI				Sn	Sn	23 26 45.2	-1.6
	comp=N,72nm,0.3s,baz=273,slow=21,SNR=9.4						
IDI	Anoyia	1.21	325	P	Pn	23 26 31.2	-0.4
IDI				AML	AML	23 26 51.4	
	comp=E,3198μm,0.4s						
IDI				AML	AML	23 26 51.5	
	comp=N,2219μm,0.5s						
IDI	Anoyia	1.21	325	P	Pn	23 26 31.0	-0.6
IDI	Anoyia	1.21	325	PN	Pn	23 26 31.3	-0.3
IDI				SN	Sb	23 26 48.5	-0.3
GVD	Gavdhos	1.46	292	P	Pn	23 26 35.5	+0.5
GVD				AML	AML	23 27 03.3	
	comp=N,3845μm,0.6s						
GVD				AML	AML	23 27 11.7	

	comp=E,4766µm,0.5s						
GVD	Gavdhos	1.46	292	P	Pn	23 26 36.0	+1.0
GVD	Gavdhos	1.46	292	PN	Pn	23 26 34.9	-0.1
KARP	Karpathos	1.71	43	P	Pb	23 26 41.0	-0.9
KARP				AML	AML	23 27 20.6	
	comp=N,2601µm,0.9s						
KARP				AML	AML	23 27 26.5	
	comp=E,1954µm,0.8s						
KARP	Karpathos	1.71	43	PN	Pn	23 26 38.8	+0.3
KARP	Karpathos	1.71	43	P	Pn	23 26 39.8	+1.3
KARP				AML	AML	23 27 20.3	
	comp=E,2.6nm,0.9s						
KARP				AML	AML	23 27 26.1	
	comp=E,2.1nm,1.1s						
CHAN	Chania	1.85	312	P	Pb	23 26 42.5	-1.7
IMMV	Iera Moni Meta	1.85	309	P	Pn	23 26 40.8	+0.4
IMMV				AML	AML	23 27 19.4	
	comp=E,2829µm,0.8s						
IMMV				AML	AML	23 27 20.5	
	comp=N,3160µm,0.8s						
IMMV	Iera Moni Meta	1.85	309	P	Pn	23 26 40.9	+0.5
IMMV	Iera Moni Meta	1.85	309	PN	Pn	23 26 40.6	+0.2
KNDR	Palaiochora Ch	1.93	299	P	Pn	23 26 42.6	+1.2
KNDR	Palaiochora Ch	1.93	299	PN	Pn	23 26 42.2	+0.8
RODP	Rodopos	2.05	308	PN	Pn	23 26 43.4	+0.2
SANT	Santorini	2.08	354	PN	Pn	23 26 44.3	+0.8
THR3	Thira Island,	2.12	353	P	Pn	23 26 44.0	-0.1
ANKY	Antikythira Is	2.54	309	P	Pn	23 26 50.7	+0.9
NIS1	Nisyros Isl.	2.58	27	PN	Pn	23 26 51.2	+0.8
KOSK	Kos Island	2.65	22	PN	Pn	23 26 52.2	+0.9
ARG	Arkhangelos	2.73	45	P	Pn	23 26 55.3	+2.8
ARG	Arkhangelos	2.73	45	PN	Pn	23 26 53.4	+0.9
ARG	Arkhangelos	2.73	45	P	Pn	23 26 54.8	+2.3
APE	Apeiranthos	2.77	357	P	Pn	23 26 52.8	-0.2
APE	Apeiranthos	2.77	357	PN	Pn	23 26 53.6	+0.6
SLUM	Salum	2.84	189	P	Pn	23 26 56.9	+3.0
	baz=190						
DAT	Datca	2.85	31	PN	Pn	23 26 55.1	+0.9
DAT	Datca	2.85	31	P	Pn	23 26 55.4	+1.1
DAT				S	Sn	23 27 27.2	-0.3
DAT				i AML	AML	23 27 44.0	
	comp=N,43nm,0.6s						
DAT				i AML	AML	23 27 45.0	
	comp=N,46nm,0.9s						
KTHA	Kythira Island	2.93	312	P	Pn	23 26 54.7	-0.6
KTHR	Kythira	2.97	312	P	Pn	23 26 55.7	-0.1
BODT	Bodrum	3.04	25	PN	Pn	23 26 57.6	+0.9
MATC	Matruh	3.21	156	P	Pn	23 27 01.8	+2.8
	baz=157						
TURN	Turunc	3.21	39	PN	Pn	23 27 00.1	+1.1
TURN	Turunc	3.21	39	P	Pn	23 27 00.3	+1.3
TURN				S	Sn	23 27 36.0	0.0
TURN				i AML	AML	23 27 39.0	
	comp=N,42nm,0.3s						
TURN				i AML	AML	23 27 49.0	
	comp=N,31nm,0.2s						
VLI	Veliai	3.32	317	P	Pn	23 26 59.3	-1.3
MLSB	Milas	3.42	28	PN	Pn	23 27 03.1	+1.1
DALY	Dalyan (Mula)	3.46	43	PN	Pn	23 27 03.8	+1.3
YER	Yerkesik	3.50	36	PN	Pn	23 27 04.4	+1.2
FETY	Fethiye	3.59	49	PN	Pn	23 27 05.6	+1.3
FETY	Fethiye	3.59	49	P	Pn	23 27 08.0	+3.7
MULA	Mugla, Merkez-	3.62	35	P	Pn	23 27 06.3	+1.5
MULA				S	Sn	23 27 46.3	-0.1
MULA				i AML	AML	23 27 53.0	
	comp=N,41nm,0.6s						
MULA				i AML	AML	23 27 55.0	
	comp=N,24nm,0.5s						
AKAS	Kas	3.71	58	PN	Pn	23 27 07.1	+1.1
AKAS	Kas	3.71	58	P	Pn	23 27 07.2	+1.1
AKAS				S	Sn	23 27 48.6	0.0
AKAS				i AML	AML	23 27 56.0	
	comp=N,80nm,0.5s						
AYDN	Tasoluk	3.78	27	P	Pn	23 27 08.4	+1.5
AYDN				S	Sn	23 27 50.2	0.0
AYDN				i AML	AML	23 27 53.0	
	comp=N,24nm,0.7s						
AYDN				i AML	AML	23 28 02.0	
	comp=N,27nm,0.6s						
CAME	Cameli-Denizli	3.92	47	PN	Pn	23 27 10.3	+1.3
AYDB	Zeytinkoy-Aydi	4.03	25	PN	Pn	23 27 11.8	+1.3
TAVA	DENIZLI_Tavas	4.08	38	P	Pn	23 27 13.3	+2.2
TAVA				S	Sn	23 27 59.2	+1.5
TAVA				i AML	AML	23 28 04.0	
	comp=N,29nm,0.7s						
TAVA				i AML	AML	23 28 04.0	
	comp=N,34nm,0.5s						
ELL	Elmali	4.19	53	P	Pn	23 27 14.9	+2.3
GOLH	Golhisar	4.27	46	P	Pn	23 27 15.8	+2.0
GOLH				S	Sn	23 28 03.2	+0.7
GOLH				i AML	AML	23 28 09.0	
	comp=N,46nm,0.7s						
GOLH				i AML	AML	23 28 14.0	
	comp=N,49nm,1.0s						
OSC1	CSNet OBS 1	4.68	98	P	Pn	23 27 20.7	+1.5
SWA2		5.05	183	P	Pn	23 27 27.4	+3.0
	baz=183						
SWA2				S	Sn	23 28 21.8	+0.3
	baz=183						
AKMS	Akamas	5.49	81	P	Pn	23 27 31.7	+1.4
AKMS				AML	AML	23 28 32.4	
	comp=N,0.5nm,0.3s						
AKMS				AML	AML	23 28 32.9	
	comp=N,0.8nm,0.5s						
OSC2	CSNet OBS 4	5.58	101	P	Pn	23 27 33.8	+2.2
NATA	Nata	5.66	83	P	Pn	23 27 33.9	+1.2
NATA				AML	AML	23 28 38.1	
	comp=N,1.9nm,0.4s						
NATA				AML	AML	23 28 38.7	
	comp=N,1.2nm,0.3s						
ALFC	Alefka	5.72	79	P	Pn	23 27 34.5	+0.9
SZAC	Souni	5.92	84	P	Pn	23 27 37.2	+0.9
HMYD	Mayadein	6.22	135	P	Pn	23 27 43.3	+2.8
	baz=135						
ASGA	Asgata	6.22	83	P	Pn	23 27 41.7	+1.2
HNAT	Natroun	6.23	137	P	Pn	23 27 43.7	+3.1
	baz=137						
CSS	Mathiatis	6.30	82	P	Pn	23 27 42.6	+1.1
RYAN	Fayoum	6.48	142	P	Pn	23 27 46.5	+2.4
	baz=143						
RYAN				S	Sn	23 28 56.4	-0.5
	baz=143						
MVOU	Mavrovouni	6.55	82	P	Pn	23 27 46.4	+1.5
KOT	Kottamia	6.76	128	P	Pn	23 27 49.5	+1.6
	baz=129						
HSAF	As Saff	6.80	132	P	Pn	23 27 50.3	+1.9
	baz=132						
HHAG	Hagoal	6.92	127	P	Pn	23 27 53.2	+3.1
	baz=128						
GLL	Jalalah	6.92	131	P	Pn	23 27 51.9	+1.7
	baz=132						
NBNS	Bani Suef	7.39	139	P	Pn	23 27 59.3	+2.8
	baz=139						
HFRF	Wahat Farafira	7.47	162	P	Pn	23 28 00.4	+2.9
	baz=162						
TAMRE	El Minia	7.96	145	P	Pn	23 28 07.2	+2.9
	baz=145						
KZIT	Kziot	8.05	112	Pn	Pn	23 28 06.3	+0.7
SLTI	Sal'it	8.06	102	Pn	Pn	23 28 07.8	+2.1
MMAI	Mount Meron Ar	8.16	96	Pn	Pn	23 28 06.8	-0.4
	comp=N,2.3nm,0.3s,baz=168,slow=17,SNR=2.1						
MMAI				Sn	Sn	23 29 35.8	-2.4
	comp=N,7.8nm,0.3s,baz=103,slow=22,SNR=9.1						
	comp=N,0.6nm,0.3s						
AMAZ	Amatzia	8.20	107	Pn	Pn	23 28 08.1	+0.5
AMAZ				Sn	Sn	23 29 36.4	-2.6
BRTR	Keskin Array B	8.32	47	Pn	Pn	23 28 09.9	+0.5
	comp=N,0.1nm,0.3s,baz=241,slow=12,SNR=2.6						
BRTR				Sn	Sn	23 29 39.9	-2.3
	comp=N,0.1nm,0.3s,baz=225,slow=26,SNR=1.1						
BRTR				LR	LR	23 32 20.9	
	comp=N,37nm,19.2s,baz=292,slow=45						
NATI	Neve Ativ	8.39	94	Pn	Pn	23 28 11.6	+1.4
NATI				Sn	Sn	23 29 42.2	-1.5
YTIR	Yattir	8.42	108	Pn	Pn	23 28 12.3	+1.6
YTIR				Sn	Sn	23 29 41.4	-3.2
HMDT	Nahal Hemdat	8.45	101	Pn	Pn	23 28 12.6	+1.6
DSI	Dead Sea	8.55	106	Pn	Pn	23 28 14.1	+1.6
DSI				Sn	Sn	23 29 44.7	-3.0
KRMI	Paran Flat	8.68	116	Pn	Pn	23 28 15.1	+0.8
KRMI				Sn	Sn	23 29 46.4	-4.6
PRNI	Paran	8.78	114	Pn	Pn	23 28 17.4	+1.8
GHAJ	Ghor Haditha	8.80	107	Pn	Pn	23 28 17.1	+1.3
HRFI	Mount Harif	8.96	116	Pn	Pn	23 28 19.4	+1.4
MBRI	Mt Berech	8.99	117	Pn	Pn	23 28 20.6	+2.0
MBRI				Sn	Sn	23 29 55.2	-3.5
EIL	Elat	9.09	118	Pn	Pn	23 28 21.3	+1.5
	comp=N,2.4nm,0.3s,baz=332,slow=1.8,SNR=45						
EIL				Sn	Sn	23 29 57.7	-3.2
	comp=N,4.6nm,0.3s,baz=44,slow=13,SNR=8.7						
	comp=N,5.8nm,0.4s						
EIL	Elat	9.09	118	Pn	Pn	23 28 21.4	+1.6
ASF	Jabal al Asfar	9.59	100	Pn	Pn	23 28 27.4	+0.7
	comp=N,0.4nm,0.3s,baz=59,slow=7.4,SNR=1.7						
ASF				Sn	Sn	23 30 09.5	-3.8
	comp=N,1.1nm,0.3s,baz=47,slow=11,SNR=3.1						
	comp=N,1.4nm,0.4s						
VAE	Valguarnera	9.72	292	Pn	Pn	23 28 27.5	-1.0
	comp=N,0.8nm,0.3s,baz=19,slow=8.0,SNR=2.5						
VAE				Sn	Sn	23 30 06.6	-10
	comp=N,1.0nm,0.3s,baz=140,slow=21,SNR=1.3						
	comp=N,36nm,0.9s						
KVAR	Kislovodsk Arr	16.29	49	Pn	P	23 29 59.5	-0.4
	baz=356,slow=19						
	comp=N,2.0nm,0.7s						
KBZ	Khabaz	16.30	50	Pn	P	23 29 59.3	-0.6
	comp=N,0.1nm,0.3s,baz=225,slow=20,SNR=8.0						
	comp=N,5.9nm,0.9s						
AKASG	Malin Array Be	16.59	8	Pn	Pn	23 30 00.7	-0.2
	comp=N,0.9nm,0.3s,baz=197,slow=11,SNR=2.6						
AKASG				LR	LR	23 36 44.4	
	comp=N,38nm,18.3s,baz=209,slow=39						
	comp=N,0.2nm,0.2s						
GERES	GERESS Array B	17.06	332	Pn	Pn	23 30 05.9	-1.0
	comp=N,0.2nm,0.3s,baz=153,slow=11,SNR=2.8						
	comp=N,0.1nm,0.3s						
DAVOX	Davos/Dischmat	17.30	321	P	Pn	23 30 09.3	-0.7
	comp=N,0.1nm,0.3s,baz=348,slow=21,SNR=2.1						
	comp=N,1.0nm,0.6s						
ESDC	Sonseca Array	24.26	291	P	P	23 31 23.8	-1.2
	comp=N,0.4nm,0.7s,baz=82,slow=9.0,SNR=8.7						
	comp=N,0.4nm,0.7s						
GEYT	Alibeck	26.34	73	P	P	23 31 44.2	+0.4
	comp=N,0.7nm,0.4s,baz=282,slow=20,SNR=2.0						
	comp=N,0.7nm,0.4s						
FINES	FINESS Array B	27.16	0	P	P	23 31 49.2	-1.7
	comp=N,0.6nm,0.7s,baz=156,slow=14,SNR=6.6						
	comp=N,0.6nm,0.7s						
EKA	Eskdalemuir Ar	29.01	325	P	P	23 32 08.5	+1.0
	comp=N,0.3nm,0.4s,baz=121,slow=9.0,SNR=1.3						
	comp=N,0.3nm,0.4s						
TORD	Torodi Ar. Bea	30.32	232	P	P	23 32 20.4	+1.0
	comp=N,0.9nm,0.6s,baz=33,slow=8.8,SNR=13						
	comp=N,0.9nm,0.6s						
ARCES	ARCESS Array B	35.29	360	P	P	23 33 00.5	-1.8
	comp=N,0.8nm,0.7s,baz=317,slow=7.0,SNR=4.3						
	comp=N,0.8nm,0.7s						
KURBB	Kurchatov Arra	41.30	50	P	P	23 33 54.2	+1.2
	comp=N,0.4nm,0.4s,baz=274,slow=8.4,SNR=5.6						
	comp=N,0.4nm,0.4s						
MKAR	Makanchi Array	43.86	56	P	P	23 34 15.3	+1.3
	comp=N,0.9nm,0.6s,baz=277,slow=6.8,SNR=9.5						
	comp=N,0.9nm,0.6s						
ZALV	Zalesovo Beam	45.26	46	P	P	23 34 24.9	-0.1
	comp=N,0.4nm,0.4s,baz=269,slow=9.1,SNR=2.3						
	comp=N,0.4nm,0.4s						
TSUM	Tsumeb	53.77	190	LR	LR	00 02 30.4	
	comp=N,60nm,18.7s,baz=66,slow=40						
TIXI	Tiksi	61.80	20	P	P	23 36 25.8	-0.1
	comp=N,0.4nm,0.3s,baz=270,slow=23,SNR=1.2						
	comp=N,0.4nm,0.3s						
SCHQ	Schefferville	64.15	320	P	P	23 36 42.5	+0.6
	comp=N,1.4nm,0.6s,baz=83,slow=8.1,SNR=2.0						
	comp=N,1.4nm,0.6s						

ISK ***24*** *23:28:54.9, 34°.34N×25°.65E, h20^{km}, ML3.2/17*
GII ***24*** *23:29:02.6±0.0, 33°.93N×26°.58E, h1^{km}, Mm3.3/1*
ISC 24 23:28:51.2±1.3**, 34°.14N**±0°.08×**25°.67E**±0°.05**, h10^{km}, n30,**
σ**1^{s}95**/32**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	1.07	25	PG	Pb	23 29 13.1	+1.2
ZKR				SG	Sn	23 29 25.8	-1.5
HRKL	Herakleio	1.26	338	PG	Pn	23 29 15.7	+0.8
IDI	Anoyia	1.31	331	PN	Pb	23 29 15.9	-0.1
IDI				SN	Sb	23 29 31.8	-1.1
GVD	Gavdhos	1.48	299	PN	Pn	23 29 20.3	+2.4
KARP	Karpathos	1.87	41	PN	Pn	23 29 24.5	+1.2
IMMV	Iera Moni Meta	1.91	314	PN	Pn	23 29 25.2	+1.3
KNDR	Palaiochora Ch	1.96	304	PN	Pn	23 29 26.5	+1.9
RODP	Rodopos	2.11	313	PN	Pn	23 29 27.8	+1.1
SANT	Santorini	2.23	356	PN	Pn	23 29 28.7	+0.4
ARG	Arkhangelos	2.89	44	PN	Pn	23 29 39.4	+2.1
APE	Apeiranthos	2.92	358	PN	Pn	23 29 38.6	+0.7
DAT	Datca	3.02	31	PN	Pn	23 29 40.3	+1.1
TURN	Turunc	3.37	38	PN	Pn	23 29 46.0	+2.1
DALY	Dalyan (Mula)	3.62	42	PN	Pn	23 29 49.6	+2.3
YER	Yerkesik	3.67	35	PN	Pn	23 29 49.8	+1.7
FETY	Fethiye	3.74	47	PN	Pn	23 29 51.9	+2.8
AKAS	Kas	3.84	56	PN	Pn	23 29 53.5	+2.9
CAME	Cameli-Denizli	4.08	46	PN	Pn	23 29 56.4	+2.6
AYDB	Zeytinkoy-Aydi	4.20	25	PN	Pn	23 29 56.4	+0.9
SLTI	Sal'it	8.08	101	Sn	Sn	23 32 17.2	-3.0
MMA0B	Mount Meron ar	8.20	95	Sn	Sn	23 32 21.9	-1.3
AMAZ	Amatzia	8.21	106	Sn	Sn	23 32 21.3	-1.9
MMLI	Mount Malkishu	8.34	99	Sn	Sn	23 32 23.6	-3.0
GEM	Giv'at Ha'Em	8.38	94	Sn	Sn	23 32 25.7	-1.9
YTIR	Yattir	8.43	107	Sn	Sn	23 32 27.2	-1.6
NATI	Neve Ativ	8.44	93	Sn	Sn	23 32 27.2	-1.6
DSI	Dead Sea	8.56	105	Sn	Sn	23 32 29.8	-2.2
KRMI	Paran Flat	8.67	115	Sn	Sn	23 32 32.4	-2.1
HRFI	Mount Harif	8.94	115	Sn	Sn	23 32 39.6	-1.7
MBRI	Mt Berech	8.97	116	Sn	Sn	23 32 40.4	-1.7

MDD ***24*** *23:40:08.3±0.3, 35°.71N×3°.69W, h0^{km}, mb_Lg2.6/11, Error ellipse: s-maj=3.2km s-min=2.7km az=10.0*
INMG ***24*** *23:40:08.2±1.5, 35°.72N×3°.71W, h0^{km}±5^{km}, ML2.2, Error ellipse: s-maj=3.7km s-min=3.4km az=18.0*
SFS ***24*** *23:40:08.0, 35°.70N×3°.68W, ML2.6, ALBORAN SUR*
CNRM ***24*** *23:40:09.0, 35°.69N×3°.60W, h23^{km}, ml2.4*
IGIL ***24*** *23:40:09.1, 35°.71N×3°.69W, h0^{km}, ML2.4*
ISC 24 23:40:07.6±1.0**, 35°.70N**±0°.02×**3°.66W**±0°.02**, h16^{km}**±9^{km},
n50, σ**1^{s}22**/90**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.54	205	P	Pn	23 40 20.0	-0.6
PALE				S	Sn	23 40 29.0	-0.4
PALE	Palemas	0.54	205	P	Pn	23 40 20.0	-0.6
PALE				S	Sn	23 40 28.8	-0.5
EALB	Alboran	0.56	65	Pg	Pb	23 40 19.1	+0.1
EALB				Sg	Sb	23 40 27.0	+0.2
EALB				i Vmb_Lg		23 40 28.6	
WMELI	Melilla	0.69	124	P	Pg	23 40 21.2	0.0
WMELI				S	Sg	23 40 30.1	-0.2
EMEL	Melilla	0.70	125	Pg	Pg	23 40 21.1	-0.2
EMEL				Sg	Sg	23 40 30.0	-0.6
GOG	Mont Gurugu	0.72	131	P	Pg	23 40 21.7	0.0
GOG				S	Sb	23 40 32.0	+0.3
GOG	Mont Gurugu	0.72	131	P	Pg	23 40 21.8	0.0
GOG				S	Sb	23 40 31.6	0.0
PVLZ	Peæn de	0.74	225	P	Pb	23 40 22.7	+0.6
PVLZ				S	Sn	23 40 33.5	-0.9
CHAS	Isla Isabel II	1.13	117	P	Pb	23 40 27.0	-1.7
CHAS				S	Sb	23 40 42.8	-0.5
ELGU	Los Guajares,	1.16	1	Pg	Pn	23 40 28.6	-0.7
ELGU				Sg	Sb	23 40 44.2	0.0
ELGU				i Vmb_Lg		23 40 47.5	
AKLM	AKL	1.20	188	P	Pg	23 40 31.2	+0.4
AKLM				S	Sg	23 40 47.6	+1.1
EMAL	Malaga-Limoner	1.23	330	P	Pn	23 40 30.0	-0.1
EMAL				S	Sb	23 40 45.7	-0.3
EMIJ	Mijas	1.24	314	Pg	Pn	23 40 29.7	-0.7
EMIJ				Sg	Sb	23 40 45.5	-1.0
EMIJ				i Vmb_Lg		23 40 47.9	
EBER	Berja	1.34	27	Pn	Pb	23 40 32.2	-0.3
EBER				Sn	Sg	23 40 51.1	0.0
EBER				i Vmb_Lg		23 41 05.9	
TAF	Taforalt	1.35	131	P	Pn	23 40 32.0	+0.1
TAF	Taforalt	1.35	131	P	Pn	23 40 31.3	-0.6
TAF				S	Sn	23 40 45.7	-3.9
SMIR	Smir Dam	1.40	270	P	Pn	23 40 32.0	-0.5
SMIR				S	Sb	23 40 51.0	0.0
CEU	Ceuta	1.41	278	P	Pn	23 40 31.0	-1.5
CEU				S	Sn	23 40 48.4	-2.4
EGOR	Sierra Gorda,	1.45	346	Pn	Pb	23 40 34.6	+0.3
EGOR				Sn	Sg	23 40 54.2	-0.1
EGOR				i Vmb_Lg		23 40 57.7	
EQUE	Quentar	1.51	7	Sn	Sg	23 40 56.0	-0.2
JBK	JBK	1.63	146	P	Pn	23 40 36.0	+0.1
JBK	JBK	1.63	146	P	Pn	23 40 35.8	-0.1
JBK				S	Sn	23 40 57.1	+0.4
EJIF	Jimena Fronter	1.64	298	Pn	Pn	23 40 36.6	+0.8
EQES	Quesada	2.15	13	Pn	Pb	23 40 45.5	-0.7
EQES				Sn	Sb	23 41 11.0	-1.7
EQES				i Vmb_Lg		23 41 19.6	
LCRM	LCR	2.24	206	P	Pb	23 40 47.5	-0.4
LCRM				S	Sb	23 41 16.7	+1.3
EADA	Adamuz	2.57	344	Pn	Pb	23 40 51.0	-2.3
EADA				Sn	Sn	23 41 20.3	+0.8
EADA				i Vmb_Lg		23 41 33.3	
ECAB	El Cabril	2.75	330	Pn	Pn	23 40 53.3	+2.1
ECAB				Sn	Sn	23 41 25.0	+0.9
ECAB				i Vmb_Lg		23 41 34.7	
MD31	MD31	2.97	198	P	Pn	23 40 55.9	+1.7
MD31				S	Sn	23 41 32.5	+2.9
MDT	Midelt	2.99	195	P	Pn	23 40 55.6	+1.1
MDT				S	Sn	23 41 30.7	+0.7
EMIN	Mina Concepcio	3.18	311	Pn	Pn	23 40 57.9	+1.0
EMIN				Sn	Sn	23 41 33.9	-0.6
EMIN				i Vmb_Lg		23 41 44.2	
ETOB	Tobarra	3.39	29	Pn	Pn	23 41 01.8	+1.9
ETOB				Sn	Sn	23 41 42.3	+2.6
EGRO	El Granado	3.58	302	Pn	Pn	23 41 03.4	+1.0
EGRO				Sn	Sn	23 41 43.9	-0.4
EGRO				i Vmb_Lg		23 41 45.9	
PBAR	Barrancos	3.66	313	ePn	Pn	23 41 04.9	+1.3
PBAR				eSn	Sn	23 41 46.1	-0.3
PBAR				A	A	23 41 49.6	
	3.0nm,0.3s						
PVAQ	Vaqueiros	3.68	299	ePn	Pn	23 41 04.8	+1.0
PVAQ				eSn	Sn	23 41 46.1	-0.8
PVAQ				A	A	23 41 48.1	
	4.3nm,0.3s						
PVAQ	Vaqueiros	3.68	299	P	Pn	23 41 04.9	+1.1
PBDV	Barranco-do-Ve	3.77	295	ePn	Pn	23 41 06.2	+1.1
PBDV				eSn	Sn	23 41 48.7	-0.5
PBDV				A	A	23 41 53.9	
	5.0nm,0.4s						
PAB	San Pablo	3.87	352	Pn	Pn	23 41 09.2	+2.6
PAB				Sn	Sn	23 41 52.7	+0.8
EBAD	Badajoz	4.05	320	Pn	Pn	23 41 10.2	+1.2
EBAD				Sn	Sn	23 41 55.8	-0.3
EBAD				i Vmb_Lg		23 41 57.5	
PBEJ	Beja	4.09	306	eSn	Sn	23 41 55.7	-1.4
PBEJ				A	A	23 41 59.3	
	2.0nm,0.4s						
MESJ	Messejana	4.24	302	eP	Pn	23 41 12.6	+1.1
MESJ				eS	Sn	23 41 59.1	-1.5
MESJ				IAML		23 42 03.1	
	comp=N,6.3nm,0.5s						
MESJ	Messejana	4.24	302	ePn	Pn	23 41 12.7	+1.2
MESJ				eSn	Sn	23 42 00.1	-0.5
MESJ				A	A	23 42 04.6	
	comp=N,4.3nm,0.4s						
MORF	Marmelete	4.33	293	eS	Sn	23 42 01.1	-1.8
MORF				IAML		23 42 04.2	
	comp=N,8.7nm,0.5s						
MORF	Marmelete	4.33	293	ePn	Pn	23 41 13.4	+0.6
MORF				eSn	Sn	23 42 02.3	-0.6
MORF				A	A	23 42 05.3	
	comp=N,2.3nm,0.2s						
PFVI	Vila Bisbo	4.40	290	eSn	Sn	23 42 03.5	-1.3
PFVI				A	A	23 42 14.3	
	comp=N,5.3nm,0.6s						
PESTR	Estremoz	4.45	316	ePn	Pn	23 41 15.9	+1.5
PESTR				eSn	Sn	23 42 05.5	-0.4
PESTR	Estremoz	4.45	316	P	Pn	23 41 15.6	+1.2
PESTR				S	Sn	23 42 03.3	-2.6
PNCL	Nicolau / Gran	4.58	303	ePn	Pn	23 41 17.4	+1.2
PNCL				eSn	Sn	23 42 08.3	-0.8
PNCL				A	A	23 42 09.9	
	comp=N,1.9nm,0.4s						
PMRV	Marv??o	4.75	323	ePn	Pn	23 41 20.5	+1.9
PMRV				eSn	Sn	23 42 13.0	-0.4
PMRV				A	A	23 42 31.0	
	comp=N,2.3nm,0.5s						
PMTG	Montargil	4.95	314	eSn	Sn	23 42 17.8	-0.4
PSBE	So Bento	5.57	315	ePn	Pn	23 41 32.7	+2.8

DJA 24 23:44:10.9±0.4**, 3°S**±3°×**12°8E**±°**, h11^{km}, M3.9**/8**, mb4.3**/2,
mB4.9/1**, MLv3.7**/8**, Mw(mB)4.1**/1**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	1.24	150	P	Pn	23 44 33.6	-0.6
AAI				S	Sb	23 44 50.4	0.0
MSAI	Masohi	1.54	119	Pg	Pg	23 44 40.8	+0.4
SWI	Sorong	4.06	65	P	Pn	23 45 12.9	-0.1
FAKI	Fak Fak	4.67	94	P	Pn	23 45 21.6	+0.1
APSI	Ampana	6.16	286	P	Pn	23 45 41.4	-0.5

IDC ***24*** *23:45:05.9±2.3, 7°.17S×129°.94E, h133^{km}±24^{km}, mb4.0/3, mbtmp4.2/7, Error ellipse: s-maj=34.7km s-min=22.2km az=89.0*
NEIC ***24*** *23:45:06.9±1.3, 7°.11S±0°.07×129°.9E±0°.1, h132^{km}±7^{km}, mb4.0/8, Error ellipse: s-maj=17.6km s-min=10.2km az=96.0*
ISC 24 23:45:03.6±0.6**, 7°.24S**±0°.05×**129°.97E**±0°.08**, h104^{km}, n29,**
σ**2^{s}57**/32**, mb4.1**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.85	28		Pn	23 46 16.2	+1.8
MTN	Manton Dam	5.69	168	Pn	Pn	23 46 31.5	+5.7
SOEI	Soe	6.17	246	Pn	Pn	23 46 35.6	+3.2
SIJI	Sorong	6.46	12	P	Pn	23 46 38.3	+2.1
	13nm,0.3s,baz=202,slow=19,SNR=39						
SIJI				S	Sn	23 47 45.5	-3.0
	16nm,0.2s,baz=111,slow=23,SNR=3.4						
BATI	Baumata	6.90	244	P	Pn	23 46 44.7	+2.5
	34nm,0.3s,baz=86,slow=2.8,SNR=8.4						
BATI				S	Sn	23 47 57.1	-2.2
	41nm,0.5s,baz=310,slow=23,SNR=7.7						
KNRA	Kununurra	8.47	188		Pn	23 47 06.6	+3.0
WB0	Warramunga Arr	13.18	161	Pn	Pn	23 48 07.2	+0.4
WRA	Warramunga Arr	13.32	162	P	Pn	23 48 09.7	+1.0
	1.2nm,0.4s,baz=347,slow=13,SNR=32						
WRA				S	Sn	23 50 30.2	-5.2
	2.8nm,0.3s,baz=328,slow=24,SNR=10						
WRA	Warramunga Arr	13.32	162	Pn	Pn	23 48 09.1	+0.4
WB2	Warramunga Arr	13.33	162	Pn	Pn	23 48 09.8	+1.1
WR0	Warramunga Arr	13.40	161	Pn	Pn	23 48 10.8	+1.1
COEN	Coen	14.59	118	P	P	23 48 30.6	+2.0
ASAR	Alice Springs	16.77	167	P	P	23 48 54.9	+2.1
	0.5nm,0.3s,baz=345,slow=9.9,SNR=13						
ASAR				S	Sn	23 51 50.3	-8.3
	0.8nm,0.8s,baz=340,slow=21,SNR=3.1						
ASAR	Alice Springs	16.77	167	P	P	23 48 56.5	+3.8
MBWA	Marble Bar	17.02	215	P	P	23 48 55.7	+0.2
PSA00	Pilbara Seismi	17.29	213	P	Pn	23 49 00.5	+2.0
CMAR	Chiang Mai Arr	39.86	310	P	P	23 52 25.4	-1.9
	2.2nm,0.3s,baz=139,slow=8.4,SNR=4.0						
	2.2nm,0.3s						
MK31	Makanchi Array	68.41	327	P	P	23 55 53.8	-0.4
MK31				IAmb	IAmb	23 55 54.2	
	comp=Z,1.8nm,0.6s						
MKAR	Makanchi Array	68.41	327	P	P	23 55 53.4	-0.8
	comp=Z,2.5nm,0.4s,baz=121,slow=7.8,SNR=51						
	comp=Z,2.5nm,0.4s						
MKAR	Makanchi Array	68.41	327	P	P	23 55 53.3	-0.9
MAKZ	Makanchi	68.58	327	P	P	23 55 54.7	-0.6
ZAA0	Zalesovo Array	71.78	334	P	P	23 56 13.5	-1.1
ZAA0				IAmb	IAmb	23 56 24.6	
	comp=Z,2.2nm,1.1s						
ZALV	Zalesovo Beam	71.78	334	P	P	23 56 12.9	-1.7
	comp=Z,1.1nm,0.6s,baz=117,slow=5.0,SNR=4.4						
	comp=Z,1.1nm,0.6s						
ZALV	Zalesovo Beam	71.78	334	P	P	23 56 13.3	-1.3
KURK	Kurchatov	72.70	329	P	P	23 56 19.2	-0.9
KK31	Karatay Array	73.50	319	P	P	23 56 24.1	-1.0
KK31				IAmb	IAmb	23 56 33.0	
	comp=Z,3.5nm,1.4s						
KKAR	Karatay Array	73.50	319	P	P	23 56 23.6	-1.5
ABKAR	Akbulak array	82.67	322	P	P	23 57 14.2	-1.4
QSPA	South Pole Qui	82.74	180	P	P	23 57 16.2	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA				IAmb	IAmb	23 57 16.6	
	comp=Z,3.8nm,1.1s						

GUC 25 00:21:52.4±0.8, 30°.45S×71°.56W, h25^{km}±3^{km}, ML3.9, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.24	196	⇑iP	Pb	00 21 59.1	+0.6
CO06				eS	Sb	00 22 03.5	+0.8
CO06				IAML		00 22 04.0	
	comp=E,22µm,0.2s						
CO05	La Serena	0.59	28	eP	Pn	00 22 04.9	-0.4
CO05				eS	Sn	00 22 13.3	-0.8
GO04	Tololo Observa	0.71	68	eP	Pn	00 22 07.3	+0.2
GO04				eS	Sn	00 22 18.3	+0.9
CO02	Combarbal	0.90	148	⇓iP	Pn	00 22 10.1	+0.5
CO02				eS	Sn	00 22 23.3	+1.4
CO02				IAML		00 22 25.4	
	comp=N,12µm,0.3s						
CO01	Juntas del Tor	1.35	70	⇓iP	Pb	00 22 17.7	+0.5
CO01				eS	Sb	00 22 34.4	+0.3
LCO	Las Campanas	1.61	28	i P	Pn	00 22 20.4	+0.8
LCO				eS	Sb	00 22 40.8	-0.9
VA06	Catapilco	2.12	174	eP	Pn	00 22 26.2	-0.1
VA06				IAML		00 23 04.8	
	comp=N,1µm,0.5s						
AC04	Llanos de Chal	2.27	11	eP	Pn	00 22 28.1	-0.3
AC04				IAML		00 23 09.9	
	comp=E,273nm,0.5s						
VA03	San Esteban	2.47	160	eP	Pn	00 22 32.9	+1.7
VA03				eS	Sb	00 23 04.2	-1.9
VA03				IAML		00 23 17.2	
	comp=E,760nm,0.5s						
ROCH	El Roble	2.56	170	eP	Pn	00 22 33.2	+0.6
ROCH				eP	Pb	00 22 33.3	-4.5
ROCH				eS	Sb	00 23 09.6	+0.6
ROCH				IAML		00 23 18.2	
	comp=E,693nm,0.3s						
VA01	Torpederas	2.57	182	eP	Pb	00 22 36.1	-1.7
PEL	Peldehue	2.79	165	eP	Pn	00 22 36.9	+1.3
PEL				eS	Sn	00 23 11.1	+2.6
PEL				IAML		00 23 19.6	
	comp=E,314nm,0.4s						
MT02	Curacav	2.83	173	eP	Pn	00 22 36.8	+0.7
FCH	Farellones	3.07	160	eP	Pn	00 22 42.5	+2.9
FCH				IAML		00 23 31.2	
	comp=E,288nm,0.2s						
MT03	Universidad Ad	3.17	164	eP	Pn	00 22 43.7	+2.9
MT03				IAML		00 23 35.5	
	comp=E,545nm,0.4s						
VA05	Santo Domingo	3.20	181	eP	Pn	00 22 41.5	+0.4
VA05				IAML		00 23 34.5	
	comp=N,399nm,0.4s						
AC06	Mina Casimiro	3.25	19	eP	Pn	00 22 41.4	-0.5
AC06				IAML		00 23 40.2	
	comp=E,198nm,0.8s						
MT09	Talagante	3.36	172	eP	Pn	00 22 44.2	+0.8
MT09				IAML		00 23 42.5	
	comp=N,273nm,0.7s						
MT01	Popeta	3.42	176	eP	Pn	00 22 44.4	+0.2
LMEL	Las Melosas	3.58	162	eP	Pn	00 22 48.8	+2.2
LMEL				IAML		00 23 49.0	
	comp=N,238nm,0.2s						
BO04	La Punta	3.62	167	eP	Pn	00 22 48.1	+1.0
BO01	Tunca	3.96	174	eP	Pn	00 22 51.6	+0.1

IDC 25 00:29:19.1±4.3, 20°.33S×172°.88E, h0^{km}, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=264.5km s-min=51.9km az=158.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.13	264	P	P	00 36 23.2	-0.1
	0.2nm,0.4s,baz=95,slow=8.2,SNR=8.0						
	0.2nm,0.4s						
ASAR	Alice Springs	36.22	257	P	P	00 36 23.8	-0.2
	0.6nm,0.7s,baz=88,slow=8.2,SNR=5.1						
	0.6nm,0.7s						
ARCES	ARCESS Array B	126.96	346	PKP	PKPdf	00 48 24.2	-0.2
	0.6nm,0.6s,baz=2.9,slow=2.4,SNR=4.5						

IDC 25 00:37:17.2±6.8, 61°.17S×156°.00E, h0^{km}, mb3.7/2, mbtmp3.7/3, ML3.7/1, MS3.5/8, Error ellipse: s-maj=404.1km s-min=39.0km az=75.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	16.54	176	Pn	Pn	00 41 10.1	0.0
	0.3nm,0.3s,baz=346,slow=14,SNR=9.1						
VNDA				LR	LR	00 46 59.0	
	comp=Z,115nm,20.6s,baz=350,slow=35						
	1.1nm,0.5s						
RPZ	Rata Peaks	19.66	34	LR	LR	00 48 09.4	
	comp=Z,171nm,19.4s,baz=200,slow=33						
URZ	Urewera	26.45	40	LR	LR	00 51 05.9	
	comp=Z,99nm,20.7s,baz=211,slow=31						
QSPA	South Pole Qui	28.92	180	LR	LR	00 53 40.5	
	comp=Z,79nm,19.3s,baz=24,slow=34						
MAW	Mawson	37.08	219	LR	LR	00 58 04.8	
	comp=Z,83nm,19.0s,baz=84,slow=34						
H01W1	Cape Leeuwin H	37.35	295	T	T	01 23 24.0	
	baz=147,slow=75,SNR=102						
H01W2	Cape Leeuwin H	37.36	295	T	T	01 23 27.2	
	baz=147,slow=75,SNR=108						
H01W3	Cape Leeuwin H	37.37	295	T	T	01 23 27.3	
	baz=147,slow=75,SNR=115						
DZM	Mont Dzumac	39.74	15	LR	LR	00 58 24.7	
	comp=Z,118nm,18.1s,baz=138,slow=32						
ASAR	Alice Springs	40.45	328	P	P	00 44 57.4	+0.2
	1.2nm,0.9s,baz=162,slow=8.7,SNR=6.7						
	1.2nm,0.9s						
CTA	Charters Tower	41.61	346	LR	LR	00 59 24.9	
	comp=Z,55nm,21.3s,baz=88,slow=32						
WRA	Warramunga Arr	43.91	330	P	P	00 45 25.0	-0.4
	0.9nm,0.9s,baz=163,slow=7.2,SNR=6.7						
	0.9nm,0.9s						
SNAA	Sanae	46.63	189	LR	LR	01 05 48.4	
	comp=Z,82nm,19.6s,baz=128,slow=37						
H08S2	Diego Garcia H	80.21	272	T	T	02 17 03.9	
	baz=150,slow=76,SNR=15						
H08S1	Diego Carcia H	80.22	272	T	T	02 17 00.7	
	baz=150,slow=76,SNR=10						
H08S3	Diego Garcia H	80.23	272	T	T	02 17 03.8	
	baz=150,slow=76,SNR=31						

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*KRSC **25** 00:53:19.6±2.6, 50°.64N×156°.99E, h99^{km}±29^{km}, ML4.4*
*MOS **25** 00:53:19.6±0.7, 50°.63N×156°.68E, h102^{km}, mb4.5/1, Error ellipse: s-maj=26.0km s-min=4.8km az=73.6*
*IDC **25** 00:53:23.3±2.6, 50°.97N×156°.27E, h123^{km}±22^{km}, mb3.3/8, mbtmp3.7/10, MS3.6/1, Error ellipse: s-maj=33.9km s-min=16.3km az=156.0*

ISC 25 00:53:20.8±0.8, 50°.70N±0°.07×156°.67E±0°.07, h104^{km}±6^{km}, n73, σ1^{s}16/87, mb3.6/8, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.35	268	⇑iPN	Pn	00 53 36.4	+0.4
SKR				i S	Sn	00 53 47.5	+0.1
SKR				pmax	pmax		
	comp=Z,2µm,0.5s						
SKR				smax	smax		
	comp=E,7µm,0.7s						
SKR				smax	smax		
	comp=N,5µm,0.5s						
SKR	Severo-Kuril's	0.35	268	i P	Pn	00 53 36.3	+0.3
SKR				eS	Sn	00 53 47.5	+0.1
PAU	Pauzhetka	0.78	7	PN	Pn	00 53 39.1	-0.1
PAU				S	Sn	00 53 53.1	0.0
PAU	Pauzhetka	0.78	7	eP	Pn	00 53 39.1	-0.1
PAU				eS	Sn	00 53 53.1	0.0
KDTR	Khodutka, Kamc	1.43	38	PN	Pn	00 53 45.9	-0.3
KDTR				S	Sn	00 54 04.4	-1.2
KDTR	Khodutka, Kamc	1.43	38	eP	Pn	00 53 45.9	-0.3
KDTR				eS	Sn	00 54 04.4	-1.2
MIPR	Malaya Ipel'ka	1.58	2	PN	Pn	00 53 47.8	-0.4
MIPR				S	Sn	00 54 08.3	-0.8
MIPR	Malaya Ipel'ka	1.58	2	eP	Pn	00 53 47.8	-0.4
MIPR				eS	Sn	00 54 08.3	-0.8
ASAK	Asacha	1.86	24	PN	Pn	00 53 52.3	+0.6
ASAK	Asacha	1.86	24	eP	Pn	00 53 52.3	+0.6
MTVR	Mutnovka	2.02	27	PN	Pn	00 53 54.6	+0.7
MTVR				S	Sn	00 54 20.0	+0.8
MTVR	Mutnovka	2.02	27	eP	Pn	00 53 54.6	+0.7
MTVR				eS	Sn	00 54 20.0	+0.8
GRL	Gorelyy	2.06	25	PN	Pn	00 53 55.2	+0.9
GRL				S	Sn	00 54 21.0	+1.1
GRL	Gorelyy	2.06	25	eP	Pn	00 53 55.2	+0.9
GRL				eS	Sn	00 54 21.0	+1.1
RUS	Russkaya	2.09	33	PN	Pn	00 53 54.3	-0.2
RUS	Russkaya	2.09	33	eP	Pn	00 53 54.3	-0.2
APC	Apacha	2.25	8	PN	Pn	00 53 56.2	-0.5
APC	Apacha	2.25	8	eP	Pn	00 53 56.2	-0.5
KRMR	Karymshinskiy	2.32	22	PN	Pn	00 53 58.1	+0.5
KRMR				S	Sn	00 54 27.4	+1.6
KRMR	Karymshinskiy	2.32	22	eP	Pn	00 53 58.1	+0.5
KRMR				eS	Sn	00 54 27.4	+1.6
PETK	Petropavlovsk-	2.50	14	P	Pn	00 53 59.5	-0.4
	comp=N,28nm,0.4s,baz=185,slow=13,SNR=90						
PETK				S	Sn	00 54 30.6	+0.5
	comp=N,11nm,0.6s,baz=196,slow=20,SNR=4.3						
PET	Petropavlovsk	2.64	27	PN	Pn	00 54 02.1	+0.4
PET				S	Sn	00 54 33.4	+0.2
PET	Petropavlovsk	2.64	27	eP	Pn	00 54 02.1	+0.4
PET				eS	Sn	00 54 33.4	+0.2
DALK	Dalny	2.67	28	PN	Pn	00 54 02.5	+0.3
DALK				S	Sn	00 54 34.7	+0.7
DALK	Dalny	2.67	28	eP	Pn	00 54 02.5	+0.3
DALK				eS	Sn	00 54 34.7	+0.7
UGLR	Uglovaya	2.85	27	PN	Pn	00 54 06.0	+1.4
UGLR	Uglovaya	2.85	27	eP	Pn	00 54 06.0	+1.4
KOK	Koryaka	2.87	24	PN	Pn	00 54 06.5	+1.6
KOK	Koryaka	2.87	24	eP	Pn	00 54 06.5	+1.6
AVH	Avacha	2.88	26	PN	Pn	00 54 07.1	+2.2
AVH	Avacha	2.88	26	eP	Pn	00 54 07.1	+2.2
SMAR	Somma	2.89	26	PN	Pn	00 54 06.7	+1.4
SMAR	Somma	2.89	26	eP	Pn	00 54 06.7	+1.4
KRER	Koryakskii	2.91	25	PN	Pn	00 54 07.2	+1.6
KRER	Koryakskii	2.91	25	eP	Pn	00 54 07.2	+1.6
SDLR	Sedlovina	2.93	27	PN	Pn	00 54 06.6	+0.9
SDLR	Sedlovina	2.93	27	eP	Pn	00 54 06.6	+0.9
KRX	Arik	2.94	24	PN	Pn	00 54 07.0	+1.2
KRX	Arik	2.94	24	eP	Pn	00 54 07.0	+1.2
NLC	Nalytchevo	2.98	33	PN	Pn	00 54 05.7	-0.6
NLC				S	Sn	00 54 39.3	-2.1
NLC	Nalytchevo	2.98	33	eP	Pn	00 54 05.7	-0.6
NLC				eS	Sn	00 54 39.3	-2.1
GNL	Ganaly	3.10	14	PN	Pn	00 54 08.6	+0.6
GNL	Ganaly	3.10	14	eP	Pn	00 54 08.6	+0.6
SPN	Mys Shipunski	3.18	40	PN	Pn	00 54 09.1	+0.2
SPN				S	Sn	00 54 45.2	-0.9
SPN	Mys Shipunski	3.18	40	eP	Pn	00 54 09.1	+0.2
SPN				eS	Sn	00 54 45.2	-0.9
KII	Karymskiy	3.76	26	PN	Pn	00 54 18.6	+1.9
KII	Karymskiy	3.76	26	eP	Pn	00 54 18.6	+1.9
MKZ	Mys Kozlova	4.95	37	PN	Pn	00 54 31.3	-1.3
MKZ	Mys Kozlova	4.95	37	eP	Pn	00 54 31.3	-1.3
TUMD	Tumrok D	5.05	25	eP	Pn	00 54 35.1	+1.0
TUMR	Tumrok	5.05	23	PN	Pn	00 54 36.8	+2.6
TUMR	Tumrok	5.05	23	eP	Pn	00 54 36.8	+2.6
KBTR	Krutoberegovo	6.63	31	PN	Pn	00 54 54.6	-0.9
KBTR	Krutoberegovo	6.63	31	eP	Pn	00 54 54.6	-0.9
BKI	Bering	7.21	48	eS	Sn	00 56 14.3	-9.2
UGL	Uglegorsk	9.56	266	ePN	Pn	00 55 41.1	+5.8
UGL				pmax	pmax		
	comp=Z,40nm,0.3s						
KLR	Kul'dur	16.08	274	P	Pn	00 57 00.9	+0.4
	comp=Z,0.7nm,0.3s,baz=61,slow=15,SNR=5.0						
KLR	Kul'dur	16.08	274	P	Pn	00 57 01.0	+0.4
JHJ	Hachijo jima 2	21.50	222	LR	LR	01 05 43.7	
	comp=Z,174nm,21.3s,baz=354,slow=34						
H11N2	WAKE ISLAND Hy	31.95	162	T	T	01 33 29.8	
	baz=348,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	31.96	162	T	T	01 33 31.9	
	baz=348,slow=76,SNR=30						
H11N1	WAKE ISLAND Hy	31.96	162	T	T	01 33 30.9	
	baz=348,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	33.10	162	T	T	01 34 54.1	
	baz=348,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	33.11	162	T	T	01 34 53.6	
	baz=348,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	33.11	162	T	T	01 34 55.4	
	baz=348,slow=76,SNR=25						
MKAR	Makanchi Array	47.28	296	P	P	01 01 40.6	-2.8
	comp=Z,0.3nm,0.3s,baz=62,slow=6.5,SNR=6.3						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	55.58	257	P	P	01 02 45.8	+0.2
	comp=Z,1.2nm,0.3s,baz=29,slow=8.0,SNR=5.1						
	comp=Z,1.2nm,0.3s						
NVAR	Mina Array Bea	58.60	66	P	P	01 03 08.7	+1.8
	comp=Z,0.4nm,0.4s,baz=292,slow=7.3,SNR=4.8						
	comp=Z,0.4nm,0.4s						
PDAR	Pinedale Array	60.58	58	P	P	01 03 21.4	+1.1
	comp=Z,0.4nm,0.7s,baz=284,slow=2.5,SNR=5.5						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	73.03	202	P	P	01 04 39.9	+0.7
	comp=Z,0.1nm,0.4s,baz=14,slow=6.2,SNR=1.2						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	73.57	64	P	P	01 04 43.7	+1.1
	comp=Z,0.6nm,0.5s,baz=297,slow=5.2,SNR=15						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	76.72	201	P	P	01 05 01.5	+1.1
	comp=Z,0.5nm,0.9s,baz=12,slow=4.8,SNR=3.2						
	comp=Z,0.5nm,0.9s						
ESDC	Sonseca Array	88.42	345	P	P	01 05 58.7	-2.3
	comp=Z,0.4nm,0.8s,baz=340,slow=3.3,SNR=2.6						
	comp=Z,0.4nm,0.8s						

TEH 25 00:58:02.6, 37°.43N×57°.50E, h7^{km}, ML3.6, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJRD	Bojnurd	0.28	345	ePg	Pb	00 58 09.7	-0.4
ISFR	Sfrayin	0.55	133	ePg	Pb	00 58 14.6	-0.1
ISFR				e		00 58 25.0	
	comp=Z,46µm,0.2s						
IEMG	Emamgholi	0.92	90	ePg	Pb	00 58 21.3	+0.3
SBZV	Sabzevar	1.04	175	ePg	Pn	00 58 23.5	-0.3
SBZV				eSg	Sn	00 58 38.0	-0.7
MRVT	Maraveh tapeh	1.14	282	ePg	Pb	00 58 24.8	+0.1
MRVT				eSg	Sn	00 58 41.1	+0.1
IAKL	Akhelmad	1.30	129	ePg	Pg	00 58 27.9	+0.3
IAKL				e		00 58 51.3	
	comp=Z,13µm,0.2s						
IPAY	Payeh	1.55	129	ePn	Pg	00 58 32.5	+0.2
IPAY				eSg	Sg	00 58 54.8	+2.4
IPAY				e		00 59 01.4	
	comp=Z,9µm,0.2s						
IMND	Minoodasht	1.67	265	ePg	Pg	00 58 34.8	+0.1
IKRD	Kardeh	1.74	111	ePn	Pg	00 58 35.9	-0.1
IKRD				e		00 59 07.5	
	comp=Z,7µm,0.2s						
SHRO	Shahrood	1.87	220	ePn	Pg	00 58 37.9	-0.5
IMOG	Moghan	1.98	131	ePn	Pb	00 58 39.7	+0.6
IMOG				e		00 59 13.6	
	comp=Z,6µm,0.4s						
IMYA	Miami	2.35	117	ePn	Pb	00 58 45.4	0.0
IMYA				e		00 59 26.7	
	comp=Z,1µm,0.6s						
TBHD	Torbat heydari	2.45	145	ePn	Pb	00 58 46.6	-0.5
IGLO	Ghaloghah	3.08	254	ePn	Pn	00 58 53.9	+2.1
IGLO				e		00 59 58.4	
	comp=Z,3µm,0.8s						
TBJM	Torbat-e-JAM	3.14	132	ePn	Pb	00 58 55.8	-3.1
IANJ	Anjilo	3.49	237	ePn	Pn	00 59 00.7	+3.2
TNSJ	Nastanj	3.53	192	ePn	Pn	00 59 01.0	+3.0
TNSJ				e		01 00 01.6	
	comp=Z,1µm,0.6s						
ISHM	Shahmirzad	3.75	246	ePn	Pn	00 59 04.6	+3.5
ISHM				e		01 00 19.6	
	comp=Z,946nm,0.4s						
TABS	Tabas	3.78	185	ePn	Pn	00 59 04.6	+3.2
TKDS	Koohdasht(Taba	3.82	185	ePn	Pn	00 59 05.2	+3.3
TKDS				e		01 00 15.4	
	comp=Z,449nm,1.0s						
AFRZ	Afriz	4.18	162	ePn	Pn	00 59 10.2	+3.3
ILAS	Lasjerd	4.19	242	ePn	Pn	00 59 10.4	+3.2
IFIR	Firoozkooh	4.22	246	ePn	Pn	00 59 11.3	+3.8
IPRN	Peran	4.30	256	ePn	Pn	00 59 11.6	+3.0
SHRT	Shahrakht	4.41	148	ePn	Pn	00 59 13.2	+3.2
TPRV	Parvadeh(Tabas	4.44	189	ePn	Pn	00 59 13.5	+3.1
TPRV				e		01 00 53.3	
	comp=Z,367nm,0.8s						
ITEG	Tejag	4.64	167	ePn	Pn	00 59 16.6	+3.4
IDAH	Dahanechah	5.07	157	ePn	Pn	00 59 22.8	+3.6
ANAR	Anarak	5.23	217	ePn	Pn	00 59 23.9	+2.5
ISFB	Sefidab	5.26	236	ePn	Pn	00 59 24.8	+3.2
IVRN	Varamin	5.26	244	ePn	Pn	00 59 25.2	+3.5
KRSH	Karshahi	5.56	233	ePn	Pn	00 59 28.9	+3.0
YZKH	Yazd	5.56	206	ePn	Pn	00 59 28.6	+2.7
BSRN	Basiran	5.61	166	ePn	Pn	00 59 29.9	+3.3
ICHK	Chekchek	5.76	207	ePn	Pn	00 59 31.6	+2.9
IBAF	Bafgh	6.04	196	ePn	Pn	00 59 36.3	+3.8
IZEF	Zefreh	6.19	225	ePn	Pn	00 59 38.3	+3.6
IKLH	Kolahrood	6.34	231	ePn	Pn	00 59 39.8	+3.1
NHDN	Nehbandan	6.38	160	ePn	Pn	00 59 40.6	+3.5
IMEH	Mehriz	6.48	202	ePn	Pn	00 59 41.8	+3.2
IGAR	Gharneh	6.72	223	ePn	Pn	00 59 45.3	+3.4
IRAM	Ramesheh	7.01	218	ePn	Pn	00 59 49.1	+3.2
KHGB	Koh Gabri	7.09	187	ePn	Pn	00 59 50.9	+4.0
IPIR	Pirpir	7.19	231	ePn	Pn	00 59 51.8	+3.4
ISRB	Sarab	7.81	276	ePn	Pn	00 59 58.9	+2.1
IHRS	Heris	8.32	279	ePn	Pn	01 00 04.7	+0.9
IMRD	Marand	9.39	281	ePn	Pn	01 00 21.6	+3.2

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*IDC **25** 01:03:35.9±0.7, 35°.12N×141°.28E, h0^{km}, mb3.9/12, mbtmp3.9/15, ML3.9/2, MS3.2/12, Error ellipse: s-maj=23.7km s-min=15.1km az=93.0*
*JMA **25** 01:03:38.1±0.3, 35°.1N±0°.4×14°1E±°, h10^{km}±4^{km}, MV3.2/36, E OFF BOSO PENINSULA*
*NEIC **25** 01:03:39.8±1.5, 35°.13N±0°.05×141°.5E±0°.1, h28^{km}±3^{km}, mb4.5/10, Error ellipse: s-maj=12.7km s-min=7.5km az=95.0*

ISC 25 01:03:39.7±0.6, 35°.14N±0°.04×141°.39E±0°.07, h27^{km}, n66, σ1^{s}24/53, mb4.0/17, MS3.3/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.59	215	i P	Pb	01 03 49.5	-1.5
BSO1				X		01 03 56.6	
CHOJ	Chosi	0.71	323	P	Pb	01 03 51.6	-1.8
BSO3	Boso 3	0.79	245	i P	Pb	01 03 53.1	-1.6
BSO3				eX		01 04 04.4	
BSO4	Boso 4	0.87	261	P	Pn	01 03 54.8	-1.3
BSO4				eX		01 04 07.0	
JSMT	Sammumatsuo	0.92	304	eP	Pb	01 03 56.4	-0.5
JKUC	kamogawauchiur	0.97	272	P	Pb	01 03 56.6	-1.2
JKUC				S	Sn	01 04 09.3	-1.1
JCN	Nagara	1.01	286	P	Pb	01 03 58.2	-0.3
JYT	Yasato	1.46	319	Pn	Pb	01 04 04.8	-1.3
JYT	Yasato	1.46	319	P	Pb	01 04 04.7	-1.3
JHJ2	Mitsune	2.40	213	Pn	Pn	01 04 17.8	+0.5
JHJ	Hachijo jima 2	2.41	214	Pn	Pn	01 04 16.3	-1.0
	23nm,0.3s,baz=356,slow=23,SNR=16						
JHJ				Sn	Sn	01 04 45.8	-0.2
	34nm,0.3s,baz=57,slow=22,SNR=3.8						
	54nm,0.2s						
JMM	Marumori	2.76	350	Pn	Pn	01 04 22.3	+0.1
MJAR	Matsushiro Arr	2.94	299	Pn	Pn	01 04 23.4	-1.2
	3.3nm,0.4s,baz=95,slow=13,SNR=27						
MJAR				LR	LR	01 05 11.5	
	comp=Z,94nm,19.3s,baz=108,slow=33						
MJAR	Matsushiro Arr	2.94	299		Pn	01 04 26.2	+1.6
MAJO	Matsushiro	2.94	299	Pn	Pn	01 04 26.3	+1.7
MJB9	Matsu-Tunnel	2.94	299	Pn	Pn	01 04 26.5	+1.8
JGF	Kuroka	3.32	279	Pn	Pn	01 04 32.0	+2.1
JSD	Sado	3.83	320	Pn	Pn	01 04 37.9	+1.0
JTM	Tenmabayashi	5.64	358	Pn	Pn	01 05 01.6	-0.2
ERM	Erimo	7.00	11	Pn	Pn	01 05 19.3	-1.1
JCJ	Chichijima	8.05	175	Pn	Pn	01 05 32.8	-2.0
	4.9nm,0.3s,baz=9.4,slow=19,SNR=6.7						
JCJ				LR	LR	01 08 59.4	
	comp=Z,104nm,20.0s,baz=98,slow=40						
	59nm,0.8s						
JCJ	Chichijima	8.05	175	Pn	Pn	01 05 33.3	-1.5
KSRS	Korea Array	11.11	286	Pn	Pn	01 06 19.4	+2.7
	0.2nm,0.3s,baz=100,slow=15,SNR=4.8						
KSRS				LR	LR	01 10 45.5	
	comp=Z,159nm,19.5s,baz=95,slow=39						
KLR	Kul'dur	15.77	336	Pn	Pn	01 07 16.1	-3.6
	baz=174,slow=7.6,SNR=4.1						
KLR				LR	LR	01 13 33.9	
	comp=Z,108nm,19.3s,baz=140,slow=38						
YHNB	Yeheng	20.21	244	Pn	Pn	01 08 15.0	+0.5
YHNB				IAmb	IAmb	01 08 30.5	
	comp=Z,22nm,1.2s						
PETK	Petropavlovsk-	21.36	28	LR	LR	01 17 35.8	
	comp=Z,38nm,18.4s,baz=227,slow=39						
MA2	Magadan	25.21	11	LR	LR	01 18 59.7	
	comp=Z,17nm,19.1s,baz=154,slow=37						
H11N2	WAKE ISLAND Hy	27.25	118	T	T	01 37 55.3	
	baz=309,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	27.25	118	T	T	01 38 01.2	
	baz=309,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	27.26	118	T	T	01 37 53.0	
	baz=309,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	27.89	120	T	T	01 38 41.1	
	baz=312,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	27.89	120	T	T	01 38 47.4	
	baz=312,slow=76,SNR=58						
H11S2	WAKE ISLAND Hy	27.91	120	T	T	01 39 07.3	
	baz=312,slow=76,SNR=42						
SONM	Songino Array	28.86	307	LR	LR	01 21 02.1	
	comp=Z,57nm,20.7s,baz=240,slow=36						
GSTR	Great Sitkin T	34.58	47		P	01 10 25.5	-0.4
ZALV	Zalesovo Beam	43.19	314	P	P	01 11 38.4	+0.3
	comp=Z,1.5nm,0.6s,baz=105,slow=5.1,SNR=7.6						
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	43.19	314	P	P	01 11 37.8	-0.2
NRIK	Noril'sk	44.98	336	LR	LR	01 32 55.4	
	comp=Z,55nm,18.5s,baz=353,slow=39						
MKAR	Makanchi Array	45.13	304	P	P	01 11 53.5	-0.2
	comp=Z,1.0nm,0.7s,baz=88,slow=11,SNR=6.7						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	45.13	304	P	P	01 11 53.3	-0.4
KURK	Kurchatov	47.10	310	P	P	01 12 08.3	-0.8
KURK				IAmb	IAmb	01 12 10.2	
	comp=Z,5.3nm,0.8s						
KURBB	Kurchatov Arra	47.17	309	LR	LR	01 33 19.6	
	comp=Z,56nm,18.5s,baz=121,slow=38						
ILAR	Eielson Array	51.11	32	P	P	01 12 40.7	+1.1
	comp=Z,0.6nm,0.7s,baz=272,slow=5.8,SNR=7.7						
	comp=Z,0.6nm,0.7s						
KK31	Karatay Array	54.07	301	P	P	01 13 02.0	+0.2
KKAR	Karatay Array	54.07	301	P	P	01 13 02.2	+0.3
WB0	Warramunga Arr	55.00	188	P	P	01 13 08.2	-0.5
WRAB	Tennant Creek	55.17	188	P	P	01 13 10.0	0.0
WR0	Warramunga Arr	55.18	188	P	P	01 13 09.8	-0.1
WR0				IAmb	IAmb	01 13 13.0	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	55.18	188	P	P	01 13 09.8	-0.2
WB2				IAmb	IAmb	01 13 10.7	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	55.18	188	P	P	01 13 09.7	-0.3
	comp=Z,4.2nm,0.8s,baz=4.2,slow=7.6,SNR=39						
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	55.18	188	P	P	01 13 09.0	-1.1
INK	Inuvik	56.08	27	LR	LR	01 38 45.1	
	comp=Z,22nm,20.1s,baz=29,slow=38						
ARU	Arti	57.77	319	P	P	01 13 27.6	-0.5
ARU				IAmb	IAmb	01 13 28.8	
	comp=Z,3.8nm,1.0s						
ASAR	Alice Springs	58.91	188	P	P	01 13 37.1	+0.7
	comp=Z,0.5nm,0.6s,baz=15,slow=12,SNR=7.1						
	comp=Z,0.5nm,0.6s						
PSA00	Pilbara Seismi	59.99	203	P	P	01 13 44.5	+0.7
PSA00				IAmb	IAmb	01 13 57.4	
	comp=Z,7.0nm,1.2s						
YKA	Yellowknife Ar	65.46	30	P	P	01 14 20.8	+1.0
	comp=Z,0.5nm,0.8s,baz=298,slow=5.5,SNR=3.4						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	70.48	333	P	P	01 14 51.7	+0.3
	comp=Z,1.6nm,0.8s,baz=68,slow=10,SNR=5.7						
	comp=Z,1.6nm,0.8s						
GNI	Garni	72.82	307	LR	LR	01 49 55.7	
	comp=Z,19nm,20.5s,baz=59,slow=38						
AKASG	Malin Array Be	75.78	323	P	P	01 15 23.0	+0.1
	comp=Z,1.2nm,0.7s,baz=47,slow=5.5,SNR=5.2						
	comp=Z,1.2nm,0.7s						
NB2	NORSAR Subarra	75.92	337	P	P	01 15 23.9	+0.3
	comp=Z,3.8nm,0.9s,baz=43,slow=5.9						
NOA	NORSAR Array B	75.92	337	P	P	01 15 22.8	-0.8
	comp=Z,1.5nm,0.7s,baz=41,slow=5.7,SNR=5.9						
	comp=Z,1.5nm,0.7s						

NVAR	Mina Array Bea	76.15	53	P	P	01 15 27.7	+2.2
	comp=Z,0.5nm,0.7s,baz=302,slow=8.4,SNR=2.0						
	comp=Z,0.5nm,0.7s						
BRTR	Keskin Array B	80.09	312	P	P	01 15 49.1	+1.8
	comp=Z,0.5nm,0.8s,baz=169,slow=33,SNR=3.2						
	comp=Z,0.5nm,0.8s						
CLL	Collm	82.73	330	*e*P	P	01 16 01.0	+0.2
MMAI	Mount Meron Ar	83.04	306	LR	LR	01 56 30.6	
	comp=Z,33nm,18.5s,baz=244,slow=38						
GERES	GERESS Array B	84.31	328	P	P	01 16 08.5	-0.7
	comp=Z,0.4nm,0.6s,baz=43,slow=6.2,SNR=5.6						
	comp=Z,0.4nm,0.6s						

SOME ***25*** *01:05:19.4, 43°.28N×84°.35E, h15^{km}*
NNC ***25*** *01:05:23.4±2.9, 43°.40N×84°.17E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=23.5km s-min=10.8km az=133.0*
ISC 25 01:05:19.8±2.7**, 43°.3N**±0°.1×**84°.4E**±0°.1**, h10^{km}, n22, σ2^{s}51**/28**, 6C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	3.47	289	*e*P	Pb	01 06 21.3	-0.1
	2.8nm,0.2s						
DJR				*e*S	Sb	01 07 06.3	+2.7
	8.5nm,0.4s						
DJR	Jarkent	3.47	289	Pg	Pb	01 06 21.3	-0.1
	2.8nm,0.2s						
DJR				Lg	Lg	01 07 06.3	
	8.5nm,0.4s						
PDGK	Podgornoye	3.55	273	Pg	Pb	01 06 24.7	+1.9
	1.2nm,0.5s						
PDGK				Lg	Lg	01 07 11.6	
	11nm,0.3s						
PDGK	Podgornoye	3.55	273	⇓Pg	Pg	01 06 30.3	+2.5
	3.5nm,0.6s						
PDGK				⇑Lg	Lg	01 07 11.3	
	8.9nm,0.3s						
MK31	Makanchi Array	3.82	338	Pg	Pb	01 06 29.1	+1.8
	0.3nm,0.2s,baz=144,slow=17,SNR=14						
MK31				⇓Lg	Lg	01 07 20.4	
	3.1nm,0.4s,baz=145,slow=27,SNR=8.4						
UZB	Uzynbulak	3.90	270	*e*P	Pb	01 06 29.7	+1.0
UZB				*e*S	Sb	01 07 20.0	+4.0
UZB	Uzynbulak	3.90	270	Pg	Pb	01 06 29.7	+1.0
UZB				Lg	Lg	01 07 20.0	
MAKZ	Makanchi	3.92	335	⇓Pg	Pg	01 06 33.1	-1.9
	1.0nm,0.4s						
MAKZ				⇑Lg	Lg	01 07 24.2	
	6.2nm,0.7s						
KAPS	Kapalarasan	4.12	301	*e*P	Pb	01 06 32.9	+0.5
	1.5nm,0.2s						
KAPS				*e*S	Sb	01 07 25.6	+3.4
	5.9nm,0.4s						
KPKS	Kokpek	4.14	275	*e*P	Pg	01 06 36.0	-3.0
KPKS				*e*S	Sg	01 07 30.8	-1.8
ZSN	Zaisan	4.20	5	*e*P	Pb	01 06 35.9	+2.1
	2.8nm,0.2s						
ZSN				*e*S	Sg	01 07 31.1	-3.6
	12nm,0.7s						
ZSN	Zaisan	4.20	5	Pg	Pb	01 06 35.9	+2.1
	2.8nm,0.2s						
SATY	Saty	4.35	269	*e*P	Pg	01 06 40.7	-2.5
	6.0nm,0.4s						
SATY				*e*S	Sg	01 07 38.9	-0.7
	14nm,0.4s						
SATY	Saty	4.35	269	Pg	Pg	01 06 40.7	-2.5
	6.0nm,0.4s						
SATY				Lg	Lg	01 07 38.9	
	14nm,0.4s						
KURS	Kuram	4.51	275	*e*P	Pg	01 06 43.3	-2.9
	6.3nm,1.2s						
KURS				*e*S	Sg	01 07 44.1	-0.6
	5.9nm,0.7s						
KURS	Kuram	4.51	275	Pg	Pg	01 06 43.3	-2.9
	6.3nm,1.2s						
KURS				Lg	Lg	01 07 44.1	
	5.9nm,0.7s						
MDOK	Medeo	5.34	271	*e*P	Pg	01 06 59.0	-3.1
MDOK				*e*S	Sg	01 08 10.1	-1.1
MDOK	Medeo	5.34	271	Pg	Pg	01 06 57.8	-4.2
	1.9nm,0.5s						
MDOK				Lg	Lg	01 08 09.7	
	7.6nm,0.8s						
MDOK	Medeo	5.34	271	Pg	Pg	01 06 59.0	-3.1
TKM2	Tokmak 2	6.42	270	⇑Pg	Pg	01 07 20.9	-1.8
	2.0nm,0.6s						
TKM2				⇑Lg	Lg	01 08 44.8	
	2.8nm,0.6s						
KURBB	Kurchatov Arra	8.37	334	⇑Lg	Lg	01 09 46.4	
	7.7nm,0.7s						
KURK	Kurchatov	8.42	334	⇑Lg	Lg	01 09 45.2	
	3.6nm,0.7s						

IDC 25 01:23:27.1±1.4**, 28°.30N×87°.80E, h0^{km}, mb3.5**/3**, mbtmp3.4**/4**, MS3.5**/1**, Error ellipse: s-maj=72.6km s-min=30.6km az=49.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.96	348	P	Pn	01 27 50.4	0.0
	0.2nm,0.4s,baz=151,slow=9.8,SNR=1.8						
NRIK	Noril'sk	41.07	360	LR	LR	01 49 26.4	
	comp=Z,64nm,21.1s,baz=121,slow=38						
WRA	Warramunga Arr	65.75	132	P	P	01 34 14.0	0.0
	0.2nm,0.6s,baz=326,slow=6.3,SNR=4.9						
	0.2nm,0.6s						
ASAR	Alice Springs	68.14	135	P	P	01 34 29.4	+0.1
	0.4nm,0.5s,baz=316,slow=6.7,SNR=5.2						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	80.51	280	P	P	01 35 41.3	-0.3
	0.3nm,0.8s,baz=57,slow=5.3,SNR=1.7						
	0.3nm,0.8s						

DMN ***25*** *01:25:52.0±0.4, 28°.41N×87°.58E, h10^{km}, Ml4.7/4, Error ellipse: s-maj=7.6km s-min=3.4km az=39.0*
IDC ***25*** *01:25:52.8±1.1, 28°.21N×87°.35E, h0^{km}, mb3.7/5, mbtmp3.6/6, ML3.2/1, MS3.4/2, Error ellipse: s-maj=58.2km s-min=21.9km az=57.0*
ISC 25 01:25:54.5±2.1**, 28°.28N**±0°.07×**87°.59E**±0°.06**, h11^{km}**±13^{km}**, n20, σ1^{s}00**/30**, mb3.6**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	0.93	174	*e*Pg	Pg	01 26 12.0	-0.5
TAPN				*e*Sg	Sb	01 26 26.3	+0.9
	754nm,0.4s						
TAPN	Taplejung	0.93	174	*e*Pg	Pg	01 26 12.1	-0.5
TAPN				*e*Sg	Sb	01 26 26.3	+0.9
JIRN	Jiri	1.39	244	*e*Pg	Pn	01 26 19.2	-1.0
JIRN				*e*Sg	Sb	01 26 37.3	-1.3
	3µm,0.4s						
JIRN	Jiri	1.39	244	*e*Pg	Pn	01 26 19.0	-1.2
JIRN				*e*Sg	Sb	01 26 37.5	-1.1
	3µm,0.4s						
RAMN	Ramite	1.59	214	*e*Pg	Pb	01 26 24.2	+0.1
RAMN				*e*Sg	Sg	01 26 47.7	+1.9
	571nm,0.4s						
RAMN	Ramite	1.59	214	*e*Pg	Pb	01 26 24.0	-0.1
RAMN				*e*Sg	Sg	01 26 45.6	-0.2
PKIN	Phulchoki	2.07	251	*e*Pg	Pb	01 26 31.5	-0.7
PKIN				*e*Sg	Sb	01 26 58.6	+0.5
	898nm,0.3s						
PKIN	Phulchoki	2.07	251	*e*Pg	Pb	01 26 31.9	-0.3
PKIN				*e*Sg	Sb	01 26 58.6	+0.5
	876nm,0.4s						
GKN	Gorkha	2.63	265	*e*Pg	Pn	01 26 38.7	+1.7
GKN				*e*Sg	Sb	01 27 15.4	+1.4
	2µm,0.5s						
GKN	Gorkha	2.63	265	*e*Pg	Pb	01 26 41.4	-0.3
GKN				*e*Sg	Sb	01 27 15.5	+1.4
	1µm,0.3s						
DANN	Dangsing	3.38	272	*e*Pg	Pb	01 26 55.0	+0.3
DANN				*e*Sg	Sb	01 27 36.6	+0.7
	249nm,0.4s						
DANN	Dangsing	3.38	272	*e*Pg	Pb	01 26 54.2	-0.5
DANN				*e*Sg	Sb	01 27 37.3	+1.4
	182nm,0.4s						
MKAR	Makanchi Array	18.95	349	P	P	01 30 14.5	-1.1
	0.1nm,0.3s,baz=158,slow=12,SNR=2.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	25.73	356	P	P	01 31 25.8	+1.0
	0.4nm,0.3s,baz=195,slow=8.5,SNR=2.3						
	0.4nm,0.3s						
KSRS	Korea Array	34.87	64	LR	LR	01 46 32.7	
	comp=Z,32nm,21.1s,baz=205,slow=35						
FINES	FINESS Array B	52.02	328	P	P	01 35 03.3	-0.4
	0.5nm,0.6s,baz=123,slow=10,SNR=1.5						
	0.5nm,0.6s						
WRA	Warramunga Arr	65.87	131	P	P	01 36 41.2	+0.7
	0.5nm,0.7s,baz=326,slow=6.5,SNR=7.7						
	0.5nm,0.7s						
ASAR	Alice Springs	68.25	134	P	P	01 36 56.4	+0.8
	0.9nm,0.6s,baz=322,slow=6.7,SNR=12						
	0.9nm,0.6s						
STKA	Stephens Creek	78.85	135	LR	LR	02 16 19.2	
	comp=Z,35nm,20.1s,baz=42,slow=38						
TORD	Torodi Ar. Bea	80.33	280	P	P	01 38 05.3	-1.0
	0.4nm,0.8s,baz=59,slow=4.9,SNR=2.4						
	0.4nm,0.8s						

GUC 25 01:34:28.0±0.8**, 33°.51S×72°.32W, h36^{km}**±2^{km}**, ML3.6, 12C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA05	Santo Domingo	0.61	104	⇓*i*P	Pn	01 34 39.5	-0.8
VA05				*i* S	Sn	01 34 49.0	+0.2
VA05				IAML		01 34 50.8	
	comp=N,7µm,0.3s						
VA01	Torpederas	0.74	50	⇓*i*P	Pn	01 34 42.0	0.0
VA01				*i* S	Sn	01 34 52.5	+0.6
VA01				IAML		01 34 54.1	
	comp=N,2µm,0.2s						
MT01	Popeta	0.96	112	⇓*i*P	Pn	01 34 45.1	+0.2
MT01				*i* S	Sn	01 34 57.9	+0.5
MT01				IAML		01 34 59.7	
	comp=N,5µm,0.1s						
MT02	Curacav	1.02	76	⇓*i*P	Pn	01 34 46.3	+0.5
MT02				*i* S	Sn	01 34 59.6	+0.8
MT02				IAML		01 35 00.5	
	comp=E,3µm,0.3s						
BO03	Pichilemu	1.03	163	⇑*i*P	Pn	01 34 46.7	+0.8
BO03				*i* S	Sn	01 35 00.5	+1.5
MT09	Talagante	1.14	104	⇓*i*P	Pn	01 34 48.0	+0.5
MT09				*i* S	Sn	01 35 03.5	+1.4
MT09				IAML		01 35 05.2	
	comp=N,4µm,0.3s						
ROCH	El Roble	1.22	64	*e*P	Pn	01 34 49.7	+0.9
ROCH				*e*P		01 34 49.7	
ROCH				*i* S	Sn	01 35 05.9	+1.7
ROCH				IAML		01 35 08.0	
	comp=E,1µm,0.2s						
ROCH				IAML		01 35 11.0	
	comp=N,2µm,0.2s						
VA06	Catapilco	1.28	43	⇑*i*P	Pn	01 34 49.9	+0.6
VA06				*i* S	Sn	01 35 06.6	+1.5
VA06				IAML		01 35 11.7	
	comp=N,3µm,0.3s						
BO01	Tunca	1.35	131	⇑*i*P	Pn	01 34 51.0	+0.7
BO01				*i* S	Sn	01 35 09.5	+2.4
PEL	Peldehue	1.42	76	⇑*i*P	Pn	01 34 52.9	+1.6
PEL				*i* S	Sn	01 35 11.4	+2.7
PEL				IAML		01 35 14.9	
	comp=N,1µm,0.2s						
BO04	La Punta	1.50	109	⇑*i*P	Pn	01 34 53.6	+1.2
BO04				*i* S	Sn	01 35 13.5	+2.6
BO04				IAML		01 35 15.6	
	comp=E,914nm,0.4s						
MT03	Universidad Ad	1.51	90	⇓*i*P	Pn	01 34 54.5	+1.8
MT03				*i* S	Sn	01 35 14.5	+3.4
MT03				IAML		01 35 25.3	
	comp=N,2µm,0.4s						
GO05	Huala	1.53	168	⇑*i*P	Pn	01 34 53.8	+0.9
GO05				IAML		01 35 22.1	
	comp=E,475nm,0.6s						
VA03	San Esteban	1.66	64	⇑*i*P	Pn	01 34 56.1	+1.4
VA03				*i* S	Sn	01 35 18.4	+3.6
VA03				IAML		01 35 21.2	
	comp=E,2µm,0.2s						
FCH	Farellones	1.71	84	⇑*i*P	Pn	01 34 57.5	+2.0
FCH				*i* S	Sn	01 35 20.6	+4.3
LMEL	Las Melosas	1.80	101	⇑*i*P	Pn	01 34 58.2	+1.6
LMEL				*i* S	Sn	01 35 22.0	+3.7
LMEL				IAML		01 35 26.3	
	comp=N,1µm,0.2s						
ML02	Panimavida	2.37	162	*e*P	Pn	01 35 06.3	+2.0
ML02				IAML		01 35 53.1	
	comp=N,476nm,0.6s						
CO02	Combarbal	2.56	26	⇑*i*P	Pn	01 35 08.1	+1.1
CO06	Fray Jorge	2.89	12	⇑*i*P	Pn	01 35 11.6	+0.2
CO06				IAML		01 35 46.1	
	comp=E,148nm,0.4s						
GO04	Tololo Observa	3.57	22	⇑*i*P	Pn	01 35 22.0	+0.9
CO01	Juntas del Tor	4.00	29	*e*P	Pn	01 35 29.1	+2.1

TRN 25 01:46:22.8, 18°.20N×62°.03W, h38^{km}, MD4.1, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.57	156	*e*P	Pn	01 46 36.2	+1.6
ANWB				*e*S	Sn	01 46 45.0	+2.1
SMRT	St. Maarten	1.01	262	*e*P	Pn	01 46 41.9	+1.5
SMRT				*e*S	Sn	01 46 56.2	+2.8
SKI	Saint Kitts	1.09	218	*e*P	Pn	01 46 43.2	+1.6
SKI				*e*S	Sn	01 46 57.7	+2.1
ANDO	Antigua, Disas	1.10	170	*e*P	Pn	01 46 42.7	+1.1
ANDO				*e*S	Sn	01 46 57.9	+2.4
SKOC	St. Kitts, UWI	1.12	217	*e*P	Pn	01 46 43.1	+1.1
SKOC				*e*S	Sn	01 46 59.7	+3.5
SEUS	St. Eustatius	1.15	232	*e*P	Pn	01 46 43.8	+1.4
SEUS				*e*S	Sn	01 46 59.0	+2.2
BPA	Boggy Peak	1.16	172	*e*P	Pn	01 46 43.4	+0.9
BPA				*e*S	Sn	01 46 59.8	+2.7
ANBD	Bethesda, Anti	1.17	168	*e*P	Pn	01 46 43.8	+1.1
ANBD				*e*S	Sn	01 46 59.5	+2.2
MBFL	Flemmings, Mon	1.45	187	*e*P	Pn	01 46 48.4	+1.8
MBFL				*e*S	Sn	01 47 07.3	+2.9
MLYT	Lee's Yard	1.48	186	*e*P	Pn	01 46 48.4	+1.5
MLYT				*e*S	Sn	01 47 07.7	+2.7
ABD	La Joyeuse, An	1.79	163	*e*P	Pn	01 46 53.4	+2.3
ABD				*e*S	Sn	01 47 14.7	+2.0
CBE	Ff, Capester	2.15	169	*e*P	Pn	01 46 58.3	+2.1
CBE				*e*S	Sn	01 47 24.1	+2.4
MAGL	Barre de l'ile	2.35	162	*e*P	Pn	01 47 01.1	+2.3
MAGL				*e*S	Sn	01 47 28.6	+2.1
TBG	Guadaloupe-3	2.36	171	*e*P	Pn	01 47 01.3	+2.3
TDBA	Terre de Bas,	2.37	171	*e*P	Pn	01 47 01.6	+2.5
TDBA				*e*S	Sn	01 47 28.5	+1.6
CDVI	St. Croix	2.65	261	*e*P	Pn	01 47 04.7	+1.8
DSLB	Salisbury	2.81	168	*e*P	Pn	01 47 07.6	+2.5
DSLB				*e*S	Sn	01 47 39.7	+1.9
BIM	Bigot	3.77	166	*e*P	Pn	01 47 20.2	+1.8
MPOM	Morne Pois Mar	3.90	163	*e*P	Pn	01 47 21.7	+1.5
MPOM				*e*S	Sn	01 48 04.9	+0.3
AOPR	Arecibo Observ	4.49	273	*e*P	Pn	01 47 30.3	+1.9
AOPR	Arecibo Observ	4.49	273	*e*S	Sn	01 48 20.1	+0.6

IDC 25 01:50:37.3±3.5**, 15°.87S×174°.02W, h0^{km}, mb3.8**/5**, mbtmp3.8**/6**, ML4.4**/1**, MS3.6**/39**, Error ellipse: s-maj=196.0km s-min=22.7km az=147.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.92	48	Pn	Pn	01 51 22.9	-2.1
	51nm,0.3s,baz=41,slow=0.1,SNR=50						
AFI				Sn	Sn	01 51 50.8	-10
	110nm,0.3s,baz=71,slow=23,SNR=6.0						
	113nm,0.3s						
MSVF	Nonsavu	7.82	255	LR	LR	01 54 55.3	
	comp=Z,164nm,21.1s,baz=23,slow=33						
RAO	Raoul Island	13.79	194	LR	LR	01 58 16.0	
	comp=Z,149nm,21.1s,baz=309,slow=33						
RAR	Rarotonga	14.52	114	LR	LR	01 58 42.4	
	comp=Z,265nm,20.2s,baz=324,slow=33						
DZM	Mont Dzumac	19.47	249	LR	LR	02 00 58.3	
	comp=Z,139nm,20.0s,baz=346,slow=32						
PPT	Papeete	23.47	98	LR	LR	02 04 17.8	
	comp=Z,94nm,18.2s,baz=332,slow=35						
URZ	Urewera	23.63	198	LR	LR	02 04 44.2	
	comp=Z,257nm,18.5s,baz=31,slow=36						
RPZ	Rata Peaks	30.52	202	LR	LR	02 09 21.8	
	comp=Z,287nm,18.4s,baz=24,slow=37						
CTA	Charters Tower	37.96	258	LR	LR	02 11 35.7	
	comp=Z,73nm,18.6s,baz=82,slow=33						
PMG	Port Moresby	38.38	275	LR	LR	02 12 33.6	
	comp=Z,119nm,18.5s,baz=125,slow=34						
H11S2	WAKE ISLAND Hy	39.06	330	T	T	02 37 58.0	
	baz=149,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	39.08	330	T	T	02 37 59.0	
	baz=149,slow=76,SNR=41						
H11S1	WAKE ISLAND Hy	39.08	330	T	T	02 37 59.4	
	baz=149,slow=76,SNR=45						
H11N3	WAKE ISLAND Hy	40.03	331	T	T	02 39 16.2	
	baz=150,slow=76,SNR=68						
H11N1	WAKE ISLAND Hy	40.03	331	T	T	02 39 11.0	
	baz=150,slow=76,SNR=94						
H11N2	WAKE ISLAND Hy	40.05	331	T	T	02 39 17.5	
	baz=150,slow=76,SNR=72						
WRA	Warramunga Arr	49.16	257	P	P	01 59 26.1	-1.3
	0.5nm,0.9s,baz=96,slow=6.1,SNR=2.7						
	0.5nm,0.9s						
ASAR	Alice Springs	49.40	252	P	P	01 59 29.5	+0.3
	3.4nm,0.8s,baz=85,slow=8.4,SNR=21						
	3.4nm,0.8s						
SIJI	Sorong	55.95	280	LR	LR	02 23 29.7	
	comp=Z,56nm,18.1s,baz=149,slow=35						
BATI	Baumata	60.79	267	LR	LR	02 24 51.8	
	comp=Z,60nm,20.1s,baz=128,slow=34						
MJAR	Matsushiro Arr	68.91	320	LR	LR	02 25 36.0	
	comp=Z,54nm,21.2s,baz=142,slow=30						
ASAJ	Asahikawa	71.62	329	LR	LR	02 27 08.2	
	comp=Z,49nm,21.5s,baz=352,slow=31						
PFO	Pinyon Flats O	73.68	47	LR	LR	02 27 37.2	
	comp=Z,61nm,18.6s,baz=214,slow=30						
LPIG	La Paz	73.79	59	LR	LR	02 27 59.2	
	comp=Z,36nm,19.2s,baz=198,slow=30						
YBH	Yreka Blue Hor	74.33	37	LR	LR	02 26 22.6	
	comp=Z,47nm,21.7s,baz=232,slow=29						
NVAR	Mina Array Bea	75.08	42	P	P	02 02 21.9	+0.4
	0.6nm,0.8s,baz=219,slow=7.0,SNR=4.1						
NVAR				LR	LR	02 27 34.9	
	comp=Z,45nm,20.4s,baz=266,slow=30						
	0.6nm,0.8s						
KDAK	Kodiak Island	75.50	12	LR	LR	02 27 23.6	
	comp=Z,44nm,21.5s,baz=226,slow=29						
KSRS	Korea Array	76.08	316	LR	LR	02 29 40.5	
	comp=Z,33nm,21.9s,baz=135,slow=31						
USRK	Ussuriysk Ar.	77.40	323	LR	LR	02 30 32.1	
	comp=Z,40nm,20.5s,baz=116,slow=31						
ELK	Elko	78.33	42	LR	LR	02 33 18.8	
	comp=Z,29nm,18.1s,baz=246,slow=33						
BBB	Bella Bella	78.57	27	LR	LR	02 29 18.9	
	comp=Z,37nm,19.3s,baz=194,slow=30						
KLR	Kul'dur	80.59	327	LR	LR	02 33 01.8	
	comp=Z,25nm,21.0s,baz=154,slow=32						
TXAR	Lajitas Array	81.37	56	LR	LR	02 30 40.2	
	comp=Z,31nm,18.8s,baz=216,slow=30						
NEW	Newport	81.43	34	LR	LR	02 34 49.6	
	comp=Z,40nm,18.3s,baz=215,slow=33						
ANMO	Albuquerque	81.56	50	LR	LR	02 35 11.3	
	comp=Z,48nm,18.3s,baz=256,slow=33						
DLBC	Dease Lake	82.36	22	LR	LR	02 32 25.2	
	comp=Z,53nm,18.9s,baz=266,slow=30						
PDAR	Pinedale Array	83.01	42	LR	LR	02 32 58.2	
	comp=Z,26nm,20.1s,baz=239,slow=31						
ILAR	Eielson Array	83.02	11	P	P	02 03 04.8	+0.7
	0.4nm,0.8s,baz=228,slow=6.9,SNR=4.2						
ILAR				LR	LR	02 31 53.8	
	comp=Z,23nm,20.6s,baz=269,slow=30						
	0.4nm,0.8s						
PMSA	Palmer Station	83.99	156	LR	LR	02 31 10.9	
	comp=Z,35nm,21.5s,baz=242,slow=29						
MAW	Mawson	87.16	199	LR	LR	02 41 21.3	
	comp=Z,95nm,18.0s,baz=74,slow=35						
YAK	Yakutsk	89.31	337	LR	LR	02 35 58.6	
	comp=Z,12nm,22.0s,baz=198,slow=30						
PLCA	Paso Flores	89.64	132	LR	LR	02 35 40.1	
	comp=Z,62nm,19.9s,baz=219,slow=30						
YKA	Yellowknife Ar	90.77	24	P	P	02 03 42.8	+0.8
	0.6nm,0.9s,baz=248,slow=3.3,SNR=4.4						
YKA				LR	LR	02 36 58.6	
	comp=Z,41nm,19.8s,baz=308,slow=31						
	0.6nm,0.9s						
ATAH	Atahualpa	93.44	98	LR	LR	02 36 18.2	
	comp=Z,25nm,19.9s,baz=216,slow=29						
NNA	Nana	93.53	103	LR	LR	02 36 27.6	
	comp=Z,11nm,19.9s,baz=293,slow=29						
ULM	Lac du Bonnet	94.67	39	LR	LR	02 40 23.0	
	comp=Z,43nm,20.0s,baz=270,slow=32						
LVC	Limon Verde	97.35	116	LR	LR	02 40 17.5	
	comp=Z,30nm,18.5s,baz=206,slow=31						
TKL	Tuckaleechee C	99.27	56	LR	LR	02 43 36.5	
	comp=Z,41nm,19.0s,baz=252,slow=32						
BRTR	Keskin Array B	146.14	320	PKPbc	PKPdf	02 10 18.4	-0.6
	2.1nm,0.9s,baz=112,slow=2.3,SNR=10						

SOME ***25*** *02:49:39.8, 46°.03N×82°.78E, h5^{km}*
NNC ***25*** *02:49:41.2±0.7, 45°.94N×82°.85E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=6.1km s-min=3.8km az=113.0*
ASRS ***25*** *02:49:46.1±0.6, 46°N±4°×8°3E±°, h5^{km}, MLh3.2/4, Error ellipse: s-maj=8.2km s-min=3.2km az=166.9, confirmed*
ISC 25 02:49:37.4±1.0**, 45°.93N**±0°.05×**83°.12E**±0°.05**, h10^{km}, n24, σ1^{s}95**/42**, 3C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	1.03	327	⇑P	Pn	02 49 58.8	+0.8
	1.2nm,0.1s,baz=149,slow=15,SNR=91						
MK31				⇓S	Sn	02 50 12.3	-0.3
	22nm,0.2s,baz=136,slow=34,SNR=81						
MKAR	Makanchi Array	1.03	327	Pg	Pn	02 49 59.0	+1.0
MKAR				Sg	Sn	02 50 12.6	0.0
MAKZ	Makanchi	1.18	318	⇓P	Pn	02 50 01.5	+1.6
	1.4nm,0.1s						
MAKZ				⇑S	Sn	02 50 16.9	+0.8
	2.1nm,0.1s						
MAKZ	Makanchi	1.18	318	⇓Pg	Pn	02 50 01.5	+1.6
MAKZ				Sg	Sn	02 50 17.4	+1.3
ZSN	Zaisan	1.94	38	*e*P	Pg	02 50 14.1	-0.4
	11nm,0.2s						
ZSN				*e*S	Sg	02 50 38.9	-0.8
	89nm,0.4s						
ZSN	Zaisan	1.94	38	P	Pg	02 50 14.1	-0.4
	11nm,0.2s						
ZSN				S	Sg	02 50 38.9	-0.8
	89nm,0.4s						
KAPS	Kapalarasan	2.72	258	*e*P	Pb	02 50 25.4	-0.6
	2.3nm,0.1s						
KAPS				*e*S	Sb	02 50 58.7	-0.8
	19nm,0.3s						
KAPS	Kapalarasan	2.72	258	Pg	Pb	02 50 25.4	-0.6
	2.3nm,0.1s						
KAPS				Lg	Lg	02 50 58.7	
	19nm,0.3s						
DJR	Jarkent	2.85	237	*e*P	Pg	02 50 31.2	-0.6
DJR				*e*S	Sg	02 51 08.2	-0.6
DJR	Jarkent	2.85	237	Pg	Pg	02 50 31.3	-0.6
DJR				Lg	Lg	02 51 08.2	
PDGK	Podgornoye	3.67	226	Pg	Pg	02 50 47.0	-0.7
	0.9nm,0.3s						
PDGK				Lg	Lg	02 51 35.9	
	15nm,0.7s						
PDGK	Podgornoye	3.67	226	⇓Lg	Lg	02 51 33.7	
	22nm,0.9s						
KPKS	Kokpek	4.01	234	*e*P	Pg	02 50 52.8	-1.3
	2.1nm,0.1s						
KPKS				*e*S	Sg	02 51 45.2	-0.8
	22nm,0.2s						
UZB	Uzynbulak	4.04	228	*e*P	Pg	02 50 53.2	-1.5
	3.1nm,0.2s						
UZB				*e*S	Sg	02 51 45.6	-1.4
	5.1nm,0.2s						
UZB	Uzynbulak	4.04	228	Pg	Pg	02 50 53.2	-1.5
	3.1nm,0.2s						
UZB				Lg	Lg	02 51 45.6	
	5.1nm,0.2s						
UKR	Ust'-Kan	5.13	12	Pn	Pn	02 50 58.0	+3.7
UKR				Pg	Pg	02 51 14.9	-0.6
UKR				Sg	Sg	02 52 19.6	-2.3
CHBI	Chibit, Altay	5.28	32	Pn	Pn	02 50 59.4	+3.1
CHBI				Pg	Pg	02 51 18.5	+0.1
CHBI				Sg	Sg	02 52 23.1	-3.6
AKAR	Aktash	5.33	33	Pn	Pn	02 51 00.9	+3.9
AKAR				Pg	Pg	02 51 20.9	+1.6
AKAR				Sg	Sg	02 52 24.5	-3.8
CUR	Chagan-Uzun	5.45	38	Pn	Pn	02 51 01.9	+3.1
CUR				Pg	Pg	02 51 20.3	-1.4
CUR				Sg	Sg	02 52 27.8	-4.5
KURBB	Kurchatov Arra	5.60	329	⇓Lg	Lg	02 52 35.3	
	24nm,0.6s						

KURK	**Kurchatov**	**5.65**	**330**	⇑Lg	Lg	02 52 35.1	
	11nm,0.6s						
KURK	**Kurchatov**	**5.65**	**330**	Pn	**Pn**	**02 51 03.2**	**+1.9**
KURK				Pg	**Pg**	**02 51 27.0**	**+1.5**
KURK				Sg	**Sg**	**02 52 38.4**	**-0.1**
ULGR	**Ulagan, Altay**	**5.70**	**33**	Pg	**Pg**	**02 51 24.3**	**-2.1**
ULGR				Sg	**Sg**	**02 52 37.2**	**-3.0**
LUZB	**Luzhba, Kemero**	**8.59**	**24**	Sg	**Sg**	**02 54 13.5**	**+0.6**

IDC 25 03:11:20.8±9.2, 17°.92S×177°.85W, h562^{km}±37^{km}, mb2.8/3, mbtmp3.6/4, Error ellipse: s-maj=345.5km s-min=35.7km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.91**	**272**	P	P	03 12 43.0	0.0
	8.3nm,0.6s,baz=133,slow=19,SNR=9.6						
WRA	**Warramunga Arr**	**45.16**	**259**	P	P	03 18 47.9	-0.3
	0.2nm,0.5s,baz=93,slow=8.4,SNR=4.7 0.2nm,0.5s						
ASAR	**Alice Springs**	**45.30**	**254**	P	P	03 18 49.2	-0.1
	1.3nm,0.6s,baz=90,slow=8.0,SNR=18 1.3nm,0.6s						
YKA	**Yellowknife Ar**	**94.12**	**25**	P	P	03 23 39.0	-0.2
	0.3nm,0.6s,baz=248,slow=5.1,SNR=2.3 0.3nm,0.6s						

TAP 25 04:08:20.9, 23°.21N×120°.53E, h7^{km}, ML1.8, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN1	**Nanshi**	**0.02**	**175**	⇑*i*P	Pg	04 08 22.7	+0.4
	baz=174						
CHN1				*i* S	Sg	04 08 23.9	+0.6
	baz=174						
SNST	**Tainan City**	**0.03**	**294**	P	Pg	04 08 22.6	+0.3
	baz=294						
SNST				S	Sg	04 08 23.8	+0.6
	baz=294						
TWK	**Hsinying**	**0.07**	**329**	P	Pg	04 08 23.2	+0.4
	baz=336						
WTP	**Ta-pu**	**0.09**	**65**	*i* P	Pg	04 08 23.8	+0.8
	baz=67						
TPUB	**Ta-pu**	**0.13**	**46**	P	Pg	04 08 24.4	+0.7
	baz=45						
SGST	**Jiashian**	**0.14**	**157**	*e*P	Pg	04 08 23.9	+0.1
	baz=154						
SGST				*e*S	Sg	04 08 26.9	+1.1
	baz=154						
STYH	**Taoyuan**	**0.23**	**99**	P	Pg	04 08 26.6	+1.1
	baz=96						

IDC 25 04:31:12.9±1.4, 0°.66S×126°.65E, h0^{km}, mb3.6/4, mbtmp3.7/5, ML3.7/1, MS2.5/1, Error ellipse: s-maj=38.4km s-min=23.9km az=55.0

DJA 25 04:31:18.1±0.8, 0°S±2°×12°7E±°, h10^{km}±6^{km}, M3.8/7, MLv3.8/7

ISC 25 04:31:15.6±1.0, 0°.49S±0°.06×126°.74E±0°.07, h10^{km}, n10, σ2^{s}13/13, mb3.8/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.78**	**101**	P	**Pb**	**04 31 32.2**	**+1.0**
LBMI				S	**Sb**	**04 31 42.1**	**+0.3**
TNTI	**Ternate**	**1.41**	**27**	P	**Pn**	**04 31 42.6**	**+1.3**
TNTI				S	**Sn**	**04 32 01.2**	**+1.3**
SANI	**Sanana**	**1.72**	**206**	P	**Pn**	**04 31 46.0**	**+0.4**
SANI				S	**Sg**	**04 32 15.2**	**+4.3**
AAI	**Ambon**	**3.49**	**155**	P	**Pn**	**04 32 11.0**	**+1.0**
SIJI	**Sorong**	**4.54**	**95**	Pn	**Pn**	**04 32 25.4**	**+0.9**
	3.4nm,0.3s,baz=302,slow=15,SNR=7.0						
SIJI				Sn	**Sn**	**04 33 17.8**	**+0.3**
	2.1nm,0.3s,baz=150,slow=22,SNR=1.7 7.2nm,0.3s						
DAV	**Davao City (W)**	**7.60**	**351**	LR	LR	04 36 05.4	
	comp=Z,35nm,22.0s,baz=278,slow=38						
WRA	**Warramunga Arr**	**20.71**	**159**	P	**P**	**04 35 53.4**	**-2.9**
	1.5nm,0.6s,baz=339,slow=11,SNR=20 1.5nm,0.6s						
ASAR	**Alice Springs**	**24.06**	**164**	P	**P**	**04 36 28.7**	**-2.6**
	0.6nm,0.4s,baz=340,slow=10.0,SNR=11 0.6nm,0.4s						
STKA	**Stephens Creek**	**34.23**	**157**	P	**P**	**04 37 59.5**	**-2.2**
	0.6nm,0.3s,baz=331,slow=10,SNR=3.3 0.6nm,0.3s						
MKAR	**Makanchi Array**	**61.03**	**327**	P	**P**	**04 41 28.9**	**-0.6**
	0.3nm,0.4s,baz=116,slow=8.7,SNR=5.8 0.3nm,0.4s						

DNK 25 04:32:46.3±0.9, 55°.43N×20°.85E, h0^{km}, ML2.6(UPP), Suspected explosion

UPP 25 04:32:48.6±2.4, 55°.50N×20°.61E, h0^{km}, ML2.6, Suspected explosion

ISC 25 04:32:48.1±1.0, 55°.53N±0°.07×20°.77E±0°.05, h0^{km}, n15, σ0^{s}67/22, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PABE	**Paberze**	**1.82**	**90**	*e*P	**Pb**	**04 33 21.7**	**-0.4**
PABE				AML	AML	04 33 22.4	
	comp=Z,44nm,0.2s						
PABE				*e*S	**Sb**	**04 33 45.6**	**+0.2**
PABE				AML	AML	04 33 46.8	
	comp=E,60nm,0.2s						
PABE				AML	AML	04 33 50.1	
	comp=N,33nm,0.2s						
SUW	**Suwalki**	**2.06**	**137**	*e*P	**Pg**	**04 33 27.0**	**-0.6**
SUW				*e*S	**Sg**	**04 33 56.1**	**+1.7**
SUW				AML	AML	04 33 57.9	
	comp=E,188nm,0.3s						
SUW				AML	AML	04 33 59.2	
	comp=N,201nm,0.5s						
SUW				AML	AML	04 34 07.0	
	comp=Z,182nm,0.4s						
SLIT	**Slitere, Latvi**	**2.26**	**21**	*e*P	**Pn**	**04 33 25.8**	**-0.9**
SLIT				AML	AML	04 33 27.1	
	comp=Z,54nm,0.1s						
SLIT				*e*S	**Sn**	**04 33 55.7**	**+0.5**
SLIT				AML	AML	04 33 57.1	
	comp=N,80nm,0.4s						
SLIT				AML	AML	04 33 57.4	
	comp=E,78nm,0.4s						
GOTU	**Gotland**	**2.48**	**331**	P	**Pn**	**04 33 30.4**	**+0.7**
GOTU				S	**Sn**	**04 34 00.9**	**+0.3**
GOTU	**Gotland**	**2.48**	**331**	P	**Pn**	**04 33 30.4**	**+0.7**
GOTU				S	**Sn**	**04 34 00.9**	**+0.3**
BYXU	**Byxelkrok**	**2.74**	**312**	P	**Pn**	**04 33 33.2**	**0.0**
BYXU				S	**Sn**	**04 34 07.4**	**+0.5**
BYXU	**Byxelkrok**	**2.74**	**312**	P	**Pn**	**04 33 33.2**	**0.0**
BYXU				S	**Sn**	**04 34 07.4**	**+0.5**
BLEU	**Blekinge**	**2.90**	**288**	P	**Pn**	**04 33 35.1**	**-0.3**
BLEU	**Blekinge**	**2.90**	**288**	P	**Pn**	**04 33 35.1**	**-0.3**
OSKU	**Oskarshamn**	**3.09**	**305**	P	**Pn**	**04 33 37.7**	**-0.3**
OSKU	**Oskarshamn**	**3.09**	**305**	P	**Pn**	**04 33 37.7**	**-0.3**
VXJU	**Vaexsjoe**	**3.54**	**296**	P	**Pn**	**04 33 43.5**	**-0.8**
VXJU	**Vaexsjoe**	**3.54**	**296**	P	**Pn**	**04 33 43.5**	**-0.8**
VIKU	**Vikbolandet**	**3.72**	**325**	P	**Pn**	**04 33 46.2**	**-0.5**
VIKU	**Vikbolandet**	**3.72**	**325**	P	**Pn**	**04 33 46.2**	**-0.5**

TAP 25 04:59:18.3, 24°.34N×121°.69E, h14^{km}±1^{km}, ML1.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.05**	**121**	*e*S	Sg	04 59 23.5	+0.8
	baz=119						
ENA	**Nanau**	**0.10**	**25**	P	Pb	04 59 22.3	+0.3
	baz=29						
ENA				S	Sb	04 59 24.6	0.0
	baz=29						
EWUT	**Wuta**	**0.13**	**35**	P	Pb	04 59 22.7	+0.1
	baz=35						
EWUT				S	Sb	04 59 24.9	-0.6
	baz=35						
NACB	**Ninganchiao**	**0.18**	**209**	P	Pb	04 59 23.4	0.0
	baz=209						
NACB				S	Sb	04 59 26.8	-0.2
	baz=209						
ETL	**Fush Village**	**0.19**	**200**	*e*P	Pb	04 59 23.4	-0.2
	baz=200						
ETL				*e*S	Sb	04 59 26.8	-0.3
	baz=200						
ETLH	**Xiulin Townshi**	**0.23**	**236**	P	Pb	04 59 24.4	+0.1
	baz=236						
ETLH				S	Sb	04 59 28.0	-0.4
	baz=236						
TWD	**Chiawan**	**0.27**	**199**	*e*P	Pb	04 59 24.8	-0.2
	baz=197						
TWD				*e*S	Sb	04 59 28.9	-0.5
	baz=197						
NDS	**Dongshan**	**0.30**	**4**	*e*P	Pb	04 59 25.5	+0.1
	baz=4.0						
NDS				*e*S	Sg	04 59 29.4	+0.7
	baz=4.0						
TWC	**Suao**	**0.31**	**27**	*e*P	Pb	04 59 25.2	-0.4
	baz=29						
TWC				*e*S	Sb	04 59 29.9	-0.6
	baz=29						
NNS	**Nan Shan**	**0.31**	**290**	*e*P	Pb	04 59 25.4	-0.3
	baz=289						
NNS				*e*S	Sb	04 59 30.6	-0.1
	baz=289						
ENTT	**Nioudou**	**0.32**	**339**	P	Pb	04 59 26.2	+0.3
	baz=340						
ENTT				S	Sb	04 59 31.1	+0.1
	baz=340						
FUSS	**Fushou**	**0.42**	**258**	*e*P	Pb	04 59 27.7	0.0
	baz=257						
FUSS				*e*S	Sb	04 59 34.2	+0.2
	baz=257						
WHF	**Hehuan Shan**	**0.43**	**244**	*e*P	Pb	04 59 27.9	-0.1
	baz=243						
WHF				*e*S	Sb	04 59 34.4	-0.2
	baz=243						
YHNB	**Yeheng**	**0.44**	**319**	*e*P	Pb	04 59 28.0	+0.1
	baz=318						
YHNB				*e*S	Sb	04 59 34.5	+0.1
	baz=318						
NSK	**Sanguang**	**0.46**	**318**	*e*P	Pb	04 59 28.0	-0.1
	baz=318						
NSK				*e*S	Sb	04 59 35.2	+0.3
	baz=318						
NWLT	**Wulai**	**0.47**	**338**	*e*P	Pb	04 59 28.4	-0.1
	baz=338						
NWLT				*e*S	Sb	04 59 35.4	+0.1
	baz=338						

KRSC 25 05:21:55.9±0.5, 55°.12N×162°.44E, h51^{km}±15^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.70**	**217**	*i* P	Pn	05 22 11.3	+1.7
MKZ				*e*S	Sn	05 22 22.2	+2.7
KBTR	**Krutoberegovo**	**1.12**	**11**	*e*P	Pn	05 22 16.8	+1.7
KBTR				*e*S	Sn	05 22 31.4	+2.0
KBG	**Krutoberegovo**	**1.15**	**7**	*e*P	Pn	05 22 17.2	+1.6
KBG				*e*S	Sn	05 22 33.1	+2.8
TUMD	**Tumrok D**	**1.18**	**275**	*e*P	Pn	05 22 17.2	+1.2
TUMD				*e*S	Sn	05 22 31.6	+0.7
BZGR	**Bezymyannyi-Gr**	**1.29**	**310**	*e*P	Pn	05 22 18.9	+1.3
BZGR				*e*S	Sn	05 22 34.9	+1.0
ZLN	**Zelenaya**	**1.30**	**315**	*e*P	Pn	05 22 19.2	+1.5
ZLN				*e*S	Sn	05 22 36.0	+2.0
TUMR	**Tumrok**	**1.33**	**278**	*e*P	Pn	05 22 19.7	+1.6
TUMR				*e*S	Sn	05 22 35.7	+1.0
BZWR	**Bezymyannyi-We**	**1.40**	**308**	*e*P	Pn	05 22 20.5	+1.4
KMNR	**Kamenistaya**	**1.41**	**298**	*e*P	Pn	05 22 20.6	+1.4
KMNR				*e*S	Sn	05 22 38.1	+1.3
KIRR	**Kirishev**	**1.46**	**306**	*e*P	Pn	05 22 21.9	+2.0
KRSR	**Krestovskiy**	**1.53**	**317**	*e*P	Pn	05 22 22.0	+1.1
KRSR				*e*S	Sn	05 22 40.3	+0.6
SMKR	**Semkarok**	**1.57**	**340**	*e*P	Pn	05 22 23.3	+1.9
SMKR				*e*S	Sn	05 22 43.6	+3.0
KLY	**Klyuchi**	**1.57**	**321**	*e*P	Pn	05 22 21.7	+0.4
KLY				*e*S	Sn	05 22 40.6	+0.1
BDR	**Baidarnaya**	**1.61**	**335**	*e*P	Pn	05 22 24.2	+2.2
BDR				*e*S	Sn	05 22 45.3	+3.6
SRKR	**Sorokina**	**1.70**	**336**	*e*P	Pn	05 22 25.1	+1.9
KOZ	**Kozyrevsk**	**1.74**	**304**	*e*P	Pn	05 22 25.9	+2.3
BKI	**Bering**	**2.03**	**86**	*e*P	Pn	05 22 30.0	+2.5
BKI				*e*S	Sn	05 22 53.3	+1.7
KII	**Karymskiy**	**2.05**	**239**	*e*P	Pn	05 22 30.3	+2.3
ESO	**Esso**	**2.28**	**292**	*e*P	Pn	05 22 34.6	+3.6
SPN	**Mys Shipunski**	**2.47**	**216**	*e*P	Pn	05 22 35.7	+2.1
SPN				*e*S	Sn	05 23 04.1	+1.5
NLC	**Nalytchevo**	**2.67**	**224**	*e*P	Pn	05 22 39.3	+3.0
NLC				*e*S	Sn	05 23 10.8	+3.5
SDLR	**Sedlovina**	**2.79**	**230**	*e*P	Pn	05 22 41.1	+3.1
KRER	**Koryakskii**	**2.83**	**232**	*e*P	Pn	05 22 42.7	+4.0
SMAR	**Somma**	**2.83**	**231**	*e*P	Pn	05 22 41.9	+3.1
KRX	**Arik**	**2.84**	**233**	*e*P	Pn	05 22 42.1	+3.3
UGLR	**Uglovaya**	**2.86**	**230**	*e*P	Pn	05 22 42.1	+3.1
KOK	**Koryaka**	**2.89**	**232**	*e*P	Pn	05 22 43.2	+3.8
GNL	**Ganaly**	**2.99**	**243**	*e*P	Pn	05 22 44.1	+3.2
DALK	**Dalny**	**3.01**	**228**	*e*P	Pn	05 22 43.8	+2.8
DALK				*e*S	Sn	05 23 18.9	+3.0
PET	**Petropavlovsk**	**3.06**	**228**	*e*P	Pn	05 22 44.7	+3.0
RUS	**Russkaya**	**3.56**	**223**	*e*P	Pn	05 22 50.8	+2.3
GRL	**Gorelyy**	**3.65**	**227**	*e*P	Pn	05 22 54.4	+4.6
MTVR	**Mutnovka**	**3.65**	**225**	*e*P	Pn	05 22 53.3	+3.4
MTVR				*e*S	Sn	05 23 35.9	+4.1
ASAK	**Asacha**	**3.84**	**226**	*e*P	Pn	05 22 57.1	+4.6
KDTR	**Khodutka, Kamc**	**4.22**	**220**	*e*P	Pn	05 23 00.4	+2.9

MOS 25 05:22:43.5±1.0, 41°.02N×142°.34E, h52^{km}, mb5.0/51, Error ellipse: s-maj=5.7km s-min=4.1km az=106.8

NIED 25 05:22:44.5, 41°.03N×142°.41E, h34^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.37; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.05; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.51; $M_{\phi r}$0.88; Fault plane solution: $M_0$1.06000×10^{16} NP1: ϕ_s263.00000°, δ34.00000°, λ159.00000°. NP2: ϕ_s11.00000°, δ79.00000°, λ58.00000°.

BJI 25 05:22:44.0±0.0, 40°.94N×142°.31E, h65^{km}, mb5.0/67, mB4.8/38, Ms4.0/38, Ms7 3.9/38

JMA 25 05:22:44.5±0.2, 41°.0N±0°.4×142°.4E±0°.8, h34^{km}±4^{km}, MD4.8/35, MW4.7/35, E OFF AOMORI PREF

JMA Felt II J1 at E OFF AOMORI PREF .

IDC 25 05:22:46.1±1.4, 40°.98N×142°.25E, h57^{km}±12^{km}, mb4.2/28, mbtmp4.5/36, MS3.7/70, Error ellipse: s-maj=13.3km s-min=7.9km az=108.0

NEIC 25 05:22:47.0±2.1, 41°.04N±0°.05×142°.2E±0°.1, h55^{km}±6^{km}, mb4.9/147, Error ellipse: s-maj=11.8km s-min=7.3km az=106.0

ISC 25 05:22:45.7±0.3, 41°.02N±0°.03×142°.35E±0°.03, h54^{km}±2^{km}, h54^{km}:pP-P, n588, σ1^{s}68/533, mb4.9/175, MS3.8/81, 44C-36D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.74**	**270**	⇓*i*P	**Pn**	**05 22 59.3**	**-0.9**
JARK				⇓S	**Sn**	**05 23 09.6**	**-1.1**
JARK	**Aomorirokkasho**	**0.74**	**270**	A	A	05 22 59.3	
	comp=E,55nm,0.4s,comp=E,59nm,3.0s						
JAHD	**Aomorihigashid**	**0.80**	**288**	⇓*i*P	**Pn**	**05 22 59.9**	**-1.0**
JAHD				⇓S	**Sn**	**05 23 11.0**	**-1.1**
JAHD	**Aomorihigashid**	**0.80**	**288**	A	A	05 22 59.9	
	comp=E,82nm,0.5s,comp=E,119nm,0.4s						
JANG	**Nango**	**0.90**	**225**	*i* P	**Pn**	**05 23 01.4**	**-0.8**
JANG				S	**Sn**	**05 23 13.8**	**-0.6**
JANG	**Nango**	**0.90**	**225**	A	A	05 23 01.4	
	comp=E,21nm,0.5s,comp=E,16nm,0.6s						
JKEN	**Kujiedanarisaw**	**0.95**	**211**	⇓*i*P	**Pn**	**05 23 01.5**	**-1.3**
JKEN	**Kujiedanarisaw**	**0.95**	**211**	A	A	05 23 01.5	
	comp=E,30nm,0.6s,comp=E,43nm,1.0s						
JTM	**Tenmabayashi**	**1.00**	**257**	Pn	**Pn**	**05 23 03.5**	**0.0**
JTM	**Tenmabayashi**	**1.00**	**257**	*i* P	**Pn**	**05 23 03.3**	**-0.2**
JTM				S	**Sn**	**05 23 16.7**	**+0.1**
JTM	**Tenmabayashi**	**1.00**	**257**	A	A	05 23 03.3	
	comp=E,94nm,1.0s,comp=E,115nm,1.1s						
JOT	**Ohata**	**1.05**	**291**	⇓*i*P	**Pn**	**05 23 03.4**	**-0.7**
JOT				⇓S	**Sn**	**05 23 16.8**	**-1.0**
JOT	**Ohata**	**1.05**	**291**	A	A	05 23 03.4	
	comp=E,52nm,0.5s,comp=E,47nm,0.5s						
JTH	**Tanohata**	**1.14**	**199**	A	A	05 23 04.9	
	comp=E,11nm,1.2s,comp=E,8.0nm,0.8s						
ERM	**Erimo**	**1.17**	**31**	Pn	**Pn**	**05 23 04.9**	**-0.9**
ERM	**Erimo**	**1.17**	**31**	P	**Pn**	**05 23 04.9**	**-0.9**
JEM	**Erimo**	**1.17**	**31**	*i* P	**Pn**	**05 23 04.8**	**-1.0**
JEM				S	**Sn**	**05 23 20.3**	**-0.3**
JEM	**Erimo**	**1.17**	**31**	A	A	05 23 04.8	
	comp=E,13nm,1.5s,comp=E,18nm,2.2s						
JKZ	**Kuzumaki**	**1.29**	**217**	A	A	05 23 07.3	
	comp=E,39nm,0.8s,comp=E,35nm,0.7s						
JNBK	**Urakawa-nobuka**	**1.30**	**13**	⇓*i*P	**Pn**	**05 23 07.0**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.30**	**13**	A	A	05 23 07.0	
	comp=E,47nm,1.2s,comp=E,43nm,0.9s						
JKB	**Kayabe**	**1.32**	**312**	⇓*i*P	**Pn**	**05 23 06.9**	**-0.9**
JKB				⇓S	**Sn**	**05 23 23.2**	**-1.1**
JKB	**Kayabe**	**1.32**	**312**	A	A	05 23 06.9	
	comp=E,14nm,1.1s,comp=E,17nm,0.8s						
JSHD	**Hidakashinhida**	**1.39**	**4**	A	A	05 23 08.2	
	comp=E,33nm,1.3s,comp=E,40nm,0.7s						
JTHR	**Tokachihiroo**	**1.46**	**29**	A	A	05 23 08.9	
	comp=E,12nm,2.0s,comp=E,17nm,1.8s						
JSI2	**Shiura 2**	**1.47**	**272**	A	A	05 23 10.1	
	comp=E,50nm,1.0s,comp=E,54nm,1.0s						
MIYJ	**Miyakonagasawa**	**1.50**	**196**	A	A	05 23 10.1	
	comp=E,27nm,1.5s,comp=E,12nm,1.0s						
JSR	**Shiriuchi**	**1.54**	**290**	⇓*i*P	**Pn**	**05 23 10.8**	**0.0**
JSR				⇓S	**Sn**	**05 23 30.4**	**+0.6**
JSR	**Shiriuchi**	**1.54**	**290**	A	A	05 23 10.8	
	comp=E,33nm,1.7s,comp=E,20nm,1.2s						
JAH	**Hinai**	**1.54**	**238**	*i* P	**Pn**	**05 23 11.1**	**+0.2**
JAH				S	**Sn**	**05 23 30.8**	**+1.0**
JAH	**Hinai**	**1.54**	**238**	A	A	05 23 11.1	
	comp=E,23nm,1.2s,comp=E,14nm,0.8s						
JHHS	**Hirosakihyakuz**	**1.55**	**257**	A	A	05 23 11.4	
	comp=E,36nm,1.0s,comp=E,34nm,2.4s						
JIAM	**Iburiatsuma**	**1.64**	**349**	⇓*i*P	**Pn**	**05 23 12.5**	**+0.4**
JIAM				⇓S	**Sn**	**05 23 34.0**	**+2.0**
JIAM	**Iburiatsuma**	**1.64**	**349**	A	A	05 23 12.5	
	comp=E,115nm,0.7s,comp=E,87nm,0.9s						
JSZI	**Iwateshizukuis**	**1.66**	**220**	A	A	05 23 12.8	
	comp=E,24nm,1.4s,comp=E,25nm,2.2s						
JOM	**Ohasama**	**1.74**	**208**	*i* P	**Pn**	**05 23 13.8**	**+0.3**
JOM				S	**Sn**	**05 23 36.4**	**+1.8**
JOM	**Ohasama**	**1.74**	**208**	A	A	05 23 13.8	
	comp=E,26nm,1.7s,comp=E,25nm,1.0s						
JNB	**Noboribetsu**	**1.75**	**326**	⇓*i*P	**Pn**	**05 23 12.5**	**-1.1**
JNB				⇓S	**Sn**	**05 23 34.7**	**-0.1**
JNB	**Noboribetsu**	**1.75**	**326**	A	A	05 23 12.5	
	comp=E,10.0nm,1.0s,comp=E,10.0nm,0.6s						
JBT2	**Biratori 2**	**1.76**	**0**	⇓P	**Pn**	**05 23 13.5**	**-0.3**
JBT2				⇓S	**Sn**	**05 23 36.0**	**+1.0**
JBT2	**Biratori 2**	**1.76**	**0**	A	A	05 23 13.5	
	comp=E,10.0nm,3.9s,comp=E,12nm,0.9s						
JCH	**Churui**	**1.77**	**25**	*i* P	**Pn**	**05 23 13.5**	**-0.4**
JCH				S	**Sn**	**05 23 35.6**	**+0.4**
JCH	**Churui**	**1.77**	**25**	A	A	05 23 13.5	
	comp=E,13nm,2.4s,comp=E,14nm,2.4s						
JNTW	**Noshirotokiwa**	**1.82**	**247**	A	A	05 23 15.3	
	comp=E,36nm,1.4s,comp=E,45nm,2.8s						
JIW	**Iwasaki**	**1.83**	**257**	A	A	05 23 15.4	
	comp=E,14nm,2.8s,comp=E,13nm,1.8s						
JOMM	**Oshimamatsumae**	**1.84**	**287**	A	A	05 23 15.4	
	comp=E,13nm,1.6s,comp=E,9.0nm,1.7s						
JYM2	**Yakumo 2**	**1.85**	**307**	A	A	05 23 15.5	
	comp=E,7.0nm,0.5s,comp=E,7.0nm,1.5s						
JEW	**Eniwo**	**1.94**	**340**	Pn	**Pn**	**05 23 16.2**	**-0.1**
JEW	**Eniwo**	**1.94**	**340**	A	A	05 23 16.5	
	comp=E,53nm,1.8s,comp=E,50nm,0.9s						
OFUJ	**Ofunato**	**2.00**	**195**	A	A	05 23 17.5	
	comp=E,18nm,2.8s,comp=E,8.0nm,3.0s						
JRG	**Rokugo**	**2.08**	**220**	A	A	05 23 18.9	
	comp=E,13nm,1.1s,comp=E,26nm,1.3s						
JFR	**Furan**	**2.15**	**5**	A	A	05 23 19.2	
	comp=E,11nm,0.7s,comp=E,13nm,1.0s						
JOB	**Onbets**	**2.19**	**30**	A	A	05 23 19.4	
	comp=E,14nm,0.9s,comp=E,28nm,3.2s						
JYW	**Yuwa**	**2.20**	**229**	A	A	05 23 20.7	
	comp=E,15nm,1.5s,comp=E,16nm,1.3s						
JMK	**Ichinoseki**	**2.24**	**203**	A	A	05 23 20.9	
	comp=E,15nm,1.8s,comp=E,6.0nm,2.3s						
JKMT	**Kesennumamotoy**	**2.31**	**197**	A	A	05 23 21.8	
	comp=E,13nm,2.6s,comp=E,5.0nm,5.7s						
JISS	**Ishikarishitsu**	**2.36**	**343**	A	A	05 23 22.4	
	comp=E,16nm,1.5s,comp=E,17nm,2.5s						
JAB	**Ashibetsu**	**2.49**	**358**	A	A	05 23 24.1	
	comp=E,16nm,3.0s,comp=E,24nm,1.5s						
JAR	**Ashorobuto**	**2.51**	**24**	A	A	05 23 24.1	
	comp=E,10.0nm,0.9s,comp=E,10.0nm,0.9s						
JYK	**Kaneyama**	**2.59**	**217**	A	A	05 23 26.2	
	comp=E,6.0nm,1.3s,comp=E,6.0nm,1.6s						
JAK	**Akkeshi**	**2.64**	**41**	A	A	05 23 25.8	
	comp=E,12nm,2.1s,comp=E,11nm,2.8s						
JOFO	**Osakifurukawao**	**2.65**	**205**	A	A	05 23 26.9	
	comp=E,27nm,2.2s,comp=E,25nm,1.0s						
JYYZ	**Yamagatayuza**	**2.73**	**224**	A	A	05 23 28.1	
	comp=E,12nm,1.6s,comp=E,16nm,3.4s						
JHR	**Hokuryu**	**2.76**	**351**	A	A	05 23 28.1	
	comp=E,13nm,4.1s,comp=E,17nm,1.1s						
JKK2	**Kamakawa 2**	**2.87**	**6**	A	A	05 23 29.5	
	comp=E,6.0nm,1.2s,comp=E,6.0nm,1.2s						
JKHN	**Kushirohamanak**	**2.94**	**44**	A	A	05 23 30.1	
	comp=E,9.0nm,1.8s,comp=E,8.0nm,2.0s						
JOU	**Okura**	**2.95**	**207**	A	A	05 23 31.1	
	comp=E,8.0nm,1.9s,comp=E,8.0nm,1.7s						
JMP	**Maruseppu**	**3.08**	**14**	A	A	05 23 32.4	
	comp=E,6.0nm,5.4s,comp=E,8.0nm,1.6s						
ASAJ	**Asahikawa**	**3.10**	**3**	P	**Pn**	**05 23 33.5**	**+1.4**
	467nm,0.4s,baz=210,slow=9.7,SNR=89						
ASAJ				S	**Sn**	**05 24 10.6**	**+2.6**
	805nm,0.8s,baz=358,slow=26,SNR=4.8						
ASAJ				LR	LR	05 24 32.7	
	comp=Z,346nm,19.0s,baz=321,slow=34						
JKA	**Kamikawa-asahi**	**3.10**	**3**	Pn	**Pn**	**05 23 32.6**	**+0.5**
JKA	**Kamikawa-asahi**	**3.10**	**3**		**Sn**	**05 24 10.6**	**+2.6**
JYA	**Atsumi**	**3.16**	**221**	A	A	05 23 34.2	
	comp=E,9.0nm,0.9s,comp=E,14nm,1.1s						
JTKR	**Abashiri--Toko**	**3.17**	**21**	A	A	05 23 33.5	
	comp=E,5.0nm,1.8s,comp=E,4.0nm,2.4s						
JYS	**Shirataka**	**3.30**	**213**	A	A	05 23 36.2	
	comp=E,14nm,1.3s,comp=E,17nm,1.5s						
JMM	**Marumori**	**3.37**	**201**		**Pn**	**05 23 36.4**	**+0.6**
JMM	**Marumori**	**3.37**	**201**	A	A	05 23 37.0	
	comp=E,15nm,1.7s,comp=E,9.0nm,1.6s						
JNSB	**Nemuroshibetsu**	**3.39**	**35**	A	A	05 23 36.5	
	comp=E,8.0nm,2.3s,comp=E,5.0nm,3.3s						
JSS	**Shosan**	**3.40**	**354**	A	A	05 23 37.1	
	comp=E,6.0nm,1.5s,comp=E,7.0nm,3.7s						
NMR	**Nemuro--Hokkai**	**3.44**	**46**	*e*P	**Pn**	**05 23 34.2**	**-2.6**
NMR				*e*S	**Sn**	**05 24 11.1**	**-5.1**
JMST	**Minamisoumatoc**	**3.48**	**199**	A	A	05 23 38.6	
	comp=E,11nm,3.4s,comp=E,10.0nm,1.3s						
JYAR	**Yonezawaarcadi**	**3.54**	**210**	A	A	05 23 39.5	
	comp=E,10.0nm,1.2s,comp=E,16nm,1.1s						
GLVR	**Golovnino**	**3.59**	**40**	*e*P	**Pn**	**05 23 37.6**	**-1.3**
GLVR				*e*S	**Sn**	**05 24 17.1**	**-2.9**
GLVR				pmax	pmax		
	comp=Z,295nm,0.3s						
GLVR				pmax	pmax		
	comp=E,251nm,0.4s						
GLVR				pmax	pmax		
	comp=N,132nm,0.2s						
GLVR				smax	smax		
	comp=N,2μm,0.2s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
RUSJ	**Misakicho**	**3.75**	**34**	*e*P	**Pn**	**05 23 40.8**	**-0.3**
RUSJ				*e*S	**Sn**	**05 24 22.8**	**-1.2**
JFK	**Kawauchi**	**3.82**	**198**	A	A	05 23 43.4	
	comp=E,6.0nm,3.9s,comp=E,3.0nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**3.98**	**40**	*e*P	**Pn**	**05 23 42.7**	**-1.4**
YUK				*e*S	**Sn**	**05 24 25.8**	**-3.7**
YUK				pmax	pmax		
	comp=N,637nm,0.2s						
YUK				pmax	pmax		
	comp=E,410nm,0.2s						
YUK				pmax	pmax		
	comp=Z,629nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
ONAJ	**Iwakimizuishiy**	**4.09**	**198**	A	A	05 23 47.2	
	comp=N,7.0nm,2.0s,comp=N,5.0nm,1.5s						
JSD	**Sado**	**4.34**	**228**	Pn	**Pn**	**05 23 50.4**	**+1.2**
SHO	**Shikotan**	**4.37**	**48**	*e*P	**Pn**	**05 23 46.9**	**-2.6**
SHO				*e*S	**Sn**	**05 24 33.5**	**-5.7**
SHO				pmax	pmax		
	comp=Z,109nm,0.2s						
SHO				pmax	pmax		
	comp=E,78nm,0.3s						
SHO				pmax	pmax		
	comp=N,85nm,0.2s						

SHO				smax	smax		
	comp=N,757nm,0.4s						
SHO				smax	smax		
	comp=E,951nm,0.3s						
JSB	**Shiboa**	**4.46**	**206**	A	A	05 23 52.5	
	comp=E,7.0nm,1.7s,comp=E,6.0nm,1.5s						
JYT	**Yasato**	**5.07**	**200**		**Pn**	**05 23 59.2**	**0.0**
MJB9	**Matsu-Tunnel**	**5.51**	**217**		**Pn**	**05 24 07.5**	**+2.2**
MAJO	**Matsushiro**	**5.52**	**217**	Pn	**Pn**	**05 24 07.5**	**+2.2**
MAJO	**Matsushiro**	**5.52**	**217**	P	**Pn**	**05 24 07.5**	**+2.2**
MJAR	**Matsushiro Arr**	**5.52**	**217**	P	**Pn**	**05 24 06.5**	**+1.2**
	comp=E,82nm,0.7s,baz=29,slow=13,SNR=191						
MJAR				LR	LR	05 26 41.2	
	comp=E,868nm,19.6s,baz=32,slow=43						
MJAR	**Matsushiro Arr**	**5.52**	**217**	Pn	**Pn**	**05 24 07.0**	**+1.7**
MJAR	**Matsushiro Arr**	**5.52**	**217**	P	**Pn**	**05 24 07.0**	**+1.7**
TEY	**Ternei**	**5.82**	**316**	⇑*e*P	**Pn**	**05 24 09.3**	**-0.1**
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=N,70nm,0.6s						
TEY				pmax	pmax		
	comp=Z,60nm,0.6s						
KUR	**Kuril'sk**	**5.83**	**42**	P	**Pn**	**05 24 07.5**	**-2.1**
KUR				S	**Sn**	**05 25 11.8**	**-3.3**
KUR				pmax	pmax		
	comp=E,145nm,0.4s						
KUR				pmax	pmax		
	comp=Z,250nm,0.4s						
KUR				smax	smax		
	comp=N,160nm,0.6s						
KUR				smax	smax		
	comp=E,190nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.94**	**3**	Pn	**Pn**	**05 24 12.5**	**+1.4**
YSS	**Yuzh-Sakhalins**	**5.94**	**3**	*e*P	**Pn**	**05 24 11.8**	**+0.8**
YSS				*e*S	**Sn**	**05 25 20.5**	**+2.8**
YSS				pmax	pmax		
	comp=Z,240nm,1.0s						
YSS				smax	smax		
	comp=N,70nm,1.1s						
YSS				smax	smax		
	comp=N,400nm,2.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
JGF	**Kuroka**	**6.68**	**218**	Pn	**Pn**	**05 24 22.4**	**+1.1**
INU	**Inuyama**	**7.05**	**218**	Pn	**Pn**	**05 24 27.4**	**+1.1**
UGL	**Uglegorsk**	**8.06**	**359**	*e*P	**Pn**	**05 24 43.2**	**+3.1**
UGL				pmax	pmax		
	comp=Z,70nm,0.7s						
VLA	**Vladivostok**	**8.06**	**289**	*i* P	**Pn**	**05 24 40.7**	**+0.6**
JHJ	**Hachijo jima 2**	**8.14**	**195**	P	**Pn**	**05 24 40.3**	**-1.0**
	comp=Z,42nm,0.3s,baz=74,slow=19,SNR=7.5						
JHJ				S	**Sn**	**05 26 07.3**	**-4.6**
	comp=Z,76nm,0.3s,baz=72,slow=19,SNR=2.2						
JHJ2	**Mitsune**	**8.15**	**195**	Pn	**Pn**	**05 24 40.2**	**-1.1**
USA0B	**Ussuriysk Arra**	**8.28**	**296**		**Pn**	**05 24 43.4**	**+0.4**
USA0B	**Ussuriysk Arra**	**8.28**	**296**	P	**Pn**	**05 24 43.4**	**+0.4**
USRK	**Ussuriysk Ar.**	**8.28**	**296**	P	**Pn**	**05 24 43.3**	**+0.3**
	comp=Z,50nm,0.8s,baz=88,slow=16,SNR=36						
USRK				LR	LR	05 27 44.0	
	comp=Z,814nm,21.7s,baz=113,slow=36						
USRK	**Ussuriysk Ar.**	**8.28**	**296**	Pn	**Pn**	**05 24 43.0**	**-0.1**
MSHR	**Mys Shultsa**	**8.51**	**284**	*i* P	**Pn**	**05 24 48.1**	**+1.9**
JHS	**Saijyo**	**9.44**	**233**	Pn	**Pn**	**05 25 01.9**	**+2.8**
TYV	**Tymovskoe**	**9.85**	**1**	*e*P	**Pn**	**05 25 08.2**	**+3.7**
TYV				*e*S	**Sn**	**05 26 56.9**	**+3.4**
TYV				pmax	pmax		
	comp=Z,33nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,4.1s						
TYV				smax	smax		
	comp=N,7.0nm,1.5s						
TYV				smax	smax		
	comp=E,10.0nm,1.5s						
TYV				smax	smax		
	comp=E,300nm,4.3s						
MDJ	**Mudanjiang**	**10.04**	**295**	P	**Pn**	**05 25 08.4**	**+1.3**
MDJ				S	**Sn**	**05 27 03.8**	**+5.6**
MDJ				ScP	**ScP**	**05 34 37.6**	**-4.0**
MDJ				PcS	**PcS**	**05 34 43.5**	**-3.8**
MDJ				ScS	**ScS**	**05 38 11.4**	**-4.7**
MDJ				pmax	pmax		
	comp=E,36nm,0.9s						
MDJ				pmax	pmax		
	comp=E,140nm,3.5s						
MDJ				LR	LR		
	comp=E,340nm,13.8s						
MDJ				LR	LR		
	comp=E,590nm,18.4s						
MDJ				LR	LR		
	comp=E,1µm,19.1s						
GRNR	**Gornyy**	**10.59**	**339**	⇓*i*P	**Pn**	**05 25 17.6**	**+3.0**
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				MLR	MLR		
	comp=E,250nm,16.0s						
GRNR				MLR	MLR		
	comp=N,200nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,220nm,16.0s						
KLR	**Kul'dur**	**11.10**	**321**	P	**Pn**	**05 25 23.1**	**+1.5**
	comp=Z,6.9nm,0.8s,baz=127,slow=11,SNR=16						
KLR				LR	LR	05 29 36.2	
	comp=Z,527nm,21.2s,baz=140,slow=37						
KLR	**Kul'dur**	**11.10**	**321**	*ce*P	**Pn**	**05 25 23.4**	**+1.7**
KLR				pmax	pmax		
	comp=Z,37nm,1.7s						
KSRS	**Korea Array**	**11.74**	**257**	P	**Pn**	**05 25 32.6**	**+2.2**
	comp=Z,16nm,0.8s,baz=69,slow=13,SNR=36						
KSRS				S	**Sn**	**05 27 39.1**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=68,slow=24,SNR=1.3						
KSRS				LR	LR	05 29 37.4	
	comp=Z,628nm,19.8s,baz=65,slow=35						
KSAR	**Wonju Array Be**	**11.77**	**257**	Pn	**Pn**	**05 25 31.7**	**+0.9**
KSAR	**Wonju Array Be**	**11.77**	**257**	P	**Pn**	**05 25 31.7**	**+0.9**
BNX	**BinXian**	**11.85**	**298**	⇑P	**Pn**	**05 25 32.4**	**+0.5**
BNX				pmax	pmax		
	comp=Z,28nm,0.8s						
BNX				pmax	pmax		
	comp=Z,290nm,6.6s						
KSCHJ	**Chungju**	**11.93**	**254**		**Pn**	**05 25 34.2**	**+1.2**
JNU	**Nakatsue**	**12.08**	**233**	P	**Pn**	**05 25 34.6**	**-0.5**
	comp=Z,13nm,0.7s,baz=23,slow=5.4,SNR=4.7						
JNU	**Nakatsue**	**12.08**	**233**		**Pn**	**05 25 34.8**	**-0.2**
TJN	**Taejon**	**12.59**	**253**		**Pn**	**05 25 39.1**	**-2.8**
TJN	**Taejon**	**12.59**	**253**	*i* P	**Pn**	**05 25 40.9**	**-1.1**
CN2	**Changchun**	**12.80**	**288**	*e*P	**Pn**	**05 25 47.8**	**+3.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
JSU	**Suzuyama**	**13.48**	**229**		**Pn**	**05 25 54.9**	**+0.6**
PETK	**Petropavlovsk-**	**15.95**	**36**	P	**Pn**	**05 26 24.8**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=218,slow=9.1,SNR=2.8						
PETK				LR	LR	05 32 51.9	
	comp=Z,172nm,20.0s,baz=220,slow=38						
ZEA	**Zeya**	**16.28**	**326**	*e*P	**Pn**	**05 26 28.1**	**-2.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				MLR	MLR		
	comp=N,100nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
HIA	**Hailar**	**17.91**	**305**	P	**Pn**	**05 26 47.9**	**-2.9**
HIA	**Hailar**	**17.91**	**305**	P	**Pn**	**05 26 47.9**	**-2.9**
HIA				pmax	pmax		
	comp=Z,14nm,0.7s						
JOW	**Kunigami**	**18.31**	**224**	P	**P**	**05 26 53.9**	**-1.5**
	comp=Z,20nm,0.8s,baz=37,slow=8.0,SNR=6.8						
JOW				LR	LR	05 34 15.2	
	comp=Z,276nm,21.4s,baz=337,slow=38						
JOW	**Kunigami**	**18.31**	**224**	P	**P**	**05 26 54.7**	**-0.7**
MA2	**Magadan**	**19.31**	**13**	P	**P**	**05 27 06.1**	**0.0**
	comp=Z,6.8nm,0.4s,baz=212,slow=11,SNR=6.6						
MA2				LR	LR	05 34 34.6	
	comp=Z,98nm,22.0s,baz=225,slow=37						
MA2	**Magadan**	**19.31**	**13**	P	**P**	**05 27 06.2**	**+0.1**
MA2	**Magadan**	**19.31**	**13**	P	**P**	**05 27 06.2**	**+0.1**
MA2				pmax	pmax		
	comp=Z,42nm,1.4s						
XLT	**XiLinHaoTe**	**19.57**	**287**	*e*P	**Pn**	**05 27 10.9**	**0.0**
XLT				pP	pP	05 27 22.3	+1.4
XLT				sS	sS	05 30 58.4	-7.5
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				LR	LR		
	comp=Z,460nm,17.7s						
XLT				LR	LR		
	comp=Z,260nm,19.8s						
BJI	**Beijing**	**19.90**	**276**	P	**P**	**05 27 11.0**	**-1.7**
BJI				pmax	pmax		
	comp=Z,14nm,1.0s						
BJI				LR	LR		
	comp=Z,180nm,17.5s						
BJI				LR	LR		
	comp=Z,180nm,20.8s						
BJI				LR	LR		
	comp=Z,400nm,16.7s						
TIA	**Tai'an**	**20.26**	**264**	⇑P	**P**	**05 27 14.8**	**-1.8**
TIA				pmax	pmax		
	comp=Z,52nm,0.8s						
TIA				pmax	pmax		
	comp=Z,94nm,3.4s						
TIA				LR	LR		
	comp=Z,140nm,13.1s						
TIA				LR	LR		
	comp=Z,200nm,19.6s						
TIA				LR	LR		
	comp=Z,310nm,16.7s						
NJ2	**Nanjing**	**20.84**	**252**	*e*P	**P**	**05 27 22.5**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,46nm,0.6s						
HNS	**HongShan**	**21.68**	**269**	⇑P	**P**	**05 27 28.6**	**-3.3**
HNS				pmax	pmax		
	comp=Z,43nm,0.9s						
HNS				LR	LR		
	comp=Z,110nm,17.4s						
HNS				LR	LR		
	comp=Z,110nm,16.2s						
HNS				LR	LR		
	comp=Z,200nm,17.4s						
YAK	**Yakutsk**	**22.39**	**344**	P	**P**	**05 27 38.3**	**-0.9**
	comp=Z,14nm,0.3s,baz=355,slow=3.4,SNR=4.2						
YAK				LR	LR	05 36 32.8	
	comp=Z,143nm,19.6s,baz=102,slow=37						
	comp=Z,14nm,0.3s						
YAK	**Yakutsk**	**22.39**	**344**	IAmb	IAmb	05 27 52.6	
	comp=Z,34nm,0.6s						
YAK	**Yakutsk**	**22.39**	**344**	*ce*P	**P**	**05 27 37.9**	**-1.3**
YAK				pmax	pmax		
	comp=Z,21nm,0.6s						
SEY	**Seymchan**	**22.75**	**12**	P	**P**	**05 27 42.9**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=204,slow=8.4,SNR=11						
SEY				LR	LR	05 37 33.6	
	comp=Z,105nm,20.9s,baz=206,slow=39						
	comp=Z,4.9nm,0.6s						
HHC	**Hu-ho-hao-te**	**23.20**	**280**	*e*P	**P**	**05 27 45.5**	**-2.5**
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
HHC				LR	LR		
	comp=Z,210nm,15.6s						
HHC				LR	LR		
	comp=Z,450nm,16.5s						
YHNB	**Yeheng**	**23.91**	**233**	P	**P**	**05 27 51.8**	**-2.9**
YHNB				IAmb	IAmb	05 28 01.8	
	comp=Z,39nm,0.9s						
LYN	**LuoYang**	**24.41**	**264**	⇓P	**P**	**05 27 56.5**	**-2.6**
LYN				pP	pP	05 28 11.6	-0.8
LYN				S	S	05 32 03.3	-12
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
LYN				pmax	pmax		
	comp=Z,180nm,4.3s						
LYN				LR	LR		
	comp=Z,180nm,14.9s						
LYN				LR	LR		
	comp=Z,200nm,15.9s						
LYN				LR	LR		
	comp=Z,220nm,27.9s						
SHEM	**Shemya Is, Ala**	**24.45**	**51**	LR	LR	05 40 07.3	
	comp=Z,20nm,18.0s,baz=322,slow=42						
BOD	**Bodaibo**	**24.68**	**323**	*e*P	**P**	**05 28 00.6**	**-0.7**
BOD				pmax	pmax		
	comp=Z,28nm,0.8s						
SSLB	**Suanglung**	**24.82**	**233**	P	**P**	**05 28 02.4**	**-0.6**
SSLB				IAmb	IAmb	05 28 09.6	
	comp=Z,28nm,0.9s						
WHN	**Wuhan**	**24.91**	**254**	⇑P	**P**	**05 28 03.0**	**-0.6**
WHN				LR	LR		
	comp=Z,1µm,19.8s						
YULB	**Yu-li**	**24.92**	**232**	P	**P**	**05 28 02.7**	**-1.1**
ULN	**Ulaanbaatar**	**25.95**	**297**	P	**P**	**05 28 12.5**	**-0.6**
ULN	**Ulaanbaatar**	**25.95**	**297**	P	**P**	**05 28 12.5**	**-0.6**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**26.39**	**297**	P	**P**	**05 28 17.1**	**0.0**
	comp=Z,5.8nm,0.5s,baz=95,slow=8.4,SNR=14						
SONM				LR	LR	05 39 39.4	
	comp=Z,324nm,18.0s,baz=86,slow=38						
	comp=Z,5.8nm,0.5s						
SONM	**Songino Array**	**26.39**	**297**	P	**P**	**05 28 16.6**	**-0.5**
CNSH	**ChangSha**	**27.25**	**251**	⇑P	**P**	**05 28 25.6**	**+0.8**
CNSH				S	**S**	**05 33 00.3**	**+0.1**
CNSH				pmax	pmax		
	comp=Z,18nm,0.9s						
CNSH				LR	LR		
	comp=Z,190nm,19.0s						
CNSH				LR	LR		
	comp=Z,190nm,16.5s						
XAN	**Xi'an**	**27.29**	**266**	P	**P**	**05 28 23.4**	**-1.8**
XAN				pP	pP	05 28 37.9	-0.6
XAN				sP	sP	05 28 44.1	-0.7
XAN				PP	**PnPn**	**05 29 13.5**	**+2.3**
XAN				S	**S**	**05 32 58.4**	**-2.5**
XAN				sS	sS	05 33 29.0	+5.8
XAN				pmax	pmax		
	comp=Z,27nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,4.1s						
XAN				LR	LR		
	comp=Z,110nm,14.4s						
XAN				LR	LR		
	comp=Z,190nm,15.6s						
XAN				LR	LR		
	comp=Z,190nm,16.1s						
ZAK	**Zakamensk**	**28.56**	**302**	*e*P	**P**	**05 28 35.3**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
ENH	**Enshi**	**28.62**	**258**	P	**P**	**05 28 37.0**	**-0.1**
ENH				IAmb	IAmb	05 28 39.1	
	comp=Z,30nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**29.80**	**128**	T	T	06 00 16.0	
	baz=318,slow=75,SNR=555						
H11N1	**WAKE ISLAND Hy**	**29.81**	**128**	T	T	05 59 53.4	
	baz=318,slow=75,SNR=686						
H11N3	**WAKE ISLAND Hy**	**29.82**	**128**	T	T	05 59 59.3	
	baz=318,slow=75,SNR=701						
BILL	**Bilibino**	**30.01**	**18**	P	**P**	**05 28 48.7**	**-0.2**
BILL	**Bilibino**	**30.01**	**18**	*i* P	**P**	**05 28 47.6**	**-1.3**
BILL				*i* *PP	**pP**	**05 29 04.0**	**+1.9**
BILL				*i*		05 29 43.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,87nm,16.0s						
MOY	**Mondy**	**30.09**	**305**	*e*P	**P**	**05 28 49.8**	**-0.2**
MOY				pmax	pmax		
	comp=Z,19nm,1.6s						
LZH	**Lanzhou**	**30.34**	**273**	*e*P	**P**	**05 28 51.3**	**-1.1**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=Z,180nm,14.7s						
LZH				LR	LR		
	comp=Z,220nm,13.9s						
LZH				LR	LR		
	comp=Z,250nm,15.5s						
H11S1	**WAKE ISLAND Hy**	**30.64**	**130**	T	T	06 01 37.0	
	baz=323,slow=76,SNR=373						
H11S3	**WAKE ISLAND Hy**	**30.64**	**130**	T	T	06 01 35.2	
	baz=323,slow=76,SNR=304						
H11S2	**WAKE ISLAND Hy**	**30.65**	**130**	T	T	06 01 32.0	
	baz=323,slow=76,SNR=207						
TIXI	**Tiksi**	**31.44**	**352**	P	**P**	**05 29 00.9**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=270,slow=23,SNR=2.5						
	comp=Z,1.8nm,0.3s						
KNGR	**Kungurtug, Tuv**	**32.24**	**303**	*i* P	**P**	**05 29 07.0**	**-1.9**
GTA	**Gaotai**	**32.29**	**281**	⇑P	**P**	**05 29 08.8**	**-0.7**
GTA				pP	pP	05 29 22.4	-0.5
GTA				sP	sP	05 29 29.1	0.0
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,71nm,4.7s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
GTA				LR	LR		
	comp=Z,350nm,17.1s						
GTA				LR	LR		
	comp=Z,310nm,18.5s						
CD2	**Chengdu**	**32.59**	**264**	P	**P**	**05 29 10.6**	**-1.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA	**Guiyang**	**32.79**	**255**	⇓P	**P**	**05 29 13.6**	**-0.4**
GYA				sP	sP	05 29 34.8	+1.2
GYA				PcP	**PcP**	**05 31 57.8**	**-0.3**
GYA				S	**S**	**05 34 27.3**	**0.0**
GYA				pmax	pmax		
	comp=Z,31nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.5s						
GYA				LR	LR		
	comp=Z,94nm,7.3s						
GYA				LR	LR		
	comp=Z,82nm,6.1s						
GYA				LR	LR		
	comp=Z,230nm,15.1s						
QIZ	**Qiongzhong**	**35.35**	**241**	P	P	05 29 44.0	+7.9
QIZ				S	**S**	**05 35 14.8**	**+8.0**
QIZ				LR	LR		
	comp=E,79nm,4.9s						
QIZ				LR	LR		
	comp=Z,130nm,18.2s						
PZH	**PanZhiHua**	**36.39**	**259**	⇑P	**P**	**05 29 44.8**	**-0.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,5.1s						
KMI	**Kunming**	**36.44**	**257**	⇑P	**P**	**05 29 45.5**	**-0.1**
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
KMI				LR	LR		
	comp=Z,190nm,15.0s						
KMI				LR	LR		
	comp=Z,190nm,18.3s						
KMI				LR	LR		
	comp=Z,310nm,20.1s						
DAV	**Davao City (W)**	**36.97**	**208**	LR	LR	05 43 06.4	
	comp=Z,64nm,20.7s,baz=332,slow=33						
GOMU	**GeErMu**	**37.09**	**278**	P	**P**	**05 29 50.5**	**-0.8**
GOMU				PP	**PnPn**	**05 31 22.3**	**+5.0**
GOMU				PcP	**PcP**	**05 32 12.1**	**+1.3**
GOMU				S	**S**	**05 35 26.3**	**-7.5**
GOMU				pmax	pmax		
	comp=Z,20nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,38nm,4.2s						
GOMU				LR	LR		
	comp=Z,90nm,16.1s						
GOMU				LR	LR		
	comp=Z,60nm,14.2s						
GOMU				LR	LR		
	comp=Z,110nm,16.1s						
WMQ	**Urumqi**	**39.83**	**293**	*e*P	**P**	**05 30 13.6**	**-0.2**
WMQ				pP	sP	05 30 32.1	-1.5
WMQ				sP	pP	05 30 37.3	+10
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
WMQ				LR	LR		
	comp=Z,270nm,15.5s						
WMQ				LR	LR		
	comp=Z,140nm,24.5s						
ZALV	**Zalesovo Beam**	**39.87**	**309**	P	**P**	**05 30 13.4**	**-0.5**
	comp=Z,28nm,0.7s,baz=86,slow=8.0,SNR=39						
ZALV				PcP	**PcP**	**05 32 18.7**	**0.0**
	comp=Z,1.9nm,0.3s,baz=89,slow=4.7,SNR=6.4						
ZALV				LR	LR	05 47 27.9	
	comp=Z,206nm,19.2s,baz=70,slow=37						
	comp=Z,28nm,0.7s						
NRIK	**Noril'sk**	**40.00**	**333**	P	**P**	**05 30 14.8**	**0.0**
	comp=Z,8.4nm,0.9s,baz=110,slow=8.2,SNR=8.2						
NRIK				LR	LR	05 47 45.9	
	comp=Z,244nm,21.0s,baz=118,slow=38						
	comp=Z,8.4nm,0.9s						
NRIK	**Noril'sk**	**40.00**	**333**	P	**P**	**05 30 14.2**	**-0.6**
NRIK				IAmb	IAmb	05 30 15.1	
	comp=Z,20nm,1.4s						
ZSN	**Zaisan**	**40.87**	**299**	*e*P	**P**	**05 30 22.4**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZSN	**Zaisan**	**40.87**	**299**	*e*P	**P**	**05 30 22.4**	**+0.1**
	comp=Z,8.3nm,0.5s,baz=299						
TTA	**Tatalina**	**41.77**	**37**	P	**P**	**05 30 30.6**	**+1.1**
TTA	**Tatalina**	**41.77**	**37**	P	**P**	**05 30 30.6**	**+1.1**
TTA				pmax	pmax		
	comp=Z,14nm,1.4s						
N18K	**Kilae Creek**	**41.81**	**41**	P	**P**	**05 30 29.5**	**-0.3**
M19K	**Big River Lodg**	**42.52**	**39**		pP	05 30 52.3	+3.2
J20K	**Nowinta River**	**42.64**	**35**	P	**P**	**05 30 37.9**	**+1.4**
J20K				IAmb	IAmb	05 30 54.3	
	comp=Z,21nm,1.1s						
K20K	**Telida**	**42.66**	**37**	P	**P**	**05 30 38.9**	**+2.2**
K20K				IAmb	IAmb	05 30 54.6	
	comp=Z,22nm,1.3s						
LSA	**Lhasa**	**42.71**	**271**	IAmb	IAmb	05 30 40.9	
	comp=Z,14nm,0.6s						
MK31	**Makanchi Array**	**42.73**	**299**	P	**P**	**05 30 37.4**	**-0.1**
MK31				IAmb	IAmb	05 30 38.2	
	comp=Z,18nm,0.8s						
MK31	**Makanchi Array**	**42.73**	**299**	P	**P**	**05 30 37.4**	**-0.1**
MK31				pmax	pmax		
	comp=Z,18nm,0.8s						
MKAR	**Makanchi Array**	**42.73**	**299**	P	**P**	**05 30 37.3**	**-0.2**
	comp=Z,18nm,0.7s,baz=84,slow=9.8,SNR=159						
MKAR				LR	LR	05 49 37.3	
	comp=Z,194nm,19.0s,baz=81,slow=38						
	comp=Z,18nm,0.7s						
SIJI	**Sorong**	**42.89**	**196**	P	**P**	**05 30 38.7**	**-0.3**
	comp=Z,4.8nm,0.3s,baz=324,slow=22,SNR=3.6						
SIJI				LR	LR	05 45 35.7	
	comp=Z,80nm,21.4s,baz=176,slow=32						
	comp=Z,4.8nm,0.3s						
SMPI	**Sarmi**	**42.93**	**185**	P	**P**	**05 30 40.1**	**+0.8**
	comp=Z,2µmcomp=Z,19nm,1.0s						
MAKZ	**Makanchi**	**42.94**	**299**	P	**P**	**05 30 38.3**	**-0.8**
MAKZ				IAmb	IAmb	05 30 39.9	
	comp=Z,24nm,0.9s						
MAKZ	**Makanchi**	**42.94**	**299**	P	**P**	**05 30 38.4**	**-0.8**
CHTO	**Chiang Mai**	**43.09**	**252**	P	**P**	**05 30 39.5**	**-1.2**
CHTO				IAmb	IAmb	05 30 48.9	
	comp=Z,13nm,0.7s						
CHTO	**Chiang Mai**	**43.09**	**252**	P	**P**	**05 30 39.5**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,13nm,0.7s						
SEM	**Semipalatinsk**	**43.20**	**304**	*e*P	**P**	**05 30 40.2**	**-1.2**
SEM				pmax	pmax		
	comp=Z,16nm,0.9s						
SEM	**Semipalatinsk**	**43.20**	**304**	*e*P	**P**	**05 30 40.3**	**-1.2**
	comp=Z,16nm,0.9s,baz=304						
H21K	**Melozitna Rive**	**43.26**	**33**	P	**P**	**05 30 42.7**	**+1.2**
CMAR	**Chiang Mai Arr**	**43.32**	**252**	P	**P**	**05 30 42.0**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=43,slow=7.5,SNR=14						
CMAR				PcP	**PcP**	**05 32 31.4**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=25,slow=3.0,SNR=5.3						
CMAR				LR	LR	05 50 23.2	
	comp=Z,84nm,18.2s,baz=45,slow=38						
	comp=Z,4.0nm,0.7s						
PPLA	**Purkeypile**	**43.52**	**37**	P	**P**	**05 30 45.6**	**+1.8**
PPLA				IAmb	IAmb	05 31 02.3	
	comp=Z,31nm,1.3s						
CAST	**Castle Rocks**	**43.56**	**36**	IAmb	IAmb	05 31 03.4	
	comp=Z,16nm,1.0s						
KDAK	**Kodiak Island**	**43.70**	**45**	P	**P**	**05 30 46.1**	**+1.0**
	comp=Z,3.7nm,0.7s,baz=299,slow=8.4,SNR=8.3						
KDAK				LR	LR	05 48 39.4	
	comp=Z,57nm,21.0s,baz=268,slow=36						
	comp=Z,3.7nm,0.7s						
KDAK	**Kodiak Island**	**43.70**	**45**	IAmb	IAmb	05 31 04.3	
	comp=Z,25nm,1.1s						
KDAK	**Kodiak Island**	**43.70**	**45**	P	**P**	**05 30 46.1**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,25nm,1.2s						

BPAW	**Bear Paw Mtn.**	**44.03**	**35**	P	**P**	**05 30 50.0**	**+2.3**
KTH	**Kantishna Hill**	**44.08**	**36**	P	**P**	**05 30 49.7**	**+1.6**
KTH				IAmb	IAmb	05 31 06.0	
	comp=Z,35nm,1.1s						
KURK	**Kurchatov**	**44.14**	**305**	P	**P**	**05 30 48.4**	**-0.4**
KURK	**Kurchatov**	**44.14**	**305**	P	**P**	**05 30 48.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,42nm,1.0s						
KURK	**Kurchatov**	**44.14**	**305**	P	**P**	**05 30 47.9**	**-0.9**
KURK				P	**P**	**05 30 47.9**	**-0.9**
KURBB	**Kurchatov Arra**	**44.22**	**305**	LR	LR	05 50 11.8	
	comp=Z,86nm,18.2s,baz=340,slow=37						
SHL	**Shillong**	**44.30**	**266**	P	**P**	**05 30 50.4**	**-0.2**
SHL				IAmb	IAmb	05 30 51.6	
	comp=Z,14nm,0.7s						
SHL	**Shillong**	**44.30**	**266**	P	**P**	**05 30 50.4**	**-0.2**
SHL				pmax	pmax		
	comp=Z,14nm,0.7s						
MRSI	**Marisa**	**44.39**	**210**	P	**P**	**05 30 51.0**	**-0.1**
	comp=Z,37nm,1.0s						
H23K	**Yukon River**	**44.61**	**33**	P	**P**	**05 30 54.2**	**+1.9**
H23K				IAmb	IAmb	05 31 10.3	
	comp=Z,13nm,0.8s						
I23K	**Minto, Yukon-K**	**44.70**	**34**	P	**P**	**05 30 55.2**	**+2.2**
I23K				IAmb	IAmb	05 31 11.5	
	comp=Z,13nm,0.9s						
NEA2	**Nenana**	**44.84**	**35**	P	**P**	**05 30 55.7**	**+1.5**
NEA2				IAmb	IAmb	05 31 14.9	
	comp=Z,15nm,0.8s						
RND	**Reindeer**	**45.01**	**36**	P	**P**	**05 30 56.2**	**+0.6**
RND				IAmb	IAmb	05 31 13.9	
	comp=Z,11nm,0.8s						
RND	**Reindeer**	**45.01**	**36**	P	**P**	**05 30 56.2**	**+0.6**
RND				pmax	pmax		
	comp=Z,11nm,0.8s						
GHO	**Glory Hole Cre**	**45.12**	**39**	IAmb	IAmb	05 31 13.7	
	comp=Z,27nm,1.2s						
MDM	**Murphy Dome**	**45.19**	**34**	P	**P**	**05 30 58.2**	**+1.3**
MDM				IAmb	IAmb	05 31 14.6	
	comp=Z,20nm,1.1s						
WRH	**Wood River Hil**	**45.27**	**35**	P	**P**	**05 30 59.4**	**+1.8**
H24K	**Noodor Dome**	**45.29**	**33**	P	**P**	**05 30 58.8**	**+1.0**
H24K				IAmb	IAmb	05 31 15.8	
	comp=Z,17nm,0.9s						
COLA	**College**	**45.35**	**34**	i P	**P**	**05 30 57.0**	**-1.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KNK	**Knik Glacier**	**45.37**	**39**	P	**P**	**05 31 00.7**	**+2.2**
KNK				IAmb	IAmb	05 31 25.8	
	comp=Z,11nm,0.8s						
CCB	**Clear Creek Bu**	**45.39**	**35**	P	**P**	**05 30 59.9**	**+1.4**
SML	**Sawmill**	**45.39**	**39**	P	**P**	**05 30 57.8**	**-0.8**
SML				IAmb	IAmb	05 31 15.9	
	comp=Z,22nm,1.2s						
POKR	**Poker Plat Res**	**45.51**	**34**	P	**P**	**05 31 00.8**	**+1.3**
POKR					**sP**	**05 31 16.7**	**-2.5**
PDGK	**Podgornoye**	**45.66**	**295**	P	**P**	**05 30 59.8**	**-1.3**
DHY	**Denali Highway**	**45.70**	**37**	P	**P**	**05 31 02.1**	**+1.0**
DHY				IAmb	IAmb	05 31 19.7	
	comp=Z,25nm,1.4s						
IL31		**45.77**	**34**	P	**P**	**05 31 02.5**	**+1.0**
IL31				IAmb	IAmb	05 31 20.3	
	comp=Z,23nm,1.1s						
ILAR	**Eielson Array**	**45.77**	**34**	P	**P**	**05 31 01.9**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=262,slow=5.3,SNR=20						
ILAR				LR	LR	05 49 58.1	
	comp=Z,79nm,21.7s,baz=264,slow=36						
	comp=Z,1.8nm,0.7s						
HDA	**Harding Lake**	**45.77**	**35**	P	**P**	**05 31 02.1**	**+0.6**
HDA				IAmb	IAmb	05 31 18.2	
	comp=Z,23nm,1.3s						
APSI	**Ampana**	**45.78**	**210**	P	**P**	**05 31 02.0**	**-0.1**
	comp=Z,20nm,1.2s						
TDK	**Taldyqorghan**	**45.85**	**297**	eP	**P**	**05 31 02.5**	**+0.1**
TDK	**Taldyqorghan**	**45.85**	**297**	eP	**P**	**05 31 02.5**	**+0.1**
	baz=297						
SCM	**Sheep Creek Mo**	**45.86**	**39**	P	**P**	**05 31 03.5**	**+1.2**
SCM				IAmb	IAmb	05 31 21.5	
	comp=Z,18nm,1.1s						
SCM	**Sheep Creek Mo**	**45.86**	**39**	P	**P**	**05 31 03.5**	**+1.2**
SCM				pmax	pmax		
	comp=Z,18nm,1.1s						
UZB	**Uzynbulak**	**46.04**	**295**	c iP	**P**	**05 31 03.6**	**-0.5**
UZB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
UZB	**Uzynbulak**	**46.04**	**295**	⇑iP	**P**	**05 31 03.7**	**-0.5**
	comp=Z,7.5nm,0.9s,baz=295						
KPKS	**Kokpek**	**46.17**	**295**	eP	**P**	**05 31 04.5**	**-0.5**
KPKS				pmax	pmax		
	comp=Z,15nm,1.1s						
KPKS	**Kokpek**	**46.17**	**295**	eP	**P**	**05 31 04.5**	**-0.5**
	comp=Z,15nm,1.1s,baz=295						
SATY	**Saty**	**46.50**	**295**	c iP	**P**	**05 31 07.5**	**-0.2**
SATY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SATY	**Saty**	**46.50**	**295**	⇑iP	**P**	**05 31 07.5**	**-0.2**
	comp=Z,5.6nm,0.7s,baz=295						
TAPN	**Taplejung**	**46.51**	**271**	eP	**P**	**05 31 08.4**	**+0.3**
KLU	**Klutina**	**46.57**	**39**	P	**P**	**05 31 11.7**	**+3.8**
KLU				IAmb	IAmb	05 31 29.9	
	comp=Z,18nm,1.2s						
RIDG	**Independent Ri**	**46.76**	**36**	P	**P**	**05 31 11.1**	**+1.7**
RIDG				IAmb	IAmb	05 31 27.8	
	comp=Z,20nm,1.4s						
EYAK	**Cordova Ski Ar**	**46.80**	**40**	P	**P**	**05 31 13.1**	**+3.5**
EYAK				pP	**sP**	**05 31 25.9**	**-3.5**
EYAK				IAmb	IAmb	05 31 40.8	
	comp=Z,13nm,1.0s						
SCRK	**Sand Creek**	**47.11**	**35**	P	**P**	**05 31 12.4**	**+0.3**
SCRK				IAmb	IAmb	05 31 30.5	
	comp=Z,17nm,0.8s						
CHKK	**Chushkaly**	**47.19**	**296**	eP	**P**	**05 31 12.3**	**-0.6**
CHKK	**Chushkaly**	**47.19**	**296**	eP	**P**	**05 31 12.3**	**-0.6**
	baz=296						
BMRM	**Bremner River**	**47.28**	**39**	P	**P**	**05 31 15.5**	**+2.1**
BMRM				IAmb	IAmb	05 31 37.0	
	comp=Z,11nm,0.9s						
MDOK	**Medeo**	**47.39**	**295**	eP	**P**	**05 31 14.3**	**-0.4**
MDOK	**Medeo**	**47.39**	**295**	eP	**P**	**05 31 14.3**	**-0.4**
	baz=295						
AAA	**Alma-Ata**	**47.47**	**296**	eP	**P**	**05 31 15.3**	**+0.2**
AAA				pmax	pmax		
	comp=Z,18nm,0.8s						
AAA	**Alma-Ata**	**47.47**	**296**	eP	**P**	**05 31 15.3**	**+0.2**
	comp=Z,18nm,0.8s,baz=296						
JIRN	**Jiri**	**47.49**	**272**	eP	**P**	**05 31 16.0**	**+0.1**
	comp=Z,29nm,0.3s						
TNSS	**Tian-Shan**	**47.51**	**295**	i P	**P**	**05 31 16.0**	**+0.1**
TNSS	**Tian-Shan**	**47.51**	**295**	i P	**P**	**05 31 16.0**	**+0.1**
	baz=295						
L26K	**Log Cabin Wild**	**47.53**	**37**	IAmb	IAmb	05 31 33.4	
	comp=Z,17nm,1.1s						
RAMN	**Ramite**	**47.55**	**271**	eP	**P**	**05 31 16.1**	**-0.2**
	comp=Z,122nm,0.7s						
GLB	**Gilahina Butte**	**47.58**	**39**	P	**P**	**05 31 16.3**	**+0.5**
GUN	**Gumba**	**47.60**	**273**	eP	**P**	**05 31 16.8**	**+0.1**
	comp=Z,173nm,0.4s						
KUU	**Kurty**	**47.62**	**297**	c iP	**P**	**05 31 15.4**	**-0.8**
KUU				pmax	pmax		
	comp=Z,20nm,0.7s						
KUU	**Kurty**	**47.62**	**297**	⇑iP	**P**	**05 31 15.4**	**-0.8**
	comp=Z,20nm,0.7s,baz=297						
KDJ	**Kajisay**	**47.68**	**294**	P	**P**	**05 31 16.6**	**-0.3**
KDJ				IAmb	IAmb	05 31 17.9	
	comp=Z,12nm,0.8s						
KDJ	**Kajisay**	**47.68**	**294**	P	**P**	**05 31 16.6**	**-0.3**
KDJ				pmax	pmax		
	comp=Z,12nm,0.8s						
VRDI	**Verde Repeater**	**47.79**	**39**	P	**P**	**05 31 18.9**	**+1.4**
M26K	**Nabesna, AK**	**47.79**	**37**	IAmb	IAmb	05 31 35.7	
	comp=Z,23nm,1.3s						
K27K	**Chicken**	**47.93**	**35**	IAmb	IAmb	05 31 37.1	
	comp=Z,21nm,1.1s						
BRZS	**Berezniki**	**48.01**	**305**	c iP	**P**	**05 31 18.8**	**-0.4**
BRZS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BRZS	**Berezniki**	**48.01**	**305**	⇑iP	**P**	**05 31 18.8**	**-0.4**
	comp=Z,8.2nm,0.5s,baz=306						
KKN	**Kakani**	**48.11**	**273**	eP	**P**	**05 31 20.1**	**-0.4**
PKI	**Pulchoki**	**48.13**	**272**	eP	**P**	**05 31 20.5**	**-0.3**
	comp=Z,29nm,0.4s						
EGAK	**Eagle**	**48.21**	**34**	P	**P**	**05 31 21.7**	**+1.3**
L27K	**Beaver Creek,**	**48.21**	**36**	P	**P**	**05 31 22.2**	**+1.6**
L27K				IAmb	IAmb	05 31 38.8	
	comp=Z,13nm,1.0s						
ULHL	**Ulahol**	**48.28**	**295**	P	**P**	**05 31 21.6**	**-0.1**
	SNR=9.7						
M27K	**Edge Creek, AK**	**48.31**	**37**	P	**P**	**05 31 23.3**	**+1.8**
M27K				IAmb	IAmb	05 31 43.2	
	comp=Z,7.2nm,0.8s						
DMN	**Daman**	**48.34**	**273**	eP	**P**	**05 31 22.2**	**-0.1**
BOOM	**Boomskoye usch**	**48.40**	**295**	P	**P**	**05 31 22.4**	**-0.1**
BOOM	**Boomskoye usch**	**48.40**	**295**	P	**P**	**05 31 22.4**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,26nm,0.8s						
TKM2	**Tokmak 2**	**48.47**	**296**	P	**P**	**05 31 23.4**	**+0.3**
	SNR=44						
GKN	**Gorkha**	**48.49**	**273**	eP	**P**	**05 31 23.0**	**-0.3**
	comp=Z,82nm,0.5s						
BRVK	**Borovoye**	**48.55**	**310**	P	**P**	**05 31 23.1**	**-0.2**
BRVK	**Borovoye**	**48.55**	**310**	P	**P**	**05 31 23.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,31nm,0.9s						
BRVK	**Borovoye**	**48.55**	**310**	P	**P**	**05 31 23.4**	**+0.1**
BRVK				P	**P**	**05 31 23.4**	**+0.1**
BTLS	**Baital**	**48.74**	**299**	c iP	**P**	**05 31 24.1**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BTLS	**Baital**	**48.74**	**299**	⇑iP	**P**	**05 31 24.2**	**-0.8**
	comp=Z,7.4nm,1.0s,baz=299						
SGDS	**Sogindy**	**48.93**	**297**	c iP	**P**	**05 31 26.1**	**-0.3**
SGDS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SGDS	**Sogindy**	**48.93**	**297**	⇑iP	**P**	**05 31 26.1**	**-0.3**
	comp=Z,6.8nm,1.1s,baz=297						
DANN	**Dangsing**	**48.97**	**274**	eP	**P**	**05 31 27.5**	**+0.3**
	comp=Z,332nm,0.5s						
KBK	**Karagaybulak**	**49.01**	**296**	P	**P**	**05 31 27.4**	**+0.2**
	SNR=26						
USP	**Ospenovka**	**49.09**	**296**	P	**P**	**05 31 27.5**	**-0.1**
	SNR=6.2						
AAK	**Ala-Archa**	**49.33**	**296**	P	**P**	**05 31 29.5**	**-0.2**
	SNR=10						
AAK	**Ala-Archa**	**49.33**	**296**	LR	LR	05 53 49.6	
	comp=Z,160nm,21.6s,baz=81,slow=38						
AAK	**Ala-Archa**	**49.33**	**296**	P	**P**	**05 31 29.4**	**-0.2**
AAK				IAmb	IAmb	05 31 33.0	
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**49.33**	**296**	P	**P**	**05 31 29.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**49.33**	**296**	P	**P**	**05 31 28.8**	**-0.8**
AAK				P	**P**	**05 31 28.8**	**-0.8**
KOLN	**Koldanda**	**49.39**	**274**	eP	**P**	**05 31 30.4**	**+0.1**
UCH	**Uchtor**	**49.47**	**295**	P	**P**	**05 31 31.3**	**+0.2**
	SNR=10						
KSH	**Kashi**	**49.54**	**291**	P	**P**	**05 31 35.4**	**+4.2**
KSH				pP	sP	05 31 49.0	-2.2
KSH				PcP	**PcP**	**05 32 54.9**	**+2.5**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				LR	LR		
	comp=Z,450nm,18.4s						
KSH				LR	LR		
	comp=Z,230nm,16.2s						
KSH				LR	LR		
	comp=Z,240nm,18.7s						
BNSI	**Bone**	**49.57**	**210**	P	**P**	**05 31 31.5**	**+0.1**
	comp=Z,19nm,1.3s						
EKS2	**Erkin-Say**	**49.81**	**296**	P	**P**	**05 31 33.1**	**-0.1**
	SNR=13						
AML	**Almayashu**	**50.07**	**295**	P	**P**	**05 31 35.9**	**+0.4**
	SNR=17						
AML	**Almayashu**	**50.07**	**295**	P	**P**	**05 31 34.1**	**-1.4**
KAPI	**Kappang**	**50.27**	**210**	P	**P**	**05 31 36.4**	**-0.3**
	comp=Z,2.8nm,0.3s,baz=52,slow=3.0,SNR=5.4						
KAPI				LR	LR	05 55 17.3	
	comp=Z,23nm,18.2s,baz=16,slow=39						
	comp=Z,2.8nm,0.3s						
KAPI	**Kappang**	**50.27**	**210**	P	**P**	**05 31 37.2**	**+0.5**
KAPI	**Kappang**	**50.27**	**210**	P	**P**	**05 31 37.2**	**+0.5**
KAPI				pmax	pmax		
	comp=Z,24nm,1.2s						
INK	**Inuvik**	**50.53**	**29**	P	**P**	**05 31 38.7**	**+0.7**
	comp=Z,3.5nm,0.3s,baz=296,slow=7.7,SNR=43						
INK				LR	LR	05 55 11.5	
	comp=Z,62nm,19.5s,baz=278,slow=38						
	comp=Z,3.5nm,0.3s						
INK	**Inuvik**	**50.53**	**29**	P	**P**	**05 31 38.6**	**+0.5**
INK				IAmb	IAmb	05 31 56.5	
	comp=Z,15nm,1.0s						
HYT	**Haines Junctio**	**50.70**	**39**	P	**P**	**05 31 41.6**	**+2.0**
N31M	**Braeburn, Yuko**	**51.32**	**37**	IAmb	IAmb	05 32 02.8	
	comp=Z,7.5nm,0.8s						
DZA	**Taraz**	**51.37**	**297**	c iP	**P**	**05 31 44.7**	**-0.2**
DZA				pmax	pmax		
	comp=Z,14nm,0.7s						
DZA	**Taraz**	**51.37**	**297**	⇑iP	**P**	**05 31 44.8**	**-0.2**
	comp=Z,14nm,0.7s,baz=297						
KK31	**Karatay Array**	**51.84**	**298**	P	**P**	**05 31 47.8**	**-0.5**
KK31				IAmb	IAmb	05 31 48.8	
	comp=Z,14nm,0.9s						
KK31	**Karatay Array**	**51.84**	**298**	P	**P**	**05 31 47.8**	**-0.5**
KK31				pmax	pmax		
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**51.84**	**298**	P	**P**	**05 31 47.7**	**-0.6**
KKAR	**Karatay Array**	**51.84**	**298**	IAmb	IAmb	05 31 48.8	
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**51.84**	**298**	P	**P**	**05 31 47.7**	**-0.6**
A36M	**Sachs Harbour**	**52.30**	**23**	P	**P**	**05 31 54.0**	**+2.7**
A36M				pP	**sP**	**05 32 08.1**	**-3.2**
IUG	**Iuzhnay**	**52.55**	**297**	c iP	**P**	**05 31 53.6**	**-0.2**
IUG	**Iuzhnay**	**52.55**	**297**	⇑iP	**P**	**05 31 53.6**	**-0.2**
	baz=297						
SVE	**Sverdlovsk**	**52.69**	**317**	eP	**P**	**05 31 55.0**	**+0.6**
SVE				pmax	pmax		
	comp=Z,35nm,0.8s						
BTK	**Batken**	**52.91**	**294**	IAmb	IAmb	05 32 13.9	
	comp=Z,26nm,1.4s						
P33M	**Teslin, Yukon**	**53.10**	**38**	IAmb	IAmb	05 32 15.9	
	comp=Z,9.8nm,1.2s						
C36M	**Paulatuk**	**53.52**	**26**	P	**P**	**05 32 00.9**	**+0.6**
C36M				pP	**sP**	**05 32 16.5**	**-3.8**
ARU	**Arti**	**53.91**	**317**	LR	LR	05 57 36.8	
	comp=Z,217nm,19.3s,baz=66,slow=39						
ARU	**Arti**	**53.91**	**317**	P	**P**	**05 32 03.0**	**-0.3**
ARU	**Arti**	**53.91**	**317**	c iP	**P**	**05 32 03.0**	**-0.3**
ARU				*PP	**pP**	**05 32 16.2**	**-1.2**
ARU						05 33 01.3	
ARU						05 34 01.5	
ARU				S	**S**	**05 39 36.8**	**+2.3**
ARU				SS	**SS**	**05 43 14.2**	**-1.3**
ARU				pmax	pmax		
	comp=Z,36nm,0.9s						
ARU				MLR	MLR		
	comp=Z,198nm,18.0s						
NIL	**Nilore**	**54.14**	**286**	P	**P**	**05 32 05.1**	**-0.4**
NIL	**Nilore**	**54.14**	**286**	P	**P**	**05 32 05.1**	**-0.4**
NIL				pmax	pmax		
	comp=Z,48nm,1.0s						
PSI	**Prapat**	**54.50**	**237**	LR	LR	05 56 48.0	
	comp=Z,38nm,18.6s,baz=358,slow=38						
CHGR	**Chuyangaron**	**54.69**	**293**	P	**P**	**05 32 09.1**	**-0.3**
CHGR	**Chuyangaron**	**54.69**	**293**	P	**P**	**05 32 09.1**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,66nm,0.7s						
DLBC	**Dease Lake**	**55.07**	**40**	LR	LR	05 56 53.7	
	comp=Z,41nm,19.9s,baz=256,slow=37						
AB31	**Akbulak array**	**55.98**	**308**	i P	**P**	**05 32 17.8**	**-0.6**
EUNU	**Eureka**	**56.14**	**9**	P	**P**	**05 32 19.4**	**+0.2**
EUNU				IAmb	IAmb	05 32 35.8	
	comp=Z,14nm,0.8s						
AKTO	**Aktyubinsk**	**56.60**	**310**	P	**P**	**05 32 22.3**	**-0.6**
KBL	**Kabul**	**56.74**	**289**	P	**P**	**05 32 23.6**	**-0.7**
KBL	**Kabul**	**56.74**	**289**	P	**P**	**05 32 23.6**	**-0.7**
KBL				pmax	pmax		
	comp=Z,21nm,0.9s						
KBL	**Kabul**	**56.74**	**289**	P	**P**	**05 32 23.2**	**-1.1**
	SNR=9.3						
SPITS	**Spitsbergen Ar**	**56.77**	**348**	LR	LR	05 59 15.6	
	comp=Z,65nm,18.7s,baz=3.5,slow=39						
SPITS	**Spitsbergen Ar**	**56.77**	**348**	P	**P**	**05 32 25.7**	**+2.1**
SPITS				pmax	pmax		
	comp=Z,35nm,1.3s						
KPJI	**Karang Pucung**	**57.07**	**221**	P	**P**	**05 32 25.9**	**-0.6**
	comp=Z,32nm,1.1s						
NOR	**Nord**	**57.13**	**356**	eP	P	05 32 19.3	-6.8
NOR				IAmb	IAmb	05 33 22.9	
	comp=Z,2.1nm,1.1s						
MDSI	**Maura Dua**	**57.16**	**227**	P	**P**	**05 32 26.9**	**-0.2**
KIRV	**Kirov**	**57.54**	**322**	i P	**P**	**05 32 27.9**	**-1.4**
KNRA	**Kununurra**	**57.80**	**196**	P	**P**	**05 32 31.4**	**0.0**
PRGR	**Permogore**	**57.85**	**326**	eP	**P**	**05 32 28.7**	**-2.7**
PRGR				e*PP	**pP**	**05 32 43.5**	**-2.1**
RES	**Resolute Bay**	**58.57**	**15**	LR	LR	06 00 41.2	
	comp=Z,39nm,19.7s,baz=14,slow=39						
RES	**Resolute Bay**	**58.57**	**15**	P	**P**	**05 32 35.9**	**-0.4**
RES				pP	**pP**	**05 32 51.7**	**+1.3**
RES	**Resolute Bay**	**58.57**	**15**	P	**P**	**05 32 35.9**	**-0.4**
RES				*PP	**pP**	**05 32 51.7**	**+1.3**
RES				pmax	pmax		
	comp=Z,22nm,0.8s						
BBB	**Bella Bella**	**58.74**	**46**	LR	LR	05 56 24.7	
	comp=Z,24nm,21.3s,baz=314,slow=34						
YKA	**Yellowknife Ar**	**60.02**	**31**	P	**P**	**05 32 46.8**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=298,slow=6.7,SNR=9.0						
YKA				LR	LR	06 00 48.8	
	comp=Z,37nm,20.0s,baz=326,slow=38						
	comp=Z,1.4nm,0.9s						
YKA	**Yellowknife Ar**	**60.02**	**31**	P	**P**	**05 32 48.3**	**+1.9**
YKA	**Yellowknife Ar**	**60.02**	**31**	P	**P**	**05 32 48.3**	**+1.9**
ARCES	**ARCESS Array B**	**60.54**	**339**	P	**P**	**05 32 49.4**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=60,slow=7.2,SNR=8.1						
ARCES				LR	LR	06 01 25.3	
	comp=Z,72nm,20.8s,baz=86,slow=38						
	comp=Z,2.1nm,0.7s						
ARCES	**ARCESS Array B**	**60.54**	**339**	P	**P**	**05 32 50.4**	**+0.5**
ARCES				IAmb	IAmb	05 33 11.0	
	comp=Z,14nm,1.4s						
ARCES	**ARCESS Array B**	**60.54**	**339**	P	**P**	**05 32 50.4**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,14nm,1.4s						
KLMR	**Klimovskoe**	**60.80**	**327**	eP	**P**	**05 32 47.4**	**-4.4**
KLMR				e*PP	**pP**	**05 33 04.8**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,16nm,1.0s						
KLMR	**Klimovskoe**	**60.80**	**327**	eP	**P**	**05 32 47.4**	**-4.4**
KLMR				AMP		05 32 52.5	
	comp=Z,16nm,1.0s						
KLMR				epP	**pP**	**05 33 04.8**	**-1.3**
KLMR				ePP	**PP**	**05 35 00.8**	**-4.9**
WB0	**Warramunga Arr**	**60.92**	**189**	IAmb	IAmb	05 32 53.2	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**61.09**	**189**	P	**P**	**05 32 53.1**	**-1.1**
WRAB				IAmb	IAmb	05 32 54.4	
	comp=Z,8.7nm,0.9s						
WRAB	**Tennant Creek**	**61.09**	**189**	P	**P**	**05 32 53.1**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WR0	**Warramunga Arr**	**61.10**	**188**	P	**P**	**05 32 53.3**	**-0.9**
WR0				IAmb	IAmb	05 32 55.7	
	comp=Z,6.5nm,0.8s						
WB2	**Warramunga Arr**	**61.10**	**189**	IAmb	IAmb	05 32 53.9	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**61.10**	**189**	P	**P**	**05 32 53.5**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=6.2,slow=6.9,SNR=71						
WRA				LR	LR	05 58 58.2	
	comp=Z,32nm,21.8s,baz=288,slow=36						
	comp=Z,4.4nm,0.6s						
BELG	**Belogornoye**	**61.42**	**316**	LR	LR	06 02 00.3	
	comp=Z,206nm,19.5s,baz=355,slow=38						
BELG	**Belogornoye**	**61.42**	**316**	i P	**P**	**05 32 55.4**	**-0.7**
BELG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DAG	**Danmarks Havn**	**61.87**	**355**	i P	**P**	**05 32 58.0**	**-0.8**
DAG				IAmb	IAmb	05 33 17.5	
	comp=Z,3.5nm,0.8s						
GEYT	**Alibeck**	**62.59**	**298**	P	**P**	**05 33 03.9**	**-0.4**
	comp=Z,11nm,0.9s,baz=70,slow=4.9,SNR=11						
GEYT				LR	LR	06 00 41.0	
	comp=Z,166nm,19.0s,baz=318,slow=36						
	comp=Z,11nm,0.9s						
GEYT	**Alibeck**	**62.59**	**298**	IAmb	IAmb	05 33 05.0	
	comp=Z,12nm,1.0s						
PALK	**Pallekele**	**63.98**	**256**	LR	LR	06 02 15.5	
	comp=Z,66nm,21.6s,baz=158,slow=37						
MOS	**Moscow**	**64.51**	**323**	eP	**P**	**05 33 14.6**	**-1.9**
MOS				e		05 33 29.6	
ASAR	**Alice Springs**	**64.83**	**189**	P	**P**	**05 33 18.9**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=9.8,slow=5.6,SNR=61						
	comp=Z,5.6nm,0.8s						
VRH	**Novokhopyorsk**	**65.14**	**317**	eP	**P**	**05 33 19.5**	**-1.2**
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
OBN	**Obninsk**	**65.36**	**323**	LR	LR	06 05 01.1	
	comp=Z,24nm,18.5s,baz=190,slow=39						
OBN	**Obninsk**	**65.36**	**323**	i P	**P**	**05 33 18.4**	**-3.7**
OBN				i		05 33 34.5	
OBN				i		05 33 49.8	
OBN				pmax	pmax		
	comp=Z,31nm,1.2s						
OBN				MLR	MLR		
	comp=Z,88nm,16.0s						
FINES	**FINESS Array B**	**65.64**	**332**	P	**P**	**05 33 23.4**	**-0.4**
	comp=Z,6.8nm,0.8s,baz=46,slow=8.2,SNR=19						
FINES				LR	LR	06 03 52.3	
	comp=Z,165nm,21.2s,baz=50,slow=38						
	comp=Z,6.8nm,0.8s						
PSA00	**Pilbara Seismi**	**65.69**	**203**	P	**P**	**05 33 24.5**	**0.0**
PSA00				IAmb	IAmb	05 33 25.2	
	comp=Z,12nm,0.9s						
LPSR	**Galich'ya Gora**	**65.73**	**319**	eP	**P**	**05 33 23.5**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR	**Storozhevoye**	**66.44**	**318**	eP	**P**	**05 33 28.8**	**-0.3**
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VORD	**Divnogorie**	**66.52**	**318**	eP	**P**	**05 33 29.1**	**-0.5**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
MAK	**Makhachkala**	**66.61**	**307**	eP	**P**	**05 33 27.5**	**-2.8**
MAK				e*PP	**pP**	**05 33 45.6**	**+0.8**
MAK				e		05 35 52.8	
MAK				ePPP	PPP	05 37 30.8	
MAK				eS	**S**	**05 42 14.1**	**-3.3**
MAK				e*SS	**sS**	**05 42 45.1**	**+3.1**
MAK				eSS	**SS**	**05 46 31.8**	**-3.0**
MAK				pmax	pmax		
	comp=Z,262nm,1.5s						
DZM	**Mont Dzumac**	**66.64**	**156**	LR	LR	06 03 19.8	
	comp=Z,43nm,18.6s,baz=120,slow=36						
SUMG	**Summit**	**66.70**	**0**	P	**P**	**05 33 31.4**	**+0.4**
SUMG				IAmb	IAmb	05 33 32.3	
	comp=Z,12nm,1.0s						
SUMG	**Summit**	**66.70**	**0**	P	**P**	**05 33 31.4**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,12nm,1.0s						
SUMG	**Summit**	**66.70**	**0**	i P	**P**	**05 33 29.7**	**-1.2**
SUMG				IAmb	IAmb	05 33 48.6	
	comp=Z,5.8nm,0.8s						
NEW	**Newport**	**66.80**	**46**	LR	LR	06 01 05.2	
	comp=Z,43nm,22.0s,baz=305,slow=34						
MSVF	**Nonsavu**	**67.19**	**143**	LR	LR	05 56 52.6	
	comp=Z,71nm,21.4s,baz=352,slow=30						
PINE	**Pine Mountain**	**67.24**	**51**		pP	05 33 52.1	+3.1
YBH	**Yreka Blue Hor**	**67.37**	**54**	LR	LR	05 57 59.7	
	comp=Z,13nm,20.9s,baz=270,slow=31						
KIV	**Kislovodsk**	**68.87**	**310**	⇑P	**P**	**05 33 44.4**	**-0.4**
KIV	**Kislovodsk**	**68.87**	**310**	P	**P**	**05 33 45.4**	**+0.7**
KIV	**Kislovodsk**	**68.87**	**310**	eP	**P**	**05 33 44.3**	**-0.4**
KIV				pmax	pmax		
	comp=Z,74nm,1.1s						
KIV				MLR	MLR		
	comp=Z,53nm,17.0s						
KIV	**Kislovodsk**	**68.87**	**310**	P	**P**	**05 33 46.4**	**+1.7**
KBZ	**Khabaz**	**68.88**	**310**	P	**P**	**05 33 45.2**	**+0.6**
	comp=Z,20nm,0.8s,baz=38,slow=4.4,SNR=36						
KBZ				LR	LR	06 06 29.1	
	comp=Z,179nm,18.6s,baz=70,slow=38						
	comp=Z,20nm,0.8s						
SHA1	**Shidzhatmaz**	**69.02**	**310**	i P	**P**	**05 33 44.2**	**-1.6**
AFI	**Afiamalu**	**69.18**	**132**	LR	LR	05 56 02.0	
	comp=Z,54nm,21.9s,baz=354,slow=29						
MNK	**Minsk**	**69.62**	**326**	i P	**P**	**05 33 45.3**	**-3.6**
MNK				i *PP	**pP**	**05 34 02.5**	**-1.1**
MNK				i		05 34 07.9	
MNK				i PPP	PPP	05 38 03.9	
MNK				i S	**S**	**05 42 46.1**	**-6.8**
MNK				i *SS	**sS**	**05 43 17.0**	**-0.5**
MNK				i SS	**SS**	**05 47 24.1**	**+3.5**
MNK				i SSS	SSS	05 50 31.5	
MNK				pmax	pmax		
	comp=E,3.0nm,1.2s						
MNK				pmax	pmax		
	comp=Z,11nm,1.0s						
MNK				pmax	pmax		

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       comp=N,16nm,0.7s
MNK                                 MLR     MLR
       comp=E,12nm,20.0s
MNK                                 MLR     MLR
       comp=Z,180nm,20.0s
MNK                                 MLR     MLR
       comp=N,100nm,20.0s
MNK    Minsk             69.62 326 i P     P       05 33 45.4 -3.6
       comp=E,3.0nm,1.2s
MNK                                i P     P       05 33 45.4 -3.6
       comp=N,16nm,0.7s
MNK                                i P     P       05 33 45.4 -3.6
       comp=Z,11nm,1.0s,baz=227
MNK                                i pP    pP      05 34 02.5 -1.1
MNK                                i PP    PP      05 36 17.9 -4.9
MNK                                i PPP   PPP     05 38 04.0
MNK                                i S     S       05 42 46.2 -6.8
MNK                                i sS    sS      05 43 17.1 -0.5
MNK                                i SS    SS      05 47 24.1 +3.5
MNK                                i SSS   SSS     05 50 31.5
MNK                                i LQ    LQ      05 59 12.6
MNK                                i LR    LR      06 00 18.4
MNK                                i LRM   MLR     06 07 19.5
       comp=E,12nm,19.7s
MNK                                i LRM   MLR     06 07 33.3
       comp=Z,180nm,20.3s
MNK                                i LRM   MLR     06 07 34.0
       comp=N,100nm,19.7s
NACGM  Naroch            69.81 326⇓eP      P       05 33 49.4 -0.8
       baz=46
AKH    Akhalkalaki       69.93 308 ⇓P      P       05 33 51.4  0.0
ICESG  Greenland Ices    70.20   1 i P     P       05 33 52.2 -0.5
ICESG                                IAmb  IAmb    05 34 14.5
       comp=Z,8.5nm,0.8s
WSAR   Wadi Sarin        70.57 284   LR    LR      06 08 01.9
       comp=Z,58nm,18.5s,baz=80,slow=38
BANOM  Banah             70.66 288   P     P       05 33 56.2 +0.3
       SNR=5.2
SHME   Shamm             70.70 288   P     P       05 33 56.4 +0.3
WBK    Wadi Bani Khal    70.70 283   P     P       05 33 57.0 +0.8
HFS    Hagfors           70.77 336   LR    LR      06 07 20.0
       comp=Z,83nm,20.3s,baz=25,slow=38
NB2    NORSAR Subarra    70.80 337   P     P       05 33 55.5 -0.7
       comp=Z,11nm,1.0s,baz=36,slow=6.5
NOA    NORSAR Array B    70.80 337   P     P       05 33 55.6 -0.5
       comp=Z,2.9nm,0.9s,baz=36,slow=6.2,SNR=7.2
NOA                                  LR    LR      06 08 18.1
       comp=Z,49nm,21.7s,baz=30,slow=39
       comp=Z,2.9nm,0.9s
EGMT   Eagleton          70.82  43   P     P       05 33 57.5 +0.9
CMB    Columbia Colle    71.00  56         pP      05 34 15.6 +3.3
DLMT   Dillon            71.03  46         pP      05 34 14.2 +1.7
MASF   Masafi            71.09 287   P     P       05 33 58.1 -0.4
UOSS   Minazif           71.31 287   P     P       05 33 59.2 -0.6
HOQ    Hoqain            71.33 285   P     P       05 33 59.3 -0.7
HATD   Hatta, Dubai      71.44 287   P     P       05 34 01.1 +0.5
       SNR=5.3
JMDO   Jabal Madar       71.48 284   P     P       05 34 01.1 +0.2
SOHO   SOHO              71.56 286   P     P       05 34 01.3 -0.1
ASHO   Ashiyiah          71.58 287   P     P       05 34 02.9 +1.4
AKASG  Malin Array Be    71.60 322   P     P       05 34 00.5 -0.6
       comp=Z,3.3nm,0.5s,baz=43,slow=6.5,SNR=34
       comp=Z,3.3nm,0.5s
AKBB   Malin Array Si    71.60 322   IAmb  IAmb    05 34 16.6
       comp=Z,15nm,0.8s
KVN    Kaiserville       71.79  54   P     P       05 34 04.3 +1.6
KVN    Kaiserville       71.79  54   P     P       05 34 04.4 +1.6
KVN                                  pmax  pmax
       comp=Z,9.0nm,1.1s
SFJD   Kangerlussuaq     71.86   5   LR    LR      06 06 51.1
       comp=Z,78nm,20.8s,baz=340,slow=37
BSY    Bisya             71.92 285   P     P       05 34 03.7 +0.2
SUW    Suwalki           71.93 327 eP      P       05 34 00.9 -2.2
SUW                                epP     pP      05 34 18.6 +0.9
LHV    Little Huntoon    72.04  55         pP      05 34 21.7 +3.2
LHV                                  IAmb  IAmb    05 34 22.9
       comp=Z,11nm,1.1s
NVAR   Mina Array Bea    72.05  55   P     P       05 34 05.5 +1.2
       comp=Z,1.3nm,0.8s,baz=293,slow=5.7,SNR=10.0
NVAR                                 LR    LR      06 05 25.5
       comp=Z,18nm,18.2s,baz=303,slow=35
       comp=Z,1.3nm,0.8s
ASUD   Al Ashush, Dub    72.14 287   P     P       05 34 05.2 +0.4
NV11   Mina Array Sit    72.14  54         pP      05 34 22.9 +3.5
MHTO   MHTO              72.42 283   P     P       05 34 06.7 +0.2
       SNR=6.3
ELK    Elko              72.45  51   LR    LR      06 04 48.2
       comp=Z,18nm,19.7s,baz=314,slow=35
STKA   Stephens Creek    72.53 181   LR    LR      06 05 26.3
       comp=Z,41nm,21.9s,baz=20,slow=35
KOPT   Kop Dagi          72.58 308   P     P       05 34 09.2 +1.7
KOPT                                 IAmb  IAmb    05 34 10.5
       comp=Z,22nm,1.2s
FRB    Frobisher Bay     72.73  14   LR    LR      06 10 16.2
       comp=Z,76nm,18.6s,baz=304,slow=39
MOOW   Moose Ponds       73.08  46   P     P       05 34 11.5 +1.1
ANGG   Ammassalik, Gr    73.70 360 i P     P       05 34 13.0 -0.3
SORM   Soroca            73.78 320 ⇑P      P       05 34 14.2 +0.1
TPNV   Topopah Spring    74.25  55         pP      05 34 34.5 +2.6
PD31   Pinedale Array    74.38  47   pP    pP      05 34 34.9 +2.2
PDAR   Pinedale Array    74.38  47   P     P       05 34 18.6 +0.5
       comp=Z,1.2nm,0.8s,baz=302,slow=2.8,SNR=9.9
PDAR                                 LR    LR      06 07 30.2
       comp=Z,15nm,20.6s,baz=298,slow=36
       comp=Z,1.2nm,0.8s
GWY    Greenwater Val    74.47  56         pP      05 34 36.1 +2.9
KWP    Kalwaria Pacla    75.32 324 eP      P       05 34 21.7 -1.4
BUR08  Bucovina Ar. S    75.63 322   IAmb  IAmb    05 34 41.4
       comp=Z,8.3nm,0.8s
BURAR  Bucovina Array    75.64 322 ⇑P      P       05 34 25.4 +0.4
BURAR  Bucovina Array    75.64 322         PcP     05 34 38.6 +0.9
BURAR                                IAmb  IAmb    05 34 41.7
       comp=Z,9.3nm,0.8s
BIZ    Bicaz             75.71 321 ⇑P      P       05 34 25.7 +0.4
TESR   Tescani           75.75 320 ⇓P      P       05 34 25.5 -0.1
ULM    Lac du Bonnet     75.79  34   LR    LR      06 10 54.8
       comp=Z,31nm,18.2s,baz=308,slow=38
RDMU   Red Mountain      75.84  48   IAmb  IAmb    05 34 44.6
       comp=Z,13nm,1.2s
CFR    Carcaliu          75.95 318 ⇑P      P       05 34 26.6 -0.1
TPGR   Topolog           76.04 318 ⇑P      P       05 34 27.5 +0.3
OJC    Ojcow             76.14 326 eP      P       05 34 28.3 +0.5
OJC                                epP     pP      05 34 43.6 +1.2
OJC    Ojcow             76.14 326   P     P       05 34 27.6 -0.1
OJC    Ojcow             76.14 326   P     P       05 34 27.6 -0.1
OJC                                  pmax  pmax
       comp=Z,26nm,1.0s
VRI    Vrincioaia        76.17 320 ⇑P      P       05 34 28.0  0.0
PFO    Pinyon Flats O    76.25  57   LR    LR      06 02 36.4
       comp=Z,32nm,21.8s,baz=250,slow=31
HARR   Harsova           76.40 318 ⇑P      P       05 34 29.6 +0.3
CRVS   Cervenica-Dubn    76.41 324 eP      P       05 34 28.8 -0.5
CRVS   Cervenica-Dubn    76.41 324 eP      P       05 34 28.8 -0.5
OZUR                     76.46 320 ⇑P      P       05 34 30.0 +0.4
NIE    Niedzica          76.53 325 eP      P       05 34 31.6 +1.6
DOK    Doka              76.72 283   P     P       05 34 31.2 -0.3
BR131  Keskin Array S    76.76 311 i P     P       05 34 29.2 -2.4
BRTR   Keskin Array B    76.76 311   P     P       05 34 31.6  0.0
       comp=Z,2.9nm,0.6s,baz=89,slow=4.0,SNR=14
BRTR                                 LR    LR      06 13 14.5
       comp=Z,79nm,19.7s,baz=101,slow=40
       comp=Z,2.9nm,0.6s
BRTR   Keskin Array B    76.76 311 i P     P       05 34 31.7 +0.1
BRTR                                 pmax  pmax
       comp=Z,3.0nm,0.6s
MLR    Muntele Rosu      76.82 320   LR    LR      06 12 39.5
       comp=Z,104nm,19.4s,baz=67,slow=39
LANS   Liptovska Anna    77.09 326 eP      P       05 34 34.3 +1.1
LANS   Liptovska Anna    77.09 326 eP      P       05 34 34.3 +1.1
KSP    Ksiaz             77.10 328 eP      P       05 34 33.9 +0.8
KSP                                epP     pP      05 34 49.4 +1.5
OKC    Ostrava-Krasne    77.12 327   AMS   AMS     06 10 50.0
       comp=Z,200nm,18.6s
VOIR                     77.30 320 ⇑P      P       05 34 34.9 +0.5
DRGR                     77.41 322 ⇓P      P       05 34 35.5 +0.5
MORC   Moravsky Berou    77.42 327 ⇑P      P       05 34 35.3 +0.3
MORC   Moravsky Berou    77.42 327   pP    pP      05 34 51.1 +1.4
MORC                                 IAmb  IAmb    05 34 52.0
       comp=Z,19nm,1.2s
MORC   Moravsky Berou    77.42 327 eP      P       05 34 35.4 +0.4
MORC                               e               05 34 50.5
DPC    Dobruska-Polom    77.47 328 eP      P       05 34 36.0 +0.7
DPC    Dobruska-Polom    77.47 328 eP      P       05 34 36.0 +0.7
KRLC   Kraliky           77.50 328 eP      P       05 34 35.6 +0.2
KRLC   Kraliky           77.50 328 eP      P       05 34 35.6 +0.2
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PSZ    Piszkesteto       77.84 325         pP      05 34 53.7 +1.5
PSZ                                  IAmb  IAmb    05 34 54.5
       comp=Z,15nm,1.2s
CLL    Collm             78.01 330   IAmb  IAmb    05 34 54.5
       comp=Z,27nm,1.5s
CLL    Collm             78.01 330 i P     P       05 34 38.0 -0.1
CLL                                i *PP   pP      05 34 52.9  0.0
CLL                                  pmax  pmax
       comp=Z,10.0nm,1.0s
CLL    Collm             78.01 330 i P     P       05 34 38.0 -0.1
       comp=Z,10.0nm,1.0s
CLL                                i pP    pP      05 34 52.9  0.0
CLL                                ePP     PP      05 37 34.0 -0.1
JAVC   Velka Javorina    78.08 326 eP      P       05 34 39.6 +0.9
JAVC                               e               05 34 55.3
VRAC   Vranov            78.18 327   LR    LR      06 12 01.1
       comp=Z,116nm,19.0s,baz=60,slow=38
VRAC   Vranov            78.18 327 eP      P       05 34 39.3 +0.1
VRAC                               e               05 34 54.9
GZR    Gura Zlata        78.42 321 ⇑P      P       05 34 40.7 +0.1
KRUC   Moravsky          78.45 327 eP      P       05 34 40.9 +0.3
KRUC                               e               05 34 56.3
PRU    Pruhonice         78.47 329 eP      P       05 34 41.1 +0.4
PRU    Pruhonice         78.47 329 eP      P       05 34 41.1 +0.4
BZS    Buzias            78.80 322 ⇑P      P       05 34 42.7 +0.1
HERR   Herculane         78.97 321 ⇑P      P       05 34 43.8 +0.3
KHC    Kasperske Hory    79.53 329   pP    pP      05 35 01.5 +0.1
KHC                                  IAmb  IAmb    05 35 03.7
       comp=Z,25nm,1.5s
KHC    Kasperske Hory    79.53 329 eP      P       05 34 46.8 +0.2
KHC                                e               05 35 01.1
KHC    Kasperske Hory    79.53 329 eP      P       05 34 46.8 +0.2
KHC                                epP     pP      05 35 01.1 -0.3
RONA   Rosalia, Austr    79.56 326 eP      P       05 34 47.2 +0.4
CONA   Conrad Observa    79.56 327 eP      P       05 34 47.3 +0.4
       comp=Z,5.2nm,1.1s
GERES  GERESS Array B    79.71 328   P     P       05 34 47.6 -0.1
       comp=Z,1.3nm,0.6s,baz=39,slow=6.8,SNR=11
GERES                                LR    LR      06 13 04.9
       comp=Z,74nm,18.1s,baz=54,slow=38
       comp=Z,1.3nm,0.6s
RDO    Rodhopi           80.17 317   IAmb  IAmb    05 34 51.7
       comp=Z,18nm,1.0s
ARSA   Arzberg           80.23 326 eP      P       05 34 50.4  0.0
       comp=Z,2.2nm,0.5s
VTS    Vitosha           80.25 319 ⇑P      P       05 34 51.2 +0.4
VTS    Vitosha           80.25 319   IAmb  IAmb    05 35 07.8
       comp=Z,13nm,0.9s
MOA    Molln             80.28 327 eP      P       05 34 51.0 +0.3
       comp=Z,2.3nm,0.6s
DIVS   Divibare          80.70 322   IAmb  IAmb    05 35 09.4
       comp=Z,12nm,1.2s
PERS   Pernice           80.89 326 i P     P       05 34 54.1 +0.1
PERS                                 IAMb          05 34 54.9
       comp=Z,10nm,0.7s
PERS                               i pP    pP      05 35 09.7 +0.8
SOKA   Soboth            80.89 326 eP      P       05 34 53.9 -0.1
       comp=Z,11nm,0.8s
BTNL   Ternell           81.06 333 dP      P       05 34 53.9 -0.8
BTNL                               dpP     pP      05 35 10.1 +0.4
OBKA   Obir              81.23 326 eP      P       05 34 56.0 +0.1
       comp=Z,4.5nm,0.7s
KBA    Koelnbreinsper    81.27 327 eP      P       05 34 56.1 -0.1
       comp=Z,7.5nm,0.9s
BHOU   Houvegnez         81.30 333 dP      P       05 34 56.0 -0.1
BHOU                               dpP     pP      05 35 11.0 +0.1
SCHQ   Schefferville     81.31  17   LR    LR      06 14 34.7
       comp=Z,43nm,18.1s,baz=127,slow=38
PDKS   Podkum            81.40 326 i P     P       05 34 56.4 -0.3
PDKS                                 IAMb          05 34 57.1
       comp=Z,7.3nm,0.8s
PDKS                               epP     pP      05 35 12.2 +0.6
ANMO   Albuquerque       81.48  51   LR    LR      06 07 20.0
       comp=Z,23nm,22.0s,baz=318,slow=33
ANMO   Albuquerque       81.48  51 i P     P       05 34 55.6 -2.0
ANMO                                 pmax  pmax
       comp=Z,14nm,3.8s
MYKA   Terra Mystica     81.51 327 eP      P       05 34 56.9 -0.4
       comp=Z,2.7nm,0.5s
BMRD   Maredsous         81.75 334 dP      P       05 34 58.5 +0.1
BMRD                               dPcP    PcP     05 35 03.6 -0.5
BMRD                               dpP     pP      05 35 14.6 +1.3
WATA   Walderalm         81.77 329 eP      P       05 34 59.0 +0.2
       comp=Z,2.7nm,0.6s
ABTA   Abfaltersbach     81.87 328 eP      P       05 34 59.5 +0.3
       comp=Z,4.0nm,0.9s
JAVS   Javornik          81.92 326 i P     P       05 34 58.4 -1.2
JAVS                                 IAMb          05 34 59.2
       comp=Z,7.5nm,0.7s
RAR    Rarotonga         81.94 127   LR    LR      06 03 48.9
       comp=Z,65nm,21.3s,baz=316,slow=30
MOTA   Moosalm           81.95 329 eP      P       05 34 59.9 +0.2
       comp=Z,4.4nm,0.6s
RETA   Reutte            81.96 329 eP      P       05 35 00.1 +0.4
       comp=Z,8.9nm,0.8s
DOU    Dourbes           81.99 334 dP      P       05 34 57.4 -2.3
DOU                                dPcP    PcP     05 35 04.0 -1.1
DOU                                dpP     pP      05 35 15.3 +0.8
DOU                                dsP     sP      05 35 21.5 +1.2
SQTA   Sankt Quirin      82.01 329 eP      P       05 34 59.5 -0.5
       comp=Z,1.7nm,0.4s
BFO    Black Forest      82.18 331         pP      05 35 17.2 +1.5
STAL   STALIGIAL         82.19 327   IAmb  IAmb    05 35 16.1
       comp=Z,16nm,1.1s
PDG    Podgorica         82.32 321 ⇑P      P       05 35 01.9 +0.4
PDG    Podgorica         82.32 321   IAmb  IAmb    05 35 17.9
       comp=Z,15nm,0.8s
FETA   Feichten          82.36 329 eP      P       05 35 01.9 +0.1
       comp=Z,2.9nm,0.7s
DAVA   Damuels           82.47 330 eP      P       05 35 02.4  0.0
       comp=Z,7.3nm,0.9s
DAVOX  Davos/Dischmat    82.89 329   LR    LR      06 14 16.2
       comp=Z,66nm,20.0s,baz=66,slow=37
IDI    Anoyia            84.81 313   LR    LR      06 16 57.4
       comp=Z,34nm,18.7s,baz=63,slow=38
URZ    Urewera           85.05 153   LR    LR      06 07 13.4
       comp=Z,21nm,19.5s,baz=211,slow=31
PPT    Papeete           85.79 117   LR    LR      06 11 02.0
       comp=Z,90nm,18.8s,baz=336,slow=34
SADO   Sadowa            86.84  28   LR    LR      06 17 47.9
       comp=Z,39nm,19.2s,baz=8.0,slow=38
TXAR   Lajitas Array     87.13  53   P     P       05 35 26.7 +0.5
       comp=Z,0.6nm,0.6s,baz=312,slow=3.1,SNR=7.7
       comp=Z,0.6nm,0.6s
CCM    Cathedral Cave    87.32  39   P     P       05 35 27.2 +0.5
CCM                                  IAmb  IAmb    05 35 44.5
       comp=Z,6.8nm,1.1s
CCM    Cathedral Cave    87.32  39   P     P       05 35 27.2 +0.5
CCM                                  pmax  pmax
       comp=Z,7.0nm,1.1s
U40A   Yellville         87.86  42   IAmb  IAmb    05 35 46.5
       comp=Z,9.7nm,1.3s
RPZ    Rata Peaks        88.22 160   LR    LR      06 18 12.3
       comp=Z,48nm,18.2s,baz=293,slow=38
TKL    Tuckaleechee C    92.73  36   LR    LR      06 18 13.5
       comp=Z,58nm,21.9s,baz=336,slow=36
ESDC   Sonseca Array     94.03 335   P     P       05 35 57.8 -0.3
       comp=Z,0.6nm,0.8s,baz=15,slow=5.3,SNR=4.6
ESDC                                 LR    LR      06 23 50.9
       comp=Z,63nm,18.2s,baz=16,slow=39
       comp=Z,0.6nm,0.8s
SDV    Santo Domingo    121.80  39 eP      PKiKP   05 41 38.5 +3.9
OTAV   Otavalo          124.76  53 eP      PKiKP   05 41 44.3 +3.5
BOAV   Boa Vista        132.03  32 eP      PKiKP   05 41 57.4 +2.6
TBTG   Tabatinga, AM    133.28  47 eP      PKiKP   05 42 00.5 +3.1
MACA   Manacapuru-AM    136.98  35 eP      PKiKP   05 42 07.0 +2.2
MALB   Monte Alegre     138.22  25 eP      PKiKP   05 42 09.2 +1.8
ETMB   Extrema          139.97  47 eP      PKiKP   05 42 12.8 +1.9
ITTB   Itaituba         140.06  29 eP      PKiKP   05 42 13.2 +2.0
ROSB   Rosrio           141.60  10 eP      PKiKP   05 42 14.6 +0.3
TROLL  Troll, Antarti   143.23 200   PKPdf PKPbc   05 42 10.5 +0.6
NBPS   Pedro II - PI    143.38   6 eP      PKiKP   05 42 18.4 +0.4
LPAZ   La Paz           143.95  56 eP      PKiKP   05 42 19.7  0.0
NBPB   Pedra_Branca-C   144.64   3 eP      PKPdf   05 42 19.0 +2.2
SNAA   Sanae            144.76 198   PKPdf PKPab   05 42 14.3  0.0
RCBR   Riachuelo        144.93 357 eP      PKPdf   05 42 18.4 +1.1
CLDB   Colider          145.98  33 eP      PKiKP   05 42 22.8 -0.5
PDRB   Porto dos Gac    146.25  35 eP      PKiKP   05 42 24.0 +0.3
VNA2   Neumayer--Watz   146.34 197   PKPdf PKPdf   05 42 19.1 +1.2
       baz=95,slow=2.0
H03N2  Juan Fernandez   146.52  90   T     T       08 27 19.8
       baz=300,slow=76,SNR=18
H03N3  Juan Fernandez   146.53  90   T     T       08 27 23.3
       baz=300,slow=76,SNR=17
H03N1  Juan Fernandez   146.53  90   T     T       08 27 20.2
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       baz=300,slow=76,SNR=18
VNA3   Neumayer Olymp   146.59 196   PKPdf PKPdf   05 42 19.3 +0.9
VNA1   Neumayer--Stat   146.74 197   PKPdf PKPdf   05 42 17.8 -0.7
LVC    Limon Verde      147.96  65 eP      PKPbc   05 42 26.4 +0.7
PTLB   Pontes e Lacer   148.44  42 eP      PKPbc   05 42 27.5 +0.9
NBAN   Anadia - AL      148.75 357 eP      PKPbc   05 42 27.5  0.0
SDBA   SAO DESIDERIO    150.80  15 eP      PKPbc   05 42 30.8 -1.8
CMC01  Camacan, BA      154.38   4 eP      PKPdf   05 42 35.6 +3.6
SJMB   Sao Joao De Ma   157.55   9 eP      PKPdf   05 42 39.5 +3.2
TRCB   Terra Rica       157.88  39 eP      PKPdf   05 42 40.2 +3.6
ALF01  Guarapari-ES     159.50   8 eP      PKPdf   05 42 42.7 +4.3
RCLB   Rio Claro- Sao   159.67  27 eP      PKPdf   05 42 42.5 +3.8
ITQB   Itaqui           160.87  60 eP      PKPdf   05 42 43.8 +4.1
PARB   Paraibuna        161.14  23 eP      PKPdf   05 42 44.4 +4.0
ITAB   Concordia        161.80  45 eP      PKPdf   05 42 43.6 +2.8
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RSPR ***25*** *05:30:36.0, 19°.22N×64°.67W, h25km±25km, MD3.6/15*
OSPL ***25*** *05:30:36.1±2.5, 19°.28N×64°.64W, h38km±63km, ML3.2*
NEIC ***25*** *05:30:37.9±1.0, 19°.06N±0°.04×64°.83W±0°.01, h34km±10km,*
Error ellipse: s-maj=5.4km s-min=1.6km az=182.0
ISC 25 05:30:32.2±1.5**, 19°.32N**±0°.06×**64°.68W**±0°.06**, h27km, n77,**
σ**1.s72**/90**, 13C-6D, Virgin Islands**

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Code   Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC        h  m  s    ISC
SJVI   Gifft Hill Sch     0.98 185⇑eP      Pn      05 30 50.9 +0.6
SJVI   Gifft Hill Sch     0.98 185 eS      Sb      05 31 02.0 -1.3
SJVI   Gifft Hill Sch     0.98 185         Pn      05 30 50.9 +0.6
SJVI                                       Sb      05 31 02.0 -1.3
STVI   Saint Thomas       0.99 195⇓iP      Pn      05 30 50.9 +0.5
STVI   Saint Thomas       0.99 195 eS      Sb      05 31 01.9 -1.6
STVI   Saint Thomas       0.99 195         Pn      05 30 50.9 +0.5
STVI                                       Sb      05 31 01.9 -1.6
CUPR   Culebra, Puert     1.16 210⇓iP      Pn      05 30 53.2 +0.5
CUPR   Culebra, Puert     1.16 210 eS      Sn      05 31 05.4 -2.1
CUPR   Culebra, Puert     1.16 210         Pn      05 30 53.2 +0.5
CUPR                                       Sn      05 31 05.4 -2.1
MTP    Monte Pirata       1.47 214⇑eP      Pn      05 30 57.9 +0.9
MTP    Monte Pirata       1.47 214 eS      Sn      05 31 14.5 -0.8
MTP    Monte Pirata       1.47 214         Pn      05 30 57.9 +0.9
MTP                                        Sn      05 31 14.5 -0.8
MTP    Monte Pirata       1.47 214   IAML          05 31 18.8
       comp=N,606nm,0.3s
CBYP   Canovanas          1.52 227⇓eP      Pn      05 30 58.4 +0.6
CBYP   Canovanas          1.52 227 eS      Sn      05 31 16.1 -0.7
CBYP   Canovanas          1.52 227         Pn      05 30 58.4 +0.6
CBYP                                       Sn      05 31 16.1 -0.7
CDVI   St. Croix          1.56 183⇑eP      Pb      05 31 00.6 +0.2
CDVI   St. Croix          1.56 183 eS      Sb      05 31 19.2 -0.5
CDVI   St. Croix          1.56 183         Pb      05 31 00.6 +0.2
CDVI                                       Sb      05 31 19.2 -0.5
HUMP   Col San Antoni     1.61 224⇓eP      Pn      05 30 59.8 +0.9
HUMP   Col San Antoni     1.61 224 eS      Sn      05 31 19.1 +0.3
HUMP   Col San Antoni     1.61 224         Pn      05 30 59.8 +0.9
HUMP                                       Sn      05 31 19.1 +0.3
GCPR   Guaynabo City      1.67 233⇑eP      Pn      05 31 00.3 +0.6
GCPR   Guaynabo City      1.67 233 eS      Sn      05 31 19.8 -0.4
GCPR   Guaynabo City      1.67 233         Pn      05 31 00.3 +0.6
GCPR                                       Sn      05 31 19.8 -0.4
PDPR   Patillas Dam,      1.81 225         Pn      05 31 03.0 +1.3
SJG    San Juan           1.84 230         Pn      05 31 03.1 +1.1
SJG                                  IAML          05 31 26.6
       comp=N,408nm,0.4s
IGPR   InterUniversit     1.91 225⇑eP      Pn      05 31 04.2 +1.2
IGPR   InterUniversit     1.91 225 eS      Sn      05 31 26.9 +0.8
EMPR   Esperanza - Ma     1.94 245⇑iP      Pn      05 31 05.2 +1.7
EMPR   Esperanza - Ma     1.94 245 eS      Sb      05 31 29.2 -1.5
EMPR   Esperanza - Ma     1.94 245         Pn      05 31 05.2 +1.7
EMPR                                       Sb      05 31 29.2 -1.5
EMPR   Esperanza - Ma     1.94 245   IAML          05 31 35.8
       comp=N,475nm,0.8s
SMRT   St. Maarten        1.97 129   Pn    Pb      05 31 07.2 -0.3
SMRT                                 IAML          05 31 39.6
       comp=N,545nm,0.5s
SMRT                                 IAML          05 31 48.6
       comp=E,545nm,0.3s
CELP   Cerrillos          2.18 236⇑eP      Pn      05 31 08.3 +1.5
CELP   Cerrillos          2.18 236 eS      Sn      05 31 33.6 +0.6
CELP   Cerrillos          2.18 236         Pn      05 31 08.3 +1.5
CELP                                       Sn      05 31 33.6 +0.6
CELP   Cerrillos          2.18 236   IAML          05 31 41.3
       comp=N,290nm,0.4s
AOPR   Arecibo Observ     2.19 244⇑eP      Pn      05 31 08.3 +1.4
AOPR   Arecibo Observ     2.19 244 eS      Sn      05 31 33.3 +0.2
AOPR   Arecibo Observ     2.19 244         Pn      05 31 08.3 +1.4
AOPR                                       Sn      05 31 33.3 +0.2
AOPR   Arecibo Observ     2.19 244   IAML          05 31 42.8
       comp=N,493nm,0.7s
OBIP   Obispado Ponce     2.22 236⇓eP      Pn      05 31 08.8 +1.4
OBIP   Obispado Ponce     2.22 236 eS      Sn      05 31 33.6 -0.4
OBIP   Obispado Ponce     2.22 236         Pn      05 31 08.8 +1.4
OBIP                                       Sn      05 31 33.6 -0.4
ICMP   Isla Caja de M     2.26 231 eS      Sn      05 31 34.6 -0.1
ICMP   Isla Caja de M     2.26 231   Pn    Pn      05 31 10.0 +2.2
ICMP                                 IAML          05 31 47.4
       comp=N,267nm,1.0s
ICMP   Isla Caja de M     2.26 231         Sn      05 31 34.6 -0.1
AGPR   Aguadilla, PR      2.45 250⇑eP      Pn      05 31 12.1 +1.6
AGPR   Aguadilla, PR      2.45 250 eS      Sn      05 31 40.7 +1.1
AGPR   Aguadilla, PR      2.45 250         Pn      05 31 12.1 +1.6
AGPR                                       Sn      05 31 40.7 +1.1
AGPR   Aguadilla, PR      2.45 250   IAML          05 31 54.2
       comp=E,271nm,0.8s
AGPR                                 IAML          05 31 55.1
       comp=N,232nm,0.8s
AGPR   Aguadilla, PR      2.45 250 i P     Pn      05 31 11.9 +1.4
AGPR                                 IAML          05 31 51.6
       comp=Z,80nm,0.7s
GBPR   Guanica, Bosqu     2.48 238⇑eP      Pn      05 31 13.3 +2.5
GBPR   Guanica, Bosqu     2.48 238 eS      Sn      05 31 41.0 +0.8
LSP    Las Mesas          2.55 244⇑eP      Pn      05 31 13.6 +1.8
PRSN   Puerto Rico Se     2.58 245         Pn      05 31 14.1 +1.8
PRSN                                 IAML          05 31 57.5
       comp=E,382nm,0.3s
MLPR   Magueyes Islan     2.61 240⇓eP      Pn      05 31 14.5 +1.8
MLPR   Magueyes Islan     2.61 240 eS      Sn      05 31 44.7 +1.2
MLPR   Magueyes Islan     2.61 240         Pn      05 31 14.5 +1.8
MLPR                                       Sn      05 31 44.7 +1.2
CRPR   Cabo Rojo, PR      2.65 241⇑eP      Pn      05 31 15.1 +1.9
CRPR   Cabo Rojo, PR      2.65 241         Pn      05 31 15.1 +1.9
CRPR                                       Sn      05 31 45.6 +1.2
CRPR   Cabo Rojo, PR      2.65 241   IAML          05 31 51.4
       comp=N,166nm,0.8s
CRPR   Cabo Rojo, PR      2.65 241 i P     Pn      05 31 15.0 +1.9
CRPR                               eS      Sn      05 31 45.7 +1.3
CRPR                                 IAML          05 31 50.9
       comp=Z,88nm,0.5s
IDE    Isla Desecheo      2.80 251⇑eP      Pn      05 31 16.9 +1.5
IDE    Isla Desecheo      2.80 251 eS      Sb      05 31 52.8 -2.8
GDHS   Morne Mazeau,      4.11 137   Pn    Pn      05 31 37.5 +4.1
GDHS                                 IAML          05 32 57.1
       comp=E,160nm,0.6s
CBE    Ff, Capester       4.36 137   Pn    Pn      05 31 40.6 +3.9
DR12   Loma Pena Alta     4.48 264⇑eP      Pn      05 31 40.9 +2.5
DR12   Loma Pena Alta     4.48 264   Pn    Pn      05 31 40.9 +2.5
SC01   Santiago de lo     5.71 272   Pn    Pn      05 31 58.7 +3.4
SC01   Santiago de lo     5.71 272 i P     Pn      05 31 58.6 +3.3
SC01                               eS      Sn      05 32 58.7 -1.3
SC01                                 IAML          05 33 07.0
       comp=Z,2.5nm,0.1s
SDDR   Presa de Saban     6.26 268   Pn    Pn      05 32 06.0 +3.1
SDDR   Presa de Saban     6.26 268 i P     Pn      05 32 04.8 +2.0
SDDR                               eS      Sn      05 33 08.3 -5.2
SDDR                                 IAML          05 33 21.2
       comp=Z,22nm,1.4s
GRTK   Grand Turk         6.43 291   Pn    Pn      05 32 07.6 +2.4
GRTK   Grand Turk         6.43 291 i P     Pn      05 32 06.8 +1.6
GRTK                               eS      Sn      05 33 13.8 -4.0
LONE2  Loma La Sidra      6.47 264 i P     Pn      05 32 08.4 +2.5
LONE2                                IAML          05 33 30.9
       comp=Z,30nm,2.5s
```

IDC 25 05:32:32.7±2.6**, 2°.09S**×**128°.74E, h0km, mb3.5**/2**,**
mbtmp3.5/3**, ML3.5**/1**, Error ellipse: s-maj=219.0km**
s-min=26.3km az=68.0, Ceram Sea

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Code   Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC        h  m  s    ISC
WRA    Warramunga Arr    18.57 163   P     P       05 36 50.2 -1.1
       0.1nm,0.3s,baz=342,slow=12,SNR=8.6
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         0.4nm,0.3s
ASAR  Alice Springs     22.03 167  P          P            05 37 29.3 +0.3
         0.9nm,0.8s,baz=346,slow=11,SNR=6.9
         0.9nm,0.8s
MKAR  Makanchi Array    63.46 326  P          P            05 43 04.7 +0.1
         0.5nm,0.6s,baz=120,slow=8.6,SNR=6.8
         0.5nm,0.6s
```

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   DSN 25 05:53:41.5±4.5, 32.°36N×49.°41E, h10km, ML4.7/1, Error
          ellipse: s-maj=54.2km s-min=11.0km az=169.0
   MOS 25 05:53:48.9±1.1, 31.°53N×49.°52E, h9km, mb4.3/16, Error
          ellipse: s-maj=10.4km s-min=6.8km az=75.9
   IDC 25 05:53:50.0±1.0, 31.°63N×49.°61E, h0km, mb4.1/16,
          mbtmp4.1/20, ML3.9/4, MS3.4/7, Error ellipse:
          s-maj=23.3km s-min=15.9km az=5.0
  NEIC 25 05:53:52.0±1.2, 31.°57N±0.°07×49.°54E±0.°09, h10km±1km,
          mb4.3/15, mb_Lg4.2(TEH), Error ellipse: s-maj=12.8km
          s-min=11.5km az=127.0
   ISN 25 05:53:51.8±0.9, 31.°54N×49.°72E, h12km±59km, ML3.9
   TEH 25 05:53:52.7, 31.°69N×49.°73E, h8km, ML4.2
  OMAN 25 05:54:01.4±1.3, 31.°18N×50.°22E, h11km, mb4.3/23,
          ms2.9/2, Error ellipse: s-maj=13.5km s-min=9.8km az=37.0
   ISC 25 05:53:53.7±0.4, 31.°61N±0.°03×49.°65E±0.°03, h25km, n192,
          σ2.s37/219, mb4.2/33, MS3.2/9, 3C-5D, Western Iran
Code  Station Name       Δ°  AZ°     Phase ID           Time       Res
                                   Op         ISC        h  m  s    ISC
AMIS  Naft Sefid         0.31 280  ePg        Pb         05 53 59.9 -1.0
AMIS                               eSg        Sb         05 54 06.2 +0.3
AHWZ  Ahwaz              0.91 252  ePg        Pn         05 54 12.9 +2.1
AHWZ                               eSg        Sn         05 54 26.5 +3.5
ABEH  Behbahan           1.14 153  ePg        Pb         05 54 15.5 +0.8
ABEH                               eSg        Sb         05 54 32.7 +3.7
SHK1  Shahrekord         1.27  56  ePg        Pn         05 54 14.8 -1.3
IBRJ  Brojen             1.40  77  ePg        Pn         05 54 18.6 +0.7
IPIR  Pirpir             1.50  44  ePg        Pn         05 54 19.7 +0.4
IPIR                               e                     05 54 42.4
         comp=Z,25μm,0.6s
KLNJ  Kolanjah           1.77 109  ePg        Pb         05 54 25.2 -0.4
KHMZ  Khomeyn            2.14   7  ePn        Pb         05 54 30.4 -1.4
IGAR  Gharneh            2.18  68  ePn        Pn         05 54 30.8 +2.2
IGAR                               e                     05 55 06.3
         comp=Z,21μm,0.7s
IRAM  Ramesheh           2.34  85  ePn        Pn         05 54 32.8 +2.1
IRAM                               e                     05 55 09.0
         comp=Z,13μm,0.5s
IKLH  Kolahrood          2.36  43  ePn        Pb         05 54 33.9 -1.7
IKLH                               e                     05 55 10.0
         comp=Z,18μm,0.4s
IKFM  Kafar-mosalman     2.44 322  ePn        Pn         05 54 34.0 +2.1
IDOB  Doab               2.50 331  ePn        Pn         05 54 35.1 +2.1
QAMS  Qamsar             2.58  34  ePn        Pn         05 54 36.4 +2.3
QAMS                               e                     05 55 17.1
         comp=Z,11μm,0.4s
IZEF  Zefreh             2.60  60  ePn        Pn         05 54 37.0 +2.5
IZEF                               e                     05 55 17.5
         comp=Z,6μm,0.6s
HSAM  Samen              2.74 342  ePn        Pn         05 54 38.5 +2.2
NASN  Na'in              2.93  65  ePn        Pn         05 54 41.0 +2.1
ASAO  Ashtian            2.94   6  ePn        Pn         05 54 41.6 +2.5
RAFI  Al-Rafai           3.02 273  ePn        Pb         05 54 44.0 -2.7
RAFI                               eSn        Sb         05 55 22.0 -1.1
RAFI                                AML       AML        05 55 35.5
         comp=E,530nm,0.1s
AHBU  AHRAM              3.09 152  ePn        Pn         05 54 43.7 +2.9
KRSH  Karshahi           3.15  41  ePn        Pn         05 54 44.8 +3.0
SHI   Shiraz             3.15 128  ePn        Pn         05 54 44.3 +2.4
GHVR  GHOM               3.17  25  ePn        Pn         05 54 44.3 +2.2
IBZA  Bozab              3.22 333  ePn        Pn         05 54 44.8 +1.9
HAGD  Aghdareh           3.23 353  ePn        Pn         05 54 45.2 +2.2
IQOM  Qom                3.43  20  ePn        Pn         05 54 47.8 +2.0
IQOM                               e                     05 55 40.7
         comp=Z,3μm,0.7s
KER   Kermanshah         3.48 323  ePn        Pn         05 54 49.1 +2.7
IBDR  Badra              3.48 296  ePn        Pn         05 54 50.0 +3.7
IBDR                               eSn        Sb         05 55 33.0 -3.5
ISFB  Sefidab            3.49  38  ePn        Pn         05 54 48.5 +2.0
IGHG  Ghaleghazi         3.75 317  ePn        Pn         05 54 52.8 +2.7
IRAZ  Razeghan           3.79   3  ePn        Pn         05 54 52.7 +2.0
ANAR  Anarak             3.79  64  ePn        Pn         05 54 52.9 +2.2
IVRN  Varamin            3.79  27  ePn        Pn         05 54 52.7 +2.1
ILIN  Lien               3.99 326  ePn        Pn         05 54 54.9 +1.4
IHSB  Hasanabad          4.05  19  ePn        Pn         05 54 55.8 +1.6
ICHK  Chekchek           4.09  80  ePn        Pn         05 54 57.1 +2.2
ICHK                               e                     05 56 13.0
         comp=Z,4μm,0.9s
IDHR  Dehrash            4.12 319  ePn        Pn         05 54 57.7 +2.5
IMHD  Mahdasht           4.15  12  ePn        Pn         05 54 57.5 +2.0
IMEH  Mehriz             4.25  92  ePn        Pn         05 54 59.1 +2.1
YZKH  Yazd               4.27  78  ePn        Pn         05 54 59.3 +2.1
QIR1  Qir                4.29 136  ePn        Pn         05 54 59.2 +1.7
IDMV  Damavand           4.42  26  ePn        Pn         05 55 01.4 +1.9
CHTH  Charan             4.46  16  ePn        Pn         05 55 01.9 +2.0
ILAS  Lasjerd            4.67  35  ePn        Pn         05 55 04.5 +1.7
BHD   Baghdad            4.75 292  ePn        Pn         05 55 08.0 +4.3
BHD                                eSn        Sn         05 56 03.0 +5.0
BHD                                 AML       AML        05 56 23.1
         comp=E,252nm,0.4s
IFIR  Firoozkooh         4.78  32  ePn        Pn         05 55 06.1 +1.7
QALM  Alamut, Qazvin     4.88   9  ePn        Pn         05 55 07.5 +1.8
IBAF  Bafgh              5.05  89  ePn        Pn         05 55 10.3 +2.3
ZNJK  Zanjan             5.11 351  ePn        Pn         05 55 11.2 +2.4
IPRN  Peran              5.13  25  ePn        Pn         05 55 10.8 +1.8
ISHM  Shahmirzad         5.17  35  ePn        Pn         05 55 11.4 +1.7
IANJ  Anjilo             5.24  42  ePn        Pn         05 55 12.1 +1.5
SAKB  Bahrain            5.67 172   P         Pn         05 55 19.0 +2.7
SAKB                                S         Sn         05 56 21.5 +0.9
IKRK  Kirkuk             5.82 312  ePn        Pn         05 55 23.0 +4.5
IKRK                               eSn        Sn         05 56 30.0 +5.5
IKRK                                AML       AML        05 56 53.3
         comp=E,121nm,0.3s
IKRK                                AML       AML        05 56 54.8
         comp=N,98nm,0.4s
SHMA  Al-Shehemyia       5.85 168   P         Pn         05 55 20.0 +1.2
SHMA                                S         Sn         05 56 25.2  0.0
IGLO  Ghaloghah          5.98  34  ePn        Pn         05 55 23.2 +2.3
KHGB  Koh Gabri          5.99 100  ePn        Pn         05 55 24.0 +3.0
TPRV  Parvadeh(Tabas     6.12  75  ePn        Pn         05 55 24.5 +1.9
TNSJ  Nastanj            6.31  66  ePn        Pn         05 55 27.0 +1.7
TVBK  TV Kerman          6.33 103  ePn        Pn         05 55 27.3 +1.6
KRBR  Kerman             6.33 103  ePn        Pn         05 55 28.2 +2.5
TKDS  Koohdasht(Taba     6.61  70  ePn        Pn         05 55 30.8 +1.4
TABS  Tabas              6.62  70  ePn        Pn         05 55 31.5 +2.0
SHRO  Shahrood           6.86  49  ePn        Pn         05 55 35.1 +2.3
SMRA  Abu-Samra          6.92 171   P         Pn         05 55 38.4 +4.9
SMRA                                S         Sn         05 56 49.9 -1.5
TRNA  Turayna            6.99 168   P         Pn         05 55 35.2 +0.7
TRNA                                S         Sn         05 56 52.2 -1.0
JRN   Qarnain Island     7.22 156   P         Pn         05 55 38.2 +0.6
JRN                                 S         Sn         05 56 58.0 -0.8
SLWR  Sila               7.73 166   P         Pn         05 55 47.5 +2.9
SLWR                                S         Sn         05 57 09.0 -2.4
ITEG  Tejag              7.81  78  ePn        Pn         05 55 48.1 +2.1
SHME  Shamm              7.95 133   P         Pn         05 55 48.4 +0.8
MRVT  Maraveh tapeh      8.03  40  ePn        Pn         05 55 50.7 +1.9
BSRN  Basiran            8.07  85  ePn        Pn         05 55 51.7 +2.2
AFRZ  Afriz              8.11  75  ePn        Pn         05 55 52.0 +2.0
BANOM Banah              8.13 133   P         Pn         05 55 48.9 -1.4
BANOM                               S         Sn         05 57 16.3 -5.2
BANOM Banah              8.13 133   P         Pn         05 55 48.5 -1.8
SBZV  Sabzevar           8.14  52  ePn        Pn         05 55 52.5 +2.0
MASF  Masafi             8.45 136   P         Pn         05 55 55.6 +1.0
AJN   Ajban              8.46 145   P         Pn         05 55 56.2 +1.5
MSFE  Esma-Masafi        8.46 136   P         Pn         05 55 53.5 -1.3
NAZ   Nazwa, Dubai       8.46 140   P         Pn         05 55 53.1 -1.6
ASUD  Al Ashush, Dub     8.58 143   P         Pn         05 55 57.1 +0.8
ASUD                                S         Sn         05 57 29.8 -2.4
ASUD  Al Ashush, Dub     8.58 143   P         Pn         05 55 56.3  0.0
FAQ   Al Faqa, Dubai     8.62 141   P         Pn         05 55 58.1 +1.2
FAQ   Al Faqa, Dubai     8.62 141   P         Pn         05 55 56.9  0.0
ISFR  Sfrayin            8.78  50  ePn        Pn         05 56 01.2 +1.9
UOSS  Minazif            8.80 137   Pn        Pn         05 55 59.5 +0.1
UOSS  Minazif            8.80 137   P         Pn         05 56 00.2 +0.8
UOSS  Minazif            8.80 137   P         Pn         05 55 58.8 -0.6
BJRD  Bojnurd            8.81  44  ePn        Pn         05 56 02.0 +2.4
HATD  Hatta, Dubai       8.85 138   P         Pn         05 56 00.9 +0.8
HATD  Hatta, Dubai       8.85 138   P         Pn         05 56 00.5 +0.4
RAYN  Ar Rayn            8.86 206   Pn        Pn         05 55 58.4 -1.8
RAYN  Ar Rayn            8.86 206   P         Pn         05 55 58.4 -1.8
RAYN  Ar Rayn            8.86 206   P         Pn         05 55 58.3 -1.9
ASHO  Ashiyiah           8.92 139   P         Pn         05 56 02.4 +1.3
ASHO                                S         Sn         05 57 35.9 -4.9
ASHO  Ashiyiah           8.92 139   P         Pn         05 55 59.4 -1.6
SHRT  Shahrakht          9.20  74  ePn        Pn         05 56 07.2 +2.3
MZR   Muzera             9.23 157   P         Pn         05 56 06.4 +1.1
MZR                                 S         Sn         05 57 44.5 -3.8
MZR   Muzera             9.23 157   P         Pn         05 56 04.7 -0.6
ALNE  Al Ain             9.26 143   S         Sn         05 57 44.7 -4.5
GEYT  Alibeck            9.39  46   Pn        Pn         05 56 09.7 +2.3
         comp=N,0.8nm,0.3s,baz=239,slow=20,SNR=16
GYA0B ALIBECK ARRAY      9.39  46   Pn        Pn         05 56 10.1 +2.7
IEMG  Emamgholi          9.41  50  ePn        Pn         05 56 10.2 +2.2
SOHO  SOHO               9.62 139   P         Pn         05 56 12.2 +1.7
TBJM  Torbat-e-JAM       9.64  65  ePn        Pn         05 56 13.3 +2.3
UMZA  Um Al Zommool     10.13 150   P         Pn         05 56 20.3 +2.7
ARQ   Araqi             10.25 142   P         Pn         05 56 21.0 +1.7
ARQ                                 S         Sn         05 58 08.1 -5.4
HOQ   Hoqain            10.49 138   P         Pn         05 56 25.5 +3.0
ASF   Jabal al Asfar    10.86 276   Pn        Pn         05 56 26.4 -1.1
         comp=N,1.6nm,0.3s,baz=101,slow=8.3,SNR=8.8
ASF                                 Sn        Sn         05 58 22.6 -5.6
         comp=N,0.4nm,0.3s,baz=58,slow=19,SNR=1.7
         comp=N,7.7nm,0.6s
BIDO  Bidbid            11.02 135   P         Pn         05 56 30.1 +0.3
BIDO                                S         Sn         05 58 25.8 -6.4
BSY   Bisya             11.10 141   P         Pn         05 56 31.5 +0.7
BSY                                 S         Sn         05 58 30.0 -4.2
SMDO  Samad             11.32 137   P         Pn         05 56 35.1 +1.0
SMDO                                P         Pn         05 56 35.2 +1.2
MAK   Makhachkala       11.46 352  eP         Pn         05 56 31.2 -4.4
MAK                                eS         Sn         05 58 37.9 -4.8
MAK                                 pmax      pmax
         comp=Z,153nm,1.1s
WSAR  Wadi Sarin        11.54 134   Pn        Pn         05 56 36.5 -0.4
         comp=Z,2.0nm,0.3s,baz=300,slow=6.7,SNR=8.4
WSAR                                Sn        Sn         05 58 37.4 -7.5
         comp=Z,2.9nm,0.3s,baz=170,slow=19,SNR=6.3
         comp=Z,9.8nm,0.5s
WSAR  Wadi Sarin        11.54 134   P         Pn         05 56 36.4 -0.4
JMDO  Jabal Madar       11.89 139   P         Pn         05 56 41.8 +0.1
WBK   Wadi Bani Khal    12.21 135   P         Pn         05 56 46.8 +0.7
EIL   Elat              12.80 265   LR        LR         06 02 42.2
         comp=Z,107nm,18.2s,baz=88,slow=42
JLN   Jalan Bani Buh    12.83 135   P         Pn         05 56 52.8 -1.7
JLN                                 P         Pn         05 56 52.8 -1.7
MHTO  MHTO              12.94 143   P         Pn         05 56 55.2 -0.8
KBZ   Khabaz            13.22 338 i P         Pn         05 57 02.4 +2.7
KIV   Kislovodsk        13.49 338  eP         Pn         05 57 01.9 -1.6
KIV                                 pmax      pmax
         comp=Z,5.0nm,1.0s
KIV                                 MLR       MLR
         comp=Z,52nm,12.0s
DOK   Doka              13.56 162   P         Pn         05 57 03.1 -1.4
DQM   DQM               13.63 147   P         Pn         05 57 03.5 -1.9
WHFO  Wadi Hawf         14.14 164   P         Pn         05 57 10.3 -2.1
SHAO  Shalim            14.57 157   P         Pn         05 57 20.7 +2.3
BRTR  Keskin Array B    15.31 306   Pn        P          05 57 31.1 -1.7
         comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=10
         comp=Z,2.3nm,1.0s
BRTR  Keskin Array B    15.31 306   Pn        Pn         05 57 27.9 -0.4
CHGR  Chuyangaron       17.42  61   P         P          05 57 57.0 +0.8
CHGR  Chuyangaron       17.42  61   P         P          05 57 57.0 +0.8
CHGR                                pmax      pmax
         comp=Z,36nm,1.0s
BORA  Eskisehir         17.61 303             P          05 57 57.9 -0.3
BORA                                IAmb      IAmb       05 58 19.0
         comp=Z,8.3nm,0.5s
GAR   Garm              18.39  61   P         Pn         05 58 08.1 +1.2
GAR                                 IAmb      IAmb       05 58 17.7
         comp=Z,32nm,1.0s
ABKAR Akbulak array     19.25  21   P         P          05 58 16.5 +0.4
AKTO  Aktyubinsk        19.81  16   P         P          05 58 22.2  0.0
         comp=Z,0.6nm,0.3s,baz=212,slow=11,SNR=12
         comp=Z,2.5nm,0.5s
NIL   Nilore            19.98  78   P         P          05 58 25.0 +0.8
NIL                                 IAmb      IAmb       05 58 34.6
         comp=Z,16nm,1.0s
NIL   Nilore            19.98  78   P         P          05 58 25.0 +0.8
NIL                                 pmax      pmax
         comp=Z,16nm,1.0s
KK31  Karatay Array     20.11  49   P         Pn         05 58 27.0 -0.5
KK31                                IAmb      IAmb       05 58 36.4
         comp=Z,15nm,1.3s
KK31  Karatay Array     20.11  49   P         Pn         05 58 27.0 -0.5
KK31                                pmax      pmax
         comp=Z,15nm,1.3s
KKAR  Karatay Array     20.11  49   P         P          05 58 26.0 +0.5
KKAR                                IAmb      IAmb       05 58 36.4
         comp=Z,15nm,1.3s
KKAR  Karatay Array     20.11  49   P         P          05 58 26.0 +0.5
KKAR                                pmax      pmax
         comp=Z,15nm,1.3s
BELG  Belogornoye       20.82 357   P         P          05 58 32.9 -0.2
         comp=Z,20nm,0.9s,baz=58,slow=2.0,SNR=6.9
         comp=Z,20nm,0.9s
ATD   Arta Tunnel       20.95 199   LR        LR         06 07 15.0
         comp=Z,102nm,21.8s,baz=358,slow=38
RDO   Rodhopi           21.56 303   P         P          05 58 40.7 -0.6
AAK   Ala-Archa         22.58  54   P         P          05 58 55.1 +2.7
         comp=Z,1.1nm,0.4s,baz=232,slow=12,SNR=1.7
AAK                                 LR        LR         06 08 03.5
         comp=Z,84nm,21.8s,baz=238,slow=38
AAK   Ala-Archa         22.58  54   P         P          05 58 53.1 +0.8
AAK                                 IAmb      IAmb       05 59 08.3
         comp=Z,15nm,1.3s
AAK   Ala-Archa         22.58  54   P         P          05 58 53.2 +0.8
AAK                                 pmax      pmax
         comp=Z,15nm,1.3s
KSH   Kashi             22.76  62   P         P          05 58 52.3 -2.0
KSH                                 pP        pP         05 58 56.9 -4.5
KSH                                 sP        sP         05 58 59.9 -4.9
KSH                                 PP        PnPn       05 59 18.8 +0.2
KSH                                 S         S          06 02 58.4 -3.4
KSH                                 sS        pS         06 03 05.9 -4.3
KSH                                 pmax      pmax
         comp=Z,5.0nm,1.5s
KSH                                 LR        LR
         comp=N,640nm,17.9s
KSH                                 LR        LR
         comp=E,270nm,13.6s
KSH                                 LR        LR
         comp=Z,210nm,16.5s
BOOM  Boomskoye usch    23.53  55   P         P          05 59 03.1 +1.0
BOOM                                IAmb      IAmb       05 59 17.9
         comp=Z,8.4nm,1.1s
BOOM  Boomskoye usch    23.53  55   P         P          05 59 03.1 +1.0
BOOM                                pmax      pmax
         comp=Z,8.0nm,1.1s
AKASG Malin Array Be    24.36 327   P         P          05 59 08.8 -0.7
         comp=Z,0.5nm,0.3s,baz=135,slow=9.6,SNR=8.7
         comp=Z,0.5nm,0.3s
AKBB  Malin Array Si    24.36 327   P         P          05 59 08.3 -1.2
AKBB                                IAmb      IAmb       05 59 09.9
         comp=Z,11nm,1.2s
AKBB  Malin Array Si    24.36 327⇓iP          P          05 59 10.6 +1.1
AKBB                                pmax      pmax
         comp=Z,9.0nm,1.9s
TARG  Taragay, Kyrgy    24.64  58   P         P          05 59 12.8 +0.1
TARG                                IAmb      IAmb       05 59 24.2
         comp=Z,7.5nm,1.0s
TARG  Taragay, Kyrgy    24.64  58   P         P          05 59 12.8 +0.1
TARG                                pmax      pmax
         comp=Z,8.0nm,1.0s
OBN   Obninsk           25.26 342 i P         P          05 59 23.9 +6.3
OBN                               i                      05 59 54.3
OBN                                 pmax      pmax
         comp=Z,7.0nm,0.8s
OBN                                 MLR       MLR
         comp=Z,71nm,17.0s
ARU   Arti              25.58  11   LR        LR         06 10 59.1
         comp=Z,32nm,18.0s,baz=253,slow=40
ARU   Arti              25.58  11c iP         P          05 59 20.4 -0.1
ARU                                 S         S          06 03 50.7 +3.9
ARU                                 pmax      pmax
         comp=Z,13nm,1.8s
BRVK  Borovoye          26.13  29ceP          P          05 59 25.3 -0.2
BRVK                                pmax      pmax
         comp=Z,6.0nm,2.5s
KIRV  Kirov             26.97 360ceP          P          05 59 33.3 +0.2
MNK   Minsk             27.64 332 i P         P          05 59 37.7 -1.5
MNK                               i PPP       PPP        06 00 30.8
MNK                               i                      06 02 55.1
MNK                               i S         S          06 04 20.3 +1.0
MNK                               i SS        SnSn       06 05 41.3  +10
MNK                                 pmax      pmax
         comp=N,23nm,1.0s
MNK                                 pmax      pmax
         comp=E,2.0nm,1.0s
MNK                                 pmax      pmax
         comp=Z,6.0nm,1.0s
MNK                                 MLR       MLR
         comp=E,4.0nm,13.0s
MNK                                 MLR       MLR
         comp=N,64nm,18.0s
MNK                                 MLR       MLR
         comp=Z,114nm,18.0s
MNK   Minsk             27.64 332 i P         P          05 59 37.7 -1.5
         comp=E,2.0nm,1.0s
MNK                               i P         P          05 59 37.7 -1.5
         comp=N,23nm,1.0s
MNK                               i P         P          05 59 37.7 -1.5
         comp=Z,6.0nm,1.0s,baz=137
MNK                               i PP        PnPn       06 00 23.2 -1.7
MNK                               i PPP       PPP        06 00 30.8
MNK                               i PcP       PcP        06 02 55.2 -0.8
MNK                               i S         S          06 04 20.4 +1.0
MNK                               i SS        SnSn       06 05 41.4  +10
MNK                               i LQ        LQ         06 08 13.0
MNK                               i LR        LR         06 10 21.2
MNK                               i LRM       MLR        06 11 38.1
         comp=E,4.0nm,13.4s
MNK                               i LRM       MLR        06 11 38.1
         comp=N,64nm,17.9s
MNK                               i LRM       MLR        06 11 38.1
         comp=Z,114nm,17.9s
KURBB Kurchatov Arra    28.60  40   P         P          05 59 48.0 +0.3
         comp=Z,0.9nm,0.6s,baz=243,slow=9.5,SNR=5.1
         comp=Z,0.9nm,0.6s
KURK  Kurchatov         28.70  40⇓eP          P          05 59 49.8 +1.2
KURK                                pmax      pmax
         comp=Z,3.0nm,0.7s
MK31  Makanchi Array    29.23  49   P         P          05 59 54.3 +0.8
MK31  Makanchi Array    29.23  49   P         P          05 59 54.3 +0.8
MK31                                pmax      pmax
         comp=Z,1.0nm,0.8s
MKAR  Makanchi Array    29.23  49   P         P          05 59 54.2 +0.7
         comp=Z,1.8nm,0.8s,baz=246,slow=8.8,SNR=10.0
         comp=Z,1.8nm,0.8s
KLMR  Klimovskoe        30.00 350  eP         P          05 59 57.1 -2.9
KLMR                                pmax      pmax
         comp=Z,10.0nm,1.2s
KLMR  Klimovskoe        30.00 350  eP         P          05 59 57.1 -2.9
KLMR                                AMP                  06 00 05.8
         comp=Z,10.0nm,1.2s
VSU   Vasula            31.04 337⇓eP          P          06 00 09.2  0.0
FINES FINESS Array B    33.57 340   P         P          06 00 31.1 -0.3
         comp=Z,1.1nm,0.3s,baz=156,slow=8.6,SNR=7.0
         comp=Z,1.1nm,0.3s
ZALV  Zalesovo Beam     33.59  38   P         P          06 00 31.6  0.0
         comp=Z,1.0nm,0.5s,baz=264,slow=8.8,SNR=5.5
         comp=Z,1.0nm,0.5s
ZALV  Zalesovo Beam     33.59  38 i P         P          06 00 32.5 +0.8
ZALV                                pmax      pmax
         comp=Z,1.0nm,0.5s
HFS   Hagfors           37.13 331   P         P          06 01 01.3 -0.8
         comp=Z,0.7nm,0.4s,baz=137,slow=30,SNR=3.6
         comp=Z,0.7nm,0.4s
GOMU  GeErMu            37.51  70   P         P          06 01 08.3 +2.3
GOMU                                pP        pP         06 01 12.6 -1.2
GOMU                                sP        sP         06 01 13.8 -3.1
GOMU                                pmax      pmax
         comp=Z,2.0nm,0.5s
GOMU                                pmax      pmax
         comp=Z,75nm,4.2s
NOA   NORSAR Array B    38.65 331   P         P          06 01 14.2 -0.7
         comp=Z,0.5nm,0.5s,baz=109,slow=9.4,SNR=2.6
         comp=Z,0.5nm,0.5s
KNGR  Kungurtug, Tuv    39.94  47⇓eP          P          06 01 26.6 +0.7
ARCES ARCESS Array B    40.35 347   P         P          06 01 29.4 +0.5
         comp=Z,1.2nm,0.9s,baz=153,slow=9.1,SNR=1.5
         comp=Z,1.2nm,0.9s
GTA   Gaotai            41.13  65  eP         P          06 01 37.0 +1.1
GTA                                 pP        pP         06 01 45.3 +1.6
GTA                                 sP        sP         06 01 51.1 +4.2
GTA                                 pmax      pmax
         comp=Z,4.0nm,1.3s
ESDC  Sonseca Array     43.75 296   P         P          06 01 57.0 -0.1
         comp=Z,1.0nm,0.9s,baz=77,slow=9.3,SNR=4.8
         comp=Z,1.0nm,0.9s
LZH   Lanzhou           44.75  69  eP         P          06 02 13.8 +8.5
LZH                                 pP        sP         06 02 21.0 +4.7
LZH                                 pmax      pmax
         comp=Z,18nm,1.3s
PZH   PanZhiHua         45.47  83   P         P          06 02 10.8 -0.3
PZH                                 pmax      pmax
         comp=Z,10.0nm,0.6s
PZH                                 pmax      pmax
         comp=Z,90nm,4.7s
ULN   Ulaanbaatar       45.96  52⇓eP          P          06 02 15.3 +0.5
ULN                                 pmax      pmax
         comp=Z,4.0nm,1.3s
CMAR  Chiang Mai Arr    46.19  94   P         P          06 02 17.3 +0.6
         comp=Z,1.1nm,0.3s,baz=291,slow=7.9,SNR=5.2
CMAR                                LR        LR         06 24 29.7
         comp=Z,24nm,18.8s,baz=0.0,slow=40
         comp=Z,1.1nm,0.3s
TORD  Torodi Ar. Bea    47.59 258   P         P          06 02 27.8 +0.2
         comp=Z,3.6nm,0.8s,baz=54,slow=8.5,SNR=18
         comp=Z,3.6nm,0.8s
TORD  Torodi Ar. Bea    47.59 258   P         P          06 02 27.3 -0.4
SPITS Spitsbergen Ar    48.89 351   P         P          06 02 37.4 +0.5
         comp=Z,7.7nm,0.9s,baz=147,slow=11,SNR=12
         comp=Z,7.7nm,0.9s
XAN   Xi'an             49.26  70   P         P          06 02 40.9 +0.5
XAN                                 pmax      pmax
         comp=Z,9.0nm,0.9s
KSRS  Korea Array       63.01  61   P         P          06 04 17.9 -0.6
         comp=Z,2.3nm,0.9s,baz=270,slow=7.9,SNR=4.5
         comp=Z,2.3nm,0.9s
JOW   Kunigami          67.38  72   LR        LR         06 38 26.8
         comp=Z,70nm,20.0s,baz=122,slow=40
SUR   Sutherland        69.25 206   LR        LR         06 36 32.0
         comp=Z,105nm,18.0s,baz=20,slow=37
SCHQ  Schefferville     78.15 328   P         P          06 05 50.2 -0.4
         comp=Z,1.3nm,0.3s,baz=40,slow=7.9,SNR=8.0
         comp=Z,1.3nm,0.3s
YKA   Yellowknife Ar    85.37 353   P         P          06 06 28.1 -0.4
         comp=Z,1.3nm,0.9s,baz=12,slow=5.4,SNR=7.2
         comp=Z,1.3nm,0.9s
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   IDC 25 05:57:48.6±1.1, 31.°56N×49.°58E, h0km, mb4.0/12,
          mbtmp4.0/17, ML3.9/5, MS3.4/1, Error ellipse:
          s-maj=25.3km s-min=18.0km az=10.0
  NEIC 25 05:57:50.9±1.5, 31.°56N±0.°08×49.°54E±0.°08, h10km±1km,
          mb4.2/18, mb_Lg4.0(TEH), Error ellipse: s-maj=13.9km
          s-min=10.8km az=208.0
   ISN 25 05:57:51.8±1.5, 31.°59N×49.°75E, h8km±96km, ML4.0
   TEH 25 05:57:52.2, 31.°65N×49.°72E, h11km, ML4.0
   ISC 25 05:57:51.4±0.5, 31.°58N±0.°04×49.°68E±0.°03, h10km, n111,
          σ2.s19/118, mb4.1/17, Western Iran
Code  Station Name       Δ°  AZ°     Phase ID           Time       Res
                                   Op         ISC        h  m  s    ISC
AMIS  Naft Sefid         0.35 284  ePg        Pg         05 57 59.4 +1.1
AHWZ  Ahwaz              0.92 255  ePg        Pb         05 58 11.1 +1.7
AHWZ                               eSg        Sn         05 58 26.2 +2.5
ABEH  Behbahan           1.09 153  ePg        Pn         05 58 14.5 +1.8
ABEH                               eSg        Sn         05 58 30.9 +3.0
SHK1  Shahrekord         1.26  54  ePg        Pb         05 58 14.7 -0.7
IBRJ  Brojen             1.38  76  ePg        Pg         05 58 18.0 +0.1
IBRJ                               eSg        Sg         05 58 38.5 +2.6
IBRJ                               e                     05 58 39.6
         comp=Z,20μm,0.5s
IPIR  Pirpir             1.50  43  ePg        Pb         05 58 19.4 -0.2
IPIR                               eSg        Sg         05 58 41.5 +1.7
IPIR                               e                     05 58 45.0
         comp=Z,32μm,0.6s
KLNJ  Kolanjah           1.73 109  ePg        Pb         05 58 24.2 +0.8
IGAR  Gharneh            2.17  67  ePn        Pb         05 58 29.9 -0.9
IGAR                               e                     05 59 11.8
         comp=Z,7μm,0.6s
KHMZ  Khomeyn            2.17   6  ePn        Pb         05 58 29.9 -0.9
IRAM  Ramesheh           2.31  84  ePn        Pb         05 58 32.6 -0.7
IRAM                               e                     05 59 13.7
         comp=Z,12μm,0.8s
IKLH  Kolahrood          2.36  42  ePn        Pb         05 58 32.8 -1.4
IKLH                               e                     05 59 10.7
         comp=Z,8μm,0.5s
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IKFM	Kafar-mosalman	2.48	322	ePn	Pn	05 58 33.8	+2.0
IKFM				e		05 59 39.1	
	comp=Z,9µm,0.6s						
IDOB	Doab	2.54	330	ePn	Pn	05 58 34.6	+1.7
QAMS	Qamsar	2.59	33	ePn	Pb	05 58 36.3	-1.8
QAMS				e		05 59 16.9	
	comp=Z,7µm,0.5s						
IZEF	Zefreh	2.60	59	ePn	Pn	05 58 35.8	+2.1
IZEF				e		05 58 48.4	
	comp=Z,4µm,0.5s						
HSAM	Samen	2.78	341	ePn	Pn	05 58 37.9	+1.7
NASN	Na'in	2.92	65	ePn	Pn	05 58 40.1	+2.0
ASAO	Ashtian	2.97	5	ePn	Pb	05 58 41.9	-2.7
AHBU	AHRAM	3.04	152	ePn	Pn	05 58 42.7	+3.1
AHBU				ePn	Pb	05 58 43.9	-1.7
RAFI	Al-Rafai	3.05	274	ePn	Pb	05 58 44.0	-1.7
RAFI				eSn	Sb	05 59 23.0	+0.1
SHI	Shiraz	3.11	128	ePn	Pn	05 58 43.5	+2.8
KRSH	Karshahi	3.15	40	ePn	Pn	05 58 43.1	+1.8
GHVR	GHOM	3.19	25	ePn	Pn	05 58 43.6	+1.9
IBZA	Bozab	3.26	333	ePn	Pn	05 58 44.4	+1.5
IBZA				e		05 59 40.7	
	comp=Z,2µm,0.4s						
HAGD	Aghdareh	3.27	352	ePn	Pn	05 58 44.8	+1.9
HAGD				e		05 59 38.2	
	comp=Z,2µm,0.6s						
IQOM	Qom	3.46	19	ePn	Pn	05 58 47.0	+1.5
IQOM				e		05 59 42.9	
	comp=Z,2µm,0.6s						
KCHF	Cheshme Sefid,	3.49	321	ePn	Pn	05 58 47.8	+1.9
ISFB	Sefidab	3.50	37	ePn	Pn	05 58 47.5	+1.5
IBDR	Badra	3.52	297	ePn	Pn	05 58 50.0	+3.8
IBDR				eSn	Sn	05 59 32.5	+4.6
ANAR	Anarak	3.78	64	ePn	Pn	05 58 52.1	+2.3
IGHG	Ghaleghazi	3.79	317	ePn	Pn	05 58 52.1	+2.0
IVRN	Varamin	3.81	26	ePn	Pn	05 58 52.0	+1.8
IRAZ	Razeghan	3.82	3	ePn	Pn	05 58 52.3	+1.8
ILIN	Lien	4.04	326	ePn	Pn	05 58 55.2	+1.8
ICHK	Chekchek	4.07	79	ePn	Pn	05 58 55.9	+2.0
ICHK				e		05 59 45.2	
	comp=N,2µm,0.2s						
IHSB	Hasanabad	4.07	19	ePn	Pn	05 58 54.5	+0.7
QABG	Abgarm-Qazvin	4.12	359	ePn	Pn	05 58 55.7	+1.1
IMEH	Mehriz	4.21	91	ePn	Pn	05 58 58.4	+2.5
YZKH	Yazd	4.25	78	ePn	Pn	05 58 58.4	+2.2
IDMV	Damavand	4.44	26	ePn	Pn	05 59 00.7	+1.6
CHTH	Charan	4.48	15	ePn	Pn	05 59 02.4	+2.8
ILAS	Lasjerd	4.68	35	ePn	Pn	05 59 03.9	+1.6
BHD	Baghdad	4.79	292	ePn	Pn	05 59 08.0	+4.4
BHD				eSn	Sn	06 00 03.0	+3.9
BHD				AML	AML	06 00 30.4	
	comp=E,410nm,0.3s						
IFIR	Firoozkooh	4.79	31	ePn	Pn	05 59 05.6	+1.7
QALM	Alamut, Qazvin	4.91	9	ePn	Pn	05 59 07.1	+1.7
IBAF	Bafgh	5.02	88	ePn	Pn	05 59 09.1	+2.2
ZNJK	Zanjan	5.14	351	ePn	Pn	05 59 13.4	+4.7
IPRN	Peran	5.15	25	ePn	Pn	05 59 10.5	+1.9
ISHM	Shahmirzad	5.18	35	ePn	Pn	05 59 10.9	+1.7
IANJ	Anjilo	5.25	41	ePn	Pn	05 59 11.6	+1.5
IKRK	Kirkuk	5.87	312	ePn	Pn	05 59 23.0	+4.6
IKRK				eSn	Sn	06 00 30.0	+4.2
IKRK				AML	AML	06 00 37.7	
	comp=E,97nm,0.2s						
IKRK				AML	AML	06 00 48.1	
	comp=N,141nm,0.3s						
KHGB	Koh Gabri	5.96	100	ePn	Pn	05 59 22.4	+2.6
IGLO	Ghaloghah	6.00	34	ePn	Pn	05 59 21.4	+1.0
TPRV	Parvadeh(Tabas	6.10	74	ePn	Pn	05 59 24.0	+2.3
KRBR	Kerman	6.29	103	ePn	Pn	05 59 26.5	+2.0
TNSJ	Nastanj	6.30	66	ePn	Pn	05 59 26.3	+1.9
TKDS	Koohdasht(Taba	6.60	70	ePn	Pn	05 59 30.4	+1.9
TABS	Tabas	6.60	70	ePn	Pn	05 59 30.6	+2.0
SHRO	Shahrood	6.86	48	ePn	Pn	05 59 34.5	+2.3
GRMI	Germi	7.36	349	ePn	Pn	05 59 42.2	+3.2
MRVT	Maraveh tapeh	8.04	39	ePn	Pn	05 59 49.8	+1.5
BANOM	Banah	8.09	133	Pg	Pn	05 59 49.3	+0.3
MSFE	Esma-Masafi	8.42	136	Pg	Pn	05 59 53.7	+0.2
NAZ	Nazwa, Dubai	8.42	140	Pg	Pn	05 59 54.8	+1.3
ASUD	Al Ashush, Dub	8.53	143	Pg	Pn	05 59 55.1	+0.1
FAQ	Al Faqa, Dubai	8.57	141	Pg	Pn	05 59 56.8	+1.2
UOSS	Minazif	8.76	137	Pn	Pn	05 59 59.0	+0.9
UOSS	Minazif	8.76	137	Pb	Pn	05 59 57.2	-1.0
HATD	Hatta, Dubai	8.81	138	Pb	Pn	05 59 59.3	+0.5
BJRD	Bojnurd	8.82	44	ePn	Pn	06 00 01.0	+2.0
RAYN	Ar Rayn	8.84	206	Pn	Pn	05 59 58.3	-1.0
ASHO	Ashiyiah	8.88	139	Pb	Pn	05 59 59.1	-0.7
SHRT	Shahrakht	9.18	74	ePn	Pn	06 00 07.1	+3.1
GEYT	Alibeck	9.39	45	Pn	Pn	06 00 08.4	+1.7
	comp=N,0.9nm,0.3s,baz=183,slow=5.2,SNR=7.6						
	comp=N,10nm,0.7s						
GEYT	Alibeck	9.39	45		Pn	06 00 08.6	+1.8
GYA0B	ALIBECK ARRAY	9.39	45		Pn	06 00 08.3	+1.5
ASF	Jabal al Asfar	10.89	276	Pn	Pn	06 00 25.3	-2.1
	comp=N,1.8nm,0.3s,baz=16,slow=21,SNR=3.9						
	comp=N,4.8nm,0.3s						
WSAR	Wadi Sarin	11.49	134	Pn	Pn	06 00 35.0	-0.6
	comp=N,1.4nm,0.3s,baz=338,slow=12,SNR=1.8						
WSAR				Sn	Sn	06 02 35.7	-8.4
	comp=N,1.6nm,0.3s,baz=102,slow=19,SNR=5.7						
	comp=N,3.4nm,0.3s						
BRTR	Keskin Array B	15.35	306	Pn	Pn	06 01 28.7	+0.5
	comp=N,0.1nm,0.3s,baz=41,slow=26,SNR=1.9						
	comp=N,0.4nm,0.5s						
BRTR	Keskin Array B	15.35	306	Pn	Pn	06 01 26.6	-1.6
CHGR	Chuyangaron	17.41	61	P	Pn	06 01 54.0	-0.4
GAR	Garm	18.38	61	P	P	06 02 06.9	+0.5
GAR				IAmb	IAmb	06 02 16.7	
	comp=Z,24nm,1.0s						
BTK	Batken	19.08	58	P	P	06 02 14.2	0.0
BTK				IAmb	IAmb	06 02 26.2	
	comp=Z,22nm,1.4s						
ABKAR	Akbulak array	19.27	21	P	P	06 02 14.9	-1.2
AKTO	Aktyubinsk	19.84	16	P	P	06 02 21.5	-0.7
	comp=Z,0.4nm,0.3s,baz=196,slow=10,SNR=3.6						
	comp=Z,1.0nm,0.3s						
NIL	Nilore	19.95	78	P	P	06 02 23.5	-0.2
NIL				IAmb	IAmb	06 02 33.0	
	comp=Z,17nm,1.1s						
KK31	Karatay Array	20.11	49	P	P	06 02 24.9	-0.3
KK31				IAmb	IAmb	06 02 35.6	
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	20.11	49	P	Pn	06 02 26.2	-0.8
KKAR				IAmb	IAmb	06 02 35.6	
	comp=Z,12nm,1.3s						
BELG	Belogornoye	20.85	356	P	P	06 02 32.2	-0.9
	comp=Z,14nm,0.7s,baz=293,slow=6.9,SNR=3.9						
	comp=Z,14nm,0.7s						
AAK	Ala-Archa	22.58	54	P	P	06 02 53.1	+1.1
AAK				IAmb	IAmb	06 03 07.5	
	comp=Z,16nm,1.4s						
KSH	Kashi	22.75	62	P	P	06 02 49.4	-4.5
KSH				pP	pP	06 02 54.0	-3.0
KSH				sP	sP	06 02 57.1	-1.3
KSH				PP	PnPn	06 03 27.9	+10
KSH				pmax	pmax		
	comp=Z,5.0nm,1.8s						
BOOM	Boomskoye usch	23.53	55	P	P	06 03 02.2	+0.3
BOOM				IAmb	IAmb	06 03 11.3	
	comp=Z,4.4nm,1.0s						
AKASG	Malin Array Be	24.40	327	P	P	06 03 08.2	-1.5
	comp=Z,0.5nm,0.3s,baz=134,slow=9.1,SNR=5.9						
	comp=Z,0.5nm,0.3s						
AKASG	Malin Array Be	24.40	327	IAmb	IAmb	06 03 16.3	
	comp=Z,3.8nm,1.3s						
AKBB	Malin Array Si	24.40	327	P	P	06 03 08.4	-1.3
AKBB				IAmb	IAmb	06 03 14.4	
	comp=Z,3.6nm,0.6s						
TARG	Taragay, Kyrgy	24.63	58	P	P	06 03 11.9	-0.5
TARG				IAmb	IAmb	06 03 25.9	
	comp=Z,7.6nm,1.2s						
MK31	Makanchi Array	29.23	49	P	P	06 03 52.3	-1.1
MKAR	Makanchi Array	29.23	49	P	P	06 03 53.0	-0.4
	comp=Z,0.8nm,0.8s,baz=249,slow=7.6,SNR=5.4						
	comp=Z,0.8nm,0.8s						
VAE	Valguarnera	29.53	291	LR	LR	06 19 58.4	
	comp=Z,59nm,18.3s,baz=140,slow=45						
FINES	FINESS Array B	33.61	340	P	P	06 04 30.3	-1.3
	comp=Z,1.6nm,0.7s,baz=145,slow=9.9,SNR=3.2						
	comp=Z,1.6nm,0.7s						
HFS	Hagfors	37.17	331	P	P	06 05 00.5	-1.7
	comp=Z,0.6nm,0.4s,baz=136,slow=30,SNR=7.5						
	comp=Z,0.6nm,0.4s						
ARCES	ARCESS Array B	40.39	347	P	P	06 05 27.9	-1.2
	comp=Z,1.0nm,0.7s,baz=155,slow=8.8,SNR=1.3						
	comp=Z,1.0nm,0.7s						
GTA	Gaotai	41.12	65	eP	P	06 05 36.3	+0.6
GTA				pP	sP	06 05 43.8	+3.4
GTA				sP	pP	06 05 48.1	+9.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	Chiang Mai Arr	46.16	94	P	P	06 06 15.8	-0.6
	comp=Z,0.9nm,0.4s,baz=305,slow=8.7,SNR=4.1						
	comp=Z,0.9nm,0.4s						
TOA0	Torodi Ar. Sit	47.61	259	P	P	06 06 25.7	-2.1
TORD	Torodi Ar. Bea	47.61	259	P	P	06 06 26.2	-1.6
	comp=Z,2.0nm,0.7s,baz=52,slow=7.8,SNR=8.5						
	comp=Z,2.0nm,0.7s						
TORD	Torodi Ar. Bea	47.61	259	P	P	06 06 25.3	-2.5
SPITS	Spitsbergen Ar	48.93	351	P	P	06 06 36.3	-0.9
	comp=Z,4.7nm,0.8s,baz=138,slow=11,SNR=1.4						
	comp=Z,4.7nm,0.8s						
KSRS	Korea Array	63.00	61	P	P	06 08 17.4	-1.1
	comp=Z,0.8nm,0.4s,baz=286,slow=8.9,SNR=4.8						
	comp=Z,0.8nm,0.4s						
SCHQ	Schefferville	78.19	328	P	P	06 09 49.4	-1.5
	comp=Z,3.2nm,0.8s,baz=59,slow=4.9,SNR=8.2						
	comp=Z,3.2nm,0.8s						
YKA	Yellowknife Ar	85.41	353	P	P	06 10 27.4	-1.3
	comp=Z,0.7nm,0.8s,baz=14,slow=4.1,SNR=5.9						
	comp=Z,0.7nm,0.8s						

JMA 25 06:02:39.4±0.1, 30°.0N±0°.8×14°2E±°, h69^{km}, MV4.0/27,
NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.94	170	P	Pn	06 03 24.8	+1.0
CBIJ				S	Sn	06 03 55.9	-2.0
JHH2	Haha-jima-NKT2	3.39	172	P	Pn	06 03 31.3	+1.3
JHH2				eS	Sn	06 04 09.5	+0.5
JHJ2	Mitsune	3.47	334	P	Pn	06 03 32.4	+1.5
JMKN	Mikurajimanish	4.25	336	eP	Pn	06 03 43.3	+1.7
JMKN				S	Sn	06 04 29.8	-0.2
BSO1	Boso 1	4.67	353	P	Pn	06 03 49.7	+2.8
BSO3	Boso 3	4.88	349	P	Pn	06 03 52.0	+2.1
BSO4	Boso 4	5.09	348	P	Pn	06 03 54.9	+1.8
JKN2	Miekihoku	6.21	314	eP	Pn	06 04 11.0	+2.7
JRY	Ryogami san	6.42	340	P	Pn	06 04 14.0	+2.7
JHO	Hitachi	6.65	353	P	Pn	06 04 16.1	+1.6
JAG	Ashikaga	6.66	345	P	Pn	06 04 16.3	+1.7

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*MAN **25** 06:08:01.5, 4°.81N×125°.43E, h291^{km}, mb5.3, ML4.2, MS4.4, Hypocentre not reviewed by the ISC*

*IDC **25** 06:08:06.9±0.7, 5°.16N×125°.07E, h290^{km}±6^{km}, mb4.0/29, mbtmp4.7/31, Error ellipse: s-maj=13.4km s-min=7.4km az=83.0*

*NEIC **25** 06:08:06.7±2.1, 5°.17N±0°.07×125°.14E±0°.08, h284^{km}±7^{km}, mb4.5/66, Error ellipse: s-maj=12.4km s-min=9.5km az=77.0*

*DJA **25** 06:08:10.3±0.4, 5°N±4°×12°5E±°, h254^{km}±3^{km}, M4.5/17, mB5.0/11, mb4.6/17, MLv4.8/12, Mw(mB)4.4/11*

ISC 25 06:08:07.5±0.3, 5°.13N±0°.04×125°.16E±0°.06, h300^{km}, n173, σ1^{s}64/176, mb4.4/67, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.97	347	⇑iP	Pn	06 08 45.5	-2.4
GSPH				iS	S	06 09 15.2	-4.9
SGSI	Sangihe	1.48	166	P	Pn	06 08 47.5	-3.1
SGSI				S	S	06 09 18.6	-6.3
KCP	Kidapawan	1.86	358	⇑iP	Pn	06 08 51.2	-2.1
DAV	Davao City (W)	1.97	12	P	Pn	06 08 52.6	-1.4
	427nm,0.3s,baz=111,slow=1.5,SNR=26						
DAV				S	S	06 09 28.6	-2.5
	614nm,0.5s,baz=270,slow=21,SNR=5.9						
DAV	Davao City (W)	1.97	12		Pn	06 08 51.8	-2.3
DAV	Davao City (W)	1.97	12	P	Pn	06 08 52.6	-1.4
CTBH	Cotabato--PC H	2.27	336	⇑iP	Pn	06 08 53.9	-2.6
CTBH				iS	S	06 09 13.2	-22
BUKP	Musuan	2.73	358	⇑eP	Pn	06 09 09.2	+8.5
PAGZ	Pagadian	3.23	327	⇑iP	Pn	06 09 04.2	-1.3
BIPH	Bislig	3.26	21	⇓eP	Pn	06 09 03.7	-2.1
BIPH				eS	S	06 09 47.2	-5.3
KMSI	Cibinong	4.68	195	P	Pn	06 09 18.0	-3.4
TNTI	Ternate	4.86	153	Pn	Pn	06 09 21.1	-2.4
TNTI					S	06 10 19.8	-4.7
TNTI	Ternate	4.86	153	P	Pn	06 09 21.0	-2.4
TNTI	Ternate	4.86	153	P	Pn	06 09 21.7	-1.8
GTOI	Gorontalo	4.96	206	P	Pn	06 09 22.1	-2.5
MRSI	Marisa	5.63	215	P	Pn	06 09 31.4	-1.1
	0.3nm914nm57nm,0.6s						
TOLI2	Tolitoli	5.92	228		Pn	06 09 34.4	-1.5
TOLI2	Tolitoli	5.92	228	P	Pn	06 09 35.1	-0.9
LBMI	Labuha	6.19	158	P	Pn	06 09 36.6	-2.6
	2.2nm4µm256nm,0.5s						
LBMI				S	S	06 10 47.1	-6.0
	2.2nm4µm256nm,0.5s						
LUWI	Luwuk	6.58	201	Pn	Pn	06 09 44.4	+0.5
LUWI	Luwuk	6.58	201	P	Pn	06 09 42.8	-1.1
	1.0nm3µm106nm,0.9s						
APSI	Ampana	6.96	210	P	Pn	06 09 48.3	-0.1
	0.2nm522nm40nm,0.8s						
MPSI	Mapaga	7.09	228	P	Pn	06 09 49.6	-0.5
	0.1nm9.8nm,0.8s						
SANI	Sanana	7.18	173	P	Pn	06 09 47.5	-3.7
	2.6nm7µm344nm,0.6s						
SANI	Sanana	7.18	173	P	Pn	06 09 47.7	-3.5
PCI	Palu	8.02	222	P	Pn	06 10 28.0	+27
SWI	Sorong	8.52	134	P	Pn	06 10 08.7	+1.2
	19nm,0.4s						
SIJI	Sorong	8.53	134	P	Pn	06 10 07.6	0.0
	9.4nm,0.5s,baz=303,slow=7.6,SNR=4.5						
TTSI	Tana Toraja	9.72	213	P	P	06 10 24.7	-1.5
	2µm35nm,0.6s						
SPSI	Sidrap Palu	10.52	211	P	Pn	06 10 32.7	+0.6
FAKI	Fak Fak	10.68	138		Pn	06 10 31.8	-2.3
FAKI	Fak Fak	10.68	138	P	Pn	06 10 35.2	+1.1
	726nm74nm,0.8s						
FAKI	Fak Fak	10.68	138	P	Pn	06 10 34.3	+0.2
BNSI	Bone	10.73	208	P	Pn	06 10 35.5	+0.8
	38nm,0.9s						
KAPI	Kappang	11.44	208		Pn	06 10 43.9	+0.6
KMPI	Kaimana, Papua	12.21	136	P	P	06 10 53.9	0.0
	35nm,0.5s						
SBUM	Sibu	13.19	259		P	06 11 04.6	-0.1
BBKI	Banjar Baru	13.39	231	P	P	06 11 11.3	+4.4
EDFI	Ende, Flores	14.22	194	P	Pn	06 11 17.6	+0.7
	13nm,0.9s						
KSM	Kuching	15.27	257	Pn	Pn	06 11 28.6	-0.6
KSM				IAmb	IAmb	06 11 30.0	
	comp=Z,13nm,0.5s						
KSM	Kuching	15.27	257	P	Pn	06 11 29.8	+0.6
BATI	Baumata	15.31	186	P	Pn	06 11 29.1	-0.6
	comp=Z,94nm,0.5s,baz=321,slow=1.0,SNR=9.6						
BATI	Baumata	15.31	186	P	Pn	06 11 30.0	+0.3
	comp=Z,79nm,0.7s						
GENI	Genyem	16.84	117	P	Pn	06 11 48.9	+1.3
TWG	Pinlang	18.02	348	P	P	06 11 53.5	-3.9
YULB	Yu-li	18.53	349	P	P	06 11 59.2	-3.7
YULB				IAmb	IAmb	06 12 01.6	
	comp=Z,13nm,0.7s						
TPUB	Ta-pu	18.58	347	P	P	06 12 01.5	-2.0
TPUB	Ta-pu	18.58	347	P	P	06 12 04.4	+0.9
MTN	Manton Dam	18.82	162		P	06 12 06.1	+0.1
MTN	Manton Dam	18.82	162	P	P	06 12 07.0	+1.0
SSLB	Suanglung	18.98	348	P	P	06 12 06.9	-0.9
SSLB				IAmb	IAmb	06 12 09.1	
	comp=Z,30nm,1.0s						
SSLB	Suanglung	18.98	348	P	P	06 12 07.8	+0.1
KDU	Kakadu	19.14	158	P	P	06 12 09.6	+0.2
YHNB	Yeheng	19.76	350	P	P	06 12 15.0	-1.1
YHNB				IAmb	IAmb	06 12 19.9	
	comp=Z,15nm,0.7s						
KNRA	Kununurra	20.98	170		P	06 12 28.2	-0.1
KNRA	Kununurra	20.98	170	P	P	06 12 28.0	-0.3
LEM	Lembang	21.16	236	P	P	06 12 31.8	+1.5
	comp=Z,43nm,0.8s,baz=81,slow=9.4,SNR=4.7						
	comp=Z,43nm,0.8s						
JOW	Kunigami	21.78	8	P	P	06 12 37.0	+1.4
	comp=Z,61nm,0.5s,baz=203,slow=8.1,SNR=31						
	comp=Z,61nm,0.5s						
JOW	Kunigami	21.78	8	P	P	06 12 36.6	+1.1
JOW	Kunigami	21.78	8	P	P	06 12 37.2	+1.6
UBPT	Khong Chiam	21.82	299	P	P	06 12 35.7	-0.4
UBPT				IAmb	IAmb	06 12 36.9	
	comp=Z,40nm,1.1s						
KRJI	Kerinci	24.74	254	P	P	06 13 13.8	+11
WB0	Warramunga Arr	26.36	160	P	P	06 13 16.6	-0.3
WB0				IAmb	IAmb	06 13 17.4	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	26.50	160	P	P	06 13 18.1	-0.1
WRAB				IAmb	IAmb	06 13 18.7	
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	26.50	160	P	P	06 13 18.2	0.0
WRA	Warramunga Arr	26.50	160	P	P	06 13 18.1	-0.2
	comp=Z,7.4nm,0.5s,baz=332,slow=11,SNR=96						
WRA				ScP	ScP	06 19 46.9	+1.2
	comp=Z,1.0nm,0.7s,baz=341,slow=3.0,SNR=5.3						
	comp=Z,7.4nm,0.5s						
WRA	Warramunga Arr	26.50	160	P	P	06 13 17.0	-1.2
WB2	Warramunga Arr	26.51	160	P	P	06 13 18.1	-0.1
WB2				IAmb	IAmb	06 13 18.8	
	comp=Z,14nm,0.7s						
WR0	Warramunga Arr	26.59	160	P	P	06 13 18.8	-0.2
MBWA	Marble Bar	26.67	191		P	06 13 19.2	-0.4
MBWA				IAmb	IAmb	06 13 19.6	
	comp=Z,11nm,0.5s						
MBWA	Marble Bar	26.67	191	P	P	06 13 19.2	-0.4
PSA00	Pilbara Seismi	27.05	191		P	06 13 22.7	-0.3
PSA00				IAmb	IAmb	06 13 23.3	
	comp=Z,21nm,0.7s						
PSA00	Pilbara Seismi	27.05	191	P	P	06 13 22.7	-0.3
JCJ	Chichijima	27.21	35	P	P	06 13 24.2	-0.2
	comp=Z,62nm,0.8s,baz=261,slow=13,SNR=6.8						
	comp=Z,62nm,0.8s						
JCJ	Chichijima	27.21	35	P	P	06 13 23.6	-0.8
JNU	Nakatsue	28.35	10	P	P	06 13 33.8	-0.7
	comp=Z,11nm,0.8s,baz=201,slow=5.9,SNR=4.0						
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	28.82	300	P	P	06 13 39.3	+0.5
	comp=Z,2.1nm,0.5s,baz=119,slow=7.3,SNR=12						
	comp=Z,2.1nm,0.5s						
CHTO	Chiang Mai	28.97	300	P	P	06 13 41.0	+0.9
	comp=Z,7.4nm,1.1s						
QIS	Mount Isa	29.21	151	P	P	06 13 42.9	+0.7
JTU	Tsushima	29.51	7	P	P	06 13 45.9	+1.3
JTU				IAmb	IAmb	06 13 46.6	
	comp=Z,15nm,0.7s						
GIRL	Giralia	29.60	201	P	P	06 13 43.4	-2.1
AS31	Alice Springs	29.87	164	P	P	06 13 48.1	+0.2
ASAR	Alice Springs	29.87	164	P	P	06 13 48.2	+0.2
	comp=Z,3.5nm,0.5s,baz=337,slow=7.1,SNR=91						
ASAR				PcP	PcP	06 16 43.6	+0.6
	comp=Z,2.2nm,0.3s,baz=346,slow=2.3,SNR=12						
ASAR				ScP	ScP	06 19 57.4	+1.2
	comp=Z,2.0nm,0.9s,baz=357,slow=3.3,SNR=10						
	comp=Z,3.5nm,0.5s						
WRKA	Warakurna	30.14	174	P	P	06 13 51.0	+0.6
JHS	Saijyo	30.61	13	P	P	06 13 55.4	+1.0
JHS				IAmb	IAmb	06 14 06.9	
	comp=Z,31nm,1.5s						
PZH	PanZhiHua	30.85	316	P	P	06 13 57.0	+0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
KSRS	Korea Array	32.27	4	P	P	06 14 09.4	+0.7
	comp=Z,10nm,0.7s,baz=181,slow=10,SNR=46						
	comp=Z,10nm,0.7s						
JGF	Kuroka	32.34	19	P	P	06 14 10.0	+0.6
JGF				IAmb	IAmb	06 14 10.2	
	comp=Z,11nm,0.9s						
XAN	Xi'an	32.48	334	P	P	06 14 10.0	-0.6
XAN				pmax	pmax		
	comp=Z,23nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,5.5s						
CTAO	Charters Tower	32.53	141	P	P	06 14 11.9	+0.7
CTAO				IAmb	IAmb	06 14 13.5	
	comp=Z,8.1nm,0.8s						
SEHB	SEOHWA	33.10	4	P	P	06 14 15.9	0.0
SEHB				IAmb	IAmb	06 14 18.4	
	comp=Z,7.3nm,0.8s						
MJAR	Matsushiro Arr	33.47	19	P	P	06 14 18.8	-0.4
	comp=Z,6.3nm,0.6s,baz=186,slow=9.8,SNR=23						
	comp=Z,6.3nm,0.6s						
MJAR	Matsushiro Arr	33.47	19	P	P	06 14 18.1	-1.0
OOD	Oodnadatta	34.28	163	P	P	06 14 26.9	+0.9
MORW	Morawa	35.12	194	P	P	06 14 33.0	-0.2
MORW				IAmb	IAmb	06 14 33.2	
	comp=Z,12nm,0.7s						
JMM	Marumori	35.56	22	P	P	06 14 38.0	+1.2
BJI	Beijing	35.68	348	P	P	06 14 38.6	+0.8
BJI				pmax	pmax		
	comp=Z,11nm,0.7s						
FORT	Forrest	35.82	176		P	06 14 39.7	+0.7
FORT	Forrest	35.82	176	P	P	06 14 39.9	+0.8
INKA	Innaminka	35.98	156	P	P	06 14 41.8	+1.3
MULG	Mulgathing	36.23	167	P	P	06 14 43.8	+1.2
LZH	Lanzhou	36.51	330	eP	P	06 14 45.1	0.0
LZH				sP	pP	06 15 07.8	-37
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				LR	LR		
	comp=N,140nm,14.0s						
LZH				LR	LR		
	comp=E,140nm,13.3s						
LZH				LR	LR		
	comp=Z,240nm,15.3s						
KLBR	Kellerberrin	37.20	190	P	P	06 14 50.6	-0.1
LCRK	Leigh Creek	37.52	161	P	P	06 14 54.4	+1.0
HHC	Hu-ho-hao-te	37.60	343	eP	P	06 14 54.9	+0.9
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
SHL	Shillong	37.79	306	P	P	06 14 55.1	-0.9
CN2	Changchun	38.51	0	eP	P	06 15 03.3	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NWAO	Narrogin (SRO)	38.59	191	P	P	06 15 02.7	+0.5
BBOO	Buckleboo	39.13	165	P	P	06 15 08.0	+1.3
BBOO	Buckleboo	39.13	165	P	P	06 15 07.7	+1.0
USRK	Ussuriysk Ar.	39.37	8	P	P	06 15 09.2	+0.7
	comp=Z,11nm,0.9s,baz=195,slow=8.5,SNR=12						
	comp=Z,11nm,0.9s						
USRK	Ussuriysk Ar.	39.37	8	P	P	06 15 08.7	+0.2
EIDS	Eidsvold	39.41	141	P	P	06 15 09.7	+0.5
EIDS	Eidsvold	39.41	141	P	P	06 15 09.4	+0.2
XLT	XiLinHaoTe	39.43	350	eP	P	06 15 09.6	+0.5
XLT				pP	pP	06 16 08.0	-1.3
XLT				sP	sP	06 16 42.9	-0.7
XLT				pmax	pmax		
	comp=Z,18nm,0.9s						
XLT				pmax	pmax		
	comp=Z,120nm,5.0s						
MDJ	Mudanjiang	39.52	5	P	P	06 15 10.1	+0.4
MDJ				pP	pP	06 16 06.3	-3.7
MDJ				S	S	06 20 52.8	+3.7
MDJ				PcS	PcS	06 21 01.9	+0.9
MDJ				ScS	ScS	06 24 42.8	-0.8
MDJ				pmax	pmax		
	comp=Z,14nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.1s						
WHYH	Whyalla	39.74	164	P	P	06 15 12.8	+1.1
STKA	Stephens Creek	40.00	158	P	P	06 15 15.2	+1.4
	comp=Z,24nm,0.6s,baz=335,slow=8.3,SNR=42						
	comp=Z,24nm,0.6s						
STKA	Stephens Creek	40.00	158	P	P	06 15 15.3	+1.4
STKA	Stephens Creek	40.00	158	P	P	06 15 14.9	+1.1
LSA	Lhasa	40.34	311	IAmb	IAmb	06 15 19.6	
	comp=Z,11nm,0.6s						
GTA	Gaotai	41.10	330	eP	P	06 15 23.3	+0.4
GTA				pP	pP	06 16 20.9	-2.6
GTA				sP	sP	06 16 57.0	-0.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,67nm,6.2s						
GTA				LR	LR		
	comp=N,75nm,14.5s						
GTA				LR	LR		
	comp=E,220nm,15.3s						
GTA				LR	LR		
	comp=Z,60nm,15.3s						
CMSA	Cobar Meteorol	41.39	153	P	P	06 15 27.0	+1.8
GOMU	GeErMu	41.62	322	P	P	06 15 28.3	+0.8
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		

	comp=Z,120nm,5.5s						
ARMA	Armidale	43.49	146	P	P	06 15 44.0	+1.8
ARMA				IAmb	IAmb	06 15 44.9	
	comp=Z,17nm,0.9s						
KLR	Kul'dur	44.30	6	P	P	06 15 48.5	+0.5
	comp=Z,7.2nm,0.6s,baz=188,slow=6.4,SNR=29						
	comp=Z,7.2nm,0.6s						
SONM	Songino Array	45.49	342	P	P	06 15 57.5	-0.1
	comp=Z,5.0nm,0.7s,baz=160,slow=8.9,SNR=14						
	comp=Z,5.0nm,0.7s						
CAN	Canberra	46.06	153	P	P	06 16 04.8	+2.6
CAN				IAmb	IAmb	06 16 05.5	
	comp=Z,21nm,0.7s						
TOO	Toolangi	46.52	158	P	P	06 16 08.1	+2.5
TOO				IAmb	IAmb	06 16 29.9	
	comp=Z,42nm,1.5s						
WMQ	Urumqi	50.69	325	*e*P	P	06 16 39.1	+2.0
PEA0B	Petropavlovsk-	54.75	23	P	P	06 17 07.9	+1.5
PEA0B				IAmb	IAmb	06 17 12.9	
	comp=Z,38nm,1.4s						
PETK	Petropavlovsk-	54.75	23	P	P	06 17 07.4	+1.0
	comp=Z,4.3nm,0.8s,baz=198,slow=9.0,SNR=9.7						
	comp=Z,4.3nm,0.8s						
MKAR	Makanchi Array	55.52	325	P	P	06 17 12.0	0.0
	comp=Z,3.0nm,0.4s,baz=119,slow=7.8,SNR=58						
MKAR				PcP	PcP	06 18 07.3	-0.7
	comp=Z,1.6nm,0.5s,baz=113,slow=4.3,SNR=8.2						
MKAR				ScP	ScP	06 21 37.4	-0.4
	comp=Z,0.7nm,0.7s,baz=115,slow=4.5,SNR=3.5						
	comp=Z,3.0nm,0.4s						
MKAR	Makanchi Array	55.52	325		P	06 17 12.1	+0.1
MAKZ	Makanchi	55.70	325	P	P	06 17 13.3	-0.1
KSH	Kashi	55.95	315	P	P	06 17 17.0	+1.6
KSH				PcP	PcP	06 18 10.5	+0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KDJ	Kajisay	56.27	318		P	06 17 17.7	+0.1
KDJ				IAmb	IAmb	06 17 18.9	
	comp=Z,6.3nm,0.7s						
MA2	Magadan	57.75	15	P	P	06 17 29.0	+1.7
	comp=Z,25nm,0.7s,baz=204,slow=5.9,SNR=17						
	comp=Z,25nm,0.7s						
MA2	Magadan	57.75	15	P	P	06 17 28.6	+1.3
AAK	Ala-Archa	58.27	318	P	P	06 17 32.1	+0.6
	comp=Z,1.3nm,0.5s,baz=148,slow=6.6,SNR=3.6						
	comp=Z,1.3nm,0.5s						
AAK	Ala-Archa	58.27	318	IAmb	IAmb	06 17 33.0	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	58.64	333	P	P	06 17 32.6	-1.0
	comp=Z,2.0nm,0.4s,baz=103,slow=6.4,SNR=12						
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	58.64	333		P	06 17 32.2	-1.4
KURBB	Kurchatov Arra	59.72	328	P	P	06 17 40.5	-0.6
	comp=Z,9.5nm,0.6s,baz=126,slow=6.2,SNR=82						
	comp=Z,9.5nm,0.6s						
KURK	Kurchatov	59.73	328		P	06 17 40.6	-0.4
GAR	Garm	59.83	313	P	P	06 17 41.7	-0.5
SEY	Seymchan	61.04	14	P	P	06 17 50.9	+1.2
	comp=Z,4.7nm,0.8s,baz=224,slow=6.3,SNR=8.4						
	comp=Z,4.7nm,0.8s						
KK31	Karatay Array	61.15	317	P	P	06 17 50.6	-0.2
KKAR	Karatay Array	61.15	317		P	06 17 50.0	-0.9
KKAR	Karatay Array	61.15	317	P	P	06 17 50.3	-0.5
KKAR				IAmb	IAmb	06 17 51.4	
	comp=Z,5.7nm,0.8s						
TIXI	Tiksi	66.47	1	P	P	06 18 24.4	-0.3
	comp=Z,5.4nm,0.5s,baz=113,slow=14,SNR=15						
	comp=Z,5.4nm,0.5s						
TIXI	Tiksi	66.47	1	P	P	06 18 23.7	-1.1
TIXI				IAmb	IAmb	06 18 25.2	
	comp=Z,7.3nm,0.6s						
NRIK	Noril'sk	68.71	347	P	P	06 18 38.3	-0.4
	comp=Z,6.5nm,0.6s,baz=132,slow=7.2,SNR=8.7						
	comp=Z,6.5nm,0.6s						
NRIK	Noril'sk	68.71	347	P	P	06 18 38.3	-0.4
NRIK				IAmb	IAmb	06 18 39.1	
	comp=Z,7.8nm,0.7s						
ABKAR	Akbulak array	70.08	321	P	P	06 18 46.6	-0.8
ABKAR				IAmb	IAmb	06 18 48.0	
	comp=Z,5.3nm,0.8s						
AKTO	Aktyubinsk	71.59	322	P	P	06 18 56.2	-0.3
	comp=Z,3.0nm,0.4s,baz=95,slow=5.9,SNR=18						
	comp=Z,3.0nm,0.4s						
ARU	Arti	72.92	328	P	P	06 19 03.1	-1.1
	comp=Z,2.0nm,0.2s,baz=127,slow=6.4,SNR=8.7						
	comp=Z,2.0nm,0.2s						
ARU	Arti	72.92	328	IAmb	IAmb	06 19 04.9	
	comp=Z,8.4nm,0.9s						
L19K	White Mountain	80.81	28	P	P	06 19 50.1	+2.2
L19K				IAmb	IAmb	06 19 50.5	
	comp=Z,4.0nm,0.8s						
K20K	Telida	81.29	27	IAmb	IAmb	06 19 53.7	
	comp=Z,8.9nm,1.2s						
M20K	Styx River	81.58	28	IAmb	IAmb	06 19 55.1	
	comp=Z,8.1nm,1.0s						
BPAW	Bear Paw Mtn.	82.72	26	IAmb	IAmb	06 20 00.1	
	comp=Z,4.0nm,0.6s						
H23K	Yukon River	83.42	24	IAmb	IAmb	06 20 04.2	
	comp=Z,5.9nm,0.9s						
KLMR	Klimovskoe	83.42	331	*e*P	P	06 19 59.4	-2.0
KLMR				AMP		06 20 02.4	
	comp=Z,10.0nm,0.6s						
I23K	Minto, Yukon-K	83.47	25	IAmb	IAmb	06 20 04.3	
	comp=Z,15nm,1.4s						
TOLK	Toolik Lake Re	83.52	22	P	P	06 20 02.3	+0.5
TOLK				IAmb	IAmb	06 20 04.8	
	comp=Z,6.3nm,0.9s						
ILAR	Eielson Array	84.52	25	P	P	06 20 06.8	0.0
	comp=Z,0.6nm,0.5s,baz=251,slow=4.9,SNR=13						
	comp=Z,0.6nm,0.5s						
VNDA	Vanda	85.01	173	P	P	06 20 09.5	+0.6
	comp=Z,1.0nm,0.5s,baz=316,slow=7.1,SNR=11						
	comp=Z,1.0nm,0.5s						
VNDA	Vanda	85.01	173	IAmb	IAmb	06 20 10.8	
	comp=Z,4.4nm,1.5s						
BRTR	Keskin Array B	87.93	310	P	P	06 20 23.1	-0.9
	comp=Z,0.8nm,0.5s,baz=114,slow=4.9,SNR=6.1						
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	88.60	340	P	P	06 20 25.4	-0.9
	comp=Z,3.3nm,0.9s,baz=79,slow=5.8,SNR=8.6						
	comp=Z,3.3nm,0.9s						
FINES	FINESS Array B	89.86	332	P	P	06 20 31.1	-1.3
	comp=Z,0.8nm,0.4s,baz=72,slow=6.2,SNR=4.7						
	comp=Z,0.8nm,0.4s						
TORD	Torodi Ar. Bea	121.00	289	PKP	PKPdf	06 26 25.2	-0.3
	comp=Z,0.4nm,0.6s,baz=47,slow=2.7,SNR=2.4						

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*TUL **25** 06:09:59.5±1.1, 36°.46N±0°.02×98°.77W±0°.02, h7^{km}±5^{km}, ML3.2, mb_Lg2.9/78(NEIC), Error ellipse: s-maj=3.3km s-min=2.0km az=47.0*

NEIC 25 06:09:59.5±0.6**, 36°.46N**±0°.01×**98°.74W**±0°.03**, h10**^{km}±6^{km}**, Error ellipse: s-maj=3.4km s-min=1.3km az=75.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.22	250	Pg	Pg	06 10 03.9	-0.2
OKCFA	Oklahoma City	1.47	134	Pn	Pb	06 10 26.7	-0.3
OKCSW	OKLAHOMA CITY	1.49	134		Pb	06 10 27.0	-0.2
WMOK	Wichita Mounta	1.71	181		Pn	06 10 28.8	-0.6
T35A	Sooner Cattle	1.85	75	IAmb_Lg		06 10 58.6	
	comp=Z,55nm,0.9s						
R32A	Long Quarter,	1.96	1		Pn	06 10 33.6	+0.8
X34A	Smith Ranch, M	1.99	158		Pb	06 10 35.0	-0.8
X34A				IAmb_Lg		06 11 06.2	
	comp=Z,86nm,0.8s						
TUL1	Leonard	2.45	102		Pn	06 10 41.5	+2.0
KSU1	Kansas State U	3.13	32	IAmb_Lg		06 11 46.9	
	comp=Z,27nm,0.8s						
HHAR	Hobbs	3.88	91	IAmb_Lg		06 12 07.4	
	comp=Z,24nm,0.8s						
ABTX	Abilene, Hawle	3.90	191	Pn	Pn	06 10 59.1	-0.3
MSTX	Muleshoe	4.13	234	IAmb_Lg		06 12 15.1	
	comp=Z,31nm,0.8s						
W39A	Magazine	4.22	106	IAmb_Lg		06 12 12.3	
	comp=Z,23nm,0.8s						
Z38A	Mt. Pleasant	4.44	135	IAmb_Lg		06 12 28.6	
	comp=Z,29nm,0.7s						
S39A	Bolivar	4.50	73		Pn	06 11 08.3	+0.6
S39A				IAmb_Lg		06 12 23.8	
	comp=Z,26nm,0.8s						
T25A	Trinidad	4.60	280	IAmb_Lg		06 12 29.7	
	comp=Z,31nm,0.8s						
MIAR	Mount Ida	4.62	113		Pn	06 11 11.1	+1.7
MIAR				IAmb_Lg		06 12 37.3	
	comp=Z,26nm,0.8s						
U40A	Yellville	4.75	89	Pn	Pn	06 11 12.0	+0.9
U40A				IAmb_Lg		06 12 40.8	
	comp=Z,31nm,0.8s						
BGNE	Belgrade	4.97	5	Pn	Pn	06 11 14.9	+0.7
BGNE				IAmb_Lg		06 12 38.6	
	comp=Z,27nm,0.8s						
P38A	Dawn	5.19	51	IAmb_Lg		06 12 56.8	
	comp=Z,16nm,0.8s						
X40A	Basin Creek Fa	5.21	110	IAmb_Lg		06 12 50.6	
	comp=Z,18nm,0.8s						
WLAR	White Oak Lake	5.38	119	IAmb_Lg		06 12 55.8	
	comp=Z,18nm,0.8s						
W41B	Gary Mavity, V	5.43	102	IAmb_Lg		06 13 03.0	
	comp=Z,18nm,0.9s						
R40A	Maddies Statio	5.47	69	IAmb_Lg		06 12 55.3	
	comp=Z,17nm,0.9s						
UALR	University of	5.47	106	IAmb_Lg		06 12 55.5	
	comp=Z,14nm,0.8s						
Q24A	Divide	5.66	298	IAmb_Lg		06 12 56.1	
	comp=Z,18nm,0.7s						
435B	Jarrell	5.74	170	IAmb_Lg		06 13 14.3	
	comp=Z,21nm,0.9s						
Z41A	Richland Creek	5.83	121	IAmb_Lg		06 13 14.9	
	comp=Z,16nm,0.7s						
JCT	Junction City	6.03	189	IAmb_Lg		06 13 22.6	
	comp=Z,24nm,0.9s						
K31A	O'Neill	6.16	360	IAmb_Lg		06 13 28.6	
	comp=Z,26nm,0.7s						
CCM	Cathedral Cave	6.19	73	IAmb_Lg		06 13 21.1	
	comp=Z,23nm,0.9s						
PBMO	Poplar Bluff	6.69	85	IAmb_Lg		06 13 44.3	
	comp=Z,16nm,0.7s						
FVM	French Village	6.81	75	IAmb_Lg		06 13 38.9	
	comp=Z,13nm,0.8s						
SMCO	Snowmass	7.06	295	IAmb_Lg		06 13 38.8	
	comp=Z,14nm,1.1s						
SLM	Saint Louis	7.10	70	IAmb_Lg		06 13 51.6	
	comp=Z,20nm,0.8s						
PHWY	Pilot Hill	7.13	315	IAmb_Lg		06 13 53.2	
	comp=Z,14nm,0.8s						
N23A	Red Feather La	7.17	310	IAmb_Lg		06 13 50.6	
	comp=Z,21nm,0.8s						
MNTX	Cornudas Mount	7.27	231	IAmb_Lg		06 13 58.7	
	comp=Z,11nm,0.9s						
ECSD	EROS Data Cent	7.45	12		Pn	06 11 47.2	-1.0
S44A	Carbondale	7.68	78	IAmb_Lg		06 14 13.3	
	comp=Z,12nm,0.7s						
SIUC	Southern Illin	7.71	78	IAmb_Lg		06 14 06.8	
	comp=Z,15nm,0.8s						
W45A	Hickory Valley	7.87	97	IAmb_Lg		06 14 18.8	
	comp=Z,15nm,0.7s						
RWWY	Rawlins	8.40	311	IAmb_Lg		06 14 47.3	
	comp=Z,8.2nm,0.8s						
I37A	Lemond, Waseca	8.58	27	IAmb_Lg		06 14 48.7	
	comp=Z,11nm,0.8s						
K22A	Casper	8.62	318	IAmb_Lg		06 14 49.0	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	9.19	43	IAmb_Lg		06 14 57.7	
	comp=Z,13nm,0.8s						
I40A	Norwalk	9.68	37	IAmb_Lg		06 15 15.3	
	comp=Z,11nm,1.1s						

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*SSNC **25** 06:16:36.6±3.2, 18°.84N×70°.30W, h120^{km}±21^{km}, MD3.7, MW4.1*

*NEIC **25** 06:16:40.3±1.8, 18°.94N±0°.06×70°.27W±0°.06, h78^{km}±6^{km}, mb4.1/24, Error ellipse: s-maj=9.7km s-min=6.8km az=209.0*

*OSPL **25** 06:16:40.9±2.9, 18°.92N×70°.21W, h86^{km}±13^{km}, ML3.7, Fault plane solution: NP1:ϕ_s211.80000°, δ38.80000°, λ-139.70000°.*

*IDC **25** 06:16:41.6±2.4, 18°.84N×70°.25W, h102^{km}±26^{km}, mb3.4/9, mbtmp3.9/11, MS2.7/2, Error ellipse: s-maj=20.8km s-min=18.7km az=171.0*

ISC 25 06:16:39.8±0.5**, 18°.89N**±0°.03×**70°.33W**±0°.04**, h90**^{km}**, n100,** σ**2^{s}.20**/121**, mb3.9**/13**, 4C-8D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANI	BANI	0.50	183		Pn	06 16 54.4	-0.3
BANI	BANI	0.50	183	⇓*i*P	Pn	06 16 54.5	-0.2
BANI				IAML		06 17 07.2	
	comp=Z,1µm,0.8s						
SDD	Santo Domingo	0.58	138		Pn	06 16 54.1	-1.1
SDD	Santo Domingo	0.58	138	ASPG		06 16 53.7	
	comp=Z,1µm,0.3s						
SDD				⇓*i*P	Pn	06 16 54.1	-1.1
SDD				ATPG		06 16 55.1	
	comp=Z,5µm,0.3s						
SDD				ASSG		06 17 04.2	
	comp=Z,7µm,0.3s						
SDD				*e*S	Sn	06 17 04.5	-2.2
SDD				ATSG		06 17 05.9	
	comp=Z,23µm,0.3s						
SC01	Santiago de lo	0.66	325		Pn	06 16 56.5	+0.5
SC01	Santiago de lo	0.66	325	ASPG		06 16 56.1	
	comp=Z,9µm,0.2s						
SC01				⇑*i*P	Pn	06 16 56.5	+0.5
SC01				ATPG		06 16 57.8	
	comp=Z,32µm,0.2s						
SC01				ASSG		06 17 09.1	
	comp=Z,28µm,0.3s						
SC01				*e*S	Sn	06 17 09.5	+1.6
SC01				ATSG		06 17 11.4	
	comp=Z,81µm,0.3s						
SC01				IAML		06 17 13.6	
	comp=Z,6µm,0.4s						
DR12	Loma Pena Alta	0.90	96		Pn	06 16 56.9	-1.6
SDDR	Presa de Saban	0.92	276		Pn	06 16 58.9	+0.2
SDDR	Presa de Saban	0.92	276	ASPG		06 16 58.6	
	comp=Z,2µm,0.5s						
SDDR				⇓*i*P	Pn	06 16 59.0	+0.4
SDDR				ATPG		06 17 00.9	
	comp=Z,5µm,0.4s						
SDDR				ASSG		06 17 13.0	
	comp=Z,3µm,0.5s						
SDDR				*e*S	Sn	06 17 13.4	+0.7
SDDR				ATSG		06 17 14.7	
	comp=Z,13µm,0.3s						
SDDR				IAML		06 17 20.3	
	comp=Z,3µm,0.8s						
LOBA2	Hotel Casa Bon	1.08	222	ASPG		06 16 60.0	
	comp=Z,1µm,0.3s						
LOBA2				⇓*i*P	Pn	06 17 00.3	-0.2
LOBA2				ATPG		06 17 01.8	
	comp=Z,5µm,0.3s						
LOBA2				ASSG		06 17 16.1	
	comp=Z,9µm,0.3s						
LOBA2				*e*S	Sn	06 17 16.5	+0.5
LOBA2				ATSG		06 17 18.2	
	comp=Z,32µm,0.3s						
LOBA2				IAML		06 17 18.3	
	comp=Z,703nm,0.3s						
LONE2	Loma La Sidra	1.14	253	ASPG		06 17 01.0	
	comp=Z,924nm,0.3s						
LONE2				⇓*i*P	Pn	06 17 01.4	+0.1
LONE2				ATPG		06 17 03.1	
	comp=Z,3µm,0.3s						
LONE2				ASSG		06 17 18.4	
	comp=Z,3µm,0.3s						
LONE2				*e*S	Sn	06 17 18.8	+1.4
LONE2				ATSG		06 17 20.3	
	comp=Z,10µm,0.4s						
LONE2				IAML		06 17 21.7	
	comp=Z,806nm,0.9s						
LOPP1	Punta Rusia, P	1.26	319	ASPG		06 17 02.7	
	comp=Z,2µm,0.3s						
LOPP1				⇑*i*P	Pn	06 17 03.1	+0.4
LOPP1				ATPG		06 17 03.7	
	comp=Z,5µm,0.3s						
LOPP1				ASSG		06 17 20.5	
	comp=Z,7µm,0.3s						
LOPP1				*e*S	Sn	06 17 20.9	+1.0
LOPP1				ATSG		06 17 22.8	
	comp=Z,19µm,0.3s						
LOPP1				IAML		06 17 28.0	
	comp=Z,3µm,0.5s						
LODA1	ITESIL, Dajabo	1.46	297	ASPG		06 17 05.3	
	comp=Z,980nm,0.3s						
LODA1				*i* P	Pn	06 17 05.7	+0.7
LODA1				ATPG		06 17 07.2	
	comp=Z,4µm,0.2s						
LODA1				ASSG		06 17 24.1	
	comp=Z,7µm,0.3s						
LODA1				*e*S	Sn	06 17 24.5	+0.4
LODA1				ATSG		06 17 26.4	
	comp=Z,24µm,0.3s						
LODA1				IAML		06 17 31.2	
	comp=Z,2µm,0.2s						
LOPE2	Hotel El Peder	1.59	238	ASPG		06 17 07.3	
	comp=Z,1µm,0.3s						
LOPE2				⇓*i*P	Pn	06 17 07.8	+1.0
LOPE2				ATPG		06 17 08.4	
	comp=Z,4µm,0.4s						
LOPE2				ASSG		06 17 29.1	
	comp=Z,1µm,0.3s						
LOPE2				*e*S	Sn	06 17 29.4	+2.2
LOPE2				IAML		06 17 34.6	
	comp=Z,671nm,0.5s						
JAKH	Jacmel	2.18	253		Pn	06 17 15.2	+0.8
JAKH	Jacmel	2.18	253	ASPG		06 17 14.7	
	comp=Z,209nm,0.3s						
JAKH				⇓*i*P	Pn	06 17 15.1	+0.8
JAKH				ATPG		06 17 15.9	
	comp=Z,598nm,0.3s						
JAKH				ASSG		06 17 42.6	
	comp=Z,498nm,0.3s						
JAKH				*e*S	Sn	06 17 43.0	+2.2
JAKH				ATSG		06 17 43.4	
	comp=Z,1µm,0.3s						
JAKH				IAML		06 17 47.2	
	comp=Z,140nm,0.4s						
GRTK	Grand Turk	2.72	344	Pn	Pn	06 17 20.7	-0.8
GRTK	Grand Turk	2.72	344	*e*P	Pn	06 17 20.7	-0.8
GRTK	Grand Turk	2.72	344	ASPG		06 17 20.3	
	comp=Z,2µm,0.3s						
GRTK				⇓*i*P	Pn	06 17 20.7	-0.8
GRTK				ATPG		06 17 21.3	
	comp=Z,7µm,0.3s						
GRTK				ASSG		06 17 49.7	
	comp=Z,439nm,0.3s						
GRTK				*e*S	Sn	06 17 50.1	-3.5
GRTK				ATSG		06 17 51.2	
	comp=Z,2µm,0.2s						
GRTK				*e*S	Sn	06 17 51.9	-1.7
GRTK				IAML		06 17 54.8	
	comp=Z,695nm,0.3s						
AGPR	Aguadilla, PR	3.08	97		Pn	06 17 26.5	+0.1
AGPR	Aguadilla, PR	3.08	97	⇑*i*P	Pn	06 17 26.3	-0.1
AGPR				IAML		06 18 16.6	
	comp=Z,286nm,1.0s						
CRPR	Cabo Rojo, PR	3.18	106		Pn	06 17 28.7	+1.0
CRPR	Cabo Rojo, PR	3.18	106	⇑*i*P	Pn	06 17 27.9	+0.2
CRPR				IAML		06 18 12.9	
	comp=Z,180nm,0.3s						
MLPR	Magueyes Islan	3.25	106	Pn	Pn	06 17 29.7	+1.0
AOPR	Arecibo Observ	3.43	98		Pn	06 17 32.1	+0.9
EMPR	Esperanza - Ma	3.62	96		Pn	06 17 35.4	+1.7
OBIP	Obispado Ponce	3.63	103	Pn	Pn	06 17 35.2	+1.3
CELP	Cerrillos	3.65	102		Pn	06 17 35.3	+1.1
ICMP	Isla Caja de M	3.74	105	Pn	Pn	06 17 36.5	+1.1
MASC	Masc	3.90	290	*e*P	Pn	06 17 35.4	-2.1
MASC				*e*S	Sn	06 18 21.0	-1.2
MASC	Masc	3.90	290	*i* P	Pn	06 17 36.0	-1.5
MASC				*e*S	Sn	06 18 20.7	-1.5
MASC				IAML		06 18 28.2	
	comp=Z,95nm,0.5s						
SJG	San Juan	4.04	100	P	Pn	06 17 40.2	+0.8
	comp=Z,36nm,0.4s,baz=306,slow=9.2,SNR=17						
SJG				S	Sn	06 18 22.0	-3.6
	comp=Z,38nm,0.3s,baz=306,slow=19,SNR=2.1						
SJG				LR	LR	06 18 49.6	
	comp=Z,21nm,18.7s,baz=271,slow=32						
SJG	San Juan	4.04	100		Pn	06 17 40.9	+1.5
SJG	San Juan	4.04	100	*e*P	Pn	06 17 41.0	+1.5
GCPR	Guaynabo City	4.07	97		Pn	06 17 39.2	-0.6
PDPR	Patillas Dam,	4.18	101		Pn	06 17 41.6	+0.3
CBYP	Canovanas	4.28	98		Pn	06 17 41.5	-1.3
HUMP	Col San Antoni	4.31	99		Pn	06 17 42.2	-0.9
MTP	Monte Pirata	4.60	99		Pn	06 17 46.5	-0.5
GTBY	Guantanamo Bay	4.63	284	Pn	Pn	06 17 46.8	-0.7
GTBY	Guantanamo Bay	4.63	284	*e*P	Pn	06 17 45.7	-1.8
GTBY				*e*S	Sn	06 18 34.5	-5.6
GTBY	Guantanamo Bay	4.63	284	*i* P	Pn	06 17 46.1	-1.4
GTBY				*e*S	Sn	06 18 38.5	-1.6
GTBY				IAML		06 18 50.0	
	comp=Z,29nm,1.0s						
MOAC	Moa	4.71	293	*e*P	Pn	06 17 45.1	-3.4
MOAC				*e*S	Sn	06 18 37.5	-4.4
CUPR	Culebra, Puert	4.82	96		Pn	06 17 47.6	-2.4
STVI	Saint Thomas	5.12	95	Pn	Pn	06 17 52.5	-1.7
RCC	Rio Carpintero	5.18	283	*e*P	Pn	06 17 53.6	-1.4
RCC				*e*S	Sn	06 18 48.7	-4.8
CDVI	St. Croix	5.40	101	Pn	Pn	06 17 57.7	-0.3
HLGC	Holguin	5.75	291	*e*P	Pn	06 18 01.9	-0.8
HLGC				*e*S	Sn	06 19 06.7	-0.7
LMGC	Las Mercedes	6.41	282	*e*P	Pn	06 18 08.8	-2.8
LMGC				*e*S	Sn	06 19 19.5	-3.9
MTDJ	Mount Denham	6.87	266	*e*P	Pn	06 18 16.4	-1.6
CCCC	Cccc	7.36	289	*e*P	Pn	06 18 16.4	-8.3
CCCC				*e*S	Sn	06 19 31.1	-15
BIRV	Birongo	9.24	154	Pn	Pn	06 18 50.1	-0.2
SDV	Santo Domingo	9.95	182	P	Pn	06 19 01.0	+0.9
	comp=Z,20nm,0.2s,baz=9.0,slow=8.0,SNR=8.1						
SDV				S	Sn	06 20 42.9	-7.2
	comp=Z,21nm,0.3s,baz=31,slow=21,SNR=5.8						
SDV	Santo Domingo	9.95	182	*e*P	Pn	06 19 00.2	0.0
SJCC	San Jacinto, C	10.10	208	Pn	Pn	06 19 02.4	+0.3
BAUV	El Baul	10.13	167	Pn	Pn	06 19 02.6	+0.1
OCAC	Ocana	10.98	196		Pn	06 19 13.2	-1.0
OCAC	Ocana	10.98	196	*e*P	Pn	06 19 13.2	-1.0
OCAC				*e*S	Sn	06 21 07.8	-7.4
OCAC				*i*		06 21 15.2	
	comp=Z,1µm,1.2s						
PAMC	Pamplona, Colo	11.71	192	*e*P	Pn	06 19 24.5	+0.1
PAMC				*e*S	Sn	06 21 27.2	-6.3
PAMC				*i*		06 21 34.4	
	comp=Z,9.9nm,0.6s						
ZARC	Zaragoza, Cauc	12.16	202	Pn	Pn	06 19 30.6	+0.6
BARC	Barichara	12.54	193	*e*P	Pn	06 19 34.1	-1.1
BARC				*e*S	Sn	06 21 45.9	-7.3
BARC				*i*		06 21 55.7	
	comp=Z,23µm,2.1s						
DBBC	Dabeiba	13.12	207	*e*P	P	06 19 51.3	+1.7
RUSC	La Rusia	13.20	192	*e*P	Pn	06 19 43.4	-0.8
HELC	Santa Helena	13.60	203	*e*P	Pn	06 19 50.9	+1.5
HELC				*e*S	Sn	06 22 11.8	-7.5
HELC				*i*		06 22 20.2	
	comp=Z,5.5nm,0.6s						
BBSR	BB Station	14.35	20	Pn	Pn	06 19 58.2	-0.4
ROSC	El Rosal	14.50	196	P	Pn	06 20 01.9	+0.8
	comp=Z,3.9nm,0.3s,baz=120,slow=20,SNR=2.4						
ROSC				S	Sn	06 22 42.4	+1.3
	comp=Z,3.9nm,0.4s,baz=264,slow=23,SNR=2.0						
JTS	Las Juntas de	16.52	241	P	P	06 20 30.4	+3.1
	comp=Z,8.0nm,1.1s,baz=133,slow=1.9,SNR=4.1						
JTS	Las Juntas de	16.52	241	IAmb	IAmb	06 20 34.9	
	comp=Z,21nm,1.4s						
Y60A	Bolivia	16.62	336	Pn	Pn	06 20 27.3	0.0
JSC	Jenkinsville	18.16	330	P	Pn	06 20 46.3	+0.2
JSC				IAmb	IAmb	06 20 46.9	
	comp=Z,14nm,1.3s						
V53A	Saluda	20.03	329	P	Pn	06 21 07.5	-0.7
U54A	Nelsons Funny	20.27	332	P	P	06 21 08.8	+0.6
U54A				IAmb	IAmb	06 21 10.6	
	comp=Z,13nm,0.9s						
TKL	Tuckaleechee C	20.50	327	P	P	06 21 11.9	+1.2
	comp=Z,3.8nm,0.8s,baz=164,slow=11,SNR=6.8						
TKL				S	S	06 24 49.0	-6.1
	comp=Z,3.4nm,0.7s,baz=210,slow=20,SNR=5.3						
	comp=Z,3.8nm,0.8s						
TKL	Tuckaleechee C	20.50	327	P	P	06 21 11.9	+1.2
TKL				IAmb	IAmb	06 21 13.2	
	comp=Z,13nm,1.4s						
Y49A	Blount Mountai	20.69	319	P	P	06 21 14.0	+1.2
CPCT	Cooper Cave	20.73	326	P	P	06 21 14.5	+1.4
W50A	Signal Mountai	20.98	324	P	P	06 21 17.5	+1.6
TZTN	Tazewell	21.09	329	P	P	06 21 18.1	+1.1
S54A	Dingess, Beckl	21.14	335	P	P	06 21 18.7	+1.1
S54A				IAmb	IAmb	06 21 20.3	
	comp=Z,10nm,0.9s						
WVT	Waverly	23.09	322	P	P	06 21 38.5	+0.6
TXAR	Lajitas Array	32.06	295	P	P	06 22 59.7	+1.3
	comp=Z,0.2nm,0.5s,baz=104,slow=8.5,SNR=4.3						
	comp=Z,0.2nm,0.5s						
SCHQ	Schefferville	35.98	3	P	P	06 23 32.9	+1.1
	comp=Z,4.1nm,0.6s,baz=193,slow=7.5,SNR=8.6						
	comp=Z,4.1nm,0.6s						
SCHQ	Schefferville	35.98	3	IAmb	IAmb	06 23 34.0	

	comp=Z,5.1nm,0.9s						
PDAR	Pinedale Array	40.73	314	PcP	PcP	06 26 11.9	-0.1
	comp=Z,0.3nm,0.4s,baz=101,slow=4.8,SNR=3.6						
RLMT	Red Lodge	41.53	318	P	P	06 24 19.7	+1.1
RLMT				IAmb	IAmb	06 24 21.0	
	comp=Z,2.2nm,0.7s						
PB15	IPOC Station P	41.85	179	P	P	06 24 21.9	+0.6
FRB	Frobisher Bay	44.84	1	LR	LR	06 42 27.6	
	comp=Z,39nm,20.4s,baz=350,slow=34						
NV11	Mina Array Sit	45.70	306	P	P	06 24 54.3	+2.2
NV11				IAmb	IAmb	06 24 55.8	
	comp=Z,2.0nm,0.7s						
KVN	Kaiserville	45.78	306	P	P	06 24 53.5	+0.7
KVN				IAmb	IAmb	06 24 55.5	
	comp=Z,1.4nm,0.6s						
NVAR	Mina Array Bea	45.81	306	P	P	06 24 55.3	+2.2
	comp=Z,1.4nm,0.8s,baz=92,slow=7.0,SNR=10						
	comp=Z,1.4nm,0.8s						
YERR	Yerington	46.64	306	P	P	06 25 02.5	+3.0
YERR				IAmb	IAmb	06 25 02.6	
	comp=Z,2.2nm,0.7s						
YKA	Yellowknife Ar	53.15	336	P	P	06 25 48.3	+0.2
	comp=Z,0.4nm,0.6s,baz=111,slow=6.9,SNR=8.3						
	comp=Z,0.4nm,0.6s						
ESDC	Sonseca Array	60.16	55	P	P	06 26 38.7	+0.4
	comp=Z,0.7nm,0.7s,baz=277,slow=6.6,SNR=4.8						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	67.35	333	P	P	06 27 25.7	+0.6
	comp=Z,0.3nm,0.4s,baz=83,slow=5.8,SNR=5.3						
	comp=Z,0.3nm,0.4s						
TORD	Torodi Ar. Bea	69.06	83	P	P	06 27 36.7	+0.1
	comp=Z,0.2nm,0.5s,baz=287,slow=7.1,SNR=1.6						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	69.06	83	IAmb	IAmb	06 27 58.1	
	comp=Z,2.6nm,1.4s						
FINES	FINESS Array B	76.62	29	P	P	06 28 21.1	+0.7
	comp=Z,1.3nm,0.8s,baz=286,slow=10.0,SNR=2.6						
	comp=Z,1.3nm,0.8s						
PZH	PanZhiHua	134.22	10	PKP	PKPdf	06 35 48.5	+0.5
WRA	Warramunga Arr	156.72	263	PKPab	PKPab	06 36 55.1	0.0
	comp=Z,0.1nm,0.5s,baz=87,slow=4.4,SNR=1.2						
ASAR	Alice Springs	156.94	254	PKPab	PKPab	06 36 55.7	-0.4
	comp=Z,0.3nm,0.4s,baz=103,slow=4.5,SNR=6.4						

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*TUL **25** 06:35:34.9±0.8, 36°.503N±0°.008×98°.48W±0°.01, h6^{km}±6^{km}, ML2.9, mb_Lg2.3/26(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=54.0*

NEIC 25 06:35:34.9±0.8**, 36°.50N**±0°.01×**98°.48W**±0°.01**, h13**^{km}±4^{km}**, Error ellipse: s-maj=2.0km s-min=1.5km az=182.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.44	254	Pg	Pg	06 35 43.6	0.0
ADOK	Arcadia Dam	1.24	133	Sn	Sg	06 36 14.6	-0.2
OKCFA	Oklahoma City	1.37	142	Pn	Pn	06 35 60.0	+0.3
T35A	Sooner Cattle	1.64	75		Pb	06 36 04.5	-0.3
WMOK	Wichita Mounta	1.78	188		Pb	06 36 06.4	-0.9
TUL1	Leonard	2.25	104	Pn	Pn	06 36 13.2	+1.4
TUL1				IAmb_Lg		06 36 45.7	
	comp=Z,16nm,0.9s						
W39A	Magazine	4.03	108	IAmb_Lg		06 37 47.9	
	comp=Z,5.7nm,0.7s						
KSCO	Kaye Shedlock'	4.13	309	IAmb_Lg		06 37 53.4	
	comp=Z,7.2nm,0.8s						
S39A	Bolivar	4.29	72	IAmb_Lg		06 37 52.9	
	comp=Z,4.4nm,0.7s						
MSTX	Muleshoe	4.33	235	IAmb_Lg		06 37 58.5	
	comp=Z,4.8nm,0.7s						
MIAR	Mount Ida	4.45	115	IAmb_Lg		06 38 06.3	
	comp=Z,5.3nm,1.1s						
P38A	Dawn	5.00	50	IAmb_Lg		06 38 14.1	
	comp=Z,4.4nm,0.7s						
X40A	Basin Creek Fa	5.03	112	IAmb_Lg		06 38 18.0	
	comp=Z,4.3nm,0.8s						
FCAR	Ozark Folk Cen	5.18	95	IAmb_Lg		06 38 19.2	
	comp=Z,4.4nm,0.7s						
UALR	University of	5.29	107	IAmb_Lg		06 38 29.2	
	comp=Z,6.0nm,1.0s						
SDCO	Great Sand Dun	5.75	285	IAmb_Lg		06 38 47.6	
	comp=Z,4.7nm,1.2s						
CCM	Cathedral Cave	5.97	73	IAmb_Lg		06 38 47.7	
	comp=Z,3.8nm,0.9s						
JCT	Junction City	6.11	191	IAmb_Lg		06 38 58.7	
	comp=Z,4.4nm,0.7s						
JFWS	Jewell Farm	9.01	42	IAmb_Lg		06 40 40.8	
	comp=Z,3.5nm,0.8s						

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*DNK **25** 06:46:47.3±0.8, 55°.37N×20°.73E, h0^{km}, ML2.9(UPP), Suspected explosion*

*UPP **25** 06:46:49.5±2.7, 55°.47N×20°.56E, h0^{km}, ML2.9, Suspected explosion*

ISC 25 06:46:50.1±1.2**, 55°.56N**±0°.07×**20°.66E**±0°.06**, h0**^{km}**, n17,** σ**1^{s}01**/21**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PABE	Paberze	1.88	90	*e*P	Pb	06 47 24.0	-1.2
PABE				AML	AML	06 47 24.5	
	comp=Z,22nm,0.2s						
PABE				*e*S	Sg	06 47 50.1	-0.3
PABE				AML	AML	06 47 51.6	
	comp=N,36nm,0.2s						
PABE				AML	AML	06 47 53.7	
	comp=E,42nm,0.2s						
SUW	Suwalki	2.12	136	AML	AML	06 47 59.8	
	comp=Z,184nm,0.4s						
SUW				*e*S	Sg	06 48 00.9	+2.6
SUW				AML	AML	06 48 04.0	
	comp=N,205nm,0.2s						
SUW				AML	AML	06 48 04.7	
	comp=E,254nm,0.6s						
SLIT	Slitere, Latvi	2.27	23	*e*P	Pn	06 47 28.3	-0.4
SLIT				AML	AML	06 47 28.9	
	comp=Z,163nm,0.2s						
SLIT				*e*S	Sn	06 47 57.0	-0.3
SLIT				AML	AML	06 47 58.2	
	comp=N,89nm,0.2s						
SLIT				AML	AML	06 47 59.1	
	comp=E,135nm,0.2s						
GOTU	Gotland	2.43	332	P	Pn	06 47 31.1	+0.2
GOTU				S	Sn	06 48 02.8	+1.5
GOTU	Gotland	2.43	332	P	Pn	06 47 31.1	+0.2
GOTU				S	Sn	06 48 02.8	+1.5
BYXU	Byxelkrok	2.67	312	P	Pn	06 47 34.2	-0.1
BYXU	Byxelkrok	2.67	312	P	Pn	06 47 34.2	-0.1
BLEU	Blekinge	2.83	287	P	Pn	06 47 35.8	-0.7
BLEU	Blekinge	2.83	287	P	Pn	06 47 35.8	-0.7
VXJU	Vaexsjoe	3.48	296	P	Pn	06 47 44.1	-1.2
VXJU	Vaexsjoe	3.48	296	P	Pn	06 47 44.1	-1.2
VIKU	Vikbolandet	3.66	325	P	Pn	06 47 47.6	-0.3
VIKU	Vikbolandet	3.66	325	P	Pn	06 47 47.6	-0.3
NYNU	Nynaeshamn	3.75	338	P	Pn	06 47 49.3	+0.3
NYNU	Nynaeshamn	3.75	338	P	Pn	06 47 49.3	+0.3
LNKU	Linkoeping	3.89	316	P	Pn	06 47 50.3	-0.7
LNKU	Linkoeping	3.89	316	P	Pn	06 47 50.3	-0.7

IDC 25 07:12:36.5±2.9**, 53°.95N**×**86°.60E, h0**^{km}**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=22.9km s-min=14.2km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.05	271	*i*		07 19 30.0	
	baz=90,slow=320,SNR=1.7						
ZALV	Zalesovo Beam	1.05	271	Pg	Pg	07 12 55.6	-1.1
	0.5nm,0.3s,baz=87,slow=14,SNR=4.0						
ZALV				Lg	Lg	07 13 11.6	
	1.3nm,0.3s,baz=90,slow=28,SNR=6.6						
KURBB	Kurchatov Arra	5.97	239	Pn	Pn	07 14 06.9	+0.9
	baz=55,slow=14,SNR=4.6						
KURBB				Lg	Lg	07 15 46.3	
	baz=56,slow=30,SNR=2.2						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.67	203	Pn	Pn	07 14 30.7	+1.2
	0.1nm,0.3s,baz=26,slow=12,SNR=2.2						
MKAR				Lg	Lg	07 16 39.0	
	baz=20,slow=31						
	0.1nm,0.3s						

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*IDC **25** 07:35:27.2±3.4, 53°.84N×88°.21E, h0^{km}, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=28.6km s-min=17.6km az=54.0*

*NNC **25** 07:35:27.7±4.7, 53°.57N×88°.18E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=35.0km s-min=21.9km az=66.0, Suspected Mining explosion.*

ISC 25 07:35:31.0±3.7**, 53°.7N**±0°.1×**87°.9E**±0°.2**, h0**^{km}**, n8,** σ**1^{s}03**/10**, 5C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.82	278	*i*		07 48 10.0	
	0.2nm,1.1s,baz=89,slow=319,SNR=3.1						
ZAA0	Zalesovo Array	1.82	278	⇓P	Pn	07 36 03.4	-0.2
	2.8nm,0.6s						
ZAA0				⇓S	Sg	07 36 31.1	+1.5
	11nm,0.7s						
ZALV	Zalesovo Beam	1.82	278	Pg	Pn	07 36 03.4	-0.2
	2.6nm,0.3s,baz=92,slow=13,SNR=30						
ZALV				Lg	Lg	07 36 31.1	
	7.9nm,0.3s,baz=93,slow=24,SNR=16						
KURK	Kurchatov	6.45	246	⇓Pn	Pn	07 37 01.9	-5.2
	2.1nm,0.6s						
KURK				⇓Sn	Sn	07 38 20.2	-1.0
	1.3nm,0.5s						
KURK				⇑Lg	Lg	07 38 54.6	
	8.1nm,0.9s						
KURBB	Kurchatov Arra	6.54	245	Pn	Pn	07 37 08.4	0.0
	0.1nm,0.3s,baz=60,slow=14,SNR=4.7						
KURBB				Lg	Lg	07 39 01.0	
	0.1nm,0.3s,baz=60,slow=30,SNR=7.1						
	1.1nm,0.4s						
KURBB	Kurchatov Arra	6.54	245	⇓Pn	Pn	07 37 04.4	-4.0
	3.1nm,0.6s						
KURBB				⇑Sn	Sn	07 38 21.8	-1.9
	7.5nm,0.6s						
KURBB				⇑Lg	Lg	07 38 58.4	
	9.0nm,0.6s						
MK31	Makanchi Array	7.82	209	⇑Pn	Pn	07 37 26.5	+0.5
	0.2nm,0.4s,baz=28,slow=13,SNR=4.9						
MK31				⇓Sn	Sn	07 38 55.6	+0.3
	1.0nm,0.6s						
MK31				⇑Lg	Lg	07 39 34.6	
	1.3nm,0.7s,baz=23,slow=34,SNR=5.4						
MKAR	Makanchi Array	7.82	209	Pn	Pn	07 37 25.6	-0.4
	0.2nm,0.3s,baz=30,slow=14,SNR=4.9						
MKAR				Sn	Sn	07 38 55.3	+0.1
	0.2nm,0.3s,baz=23,slow=24,SNR=2.5						
MKAR				Lg	Lg	07 39 41.5	
	0.1nm,0.3s,baz=25,slow=35,SNR=3.0						
	0.5nm,0.5s						

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*SOME **25** 07:35:45.4, 40°.92N×70°.87E, h20^{km}*

*NNC **25** 07:35:49.7±3.4, 41°.11N×70°.79E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=27.1km s-min=12.8km az=21.0*

ISC 25 07:35:44.7±3.4**, 40°.9N**±0°.2×**70°.77E**±0°.07**, h8**^{km}±17^{km}**, n7,** σ**0^{s}73**/12**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.37	336	*e*P	Pn	07 36 10.0	-0.2
	20nm,0.1s						
IUG				*e*S	Sb	07 36 27.6	-0.8
	12nm,0.5s						
IUG	Iuzhnay	1.37	336	P	Pg	07 36 11.7	+0.7
IUG				S	Sb	07 36 27.6	-0.8
KK31	Karatay Array	2.22	355	P	Pb	07 36 24.6	-0.4
	5.7nm,0.5s,baz=164,slow=16,SNR=63						
KK31				S	Sb	07 36 52.9	+0.2
	6.3nm,0.4s,baz=158,slow=25,SNR=13						
BRLS	Borolday	2.25	342	*e*P	Pn	07 36 23.2	+0.9
	5.3nm,0.4s						
BRLS				*e*S	Sn	07 36 50.6	+0.4
	16nm,0.5s						
BRLS	Borolday	2.25	342	Pg	Pb	07 36 24.8	-0.7
	5.3nm,0.4s						
BRLS				Lg	Lg	07 36 50.6	
	16nm,0.5s						
MRKS	Merke	2.61	44	*e*P	Pb	07 36 31.4	-0.4
	1.9nm,0.3s						
MRKS				*e*S	Sb	07 37 04.5	+0.5
	6.5nm,0.4s						
MRKS	Merke	2.61	44	Pg	Pg	07 36 34.4	-0.3
	3.1nm,0.2s						
MRKS				Lg	Lg	07 37 06.6	
	6.5nm,0.4s						

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*IDC **25** 07:49:22.9±1.0, 35°.63N×73°.60E, h0^{km}, mb3.7/9, mbtmp3.7/13, ML3.4/4, MS2.7/2, Error ellipse: s-maj=25.0km s-min=20.0km az=68.0*

*NNC **25** 07:49:31.1±6.6, 36°.03N×73°.17E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=64.7km s-min=44.3km az=132.0*

ISC 25 07:49:28.4±1.0**, 35°.61N**±0°.09×**73°.4E**±0°.1**, h37**^{km}**, n18,** σ**1^{s}94**/22**, mb3.6**/9**, 2C-1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	7.07	7	Pn	Pn	07 51 12.0	+2.6
	0.3nm,0.3s,baz=200,slow=12,SNR=3.6						
AAK				Sn	Sn	07 52 32.6	+4.1
	0.4nm,0.3s,baz=36,slow=19,SNR=1.4						
AAK				LR	LR	07 54 05.8	
	comp=Z,38nm,20.1s,baz=161,slow=40						
	1.1nm,0.3s						
TKM2	Tokmak 2	7.50	12	⇑Pn	Pn	07 51 17.9	+2.6
	1.6nm,0.6s						
TKM2				⇑Sn	Sn	07 52 38.2	-0.9
	3.7nm,0.8s						
KK31	Karatay Array	7.81	344	Pn	Pn	07 51 20.8	+1.3
	1.5nm,0.2s,baz=168,slow=12,SNR=118						
KK31				Sn	Sn	07 52 46.6	0.0
	8.0nm,0.3s,baz=166,slow=24,SNR=14						
MKAR	Makanchi Array	13.01	28	Pn	Pn	07 52 29.1	-1.5
	0.1nm,0.3s,baz=204,slow=12,SNR=6.2						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	15.46	12	Pn	Pn	07 53 03.2	-0.3
	0.1nm,0.3s,baz=200,slow=10,SNR=5.6						
AB31	Akbulak array	16.84	328	P	Pn	07 53 20.7	-0.4
	0.5nm,0.5s,baz=157,slow=11,SNR=16						
AKTO	Aktyubinsk	18.55	328	P	Pn	07 53 42.7	+0.4
	0.4nm,0.3s,baz=130,slow=9.5,SNR=6.0						
AKTO				S	Sn	07 57 03.0	-5.4
	1.1nm,0.7s,baz=101,slow=18,SNR=2.4						
AKTO				LR	LR	08 01 24.2	
	comp=Z,31nm,18.5s,baz=97,slow=39						
	3.9nm,0.7s						
AKTO	Aktyubinsk	18.55	328	⇓P	Pn	07 53 42.6	+0.4
	4.8nm,0.8s						
ZALV	Zalesovo Beam	20.00	20	P	P	07 53 55.9	-1.7
	0.6nm,0.3s,baz=214,slow=11,SNR=10						
	2.3nm,0.5s						
SONM	Songino Array	27.27	53	P	P	07 55 07.7	-1.6
	0.7nm,0.4s,baz=262,slow=10.0,SNR=1.8						
	0.7nm,0.4s						
FINES	FINESS Array B	39.31	326	P	P	07 56 54.1	+0.7
	0.8nm,0.4s,baz=120,slow=11,SNR=6.5						
	0.8nm,0.4s						
ARCES	ARCESS Array B	42.71	337	P	P	07 57 21.5	+0.1
	0.6nm,0.5s,baz=101,slow=6.3,SNR=6.4						
	0.6nm,0.5s						
NOA	NORSAR Array B	46.26	323	P	P	07 57 50.3	+0.4
	0.3nm,0.4s,baz=95,slow=7.6,SNR=2.1						
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	67.66	270	P	P	08 00 22.7	+0.6
	0.2nm,0.4s,baz=38,slow=5.9,SNR=4.6						
	0.2nm,0.4s						
ILAR	Eielson Array	75.09	17	P	P	08 01 05.6	-0.4
	0.3nm,0.8s,baz=305,slow=6.5,SNR=4.5						
	0.3nm,0.8s						
WRA	Warramunga Arr	79.87	123	P	P	08 01 33.6	+0.2
	0.6nm,0.8s,baz=320,slow=5.5,SNR=5.7						
	0.6nm,0.8s						
YKA	Yellowknife Ar	82.02	4	P	P	08 01 44.4	+0.1
	0.3nm,0.5s,baz=348,slow=5.2,SNR=8.1						
	0.3nm,0.5s						
ASAR	Alice Springs	82.15	126	P	P	08 01 45.1	-0.4
	0.4nm,0.6s,baz=306,slow=4.5,SNR=4.1						
	0.4nm,0.6s						

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*NNC **25** 08:11:57.4±5.1, 54°.04N×87°.34E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=40.7km s-min=27.5km az=27.0, Suspected Mining explosion.*

*IDC **25** 08:11:58.9±2.8, 54°.14N×87°.16E, h0^{km}, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=24.6km s-min=15.9km az=64.0*

ISC 25 08:12:01.7±4.4**, 54°.1N**±0°.2×**86°.9E**±0°.2**, h0**^{km}**, n8,** σ**2^{s}06**/12**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.22	266	*i*		08 20 30.0	
	baz=79,slow=317,SNR=4.4						
ZAA0	Zalesovo Array	1.22	266	⇓P	Pg	08 12 23.0	-2.1
	0.2nm,0.2s						
ZAA0				⇑S	Sn	08 12 46.5	+3.3
	1.1nm,0.3s						
ZALV	Zalesovo Beam	1.22	266	Pg	Pg	08 12 23.1	-2.0
	2.0nm,0.3s,baz=82,slow=17,SNR=12						
ZALV				Lg	Lg	08 12 43.6	
	2.8nm,0.3s,baz=81,slow=27,SNR=6.3						
KURK	Kurchatov	6.06	240	⇑Pn	Pn	08 13 33.8	+1.3
	0.9nm,0.6s						
KURK				⇓Sn	Sn	08 14 45.2	+2.7
	0.6nm,0.4s						
KURK				⇑Lg	Lg	08 15 17.7	
	4.3nm,0.8s						
KURBB	Kurchatov Arra	6.17	239	Pn	Pn	08 13 34.8	+0.9
	0.1nm,0.3s,baz=56,slow=14,SNR=6.9						
KURBB				Lg	Lg	08 15 20.4	
	baz=58,slow=30,SNR=5.0						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	6.17	239	⇑Pn	Pn	08 13 34.3	+0.4
	1.2nm,0.5s						
KURBB				⇑Sn	Sn	08 14 42.7	-2.4
	3.0nm,0.5s						
KURBB				⇓Lg	Lg	08 15 17.1	
	9.4nm,0.9s						
MK31	Makanchi Array	7.84	204	⇑Pn	Pn	08 13 57.7	+0.7
	0.3nm,0.5s,baz=28,slow=14,SNR=8.9						
MK31				Sn	Sn	08 15 27.8	+1.5
	0.5nm,0.5s,baz=25,slow=26,SNR=3.5						
MK31				⇑Lg	Lg	08 16 10.2	
	1.7nm,0.7s,baz=22,slow=31,SNR=4.9						
MKAR	Makanchi Array	7.84	204	Pn	Pn	08 13 57.5	+0.6
	0.3nm,0.3s,baz=24,slow=13,SNR=10						
MKAR				Sn	Sn	08 15 25.8	-0.6
	0.2nm,0.3s,baz=23,slow=26,SNR=6.1						
MKAR				Lg	Lg	08 16 11.8	
	0.1nm,0.3s,baz=21,slow=30,SNR=2.6						
	0.5nm,0.4s						

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*IDC **25** 08:16:08.4±2.3, 57°.98N×139°.34W, h0^{km}, mb2.9/1, mbtmp2.9/3, ML2.9/2, MS2.1/1, Error ellipse: s-maj=40.4km s-min=19.8km az=40.0*

*PGC **25** 08:16:08.6±0.1, 57°.89N×139°.19W, h10^{km}, ML3.2/12, 156km Sse of Yakutat, Ak Off Coast Of Southeastern Alaska*

*ANF **25** 08:16:09.6±1.6, 57°.87N×139°.14W, h35^{km}±18^{km}, ML3.5/19, Error ellipse: s-maj=8.9km s-min=3.9km az=39.0*

*NEIC **25** 08:16:09.5±2.2, 57°.92N±0°.05×139°.11W±0°.09, h25^{km}±6^{km}, ML3.2/74, ML3.2/47(AEIC), Error ellipse: s-maj=8.5km s-min=5.7km az=48.0*

*AEIC **25** 08:16:10.3±1.5, 57°.85N±0°.05×139°.17W±0°.10, h1^{km}±7^{km}, Error ellipse: s-maj=9.2km s-min=5.8km az=219.0*

ISC 25 08:16:09.0±0.9**, 57°.88N**±0°.05×**139°.16W**±0°.04**, h22**^{km}±6^{km}**, n167,** σ**1^{s}13**/188**, Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKU2	Yakutat	1.66	351		Pn	08 16 36.5	-0.3
YKU2					Sn	08 16 56.4	-1.0
PNL	Peninsula	1.80	356		Pn	08 16 36.9	-1.8
PNL					Sn	08 16 58.8	-2.1
PNL	Peninsula	1.80	356	Pn	Pn	08 16 36.6	-2.1
PNL				Sn	Sn	08 16 59.5	-1.4
PNL	Peninsula	1.80	356	P	Pn	08 16 36.9	-1.8
	baz=176,SNR=36						
PNL				S	Sn	08 16 59.9	-1.0
	baz=176						
BCPM	Bancas Point	2.09	353		Pn	08 16 40.9	-1.9
PLBC	Pleasant Camp	2.15	42		Pn	08 16 43.0	-0.6
PLBC					Sn	08 17 07.7	-1.9
PLBC	Pleasant Camp	2.15	42	Pn	Pn	08 16 42.9	-0.6
PLBC				Sn	Sn	08 17 08.0	-1.5
PLBC	Pleasant Camp	2.15	42	P	Pn	08 16 42.9	-0.6
	baz=224,SNR=45						
PLBC				S	Sn	08 17 08.4	-1.1
	baz=224						
SIT	Sitka	2.23	110		Pn	08 16 43.0	-1.6
SIT					Sn	08 17 10.0	-1.4
SIT	Sitka	2.23	110	P	Pn	08 16 43.2	-1.4
	baz=293						
SIT				S	Sn	08 17 10.4	-0.9
	baz=293						
PINM	Pinnacle	2.29	346	P	Pn	08 16 44.0	-1.6
	baz=166,SNR=30						
PINM				S	Sn	08 17 14.8	+1.6
	baz=166						
PCA	Pinnacle	2.29	346		Pn	08 16 45.3	-0.3
PCA					Sn	08 17 14.2	+1.0
PCA	Pinnacle	2.29	346	Pn	Pn	08 16 45.4	-0.3
PCA				Sn	Sn	08 17 14.3	+1.0
BESE	Bessie Mountai	2.38	71		Pn	08 16 46.2	-0.6
BESE	Bessie Mountai	2.38	71	Pn	Pn	08 16 46.2	-0.6
BESE				Sn	Sn	08 17 16.0	+0.7
SAMH	Samovar Hills	2.41	340		Pn	08 16 46.7	-0.5
SAMH	Samovar Hills	2.41	340	Pn	Pn	08 16 46.6	-0.6
CHX	Chaix Hills	2.41	336		Pn	08 16 46.3	-1.0
SKAG	Skagway	2.55	50		Pn	08 16 49.0	0.0
SKAG					Sn	08 17 18.8	-0.6
SKAG	Skagway	2.55	50	IAML		08 17 22.8	
	comp=N,162nm,0.6s						
SKAG				IAML		08 17 27.5	
	comp=E,142nm,0.6s						
SKAG	Skagway	2.55	50	P	Pn	08 16 48.6	-0.4
	baz=233,SNR=21						
SKAG				S	Sn	08 17 18.6	-0.7
	baz=233						
JIS	Juneau Island	2.56	79		Pn	08 16 48.8	-0.4
JIS					Sn	08 17 20.9	+1.2
JIS	Juneau Island	2.56	79	IAML		08 17 28.3	
	comp=E,147nm,0.4s						
JIS				IAML		08 17 34.5	
	comp=N,154nm,0.5s						
YUK7	Dusty Glacier	2.71	11		Pn	08 16 51.5	+0.1
YUK7	Dusty Glacier	2.71	11	Pn	Pn	08 16 51.5	+0.1
YUK7				Sn	Sn	08 17 22.5	-1.1
MESA	MESA	2.72	329		Pn	08 16 50.6	-0.9
MESA	MESA	2.72	329	Pn	Pn	08 16 50.6	-0.9
MESA				Sn	Sb	08 17 28.2	-1.8
MESA	MESA	2.72	329	P	Pn	08 16 50.4	-1.2
	baz=147						
TABL	Table Mountain	2.76	339		Pn	08 16 50.9	-1.3
TABL	Table Mountain	2.76	339	IAML		08 17 42.3	
	comp=N,124nm,0.7s						
TABL				IAML		08 17 46.3	
	comp=E,101nm,0.8s						
TABL	Table Mountain	2.76	339	Pn	Pn	08 16 51.3	-0.9
TABL				Sn	Sn	08 17 28.2	+3.3
YAH	Yahtse	2.83	333		Pn	08 16 51.7	-1.3
YAH	Yahtse	2.83	333	IAML		08 17 47.6	
	comp=E,80nm,0.9s						
YAH				IAML		08 17 51.1	
	comp=N,97nm,1.3s						
SNH	Sunshine Point	2.99	322	Pn	Pn	08 16 54.6	-0.5
SNH				IAML		08 17 47.8	
	comp=E,91nm,0.7s						
SNH				IAML		08 18 06.2	
	comp=N,87nm,0.9s						
BAGL	Bagley Icefiel	3.02	331		Pn	08 16 54.2	-1.3
HYT	Haines Junctio	3.07	15		Pn	08 16 56.3	0.0
HYT	Haines Junctio	3.07	15	IAML		08 17 35.8	
	comp=E,93nm,0.6s						
HYT				IAML		08 17 54.2	
	comp=N,62nm,0.9s						
HYT	Haines Junctio	3.07	15	Pn	Pn	08 16 56.3	0.0
HYT				Sn	Sn	08 17 34.0	+1.6
HYT	Haines Junctio	3.07	15	P	Pn	08 16 55.9	-0.4
	baz=197,SNR=18						
HYT				S	Sn	08 17 32.6	+0.1
	baz=197						
YUK6	Outpost Mounta	3.10	7	Pn	Pn	08 16 57.0	+0.2
YUK6	Outpost Mounta	3.10	7	P	Pn	08 16 56.6	-0.2
	baz=188						
LOGN	Logan Glacier	3.10	343	Pn	Pn	08 16 57.2	+0.4
LOGN				IAML		08 17 20.2	
	comp=N,62nm,0.6s						

LOGN				IAML		08 17 46.4	
	comp=E,49nm,0.8s						
LOGN	Logan Glacier	3.10	343	Pn	Pn	08 16 57.1	+0.3
LOGN				Sn	Sn	08 17 35.0	+1.8
GRNC	Granite Creek	3.15	336		Pn	08 16 57.2	-0.4
GRNC				IAML		08 17 54.0	
	comp=N,77nm,0.9s						
GRNC	Granite Creek	3.15	336	Pn	Pn	08 16 55.9	-1.6
ISLE	Juniper Island	3.18	330		Pn	08 16 56.3	-1.5
WAX	Waxell Ridge	3.20	325		Pn	08 16 57.9	-0.2
GRIN	Grindle Hills	3.23	320		Pn	08 16 58.9	+0.5
SUCK	Suckling Hills	3.25	315	Pn	Pn	08 16 58.7	+0.1
SUCK				IAML		08 18 10.2	
	comp=N,43nm,0.9s						
CTGM	Chitina Glacie	3.29	341		Pn	08 16 59.4	+0.1
CTGM	Chitina Glacie	3.29	341	IAML		08 17 47.4	
	comp=N,52nm,0.6s						
CTGM	Chitina Glacie	3.29	341	Pn	Pn	08 16 59.6	+0.3
CTG	Chitna Glacier	3.29	341	P	Pn	08 16 58.2	-1.2
	baz=160						
CTG				S	Sn	08 17 38.5	+0.7
	baz=160						
KHIT	Khitrov Hills	3.32	322		Pn	08 16 58.1	-1.6
YUK5	Granite Creek	3.33	11	Pn	Pn	08 17 00.2	+0.4
YUK5				Sn	Sn	08 17 36.7	-2.1
BARN	Barnard Glacie	3.44	339		Pn	08 17 01.8	+0.4
BARN	Barnard Glacie	3.44	339	IAML		08 18 03.1	
	comp=E,42nm,0.8s						
BARN				IAML		08 18 09.4	
	comp=N,38nm,0.6s						
TGL	Tana Glacier	3.44	328	Pn	Pn	08 17 01.4	0.0
TGL				IAML		08 18 21.1	
	comp=N,53nm,1.2s						
TGL				IAML		08 18 23.2	
	comp=E,55nm,3.5s						
YUK4	Talbot Arm	3.48	4	Pn	Pn	08 17 04.3	+2.2
YUK4	Talbot Arm	3.48	4	P	Pn	08 17 03.9	+1.8
	baz=185						
WHY	Whitehorse	3.55	36		Pn	08 17 03.0	+0.2
WHY	Whitehorse	3.55	36	IAML		08 17 54.6	
	comp=N,56nm,0.8s						
WHY				IAML		08 17 58.4	
	comp=E,63nm,0.6s						
WHY	Whitehorse	3.55	36	Pn	Pn	08 17 03.0	+0.2
WHY				Sn	Sn	08 17 43.1	-1.0
WHY	Whitehorse	3.55	36	P	Pn	08 17 02.8	0.0
	baz=220,SNR=15						
WHY				S	Sn	08 17 43.3	-0.8
	baz=220						
BALM	Baldy	3.56	334		Pn	08 17 03.2	+0.2
BALM	Baldy	3.56	334	Pn	Pn	08 17 02.8	-0.2
HMT	Hamilton	3.60	315		Pn	08 17 02.5	-1.1
PTPK	Patty Peak	3.72	334		Pn	08 17 05.7	+0.4
PTPK	Patty Peak	3.72	334	Pn	Pn	08 17 05.5	+0.2
N30M	Aishikik Lake	3.74	15	P	Pn	08 17 05.0	-0.4
	baz=197						
N30M				S	Sn	08 17 49.1	+0.3
	baz=197						
YUK3	Moose Creek	3.96	351	Pn	Pn	08 17 09.2	+0.5
N31M	Braeburn, Yuko	4.00	24		Pn	08 17 09.6	+0.6
N31M	Braeburn, Yuko	4.00	24	Pn	Pn	08 17 09.4	+0.3
N31M				Sn	Sn	08 17 53.5	-1.6
N31M				Sg	Sb	08 18 08.2	+1.5
N31M	Braeburn, Yuko	4.00	24	P	Pn	08 17 09.3	+0.3
	baz=207,SNR=20						
N31M				S	Sn	08 17 54.8	-0.4
	baz=207						
VRDI	Verde Repeater	4.01	329		Pn	08 17 08.3	-0.9
YUK2	White River	4.01	348		Pn	08 17 10.3	+1.1
YUK2	White River	4.01	348	Pn	Pn	08 17 10.3	+1.1
P33M	Teslin, Yukon	4.02	52		Pn	08 17 09.0	-0.4
P33M	Teslin, Yukon	4.02	52	IAML		08 18 08.5	
	comp=N,36nm,0.5s						
P33M				IAML		08 18 10.9	
	comp=E,37nm,0.7s						
P33M	Teslin, Yukon	4.02	52	Pn	Pn	08 17 09.0	-0.4
P33M				Sn	Sn	08 17 54.0	-1.7
P33M				Sg	Sb	08 18 08.2	+0.9
P33M	Teslin, Yukon	4.02	52	P	Pn	08 17 08.9	-0.4
	baz=237						
P33M				S	Sn	08 17 54.4	-1.4
	baz=237						
MCARA	McCarthy VSAT	4.03	332	Pn	Pn	08 17 09.4	+0.1
MCARA				IAML		08 18 38.9	
	comp=N,49nm,1.3s						
MCARA	McCarthy VSAT	4.03	332	P	Pn	08 17 09.4	+0.1
	baz=149,SNR=15						
CRAG	Craig	4.11	123		Pn	08 17 10.2	-0.3
CRAG	Craig	4.11	123	IAML		08 18 39.5	
	comp=E,23nm,2.7s						
CRAG	Craig	4.11	123	P	Pn	08 17 09.9	-0.6
	baz=308						
BMRM	Bremner River	4.16	320	Pn	Pn	08 17 10.0	-1.2
BMRM				IAML		08 18 25.3	
	comp=N,32nm,0.5s						
BMRM				IAML		08 18 34.7	
	comp=E,28nm,0.8s						
BMRM	Bremner River	4.16	320	P	Pn	08 17 10.1	-1.1
	baz=136						
GLB	Gilahina Butte	4.28	329		Pn	08 17 12.3	-0.5
BVCY	Beaver Creek	4.63	350	Pn	Pn	08 17 19.5	+1.9
BVCY	Beaver Creek	4.63	350	P	Pn	08 17 17.1	-0.5
	baz=169						
N25K	Chitina, Valde	4.64	326		Pn	08 17 17.6	-0.2
N25K	Chitina, Valde	4.64	326	P	Pn	08 17 18.5	+0.7
	baz=142						
M27K	Edge Creek, AK	4.69	344		Pn	08 17 20.1	+1.5
M27K	Edge Creek, AK	4.69	344	IAML		08 18 50.8	
	comp=E,14nm,0.9s						
M27K				IAML		08 18 51.0	
	comp=N,18nm,0.8s						
M27K	Edge Creek, AK	4.69	344	P	Pn	08 17 19.3	+0.7
	baz=162						
FID	Port Fidalgo	4.73	311		Pn	08 17 19.2	+0.3
M30M	Minto, Yukon	4.86	13		Pn	08 17 21.0	+0.2
M30M	Minto, Yukon	4.86	13	IAML		08 18 48.2	
	comp=N,20nm,1.2s						
M30M				IAML		08 18 51.6	
	comp=E,22nm,1.4s						
M30M	Minto, Yukon	4.86	13	Pn	Pn	08 17 21.0	+0.2
M30M	Minto, Yukon	4.86	13	P	Pn	08 17 20.6	-0.1
	baz=195,SNR=9.9						
DLBC	Dease Lake	4.87	80	LR	LR	08 18 57.1	
	comp=E,23nm,20.6s,baz=326,slow=34						
DLBC	Dease Lake	4.87	80		Pn	08 17 21.3	+0.3
DLBC				IAML		08 18 48.7	
	comp=N,26nm,1.0s						
DLBC	Dease Lake	4.87	80	Pn	Pn	08 17 21.6	+0.7
DLBC				Sn	Sn	08 18 13.6	-3.0
DLBC				Sg	Sb	08 18 32.8	+1.3
M26K	Nabesna, AK	4.92	339		Pn	08 17 23.1	+1.4
M31M	Drury Creek, Y	4.95	27		Pn	08 17 22.7	+0.7
M31M	Drury Creek, Y	4.95	27	Pn	Pn	08 17 22.9	+0.9
M31M				Sn	Sn	08 18 17.0	-1.5
M31M	Drury Creek, Y	4.95	27	P	Pn	08 17 21.3	-0.7
	baz=211,SNR=16						
M31M				S	Sn	08 18 17.9	-0.6
	baz=211						
LIB	Langara Island	4.99	134	Pn	Pn	08 17 22.4	-0.1
KLU	Klutina	4.99	319		Pn	08 17 23.1	+0.5
KLU				IAML		08 18 54.0	
	comp=E,17nm,0.8s						
KLU				IAML		08 18 54.3	
	comp=N,16nm,0.8s						
KLU	Klutina	4.99	319	P	Pn	08 17 23.0	+0.4
	baz=134						
GLI	Glacier Island	5.05	310	Pn	Pn	08 17 25.7	+2.3
GLI				IAML		08 18 09.4	
	comp=E,15nm,0.6s						
GLI				IAML		08 18 09.7	
	comp=N,12nm,0.6s						
FARO	Faro, Yukon	5.24	31	Pn	Pn	08 17 27.6	+1.6
FARO				Sn	Sn	08 18 24.3	-1.5
FARO				Sg	Sb	08 18 42.7	+0.4
BCAR	Beaver Creek A	5.36	347	Pn	Pn	08 17 29.6	+1.9
L27K	Beaver Creek,	5.36	347		Pn	08 17 27.7	0.0
L27K	Beaver Creek,	5.36	347	P	Pn	08 17 27.7	0.0
	baz=165						
M24K	Tolsona, Glenn	5.51	323	Pn	Pn	08 17 31.3	+1.6
MENT	Mentasta	5.55	338		Pn	08 17 33.1	+2.8
L26K	Log Cabin Wild	5.56	340		Pn	08 17 32.0	+1.6
L26K	Log Cabin Wild	5.56	340	P	Pn	08 17 31.3	+0.9
	baz=156,SNR=6.8						
SCM	Sheep Creek Mo	5.71	317		Pn	08 17 33.1	+0.5
SCM	Sheep Creek Mo	5.71	317	P	Pn	08 17 33.2	+0.7
	baz=131						
MAYO	Mayo, Yukon	5.95	14	Pn	Pn	08 17 36.7	+1.0
PAX	Paxson	5.98	331	Pn	Pn	08 17 36.4	+0.1
DIB	Dawson Inlet,	6.03	138		Pn	08 17 37.3	+0.5
DIB	Dawson Inlet,	6.03	138	Pn	Pn	08 17 36.8	0.0
H02S1	DAWSON INLET T	6.03	138	Pn	Pn	08 17 36.2	-0.5
H02S1				Sn	Sn	08 18 46.5	+1.5
SML	Sawmill	6.07	314	Pn	Pn	08 17 37.2	-0.2
RUBB	Prince Rupert	6.12	122	Pn	Pn	08 17 37.6	-0.5
RUBB	Prince Rupert	6.12	122	Pn	Pn	08 17 38.5	+0.5
MMPY	Sheldon Lake,	6.16	36	Sn	Sn	08 18 45.9	-2.5
DAWY	Dawson	6.21	359		Pn	08 17 39.7	+0.4
DAWY	Dawson	6.21	359	Pn	Pn	08 17 39.8	+0.4
DAWY	Dawson	6.21	359	P	Pn	08 17 39.1	-0.2
	baz=179,SNR=5.9						
PMR	Palmer	6.27	311	Pn	Pn	08 17 39.7	-0.3
RC01	Rabbit Creek A	6.28	305	Pn	Pn	08 17 40.0	-0.2
K27K	Chicken	6.33	348		Pn	08 17 41.6	+0.7
WAT6	Susitna Watana	6.36	321	P	Pn	08 17 41.9	+0.3
	baz=134						
CNPM	China Poot	6.51	290		Pn	08 17 42.6	-0.8
BNAB	Bonilla	6.52	129	Pn	Pn	08 17 43.8	+0.3
SCRK	Sand Creek	6.55	341	Pn	Pn	08 17 44.5	+0.4
SCRK	Sand Creek	6.55	341	P	Pn	08 17 44.6	+0.6
	baz=157,SNR=5.9						
GRNB	Grenville Isla	6.57	124	Pn	Pn	08 17 44.6	+0.4
GRNB	Grenville Isla	6.57	124	Pn	Pn	08 17 44.8	+0.6
DHY	Denali Highway	6.60	326	Pn	Pn	08 17 42.5	-2.4
BNB	Barry Inlet	6.79	138	Pn	Pn	08 17 47.6	+0.2
BNKB	Banks Island	6.94	127	Pn	Pn	08 17 49.8	+0.4
J26L	Joseph Creek	6.97	344	P	Pn	08 17 50.4	+0.6
	baz=160						
EGAK	Eagle	6.99	353		Pn	08 17 51.0	+1.0
KDAK	Kodiak Island	7.17	275	Pn	Pn	08 17 50.6	-1.8
KDAK	Kodiak Island	7.17	275	Pn	Pn	08 17 52.4	-0.1
HG4B	Hotspring	7.22	137	Pn	Pn	08 17 54.0	+0.8
I29M	Ogilvie Camp,	7.52	3	Pn	Pn	08 17 58.8	+1.6
OHAK	Old Harbor	7.63	271	Pn	Pn	08 17 58.4	-0.4
TRF	Thorofare Moun	7.81	320	Pn	Pn	08 18 03.3	+2.0
ILAR	Eielson Array	7.84	335	Pn	Pn	08 18 01.5	-0.2
	comp=N,0.3nm,0.3s,baz=156,slow=13,SNR=18						
	comp=N,0.3nm,0.7s						
CCB	Clear Creek Bu	7.96	332		Pn	08 18 01.8	-1.4
BBB	Bella Bella	8.53	127	Pn	Pn	08 18 12.3	+1.3
FNBB	Fort Nelson	8.54	76	Pn	Pn	08 18 12.8	+1.5
YKA	Yellowknife Ar	13.01	59	Pn	Pn	08 19 11.8	-0.5
	comp=N,0.1nm,0.3s,baz=259,slow=14,SNR=5.2						
	comp=N,0.2nm,0.5s						
NVAR	Mina Array Bea	23.74	136	P	P	08 21 23.7	+4.0
	comp=N,0.3nm,0.7s,baz=340,slow=7.7,SNR=2.7						
	comp=N,0.3nm,0.7s						
H11N2	WAKE ISLAND Hy	54.56	249	T	T	09 25 04.3	
	baz=31,slow=76,SNR=100						
H11N3	WAKE ISLAND Hy	54.56	249	T	T	09 25 10.6	
	baz=31,slow=76,SNR=121						
H11N1	WAKE ISLAND Hy	54.58	249	T	T	09 25 06.4	
	baz=31,slow=76,SNR=66						
H11S1	WAKE ISLAND Hy	55.69	249	T	T	09 26 34.4	
	baz=31,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	55.70	249	T	T	09 26 29.8	
	baz=31,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	55.71	249	T	T	09 26 34.9	
	baz=31,slow=76,SNR=26						

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*PDG **25** 08:36:06.8±0.3, 34°.19N×25°.43E, h19^{km}±11^{km}, MD5.4/1, ML5.3/13, Error ellipse: s-maj=57.5km s-min=28.3km az=90.0*

*BJI **25** 08:36:09.9±0.0, 34°.83N×25°.66E, h26^{km}, mb5.1/75, mB5.3/65, Ms5.2/80, Ms7 4.9/75*

*HLW **25** 08:36:10.2, 35°.18N×26°.26E, h8^{km}±17^{km}, Md4.4, Ml5.4*

*MOS **25** 08:36:12.9±1.2, 34°.98N×26°.24E, h17^{km}, mb5.4/54, MS4.6/30, Error ellipse: s-maj=4.6km s-min=3.0km az=80.7*

*TIR **25** 08:36:13.1, 34°.77N×25°.45E, h50^{km}±99^{km}, Ml5.3*

*NEIC **25** 08:36:13.7±2.6, 34°.95N±0°.06×26°.21E±0°.05, h10^{km}±1^{km}, mb5.4/681, Mww5.3, ML5.5(ATH), Error ellipse: s-maj=10.1km s-min=7.1km az=167.0*

*NIC **25** 08:36:13.4±0.0, 34°.89N×26°.33E, h19^{km}±8^{km}, Ml5.7/10*

*ISK **25** 08:36:13.9, 34°.92N×26°.36E, h20^{km}, ML5.4/57*

*GCMT **25** 08:36:14.7±0.2, 34°.92N±0°.01×26°.28E±0°.01, h16^{km}, MW5.7/103, Moment Tensor Solution. s85,c134; s103,c159; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.50±.03; M$_{\theta\theta}$-0.22±.02; M$_{\phi\phi}$0.71±.02; M$_{r\theta}$1.35±.07; M$_{\theta\phi}$0.05±.02; M$_{\phi r}$-3.46±.06; Best double couple: M$_0$3.76900×10^{17} NP1:ϕ_s212.00000°, δ7.00000°, λ-37.00000°. NP2:ϕ_s339.00000°, δ86.00000°, λ-95.00000°. Principal axes: T 3.7990, Plg41.0000°, Azm74.0000°; N -0.0610, Plg5.0000°, Azm339.0000°; P -3.7380, Plg49.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MED_RC **25** 08:36:14.0±0.3, 34°.97N×26°.04E, h25^{km}, MW5.5/29, Moment Tensor Solution. Body waves: s3,c3;Mantle waves: s29,c47; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.70±.06; M$_{\theta\theta}$0.19±.04; M$_{\phi\phi}$0.51±.04; M$_{r\theta}$0.62±.05; M$_{\theta\phi}$-0.21±.03; M$_{\phi r}$-1.99±.04; Best double couple: M$_0$2.19000×10^{17} NP1:ϕ_s342.00000°, δ81.00000°, λ-88.00000°. NP2:ϕ_s149.00000°, δ9.00000°, λ-103.00000°. Principal axes: T 2.1400, Plg36.0000°, Azm70.0000°; N 0.0900, Plg2.0000°, Azm162.0000°; P -2.2300, Plg54.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*DDA **25** 08:36:14.8±0.0, 35°.01N×26°.20E, h7^{km}±3^{km}, MW5.3*

*NEIC **25** 08:36:15, 34°.92N×26°.21E, h24^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.47; M$_{\theta\theta}$-0.06; M$_{\phi\phi}$0.53; M$_{r\theta}$0.06; M$_{\theta\phi}$0.36; M$_{\phi r}$-1.00; Fault plane solution: M$_0$1.18000×10^{17} NP1: ϕ_s235.00000°, δ22.00000°, λ-37.00000°. NP2: ϕ_s360.00000°, δ77.00000°, λ-108.00000°. Principal axes: T 1.2105, Plg30.0000°, Azm104.0000°; N -0.0641, Plg18.0000°, Azm4.0000°; P -1.1465, Plg55.0000°, Azm247.0000°;*

*ATH **25** 08:36:15.8, 35°.04N×26°.29E, h20^{km}±3^{km}, ML5.5/7 Error ellipse: s-maj=3.6km s-min=1.1km az=340.0*

*THE **25** 08:36:15.2, 34°.92N×26°.26E, h7^{km}, ML5.6/7, Error ellipse: s-maj=0.7km s-min=0.3km az=342.0*

*IDC **25** 08:36:16.1±1.1, 35°.11N×26°.27E, h26^{km}±6^{km}, mb4.9/49, mbtmp5.1/59, ML4.6/10, MS4.7/80, Error ellipse: s-maj=8.6km s-min=6.9km az=166.0*

*GII **25** 08:36:17.7±0.0, 34°.75N×26°.66E, h20^{km}±1^{km}, mb4.8/4, MD4.8/4, Mm5.2/3*

ISC 25 08:36:15.4±0.3**, 35°.04N**±0°.02×**26°.28E**±0°.02**, h24**^{km}±2^{km}**, h24**^{km}**:pP-P, n1984,** σ**1^{s}86**/2196**, mb5.3**/473**, MS4.8**/101**, 175C-75D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.09	326	P	Pb	08 36 19.8	-0.1
ZKR				S	Sb	08 36 22.5	-0.4
ZKR	Zakros	0.09	326	P	Pb	08 36 19.8	-0.1
ZKR				S	Sb	08 36 22.9	0.0
ZKR	Zakros	0.09	326	PG	Pb	08 36 19.8	-0.1
ZKR	Zakros	0.09	326	⇑iP	Pb	08 36 19.1	-0.8
ZKR				S	Sb	08 36 23.1	+0.2
ZKR				AML	AML	08 36 24.8	
	2µm,0.4s						
ZKR				AML	AML	08 36 24.8	
	2µm,0.4s						
ZKR				AML	AML	08 36 25.9	
	3µm,0.5s						
ZKR				AML	AML	08 36 25.9	
	3µm,0.5s						
FRMA	Ierapetra Chan	0.45	266	P	Pb	08 36 22.4	-2.3
FRMA				S	Sb	08 36 28.4	-2.5
FRMA				AML	AML	08 36 31.7	
FRMA				AML	AML	08 36 32.6	
FRMA	Ierapetra Chan	0.45	266	P	Pb	08 36 22.4	-2.3
FRMA				S	Sb	08 36 27.8	-3.1
NPS	Neapolis	0.58	292	P	Pb	08 36 26.8	-0.3
NPS				S	Sn	08 36 36.2	-0.8
NPS	Neapolis	0.58	292	P	Pb	08 36 27.5	+0.5
NPS				S	Sn	08 36 36.9	-0.1
KARP	Karpathos	0.88	55	P	Pn	08 36 32.6	+0.3
KARP	Karpathos	0.88	55	P	Pn	08 36 33.0	+0.8
KARP				S	Sn	08 36 47.3	+2.9
	523µm,0.6s						
KARP	Karpathos	0.88	55	PG	Pn	08 36 32.6	+0.3
KARP				SG	Sn	08 36 45.3	+0.9
KARP	Karpathos	0.88	55	Pg	Pn	08 36 33.1	+0.8
KARP	Karpathos	0.88	55	⇓iP	Pn	08 36 32.5	+0.1
KARP				S	Sn	08 36 47.2	+2.9
KARP				AML	AML	08 36 48.9	
	1µm,0.6s						
KARP				AML	AML	08 36 48.9	
	1µm,0.6s						
KARP				AML	AML	08 36 50.8	
	919nm,0.6s						
KARP				AML	AML	08 36 50.8	
	919nm,0.6s						
KARP	Karpathos	0.88	55	⇓P	Pn	08 36 32.4	+0.1
HRKL	Herakleio	1.00	286	PN	Pb	08 36 34.1	+0.1
IACM	Heraklion	1.02	285	P	Pb	08 36 35.1	+0.7
IACM	Heraklion	1.02	285	P	Pb	08 36 34.5	+0.1
IACM				S	Sn	08 36 49.9	+2.2
KSTL	Kastelli Herak	1.02	285	P	Pn	08 36 30.4	-3.7
KSTL	Kastelli Herak	1.02	285	P	Pn	08 36 31.0	-3.1
KSTL				S	Sb	08 36 42.9	-4.4
IDI	Anoyia	1.16	283	⇑P	Pn	08 36 36.0	-0.1
IDI				⇑S	Sb	08 36 53.5	+2.0
IDI	Anoyia	1.16	283	Pg	Pb	08 36 37.4	+0.6
	3µm,0.3s,baz=144,slow=9.7,SNR=1719						
IDI				Lg	Lg	08 36 54.9	
	7µm,0.3s,baz=346,slow=18,SNR=11						
IDI				LR	LR	08 37 23.8	
	comp=Z,121µm,20.1s,baz=83,slow=59						
IDI	Anoyia	1.16	283	P	Pb	08 36 37.0	+0.2
IDI				S	Sb	08 36 53.1	+1.7
IDI				AML	AML	08 37 00.0	
IDI				AML	AML	08 37 03.7	
IDI	Anoyia	1.16	283	P	Pn	08 36 36.3	+0.2
IDI				S	Sb	08 36 53.2	+1.7
	145µm,0.9s						
IDI	Anoyia	1.16	283	PN	Pn	08 36 36.1	-0.1
IDI	Anoyia	1.16	283		Pb	08 36 37.0	+0.2
IDI	Anoyia	1.16	283	⇑P	Pn	08 36 36.0	-0.1
SIVA	Sivas	1.20	269	P	Pb	08 36 37.6	+0.2
SIVA				S	Sb	08 36 54.0	+1.5
SIVA				AML	AML	08 37 00.1	
SIVA				AML	AML	08 37 01.1	
SIVA	Sivas	1.20	269	P	Pn	08 36 36.9	+0.3
SIVA				S	Sb	08 36 53.7	+1.1
	382µm,0.6s						
TMBK	Timbaki Herakl	1.24	272	P	Pb	08 36 38.2	+0.1
TMBK				S	Sb	08 36 54.5	+0.9
TMBK				AML	AML	08 37 02.9	
TMBK				AML	AML	08 37 04.0	
TMBK	Timbaki Herakl	1.24	272	P	Pn	08 36 37.0	-0.1
TMBK				S	Sb	08 36 54.7	+1.1
	156µm,0.9s						
SANT	Santorini	1.48	334	⇑P	Pb	08 36 42.2	-0.1
SANT	Santorini	1.48	334	P	Pb	08 36 42.0	-0.2
SANT				S	Sb	08 37 03.3	+2.6
SANT	Santorini	1.48	334	PN	Pb	08 36 41.7	-0.6
SANT				SN	Sb	08 37 03.2	+2.6
SANT	Santorini	1.48	334	Pn	Pb	08 36 42.0	-0.2
SANT	Santorini	1.48	334	⇑P	Pn	08 36 40.8	+0.2
SNT5	Nea Kammeni, S	1.54	332	P	Pb	08 36 43.0	-0.1
CMBO	Columbo, Santo	1.59	334	P	Pb	08 36 43.5	-0.5
SAP4	Santorini-Oia	1.60	333	P	Pb	08 36 44.3	0.0
NIS1	Nisyros Isl.	1.72	25	P	Pb	08 36 45.9	-0.4
NIS1	Nisyros Isl.	1.72	25	P	Pb	08 36 45.8	-0.4
NIS1				S	Sb	08 37 09.3	+1.8
	114µm,0.7s						
NIS1	Nisyros Isl.	1.72	25	PN	Pb	08 36 45.9	-0.4
KOSK	Kos Island	1.80	18	P	Pb	08 36 47.3	-0.3
KOSK	Kos Island	1.80	18	P	Pb	08 36 47.0	-0.6
KOSK				S	Sb	08 37 11.8	+2.1
	91µm,0.7s						
KOSK	Kos Island	1.80	18	PN	Pb	08 36 46.8	-0.8
GVD	Gavdhos	1.81	264	P	Pb	08 36 47.9	+0.1
GVD				AML	AML	08 37 29.2	
GVD				AML	AML	08 37 33.0	
GVD	Gavdhos	1.81	264	PN	Pb	08 36 47.3	-0.5
CHAN	Chania	1.89	285	P	Pb	08 36 49.5	+0.4
ARG	Arkhangelos	1.91	52	P	Pb	08 36 49.6	+0.1
ARG	Arkhangelos	1.91	52	P	Pb	08 36 48.0	-1.5
ARG				S	Sb	08 37 13.5	+0.6
	82µm,0.6s						
ARG	Arkhangelos	1.91	52	PN	Pb	08 36 49.4	-0.1
ARG	Arkhangelos	1.91	52		Pb	08 36 49.0	-0.5
ARG	Arkhangelos	1.91	52	P	Pb	08 36 49.0	-0.5
ARG	Arkhangelos	1.91	52	⇑P	Pb	08 36 49.4	-0.1
IMMV	Iera Moni Meta	1.92	283	P	Pb	08 36 50.2	+0.5
IMMV				AML	AML	08 37 22.6	
IMMV				AML	AML	08 37 23.2	
IMMV	Iera Moni Meta	1.92	283	PN	Pb	08 36 49.4	-0.3
DAT	Datca	1.99	32	P	Pb	08 36 49.5	-1.4
DAT				S	Sb	08 37 16.0	+0.7
DAT	Datca	1.99	32	PN	Pb	08 36 49.6	-1.4
DAT	Datca	1.99	32	P	Pb	08 36 49.3	-1.6
DAT				S	Sb	08 37 15.4	+0.1
APE	Apeiranthos	2.11	344	⇑P	Pb	08 36 51.2	-1.8
APE	Apeiranthos	2.11	344	P	Pn	08 36 50.8	+1.6
APE				S	Sb	08 37 19.4	+0.7
APE	Apeiranthos	2.11	344	PN	Pn	08 36 50.8	+1.6
APE	Apeiranthos	2.11	344	d iP	Pn	08 36 50.7	+1.6
APE	Apeiranthos	2.11	344	P	Pn	08 36 50.8	+1.6
APE	Apeiranthos	2.11	344	⇓P	Pn	08 36 50.6	+1.4
KNDR	Palaiochora Ch	2.13	276	P	Pb	08 36 53.2	-0.1
KNDR	Palaiochora Ch	2.13	276	PN	Pb	08 36 52.9	-0.4
BODT	Bodrum	2.18	22	P	Pb	08 36 52.9	-1.3
BODT	Bodrum	2.18	22	PN	Pn	08 36 51.7	+1.6
BODT	Bodrum	2.18	22	P	Pn	08 36 52.1	+2.0
BODT				i AML	AML	08 37 44.0	
	comp=E,8µm,1.2s						
BODT				i AML	AML	08 37 45.0	
	comp=N,8µm,0.7s						
BDRM	Kayabasi	2.23	25	P	Pn	08 36 52.6	+1.8
BDRM				S	Sb	08 37 20.1	-2.0
BDRM				i AML	AML	08 37 33.0	
	comp=E,7µm,0.6s						
BDRM				i AML	AML	08 37 38.0	
	comp=N,6µm,0.6s						
MHLO	Agia Marina, M	2.24	318	P	Pn	08 36 52.8	+1.9
MHLO				S	Sb	08 37 21.4	-1.0
TURN	Turunc	2.35	42	PN	Pn	08 36 54.5	+2.0
TURN	Turunc	2.35	42	P	Pn	08 36 54.2	+1.7
TURN				i AML	AML	08 37 35.0	
	comp=E,1µm,0.7s						
TURN				i AML	AML	08 37 40.0	
	comp=N,8µm,0.8s						
DDIM	Aydin, Didim	2.53	18	P	Pn	08 36 57.3	+2.3
DDIM				i AML	AML	08 37 47.0	
	comp=N,1µm,1.2s						
DDIM				i AML	AML	08 37 49.0	
	comp=E,1µm,1.2s						
MLSB	Milas	2.56	28	PN	Pb	08 36 58.0	-2.5
MLSB	Milas	2.56	28	P	Pn	08 36 57.5	+2.3
ANKY	Antikythira Is	2.56	290	P	Pb	08 37 00.2	-0.5
ANKY				AML	AML	08 37 45.4	
	comp=N,59890µm,0.7s						
ANKY				AML	AML	08 37 46.9	
	comp=E,76486µm,0.8s						
ANKY	Antikythira Is	2.56	290	P	Pn	08 36 56.1	+0.8
DALY	Dalyan (Mula)	2.62	47	PN	Pn	08 36 58.5	+2.4
YER	Yerkesik	2.65	37	PN	Pb	08 36 59.5	-2.6
YER	Yerkesik	2.65	37	P	Pb	08 36 59.4	-2.7
YER				S	Sb	08 37 32.4	-1.8
YER				i AML	AML	08 37 42.0	
	comp=E,2µm,0.7s						
YER				i AML	AML	08 37 45.0	
	comp=E,2µm,1.0s						
MULA	Mugla, Merkez-	2.76	36	P	Pb	08 37 01.2	-2.9
MULA				S	Sb	08 37 35.1	-2.4
MULA				i AML	AML	08 37 49.0	
	comp=E,9µm,0.6s						
MULA				i AML	AML	08 37 49.0	
	comp=E,4µm,1.2s						
GCAM	G?zelcaml?	2.76	16	PN	Pn	08 37 00.8	+2.7
GCAM	G?zelcaml?	2.76	16	P	Pn	08 36 59.9	+1.8
FETY	Fethiye	2.78	54	PN	Pn	08 37 00.1	+1.7
FETY	Fethiye	2.78	54	P	Pb	08 37 02.4	-2.0
KTHA	Kythira Island	2.88	296	P	Pn	08 37 01.0	+1.2
KSL	Kastellorizon	2.91	67	P	Pn	08 37 01.6	+1.4
KSL				AML	AML	08 38 12.1	

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      comp=E,22nm,1.9s
KSL                                 AML     AML   08 38 12.7
      comp=E,28nm,1.9s
AYDN  Tasoluk          2.92  26     P       Pn    08 37 03.1 +2.8
AYDN                              i AML     AML   08 38 02.0
      comp=E,4µm,1.0s
AYDN                              i AML     AML   08 38 04.0
      comp=E,4µm,0.8s
KTHR  Kythira          2.93 295     P       Pn    08 37 01.3 +0.9
AKAS  Kas              2.96  65     PN      Pn    08 37 02.6 +1.6
AKAS  Kas              2.96  65             Pn    08 37 02.4 +1.4
AKAS  Kas              2.96  65     P       Pn    08 37 02.4 +1.4
DGB   zmir             3.04   9     P       Pn    08 37 04.1 +2.1
DGB                               i AML     AML   08 37 44.0
      comp=E,2µm,0.6s
DGB                               i AML     AML   08 37 55.0
      comp=E,1µm,0.9s
AYDB  Zeytinkoy-Aydi   3.18  24     PN      Pn    08 37 06.5 +2.6
ZEYE  Izmir, Urla-Ze   3.19   3     P       Pn    08 37 05.6 +1.6
CAEL  Denizli, Camel   3.22  49     P       Pn    08 37 07.2 +2.6
TAVA  DENIZLI_Tavas    3.22  41     P       Pn    08 37 06.9 +2.4
URLA  Izmir            3.32   4     PN      Pn    08 37 07.5 +1.7
URLA  Izmir            3.32   4     P       Pn    08 37 07.2 +1.4
URLA                              i AML     AML   08 38 20.0
      comp=E,10µm,1.9s
URLA                              i AML     AML   08 38 24.0
      comp=E,6µm,0.9s
CHOS  Chios island     3.34 357     PN      Pn    08 37 08.1 +2.0
BLCB  Balcova          3.39  10     PN      Pn    08 37 08.6 +1.9
BLCB  Balcova          3.39  10     P       Pn    08 37 08.8 +2.0
BLCB                                S       Sn    08 37 45.6 -0.6
BLCB                              i AML     AML   08 38 14.0
      comp=E,7µm,0.6s
BLCB                              i AML     AML   08 38 14.0
      comp=E,4µm,0.6s
ELL   Elmali           3.41  59     PN      Pn    08 37 09.7 +2.6
ELL   Elmali           3.41  59             Pn    08 37 09.4 +2.4
ELL   Elmali           3.41  59     P       Pn    08 37 09.4 +2.4
ELL   Elmali           3.41  59     P       Pn    08 37 09.5 +2.4
ELL   Elmali           3.41  59    ⇑P       Pn    08 37 09.6 +2.6
GOLH  Golhisar         3.44  50     P       Pn    08 37 10.2 +2.6
AKUM  Antalya-Kumluc   3.55  68     P       Pn    08 37 10.4 +1.5
SLUM  Salum            3.65 194     P       Pn    08 37 10.1 -0.3
      baz=194
MATC  Matruh           3.77 167     P       Pn    08 37 11.5 -0.5
      baz=167
KORT  Korkueli         3.84  58     P       Pn    08 37 14.3 +1.3
KULA  Kula-Manisa      3.96  28     PN      Pn    08 37 17.6 +3.0
KULA  Kula-Manisa      3.96  28     P       Pn    08 37 17.1 +2.5
KULA                                S       Sn    08 38 05.0 +4.7
ZEDA  zmir-Bergama     3.97   9     P       Pn    08 37 16.4 +1.7
ANTB  Antalya          4.01  61     P       Pn    08 37 17.7 +2.6
AKHS  Akhisar          4.02  17     P       Pn    08 37 18.0 +2.6
AKHS                              i AML     AML   08 38 37.0
      comp=E,2µm,1.0s
AKHS                              i AML     AML   08 38 42.0
      comp=E,1µm,1.6s
BRDR  BURDUR-Merkez    4.04  48     P       Pn    08 37 17.6 +1.8
DKL   Dikili           4.05   7     PN      Pn    08 37 18.5 +2.7
DKL   Dikili           4.05   7     P       Pn    08 37 18.4 +2.5
DKL   Dikili           4.05   7    ⇑P       Pn    08 37 18.6 +2.7
ITM   Ithomi           4.12 302     PN      Pn    08 37 19.0 +2.3
ITM   Ithomi           4.12 302     Pn      Pn    08 37 18.6 +1.9
ITM   Ithomi           4.12 302    ⇓P       Pn    08 37 19.1 +2.4
BUCA  Burdur, Bucak-   4.15  55     P       Pn    08 37 19.7 +2.5
PASA  Karahalli, USA   4.19  37     P       Pn    08 37 19.5 +1.7
BCK   Bucak            4.24  54     PN      Pn    08 37 21.1 +2.6
BCK   Bucak            4.24  54     P       Pn    08 37 20.3 +1.8
AYVA  Ayvalik          4.27   4     P       Pn    08 37 19.6 +0.8
USAK  Uak-Merkez       4.27  30     P       Pn    08 37 21.6 +2.7
ISP   Isparta          4.41  50     PN      Pn    08 37 22.5 +1.6
ISP   Isparta          4.41  50     Pn      Pn    08 37 21.5 +0.7
ISP   Isparta          4.41  50c  iP        Pn    08 37 22.4 +1.6
OSC1  CSNet OBS 1      4.42 109     P       Pn    08 37 18.9 -2.0
KOCA  Canakkale, Ayv   4.45 359     P       Pn    08 37 23.0 +1.6
KZIL  AFYON_Kizioren   4.47  43     P       Pn    08 37 23.0 +1.3
STEP  BALIKESIR_Sava   4.48  14     P       Pn    08 37 24.2 +2.5
SIMA  Simav-Kutahya    4.58  27     PN      Pn    08 37 26.1 +3.0
SIMA  Simav-Kutahya    4.58  27     P       Pn    08 37 26.2 +3.1
BAGO  Egridir - ISPA   4.68  50     P       Pn    08 37 24.9 +0.4
AFYN  Afyon-Dinar-K    4.68  45     P       Pb    08 37 36.5 -0.4
BAYC  CANAKKALE_Bayr   4.70   3     P       Pn    08 37 26.5 +1.8
GEDZ  Gediz            4.72  31     PN      Pn    08 37 27.8 +2.8
GEDZ  Gediz            4.72  31     P       Pn    08 37 27.6 +2.6
EZN   Ezine            4.77   0     PN      Pn    08 37 27.5 +1.8
GDZ   Gediz            4.78  31     P       Pn    08 37 27.4 +1.4
BOZC  Bozcaada         4.79 358     PN      Pn    08 37 27.9 +1.9
SHUT  Suhut-Afyon      4.90  43     PN      Pn    08 37 29.4 +1.8
SHUT  Suhut-Afyon      4.90  43     P       Pn    08 37 28.5 +0.8
AFYO  Afyonkarahisar   4.94  40     P       Pn    08 37 30.5 +2.5
AKMS  Akamas           4.97  89⇑iP          Pn    08 37 27.7 -0.8
AKMS                                AML     AML   08 38 26.3
      comp=E,14nm,0.5s
AKMS                                AML     AML   08 38 26.3
      comp=E,25nm,0.7s
ECEA  Canakkale, Ece   4.99 359     P       Pn    08 37 31.2 +2.5
SEDI  Konya, Seydise   5.04  60     P       Pn    08 37 31.9 +2.4
GAZI  Gazipasa         5.06  75     PN      Pn    08 37 29.1 -0.6
GAZI  Gazipasa         5.06  75     P       Pn    08 37 29.3 -0.5
TVSB  Tavsanli         5.08  29     PN      Pn    08 37 32.9 +2.9
TVSB  Tavsanli         5.08  29     P       Pn    08 37 31.9 +1.8
TVSB                                S       Sn    08 38 29.4 +1.4
TVSB                              i AML     AML   08 38 33.0
      comp=E,585nm,0.8s
TVSB                              i AML     AML   08 39 41.0
      comp=E,504nm,3.0s
YVAC  Isparta, Yalva   5.13  50     P       Pn    08 37 31.8 +1.1
YVAC                              i AML     AML   08 39 27.0
      comp=E,663nm,2.7s
YVAC                              i AML     AML   08 39 40.0
      comp=E,700nm,2.6s
GADA  Gvkgeada         5.15 357     PN      Pn    08 37 33.4 +2.5
NATA  Nata             5.18  91     P       Pn    08 37 30.3 -1.0
NATA                                AML     AML   08 38 31.4
      comp=E,32nm,0.5s
NATA                                AML     AML   08 38 31.7
      comp=E,22nm,0.7s
ALFC  Alefka           5.19  87⇑iP          Pn    08 37 30.6 -0.9
ALFC                                AML     AML   08 38 31.0
      comp=E,38nm,0.7s
ALFC                                AML     AML   08 38 31.4
      comp=E,35nm,0.7s
DOGA  KONYA_Doganhis   5.31  53     P       Pn    08 37 35.4 +2.1
ANDZ  Kutahya, Merke   5.31  32     P       Pn    08 37 35.4 +2.2
GELI  Tayfur-Gelibol   5.35   2     PN      Pn    08 37 36.3 +2.7
HDMB  Hadim            5.39  67     PN      Pn    08 37 36.0 +1.6
KRBG  Karabiga-Canak   5.40   8     PN      Pn    08 37 37.1 +2.8
LEF   Lefka            5.42  87     PN      Pn    08 37 33.2 -1.5
LEF   Lefka            5.42  87     P       Pn    08 37 33.8 -0.9
SZAC  Souni            5.44  91⇑iP          Pn    08 37 33.9 -1.0
SZAC                                AML     AML   08 38 37.9
      comp=E,8.2nm,0.5s
SZAC                                AML     AML   08 38 40.4
      comp=E,13nm,0.6s
EDC   Edincik          5.44  13     PN      Pn    08 37 38.0 +3.1
OUR   Ouranopolis      5.59 342     PN      Pn    08 37 41.2 +4.3
KMER  Konya-Meram      5.62  59     P       Pn    08 37 39.9 +2.5
ERIK  Erikli-Kesan     5.62   2     PN      Pn    08 37 40.1 +2.7
ERMK  Ermenek          5.62  72     P       Pn    08 37 39.9 +2.2
ERMK                                S       Sn    08 38 42.0 +0.4
ENEZ  Enez             5.68 359     PN      Pn    08 37 41.3 +3.1
KONT  Konya--Tatoy     5.69  58     PN      Pn    08 37 40.8 +2.4
AUBOZ BOZOYUK          5.70  30     PN      Pn    08 37 41.4 +2.8
MAR6  Marsite Statio   5.71   8     PN      Pn    08 37 41.6 +3.1
MDNY  Mudanya-Bursa    5.71  20     PN      Pn    08 37 41.2 +2.7
ASGA  Asgata           5.74  91⇑iP          Pn    08 37 37.7 -1.3
ASGA                                AML     AML   08 38 46.3
      comp=E,16nm,1.0s
ASGA                                AML     AML   08 38 48.0
      comp=E,11nm,0.5s
MAR3  Marsite Statio   5.75   8     PN      Pn    08 37 42.2 +3.1
GZKV  Gazikoy-Tekird   5.76   8     PN      Pn    08 37 42.3 +3.1
CIFT  Cifteler, Eski   5.76  40     PN      Pn    08 37 41.3 +1.9
SGAZ  Eskisehir, Sey   5.77  38     P       Pn    08 37 41.4 +1.9
CSS   Mathiatis        5.79  89     PN      Pn    08 37 38.8 -1.0
CSS   Mathiatis        5.79  89     Pn      Pn    08 37 38.9 -0.8
CSS   Mathiatis        5.79  89    ⇑P       Pn    08 37 38.6 -1.2
CSS   Mathiatis        5.79  89    ⇑P       Pn    08 37 38.6 -1.2
KKBE  Karaman, Kazim   5.81  66     P       Pn    08 37 42.3 +2.1
LADK  Ladik-KONYA      5.82  55     PN      Pn    08 37 41.8 +1.5
LADK  Ladik-KONYA      5.82  55     P       Pn    08 37 41.0 +0.7
SWA2                   5.83 187     P       Pn    08 37 39.9 -0.3
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      baz=187
KDHN  Kadinhani        5.83  52     P       Pn    08 37 41.5 +1.1
ALN   Alexandroupoli   5.85 358     PN      Pn    08 37 42.6 +2.1
ALN   Alexandroupoli   5.85 358             Pn    08 37 42.7 +2.2
ALN   Alexandroupoli   5.85 358     P       Pn    08 37 42.7 +2.2
ALN   Alexandroupoli   5.85 358    ⇑P       Pn    08 37 42.6 +2.1
LKD2  Lefkada island   5.85 311     P       Pn    08 37 41.4 +0.8
      baz=318
LKD2                                S       Sn    08 38 43.3 -3.6
      baz=318
BORA  Eskisehir        5.86  33     PN      Pn    08 37 43.2 +2.4
BORA  Eskisehir        5.86  33     Pn      Pn    08 37 43.0 +2.3
LFK   Lefkose          5.95  86     PN      Pn    08 37 41.4 -0.6
AKK2  Akkuyu-Mersin    6.03  77     PN      Pn    08 37 44.0 +1.1
GULN  MERSIN_Gulnar    6.03  77     P       Pn    08 37 42.5 -0.4
AKKU  Akkuyu-Mersin    6.03  77     PN      Pn    08 37 42.7 -0.3
YLV   Yalova           6.03  23     PN      Pn    08 37 45.8 +2.7
MVOU  Mavrovouni       6.04  88    ⇑P       Pn    08 37 42.1 -1.0
MVOU                                AML     AML   08 38 57.5
      comp=E,7.5nm,0.6s
MVOU                                AML     AML   08 38 57.7
      comp=E,7.5nm,1.0s
ADVT  Abdulvahap       6.04  26     PN      Pn    08 37 46.3 +3.2
SVRH  Sivrihisar-ESK   6.07  42     PN      Pn    08 37 45.7 +2.1
SVRH  Sivrihisar-ESK   6.07  42     P       Pn    08 37 44.2 +0.6
AUSIV SIVRIHISAR       6.07  42     PN      Pn    08 37 45.7 +2.0
AUSIV SIVRIHISAR       6.07  42     P       Pn    08 37 45.3 +1.6
HORT  Hortiatis        6.09 337     PN      Pn    08 37 47.6 +3.7
RDO   Rodhopi          6.12 355     PN      Pn    08 37 46.6 +2.4
RDO   Rodhopi          6.12 355             Pn    08 37 46.8 +2.6
RDO   Rodhopi          6.12 355    ⇓P       Pn    08 37 46.8 +2.6
IKL   Isikli           6.15  77     PN      Pn    08 37 44.8 +0.1
THE   Thessaloniki     6.16 336     P       Pn    08 37 48.8 +4.0
      baz=343
ALIN  Konya, Altinte   6.22  57     P       Pn    08 37 46.8 +1.1
GULT  Gulveren         6.34  31     PN      Pn    08 37 50.3 +2.9
AUMIH MIHALICIK        6.35  39     PN      Pn    08 37 49.8 +2.2
SLVT  Silivri          6.36  13     PN      Pn    08 37 50.7 +3.2
PARAL Paralimni        6.37  88     P       Pn    08 37 47.0 -0.7
PARAL                               AML     AML   08 39 11.3
      comp=E,9.2nm,1.4s
PARAL                               AML     AML   08 39 12.4
      comp=E,11nm,1.0s
KAVV  Kandilli-Istan   6.40  19     PN      Pn    08 37 50.2 +2.1
ISK   Istanbul-Kandi   6.40  19     PN      Pn    08 37 50.0 +1.9
CTKS  Kestanelik-??a   6.43  15     PN      Pn    08 37 50.9 +2.5
EREN  Erenkoy          6.48  83     PN      Pn    08 37 48.2 -0.9
EREN  Erenkoy          6.48  83     P       Pn    08 37 49.5 +0.4
HMYD  Mayadein         6.48 143     P       Pn    08 37 49.1 -0.1
      baz=143
IGT   Igoumenitsa      6.52 315     P       Pn    08 37 51.5 +1.8
      baz=321
HNAT  Natroun          6.53 145     P       Pn    08 37 49.4 -0.5
      baz=145
SAUV  Serdivan-Sakar   6.53  28     PN      Pn    08 37 52.5 +2.7
KLYT  Kilyos           6.57  19     PN      Pn    08 37 52.6 +2.2
YESY  Yesilyurt        6.61  63     PN      Pn    08 37 52.8 +1.7
CTYL  Yalikoy Yolu     6.61  13     PN      Pn    08 37 53.8 +2.8
SULT  Sultanhani-AKS   6.62  59     PN      Pn    08 37 53.4 +2.2
GRG   Griva            6.65 334     PN      Pn    08 37 54.6 +3.1
PHSR  Pinarhisar       6.65   8     PN      Pn    08 37 54.7 +3.2
SILT  Sile             6.65  23     PN      Pn    08 37 54.1 +2.6
KNT   Kendrikon        6.66 337     PN      Pn    08 37 55.7 +4.0
MDUB  Mudurnu          6.67  34     PN      Pn    08 37 54.8 +2.9
MDUB  Mudurnu          6.67  34             Pn    08 37 54.5 +2.6
MDUB  Mudurnu          6.67  34    ⇑P       Pn    08 37 54.8 +2.9
KKUL  Konya-Kulu       6.72  50     P       Pn    08 37 54.1 +1.6
LSK   Leskovik         6.80 320     P       Pn    08 37 55.8 +2.2
      baz=326
EDRB  Edirne           6.80   3     PN      Pn    08 37 56.0 +2.4
RYAN  Fayoum           6.84 149     P       Pn    08 37 53.4 -0.8
      baz=149
VAY   Valandovo        6.91 336   i Pn      Pn    08 37 59.3 +4.2
VAY                               eLg       Lg    08 39 35.4
      comp=N,515nm,1.0s
VAY                               eLg       Lg    08 39 35.9
      comp=E,558nm,1.3s
FNA   Florina          6.92 327     PN      Pn    08 37 57.2 +2.0
FNA   Florina          6.92 327             Pn    08 37 58.1 +2.9
FNA   Florina          6.92 327     P       Pn    08 37 58.1 +2.9
FNA   Florina          6.92 327     P       Pn    08 37 57.3 +2.0
      baz=334
FNA   Florina          6.92 327    ⇓P       Pn    08 37 57.4 +2.2
KOT   Kottamia         6.93 136     P       Pn    08 37 55.0 -0.4
      baz=136
MERS  Mersin           6.93  72     PN      Pn    08 37 55.8 +0.3
SRN   Sarande          6.94 316     P       Pn    08 37 56.5 +1.0
      baz=322
SRN                                 S       Sn    08 39 14.8 +1.2
      baz=322
SRN                                 AMP
      comp=E,3.2nm,0.9s,baz=322
KEK   Kerkira          6.95 314             Pn    08 37 55.7 +0.1
KEK   Kerkira          6.95 314    ⇑P       Pn    08 37 55.9 +0.3
AFSR  Afar-Bala (An    6.98  49     PN      Pn    08 37 58.1 +2.0
AFSR  Afar-Bala (An    6.98  49     P       Pn    08 37 57.6 +1.5
SERE  Sereflikochisa   7.01  54     PN      Pn    08 37 57.9 +1.3
HSAF  As Saff          7.01 139     P       Pn    08 37 55.5 -1.1
      baz=139
BR231 Keskin MP Arra   7.05  45     Pn      Pn    08 37 59.7 +2.6
KBN   Korca            7.06 324     P       Pn    08 38 01.1 +3.8
      baz=330
HHAG  Hagoal           7.07 134     P       Pn    08 37 56.5 -0.8
      baz=135
LOD   Lodumlu          7.07  45     PN      Pn    08 37 59.6 +2.2
ANTO  Ankara           7.08  45     PN      Pn    08 37 59.7 +2.3
ANTO  Ankara           7.08  45             Pn    08 37 59.2 +1.8
ANTO  Ankara           7.08  45     P       Pn    08 37 59.2 +1.8
ANTO  Ankara           7.08  45     P       Pn    08 38 01.2 +3.8
GLL   Jalalah          7.13 138     P       Pn    08 37 57.2 -1.0
      baz=139
PLD   Plovdiv          7.16 351     PN      Pn    08 38 02.1 +3.6
YAYX  Yaylak           7.17  55     PN      Pn    08 38 00.2 +1.4
STIP  Stip             7.38 335   i Pn      Pn    08 38 05.1 +3.6
OHR   Ohrid            7.44 326   i Pn      Pn    08 38 06.7 +4.3
OHR                               eSn       Sn    08 39 29.4 +3.4
OHR                               eLg       Lg    08 39 49.0
      comp=E,3µm,2.0s
OHR                               eLg       Lg    08 39 50.4
      comp=N,6µm,2.3s
KARA  Karaisali        7.44  70     PN      Pn    08 38 03.7 +1.3
BRTR  Keskin Array B   7.50  49     Pn      Pn    08 38 04.7 +1.4
      comp=N,2.2nm,0.3s,baz=239,slow=14,SNR=108
BRTR                                Sn      Sn    08 39 27.7 +0.2
      comp=N,2.5nm,0.3s,baz=292,slow=18,SNR=2.0
BRTR                                Lg      Lg    08 40 14.5
      baz=179,slow=25
BRTR                                LR      LR    08 41 54.1
      comp=N,23µm,21.9s,baz=221,slow=45
      comp=N,25nm,0.7s
BRTR  Keskin Array B   7.50  49     PN      Pn    08 38 04.6 +1.4
BR131 Keskin Array S   7.50  49c  iP        Pn    08 38 04.5 +1.2
BR131 Keskin Array S   7.50  49     P       Pn    08 38 05.3 +2.1
      SNR=80
BR131                               P       Pn    08 38 05.3 +2.1
      SNR=80
SUZ   Suez             7.59 131     P       Pn    08 38 03.7 -0.7
      baz=132
VLO   Vlora            7.62 317     P       Pn    08 38 05.8 +0.9
      baz=323
HNTI  Hanita           7.64 102     Pn      Pn    08 38 03.9 -1.2
OFRI  `Ofer            7.64 106     Pn      Pn    08 38 03.3 -1.9
OFRI                                Sn      Sn    08 39 25.6 -5.4
NBNS  Bani Suef        7.69 145     P       Pn    08 38 05.6 -0.3
      baz=145
BLGI  Bet Lehem HaGe   7.76 105     Pn      Pn    08 38 05.5 -1.3
DQRL  Deir Qamar       7.80  97   eP        Pn    08 38 05.6 -1.8
SLTI  Sal'it           7.83 108     Pn      Pn    08 38 05.8 -1.9
SLTI                                Sn      Sn    08 39 29.8 -5.7
ZAF   Zafarana         7.83 135     P       Pn    08 38 07.0 -0.7
      baz=136
BHL   Bhannes          7.83  96   eP        Pn    08 38 03.1 -4.7
MMA0B Mount Meron ar   7.84 102     Pn      Pn    08 38 06.5 -1.5
MMAI  Mount Meron Ar   7.84 102     Pn      Pn    08 38 02.6 -5.4
      comp=N,15nm,0.3s,baz=134,slow=28,SNR=13
MMAI                                Sn      Sn    08 39 37.2 +1.2
      comp=N,80nm,0.3s,baz=45,slow=12,SNR=4.6
SKO   Skopje           7.89 333   i Pn      Pn    08 38 14.8 +6.4
CEYT  Ceyhan           7.92  73     PN      Pn    08 38 08.7 -0.3
VTS   Vitosha          7.93 344    ⇑P       Pn    08 38 13.4 +4.2
VTS   Vitosha          7.93 344    ⇑P       Pn    08 38 13.3 +4.1
QRWL  Qaraoun          7.93  98   eP        Pn    08 38 06.7 -2.4
ZNM   Zenema           7.95 133     P       Pn    08 38 08.1 -1.3
      baz=134
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KZIT  Kziot            7.97 119     Pn      Pn    08 38 06.9 -2.8
SCTE  Santa Cesarea    7.98 311     Pn      Pn    08 38 09.0 -0.7
SCTE  Santa Cesarea    7.98 311     P       Pn    08 38 09.2 -0.5
      baz=316
GEM   Giv'at Ha'Em     8.00 101     Pn      Pn    08 38 07.6 -2.4
GEM                                 Sn      Sn    08 39 34.9 -4.8
HWQ   Hawqa            8.01  93   eP        Pn    08 38 08.2 -2.1
SHBL  Chebaa           8.03  99   eP        Pn    08 38 07.2 -3.3
AMAZ  Amatzia          8.04 113     Pn      Pn    08 38 08.3 -2.3
AMAZ                                Sn      Sn    08 39 34.6 -6.1
NATI  Neve Ativ        8.04 100     Pn      Pn    08 38 08.5 -2.1
PHP   Peshkopia        8.06 327     P       Pn    08 38 11.3 +0.5
      baz=332
HFRF  Wahat Farafira   8.06 167     P       Pn    08 38 09.8 -1.1
      baz=167
RCY   Rachaya          8.06  98   eP        Pn    08 38 08.7 -2.4
TIR   Tirane           8.06 323    ⇑P       Pn    08 38 13.2 +2.3
TIR   Tirane           8.06 323     Pn      Pn    08 38 13.2 +2.3
TIR   Tirane           8.06 323     P       Pn    08 38 13.2 +2.3
TIR   Tirane           8.06 323     P       Pn    08 38 13.5 +2.6
      baz=328
TIR   Tirane           8.06 323    ⇑P       Pn    08 38 15.0 +4.1
YAYL  Yayladag         8.08  80     PN      Pn    08 38 10.2 -1.0
KOZT  Kozan            8.09  70     PN      Pn    08 38 11.3  0.0
KSHT  Keshet           8.18 102     Pn      Pn    08 38 10.9 -1.7
HMDT  Nahal Hemdat     8.20 107     Pn      Pn    08 38 10.3 -2.5
YTIR  Yattir           8.27 114     Pn      Pn    08 38 11.7 -2.1
YTIR                                Sn      Sn    08 39 39.8 -6.7
TAMRE El Minia         8.34 150     P       Pn    08 38 13.9 -0.9
      baz=150
DSI   Dead Sea         8.37 112     Pn      Pn    08 38 13.0 -2.1
RMNI  Mount Ramon      8.41 119     Pn      Pn    08 38 13.3 -2.4
RAZG  Razgrad          8.51   1    ⇑P       Pn    08 38 20.7 +3.6
BNN   Bunyan           8.55  61     Pn      Pn    08 38 20.2 +2.4
BNN   Bunyan           8.55  61    ⇑P       Pn    08 38 20.4 +2.6
GHAJ  Ghor Haditha     8.63 113     Pn      Pn    08 38 18.1 -0.6
TIP   Timpagrande      8.65 301    ⇑P       Pn    08 38 19.0  0.0
TIP   Timpagrande      8.65 301     Pn      Pn    08 38 19.0  0.0
TIP   Timpagrande      8.65 301    ⇑P       Pn    08 38 18.2 -0.8
KRMI  Paran Flat       8.66 122     Pn      Pn    08 38 16.5 -2.6
HRDS  Abu Rudays       8.69 135     P       Pn    08 38 17.9 -1.6
      baz=135
PRNI  Paran            8.72 120     Pn      Pn    08 38 17.2 -2.7
PRNI                                Sn      Sn    08 39 50.7 -6.7
GRB   Gharib           8.74 139     P       Pn    08 38 18.7 -1.5
      baz=139
BCI   Bajram Curri     8.77 328     P       Pn    08 38 22.8 +2.2
      baz=333
ULC   Ulcinj           8.84 324   ePn       Pn    08 38 20.4 -1.1
ULC                               eSn       Sn    08 40 00.4 +0.1
ASUT                   8.86 148     P       Pn    08 38 22.3 +0.4
      baz=148
HRFI  Mount Harif      8.92 122     Pn      Pn    08 38 20.5 -2.2
HRFI                                Sn      Sn    08 39 55.7 -6.8
CEL   Celeste          8.94 294     Pn      Pn    08 38 22.8 -0.1
CEL   Celeste          8.94 294    ⇑P       Pn    08 38 22.9 -0.1
MANR  Mangalia         8.94  11    ⇑P       Pn    08 38 27.9 +5.0
MBRI  Mt Berech        8.98 123     Pn      Pn    08 38 21.6 -2.0
PVY   Plav             9.01 329   ePn       Pn    08 38 23.7 -0.2
PVY                               eSn       Sn    08 40 05.9 +1.3
BLKB  Belogradchik     9.01 343    ⇑P       Pn    08 38 27.3 +3.4
DRME  Dracevica, Mon   9.03 324   ePn       Pn    08 38 22.5 -1.7
DRME  Dracevica, Mon   9.03 324   ePn       Pn    08 38 22.7 -1.5
DRME                              eSn       Sn    08 40 04.2 -0.9
VLAD  Vladila          9.06 351    ⇑P       Pn    08 38 29.0 +4.5
EIL   Elat             9.08 124     Pn      Pn    08 38 23.7 -1.2
      comp=N,13nm,0.3s,baz=212,slow=3.6,SNR=145
EIL                                 Sn      Sn    08 39 59.6 -6.8
      comp=N,60nm,0.3s,baz=89,slow=22,SNR=8.1
      comp=N,216nm,0.7s
EIL   Elat             9.08 124     Pn      Pn    08 38 22.2 -2.7
EIL                                 Sn      Sn    08 39 59.1 -7.3
EIL   Elat             9.08 124    ⇑P       Pn    08 38 21.9 -3.1
EIL                                ⇓S       Sn    08 40 03.0 -3.5
COPA  Copaceanca       9.12 355    ⇑P       Pn    08 38 29.1 +3.8
ICOR  Ion Corvin       9.14   7    ⇑P       Pn    08 38 29.6 +4.0
SGRR  Singureni        9.17 359    ⇓P       Pn    08 38 30.8 +4.7
BZK   Bozkurt          9.18  39    ⇑P       Pn    08 38 29.4 +3.2
BZK   Bozkurt          9.18  39     Pn      Pn    08 38 28.4 +2.2
BZK   Bozkurt          9.18  39    ⇑P       Pn    08 38 28.5 +2.3
PDG   Podgorica        9.19 325    ⇓P       Pn    08 38 26.2 -0.1
PDG   Podgorica        9.19 325   ePn       Pn    08 38 24.0 -2.3
PDG   Podgorica        9.19 325    ⇑P       Pn    08 38 25.2 -1.0
TTG   Podgorica        9.19 325   ePn       Pn    08 38 25.9 -0.4
TTG                               eSn       Sn    08 40 08.7 -0.1
HBST  Basata           9.23 127     P       Pn    08 38 25.9 -1.0
      baz=127
HBST                                S       Sn    08 40 06.0 -3.9
      baz=127
HKAT  Jabal Katrina    9.24 133     P       Pn    08 38 24.9 -2.4
      baz=133
HKAT                                S       Sn    08 40 05.3 -5.2
      baz=133
BUM   Brajici-Budva    9.26 324   ePn       Pn    08 38 25.5 -1.9
BUM                               eSn       Sn    08 40 10.2 -0.6
IVA   Berane           9.26 329   ePn       Pn    08 38 27.2 -0.2
IVA                               eSn       Sn    08 40 12.3 +1.5
NOCI  Noci             9.26 311     P       Pn    08 38 26.2 -1.2
      baz=315
MFTR  Murfatlar        9.27  10    ⇑P       Pn    08 38 31.2 +3.8
BOVS  Bovan            9.28 339    ⇓P       Pn    08 38 31.2 +3.6
NUB   Nuweibaa         9.30 128     P       Pn    08 38 26.9 -1.0
      baz=128
ASF   Jabal al Asfar   9.31 105     Pn      Pn    08 38 26.8 -1.3
      comp=N,7.6nm,0.3s,baz=302,slow=8.2,SNR=25
ASF                                 Sn      Sn    08 40 13.4 +1.3
      comp=N,4.1nm,0.3s,baz=242,slow=18,SNR=1.4
      comp=N,40nm,0.5s
CVDA  Cernavoda        9.38   8    ⇑P       Pn    08 38 33.5 +4.6
KOME  Kolasin          9.40 328   ePn       Pn    08 38 28.9 -0.5
KOME                              eSn       Sn    08 40 15.5 +1.2
MATE  Matera           9.41 309    ⇓P       Pn    08 38 27.7 -1.6
CEME  Cevo             9.44 325   ePn       Pn    08 38 27.9 -1.9
CEME                              eSn       Sn    08 40 15.1  0.0
HDHB  Dhahab           9.48 129     P       Pn    08 38 29.7 -0.7
      baz=130
HUMR  Humele           9.53 354    ⇑P       Pn    08 38 35.3 +4.3
TIRR  Tirgusor         9.55   9    ⇑P       Pn    08 38 34.5 +3.3
TIRR  Tirgusor         9.55   9    ⇑P       Pn    08 38 34.5 +3.3
TIRR  Tirgusor         9.55   9    ⇑P       Pn    08 38 32.9 +1.7
SJES  Sjenica          9.55 331   ePn       Pn    08 38 31.1 -0.3
HCY   Herceg Novi      9.57 323   ePn       Pn    08 38 29.9 -1.6
HCY   Herceg Novi      9.57 323   ePn       Pn    08 38 29.9 -1.6
TLBR  Topalu           9.59   8    ⇑P       Pn    08 38 36.1 +4.4
TR1   Tor 1            9.60 135     P       Pn    08 38 29.8 -2.2
      baz=135
NKY   Niksic           9.61 326   ePn       Pn    08 38 31.3 -0.9
NKY                               eSn       Sn    08 40 18.8 -0.5
SULR                   9.62 360    ⇑P       Pn    08 38 36.8 +4.6
HARR  Harsova          9.72   7    ⇑P       Pn    08 38 37.2 +3.7
TREB  Trebinje         9.84 324   ePn       Pn    08 38 32.0 -3.2
HDK1  Dakhla           9.85 163     P       Pn    08 38 34.7 -0.7
      baz=163
PLE   Pljevlja         9.85 329   ePn       Pn    08 38 35.5  0.0
PLE                               eSn       Sn    08 40 25.6 +0.4
VAE   Valguarnera      9.88 288     Pn      Pn    08 38 37.9 +2.0
      comp=N,71nm,0.3s,baz=58,slow=1.7,SNR=48
VAE                                 Sn      Sn    08 40 26.0 -0.1
      comp=N,39nm,0.3s,baz=114,slow=22,SNR=4.0
VAE                                 LR      LR    08 41 50.8
      comp=N,2µm,22.0s,baz=130,slow=34
BRY   Bratogost        9.89 325   ePn       Pn    08 38 34.5 -1.5
BRY   Bratogost        9.89 325   ePn       Pn    08 38 34.7 -1.3
BRY                               eSn       Sn    08 40 25.5 -0.8
SRE   Strehaia         9.89 347    ⇑P       Pn    08 38 40.5 +4.5
JURR  Jurilovca        9.91  11    ⇑P       Pn    08 38 40.1 +3.9
TPGR  Topolog          9.94   9    ⇑P       Pn    08 38 40.5 +3.9
UPM   Unac-Piva        9.95 327   ePn       Pn    08 38 36.1 -0.9
UPM   Unac-Piva        9.95 327   ePn       Pn    08 38 35.3 -1.7
UPM                               eSn       Sn    08 40 27.5 -0.5
DJES  Djerdap         10.03 344    ⇑P       Pn    08 38 41.0 +3.1
ISR   Istrita         10.07   1    ⇑P       Pn    08 38 43.2 +4.8
RUDO  Rudo            10.09 330   ePn       Pn    08 38 37.7 -1.0
AKRG  Al Kharijah     10.18 158     P       Pn    08 38 39.4 -0.6
      baz=158
GTR   Jabal at Tayr   10.20 158     P       Pn    08 38 39.5 -0.7
      baz=157
MTUR  Matau           10.21 355    ⇑P       Pn    08 38 43.8 +3.4
CFR   Carcaliu        10.22   7    ⇑P       Pn    08 38 43.7 +3.3
DIVS  Divibare        10.26 334   ePn       Pn    08 38 41.7 +0.7
DIVS  Divibare        10.26 334    ⇑P       Pn    08 38 42.7 +1.6
BBLS  Lazi&#263;i     10.28 331   ePn       Pn    08 38 39.5 -1.9
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MDVR	**Moldovita**	**10.34**	**342**	⇑P	**Pn**	**08 38 45.6**	**+3.5**
VOIR		**10.42**	**355**	⇑P	**Pn**	**08 38 46.5**	**+3.2**
MLR	**Muntele Rosu**	**10.44**	**359**	⇑P	**Pn**	**08 38 48.2**	**+4.6**
MLR	**Muntele Rosu**	**10.44**	**359**	Pn	**Pn**	**08 38 47.7**	**+4.1**
	comp=N,1.6nm,0.3s,baz=190,slow=5.6,SNR=28						
MLR				Sn	**Sn**	**08 40 45.4**	**+5.7**
	baz=331,slow=21						
MLR				LR	LR	08 43 15.9	
	comp=N,3µm,21.6s,baz=180,slow=40						
MLR	**Muntele Rosu**	**10.44**	**359**		**Pn**	**08 38 46.6**	**+3.0**
BISRR	**Bisoca**	**10.50**	**2**	⇑P	Pn	08 38 49.5	+5.2
LOT	**Lotru**	**10.57**	**350**	⇑P	**Pn**	**08 38 48.8**	**+3.5**
TATR	**Tatarca**	**10.63**	**7**	⇑P	**Pn**	**08 38 50.0**	**+4.0**
SGRT	**San Giovanni R**	**10.63**	**312**	P	**Pn**	**08 38 44.1**	**-2.1**
	baz=316						
GZR	**Gura Zlata**	**10.68**	**347**	⇑P	**Pn**	**08 38 49.6**	**+2.9**
SCTR	**Scanteiesti**	**10.70**	**7**	⇑P	**Pn**	**08 38 50.8**	**+3.9**
COVR	**Voineasa-Covas**	**10.79**	**360**	⇑P	**Pn**	**08 38 52.9**	**+4.6**
PLOR	**Plostina**	**10.80**	**1**	⇑P	**Pn**	**08 38 52.0**	**+3.6**
TEKS	**Tekeris**	**10.81**	**333**	*e*Pn	**Pn**	**08 38 46.0**	**-2.6**
VRI	**Vrincioaia**	**10.82**	**2**	⇑P	**Pn**	**08 38 53.0**	**+4.4**
CLTB	**Caltabellotta**	**10.84**	**287**	⇑P	**Pn**	**08 38 50.1**	**+1.1**
VLDR	**Vladesti**	**10.88**	**7**	⇑P	Pn	08 38 54.4	+5.0
VARL	**Varlezi**	**10.91**	**6**	⇑P	Pn	08 38 54.8	+4.9
DOPR	**Dopca**	**10.93**	**357**	⇑P	**Pn**	**08 38 54.6**	**+4.3**
GHRR		**11.04**	**4**	⇑P	Pn	08 38 56.8	+5.1
BANR	**Banloc**	**11.05**	**341**	⇑P	**Pn**	**08 38 55.9**	**+4.2**
OZUR		**11.05**	**358**	⇑P	**Pn**	**08 38 56.0**	**+4.2**
DEV	**Deva**	**11.13**	**348**	⇑P	**Pn**	**08 38 57.4**	**+4.5**
BZS	**Buzias**	**11.14**	**343**	⇓P	**Pn**	**08 38 56.8**	**+3.8**
FRGS	**Fruska Gora**	**11.24**	**336**	⇑P	**Pn**	**08 38 57.3**	**+2.8**
FRGS	**Fruska Gora**	**11.24**	**336**	*e*Pn	**Pn**	**08 38 54.4**	**-0.1**
TESR	**Tescani**	**11.46**	**1**	⇑P	**Pn**	**08 39 01.5**	**+4.1**
SIM	**Simferopol'**	**11.57**	**29**	*e*P	**Pn**	**08 39 02.9**	**+4.0**
SIM				*e*S	**Sn**	**08 41 10.5**	**+3.2**
SIM				pmax	pmax		
	comp=Z,181nm,0.7s						
SIM				smax	smax		
	comp=E,197nm,0.9s						
SIM				smax	smax		
	comp=N,171nm,0.9s						
VASR	**Vaslui**	**11.64**	**5**	⇑P	**Pn**	**08 39 04.6**	**+4.7**
MGRS	**Mrkonjic Grad**	**11.73**	**326**	*e*Pn	**Pn**	**08 39 01.0**	**-0.1**
SIRR	**Siria**	**11.74**	**344**	⇑P	**Pn**	**08 39 05.2**	**+3.9**
CJR	**Cluj-Napoca**	**11.83**	**351**	⇑P	**Pn**	**08 39 07.1**	**+4.5**
BIZ	**Bicaz**	**11.88**	**359**	⇑P	**Pn**	**08 39 06.5**	**+3.3**
BLY	**Banja Luka**	**11.94**	**327**	*e*Pn	**Pn**	**08 38 59.8**	**-4.1**
BLY	**Banja Luka**	**11.94**	**327**	⇓P	**Pn**	**08 39 03.5**	**-0.4**
MILM	**Milestii Mici**	**12.02**	**8**	*d i*P	**Pn**	**08 39 08.0**	**+3.0**
MILM				*i* S	**Sn**	**08 41 21.0**	**+2.8**
MILM				pmax	pmax		
	comp=Z,1µm,3.8s						
MILM				pmax	pmax		
	comp=E,6µm,8.0s						
MILM				MLR	MLR		
	comp=Z,3µm,11.0s						
KIS	**Kishinev**	**12.10**	**8**	⇓*e*P	**Pn**	**08 39 08.0**	**+1.9**
	comp=Z,770nm,3.8s						
KIS				*e*Lq	LQ	08 41 58.0	
KIS				LM		08 42 56.0	
	comp=Z,3µm,8.0s						
KIS				LRM	MLR	08 44 23.0	
	comp=Z,2µm,12.5s						
KIS	**Kishinev**	**12.10**	**8**	*de*P	**Pn**	**08 39 08.0**	**+1.9**
KIS				*e*		08 41 18.0	
KIS				pmax	pmax		
	comp=Z,770nm,3.8s						
KIS				pmax	pmax		
	comp=N,700nm,3.5s						
KIS				pmax	pmax		
	comp=E,700nm,3.5s						
KIS				pmax	pmax		
	comp=E,3µm,8.0s						
KIS				MLR	MLR		
	comp=Z,2µm,12.5s						
KIS				MLR	MLR		
	comp=N,1µm,12.0s						
KIS				MLR	MLR		
	comp=E,1µm,11.0s						
ARCR	**ARCALIA**	**12.12**	**354**	⇑P	**Pn**	**08 39 11.2**	**+4.8**
KOPT	**Kop Dagi**	**12.33**	**62**	Pn	**Pn**	**08 39 12.2**	**+2.6**
MORH	**Mrgy, Hungar**	**12.57**	**335**	*e*Pn	**Pn**	**08 39 12.2**	**-0.3**
BURAR	**Bucovina Array**	**12.59**	**357**	⇓P	Pn	08 39 18.2	+5.3
ANN	**Anapa**	**12.96**	**38**	*e*P	**Pn**	**08 39 15.7**	**-2.2**
ANN				*e*S	**Sn**	**08 41 40.9**	**-0.3**
ANN				pmax	pmax		
	comp=Z,74nm,0.9s						
SORM	**Soroca**	**13.17**	**6**	⇑P	**Pn**	**08 39 24.0**	**+3.3**
TATN	**Tataouine**	**13.32**	**264**	⇓P	**Pn**	**08 39 21.8**	**-1.2**
BOJS	**Bojanci**	**13.40**	**325**	*e*Pn	**Pn**	**08 39 21.3**	**-2.6**
BOJS				*e*Sn	**Sn**	**08 41 47.9**	**-4.2**
BOJS				IAML		08 45 23.4	
	comp=Z,6µm,11.6s						
SOC	**Sochi**	**13.44**	**47**	*c i*P	**Pn**	**08 39 23.3**	**-1.2**
SOC				*e*		08 41 55.6	
SOC				pmax	pmax		
	comp=Z,28nm,0.8s						
SOC				MLR	MLR		
	comp=Z,4µm,17.0s						
BEHE	**Becsehely**	**13.48**	**331**	*e*Pn	**Pn**	**08 39 27.7**	**+2.7**
BEHE	**Becsehely**	**13.48**	**331**	P	**Pn**	**08 39 28.3**	**+3.3**
MGAB	**Montegabbione**	**13.52**	**310**	⇓P	**Pn**	**08 39 26.2**	**+0.6**
CRES	**Cresnjev**	**13.54**	**326**	*e*Pn	**Pn**	**08 39 22.2**	**-3.7**
CSKK	**Cskako**	**13.70**	**336**	P	**P**	**08 39 34.0**	**-2.4**
PSZ	**Piszkesteto**	**13.72**	**342**	⇓P	**Pn**	**08 39 32.4**	**+4.2**
PSZ	**Piszkesteto**	**13.72**	**342**	P	**Pn**	**08 39 32.0**	**+3.7**
PSZ	**Piszkesteto**	**13.72**	**342**	⇓P	**Pn**	**08 39 32.0**	**+3.7**
BATM	**Batumi**	**13.76**	**57**	⇑P	**Pn**	**08 39 31.3**	**+2.5**
MPLH	**Magyarpolny**	**13.78**	**334**	P	**Pn**	**08 39 32.6**	**+3.6**
KEST	**Kesra**	**13.83**	**278**	Pn	**Pn**	**08 39 31.1**	**+1.2**
	comp=Z,2.6nm,0.3s,baz=359,slow=4.7,SNR=16						
KEST				Sn	**Sn**	**08 41 56.1**	**-6.7**
	baz=358,slow=19						
	comp=Z,80nm,0.9s						
KEST	**Kesra**	**13.83**	**278**		**Pn**	**08 39 28.9**	**-1.0**
KEST	**Kesra**	**13.83**	**278**	P	**Pn**	**08 39 30.6**	**+0.7**
	SNR=31						
KEST				P	**Pn**	**08 39 30.6**	**+0.7**
	SNR=31						
UZH	**Uzhgorod**	**13.89**	**349**	*e*P	**P**	**08 39 34.8**	**-3.8**
UZH				*e*S	**Sn**	**08 42 12.0**	**+8.0**
CEY	**Cerknica**	**13.97**	**323**	*e*Pn	**Pn**	**08 39 28.9**	**-2.8**
TAMR	**Tamra**	**14.04**	**283**	⇑P	**Pn**	**08 39 33.3**	**+0.7**
SKDS	**Skadanscina**	**14.04**	**322**	*e*Pn	**Pn**	**08 39 30.3**	**-2.4**
KECS	**Kecovo**	**14.10**	**344**	*e*P	**Pn**	**08 39 36.9**	**+3.4**
KECS	**Kecovo**	**14.10**	**344**	*e*P	**Pn**	**08 39 36.9**	**+3.4**
LJU	**Ljubljana**	**14.14**	**325**	*e*Pn	**Pn**	**08 39 31.8**	**-2.2**
VSL	**Villasalto**	**14.17**	**293**	⇓P	**Pn**	**08 39 34.7**	**+0.2**
KOLS	**Kolonicke sedl**	**14.19**	**349**	*e*P	**P**	**08 39 40.7**	**-1.2**
KOLS	**Kolonicke sedl**	**14.19**	**349**	*e*P	**P**	**08 39 40.7**	**-1.2**
CRVS	**Cervenica-Dubn**	**14.30**	**347**	*e*P	**P**	**08 39 41.4**	**-1.7**
CRVS				*e*S	**Sn**	**08 42 22.7**	**+8.8**
CRVS	**Cervenica-Dubn**	**14.30**	**347**	*e*P	**P**	**08 39 41.4**	**-1.7**
CRVS				*e*S	**Sn**	**08 42 22.7**	**+8.8**
SOKA	**Soboth**	**14.38**	**327**	*e*Pn	**Pn**	**08 39 35.2**	**-2.2**
	comp=Z,0.8nm,0.2s						
SOKA				*e*Sn	**Sn**	**08 42 20.1**	**+4.0**
	comp=Z,9.9nm,0.6s						
SOKA				*e*S	**ScP**	**08 48 25.1**	**+0.3**
	comp=Z,5.8nm,1.0s						
OBKA	**Obir**	**14.47**	**326**	*e*Pn	**Pn**	**08 39 36.8**	**-1.9**
	comp=Z,1.2nm,0.2s						
OBKA				*e*S	**ScP**	**08 48 25.3**	**+0.4**
	comp=Z,4.3nm,0.8s						
CHVG	**Ch'k'valeri**	**14.49**	**53**	⇑P	**Pn**	**08 39 40.4**	**+1.6**
VYHS	**Vyhne**	**14.53**	**340**	*e*P	**P**	**08 39 42.9**	**-2.8**
VYHS	**Vyhne**	**14.53**	**340**	*e*P	**P**	**08 39 42.9**	**-2.8**
VYHS				*e*		08 48 25.5	
SOP	**Sopron**	**14.57**	**333**	P	**P**	**08 39 45.5**	**-0.6**
ARSA	**Arzberg**	**14.62**	**330**	*e*Pn	**Pn**	**08 39 40.5**	**-0.1**
	comp=Z,8.2nm,0.5s						
ARSA				*e*S	**ScP**	**08 48 25.1**	**0.0**
	comp=Z,6.3nm,1.0s						
ARSA	**Arzberg**	**14.62**	**330**	⇑P	**Pn**	**08 39 42.6**	**+2.0**
RONA	**Rosalia, Austr**	**14.68**	**332**	*e*Pn	**Pn**	**08 39 42.3**	**+0.9**
	SNR=17						
KOLL	**Kolacno**	**14.73**	**339**	*e*P	**Pn**	**08 39 43.7**	**+1.7**
ZST	**Bratislava**	**14.81**	**335**	*e*P	**P**	**08 39 49.0**	**+0.2**
ZST				*e*S	**S**	**08 42 37.2**	**-7.1**
ZST	**Bratislava**	**14.81**	**335**	*e*P	**P**	**08 39 49.0**	**+0.2**
ZST				*e*S	**S**	**08 42 37.2**	**-7.1**
KWP	**Kalwaria Pacla**	**14.81**	**351**	*e*P	**P**	**08 39 48.3**	**-0.5**
KWP				*e*S	**S**	**08 42 38.7**	**-5.7**
KWP				*e*L	L	08 47 03.8	
	comp=Z,2µm,22.3s						
KWP	**Kalwaria Pacla**	**14.81**	**351**	⇑P	**P**	**08 39 48.6**	**-0.2**
LVV	**L'vov**	**14.86**	**354**	*e*P	**P**	**08 39 49.0**	**-0.3**
LVV				*e*S	**Sn**	**08 42 36.0**	**+8.5**
LVV				MLR	MLR		
	comp=Z,2µm,11.0s						
MODS	**Modra-Piesok**	**14.90**	**336**	*e*P	**P**	**08 39 50.7**	**+0.9**
MODS				*e*S	**S**	**08 42 39.4**	**-6.8**
MODS	**Modra-Piesok**	**14.90**	**336**	*e*P	**P**	**08 39 50.7**	**+0.9**
MODS				*e*S	**S**	**08 42 39.4**	**-6.8**
AKH	**Akhalkalaki**	**14.94**	**60**	⇑P	**Pn**	**08 39 46.5**	**+1.4**
LANS	**Liptovska Anna**	**14.96**	**342**	*e*P	**P**	**08 39 51.8**	**+1.2**
LANS	**Liptovska Anna**	**14.96**	**342**	*e*P	**P**	**08 39 51.8**	**+1.2**
PTCC	**Patocco-Chiusa**	**14.97**	**323**	⇑P	**Pn**	**08 39 44.6**	**-0.7**
SMOL	**Smolenice**	**14.97**	**337**	*e*P	**P**	**08 39 51.8**	**+1.2**
SMOL	**Smolenice**	**14.97**	**337**	*e*P	**P**	**08 39 51.8**	**+1.2**
ZCCA	**Zocca**	**14.98**	**313**	IAmb	IAmb	08 40 08.9	
	comp=Z,91nm,0.8s						
MYKA	**Terra Mystica**	**14.99**	**324**	*e*Pn	**P**	**08 39 50.2**	**-0.7**
	comp=Z,1.4nm,0.2s						
MYKA				*e*Sn	**Sn**	**08 42 27.8**	**-3.1**
	comp=Z,7.8nm,0.5s						
MYKA				*e*S	**ScP**	**08 48 25.8**	**-0.1**
	comp=Z,2.5nm,0.4s						
NIE	**Niedzica**	**15.02**	**345**	*e*P	**P**	**08 39 51.7**	**+0.5**
NIE				*e*S	**S**	**08 42 41.4**	**-7.3**
NIE				*e*L	L	08 49 01.9	
	comp=Z,2µm,19.1s						
CONA	**Conrad Observa**	**15.03**	**332**	*e*Pn	**Pn**	**08 39 46.2**	**0.0**
	comp=Z,3.4nm,0.4s,SNR=17						
TEOL	**Teolo**	**15.16**	**317**	IAmb	IAmb	08 40 08.7	
	comp=Z,145nm,0.7s						
STAL	**STALIGIAL**	**15.19**	**322**	IAmb	IAmb	08 40 26.4	
	comp=Z,95nm,0.8s						
JAVC	**Velka Javorina**	**15.20**	**338**	*e*P	**Pn**	**08 39 47.3**	**-1.1**
VLC	**Villacollemand**	**15.24**	**311**	⇑P	**P**	**08 39 52.9**	**-0.7**
ABSA	**Djebel Ababsia**	**15.33**	**280**	P	**P**	**08 39 56.2**	**+1.4**
CMAH	**Djebel Manchou**	**15.38**	**281**	P	**Pn**	**08 39 51.3**	**+0.5**
KBA	**Koelnbreinsper**	**15.46**	**325**	*e*Pn	**Pn**	**08 39 50.1**	**-1.8**
	comp=Z,2.1nm,0.5s						
KBA				*e*S	**ScP**	**08 48 26.3**	**-0.6**
	comp=Z,4.2nm,1.2s						
KBA	**Koelnbreinsper**	**15.46**	**325**	⇑P	**Pn**	**08 39 50.4**	**-1.5**
KIV	**Kislovodsk**	**15.46**	**50**	P	**P**	**08 39 54.4**	**-1.7**
KIV				IAmb	IAmb	08 40 08.6	
	comp=Z,190nm,1.0s						
KIV	**Kislovodsk**	**15.46**	**50**	*e*P	**Pn**	**08 39 52.8**	**+0.9**
KIV				*e*S	**Sn**	**08 42 47.0**	**+4.6**
KIV				pmax	pmax		
	comp=Z,152nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,13.0s						
KIV	**Kislovodsk**	**15.46**	**50**	P	**P**	**08 39 56.2**	**+0.1**
KIV				P	**P**	**08 39 56.2**	**+0.1**
KIV	**Kislovodsk**	**15.46**	**50**	*i* P	**P**	**08 39 57.1**	**+0.9**
	SNR=21						
KIV	**Kislovodsk**	**15.46**	**50**	⇑P	**Pn**	**08 39 52.8**	**+0.9**
KVAR	**Kislovodsk Arr**	**15.47**	**50**	Pn	**P**	**08 39 55.2**	**-1.0**
	baz=95,slow=23						
KVAR				Sn	**S**	**08 42 52.6**	**-5.4**
	baz=74,slow=23						
KVAR				LR	LR	08 47 39.0	
	comp=Z,2µm,20.3s,baz=128,slow=44						
	comp=Z,11nm,0.6s						
KBZ	**Khabaz**	**15.48**	**51**	Pn	**P**	**08 39 55.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=244,slow=8.9,SNR=34						
KBZ				LR	LR	08 47 38.5	
	comp=Z,3µm,18.5s,baz=240,slow=44						
	comp=Z,71nm,0.7s						
KBZ	**Khabaz**	**15.48**	**51**	P	**P**	**08 39 55.0**	**-1.3**
GNI	**Garni**	**15.49**	**65**	Pn	**P**	**08 39 55.0**	**-1.6**
	comp=Z,77nm,0.8s,baz=268,slow=5.7,SNR=43						
GNI				LR	LR	08 47 13.8	
	comp=Z,16µm,19.2s,baz=260,slow=42						
GNI	**Garni**	**15.49**	**65**	P	**P**	**08 39 55.1**	**-1.6**
GNI				IAmb	IAmb	08 39 56.5	
	comp=Z,148nm,1.0s						
GNI	**Garni**	**15.49**	**65**	P	**P**	**08 39 55.1**	**-1.6**
GNI				pmax	pmax		
	comp=Z,148nm,1.0s						
GNI	**Garni**	**15.49**	**65**	P	**P**	**08 39 55.3**	**-1.3**
GNI				P	**P**	**08 39 55.3**	**-1.3**
GNI				P	**P**	**08 39 55.3**	**-1.3**
GNI	**Garni**	**15.49**	**65**	P	**P**	**08 39 55.0**	**-1.6**
MAUC	**Maruska**	**15.60**	**339**	*e*P	**P**	**08 39 56.4**	**-1.3**
MAUC				*e*S	**S**	**08 43 01.6**	**+1.0**
MOA	**Molln**	**15.62**	**329**	*e*Pn	**P**	**08 39 57.6**	**-0.2**
	comp=Z,36nm,1.0s						
ABTA	**Abfaltersbach**	**15.62**	**323**	*e*Pn	**Pn**	**08 39 51.4**	**-2.6**
	comp=Z,20nm,0.6s,SNR=8.4						
ABTA				*e*Sn	**Sn**	**08 42 43.2**	**-3.1**
	comp=Z,48nm,0.8s						
ABTA				*e*S	**ScP**	**08 48 27.4**	**+0.4**
	comp=Z,3.5nm,0.6s						
AK07	**Malin Array Si**	**15.64**	**7**	IAmb	IAmb	08 40 17.1	
	comp=Z,200nm,0.8s						
AK06	**Malin Array Si**	**15.68**	**7**	IAmb	IAmb	08 40 17.9	
	comp=Z,350nm,1.1s						
AK10	**Malin Array Si**	**15.70**	**7**	IAmb	IAmb	08 40 18.1	
	comp=Z,371nm,1.1s						
AK09	**Malin Array Si**	**15.72**	**7**	IAmb	IAmb	08 40 18.4	
	comp=Z,394nm,1.1s						
ZEI	**Tsey**	**15.73**	**55**	*e*P	**Pn**	**08 39 55.9**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,106nm,0.7s						
AK08	**Malin Array Si**	**15.73**	**7**	IAmb	IAmb	08 40 18.5	
	comp=Z,314nm,1.1s						
AK02	**Malin Array Si**	**15.75**	**7**	IAmb	IAmb	08 40 18.6	
	comp=Z,241nm,1.0s						
AK16	**Malin Array Si**	**15.75**	**7**	IAmb	IAmb	08 40 18.6	
	comp=Z,335nm,1.0s						
AK17	**Malin Array Si**	**15.76**	**7**	IAmb	IAmb	08 40 18.6	
	comp=Z,339nm,0.9s						
AK11	**Malin Array Si**	**15.77**	**7**	IAmb	IAmb	08 40 18.7	
	comp=Z,313nm,1.0s						
BIOA	**Bad Ischl, Aus**	**15.77**	**327**	*e*Pn	**P**	**08 40 00.1**	**+0.6**
AK01	**Malin Array Si**	**15.79**	**7**	IAmb	IAmb	08 40 18.9	
	comp=Z,237nm,1.1s						
KRUC	**Moravsky**	**15.79**	**336**	*e*P	**P**	**08 39 58.0**	**-1.7**
AKASG	**Malin Array Be**	**15.80**	**7**	Pn	**P**	**08 39 58.1**	**-1.6**
	comp=Z,8.3nm,0.3s,baz=201,slow=11,SNR=27						
AKASG				Sn	**Sn**	**08 42 48.1**	**-2.1**
	baz=251,slow=38						
AKASG				LR	LR	08 46 58.3	
	comp=Z,1µm,18.1s,baz=190,slow=41						
AKASG				ScP	**ScP**	**08 48 26.3**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=206,slow=0.9,SNR=5.3						
AKASG	**Malin Array Be**	**15.80**	**7**	IAmb	IAmb	08 40 19.1	
	comp=Z,269nm,1.1s						
AKASG	**Malin Array Be**	**15.80**	**7**	*i* P	**P**	**08 39 58.0**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,20nm,0.6s						
AKBB	**Malin Array Si**	**15.80**	**7**	Pn	**Pn**	**08 39 57.0**	**+1.0**
AKBB	**Malin Array Si**	**15.80**	**7**	*d i*P	**Pn**	**08 39 57.4**	**+1.4**
AK18	**Malin Array Si**	**15.80**	**7**	IAmb	IAmb	08 40 19.0	
	comp=Z,248nm,0.9s						
AK04	**Malin Array Si**	**15.81**	**7**	IAmb	IAmb	08 40 19.2	
	comp=Z,298nm,1.1s						
NCK	**Nalchik**	**15.83**	**53**	⇓*i*P	**P**	**08 39 59.8**	**-0.3**
CAEH	**'Ain El Ouahch**	**15.84**	**282**	P	**P**	**08 39 59.7**	**-0.6**
AK22	**Malin Array Si**	**15.84**	**7**	IAmb	IAmb	08 40 19.5	
	comp=Z,227nm,1.0s						
AK23	**Malin Array Si**	**15.85**	**7**	IAmb	IAmb	08 40 19.6	
	comp=Z,226nm,0.9s						
AK21	**Malin Array Si**	**15.85**	**6**	IAmb	IAmb	08 40 19.6	
	comp=Z,236nm,1.0s						
OJC	**Ojcow**	**15.89**	**345**	*e*P	**P**	**08 39 59.6**	**-1.1**
OJC				*e*S	**Sn**	**08 42 57.9**	**+5.4**
OJC				*e*L	L	08 46 48.2	
	comp=Z,2µm,23.4s						
OJC	**Ojcow**	**15.89**	**345**	⇑P	**P**	**08 39 59.9**	**-0.9**
VRAC	**Vranov**	**15.94**	**336**	⇑P	**P**	**08 40 01.2**	**-0.1**
VRAC	**Vranov**	**15.94**	**336**	Pn	**Pn**	**08 39 59.6**	**+1.7**
	comp=Z,5.2nm,0.3s,baz=160,slow=11,SNR=24						
VRAC				Sn	**Sn**	**08 42 55.0**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=220,slow=5.6,SNR=1.4						
	comp=Z,31nm,0.5s						
VRAC	**Vranov**	**15.94**	**336**	*e*P	**Pn**	**08 39 57.8**	**-0.1**
OKC	**Ostrava-Krasne**	**15.94**	**341**	*e*P	**P**	**08 39 59.9**	**-1.4**
OKC				MLR	MLR		
	comp=Z,3µm,10.4s						
OKC	**Ostrava-Krasne**	**15.94**	**341**	*e*P	**P**	**08 39 59.9**	**-1.4**
OKC				*e*S	**S**	**08 43 09.7**	**+2.3**
OKC				AMS	AMS	08 49 00.0	
	comp=Z,3µm,10.4s						
CKFL	**Kef-Lekhel**	**15.94**	**281**	P	**P**	**08 40 00.4**	**-1.2**
SALO	**Salr**	**15.96**	**316**	Pn	**Pn**	**08 39 58.3**	**0.0**
SALO				IAmb	IAmb	08 40 22.8	
	comp=Z,243nm,0.9s						
SALO	**Salr**	**15.96**	**316**	⇑P	**P**	**08 40 00.1**	**-1.6**
MORC	**Moravsky Berou**	**16.06**	**339**	*e*P	**Pn**	**08 39 59.1**	**-0.3**
MORC	**Moravsky Berou**	**16.06**	**339**	⇓P	**Pn**	**08 40 00.3**	**+0.9**
BOB	**Bobbio (Coli)**	**16.13**	**312**	⇓P	**P**	**08 40 02.6**	**-1.0**
CASM	**Ain Smara**	**16.13**	**280**	P	**P**	**08 40 02.6**	**-1.0**
CTEI	**Djebel Teioual**	**16.20**	**279**	P	**P**	**08 40 03.2**	**-1.3**
GOF	**Gofitskoye**	**16.25**	**47**	⇑*e*P	**P**	**08 40 06.6**	**+1.8**
GOF				pmax	pmax		
	comp=Z,154nm,0.7s						
CKRC	**Cesky Krumlov**	**16.36**	**331**	*e*P	**Pn**	**08 40 03.8**	**+0.4**
CKRC				AMS	AMS	08 48 10.0	
	comp=Z,5µm,15.5s						
WTTA	**Wattenberg**	**16.41**	**322**	*e*Pn	**Pn**	**08 40 04.8**	**+0.6**
	comp=Z,17nm,0.7s,SNR=16						
WTTA				*e*Sn	**Sn**	**08 43 02.4**	**-3.2**
	comp=Z,46nm,0.9s						
WTTA				*e*S	**ScP**	**08 48 29.3**	**+0.6**
	comp=Z,9.9nm,0.8s						
WATA	**Walderalm**	**16.49**	**323**	*e*Pn	**Pn**	**08 40 06.1**	**+1.0**
	comp=Z,7.9nm,0.7s,SNR=14						
WATA				*e*Sn	**Sn**	**08 43 05.1**	**-2.4**
	comp=Z,33nm,0.8s						
KRLC	**Kraliky**	**16.55**	**338**	*e*P	**Pn**	**08 40 06.7**	**+1.0**
KRLC	**Kraliky**	**16.55**	**338**	*e*P	**Pn**	**08 40 06.7**	**+1.0**
SQTA	**Sankt Quirin**	**16.60**	**322**	*e*Pn	**Pn**	**08 40 06.1**	**-0.3**
	comp=Z,3.9nm,0.2s						
SQTA				*e*S	**ScP**	**08 48 29.0**	**0.0**
	comp=Z,9.3nm,0.8s						
DFRA	**Djebel Bou Aff**	**16.62**	**281**	P	**P**	**08 40 10.9**	**+1.8**
GERES	**GERESS Array B**	**16.63**	**330**	Pn	**Pn**	**08 40 06.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=161,slow=12,SNR=56						
GERES				Sn	**Sn**	**08 43 09.2**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=158,slow=8.6,SNR=1.5						
GERES				LR	LR	08 48 05.4	
	comp=Z,4µm,18.9s,baz=145,slow=43						
GERES				ScP	**ScP**	**08 48 28.8**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=137,slow=2.0,SNR=5.4						
	comp=Z,16nm,0.7s						
FETA	**Feichten**	**16.72**	**320**	*i* Pn	**Pn**	**08 40 06.9**	**-1.1**
	comp=Z,41nm,0.8s,SNR=15						
FETA				*e*Sn	**Sn**	**08 43 12.0**	**-1.0**
	comp=Z,12nm,1.0s						
FETA				*e*S	**ScP**	**08 48 30.0**	**+0.8**
	comp=Z,8.6nm,0.9s						
MOTA	**Moosalm**	**16.74**	**322**	*e*Pn	**Pn**	**08 40 08.5**	**+0.3**
	comp=Z,12nm,0.5s,SNR=8.2						
MOTA				*e*Sn	**Sn**	**08 43 11.8**	**-1.6**
	comp=Z,42nm,1.0s						
MOTA				*e*S	**ScP**	**08 48 28.8**	**-0.4**
	comp=Z,4.5nm,0.7s						
KHC	**Kasperske Hory**	**16.91**	**330**	*e*P	**P**	**08 40 11.4**	**-0.7**
KHC				*e*S	**Sn**	**08 43 15.6**	**-1.7**
KHC				MLR	MLR		
	comp=Z,5µm,14.9s						
KHC	**Kasperske Hory**	**16.91**	**330**	*e*P	**P**	**08 40 11.4**	**-0.7**
KHC				*e*S	**Sn**	**08 43 15.6**	**-1.7**
KHC				AMS	AMS	08 48 20.0	
	comp=Z,5µm,14.9s						
KHC	**Kasperske Hory**	**16.91**	**330**	⇑P	**P**	**08 40 11.2**	**-0.9**
CKHR	**Kef el Ahmar**	**16.93**	**279**	P	**P**	**08 40 13.9**	**+1.3**
DPC	**Dobruska-Polom**	**16.93**	**338**	*e*P	**P**	**08 40 12.1**	**-0.3**
DPC				*e*S	**S**	**08 43 25.8**	**-1.9**
DPC				MLR	MLR		
	comp=Z,3µm,12.1s						
DPC	**Dobruska-Polom**	**16.93**	**338**	*e*P	**P**	**08 40 12.1**	**-0.3**
DPC				*e*S	**S**	**08 43 25.8**	**-1.9**
DPC				AMS	AMS	08 48 00.0	
	comp=Z,3µm,12.1s						
RETA	**Reutte**	**17.00**	**322**	*e*Pn	**P**	**08 40 13.0**	**-0.2**
	comp=Z,1.9nm,0.2s						
SET	**Setif**	**17.01**	**280**	P	**P**	**08 40 14.0**	**+0.6**
DAVOX	**Davos/Dischmat**	**17.02**	**318**	Pn	**P**	**08 40 12.9**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=149,slow=14,SNR=16						
DAVOX				Sn	**Sn**	**08 43 23.4**	**+3.1**
	comp=Z,0.6nm,0.3s,baz=296,slow=17,SNR=3.1						
DAVOX				ScP	**ScP**	**08 48 30.2**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=56,slow=5.4,SNR=3.6						
DAVOX				LR	LR	08 49 10.7	
	comp=Z,3µm,18.1s,baz=124,slow=46						
	comp=Z,11nm,0.8s						
TUE	**Stuetta**	**17.13**	**317**	P	**P**	**08 40 14.6**	**-0.2**
TUE	**Stuetta**	**17.13**	**317**	⇑P	**Pn**	**08 40 13.6**	**+0.3**
OSTC	**Ostas**	**17.14**	**338**	*e*P	**P**	**08 40 15.1**	**+0.4**
OSTC				*e*S	**S**	**08 43 31.4**	**-0.7**
OSTC				AMS	AMS	08 48 00.0	
	comp=Z,3µm,16.1s						
UPC	**Upice**	**17.17**	**337**	*e*P	**P**	**08 40 15.4**	**+0.5**
UPC				*e*S	**S**	**08 43 30.5**	**-2.0**
UPC				MLR	MLR		
	comp=Z,4µm,14.3s						
UPC	**Upice**	**17.17**	**337**	*e*P	**P**	**08 40 15.4**	**+0.5**
UPC				*e*S	**S**	**08 43 30.5**	**-2.0**
UPC				AMS	AMS	08 48 00.0	
	comp=Z,4µm,14.3s						
GROC	**Groznyy**	**17.17**	**56**	*e*P	**P**	**08 40 15.4**	**+0.4**
GROC				*e*S	**S**	**08 43 30.7**	**-2.0**
GROC				pmax	pmax		
	comp=Z,87nm,0.8s						
MQOL	**MQOL**	**17.18**	**144**	*i* P	**Pn**	**08 40 11.4**	**-2.4**
CHVC	**Chvalec**	**17.22**	**338**	*e*P	**P**	**08 40 16.7**	**+1.1**
CHVC				AMS	AMS	08 48 00.0	
	comp=Z,4µm,15.5s						
PRU	**Pruhonice**	**17.23**	**334**	*e*P	**Pn**	**08 40 13.4**	**-0.8**
PRU				*e*S	**S**	**08 43 29.7**	**-4.0**
PRU				MLR	MLR		
	comp=Z,4µm,12.4s						
PRU	**Pruhonice**	**17.23**	**334**	*e*P	**Pn**	**08 40 13.4**	**-0.8**
PRU				*e*S	**S**	**08 43 29.7**	**-4.0**
PRU				AMS	AMS	08 48 40.0	
	comp=Z,4µm,12.4s						
BEL	**Belsk**	**17.24**	**348**	*e*P	**P**	**08 40 18.5**	**+2.8**
BEL				*e*S	**S**	**08 43 35.8**	**+1.9**
DAVA	**Damuels**	**17.33**	**320**	*e*Pn	**Pn**	**08 40 15.9**	**+0.2**
	comp=Z,11nm,0.3s,SNR=11						
DAVA				*e*Sn	**Sn**	**08 43 25.2**	**-2.7**
	comp=Z,24nm,0.6s						
DAVA	**Damuels**	**17.33**	**320**	⇑P	**P**	**08 40 17.2**	**+0.2**
KSP	**Ksiaz**	**17.37**	**338**	*e*P	**Pn**	**08 40 16.2**	**+0.2**
KSP				*e*S	**S**	**08 43 32.8**	**-3.8**
KSP				*e*L	L	08 48 26.9	
	comp=Z,2µm,21.6s						
KSP	**Ksiaz**	**17.37**	**338**	⇑P	**P**	**08 40 17.4**	**+0.2**
PVCC	**Panska Ves**	**17.66**	**335**	*e*P	**Pn**	**08 40 19.4**	**-0.2**
PVCC				MLR	MLR		
	comp=Z,3µm,11.7s						
PVCC	**Panska Ves**	**17.66**	**335**	*e*P	**Pn**	**08 40 19.4**	**-0.2**
PVCC				AMS	AMS	08 50 00.0	
	comp=Z,3µm,11.7s						
ATAF	**Djebel Tarf**	**17.94**	**279**	P	**P**	**08 40 23.5**	**-0.2**
BNI	**Bardonecchia**	**17.99**	**310**	P	**P**	**08 40 24.9**	**+0.7**
BNI	**Bardonecchia**	**17.99**	**310**	P	**P**	**08 40 24.9**	**+0.7**
BNI				pmax	pmax		
	comp=Z,108nm,1.0s						
BNI	**Bardonecchia**	**17.99**	**310**	⇓P	**P**	**08 40 25.0**	**+0.9**
MAHO	**Mahon**	**18.12**	**292**	P	**Pn**	**08 40 24.5**	**-0.7**
MAHO				S	**S**	**08 43 49.6**	**-2.2**
MAHO	**Mahon**	**18.12**	**292**	⇓P	**P**	**08 40 25.6**	**+0.2**
BRG	**Berggiesshubel**	**18.17**	**334**	*e*P	**P**	**08 40 27.2**	**+1.2**
BRG				Amp		08 40 32.6	
	comp=Z,61nm,0.9s						
BRG				*e*x	x	08 40 47.0	
BRG				Amp		08 40 48.6	
	comp=Z,67nm,0.9s						
BRG	**Berggiesshubel**	**18.17**	**334**	*e*P	**P**	**08 40 27.2**	**+1.2**
BRG				S	**Sn**	**08 43 40.0**	**-7.9**
BRG				pmax	pmax		
	comp=Z,61nm,0.9s						
BRG				pmax	pmax		
	comp=Z,67nm,0.9s						
BRG				smax	smax		
	comp=N,3µm,10.5s						
BRG				MLR	MLR		
	comp=E,2µm,11.6s						
BRG				MLR	MLR		
	comp=Z,3µm,15.2s						
NKC	**Novy Kostel**	**18.23**	**331**	*e*P	**Pn**	**08 40 25.6**	**-0.9**
NKC				*e*S	**Sn**	**08 43 51.5**	**+2.3**
NKC				MLR	MLR		
	comp=Z,5µm,14.5s						
NKC	**Novy Kostel**	**18.23**	**331**	*e*P	**Pn**	**08 40 25.6**	**-0.9**
NKC				*e*S	**Sn**	**08 43 51.5**	**+2.3**

NKC				AMS	AMS	08 49 20.0	
	comp=Z,5µm,14.5s						
AKET	Djebel Ketaf	18.25	280	P	P	08 40 28.0	+0.9
MAK	Makhachkala	18.27	58	*d i*P	P	08 40 29.5	+2.4
MAK				*e*S	S	08 43 56.6	+1.9
MAK				pmax	pmax		
	comp=Z,341nm,0.5s						
MAK				smax	smax		
	comp=E,174nm,0.4s						
MAK				MLR	MLR		
	comp=Z,2µm,11.0s						
RUSF	Rustrel	18.30	305	⇓P	Pn	08 40 30.4	+2.9
GRFO	Grafenberg	18.33	328	P	P	08 40 27.5	-0.3
GRFO	Grafenberg	18.33	328	P	P	08 40 27.5	-0.3
GRFO				pmax	pmax		
	comp=Z,172nm,1.0s						
VORD	Divnogorie	18.50	27	*e*P	Pn	08 40 30.3	+0.5
VORD				pmax	pmax		
	comp=Z,60nm,0.9s						
ABMS	Boumerdes	18.54	282	P	Pn	08 40 30.9	+0.4
ADJB	Djebel Djouab	18.60	280	P	Pn	08 40 31.7	+0.4
STU	Stuttgart	18.64	323	P	Pn	08 40 32.5	+0.9
STU	Stuttgart	18.64	323	P	Pn	08 40 32.5	+0.9
STU				pmax	pmax		
	comp=Z,83nm,0.8s						
VSR	Storozhevoye	18.66	26	*e*P	P	08 40 31.4	+0.1
VSR				*e*S	Sn	08 43 58.2	-1.3
VSR				pmax	pmax		
	comp=Z,70nm,0.6s						
VSR				smax	smax		
	comp=N,940nm,11.2s						
VSR				MLR	MLR		
	comp=Z,1µm,8.0s						
BFO	Black Forest	18.80	320	P	P	08 40 32.8	-0.2
BFO	Black Forest	18.80	320	P	P	08 40 32.8	-0.2
BFO				pmax	pmax		
	comp=Z,63nm,0.8s						
BFO	Black Forest	18.80	320	⇑P	Pn	08 40 33.5	-0.1
CLL	Collm	18.87	334	*e*P	Pn	08 40 34.0	-0.3
CLL				*e*S	Sn	08 44 02.0	-2.7
CLL	Collm	18.87	334	*e*P	Pn	08 40 34.0	-0.3
CLL				*e*Plp		08 40 36.0	
	comp=Z,300nm,18.7s						
CLL				*e*sP	sP	08 40 44.0	+0.5
CLL				*i* PP	PnPn	08 40 48.2	+1.5
CLL				*e*PPP	PPP	08 40 57.0	
CLL				*i* x	x	08 41 00.0	
CLL				*e*x	x	08 42 09.0	
CLL				*e*S	Sn	08 44 02.0	-2.7
	comp=N,1µm,20.7s						
CLL				*e*S	Sn	08 44 02.0	-2.7
	comp=E,2µm,18.4s						
CLL				*e*S	Sn	08 44 02.0	-2.7
	comp=Z,600nm,26.5s						
CLL				*e*SS	SnSn	08 44 32.0	+13
CLL				*e*ScP	ScP	08 48 33.0	-0.5
CLL				*e*Lmax		08 49 26.0	
ABA	Alger-Bouzarea	18.90	282	P	Pn	08 40 34.5	-0.3
EMHD	Djebel Mahouad	18.99	280	P	P	08 40 35.5	+0.2
VORR	Voronezh	19.05	25	⇓*i*P	Pn	08 40 38.0	+1.6
VORR				*e*S	S	08 44 14.0	+4.0
VORR				pmax	pmax		
	comp=Z,183nm,2.0s						
VORR				MLR	MLR		
	comp=Z,2µm,15.0s						
SUW	Suwalki	19.09	354	*e*P	Pn	08 40 37.3	+0.3
SUW				*e*pP	pP	08 40 41.7	-1.0
SUW				*e*S	Sn	08 44 04.9	-5.0
SUW				*e*L	L	08 47 42.4	
	comp=Z,2µm,25.3s						
SUW	Suwalki	19.09	354	*e*P	Pn	08 40 37.6	+0.7
SUW	Suwalki	19.09	354	⇑P	Pn	08 40 37.3	+0.3
GKP	Gorka Klasztor	19.31	343	*e*P	Pn	08 40 39.5	-0.1
GKP				*e*S	S	08 44 16.7	+1.3
GKP				*e*L	L	08 50 04.9	
	comp=Z,2µm,24.3s						
GKP	Gorka Klasztor	19.31	343	*e*P	Pn	08 40 40.6	+1.0
ECH	Echery	19.36	319	⇓P	P	08 40 37.2	-1.8
SSB	Saint Sauveur	19.45	308	⇑P	P	08 40 39.3	-0.8
MNK	Minsk	19.49	3	*i* P	P	08 40 32.7	-7.7
MNK				*i* S	S	08 44 14.5	-4.5
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,22nm,0.9s						
MNK				MLR	MLR		
	comp=Z,2µm,19.0s						
MNK				MLR	MLR		
	comp=N,1µm,17.0s						
MNK				MLR	MLR		
	comp=E,202nm,18.0s						
MNK	Minsk	19.49	3	*i* P	P	08 40 32.8	-7.6
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	08 40 32.8	-7.6
	comp=N,22nm,0.9s						
MNK				*i* P	P	08 40 32.8	-7.6
	comp=Z,7.0nm,1.0s,baz=184						
MNK				*i* PP	pP	08 40 45.5	-1.6
MNK				*i* S	S	08 44 14.5	-4.5
MNK				*i* SS	SnSn	08 44 30.8	-3.1
MNK				*i* LQ	LQ	08 46 31.9	
MNK				*i* LR	LR	08 47 25.6	
MNK				*i* LRM	MLR	08 49 20.8	
	comp=Z,2µm,19.0s						
MNK				*i* LRM	MLR	08 49 24.0	
	comp=N,1µm,16.9s						
MNK				*i* LRM	MLR	08 49 32.2	
	comp=E,202nm,18.3s						
VRH	Novokhopyorsk	19.63	30	*e*P	P	08 40 41.9	-0.1
VRH				*e*S	S	08 44 14.3	-7.7
VRH				pmax	pmax		
	comp=Z,260nm,0.8s						
VRH				smax	smax		
	comp=N,2µm,10.9s						
VRH				MLR	MLR		
	comp=Z,510nm,8.0s						
LPSR	Galich'ya Gora	19.73	23	*e*P	P	08 40 42.4	-0.6
LPSR				*e*S	S	08 44 14.3	-10
LPSR				pmax	pmax		
	comp=Z,240nm,1.5s						
LPSR				smax	smax		
	comp=N,1µm,13.0s						
LPSR				MLR	MLR		
	comp=Z,1µm,11.0s						
NACGM	Naroch	19.86	1	⇓*e*P	P	08 40 44.6	+0.1
	baz=182						
EBNR	Beni Rached	20.13	281	P	P	08 40 44.5	-3.1
ECHA	Ech Chlef	20.27	280	P	P	08 40 46.8	-2.3
IDID	Didziasalis	20.27	1	*e*P	P	08 40 47.7	-1.2
RAYN	Ar Rayn	20.29	119	P	Pn	08 40 50.7	-0.8
RAYN				IAmb	IAmb	08 41 05.7	
	comp=Z,261nm,1.9s						
RAYN	Ar Rayn	20.29	119	P	Pn	08 40 50.7	-0.8
RAYN				pmax	pmax		
	comp=Z,261nm,1.9s						
RAYN	Ar Rayn	20.29	119	P	Pn	08 40 51.5	0.0
RAYN	Ar Rayn	20.29	119	*i* P	Pn	08 40 51.1	-0.3
	SNR=27						
RAYN	Ar Rayn	20.29	119	⇑P	Pn	08 40 51.1	-0.4
IIGN	Ignalina	20.31	360	*e*P	P	08 40 49.8	+0.5
FLTG	Flechtingen	20.35	333	⇑P	P	08 40 48.4	-1.4
JAWL	J.Aulia	20.50	163	*i* P	Pn	08 40 53.9	-0.1
EANR	'Ain N'Sour	20.51	280	P	P	08 40 51.5	-0.2
PABE	Paberze	20.52	356	*e*P	P	08 40 51.6	0.0
ISAL	Salakas	20.53	360	*e*P	Pn	08 40 53.4	-0.6
WLF	Walferdange	20.75	321	P	P	08 40 54.0	-0.2
WLF				IAmb	IAmb	08 41 00.2	
	comp=Z,120nm,0.8s						
WLF	Walferdange	20.75	321	P	P	08 40 54.0	-0.2
WLF				pmax	pmax		
	comp=Z,121nm,0.8s						
WLF	Walferdange	20.75	321	*d*P	P	08 40 54.4	+0.2
	comp=Z,105nm,0.9s						
WLF	Walferdange	20.75	321	⇑P	Pn	08 40 55.5	-1.2
OKGL	Djebel Kef Gue	20.87	280	P	P	08 40 55.7	+0.1
VSVD	Vaisvydziai	21.00	356	*e*P	P	08 40 58.4	+1.6
PBUR	Paburge	21.19	353	*e*P	P	08 40 59.1	+0.3
OBN	Obninsk	21.30	16	P	P	08 41 00.8	+0.8
	comp=Z,6.1nm,0.3s,baz=213,slow=7.0,SNR=9.2						
OBN				S	S	08 44 52.1	-3.1
	comp=Z,4.7nm,0.4s,baz=36,slow=22,SNR=2.2						
OBN				LR	LR	08 50 02.8	
	comp=Z,582nm,20.2s,baz=210,slow=39						
	comp=Z,6.1nm,0.3s						
OBN	Obninsk	21.30	16	P	P	08 40 59.0	-1.0
OBN				IAmb	IAmb	08 41 10.5	
	comp=Z,156nm,1.0s						
OBN	Obninsk	21.30	16	*i* P	P	08 40 59.1	-0.9
OBN				*i*		08 41 19.9	
OBN				*i* S	S	08 44 50.9	-4.4
OBN				pmax	pmax		
	comp=Z,186nm,1.0s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
BTNL	Ternell	21.34	323	*d*P	P	08 41 00.6	+0.1
	comp=Z,93nm,0.9s						
MEM	Membach	21.41	323	*d*P	P	08 41 01.4	+0.2
	comp=Z,120nm,0.9s						
MEM				*d*S	Sn	08 45 02.6	-3.3
RCHB	Rochefort	21.53	321	*b*P	P	08 41 02.1	-0.3
	comp=Z,50nm,0.9s						
RCHB				*d*S	S	08 44 59.5	-0.3
BSD	Bornholm Skovb	21.56	342	*e*P	P	08 41 03.8	+1.0
BSD	Bornholm Skovb	21.56	342	*i* P	P	08 41 00.6	-2.2
BSD				IAmb	IAmb	08 41 11.2	
	comp=Z,54nm,1.1s						
ODJA	Bouhanifia	21.58	278	P	P	08 41 04.5	+1.2
KSLA	Kassala	21.58	152	*i* P	P	08 41 04.1	+0.7
BSTI	Sart Tilman	21.61	322	*d*P	P	08 41 04.0	+0.6
BCLA	Clavier	21.65	322	*b*P	P	08 41 03.9	+0.1
	comp=Z,78nm,1.0s						
BCLA				*d*S	S	08 45 01.3	-0.9
BEBN	Eben Emael	21.69	323	*d*P	P	08 41 04.2	0.0
	comp=Z,76nm,1.1s						
BGES	Gesves	21.74	321	*d*P	P	08 41 04.6	-0.1
BGES				*d*S	S	08 45 06.8	+2.8
DOU	Dourbes	21.82	320	*b*P	P	08 41 05.2	-0.4
	comp=Z,128nm,0.7s						
DOU				*d*S	S	08 45 04.7	-0.9
BMRD	Maredsous	21.85	321	*b*P	P	08 41 05.4	-0.6
	comp=Z,48nm,0.8s						
USTO	Oran	21.86	280	P	P	08 41 09.2	+3.0
CLF	Chambon-Foret	22.06	313	⇑P	P	08 41 08.3	+0.1
CART	Cartagena	22.10	285	P	P	08 41 14.4	+5.6
CART				S	Sn	08 45 19.1	-3.5
CART	Cartagena	22.10	285	IAmb	IAmb	08 41 16.4	
	comp=Z,122nm,0.8s						
CART	Cartagena	22.10	285	P	P	08 41 08.2	-0.6
CART	Cartagena	22.10	285	⇑P	P	08 41 08.2	-0.6
OTSS	Djebel Tessala	22.11	278	P	P	08 41 12.1	+3.0
MOS	Moscow	22.12	17	*e*P	P	08 41 05.5	-3.3
MOS				*e*		08 41 48.0	
MOS				*e*S	S	08 45 05.6	-5.6
MOS				*e*		08 52 22.7	
MOS				pmax	pmax		
	comp=Z,351nm,1.8s						
MOS				pmax	pmax		
	comp=Z,1µm,2.5s						
MOS				smax	smax		
	comp=N,2µm,3.6s						
MOS				smax	smax		
	comp=E,2µm,3.8s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
SNF	Seneffe	22.22	321	*d*P	P	08 41 09.8	-0.2
	comp=Z,100nm,0.9s						
BLEU	Blekinge	22.43	345	*i* P	P	08 41 10.0	-2.1
LLD	Lille Linde	22.50	339	*i* P	P	08 41 15.2	+2.3
LLD				IVmB_BB		08 42 38.5	
	comp=Z,1µm,3.2s						
OLHC	Oulhaca	22.62	279	P	P	08 41 17.2	+2.7
SAKB	Bahrain	22.73	107	P	P	08 41 18.9	+3.4
COP	Copenhagen	22.74	339	*i* P	P	08 41 17.1	+1.7
COP				IAmb	IAmb	08 42 09.8	
	comp=Z,428nm,1.7s						
SLIT	Slitere, Latvi	22.75	354	*e*P	P	08 41 15.9	+0.4
SLIT	Slitere, Latvi	22.75	354	⇑P	P	08 41 15.8	+0.3
BJUU	Bjuv	22.91	341	*i* P	P	08 41 17.4	+0.2
DEL	Delary	23.04	342	*e*P	P	08 41 17.5	-1.0
DEL	Delary	23.04	342	*i* P	P	08 41 15.0	-3.5
BELG	Belogornoye	23.07	35	P	P	08 41 18.1	-0.7
	comp=Z,128nm,0.7s,baz=60,slow=1.6,SNR=29						
BELG				S	S	08 45 24.7	-3.5
	comp=Z,48nm,0.9s,baz=110,slow=23,SNR=7.4						
BELG				LR	LR	08 52 31.3	
	comp=Z,1µm,19.3s,baz=248,slow=42						
	comp=Z,128nm,0.7s						
FIGM	Figuig	23.09	271	P	P	08 41 20.0	+0.5
SHMA	Al-Shehemyia	23.12	107	P	P	08 41 21.8	+2.2
VSU	Vasula	23.43	1	⇑*e*P	P	08 41 22.6	+0.2
VSU				pmax	pmax		
	comp=Z,409nm,2.0s						
VSU	Vasula	23.43	1	*e*P	P	08 41 23.7	+1.3
VSU	Vasula	23.43	1	⇑P	P	08 41 21.6	-0.8
VSU				⇓S	S	08 45 35.9	+1.8
CHAS	Isla Isabel II	23.45	279	P	P	08 41 21.9	-1.0
CHAS				S	S	08 45 40.9	+6.1
TDRA	Tendrara	23.51	273	P	P	08 41 25.0	+1.3
SMRA	Abu-Samra	23.57	109	P	P	08 41 26.0	+1.9
KHOR	Al-Khor Airpor	23.67	106	P	P	08 41 27.6	+2.6
JBK	JBK	23.70	277	P	P	08 41 27.0	+1.5
MTSE	Matsula	23.74	357	*e*P	P	08 41 26.7	+1.3
WMELI	Melilla	23.86	279	P	P	08 41 23.8	-2.9
WMELI				S	S	08 45 45.5	+4.1
TRNA	Turayna	23.88	109	P	P	08 41 27.4	+0.4
UCM	Universidad Co	23.89	291	P	P	08 41 30.0	+2.9
UCM				S	S	08 45 43.6	+1.7
ELSH	Elham, Standar	24.24	319	*e*P	P	08 41 30.5	+0.3
ELSH				IAmb	IAmb	08 41 35.0	
	comp=Z,365nm,0.9s						
ES09	SONSECA Array	24.36	290	IAmb	IAmb	08 41 34.4	
	comp=Z,64nm,0.8s						
ES19	SONSECA Array	24.36	290	IAmb	IAmb	08 41 33.6	
	comp=Z,64nm,0.8s						
ES10	SONSECA Array	24.37	290	IAmb	IAmb	08 41 34.5	
	comp=Z,60nm,0.7s						
ES11	SONSECA Array	24.38	290	IAmb	IAmb	08 41 34.6	
	comp=Z,64nm,0.8s						
MUD	Monsted U'grnd	24.38	337	*i* P	P	08 41 37.0	+5.6
MUD				IAmb	IAmb	08 41 50.0	
	comp=Z,28nm,0.6s						
ES08	SONSECA Array	24.39	290	IAmb	IAmb	08 41 33.8	
	comp=Z,77nm,0.8s						
ES03	SONSECA Array	24.39	290	IAmb	IAmb	08 41 34.7	
	comp=Z,64nm,0.8s						
ES02	SONSECA Array	24.39	290	IAmb	IAmb	08 41 33.9	
	comp=Z,74nm,0.8s						
ES04	SONSECA Array	24.40	290	IAmb	IAmb	08 41 34.8	
	comp=Z,66nm,0.8s						
ES12	SONSECA Array	24.40	290	IAmb	IAmb	08 41 34.8	
	comp=Z,61nm,0.8s						
ES01	SONSECA Array	24.40	290	IAmb	IAmb	08 41 34.0	
	comp=Z,72nm,0.8s						
ES18	SONSECA Array	24.40	290	IAmb	IAmb	08 41 34.0	
	comp=Z,79nm,0.8s						
ES06	SONSECA Array	24.41	290	IAmb	IAmb	08 41 34.0	
	comp=Z,83nm,0.8s						
ES07	SONSECA Array	24.41	290	IAmb	IAmb	08 41 34.0	
	comp=Z,81nm,0.8s						
ES05	SONSECA Array	24.41	290	IAmb	IAmb	08 41 34.1	
	comp=Z,82nm,0.8s						
ESBB	Sonseca Array	24.41	290	IAmb	IAmb	08 41 34.1	
	comp=Z,76nm,0.8s						
ESDC	Sonseca Array	24.41	290	P	P	08 41 31.6	-0.3
	comp=Z,65nm,0.7s,baz=82,slow=9.3,SNR=285						
ESDC				PcP	PcP	08 45 11.5	+0.9
	comp=Z,4.7nm,0.8s,baz=83,slow=2.1,SNR=4.7						
ESDC				ScP	ScP	08 48 48.4	+0.7
	comp=Z,6.2nm,0.9s,baz=55,slow=2.5,SNR=16						
ESDC				LR	LR	08 52 02.5	
	comp=Z,948nm,21.6s,baz=92,slow=39						
	comp=Z,65nm,0.7s						
ESDC	Sonseca Array	24.41	290	IAmb	IAmb	08 41 34.1	
	comp=Z,69nm,0.8s						
ES13	SONSECA Array	24.41	290	IAmb	IAmb	08 41 35.0	
	comp=Z,76nm,0.8s						
ES17	SONSECA Array	24.42	290	IAmb	IAmb	08 41 34.1	
	comp=Z,82nm,0.8s						
ES14	SONSECA Array	24.43	290	IAmb	IAmb	08 41 34.4	
	comp=Z,73nm,0.8s						
ES16	SONSECA Array	24.44	290	IAmb	IAmb	08 41 34.3	
	comp=Z,80nm,0.8s						
ES15	SONSECA Array	24.44	290	IAmb	IAmb	08 41 34.4	
	comp=Z,86nm,0.8s						
HMNX	Herstmonceux	24.53	318	*e*P	P	08 41 32.9	+0.1
SLWR	Sila	24.60	110	P	P	08 41 35.2	+1.5
SLWR				P	P	08 41 35.2	+1.5
PAB	San Pablo	24.71	290	P	P	08 41 33.9	-0.8
PAB				IAmb	IAmb	08 41 39.4	
	comp=Z,72nm,1.0s						
PAB	San Pablo	24.71	290	P	P	08 41 33.9	-0.8
PAB				pmax	pmax		
	comp=Z,73nm,1.0s						
PAB	San Pablo	24.71	290	P	P	08 41 34.5	-0.1
PAB	San Pablo	24.71	290	⇓P	P	08 41 34.6	-0.1
AKLM	AKL	24.72	277	P	P	08 41 37.0	+2.2
ELMS	Elmsett, Ipswi	24.83	321	*e*P	P	08 41 34.8	-0.7
ELMS				IAmb	IAmb	08 41 39.7	
	comp=Z,243nm,0.8s						
EMAL	Malaga-Limoner	24.88	283	P	P	08 41 33.1	-3.1
EMAL				S	S	08 46 04.4	+6.6
PUL	Pulkovo	24.88	5	⇓*e*P	P	08 41 37.9	+2.0
PUL				pmax	pmax		
	comp=Z,173nm,0.7s						
PVLZ	Peæn de	24.97	279	P	P	08 41 36.6	-0.3
PVLZ				S	S	08 46 08.3	+9.0
JRN	Qarnain Island	25.05	106	P	P	08 41 39.5	+1.7
JRN				P	P	08 41 39.5	+1.7
JQE	Queens East	25.14	313	*e*P	P	08 41 38.0	-0.3
JSA	Saint Aubin	25.21	313	*e*P	P	08 41 38.8	-0.2
JSA				IAmb	IAmb	08 41 49.2	
	comp=Z,122nm,0.8s						
JSA	Saint Aubin	25.21	313	⇓P	P	08 41 39.4	+0.4
MEF	Metsahovi	25.22	358	*e*P	P	08 41 38.2	-0.7
JVM	Valle D.L. Mar	25.25	313	*e*P	P	08 41 38.2	-1.0
WACR	West Acre	25.36	322	*e*P	P	08 41 41.6	+1.3
WACR				IAmb	IAmb	08 41 47.7	
	comp=Z,350nm,0.9s						
UPP	Uppsala	25.46	350	*e*P	P	08 41 41.5	+0.3
AAL	Aland	25.48	353	*e*P	P	08 41 41.0	-0.3
GHWR	Ruwais	25.57	108	P	P	08 41 44.1	+1.6
GHWR				P	P	08 41 44.1	+1.6
MDT	Midelt	25.67	274	P	P	08 41 44.1	+0.6
	comp=Z,76nm,0.8s,baz=91,slow=15,SNR=89						
MDT				LR	LR	08 54 28.0	
	comp=Z,5µm,20.8s,baz=90,slow=42						
	comp=Z,76nm,0.8s						
MDT	Midelt	25.67	274	P	P	08 41 44.4	+0.9
LCRM	LCR	25.69	276	P	P	08 41 45.3	+1.6
GEYT	Alibeck	25.70	74	P	P	08 41 44.3	+0.7
	comp=Z,120nm,0.7s,baz=264,slow=11,SNR=123						
	comp=Z,120nm,0.7s						
CEU	Ceuta	25.73	281	P	P	08 41 40.7	-3.2
CEU				S	S	08 46 24.4	+13
SMIR	Smir Dam	25.77	281	P	P	08 41 45.0	+0.8
CHEFC	Chefchaouen	25.82	279	P	P	08 41 46.0	+1.2
STRU	Stroemstad	25.99	342	*i* P	P	08 41 45.0	-0.9
HOMB	Homborsund	26.08	338	*e*P	P	08 41 47.5	+0.8
RAF	Rauma	26.16	355	*e*P	P	08 41 47.4	0.0
GOLM	Goulmima	26.23	272	P	P	08 41 51.0	+2.3
SFS	San Fernando	26.33	283	P	P	08 41 51.6	+2.4
SFS				S	S	08 46 45.4	+25
HFS	Hagfors	26.41	346	P	P	08 41 48.7	-1.0
	comp=Z,2.1nm,0.4s,baz=146,slow=30,SNR=15						
HFS				LR	LR	08 53 06.8	
	comp=Z,2µm,21.2s,baz=156,slow=38						
	comp=Z,2.1nm,0.4s						
FINES	FINESS Array B	26.42	360	P	P	08 41 48.7	-1.1
	comp=Z,17nm,0.6s,baz=159,slow=11,SNR=22						
FINES				PcP	PcP	08 45 15.0	+0.4
	comp=Z,10nm,0.6s,baz=134,slow=5.5,SNR=5.0						
FINES				ScP	ScP	08 48 53.1	+0.3
	comp=Z,6.3nm,0.8s,baz=34,slow=0.5,SNR=4.7						
FINES				LR	LR	08 53 30.5	
	comp=Z,522nm,18.4s,baz=181,slow=39						
	comp=Z,17nm,0.6s						
FINES	FINESS Array B	26.42	360	P	P	08 41 47.8	-2.0
MZWR	Madinat Zayed	26.46	108	P	P	08 41 53.5	+3.0
MZWR				P	P	08 41 53.5	+3.0
SNART	Snartemo	26.53	337	*i* P	P	08 41 50.0	-0.9
SNART				*i* P	P	08 41 50.0	-0.9
MZR	Muzera	26.55	110	P	P	08 41 53.0	+1.6
	SNR=5.9						
MZR				P	P	08 41 53.0	+1.6
	SNR=5.9						
MZR	Muzera	26.55	110	P	P	08 41 52.7	+1.3
PBRG	Braganca	26.62	295	*e*P	P	08 41 51.9	0.0
	comp=Z,185nm,1.1s						
PBRG				*i* LQ	LQ	08 48 56.0	
MONM	Monmouth	26.72	318	*e*P	P	08 41 50.9	-1.8
MONM				IAmb	IAmb	08 42 00.3	
	comp=Z,76nm,0.9s						
DESE	Dese	26.74	150	*e*P	P	08 41 57.9	+4.4
DESE				*e*S	S	08 46 32.3	+4.2
MVO	Moncorvo	26.80	293	*e*P	P	08 41 53.4	-0.2
	comp=Z,252nm,1.0s						
MVO				*e*S	S	08 46 35.7	+7.4
MVO				*i* LQ	LQ	08 48 57.0	
MVO				*e*LR	LR	08 50 11.9	
	comp=Z,2µm,22.0s						
PBAR	Barrancos	26.84	287	*e*P	P	08 41 53.6	-0.3
	comp=Z,106nm,1.4s						
PBAR				*i* LQ	LQ	08 48 56.1	
MCH1	Michaelchurch	26.90	318	*e*P	P	08 41 55.3	+1.0
MCH1				IAmb	IAmb	08 42 00.4	
	comp=Z,45nm,0.8s						
MCH1	Michaelchurch	26.90	318	⇑P	P	08 41 54.3	+0.1
AJN	Ajban	26.93	105	P	P	08 41 56.7	+1.9
AJN				P	P	08 41 56.7	+1.9
AJN	Ajban	26.93	105	P	P	08 41 56.0	+1.3
TZRR	Tazzarine	27.00	270	P	P	08 41 57.0	+1.4
PMRV	Marv??o	27.06	289	*e*P	P	08 41 54.9	-1.0
	comp=Z,125nm,0.9s						
PMRV				*e*S	S	08 46 51.0	+19
PMRV				*i* LQ	LQ	08 48 56.5	
PMRV				*e*LR	LR	08 50 38.9	
	comp=Z,929nm,22.0s						
HLM1	Long Mynd	27.08	319	*e*P	P	08 41 54.7	-1.2
HLM1				IAmb	IAmb	08 41 59.7	
	comp=Z,33nm,0.7s						
PCBR	Castelo Branco	27.12	290	*e*P	P	08 41 56.0	-0.4
	comp=Z,89nm,0.9s						
PCBR				*i* LQ	LQ	08 48 57.1	
SHME	Shamm	27.16	101	P	P	08 41 57.8	+0.9
SHME				P	P	08 41 57.8	+0.9
SHME	Shamm	27.16	101	*i* P	P	08 41 57.7	+0.9
	SNR=6.6						
ASUD	Al Ashush, Dub	27.17	105	P	P	08 41 58.6	+1.6
ASUD				P	P	08 41 58.6	+1.6
ASUD	Al Ashush, Dub	27.17	105	P	P	08 41 58.3	+1.4
HPK	Haverah Park	27.17	323	*e*P	P	08 41 56.5	-0.2
MTE	Manteigas	27.17	291	*e*P	P	08 41 56.5	-0.4
	comp=Z,75nm,0.9s						
MTE				*e*S	S	08 46 37.2	+3.0
MTE				*i* LQ	LQ	08 48 57.8	
MTE				*e*LR	LR	08 50 22.9	
	comp=Z,1µm,22.0s						
MTE	Manteigas	27.17	291	P	P	08 41 56.3	-0.6
MTE				IAmb	IAmb	08 42 01.2	
	comp=Z,56nm,0.7s						
MTE	Manteigas	27.17	291	⇑P	P	08 41 56.9	-0.1
ZHG	ZHG	27.19	276	P	P	08 41 59.0	+1.8
KLMR	Klimovskoe	27.20	14	*e*P	P	08 41 54.4	-2.4
KLMR				*e*S	S	08 46 36.8	+2.8
KLMR				pmax	pmax		
	comp=Z,24nm,0.6s						
KLMR				MLR	MLR		
	comp=Z,2µm,13.0s						
KLMR	Klimovskoe	27.20	14	*e*P	P	08 41 54.4	-2.4
KLMR				AMP		08 42 02.4	
	comp=Z,24nm,0.6s						
KLMR				*e*S	S	08 46 36.9	+2.9
KLMR				*e*S	S	08 46 36.9	+2.9
KLMR				LQ	LQ	08 49 52.8	
KLMR				LQ	LQ	08 49 52.8	
KLMR				LR	LR	08 51 36.4	
KLMR				AMP		08 53 37.5	
	comp=Z,2µm,12.7s						
PESTR	Estremoz	27.24	288	*e*P	P	08 41 57.1	-0.3
	comp=Z,117nm,1.0s						
PESTR				*i* LQ	LQ	08 48 57.2	
PESTR	Estremoz	27.24	288	P	P	08 41 56.4	-1.1
PESTR				IAmb	IAmb	08 42 01.2	
	comp=Z,51nm,0.9s						
PESTR	Estremoz	27.24	288	P	P	08 41 57.2	-0.3
PESTR	Estremoz	27.24	288	⇑P	P	08 41 57.1	-0.3
ZGR	Zagora	27.25	269	P	P	08 41 59.0	+1.2
NAZ	Nazwa, Dubai	27.26	104	P	P	08 41 59.2	+1.4
NAZ				P	P	08 41 59.2	+1.4
NAZ				P	P	08 41 59.2	+1.4
NAZ	Nazwa, Dubai	27.26	104	*i* P	P	08 41 59.0	+1.2

	SNR=14						
FAQ	Al Faqa, Dubai	27.32	104	P	P	08 41 59.5	+1.2
FAQ				P	P	08 41 59.5	+1.2
FAQ				P	P	08 41 59.5	+1.2
FAQ	Al Faqa, Dubai	27.32	104	i P	P	08 41 60.0	+1.6
	SNR=6.6						
PVRL	Vila Real	27.32	293	eP	P	08 41 58.3	0.0
	comp=Z,84nm,1.3s						
PVRL				i LQ	LQ	08 48 58.3	
BANOM	Banah	27.34	101	P	P	08 41 59.5	+1.0
BANOM				P	P	08 41 59.5	+1.0
BANOM	Banah	27.34	101	i P	P	08 41 59.0	+0.5
	SNR=8.6						
POLO	Lamas de Olo	27.39	294	eP	P	08 41 58.3	-0.6
	comp=Z,51nm,1.2s						
POLO				i LQ	LQ	08 48 58.0	
NC602	NORSAR Array S	27.41	344	IAmb	IAmb	08 42 28.6	
	comp=Z,61nm,1.0s						
NC602	NORSAR Array S	27.41	344	eP	P	08 41 57.0	-1.7
PVAQ	Vaqueiros	27.44	285	eP	P	08 41 58.5	-0.8
	comp=Z,144nm,0.8s						
PVAQ				eS	S	08 46 59.9	+22
PVAQ				eLR	LR	08 48 48.1	
	comp=Z,768nm,20.0s						
PVAQ				i LQ	LQ	08 48 58.1	
PVAQ	Vaqueiros	27.44	285	IAmb	IAmb	08 42 00.2	
	comp=Z,75nm,0.7s						
PVAQ	Vaqueiros	27.44	285	P	P	08 41 59.1	-0.2
PVAQ	Vaqueiros	27.44	285	⇓P	P	08 41 58.5	-0.8
PVIS	Viseu	27.44	292	eP	P	08 41 58.9	-0.5
	comp=Z,97nm,1.2s						
PVIS				i LQ	LQ	08 48 57.4	
MASF	Masafi	27.48	102	P	P	08 42 00.8	+1.0
MASF				P	P	08 42 00.8	+1.0
MSFE	Esma-Masafi	27.48	102	i P	P	08 42 00.6	+0.8
	SNR=9.8						
PBEJ	Beja	27.50	286	eP	P	08 41 58.9	-1.0
	comp=Z,71nm,0.8s						
PBEJ				i LQ	LQ	08 48 58.5	
PCAB	Cabril	27.57	294	eP	P	08 42 00.4	-0.1
	comp=Z,114nm,1.4s						
PCAB				i LQ	LQ	08 48 58.5	
EVO	Evora	27.59	287	P	P	08 41 57.3	-3.3
EVO				S	S	08 46 58.4	+18
EVO	Evora	27.59	287	eP	P	08 42 00.6	0.0
	comp=Z,83nm,1.7s						
PBDV	Barranco-do-Ve	27.62	285	eP	P	08 42 00.0	-1.0
	comp=Z,207nm,0.9s						
PBDV				i LQ	LQ	08 48 59.3	
BLS5	Blasjo	27.64	338	eP	P	08 41 58.0	-2.9
NAO01	NORSAR Array S	27.65	344	IAmb	IAmb	08 42 50.3	
	comp=Z,73nm,1.1s						
AKTO	Aktyubinsk	27.66	46	P	P	08 42 01.4	+0.3
	comp=Z,66nm,0.6s,baz=250,slow=9.3,SNR=70						
AKTO				LR	LR	08 57 22.8	
	comp=Z,2µm,18.4s,baz=257,slow=46						
	comp=Z,66nm,0.6s						
PCVE	Castro Verde	27.67	285	eP	P	08 42 01.0	-0.4
	comp=Z,106nm,1.5s						
NC405	NORSAR Array S	27.71	345	IAmb	IAmb	08 42 51.6	
	comp=Z,55nm,1.1s						
HATD	Hatta, Dubai	27.71	103	P	P	08 42 02.8	+1.0
HATD				P	P	08 42 02.8	+1.0
HATD				P	P	08 42 02.8	+1.0
HATD	Hatta, Dubai	27.71	103	i P	P	08 42 01.9	+0.1
	SNR=14						
UOSS	Minazif	27.71	103	P	P	08 42 01.8	0.0
UOSS				IAmb	IAmb	08 42 27.5	
	comp=Z,56nm,0.8s						
UOSS	Minazif	27.71	103	P	P	08 42 02.5	+0.7
UOSS				P	P	08 42 02.5	+0.7
UOSS	Minazif	27.71	103	i P	P	08 42 01.6	-0.3
	SNR=6.9						
UOSS	Minazif	27.71	103	⇑P	P	08 42 02.2	+0.3
ASHO	Ashiyiah	27.72	104	P	P	08 42 02.8	+0.8
ASHO				P	P	08 42 02.8	+0.8
ASHO				P	P	08 42 02.8	+0.8
ASHO	Ashiyiah	27.72	104	i P	P	08 42 02.2	+0.2
	SNR=9.0						
PMTG	Montargil	27.72	289	eP	P	08 42 01.5	-0.3
	comp=Z,62nm,1.0s						
PMTG				i LQ	LQ	08 48 56.5	
NB201	NORSAR Array S	27.74	344	IAmb	IAmb	08 42 57.0	
	comp=Z,107nm,1.3s						
NB2	NORSAR Subarra	27.75	344	P	P	08 42 00.8	-1.1
	comp=Z,8.0nm,0.8s,baz=156,slow=9.3						
NB2	NORSAR Subarra	27.75	344	P	P	08 42 00.8	-1.1
	baz=156,slow=9.3						
NOA	NORSAR Array B	27.75	344	P	P	08 42 00.7	-1.1
	comp=Z,2.4nm,0.7s,baz=144,slow=8.9,SNR=10						
NOA				PcP	PcP	08 45 18.4	+0.5
	comp=Z,3.3nm,0.7s,baz=135,slow=2.7,SNR=4.3						
PGAV	Gavieira, Arco	27.77	295	eP	P	08 42 02.2	-0.1
	comp=Z,118nm,1.5s						
PGAV				eS	S	08 46 54.5	+11
PGAV				eLR	LR	08 51 00.6	
	comp=Z,1µm,20.0s						
ALNE	Al Ain	27.79	105	P	P	08 42 02.7	+0.2
	SNR=7.8						
ALNE				P	P	08 42 02.7	+0.2
	SNR=7.8						
ALNE	Al Ain	27.79	105	i P	P	08 42 02.5	0.0
	SNR=7.8						
MESJ	Messejana	27.80	286	eP	P	08 42 01.7	-0.8
MESJ				IAmb	IAmb	08 42 03.9	
	comp=Z,47nm,0.9s						
MESJ				eS	S	08 46 44.1	+0.2
MESJ	Messejana	27.80	286	eP	P	08 42 02.4	-0.1
	comp=Z,80nm,1.3s						
MESJ				i LQ	LQ	08 48 59.2	
MESJ	Messejana	27.80	286	eP	P	08 42 01.6	-0.8
MESJ				eS	S	08 46 44.1	+0.2
MESJ	Messejana	27.80	286	⇓P	P	08 42 01.9	-0.6
EDMD	Edmundbyers	27.82	324	eP	P	08 42 02.4	-0.1
ATD	Arta Tunnel	27.84	143	P	P	08 42 03.5	+0.5
	comp=Z,3.1nm,0.3s,baz=243,slow=20,SNR=1.5						
	comp=Z,3.1nm,0.3s						
ATD	Arta Tunnel	27.84	143	eP	P	08 42 02.4	-0.6
ATD				eS	S	08 46 27.3	-18
COI	Coimbra	27.84	291	eP	P	08 42 03.4	+0.6
	comp=Z,128nm,0.9s						
COI	Coimbra	27.84	291	⇓P	P	08 42 03.2	+0.4
KMY	Karmoy	27.85	337	eP	P	08 42 01.6	-1.1
AVE	Averroes	27.85	276	P	P	08 42 01.6	-1.4
AVE				S	S	08 47 12.4	+27
PCAS	Casmilo, Conde	27.91	291	eP	P	08 42 03.8	+0.4
	comp=Z,98nm,1.3s						
OUZM	OUZ	27.94	271	P	P	08 42 06.0	+2.0
ODD1	Odda	27.98	339	eP	P	08 42 04.4	+0.5
PTO	Porto	27.99	293	eP	P	08 42 05.3	+1.2
	comp=Z,139nm,1.2s						
UMZA	Um Al Zommool	28.01	108	P	P	08 42 05.5	+1.0
UMZA				P	P	08 42 05.5	+1.0
PNCL	Nicolau / Gran	28.02	287	eP	P	08 42 05.3	+0.9
	comp=Z,80nm,1.5s						
PNCL				i LQ	LQ	08 48 58.8	
NC204	NORSAR Array S	28.06	344	IAmb	IAmb	08 42 46.5	
	comp=Z,102nm,1.2s						
KIRV	Kirov	28.10	26	P	P	08 42 03.8	-1.1
	comp=Z,36nm,0.7s,baz=225,slow=6.0,SNR=8.0						
KIRV				S	S	08 46 43.4	-4.8
	comp=Z,15nm,0.6s,baz=301,slow=23,SNR=7.0						
KIRV				LR	LR	08 55 18.0	
	comp=Z,1µm,18.2s,baz=234,slow=41						
	comp=Z,36nm,0.7s						
PSBE	So Bento	28.15	290	eP	P	08 42 04.6	-1.0
	comp=Z,91nm,1.3s						
SKAR	Skarslia	28.15	341	eP	P	08 42 07.6	+2.2
MORF	Marmelete	28.19	285	eP	P	08 42 05.0	-1.0
MORF				IAmb	IAmb	08 42 11.5	
	comp=Z,20nm,0.8s						
MORF				eS	S	08 46 50.4	+0.1
MORF	Marmelete	28.19	285	eP	P	08 42 06.6	+0.6
	comp=Z,54nm,1.3s						
MORF				i LQ	LQ	08 49 00.6	
MORF	Marmelete	28.19	285	eP	P	08 42 05.0	-1.0
MORF				eS	S	08 46 50.3	+0.1
PACT	Alcochete	28.21	288	eP	P	08 42 07.2	+1.1
	comp=Z,361nm,1.8s						
PTEO	Sao Teotonio	28.22	285	eP	P	08 42 05.0	-1.3
	comp=Z,124nm,1.5s						
AAE	Adis Abeba	28.31	153	eP	P	08 41 55.6	-12
AAE				eS	S	08 46 39.9	-13
PFVI	Vila Bisbo	28.35	285	eP	P	08 42 07.1	-0.3
	comp=Z,111nm,1.9s						
PFVI				i LQ	LQ	08 49 02.2	
SOHO	SOHO	28.37	104	P	P	08 42 08.6	+1.0
SOHO				P	P	08 42 08.6	+1.0
SOHO	SOHO	28.37	104	i P	P	08 42 07.9	+0.2
	SNR=21						
FURI	Furi	28.40	153	eP	P	08 42 09.2	+0.9
AB31	Akbulak array	28.45	50	IAmb	IAmb	08 42 33.4	
	comp=Z,71nm,0.9s						
AB31	Akbulak array	28.45	50	i P	P	08 42 08.3	+0.2
ABKAR	Akbulak array	28.45	50	P	P	08 42 08.6	+0.5
ABKAR	Akbulak array	28.45	50	IAmb	IAmb	08 42 33.4	
	comp=Z,71nm,0.9s						
ABKAR	Akbulak array	28.45	50	⇓P	P	08 42 07.2	-1.0
LIS	Lisbon	28.46	288	eS	S	08 46 54.8	+0.4
EKB2	Eskdalemuir Ar	28.66	324	IAmb	IAmb	08 42 34.4	
	comp=Z,74nm,1.0s						
EKA	Eskdalemuir Ar	28.67	324	P	P	08 42 09.1	-1.0
	comp=Z,5.8nm,0.5s,baz=125,slow=11,SNR=22						
EKA				LR	LR	08 55 32.8	
	comp=Z,1µm,21.6s,baz=140,slow=40						
	comp=Z,5.8nm,0.5s						
EKR2	Eskdalemuir Ar	28.67	324	IAmb	IAmb	08 42 20.1	
	comp=Z,58nm,0.8s						
ESK	Eskdalemuir	28.68	324	P	P	08 42 10.2	+0.1
ESK				IAmb	IAmb	08 42 55.4	
	comp=Z,57nm,0.9s						
ESK	Eskdalemuir	28.68	324	P	P	08 42 10.2	+0.1
ESK				pmax	pmax		
	comp=Z,57nm,0.9s						
ESK	Eskdalemuir	28.68	324	⇑P	P	08 42 09.7	-0.5
EKB	Eskdalemuir	28.68	324	IAmb	IAmb	08 42 40.0	
	comp=Z,49nm,0.8s						
BER	Bergen	28.75	338	eP	P	08 42 11.7	+1.1
ARQ	Araqi	28.76	106	P	P	08 42 12.1	+0.9
	SNR=12						
ARQ				P	P	08 42 12.1	+0.9
	SNR=12						
OUK	Oukaimeden	28.76	272	P	P	08 42 13.0	+1.4
ASK	Askoy	28.87	338	eP	P	08 42 13.1	+1.4
EDI	Edinburgh	29.00	325	eP	P	08 42 12.4	-0.6
EDI				IAmb	IAmb	08 42 15.1	
	comp=Z,44nm,0.8s						
NEWG	New Galloway	29.07	323	eP	P	08 42 12.5	-1.1
NEWG				IAmb	IAmb	08 42 18.1	
	comp=Z,37nm,0.8s						
DOMB	Dombas	29.13	343	eP	P	08 42 15.5	+1.4
GAL1	Galloway	29.18	322	eP	P	08 42 14.6	0.0
GAL1				IAmb	IAmb	08 42 19.6	
	comp=Z,44nm,0.9s						
HOQ	Hoqain	29.26	105	P	P	08 42 16.2	+0.6
HOQ				P	P	08 42 16.2	+0.6
HOQ				P	P	08 42 16.2	+0.6
PRGR	Permogore	29.32	19	⇓iP	P	08 42 14.8	-0.9
PRGR				eS	S	08 47 06.1	-1.2
TTIG	Tnine Tigouga,	29.43	271	P	P	08 42 19.0	+1.8
HRA	Herat	29.48	81	P	P	08 42 18.3	+0.6
BSY	Bisya	29.60	106	P	P	08 42 19.5	+0.9
	SNR=8.8						
BSY				P	P	08 42 19.5	+0.9
	SNR=8.8						
BSY				P	P	08 42 19.5	+0.9
	SNR=8.8						
DOK	Doka	29.62	116	P	P	08 42 19.6	+0.8
DOK				P	P	08 42 19.6	+0.8
EAB	Aberfoyle	29.69	325	eP	P	08 42 18.2	-0.9
WHFO	Wadi Hawf	29.80	118	P	P	08 42 21.3	+0.8
ABTO	Aybut	29.82	119	P	P	08 42 21.8	+1.1
ABTO				P	P	08 42 21.8	+1.1
BIDO	Bidbid	29.94	104	P	P	08 42 21.6	0.0
BIDO				P	P	08 42 21.6	0.0
BIDO				P	P	08 42 21.6	0.0
MOL	Molde	29.95	343	eP	P	08 42 21.9	+0.7
SMDO	Samad	30.11	105	P	P	08 42 23.7	+0.5
	SNR=9.0						
SMDO				P	P	08 42 23.7	+0.5
	SNR=9.0						
LAWE	Loch Awe, Argy	30.23	324	eP	P	08 42 23.1	-0.7
RBK	Rabkut	30.38	118	P	P	08 42 26.9	+1.3
RBK				P	P	08 42 26.9	+1.3
WSAR	Wadi Sarin	30.48	104	P	P	08 42 26.9	+0.5
	comp=Z,9.8nm,0.8s,baz=303,slow=11,SNR=7.3						
WSAR				LR	LR	08 59 21.9	
	comp=Z,2µm,20.6s,baz=331,slow=45						
	comp=Z,9.8nm,0.8s						
WSAR	Wadi Sarin	30.48	104	P	P	08 42 27.4	+0.9
JMDO	Jabal Madar	30.50	106	P	P	08 42 27.0	+0.4
JMDO				P	P	08 42 27.0	+0.4
ARU	Arti	30.61	36	P	P	08 42 27.0	-0.2
	comp=Z,3.2nm,0.3s,baz=222,slow=9.0,SNR=22						
ARU				LR	LR	08 58 02.7	
	comp=Z,1µm,21.1s,baz=236,slow=43						
	comp=Z,3.2nm,0.3s						
ARU	Arti	30.61	36	P	P	08 42 26.6	-0.6
ARU				IAmb	IAmb	08 42 39.3	
	comp=Z,123nm,1.6s						
ARU	Arti	30.61	36c	iP	P	08 42 26.7	-0.5
ARU				PPP	PPP	08 43 30.4	
ARU						08 45 24.2	
ARU				S	S	08 47 27.1	-0.6
ARU				SSS	SSS	08 49 13.1	
ARU				pmax	pmax		
	comp=Z,80nm,1.8s						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
NSS	Namsos	30.77	348	eP	P	08 42 28.8	+0.2
DMTO	DMTO	30.79	117	P	P	08 42 29.4	+0.2
KAC	Achnashellach	30.84	327	eP	P	08 42 28.0	-1.3
KPL	Plockton	30.92	326	eP	P	08 42 28.3	-1.6
KPL				IAmb	IAmb	08 42 33.3	
	comp=Z,38nm,0.8s						
VAL	Valentia	31.00	314	⇑P	P	08 42 30.9	+0.2
WBK	Wadi Bani Khal	31.07	105	P	P	08 42 33.4	+1.8
WBK				P	P	08 42 33.4	+1.8
SHAO	Shalim	31.09	115	P	P	08 42 33.2	+1.4
TOB2	Torodi Ar. Sit	31.11	232	P	P	08 42 31.8	-0.2
TOA1	Torodi Ar. Sit	31.12	232	P	P	08 42 31.9	-0.2
TOA0	Torodi Ar. Sit	31.12	232	P	P	08 42 31.5	-0.7
TOA0	Torodi Ar. Sit	31.12	232	P	P	08 42 32.5	+0.3
	SNR=16						
TORD	Torodi Ar. Bea	31.12	232	P	P	08 42 31.9	-0.2
	comp=Z,76nm,0.6s,baz=38,slow=8.5,SNR=636						
TORD				PcP	PcP	08 45 27.6	+0.4
	comp=Z,6.9nm,0.9s,baz=30,slow=2.5,SNR=3.1						
TORD				ScP	ScP	08 49 08.5	+0.1
	comp=Z,4.4nm,0.9s,baz=72,slow=1.3,SNR=5.0						
TORD				LR	LR	08 57 31.4	
	comp=Z,3µm,18.1s,baz=33,slow=41						
	comp=Z,76nm,0.6s						
MHTO	MHTO	31.14	108	P	P	08 42 33.5	+1.3
MHTO				P	P	08 42 33.5	+1.3
DQM	DQM	31.40	110	P	P	08 42 35.4	+0.9
DQM				P	P	08 42 35.4	+0.9
JLN	Jalan Bani Buh	31.65	105	P	P	08 42 37.5	+0.8
JLN				P	P	08 42 37.5	+0.8
SVE	Sverdlovsk	31.80	36	eP	P	08 42 37.8	+0.1
SVE				eS	S	08 47 45.0	-1.4
SVE				MLR	MLR		
	comp=Z,1µm,16.0s						
MOR8	Moi Rana	31.94	351	eP	P	08 42 39.5	+0.6
KONS	Konsvik	32.43	350	eP	P	08 42 41.3	-1.7
LODK	Lodwar	32.57	163	P	P	08 42 45.1	+0.2
LODK	Lodwar	32.57	163	P	P	08 42 47.1	+2.1
	SNR=7.7						
LODK	Lodwar	32.57	163	eP	P	08 42 43.1	-1.9
LODK				eS	S	08 47 59.2	0.0
FAUS	Fauske	33.00	352	eP	P	08 42 47.8	-0.3
LVZ	Lovozero	33.25	6	P	P	08 42 49.5	-0.8
LVZ				IAmb	IAmb	08 44 05.8	
	comp=Z,48nm,1.0s						
LVZ	Lovozero	33.25	6	⇓eP	P	08 42 50.4	+0.1
LVZ				pmax	pmax		
	comp=Z,62nm,1.4s						
LVZ	Lovozero	33.25	6	⇑P	P	08 42 50.0	-0.3
STEI	Steigen	33.53	352	eP	P	08 42 51.4	-1.3
SOCY	Socotra	33.89	125	P	P	08 42 54.6	-1.8
KOWA	Kowa	34.06	241	P	P	08 42 57.3	-0.6
KOWA				IAmb	IAmb	08 42 59.7	
	comp=Z,36nm,0.8s						
KOWA	Kowa	34.06	241	⇓P	P	08 42 58.0	+0.1
KTK1	Kautokeino	34.06	358	eP	P	08 42 55.8	-1.5
CHGR	Chuyangaron	34.28	71	P	P	08 43 00.5	+0.8
CHGR	Chuyangaron	34.28	71	P	P	08 43 00.5	+0.8
CHGR				pmax	pmax		
	comp=Z,384nm,1.7s						
ARD5	ARCESS Array S	34.53	360	IAmb	IAmb	08 43 03.9	
	comp=Z,54nm,1.2s						
ARD6	ARCESS Array S	34.54	360	IAmb	IAmb	08 43 03.9	
	comp=Z,47nm,1.2s						
ARC4	ARCESS Array S	34.54	360	IAmb	IAmb	08 43 06.8	
	comp=Z,54nm,1.3s						
ARC5	ARCESS Array S	34.54	360	IAmb	IAmb	08 43 06.9	
	comp=Z,48nm,1.2s						
ARB3	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,127nm,1.8s						
ARB4	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,129nm,1.9s						
ARA2	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,129nm,1.8s						
ARA3	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,124nm,1.8s						
ARA0	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,128nm,1.8s						
ARA0	ARCESS Array S	34.55	360	eP	P	08 43 00.1	-1.4
ARCES	ARCESS Array B	34.55	360	P	P	08 43 00.1	-1.5
	comp=Z,7.8nm,0.4s,baz=179,slow=9.1,SNR=83						
ARCES				PcP	PcP	08 45 35.4	-0.3
	comp=Z,3.2nm,0.5s,baz=177,slow=3.2,SNR=4.2						
ARCES				LR	LR	08 59 44.0	
	comp=Z,2µm,18.2s,baz=173,slow=41						
	comp=Z,7.8nm,0.4s						
ARA1	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,122nm,1.8s						
ARB1	ARCESS Array S	34.55	360	IAmb	IAmb	08 43 16.5	
	comp=Z,120nm,1.8s						
IUG	Iuzhnay	34.62	65c	iP	P	08 43 03.2	+0.6
IUG	Iuzhnay	34.62	65	⇑iP	P	08 43 03.3	+0.6
	baz=65						
JETT	Jettan, Norway	34.72	356	eP	P	08 43 01.3	-1.7
KEV	Kevo	34.77	0	P	P	08 43 02.4	-1.0
KEV				IAmb	IAmb	08 43 08.3	
	comp=Z,100nm,1.6s						
KEV	Kevo	34.77	0	P	P	08 43 02.4	-1.0
KEV				pmax	pmax		
	comp=Z,100nm,1.6s						
KEV	Kevo	34.77	0	⇓P	P	08 43 03.4	0.0
TRO	Tromso	34.88	356	eP	P	08 43 04.1	-0.2
KBL	Kabul	34.93	78	P	P	08 43 06.4	+0.9
KBL	Kabul	34.93	78	P	P	08 43 06.4	+0.9
KBL				pmax	pmax		
	comp=Z,32nm,1.3s						
KBL	Kabul	34.93	78	P	P	08 43 06.7	+1.2
KBL				P	P	08 43 06.7	+1.2
KBL				P	P	08 43 06.7	+1.2
KBL				P	pP	08 43 08.2	-4.3
	SNR=9.1						
KBL				P	pP	08 43 08.2	-4.3
	SNR=9.1						
KBL				P	pP	08 43 08.2	-4.3
	SNR=9.1						
KK31	Karatay Array	34.94	63	IAmb	IAmb	08 43 16.5	
	comp=Z,46nm,0.8s						
KK31	Karatay Array	34.94	63	i P	P	08 43 06.0	+0.7
KKAR	Karatay Array	34.94	63	IAmb	IAmb	08 43 16.5	
	comp=Z,46nm,0.8s						
KKAR	Karatay Array	34.94	63	⇑P	P	08 43 06.0	+0.8
DZA	Taraz	35.55	63c	iP	P	08 43 11.3	+0.8
DZA				pmax	pmax		
	comp=Z,20nm,0.8s						
DZA	Taraz	35.55	63	⇑iP	P	08 43 11.4	+0.8
	comp=Z,20nm,0.8s,baz=63						
HAMF	Hammerfest	35.69	359	eP	P	08 43 11.1	-0.2
MBAR	Mbarara	35.70	172	P	P	08 43 13.4	+1.2
	comp=Z,4.1nm,0.2s,baz=348,slow=6.0,SNR=8.0						
	comp=Z,4.1nm,0.2s						
MBAR	Mbarara	35.70	172	P	P	08 43 13.6	+1.4
MBAR	Mbarara	35.70	172	P	P	08 43 13.6	+1.4
MBAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MBAR	Mbarara	35.70	172	P	P	08 43 14.2	+2.0
MBAR				P	P	08 43 14.2	+2.0
MBAR	Mbarara	35.70	172	⇑P	P	08 43 14.1	+1.9
BRVK	Borovoye	35.71	46	P	P	08 43 12.1	+0.3
BRVK				IAmb	IAmb	08 43 20.0	
	comp=Z,66nm,1.1s						
BRVK	Borovoye	35.71	46c	iP	P	08 43 12.4	+0.7
BRVK				pmax	pmax		
	comp=Z,110nm,1.7s						
BRVK	Borovoye	35.71	46	P	P	08 43 12.9	+1.2
BRVK	Borovoye	35.71	46	⇑P	P	08 43 12.6	+0.8
OTUK	Ortayu	36.32	54	P	P	08 43 18.0	+0.9
BRZS	Berezniki	36.70	51c	iP	P	08 43 20.8	+0.6
BRZS				pmax	pmax		
	comp=Z,41nm,1.5s						
BRZS	Berezniki	36.70	51	⇑iP	P	08 43 20.8	+0.6
	comp=Z,41nm,1.5s,baz=51						
AML	Almayashu	37.34	65	P	P	08 43 27.2	+0.9
	SNR=10						
AML	Almayashu	37.34	65	P	P	08 43 27.9	+1.6
AML	Almayashu	37.34	65	i P	P	08 43 27.4	+1.1
	SNR=16						
EKS2	Erkin-Say	37.36	64	P	P	08 43 27.7	+1.6
	SNR=16						
KMBO	Kilima Mbogo	37.42	162	P	P	08 43 29.5	+2.6
	comp=Z,1.7nm,0.6s,baz=333,slow=9.5,SNR=4.3						
KMBO				LR	LR	08 58 09.7	
	comp=Z,423nm,21.4s,baz=332,slow=35						
KMBO	Kilima Mbogo	37.42	162	P	P	08 43 27.6	+0.7
BTLS	Baital	37.43	60c	iP	P	08 43 27.4	+0.9
BTLS				pmax	pmax		
	comp=Z,50nm,1.7s						
BTLS	Baital	37.43	60	⇑iP	P	08 43 27.4	+0.9
	comp=Z,50nm,1.7s,baz=60						
USP	Ospenovka	37.84	63	P	P	08 43 30.7	+0.6
	SNR=11						
AAK	Ala-Archa	37.89	64	P	P	08 43 32.1	+1.5
	SNR=29						
AAK	Ala-Archa	37.89	64	P	P	08 43 32.1	+1.5
	comp=Z,29nm,0.7s,baz=243,slow=4.2,SNR=60						
AAK				S	S	08 49 24.5	+3.7
	comp=Z,1.3nm,0.3s,baz=233,slow=17,SNR=1.5						
	comp=Z,29nm,0.7s						
AAK	Ala-Archa	37.89	64	P	P	08 43 32.2	+1.5
AAK				IAmb	IAmb	08 43 44.8	
	comp=Z,51nm,0.6s						
AAK	Ala-Archa	37.89	64	P	P	08 43 32.2	+1.6
AAK				pmax	pmax		
	comp=Z,51nm,0.6s						
AAK	Ala-Archa	37.89	64	P	P	08 43 32.4	+1.8
AAK				P	P	08 43 32.4	+1.8
AAK	Ala-Archa	37.89	64	i P	P	08 43 32.2	+1.6
	SNR=36						
AAK				i P	P	08 43 32.2	+1.6
	SNR=17						
AAK	Ala-Archa	37.89	64	⇑P	P	08 43 32.1	+1.6
SGDS	Sogindy	37.93	62c	iP	P	08 43 31.0	+0.2
SGDS	Sogindy	37.93	62	⇑iP	P	08 43 31.0	+0.2
	baz=62						
UCH	Uchtor	37.94	64	P	P	08 43 32.7	+1.3
	SNR=28						
CHMS	Chumysh	38.05	63	P	P	08 43 33.1	+1.3
	SNR=13						
CHMS	Chumysh	38.05	63	i P	P	08 43 32.7	+0.9
CHMS				pmax	pmax		
	comp=Z,59nm,0.9s						
KBK	Karagaybulak	38.22	64	P	P	08 43 35.0	+1.6
	SNR=18						
NIL	Nilore	38.53	78	P	P	08 43 35.8	-0.2
NIL				IAmb	IAmb	08 44 38.4	
	comp=Z,96nm,1.1s						
NIL	Nilore	38.53	78	P	P	08 43 35.8	-0.2
NIL				pmax	pmax		
	comp=Z,96nm,1.1s						
NIL	Nilore	38.53	78	P	P	08 43 36.7	+0.7
TKM2	Tokmak 2	38.67	63	P	P	08 43 38.3	+1.1
	SNR=38						
TKM2	Tokmak 2	38.67	63	i P	P	08 43 38.0	+0.7
TKM2				pmax	pmax		
	comp=Z,25nm,0.6s						
KIBK	Kibwezi	38.79	161	P	P	08 43 36.4	-1.9
KIBK	Kibwezi	38.79	161	P	P	08 43 41.1	+2.8
KUU	Kurty	39.13	61c	iP	P	08 43 42.2	+1.4
KUU				i S	S	08 49 41.5	+2.4
KUU				pmax	pmax		
	comp=Z,39nm,0.8s						
KUU	Kurty	39.13	61	⇑iP	P	08 43 42.2	+1.4
	comp=Z,40nm,0.8s,baz=61						
KUU				i S	S	08 49 41.6	+2.4
	baz=61						
ULHL	Ulahol	39.22	64	P	P	08 43 43.6	+1.7
	SNR=63						

KSH	Kashi	39.39	68	P	P	08 43 42.8	-0.4
KSH				pP	pP	08 43 49.8	-0.8
KSH				sP	sP	08 43 53.3	+0.1
KSH				ScP	ScP	08 49 38.0	-0.2
KSH				S	S	08 49 42.5	-1.0
KSH				ScS	ScS	08 53 48.3	-2.0
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
KSH				pmax	pmax		
	comp=Z,270nm,5.3s						
KSH				LR	LR		
	comp=Z,590nm,20.0s						
KSH				LR	LR		
	comp=Z,630nm,20.0s						
KSH				LR	LR		
	comp=Z,1µm,26.7s						
CHKK	Chushkaly	39.60	61	eP	P	08 43 45.8	+1.0
CHKK	Chushkaly	39.60	61	eP	P	08 43 45.9	+1.0
	baz=61						
AAA	Alma-Ata	39.61	62c	iP	P	08 43 46.3	+1.4
AAA	Alma-Ata	39.61	62	⇑iP	P	08 43 46.3	+1.4
	baz=62						
TNSS	Tian-Shan	39.65	63	i P	P	08 43 46.8	+1.2
TNSS	Tian-Shan	39.65	63	i P	P	08 43 46.8	+1.2
	baz=63						
BJO1	Bjornoya	39.70	357	eP	P	08 43 44.1	-1.1
MDOK	Medeo	39.71	63	i P	P	08 43 46.9	+1.1
MDOK				eS	S	08 49 49.2	+1.1
MDOK	Medeo	39.71	63	i P	P	08 43 46.9	+1.1
	baz=62						
MDOK				eS	S	08 49 49.3	+1.1
	baz=62						
DBIC	Dimbokro	40.22	233	⇓iP	P	08 43 49.7	-0.4
DBIC				IAmb	IAmb	08 43 53.7	
	comp=Z,70nm,0.9s						
DBIC	Dimbokro	40.22	233	P	P	08 43 49.5	-0.7
	comp=Z,46nm,0.6s,baz=51,slow=8.6,SNR=83						
DBIC				LR	LR	09 04 06.7	
	comp=Z,3µm,18.4s,baz=43,slow=42						
	comp=Z,46nm,0.6s						
DBIC	Dimbokro	40.22	233	P	P	08 43 49.3	-0.8
DBIC				IAmb	IAmb	08 43 53.9	
	comp=Z,69nm,0.9s						
DBIC	Dimbokro	40.22	233	⇓P	P	08 43 49.4	-0.7
TIC	Toumodi	40.34	233	eP	P	08 43 50.5	-0.7
	comp=Z,123nm,0.7s						
KIC	Kosan Boka	40.37	232	eP	P	08 43 50.8	-0.6
	comp=Z,142nm,0.6s						
JMIC	Jan Mayen	40.45	343	LR	LR	09 03 01.1	
	comp=Z,575nm,18.0s,baz=102,slow=40						
KURBB	Kurchatov Arra	40.48	51	P	P	08 43 52.9	+0.9
	comp=Z,47nm,0.6s,baz=277,slow=8.7,SNR=358						
KURBB				PcP	PcP	08 45 55.4	+1.2
	comp=Z,9.6nm,0.6s,baz=260,slow=3.9,SNR=3.8						
KURBB				ScP	ScP	08 49 42.5	+0.4
	comp=Z,4.6nm,0.9s,baz=268,slow=4.7,SNR=12						
KURBB				S	S	08 50 00.7	+1.5
	comp=Z,0.9nm,0.3s,baz=269,slow=15,SNR=7.8						
KURBB				LR	LR	09 04 34.6	
	comp=Z,2µm,20.1s,baz=244,slow=42						
	comp=Z,47nm,0.6s						
TDK	Taldyqorghan	40.52	60	eP	P	08 43 53.0	+0.6
TDK				eS	S	08 50 00.6	+0.7
TDK				pmax	pmax		
	comp=Z,35nm,1.1s						
TDK	Taldyqorghan	40.52	60	eP	P	08 43 53.1	+0.6
	comp=Z,35nm,1.1s,baz=59						
TDK				eS	S	08 50 00.6	+0.7
	baz=59						
KURK	Kurchatov	40.55	51	P	P	08 43 53.0	+0.5
KURK	Kurchatov	40.55	51	P	P	08 43 52.9	+0.4
KURK						08 45 55.4	
KURK	Kurchatov	40.55	51	P	P	08 43 53.5	+1.0
KURK				P	P	08 43 53.5	+1.0
KURK				P	P	08 43 53.5	+1.0
KURK	Kurchatov	40.55	51	⇑P	P	08 43 53.2	+0.8
LIC	Lamto	40.66	232	eP	P	08 43 53.8	0.0
	comp=Z,119nm,0.9s						
SATY	Saty	40.71	63c	iP	P	08 43 55.6	+1.5
SATY				eS	S	08 50 05.3	+2.3
SATY				pmax	pmax		
	comp=Z,36nm,1.0s						
SATY	Saty	40.71	63	⇑iP	P	08 43 55.7	+1.5
	comp=Z,36nm,1.0s,baz=62						
SATY				eS	S	08 50 05.3	+2.3
	baz=62						
ZHN	Zhinishke	40.72	62	eP	P	08 43 55.1	+1.0
ZHN				eS	S	08 50 06.6	+3.5
ZHN	Zhinishke	40.72	62	eP	P	08 43 55.2	+1.0
	baz=62						
ZHN				eS	S	08 50 06.7	+3.5
	baz=62						
KPKS	Kokpek	40.86	62c	iP	P	08 43 56.1	+0.8
KPKS				eS	S	08 50 05.9	+0.7
KPKS	Kokpek	40.86	62	⇑iP	P	08 43 56.1	+0.8
	baz=62						
KPKS				eS	S	08 50 06.0	+0.7
	baz=62						
BORG	Borgarnes	41.09	331	P	P	08 43 57.9	+1.2
	comp=Z,13nm,0.7s,baz=160,slow=5.5,SNR=5.6						
BORG				LR	LR	09 02 12.9	
	comp=Z,684nm,20.7s,baz=124,slow=38						
	comp=Z,13nm,0.7s						
BORG	Borgarnes	41.09	331	P	P	08 43 57.5	+0.8
UZB	Uzynbulak	41.15	62c	iP	P	08 43 58.5	+0.8
UZB				eS	S	08 50 09.9	+0.3
UZB				pmax	pmax		
	comp=Z,17nm,1.0s						
UZB	Uzynbulak	41.15	62	⇑iP	P	08 43 58.6	+0.8
	comp=Z,17nm,1.0s,baz=62						
UZB				eS	S	08 50 10.0	+0.3
	baz=62						
PDGK	Podgornoye	41.46	62	P	P	08 44 00.6	+0.3
SEM	Semipalatinsk	41.58	51	eP	P	08 44 02.0	+0.8
SEM				pmax	pmax		
	comp=Z,72nm,1.4s						
SEM	Semipalatinsk	41.58	51	eP	P	08 44 02.1	+0.8
	comp=Z,72nm,1.4s,baz=51						
BHK	Bhakra	41.75	80	ex	P	08 44 02.0	-0.7
HSPB	Hornsund (broa	42.33	356	eP	P	08 44 07.7	+0.9
MAKZ	Makanchi	42.86	57	P	P	08 44 12.6	+1.1
MAKZ	Makanchi	42.86	57	P	P	08 44 12.6	+1.1
MAKZ				pmax	pmax		
	comp=Z,30nm,0.6s						
MAKZ	Makanchi	42.86	57	⇑P	P	08 44 12.5	+0.9
MK31	Makanchi Array	43.08	57	IAmb	IAmb	08 44 33.7	
	comp=Z,48nm,0.7s						
MK31	Makanchi Array	43.08	57c	iP	P	08 44 14.2	+0.9
MKAR	Makanchi Array	43.08	57	P	P	08 44 14.2	+0.9
	comp=Z,30nm,0.5s,baz=279,slow=6.4,SNR=352						
MKAR				ScP	ScP	08 49 52.3	-0.2
	comp=Z,4.9nm,0.9s,baz=316,slow=6.0,SNR=5.7						
MKAR				S	S	08 50 38.3	+0.6
	comp=Z,0.4nm,0.4s,baz=280,slow=16,SNR=4.3						
MKAR				LR	LR	09 05 28.0	
	comp=Z,816nm,19.2s,baz=273,slow=41						
	comp=Z,30nm,0.5s						
SPB2	Spitsbergen Ar	43.44	357	IAmb	IAmb	08 44 32.9	
	comp=Z,39nm,0.7s						
SPB3	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 29.9	
	comp=Z,46nm,0.7s						
SPA0	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 39.8	
	comp=Z,51nm,0.9s						
SPA0	Spitsbergen Ar	43.45	357	eP	P	08 44 15.0	-0.8
SPA3	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 39.8	
	comp=Z,70nm,0.9s						
SPITS	Spitsbergen Ar	43.45	357	P	P	08 44 15.0	-0.8
	comp=Z,22nm,0.6s,baz=156,slow=10,SNR=25						
	comp=Z,22nm,0.6s						
SPITS	Spitsbergen Ar	43.45	357	P	P	08 44 15.2	-0.7
SPITS				pmax	pmax		
	comp=Z,51nm,1.0s						
SPB1	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 24.0	
	comp=Z,51nm,0.9s						
SPA1	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 31.5	
	comp=Z,82nm,1.2s						
SPB4	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 28.8	
	comp=Z,64nm,0.8s						
SPB5	Spitsbergen Ar	43.45	357	IAmb	IAmb	08 44 31.6	
	comp=Z,70nm,1.0s						
SCO	Scoresbysund	43.77	339	IAmb	IAmb	08 44 50.9	
	comp=Z,28nm,0.9s						
SCO	Scoresbysund	43.77	339	i P	P	08 44 17.5	-1.0
SCO				IAmb	IAmb	08 44 50.3	
	comp=Z,16nm,0.7s						
SCO	Scoresbysund	43.77	339	⇑P	P	08 44 20.6	+2.0
KBS	Kingsbay	44.40	356	P	P	08 44 23.3	-0.2
KBS				IAmb	IAmb	08 44 24.9	
	comp=Z,41nm,0.8s						
KBS	Kingsbay	44.40	356	P	P	08 44 23.3	-0.2
KBS				pmax	pmax		
	comp=Z,41nm,0.9s						
KBS	Kingsbay	44.40	356	i P	P	08 44 20.7	-2.7
KBS	Kingsbay	44.40	356	eP	P	08 44 23.2	-0.2
KBS	Kingsbay	44.40	356	⇑P	P	08 44 23.2	-0.2
ZAA0	Zalesovo Array	44.43	46	IAmb	IAmb	08 44 35.7	
	comp=Z,40nm,0.7s						
ZALV	Zalesovo Beam	44.43	46	P	P	08 44 24.1	+0.1
	comp=Z,23nm,0.4s,baz=265,slow=9.4,SNR=51						
ZALV				LR	LR	09 08 38.4	
	comp=Z,820nm,18.8s,baz=270,slow=44						
	comp=Z,23nm,0.4s						
ZALV	Zalesovo Beam	44.43	46	i P	P	08 44 24.1	+0.1
ZALV				pmax	pmax		
	comp=Z,24nm,0.4s						
ZSN	Zaisan	44.76	55c	iP	P	08 44 27.9	+1.1
ZSN				eS	S	08 51 03.4	+1.1
ZSN				pmax	pmax		
	comp=Z,68nm,2.3s						
ZSN	Zaisan	44.76	55	⇑iP	P	08 44 27.9	+1.1
	comp=Z,68nm,2.3s,baz=55						
ZSN				eS	S	08 51 03.5	+1.1
	baz=55						
POO	Poona	45.11	99	eP	P	08 44 29.0	-0.9
DBG	Daneborg	45.27	344	i P	P	08 44 31.4	+1.0
DBG				IAmb	IAmb	08 45 21.8	
	comp=Z,14nm,1.1s						
DBG	Daneborg	45.27	344	⇑P	P	08 44 31.1	+0.7
SOEG	Soedalen	46.03	334	i P	P	08 44 37.4	+0.9
SOEG				IAmb	IAmb	08 44 51.4	
	comp=Z,28nm,0.8s						
DAG	Danmarks Havn	46.37	347	i P	P	08 44 38.0	-1.1
DAG				i P	pP	08 44 38.0	-8.7
DAG				IAmb	IAmb	08 45 04.8	
	comp=Z,17nm,0.8s						
DAG	Danmarks Havn	46.37	347	⇓P	P	08 44 38.0	-1.1
WMQ	Urumqi	47.27	60	eP	P	08 44 49.5	+2.8
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
NRIK	Noril'sk	47.60	25	P	P	08 44 49.4	+0.6
	comp=Z,10nm,0.7s,baz=242,slow=5.0,SNR=20						
NRIK				LR	LR	09 08 06.6	
	comp=Z,588nm,19.0s,baz=266,slow=40						
	comp=Z,10nm,0.7s						
NRIK	Noril'sk	47.60	25	P	P	08 44 49.5	+0.8
NRIK	Noril'sk	47.60	25	P	P	08 44 49.5	+0.8
NRIK				pmax	pmax		
	comp=Z,57nm,1.0s						
ISOG	Isortoq, Green	48.49	330	i P	P	08 44 54.0	-1.7
ISOG				IAmb	IAmb	08 45 05.5	
	comp=Z,531nm,2.4s						
ISOG	Isortoq, Green	48.49	330	⇓P	P	08 44 56.1	+0.5
DANN	Dangsing	48.80	81	eP	P	08 44 59.9	+1.0
	comp=Z,289nm,0.7s						
DANN	Dangsing	48.80	81	eP	P	08 44 59.9	+1.0
	comp=Z,385nm,0.7s						
SACV	Santiago Islan	48.87	259	P	P	08 44 59.8	+0.5
KOLN	Koldanda	48.89	82	eP	P	08 45 00.0	+0.4
NOR	Nord	49.18	352	i P	P	08 44 59.3	-1.5
NOR				IVmB_BB		08 45 15.6	
	comp=Z,399nm,1.6s						
ICESG	Greenland Ices	49.18	334	i P	P	08 45 00.6	-0.8
ICESG				IAmb	IAmb	08 45 07.1	
	comp=Z,30nm,0.6s						
SUMG	Summit	49.41	339	i P	P	08 45 03.0	-0.2
SUMG				IAmb	IAmb	08 45 45.6	
	comp=Z,40nm,1.0s						
SUMG	Summit	49.41	339	⇑P	P	08 45 04.1	+0.9
HYBB	Hyderabad (bro	49.51	97	eP	P	08 45 04.3	+0.2
GKN	Gorkha	49.64	81	eP	P	08 45 05.5	+0.2
GKN	Gorkha	49.64	81	eP	P	08 45 05.5	+0.2
	comp=Z,72nm,0.5s						
LSZ	Lusaka	50.08	178	P	P	08 45 08.6	+0.2
	comp=Z,5.2nm,0.8s,baz=14,slow=8.6,SNR=7.3						
LSZ				LR	LR	09 08 29.2	
	comp=Z,516nm,19.0s,baz=358,slow=39						
	comp=Z,5.2nm,0.8s						
DMN	Daman	50.18	81	eP	P	08 45 09.8	+0.3
DMN	Daman	50.18	81	eP	P	08 45 09.9	+0.4
KKN	Kakani	50.25	81	eP	P	08 45 10.1	+0.1
PKIN	Phulchoki	50.43	81	eP	P	08 45 11.4	0.0
	comp=Z,112nm,0.8s						
PKIN	Phulchoki	50.43	81	eP	P	08 45 11.4	0.0
	comp=Z,115nm,0.8s						
PKI	Pulchoki	50.44	81	eP	P	08 45 11.6	0.0
	comp=Z,94nm,0.8s						
PKI	Pulchoki	50.44	81	eP	P	08 45 11.5	0.0
GUN	Gumba	50.69	81	eP	P	08 45 13.6	+0.2
	comp=Z,125nm,0.6s						
GUN	Gumba	50.69	81	eP	P	08 45 13.6	+0.2
	comp=Z,125nm,0.6s						
JIRN	Jiri	51.04	81	eP	P	08 45 16.2	+0.1
	comp=Z,50nm,0.5s						
JIRN	Jiri	51.04	81	eP	P	08 45 16.3	+0.1
	comp=Z,94nm,0.9s						
NRS	Narsarsuaq	51.33	324	i P	P	08 45 19.6	+2.4
NRS				IAmb	IAmb	08 45 40.0	
	comp=Z,16nm,0.7s						
DY2G	Dye2	51.51	331	i P	P	08 45 18.6	-0.3
DY2G				IAmb	IAmb	08 45 27.5	
	comp=Z,328nm,1.7s						
RAMN	Ramite	51.66	81	eP	P	08 45 20.2	-0.4
	comp=Z,85nm,0.8s						
RAMN	Ramite	51.66	81	eP	P	08 45 20.2	-0.4
	comp=Z,85nm,0.8s						
TAPN	Taplejung	52.40	80	eP	P	08 45 25.7	-0.5
TAPN	Taplejung	52.40	80	eP	P	08 45 25.9	-0.3
KNGR	Kungurtug, Tuv	52.51	50d	eP	P	08 45 28.1	+1.7
IVI	Ivigtut	52.65	324	i P	P	08 45 26.3	-0.8
IVI				IAmb	IAmb	08 45 46.3	
	comp=Z,32nm,0.9s						
IVI	Ivigtut	52.65	324	⇑P	P	08 45 27.6	+0.5
SFJD	Kangerlussuaq	53.22	331	LR	LR	09 09 45.2	
	comp=Z,949nm,20.5s,baz=88,slow=38						
SFJD	Kangerlussuaq	53.22	331	P	P	08 45 31.2	0.0
SFJD	Kangerlussuaq	53.22	331	P	P	08 45 31.3	0.0
SFJD				pmax	pmax		
	comp=Z,27nm,1.0s						
SFJD	Kangerlussuaq	53.22	331	i P	P	08 45 28.5	-2.7
SFJD				IAmb	IAmb	08 46 22.2	
	comp=Z,905nm,3.4s						
SFJD	Kangerlussuaq	53.22	331	⇑P	P	08 45 31.2	0.0
ILULI	Ilulissat	53.28	334	IAmb	IAmb	08 45 58.5	
	comp=Z,74nm,1.2s						
ILULI	Ilulissat	53.28	334	i P	P	08 45 28.5	-3.1
ILULI				IAmb	IAmb	08 46 40.8	
	comp=Z,25nm,0.8s						
NUUG	Nuugaatsiaq	53.87	337	i P	P	08 45 32.2	-3.8
NUUG				IAmb	IAmb	08 45 54.1	
	comp=Z,12nm,0.7s						
NUUK	Nuuk	53.95	328	i P	P	08 45 34.1	-2.4
NUUK				IAmb	IAmb	08 45 42.4	
	comp=Z,112nm,0.5s						
LSA	Lhasa	54.20	76	P	P	08 45 40.5	+0.9
LSA				pmax	pmax		
	comp=Z,24nm,0.8s						
MOY	Mondy	54.41	48	eP	P	08 45 41.2	+0.8
MOY				pmax	pmax		
	comp=Z,55nm,1.8s						
TSUM	Tsumeb	54.57	190	eP	P	08 45 41.6	-0.2
TSUM				IAmb	IAmb	08 45 52.9	
	comp=Z,225nm,1.0s						
TSUM	Tsumeb	54.57	190	LR	LR	09 11 13.7	
	comp=Z,3µm,19.5s,baz=360,slow=38						
TSUM	Tsumeb	54.57	190	P	P	08 45 41.9	+0.1
TSUM				IAmb	IAmb	08 45 53.6	
	comp=Z,28nm,1.0s						
GOMU	GeErMu	54.62	67	P	P	08 45 44.0	+1.5
GOMU				pP	pP	08 45 48.3	-1.5
GOMU				PcP	PcP	08 46 47.3	+2.0
GOMU				PP	PP	08 47 46.0	+1.1
GOMU				S	S	08 53 17.5	-3.7
GOMU				sS	sS	08 53 33.5	+0.2
GOMU				SS	SS	08 57 05.5	+1.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,240nm,5.0s						
GOMU				LR	LR		
	comp=Z,160nm,20.2s						
GOMU				LR	LR		
	comp=Z,220nm,14.9s						
GOMU				LR	LR		
	comp=Z,160nm,19.0s						
UPNV	Upernavik	54.69	339	i P	P	08 45 39.9	-2.0
UPNV				IVmB_BB		08 46 14.8	
	comp=Z,746nm,4.3s						
BLWY	Bulawayo	54.92	177	eP	P	08 45 45.2	+0.8
BLWY				IAmb	IAmb	08 45 46.6	
	comp=Z,64nm,1.1s						
BLWY	Bulawayo	54.92	177	eP	P	08 45 43.4	-0.9
BLWY	Bulawayo	54.92	177	eP	P	08 45 43.4	-0.9
MATP	Matopo	55.20	177	eP	P	08 45 46.5	+0.1
MATP	Matopo	55.20	177	eP	P	08 45 46.5	+0.1
ZAK	Zakamensk	56.14	49	eP	P	08 45 53.7	+0.9
ZAK				pmax	pmax		
	comp=Z,44nm,1.3s						
IRK	Irkutsk	56.24	46	eP	P	08 45 53.3	-0.1
IRK				pmax	pmax		
	comp=Z,107nm,2.2s						
SHL	Shillong	56.54	80	P	P	08 45 54.9	-1.2
SHL				IAmb	IAmb	08 45 56.8	
	comp=Z,32nm,0.8s						
SHL	Shillong	56.54	80	P	P	08 45 54.9	-1.2
SHL				pmax	pmax		
	comp=Z,32nm,0.8s						
SHL	Shillong	56.54	80	P	P	08 45 55.5	-0.6
	SNR=9.9						
OPO	Ambohidratompo	56.90	156	LR	LR	09 11 23.0	
	comp=Z,483nm,21.8s,baz=166,slow=37						
PALK	Pallekele	56.95	106	LR	LR	09 12 49.0	
	comp=Z,1µm,21.7s,baz=54,slow=38						
GTA	Gaotai	57.21	62	⇑P	P	08 46 01.3	+0.6
GTA				pP	pP	08 46 06.8	-1.4
GTA				sP	sP	08 46 10.3	-0.4
GTA				PP	PP	08 48 09.5	+1.9
GTA				S	S	08 53 56.3	+1.3
GTA				SS	SS	08 57 50.8	+6.9
GTA				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA				pmax	pmax		
	comp=Z,160nm,6.9s						
GTA				LR	LR		
	comp=Z,490nm,18.9s						
GTA				LR	LR		
	comp=Z,490nm,19.6s						
GTA				LR	LR		
	comp=Z,720nm,19.3s						
TULEG	Thule	57.41	344	i P	P	08 45 59.8	-1.6
TULEG				IVmB_BB		08 46 58.8	
	comp=Z,2µm,4.1s						
MOPA	Mopani	58.44	174	eP	P	08 46 10.3	+1.2
MOPA				IAmb	IAmb	08 46 21.1	
	comp=Z,30nm,0.9s						
MOPA	Mopani	58.44	174	eP	P	08 46 11.8	+2.7
MOPA	Mopani	58.44	174	eP	P	08 46 11.8	+2.7
SONB5	Songino Array	58.83	51	IAmb	IAmb	08 46 31.2	
	comp=Z,26nm,0.8s						
SONB4	Songino Array	58.83	51	IAmb	IAmb	08 46 29.4	
	comp=Z,19nm,0.7s						
SONA2	Songino Array	58.85	51	IAmb	IAmb	08 46 31.4	
	comp=Z,24nm,0.8s						
SONA0	Songino Array	58.85	51	IAmb	IAmb	08 46 29.6	
	comp=Z,25nm,0.7s						
SONM	Songino Array	58.85	51	P	P	08 46 12.7	+0.7
	comp=Z,13nm,0.5s,baz=285,slow=8.7,SNR=23						
	comp=Z,13nm,0.5s						
SONA1	Songino Array	58.85	51	IAmb	IAmb	08 46 31.4	
	comp=Z,25nm,0.8s						
SONA4	Songino Array	58.86	51	IAmb	IAmb	08 46 31.4	
	comp=Z,27nm,0.9s						
SONB2	Songino Ar. Si	58.87	51	IAmb	IAmb	08 46 31.5	
	comp=Z,28nm,0.8s						
ULN	Ulaanbaatar	59.26	51	P	P	08 46 15.6	+0.7
ULN	Ulaanbaatar	59.26	51	P	P	08 46 15.6	+0.7
ULN				pmax	pmax		
	comp=Z,57nm,1.2s						
ULN	Ulaanbaatar	59.26	51	P	P	08 46 15.9	+1.0
LBTB	Lobatse	59.73	181	eP	P	08 46 19.1	+0.9
LBTB				IAmb	IAmb	08 46 49.0	
	comp=Z,148nm,2.1s						
LBTB	Lobatse	59.73	181	LR	LR	09 15 34.9	
	comp=Z,811nm,18.1s,baz=7.5,slow=39						
LBTB	Lobatse	59.73	181	P	P	08 46 18.9	+0.7
LBTB				IAmb	IAmb	08 46 29.9	
	comp=Z,18nm,0.9s						
LBTB	Lobatse	59.73	181	P	P	08 46 18.9	+0.7
LBTB				pmax	pmax		
	comp=Z,18nm,0.9s						
LBTB	Lobatse	59.73	181	eP	P	08 46 16.9	-1.3
LBTB	Lobatse	59.73	181	eP	P	08 46 16.9	-1.3
VOI	Vohitsoka	59.89	158	P	P	08 46 21.3	+1.9
BOD	Bodaibo	59.98	38	eP	P	08 46 18.9	-0.6
BOD				pmax	pmax		
	comp=Z,37nm,1.1s						
SLR	Silverton	60.48	178	eP	P	08 46 24.8	+1.5
SLR				IAmb	IAmb	08 46 35.0	
	comp=Z,24nm,1.0s						
HRAO	HartRAO	60.62	179	eP	P	08 46 25.4	+1.1
HRAO				IAmb	IAmb	08 46 39.2	
	comp=Z,34nm,1.3s						
DRLN	Deer Lake	60.65	312	P	P	08 46 24.2	0.0
CRLN	Carolina, Mapu	60.81	176	eP	P	08 46 26.7	+1.1
CRLN				IAmb	IAmb	08 46 37.9	
	comp=Z,17nm,0.9s						
MMAL	MMAL	60.94	175	eP	P	08 46 28.4	+2.0
MMAL				IAmb	IAmb	08 46 43.9	
	comp=Z,34nm,1.0s						
TIXI	Tiksi	60.95	21	P	P	08 46 25.5	-0.4
	comp=Z,20nm,0.9s,baz=268,slow=23,SNR=17						
TIXI				LR	LR	09 16 59.8	
	comp=Z,1µm,18.8s,baz=0.0,slow=40						
	comp=Z,20nm,0.9s						
TIXI	Tiksi	60.95	21	P	P	08 46 25.5	-0.4
TIXI				IAmb	IAmb	08 46 36.9	
	comp=Z,32nm,0.9s						
TIXI	Tiksi	60.95	21	P	P	08 46 25.5	-0.4
TIXI				pmax	pmax		
	comp=Z,32nm,0.9s						
MAGG	Maguga Dam	60.97	175	eP	P	08 46 28.1	+1.5
MAGG				IAmb	IAmb	08 46 51.5	
	comp=Z,39nm,1.1s						
HAGI	HAGI	61.00	175	eP	P	08 46 28.4	+1.5
HAGI				IAmb	IAmb	08 46 30.9	
	comp=Z,100nm,1.6s						
FRB	Frobisher Bay	61.23	330	LR	LR	09 15 23.8	
	comp=Z,955nm,19.6s,baz=62,slow=38						
CNG	Changalane	61.26	174	eP	P	08 46 28.0	-0.4
CNG				IAmb	IAmb	08 46 37.4	
	comp=Z,18nm,1.6s						
LZH	Lanzhou	61.43	64	eP	P	08 46 30.5	+0.6
LZH				sP	pP	08 46 38.3	+1.0
LZH				PP	PP	08 48 45.0	0.0
LZH				eS	S	08 54 41.5	-8.2
LZH				SS	SS	08 58 52.0	+1.8
LZH				pmax	pmax		
	comp=Z,49nm,1.0s						
LZH				pmax	pmax		
	comp=Z,260nm,4.9s						
LZH				LR	LR		
	comp=Z,620nm,17.9s						
LZH				LR	LR		
	comp=Z,950nm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,18.2s						
PRYS	Parys	61.64	179	eP	P	08 46 31.8	+0.6
PRYS				IAmb	IAmb	08 46 48.4	
	comp=Z,512nm,3.2s						
POGA	Pongola	62.26	175	eP	P	08 46 36.6	+1.4
POGA				IAmb	IAmb	08 46 41.7	
	comp=Z,299nm,2.6s						
NWCL	Newcastle	62.53	176	eP	P	08 46 38.3	+1.1
NWCL				IAmb	IAmb	08 46 57.5	
	comp=Z,344nm,2.9s						
SNKL	Senekal, Frees	62.99	179	eP	P	08 46 40.9	+0.7
SNKL				IAmb	IAmb	08 46 57.0	
	comp=Z,30nm,0.9s						
UPI	Upington	63.24	185	eP	P	08 46 41.4	-0.4
BOSA	Boshof	63.32	181	⇓iP	P	08 46 42.1	-0.2
BOSA				IAmb	IAmb	08 46 57.6	
	comp=Z,35nm,1.1s						
BOSA	Boshof	63.32	181	P	P	08 46 43.1	+0.8
	comp=Z,12nm,0.8s,baz=357,slow=7.5,SNR=19						

	comp=Z,12nm,0.8s						
BOSA	**Boshof**	**63.32**	**181**	P	**P**	**08 46 42.7**	**+0.3**
BOSA				IAmb	IAmb	08 46 54.1	
	comp=Z,31nm,1.0s						
BOSA	**Boshof**	**63.32**	**181**	*e*P	**P**	**08 46 41.2**	**-1.1**
BOSA	**Boshof**	**63.32**	**181**	*e*P	**P**	**08 46 41.2**	**-1.1**
CD2	**Chengdu**	**63.58**	**70**	⇑P	**P**	**08 46 44.8**	**+0.6**
CD2				PP	**PP**	**08 49 08.0**	**+4.1**
CD2				S	**S**	**08 55 17.0**	**+0.4**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,260nm,9.3s						
CD2				LR	LR		
	comp=Z,600nm,19.8s						
CD2				LR	LR		
	comp=Z,670nm,18.6s						
KEIM	**Keimoes**	**63.60**	**185**	*e*P	**P**	**08 46 44.2**	**+0.1**
KEIM				IAmb	IAmb	08 46 46.3	
	comp=Z,138nm,2.3s						
SCHQ	**Schefferville**	**63.87**	**320**	P	**P**	**08 46 45.5**	**-0.2**
	comp=Z,50nm,0.6s,baz=68,slow=4.5,SNR=82						
SCHQ				LR	LR	09 15 01.2	
	comp=Z,366nm,19.3s,baz=82,slow=36						
	comp=Z,50nm,0.6s						
SCHQ	**Schefferville**	**63.87**	**320**	P	**P**	**08 46 45.0**	**-0.7**
BTO	**Baotou**	**63.98**	**57**	*e*P	**P**	**08 46 46.5**	**-0.3**
PZH	**PanZhiHua**	**64.01**	**75**	P	**P**	**08 46 47.0**	**-0.2**
PZH				S	**S**	**08 55 20.5**	**-1.8**
PZH				SKS	**SKSac**	**08 56 38.5**	**-1.3**
PZH				SS	**SS**	**08 59 33.5**	**+2.6**
PZH				pmax	pmax		
	comp=Z,30nm,1.0s						
PZH				pmax	pmax		
	comp=Z,180nm,5.2s						
PZH				LR	LR		
	comp=Z,1µm,22.1s						
PZH				LR	LR		
	comp=Z,1µm,23.0s						
PZH				LR	LR		
	comp=Z,1µm,20.6s						
RES	**Resolute Bay**	**64.01**	**345**	LR	LR	09 17 11.1	
	comp=Z,288nm,18.1s,baz=62,slow=38						
HHC	**Hu-ho-hao-te**	**64.94**	**57**	*e*P	**P**	**08 46 54.0**	**+0.9**
HHC				S	**S**	**08 55 28.5**	**-4.9**
HHC				pmax	pmax		
	comp=Z,59nm,1.1s						
HHC				pmax	pmax		
	comp=Z,790nm,5.1s						
HHC				LR	LR		
	comp=Z,950nm,15.9s						
HHC				LR	LR		
	comp=Z,940nm,16.7s						
HHC				LR	LR		
	comp=Z,2µm,16.2s						
KMI	**Kunming**	**65.45**	**76**	⇑P	**P**	**08 46 56.5**	**-0.3**
KMI				pP	sP	08 47 07.3	+0.3
KMI				PcP	**PcP**	**08 47 28.0**	**-0.6**
KMI				S	**S**	**08 55 37.0**	**-3.3**
KMI				ScS	**SKSac**	**08 56 51.0**	**-0.1**
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI				pmax	pmax		
	comp=Z,210nm,3.9s						
KMI				LR	LR		
	comp=Z,390nm,21.6s						
KMI				LR	LR		
	comp=Z,400nm,23.5s						
KMI				LR	LR		
	comp=Z,690nm,27.0s						
CHTO	**Chiang Mai**	**65.50**	**84**	P	**P**	**08 46 57.0**	**+0.1**
CHTO				IAmb	IAmb	08 47 10.3	
	comp=Z,43nm,1.4s						
CHTO	**Chiang Mai**	**65.50**	**84**	P	**P**	**08 46 57.0**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,43nm,1.4s						
CHTO	**Chiang Mai**	**65.50**	**84**	P	**P**	**08 46 56.4**	**-0.5**
YAK	**Yakutsk**	**65.52**	**30**	P	**P**	**08 46 54.7**	**-1.6**
	comp=Z,5.5nm,0.3s,baz=36,slow=0.9,SNR=1.1						
YAK				LR	LR	09 19 43.2	
	comp=Z,744nm,19.2s,baz=272,slow=40						
	comp=Z,5.5nm,0.3s						
YAK	**Yakutsk**	**65.52**	**30**	*e*P	**P**	**08 46 54.9**	**-1.4**
YAK				e*PP	**pP**	**08 47 04.9**	**+0.8**
YAK				*e*		08 47 22.8	
YAK				*e*		08 49 19.5	
YAK				*e*S	**S**	**08 55 35.9**	**-3.6**
YAK				*e*SS	**SS**	**09 00 01.9**	**+9.4**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,17nm,0.6s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax	smax		
	comp=E,163nm,3.0s						
YAK				smax	smax		
	comp=N,69nm,2.2s						
YAK				MLR	MLR		
	comp=Z,742nm,16.0s						
YAK				MLR	MLR		
	comp=E,730nm,18.0s						
YAK				MLR	MLR		
	comp=N,262nm,15.0s						
CM31	**Chiang Mai Arr**	**65.68**	**84**	IAmb	IAmb	08 47 20.0	
	comp=Z,24nm,0.8s						
CM31	**Chiang Mai Arr**	**65.68**	**84**	P	**P**	**08 46 57.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**65.68**	**84**	P	**P**	**08 46 58.0**	**0.0**
	comp=Z,12nm,0.8s,baz=297,slow=8.2,SNR=50						
CMAR				LR	LR	09 22 20.2	
	comp=Z,232nm,21.0s,baz=295,slow=42						
	comp=Z,12nm,0.8s						
CM07	**Chiang Mai Arr**	**65.68**	**84**	P	**P**	**08 46 57.3**	**-0.7**
XAN	**Xi'an**	**66.06**	**64**	⇑P	**P**	**08 47 00.8**	**+0.4**
XAN				pP	pP	08 47 08.0	+0.2
XAN				sP	sP	08 47 12.0	+1.5
XAN				PP	**PP**	**08 49 32.8**	**+7.1**
XAN				S	**S**	**08 55 46.5**	**-0.7**
XAN				ScS	**SKSac**	**08 56 51.8**	**-3.3**
XAN				pmax	pmax		
	comp=Z,35nm,0.9s						
XAN				pmax	pmax		
	comp=Z,340nm,4.0s						
XAN				LR	LR		
	comp=Z,630nm,18.4s						
XAN				LR	LR		
	comp=Z,580nm,18.6s						
XAN				LR	LR		
	comp=Z,770nm,20.3s						
HIA	**Hailar**	**66.46**	**45**	IAmb	IAmb	08 47 14.9	
	comp=Z,20nm,0.7s						
XLT	**XiLinHaoTe**	**66.61**	**52**	*e*P	**P**	**08 47 04.5**	**+0.7**
XLT				pP	pP	08 47 09.8	-1.6
XLT				sP	sP	08 47 12.0	-2.3
XLT				ScP		08 51 34.0	
XLT				S	**S**	**08 55 51.5**	**-2.1**
XLT				SS	**SS**	**09 00 11.5**	**+1.0**
XLT				pmax	pmax		
	comp=Z,26nm,1.5s						
XLT				pmax	pmax		
	comp=Z,400nm,4.4s						
XLT				LR	LR		
	comp=Z,790nm,18.1s						
XLT				LR	LR		
	comp=Z,1µm,19.0s						
TIY	**Taiyuan**	**66.94**	**59**	⇑P	**P**	**08 47 06.5**	**+0.6**
TIY				S	**S**	**08 56 00.0**	**+2.3**
TIY				pmax	pmax		
	comp=Z,200nm,3.6s						
TIY				LR	LR		
	comp=Z,490nm,20.6s						
TIY				LR	LR		
	comp=Z,560nm,23.4s						
TIY				LR	LR		
	comp=Z,650nm,25.4s						
GRAN	**Grantham**	**67.10**	**184**	*e*P	**P**	**08 47 07.8**	**+1.0**
GRAN				IAmb	IAmb	08 47 09.4	
	comp=Z,8.6nm,0.7s						
SUR	**Sutherland**	**67.27**	**185**	LR	LR	09 20 46.8	
	comp=Z,1µm,18.1s,baz=1.0,slow=40						
SUR	**Sutherland**	**67.27**	**185**	P	**P**	**08 47 09.2**	**+1.2**
GYA	**Guiyang**	**67.91**	**73**	⇓P	**P**	**08 47 12.8**	**+0.5**
GYA				S	**S**	**08 56 10.5**	**+0.7**
GYA				SKS	**SKiKP**	**08 57 07.3**	**+0.1**
GYA				pmax	pmax		
	comp=Z,27nm,1.6s						
GYA				pmax	pmax		
	comp=Z,250nm,5.3s						
GYA				LR	LR		
	comp=Z,95nm,6.0s						
GYA				LR	LR		
	comp=Z,41nm,4.2s						
GYA				LR	LR		
	comp=Z,140nm,7.8s						
GGN	**Saint George**	**68.16**	**310**	IAmb	IAmb	08 47 33.9	
	comp=Z,25nm,0.8s						
LYN	**LuoYang**	**68.43**	**62**	*e*P	**P**	**08 47 15.5**	**+0.2**
LYN				pP	sP	08 47 28.0	+2.6
LYN				S	**S**	**08 56 15.5**	**0.0**
LYN				sS	sS	08 56 33.0	+5.0
LYN				pmax	pmax		
	comp=Z,370nm,8.1s						
LYN				LR	LR		
	comp=Z,680nm,24.3s						
LYN				LR	LR		
	comp=Z,430nm,20.6s						
LYN				LR	LR		
	comp=Z,880nm,21.6s						
BJI	**Beijing**	**68.45**	**56**	P	**P**	**08 47 16.0**	**+0.7**
BJI				PcP	**PcP**	**08 47 41.0**	**+0.5**
BJI				S	**S**	**08 56 17.3**	**+1.8**
BJI				SS	**SS**	**09 00 41.3**	**+2.5**
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI				pmax	pmax		
	comp=Z,140nm,3.6s						
BJI				LR	LR		
	comp=Z,470nm,17.7s						
BJI				LR	LR		
	comp=Z,650nm,21.7s						
BJI				LR	LR		
	comp=Z,1µm,17.7s						
BJT	**Baijiatuau**	**68.45**	**56**	IAmb	IAmb	08 47 28.6	
	comp=Z,25nm,1.0s						
ZEA	**Zeya**	**68.47**	**39**	*e*P	**P**	**08 47 16.5**	**+1.3**
ZEA				*e*S	**S**	**08 56 20.2**	**+4.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=E,100nm,4.7s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.0s						
ZEA				smax	smax		
	comp=E,200nm,15.4s						
E63A	**Oxbow**	**68.51**	**312**	P	**P**	**08 47 16.5**	**+0.9**
	baz=62,SNR=7.6						
E63A				P	**P**	**08 47 16.5**	**+0.9**
	baz=62,SNR=7.6						
G65A	**Princeton**	**68.57**	**311**	IAmb	IAmb	08 47 36.2	
	comp=Z,24nm,1.1s						
G65A	**Princeton**	**68.57**	**311**	P	**P**	**08 47 16.4**	**+0.5**
	baz=62						
G65A				P	**P**	**08 47 16.4**	**+0.5**
	baz=62						
D62A	**Allapoint, All**	**68.58**	**313**	P	**P**	**08 47 17.1**	**+1.1**
	baz=61,SNR=29						
D62A				P	**P**	**08 47 17.1**	**+1.1**
	baz=61,SNR=29						
HNS	**HongShan**	**68.68**	**59**	⇑P	**P**	**08 47 17.5**	**+0.7**
HNS				pP	**pP**	**08 47 25.3**	**+1.1**
HNS				sP	**sP**	**08 47 29.5**	**+2.6**
HNS				ScP		08 51 36.5	
HNS				PcS		08 51 45.5	
HNS				S	**S**	**08 56 20.0**	**+1.6**
HNS				pmax	pmax		
	comp=Z,18nm,1.2s						
HNS				LR	LR		
	comp=Z,350nm,20.6s						
HNS				LR	LR		
	comp=Z,290nm,20.6s						
HNS				LR	LR		
	comp=Z,670nm,22.1s						
F64A	**Sherman**	**68.74**	**312**	P	**P**	**08 47 17.1**	**+0.1**
F64A				IAmb	IAmb	08 47 43.0	
	comp=Z,23nm,0.9s						
F64A	**Sherman**	**68.74**	**312**	P	**P**	**08 47 17.9**	**+0.9**
	baz=61,SNR=7.2						
F64A				P	**P**	**08 47 17.9**	**+0.9**
	baz=61,SNR=7.2						
LMQ	**La Malbaie**	**69.11**	**314**	IAmb	IAmb	08 47 28.4	
	comp=Z,19nm,0.9s						
F63A	**Nahmakanta, Br**	**69.28**	**312**	P	**P**	**08 47 21.3**	**+0.9**
	baz=61						
F63A				P	**P**	**08 47 21.3**	**+0.9**
	baz=61						
PKME	**Peaks-Kenny Pk**	**69.61**	**311**	IAmb	IAmb	08 48 07.5	
	comp=Z,33nm,1.2s						
PKME	**Peaks-Kenny Pk**	**69.61**	**311**	P	**P**	**08 47 21.9**	**-0.5**
	baz=61						
PKME	**Peaks-Kenny Pk**	**69.61**	**311**	P	**P**	**08 47 21.6**	**-0.8**
	baz=61						
WVL	**Waterville**	**70.18**	**311**	P	**P**	**08 47 26.8**	**+0.9**
	baz=60						
LATQ	**La Tuque**	**70.64**	**315**	IAmb	IAmb	08 47 31.2	
	comp=Z,25nm,0.8s						
TIA	**Tai'an**	**70.95**	**59**	⇑P	**P**	**08 47 31.0**	**+0.2**
TIA				pP	**sP**	**08 47 43.0**	**+2.0**
TIA				S	**S**	**08 56 45.3**	**+0.1**
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
TIA				pmax	pmax		
	comp=Z,230nm,6.4s						
TIA				LR	LR		
	comp=Z,460nm,26.4s						
TIA				LR	LR		
	comp=Z,500nm,28.1s						
TIA				LR	LR		
	comp=Z,720nm,30.5s						
H62A	**Milan**	**71.10**	**311**	IAmb	IAmb	08 47 34.6	
	comp=Z,20nm,0.8s						
H62A	**Milan**	**71.10**	**311**	P	**P**	**08 47 32.3**	**+0.8**
	baz=59,SNR=10						
H62A				P	**P**	**08 47 32.3**	**+0.8**
	baz=59,SNR=10						
RCBR	**Riachuelo**	**71.13**	**248**	LR	LR	09 20 45.3	
	comp=Z,2µm,18.2s,baz=194,slow=38						
RCBR	**Riachuelo**	**71.13**	**248**	P	**P**	**08 47 33.6**	**+1.4**
RCBR				IAmb	IAmb	08 47 35.6	
	comp=Z,28nm,0.8s						
RCBR	**Riachuelo**	**71.13**	**248**	P	**P**	**08 47 33.6**	**+1.4**
RCBR				pmax	pmax		
	comp=Z,28nm,0.8s						
A36M	**Sachs Harbour**	**71.41**	**351**	P	**P**	**08 47 32.4**	**-0.5**
	baz=24,SNR=6.1						
A36M				S	**S**	**08 56 48.2**	**-1.0**
	baz=24						
LBNH	**Lisbon**	**71.74**	**311**	IAmb	IAmb	08 48 02.5	
	comp=Z,40nm,1.2s						
LBNH	**Lisbon**	**71.74**	**311**	P	**P**	**08 47 36.7**	**+1.3**
	baz=59,SNR=5.9						
LBNH	**Lisbon**	**71.74**	**311**	P	**P**	**08 47 35.4**	**-0.1**
	baz=59,SNR=5.9						
WHN	**Wuhan**	**71.77**	**65**	⇑P	**P**	**08 47 36.3**	**+0.5**
WHN				pP	**pP**	**08 47 41.8**	**-1.5**
WHN				sP	**sP**	**08 47 46.0**	**0.0**
WHN				S	**S**	**08 56 54.0**	**-0.7**
WHN				SKS	**SKSac**	**08 57 37.3**	**-0.9**
WHN				pmax	pmax		
	comp=Z,25nm,0.7s						
WHN				pmax	pmax		
	comp=Z,570nm,3.8s						
WHN				LR	LR		
	comp=Z,1µm,17.1s						
WHN				LR	LR		
	comp=Z,1µm,17.5s						
WHN				LR	LR		
	comp=Z,2µm,17.6s						
CNSH	**ChangSha**	**71.89**	**68**	⇓P	**P**	**08 47 34.3**	**-2.3**
CNSH				S	**S**	**08 56 54.3**	**-1.9**
CNSH				pmax	pmax		
	comp=Z,160nm,3.9s						
CNSH				LR	LR		
	comp=Z,350nm,21.6s						
CNSH				LR	LR		
	comp=Z,380nm,22.9s						
CNSH				LR	LR		
	comp=Z,620nm,28.5s						
VT1	**Waterbury**	**72.20**	**312**	P	**P**	**08 47 39.6**	**+1.4**
	baz=58,SNR=5.6						
TRQ	**Mont Tremblant**	**72.28**	**314**	IAmb	IAmb	08 48 05.6	
	comp=Z,27nm,1.0s						
HRV	**Adam Dziewonsk**	**72.42**	**310**	P	**P**	**08 47 39.4**	**-0.1**
	baz=58						
SNY	**Shenyang**	**72.43**	**51**	⇑P	**P**	**08 47 40.5**	**+0.9**
SNY				S	**S**	**08 57 01.5**	**-0.5**
SNY				pmax	pmax		
	comp=Z,22nm,1.4s						
SNY				pmax	pmax		
	comp=Z,340nm,4.3s						
SNY				LR	LR		
	comp=Z,850nm,16.9s						
SNY				LR	LR		
	comp=Z,620nm,15.3s						
SNY				LR	LR		
	comp=Z,1µm,19.2s						
FRNY	**Flat Rock**	**72.44**	**313**	P	**P**	**08 47 40.4**	**+0.8**
	baz=58,SNR=10						
MCVT	**Middlebury Col**	**72.55**	**312**	P	**P**	**08 47 41.9**	**+1.6**
	baz=58,SNR=14						
CN2	**Changchun**	**72.57**	**49**	*e*P	**P**	**08 47 40.3**	**-0.1**
CN2				*e*S	**S**	**08 56 59.5**	**-4.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.5s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,700nm,20.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,700nm,18.0s						
J61A	**Chester**	**72.60**	**311**	IAmb	IAmb	08 48 07.7	
	comp=Z,22nm,0.9s						
BNX	**BinXian**	**72.72**	**46**	⇓P	**P**	**08 47 41.5**	**+0.3**
BNX				pP	**pP**	**08 47 47.5**	**-1.4**
BNX				PP	**PP**	**08 50 23.5**	**+0.8**
BNX				S	**S**	**08 57 03.3**	**-1.8**
BNX				pmax	pmax		
	comp=Z,41nm,1.0s						
BNX				pmax	pmax		
	comp=Z,720nm,4.3s						
BNX				LR	LR		
	comp=Z,830nm,14.5s						
BNX				LR	LR		
	comp=Z,930nm,14.5s						
BNX				LR	LR		
	comp=Z,920nm,19.6s						
KCSI	**Kotacane, Aceh**	**72.86**	**98**	P	P	08 47 47.7	+5.2
	comp=Z,3µmcomp=Z,37nm,0.8s						
VLDQ	**Val d'Or**	**72.92**	**317**	IAmb	IAmb	08 47 45.6	
	comp=Z,28nm,0.8s						
BILL	**Bilibino**	**72.95**	**15**	P	**P**	**08 47 41.9**	**-0.3**
BILL				IAmb	IAmb	08 47 55.8	
	comp=Z,30nm,1.2s						
BILL	**Bilibino**	**72.95**	**15**	*i* P	**P**	**08 47 42.1**	**-0.1**
BILL				*i*		08 47 52.7	
BILL				*i* S	S	08 56 57.7	-9.4
BILL				pmax	pmax		
	comp=Z,12nm,0.9s						
BMNY	**Brushton-Moira**	**72.99**	**313**	P	**P**	**08 47 43.3**	**+0.4**
	baz=57,SNR=7.9						
LONY	**Lake Ozonia**	**73.16**	**313**	IAmb	IAmb	08 47 46.8	
	comp=Z,21nm,0.8s						
LONY	**Lake Ozonia**	**73.16**	**313**	P	**P**	**08 47 42.8**	**-1.1**
	baz=57,SNR=17						
UCCT	**U. Connecticut**	**73.21**	**309**	IAmb	IAmb	08 48 16.5	
	comp=Z,28nm,1.1s						
KLR	**Kul'dur**	**73.25**	**41**	P	**P**	**08 47 44.5**	**+0.2**
	comp=Z,12nm,0.8s,baz=310,slow=7.2,SNR=16						
KLR				LR	LR	09 23 44.8	
	comp=Z,697nm,21.4s,baz=304,slow=39						
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**73.25**	**41**	⇓*i*P	**P**	**08 47 45.0**	**+0.6**
KLR				pmax	pmax		
	comp=Z,13nm,0.9s						
ACCN	**Adirondack Com**	**73.27**	**311**	IAmb	IAmb	08 47 47.9	
	comp=Z,23nm,0.8s						
ACCN	**Adirondack Com**	**73.27**	**311**	P	**P**	**08 47 46.1**	**+1.5**
	baz=58,SNR=12						
M63A	**Gales Ferry**	**73.31**	**309**	IAmb	IAmb	08 47 47.5	
	comp=Z,26nm,0.9s						
M63A	**Gales Ferry**	**73.31**	**309**	P	**P**	**08 47 45.6**	**+0.8**
	baz=58						
M63A				P	**P**	**08 47 45.6**	**+0.8**
	baz=58						
SEY	**Seymchan**	**73.32**	**23**	P	**P**	**08 47 44.6**	**+0.2**
	comp=Z,8.2nm,0.8s,baz=281,slow=5.3,SNR=23						
SEY				LR	LR	09 25 27.7	
	comp=Z,313nm,19.1s,baz=316,slow=40						
	comp=Z,8.2nm,0.8s						
SEY	**Seymchan**	**73.32**	**23**	⇓*i*P	**P**	**08 47 45.6**	**+1.1**
SEY				pmax	pmax		
	comp=Z,13nm,0.9s						
C36M	**Paulatuk**	**73.65**	**349**	P	**P**	**08 47 45.9**	**-0.4**
	baz=25,SNR=17						
C36M				S	**SKiKP**	**08 57 12.8**	**-1.5**
	baz=25						
J59A	**Piesco**	**73.73**	**312**	P	**P**	**08 47 48.2**	**+0.9**
	baz=57						
J59A				P	**P**	**08 47 48.2**	**+0.9**
	baz=57						
A21K	**Barrow**	**73.91**	**1**	IAmb	IAmb	08 48 16.1	
	comp=Z,37nm,0.9s						
A21K	**Barrow**	**73.91**	**1**	P	**P**	**08 47 47.9**	**+0.1**
	baz=358						
A21K				S	**S**	**08 57 17.6**	**-0.2**
	baz=358						
HCNY	**Howe Caverns**	**74.09**	**311**	P	**P**	**08 47 50.9**	**+1.6**
	baz=57,SNR=15						
WCNY	**West Carthage**	**74.15**	**313**	P	**P**	**08 47 51.2**	**+1.5**
	baz=56,SNR=20						
KULM	**Kulim**	**74.19**	**95**	P	**P**	**08 47 50.2**	**-0.2**
QIZ	**Qiongzhong**	**74.20**	**78**	P	**P**	**08 47 51.0**	**+0.6**
QIZ				S	**S**	**08 57 22.5**	**-0.2**
QIZ				ScS	**ScS**	**08 58 00.3**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,16nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,220nm,6.3s						
QIZ				LR	LR		
	comp=Z,350nm,23.9s						
QIZ				LR	LR		
	comp=Z,220nm,20.2s						
QIZ				LR	LR		
	comp=Z,460nm,20.6s						
PSI	**Prapat**	**74.21**	**98**	P	**P**	**08 47 50.7**	**+0.1**
	comp=Z,9.8nm,0.7s,baz=338,slow=18,SNR=5.6						
PSI				LR	LR	09 25 19.8	
	comp=Z,678nm,21.6s,baz=298,slow=40						
	comp=Z,9.8nm,0.7s						
FCC	**Fort Churchill**	**74.23**	**332**	P	**P**	**08 47 49.6**	**-0.3**
FCC				IAmb	IAmb	08 48 04.3	
	comp=Z,40nm,1.4s						
FCC	**Fort Churchill**	**74.23**	**332**	P	**P**	**08 47 49.6**	**-0.3**
FCC				pmax	pmax		
	comp=Z,40nm,1.4s						
J58A	**Remsen**	**74.27**	**312**	IAmb	IAmb	08 47 53.7	
	comp=Z,20nm,0.7s						
J58A	**Remsen**	**74.27**	**312**	P	**P**	**08 47 50.3**	**-0.2**
	baz=57,SNR=15						
J58A				P	**P**	**08 47 50.3**	**-0.2**
	baz=57,SNR=15						
NJ2	**Nanjing**	**74.30**	**62**	*e*P	**P**	**08 47 49.3**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NPNY	**Mohonk Preserv**	**74.44**	**310**	P	**P**	**08 47 52.3**	**+0.9**
	baz=57						
MDJ	**Mudanjiang**	**74.63**	**46**	P	**P**	**08 47 53.3**	**+0.8**
MDJ				S	**S**	**08 57 27.0**	**+0.3**
MDJ				ScS	**ScS**	**08 58 02.8**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,10.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.6s						
MDJ				LR	LR		
	comp=Z,290nm,13.4s						
MDJ				LR	LR		
	comp=Z,790nm,18.1s						
MDJ				LR	LR		
	comp=Z,800nm,18.2s						
PAL	**Palisades**	**74.70**	**309**	P	**P**	**08 47 52.5**	**-0.5**
	baz=57						
PAL				S	**S**	**08 57 30.4**	**+2.7**
	baz=57						
L59A	**Walton**	**74.76**	**311**	IAmb	IAmb	08 47 56.6	
	comp=Z,37nm,0.8s						

L59A	Walton	74.76	311	P	P	08 47 54.9	+1.5
	baz=56,SNR=15						
L59A				P	P	08 47 54.9	+1.5
	baz=56,SNR=15						
TRNY	Table Rock, Ra	74.83	310	IAmb	IAmb	08 49 07.8	
	comp=Z,70nm,1.9s						
MA2	Magadan	75.19	26	P	P	08 47 56.0	+0.5
	comp=Z,12nm,0.7s,baz=336,slow=12,SNR=8.9						
MA2				LR	LR	09 22 45.2	
	comp=Z,347nm,21.7s,baz=316,slow=37						
	comp=Z,12nm,0.7s						
MA2	Magadan	75.19	26	P	P	08 47 56.5	+1.0
MA2				IAmb	IAmb	08 48 26.1	
	comp=Z,37nm,1.0s						
MA2	Magadan	75.19	26	P	P	08 47 56.5	+1.0
MA2				pmax	pmax		
	comp=Z,37nm,1.0s						
J56A	Wolcott	75.27	313	IAmb	IAmb	08 47 59.3	
	comp=Z,38nm,0.8s						
J56A	Wolcott	75.27	313	P	P	08 47 57.6	+1.4
	baz=56,SNR=11						
J56A				P	P	08 47 57.6	+1.4
	baz=56,SNR=11						
J56A				S	S	08 57 36.0	+2.2
	baz=56						
J56A				S	S	08 57 36.0	+2.2
	baz=56						
BRNJ	Basking Ridge	75.30	309	IAmb	IAmb	08 47 59.1	
	comp=Z,22nm,0.8s						
BRNJ	Basking Ridge	75.30	309	P	P	08 47 57.4	+1.0
	baz=56						
BINY	Binghamton	75.34	311	IAmb	IAmb	08 48 30.4	
	comp=Z,34nm,0.8s						
BINY	Binghamton	75.34	311	P	P	08 47 58.0	+1.3
	baz=56,SNR=11						
BINY	Binghamton	75.34	311	P	P	08 47 56.3	-0.4
	baz=56,SNR=11						
BINY				S	S	08 57 37.5	+2.7
	baz=56						
K57A	Scipio Center	75.37	312	IAmb	IAmb	08 48 25.2	
	comp=Z,30nm,0.9s						
K57A	Scipio Center	75.37	312	P	P	08 47 58.2	+1.3
	baz=56,SNR=6.8						
K57A				S	S	08 57 36.8	+1.7
	baz=56						
NKL	Nikolayevsk	75.40	35	eP	P	08 48 03.5	+6.8
NKL				eS	S	08 57 33.0	-1.9
NKL				pmax	pmax		
	comp=N,2.0nm,0.8s						
NKL				pmax	pmax		
	comp=Z,26nm,1.1s						
NKL				pmax	pmax		
	comp=E,5.0nm,0.9s						
PANJ	Princeton	75.55	309	P	P	08 47 58.9	+1.0
	baz=56,SNR=7.2						
KSPA	Keystone Colle	75.56	311	IAmb	IAmb	08 48 01.0	
	comp=Z,30nm,0.8s						
KSPA	Keystone Colle	75.56	311	P	P	08 47 59.2	+1.3
	baz=56,SNR=18						
ROSB	Rosrio	75.75	256	eP	P	08 48 00.4	+1.1
SADO	Sadowa	75.77	315	LR	LR	09 20 17.4	
	comp=Z,324nm,21.7s,baz=65,slow=35						
J55A	Hilton	75.85	313	S	S	08 57 40.8	+0.4
	baz=55						
J55A				S	S	08 57 40.8	+0.4
	baz=55						
INK	Inuvik	75.86	352	P	P	08 47 59.0	-0.1
	comp=Z,11nm,0.9s,baz=28,slow=6.9,SNR=9.7						
INK				LR	LR	09 23 37.5	
	comp=Z,217nm,21.6s,baz=12,slow=38						
	comp=Z,11nm,0.9s						
INK	Inuvik	75.86	352	P	P	08 47 58.5	-0.6
INK				IAmb	IAmb	08 48 12.1	
	comp=Z,38nm,1.3s						
INK	Inuvik	75.86	352	P	P	08 47 59.0	-0.1
	baz=17						
INK				S	S	08 57 35.6	-4.0
	baz=17						
NBLA	Lagarto - SE	75.87	246	eP	P	08 48 01.0	+1.0
TUPA	Temple Univers	75.98	309	P	P	08 48 01.3	+1.0
	baz=56,SNR=10						
MMNY	Mt. Morris Dam	76.21	313	IAmb	IAmb	08 48 03.9	
	comp=Z,31nm,0.9s						
USB1	Ussuriysk Arra	76.27	45	P	P	08 48 02.2	+0.3
USB4	Ussuriysk Arra	76.27	45	P	P	08 48 02.2	+0.3
USA0	Ussuriysk Arra	76.27	45	P	P	08 48 02.2	+0.3
USA0B	Ussuriysk Arra	76.27	45	IAmb	IAmb	08 48 33.5	
	comp=Z,43nm,1.0s						
USA0B	Ussuriysk Arra	76.27	45	ceP	P	08 48 01.7	-0.2
USRK	Ussuriysk Ar.	76.27	45	P	P	08 48 01.6	-0.3
	comp=Z,22nm,0.8s,baz=297,slow=4.7,SNR=30						
USRK				LR	LR	09 28 55.8	
	comp=Z,426nm,18.1s,baz=292,slow=42						
	comp=Z,22nm,0.8s						
MEDO	Medina	76.29	313	IAmb	IAmb	08 48 04.8	
	comp=Z,29nm,0.8s						
J54A	Appleton	76.34	313	IAmb	IAmb	08 48 05.1	
	comp=Z,30nm,0.9s						
L56A	Greenwood	76.34	312	P	P	08 48 03.4	+1.0
	baz=55,SNR=19						
L56A				P	P	08 48 03.4	+1.0
	baz=55,SNR=19						
SSE	Sheshan	76.50	62	P	P	08 48 04.5	+1.1
SSE				S	S	08 57 45.8	-2.0
SSE				pmax	pmax		
	comp=Z,18nm,0.8s						
SSE				pmax	pmax		
	comp=Z,45nm,3.5s						
SSE				LR	LR		
	comp=Z,180nm,21.7s						
SSE				LR	LR		
	comp=Z,190nm,21.4s						
M57A	Sunshine Farm,	76.53	311	IAmb	IAmb	08 48 36.8	
	comp=Z,37nm,0.9s						
M57A	Sunshine Farm,	76.53	311	P	P	08 48 04.8	+1.4
	baz=55,SNR=17						
M57A				P	P	08 48 04.8	+1.4
	baz=55,SNR=17						
M57A				S	S	08 57 48.9	+1.0
	baz=55						
M57A				S	S	08 57 48.9	+1.0
	baz=55						
N58A	Sunbury	76.56	311	P	P	08 48 04.8	+1.1
	baz=55,SNR=14						
N58A				P	P	08 48 04.8	+1.1
	baz=55,SNR=14						
TOLK	Toolik Lake Re	76.58	358	IAmb	IAmb	08 48 23.0	
	comp=Z,19nm,0.8s						
TOLK	Toolik Lake Re	76.58	358	P	P	08 48 03.5	+0.1
	baz=3.5,SNR=18						
TOLK				S	S	08 57 48.9	+1.3
	baz=3.5						
MSHR	Mys Shultsa	76.72	47	⇑eP	P	08 48 05.6	+1.1
MSHR				pmax	pmax		
	comp=Z,17nm,0.9s						
MVL	Millersville	76.81	310	IAmb	IAmb	08 48 08.0	
	comp=Z,30nm,0.8s						
WVNY	West Valley, N	76.82	313	IAmb	IAmb	08 48 33.0	
	comp=Z,37nm,0.9s						
WVNY	West Valley, N	76.82	313	P	P	08 48 06.2	+1.1
	baz=54,SNR=12						
WVNY				S	S	08 57 51.9	+0.8
	baz=54						
VLA	Vladivostok	76.84	46	⇓eP	P	08 48 05.2	+0.1
VLA				pmax	pmax		
	comp=Z,38nm,0.9s						
PAGS	Pennsylvania G	76.91	310	IAmb	IAmb	08 48 08.0	
	comp=Z,33nm,0.7s						
RDOG	Red Dog Mine	76.98	4	P	P	08 48 03.9	-1.6
	baz=352						
SSPA	Standing Stone	77.41	311	P	P	08 48 09.4	+1.0
SSPA				IAmb	IAmb	08 48 28.7	
	comp=Z,32nm,1.1s						
SSPA	Standing Stone	77.41	311	P	P	08 48 09.4	+1.0
	baz=54,SNR=9.3						
SSPA				S	S	08 57 58.1	+0.6
	baz=54						
SSPA	Standing Stone	77.41	311	P	P	08 48 07.5	-0.9
	baz=54						
SSPA				S	S	08 57 59.3	+1.9
	baz=54						
SDMD	Soldier's Deli	77.45	309	IAmb	IAmb	08 48 11.3	
	comp=Z,20nm,0.8s						
SDMD	Soldier's Deli	77.45	309	P	P	08 48 09.6	+0.9
	baz=55,SNR=9.4						
M55A	Ridgway	77.46	312	IAmb	IAmb	08 48 11.1	
	comp=Z,34nm,0.8s						
M55A	Ridgway	77.46	312	P	P	08 48 09.8	+1.1
	baz=54,SNR=17						
M55A				P	P	08 48 09.8	+1.1
	baz=54,SNR=17						
M55A				S	S	08 57 55.2	-3.0
	baz=54						
M55A				S	S	08 57 55.2	-3.0
	baz=54						
KS19	Wonju Array Si	77.56	53	IAmb	IAmb	08 48 22.1	
	comp=Z,26nm,0.9s						
NBPN	Ponto Novo - B	77.59	247	eP	P	08 48 10.6	+0.9
KSRS	Korea Array	77.63	53	P	P	08 48 09.9	+0.3
	comp=Z,9.5nm,0.8s,baz=298,slow=4.7,SNR=18						
KSRS				LR	LR	09 27 31.3	
	comp=Z,753nm,19.1s,baz=310,slow=40						
	comp=Z,9.5nm,0.8s						
S61A	Accomac	77.69	307	S	S	08 58 04.2	+3.6
	baz=55						
S61A				S	S	08 58 04.2	+3.6
	baz=55						
E46A	Sault Ste Mari	77.72	318	IAmb	IAmb	08 48 25.9	
	comp=Z,41nm,0.9s						
E46A	Sault Ste Mari	77.72	318	P	P	08 48 10.4	+0.4
	baz=52,SNR=22						
ERPA	Erie	77.82	313	P	P	08 48 09.6	-1.1
	baz=54						
ERPA				S	S	08 58 02.8	+0.9
	baz=54						
YKA	Yellowknife Ar	77.84	343	P	P	08 48 10.0	-0.4
	comp=Z,5.3nm,0.7s,baz=33,slow=5.5,SNR=42						
YKA				LR	LR	09 25 17.9	
	comp=Z,230nm,18.0s,baz=30,slow=38						
	comp=Z,5.3nm,0.7s						
KSCHJ	Chungju	77.99	53	IAmb	IAmb	08 48 30.3	
	comp=Z,21nm,0.7s						
COLD	Coldfoot	78.01	359	IAmb	IAmb	08 48 17.3	
	comp=Z,26nm,1.0s						
COLD	Coldfoot	78.01	359	P	P	08 48 11.4	+0.1
	baz=3.0,SNR=7.0						
COLD				S	S	08 58 01.1	-2.1
	baz=3.0						
MDP	Montagnes des	78.02	268	LR	LR	09 23 04.5	
	comp=Z,447nm,19.2s,baz=48,slow=36						
EPYK	Eagle Plains	78.06	353	IAmb	IAmb	08 48 16.6	
	comp=Z,28nm,0.8s						
EPYK	Eagle Plains	78.06	353	P	P	08 48 11.3	-0.4
	baz=14						
EPYK				S	S	08 57 58.8	-5.0
	baz=14						
P57A	Homestead Farm	78.15	310	IAmb	IAmb	08 48 15.4	
	comp=Z,28nm,0.8s						
P57A	Homestead Farm	78.15	310	P	P	08 48 13.4	+0.8
	baz=54,SNR=15						
P57A				P	P	08 48 13.4	+0.8
	baz=54,SNR=15						
ALLY	Alegheny Colle	78.19	313	IAmb	IAmb	08 48 27.8	
	comp=Z,25nm,0.9s						
I49A	Point Hope	78.39	316	S	S	08 58 09.0	+1.1
	baz=52						
I49A				S	S	08 58 09.0	+1.1
	baz=52						
CBN	Corbin Frederi	78.49	309	P	P	08 48 15.1	+0.7
	baz=54,SNR=5.1						
CBN	Corbin Frederi	78.49	309	P	P	08 48 14.4	-0.1
	baz=54,SNR=5.1						
CBN				S	S	08 58 09.6	+0.4
	baz=54						
TMAB	Tom-Au,PA,Br	78.61	259	eP	P	08 48 17.1	+1.7
M53A	WI Miller and	78.64	313	P	P	08 48 15.0	-0.2
	baz=53,SNR=6.1						
M53A				S	S	08 58 10.1	-0.6
	baz=53						
R58B	Mineral	78.95	309	IAmb	IAmb	08 48 19.4	
	comp=Z,21nm,0.7s						
R58B	Mineral	78.95	309	P	P	08 48 17.5	+0.4
	baz=54,SNR=15						
R58B				P	P	08 48 17.5	+0.4
	baz=54,SNR=15						
K50A	Casco	78.98	315	IAmb	IAmb	08 48 19.6	
	comp=Z,39nm,0.8s						
K50A	Casco	78.98	315	P	P	08 48 18.0	+0.9
	baz=52,SNR=6.1						
K50A				P	P	08 48 18.0	+0.9
	baz=52,SNR=6.1						
M52A	Chesterland	78.98	313	IAmb	IAmb	08 48 37.7	
	comp=Z,44nm,1.2s						
M52A	Chesterland	78.98	313	P	P	08 48 17.1	0.0
	baz=53,SNR=5.4						
M52A				P	P	08 48 17.1	0.0
	baz=53,SNR=5.4						
M52A				S	S	08 58 15.0	+0.6
	baz=53						
M52A				S	S	08 58 15.0	+0.6
	baz=53						
TNA	Tin City	79.11	6	P	P	08 48 17.0	-0.3
	baz=348						
N53A	Lisbon	79.11	312	P	P	08 48 18.4	+0.5
	baz=53,SNR=8.0						
N53A				P	P	08 48 18.4	+0.5
	baz=53,SNR=8.0						
N53A				S	S	08 58 16.1	+0.2
	baz=53						
N53A				S	S	08 58 16.1	+0.2
	baz=53						
Q56A	Snyder Ridge,	79.15	310	P	P	08 48 17.6	-0.5
	baz=54						
Q56A				P	P	08 48 17.6	-0.5
	baz=54						
Q56A				S	S	08 58 17.5	+1.2
	baz=54						
Q56A				S	S	08 58 17.5	+1.2
	baz=54						
E43A	Lone Tree Farm	79.16	320	P	P	08 48 18.6	+0.5
	baz=50,SNR=9.0						
E43A				S	S	08 58 14.6	-1.6
	baz=50						
MCWV	Mont Chateau	79.19	311	IAmb	IAmb	08 48 21.1	
	comp=Z,35nm,0.8s						
MCWV	Mont Chateau	79.19	311	P	P	08 48 19.5	+1.2
	baz=53,SNR=11						
MCWV	Mont Chateau	79.19	311	P	P	08 48 18.4	+0.1
	baz=53,SNR=11						
MCWV				S	S	08 58 17.9	+1.2
	baz=53						
I29M	Ogilvie Camp,	79.20	353	P	P	08 48 18.0	+0.1
	baz=13,SNR=90						
I29M				S	S	08 58 13.2	-2.8
	baz=13						
O54A	Avella	79.21	312	P	P	08 48 19.1	+0.7
	baz=53,SNR=6.2						
O54A				P	P	08 48 19.1	+0.7
	baz=53,SNR=6.2						
O54A				S	S	08 58 18.2	+1.3
	baz=53						
O54A				S	S	08 58 18.2	+1.3
	baz=53						
G45A	Suttons Bay	79.29	318	P	P	08 48 19.3	+0.6
	baz=51,SNR=24						
G45A				P	P	08 48 19.3	+0.6
	baz=51,SNR=24						
T59A	Double "B" Far	79.33	308	P	P	08 48 19.1	+0.1
	baz=54,SNR=8.0						
T59A				P	P	08 48 19.1	+0.1
	baz=54,SNR=8.0						
H24K	Noodor Dome	79.34	358	P	P	08 48 18.9	+0.2
	baz=4.9,SNR=15						
H24K				S	S	08 58 15.9	-1.6
	baz=4.9						
H23K	Yukon River	79.40	358	IAmb	IAmb	08 48 47.3	
	comp=Z,38nm,1.1s						
H23K	Yukon River	79.40	358	P	P	08 48 19.9	+0.9
	baz=3.5,SNR=40						
H23K				S	S	08 58 16.4	-1.7
	baz=3.5						
D41A	Chassel	79.54	321	IAmb	IAmb	08 48 36.8	
	comp=Z,36nm,1.0s						
D41A	Chassel	79.54	321	P	P	08 48 20.7	+0.6
	baz=49,SNR=8.0						
H21K	Melozitna Rive	79.62	360	IAmb	IAmb	08 48 40.9	
	comp=Z,33nm,1.0s						
H21K	Melozitna Rive	79.62	360	P	P	08 48 20.9	+0.7
	baz=0.8,SNR=39						
H21K				S	S	08 58 19.0	-1.4
	baz=0.8						
O53A	New Philadelph	79.68	312	IAmb	IAmb	08 48 23.6	
	comp=Z,25nm,0.8s						
O53A	New Philadelph	79.68	312	P	P	08 48 21.1	+0.1
	baz=53,SNR=12						
O53A				S	S	08 58 21.7	-0.1
	baz=53						
S57A	Dark Hollow, R	79.76	309	P	P	08 48 22.1	+0.7
	baz=54,SNR=7.8						
S57A				P	P	08 48 22.1	+0.7
	baz=54,SNR=7.8						
U59A	Littleton	79.84	307	IAmb	IAmb	08 48 24.1	
	comp=Z,28nm,0.9s						
U59A	Littleton	79.84	307	P	P	08 48 22.8	+0.9
	baz=54,SNR=16						
U59A				P	P	08 48 22.8	+0.9
	baz=54,SNR=16						
U59A				S	S	08 58 24.4	+0.8
	baz=54						
U59A				S	S	08 58 24.4	+0.8
	baz=54						
J47A	Sunmer	79.96	316	IAmb	IAmb	08 48 42.9	
	comp=Z,32nm,0.8s						
J47A	Sunmer	79.96	316	P	P	08 48 23.2	+0.8
	baz=51,SNR=7.8						
J47A				P	P	08 48 23.2	+0.8
	baz=51,SNR=7.8						
N51A	Ashland	79.97	313	IAmb	IAmb	08 48 25.3	
	comp=Z,34nm,1.1s						
N51A	Ashland	79.97	313	P	P	08 48 22.5	0.0
	baz=52						
N51A				P	P	08 48 22.5	0.0
	baz=52						
N51A				S	S	08 58 24.2	-0.8
	baz=52						
N51A				S	S	08 58 24.2	-0.8
	baz=52						
CMC01	Camacan, BA	79.97	243	eP	P	08 48 24.4	+1.6
EGAK	Eagle	80.02	355	P	P	08 48 22.7	+0.4
	baz=10,SNR=22						
EGAK				S	S	08 58 23.5	-1.0
	baz=10						
POKR	Poker Plat Res	80.05	357	IAmb	IAmb	08 48 28.4	
	comp=Z,42nm,0.9s						
POKR	Poker Plat Res	80.05	357	P	P	08 48 22.8	+0.4
	baz=5.3,SNR=10						
POKR				S	S	08 58 23.9	-1.0
	baz=5.3						
M50A	Fremont	80.07	314	P	P	08 48 23.4	+0.4
	baz=52						
M50A				P	P	08 48 23.4	+0.4
	baz=52						
I23K	Minto, Yukon-K	80.08	358	P	P	08 48 23.1	+0.5
	baz=3.7,SNR=23						
I23K				S	S	08 58 25.5	+0.4
	baz=3.7						
J29M	Klondike Camp	80.08	353	S	S	08 58 24.3	-1.1
	baz=13						
I21K	Tanana	80.09	359	IAmb	IAmb	08 48 29.0	
	comp=Z,32nm,0.9s						
I21K	Tanana	80.09	359	P	P	08 48 23.3	+0.6
	baz=1.5,SNR=21						
I21K				S	S	08 58 25.3	0.0
	baz=1.5						
O52A	Adamsville	80.14	312	IAmb	IAmb	08 48 25.9	
	comp=Z,32nm,0.8s						
O52A	Adamsville	80.14	312	P	P	08 48 24.1	+0.7
	baz=52,SNR=15						
O52A				P	P	08 48 24.1	+0.7
	baz=52,SNR=15						
R55A	Marlinton	80.19	310	IAmb	IAmb	08 48 39.2	
	comp=Z,40nm,1.1s						
R55A	Marlinton	80.19	310	P	P	08 48 24.7	+0.8
	baz=53,SNR=8.5						
R55A				P	P	08 48 24.7	+0.8
	baz=53,SNR=8.5						
R55A				S	S	08 58 27.8	+0.3
	baz=53						
R55A				S	S	08 58 27.8	+0.3
	baz=53						
Q54A	Coxs Mills	80.21	311	P	P	08 48 24.2	+0.3
	baz=53,SNR=9.2						
Q54A				P	P	08 48 24.2	+0.3
	baz=53,SNR=9.2						
MDM	Murphy Dome	80.23	358	IAmb	IAmb	08 48 29.3	
	comp=Z,38nm,0.9s						
I45A	Fountain	80.25	317	P	P	08 48 25.1	+1.1
	baz=50,SNR=8.7						
I45A				P	P	08 48 25.1	+1.1
	baz=50,SNR=8.7						
P53A	Whipple	80.25	312	IAmb	IAmb	08 48 26.4	
	comp=Z,32nm,0.8s						
P53A	Whipple	80.25	312	P	P	08 48 25.0	+0.9
	baz=52,SNR=14						
P53A				P	P	08 48 25.0	+0.9
	baz=52,SNR=14						
ANM	Nome	80.30	5	IAmb	IAmb	08 48 39.9	
	comp=Z,40nm,1.0s						
ANM	Nome	80.30	5	P	P	08 48 23.7	-0.2
	baz=350						
COLA	College	80.31	357	diP	P	08 48 24.8	+1.0
COLA				pmax	pmax		
	comp=Z,38nm,2.2s						
COLA	College	80.31	357	P	P	08 48 23.7	-0.1
	baz=4.9						
COLA				S	S	08 58 24.8	-2.7
	baz=4.9						
TCOL	CIGO, UAF Yank	80.31	357	P	P	08 48 23.4	-0.4
	baz=4.9						
TCOL				S	S	08 58 24.8	-2.7
	baz=4.9						
ILAR	Eielson Array	80.37	357	P	P	08 48 24.4	+0.2
	comp=Z,7.4nm,0.8s,baz=350,slow=3.4,SNR=52						
ILAR				PKKPbc	PKKPbc	09 07 04.7	-1.6
	comp=Z,0.7nm,0.8s,baz=238,slow=3.3,SNR=5.7						
ILAR				LR	LR	09 24 48.7	
	comp=Z,160nm,21.9s,baz=347,slow=36						
	comp=Z,7.4nm,0.8s						
T57A	Hurt	80.41	309	P	P	08 48 25.8	+0.9
	baz=53,SNR=7.6						
T57A				P	P	08 48 25.8	+0.9
	baz=53,SNR=7.6						
T57A				S	S	08 58 31.0	+1.4
	baz=53						
T57A				S	S	08 58 31.0	+1.4
	baz=53						
EYMN	Ely	80.44	323	S	S	08 58 27.1	-2.5
	baz=47						
EYMN	Ely	80.44	323	P	P	08 48 24.2	-0.8
	baz=47						
EYMN				S	S	08 58 26.8	-2.8
	baz=47						
J25K	Salcha River,	80.46	356	P	P	08 48 24.8	0.0
	baz=7.0,SNR=11						
J25K				S	S	08 58 25.9	-3.5
	baz=7.0						
YSS	Yuzh-Sakhalins	80.46	38	eP	P	08 48 25.6	+0.6
YSS				e*SP	PcP	08 48 32.1	+0.2
YSS				e		08 51 27.3	
YSS				eS	S	08 58 33.0	+3.3
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
J26L	Joseph Creek	80.46	356	P	P	08 48 24.7	-0.2
	baz=8.5,SNR=37						
J26L				S	S	08 58 26.4	-3.1
	baz=8.5						
COWI	Conover	80.47	320	IAmb	IAmb	08 48 27.3	
	comp=Z,32nm,0.8s						
COWI	Conover	80.47	320	P	P	08 48 24.7	-0.4
	baz=49						
COWI				S	S	08 58 28.5	-1.6
	baz=49						
GAMB	Gambell	80.48	8	P	P	08 48 24.6	-0.2
	baz=345						
GAMB				S	S	08 58 24.2	-5.2
	baz=345						
GCSA	Galena City Sc	80.51	1	P	P	08 48 24.5	-0.4
	baz=357,SNR=10						
GCSA				S	S	08 58 28.5	-1.1
	baz=357						
CCB	Clear Creek Bu	80.53	357	IAmb	IAmb	08 48 30.3	
	comp=Z,26nm,0.9s						
L48A	N Adams	80.55	315	IAmb	IAmb	08 48 27.7	
	comp=Z,25nm,0.8s						
L48A	N Adams	80.55	315	P	P	08 48 26.0	+0.4
	baz=51,SNR=11						
L48A				P	P	08 48 26.0	+0.4
	baz=51,SNR=11						
CNNC	Cliffs of the	80.56	306	P	P	08 48 25.2	-0.6
	baz=54						
DAWY	Dawson	80.57	354	IAmb	IAmb	08 48 41.6	
	comp=Z,25nm,0.8s						
DAWY	Dawson	80.57	354	P	P	08 48 25.4	0.0

	baz=12,SNR=40						
DAWY				S	S	08 58 29.1	-1.5
	baz=12						
P52A	Corning	80.61	312	P	P	08 48 25.5	-0.5
	baz=52,SNR=7.0						
NEA2	Nenana	80.63	358	P	P	08 48 25.4	-0.2
	baz=3.9,SNR=21						
NEA2				S	S	08 58 28.7	-2.3
	baz=3.9						
MCPB	Macapa, AP	80.66	263	eP	P	08 48 27.7	+1.1
MAYO	Mayo, Yukon	80.67	352	P	P	08 48 25.5	-0.4
	baz=15						
HDA	Harding Lake	80.73	357	IAmb	IAmb	08 48 31.8	
	comp=Z,39nm,0.8s						
HDA	Harding Lake	80.73	357	P	P	08 48 25.8	-0.4
	baz=5.7,SNR=58						
HDA				S	S	08 58 28.1	-4.0
	baz=5.7						
HDA				S	S	08 58 28.1	-4.0
	baz=5.7						
ACSO	Alum Creek Sta	80.76	313	IAmb	IAmb	08 48 29.0	
	comp=Z,35nm,0.8s						
ACSO	Alum Creek Sta	80.76	313	P	P	08 48 26.9	+0.2
	baz=52,SNR=14						
ACSO	Alum Creek Sta	80.76	313	P	P	08 48 26.1	-0.7
	baz=52,SNR=14						
ACSO				S	S	08 58 32.0	-1.2
	baz=52						
H43A	Windswept, Lux	80.81	319	IAmb	IAmb	08 48 28.9	
	comp=Z,31nm,0.8s						
H43A	Windswept, Lux	80.81	319	P	P	08 48 27.1	+0.1
	baz=49,SNR=7.1						
H43A				S	S	08 58 32.7	-0.9
	baz=49						
YULB	Yu-li	80.81	68	IAmb	IAmb	08 49 01.4	
	comp=Z,37nm,1.2s						
K27K	Chicken	80.83	355	P	P	08 48 26.7	0.0
	baz=9.7						
K27K				S	S	08 58 31.6	-1.5
	baz=9.7						
ULM	Lac du Bonnet	80.91	327	P	P	08 48 26.9	-0.5
	comp=Z,14nm,0.7s,baz=41,slow=4.1,SNR=22						
ULM				LR	LR	09 26 02.1	
	comp=Z,568nm,19.0s,baz=50,slow=37						
	comp=Z,14nm,0.7s						
GUA01	Guaratinga, BA	80.97	243	eP	P	08 48 30.8	+2.6
MMPY	Sheldon Lake,	81.01	350	P	P	08 48 27.4	-0.3
	baz=18						
SCRK	Sand Creek	81.01	356	IAmb	IAmb	08 48 42.1	
	comp=Z,30nm,1.1s						
SCRK	Sand Creek	81.01	356	P	P	08 48 28.2	+0.4
	baz=8.1,SNR=25						
SCRK				S	S	08 58 32.6	-2.7
	baz=8.1						
BLA	Blacksburg	81.02	309	IAmb	IAmb	08 48 56.8	
	comp=Z,64nm,1.9s						
BLA	Blacksburg	81.02	309	P	P	08 48 28.1	-0.2
	baz=53						
BLA				S	S	08 58 37.2	+1.0
	baz=53						
V58A	Windy Hill, Pi	81.04	307	P	P	08 48 28.6	+0.3
	baz=53,SNR=6.4						
V58A				P	P	08 48 28.6	+0.3
	baz=53,SNR=6.4						
N49A	Columbus Grove	81.04	314	IAmb	IAmb	08 48 30.4	
	comp=Z,25nm,0.8s						
N49A	Columbus Grove	81.04	314	P	P	08 48 28.7	+0.5
	baz=51,SNR=7.5						
N49A				P	P	08 48 28.7	+0.5
	baz=51,SNR=7.5						
N49A				S	S	08 58 33.5	-2.6
	baz=51						
N49A				S	S	08 58 33.5	-2.6
	baz=51						
Q52A	Bidwell	81.11	312	IAmb	IAmb	08 48 30.9	
	comp=Z,28nm,0.8s						
Q52A	Bidwell	81.11	312	P	P	08 48 29.2	+0.6
	baz=52,SNR=8.2						
Q52A				P	P	08 48 29.2	+0.6
	baz=52,SNR=8.2						
J20K	Nowinta River	81.11	0	IAmb	IAmb	08 48 42.6	
	comp=Z,28nm,0.9s						
J20K	Nowinta River	81.11	0	P	P	08 48 28.3	+0.1
	baz=360,SNR=31						
J20K				S	S	08 58 35.5	-0.5
	baz=360						
BPAW	Bear Paw Mtn.	81.17	359	IAmb	IAmb	08 48 47.8	
	comp=Z,32nm,1.0s						
BPAW	Bear Paw Mtn.	81.17	359	P	P	08 48 28.0	-0.5
	baz=2.3,SNR=36						
BPAW				S	S	08 58 33.4	-3.2
	baz=2.3						
S54A	Dingess, Beckl	81.23	310	P	P	08 48 29.6	+0.3
	baz=52,SNR=6.1						
S54A				P	P	08 48 29.6	+0.3
	baz=52,SNR=6.1						
B35A	Bob, Littlefor	81.24	324	P	P	08 48 29.0	-0.1
	baz=46,SNR=7.6						
P51A	Williamsport	81.27	312	IAmb	IAmb	08 48 31.3	
	comp=Z,24nm,0.8s						
P51A	Williamsport	81.27	312	P	P	08 48 29.5	0.0
	baz=52,SNR=6.7						
P51A				P	P	08 48 29.5	0.0
	baz=52,SNR=6.7						
K24K	Donnelly Dome	81.28	356	P	P	08 48 29.0	-0.2
	baz=6.6,SNR=36						
K24K				S	S	08 58 35.9	-2.0
	baz=6.6						
RIDG	Independent Ri	81.30	356	P	P	08 48 28.7	-0.5
	baz=7.4,SNR=39						
RIDG				S	S	08 58 36.4	-1.7
	baz=7.4						
R53A	Hurricane	81.30	311	IAmb	IAmb	08 48 32.2	
	comp=Z,28nm,0.8s						
R53A	Hurricane	81.30	311	P	P	08 48 30.2	+0.5
	baz=52,SNR=11						
R53A				P	P	08 48 30.2	+0.5
	baz=52,SNR=11						
DOT	Dot Lake	81.34	356	IAmb	IAmb	08 48 35.5	
	comp=Z,30nm,0.9s						
E38A	The Farm, Brul	81.38	322	P	P	08 48 29.4	-0.5
	baz=47						
CHUM	Lake Minchumin	81.40	359	P	P	08 48 30.1	+0.4
	baz=1.2,SNR=28						
CHUM				S	S	08 58 36.3	-2.7
	baz=1.2						
HUMP	Col San Antoni	81.49	286	IAmb	IAmb	08 48 46.5	
	comp=Z,34nm,0.8s						
U56A	King	81.52	309	IAmb	IAmb	08 48 33.1	
	comp=Z,20nm,0.8s						
U56A	King	81.52	309	P	P	08 48 31.9	+0.9
	baz=53,SNR=7.1						
U56A				P	P	08 48 31.9	+0.9
	baz=53,SNR=7.1						
TGTN	Hyland Airport	81.57	348	P	P	08 48 30.7	0.0
	baz=21						
TGTN				S	S	08 58 42.5	+1.6
	baz=21						
L46A	Eue Claire	81.58	316	IAmb	IAmb	08 48 33.2	
	comp=Z,23nm,0.8s						
G40A	Rib Lake	81.58	320	IAmb	IAmb	08 48 56.3	
	comp=Z,32nm,1.1s						
G40A	Rib Lake	81.58	320	P	P	08 48 31.2	+0.2
	baz=48,SNR=13						
GCPR	Guaynabo City	81.58	286	IAmb	IAmb	08 48 46.5	
	comp=Z,46nm,1.2s						
O49A	Covington	81.60	314	IAmb	IAmb	08 48 33.2	
	comp=Z,35nm,0.8s						
O49A	Covington	81.60	314	P	P	08 48 31.2	0.0
	baz=51,SNR=8.6						
O49A				P	P	08 48 31.2	0.0
	baz=51,SNR=8.6						
FARO	Faro, Yukon	81.68	351	P	P	08 48 31.4	+0.1
	baz=17						
KTH	Kantishna Hill	81.71	359	IAmb	IAmb	08 48 58.9	
	comp=Z,42nm,1.2s						
Q51A	Peebles	81.73	312	IAmb	IAmb	08 48 34.3	
	comp=Z,39nm,0.9s						
Q51A	Peebles	81.73	312	P	P	08 48 32.0	0.0
	baz=51,SNR=18						
Q51A				P	P	08 48 32.0	0.0
	baz=51,SNR=18						
SJG	San Juan	81.74	286	LR	LR	09 23 30.4	
	comp=Z,98nm,19.2s,baz=73,slow=35						
L27K	Beaver Creek,	81.77	355	P	P	08 48 31.5	-0.2
	baz=9.9,SNR=39						
L27K				S	S	08 58 42.4	-0.5
	baz=9.9						
M30M	Minto, Yukon	81.77	352	P	P	08 48 31.8	0.0
	baz=14						
M30M				S	S	08 58 41.0	-2.0
	baz=14						
TRF	Thorofare Moun	81.80	358	P	P	08 48 32.0	0.0
	baz=2.9,SNR=20						
TRF				S	S	08 58 41.0	-2.6
	baz=2.9						
I42A	Draeger Farm,	81.81	319	IAmb	IAmb	08 48 34.4	
	comp=Z,22nm,0.8s						
I42A	Draeger Farm,	81.81	319	P	P	08 48 32.1	-0.2
	baz=49,SNR=10.0						
M31M	Drury Creek, Y	81.84	351	IAmb	IAmb	08 48 46.7	
	comp=Z,40nm,1.2s						
M31M	Drury Creek, Y	81.84	351	P	P	08 48 32.3	+0.1
	baz=16,SNR=16						
M31M				S	S	08 58 42.6	-1.1
	baz=16						
CAST	Castle Rocks	81.86	359	IAmb	IAmb	08 48 52.2	
	comp=Z,29nm,1.0s						
CAST	Castle Rocks	81.86	359	P	P	08 48 32.1	-0.1
	baz=1.4,SNR=13						
L26K	Log Cabin Wild	81.91	355	P	P	08 48 32.5	+0.1
	baz=8.6,SNR=12						
L26K				S	S	08 58 43.2	-1.2
	baz=8.6						
K20K	Telida	81.94	0	IAmb	IAmb	08 48 52.8	
	comp=Z,31nm,1.1s						
K20K	Telida	81.94	0	P	P	08 48 32.4	-0.1
	baz=360,SNR=20						
K20K				S	S	08 58 43.6	-1.1
	baz=360						
N47A	Urbana	81.96	315	P	P	08 48 33.3	+0.2
	baz=50,SNR=15						
N47A				P	P	08 48 33.3	+0.2
	baz=50,SNR=15						
Y59A	Loris	81.96	306	P	P	08 48 33.6	+0.4
	baz=53,SNR=6.1						
Y59A				P	P	08 48 33.6	+0.4
	baz=53,SNR=6.1						
W57A	Gilead	81.99	307	P	P	08 48 34.0	+0.6
	baz=53,SNR=5.7						
W57A				P	P	08 48 34.0	+0.6
	baz=53,SNR=5.7						
NAN01	Guarapari, ES	82.02	242	eP	P	08 48 34.7	+1.1
MENT	Mentasta	82.03	355	IAmb	IAmb	08 48 54.0	
	comp=Z,20nm,0.8s						
O48B	Farmland	82.04	314	P	P	08 48 33.2	-0.3
	baz=50						
O48B				S	S	08 58 42.5	-4.0
	baz=50						
SMTB	Santa Maria do	82.08	253	eP	P	08 48 35.9	+1.8
DHY	Denali Highway	82.08	357	P	P	08 48 33.3	-0.2
	baz=5.3,SNR=38						
DHY				S	S	08 58 42.5	-4.0
	baz=5.3						
PAX	Paxson	82.10	356	P	P	08 48 33.3	-0.2
	baz=6.9,SNR=5.1						
PAX				S	S	08 58 44.4	-2.1
	baz=6.9						
CELP	Cerrillos	82.10	286	IAmb	IAmb	08 48 49.5	
	comp=Z,38nm,0.9s						
SDBA	SAO DESIDERIO	82.15	249	eP	P	08 48 36.2	+1.7
P49A	Miami Univ. Ec	82.24	313	IAmb	IAmb	08 48 36.3	
	comp=Z,20nm,0.8s						
P49A	Miami Univ. Ec	82.24	313	P	P	08 48 34.6	0.0
	baz=51,SNR=7.8						
P49A	Miami Univ. Ec	82.24	313	P	P	08 48 33.7	-0.8
	baz=51,SNR=7.8						
P49A				S	S	08 58 46.6	-1.9
	baz=51						
PRPB	Parauapebas	82.24	257	eP	P	08 48 35.9	+1.0
ASAJ	Asahikawa	82.27	41	P	P	08 48 36.6	+1.9
	comp=Z,11nm,0.8s,baz=231,slow=8.2,SNR=5.7						
ASAJ				LR	LR	09 31 59.1	
	comp=Z,753nm,19.1s,baz=334,slow=41						
	comp=Z,11nm,0.8s						
K43A	Burlington	82.28	317	IAmb	IAmb	08 49 01.0	
	comp=Z,38nm,1.1s						
K43A	Burlington	82.28	317	P	P	08 48 34.9	+0.2
	baz=49,SNR=8.3						
AGMN	Agassiz Nation	82.30	325	P	P	08 48 34.6	-0.1
	baz=44,SNR=10.0						
AGMN	Agassiz Nation	82.30	325	P	P	08 48 33.8	-1.0
	baz=44,SNR=10.0						
AGMN				S	S	08 58 46.3	-2.6
	baz=44						
BVCY	Beaver Creek	82.33	354	P	P	08 48 34.1	-0.6
	baz=11,SNR=6.3						
U54A	Nelsons Funny	82.33	309	IAmb	IAmb	08 48 37.6	
	comp=Z,31nm,0.8s						
U54A	Nelsons Funny	82.33	309	P	P	08 48 35.9	+0.7
	baz=52,SNR=11						
U54A				P	P	08 48 35.9	+0.7
	baz=52,SNR=11						
TTA	Tatalina	82.35	1	IAmb	IAmb	08 49 03.5	
	comp=Z,33nm,1.3s						
TTA	Tatalina	82.35	1	P	P	08 48 34.7	-0.1
	baz=358,SNR=6.7						
TTA				S	S	08 58 47.6	-1.4
	baz=358						
V55A	Taylorsville	82.36	309	P	P	08 48 36.2	+0.9
	baz=52,SNR=5.3						
V55A				P	P	08 48 36.2	+0.9
	baz=52,SNR=5.3						
WAT1	Susitna Watana	82.38	358	P	P	08 48 34.8	-0.2
	baz=4.3						
WAT1				S	S	08 58 44.0	-5.2
	baz=4.3						
L44A	Lake County Fo	82.39	317	IAmb	IAmb	08 48 37.3	
	comp=Z,37nm,0.9s						
L44A	Lake County Fo	82.39	317	P	P	08 48 34.9	-0.4
	baz=49						
PPLA	Purkeypile	82.39	359	P	P	08 48 34.9	-0.3
PPLA	Purkeypile	82.39	359	P	P	08 48 35.1	-0.1
	baz=1.3,SNR=28						
M27K	Edge Creek, AK	82.47	354	IAmb	IAmb	08 48 47.9	
	comp=Z,32nm,1.1s						
M27K	Edge Creek, AK	82.47	354	P	P	08 48 35.8	+0.3
	baz=9.8,SNR=11						
M27K				S	S	08 58 49.6	-0.8
	baz=9.8						
M26K	Nabesna, AK	82.51	355	IAmb	IAmb	08 48 51.8	
	comp=Z,19nm,0.9s						
M26K	Nabesna, AK	82.51	355	P	P	08 48 35.5	-0.2
	baz=8.9,SNR=14						
M26K				S	S	08 58 50.3	-0.3
	baz=8.9						
MLPR	Magueyes Islan	82.53	287	IAmb	IAmb	08 48 41.9	
	comp=Z,29nm,0.8s						
WAT6	Susitna Watana	82.59	357	P	P	08 48 35.9	-0.4
	baz=5.0,SNR=24						
WAT6				S	S	08 58 47.9	-3.8
	baz=5.0						
PETK	Petropavlovsk-	82.60	27	P	P	08 48 36.1	-0.2
	comp=Z,5.6nm,0.8s,baz=321,slow=2.1,SNR=11						
PETK				LR	LR	09 31 29.8	
	comp=Z,381nm,18.4s,baz=312,slow=40						
	comp=Z,5.6nm,0.8s						
HARP	HAARP	82.65	356	P	P	08 48 35.6	-0.7
	baz=7.1						
HARP				S	S	08 58 51.3	-0.7
	baz=7.1						
MDSI	Maura Dua	82.70	101	P	P	08 48 35.8	-1.5
	comp=Z,20nm,0.8s						
P48A	Milroy	82.71	314	IAmb	IAmb	08 48 38.4	
	comp=Z,26nm,0.8s						
P48A	Milroy	82.71	314	P	P	08 48 37.1	0.0
	baz=50,SNR=9.9						
P48A				P	P	08 48 37.1	0.0
	baz=50,SNR=9.9						
N31M	Braeburn, Yuko	82.71	351	IAmb	IAmb	08 49 06.5	
	comp=Z,16nm,0.8s						
N31M	Braeburn, Yuko	82.71	351	P	P	08 48 36.8	+0.1
	baz=15,SNR=9.8						
N31M				S	S	08 58 50.2	-2.5
	baz=15						
I40A	Norwalk	82.73	319	IAmb	IAmb	08 48 38.8	
	comp=Z,16nm,0.8s						
I40A	Norwalk	82.73	319	P	P	08 48 37.0	0.0
	baz=48,SNR=7.5						
S51A	Beattyville	82.75	311	IAmb	IAmb	08 48 39.7	
	comp=Z,18nm,0.8s						
S51A	Beattyville	82.75	311	P	P	08 48 37.9	+0.6
	baz=51,SNR=14						
S51A				P	P	08 48 37.9	+0.6
	baz=51,SNR=14						
R50A	Paris	82.79	312	P	P	08 48 37.9	+0.4
	baz=51,SNR=6.3						
R50A				P	P	08 48 37.9	+0.4
	baz=51,SNR=6.3						
L20K	Farewell, AK	82.82	0	P	P	08 48 37.1	-0.1
	baz=360,SNR=7.2						
L20K				S	S	08 58 52.2	-1.6
	baz=360						
CUT	Chulitna	82.85	358	P	P	08 48 36.8	-0.6
	baz=2.9						
KMSC	Kings Mountain	82.87	308	P	P	08 48 38.1	+0.1
	baz=52,SNR=6.1						
F36A	Milaca	82.88	322	IAmb	IAmb	08 48 39.6	
	comp=Z,21nm,0.8s						
F36A	Milaca	82.88	322	P	P	08 48 37.6	-0.3
	baz=46,SNR=23						
N30M	Aishikik Lake	82.89	352	P	P	08 48 37.4	-0.3
	baz=14,SNR=15						
N30M				S	S	08 58 52.7	-1.8
	baz=14						
YUK3	Moose Creek	82.92	354	P	P	08 48 37.8	-0.2
	baz=11,SNR=38						
YUK3				S	S	08 58 54.3	-0.9
	baz=11						
SPMN	Marine on St.	82.96	322	IAmb	IAmb	08 49 32.2	
	comp=Z,23nm,0.9s						
SPMN	Marine on St.	82.96	322	P	P	08 48 37.9	-0.3
	baz=46						
SPMN				S	S	08 58 54.2	-1.5
	baz=46						
M44A	Midewin, Midew	82.98	316	IAmb	IAmb	08 49 04.6	
	comp=Z,22nm,1.0s						
M24K	Tolsona, Glenn	83.00	356	IAmb	IAmb	08 49 38.8	
	comp=Z,35nm,0.9s						
M24K	Tolsona, Glenn	83.00	356	P	P	08 48 38.4	+0.2
	baz=6.3						
M24K				S	S	08 58 55.4	-0.2
	baz=6.3						
PET	Petropavlovsk	83.02	27	eP	P	08 48 40.3	+1.9
PET				eS	S	08 58 54.8	-1.2
PET				ePS	PnS	08 59 45.2	-2.8
PET				pmax	pmax		
	comp=Z,200nm,11.1s						
PET				MLR	MLR		
	comp=Z,900nm,15.0s						
PET				MLR	MLR		
	comp=Z,800nm,21.0s						
SFIN	Lafayette	83.09	315	IAmb	IAmb	08 48 40.5	
	comp=Z,18nm,0.8s						
SFIN	Lafayette	83.09	315	P	P	08 48 39.0	0.0
	baz=49,SNR=9.6						
SFIN	Lafayette	83.09	315	P	P	08 48 38.4	-0.6
	baz=49,SNR=9.6						
SFIN				S	S	08 58 54.8	-2.4
	baz=49						
L19K	White Mountain	83.11	1	IAmb	IAmb	08 48 55.3	
	comp=Z,27nm,0.9s						
L19K	White Mountain	83.11	1	P	P	08 48 38.8	+0.1
	baz=359,SNR=18						
L19K				S	S	08 58 55.6	-1.2
	baz=359						
YUK4	Talbot Arm	83.17	353	P	P	08 48 37.6	-1.7
	baz=12						
JFWS	Jewell Farm	83.19	319	IAmb	IAmb	08 48 41.2	
	comp=Z,26nm,0.8s						
JFWS	Jewell Farm	83.19	319	P	P	08 48 39.5	0.0
	baz=48,SNR=14						
JFWS	Jewell Farm	83.19	319	P	P	08 48 38.4	-1.0
	baz=48,SNR=14						
JFWS				S	S	08 58 55.2	-2.9
	baz=48						
R49A	Shelbyville	83.30	312	P	P	08 48 40.7	+0.6
	baz=50,SNR=20						
R49A				P	P	08 48 40.7	+0.6
	baz=50,SNR=20						
MALB	Monte Alegre	83.31	263	eP	P	08 48 41.7	+1.2
SCM	Sheep Creek Mo	83.33	357	P	P	08 48 39.4	-0.5
	baz=5.3,SNR=13						
SCM				S	S	08 58 57.1	-1.9
	baz=5.3						
SJMB	Sao Joao De Ma	83.34	242	eP	P	08 48 41.4	+0.9
JANB	Januaria	83.34	247	eP	P	08 48 41.2	+0.6
NHSC	New Hope	83.36	306	P	P	08 48 40.0	-0.5
	baz=52						
PAULI	Pauline	83.38	308	IAmb	IAmb	08 48 43.1	
	comp=Z,13nm,0.8s						
PAULI	Pauline	83.38	308	P	P	08 48 41.4	+0.8
	baz=52						
M23K	Glacier View	83.38	357	P	P	08 48 40.2	0.0
	baz=5.0,SNR=21						
M23K				S	S	08 58 56.7	-2.7
	baz=5.0						
M19K	Big River Lodg	83.39	0	P	P	08 48 39.8	-0.4
	baz=360						
M19K				S	S	08 58 57.0	-2.5
	baz=360						
SML	Sawmill	83.39	357	P	P	08 48 40.0	-0.2
	baz=4.5,SNR=11						
SML				S	S	08 58 57.0	-2.6
	baz=4.5						
WHY	Whitehorse	83.39	351	P	P	08 48 39.9	-0.4
	baz=16						
WHY				S	S	08 58 56.5	-3.3
	baz=16						
N25K	Chitina, Valde	83.41	356	P	P	08 48 39.6	-0.7
	baz=7.6,SNR=8.7						
N25K				S	S	08 58 58.0	-1.8
	baz=7.6						
TZTN	Tazewell	83.41	310	IAmb	IAmb	08 48 55.9	
	comp=Z,27nm,1.1s						
TZTN	Tazewell	83.41	310	P	P	08 48 40.5	-0.2
	baz=51,SNR=5.6						
TZTN	Tazewell	83.41	310	P	P	08 48 40.4	-0.4
	baz=51,SNR=5.6						
TZTN				S	S	08 58 59.5	-1.1
	baz=51						
M20K	Styx River	83.41	360	IAmb	IAmb	08 48 47.9	
	comp=Z,23nm,0.8s						
M20K	Styx River	83.41	360	P	P	08 48 40.0	-0.4
	baz=0.5						
M20K				S	S	08 58 55.7	-4.2
	baz=0.5						
O30N	Mendenhall	83.44	351	P	P	08 48 40.3	-0.2
	baz=14						
L42A	Oliver, Polo	83.48	318	P	P	08 48 40.8	-0.2
	baz=48,SNR=8.2						
V53A	Saluda	83.49	309	IAmb	IAmb	08 49 10.4	
	comp=Z,25nm,1.3s						
V53A	Saluda	83.49	309	P	P	08 48 41.9	+0.6
	baz=51,SNR=7.3						
V53A				P	P	08 48 41.9	+0.6
	baz=51,SNR=7.3						
M22K	Willow	83.50	358	S	S	08 58 57.8	-2.7
	baz=3.0						
MCARA	McCarthy VSAT	83.52	355	IAmb	IAmb	08 49 14.8	
	comp=Z,25nm,1.0s						
MCARA	McCarthy VSAT	83.52	355	P	P	08 48 40.7	-0.1
	baz=8.9,SNR=9.9						
MCARA				S	S	08 58 59.0	-1.8
	baz=8.9						
YUK6	Outpost Mounta	83.53	353	P	P	08 48 39.9	-1.3
	baz=13						
P33M	Teslin, Yukon	83.54	350	IAmb	IAmb	08 49 08.0	
	comp=Z,22nm,1.2s						
P33M	Teslin, Yukon	83.54	350	P	P	08 48 41.0	0.0
	baz=17,SNR=10						
P33M				S	S	08 58 59.6	-1.6
	baz=17						
HYT	Haines Junctio	83.56	352	IAmb	IAmb	08 48 53.4	
	comp=Z,44nm,1.3s						
HYT	Haines Junctio	83.56	352	P	P	08 48 40.8	-0.3
	baz=13,SNR=6.7						
HYT				S	S	08 58 59.9	-1.5
	baz=13						
KLU	Klutina	83.60	356	IAmb	IAmb	08 49 01.3	
	comp=Z,15nm,0.8s						
KLU	Klutina	83.60	356	P	P	08 48 41.4	0.0
	baz=6.5,SNR=6.8						
KLU				S	S	08 58 59.7	-2.1
	baz=6.5						
PMR	Palmer	83.63	358	IAmb	IAmb	08 49 16.9	
	comp=Z,32nm,1.0s						
PMR	Palmer	83.63	358	P	P	08 48 41.0	-0.3
	baz=3.8,SNR=17						
PMR				S	S	08 58 58.7	-3.2
	baz=3.8						
P46A	Rosedale	83.66	315	IAmb	IAmb	08 48 44.0	
	comp=Z,23nm,0.8s						
P46A	Rosedale	83.66	315	P	P	08 48 42.2	+0.3

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        baz=49,SNR=7.4
KNK     Knik Glacier       83.79 357  P     P     08 48 42.2  -0.1
        baz=4.4,SNR=16
KNK                                   S     S     08 59 01.8  -1.7
        baz=4.4
CTG     Chitna Glacier     83.80 354  P     P     08 48 41.4  -1.0
        baz=10
V52A    Sevierville        83.88 310  IAmb  IAmb  08 48 57.4
        comp=Z,25nm,1.2s
V52A    Sevierville        83.88 310  P     P     08 48 43.8  +0.6
        baz=51,SNR=8.6
T50A    Nancy              83.91 311  P     P     08 48 44.1  +0.8
        baz=50
T50A                                  P     P     08 48 44.1  +0.8
        baz=50
BG3     Lake Jocassee      83.99 309  IAmb  IAmb  08 48 58.3
        comp=Z,14nm,0.9s
CASEE   Lake Jocassee      83.99 309  P     P     08 48 44.4  +0.6
        baz=51,SNR=5.3
JOW     Kunigami           84.02  61  P     P     08 48 44.0   0.0
        comp=Z,9.8nm,0.5s,baz=143,slow=7.5,SNR=9.8
JOW                                   LR    LR    09 32 12.7
        comp=Z,304nm,19.0s,baz=312,slow=40
        comp=Z,9.8nm,0.5s
HODGE   Hodges             84.03 308  P     P     08 48 44.2  +0.2
        baz=51,SNR=6.2
O44A    Mansfield          84.03 316  P     P     08 48 44.5  +0.6
        baz=48,SNR=8.8
BMRM    Bremner River      84.04 356  P     P     08 48 43.2  -0.4
        baz=7.5
BMRM                                  S     S     08 59 04.1  -2.1
        baz=7.5
GRNC    Granite Creek      84.06 354  IAmb  IAmb  08 49 00.4
        comp=Z,22nm,1.0s
I37B    Waseca             84.11 321  P     P     08 48 44.7  +0.5
        baz=46,SNR=19
TKL     Tuckaleechee C     84.11 310  LR    LR    09 25 44.5
        comp=Z,373nm,21.7s,baz=62,slow=35
TKL     Tuckaleechee C     84.11 310  IAmb  IAmb  08 49 12.7
        comp=Z,34nm,1.2s
TKL     Tuckaleechee C     84.11 310  P     P     08 48 44.7  +0.4
        baz=51,SNR=13
TGL     Tana Glacier       84.13 355  IAmb  IAmb  08 49 10.7
        comp=Z,20nm,1.0s
HAW     Hawthorne Fire     84.15 307  P     P     08 48 45.4  +0.9
        baz=52,SNR=7.3
RC01    Rabbit Creek A     84.16 358  P     P     08 48 43.3  -0.8
        baz=3.3,SNR=12
RC01                                  S     S     08 59 05.1  -2.1
        baz=3.3
SVW2    Sparrevohn         84.19   1  IAmb  IAmb  08 49 04.6
        comp=Z,24nm,0.9s
HDIL    Hopedale           84.24 316  P     P     08 48 44.7  -0.2
        baz=48,SNR=12
HDIL    Hopedale           84.24 316  P     P     08 48 43.9  -1.0
        baz=48,SNR=12
HDIL                                  S     S     08 59 07.4  -1.3
        baz=48
ISLE    Juniper Island     84.24 354  IAmb  IAmb  08 49 13.8
        comp=Z,27nm,1.0s
F33A    5 Mile Ranch,      84.26 324  IAmb  IAmb  08 48 46.7
        comp=Z,12nm,0.8s
F33A    5 Mile Ranch,      84.26 324  P     P     08 48 44.8  -0.1
        baz=44,SNR=7.1
GLI     Glacier Island     84.27 357  IAmb  IAmb  08 49 03.9
        comp=Z,29nm,1.0s
GLI     Glacier Island     84.27 357  P     P     08 48 43.8  -0.9
        baz=5.5,SNR=6.1
GLI                                   S     S     08 59 06.1  -2.2
        baz=5.5
L40A    Anamosa            84.29 318  P     P     08 48 45.3  +0.1
        baz=47,SNR=28
MDND    Maddock            84.34 327  P     P     08 48 45.2  -0.1
        baz=42,SNR=6.4
MDND    Maddock            84.34 327  P     P     08 48 44.5  -0.8
        baz=42,SNR=6.4
FID     Port Fidalgo       84.37 356  IAmb  IAmb  08 49 17.8
        comp=Z,24nm,0.9s
V51A    Loudon             84.38 310  IAmb  IAmb  08 49 01.1
        comp=Z,38nm,1.1s
V51A    Loudon             84.38 310  P     P     08 48 46.2  +0.4
        baz=50,SNR=10
YAH     Yahtse             84.43 354  IAmb  IAmb  08 49 22.2
        comp=Z,17nm,0.8s
WAX     Waxell Ridge       84.43 355  IAmb  IAmb  08 48 57.7
        comp=Z,40nm,1.4s
N19K    Bonanza Creek      84.49   0  IAmb  IAmb  08 49 05.5
        comp=Z,22nm,0.9s
N19K    Bonanza Creek      84.49   0  P     P     08 48 45.2  -0.7
        baz=359
N19K                                  S     S     08 59 08.9  -1.8
        baz=359
CAPN    Captain Cook N     84.51 359  S     S     08 59 10.4  -0.2
        baz=2.2
EYAK    Cordova Ski Ar     84.53 356  IAmb  IAmb  08 49 13.2
        comp=Z,32nm,1.2s
EYAK    Cordova Ski Ar     84.53 356  P     P     08 48 46.4  +0.4
        baz=6.6
EYAK                                  S     S     08 59 10.5  -0.4
        baz=6.6
PINM    Pinnacle           84.56 353  P     P     08 48 46.3  +0.1
        baz=11
PINM                                  S     S     08 59 10.9  -0.5
        baz=11
W52A    Murphy             84.56 309  IAmb  IAmb  08 49 01.6
        comp=Z,28nm,1.1s
W52A    Murphy             84.56 309  P     P     08 48 47.3  +0.6
        baz=51,SNR=9.6
N18K    Kilae Creek        84.61   1  IAmb  IAmb  08 49 06.9
        comp=Z,22nm,0.9s
N18K    Kilae Creek        84.61   1  P     P     08 48 46.6  +0.2
        baz=358,SNR=10
N18K                                  S     S     08 59 10.2  -1.5
        baz=358
MESA    MESA               84.63 354  P     P     08 48 47.0  +0.2
        baz=9.7
MJB9    Matsu-Tunnel       84.71  49  IAmb  IAmb  08 48 59.4
        comp=Z,53nm,1.3s
MAJO    Matsushiro         84.72  49  P     P     08 48 47.1  -0.4
MAJO    Matsushiro         84.72  49ceP     P     08 48 47.4   0.0
MAJO                                  pmax  pmax
        comp=Z,36nm,1.9s
MJAR    Matsushiro Arr     84.72  49  P     P     08 48 48.2  +0.7
        comp=Z,9.7nm,0.9s,baz=316,slow=4.3,SNR=15
MJAR                                  LR    LR    09 30 58.9
        comp=Z,479nm,20.2s,baz=318,slow=39
        comp=Z,9.7nm,0.9s
MJAR    Matsushiro Arr     84.72  49  IAmb  IAmb  08 49 00.3
        comp=Z,31nm,1.0s
K38A    Parkersburg        84.72 320  P     P     08 48 46.7  -0.6
        baz=46,SNR=15
PLBC    Pleasant Camp      84.75 351  P     P     08 48 47.7  +0.6
        baz=14
PLBC                                  S     S     08 59 13.0  -0.1
        baz=14
OLIL    Olney              84.76 314  P     P     08 48 47.4  -0.2
        baz=49,SNR=12
O22K    Cooper Landing     84.76 358  P     P     08 48 47.6  +0.4
        baz=3.3
DLBC    Dease Lake         84.78 348  LR    LR    09 29 04.3
        comp=Z,315nm,20.9s,baz=15,slow=37
DLBC    Dease Lake         84.78 348  IAmb  IAmb  08 49 27.0
        comp=Z,20nm,1.2s
U49A    Red Boiling Sp     84.81 311  P     P     08 48 48.4  +0.6
        baz=50,SNR=43
U49A                                  S     S     08 59 14.9  +0.3
        baz=50
PNL     Peninsula          84.89 353  P     P     08 48 48.1  +0.2
        baz=12
P43A    Skaggs, Pawnee     84.98 316  P     P     08 48 48.1  -0.6
        baz=48,SNR=13
N41A    Harden Midland     85.01 317  P     P     08 48 48.8   0.0
        baz=47,SNR=19
O19K    Port Alsworth      85.11   0  IAmb  IAmb  08 49 18.8
        comp=Z,15nm,0.8s
O19K    Port Alsworth      85.11   0  P     P     08 48 49.0  +0.1
        baz=360
O19K                                  S     S     08 59 13.7  -3.0
        baz=360
SEW     Seward             85.13 358  IAmb  IAmb  08 49 05.3
        comp=Z,28nm,0.9s
SEW     Seward             85.13 358  P     P     08 48 48.9  -0.1
        baz=3.6,SNR=7.6
SEW                                   S     S     08 59 15.0  -1.9
        baz=3.6
Q44A    Meyer Farm, Va     85.18 315  P     P     08 48 49.6  -0.1
        baz=48,SNR=8.2
O20K    Slope Mountain     85.22 359  P     P     08 48 48.5  -1.1
        baz=1.0
SDDR    Presa de Saban     85.26 290  IAmb  IAmb  08 48 57.5
        comp=Z,38nm,1.1s
T47A    Sharon Grove       85.31 312  P     P     08 48 50.3  -0.1
        baz=49,SNR=17
GOGA    Godfrey            85.33 308  IAmb  IAmb  08 49 05.2
        comp=Z,18nm,0.8s
GOGA    Godfrey            85.33 308  P     P     08 48 51.4  +0.9
        baz=51,SNR=15
GOGA    Godfrey            85.33 308  P     P     08 48 50.3  -0.2
        baz=51,SNR=15
GOGA                                  S     S     08 59 18.7  -1.1
        baz=51
W50A    Signal Mountai     85.37 310  P     P     08 48 51.5  +0.7
        baz=50,SNR=21
W50A                                  S     S     08 59 20.1  -0.1
        baz=50
CLTN    Cedars of Leba     85.42 311  IAmb  IAmb  08 48 53.5
        comp=Z,31nm,1.0s
Y52A    Lilburn            85.43 308  IAmb  IAmb  08 49 19.4
        comp=Z,30nm,0.8s
Y52A    Lilburn            85.43 308  P     P     08 48 51.9  +0.9
        baz=50,SNR=19
Y52A                                  P     P     08 48 51.9  +0.9
        baz=50,SNR=19
S34M    Telegraph Cree     85.47 348  P     P     08 48 51.3  +0.6
        baz=18
S34M                                  S     S     08 59 23.2  +2.8
        baz=18
SCIA    State Center       85.48 319  P     P     08 48 51.1   0.0
        baz=46,SNR=7.7
SCIA    State Center       85.48 319  P     P     08 48 50.5  -0.6
        baz=46,SNR=7.7
SCIA                                  S     S     08 59 17.8  -3.2
        baz=46
X51A    Calhoun            85.49 309  IAmb  IAmb  08 48 53.5
        comp=Z,20nm,0.9s
X51A    Calhoun            85.49 309  P     P     08 48 52.1  +0.8
        baz=50,SNR=6.6
X51A                                  P     P     08 48 52.1  +0.8
        baz=50,SNR=6.6
BRLK    Bradley Lake       85.51 359  IAmb  IAmb  08 49 08.9
        comp=Z,31nm,1.1s
BRSE    Bradley Lake S     85.53 358  P     P     08 48 51.5  +0.5
        baz=2.5
BRSE                                  S     S     08 59 18.4  -2.6
        baz=2.5
154A    Montrose           85.59 307  IAmb  IAmb  08 49 11.6
        comp=Z,36nm,1.0s
154A    Montrose           85.59 307  S     S     08 59 23.1  +0.6
        baz=51
255A    Hazlehurst         85.61 306  IAmb  IAmb  08 49 12.6
        comp=Z,24nm,0.8s
CNPM    China Poot         85.76 359  IAmb  IAmb  08 49 20.4
        comp=Z,20nm,0.8s
E28A    Huff               85.79 326  P     P     08 48 53.0  +0.4
        baz=41,SNR=7.2
DGMT    Dagmar             85.86 329  P     P     08 48 53.6  +0.7
        baz=39,SNR=10
DGMT    Dagmar             85.86 329  P     P     08 48 52.6  -0.4
        baz=39,SNR=10
DGMT                                  S     S     08 59 25.2  +0.6
        baz=39
P18K    Big Mountain,      85.91   1  P     P     08 48 52.8  -0.1
        baz=359
ECSD    EROS Data Cent     85.94 322  IAmb  IAmb  08 49 31.4
        comp=Z,19nm,0.9s
ECSD    EROS Data Cent     85.94 322  P     P     08 48 53.4   0.0
        baz=44,SNR=24
ECSD    EROS Data Cent     85.94 322  P     P     08 48 53.4   0.0
        baz=44,SNR=24
ECSD                                  S     S     08 59 21.0  -4.5
        baz=44
V48A    Smith Brothers     85.95 311  IAmb  IAmb  08 48 55.6
        comp=Z,26nm,0.8s
V48A    Smith Brothers     85.95 311  P     P     08 48 53.2  -0.4
        baz=49,SNR=23
V48A                                  S     S     08 59 23.1  -2.9
        baz=49
FPAL    Fort Paine         85.98 310  IAmb  IAmb  08 48 55.9
        comp=Z,26nm,0.9s
SLM     Saint Louis        86.07 315  IAmb  IAmb  08 49 27.4
        comp=Z,31nm,1.0s
S44A    Carbondale         86.13 314  P     P     08 48 53.7  -0.7
        baz=48,SNR=24
S44A                                  S     S     08 59 24.6  -3.0
        baz=48
N38A    Joes South For     86.27 319  P     P     08 48 55.5  +0.5
        baz=46,SNR=8.9
N38A                                  S     S     08 59 25.5  -3.3
        baz=46
WVT     Waverly            86.32 312  P     P     08 48 54.6  -0.7
WVT                                   IAmb  IAmb  08 48 56.9
        comp=Z,26nm,0.8s
WVT     Waverly            86.32 312  P     P     08 48 54.6  -0.7
WVT                                   pmax  pmax
        comp=Z,26nm,0.8s
WVT     Waverly            86.32 312  P     P     08 48 54.7  -0.7
        baz=49,SNR=37
WVT                                   S     S     08 59 27.6  -1.9
        baz=49
WVT     Waverly            86.32 312  P     P     08 48 54.7  -0.6
        baz=49
WVT                                   S     S     08 59 27.2  -2.2
        baz=49
P40A    Paris              86.49 317  IAmb  IAmb  08 48 57.8
        comp=Z,26nm,0.8s
P40A    Paris              86.49 317  P     P     08 48 56.5  +0.3
        baz=46,SNR=20
Z51A    Franklin           86.49 309  IAmb  IAmb  08 49 11.6
        comp=Z,31nm,1.1s
Z51A    Franklin           86.49 309  P     P     08 48 57.2  +0.9
        baz=50,SNR=7.5
BDFB    Brasilia           86.51 248  P     P     08 48 57.9  +1.3
        comp=Z,16nm,0.8s,baz=97,slow=4.6,SNR=19
BDFB                                  LR    LR    09 29 42.1
        comp=Z,824nm,19.2s,baz=78,slow=37
        comp=Z,16nm,0.8s
BDFB    Brasilia           86.51 248  IAmb  IAmb  08 49 09.0
        comp=Z,22nm,0.9s
BDFB    Brasilia           86.51 248 eP     P     08 48 57.7  +1.1
SUSD    Miller             86.57 324  S     S     08 59 29.3  -2.4
        baz=42
152A    Waverly Hall       86.61 308  IAmb  IAmb  08 49 11.8
        comp=Z,32nm,1.1s
152A    Waverly Hall       86.61 308  P     P     08 48 57.6  +0.8
        baz=50,SNR=13
FVM     French Village     86.62 315  P     P     08 48 57.3  +0.4
        baz=47,SNR=17
TIGA    Tifton             86.65 306  P     P     08 48 57.2  +0.1
        baz=50
TIGA                                  S     S     08 59 32.5  -0.3
        baz=50
LEM     Lembang            86.84 101  LR    LR    09 29 52.9
        comp=Z,402nm,21.3s,baz=345,slow=37
SNDB    Serra Nova Dou     86.85 253 eP     P     08 48 57.8  -0.4
Y49A    Blount Mountai     86.92 310  P     P     08 48 58.9  +0.5
        baz=49,SNR=25
Y49A                                  S     S     08 59 34.7  -0.8
        baz=49
X48A    Hartselle          86.94 311  P     P     08 48 58.8  +0.3
        baz=49,SNR=19
X48A                                  S     S     08 59 33.9  -1.6
        baz=49
CCM     Cathedral Cave     87.04 315  P     P     08 48 58.8  -0.1
CCM     Cathedral Cave     87.04 315  P     P     08 48 58.8  -0.1
CCM                                   pmax  pmax
        comp=Z,32nm,0.9s
CCM     Cathedral Cave     87.04 315  P     P     08 48 59.0  +0.1
        baz=47,SNR=31
CCM                                   S     S     08 59 36.2  -0.2
        baz=47
CCM     Cathedral Cave     87.04 315  P     P     08 48 58.7  -0.2
        baz=47
CCM                                   S     S     08 59 34.7  -1.7
        baz=47
L34A    Svendsen Farm,     87.10 321  P     P     08 48 58.9  -0.2
        baz=44
WRAK    Wrangell Islan     87.10 348  P     P     08 48 58.6  -0.2
        baz=17
WRAK                                  S     S     08 59 35.9  -0.3
        baz=17
P38A    Dawn               87.24 318  IAmb  IAmb  08 49 12.1
        comp=Z,24nm,0.8s
P38A    Dawn               87.24 318  P     P     08 49 00.0  +0.2
        baz=45,SNR=18
VAS01   Vassouras-RJ       87.25 240 eP     P     08 49 01.6  +1.6
DWPF    Disney Wildern     87.28 303  P     P     08 49 00.5  +0.3
        baz=51
PBMO    Poplar Bluff       87.44 314  IAmb  IAmb  08 49 39.5
        comp=Z,19nm,0.9s
PBMO    Poplar Bluff       87.44 314  P     P     08 49 01.1  +0.3
        baz=47,SNR=16
R40A    Maddies Statio     87.47 316  P     P     08 49 01.0  +0.1
        baz=46,SNR=45
R40A                                  S     S     08 59 39.1  -1.4
        baz=46
352A    Blakely            87.51 307  P     P     08 49 01.1  -0.2
        baz=50,SNR=5.4
N35A    Tabor              87.51 320  S     S     08 59 38.2  -2.6
        baz=44
KDAK    Kodiak Island      87.52 359  P     P     08 49 01.9  +1.1
        comp=Z,17nm,0.7s,baz=156,slow=2.7,SNR=11
        comp=Z,17nm,0.7s
KDAK    Kodiak Island      87.52 359  IAmb  IAmb  08 49 12.7
        comp=Z,27nm,1.0s
KDAK    Kodiak Island      87.52 359  P     P     08 49 01.9  +1.1
KDAK                                  pmax  pmax
        comp=Z,27nm,1.0s
KDAK    Kodiak Island      87.52 359  P     P     08 49 01.3  +0.5
        baz=1.0
W45A    Hickory Valley     87.79 312  P     P     08 49 01.6  -0.9
        baz=48,SNR=9.4
LRAL    Lakeview Retre     87.83 309  P     P     08 49 03.2  +0.4
        baz=49,SNR=51
LRAL                                  S     S     08 59 43.5  -0.7
        baz=49
LRAL    Lakeview Retre     87.83 309  P     P     08 49 02.5  -0.3
        baz=49,SNR=51
LRAL                                  S     S     08 59 42.9  -1.3
        baz=49
MAN01   Angra dos Reis     87.99 240 eP     P     08 49 04.5  +0.9
250A    Grady              88.06 308  P     P     08 49 04.8  +0.9
        baz=49,SNR=15
OHAK    Old Harbor         88.09 360  P     P     08 49 03.8  +0.3
        baz=0.4
OHAK                                  S     S     08 59 42.5  -3.1
        baz=0.4
LAO     LASA Array         88.11 329  P     P     08 49 04.9  +0.9
        baz=37,SNR=25
LAO     LASA Array         88.11 329  P     P     08 49 04.0   0.0
        baz=37,SNR=25
LAO                                   S     S     08 59 44.4  -2.1
        baz=37
SHEM    Shemya Is, Ala     88.20  19  LR    LR    09 34 07.0
        comp=Z,227nm,18.3s,baz=316,slow=39
MGMO    Mountain Grove     88.25 315  IAmb  IAmb  08 49 17.2
        comp=Z,23nm,1.1s
LCAR    Lake Charles       88.35 314  IAmb  IAmb  08 49 07.7
        comp=Z,16nm,0.8s
LCAR    Lake Charles       88.35 314  P     P     08 49 05.8  +0.6
        baz=47,SNR=14
OXF     Oxford             88.35 312  IAmb  IAmb  08 49 08.8
        comp=Z,21nm,0.9s
OXF     Oxford             88.35 312  P     P     08 49 04.9  -0.3
        baz=48
OXF                                   S     S     08 59 47.2  -1.9
        baz=48
Z47A    Carrollton         88.40 310  IAmb  IAmb  08 49 24.2
        comp=Z,16nm,0.9s
BGNE    Belgrade           88.41 322  P     P     08 49 05.7  +0.3
        baz=43,SNR=5.6
BGNE    Belgrade           88.41 322  P     P     08 49 05.5  +0.1
        baz=43,SNR=5.6
BGNE                                  S     S     08 59 48.0  -1.5
        baz=43
BAUV    El Baul            88.44 280  P     P     08 49 05.5  -0.4
BAUV                                  IAmb  IAmb  08 49 19.4
        comp=Z,25nm,0.9s
EGMT    Eagleton           88.44 332  P     P     08 49 05.3  -0.2
        baz=35,SNR=12
EGMT                                  S     S     08 59 48.5  -1.1
        baz=35
S39A    Bolivar            88.48 316  S     S     08 59 48.4  -1.9
        baz=46
SII     Sitkinak Islan     88.75   0  P     P     08 49 05.7  -1.0
        baz=360
CHGN    Chignik            88.93   3  IAmb  IAmb  08 49 34.0
        comp=Z,22nm,0.9s
CHGN    Chignik            88.93   3  P     P     08 49 07.0  -0.5
        baz=356
WALA    Waterton Lakes     89.09 335  IAmb  IAmb  08 49 10.2
        comp=Z,23nm,0.8s
BRAL    Brewton            89.09 308  P     P     08 49 09.9  +1.1
        baz=49,SNR=9.6
BRAL    Brewton            89.09 308  P     P     08 49 08.9  +0.2
        baz=49,SNR=9.6
BRAL                                  S     S     08 59 56.1   0.0
        baz=49
U40A    Yellville          89.14 315  P     P     08 49 08.8  -0.1
        baz=46,SNR=7.3
U40A                                  P     P     08 49 08.8  -0.1
        baz=46,SNR=7.3
U40A    Yellville          89.14 315  P     P     08 49 08.5  -0.5
        baz=46,SNR=7.3
U40A                                  S     S     08 59 54.3  -2.2
        baz=46
RSSD    Black Hills        89.18 327  P     P     08 49 08.4  -0.9
RSSD                                  IAmb  IAmb  08 49 11.5
        comp=Z,18nm,0.8s
RSSD    Black Hills        89.18 327  P     P     08 49 08.4  -0.9
RSSD    Black Hills        89.18 327  P     P     08 49 09.9  +0.6
        baz=39,SNR=19
RSSD    Black Hills        89.18 327  P     P     08 49 09.3   0.0
        baz=39
RSSD                                  S     S     08 59 53.2  -3.9
        baz=39
KSU1    Kansas State U     89.29 319  IAmb  IAmb  08 49 21.4
        comp=Z,20nm,0.8s
KSU1    Kansas State U     89.29 319  P     P     08 49 08.9  -0.7
        baz=44
KSU1                                  S     S     08 59 56.4  -1.4
        baz=44
MACA    Manacapuru-AM      89.30 266 eP     P     08 49 11.1  +1.1
PARB    Paraibuna          89.47 241 eP     P     08 49 11.6  +1.0
W41B    Gary Mavity, V     89.61 314  P     P     08 49 11.3  +0.2
        baz=46
W41B    Gary Mavity, V     89.61 314  P     P     08 49 11.0  -0.1
        baz=46
CLDB    Colider            89.77 257 eP     P     08 49 13.4  +1.3
SDPT    Sand Point         89.78   4  P     P     08 49 11.5  +0.1
        baz=354
BB19B   Bebedouro          90.19 244 eP     P     08 49 15.1  +1.2
BBB     Bella Bella        90.29 345  LR    LR    09 33 10.8
        comp=Z,261nm,19.1s,baz=27,slow=38
CHNA    Chernabura Isl     90.35   3  P     P     08 49 14.2   0.0
        baz=355
X40A    Basin Creek Fa     90.43 314  P     P     08 49 14.8  -0.2
        baz=46
X40A                                  S     S     09 00 09.3  +0.8
        baz=46
346A    Big Creek Wild     90.49 310  S     S     09 00 09.5  +0.4
        baz=48
W39A    Magazine           90.49 315  P     P     08 49 15.0  -0.2
        baz=45
SDV     Santo Domingo      90.56 281  LR    LR    09 28 14.9
        comp=Z,90nm,21.8s,baz=64,slow=34
SDV     Santo Domingo      90.56 281  P     P     08 49 16.8  +0.6
SDV                                   IAmb  IAmb  08 49 18.6
        comp=Z,27nm,0.9s
SDV     Santo Domingo      90.56 281 eP     P     08 49 16.7  +0.6
VBMS    Vicksburg          90.58 311  P     P     08 49 15.9  +0.2
        baz=47
RLMT    Red Lodge          90.63 330  P     P     08 49 15.7  -0.3
        baz=35
RLMT                                  S     S     09 00 09.0  -1.4
        baz=35
ITRB    Iturama            90.74 246 eP     P     08 49 18.0  +1.5
MIAR    Mount Ida          90.83 314  IAmb  IAmb  08 49 19.5
        comp=Z,14nm,0.9s
MIAR    Mount Ida          90.83 314  P     P     08 49 17.6  +0.8
        baz=45,SNR=14
MIAR    Mount Ida          90.83 314  P     P     08 49 16.5  -0.3
        baz=45,SNR=14
NEW     Newport            90.85 337  LR    LR    09 33 05.8
        comp=Z,545nm,18.6s,baz=29,slow=38
NEW     Newport            90.85 337  IAmb  IAmb  08 49 19.1
        comp=Z,22nm,0.8s
NEW     Newport            90.85 337  P     P     08 49 16.5  -0.2
        baz=29,SNR=28
R32A    Long Quarter,      90.90 320  IAmb  IAmb  08 50 10.4
        comp=Z,20nm,0.9s
PDRB    Porto dos Gac      90.94 257 eP     P     08 49 19.0  +1.4
MSO     Missoula           91.00 334  P     P     08 49 17.0  -0.5
        baz=32,SNR=13
TUL1    Leonard            91.14 317  IAmb  IAmb  08 50 00.5
        comp=Z,19nm,0.8s
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TUL1	Leonard	91.14	317	P	P	08 49 18.2	-0.1
	baz=44,SNR=7.4						
TUL1	Leonard	91.14	317	P	P	08 49 17.4	-0.8
	baz=44,SNR=7.4						
TUL1				S	S	09 00 13.7	-1.2
	baz=44						
CBKS	Cedar Bluff	91.15	321	P	P	08 49 18.0	-0.3
	baz=42						
BOZ	Bozeman (W)	91.17	332	P	P	08 49 17.4	-1.0
	baz=33,SNR=12						
BOZ				S	S	09 00 12.7	-2.5
	baz=33						
PET01	Itanhaem-SP	91.25	241	*e*P	P	08 49 20.0	+1.2
Z41A	Richland Creek	91.27	313	P	P	08 49 19.1	+0.2
	baz=46						
K22A	Casper	91.46	327	P	P	08 49 19.1	-0.7
	baz=37,SNR=16						
K22A	Casper	91.46	327	P	P	08 49 18.3	-1.5
	baz=37,SNR=16						
C09A	Chrisman Ranch	91.63	337	IAmb	IAmb	08 49 22.3	
	comp=Z,11nm,0.8s						
YMR	Madison River	91.68	331	IAmb	IAmb	08 49 47.6	
	comp=Z,13nm,1.1s						
H17A	Grant Village	91.75	331	P	P	08 49 20.6	-0.7
	baz=34,SNR=7.0						
YPP	Pitchstone Pla	91.95	331	IAmb	IAmb	08 49 46.3	
	comp=Z,16nm,1.2s						
FLWY	Flagg Ranch	92.06	331	IAmb	IAmb	08 50 29.5	
	comp=Z,19nm,1.4s						
FRTB	Fartura	92.33	243	*e*P	P	08 49 25.0	+1.1
KSCO	Kaye Shedlock'	92.47	323	P	P	08 49 24.4	-0.1
	baz=40						
PCMB	Pacaembu	92.55	245	*e*P	P	08 49 26.0	+1.1
N23A	Red Feather La	92.59	326	IAmb	IAmb	08 49 27.3	
	comp=Z,16nm,0.8s						
N23A	Red Feather La	92.59	326	P	P	08 49 24.3	-0.9
	baz=37,SNR=14						
SALV	Santo Antonio	92.60	253	*e*P	P	08 49 26.3	+1.1
TPAW	Teton Pass	92.66	330	IAmb	IAmb	08 49 28.2	
	comp=Z,8.9nm,0.7s						
PDAR	Pinedale Array	92.68	329	P	P	08 49 24.6	-0.9
	comp=Z,3.7nm,0.7s,baz=62,slow=3.7,SNR=36						
PDAR				LR	LR	09 33 11.3	
	comp=Z,726nm,19.9s,baz=35,slow=37						
	comp=Z,3.7nm,0.7s						
BW06	Boulder Array	92.68	329	P	P	08 49 24.4	-1.2
	baz=35,SNR=7.7						
MPSI	Mapaga	92.78	88	P	P	08 49 35.2	+9.1
HAWA	Hanford	93.28	337	IAmb	IAmb	08 49 30.4	
	comp=Z,13nm,0.8s						
ISCO	Idaho Springs	93.30	325	P	P	08 49 28.4	-0.2
	baz=38,SNR=8.1						
ISCO	Idaho Springs	93.30	325	P	P	08 49 27.6	-1.0
	baz=38,SNR=8.1						
AHID	Auburn Hatcher	93.32	330	IAmb	IAmb	08 49 30.3	
	comp=Z,8.2nm,0.8s						
D03D	Eldon	93.33	340	P	P	08 49 28.0	-0.1
	baz=25						
JCJ	Chichijima	93.48	53	LR	LR	09 36 16.0	
	comp=Z,268nm,20.6s,baz=337,slow=38						
DAV	Davao City (W)	93.54	79	LR	LR	09 37 48.3	
	comp=Z,307nm,20.7s,baz=328,slow=40						
D04E	Lakebay	93.56	339	P	P	08 49 28.5	-0.6
	baz=25						
SJCC	San Jacinto, C	93.61	285	IAmb	IAmb	08 49 45.7	
	comp=Z,19nm,0.9s						
WMOK	Wichita Mounta	93.66	318	P	P	08 49 30.3	+0.3
	baz=42,SNR=5.1						
WMOK	Wichita Mounta	93.66	318	P	P	08 49 29.6	-0.4
	baz=42,SNR=5.1						
BMO	Blue Mountains	93.89	335	IAmb	IAmb	08 49 32.2	
	comp=Z,8.9nm,0.8s						
HLID	Hailey	93.95	333	P	P	08 49 31.0	-0.3
	baz=31						
E04D	Cinebar	94.06	339	IAmb	IAmb	08 49 47.3	
	comp=Z,19nm,1.1s						
E04D	Cinebar	94.06	339	P	P	08 49 31.4	-0.1
	baz=25						
O20A	White River Ci	94.25	327	P	P	08 49 32.3	-0.5
	baz=36						
F05D	White Salmon	94.33	338	P	P	08 49 32.7	-0.1
	baz=26						
HWUT	Hardware Ranch	94.47	330	IAmb	IAmb	08 49 35.6	
	comp=Z,15nm,0.8s						
VILB	Vilhena	94.48	257	*e*P	P	08 49 34.9	+0.9
MFID	Camas Ranch	94.61	333	IAmb	IAmb	08 49 36.4	
	comp=Z,11nm,0.8s						
F04D	Rainier, OR	94.62	339	P	P	08 49 34.0	-0.1
	baz=25						
T25A	Trinidad	94.81	323	P	P	08 49 35.0	-0.5
	baz=39,SNR=5.5						
G05D	Wamic, OR	94.87	338	P	P	08 49 34.7	-0.6
	baz=26						
SDCO	Great Sand Dun	94.87	324	P	P	08 49 35.4	-0.4
	baz=38,SNR=9.9						
SDCO	Great Sand Dun	94.87	324	P	P	08 49 35.0	-0.8
	baz=38,SNR=9.9						
HOOD	Mount Hood Mea	94.90	338	IAmb	IAmb	08 50 09.3	
	comp=Z,17nm,0.9s						
PTGB	Pitanga	94.98	243	*e*P	P	08 49 36.5	+0.4
PTLB	Pontes e Lacer	95.05	255	*e*P	P	08 49 37.5	+1.1
TER01	Tubaro-SC	95.14	239	*e*P	P	08 49 37.8	+1.2
G03D	McMinnville, O	95.49	339	P	P	08 49 37.9	-0.1
	baz=25						
S22A	4UR Ranch, Cre	95.51	324	P	P	08 49 38.1	-0.6
	baz=37,SNR=7.4						
H04A	Detroit Lake	95.64	338	IAmb	IAmb	08 50 12.6	
	comp=Z,11nm,1.0s						
I05D	Terrebonne, OR	95.69	337	P	P	08 49 38.6	-0.5
	baz=26						
KAPI	Kappang	95.69	92	LR	LR	09 40 28.7	
	comp=Z,248nm,18.7s,baz=285,slow=40						
ABTX	Abilene, Hawle	95.71	317	P	P	08 49 39.1	-0.3
	baz=42						
PV15	Paradox Valley	95.81	326	IAmb	IAmb	08 49 41.5	
	comp=Z,8.9nm,0.8s						
435B	Jarrell	95.88	314	S	S	09 00 57.2	+0.3
	baz=43						
ROSC	El Rosal	95.88	280	LR	LR	09 31 02.7	
	comp=Z,265nm,21.4s,baz=64,slow=34						
H04D	Lebanon	95.95	338	P	P	08 49 40.2	0.0
	baz=25						
PV23	Carpenter Ridg	95.96	326	IAmb	IAmb	08 49 41.9	
	comp=Z,11nm,0.9s						
PV12	Saucer Basin,	95.97	326	IAmb	IAmb	08 50 32.3	
	comp=Z,18nm,1.3s						
PV11	David Mesa, Pa	96.02	326	IAmb	IAmb	08 49 42.7	
	comp=Z,8.4nm,0.9s						
PV14	Lion Creek, Pa	96.03	326	IAmb	IAmb	08 50 07.7	
	comp=Z,8.2nm,0.8s						
PINE	Pine Mountain	96.05	337	IAmb	IAmb	08 49 47.3	
	comp=Z,12nm,0.9s						
PV17	East Wray Mesa	96.08	326	IAmb	IAmb	08 50 06.4	
	comp=Z,9.8nm,1.1s						
DUG	Dugway, Tooele	96.17	330	P	P	08 49 40.9	-0.6
	baz=33,SNR=10						
DUG				S	S	09 00 58.1	-1.4
	baz=33						
ITAB	Concordia	96.51	241	*e*P	P	08 49 44.1	+1.3
I04A	Tendick Farm,	96.51	338	P	P	08 49 42.6	-0.3
	baz=25,SNR=8.5						
J05D	Fort Rock, OR	96.60	337	P	P	08 49 43.3	0.0
	baz=26,SNR=16						
ELK	Elko	96.68	332	LR	LR	09 36 27.9	
	comp=Z,443nm,18.3s,baz=30,slow=37						
MVCO	Mesa Verde	96.73	325	P	P	08 49 43.1	-1.1
	baz=36						
I03D	Drain, OR	96.89	338	P	P	08 49 45.1	+0.6
	baz=25						
SIV	San Ignacio	96.89	255	LR	LR	09 36 14.1	
	comp=Z,667nm,18.1s,baz=84,slow=37						
J04D	Umpqua Nationa	96.92	337	P	P	08 49 44.7	-0.1
	baz=26						
K05A	Summer Lake	96.99	336	IAmb	IAmb	08 50 25.1	
	comp=Z,15nm,1.2s						
JCT	Junction City	97.39	315	P	P	08 49 46.5	-0.6
	baz=42						
JCT				S	S	09 01 09.7	-0.4
	baz=42						
ANMO	Albuquerque	97.55	323	LR	LR	09 35 53.4	
	comp=Z,346nm,18.1s,baz=42,slow=37						
ANMO	Albuquerque	97.55	323	P	P	08 49 47.8	-0.1
ANMO	Albuquerque	97.55	323⇑	*e*P	Pdif	08 49 48.0	0.0
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	97.55	323	P	P	08 49 47.8	-0.1
	baz=37						
ETMB	Extrema	97.58	263	*e*P	Pdif	08 49 48.8	+0.7
MTPU	Mount Pierson	97.71	328	IAmb	IAmb	08 50 07.1	
	comp=Z,10nm,1.5s						
L04D	Klamath Falls	97.90	337	IAmb	IAmb	08 49 51.1	
	comp=Z,9.5nm,0.8s						
L04D	Klamath Falls	97.90	337	P	P	08 49 48.7	-0.6
	baz=26						
L02F	Cave Junction	98.39	338	P	P	08 49 51.1	-0.2
	baz=25						
YBH	Yreka Blue Hor	98.47	337	LR	LR	09 36 56.9	
	comp=Z,314nm,19.7s,baz=18,slow=37						
YBH	Yreka Blue Hor	98.47	337	IAmb	IAmb	08 53 39.2	
	comp=Z,18nm,1.8s						
Y22D	IRIS PASSCAL I	98.48	322	S	S	09 01 20.3	+0.8
	baz=37						
R11A	Troy Canyon, C	98.87	331	P	P	08 49 52.7	-1.0
	baz=31						
R11A				S	S	09 01 19.3	-3.4
	baz=31						
CPSB	Cacapava Do Su	99.28	239	*e*P	Pdif	08 49 56.1	+0.9
WUAZ	Wupatki	99.44	326	P	Pdif	08 49 55.7	-0.6
	baz=34						
MNTX	Cornudas Mount	99.55	320	P	Pdif	08 49 56.5	-0.2
	baz=38						
CPUP	Villa Florida	99.80	245	LR	LR	09 37 51.2	
	comp=Z,848nm,18.9s,baz=45,slow=37						
CPUP	Villa Florida	99.80	245	*e*P	Pdif	08 49 58.4	+0.8
NVAR	Mina Array Bea	99.87	332	P	Pdif	08 49 58.6	+0.4
	comp=Z,1.5nm,0.7s,baz=30,slow=3.6,SNR=18						
NVAR				PKKPbc	PKKPbc	09 06 16.9	-0.7
	comp=Z,0.6nm,0.7s,baz=178,slow=2.7,SNR=6.7						
NVAR				LR	LR	09 36 14.4	
	comp=Z,544nm,21.9s,baz=28,slow=36						
	comp=Z,1.5nm,0.7s						
121A	Cookes Peak, D	100.14	322	P	Pdif	08 49 59.1	-0.4
	baz=37						
PLTB	Pedras Altas	100.17	238	*e*P	Pdif	08 49 59.8	+0.6
TXAR	Lajitas Array	100.45	317	P	Pdif	08 50 01.1	+0.3
	comp=Z,1.2nm,0.9s,baz=58,slow=3.4,SNR=10						
TXAR				PP	PP	08 54 06.9	+0.2
	comp=Z,1.5nm,0.9s,baz=42,slow=6.3,SNR=3.9						
TXAR				PKKPbc	PKKPbc	09 06 16.8	+1.3
	comp=Z,0.2nm,0.7s,baz=171,slow=6.3,SNR=3.8						
TXAR	Lajitas Array	100.45	317	Pdif	Pdif	08 50 02.8	+2.0
TXAR	Lajitas Array	100.45	317	*i* P	Pdif	08 50 02.8	+2.0
TUC	Tucson	101.81	324	P	Pdif	08 50 06.1	-0.7
	baz=35						
WRA	Warramunga Arr	115.67	97	PKP	PKPdf	08 54 55.2	-0.8
	comp=Z,1.6nm,0.6s,baz=310,slow=1.6,SNR=25						
WRA				SKP		08 58 29.6	
	comp=Z,1.1nm,0.8s,baz=324,slow=1.5,SNR=4.2						
WRA				PKKPbc	PKKPbc	09 05 28.7	+1.3
	comp=Z,0.7nm,0.9s,baz=119,slow=3.1,SNR=4.7						
WRAB	Tennant Creek	115.67	97		PKiKP	08 54 56.5	+0.6
WRAB	Tennant Creek	115.67	97	PKIKP	PKiKP	08 54 56.5	+0.6
PLCA	Paso Flores	116.47	237	PKP	PKiKP	08 54 57.2	+0.3
	comp=Z,1.0nm,0.8s,baz=358,slow=4.6,SNR=5.2						
AS31	Alice Springs	117.13	101		PKPdf	08 54 57.9	-0.8
ASAR	Alice Springs	117.13	101	PKP	PKPdf	08 54 58.5	-0.2
	comp=Z,2.1nm,0.5s,baz=313,slow=1.3,SNR=27						
ASAR				SKP		08 58 32.1	
	comp=Z,2.1nm,0.9s,baz=310,slow=1.6,SNR=5.7						
ASAR				PKKPbc	PKKPbc	09 05 22.9	+0.6
	comp=Z,1.0nm,0.8s,baz=120,slow=3.8,SNR=7.4						
ASAR	Alice Springs	117.13	101	PKPdf	PKPdf	08 54 57.9	-0.8
BELA	Belgrano 2	118.32	192	PKPdf	PKPdf	08 54 59.3	0.0
QSPA	South Pole Qui	124.90	180		PKiKP	08 55 12.6	-0.1
CTA	Charters Tower	125.49	91	PKP	PKiKP	08 55 15.3	+0.2
	comp=Z,3.4nm,0.7s,baz=257,slow=3.6,SNR=5.8						
STKA	Stephens Creek	126.80	106	PKP	PKiKP	08 55 17.5	+0.1
	comp=Z,3.6nm,0.7s,baz=324,slow=5.1,SNR=12						
VNDA	Vanda	133.27	168	PKP	PKPdf	08 55 28.3	+0.4
	comp=Z,0.7nm,0.7s,baz=296,slow=7.5,SNR=3.6						
DZM	Mont Dzumac	142.94	80	*e*PP	PP	08 58 58.4	+1.2
DZM	Mont Dzumac	142.94	80	PKP	PKPdf	08 55 46.3	-1.1
	comp=Z,4.1nm,0.9s,baz=169,slow=8.8,SNR=2.4						
MSVF	Nonsavu	149.55	63	PKPbc	PKiKP	08 56 04.5	+0.2
	comp=Z,12nm,0.6s,baz=300,slow=4.1,SNR=20						
MSVF	Nonsavu	149.55	63		PKiKP	08 56 04.9	+0.6
MSVF	Nonsavu	149.55	63	PKP2	PKiKP	08 56 04.9	+0.6
EAZ	Earnscleugh	150.19	121	P	PKiKP	08 56 05.1	+0.4
FOZ	Fox Glacier	150.72	118	P	PKiKP	08 56 05.9	+0.1
GCSZ	Gaunt Creek Bo	151.11	118	P	PKiKP	08 56 07.0	+0.4
TAOE	Nuku Hiva Isla	151.12	331	*e*LR	LR	09 46 05.3	
	comp=Z,346nm,26.2s						
ODZ	Otahua Downs	151.16	121	P	PKiKP	08 56 07.2	+0.6
WVZ	Waitaha Valley	151.43	117	P	PKPbc	08 56 06.7	-0.1
TMZ	Timaru	151.50	120	P	PKPbc	08 56 07.0	0.0
RPZ	Rata Peaks	151.60	118	PKPbc	PKiKP	08 56 08.1	+0.5
	comp=Z,16nm,0.7s,baz=242,slow=2.3,SNR=6.4						
ARCZ	Arundel	151.67	119	P	PKiKP	08 56 09.6	+1.8
INZ	Inchbonnie	151.97	116	P	PKPbc	08 56 07.3	-0.8
OXZ	Oxford	152.35	118		PKiKP	08 56 09.8	+0.6
LTZ	Lake Taylor	152.58	117	P	PKiKP	08 56 10.3	+0.6
GVZ	Greta Valley S	153.12	117	P	PKiKP	08 56 11.6	+0.7
KHZ	Kahutara	153.54	116	P	PKiKP	08 56 12.1	+0.5
PPT2	Papeete2	162.23	347	*e*LR	LR	09 51 16.7	
	comp=Z,554nm,25.8s						
TBI	Tubuai	167.77	341	*e*LR	LR	09 53 31.8	
	comp=Z,643nm,27.2s						

TUL ***25*** *08:42:55.8±0.9, 36°.33N±0°.01×97°.51W±0°.01, h5^{km}, ML2.6, mb_Lg2.4/31(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=45.0*

NEIC 25 08:42:55.9±0.9**, 36°.327N**±0°.005×**97°.51W**±0°.01**, h5**^{km}±6^{km}**, Error ellipse: s-maj=1.8km s-min=0.3km az=64.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.91	177	Pg	Pg	08 43 13.1	-0.3
OKCSW	OKLAHOMA CITY	0.92	176		Pg	08 43 13.3	-0.3
T35A	Sooner Cattle	0.99	53	Pg	Pg	08 43 14.6	-0.4
U32A	Winter Ranch,	1.21	273	Pn	Pg	08 43 18.2	-0.9
U32A				Sn	Sb	08 43 35.1	0.0
TUL1	Leonard	1.45	106	Pn	Pn	08 43 22.2	-0.5
X34A	Smith Ranch, M	1.74	189		Pb	08 43 28.0	-0.3
WMOK	Wichita Mounta	1.90	214	Pn	Pn	08 43 29.7	+0.8
R32A	Long Quarter,	2.30	336	IAmb_Lg		08 44 13.6	
	comp=Z,16nm,1.1s						
X37A	Clayton	2.46	134	IAmb_Lg		08 44 20.4	
	comp=Z,14nm,0.7s						
CBKS	Cedar Bluff	3.05	325	IAmb_Lg		08 44 38.2	
	comp=Z,9.3nm,0.8s						
W39A	Magazine	3.23	109	IAmb_Lg		08 44 45.0	
	comp=Z,15nm,0.7s						
S39A	Bolivar	3.62	67	IAmb_Lg		08 44 52.8	
	comp=Z,7.9nm,1.0s						
AMTX	Amarillo	3.69	248	IAmb_Lg		08 44 55.7	
	comp=Z,10.0nm,0.8s						
MGMO	Mountain Grove	4.29	77	IAmb_Lg		08 45 14.7	
	comp=Z,5.7nm,0.7s						
P38A	Dawn	4.55	42	IAmb_Lg		08 45 21.9	
	comp=Z,8.0nm,0.7s						
N35A	Tabor	4.76	17	IAmb_Lg		08 45 38.9	
	comp=Z,12nm,0.7s						
KSCO	Kaye Shedlock'	4.87	305	IAmb_Lg		08 45 30.5	
	comp=Z,6.8nm,0.7s						
CCM	Cathedral Cave	5.29	69	IAmb_Lg		08 45 52.0	
	comp=Z,9.2nm,0.8s						
P40A	Paris	5.37	52	IAmb_Lg		08 45 51.4	
	comp=Z,5.7nm,0.7s						
X43A	Marvell	5.70	107	IAmb_Lg		08 46 09.9	
	comp=Z,4.1nm,1.2s						
PBMO	Poplar Bluff	5.71	83	IAmb_Lg		08 45 59.3	
	comp=Z,7.2nm,0.9s						
FVM	French Village	5.89	72	IAmb_Lg		08 46 05.2	
	comp=Z,7.5nm,1.1s						
JCT	Junction City	6.14	199	IAmb_Lg		08 46 13.3	
	comp=Z,5.3nm,1.0s						

DDA ***25*** *08:45:55.4±0.0, 34°.91N×26°.03E, h7^{km}±5^{km}, ML3.9*

IDC ***25*** *08:45:58.9±1.0, 34°.95N×26°.36E, h0^{km}, mb4.0/9, mbtmp4.0/11, ML3.3/2, Error ellipse: s-maj=25.9km s-min=11.0km az=180.0*

THE ***25*** *08:46:02.6, 34°.93N×26°.20E, h7^{km}, ML3.6/4, Error ellipse: s-maj=0.9km s-min=0.3km az=346.0*

ISK ***25*** *08:46:02.0, 34°.96N×26°.28E, h16^{km}, ML3.9/29*

ATH ***25*** *08:46:04.0, 35°.08N×26°.15E, h14^{km}±1^{km}, ML3.8/4, Error ellipse: s-maj=4.9km s-min=1.2km az=164.0*

GII ***25*** *08:46:06.7±0.0, 34°.73N×26°.84E, h10^{km}, Mm3.7/2*

ISC 25 08:45:57.7±1.2**, 34°.80N**±0°.04×**26°.33E**±0°.02**, h4**^{km}±8^{km}**, n97,** σ**2^{s}14**/131**, mb4.1**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.33	344	P	Pb	08 46 06.7	+0.5
ZKR				S	Sg	08 46 09.1	+0.7
ZKR				AML	AML	08 46 10.4	
ZKR				AML	AML	08 46 10.5	
ZKR	Zakros	0.33	344	P	Pb	08 46 06.6	+0.5
ZKR				S	Sb	08 46 09.9	-2.0
ZKR	Zakros	0.33	344	PG	Pb	08 46 06.7	+0.5
ZKR				SG	Sb	08 46 09.9	-2.0
FRMA	Ierapetra Chan	0.53	294	P	Pb	08 46 08.8	-0.9
FRMA				S	Sg	08 46 13.0	-1.9
FRMA				AML	AML	08 46 15.1	
	comp=E,86565µm,0.5s						
FRMA				AML	AML	08 46 15.7	
	comp=N,31141µm,0.3s						
FRMA	Ierapetra Chan	0.53	294	P	Pb	08 46 08.8	-0.9
FRMA				S	Sg	08 46 13.6	-1.3
NPS	Neapolis	0.75	309	P	Pb	08 46 13.4	+0.1
NPS	Neapolis	0.75	309	P	Pn	08 46 13.6	-1.5
NPS				S	Sb	08 46 22.7	-1.2
KARP	Karpathos	1.01	42	P	Pn	08 46 20.8	+2.1
KARP				S	Sn	08 46 35.0	+1.4
KARP				AML	AML	08 46 37.6	
	comp=E,35039µm,0.5s						
KARP				AML	AML	08 46 38.0	
	comp=N,25177µm,0.5s						
KARP	Karpathos	1.01	42	P	Pn	08 46 20.9	+2.1
KARP				S	Sn	08 46 35.6	+2.1
KARP	Karpathos	1.01	42	PG	Pn	08 46 20.6	+1.8
HRKL	Herakleio	1.13	297	P	Pn	08 46 21.2	+0.9
HRKL	Herakleio	1.13	297	P	Pn	08 46 20.9	+0.6
HRKL				S	Sn	08 46 35.2	-1.1
HRKL	Herakleio	1.13	297	PG	Pn	08 46 21.6	+1.3
HRKL				SG	Sn	08 46 37.2	+0.9
KSTL	Kastelli Herak	1.15	297	P	Pb	08 46 16.9	-3.3
KSTL	Kastelli Herak	1.15	297	P	Pb	08 46 17.0	-3.1
KSTL				S	Sb	08 46 28.5	-6.9
IACM	Heraklion	1.15	297	P	Pn	08 46 22.0	+1.4
IACM	Heraklion	1.15	297	P	Pn	08 46 21.4	+0.8
IDI	Anoyia	1.28	293	Pg	Pg	08 46 23.5	+1.3
	comp=N,126nm,0.3s,baz=108,slow=16,SNR=40						
IDI				Lg	Lg	08 46 40.4	
	comp=N,153nm,0.3s,baz=186,slow=19,SNR=9.4						
IDI	Anoyia	1.28	293	P	Pg	08 46 23.5	+1.3
IDI				AML	AML	08 46 47.5	
	comp=N,3947µm,0.9s						
IDI				AML	AML	08 46 48.5	
	comp=E,3106µm,0.6s						
IDI	Anoyia	1.28	293	P	Pg	08 46 23.1	+0.9
IDI				S	Sn	08 46 39.0	-1.0
	comp=E,2µm,0.7s						
IDI	Anoyia	1.28	293	PN	Pg	08 46 24.0	+1.8
IDI				SN	Sn	08 46 41.2	+1.2
TMBK	Timbaki Herakl	1.31	283	P	Pg	08 46 24.7	+1.9
TMBK	Timbaki Herakl	1.31	283	P	Pg	08 46 24.2	+1.3
TMBK				S	Sg	08 46 40.5	+0.6
	comp=E,2µm,0.7s						
SANT	Santorini	1.72	336	P	Pb	08 46 29.2	-0.8
SANT	Santorini	1.72	336	P	Pb	08 46 29.1	-0.8
SANT				S	Sn	08 46 49.9	-1.1
	comp=E,2µm,0.4s						
SANT	Santorini	1.72	336	PN	Pb	08 46 29.4	-0.6
SANT				SN	Sn	08 46 50.0	-1.1
SNT5	Nea Kammeni, S	1.77	335	P	Pb	08 46 29.5	-1.3
GVDS	Gavdos	1.84	272	P	Pb	08 46 32.1	+0.2
GVD	Gavdhos	1.84	272	PN	Pg	08 46 33.5	+0.5
NIS1	Nisyros Isl.	1.93	21	P	Pb	08 46 33.1	-0.4
NIS1	Nisyros Isl.	1.93	21	PN	Pg	08 46 33.4	-1.3
KOSK	Kos Island	2.02	15	P	Pb	08 46 34.3	-0.7
KOSK	Kos Island	2.02	15	PN	Pb	08 46 34.4	-0.6
IMMV	Iera Moni Meta	2.03	290	P	Pg	08 46 37.0	+0.3
IMMV	Iera Moni Meta	2.03	290	PN	Pb	08 46 35.6	+0.4
ARG	Arkhangelos	2.04	46	P	Pg	08 46 38.7	+1.9
ARG	Arkhangelos	2.04	46	P	Pg	08 46 35.8	-1.1
ARG				S	Sg	08 47 01.5	-1.8
	comp=E,2µm,0.5s						
ARG	Arkhangelos	2.04	46	PN	Pg	08 46 35.7	-1.1
DAT	Datca	2.18	27	P	Pb	08 46 37.1	-0.7
DAT	Datca	2.18	27	PN	Pb	08 46 36.9	-0.9
DAT	Datca	2.18	27	P	Pb	08 46 36.2	-1.6
DAT				S	Sg	08 47 08.8	+1.0
APE	Apeiranthos	2.36	344	PN	Pb	08 46 38.3	-2.5
BODT	Bodrum	2.40	19	PN	Pb	08 46 40.0	-1.5
BDRM	Kayabasi	2.44	22	P	Pn	08 46 38.0	-0.4
BDRM				S	Sg	08 47 21.8	+5.7
TURN	Turunc	2.52	38	PN	Pb	08 46 42.1	-1.3
TURN	Turunc	2.52	38	P	Pb	08 46 41.1	-2.3
TURN				S	Sg	08 47 19.1	+0.5
ANKY	Antikythira Is	2.69	294	P	Pn	08 46 42.5	+0.7
MLSB	Milas	2.76	25	PN	Pb	08 46 45.1	-2.5
DALY	Dalyan (Mula)	2.76	42	PN	Pb	08 46 45.9	-1.8
YER	Yerkesik	2.82	34	PN	Pb	08 46 46.4	-2.3
FETY	Fethiye	2.90	50	PN	Pb	08 46 47.8	-2.2
FETY	Fethiye	2.90	50	P	Pn	08 46 45.8	+1.1
FETY				S	Sg	08 47 34.2	+3.4
MULA	Mugla, Merkez-	2.94	33	P	Pn	08 46 46.8	+1.5
MULA				S	Sb	08 47 23.2	-3.8
GCAM	G?zelcaml?	2.99	14	PN	Pb	08 46 48.4	-3.1
AKAS	Kas	3.03	61	PN	Pb	08 46 50.0	-2.4
AKAS	Kas	3.03	61	P	Pn	08 46 47.7	+1.1
AKAS				S	Sb	08 47 26.4	-3.4
AKAS				*i* AML	AML	08 47 36.0	
	comp=E,344nm,0.5s						
AYDN	Tasoluk	3.12	23	P	Pn	08 46 48.5	+0.7
CAME	Cameli-Denizli	3.23	48	PN	Pb	08 46 52.7	-3.0
DGB	zmir	3.28	8	P	Pn	08 46 48.2	-1.7
DGB				S	Sn	08 47 28.9	-0.5
CAEL	Denizli, Camel	3.36	45	P	Pn	08 46 52.1	+1.0
CAEL				S	Sg	08 47 49.9	+4.3
CAEL				*i* AML	AML	08 48 06.0	
	comp=E,360nm,0.7s						
CAEL				*i* AML	AML	08 48 10.0	
	comp=E,281nm,0.8s						
AYDB	Zeytinkoy-Aydi	3.39	21	PN	Pb	08 46 54.1	-4.3
TAVA	DENIZLI_Tavas	3.39	37	P	Pb	08 46 54.8	-3.6
TAVA				S	Sb	08 47 38.9	-1.1
ELL	Elmali	3.50	55	PN	Pb	08 46 56.9	-3.5
URLA	Izmir	3.56	3	PN	Pn	08 46 56.2	+2.4
GOLH	Golhisar	3.58	46	P	Pb	08 46 57.0	-4.6
GOLH				S	Sg	08 47 50.4	-2.3
CHOS	Chios island	3.59	357	PN	Pn	08 46 56.4	+2.2
AKUM	Antalya-Kumluc	3.61	64	P	Pn	08 46 56.8	+2.3
AKUM				S	Sb	08 47 43.0	-3.2
BLCB	Balcova	3.63	9	PN	Pn	08 46 56.9	+2.2
KORT	Korkueli	3.94	55	PN	Pb	08 47 03.1	-4.7
KORT	Korkueli	3.94	55	P	Pn	08 46 59.0	-0.1
KORT				S	Sb	08 47 52.1	-3.7
KULA	Kula-Manisa	4.16	26	PN	Pn	08 47 05.1	+3.0
BRDR	BURDUR-Merkez	4.18	45	P	Pn	08 47 00.7	-1.7
ITM	Ithomi	4.29	305	PN	Pn	08 47 07.2	+3.4
PASA	Karahalli, USA	4.36	35	P	Pn	08 47 05.1	+0.2
PASA				S	Sn	08 47 59.5	+3.2
USAK	Uak-Merkez	4.47	28	P	Pn	08 47 07.8	+1.5
BRTR	Keskin Array B	7.63	48	Pn	Pn	08 47 52.8	+3.0
	comp=E,0.1nm,0.3s,baz=239,slow=13,SNR=2.5						
	comp=E,1.0nm,0.3s						
MMA0B	Mount Meron ar	7.75	101	Pn	Pn	08 47 54.8	+3.4
MMAI	Mount Meron Ar	7.75	101	Sn	Sn	08 49 20.2	+0.5
	comp=E,2.7nm,0.3s,baz=34,slow=49,SNR=2.0						
GEM	Giv'at Ha'Em	7.91	99	Pn	Pn	08 47 55.0	+1.4
HMDT	Nahal Hemdat	8.09	106	Pn	Pn	08 47 58.9	+2.9
DSI	Dead Sea	8.24	110	Pn	Pn	08 48 01.0	+2.9
DSI				Sn	Sn	08 49 30.2	-1.5
KRMI	Paran Flat	8.49	121	Pn	Pn	08 48 04.8	+3.3
PRNI	Paran	8.56	119	Pn	Pn	08 48 05.8	+3.4
PRNI				Sn	Sn	08 49 37.6	-1.9
HRFI	Mount Harif	8.76	120	Pn	Pn	08 48 08.4	+3.2
HRFI				Sn	Sn	08 49 42.7	-1.7
MBRI	Mt Berech	8.81	122	Pn	Pn	08 48 09.2	+3.2
MBRI				Sn	Sn	08 49 45.3	-0.5
EIL	Elat	8.91	123	Pn	Pn	08 48 10.3	+3.0
	comp=E,1.3nm,0.3s,baz=214,slow=2.0,SNR=9.3						
EIL				Sn	Sn	08 49 48.2	0.0
	comp=E,2.3nm,0.3s,baz=76,slow=21,SNR=5.8						
	comp=E,4.3nm,0.3s						
EIL	Elat	8.91	123	Pn	Pn	08 48 10.8	+3.5
EIL				Sn	Sn	08 49 46.5	-1.7
AKASG	Malin Array Be	16.04	7	Pn	P	08 49 46.5	-1.0
	comp=E,0.6nm,0.3s,baz=200,slow=11,SNR=1.7						
ESDC	Sonseca Array	24.54	290	P	P	08 51 18.4	-0.1
	comp=E,1.1nm,0.8s,baz=84,slow=9.4,SNR=5.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,1.1nm,0.8s						
GEYT	**Alibeck**	25.73	74	P	P	08 51 31.6	+2.4
	comp=E,3.2nm,0.5s,baz=247,slow=14,SNR=5.4						
	comp=E,3.2nm,0.5s						
AKTO	**Aktyubinsk**	27.80	46	P	P	08 51 47.6	-0.2
	comp=E,0.7nm,0.3s,baz=209,slow=4.3,SNR=4.2						
	comp=E,0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	31.00	232	P	P	08 52 18.6	+2.1
	comp=E,1.5nm,0.4s,baz=34,slow=8.7,SNR=18						
	comp=E,1.5nm,0.4s						
ARCES	**ARCESS Array B**	34.80	359	P	P	08 52 47.5	-1.6
	comp=E,6.8nm,1.1s,baz=174,slow=8.8,SNR=5.3						
	comp=E,6.8nm,1.1s						
KURBB	**Kurchatov Arra**	40.61	51	P	P	08 53 39.5	+1.1
	comp=E,1.6nm,0.3s,baz=275,slow=8.5,SNR=5.7						
	comp=E,1.6nm,0.3s						
MKAR	**Makanchi Array**	43.18	56	P	P	08 54 00.9	+1.3
	comp=E,0.9nm,0.3s,baz=269,slow=8.3,SNR=20						
	comp=E,0.9nm,0.3s						
ZALV	**Zalesovo Beam**	44.57	46	P	P	08 54 09.9	-0.7
	comp=E,1.2nm,0.4s,baz=259,slow=9.3,SNR=2.8						
	comp=E,1.2nm,0.4s						
YKA	**Yellowknife Ar**	78.08	343	P	P	08 57 59.8	+2.4
	comp=E,0.1nm,0.5s,baz=37,slow=12,SNR=4.6						
	comp=E,0.1nm,0.5s						

KRSZO 25 08:50:58.0±1.2**, 45°.52N×17°.73E, h5^{km}, ML2.6**/8**, Error ellipse: s-maj=15.0km s-min=5.1km az=122.0, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A252A	**Venje**	0.12	135	*e*Pg	Pg	08 50 58.4	-1.9
A252A				Sg	Sg	08 50 59.4	-2.6
MOSL	**Moslavina**	0.69	278	*e*Pg	Pg	08 51 11.8	+0.5
MOSL				Sg	Sb	08 51 22.3	-0.2
BLY	**Banja Luka**	0.86	207	Pg	Pg	08 51 14.4	-0.1
	comp=Z,0.1nm,SNR=1.4						
BLY				Lg	Lg	08 51 25.7	
A265A	**Kaposfured**	0.91	3	Pn	Pn	08 51 17.4	0.0
	comp=Z,0.5nm,SNR=3.1						
MORH	**Mrgy, Hungar**	0.94	42	Pg	Pg	08 51 16.0	-0.1
	comp=Z,0.1nm,SNR=2.6						
MORH				Lg	Lg	08 51 30.4	
MORH	**Mrgy, Hungar**	0.94	42	P	Pg	08 51 16.0	-0.1
MORH				S	Sb	08 51 30.4	+0.8
A266A	**Gyulaj**	1.07	20	Pg	Pn	08 51 20.0	+0.3
	comp=Z,0.3nm,SNR=1.3						
KALN	**Kalnik**	1.08	305	*e*Pg	Pg	08 51 18.5	-0.2
KALN				Sg	Sb	08 51 33.4	-0.3
BEHE	**Becsehely**	1.16	325	Pn	Pn	08 51 21.1	+0.2
	comp=Z,0.2nm,SNR=1.9						
BEHE				Sn	Sn	08 51 36.6	-0.6
BEHE	**Becsehely**	1.16	325	P	Pn	08 51 21.1	+0.2
BEHE				S	Sn	08 51 36.6	-0.6
PTJ	**Puntijarka**	1.30	288	*e*Pn	Pg	08 51 21.9	-0.9
PTJ				Sg	Sn	08 51 41.3	+0.7
LOBO	**Lobor**	1.33	299	*e*Pg	Pn	08 51 22.6	-0.6
LOBO				Sg	Sn	08 51 41.6	+0.4
OZLJ	**Ozalj**	1.59	274	*e*Pn	Pn	08 51 27.1	+0.2
OZLJ				Sn	Sb	08 51 48.7	+0.4
CRES	**Cresnjev**	1.63	282	Pn	Pn	08 51 27.0	-0.2
	comp=Z,0.3nm,SNR=0.9						
MPLH	**Magyarpolny**	1.66	355	Pn	Pn	08 51 27.8	0.0
	comp=Z,0.1nm,SNR=1.6						
MPLH	**Magyarpolny**	1.66	355	P	Pn	08 51 27.8	0.0
KIJV	**Kijevo**	1.78	213	*e*Pn	Pn	08 51 28.7	-0.7
KIJV				Sn	Sn	08 51 52.7	+0.2
RICI	**Ricice**	2.07	192	*e*Pn	Pn	08 51 32.7	-0.6
RICI				Sn	Sn	08 52 00.2	+0.7
MORI	**Morici**	2.19	222	*e*Pn	Pn	08 51 35.0	0.0
MORI				Sn	Sn	08 52 03.1	+0.5
ARSA	**Arzberg**	2.31	319	Pn	Pn	08 51 35.6	-1.1
	comp=Z,0.1nm,SNR=2.1						
ZIRJ	**Zirje**	2.39	219	*e*Pn	Pn	08 51 37.5	-0.1
ZIRJ				Sn	Sn	08 52 07.3	0.0
DUGI	**Dugi Otok**	2.44	232	*e*Pn	Pn	08 51 38.8	+0.4
DUGI				Sn	Sn	08 52 10.0	+1.3

IDC 25 09:52:06.8±3.9**, 11°.60S×166°.92E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=216.1km s-min=30.5km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	32.38	251	P	P	09 58 39.4	+0.8
	0.1nm,0.5s,baz=80,slow=8.6,SNR=4.9						
	0.1nm,0.5s						
ASAR	**Alice Springs**	33.58	245	P	P	09 58 48.6	-0.5
	0.4nm,0.7s,baz=70,slow=10,SNR=5.4						
	0.4nm,0.7s						
ILAR	**Eielson Array**	83.67	18	P	P	10 04 38.0	+0.9
	0.8nm,0.6s,baz=232,slow=5.6,SNR=15						
	0.8nm,0.6s						
ARCES	**ARCESS Array B**	117.15	346	PKP	PKPdf	10 10 51.3	-2.2
	1.2nm,0.7s,baz=66,slow=2.2,SNR=4.8						

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*TIR **25** 10:00:05.3, 37°.72N×21°.77E, h3^{km}±3^{km}, Ml3.9*
*IDC **25** 10:00:10.9±0.9, 38°.11N×21°.54E, h0^{km}, mb3.8/12, mbtmp3.8/18, ML3.6/6, MS3.2/7, Error ellipse: s-maj=18.9km s-min=16.3km az=161.0*
*NEIC **25** 10:00:12.8±2.4, 37°.84N±0°.05×21°.49E±0°.07, h18^{km}±5^{km}, Error ellipse: s-maj=9.2km s-min=6.9km az=50.0*
*THE **25** 10:00:13.1, 37°.98N×21°.56E, h24^{km}, ML3.9/7, Error ellipse: s-maj=0.5km s-min=0.3km az=342.0*
*ATH **25** 10:00:13.2, 38°.00N×21°.55E, h24^{km}±1^{km}, ML3.8/21, Error ellipse: s-maj=1.6km s-min=0.8km az=208.0*
ISC 25 10:00:13.3±0.5**, 37°.95N**±0°.02×**21°.55E**±0°.02**, h20^{km}**±1^{km}**, n173, σ1^{s}.68**/202**, mb3.8**/13**, 10C-4D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.12	327	P	**Pb**	**10 00 17.8**	**-1.4**
RLS				S	**Sb**	**10 00 20.7**	**-2.6**
RLS				AML	AML	10 00 21.3	
RLS				AML	AML	10 00 21.4	
RLS	**Riolos of Patr**	0.12	327	P	**Pb**	**10 00 17.5**	**-1.7**
RLS				S	**Sb**	**10 00 20.9**	**-2.4**
DRO	**Drossia**	0.12	90	P	**Pb**	**10 00 18.0**	**-1.2**
DRO				S	**Sb**	**10 00 21.2**	**-2.2**
DRO				AML	AML	10 00 22.4	
DRO				AML	AML	10 00 22.5	
DRO	**Drossia**	0.12	90	P	**Pb**	**10 00 17.5**	**-1.7**
DRO				S	**Sb**	**10 00 21.3**	**-2.0**
LAKA	**Lakka**	0.44	49	P	**Pb**	**10 00 21.9**	**-0.5**
LAKA				S	**Sb**	**10 00 28.0**	**-0.5**
LAKA				AML	AML	10 00 29.2	
	comp=N,45182μm,0.6s						
LAKA				AML	AML	10 00 30.5	
	comp=E,56892μm,0.8s						
LAKA	**Lakka**	0.44	49	P	**Pb**	**10 00 21.6**	**-0.8**
LAKA				S	**Sb**	**10 00 28.4**	**-0.1**
KLV	**Kalavryta, Ach**	0.48	79	P	**Pb**	**10 00 22.7**	**-0.4**
KLV				S	**Sb**	**10 00 29.5**	**-0.2**
KLV				AML	AML	10 00 32.1	
	comp=N,12946μm,0.5s						
KLV				AML	AML	10 00 38.1	
	comp=E,11690μm,0.7s						
KLV	**Kalavryta, Ach**	0.48	79	P	**Pb**	**10 00 22.4**	**-0.7**
KLV				S	**Sb**	**10 00 29.6**	**-0.2**
ALIK	**Aliki, Aigiali**	0.54	55	P	**Pb**	**10 00 23.2**	**-0.9**
ALIK				S	**Sb**	**10 00 31.3**	**-0.1**
ZAK2	**Zakynthos**	0.54	252	P	**Pb**	**10 00 23.9**	**-0.3**
ZAK2				S	**Sb**	**10 00 32.6**	**+1.1**
	comp=E,29μm,0.7s						
EFP	**Efpalio**	0.55	30	P	**Pb**	**10 00 23.5**	**-0.8**
EFP				AML	AML	10 00 32.7	
	comp=N,33526μm,0.7s						
EFP				AML	AML	10 00 33.1	
	comp=E,36817μm,0.4s						
EFP	**Efpalio**	0.55	30	P	**Pb**	**10 00 23.2**	**-1.1**
EFP				S	**Sb**	**10 00 31.6**	**-0.2**
	comp=E,17μm,0.4s						
GUR	**Goura**	0.62	91	P	**Pb**	**10 00 25.3**	**-0.4**
GUR				AML	AML	10 00 38.2	
	comp=N,33065μm,0.6s						
GUR				AML	AML	10 00 39.1	
	comp=E,27599μm,0.4s						
GUR	**Goura**	0.62	91	P	**Pb**	**10 00 24.8**	**-0.9**
GUR				S	**Sb**	**10 00 34.3**	**+0.2**
	comp=E,16μm,0.5s						
PVO	**Paravola**	0.66	358	P	**Pb**	**10 00 25.2**	**-1.0**
PVO				S	**Sb**	**10 00 34.2**	**-0.8**
PVO	**Paravola**	0.66	358	P	**Pb**	**10 00 25.2**	**-1.0**
PVO				S	**Sb**	**10 00 34.9**	**-0.2**
ANX	**Ano Chora**	0.70	24	P	**Pb**	**10 00 25.8**	**-1.2**
ANX				AML	AML	10 00 38.0	
	comp=N,26131μm,0.6s						
ANX				AML	AML	10 00 39.3	
	comp=E,26189μm,0.4s						
ANX	**Ano Chora**	0.70	24	P	**Pb**	**10 00 26.2**	**-0.8**
ANX				S	**Sb**	**10 00 35.8**	**-0.5**
	comp=E,13μm,0.5s						
TRIP	**Tripoli**	0.71	126	P	**Pb**	**10 00 27.0**	**-0.1**
TRIP				S	**Sn**	**10 00 37.7**	**-0.9**
TRIP				AML	AML	10 00 39.8	
	comp=E,18138μm,0.7s						
TRIP				AML	AML	10 00 39.9	
	comp=N,18495μm,0.5s						
TRIP	**Tripoli**	0.71	126	P	**Pb**	**10 00 26.9**	**-0.1**
TRIP				S	**Sb**	**10 00 37.2**	**+0.8**
	comp=N,9μm,0.6s						
PSDA	**Pessada-Kefalo**	0.78	282	P	**Pb**	**10 00 27.5**	**-0.7**
VLS	**Valsamata**	0.79	287	P	**Pb**	**10 00 27.6**	**-0.8**
VLS				AML	AML	10 00 47.1	
	comp=E,5860μm,0.3s						
VLS				AML	AML	10 00 49.1	
	comp=N,13266μm,0.4s						
VLS	**Valsamata**	0.79	287	P	**Pb**	**10 00 27.6**	**-0.8**
VLS				S	**Sb**	**10 00 39.6**	**+0.9**
	comp=N,5μm,0.4s						
ITM	**Ithomi**	0.83	159	P	**Pn**	**10 00 29.5**	**-0.4**
ITM				AML	AML	10 00 51.6	
	comp=E,9436μm,0.6s						
ITM				AML	AML	10 00 53.6	
	comp=N,6521μm,0.8s						
ITM	**Ithomi**	0.83	159	P	**Pb**	**10 00 28.4**	**-0.6**
ITM				S	**Sn**	**10 00 41.1**	**-0.3**
	comp=N,4μm,0.5s						
ITM	**Ithomi**	0.83	159		**Pb**	**10 00 28.9**	**-0.1**
ITM				Sg	**Sb**	**10 00 36.7**	**-3.0**
THAL	**Thalero**	0.88	84	P	**Pb**	**10 00 29.6**	**-0.3**
THAL				AML	AML	10 00 51.2	
	comp=N,20877μm,0.4s						
THAL				AML	AML	10 00 58.0	
	comp=E,24132μm,0.5s						
THAL	**Thalero**	0.88	84	P	**Pb**	**10 00 29.2**	**-0.7**
THAL				S	**Sb**	**10 00 41.8**	**+0.6**
EVGI	**Lefkada island**	0.97	314	P	**Pb**	**10 00 30.6**	**-0.8**
DMLN	**Damoulianata-K**	0.97	287	P	**Pb**	**10 00 30.8**	**-0.7**
EVR	**Evrytania**	0.98	12	P	**Pb**	**10 00 30.4**	**-1.3**
NYDR	**Nydri-Lefkada**	1.01	319	P	**Pb**	**10 00 31.1**	**-1.1**
DRAG	**Dragano-Lefkad**	1.06	314	P	**Pb**	**10 00 31.9**	**-1.1**
LKD2	**Lefkada island**	1.09	320	P	**Pn**	**10 00 32.6**	**-0.9**
LKD2				AML	AML	10 00 55.4	
	comp=N,10583μm,0.5s						
LKD2				AML	AML	10 01 00.6	
	comp=E,9604μm,0.6s						
LKD2	**Lefkada island**	1.09	320	P	**Pn**	**10 00 32.3**	**-1.1**
	baz=322						
LKD2				S	**Sn**	**10 00 53.2**	**+5.2**
	baz=322						
TSLK	**Tsoukalades, L**	1.12	321	P	**Pn**	**10 00 33.3**	**-0.6**
MAKR	**Makrakomi, Fth**	1.15	23	P	**Pn**	**10 00 33.4**	**-0.9**
MAKR				AML	AML	10 00 58.8	
	comp=E,15014μm,0.6s						
MAKR				AML	AML	10 00 58.8	
	comp=N,12262μm,0.5s						
EPID	**Epidavros**	1.29	105	P	**Pb**	**10 00 37.6**	**+0.8**
LKR	**Lokris**	1.33	58	P	**Pn**	**10 00 36.1**	**-0.7**
LKR				AML	AML	10 00 58.0	
	comp=N,5054μm,0.5s						
LKR				AML	AML	10 01 03.5	
	comp=E,4321μm,0.6s						
ATAL	**Atalanti**	1.37	57	P	**Pn**	**10 00 37.4**	**+0.1**
ATAL				AML	AML	10 01 01.7	
	comp=E,2936μm,0.4s						
ATAL				AML	AML	10 01 09.2	
	comp=N,3817μm,0.8s						
VIL2	**Platees**	1.38	79	P	**Pb**	**10 00 38.2**	**-0.2**
VIL2				AML	AML	10 01 08.6	
	comp=N,4918μm,0.6s						
VIL2				AML	AML	10 01 10.5	
	comp=E,6322μm,0.7s						
KRND	**KRANIDI**	1.39	114	P	**Pb**	**10 00 39.0**	**+0.5**
VLI	**Veliai**	1.66	138	P	**Pb**	**10 00 44.3**	**+1.2**
VLI				AML	AML	10 01 12.6	
	comp=N,5637μm,0.9s						
VLI				AML	AML	10 01 19.6	
	comp=E,4504μm,0.6s						
ATH	**Athens Observa**	1.71	89	P	**Pn**	**10 00 42.8**	**+0.9**
ATH				AML	AML	10 01 11.5	
	comp=N,4833μm,0.7s						
ATH				AML	AML	10 01 14.9	
	comp=E,2118μm,0.4s						
ATHU	**Athens Univers**	1.77	89	P	**Pn**	**10 00 43.5**	**+0.8**
ATHU				AML	AML	10 01 13.4	
	comp=N,1046μm,0.4s						
ATHU				AML	AML	10 01 14.6	
	comp=E,572μm,0.6s						
VLY	**Voula,Athens**	1.78	93	P	**Pn**	**10 00 43.7**	**+0.9**
VLY				AML	AML	10 01 15.8	
	comp=N,3644μm,0.9s						
VLY				AML	AML	10 01 19.1	
	comp=E,2515μm,0.5s						
IGT	**Igoumenitsa**	1.84	329	*i* Pn	**Pb**	**10 00 45.8**	**-0.5**
IGT				*e*Sn	**Sb**	**10 01 13.9**	**+5.0**
IGT	**Igoumenitsa**	1.84	329	P	**Pb**	**10 00 45.9**	**-0.4**
	baz=329						
IGT				S	**Sb**	**10 01 15.3**	**+6.4**
	baz=329						
KTHR	**Kythira**	2.05	145	P	**Pb**	**10 00 52.1**	**+2.2**
KTHR				AML	AML	10 01 29.5	
	comp=N,5359μm,0.5s						
KTHR				AML	AML	10 01 36.3	
	comp=E,4534μm,0.7s						
KEK	**Kerkira**	2.23	323		**Pn**	**10 00 50.3**	**+1.3**
LIT	**Litokhoron**	2.27	19		**Pb**	**10 00 51.9**	**-1.6**
LIT	**Litokhoron**	2.27	19	*i* Pn	**Pb**	**10 00 51.7**	**-1.8**
LIT				*i* Sg	**Sb**	**10 01 25.8**	**+4.7**
SRN	**Sarande**	2.27	328	P	**Pb**	**10 00 51.8**	**-1.8**
	baz=328						
SRN				S	**Sb**	**10 01 26.8**	**+5.5**
	baz=328						
SRN				AMP			
	comp=E,1.4nm,0.6s,baz=328						
ANKY	**Antikythira Is**	2.51	146	P	**Pb**	**10 00 57.4**	**-0.2**
KBN	**Korca**	2.73	348		**Pn**	**10 00 57.6**	**+1.5**
FNA	**Florina**	2.83	357		**Pn**	**10 00 59.4**	**+2.0**
FNA	**Florina**	2.83	357	*i* Pn	**Pn**	**10 00 59.5**	**+2.1**
FNA	**Florina**	2.83	357	P	**Pn**	**10 00 59.5**	**+2.1**
	baz=355						
THE	**Thessaloniki**	2.89	22	*e*Pn	**Pn**	**10 00 59.7**	**+1.6**
VLO	**Vlora**	2.98	328		**Pn**	**10 01 00.9**	**+1.6**
GRG	**Griva**	3.07	12	*i* Pn	**Pn**	**10 01 02.4**	**+1.7**
SOH	**Sokhos**	3.19	25	*i* Pn	**Pn**	**10 01 04.8**	**+2.5**
SCTE	**Santa Cesarea**	3.20	312	Pn	**Pn**	**10 01 02.8**	**+0.3**
OHR	**Ohrid**	3.21	350	*i* Pn	**Pn**	**10 01 05.7**	**+3.1**
OHR				*e*Lg	Lg	10 02 03.0	
	comp=N,167nm,0.8s						
OHR				*e*Lg	Lg	10 02 05.6	
	comp=E,327nm,1.1s						
APE	**Apeiranthos**	3.29	104	⇑P	**Pn**	**10 01 04.7**	**+1.1**
KNT	**Kendrikon**	3.37	18	*i* Pn	**Pn**	**10 01 07.3**	**+2.5**
VAY	**Valandovo**	3.45	13	*i* Pn	**Pn**	**10 01 08.2**	**+2.3**
VAY				*e*Sn	**Sn**	**10 01 50.2**	**+4.0**
VAY				*e*Lg	Lg	10 01 57.9	
	comp=E,136nm,0.8s						
VAY				*e*Lg	Lg	10 02 04.5	
	comp=N,176nm,1.1s						
SANT	**Santorini**	3.50	116	⇑P	**Pb**	**10 01 13.9**	**-0.7**
SANT	**Santorini**	3.50	116	Pn	**Pn**	**10 01 05.9**	**-0.6**
SRS	**Serrai**	3.53	26	*i* Pn	**Pn**	**10 01 09.6**	**+2.6**
TIR	**Tirane**	3.63	340		**Pn**	**10 01 10.3**	**+1.9**
TIR	**Tirane**	3.63	340	P	**Pn**	**10 01 11.1**	**+2.7**
	baz=339						
STIP	**Stip**	3.77	7	*i* Pn	**Pn**	**10 01 13.2**	**+3.0**
IDI	**Anoyia**	3.78	134	⇑P	**Pn**	**10 01 13.7**	**+3.2**
IDI	**Anoyia**	3.78	134	Pn	**Pn**	**10 01 12.7**	**+2.3**
	comp=N,2.2nm,0.3s,baz=284,slow=5.9,SNR=3.2						
IDI				Sn	**Sn**	**10 01 55.1**	**+0.8**
	comp=N,7.1nm,0.3s,baz=319,slow=15,SNR=5.6						
IDI				LR	LR	10 02 42.0	
	comp=N,93nm,21.2s,baz=274,slow=39						
	comp=N,10nm,0.4s						
IDI	**Anoyia**	3.78	134		**Pn**	**10 01 09.8**	**-0.7**
PHP	**Peshkopia**	3.82	347	P	**Pn**	**10 01 12.8**	**+1.7**
	baz=346						
TIP	**Timpagrande**	3.95	290		**Pn**	**10 01 12.9**	**+0.1**
MMB	**Musomiste**	4.00	24	P	**Pn**	**10 01 15.5**	**+2.1**
SKO	**Skopje**	4.01	359	*i* Pn	**Pn**	**10 01 16.5**	**+2.9**
KKB	**Krupnik**	4.08	16	P	**Pn**	**10 01 16.5**	**+1.9**
RDO	**Rodhopi**	4.43	43	Pn	**Pn**	**10 01 20.8**	**+1.5**
ALN	**Alexandroupoli**	4.55	48	Pn	**Pn**	**10 01 21.7**	**+0.7**
DRME	**Dracevica, Mon**	4.60	338	*e*Pn	**Pn**	**10 01 22.2**	**+0.5**
MATE	**Matera**	4.62	307	⇑P	**Pb**	**10 01 30.5**	**-3.1**
KDZ	**Kurdzhali**	4.74	38	*e*P	**Pn**	**10 01 25.4**	**+1.8**
PDG	**Podgorica**	4.80	339	⇓P	**Pn**	**10 01 25.2**	**+0.7**
PDG	**Podgorica**	4.80	339	Pn	**Pn**	**10 01 25.0**	**+0.5**
PDG	**Podgorica**	4.80	339	*e*Pn	**Pn**	**10 01 24.5**	**+0.1**
VTS	**Vitosha**	4.83	15	⇓P	**Pn**	**10 01 26.7**	**+1.7**
VTS	**Vitosha**	4.83	15	Pn	**Pn**	**10 01 27.3**	**+2.3**
VTS	**Vitosha**	4.83	15	P	**Pn**	**10 01 26.4**	**+1.4**
BARS	**Barje**	4.86	2	*i* Pn	**Pn**	**10 01 26.6**	**+1.4**
CUC	**Castrocucco**	4.91	296	Pn	**Pn**	**10 01 25.6**	**-0.4**
HCY	**Herceg Novi**	5.06	333	*e*Pn	**Pn**	**10 01 27.4**	**-0.6**
KARP	**Karpathos**	5.10	116	Pn	**Pn**	**10 01 29.1**	**+0.5**
TREB	**Trebinje**	5.35	334	*e*Pn	**Pn**	**10 01 31.6**	**-0.4**
SJES	**Sjenica**	5.44	348	*e*Pn	**Pn**	**10 01 34.1**	**+0.8**
BRY	**Bratogost**	5.45	336	*e*Pn	**Pn**	**10 01 32.9**	**-0.6**
UPM	**Unac-Piva**	5.62	340	*e*Pn	**Pn**	**10 01 36.7**	**+0.9**
MPEP	**Malo Peshtene**	5.65	16	*e*P	**Pn**	**10 01 38.7**	**+2.7**
BOVS	**Bovan**	5.68	1	⇑P	**Pn**	**10 01 36.8**	**+0.4**
SGRT	**San Giovanni R**	5.86	312	Pn	**Pn**	**10 01 39.2**	**+0.1**
SGRT	**San Giovanni R**	5.86	312	P	**Pn**	**10 01 39.4**	**+0.3**
	baz=313						
RUDO	**Rudo**	5.90	344	*e*Pn	**Pn**	**10 01 38.9**	**-0.6**
BBLS	**Lazići**	6.13	345	*e*Pn	**Pn**	**10 01 42.6**	**-0.1**
DIVS	**Divibare**	6.25	350		**Pn**	**10 01 44.4**	**0.0**
DIVS	**Divibare**	6.25	350	*e*Pn	**Pn**	**10 01 43.7**	**-0.7**
MDVR	**Moldovita**	6.82	1	⇑P	**Pn**	**10 01 50.4**	**-1.8**
SRKY	**Kupres RS**	6.95	333	*e*Pn	**Pn**	**10 01 54.1**	**+0.1**
HERR	**Herculane**	6.95	5	⇑P	**Pn**	**10 01 54.3**	**+0.3**
FRGS	**Fruska Gora**	7.32	350	⇑P	**Pn**	**10 01 56.9**	**-2.0**
FRGS	**Fruska Gora**	7.32	350	*e*Pn	**Pn**	**10 01 57.2**	**-1.8**
GZR	**Gura Zlata**	7.49	7	⇑P	**Pn**	**10 02 00.3**	**-1.1**
VOIR		7.92	18	⇑P	**Pn**	**10 02 10.0**	**+2.6**
NRCA	**Norcia**	8.07	310		**Pn**	**10 02 08.4**	**-1.1**
MLR	**Muntele Rosu**	8.21	22	⇓P	Pn	10 02 03.0	-8.4
MLR	**Muntele Rosu**	8.21	22	Pn	Pn	10 02 18.1	+6.7
	comp=N,1.4nm,0.3s,baz=288,slow=6.0,SNR=9.4						
MLR	**Muntele Rosu**	8.21	22	Pn	**Pn**	**10 02 14.0**	**+2.6**
MURB	**Monte Urbino**	8.67	311	Pn	**Pn**	**10 02 18.0**	**+0.3**
PLOR	**Plostina**	8.76	24	⇓P	Pn	10 02 04.6	-14
CRES	**Cresnjev**	9.08	332	*e*Pn	**Pn**	**10 02 21.5**	**-1.7**
CEY	**Cerknica**	9.42	328	*e*Pn	**Pn**	**10 02 27.4**	**-0.4**
SKDS	**Skadanscina**	9.44	326	*e*Pn	**Pn**	**10 02 26.5**	**-1.7**
BRTR	**Keskin Array B**	9.60	76	Pn	**Pn**	**10 02 33.3**	**+2.9**
	comp=N,0.3nm,0.3s,baz=250,slow=14,SNR=7.5						
BRTR				Sn	Sn	10 04 08.3	-9.3
	comp=N,0.4nm,0.3s,baz=351,slow=25,SNR=7.0						
BRTR				LR	LR	10 06 29.3	
	comp=N,135nm,20.4s,baz=240,slow=40						
	comp=N,1.2nm,0.5s						
BRTR	**Keskin Array B**	9.60	76		**Pn**	**10 02 31.7**	**+1.3**
SOKA	**Soboth**	9.96	333	*e*Pn	**Pn**	**10 02 35.4**	**+0.1**
	comp=N,2.2nm,0.4s						
SOKA				*e*Sn	**Sn**	**10 04 22.4**	**-4.1**
	comp=N,2.8nm,0.4s						
OBKA	**Obir**	10.00	331	*e*Pn	**Pn**	**10 02 35.9**	**+0.1**
	comp=N,2.0nm,0.3s						
OBKA				*e*Sn	**Sn**	**10 04 25.8**	**-1.6**
	comp=N,2.4nm,0.5s						
KEST	**Kesra**	10.03	261	Pn	**Pn**	**10 02 36.7**	**+0.4**
	comp=N,0.2nm,0.3s,baz=280,slow=21,SNR=6.5						
	comp=N,3.6nm,0.8s						
KEST	**Kesra**	10.03	261		**Pn**	**10 02 34.8**	**-1.5**
ARSA	**Arzberg**	10.29	336	*e*Pn	**Pn**	**10 02 41.6**	**+1.8**
	comp=N,1.0nm,0.3s						
ARSA				*e*Sn	**Sn**	**10 04 36.3**	**+1.8**
	comp=N,0.7nm,0.3s						
TEOL	**Teolo**	10.45	318		**Pn**	**10 02 41.1**	**-0.9**
CTI	**Castel Tesino**	10.93	321	Pn	**Pn**	**10 02 48.0**	**-0.7**
ABTA	**Abfaltersbach**	11.04	326	*e*Pn	**Pn**	**10 02 50.7**	**+0.7**
	comp=N,4.5nm,0.6s						
ABTA				*e*Sn	**Sn**	**10 04 52.9**	**+0.1**
	comp=N,4.6nm,0.5s						
MSSA	**Maissana**	11.07	309	Pn	**Pn**	**10 02 50.4**	**-0.1**
WTTA	**Wattenberg**	11.82	325	*e*Pn	**Pn**	**10 03 02.0**	**+1.2**
	comp=N,1.7nm,0.3s						
WTTA				*e*Sn	**Sn**	**10 05 14.5**	**+2.4**
	comp=N,8.2nm,0.6s						
VRAC	**Vranov**	11.90	344	LR	LR	10 08 54.7	
	comp=N,73nm,18.5s,baz=124,slow=45						
SQTA	**Sankt Quirin**	11.98	324	*e*Pn	**Pn**	**10 03 04.1**	**+1.1**
	comp=N,1.6nm,0.2s						
SQTA				*e*Sn	**Sn**	**10 05 17.4**	**+1.4**
	comp=N,4.4nm,0.5s						
MORC	**Moravsky Berou**	12.17	348	Pn	**Pn**	**10 03 07.6**	**+2.2**
GERES	**GERESS Array B**	12.28	335	Pn	**Pn**	**10 03 06.5**	**-0.5**
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=1.7						
	comp=N,0.2nm,0.3s						
GERES	**GERESS Array B**	12.28	335		**Pn**	**10 03 08.7**	**+1.6**
DAVOX	**Davos/Dischmat**	12.33	319	Pn	**Pn**	**10 03 08.1**	**+0.3**
	comp=N,0.3nm,0.3s,baz=192,slow=19,SNR=2.2						
DAVOX				Sn	**Sn**	**10 05 18.4**	**-6.2**
	comp=N,0.1nm,0.3s,baz=342,slow=14,SNR=1.7						
	comp=N,0.8nm,0.4s						
AKASG	**Malin Array Be**	13.87	21	Pn	**P**	**10 03 36.6**	**0.0**
	comp=N,0.8nm,0.3s,baz=209,slow=8.3,SNR=4.1						
AKASG				LR	LR	10 09 07.0	
	comp=N,77nm,19.0s,baz=343,slow=39						
SUW	**Suwalki**	16.10	3		**Pn**	**10 03 58.4**	**+0.1**
PABE	**Paberze**	17.63	5		**Pn**	**10 04 16.1**	**-1.4**
PABE				IAmb	IAmb	10 04 21.5	
	comp=Z,12nm,0.6s						
GNI	**Garni**	18.14	76	LR	LR	10 11 57.7	
	comp=Z,60nm,21.7s,baz=187,slow=39						
ESDC	**Sonseca Array**	19.94	283	P	**P**	**10 04 44.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=14						
	comp=Z,3.2nm,1.0s						
MDT	**Midelt**	21.90	264	P	**P**	**10 05 04.2**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=156,slow=9.7,SNR=2.5						
	comp=Z,1.1nm,0.5s						
HFS	**Hagfors**	22.76	350	P	**P**	**10 05 13.4**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=142,slow=31,SNR=8.4						
	comp=Z,0.6nm,0.4s						
FIA0	**FINESS Array S**	23.68	5	P	**P**	**10 05 22.6**	**-0.7**
FINES	**FINESS Array B**	23.68	5	P	**P**	**10 05 21.5**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=176,slow=9.4,SNR=5.7						
FINES				LR	LR	10 14 54.9	
	comp=Z,107nm,19.1s,baz=24,slow=38						
	comp=Z,1.6nm,0.6s						
FINES	**FINESS Array B**	23.68	5	P	**P**	**10 05 22.2**	**-1.1**
FIA1	**FINESS Array S**	23.68	5	P	**P**	**10 05 23.0**	**-0.3**
NAO01	**NORSAR Array S**	23.88	347	P	**P**	**10 05 26.0**	**+0.8**
NB2	**NORSAR Subarra**	24.00	348	P	**P**	**10 05 26.4**	**0.0**
	comp=Z,2.3nm,0.9s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	24.00	348	P	**P**	**10 05 25.2**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=155,slow=11,SNR=5.4						
	comp=Z,1.5nm,0.8s						
EKA	**Eskdalemuir Ar**	24.08	324	P	**P**	**10 05 28.0**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=126,slow=9.7,SNR=6.6						
	comp=Z,1.9nm,0.6s						
ABKAR	**Akbulak array**	29.70	55	P	**P**	**10 06 16.9**	**-0.8**
TOA0	**Torodi Ar. Sit**	30.38	221	P	**P**	**10 06 22.1**	**-1.9**
TOA0				IAmb	IAmb	10 06 31.5	
	comp=Z,3.7nm,1.1s						
TORD	**Torodi Ar. Bea**	30.38	221	P	**P**	**10 06 25.8**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=34,slow=9.1,SNR=17						
	comp=Z,1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	30.38	221	P	**P**	**10 06 22.0**	**-2.0**
ARCES	**ARCESS Array B**	31.71	3	P	**P**	**10 06 34.6**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=189,slow=10,SNR=6.3						
	comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	31.71	3	P	**P**	**10 06 34.0**	**-1.2**
ARCES				IAmb	IAmb	10 06 47.6	
	comp=Z,4.6nm,0.9s						
MK31	**Makanchi Array**	44.73	58	P	**P**	**10 08 24.8**	**-0.2**
MKAR	**Makanchi Array**	44.73	58	P	**P**	**10 08 24.7**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=280,slow=7.6,SNR=11						
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	44.73	58	P	**P**	**10 08 24.6**	**-0.4**
ZAA0	**Zalesovo Array**	45.24	48	P	**P**	**10 08 28.5**	**-0.4**
ZALV	**Zalesovo Beam**	45.24	48	P	**P**	**10 08 28.8**	**0.0**
	comp=Z,2.7nm,0.4s,baz=267,slow=7.9,SNR=10						
	comp=Z,2.7nm,0.4s						
ZALV	**Zalesovo Beam**	45.24	48	P	**P**	**10 08 28.6**	**-0.2**
SCHQ	**Schefferville**	59.17	318	P	**P**	**10 10 11.5**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=280,slow=11,SNR=2.6						
	comp=Z,1.8nm,0.7s						

YKA	Yellowknife Ar	73.88	340	P	P	10 11 46.7	+0.5
	comp=Z,0.3nm,0.7s,baz=29,slow=4.9,SNR=1.7						
	comp=Z,0.3nm,0.7s						
ILAR	Eielson Array	77.21	355	P	P	10 12 05.9	+0.6
	comp=Z,0.2nm,0.5s,baz=323,slow=3.7,SNR=4.5						
	comp=Z,0.2nm,0.5s						
JOW	Kunigami	85.89	59	LR	LR	10 58 14.3	
	comp=Z,28nm,19.5s,baz=153,slow=41						

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*IDC **25** 10:24:29.1±1.0, 3°.47N×126°.55E, h0^{km}, mb3.9/6, mbtmp3.9/7, ML3.8/1, MS3.8/1, Error ellipse: s-maj=58.0km s-min=17.7km az=70.0*
*NEIC **25** 10:24:34.5±1.0, 3°.6N±0°.1×126°.81E±0°.06, h37^{km}±11^{km}, mb4.1/11, Error ellipse: s-maj=16.3km s-min=4.6km az=204.0*
ISC 25 10:24:35.2±0.6, 3°.46N±0°.06×126°.8E±0°.1, h48^{km}, n27, σ1^{s}.45/27, mb4.1/11, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.74	167	Pn	Pn	10 25 18.4	+1.6
DDMP	Don Marcelino,	2.83	338	⇓eP	Pn	10 25 15.2	-2.7
DDMP				eS	Sn	10 25 55.6	+4.8
KCP	Kidapawan	3.90	335	⇑eP	Pn	10 25 33.7	+1.0
KCP				i S	Sn	10 26 27.5	+10
SIJI	Sorong	6.22	134	Pn	Pn	10 26 04.4	-0.2
	1.9nm,0.3s,baz=240,slow=23,SNR=4.8						
	7.7nm,0.5s						
TOLI2	Tolitoli	6.42	249	Pn	Pn	10 26 07.5	+0.3
FAKI	Fak Fak	8.38	139	Pn	Pn	10 26 34.4	+0.2
MYLDM	Lahad Datu	8.42	282	Pn	Pn	10 26 33.5	-1.1
KNRA	Kununurra	19.12	174	P	Pn	10 28 54.9	-0.7
KNRA				IAmb	IAmb	10 29 05.7	
	comp=Z,6.1nm,0.7s						
WB0	Warramunga Arr	24.27	162	P	P	10 29 48.7	+0.6
WB0				IAmb	IAmb	10 29 50.2	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	24.42	163	P	P	10 29 50.3	+0.8
	comp=Z,2.6nm,1.0s,baz=338,slow=11,SNR=21						
	comp=Z,2.6nm,1.0s						
WRA	Warramunga Arr	24.42	163	P	P	10 29 49.3	-0.2
WB2	Warramunga Arr	24.42	163	P	P	10 29 50.1	+0.6
WB2				IAmb	IAmb	10 29 59.2	
	comp=Z,9.0nm,1.1s						
WR0	Warramunga Arr	24.50	162	P	P	10 29 51.0	+0.8
WR0				IAmb	IAmb	10 30 02.2	
	comp=Z,4.5nm,0.8s						
MNAI	Manna	25.03	252	P	P	10 29 54.6	-0.5
AS31	Alice Springs	27.84	166	P	P	10 30 20.5	+0.1
ASAR	Alice Springs	27.85	166	P	P	10 30 21.5	+1.1
	comp=Z,0.3nm,0.3s,baz=341,slow=10,SNR=11						
	comp=Z,0.3nm,0.3s						
JWT	Wachi	32.66	13	P	P	10 31 00.3	-2.5
JWT				IAmb	IAmb	10 31 01.9	
	comp=Z,3.4nm,1.1s						
BBOO	Buckleboo	37.13	167	P	P	10 31 41.8	+0.3
STKA	Stephens Creek	37.87	159	P	P	10 31 47.8	+0.2
	comp=Z,3.6nm,1.1s,baz=338,slow=8.2,SNR=3.8						
	comp=Z,3.6nm,1.1s						
STKA	Stephens Creek	37.87	159	P	P	10 31 48.2	+0.6
STKA				IAmb	IAmb	10 32 14.8	
	comp=Z,0.6nm,1.1s						
SONM	Songino Array	47.56	341	P	P	10 33 04.7	-1.5
	comp=Z,0.8nm,0.4s,baz=132,slow=6.0,SNR=2.5						
	comp=Z,0.8nm,0.4s						
MSVF	Nonsavu	54.77	114	LR	LR	10 55 52.6	
	comp=Z,87nm,18.1s,baz=47,slow=34						
PETK	Petropavlovsk-	55.66	22	P	P	10 34 07.9	+1.4
	comp=Z,1.6nm,0.8s,baz=197,slow=9.0,SNR=3.6						
	comp=Z,1.6nm,0.8s						
MK31	Makanchi Array	57.80	325	P	P	10 34 21.5	-0.3
MK31				IAmb	IAmb	10 34 25.1	
	comp=Z,2.6nm,1.4s						
MKAR	Makanchi Array	57.80	325	P	P	10 34 21.8	+0.1
	comp=Z,1.2nm,0.5s,baz=118,slow=8.0,SNR=14						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	57.80	325	P	P	10 34 21.6	-0.1
ABKAR	Akbulak array	72.38	321	P	P	10 35 56.4	+0.1

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*ISK **25** 10:27:19.9, 39°.20N×26°.75E, h2^{km}, ML2.7/7*
*DDA **25** 10:27:20.0±0.0, 39°.22N×26°.69E, h11^{km}±1^{km}, ML2.5*
*ATH **25** 10:27:20.6, 39°.22N×26°.71E, h32^{km}±6^{km}, ML2.2/5, Error ellipse: s-maj=7.3km s-min=1.5km az=263.0*
*THE **25** 10:27:20.5, 39°.25N×26°.77E, h18^{km}±1^{km}, ML2.2/4, Error ellipse: s-maj=1.3km s-min=0.6km az=259.0*
ISC 25 10:27:20.2±0.8, 39°.23N±0°.02×26°.75E±0°.02, h13^{km}±4^{km}, n35, σ0^{s}.59/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.09	333	P	Pb	10 27 23.0	-0.1
AYVA				S	Sb	10 27 24.7	-0.5
AYVA				i AML	AML	10 27 25.0	
	comp=N,2µm,0.2s						
AYVA				i AML	AML	10 27 26.0	
	comp=E,2µm,0.4s						
ZEDA	zmir-Bergama	0.36	135	P	Pb	10 27 28.4	-0.1
ZEDA				S	Sb	10 27 33.9	-0.1
ZEDA				i AML	AML	10 27 34.0	
	comp=E,303nm,0.1s						
ZEDA				i AML	AML	10 27 35.0	
	comp=N,345nm,0.2s						
PRK	Paraskevi	0.37	274	P	Pb	10 27 28.7	+0.2
PRK				S	Sb	10 27 34.8	+0.6
PRK				AML	AML	10 27 37.7	
	comp=E,740µm,0.3s						
PRK				AML	AML	10 27 41.7	
	comp=N,609µm,0.1s						
PRK	Paraskevi	0.37	274	P	Pb	10 27 28.7	+0.2
PRK				S	Sb	10 27 35.0	+0.8
	comp=N,352nm,0.3s						
BUHA	Balikesir, Bur	0.38	43	P	Pg	10 27 27.7	-0.1
BUHA				S	Sb	10 27 34.5	0.0
BUHA				i AML	AML	10 27 36.0	
	comp=N,245nm,0.3s						
BUHA				i AML	AML	10 27 36.0	
	comp=N,253nm,0.4s						
FOCM	Foa	0.51	181	PG	Pg	10 27 30.0	-0.2
FOCM				SG	Sb	10 27 38.0	-0.3
BAYC	CANAKKALE_Bayr	0.54	344	P	Pg	10 27 29.9	-0.8
BAYC				i AML	AML	10 27 38.0	
	comp=N,206nm,0.2s						
BAYC				i AML	AML	10 27 38.0	
	comp=N,233nm,0.2s						
BAYC				S	Sg	10 27 38.3	+0.4
EZN	Ezine	0.68	332	P	Pb	10 27 33.4	-0.5
EZN				S	Sb	10 27 42.9	-0.3
	comp=N,265nm,0.1s						
SIGR	SIGRI	0.69	269	P	Pb	10 27 33.2	-0.9
SIGR				AML	AML	10 27 47.9	
	comp=E,291µm,0.2s						
SIGR				AML	AML	10 27 48.1	
	comp=N,293µm,0.2s						
SIGR	SIGRI	0.69	269	P	Pb	10 27 33.5	-0.5
SIGR				S	Sg	10 27 44.2	+1.5
	comp=N,142nm,0.1s						
STEP	BALIKESIR_Sava	0.77	78	P	Pn	10 27 36.7	-0.1
STEP				S	Sn	10 27 47.4	-0.8
STEP				i AML	AML	10 27 50.0	
	comp=N,227nm,0.4s						
STEP				i AML	AML	10 27 51.0	
	comp=N,238nm,0.3s						
BALY	Balya	0.85	52	P	Pn	10 27 37.5	-0.4
BALY				S	Sn	10 27 51.3	+1.1
BALY				i AML	AML	10 27 53.0	
	comp=N,148nm,0.3s						
BALY				i AML	AML	10 27 54.0	
	comp=N,142nm,0.4s						
BLCB	Balcova	0.87	164	P	Pb	10 27 36.7	-0.4
BLCB				S	Sg	10 27 49.1	+0.7
BLCB	Balcova	0.87	164	PG	Pb	10 27 37.0	-0.1
BLCB				SG	Sn	10 27 49.5	-1.1
URLA	Izmir	0.87	188	PG	Pb	10 27 37.1	0.0
URLA				SG	Sn	10 27 49.6	-1.1
URLA	Izmir	0.87	188	P	Pb	10 27 36.3	-0.8
URLA				S	Sn	10 27 52.3	+1.7
URLA				i AML	AML	10 27 53.0	
	comp=N,136nm,0.5s						
URLA				i AML	AML	10 27 54.0	
	comp=N,121nm,0.5s						
AKHS	Akhisar	0.90	112	P	Pn	10 27 38.3	-0.2
AKHS				S	Sn	10 27 51.6	+0.3
AKS	Akhisar	0.90	112	PG	Pg	10 27 37.8	+0.2
AKS				SG	Sn	10 27 51.1	-0.3
ECEA	Canakkale, Ece	0.93	332	P	Pb	10 27 37.4	-0.7
ECEA				i AML	AML	10 27 51.0	
	comp=N,197nm,0.5s						
ECEA				S	Sn	10 27 51.6	-0.4
ECEA				i AML	AML	10 27 57.0	
	comp=N,183nm,0.3s						
CHOS	Chios island	0.99	213	P	Pb	10 27 39.0	-0.2
CHOS				S	Sb	10 27 51.1	-1.2
CHOS				AML	AML	10 27 57.4	
	comp=N,348µm,0.2s						
CHOS				AML	AML	10 27 57.6	
	comp=E,686µm,0.2s						
CHOS	Chios island	0.99	213	P	Pb	10 27 39.2	-0.1
CHOS				S	Sn	10 27 53.5	-0.3
	comp=E,260nm,0.3s						
CHOS	Chios island	0.99	213	PG	Pn	10 27 39.7	-0.2
ZEYE	Izmir, Urla-Ze	1.00	191	P	Pb	10 27 38.7	-0.6
ZEYE				S	Sn	10 27 53.8	0.0
ZEYE				i AML	AML	10 27 56.0	
	comp=E,127nm,0.5s						
GOMA	Golmarmara-Man	1.05	119	PG	Pg	10 27 40.5	+0.1
GOKA	anakkale-Gk	1.16	326	P	Pb	10 27 42.5	+0.4
GOKA				S	Sg	10 27 59.0	+1.3
GOKA				i AML	AML	10 27 59.0	
	comp=E,284nm,0.5s						
LIA	Limnos Island	1.38	300	P	Pb	10 27 45.8	-0.1
LIA				S	Sb	10 28 03.3	-0.1
DURS	Dursunbey	1.39	74	P	Pn	10 27 45.2	-0.1
DURS				S	Sg	10 28 05.6	+0.6
DURS				i AML	AML	10 28 07.0	
	comp=E,74nm,0.3s						
DURS				i AML	AML	10 28 08.0	
	comp=E,74nm,0.3s						
SMG	Samos	1.52	177	P	Pb	10 27 48.0	-0.1
CAVK	Edirne/Enez-Ca	1.53	343	P	Pn	10 27 46.9	-0.3
CAVK				S	Sg	10 28 09.6	+0.2
CAVK				i AML	AML	10 28 14.0	
	comp=E,80nm,0.7s						
SMTH	Samothraki Isl	1.56	323	P	Pn	10 27 47.9	+0.4
SMTH				AML	AML	10 28 10.8	
	comp=E,142µm,0.2s						
SMTH				AML	AML	10 28 10.8	
	comp=N,225µm,0.4s						
AYDB	Zeytinkoy-Aydi	1.56	145	PN	Pb	10 27 49.2	+0.2
GCAM	G?zelcaml?	1.57	166	PN	Pb	10 27 49.2	+0.2
KESN	Edirne-Kesan	1.60	358	P	Pn	10 27 48.6	+0.1
KESN				S	Sg	10 28 11.5	-0.2
KESN				i AML	AML	10 28 12.0	
	comp=N,92nm,0.3s						
KESN				i AML	AML	10 28 18.0	
	comp=N,61nm,0.3s						
KULA	Kula-Manisa	1.66	115	PN	Pb	10 27 50.7	+0.2
ALN	Alexandroupoli	1.75	342	P	Pn	10 27 50.9	+0.6
ALN				S	Sb	10 28 14.2	+0.1
ALN				AML	AML	10 28 17.2	
	comp=E,58µm,0.4s						
ALN				AML	AML	10 28 17.5	
	comp=N,104µm,0.6s						

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*IDC **25** 10:42:13.8±1.2, 8°.75S×158°.33E, h0^{km}, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=30.6km s-min=20.2km az=177.0*
*NEIC **25** 10:42:17.6±0.9, 8°.91S±0°.09×158°.48E±0°.09, h20^{km}±8^{km}, mb4.1/11, Error ellipse: s-maj=17.2km s-min=7.7km az=223.0*
ISC 25 10:42:18.3±0.9, 8°.9S±0°.1×158°.42E±0°.07, h29^{km}, n22, σ0^{s}.76/24, mb4.1/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.60	109	Pn	Pn	10 42 44.9	+0.3
	416nm,0.3s,baz=236,slow=4.8,SNR=80						
HNR				Sn	Sb	10 43 07.8	+0.8
	916nm,0.3s,baz=128,slow=16,SNR=9.9						
HNR	Honiara	1.60	109		Pn	10 42 43.3	-1.3
HNR				Sn	Sn	10 43 03.7	-0.6
LIFNC	LIFOU	14.55	145	Pn	Pn	10 45 41.9	-0.5
ARMA	Armidale	22.32	196	P	P	10 47 13.5	-0.3
ARMA				IAmb	IAmb	10 47 30.7	
	comp=Z,8.8nm,1.1s						
WR0	Warramunga Arr	25.56	242	P	P	10 47 44.7	-0.3
WR0				IAmb	IAmb	10 47 49.5	
	comp=Z,4.8nm,1.1s						
WB0	Warramunga Arr	25.62	242	P	P	10 47 45.5	0.0
WRAB	Tennant Creek	25.72	242	P	P	10 47 45.5	-0.9
WRAB				IAmb	IAmb	10 47 45.6	
	comp=Z,7.0nm,1.4s						
WB2	Warramunga Arr	25.72	242	P	P	10 47 46.4	0.0
WB2				IAmb	IAmb	10 48 10.7	
	comp=Z,6.7nm,1.2s						
WRA	Warramunga Arr	25.73	242	P	P	10 47 46.5	0.0
	comp=Z,1.7nm,0.8s,baz=65,slow=9.0,SNR=13						
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	25.73	242	P	P	10 47 45.2	-1.4
ASAR	Alice Springs	27.66	235	P	P	10 48 02.8	-1.1
	comp=Z,0.9nm,0.8s,baz=67,slow=9.0,SNR=10						
	comp=Z,0.9nm,0.8s						
STKA	Stephens Creek	27.69	212	P	P	10 48 05.3	+1.3
	comp=Z,1.6nm,0.4s,baz=47,slow=14,SNR=9.6						
	comp=Z,1.6nm,0.4s						
STKA	Stephens Creek	27.69	212	P	P	10 48 04.1	+0.1
BBOO	Buckleboo	31.52	218	P	P	10 48 37.6	-0.3
MSWZ	Moikau Station	35.64	158	P	P	10 49 13.4	-0.3
PSA00	Pilbara Seismi	39.17	247	P	P	10 49 44.3	+0.4
MBWA	Marble Bar	39.19	247	P	P	10 49 43.5	-0.6
MBWA				IAmb	IAmb	10 49 56.3	
	comp=Z,4.9nm,1.1s						
VNDA	Vanda	68.61	179	P	P	10 53 19.4	+1.2
VNDA				IAmb	IAmb	10 53 30.6	
	comp=Z,2.5nm,1.4s						
QSPA	South Pole Qui	81.08	180	P	P	10 54 31.3	+0.7
QSPA				IAmb	IAmb	10 54 41.0	
	comp=Z,2.5nm,1.0s						
IMAR	Indian Mountai	82.46	18	P	P	10 54 38.3	+0.6
ILAR	Eielson Array	83.93	21	P	P	10 54 45.4	+0.2
	comp=Z,0.4nm,0.9s,baz=248,slow=6.0,SNR=4.0						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	87.08	318	P	P	10 55 00.7	-0.7
	comp=Z,0.2nm,0.5s,baz=90,slow=5.0,SNR=2.4						
	comp=Z,0.2nm,0.5s						

IDC 25 10:46:52.2±3.5, 54°.64N×83°.77E, h0^{km}, mbtmp2.7/1, ML2.7/1, Error ellipse: s-maj=24.1km s-min=15.0km az=158.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.93	138	i		10 52 30.0	
	baz=318,slow=317,SNR=3.7						
ZALV	Zalesovo Beam	0.93	138	Pg	Pg	10 47 09.7	-0.3
	3.7nm,0.3s,baz=322,slow=16,SNR=18						
ZALV				Lg	Lg	10 47 23.3	
	4.7nm,0.3s,baz=318,slow=24,SNR=15						
ZALV				Rg	Rg	10 47 28.8	
	58nm,1.1s,baz=322,slow=39,SNR=12						
MKAR	Makanchi Array	7.91	187	Pn	Pn	10 48 48.9	+0.4
	0.1nm,0.3s,baz=10,slow=12,SNR=3.1						
MKAR				Lg	Lg	10 51 02.8	
	baz=10.0,slow=32,SNR=2.0						
	0.2nm,0.4s						

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*TUL **25** 10:50:47.2±1.2, 36°.46N±0°.02×98°.75W±0°.03, h5^{km}±4^{km}, ML2.7, mb_Lg2.4/36(NEIC), Error ellipse: s-maj=3.4km s-min=2.4km az=89.0*
NEIC 25 10:50:47.5±1.2, 36°.46N±0°.01×98°.74W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.5km s-min=2.7km az=243.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.23	250	Pg	Pg	10 50 51.6	-0.5
U32A				Sg	Sg	10 50 55.0	-0.1
OKCFA	Oklahoma City	1.47	135	Pn	Pn	10 51 14.9	+0.1
WMOK	Wichita Mounta	1.72	181		Pn	10 51 17.1	-1.0
T35A	Sooner Cattle	1.84	75		Pn	10 51 20.5	+0.6
R32A	Long Quarter,	1.96	1		Pn	10 51 22.2	+0.8
X34A	Smith Ranch, M	2.00	158		Pn	10 51 22.9	+1.0
X34A				IAmb_Lg		10 51 50.0	
	comp=Z,16nm,0.8s						
TUL1	Leonard	2.44	102	Pn	Pn	10 51 27.8	-0.3
KSCO	Kaye Shedlock’	4.00	311	IAmb_Lg		10 53 03.6	
	comp=Z,12nm,0.7s						
MSTX	Muleshoe	4.13	234	IAmb_Lg		10 53 02.7	
	comp=Z,8.2nm,0.8s						
W39A	Magazine	4.22	106	IAmb_Lg		10 53 04.0	
	comp=Z,10nm,0.9s						
S39A	Bolivar	4.50	73	IAmb_Lg		10 53 11.4	
	comp=Z,6.6nm,0.8s						
T25A	Trinidad	4.61	280	IAmb_Lg		10 53 19.5	
	comp=Z,7.4nm,0.8s						
MIAR	Mount Ida	4.62	113	IAmb_Lg		10 53 27.1	
	comp=Z,8.3nm,1.1s						
U40A	Yellville	4.75	90	IAmb_Lg		10 53 17.8	
	comp=Z,7.2nm,0.8s						
X40A	Basin Creek Fa	5.20	110	IAmb_Lg		10 53 46.8	
	comp=Z,5.6nm,0.8s						
FCAR	Ozark Folk Cen	5.38	94	IAmb_Lg		10 53 45.4	
	comp=Z,5.5nm,0.9s						
W41B	Gary Mavity, V	5.43	102	IAmb_Lg		10 53 40.1	
	comp=Z,6.5nm,1.0s						
JCT	Junction City	6.03	189	IAmb_Lg		10 54 07.2	
	comp=Z,6.3nm,0.9s						
P40A	Paris	6.11	58	IAmb_Lg		10 54 07.0	
	comp=Z,6.5nm,0.8s						
CCM	Cathedral Cave	6.18	73	IAmb_Lg		10 54 08.7	
	comp=Z,6.7nm,0.9s						
PBMO	Poplar Bluff	6.69	85	IAmb_Lg		10 54 38.9	
	comp=Z,6.6nm,1.1s						
PHWY	Pilot Hill	7.13	315	IAmb_Lg		10 54 40.8	
	comp=Z,3.8nm,0.8s						
RSSD	Black Hills	8.66	334	IAmb_Lg		10 55 26.8	
	comp=Z,2.9nm,0.8s						

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*IDC **25** 11:12:35.5±0.9, 20°.76N×146°.39E, h0^{km}, mb3.6/8, mbtmp3.6/8, Error ellipse: s-maj=35.6km s-min=22.0km az=103.0*
ISC 25 11:12:40.6±1.0, 20°.8N±0°.2×146°.4E±0°.2, h34^{km}, n14, σ1^{s}.01/8, mb3.6/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	19.26	93	T	T	11 36 58.7	
	baz=280						
H11S1	WAKE ISLAND Hy	19.27	93	T	T	11 36 59.5	
	baz=280						
H11N1	WAKE ISLAND Hy	19.28	89	T	T	11 36 51.4	
	baz=276,slow=74						
H11S2	WAKE ISLAND Hy	19.28	93	T	T	11 36 54.5	
	baz=280						
H11N2	WAKE ISLAND Hy	19.28	89	T	T	11 36 52.2	
	baz=276						
H11N3	WAKE ISLAND Hy	19.30	89	T	T	11 36 54.6	
	baz=276,slow=74						
KSRS	Korea Array	23.11	320	P	P	11 17 43.8	+0.3
	0.8nm,0.8s,baz=146,slow=8.8,SNR=2.0						
	0.8nm,0.8s						
WRA	Warramunga Arr	42.12	197	P	P	11 20 29.3	-0.5
	0.8nm,0.7s,baz=18,slow=8.7,SNR=10						
	0.8nm,0.7s						
ASAR	Alice Springs	45.79	196	P	P	11 20 59.5	+0.3
	0.3nm,1.0s,baz=26,slow=6.5,SNR=1.5						
	0.3nm,1.0s						
MKAR	Makanchi Array	57.53	313	P	P	11 22 27.6	+0.8
	0.2nm,0.6s,baz=85,slow=7.1,SNR=2.1						
	0.2nm,0.6s						
ILAR	Eielson Array	61.54	27	P	P	11 22 53.1	-1.0
	0.7nm,1.0s,baz=262,slow=6.0,SNR=4.7						
	0.7nm,1.0s						
YKA	Yellowknife Ar	75.89	28	P	P	11 24 23.4	-0.1
	0.5nm,0.7s,baz=289,slow=5.6,SNR=5.6						
	0.5nm,0.7s						
NVAR	Mina Array Bea	81.38	52	P	P	11 24 55.9	+1.3
	1.2nm,0.9s,baz=266,slow=5.8,SNR=8.6						
	1.2nm,0.9s						
FINES	FINESS Array B	85.30	335	P	P	11 25 12.7	-1.1
	0.7nm,0.5s,baz=72,slow=6.2,SNR=5.8						
	0.7nm,0.5s						

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*IDC **25** 11:22:46.6±1.2, 20°.87N×146°.15E, h0^{km}, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=36.9km s-min=31.7km az=103.0*
ISC 25 11:22:51.8±1.1, 20°.9N±0°.2×146°.1E±0°.2, h34^{km}, n10, σ0^{s}.36/7, mb3.5/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N1	WAKE ISLAND Hy	19.53	90	T	T	11 47 14.8	
	baz=276						
H11N2	WAKE ISLAND Hy	19.53	90	T	T	11 47 14.1	
	baz=276						
H11N3	WAKE ISLAND Hy	19.55	90	T	T	11 47 14.7	
	baz=276						
KSRS	Korea Array	22.86	320	P	P	11 27 51.9	-0.3
	0.4nm,0.4s,baz=136,slow=8.6,SNR=1.9						
	0.4nm,0.4s						
WRA	Warramunga Arr	42.15	197	P	P	11 30 41.1	-0.1
	0.2nm,0.8s,baz=36,slow=9.2,SNR=2.0						
	0.2nm,0.8s						
MKAR	Makanchi Array	57.27	313	P	P	11 32 36.3	+0.2
	0.2nm,0.5s,baz=81,slow=8.7,SNR=2.0						
	0.2nm,0.5s						
ILAR	Eielson Array	61.55	27	P	P	11 33 04.8	-0.5
	0.4nm,0.8s,baz=263,slow=6.4,SNR=4.3						
	0.4nm,0.8s						
YKA	Yellowknife Ar	75.91	28	P	P	11 34 35.0	+0.3
	0.3nm,0.5s,baz=290,slow=6.3,SNR=4.5						
	0.3nm,0.5s						
NVAR	Mina Array Bea	81.52	52	P	P	11 35 06.4	+0.1
	0.4nm,0.7s,baz=271,slow=6.3,SNR=4.3						
	0.4nm,0.7s						
FINES	FINESS Array B	85.09	335	P	P	11 35 24.1	+0.2
	0.4nm,0.4s,baz=64,slow=4.4,SNR=4.4						
	0.4nm,0.4s						

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*DDA **25** 11:40:57.7±0.0, 39°.37N×40°.90E, h25^{km}±2^{km}, ML3.7*
*ISK **25** 11:40:57.4, 39°.35N×40°.93E, h5^{km}, ML4.0/26*
*IDC **25** 11:40:59.1±0.9, 39°.39N×40°.79E, h0^{km}, mb3.6/6, mbtmp3.6/14, ML3.1/8, MS3.0/9, Error ellipse: s-maj=15.3km s-min=9.5km az=139.0*
*AZER **25** 11:41:05.1±0.5, 38°.76N×40°.98E, h25^{km}, Error ellipse: s-maj=12.2km s-min=6.6km az=317.0*
ISC 25 11:40:59.3±0.6, 39°.36N±0°.02×40°.95E±0°.02, h10^{km}, n70, σ1^{s}.74/82, mb3.5/5, MS2.9/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.32	285	PG	Pg	11 41 04.9	-0.9
YEDI				SG	Sg	11 41 10.2	+0.1
SLHN	Bingol, Solhan	0.41	171	P	Pg	11 41 06.9	-0.5
SLHN				S	Sb	11 41 13.9	-1.1
SLHN				i AML	AML	11 41 14.0	
	comp=E,4µm,0.3s						
SLHN				i AML	AML	11 41 14.0	
	comp=N,3µm,0.3s						
BNGB	Bingl	0.42	210	PG	Pg	11 41 06.4	-1.2
BNGB				SG	Sg	11 41 12.9	-0.3
VRTB	Varto-Mus	0.44	116	PG	Pg	11 41 07.5	-0.6
VRTB				SG	Sb	11 41 14.7	-1.4
VRTB	Varto-Mus	0.44	116	P	Pg	11 41 07.4	-0.6
VRTB				S	Sb	11 41 18.1	+2.0
VRTB				i AML	AML	11 41 24.0	
	comp=E,2µm,0.6s						
VRTB				i AML	AML	11 41 25.0	
	comp=N,2µm,0.8s						
MUSM	Mu-Merkez	0.77	145	P	Pg	11 41 12.6	-1.6
MUSM				S	Sb	11 41 24.7	-0.8
ERZN	Erzincan	0.97	284	PG	Pg	11 41 16.4	-1.7
KRIK	Erzurum-spir	0.98	359	P	Pg	11 41 10.2	-8.0
KRIK				S	Sg	11 41 24.4	-6.6
EUZM	Uzumlu	1.03	290	P	Pg	11 41 16.6	-2.5
EUZM				S	Sg	11 41 31.2	-1.2
EUZM				i AML	AML	11 41 36.0	
	comp=E,2µm,0.4s						
EUZM				i AML	AML	11 41 38.0	
	comp=N,1µm,0.5s						
HANI	Diyarbakir_Han	1.03	204	P	Pn	11 41 18.9	-1.0
HANI				S	Sb	11 41 32.7	-0.3
HANI				i AML	AML	11 41 38.0	
	comp=E,3µm,0.5s						
HANI				i AML	AML	11 41 38.0	
	comp=N,3µm,0.7s						

BAYB	BAYBURT	1.04	330	P	Pg	11 41 17.7	-1.8
BAYB				S	Sn	11 41 38.5	+3.5
BAYB				i AML	AML	11 41 39.0	
	comp=E,1µm,0.6s						
BAYB				i AML	AML	11 41 40.0	
	comp=N,1µm,0.5s						
KOVA	Elazig, Kovanc	1.10	234	P	Pg	11 41 18.4	-2.0
KOVA				S	Sg	11 41 34.0	-0.6
KOVA				i AML	AML	11 41 40.0	
	comp=N,1µm,0.8s						
KOVA				i AML	AML	11 41 42.0	
	comp=E,1µm,0.6s						
GURO	Guroymak-BITLI	1.17	133	PN	Pb	11 41 20.1	-1.6
BAYT	Aydıntepe-Bayb	1.21	329	PN	Pb	11 41 21.2	-1.2
SVAN	Silvan-Diyarba	1.22	171	PN	Pg	11 41 21.9	-0.9
SVAN	Silvan-Diyarba	1.22	171	P	Pn	11 41 21.6	-0.9
SVAN				S	Sn	11 41 39.2	+0.1
SVAN				i AML	AML	11 41 47.0	
	comp=E,1µm,0.7s						
EATA	Eleskirt	1.30	67	P	Pn	11 41 21.4	-2.5
EATA				S	Sn	11 41 41.3	-0.1
EATA				i AML	AML	11 41 54.0	
	comp=E,1µm,0.6s						
DYBB	Diyarbakir	1.54	204	PN	Pg	11 41 27.7	-1.1
GUMT	Gumushane	1.57	315	PN	Pb	11 41 27.8	-0.8
AGRB	Hanur-Agry	1.60	82	PN	Pb	11 41 27.9	-1.2
SVRC	Sivrice-ELAZID	1.61	233	PN	Pb	11 41 27.9	-1.4
SENK	Senkaya-Erzuru	1.62	42	PN	Pn	11 41 27.7	-0.4
CHAY	Cayeli-Rize	1.73	355	PN	Pb	11 41 30.2	-1.1
CHOM	Cayeli-Rize	1.74	355	PN	Pb	11 41 30.4	-1.0
KOTA	Agri, Merkez-K	1.80	75	P	Pn	11 41 29.6	-1.0
KOTA				S	Sg	11 41 57.3	0.0
KTUT	Trabzon	1.86	331	PN	Pb	11 41 32.2	-1.2
MAZI	Mazidag	1.94	192	PN	Pn	11 41 32.7	+0.3
MIDY	Mardin/Midyat-	1.98	169	P	Pb	11 41 34.4	-1.1
MIDY				S	Sb	11 42 00.7	+0.4
MIDY				i AML	AML	11 42 05.0	
	comp=E,1µm,0.4s						
MIDY				i AML	AML	11 42 08.0	
	comp=N,779nm,0.8s						
ARPR	Arapgir-MALATY	2.04	263	PN	Pn	11 41 34.1	+0.2
VANB	Van	2.05	111	PN	Pb	11 41 35.5	-1.3
HOPA	Hopa-Artvin	2.06	11	PN	Pb	11 41 34.7	-2.1
MALT	Malatya	2.23	243	PN	Pn	11 41 36.8	+0.4
ESPY	Espiye-Giresun	2.31	313	PN	Pn	11 41 38.0	+0.6
BATM	Batumi	2.31	14	PN	Pb	11 41 38.4	-2.8
CLDR	Caldiran	2.32	94	PN	Pb	11 41 38.6	-2.8
DARE	Darende-Malaty	2.81	255	PN	Pn	11 41 45.3	+0.9
AKH	Akhalkalaki	2.83	43	PN	Pn	11 41 45.8	+1.1
CUKT	Cukurca	2.97	134	PN	Pn	11 41 47.8	+1.1
RSDY	Resadiye-TOKAT	2.97	292	PN	Pn	11 41 47.7	+1.1
GNI	Garni	3.03	74	Pn	Pb	11 41 51.1	-2.4
	15nm,0.3s,baz=271,slow=5.2,SNR=7.8						
GNI				LR	LR	11 43 24.5	
	comp=Z,107nm,18.2s,baz=262,slow=46						
	116nm,0.5s						
GNI	Garni	3.03	74	PN	Pn	11 41 48.9	+1.4
HYR	Heyderabad	3.04	82	P	Pg	11 41 55.6	-2.1
	SNR=10						
HYR				S	Sg	11 42 39.6	+2.6
SVSK	Karacayir	3.10	282	PN	Pn	11 41 49.6	+1.4
NAX	Nakhchivan	3.54	92	P	Pb	11 42 01.4	-0.7
	SNR=14						
NAX				S	Sg	11 42 50.5	-2.4
SBZ	Shahbuz	3.57	88	P	Pb	11 42 02.8	+0.1
	SNR=13						
SBZ				S	Sg	11 42 52.5	-1.5
SARI	SarD1z-Kayseri	3.66	256	PN	Pn	11 41 57.1	+1.0
QZX	Qazax, Azerbai	3.79	62	P	Pb	11 42 07.8	+1.4
	SNR=12						
QZX				S	Sg	11 43 04.4	+3.3
GDB	GEDABAY	3.94	68	P	Pb	11 42 10.5	+1.7
	SNR=21						
GDB				S	Sg	11 43 07.9	+2.2
ORD	Ordubad	3.95	95	P	Pb	11 42 07.3	-1.8
	SNR=12						
ORD				S	Sg	11 43 02.2	-3.9
GANJ	Ganja	4.33	71	S	Sg	11 43 16.5	-1.7
KBZ	Khabaz	4.61	18	Pn	Pn	11 42 13.0	+4.0
	0.4nm,0.3s,baz=224,slow=14,SNR=3.8						
KBZ				Lg	Lg	11 43 26.6	
	0.4nm,0.3s,baz=210,slow=8.1,SNR=5.6						
	1.5nm,0.4s						
KVAR	Kislovodsk Arr	4.78	15	Pn	Pn	11 42 13.1	+1.7
	baz=257,slow=16						
KVAR				Sn	Sn	11 43 10.2	+3.3
	baz=135,slow=14						
KVAR				LR	LR	11 44 18.2	
	comp=Z,96nm,18.6s,baz=111,slow=42						
	2.7nm,0.4s						
BRTR	Keskin Array B	5.66	276	Pn	Pn	11 42 24.5	+0.9
	0.2nm,0.3s,baz=110,slow=14,SNR=8.0						
BRTR				Lg	Lg	11 44 00.6	
	baz=136,slow=16						
	1.6nm,0.7s						
YRD	Yardimli	5.69	92	P	Pb	11 42 31.3	-7.5
	SNR=4.3						
MMAI	Mount Meron Ar	7.75	217	Pn	Pn	11 42 53.2	+0.9
	1.6nm,0.3s,baz=9.9,slow=18,SNR=2.7						
MMAI				Lg	Lg	11 45 06.4	
	1.3nm,0.3s,baz=99,slow=28,SNR=1.8						
	0.4nm,0.3s						
ASF	Jabal al Asfar	7.89	206	Pn	Pn	11 42 56.1	+2.0
	0.6nm,0.3s,baz=7.7,slow=10,SNR=3.0						
ASF				Lg	Lg	11 45 06.6	
	0.5nm,0.3s,baz=62,slow=24,SNR=3.5						
	3.7nm,0.5s						
EIL	Elat	10.85	209	Lg	Lg	11 46 45.2	
	0.3nm,0.3s,baz=50,slow=20,SNR=1.4						
EIL				LR	LR	11 47 25.8	
	comp=Z,73nm,19.7s,baz=292,slow=36						
IDI	Anoyia	13.41	257	LR	LR	11 50 04.7	
	comp=Z,43nm,21.2s,baz=95,slow=41						
AKASG	Malin Array Be	14.03	328	Pn	Pn	11 44 17.2	-0.8
	0.5nm,0.3s,baz=138,slow=10.0,SNR=8.7						
	0.6nm,0.4s						
AKTO	Aktyubinsk	16.36	42	Pn	Pn	11 44 49.3	+0.3
	0.1nm,0.3s,baz=215,slow=9.7,SNR=7.0						
	2.1nm,0.8s						
ARU	Arti	20.66	28	P	Pn	11 45 41.6	+0.3
	0.9nm,0.3s,baz=293,slow=20,SNR=1.6						
	0.9nm,0.3s						
WSAR	Wadi Sarin	21.99	132	LR	LR	11 55 45.9	
	comp=Z,50nm,18.7s,baz=336,slow=40						
FINES	FINESS Array B	23.94	342	P	P	11 46 13.4	+0.1
	1.8nm,0.7s,baz=152,slow=8.4,SNR=5.5						
FINES				LR	LR	11 56 06.3	
	comp=Z,37nm,19.4s,baz=226,slow=38						
	1.8nm,0.7s						
HFS	Hagfors	26.90	330	LR	LR	11 57 42.5	
	comp=Z,70nm,18.2s,baz=346,slow=37						
NOA	NORSAR Array B	28.43	330	LR	LR	11 58 38.0	
	comp=Z,21nm,20.3s,baz=165,slow=37						
MKAR	Makanchi Array	30.82	62	P	P	11 47 17.8	+2.6
	0.4nm,0.6s,baz=279,slow=8.0,SNR=4.5						
	0.4nm,0.6s						
ARCES	ARCESS Array B	31.34	350	P	P	11 47 20.9	+1.3
	2.3nm,1.0s,baz=161,slow=8.6,SNR=2.0						
	2.3nm,1.0s						
ZALV	Zalesovo Beam	32.88	49	LR	LR	12 04 23.8	
	comp=Z,22nm,18.8s,baz=54,slow=43						
ESDC	Sonseca Array	34.37	285	P	P	11 47 46.3	-0.2
	0.2nm,0.5s,baz=54,slow=7.0,SNR=1.6						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	43.31	244	P	P	11 49 01.6	0.0
	0.3nm,0.7s,baz=71,slow=7.3,SNR=2.0						
	0.3nm,0.7s						

GUC 25 11:47:22.7±0.8, 24.°39S×69.°13W, h96km±7km, ML3.5, 7C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	0.88	208	⇓iP	Pn	11 47 41.9	0.0
GO02				i S	Sn	11 47 56.4	+0.2
GO02				IAML		11 47 56.8	
	comp=N,4µm,0.1s						
PB14	IPOC Station P	1.18	258	⇓iP	Pn	11 47 45.3	+0.1
PB14				i S	Sn	11 48 02.5	+0.4
PB14				IAML		11 48 10.6	
	comp=N,337nm,0.2s						
PB15	IPOC Station P	1.21	345	⇑iP	Pn	11 47 45.4	-0.1
PB15				i S	Sn	11 48 02.7	0.0
PB10	IPOC Station P	1.56	304	⇑iP	Pn	11 47 50.2	+0.7
PB10				i S	Sn	11 48 09.8	-0.2
PB10				IAML		11 48 15.4	
	comp=N,232nm,0.4s						
AF01	San Pedro de A	1.68	32	⇑iP	Pn	11 47 51.7	+0.4
AF01				i S	Sn	11 48 13.4	+0.5
AF01				IAML		11 48 21.2	
	comp=E,864nm,0.5s						
PB06	IPOC Station P	1.72	346	eP	Pn	11 47 51.8	+0.1
PB06				i S	Sn	11 48 14.2	+0.5
PB06				IAML		11 48 19.5	
	comp=E,472nm,0.2s						
LVC	Limon Verde	1.78	7	eP	Pn	11 47 52.3	-0.4
LVC				i S	Sn	11 48 15.2	-0.3
AC01	Pan de Azucar	2.20	217	⇑iP	Pn	11 47 57.9	+0.2
AC01				IAML		11 48 31.9	
	comp=N,333nm,0.3s						
PB04	IPOC Station P	2.25	335	eP	Pn	11 47 58.2	-0.4
PB04				IAML		11 48 37.8	
	comp=N,293nm,0.2s						
AC02	Maricunga	2.44	180	⇑iP	Pn	11 48 02.2	+0.8
AC02				IAML		11 48 41.4	
	comp=N,214nm,0.2s						
PB09	IPOC Station P	2.58	358	eP	Pn	11 48 03.6	+0.6
PB09				IAML		11 48 41.8	
	comp=N,140nm,0.3s						
PB07	IPOC Station P	2.74	345	⇑iP	Pn	11 48 04.6	-0.4
PB07				IAML		11 48 48.6	
	comp=E,161nm,0.2s						
PB02	IPOC Station P	3.13	347	eP	Pn	11 48 09.5	-0.8
PB02				IAML		11 48 58.2	
	comp=E,261nm,0.3s						
AC06	Mina Casimiro	3.15	200	eP	Pn	11 48 09.2	-1.2
AC06				IAML		11 48 58.4	
	comp=N,134nm,0.2s						
GO03	Copiap	3.34	197	eP	Pn	11 48 11.6	-1.4
GO03				i S	Sn	11 48 52.6	+0.8
GO03				IAML		11 49 02.6	
	comp=N,138nm,0.2s						
PB01	IPOC Station P	3.34	354	⇑iP	Pn	11 48 12.5	-0.6
PB01				IAML		11 49 03.7	
	comp=E,156nm,0.3s						
PATCX	Punta Patache	3.67	345	eP	Pn	11 48 15.8	-1.7
AC04	Llanos de Chal	4.18	204	eP	Pn	11 48 21.6	-2.7
PB08	IPOC Station P	4.23	360	eP	Pn	11 48 24.0	-1.3
LCO	Las Campanas	4.81	197	eP	Pn	11 48 28.6	-4.5

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*NNC **25** 12:16:07.9±0.1, 42.°95N×71.°06E, h0km, mpv1.4, Error ellipse: s-maj=7.0km s-min=0.6km az=21.0, Suspected Mining explosion.*

*KRNET **25** 12:16:07.7±0.1, 43.°01N×71.°05E, h23km, mb2.6*

ISC 25 12:16:07.4±1.2, 43.°01N±0.°09×71.°15E±0.°06, h0km, n14, σ0.s23/28, 21C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK06	Karatay Array	0.47	281	⇑P	Pg	12 16 16.3	-0.1
KK06				⇑S	Sg	12 16 22.2	-0.2
KK05	Karatay Array	0.47	284	⇑P	Pg	12 16 16.4	0.0
KK05				⇑S	Sg	12 16 22.5	-0.1
KK02	Karatay Array	0.48	282	⇑P	Pg	12 16 16.6	0.0
KK02				⇑S	Sg	12 16 22.6	-0.1
KK31	Karatay Array	0.48	282	P	Pg	12 16 16.5	-0.1
	0.4nm,0.2s,baz=117,slow=18,SNR=137						
KK31				S	Sg	12 16 22.7	-0.1
	1.5nm,0.2s,baz=120,slow=31,SNR=14						
KKAR	Karatay Array	0.48	282	⇑iP	Pg	12 16 16.4	-0.2
	baz=84						
KKAR				⇑eS	Sg	12 16 22.4	-0.3
	baz=84						
KK01	Karatay Array	0.48	282	⇓P	Pg	12 16 16.5	-0.1
KK01				⇑S	Sg	12 16 22.6	-0.2
KK04	Karatay Array	0.48	283	⇑P	Pg	12 16 16.6	-0.1
KK04				⇑S	Sg	12 16 22.7	-0.2
KK07	Karatay Array	0.48	280	⇑P	Pg	12 16 16.6	-0.1
KK07				⇑S	Sg	12 16 22.5	-0.4
KK03	Karatay Array	0.48	282	⇑P	Pg	12 16 16.6	-0.1
KK03				⇓S	Sg	12 16 22.9	-0.1
KK09	Karatay Array	0.49	284	⇑P	Pg	12 16 16.7	-0.1
KK09				⇑S	Sg	12 16 23.0	-0.1
KK08	Karatay Array	0.49	282	⇑P	Pg	12 16 16.7	-0.2
KK08				⇓S	Sg	12 16 23.2	-0.1
ARK	Arkit	1.35	153	⇓eP	Pg	12 16 33.0	-0.3
	baz=50						
ARK				⇓eS	Sb	12 16 51.3	-0.2
	baz=50						
TRKS	Terek-Say	1.48	180	⇑iP	Pb	12 16 35.7	-0.1
	baz=77						
TRKS				⇑iS	Sn	12 16 56.2	+0.7
	baz=77						
UCH	Uchtor	2.60	106	⇑eP	Pn	12 16 51.6	+0.4
	baz=6.0						
UCH				⇑eS	Sn	12 17 23.6	-0.1
	baz=6.0						

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*IDC **25** 12:22:59.0±5.8, 14.°45N×92.°69W, h0km, mb3.5/5, mbtmp3.5/7, ML3.2/2, MS2.8/4, Error ellipse: s-maj=137.5km s-min=65.7km az=26.0*

*MEX **25** 12:23:03.9±0.6, 14.°31N×93.°08W, h10km, MD4.0*

*GCG **25** 12:23:04.7±0.3, 14.°91N×93.°01W, h70km±13km, MD4.0*

ISC 25 12:23:02.6±2.0, 14.°49N±0.°07×93.°02W±0.°05, h15km±11km, n21, σ1.s11/28, mb3.7/5, MS3.0/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.84	60	eP	Pn	12 23 19.7	-0.2
THIG				eS	Sn	12 23 32.0	0.0
PATR	El Naranjo	0.98	50	eP	Pn	12 23 22.0	-0.2
PATR				i S	Sn	12 23 36.1	+0.1
CHUJ	Union Juarez	1.06	55	eP	Pn	12 23 23.6	+0.2
CHUJ				i S	Sn	12 23 39.1	+1.1
PAVE	Pavencul	1.07	49	eP	Pg	12 23 23.4	0.0
PAVE				i S	Sn	12 23 39.4	+1.2
PCIG		1.23	351	eP	Pn	12 23 24.2	-1.1
PCIG				i S	Sb	12 23 38.5	-2.8
STG3	Santiaguito 3,	1.42	81	eP	Pb	12 23 29.2	+0.3
STG3				eS	Sg	12 23 48.1	-0.3
CCIG	Comitan	1.98	25	eP	Pb	12 23 39.1	+0.6
CCIG				eS	Sb	12 24 02.5	-0.6
FUG	Fuego 3	2.10	91	eP	Pn	12 23 39.0	+1.4
FUG				eS	Sn	12 24 02.2	-1.5
TGIG		2.28	357	eP	Pn	12 23 41.5	+1.6
TGIG				eS	Sb	12 24 10.5	-1.2
PCG	Pacaya	2.33	92	eP	Pn	12 23 40.3	-0.5
PCG				eS	Sb	12 24 12.2	-1.2
UXUV	UXUV	3.02	339	eP	Pn	12 23 51.3	+1.4
CMIG	Matias Romero	3.15	325	Pn	Pn	12 23 51.1	-0.8
	1.8nm,0.3s,baz=141,slow=9.5,SNR=25						
CMIG				LR	LR	12 24 49.5	
	comp=Z,32nm,18.9s,baz=44,slow=33						
	9.4nm,0.4s						
TXAR	Lajitas Array	17.76	328	P	P	12 27 12.0	+1.7
	baz=135,slow=14,SNR=8.1						
	0.9nm,0.9s						
SJG	San Juan	26.03	78	LR	LR	12 38 17.4	
	comp=Z,26nm,20.4s,baz=332,slow=36						
PDAR	Pinedale Array	31.58	336	P	P	12 29 25.8	+0.9
	0.2nm,0.6s,baz=146,slow=8.3,SNR=1.8						
	0.2nm,0.6s						
NVAR	Mina Array Bea	32.68	322	P	P	12 29 35.3	+0.6
	0.7nm,0.8s,baz=134,slow=9.3,SNR=7.5						
	0.7nm,0.8s						
YBH	Yreka Blue Hor	37.38	322	LR	LR	12 45 10.2	
	comp=Z,28nm,20.6s,baz=144,slow=35						
LPAZ	La Paz	39.23	140	LR	LR	12 44 08.4	
	comp=Z,28nm,18.9s,baz=52,slow=32						
YKA	Yellowknife Ar	50.33	347	P	P	12 31 58.0	-0.7
	0.7nm,0.7s,baz=148,slow=7.4,SNR=9.1						
	0.7nm,0.7s						
INK	Inuvik	59.70	344	P	P	12 33 05.6	-0.6
	0.7nm,0.6s,baz=141,slow=5.0,SNR=1.8						
	0.7nm,0.6s						
ILAR	Eielson Array	62.01	337	P	P	12 33 21.5	-0.5
	0.3nm,0.9s,baz=178,slow=4.3,SNR=4.5						
	0.3nm,0.9s						

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*IDC **25** 12:24:03.9±0.6, 17.°72N×94.°33W, h127km±9km, mb3.7/17, mbtmp4.1/18, Error ellipse: s-maj=25.5km s-min=11.2km az=63.0*

*NEIC **25** 12:24:05.8±1.8, 17.°57N±0.°05×94.°70W±0.°06, h150km±5km, mb4.5/147, Md4.5/37(MEX), Error ellipse: s-maj=9.0km s-min=6.5km az=62.0*

*MEX **25** 12:24:06.1±2.0, 17.°58N×94.°72W, h152km±13km, MD4.5*

ISC 25 12:24:05.1±0.6, 17.°51N±0.°04×94.°72W±0.°04, h151km±5km, n251, σ1.s26/228, mb4.3/49, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.45	201	P	Pn	12 24 26.3	0.0
	1µm,0.3s,baz=30,slow=1.0,SNR=172						
CMIG				S	Sn	12 24 41.4	-1.1
	1µm,0.3s,baz=322,slow=19,SNR=18						
CMIG	Matias Romero	0.45	201		Pn	12 24 26.5	+0.2
CMIG					Sn	12 24 41.6	-0.9
CMIG	Matias Romero	0.45	201	i P	Pn	12 24 26.5	+0.2
CMIG				i S	Sn	12 24 41.6	-0.9
UXUV	UXUV	0.58	109	eP	Pn	12 24 27.3	+0.4
UXUV				i S	Sn	12 24 42.5	-1.1
TUIG	Tuzandepetl	0.59	28		Pn	12 24 26.9	-0.2
TUIG					Sn	12 24 42.8	-1.0
TUIG	Tuzandepetl	0.59	28	i P	Pn	12 24 26.9	-0.2
TUIG				i S	Sn	12 24 42.8	-1.0
NEUV	Arroyo Zacate	1.05	281	i P	Pn	12 24 29.9	-0.5
NEUV				i S	Sn	12 24 47.9	-1.8
OXLC	Oaxaca	1.95	257	eP	Pn	12 24 40.1	+0.2
OXLC				eS	Sn	12 25 07.3	+0.7
OXBJ	Oaxaca	1.97	257		Pn	12 24 40.3	+0.2
OXBJ					Sn	12 25 07.5	+0.6
OXBJ	Oaxaca	1.97	257	eP	Pn	12 24 40.3	+0.2
OXBJ				eS	Sn	12 25 07.5	+0.6
VHO	Vista Hermosa	1.98	258	i P	Pn	12 24 40.4	+0.2
VHO				i S	Sn	12 25 07.8	+0.7
TOIG	Toxpalan	2.31	285	i P	Pn	12 24 44.3	+0.2
TOIG				i S	Sn	12 25 12.1	-2.0
TPIG	Tehuac#an	2.67	290		Pn	12 24 49.0	+0.4
TPIG					Sn	12 25 20.1	-2.0
TPIG	Tehuac#an	2.67	290	i P	Pn	12 24 49.0	+0.4
TPIG				i S	Sn	12 25 20.1	-2.0
JAUV	Jalcomulco	2.71	313	i P	Pn	12 24 47.7	-1.1
JAUV				i S	Sn	12 25 19.2	-3.5
CCIG	Comitan	2.76	116	Pn	Pn	12 24 50.5	+0.9
PEIG	Puerto Escondi	2.77	237	i P	Pn	12 24 47.5	-2.2
PEIG				eS	Sn	12 25 20.4	-3.7
YOIG	Yosondua	2.78	257	i P	Pn	12 24 49.2	-0.8
YOIG				eS	Sn	12 25 20.9	-3.8
HLIG	Huajuapan de L	2.96	277	i P	Pn	12 24 52.1	-0.1
HLIG				eS	Sn	12 25 24.1	-4.4
PAVE	Pavencul	3.36	133	eP	Pn	12 24 58.3	+1.0
PAVE				eS	Sn	12 25 36.5	-1.1
PATR	El Naranjo	3.37	135	eP	Pn	12 24 58.6	+1.1
PATR				i S	Sn	12 25 36.4	-1.6
PNIG	Pinotepa	3.45	252		Pn	12 24 56.1	-2.2
PNIG	Pinotepa	3.45	252	i P	Pn	12 24 56.1	-2.2
CHUJ	Union Juarez	3.47	133	eP	Pn	12 24 59.5	+0.7
CHUJ				eS	Sn	12 25 39.8	-0.6
THIG		3.50	137		Pn	12 24 59.6	+0.7
THIG					Sn	12 25 35.3	-5.3
THIG		3.50	137	eP	Pn	12 24 59.6	+0.7
THIG				eS	Sn	12 25 35.3	-5.3
TLIG	Tlapa	3.67	271		Pn	12 25 01.1	-0.1
HUEH	Huehuetenango	3.78	125	Pn	Pn	12 25 03.2	+0.5
RTAL	Retalhuleu	4.16	135	Pn	Pn	12 25 09.4	+1.9
UNM	Universidad Na	4.60	294	Pn	Pn	12 25 15.5	+1.9
PETF	Flores	4.67	97	Pn	Pn	12 25 15.0	+0.8
CAIG	El Cayaco	5.32	266	i P	Pn	12 25 21.5	-1.3
CAIG				i S	Sn	12 26 13.7	-10
MTO3	Montecristo	6.01	120	Pn	Pn	12 25 31.6	-0.6
MOIG	Morelia	6.50	290		Pn	12 25 41.3	+2.5
TGUH	Tegucigalpa,Un	7.95	115	Pn	Pn	12 25 56.7	-1.3
ZAIG	Zacatecas	9.04	307	Pn	Pn	12 26 11.5	-1.1
MATN	Matagalpa	9.63	117	Pn	Pn	12 26 19.8	-0.6
833A	Chaparral WMA,	11.59	339	Pn	Pn	12 26 45.7	-0.3
833A	Chaparral WMA,	11.59	339	P	Pn	12 26 45.1	-0.8
	baz=157						
JTS	Las Juntas de	11.89	126	P	Pn	12 26 50.5	+0.5
	1.9nm,0.3s,baz=357,slow=20,SNR=1.7						
JTS	Las Juntas de	11.89	126	Pn	Pn	12 26 50.2	+0.2
HKT	Hockley	12.42	355	Pn	Pn	12 26 57.5	+0.8
JACO	JACO, Garabito	12.50	127	Pn	Pn	12 26 59.2	+1.3
RIMA	Rio Macho	13.05	125		Pn	12 27 06.6	+1.3
PEZE	Perez Zeledon,	13.43	126	Pn	Pn	12 27 10.1	+0.1
435B	Jarrell	13.47	349	Pn	Pn	12 27 09.4	-0.8
JCT	Junction City	13.72	341	Pn	Pn	12 27 13.7	+0.3
JCT	Junction City	13.72	341	P	Pn	12 27 12.7	-0.7
	baz=159,SNR=9.0						
SRBA	San Rafael, Bu	13.77	125	Pn	Pn	12 27 14.8	+0.5
HPIG		13.80	315		Pn	12 27 15.4	+0.8
TXAR	Lajitas Array	14.34	327	P	P	12 27 22.8	-1.2
	4.2nm,0.5s,baz=149,slow=12,SNR=60						
TXAR	Lajitas Array	14.34	327	P	P	12 27 23.2	-0.8
TX31	Lajitas Ar. Si	14.34	327		P	12 27 22.8	-1.2
TX32	Lajitas Array	14.34	327		P	12 27 23.1	-1.0
WHTX	Lake Whitney,	14.63	351		Pn	12 27 24.5	-0.3
WHTX	Lake Whitney,	14.63	351	P	Pn	12 27 23.6	-1.2
	baz=170						
Z38A	Mt. Pleasant	15.68	359	P	P	12 27 38.8	0.0
ABTX	Abilene, Hawle	15.69	344	P	Pn	12 27 38.1	+0.1
ABTX				IAmb	IAmb	12 27 41.4	
	comp=Z,31nm,0.8s						
ABTX	Abilene, Hawle	15.69	344	P	Pn	12 27 37.7	-0.3
	baz=162,SNR=9.2						
Z41A	Richland Creek	15.77	6	Pn	Pn	12 27 37.7	-1.3
Z35A	Perchaven, San	15.92	352		P	12 27 41.0	-0.4
Z35A				IAmb	IAmb	12 27 43.6	
	comp=Z,23nm,0.7s						
WLAR	White Oak Lake	16.17	5		P	12 27 44.2	0.0
WLAR				IAmb	IAmb	12 27 46.5	
	comp=Z,19nm,0.8s						
LRAL	Lakeview Retre	16.95	23	P	Pn	12 27 52.6	-0.7
X40A	Basin Creek Fa	16.99	5	P	Pn	12 27 53.4	-0.3
X40A	Basin Creek Fa	16.99	5	P	Pn	12 27 53.2	-0.5
	baz=186						
MIAR	Mount Ida	16.99	3	P	Pn	12 27 53.5	-0.3
MIAR				IAmb	IAmb	12 27 54.5	
	comp=Z,18nm,0.9s						
MIAR	Mount Ida	16.99	3	P	P	12 27 52.7	-0.5
	baz=184,SNR=12						
X37A	Clayton	17.02	358	P	Pn	12 27 53.9	-0.2
X37A				IAmb	IAmb	12 27 56.7	
	comp=Z,18nm,0.7s						
MNTX	Cornudas Mount	17.11	328	P	Pn	12 27 55.2	-0.1
MNTX	Cornudas Mount	17.11	328	P	P	12 27 54.7	+0.1
	baz=143,SNR=7.1						
X34A	Smith Ranch, M	17.25	351	P	Pn	12 27 57.0	+0.1
X34A				IAmb	IAmb	12 28 12.1	
	comp=Z,17nm,0.7s						
UALR	University of	17.32	7		Pn	12 27 57.1	-0.6
UALR				IAmb	IAmb	12 27 58.9	
	comp=Z,23nm,0.7s						
WMOK	Wichita Mounta	17.54	349	P	Pn	12 27 59.5	-0.8
WMOK	Wichita Mounta	17.54	349	P	P	12 27 59.1	-0.1
	baz=167						
OXF	Oxford	17.58	15	P	P	12 27 59.5	-0.1
OXF				IAmb	IAmb	12 28 09.7	
	comp=Z,12nm,0.8s						
W39A	Magazine	17.63	3	P	Pn	12 28 00.6	-0.8
W39A				IAmb	IAmb	12 28 13.1	
	comp=Z,19nm,0.6s						
W39A	Magazine	17.63	3	P	Pn	12 28 00.5	-0.9
	baz=183,SNR=11						
W41B	Gary Mavity, V	17.73	7	P	P	12 28 01.1	-0.2
	baz=188						
Y49A	Blount Mountai	17.90	23	P	P	12 28 03.1	-0.1
MSTX	Muleshoe	17.91	338	P	P	12 28 02.8	-0.6
	baz=154,SNR=18						
Z51A	Franklin	17.93	27	P	P	12 28 02.9	-0.6
OKCFA	Oklahoma City	18.00	353	P	Pn	12 28 04.8	-1.0
TUL1	Leonard	18.35	357	IAmb	IAmb	12 28 11.7	
	comp=Z,34nm,0.9s						
TUL1	Leonard	18.35	357	P	P	12 28 07.3	-0.8
	baz=177,SNR=7.8						
PLAL	Pickwick Lake	18.38	18	P	P	12 28 08.5	+0.1
AMTX	Amarillo	18.38	342	P	Pn	12 28 09.4	-1.0
AMTX	Amarillo	18.38	342	P	P	12 28 08.7	+0.1
	baz=158						
FCAR	Ozark Folk Cen	18.45	7	P	Pn	12 28 09.9	-1.2
FCAR				IAmb	IAmb	12 28 10.9	
	comp=Z,20nm,0.6s						
HHAR	Hobbs	18.71	2	P	P	12 28 11.4	-0.6
HHAR				IAmb	IAmb	12 28 15.4	
	comp=Z,21nm,0.6s						
LCAR	Lake Charles	18.75	9		P	12 28 12.3	-0.2
GOGA	Godfrey	18.79	30	IAmb	IAmb	12 28 25.0	
	comp=Z,10nm,0.7s						
GOGA	Godfrey	18.79	30	P	P	12 28 12.2	-0.6

	baz=215						
FPAL	Fort Paine	18.81	24	IAmb	IAmb	12 28 13.3	
	comp=Z,5.8nm,0.5s						
U40A	Yellville	18.84	5	P	P	12 28 13.0	-0.5
	baz=185,SNR=29						
Y52A	Lilburn	18.88	28	IAmb	IAmb	12 28 26.6	
	comp=Z,18nm,0.8s						
121A	Cookes Peak, D	19.05	324	P	P	12 28 16.1	+0.2
	baz=139						
SWET	Sewanee	19.29	22	P	P	12 28 17.3	-1.1
SWET				IAmb	IAmb	12 28 18.0	
	comp=Z,8.6nm,0.4s						
W50A	Signal Mountai	19.51	24	IAmb	IAmb	12 28 20.2	
	comp=Z,12nm,0.4s						
WVT	Waverly	19.52	17	P	P	12 28 19.6	-1.2
WVT	Waverly	19.52	17	P	P	12 28 21.0	+0.2
	baz=200						
PBMO	Poplar Bluff	19.56	10	P	P	12 28 20.5	-0.7
PBMO				IAmb	IAmb	12 28 21.6	
	comp=Z,20nm,1.1s						
MGMO	Mountain Grove	19.69	6	IAmb	IAmb	12 28 24.6	
	comp=Z,10nm,0.6s						
W52A	Murphy	19.98	27	IAmb	IAmb	12 28 33.6	
	comp=Z,6.2nm,0.5s						
CPCT	Cooper Cave	20.04	25	IAmb	IAmb	12 28 29.2	
	comp=Z,7.3nm,0.4s						
HODGE	Hodges	20.04	31	IAmb	IAmb	12 28 26.2	
	comp=Z,8.5nm,0.8s						
S39A	Bolivar	20.14	3	P	P	12 28 27.1	-0.4
S39A				IAmb	IAmb	12 28 30.1	
	comp=Z,8.2nm,0.6s						
ANMO	Albuquerque	20.28	331	P	P	12 28 30.7	+1.5
	comp=Z,8.1nm,0.7s,baz=144,slow=12,SNR=27						
	comp=Z,8.1nm,0.7s						
ANMO	Albuquerque	20.28	331	P	P	12 28 29.2	+0.1
ANMO				IAmb	IAmb	12 28 31.8	
	comp=Z,8.5nm,0.8s						
ANMO	Albuquerque	20.28	331	P	P	12 28 29.5	+0.4
	baz=146						
BG3	Lake Jocassee	20.34	29	P	P	12 28 29.0	-0.5
BG3				IAmb	IAmb	12 28 45.8	
	comp=Z,13nm,0.7s						
U49A	Red Boiling Sp	20.51	21	IAmb	IAmb	12 28 33.3	
	comp=Z,13nm,1.0s						
TKL	Tuckaleechee C	20.52	26	P	P	12 28 29.9	-1.6
	comp=Z,4.8nm,0.4s,baz=189,slow=10.0,SNR=18						
	comp=Z,4.8nm,0.4s						
JSC	Jenkinsville	20.59	33	IAmb	IAmb	12 28 31.9	
	comp=Z,9.6nm,0.5s						
TUC	Tucson	20.68	318	P	P	12 28 32.8	-0.6
TUC	Tucson	20.68	318	P	P	12 28 33.7	+0.3
	baz=132						
CCM	Cathedral Cave	20.69	8	P	P	12 28 32.0	-1.3
CCM				IAmb	IAmb	12 28 33.9	
	comp=Z,15nm,0.6s						
CCM	Cathedral Cave	20.69	8	P	P	12 28 32.7	-0.6
	baz=189						
PAULI	Pauline	20.73	31	IAmb	IAmb	12 28 35.3	
	comp=Z,7.5nm,0.7s						
V52A	Sevierville	20.76	26	IAmb	IAmb	12 29 09.8	
	comp=Z,32nm,2.0s						
R40A	Maddies Statio	20.81	5	IAmb	IAmb	12 28 38.1	
	comp=Z,12nm,0.5s						
V53A	Saluda	20.95	28	P	P	12 28 35.7	-0.5
V53A				IAmb	IAmb	12 28 37.5	
	comp=Z,7.4nm,0.6s						
KMSC	Kings Mountain	21.23	32	IAmb	IAmb	12 28 40.0	
	comp=Z,12nm,0.7s						
KMSC	Kings Mountain	21.23	32	P	P	12 28 38.2	-0.8
	baz=218						
T25A	Trinidad	21.34	338	IAmb	IAmb	12 28 49.2	
	comp=Z,8.9nm,0.8s						
T25A	Trinidad	21.34	338	P	P	12 28 40.8	+0.3
	baz=154,SNR=5.9						
TZTN	Tazewell	21.38	25	P	P	12 28 40.2	-0.5
	baz=210						
KSU1	Kansas State U	21.57	356	P	P	12 28 42.7	0.0
	baz=175						
CBKS	Cedar Bluff	21.67	349	P	P	12 28 43.8	0.0
CBKS				IAmb	IAmb	12 28 45.8	
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	21.67	349	P	P	12 28 43.5	-0.4
	baz=167						
214A	Organ Pipe Nat	21.79	315	P	P	12 28 45.2	0.0
	baz=127						
V55A	Taylorsville	21.85	31	IAmb	IAmb	12 28 46.0	
	comp=Z,13nm,0.6s						
Q44A	Meyer Farm, Va	21.89	12	P	P	12 28 45.6	-0.4
Q44A				IAmb	IAmb	12 28 45.9	
	comp=Z,12nm,0.5s						
W57A	Gilead	21.93	34	P	P	12 28 45.8	-0.6
W57A				IAmb	IAmb	12 28 46.4	
	comp=Z,14nm,0.8s						
W18A	Petrified Fore	22.06	326	P	P	12 28 48.2	+0.2
	baz=139						
P38A	Dawn	22.06	2	IAmb	IAmb	12 28 47.3	
	comp=Z,7.5nm,0.6s						
P40A	Paris	22.06	6	IAmb	IAmb	12 28 48.4	
	comp=Z,13nm,0.6s						
U54A	Nelsons Funny	22.11	29	IAmb	IAmb	12 28 48.3	
	comp=Z,12nm,0.6s						
SDCO	Great Sand Dun	22.27	337	P	P	12 28 52.4	+2.1
SDCO	Great Sand Dun	22.27	337	P	P	12 28 49.6	-0.6
	baz=152,SNR=9.2						
S51A	Beattyville	22.31	24	P	P	12 28 49.0	-1.2
KSCO	Kaye Shedlock’	22.50	344	P	P	12 28 52.2	-0.1
	baz=160						
S22A	4UR Ranch, Cre	22.79	335	P	P	12 28 55.0	-0.2
	baz=149						
V58A	Windy Hill, Pi	22.88	34	IAmb	IAmb	12 28 55.4	
	comp=Z,11nm,0.5s						
MVCO	Mesa Verde	23.07	331	P	P	12 28 57.5	-0.2
	baz=144,SNR=7.5						
Q24A	Divide	23.23	339	P	P	12 28 59.6	+0.4
	baz=154,SNR=6.4						
WUAZ	Wupatki	23.26	324	IAmb	IAmb	12 29 03.6	
	comp=Z,12nm,1.0s						
WUAZ	Wupatki	23.26	324	P	P	12 28 59.1	-0.2
	baz=136,SNR=7.5						
BLA	Blacksburg	23.32	30	P	P	12 28 59.0	-0.7
	baz=216						
P49A	Miami Univ. Ec	23.60	20	P	P	12 29 01.4	-0.8
	baz=204						
SFIN	Lafayette	23.72	15	P	P	12 29 02.6	-0.6
	baz=198						
T57A	Hurt	23.72	32	IAmb	IAmb	12 29 04.1	
	comp=Z,10nm,0.5s						
GLA	Glamis	23.81	314	P	P	12 29 04.1	-0.1
	baz=126						
PV15	Paradox Valley	24.00	333	IAmb	IAmb	12 29 11.4	
	comp=Z,8.2nm,0.9s						
PV13	Radium Mtn., P	24.00	332	IAmb	IAmb	12 29 10.1	
	comp=Z,8.8nm,0.6s						
PV05	Paradox Valley	24.06	331	IAmb	IAmb	12 29 11.8	
	comp=Z,11nm,1.0s						
PV03	Paradox Valley	24.09	332	IAmb	IAmb	12 29 10.9	
	comp=Z,7.4nm,0.6s						
PV18	Skein Mesa, Pa	24.11	332	IAmb	IAmb	12 29 11.1	
	comp=Z,9.0nm,0.6s						
PV12	Saucer Basin,	24.12	332	IAmb	IAmb	12 29 13.0	
	comp=Z,12nm,1.0s						
O48B	Farmland	24.13	18	P	P	12 29 05.8	-1.1
	baz=203,SNR=5.2						
PV11	David Mesa, Pa	24.14	332	IAmb	IAmb	12 29 14.2	
	comp=Z,11nm,0.7s						
ISCO	Idaho Springs	24.14	339	P	P	12 29 07.2	-0.2
	baz=154						
PV17	East Wray Mesa	24.16	332	IAmb	IAmb	12 29 13.5	
	comp=Z,8.3nm,0.7s						
PV16	Nyswonger Mesa	24.16	332	IAmb	IAmb	12 29 12.6	
	comp=Z,13nm,1.3s						
OGNE	Ogallala	24.19	346	P	P	12 29 08.1	+0.5
	baz=163						
PV19	Morning Glory	24.19	332	IAmb	IAmb	12 29 12.8	
	comp=Z,8.6nm,0.8s						
PV20	West Nyswonger	24.21	332	IAmb	IAmb	12 29 12.5	
	comp=Z,6.2nm,0.6s						
PV04	Paradox Valley	24.23	332	IAmb	IAmb	12 29 12.5	
	comp=Z,10nm,0.7s						
PV14	Lion Creek, Pa	24.26	332	IAmb	IAmb	12 29 14.0	
	comp=Z,8.0nm,0.8s						
O49A	Covington	24.32	20	IAmb	IAmb	12 29 08.5	
	comp=Z,28nm,1.1s						
R55A	Marlinton	24.32	29	IAmb	IAmb	12 29 10.8	
	comp=Z,10nm,0.7s						
PV23	Carpenter Ridg	24.32	332	IAmb	IAmb	12 29 16.3	
	comp=Z,14nm,0.9s						
SCIA	State Center	24.35	3	P	P	12 29 09.7	+0.8
	baz=183						
BC3	Big Chuckawall	24.59	315	P	P	12 29 12.7	+1.4
	baz=126						
L40A	Anamosa	24.65	6	IAmb	IAmb	12 29 12.8	
	comp=Z,11nm,0.6s						
BELC	Belle Mtn. Jos	25.16	315	P	P	12 29 17.0	+0.4
	baz=125						
N23A	Red Feather La	25.23	340	P	P	12 29 18.2	+0.9
	baz=154						
TPFO	Pinon Flats	25.24	314	P	P	12 29 18.2	+0.9
	baz=124						
GMRC	Granite Mounta	25.39	317	P	P	12 29 19.6	+0.9
	baz=127						
O20A	White River Ci	25.40	335	P	P	12 29 19.6	+0.8
	baz=149						
MTPU	Mount Pierson	25.55	327	IAmb	IAmb	12 29 28.2	
	comp=Z,7.3nm,1.0s						
JFWS	Jewell Farm	25.60	8	P	P	12 29 20.4	+0.1
	baz=190						
ECSD	EROS Data Cent	26.19	357	P	P	12 29 25.8	+0.2
	baz=176						
SCI2	San Clemente I	26.40	310	P	P	12 29 29.1	+1.5
	baz=120						
BFSC	Mount Baldy Ra	26.43	313	P	P	12 29 29.3	+1.4
	baz=123						
GSC	Goldstone, Bar	26.46	316	P	P	12 29 29.5	+1.3
	baz=126						
R11A	Troy Canyon, C	27.64	323	P	P	12 29 39.7	+0.8
	baz=133						
PDAR	Pinedale Array	28.17	336	P	P	12 29 43.3	-0.2
	comp=Z,0.3nm,0.6s,baz=148,slow=8.7,SNR=2.7						
	comp=Z,0.3nm,0.6s						
ELK	Elko	29.14	327	P	P	12 29 54.1	+2.0
	comp=Z,1.3nm,0.7s,baz=128,slow=10,SNR=5.5						
	comp=Z,1.3nm,0.7s						
NV07	Mina Array Sit	29.30	320	P	P	12 29 56.4	+2.8
NV08	Mina Array Sit	29.31	320	P	P	12 29 56.5	+2.9
NV01	Mina Array Sit	29.31	320	P	P	12 29 56.5	+2.8
NVAR	Mina Array Bea	29.31	320	P	P	12 29 56.5	+2.8
	comp=Z,3.2nm,0.8s,baz=132,slow=9.1,SNR=24						
	comp=Z,3.2nm,0.8s						
NV02	Mina Array Sit	29.32	320	P	P	12 29 56.1	+2.3
LHV	Little Huntoon	29.32	320	P	P	12 29 53.5	0.0
KVN	Kaiserville	29.58	321	IAmb	IAmb	12 30 29.6	
	comp=Z,11nm,2.0s						
RLMT	Red Lodge	30.10	339	P	P	12 30 01.3	+0.7
	baz=151						
SADO	Sadowa	30.16	22	P	P	12 29 57.6	-3.1
	comp=Z,2.1nm,0.3s,baz=236,slow=11,SNR=2.6						
	comp=Z,2.1nm,0.3s						
SADO	Sadowa	30.16	22	P	P	12 29 59.3	-1.5
SADO				IAmb	IAmb	12 30 35.2	
	comp=Z,9.3nm,1.2s						
EYMN	Ely	30.47	4	P	P	12 30 02.8	-0.7
	baz=186						
AGMN	Agassiz Nation	30.72	359	P	P	12 30 04.9	-0.8
	baz=178,SNR=9.5						
HLID	Hailey	30.86	331	P	P	12 30 09.1	+1.9
HLID	Hailey	30.86	331	P	P	12 30 07.1	-0.1
	baz=141						
BOZ	Bozeman (W)	31.36	337	P	P	12 30 12.3	+0.8
	baz=148						
ULM	Lac du Bonnet	32.67	359	P	P	12 30 21.2	-1.5
	comp=Z,4.4nm,0.5s,baz=169,slow=10.0,SNR=6.7						
	comp=Z,4.4nm,0.5s						
ULM	Lac du Bonnet	32.67	359	IAmb	IAmb	12 30 22.4	
	comp=Z,5.2nm,0.6s						
J08A	Circle Bar Ran	32.69	327	IAmb	IAmb	12 30 25.9	
	comp=Z,6.8nm,0.7s						
EGMT	Eagleton	32.83	341	P	P	12 30 24.9	+0.6
	baz=153						
MSO	Missoula	33.27	336	P	P	12 30 29.2	+1.0
	baz=145						
F10A	Beach Ranch, E	33.99	331	IAmb	IAmb	12 30 35.8	
	comp=Z,3.8nm,0.6s						
K04D	Chiloquin, OR	33.99	323	P	P	12 30 34.7	+0.2
	baz=129						
EDM	Edmonton	38.49	342	IAmb	IAmb	12 31 13.5	
	comp=Z,6.1nm,0.5s						
LPAZ	La Paz	42.59	141	P	P	12 31 48.7	+1.5
	comp=Z,2.6nm,0.7s,baz=320,slow=3.9,SNR=8.1						
	comp=Z,2.6nm,0.7s						
LPAZ	La Paz	42.59	141	P	P	12 31 49.1	+1.9
SCHQ	Schefferville	42.95	23	P	P	12 31 47.8	-1.2
	comp=Z,1.5nm,0.5s,baz=224,slow=9.7,SNR=2.0						
	comp=Z,1.5nm,0.5s						
PB16	IPOC Station P	43.40	144	P	P	12 31 56.3	+2.6
SIV	San Ignacio	46.99	133	P	P	12 32 21.6	+0.2
	comp=Z,6.8nm,0.9s,baz=308,slow=8.5,SNR=20						
	comp=Z,6.8nm,0.9s						
YKA	Yellowknife Ar	47.04	348	P	P	12 32 20.5	-0.5
	comp=Z,1.1nm,0.6s,baz=150,slow=7.4,SNR=11						
	comp=Z,1.1nm,0.6s						
YKA	Yellowknife Ar	47.04	348	P	P	12 32 21.1	+0.1
PLBC	Pleasant Camp	51.59	334	P	P	12 32 56.5	+0.9
	baz=126						
M31M	Drury Creek, Y	52.52	338	P	P	12 33 03.2	+0.7
	baz=130						
M30M	Minto, Yukon	53.63	337	P	P	12 33 11.4	+0.8
	baz=127						
M27K	Edge Creek, AK	55.45	335	P	P	12 33 24.7	+0.8
	baz=122						
DAWY	Dawson	55.46	338	P	P	12 33 24.7	+0.9
	baz=126						
L27K	Beaver Creek,	55.80	336	P	P	12 33 27.7	+1.4
	baz=122						
M26K	Nabesna, AK	55.92	335	P	P	12 33 28.2	+1.1
	baz=121						
INK	Inuvik	56.35	344	P	P	12 33 30.6	+0.6
	comp=Z,2.0nm,0.5s,baz=128,slow=4.0,SNR=8.7						
	comp=Z,2.0nm,0.5s						
INK	Inuvik	56.35	344	P	P	12 33 30.6	+0.6
INK				IAmb	IAmb	12 33 31.4	
	comp=Z,2.3nm,0.7s						
INK	Inuvik	56.35	344	P	P	12 33 30.6	+0.6
	baz=134						
K27K	Chicken	56.42	337	P	P	12 33 32.4	+1.8
	baz=123						
EGAK	Eagle	56.50	338	P	P	12 33 32.1	+0.9
	baz=124						
PAX	Paxson	57.19	335	P	P	12 33 37.1	+0.9
	baz=118						
J26L	Joseph Creek	57.22	337	P	P	12 33 37.5	+1.1
	baz=121						
RIDG	Independent Ri	57.32	336	P	P	12 33 38.4	+1.4
	baz=120						
K24K	Donnelly Dome	57.71	336	P	P	12 33 40.6	+0.8
	baz=119						
ILAR	Eielson Array	58.60	337	P	P	12 33 46.8	+0.9
	comp=Z,0.5nm,0.6s,baz=146,slow=4.8,SNR=10						
	comp=Z,0.5nm,0.6s						
TRF	Thorofare Moun	59.36	334	P	P	12 33 52.3	+1.0
	baz=114						
H24K	Noodor Dome	59.47	338	P	P	12 33 53.0	+1.2
	baz=118						
I23K	Minto, Yukon-K	59.71	336	P	P	12 33 54.4	+1.0
	baz=116						
BPAW	Bear Paw Mtn.	59.91	335	P	P	12 33 55.8	+0.9
	baz=114						
L20K	Farewell, AK	60.52	333	P	P	12 34 00.1	+1.0
	baz=110						
K20K	Telida	60.91	334	P	P	12 34 02.7	+1.1
	baz=110						
J20K	Nowinta River	61.22	335	P	P	12 34 04.2	+0.5
	baz=110						
TOLK	Toolik Lake Re	61.35	340	P	P	12 34 05.6	+1.1
	baz=117						
PLCA	Paso Flores	62.15	159	P	P	12 34 11.3	+1.1
	comp=Z,1.1nm,0.8s,baz=344,slow=3.8,SNR=4.8						
	comp=Z,1.1nm,0.8s						
PLCA	Paso Flores	62.15	159	P	P	12 34 11.5	+1.2
ESDC	Sonseca Array	79.60	52	P	P	12 35 55.2	-0.6
	comp=Z,0.7nm,1.0s,baz=247,slow=6.6,SNR=2.6						
	comp=Z,0.7nm,1.0s						
ARCES	ARCESS Array B	83.62	18	P	P	12 36 16.0	-0.3
	comp=Z,2.4nm,0.9s,baz=320,slow=6.6,SNR=6.7						
	comp=Z,2.4nm,0.9s						
ARCES	ARCESS Array B	83.62	18	P	P	12 36 16.6	+0.3
TORD	Torodi Ar. Bea	92.08	76	P	P	12 36 57.4	-0.4
	comp=Z,0.7nm,1.0s,baz=274,slow=6.5,SNR=2.0						
	comp=Z,0.7nm,1.0s						
PZH	PanZhiHua	133.42	340	PKP	PKiKP	12 43 06.5	+1.0
WRA	Warramunga Arr	133.61	259	PKP	PKPdf	12 43 05.9	+1.4
	comp=Z,0.2nm,0.6s,baz=26,slow=1.0,SNR=1.3						

WEL 25 12:25:60.0, 43˚S±2˚×17˚3E±˚, h9^{km}±2^{km}, M3.5/6, ML3.8/6, MLv3.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=28.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MQZ	McQueen’s Vall	0.23	187	P	Pg	12 26 06.0	+1.3
MQZ				S	Sg	12 26 10.1	+2.1
AMCZ	Amberley	0.30	354	P	Pb	12 26 07.5	0.0
AMCZ				S	Sb	12 26 13.1	+0.6
OKCZ	Okains Bay	0.36	134	P	Pg	12 26 07.3	+0.1
AKCZ	Akaroa Harbour	0.43	159	P	Pg	12 26 08.9	+0.6
AKCZ				S	Sg	12 26 14.8	+0.8
RACZ	Rakaia	0.48	238	P	Pn	12 26 11.9	-1.1
OXZ	Oxford	0.50	287	P	Pn	12 26 12.2	-1.2
GVZ	Greta Valley S	0.56	26	P	Pb	12 26 11.5	-0.5
LTZ	Lake Taylor	0.76	336	P	Pn	12 26 16.4	-0.6
WACZ	Wakanui South	0.78	233	P	Pn	12 26 17.5	+0.4
MHCZ	Mount Hutt	0.82	266	P	Pn	12 26 18.7	+0.9
INZ	Inchbonnie	1.18	309	P	Pn	12 26 23.1	+0.4
ARCZ	Arundel	1.20	246	P	Pg	12 26 23.4	+0.4
RPZ	Rata Peaks	1.22	258	P	Pg	12 26 23.8	+0.5
KHZ	Kahutara	1.23	31	P	Pn	12 26 21.5	-1.8
WVZ	Waitaha Valley	1.48	285	P	Pg	12 26 28.1	-0.3
TMZ	Timaru	1.52	233	P	Pb	12 26 27.9	-0.5
THZ	Tophouse	1.72	5	P	Pn	12 26 29.5	-0.6
GCSZ	Gaunt Creek Bo	1.73	274	P	Pg	12 26 32.7	-0.5
DSZ	Denniston Nort	1.85	339	P	Pn	12 26 32.5	+0.6
BSWZ	Blackbirch Sta	1.96	27	P	Pn	12 26 32.6	-0.8
LBZ	Lake Benmore	2.03	242	P	Pn	12 26 35.6	+1.2
MRNZ	Matariki Terra	2.07	1	P	Pn	12 26 35.3	+0.3
FOZ	Fox Glacier	2.10	267	P	Pb	12 26 37.7	-0.5
ODZ	Otahua Downs	2.15	222	P	Pn	12 26 36.3	+0.2
TUWZ	Tuamarina	2.24	25	P	Pn	12 26 36.1	-1.2
NNZ	Nelson	2.31	13	P	Pn	12 26 38.0	-0.2
TKNZ	Takaka Hill	2.45	5	P	Pn	12 26 40.5	+0.4
TCW	Tory Channel	2.55	28	P	Pn	12 26 40.1	-1.4
QRZ	Quartz Range	2.65	357	P	Pn	12 26 43.1	+0.2
PLWZ	Palliser	2.68	46	P	Pn	12 26 41.1	-2.3
MSWZ	Moikau Station	2.79	43	P	Pn	12 26 42.6	-2.3
DUWZ	D’Urville Isla	2.82	19	P	Pn	12 26 44.7	-0.6
HHSZ	Highcliff Hill	2.84	211	P	Pn	12 26 45.5	+0.1
JCZ	Jackson Bay	2.90	257	P	Pn	12 26 48.2	+1.9
CAW	Cannon Point	2.95	37	P	Pn	12 26 45.0	-2.0
WKZ	Wanaka	2.97	242	P	Pn	12 26 48.4	+1.1
EAZ	Earnscleugh	3.00	233	P	Pn	12 26 48.1	+0.4
TUZ	Tuapeka	3.31	220	P	Pn	12 26 52.3	+0.4
MRZ	Mangatainoka R	3.54	38	P	Pn	12 26 53.5	-1.6
MSZ	Milford Sound	3.64	249	P	Pn	12 26 58.4	+2.0
MLZ	Mavora Lakes	3.79	238	P	Pn	12 26 59.3	+0.7
BFZ	Birch Farm	3.84	45	P	Pn	12 26 56.8	-2.5
SYZ	Scrubby Hill	3.97	218	P	Pn	12 27 01.6	+0.6
WHZ	Wether Hill Ro	4.16	233	P	Pn	12 27 03.1	-0.6
TSZ	Takapari Road	4.20	37	P	Pn	12 27 02.8	-1.3
KHEZ	Kahui Hut	4.29	14	P	Pn	12 27 07.2	+1.6
PKE	Pukeiti	4.38	13	P	Pn	12 27 08.5	+1.7
VRZ	Vera Road	4.61	20	P	Pn	12 27 11.0	+1.1
BHHZ	Black Hill Sta	4.72	34	P	Pn	12 27 10.3	-1.1
APZ	The Paps	4.73	223	P	Pn	12 27 11.8	+0.3
TUVZ	Tukino	4.75	29	P	Pn	12 27 12.0	0.0
TOZ	Tahuroa Road	6.12	21	P	Pn	12 27 29.8	-0.8

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*IDC **25** 12:41:35.1±1.3, 15˚.93S×167˚.74E, h0^{km}, mb3.9/6, mbtmp3.9/7, ML4.0/1, MS3.3/11, Error ellipse: s-maj=47.0km s-min=25.4km az=133.0*

*NEIC **25** 12:41:40.4±1.2, 15˚.98S±0˚.06×167˚.7E±0˚.1, h28^{km}±7^{km}, mb4.3/12, Error ellipse: s-maj=20.2km s-min=5.6km az=71.0*

*NOU **25** 12:41:41.0, 16˚.00S×167˚.58E, h24^{km}, MLv4.7/19, Vanuatu Islands*

ISC 25 12:41:41.3±0.7, 16˚.03S±0˚.05×167˚.58E±0˚.09, h39^{km}, n54, σ1^{s}66/52, mb4.3/10, MS3.4/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.69	328		Pn	12 41 53.9	-0.6
SANVU				Sn	Sn	12 42 04.1	+0.1
SANVU	Saraoutou	0.69	328	P	Pn	12 41 54.3	-0.2
DVP	Devils Point	1.78	161	P	Pn	12 42 11.2	+1.6
RTV	Rentapao	1.93	155	P	Pn	12 42 13.4	+1.8
LIFNC	LIFOU	4.73	184	Pn	Pn	12 42 49.7	-0.5
LIFNC				Sn	Sn	12 43 38.7	-5.0
LIFNC	LIFOU	4.73	184	P	Pn	12 42 49.8	-0.3
MARNC	Mare, Loyalty	5.44	176		Pn	12 42 59.1	-0.8
MARNC	Mare, Loyalty	5.44	176	P	Pn	12 42 59.5	-0.3
KOUNC	Koumac, New Ca	5.48	214		Pn	12 43 01.1	+0.7
KOUNC	Koumac, New Ca	5.48	214	P	Pn	12 43 01.5	+1.1
YATNC	Mamie plateau,	6.03	186	P	Pn	12 43 08.2	+0.2
DZM	Mont Dzumac	6.10	190	Pn	Pn	12 43 08.4	-0.7
	3.2nm,0.3s,baz=52,slow=19,SNR=94						
DZM				Sn	Sn	12 44 15.7	-2.0
	8.7nm,0.3s,baz=330,slow=20,SNR=7.7						
DZM				LR	LR	12 45 18.3	
	comp=Z,274nm,20.1s,baz=13,slow=36						
	7.3nm,0.3s						
DZM	Mont Dzumac	6.10	190		Pn	12 43 09.8	+0.7
DZM	Mont Dzumac	6.10	190	P	Pn	12 43 10.5	+1.4
NOUC	Port Laguerre	6.16	191	P	Pn	12 43 11.1	+1.4
ONTNC	Ouen Toro	6.33	190		Pn	12 43 13.9	+1.8
ONTNC	Ouen Toro	6.33	190	P	Pn	12 43 13.8	+1.7
OUENC	Ouen Island, N	6.39	186		Pn	12 43 10.0	-2.9
OUENC	Ouen Island, N	6.39	186	P	Pn	12 43 14.9	+2.0
PINNC	Pines Island,	6.55	181	Pn	Pn	12 43 15.2	+0.1
PINNC	Pines Island,	6.55	181	P	Pn	12 43 16.4	+1.3
HNR	Honiara	9.92	310	LR	LR	12 47 19.1	
	comp=Z,185nm,20.6s,baz=210,slow=34						
HNR	Honiara	9.92	310		Pn	12 43 57.9	-3.5
MSVF	Nonsavu	10.16	101	Pn	Pn	12 44 09.5	+4.7
	0.3nm,0.3s,baz=283,slow=16,SNR=8.5						
EIDS	Eidsvold	18.00	236		Pn	12 45 49.3	+0.8
CTA	Charters Tower	20.67	256	P	P	12 46 19.4	+1.3
	0.8nm,0.6s,baz=44,slow=18,SNR=1.4						
CTA				LR	LR	12 53 04.9	
	comp=Z,71nm,20.2s,baz=86,slow=33						
	0.8nm,0.6s						
CTAO	Charters Tower	20.67	256	P	P	12 46 18.9	+0.9
CTAO				IAmb	IAmb	12 46 31.3	
	comp=Z,10nm,0.9s						
URZ	Urewera	23.68	161	P	P	12 46 46.1	-3.2
WR0	Warramunga Arr	31.64	258	P	P	12 48 01.8	+0.8
WR0				IAmb	IAmb	12 48 19.3	
	comp=Z,6.5nm,1.1s						
WB0	Warramunga Arr	31.77	258	P	P	12 48 02.7	+0.6
WB2	Warramunga Arr	31.81	258	P	P	12 48 02.7	+0.2
WB2				IAmb	IAmb	12 48 06.7	
	comp=Z,7.2nm,1.4s						
WRA	Warramunga Arr	31.83	258	P	P	12 48 02.8	+0.1
	comp=Z,0.8nm,0.9s,baz=84,slow=7.8,SNR=12						
WRA				ScP	ScP	12 54 38.2	+4.6
	comp=Z,0.3nm,0.9s,baz=96,slow=3.8,SNR=4.2						
WRA				LR	LR	12 59 41.2	
	comp=Z,68nm,19.2s,baz=56,slow=34						
	comp=Z,0.8nm,0.9s						
WRA	Warramunga Arr	31.83	258	P	P	12 48 02.5	-0.1
AS09	Alice Springs	32.49	251	P	P	12 48 09.6	+1.2
AS10	Alice Springs	32.51	251	P	P	12 48 09.5	+0.9
AS31	Alice Springs	32.51	251	P	P	12 48 09.7	+1.0
AS31				IAmb	IAmb	12 48 12.3	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	32.52	251	P	P	12 48 09.6	+0.9
	comp=Z,5.0nm,0.8s,baz=77,slow=8.9,SNR=54						
ASAR				PcP	PcP	12 50 56.2	+1.2
	comp=Z,0.2nm,0.7s,baz=86,slow=3.3,SNR=1.5						
ASAR				ScP	ScP	12 54 39.6	+3.7
	comp=Z,1.4nm,1.0s,baz=69,slow=3.2,SNR=6.5						
	comp=Z,5.0nm,0.8s						
ASAR	Alice Springs	32.52	251	P	P	12 48 09.7	+1.0
GUMO	Guam	37.02	321	LR	LR	13 01 33.1	
	comp=Z,48nm,21.3s,baz=118,slow=32						
KNRA	Kununurra	37.31	265	P	P	12 48 50.2	+0.2
KNRA				IAmb	IAmb	12 48 58.0	
	comp=Z,8.5nm,1.2s						
SIJI	Sorong	38.84	289	LR	LR	13 05 11.8	
	comp=Z,55nm,19.3s,baz=196,slow=36						
BATI	Baumata	43.10	272	LR	LR	13 06 40.6	
	comp=Z,75nm,19.1s,baz=196,slow=35						
MBWA	Marble Bar	45.51	256	P	P	12 49 58.5	+1.2
JHJ	Hachijo jima 2	55.62	332	LR	LR	13 12 51.7	
	comp=Z,7.7nm,20.1s,baz=78,slow=34						
PETK	Petropavlovsk-	69.38	354	LR	LR	13 18 19.8	
	comp=Z,13nm,19.6s,baz=102,slow=32						
QSPA	South Pole Qui	74.00	180	P	P	12 53 12.6	-0.2
QSPA				IAmb	IAmb	12 53 30.2	
	comp=Z,4.0nm,1.1s						

SONM	Songino Array	83.72	324	P	P	12 54 06.4	+0.2
	comp=Z,1.8nm,0.8s,baz=142,slow=6.0,SNR=9.7						
	comp=Z,1.8nm,0.8s						
SONM	Songino Array	83.72	324	P	P	12 54 06.5	+0.2
SONM				IAmb	IAmb	12 54 09.2	
	comp=Z,1.8nm,0.8s						
IMAR	Indian Mountai	86.74	15	P	P	12 54 21.3	+0.5
ILAR	Eielson Array	87.67	18	P	P	12 54 24.0	-1.3
	comp=Z,0.3nm,0.5s,baz=233,slow=4.9,SNR=5.9						
ILAR				LR	LR	13 30 46.5	
	comp=Z,13nm,19.2s,baz=68,slow=34						
	comp=Z,0.3nm,0.5s						
NVAR	Mina Array Bea	87.89	49	LR	LR	13 25 37.5	
	comp=Z,18nm,19.9s,baz=229,slow=30						
MKAR	Makanchi Array	98.35	316	P	P	12 55 15.2	+0.2
	comp=Z,0.2nm,0.6s,baz=111,slow=3.2,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	121.58	345	PKP	PKPdf	13 00 29.9	-0.2
	comp=Z,1.1nm,0.5s,baz=57,slow=2.5,SNR=13						
FINES	FINESS Array B	127.03	338	PKP	PKPdf	13 00 40.7	0.0
	comp=Z,0.9nm,0.6s,baz=64,slow=8.7,SNR=3.7						

IDC 25 12:47:37.8±3.3**, 1°.41N×98°.96E, h173**km±20km**, mb3.4**/4**, mbtmp3.9**/4**, Error ellipse: s-maj=101.4km s-min=18.0km az=52.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	1.38	358	P	Pn	12 48 08.9	+0.6
	50nm,0.3s,baz=174,slow=10,SNR=42						
PSI				S	Sn	12 48 29.9	-2.0
	16nm,0.5s,baz=195,slow=20,SNR=10						
WRA	Warramunga Arr	40.66	123	P	P	12 55 01.3	-0.1
	1.8nm,0.3s,baz=308,slow=8.9,SNR=65						
WRA				PcP	PcP	12 57 01.1	+1.1
	0.5nm,1.0s,baz=316,slow=2.6,SNR=2.0						
	1.8nm,0.3s						
ASAR	Alice Springs	42.13	128	P	P	12 55 12.7	-0.7
	0.4nm,0.4s,baz=300,slow=7.8,SNR=12						
	0.4nm,0.4s						
MKAR	Makanchi Array	47.49	344	P	P	12 55 56.1	+0.7
	0.3nm,0.4s,baz=157,slow=8.8,SNR=4.3						
	0.3nm,0.4s						
FINES	FINESS Array B	80.63	332	P	P	12 59 29.7	-1.3
	0.3nm,0.3s,baz=94,slow=5.9,SNR=4.7						
	0.3nm,0.3s						

IDC ***25*** *13:01:03.9±0.7, 40°.46N×110°.59W, h0km, mb3.8/5, mbtmp3.7/13, ML3.0/7, MS2.9/11, Error ellipse: s-maj=10.7km s-min=7.5km az=154.0*

NEIC ***25*** *13:01:07.7±2.0, 40°.47N±0°.03×110°.65W±0°.03, h15km±4km, Error ellipse: s-maj=4.4km s-min=2.4km az=208.0*

UUSS ***25*** *13:01:07.3±1.8, 40°.49N±0°.03×110°.65W±0°.03, h16km±4km, ML4.0/28, mb3.9/9(NEIC), ML4.1/110(NEIC), Mwr3.8/101(NEIC), Error ellipse: s-maj=3.8km s-min=3.2km az=218.0*

NEIC ***25*** *13:01:07.3, 40°.49N×110°.65W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.43; $M_{\theta\theta}$0.04; $M_{\phi\phi}$2.39; $M_{r\theta}$-1.08; $M_{\theta\phi}$1.28; $M_{\phi r}$-6.25; Fault plane solution: $M_0$6.90000×10^{14} NP1:ϕ_s10.61000°, δ78.85000°, λ-96.43000°. NP2:ϕ_s220.84000°, δ12.85000°, λ-60.40000°. Principal axes: T 7.0718, Plg34.0000°, Azm106.0000°; N -0.3556, Plg6.0000°, Azm12.0000°; P -6.7163, Plg56.0000°, Azm273.0000°;*

ANF ***25*** *13:01:08.8±0.2, 40°.52N×110°.59W, h15km, ML4.2/16 Error ellipse: s-maj=3.1km s-min=2.8km az=168.0*

ISC 25 13:01:07.7±0.8**, 40°.51N**±0°.02×**110°.70W**±0°.02**, h17**km±5km**, n260, σ1s.84**/277**, mb3.9**/6**, MS3.2**/4**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSUT	Blindstream Ca	0.06	299		Pg	13 01 11.2	-0.2
BSUT					Sg	13 01 13.8	+0.1
HTU	Hoyt Peak	0.43	293		Pb	13 01 16.9	-0.1
HTU	Hoyt Peak	0.43	293		Sb	13 01 23.8	+0.4
DAU	Daniels Canyon	0.44	257		Pb	13 01 17.2	0.0
LHUT	Little Humpy P	0.44	329		Pb	13 01 17.6	+0.3
HEB	Heber	0.49	269		Pb	13 01 18.0	0.0
HLJ	Hailstone	0.54	281		Pb	13 01 19.1	+0.1
LDJ	Lady	0.55	278		Pb	13 01 19.3	+0.3
KLJ	Keetly	0.55	283		Pb	13 01 19.1	0.0
JLU	Jordanelle	0.58	279		Pb	13 01 19.8	+0.1
JLU				IAML		13 01 28.4	
	comp=N,13μm,0.3s						
JLU				IAML		13 01 28.8	
	comp=E,12μm,0.4s						
RCJ	Ross Creek	0.58	285		Pb	13 01 19.7	+0.1
N16A	Rees Ranch, Co	0.68	304		Pb	13 01 21.6	+0.4
O16A	Springville	0.69	244		Pg	13 01 21.2	0.0
EMUT	Emma Park	0.70	187		Pg	13 01 20.8	-0.7
TCVU	Timpanogos Cav	0.77	265		Pg	13 01 22.8	0.0
GMU	Granite Mounta	0.81	275		Pb	13 01 23.4	-0.2
DCM	Dugout Coal Mi	0.82	174		Pb	13 01 22.4	-1.2
CTU	Camp Tracy	0.82	283		Pg	13 01 23.8	0.0
CTU				IAML		13 01 40.4	
	comp=E,3μm,0.6s						
MHD	Mile High Driv	0.85	281		Pb	13 01 24.3	0.0
RDMU	Red Mountain	0.86	86		Pb	13 01 22.7	-1.7
RDMU				IAML		13 01 33.5	
	comp=E,5μm,0.4s						
RDMU				IAML		13 01 36.4	
	comp=N,3μm,0.4s						
MPU	Maple Canyon	0.87	236		Pb	13 01 24.2	-0.3
MPU				IAML		13 01 41.0	
	comp=N,10μm,0.3s						
MPU				IAML		13 01 41.2	
	comp=E,4μm,0.2s						
ROA	Roan Cliffs	0.89	163		Pb	13 01 23.5	-1.3
RBU	Red Butte Cany	0.89	288		Pb	13 01 24.9	+0.1
BCE	Book Cliffs Ea	0.92	166		Pb	13 01 24.1	-1.4
HRU	Hogsback Ridge	0.94	287		Pg	13 01 26.0	-0.1
EOCU	Emergency Oper	0.94	287		Pg	13 01 26.2	+0.1
P18A	Preston Nutter	0.95	158		Pb	13 01 24.5	-1.4
P18A				IAML		13 01 37.0	
	comp=N,4μm,0.4s						
P18A				IAML		13 01 42.6	
	comp=E,4μm,0.5s						
WTU	Western Traver	0.96	267		Pg	13 01 26.3	-0.1
WMUT	West Mountain	0.97	244		Pg	13 01 26.5	-0.1
FPU	Francis Peak	1.01	301		Pb	13 01 27.1	+0.1
P17A	Butcher Ranch,	1.04	182		Pb	13 01 26.1	-1.3
P17A	Butcher Ranch,	1.04	182	IAML		13 01 41.3	
	comp=N,3μm,0.4s						
P17A				IAML		13 01 46.6	
	comp=E,4μm,0.5s						
SUU	Santaquin Cany	1.04	234		Pb	13 01 27.2	-0.3
CWU	Camp Williams	1.07	267		Pn	13 01 28.3	+0.1
NOQ	North Oquirrh	1.09	278		Pg	13 01 28.7	-0.2
WBC	Weber Canyon	1.11	305		Pb	13 01 28.6	0.0
MCU	Monte Cristo P	1.13	327		Pb	13 01 29.1	+0.1
SAIU	Southern Antel	1.18	287		Pb	13 01 29.8	0.0
NLU	North Lily Min	1.19	243		Pg	13 01 30.6	-0.2
NLU				IAML		13 01 48.4	
	comp=E,3μm,0.7s						
NLU				IAML		13 01 48.5	
	comp=N,3μm,0.6s						
DBD	Des Bee Dove	1.23	194		Pn	13 01 29.9	-0.6
RSUT	Red Spur Mount	1.25	335		Pb	13 01 31.3	+0.2
NAIU	Northern Antel	1.27	294		Pb	13 01 31.4	+0.1
TMUT	Trail Mountain	1.27	198		Pn	13 01 30.7	-0.4
TMUT				IAML		13 01 54.4	
	comp=E,4μm,0.4s						
TMUT				IAML		13 01 55.8	
	comp=N,4μm,0.7s						
HWUT	Hardware Ranch	1.28	329		Pb	13 01 31.5	0.0
HWUT				IAML		13 01 51.5	
	comp=N,4μm,0.7s						
HWUT				IAML		13 01 54.5	
	comp=N,3μm,0.7s						
LEVU	Levan	1.32	221		Pn	13 01 31.5	-0.1
GZU	Grizzly Peak	1.33	314		Pb	13 01 32.6	+0.2
BCUT	Brigham City	1.40	316		Pg	13 01 34.3	-0.4
SRU	San Rafael Swe	1.40	174		Pn	13 01 32.4	-0.3
SRU	San Rafael Swe	1.40	174	IAML		13 01 54.3	
	comp=N,2μm,0.4s						
SRU				IAML		13 01 57.3	
	comp=E,3μm,0.6s						
SNUT	Stansbury Nort	1.43	286		Pn	13 01 33.5	+0.4
WVUT	Wellsville	1.46	319		Pb	13 01 34.7	+0.2
BMUT	Black Mountain	1.50	345		Pb	13 01 35.0	-0.4
SGU	Sterling	1.51	209		Pb	13 01 35.4	-0.1
HDU	Hyde Park	1.52	328		Pb	13 01 35.6	-0.1
SPUT	South Promonto	1.55	302		Pn	13 01 34.1	-0.6
EPU	East Promontor	1.57	305		Pb	13 01 35.8	-0.5
LTU	Little Mountai	1.59	313		Pb	13 01 36.6	-0.3
FLU	Fool Peak	1.60	226		Pn	13 01 36.1	+0.6
DUG	Dugway, Tooele	1.65	260	P	Pn	13 01 36.1	0.0
	baz=79,SNR=469						
DUG				S	Sb	13 01 58.2	0.0
	baz=79						
BGU	Big Grassy Mou	1.82	284	Pn	Pn	13 01 38.1	-0.3
BGU				IAML		13 02 08.1	
	comp=E,772nm,0.6s						
MLI	Malad Range	1.86	325		Pb	13 01 40.6	-0.8
WCU	Willow Creek	1.88	215		Pn	13 01 40.6	+1.2
O20A	White River Ci	1.92	100		Pn	13 01 40.0	+0.2
O20A				IAML		13 02 10.9	
	comp=N,3μm,0.4s						
O20A				IAML		13 02 11.0	
	comp=E,4μm,0.3s						
O20A	White River Ci	1.92	100	P	Pn	13 01 40.5	+0.7
	baz=282,SNR=1000						
O20A				S	Sn	13 02 04.0	+0.3
	baz=282						
NPI	North Pocatell	2.13	321		Pn	13 01 44.0	+1.2
FSU	Fish Springs	2.21	250		Pn	13 01 44.9	+1.1
AHID	Auburn Hatcher	2.27	353		Pn	13 01 45.2	+0.4
AHID				IAML		13 02 18.9	
	comp=E,2μm,0.5s						
AHID				IAML		13 02 27.8	
	comp=E,2μm,0.5s						
MSU	Marysvale	2.30	210	Pn	Pn	13 01 46.0	+0.9
TCRU	Three Creeks R	2.33	216	Pn	Pb	13 01 47.6	-1.8
TCRU				IAML		13 02 24.0	
	comp=E,761nm,0.9s						
TCRU				IAML		13 02 27.5	
	comp=N,678nm,0.8s						
MMU	Miners Mountai	2.35	192		Pb	13 01 47.9	-1.9
PD11	Pinedale Array	2.39	20		Pn	13 01 46.9	+0.5
PD08	Pinedale Array	2.40	20		Pn	13 01 47.0	+0.6
PD12	Pinedale Array	2.40	20		Pn	13 01 47.2	+0.7
PD13	Pinedale Array	2.40	21		Pn	13 01 47.2	+0.6
PD09	Pinedale Array	2.41	20		Pn	13 01 47.1	+0.6
PD10	Pinedale Array	2.41	20		Pn	13 01 47.0	+0.4
PD04	Pinedale Array	2.41	20		Pn	13 01 47.3	+0.7
BW06	Boulder Array	2.41	20		Pn	13 01 47.5	+0.8
BW06				IAML		13 02 26.1	
	comp=N,610nm,0.5s						
BW06				IAML		13 02 41.1	
	comp=N,422nm,0.7s						
BW06	Boulder Array	2.41	20		Pn	13 01 47.2	+0.5
BW06	Boulder Array	2.41	20	P	Pn	13 01 47.3	+0.5
	baz=200,SNR=163						
BW06				S	Sn	13 02 18.0	+2.0
	baz=200						
PD31	Pinedale Array	2.41	20	Pn	Pn	13 01 47.4	+0.7
PD32	Pinedale Array	2.41	20		Pn	13 01 47.2	+0.5
PDAR	Pinedale Array	2.41	20	Pn	Pn	13 01 47.4	+0.7
	comp=N,19nm,0.3s,baz=190,slow=12,SNR=243						
PDAR				Sn	Sb	13 02 19.2	-1.2
	comp=N,111nm,0.3s,baz=212,slow=28,SNR=17						
PDAR				LR	LR	13 02 39.3	
	comp=N,107nm,18.7s,baz=134,slow=39						
PDAR	Pinedale Array	2.41	20		Pn	13 01 47.5	+0.8
PD05	Pinedale Array	2.41	20		Pn	13 01 47.4	+0.7
PD01	Pinedale Array	2.41	20		Pn	13 01 47.6	+0.9
PD07	Pinedale Array	2.42	21		Pn	13 01 47.1	+0.3
PD02	Pinedale Array	2.42	20		Pn	13 01 47.3	+0.5
PD03	Pinedale Array	2.42	20		Pn	13 01 47.3	+0.4
PV23	Carpenter Ridg	2.43	147	Pn	Pn	13 01 47.2	+0.2
R19A	Curley Farm, L	2.48	153		Pn	13 01 48.2	+0.6
PV10	Paradox Valley	2.49	148		Pn	13 01 48.8	+1.1
PV14	Lion Creek, Pa	2.50	148		Pn	13 01 48.0	+0.2
PV04	Paradox Valley	2.53	146		Pn	13 01 48.5	+0.3
PV19	Morning Glory	2.57	148		Pn	13 01 49.1	+0.3
PV19				IAML		13 02 25.8	
	comp=N,3μm,0.5s						
PV19				IAML		13 02 32.4	
	comp=E,2μm,0.7s						
HMU	Henry Mountain	2.57	181		Pn	13 01 50.8	+1.9
ECR	Eagle Creek	2.59	349		Pn	13 01 49.7	+0.6
PV16	Nyswonger Mesa	2.59	147		Pn	13 01 49.5	+0.3
NMUT	North Mineral	2.59	221		Pn	13 01 50.9	+1.7
PV17	East Wray Mesa	2.60	148		Pn	13 01 49.5	+0.2
PV17				IAML		13 02 40.2	
	comp=E,2μm,0.7s						
PV07	Paradox Valley	2.61	142		Pn	13 01 49.8	+0.5
PV07				IAML		13 02 28.8	
	comp=N,3μm,0.6s						
PV11	David Mesa, Pa	2.62	147		Pn	13 01 50.0	+0.5
PV12	Saucer Basin,	2.64	146		Pn	13 01 50.4	+0.7
PV18	Skein Mesa, Pa	2.65	148		Pn	13 01 50.2	+0.2
PV18				IAML		13 02 28.1	
	comp=N,3μm,0.5s						
PV18				IAML		13 02 35.1	
	comp=E,2μm,0.5s						
PV03	Paradox Valley	2.67	147		Pn	13 01 50.6	+0.4
PV03				IAML		13 02 30.7	
	comp=N,3μm,0.5s						
MTPU	Mount Pierson	2.72	206		Pn	13 01 53.5	+2.4
PV05	Paradox Valley	2.73	152		Pn	13 01 51.5	+0.5
PV02	Paradox Valley	2.76	146	Pn	Pn	13 01 52.3	+0.9
PV13	Radium Mtn., P	2.76	148		Pn	13 01 52.1	+0.7
PV15	Paradox Valley	2.76	141		Pn	13 01 52.4	+0.9
REDW	Red Top Meadow	2.85	358		Pn	13 01 53.1	+0.4
REDW				IAML		13 02 38.3	
	comp=N,972nm,0.8s						
REDW				IAML		13 02 40.0	
	comp=N,693nm,0.6s						
RWWY	Rawlins	2.89	65		Pn	13 01 54.1	+0.9
PV01	Paradox Valley	2.89	144		Pn	13 01 54.0	+0.8
BTU	Barney Top	2.90	199		Pn	13 01 55.7	+2.2
TPAW	Teton Pass	2.98	356		Pn	13 01 55.9	+1.3
TPAW				IAML		13 02 41.8	
	comp=N,390nm,0.5s						
TPAW				IAML		13 02 42.0	
	comp=N,1μm,0.6s						
DWU	Dry Willow Pea	2.99	217		Pn	13 01 56.8	+2.2
LOHW	Long Hollow	3.10	1		Pn	13 01 56.7	+0.6
LOHW				IAML		13 02 43.4	
	comp=N,328nm,0.5s						
FXWY	Fox Creek	3.14	356		Pn	13 01 57.6	+1.0
PSUT	Pine Spring	3.14	232		Pn	13 01 58.8	+2.2
PSUT				IAML		13 02 49.0	
	comp=N,218nm,0.6s						
PSUT				IAML		13 02 49.0	
	comp=E,251nm,0.7s						
SMCO	Snowmass	3.16	114	Pn	Pn	13 01 58.0	+0.9
MOOW	Moose Ponds	3.24	359	Pn	Pn	13 01 58.5	+0.5
ARUT	Antelope Range	3.45	219		Pn	13 02 04.2	+3.3
ELK	Elko	3.46	275	Pn	Pn	13 02 01.1	0.0
	comp=E,0.5nm,0.3s,baz=90,slow=9.8,SNR=17						
ELK				Sn	Sn	13 02 43.0	+1.1
	comp=E,12nm,0.3s,baz=145,slow=12,SNR=7.3						
ELK				Lg	Lg	13 02 56.5	
	comp=E,14nm,0.3s,baz=18,slow=20,SNR=7.9						
	comp=E,7.9nm,0.4s						
ELK	Elko	3.46	275	Pn	Pn	13 02 01.4	+0.2
FLWY	Flagg Ranch	3.57	360		Pn	13 02 03.3	+0.8
CCUT	Cedar City	3.61	216		Pn	13 02 04.1	+1.0
N23A	Red Feather La	3.63	82		Pn	13 02 04.8	+1.3
N23A				IAML		13 03 03.3	
	comp=N,950nm,0.6s						
N23A	Red Feather La	3.63	82	P	Pn	13 02 05.1	+1.6
	baz=265,SNR=208						
N23A				Sb	Sb	13 02 56.2	+0.6
	baz=265						
ZNPU	Zion National	3.67	212		Pn	13 02 06.9	+2.9
MCID	Moose Creek	3.70	355		Pn	13 02 05.4	+1.1
EKU	East Kanab	3.71	203		Pn	13 02 07.2	+2.7
MVCO	Mesa Verde	3.71	152	Pn	Pn	13 02 05.0	+0.4
MVCO				IAML		13 03 02.8	
	comp=N,815nm,0.7s						
MVCO	Mesa Verde	3.71	152	P	Pn	13 02 04.8	+0.2
	baz=334,SNR=44						
MVCO				Sb	Sb	13 02 59.8	+1.9
	baz=334						
YPP	Pitchstone Pla	3.76	359		Pn	13 02 06.0	+0.7
K22A	Casper	3.79	54		Pn	13 02 07.1	+1.5
K22A	Casper	3.79	54	P	Pn	13 02 07.2	+1.7
	baz=236,SNR=110						
K22A				S	Sb	13 03 02.7	+2.6
	baz=236						
K22A	Casper	3.79	54	P	Pn	13 02 07.3	+1.7
	baz=236,SNR=110						
K22A				Sb	Sb	13 03 02.3	+2.3
	baz=236						
H17A	Grant Village	3.88	1		Pn	13 02 05.5	-1.4
H17A	Grant Village	3.88	1	P	Pn	13 02 08.0	+1.1
	baz=181						
H17A				Sb	Sb	13 03 06.9	+4.1
	baz=181						
ISCO	Idaho Springs	3.96	99	P	Pn	13 02 08.5	+0.5
	baz=282,SNR=16						
ISCO	Idaho Springs	3.96	99	P	Pn	13 02 08.5	+0.5
	baz=282,SNR=16						
ISCO				Sb	Sb	13 03 06.7	+1.7
	baz=282						
PHWY	Pilot Hill	4.05	77		Pn	13 02 09.1	-0.1
PHWY				IAML		13 03 14.4	
	comp=N,240nm,0.4s						
PHWY				IAML		13 03 24.4	
	comp=N,336nm,0.5s						
S22A	4UR Ranch, Cre	4.08	131	Pn	Pn	13 02 09.1	-0.6
S22A				IAML		13 03 16.4	
	comp=E,209nm,0.8s						
S22A				IAML		13 03 19.8	
	comp=N,197nm,0.8s						
S22A	4UR Ranch, Cre	4.08	131	P	Pn	13 02 09.6	-0.1
	baz=314,SNR=33						
S22A				Sb	Sb	13 03 10.6	+2.0
	baz=314						
HLID	Hailey	4.12	319	Pn	Pn	13 02 10.6	+0.5
HLID	Hailey	4.12	319	P	Pn	13 02 13.1	+3.0
	baz=136,SNR=35						
HLID				Sb	Sb	13 03 13.9	+4.5
	baz=136						
ICU	Indian Springs	4.20	218		Pn	13 02 14.2	+3.1
YNR	Norris Junctio	4.20	0	Pn	Pn	13 02 11.9	+0.6
R11A	Troy Canyon, C	4.36	242		Pn	13 02 15.7	+2.4
R11A				IAML		13 03 25.4	
	comp=N,106nm,1.3s						
R11A				IAML		13 03 30.9	
	comp=E,108nm,1.1s						
R11A	Troy Canyon, C	4.36	242	P	Pn	13 02 16.0	+2.6
	baz=59,SNR=30						
R11A				Sb	Sg	13 03 22.9	-4.7
	baz=59						
Q24A	Divide	4.55	108	Pn	Pn	13 02 16.2	+0.1
Q24A				IAML		13 03 41.4	
	comp=N,194nm,0.7s						
Q24A				IAML		13 03 43.7	
	comp=E,174nm,1.0s						
Q24A	Divide	4.55	108	P	Pn	13 02 17.0	+0.9
	baz=292,SNR=18						
RLMT	Red Lodge	4.73	12	Pn	Pn	13 02 19.7	+1.2
RLMT				IAML		13 03 52.4	
	comp=E,66nm,0.5s						
RLMT	Red Lodge	4.73	12	P	Pn	13 02 19.3	+0.8
	baz=193						
RLMT				Sb	Sb	13 03 32.6	+5.6
	baz=193						
S11A	Rachel	4.86	236		Pn	13 02 21.3	+1.1
S11A				IAML		13 03 45.5	
	comp=E,289nm,1.0s						
S11A				IAML		13 03 46.4	
	comp=N,229nm,0.9s						
SDCO	Great Sand Dun	4.89	123	P	Pn	13 02 21.0	+0.1
	baz=306,SNR=21						
SDCO	Great Sand Dun	4.89	123	P	Pn	13 02 20.8	0.0
	baz=306,SNR=21						
SDCO				Sb	Sb	13 03 35.4	+3.6
	baz=306						
WUAZ	Wupatki	5.01	186	P	Pn	13 02 23.9	+1.6
	baz=6.3,SNR=31						
WUAZ				Sb	Sb	13 03 39.4	+4.2
	baz=6.3						
BOZ	Bozeman (W)	5.13	353	P	Pn	13 02 26.5	+2.5
	baz=172,SNR=18						
W18A	Petrified Fore	5.44	172	P	Pn	13 02 28.9	+0.7
	baz=353						
W18A				Sb	Sb	13 03 50.7	+3.3
	baz=353						
TPNV	Topopah Spring	5.61	232	P	Pn	13 02 33.8	+3.2
	baz=49,SNR=76						
T25A	Trinidad	5.95	122	P	Pn	13 02 35.4	+0.1
	baz=306						
T25A				Sb	Sb	13 04 07.1	+4.8
	baz=306						
RSSD	Black Hills	6.12	52	Pn	Pn	13 02 36.7	-0.8
RSSD	Black Hills	6.12	52	P	Pn	13 02 37.5	0.0
	baz=236,SNR=65						
RSSD	Black Hills	6.12	52	P	Pn	13 02 37.6	0.0
	baz=236						
RSSD				S	Sn	13 03 46.7	-0.5
	baz=236						
NVAR	Mina Array Bea	6.24	253	Pn	Pn	13 02 41.1	+1.8
	comp=N,0.8nm,0.3s,baz=67,slow=12,SNR=34						
NVAR				Pg	Pb	13 02 52.4	-3.6
	comp=N,2.0nm,0.3s,baz=64,slow=14,SNR=16						
NVAR				Sn	Sn	13 03 53.6	+3.3
	comp=N,1.9nm,0.3s,baz=57,slow=18,SNR=1.6						
NVAR				Lg	Lg	13 04 19.2	
	comp=N,0.9nm,0.3s,baz=84,slow=26,SNR=1.3						
	comp=N,1.5nm,0.5s						
HRY	Holter Researc	6.25	353		Pn	13 02 42.4	+3.1
GRAC	Grapevine Rang	6.28	238	P	Pn	13 02 43.2	+3.5
	baz=54						
FURC	Furnace Creek,	6.30	232	P	Pn	13 02 44.3	+4.5
	baz=48						
SHOC	Shoshone, Teco	6.36	225	P	Pn	13 02 44.2	+3.4
	baz=42						
KSCO	Kaye Shedlock’	6.40	101	S	Sb	13 04 22.5	+7.6
	baz=286						
KSCO	Kaye Shedlock’	6.40	101	P	Pn	13 02 43.5	+2.2
	baz=286						
KSCO				Sb	Sb	13 04 20.3	+5.4
	baz=286						
ANMO	Albuquerque	6.49	147	Pn	Pn	13 02 41.7	-1.0
	comp=N,0.5nm,0.3s,baz=319,slow=14,SNR=6.1						
ANMO				Pg	Pb	13 03 02.7	+2.4
	comp=N,3.6nm,0.3s,baz=330,slow=14,SNR=12						
ANMO				Lg	Lg	13 04 23.9	
	comp=N,3.9nm,0.3s,baz=247,slow=20,SNR=7.8						
ANMO				LR	LR	13 04 37.7	
	comp=N,23nm,19.2s,baz=328,slow=33						
	comp=N,0.9nm,0.3s						
ANMO	Albuquerque	6.49	147	Pn	Pn	13 02 41.8	-0.9
ANMO	Albuquerque	6.49	147	P	Pn	13 02 42.1	-0.6
	baz=330						
ANMO				Sb	Sb	13 04 22.9	+5.2
	baz=330						
TUQ	Turquoise Moun	6.53	221	P	Pn	13 02 46.3	+3.1
	baz=38						
OGNE	Ogallala	6.60	83	Pn	Pn	13 02 44.1	0.0
OGNE	Ogallala	6.60	83	P	Pn	13 02 44.9	+0.9
	baz=269,SNR=9.3						
OGNE	Ogallala	6.60	83	P	Pn	13 02 44.1	0.0
	baz=269,SNR=9.3						
MSO	Missoula	6.74	341	P	Pn	13 02 49.8	+3.8
	baz=158						
GMRC	Granite Mounta	6.94	216	P	Pn	13 02 51.6	+2.8
	baz=33						
LAO	LASA Array	6.98	26		Pn	13 02 48.9	-0.3
LAO	LASA Array	6.98	26	P	Pn	13 02 51.1	+1.9
	baz=209,SNR=16						
LAO	LASA Array	6.98	26	P	Pn	13 02 49.2	0.0
	baz=209,SNR=16						
CWC	Cottonwood Cre	7.07	237	P	Pn	13 02 53.7	+3.1
	baz=53						
GSC	Goldstone, Bar	7.09	225	P	Pn	13 02 53.8	+3.0
	baz=41						
Y22A	Socorro	7.20	154	S	Sb	13 04 46.6	+8.4
	baz=337						
HEC	Hector,Ludlow	7.22	220	P	Pn	13 02 55.4	+2.8
	baz=37						
LRMC	Laurel Mtn Rad	7.46	230	P	Pn	13 02 59.5	+3.6
	baz=46						
EGMT	Eagleton	7.54	5	P	Pn	13 03 00.3	+3.3
	baz=185						
BELC	Belle Mtn. Jos	7.75	215	P	Pn	13 03 03.1	+3.2
	baz=32						
ISA	Isabella, Lake	7.81	234	P	Pn	13 03 04.4	+3.8
	baz=50						
PFO	Pinyon Flats O	8.28	216	LR	LR	13 06 34.3	
	comp=N,93nm,20.2s,baz=300,slow=40						
TPFO	Pinon Flats	8.28	216	P	Pn	13 03 10.4	+3.1
	baz=32						
121A	Cookes Peak, D	8.30	163	S	Sb	13 05 24.9	+15
	baz=345						
J05D	Fort Rock, OR	8.33	293	P	Pn	13 03 11.2	+3.3
	baz=106						
ARVC	Arvin	8.38	233	P	Pn	13 03 12.3	+3.9

	baz=48						
CBKS	Cedar Bluff	8.62	98	P	Pn	13 03 12.6	+0.9
	baz=285						
I05D	Terrebonne, OR	8.75	299	P	Pn	13 03 17.4	+3.8
	baz=112						
NEW	Newport	9.01	331	Pn	Pn	13 03 18.4	+1.3
	comp=N,0.2nm,0.3s,baz=148,slow=14,SNR=6.8						
NEW				Lg	Lg	13 05 43.8	
	comp=N,0.3nm,0.3s,baz=170,slow=19,SNR=2.6						
NEW				LR	LR	13 07 13.9	
	comp=N,107nm,19.0s,baz=149,slow=41						
	comp=N,3.7nm,0.7s						
NEW	Newport	9.01	331	P	Pn	13 03 21.1	+4.0
	baz=147						
AMTX	Amarillo	9.09	125	P	Pn	13 03 19.1	+0.9
	baz=311						
YBH	Yreka Blue Hor	9.15	282	Pn	Pn	13 03 19.9	+0.9
	comp=N,0.1nm,0.3s,baz=313,slow=19,SNR=1.9						
YBH				LR	LR	13 07 02.2	
	comp=N,56nm,21.6s,baz=76,slow=39						
	comp=N,0.9nm,0.9s						
DGMT	Dagmar	9.21	28		Pn	13 03 20.0	+0.2
DGMT	Dagmar	9.21	28	P	Pn	13 03 20.5	+0.7
	baz=212,SNR=8.0						
DGMT	Dagmar	9.21	28	P	Pn	13 03 19.7	-0.1
	baz=212,SNR=8.0						
E28A	Huff	9.46	47		Pn	13 03 22.4	-0.7
E28A	Huff	9.46	47	P	Pn	13 03 23.0	-0.1
	baz=233,SNR=14						
SUSD	Miller	9.52	62		Pn	13 03 23.8	-0.3
SUSD	Miller	9.52	62	P	Pn	13 03 24.1	0.0
	baz=249,SNR=9.0						
SUSD	Miller	9.52	62	P	Pn	13 03 23.3	-0.8
	baz=249,SNR=9.0						
MNTX	Cornudas Mount	9.79	152	P	Pn	13 03 28.6	+0.9
	baz=336						
L02F	Cave Junction	9.82	284	P	Pn	13 03 29.9	+1.8
	baz=95						
L34A	Svendsen Farm,	10.89	78		Pn	13 03 41.5	-1.3
ECSD	EROS Data Cent	10.95	68	Pn	Pn	13 03 42.1	-1.5
ECSD	EROS Data Cent	10.95	68	P	Pn	13 03 42.3	-1.2
	baz=258,SNR=18						
ECSD	EROS Data Cent	10.95	68	P	Pn	13 03 42.3	-1.2
	baz=258,SNR=18						
WMOK	Wichita Mounta	11.06	118	P	Pn	13 03 45.2	0.0
	baz=305						
F33A	5 Mile Ranch,	11.78	58		Pn	13 03 52.3	-2.7
TXAR	Lajitas Array	12.55	151	Pn	Pn	13 04 04.2	-1.4
	baz=339,slow=31,SNR=2.1						
TXAR				Lg	Lg	13 07 34.2	
	comp=N,0.1nm,0.3s,baz=352,slow=24,SNR=5.7						
TXAR				LR	LR	13 09 36.5	
	comp=N,40nm,21.9s,baz=329,slow=41						
	comp=N,0.2nm,0.6s						
AGMN	Agassiz Nation	13.14	49	P	Pn	13 04 10.3	-3.2
	baz=239						
ULM	Lac du Bonnet	14.23	42	Pn	Pn	13 04 24.3	-4.1
	comp=N,0.7nm,0.3s,baz=229,slow=14,SNR=3.1						
ULM				Lg	Lg	13 08 23.0	
	comp=N,0.4nm,0.3s,baz=319,slow=20,SNR=2.0						
ULM				LR	LR	13 09 41.9	
	comp=N,36nm,20.2s,baz=274,slow=36						
	comp=N,4.8nm,0.5s						
CCM	Cathedral Cave	15.26	93	Pn	Pn	13 04 42.1	-0.3
CCM				IAmb	IAmb	13 05 05.1	
	comp=Z,4.0nm,0.7s						
CCM	Cathedral Cave	15.26	93	P	Pn	13 04 39.0	-3.4
	baz=285						
FCAR	Ozark Folk Cen	15.31	102		Pn	13 04 42.8	-0.3
X40A	Basin Creek Fa	15.39	107	Pn	Pn	13 04 43.3	-0.8
LCAR	Lake Charles	15.97	100		Pn	13 04 50.5	-1.1
LCAR				IAmb	IAmb	13 04 54.5	
	comp=Z,12nm,1.3s						
PBMO	Poplar Bluff	16.26	97	Pn	Pn	13 04 53.6	-1.7
E43A	Lone Tree Farm	18.15	63	P	Pn	13 05 16.4	-2.5
E43A				IAmb	IAmb	13 05 17.8	
	comp=Z,6.7nm,0.7s						
PLAL	Pickwick Lake	18.70	100	P	P	13 05 25.1	-0.2
PLAL				IAmb	IAmb	13 05 27.0	
	comp=Z,5.2nm,0.7s						
LRAL	Lakeview Retre	20.36	104	P	P	13 05 42.3	-1.1
	baz=298						
TKL	Tuckaleechee C	21.70	94	LR	LR	13 14 43.1	
	comp=Z,69nm,20.6s,baz=280,slow=38						
YKAB1	New Yellowknif	22.05	355	P	P	13 06 01.8	+0.5
YKAB2	New Yellowknif	22.07	355	P	P	13 06 02.0	+0.5
YKAB3	New Yellowknif	22.10	355	P	P	13 06 01.2	-0.7
YKAB4	New Yellowknif	22.12	355	P	P	13 06 01.4	-0.7
YKAR9	New YK Array r	22.14	355	P	P	13 06 01.2	-1.1
YKA	Yellowknife Ar	22.14	355	P	P	13 06 00.9	-1.4
	comp=Z,2.3nm,0.7s,baz=168,slow=9.2,SNR=24						
	comp=Z,2.3nm,0.7s						
YKA	Yellowknife Ar	22.14	355	P	P	13 06 01.5	-0.8
YKAR8	New YK Array r	22.14	355	P	P	13 06 01.5	-0.8
YKAR6	New YK Array r	22.15	355	P	P	13 06 02.1	-0.2
YKAR5	New YK Array r	22.15	355	P	P	13 06 01.9	-0.5
YKAR2	New YK Array r	22.16	355	P	P	13 06 03.0	+0.5
YKAB8	New Yellowknif	22.21	355	P	P	13 06 02.4	-0.7
YKAB9	New Yellowknif	22.23	355	P	P	13 06 02.9	-0.4
O53A	New Philadelph	22.42	81	P	P	13 06 05.9	+0.4
	baz=280						
SADO	Sadowa	23.52	69	LR	LR	13 15 43.9	
	comp=Z,109nm,19.2s,baz=308,slow=38						
ILAR	Eielson Array	31.97	331	P	P	13 07 32.2	-0.3
	comp=Z,1.1nm,0.8s,baz=120,slow=7.8,SNR=14						
	comp=Z,1.1nm,0.8s						
H24K	Noodor Dome	32.89	333	P	P	13 07 41.5	+0.9
	baz=122,SNR=5.5						
PETK	Petropavlovsk-	59.78	316	P	P	13 11 10.7	-0.9
	comp=Z,1.7nm,0.5s,baz=71,slow=11,SNR=16						
	comp=Z,1.7nm,0.5s						
MA2	Magadan	60.04	324	LR	LR	13 36 35.0	
	comp=Z,14nm,18.1s,baz=170,slow=35						
YAK	Yakutsk	66.86	334	LR	LR	13 41 04.5	
	comp=Z,18nm,20.2s,baz=101,slow=36						
XLT	XiLinHaoTe	86.01	328	*e*P	P	13 13 46.0	-1.3
XLT				pP	PcP	13 13 50.0	0.0
XLT				sP	pP	13 13 54.0	+0.2
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,95nm,4.2s						
KURK	Kurchatov	88.79	354	P	P	13 13 58.3	-2.1
KURK	Kurchatov	88.79	354	IAmb	IAmb	13 13 59.3	
	comp=Z,2.3nm,0.9s						
KURBB	Kurchatov Arra	88.89	354	P	P	13 13 58.3	-2.6
	comp=Z,0.4nm,0.6s,baz=358,slow=5.1,SNR=3.1						
	comp=Z,0.4nm,0.6s						
HHC	Hu-ho-hao-te	90.37	329	*e*P	P	13 14 07.0	-1.2
MKAR	Makanchi Array	92.31	351	P	P	13 14 14.7	-2.3
	comp=Z,0.1nm,0.4s,baz=19,slow=4.9,SNR=1.5						
	comp=Z,0.1nm,0.4s						
WMQ	Urumqi	94.43	347	*e*P	P	13 14 27.5	+0.7
WRA	Warramunga Arr	121.47	270	PKP	PKPdf	13 20 00.2	-0.3
	comp=Z,0.5nm,0.5s,baz=54,slow=2.1,SNR=16						

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*DNK **25** 13:09:50.9±0.9, 55°.43N×21°.10E, h0km, ML2.2(UPP), Suspected explosion*

*LVSN **25** 13:10:09.2±13.0, 56°.69N×23°.22E, h0km±71km, ML2.0*

UPP 25 13:09:53.1±2.2**, 55°.55N×21°.00E, h0km, ML2.2, Suspected explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PABE	Paberze	1.69	90	AML	AML	13 10 50.1	
	comp=E,40nm,0.5s						
PABE				AML	AML	13 10 50.2	
	comp=N,34nm,0.5s						
PABE				AML	AML	13 10 53.1	
	comp=Z,17nm,0.5s						
SUW	Suwalki	1.99	140	*e*P	Pg	13 10 31.1	-0.1
SUW				*e*S	Sg	13 10 60.0	+2.9
SLIT	Slitere, Latvi	2.20	18	*e*P	Pn	13 10 30.4	-0.5
SLIT				AML	AML	13 10 31.9	
	comp=Z,113nm,0.1s						
SLIT				AML	AML	13 11 00.8	
	comp=E,131nm,0.6s						
SLIT				AML	AML	13 11 01.1	
	comp=N,112nm,0.5s						
GOTU	Gotland	2.53	329	P	Pn	13 10 35.4	+0.1
GOTU				S	Sn	13 11 07.9	+1.1
GOTU	Gotland	2.53	329	P	Pn	13 10 35.4	+0.1
GOTU				S	Sn	13 11 07.9	+1.1
BYXU	Byxelkrok	2.82	310	P	Pn	13 10 39.4	0.0
BYXU				S	Sn	13 11 14.2	+0.2
BYXU	Byxelkrok	2.82	310	P	Pn	13 10 39.4	0.0
BYXU				S	Sn	13 11 14.2	+0.2
VXJU	Vaexsjoe	3.65	295	P	Pn	13 10 50.7	-0.1
VXJU	Vaexsjoe	3.65	295	P	Pn	13 10 50.7	-0.1
EKSU	Eksjoe	3.75	305	S	Sn	13 11 35.6	-1.3
EKSU	Eksjoe	3.75	305	S	Sn	13 11 35.6	-1.3
VIKU	Vikbolandet	3.78	323	P	Pn	13 10 52.1	-0.5
VIKU	Vikbolandet	3.78	323	P	Pn	13 10 52.1	-0.5
NYNU	Nynaeshamn	3.83	336	P	Pn	13 10 52.9	-0.3
NYNU	Nynaeshamn	3.83	336	P	Pn	13 10 52.9	-0.3
LNKU	Linkoeping	4.03	314	P	Pn	13 10 55.8	-0.2
LNKU	Linkoeping	4.03	314	P	Pn	13 10 55.8	-0.2
NRTU	Norrtaelje	4.33	344	P	Pn	13 10 59.8	-0.3
NRTU	Norrtaelje	4.33	344	P	Pn	13 10 59.8	-0.3
ESKU	Eskilstuna	4.45	328	P	Pn	13 11 01.3	-0.5
ESKU	Eskilstuna	4.45	328	P	Pn	13 11 01.3	-0.5
RAF	Rauma	5.50	4	AML	AML	13 11 14.5	
	comp=E,3.3nm,0.6s						
RAF				AML	AML	13 11 15.4	
	comp=Z,4.9nm,0.8s						
RAF				AML	AML	13 11 16.3	
	comp=N,2.6nm,0.6s						

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*TAP **25** 13:36:02.9, 24°.35N×122°.03E, h28km, ML3.4, B*

*JMA **25** 13:36:02.9±0.1, 24°.3N±0°.6×122°.0E±0°.3, h38km±2km, MV2.7/7, TAIWAN REGION*

ISC 25 13:36:02.9±1.0**, 24°.31N**±0°.02×**122°.05E**±0°.02**, h26km**±9km**, n79, σ0^{s}.94**/126**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.28	299	*i* P	Pb	13 36 09.8	0.0
	baz=299						
EWUT				S	Sn	13 36 14.7	-2.1
	baz=299						
ENA	Nanau	0.30	293	*i* P	Pb	13 36 10.1	0.0
	baz=292						
ENA				S	Sn	13 36 15.2	-2.2
	baz=292						
TWC	Suao	0.35	329	*i* P	Pb	13 36 10.4	-0.4
	baz=334						
TWC				S	Sb	13 36 15.5	-0.6
	baz=334						
ETL	Fush Village	0.42	249	*i* P	Pn	13 36 12.3	-1.0
	baz=242						
ETL				*e*S	Sn	13 36 21.1	+0.9
	baz=242						
NACB	Ninganchiao	0.44	252	*i* P	Pn	13 36 12.5	-1.0
	baz=246						
NACB				*e*S	Sn	13 36 20.9	+0.2
	baz=246						
NDS	Dongshan	0.44	317	*i* P	Pb	13 36 12.0	-0.2
	baz=316						
NDS				*e*S	Sb	13 36 18.2	-0.4
	baz=316						
TWD	Chiawan	0.47	241	*i* P	Pn	13 36 13.3	-0.7
	baz=234						
TWD				*e*S	Sn	13 36 21.9	+0.4
	baz=234						
HWA	Hwalien	0.52	231	*i* P	Pn	13 36 14.6	-0.1
	baz=224						
HWA				*e*S	Sn	13 36 25.9	+3.2
	baz=224						
LATG	Datong	0.53	295	P	Pb	13 36 13.8	+0.1
	baz=298						
LATG				S	Sn	13 36 22.3	-0.8
	baz=298						
ETLH	Xiulin Townshi	0.53	259	*i* P	Pn	13 36 13.9	-1.0
	baz=254						
ETLH				*e*S	Sn	13 36 23.4	+0.4
	baz=254						
ILA	Ilan	0.53	329	P	Pb	13 36 13.7	0.0
	baz=330						
ILA				*i* S	Sb	13 36 21.2	+0.2
	baz=330						
TWE	Neicheng	0.54	320	*i* P	Pb	13 36 13.6	-0.2
	baz=321						
TWE				S	Sb	13 36 21.4	+0.2
	baz=321						
EGS		0.54	349	*i* P	Pn	13 36 14.1	-0.9
	baz=353						
EGS				S	Sb	13 36 21.6	+0.3
	baz=353						
ENTT	Nioudou	0.55	307	*i* P	Pb	13 36 14.1	+0.1
	baz=306						
ENTT				S	Sb	13 36 22.3	+0.7
	baz=306						
NTC	Toucheng	0.58	340	*i* P	Pn	13 36 14.4	-1.1
	baz=341						
NTC				*e*S	Sb	13 36 22.0	-0.3
	baz=341						
TEYL	Yanliau Villag	0.60	223	*i* P	Pn	13 36 15.4	-0.4
	baz=221						
ETM	Tongmen	0.61	236	*i* P	Pn	13 36 15.3	-0.7
	baz=231						
ETM				*e*S	Sn	13 36 25.6	+0.6
	baz=231						
FUSB	Fushanzhiwuyua	0.61	317	*i* P	Pn	13 36 15.2	-0.9
	baz=316						
FUSB				S	Sb	13 36 23.9	+0.4
	baz=316						
NNSB	Datong	0.62	281	*i* P	Pb	13 36 15.6	+0.3
	baz=283						
NNSB				*i* S	Sn	13 36 24.2	-1.1
	baz=283						
NNS	Nan Shan	0.63	282	*i* P	Pb	13 36 15.7	+0.2
	baz=284						
NNS				S	Sn	13 36 24.5	-1.1
	baz=284						
NWLT	Wulai	0.68	313	*i* P	Pn	13 36 16.1	-0.9
	baz=312						
NWLT				S	Sn	13 36 25.3	-1.4
	baz=312						
TIPB	Shuangxi	0.69	343	*i* P	Pn	13 36 16.3	-0.7
	baz=345						
TIPB				*i* S	Sn	13 36 25.4	-1.5
	baz=345						
TWB1	Santiao Chiao	0.70	355	*i* P	Pn	13 36 16.6	-0.5
	baz=358						
YHNB	Yeheng	0.71	300	*i* P	Pn	13 36 16.8	-0.6
	baz=305						
YHNB				S	Sn	13 36 26.8	-0.8
	baz=305						
NSK	Sanguang	0.73	300	*i* P	Pn	13 36 17.1	-0.6
	baz=305						
NSK				*i* S	Sn	13 36 26.8	-1.2
	baz=305						
WHF	Hehuan Shan	0.73	257	*i* P	Pb	13 36 17.5	+0.1
	baz=253						
WHF				S	Sn	13 36 28.7	+0.1
	baz=253						
FUSS	Fushou	0.74	265	*e*P	Pb	13 36 18.4	+1.0
	baz=262						
ESL	Shilin	0.75	229	*i* P	Pb	13 36 17.2	-0.2
	baz=224						
TEGC	Jichi Village	0.76	218	P	Pb	13 36 17.7	+0.2
	baz=200						
TWA	Mucha	0.79	328	P	Pb	13 36 18.8	+0.7
	baz=318						
NWF	Wu-fen Shan	0.80	342	*i* P	Pn	13 36 18.6	+0.1
	baz=338						
NWF				*i* S	Sn	13 36 29.4	-0.2
	baz=338						
WFSB	Wu-fen Shan	0.80	342	*e*P	Pn	13 36 18.7	+0.2
	baz=338						
WFSB				*i* S	Sn	13 36 28.9	-0.6
	baz=338						
SXI1	Grass Mountain	0.80	349	*i* P	Pn	13 36 18.5	-0.1
	baz=355						
SXI1				S	Sn	13 36 28.8	-0.9
	baz=355						
TWT	Tachien	0.80	266	*e*P	Pb	13 36 19.9	+1.6
	baz=263						
NHDH	Xindian Distri	0.81	324	*e*P	Pb	13 36 19.4	+1.1
	baz=316						
TDCB	Techi	0.81	266	*e*P	Pb	13 36 19.8	+1.2
	baz=263						
JYNG	Yonagunijimaku	0.83	80	P	Pn	13 36 18.6	-0.3
JYNG				S	Sn	13 36 30.2	-0.1
TATO	Taipei	0.84	323	*i* P	Pn	13 36 19.2	+0.2
	baz=317						
TATO				S	Sn	13 36 30.5	0.0
	baz=317						
CHGB	Renai	0.84	253	*i* P	Pb	13 36 19.3	+0.3
	baz=237						
CHGB				S	Sb	13 36 31.2	+1.3
	baz=237						
EGFH	Guangfu	0.85	222	P	Pb	13 36 19.7	+0.6
	baz=205						
OWD	Renai	0.87	246	*i* P	Pb	13 36 19.4	-0.1
	baz=242						
OWD				*e*S	Sb	13 36 31.2	+0.4
	baz=242						
TNOU	National Taiwa	0.87	343	*i* P	Pn	13 36 19.6	0.0
	baz=358						
TNOU				*e*S	Sn	13 36 30.6	-0.9
	baz=358						
YOJ	Yonaguni jima	0.89	80	*i* P	Pn	13 36 19.7	0.0
	baz=76						
YOJ				S	Sb	13 36 32.1	+0.9
	baz=76						
YOJ	Yonaguni jima	0.89	80	P	Pn	13 36 19.5	-0.2
YOJ				S	Sn	13 36 31.7	-0.1
NFF	Wufeng Townshi	0.91	291	*i* P	Pb	13 36 20.2	+0.1
	baz=289						
NFF				*e*S	Sb	13 36 34.1	+2.3
	baz=289						
WUSB	Renai	0.91	250	*i* P	Pb	13 36 20.2	+0.1
	baz=235						
YM01	YM01	0.94	332	P	Pb	13 36 21.3	+0.7
	baz=333						
YM08	YM08	0.97	335	P	Pn	13 36 21.1	+0.2
	baz=335						
HGSD	Ruisui	0.99	215	P	Pb	13 36 20.4	-1.1
	baz=201						
VWDT	VWDT	1.00	236	P	Pb	13 36 21.5	0.0
	baz=223						
LIOB	Emei	1.00	290	*i* P	Pb	13 36 22.3	+0.7
	baz=288						
NSTT	Nanjuang	1.01	289	*i* P	Pb	13 36 22.3	+0.6
	baz=287						
NSTT				*e*S	Sb	13 36 35.9	+1.4
	baz=287						
WHP	Taichung City	1.01	268	*i* P	Pb	13 36 22.7	+0.9
	baz=266						
EHY	Hungye	1.04	220	*e*P	Pn	13 36 20.7	-1.1
	baz=216						
WPL	Puli Township	1.04	254	P	Pb	13 36 22.2	-0.1
	baz=250						
WPL				S	Sb	13 36 36.7	+1.1
	baz=250						
DPDB	Guoxing	1.06	255	P	Pb	13 36 22.9	+0.2
	baz=252						
DPDB				S	Sb	13 36 37.5	+1.3
	baz=252						
WCS	Beigang Elemen	1.07	257	P	Pb	13 36 22.9	+0.2
	baz=253						
WCS				S	Sb	13 36 38.0	+1.6
	baz=253						
SSLB	Suanglung	1.13	243	P	Pb	13 36 23.4	-0.4
	baz=226						
SMLT	Sun Moon Lake	1.13	248	*i* P	Pb	13 36 23.8	-0.1
	baz=245						
YULB	Yu-li	1.14	217	P	Pn	13 36 22.0	-1.3
	baz=211						
YULB				*e*S	Sb	13 36 39.6	+1.1
	baz=211						
TYC	Yuchr	1.16	250	P	Pb	13 36 24.4	0.0
	baz=237						
TWQ1	Liyutan	1.17	272	*e*P	Pb	13 36 25.9	+1.5
	baz=270						
TWF1	Yuli	1.18	216	*e*P	Pb	13 36 23.8	-0.8
	baz=228						
WWF	Wufeng	1.26	258	*e*P	Pb	13 36 27.6	+1.6
	baz=255						
FULB	Fuli	1.30	212	P	Pb	13 36 26.1	-0.7
	baz=195						
PCYT	Pengchaiyu	1.31	1	*e*P	Pn	13 36 25.4	-0.3
	baz=4.0						
ALS	Alishan	1.39	235	*i* P	Pb	13 36 27.7	-0.7
	baz=231						
CHN5	Tsauling	1.44	241	P	Pb	13 36 28.8	-0.3
	baz=221						
CHN5				S	Sb	13 36 49.1	+2.0
	baz=221						
ELDTW	Lidau	1.46	220	*e*P	Pn	13 36 27.4	-0.4
	baz=202						
ELDTW				*e*S	Sb	13 36 47.1	-0.6
	baz=202						
IRIF	Iriomote-Funau	1.53	89	P	Pn	13 36 28.6	0.0
IRIF				*e*S	Sn	13 36 48.1	+0.4
STYH	Taoyuan	1.63	226	P	Pb	13 36 30.5	-1.8
	baz=221						
STYH				S	Sb	13 36 53.4	+1.1
	baz=221						
STYT	Tauyuan	1.65	226	P	Pb	13 36 30.7	-1.9
	baz=221						
STYT				S	Sb	13 36 54.0	+1.1
	baz=221						
LDUT	Ludao	1.71	198	*e*P	Pn	13 36 29.2	-1.9
	baz=183						
LDUT				*e*S	Sn	13 36 49.8	-2.4
	baz=183						
JKRS	Kuro-shima	1.79	92	P	Pn	13 36 32.9	+0.8
JKRS				*e*S	Sn	13 36 54.7	+0.6
JIJ	Ishigaki jima	1.91	88	P	Pn	13 36 34.2	+0.3
SSD	Sandimen	2.03	220	P	Pb	13 36 37.9	-1.2
	baz=215						
PNG	Penghu	2.40	253	P	Pn	13 36 41.1	+0.6
	baz=248						
PHUB	P'eng-hu	2.40	251	*e*P	Pn	13 36 40.5	-0.1
	baz=247						
WDGT	Dungji	2.42	245	*i* P	Pn	13 36 42.2	+1.3
	baz=240						

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*IDC **25** 13:54:31.7±0.6, 21°.98N×120°.52E, h0km, mb3.9/19, mbtmp3.9/21, ML3.0/1, MS3.4/17, Error ellipse: s-maj=20.7km s-min=14.3km az=73.0*

*JMA **25** 13:54:34.2±0.6, 22°N±3°×12°0E±°, h15km, MV4.2/12, TAIWAN REGION*

*MOS **25** 13:54:34.7±1.2, 21°.88N×120°.53E, h37km, mb4.3/18, Error ellipse: s-maj=25.8km s-min=9.9km az=108.6*

*TAP **25** 13:54:35.2, 22°.01N×120°.48E, h52km, ML4.5, C*

*NEIC **25** 13:54:36.5±1.1, 22°.05N±0°.05×120°.45E±0°.06, h25km±6km, mb4.1/16, Error ellipse: s-maj=9.1km s-min=5.3km az=124.0*

*BJI **25** 13:54:38.6±0.0, 22°.22N×120°.20E, h30km, mb4.0/21, mB4.4/12, ML3.6/5, Ms3.8/8, Ms7 3.7/7*

ISC 25 13:54:34.1±1.2**, 21°.96N**±0°.03×**120°.40E**±0°.02**, h15km**±7km**, n231, σ1^{s}.31**/343**, mb4.0**/32**, MS3.4**/17**, 30C-22D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEN	Hengchun	0.32	81	⇑*i*P	Pn	13 54 44.3	+0.1
	baz=91						
HEN				*i* S	Sn	13 54 51.2	+0.7
	baz=91						
TWKBT	Hengchun	0.39	92	⇑*i*P	Pn	13 54 45.0	-0.1
	baz=102						
TWKBT				*i* S	Sn	13 54 52.1	0.0
	baz=102						
TWP	Hsiaoliuchiu	0.39	355	⇓*e*P	Pn	13 54 45.9	+0.8
	baz=343						
TWP				*e*S	Sn	13 54 54.3	+2.0
	baz=343						
WLCH	Liuqiu	0.39	357	⇓*i*P	Pn	13 54 45.9	+0.7
	baz=345						
WLCH				S	Sn	13 54 54.4	+2.0
	baz=345						
SMST	Manzhou Townsh	0.41	81	⇑*i*P	Pn	13 54 45.3	-0.1
	baz=88						
SMST				S	Sn	13 54 52.8	0.0
	baz=88						
SLIU	Shizi	0.45	55	⇑*i*P	Pn	13 54 45.6	-0.4
	baz=55						
SLIU				*i* S	Sn	13 54 53.2	-0.7
	baz=55						
SCZT	Fangliau	0.46	26	⇑*i*P	Pn	13 54 45.7	-0.4
	baz=21						
SCZT				*i* S	Sn	13 54 53.1	-1.0
	baz=21						
TSEB	Hengchuen, Pin	0.47	97	⇑*i*P	Pn	13 54 45.8	-0.4
	baz=107						
TSEB				S	Sn	13 54 54.0	-0.2
	baz=107						
SSPT	Xinbi	0.55	17	⇑*i*P	Pn	13 54 47.1	-0.2
	baz=10.0						
SSPT				*e*S	Sn	13 54 55.7	-0.5
	baz=10.0						
EAST	Anshuo	0.59	44	⇑*i*P	Pn	13 54 47.8	-0.2

	baz=43						
EAST				eS	Sn	13 54 56.6	-0.8
	baz=43						
TAW	**Tawu**	**0.61**	**49**	⇑eP	**Pn**	**13 54 48.0**	**-0.2**
	baz=49						
TAW				eS	**Sn**	**13 54 56.8**	**-0.9**
	baz=49						
KAU	**Kaohsiung**	**0.61**	**352**	P	**Pn**	**13 54 48.7**	**+0.5**
	baz=345						
KAU				S	**Sn**	**13 54 58.8**	**+1.0**
	baz=345						
MASBT	**Mashibuluo**	**0.69**	**18**	⇑iP	**Pn**	**13 54 48.8**	**-0.5**
	baz=13						
MASBT				eS	**Sb**	**13 54 58.2**	**+1.2**
	baz=13						
WSSB	**Gushan**	**0.69**	**350**	i P	**Pn**	**13 54 49.5**	**+0.2**
	baz=342						
WSSB				eS	**Sn**	**13 54 60.0**	**+0.1**
	baz=342						
TSPT	**Pingtung City**	**0.72**	**7**	eP	**Pn**	**13 54 50.6**	**+0.9**
	baz=1.0						
TSPT				eS	**Sn**	**13 55 02.0**	**+1.6**
	baz=1.0						
SGLT	**Jiouru**	**0.77**	**6**	eP	**Pn**	**13 54 51.3**	**+0.9**
	baz=1.0						
SGLT				eS	**Sn**	**13 55 02.2**	**+0.5**
	baz=1.0						
TSMG	**Majia**	**0.78**	**17**	⇑P	**Pb**	**13 54 50.0**	**+0.7**
	baz=12						
TSMG				S	**Sb**	**13 55 00.1**	**+0.4**
	baz=12						
SNJT	**Kaohsiung City**	**0.79**	**356**	eP	**Pn**	**13 54 51.0**	**+0.3**
	baz=350						
SNJT				eS	**Sn**	**13 55 02.2**	**-0.1**
	baz=350						
SSD	**Sandimen**	**0.81**	**15**	⇑iP	**Pn**	**13 54 50.6**	**-0.3**
	baz=11						
SSD				eS	**Sb**	**13 55 01.7**	**+0.9**
	baz=11						
ECL	**Taimali**	**0.82**	**39**	⇑iP	**Pn**	**13 54 50.8**	**-0.3**
	baz=37						
ECL				eS	**Sg**	**13 55 00.8**	**0.0**
	baz=37						
TWM1	**Shoushan**	**0.86**	**1**	⇓eP	**Pn**	**13 54 52.3**	**+0.6**
	baz=357						
TWM1				eS	**Sg**	**13 55 02.7**	**+0.5**
	baz=357						
SCST	**Cishan**	**0.93**	**5**	eP	**Pn**	**13 54 52.8**	**+0.3**
	baz=1.0						
SCST				eS	**Sb**	**13 55 03.6**	**-0.4**
	baz=1.0						
TTN	**Taitung**	**1.05**	**41**	⇑eP	**Pg**	**13 54 54.9**	**+0.5**
	baz=40						
TTN				eS	**Sn**	**13 55 09.2**	**+0.5**
	baz=40						
SLGT	**Liugui**	**1.06**	**12**	eP	**Pg**	**13 54 54.7**	**+0.2**
	baz=9.0						
SLGT				eS	**Sb**	**13 55 07.4**	**-0.3**
	baz=9.0						
SHHT	**Tainan City**	**1.06**	**357**	eP	**Pg**	**13 54 54.8**	**+0.2**
	baz=353						
SHHT				eS	**Sn**	**13 55 09.3**	**+0.5**
	baz=353						
TWG	**Pinlang**	**1.06**	**36**		**Pb**	**13 54 54.2**	**+0.1**
TWG				Sn	**Sb**	**13 55 07.0**	**-0.8**
TWG	**Pinlang**	**1.06**	**36**	⇑eP	**Pb**	**13 54 54.4**	**+0.3**
	baz=35						
TWG				eS	**Sb**	**13 55 07.5**	**-0.4**
	baz=35						
TWGBT	**Beinan**	**1.06**	**36**	⇑P	**Pb**	**13 54 54.4**	**+0.2**
	baz=35						
TWGBT				eS	**Sb**	**13 55 07.8**	**-0.2**
	baz=35						
LAY	**Lan-yu**	**1.07**	**85**	eP	**Pb**	**13 54 53.5**	**-0.8**
	baz=88						
LAY				eS	**Sb**	**13 55 06.0**	**-2.2**
	baz=88						
TAI1	**Yung-k'ang**	**1.09**	**352**	eP	**Pg**	**13 54 55.3**	**+0.2**
	baz=348						
TAI1				eS	**Sn**	**13 55 09.6**	**+0.1**
	baz=348						
LYUB	**Lan-yu**	**1.10**	**87**	⇑P	**Pb**	**13 54 53.0**	**-1.8**
	baz=90						
LYUB				eS	**Sb**	**13 55 06.0**	**-3.0**
	baz=90						
CHN3	**Shinhua**	**1.11**	**358**	eP	**Pg**	**13 54 55.7**	**+0.1**
	baz=354						
CHN3				eS	**Sg**	**13 55 11.0**	**+0.8**
	baz=354						
SGST	**Jiashian**	**1.13**	**9**	eP	**Pb**	**13 54 54.4**	**-0.9**
	baz=5.0						
SGST				eS	**Sb**	**13 55 09.1**	**-0.8**
	baz=5.0						
LONT	**Longtian**	**1.16**	**35**	eP	**Pn**	**13 54 55.6**	**-0.1**
	baz=34						
LONT				eS	**Sb**	**13 55 10.3**	**-0.4**
	baz=34						
LDUT	**Ludao**	**1.22**	**54**	⇑eP	**Pn**	**13 54 56.1**	**-0.5**
	baz=54						
LDUT				eS	**Sb**	**13 55 10.5**	**-1.9**
	baz=54						
SCLT	**Jiali**	**1.23**	**351**	eP	**Pn**	**13 54 56.5**	**-0.1**
	baz=347						
SCLT				eS	**Sb**	**13 55 12.3**	**-0.2**
	baz=347						
CHN1	**Nanshi**	**1.23**	**6**	⇓eP	**Pn**	**13 54 56.6**	**-0.1**
	baz=2.0						
CHN1				eS	**Sb**	**13 55 12.3**	**-0.3**
	baz=2.0						
STYT	**Tauyuan**	**1.25**	**15**	eP	**Pn**	**13 54 57.0**	**0.0**
	baz=13						
STYT				eS	**Sb**	**13 55 12.3**	**-0.8**
	baz=13						
STYH	**Taoyuan**	**1.26**	**16**	⇓eP	**Pn**	**13 54 57.2**	**+0.1**
	baz=13						
STYH				eS	**Sb**	**13 55 12.1**	**-1.4**
	baz=13						
SNST	**Tainan City**	**1.26**	**4**	⇓eP	**Pn**	**13 54 56.9**	**-0.3**
	baz=1.0						
SNST				eS	**Sb**	**13 55 12.5**	**-1.0**
	baz=1.0						
WTP	**Ta-pu**	**1.30**	**9**	⇓eP	**Pn**	**13 54 57.5**	**-0.2**
	baz=6.0						
WTP				eS	**Sb**	**13 55 13.7**	**-1.0**
	baz=6.0						
TWK	**Hsinying**	**1.31**	**4**	⇓eP	**Pn**	**13 54 57.5**	**-0.3**
	baz=1.0						
TWK				eS	**Sb**	**13 55 13.8**	**-1.1**
	baz=1.0						
EDH	**Donghe**	**1.31**	**39**	eP	**Pn**	**13 54 57.7**	**-0.1**
	baz=38						
EDH				eS	**Sb**	**13 55 14.3**	**-0.8**
	baz=38						
ELDTW	**Lidau**	**1.35**	**25**	⇑eP	**Pn**	**13 54 58.6**	**+0.1**
	baz=23						
ELDTW				eS	**Sn**	**13 55 15.1**	**-1.2**
	baz=23						
TPUB	**Ta-pu**	**1.35**	**9**		**Pn**	**13 54 57.9**	**-0.6**
TPUB				Sn	**Sn**	**13 55 14.3**	**-1.9**
TPUB	**Ta-pu**	**1.35**	**9**	⇓eP	**Pn**	**13 54 58.1**	**-0.4**
	baz=6.0						
TPUB				eS	**Sn**	**13 55 14.7**	**-1.5**
	baz=6.0						
ECS	**Chishang**	**1.36**	**34**	eP	**Pn**	**13 54 58.8**	**+0.3**
	baz=32						
ECS				eS	**Sn**	**13 55 16.3**	**-0.1**
	baz=32						
CHN8	**Yiju**	**1.39**	**353**	eP	**Pn**	**13 54 58.7**	**-0.2**
	baz=350						
CHN8				eS	**Sn**	**13 55 16.2**	**-0.9**
	baz=350						
ICHU	**Yijhu**	**1.40**	**356**	eP	**Pn**	**13 54 58.2**	**-0.8**
	baz=352						
ICHU				eS	**Sn**	**13 55 15.4**	**-1.9**
	baz=352						
CHKT	**Chengkung**	**1.45**	**38**	eP	**Pn**	**13 54 60.0**	**+0.3**
	baz=37						
CHKT				eS	**Sn**	**13 55 17.5**	**-0.9**
	baz=37						
WDGT	**Dungji**	**1.47**	**332**	⇓iP	**Pn**	**13 54 58.8**	**-1.1**
	baz=329						
WDGT				eS	**Sn**	**13 55 16.1**	**-2.8**
	baz=329						
FULB	**Fuli**	**1.49**	**34**	⇑eP	**Pn**	**13 55 00.8**	**+0.5**
	baz=32						
FULB				eS	**Sb**	**13 55 20.0**	**-0.2**
	baz=32						
CHY	**Chiayi**	**1.53**	**1**	eP	**Pn**	**13 55 00.3**	**-0.5**
	baz=358						
CHY				eS	**Sn**	**13 55 18.8**	**-1.8**
	baz=358						
VCHM	**Qimei**	**1.53**	**324**	⇓eP	**Pn**	**13 54 59.8**	**-1.1**
	baz=321						
VCHM				eS	**Sn**	**13 55 18.0**	**-2.6**
	baz=321						
WSL	**Shuilin Townsh**	**1.57**	**354**	⇓eP	**Pn**	**13 55 00.6**	**-0.7**
	baz=351						
WSL				eS	**Sn**	**13 55 19.1**	**-2.2**
	baz=351						
CHN2	**Minshiung**	**1.57**	**3**	eP	**Pn**	**13 55 01.4**	**0.0**
	baz=360						
CHN2				eS	**Sn**	**13 55 20.5**	**-0.9**
	baz=360						
ALS	**Alishan**	**1.59**	**14**	⇓eP	**Pn**	**13 55 02.0**	**0.0**
	baz=12						
ALS				eS	**Sn**	**13 55 20.2**	**-2.2**
	baz=12						
YUS	**Yu-Shan**	**1.61**	**18**	eP	**Pn**	**13 55 02.4**	**0.0**
	baz=17						
YUS				eS	**Sn**	**13 55 23.0**	**-0.1**
	baz=17						
TWF1	**Yuli**	**1.62**	**31**	eP	**Pn**	**13 55 02.2**	**+0.1**
	baz=30						
TWF1				eS	**Sn**	**13 55 21.9**	**-0.8**
	baz=30						
CHN5	**Tsauling**	**1.65**	**9**	eP	**Pn**	**13 55 02.4**	**-0.2**
	baz=7.0						
CHN5				eS	**Sn**	**13 55 22.6**	**-1.1**
	baz=7.0						
YULB	**Yu-li**	**1.65**	**30**		**Pn**	**13 55 02.5**	**0.0**
YULB				Sn	**Sn**	**13 55 22.1**	**-1.4**
YULB	**Yu-li**	**1.65**	**30**	eP	**Pn**	**13 55 02.7**	**+0.2**
	baz=29						
YULB				eS	**Sn**	**13 55 22.3**	**-1.2**
	baz=29						
WSF	**Szhu**	**1.68**	**354**	eP	**Pn**	**13 55 02.3**	**-0.6**
	baz=352						
WSF				eS	**Sn**	**13 55 22.6**	**-1.6**
	baz=352						
WTK	**Tuku**	**1.72**	**360**	eP	**Pn**	**13 55 02.8**	**-0.6**
	baz=357						
WTK				eS	**Sn**	**13 55 22.6**	**-2.6**
	baz=357						
PHUB	**P'eng-hu**	**1.73**	**334**	⇓P	**Pn**	**13 55 02.3**	**-1.2**
	baz=331						
PHUB				eS	**Sn**	**13 55 22.4**	**-2.9**
	baz=331						
WGK	**Gukeng**	**1.73**	**5**	eP	**Pn**	**13 55 03.3**	**-0.3**
	baz=3.0						
WGK				eS	**Sn**	**13 55 24.6**	**-0.7**
	baz=3.0						
WDLH	**Douliu**	**1.73**	**4**	eP	**Pn**	**13 55 03.2**	**-0.3**
	baz=2.0						
WDLH				eS	**Sn**	**13 55 23.4**	**-1.9**
	baz=2.0						
EHY	**Hungye**	**1.76**	**29**	eP	**Pn**	**13 55 04.5**	**+0.5**
	baz=28						
EHY				eS	**Sn**	**13 55 25.4**	**-0.8**
	baz=28						
PNG	**Penghu**	**1.78**	**334**	eP	**Pn**	**13 55 03.2**	**-1.1**
	baz=331						
PNG				eS	**Sn**	**13 55 24.2**	**-2.4**
	baz=331						
HGSD	**Ruisui**	**1.80**	**32**	eP	**Pn**	**13 55 05.4**	**+0.9**
	baz=31						
HGSD				eS	**Sn**	**13 55 27.3**	**+0.3**
	baz=31						
WJS	**Zhushan**	**1.88**	**9**	eP	**Pn**	**13 55 05.2**	**-0.4**
	baz=7.0						
WJS				eS	**Sn**	**13 55 27.4**	**-1.8**
	baz=7.0						
SSLB	**Suanglung**	**1.89**	**16**		**Pn**	**13 55 05.6**	**-0.2**
SSLB	**Suanglung**	**1.89**	**16**	eP	**Pn**	**13 55 05.9**	**0.0**
	baz=14						
SSLB				eS	**Sn**	**13 55 27.3**	**-2.1**
	baz=14						
WTCT	**Ta-ch'eng**	**1.90**	**357**	eP	**Pn**	**13 55 05.5**	**-0.4**
	baz=355						
WTCT				eS	**Sn**	**13 55 27.9**	**-1.7**
	baz=355						
VWDT	**VWDT**	**1.92**	**21**	⇑eP	**Pn**	**13 55 06.6**	**+0.5**
	baz=19						
WNT	**Mingjian**	**1.93**	**8**	eP	**Pn**	**13 55 06.1**	**-0.2**
	baz=6.0						
WNT				eS	**Sn**	**13 55 28.8**	**-1.5**
	baz=6.0						
WRL	**Guolierlin Hig**	**1.94**	**359**	eP	**Pn**	**13 55 05.8**	**-0.6**
	baz=357						
WRL				eS	**Sn**	**13 55 28.0**	**-2.4**
	baz=357						
EGFH	**Guangfu**	**1.95**	**29**	eP	**Pn**	**13 55 06.6**	**0.0**
	baz=28						
EGFH				eS	**Sn**	**13 55 30.0**	**-0.8**
	baz=28						
SMLT	**Sun Moon Lake**	**1.97**	**13**	eP	**Pn**	**13 55 07.1**	**+0.1**
	baz=12						
SMLT				eS	**Sn**	**13 55 30.5**	**-1.0**
	baz=12						
TYC	**Yuchr**	**1.98**	**12**	eP	**Pn**	**13 55 07.1**	**0.0**
	baz=11						
TYC				eS	**Sn**	**13 55 29.6**	**-2.0**
	baz=11						
ESL	**Shilin**	**2.08**	**27**	eP	**Pn**	**13 55 08.5**	**+0.1**
	baz=26						
ESL				eS	**Sn**	**13 55 31.8**	**-2.3**
	baz=26						
WWF	**Wufeng**	**2.09**	**8**	eP	**Pn**	**13 55 08.6**	**0.0**
	baz=6.0						
WWF				eS	**Sn**	**13 55 33.7**	**-0.7**
	baz=6.0						
WPL	**Puli Township**	**2.11**	**14**	eP	**Pn**	**13 55 09.4**	**+0.6**
	baz=12						
OWD	**Renai**	**2.11**	**20**	⇑eP	**Pn**	**13 55 09.3**	**+0.3**
	baz=18						
OWD				eS	**Sn**	**13 55 33.2**	**-1.9**
	baz=18						
WCHH	**Zhanghua**	**2.12**	**4**	eP	**Pn**	**13 55 08.9**	**0.0**
	baz=2.0						
WCHH				eS	**Sn**	**13 55 33.3**	**-1.7**
	baz=2.0						
DPDB	**Guoxing**	**2.12**	**13**	eP	**Pn**	**13 55 09.2**	**+0.1**
	baz=12						
DPDB				eS	**Sn**	**13 55 32.3**	**-2.9**
	baz=12						
WUSB	**Renai**	**2.13**	**18**	⇑eP	**Pn**	**13 55 09.4**	**+0.2**
	baz=17						
WUSB				eS	**Sn**	**13 55 33.7**	**-1.8**
	baz=17						
WCS	**Beigang Elemen**	**2.14**	**13**	⇓eP	**Pn**	**13 55 09.2**	**-0.1**
	baz=11						
WCS				eS	**Sn**	**13 55 34.0**	**-1.6**
	baz=11						
TCU	**Taichung**	**2.19**	**7**	eP	**Pn**	**13 55 10.1**	**+0.1**
	baz=5.0						
TCU				eS	**Sn**	**13 55 35.7**	**-1.2**
	baz=5.0						
CHGB	**Renai**	**2.21**	**19**	eP	**Pn**	**13 55 10.8**	**+0.4**
	baz=17						
CHGB				eS	**Sn**	**13 55 36.8**	**-0.9**
	baz=17						
ETM	**Tongmen**	**2.24**	**27**	eP	**Pn**	**13 55 10.9**	**+0.3**
	baz=26						
ETM				eS	**Sn**	**13 55 35.3**	**-2.6**
	baz=26						
WHF	**Hehuan Shan**	**2.32**	**20**	eP	**Pn**	**13 55 12.7**	**+0.6**
	baz=19						
WHP	**Taichung City**	**2.36**	**12**	eP	**Pn**	**13 55 12.7**	**+0.3**
	baz=11						
WHP				eS	**Sn**	**13 55 40.5**	**-0.7**
	baz=11						
TWD	**Chiawan**	**2.38**	**27**	eP	**Pn**	**13 55 12.8**	**+0.2**
	baz=27						
TDCB	**Techi**	**2.39**	**17**	eP	**Pn**	**13 55 13.1**	**+0.3**
	baz=16						
TDCB				eS	**Sn**	**13 55 40.2**	**-1.7**
	baz=16						
TWT	**Tachien**	**2.40**	**17**	eP	**Pn**	**13 55 13.2**	**+0.2**
	baz=16						
TWT				eS	**Sn**	**13 55 40.7**	**-1.4**
	baz=16						
TWQ1	**Liyutan**	**2.40**	**8**	eP	**Pn**	**13 55 13.3**	**+0.4**
	baz=7.0						
TWQ1				eS	**Sn**	**13 55 41.3**	**-0.8**
	baz=7.0						
FUSS	**Fushou**	**2.41**	**19**	eP	**Pn**	**13 55 13.4**	**+0.2**
	baz=18						
ETLH	**Xiulin Townshi**	**2.45**	**24**	eP	**Pn**	**13 55 13.5**	**-0.1**
	baz=23						
ETLH				eS	**Sn**	**13 55 42.7**	**-0.7**
	baz=23						
NACB	**Ninganchiao**	**2.47**	**26**		**Pn**	**13 55 13.4**	**-0.3**
NACB	**Ninganchiao**	**2.47**	**26**	eP	**Pn**	**13 55 13.4**	**-0.3**
	baz=25						
NACB				eS	**Sn**	**13 55 42.0**	**-1.5**
	baz=25						
NNSB	**Datong**	**2.62**	**20**	eP	**Pn**	**13 55 17.0**	**+1.0**
	baz=19						
NNSB				eS	**Sn**	**13 55 46.5**	**-1.1**
	baz=19						
NNS	**Nan Shan**	**2.63**	**20**	eP	**Pn**	**13 55 17.3**	**+1.2**
	baz=19						
NSTT	**Nanjuang**	**2.72**	**12**	eP	**Pn**	**13 55 17.4**	**+0.2**
	baz=11						
NSTT				eS	**Sn**	**13 55 47.8**	**-2.1**
	baz=11						
LIOB	**Emei**	**2.73**	**12**	eP	**Pn**	**13 55 17.5**	**0.0**
	baz=11						
LIOB				eS	**Sn**	**13 55 48.0**	**-2.3**
	baz=11						
NFF	**Wufeng Townshi**	**2.74**	**14**	eP	**Pn**	**13 55 17.8**	**+0.2**
	baz=13						
NFF				eS	**Sn**	**13 55 48.6**	**-1.9**
	baz=13						
LATG	**Datong**	**2.77**	**22**	eP	**Pn**	**13 55 18.6**	**+0.7**
	baz=21						
EWUT	**Wuta**	**2.78**	**27**	eP	**Pn**	**13 55 17.1**	**-1.0**
	baz=26						
EWUT				eS	**Sn**	**13 55 49.3**	**-2.1**
	baz=26						
NDT	**Datong Townshi**	**2.83**	**21**	eP	**Pn**	**13 55 19.5**	**+0.9**
	baz=20						
YHNB	**Yeheng**	**2.84**	**18**		**Pn**	**13 55 19.3**	**+0.3**
YHNB	**Yeheng**	**2.84**	**18**	eP	**Pn**	**13 55 19.6**	**+0.5**
	baz=17						
NSK	**Sanguang**	**2.85**	**18**	eP	**Pn**	**13 55 20.0**	**+1.0**
	baz=17						
NSK				eS	**Sn**	**13 55 51.7**	**-1.3**
	baz=17						
ENTT	**Nioudou**	**2.88**	**22**	eP	**Pn**	**13 55 20.2**	**+0.8**
	baz=21						
ENTT				eS	**Sn**	**13 55 52.9**	**-0.8**
	baz=21						
NDS	**Dongshan**	**2.93**	**24**	eP	**Pn**	**13 55 21.1**	**+1.1**
	baz=24						
NDS				eS	**Sn**	**13 55 55.4**	**+0.5**
	baz=24						
TWC	**Suao**	**2.96**	**27**	eP	**Pn**	**13 55 21.5**	**+1.0**
	baz=26						
NWLT	**Wulai**	**2.98**	**20**	eP	**Pn**	**13 55 21.7**	**+0.8**
	baz=19						
TWE	**Neicheng**	**2.99**	**23**	eP	**Pn**	**13 55 21.7**	**+0.8**
	baz=22						
FUSB	**Fushanzhiwuyua**	**3.00**	**21**	eP	**Pn**	**13 55 22.3**	**+1.2**
	baz=20						
FUSB				eS	**Sn**	**13 55 57.1**	**+0.4**
	baz=20						
KNM	**Kinmen**	**3.04**	**324**	eP	**Pn**	**13 55 22.2**	**+0.5**
	baz=320						
KNM				eS	**Sn**	**13 55 56.8**	**-1.0**
	baz=320						
KNMB	**Chin-men Tao**	**3.10**	**324**	Pn	**Pn**	**13 55 22.6**	**+0.1**
KNMB	**Chin-men Tao**	**3.10**	**324**	eP	**Pn**	**13 55 22.4**	**-0.1**
	baz=322						
KNMB				eS	**Sn**	**13 55 57.1**	**-2.3**
	baz=322						
ZPLA	**Ao Xicun**	**3.13**	**309**	⇓eP	**Pn**	**13 55 22.3**	**-0.6**
	baz=307						
ZPLA				eS	**Sn**	**13 55 58.1**	**-1.9**
	baz=307						
VWUC	**VWUC**	**3.14**	**344**	eP	**Pn**	**13 55 22.3**	**-0.7**
	baz=342						
VWUC				eS	**Sn**	**13 55 56.6**	**-3.6**
	baz=342						
TATO	**Taipei**	**3.17**	**18**	Pn	**Pn**	**13 55 22.2**	**-1.2**
DSXP	**Dongshan**	**3.25**	**303**	eP	**Pn**	**13 55 24.0**	**-0.4**
	baz=301						
DSXP				eS	**Sn**	**13 56 00.0**	**-2.9**
	baz=301						
TIPB	**Shuangxi**	**3.27**	**23**	eP	**Pn**	**13 55 26.0**	**+1.1**
	baz=23						
TIPB				eS	**Sn**	**13 56 03.8**	**+0.2**
	baz=23						
PTMZ	**Houxiangcun**	**3.29**	**339**	eP	**Pn**	**13 55 24.3**	**-0.7**
	baz=338						
PTMZ				eS	**Sn**	**13 56 00.2**	**-3.5**
	baz=338						
SXI1	**Grass Mountain**	**3.40**	**23**	eP	**Pn**	**13 55 26.6**	**-0.1**
	baz=23						
JYNG	**Yonagunijimaku**	**3.41**	**43**	P	**Pn**	**13 55 27.4**	**+0.7**
JYNG				S	**Sn**	**13 56 06.7**	**-0.3**
YOJ	**Yonaguni jima**	**3.46**	**43**		**Pn**	**13 55 27.7**	**+0.2**
YOJ	**Yonaguni jima**	**3.46**	**43**	eP	**Pn**	**13 55 29.0**	**+1.6**
	baz=43						
YOJ				eS	**Sn**	**13 56 06.6**	**-1.6**
	baz=43						
YOJ	**Yonaguni jima**	**3.46**	**43**	P	**Pn**	**13 55 28.6**	**+1.2**
YOJ				eS	**Sn**	**13 56 08.0**	**-0.2**
VDOS	**Pratas Island**	**3.64**	**251**	eP	**Pn**	**13 55 31.1**	**+1.2**
	baz=250						
VDOS				eS	**Sn**	**13 56 09.9**	**-2.6**
	baz=250						
AXDP	**Jialang**	**3.68**	**323**	eP	**Pn**	**13 55 30.2**	**-0.2**
	baz=321						
AXDP				eS	**Sn**	**13 56 10.7**	**-2.8**
	baz=321						
HATJ	**Hateruma jima**	**3.77**	**56**	P	**Pn**	**13 55 32.1**	**+0.5**
HATJ				eS	**Sn**	**13 56 15.2**	**-0.6**
IRIF	**Iriomote-Funau**	**3.87**	**52**	P	**Pn**	**13 55 33.7**	**+0.6**
IRIF				eS	**Sn**	**13 56 18.3**	**0.0**
JKRS	**Kuro-shima**	**4.03**	**55**	P	**Pn**	**13 55 35.9**	**+0.7**
JKRS				eS	**Sn**	**13 56 21.2**	**-0.8**
APYP	**Conner**	**4.15**	**169**	⇓eP	**Pn**	**13 55 38.2**	**+1.3**
APYP				eS	**Sn**	**13 56 23.8**	**-1.4**
JIJ	**Ishigaki jima**	**4.20**	**54**	P	**Pn**	**13 55 37.2**	**-0.3**
JIJ				eS	**Sn**	**13 56 23.7**	**-2.6**
MATB	**Ma-tsu**	**4.20**	**354**	eP	**Pn**	**13 55 37.0**	**-0.5**
	baz=353						
MATB				eS	**Sn**	**13 56 21.6**	**-4.6**
	baz=353						
MSUT	**Lienchiang**	**4.21**	**354**	eP	**Pn**	**13 55 37.8**	**0.0**
	baz=353						
MSUT				eS	**Sn**	**13 56 22.9**	**-3.8**
	baz=353						
LYJJ	**Jianjiangzhen**	**4.61**	**353**	eP	**Pn**	**13 55 42.6**	**-0.5**
	baz=352						
LYJJ				eS	**Sn**	**13 56 32.2**	**-4.2**
	baz=352						
JTJ	**Tarama**	**4.77**	**55**	P	**Pn**	**13 55 45.9**	**+0.4**
JTJ				eS	**Sn**	**13 56 39.2**	**-1.3**
XPSS	**Dashiqiu**	**4.95**	**358**	eP	**Pn**	**13 55 47.1**	**-0.8**
	baz=357						
XPSS				eS	**Sn**	**13 56 39.4**	**-5.5**
	baz=357						
SXFK	**Yanhouchang**	**5.09**	**331**	eP	**Pn**	**13 55 49.4**	**-0.4**
	baz=329						
SXFK				eS	**Sn**	**13 56 44.7**	**-3.6**
	baz=329						
JIRB	**Irabujima**	**5.24**	**56**	P	**Pn**	**13 55 52.5**	**+0.8**
JIRB				eS	**Sn**	**13 56 51.7**	**-0.2**
JMJ2	**Miyako jima3**	**5.31**	**58**	eS	**Sn**	**13 56 52.6**	**-1.2**
HKPS	**Hong Kong Po S**	**5.81**	**274**	Pn	**Pn**	**13 56 01.2**	**+1.5**
JOW	**Kunigami**	**8.66**	**54**	Pn	**Pn**	**13 56 36.5**	**-2.4**
	0.4nm,0.3s,baz=233,slow=18,SNR=6.7						
JOW				Sn	**Sn**	**13 58 09.3**	**-7.1**
	0.4nm,0.3s,baz=137,slow=28,SNR=1.5						
	2.7nm,0.5s						
NJ2	**Nanjing**	**10.15**	**353**	eP	**Pn**	**13 56 59.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DAV	**Davao City (W)**	**15.62**	**161**	LR	LR	14 05 16.8	
	comp=Z,73nm,20.2s,baz=336,slow=41						
XAN	**Xi'an**	**15.72**	**322**	P	**P**	**13 58 20.5**	**+1.5**
XAN				pP	sP	13 58 27.5	+2.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				LR	LR		
	comp=N,210nm,12.5s						
XAN				LR	LR		
	comp=E,160nm,11.9s						
XAN				LR	LR		
	comp=Z,270nm,13.7s						
KSRS	**Korea Array**	**16.76**	**21**	Pn	**Pn**	**13 58 28.1**	**-0.2**
	0.4nm,0.6s,baz=228,slow=7.9,SNR=1.6						

KSRS				LR	LR	14 06 22.3	
	comp=Z,141nm,18.4s,baz=210,slow=43						
PZH	**PanZhiHua**	**17.60**	**289**	P	**Pn**	**13 58 38.5**	**-0.5**
PZH				S	**Sn**	**14 01 58.3**	**+3.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,90nm,5.7s						
PZH				LR	LR		
	comp=N,320nm,15.1s						
PZH				LR	LR		
	comp=E,280nm,14.1s						
PZH				LR	LR		
	comp=Z,410nm,16.0s						
JGF	**Kuroka**	**20.10**	**44**	P	**P**	**13 59 06.5**	**-0.8**
JGF				IAmb	IAmb	13 59 23.4	
	comp=Z,7.5nm,0.9s						
LZH	**Lanzhou**	**20.15**	**318**	*e*P	Pn	13 59 11.3	+1.5
LZH				pP	sP	13 59 16.0	+2.1
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.43**	**264**	P	**P**	**13 59 10.1**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=74,slow=9.5,SNR=1.5						
CMAR				LR	LR	14 08 28.7	
	comp=Z,70nm,18.2s,baz=75,slow=41						
	comp=Z,0.8nm,0.6s						
MJAR	**Matsushiro Arr**	**21.22**	**43**	P	**P**	**13 59 17.2**	**-2.2**
	comp=Z,1.0nm,0.7s,baz=228,slow=8.5,SNR=1.9						
	comp=Z,1.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.16**	**21**	P	**P**	**13 59 48.4**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=115,slow=8.0,SNR=1.8						
USRK				LR	LR	14 10 11.3	
	comp=Z,52nm,20.9s,baz=219,slow=39						
	comp=Z,1.2nm,0.6s						
GTA	**Gaotai**	**24.72**	**319**	*e*P	**P**	**13 59 57.0**	**+2.0**
GTA				pP	sP	14 00 10.0	+8.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GOMU	**GeErMu**	**26.38**	**308**	P	**P**	**14 00 12.3**	**+2.0**
GOMU				pP	sP	14 00 17.3	+0.8
GOMU				sP	pP	14 00 19.8	+5.1
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,93nm,5.1s						
GOMU				LR	LR		
	comp=Z,59nm,10.7s						
GOMU				LR	LR		
	comp=Z,110nm,9.0s						
GOMU				LR	LR		
	comp=Z,130nm,11.8s						
ULN	**Ulaanbaatar**	**27.99**	**341**	⇓*e*P	**P**	**14 00 26.2**	**+1.9**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SONM	**Songino Array**	**28.16**	**340**	P	**P**	**14 00 26.4**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=158,slow=9.3,SNR=8.9						
SONM				LR	LR	14 12 43.6	
	comp=Z,94nm,21.5s,baz=161,slow=39						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**28.16**	**340**	P	**P**	**14 00 26.4**	**+0.5**
KLR	**Kul'dur**	**28.67**	**16**	LR	LR	14 13 39.6	
	comp=Z,148nm,18.3s,baz=202,slow=40						
KLR	**Kul'dur**	**28.67**	**16**	⇑*e*P	**P**	**14 00 29.0**	**-1.2**
KLR				pmax	pmax		
	comp=Z,10.0nm,2.4s						
ASAJ	**Asahikawa**	**28.72**	**34**	LR	LR	14 13 42.1	
	comp=Z,54nm,18.5s,baz=193,slow=40						
MK31	**Makanchi Array**	**39.47**	**318**	P	**P**	**14 02 04.5**	**+0.8**
MK31	**Makanchi Array**	**39.47**	**318**	⇑*i*P	**P**	**14 02 04.1**	**+0.3**
MKAR	**Makanchi Array**	**39.47**	**318**	P	**P**	**14 02 04.3**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=110,slow=10,SNR=16						
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**39.47**	**318**	P	**P**	**14 02 03.8**	**0.0**
MKAR	**Makanchi Array**	**39.47**	**318**	*e*P	**P**	**14 02 05.2**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**39.67**	**318**	P	**P**	**14 02 06.3**	**+0.9**
MAKZ				IAmb	IAmb	14 02 07.8	
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**40.55**	**7**	LR	LR	14 21 06.9	
	comp=Z,54nm,19.9s,baz=264,slow=39						
YAK	**Yakutsk**	**40.55**	**7**	⇑*i*P	**P**	**14 02 12.5**	**0.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PALK	**Pallekele**	**40.94**	**255**	LR	LR	14 21 43.3	
	comp=Z,51nm,18.6s,baz=215,slow=40						
ZAA0	**Zalesovo Array**	**41.74**	**329**	P	**P**	**14 02 22.9**	**+0.5**
ZAA0				IAmb	IAmb	14 02 24.0	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**41.74**	**329**	P	**P**	**14 02 23.1**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=116,slow=6.9,SNR=11						
ZALV				LR	LR	14 21 07.9	
	comp=Z,38nm,18.6s,baz=87,slow=38						
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**41.74**	**329**	P	**P**	**14 02 22.9**	**+0.5**
ZALV	**Zalesovo Beam**	**41.74**	**329**	*e*P	**P**	**14 02 23.3**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PETK	**Petropavlovsk-**	**42.12**	**33**	LR	LR	14 20 55.9	
	comp=Z,39nm,19.3s,baz=218,slow=38						
PETK	**Petropavlovsk-**	**42.12**	**33**	P	**P**	**14 02 24.2**	**-1.3**
MA2	**Magadan**	**43.31**	**22**	P	**P**	**14 02 34.5**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=202,slow=9.6,SNR=3.8						
	comp=Z,1.9nm,0.7s						
MA2	**Magadan**	**43.31**	**22**	IAmb	IAmb	14 02 40.7	
	comp=Z,4.7nm,1.1s						
MA2	**Magadan**	**43.31**	**22**	⇑*e*P	**P**	**14 02 35.6**	**+0.5**
MA2				pmax	pmax		
	comp=Z,12nm,2.3s						
AAK	**Ala-Archa**	**43.32**	**309**	LR	LR	14 23 21.0	
	comp=Z,47nm,19.8s,baz=131,slow=40						
KURK	**Kurchatov**	**43.36**	**322**	P	**P**	**14 02 35.6**	**0.0**
KURK				IAmb	IAmb	14 02 38.5	
	comp=Z,3.4nm,1.0s						
KURK	**Kurchatov**	**43.36**	**322**	⇓*e*P	**P**	**14 02 37.5**	**+1.9**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KURBB	**Kurchatov Arra**	**43.37**	**322**	P	**P**	**14 02 36.4**	**+0.7**
	comp=Z,1.9nm,0.2s,baz=123,slow=7.4,SNR=8.6						
	comp=Z,1.9nm,0.2s						
H11N1	**WAKE ISLAND Hy**	**43.38**	**84**	T	T	14 48 28.6	
	baz=282,slow=74,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**43.39**	**84**	T	T	14 48 28.5	
	baz=282,slow=74,SNR=7.7						
H11N3	**WAKE ISLAND Hy**	**43.40**	**84**	T	T	14 48 30.2	
	baz=282,slow=74,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**43.45**	**86**	T	T	14 48 34.9	
	baz=283,slow=74,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**43.46**	**86**	T	T	14 48 33.3	
	baz=283,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**43.47**	**86**	T	T	14 48 33.8	
	baz=283,slow=74,SNR=7.6						
WRA	**Warramunga Arr**	**43.82**	**161**	P	**P**	**14 02 39.0**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=342,slow=8.7,SNR=14						
WRA				PcP	**PcP**	**14 04 25.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=294,slow=11,SNR=1.3						
	comp=Z,2.2nm,0.9s						
WRA	**Warramunga Arr**	**43.82**	**161**	P	**P**	**14 02 38.6**	**-1.0**
WRA	**Warramunga Arr**	**43.82**	**161**	*e*P	**P**	**14 02 38.0**	**-1.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WR0	**Warramunga Arr**	**43.89**	**161**	P	**P**	**14 02 39.8**	**-0.5**
KKAR	**Karatay Array**	**46.28**	**309**	P	**P**	**14 02 59.5**	**+0.4**
ASAR	**Alice Springs**	**47.22**	**163**	P	**P**	**14 03 06.8**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=342,slow=6.8,SNR=5.9						
ASAR				PcP	**PcP**	**14 04 38.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=303,slow=8.8,SNR=4.9						
	comp=Z,0.7nm,0.4s						
CTA	**Charters Tower**	**48.83**	**147**	LR	LR	14 22 07.2	
	comp=Z,36nm,21.9s,baz=258,slow=34						
BRVK	**Borovoye**	**49.03**	**322**	P	**P**	**14 03 21.0**	**+0.8**
BRVK				IAmb	IAmb	14 03 23.1	
	comp=Z,2.7nm,1.0s						
BRVK	**Borovoye**	**49.03**	**322**	⇓*e*P	**P**	**14 03 22.2**	**+2.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
TIXI	**Tiksi**	**49.95**	**3**	P	**P**	**14 03 27.2**	**+0.3**
TIXI	**Tiksi**	**49.95**	**3**	⇑*e*P	**P**	**14 03 27.9**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**51.36**	**346**	P	**P**	**14 03 38.3**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=137,slow=7.7,SNR=1.9						
	comp=Z,2.8nm,0.8s						
NRIK	**Noril'sk**	**51.36**	**346**	⇑*e*P	**P**	**14 03 38.5**	**+0.9**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	**Bilibino**	**54.01**	**19**	*i* P	**P**	**14 03 55.5**	**-1.8**
BILL				*i*		14 05 02.6	
BILL				*i*		14 05 58.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,33nm,21.0s						
GEYT	**Alibeck**	**55.32**	**302**	LR	LR	14 30 14.3	
	comp=Z,42nm,18.4s,baz=168,slow=39						
AKTO	**Aktyubinsk**	**55.87**	**317**	LR	LR	14 30 21.5	
	comp=Z,26nm,20.9s,baz=119,slow=38						
ARU	**Arti**	**56.46**	**324**	*c i*P	**P**	**14 04 15.6**	**+0.5**
ARU						14 05 09.1	
ARU						14 06 16.8	
ARU				S	**S**	**14 12 08.6**	**+3.1**
ARU				SS	**SS**	**14 15 49.6**	**-2.9**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**57.25**	**159**	P	**P**	**14 04 20.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=335,slow=3.2,SNR=3.1						
	comp=Z,0.9nm,0.7s						
KIRV	**Kirov**	**61.63**	**326**	⇓*e*P	**P**	**14 04 51.4**	**+0.5**
NCK	**Nalchik**	**65.84**	**309**	⇓*e*P	**P**	**14 05 17.4**	**-1.6**
NCK				pmax	pmax		
	comp=Z,18nm,0.4s						
KIV	**Kislovodsk**	**66.43**	**310**	*e*P	**P**	**14 05 22.1**	**-0.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H23K	**Yukon River**	**70.22**	**26**	P	**P**	**14 05 46.8**	**+0.6**
ILAR	**Eielson Array**	**71.52**	**27**	P	**P**	**14 05 53.4**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=282,slow=5.7,SNR=2.3						
	comp=Z,0.2nm,0.6s						
SCM	**Sheep Creek Mo**	**71.95**	**30**	P	**P**	**14 05 57.0**	**+0.2**
FINES	**FINESS Array B**	**73.00**	**330**	P	**P**	**14 06 03.1**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=132,slow=2.8,SNR=4.2						
	comp=Z,2.4nm,0.9s						
BRTR	**Keskin Array B**	**73.91**	**307**	P	**P**	**14 06 09.7**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=58,slow=3.6,SNR=2.6						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**74.05**	**319**	P	**P**	**14 06 08.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=89,slow=16,SNR=1.4						
	comp=Z,0.2nm,0.4s						
INK	**Inuvik**	**75.55**	**22**	P	**P**	**14 06 17.5**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=353,slow=6.2,SNR=4.8						
	comp=Z,1.6nm,0.8s						
INK	**Inuvik**	**75.55**	**22**	IAmb	IAmb	14 06 19.1	
	comp=Z,2.3nm,0.9s						
BURAR	**Bucovina Array**	**77.47**	**316**	P	**P**	**14 06 29.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**77.47**	**316**	P	**P**	**14 06 30.1**	**+1.1**
BUR08				IAmb	IAmb	14 06 30.8	
	comp=Z,2.9nm,1.0s						
HFS	**Hagfors**	**79.15**	**331**	LR	LR	14 47 26.5	
	comp=Z,48nm,18.7s,baz=45,slow=40						
NOA	**NORSAR Array B**	**79.85**	**332**	LR	LR	14 45 28.7	
	comp=Z,43nm,19.2s,baz=55,slow=38						
GERES	**GERESS Array B**	**84.09**	**320**	P	**P**	**14 07 05.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=101,slow=2.9,SNR=5.7						
	comp=Z,0.5nm,0.6s						
GERES	**GERESS Array B**	**84.09**	**320**	*e*P	**P**	**14 07 05.7**	**+1.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**85.29**	**22**	P	**P**	**14 07 10.3**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=321,slow=4.8,SNR=6.4						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**72.20**	**180**	P	**P**	**14 07 49.9**	**-1.1**
QSPA				IAmb	IAmb	14 07 53.2	
	comp=Z,9.9nm,1.3s						
CMAR	**Chiang Mai Arr**	**77.00**	**294**	P	**P**	**14 08 19.2**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=122,slow=4.8,SNR=6.9						
	comp=Z,1.3nm,0.8s						
BELA	**Belgrano 2**	**83.56**	**175**	P	**P**	**14 08 51.5**	**-2.0**
SONM	**Songino Array**	**85.50**	**323**	P	**P**	**14 09 04.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=127,slow=3.8,SNR=3.1						
	comp=Z,0.5nm,0.8s						
NVAR	**Mina Array Bea**	**88.66**	**49**	P	**P**	**14 09 20.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=235,slow=3.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						
SNAA	**Sanae**	**90.50**	**183**	P	**P**	**14 09 27.3**	**0.0**
SNAA				IAmb	IAmb	14 09 50.0	
	comp=Z,4.4nm,1.2s						

IDC 25 13:55:29.8±8.7, 16°.90N×122°.08W, h0^{km}, mb3.3/5, mbtmp3.3/5, MS3.0/1, Error ellipse: s-maj=157.2km s-min=57.1km az=2.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**20.94**	**51**	P	P	14 00 14.6	+0.2
	0.7nm,0.9s,baz=225,slow=11,SNR=5.3						
	0.7nm,0.9s						
NVAR	**Mina Array Bea**	**21.70**	**8**	P	P	14 00 22.9	+0.2
	0.3nm,0.9s,baz=203,slow=12,SNR=3.8						
	0.3nm,0.9s						
YBH	**Yreka Blue Hor**	**24.75**	**359**	LR	LR	14 07 48.5	
	comp=Z,32nm,18.5s,baz=167,slow=30						
YKA	**Yellowknife Ar**	**45.84**	**5**	P	P	14 03 53.1	-0.2
	0.5nm,0.8s,baz=182,slow=9.0,SNR=6.3						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**50.69**	**347**	P	P	14 04 31.0	+0.2
	0.3nm,0.7s,baz=162,slow=9.1,SNR=3.2						
	0.3nm,0.7s						
INK	**Inuvik**	**51.90**	**355**	P	P	14 04 39.2	-0.6
	2.0nm,1.0s,baz=180,slow=7.1,SNR=3.3						
	2.0nm,1.0s						

IDC ***25*** *13:56:35.9±3.1, 17°.79S×168°.10E, h84^{km}±32^{km}, mb3.8/9, mbtmp4.2/11, MS3.0/3, Error ellipse: s-maj=27.6km s-min=18.4km az=155.0*

NEIC ***25*** *13:56:37.4±1.8, 17°.93S±0°.07×168°.21E±0°.09, h96^{km}±8^{km}, mb4.5/16, Error ellipse: s-maj=12.5km s-min=9.6km az=86.0*

ISC 25 13:56:37.0±0.6, 17°.85S±0°.06×168°.16E±0°.08, h100^{km}, n38, σ1^{s}.35/37, mb4.3/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.56**	**339**		**Pn**	**13 57 14.0**	**-2.9**
LIFNC	**LIFOU**	**3.04**	**196**		**Pn**	**13 57 20.6**	**-2.7**
MARNC	**Mare, Loyalty**	**3.62**	**182**		**Pn**	**13 57 27.3**	**-3.7**
DZM	**Mont Dzumac**	**4.50**	**201**	P	**Pn**	**13 57 42.1**	**-1.0**
	71nm,0.4s,baz=88,slow=9.6,SNR=371						
DZM				S	**Sn**	**13 58 33.7**	**-0.6**
	175nm,0.3s,baz=315,slow=23,SNR=30						
DZM	**Mont Dzumac**	**4.50**	**201**		**Pn**	**13 57 42.3**	**-0.8**
KOUNC	**Koumac, New Ca**	**4.54**	**233**		**Pn**	**13 57 43.7**	**+0.2**
OUENC	**Ouen Island, N**	**4.71**	**195**		**Pn**	**13 57 45.1**	**-0.7**
PINNC	**Pines Island,**	**4.79**	**188**		**Pn**	**13 57 45.9**	**-1.0**
MSVF	**Nonsavu**	**9.42**	**91**	P	**Pn**	**13 58 50.3**	**+0.3**
	34nm,1.1s,baz=242,slow=8.0,SNR=12						
MSVF				LR	LR	14 01 59.2	
	comp=Z,70nm,18.3s,baz=268,slow=34						
MSVF	**Nonsavu**	**9.42**	**91**		**Pn**	**13 58 53.8**	**+3.8**
CTA	**Charters Tower**	**20.84**	**260**	P	**P**	**14 01 11.1**	**+0.2**
	6.2nm,1.0s,baz=59,slow=9.0,SNR=4.4						
CTA				LR	LR	14 07 43.9	
	comp=Z,41nm,19.2s,baz=78,slow=32						
	6.2nm,1.0s						
CTAO	**Charters Tower**	**20.84**	**260**	P	Pn	14 01 15.3	+1.1
URZ	**Urewera**	**21.79**	**161**	P	**P**	**14 01 22.2**	**+1.4**
	8.1nm,0.7s,baz=335,slow=14,SNR=1.3						
	8.1nm,0.7s						
PMG	**Port Moresby**	**22.05**	**290**	P	**P**	**14 01 23.2**	**-0.6**
	9.3nm,0.8s,baz=114,slow=12,SNR=3.6						
	9.3nm,0.8s						
BKZ	**Black Stump Fm**	**22.45**	**163**	P	**P**	**14 01 28.4**	**+0.7**
BKZ				IAmb	IAmb	14 01 30.3	
	comp=Z,14nm,0.8s						
THZ	**Tophouse**	**24.18**	**171**	P	**P**	**14 01 43.5**	**-0.6**
STKA	**Stephens Creek**	**27.76**	**235**	P	**P**	**14 02 16.8**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=105,slow=9.2,SNR=3.5						
	comp=Z,2.1nm,0.8s						
RAR	**Rarotonga**	**30.38**	**102**	LR	LR	14 13 38.6	
	comp=Z,27nm,19.0s,baz=185,slow=34						
WB0	**Warramunga Arr**	**31.99**	**261**	P	**P**	**14 02 54.8**	**+0.8**
WB0				IAmb	IAmb	14 02 55.2	
	comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**32.04**	**261**	P	**P**	**14 02 54.6**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=89,slow=9.2,SNR=23						
	comp=Z,3.2nm,0.7s						
WRA	**Warramunga Arr**	**32.04**	**261**	P	**P**	**14 02 54.7**	**+0.3**
AS31	**Alice Springs**	**32.50**	**254**	P	**P**	**14 02 59.0**	**+0.6**
ASAR	**Alice Springs**	**32.50**	**254**	P	**P**	**14 02 59.1**	**+0.7**
	comp=Z,9.8nm,0.8s,baz=77,slow=9.1,SNR=133						
	comp=Z,9.8nm,0.8s						
ASAR	**Alice Springs**	**32.50**	**254**	P	**P**	**14 02 58.6**	**+0.2**
KNRA	**Kununurra**	**37.74**	**267**	P	**P**	**14 03 44.3**	**+0.9**
FAKI	**Fak Fak**	**38.20**	**289**	P	**P**	**14 03 47.6**	**+0.3**
FAKI				IAmb	IAmb	14 03 48.4	
	comp=Z,4.5nm,0.9s						
MBWA	**Marble Bar**	**45.63**	**258**	P	**P**	**14 04 48.7**	**+0.9**
MBWA				IAmb	IAmb	14 04 49.9	
	comp=Z,9.1nm,1.0s						
MORW	**Morawa**	**48.76**	**247**	P	**P**	**14 05 12.6**	**+0.6**
VNDA	**Vanda**	**59.78**	**182**	P	**P**	**14 06 30.7**	**-0.5**
VNDA				IAmb	IAmb	14 06 49.9	
	comp=Z,4.2nm,1.5s						
SBA	**Scott Base**	**60.04**	**180**	P	**P**	**14 06 33.2**	**+0.3**
USA0B	**Ussuriysk Arra**	**70.04**	**333**	P	**P**	**14 07 38.7**	**+0.8**
USA0B				IAmb	IAmb	14 07 50.9	
	comp=Z,8.5nm,1.1s						
USRK	**Ussuriysk Ar.**	**70.04**	**333**	P	**P**	**14 07 38.0**	**0.0**

IDC 25 14:29:51.6±3.5, 5°.73S×146°.95E, h197^{km}±62^{km}, mb2.9/2, mbtmp3.5/4, Error ellipse: s-maj=115.6km s-min=30.6km az=109.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.65**	**177**	P	Pn	14 30 49.3	+0.2
	4.3nm,0.3s,baz=0.0,slow=11,SNR=8.8						
PMG				S	Sn	14 31 34.6	+0.5
	10nm,0.5s,baz=342,slow=20,SNR=8.8						
WRA	**Warramunga Arr**	**18.70**	**220**	P	P	14 33 54.7	-0.7
	0.6nm,0.3s,baz=46,slow=11,SNR=40						
ASAR	**Alice Springs**	**21.81**	**214**	P	P	14 34 28.8	+0.4
	1.1nm,0.8s,baz=49,slow=7.3,SNR=16						
	1.1nm,0.8s						
SONM	**Songino Array**	**64.15**	**331**	P	P	14 40 05.1	-0.1
	0.2nm,0.3s,baz=152,slow=7.8,SNR=1.5						
	0.2nm,0.3s						

JMA 25 14:30:33.9±0.5, 24°N±1°×12°4E±°, h17^{km}±2^{km}, MV0.2/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.04**	**94**	*i* P	Pg	14 30 36.7	-0.1
IRIF				*e*S	Sg	14 30 39.4	+0.5
HATJ	**Hateruma jima**	**0.30**	**159**	*e*P	Pg	14 30 40.2	-0.1
JKRS	**Kuro-shima**	**0.31**	**109**	P	Pg	14 30 40.1	-0.3
JKRS				*e*S	Sg	14 30 44.7	-0.1
JIJ	**Ishigaki jima**	**0.41**	**86**	P	Pg	14 30 42.1	-0.2
JIJ				*e*S	Sb	14 30 48.5	-0.3
JISG	**Ishigakijimahi**	**0.62**	**66**	*i* S	Sg	14 30 52.0	-2.3

TAP 25 14:30:42.3, 24°.19N×121°.67E, h12^{km}, ML1.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.05**	**237**	P	Pg	14 30 45.4	+0.7
	baz=236						
ETL				S	Sg	14 30 47.3	+0.9
	baz=236						
NACB	**Ninganchiao**	**0.07**	**259**	P	Pg	14 30 45.3	+0.5
	baz=258						
NACB				S	Sg	14 30 47.1	+0.5
	baz=258						
TWD	**Chiawan**	**0.13**	**213**	P	Pg	14 30 45.8	+0.3
	baz=210						
TWD				S	Sg	14 30 48.4	+0.6
	baz=210						
ETLH	**Xiulin Townshi**	**0.17**	**276**	P	Pb	14 30 47.0	-0.5
	baz=276						
ETLH				S	Sg	14 30 50.0	+1.0
	baz=276						
HWA	**Hwalien**	**0.22**	**196**	*e*P	Pb	14 30 48.8	+0.5
	baz=194						
HWA				*e*S	Sg	14 30 52.4	+2.2
	baz=194						
ENA	**Nanau**	**0.25**	**15**	P	Pg	14 30 48.0	+0.5
	baz=16						
ENA				S	Sg	14 30 52.1	+1.1
	baz=16						
EWUT	**Wuta**	**0.27**	**21**	P	Pg	14 30 48.5	+0.5
	baz=20						
EWUT				S	Sb	14 30 52.8	-1.0
	baz=20						
NNSB	**Datong**	**0.36**	**312**	P	Pb	14 30 50.6	-0.1
	baz=312						
NNSB				S	Sb	14 30 55.7	-0.6
	baz=312						
LATG	**Datong**	**0.37**	**339**	P	Pb	14 30 50.6	-0.3
	baz=338						
LATG				S	Sb	14 30 56.8	+0.1
	baz=338						
NNS	**Nan Shan**	**0.37**	**313**	P	Pb	14 30 51.3	+0.4
	baz=313						
NNS				S	Sb	14 30 56.4	-0.3
	baz=313						
WHF	**Hehuan Shan**	**0.37**	**264**	*e*P	Pb	14 30 51.4	+0.3
	baz=263						
WHF				*e*S	Sb	14 30 56.4	-0.7
	baz=263						
FUSS	**Fushou**	**0.40**	**279**	*e*P	Pb	14 30 51.4	0.0
	baz=278						
FUSS				*e*S	Sb	14 30 57.3	-0.2
	baz=278						
ESL	**Shilin**	**0.43**	**210**	P	Pg	14 30 51.1	+0.3
	baz=209						
ESL				S	Sb	14 30 58.2	-0.1
	baz=209						
NDS	**Dongshan**	**0.45**	**5**	P	Pb	14 30 52.3	+0.2
	baz=5.0						
NDS				S	Sb	14 30 58.5	-0.3
	baz=5.0						
TWC	**Suao**	**0.45**	**21**	*e*P	Pg	14 30 51.6	+0.4
	baz=22						
TWC				*e*S	Sb	14 30 58.5	-0.4
	baz=22						
TWT	**Tachien**	**0.46**	**278**	*e*P	Pb	14 30 52.4	0.0
	baz=277						
TWT				*e*S	Sb	14 30 59.6	+0.4
	baz=277						
ENTT	**Nioudou**	**0.46**	**348**	P	Pb	14 30 52.5	+0.1
	baz=348						
ENTT				S	Sb	14 30 59.7	+0.5
	baz=348						
CHGB	**Renai**	**0.47**	**254**	P	Pb	14 30 52.7	0.0
	baz=254						
CHGB				S	Sb	14 30 59.6	-0.1
	baz=254						
TDCB	**Techi**	**0.47**	**278**	P	Pb	14 30 52.2	-0.4
	baz=277						
TDCB				S	Sb	14 30 59.4	-0.3
	baz=277						
OWD	**Renai**	**0.51**	**243**	P	Pb	14 30 53.6	+0.3
	baz=242						
OWD				S	Sb	14 31 00.5	-0.2
	baz=242						
TWE	**Neicheng**	**0.53**	**360**	P	Pb	14 30 53.7	+0.1
	baz=1.0						
TWE				S	Sb	14 31 01.4	+0.2
	baz=1.0						
WUSB	**Renai**	**0.54**	**249**	*e*P	Pb	14 30 54.1	+0.3
	baz=248						
WUSB				S	Sb	14 31 01.7	0.0
	baz=248						
YHNB	**Yeheng**	**0.55**	**331**	P	Pb	14 30 54.4	+0.4
	baz=330						
YHNB				S	Sb	14 31 01.5	-0.3
	baz=330						
EGFH	**Guangfu**	**0.56**	**203**	*e*P	Pb	14 30 53.8	-0.3
	baz=203						
EGFH				*e*S	Sb	14 31 02.5	+0.3
	baz=203						
NSK	**Sanguang**	**0.56**	**330**	P	Pb	14 30 54.2	0.0
	baz=330						
NSK				S	Sb	14 31 02.8	+0.6
	baz=330						
FUSB	**Fushanzhiwuyua**	**0.57**	**352**	P	Pb	14 30 54.6	+0.2
	baz=352						
FUSB				S	Sb	14 31 02.5	0.0
	baz=352						
NWLT	**Wulai**	**0.61**	**345**	P	Pb	14 30 55.1	+0.2
	baz=345						
NWLT				S	Sb	14 31 03.5	+0.1
	baz=345						
VWDT	**VWDT**	**0.65**	**228**	P	Pb	14 30 56.4	+0.8
	baz=228						

VWDT				S	Sb	14 31 05.2	+0.6
	baz=228						
NFF	**Wufeng Townshi**	**0.67**	**311**	*e*P	Pg	14 30 55.5	+0.1
	baz=311						
NFF				*e*S	Sb	14 31 05.3	0.0
	baz=311						
EGS		**0.70**	**20**	*e*P	Pg	14 30 55.6	-0.2
	baz=20						
EGS				*e*S	Sb	14 31 06.1	+0.1
	baz=20						
WCS	**Beigang Elemen**	**0.71**	**260**	*e*P	Pb	14 30 57.3	+0.7
	baz=259						
WCS				*e*S	Sb	14 31 06.5	+0.2
	baz=259						
HGSD	**Ruisui**	**0.73**	**198**	*e*P	Pn	14 30 58.2	-0.2
	baz=198						
HGSD				*e*S	Sn	14 31 09.4	-0.1
	baz=198						
EHY	**Hungye**	**0.75**	**205**	*e*P	Pg	14 30 56.8	0.0
	baz=204						
EHY				*e*S	Sb	14 31 08.1	+0.6
	baz=204						
LIOB	**Emei**	**0.75**	**307**	*e*P	Pn	14 30 58.9	+0.2
	baz=307						
LIOB				*e*S	Sb	14 31 08.6	+1.0
	baz=307						
NSTT	**Nanjuang**	**0.75**	**306**	*e*P	Pn	14 30 58.9	+0.1
	baz=306						
NSTT				*e*S	Sb	14 31 07.9	+0.3
	baz=306						
SMLT	**Sun Moon Lake**	**0.77**	**247**	*e*P	Pn	14 30 58.8	-0.3
	baz=246						
SMLT				*e*S	Sb	14 31 08.5	+0.4
	baz=246						
SSLB	**Suanglung**	**0.77**	**239**	*e*P	Pg	14 30 57.1	-0.1
	baz=238						
SSLB				*e*S	Sb	14 31 08.6	+0.6
	baz=238						
TIPB	**Shuangxi**	**0.79**	**10**	*e*P	Pb	14 30 58.6	+0.5
	baz=10.0						
TIPB				*e*S	Sb	14 31 08.7	-0.1
	baz=10.0						
YULB	**Yu-li**	**0.86**	**204**	*e*P	Pg	14 30 58.8	-0.1
	baz=203						
YULB				*e*S	Sn	14 31 11.8	-1.0
	baz=203						
NCU	**National Centr**	**0.90**	**331**	*e*P	Pg	14 30 59.3	-0.3
	baz=330						
NCU				*e*S	Sb	14 31 11.9	+0.2
	baz=330						
ELDTW	**Lidau**	**1.16**	**211**	*e*P	Pb	14 31 03.8	-0.6
	baz=210						
ELDTW				*e*S	Sn	14 31 20.2	-0.1
	baz=210						

WEL 25 14:40:21.4±0.7**,45°S**±4°×**16°8E**±°**,h70**km±7km**,M3.8**/15**,**
ML4.0/17**,MLv3.8**/15**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=129.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.44**	**35**	P	Pn	14 40 34.9	+1.2
MSZ				S	Sn	14 40 45.5	+2.8
MLZ	**Mavora Lakes**	**0.51**	**131**	P	Pn	14 40 35.7	+1.2
MLZ				S	Sn	14 40 46.2	+2.2
DCZ	**Deep Cove**	**0.52**	**214**	P	Pn	14 40 35.2	+0.7
DCZ				S	Sn	14 40 45.7	+1.7
WHZ	**Wether Hill Ro**	**0.90**	**163**	P	Pn	14 40 39.5	+0.8
WKZ	**Wanaka**	**1.05**	**79**	P	Pn	14 40 41.9	+1.3
WKZ				S	Sn	14 40 56.9	+2.1
EAZ	**Earnscleugh**	**1.25**	**100**	P	Pn	14 40 44.3	+1.3
EAZ				S	Sn	14 41 00.6	+1.3
PYZ	**Puysegur Point**	**1.29**	**209**	P	Pn	14 40 44.9	+1.3
JCZ	**Jackson Bay**	**1.29**	**42**	P	Pn	14 40 44.1	+0.3
JCZ				S	Sn	14 41 03.7	+3.2
TUZ	**Tuapeka**	**1.71**	**123**	P	Pn	14 40 50.2	+1.0
TUZ				S	Sn	14 41 10.5	+0.2
APZ	**The Paps**	**1.82**	**171**	P	Pn	14 40 51.1	+0.4
SYZ	**Scrubby Hill**	**1.86**	**144**	P	Pn	14 40 51.9	+0.8
LBZ	**Lake Benmore**	**1.97**	**72**	P	Pn	14 40 52.4	-0.3
LBZ				S	Sn	14 41 15.5	-1.0
ODZ	**Otahua Downs**	**2.18**	**91**	P	Pn	14 40 55.5	0.0
ODZ				S	Sn	14 41 19.9	-1.6
FOZ	**Fox Glacier**	**2.20**	**48**	P	Pn	14 40 55.6	-0.2
HHSZ	**Highcliff Hill**	**2.29**	**113**	P	Pn	14 40 57.8	+0.8
TMZ	**Timaru**	**2.53**	**76**	P	Pn	14 40 59.4	-0.9
GCSZ	**Gaunt Creek Bo**	**2.62**	**50**	P	Pn	14 41 00.7	-0.8
ARCZ	**Arundel**	**2.80**	**68**	P	Pn	14 41 02.6	-1.3
RPZ	**Rata Peaks**	**2.82**	**63**	P	Pn	14 41 03.0	-1.2
WVZ	**Waitaha Valley**	**3.01**	**50**	P	Pn	14 41 07.1	+0.4
WACZ	**Wakanui South**	**3.24**	**72**	P	Pn	14 41 08.5	-1.4
INZ	**Inchbonnie**	**3.63**	**52**	P	Pn	14 41 14.1	-1.1
OXZ	**Oxford**	**3.64**	**64**	P	Pn	14 41 13.1	-2.3
MQZ	**McQueen's Vall**	**3.88**	**72**	P	Pn	14 41 17.1	-1.5
LTZ	**Lake Taylor**	**4.08**	**58**	P	Pn	14 41 19.3	-2.0
AMCZ	**Amberley**	**4.10**	**65**	P	Pn	14 41 20.0	-1.6
GVZ	**Greta Valley S**	**4.45**	**64**	P	Pn	14 41 24.5	-1.9
DSZ	**Denniston Nort**	**4.51**	**45**	P	Pn	14 41 26.8	-0.4
THZ	**Tophouse**	**5.08**	**52**	P	Pn	14 41 32.9	-2.2
MRNZ	**Matariki Terra**	**5.25**	**48**	P	Pn	14 41 37.1	-0.2
QRZ	**Quartz Range**	**5.56**	**43**	P	Pn	14 41 41.0	-0.6
TKNZ	**Takaka Hill**	**5.62**	**47**	P	Pn	14 41 42.4	0.0

KRNET ***25*** *15:08:51.6±0.1,40°.87N×71°.17E,h10km,mb3.6*
NNC ***25*** *15:08:51.8±2.3,40°.80N×71°.06E,h0km,mb4.1,mpv3.6,*
Error ellipse: s-maj=17.8km s-min=7.5km az=11.0
SOME ***25*** *15:08:52.5,40°.93N×71°.08E,h0km*
ISU ***25*** *15:08:52,40°.88N×71°.18E,h14km*
ISC 25 15:08:51.3±1.0**,40°.88N**±0°.02×**71°.19E**±0°.02**,h15**km±9km**,**
n43,σ**1^{s}31**/76**,13C-6D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHDK	**Chadak**	**0.34**	**286**	P	**Pb**	**15 08 59.2**	**0.0**
CHDK				S	**Sb**	**15 09 04.2**	**-0.3**
MINT	**Mingtut**	**0.45**	**202**	P	**Pb**	**15 09 01.3**	**+0.5**
MINT				S	**Sb**	**15 09 08.1**	**+0.8**
TRKS	**Terek-Say**	**0.65**	**357**	⇓*i*P	**Pg**	**15 09 03.1**	**-1.0**
	baz=0.0						
TRKS				⇓*i*S	**Sg**	**15 09 11.5**	**-1.3**
	baz=0.0						
CHMI	**Chimion**	**0.66**	**157**	P	**Pb**	**15 09 05.4**	**+0.8**
CHMI				S	**Sn**	**15 09 15.3**	**-1.0**
FRG	**Fergana**	**0.68**	**138**	P	**Pb**	**15 09 05.6**	**+0.8**
FRG				S	**Sn**	**15 09 15.9**	**-0.8**
BTK	**Batken**	**0.87**	**199**	⇓*i*P	**Pb**	**15 09 08.0**	**-0.1**
	baz=99						
BTK				⇓*i*S	**Sb**	**15 09 19.9**	**+0.3**
	baz=99						
BTK	**Batken**	**0.87**	**199**	P	**Pg**	**15 09 07.5**	**-0.7**
BTK				S	**Sb**	**15 09 19.4**	**-0.2**
SHAK	**Shakhimardan**	**1.02**	**155**	P	**Pb**	**15 09 10.8**	**+0.1**
SHAK				S	**Sn**	**15 09 25.2**	**0.0**
ARK	**Arkit**	**1.09**	**32**	⇑*i*P	**Pn**	**15 09 12.7**	**+0.6**
	baz=33						
ARK				⇑*i*S	**Sn**	**15 09 28.0**	**+1.1**
	baz=33						
ARK	**Arkit**	**1.09**	**32**	P	**Pn**	**15 09 12.7**	**+0.6**
ARK				S	**Sn**	**15 09 27.9**	**+1.1**
CHMG	**Chimgan**	**1.11**	**307**	P	**Pn**	**15 09 13.0**	**+0.5**
CHMG				S	**Sn**	**15 09 28.1**	**+0.5**
CHRV	**Charvak**	**1.20**	**310**	P	**Pg**	**15 09 14.9**	**+0.4**
CHRV				S	**Sn**	**15 09 31.6**	**+1.9**
OHH	**Osh**	**1.26**	**106**	⇑*i*P	**Pg**	**15 09 15.8**	**+0.1**
	baz=5.0						
OHH				⇑*i*S	**Sg**	**15 09 33.5**	**+1.3**
	baz=5.0						
OHH	**Osh**	**1.26**	**106**	P	**Pg**	**15 09 15.6**	**-0.1**
OHH				S	**Sg**	**15 09 32.5**	**+0.3**
DRK	**Karamyk**	**1.48**	**161**	⇓*e*P	**Pg**	**15 09 19.5**	**-0.2**
	baz=61						
DRK				⇓*i*S	**Sg**	**15 09 39.7**	**+0.8**
	baz=61						
TAS	**Tashkent**	**1.50**	**288**	⇑*i*P	**Pg**	**15 09 19.7**	**-0.4**
	baz=89						
TAS				⇑*i*S	**Sg**	**15 09 40.1**	**+0.5**
	baz=89						
TAS	**Tashkent**	**1.50**	**288**	P	**Pg**	**15 09 20.6**	**+0.5**
TAS				S	Sn	15 09 26.9	-10
TAS				S	**Sg**	**15 09 41.2**	**+1.6**
IUG	**Iuzhnay**	**1.54**	**326**	*e*P	**Pg**	**15 09 20.7**	**-0.1**
	5μm,0.5s						
IUG				*e*S	**Sg**	**15 09 41.1**	**+0.3**
	906nm,0.4s						
IUG	**Iuzhnay**	**1.54**	**326**	P	**Pg**	**15 09 20.7**	**-0.1**
	5μm,0.5s						
IUG				S	**Sg**	**15 09 41.1**	**+0.3**
	906nm,0.4s						
NZBK	**Nazarbek**	**1.60**	**283**	P	**Pg**	**15 09 22.8**	**+0.7**
NZBK				S	**Sg**	**15 09 44.8**	**+1.8**
GAR	**Garm**	**1.99**	**200**	⇑*i*P	**Pg**	**15 09 28.5**	**-1.1**
	baz=0.0						
GAR				⇑*i*S	**Sg**	**15 09 55.1**	**-0.4**
	baz=0.0						
DZA	**Taraz**	**2.01**	**3**	*e*P	**Pg**	**15 09 29.8**	**-0.2**
	135nm,0.1s						
DZA				*e*S	**Sg**	**15 09 56.6**	**+0.5**
	744nm,0.6s						
KK31	**Karatay Array**	**2.28**	**347**	P	**Pb**	**15 09 31.9**	**-0.2**
	15nm,0.4s,baz=176,slow=13,SNR=245						
KK31				S	**Sg**	**15 10 03.6**	**-0.9**
	206nm,0.7s,baz=164,slow=27,SNR=18						
MRKS	**Merke**	**2.41**	**39**	*e*P	**Pg**	**15 09 39.7**	**+2.2**
	8.1nm,0.4s						
MRKS				*e*S	**Sg**	**15 10 13.5**	**+4.8**
	102nm,0.5s						
MRKS	**Merke**	**2.41**	**39**	Pg	**Pg**	**15 09 39.7**	**+2.2**
	8.1nm,0.4s						
MRKS				Lg	Lg	15 10 13.5	
	102nm,0.5s						
ARLS	**Aral**	**2.55**	**66**	⇑*e*P	**Pb**	**15 09 36.5**	**-0.4**
	baz=67						
ARLS				⇑*i*S	**Sb**	**15 10 09.3**	**+1.1**
	baz=67						
UCH	**Uchtor**	**2.83**	**61**	⇑*i*P	**Pb**	**15 09 40.5**	**-1.4**
	baz=61						
UCH				⇑*i*S	**Sb**	**15 10 16.3**	**-0.2**
	baz=61						
SGDS	**Sogindy**	**3.62**	**44**	*e*P	**Pg**	**15 09 59.3**	**-1.4**
	1.6nm,0.6s						
SGDS				*e*S	**Sg**	**15 10 47.6**	**-0.1**
	9.0nm,0.5s						
SGDS	**Sogindy**	**3.62**	**44**	Pg	**Pg**	**15 09 59.3**	**-1.4**
	1.6nm,0.6s						
SGDS				Lg	Lg	15 10 47.6	
	9.0nm,0.5s						
KST	**Kastek**	**4.16**	**57**	*e*P	**Pg**	**15 10 11.7**	**+0.7**
	2.8nm,0.3s						
KST				*e*S	**Sg**	**15 11 08.2**	**+3.2**
	26nm,1.0s						
KST	**Kastek**	**4.16**	**57**	Pg	**Pg**	**15 10 11.7**	**+0.7**
	2.8nm,0.3s						
KST				Lg	Lg	15 11 08.2	
	26nm,1.0s						
KRBS	**Karabastau**	**4.36**	**48**	*e*P	**Pg**	**15 10 14.5**	**-0.2**
	3.2nm,0.3s						
KRBS				*e*S	**Sg**	**15 11 13.2**	**+2.0**
	12nm,0.6s						
KRBS	**Karabastau**	**4.36**	**48**	Pg	**Pg**	**15 10 14.5**	**-0.2**
	3.2nm,0.3s						
KRBS				Lg	Lg	15 11 13.2	
	12nm,0.6s						
MTBS	**Maitube**	**4.50**	**58**	*e*P	**Pg**	**15 10 14.9**	**-2.7**
	2.0nm,0.1s						
MTBS				*e*S	**Sg**	**15 11 13.4**	**-2.5**
	9.9nm,0.4s						
MTBS	**Maitube**	**4.50**	**58**	Pg	**Pg**	**15 10 14.9**	**-2.7**
	2.0nm,0.1s						
MTBS				Lg	Lg	15 11 13.4	
	9.9nm,0.4s						
BTLS	**Baital**	**4.66**	**26**	*e*P	**Pg**	**15 10 18.4**	**-2.1**
	2.9nm,0.5s						
BTLS				*e*S	**Sg**	**15 11 19.5**	**-1.2**
	36nm,0.7s						
BTLS	**Baital**	**4.66**	**26**	Pg	**Pg**	**15 10 18.4**	**-2.1**
	2.9nm,0.5s						
BTLS				Lg	Lg	15 11 19.5	
	36nm,0.7s						
KUU	**Kurty**	**4.86**	**50**	*e*P	**Pg**	**15 10 23.6**	**-0.7**
	1.7nm,0.3s						
KUU				*e*S	**Sg**	**15 11 29.0**	**+1.8**
	17nm,1.1s						
KUU	**Kurty**	**4.86**	**50**	Pg	**Pg**	**15 10 23.7**	**-0.7**
	1.7nm,0.3s						
KUU				Lg	Lg	15 11 29.0	
	17nm,1.1s						
KTBS	**Karatobe**	**4.96**	**53**	*e*P	**Pg**	**15 10 25.0**	**-1.3**
	1.2nm,0.5s						
KTBS				*e*S	**Sg**	**15 11 30.9**	**+0.4**
	27nm,0.7s						
KTBS	**Karatobe**	**4.96**	**53**	Pg	**Pg**	**15 10 25.0**	**-1.3**
	1.2nm,0.5s						
KTBS				Lg	Lg	15 11 30.9	
	27nm,0.7s						
AB31	**Akbulak array**	**11.54**	**320**	P	**Pn**	**15 11 33.9**	**-1.4**
	1.9nm,0.6s,baz=134,slow=11,SNR=24						
AKTO	**Aktyubinsk**	**13.25**	**321**	⇑P	**Pn**	**15 11 57.7**	**-1.1**
	3.3nm,0.9s						

IDC ***25*** *15:10:39.6±0.7,22°.00N×143°.96E,h118km±6km,mb3.6/15,*
mbtmp4.0/17,MS2.7/1,Error ellipse: s-maj=19.4km
s-min=10.2km az=76.0
JMA ***25*** *15:10:43.0±0.3,23°N±3°×14°5E±°,h38km,MV5.4/19,FAR*
E OFF OGASAWARA
NEIC ***25*** *15:10:42.0±1.5,21°.97N±0°.10×143°.9E±0°.2,h127km±7km,*
mb4.2/23,Error ellipse: s-maj=24.3km s-min=13.2km
az=79.0
ISC 25 15:10:39.1±0.5**,21°.95N**±0°.05×**144°.0E**±0°.1**,h105**km**,n66,**
σ**1^{s}64**/66**,mb4.2**/24**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**4.94**	**341**	*e*P	**Pn**	**15 11 53.3**	**+2.4**
JHH2				*e*S	**Sn**	**15 12 46.5**	**-0.4**
CBIJ	**Chichi jima**	**5.37**	**343**	*e*P	**Pn**	**15 11 58.9**	**+2.0**
CBIJ				S	**Sn**	**15 12 56.1**	**-1.3**
JCJ	**Chichijima**	**5.37**	**343**	P	**Pn**	**15 11 58.0**	**+1.1**
	98nm,0.5s,baz=186,slow=19,SNR=44						
JCJ				S	**Sn**	**15 12 56.6**	**-0.8**
	246nm,0.4s,baz=101,slow=23,SNR=21						
JCJ	**Chichijima**	**5.37**	**343**		**Pn**	**15 11 59.4**	**+2.5**
BSO1	**Boso 1**	**12.93**	**349**	*e*S	**Sn**	**15 15 56.7**	**-3.5**
BSO3	**Boso 3**	**13.16**	**347**	*e*S	**Sn**	**15 16 00.9**	**-5.2**
JOD2	**Odawara 2**	**13.93**	**343**	*e*P	**Pn**	**15 13 54.0**	**+2.1**
JYT	**Yasato**	**14.60**	**348**	Pn	**Pn**	**15 14 00.7**	**+0.2**
JRY	**Ryogami san**	**14.69**	**344**	*e*P	**Pn**	**15 14 03.7**	**+2.1**
JGF	**Kuroka**	**14.77**	**338**	Pn	**Pn**	**15 14 03.7**	**+1.0**
JHO	**Hitachi**	**14.90**	**349**	*e*P	**Pn**	**15 14 04.1**	**-0.2**
JAG	**Ashikaga**	**14.95**	**346**	*e*P	**Pn**	**15 14 06.1**	**+1.3**
MJAR	**Matsushiro Arr**	**15.37**	**342**	P	**Pn**	**15 14 09.3**	**-1.0**
	1.1nm,0.8s,baz=153,slow=16,SNR=1.8						
JMM	**Marumori**	**16.10**	**351**	P	**P**	**15 14 21.9**	**+1.4**
JHS	**Saijyo**	**16.10**	**326**	P	**P**	**15 14 22.3**	**+1.7**
JHS				IAmb	IAmb	15 14 31.1	
	comp=Z,11nm,1.1s						
JHS	**Saijyo**	**16.10**	**326**	*e*P	**P**	**15 14 24.2**	**+3.6**
KSRS	**Korea Array**	**20.75**	**322**	P	**P**	**15 15 11.8**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=148,slow=8.7,SNR=27						
	comp=Z,3.2nm,0.6s						
KSAR	**Wonju Array Be**	**20.76**	**322**	P	Pn	15 15 15.8	+0.9
KS19	**Wonju Array Si**	**20.81**	**322**	P	Pn	15 15 15.7	+0.2
KS19				IAmb	IAmb	15 15 43.7	
	comp=Z,5.9nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**21.56**	**92**	T	T	15 38 14.7	
	baz=285						
H11N2	**WAKE ISLAND Hy**	**21.56**	**92**	T	T	15 38 27.7	
	baz=285						
H11N3	**WAKE ISLAND Hy**	**21.58**	**92**	T	T	15 38 34.7	
	baz=285						
H11S3	**WAKE ISLAND Hy**	**21.61**	**95**	T	T	15 38 23.0	
	baz=283,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**21.62**	**95**	T	T	15 38 21.6	
	baz=283,slow=75,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**21.63**	**95**	T	T	15 38 25.2	
	baz=283,slow=75,SNR=5.3						
DAV	**Davao City (W)**	**23.09**	**233**	LR	LR	15 23 41.5	
	comp=Z,19nm,21.9s,baz=21,slow=34						
MANU	**Manus Island**	**24.08**	**172**	P	**P**	**15 15 45.3**	**+0.5**
MANU				IAmb	IAmb	15 15 46.3	
	comp=Z,6.6nm,0.7s						
COEN	**Coen**	**35.69**	**181**	P	**P**	**15 17 28.5**	**+1.0**
MTN	**Manton Dam**	**36.79**	**201**	P	**P**	**15 17 36.9**	**+0.1**
MTN				IAmb	IAmb	15 17 46.7	
	comp=Z,5.2nm,1.1s						
SONM	**Songino Array**	**39.60**	**320**	P	**P**	**15 17 59.1**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=121,slow=6.6,SNR=3.6						
	comp=Z,0.7nm,0.6s						
KNRA	**Kununurra**	**40.24**	**203**	P	**P**	**15 18 05.4**	**-0.4**
KNRA				IAmb	IAmb	15 18 07.1	
	comp=Z,4.0nm,0.8s						
CTAO	**Charters Tower**	**41.84**	**177**	P	**P**	**15 18 19.5**	**+0.7**
CTAO				IAmb	IAmb	15 18 19.7	
	comp=Z,6.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**42.27**	**274**	P	**P**	**15 18 21.1**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=98,slow=5.7,SNR=1.9						
	comp=Z,0.3nm,0.5s						
WB0	**Warramunga Arr**	**42.50**	**193**	P	**P**	**15 18 24.1**	**-0.1**
WR0	**Warramunga Arr**	**42.65**	**193**	P	**P**	**15 18 25.1**	**-0.3**
WR0				IAmb	IAmb	15 18 30.1	
	comp=Z,3.7nm,1.1s						
WRAB	**Tennant Creek**	**42.67**	**193**	P	**P**	**15 18 25.3**	**-0.3**
WRAB				IAmb	IAmb	15 18 26.7	
	comp=Z,3.9nm,0.8s						
WB2	**Warramunga Arr**	**42.68**	**193**	P	**P**	**15 18 25.3**	**-0.3**
WB2				IAmb	IAmb	15 18 28.8	
	comp=Z,3.4nm,0.7s						
WRA	**Warramunga Arr**	**42.68**	**193**	P	**P**	**15 18 25.1**	**-0.5**
	comp=Z,1.3nm,0.2s,baz=14,slow=8.5,SNR=120						
WRA				PcP	**PcP**	**15 20 15.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=5.6,slow=3.6,SNR=5.8						
	comp=Z,1.3nm,0.2s						
WRA	**Warramunga Arr**	**42.68**	**193**	P	**P**	**15 18 24.8**	**-0.8**
AS31	**Alice Springs**	**46.38**	**193**	P	**P**	**15 18 54.5**	**-0.6**
ASAR	**Alice Springs**	**46.38**	**193**	P	**P**	**15 18 53.8**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=9.4,slow=6.5,SNR=23						
ASAR				PcP	**PcP**	**15 20 28.4**	**0.0**
	comp=Z,0.6nm,0.7s,baz=9.7,slow=3.4,SNR=7.9						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**46.38**	**193**	P	**P**	**15 18 54.1**	**-0.9**
DZM	**Mont Dzumac**	**48.94**	**152**	P	**P**	**15 19 13.1**	**-1.8**
	comp=Z,2.8nm,0.6s,baz=288,slow=15,SNR=2.1						
	comp=Z,2.8nm,0.6s						
GSI	**Gunungsitoli**	**49.55**	**252**	P	**P**	**15 19 19.6**	**-0.1**
STKA	**Stephens Creek**	**53.57**	**182**	P	**P**	**15 19 48.6**	**-0.6**
	comp=Z,4.5nm,0.6s,baz=357,slow=8.5,SNR=15						
	comp=Z,4.5nm,0.6s						
STKA	**Stephens Creek**	**53.57**	**182**	P	**P**	**15 19 49.0**	**-0.2**
ZALV	**Zalesovo Beam**	**54.45**	**321**	P	**P**	**15 19 54.5**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=96,slow=7.1,SNR=6.4						
	comp=Z,1.7nm,0.6s						
FORT	**Forrest**	**54.60**	**197**	P	**P**	**15 19 56.4**	**-0.3**
MK31	**Makanchi Array**	**55.05**	**312**	P	**P**	**15 20 00.1**	**+0.1**
MKAR	**Makanchi Array**	**55.05**	**312**	P	**P**	**15 19 59.6**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=8.6,SNR=9.0						
MKAR				pP	**pP**	**15 20 27.4**	**+3.0**
	comp=Z,0.6nm,0.6s,baz=88,slow=9.2,SNR=5.0						
	comp=Z,0.4nm,0.4s						
MAKZ	**Makanchi**	**55.27**	**312**	P	**P**	**15 20 01.7**	**+0.2**
MAKZ				IAmb	IAmb	15 20 02.3	
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**57.78**	**317**	P	**P**	**15 20 18.8**	**-0.3**
KURK				IAmb	IAmb	15 20 19.2	
	comp=Z,3.8nm,0.9s						
WRH	**Wood River Hil**	**60.93**	**27**	P	**P**	**15 20 41.1**	**+0.5**
WRH				IAmb	IAmb	15 20 50.7	
	comp=Z,2.9nm,1.0s						
ILAR	**Eielson Array**	**61.49**	**27**	P	**P**	**15 20 42.8**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=238,slow=12,SNR=6.7						
	comp=Z,0.2nm,0.5s						
KKAR	**Karatay Array**	**63.46**	**308**	P	**P**	**15 20 58.3**	**+0.4**
ABKAR	**Akbulak array**	**69.86**	**316**	P	**P**	**15 21 37.7**	**-0.8**
YKA	**Yellowknife Ar**	**75.90**	**28**	P	**P**	**15 22 12.6**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=295,slow=5.7,SNR=2.7						
YKA				pP	**pP**	**15 22 42.1**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=287,slow=6.2,SNR=2.9						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**78.91**	**342**	P	**P**	**15 22 29.4**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=64,slow=8.4,SNR=6.2						
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	**78.91**	**342**	P	**P**	**15 22 30.1**	**-0.5**
NVAR	**Mina Array Bea**	**82.43**	**52**	P	**P**	**15 22 49.0**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=268,slow=5.6,SNR=3.9						
NVAR				pP	**pP**	**15 23 19.5**	**+3.4**
	comp=Z,0.8nm,1.0s,baz=310,slow=4.2,SNR=2.5						
	comp=Z,0.4nm,0.6s						
KBZ	**Khabaz**	**82.70**	**314**	P	**P**	**15 22 49.6**	**-1.6**
	comp=Z,3.7nm,0.8s,baz=116,slow=2.6,SNR=8.3						
	comp=Z,3.7nm,0.8s						
FINES	**FINESS Array B**	**83.26**	**335**	P	**P**	**15 22 51.4**	**-2.3**
	comp=Z,1.1nm,0.6s,baz=64,slow=3.2,SNR=5.5						
FINES				pP	**pP**	**15 23 22.6**	**+2.9**
	comp=Z,2.1nm,0.9s,baz=60,slow=4.1,SNR=2.2						
	comp=Z,1.1nm,0.6s						
FINES	**FINESS Array B**	**83.26**	**335**	P	**P**	**15 22 52.0**	**-1.7**
PLCA	**Paso Flores**	**145.39**	**131**	PKPbc	**PKPdf**	**15 30 04.7**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=225,slow=3.1,SNR=12						
PLCA	**Paso Flores**	**145.39**	**131**		**PKPdf**	**15 30 04.6**	**-0.4**
LPAZ	**La Paz**	**149.21**	**85**	PKPbc	**PKPdf**	**15 30 16.2**	**+3.6**
	comp=Z,1.5nm,0.6s,baz=277,slow=6.7,SNR=6.6						

IDC 25 15:19:35.2±3.2**,22°.45S**×**179°.17E,h0**km**,mb3.8**/3**,**
mbtmp3.7/4**,ML4.5**/1**,Error ellipse: s-maj=80.8km**
s-min=34.7km az=130.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.80**	**347**	Pn	Pn	15 20 50.5	+1.6
	0.7nm,0.3s,baz=162,slow=20,SNR=6.3						
	2.6nm,0.5s						
ASAR	**Alice Springs**	**41.53**	**259**	P	P	15 27 25.8	+1.1
	1.6nm,0.6s,baz=90,slow=8.3,SNR=52						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**41.76**	**265**	P	P	15 27 24.9	-1.6
	0.5nm,0.7s,baz=96,slow=7.0,SNR=22						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**90.81**	**14**	P	P	15 32 39.5	-0.3
	0.7nm,1.1s,baz=229,slow=6.8,SNR=2.8						
	0.7nm,1.1s						

NEIC ***25*** *15:21:15.8±2.3,23°.9S±0°.1×179°.5W±0°.1,h520km±13km,*
mb4.0/18,Error ellipse: s-maj=21.8km s-min=12.2km
az=151.0
IDC ***25*** *15:21:16.4±2.1,23°.88S×179°.65W,h520km±27km,mb3.0/6,*
mbtmp4.0/8,Error ellipse: s-maj=24.9km s-min=21.7km
az=94.0
NOU ***25*** *15:21:16.7,23°.86S×179°.38W,h523km,mb4.2/14,South*
of Fiji Islands
ISC 25 15:21:15.1±0.7**,23°.83S**±0°.08×**179°.41W**±0°.09**,h512**km**,**
n64,σ**1^{s}74**/65**,mb3.8**/14**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.52**	**338**	P	**P**	**15 22 58.5**	**+1.3**
	3.9nm,0.5s,baz=188,slow=8.6,SNR=8.2						
MSVF	**Nonsavu**	**6.52**	**338**	P	**P**	**15 22 59.3**	**+2.1**
MSVF	**Nonsavu**	**6.52**	**338**	P	**P**	**15 22 59.4**	**+2.2**
DGTI	**Dogotuki**	**7.54**	**354**	P	**P**	**15 23 10.0**	**+2.7**
NIUE	**Niue**	**10.02**	**64**	P	**P**	**15 23 32.6**	**-0.3**
MARNC	**Mare, Loyalty**	**11.83**	**279**	P	**P**	**15 23 52.2**	**+0.3**
MARNC	**Mare, Loyalty**	**11.83**	**279**	P	**P**	**15 23 52.4**	**+0.5**
PINNC	**Pines Island,**	**12.14**	**273**	P	**P**	**15 23 56.4**	**+1.2**
PINNC	**Pines Island,**	**12.14**	**273**	P	**P**	**15 23 57.9**	**+2.7**
AFI	**Afiamalu**	**12.23**	**38**	P	**P**	**15 23 55.2**	**-1.1**
	19nm,0.4s,baz=209,slow=7.2,SNR=11						
AFI				S	**S**	**15 26 05.1**	**-3.9**
	21nm,0.8s,baz=230,slow=21,SNR=2.2						
AFI	**Afiamalu**	**12.23**	**38**	P	**P**	**15 23 57.1**	**+0.8**
AFI	**Afiamalu**	**12.23**	**38**	P	**P**	**15 23 58.0**	**+1.7**
LIFNC	**LIFOU**	**12.72**	**281**	P	**P**	**15 24 01.6**	**+0.3**
OUZ	**Omahuta**	**12.87**	**207**	P	**P**	**15 24 05.1**	**+2.5**
OUZ	**Omahuta**	**12.87**	**207**	P	**P**	**15 24 04.9**	**+2.2**
PUZ	**Puketiti**	**14.33**	**187**	P	P	15 24 23.4	+5.4
TWGZ	**Tauwhareparae**	**14.47**	**188**	P	**P**	**15 24 23.7**	**+4.2**
URZ	**Urewera**	**14.68**	**191**	P	**P**	**15 24 20.7**	**-0.9**
	5.7nm,0.3s,baz=0.0,slow=20,SNR=14						
URZ				S	**S**	**15 26 53.3**	**-2.2**
	13nm,1.0s,baz=53,slow=20,SNR=1.6						
URZ	**Urewera**	**14.68**	**191**	P	**P**	**15 24 22.4**	**+0.7**
URZ	**Urewera**	**14.68**	**191**	P	**P**	**15 24 22.9**	**+1.2**
MWZ	**Matawai**	**14.69**	**190**	P	**P**	**15 24 22.9**	**+1.1**
MUGZ	**Murupara**	**14.96**	**192**	P	**P**	**15 24 26.5**	**+1.9**
NMHZ	**Naumai**	**15.55**	**191**	P	**P**	**15 24 32.7**	**+1.9**
BKZ	**Black Stump Fm**	**15.68**	**192**	P	**P**	**15 24 30.6**	**-1.5**
BKZ				IAmb	IAmb	15 24 34.5	
	comp=Z,4.2nm,0.6s						
BKZ	**Black Stump Fm**	**15.68**	**192**	P	**P**	**15 24 31.2**	**-0.8**
BKZ	**Black Stump Fm**	**15.68**	**192**	P	**P**	**15 24 31.7**	**-0.4**
ARHZ	**Aropaoanui**	**15.68**	**190**	P	**P**	**15 24 34.8**	**+2.8**
MCHZ	**McNeill Hill**	**15.91**	**191**	P	**P**	**15 24 34.6**	**+0.2**
VRZ	**Vera Road**	**16.03**	**197**	P	**P**	**15 24 39.9**	**+4.3**

BHHZ	Black Hill Sta	16.07	193	P	P	15 24 35.7	-0.5
KAHZ	Kahuranaki	16.22	190	P	P	15 24 38.4	+0.7
PNHZ	Pukenui	16.46	192	P	P	15 24 39.8	-0.3
TSZ	Takapari Road	16.64	192	P	P	15 24 41.5	-0.5
ANWZ	Angora Road	16.94	191	P	P	15 24 45.6	+0.8
BFZ	Birch Farm	17.19	191	P	P	15 24 45.4	-1.9
BFZ	Birch Farm	17.19	191	P	P	15 24 46.7	-0.6
MSWZ	Moikau Station	18.09	193	P	P	15 24 53.4	-2.2
QRZ	Quartz Range	18.25	200	P	P	15 24 58.6	+1.6
QRZ	Quartz Range	18.25	200	P	P	15 24 58.9	+2.0
KHZ	Kahutara	19.44	196	P	P	15 25 08.7	+1.0
RPZ	Rata Peaks	21.33	199	P	P	15 25 24.9	-0.1
	comp=Z,14nm,0.8s,baz=358,slow=4.3,SNR=8.4						
	comp=Z,14nm,0.8s						
RPZ	Rata Peaks	21.33	199	P	P	15 25 24.6	-0.3
RPZ	Rata Peaks	21.33	199	P	P	15 25 26.6	+1.6
ODZ	Otahua Downs	22.66	199	P	P	15 25 37.0	+0.1
ODZ				IAmb	IAmb	15 25 39.6	
	comp=Z,5.6nm,1.2s						
MLZ	Mavora Lakes	23.75	202	P	P	15 25 46.3	-0.4
CTA	Charters Tower	32.01	270	P	P	15 26 58.6	-0.6
	comp=Z,1.3nm,0.3s,baz=88,slow=7.8,SNR=7.4						
	comp=Z,1.3nm,0.3s						
CTAO	Charters Tower	32.01	270	P	P	15 26 56.8	-2.4
CTAO				IAmb	IAmb	15 27 17.8	
	comp=Z,4.4nm,1.1s						
TOO	Toolangi	32.94	237	P	P	15 27 07.0	+0.1
TOO				IAmb	IAmb	15 27 30.9	
	comp=Z,6.8nm,1.1s						
STKA	Stephens Creek	35.25	248	P	P	15 27 25.7	-0.7
	comp=Z,1.4nm,0.6s,baz=67,slow=9.2,SNR=3.8						
	comp=Z,1.4nm,0.6s						
STKA	Stephens Creek	35.25	248	P	P	15 27 25.9	-0.5
BBOO	Buckleboo	39.96	247	P	P	15 28 03.5	-1.5
BBOO				IAmb	IAmb	15 28 26.5	
	comp=Z,7.8nm,1.1s						
AS31	Alice Springs	42.58	260	P	P	15 28 24.9	-1.0
ASAR	Alice Springs	42.58	260	P	P	15 28 24.6	-1.3
	comp=Z,0.2nm,0.4s,baz=95,slow=6.9,SNR=7.7						
	comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	42.58	260	P	P	15 28 24.5	-1.4
WR0	Warramunga Arr	42.76	266	P	P	15 28 25.4	-1.9
WB2	Warramunga Arr	42.94	266	P	P	15 28 26.9	-1.8
WB2				IAmb	IAmb	15 28 29.9	
	comp=Z,1.3nm,0.8s						
WRAB	Tennant Creek	42.94	266	P	P	15 28 26.9	-1.9
WRAB				IAmb	IAmb	15 28 30.0	
	comp=Z,2.1nm,1.0s						
WB0	Warramunga Arr	42.94	266	P	P	15 28 26.8	-2.0
WRA	Warramunga Arr	42.95	266	P	P	15 28 27.1	-1.8
	comp=Z,0.3nm,0.3s,baz=96,slow=8.4,SNR=41						
	comp=Z,0.3nm,0.3s						
FORT	Forrest	46.84	249	P	P	15 28 57.1	-1.4
FORT				IAmb	IAmb	15 29 04.3	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	49.23	269	P	P	15 29 15.2	-1.4
KNRA				IAmb	IAmb	15 29 16.6	
	comp=Z,4.7nm,0.9s						
QSPA	South Pole Qui	66.25	180	P	P	15 31 13.9	+2.0
QSPA				IAmb	IAmb	15 31 25.4	
	comp=Z,1.5nm,1.1s						
TXAR	Lajitas Array	89.94	58	P	P	15 33 21.2	+1.4
	comp=Z,0.4nm,0.7s,baz=212,slow=4.4,SNR=5.1						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	89.94	58	P	P	15 33 21.6	+1.8

IDC 25 16:21:56.7±420.0**,54°.00N×99°.19E,h0km,Error ellipse: s-maj=152.9km s-min=137.7km az=117.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	7.70	141	*i*		17 10 30.0	
	baz=327,slow=316,SNR=0.6						
I46RU	ZALESOVO INFRA	8.47	275	*i*		17 16 40.0	
	baz=83,slow=325,SNR=1.0						
I31KZ	AKTYUBINSK INF	25.22	279	*i*		18 55 20.0	
	baz=67,slow=315,SNR=1.1						
I43RU	DUBNA INFRASON	34.28	300	*i*		20 08 00.0	
	baz=71,slow=331,SNR=0.4						

*JMA **25** 16:40:05.4±0.2,24°.1N±0°.9×12°2E±°,h18km±1km, TAIWAN REGION*

*TAP **25** 16:40:05.7,24°.19N×121°.73E,h12km,ML2.8,B*

ISC 25 16:40:05.9±0.8**,24°.18N**±0°.02×**121°.68E**±0°.02**,h18**km±4km**,n49,**σ0s.**87**/83**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.05	248	*i* P	Pg	16 40 09.2	+0.1
	baz=249						
ETL				*i* S	Sg	16 40 11.6	+0.2
	baz=249						
NACB	Ninganchiao	0.07	266	*i* P	Pg	16 40 09.5	+0.2
	baz=260						
NACB				*i* S	Sg	16 40 12.1	+0.5
	baz=260						
TWD	Chiawan	0.12	217	*i* P	Pg	16 40 10.1	+0.3
	baz=225						
TWD				S	Sg	16 40 13.1	+0.7
	baz=225						
EHP	Heping Village	0.14	24	P	Pg	16 40 09.4	-0.6
	baz=8.0						
EHP				S	Sg	16 40 12.0	-0.8
	baz=8.0						
ETLH	Xiulin Townshi	0.18	279	*i* P	Pb	16 40 11.3	+0.5
	baz=273						
ETLH				*i* S	Sb	16 40 15.2	+1.2
	baz=273						
HWA	Hwalien	0.21	198	*e*P	Pb	16 40 12.1	+0.9
	baz=206						
ENA	Nanau	0.26	13	*i* P	Pg	16 40 11.2	-0.5
	baz=4.0						
ENA				S	Sg	16 40 14.9	-0.7
	baz=4.0						
ETM	Tongmen	0.27	218	P	Pb	16 40 12.6	+0.3
	baz=223						
ETM				S	Sb	16 40 17.3	+0.7
	baz=223						
EWUT	Wuta	0.28	19	*e*P	Pg	16 40 11.5	-0.6
	baz=9.0						
EWUT				S	Sg	16 40 15.4	-0.9
	baz=9.0						
TEYL	Yanliau Villag	0.32	193	*e*P	Pn	16 40 14.2	-1.5
	baz=202						
NNSB	Datong	0.37	313	*e*P	Pb	16 40 14.5	+0.5
	baz=306						
WHF	Hehuan Shan	0.38	265	*e*P	Pn	16 40 15.0	-1.9
	baz=263						
WHF				S	Sn	16 40 21.2	-2.8
	baz=263						
NNS	Nan Shan	0.38	313	P	Pb	16 40 14.7	+0.4
	baz=307						
NNS				S	Sb	16 40 20.9	+1.0
	baz=307						
LATG	Datong	0.38	339	*e*P	Pb	16 40 14.3	0.0
	baz=331						
LATG				S	Sb	16 40 20.8	+0.8
	baz=331						
FUSS	Fushou	0.40	280	*e*P	Pn	16 40 15.6	-1.5
	baz=276						
FUSS				S	Sn	16 40 22.3	-2.1
	baz=276						
ESL	Shilin	0.43	212	P	Pn	16 40 15.2	-2.0
	baz=214						
ESL				S	Sn	16 40 22.4	-2.2
	baz=214						
NDS	Dongshan	0.45	4	*i* P	Pg	16 40 15.1	-0.1
	baz=358						
NDS				S	Sg	16 40 21.3	0.0
	baz=358						
TWC	Suao	0.46	20	*i* P	Pg	16 40 14.8	-0.4
	baz=15						
TWC				*i* S	Sg	16 40 21.4	0.0
	baz=15						
TWT	Tachien	0.46	279	*i* P	Pn	16 40 17.2	-0.7
	baz=276						
ENTT	Nioudou	0.47	348	*e*P	Pg	16 40 15.8	+0.4
	baz=342						
CHGB	Renai	0.47	256	P	Pn	16 40 16.9	-1.1
	baz=255						
CHGB				*i* S	Sn	16 40 24.5	-1.6
	baz=255						
TDCB	Techi	0.48	279	P	Pn	16 40 17.2	-0.9
	baz=276						
OWD	Renai	0.51	244	P	Pn	16 40 17.8	-0.7
	baz=244						
OWD				*e*S	Sn	16 40 25.1	-1.7
	baz=244						
TWE	Neicheng	0.54	359	P	Pg	16 40 16.9	+0.2
	baz=355						
TWE				S	Sg	16 40 24.5	+0.5
	baz=355						
WUSB	Renai	0.54	250	P	Pn	16 40 18.3	-0.6
	baz=250						
WUSB				S	Sn	16 40 26.9	-0.8
	baz=250						
EGFH	Guangfu	0.56	204	*i* P	Pn	16 40 17.8	-1.2
	baz=207						
YHNB	Yeheng	0.56	331	*e*P	Pb	16 40 17.9	+0.6
	baz=325						
NSK	Sanguang	0.57	330	*e*P	Pb	16 40 18.1	+0.5
	baz=325						
NSK				*i* S	Sb	16 40 26.3	+0.9
	baz=325						
FUSB	Fushanzhiwuyua	0.58	352	*e*P	Pg	16 40 18.0	+0.4
	baz=346						
NWLT	Wulai	0.62	345	P	Pb	16 40 18.6	+0.4
	baz=340						
NWLT				S	Sg	16 40 27.2	+0.8
	baz=340						
VWDT	VWDT	0.65	229	P	Pn	16 40 20.0	-0.2
	baz=230						
WPL	Puli Township	0.68	256	P	Pn	16 40 21.0	+0.3
	baz=255						
WPL				*e*S	Sn	16 40 30.6	-0.3
	baz=255						
NFF	Wufeng Townshi	0.68	312	P	Pn	16 40 20.6	-0.2
	baz=307						
NFF				S	Sn	16 40 30.4	-0.6
	baz=307						
NTC	Toucheng	0.69	12	P	Pg	16 40 19.2	-0.2
	baz=7.0						
DPDB	Guoxing	0.70	258	P	Pn	16 40 21.4	+0.4
	baz=257						
DPDB				S	Sn	16 40 31.7	+0.2
	baz=257						
WCS	Beigang Elemen	0.71	260	*e*P	Pn	16 40 21.5	+0.4
	baz=259						
NSTT	Nanjuang	0.76	306	*i* S	Sn	16 40 33.2	+0.2
	baz=303						
SSLB	Suanglung	0.77	240	P	Pn	16 40 22.1	+0.1
	baz=240						
SSLB				S	Sn	16 40 33.4	+0.3
	baz=240						
SMLT	Sun Moon Lake	0.77	248	P	Pn	16 40 22.7	+0.7
	baz=247						
SMLT				S	Sn	16 40 33.3	0.0
	baz=247						
NHDH	Xindian Distri	0.79	350	*e*P	Pg	16 40 22.3	+0.8
	baz=346						
TYC	Yuchr	0.80	250	*e*P	Pn	16 40 23.0	+0.7
	baz=249						
TYC				S	Sn	16 40 34.1	+0.4
	baz=249						
TIPB	Shuangxi	0.80	10	P	Pb	16 40 21.3	-0.1
	baz=6.0						
TIPB				*e*S	Sb	16 40 31.5	-0.5
	baz=6.0						
TWB1	Santiao Chiao	0.87	19	*e*S	Sb	16 40 33.7	-0.3
	baz=16						
JYNG	Yonagunijimaku	1.19	77	*e*P	Pn	16 40 27.9	+0.2
JYNG				*e*S	Sb	16 40 44.0	+1.0
YOJ	Yonaguni jima	1.25	77	P	Pn	16 40 28.1	-0.4
	baz=76						
YOJ				S	Sn	16 40 45.0	0.0
	baz=76						
YOJ	Yonaguni jima	1.25	77	P	Pn	16 40 28.3	-0.2
YOJ				S	Sn	16 40 44.9	0.0
IRIF	Iriomote-Funau	1.88	85	*e*P	Pn	16 40 36.8	-0.5
IRIF				*e*S	Sn	16 41 00.5	0.0
JKRS	Kuro-shima	2.13	88	*e*P	Pn	16 40 41.5	+0.8
JKRS				S	Sn	16 41 07.3	+0.6
JIJ	Ishigaki jima	2.26	85	*e*P	Pn	16 40 42.3	-0.1
JIJ				*e*S	Sn	16 41 08.6	-1.2

IDC 25 16:57:15.8±2.2**,1°.26N×124°.98E,h0km,mb3.0**/3**, mbtmp3.0**/3**,Error ellipse: s-maj=210.7km s-min=28.9km az=64.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.98	157	P	P	17 02 23.6	+1.3
	0.1nm,0.3s,baz=336,slow=10,SNR=1.9						
	0.1nm,0.3s						
ASAR	Alice Springs	26.25	161	P	P	17 02 51.7	-1.2
	0.3nm,1.0s,baz=337,slow=6.7,SNR=4.7						
	0.3nm,1.0s						
MKAR	Makanchi Array	58.62	327	P	P	17 07 15.1	+0.3
	0.2nm,0.7s,baz=122,slow=5.4,SNR=2.1						
	0.2nm,0.7s						

*UCR **25** 17:08:39.6±1.5,11°.07N×85°.77W,h106km±3km,MW3.9*

*INET **25** 17:08:39.5±1.1,11°.12N×85°.76W,h105km±4km,MW3.3*

ISC 25 17:08:39.4±1.5**,11°.10N**±0°.04×**85°.81W**±0°.05**,h106**km±9km**,n49,**σ0s.**44**/78**,13C-1D,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.44	152	⇑*i*P	Pn	17 08 55.6	+0.1
HZTE				*e*S	Sn	17 09 08.5	+1.0
HZTE	Horizontes, Gu	0.44	152	*e*P	Pn	17 08 55.6	+0.1
HZTE				*e*S	Sn	17 09 08.5	+1.0
GBS3	Finca Las Img	0.47	133	⇑*e*P	Pn	17 08 55.4	-0.3
GBS3				*e*S	Sn	17 09 07.9	0.0
CONN	Concepcion	0.49	21	*e*P	Pn	17 08 55.4	-0.4
CONN				*e*S	Sn	17 09 07.9	-0.2
GB1A	Borinquen Arri	0.49	125	*e*P	Pn	17 08 56.0	+0.1
GB1A				*e*S	Sn	17 09 08.5	+0.2
BUEV	Buena Vista	0.50	128	*e*P	Pn	17 08 55.9	0.0
BUEV				*e*S	Sn	17 09 08.6	+0.3
LAPC	Finca la Perla	0.50	132	⇑*e*P	Pn	17 08 55.4	-0.4
LAPC				*e*S	Sn	17 09 08.1	-0.1
BUAI	Buenos Aires	0.52	116	*i* P	Pn	17 08 55.9	-0.1
BUAI				*e*S	Sn	17 09 08.7	+0.3
GPS2	Hotel Rincn d	0.57	128	*e*P	Pn	17 08 56.2	-0.2
GPS2				*e*S	Sn	17 09 09.1	0.0
LIM1	Limonal	0.68	126	*e*P	Pn	17 08 57.5	+0.2
LIM1				*e*S	Sn	17 09 10.8	+0.1
GUAB	Guayabo de Bag	0.69	125	*e*S	Sn	17 09 11.2	+0.3
HORNC	Hornillas	0.73	122	*e*P	Pn	17 08 57.4	-0.3
HORNC				*e*S	Sn	17 09 12.1	+0.5
VMAR	Armenia, Volca	0.73	113	*i* P	Pn	17 08 57.4	-0.3
VMAR				*e*S	Sn	17 09 11.8	+0.3
COLC	Colonia	0.74	126	*e*P	Pn	17 08 58.2	+0.4
COLC				*e*S	Sn	17 09 11.9	+0.4
CUI	Cuipilapa	0.77	125	⇑*e*P	Pn	17 08 58.0	-0.1
CUI				*e*S	Sn	17 09 12.8	+0.6
ORTG	Ortega, Santa	0.81	155	*e*P	Pn	17 08 58.6	+0.1
ORTG	Ortega, Santa	0.81	155	*e*P	Pn	17 08 58.7	+0.1
ORTG				*e*S	Sn	17 09 13.0	+0.1
PLVR	Palo Verde	0.88	149	⇑*e*P	Pn	17 08 59.0	-0.2
PLVR				*e*S	Sn	17 09 13.5	-0.6
GUAI	GUAI	0.88	161	⇑*i*P	Pn	17 08 59.2	+0.1
GUAI				*e*S	Sn	17 09 13.9	0.0
PTEN	Parque Tenorio	0.89	116	*e*P	Pn	17 08 59.4	+0.2
PTEN				*e*S	Sn	17 09 14.5	+0.2
NICO	Nicoya	1.03	160	⇑*i*P	Pn	17 09 00.6	0.0
SAJU	San Juanillo,	1.03	175	⇑*i*P	Pn	17 09 00.4	-0.2
SAJU				*e*S	Sn	17 09 16.0	-0.7
ACON	Acoyapa	1.06	36	⇓*i*P	Pn	17 09 00.4	-0.5
ACON	Acoyapa	1.06	36	*e*P	Pn	17 09 00.4	-0.5
DUNO	Dulce Nombre,	1.06	163	⇑*i*P	Pn	17 09 01.0	0.0
DUNO				*e*S	Sn	17 09 16.6	-0.7
DUNO	Dulce Nombre,	1.06	163	*e*P	Pn	17 09 01.0	0.0
DUNO				*e*S	Sn	17 09 16.6	-0.7
JTS	Las Juntas de	1.17	134	*e*P	Pn	17 09 01.5	-0.6
JTS				*e*S	Sn	17 09 18.2	-1.1
JTS	Las Juntas de	1.17	134	*e*P	Pn	17 09 01.7	-0.4
GRZA	Playa Garza	1.19	172	⇑*i*P	Pn	17 09 02.2	-0.2
CEDE	Laguna Cedeo	1.25	119	*e*P	Pn	17 09 03.3	+0.3
CASO	Castillo	1.25	122	*e*P	Pn	17 09 03.2	+0.1
CASO				*e*S	Sn	17 09 21.8	+0.9
INDI	Punta indio, G	1.27	166	⇑*e*P	Pn	17 09 03.1	-0.1
HUEN		1.28	344	*e*P	Pn	17 09 03.2	-0.1
HUEN				*e*S	Sn	17 09 21.9	+0.4
COPN	Copaltepe	1.32	324	*e*P	Pn	17 09 03.1	-0.7
BOAB	BOACO BROADBAN	1.34	6	*e*P	Pn	17 09 03.6	-0.5
BOAB				*e*S	Sn	17 09 22.7	-0.2
MOMN	Momotombo	1.48	331	*e*P	Pn	17 09 05.5	-0.3
MOMN				*e*S	Sn	17 09 26.0	+0.1
LAFE	Finca La Fe, P	1.56	146	⇑*i*P	Pn	17 09 06.6	-0.1
LAFE				*e*S	Sn	17 09 26.8	-0.8
LAFE	Finca La Fe, P	1.56	146	*e*P	Pn	17 09 06.6	-0.1
LAFE				*e*S	Sn	17 09 26.5	-1.1
CNGN	Cerro Negro	1.64	328	*e*S	Sn	17 09 29.8	+0.6
MATN	Matagalpa	1.82	356	*e*P	Pn	17 09 09.7	-0.4
JACO	JACO, Garabito	1.82	142	⇑*i*P	Pn	17 09 09.9	0.0
ESPN	Las Esperanzas	1.83	54	*e*P	Pn	17 09 09.7	-0.4
CRIN	San Cristobal	2.00	323	*e*P	Pn	17 09 12.6	+0.3
CRIN	San Cristobal	2.00	323	*e*P	Pn	17 09 12.2	-0.1
CRIN				*e*S	Sn	17 09 37.2	-0.1
LCR2	La Lucha 2	2.23	127	*e*P	Pn	17 09 15.8	+0.4
RIMA	Rio Macho	2.33	125	*e*P	Pn	17 09 17.1	+0.4
RIMA	Rio Macho	2.33	125	*e*P	Pn	17 09 17.2	+0.6
CDM	Cerro de Muert	2.53	127	*e*P	Pn	17 09 20.3	+0.8
CNCH	Conchagua	2.93	318	*e*P	Pn	17 09 25.2	+0.7

IDC 25 17:26:33.7±18.0**,13°.08S×167°.12E,h250**km±174km**, mb3.1**/4**,mbtmp3.6**/4**,Error ellipse: s-maj=144.9km s-min=58.3km az=140.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.12	253	P	P	17 32 37.5	-0.7
	0.2nm,0.6s,baz=85,slow=8.4,SNR=2.2						
	0.2nm,0.6s						
ASAR	Alice Springs	33.16	247	P	P	17 32 47.6	+0.4
	0.3nm,0.8s,baz=72,slow=9.8,SNR=2.6						
	0.3nm,0.8s						
ILAR	Eielson Array	85.01	18	P	P	17 38 40.8	0.0
	1.0nm,0.5s,baz=234,slow=5.2,SNR=23						
	1.0nm,0.5s						
MKAR	Makanchi Array	95.92	317	P	P	17 39 32.6	+0.3
	0.2nm,0.6s,baz=104,slow=6.1,SNR=3.8						
	0.2nm,0.6s						
ARCES	ARCESS Array B	118.63	346	PKP	PKPdf	17 44 50.8	-0.6
	1.5nm,0.8s,baz=57,slow=3.3,SNR=5.2						

*NEIC **25** 17:33:33.9±0.8,59°.98S±0°.10×26°.8W±0°.3,h39km±13km, mb4.3/10,Error ellipse: s-maj=21.7km s-min=12.9km az=70.0*

*IDC **25** 17:33:33.9±5.9,60°.06S×26°.94W,h42km±56km,mb3.9/6, mbtmp4.1/7,ML4.3/1,MS3.5/8,Error ellipse: s-maj=40.8km s-min=22.7km az=15.0*

ISC 25 17:33:32.9±0.7**,60°.0S**±0°.1×**26°.8W**±0°.1**,h34**km**,n32,** σ0s.**66**/22**,mb4.1**/7**,MS3.5**/7**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.15	152	P	Pn	17 36 37.4	+0.5
VNA1				S	Sn	17 38 47.9	-14
VNA3	Neumayer Olymp	13.28	155	P	Pn	17 36 38.3	-0.3
VNA3				S	Sn	17 38 50.6	-14
VNA2	Neumayer--Watz	13.55	152	P	Pn	17 36 42.2	-0.1
	baz=311,slow=16						
VNA2				S	Sn	17 38 56.8	-15
SNAA	Sanae	15.14	151	P	Pn	17 37 04.1	0.0
SNAA				S	Sn	17 39 36.6	-14
SNAA	Sanae	15.14	151	P	Pn	17 37 04.0	0.0
	1.2nm,0.3s,baz=315,slow=18,SNR=59						
SNAA				S	Sn	17 39 38.2	-12
	1.4nm,0.6s,baz=88,slow=15,SNR=2.4						
	3.0nm,0.4s						
SNAA	Sanae	15.14	151		Pn	17 37 03.7	-0.3
TROLL	Troll, Antarti	16.72	148	P	P	17 37 26.5	+0.2
TROLL				S	Sn	17 40 13.1	-16
PMSA	Palmer Station	17.74	238	LR	LR	17 42 54.4	
	comp=Z,85nm,21.5s,baz=100,slow=32						
BELA	Belgrano 2	18.19	185		P	17 37 42.9	+0.5
SMAI	San Martin Ant	19.09	228	P	Pn	17 38 04.2	+11
SMAI				IAmb	IAmb	17 38 16.3	
	comp=Z,20nm,1.0s						
USHA	Ushuaia	22.72	265	P	P	17 38 30.4	-1.1
	comp=Z,2.5nm,0.5s,baz=256,slow=16,SNR=1.7						
	comp=Z,2.5nm,0.5s						
QSPA	South Pole Qui	30.28	180	LR	LR	17 50 29.8	
	comp=Z,85nm,20.3s,baz=44,slow=34						
PLCA	Paso Flores	33.08	286	P	P	17 40 05.4	+0.2
	comp=Z,0.8nm,0.8s,baz=135,slow=1.4,SNR=1.3						
	comp=Z,0.8nm,0.8s						
PLCA	Paso Flores	33.08	286	P	P	17 40 05.5	+0.2
PLCA				IAmb	IAmb	17 40 14.9	
	comp=Z,8.2nm,1.3s						
MT09	Talagante	38.86	292	P	P	17 40 55.2	+0.4
MT09				IAmb	IAmb	17 41 09.7	
	comp=Z,12nm,1.2s						
CPUP	Villa Florida	39.63	314	P	P	17 41 01.6	+0.5
	comp=Z,1.1nm,0.5s,baz=181,slow=9.5,SNR=3.0						
CPUP				LR	LR	17 57 19.0	
	comp=Z,21nm,18.5s,baz=204,slow=36						
	comp=Z,1.1nm,0.5s						
CPUP	Villa Florida	39.63	314	IAmb	IAmb	17 41 05.6	
	comp=Z,3.1nm,1.0s						
SUR	Sutherland	41.61	70	P	P	17 41 18.4	+0.7
	comp=Z,3.1nm,0.9s,baz=195,slow=22,SNR=1.2						
SUR				LR	LR	17 53 18.6	
	comp=Z,29nm,21.9s,baz=122,slow=28						
	comp=Z,3.1nm,0.9s						
BOSA	Boshof	46.86	72	LR	LR	17 57 16.0	
	comp=Z,53nm,18.1s,baz=184,slow=30						
BOSA	Boshof	46.86	72	P	P	17 41 57.5	-2.1
LPAZ	La Paz	52.86	307	P	P	17 42 45.6	-0.3
	comp=Z,1.0nm,0.6s,baz=142,slow=7.8,SNR=3.7						
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	52.86	307	IAmb	IAmb	17 43 08.8	
	comp=Z,3.8nm,1.4s						
MDP	Montagnes des	67.99	332	LR	LR	18 13 40.6	
	comp=Z,33nm,18.5s,baz=194,slow=35						
TOA0	Torodi Ar. Sit	76.38	29	P	P	17 45 18.8	+0.3
TORD	Torodi Ar. Bea	76.38	29	P	P	17 45 19.2	+0.7
	comp=Z,4.0nm,0.5s,baz=199,slow=6.2,SNR=44						
	comp=Z,4.0nm,0.5s						
TORD	Torodi Ar. Bea	76.38	29	P	P	17 45 18.9	+0.4
TORD				IAmb	IAmb	17 45 19.8	
	comp=Z,3.4nm,0.7s						
RAO	Raoul Island	87.99	205	LR	LR	18 19 05.6	
	comp=Z,210nm,20.2s,baz=232,slow=31						
ATD	Arta Tunnel	90.00	67	LR	LR	18 21 53.4	
	comp=Z,24nm,21.6s,baz=345,slow=32						
CMAR	Chiang Mai Arr	123.43	113	PKP	PKPdf	17 52 26.4	+0.2
	comp=Z,0.6nm,0.7s,baz=216,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	137.81	75	PKP	PKPdf	17 52 52.3	-0.3
	comp=Z,0.1nm,0.6s,baz=266,slow=4.3,SNR=3.8						
ZALV	Zalesovo Beam	143.76	68	PKP	PKPab	17 53 00.2	+0.2
	comp=Z,1.6nm,0.4s,baz=246,slow=5.0,SNR=7.4						
SONM	Songino Array	150.53	93	PKPbc	PKPbc	17 53 20.0	-0.1
	comp=Z,2.1nm,0.7s,baz=221,slow=2.4,SNR=15						

NOU 25 17:40:14.0,22°.26S×171°.03E,h0km,MLv4.8/11**, Southeast of Loyalty Islands,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.89	285	P	Pn	17 41 01.2	-0.1
PINNC	Pines Island,	3.33	263	P	Pn	17 41 07.5	+0.1
LIFNC	LIFOU	3.83	292	P	Pn	17 41 13.6	-0.6
YATNC	Mamie plateau,	3.84	272	P	Pn	17 41 13.8	-0.6
OUENC	Ouen Island, N	3.88	267	P	Pn	17 41 14.8	-0.1
ONTNC	Ouen Toro	4.24	269	P	Pn	17 41 19.9	0.0
DZM	Mont Dzumac	4.25	272	P	Pn	17 41 20.1	-0.1
NOUC	Port Laguerre	4.38	271	P	Pn	17 41 21.7	-0.2
KOUNC	Koumac, New Ca	6.51	284	P	Pn	17 41 51.8	+0.7

RSNC 25 18:05:29.9±1.2**,4°.35N×76°.41W,h119**km±4km**,ML3.1, Mw3.7,2C-5D,Fault plane solution: NP1:**φs136.00000°**,** δ78.00000°**,**λ134.00000°.**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.37	170	*e*P	Pn	18 05 46.1	-1.1
YOTC				*e*S	Sn	18 05 60.0	-0.2
YOTC				*i*		18 06 01.0	
	comp=Z,542nm,0.2s						
PLMC	San Jos del P	0.56	13	⇓*i*P	Pn	18 05 47.0	-1.3
PLMC				*e*S	Sn	18 06 02.4	+0.4

PLMC				*i*		18 06 06.0	
	comp=Z,771nm,0.5s						
MALC	**Bahia Malaga**	**0.98**	**250**	*e*P	Pn	18 05 51.9	+0.3
MALC				*e*S	Sn	18 06 07.7	-0.5
MALC				*i*		18 06 14.8	
	comp=Z,158nm,0.3s						
ANIL	**Santa Ana**	**1.01**	**82**	⇓*e*P	Pn	18 05 51.0	-1.2
ANIL				*e*S	Sn	18 06 07.4	-1.7
ANIL				*i*		18 06 12.0	
	comp=Z,570nm,0.3s						
PIZC	**Pizarro, Choco**	**1.13**	**303**	⇑*e*P	Pn	18 05 53.2	+0.1
PIZC				*e*S	Sn	18 06 11.1	+0.4
PIZC				*i*		18 06 13.9	
	comp=Z,384nm,0.2s						
ORTC	**Ortega, Tolima**	**1.24**	**111**	*e*P	Pn	18 05 53.7	-0.7
ORTC				*e*S	Sn	18 06 12.1	-0.8
ORTC				*i*		18 06 13.3	
	comp=Z,128nm,0.1s						
CBOC	**Ciudad Bolivar**	**1.55**	**15**	⇓*e*P	Pn	18 05 57.5	-0.6
CBOC				*e*S	Sn	18 06 19.0	-0.5
CBOC				*i*		18 06 27.5	
	comp=Z,75nm,0.5s						
MARP	**Paez Belalcaza**	**1.56**	**163**	*e*P	Pn	18 05 58.1	-0.2
MARP				*e*S	Sn	18 06 19.5	-0.4
MARP				*i*		18 06 20.5	
	comp=Z,57nm,0.2s						
PRAC	**Prado**	**1.64**	**113**	⇑*e*P	Pn	18 05 58.6	-0.4
PRAC				*e*S	Sn	18 06 20.7	-0.4
PRAC				*i*		18 06 22.9	
	comp=Z,147nm,0.4s						
BETC	**Betania**	**1.92**	**150**	*e*P	Pn	18 06 02.2	-0.2
BETC				*e*S	Sn	18 06 26.8	-0.3
BETC				*i*		18 06 27.6	
	comp=Z,124nm,0.4s						
NORC	**Norcasia**	**1.95**	**52**	*e*P	Pn	18 06 02.4	-0.3
NORC				*e*S	Sn	18 06 27.4	-0.4
NORC				*i*		18 06 31.5	
	comp=Z,49nm,0.3s						
PCON	**Cinco Dias**	**2.01**	**180**	*e*P	Pn	18 06 04.1	+0.1
PCON				*e*S	Sn	18 06 30.0	0.0
PCON				*i*		18 06 33.8	
	comp=Z,99nm,0.3s						
HELC	**Santa Helena**	**2.02**	**26**	*e*P	Pn	18 06 03.2	-0.8
HELC				*e*S	Sn	18 06 29.8	-0.2
HELC				*i*		18 06 33.2	
	comp=Z,31nm,0.6s						
SOLC	**Bahia Solano**	**2.11**	**332**	*e*P	Pn	18 06 04.0	-0.7
SOLC				*e*S	Sn	18 06 30.3	-1.1
SOLC				*i*		18 06 31.8	
	comp=Z,57nm,0.4s						
ROSC	**El Rosal**	**2.14**	**77**	*e*P	Pn	18 06 07.1	+1.7
ROSC				*e*S	Sn	18 06 35.1	+2.6
ROSC				*i*		18 06 37.8	
	comp=Z,56nm,0.7s						
GR1C	**Gorgona, Isla**	**2.21**	**233**	*e*P	Pn	18 06 03.8	-2.2
GR1C				*e*S	Sn	18 06 30.2	-3.4
GR1C				*i*		18 06 37.4	
	comp=Z,1µm,0.7s						
SOTA	**Rioblanco**	**2.21**	**185**	*e*P	Pn	18 06 06.2	-0.3
SOTA				*e*S	Sn	18 06 34.6	+0.2
SOTA				*i*		18 06 38.9	
	comp=Z,61nm,0.5s						
GARC	**Garzon, Huila**	**2.34**	**157**	⇓*i*P	Pn	18 06 07.0	-0.8
GARC				*e*S	Sn	18 06 35.1	-1.8
GARC				*i*		18 06 36.5	
	comp=Z,203nm,0.3s						
DBBC	**Dabeiba**	**2.66**	**4**	*e*P	Pn	18 06 11.5	-0.3
DBBC				*e*S	Sn	18 06 43.4	-0.6
DBBC				*i*		18 06 48.5	
	comp=Z,108nm,0.5s						
SPBC	**San Pablo de B**	**2.66**	**61**	*e*P	Pn	18 06 12.2	+0.4
SPBC				*e*S	Sn	18 06 44.7	+0.7
SPBC				*i*		18 06 52.0	
	comp=Z,17nm,0.5s						
CHIC	**Chingaza**	**2.68**	**84**	*e*P	Pn	18 06 13.3	+0.9
CHIC				*e*S	Sn	18 06 47.1	+2.1
CHIC				*i*		18 06 51.3	
	comp=Z,28nm,0.5s						
VILC	**Villavicencio,**	**2.72**	**95**	*e*P	Pn	18 06 13.7	+1.1
VILC				*e*S	Sn	18 06 46.5	+1.1
VILC				*i*		18 06 48.9	
	comp=Z,3µm,0.4s						
CRUC	**La Cruz**	**2.82**	**191**	*e*P	Pn	18 06 13.2	-1.0
CRUC				*e*S	Sn	18 06 46.9	-1.3
CRUC				*i*		18 06 50.1	
	comp=Z,2µm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.91**	**42**	*e*P	Pn	18 06 14.3	-0.7
PTBC				*e*S	Sn	18 06 48.8	-1.1
PTBC				*i*		18 06 50.4	
	comp=Z,27nm,0.2s						
PTAC	**Punta Ardita,**	**3.11**	**333**	⇓*i*P	Pn	18 06 16.7	-0.9
PTAC				*e*S	Sn	18 06 51.1	-3.3
PTAC				*i*		18 06 52.2	
	comp=Z,253nm,0.2s						
GCUF	**Volcan Galeras**	**3.24**	**197**	*e*P	Pn	18 06 18.5	-1.3
GCUF				*e*S	Sn	18 06 56.0	-2.3
GCUF				*i*		18 06 58.5	
	comp=Z,33nm,0.3s						
UREC	**San Jos de Ur**	**3.49**	**14**	*e*P	Pn	18 06 22.0	-0.7
UREC				*e*S	Sn	18 06 57.5	-5.9
UREC				*i*		18 07 09.2	
	comp=Z,10.0nm,0.3s						
RUSC	**La Rusia**	**3.65**	**65**	*e*P	Pn	18 06 26.0	+0.8
RUSC				*e*S	Sn	18 07 08.1	+0.2
RUSC				*i*		18 07 12.7	
	comp=Z,5.8nm,0.7s						
BARC	**Barichara**	**3.91**	**55**	*e*P	Pn	18 06 28.0	-0.4
BARC				*e*S	Sn	18 07 13.0	-0.7
BARC				*i*		18 07 19.3	
	comp=Z,25nm,0.4s						
PAMC	**Pamplona, Colo**	**4.73**	**51**	*e*P	Pn	18 06 40.4	+0.7
PAMC				*e*S	Sn	18 07 32.8	-1.1
PAMC				*i*		18 07 39.8	
	comp=Z,12nm,0.3s						
OCAC	**Ocana**	**4.93**	**38**	*e*P	Pn	18 06 42.0	-0.2
OCAC				*e*S	Sn	18 07 35.8	-2.5
OCAC				*i*		18 07 42.9	
	comp=Z,45nm,0.5s						

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*TUL **25** 18:23:11±1.1, 36°.42N±0°.02×97°.78W±0°.02, h5^{km}±7^{km}, ML2.8, mb_Lg2.7/27(NEIC), Error ellipse: s-maj=2.7km s-min=2.3km az=217.0*

NEIC 25 18:23:11.0±1.1**, 36°.40N**±0°.02×**97°.76W**±0°.01**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.7km az=34.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**1.00**	**269**	Pg	Pg	18 23 29.4	-0.7
OKCFA	**Oklahoma City**	**1.02**	**166**	Pg	Pg	18 23 30.0	-0.5
OKCSW	**OKLAHOMA CITY**	**1.03**	**165**		Pg	18 23 30.6	-0.2
T35A	**Sooner Cattle**	**1.13**	**63**	Pg	Pg	18 23 32.3	-0.3
FNO	**Franklin**	**1.18**	**165**		Pg	18 23 33.2	-0.4
TUL1	**Leonard**	**1.67**	**107**		Pn	18 23 41.1	+0.2
TUL1				IAmb_Lg		18 24 07.8	
	comp=Z,47nm,0.8s						
X34A	**Smith Ranch, M**	**1.80**	**182**		Pb	18 23 44.0	-0.4
WMOK	**Wichita Mounta**	**1.86**	**207**		Pn	18 23 43.5	+0.1
R32A	**Long Quarter,**	**2.15**	**340**	Pn	Pn	18 23 47.1	-0.4
X37A	**Clayton**	**2.66**	**132**		Pn	18 23 54.0	-0.5
X37A				IAmb_Lg		18 24 41.4	
	comp=Z,22nm,0.8s						
KSU1	**Kansas State U**	**2.84**	**18**		Pn	18 23 56.2	-0.8
CBKS	**Cedar Bluff**	**2.87**	**327**		Pn	18 23 57.0	-0.5
CBKS				IAmb_Lg		18 24 47.4	
	comp=Z,22nm,0.7s						
HHAR	**Hobbs**	**3.09**	**91**	Pn	Pn	18 23 59.8	-0.6
W39A	**Magazine**	**3.45**	**109**	Pg	Pb	18 24 13.4	+0.8
AMTX	**Amarillo**	**3.53**	**246**	Pg	Pb	18 24 13.9	-0.1
AMTX				IAmb_Lg		18 25 03.7	
	comp=Z,26nm,0.9s						
S39A	**Bolivar**	**3.78**	**69**		Pn	18 24 08.9	-1.0
S39A				IAmb_Lg		18 25 12.7	
	comp=Z,25nm,0.8s						
MIAR	**Mount Ida**	**3.89**	**117**	Pn	Pn	18 24 10.3	-1.0
MIAR					Pb	18 24 21.6	+1.6
MIAR				IAmb_Lg		18 25 16.1	
	comp=Z,15nm,0.8s						
U40A	**Yellville**	**3.96**	**89**	Pn	Pn	18 24 12.7	+0.3
ABTX	**Abilene, Hawle**	**4.08**	**203**	Pn	Pn	18 24 13.4	-0.6
X40A	**Basin Creek Fa**	**4.45**	**114**		Pb	18 24 29.9	+0.2
X40A				IAmb_Lg		18 25 43.9	
	comp=Z,11nm,0.8s						
MGMO	**Mountain Grove**	**4.47**	**79**	Pn	Pn	18 24 16.6	-2.8
MGMO				IAmb_Lg		18 25 33.5	
	comp=Z,13nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.59**	**95**		Pb	18 24 31.7	-0.3
FCAR				IAmb_Lg		18 25 34.3	
	comp=Z,11nm,0.9s						
P38A	**Dawn**	**4.64**	**45**		Pb	18 24 35.0	+2.3
P38A				IAmb_Lg		18 25 44.4	
	comp=Z,16nm,0.7s						
W41B	**Gary Mavity, V**	**4.65**	**104**		Pb	18 24 32.6	-0.3
W41B				IAmb_Lg		18 25 46.6	
	comp=Z,12nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.65**	**305**	IAmb_Lg		18 25 50.6	
	comp=Z,21nm,1.0s						
R40A	**Maddies Statio**	**4.76**	**65**	IAmb_Lg		18 25 51.9	
	comp=Z,12nm,0.8s						
MSTX	**Muleshoe**	**4.77**	**241**	IAmb_Lg		18 25 52.9	
	comp=Z,7.4nm,0.9s						

IDC 25 18:46:34.8±7.1**, 20°.39S**×**178°.08W, h0**^{km}**, mb3.3**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=349.3km s-min=105.3km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.48**	**257**	P	P	18 54 47.2	-1.0
	0.2nm,0.6s,baz=99,slow=7.6,SNR=4.0						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**44.55**	**262**	P	P	18 54 49.2	+0.5
	0.5nm,0.7s,baz=95,slow=8.2,SNR=13						
	0.5nm,0.7s						
AKASG	**Malin Array Be**	**142.88**	**331**	PKP	PKPdf	19 06 09.7	-0.5
	0.7nm,0.4s,baz=41,slow=3.0,SNR=5.7						

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*BJI **25** 19:10:14.9±0.0, 8°.66N×126°.70E, h50^{km}, mb4.6/59, mB4.8/31, Ms4.2/26, Ms7 3.9/25*

*IDC **25** 19:10:19.6±1.2, 8°.83N×126°.64E, h63^{km}±11^{km}, mb4.4/31, mbtmp4.7/36, MS3.6/48, Error ellipse: s-maj=13.7km s-min=8.1km az=95.0*

*NEIC **25** 19:10:19.3±1.8, 8°.79N±0°.07×126°.45E±0°.09, h52^{km}±6^{km}, mb4.9/178, Error ellipse: s-maj=12.8km s-min=9.8km az=77.0*

*DJA **25** 19:10:19.8±0.5, 9°N±4°×12°7E±°, h63^{km}±4^{km}, M4.8/61, mb4.9/61, mB5.2/18, MLv5.4/5, Mw(mB)4.5/18, MwMwp5.7/1, Mwp5.8/1*

ISC 25 19:10:18.5±0.7**, 8°.76N**±0°.03×**126°.54E**±0°.05**, h50**^{km}±6^{km}**, n527, σ**1^{s}.**44**/512**, mb4.9**/147**, MS3.6**/49**, 46C-34D, Fault plane solution: NP1:**ϕ_s142.62625°**,**δ53.82668°**,** λ77.96482°. **NP2:**ϕ_s342.48660°**,**δ37.86194°**,**λ105.91679°. **Principal axes:** T Plg77.3199°**,** Azm10.4290°**;** N Plg9.6901°**,** Azm149.7984°**;** P Plg8.0999°**,** Azm241.1909°**; Fault plane solution: NP1:**ϕ_s359.68393°**,**δ49.85765°**,** λ65.11615°. **NP2:**ϕ_s215.41827°**,**δ46.09410°**,**λ116.51660°. **Principal axes:** T Plg71.1248°**,** Azm202.7988°**;** N Plg18.7636°**,** Azm16.3324°**;** P Plg1.9770°**,** Azm107.0043°**; Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.60**	**197**	⇑*i*P	**Pn**	**19 10 28.4**	**-2.6**
BIPH				*i* S	**Sn**	**19 10 36.8**	**-3.3**
SCPH	**Surigao**	**1.45**	**314**	⇑*e*P	**Pn**	**19 10 41.8**	**-0.6**
SCPH				*e*S	**Sn**	**19 11 02.5**	**+2.2**
DAV	**Davao City (W)**	**1.93**	**210**	P	**Pn**	**19 10 51.2**	**+2.2**
	456nm,0.3s,baz=59,slow=3.0,SNR=17						
DAV				S	**Sn**	**19 11 17.3**	**+5.2**
	3µm,0.6s,baz=148,slow=22,SNR=4.8						
DAV				LR	LR	19 11 51.1	
	comp=Z,5µm,19.1s,baz=18,slow=45						
DAV	**Davao City (W)**	**1.93**	**210**		**Pn**	**19 10 49.5**	**+0.6**
DAV	**Davao City (W)**	**1.93**	**210**	P	Pn	19 10 52.3	+3.3
MSLP	**Maasin**	**2.15**	**309**	⇓*e*P	**Pn**	**19 10 52.7**	**+0.8**
MSLP				*e*S	**Sn**	**19 11 17.8**	**+0.5**
CTBH	**Cotabato--PC H**	**2.74**	**236**	*e*P	**Pn**	**19 11 00.3**	**+0.3**
CTBH				*i* S	**Sn**	**19 11 35.5**	**+3.5**
TBP	**Tagbilaran**	**2.80**	**289**	⇓*i*P	**Pn**	**19 11 01.4**	**+0.6**
TBP				*i* S	**Sn**	**19 11 35.8**	**+2.3**
LLP	**Lapu-Lapu**	**2.98**	**301**	⇓*i*P	**Pn**	**19 11 04.0**	**+0.8**
LLP				*i* S	**Sn**	**19 11 42.4**	**+4.7**
GSPH	**General Santos**	**3.09**	**211**	*i* P	**Pn**	**19 11 06.4**	**+1.5**
GSPH				*e*S	**Sn**	**19 11 36.5**	**-4.3**
DCPH	**Dipolog City**	**3.16**	**267**	⇓*e*P	**Pn**	**19 11 06.8**	**+1.0**
PAGZ	**Pagadian**	**3.26**	**254**	⇓*i*P	**Pn**	**19 11 08.0**	**+0.9**
CNOP	**Candoni, Negro**	**4.00**	**286**	⇓*i*P	**Pn**	**19 11 17.9**	**+0.7**
CNOP				*e*S	**Sn**	**19 11 59.9**	**-2.9**
RCP	**Roxas**	**4.66**	**307**	⇑*e*P	**Pn**	**19 11 28.4**	**+2.1**
RCP				*e*S	**Sn**	**19 12 21.6**	**+2.4**
JAP	**San Jose, Anti**	**4.94**	**294**	⇑*e*P	Pn	19 11 32.9	+2.7
SGSI	**Sangihe**	**5.14**	**191**	P	Pn	19 11 36.4	+3.4
	3.8nm5µm436nm,0.8s						
TGY	**Tagaytay City**	**7.64**	**315**	P	Pn	19 12 12.2	+4.9
	377nm,0.4s,baz=170,slow=4.2,SNR=10						
TNTI	**Ternate**	**7.98**	**174**	Pn	**Pn**	**19 12 12.5**	**+0.6**
TNTI	**Ternate**	**7.98**	**174**	P	**Pn**	**19 12 14.0**	**+2.1**
	935nm102nm,1.1s						
TNTI	**Ternate**	**7.98**	**174**	P	**Pn**	**19 12 14.0**	**+2.1**
BALP	**Baler**	**8.46**	**325**	⇓*e*P	**Pn**	**19 12 18.8**	**+0.3**
BALP				*e*S	**Sn**	**19 13 46.2**	**-6.5**
KMSI	**Cibinong**	**8.53**	**198**	P	Pn	19 12 24.4	+5.0
	150nm,0.8s						
MYLDM	**Lahad Datu**	**8.74**	**247**	Pn	**Pn**	**19 12 22.1**	**-0.3**
GTOI	**Gorontalo**	**8.81**	**204**	P	**Pn**	**19 12 23.4**	**+0.2**
	318nm34nm,0.8s						
LBMI	**Labuha**	**9.39**	**174**	P	**Pn**	**19 12 32.8**	**+1.6**
	725nm80nm,1.2s						
MRSI	**Marisa**	**9.42**	**209**	P	**Pn**	**19 12 32.3**	**+0.6**
	636nm79nm,1.1s						
TOLI2	**Tolitoli**	**9.52**	**217**	Pn	**Pn**	**19 12 33.3**	**+0.3**
LUWI	**Luwuk**	**10.44**	**201**		**Pn**	**19 12 46.5**	**+0.9**
LUWI	**Luwuk**	**10.44**	**201**	P	Pn	19 12 50.7	+5.1
	950nm102nm,1.1s						
LUWI	**Luwuk**	**10.44**	**201**	P	Pn	19 12 49.3	+3.7
SWI	**Sorong**	**10.65**	**154**	P	**Pn**	**19 12 50.2**	**+1.7**
	1µm60nm,0.8s						
SIJI	**Sorong**	**10.66**	**154**	P	**Pn**	**19 12 49.3**	**+0.7**
	38nm,0.4s,baz=332,slow=19,SNR=63						
SIJI				S	**Sn**	**19 14 40.7**	**-6.0**
	7.8nm,0.7s,baz=230,slow=22,SNR=2.2						
SIJI				LR	LR	19 17 05.2	
	comp=Z,273nm,20.9s,baz=44,slow=38						
SANI	**Sanana**	**10.76**	**183**	P	**Pn**	**19 12 48.4**	**-1.5**
	40nm,1.0s						
SANI	**Sanana**	**10.76**	**183**	P	**Pn**	**19 12 51.7**	**+1.8**
APSI	**Ampana**	**10.78**	**207**	P	Pn	19 12 55.1	+4.9
	433nm30nm,0.7s						
AAI	**Ambon**	**12.48**	**172**	P	Pn	19 13 17.3	+3.9
	1µm34nm,0.8s						
FAKI	**Fak Fak**	**12.92**	**154**		**Pn**	**19 13 19.2**	**-0.4**
FAKI	**Fak Fak**	**12.92**	**154**	P	**Pn**	**19 13 20.7**	**+1.1**
	57nm,0.8s						
FAKI	**Fak Fak**	**12.92**	**154**	P	**Pn**	**19 13 21.1**	**+1.5**
TTSI	**Tana Toraja**	**13.51**	**210**	P	**P**	**19 13 30.8**	**-4.5**
	1µm30nm,1.1s						
BAKI	**Biak**	**13.73**	**136**	P	**Pn**	**19 13 31.9**	**+1.3**
	56nm,1.1s						
SRPI	**Serui, Papua**	**14.32**	**137**	P	**Pn**	**19 13 42.3**	**+3.8**
	27nm,0.7s						
SPSI	**Sidrap Palu**	**14.33**	**208**	P	**P**	**19 13 41.0**	**-3.5**
	25nm,0.8s						
BNSI	**Bone**	**14.57**	**206**	P	**P**	**19 13 45.6**	**-1.5**
	44nm,1.0s						
MTKI	**Muara Teweh, K**	**15.09**	**231**	P	**P**	**19 13 51.3**	**-1.6**
	15nm,0.6s						
KAPI	**Kappang**	**15.27**	**207**	P	**P**	**19 13 54.4**	**-0.5**
	8.1nm,0.6s,baz=34,slow=15,SNR=6.4						
KAPI				LR	LR	19 20 25.1	
	comp=Z,249nm,19.7s,baz=40,slow=39						
KAPI	**Kappang**	**15.27**	**207**		**Pn**	**19 13 50.9**	**0.0**
KAPI	**Kappang**	**15.27**	**207**	P	**P**	**19 13 54.2**	**-0.7**
BKSI	**Bulukumba**	**15.39**	**205**	P	**P**	**19 13 54.1**	**-2.1**
	19nm,0.8s						
YULB	**Yu-li**	**15.39**	**342**	Pn	**Pn**	**19 13 51.2**	**-1.3**
TPUB	**Ta-pu**	**15.53**	**339**		**P**	**19 13 55.1**	**-2.7**
TPUB	**Ta-pu**	**15.53**	**339**	P	**P**	**19 13 58.0**	**+0.2**
SBUM	**Sibu**	**15.57**	**247**		**P**	**19 13 55.6**	**-2.6**
SSLB	**Suanglung**	**15.87**	**341**	Pn	**Pn**	**19 13 57.6**	**-1.0**
SSLB	**Suanglung**	**15.87**	**341**	P	**P**	**19 14 00.8**	**-0.8**
SMPI	**Sarmi**	**16.16**	**131**	P	**Pn**	**19 14 04.2**	**+1.9**
	30nm,1.3s						
YHNB	**Yeheng**	**16.57**	**343**	Pn	**Pn**	**19 14 07.3**	**-0.2**
BBKI	**Banjar Baru**	**16.84**	**224**	P	**P**	**19 14 16.1**	**+3.7**
	29nm,0.8s						
STKI	**Sintang**	**17.32**	**241**	P	**P**	**19 14 19.8**	**+2.2**
	3µm21nm,1.5s						
MMRI	**Maumere**	**17.81**	**194**	P	**P**	**19 14 26.6**	**+3.6**
	60nm,1.3s						
JOW	**Kunigami**	**18.05**	**5**	P	**P**	**19 14 26.8**	**+1.2**
	34nm,0.6s,baz=202,slow=9.4,SNR=22						
JOW				LR	LR	19 20 47.9	
	comp=Z,108nm,19.1s,baz=344,slow=35						
JOW	**Kunigami**	**18.05**	**5**		**Pn**	**19 14 25.2**	**-0.5**
JOW	**Kunigami**	**18.05**	**5**	P	**P**	**19 14 28.2**	**+2.6**
EDFI	**Ende, Flores**	**18.06**	**196**	P	**P**	**19 14 27.7**	**+1.8**
	290nm8.8nm,0.6s						
SOEI	**Soe**	**18.54**	**187**	P	**Pn**	**19 14 31.9**	**+0.1**
SOEI				IAmb	IAmb	19 15 01.0	
	comp=Z,85nm,0.8s						
SOEI	**Soe**	**18.54**	**187**	P	**Pn**	**19 14 34.0**	**+2.2**
	comp=Z,941nmcomp=Z,113nm,0.8s						
SOEI	**Soe**	**18.54**	**187**	P	**Pn**	**19 14 33.8**	**+2.0**
GUMO	**Guam**	**18.60**	**73**	LR	LR	19 20 09.6	
	comp=Z,330nm,20.8s,baz=236,slow=32						
BATI	**Baumata**	**19.06**	**189**	P	**Pn**	**19 14 39.3**	**+1.2**
	comp=Z,45nm,0.4s,baz=8.5,slow=1.4,SNR=29						
BATI				LR	LR	19 23 25.2	
	comp=Z,131nm,19.4s,baz=322,slow=41						
BATI	**Baumata**	**19.06**	**189**	P	**Pn**	**19 14 39.2**	**+1.2**
	comp=Z,42nm,0.8s						
QIZ	**Qiongzhong**	**19.14**	**304**	P	**P**	**19 14 35.9**	**-1.8**
QIZ	**Qiongzhong**	**19.14**	**304**	P	**Pn**	**19 14 41.0**	**+2.1**
QIZ				S	**Sn**	**19 18 09.5**	**-3.2**
QIZ				pmax	pmax		
	comp=Z,24nm,1.3s						
QIZ				LR	LR		
	comp=Z,220nm,14.7s						
QIZ				LR	LR		
	comp=Z,250nm,16.7s						
QIZ				LR	LR		
	comp=Z,320nm,14.6s						
QIZ	**Qiongzhong**	**19.14**	**304**	P	**Pn**	**19 14 41.6**	**+2.7**
PLAI	**Plampang**	**19.54**	**207**	P	**Pn**	**19 14 45.5**	**+1.9**
	comp=Z,54nm,0.8s						
PLAI	**Plampang**	**19.54**	**207**	P	**Pn**	**19 14 45.6**	**+1.9**
KMMI	**Kalianget**	**20.10**	**219**	P	**Pn**	**19 14 51.4**	**+1.1**
	comp=Z,148nm,1.7s						
SRBI	**Singaraja**	**20.19**	**214**	P	Pn	19 14 54.3	+2.9
	comp=Z,97nm,0.8s						
JAGI	**Jajag, Banyuwa**	**21.11**	**216**	P	P	19 15 05.4	+6.4
UBPT	**Khong Chiam**	**21.59**	**289**	P	**P**	**19 15 04.3**	**+0.1**
MTN	**Manton Dam**	**21.94**	**168**	P	**P**	**19 15 07.7**	**-0.3**
	baz=22,SNR=31						
MTN	**Manton Dam**	**21.94**	**168**	P	**P**	**19 15 07.2**	**-0.8**
MTN				IAmb	IAmb	19 15 12.1	
	comp=Z,32nm,0.7s						
MTN	**Manton Dam**	**21.94**	**168**	P	**P**	**19 15 08.2**	**+0.2**
MMPI	**Merauke**	**21.98**	**141**	P	**P**	**19 15 10.3**	**+1.9**
	comp=Z,376nm,0.8s						
TPI	**Tanjungpandan**	**22.04**	**240**	P	**P**	**19 15 10.4**	**+1.4**
	comp=Z,11µmcomp=Z,384nmcomp=Z,24nm,0.9s						
KDU	**Kakadu**	**22.11**	**164**	P	**P**	**19 15 08.6**	**-1.1**
	baz=22,SNR=26						
KDU	**Kakadu**	**22.11**	**164**	P	**P**	**19 15 09.4**	**-0.3**
JSU	**Suzuyama**	**22.92**	**9**	P	**P**	**19 15 17.3**	**-0.9**
JSU				IAmb	IAmb	19 15 20.7	
	comp=Z,29nm,0.8s						
JCJ	**Chichijima**	**23.49**	**37**	LR	LR	19 22 51.9	
	comp=Z,127nm,21.6s,baz=88,slow=32						
NJ2	**Nanjing**	**24.25**	**344**	*e*P	**P**	**19 15 35.3**	**+4.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KNRA	**Kununurra**	**24.38**	**175**	P	**P**	**19 15 31.8**	**-0.3**
	baz=24,SNR=90						
KNRA	**Kununurra**	**24.38**	**175**	P	**P**	**19 15 32.1**	**0.0**
KNRA				IAmb	IAmb	19 15 42.7	
	comp=Z,36nm,0.7s						
KNRA	**Kununurra**	**24.38**	**175**	P	**P**	**19 15 32.3**	**+0.2**
LEM	**Lembang**	**24.41**	**231**	P	**P**	**19 15 35.3**	**+2.7**
	comp=Z,54nm,0.8s,baz=36,slow=10,SNR=12						
LEM				LR	LR	19 27 01.1	
	comp=Z,185nm,21.3s,baz=16,slow=41						
	comp=Z,54nm,0.8s						
LEM	**Lembang**	**24.41**	**231**	P	**P**	**19 15 36.4**	**+3.8**
	comp=Z,29nm,0.8s						
JNU	**Nakatsue**	**24.57**	**9**	P	**P**	**19 15 33.0**	**-0.8**
	comp=Z,33nm,0.9s,baz=113,slow=3.7,SNR=6.2						
	comp=Z,33nm,0.9s						
JNU	**Nakatsue**	**24.57**	**9**	P	**P**	**19 15 33.8**	**0.0**
JNU				IAmb	IAmb	19 15 35.7	
	comp=Z,48nm,1.0s						
JNU	**Nakatsue**	**24.57**	**9**	P	**P**	**19 15 34.2**	**+0.4**
PMBI	**Palembang**	**24.62**	**243**	P	**P**	**19 15 38.6**	**+4.2**
	comp=Z,167nm,0.4s						
IPM	**Ipoh**	**25.70**	**262**	P	**P**	**19 15 44.4**	**+0.2**
IPM				IAmb	IAmb	19 15 46.7	
	comp=Z,72nm,1.0s						
JTU	**Tsushima**	**25.77**	**5**	P	**P**	**19 15 43.9**	**-0.7**
JTU				IAmb	IAmb	19 15 46.8	
	comp=Z,31nm,1.1s						
KULM	**Kulim**	**25.93**	**264**	P	**P**	**19 15 47.4**	**+1.2**
KULM				IAmb	IAmb	19 15 49.1	
	comp=Z,40nm,0.8s						
KASI	**Kota Agung**	**26.16**	**238**	P	**P**	**19 15 51.0**	**+2.6**
	comp=Z,34nm,1.3s						
LWLI	**Liwa**	**26.27**	**239**	P	**P**	**19 15 50.5**	**+1.0**
	comp=Z,1µmcomp=Z,175nm,0.9s						
NAWB	**Namwon**	**26.55**	**2**	P	**P**	**19 15 51.0**	**-0.6**
NAWB				IAmb	IAmb	19 15 54.3	
	comp=Z,22nm,0.8s						
JHS	**Saijyo**	**26.80**	**12**	P	**P**	**19 15 53.9**	**-0.1**
JHJ	**Hachijo jima 2**	**27.15**	**25**	LR	LR	19 27 22.2	
	comp=Z,90nm,18.8s,baz=282,slow=38						
KRJI	**Kerinci**	**27.23**	**248**	P	**P**	**19 15 59.7**	**+1.6**
	comp=Z,69nm,0.8s						
PMG	**Port Moresby**	**27.34**	**131**	P	**P**	**19 15 57.9**	**-1.0**
	comp=Z,12nm,0.7s,baz=326,slow=7.8,SNR=4.3						
	comp=Z,12nm,0.7s						
KMI	**Kunming**	**27.91**	**309**	⇑P	**P**	**19 16 06.3**	**+2.1**
KMI				LR	LR		
	comp=Z,220nm,17.7s						
KMI				LR	LR		
	comp=Z,230nm,19.3s						
COEN	**Coen**	**27.96**	**144**	P	**P**	**19 16 05.2**	**+0.7**
	baz=28,SNR=26						
COEN	**Coen**	**27.96**	**144**	P	**P**	**19 16 04.7**	**+0.2**
COEN	**Coen**	**27.96**	**144**	P	**P**	**19 16 05.2**	**+0.7**
KSCHJ	**Chungju**	**28.01**	**2**	P	**P**	**19 16 05.0**	**+0.3**
PSI	**Prapat**	**28.10**	**259**	P	**P**	**19 16 08.0**	**+2.0**
	comp=Z,19nm,0.9s,baz=56,slow=3.3,SNR=7.1						
PSI				LR	LR	19 28 49.8	
	comp=Z,104nm,20.5s,baz=60,slow=39						
	comp=Z,19nm,0.9s						
RPSI	**Rantau Prapat**	**28.12**	**259**	P	**P**	**19 16 08.0**	**+2.0**
INU	**Inuyama**	**28.14**	**18**	P	**P**	**19 16 06.0**	**+0.1**
INU	**Inuyama**	**28.14**	**18**	P	**P**	**19 16 06.6**	**+0.7**
	comp=Z,22nm,0.7s						
CM31	**Chiang Mai Arr**	**28.46**	**293**	P	**P**	**19 16 08.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**28.46**	**293**	P	**P**	**19 16 09.8**	**+0.8**
	comp=Z,8.8nm,0.9s,baz=112,slow=7.3,SNR=39						
CMAR				PcP	**PcP**	**19 19 20.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=62,slow=1.6,SNR=4.7						
CMAR				ScP	**ScP**	**19 22 56.4**	**-1.0**
	comp=Z,1.0nm,1.0s,baz=209,slow=29,SNR=4.4						
CMAR				LR	LR	19 28 20.6	
	comp=Z,147nm,18.2s,baz=110,slow=38						
	comp=Z,8.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.46**	**293**	P	**P**	**19 16 10.0**	**+1.0**
JGF	**Kuroka**	**28.48**	**19**	P	**P**	**19 16 08.0**	**-1.0**
CHTO	**Chiang Mai**	**28.56**	**293**	P	**P**	**19 16 09.3**	**-0.6**
CHTO	**Chiang Mai**	**28.56**	**293**	P	P	19 16 12.9	+3.0
KSAR	**Wonju Array Be**	**28.58**	**2**	P	**P**	**19 16 09.6**	**-0.2**
KSRS	**Korea Array**	**28.59**	**2**	P	**P**	**19 16 10.1**	**+0.2**
	comp=Z,7.2nm,0.8s,baz=179,slow=10,SNR=33						
KSRS				PcP	**PcP**	**19 19 20.4**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=225,slow=1.4,SNR=5.2						
KSRS				LR	LR	19 29 13.6	
	comp=Z,70nm,18.7s,baz=200,slow=40						
	comp=Z,7.2nm,0.8s						
RABL	**Rabaul**	**28.60**	**116**	P	**P**	**19 16 09.6**	**-0.7**
RABL				IAmb	IAmb	19 16 15.3	
	comp=Z,25nm,0.6s						
KS19	**Wonju Array Si**	**28.64**	**2**	P	**P**	**19 16 10.0**	**-0.3**
KCSI	**Kotacane, Aceh**	**29.07**	**261**	P	**P**	**19 16 12.4**	**-2.0**
	comp=Z,63nm,1.0s						
SISI	**Saibi**	**29.14**	**251**	P	**P**	**19 16 14.0**	**-1.0**
	comp=Z,29nm,0.7s						
WB0	**Warramunga Arr**	**29.39**	**165**	P	**P**	**19 16 15.4**	**-1.7**

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PZH   PanZhiHua          29.39 310  P      P       19 16 19.3 +2.0
PZH                                 S      S       19 21 09.0 +1.1
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                 pmax   pmax
      comp=Z,80nm,6.1s
PZH                                 LR     LR
      comp=Z,290nm,22.5s
PZH                                 LR     LR
      comp=Z,510nm,21.3s
PZH                                 LR     LR
      comp=Z,880nm,24.0s
WRAB  Tennant Creek      29.53 165  P      P       19 16 17.0 -1.4
WRAB  Tennant Creek      29.53 165  P      P       19 16 17.3 -1.1
WRA   Warramunga Arr     29.54 165  P      P       19 16 17.1 -1.4
      comp=Z,3.3nm,0.6s,baz=347,slow=9.4,SNR=60
WRA                                 PcP    PcP     19 19 22.6 -0.3
      comp=Z,2.5nm,0.8s,baz=329,slow=3.0,SNR=4.7
WRA                                 S      S       19 21 03.3 -6.7
      comp=Z,1.2nm,0.7s,baz=348,slow=15,SNR=5.6
WRA                                 ScP    ScP     19 22 59.0 -1.7
      comp=Z,1.3nm,1.0s,baz=346,slow=3.4,SNR=4.0
      comp=Z,3.3nm,0.6s
WRA   Warramunga Arr     29.54 165  P      P       19 16 17.3 -1.2
WB2   Warramunga Arr     29.54 165  P      P       19 16 16.7 -1.8
      baz=30
WB2   Warramunga Arr     29.54 165  P      P       19 16 16.9 -1.7
WR0   Warramunga Arr     29.61 165  P      P       19 16 17.5 -1.6
WR0                                 IAmb   IAmb    19 16 44.1
      comp=Z,26nm,1.4s
MAJO  Matsushiro         29.62  19  P      P       19 16 15.4 -3.6
MJAR  Matsushiro Arr     29.62  19  P      P       19 16 17.8 -1.3
      comp=Z,3.4nm,0.8s,baz=192,slow=9.1,SNR=10
MJAR                                PP     PnPn    19 17 17.1 +1.3
      comp=Z,2.8nm,0.8s,baz=194,slow=10,SNR=5.2
MJAR                                LR     LR      19 29 26.6
      comp=Z,134nm,18.1s,baz=203,slow=39
      comp=Z,3.4nm,0.8s
MJAR  Matsushiro Arr     29.62  19  IAmb   IAmb    19 16 19.0
      comp=Z,1.1nm,0.8s
MJB9  Matsu-Tunnel       29.62  19  P      P       19 16 15.3 -3.8
XAN   Xi'an              29.93 330  P      P       19 16 19.3 -2.6
XAN                                 pP     pP      19 16 33.5 -1.2
XAN                                 sP     sP      19 16 41.0 +0.4
XAN                                 pmax   pmax
      comp=Z,5.0nm,0.7s
XAN                                 LR     LR
      comp=Z,130nm,16.1s
XAN                                 LR     LR
      comp=Z,120nm,15.8s
XAN                                 LR     LR
      comp=Z,180nm,16.7s
HNS   HongShan           30.46 341 ⇓P      P       19 16 27.0 +0.6
MBWA  Marble Bar         30.48 193  P      P       19 16 27.5 +0.8
PSA00 Pilbara Seismi     30.86 192  P      P       19 16 30.5 +0.4
PSA00                               IAmb   IAmb    19 16 31.6
      comp=Z,19nm,0.9s
PSA00 Pilbara Seismi     30.86 192  P      P       19 16 30.2 +0.2
PSA00                               IAmb   IAmb    19 16 31.6
      comp=Z,11nm,1.0s
PSA00 Pilbara Seismi     30.86 192  P      P       19 16 31.0 +0.9
      comp=Z,24nm,0.9s
JMM   Marumori           31.70  22  P      P       19 16 37.2 -0.2
QIS   Mount Isa          31.84 156  P      P       19 16 38.4 -0.4
      baz=32,SNR=31
QIS   Mount Isa          31.84 156  P      P       19 16 39.0 +0.2
MTSU  Mount Surprise     31.97 147  P      P       19 16 40.2 +0.2
      baz=32,SNR=32
MTSU  Mount Surprise     31.97 147  P      P       19 16 40.6 +0.6
BJT   Baijiatuau         32.47 345  P      P       19 16 42.4 -1.8
BJI   Beijing            32.49 345  P      P       19 16 44.5 +0.2
BJI                                 pmax   pmax
      comp=Z,6.0nm,0.8s
AS31  Alice Springs      33.02 168  P      P       19 16 48.0 -1.1
ASAR  Alice Springs      33.02 168  P      P       19 16 48.2 -0.9
      comp=Z,1.6nm,0.4s,baz=351,slow=6.3,SNR=92
ASAR                                PcP    PcP     19 19 31.8 -0.4
      comp=Z,2.5nm,0.7s,baz=342,slow=2.5,SNR=7.1
ASAR                                S      S       19 21 58.5 -5.9
      comp=Z,0.4nm,0.8s,baz=357,slow=18,SNR=2.7
ASAR                                ScP    ScP     19 23 11.0 -1.3
      comp=Z,1.0nm,0.7s,baz=342,slow=2.8,SNR=7.5
      comp=Z,1.6nm,0.4s
ASAR  Alice Springs      33.02 168  P      P       19 16 47.8 -1.4
WRKA  Warakurna          33.64 177  P      P       19 16 54.7 +0.2
      baz=34,SNR=11
WRKA  Warakurna          33.64 177  P      P       19 16 54.9 +0.4
HHC   Hu-ho-hao-te       34.62 340 eP      P       19 17 06.0 +3.1
HHC                                 pmax   pmax
      comp=Z,34nm,0.9s
HHC                                 pmax   pmax
      comp=Z,190nm,7.7s
HHC                                 LR     LR
      comp=Z,440nm,16.5s
HHC                                 LR     LR
      comp=Z,220nm,17.1s
HHC                                 LR     LR
      comp=Z,260nm,17.1s
CTA   Charters Tower     34.62 146  LR     LR      19 33 04.2
      comp=Z,83nm,18.9s,baz=287,slow=39
CTAO  Charters Tower     34.62 146  P      P       19 17 03.4 +0.4
CTAO                                IAmb   IAmb    19 17 05.7
      comp=Z,18nm,1.4s
CTAO  Charters Tower     34.62 146  P      P       19 17 03.9 +0.9
CN2   Changchun          34.92 359 eP      P       19 17 04.8 -0.5
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra     35.62   7  P      P       19 17 11.9 +0.6
USRK  Ussuriysk Ar.      35.62   7  P      P       19 17 11.9 +0.6
      comp=Z,27nm,0.7s,baz=192,slow=7.9,SNR=45
      comp=Z,27nm,0.7s
USRK  Ussuriysk Ar.      35.62   7  P      P       19 17 11.3  0.0
MDJ   Mudanjiang         35.82   4  P      P       19 17 13.4 +0.4
MDJ   Mudanjiang         35.82   4  P      P       19 17 14.0 +1.0
MDJ                                 pP     sP      19 17 28.0 -2.9
MDJ                                 sP     pwP     19 17 35.0 +5.7
MDJ                                 S      S       19 22 50.5 +3.5
MDJ                                 sS     ScP     19 23 13.5 -8.4
MDJ                                 PcS    PcS     19 23 27.3 +0.3
MDJ                                 ScS    ScS     19 27 26.3 -0.7
MDJ                                 pmax   pmax
      comp=Z,40nm,1.0s
MDJ                                 pmax   pmax
      comp=Z,85nm,4.8s
MDJ                                 LR     LR
      comp=Z,150nm,6.6s
MDJ                                 LR     LR
      comp=Z,150nm,6.7s
MDJ                                 LR     LR
      comp=Z,170nm,6.1s
MDJ   Mudanjiang         35.82   4  P      P       19 17 14.5 +1.5
XLT   XiLinHaoTe         36.17 347 eP      P       19 17 15.0 -1.2
XLT                                 pP     pP      19 17 27.0 -1.9
XLT                                 sP     sP      19 17 32.0 -2.6
XLT                                 S      S       19 22 51.3 -1.4
XLT                                 sS     sS      19 23 14.0 +0.3
XLT                                 pmax   pmax
      comp=Z,21nm,1.0s
XLT                                 pmax   pmax
      comp=Z,96nm,4.9s
BNX   BinXian            36.85   1 ⇑P      P       19 17 22.3 +0.5
BNX                                 pmax   pmax
      comp=Z,20nm,0.9s
BNX                                 pmax   pmax
      comp=Z,220nm,7.4s
SHL   Shillong           36.94 301  P      P       19 17 22.1 -1.0
OOD   Oodnadatta         37.40 167  P      P       19 17 26.5 -0.2
HNR   Honiara            37.86 118  LR     LR      19 31 26.7
      comp=Z,135nm,21.9s,baz=244,slow=34
ASAJ  Asahikawa          37.89  19  LR     LR      19 34 01.5
      comp=Z,90nm,18.1s,baz=202,slow=38
JKA   Kamikawa-asahi     37.89  19  P      P       19 17 31.5 +0.8
GTA   Gaotai             38.77 326 eP      P       19 17 37.5 -0.8
GTA                                 pmax   pmax
      comp=Z,3.0nm,0.8s
GTA                                 pmax   pmax
      comp=Z,88nm,5.1s
GTA                                 LR     LR
      comp=Z,130nm,15.6s
GTA                                 LR     LR
      comp=Z,160nm,17.1s
GTA                                 LR     LR
      comp=Z,110nm,17.4s
INKA  Innaminka          38.80 160  P      P       19 17 40.0 +1.5
MORW  Morawa             38.95 195  P      P       19 17 40.2 +0.5
      baz=39,SNR=7.5
MORW  Morawa             38.95 195  P      P       19 17 39.9 +0.2
MORW                                IAmb   IAmb    19 18 06.6
      comp=Z,24nm,1.1s
QLP   Quilpie            39.11 154  P      P       19 17 41.1  0.0
LSA   Lhasa              39.13 307  P      P       19 17 41.5 -0.4
LSA                                 IAmb   IAmb    19 17 46.9
      comp=Z,9.1nm,0.7s
FORT  Forrest            39.34 178  P      P       19 17 43.4 +0.4
      baz=40,SNR=28
FORT  Forrest            39.34 178  P      P       19 17 42.9 -0.1
FORT                                IAmb   IAmb    19 18 04.3
      comp=Z,22nm,0.7s
FORT  Forrest            39.34 178  P      P       19 17 44.8 +1.8
RK1H  Rockhampton Ha     39.62 144  P      P       19 17 45.9 +0.5
      comp=Z,14nm,0.7s
GOMU  GeErMu             39.73 318  P      P       19 17 48.8 +2.1
GOMU                                pP     pP      19 17 55.0 -4.8
GOMU                                pmax   pmax
      comp=Z,12nm,1.1s
GOMU                                pmax   pmax
      comp=Z,73nm,4.4s
GOMU                                LR     LR
      comp=Z,92nm,10.9s
GOMU                                LR     LR
      comp=Z,88nm,14.8s
GOMU                                LR     LR
      comp=Z,93nm,13.5s
H11S3 WAKE ISLAND Hy     40.11  72  T      T       20 00 47.8
      baz=262,slow=75,SNR=176
H11S1 WAKE ISLAND Hy     40.12  72  T      T       20 00 51.7
      baz=262,slow=75,SNR=115
H11S2 WAKE ISLAND Hy     40.13  72  T      T       20 00 52.3
      baz=262,slow=75,SNR=153
BLDU  Ballidu            40.27 193  P      P       19 17 50.2 -0.6
      baz=40,SNR=4.9
H11N1 WAKE ISLAND Hy     40.49  70  T      T       20 01 34.1
      baz=265,slow=74,SNR=82
H11N2 WAKE ISLAND Hy     40.50  70  T      T       20 01 34.4
      baz=265,slow=74,SNR=66
H11N3 WAKE ISLAND Hy     40.51  70  T      T       20 01 28.1
      baz=265,slow=74,SNR=83
LCRK  Leigh Creek        40.56 164  P      P       19 17 53.4 +0.3
KLR   Kul'dur            40.57   5  LR     LR      19 36 14.1
      comp=Z,45nm,18.8s,baz=192,slow=38
HIA   Hailar             40.77 353  P      P       19 17 53.6 -1.0
KLBR  Kellerberrin       41.00 191  P      P       19 17 57.3 +0.6
      baz=41,SNR=5.5
TAPN  Taplejung          41.06 302 eP      P       19 17 56.9 -0.8
ODAN  Odare              41.17 301 eP      P       19 17 58.3 -0.3
      comp=Z,11nm,0.7s
EIDS  Eidsvold           41.50 145  P      P       19 18 00.2 -0.7
MUN   Mundaring          41.70 193  P      P       19 18 03.1 +0.7
      baz=42,SNR=5.7
RAMN  Ramite             41.87 301 eP      P       19 18 03.7 -0.6
      comp=Z,60nm,1.0s
BBOO  Buckleboo          42.32 168  P      P       19 18 07.6 +0.1
      baz=42,SNR=13
BBOO  Buckleboo          42.32 168  P      P       19 18 07.4 -0.1
BBOO                                IAmb   IAmb    19 18 07.9
      comp=Z,18nm,0.6s
ULN   Ulaanbaatar        42.33 341  P      P       19 18 06.0 -1.6
JIRN  Jiri               42.44 302 eP      P       19 18 08.3 -0.7
      comp=Z,71nm,0.6s
SONM  Songino Array      42.52 340  P      P       19 18 07.7 -1.5
      comp=Z,1.0nm,0.6s,baz=158,slow=9.8,SNR=9.3
SONM                                PcP    PcP     19 20 01.0 -0.1
      comp=Z,1.1nm,0.7s,baz=166,slow=3.7,SNR=4.5
SONM                                ScP    ScP     19 23 47.5 -0.3
      comp=Z,0.8nm,0.9s,baz=141,slow=4.5,SNR=5.0
SONM                                LR     LR      19 37 24.2
      comp=Z,71nm,20.0s,baz=177,slow=38
      comp=Z,1.0nm,0.6s
SONM  Songino Array      42.52 340  P      P       19 18 07.4 -1.7
SONM                                PcP    PcP     19 20 00.7 -0.3
GUN   Gumba              42.77 302 eP      P       19 18 11.2 -0.6
      comp=Z,71nm,0.7s
STKA  Stephens Creek     42.90 161  P      P       19 18 12.0 -0.2
      comp=Z,14nm,0.6s,baz=336,slow=8.4,SNR=39
STKA                                LR     LR      19 42 48.8
      comp=Z,111nm,18.5s,baz=220,slow=45
      comp=Z,14nm,0.6s
STKA  Stephens Creek     42.90 161  P      P       19 18 12.1 -0.2
      baz=43,SNR=24
STKA  Stephens Creek     42.90 161  P      P       19 18 11.7 -0.5
STKA  Stephens Creek     42.90 161  P      P       19 18 11.8 -0.4
PKI   Pulchoki           43.07 301 eP      P       19 18 13.1 -1.0
      comp=Z,19nm,0.6s
PKIN  Phulchoki          43.08 301 eP      P       19 18 13.3 -0.8
      comp=Z,14nm,0.4s
NAPP  Napperby           43.15 166  P      P       19 18 15.6 +1.4
      comp=Z,25nm,1.0s
DMN   Daman              43.33 301 eP      P       19 18 15.7 -0.5
      comp=Z,17nm,0.4s
HTT   Hallett            43.58 165  P      P       19 18 18.2 +0.4
      baz=44,SNR=6.5
GKN   Gorkha             43.85 302 eP      P       19 18 19.1 -1.1
      comp=Z,14nm,0.5s
CMSA  Cobar Meteorol     44.06 156  P      P       19 18 21.5 -0.1
      baz=44,SNR=8.1
CMSA  Cobar Meteorol     44.06 156  P      P       19 18 22.2 +0.6
KOLN  Koldanda           44.66 301 eP      P       19 18 26.5 -0.3
      comp=Z,7.0nm,0.7s
DANN  Dangsing           44.69 302 eP      P       19 18 26.0 -1.1
      comp=Z,60nm,0.6s
PALK  Pallekele          45.40 272  LR     LR      19 37 38.5
      comp=Z,70nm,21.8s,baz=191,slow=36
ARPS  Mount Arapiles     47.51 163  P      P       19 18 49.1 +0.4
      baz=48,SNR=8.3
ARPS  Mount Arapiles     47.51 163  P      P       19 18 49.9 +1.2
WMQ   Urumqi             48.57 323 eP      P       19 19 00.0 +3.0
WMQ                                 pmax   pmax
      comp=Z,22nm,0.9s
WMQ                                 LR     LR
      comp=Z,220nm,24.9s
WMQ                                 LR     LR
      comp=Z,59nm,21.3s
TOO   Toolangi           49.38 160  P      P       19 19 04.4 +1.2
      baz=50,SNR=8.4
LIFNC LIFOU              49.62 127  P      P       19 19 05.4 +0.2
LIFNC LIFOU              49.62 127  P      P       19 19 06.1 +1.0
DZM   Mont Dzumac        49.69 129  LR     LR      19 39 22.3
      comp=Z,48nm,19.1s,baz=312,slow=35
DZM   Mont Dzumac        49.69 129  P      P       19 19 06.5 +0.6
DZM                                 IAmb   IAmb    19 19 07.6
      comp=Z,11nm,0.7s
PEA0B Petropavlovsk-     50.90  24  P      P       19 19 15.3 +0.9
PEA0B                               IAmb   IAmb    19 19 18.4
      comp=Z,13nm,0.8s
PETK  Petropavlovsk-     50.90  24  P      P       19 19 15.1 +0.7
      comp=Z,9.0nm,0.7s,baz=210,slow=10.0,SNR=19
PETK                                LR     LR      19 40 42.8
      comp=Z,48nm,19.7s,baz=210,slow=36
      comp=Z,9.0nm,0.7s
PETK  Petropavlovsk-     50.90  24  P      P       19 19 15.2 +0.8
YAK   Yakutsk            53.22   2  LR     LR      19 43 39.8
      comp=Z,37nm,19.1s,baz=267,slow=38
YAK   Yakutsk            53.22   2  P      P       19 19 31.4 -0.1
YAK                                 IAmb   IAmb    19 19 35.8
      comp=Z,12nm,0.6s
MK31  Makanchi Array     53.39 323  P      P       19 19 32.1 -0.9
MK31                                IAmb   IAmb    19 19 33.7
      comp=Z,8.8nm,0.9s
MKAR  Makanchi Array     53.39 323  P      P       19 19 32.0 -1.1
      comp=Z,11nm,0.7s,baz=120,slow=8.0,SNR=106
MKAR                                PcP    PcP     19 20 39.1 -0.7
      comp=Z,4.8nm,0.8s,baz=170,slow=2.9,SNR=6.9
MKAR                                LR     LR      19 44 09.2
      comp=Z,107nm,19.7s,baz=122,slow=38
      comp=Z,11nm,0.7s
MKAR  Makanchi Array     53.39 323  P      P       19 19 31.9 -1.2
MAKZ  Makanchi           53.58 323  P      P       19 19 33.3 -1.2
MAKZ                                IAmb   IAmb    19 19 35.6
      comp=Z,7.3nm,0.8s
MA2   Magadan            53.91  15  LR     LR      19 41 52.2
      comp=Z,20nm,20.6s,baz=180,slow=35
MA2   Magadan            53.91  15  P      P       19 19 37.1 +0.5
MA2   Magadan            53.91  15  P      P       19 19 37.7 +1.1
KSH   Kashi              54.44 313  P      P       19 19 42.5 +1.5
KSH                                 PP     PP      19 21 48.0 +4.4
KSH                                 pmax   pmax
      comp=Z,3.0nm,0.6s
NIL   Nilore             54.81 305  P      P       19 19 42.0 -1.6
ZAA0  Zalesovo Array     56.07 332  P      P       19 19 50.3 -2.0
ZAA0                                IAmb   IAmb    19 19 54.7
      comp=Z,7.4nm,0.8s
ZALV  Zalesovo Beam      56.07 332  P      P       19 19 50.5 -1.9
      comp=Z,6.7nm,0.7s,baz=115,slow=7.0,SNR=20
ZALV                                PcP    PcP     19 20 47.9 -2.1
      comp=Z,1.6nm,0.4s,baz=129,slow=6.3,SNR=4.6
ZALV                                LR     LR      19 46 14.5
      comp=Z,34nm,18.1s,baz=153,slow=38
      comp=Z,6.7nm,0.7s
ZALV  Zalesovo Beam      56.07 332  P      P       19 19 50.3 -2.0
AAK   Ala-Archa          56.58 316  LR     LR      19 46 08.7
      comp=Z,102nm,21.5s,baz=83,slow=38
SEY   Seymchan           57.21  14  LR     LR      19 43 42.2
      comp=Z,36nm,21.8s,baz=218,slow=35
MSVF  Nonsavu            57.28 118  P      P       19 20 03.1 +1.6
MSVF  Nonsavu            57.28 118  P      P       19 20 02.0 +0.5
KURK  Kurchatov          57.46 326  P      P       19 20 00.1 -2.1
KURK                                IAmb   IAmb    19 20 03.2
      comp=Z,19nm,1.0s
DGTI  Dogotuki           58.23 115  P      P       19 20 08.3 +0.1
SHEM  Shemya Is, Ala     58.28  32  LR     LR      19 44 22.1
      comp=Z,12nm,20.3s,baz=16,slow=35
KBL   Kabul              58.41 305  P      P       19 20 07.6 -1.8
GAR   Garm               58.46 311  P      P       19 20 08.4 -1.2
CHGR  Chuyangaron        59.25 310  P      P       19 20 13.6 -1.5
KK31  Karatay Array      59.50 315  P      P       19 20 15.1 -1.6
KKAR  Karatay Array      59.50 315  P      P       19 20 14.8 -1.8
KKAR  Karatay Array      59.50 315  P      P       19 20 15.1 -1.6
KKAR                                IAmb   IAmb    19 20 16.8
      comp=Z,4.4nm,0.8s
TIXI  Tiksi              62.85   1  LR     LR      19 49 09.6
      comp=Z,72nm,18.3s,baz=181,slow=37
TIXI  Tiksi              62.85   1  P      P       19 20 38.3 -0.4
TIXI                                IAmb   IAmb    19 20 40.9
      comp=Z,12nm,1.1s
BRVK  Borovoye           63.13 326  P      P       19 20 39.9 -1.0
HRA   Herat              63.92 304  P      P       19 20 45.6 -1.2
HRA                                 IAmb   IAmb    19 20 49.3
      comp=Z,7.0nm,0.8s
BILL  Bilibino           64.78  15  P      P       19 20 51.4  0.0
BILL                                IAmb   IAmb    19 20 53.1
      comp=Z,16nm,1.0s
AFI   Afiamalu           65.22 110  LR     LR      19 44 19.4
      comp=Z,94nm,21.0s,baz=292,slow=31
NRIK  Noril'sk           65.53 346  P      P       19 20 55.7 -0.6
      comp=Z,12nm,0.7s,baz=117,slow=6.9,SNR=17
NRIK                                LR     LR      19 52 34.6
      comp=Z,49nm,19.3s,baz=222,slow=39
      comp=Z,12nm,0.7s
NRIK  Noril'sk           65.53 346  P      P       19 20 55.6 -0.7
NRIK                                IAmb   IAmb    19 21 00.5
      comp=Z,15nm,1.0s
RPZ   Rata Peaks         65.99 146  P      P       19 20 58.8 -0.9
WSAR  Wadi Sarin         66.34 291  LR     LR      19 54 39.2
      comp=Z,33nm,18.4s,baz=100,slow=40
URZ   Urewera            66.36 138  LR     LR      19 52 10.9
      comp=Z,59nm,18.1s,baz=31,slow=38
BKZ   Black Stump Fm     66.47 140  P      P       19 21 03.5 +0.5
GEYT  Alibeck            67.66 307  P      P       19 21 10.8 +0.2
      comp=Z,6.3nm,0.8s,baz=142,slow=5.5,SNR=15
GEYT                                LR     LR      19 53 34.3
      comp=Z,67nm,21.9s,baz=132,slow=38
      comp=Z,6.3nm,0.8s
GEYT  Alibeck            67.66 307  P      P       19 21 09.3 -1.3
GYA0B ALIBECK ARRAY      67.66 307  P      P       19 21 09.8 -0.9
GYA0B                               IAmb   IAmb    19 21 16.3
      comp=Z,8.8nm,0.8s
NIKH  Nikolski High      67.86  36  P      P       19 21 12.2 +0.8
      baz=255
ABKAR Akbulak array      68.19 320  P      P       19 21 12.1 -1.5
ABKAR                               IAmb   IAmb    19 21 16.9
      comp=Z,7.5nm,0.7s
ABKAR Akbulak array      68.19 320  P      P       19 21 12.3 -1.4
SPIA  Saint Paul Isl     68.31  32  P      P       19 21 15.6 +1.4
      baz=252
UNV   Unalaska Valle     69.44  36  P      P       19 21 21.6 +0.3
      baz=256
AKTO  Aktyubinsk         69.65 321  LR     LR      19 53 15.4
      comp=Z,48nm,21.6s,baz=110,slow=37
GAMB  Gambell            69.91  25  P      P       19 21 24.7 +0.7
GAMB                                IAmb   IAmb    19 21 26.5
      comp=Z,24nm,1.1s
GAMB  Gambell            69.91  25  P      P       19 21 25.3 +1.3
      baz=248
ARU   Arti               70.63 327  P      P       19 21 26.9 -1.6
ARU                                 IAmb   IAmb    19 21 27.6
      comp=Z,13nm,0.5s
FALS  False Pass         71.42  35  P      P       19 21 34.2 +0.8
      baz=259
TNA   Tin City           72.06  23  P      P       19 21 37.9 +0.9
      baz=251
ANM   Nome               72.79  25  P      P       19 21 42.6 +1.2
      baz=254
SDPT  Sand Point         73.17  35  P      P       19 21 44.0 +0.2
SDPT  Sand Point         73.17  35  P      P       19 21 44.0 +0.2
      baz=261
CHNA  Chernabura Isl     73.60  35  P      P       19 21 46.9 +0.6
      baz=262
CHGN  Chignik            74.46  34  P      P       19 21 51.6 +0.3
CHGN  Chignik            74.46  34  P      P       19 21 51.4 +0.1
      baz=262
CHIR  Chirikof Islan     75.97  35  P      P       19 22 00.3 +0.3
      baz=265
N18K  Kilae Creek        76.32  30  P      P       19 22 03.3 +1.4
N18K                                IAmb   IAmb    19 22 04.4
      comp=Z,12nm,0.8s
N18K  Kilae Creek        76.32  30  P      P       19 22 02.8 +0.9
      baz=264
GCSA  Galena City Sc     76.40  25  P      P       19 22 03.3 +1.0
      baz=262
P18K  Big Mountain,      76.51  31  P      P       19 22 04.7 +1.6
P18K                                IAmb   IAmb    19 22 06.3
      comp=Z,16nm,1.1s
P18K  Big Mountain,      76.51  31  P      P       19 22 04.2 +1.0
      baz=264
SVW2  Sparrevohn         76.52  29  P      P       19 22 05.0 +2.0
SVW2                                IAmb   IAmb    19 22 06.0
      comp=Z,14nm,0.9s
TTA   Tatalina           76.53  27  P      P       19 22 04.8 +1.6
TTA                                 IAmb   IAmb    19 22 05.6
      comp=Z,19nm,1.4s
TTA   Tatalina           76.53  27  P      P       19 22 03.9 +0.6
      baz=263,SNR=6.6
SII   Sitkinak Islan     76.83  34  P      P       19 22 06.2 +1.3
SII   Sitkinak Islan     76.83  34  P      P       19 22 06.4 +1.5
      baz=266
L19K  White Mountain     76.98  28  P      P       19 22 07.2 +1.5
L19K                                IAmb   IAmb    19 22 08.4
      comp=Z,16nm,0.9s
L19K  White Mountain     76.98  28  P      P       19 22 06.6 +0.9
      baz=264,SNR=11
N19K  Bonanza Creek      77.02  30  P      P       19 22 07.3 +1.3
N19K  Bonanza Creek      77.02  30  P      P       19 22 07.0 +1.0
      baz=265,SNR=8.7
O19K  Port Alsworth      77.05  30  P      P       19 22 07.4 +1.4
O19K  Port Alsworth      77.05  30  P      P       19 22 07.1 +1.1
      baz=265
M19K  Big River Lodg     77.17  28  P      P       19 22 07.8 +1.0
      baz=265
Q19K  Cape Douglas,      77.29  32  P      P       19 22 07.7 +0.2
Q19K  Cape Douglas,      77.29  32  P      P       19 22 07.6 +0.2
      baz=266
OHAK  Old Harbor         77.36  33  P      P       19 22 08.9 +1.1
OHAK  Old Harbor         77.36  33  P      P       19 22 07.9 +0.1
      baz=267,SNR=5.5
K20K  Telida             77.46  27  P      P       19 22 10.0 +1.7
K20K                                IAmb   IAmb    19 22 11.2
      comp=Z,9.0nm,1.0s
K20K  Telida             77.46  27  P      P       19 22 10.0 +1.7
      baz=264,SNR=5.6
L20K  Farewell, AK       77.46  28  P      P       19 22 10.0 +1.6
      baz=265
J20K  Nowinta River      77.50  26  P      P       19 22 08.6  0.0
J20K                                IAmb   IAmb    19 22 12.2
      comp=Z,8.2nm,0.8s
J20K  Nowinta River      77.50  26  P      P       19 22 10.0 +1.5
      baz=264,SNR=12
A21K  Barrow             77.54  19  P      P       19 22 09.4 +0.9
A21K  Barrow             77.54  19  P      P       19 22 09.6 +1.1
      baz=260
M20K  Styx River         77.76  29  P      P       19 22 11.6 +1.5
      baz=266
KDAK  Kodiak Island      77.77  33  LR     LR      19 52 27.3
      comp=Z,71nm,20.1s,baz=257,slow=32
KDAK  Kodiak Island      77.77  33  P      P       19 22 11.1 +1.0
KDAK  Kodiak Island      77.77  33  P      P       19 22 11.3 +1.2
      baz=267
RSO   Redoubt South      77.84  30  P      P       19 22 11.5 +0.7
IMAR  Indian Mountai     77.86  24  P      P       19 22 11.5 +1.0
GNI   Garni              78.16 309  LR     LR      20 01 01.5
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         comp=Z,30nm,21.1s,baz=90,slow=39
H21K  Melozitna Rive    78.21  25  P      P       19 22 13.9 +1.4
H21K                               IAmb   IAmb    19 22 15.1
         comp=Z,15nm,0.9s
H21K  Melozitna Rive    78.21  25  P      P       19 22 14.1 +1.6
         baz=265,SNR=15
SPU   Mount Spurr       78.23  29  P      P       19 22 12.8 +0.1
PPLA  Purkeypile        78.27  28  P      P       19 22 14.0 +1.0
         baz=266
CHUM  Lake Minchumin    78.28  27  P      P       19 22 13.7 +0.9
         baz=266,SNR=9.9
CAST  Castle Rocks      78.35  27  P      P       19 22 14.1 +0.8
         baz=266
RAYN  Ar Rayn           78.38 292  P      P       19 22 13.0 -1.3
I21K  Tanana            78.52  25  P      P       19 22 14.6 +0.5
I21K                               IAmb   IAmb    19 22 16.8
         comp=Z,19nm,0.9s
I21K  Tanana            78.52  25  P      P       19 22 14.9 +0.7
         baz=266,SNR=15
CNPM  China Poot        78.56  31  P      P       19 22 14.8 +0.4
CNPM                               IAmb   IAmb    19 22 15.8
         comp=Z,19nm,0.8s
BRLK  Bradley Lake      78.74  31  P      P       19 22 15.7 +0.1
BRSE  Bradley Lake S    78.81  31  P      P       19 22 16.1 +0.2
         baz=268,SNR=9.1
BPAW  Bear Paw Mtn.     78.88  26  P      P       19 22 16.9 +0.7
BPAW                               IAmb   IAmb    19 22 18.4
         comp=Z,27nm,1.0s
BPAW  Bear Paw Mtn.     78.88  26  P      P       19 22 17.4 +1.2
         baz=267,SNR=11
KTH   Kantishna Hill    78.88  27  P      P       19 22 17.2 +0.9
KTH                                IAmb   IAmb    19 22 19.0
         comp=Z,23nm,1.4s
TRF   Thorofare Moun    79.16  27  P      P       19 22 18.7 +0.8
TRF                                IAmb   IAmb    19 22 19.5
         comp=Z,20nm,1.2s
TRF   Thorofare Moun    79.16  27  P      P       19 22 18.5 +0.6
         baz=268,SNR=8.5
M22K  Willow            79.18  29  P      P       19 22 18.1 +0.3
M22K  Willow            79.18  29  P      P       19 22 17.9 +0.1
         baz=268
O22K  Cooper Landing    79.34  30  P      P       19 22 18.7  0.0
O22K  Cooper Landing    79.34  30  P      P       19 22 19.2 +0.5
         baz=269
RC01  Rabbit Creek A    79.35  29  P      P       19 22 19.2 +0.4
RC01                               IAmb   IAmb    19 22 20.0
         comp=Z,26nm,1.2s
RC01  Rabbit Creek A    79.35  29  P      P       19 22 18.8  0.0
         baz=269,SNR=5.1
COLD  Coldfoot          79.36  23  P      P       19 22 19.8 +1.1
COLD                               IAmb   IAmb    19 22 21.4
         comp=Z,20nm,1.1s
COLD  Coldfoot          79.36  23  P      P       19 22 19.5 +0.8
         baz=267,SNR=12
KBZ   Khabaz            79.42 313  P      P       19 22 18.4 -1.1
         comp=Z,3.5nm,1.0s,baz=110,slow=3.0,SNR=4.8
KBZ                                LR     LR      20 01 26.8
         comp=Z,45nm,21.7s,baz=62,slow=39
         comp=Z,3.5nm,1.0s
SEW   Seward            79.47  30  P      P       19 22 19.6 +0.2
SEW                                IAmb   IAmb    19 22 21.0
         comp=Z,34nm,1.2s
SEW   Seward            79.47  30  P      P       19 22 19.9 +0.5
         baz=269,SNR=6.1
H23K  Yukon River       79.57  25  P      P       19 22 20.6 +0.7
H23K                               IAmb   IAmb    19 22 22.6
         comp=Z,13nm,0.8s
H23K  Yukon River       79.57  25  P      P       19 22 21.6 +1.7
         baz=268,SNR=21
KIV   Kislovodsk        79.57 313  P      P       19 22 19.4 -1.1
I23K  Minto, Yukon-K    79.62  25  P      P       19 22 20.7 +0.5
I23K                               IAmb   IAmb    19 22 22.4
         comp=Z,13nm,0.6s
I23K  Minto, Yukon-K    79.62  25  P      P       19 22 21.5 +1.3
         baz=268,SNR=11
PMR   Palmer            79.65  29  P      P       19 22 20.1 -0.2
PMR                                IAmb   IAmb    19 22 21.6
         comp=Z,23nm,0.8s
PMR   Palmer            79.65  29  P      P       19 22 20.6 +0.3
         baz=269
TOLK  Toolik Lake Re    79.67  22  P      P       19 22 21.6 +1.1
TOLK                               IAmb   IAmb    19 22 23.0
         comp=Z,17nm,0.8s
TOLK  Toolik Lake Re    79.67  22  P      P       19 22 21.8 +1.4
         baz=268,SNR=22
NEA2  Nenana            79.73  26  P      P       19 22 21.3 +0.5
NEA2                               IAmb   IAmb    19 22 22.9
         comp=Z,16nm,0.8s
NEA2  Nenana            79.73  26  P      P       19 22 21.9 +1.1
         baz=269,SNR=11
MCK   McKinley          79.77  27  P      P       19 22 21.5 +0.4
MCK   McKinley          79.77  27  P      P       19 22 21.5 +0.4
         baz=269
RND   Reindeer          79.81  27  P      P       19 22 21.2 -0.1
RND                                IAmb   IAmb    19 22 22.6
         comp=Z,33nm,1.3s
WAT1  Susitna Watana    79.94  28  P      P       19 22 22.1 +0.1
         baz=270
KNK   Knik Glacier      79.97  29  P      P       19 22 22.6 +0.4
KNK   Knik Glacier      79.97  29  P      P       19 22 23.1 +1.0
         baz=270,SNR=10
SML   Sawmill           80.03  29  P      P       19 22 23.4 +0.8
         baz=270,SNR=13
MDM   Murphy Dome       80.10  26  P      P       19 22 23.2 +0.4
MDM                                IAmb   IAmb    19 22 24.6
         comp=Z,6.7nm,0.6s
WRH   Wood River Hil    80.15  26  P      P       19 22 23.1  0.0
WRH                                IAmb   IAmb    19 22 24.6
         comp=Z,19nm,1.4s
H24K  Noodor Dome       80.25  25  P      P       19 22 24.9 +1.2
H24K                               IAmb   IAmb    19 22 27.0
         comp=Z,14nm,0.9s
H24K  Noodor Dome       80.25  25  P      P       19 22 24.8 +1.2
         baz=270,SNR=20
CCB   Clear Creek Bu    80.28  26  P      P       19 22 23.8 +0.1
WAT6  Susitna Watana    80.31  28  P      P       19 22 24.8 +0.7
         baz=270,SNR=17
M23K  Glacier View      80.32  29  P      P       19 22 24.6 +0.6
         baz=270,SNR=8.9
GURO  Guroymak-BITLI    80.33 308  P      P       19 22 24.4 -0.3
POKR  Poker Plat Res    80.44  25  P      P       19 22 25.9 +1.3
POKR                               IAmb   IAmb    19 22 27.1
         comp=Z,7.4nm,0.7s
POKR  Poker Plat Res    80.44  25  P      P       19 22 26.0 +1.3
         baz=270
DHY   Denali Highway    80.47  27  P      P       19 22 25.4 +0.4
DHY                                IAmb   IAmb    19 22 27.0
         comp=Z,6.9nm,0.6s
DHY   Denali Highway    80.47  27  P      P       19 22 25.9 +0.9
         baz=271,SNR=5.9
SCM   Sheep Creek Mo    80.51  29  P      P       19 22 24.1 -1.1
SCM   Sheep Creek Mo    80.51  29  P      P       19 22 26.1 +1.0
         baz=271,SNR=9.2
GLI   Glacier Island    80.64  30  P      P       19 22 25.4 -0.3
GLI   Glacier Island    80.64  30  P      P       19 22 26.6 +0.8
         baz=271,SNR=10
HDA   Harding Lake      80.65  26  P      P       19 22 25.4 -0.4
HDA                                IAmb   IAmb    19 22 26.4
         comp=Z,15nm,0.6s
HDA   Harding Lake      80.65  26  P      P       19 22 25.5 -0.2
         baz=271,SNR=18
IL31                    80.67  26  P      P       19 22 25.3 -0.5
ILAR  Eielson Array     80.67  26  P      P       19 22 25.2 -0.6
         comp=Z,5.3nm,0.8s,baz=238,slow=5.0,SNR=62
         comp=Z,5.3nm,0.8s
ILAR  Eielson Array     80.67  26  P      P       19 22 24.9 -0.9
FID   Port Fidalgo      80.94  30  P      P       19 22 27.8 +0.4
FID                                IAmb   IAmb    19 22 29.3
         comp=Z,15nm,0.8s
KLMR  Klimovskoe        80.96 330 eP      P       19 22 25.0 -2.4
KLMR                               AMP            19 22 30.4
         comp=Z,17nm,0.7s
M24K  Tolsona, Glenn    81.05  28  P      P       19 22 28.9 +0.9
M24K  Tolsona, Glenn    81.05  28  P      P       19 22 29.3 +1.3
         baz=272,SNR=9.3
K24K  Donnelly Dome     81.18  27  P      P       19 22 29.2 +0.6
         baz=272,SNR=9.9
KLU   Klutina           81.19  29  P      P       19 22 29.6 +0.9
KLU                                IAmb   IAmb    19 22 30.8
         comp=Z,7.9nm,0.6s
KLU   Klutina           81.19  29  P      P       19 22 29.9 +1.2
         baz=272,SNR=7.8
DIV   Divide            81.27  29  P      P       19 22 30.4 +1.1
DIV                                IAmb   IAmb    19 22 31.6
         comp=Z,18nm,0.8s
EYAK  Cordova Ski Ar    81.31  30  P      P       19 22 30.5 +1.2
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         baz=272
J25K  Salcha River,     81.33  26  P      P       19 22 28.5 -0.9
J25K  Salcha River,     81.33  26  P      P       19 22 29.0 -0.4
         baz=272,SNR=12
PAX   Paxson            81.34  28  P      P       19 22 30.5 +0.9
PAX                                IAmb   IAmb    19 22 31.7
         comp=Z,9.4nm,0.8s
PAX   Paxson            81.34  28  P      P       19 22 30.6 +1.1
         baz=272,SNR=13
HARP  HAARP             81.51  28  P      P       19 22 31.4 +0.9
         baz=273
BMAR  Burnt Mountain    81.54  23  P      P       19 22 32.2 +1.7
RIDG  Independent Ri    81.59  27  P      P       19 22 31.5 +0.7
         baz=273,SNR=32
N25K  Chitina, Valde    81.82  29  P      P       19 22 33.4 +1.3
N25K                               IAmb   IAmb    19 22 35.2
         comp=Z,7.8nm,0.8s
N25K  Chitina, Valde    81.82  29  P      P       19 22 33.3 +1.3
         baz=273,SNR=6.4
BMRM  Bremner River     81.85  30  P      P       19 22 33.3 +1.0
BMRM                               IAmb   IAmb    19 22 34.6
         comp=Z,18nm,1.1s
BMRM  Bremner River     81.85  30  P      P       19 22 33.2 +1.0
         baz=273,SNR=6.3
SCRK  Sand Creek        81.96  26  P      P       19 22 33.0 +0.1
SCRK                               IAmb   IAmb    19 22 35.4
         comp=Z,8.3nm,0.8s
SCRK  Sand Creek        81.96  26  P      P       19 22 33.6 +0.7
         baz=274,SNR=11
J26L  Joseph Creek      82.11  26  P      P       19 22 34.3 +0.7
         baz=274,SNR=12
MENT  Mentasta          82.15  27  P      P       19 22 34.8 +1.1
MENT                               IAmb   IAmb    19 22 36.0
         comp=Z,15nm,0.7s
GLB   Gilahina Butte    82.20  29  P      P       19 22 34.7 +0.6
GLB                                IAmb   IAmb    19 22 36.4
         comp=Z,17nm,1.0s
L26K  Log Cabin Wild    82.31  27  P      P       19 22 35.8 +1.2
L26K                               IAmb   IAmb    19 22 36.9
         comp=Z,12nm,0.8s
L26K  Log Cabin Wild    82.31  27  P      P       19 22 36.0 +1.4
         baz=274,SNR=12
VRDI  Verde Repeater    82.39  29  P      P       19 22 35.7 +0.4
VRDI                               IAmb   IAmb    19 22 36.9
         comp=Z,7.1nm,0.7s
M26K  Nabesna, AK       82.52  28  P      P       19 22 36.9 +1.2
M26K                               IAmb   IAmb    19 22 38.1
         comp=Z,8.8nm,1.0s
M26K  Nabesna, AK       82.52  28  P      P       19 22 36.9 +1.2
         baz=275,SNR=8.5
MCARA McCarthy VSAT     82.58  29  P      P       19 22 37.2 +1.1
         baz=275
TGL   Tana Glacier      82.73  30  P      P       19 22 37.9 +1.0
TGL                                IAmb   IAmb    19 22 39.2
         comp=Z,13nm,0.8s
WAX   Waxell Ridge      82.75  30  P      P       19 22 38.4 +1.4
SNH   Sunshine Point    82.78  30  P      P       19 22 38.7 +1.6
K27K  Chicken           82.80  26  P      P       19 22 39.2 +2.1
         baz=275
ISLE  Juniper Island    82.98  30  P      P       19 22 39.9 +1.6
ISLE                               IAmb   IAmb    19 22 40.2
         comp=Z,10nm,0.7s
L27K  Beaver Creek,     83.00  27  P      P       19 22 39.5 +1.3
L27K                               IAmb   IAmb    19 22 40.9
         comp=Z,8.8nm,0.8s
L27K  Beaver Creek,     83.00  27  P      P       19 22 39.9 +1.8
         baz=276,SNR=15
BCAR  Beaver Creek A    83.02  27  P      P       19 22 40.0 +1.8
M27K  Edge Creek, AK    83.04  28  P      P       19 22 39.6 +1.1
M27K                               IAmb   IAmb    19 22 41.1
         comp=Z,7.6nm,0.8s
M27K  Edge Creek, AK    83.04  28  P      P       19 22 40.1 +1.5
         baz=276,SNR=13
EGAK  Eagle             83.12  26  P      P       19 22 39.3 +0.6
EGAK                               IAmb   IAmb    19 22 40.8
         comp=Z,8.2nm,0.9s
EGAK  Eagle             83.12  26  P      P       19 22 39.7 +0.9
         baz=276,SNR=12
MESA  MESA              83.22  30  P      P       19 22 40.8 +1.2
         baz=276
GRNC  Granite Creek     83.26  30  P      P       19 22 41.4 +1.6
GRNC                               IAmb   IAmb    19 22 42.1
         comp=Z,11nm,0.8s
BARN  Barnard Glacie    83.27  29  P      P       19 22 41.2 +1.4
BARN                               IAmb   IAmb    19 22 42.7
         comp=Z,11nm,0.8s
YAH   Yahtse            83.30  30  P      P       19 22 41.6 +1.6
CTG   Chitna Glacier    83.44  29  P      P       19 22 42.5 +1.9
         baz=276,SNR=18
CTGM  Chitina Glacie    83.44  29  P      P       19 22 42.1 +1.4
BVCY  Beaver Creek      83.51  28  P      P       19 22 42.3 +1.5
         baz=276,SNR=6.5
TABL  Table Mountain    83.59  30  P      P       19 22 43.1 +1.6
LOGN  Logan Glacier     83.62  30  P      P       19 22 43.3 +1.7
YUK3  Moose Creek       83.77  29  P      P       19 22 43.8 +1.4
         baz=277,SNR=11
DAWY  Dawson            83.97  26  P      P       19 22 44.5 +1.4
DAWY                               IAmb   IAmb    19 22 45.8
         comp=Z,15nm,0.8s
DAWY  Dawson            83.97  26  P      P       19 22 44.5 +1.4
         baz=278,SNR=9.7
PCA   Pinnacle          84.07  30  P      P       19 22 44.2 +0.4
PINM  Pinnacle          84.07  30  P      P       19 22 45.3 +1.6
         baz=277
I29M  Ogilvie Camp,     84.25  25  P      P       19 22 45.5 +1.0
I29M                               IAmb   IAmb    19 22 46.9
         comp=Z,24nm,1.1s
I29M  Ogilvie Camp,     84.25  25  P      P       19 22 45.7 +1.2
         baz=278,SNR=15
PNL   Peninsula         84.56  31  P      P       19 22 48.2 +2.0
         baz=278
YUK4  Talbot Arm        84.68  29  P      P       19 22 48.5 +1.4
         baz=279
EPYK  Eagle Plains      84.73  24  P      P       19 22 47.5 +0.6
EPYK  Eagle Plains      84.73  24  P      P       19 22 47.7 +0.7
         baz=280,SNR=20
YUK6  Outpost Mounta    84.88  29  P      P       19 22 49.4 +1.3
         baz=279
BNN   Bunyan            85.11 308  P      P       19 22 50.3 +0.7
HYT   Haines Junctio    85.31  29  P      P       19 22 51.9 +1.8
HYT                                IAmb   IAmb    19 22 52.9
         comp=Z,6.8nm,1.0s
HYT   Haines Junctio    85.31  29  P      P       19 22 51.2 +1.1
         baz=280
M30M  Minto, Yukon      85.35  27  P      P       19 22 51.1 +0.9
M30M                               IAmb   IAmb    19 22 53.2
         comp=Z,15nm,1.2s
M30M  Minto, Yukon      85.35  27  P      P       19 22 51.5 +1.4
         baz=280
N30M  Aishikik Lake     85.41  29  P      P       19 22 51.6 +1.1
         baz=280
SPITS Spitsbergen Ar    85.54 349  P      P       19 22 50.2 -0.6
         comp=Z,1.4nm,0.4s,baz=79,slow=8.7,SNR=14
SPITS                              LR     LR      20 06 55.4
         comp=Z,28nm,19.5s,baz=81,slow=40
         comp=Z,1.4nm,0.4s
MAYO  Mayo, Yukon       85.57  26  P      P       19 22 52.4 +1.2
         baz=281
INK   Inuvik            85.58  22  P      P       19 22 50.8 -0.3
         comp=Z,3.4nm,0.7s,baz=15,slow=5.0,SNR=7.7
INK                                LR     LR      20 04 27.5
         comp=Z,13nm,18.8s,baz=148,slow=38
         comp=Z,3.4nm,0.7s
INK   Inuvik            85.58  22  P      P       19 22 51.3 +0.3
INK                                IAmb   IAmb    19 22 52.7
         comp=Z,15nm,1.4s
INK   Inuvik            85.58  22  P      P       19 22 51.6 +0.5
         baz=282,SNR=5.5
ARCES ARCESS Array B    85.69 340  P      P       19 22 50.7 -1.0
         comp=Z,4.5nm,0.7s,baz=82,slow=5.7,SNR=8.8
         comp=Z,4.5nm,0.7s
ARCES ARCESS Array B    85.69 340  P      P       19 22 51.6 -0.1
ARCES                              IAmb   IAmb    19 22 52.8
         comp=Z,8.6nm,1.1s
N31M  Braeburn, Yuko    86.02  28  P      P       19 22 54.8 +1.3
N31M                               IAmb   IAmb    19 22 56.9
         comp=Z,11nm,0.8s
N31M  Braeburn, Yuko    86.02  28  P      P       19 22 54.7 +1.3
         baz=281
PLBC  Pleasant Camp     86.11  31  P      P       19 22 55.7 +1.8
         baz=281
M31M  Drury Creek, Y    86.52  28  P      P       19 22 56.8 +0.9
         baz=282
WHY   Whitehorse        86.61  29  P      P       19 22 57.4 +0.9
WHY                                IAmb   IAmb    19 22 59.9
         comp=Z,6.3nm,0.9s
WHY   Whitehorse        86.61  29  P      P       19 22 57.3 +0.8
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         baz=282
BRTR  Keskin Array B    86.69 310  P      P       19 22 55.2 -2.2
         comp=Z,0.8nm,0.7s,baz=122,slow=4.9,SNR=5.2
         comp=Z,0.8nm,0.7s
FARO  Faro, Yukon       86.99  28  P      P       19 22 59.1 +0.9
         baz=283
A36M  Sachs Harbour     87.26  17  P      P       19 23 00.4 +1.1
A36M  Sachs Harbour     87.26  17  P      P       19 22 59.5 +0.3
         baz=290
FINES FINESS Array B    87.34 332  P      P       19 22 58.5 -1.3
         comp=Z,2.6nm,0.4s,baz=79,slow=4.6,SNR=53
         comp=Z,2.6nm,0.4s
P33M  Teslin, Yukon     87.71  29  P      P       19 23 01.5 -0.3
         baz=284
AKASG Malin Array Be    87.90 321  P      P       19 23 00.8 -1.9
         comp=Z,0.3nm,0.3s,baz=62,slow=5.6,SNR=2.2
         comp=Z,0.3nm,0.3s
MAW   Mawson            88.38 200  P      P       19 23 05.1 +0.6
         comp=Z,1.8nm,0.6s,baz=240,slow=7.4,SNR=4.1
         comp=Z,1.8nm,0.6s
MAW   Mawson            88.38 200  IAmb   IAmb    19 23 12.7
         comp=Z,1.9nm,1.4s
VNDA  Vanda             88.41 173  P      P       19 23 04.8 +0.2
         comp=Z,5.6nm,0.8s,baz=316,slow=5.8,SNR=16
         comp=Z,5.6nm,0.8s
VNDA  Vanda             88.41 173  P      P       19 23 04.7 +0.2
VNDA                               IAmb   IAmb    19 23 05.5
         comp=Z,5.5nm,0.8s
C36M  Paulatuk          88.56  20  P      P       19 23 05.6 +0.1
C36M  Paulatuk          88.56  20  P      P       19 23 05.4  0.0
         baz=291
S34M  Telegraph Cree    89.12  31  P      P       19 23 08.9 +0.6
         baz=285
KMBO  Kilima Mbogo      89.47 269  P      P       19 23 11.2 -0.1
         comp=Z,0.5nm,0.3s,baz=134,slow=4.3,SNR=3.1
         comp=Z,0.5nm,0.3s
DLBC  Dease Lake        89.54  31  LR     LR      20 00 35.1
         comp=Z,22nm,20.0s,baz=129,slow=34
MLR   Muntele Rosu      91.16 316  LR     LR      20 07 47.4
         comp=Z,68nm,19.4s,baz=67,slow=38
DAG   Danmarks Havn     92.27 352 i P     P       19 23 21.0 -1.7
RES   Resolute Bay      92.92  10  LR     LR      20 07 28.2
         comp=Z,13nm,19.1s,baz=44,slow=37
CRVS  Cervenica-Dubn    93.21 320 eP      P       19 23 31.8 +4.2
HFS   Hagfors           93.50 332  LR     LR      20 07 54.5
         comp=Z,64nm,19.7s,baz=64,slow=37
NB2   NORSAR Subarra    94.22 334  P      P       19 23 29.8 -2.2
         comp=Z,4.3nm,1.1s,baz=61,slow=4.6
NB2   NORSAR Subarra    94.22 334  P      P       19 23 29.8 -2.2
         baz=61,slow=4.6
NOA   NORSAR Array B    94.22 334  P      P       19 23 30.0 -2.0
         comp=Z,1.3nm,0.8s,baz=62,slow=4.7,SNR=4.2
NOA                                LR     LR      20 08 41.6
         comp=Z,16nm,18.0s,baz=60,slow=37
         comp=Z,1.3nm,0.8s
YKA   Yellowknife Ar    95.02  24  P      P       19 23 35.8 +0.2
         comp=Z,3.3nm,0.7s,baz=300,slow=4.5,SNR=29
         comp=Z,3.3nm,0.7s
MBAR  Mbarara           95.83 270  LR     LR      20 04 21.8
         comp=Z,34nm,20.3s,baz=72,slow=34
CLL   Collm             97.47 325 eP      Pdif    19 23 47.0  0.0
CLL                               ePP     PP      19 27 48.0 +3.9
GERES GERESS Array B    98.04 322  P      P       19 23 48.7 -1.0
         comp=Z,0.8nm,0.8s,baz=41,slow=9.1,SNR=4.1
         comp=Z,0.8nm,0.8s
L02F  Cave Junction     98.57  45  P      P       19 23 52.5 +0.3
         baz=290
G05D  Wamic, OR         98.98  41  P      Pdif    19 23 53.3 -0.6
         baz=292
YBH   Yreka Blue Hor    99.31  45  LR     LR      20 00 36.0
         comp=Z,32nm,21.5s,baz=292,slow=30
TXAR  Lajitas Array    118.59  50  PKP    PKPdf   19 29 01.4 -0.3
         comp=Z,0.5nm,0.6s,baz=0.0,slow=0.1,SNR=5.4
JCT   Junction City    120.84  47  P      PKPdf   19 29 05.9  0.0
         baz=304
TORD  Torodi Ar. Bea   121.06 291  PKP    PKPdf   19 29 05.0 -1.6
         comp=Z,0.7nm,0.6s,baz=65,slow=1.8,SNR=4.4
WHTX  Lake Whitney,    121.63  44  P      PKPdf   19 29 07.1 -0.2
         baz=306
U40A  Yellville        121.82  37  P      PKPdf   19 29 06.9 -0.7
         baz=313
833A  Chaparral WMA,   122.32  49  P      PKPdf   19 29 07.8 -0.9
         baz=303
MIAR  Mount Ida        122.58  39  P      PKPdf   19 29 09.4 +0.4
         baz=311
WVT   Waverly          124.87  34  P      PKPdf   19 29 13.1 -0.2
         baz=317
L61B  Northampton      126.09  18  P      PKPdf   19 29 15.5 -0.1
         baz=336
HRV   Adam Dziewonsk   126.36  17  P      PKPdf   19 29 16.1  0.0
         baz=338
LRAL  Lakeview Retre   127.59  36  P      PKPdf   19 29 18.2 -0.5
         baz=317
PLCA  Paso Flores      144.72 157  PKP    PKPab   19 29 48.9 -0.1
         comp=Z,5.4nm,1.0s,baz=234,slow=3.9,SNR=14
LPAZ  La Paz           163.85 119  PKP    PKPdf   19 30 17.8  0.0
         comp=Z,0.7nm,0.5s,baz=134,slow=2.5,SNR=4.4
```

NNC 25 19:29:07.9±6.1, 36.°05N×69.°73E, h0km, mb3.8, mpv3.6, 1C-3D Error ellipse: s-maj=66.1km s-min=41.1km az=150.0, Hindu Kush region

```
Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                     Op      ISC        h  m  s    ISC
KK31  Karatay Array       7.07   5  ⇓P      Pn         19 30 54.0 +1.3
         1.5nm,0.4s,baz=187,slow=13,SNR=59
KK31                                ⇑S      Sn         19 32 15.0 +1.2
         0.8nm,0.4s,baz=201,slow=44,SNR=6.3
TKM2  Tokmak 2            8.23  32  ⇓P      Pn         19 31 08.3 -0.4
         1.7nm,0.6s
TKM2                                ⇓S      Sn         19 32 43.5 +1.0
         0.1nm,0.2s
AB31  Akbulak array      15.02 335   P      Pn         19 32 39.7 -1.6
         0.3nm,0.3s,baz=152,slow=13,SNR=20
```

IDC ***25*** *19:49:08.4±5.1, 15.°25N×93.°57W, h0km, mb3.4/2, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=167.1km s-min=54.2km az=45.0*

MEX ***25*** *19:49:09.0±0.6, 14.°75N×93.°81W, h20km±15km, MD4.0*

GCG ***25*** *19:49:21.9±0.3, 15.°17N×92.°60W, h77km, MD4.7*

ISC 25 19:49:07.0±3.4, 14.°86N±0.°08×93.°72W±0.°05, h13km±22km, n17, σ1°11/29, Near coast of Chiapas

```
Code  Station Name        Δ°   AZ°    Phase ID            Time      Res
                                     Op      ISC        h  m  s    ISC
PCIG                      0.96  30  eP      Pn         19 49 26.3 +0.1
PCIG                                eS      Sn         19 49 39.4 -0.4
THIG                      1.40  88  eP      Pn         19 49 31.0 -1.2
THIG                                eS      Sn         19 49 49.2 -1.4
PATR  El Naranjo          1.45  80  eP      Pn         19 49 32.7 -0.5
PATR                                eS      Sn         19 49 51.1 -1.1
PAVE  Pavencul            1.52  77  eP      Pn         19 49 34.0 -0.1
PAVE                                eS      Sn         19 49 52.6 -1.3
CHUJ  Union Juarez        1.57  81  eP      Pn         19 49 34.5 -0.3
CHUJ                                i S     Sn         19 49 54.9 -0.2
TGIG                      1.99  17  eP      Pb         19 49 42.4 -0.6
TGIG                                eS      Sn         19 50 06.1 +1.0
TGBT  Tuxtla Gutierr      2.00  17  i P     Pb         19 49 42.4 -0.7
TGBT                                i S     Sn         19 50 04.8 -0.4
CCIG  Comitan             2.07  47  eP      Pb         19 49 44.7 +0.1
CCIG                                i S     Sb         19 50 09.6 -0.8
STG3  Santiaguito 3,      2.08  94  eP      Pn         19 49 42.6 +0.8
UXUV  UXUV                2.48 350  eP      Pn         19 49 49.1 +2.1
UXUV                                eS      Sn         19 50 16.2 -0.9
CMIG  Matias Romero       2.48 333   Pn     Pn         19 49 47.0 -0.1
         3.0nm,0.3s,baz=182,slow=9.7,SNR=18
CMIG                                 Sn     Sn         19 50 15.7 -1.6
         13nm,0.3s,baz=159,slow=20,SNR=13
         6.7nm,0.3s
CMIG  Matias Romero       2.48 333  eP      Pn         19 49 46.9 -0.3
CMIG                                eS      Sn         19 50 15.8 -1.5
FUG   Fuego 3             2.81  98  eP      Pn         19 49 52.3 +0.5
NEUV  Arroyo Zacate       3.47 325  eP      Pn         19 50 00.4 -0.3
NEUV                                eS      Sn         19 50 38.9 -2.7
TXAR  Lajitas Array      17.08 329   Pn     Pn         19 53 05.5 -0.2
         baz=147,slow=15,SNR=2.4
         0.2nm,0.6s
NVAR  Mina Array Bea     31.96 322   P      P          19 55 34.3 +1.3
         0.2nm,0.2s,baz=132,slow=8.7,SNR=0.9
         0.2nm,0.2s
YKA   Yellowknife Ar     49.82 347   P      P          19 58 00.3 +1.0
         0.2nm,0.5s,baz=152,slow=7.4,SNR=3.8
         0.2nm,0.5s
```

MEX ***25*** *19:49:53.1±0.8, 14°.79N×93°.68W, h20^{km}, MD4.2*
NEIC ***25*** *19:49:54.4±1.0, 15°.03N±0°.03×93°.68W±0°.09, h24^{km}±9^{km}, mb4.2/8, Md4.2/13(MEX), Error ellipse: s-maj=13.3km s-min=1.7km az=108.0*
IDC ***25*** *19:49:54.6±2.0, 16°.22N×93°.02W, h0^{km}, mb3.8/3, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=61.0km s-min=21.0km az=32.0*
ISC 25 19:49:53.0±1.8**, 15°.00N**±0°.07×**93°.66W**±0°.06**, h29**^{km}±12^{km}**, n34, σ1^s.33**/40**, mb4.2**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.82	31		Pb	19 50 08.3	-0.3
PCIG					Sn	19 50 21.2	+1.6
PCIG		0.82	31	eP	Pb	19 50 08.3	-0.3
PCIG				i S	Sn	19 50 21.2	+1.6
PATR	El Naranjo	1.38	85	eP	Pn	19 50 14.8	-1.7
PATR				eS	Sn	19 50 32.4	-1.5
PAVE	Pavencul	1.44	82	eP	Pn	19 50 16.6	-0.7
PAVE				eS	Sn	19 50 33.6	-1.8
CHUJ	Union Juarez	1.50	86	eP	Pb	19 50 20.4	0.0
CHUJ				eS	Sn	19 50 35.5	-1.4
TGIG		1.84	16		Pb	19 50 24.6	-1.4
TGIG					Sb	19 50 49.5	+0.8
TGIG		1.84	16	eP	Pb	19 50 24.6	-1.4
TGIG				eS	Sb	19 50 49.5	+0.8
CCIG	Comitan	1.94	49	Pn	Pb	19 50 25.5	-2.3
CCIG	Comitan	1.94	49	eP	Pn	19 50 12.6	-12
CCIG				eS	Sn	19 50 46.0	-1.6
CMIG	Matias Romero	2.39	331	Pn	Pn	19 50 28.5	-1.6
	23nm,0.3s,baz=57,slow=18,SNR=9.4						
CMIG				Sn	Sn	19 50 56.9	-1.5
	55nm,0.3s,baz=65,slow=9.5,SNR=5.0						
CMIG	Matias Romero	2.39	331		Pn	19 50 28.9	-1.2
CMIG	Matias Romero	2.39	331	eP	Pn	19 50 28.9	-1.2
SNET	Serv Nac Est T	4.49	106	Pn	Pn	19 50 58.5	-0.6
TLIG	Tlapa	5.36	299	Pn	Pn	19 51 10.1	-1.0
TGUH	Tegucigalpa,Un	6.25	98	Pn	Pn	19 51 22.4	-1.0
ORTG	Ortega, Santa	9.23	119	Pn	Pn	19 52 06.1	+1.8
DUNO	Dulce Nombre,	9.35	121		Pn	19 52 07.8	+1.9
JTS	Las Juntas de	9.70	118	Pn	Pn	19 52 17.0	+6.3
	1.0nm,0.3s,baz=299,slow=19,SNR=2.3						
JTS				Sn	Sn	19 54 10.3	+12
	0.8nm,0.3s,baz=104,slow=23,SNR=1.8						
	2.7nm,0.4s						
JTS	Las Juntas de	9.70	118		Pn	19 52 10.6	-0.1
RIMA	Rio Macho	10.89	117		Pn	19 52 29.2	+2.0
SRBA	San Rafael, Bu	11.59	119	Pn	Pn	19 52 36.1	-0.5
SOR	Soroa	12.71	51	Pn	Pn	19 52 52.3	+0.6
TX32	Lajitas Array	16.99	329	Pn	Pn	19 53 49.6	+0.9
TXAR	Lajitas Array	16.99	329	Pn	Pn	19 53 48.2	-0.5
	0.1nm,0.3s,baz=138,slow=11,SNR=1.6						
TXAR				Lg	Lg	19 58 30.5	
	0.2nm,0.3s,baz=136,slow=32,SNR=7.1						
	0.3nm,0.7s						
TXAR	Lajitas Array	16.99	329	Pn	Pn	19 53 49.3	+0.6
TX31	Lajitas Ar. Si	16.99	329	Pn	Pn	19 53 49.6	+0.9
TX31				IAmb	IAmb	19 54 05.1	
	comp=Z,18nm,1.5s						
LRAL	Lakeview Retre	18.94	17	P	Pn	19 54 13.5	+1.0
X48A	Hartselle	20.26	16	P	Pn	19 54 28.0	-0.2
X48A				IAmb	IAmb	19 54 33.1	
	comp=Z,10nm,0.8s						
121A	Cookes Peak, D	21.68	326	P	P	19 54 41.5	0.0
121A				IAmb	IAmb	19 54 49.7	
	comp=Z,9.1nm,0.9s						
S44A	Carbondale	22.93	9	P	P	19 54 55.7	+0.9
S44A				IAmb	IAmb	19 55 05.0	
	comp=Z,10.0nm,0.6s						
SIUC	Southern Illin	22.96	9	P	P	19 54 57.2	+2.2
NVAR	Mina Array Bea	31.89	322	P	P	19 56 17.0	+1.0
	comp=Z,0.5nm,0.6s,baz=123,slow=9.8,SNR=3.8						
	comp=Z,0.5nm,0.6s						
YKA	Yellowknife Ar	49.69	347	P	P	19 58 40.5	-1.5
	comp=Z,0.2nm,0.3s,baz=151,slow=7.8,SNR=5.4						
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	85.69	18	P	P	20 02 28.2	-0.5
	comp=Z,2.5nm,0.9s,baz=318,slow=5.3,SNR=3.5						
	comp=Z,2.5nm,0.9s						

IDC ***25*** *19:56:57.1±2.4, 14°.80N×93°.87W, h0^{km}, mb3.5/2, mbtmp3.5/5, ML3.5/3, MS3.2/9, Error ellipse: s-maj=85.0km s-min=26.2km az=45.0*
MEX ***25*** *19:57:02.9±0.8, 14°.77N×93°.68W, h20^{km}±96^{km}, MD4.2*
NEIC ***25*** *19:57:04.7±1.9, 14°.91N±0°.06×93°.60W±0°.07, h34^{km}±10^{km}, mb4.1/12, Md4.2/14(MEX), Error ellipse: s-maj=11.5km s-min=6.0km az=49.0*
SNET ***25*** *19:57:04.8±1.2, 16°.82N×92°.39W, h34^{km}±999^{km}, ML4.3*
GCG ***25*** *19:57:04.4±1.8, 14°.88N×93°.29W, h1^{km}±19^{km}, MD4.4*
UCR ***25*** *19:57:04.5±1.0, 14°.20N×93°.39W, h205^{km}±145^{km}, ML3.9*
ISC 25 19:56:59.4±2.0**, 14°.96N**±0°.06×**93°.63W**±0°.05**, h5**^{km}±12^{km}**, n65, σ1^s.68**/77**, mb4.0**/5**, MS3.3**/7**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.84	28		Pn	19 57 18.5	+0.6
PCIG					Sn	19 57 31.5	+0.9
PCIG		0.84	28	eP	Pn	19 57 18.5	+0.6
PCIG				i S	Sn	19 57 31.5	+0.9
THIG		1.32	92		Pn	19 57 24.2	-0.2
THIG					Sb	19 57 42.4	+0.5
THIG		1.32	92	eP	Pn	19 57 24.2	-0.2
THIG				eS	Sb	19 57 42.4	+0.5
PATR	El Naranjo	1.36	83	eP	Pn	19 57 24.8	-0.4
PATR				eS	Sb	19 57 41.2	-2.0
PAVE	Pavencul	1.42	80	eP	Pn	19 57 26.2	+0.1
PAVE				eS	Sb	19 57 44.0	-1.1
CHUJ	Union Juarez	1.48	85	eP	Pn	19 57 26.7	-0.1
CHUJ				eS	Sn	19 57 45.8	-0.9
TGIG		1.87	15		Pb	19 57 34.9	+0.7
TGIG					Sg	19 57 59.1	-0.5
TGIG		1.87	15	eP	Pb	19 57 34.9	+0.7
TGIG				eS	Sg	19 57 59.1	-0.5
CCIG	Comitan	1.95	47		Pg	19 57 37.0	+0.2
CCIG					Sb	19 57 59.5	-0.7
CCIG	Comitan	1.95	47	eP	Pg	19 57 37.0	+0.2
CCIG				i S	Sb	19 57 59.5	-0.7
STG3	Santiaguito 3,	2.01	97	eP	Pn	19 57 34.6	+0.5
STG3				eS	Sn	19 57 57.9	-1.7
CMIG	Matias Romero	2.44	331	Pn	Pn	19 57 39.0	-0.9
	5.9nm,0.3s,baz=150,slow=11,SNR=33						
CMIG				Sn	Sn	19 58 07.5	-2.6
	30nm,0.3s,baz=171,slow=18,SNR=13						
CMIG				LR	LR	19 58 49.3	
	comp=Z,245nm,21.0s,baz=152,slow=45						
	13nm,0.3s						
FUG	Fuego 3	2.75	100	eP	Pn	19 57 45.9	+1.6
FUG				eS	Sn	19 58 14.0	-3.9
PCG	Pacaya	2.98	101	eP	Pn	19 57 49.0	+1.5
PCG				eS	Sn	19 58 23.0	-0.8
MRL	Marmol	3.81	88	eP	Pb	19 58 03.7	-3.7
MRL				eS	Sn	19 58 45.4	+1.0
NUBE	Las Nubes	3.88	105	eP	Pn	19 58 00.9	+1.1
NUBE				eS	Sn	19 58 46.3	+0.6
NUBE				IAML		19 58 55.6	
	comp=Z,131nm,0.5s						
NUBE	Las Nubes	3.88	105	eP	Pn	19 58 00.9	+1.1
NUBE				eS	Sn	19 58 46.3	+0.6
NUBE				IAML		19 58 55.6	
	comp=Z,131nm,0.5s						
RTR	El Retiro	4.00	105	eP	Pn	19 58 04.6	+3.0
RTR				eS	Sn	19 58 50.4	+1.4
RTR	El Retiro	4.00	105	eP	Pn	19 58 04.6	+3.0
RTR				eS	Sn	19 58 50.4	+1.4
SBLS	San Blas	4.04	106	eP	Pn	19 58 04.9	+2.8
SBLS	San Blas	4.04	106	eP	Pn	19 58 04.9	+2.8
CEVE	Cerro Verde	4.04	106	eP	Pn	19 58 05.2	+3.0
CEVE				IAML		19 59 08.4	
	comp=Z,1μm,0.6s						
CEVE	Cerro Verde	4.04	106	eP	Pn	19 58 05.2	+3.0
CEVE				IAML		19 59 08.4	
	comp=Z,1μm,0.6s						
SNJE	San Jose	4.05	105	eP	Pn	19 58 04.4	+2.2
SNJE	San Jose	4.05	105	eP	Pn	19 58 04.4	+2.2
LFRS	El Faro	4.62	106	eP	Pn	19 58 11.4	+1.4
LFRS				eS	Sn	19 59 03.4	-0.8
LFRS	El Faro	4.62	106	eP	Pn	19 58 11.4	+1.4
LFRS				eS	Sn	19 59 03.4	-0.8
PAVA	Las Pavas	4.71	105	eP	Pn	19 58 12.6	+1.3
PAVA	Las Pavas	4.71	105	eP	Pn	19 58 12.6	+1.3
TLIG	Tlapa	5.40	299	Pn	Pn	19 58 21.4	+0.7
CRIN	San Cristobal	6.77	109		Pn	19 58 42.1	+2.5
CNGN	Cerro Negro	7.17	109		Pn	19 58 45.9	+1.0
MATN	Matagalpa	7.75	104	Pn	Pn	19 58 52.6	-0.4
HZTE	Horizontes, Gu	8.90	117	Pn	Pn	19 59 10.7	+2.1
ORTG	Ortega, Santa	9.19	119		Pn	19 59 14.3	+1.6
JTS	Las Juntas de	9.66	118	Pn	Pn	19 59 18.9	-0.2
	comp=Z,0.9nm,0.3s,baz=294,slow=18,SNR=1.9						
JTS				Sn	Sn	20 01 12.8	+4.7
	comp=Z,3.4nm,0.3s,baz=29,slow=22,SNR=4.0						
JTS				LR	LR	20 02 29.5	
	comp=Z,44nm,21.6s,baz=5.0,slow=34						
	comp=Z,2.4nm,0.3s						
RIMA	Rio Macho	10.85	117		Pn	19 59 36.2	+0.7
SRBA	San Rafael, Bu	11.54	118		Pn	19 59 46.2	+1.2
DRK0	Durika	11.62	118	Pn	Pn	19 59 47.5	+1.3
SOR	Soroa	12.71	51	Pn	Pn	20 00 00.5	-0.4
TXAR	Lajitas Array	17.05	329	Pn	Pn	20 00 57.4	-1.3
	baz=153,slow=10,SNR=1.7						
	comp=Z,0.2nm,0.5s						
MIAR	Mount Ida	19.50	0	P	Pn	20 01 29.7	+1.0
X37A	Clayton	19.61	356	P	Pn	20 01 31.6	+1.7
X37A				IAmb	IAmb	20 01 59.7	
	comp=Z,12nm,1.2s						
W39A	Magazine	20.15	360		Pn	20 01 39.0	+2.7
W41B	Gary Mavity, V	20.17	3		Pn	20 01 39.3	+2.8
W41B				IAmb	IAmb	20 01 42.1	
	comp=Z,7.3nm,0.9s						
WHAR	Wooly Hollow	20.28	3	P	Pn	20 01 37.0	-0.9
WHAR				IAmb	IAmb	20 01 44.4	
	comp=Z,8.4nm,1.0s						
X48A	Hartselle	20.30	16	P	Pn	20 01 37.9	-0.2
AMTX	Amarillo	21.12	341	P	P	20 01 46.4	+1.2
AMTX				IAmb	IAmb	20 01 58.3	
	comp=Z,6.4nm,0.7s						
121A	Cookes Peak, D	21.73	326	P	P	20 01 52.7	+0.9
121A				IAmb	IAmb	20 02 03.9	
	comp=Z,6.3nm,0.9s						
TKL	Tuckaleechee C	22.43	21	LR	LR	20 12 53.5	
	comp=Z,54nm,18.2s,baz=232,slow=42						
BNM	Barren Site	22.43	331	P	P	20 02 02.4	+3.1
U49A	Red Boiling Sp	22.58	17	P	P	20 02 01.2	+0.5
U49A				IAmb	IAmb	20 02 24.8	
	comp=Z,7.3nm,0.9s						
S44A	Carbondale	22.97	9	P	P	20 02 06.2	+1.4
SIUC	Southern Illin	23.00	9	P	P	20 02 06.0	+0.9
TUC	Tucson	23.29	321	P	P	20 02 09.6	+1.3
ATAH	Atahualpa	26.65	144	LR	LR	20 10 53.3	
	comp=Z,50nm,19.6s,baz=357,slow=31						
ELK	Elko	31.84	328	LR	LR	20 18 20.1	
	comp=Z,72nm,18.6s,baz=190,slow=40						
YBH	Yreka Blue Hor	36.64	322	LR	LR	20 21 06.8	
	comp=Z,43nm,18.4s,baz=177,slow=40						
NEW	Newport	38.45	335	LR	LR	20 22 49.8	
	comp=Z,41nm,21.0s,baz=180,slow=40						
YKA	Yellowknife Ar	49.74	347	P	P	20 05 51.3	-1.1
	comp=Z,1.0nm,0.8s,baz=149,slow=7.5,SNR=9.5						
	comp=Z,1.0nm,0.8s						
INK	Inuvik	59.08	344	LR	LR	20 37 09.0	
	comp=Z,22nm,19.9s,baz=63,slow=41						
ILAR	Eielson Array	61.34	337	P	P	20 07 15.5	-0.4
	comp=Z,0.2nm,0.7s,baz=139,slow=5.9,SNR=4.3						
	comp=Z,0.2nm,0.7s						
JMIC	Jan Mayen	74.38	20	LR	LR	20 42 08.1	
	comp=Z,18nm,19.0s,baz=242,slow=36						
WRA	Warramunga Arr	134.09	257	PKP	PKPdf	20 16 16.1	-2.7
	comp=Z,0.3nm,0.7s,baz=92,slow=0.9,SNR=2.3						

IDC ***25*** *20:06:16.1±1.8, 10°.71S×119°.07E, h0^{km}, mb3.6/2, mbtmp3.7/6, ML3.7/4, Error ellipse: s-maj=47.5km s-min=22.9km az=53.0*
ISC 25 20:06:22.2±0.8**, 10°.66S**±0°.08×**119°.28E**±0°.07**, h35**^{km}**, n17, σ1^s.35**/16**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.35	321	P	Pn	20 07 00.3	+1.9
MMRI	Maumere	3.55	56	P	Pn	20 07 15.5	+0.7
BATI	Baumata	4.34	84	Pn	Pn	20 07 26.9	+1.1
	4.7nm,0.3s,baz=139,slow=0.7,SNR=15						
BATI				Sn	Sn	20 08 15.8	+0.7
	12nm,0.3s,baz=2.4,slow=19,SNR=11						
	11nm,0.2s						
SOEI	Soe	4.99	80	P	Pn	20 07 36.3	+1.4
JAGI	Jajag, Banyuwa	5.50	293	P	Pn	20 07 41.3	-0.5
KAPI	Kappang	5.63	5	Pn	Pn	20 07 41.3	-2.2
	0.7nm,0.3s,baz=67,slow=17,SNR=1.4						
KAPI				Sn	Sn	20 08 49.5	+2.4
	1.4nm,0.3s,baz=354,slow=23,SNR=1.6						
	4.1nm,0.4s						
KNRA	Kununurra	10.49	119	P	Pn	20 08 49.9	-0.4
PSA00	Pilbara Seismi	10.86	177	P	Pn	20 08 56.5	+1.2
KDU	Kakadu	13.08	100	P	Pn	20 09 25.2	-0.4
WRKA	Warakurna	16.66	150	P	P	20 10 14.7	-0.6
WRA	Warramunga Arr	17.20	124	P	Pn	20 10 19.1	-0.7
	0.7nm,0.3s,baz=299,slow=14,SNR=165						
WRA				S	Sn	20 13 15.4	-15
	0.2nm,0.7s,baz=294,slow=21,SNR=1.8						
	2.0nm,0.3s						
ASAR	Alice Springs	19.02	135	P	P	20 10 41.1	-0.2
	0.1nm,0.3s,baz=317,slow=14,SNR=11						
ASAR				S	Sn	20 14 01.1	-13
	0.1nm,0.4s,baz=172,slow=38,SNR=1.1						
	0.8nm,0.8s						
H08S2	Diego Garcia H	46.25	270	T	T	21 04 23.7	
	baz=96						
H08S3	Diego Garcia H	46.27	270	T	T	21 04 22.6	
	baz=96						
H08S1	Diego Carcia H	46.27	270	T	T	21 04 17.5	
	baz=96						
SONM	Songino Array	59.35	350	P	P	20 16 20.6	-0.3
	0.3nm,0.5s,baz=159,slow=7.0,SNR=3.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	66.05	333	P	P	20 17 04.2	-1.3
	0.5nm,0.6s,baz=140,slow=6.8,SNR=6.1						
	0.5nm,0.6s						

TAP 25 20:14:38.6, 24°.47N×122°.01E, h15^{km}, ML1.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.20	314	P	Pb	20 14 43.9	-0.2
	baz=315						
TWC				S	Sb	20 14 47.6	-0.1
	baz=315						
EWUT	Wuta	0.21	264	P	Pb	20 14 44.1	-0.1
	baz=264						
EWUT				eS	Sb	20 14 48.0	+0.1
	baz=264						
NDS	Dongshan	0.32	302	eP	Pb	20 14 46.1	+0.1
	baz=302						
NDS				eS	Sb	20 14 50.9	-0.1
	baz=302						
EGS		0.38	349	eP	Pb	20 14 47.1	-0.1
	baz=350						
EGS				eS	Sb	20 14 53.2	+0.3
	baz=350						
TWE	Neicheng	0.40	309	eS	Sb	20 14 53.6	+0.2
	baz=310						
ENTT	Nioudou	0.44	293	P	Pb	20 14 48.2	+0.1
	baz=293						
ENTT				S	Sb	20 14 54.8	+0.3
	baz=293						
LATG	Datong	0.45	279	P	Pb	20 14 48.4	+0.1
	baz=278						
LATG				S	Sb	20 14 55.5	+0.7
	baz=278						
NACB	Ninganchiao	0.48	233	eP	Pg	20 14 47.8	-0.3
	baz=232						
NACB				eS	Sb	20 14 55.5	-0.1
	baz=232						
FUSB	Fushanzhiwuyua	0.48	307	eP	Pb	20 14 49.1	+0.2
	baz=307						
FUSB				eS	Sb	20 14 56.4	+0.5
	baz=307						
TIPB	Shuangxi	0.53	342	eP	Pb	20 14 49.8	+0.1
	baz=341						
TIPB				eS	Sb	20 14 56.9	-0.4
	baz=341						
ETLH	Xiulin Townshi	0.55	242	eP	Pg	20 14 49.4	0.0
	baz=241						
ETLH				eS	Sb	20 14 58.6	+0.9
	baz=241						
NWLT	Wulai	0.56	304	eP	Pb	20 14 50.1	-0.1
	baz=303						
NWLT				eS	Sb	20 14 58.6	+0.6
	baz=303						
NNSB	Datong	0.57	266	eP	Pb	20 14 50.2	-0.2
	baz=266						
NNSB				eS	Sb	20 14 59.1	+0.6
	baz=266						
YHNB	Yeheng	0.61	289	eP	Pb	20 14 51.8	+0.7
	baz=289						
YHNB				eS	Sb	20 15 00.0	+0.4
	baz=289						
NSK	Sanguang	0.63	290	eP	Pb	20 14 51.4	0.0
	baz=289						
NSK				eS	Sb	20 15 00.6	+0.5
	baz=289						
SXI1	Grass Mountain	0.64	349	eP	Pb	20 14 51.9	+0.3
	baz=348						
SXI1				eS	Sb	20 15 00.4	0.0
	baz=348						
TDCB	Techi	0.81	255	eP	Pb	20 14 54.4	-0.1
	baz=254						
TDCB				eS	Sb	20 15 06.0	+0.8
	baz=254						

JMA ***25*** *20:15:15.2±0.2, 25°N±2°×123°.2E±0°.5, h94^{km}±2^{km}, MV3.3/14, NW OFF ISHIGAKIJIMA IS*
IDC ***25*** *20:15:16.3±8.7, 24°.91N×123°.36E, h125^{km}±98^{km}, mb3.2/4, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=79.0km s-min=19.5km az=59.0*
ISC 25 20:15:14.0±0.9**, 24°.79N**±0°.09×**123°.15E**±0°.06**, h98**^{km}±8^{km}**, n17, σ0^s.76**/29**, mb3.5**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.35	201	P	Pn	20 15 29.2	+0.5
YOJ				S	Sn	20 15 39.5	-0.1
JYNG	Yonagunijimaku	0.39	209	i P	Pn	20 15 29.4	+0.5
JYNG				eS	Sn	20 15 39.9	0.0
IRIF	Iriomote-Funau	0.70	131	P	Pn	20 15 31.4	+0.2
IRIF				S	Sn	20 15 43.4	-0.7
HATJ	Hateruma jima	0.94	141	P	Pn	20 15 33.9	+0.2
HATJ				S	Sn	20 15 47.5	-1.0
JKRS	Kuro-shima	0.96	125	P	Pn	20 15 34.4	+0.6
JKRS				S	Sn	20 15 48.3	-0.4
JIJ	Ishigaki jima	1.00	115	P	Pn	20 15 34.5	+0.2
JIJ				S	Sn	20 15 48.3	-1.3
JTJ	Tarama	1.42	96	P	Pn	20 15 40.0	+0.8
JTJ				S	Sn	20 15 57.9	-0.2
JIRB	Irabujima	1.84	89	P	Pn	20 15 45.3	+0.9
JIRB				S	Sn	20 16 07.2	-0.3
JIKM	Ikemajima	1.91	86	P	Pn	20 15 46.6	+1.3
JIKM				eS	Sn	20 16 09.0	-0.1
JMJ2	Miyako jima3	1.98	91	P	Pn	20 15 47.3	+1.1
JMJ2				S	Sn	20 16 11.1	+0.3
JOGS	Gusukube	2.05	90	P	Pn	20 15 48.4	+1.3
JOGS				eS	Sn	20 16 12.8	+0.3
JOW	Kunigami	5.04	65	P	Pn	20 16 27.0	-0.3
	17nm,0.3s,baz=220,slow=7.9,SNR=118						
JOW				S	Sn	20 17 22.5	-1.8
	4.8nm,0.2s,baz=115,slow=23,SNR=1.0						
	30nm,0.3s						
KSRS	Korea Array	13.26	17	P	P	20 18 24.4	-0.1
	1.0nm,0.6s,baz=199,slow=12,SNR=5.1						
MKAR	Makanchi Array	39.17	315	P	P	20 22 32.3	+0.1
	0.3nm,0.6s,baz=94,slow=8.7,SNR=2.4						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	42.81	319	P	P	20 23 01.7	-0.3
	0.3nm,0.6s,baz=113,slow=9.6,SNR=4.3						
	0.3nm,0.6s						
WRA	Warramunga Arr	45.78	165	P	P	20 23 25.6	-0.3
	1.1nm,0.7s,baz=349,slow=8.3,SNR=8.4						
	1.1nm,0.7s						
ASAR	Alice Springs	49.29	167	P	P	20 23 53.5	+0.4
	0.5nm,0.3s,baz=352,slow=7.3,SNR=23						
	0.5nm,0.3s						

ISK ***25*** *20:19:27.8, 35°.82N×31°.01E, h32^{km}, ML3.2/37*
DDA ***25*** *20:19:27.3±0.0, 35°.90N×31°.07E, h36^{km}, ML3.1*
NIC ***25*** *20:19:28.3±0.0, 36°.42N×31°.46E, h34^{km}±36^{km}, Ml3.3/6*
IDC ***25*** *20:19:41.3±12.0, 36°.80N×31°.31E, h114^{km}±58^{km}, mb3.1/5, mbtmp3.4/7, Error ellipse: s-maj=153.7km s-min=29.4km az=18.0*
ISC 25 20:19:29.6±1.0**, 35°.90N**±0°.03×**30°.97E**±0°.03**, h55**^{km}±11^{km}**, n81, σ1^s.45**/107**, mb3.1**/5**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.66	310	P	Pn	20 19 41.8	-1.2
AKUM				S	Sn	20 19 53.5	+0.7
AKUM				i AML	AML	20 19 55.0	
	comp=N,2μm,0.3s						
AKUM				i AML	AML	20 19 55.0	
	comp=E,874nm,0.3s						
AKUM				i AML	AML	20 19 57.0	
	comp=Z,702nm,0.7s						
KEMT	Kemer-ANTALYA	0.78	334	PG	Pn	20 19 42.6	-1.9
ANTB	Antalya	1.03	346	PN	Pn	20 19 47.1	-0.7
ANTB				SN	Sn	20 20 02.1	+0.8
GAZI	Gazipasa	1.14	73	PN	Pn	20 19 47.4	-1.9
GAZI				SN	Sn	20 20 02.5	-1.4
AKAS	Kas	1.16	287	PN	Pn	20 19 49.0	-0.7
ELL	Elmali	1.21	315	PN	Pn	20 19 50.1	-0.2
ELL	Elmali	1.21	315	P	Pn	20 19 50.2	-0.2
ELL				S	Sn	20 20 06.6	+0.9
KORT	Korkueli	1.21	336	PN	Pn	20 19 50.2	-0.1
AKMS	Akamas	1.42	128	P	Pn	20 19 53.0	-0.1
AKMS				S	Sn	20 20 13.7	+3.1
AKMS				AML	AML	20 20 17.0	
	1.3nm,0.7s						
AKMS				AML	AML	20 20 17.0	
	1.3nm,0.7s						
AKMS				AML	AML	20 20 19.1	
	0.9nm,0.7s						
AKMS				AML	AML	20 20 19.1	
	0.9nm,0.7s						
ALFC	Alefka	1.52	119	P	Pn	20 19 54.1	-0.4
ALFC				AML	AML	20 20 21.6	
	1.1nm,0.3s						
ALFC				AML	AML	20 20 25.2	
	1.1nm,0.3s						
BCK	Bucak	1.59	349	PN	Pn	20 19 55.7	+0.3
HDMB	Hadim	1.61	49	PN	Pn	20 19 55.1	-0.8
SEYD	Seydisehir-KON	1.65	25	PN	Pn	20 19 56.2	-0.2
SEDI	Konya, Seydise	1.67	22	P	Pn	20 19 56.0	-0.6
SEDI				S	Sn	20 20 19.0	+2.0
FETY	Fethiye	1.69	296	PN	Pn	20 19 57.5	+0.7
FETY	Fethiye	1.69	296	P	Pn	20 19 57.9	+1.1
FETY				S	Sn	20 20 19.0	+1.6
CAME	Cameli-Denizli	1.70	308	PN	Pn	20 19 57.5	+0.5
NATA	Nata	1.72	130	P	Pn	20 19 58.3	+1.1
NATA				S	Sn	20 20 21.8	+3.8
NATA				AML	AML	20 20 31.8	
	2.6nm,1.0s						
NATA				AML	AML	20 20 31.8	
	2.6nm,1.0s						
NATA				AML	AML	20 20 34.0	
	2.0nm,1.0s						
NATA				AML	AML	20 20 34.0	
	2.0nm,1.0s						
LEF	Lefka	1.75	116	PN	Pn	20 19 55.3	-2.2
LEF	Lefka	1.75	116	P	Pn	20 19 57.0	-0.5
LEF				S	Sn	20 20 23.9	+5.2
TEKE	Tekeli-Mersin	1.75	82	PN	Pn	20 19 56.5	-1.1
CAEL	Denizli, Camel	1.81	313	P	Pn	20 19 59.3	+0.9
CAEL				S	Sn	20 20 24.7	+4.4
CAEL				i AML	AML	20 20 41.0	
	comp=N,274nm,1.3s						
CAEL				i AML	AML	20 20 41.0	
	comp=E,228nm,0.7s						
CAEL				i AML	AML	20 20 53.0	
	comp=Z,190nm,0.8s						
BERE	Bereket-Mersin	1.87	76	PN	Pn	20 19 59.0	-0.4
BRDR	BURDUR-Merkez	1.94	338	P	Pn	20 20 01.7	+1.6
BRDR				S	Sn	20 20 24.4	+1.1
SZAC	Souni	1.94	126	P	Pn	20 20 00.8	+0.7
SZAC				S	Sn	20 20 24.5	+1.2
SZAC				AML	AML	20 20 36.5	
	0.9nm,1.2s						
SZAC				AML	AML	20 20 36.5	
	0.9nm,1.2s						
SZAC				AML	AML	20 20 39.2	

	0.7nm,0.7s						
SZAC				AML	AML	20 20 39.2	
	0.7nm,0.7s						
ISP	Isparta	1.95	349	PN	Pn	20 20 00.8	+0.4
KKBE	Karaman, Kazim	2.06	50	P	Pn	20 20 02.9	+1.1
KKBE				S	Sn	20 20 29.4	+3.0
KKBE				*i* AML	AML	20 20 33.0	
	comp=N,159nm,0.6s						
KKBE				*i* AML	AML	20 20 34.0	
	comp=E,196nm,1.1s						
TEVE	Tevekalti-Mers	2.07	74	PN	Pn	20 20 01.7	-0.2
DALY	Dalyan (Mula)	2.08	297	PN	Pn	20 20 02.2	+0.1
GULN	MERSIN_Gulnar	2.10	82	P	Pn	20 20 01.9	-0.5
GULN				S	Sn	20 20 26.5	-0.8
AKKU	Akkuyu-Mersin	2.10	82	PN	Pn	20 20 01.7	-0.7
CSS	Mathiatis	2.14	115	PN	Pn	20 20 00.8	-2.1
CSS	Mathiatis	2.14	115	P	Pn	20 20 01.0	-1.9
ASGA	Asgata	2.17	120	P	Pn	20 20 03.1	-0.1
ASGA				AML	AML	20 20 41.5	
	0.4nm,0.8s						
ASGA				AML	AML	20 20 43.0	
	0.4nm,0.7s						
KMER	Konya-Meram	2.17	31	P	Pn	20 20 04.4	+1.0
KMER				S	Sn	20 20 30.1	+0.9
LFK	Lefkose	2.18	106	PN	Pn	20 20 02.6	-0.8
IKL	Isikli	2.22	81	PN	Pn	20 20 03.5	-0.5
KRMN	Karaman	2.24	55	PN	Pn	20 20 04.3	0.0
DOGA	KONYA_Doganhis	2.27	14	P	Pn	20 20 05.7	+0.9
DOGA				S	Sn	20 20 33.2	+1.6
DOGA				*i* AML	AML	20 20 37.0	
	comp=N,118nm,0.6s						
TAVA	DENIZLI_Tavas	2.28	314	P	Pn	20 20 05.0	+0.2
TAVA				S	Sn	20 20 32.0	+0.2
KEBE	Keben-Mersin	2.28	75	PN	Pn	20 20 04.3	-0.6
KONT	Konya--Tatoy	2.32	28	P	Pn	20 20 05.6	+0.2
KONT				S	Sn	20 20 32.2	-0.6
ARG	Arkhangelos	2.33	279	PN	Pn	20 20 05.1	-0.3
MVOU	Mavrovouni	2.34	111	P	Pn	20 20 03.2	-2.4
MVOU				S	Sn	20 20 29.8	-3.4
MVOU				AML	AML	20 20 41.4	
	0.3nm,0.6s						
MVOU				AML	AML	20 20 41.4	
	0.3nm,0.6s						
MVOU				AML	AML	20 20 44.2	
	0.4nm,0.8s						
MVOU				AML	AML	20 20 44.2	
	0.4nm,0.8s						
TURN	Turunc	2.37	292	PN	Pn	20 20 06.2	+0.2
KZIL	AFYON_Kizioren	2.44	344	P	Pn	20 20 07.4	+0.2
KZIL				S	Sn	20 20 39.1	+3.2
YER	Yerkesik	2.49	300	PN	Pn	20 20 08.9	+1.2
MULA	Mugla, Merkez-	2.53	303	P	Pn	20 20 09.3	+1.0
MULA				S	Sn	20 20 36.0	-1.9
LADK	Ladik-KONYA	2.55	25	PN	Pn	20 20 08.7	+0.1
SHUT	Suhut-Afyon	2.67	353	PN	Pn	20 20 11.4	+1.2
ALIN	Konya, Altinte	2.83	32	P	Pn	20 20 12.8	+0.4
ALIN				S	Sn	20 20 43.0	-2.5
DAT	Datca	2.86	288	PN	Pn	20 20 12.8	-0.1
DAT	Datca	2.86	288	P	Pn	20 20 12.5	-0.4
DAT				S	Sn	20 20 43.9	-2.3
YESY	Yesilyurt	2.91	49	PN	Pn	20 20 14.5	+1.0
AFYO	Afyonkarahisar	2.93	350	P	Pn	20 20 14.9	+1.2
AFYO				S	Sn	20 20 49.6	+1.8
OSC2	CSNet OBS 4	3.02	159	P	Pn	20 20 19.6	+4.8
MERS	Mersin	3.02	70	PN	Pn	20 20 14.6	-0.4
SULT	Sultanhani-AKS	3.06	41	PN	Pn	20 20 16.6	+1.0
CHBY	Cihanbeyli	3.08	29	PN	Pn	20 20 16.1	+0.3
KARP	Karpathos	3.12	265	PN	Pn	20 20 16.4	+0.1
NIS1	Nisyros Isl.	3.15	284	PN	Pn	20 20 16.8	+0.1
BODT	Bodrum	3.17	292	PN	Pn	20 20 16.9	-0.1
AYDB	Zeytinkoy-Aydi	3.20	310	PN	Pn	20 20 17.8	+0.3
USAK	Uak-Merkez	3.21	332	P	Pn	20 20 16.5	-1.1
USAK				S	Sn	20 20 54.0	-0.6
MANT	Manisa	3.22	324	P	Pn	20 20 16.9	-1.0
MANT				S	Sn	20 20 52.5	-2.7
GULE	Gulek	3.36	65	P	Pn	20 20 21.8	+2.1
GULE				*i* AML	AML	20 21 10.0	
	comp=N,66nm,0.8s						
GULE				*i* AML	AML	20 21 10.0	
	comp=E,102nm,0.6s						
GDZ	Gediz	3.40	340	P	Pn	20 20 20.2	0.0
GDZ				S	Sn	20 20 58.7	-0.5
KULU	Kulu	3.52	27	PN	Pn	20 20 22.8	+0.9
SIMA	Simav-Kutahya	3.55	334	PN	Pn	20 20 22.1	-0.1
SVRH	Sivrihisar-ESK	3.56	7	PN	Pn	20 20 22.8	+0.3
KKUL	Konya-Kulu	3.61	25	P	Pn	20 20 23.9	+0.7
SGAZ	Eskisehir, Sey	3.62	358	P	Pn	20 20 24.2	+1.0
ANDZ	Kutahya, Merke	3.70	347	P	Pn	20 20 25.2	+0.8
ANDZ				*i* AML	AML	20 21 08.0	
	comp=N,35nm,1.1s						
ZEDA	zmir-Bergama	4.36	316	P	Pn	20 20 31.7	-1.5
BRTR	Keskin Array B	4.36	28	P	Pn	20 20 33.4	-0.1
	2.6nm,0.5s,baz=199,slow=16,SNR=26						
BRTR				S	Sn	20 21 23.7	+0.7
	2.2nm,0.3s,baz=204,slow=26,SNR=5.6						
GERES	GERESS Array B	18.11	321	P	P	20 23 39.6	+2.6
	0.2nm,0.4s,baz=123,slow=11,SNR=2.0						
FINES	FINESS Array B	25.75	355	P	P	20 24 53.1	-1.7
	0.4nm,0.4s,baz=171,slow=9.8,SNR=5.6						
	0.4nm,0.4s						
NOA	NORSAR Array B	28.13	340	P	P	20 25 14.8	-1.4
	0.3nm,0.6s,baz=142,slow=7.9,SNR=1.6						
	0.3nm,0.6s						
ARCES	ARCESS Array B	33.82	357	P	P	20 26 05.3	-0.8
	4.8nm,1.1s,baz=171,slow=8.9,SNR=2.1						
	4.8nm,1.1s						
KURBB	Kurchatov Arra	36.96	51	P	P	20 26 32.6	-0.6
	0.1nm,0.4s,baz=271,slow=9.1,SNR=4.2						
	0.1nm,0.4s						
MKAR	Makanchi Array	39.39	58	P	P	20 26 53.8	0.0
	0.1nm,0.5s,baz=274,slow=7.1,SNR=1.9						
	0.1nm,0.5s						

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*IDC **25** 20:22:56.7±1.3, 14.°33N×145.°42E, h95^{km}±10^{km}, mb3.5/9, mbtmp3.8/9, Error ellipse: s-maj=32.9km s-min=17.6km az=94.0*

*NEIC **25** 20:22:59.2±1.0, 14.°21N±0.°06×145.°30E±0.°07, h106^{km}±8^{km}, mb4.2/9, ML3.5/6, Error ellipse: s-maj=9.2km s-min=8.9km az=71.0*

ISC 25 20:22:57.5±0.7**, 14.°30N**±0.°10×**145.°4E**±0.°2**, h100**^{km}**, n26, σ1^s.37**/21**, mb4.0**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.86	215	P	Pn	20 23 17.6	+1.2
	2µm,0.3s,baz=78,slow=2.8,SNR=584						
GUMO				S	Sn	20 23 30.6	-0.1
	751nm,0.3s,baz=176,slow=23,SNR=14						
GUMO	Guam	0.86	215		Pn	20 23 17.5	+1.0
GUMO				IAML		20 23 33.1	
	3µm,0.4s						
RABL	Rabaul	19.56	159	P	P	20 27 16.1	-1.5
H11S3	WAKE ISLAND Hy	20.86	76	T	T	20 49 36.5	
	baz=261,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	20.87	76	T	T	20 49 42.1	
	baz=261,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	20.88	76	T	T	20 49 39.8	
	baz=261,slow=75,SNR=9.3						
H11N1	WAKE ISLAND Hy	21.26	72	T	T	20 49 43.0	
	baz=260,slow=75						
H11N2	WAKE ISLAND Hy	21.27	72	T	T	20 49 57.4	
	baz=260						
H11N3	WAKE ISLAND Hy	21.27	72	T	T	20 49 35.2	
	baz=260,slow=75						
KSRS	Korea Array	27.80	329	P	P	20 28 36.3	-0.9
	0.7nm,0.6s,baz=143,slow=8.9,SNR=2.4						
	0.7nm,0.6s						
WRA	Warramunga Arr	35.72	198	P	P	20 29 46.5	-0.1
	2.2nm,0.6s,baz=18,slow=9.4,SNR=19						
	2.2nm,0.6s						
WRA	Warramunga Arr	35.72	198	P	P	20 29 46.0	-0.7
ASAR	Alice Springs	39.37	197	P	P	20 30 17.6	+0.2
	0.3nm,0.6s,baz=22,slow=11,SNR=7.7						
	0.3nm,0.6s						
SONM	Songino Array	46.45	324	P	P	20 31 13.9	-0.5
	0.2nm,0.4s,baz=131,slow=6.4,SNR=2.2						
	0.2nm,0.4s						
MK31	Makanchi Array	61.33	316	P	P	20 33 03.6	+0.9
MKAR	Makanchi Array	61.33	316	P	P	20 33 03.2	+0.5
	0.7nm,0.4s,baz=92,slow=8.4,SNR=18						
	0.7nm,0.4s						
IL31		67.72	25	P	P	20 33 44.0	+0.2
IL31				IAmb	IAmb	20 33 46.2	
	comp=Z,4.0nm,1.4s						
ILAR	Eielson Array	67.72	25	P	P	20 33 43.3	-0.6
	comp=Z,0.5nm,0.4s,baz=254,slow=5.8,SNR=14						
	comp=Z,0.5nm,0.4s						
PAX	Paxson	67.92	27	P	P	20 33 46.8	+1.5
PAX				IAmb	IAmb	20 33 47.5	
	comp=Z,1.3nm,0.6s						
GRNC	Granite Creek	69.26	30	P	P	20 33 55.8	+1.9
GRNC				IAmb	IAmb	20 33 56.2	
	comp=Z,3.6nm,0.5s						
CTGM	Chitina Glacie	69.50	30	P	P	20 33 57.8	+2.6
CTGM				IAmb	IAmb	20 33 57.8	
	comp=Z,2.6nm,0.9s						
TABL	Table Mountain	69.52	30	P	P	20 33 57.4	+1.9
HYT	Haines Junctio	71.35	30	P	P	20 34 09.2	+2.8
HYT				IAmb	IAmb	20 34 09.5	
	comp=Z,2.1nm,0.6s						
YKA	Yellowknife Ar	82.00	27	P	P	20 35 05.1	-1.1
	comp=Z,0.2nm,0.4s,baz=282,slow=6.1,SNR=1.9						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	90.73	335	P	P	20 35 47.8	-1.2
	comp=Z,2.3nm,1.1s,baz=58,slow=4.7,SNR=5.3						
	comp=Z,2.3nm,1.1s						
PDAR	Pinedale Array	91.12	45	P	P	20 35 51.6	+0.1
	comp=Z,0.1nm,0.4s,baz=299,slow=6.1,SNR=1.9						
	comp=Z,0.1nm,0.4s						

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*IDC **25** 20:30:22.8±0.6, 39.°52N×144.°95E, h0^{km}, mb4.0/19, mbtmp4.0/26, ML3.2/6, MS2.8/14, Error ellipse: s-maj=16.9km s-min=13.9km az=120.0*

*BJI **25** 20:30:23.8±0.0, 39.°39N×144.°52E, h10^{km}, mb4.1/9, mB4.7/5*

*MOS **25** 20:30:26.9±1.3, 39.°65N×144.°80E, h34^{km}, mb4.5/13, Error ellipse: s-maj=8.8km s-min=5.5km az=95.7*

*NIED **25** 20:30:27.2, 39.°67N×144.°77E, h43^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.89; $M_{\theta\theta}$0.36; $M_{\phi\phi}$0.53; $M_{r\theta}$-1.01; $M_{\theta\phi}$-0.13; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.31000×10^{15} NP1: ϕ_s324.00000°, δ18.00000°, λ-67.00000°. NP2: ϕ_s119.00000°, δ74.00000°, λ-97.00000°.*

*JMA **25** 20:30:27.2±0.2, 39.°7N±0.°9×14°5E±°, h43^{km}, MV4.4/29, FAR E OFF NORTH HONSHU*

*NEIC **25** 20:30:27.8±1.5, 39.°52N±0.°07×144.°8E±0.°1, h29^{km}±5^{km}, mb4.3/46, Error ellipse: s-maj=15.4km s-min=8.8km az=115.0*

ISC 25 20:30:24.6±3.9**, 39.°61N**±0.°05×**144.°89E**±0.°05**, h10**^{km}±24^{km}**, n162, σ1^s.58**/174**, mb4.2**/52**, MS2.8**/8**, 9C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	2.35	279	P	Pn	20 31 02.9	-0.4
JTH				S	Sn	20 31 30.1	-2.2
MIYJ	Miyakonagasawa	2.37	270	*i* P	Pn	20 31 03.6	0.0
MIYJ				S	Sn	20 31 30.7	-2.1
JKEN	Kujiedanarisaw	2.52	285	P	Pn	20 31 05.1	-0.5
JKEN				S	Sn	20 31 33.9	-2.3
JANG	Nango	2.70	287	P	Pn	20 31 07.7	-0.4
JANG				*e*S	Sn	20 31 37.3	-3.6
ERM	Erimo	2.74	332		Pn	20 31 08.7	+0.2
ERM	Erimo	2.74	332	⇓*e*P	Pn	20 31 08.8	+0.2
JOM	Ohasama	2.78	268	P	Pn	20 31 09.8	+0.5
JOM				S	Sn	20 31 41.3	-1.6
JOM	Ohasama	2.78	268	A	A	20 31 09.8	
	comp=E,2.0nm,0.3s,comp=E,2.0nm,0.3s						
JMK	Ichinoseki	2.92	258	*i* P	Pn	20 31 11.2	0.0
JMK				S	Sn	20 31 43.5	-2.8
JNBK	Urakawa-nobuka	3.12	329	P	Pn	20 31 14.4	+0.5
JNBK				S	Sn	20 31 50.2	-0.9
JTM	Tenmabayashi	3.15	293		Pn	20 31 14.7	+0.4
JTM				Sn	Sn	20 31 49.3	-2.7
JCH	Churui	3.21	339	P	Pn	20 31 15.2	+0.1
JCH				S	Sn	20 31 51.4	-2.1
JAK	Akkeshi	3.38	358	S	Sn	20 31 56.1	-1.6
JOT	Ohata	3.42	302	P	Pn	20 31 18.3	+0.3
JOT				S	Sn	20 31 57.0	-1.6
JYK	Kaneyama	3.58	260	P	Pn	20 31 20.9	+0.7
JYK				*e*S	Sn	20 32 01.8	-0.8
JMM	Marumori	3.65	243		Pn	20 31 19.9	-1.2
JMM				Sn	Sn	20 31 58.8	-5.4
JAR	Ashorobuto	3.78	347	P	Pn	20 31 22.3	-0.6
JAR				S	Sn	20 32 03.7	-3.7
NEM2	Nemuro 2	3.81	9	P	Pn	20 31 22.1	-1.2
NEM2				S	Sn	20 32 04.0	-4.1
NMR	Nemuro--Hokkai	3.81	9	⇓*i*P	Pn	20 31 21.7	-1.6
NMR				*e*S	Sn	20 32 03.3	-4.8
JEW	Eniwo	4.14	322	Pn	Pn	20 31 29.4	+1.6
JEW				Sn	Sn	20 32 13.4	-2.9
GLVR	Golovnino	4.15	6	⇑*i*P	Pn	20 31 27.2	-0.8
GLVR				*i* S	Sn	20 32 12.2	-4.4
GLVR				pmax	pmax		
	comp=Z,44nm,0.2s						
GLVR				smax	smax		
	comp=N,596nm,0.5s						
GLVR				smax	smax		
	comp=E,281nm,0.3s						
JTKR	Abashiri--Toko	4.42	351	P	Pn	20 31 32.1	+0.4
JTKR				S	Sn	20 32 20.9	-2.2
YUK	Yuzh-Kuril'sk	4.48	9	*e*P	Pn	20 31 31.8	-0.7
YUK				*e*S	Sn	20 32 21.0	-3.7
YUK				pmax	pmax		
	comp=Z,166nm,0.2s						
YUK				pmax	pmax		
	comp=E,29nm,0.1s						
YUK				smax	smax		
	comp=N,294nm,0.4s						
YUK				smax	smax		
	comp=E,996nm,0.5s						
SHO	Shikotan	4.50	18	*e*P	Pn	20 31 31.3	-1.4
SHO				*e*S	Sn	20 32 19.4	-5.7
SHO				pmax	pmax		
	comp=Z,52nm,0.3s						
SHO				pmax	pmax		
	comp=N,14nm,0.2s						
SHO				pmax	pmax		
	comp=E,27nm,0.2s						
RUSJ	Misakicho	4.50	3	*e*P	Pn	20 31 32.5	-0.3
RUSJ				*e*S	Sn	20 32 21.6	-3.5
JKA	Kamikawa-asahi	4.81	340		Pn	20 31 37.1	0.0
ASAJ	Asahikawa	4.82	340	Pn	Pn	20 31 37.6	+0.4
	comp=E,2.7nm,0.3s,baz=171,slow=9.8,SNR=12						
ASAJ				Sn	Sn	20 32 31.0	-2.0
	comp=E,2.8nm,0.3s,baz=328,slow=16,SNR=6.3						
ASAJ				LR	LR	20 33 20.0	
	comp=E,41nm,20.8s,baz=135,slow=36						
	comp=E,6.7nm,0.3s						
JYT	Yasato	5.02	229		Pn	20 31 37.9	-2.0
JSD	Sado	5.41	255	Pn	Pn	20 31 45.3	0.0
MJA0	Matsu Arr-Jizo	6.07	242	*e*P	Pn	20 31 55.5	+1.1
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	6.09	242	Pn	Pn	20 31 54.4	-0.3
	comp=Z,0.8nm,0.3s,baz=51,slow=11,SNR=33						
MJAR				Sn	Sn	20 33 06.4	+1.8
	comp=Z,0.5nm,0.3s,baz=74,slow=23,SNR=5.3						
MJAR				LR	LR	20 34 30.6	
	comp=Z,141nm,20.8s,baz=66,slow=41						
	comp=Z,3.9nm,0.3s						
MAJO	Matsushiro	6.10	242	Pn	Pn	20 31 55.3	+0.5
MAJO	Matsushiro	6.10	242	*c i*P	Pn	20 31 55.5	+0.7
MJB9	Matsu-Tunnel	6.10	242		Pn	20 31 55.0	+0.2
JGF	Kuroka	7.19	239	Pn	Pn	20 32 10.6	+0.7
INU	Inuyama	7.57	238	Pn	Pn	20 32 13.7	-1.2
JHJ2	Mitsune	7.67	214	Pn	Pn	20 32 13.1	-3.3
JHJ	Hachijo jima 2	7.67	214	Pn	Pn	20 32 13.2	-3.3
	comp=Z,40nm,0.3s,baz=80,slow=22,SNR=12						
JHJ				Sn	Sn	20 33 33.2	-10
	comp=Z,29nm,0.3s,baz=79,slow=22,SNR=7.3						
USA0B	Ussuriysk Arra	10.65	300	Pn	Pn	20 32 56.2	-1.0
USA0B	Ussuriysk Arra	10.65	300	⇑*e*P	Pn	20 32 58.6	+1.4
USRK	Ussuriysk Ar.	10.65	300	Pn	Pn	20 32 56.6	-0.5
	comp=Z,0.7nm,0.3s,baz=98,slow=14,SNR=8.0						
	comp=Z,8.0nm,0.7s						
JCJ	Chichijima	12.68	191	Pn	Pn	20 33 18.7	-6.4
	comp=Z,1.2nm,0.3s,baz=295,slow=21,SNR=1.1						
JCJ				Sn	Sn	20 35 27.1	-19
	comp=Z,1.6nm,0.3s,baz=37,slow=22,SNR=1.1						
KLR	Kul'dur	13.42	320	Pn	Pn	20 33 35.8	+0.8
	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=3.7						
KLR				LR	LR	20 39 05.3	
	comp=Z,34nm,18.1s,baz=132,slow=39						
	comp=Z,0.7nm,0.3s						
KLR	Kul'dur	13.42	320	⇓*e*P	Pn	20 33 36.0	+1.0
KLR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KSRS	Korea Array	13.46	266	Pn	Pn	20 33 35.8	+0.2
	comp=Z,0.1nm,0.3s,baz=84,slow=13,SNR=2.1						
KSRS				LR	LR	20 39 02.1	
	comp=Z,17nm,19.4s,baz=75,slow=38						
	comp=Z,0.8nm,0.7s						
PETK	Petropavlovsk-	16.10	29	Pn	Pn	20 34 11.7	+0.8
	comp=Z,0.1nm,0.3s,baz=234,slow=11,SNR=1.4						
PETK				LR	LR	20 39 56.2	
	comp=Z,44nm,21.9s,baz=221,slow=36						
	comp=Z,0.9nm,0.6s						
ZEA	Zeya	18.53	325	*e*P	Pn	20 34 41.2	0.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JOW	Kunigami	18.82	232	LR	LR	20 42 07.2	
	comp=Z,11nm,19.1s,baz=7.0,slow=38						
MA2	Magadan	20.33	9	LR	LR	20 44 25.0	
	comp=Z,15nm,18.2s,baz=326,slow=41						
NJ2	Nanjing	22.36	258	*e*P	P	20 35 19.5	-3.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SEY	Seymchan	23.79	9	P	P	20 35 37.3	+0.1
	comp=Z,4.1nm,0.7s,baz=183,slow=8.3,SNR=16						
SEY				LR	LR	20 45 18.1	
	comp=Z,30nm,19.4s,baz=300,slow=38						
	comp=Z,4.1nm,0.7s						
SEY	Seymchan	23.79	9	⇑*e*P	P	20 35 38.8	+1.7
SEY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YAK	Yakutsk	24.29	343	P	P	20 35 42.1	+0.2
	comp=Z,3.2nm,0.5s,baz=145,slow=2.7,SNR=3.8						
YAK				LR	LR	20 44 54.8	
	comp=Z,15nm,20.2s,baz=258,slow=36						
	comp=Z,3.2nm,0.5s						
YAK	Yakutsk	24.29	343	P	P	20 35 41.2	-0.7
YAK				IAmb	IAmb	20 35 45.6	
	comp=Z,8.1nm,0.7s						
H11N2	WAKE ISLAND Hy	27.41	130	T	T	21 04 45.3	
	baz=322,slow=75,SNR=4.5						
H11N1	WAKE ISLAND Hy	27.41	130	T	T	21 04 42.6	
	baz=322,slow=75,SNR=3.5						
H11N3	WAKE ISLAND Hy	27.42	130	T	T	21 04 44.7	
	baz=322,slow=75,SNR=3.3						
H11S1	WAKE ISLAND Hy	28.25	132	T	T	21 05 48.7	
	baz=320						
H11S3	WAKE ISLAND Hy	28.25	132	T	T	21 05 45.9	
	baz=320						
H11S2	WAKE ISLAND Hy	28.26	132	T	T	21 05 48.8	
	baz=320						
SONM	Songino Array	28.76	299	P	P	20 36 22.0	-0.5
	comp=Z,0.3nm,0.6s,baz=98,slow=8.7,SNR=3.1						
SONM				LR	LR	20 47 34.8	
	comp=Z,24nm,21.4s,baz=142,slow=36						
	comp=Z,0.3nm,0.6s						
SONM	Songino Array	28.76	299	P	P	20 36 22.0	-0.5
BILL	Bilibino	30.80	16	*i* P	P	20 36 39.7	-0.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PZH	PanZhiHua	38.10	263	P	P	20 37 43.0	-0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,6.0s						
GOMU	GeErMu	39.25	281	P	P	20 37 50.0	-3.7
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,83nm,5.9s						
ZALV	Zalesovo Beam	42.27	310	P	P	20 38 18.2	+0.2
	comp=Z,0.7nm,0.5s,baz=89,slow=8.8,SNR=2.9						
ZALV				PcP	PcP	20 40 12.4	+0.8
	comp=Z,0.6nm,0.6s,baz=76,slow=6.1,SNR=3.6						
	comp=Z,0.7nm,0.5s						
ZALV	Zalesovo Beam	42.27	310	P	P	20 38 17.7	-0.2
J20K	Nowinta River	42.69	34	P	P	20 38 22.6	+1.4
A21K	Barrow	43.01	24	P	P	20 38 24.9	+1.1
A21K				IAmb	IAmb	20 38 25.9	
	comp=Z,5.3nm,0.8s						
IMAR	Indian Mountai	43.03	32	P	P	20 38 24.5	+0.4
H21K	Melozitna Rive	43.39	32	P	P	20 38 28.4	+1.5
CMAR	Chiang Mai Arr	44.79	256	P	P	20 38 39.3	+0.6
	comp=Z,0.6nm,0.7s,baz=45,slow=7.7,SNR=4.4						
CMAR				LR	LR	21 00 34.1	
	comp=Z,12nm,19.6s,baz=200,slow=40						
	comp=Z,0.6nm,0.7s						
CMAR	Chiang Mai Arr	44.79	256	*e*P	P	20 38 40.3	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	45.12	301	P	P	20 38 42.0	+1.0
MK31	Makanchi Array	45.12	301	P	P	20 38 42.1	+1.0
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	45.12	301	P	P	20 38 41.4	+0.3
	comp=Z,1.0nm,0.8s,baz=81,slow=9.3,SNR=8.9						
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	45.12	301	*e*P	P	20 38 42.1	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MDM	Murphy Dome	45.27	33	P	P	20 38 42.8	+0.8
MDM				IAmb	IAmb	20 38 44.8	
	comp=Z,2.3nm,0.8s						
MAKZ	Makanchi	45.32	301	P	P	20 38 42.0	-0.7
MAKZ				IAmb	IAmb	20 38 58.2	
	comp=Z,1.6nm,0.6s						
MAKZ	Makanchi	45.32	301	P	P	20 38 42.0	-0.7
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HDA	Harding Lake	45.83	34	P	P	20 38 46.8	+0.4
HDA				IAmb	IAmb	20 38 47.5	
	comp=Z,2.4nm,0.8s						
IL31		45.85	34	P	P	20 38 46.8	+0.3
IL31				IAmb	IAmb	20 38 47.8	
	comp=Z,2.2nm,0.8s						
ILAR	Eielson Array	45.85	34	P	P	20 38 46.8	+0.2
	comp=Z,1.6nm,0.7s,baz=263,slow=6.8,SNR=21						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	45.85	34	*e*P	P	20 38 47.2	+0.7
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	46.54	307	P	P	20 38 53.1	+0.9
KURK				IAmb	IAmb	20 39 04.6	
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	46.54	307	P	P	20 38 53.1	+0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SCRK	Sand Creek	47.15	35	P	P	20 38 57.6	+0.8
SCRK				IAmb	IAmb	20 38 58.1	
	comp=Z,1.9nm,0.8s						
K27K	Chicken	47.98	35	P	P	20 39 04.5	+1.3
K27K				IAmb	IAmb	20 39 06.3	
	comp=Z,2.0nm,0.8s						
EPYK	Eagle Plains	49.92	31	P	P	20 39 19.4	+1.3
EPYK				IAmb	IAmb	20 39 20.7	
	comp=Z,4.8nm,1.0s						
INK	Inuvik	50.84	28	P	P	20 39 26.2	+1.3
INK	Inuvik	50.84	28	P	P	20 39 26.2	+1.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
A36M	Sachs Harbour	52.84	23	P	P	20 39 40.4	+0.6
MTN	Manton Dam	53.73	197	P	P	20 39 45.8	-1.2
KK31	Karatay Array	54.22	300	P	P	20 39 50.8	+0.4
KK31	Karatay Array	54.22	300	P	P	20 39 50.8	+0.4
KK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KKAR	Karatay Array	54.22	300	P	P	20 39 50.5	+0.1
KKAR	Karatay Array	54.22	300	P	P	20 39 50.5	+0.1
ARU	Arti	56.25	318	P	P	20 40 05.8	+0.9
ARU				IAmb	IAmb	20 40 07.1	
	comp=Z,4.1nm,0.8s						
ARU	Arti	56.25	318	*de*P	P	20 40 06.1	+1.3
ARU				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ABKAR	Akbulak array	58.38	310	P	P	20 40 20.8	+0.9
ABKAR				IAmb	IAmb	20 40 21.9	
	comp=Z,1.5nm,0.7s						
ABKAR	Akbulak array	58.38	310	P	P	20 40 20.5	+0.6
KBL	Kabul	59.05	291	P	P	20 40 24.3	-0.8
KBL	Kabul	59.05	291	P	P	20 40 24.3	-0.8
KBL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIRV	Kirov	59.84	323	*de*P	P	20 40 31.1	+1.2
WB0	Warramunga Arr	59.88	191	P	P	20 40 29.2	-1.4
WR0	Warramunga Arr	60.04	191	P	P	20 40 30.6	-1.1

WRAB	Tennant Creek	60.05	191	P	P	20 40 30.7	-1.0
WRAB	Tennant Creek	60.05	191	P	P	20 40 30.7	-1.0
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WB2	Warramunga Arr	60.06	191	P	P	20 40 30.8	-1.0
WRA	Warramunga Arr	60.06	191	P	P	20 40 30.8	-1.0
	comp=Z,2.4nm,0.6s,baz=12,slow=7.1,SNR=37						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	60.06	191	P	P	20 40 30.4	-1.4
YKA	Yellowknife Ar	60.20	32	P	P	20 40 32.5	+0.2
	comp=Z,0.5nm,0.7s,baz=306,slow=7.4,SNR=4.1						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	60.20	32	*e*P	P	20 40 33.1	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BELG	Belogornoye	63.77	317	*ce*P	P	20 40 58.0	+1.5
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AS31	Alice Springs	63.78	191	P	P	20 40 54.6	-2.2
ASAR	Alice Springs	63.78	191	P	P	20 40 56.2	-0.6
	comp=Z,1.0nm,0.7s,baz=10,slow=5.5,SNR=13						
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	67.79	333	P	P	20 41 22.9	+0.6
	comp=Z,3.3nm,0.8s,baz=46,slow=6.1,SNR=10.0						
FINES				LR	LR	21 16 39.5	
	comp=Z,41nm,18.8s,baz=44,slow=41						
	comp=Z,3.3nm,0.8s						
FINES	FINESS Array B	67.79	333	*e*P	P	20 41 23.4	+1.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	70.99	46	P	P	20 41 43.3	+0.7
BOZ				IAmb	IAmb	20 41 44.0	
	comp=Z,1.4nm,0.7s						
BOZ	Bozeman (W)	70.99	46	P	P	20 41 43.3	+0.7
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KVN	Kaiserville	71.03	55	P	P	20 41 43.1	+0.1
KVN				IAmb	IAmb	20 41 45.2	
	comp=Z,2.8nm,0.9s						
KVN	Kaiserville	71.03	55	P	P	20 41 43.1	+0.1
KVN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	71.26	312	P	P	20 41 45.4	+1.3
KIV	Kislovodsk	71.26	312	*e*P	P	20 41 46.6	+2.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NVAR	Mina Array Bea	71.27	55	P	P	20 41 44.3	-0.1
	comp=Z,0.5nm,0.4s,baz=299,slow=5.6,SNR=7.2						
	comp=Z,0.5nm,0.4s						
KBZ	Khabaz	71.27	312	P	P	20 41 45.2	+1.1
	comp=Z,4.2nm,0.9s,baz=37,slow=2.6,SNR=9.0						
	comp=Z,4.2nm,0.9s						
KBZ	Khabaz	71.27	312	*e*P	P	20 41 46.3	+2.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GNI	Garni	72.33	308⇑	*e*P	P	20 41 54.5	+3.8
GNI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRAC	Grapevine Rang	72.71	56	P	P	20 41 54.3	+1.4
GRAC				IAmb	IAmb	20 41 55.3	
	comp=Z,4.0nm,0.7s						
NB2	NORSAR Subarra	72.83	338	P	P	20 41 53.9	+0.7
	comp=Z,1.5nm,0.7s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.83	338	P	P	20 41 52.8	-0.5
	comp=Z,1.5nm,0.8s,baz=38,slow=5.9,SNR=5.8						
NOA				LR	LR	21 19 02.7	
	comp=Z,7.7nm,20.2s,baz=10.0,slow=40						
	comp=Z,1.5nm,0.8s						
NOA	NORSAR Array B	72.83	338	*e*P	P	20 41 54.2	+1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
R11A	Troy Canyon, C	73.03	54	P	P	20 41 55.6	+0.7
TPNV	Topopah Spring	73.46	56	P	P	20 41 58.5	+1.1
TPNV				IAmb	IAmb	20 41 59.5	
	comp=Z,3.7nm,0.9s						
TPNV	Topopah Spring	73.46	56	P	P	20 41 58.6	+1.1
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GWY	Greenwater Val	73.65	57	P	P	20 41 59.5	+0.9
GWY				IAmb	IAmb	20 42 00.4	
	comp=Z,2.8nm,0.7s						
QSM	Queen of Sheba	73.65	57	P	P	20 41 59.3	+0.8
QSM				IAmb	IAmb	20 42 00.4	
	comp=Z,3.2nm,0.7s						
AKASG	Malin Array Be	73.90	323	P	P	20 42 00.5	+0.9
	comp=Z,1.4nm,0.4s,baz=43,slow=5.4,SNR=9.6						
	comp=Z,1.4nm,0.4s						
AKASG	Malin Array Be	73.90	323	IAmb	IAmb	20 42 02.5	
	comp=Z,3.3nm,1.2s						
AKASG	Malin Array Be	73.90	323	P	P	20 42 00.5	+0.9
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AKBB	Malin Array Si	73.90	323	P	P	20 42 00.7	+1.1
AKBB	Malin Array Si	73.90	323⇑	*e*P	P	20 42 00.8	+1.2
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BW06	Boulder Array	73.91	48	P	P	20 42 00.1	0.0
PD31	Pinedale Array	73.91	48	P	P	20 42 00.1	0.0
PDAR	Pinedale Array	73.91	48	P	P	20 41 60.0	-0.2
	comp=Z,0.4nm,0.6s,baz=280,slow=2.7,SNR=5.6						
	comp=Z,0.4nm,0.6s						
GURO	Guroymak-BITLI	74.97	308	P	P	20 42 05.8	-0.4
GURO				IAmb	IAmb	20 42 09.3	
	comp=Z,3.4nm,0.9s						
BUR08	Bucovina Ar. S	77.93	323	P	P	20 42 23.6	+0.8
BUR08				IAmb	IAmb	20 42 34.4	
	comp=Z,2.1nm,0.9s						
BURAR	Bucovina Array	77.94	323	P	P	20 42 24.1	+1.2
BURAR				IAmb	IAmb	20 42 25.1	
	comp=Z,1.6nm,0.7s						
BRTR	Keskin Array B	79.15	313	P	P	20 42 30.8	+1.1
	comp=Z,0.9nm,0.7s,baz=100,slow=3.9,SNR=4.0						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	79.15	313	*e*P	P	20 42 31.6	+1.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CLL	Collm	80.18	332	*e*P	P	20 42 36.0	+1.1
CLL	Collm	80.18	332	*e*P	P	20 42 36.0	+1.1
ANMO	Albuquerque	80.84	52⇑	*e*P	P	20 42 40.8	+1.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
I37A	Lemond, Waseca	81.56	38	P	P	20 42 42.4	-0.1
KHC	Kasperske Hory	81.73	330⇑	*e*P	P	20 42 45.1	+1.8
KHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GERES	GERESS Array B	81.91	330	P	P	20 42 44.9	+0.5
	comp=Z,0.4nm,0.5s,baz=26,slow=7.4,SNR=5.0						
	comp=Z,0.4nm,0.5s						
DAVOX	Davos/Dischmat	85.07	331	LR	LR	21 28 27.2	
	comp=Z,24nm,20.5s,baz=269,slow=41						
TX31	Lajitas Ar. Si	86.39	55	P	P	20 43 08.2	+0.7
TX32	Lajitas Array	86.39	55	P	P	20 43 07.7	+0.2
TX32				IAmb	IAmb	20 43 09.2	
	comp=Z,1.9nm,0.9s						
TXAR	Lajitas Array	86.39	55	P	P	20 43 07.0	-0.5
	comp=Z,1.1nm,0.8s,baz=309,slow=3.0,SNR=8.9						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	86.39	55	P	P	20 43 08.0	+0.5
TXAR	Lajitas Array	86.39	55	P	P	20 43 08.0	+0.5

PRU 25 20:42:25.0±0.0**,49°.85N**×**18°.50E,h0^{km},Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.23	267	*e*P	Pg	20 42 29.2	-0.2
OKC	Ostrava-Krasne	0.23	267	*e*PG	Pg	20 42 29.2	-0.2
OKC				*e*SG	Sg	20 42 32.7	+0.4
	comp=Z,5.0nm,0.4s						
KRLC	Kraliky	1.13	282	*e*SG	Sg	20 43 00.2	-1.2
DPC	Dobruska-Polom	1.49	290	*e*SG	Sg	20 43 12.6	-0.2

*IDC **25** 21:21:38.9±1.5,0°.57N×80°.57W,h0^{km},mb3.7/4, mbtmp3.7/4,MS3.1/6,Error ellipse: s-maj=130.7km s-min=24.5km az=54.0*

ISC 25 21:21:40.3±1.1**,0°.4N**±0°.4×**80°.7W**±0°.6**,h11^{km},n11,**σ**0^s.65**/6**, mb3.9**/3**,MS3.1**/4**,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	7.87	163	LR	LR	21 26 54.9	
	comp=Z,96nm,18.5s,baz=341,slow=40						
JTS	Las Juntas de	10.65	337	LR	LR	21 27 05.3	
	comp=Z,32nm,20.3s,baz=172,slow=31						
LPAZ	La Paz	20.76	144	P	P	21 26 22.4	+0.4
	1.1nm,0.7s,baz=336,slow=10.0,SNR=2.7						
	1.1nm,0.7s						
SIV	San Ignacio	25.36	131	P	P	21 27 07.6	-0.1
	0.4nm,0.4s,baz=304,slow=11,SNR=2.0						
SIV				LR	LR	21 37 47.8	
	comp=Z,61nm,19.6s,baz=44,slow=38						
	0.4nm,0.4s						
LVC	Limon Verde	25.64	154	LR	LR	21 38 48.0	
	comp=Z,41nm,18.2s,baz=294,slow=40						
CPUP	Villa Florida	34.89	141	LR	LR	21 43 26.5	
	comp=Z,31nm,19.3s,baz=298,slow=38						
NVAR	Mina Array Bea	51.16	322	P	P	21 30 44.2	+0.4
	0.7nm,0.3s,baz=140,slow=7.1,SNR=4.0						
	0.7nm,0.3s						
YKA	Yellowknife Ar	66.91	344	P	P	21 32 32.3	-0.1
	0.6nm,0.8s,baz=132,slow=6.4,SNR=7.5						
	0.6nm,0.8s						
AFI	Afiamalu	91.11	256	LR	LR	22 07 40.2	
	comp=Z,28nm,18.6s,baz=52,slow=30						
ASAR	Alice Springs	139.22	233	PKP	PKPdf	21 41 08.5	+0.1
	0.2nm,0.3s,baz=113,slow=2.4,SNR=5.0						
WRA	Warramunga Arr	140.57	238	PKP	PKPdf	21 41 10.0	-1.0
	0.3nm,0.7s,baz=115,slow=1.7,SNR=5.5						

*TUL **25** 21:25:28.7±0.5,36°.957N±0°.009×97°.97W±0°.02,h4^{km}±4^{km}, ML2.9,mb_Lg2.2/11(NEIC),Error ellipse: s-maj=1.8km s-min=1.2km az=110.0*

NEIC 25 21:25:29.4±0.4**,36°.952N**±0°.010×**97°.96W**±0°.01**,h2^{km}**±3^{km}**, Error ellipse: s-maj=1.6km s-min=1.4km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	1.01	236	Pg	Pg	21 25 48.0	-0.9
T35A	Sooner Cattle	1.16	91	Pg	Pg	21 25 50.7	-1.0
R32A	Long Quarter,	1.58	338		Pn	21 25 58.1	-0.4
FNO	Franklin	1.75	165	Pn	Pn	21 26 00.4	-0.4
TUL1	Leonard	2.04	120	Pn	Pn	21 26 04.4	-0.3
TUL1				IAmb_Lg		21 26 38.5	
	comp=Z,8.2nm,0.7s						
WMOK	Wichita Mounta	2.31	197	Pn	Pn	21 26 08.6	+0.1
WMOK				IAmb_Lg		21 26 40.8	
	comp=Z,4.8nm,0.8s						
KSU1	Kansas State U	2.40	26	Pn	Pn	21 26 10.0	+0.3
X37A	Clayton	3.16	137	Pn	Pn	21 26 20.5	+0.3
X37A				IAmb_Lg		21 27 15.9	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	3.31	100	Pn	Pn	21 26 21.0	-1.2
S39A	Bolivar	3.77	77	Pn	Pn	21 26 27.9	-0.7
W39A	Magazine	3.81	116	IAmb_Lg		21 27 38.7	
	comp=Z,9.0nm,1.1s						
U40A	Yellville	4.15	97	IAmb_Lg		21 27 47.1	
	comp=Z,4.5nm,0.7s						
MIAR	Mount Ida	4.30	123	Pn	Pn	21 26 35.4	-0.4
MIAR				IAmb_Lg		21 27 51.4	
	comp=Z,3.9nm,0.7s						
R40A	Maddies Statio	4.71	72	Pn	Pn	21 26 40.7	-0.8
FCAR	Ozark Folk Cen	4.83	101	Pn	Pn	21 26 42.5	-0.6

*NEIC **25** 21:48:57.6±1.5,17°.3N±0°.1×95°.11W±0°.05,h119^{km}±10^{km}, Error ellipse: s-maj=18.5km s-min=5.3km az=195.0*

*IDC **25** 21:48:57.2±0.5,17°.39N×94°.92W,h104^{km}±7^{km},mb3.7/13, mbtmp4.1/15,MS2.5/2,Error ellipse: s-maj=32.6km s-min=11.6km az=53.0*

*MEX **25** 21:48:58.1±0.7,17°.22N×95°.20W,h121^{km}±7^{km},MD4.5*

ISC 25 21:48:56.9±0.6**,17°.21N**±0°.06×**95°.17W**±0°.04**,h116^{km}**±5^{km}**, n116,**σ**1^s.12**/129**,mb4.2**/28**,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.30	114	P	Pn	21 49 13.7	+0.3
	2μm,0.4s,baz=279,slow=3.6,SNR=5776						
CMIG				S	Sn	21 49 25.0	-0.9
	499nm,0.4s,baz=133,slow=22,SNR=7.1						
CMIG	Matias Romero	0.30	114		Pn	21 49 13.9	+0.4
CMIG					Sn	21 49 26.1	+0.2
CMIG	Matias Romero	0.30	114	*i* P	Pn	21 49 13.9	+0.4
CMIG				*e*S	Sn	21 49 26.1	+0.2
NEUV	Arroyo Zacate	0.78	310	*e*P	Pn	21 49 16.8	+0.2
NEUV				*i* S	Sn	21 49 31.5	+0.2
UXUV	UXUV	0.99	84	*i* P	Pn	21 49 19.4	+0.9
UXUV				*e*S	Sn	21 49 35.0	+0.2
OXLC	Oaxaca	1.47	264	*e*P	Pn	21 49 24.3	+0.3
OXLC				*e*S	Sn	21 49 45.0	+0.5
OXBJ	Oaxaca	1.49	265		Pn	21 49 24.5	+0.3
OXBJ					Sn	21 49 44.5	-0.4
OXBJ	Oaxaca	1.49	265	*e*P	Pn	21 49 24.5	+0.3
OXBJ				*e*S	Sn	21 49 44.5	-0.4
VHO	Vista Hermosa	1.50	265	*e*P	Pn	21 49 24.6	+0.4
VHO				*e*S	Sn	21 49 45.1	0.0
YOIG	Yosondua	2.30	261	*e*P	Pn	21 49 33.6	-0.6
YOIG				*e*S	Sn	21 50 01.3	-1.5
JAUV	Jalcomulco	2.64	324	*e*P	Pn	21 49 38.5	0.0
JAUV				*e*S	Sn	21 50 09.4	-1.0
CCIG	Comitan	3.05	107	Pn	Pn	21 49 44.8	+0.8
TLIG	Tlapa	3.26	277		Pn	21 49 46.9	+0.2
TLIG				Sn	Sn	21 50 22.1	-2.9
YAIG	Yautepec	4.05	294		Pn	21 49 59.3	+2.1
YAIG					Sn	21 50 41.5	-2.5
YAIG	Yautepec	4.05	294	*e*P	Pn	21 49 59.3	+2.1
YAIG				*e*S	Sn	21 50 41.5	-2.5
UNM	Universidad Na	4.35	300	Pn	Pn	21 50 02.8	+1.5
MOIG	Morelia	6.21	294	Pn	Pn	21 50 26.7	+0.2
ZAIG	Zacatecas	8.88	310	Pn	Pn	21 51 03.8	+1.2
CRIN	San Cristobal	9.04	119	Pn	Pn	21 51 06.0	+1.3
HZTE	Horizontes, Gu	11.32	124	Pn	Pn	21 51 35.6	+0.3
ORTG	Ortega, Santa	11.63	125	Pn	Pn	21 51 39.4	-0.2
DUNO	Dulce Nombre,	11.78	126	Pn	Pn	21 51 41.7	+0.3
JTS	Las Juntas de	12.08	123	P	Pn	21 51 44.6	-0.8
	9.0nm,0.5s,baz=15,slow=21,SNR=4.4						
JTS				LR	LR	21 56 16.9	
	comp=Z,18nm,22.0s,baz=102,slow=37						
JTS	Las Juntas de	12.08	123		Pn	21 51 45.4	0.0
JACO	JACO, Garabito	12.68	125	Pn	Pn	21 51 53.5	+0.3
SOR	Soroa	12.71	62	Pn	Pn	21 51 50.9	-2.6
RIMA	Rio Macho	13.25	123		Pn	21 52 00.6	-0.3
SRBA	San Rafael, Bu	13.97	123	Pn	Pn	21 52 09.6	-0.4
DRK0	Durika	14.04	123	Pn	Pn	21 52 10.7	-0.3
TXAR	Lajitas Array	14.36	329	P	Pn	21 52 17.0	+2.1
	0.9nm,0.5s,baz=149,slow=13,SNR=13						
TXAR	Lajitas Array	14.36	329	Pn	Pn	21 52 14.6	-0.3
TX31	Lajitas Ar. Si	14.36	329		Pn	21 52 15.5	+0.6
TX32	Lajitas Array	14.36	329		Pn	21 52 13.8	-1.2
ABTX	Abilene, Hawle	15.87	346		P	21 52 34.8	-0.3
ABTX				IAmb	IAmb	21 52 39.1	
	comp=Z,9.3nm,0.8s						
Z41A	Richland Creek	16.12	7		P	21 52 37.9	0.0
Z41A				IAmb	IAmb	21 52 41.1	
	comp=Z,34nm,1.4s						
250A	Grady	16.77	27		P	21 52 47.4	+2.3
352A	Blakely	16.98	31		Pn	21 52 46.3	-1.1
352A				IAmb	IAmb	21 52 48.6	
	comp=Z,18nm,0.8s						
MNTX	Cornudas Mount	17.14	329		P	21 52 49.7	+0.5
MIAR	Mount Ida	17.32	4	P	P	21 52 51.2	+0.1
LRAL	Lakeview Retre	17.39	24	P	Pn	21 52 52.7	+0.4
MSTX	Muleshoe	18.02	339	P	Pn	21 52 60.0	-0.1
W41B	Gary Mavity, V	18.08	8	P	P	21 52 59.9	+0.5
WHAR	Wooly Hollow	18.19	8	P	P	21 53 00.7	+0.1
WHAR				IAmb	IAmb	21 53 12.6	
	comp=Z,6.8nm,0.6s						
Y49A	Blount Mountai	18.35	24	P	P	21 53 02.3	-0.2
PLAL	Pickwick Lake	18.80	18	P	P	21 53 06.3	-1.0
FCAR	Ozark Folk Cen	18.80	8	P	P	21 53 08.0	+0.7
FCAR				IAmb	IAmb	21 53 09.1	
	comp=Z,6.6nm,0.5s						
121A	Cookes Peak, D	19.04	326	P	Pn	21 53 12.5	+0.3
121A				IAmb	IAmb	21 53 14.8	
	comp=Z,17nm,1.1s						
LCAR	Lake Charles	19.12	10	P	P	21 53 10.9	+0.1
LCAR				IAmb	IAmb	21 53 12.4	
	comp=Z,9.9nm,0.8s						
FPAL	Fort Paine	19.26	25	P	P	21 53 11.8	-0.6
FPAL				IAmb	IAmb	21 53 16.7	
	comp=Z,9.7nm,0.5s						
GOGA	Godfrey	19.26	31	P	P	21 53 12.1	-0.4
GOGA				IAmb	IAmb	21 53 25.4	
	comp=Z,10nm,0.6s						
Y52A	Lilburn	19.35	29	P	P	21 53 13.1	-0.3
SWET	Sewanee	19.73	23	P	P	21 53 16.5	-1.0
SWET				IAmb	IAmb	21 53 17.8	
	comp=Z,5.7nm,0.6s						
PBMO	Poplar Bluff	19.93	11	P	P	21 53 18.9	-0.7
WVT	Waverly	19.94	18	P	P	21 53 18.7	-1.0
W50A	Signal Mountai	19.96	24	P	P	21 53 19.1	-0.9
W50A				IAmb	IAmb	21 53 20.1	
	comp=Z,11nm,0.8s						
MGMO	Mountain Grove	20.03	7	P	P	21 53 20.1	-0.6
ANMO	Albuquerque	20.33	332	P	P	21 53 25.2	+1.0
	comp=Z,1.8nm,0.6s,baz=139,slow=12,SNR=6.7						
	comp=Z,1.8nm,0.6s						
ANMO	Albuquerque	20.33	332	P	P	21 53 25.1	+0.9
CPCT	Cooper Cave	20.49	26	P	P	21 53 24.4	-1.3
CPCT				IAmb	IAmb	21 53 28.1	
	comp=Z,6.8nm,0.7s						
HODGE	Hodges	20.52	32	P	P	21 53 24.8	-1.2
HODGE				IAmb	IAmb	21 53 26.7	
	comp=Z,12nm,0.6s						
TUC	Tucson	20.62	320	P	P	21 53 27.5	+0.3
TUC				IAmb	IAmb	21 53 33.2	
	comp=Z,8.6nm,0.8s						
BG3	Lake Jocassee	20.81	29	P	P	21 53 28.3	-0.8
V51A	Loudon	20.86	25	P	P	21 53 28.3	-1.4
U49A	Red Boiling Sp	20.95	22	P	P	21 53 29.4	-1.1
TKL	Tuckaleechee C	20.98	27	P	P	21 53 29.6	-1.4
	comp=Z,3.4nm,0.5s,baz=192,slow=12,SNR=13						
	comp=Z,3.4nm,0.5s						
TKL	Tuckaleechee C	20.98	27	P	P	21 53 30.5	-0.4
TKL				IAmb	IAmb	21 53 35.8	
	comp=Z,8.2nm,0.8s						
CCM	Cathedral Cave	21.05	9	P	P	21 53 31.4	-0.2
CCM				IAmb	IAmb	21 53 33.4	
	comp=Z,9.0nm,0.8s						
S44A	Carbondale	21.06	13	P	P	21 53 31.4	-0.2
S44A				IAmb	IAmb	21 53 33.8	
	comp=Z,10nm,0.7s						
R40A	Maddies Statio	21.15	6	P	P	21 53 32.9	+0.2
V52A	Sevierville	21.21	27	P	P	21 53 32.5	-0.9
V52A				IAmb	IAmb	21 53 50.8	
	comp=Z,5.5nm,0.7s						
V53A	Saluda	21.42	29	P	P	21 53 35.1	-0.6
V53A				IAmb	IAmb	21 53 37.4	
	comp=Z,13nm,1.3s						
KMSC	Kings Mountain	21.71	32	P	P	21 53 37.3	-1.3
KMSC				IAmb	IAmb	21 53 57.7	
	comp=Z,13nm,1.0s						
X18A	Snowflake	21.73	325	P	P	21 53 40.5	+1.4
T50A	Nancy	21.74	23	P	P	21 53 37.3	-1.7
TZTN	Tazewell	21.83	26	P	P	21 53 38.7	-1.3
TZTN				IAmb	IAmb	21 54 00.3	
	comp=Z,6.3nm,0.7s						
V55A	Taylorsville	22.32	31	P	P	21 53 43.8	-1.3
SDCO	Great Sand Dun	22.38	338	P	P	21 53 47.3	+1.3
P40A	Paris	22.40	6	P	P	21 53 45.3	-0.5
W57A	Gilead	22.41	34	P	P	21 53 45.4	-0.6
W57A				IAmb	IAmb	21 53 46.5	
	comp=Z,7.2nm,0.7s						
U54A	Nelsons Funny	22.57	29	P	P	21 53 46.6	-1.1
R49A	Shelbyville	22.76	21	P	P	21 53 48.0	-1.3
R49A				IAmb	IAmb	21 53 50.1	
	comp=Z,8.7nm,0.6s						
S51A	Beattyville	22.76	24	P	P	21 53 47.9	-1.5
S51A				IAmb	IAmb	21 54 13.0	
	comp=Z,10nm,1.0s						
P43A	Skaggs, Pawnee	22.88	11	P	P	21 53 49.9	-0.6
P43A				IAmb	IAmb	21 53 51.5	
	comp=Z,15nm,0.8s						
P46A	Rosedale	23.37	16	P	P	21 53 54.9	-0.2
P46A				IAmb	IAmb	21 53 57.0	
	comp=Z,14nm,0.8s						
P49A	Miami Univ. Ec	24.03	20	P	P	21 54 00.1	-1.0
Q52A	Bidwell	24.42	25	P	P	21 54 03.8	-0.9
Q52A				IAmb	IAmb	21 54 05.8	
	comp=Z,11nm,0.8s						
O49A	Covington	24.75	20	P	P	21 54 06.6	-1.0
SDV	Santo Domingo	25.27	106	P	P	21 54 11.8	-1.1
	comp=Z,7.9nm,0.4s,baz=303,slow=7.4,SNR=5.6						
	comp=Z,7.9nm,0.4s						
SDV	Santo Domingo	25.27	106	P	P	21 54 12.4	-0.5
MTPU	Mount Pierson	25.56	328	P	P	21 54 17.1	+1.6
N53A	Lisbon	26.57	25	P	P	21 54 23.0	-1.1
BAUV	El Baul	27.65	104	P	P	21 54 32.0	-2.0
SJG	San Juan	27.66	84	LR	LR	22 06 50.8	
	comp=Z,11nm,18.1s,baz=184,slow=39						
PDPR	Patillas Dam,	27.79	84	P	P	21 54 32.7	-2.5
MTP	Monte Pirata	28.23	84	P	P	21 54 37.1	-2.0
PDAR	Pinedale Array	28.27	337	P	P	21 54 39.9	+0.4
	comp=Z,0.2nm,0.4s,baz=167,slow=10,SNR=3.1						
	comp=Z,0.2nm,0.4s						
CUPR	Culebra, Puert	28.47	83	P	P	21 54 40.1	-1.2
STVI	Saint Thomas	28.78	83	P	P	21 54 42.3	-1.7
ELK	Elko	29.15	328	P	P	21 54 49.4	+2.0
	comp=Z,1.4nm,0.8s,baz=130,slow=4.4,SNR=6.1						
	comp=Z,1.4nm,0.8s						
NVAR	Mina Array Bea	29.26	321	P	P	21 54 51.0	+2.6
	comp=Z,2.6nm,0.6s,baz=135,slow=9.1,SNR=6.9						
	comp=Z,2.6nm,0.6s						
LHV	Little Huntoon	29.27	320	P	P	21 54 50.0	+1.9
LHV				IAmb	IAmb	21 54 52.4	
	comp=Z,3.0nm,0.7s						
J08A	Circle Bar Ran	32.70	328	P	P	21 55 20.0	+1.6
J08A				IAmb	IAmb	21 55 21.5	
	comp=Z,5.1nm,0.8s						
G62A	West of Eustis	34.71	31	P	P	21 55 34.8	-0.8
G62A				IAmb	IAmb	21 55 35.9	
	comp=Z,3.7nm,0.7s						
LPAZ	La Paz	42.65	140	P	P	21 56 44.7	+1.8
	comp=Z,1.9nm,0.6s,baz=316,slow=9.6,SNR=9.0						
	comp=Z,1.9nm,0.6s						
SIV	San Ignacio	47.11	133	P	P	21 57 19.4	+1.8
	comp=Z,4.5nm,0.6s,baz=305,slow=6.8,SNR=26						
	comp=Z,4.5nm,0.6s						
YKA	Yellowknife Ar	47.23	348	P	P	21 57 18.3	+0.3
	comp=Z,1.5nm,0.6s,baz=153,slow=7.4,SNR=15						
	comp=Z,1.5nm,0.6s						
DLBC	Dease Lake	48.49	336	P	P	21 57 29.1	+1.2
	comp=Z,1.4nm,0.4s,baz=130,slow=7.3,SNR=3.9						
	comp=Z,1.4nm,0.4s						
INK	Inuvik	56.52	344	P	P	21 58 26.2	-0.5
	comp=Z,2.1nm,0.6s,baz=112,slow=8.9,SNR=5.9						
	comp=Z,2.1nm,0.6s						
INK	Inuvik	56.52	344	P	P	21 58 26.8	+0.1
INK				IAmb	IAmb	21 58 28.3	
	comp=Z,2.1nm,0.7s						
K27K	Chicken	56.52	337	P	P	21 58 28.6	+1.8
K27K				IAmb	IAmb	21 58 54.3	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	58.70	337	P	P	21 58 42.6	+0.6
	comp=Z,0.5nm,0.5s,baz=132,slow=5.2,SNR=7.8						
	comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	58.70	337	P	P	21 58 42.3	+0.2
RND	Reindeer	58.84	335	P	P	21 58 43.9	+0.8
RND				IAmb	IAmb	21 58 45.6	
	comp=Z,2.7nm,0.6s						
TORD	Torodi Ar. Bea	92.57	75	P	P	22 01 56.4	+0.4
	comp=Z,0.6nm,0.9s,baz=297,slow=5.9,SNR=2.0						
	comp=Z,0.6nm,0.9s						
WRA	Warramunga Arr	133.12	259	PKP	PKPdf	22 07 59.9	+0.2
	comp=Z,0.5nm,1.0s,baz=79,slow=1.9,SNR=5.3						
ASAR	Alice Springs	133.74	254	PKP	PKPdf	22 08 00.5	-0.3
	comp=Z,0.1nm,0.4s,baz=90,slow=1.6,SNR=3.4						

*IDC **25** 21:51:29.5±0.7,28°.79N×129°.64E,h0^{km},mb3.7/10, mbtmp3.8/16,ML3.6/6,MS2.2/1,Error ellipse: s-maj=23.5km s-min=13.0km az=96.0*

*NIED **25** 21:51:33.3,28°.81N×129°.69E,h31^{km},MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.86; M$_{\theta\theta}$1.43; M$_{\phi\phi}$2.42; M$_{r\theta}$0.25; M$_{\theta\phi}$-2.74; M$_{\phi r}$0.61; Fault plane solution: M$_0$4.35000×10^{14} NP1: ϕ$_s$309.00000°,δ44.00000°,λ-105.00000°. NP2: ϕ$_s$150.00000°,δ48.00000°,λ-76.00000°.*

*JMA **25** 21:51:33.3±0.2,28°.8N±0°.8×13°0E±°,h31^{km}±4^{km}, MV3.7/24,NEAR AMAMI-OSHIMA ISLAND*

*NEIC **25** 21:51:34.9±1.3,28°.80N±0°.05×129°.7E±0°.1,h34^{km}±5^{km}, mb4.0/8,Error ellipse: s-maj=14.2km s-min=6.1km az=106.0*

ISC 25 21:51:33.1±1.2**,28°.80N**±0°.04×**129°.70E**±0°.05**,h25^{km}**±9^{km}**, n53,**σ**1^s.25**/62**,mb3.8**/14**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	Amami Oshima	0.40	193	*i* P	Pb	21 51 41.7	+0.1
JAM				*e*S	Sb	21 51 47.8	+0.4

JZK	**Kikaishima**	0.54	154	P	Pb	21 51 44.9	+0.9
JTAJ	**Takarajima**	0.56	309	*i* P	Pn	21 51 44.6	-0.9
JTAJ				*e*S	Sn	21 51 52.9	-1.1
JAMN	**Amaminishikomi**	0.72	220	*i* P	Pn	21 51 47.0	-0.7
JAMN				S	Sn	21 51 57.7	-0.3
JNN	**Nakanoshima**	1.05	8	*i* P	Pn	21 51 51.0	-1.2
JNN				*e*S	Sn	21 52 04.2	-1.9
JTK	**Tokunoshima**	1.21	213	*i* P	Pn	21 51 54.0	-0.4
JTK				S	Sb	21 52 10.5	0.0
JYAK	**Yakushimahirau**	1.60	26	*e*P	Pn	21 51 58.3	-1.4
JYAK				*e*S	Sn	21 52 16.8	-2.7
JKC	**Kuchinoerabu**	1.71	14	P	Pn	21 52 00.3	-1.0
JKC				*e*S	Sn	21 52 20.2	-2.1
JOKE	**Okinoerabujima**	1.75	215	P	Pn	21 52 02.0	+0.2
JMTN	**Minamitane**	1.90	33	*e*P	Pn	21 52 03.3	-0.6
JYRO	**Yoronjima**	2.09	212	*e*P	Pn	21 52 07.0	+0.6
JTN	**Tanegashima 3**	2.16	31	*e*P	Pn	21 52 06.7	-0.7
JOW	**Kunigami**	2.33	213	Pn	Pn	21 52 10.1	+0.2
	38nm,0.3s,baz=99,slow=19,SNR=45						
JOW				LR	LR	21 52 38.1	
	comp=Z,55nm,20.9s,baz=312,slow=30						
JOW				Sn	Sb	21 52 40.0	-2.8
	28nm,0.3s,baz=84,slow=27,SNR=11						
	102nm,0.4s						
JOW	**Kunigami**	2.33	213	*e*P	Pn	21 52 10.3	+0.4
JIH	**Iheya**	2.33	222	*e*P	Pn	21 52 10.0	+0.1
JIH				*e*S	Sb	21 52 39.4	-3.5
JSU	**Suzuyama**	2.77	13		Pn	21 52 15.6	-0.4
JSU				Sn	Sn	21 52 46.3	-2.4
JAGN	**Aguni-jima**	3.10	225	*e*P	Pn	21 52 21.1	+0.7
JMZ	**Minamidaito 2**	3.26	155	*e*P	Pn	21 52 22.5	-0.1
JMZ				*e*S	Sn	21 52 58.7	-1.9
JKE	**Kume jima 2**	3.57	227	*e*P	Pn	21 52 27.8	+0.8
JNU	**Nakatsue**	4.42	13	Pn	Pn	21 52 39.4	+0.8
	4.6nm,0.3s,baz=194,slow=9.1,SNR=12						
JNU				Sn	Sn	21 53 31.7	+2.3
	0.7nm,0.3s,baz=209,slow=3.3,SNR=1.4						
	15nm,0.4s						
JNU	**Nakatsue**	4.42	13		Pn	21 52 40.5	+1.8
JTU	**Tsushima**	5.71	357	Pn	Pn	21 52 59.3	+3.0
JHS	**Saijyo**	6.83	24	Pn	Pn	21 53 11.8	+0.2
KSRS	**Korea Array**	8.76	351	Pn	Pn	21 53 38.8	+0.7
	0.1nm,0.3s,baz=170,slow=15,SNR=1.8						
	0.6nm,0.4s						
INU	**Inuyama**	9.01	42	Pn	Pn	21 53 44.1	+2.6
JGF	**Kuroka**	9.38	42	Pn	Pn	21 53 47.4	+0.7
JHJ	**Hachijo jima 2**	9.66	61	Pn	Pn	21 53 52.5	+1.9
	4.6nm,0.3s,baz=124,slow=21,SNR=1.7						
	19nm,0.4s						
MJAR	**Matsushiro Arr**	10.53	41	Pn	Pn	21 54 03.3	+0.9
	0.1nm,0.3s,baz=228,slow=7.1,SNR=4.0						
	1.0nm,0.5s						
ASAJ	**Asahikawa**	18.44	31	P	Pn	21 55 46.9	+0.1
	1.0nm,0.3s,baz=153,slow=30,SNR=1.4						
	3.1nm,0.4s						
SONM	**Songino Array**	26.20	323	P	P	21 57 05.4	-0.4
	0.2nm,0.4s,baz=115,slow=9.7,SNR=1.9						
	0.2nm,0.4s						
YAK	**Yakutsk**	33.23	360	P	P	21 58 07.9	+0.1
	14nm,0.4s,baz=241,slow=0.9,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	34.97	97	T	T	22 35 18.5	
	baz=290						
H11N1	**WAKE ISLAND Hy**	34.97	97	T	T	22 35 15.3	
	baz=290						
H11N3	**WAKE ISLAND Hy**	34.99	97	T	T	22 35 17.0	
	baz=290						
MKAR	**Makanchi Array**	40.86	309	P	P	21 59 13.8	+0.9
	0.1nm,0.5s,baz=86,slow=11,SNR=1.9						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	43.95	314	P	P	21 59 37.3	-0.6
	0.2nm,0.4s,baz=99,slow=9.2,SNR=3.5						
	0.2nm,0.4s						
KNRA	**Kununurra**	44.22	181	P	P	21 59 40.8	+0.4
WB0	**Warramunga Arr**	48.49	174	P	P	22 00 13.6	-0.3
WB0				IAmb	IAmb	22 00 37.2	
	comp=Z,5.3nm,1.5s						
WRA	**Warramunga Arr**	48.66	174	P	P	22 00 15.0	-0.2
	comp=Z,1.1nm,0.6s,baz=354,slow=8.3,SNR=19						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	48.66	174	P	P	22 00 14.8	-0.4
AS31	**Alice Springs**	52.32	175	P	P	22 00 42.3	-0.5
AS31				IAmb	IAmb	22 00 45.7	
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	52.32	175	P	P	22 00 43.1	+0.3
	comp=Z,0.5nm,0.5s,baz=8.4,slow=14,SNR=21						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	52.32	175	P	P	22 00 42.9	+0.1
ABKAR	**Akbulak array**	55.88	312	P	P	22 01 08.7	+0.2
ABKAR				IAmb	IAmb	22 01 11.1	
	comp=Z,2.9nm,1.5s						
STKA	**Stephens Creek**	61.39	168	P	P	22 01 47.1	+0.1
	comp=Z,1.8nm,0.7s,baz=11,slow=5.9,SNR=3.6						
	comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	61.39	168	P	P	22 01 47.2	+0.2
C36M	**Paulatuk**	68.83	21	P	P	22 02 35.4	+0.5
FINES	**FINESS Array B**	71.28	330	P	P	22 02 49.1	-0.9
	comp=Z,0.3nm,0.3s,baz=80,slow=4.6,SNR=5.5						
	comp=Z,0.3nm,0.3s						
FINES	**FINESS Array B**	71.28	330	P	P	22 02 50.0	0.0
YKA	**Yellowknife Ar**	75.65	26	P	P	22 03 16.3	+0.6
	comp=Z,0.5nm,0.6s,baz=300,slow=5.8,SNR=5.4						
	comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	76.49	308	P	P	22 03 21.9	+0.7
	comp=Z,0.5nm,0.5s,baz=64,slow=2.9,SNR=3.8						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	76.49	308	P	P	22 03 21.3	+0.2
FRB	**Frobisher Bay**	86.64	8	P	P	22 04 14.5	+0.4
	comp=Z,3.2nm,1.0s,baz=17,slow=7.0,SNR=4.2						
	comp=Z,3.2nm,1.0s						

ISC 25 21:54:06.8±1.1, 50°.13N±0°.05×19°.05E±0°.04, h0^{km}, n8, σ0^{s}51/15, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.49	79	*e*Pg	Pg	21 54 15.8	-0.5
OJC				*e*Sg	Sg	21 54 23.3	+0.7
LANS	**Liptovska Anna**	1.02	164	*e*PG	Pn	21 54 28.1	-0.3
LANS				*e*SG	Sn	21 54 43.3	-0.1
LANS				*e*LG	Lg	21 54 45.4	
MORC	**Moravsky Berou**	1.03	251	*e*PG	Pg	21 54 25.7	-1.0
MORC				*e*SG	Sg	21 54 40.1	0.0
JAVC	**Velka Javorina**	1.56	216	*e*PN	Pg	21 54 36.9	+0.2
VYHS	**Vyhne**	1.64	185	*e*PN	Pn	21 54 36.7	-0.3
VYHS				*e*SN	Sg	21 55 00.1	+0.5
VYHS				*e*LG	Lg	21 55 06.8	
VRAC	**Vranov**	1.79	244	*e*PN	Pn	21 54 39.0	0.0
VRAC				*e*SG	Sn	21 55 03.4	+0.9
KSP	**Ksiaz**	1.90	293	*e*Pg	Pn	21 54 40.6	+0.2
KSP				*e*Sg	Sn	21 55 05.3	+0.2
KRUC	**Moravsky**	2.03	239	*e*PN	Pn	21 54 42.5	+0.2
KRUC				*e*SG	Sb	21 55 10.2	-0.2

IDC 25 21:54:23.1±2.5, 4°.33N×126°.52E, h0^{km}, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=198.8km s-min=29.5km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	25.31	163	P	P	21 59 50.8	-0.9
	0.7nm,0.9s,baz=342,slow=9.7,SNR=8.5						
	0.7nm,0.9s						
ASAR	**Alice Springs**	28.74	166	P	P	22 00 23.9	+1.4
	0.2nm,0.4s,baz=345,slow=11,SNR=1.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	56.95	325	P	P	22 04 10.2	-0.1
	0.2nm,0.5s,baz=120,slow=5.2,SNR=1.9						
	0.2nm,0.5s						

IDC 25 21:58:04.4±3.3, 5°.50S×129°.36E, h368^{km}±48^{km}, mb2.6/1, mbtmp3.5/4, Error ellipse: s-maj=94.8km s-min=15.0km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	4.98	23	P	Pn	21 59 24.8	+0.1
	5.0nm,0.3s,baz=259,slow=23,SNR=7.7						
SIJI				S	S	22 00 30.1	+0.4
	4.7nm,0.2s,baz=258,slow=23,SNR=2.7						
WRA	**Warramunga Arr**	15.15	162	P	P	22 01 19.9	0.0
	0.4nm,0.3s,baz=334,slow=13,SNR=15						
WRA				S	S	22 04 02.5	+0.5
	0.1nm,0.5s,baz=342,slow=19,SNR=2.6						
ASAR	**Alice Springs**	18.58	167	P	P	22 01 56.8	0.0
	0.5nm,0.3s,baz=344,slow=10,SNR=9.3						
ASAR				S	S	22 05 09.7	+0.6
	0.9nm,0.9s,baz=350,slow=23,SNR=7.5						
MKAR	**Makanchi Array**	66.63	327	P	P	22 08 16.6	0.0
	0.1nm,0.4s,baz=119,slow=8.2,SNR=4.2						
	0.1nm,0.4s						

*IDC **25** 22:10:24.8±0.7, 36°.66N×15°.78E, h0^{km}, mb3.7/13, mbtmp3.8/24, ML4.0/10, MS3.0/12, Error ellipse: s-maj=14.7km s-min=13.2km az=157.0*

*NEIC **25** 22:10:26.5±1.3, 36°.72N±0°.05×15°.82E±0°.08, h9^{km}±4^{km}, Error ellipse: s-maj=9.4km s-min=7.1km az=114.0*

*ROM **25** 22:10:27.8±0.1, 36°.802N±0°.007×15°.801E±0°.008, h15^{km}, ML4.0/72, Mw3.8, Error ellipse: s-maj=0.7km s-min=0.7km az=176.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.19; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-4.07; $M_{r\theta}$-1.29; $M_{\theta\phi}$-2.76; $M_{\phi r}$1.99; Fault plane solution: $M_0$5.49652×10^{14} NP1:ϕ_s232.00000°, δ44.00000°, λ129.00000°. NP2:ϕ_s3.00000°, δ57.00000°, λ58.00000°.*

*MED_RC **25** 22:10:28.0±0.5, 36°.77N×15°.81E, h22^{km}±2^{km}, MW4.1/11, Moment Tensor Solution.Mantle waves: s11,c15; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.23±.32; $M_{\theta\theta}$0.35±.15; $M_{\phi\phi}$-1.58±.24; $M_{r\theta}$-0.51±.16; $M_{\theta\phi}$-0.59±.09; $M_{\phi r}$1.23±.26; Best double couple: $M_0$2.04000×10^{15} NP1:ϕ_s350.00000°, δ68.00000°, λ63.00000°. NP2:ϕ_s224.00000°, δ34.00000°, λ139.00000°. Principal axes: T 1.9800, Plg58.0000°, Azm222.0000°; N 0.1200, Plg25.0000°, Azm1.0000°; P -2.1000, Plg19.0000°, Azm100.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*LDG **25** 22:10:29.3±0.3, 36°.73N×15°.70E, h19^{km}, Ml3.3/4 Error ellipse: s-maj=6.5km s-min=3.6km az=172.0*

*BEO **25** 22:10:29.1±0.6, 37°.01N×15°.78E, h12^{km}±8^{km}, ML4.2/11*

*PDG **25** 22:10:32.1±0.2, 37°.28N×16°.27E, h14^{km}±2^{km}, ML4.4/13, Error ellipse: s-maj=2.3km s-min=1.8km az=90.0*

*GII **25** 22:10:39.2±0.0, 36°.62N×17°.37E, h2^{km}±1^{km}, Mm4.4/1*

ISC 25 22:10:27.3±1.2, 36°.80N±0°.04×15°.89E±0°.03, h17^{km}±7^{km}, n357, σ2^{s}53/431, mb3.9/19, MS2.9/5, 25C-46D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPAC	**Pachino**	0.64	261	⇓P	Pb	22 10 40.0	+0.2
HPAC				S	Sg	22 10 48.3	0.0
HPAC				AML	AML		
	comp=N,69750µm,0.3s						
HPAC				AML	AML		
	comp=E,65600µm,0.5s						
HAVL	**Avola**	0.64	285	⇓*i*P	Pg	22 10 39.6	-0.3
HAVL				S	Sg	22 10 47.7	-0.7
HAVL				AML	AML		
	comp=E,71400µm,0.4s						
HAVL				AML	AML		
	comp=N,75250µm,0.4s						
AGST	**Augusta-Monte**	0.70	311	⇓*i*P	Pg	22 10 40.9	-0.2
AGST				S	Sg	22 10 49.7	-0.7
AGST				AML	AML		
	comp=N,17950µm,0.3s						
AGST				AML	AML		
	comp=E,12700µm,1.3s						
HAGA	**Augusta**	0.77	310	⇓*i*P	Pb	22 10 41.8	-0.3
HAGA				S	Sb	22 10 51.6	-0.6
HAGA				AML	AML		
	comp=N,9910µm,1.5s						
HAGA				AML	AML		
	comp=E,10605µm,0.6s						
MEU	**Monte Lauro**	0.83	292	⇓*i*P	Pb	22 10 43.5	+0.2
MEU				S	Sg	22 10 54.7	+0.2
MEU				AML	AML		
MEU				AML	AML		
	comp=E,79000µm,0.3s						
HMDC	**Modica**	0.91	281	⇓*i*P	Pb	22 10 43.2	-1.3
HMDC				S	Sb	22 10 54.0	-2.3
HMDC				AML	AML		
	comp=E,44300µm,0.4s						
HMDC				AML	AML		
	comp=N,6440µm,0.3s						
EPOZ	**Pozzillo**	0.97	318	⇓*i*P	Pn	22 10 46.9	+0.9
EPOZ				S	Sn	22 11 00.6	+1.3
EPOZ				AML	AML		
	comp=E,13400µm,0.6s						
EPOZ				AML	AML		
	comp=N,18000µm,0.4s						
HLNI	**Lentini**	0.98	304	⇓*i*P	Pb	22 10 45.0	-0.9
HLNI				S	Sb	22 10 57.1	-1.4
HLNI				AML	AML		
	comp=E,43100µm,0.5s						
HLNI				AML	AML		
	comp=N,30550µm,0.5s						
HVZN	**Vizzini**	1.02	292	⇓P	Pb	22 10 45.3	-1.1
HVZN				S	Sb	22 10 58.0	-1.5
ESML	**S. M. di Licod**	1.15	316	⇓*i*P	Pn	22 10 47.9	-0.7
ESML				S	Sb	22 11 02.2	-1.2
ESML				AML	AML		
	comp=E,8075µm,0.2s						
ESML				AML	AML		
	comp=N,6385µm,0.4s						
MTTG	**Motta San Giov**	1.21	353	⇓*e*P	Pb	22 10 50.1	+0.3
MTTG				S	Sb	22 11 05.3	+0.1
MTTG				AML	AML		
	comp=N,3940µm,0.5s						
MTTG				AML	AML		
	comp=E,2550µm,0.4s						
SOI	**Samo**	1.28	6	⇑P	Pb	22 10 51.4	+0.5
SOI				S	Sn	22 11 08.0	+0.9
SOI				AML	AML		
	comp=N,2585µm,0.8s						
SOI				AML	AML		
	comp=N,2590µm,0.8s						
SOI				AML	AML		
	comp=E,3845µm,1.5s						
AIO	**Antillo**	1.29	336	⇓*e*P	Pn	22 10 50.4	-0.1
AIO				AML	AML		
	comp=E,5415µm,0.7s						
AIO				AML	AML		
	comp=N,9265µm,0.6s						
EPZF	**Pizzo Felice**	1.32	321	⇓P	Pn	22 10 51.2	+0.2
EPZF				AML	AML		
	comp=E,6540µm,1.5s						
EPZF				AML	AML		
	comp=N,9280µm,0.4s						
VAE	**Valguarnera**	1.37	300	Pn	Pb	22 10 52.5	+0.1
	comp=N,102nm,0.3s,baz=344,slow=4.7,SNR=297						
VAE				Sn	Sn	22 11 07.8	-1.5
	comp=N,321nm,0.3s,baz=108,slow=3.2,SNR=13						
NOV	**Novara**	1.37	334	⇓P	Pn	22 10 51.8	+0.1
NOV				S	Sn	22 11 09.5	+0.1
NOV				AML	AML		
	comp=N,19200µm,0.4s						
NOV				AML	AML		
	comp=E,32650µm,0.4s						
GMB	**Gambarie**	1.37	358		Pb	22 10 52.7	+0.2
GMB	**Gambarie**	1.37	358	P	Pb	22 10 52.6	+0.2
GMB				S	Sn	22 11 09.9	+0.3
GMB				AML	AML		
	comp=N,18050µm,0.3s						
GMB				AML	AML		
	comp=E,16800µm,0.5s						
CAGR	**Agira**	1.39	307	⇓P	Pn	22 10 52.3	+0.5
CAGR				AML	AML		
	comp=N,11435µm,0.7s						
CAGR				AML	AML		
	comp=E,11800µm,0.7s						
GALF	**Gagliano Caste**	1.40	311	⇓P	Pn	22 10 52.1	+0.1
GALF				AML	AML		
	comp=E,5465µm,0.4s						
GALF				AML	AML		
	comp=N,5655µm,0.4s						
MPNC	**Port Mandanici**	1.41	342	P	Pn	22 10 52.4	+0.2
CEL	**Celeste**	1.46	0		Pb	22 10 53.9	-0.1
CEL				Sn	Sb	22 11 12.7	+0.3
CEL	**Celeste**	1.46	0	P	Pb	22 10 54.3	+0.2
CEL				S	Sb	22 11 12.7	+0.3
CEL				AML	AML		
	comp=E,4180µm,0.5s						
CEL				AML	AML		
	comp=E,4940µm,0.5s						
CEL				AML	AML		
	comp=E,4175µm,0.5s						
CEL				AML	AML		
	comp=N,2590µm,0.4s						
CEL				AML	AML		
	comp=N,3200µm,0.4s						
WDD	**Wied Dalam**	1.46	230	P	Pn	22 10 51.3	-1.5
WDD				AML	AML		
	comp=E,9090µm,0.8s						
WDD				AML	AML		
	comp=N,7110µm,0.3s						
WDD				AML	AML		
	comp=E,7990µm,0.9s						
WDD				AML	AML		
	comp=N,6895µm,0.3s						
MNO	**Monte Soro**	1.48	320	P	Pb	22 10 54.4	-0.1
MNO				AML	AML		
	comp=E,7550µm,0.5s						
MNO				AML	AML		
	comp=E,7555µm,0.5s						
MNO				AML	AML		
	comp=N,6385µm,0.5s						
CLTA	**Licata**	1.59	284	⇓P	Pn	22 10 54.4	-0.1
CLTA				AML	AML		
	comp=N,22300µm,0.3s						
CLTA				AML	AML		
	comp=E,10915µm,0.4s						
MSFR	**San Fratello**	1.61	320	⇓P	Pn	22 10 55.0	0.0
MSFR				AML	AML		
	comp=E,1345µm,0.7s						
MSFR				AML	AML		
	comp=N,1455µm,1.5s						
PLAC	**Placanica**	1.71	15		Pb	22 10 58.2	0.0
PLAC	**Placanica**	1.71	15	⇑P	Pb	22 10 58.2	0.0
PLAC				S	Sb	22 11 19.8	+0.4
PLAC				AML	AML		
	comp=E,1329µm,1.2s						
PLAC				AML	AML		
	comp=N,1210µm,0.6s						
PLAC				AML	AML		
	comp=N,1290µm,1.2s						
PLAC				AML	AML		
	comp=E,1180µm,0.7s						
VPL	**Vulcano Piano**	1.74	336	⇓P	Pn	22 10 57.4	+0.7
VPL				S	Sn	22 11 19.6	+1.2
VPL				AML	AML		
	comp=N,35850µm,0.8s						
VPL				AML	AML		
	comp=E,44350µm,0.5s						
PETRA	**Petralia Sopra**	1.76	307	⇓P	Pn	22 10 57.7	+0.7
PETRA				AML	AML		
	comp=N,5060µm,0.5s						
PETRA				AML	AML		
	comp=E,4375µm,0.8s						
CMDO	**Montedoro**	1.78	293	⇓P	Pb	22 10 58.8	-0.7
JOPP	**Joppolo**	1.81	360		Pb	22 10 59.2	-0.7
JOPP	**Joppolo**	1.81	360	P	Pb	22 10 59.1	-0.8
JOPP				AML	AML		
	comp=N,2770µm,0.4s						
JOPP				AML	AML		
	comp=E,1760µm,0.6s						
LLI	**Lipari**	1.81	336	⇓P	Pn	22 10 58.6	+1.0
LLI				AML	AML		
	comp=E,30450µm,0.8s						
LLI				AML	AML		
	comp=N,52900µm,0.6s						
PLLN	**Pollina**	1.83	311	⇓P	Pn	22 10 58.7	+0.7
PLLN				S	Sn	22 11 22.3	+1.4
PLLN				AML	AML		
	comp=E,6690µm,0.6s						
PLLN				AML	AML		
	comp=N,8700µm,0.9s						
PLLN				AML	AML		
	comp=N,8705µm,0.9s						
PLLN				AML	AML		
	comp=E,6685µm,0.6s						
FAVR	**Favara**	1.84	285	⇓P	Pn	22 10 58.2	+0.1
FAVR				AML	AML		
	comp=E,5815µm,0.6s						
FAVR				AML	AML		
	comp=N,7345µm,0.6s						
CSLB	**Castelbuono**	1.85	308	⇓P	Pn	22 10 58.9	+0.6
CSLB				S	Sn	22 11 22.5	+1.2
CSLB				AML	AML		
	comp=N,2315µm,0.8s						
CSLB				AML	AML		
	comp=E,2140µm,0.9s						
GIB	**Gibilmanna**	1.91	309	⇓P	Pn	22 10 59.9	+0.8
GIB				AML	AML		
	comp=E,7475µm,0.7s						
GIB				AML	AML		
	comp=N,5260µm,0.9s						
ALJA	**Alia**	1.95	300	P	Pn	22 11 00.5	+0.9
ALJA				AML	AML		
	comp=E,1620µm,0.4s						
ALJA				AML	AML		
	comp=N,1865µm,0.3s						
MCT	**Mte Cammarata**	1.99	295	P	Pb	22 11 02.2	-0.9
MCT				AML	AML		
	comp=E,1715µm,0.8s						
MCT				AML	AML		
	comp=N,2230µm,0.6s						
IFIL	**Filicudi I Eol**	2.06	330	⇓P	Pn	22 11 00.8	-0.2
IFIL				AML	AML		
	comp=E,12600µm,0.4s						
IFIL				AML	AML		
	comp=N,4615µm,0.4s						
ISTR	**Stromboli Gino**	2.06	345	P	Pn	22 11 01.4	+0.3
ISTR				AML	AML		
	comp=E,2435µm,0.5s						
ISTR				AML	AML		
	comp=N,3125µm,0.4s						
GRI	**Girifalco**	2.07	12	⇓P	Pb	22 11 03.4	-0.9
GRI				AML	AML		
	comp=N,1062µm,0.5s						
GRI				AML	AML		
	comp=E,1630µm,0.3s						
IST3	**Stromboli F**	2.07	346	P	Pn	22 11 01.2	0.0
IST3				AML	AML		
	comp=E,2280µm,1.4s						
IST3				AML	AML		
	comp=N,3225µm,0.3s						
IACL	**Alicudi**	2.12	325	⇓P	Pn	22 11 01.6	-0.3
IACL				AML	AML		
	comp=N,1970µm,0.4s						
IACL				AML	AML		
	comp=E,2290µm,0.8s						
CLTB	**Caltabellotta**	2.28	291		Pn	22 11 03.5	-0.7
CLTB	**Caltabellotta**	2.28	291	P	Pn	22 11 04.6	+0.5
SOLUN	**Solunto**	2.28	305	⇓P	Pn	22 11 04.4	+0.3
SOLUN				S	Sn	22 11 30.5	-1.3
SOLUN				AML	AML		
	comp=E,842µm,1.0s						
SOLUN				AML	AML		
	comp=N,786µm,0.7s						
SERS	**Sersale**	2.32	15	⇑P	Pb	22 11 07.0	-1.7
SERS				S	Sn	22 11 35.2	+2.1
SERS				AML	AML		
	comp=E,934µm,0.4s						
SERS				AML	AML		
	comp=E,681µm,0.4s						
SERS				AML	AML		
	comp=N,628µm,0.4s						
SERS				AML	AML		
	comp=N,891µm,1.4s						
MPG	**Monte Pellegri**	2.43	305	⇓P	Pn	22 11 06.4	+0.1
MPG				AML	AML		
	comp=E,596µm,1.0s						
MPG				AML	AML		
	comp=N,725µm,0.6s						
CAR1	**CAROLEI**	2.47	6	P	Pn	22 11 08.1	+1.3
CAR1				AML	AML		
	comp=N,2195µm,0.7s						
CAR1				AML	AML		
	comp=N,2540µm,0.7s						
CAR1				AML	AML		
	comp=E,2815µm,0.7s						
CAR1				AML	AML		
	comp=E,2915µm,0.7s						
TIP	**Timpagrande**	2.48	16		Pn	22 11 08.8	+1.9
TIP	**Timpagrande**	2.48	16	⇑P	Pn	22 11 08.8	+1.9
TIP				AML	AML		
	comp=E,384µm,0.6s						
TIP				AML	AML		
	comp=N,594µm,1.3s						
TIP				AML	AML		
	comp=E,334µm,0.6s						
TIP				AML	AML		
	comp=N,738µm,1.3s						

MMGO	Monte Magaggia	2.48	291	P	Pn	22 11 05.4	-1.5
SPS2	Spezzano della	2.52	8	P	Pn	22 11 09.2	+1.8
SPS2				AML	AML		
	comp=E,502µm,0.3s						
SPS2				AML	AML		
	comp=N,608µm,1.6s						
MFNL	Monte Finestre	2.57	294	P	Pn	22 11 07.8	-0.3
LADO	San Nicola del	2.63	19	⇑P	Pn	22 11 10.6	+1.6
CELI	Celico	2.65	10	P	Pn	22 11 11.6	+2.3
CELI				S	Sn	22 11 42.5	+1.5
CELI				AML	AML		
	comp=N,1775µm,1.3s						
CELI				AML	AML		
	comp=E,1520µm,0.7s						
CET2	Cetraro	2.73	1	P	Pn	22 11 11.5	+1.2
CET2				AML	AML		
	comp=N,2350µm,0.9s						
CET2				AML	AML		
	comp=E,2185µm,0.8s						
PIPA	Pietrapaola	2.78	15	⇑P	Pn	22 11 13.1	+2.1
PIPA				AML	AML		
	comp=N,865µm,0.4s						
PIPA				AML	AML		
	comp=E,754µm,0.3s						
PIPA				AML	AML		
	comp=E,764µm,0.3s						
PIPA				AML	AML		
	comp=N,863µm,0.4s						
USI	Ustica	2.88	312	P	Pn	22 11 11.5	-0.8
USI				AML	AML		
	comp=E,1360µm,1.4s						
USI				AML	AML		
	comp=N,1465µm,0.5s						
TDS	Terranova Siba	2.88	7	P	Pn	22 11 14.1	+1.7
TDS				AML	AML		
	comp=N,336µm,0.8s						
TDS				AML	AML		
	comp=E,192µm,1.2s						
ERC	Erice	2.91	296	P	Pn	22 11 12.4	-0.4
LPDG	Lampedusa Capo	2.93	245	P	Pn	22 11 10.9	-2.2
MMN	Mormanno	3.09	1	P	Pn	22 11 17.0	+1.8
MMN				AML	AML		
	comp=E,324µm,0.2s						
MMN				AML	AML		
	comp=N,624µm,0.2s						
SALB	San Lorenzo Be	3.10	6	P	Pn	22 11 17.8	+2.3
SALB				AML	AML		
	comp=N,374µm,0.7s						
SALB				AML	AML		
	comp=E,668µm,0.9s						
CUC	Castrocucco	3.19	359		Pn	22 11 17.8	+1.1
CUC	Castrocucco	3.19	359	P	Pn	22 11 17.8	+1.1
CUC				AML	AML		
	comp=N,610µm,0.3s						
CUC				AML	AML		
	comp=N,506µm,0.4s						
CUC				AML	AML		
	comp=E,764µm,0.5s						
CUC				AML	AML		
	comp=E,611µm,0.5s						
ORI	Oriolo Calabro	3.29	7	P	Pn	22 11 20.4	+2.4
BULG	Bulgheria - Ca	3.30	353	P	Pn	22 11 18.8	+0.6
BULG				AML	AML		
	comp=E,887µm,0.3s						
BULG				AML	AML		
	comp=N,1550µm,1.3s						
BULG				AML	AML		
	comp=E,940µm,0.3s						
BULG				AML	AML		
	comp=N,1585µm,1.3s						
MGR	Morigerati	3.35	356	P	Pn	22 11 19.5	+0.7
MGR				AML	AML		
	comp=E,636µm,0.3s						
MGR				AML	AML		
	comp=E,560µm,0.4s						
MGR				AML	AML		
	comp=N,532µm,0.3s						
MGR				AML	AML		
	comp=N,655µm,0.9s						
SIRI	Monte Sirino -	3.38	360	P	Pn	22 11 20.5	+1.1
SIRI				AML	AML		
	comp=N,600µm,0.3s						
SIRI				AML	AML		
	comp=N,628µm,0.3s						
SIRI				AML	AML		
	comp=E,708µm,0.3s						
SIRI				AML	AML		
	comp=E,728µm,0.3s						
SCHR	S. Chirico Rap	3.40	2	P	Pn	22 11 21.1	+1.5
SCHR				AML	AML		
	comp=N,242µm,0.5s						
SCHR				AML	AML		
	comp=E,259µm,0.7s						
MTSN	Montesano sull	3.47	358	P	Pn	22 11 21.5	+1.0
MTSN				S	Sn	22 12 01.4	+0.2
MTSN				AML	AML		
	comp=N,410µm,0.4s						
MTSN				AML	AML		
	comp=E,365µm,0.5s						
MCEL	Monticello	3.52	359	P	Pn	22 11 22.5	+1.2
MCEL				AML	AML		
	comp=E,396µm,0.4s						
MCEL				AML	AML		
	comp=N,369µm,0.3s						
MCEL				AML	AML		
	comp=E,390µm,0.4s						
MCEL				AML	AML		
	comp=N,351µm,0.3s						
CMPR	Campora	3.55	353	P	Pn	22 11 22.2	+0.6
CMPR				AML	AML		
	comp=E,542µm,0.4s						
CMPR				AML	AML		
	comp=N,708µm,0.3s						
CRAC	Craco	3.59	7	P	Pn	22 11 24.9	+2.8
CRAC				AML	AML		
	comp=N,653µm,1.0s						
CRAC				AML	AML		
	comp=E,678µm,0.4s						
SLCN	Sala Consilina	3.59	357	P	Pn	22 11 23.4	+1.1
CDRU	Civita di Ruta	3.72	353	P	Pn	22 11 24.8	+0.8
CDRU				AML	AML		
	comp=E,506µm,0.2s						
CDRU				AML	AML		
	comp=N,232µm,0.3s						
KEF3	Kipouria, Keph	3.81	67	P	Pn	22 11 27.2	+2.1
MIGL	Miglionico	3.83	6	P	Pn	22 11 27.0	+1.6
MIGL				AML	AML		
	comp=N,870µm,0.5s						
MIGL				AML	AML		
	comp=E,896µm,0.5s						
DMLN	Damoulianata-K	3.84	67	P	Pn	22 11 27.3	+1.7
PZUN	Potenza	3.84	359	P	Pn	22 11 28.5	+2.9
SCTE	Santa Cesarea	3.85	31		Pn	22 11 25.8	+0.2
SCTE	Santa Cesarea	3.85	31	P	Pn	22 11 25.8	+0.2
SCTE				AML	AML		
	comp=N,399µm,1.1s						
SCTE				AML	AML		
	comp=E,628µm,0.7s						
LTRZ	Laterza	3.87	11	⇑P	Pn	22 11 26.4	+0.4
KEF4	Livadi, Kephal	3.89	67	P	Pn	22 11 27.8	+1.6
MATE	Matera	3.90	9	⇑P	Pn	22 11 27.1	+0.7
MATE				⇑S	Sn	22 12 08.5	-3.2
MATE	Matera	3.90	9	P	Pn	22 11 26.9	+0.5
MATE				AML	AML		
	comp=E,429µm,0.2s						
MATE				AML	AML		
	comp=N,390µm,1.3s						
PSDA	Pessada-Kefalo	3.96	69	P	Pn	22 11 28.7	+1.6
MRLC	Muro Lucano	3.97	356	P	Pn	22 11 29.7	+2.4
MRLC				AML	AML		
	comp=E,232µm,1.0s						
MRLC				AML	AML		
	comp=N,236µm,0.4s						
VLS	Valsamata	3.98	68	P	Pn	22 11 28.8	+1.3
VLS	Valsamata	3.98	68	P	Pn	22 11 28.8	+1.3
VLS				AML	AML		
	comp=N,688µm,0.7s						
VLS				AML	AML		
	comp=E,781µm,0.4s						
ACER	Acerenza	3.98	1	P	Pn	22 11 29.5	+1.9
ACER				AML	AML		
	comp=E,597µm,0.4s						
ACER				AML	AML		
	comp=N,391µm,0.6s						
MCRV	Calabrutti - M	4.02	352	P	Pn	22 11 29.8	+1.7
FSK	Fiskardo	4.06	64	P	Pn	22 11 31.0	+2.4
MESG	Mesagne	4.08	21	P	Pn	22 11 29.0	+0.1
NOCI	Noci	4.09	13	P	Pn	22 11 28.9	-0.1
NOCI				AML	AML		
	comp=N,966µm,0.9s						
NOCI				AML	AML		
	comp=E,832µm,0.5s						
LIO3	Lioni	4.13	352	P	Pn	22 11 32.4	+2.8
AMUR	Altamura	4.14	7	P	Pn	22 11 30.1	+0.3
AMUR				AML	AML		
	comp=N,441µm,0.3s						
AMUR				AML	AML		
	comp=E,550µm,0.3s						
PALZ	Palazzo San Ge	4.14	1	P	Pn	22 11 30.8	+1.0
PALZ				AML	AML		
	comp=E,305µm,0.6s						
PALZ				AML	AML		
	comp=N,324µm,0.4s						
SNAL	S. Angelo Dei	4.16	353	P	Pn	22 11 32.7	+2.7
SNAL				AML	AML		
	comp=N,198µm,1.0s						
SNAL				AML	AML		
	comp=E,169µm,1.2s						
VULT	Monte Vulture	4.16	357	P	Pn	22 11 33.7	+3.7
DRAG	Dragano-Lefkad	4.16	62	P	Pn	22 11 31.5	+1.5
VCRE	Vesuvio Crater	4.18	345	P	Pn	22 11 31.9	+1.7
VBKN	Vesuvio Bunker	4.19	345	P	Pn	22 11 32.4	+2.0
EVGI	Lefkada island	4.19	63	P	Pn	22 11 32.5	+2.1
VVDG	Vesuvio Valle	4.19	345	P	Pn	22 11 31.5	+1.1
RSF3	Rocca San Feli	4.20	353	P	Pn	22 11 32.9	+2.4
KEK	Kerkira	4.24	45	P	Pn	22 11 31.4	+0.4
KEK	Kerkira	4.24	45	Pn	Pn	22 11 31.6	+0.6
CAFE	Carife	4.26	353	P	Pn	22 11 34.0	+2.7
NYDR	Nydri-Lefkada	4.26	62	P	Pn	22 11 33.1	+1.8
LKD2	Lefkada island	4.27	61	P	Pn	22 11 33.0	+1.6
TSLK	Tsoukalades, L	4.28	60	P	Pn	22 11 33.2	+1.6
PAOL	Paolisi	4.35	347		Pn	22 11 33.4	+0.7
CAPA	Cerignola FG	4.36	359	P	Pn	22 11 33.5	+0.9
MRB1	Monte Rocchett	4.38	351	P	Pn	22 11 35.8	+2.7
IGT	Igoumenitsa	4.44	51	P	Pn	22 11 34.5	+0.7
SRN	Sarande	4.46	45	P	Pn	22 11 34.5	+0.4
SRN	Sarande	4.46	45	P	Pn	22 11 34.4	+0.3
SRN				AML	AML		
	comp=N,168µm,0.3s						
SRN				AML	AML		
	comp=E,217µm,0.6s						
VITU	Vitulano (BN)	4.49	348	P	Pn	22 11 36.5	+2.0
VITU				AML	AML		
	comp=E,133µm,0.4s						
VITU				AML	AML		
	comp=N,174µm,0.6s						
PSB1	Pescosannita	4.50	350	P	Pn	22 11 36.5	+1.8
PIGN	Pignataro Magg	4.60	344	P	Pn	22 11 37.8	+1.9
MOCO	Biccari - m.te	4.60	353	P	Pn	22 11 38.6	+2.5
RLS	Riolos of Patr	4.61	72	P	Pn	22 11 38.6	+2.5
MODR	Mondragone	4.62	341	P	Pn	22 11 36.3	+0.1
VLO	Vlora	4.63	36		Pn	22 11 36.9	+0.6
PTRJ	Pietraroja	4.68	347	P	Pn	22 11 38.9	+1.7
PYL	PYLOS	4.69	87	P	Pn	22 11 38.6	+1.3
SGG	Gregorio Mates	4.73	346	P	Pn	22 11 39.7	+1.8
DRO	Drossia	4.78	74	P	Pn	22 11 41.4	+3.0
VAGA	Valle Agricola	4.79	345	P	Pn	22 11 42.1	+3.5
PVO	Paravola	4.82	66	P	Pn	22 11 41.7	+2.7
ITM	Ithomi	4.85	84	P	Pn	22 11 41.3	+1.9
ITM	Ithomi	4.85	84	Pn	Pn	22 11 41.2	+1.9
ITM	Ithomi	4.85	84	P	Pn	22 11 41.4	+1.9
BSSO	Busso	4.85	348	P	Pn	22 11 42.1	+2.6
MSAG	Monte S. Angel	4.91	0	P	Pn	22 11 40.6	+0.3
CIGN	Sant'Elia a Pi	4.91	351	P	Pn	22 11 43.1	+2.8
SGRT	San Giovanni R	4.95	359	Pn	Pn	22 11 41.2	+0.3
SGRT	San Giovanni R	4.95	359	P	Pn	22 11 41.4	+0.4
APRC	Apricena	4.96	357	P	Pn	22 11 41.9	+0.9
CERA	Filignano	5.01	344	P	Pn	22 11 43.8	+2.1
EFP	Efpalio	5.04	69	P	Pn	22 11 44.8	+2.7
LAKA	Lakka	5.05	72	P	Pn	22 11 44.7	+2.5
RNI2	Rionero Sannit	5.08	345	P	Pn	22 11 45.7	+3.0
ANX	Ano Chora	5.11	68	P	Pn	22 11 45.7	+2.7
KLV	Kalavryta, Ach	5.13	74	P	Pn	22 11 46.3	+2.9
KLV	Kalavryta, Ach	5.13	74	P	Pn	22 11 46.3	+2.9
EVR	Evrytania	5.14	64	P	Pn	22 11 46.8	+3.3
TRIP	Tripoli	5.15	80	P	Pn	22 11 45.5	+1.9
GIUL	Giuliano Di Ro	5.18	337	P	Pn	22 11 46.3	+2.3
POFI	Posta Fibreno	5.20	342	P	Pn	22 11 46.8	+2.6
GUR	Goura	5.26	76	P	Pn	22 11 47.8	+2.6
TREM	Isole Tremiti	5.33	357	P	Pn	22 11 47.7	+1.7
VVLD	Villa Vallelon	5.37	342	P	Pn	22 11 48.2	+1.6
KEST	Kesra	5.39	261	Pn	Pn	22 11 46.4	-0.6
	comp=N,1.4nm,0.3s,baz=64,slow=9.5,SNR=51						
KEST				Sn	Sn	22 12 44.1	-4.6
	comp=N,5.4nm,0.3s,baz=221,slow=20,SNR=17						
KEST				LR	LR	22 14 32.2	
	comp=N,148nm,18.5s,baz=133,slow=47						
	comp=N,11nm,0.6s						
KEST	Kesra	5.39	261		Pn	22 11 46.3	-0.7
MAKR	Makrakomi, Fth	5.41	64	P	Pn	22 11 50.9	+3.8
KBN	Korca	5.41	44		Pn	22 11 48.5	+1.3
TAMR	Tamra	5.44	275	P	Pn	22 11 46.0	-1.5
TIR	Tirane	5.50	33	ePn	Pn	22 11 48.3	0.0
TIR				eSn	Sn	22 12 48.6	-2.5
TIR	Tirane	5.50	33	Pn	Pn	22 11 48.7	+0.4
THL	Klokotos Trika	5.56	58	P	Pn	22 11 51.2	+2.1
VLI	Veliai	5.66	89	P	Pn	22 11 52.9	+2.4
KTHR	Kythira	5.75	93	P	Pn	22 11 53.6	+1.8
OHR	Ohrid	5.76	40	ePn	Pn	22 11 52.5	+0.5
OHR				eSn	Sn	22 12 54.3	-3.4
LTK	Loutraki	5.76	76	P	Pn	22 11 54.0	+2.0
ULC	Ulcinj	5.78	26	⇓iPn	Pn	22 11 51.3	-0.9
ULC				i Sn	Sn	22 12 51.2	-6.8
KTHA	Kythira Island	5.80	93	P	Pn	22 11 54.4	+1.9
CGL	Cagliari Serpe	5.80	298	P	Pn	22 11 51.6	-0.9
VSL	Villasalto	5.80	300	Pn	Pn	22 11 51.9	-0.6
VSL	Villasalto	5.80	300	P	Pn	22 11 51.7	-0.7
EPID	Epidavros	5.83	80	P	Pn	22 11 55.1	+2.2
KRND	KRANIDI	5.83	82	P	Pn	22 11 54.9	+2.0
FNA	Florina	5.85	45		Pn	22 11 54.4	+1.2
DRME	Dracevica, Mon	5.96	24	ePn	Pn	22 11 54.1	-0.5
DRME	Dracevica, Mon	5.96	24	ePn	Pn	22 11 54.0	-0.5
DRME				i Sn	Sn	22 12 55.2	-7.2
ATAL	Atalanti	5.96	69	P	Pn	22 11 56.3	+1.7
BUM	Brajici-Budva	5.97	22	ePn	Pn	22 11 53.6	-1.2
BUM				i Sn	Sn	22 12 55.8	-7.0
HCY	Herceg Novi	5.99	19	ePn	Pn	22 11 53.7	-1.3
HCY	Herceg Novi	5.99	19	ePn	Pn	22 11 53.8	-1.3
HCY				eSn	Sn	22 12 56.3	-7.0
PHP	Peshkopia	6.02	34	P	Pn	22 11 56.1	+0.5
LIT	Litokhoron	6.14	55		Pn	22 11 58.2	+1.0
PDG	Podgorica	6.20	24	⇓P	Pn	22 11 57.2	-0.6
PDG				⇑S	Sn	22 13 02.5	-5.8
PDG	Podgorica	6.20	24	ePn	Pn	22 11 57.3	-0.6
PDG				eSn	Sn	22 13 04.2	-4.1
PDG	Podgorica	6.20	24	Pn	Pn	22 11 57.4	-0.5
PDG	Podgorica	6.20	24	ePn	Pn	22 11 57.2	-0.6
TTG	Podgorica	6.20	24	⇓iPn	Pn	22 11 57.1	-0.8
TTG				i Sn	Sn	22 13 01.1	-7.2
CEME	Cevo	6.20	21	ePn	Pn	22 11 56.9	-1.1
CEME				i Sn	Sn	22 13 01.1	-7.4
TREB	Trebinje	6.21	17	ePn	Pn	22 11 57.6	-0.5
TREB				eSn	Sn	22 13 03.2	-5.4
TREB	Trebinje	6.21	17	ePn	Pn	22 11 57.1	-1.0
XOR	Xorichti	6.30	64	P	Pn	22 12 00.9	+1.5
NEO	Neokhori	6.30	64	P	Pn	22 12 01.5	+2.1
ATHU	Athens Univers	6.39	77	P	Pn	22 12 02.5	+1.9
NKME	Niksic	6.41	21	⇓iPn	Pn	22 12 00.2	-0.7
NKME				i Sn	Sn	22 13 06.3	-7.4
BRY	Bratogost	6.43	18	ePn	Pn	22 12 00.1	-1.1
BRY	Bratogost	6.43	18	⇑iPn	Pn	22 12 00.5	-0.7
BRY				i Sn	Sn	22 13 06.9	-7.3
NKY	Niksic	6.47	21	⇑iPn	Pn	22 12 01.1	-0.6
NKY				i Sn	Sn	22 13 07.7	-7.4
PVY	Plav	6.58	27	⇑iPn	Pn	22 12 02.8	-0.6
PVY				i Sn	Sn	22 13 10.7	-7.4
KOME	Kolasin	6.66	24	⇓iPn	Pn	22 12 04.0	-0.3
KOME				i Sn	Sn	22 13 12.1	-7.7
IVA	Berane	6.80	26	ePn	Pn	22 12 06.7	+0.4
IVA				i Sn	Sn	22 13 15.9	-7.5
UPM	Unac-Piva	6.80	19	ePn	Pn	22 12 06.3	-0.1
UPM	Unac-Piva	6.80	19	ePn	Pn	22 12 05.9	-0.5
UPM				eSn	Sn	22 13 16.0	-7.5
VAY	Valandovo	6.88	47	ePn	Pn	22 12 07.1	-0.2
VAY				eSn	Sn	22 13 22.7	-2.5
PLE	Pljevlja	7.05	21	ePn	Pn	22 12 09.4	-0.4
PLE				i Sn	Sn	22 13 21.8	-7.8
CASP	Castiglione de	7.13	329	Pn	Pn	22 12 12.4	+1.7
SJES	Sjenica	7.18	25	ePn	Pn	22 12 12.3	+0.8
SJES				eSn	Sn	22 13 27.9	-4.7
SJES	Sjenica	7.18	25	ePn	Pn	22 12 11.4	-0.1
RUDO	Rudo	7.32	20	ePn	Pn	22 12 12.5	-0.8
SRKY	Kupres RS	7.33	7	ePn	Pn	22 12 14.7	+1.2
PRVS	Prvonek	7.43	38	ePn	Pn	22 12 14.3	-0.6
IDI	Anoyia	7.44	99	⇓P	Pn	22 12 16.8	+1.7
IDI	Anoyia	7.44	99	Pn	Pn	22 12 16.6	+1.5
	comp=N,13nm,0.3s,baz=304,slow=12,SNR=35						
IDI				Sn	Sn	22 13 36.1	-3.1
	comp=N,9.3nm,0.3s,baz=78,slow=15,SNR=10						
IDI				LR	LR	22 15 47.4	
	comp=N,136nm,21.9s,baz=269,slow=43						
	comp=N,33nm,0.4s						
IDI	Anoyia	7.44	99	P	Pn	22 12 15.8	+0.7
BARS	Barje	7.54	35	ePn	Pn	22 12 16.6	+0.2
BARS	Barje	7.54	35	ePn	Pb	22 12 29.6	-8.0
BARS				eSn	Sn	22 13 37.6	-3.9
BARS				eSn	Sb	22 14 02.4	-4.8
BBLS	Lazići	7.55	20	ePn	Pn	22 12 16.5	-0.1
BBLS				eSn	Sn	22 13 35.5	-6.3
BBLS	Lazići	7.55	20	ePn	Pn	22 12 16.5	-0.1
SELS	Selova	7.56	30	ePn	Pn	22 12 16.1	-0.6
SELS				eSn	Sn	22 13 36.9	-5.1
BOSS	Bosilegrad	7.63	40	ePn	Pn	22 12 17.0	-0.6
BOSS				eSn	Sn	22 13 39.8	-3.8
MGRS	Mrkonjic Grad	7.67	6	ePn	Pn	22 12 18.2	+0.1
SANT	Santorini	7.71	90	⇓P	Pn	22 12 19.9	+1.1
SANT				⇑S	Sn	22 13 41.8	-3.9
SANT	Santorini	7.71	90	Pn	Pn	22 12 19.6	+0.9
APE	Apeiranthos	7.72	85	⇑P	Pn	22 12 19.6	+0.7
APE				⇑S	Sn	22 13 41.5	-4.6
PGF	Pioggiola	7.83	319	eP	Pn	22 12 23.6	+3.2
PGF				eSn	Sn	22 13 41.8	-6.8
	comp=N,4.7nm,0.5s						
DIVS	Divibare	7.93	22	ePn	Pn	22 12 21.5	-0.3
DIVS				eSn	Sn	22 13 45.6	-5.6
DIVS	Divibare	7.93	22		Pn	22 12 21.4	-0.5
DIVS	Divibare	7.93	22	ePn	Pn	22 12 21.5	-0.3
GRUS	Gruza	7.98	26	ePn	Pn	22 12 22.9	+0.5
GRUS				eSn	Sn	22 13 46.3	-6.0
BLY	Banja Luka	8.01	7	ePn	Pn	22 12 22.4	-0.3
BLY	Banja Luka	8.01	7	ePn	Pn	22 12 24.0	+1.3
VTS	Vitosha	8.11	42	⇓P	Pn	22 12 23.1	-1.2
VTS				⇓S	Sn	22 13 47.2	-8.4
VTS	Vitosha	8.11	42	ePn	Pn	22 12 25.1	+0.8
VTS				eSn	Sn	22 13 50.7	-5.0
VTS	Vitosha	8.11	42	Pn	Pn	22 12 24.8	+0.4
BOVS	Bovan	8.15	31	⇑P	Pn	22 12 23.8	-0.9
BOVS				⇓S	Sn	22 13 49.5	-6.8
BOVS	Bovan	8.15	31	ePn	Pn	22 12 24.3	-0.4
BOVS				eSn	Sn	22 13 51.3	-5.0
TRUS	Trudelj	8.18	23	ePn	Pn	22 12 24.7	-0.4
TRUS				eSn	Sn	22 13 51.5	-5.5
TEKS	Tekeris	8.22	18	eSn	Sn	22 13 52.1	-6.1
SVIS	Svilajnac	8.49	27	eSn	Sn	22 13 59.0	-5.7
ZAGS	Zajecar	8.52	33	ePn	Pn	22 12 29.1	-0.6
ZAGS				eSn	Sn	22 14 00.8	-4.6
RDO	Rodhopi	8.68	57	Pn	Pn	22 12 32.6	+0.7
KUBS	Kucevo	8.79	28	ePn	Pn	22 12 31.9	-1.5
SKDS	Skadanscina	8.86	351	ePn	Pn	22 12 35.6	+1.2
FRGS	Fruska Gora	8.86	18	⇑P	Pn	22 12 33.4	-1.1
FRGS				⇑S	Sn	22 14 07.8	-6.1
FRGS	Fruska Gora	8.86	18	ePn	Pn	22 12 32.0	-2.5
FRGS				eSn	Sn	22 14 07.4	-6.5
FRGS	Fruska Gora	8.86	18	ePn	Pn	22 12 31.7	-2.8
ALN	Alexandroupoli	8.92	60	Pn	Pn	22 12 35.9	+0.7
CEY	Cerknica	9.00	353	ePn	Pn	22 12 38.5	+2.1
CRES	Cresnjev	9.03	358	ePn	Pn	22 12 37.8	+1.0
MDVR	Moldovita	9.11	27	⇑P	Pn	22 12 37.4	-0.6
MDVR				⇑S	Sn	22 14 13.2	-6.9
KARP	Karpathos	9.20	94	Pn	Pn	22 12 40.1	+1.0
HERR	Herculane	9.47	29	⇑P	Pn	22 12 42.4	-0.4
HERR				⇓S	Sn	22 14 22.2	-6.4
SBF	Sospel	9.56	320	eP	Pn	22 12 48.5	+4.4
SBF				eSn	Sn	22 14 22.7	-8.5
	comp=N,5.0nm,0.7s						
LMR	La Mourre	9.71	315	ePn	Pn	22 12 44.9	-1.2
LMR				eSn	Sn	22 14 25.9	-8.8
	comp=N,1.7nm,0.5s						
STAL	STALIGIAL	9.75	347	Pn	Pn	22 12 46.4	-0.3
OBKA	Obir	9.76	355	ePn	Pn	22 12 48.7	+1.9
	comp=N,1.3nm,0.5s						
OBKA				eSn	Sn	22 14 36.1	+0.1
	comp=N,3.1nm,0.4s						
CTI	Castel Tesino	9.78	342	Pn	Pn	22 12 47.8	+0.7
BZS	Buzias	9.81	24	⇓P	Pn	22 12 46.7	-0.7
ARG	Arkhangelos	9.87	90	Pn	Pn	22 12 50.0	+1.7
SOKA	Soboth	9.89	357	ePn	Pn	22 12 50.4	+1.7
	comp=N,1.0nm,0.4s						
SOKA				eSn	Sn	22 14 41.2	+1.9
	comp=N,0.3nm,0.2s						
ABTA	Abfaltersbach	10.26	347	ePn	Pn	22 12 55.8	+2.1
	comp=N,0.9nm,0.4s						
ABTA				eSn	Sn	22 14 49.9	+1.6
	comp=N,0.4nm,0.3s						
HUMR	Humele	10.35	39	⇑P	Pn	22 12 54.3	-0.6
KBA	Koelnbreinsper	10.45	350	ePn	Pn	22 12 59.4	+3.1
KBA				eSn	Sn	22 14 53.9	+0.8
	comp=N,0.4nm,0.3s						
ARSA	Arzberg	10.45	359	ePn	Pn	22 12 58.1	+1.8
	comp=N,1.4nm,0.4s						
ARSA				eSn	Sn	22 14 54.8	+1.9
	comp=N,0.5nm,0.3s						
MBDF	Montbardon	10.51	322	ePn	Pn	22 12 56.8	-0.4
MBDF	Montbardon	10.51	322	eP	Pn	22 13 02.3	+5.1
SMRF	Simiane la Rot	10.64	316	eP	Pn	22 13 03.3	+4.4
RONA	Rosalia, Austr	10.90	1	ePn	Pn	22 13 04.9	+2.5
FETA	Feichten	10.91	341	ePn	Pn	22 13 07.3	+4.5
	comp=N,2.0nm,0.8s						
FETA				eSn	Sn	22 15 02.6	-1.9
	comp=N,0.3nm,0.3s						
WTTA	Wattenberg	10.93	345	ePn	Pn	22 13 07.1	+4.2
	comp=N,1.2nm,0.5s						
WTTA				eSn	Sn	22 15 06.9	+2.2
	comp=N,1.3nm,0.4s						
DAVOX	Davos/Dischmat	10.94	338	Pn	Pn	22 13 04.6	+1.5
	comp=N,1.4nm,0.8s,baz=184,slow=23,SNR=3.2						
DAVOX				Sn	Sn	22 15 06.8	+1.8
	comp=N,0.1nm,0.3s,baz=126,slow=22,SNR=1.1						
SQTA	Sankt Quirin	10.98	343	ePn	Pn	22 13 08.3	+4.7
	comp=N,3.9nm,0.7s						
SQTA				eSn	Sn	22 15 07.9	+1.9
	comp=N,1.0nm,0.4s						
AKAS	Kas	11.05	89	Pn	Pn	22 13 05.2	+0.6
LPG	La Plagne	11.09	324	eP	Pn	22 13 10.1	+4.9
ORIF	Oris-en-Rattie	11.10	320	eP	Pn	22 13 09.3	+4.1
LPL	La Plagne	11.11	324	eP	Pn	22 13 09.0	+3.5
MOA	Molln	11.11	354	ePn	Pn	22 13 08.4	+3.1
	comp=N,1.6nm,0.6s						
MOTA	Moosalm	11.12	343	ePn	Pn	22 13 10.0	+4.4
	comp=N,6.5nm,0.8s						
MOTA				eSn	Sn	22 15 10.8	+1.2
	comp=N,0.6nm,0.4s						
CONA	Conrad Observa	11.13	360	ePn	Pn	22 13 07.3	+1.8
	comp=N,0.5nm,0.3s						
DRGR		11.20	25	⇑P	Pn	22 13 05.9	-0.7
DRGR				⇓S	Sn	22 15 04.7	-6.7
ELL	Elmali	11.24	86	Pn	Pn	22 13 09.9	+2.7
RETA	Reutte	11.34	342	ePn	Pn	22 13 13.1	+4.7
	comp=N,0.6nm,0.3s						
MLR	Muntele Rosu	11.52	38	⇓P	Pn	22 13 08.7	-2.3
MLR	Muntele Rosu	11.52	38	Pn	Pn	22 13 14.6	+3.6
	comp=N,0.2nm,0.3s,baz=326,slow=7.2,SNR=5.1						
MLR				LR	LR	22 19 08.3	
	comp=N,51nm,19.1s,baz=209,slow=45						
	comp=N,2.3nm,0.8s						
MLR	Muntele Rosu	11.52	38		Pn	22 13 13.7	+2.8
BORA	Eskisehir	11.84	71	Pn	Pn	22 13 17.6	+2.2
GERES	GERESS Array B	12.15	353	Pn	Pn	22 13 20.0	+0.5
	comp=N,0.2nm,0.3s,baz=170,slow=13,SNR=8.0						
	comp=N,0.5nm,0.5s						
GERES	GERESS Array B	12.15	353	Pn	Pn	22 13 20.4	+0.9
VRI	Vrincioaia	12.17	39	⇑P	Pn	22 13 18.2	-1.6
VRAC	Vranov	12.52	2	LR	LR	22 18 18.2	
	comp=N,15nm,18.0s,baz=156,slow=37						
BURAR	Bucovina Array	12.82	30	⇓P	Pn	22 13 28.4	-0.3
BURAR	Bucovina Array	12.82	30	Pn	Pn	22 13 30.6	+1.9
BUR08	Bucovina Ar. S	12.84	29	Pn	Pn	22 13 30.0	+1.1
BRTR	Keskin Array B	14.25	73	Pn	P	22 13 52.5	-3.1
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=6.5						
BRTR				LR	LR	22 20 03.2	

	comp=N,55nm,19.1s,baz=270,slow=40						
	comp=N,0.9nm,0.7s						
BRTR	Keskin Array B	14.25	73	Pn	Pn	22 13 49.1	+0.8
CSS	Mathiatis	14.26	92	Pn	Pn	22 13 46.7	-1.7
ESBB	Sonseca Array	15.86	286	Pn	Pn	22 14 09.7	-0.1
ESDC	Sonseca Array	15.86	286	Pn	Pn	22 14 09.4	-0.4
	comp=N,0.1nm,0.3s,baz=91,slow=11,SNR=5.9						
ESDC				LR	LR	22 20 13.0	
	comp=N,75nm,18.7s,baz=92,slow=37						
	comp=N,1.5nm,0.8s						
ESDC	Sonseca Array	15.86	286	Pn	Pn	22 14 09.8	+0.1
PAB	San Pablo	16.15	286	Pn	Pn	22 14 13.9	+0.4
OFRI	`Ofer	16.24	99	Pn	Pn	22 14 12.3	-2.3
SLTI	Sal'it	16.42	100	Pn	Pn	22 14 15.1	-1.7
SLTI				Sn	Sn	22 17 05.2	-13
MMAI	Mount Meron Ar	16.44	98	Pn	Pn	22 14 18.1	+0.9
	comp=N,4.1nm,0.3s,baz=30,slow=15,SNR=6.2						
	comp=N,1.7nm,0.3s						
KZIT	Kziot	16.45	106	Pn	Pn	22 14 15.3	-1.9
GEM	Giv'at Ha'Em	16.59	97	Pn	Pn	22 14 17.1	-1.9
AMAZ	Amatzia	16.59	103	Pn	Pn	22 14 17.6	-1.4
NATI	Neve Ativ	16.63	96	Pn	Pn	22 14 18.1	-1.4
MMLI	Mount Malkishu	16.65	99	Pn	Pn	22 14 18.6	-1.2
HMDT	Nahal Hemdat	16.80	100	Pn	Pn	22 14 20.0	-1.6
YTIR	Yattir	16.82	103	Pn	Pn	22 14 20.6	-1.4
YTIR				Sn	Sn	22 17 14.7	-14
AKASG	Malin Array Be	16.87	30	Pn	P	22 14 24.0	-0.5
	comp=N,0.5nm,0.3s,baz=224,slow=9.7,SNR=7.2						
	comp=N,0.2nm,0.3s						
DSI	Dead Sea	16.94	102	Pn	Pn	22 14 22.8	-0.6
DSI				Sn	Sn	22 17 17.7	-14
KRMI	Paran Flat	17.06	108	Pn	Pn	22 14 23.6	-1.3
PRNI	Paran	17.16	106	Pn	Pn	22 14 25.1	-1.2
PRNI				Sn	Sn	22 17 23.7	-13
GHAJ	Ghor Haditha	17.19	103	Pn	Pn	22 14 25.9	-0.7
MDT	Midelt	17.29	263	LR	LR	22 21 54.6	
	comp=N,65nm,19.0s,baz=117,slow=40						
HRFI	Mount Harif	17.33	107	Pn	Pn	22 14 27.6	-0.8
HRFI				Sn	Sn	22 17 27.2	-14
MBRI	Mt Berech	17.35	108	Pn	Pn	22 14 28.0	-0.7
EIL	Elat	17.44	109	P	Pn	22 14 28.7	-1.0
	comp=N,2.2nm,0.3s,baz=191,slow=6.0,SNR=12						
	comp=N,6.0nm,0.4s						
EIL	Elat	17.44	109	Pn	Pn	22 14 28.6	-1.1
ASF	Jabal al Asfar	17.91	99	P	Pn	22 14 34.8	-0.8
	comp=N,1.1nm,0.3s,baz=294,slow=4.9,SNR=16						
	comp=N,4.3nm,0.6s						
PABE	Paberze	19.51	14	P	Pn	22 14 54.8	+0.2
PABE				IAmb	IAmb	22 15 05.9	
	comp=Z,9.2nm,0.8s						
GURO	Guroymak-BITLI	20.75	77	P	Pn	22 15 08.9	-0.7
GURO				IAmb	IAmb	22 15 12.0	
	comp=Z,5.3nm,0.7s						
KIV	Kislovodsk	21.57	62	P	P	22 15 17.6	+1.7
KIV				IAmb	IAmb	22 15 29.6	
	comp=Z,13nm,1.2s						
KBZ	Khabaz	21.68	63	P	P	22 15 20.1	+3.1
	comp=Z,4.4nm,0.9s,baz=288,slow=9.5,SNR=8.0						
KBZ				LR	LR	22 26 19.4	
	comp=Z,30nm,18.4s,baz=74,slow=44						
	comp=Z,4.4nm,0.9s						
EKA	Eskdalemuir Ar	22.64	331	P	P	22 15 28.2	+1.1
	comp=Z,1.5nm,0.9s,baz=141,slow=9.1,SNR=1.9						
	comp=Z,1.5nm,0.9s						
GNI	Garni	22.79	73	P	P	22 15 30.8	+1.7
	comp=Z,2.5nm,0.8s,baz=350,slow=7.2,SNR=3.6						
GNI				LR	LR	22 25 31.6	
	comp=Z,28nm,19.6s,baz=252,slow=40						
	comp=Z,2.5nm,0.8s						
HFS	Hagfors	23.40	357	P	P	22 15 35.7	+0.8
	comp=Z,0.6nm,0.8s,baz=159,slow=12,SNR=1.2						
	comp=Z,0.6nm,0.8s						
FINES	FINESS Array B	25.49	11	P	P	22 15 55.0	+0.7
	comp=Z,1.4nm,0.9s,baz=185,slow=11,SNR=1.6						
	comp=Z,1.4nm,0.9s						
FINES	FINESS Array B	25.49	11	P	P	22 15 55.0	+0.7
TOA0	Torodi Ar. Sit	26.77	212	P	P	22 16 05.1	-1.2
TOA0				IAmb	IAmb	22 16 05.9	
	comp=Z,3.2nm,0.9s						
TORD	Torodi Ar. Bea	26.77	212	P	P	22 16 05.3	-0.9
	comp=Z,2.0nm,0.7s,baz=18,slow=9.6,SNR=13						
	comp=Z,2.0nm,0.7s						
TORD	Torodi Ar. Bea	26.77	212	P	P	22 16 05.3	-0.9
TORD				IAmb	IAmb	22 16 05.8	
	comp=Z,2.3nm,1.0s						
KOWA	Kowa	28.44	224	P	P	22 16 19.9	-1.3
ABKAR	Akbulak array	34.05	54	P	P	22 17 11.2	+0.9
ABKAR	Akbulak array	34.05	54	P	P	22 17 11.2	+0.9
ABKAR				IAmb	IAmb	22 17 26.6	
	comp=Z,3.7nm,1.4s						
DBIC	Dimbokro	35.47	217	P	P	22 17 20.9	-1.9
	comp=Z,2.4nm,0.5s,baz=40,slow=9.3,SNR=5.4						
DBIC				LR	LR	22 31 57.7	
	comp=Z,42nm,20.0s,baz=80,slow=37						
	comp=Z,2.4nm,0.5s						
DBIC	Dimbokro	35.47	217	P	P	22 17 21.3	-1.5
BORG	Borgarnes	35.62	334	LR	LR	22 33 33.1	
	comp=Z,22nm,19.1s,baz=196,slow=39						
KK31	Karatay Array	41.72	64	P	P	22 18 16.3	+1.2
KKAR	Karatay Array	41.72	64	P	P	22 18 15.4	+0.2
MK31	Makanchi Array	49.15	56	P	P	22 19 15.3	+1.4
MK31				IAmb	IAmb	22 19 29.3	
	comp=Z,2.4nm,1.4s						
MKAR	Makanchi Array	49.15	56	P	P	22 19 14.3	+0.3
	comp=Z,0.3nm,0.5s,baz=272,slow=8.1,SNR=3.9						
MKAR				LR	LR	22 42 14.5	
	comp=Z,16nm,21.4s,baz=162,slow=39						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	49.15	56	P	P	22 19 14.5	+0.5
ZALV	Zalesovo Beam	49.33	47	P	P	22 19 16.0	+0.8
	comp=Z,0.3nm,0.4s,baz=276,slow=8.0,SNR=1.7						
	comp=Z,0.3nm,0.4s						
WMQ	Urumqi	53.63	59	*e*P	P	22 19 51.3	+3.6
GOMU	GeErMu	61.61	64	P	P	22 20 47.3	+2.9
GOMU				pP	sP	22 20 51.5	+0.9
GOMU				sP	pwP	22 20 53.0	-0.1
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,66nm,5.8s						
SONM	Songino Array	64.15	48	P	P	22 21 03.7	+2.9
	comp=Z,0.4nm,0.6s,baz=308,slow=7.1,SNR=1.0						
	comp=Z,0.4nm,0.6s						
BOSA	Boshof	65.66	171	P	P	22 21 09.7	-0.9
	comp=Z,1.1nm,0.6s,baz=23,slow=7.9,SNR=3.8						
	comp=Z,1.1nm,0.6s						
BOSA	Boshof	65.66	171	P	P	22 21 10.0	-0.6
HHC	Hu-ho-hao-te	70.83	53	*e*P	P	22 21 42.5	-0.6
HHC				pmax	pmax		
	comp=Z,68nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,5.0s						
PZH	PanZhiHua	71.53	70	P	P	22 21 48.5	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,7.0s						
YKA	Yellowknife Ar	73.37	338	P	P	22 21 57.6	-0.2
	comp=Z,0.3nm,0.6s,baz=58,slow=5.9,SNR=4.8						
	comp=Z,0.3nm,0.6s						
USRK	Ussuriysk Ar.	80.77	41	P	P	22 22 42.1	+2.4
	comp=Z,0.3nm,0.4s,baz=298,slow=6.4,SNR=1.0						
	comp=Z,0.3nm,0.4s						

UPA ***25*** *22:17:56.3±0.7, 5°.79N×77°.84W, h0^{km}±4^{km}, MW4.1*
RSNC ***25*** *22:17:58.9±0.7, 5°.84N×77°.67W, h32^{km}±7^{km}, ML3.1, Mw3.8*
IDC ***25*** *22:17:59.5±4.3, 5°.89N×77°.38W, h26^{km}±30^{km}, mb3.2/7, mbtmp3.5/9, ML3.3/2, MS3.0/4, Error ellipse: s-maj=35.0km s-min=20.2km az=41.0*
ISC 25 22:17:57.6±0.6, **5°.79N**±0°.03×**77°.66W**±0°.03, **h17^{km}, n45, σ2^{s}.00**/66, **mb3.4**/6, **1D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.50	30	*e*P	Pb	22 18 08.2	+0.2
SOLC				*e*S	Sb	22 18 16.0	+1.1
SOLC				*i*		22 18 21.9	
	comp=Z,3µm,0.3s						
PIZC	Pizarro, Choco	0.88	160	*e*P	Pb	22 18 14.8	+0.4
PIZC				*e*S	Sb	22 18 26.5	+0.7
PIZC				*i*		22 18 51.5	
	comp=Z,864nm,0.5s						
PTAC	Punta Ardita,	1.35	354	*e*P	Pn	22 18 20.2	-1.6
PTAC				*e*S	Sn	22 18 36.1	-3.2
PTAC				*i*		22 18 37.4	
	comp=Z,588nm,0.1s						
PLMC	San Jos del P	1.63	123	*e*P	Pn	22 18 24.8	-0.8
PLMC				*e*S	Sn	22 18 45.4	-0.9
PLMC				*i*		22 18 55.5	
	comp=Z,223nm,0.4s						
CBOC	Ciudad Bolivar	1.64	87	*e*P	Pn	22 18 25.0	-0.8
CBOC				*e*S	Sn	22 18 44.9	-1.8
CBOC				*i*		22 18 53.8	
	comp=Z,157nm,0.4s						
MALC	Bahia Malaga	1.80	170	*e*P	Pn	22 18 27.8	-0.1
MALC				*e*S	Sn	22 18 50.6	+0.3
MALC				*i*		22 18 51.7	
	comp=Z,101nm,0.7s						
DBBC	Dabeiba	1.89	50	*e*P	Pn	22 18 30.2	+1.0
DBBC				*e*S	Sn	22 18 50.2	-2.5
HELC	Santa Helena	2.16	79	*e*P	Pn	22 18 33.8	+0.6
HELC				*e*S	Sn	22 18 58.5	-1.2
HELC				*i*		22 19 11.0	
	comp=Z,71nm,0.5s						
YOTC	Yotoco, Valle	2.23	144	*e*P	Pn	22 18 33.5	-0.4
YOTC				*e*S	Sn	22 18 57.0	-4.0
YOTC				*i*		22 18 57.1	
	comp=Z,36nm,0.5s						
ANIL	Santa Ana	2.59	120	*e*P	Pn	22 18 40.3	+1.2
NORC	Norcasia	2.79	95	*e*P	Pn	22 18 43.3	+1.8
NORC				*e*S	Sn	22 19 15.8	+1.0
NORC				*i*		22 19 26.9	
	comp=Z,60nm,0.5s						
CAPC	Capurgana	2.84	6	*e*P	Pn	22 18 43.2	+0.9
UREC	San Jos de Ur	2.87	47	*e*P	Pn	22 18 45.4	+2.7
UREC				*e*S	Sb	22 19 21.6	-1.7
ORTC	Ortega, Tolima	3.05	128	*e*P	Pn	22 18 47.4	+2.3
AZU	Azuero	3.27	308	*e*P	Pn	22 18 46.8	-1.3
AZU	Azuero	3.27	308	⇓*i*P	Pn	22 18 46.8	-1.3
AZU				*e*S	Sn	22 19 24.5	-2.1
PTBC	PUERTO BERRIO,	3.27	77	*e*P	Pn	22 18 50.6	+2.5
PTBC				*e*S	Sn	22 19 25.4	-1.3
PTBC				*i*		22 19 41.9	
	comp=Z,32nm,0.6s						
PRAC	Prado	3.45	127	*e*P	Pn	22 18 52.9	+2.2
PRAC				*e*S	Sn	22 19 26.3	-5.0
PRAC				*i*		22 19 50.7	
	comp=Z,37nm,0.5s						
ROSC	El Rosal	3.46	106	Pg	Pb	22 18 59.0	+0.3
	comp=Z,9.2nm,0.3s,baz=49,slow=13,SNR=9.2						
ROSC				Sn	Sn	22 19 24.4	-7.5
	comp=Z,7.8nm,0.3s,baz=359,slow=18,SNR=6.5						
ROSC				Lg	Lg	22 19 45.4	
	comp=Z,1.8nm,0.3s,baz=250,slow=22,SNR=1.2						
CHIT3	Chitre	3.48	308	*e*P	Pn	22 18 49.6	-1.4
CHIT3				*e*S	Sn	22 19 29.2	-2.7
CACAO	El Cacao, Vera	3.53	296	*e*P	Pn	22 18 49.8	-1.9
CACAO				*e*S	Sn	22 19 30.9	-2.2
SPBC	San Pablo de B	3.57	92	*e*P	Pn	22 18 54.5	+2.0
PCON	Cinco Dias	3.67	160	*e*P	Pn	22 18 56.3	+2.2
UPA	Univ. de Panam	3.67	330	*e*P	Pn	22 18 52.4	-1.3
UPA				*e*S	Sn	22 19 35.9	-0.7
CHOR3	La Chorrera	3.73	326	*e*P	Pn	22 18 53.3	-1.1
CHOR3				*e*S	Sn	22 19 36.6	-1.3
SOTA	Rioblanco	3.78	164	*e*P	Pn	22 18 57.8	+2.1
ZANG	Zanguenga, Cho	3.83	325	*e*P	Pn	22 18 55.2	-0.6
ZANG				*e*S	Sn	22 19 39.3	-1.2
BCIP	Isla Barro Col	3.99	327	*e*P	Pn	22 18 56.3	-1.7
BCIP				*e*S	Sn	22 19 44.0	-0.3
BCIP	Isla Barro Col	3.99	327	*e*P	Pn	22 18 57.2	-0.8
BCIP				*e*S	Sn	22 19 42.9	-1.5
GMAL	Guarumal, Vera	4.05	299	*e*P	Pn	22 18 57.5	-1.4
GMAL				*e*S	Sn	22 19 43.8	-2.2
GARC	Garzon, Huila	4.18	149	*e*P	Pn	22 19 03.6	+2.6
GARC				*e*S	Sn	22 19 51.1	+1.5
GARC				*i*		22 19 55.0	
	comp=Z,25nm,0.3s						
DRK0	Durika	6.52	302	*e*P	Pn	22 19 31.4	-1.6
SDV	Santo Domingo	7.62	66	Pn	Pn	22 19 43.2	-4.9
	comp=Z,1.5nm,0.3s,baz=284,slow=6.7,SNR=1.5						
SDV				Sn	Sn	22 21 11.8	-2.4
	comp=Z,1.1nm,0.3s,baz=334,slow=6.1,SNR=1.4						
SDV				LR	LR	22 22 56.6	
	comp=Z,157nm,20.1s,baz=190,slow=41						
	comp=Z,5.2nm,0.3s						
JTS	Las Juntas de	8.49	302	Pn	Pn	22 20 02.7	+2.7
	comp=Z,1.1nm,0.3s,baz=245,slow=13,SNR=3.5						
JTS				LR	LR	22 23 07.0	
	comp=Z,73nm,20.1s,baz=147,slow=35						
	comp=Z,3.7nm,0.4s						
NNA	Nana	17.68	177	LR	LR	22 30 13.0	
	comp=Z,46nm,20.4s,baz=357,slow=41						
CMIG	Matias Romero	20.25	305	P	Pn	22 22 34.7	+0.4
	comp=Z,1.4nm,0.7s,baz=107,slow=10.0,SNR=3.7						
	comp=Z,1.4nm,0.7s						
LPAZ	La Paz	23.88	157	P	P	22 23 11.3	+0.1
	comp=Z,0.7nm,0.6s,baz=327,slow=12,SNR=3.7						
	comp=Z,0.7nm,0.6s						
MDP	Montagnes des	24.91	90	LR	LR	22 33 02.3	
	comp=Z,46nm,21.2s,baz=178,slow=37						
PDAR	Pinedale Array	46.38	327	P	P	22 26 24.4	+1.0
	comp=Z,0.4nm,1.0s,baz=128,slow=5.9,SNR=2.1						
	comp=Z,0.4nm,1.0s						
NVAR	Mina Array Bea	49.08	317	P	P	22 26 46.6	+2.2
	comp=Z,0.2nm,0.6s,baz=141,slow=5.8,SNR=2.3						
	comp=Z,0.2nm,0.6s						
YKA	Yellowknife Ar	62.74	342	P	P	22 28 22.0	+0.4
	comp=Z,0.3nm,0.6s,baz=138,slow=6.7,SNR=4.4						
	comp=Z,0.3nm,0.6s						
ILAR	Eielson Array	76.00	336	P	P	22 29 43.9	+0.2
	comp=Z,0.3nm,0.8s,baz=110,slow=4.9,SNR=2.7						
	comp=Z,0.3nm,0.8s						
TORD	Torodi Ar. Bea	78.36	78	P	P	22 29 57.3	-0.6
	comp=Z,0.4nm,0.7s,baz=285,slow=5.9,SNR=1.9						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	144.82	236	PKPbc	PKPab	22 37 33.9	+0.3
	comp=Z,0.2nm,0.4s,baz=121,slow=4.0,SNR=2.4						
WRA	Warramunga Arr	145.87	243	PKPbc	PKPbc	22 37 37.5	+0.3
	comp=Z,0.6nm,1.0s,baz=102,slow=2.5,SNR=3.4						

IDC 25 22:30:21.4±2.2**, 7°.54S**×**158°.36E, h0^{km}, mb3.3**/3**, mbtmp3.5**/4**, ML4.3**/1**, Error ellipse: s-maj=50.2km s-min=33.2km az=36.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.45	140	Pn	Pn	22 31 02.3	-0.3
	67nm,0.3s,baz=242,slow=5.0,SNR=22						
HNR				Sn	Sn	22 31 28.4	-5.0
	59nm,0.3s,baz=323,slow=23,SNR=6.5						
	192nm,0.2s						
WRA	Warramunga Arr	26.34	240	P	P	22 35 59.9	+0.5
	0.2nm,0.3s,baz=65,slow=8.9,SNR=4.8						
	0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	27.14	18	T	T	23 04 40.5	
	baz=198,slow=76,SNR=112						
H11S2	WAKE ISLAND Hy	27.14	18	T	T	23 04 39.4	
	baz=198,slow=76,SNR=134						
H11S1	WAKE ISLAND Hy	27.15	18	T	T	23 04 41.5	
	baz=198,slow=76,SNR=70						
H11N1	WAKE ISLAND Hy	28.35	17	T	T	23 06 20.3	
	baz=196,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	28.36	17	T	T	23 06 22.9	
	baz=196,slow=76,SNR=28						
H11N2	WAKE ISLAND Hy	28.37	17	T	T	23 06 24.9	
	baz=196,slow=76,SNR=26						
ASAR	Alice Springs	28.42	233	P	P	22 36 17.2	-0.8
	0.2nm,0.4s,baz=55,slow=10.0,SNR=1.9						
	0.2nm,0.4s						
MKAR	Makanchi Array	86.02	318	P	P	22 43 04.3	+0.3
	0.1nm,0.4s,baz=90,slow=6.8,SNR=1.6						
	0.1nm,0.4s						

IDC ***25*** *22:37:00.5±4.6, 13°.16N×85°.46W, h0^{km}, mb3.2/1, mbtmp3.3/1, Error ellipse: s-maj=154.1km s-min=68.4km az=41.0*
INET ***25*** *22:37:21.4±1.2, 12°.63N×87°.25W, h131^{km}±4^{km}, MW3.3*
SNET ***25*** *22:37:21.2±1.1, 12°.06N×87°.71W, h4^{km}±29^{km}, ML3.8*
UCR ***25*** *22:37:23.8±2.2, 12°.29N×87°.41W, h26^{km}±35^{km}, ML3.6*
ISC 25 22:37:22.4±1.1, **12°.46N**±0°.08×**87°.31W**±0°.05, **h100^{km}, n48, σ1^{s}.86**/51, **1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TELN	Telica	0.48	73	*e*P	Pn	22 37 40.0	+1.8
CSGN	Cosiguina Volc	0.57	334	*e*P	Pn	22 37 40.5	+1.7
CNGN	Cerro Negro	0.59	86	*e*P	Pn	22 37 40.5	+1.6
MOMN	Momotombo	0.75	94	*e*P	Pn	22 37 41.7	+1.3
COPN	Copaltepe	0.75	112	*e*P	Pn	22 37 41.5	+1.2
CNCH	Conchagua	0.96	328	*i* P	Pn	22 37 43.7	+1.1
CNCH	Conchagua	0.96	328	*i* P	Pn	22 37 43.7	+1.1
CNCH	Conchagua	0.96	328	*e*P	Pn	22 37 43.7	+1.1
HUEN		1.12	96	*e*P	Pn	22 37 45.1	+1.0
HUEN				*e*S	Sn	22 38 03.9	+3.5
RANC	El Ranchito	1.36	315	*e*P	Pn	22 37 48.4	+1.3
RANC	El Ranchito	1.36	315	*e*P	Pn	22 37 48.4	+1.3
PACA	Pacayal	1.41	315	*e*P	Pn	22 37 48.8	+1.1
PACA	Pacayal	1.41	315	*e*P	Pn	22 37 48.8	+1.1
COEB	Comit de Eme	1.57	311	*e*S	Sn	22 38 14.4	+4.0
COEB	Comit de Eme	1.57	311	*e*S	Sn	22 38 14.4	+4.0
TGUH	Tegucigalpa,Un	1.58	1	*e*P	Pn	22 37 49.7	-0.2
BOAB	BOACO BROADBAN	1.60	90	*e*P	Pn	22 37 50.0	+0.1
BOAB				*e*S	Sn	22 38 12.3	+1.5
CONN	Concepcion	1.87	118	*e*P	Pn	22 37 54.0	+0.7
LFRS	El Faro	2.06	304	*e*P	Pn	22 37 56.8	+0.9
LFRS	El Faro	2.06	304	*e*P	Pn	22 37 56.8	+0.9
HZTE	Horizontes, Gu	2.42	136	*e*P	Pn	22 38 01.8	+1.4
HZTE	Horizontes, Gu	2.42	136	*e*P	Pn	22 38 02.2	+1.8
GBS3	Finca Las Img	2.47	132	*e*P	Pn	22 38 02.8	+1.7
BUEV	Buena Vista	2.49	131	*e*P	Pn	22 38 03.0	+1.5
CEVE	Cerro Verde	2.63	301	*e*P	Pn	22 38 04.2	+0.7
CEVE				*e*S	Sn	22 38 36.7	+1.7
CEVE				IAML		22 38 45.3	
	comp=Z,425nm,0.4s						
CEVE	Cerro Verde	2.63	301	*e*P	Pn	22 38 04.2	+0.7
CEVE				*e*S	Sn	22 38 36.7	+1.7
CEVE				IAML		22 38 45.3	
	comp=Z,425nm,0.4s						
HORNC	Hornillas	2.72	130	*e*P	Pn	22 38 04.8	+0.4
COLC	Colonia	2.73	131	*e*P	Pn	22 38 05.6	+1.0
CUI	Cuipilapa	2.76	130	*e*P	Pn	22 38 06.0	+1.0
ORTG	Ortega, Santa	2.76	139	*e*P	Pn	22 38 06.5	+1.4
NUBE	Las Nubes	2.80	301	*e*S	Sn	22 38 40.5	+1.5
NUBE	Las Nubes	2.80	301	*e*S	Sn	22 38 40.5	+1.5
GUAI	GUAI	2.80	141	⇓*i*P	Pn	22 38 07.0	+1.5
PLVR	Palo Verde	2.84	137	*e*P	Pn	22 38 07.6	+1.3
SAJU	San Juanillo,	2.85	147	*e*P	Pn	22 38 07.3	+1.1
DUNO	Dulce Nombre,	2.96	143	*e*P	Pn	22 38 08.9	+1.2
DUNO	Dulce Nombre,	2.96	143	*e*P	Pn	22 38 08.9	+1.2
GRZA	Playa Garza	3.02	147	*e*P	Pn	22 38 09.5	+1.1
JTS	Las Juntas de	3.16	133	*e*P	Pn	22 38 10.6	+0.3
JTS	Las Juntas de	3.16	133	*e*P	Pn	22 38 10.9	+0.5
LAFE	Finca La Fe, P	3.54	138	*e*P	Pn	22 38 16.0	+0.6
JACO	JACO, Garabito	3.81	137	*e*P	Pn	22 38 20.0	+1.0
LCR2	La Lucha 2	4.22	130	*e*P	Pn	22 38 25.8	+1.0
RIMA	Rio Macho	4.31	128	*e*P	Pn	22 38 27.4	+1.4
CMIG	Matias Romero	8.65	303	Pn	Pn	22 39 24.2	-0.6
	baz=120,slow=20						
TXAR	Lajitas Array	22.65	320	P	P	22 42 10.6	-4.8
	comp=Z,0.5nm,0.6s,baz=141,slow=10,SNR=7.0						
	comp=Z,0.5nm,0.6s						
ASAR	Alice Springs	139.40	248	PKP	PKPdf	22 56 33.6	-5.3
	comp=Z,0.7nm,1.1s,baz=84,slow=2.9,SNR=2.5						
WRA	Warramunga Arr	139.41	254	PKP	PKPdf	22 56 33.6	-5.3
	comp=Z,0.3nm,0.6s,baz=90,slow=2.4,SNR=12						

IDC ***25*** *22:44:58.8±1.9, 59°.78N×153°.74W, h111^{km}±30^{km}, mb3.5/2, mbtmp3.8/7, MS2.7/1, Error ellipse: s-maj=33.3km s-min=18.3km az=112.0*
NEIC ***25*** *22:45:00.0±1.3, 59°.84N±0°.04×153°.39W±0°.09, h130^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=5.3km az=108.0*
ANF ***25*** *22:45:00.4±0.3, 59°.83N×153°.36W, h120^{km}±3^{km}, ML3.6/49, Error ellipse: s-maj=2.7km s-min=2.4km az=49.0*
AEIC ***25*** *22:45:01±1.6, 59°.82N±0°.03×153°.39W±0°.05, h122^{km}±4^{km}, ML3.2, ML3.4/112(NEIC), Error ellipse: s-maj=5.1km s-min=3.1km az=205.0*
ISC 25 22:45:00.0±0.8, **59°.84N**±0°.04×**153°.34W**±0°.04, **h129^{km}**±6^{km}**, n256, σ0^{s}.87**/257**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPT	Oil Point	0.20	164		Pn	22 45 17.8	+0.1
O20K	Slope Mountain	0.43	56		Pn	22 45 18.9	+0.3
O20K					Sn	22 45 32.3	-0.4
O20K	Slope Mountain	0.43	56	P	Pn	22 45 18.9	+0.3
	baz=236,SNR=7.5						
O20K				S	Sn	22 45 32.6	-0.2
	baz=236						
AUL	Augustine Lava	0.46	186		Pn	22 45 18.9	+0.2
AU22	Augustine Moun	0.47	181		Pn	22 45 18.8	+0.1
AU22					Sn	22 45 32.5	-0.4
AU2	Augustine Isla	0.47	183		Pn	22 45 18.9	+0.2
AUH	Augustine H	0.48	187		Pn	22 45 19.1	+0.2
AUCH	Augustine Cone	0.48	187		Pn	22 45 19.1	+0.1
AUQ	Augustine Qik'	0.49	185		Pn	22 45 19.1	+0.1
O19K	Port Alsworth	0.61	306		Pn	22 45 19.4	-0.2
O19K	Port Alsworth	0.61	306	P	Pn	22 45 19.3	-0.3
	baz=124						
O19K				S	Sn	22 45 33.2	-1.2
	baz=124						
RED	Redoubt Volcan	0.65	26		Pn	22 45 20.0	+0.1
RED					Sn	22 45 34.5	-0.5
RSO	Redoubt South	0.69	25		Pn	22 45 20.6	+0.2
RDWB	Redoubt West	0.70	21		Pn	22 45 20.4	0.0
RDWB					Sn	22 45 35.3	-0.6
RDJH	Redoubt Jeurge	0.80	19		Pn	22 45 21.4	+0.2
DFR	Drift River	0.82	23		Pn	22 45 21.5	+0.2
HOM	Homer	0.88	101		Pn	22 45 22.1	+0.4
HOM	Homer	0.88	101	P	Pn	22 45 22.0	+0.4
	baz=284						
HOM				S	Sn	22 45 38.1	+0.1
	baz=284						
Q19K	Cape Douglas,	0.93	190		Pn	22 45 22.1	0.0
Q19K					Sn	22 45 38.4	-0.5
Q19K	Cape Douglas,	0.93	190	IAML		22 45 40.1	
	comp=E,1µm,0.7s						
Q19K				IAML		22 45 43.5	
	comp=N,1µm,0.8s						
Q19K	Cape Douglas,	0.93	190	P	Pn	22 45 22.2	0.0
	baz=10,SNR=48						
Q19K				S	Sn	22 45 38.1	-0.9
	baz=10						
P18K	Big Mountain,	1.06	246		Pn	22 45 22.9	-0.5
P18K					Sn	22 45 39.5	-1.7
P18K	Big Mountain,	1.06	246	P	Pn	22 45 22.9	-0.5
	baz=64						
P18K				S	Sn	22 45 39.3	-1.9
	baz=64						
CNPM	China Poot	1.11	106		Pn	22 45 23.7	-0.2
CNPM	China Poot	1.11	106	IAML		22 45 42.4	
	comp=N,2µm,0.6s						
CNPM				IAML		22 45 43.1	
	comp=E,1µm,0.4s						
N19K	Bonanza Creek	1.13	330		Pn	22 45 24.2	+0.1
N19K					Sn	22 45 41.4	-1.1
N19K	Bonanza Creek	1.13	330	IAML		22 45 42.5	
	comp=E,486nm,0.7s						
N19K	Bonanza Creek	1.13	330	P	Pn	22 45 24.3	+0.1
	baz=148,SNR=53						
N19K				S	Sn	22 45 41.3	-1.2
	baz=148						
BRLK	Bradley Lake	1.24	92		Pn	22 45 25.2	+0.1
BRLK	Bradley Lake	1.24	92	IAML		22 45 44.5	
	comp=N,2µm,0.5s						
BRLK				IAML		22 45 44.6	
	comp=E,1µm,0.2s						
BRSE	Bradley Lake S	1.31	93		Pn	22 45 26.0	0.0
BRSE	Bradley Lake S	1.31	93	P	Pn	22 45 26.0	0.0
	baz=276,SNR=10						
BRSE				S	Sn	22 45 44.6	-1.1
	baz=276						
CAPN	Captain Cook N	1.43	48		Pn	22 45 29.4	+2.2
CAPN	Captain Cook N	1.43	48	IAML		22 45 53.0	
	comp=N,993nm,0.3s						
CAPN				IAML		22 45 55.6	
	comp=E,885nm,0.4s						
CAPN	Captain Cook N	1.43	48	P	Pn	22 45 29.1	+1.9
	baz=230						
SPU	Mount Spurr	1.49	25		Pn	22 45 28.4	+0.5
SPWE	Spurr West	1.49	15		Pn	22 45 28.9	+0.9
CKN	Chakachatna No	1.50	22		Pn	22 45 28.9	+0.9
N18K	Kilae Creek	1.53	305		Pn	22 45 28.3	0.0
N18K	Kilae Creek	1.53	305	P	Pn	22 45 28.3	0.0
	baz=122,SNR=22						
N18K				S	Sn	22 45 49.1	-0.8
	baz=122						

SPCG	**Spurr Capps Gl**	**1.59**	**23**		**Pn**	**22 45 29.8**	**+0.7**
SVW2	**Sparrevohn**	**1.68**	**320**		**Pn**	**22 45 30.0**	**-0.1**
SLKM	**Skilak Lake**	**1.69**	**65**		**Pn**	**22 45 30.4**	**+0.1**
STLK	**Strandline Lak**	**1.82**	**23**		**Pn**	**22 45 32.5**	**+0.7**
KELA	**Mount Kelaz**	**1.87**	**222**		**Pn**	**22 45 34.5**	**+2.1**
O22K	**Cooper Landing**	**1.92**	**69**		**Pn**	**22 45 33.4**	**+0.6**
O22K	**Cooper Landing**	**1.92**	**69**	P	**Pn**	**22 45 33.4**	**+0.6**
	baz=252,SNR=6.5						
O22K				S	**Sn**	**22 45 56.5**	**-1.4**
	baz=252						
SEW	**Seward**	**1.97**	**81**		**Pn**	**22 45 33.9**	**+0.4**
SEW	**Seward**	**1.97**	**81**	P	**Pn**	**22 45 33.8**	**+0.4**
	baz=264,SNR=26						
SEW				S	**Sn**	**22 45 57.5**	**-1.6**
	baz=264						
ANCK	**Angle Creek**	**1.99**	**215**		**Pn**	**22 45 36.3**	**+2.5**
FIS	**Fire Island**	**2.02**	**48**		**Pn**	**22 45 35.9**	**+1.8**
FIS	**Fire Island**	**2.02**	**48**	IAML		22 46 03.2	
	comp=E,298nm,0.8s						
FIS				IAML		22 46 07.4	
	comp=N,278nm,0.5s						
M20K	**Styx River**	**2.05**	**3**		**Pn**	**22 45 35.3**	**+0.7**
M20K	**Styx River**	**2.05**	**3**	P	**Pn**	**22 45 35.3**	**+0.7**
	baz=182						
M20K				S	**Sn**	**22 46 00.4**	**-0.7**
	baz=182						
KDAK	**Kodiak Island**	**2.10**	**169**	P	**Pn**	**22 45 34.2**	**-0.9**
	comp=N,50nm,0.4s,baz=33,slow=7.2,SNR=163						
KDAK				S	**Sn**	**22 45 59.3**	**-2.6**
	comp=N,115nm,0.3s,baz=155,slow=20,SNR=63						
KDAK	**Kodiak Island**	**2.10**	**169**		**Pn**	**22 45 34.2**	**-0.9**
KDAK				IAML		22 46 01.7	
	comp=N,462nm,0.5s						
KDAK				IAML		22 46 02.0	
	comp=N,560nm,0.4s						
KDAK	**Kodiak Island**	**2.10**	**169**	P	**Pn**	**22 45 34.2**	**-0.9**
	baz=350						
M19K	**Big River Lodg**	**2.13**	**346**		**Pn**	**22 45 35.8**	**+0.3**
M19K	**Big River Lodg**	**2.13**	**346**	P	**Pn**	**22 45 35.8**	**+0.3**
	baz=165						
M19K				S	**Sn**	**22 46 02.0**	**-0.7**
	baz=165						
RC01	**Rabbit Creek A**	**2.18**	**53**		**Pn**	**22 45 36.3**	**+0.3**
RC01	**Rabbit Creek A**	**2.18**	**53**	IAML		22 46 04.3	
	comp=N,397nm,0.3s						
RC01				IAML		22 46 05.0	
	comp=E,345nm,0.5s						
RC01	**Rabbit Creek A**	**2.18**	**53**	P	**Pn**	**22 45 36.4**	**+0.3**
	baz=236,SNR=104						
L19K	**White Mountain**	**2.46**	**343**		**Pn**	**22 45 39.9**	**+0.2**
L19K	**White Mountain**	**2.46**	**343**	P	**Pn**	**22 45 39.9**	**+0.2**
	baz=162,SNR=44						
OHAK	**Old Harbor**	**2.63**	**179**		**Pn**	**22 45 40.6**	**-1.1**
OHAK	**Old Harbor**	**2.63**	**179**	IAML		22 46 12.0	
	comp=E,144nm,0.5s						
OHAK				IAML		22 46 13.5	
	comp=N,175nm,0.7s						
OHAK	**Old Harbor**	**2.63**	**179**	P	**Pn**	**22 45 40.5**	**-1.1**
	baz=360,SNR=5.6						
L20K	**Farewell, AK**	**2.66**	**355**		**Pn**	**22 45 42.9**	**+0.7**
L20K	**Farewell, AK**	**2.66**	**355**	P	**Pn**	**22 45 42.9**	**+0.7**
	baz=174,SNR=14						
PMR	**Palmer**	**2.71**	**48**		**Pn**	**22 45 43.0**	**+0.2**
PMR				IAML		22 46 17.0	
	comp=E,81nm,0.5s						
PMR	**Palmer**	**2.71**	**48**	P	**Pn**	**22 45 42.6**	**-0.2**
	baz=231,SNR=8.5						
KNK	**Knik Glacier**	**2.88**	**55**		**Pn**	**22 45 44.4**	**-0.5**
KNK	**Knik Glacier**	**2.88**	**55**	IAML		22 46 20.8	
	comp=E,162nm,0.7s						
KNK				IAML		22 46 24.6	
	comp=N,163nm,0.3s						
KNK	**Knik Glacier**	**2.88**	**55**	P	**Pn**	**22 45 44.4**	**-0.5**
	baz=239,SNR=31						
KNK				S	**Sn**	**22 46 17.9**	**-1.6**
	baz=239						
GHO	**Glory Hole Cre**	**2.90**	**46**		**Pn**	**22 45 44.9**	**-0.5**
GHO				IAML		22 46 21.2	
	comp=N,89nm,0.4s						
GHO				IAML		22 46 26.7	
	comp=E,127nm,0.4s						
PPLA	**Purkeypile**	**3.12**	**10**		**Pn**	**22 45 50.0**	**+1.9**
PPLA	**Purkeypile**	**3.12**	**10**	P	**Pn**	**22 45 49.8**	**+1.6**
	baz=190,SNR=27						
SML	**Sawmill**	**3.15**	**49**		**Pn**	**22 45 47.9**	**-0.6**
SML	**Sawmill**	**3.15**	**49**	IAML		22 46 29.9	
	comp=N,59nm,0.4s						
SML				IAML		22 46 36.0	
	comp=E,60nm,0.5s						
SML	**Sawmill**	**3.15**	**49**	P	**Pn**	**22 45 47.9**	**-0.6**
	baz=233,SNR=29						
SML				S	**Sn**	**22 46 24.4**	**-1.5**
	baz=233						
GLI	**Glacier Island**	**3.27**	**69**		**Pn**	**22 45 48.6**	**-1.5**
GLI	**Glacier Island**	**3.27**	**69**	IAML		22 46 29.2	
	comp=N,180nm,0.4s						
GLI				IAML		22 46 29.4	
	comp=E,181nm,0.4s						
GLI	**Glacier Island**	**3.27**	**69**	P	**Pn**	**22 45 48.5**	**-1.5**
	baz=254						
SII	**Sitkinak Islan**	**3.32**	**188**	Pn	**Pn**	**22 45 50.3**	**-0.5**
SII	**Sitkinak Islan**	**3.32**	**188**	P	**Pn**	**22 45 50.5**	**-0.3**
	baz=7.6						
TTA	**Tatalina**	**3.36**	**339**		**Pn**	**22 45 51.2**	**0.0**
TTA	**Tatalina**	**3.36**	**339**	P	**Pn**	**22 45 51.2**	**0.0**
	baz=156,SNR=18						
M23K	**Glacier View**	**3.37**	**52**	P	**Pn**	**22 45 50.9**	**-0.5**
	baz=237,SNR=65						
HIN	**Hinchinbrook I**	**3.46**	**78**		**Pn**	**22 45 52.1**	**-0.5**
FID	**Port Fidalgo**	**3.53**	**72**		**Pn**	**22 45 52.1**	**-1.4**
K20K	**Telida**	**3.55**	**355**		**Pn**	**22 45 54.2**	**+0.5**
K20K	**Telida**	**3.55**	**355**	P	**Pn**	**22 45 54.2**	**+0.5**
	baz=174,SNR=15						
JPK	**Jack Peak**	**3.55**	**67**		**Pn**	**22 45 53.0**	**-0.8**
SCM	**Sheep Creek Mo**	**3.56**	**53**		**Pn**	**22 45 53.5**	**-0.4**
SCM	**Sheep Creek Mo**	**3.56**	**53**	IAML		22 46 41.9	
	comp=E,70nm,0.5s						
SCM				IAML		22 46 47.0	
	comp=N,56nm,1.0s						
SCM	**Sheep Creek Mo**	**3.56**	**53**	P	**Pn**	**22 45 53.5**	**-0.4**
	baz=238,SNR=34						
Q23K	**Middleton Isla**	**3.57**	**94**	Pn	**Pn**	**22 45 54.2**	**+0.3**
Q23K				IAML		22 46 45.7	
	comp=E,130nm,0.8s						
Q23K	**Middleton Isla**	**3.57**	**94**	P	**Pn**	**22 45 54.4**	**+0.4**
	baz=280						
MID	**Middleton Isla**	**3.58**	**94**	Pn	**Pn**	**22 45 54.3**	**+0.3**
MID				IAML		22 46 45.7	
	comp=E,126nm,0.8s						
CAST	**Castle Rocks**	**3.64**	**9**		**Pn**	**22 45 55.9**	**+1.0**
CAST				IAML		22 46 57.8	
	comp=N,68nm,0.5s						
CAST	**Castle Rocks**	**3.64**	**9**	P	**Pn**	**22 45 55.7**	**+0.8**
	baz=190,SNR=26						
WAT1	**Susitna Watana**	**3.78**	**35**		**Pn**	**22 45 57.0**	**+0.2**
WAT1	**Susitna Watana**	**3.78**	**35**	P	**Pn**	**22 45 56.9**	**+0.1**
	baz=220						
EYAK	**Cordova Ski Ar**	**3.85**	**76**		**Pn**	**22 45 58.2**	**+0.5**
EYAK	**Cordova Ski Ar**	**3.85**	**76**	P	**Pn**	**22 45 58.0**	**+0.3**
	baz=263						
WAT6	**Susitna Watana**	**3.86**	**42**		**Pn**	**22 45 57.5**	**-0.3**
WAT6	**Susitna Watana**	**3.86**	**42**	P	**Pn**	**22 45 57.6**	**-0.3**
	baz=227,SNR=42						
KTH	**Kantishna Hill**	**3.90**	**16**		**Pn**	**22 45 58.9**	**+0.5**
KTH				IAML		22 46 45.6	
	comp=N,49nm,0.7s						
KTH				IAML		22 46 45.7	
	comp=E,45nm,0.5s						
TRF	**Thorofare Moun**	**3.90**	**21**		**Pn**	**22 45 58.8**	**+0.3**
TRF	**Thorofare Moun**	**3.90**	**21**	IAML		22 46 46.9	
	comp=N,58nm,0.5s						
TRF				IAML		22 46 47.8	
	comp=E,44nm,0.7s						
TRF	**Thorofare Moun**	**3.90**	**21**	P	**Pn**	**22 45 58.8**	**+0.3**
	baz=203,SNR=20						
DIV	**Divide**	**3.96**	**68**		**Pn**	**22 45 58.9**	**-0.3**
KLU	**Klutina**	**4.01**	**62**		**Pn**	**22 45 59.4**	**-0.4**
KLU	**Klutina**	**4.01**	**62**	IAML		22 46 50.0	
	comp=E,100nm,0.5s						
KLU	**Klutina**	**4.01**	**62**	P	**Pn**	**22 45 59.4**	**-0.4**
	baz=249,SNR=80						
CHUM	**Lake Minchumin**	**4.09**	**6**	P	**Pn**	**22 46 01.8**	**+1.0**
	baz=187,SNR=7.4						
M24K	**Tolsona, Glenn**	**4.16**	**54**		**Pn**	**22 46 01.9**	**+0.1**
M24K	**Tolsona, Glenn**	**4.16**	**54**	IAML		22 46 52.2	
	comp=N,58nm,1.0s						
M24K				IAML		22 46 55.1	
	comp=E,61nm,0.6s						
M24K	**Tolsona, Glenn**	**4.16**	**54**	P	**Pn**	**22 46 02.0**	**+0.1**
	baz=240,SNR=37						
RND	**Reindeer**	**4.17**	**29**		**Pn**	**22 46 01.8**	**-0.1**
RND	**Reindeer**	**4.17**	**29**	IAML		22 46 51.9	
	comp=N,26nm,0.4s						
RND				IAML		22 46 53.5	
	comp=E,33nm,0.4s						
DHY	**Denali Highway**	**4.33**	**39**		**Pn**	**22 46 03.9**	**-0.2**
DHY	**Denali Highway**	**4.33**	**39**	IAML		22 46 55.9	
	comp=E,43nm,0.4s						
DHY				IAML		22 46 57.0	
	comp=N,50nm,0.5s						
DHY	**Denali Highway**	**4.33**	**39**	P	**Pn**	**22 46 04.0**	**-0.1**
	baz=224,SNR=28						
J20K	**Nowinta River**	**4.37**	**355**		**Pn**	**22 46 05.3**	**+0.8**
J20K	**Nowinta River**	**4.37**	**355**	P	**Pn**	**22 46 05.0**	**+0.5**
	baz=174,SNR=24						
BPAW	**Bear Paw Mtn.**	**4.42**	**14**		**Pn**	**22 46 05.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.42**	**14**	IAML		22 46 56.2	
	comp=N,28nm,0.6s						
BPAW				IAML		22 46 57.2	
	comp=E,22nm,0.7s						
BPAW	**Bear Paw Mtn.**	**4.42**	**14**	P	**Pn**	**22 46 05.2**	**0.0**
	baz=195,SNR=18						
MCK	**McKinley**	**4.43**	**26**		**Pn**	**22 46 06.2**	**+0.9**
MCK	**McKinley**	**4.43**	**26**	IAML		22 46 57.6	
	comp=E,24nm,0.4s						
MCK				IAML		22 46 57.6	
	comp=N,31nm,0.6s						
MCK	**McKinley**	**4.43**	**26**	P	**Pn**	**22 46 05.9**	**+0.6**
	baz=210,SNR=12						
CHGN	**Chignik**	**4.46**	**219**	Pn	**Pn**	**22 46 05.4**	**-0.3**
CHGN				IAML		22 46 58.4	
	comp=N,33nm,0.1s						
CHGN				IAML		22 47 05.9	
	comp=E,46nm,0.1s						
BMRM	**Bremner River**	**4.47**	**72**		**Pn**	**22 46 06.5**	**+0.5**
BMRM	**Bremner River**	**4.47**	**72**	P	**Pn**	**22 46 06.5**	**+0.5**
	baz=259,SNR=37						
HMT	**Hamilton**	**4.57**	**80**		**Pn**	**22 46 07.7**	**+0.4**
N25K	**Chitina, Valde**	**4.64**	**64**		**Pn**	**22 46 08.0**	**-0.3**
N25K	**Chitina, Valde**	**4.64**	**64**	IAML		22 47 02.6	
	comp=E,57nm,0.5s						
N25K				IAML		22 47 05.0	
	comp=N,40nm,0.5s						
N25K	**Chitina, Valde**	**4.64**	**64**	P	**Pn**	**22 46 07.9**	**-0.3**
	baz=251,SNR=68						
NICHA	**Nichawak Mount**	**4.71**	**81**		**Pn**	**22 46 09.8**	**+0.6**
HARP	**HAARP**	**4.72**	**54**		**Pn**	**22 46 09.5**	**+0.2**
HARP	**HAARP**	**4.72**	**54**	P	**Pn**	**22 46 09.2**	**0.0**
	baz=241						
SUCK	**Suckling Hills**	**4.81**	**83**	Pn	**Pn**	**22 46 10.6**	**+0.2**
SUCK				IAML		22 47 14.1	
	comp=E,35nm,0.7s						
PAX	**Paxson**	**4.91**	**47**		**Pn**	**22 46 12.1**	**+0.2**
PAX	**Paxson**	**4.91**	**47**	P	**Pn**	**22 46 11.9**	**+0.1**
	baz=234,SNR=15						
GLB	**Gilahina Butte**	**4.96**	**67**		**Pn**	**22 46 12.1**	**-0.3**
BGLC	**Bering Glacier**	**5.06**	**82**	P	**Pn**	**22 46 15.1**	**+1.4**
	baz=271						
VRDI	**Verde Repeater**	**5.08**	**70**		**Pn**	**22 46 13.9**	**-0.3**
VRDI	**Verde Repeater**	**5.08**	**70**	IAML		22 47 12.2	
	comp=N,55nm,0.6s						
VRDI				IAML		22 47 17.3	
	comp=E,33nm,0.8s						
KHIT	**Khitrov Hills**	**5.08**	**79**		**Pn**	**22 46 13.3**	**-0.8**
NEA2	**Nenana**	**5.17**	**21**		**Pn**	**22 46 15.1**	**-0.1**
NEA2	**Nenana**	**5.17**	**21**	IAML		22 47 14.2	
	comp=N,12nm,0.9s						
NEA2	**Nenana**	**5.17**	**21**	P	**Pn**	**22 46 15.2**	**-0.1**
	baz=204,SNR=27						
WRH	**Wood River Hil**	**5.26**	**26**		**Pn**	**22 46 16.4**	**0.0**
WRH				IAML		22 47 15.2	
	comp=N,14nm,0.6s						
WAX	**Waxell Ridge**	**5.28**	**79**		**Pn**	**22 46 17.0**	**+0.3**
SNH	**Sunshine Point**	**5.28**	**82**	Pn	**Pn**	**22 46 17.9**	**+1.2**
TGL	**Tana Glacier**	**5.31**	**76**	Pn	**Pn**	**22 46 16.9**	**-0.2**
MCARA	**McCarthy VSAT**	**5.31**	**69**		**Pn**	**22 46 18.1**	**+1.0**
MCARA	**McCarthy VSAT**	**5.31**	**69**	P	**Pn**	**22 46 17.9**	**+0.8**
	baz=258,SNR=10						
MLY	**Manley**	**5.35**	**12**		**Pn**	**22 46 17.3**	**-0.3**
MLY	**Manley**	**5.35**	**12**	P	**Pn**	**22 46 17.5**	**-0.1**
	baz=194,SNR=19						
K24K	**Donnelly Dome**	**5.35**	**39**	P	**Pn**	**22 46 19.0**	**+1.3**
	baz=225,SNR=11						
I21K	**Tanana**	**5.40**	**6**	Pn	**Pn**	**22 46 18.6**	**+0.3**
I21K	**Tanana**	**5.40**	**6**	P	**Pn**	**22 46 18.5**	**+0.3**
	baz=187						
CCB	**Clear Creek Bu**	**5.47**	**26**		**Pn**	**22 46 19.1**	**-0.2**
HDA	**Harding Lake**	**5.48**	**30**		**Pn**	**22 46 19.3**	**0.0**
HDA	**Harding Lake**	**5.48**	**30**	P	**Pn**	**22 46 19.1**	**-0.2**
	baz=216,SNR=20						
ISLE	**Juniper Island**	**5.54**	**77**		**Pn**	**22 46 20.9**	**+0.6**
MENT	**Mentasta**	**5.57**	**52**		**Pn**	**22 46 20.6**	**0.0**
BALM	**Baldy**	**5.57**	**73**		**Pn**	**22 46 21.1**	**+0.3**
RIDG	**Independent Ri**	**5.61**	**42**	Pn	**Pn**	**22 46 21.6**	**+0.4**
RIDG	**Independent Ri**	**5.61**	**42**	P	**Pn**	**22 46 21.4**	**+0.2**
	baz=230						
M26K	**Nabesna, AK**	**5.63**	**58**		**Pn**	**22 46 21.8**	**+0.3**
M26K	**Nabesna, AK**	**5.63**	**58**	P	**Pn**	**22 46 21.5**	**0.0**
	baz=247,SNR=41						
I23K	**Minto, Yukon-K**	**5.64**	**17**		**Pn**	**22 46 21.7**	**+0.2**
I23K	**Minto, Yukon-K**	**5.64**	**17**	P	**Pn**	**22 46 21.4**	**-0.1**
	baz=201,SNR=23						
BAGL	**Bagley Icefiel**	**5.65**	**79**		**Pn**	**22 46 22.6**	**+1.0**
TCOL	**CIGO, UAF Yank**	**5.66**	**24**	P	**Pn**	**22 46 21.8**	**0.0**
	baz=209						
MDM	**Murphy Dome**	**5.66**	**23**		**Pn**	**22 46 21.6**	**-0.2**
COLA	**College**	**5.66**	**24**	P	**Pn**	**22 46 21.7**	**0.0**
	baz=209						
MESA	**MESA**	**5.72**	**82**		**Pn**	**22 46 23.8**	**+0.9**
MESA	**MESA**	**5.72**	**82**	P	**Pn**	**22 46 23.5**	**+0.7**
	baz=272						
L26K	**Log Cabin Wild**	**5.76**	**52**		**Pn**	**22 46 24.2**	**+1.1**
IL31		**5.79**	**29**		**Pn**	**22 46 23.1**	**-0.4**
ILAR	**Eielson Array**	**5.79**	**29**	P	**Pn**	**22 46 23.3**	**-0.2**
	comp=N,17nm,0.5s,baz=216,slow=14,SNR=263						
ILAR				S	**Sn**	**22 47 24.8**	**-3.8**
	comp=N,3.5nm,0.3s,baz=334,slow=11,SNR=9.4						
ILAR	**Eielson Array**	**5.79**	**29**		**Pn**	**22 46 23.4**	**-0.1**
YAH	**Yahtse**	**5.82**	**80**		**Pn**	**22 46 25.5**	**+1.3**
GRNC	**Granite Creek**	**5.83**	**76**		**Pn**	**22 46 25.2**	**+0.9**
H21K	**Melozitna Rive**	**5.84**	**2**		**Pn**	**22 46 24.8**	**+0.5**
H21K	**Melozitna Rive**	**5.84**	**2**	P	**Pn**	**22 46 24.7**	**+0.5**
	baz=182,SNR=5.6						
BARN	**Barnard Glacie**	**5.91**	**73**		**Pn**	**22 46 26.5**	**+1.2**
POKR	**Poker Plat Res**	**5.96**	**25**		**Pn**	**22 46 25.7**	**-0.1**
POKR	**Poker Plat Res**	**5.96**	**25**	P	**Pn**	**22 46 25.7**	**-0.1**
	baz=210,SNR=6.6						
CTG	**Chitna Glacier**	**6.05**	**74**	P	**Pn**	**22 46 28.4**	**+1.2**
	baz=264,SNR=14						
CHNA	**Chernabura Isl**	**6.05**	**217**	P	**Pn**	**22 46 25.8**	**-1.4**
	baz=31						
CTGM	**Chitina Glacie**	**6.05**	**74**		**Pn**	**22 46 28.5**	**+1.2**
SCRK	**Sand Creek**	**6.06**	**43**		**Pn**	**22 46 26.6**	**-0.7**
SCRK	**Sand Creek**	**6.06**	**43**	P	**Pn**	**22 46 26.6**	**-0.7**
	baz=231,SNR=19						
J25K	**Salcha River,**	**6.06**	**34**		**Pn**	**22 46 27.2**	**-0.1**
J25K	**Salcha River,**	**6.06**	**34**	P	**Pn**	**22 46 27.1**	**-0.1**
	baz=221,SNR=33						
CNBA	**Chernabura Isl**	**6.06**	**217**	Pn	**Pn**	**22 46 25.9**	**-1.4**
M27K	**Edge Creek, AK**	**6.10**	**61**		**Pn**	**22 46 28.5**	**+0.7**
M27K	**Edge Creek, AK**	**6.10**	**61**	P	**Pn**	**22 46 28.4**	**+0.5**
	baz=251,SNR=20						
TABL	**Table Mountain**	**6.12**	**79**		**Pn**	**22 46 29.2**	**+0.9**
CHX	**Chaix Hills**	**6.14**	**83**		**Pn**	**22 46 29.9**	**+1.5**
IM03		**6.17**	**358**		**Pn**	**22 46 29.7**	**+1.1**
IMAR	**Indian Mountai**	**6.17**	**358**	Pn	**Pn**	**22 46 29.1**	**+0.5**
LOGN	**Logan Glacier**	**6.20**	**76**		**Pn**	**22 46 30.6**	**+1.3**
H23K	**Yukon River**	**6.25**	**14**		**Pn**	**22 46 30.5**	**+0.7**
H23K	**Yukon River**	**6.25**	**14**	P	**Pn**	**22 46 30.1**	**+0.3**
	baz=198,SNR=24						
SAMH	**Samovar Hills**	**6.31**	**82**		**Pn**	**22 46 32.2**	**+1.6**
L27K	**Beaver Creek,**	**6.39**	**55**		**Pn**	**22 46 31.5**	**-0.2**
L27K	**Beaver Creek,**	**6.39**	**55**	P	**Pn**	**22 46 31.7**	**0.0**
	baz=245						
BC03		**6.41**	**55**		**Pn**	**22 46 32.1**	**+0.3**
BCAR	**Beaver Creek A**	**6.41**	**55**	Pn	**Pn**	**22 46 31.8**	**-0.2**
YUK2	**White River**	**6.42**	**67**		**Pn**	**22 46 33.2**	**+1.2**
H24K	**Noodor Dome**	**6.51**	**20**		**Pn**	**22 46 33.2**	**-0.1**
H24K	**Noodor Dome**	**6.51**	**20**	P	**Pn**	**22 46 33.3**	**0.0**
	baz=205,SNR=8.4						
J26L	**Joseph Creek**	**6.54**	**40**	P	**Pn**	**22 46 33.5**	**-0.2**
	baz=229,SNR=18						
BVCY	**Beaver Creek**	**6.57**	**62**	P	**Pn**	**22 46 33.8**	**-0.3**
	baz=252,SNR=7.3						
PCA	**Pinnacle**	**6.57**	**82**		**Pn**	**22 46 35.4**	**+1.3**
PINM	**Pinnacle**	**6.58**	**82**	P	**Pn**	**22 46 35.2**	**+1.1**
	baz=274,SNR=7.2						
YUK3	**Moose Creek**	**6.59**	**67**		**Pn**	**22 46 35.6**	**+1.1**
YUK3	**Moose Creek**	**6.59**	**67**	P	**Pn**	**22 46 35.6**	**+1.1**
	baz=259,SNR=38						
K27K	**Chicken**	**6.77**	**47**		**Pn**	**22 46 36.9**	**+0.2**
K27K	**Chicken**	**6.77**	**47**	P	**Pn**	**22 46 37.2**	**+0.5**
	baz=237						
PNL	**Peninsula**	**7.04**	**85**		**Pn**	**22 46 41.0**	**+0.6**
PNL	**Peninsula**	**7.04**	**85**	P	**Pn**	**22 46 40.9**	**+0.4**
	baz=278,SNR=8.2						
YUK4	**Talbot Arm**	**7.39**	**72**	P	**Pn**	**22 46 46.5**	**+1.2**
	baz=264						
YUK6	**Outpost Mounta**	**7.50**	**75**	P	**Pn**	**22 46 47.8**	**+1.0**
	baz=268						
EGAK	**Eagle**	**7.52**	**44**		**Pn**	**22 46 46.4**	**-0.5**
COLD	**Coldfoot**	**7.55**	**9**	Pn	**Pn**	**22 46 47.5**	**+0.3**
COLD	**Coldfoot**	**7.55**	**9**	P	**Pn**	**22 46 47.5**	**+0.3**
	baz=192						
HYT	**Haines Junctio**	**7.92**	**76**	Pn	**Pn**	**22 46 54.1**	**+1.8**
HYT	**Haines Junctio**	**7.92**	**76**	P	**Pn**	**22 46 53.6**	**+1.3**
	baz=270						
N30M	**Aishikik Lake**	**8.14**	**72**	P	**Pn**	**22 46 55.3**	**0.0**
	baz=266						
M30M	**Minto, Yukon**	**8.44**	**64**	Pn	**Pn**	**22 46 60.0**	**+0.7**
M30M	**Minto, Yukon**	**8.44**	**64**	P	**Pn**	**22 46 59.9**	**+0.7**
	baz=258						
BMAR	**Burnt Mountain**	**8.54**	**23**	Pn	**Pn**	**22 46 59.8**	**-0.8**
N31M	**Braeburn, Yuko**	**8.77**	**72**	Pn	**Pn**	**22 47 05.3**	**+1.6**
N31M	**Braeburn, Yuko**	**8.77**	**72**	P	**Pn**	**22 47 04.8**	**+1.1**
	baz=267						
I29M	**Ogilvie Camp,**	**8.85**	**45**	Pn	**Pn**	**22 47 04.3**	**-0.4**
TOLK	**Toolik Lake Re**	**8.98**	**9**	Pn	**Pn**	**22 47 07.9**	**+1.4**
TOLK	**Toolik Lake Re**	**8.98**	**9**	P	**Pn**	**22 47 06.8**	**+0.3**
	baz=192						
WHY	**Whitehorse**	**9.21**	**77**	P	**Pn**	**22 47 10.6**	**+0.9**
	baz=273						
M31M	**Drury Creek, Y**	**9.49**	**67**	Pn	**Pn**	**22 47 15.1**	**+1.8**
EPYK	**Eagle Plains**	**9.95**	**42**	Pn	**Pn**	**22 47 20.8**	**+1.3**
P33M	**Teslin, Yukon**	**10.27**	**79**	Pn	**Pn**	**22 47 26.0**	**+2.1**
P33M	**Teslin, Yukon**	**10.27**	**79**	P	**Pn**	**22 47 25.3**	**+1.5**
	baz=277,SNR=5.2						
DLBC	**Dease Lake**	**12.03**	**87**	P	**Pn**	**22 47 50.5**	**+3.2**
	comp=N,0.9nm,0.4s,baz=230,slow=6.2,SNR=1.9						
DLBC				S	**Sn**	**22 49 60.0**	**+0.3**
	comp=N,0.9nm,0.4s,baz=79,slow=19,SNR=2.0						
INK	**Inuvik**	**12.07**	**37**	P	**Pn**	**22 47 49.3**	**+1.8**
	comp=N,1.2nm,0.5s,baz=213,slow=12,SNR=2.6						
YKA	**Yellowknife Ar**	**18.67**	**65**	P	**Pn**	**22 49 09.8**	**+0.2**
	comp=N,0.8nm,0.6s,baz=277,slow=9.9,SNR=9.9						
YKA	**Yellowknife Ar**	**18.67**	**65**	P	**P**	**22 49 08.5**	**+0.8**
MA2	**Magadan**	**27.49**	**294**	LR	LR	23 00 55.5	
	comp=N,15nm,19.4s,baz=172,slow=35						
ZALV	**Zalesovo Beam**	**57.40**	**323**	P	**P**	**22 54 33.9**	**-0.6**
	comp=N,1.2nm,0.4s,baz=35,slow=7.2,SNR=5.5						
	comp=N,1.2nm,0.4s						
KURBB	**Kurchatov Arra**	**62.17**	**325**	P	**P**	**22 55 08.0**	**+0.9**
	comp=N,0.4nm,0.5s,baz=30,slow=6.4,SNR=3.8						
	comp=N,0.4nm,0.5s						

NOU ***25*** *22:45:49.2, 40˚.48S×175˚.07E, h0km, MLv3.5/6, North Island, New Zealand*

WEL ***25*** *22:45:50.4±0.2, 41˚S±2˚×17˚5E±˚, h25km±3km, M3.1/47, ML3.4/50, MLv3.1/47, Error ellipse: s-maj=0.0km s-min=0.0km az=114.5*

ISC 25 22:45:49.7±1.2**, 40˚.51S**±0˚.02×**175˚.15E**±0˚.02**, h12**km±11km**, n87, σ1§15**/100**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OGWZ	**Otaki Gorge**	**0.31**	**178**	P	**Pn**	**22 45 59.0**	**-1.0**
OGWZ				S	**Sb**	**22 46 05.5**	**+3.3**
OHWZ	**Ohakea**	**0.33**	**22**	P	**Pn**	**22 45 59.0**	**-1.3**
OHWZ				S	**Sb**	**22 46 05.6**	**+2.9**
MRZ	**Mangatainoka R**	**0.36**	**115**	P	**Pb**	**22 45 59.1**	**+1.1**
KIW	**Kapiti Island**	**0.40**	**208**	P	**Pb**	**22 45 60.0**	**+1.3**
KIW				S	**Sb**	**22 46 07.0**	**+2.2**
HOWZ	**Holdsworth Sta**	**0.47**	**145**	P	**Pb**	**22 46 01.0**	**+1.0**
HOWZ				S	**Sb**	**22 46 09.2**	**+2.1**
POWZ	**Post Office Ro**	**0.48**	**76**	P	**Pb**	**22 46 00.5**	**+0.3**
POWZ				S	**Sb**	**22 46 08.1**	**+0.8**
CAW	**Cannon Point**	**0.60**	**186**	P	**Pb**	**22 46 03.0**	**+0.9**
CAW				S	**Sn**	**22 46 12.7**	**-1.2**
TIWZ	**Tintock**	**0.62**	**116**	P	**Pb**	**22 46 03.0**	**+0.5**
TIWZ				S	**Sb**	**22 46 12.8**	**+1.6**
PRWZ	**Pori Road**	**0.62**	**94**	P	**Pb**	**22 46 03.2**	**+0.6**
PRWZ				S	**Sb**	**22 46 13.2**	**+1.9**
MTW	**Mount Morrison**	**0.70**	**158**	P	**Pb**	**22 46 03.9**	**+0.1**
MTW				S	**Sb**	**22 46 15.0**	**+1.5**
TSZ	**Takapari Road**	**0.76**	**54**	P	**Pg**	**22 46 04.6**	**+0.2**
WAZ	**Wanganui**	**0.76**	**350**	P	**Pb**	**22 46 05.4**	**+0.4**
DVHZ	**Dannevirke**	**0.80**	**75**	P	**Pg**	**22 46 05.1**	**0.0**
DVHZ				S	**Sb**	**22 46 16.8**	**+0.3**
TMWZ	**Te Maipa**	**0.82**	**137**	P	**Pg**	**22 46 05.3**	**-0.2**
TMWZ				S	**Sb**	**22 46 18.5**	**+1.6**
WEL	**Wellington**	**0.83**	**201**	P	**Pb**	**22 46 06.5**	**+0.5**
WEL				S	**Sn**	**22 46 18.3**	**-1.1**
BFZ	**Birch Farm**	**0.85**	**102**	P	**Pg**	**22 46 05.5**	**-0.5**
BFZ				S	**Sg**	**22 46 17.5**	**+0.3**
BFZ	**Birch Farm**	**0.85**	**102**	P	**Pg**	**22 46 05.5**	**-0.5**
SNZO	**South Karori**	**0.87**	**203**	P	**Pb**	**22 46 06.9**	**+0.2**
CPWZ	**Castlepoint**	**0.89**	**117**	P	**Pg**	**22 46 06.7**	**-0.2**
PAWZ	**Paruwai Farm**	**0.90**	**167**	P	**Pg**	**22 46 06.5**	**-0.5**
MSWZ	**Moikau Station**	**0.91**	**175**	P	**Pg**	**22 46 06.7**	**-0.5**
BHW	**Baring Head**	**0.92**	**193**	P	**Pg**	**22 46 07.2**	**-0.3**
TCW	**Tory Channel**	**0.97**	**223**	P	**Pg**	**22 46 08.3**	**0.0**
TRWZ	**Traveller**	**0.98**	**156**	P	**Pb**	**22 46 08.3**	**-0.2**
DUWZ	**D'Urville Isla**	**0.98**	**252**	P	**Pb**	**22 46 08.5**	**-0.2**
PNHZ	**Pukenui**	**1.00**	**54**	P	**Pb**	**22 46 08.0**	**-0.9**
ANWZ	**Angora Road**	**1.01**	**88**	P	**Pb**	**22 46 07.7**	**-1.4**
PLWZ	**Palliser**	**1.06**	**176**	P	**Pb**	**22 46 08.6**	**-1.4**
WPHZ	**Waipukurau**	**1.08**	**66**	P	**Pb**	**22 46 09.3**	**-1.0**
MTVZ	**Mangateitei**	**1.15**	**12**	P	**Pb**	**22 46 10.5**	**-1.0**
PRHZ	**Porangahau**	**1.16**	**78**	P	**Pb**	**22 46 10.7**	**-0.9**
MOVZ	**Moawhango**	**1.19**	**23**	P	**Pn**	**22 46 10.7**	**-1.6**
LREZ	**Lake Rotokare**	**1.20**	**331**	P	**Pn**	**22 46 12.0**	**-0.3**
PKVZ	**Pokaka**	**1.23**	**7**	P	**Pn**	**22 46 11.7**	**-1.0**
WNVZ	**Wahianoa**	**1.23**	**16**	P	**Pn**	**22 46 11.7**	**-1.2**
BHHZ	**Black Hill Sta**	**1.23**	**35**	P	**Pn**	**22 46 11.8**	**-1.1**
TRVZ	**Turoa**	**1.25**	**14**	P	**Pn**	**22 46 12.0**	**-1.2**
WHVZ	**Whangaehu Hut**	**1.27**	**15**	P	**Pn**	**22 46 12.4**	**-1.1**
KRHZ	**Kereru**	**1.27**	**48**	P	**Pn**	**22 46 11.1**	**-2.3**
FWVZ	**Far West T-bar**	**1.29**	**14**	P	**Pn**	**22 46 12.6**	**-1.2**
TUVZ	**Tukino**	**1.30**	**17**	P	**Pn**	**22 46 13.0**	**-0.8**
TUWZ	**Tuamarina**	**1.30**	**225**	P	**Pn**	**22 46 12.7**	**-1.0**
SNVZ	**South Ngauruho**	**1.37**	**16**	P	**Pn**	**22 46 14.1**	**-0.8**
NGZ	**Ngauruhoe**	**1.38**	**15**	P	**Pn**	**22 46 14.1**	**-0.8**
PXZ	**Pawanui**	**1.39**	**70**	P	**Pn**	**22 46 15.1**	**+0.1**
PREZ	**Palmer Road**	**1.39**	**326**	P	**Pn**	**22 46 15.1**	**0.0**
OTVZ	**Oturere**	**1.40**	**16**	P	**Pn**	**22 46 14.6**	**-0.6**
VRZ	**Vera Road**	**1.42**	**347**	P	**Pn**	**22 46 14.5**	**-0.8**
NNVZ	**North Ngauruho**	**1.42**	**15**	P	**Pn**	**22 46 15.1**	**-0.5**
CMWZ	**Cape Campbell**	**1.43**	**210**	P	**Pn**	**22 46 13.7**	**-1.8**
WTVZ	**West Tongariro**	**1.43**	**14**	P	**Pn**	**22 46 14.9**	**-0.7**
ETVZ	**East Tongariro**	**1.44**	**18**	P	**Pn**	**22 46 14.9**	**-0.8**
TWVZ	**Taurewa**	**1.45**	**9**	P	**Pn**	**22 46 14.7**	**-1.2**
TMVZ	**Te Maari**	**1.46**	**17**	P	**Pn**	**22 46 15.2**	**-0.7**
KWHZ	**Kaweka Forest**	**1.46**	**42**	P	**Pn**	**22 46 16.3**	**+0.3**
KRVZ	**Karewarewa**	**1.46**	**15**	P	**Pn**	**22 46 15.5**	**-0.5**
NTVZ	**North Tongarir**	**1.47**	**16**	P	**Pn**	**22 46 15.5**	**-0.6**
NMEZ	**Namu Road**	**1.47**	**318**	P	**Pb**	**22 46 16.3**	**-0.7**
NEZ	**North Egmont**	**1.48**	**326**	P	**Pn**	**22 46 16.3**	**0.0**
KHEZ	**Kahui Hut**	**1.50**	**324**	P	**Pn**	**22 46 16.6**	**+0.1**
KAHZ	**Kahuranaki**	**1.50**	**62**	P	**Pg**	**22 46 18.9**	**+0.4**
DREZ	**Durham Road**	**1.51**	**331**	P	**Pn**	**22 46 16.8**	**+0.2**
NNZ	**Nelson**	**1.52**	**242**	P	**Pn**	**22 46 15.9**	**-0.8**
BSWZ	**Blackbirch Sta**	**1.54**	**218**	P	**Pn**	**22 46 15.9**	**-1.2**
NBEZ	**Newall Road No**	**1.59**	**321**	P	**Pn**	**22 46 17.9**	**+0.3**
KATZ	**Kakaramea**	**1.59**	**15**	P	**Pn**	**22 46 17.7**	**-0.1**
PKE	**Pukeiti**	**1.59**	**325**	P	**Pn**	**22 46 18.1**	**+0.4**
MCHZ	**McNeill Hill**	**1.59**	**49**	P	**Pg**	**22 46 21.1**	**+0.8**
RITZ	**Rihia Road**	**1.62**	**20**	P	**Pn**	**22 46 18.3**	**+0.1**
BKZ	**Black Stump Fm**	**1.69**	**38**	P	**Pn**	**22 46 20.0**	**+0.9**
BKZ	**Black Stump Fm**	**1.69**	**38**	P	**Pb**	**22 46 20.5**	**-0.3**
RATZ	**Rangitukua**	**1.71**	**16**	P	**Pn**	**22 46 19.5**	**+0.1**
TKNZ	**Takaka Hill**	**1.75**	**252**	P	**Pn**	**22 46 18.9**	**-1.0**
HIZ	**Hauiti**	**2.01**	**353**	P	**Pn**	**22 46 22.7**	**-0.7**

HIZ	Hauiti	2.01	353	P	Pn	22 46 22.9	-0.5
MRNZ	Matariki Terra	2.02	243	P	Pn	22 46 22.8	-0.8
QRZ	Quartz Range	2.02	260	P	Pn	22 46 22.3	-1.3
QRZ	Quartz Range	2.02	260	P	Pn	22 46 22.6	-1.0
MTHZ	Maungataniwha	2.10	39	P	Pn	22 46 21.8	-3.0
THZ	Tophouse	2.11	233	P	Pn	22 46 23.4	-1.6
RAHZ	Arahi	2.18	44	P	Pb	22 46 28.3	-0.8
TLZ	Tolley Road	2.20	8	P	Pn	22 46 26.2	+0.2
KHZ	Kahutara	2.26	212	P	Pn	22 46 24.9	-1.9
EDRZ	Edgecumbe	2.70	28	P	Pb	22 46 36.4	-1.5
URZ	Urewera	2.71	35	P	Pn	22 46 35.1	+2.1
URZ	Urewera	2.71	35	P	Pn	22 46 35.3	+2.2
TOZ	Tahuroa Road	2.79	6	P	Pn	22 46 32.9	-1.3

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*IDC **25** 22:56:31.1±1.1, 46°.59S×165°.06E, h0^{km}, mb3.6/3, mbtmp3.7/4, ML3.9/1, MS3.5/1, Error ellipse: s-maj=37.9km s-min=30.1km az=41.0*

*NEIC **25** 22:56:32.6±2.3, 46°.6S±0°.1×165°.0E±0°.1, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=21.5km s-min=13.6km az=180.0*

*WEL **25** 22:56:35.4±1.6, 47°S±9°×16°5E±°, h12^{km}, M3.8/7, ML4.0/7, MLv3.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=61.4*

ISC 25 22:56:32.4±2.3**, 46°.56S**±0°.07×**165°.08E**±0°.05**, h11**^{km}±14^{km}**, n55, σ1^{s}34**/65**, mb3.7**/4**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	1.18	71		Pb	22 56 55.2	+0.5
PYZ	Puysegur Point	1.18	71	P	Pb	22 56 55.2	+0.5
PYZ				S	Sg	22 57 10.7	+0.4
DCZ	Deep Cove	1.81	53		Pn	22 57 03.2	-0.3
DCZ	Deep Cove	1.81	53	P	Pn	22 57 03.3	-0.1
DCZ				S	Sn	22 57 24.6	-1.8
APZ	The Paps	2.02	99	P	Pn	22 57 06.7	+0.4
APZ				S	Sn	22 57 30.0	-1.6
WHZ	Wether Hill Ro	2.10	72		Pn	22 57 08.4	+1.0
WHZ	Wether Hill Ro	2.10	72	P	Pn	22 57 08.7	+1.3
WHZ				S	Sn	22 57 34.8	+1.4
MLZ	Mavora Lakes	2.43	62		Pn	22 57 14.1	+2.0
MLZ	Mavora Lakes	2.43	62	P	Pb	22 57 14.6	-1.6
MLZ				S	Sb	22 57 44.9	-1.1
MSZ	Milford Sound	2.75	48	P	Pn	22 57 18.5	+2.2
SYZ	Scrubby Hill	2.80	91	P	Pn	22 57 18.8	+1.8
SYZ				S	Sn	22 57 50.8	0.0
TUZ	Tuapeka	3.21	81	P	Pn	22 57 23.9	+1.2
TUZ				S	Sn	22 58 01.0	0.0
EAZ	Earnscleugh	3.24	67	P	Pn	22 57 25.3	+2.2
EAZ				S	Sn	22 58 02.9	+1.4
WKZ	Wanaka	3.26	59		Pn	22 57 24.9	+1.5
WKZ	Wanaka	3.26	59	P	Pn	22 57 26.7	+3.3
WKZ				S	Sn	22 58 04.1	+2.0
JCZ	Jackson Bay	3.61	48	P	Pn	22 57 31.1	+2.9
HHSZ	Highcliff Hill	3.89	82	P	Pn	22 57 32.2	+0.1
ODZ	Otahua Downs	4.17	71	Pn	Pn	22 57 35.9	-0.1
ODZ	Otahua Downs	4.17	71	P	Pn	22 57 35.9	-0.1
LBZ	Lake Benmore	4.20	61	Pn	Pn	22 57 36.8	+0.6
LBZ	Lake Benmore	4.20	61	P	Pn	22 57 36.7	+0.4
LBZ				S	Sn	22 58 23.5	-1.8
FOZ	Fox Glacier	4.52	50	Pn	Pn	22 57 42.4	+1.7
FOZ	Fox Glacier	4.52	50	P	Pn	22 57 42.3	+1.7
FOZ				S	Sn	22 58 32.1	-1.0
TMZ	Timaru	4.70	65	P	Pn	22 57 43.6	+0.4
GCSZ	Gaunt Creek Bo	4.94	51	P	Pn	22 57 47.9	+1.5
GCSZ				S	Sn	22 58 41.4	-2.1
ARCZ	Arundel	5.03	61	P	Pn	22 57 48.0	+0.2
ARCZ				S	Sn	22 58 43.6	-2.3
RPZ	Rata Peaks	5.09	58	Pn	Pn	22 57 48.5	-0.1
	4.8nm,0.3s,baz=235,slow=5.3,SNR=16						
RPZ				Sn	Sn	22 58 45.0	-2.3
	6.1nm,0.3s,baz=352,slow=23,SNR=9.0						
	10nm,0.3s						
RPZ	Rata Peaks	5.09	58	P	Pn	22 57 48.7	+0.1
RPZ				S	Sn	22 58 45.5	-1.9
WVZ	Waitaha Valley	5.32	51	P	Pn	22 57 52.3	+0.6
WVZ				S	Sn	22 58 52.1	-0.8
OXZ	Oxford	5.90	59	Pn	Pn	22 58 00.8	+1.1
MQZ	McQueen's Vall	6.07	65	Pn	Pn	22 58 01.9	0.0
LTZ	Lake Taylor	6.37	56	Pn	Pn	22 58 06.2	+0.1
QRZ	Quartz Range	7.87	46	Pn	Pn	22 58 28.0	+1.3
TAU	Tasmania Unive	13.14	280	Pn	Pn	22 59 36.3	-2.6
CAN	Canberra	16.51	307	Pn	Pn	23 00 23.8	-0.1
CAN				IAmb	IAmb	23 00 35.6	
	comp=Z,14nm,1.1s						
TOO	Toolangi	17.06	295		Pn	23 00 31.1	+0.3
TOO				IAmb	IAmb	23 00 38.9	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	23.25	301	LR	LR	23 08 30.8	
	comp=Z,111nm,19.3s,baz=203,slow=31						
ASAR	Alice Springs	33.88	302	P	P	23 03 14.4	-0.7
	comp=Z,0.4nm,0.6s,baz=132,slow=8.2,SNR=7.2						
ASAR				PcP	PcP	23 05 54.2	+0.6
	comp=Z,0.4nm,0.8s,baz=140,slow=4.9,SNR=2.1						
	comp=Z,0.4nm,0.6s						
WR0	Warramunga Arr	36.43	306	P	P	23 03 38.3	+1.3
WR0				IAmb	IAmb	23 03 45.7	
	comp=Z,3.4nm,1.1s						
WB2	Warramunga Arr	36.55	306	P	P	23 03 38.7	+0.7
WRA	Warramunga Arr	36.55	306	P	P	23 03 39.0	+0.9
	comp=Z,0.5nm,0.7s,baz=139,slow=8.0,SNR=8.6						
WRA				PcP	PcP	23 06 02.5	+1.0
	comp=Z,0.2nm,0.7s,baz=144,slow=2.9,SNR=5.2						
	comp=Z,0.5nm,0.7s						
WRA	Warramunga Arr	36.55	306	P	P	23 03 37.5	-0.6
H01W1	Cape Leeuwin H	39.67	268	T	T	23 46 38.8	
	baz=123,slow=75,SNR=14						
H01W2	Cape Leeuwin H	39.69	268	T	T	23 46 31.4	
	baz=123,slow=75,SNR=12						
H01W3	Cape Leeuwin H	39.69	268	T	T	23 46 25.9	
	baz=123,slow=75,SNR=10						
QSPA	South Pole Qui	43.56	180	P	P	23 04 36.0	+0.1
	comp=Z,1.0nm,0.8s,baz=63,slow=4.5,SNR=2.1						
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	43.56	180	P	P	23 04 36.4	+0.4
QSPA				IAmb	IAmb	23 04 38.4	
	comp=Z,5.7nm,1.3s						
H08S2	Diego Garcia H	86.29	263	T	T	00 44 44.5	
	baz=137						
H08S1	Diego Carcia H	86.30	263	T	T	00 44 47.4	
	baz=137						
H08S3	Diego Garcia H	86.31	263	T	T	00 44 49.0	
	baz=137						
TORD	Torodi Ar. Bea	143.87	208	PKP	PKPbc	23 16 06.6	+1.1
	comp=Z,0.7nm,0.6s,baz=159,slow=2.6,SNR=8.3						
BRTR	Keskin Array B	144.39	277	PKP	PKPdf	23 16 07.8	-0.4
	comp=Z,1.0nm,0.8s,baz=143,slow=5.0,SNR=3.9						
ARCES	ARCESS Array B	149.58	333	PKPbc	PKPbc	23 16 20.8	+0.4
	comp=Z,4.7nm,1.0s,baz=49,slow=2.9,SNR=4.5						
AKASG	Malin Array Be	150.87	295	PKPbc	PKPbc	23 16 24.0	0.0
	comp=Z,1.2nm,0.6s,baz=70,slow=2.8,SNR=2.5						
FINES	FINESS Array B	152.25	317	PKPbc	PKiKP	23 16 28.0	+0.8
	comp=Z,0.8nm,0.6s,baz=60,slow=5.6,SNR=1.7						

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*IDC **25** 23:01:18.0±0.5, 29°.23N×142°.24E, h0^{km}, mb4.5/27, mbtmp4.5/31, ML3.7/5, MS4.0/63, Error ellipse: s-maj=16.2km s-min=10.5km az=82.0*

*BJI **25** 23:01:17.8±0.0, 29°.23N×142°.24E, h14^{km}, mb4.7/68, mB4.8/36, Ms4.4/64, Ms7 4.3/62*

*MOS **25** 23:01:18.7±0.9, 29°.28N×142°.23E, h15^{km}, mb5.1/38, MS4.5/7, Error ellipse: s-maj=9.2km s-min=4.1km az=121.6*

*NEIC **25** 23:01:20.1±1.2, 29°.33N±0°.05×142°.3E±0°.1, h10^{km}±1^{km}, mb4.9/118, Error ellipse: s-maj=15.4km s-min=9.1km az=83.0*

*NIED **25** 23:01:20.2, 29°.36N×142°.58E, h48^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.56; M$_{\theta\theta}$-0.01; M$_{\phi\phi}$-0.55; M$_{r\theta}$0.50; M$_{\theta\phi}$-0.43; M$_{\phi r}$1.36; Fault plane solution: M$_0$1.60000×10^{16} NP1: φ$_s$224.00000°, δ13.00000°, λ113.00000°. NP2: φ$_s$20.00000°, δ78.00000°, λ85.00000°.*

*JMA **25** 23:01:20.2±0.2, 29°.4N±0°.4×14°3E±°, h48^{km}, MV4.9/33, MW4.8/33, NEAR TORISHIMA IS*

*GCMT **25** 23:01:24.1±0.5, 29°.15N±0°.04×142°.34E±0°.03, h21^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s13,c15; s73,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.74±.17; M$_{\theta\theta}$0.04±.09; M$_{\phi\phi}$-1.78±.11; M$_{r\theta}$0.69±.17; M$_{\theta\phi}$-0.06±.06; M$_{\phi r}$0.77±.15; Best double couple: M$_0$2.03700×10^{16} NP1: φ$_s$166.00000°, δ35.00000°, λ61.00000°. NP2: φ$_s$20.00000°, δ60.00000°, λ109.00000°. Principal axes: T 2.1130, Plg69.0000°, Azm329.0000°; N -0.1490, Plg16.0000°, Azm190.0000°; P -1.9620, Plg13.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 23:01:20.5±0.5**, 29°.26N**±0°.03×**142°.28E**±0°.05**, h16**^{km}±2^{km}**, h16**^{km}**:pP-P, n443, σ1^{s}37**/450**, mb4.9**/146**, MS4.2**/81**, 27C-15D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.16	182	P	Pn	23 01 56.4	+0.6
CBIJ	Chichi jima	2.16	182	A	A	23 01 56.4	
	comp=E,13nm,4.4s,comp=E,9.0nm,3.3s						
JCJ	Chichijima	2.16	182	Pn	Pn	23 01 56.1	+0.3
	52nm,0.3s,baz=300,slow=23,SNR=29						
JCJ				Sn	Sn	23 02 21.6	-0.7
	201nm,0.3s,baz=299,slow=22,SNR=5.8						
JCJ	Chichijima	2.16	182	Pn	Pn	23 01 56.8	+1.0
JCJ	Chichijima	2.16	182	P	Pn	23 01 57.1	+1.3
JHH2	Haha-jima-NKT2	2.62	182	*e*P	Pn	23 02 02.9	+0.7
JHH2	Haha-jima-NKT2	2.62	182	A	A	23 02 02.9	
	comp=E,8.0nm,2.1s,comp=E,6.0nm,2.7s						
JAOM	Aogashimamukai	3.85	326	P	Pn	23 02 20.2	+1.0
JHCJ	Hachijojimakas	4.35	331	*e*P	Pn	23 02 26.2	+0.2
JHJ2	Mitsune	4.38	332		Pn	23 02 25.0	-1.3
JHJ2	Mitsune	4.38	332	P	Pn	23 02 26.6	+0.3
JHJ2	Mitsune	4.38	332	*e*P	Pn	23 02 26.8	+0.5
JHJ	Hachijo jima 2	4.40	332	Pn	Pn	23 02 25.6	-1.0
	33nm,0.3s,baz=216,slow=23,SNR=13						
JHJ				Sn	Sn	23 03 12.9	-4.6
	36nm,0.3s,baz=69,slow=19,SNR=6.3						
JHJ				LR	LR	23 04 11.8	
	comp=Z,3μm,18.8s,baz=146,slow=40						
	64nm,0.3s						
JMKN	Mikurajimanish	5.16	334	*e*S	Sn	23 03 34.1	-2.0
BSO1	Boso 1	5.49	349	P	Pn	23 02 40.8	-0.3
BSO1				*e*S	Sn	23 03 41.2	-2.4
BSO3	Boso 3	5.72	345	P	Pn	23 02 45.0	+0.4
BSO4	Boso 4	5.94	344	*e*P	Pn	23 02 48.4	+0.6
JOD2	Odawara 2	6.56	337	P	Pn	23 02 57.9	+1.5
JHU	Hanno	7.04	340	*e*P	Pn	23 03 03.6	+0.7
JHU				*e*S	Sn	23 04 20.6	-2.0
JYT	Yasato	7.16	346	Pn	Pn	23 03 03.6	-1.0
JRY	Ryogami san	7.31	338	P	Pn	23 03 07.7	+1.1
INU	Inuyama	7.53	325		Pn	23 03 09.6	0.0
INU	Inuyama	7.53	325	P	Pn	23 03 11.7	+2.1
JAG	Ashikaga	7.53	342	P	Pn	23 03 08.9	-0.7
JGF	Kuroka	7.57	328	Pn	Pn	23 03 10.3	+0.1
MJAR	Matsushiro Arr	8.02	336	Pn	Pn	23 03 16.1	-0.3
	1.4nm,0.3s,baz=119,slow=13,SNR=27						
MJAR				Sn	Sn	23 04 46.9	0.0
	0.5nm,0.3s,baz=144,slow=21,SNR=4.3						
MJAR				LR	LR	23 06 34.4	
	comp=Z,839nm,18.8s,baz=150,slow=39						
	37nm,0.7s						
MJAR	Matsushiro Arr	8.02	336		Pn	23 03 16.5	+0.1
MJAR	Matsushiro Arr	8.02	336	P	Pn	23 03 16.5	+0.1
MAJO	Matsushiro	8.03	336	Pn	Pn	23 03 15.7	-0.7
MAJO	Matsushiro	8.03	336	*c i*P	Pn	23 03 16.9	+0.4
MAJO	Matsushiro	8.03	336	P	Pn	23 03 18.2	+1.7
MJB9	Matsu-Tunnel	8.03	336		Pn	23 03 15.6	-0.9
JFK	Kawauchi	8.17	352	*e*S	Sn	23 04 41.4	-9.0
JMM	Marumori	8.67	352		Pn	23 03 23.4	-1.8
JSD	Sado	9.37	340	Pn	Pn	23 03 33.1	-1.7
JHS	Saijyo	9.64	309	Pn	Pn	23 03 40.1	+1.5
JMK	Ichinoseki	9.71	355	*e*P	Pn	23 03 37.4	-2.0
JMK				*e*S	Sn	23 05 17.5	-11
JSU	Suzuyama	10.46	285	Pn	Pn	23 03 51.9	+2.1
JNU	Nakatsue	10.49	294	Pn	Pn	23 03 52.3	+2.0
	0.6nm,0.3s,baz=44,slow=6.0,SNR=3.1						
JNU				LR	LR	23 07 55.1	
	comp=Z,2μm,18.8s,baz=105,slow=38						
JNU	Nakatsue	10.49	294		Pn	23 03 52.6	+2.3
JTM	Tenmabayashi	11.54	355	Pn	Pn	23 04 03.2	-1.3
JTU	Tsushima	12.13	299	Pn	Pn	23 04 13.7	+0.9
JOW	Kunigami	12.61	262	Pn	Pn	23 04 20.6	+1.4
	0.5nm,0.3s,baz=112,slow=12,SNR=2.0						
JOW				LR	LR	23 08 34.3	
	comp=Z,1μm,20.9s,baz=104,slow=35						
ERM	Erimo	12.74	3	Pn	Pn	23 04 18.2	-2.8
ERM	Erimo	12.74	3	⇑*e*P	Pn	23 04 19.8	-1.2
ERM	Erimo	12.74	3	P	Pn	23 04 21.6	+0.6
NAWB	Namwon	13.99	300	Pn	Pn	23 04 39.3	+1.2
KSCHJ	Chungju	14.18	306		Pn	23 04 42.0	+1.2
TJN	Taejon	14.40	303		Pn	23 04 44.9	+1.2
TJN	Taejon	14.40	303	⇓*e*P	P	23 04 47.5	-3.0
KSRS	Korea Array	14.50	308	Pn	Pn	23 04 46.5	+1.4
	0.4nm,0.3s,baz=115,slow=16,SNR=20						
KSRS				LR	LR	23 10 12.5	
	comp=Z,634nm,18.6s,baz=120,slow=37						
	4.7nm,0.7s						
KSAR	Wonju Array Be	14.52	308		Pn	23 04 46.0	+0.6
KSAR	Wonju Array Be	14.52	308	P	Pn	23 04 46.0	+0.6
KS19	Wonju Array Si	14.57	308		Pn	23 04 46.7	+0.8
SEHB	SEOHWA	14.71	311	Pn	Pn	23 04 48.2	+0.3
ASAJ	Asahikawa	14.83	1	Pn	Pn	23 04 45.6	-3.8
	0.9nm,0.3s,baz=231,slow=26,SNR=1.8						
ASAJ				LR	LR	23 12 18.1	
	comp=Z,272nm,20.8s,baz=162,slow=44						
INCN	Inchon	15.42	306		Pn	23 04 57.1	-0.3
INCN				IAmb	IAmb	23 05 03.1	
	comp=Z,49nm,0.8s						
INCN	Inchon	15.42	306	P	Pn	23 04 57.1	-0.3
INCN				pmax	pmax		
	comp=Z,49nm,0.8s						
MSHR	Mys Shultsa	16.03	329	⇓*e*P	Pn	23 05 03.6	-1.7
USA0B	Ussuriysk Arra	17.02	334	⇑*e*P	Pn	23 05 16.8	-0.9
USRK	Ussuriysk Ar.	17.02	334	P	Pn	23 05 16.8	-0.9
	comp=Z,0.4nm,0.3s,baz=129,slow=8.1,SNR=6.9						
USRK				LR	LR	23 11 37.9	
	comp=Z,416nm,18.1s,baz=141,slow=36						
	comp=Z,4.6nm,0.7s						
USRK	Ussuriysk Ar.	17.02	334		Pn	23 05 15.6	-2.1
YSS	Yuzh-Sakhalins	17.67	1	⇓*e*P	P	23 05 26.9	+0.2
YSS				pmax	pmax		
	comp=Z,58nm,1.8s						
YOJ	Yonaguni jima	17.84	259		P	23 05 28.8	0.0
YOJ				IAmb	IAmb	23 05 33.6	
	comp=Z,83nm,1.2s						
YOJ	Yonaguni jima	17.84	259	P	P	23 05 28.8	0.0
YOJ				pmax	pmax		
	comp=Z,83nm,1.2s						
MDJ	Mudanjiang	18.34	330		Pn	23 05 33.4	-0.7
MDJ	Mudanjiang	18.34	330	P	Pn	23 05 33.8	-0.3
MDJ				pP	sP	23 05 38.5	-0.1
MDJ				sP	pwP	23 05 41.3	-2.3
MDJ				pmax	pmax		
	comp=Z,27nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,170nm,6.4s						
MDJ				LR	LR		
	comp=Z,580nm,18.4s						
MDJ				LR	LR		
	comp=Z,590nm,17.2s						
MDJ				LR	LR		
	comp=Z,1μm,16.8s						
TATO	Taipei	18.99	262	P	P	23 05 41.5	+0.1
TATO				IAmb	IAmb	23 05 47.0	
	comp=Z,156nm,0.9s						
NACB	Ninganchiao	19.15	260	P	P	23 05 43.4	+0.2
YHNB	Yeheng	19.18	261	P	P	23 05 43.9	+0.3
YHNB				IAmb	IAmb	23 05 55.2	
	comp=Z,44nm,0.9s						
YHNB	Yeheng	19.18	261	P	Pn	23 05 45.0	+0.5
SNY	Shenyang	19.67	315	⇑P	P	23 05 48.0	-0.7
SNY				S	S	23 09 16.3	-14
SNY				pmax	pmax		
	comp=Z,14nm,0.8s						
SNY				pmax	pmax		
	comp=Z,82nm,4.8s						
SNY				LR	LR		
	comp=Z,490nm,13.9s						
SNY				LR	LR		
	comp=Z,350nm,13.7s						
SNY				LR	LR		
	comp=Z,620nm,18.9s						
YULB	Yu-li	19.68	258	P	Pn	23 05 50.2	-0.3
YULB				IAmb	IAmb	23 05 54.6	
	comp=Z,198nm,1.5s						
CN2	Changchun	19.78	322	*e*P	P	23 05 50.0	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
CN2				LR	LR		
	comp=Z,900nm,17.0s						
SSLB	Suanglung	19.84	259	P	Pn	23 05 52.1	-0.3
SSLB	Suanglung	19.84	259	P	Pn	23 05 53.5	+1.1
TWG	Pinlang	20.09	256	P	P	23 05 54.3	+0.7
TWG				IAmb	IAmb	23 06 05.4	
	comp=Z,63nm,1.1s						
BNX	BinXian	20.19	329	⇓P	P	23 05 54.3	-0.1
BNX				pP	sP	23 05 58.5	-0.4
BNX				sP	pwP	23 06 00.8	-3.1
BNX				S	S	23 09 41.0	+0.6
BNX				sS	pS	23 09 49.0	-2.2
BNX				pmax	pmax		
	comp=Z,150nm,1.1s						
BNX				pmax	pmax		
	comp=Z,290nm,3.7s						
BNX				LR	LR		
	comp=Z,1μm,16.7s						
BNX				LR	LR		
	comp=Z,970nm,16.6s						
BNX				LR	LR		
	comp=Z,800nm,18.1s						
TPUB	Ta-pu	20.29	258	P	P	23 05 56.5	+0.8
TPUB				IAmb	IAmb	23 06 05.0	
	comp=Z,66nm,1.0s						
TPUB	Ta-pu	20.29	258	P	Pn	23 05 58.6	+0.9
NJ2	Nanjing	20.34	284	*e*P	P	23 05 56.0	-0.1
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
KLR	Kul'dur	21.50	341	P	P	23 06 08.6	+0.1
	comp=Z,10nm,0.8s,baz=155,slow=7.3,SNR=19						
	comp=Z,10nm,0.8s						
KLR	Kul'dur	21.50	341	*d i*P	P	23 06 08.7	+0.2
KLR				pmax	pmax		
	comp=Z,40nm,1.6s						
NKL	Nikolayevsk	23.90	358	*e*P	P	23 06 37.7	+4.4
NKL				*e*S	S	23 10 51.8	+3.0
NKL				pmax	pmax		
	comp=N,1.0nm,1.0s						
NKL				pmax	pmax		
	comp=E,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,26nm,1.3s						
NKL				smax	smax		
	comp=E,3.0nm,1.2s						
NKL				smax	smax		
	comp=N,20nm,1.5s						
NKL				MLR	MLR		
	comp=E,258nm,22.0s						
NKL				MLR	MLR		
	comp=N,18nm,15.0s						
NKL				MLR	MLR		
	comp=Z,218nm,17.0s						
BJT	Baijiatuau	23.93	304	P	P	23 06 33.4	-0.4
BJT	Baijiatuau	23.93	304	P	P	23 06 33.4	-0.4
BJT				pmax	pmax		
	comp=Z,23nm,1.4s						
BJI	Beijing	23.93	304	P	P	23 06 34.3	+0.5
BJI				S	S	23 10 54.5	+4.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI				LR	LR		
	comp=Z,300nm,17.9s						
BJI				LR	LR		
	comp=Z,550nm,16.1s						
BJI				LR	LR		
	comp=Z,860nm,16.7s						
WHN	Wuhan	24.23	280	⇓P	P	23 06 36.0	-0.6
WHN				pmax	pmax		
	comp=Z,42nm,0.8s						
WHN				LR	LR		
	comp=Z,480nm,10.4s						
WHN				LR	LR		
	comp=Z,1μm,19.5s						
WHN				LR	LR		
	comp=Z,910nm,16.9s						
H11N2	WAKE ISLAND Hy	24.29	107	T	T	23 32 11.7	
	baz=297,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	24.29	107	T	T	23 32 13.6	
	baz=297,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	24.30	107	T	T	23 32 14.2	
	baz=297,slow=75,SNR=58						
HNS	HongShan	24.36	297	⇓P	P	23 06 36.8	-1.0
HNS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HNS				LR	LR		
	comp=Z,340nm,16.7s						
HNS				LR	LR		
	comp=Z,670nm,15.7s						
HNS				LR	LR		
	comp=Z,760nm,15.2s						
H11S3	WAKE ISLAND Hy	24.71	110	T	T	23 32 47.5	
	baz=304,slow=71						
H11S1	WAKE ISLAND Hy	24.71	110	T	T	23 32 51.7	
	baz=304,slow=71						
H11S2	WAKE ISLAND Hy	24.73	110	T	T	23 32 56.4	
	baz=304,slow=71						
XLT	XiLinHaoTe	25.48	312	*e*P	P	23 06 48.3	+0.4
XLT				pP	sP	23 06 52.8	+0.1
XLT				sP	pwP	23 06 55.0	-2.4
XLT				S	S	23 11 15.0	+0.4
XLT				sS	sS	23 11 22.3	+1.9
XLT				pmax	pmax		
	comp=Z,78nm,3.9s						
XLT				LR	LR		
	comp=Z,370nm,16.8s						
XLT				LR	LR		
	comp=Z,380nm,20.2s						
CNSH	ChangSha	25.73	275	⇑P	P	23 06 49.0	-1.3
CNSH				S	S	23 11 18.3	-0.4
CNSH				pmax	pmax		
	comp=Z,22nm,1.2s						
CNSH				LR	LR		
	comp=Z,300nm,16.0s						
CNSH				LR	LR		
	comp=Z,550nm,15.8s						
CNSH				LR	LR		
	comp=Z,480nm,16.8s						
HIA	Hailar	26.35	326	P	P	23 06 55.8	+0.1
HIA				IAmb	IAmb	23 06 58.2	
	comp=Z,68nm,1.3s						
HIA	Hailar	26.35	326	*c i*P	P	23 06 56.6	+0.9
HIA				pmax	pmax		
	comp=Z,51nm,1.3s						
PETK	Petropavlovsk-	26.39	21	LR	LR	23 20 08.8	
	comp=Z,115nm,18.6s,baz=209,slow=43						
PET	Petropavlovsk	26.62	22	*e*P	P	23 07 11.8	+14
PET				*e*SS		23 12 54.2	
PET				MLR	MLR		
	comp=Z,800nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
ZEA	Zeya	26.81	340	*e*P	P	23 07 00.6	+0.8
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA				MLR	MLR		
	comp=E,100nm,15.0s						
ZEA				MLR	MLR		
	comp=N,200nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,14.0s						
DAV	Davao City (W)	27.11	219	LR	LR	23 17 30.5	
	comp=Z,227nm,20.3s,baz=16,slow=36						
HHC	Hu-ho-hao-te	27.54	303	*e*P	P	23 07 09.3	+2.7
HHC				S	S	23 11 53.5	+6.3
HHC				pmax	pmax		
	comp=Z,38nm,1.1s						
HHC				LR	LR		
	comp=Z,670nm,14.6s						
HHC				LR	LR		
	comp=Z,1μm,13.3s						
HHC				LR	LR		
	comp=Z,2μm,13.0s						
ENH	Enshi	28.43	280	P	P	23 07 12.8	-1.8
ENH				IAmb	IAmb	23 07 14.8	
	comp=Z,13nm,0.7s						
XAN	Xi'an	28.72	288	⇓P	P	23 07 15.3	-1.9
XAN				pP	pP	23 07 21.0	+0.5

XAN				S	S	23 12 02.8	-3.0
XAN				sS	sS	23 12 16.8	+4.4
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN				LR	LR		
	comp=Z,290nm,13.6s						
XAN				LR	LR		
	comp=Z,590nm,14.1s						
XAN				LR	LR		
	comp=Z,640nm,16.0s						
MA2	Magadan	30.86	8	P	P	23 07 36.1	+0.4
	comp=Z,3.4nm,0.3s,baz=172,slow=6.7,SNR=5.8						
	comp=Z,3.4nm,0.3s						
MA2	Magadan	30.86	8	P	P	23 07 35.1	-0.7
MA2				IAmb	IAmb	23 07 49.4	
	comp=Z,18nm,1.4s						
MA2	Magadan	30.86	8	⇓eP	P	23 07 36.4	+0.7
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
QIZ	Qiongzhong	31.21	258	P	P	23 07 41.0	+1.7
QIZ				S	S	23 12 49.8	+4.7
QIZ				LR	LR		
	comp=Z,160nm,17.7s						
QIZ				LR	LR		
	comp=Z,280nm,20.1s						
QIZ				LR	LR		
	comp=Z,280nm,21.6s						
GYA	Guiyang	31.54	274	⇓P	P	23 07 41.5	-0.8
GYA				S	S	23 12 47.3	-3.1
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
GYA				pmax	pmax		
	comp=Z,240nm,7.1s						
GYA				LR	LR		
	comp=Z,320nm,18.8s						
GYA				LR	LR		
	comp=Z,190nm,11.5s						
GYA				LR	LR		
	comp=Z,270nm,10.0s						
ULN	Ulaanbaatar	32.84	314	P	P	23 07 53.2	-0.3
ULN				IAmb	IAmb	23 07 56.2	
	comp=Z,23nm,1.1s						
ULN	Ulaanbaatar	32.84	314	deP	P	23 07 54.1	+0.6
ULN				pmax	pmax		
	comp=Z,26nm,1.3s						
MYLDM	Lahad Datu	32.86	228	P	P	23 07 54.8	+1.0
MYLDM				IAmb	IAmb	23 08 08.6	
	comp=Z,27nm,1.0s						
LZH	Lanzhou	32.90	292	eP	P	23 07 55.8	+1.6
LZH				pP	pwP	23 08 01.5	-2.3
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				LR	LR		
	comp=Z,350nm,15.2s						
LZH				LR	LR		
	comp=Z,740nm,15.2s						
LZH				LR	LR		
	comp=Z,940nm,16.3s						
LBMI	Labuha	32.92	208	P	P	23 07 54.9	+0.6
	comp=Z,15nm,1.0s						
SHEM	Shemya Is, Ala	33.12	36	LR	LR	23 20 49.8	
	comp=Z,78nm,18.6s,baz=212,slow=35						
SONM	Songino Array	33.24	314	P	P	23 07 56.8	-0.2
	comp=Z,11nm,0.9s,baz=129,slow=8.0,SNR=48						
SONM				LR	LR	23 22 05.2	
	comp=Z,263nm,18.9s,baz=104,slow=38						
	comp=Z,11nm,0.9s						
SONM	Songino Array	33.24	314	P	P	23 07 56.3	-0.7
SONM				IAmb	IAmb	23 07 59.6	
	comp=Z,13nm,0.9s						
CD2	Chengdu	33.27	283	P	P	23 07 55.5	-1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=Z,490nm,13.7s						
CD2				LR	LR		
	comp=Z,600nm,14.7s						
FAKI	Fak Fak	33.41	198	P	P	23 07 58.0	-0.6
FAKI				IAmb	IAmb	23 07 59.3	
	comp=Z,43nm,1.7s						
FAKI	Fak Fak	33.41	198	P	P	23 07 57.5	-1.1
	comp=Z,9.8nm,0.6s						
YAK	Yakutsk	33.81	349	LR	LR	23 22 50.0	
	comp=Z,162nm,19.5s,baz=94,slow=38						
GTOI	Gorontalo	33.89	216	P	P	23 08 02.5	-0.2
	comp=Z,9.4nm,1.0s						
SEY	Seymchan	34.31	8	P	P	23 08 05.2	-0.7
	comp=Z,1.5nm,0.3s,baz=185,slow=6.1,SNR=6.7						
	comp=Z,1.5nm,0.3s						
SEY	Seymchan	34.31	8	⇓iP	P	23 08 07.0	+1.1
SEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MRSI	Marisa	34.58	218	P	P	23 08 09.5	+0.8
	comp=Z,48nm,1.0s						
BOD	Bodaibo	34.65	334	eP	P	23 08 09.5	+0.6
BOD				pmax	pmax		
	comp=Z,16nm,1.0s						
TOLI2	Tolitoli	34.69	220	P	P	23 08 09.2	-0.6
TOLI2				IAmb	IAmb	23 08 15.4	
	comp=Z,21nm,1.3s						
SANI	Sanana	34.83	209	P	P	23 08 09.0	-1.8
	comp=Z,22nm,0.9s						
SANI				pP	pwP	23 08 19.9	0.0
	comp=Z,22nm,0.9s						
KMI	Kunming	35.30	273	⇑P	P	23 08 14.3	-0.9
KMI				pP	sP	23 08 21.0	+1.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				LR	LR		
	comp=Z,280nm,19.9s						
KMI				LR	LR		
	comp=Z,350nm,21.5s						
KMI				LR	LR		
	comp=Z,390nm,22.3s						
LUWI	Luwuk	35.44	215	P	P	23 08 14.9	-1.2
LUWI				IAmb	IAmb	23 08 51.8	
	comp=Z,26nm,0.9s						
PZH	PanZhiHua	35.81	276	P	P	23 08 18.0	-1.5
PZH				pP	sP	23 08 25.8	+1.5
PZH				sP	pwP	23 08 29.8	+0.6
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,150nm,5.0s						
PZH				LR	LR		
	comp=Z,660nm,17.6s						
PZH				LR	LR		
	comp=Z,410nm,16.7s						
PZH				LR	LR		
	comp=Z,940nm,20.6s						
ZAK	Zakamensk	36.07	317	eP	P	23 08 21.6	+0.3
ZAK				pmax	pmax		
	comp=Z,26nm,1.4s						
GTA	Gaotai	36.21	298	eP	P	23 08 21.8	-0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,63nm,6.2s						
GTA				LR	LR		
	comp=Z,280nm,16.0s						
GTA				LR	LR		
	comp=Z,320nm,17.1s						
GTA				LR	LR		
	comp=Z,420nm,16.7s						
IRK	Irkutsk	36.21	320	eP	P	23 08 23.2	+0.8
IRK				pmax	pmax		
	comp=Z,48nm,2.2s						
UBPT	Khong Chiam	36.63	256	P	P	23 08 26.4	+0.1
UBPT				IAmb	IAmb	23 08 27.7	
	comp=Z,18nm,1.1s						
MOY	Mondy	37.87	318	eP	P	23 08 37.6	+0.9
MOY				pmax	pmax		
	comp=Z,30nm,1.5s						
SBUM	Sibu	39.08	233	P	P	23 08 47.1	0.0
SPSI	Sidrap Palu	39.48	217	P	P	23 08 49.7	-0.6
	comp=Z,21nm,0.6s						
KNGR	Kungurtug, Tuv	39.63	315	⇑eP	P	23 08 52.4	+0.9
MTKI	Muara Teweh, K	39.84	226	P	P	23 08 53.7	+0.3
	comp=Z,26nm,0.8s						
GOMU	GeErMu	40.20	293	P	P	23 08 55.5	-1.2
GOMU				pP	pP	23 08 59.3	-0.9
GOMU				sP	sP	23 09 01.3	-0.3
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,100nm,4.7s						
GOMU				LR	LR		
	comp=Z,160nm,15.0s						
GOMU				LR	LR		
	comp=Z,250nm,15.5s						
GOMU				LR	LR		
	comp=Z,280nm,15.5s						
KAPI	Kappang	40.37	216	LR	LR	23 25 19.2	
	comp=Z,74nm,21.3s,baz=42,slow=36						
CHTO	Chiang Mai	40.72	265	P	P	23 09 00.2	-0.6
CHTO				IAmb	IAmb	23 09 01.2	
	comp=Z,29nm,0.8s						
CHTO	Chiang Mai	40.72	265	P	P	23 09 00.2	-0.6
CHTO				pmax	pmax		
	comp=Z,29nm,0.9s						
CM31	Chiang Mai Arr	40.86	265	P	P	23 09 01.3	-0.6
CMAR	Chiang Mai Arr	40.86	265	P	P	23 09 00.5	-1.4
	comp=Z,6.4nm,0.7s,baz=51,slow=8.2,SNR=38						
CMAR				LR	LR	23 26 29.6	
	comp=Z,332nm,20.1s,baz=70,slow=37						
	comp=Z,6.4nm,0.7s						
CMAR	Chiang Mai Arr	40.86	265	P	P	23 09 01.5	-0.4
CMAR	Chiang Mai Arr	40.86	265	i P	P	23 09 01.7	-0.2
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BILL	Bilibino	41.33	13	P	P	23 09 05.1	-0.1
BILL	Bilibino	41.33	13	i P	P	23 09 05.0	-0.1
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,116nm,16.0s						
SOEI	Soe	42.50	207	P	P	23 09 15.9	+0.5
SOEI				IAmb	IAmb	23 09 43.1	
	comp=Z,16nm,0.7s						
EDFI	Ende, Flores	42.69	211	P	P	23 09 16.0	-0.9
	comp=Z,10nm,0.7s						
COEN	Coen	42.98	179	P	P	23 09 18.4	-0.6
TIXI	Tiksi	43.07	354	P	P	23 09 19.6	+0.3
	comp=Z,1.3nm,0.4s,baz=268,slow=23,SNR=12						
	comp=Z,1.3nm,0.4s						
TIXI	Tiksi	43.07	354	P	P	23 09 18.9	-0.3
MTN	Manton Dam	43.22	196	P	P	23 09 20.6	-0.5
MTN				IAmb	IAmb	23 09 35.2	
	comp=Z,20nm,0.7s						
WMQ	Urumqi	45.41	304	eP	P	23 09 38.8	+0.3
WMQ				LR	LR		
	comp=Z,1µm,22.7s						
WMQ				LR	LR		
	comp=Z,910nm,24.9s						
WMQ				LR	LR		
	comp=Z,220nm,18.3s						
KULM	Kulim	45.98	247	P	P	23 09 43.1	-0.1
KNRA	Kununurra	46.55	198	P	P	23 09 46.5	-1.0
KNRA				IAmb	IAmb	23 10 01.9	
	comp=Z,12nm,1.0s						
TAPN	Taplejung	47.72	282	eP	P	23 09 56.4	-0.7
ZAA0	Zalesovo Array	47.93	318	P	P	23 09 57.7	-0.3
ZALV	Zalesovo Beam	47.93	318	P	P	23 09 58.4	+0.5
	comp=Z,24nm,1.0s,baz=102,slow=6.2,SNR=53						
ZALV				PcP	PcP	23 11 26.2	0.0
	comp=Z,1.4nm,0.5s,baz=116,slow=3.4,SNR=2.2						
ZALV				LR	LR	23 30 54.8	
	comp=Z,333nm,18.4s,baz=98,slow=37						
	comp=Z,24nm,1.0s						
ZALV	Zalesovo Beam	47.93	318	P	P	23 09 57.7	-0.2
RAMN	Ramite	48.78	281	eP	P	23 10 04.6	-0.6
PSI	Prapat	48.84	246	LR	LR	23 31 05.8	
	comp=Z,178nm,18.1s,baz=71,slow=37						
JIRN	Jiri	48.93	282	eP	P	23 10 06.0	-0.6
LEM	Lembang	48.99	228	LR	LR	23 33 08.7	
	comp=Z,55nm,18.9s,baz=16,slow=39						
LEM	Lembang	48.99	228	P	P	23 10 06.4	-0.3
	comp=Z,32nm,1.1s						
GUN	Gumba	49.13	283	eP	P	23 10 07.4	-0.6
MK31	Makanchi Array	49.19	308	P	P	23 10 07.5	-0.2
MK31				IAmb	IAmb	23 10 09.0	
	comp=Z,9.5nm,0.8s						
MK31	Makanchi Array	49.19	308	P	P	23 10 07.6	-0.2
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	49.19	308	P	P	23 10 07.7	-0.2
	comp=Z,9.3nm,0.7s,baz=92,slow=9.5,SNR=101						
MKAR				PcP	PcP	23 11 30.9	0.0
	comp=Z,1.0nm,0.7s,baz=102,slow=3.9,SNR=1.3						
MKAR				ScP	ScP	23 15 27.2	+1.6
	comp=Z,0.4nm,0.6s,baz=89,slow=5.7,SNR=3.2						
MKAR				LR	LR	23 31 53.8	
	comp=Z,295nm,18.3s,baz=90,slow=37						
	comp=Z,9.3nm,0.7s						
MKAR	Makanchi Array	49.19	308	P	P	23 10 07.4	-0.4
CTA	Charters Tower	49.21	175	LR	LR	23 29 14.4	
	comp=Z,93nm,20.8s,baz=310,slow=34						
WB0	Warramunga Arr	49.33	190	P	P	23 10 09.0	-0.1
MAKZ	Makanchi	49.40	308	P	P	23 10 09.5	+0.1
MAKZ				IAmb	IAmb	23 10 12.4	
	comp=Z,6.9nm,0.7s						
MAKZ	Makanchi	49.40	308	P	P	23 10 09.5	+0.1
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRAB	Tennant Creek	49.50	190	P	P	23 10 10.2	-0.1
WRAB				IAmb	IAmb	23 10 11.2	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	49.52	190	P	P	23 10 10.2	-0.2
	comp=Z,18nm,0.9s,baz=7.6,slow=8.2,SNR=83						
WRA				PcP	PcP	23 11 32.5	+0.2
	comp=Z,2.6nm,0.7s,baz=3.0,slow=3.8,SNR=2.4						
WRA				ScP	ScP	23 15 28.8	+1.7
	comp=Z,0.6nm,0.8s,baz=1.5,slow=4.3,SNR=4.8						
WRA				S	S	23 17 11.0	-6.6
	comp=Z,1.3nm,1.2s,baz=11,slow=14,SNR=4.8						
WRA				LR	LR	23 28 47.0	
	comp=Z,172nm,21.7s,baz=14,slow=33						
	comp=Z,18nm,0.9s						
WRA	Warramunga Arr	49.52	190	P	P	23 10 09.2	-1.3
GKN	Gorkha	50.16	283	eP	P	23 10 14.9	-0.8
SEM	Semipalatinsk	50.51	313	eP	P	23 10 17.5	-0.5
SEM				pmax	pmax		
	comp=Z,21nm,0.9s						
SEM	Semipalatinsk	50.51	313	eP	P	23 10 17.6	-0.5
	comp=Z,21nm,0.9s,baz=313						
NRIK	Noril'sk	50.67	338	P	P	23 10 18.9	+0.2
	comp=Z,14nm,0.8s,baz=115,slow=8.2,SNR=18						
	comp=Z,14nm,0.8s						
NRIK	Noril'sk	50.67	338	P	P	23 10 18.7	0.0
NRIK				IAmb	IAmb	23 10 20.4	
	comp=Z,26nm,1.1s						
NRIK	Noril'sk	50.67	338	c iP	P	23 10 19.3	+0.6
NRIK				pmax	pmax		
	comp=Z,28nm,1.1s						
DANN	Dangsing	50.81	284	eP	P	23 10 20.4	-0.3
P18K	Big Mountain,	51.37	36	P	P	23 10 24.4	+0.3
P18K				IAmb	IAmb	23 10 29.8	
	comp=Z,14nm,1.0s						
SVW2	Sparrevohn	51.43	33	P	P	23 10 25.0	+0.5
KURK	Kurchatov	51.55	313	P	P	23 10 25.7	+0.2
KURK	Kurchatov	51.55	313	P	P	23 10 25.7	+0.2
KURK				pmax	pmax		
	comp=Z,63nm,0.9s						
KURBB	Kurchatov Arra	51.61	313	LR	LR	23 33 07.5	
	comp=Z,202nm,18.4s,baz=63,slow=37						
UZB	Uzynbulak	51.75	304	eP	P	23 10 26.3	-1.1
UZB	Uzynbulak	51.75	304	eP	P	23 10 26.4	-1.0
	baz=304						
KPKS	Kokpek	51.96	304	eP	P	23 10 28.1	-0.8
KPKS	Kokpek	51.96	304	eP	P	23 10 28.1	-0.8
	baz=304						
TDK	Taldyqorghan	52.00	306	eP	P	23 10 27.9	-1.1
TDK	Taldyqorghan	52.00	306	eP	P	23 10 27.9	-1.1
	baz=306						
ZHN	Zhinishke	52.17	304	eP	P	23 10 30.2	-0.3
ZHN	Zhinishke	52.17	304	eP	P	23 10 30.2	-0.3
	baz=304						
SATY	Saty	52.20	304	eP	P	23 10 30.2	-0.5
SATY	Saty	52.20	304	eP	P	23 10 30.3	-0.5
	baz=304						
K20K	Telida	52.49	31	P	P	23 10 33.4	+1.0
J20K	Nowinta River	52.59	30	P	P	23 10 33.1	0.0
KDAK	Kodiak Island	52.59	38	LR	LR	23 31 48.6	
	comp=Z,169nm,20.8s,baz=273,slow=35						
TARG	Taragay, Kyrgy	52.82	302	P	P	23 10 35.3	-0.4
TARG				IAmb	IAmb	23 10 37.6	
	comp=Z,11nm,1.0s						
TARG	Taragay, Kyrgy	52.82	302	P	P	23 10 35.3	-0.4
TARG				pmax	pmax		
	comp=Z,11nm,1.0s						
IMAR	Indian Mountai	53.08	27	P	P	23 10 37.1	+0.4
CHKK	Chushkaly	53.13	305	eP	P	23 10 36.8	-0.7
CHKK	Chushkaly	53.13	305	eP	P	23 10 36.9	-0.7
	baz=305						
MDOK	Medeo	53.18	304	i P	P	23 10 37.5	-0.5
MDOK	Medeo	53.18	304	i P	P	23 10 37.5	-0.5
	baz=304						
AS31	Alice Springs	53.24	190	P	P	23 10 38.0	-0.3
ASAR	Alice Springs	53.24	190	P	P	23 10 38.1	-0.2
	comp=Z,3.4nm,0.8s,baz=2.5,slow=4.8,SNR=32						
ASAR				PcP	PcP	23 11 44.9	-1.2
	comp=Z,1.2nm,0.8s,baz=2.2,slow=4.9,SNR=2.0						
ASAR				ScP	ScP	23 15 46.3	+3.1
	comp=Z,0.3nm,0.7s,baz=1.0,slow=5.6,SNR=2.2						
ASAR				S	S	23 18 05.2	-3.9
	comp=Z,0.3nm,0.7s,baz=20,slow=16,SNR=2.1						
	comp=Z,3.4nm,0.8s						
AAA	Alma-Ata	53.27	304	eP	P	23 10 38.0	-0.6
AAA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AAA	Alma-Ata	53.27	304	eP	P	23 10 38.0	-0.6
	comp=Z,10nm,0.6s,baz=304						
TNSS	Tian-Shan	53.27	304	eP	P	23 10 38.7	-0.3
TNSS	Tian-Shan	53.27	304	eP	P	23 10 38.8	-0.3
	baz=304						
H21K	Melozitna Rive	53.41	28	P	P	23 10 40.0	+0.8
KUU	Kurty	53.59	305	c iP	P	23 10 39.8	-1.1
KUU				pmax	pmax		
	comp=Z,11nm,0.7s						
KUU	Kurty	53.59	305	⇑iP	P	23 10 39.9	-1.1
	comp=Z,11nm,0.7s,baz=305						
ULHL	Ulahol	53.90	303	P	P	23 10 43.4	0.0
	SNR=8.3						
KSH	Kashi	54.56	300	P	P	23 10 51.0	+2.8
KSH				sP	pwP	23 10 59.3	+1.5
KSH				PP	PP	23 12 55.0	+4.6
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MBWA	Marble Bar	54.64	206	P	P	23 10 47.0	-1.6
MBWA				IAmb	IAmb	23 10 58.6	
	comp=Z,17nm,1.2s						
KBK	Karagaybulak	54.78	304	P	P	23 10 50.3	+0.5
	SNR=17						
NEA2	Nenana	54.83	29	P	P	23 10 49.8	+0.2
SGDS	Sogindy	54.88	305	c iP	P	23 10 49.6	-0.7
SGDS	Sogindy	54.88	305	⇑iP	P	23 10 49.6	-0.7
	baz=304						
EIDS	Eidsvold	54.97	170	P	P	23 10 51.9	+1.0
EIDS				IAmb	IAmb	23 11 01.4	
	comp=Z,22nm,1.5s						
USP	Ospenovka	55.01	304	P	P	23 10 51.4	+0.2
	SNR=5.4						
BTLS	Baital	55.06	307	c iP	P	23 10 50.5	-1.0
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BTLS	Baital	55.06	307	⇑iP	P	23 10 50.6	-1.0
	comp=Z,4.9nm,0.8s,baz=306						
AAK	Ala-Archa	55.11	304	LR	LR	23 36 53.7	
	comp=Z,167nm,18.2s,baz=76,slow=39						
AAK	Ala-Archa	55.11	304	P	P	23 10 51.6	-0.6
AAK	Ala-Archa	55.11	304	ceP	P	23 10 52.0	-0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TOLK	Toolik Lake Re	55.13	24	P	P	23 10 51.4	-0.3
TOLK				IAmb	IAmb	23 11 11.3	
	comp=Z,8.6nm,1.1s						
UCH	Uchtor	55.17	303	P	P	23 10 53.9	+1.0
	SNR=14						
MDM	Murphy Dome	55.22	29	P	P	23 10 51.8	-0.6
MDM				IAmb	IAmb	23 11 20.0	
	comp=Z,9.4nm,1.2s						
BRZS	Berezniki	55.39	313	c iP	P	23 10 53.9	+0.1
BRZS				pmax	pmax		
	comp=Z,22nm,1.0s						
BRZS	Berezniki	55.39	313	⇑iP	P	23 10 53.1	-0.7
	comp=Z,22nm,1.0s,baz=313						
SCM	Sheep Creek Mo	55.44	33	P	P	23 10 53.6	-0.5
SCM				IAmb	IAmb	23 11 02.2	
	comp=Z,10nm,0.7s						
SCM	Sheep Creek Mo	55.44	33	P	P	23 10 53.6	-0.5
SCM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EKS2	Erkin-Say	55.63	304	P	P	23 10 55.4	-0.4
	SNR=6.5						
IL31		55.78	29	P	P	23 10 56.1	-0.2
ILAR	Eielson Array	55.78	29	P	P	23 10 56.3	-0.1
	comp=Z,2.8nm,0.9s,baz=261,slow=6.1,SNR=20						
ILAR				LR	LR	23 32 25.9	
	comp=Z,44nm,21.3s,baz=272,slow=34						
	comp=Z,2.8nm,0.9s						
ILAR	Eielson Array	55.78	29	P	P	23 10 56.0	-0.4
AML	Almayashu	55.78	303	P	P	23 10 57.9	+0.7
	SNR=25						
DZM	Mont Dzumac	56.09	153	LR	LR	23 36 03.7	
	comp=Z,162nm,18.5s,baz=16,slow=37						
BRVK	Borovoye	56.58	317	P	P	23 11 03.0	+0.7
BRVK	Borovoye	56.58	317	P	P	23 11 03.0	+0.7
BRVK				pmax	pmax		
	comp=Z,23nm,0.8s						
BMAR	Burnt Mountain	56.88	26	P	P	23 11 05.3	+1.1
SCRK	Sand Creek	57.02	30	P	P	23 11 05.5	+0.2
DZA	Taraz	57.36	304	eP	P	23 11 08.1	+0.1
DZA	Taraz	57.36	304	eP	P	23 11 08.1	+0.1
	baz=304						
K27K	Chicken	57.86	30	P	P	23 11 11.7	+0.5
KK31	Karatay Array	57.91	305	P	P	23 11 12.0	+0.2
KK31				IAmb	IAmb	23 11 12.9	
	comp=Z,16nm,0.8s						
KK31	Karatay Array	57.91	305	P	P	23 11 12.0	+0.2
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
KKAR	Karatay Array	57.91	305	P	P	23 11 11.9	0.0
KKAR				IAmb	IAmb	23 11 12.9	
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	57.91	305	P	P	23 11 12.0	+0.2
KKAR	Karatay Array	57.91	305	P	P	23 11 12.0	+0.2
BCAR	Beaver Creek A	58.02	31	P	P	23 11 12.0	-0.4
NIL	Nilore	58.06	293	P	P	23 11 11.8	-1.3
NIL				IAmb	IAmb	23 11 12.8	
	comp=Z,16nm,0.8s						
NIL	Nilore	58.06	293	P	P	23 11 11.8	-1.3
NIL				pmax	pmax		
	comp=Z,16nm,0.8s						
MSVF	Nonsavu	58.10	139	LR	LR	23 36 03.0	
	comp=Z,151nm,18.0s,baz=123,slow=36						
EGAK	Eagle	58.24	29	P	P	23 11 14.2	+0.4
IUG	Iuzhnay	58.45	304	c iP	P	23 11 16.1	+0.4
IUG	Iuzhnay	58.45	304	⇑iP	P	23 11 16.2	+0.4
	baz=304						
GAR	Garm	58.96	300	P	P	23 11 18.7	-0.7
DAWY	Dawson	59.04	30	P	P	23 11 19.8	+0.4
I29M	Ogilvie Camp,	59.41	29	P	P	23 11 22.2	+0.2
CHGR	Chuyangaron	59.92	300	P	P	23 11 25.6	-0.4
CHGR	Chuyangaron	59.92	300	P	P	23 11 25.6	-0.4
CHGR				pmax	pmax		
	comp=Z,58nm,0.7s						
EPYK	Eagle Plains	59.99	27	P	P	23 11 26.8	+0.8
EPYK				IAmb	IAmb	23 11 41.1	
	comp=Z,9.4nm,0.8s						
STKA	Stephens Creek	60.81	181	P	P	23 11 31.4	-0.4
	comp=Z,2.2nm,0.5s,baz=316,slow=6.9,SNR=4.2						
	comp=Z,2.2nm,0.5s						
STKA	Stephens Creek	60.81	181	P	P	23 11 32.2	+0.4
STKA	Stephens Creek	60.81	181	P	P	23 11 32.2	+0.4
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	61.03	25	P	P	23 11 33.4	+0.5
	comp=Z,1.3nm,0.6s,baz=338,slow=9.5,SNR=2.4						
INK				LR	LR	23 40 49.7	
	comp=Z,24nm,19.2s,baz=200,slow=39						
	comp=Z,1.3nm,0.6s						
KBL	Kabul	61.15	296	P	P	23 11 33.9	-0.7
KBL				IAmb	IAmb	23 11 34.7	
	comp=Z,7.1nm,0.8s						
KBL	Kabul	61.15	296	P	P	23 11 33.9	-0.7
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FORT	Forrest	61.23	194	P	P	23 11 34.8	+0.2
SVE	Sverdlovsk	61.57	322	eP	P	23 11 37.5	+0.7
SVE				pmax	pmax		
	comp=Z,27nm,1.2s						
AFI	Afiamalu	61.72	128	LR	LR	23 35 17.2	
	comp=Z,48nm,18.9s,baz=32,slow=33						
PALK	Pallekele	61.72	262	LR	LR	23 39 40.3	
	comp=Z,66nm,18.6s,baz=174,slow=37						
BBOO	Buckleboo	62.02	186	P	P	23 11 40.2	+0.3
ARU	Arti	62.78	322	LR	LR	23 41 18.7	
	comp=Z,195nm,18.0s,baz=78,slow=38						
ARU	Arti	62.78	322	P	P	23 11 45.1	+0.1

ARU	**Arti**	**62.78**	**322***c*	*i*P	**P**	**23 11 45.0**	**+0.1**
ARU						23 12 21.1	
ARU				S	**S**	**23 20 14.6**	**+1.5**
ARU				SS	**SS**	**23 24 11.4**	**-6.1**
ARU				pmax	pmax		
	comp=Z,32nm,0.8s						
ARU				MLR	MLR		
	comp=Z,171nm,14.0s						
ABKAR	**Akbulak array**	**63.66**	**314**	P	**P**	**23 11 51.1**	**+0.3**
ABKAR	**Akbulak array**	**63.66**	**314**	P	**P**	**23 11 51.1**	**+0.3**
C36M	**Paulatuk**	**64.22**	**23**	P	**P**	**23 11 54.8**	**+0.6**
C36M				IAmb	IAmb	23 12 20.9	
	comp=Z,10nm,1.2s						
DLBC	**Dease Lake**	**64.40**	**36**	LR	LR	23 37 04.2	
	comp=Z,83nm,22.0s,baz=276,slow=33						
AKTO	**Aktyubinsk**	**64.55**	**315**	LR	LR	23 41 21.6	
	comp=Z,239nm,19.0s,baz=74,slow=37						
CAN	**Canberra**	**64.55**	**174**	P	**P**	**23 11 57.1**	**+0.4**
CAN	**Canberra**	**64.55**	**174**	P	**P**	**23 11 57.2**	**+0.4**
CAN				pmax	pmax		
	comp=Z,60nm,1.6s						
HRA	**Herat**	**66.52**	**297**	P	**P**	**23 12 10.0**	**0.0**
HRA				IAmb	IAmb	23 12 11.1	
	comp=Z,6.6nm,0.8s						
TOO	**Toolangi**	**66.55**	**177**	P	**P**	**23 12 11.6**	**+2.0**
TOO	**Toolangi**	**66.55**	**177**	P	**P**	**23 12 11.6**	**+2.0**
TOO				pmax	pmax		
	comp=Z,77nm,1.8s						
KIRV	**Kirov**	**66.96**	**325**	P	**P**	**23 12 12.6**	**+0.5**
	comp=Z,28nm,0.7s,baz=72,slow=11,SNR=14						
KIRV				LR	LR	23 44 08.1	
	comp=Z,284nm,18.3s,baz=70,slow=38						
	comp=Z,28nm,0.7s						
PRGR	**Permogore**	**67.73**	**329**	*e*P	**P**	**23 12 16.9**	**0.0**
EUNU	**Eureka**	**67.75**	**8**	P	**P**	**23 12 17.4**	**+0.5**
SPB2	**Spitsbergen Ar**	**68.27**	**350**	P	**P**	**23 12 20.8**	**+0.6**
SPITS	**Spitsbergen Ar**	**68.27**	**350**	P	**P**	**23 12 21.2**	**+1.1**
SPITS				pmax	pmax		
	comp=Z,39nm,1.4s						
GEYT	**Alibeck**	**68.41**	**302**	P	**P**	**23 12 21.7**	**0.0**
	comp=Z,6.0nm,0.8s,baz=230,slow=6.9,SNR=9.9						
GEYT				LR	LR	23 45 08.0	
	comp=Z,196nm,18.6s,baz=78,slow=38						
	comp=Z,6.0nm,0.8s						
GEYT	**Alibeck**	**68.41**	**302**	P	**P**	**23 12 21.6**	**0.0**
GEYT				IAmb	IAmb	23 12 24.2	
	comp=Z,5.5nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**68.41**	**302**	P	**P**	**23 12 21.5**	**-0.2**
GYA0B				IAmb	IAmb	23 12 24.1	
	comp=Z,9.6nm,0.9s						
NOR	**Nord**	**68.83**	**357**	*i* P	P	23 12 33.9	+10
NOR				IAmb	IAmb	23 12 42.2	
	comp=Z,1.4nm,0.7s						
BELG	**Belogornoye**	**70.07**	**319**	P	**P**	**23 12 31.3**	**-0.3**
	comp=Z,40nm,0.9s,baz=279,slow=3.3,SNR=7.7						
	comp=Z,40nm,0.9s						
BELG	**Belogornoye**	**70.07**	**319**	*i* P	**P**	**23 12 31.5**	**-0.1**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YKA	**Yellowknife Ar**	**70.20**	**29**	P	**P**	**23 12 32.9**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=294,slow=6.0,SNR=17						
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**70.20**	**29**	P	**P**	**23 12 32.0**	**-0.3**
KLMR	**Klimovskoe**	**70.76**	**330**	*e*P	**P**	**23 12 33.6**	**-2.1**
KLMR				*e*		23 12 55.4	
KLMR				*e*		23 15 10.0	
KLMR				pmax	pmax		
	comp=Z,15nm,1.1s						
KLMR	**Klimovskoe**	**70.76**	**330**	*e*P	**P**	**23 12 33.7**	**-2.0**
KLMR				AMP		23 12 37.0	
	comp=Z,15nm,1.1s						
KLMR				*e*PcP	**PcP**	**23 12 55.4**	**-1.0**
KLMR				*e*PP	**PP**	**23 15 10.0**	**-2.0**
ARCES	**ARCESS Array B**	**71.53**	**341**	P	**P**	**23 12 40.7**	**+0.4**
	comp=Z,8.3nm,1.0s,baz=64,slow=5.9,SNR=7.6						
ARCES				LR	LR	23 49 07.8	
	comp=Z,181nm,19.0s,baz=72,slow=40						
	comp=Z,8.3nm,1.0s						
ARCES	**ARCESS Array B**	**71.53**	**341**	P	**P**	**23 12 40.4**	**+0.1**
ARCES				IAmb	IAmb	23 12 42.2	
	comp=Z,13nm,1.1s						
DAG	**Danmarks Havn**	**73.56**	**356**	*i* P	**P**	**23 12 52.0**	**-0.2**
DAG				IAmb	IAmb	23 12 53.4	
	comp=Z,2.7nm,0.9s						
VRH	**Novokhopyorsk**	**73.90**	**320**	*e*P	**P**	**23 12 54.3**	**-0.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAK	**Makhachkala**	**73.93**	**310**	*i* P	**P**	**23 12 50.2**	**-4.7**
MAK				*e*S	**SKiKP**	**23 22 18.3**	**-4.8**
MAK				pmax	pmax		
	comp=Z,26nm,1.1s						
MAK				MLR	MLR		
	comp=Z,330nm,16.0s						
MOS	**Moscow**	**73.98**	**325**	*e*P	**P**	**23 12 50.3**	**-4.7**
MOS				*e*		23 27 05.0	
MOS				MLR	MLR		
	comp=Z,300nm,18.0s						
YBH	**Yreka Blue Hor**	**74.61**	**51**	LR	LR	23 39 45.0	
	comp=Z,64nm,20.8s,baz=286,slow=31						
URZ	**Urewera**	**74.65**	**152**	LR	LR	23 42 11.8	
	comp=Z,93nm,21.5s,baz=211,slow=33						
LPSR	**Galich'ya Gora**	**74.79**	**322**	*e*P	**P**	**23 12 58.8**	**-1.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	**Obninsk**	**74.81**	**325**	LR	LR	23 48 45.1	
	comp=Z,85nm,19.1s,baz=5.5,slow=38						
OBN	**Obninsk**	**74.81**	**325**	P	**P**	**23 12 59.1**	**-0.7**
OBN				IAmb	IAmb	23 13 28.7	
	comp=Z,9.3nm,0.6s						
OBN	**Obninsk**	**74.81**	**325**	*i* P	**P**	**23 12 59.8**	**0.0**
OBN				*i*		23 13 17.1	
OBN				*i*		23 15 50.4	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,386nm,17.0s						
PINE	**Pine Mountain**	**74.89**	**48**	P	**P**	**23 13 00.1**	**-0.7**
PINE				IAmb	IAmb	23 13 15.8	
	comp=Z,9.7nm,1.0s						
EDM	**Edmonton**	**75.04**	**37**	P	**P**	**23 13 01.0**	**-0.3**
EDM	**Edmonton**	**75.04**	**37**	P	**P**	**23 13 01.0**	**-0.3**
EDM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAR	**Rarotonga**	**75.06**	**125**	LR	LR	23 39 43.7	
	comp=Z,134nm,21.2s,baz=313,slow=31						
VORR	**Voronezh**	**75.08**	**321**	*e*P	**P**	**23 13 02.4**	**+0.9**
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
NEW	**Newport**	**75.26**	**43**	LR	LR	23 41 16.9	
	comp=Z,46nm,19.7s,baz=303,slow=32						
VSR	**Storozhevoye**	**75.32**	**321**	*e*P	**P**	**23 13 03.0**	**+0.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GOF	**Gofitskoye**	**75.90**	**314**⇑	*e*P	**P**	**23 13 05.9**	**-0.4**
GOF				pmax	pmax		
	comp=Z,22nm,0.8s						
FIA1	**FINESS Array S**	**76.05**	**334**	P	**P**	**23 13 06.9**	**+0.1**
FIA1				IAmb	IAmb	23 13 23.9	
	comp=Z,26nm,1.3s						
FINES	**FINESS Array B**	**76.05**	**334**	P	**P**	**23 13 07.3**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=58,slow=4.7,SNR=31						
FINES				LR	LR	23 50 40.8	
	comp=Z,74nm,18.4s,baz=54,slow=39						
	comp=Z,2.9nm,0.6s						
FINES	**FINESS Array B**	**76.05**	**334**	P	**P**	**23 13 07.0**	**+0.2**
NCK	**Nalchik**	**76.26**	**312**⇑	*e*P	**P**	**23 13 09.8**	**+1.4**
NCK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZEI	**Tsey**	**76.38**	**311**	*e*P	**P**	**23 13 08.8**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBZ	**Khabaz**	**76.60**	**313**	P	**P**	**23 13 11.3**	**+1.0**
	comp=Z,21nm,0.8s,baz=87,slow=3.4,SNR=55						
KBZ				LR	LR	23 49 56.4	
	comp=Z,123nm,18.8s,baz=61,slow=38						
KIV	**Kislovodsk**	**76.63**	**313**	P	**P**	**23 13 11.8**	**+1.2**
KIV				IAmb	IAmb	23 13 13.6	
	comp=Z,14nm,0.8s						
KIV	**Kislovodsk**	**76.63**	**313**	*e*P	**P**	**23 13 11.4**	**+0.8**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
WALA	**Waterton Lakes**	**76.75**	**41**	P	**P**	**23 13 10.7**	**-0.6**
WALA				IAmb	IAmb	23 13 15.9	
	comp=Z,7.8nm,1.1s						
GNI	**Garni**	**77.03**	**309**	LR	LR	23 50 52.1	
	comp=Z,137nm,18.0s,baz=72,slow=39						
GNI	**Garni**	**77.03**	**309**	P	**P**	**23 13 12.7**	**-0.4**
GNI				IAmb	IAmb	23 13 25.2	
	comp=Z,9.0nm,0.8s						
GNI	**Garni**	**77.03**	**309***c*	*i*P	**P**	**23 13 13.5**	**+0.5**
GNI				pmax	pmax		
	comp=Z,15nm,1.2s						
BEKR	**Beckworth**	**77.04**	**52**	P	**P**	**23 13 13.6**	**+0.4**
BEKR				IAmb	IAmb	23 13 19.4	
	comp=Z,6.3nm,0.8s						
JTMT	**Jette**	**77.18**	**42**	P	**P**	**23 13 13.2**	**-0.6**
JTMT				IAmb	IAmb	23 13 29.7	
	comp=Z,5.8nm,0.8s						
VSU	**Vasula**	**77.55**	**331**⇓	*e*P	**P**	**23 13 16.0**	**+0.7**
VSU				pmax	pmax		
	comp=Z,44nm,1.4s						
MFID	**Camas Ranch**	**78.36**	**47**	P	**P**	**23 13 20.2**	**-0.1**
SUMG	**Summit**	**78.43**	**0**	P	**P**	**23 13 21.6**	**+1.1**
SUMG				IAmb	IAmb	23 13 30.0	
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**78.43**	**0**	P	**P**	**23 13 21.6**	**+1.1**
SUMG				pmax	pmax		
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**78.43**	**0**	*i* P	**P**	**23 13 21.0**	**+0.4**
SUMG				IAmb	IAmb	23 13 29.3	
	comp=Z,4.9nm,1.0s						
SOC	**Sochi**	**78.70**	**314**	*e*P	**P**	**23 13 20.3**	**-1.7**
SOC				*e*		23 16 15.9	
SOC				*e*PPP	PPP	23 18 06.8	
SOC				*e*S	**S**	**23 23 16.7**	**-2.1**
SOC				*e*SSS	SSS	23 31 43.9	
SOC				pmax	pmax		
	comp=Z,19nm,0.7s						
SOC				MLR	MLR		
	comp=Z,163nm,19.0s						
KVN	**Kaiserville**	**78.96**	**51**	P	**P**	**23 13 23.5**	**-0.3**
KVN	**Kaiserville**	**78.96**	**51**	P	**P**	**23 13 23.5**	**-0.3**
KVN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NVAR	**Mina Array Bea**	**79.12**	**52**	P	**P**	**23 13 25.3**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=267,slow=4.7,SNR=15						
NVAR				LR	LR	23 49 51.2	
	comp=Z,62nm,18.1s,baz=286,slow=37						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**79.12**	**52**	P	**P**	**23 13 25.1**	**+0.3**
LRM	**Limekiln Ridge**	**79.24**	**43**	P	**P**	**23 13 25.8**	**+0.5**
MNK	**Minsk**	**79.37**	**327**	*i* P	**P**	**23 13 24.9**	**-0.5**
MNK				*i*		23 13 32.9	
MNK				*i*		23 16 26.3	
MNK				*i* PPP	PPP	23 18 12.9	
MNK				*i* S	**S**	**23 23 24.3**	**-1.2**
MNK				*i* SS	**SS**	**23 28 31.8**	**+0.2**
MNK				*i* SSS	SSS	23 31 58.4	
MNK				pmax	pmax		
	comp=Z,19nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,4.0nm,0.5s						
MNK				MLR	MLR		
	comp=Z,277nm,15.0s						
MNK				MLR	MLR		
	comp=E,25nm,15.0s						
MNK				MLR	MLR		
	comp=N,95nm,15.0s						
MNK	**Minsk**	**79.37**	**327**	*i* P	**P**	**23 13 24.9**	**-0.5**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**23 13 24.9**	**-0.5**
	comp=N,4.0nm,0.5s,baz=54						
MNK				*i* P	**P**	**23 13 24.9**	**-0.5**
	comp=Z,19nm,1.0s						
MNK				*i* PcP	**PcP**	**23 13 32.9**	**-0.7**
MNK				*i* PP	**PP**	**23 16 26.4**	**+1.5**
MNK				*i* PPP	PPP	23 18 13.0	
MNK				*i* S	**S**	**23 23 24.3**	**-1.2**
MNK				*i* SS	**SS**	**23 28 31.9**	**+0.2**
MNK				*i* SSS	SSS	23 31 58.4	
MNK				*i* LQ	LQ	23 42 50.7	
MNK				*i* LR	LR	23 47 58.4	
MNK				*i* LRM	MLR	23 51 58.4	
	comp=Z,277nm,15.2s						
MNK				*i* LRM	MLR	23 51 59.6	
	comp=E,25nm,15.2s						
MNK				*i* LRM	MLR	23 52 00.3	
	comp=N,95nm,15.2s						
IDID	**Didziasalis**	**79.42**	**328**	*e*P	**P**	**23 13 26.4**	**+0.7**
ISAL	**Salakas**	**79.54**	**329**	*e*P	**P**	**23 13 27.3**	**+0.9**
IIGN	**Ignalina**	**79.63**	**329**	*e*P	**P**	**23 13 27.8**	**+0.9**
GURO	**Guroymak-BITLI**	**79.63**	**308**	P	**P**	**23 13 28.3**	**+0.9**
GURO				IAmb	IAmb	23 13 29.9	
	comp=Z,10.0nm,1.1s						
NACGM	**Naroch**	**79.64**	**328**⇓	*e*P	**P**	**23 13 27.8**	**+0.8**
	baz=53						
TPH	**Tonopah**	**80.04**	**52**	P	**P**	**23 13 29.1**	**-0.7**
TPH	**Tonopah**	**80.04**	**52**	P	**P**	**23 13 29.1**	**-0.7**
TPH				pmax	pmax		
	comp=Z,58nm,1.6s						
ELK	**Elko**	**80.05**	**49**	LR	LR	23 46 25.2	
	comp=Z,102nm,18.9s,baz=230,slow=34						
PABE	**Paberze**	**80.55**	**329**	P	**P**	**23 13 32.3**	**+0.4**
PABE				IAmb	IAmb	23 13 39.1	
	comp=Z,18nm,0.9s						
PABE	**Paberze**	**80.55**	**329**	*e*P	**P**	**23 13 32.5**	**+0.6**
AKASG	**Malin Array Be**	**80.93**	**324**	P	**P**	**23 13 33.7**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=46,slow=5.8,SNR=13						
AKASG				LR	LR	23 51 57.2	
	comp=Z,306nm,19.3s,baz=51,slow=38						
	comp=Z,2.7nm,0.7s						
AKASG	**Malin Array Be**	**80.93**	**324***c*	*e*P	**P**	**23 13 33.7**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	**Malin Array Si**	**80.93**	**324**	P	**P**	**23 13 34.3**	**+0.4**
AKBB	**Malin Array Si**	**80.93**	**324**	P	**P**	**23 13 34.3**	**+0.4**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MARD	**Mardin**	**81.11**	**308**	P	**P**	**23 13 35.9**	**+0.5**
MARD				IAmb	IAmb	23 13 38.0	
	comp=Z,14nm,0.7s						
NC405	**NORSAR Array S**	**81.42**	**338**	P	**P**	**23 13 36.5**	**0.0**
SIM	**Simferopol'**	**81.43**	**317**	*e*P	**P**	**23 13 35.9**	**-0.9**
SIM				pmax	pmax		
	comp=N,18nm,0.8s						
NB2	**NORSAR Subarra**	**81.64**	**338**	P	**P**	**23 13 37.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=41,slow=5.1						
NOA	**NORSAR Array B**	**81.64**	**338**	P	**P**	**23 13 37.8**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=42,slow=5.2,SNR=7.2						
NOA				LR	LR	23 54 19.9	
	comp=Z,70nm,20.1s,baz=45,slow=39						
	comp=Z,2.9nm,0.9s						
SUW	**Suwalki**	**81.85**	**329**	*e*P	**P**	**23 13 39.2**	**+0.4**
SUW	**Suwalki**	**81.85**	**329**	P	**P**	**23 13 38.6**	**-0.2**
SUW				IAmb	IAmb	23 13 45.7	
	comp=Z,20nm,0.9s						
SUW	**Suwalki**	**81.85**	**329**	P	**P**	**23 13 38.6**	**-0.2**
SUW				pmax	pmax		
	comp=Z,20nm,0.9s						
SUW	**Suwalki**	**81.85**	**329**	*e*P	**P**	**23 13 39.3**	**+0.4**
PDAR	**Pinedale Array**	**82.62**	**45**	P	**P**	**23 13 44.0**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=292,slow=2.6,SNR=4.0						
PDAR				LR	LR	23 47 01.6	
	comp=Z,34nm,21.5s,baz=305,slow=33						
	comp=Z,1.6nm,0.9s						
PDAR	**Pinedale Array**	**82.62**	**45**	P	**P**	**23 13 43.2**	**-0.2**
PFO	**Pinyon Flats O**	**82.79**	**56**	LR	LR	23 47 21.6	
	comp=Z,54nm,19.2s,baz=202,slow=33						
BZK	**Bozkurt**	**83.13**	**314**	P	**P**	**23 13 45.5**	**-0.2**
SFJD	**Kangerlussuaq**	**83.55**	**5**	LR	LR	23 55 20.5	
	comp=Z,16nm,19.9s,baz=354,slow=39						
BNN	**Bunyan**	**83.64**	**311**	P	**P**	**23 13 49.0**	**+0.4**
ILGA	**Ilgaz**	**83.81**	**314**	P	**P**	**23 13 49.8**	**+0.2**
FRB	**Frobisher Bay**	**84.15**	**13**	LR	LR	23 56 20.8	
	comp=Z,26nm,18.4s,baz=13,slow=39						
RAYN	**Ar Rayn**	**84.36**	**294**	P	**P**	**23 13 53.0**	**+0.7**
RAYN	**Ar Rayn**	**84.36**	**294**	P	**P**	**23 13 53.1**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,38nm,0.9s						
BR131	**Keskin Array S**	**84.60**	**313**	P	**P**	**23 13 53.5**	**0.0**
BR131	**Keskin Array S**	**84.60**	**313***d*	*i*P	**P**	**23 13 54.1**	**+0.7**
BRTR	**Keskin Array B**	**84.60**	**313**	P	**P**	**23 13 54.1**	**+0.7**
	comp=Z,9.4nm,0.9s,baz=101,slow=3.3,SNR=40						
BRTR				LR	LR	23 56 01.7	
	comp=Z,88nm,18.3s,baz=80,slow=39						
	comp=Z,9.4nm,0.9s						
BRTR	**Keskin Array B**	**84.60**	**313**	P	**P**	**23 13 53.5**	**0.0**
BRTR	**Keskin Array B**	**84.60**	**313***c*	*e*P	**P**	**23 13 54.2**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**84.88**	**323**	P	**P**	**23 13 54.9**	**+0.2**
BUR08				IAmb	IAmb	23 14 11.7	
	comp=Z,4.6nm,0.9s						
BURAR	**Bucovina Array**	**84.89**	**323**	P	**P**	**23 13 54.6**	**-0.1**
ULM	**Lac du Bonnet**	**85.59**	**33**	LR	LR	23 50 02.0	
	comp=Z,52nm,22.0s,baz=284,slow=34						
MLR	**Muntele Rosu**	**85.81**	**321**	LR	LR	23 55 08.8	
	comp=Z,137nm,18.6s,baz=68,slow=38						
OJC	**Ojcow**	**85.91**	**327**	*e*P	**P**	**23 13 59.7**	**0.0**
MMAI	**Mount Meron Ar**	**87.10**	**306**	LR	LR	23 57 43.0	
	comp=Z,122nm,18.5s,baz=211,slow=39						
KSP	**Ksiaz**	**87.10**	**329**	*e*P	**P**	**23 14 05.4**	**-0.1**
CSS	**Mathiatis**	**87.46**	**309**	P	**P**	**23 14 06.8**	**-0.7**
VRAC	**Vranov**	**88.05**	**328**	LR	LR	23 57 04.0	
	comp=Z,127nm,18.7s,baz=51,slow=38						
CLL	**Collm**	**88.20**	**331**	*e*P	**P**	**23 14 11.0**	**+0.3**
CLL				*e**PP	**sP**	**23 14 17.0**	**+1.6**
CLL	**Collm**	**88.20**	**331**	*e*P	**P**	**23 14 11.0**	**+0.3**
CLL				*e*(pP)	**sP**	**23 14 17.0**	**+1.6**
CLL				*e*PP	**PP**	**23 17 37.0**	**-0.1**
CLL				*e*S	**S**	**23 25 00.0**	**+5.4**
CLL				*e*SS	**SS**	**23 30 48.0**	**+5.9**
ELL	**Elmali**	**88.71**	**312**	P	**P**	**23 14 14.3**	**+0.7**
ELL	**Elmali**	**88.71**	**312**	P	**P**	**23 14 14.3**	**+0.7**
ELL				pmax	pmax		
	comp=Z,95nm,1.6s						
ANMO	**Albuquerque**	**89.03**	**50**	LR	LR	23 53 12.3	
	comp=Z,59nm,18.0s,baz=302,slow=35						
ANMO	**Albuquerque**	**89.03**	**50**⇑	*e*P	**P**	**23 14 16.7**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,7.0nm,3.7s						
RONA	**Rosalia, Austr**	**89.32**	**327**	*e*P	**P**	**23 14 15.2**	**-1.0**
CONA	**Conrad Observa**	**89.37**	**327**	*e*P	**P**	**23 14 16.6**	**+0.1**
	comp=Z,3.7nm,1.3s						
CONA				*e*P	**PP**	**23 17 45.9**	**-0.7**
	comp=Z,3.7nm,1.5s						
GERES	**GERESS Array B**	**89.70**	**329**	P	**P**	**23 14 16.9**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=51,slow=7.0,SNR=5.0						
	comp=Z,0.5nm,0.7s						
ARSA	**Arzberg**	**90.01**	**327**	*e*P	**P**	**23 14 18.5**	**-0.9**
	comp=Z,2.9nm,0.9s						
MOA	**Molln**	**90.17**	**328**	*e*P	**P**	**23 14 20.1**	**0.0**
	comp=Z,1.5nm,1.0s						
MOA				*e*P	**PP**	**23 17 49.3**	**-3.6**
	comp=Z,2.3nm,1.1s						
BIOA	**Bad Ischl, Aus**	**90.58**	**328**	*e*P	**P**	**23 14 22.5**	**+0.5**
SOKA	**Soboth**	**90.66**	**327**	*e*P	**P**	**23 14 21.8**	**-0.6**
	comp=Z,3.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**90.69**	**341**	LR	LR	23 59 25.4	
	comp=Z,62nm,19.0s,baz=355,slow=38						
OBKA	**Obir**	**91.01**	**327**	*e*P	**P**	**23 14 20.2**	**-3.9**
	comp=Z,1.6nm,1.0s						
OBKA				*e*P	**PP**	**23 18 02.2**	**+2.5**
	comp=Z,2.3nm,1.6s						
KBA	**Koelnbreinsper**	**91.16**	**328**	*e*P	**P**	**23 14 23.9**	**-1.0**
	comp=Z,1.3nm,0.6s						
KBA				*e*P	**PP**	**23 18 03.6**	**+2.6**
	comp=Z,5.4nm,1.3s						
MYKA	**Terra Mystica**	**91.35**	**327**	*e*P	**PP**	**23 18 05.8**	**+3.5**
	comp=Z,3.2nm,1.0s						
WATA	**Walderalm**	**91.78**	**329**	*e*P	**P**	**23 14 24.1**	**-3.6**
	comp=Z,2.6nm,0.6s						
WATA				*e*P	**PP**	**23 18 07.9**	**+2.1**
	comp=Z,1.5nm,0.6s						
ABTA	**Abfaltersbach**	**91.79**	**328**	*e*P	**P**	**23 14 26.7**	**-1.0**
	comp=Z,2.0nm,0.7s						
MOTA	**Moosalm**	**91.99**	**329**	*e*P	**P**	**23 14 28.0**	**-0.7**
	comp=Z,1.6nm,0.7s						
MOTA				*e*P	**PP**	**23 18 06.2**	**-1.3**
	comp=Z,6.2nm,1.3s						
RETA	**Reutte**	**92.03**	**329**	*e*P	**P**	**23 14 26.3**	**-2.6**
	comp=Z,2.9nm,1.2s						
SQTA	**Sankt Quirin**	**92.03**	**329**	*e*P	**PP**	**23 18 10.2**	**+2.4**
	comp=Z,10nm,2.0s						
LPIG	**La Paz**	**92.38**	**61**	LR	LR	23 50 08.6	
	comp=Z,56nm,19.9s,baz=280,slow=32						
FETA	**Feichten**	**92.40**	**329**	*e*P	**P**	**23 14 30.0**	**-0.6**
	comp=Z,2.9nm,1.1s						
FETA				*e*P	**PP**	**23 18 08.0**	**-2.7**
	comp=Z,3.3nm,1.0s						
DAVA	**Damuels**	**92.57**	**330**	*e*P	**P**	**23 14 30.6**	**-0.9**
	comp=Z,5.5nm,0.9s						
SCHQ	**Schefferville**	**92.58**	**16**	LR	LR	00 01 16.5	
	comp=Z,38nm,19.3s,baz=82,slow=39						
DAVOX	**Davos/Dischmat**	**92.96**	**329**	LR	LR	00 00 28.3	
	comp=Z,123nm,18.6s,baz=57,slow=38						
TX31	**Lajitas Ar. Si**	**94.24**	**53**	P	**P**	**23 14 39.4**	**0.0**
TXAR	**Lajitas Array**	**94.24**	**53**	P	**P**	**23 14 39.7**	**+0.3**
	comp=Z,0.9nm,1.0s,baz=298,slow=1.9,SNR=5.3						
TXAR				LR	LR	23 56 54.8	
	comp=Z,43nm,18.3s,baz=308,slow=35						
	comp=Z,0.9nm,1.0s						
SADO	**Sadowa**	**97.20**	**28**	LR	LR	00 02 39.3	
	comp=Z,36nm,18.7s,baz=336,slow=38						
TORD	**Torodi Ar. Bea**	**123.21**	**312**	PKP	**PKPdf**	**23 20 16.6**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=338,slow=2.2,SNR=3.2						
TORD				PP	**PP**	**23 21 55.9**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=30,slow=7.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**123.21**	**312**	PKPdf	**PKPdf**	**23 20 16.4**	**-0.9**
LPAZ	**La Paz**	**149.23**	**72**	PKPbc	**PKPbc**	**23 21 09.2**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=359,slow=4.3,SNR=7.4						
PLCA	**Paso Flores**	**150.93**	**122**	PKPbc	**PKPbc**	**23 21 12.3**	**-0.3**
	comp=Z,8.7nm,1.2s,baz=247,slow=2.6,SNR=6.0						
PLCA	**Paso Flores**	**150.93**	**122**	PKPbc	**PKiKP**	**23 21 14.1**	**+0.9**

DDA ***25*** *23:13:08.2±0.0, 39.°40N×44.°04E, h7^km±8^km, ML1.6*

ISK 25 23:13:12.9, 37.°80N×43.°78E, h19^km, ML2.0/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.56**	**194**	PG	Pg	23 13 24.9	+0.7
CUKT				SG	Sg	23 13 32.8	+1.0
CUKT	**Cukurca**	**0.56**	**194**	P	Pg	23 13 25.0	+0.7
CUKT				S	Sg	23 13 32.1	+0.2
GEVA	**Gevas**	**0.77**	**313**	P	Pb	23 13 27.1	-0.7
GEVA				S	Sb	23 13 37.1	-0.8
TVAN	**Van**	**0.79**	**338**	P	Pn	23 13 28.9	-0.4
TVAN				S	Sn	23 13 41.4	+0.8
TVAN				*i* AML	AML	23 13 49.0	
	comp=N,24nm,1.1s						
TVAN				*i* AML	AML	23 13 51.0	
	comp=Z,9.3nm,0.6s						
TVAN				*i* AML	AML	23 13 53.0	
	comp=E,19nm,0.5s						
AKDM	**Akdamar-Van**	**0.82**	**311**	PG	Pb	23 13 28.8	+0.1
AKDM				SG	Sn	23 13 41.5	+0.1
VANB	**Van**	**0.85**	**339**	PG	Pb	23 13 28.2	-1.0
VANB				SG	Sb	23 13 39.8	-0.6
OZAP	**Van, Ozalp-Mer**	**0.88**	**11**	P	Pn	23 13 31.5	+1.0
OZAP				S	Sn	23 13 47.9	+4.9
GURO	**Guroymak-BITLI**	**1.57**	**299**	PN	Pn	23 13 40.5	+0.6
MLAZ	**Malazgirt-MUS**	**1.65**	**325**	PN	Pn	23 13 41.7	+0.6

IDC ***25*** *23:30:01.4±2.0, 1.°79N×89.°64E, h0^km, mb3.6/5,*
mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=67.7km
s-min=23.5km az=53.0

ISC 25 23:30:02.2±1.5**, 1.°7N**±0.°3**×89.°5E**±0.°2**, h10^km, n12, σ0.^s46**/6**,**
mb3.6/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.39**	**303**	Pn	**Pn**	**23 32 31.4**	**0.0**
	0.3nm,0.3s,baz=23,slow=7.7,SNR=1.7						
PALK				Sn	Sn	23 34 16.4	-12
	1.0nm,0.3s,baz=214,slow=10,SNR=2.0						
	7.4nm,0.8s						
H08S2	**Diego Garcia H**	**19.32**	**241**	T	T	23 54 26.5	
	baz=60,slow=74,SNR=25						
H08S3	**Diego Garcia H**	**19.32**	**241**	T	T	23 54 24.7	
	baz=60,slow=74,SNR=23						
H08S1	**Diego Carcia H**	**19.34**	**241**	T	T	23 54 18.5	
	baz=60,slow=74,SNR=17						
H01W3	**Cape Leeuwin H**	**43.07**	**150**	T	T	00 23 35.0	
	baz=325						
H01W2	**Cape Leeuwin H**	**43.08**	**150**	T	T	00 24 09.2	
	baz=325						
H01W1	**Cape Leeuwin H**	**43.09**	**150**	T	T	00 24 01.0	
	baz=325						
MKAR	**Makanchi Array**	**45.38**	**353**	P	**P**	**23 38 21.1**	**+0.2**
	0.4nm,0.6s,baz=170,slow=9.4,SNR=5.5						
	0.4nm,0.6s						
SONM	**Songino Array**	**48.26**	**15**	P	**P**	**23 38 43.8**	**+0.3**
	1.4nm,0.6s,baz=201,slow=8.7,SNR=9.6						
	1.4nm,0.6s						

WRA	Warramunga Arr	48.93	118	P	P	23 38 49.0	0.0
	0.5nm,0.8s,baz=296,slow=8.4,SNR=6.8 0.5nm,0.8s						
ASAR	Alice Springs	49.97	123	P	P	23 38 56.9	+0.1
	0.2nm,0.5s,baz=308,slow=7.8,SNR=2.4 0.2nm,0.5s						
ZALV	Zalesovo Beam	52.25	357	P	P	23 39 12.8	-0.7
	0.6nm,0.5s,baz=184,slow=9.0,SNR=3.6 0.6nm,0.5s						

MEX ***25*** *23:51:45.2±0.6, 14°.83N×93°.64W, h3km±15km, MD4.0*
GCG ***25*** *23:51:49.2±0.8, 15°.32N×93°.14W, h95km±28km, MD4.1*
ISC 25 23:51:41.0±2.2**, 14°.88N**±0°.08×**93°.63W**±0°.07**, h7**km±12km**,**
n13, σ1s.45/26**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.91	26	eP	Pn	23 52 01.4	+1.2
PCIG				eS	Sn	23 52 14.4	+0.8
THIG		1.32	89	eP	Pb	23 52 06.2	0.0
THIG				eS	Sg	23 52 22.8	-0.8
PATR	El Naranjo	1.37	80	eP	Pg	23 52 07.7	+0.3
PATR				eS	Sg	23 52 26.0	+0.8
PAVE	Pavencul	1.44	77	eP	Pg	23 52 09.3	+0.6
PAVE				eS	Sg	23 52 27.1	-0.4
CHUJ	Union Juarez	1.49	82	eP	Pg	23 52 09.8	+0.2
CHUJ				eS	Sg	23 52 28.9	-0.1
TGIG		1.95	15	eP	Pb	23 52 17.6	+0.7
TGIG				eS	Sg	23 52 42.5	-1.3
STG3	Santiaguito 3,	2.00	95	eP	Pb	23 52 17.8	-0.1
STG3				eS	Sn	23 52 39.9	-1.0
CCIG	Comitan	2.00	46	eP	Pg	23 52 19.9	+0.4
CCIG				iS	Sg	23 52 43.6	-1.9
UXUV	UXUV	2.47	349	eP	Pn	23 52 24.1	+2.3
UXUV				iS	Sn	23 52 52.6	+0.3
CMIG	Matias Romero	2.51	331	eP	Pn	23 52 22.0	-0.3
CMIG				iS	Sn	23 52 50.8	-2.3
FUG	Fuego 3	2.73	99	eP	Pn	23 52 28.1	+2.6
FUG				eS	Sb	23 53 01.5	-2.7
PCG	Pacaya	2.97	99	eP	Pn	23 52 30.2	+1.3
PCG				eS	Sn	23 53 03.4	-1.4
NEUV	Arroyo Zacate	3.50	324	eP	Pn	23 52 35.0	-0.9
NEUV				eS	Sn	23 53 20.2	+2.5

NNC 25 23:59:15.1±2.1**, 43°.18N×87°.50E, h0**km**, mb3.6, mpv3.2,**
11C-4D, Error ellipse: s-maj=15.8km s-min=13.0km
az=102.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	5.16	316	⇓Pn	Pn	00 00 34.3	+0.7
	1.1nm,0.3s,baz=134,slow=14,SNR=110						
MK31				⇑Sn	Sn	00 01 36.6	+2.6
	1.6nm,0.3s						
MK31				⇓Lg	Lg	00 01 58.1	
	4.7nm,0.6s,baz=134,slow=28,SNR=4.7						
MAKZ	Makanchi	5.33	315	⇑Pn	Pn	00 00 36.9	+0.9
	1.9nm,0.6s						
MAKZ				⇑Sn	Sn	00 01 39.3	+1.2
	1.8nm,0.5s						
MAKZ				⇑Lg	Lg	00 02 04.2	
	6.9nm,1.2s						
PDGK	Podgornoye	5.85	274	⇑Pn	Pn	00 00 42.6	-0.5
	1.1nm,0.3s						
PDGK				⇓Sn	Sn	00 01 52.2	+1.2
	4.8nm,0.7s						
PDGK				⇑Lg	Lg	00 02 20.4	
	6.3nm,0.6s						
KURBB	Kurchatov Arra	9.64	324	⇑Pn	Pn	00 01 34.0	-0.9
	1.7nm,0.7s						
KURBB				⇑Sn	Sn	00 03 24.2	+0.3
	3.2nm,0.8s						
KURBB				⇑Lg	Lg	00 04 20.7	
	3.7nm,0.6s						
KURK	Kurchatov	9.67	324	⇑Pn	Pn	00 01 34.4	-1.0
	0.6nm,0.6s						
KURK				⇑Sn	Sn	00 03 22.9	-1.7
	0.5nm,0.5s						
KURK				⇓Lg	Lg	00 04 21.9	
	3.1nm,0.9s						

IDC 26 00:04:58.8±1.6**, 7°.78S×153°.37E, h239**km±17km**, mb3.4**/6**,**
mbtmp4.1/8**, Error ellipse: s-maj=26.2km s-min=15.4km**
az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.70	339	P	Pn	00 05 57.9	-0.7
	56nm,0.3s,baz=200,slow=2.2,SNR=6.2						
KRVT				S	S	00 06 50.2	+4.3
	45nm,0.6s,baz=161,slow=16,SNR=2.3						
HNR	Honiara	6.71	105	P	Pn	00 06 35.7	0.0
	367nm,0.8s,baz=177,slow=22,SNR=7.1						
WRA	Warramunga Arr	22.05	235	P	P	00 09 34.5	+0.1
	0.6nm,0.4s,baz=56,slow=9.3,SNR=12						
WRA				S	S	00 13 20.1	0.0
	0.3nm,0.3s,baz=330,slow=22,SNR=6.9 0.6nm,0.4s						
ASAR	Alice Springs	24.45	228	P	P	00 09 56.4	+0.2
	0.5nm,0.5s,baz=55,slow=8.9,SNR=9.7 0.5nm,0.5s						
SONM	Songino Array	69.14	328	P	P	00 15 39.3	-0.1
	1.7nm,0.8s,baz=142,slow=7.5,SNR=5.2 1.7nm,0.8s						
MKAR	Makanchi Array	82.93	319	P	P	00 16 58.3	+1.3
	4.3nm,0.8s,baz=106,slow=5.7,SNR=35 4.3nm,0.8s						
ZALV	Zalesovo Beam	83.93	326	P	P	00 17 01.0	-0.9
	4.2nm,0.8s,baz=124,slow=5.3,SNR=14 4.2nm,0.8s						
ILAR	Eielson Array	84.69	22	P	P	00 17 04.0	-1.5
	0.2nm,0.6s,baz=228,slow=6.8,SNR=1.7 0.2nm,0.6s						
TORD	Torodi Ar. Bea	151.65	283	PKPbc	PKiKP	00 24 26.1	-0.1
	0.4nm,0.8s,baz=102,slow=4.6,SNR=1.7						

NEIC ***26*** *00:08:01.2±1.3, 18°.78S±0°.05×69°.11W±0°.08, h118km±5km, mb4.6/67, Mwr4.2/20, ML4.3(GUC), Error ellipse: s-maj=10.5km s-min=7.2km az=84.0*
GUC ***26*** *00:08:02.9±0.8, 18°.81S×69°.21W, h120km±5km, ML4.3*
NEIC ***26*** *00:08:02, 18°.81S×69°.21W, h119km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.59; M$_{\theta\theta}$-0.35; M$_{\phi\phi}$-0.24; M$_{r\theta}$0.86; M$_{\theta\phi}$0.62; M$_{\phi r}$-2.20; Fault plane solution: M$_0$2.49000×10^{15} NP1:φ$_s$281.41000°, δ13.49000°, λ34.42000°. NP2:φ$_s$157.73000°, δ82.42000°, λ101.20000°. Principal axes: T 2.4381, Plg51.0000°, Azm80.0000°; N 0.1089, Plg11.0000°, Azm336.0000°; P -2.5470, Plg36.0000°, Azm238.0000°;*
IDC ***26*** *00:08:02.6±0.6, 18°.85S×68°.93W, h134km±4km, mb4.0/11, mbtmp4.4/15, MS2.7/1 Error ellipse: s-maj=14.7km s-min=8.2km az=96.0*
VAO ***26*** *00:08:03.3±0.5, 18°.67S×68°.95W, h135km, mb4.7*
ISC 26 00:08:01.3±0.5**, 18°.83S**±0°.03×**69°.13W**±0°.05**, h125**km±4km**,**
n162, σ1s.12/183**, mb4.6**/40**, 12C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	IPOC Station P	0.61	324		Pn	00 08 21.4	+0.2
PB16				Sn	Sn	00 08 35.7	-0.4
PB16	IPOC Station P	0.61	324	⇑iP	Pn	00 08 21.7	+0.5
PB16				iS	Sn	00 08 35.9	-0.3
PB16				IAML		00 08 38.1	
	comp=N,6µm,0.3s						
PB11	IPOC Station P	1.05	208	Pn	Pn	00 08 24.8	+0.4
PB11				Sn	Sn	00 08 42.2	+0.1
PB11	IPOC Station P	1.05	208	⇑iP	Pn	00 08 25.1	+0.7
PB11				iS	Sn	00 08 41.4	-0.7
PB11				IAML		00 08 43.1	
	comp=E,13µm,0.3s						
PB12	IPOC Station P	1.16	280		Pn	00 08 24.6	-0.8
PB12				Sn	Sn	00 08 42.3	-1.4
PB12	IPOC Station P	1.16	280	⇑iP	Pn	00 08 25.1	-0.2
PB12				iS	Sn	00 08 42.4	-1.4
PB12				IAML		00 08 44.9	
	comp=E,9µm,0.3s						
AP01	Chacalluta	1.24	291		Pn	00 08 26.1	-0.1
AP01	Chacalluta	1.24	291	⇑iP	Pn	00 08 26.0	-0.1
AP01				iS	Sn	00 08 44.2	-0.8
AP01				IAML		00 08 46.5	
	comp=E,12µm,0.2s						
PB08	IPOC Station P	1.31	181		Pn	00 08 28.8	+1.5
PB08	IPOC Station P	1.31	181	⇑iP	Pn	00 08 28.9	+1.5
PB08				iS	Sn	00 08 48.6	+1.5
PB08				IAML		00 08 51.1	
	comp=N,3µm,0.4s						
HMBC	Humberstone	1.61	206	⇑iP	Pn	00 08 30.7	+0.2
HMBC				iS	Sn	00 08 52.1	-0.6
HMBC				IAML		00 08 55.3	
	comp=N,3µm,0.3s						
TA01	Diego Aracena	1.99	210		Pn	00 08 35.0	+0.1
TA01	Diego Aracena	1.99	210	⇑iP	Pn	00 08 35.1	+0.2
TA01				iS	Sn	00 08 59.6	-1.1
TA01				IAML		00 09 03.9	
	comp=E,2µm,0.3s						
PATCX	Punta Patache	2.21	206		Pn	00 08 37.9	+0.3
PATCX	Punta Patache	2.21	206	⇑iP	Pn	00 08 37.9	+0.3
PATCX				iS	Sn	00 09 04.1	-1.4
PATCX				IAML		00 09 12.3	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	2.23	189		Pn	00 08 38.6	+0.7
PB01	IPOC Station P	2.23	189	⇑iP	Pn	00 08 39.0	+1.1
PB01				iS	Sn	00 09 06.0	-0.1
PB01				IAML		00 09 07.7	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	2.58	196		Pn	00 08 43.4	+1.0
PB02	IPOC Station P	2.58	196	⇑eP	Pn	00 08 43.1	+0.7
PB02				IAML		00 09 23.5	
	comp=E,3µm,0.4s						
LPAZ	La Paz	2.70	21	P	Pn	00 08 46.7	+2.2
	comp=E,128nm,0.3s,baz=185,slow=2.8,SNR=1800						
LPAZ				S	Sn	00 09 18.5	+1.0
	comp=E,107nm,0.5s,baz=178,slow=16,SNR=3.9						
LPAZ	La Paz	2.70	21	Pn	Pn	00 08 46.4	+1.9
LPAZ	La Paz	2.70	21	⇑iP	Pn	00 08 46.7	+2.2
LPAZ				iS	Sn	00 09 19.6	+2.0
PB09	IPOC Station P	2.96	182		Pn	00 08 48.9	+1.6
PB09	IPOC Station P	2.96	182	eP	Pn	00 08 49.0	+1.7
PB09				IAML		00 09 33.8	
	comp=N,483nm,0.4s						
PB07	IPOC Station P	2.97	194		Pn	00 08 48.3	+0.8
PB07	IPOC Station P	2.97	194	⇑iP	Pn	00 08 48.3	+0.8
PB07				iS	Sn	00 09 22.8	-0.4
PB07				IAML		00 09 33.0	
	comp=E,1µm,0.4s						
PB04	IPOC Station P	3.62	195		Pn	00 08 56.3	+0.3
PB04	IPOC Station P	3.62	195	eP	Pn	00 08 56.5	+0.5
LVC	Limon Verde	3.77	177	P	Pn	00 09 00.3	+2.1
	comp=E,61nm,0.4s,baz=348,slow=8.6,SNR=74						
LVC				S	Sn	00 09 42.1	-0.1
	comp=E,109nm,0.4s,baz=63,slow=22,SNR=10						
LVC	Limon Verde	3.77	177	Pn	Pn	00 08 59.7	+1.5
LVC	Limon Verde	3.77	177	eP	Pn	00 09 00.2	+2.1
PB06	IPOC Station P	3.88	186		Pn	00 08 60.0	+0.5
PB06	IPOC Station P	3.88	186	eP	Pn	00 09 00.1	+0.6
PB06				iS	Sn	00 09 40.3	-4.3
PB15	IPOC Station P	4.37	184		Pn	00 09 06.5	+0.4
PB15	IPOC Station P	4.37	184	eP	Pn	00 09 06.6	+0.6
PB15				iS	Sn	00 09 54.2	-2.2
PB10	IPOC Station P	4.85	196	Pn	Pn	00 09 11.5	-0.8
PB14	IPOC Station P	5.89	191	Pn	Pn	00 09 25.2	-1.3
GO02	Mina Guanaco	6.32	184		Pn	00 09 31.7	-0.6
AC02	Maricunga	7.97	180	Pn	Pn	00 09 53.9	-0.9
SIV	San Ignacio	8.19	71	P	Pn	00 09 55.8	-1.5
	comp=E,23nm,0.4s,baz=256,slow=10,SNR=71						
SIV				S	Sn	00 11 24.4	-4.0
	comp=E,10.0nm,0.9s,baz=132,slow=23,SNR=7.0						
SIV				LR	LR	00 13 10.3	
	comp=E,50nm,18.1s,baz=292,slow=38						
AC06	Mina Casimiro	8.57	187	Pn	Pn	00 10 00.6	-1.7
ETMB	Extrema	9.39	18	eP	Pn	00 10 11.9	-1.6
PTLB	Pontes e Lacer	10.12	72	eP	Pn	00 10 21.6	-1.8
VILB	Vilhena	10.38	57	eP	Pn	00 10 25.4	-1.6
SAML	Samuel	11.39	31	Pn	Pn	00 10 37.2	-3.1
GO04	Tololo Observa	11.40	187	Pn	Pn	00 10 38.1	-2.5
CZSB	Cruzeiro do Su	11.56	342	eP	Pn	00 10 43.7	+1.0
CO06	Fray Jorge	12.01	190	Pn	Pn	00 10 48.6	+0.1
CO02	Combarbal	12.44	187	Pn	Pn	00 10 53.8	-0.4
SALV	Santo Antonio	13.15	79	eP	Pn	00 11 00.7	-2.6
CPUP	Villa Florida	13.21	127	P	Pn	00 11 02.7	-1.3
	comp=E,1.8nm,0.8s,baz=335,slow=11,SNR=5.4						
CPUP	Villa Florida	13.21	127	Pn	Pn	00 11 03.3	-0.7
VA03	San Esteban	13.94	185		Pn	00 11 14.2	+0.7
PDRB	Porto dos Gac	13.95	61	eP	Pn	00 11 12.4	-1.2
MT02	Curacav	14.49	187	Pn	Pn	00 11 20.1	-0.3
TBTG	Tabatinga, AM	14.57	357	eP	Pn	00 11 22.3	+0.8
MT09	Talagante	14.98	186		Pn	00 11 26.9	+0.2
MT09				IAmb	IAmb	00 11 32.4	
	comp=Z,21nm,0.8s						
LMEL	Las Melosas	14.99	183		Pn	00 11 27.5	+0.7
MT01	Popeta	15.10	187		Pn	00 11 27.9	-0.1
MT01				IAmb	IAmb	00 11 34.4	
	comp=Z,28nm,0.7s						
CLDB	Colider	15.11	60	eP	Pn	00 11 26.6	-1.8
BO04	La Punta	15.16	185		Pn	00 11 29.6	+0.7
BO01	Tunca	15.60	186	Pn	Pn	00 11 34.3	0.0
ITQB	Itaqui	15.69	136		P	00 11 35.9	-0.9
TRCB	Terra Rica	15.92	107	P	P	00 11 40.6	+1.1
PTGB	Pitanga	16.89	113	eP	Pn	00 11 51.1	+0.8
PCMB	Pacaembu	17.00	102	eP	Pn	00 11 52.2	+0.6
MACA	Manacapuru-AM	17.63	29	eP	P	00 11 57.5	-0.8
ITAB	Concordia	17.73	121	P	Pn	00 12 00.9	+0.6
ITAB				IAmb	IAmb	00 12 02.3	
	comp=Z,27nm,0.8s						
ITAB	Concordia	17.73	121	eP	Pn	00 12 01.0	+0.8
ITRB	Iturama	17.75	96	eP	P	00 11 59.6	0.0
CPSB	Cacapava Do Su	18.32	132	eP	Pn	00 12 07.1	-0.2
SNDB	Serra Nova Dou	18.49	71	eP	P	00 12 07.1	-0.7
FRTB	Fartura	18.80	107	eP	P	00 12 11.7	+0.6
PLTB	Pedras Altas	19.02	136	P	P	00 12 13.3	-0.1
ITTB	Itaituba	19.44	44	eP	P	00 12 16.7	-1.4
BB19B	Bebedouro	19.50	100	eP	P	00 12 18.8	+0.1
IPMB	Ipameri, GO	19.87	91	eP	P	00 12 22.7	-0.1
TRQA	Tornquist	20.15	163	P	P	00 12 25.9	+0.2
BDFB	Brasilia	20.41	84	P	P	00 12 26.5	-2.2
	comp=Z,8.5nm,0.4s,baz=252,slow=9.1,SNR=15 comp=Z,8.5nm,0.4s						
BDFB	Brasilia	20.41	84	P	P	00 12 28.5	-0.2
BDFB				IAmb	IAmb	00 12 32.0	
	comp=Z,10nm,0.5s						
OTAV	Otavalo	21.04	333	P	P	00 12 34.3	-1.5
PLCA	Paso Flores	21.87	183	P	P	00 12 44.4	+0.4
	comp=Z,4.8nm,0.8s,baz=6.0,slow=12,SNR=8.1 comp=Z,4.8nm,0.8s						
PLCA	Paso Flores	21.87	183	P	P	00 12 44.6	+0.6
SMTB	Santa Maria do	23.11	68	eP	P	00 12 56.5	-0.1
JANB	Januaria	24.03	85	eP	P	00 13 04.3	-0.6
SDBA	SAO DESIDERIO	24.17	78	eP	P	00 13 05.0	-1.2
MCPB	Macapa, AP	24.85	44	eP	P	00 13 11.8	-0.5
SDV	Santo Domingo	27.58	357	P	P	00 13 36.0	-0.9
	comp=Z,3.9nm,0.4s,baz=222,slow=5.3,SNR=6.0 comp=Z,3.9nm,0.4s						
SDV	Santo Domingo	27.58	357	P	P	00 13 35.7	-1.3
SDV				IAmb	IAmb	00 13 37.2	
	comp=Z,5.8nm,0.6s						
BAUV	El Baul	27.61	2	P	P	00 13 36.2	-0.9
BAUV				IAmb	IAmb	00 13 37.4	
	comp=Z,27nm,1.0s						
MDP	Montagnes des	28.80	36	P	P	00 13 46.0	-1.6
	comp=Z,3.0nm,0.4s,baz=201,slow=12,SNR=10 comp=Z,3.0nm,0.4s						
SJCC	San Jacinto, C	29.16	348	P	P	00 13 51.7	+0.8
SJCC				IAmb	IAmb	00 13 54.4	
	comp=Z,12nm,1.0s						
MLPR	Magueyes Islan	36.62	3	P	P	00 14 54.3	-1.3
CRPR	Cabo Rojo, PR	36.66	3	P	P	00 14 54.3	-1.6
CELP	Cerrillos	36.76	4	P	P	00 14 55.6	-1.1
CBYP	Canovanas	37.01	5	P	P	00 14 57.1	-1.8
CUPR	Culebra, Puert	37.09	6	P	P	00 14 57.5	-2.1
DR12	Loma Pena Alta	37.38	360	P	P	00 15 00.1	-2.0
152A	Waverly Hall	53.33	344	P	P	00 17 07.8	+0.2
152A				IAmb	IAmb	00 17 08.7	
	comp=Z,5.7nm,1.1s						
JSC	Jenkinsville	54.06	348	P	P	00 17 13.2	+0.3
JSC				IAmb	IAmb	00 17 14.0	
	comp=Z,5.5nm,1.2s						
HODGE	Hodges	54.22	347	P	P	00 17 14.5	+0.5
HODGE				IAmb	IAmb	00 17 15.4	
	comp=Z,3.1nm,0.8s						
LRAL	Lakeview Retre	54.32	342	P	P	00 17 14.8	0.0
LRAL				IAmb	IAmb	00 17 15.3	
	comp=Z,4.6nm,0.5s						
KMSC	Kings Mountain	54.91	348	P	P	00 17 19.3	+0.3
KMSC				IAmb	IAmb	00 17 20.4	
	comp=Z,6.3nm,0.8s						
V55A	Taylorsville	55.57	348	P	P	00 17 24.2	+0.5
V55A				IAmb	IAmb	00 17 25.5	
	comp=Z,9.7nm,0.9s						
W50A	Signal Mountai	55.88	344	P	P	00 17 26.1	+0.1
W50A				IAmb	IAmb	00 17 27.7	
	comp=Z,12nm,1.4s						
TKL	Tuckaleechee C	55.94	346	P	P	00 17 26.1	-0.2
TKL				IAmb	IAmb	00 17 27.2	
	comp=Z,5.9nm,0.9s						
SWET	Sewanee	56.06	343	P	P	00 17 27.3	0.0
CLTN	Cedars of Leba	56.99	343	P	P	00 17 33.5	-0.3
CLTN				IAmb	IAmb	00 17 34.8	
	comp=Z,5.8nm,0.8s						
WVT	Waverly	57.45	342	P	P	00 17 36.8	-0.2
WVT				IAmb	IAmb	00 17 37.5	
	comp=Z,6.0nm,0.7s						
MIAR	Mount Ida	57.95	336	P	P	00 17 41.3	+0.8
T47A	Sharon Grove	58.05	343	P	P	00 17 41.4	+0.2
TXAR	Lajitas Array	58.34	324	P	P	00 17 44.6	+1.1
	comp=Z,0.2nm,0.5s,baz=108,slow=5.8,SNR=1.6						
FCAR	Ozark Folk Cen	58.62	338	P	P	00 17 45.1	-0.1
SIUC	Southern Illin	59.33	342	P	P	00 17 50.0	0.0
CCM	Cathedral Cave	60.28	340	P	P	00 17 56.5	-0.1
CCM				IAmb	IAmb	00 17 57.6	
	comp=Z,5.9nm,0.9s						
BRYW	Bryant College	60.48	358	P	P	00 17 58.2	+0.4
HRV	Adam Dziewonsk	61.06	358	P	P	00 18 02.2	+0.5
HRV				IAmb	IAmb	00 18 03.1	
	comp=Z,8.7nm,0.8s						
HDIL	Hopedale	61.99	343	P	P	00 18 07.6	-0.4
PKME	Peaks-Kenny Pk	63.78	360	P	P	00 18 19.9	+0.2
GBN	Guysborough	64.30	6	P	P	00 18 23.6	+0.4
GBN				IAmb	IAmb	00 18 38.4	
	comp=Z,6.0nm,1.0s						
JFWS	Jewell Farm	64.44	343	P	P	00 18 24.1	-0.1
JFWS				IAmb	IAmb	00 18 25.2	
	comp=Z,7.7nm,0.6s						
LMN	Caledonia Moun	64.49	3	P	P	00 18 24.2	-0.2
LMN				IAmb	IAmb	00 18 26.0	
	comp=Z,16nm,1.4s						
TRQ	Mont Tremblant	64.93	356	P	P	00 18 27.4	+0.2
TRQ				IAmb	IAmb	00 18 28.5	
	comp=Z,5.0nm,0.9s						
D62A	Allapoint, All	65.60	0	P	P	00 18 31.6	+0.1
D62A				IAmb	IAmb	00 18 33.0	
	comp=Z,15nm,1.4s						
BATG	Bathurst New B	65.85	2	P	P	00 18 33.1	0.0
BATG				IAmb	IAmb	00 18 43.0	
	comp=Z,15nm,1.4s						
VLDQ	Val d'Or	67.05	354	P	P	00 18 41.2	+0.5
COWI	Conover	67.11	345	P	P	00 18 41.6	+0.4
COWI				IAmb	IAmb	00 19 07.2	
	comp=Z,13nm,1.4s						
ECSD	EROS Data Cent	67.16	339	P	P	00 18 42.2	+0.6
LIC	Lamto	67.87	75	eP	P	00 18 46.6	-0.1
	comp=Z,15nm,0.3s						
TIC	Toumodi	68.04	74	eP	P	00 18 46.9	-0.9
	comp=Z,9.0nm,0.2s						
KIC	Kosan Boka	68.18	75	eP	P	00 18 48.3	-0.3
	comp=Z,95nm,0.5s						
DBIC	Dimbokro	68.20	75	P	P	00 18 48.7	0.0
	comp=Z,20nm,0.5s,baz=258,slow=3.8,SNR=89						
DBIC	Dimbokro	68.20	75	P	P	00 18 48.7	0.0
DRLN	Deer Lake	68.56	8	P	P	00 18 50.0	-0.2
QSPA	South Pole Qui	71.35	180	P	P	00 19 08.5	+1.2
QSPA				IAmb	IAmb	00 19 36.5	
	comp=Z,8.4nm,1.5s						
PDAR	Pinedale Array	71.70	330	P	P	00 19 11.2	+1.4
	comp=Z,0.2nm,0.6s,baz=148,slow=5.3,SNR=2.4 comp=Z,0.2nm,0.6s						
KOWA	Kowa	72.17	67	P	P	00 19 12.5	-0.3
KOWA				IAmb	IAmb	00 19 13.2	
	comp=Z,5.5nm,0.6s						
ULM	Lac du Bonnet	72.72	342	P	P	00 19 15.8	+0.4
	comp=Z,2.6nm,0.4s,baz=155,slow=6.4,SNR=6.8 comp=Z,2.6nm,0.4s						
ULM	Lac du Bonnet	72.72	342	P	P	00 19 15.7	+0.3
ULM				IAmb	IAmb	00 19 16.5	
	comp=Z,3.4nm,0.5s						
SCHQ	Schefferville	73.39	1	P	P	00 19 18.4	-0.9
	comp=Z,3.2nm,0.8s,baz=226,slow=10,SNR=5.2 comp=Z,3.2nm,0.8s						
SCHQ	Schefferville	73.39	1	P	P	00 19 19.2	0.0
TOA0	Torodi Ar. Sit	76.67	71	P	P	00 19 38.6	-0.4
TORD	Torodi Ar. Bea	76.67	71	P	P	00 19 38.3	-0.7
	comp=Z,5.9nm,0.4s,baz=252,slow=5.2,SNR=276 comp=Z,5.9nm,0.4s						
TORD	Torodi Ar. Bea	76.67	71	P	P	00 19 38.5	-0.5
TORD				IAmb	IAmb	00 19 39.0	
	comp=Z,4.2nm,0.5s						
PAB	San Pablo	83.76	45	P	P	00 20 17.7	+1.1
PAB				IAmb	IAmb	00 20 18.6	
	comp=Z,5.8nm,0.7s						
ESDC	Sonseca Array	84.08	45	P	P	00 20 19.1	+0.9
	comp=Z,3.2nm,0.9s,baz=248,slow=5.7,SNR=20						
ESDC				pP	pP	00 20 53.1	+1.7
	comp=Z,1.1nm,0.9s,baz=259,slow=5.6,SNR=3.5 comp=Z,3.2nm,0.9s						
ESDC	Sonseca Array	84.08	45	P	P	00 20 18.6	+0.4
ESBB	Sonseca Array	84.09	45	P	P	00 20 19.4	+1.2
ESBB				IAmb	IAmb	00 20 20.5	
	comp=Z,4.4nm,0.9s						
BOSA	Boshof	84.89	118	P	P	00 20 23.6	+0.9
	comp=Z,0.6nm,0.4s,baz=262,slow=4.7,SNR=7.0 comp=Z,0.6nm,0.4s						
BOSA	Boshof	84.89	118	P	P	00 20 23.1	+0.4
BOSA				IAmb	IAmb	00 20 43.2	
	comp=Z,11nm,1.3s						
YKA	Yellowknife Ar	88.61	341	P	P	00 20 41.0	+1.3
	comp=Z,1.9nm,0.6s,baz=134,slow=4.9,SNR=23						
YKA				pP	pP	00 21 13.7	+0.4
	comp=Z,4.5nm,0.7s,baz=134,slow=4.8,SNR=17 comp=Z,1.9nm,0.6s						
YKA	Yellowknife Ar	88.61	341	P	P	00 20 40.4	+0.8
WRA	Warramunga Arr	135.12	212	PKP	PKiKP	00 27 08.1	-0.2
	comp=Z,0.3nm,0.8s,baz=143,slow=1.6,SNR=5.6						
WRA				SKP		00 30 27.8	
	comp=Z,0.7nm,1.0s,baz=162,slow=2.3,SNR=4.7						
ZALV	Zalesovo Beam	139.62	24	PKP	PKPdf	00 27 14.4	+0.6
	comp=Z,1.6nm,0.5s,baz=284,slow=3.4,SNR=5.8						
ZALV				pPKP	pPKPdf	00 27 50.9	+1.7
	comp=Z,1.4nm,0.7s,baz=248,slow=3.4,SNR=2.9						
ZALV	Zalesovo Beam	139.62	24		PKPdf	00 27 13.8	-0.1
MKAR	Makanchi Array	143.56	34	PKhKP	PKPpre	00 27 19.1	
	comp=Z,0.6nm,0.6s,baz=298,slow=3.5,SNR=6.4						
SONM	Songino Array	150.84	6	PKPbc	PKiKP	00 27 40.6	+0.8
	comp=Z,3.4nm,0.4s,baz=317,slow=1.6,SNR=21						
SONM				pPKPbc	pPKPbc	00 28 15.2	+1.0
	comp=Z,2.0nm,0.8s,baz=313,slow=1.0,SNR=4.5						
SONM	Songino Array	150.84	6		PKiKP	00 27 40.2	+0.5
XLT	XiLinHaoTe	154.62	351	PP	PP	00 31 44.5	+6.9
XLT	XiLinHaoTe	154.62	351	ePKPbc	PKPdf	00 27 39.3	+0.3
HHC	Hu-ho-hao-te	158.04	359	eP	PKPdf	00 27 45.0	+1.4
PZH	PanZhiHua	168.63	46	PKP	PKPdf	00 27 51.3	-2.7

IDC ***26*** *00:20:20.9±2.9, 16°.44N×146°.28E, h101km±27km, mb3.4/8, mbtmp3.8/9, MS3.2/1, Error ellipse: s-maj=29.0km s-min=18.3km az=97.0*
NEIC ***26*** *00:20:23.1±0.9, 16°.49N±0°.06×146°.1E±0°.1, h104km±9km, mb4.5/8, Error ellipse: s-maj=19.1km s-min=5.5km az=109.0*
ISC 26 00:20:21.2±0.6**, 16°.55N**±0°.07×**146°.2E**±0°.1**, h100**km**, n32,**
σ1s.25/27**, mb3.7**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	3.19	203	P	Pn	00 21 10.1	+0.5
	78nm,0.3s,baz=96,slow=6.6,SNR=5.2						
GUMO				S	Sn	00 21 45.2	-1.6
	65nm,0.4s,baz=338,slow=23,SNR=1.5						
GUMO	Guam	3.19	203		Pn	00 21 10.5	+0.9
GUMO				Sn	Sn	00 21 46.9	0.0
JCJ	Chichijima	11.13	341	Pn	Pn	00 22 55.0	-2.2
PATS	Pohnpei	15.31	128	Pn	Pn	00 23 52.2	+0.3
JOW	Kunigami	19.50	305	P	P	00 24 41.4	+0.9
JOW				IAmb	IAmb	00 24 45.4	
	comp=Z,14nm,1.2s						
H11S3	WAKE ISLAND Hy	19.67	81	T	T	00 45 25.9	
	baz=267,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	19.68	81	T	T	00 45 36.0	
	baz=267,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	19.68	81	T	T	00 45 34.2	
	baz=267,slow=75,SNR=17						

H11N1	WAKE ISLAND Hy	19.95	78	T	T	00 45 51.6	
	baz=264,slow=74,SNR=40						
H11N2	WAKE ISLAND Hy	19.95	78	T	T	00 45 53.3	
	baz=264,slow=74,SNR=35						
H11N3	WAKE ISLAND Hy	19.96	78	T	T	00 45 54.0	
	baz=264,slow=74,SNR=37						
FAKI	Fak Fak	23.73	217	P	P	00 25 23.3	-1.1
PMG	Port Moresby	25.80	178	P	P	00 25 43.6	+0.5
	comp=Z,6.6nm,0.4s,baz=240,slow=5.9,SNR=4.0						
HNR	Honiara	29.19	151	LR	LR	00 37 19.6	
	comp=Z,42nm,19.9s,baz=110,slow=35						
WB0	Warramunga Arr	37.89	198	P	P	00 27 28.1	-0.7
WB0				IAmb	IAmb	00 27 56.0	
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	38.08	198	P	P	00 27 28.6	-1.7
	comp=Z,0.4nm,0.4s,baz=26,slow=8.5,SNR=27						
	comp=Z,0.4nm,0.4s						
WRA	Warramunga Arr	38.08	198	P	P	00 27 29.6	-0.7
ASAR	Alice Springs	41.72	197	P	P	00 27 59.5	-1.1
	comp=Z,0.5nm,0.4s,baz=16,slow=11,SNR=13						
	comp=Z,0.5nm,0.4s						
ASAR	Alice Springs	41.72	197		P	00 28 00.5	0.0
CMAR	Chiang Mai Arr	44.98	280	P	P	00 28 28.1	+1.3
	comp=Z,0.9nm,0.3s,baz=80,slow=7.6,SNR=4.2						
	comp=Z,0.9nm,0.3s						
BBOO	Buckleboo	50.02	191	P	P	00 29 05.1	-0.5
CAN	Canberra	51.65	177	P	P	00 29 18.5	+0.8
CAN				IAmb	IAmb	00 29 39.6	
	comp=Z,18nm,1.5s						
MK31	Makanchi Array	60.28	315	P	P	00 30 20.8	+1.5
MKAR	Makanchi Array	60.28	315	P	P	00 30 20.3	+1.1
	comp=Z,0.3nm,0.5s,baz=88,slow=8.6,SNR=4.1						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	60.28	315	P	P	00 30 20.5	+1.3
KURBB	Kurchatov Arra	63.22	319	P	P	00 30 38.3	-0.6
	comp=Z,0.3nm,0.4s,baz=98,slow=7.4,SNR=2.9						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	65.38	26	P	P	00 30 52.6	-0.1
	comp=Z,0.6nm,0.6s,baz=254,slow=5.4,SNR=6.8						
	comp=Z,0.6nm,0.6s						
BMAR	Burnt Mountain	66.91	23	P	P	00 31 04.2	+1.6
TABL	Table Mountain	67.22	31	P	P	00 31 06.7	+1.9
TABL				IAmb	IAmb	00 31 32.8	
	comp=Z,6.0nm,1.1s						
BCAR	Beaver Creek A	67.26	28	P	P	00 31 06.5	+1.7
YKA	Yellowknife Ar	79.67	28	P	P	00 32 17.8	+0.3
	comp=Z,0.6nm,0.7s,baz=286,slow=5.3,SNR=6.7						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	84.11	52	P	P	00 32 39.5	-2.1
	comp=Z,0.3nm,0.7s,baz=275,slow=4.4,SNR=1.7						
	comp=Z,0.3nm,0.7s						

*IDC **26** 00:30:07.0±0.8, 41.°04N×72.°37E, h0^{km}, mb3.8/15, mbtmp3.8/22, ML3.2/7, MS3.0/12, Error ellipse: s-maj=16.4km s-min=8.3km az=152.0*
*ISU **26** 00:30:08, 41.°20N×72.°44E, h13^{km}*
*KRNET **26** 00:30:09.8±0.1, 41.°17N×72.°34E, h19^{km}, mb4.6*
*SOME **26** 00:30:09.5, 41.°23N×72.°38E, h10^{km}, MS3.3*
*KNET **26** 00:30:10.5±0.6, 41.°25N×72.°46E, h0^{km}, ml4.3, Error ellipse: s-maj=13.5km s-min=4.1km az=133.0*
*NNC **26** 00:30:11.6±1.1, 41.°22N×72.°34E, h0^{km}, mb4.8, mpv4.6, Error ellipse: s-maj=11.3km s-min=4.3km az=0.0*
*MOS **26** 00:30:12.0±1.4, 41.°11N×72.°37E, h31^{km}, mb4.3/9, Error ellipse: s-maj=6.2km s-min=3.6km az=61.6*
*NEIC **26** 00:30:13.0±2.2, 41.°13N±0.°04×72.°40E±0.°07, h35^{km}±7^{km}, mb4.3/17, Error ellipse: s-maj=8.0km s-min=6.1km az=113.0*
ISC 26 00:30:10.6±0.9**, 41.°15N**±0.°02×**72.°31E**±0.°01**, h17**^{km}±6^{km}**, n262, σ2.^{s}27**/358**, mb4.0**/26**, MS3.1**/9**, 50C-47D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.70	339	i PG	Pg	00 30 23.0	-1.4
ARK				i S	Sg	00 30 32.4	-1.4
ARK	Arkit	0.70	339	⇓iP	Pg	00 30 23.0	-1.4
	baz=36						
ARK				⇓iS	Sg	00 30 32.4	-1.4
	baz=36						
ARK	Arkit	0.70	339	P	Pg	00 30 23.1	-1.4
ARK				S	Sg	00 30 32.3	-1.5
OHH	Osh	0.72	150	i PG	Pg	00 30 23.5	-1.3
OHH				i S	Sg	00 30 33.6	-0.7
OHH	Osh	0.72	150	⇑iP	Pg	00 30 23.5	-1.3
	baz=52						
OHH				⇑iS	Sg	00 30 33.6	-0.7
	baz=52						
OHH	Osh	0.72	150	P	Pg	00 30 23.5	-1.3
OHH				S	Sg	00 30 33.0	-1.3
TRKS	Terek-Say	0.96	294	i PG	Pg	00 30 27.3	-2.0
TRKS	Terek-Say	0.96	294	⇓iP	Pg	00 30 27.3	-2.0
	baz=89						
TRKS				⇓iS	Sg	00 30 39.7	-2.2
	baz=89						
CHMI	Chimion	1.06	214	P	Pg	00 30 30.5	-0.7
CHMI				S	Sn	00 30 49.5	+4.4
CHDK	Chadak	1.19	262	P	Pn	00 30 32.9	+0.4
CHDK				S	Sn	00 30 50.9	+2.6
MINT	Mingtut	1.22	236	P	Pg	00 30 34.5	+0.3
MINT				S	Sg	00 30 52.3	+2.2
AML	Almayashu	1.43	46	⇑P	Pn	00 30 36.0	-0.2
	691nm,0.2s,SNR=649						
AML				⇓S	Sn	00 30 53.8	-1.0
	3μm,0.3s						
AML	Almayashu	1.43	46	i PG	Pn	00 30 35.8	-0.4
BTK	Batken	1.57	227	i PN	Pb	00 30 39.1	-0.2
BTK				i S	Sg	00 31 00.5	-0.8
BTK	Batken	1.57	227	⇓iP	Pb	00 30 39.1	-0.2
	baz=27						
BTK				⇓iS	Sg	00 31 00.5	-0.8
	baz=27						
BTK	Batken	1.57	227	P	Pb	00 30 39.0	-0.2
BTK				S	Sg	00 31 01.2	-0.1
ARLS	Aral	1.68	64	i PN	Pn	00 30 39.9	+0.6
ARLS				i S	Sn	00 31 01.7	+1.2
ARLS	Aral	1.68	64	⇑iP	Pn	00 30 39.9	+0.6
	baz=65						
ARLS				⇑iS	Sn	00 31 01.7	+1.2
	baz=65						
DRK	Karamyk	1.71	193	⇑iP	Pb	00 30 41.6	-0.2
	baz=94						
DRK				⇑iS	Sg	00 31 04.7	-1.1
	baz=94						
MRKS	Merke	1.74	23	eP	Pg	00 30 44.0	-0.1
	418nm,0.3s						
MRKS				eS	Sg	00 31 08.9	+2.2
	2μm,0.4s						
MRKS	Merke	1.74	23	P	Pg	00 30 45.4	+1.4
	418nm,0.3s						
MRKS				S	Sg	00 31 08.9	+2.2
	2μm,0.4s						
CHRV	Charvak	1.84	286	P	Pb	00 30 43.8	0.0
CHRV				S	Sg	00 31 09.9	0.0
EKS2	Erkin-Say	1.87	35	⇓P	Pb	00 30 43.7	-0.7
	206nm,0.3s,SNR=611						
EKS2				⇓S	Sb	00 31 09.4	+1.8
	1μm,0.6s						
EKS2	Erkin-Say	1.87	35	i PN	Pn	00 30 43.0	+1.0
EKS2				i S	Sb	00 31 07.4	-0.1
EKS2	Erkin-Say	1.87	35	⇓iP	Pn	00 30 43.0	+1.0
	baz=35						
EKS2				⇓iS	Sb	00 31 07.4	-0.1
	baz=35						
DZA	Taraz	1.89	338	i PN	Pb	00 30 44.0	-0.7
DZA				e		00 31 10.0	
DZA	Taraz	1.89	338	eP	Pb	00 30 45.1	+0.4
	2μm,0.2s						
DZA				eS	Sg	00 31 10.5	-0.9
	6μm,0.4s						
DZA	Taraz	1.89	338	i Pn	Pb	00 30 44.0	-0.7
	baz=336						
DZA				i Pg	Pg	00 30 45.3	-1.6
	baz=336						
DZA				eLg	Lg	00 31 10.1	
	baz=336						
DZA	Taraz	1.89	338	P	Pb	00 30 45.1	+0.4
	2μm,0.2s						
DZA				S	Sb	00 31 07.9	-0.1
	6μm,0.4s						
UCH	Uchtor	1.98	56	P	Pb	00 30 45.7	-0.7
	270nm,0.2s,SNR=1183						
UCH				⇑S	Sb	00 31 12.8	+1.9
	1μm,0.4s						
UCH	Uchtor	1.98	56	i PN	Pn	00 30 44.9	+1.2
UCH				i S	Sb	00 31 10.4	-0.5
UCH	Uchtor	1.98	56	⇓iP	Pn	00 30 44.9	+1.2
	baz=56						
UCH				⇓iS	Sb	00 31 10.4	-0.5
	baz=56						
IUG	Iuzhnay	1.98	301	i PN	Pb	00 30 45.5	-0.7
IUG				e		00 31 13.4	
IUG	Iuzhnay	1.98	301	eP	Pb	00 30 46.5	+0.3
	16μm,0.4s						
IUG				eS	Sg	00 31 12.7	-1.5
	9μm,0.4s						
IUG	Iuzhnay	1.98	301	i Pn	Pb	00 30 45.5	-0.7
	baz=299						
IUG				i Pg	Pg	00 30 47.0	-1.6
	baz=299						
IUG				eLg	Lg	00 31 13.5	
	baz=299						
IUG	Iuzhnay	1.98	301	P	Pb	00 30 46.9	+0.7
	16μm,0.4s						
IUG				S	Sb	00 31 11.0	+0.5
	9μm,0.4s						
AAK	Ala-Archa	2.21	47	⇑P	Pb	00 30 49.2	-1.1
	255nm,0.4s,SNR=91						
AAK				⇓S	Sb	00 31 19.8	+2.4
	2μm,0.5s						
AAK	Ala-Archa	2.21	47	Pn	Pb	00 30 49.2	-1.1
	60nm,0.3s,baz=220,slow=12,SNR=101						
AAK				Pg	Pg	00 30 50.6	-2.4
	82nm,0.3s,baz=220,slow=6.1,SNR=61						
AAK				Lg	Lg	00 31 18.6	
	157nm,0.3s,baz=225,slow=22,SNR=36						
	183nm,0.3s						
AAK	Ala-Archa	2.21	47		Pb	00 30 48.9	-1.3
AAK	Ala-Archa	2.21	47	⇓iP	Pn	00 30 47.9	+1.2
	baz=47						
AAK				⇓iS	Sn	00 31 15.6	+1.9
	baz=47						
TAS	Tashkent	2.28	275	Pn	Pb	00 30 51.1	-0.1
TAS	Tashkent	2.28	275	PN	Pb	00 30 51.2	-0.1
TAS	Tashkent	2.28	275	⇓iP	Pn	00 30 49.5	+2.0
	baz=75						
TAS				⇓iS	Sb	00 31 18.4	-0.8
	baz=75						
TAS	Tashkent	2.28	275	P	Pb	00 30 51.6	+0.3
TAS				S	Sn	00 30 30.5	-45
TAS				S	Sg	00 31 22.5	-1.4
CHM	Chimkent	2.34	301	ePN	Pg	00 30 54.4	-1.1
CHM				e		00 31 25.3	
CHM	Chimkent	2.34	301	eP	Pb	00 30 53.8	+1.5
	2.6nm,0.3s						
CHM				eS	Sg	00 31 25.3	-0.5
	7μm,0.3s						
CHM	Chimkent	2.34	301	ePg	Pg	00 30 54.4	-1.1
	baz=300						
CHM				eLg	Lg	00 31 25.3	
	baz=300						
KK31	Karatay Array	2.37	326		Pn	00 30 50.5	+1.7
KK31	Karatay Array	2.37	326	PN	Pn	00 30 50.9	+2.2
KK31	Karatay Array	2.37	326	Pn	Pn	00 30 51.0	+2.2
	159nm,0.5s,baz=137,slow=13,SNR=1690						
KK31				Lg	Lg	00 31 22.0	
	670nm,0.6s,baz=152,slow=20,SNR=12						
KKAR	Karatay Array	2.37	326		Pn	00 30 50.8	+2.1
KKAR	Karatay Array	2.37	326	Pn	Pn	00 30 50.5	+1.7
KKAR	Karatay Array	2.37	326	PN	Pn	00 30 50.8	+2.1
KKAR	Karatay Array	2.37	326	⇓iP	Pn	00 30 50.4	+1.7
	baz=26						
KKAR				⇓eS	Sn	00 31 19.8	+2.4
	baz=26						
FRU1	Bishkek	2.40	45	Pn	Pb	00 30 52.1	-1.3
FRU1	Bishkek	2.40	45	PN	Pb	00 30 52.1	-1.3
KBK	Karagaybulak	2.48	52	⇑P	Pb	00 30 53.4	-1.4
	208nm,0.2s,SNR=305						
KBK	Karagaybulak	2.48	52	i PN	Pn	00 30 51.7	+1.3
KBK				i S	Sn	00 31 22.2	+1.8
KBK	Karagaybulak	2.48	52	⇑iP	Pn	00 30 51.7	+1.3
	baz=52						
KBK				⇑iS	Sn	00 31 22.2	+1.8
	baz=52						
CHMS	Chumysh	2.60	44	⇑P	Pn	00 30 54.2	+2.3
	210nm,0.3s,SNR=29						
CHMS				⇓S	Sb	00 31 28.4	0.0
	426nm,0.3s						
CHMS	Chumysh	2.60	44	i PN	Pn	00 30 54.2	+2.3
CHMS				pmax	pmax		
	comp=Z,86nm,0.3s						
CHMS	Chumysh	2.60	44	⇓Pn	Pn	00 30 54.3	+2.4
	comp=Z,86nm,0.3s						
CHMS				⇑Lg	Lg	00 31 29.1	
	comp=Z,2μm,0.8s						
CHMS	Chumysh	2.60	44	⇓iP	Pn	00 30 53.1	+1.2
	baz=44						
CHMS				⇓iS	Sn	00 31 24.8	+1.8
	baz=44						
BRLS	Borolday	2.63	316	ePN	Pn	00 30 53.6	+1.3
BRLS	Borolday	2.63	316	eP	Pb	00 30 56.0	-1.3
	comp=Z,151nm,0.3s						
BRLS				eS	Sb	00 31 29.4	+0.1
	comp=Z,1μm,0.5s						
BRLS	Borolday	2.63	316	ePn	Pn	00 30 53.6	+1.3
	baz=309						
BRLS				i Pg	Pb	00 30 57.9	+0.6
	baz=309						
BRLS	Borolday	2.63	316	Pg	Pb	00 30 57.6	+0.3
	comp=Z,151nm,0.3s						
BRLS				Lg	Lg	00 31 29.4	
	comp=Z,1μm,0.5s						
GAR	Garm	2.63	216		Pn	00 30 54.6	+2.2
GAR	Garm	2.63	216	i PN	Pn	00 30 54.7	+2.2
GAR				i S	Sb	00 31 27.4	-2.1
GAR	Garm	2.63	216	⇓iP	Pn	00 30 54.7	+2.2
	baz=16						
GAR				⇓iS	Sb	00 31 27.4	-2.1
	baz=16						
USP	Ospenovka	2.67	37	⇑P	Pn	00 30 55.3	+2.4
	comp=Z,151nm,0.3s,SNR=152						
USP	Ospenovka	2.67	37	i PN	Pn	00 30 54.3	+1.4
USP				i S	Sn	00 31 26.6	+1.7
USP	Ospenovka	2.67	37	⇓iP	Pn	00 30 54.3	+1.4
	baz=37						
USP				⇓iS	Sn	00 31 26.6	+1.7
	baz=37						
SGDS	Sogindy	2.88	36c	i PN	Pn	00 30 58.1	+2.3
SGDS				e		00 31 34.1	
SGDS	Sogindy	2.88	36	eP	Pb	00 31 01.3	-0.2
	comp=Z,88nm,0.3s						
SGDS				eS	Sb	00 31 38.8	+2.3
	comp=Z,289nm,0.5s						
SGDS	Sogindy	2.88	36	⇑iPn	Pn	00 30 58.1	+2.3
	baz=37						
SGDS				i Pg	Pb	00 31 02.3	+0.7
	baz=37						
SGDS				eSn	Sb	00 31 34.2	-2.3
	baz=37						
SGDS	Sogindy	2.88	36	Pg	Pb	00 31 03.5	+1.9
	comp=Z,119nm,0.5s						
SGDS				Lg	Lg	00 31 39.4	
	comp=Z,289nm,0.5s						
TKM2	Tokmak 2	3.02	53	⇑P	Pn	00 31 00.4	+2.5
	comp=Z,76nm,0.3s,SNR=58						
TKM2	Tokmak 2	3.02	53	i PN	Pn	00 31 00.3	+2.4
TKM2				pmax	pmax		
	comp=Z,51nm,0.4s						
TKM2	Tokmak 2	3.02	53	⇑Pn	Pn	00 31 00.3	+2.4
	comp=Z,51nm,0.4s						
TKM2				⇑Lg	Lg	00 31 42.1	
	comp=Z,354nm,0.6s						
TKM2	Tokmak 2	3.02	53	⇑iP	Pn	00 30 59.4	+1.5
	baz=53						
TKM2				⇑iS	Sn	00 31 35.4	+1.5
	baz=53						
BOOM	Boomskoye usch	3.03	63		Pn	00 31 00.1	+2.2
BOOM	Boomskoye usch	3.03	63	PN	Pn	00 31 00.1	+2.2
BOOM	Boomskoye usch	3.03	63	⇓iP	Pn	00 30 59.4	+1.5
	baz=63						
BOOM				⇓iS	Sn	00 31 35.5	+1.6
	baz=63						
ULHL	Ulahol	3.15	68	i PN	Pn	00 31 00.8	+1.2
ULHL				i S	Sn	00 31 38.2	+1.4
ULHL	Ulahol	3.15	68	⇓iP	Pn	00 31 00.8	+1.2
	baz=69						
ULHL				⇓iS	Sn	00 31 38.2	+1.4
	baz=69						
KSH	Kashi	3.24	119	Pn	Pn	00 31 02.5	+1.7
KSH				sP	Pb	00 31 09.0	+1.2
KSH				Sn	Sn	00 31 42.5	+3.4
KSH				pmax	pmax		
	comp=Z,21nm,0.4s						
KSH				smax	smax		
	comp=N,850nm,0.5s						
KSH				smax	smax		
	comp=E,700nm,0.5s						
KST	Kastek	3.32	54	eP	Pb	00 31 10.1	+1.0
	comp=E,90nm,0.3s						
KST				eS	Sg	00 31 53.6	-3.6
	comp=E,806nm,0.7s						
KST	Kastek	3.32	54	Pg	Pb	00 31 11.5	+2.4
	comp=E,90nm,0.3s						
KST				Lg	Lg	00 31 53.6	
	comp=E,806nm,0.7s						
DGS	Degeres	3.32	50	eP	Pb	00 31 09.9	+0.8
	comp=E,51nm,0.6s						
DGS				eS	Sb	00 31 53.2	+4.0
	comp=E,797nm,0.6s						
DGS	Degeres	3.32	50	Pg	Pb	00 31 11.5	+2.4
	comp=E,90nm,0.4s						
DGS				Lg	Lg	00 31 53.2	
	comp=E,797nm,0.6s						
CHGR	Chuyangaron	3.47	225		Pn	00 31 05.8	+1.9
CHGR	Chuyangaron	3.47	225	PN	Pn	00 31 05.8	+1.9
CHGR	Chuyangaron	3.47	225	⇑iP	Pn	00 31 06.3	+2.4
	baz=25						
CHGR				⇑iS	Sn	00 31 47.5	+2.8
	baz=25						
KRBS	Karabastau	3.56	43	eP	Pb	00 31 14.4	+1.2
	comp=E,47nm,0.4s						
KRBS				eS	Sb	00 32 00.9	+4.7
	comp=E,328nm,0.7s						
KRBS	Karabastau	3.56	43	Pg	Pb	00 31 16.0	+2.7
	comp=E,47nm,0.4s						
KRBS				Lg	Lg	00 32 00.9	
	comp=E,328nm,0.7s						
MTBS	Maitube	3.65	56	eP	Pb	00 31 16.0	+1.3
	comp=E,54nm,0.7s						
MTBS				eS	Sb	00 32 03.5	+4.7
	comp=E,249nm,0.9s						
MTBS	Maitube	3.65	56	Pg	Pb	00 31 17.5	+2.8
	comp=E,87nm,0.6s						
MTBS				Lg	Lg	00 32 03.5	
	comp=E,249nm,0.9s						
KDJ	Kajisay	3.78	73	⇓iP	Pn	00 31 10.0	+1.7
	baz=74						
KDJ				⇓iS	Sn	00 31 53.7	+1.2
	baz=74						
TNSS	Tian-Shan	3.94	60	i PN	Pn	00 31 13.5	+2.9
TNSS				i		00 31 22.6	
TNSS				i		00 32 14.8	
TNSS	Tian-Shan	3.94	60	eP	Pb	00 31 21.5	+1.7
	comp=E,76nm,0.6s						
TNSS				eS	Sg	00 32 13.8	-3.2
	comp=E,107nm,0.6s						
TNSS	Tian-Shan	3.94	60	i Pn	Pn	00 31 13.5	+2.9
	baz=61						
TNSS				i Pg	Pb	00 31 22.7	+2.9
	baz=61						
TNSS				i Lg	Lg	00 32 14.9	
	baz=61						
TNSS	Tian-Shan	3.94	60	Pg	Pb	00 31 22.5	+2.7
	comp=E,76nm,0.6s						
TNSS				Lg	Lg	00 32 12.0	
	comp=E,107nm,0.6s						
AAA	Alma-Ata	4.00	57	ePN	Pn	00 31 14.1	+3.0
AAA				e		00 31 24.0	
AAA				e		00 32 16.5	
AAA	Alma-Ata	4.00	57	eP	Pb	00 31 22.0	+1.4
	comp=E,222nm,0.4s						
AAA				eS	Sb	00 32 14.2	+5.5
	comp=E,407nm,0.7s						
AAA	Alma-Ata	4.00	57	ePn	Pn	00 31 14.1	+3.0
	baz=58						
AAA				ePg	Pg	00 31 24.0	-3.2
	baz=58						
AAA				eLg	Lg	00 32 16.5	
	baz=58						
AAA	Alma-Ata	4.00	57	Pg	Pb	00 31 23.7	+3.1
	comp=E,222nm,0.4s						
AAA				Lg	Lg	00 32 14.2	
	comp=E,407nm,0.7s						
KNDC	Almaty	4.03	58	PN	Pn	00 31 14.4	+2.8
KNDC						00 31 24.0	
KNDC	Almaty	4.03	58	⇓Pn	Pn	00 31 14.5	+2.8
	comp=E,93nm,0.5s						
KNDC				⇑Pg	Pb	00 31 24.0	+2.8
	comp=E,162nm,0.5s						
KNDC				⇓Lg	Lg	00 32 16.5	
	comp=E,933nm,0.8s						
KUU	Kurty	4.05	46c	i PN	Pn	00 31 13.4	+1.6
KUU				i		00 31 24.6	
KUU				eS	Sb	00 32 14.7	+4.5
KUU	Kurty	4.05	46	eP	Pb	00 31 22.2	+0.7
	comp=E,66nm,0.8s						
KUU				eS	Sb	00 32 14.6	+4.5
	comp=E,537nm,1.0s						
KUU	Kurty	4.05	46	⇑iPn	Pn	00 31 13.4	+1.6
	baz=47						
KUU				i Pg	Pb	00 31 24.7	+3.2
	baz=47						
KUU				eSb	Sb	00 32 14.8	+4.5
	baz=47						
KUU	Kurty	4.05	46	Pg	Pb	00 31 24.0	+2.5
	comp=E,66nm,0.8s						
KUU				Lg	Lg	00 32 14.6	
	comp=E,537nm,1.0s						
MDOK	Medeo	4.06	59	i PN	Pn	00 31 14.8	+2.7
MDOK				i		00 31 24.8	
MDOK				eS	Sb	00 32 14.9	+4.3
MDOK	Medeo	4.06	59	eP	Pb	00 31 23.2	+1.5
	comp=E,102nm,0.6s						
MDOK				eS	Sb	00 32 15.7	+5.2
	comp=E,221nm,0.7s						
MDOK	Medeo	4.06	59	i Pn	Pn	00 31 14.8	+2.7
	baz=60						
MDOK				i Pg	Pb	00 31 24.9	+3.1
	baz=60						
MDOK				eSb	Sb	00 32 14.9	+4.3
	baz=60						
MDOK				i Lg	Lg	00 32 18.4	
	baz=60						
MDOK	Medeo	4.06	59	⇓Pn	Pn	00 31 14.8	+2.7
	comp=E,69nm,0.8s						
MDOK				⇑Pg	Pb	00 31 23.9	+2.2
	comp=E,106nm,0.7s						
MDOK				⇓Lg	Lg	00 32 15.7	
	comp=E,340nm,0.9s						
MDOK	Medeo	4.06	59	Pg	Pb	00 31 24.6	+2.9
	comp=E,102nm,0.6s						
MDOK				Lg	Lg	00 32 15.7	
	comp=E,221nm,0.7s						
BTLS	Baital	4.10	18	ePN	Pn	00 31 14.2	+1.8
BTLS				i		00 31 25.3	
BTLS				e		00 32 15.6	
BTLS	Baital	4.10	18	eP	Pb	00 31 24.0	+1.7
	comp=E,67nm,0.7s						
BTLS				eS	Sb	00 32 17.1	+5.7
	comp=E,37nm,0.7s						
BTLS	Baital	4.10	18	ePn	Pn	00 31 14.2	+1.8
	baz=18						
BTLS				i Pg	Pb	00 31 25.3	+3.1
	baz=18						
BTLS				eSb	Sb	00 32 15.6	+4.2
	baz=18						
BTLS	Baital	4.10	18	Pg	Pb	00 31 25.5	+3.2
	comp=E,67nm,0.7s						
BTLS				Lg	Lg	00 32 17.1	
	comp=E,37nm,0.7s						
KTBS	Karatobe	4.13	50	eP	Pb	00 31 23.5	+0.6
	comp=E,74nm,0.6s						
KTBS				eS	Sb	00 32 16.3	+3.8
	comp=E,568nm,0.6s						
KTBS	Karatobe	4.13	50	Pg	Pb	00 31 25.0	+2.1
	comp=E,74nm,0.6s						
KTBS				Lg	Lg	00 32 16.3	
	comp=E,568nm,0.6s						
TARG	Taragay, Kyrgy	4.17	80		Pn	00 31 15.5	+1.6
TARG	Taragay, Kyrgy	4.17	80	PN	Pn	00 31 15.5	+1.6
ANVS	Anan'yevo	4.32	66	i PN	Pn	00 31 17.1	+1.4
ANVS				i S	Sn	00 32 06.4	+0.7
ANVS	Anan'yevo	4.32	66	⇑iP	Pn	00 31 17.1	+1.4
	baz=66						
ANVS				⇑iS	Sn	00 32 06.4	+0.7
	baz=66						
CHKK	Chushkaly	4.39	50	i PN	Pn	00 31 18.5	+2.0
CHKK				i		00 31 31.4	

CHKK				eS	Sb	00 32 25.6	+5.6
CHKK	Chushkaly	4.39	50	eP	Pb	00 31 29.5	+2.2
	comp=E,36nm,0.5s						
CHKK				eS	Sg	00 32 26.5	-5.1
	comp=E,233nm,0.6s						
CHKK	Chushkaly	4.39	50	i Pn	Pn	00 31 18.6	+2.0
	baz=51						
CHKK				i Pb	Pb	00 31 29.0	+1.7
	baz=51						
CHKK				i Pg	Pg	00 31 31.5	-3.3
	baz=51						
CHKK				eSb	Sb	00 32 25.6	+5.6
	baz=51						
CHKK	Chushkaly	4.39	50	Pg	Pb	00 31 30.9	+3.6
	comp=E,36nm,0.5s						
CHKK				Lg	Lg	00 32 26.5	
	comp=E,233nm,0.6s						
PRZ	Przheval'sk	4.75	72	i PN	Pn	00 31 23.1	+1.6
PRZ				i S	Sn	00 32 16.8	+0.5
PRZ	Przheval'sk	4.75	72	⇑iP	Pn	00 31 23.1	+1.6
	baz=72						
PRZ				⇑iS	Sn	00 32 16.8	+0.5
	baz=72						
SATY	Saty	4.92	65	ePN	Pn	00 31 25.7	+1.8
SATY				e		00 31 40.4	
SATY	Saty	4.92	65	eP	Pb	00 31 38.0	+1.5
	comp=E,33nm,0.7s						
SATY				eS	Sb	00 32 41.5	+6.1
	comp=E,125nm,0.7s						
SATY	Saty	4.92	65	ePn	Pn	00 31 25.8	+1.8
	baz=66						
SATY				ePb	Pb	00 31 37.2	+0.7
	baz=66						
SATY				ePg	Pg	00 31 40.5	-4.4
	baz=66						
SATY				eLg	Lg	00 32 47.1	
	baz=66						
SATY	Saty	4.92	65	Pg	Pb	00 31 39.7	+3.2
	comp=E,33nm,0.7s						
SATY				Lg	Lg	00 32 41.5	
	comp=E,125nm,0.7s						
KURS	Kuram	4.94	60	eP	Pb	00 31 39.2	+2.6
	comp=E,47nm,0.7s						
KURS				eS	Sg	00 32 43.0	-6.1
	comp=E,204nm,1.0s						
KURS	Kuram	4.94	60	Pg	Pb	00 31 40.5	+3.9
	comp=E,47nm,0.7s						
KURS				Lg	Lg	00 32 43.0	
	comp=E,204nm,1.0s						
ZHN	Zhinishke	4.98	64	ePN	Pn	00 31 27.7	+3.0
ZHN				e		00 31 40.8	
ZHN	Zhinishke	4.98	64	eP	Pb	00 31 40.6	+3.2
	comp=E,35nm,0.3s						
ZHN				eS	Sg	00 32 45.3	-5.2
	comp=E,48nm,0.6s						
ZHN	Zhinishke	4.98	64	ePn	Pn	00 31 27.8	+3.0
	baz=65						
ZHN				ePg	Pb	00 31 40.9	+3.4
	baz=65						
ZHN	Zhinishke	4.98	64	Pg	Pg	00 31 41.9	-4.1
	comp=E,35nm,0.3s						
ZHN				Lg	Lg	00 32 45.3	
	comp=E,48nm,0.6s						
KPKS	Kokpek	5.27	62	ePN	Pn	00 31 28.9	+0.3
KPKS				e		00 31 46.1	
KPKS	Kokpek	5.27	62	eP	Pb	00 31 44.9	+2.6
	comp=E,41nm,0.4s						
KPKS				eS	Sg	00 32 53.9	-5.8
	comp=E,228nm,0.8s						
KPKS	Kokpek	5.27	62	ePn	Pn	00 31 29.0	+0.3
	baz=62						
KPKS				ePg	Pb	00 31 46.2	+3.9
	baz=62						
UZB	Uzynbulak	5.38	66	ePN	Pb	00 31 45.2	+1.1
UZB	Uzynbulak	5.38	66	eP	Pb	00 31 47.2	+3.0
	comp=E,24nm,0.6s						
UZB				eS	Sg	00 32 57.7	-5.5
	comp=E,122nm,0.9s						
UZB	Uzynbulak	5.38	66	ePb	Pb	00 31 45.3	+1.1
	baz=67						
UZB	Uzynbulak	5.38	66	Pg	Pg	00 31 49.1	-4.4
	comp=E,24nm,0.6s						
UZB				Lg	Lg	00 32 57.7	
	comp=E,122nm,0.9s						
PDGK	Podgornoye	5.76	65	PN	Pb	00 31 49.8	-0.9
PDGK	Podgornoye	5.76	65	Pg	Pb	00 31 55.2	+4.5
	comp=E,8.5nm,0.7s						
PDGK				Lg	Lg	00 33 08.2	
	comp=E,64nm,0.8s						
PDGK	Podgornoye	5.76	65	⇑Pg	Pb	00 31 55.1	+4.4
	comp=E,28nm,0.8s						
PDGK				⇑Lg	Lg	00 33 10.0	
	comp=E,158nm,0.8s						
TDK	Taldyqorghan	5.90	47	ePg	Pb	00 31 56.9	+3.9
	baz=48						
TDK				eSb	Sb	00 33 09.3	+6.0
	baz=48						
KBL	Kabul	7.08	202		Pn	00 31 55.8	+2.1
KBL	Kabul	7.08	202	PN	Pn	00 31 55.8	+2.1
OTUK	Ortayu	7.10	0	PN	Pn	00 31 56.7	+3.0
OTUK	Ortayu	7.10	0	⇑Pn	Pn	00 31 54.9	+1.2
	comp=E,12nm,0.7s						
OTUK				⇓Lg	Lg	00 33 47.8	
	comp=E,182nm,0.9s						
CEP	Cherat	7.32	183	P	Pn	00 31 59.8	+3.0
CHCP	Chirah Chowk	7.51	174	P	Pn	00 32 02.1	+2.7
CHCP				S	Sn	00 33 23.0	-1.2
NIL	Nilore	7.52	174	Pn	Pn	00 31 59.4	-0.1
NIL	Nilore	7.52	174	P	Pn	00 31 59.4	-0.1
BRZS	Berezniki	8.84	2	eP	Pn	00 32 20.8	+3.3
BRZS	Berezniki	8.84	2	ePn	Pn	00 32 20.9	+3.3
	baz=1.5						
MAKZ	Makanchi	8.98	48		Pn	00 32 19.8	+0.4
MAKZ	Makanchi	8.98	48	P	Pn	00 32 19.8	+0.4
MAKZ	Makanchi	8.98	48	⇓Pn	Pn	00 32 20.4	+1.0
	comp=E,7.4nm,1.4s						
MAKZ				⇑Pg		00 32 33.6	
	comp=E,1.0nm,0.5s						
MAKZ				⇑Lg	Lg	00 34 49.2	
	comp=E,43nm,0.9s						
MK31	Makanchi Array	9.14	49		Pn	00 32 22.6	+0.8
MK31	Makanchi Array	9.14	49	c iP	Pn	00 32 23.1	+1.4
MK31	Makanchi Array	9.14	49	Pn	Pn	00 32 23.1	+1.4
	comp=E,3.1nm,0.5s,baz=230,slow=13,SNR=45						
MK31				⇑Pg		00 32 33.4	
	comp=E,2.2nm,0.4s,baz=234,slow=13,SNR=7.3						
MK31				Lg	Lg	00 34 57.0	
	comp=E,21nm,0.8s,baz=232,slow=28,SNR=4.8						
MKAR	Makanchi Array	9.14	49	Pn	Pn	00 32 23.0	+1.3
	comp=E,1.0nm,0.3s,baz=233,slow=14,SNR=50						
MKAR				Lg	Lg	00 34 52.1	
	comp=E,1.0nm,0.3s,baz=232,slow=29,SNR=5.5						
MKAR				LR	LR	00 36 14.3	
	comp=E,73nm,21.2s,baz=236,slow=40						
	comp=E,4.8nm,0.6s						
MKAR	Makanchi Array	9.14	49		Pn	00 32 22.4	+0.6
MKAR	Makanchi Array	9.14	49	i P	Pn	00 32 23.3	+1.6
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	10.42	22	Pn	Pn	00 32 37.9	-1.2
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=4.6						
KURBB				Lg	Lg	00 35 34.4	
	comp=Z,0.3nm,0.3s,baz=206,slow=29,SNR=8.2						
	comp=Z,0.4nm,0.4s						
KURBB	Kurchatov Arra	10.42	22	⇑Pn	Pn	00 32 38.1	-1.0
	comp=Z,1.7nm,0.5s						
KURBB				⇓Lg	Lg	00 35 37.0	
	comp=Z,87nm,0.7s						
HRA	Herat	10.43	233		Pn	00 32 39.3	-0.3
KURK	Kurchatov	10.53	23		Pn	00 32 40.2	-0.4
KURK	Kurchatov	10.53	23	⇑eP	Pn	00 32 41.3	+0.7
KURK	Kurchatov	10.53	23	⇑Pn	Pn	00 32 40.1	-0.5
	comp=Z,1.7nm,1.0s						
KURK				⇓Lg	Lg	00 35 35.6	
	comp=Z,59nm,0.9s						
SEM	Semipalatinsk	10.79	28	eP	Pn	00 32 45.4	+1.0
SEM	Semipalatinsk	10.79	28	ePn	Pn	00 32 45.5	+1.0
	baz=28						
ZSN	Zaisan	10.98	51	ePg	Pn	00 33 31.3	+44
	baz=51						
ZSN				eLg	Lg	00 35 59.0	
	baz=51						
GEYT	Alibeck	11.42	258	Pn	Pn	00 32 51.3	-1.6
	comp=Z,0.3nm,0.3s,baz=100,slow=41,SNR=2.2						
GEYT				Sn	Sn	00 34 53.3	-6.8
	comp=Z,0.5nm,0.3s,baz=39,slow=8.0,SNR=2.6						
GEYT				LR	LR	00 37 31.0	
	comp=Z,30nm,21.0s,baz=22,slow=39						
	comp=Z,0.7nm,0.3s						
GEYT	Alibeck	11.42	258	Pn	Pn	00 32 52.5	-0.4
GYA0B	ALIBECK ARRAY	11.42	258	Pn	Pn	00 32 52.8	-0.1
AB31	Akbulak array	11.89	317	P	Pn	00 32 57.9	-1.4
AB31	Akbulak array	11.89	317	Pn	Pn	00 33 01.4	+2.1
	comp=Z,1.4nm,0.4s,baz=128,slow=13,SNR=51						
AB31				⇓Lg	Lg	00 36 25.1	
	comp=Z,5.8nm,0.7s						
ABKAR	Akbulak array	11.89	317	Pn	Pn	00 32 58.0	-1.3
ABKAR	Akbulak array	11.89	317	Pn	Pn	00 32 58.0	-1.3
BRVK	Borovoye	12.00	354	Pn	Pn	00 33 02.0	+1.4
BRVK	Borovoye	12.00	354	⇓eP	Pn	00 33 03.5	+2.8
BRVK	Borovoye	12.00	354	⇑Pn	Pn	00 33 02.4	+1.7
	comp=Z,7.5nm,1.0s						
BRVK				⇑Lg	Lg	00 36 26.4	
	comp=Z,51nm,1.0s						
AKTO	Aktyubinsk	13.60	318	Pn	Pn	00 33 21.7	-0.9
	comp=Z,0.4nm,0.3s,baz=96,slow=13,SNR=5.3						
AKTO				LR	LR	00 39 05.7	
	comp=Z,48nm,20.6s,baz=132,slow=39						
	comp=Z,1.2nm,0.4s						
AKTO	Aktyubinsk	13.60	318	⇑Pn	Pn	00 33 24.6	+2.0
	comp=Z,2.0nm,0.8s						
AKTO				⇑Lg	Lg	00 37 19.5	
	comp=Z,10nm,0.9s						
ZAA0	Zalesovo Array	15.31	29	Pn	Pn	00 33 46.6	+0.9
ZALV	Zalesovo Beam	15.31	29	Pn	Pn	00 33 44.4	-1.3
	comp=Z,0.6nm,0.3s,baz=219,slow=13,SNR=9.6						
ZALV				Sn	Sn	00 36 27.8	-7.0
	comp=Z,0.1nm,0.3s,baz=214,slow=15,SNR=1.1						
ZALV				Lg	Lg	00 38 08.9	
	baz=226,slow=23						
ZALV				LR	LR	00 39 56.9	
	comp=Z,64nm,19.0s,baz=191,slow=38						
	comp=Z,2.1nm,0.5s						
ZALV	Zalesovo Beam	15.31	29		Pn	00 33 46.2	+0.4
ZALV	Zalesovo Beam	15.31	29	i P	Pn	00 33 47.0	+1.3
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	17.72	334	P	P	00 34 17.3	+0.2
	baz=140,slow=13,SNR=4.2						
ARU				Lg	Lg	00 39 29.9	
	baz=315,slow=19,SNR=1.3						
ARU				LR	LR	00 41 18.4	
	comp=Z,29nm,18.8s,baz=102,slow=38						
	comp=Z,0.8nm,0.5s						
ARU	Arti	17.72	334		Pn	00 34 15.5	-0.8
ARU	Arti	17.72	334	c iP	P	00 34 18.7	+1.6
ARU				S	S	00 37 37.9	-2.3
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GOMU	GeErMu	18.24	98	P	Pn	00 34 22.5	-0.8
GOMU				pP	P	00 34 25.5	+2.1
GOMU				sP	sP	00 34 30.0	-0.8
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,32nm,4.1s						
KNGR	Kungurtug, Tuv	19.85	53	⇓iP	Pn	00 34 42.2	-0.2
GNI	Garni	20.91	276	P	P	00 34 53.0	+0.7
	comp=Z,1.1nm,0.4s,baz=165,slow=3.0,SNR=3.0						
	comp=Z,1.1nm,0.4s						
GNI	Garni	20.91	276	P	P	00 34 52.6	+0.3
GNI				IAmb	IAmb	00 34 59.6	
	comp=Z,10nm,0.9s						
GNI	Garni	20.91	276	⇑eP	Pn	00 34 58.9	+4.0
GNI				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	Gaotai	21.03	86	eP	P	00 34 54.3	+0.7
GTA				pP	sP	00 35 04.8	+3.8
GTA				sP	pP	00 35 08.8	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WSAR	Wadi Sarin	21.23	217	P	P	00 34 55.6	-0.1
	comp=Z,3.8nm,0.8s,baz=159,slow=7.7,SNR=1.5						
WSAR				LR	LR	00 45 05.7	
	comp=Z,51nm,18.8s,baz=82,slow=42						
	comp=Z,3.8nm,0.8s						
NCK	Nalchik	21.32	286	⇑eP	P	00 35 01.5	+5.0
NCK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KBZ	Khabaz	21.81	287	LR	LR	00 46 14.0	
	comp=Z,27nm,18.0s,baz=359,slow=44						
KIV	Kislovodsk	21.95	287	eP	P	00 35 07.5	+4.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,21nm,14.0s						
ZAK	Zakamensk	23.35	56	eP	P	00 35 17.4	-0.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONM	Songino Array	25.07	63	P	P	00 35 33.4	-0.8
	comp=Z,0.8nm,0.7s,baz=266,slow=9.2,SNR=5.6						
SONM				LR	LR	00 46 17.0	
	comp=Z,56nm,18.1s,baz=206,slow=39						
	comp=Z,0.8nm,0.7s						
ULN	Ulaanbaatar	25.52	63	⇓eP	P	00 35 40.3	+2.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	Obninsk	27.29	313	⇓eP	P	00 35 59.7	+5.8
OBN				e		00 36 43.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,16nm,13.0s						
PZH	PanZhiHua	28.32	112	P	P	00 36 07.5	+3.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,6.7s						
BR131	Keskin Array S	29.31	280	P	P	00 36 15.2	+2.9
BR131	Keskin Array S	29.31	280	⇑eP	P	00 36 18.3	+6.0
BRTR	Keskin Array B	29.31	280	P	P	00 36 13.2	+0.9
	comp=Z,0.4nm,0.7s,baz=34,slow=33,SNR=3.0						
	comp=Z,0.4nm,0.7s						
BRTR	Keskin Array B	29.31	280	P	P	00 36 15.6	+3.3
BRTR	Keskin Array B	29.31	280	i P	P	00 36 18.5	+6.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	31.06	303	LR	LR	00 49 43.8	
	comp=Z,44nm,21.2s,baz=14,slow=38						
FIA1	FINESS Array S	34.32	322	P	P	00 36 55.6	-0.3
FIA1				IAmb	IAmb	00 37 04.7	
	comp=Z,8.9nm,1.1s						
FINES	FINESS Array B	34.32	322	P	P	00 36 56.1	+0.3
	comp=Z,1.4nm,0.4s,baz=110,slow=9.3,SNR=20						
	comp=Z,1.4nm,0.4s						
FINES	FINESS Array B	34.32	322	P	P	00 36 55.9	0.0
ARCES	ARCESS Array B	37.30	335	P	P	00 37 21.2	-0.1
	comp=Z,1.2nm,0.5s,baz=106,slow=8.9,SNR=16						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	37.30	335	P	P	00 37 21.2	-0.1
ARCES				IAmb	IAmb	00 37 32.6	
	comp=Z,8.1nm,1.3s						
ARCES	ARCESS Array B	37.30	335	P	P	00 37 21.3	-0.1
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HFS	Hagfors	40.15	319	LR	LR	00 56 01.2	
	comp=Z,35nm,19.2s,baz=70,slow=39						
TIXI	Tiksi	41.10	24	P	P	00 37 52.5	-0.5
TIXI				IAmb	IAmb	00 37 53.3	
	comp=Z,4.9nm,0.8s						
TIXI	Tiksi	41.10	24	P	P	00 37 52.5	-0.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GERES	GERESS Array B	41.24	301	P	P	00 37 54.7	+0.1
	comp=Z,0.4nm,0.4s,baz=64,slow=9.1,SNR=6.9						
	comp=Z,0.4nm,0.4s						
GERES	GERESS Array B	41.24	301	P	P	00 37 55.1	+0.5
GERES	GERESS Array B	41.24	301	P	P	00 37 55.1	+0.5
NC303	NORSAR Array S	41.31	320	P	P	00 37 55.0	+0.1
NC303				IAmb	IAmb	00 38 20.1	
	comp=Z,6.8nm,1.0s						
NB2	NORSAR Subarra	41.38	320	P	P	00 37 54.9	-0.7
	comp=Z,0.8nm,0.5s,baz=90,slow=8.6						
NOA	NORSAR Array B	41.38	320	P	P	00 37 55.1	-0.4
	comp=Z,1.0nm,0.5s,baz=90,slow=8.2,SNR=6.8						
NOA				LR	LR	00 55 55.0	
	comp=Z,25nm,18.7s,baz=5.0,slow=37						
	comp=Z,1.0nm,0.5s						
NRCA	Norcia	43.23	293	P	P	00 38 11.5	+0.5
DAVOX	Davos/Dischmat	44.24	299	LR	LR	01 00 32.2	
	comp=Z,30nm,18.2s,baz=77,slow=41						
PETK	Petropavlovsk-	55.98	46	P	P	00 39 46.3	-1.4
	comp=Z,0.6nm,0.3s,baz=284,slow=7.5,SNR=8.2						
	comp=Z,0.6nm,0.3s						
PETK	Petropavlovsk-	55.98	46	P	P	00 39 47.0	-0.8
PETK	Petropavlovsk-	55.98	46	P	P	00 39 47.0	-0.8
ESDC	Sonseca Array	56.28	296	P	P	00 39 49.6	-0.6
	comp=Z,0.2nm,0.5s,baz=63,slow=7.0,SNR=2.8						
	comp=Z,0.2nm,0.5s						
TOLK	Toolik Lake Re	66.18	16	P	P	00 40 56.4	-0.4
TOLK				IAmb	IAmb	00 40 57.6	
	comp=Z,2.7nm,0.9s						
A36M	Sachs Harbour	66.49	6	P	P	00 40 58.3	-0.3
TOA0	Torodi Ar. Sit	66.90	267	P	P	00 41 01.0	-1.1
TORD	Torodi Ar. Bea	66.90	267	P	P	00 41 01.1	-1.0
	comp=Z,0.8nm,0.5s,baz=46,slow=5.3,SNR=13						
	comp=Z,0.8nm,0.5s						
TORD	Torodi Ar. Bea	66.90	267	P	P	00 41 01.2	-1.0
TORD				IAmb	IAmb	00 41 07.3	
	comp=Z,3.5nm,1.1s						
IMAR	Indian Mountai	67.45	19	P	P	00 41 03.9	-1.0
BMAR	Burnt Mountain	68.19	14	P	P	00 41 09.3	-0.3
C36M	Paulatuk	69.16	6	P	P	00 41 14.3	-1.2
ILAR	Eielson Array	70.04	17	P	P	00 41 19.8	-1.2
	comp=Z,0.5nm,0.8s,baz=314,slow=5.3,SNR=7.7						
	comp=Z,0.5nm,0.8s						
ILAR	Eielson Array	70.04	17	P	P	00 41 19.9	-1.1
ILAR	Eielson Array	70.04	17	P	P	00 41 19.9	-1.1
KOWA	Kowa	70.37	272	P	P	00 41 22.8	-1.0
KOWA				IAmb	IAmb	00 41 23.8	
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	76.56	3	P	P	00 41 58.4	-1.1
	comp=Z,1.2nm,0.8s,baz=352,slow=5.9,SNR=9.8						
	comp=Z,1.2nm,0.8s						
YKA	Yellowknife Ar	76.56	3	P	P	00 41 58.5	-1.0
YKA	Yellowknife Ar	76.56	3	P	P	00 41 58.5	-1.0
WRA	Warramunga Arr	83.63	123	P	P	00 42 36.8	-1.5
	comp=Z,0.2nm,0.6s,baz=320,slow=4.7,SNR=8.0						
	comp=Z,0.2nm,0.6s						
WB2	Warramunga Arr	83.64	123	P	P	00 42 37.0	-1.3
ASAR	Alice Springs	86.12	126	P	P	00 42 49.1	-1.6
	comp=Z,0.4nm,0.7s,baz=312,slow=4.7,SNR=4.5						
	comp=Z,0.4nm,0.7s						

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*SKO **26** 00:41:30.1, 41°.28N×22°.71E, h15^{km}*

*THE **26** 00:41:31.3, 41°.24N×22°.72E, h15^{km}±1^{km}, ML1.3/3, Error ellipse: s-maj=2.1km s-min=0.6km az=165.0*

ATH 26 00:41:31.6, 41°.23N×22°.72E, h14^{km}±2^{km}, ML1.5/2, 1C, Error ellipse: s-maj=4.4km s-min=1.2km az=165.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.15	308	i Pg	Pg	00 41 34.1	-1.2
VAY				i Sg	Sg	00 41 36.2	-1.6
VAY				eLg	Lg	00 41 36.3	
	comp=N,509nm,0.2s						
KNT	Kendrikon	0.15	118	P	Pg	00 41 35.2	-0.1
KNT				S	Sg	00 41 37.9	0.0
KNT	Kendrikon	0.15	118	P	Pg	00 41 35.2	-0.1
KNT				S	Sg	00 41 37.8	0.0
KNT	Kendrikon	0.15	118	⇑iPg	Pg	00 41 35.2	-0.1
KNT				i Sg	Sg	00 41 38.0	+0.2
GRG	Griva	0.37	222	P	Pg	00 41 38.6	-0.4
GRG				S	Sg	00 41 44.3	+0.3
GRG				AML	AML	00 41 45.3	
	comp=E,262µm,0.1s						
GRG				AML	AML	00 41 45.8	
	comp=N,153µm,0.2s						
GRG	Griva	0.37	222	P	Pg	00 41 38.6	-0.4
GRG				S	Sg	00 41 44.4	+0.4
	comp=N,105nm,0.1s						
GRG	Griva	0.37	222	i Pg	Pg	00 41 38.6	-0.4
GRG				i Sg	Sg	00 41 44.6	+0.6
STIP	Stip	0.61	319	i Pg	Pg	00 41 40.7	-2.9
STIP				i Sg	Sg	00 41 48.8	-3.0
THE	Thessaloniki	0.62	163	i Pg	Pg	00 41 43.7	-0.1
SOH	Sokhos	0.63	130	P	Pg	00 41 43.5	-0.3
SOH				S	Sg	00 41 52.3	+0.1
SOH				AML	AML	00 41 56.5	
	comp=E,109µm,0.3s						
SOH				AML	AML	00 41 57.6	
	comp=N,121µm,0.3s						
SOH	Sokhos	0.63	130	P	Pg	00 41 43.5	-0.3
SOH				S	Sb	00 41 52.6	-0.4
	comp=N,48nm,0.3s						
SOH	Sokhos	0.63	130	i Pg	Pg	00 41 43.6	-0.2
SRS	Serrai	0.67	100	P	Pg	00 41 44.2	-0.4
SRS	Serrai	0.67	100	P	Pg	00 41 44.2	-0.3
SRS	Serrai	0.67	100	i Pg	Pg	00 41 44.2	-0.3
HORT	Hortiatis	0.69	156	P	Pg	00 41 45.2	+0.1
NVR	Nevrokopi	0.87	82	P	Pg	00 41 47.8	-0.5
NVR	Nevrokopi	0.87	82	P	Pg	00 41 47.7	-0.6
NVR				S	Sg	00 41 59.6	-0.1
	comp=N,12nm,0.2s						
FNA	Florina	1.11	247	P	Pb	00 41 52.1	-0.6

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*BUC **26** 00:41:41.0±0.2, 45°.65N×26°.54E, h137^{km}±1^{km}, ml3.8/43, Error ellipse: s-maj=1.5km s-min=1.3km az=139.0*

ISC 26 00:41:40.2±1.3, 45°.65N±0°.02×26°.54E±0°.02, h145^{km}±6^{km}, n132, σ0^{s}.62/223, 121C-100D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BISRR	Bisoca	0.16	129	⇓P	Pn	00 42 00.4	+0.5
BISRR				⇑S	Sn	00 42 14.5	-0.4
BISRR	Bisoca	0.16	129	⇓P	Pn	00 42 00.4	+0.5
BISRR				⇑S	Sn	00 42 14.5	-0.4
PLOR	Plostina	0.22	22	⇑P	Pn	00 42 00.0	+0.1
PLOR				⇑S	Sn	00 42 13.0	-2.1
PLOR	Plostina	0.22	22	⇑P	Pn	00 42 00.0	+0.1
PLOR				⇑S	Sn	00 42 13.0	-2.1
VRI	Vrincioaia	0.26	32	⇑P	Pn	00 42 00.2	+0.2
VRI				⇓S	Sn	00 42 15.1	-0.1
VRI	Vrincioaia	0.26	32	⇑P	Pn	00 42 00.2	+0.2
VRI				⇓S	Sn	00 42 15.1	-0.1
NEHR	Nehoiu	0.28	217	⇑P	Pn	00 42 00.6	+0.4
NEHR				⇑S	Sn	00 42 15.3	0.0
NEHR	Nehoiu	0.28	217	⇑P	Pn	00 42 00.6	+0.4
NEHR				⇑S	Sn	00 42 15.3	0.0
COVR	Voineasa-Covas	0.30	310	⇑P	Pn	00 42 00.1	-0.1
COVR				⇓S	Sn	00 42 14.6	-0.9
COVR	Voineasa-Covas	0.30	310	⇑P	Pn	00 42 00.1	-0.1
COVR				⇓S	Sn	00 42 14.6	-0.9
GRER		0.41	131	⇓S	Sn	00 42 15.5	-0.5
GRER		0.41	131	⇓S	Sn	00 42 15.5	-0.5
MLR	Muntele Rosu	0.44	249	⇓P	Pn	00 42 01.0	+0.1
MLR				⇓S	Sn	00 42 16.9	+0.3
MLR	Muntele Rosu	0.44	249	⇓P	Pn	00 42 01.0	+0.1
MLR				⇓S	Sn	00 42 16.9	+0.3
PANC	Panciu	0.48	62	⇑P	Pn	00 42 01.6	+0.7
PANC				⇓S	Sn	00 42 17.2	+0.5
PANC	Panciu	0.48	62	⇑P	Pn	00 42 01.6	+0.7
PANC				⇓S	Sn	00 42 17.2	+0.5
ISR	Istrita	0.53	179	⇑S	Sn	00 42 16.5	-0.7
ISR	Istrita	0.53	179	⇑S	Sn	00 42 16.5	-0.7
OZUR		0.69	311	⇑P	Pn	00 42 01.9	-0.2
OZUR				⇓S	Sn	00 42 17.6	-1.3
OZUR		0.69	311	⇑P	Pn	00 42 01.9	-0.2
OZUR				⇓S	Sn	00 42 17.6	-1.3
SECR		0.70	208	⇑P	Pn	00 42 02.8	+0.7
SECR		0.70	208	⇑P	Pn	00 42 02.8	+0.7
GHRR		0.74	56	⇑P	Pn	00 42 03.1	+0.8
GHRR				⇓S	Sn	00 42 19.6	+0.3
GHRR		0.74	56	⇑P	Pn	00 42 03.1	+0.8
GHRR				⇓S	Sn	00 42 19.6	+0.3
TUDR		0.80	94	⇓P	Pn	00 42 02.9	+0.1
TUDR				⇑S	Sn	00 42 19.8	-0.2
TUDR		0.80	94	⇓P	Pn	00 42 02.9	+0.1
TUDR				⇑S	Sn	00 42 19.8	-0.2
PGOR	Pogoanele	0.81	157	⇑P	Pn	00 42 03.7	+0.8
PGOR				⇑S	Sn	00 42 20.7	+0.6
PGOR	Pogoanele	0.81	157	⇑P	Pn	00 42 03.7	+0.8
PGOR				⇑S	Sn	00 42 20.7	+0.6
PLAR	PLOIESTI	0.82	206	⇓S	Sn	00 42 21.2	+0.9
PLAR	PLOIESTI	0.82	206	⇓S	Sn	00 42 21.2	+0.9
DOPR	Dopca	0.86	292	⇑P	Pn	00 42 03.5	+0.1
DOPR				⇑S	Sn	00 42 20.3	-0.8
DOPR	Dopca	0.86	292	⇑P	Pn	00 42 03.5	+0.1
DOPR				⇑S	Sn	00 42 20.3	-0.8
TESR	Tescani	0.87	5	⇓P	Pn	00 42 03.3	-0.1
TESR				⇓S	Sn	00 42 20.0	-1.2
TESR	Tescani	0.87	5	⇓P	Pn	00 42 03.3	-0.1
TESR				⇓S	Sn	00 42 20.0	-1.2

SLCR	Slobozia Conac	0.87	93	⇓P	Pn	00 42 03.7	+0.4
SLCR				⇑S	Sn	00 42 20.8	-0.2
SLCR	Slobozia Conac	0.87	93	⇓P	Pn	00 42 03.7	+0.4
SLCR				⇑S	Sn	00 42 20.8	-0.2
IZVR	Izvoarele	0.87	97	⇓P	Pn	00 42 03.3	0.0
IZVR				⇓S	Sn	00 42 20.1	-0.9
IZVR	Izvoarele	0.87	97	⇓P	Pn	00 42 03.3	0.0
IZVR				⇓S	Sn	00 42 20.1	-0.9
SCHL	Schela	0.92	99	⇓P	Pn	00 42 04.1	+0.3
SCHL				⇓S	Sn	00 42 21.7	-0.1
SCHL	Schela	0.92	99	⇓P	Pn	00 42 04.1	+0.3
SCHL				⇓S	Sn	00 42 21.7	-0.1
VARL	Varlezi	0.95	74	⇓P	Pn	00 42 04.5	+0.5
VARL				⇑S	Sn	00 42 22.3	+0.1
VARL	Varlezi	0.95	74	⇓P	Pn	00 42 04.5	+0.5
VARL				⇑S	Sn	00 42 22.3	+0.1
BIR	Birlad	0.98	51	⇓P	Pn	00 42 04.9	+0.6
BIR				⇑S	Sn	00 42 22.2	-0.5
BIR	Birlad	0.98	51	⇓P	Pn	00 42 04.9	+0.6
BIR				⇑S	Sn	00 42 22.2	-0.5
SULR		0.99	192	⇓P	Pn	00 42 04.9	+0.6
SULR				⇓S	Sn	00 42 23.4	+0.6
SULR		0.99	192	⇓P	Pn	00 42 04.9	+0.6
SULR				⇓S	Sn	00 42 23.4	+0.6
SCTR	Scanteiesti	1.02	88	⇓P	Pn	00 42 05.4	+0.7
SCTR				⇑S	Sn	00 42 23.4	+0.1
SCTR	Scanteiesti	1.02	88	⇓P	Pn	00 42 05.4	+0.7
SCTR				⇑S	Sn	00 42 23.4	+0.1
TATR	Tatarca	1.06	92	⇓P	Pn	00 42 05.6	+0.6
TATR				⇓S	Sn	00 42 24.0	+0.1
TATR	Tatarca	1.06	92	⇓P	Pn	00 42 05.6	+0.6
TATR				⇓S	Sn	00 42 24.0	+0.1
VOIR		1.06	259	⇑P	Pn	00 42 04.9	-0.3
VOIR				⇑S	Sn	00 42 23.8	-0.4
VOIR		1.06	259	⇑P	Pn	00 42 04.9	-0.3
VOIR				⇑S	Sn	00 42 23.8	-0.4
GISR	Galati	1.09	100	⇑S	Sn	00 42 23.7	-0.6
GISR	Galati	1.09	100	⇑S	Sn	00 42 23.7	-0.6
VLDR	Vladesti	1.10	79	⇓P	Pn	00 42 05.9	+0.6
VLDR				⇓S	Sn	00 42 24.2	-0.3
VLDR	Vladesti	1.10	79	⇓P	Pn	00 42 05.9	+0.6
VLDR				⇓S	Sn	00 42 24.2	-0.3
AMRR	Amara	1.18	151	⇑P	Pn	00 42 06.7	+0.5
AMRR				⇓S	Sn	00 42 26.1	+0.2
AMRR	Amara	1.18	151	⇑P	Pn	00 42 06.7	+0.5
AMRR				⇓S	Sn	00 42 26.1	+0.2
LEHL	Lehliu	1.19	170	⇑P	Pn	00 42 06.0	-0.2
LEHL				⇑S	Sn	00 42 26.2	+0.1
LEHL	Lehliu	1.19	170	⇑P	Pn	00 42 06.0	-0.2
LEHL				⇑S	Sn	00 42 26.2	+0.1
CFR	Carcaliu	1.22	112	⇑P	Pn	00 42 06.7	+0.3
CFR				⇓S	Sn	00 42 25.7	-0.9
CFR	Carcaliu	1.22	112	⇑P	Pn	00 42 06.7	+0.3
CFR				⇓S	Sn	00 42 25.7	-0.9
INCR	INCERC-Sediu C	1.24	193	⇓S	Sn	00 42 26.6	-0.2
INCR	INCERC-Sediu C	1.24	193	⇓S	Sn	00 42 26.6	-0.2
GIRR	Girov	1.31	359	⇓P	Pn	00 42 08.0	+0.7
GIRR	Girov	1.31	359	⇓P	Pn	00 42 08.0	+0.7
VASR	Vaslui	1.32	41	⇑P	Pn	00 42 08.0	+0.5
VASR				⇑S	Sn	00 42 27.8	-0.6
VASR	Vaslui	1.32	41	⇑P	Pn	00 42 08.0	+0.5
VASR				⇑S	Sn	00 42 27.8	-0.6
BIZ	Bicaz	1.32	347	⇑P	Pn	00 42 08.6	+1.1
BIZ				⇓S	Sn	00 42 28.4	-0.1
BIZ	Bicaz	1.32	347	⇑P	Pn	00 42 08.6	+1.1
BIZ				⇓S	Sn	00 42 28.4	-0.1
BUC1	Bucharest	1.35	196	⇑P	Pn	00 42 08.3	+0.5
BUC1				⇑S	Sn	00 42 28.5	-0.3
BUC1	Bucharest	1.35	196	⇑P	Pn	00 42 08.3	+0.5
BUC1				⇑S	Sn	00 42 28.5	-0.3
STFAR	Stefanesti-Arg	1.36	235	⇑P	Pn	00 42 08.7	+0.8
STFAR				⇑S	Sn	00 42 29.6	+0.5
STFAR	Stefanesti-Arg	1.36	235	⇑P	Pn	00 42 08.7	+0.8
STFAR				⇑S	Sn	00 42 29.6	+0.5
HARR	Harsova	1.38	134	⇓P	Pn	00 42 08.5	+0.4
HARR	Harsova	1.38	134	⇓P	Pn	00 42 08.5	+0.4
LEOM	Leova	1.45	55	⇑P	Pn	00 42 09.3	+0.6
LEOM				⇓S	Sn	00 42 30.4	-0.2
LEOM	Leova	1.45	55	⇑P	Pn	00 42 09.3	+0.6
LEOM				⇓S	Sn	00 42 30.4	-0.2
SGRR	Singureni	1.48	196	⇓P	Pn	00 42 09.3	+0.1
SGRR				⇑S	Sn	00 42 30.4	-0.9
SGRR	Singureni	1.48	196	⇓P	Pn	00 42 09.3	+0.1
SGRR				⇑S	Sn	00 42 30.4	-0.9
RASA	Rasa	1.50	163	⇑P	Pn	00 42 09.7	+0.3
RASA				⇑S	Sn	00 42 31.9	+0.3
RASA	Rasa	1.50	163	⇑P	Pn	00 42 09.7	+0.3
RASA				⇑S	Sn	00 42 31.9	+0.3
TLBR	Topalu	1.54	135	⇓P	Pn	00 42 10.2	+0.4
TLBR				⇑S	Sn	00 42 31.8	-0.5
TLBR	Topalu	1.54	135	⇓P	Pn	00 42 10.2	+0.4
TLBR				⇑S	Sn	00 42 31.8	-0.5
TPGR	Topolog	1.55	120	⇑P	Pn	00 42 10.0	+0.1
TPGR				⇑S	Sn	00 42 31.8	-0.9
TPGR	Topolog	1.55	120	⇑P	Pn	00 42 10.0	+0.1
TPGR				⇑S	Sn	00 42 31.8	-0.9
HUMR	Humele	1.57	225	⇑P	Pn	00 42 09.9	-0.2
HUMR				⇑S	Sn	00 42 32.6	-0.4
HUMR	Humele	1.57	225	⇑P	Pn	00 42 09.9	-0.2
HUMR				⇑S	Sn	00 42 32.6	-0.4
TLCR		1.67	105	⇑P	Pn	00 42 11.6	+0.4
TLCR				⇑S	Sn	00 42 35.2	+0.2
TLCR		1.67	105	⇑P	Pn	00 42 11.6	+0.4
TLCR				⇑S	Sn	00 42 35.2	+0.2
CVDA	Cernavoda	1.69	140	⇑P	Pn	00 42 12.0	+0.5
CVDA				⇓S	Sn	00 42 34.3	-1.0
CVDA	Cernavoda	1.69	140	⇑P	Pn	00 42 12.0	+0.5
CVDA				⇓S	Sn	00 42 34.3	-1.0
IAS	Iasi	1.70	24	⇓S	Sn	00 42 34.7	-0.9
IAS	Iasi	1.70	24	⇓S	Sn	00 42 34.7	-0.9
CVD1	Cernavoda-Powe	1.71	140	⇓P	Pn	00 42 12.2	+0.5
CVD1	Cernavoda-Powe	1.71	140	⇓P	Pn	00 42 12.2	+0.5
ICOR	Ion Corvin	1.78	149	⇑P	Pn	00 42 12.9	+0.5
ICOR				⇑S	Sn	00 42 37.2	+0.1
ICOR	Ion Corvin	1.78	149	⇑P	Pn	00 42 12.9	+0.5
ICOR				⇑S	Sn	00 42 37.2	+0.1
COPA	Copaceanca	1.78	212	⇑S	Sn	00 42 36.4	-0.8
COPA	Copaceanca	1.78	212	⇑S	Sn	00 42 36.4	-0.8
TIRR	Tirgusor	1.79	131	⇓P	Pn	00 42 12.9	+0.4
TIRR				⇑S	Sn	00 42 36.1	-1.2
TIRR	Tirgusor	1.79	131	⇓P	Pn	00 42 12.9	+0.4
TIRR				⇑S	Sn	00 42 36.1	-1.2
JURR	Jurilovca	1.88	117	⇓P	Pn	00 42 14.1	+0.6
JURR	Jurilovca	1.88	117	⇓P	Pn	00 42 14.1	+0.6
LOT	Lotru	1.95	265	⇓P	Pn	00 42 15.1	+0.5
LOT				⇓S	Sn	00 42 40.6	-0.3
LOT	Lotru	1.95	265	⇓P	Pn	00 42 15.1	+0.5
LOT				⇓S	Sn	00 42 40.6	-0.3
MFTR	Murfatlar	1.99	137	⇓P	Pn	00 42 15.3	+0.4
MFTR	Murfatlar	1.99	137	⇓P	Pn	00 42 15.3	+0.4
MILM	Milestii Mici	2.03	50	⇑*i*P	Pn	00 42 15.7	+0.5
	11nm,0.1s						
MILM				*e*S	Sn	00 42 40.6	-1.6
	62nm,0.4s						
MILM	Milestii Mici	2.03	50	⇓P	Pn	00 42 15.7	+0.5
MILM				⇓S	Sn	00 42 41.2	-1.0
MILM	Milestii Mici	2.03	50	⇓P	Pn	00 42 15.7	+0.5
MILM				⇓S	Sn	00 42 41.2	-1.0
KIS	Kishinev	2.08	49	*i* S	Sn	00 42 42.0	-1.4
	160nm,0.4s						
KIS	Kishinev	2.08	49	⇑S	Sn	00 42 42.6	-0.8
KIS	Kishinev	2.08	49	⇑S	Sn	00 42 42.6	-0.8
RAZG	Razgrad	2.08	181	⇑P	Pn	00 42 16.3	+0.3
RAZG	Razgrad	2.08	181	⇑P	Pn	00 42 16.3	+0.3
BURAR	Bucovina Array	2.17	336	⇑P	Pn	00 42 18.5	+1.5
BURAR				⇓S	Sn	00 42 46.4	+1.0
BURAR	Bucovina Array	2.17	336	⇑P	Pn	00 42 18.5	+1.5
BURAR				⇓S	Sn	00 42 46.4	+1.0
VLAD	Vladila	2.24	223	⇓P	Pn	00 42 17.7	-0.2
VLAD				⇓S	Sn	00 42 45.9	-0.9
VLAD	Vladila	2.24	223	⇓P	Pn	00 42 17.7	-0.2
VLAD				⇓S	Sn	00 42 45.9	-0.9
MANR	Mangalia	2.34	141	⇑P	Pn	00 42 19.7	+0.6
MANR	Mangalia	2.34	141	⇑P	Pn	00 42 19.7	+0.6
TSMN	Mangalia Port-	2.36	141	⇓P	Pn	00 42 19.3	0.0
TSMN	Mangalia Port-	2.36	141	⇓P	Pn	00 42 19.3	0.0
PURM	Purcari	2.48	68	⇑P	Pn	00 42 21.1	+0.3
PURM				⇑S	Sn	00 42 51.8	-0.2
PURM	Purcari	2.48	68	⇑P	Pn	00 42 21.1	+0.3
PURM				⇑S	Sn	00 42 51.8	-0.2
SORM	Soroca	2.78	26	⇑P	Pn	00 42 24.4	0.0
SORM	Soroca	2.78	26	⇑P	Pn	00 42 24.4	0.0
DRGR		2.89	295	⇑P	Pn	00 42 26.7	+0.7
DRGR		2.89	295	⇑P	Pn	00 42 26.7	+0.7
HERR	Herculane	3.01	257	⇑P	Pn	00 42 27.0	-0.4
HERR	Herculane	3.01	257	⇑P	Pn	00 42 27.0	-0.4

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*IDC **26** 00:42:12.8±0.8, 0°.63N×80°.42W, h0^{km}, mb3.7/12, mbtmp3.7/13, ML3.5/1, MS3.1/7, Error ellipse: s-maj=40.5km s-min=15.4km az=58.0*

*IGQ **26** 00:42:14±0.7, 0°N±3°×8°1W±°, h10^{km}*

ISC 26 00:42:13.7±0.6**, 0°.42N**±0°.04×**80°.67W**±0°.04**, h11**^{km}**, n80, σ1^{s}78**/80**, mb3.8**/11**, MS3.0**/4**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.82	145	P	Pg	00 42 29.0	-0.6
JAMA				S	Sg	00 42 41.0	+0.6
CABP	Cabo Pasado	0.84	163	P	Pg	00 42 29.0	-0.9
CABP				S	Sg	00 42 41.0	+0.2
MAG1	Magdalena	1.02	119	P	Pn	00 42 34.0	0.0
AMA1	Acelerografo,	1.08	62	P	Pn	00 42 39.0	+4.3
FLF1	Flavio Alfaro-	1.13	133	P	Pb	00 42 35.0	-0.3
AV21	Acelerografo,	1.15	78	P	Pn	00 42 36.0	+0.3
AV18	Acelerografo,	1.20	95	P	Pn	00 42 38.0	+1.6
BV15	Puerto Quito-O	1.47	100	P	Pg	00 42 41.0	-1.0
ISPT	Isla de la Pla	1.72	193	P	Pn	00 42 41.0	-2.6
PAC1	Pacto, Paraso	1.89	95	P	Pb	00 42 47.0	-1.3
PPLP	Puerto Lpez	1.96	183	P	Pn	00 42 45.0	-1.9
HPAL	Hacienda Las P	2.12	107	P	Pn	00 42 50.0	+0.6
PINO	Pino	2.14	106	P	Pn	00 42 50.0	+0.1
TERV	Terraza Guagua	2.15	106	P	Pg	00 42 59.0	+4.0
JUA2	San Juan 2	2.16	107	P	Pn	00 42 51.0	+0.9
YANA	Yana	2.17	104	P	Pn	00 42 51.0	+0.8
OTAV	Otavalo	2.23	95	*e*P	Pn	00 42 52.0	+1.0
OTAV				*e*S	Sb	00 43 20.5	-1.6
ILLI	Illinizas Sur	2.25	120	P	Pn	00 42 52.0	+0.7
CUSE	Cuicocha Este	2.28	93	P	Pb	00 42 53.0	-2.1
PAST	Pastocalle	2.31	119	P	Pn	00 42 53.0	+0.9
CUIC	Cuicocha-Domo	2.31	93	P	Pb	00 42 54.0	-1.7
CUSW	Cuicocha Oeste	2.33	93	P	Pb	00 42 54.0	-1.9
COTA	Cotacachi	2.34	92	P	Pn	00 42 51.0	-1.5
SRAM	San Ramn-Vol	2.41	119	P	Pb	00 42 57.0	-0.2
URCU	Urcuqui	2.42	90	P	Pb	00 42 55.0	-2.5
SUCR	Mariscal Sucre	2.42	116	P	Pn	00 42 55.0	+1.4
CAMI	Rancho Maria	2.43	117	P	Pg	00 43 00.0	-0.3
BNAS	Cotopaxi Volca	2.45	116	P	Pb	00 42 56.0	-2.0
SLOR	San Lorenzo -	2.46	118	P	Pn	00 42 55.0	+0.8
BREF	Cotopaxi Volca	2.48	116	P	Pb	00 42 58.0	-0.7
BMOR	Cotopaxi Volca	2.49	117	P	Pn	00 42 55.0	+0.3
BRRN	Barrancas-Volc	2.50	119	P	Pb	00 42 57.0	-1.9
BVC2	Cotopaxi Volca	2.50	115	P	Pb	00 42 57.0	-2.0
BTAM	Cotopaxi Volca	2.52	116	P	Pn	00 42 57.0	+1.9
TAMB	Tambo	2.56	116	P	Pb	00 43 00.0	+0.1
VCES	Cotopaxi	2.58	118	P	Pn	00 42 57.0	+1.1
ANTG	Antisana-Guama	2.59	111	P	Pb	00 42 59.0	-1.4
YAHU	Yahuarcocha	2.60	91	P	Pb	00 42 59.0	-1.6
CHSH	Refugio Sur-Vo	2.62	137	P	Pn	00 42 58.0	+1.5
CHMA	Chilma	2.65	80	P	Pn	00 42 56.0	-0.6
ANTI	Antisana	2.66	109	P	Pb	00 43 00.0	-1.6
ANTS	Antisana-Sarah	2.66	110	P	Pn	00 42 59.0	+1.9
PORT	Chimborazo Vol	2.67	135	P	Pn	00 42 58.0	+0.9
LNGL	El Angel-Carch	2.69	83	P	Pn	00 42 58.0	+0.6
ANGU	Angureal	2.69	98	P	Pb	00 43 02.0	-0.2
CAYR	Refugio Cayamb	2.70	99	P	Pb	00 43 01.0	-1.4
TAMH	Tambohuasha Ch	2.72	136	P	Pn	00 42 59.0	+1.3
ECEN	Cerro Negro	2.73	82	P	Pn	00 42 59.0	+1.0
CHL1	Volc¡n Chiles	2.75	82	P	Pn	00 42 59.0	+0.7
CHL2	Volc¡n Chiles	2.78	82	P	Pn	00 43 00.0	+1.4
POND	Pondoa	2.88	129	P	Pb	00 43 04.0	-1.3
CMBC	Cumbal	2.89	80	*e*P	Pn	00 43 01.5	+1.4
CMBC				*i*		00 43 45.2	
	comp=Z,21μm,0.9s						
RETU	Refugio	2.90	130	P	Pb	00 43 06.0	+0.2
BRUN	Tungurahua Vol	2.91	129	P	Pb	00 43 04.0	-1.8
ARRY	Arrayan	2.93	131	P	Pn	00 43 03.0	+2.4
ISPG	Isla Puna-Puer	3.40	172	P	Pn	00 43 09.0	+2.2
GCUF	Volcan Galeras	3.42	76	*e*P	Pn	00 43 09.7	+2.3
GCUF				*e*S	Sb	00 43 52.9	-3.6
GCUF				*i*		00 43 58.9	
	comp=E,76nm,0.4s						
ARNL	Arenillas	3.99	171	P	Pn	00 43 15.0	+0.2
SOTA	Rioblanco	4.41	67	*e*P	Pn	00 43 22.7	+1.7
SOTA				*e*S	Sb	00 44 16.7	-8.1
SOTA				*i*		00 44 34.1	
	comp=Z,54nm,0.7s						
ATAH	Atahualpa	7.84	163	Pn	Pn	00 44 11.9	+3.7
	comp=Z,0.7nm,0.3s,baz=357,slow=8.6,SNR=5.2						
ATAH				Sn	Sn	00 45 26.5	-11
	comp=Z,0.2nm,0.3s,baz=289,slow=22,SNR=0.8						
ATAH				LR	LR	00 47 20.1	
	comp=Z,153nm,20.8s,baz=326,slow=38						
	comp=Z,4.3nm,0.6s						
JTS	Las Juntas de	10.69	337	LR	LR	00 48 00.1	
	comp=Z,69nm,22.0s,baz=204,slow=33						
NNA	Nana	12.90	163	LR	LR	00 50 17.9	
	comp=Z,40nm,19.8s,baz=350,slow=37						
SDV	Santo Domingo	13.06	50	Pn	P	00 45 32.6	+2.6
	comp=Z,0.3nm,0.3s,baz=252,slow=10.0,SNR=7.9						
LPAZ	La Paz	20.71	144	P	Pn	00 46 56.8	-0.4
	comp=Z,1.0nm,0.6s,baz=47,slow=5.6,SNR=5.1						
	comp=Z,1.0nm,0.6s						
CMIG	Matias Romero	21.69	321	P	P	00 47 07.3	+2.6
	comp=Z,2.2nm,0.7s,baz=70,slow=7.3,SNR=4.7						
CMIG				LR	LR	00 53 21.4	
	comp=Z,39nm,21.3s,baz=182,slow=31						
	comp=Z,2.2nm,0.7s						
SIV	San Ignacio	25.31	131	P	P	00 47 41.0	+0.4
	comp=Z,0.5nm,0.3s,baz=288,slow=12,SNR=3.8						
SIV				LR	LR	00 59 05.3	
	comp=Z,60nm,20.1s,baz=296,slow=40						
	comp=Z,0.5nm,0.3s						
MDP	Montagnes des	28.37	80	LR	LR	00 59 46.4	
	comp=Z,36nm,20.4s,baz=86,slow=38						
CPUP	Villa Florida	34.84	142	LR	LR	01 06 43.6	
	comp=Z,47nm,18.6s,baz=34,slow=42						
TXAR	Lajitas Array	36.16	325	P	P	00 49 17.1	+0.6
	comp=Z,0.7nm,1.0s,baz=131,slow=6.8,SNR=3.9						
TXAR				PcP	PcP	00 51 43.0	+0.9
	comp=Z,0.1nm,0.5s,baz=120,slow=4.5,SNR=3.6						
	comp=Z,0.7nm,1.0s						
PLCA	Paso Flores	41.98	168	P	P	00 50 06.5	+1.5
	comp=Z,2.6nm,0.9s,baz=20,slow=8.0,SNR=3.0						
	comp=Z,2.6nm,0.9s						
PDAR	Pinedale Array	49.48	332	P	P	00 51 05.2	+0.8
	comp=Z,0.2nm,0.4s,baz=143,slow=6.6,SNR=2.9						
	comp=Z,0.2nm,0.4s						
NVAR	Mina Array Bea	51.21	322	P	P	00 51 18.4	+0.8
	comp=Z,1.4nm,0.7s,baz=140,slow=7.2,SNR=12						
	comp=Z,1.4nm,0.7s						
ULM	Lac du Bonnet	51.31	348	P	P	00 51 17.5	-0.4
	comp=Z,2.2nm,0.6s,baz=140,slow=9.7,SNR=3.3						
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	66.94	344	P	P	00 53 06.0	+0.1
	comp=Z,1.1nm,0.7s,baz=140,slow=5.9,SNR=13						
	comp=Z,1.1nm,0.7s						
ESDC	Sonseca Array	79.51	50	P	P	00 54 20.1	-0.7
	comp=Z,0.7nm,0.7s,baz=262,slow=5.7,SNR=6.0						
	comp=Z,0.7nm,0.7s						
ILAR	Eielson Array	79.66	337	P	P	00 54 20.2	-0.9
	comp=Z,0.2nm,0.6s,baz=111,slow=4.9,SNR=3.4						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	82.47	77	P	P	00 54 36.9	-0.1
	comp=Z,0.8nm,1.1s,baz=190,slow=2.1,SNR=2.8						
	comp=Z,0.8nm,1.1s						
MKAR	Makanchi Array	130.66	15	PKP	PKPdf	01 01 23.5	-1.7
	comp=Z,0.3nm,0.7s,baz=354,slow=4.3,SNR=2.1						
ASAR	Alice Springs	139.27	233	PKP	PKPdf	01 01 40.7	-1.2
	comp=Z,0.4nm,0.7s,baz=121,slow=2.1,SNR=5.3						
WRA	Warramunga Arr	140.62	238	PKP	PKPdf	01 01 43.4	-1.0
	comp=Z,0.7nm,0.7s,baz=112,slow=1.8,SNR=14						

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*IDC **26** 01:02:34.6±0.5, 11°.65N×85°.48W, h195^{km}±4^{km}, mb4.2/21, mbtmp4.7/22, MS3.5/16, Error ellipse: s-maj=14.6km s-min=7.0km az=58.0*

*INET **26** 01:02:35.1±1.2, 11°.44N×85°.78W, h209^{km}±11^{km}, MW5.0*

*NEIC **26** 01:02:36.5±1.1, 11°.50N±0°.05×85°.72W±0°.06, h197^{km}±4^{km}, mb5.1/598, Mww5.2, ML4.9(UCR), Error ellipse: s-maj=8.7km s-min=6.4km az=63.0*

*UCR **26** 01:02:36.3±1.4, 11°.43N×85°.93W, h191^{km}±9^{km}, ML4.5, MW5.0, mb5.2(NEIC)*

*NEIC **26** 01:02:37, 11°.51N×86°.31W, h180^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.82; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-4.86; M$_{r\theta}$2.12; M$_{\theta\phi}$4.86; M$_{\phi r}$-1.07; Fault plane solution: M$_0$7.26000×10^{16} NP1: ϕ$_s$354.00000°, δ42.00000°, λ128.00000°. NP2: ϕ$_s$127.00000°, δ58.00000°, λ61.00000°. Principal axes: T 5.7061, Plg64.0000°, Azm346.0000°; N 2.4646, Plg24.0000°, Azm143.0000°; P -8.1707, Plg9.0000°, Azm237.0000°;*

*UPA **26** 01:02:37.3±0.9, 11°.44N×85°.82W, h186^{km}±9^{km}, MW5.0*

*SNET **26** 01:02:38.5±1.2, 11°.61N×86°.04W, h206^{km}, ML4.8*

*GCMT **26** 01:02:38.5±0.3, 11°.52N±0°.02×85°.74W±0°.02, h202^{km}±1^{km}, MW5.0/111, Moment Tensor Solution. s47,c58; s111,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.09±.10; M$_{\theta\theta}$-1.37±.14; M$_{\phi\phi}$-1.71±.15; M$_{r\theta}$2.35±.10; M$_{\theta\phi}$1.93±.13; M$_{\phi r}$-2.25±.10; Best double couple: M$_0$4.62300×10^{16} NP1: ϕ$_s$321.00000°, δ23.00000°, λ96.00000°. NP2: ϕ$_s$135.00000°, δ67.00000°, λ88.00000°. Principal axes: T 4.4340, Plg68.0000°, Azm40.0000°; N 0.3890, Plg2.0000°, Azm136.0000°; P -4.8130, Plg22.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GCG **26** 01:03:17.4±0.6, 14°.47N×89°.79W, h310^{km}±5^{km}, MD4.6*

ISC 26 01:02:35.4±0.4**, 11°.52N**±0°.03×**85°.71W**±0°.04**, h203**^{km}±3^{km}**, h203**^{km}**: pP-P, n1161, σ1^{s}23**/1117**, mb5.0**/293**, 274C-60D, Fault plane solution: NP1:** ϕ$_s$138.06273°, δ50.01887°, λ59.33003°. **NP2:** ϕ$_s$0.76915°, δ48.77087°, λ121.31261°. **Principal axes:** T Plg66.9810°, Azm340.7840°; N Plg23.0081°, Azm158.9223°; P Plg0.6700°, Azm249.2068°; **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACON	Acoyapa	0.69	50		Pn	01 03 04.5	+0.8
ACON				Sn	S	01 03 24.8	-0.8
ACON	Acoyapa	0.69	50	*e*P	Pn	01 03 04.3	+0.6
BUAI	Buenos Aires	0.74	149	⇑*i*P	Pn	01 03 04.5	+0.5
GB1A	Borinquen Arri	0.76	156	*e*P	Pn	01 03 04.4	+0.2
GBS3	Finca Las Img	0.77	161	⇑*i*P	Pn	01 03 04.3	+0.1
BUEV	Buena Vista	0.78	157	⇑*i*P	Pn	01 03 04.4	+0.1
WILN	Americas 2	0.79	324	*e*P	Pn	01 03 06.7	+2.5
LAPC	Finca la Perla	0.79	160	⇑*i*P	Pn	01 03 04.1	-0.2
VRLE	La Escondida,	0.80	155	*e*P	Pn	01 03 04.7	+0.2
HZTE	Horizontes, Gu	0.81	172		Pn	01 03 04.5	+0.1
HZTE				Sn	S	01 03 26.0	-0.8
HZTE	Horizontes, Gu	0.81	172	*e*P	Pn	01 03 04.5	+0.1
HZTE	Horizontes, Gu	0.81	172	*e*P	Pn	01 03 04.5	+0.1
MGAN	Managua	0.82	320	*e*P	Pn	01 03 04.8	+0.4
GPS2	Hotel Rincn d	0.84	155	*e*P	Pn	01 03 04.6	0.0
VMAR	Armenia, Volca	0.91	140	*e*P	Pn	01 03 05.4	+0.4
BOAB	BOACO BROADBAN	0.93	3	Pn	Pn	01 03 05.8	+0.7
BOAB				Sn	S	01 03 27.4	-0.7
BOAB	BOACO BROADBAN	0.93	3	*e*P	Pn	01 03 05.8	+0.7
HUEN		0.93	331	*e*P	Pn	01 03 05.7	+0.7
LIM1	Limonal	0.93	151	⇑*i*P	Pn	01 03 05.4	+0.3
GUAB	Guayabo de Bag	0.93	149	*e*P	Pn	01 03 05.5	+0.3
APYN	Apoyeque	0.95	319	*e*P	Pn	01 03 07.2	+2.0
HORNC	Hornillas	0.96	147	*e*P	Pn	01 03 05.7	+0.4
COLC	Colonia	0.98	149	*e*P	Pn	01 03 05.8	+0.3
CUI	Cuipilapa	1.01	148	*e*P	Pn	01 03 06.2	+0.6
PTEN	Parque Tenorio	1.07	138	⇑*i*P	Pn	01 03 06.8	+0.7
ORTG	Ortega, Santa	1.17	168	Pn	Pn	01 03 06.8	-0.1
ORTG	Ortega, Santa	1.17	168	*e*P	Pn	01 03 06.8	-0.1
PLVR	Palo Verde	1.22	163	*e*P	Pn	01 03 07.2	-0.1
GUAI	GUAI	1.25	171	⇑*i*P	Pn	01 03 07.6	+0.2
CNGN	Cerro Negro	1.37	315		Pn	01 03 08.4	+0.1
NICO	Nicoya	1.40	169	*e*P	Pn	01 03 08.5	-0.1
MATN	Matagalpa	1.42	352		Pn	01 03 09.6	+0.7
JTS	Las Juntas de	1.43	148	P	Pn	01 03 08.8	0.0
	2μm,0.4s,baz=31,slow=6.0,SNR=1923						
JTS				S	S	01 03 32.7	-1.7
	5μm,0.3s,baz=296,slow=22,SNR=35						
JTS	Las Juntas de	1.43	148	*e*P	Pn	01 03 08.8	0.0
JTS	Las Juntas de	1.43	148	⇑*i*P	Pn	01 03 09.0	+0.1
JTS				*e*S	S	01 03 31.6	-2.9
JTS	Las Juntas de	1.43	148	*e*P	Pn	01 03 08.8	0.0
SAJU	San Juanillo,	1.44	180	*e*P	Pn	01 03 08.6	-0.3
DUNO	Dulce Nombre,	1.45	171		Pn	01 03 08.9	0.0
DUNO	Dulce Nombre,	1.45	171	*e*P	Pn	01 03 08.9	0.0
DUNO	Dulce Nombre,	1.45	171	*e*P	Pn	01 03 08.9	0.0
ESPN	Las Esperanzas	1.54	64		Pn	01 03 10.8	+1.1
ESPN	Las Esperanzas	1.54	64	*e*P	Pn	01 03 10.8	+1.1
GRZA	Playa Garza	1.59	177	*e*P	Pn	01 03 09.9	-0.3
INDI	Punta indio, G	1.65	173	*e*P	Pn	01 03 10.5	-0.3
CRIN	San Cristobal	1.76	312		Pn	01 03 12.0	+0.2
CRIN	San Cristobal	1.76	312	*e*P	Pn	01 03 12.0	+0.2
LAFE	Finca La Fe, P	1.87	155	*e*P	Pn	01 03 12.9	-0.1
LAFE	Finca La Fe, P	1.87	155	*e*P	Pn	01 03 12.9	-0.1
JACO	JACO, Garabito	2.11	151		Pn	01 03 15.7	+0.3
JACO	JACO, Garabito	2.11	151	*e*P	Pn	01 03 15.6	+0.2
HDC	Heredia	2.18	134		Pn	01 03 16.8	+0.6
HDC	Heredia	2.18	134	*e*P	Pn	01 03 17.3	+1.1
HDC				*e*S	S	01 03 47.2	-0.1
HDC3	Heredia 3	2.18	134	*e*P	Pn	01 03 17.0	+0.9
CSGN	Cosiguina Volc	2.31	309	*e*P	Pn	01 03 17.6	+0.1
RIMA	Rio Macho	2.52	134		Pn	01 03 20.2	+0.3
RIMA	Rio Macho	2.52	134	*e*P	Pn	01 03 20.7	+0.8
BATAN	Batan	2.69	121		Pn	01 03 22.5	+0.8
BATAN	Batan	2.69	121	*e*P	Pn	01 03 23.1	+1.4
BATAN				*e*S	S	01 03 56.9	-0.3
CNCH	Conchagua	2.71	310	*e*P	Pn	01 03 22.4	+0.4
CNCH				*e*S	S	01 03 57.7	-0.1
CNCH				IAML		01 04 04.9	
	comp=Z,7μm,0.3s						
CNCH	Conchagua	2.71	310	*e*P	Pn	01 03 22.4	+0.4
CNCH				*e*S	S	01 03 57.7	-0.1
CNCH				IAML		01 04 04.9	
	comp=Z,7μm,0.3s						
CNCH	Conchagua	2.71	310	*e*P	Pn	01 03 22.2	+0.2
CDM	Cerro de Muert	2.73	135	*e*P	Pn	01 03 23.6	+0.9
LCND	La Caada	2.77	310	*e*P	Pn	01 03 23.1	+0.5
LCND				*e*S	S	01 03 59.2	+0.3
LCND				IAML		01 04 03.3	
	comp=Z,3μm,0.3s						
LCND	La Caada	2.77	310	*e*P	Pn	01 03 23.1	+0.5
LCND				*e*S	S	01 03 59.2	+0.3
LCND				IAML		01 04 03.3	
	comp=Z,3μm,0.3s						
PEZE	Perez Zeledon,	2.92	136		Pn	01 03 25.2	+0.9
TGUH	Tegucigalpa,Un	2.95	329	Pn	Pn	01 03 26.3	+1.6
TGUH	Tegucigalpa,Un	2.95	329	*e*P	Pn	01 03 26.5	+1.7
JUCU	Jucuar¡n	3.02	305	*e*P	Pn	01 03 25.6	+0.1
JUCU				*e*S	S	01 04 03.1	-1.0
JUCU				IAML		01 04 09.6	
	comp=Z,4μm,0.3s						
JUCU	Jucuar¡n	3.02	305	*e*P	Pn	01 03 25.6	+0.1
JUCU				*e*S	S	01 04 03.1	-1.0
JUCU				IAML		01 04 09.6	
	comp=Z,4μm,0.3s						
JUCU	Jucuar¡n	3.02	305	*e*P	Pn	01 03 25.6	+0.1
FAGO	Alcalda de S	3.19	313	*e*P	Pn	01 03 27.9	+0.4
PACA	Pacayal	3.20	308	*e*P	Pn	01 03 28.6	+0.9
PACA				*e*S	S	01 04 08.1	0.0
PACA	Pacayal	3.20	308	*e*P	Pn	01 03 28.6	+0.9
PACA				*e*S	S	01 04 08.1	0.0
SRBA	San Rafael, Bu	3.24	134	Pn	Pn	01 03 28.9	+0.6
DRK0	Durika	3.30	132		Pn	01 03 29.7	+0.6
DRK0	Durika	3.30	132	*e*P	Pn	01 03 30.4	+1.4
DRK0				*e*S	S	01 04 10.9	+0.5
DRK0	Durika	3.30	132	*e*P	Pn	01 03 29.9	+0.9
COEB	Comit de Eme	3.38	306	*e*P	Pn	01 03 31.4	+1.5
COEB				*e*S	S	01 04 11.8	-0.2
COEB				IAML		01 04 17.1	
	comp=Z,1μm,0.3s						
COEB	Comit de Eme	3.38	306	*e*P	Pn	01 03 31.4	+1.5
COEB				*e*S	S	01 04 11.8	-0.2
COEB				IAML		01 04 17.1	
	comp=Z,1μm,0.3s						
RIOS	Rincon, Osa	3.54	142		Pn	01 03 32.5	+0.9
RIOS	Rincon, Osa	3.54	142	*e*P	Pn	01 03 32.5	+0.9
SCLA	Alcaldia de Sa	3.66	307	*e*P	Pn	01 03 34.2	+1.1
SCLA				*e*S	S	01 04 16.8	-1.1
SCLA	Alcaldia de Sa	3.66	307	*e*P	Pn	01 03 34.2	+1.1
SCLA				*e*S	S	01 04 16.8	-1.1
COEG	Centro de Oper	3.73	304	*e*P	Pn	01 03 34.9	+0.8
COEG				*e*S	S	01 04 19.5	-0.1

COEG				IAML		01 04 24.2	
	comp=Z,1μm,0.3s						
COEG	Centro de Oper	3.73	304	*e*P	Pn	01 03 34.9	+0.8
COEG				*e*S	S	01 04 19.5	-0.1
COEG				IAML		01 04 24.2	
	comp=Z,1μm,0.3s						
SJTE	Alcalda de S	3.83	303	*e*P	Pn	01 03 36.1	+0.8
SJTE				*e*S	S	01 04 20.7	-1.1
SJTE				IAML		01 04 24.6	
	comp=Z,644nm,0.4s						
SJTE	Alcalda de S	3.83	303	*e*P	Pn	01 03 36.1	+0.8
SJTE				*e*S	S	01 04 20.7	-1.1
SJTE				IAML		01 04 24.6	
	comp=Z,644nm,0.4s						
BRU2	Volcan	4.02	132		Pn	01 03 38.8	+1.0
BRU2	Volcan	4.02	132	*e*P	Pn	01 03 39.1	+1.4
BRU2				*e*S	S	01 04 26.2	+0.1
LALI	Alcalda de L	4.03	299	*e*P	Pn	01 03 38.8	+1.1
LALI	Alcalda de L	4.03	299	*e*P	Pn	01 03 38.8	+1.1
LALI				*e*S	S	01 04 24.0	-2.1
CDITO	Canoas	4.05	136		Pn	01 03 38.8	+0.9
SNET	Serv Nac Est T	4.05	303		Pn	01 03 39.0	+0.9
BCO2	Palmira	4.19	131	*e*P	Pn	01 03 41.6	+1.7
BCO2				*e*S	S	01 04 29.1	-0.9
PTPM	Petroterminale	4.32	139	*e*P	Pn	01 03 42.5	+1.2
CEVE	Cerro Verde	4.45	301	*e*P	Pn	01 03 44.5	+1.3
CEVE				*e*S	S	01 04 35.9	-0.2
CEVE	Cerro Verde	4.45	301	*e*P	Pn	01 03 44.5	+1.3
CEVE				*e*S	S	01 04 35.9	-0.2
MTO3	Montecristo	4.57	309	Pn	Pn	01 03 45.7	+1.1
NUBE	Las Nubes	4.62	301	*e*P	Pn	01 03 46.2	+1.0
NUBE				*e*S	S	01 04 39.1	-0.7
NUBE	Las Nubes	4.62	301	*e*P	Pn	01 03 46.2	+1.0
NUBE				*e*S	S	01 04 39.1	-0.7
PRVC	Isla de Provid	4.63	66	Pn	Pn	01 03 46.2	+0.9
PRVC	Isla de Provid	4.63	66	*e*P	Pn	01 03 45.3	+0.1
MRL	Marmol	5.24	313	*e*P	Pn	01 03 54.8	+1.6
MRL				*e*S	S	01 04 31.5	-23
NBG	Las Nubes	5.45	305	*e*P	Pn	01 03 58.8	+2.9
NBG				*e*S	S	01 04 31.2	-28
PCG	Pacaya	5.56	301	*e*P	Pn	01 03 59.8	+2.5
PCG				*e*S	S	01 04 32.2	-29
FUG	Fuego 3	5.79	301	*e*P	Pn	01 04 02.5	+2.3
FUG				*e*S	S	01 04 34.0	-33
BCIP	Isla Barro Col	6.24	111	Pn	Pn	01 04 06.6	+0.8
BCIP	Isla Barro Col	6.24	111	*e*P	Pn	01 04 06.7	+0.9
BCIP	Isla Barro Col	6.24	111	*e*P	Pn	01 04 06.9	+1.1
BCIP				*e*S	S	01 05 19.4	+2.2
AZU	Azuero	6.52	124	*e*P	Pn	01 04 13.7	+4.3
STG3	Santiaguito 3,	6.53	300	*e*P	Pn	01 04 04.8	-5.0
UPA	Univ. de Panam	6.58	112	*e*P	Pn	01 04 12.5	+2.2
CCIG	Comitan	7.83	308		Pn	01 04 27.9	+1.2
CMIG	Matias Romero	10.47	303	P	Pn	01 05 00.8	+0.1
	comp=Z,14nm,0.3s,baz=129,slow=11,SNR=50						
SJCC	San Jacinto, C	10.48	98	Pn	Pn	01 05 01.2	+0.3
SJCC	San Jacinto, C	10.48	98	*e*P	Pn	01 05 00.7	-0.2
CBOC	Ciudad Bolivar	11.11	120	*e*P	P	01 05 15.5	+0.3
HELC	Santa Helena	11.37	117	*e*P	P	01 05 20.2	+2.0
SOR	Soroa	11.51	13	Pn	Pn	01 05 14.7	+0.7
LL5C	La Loma 5 El P	11.92	97	*e*P	P	01 05 25.1	+1.1
YOTC	Yotoco, Valle	11.92	128	*e*P	P	01 05 22.4	-1.8
NORC	Norcasia	12.24	118	*e*P	P	01 05 30.0	+2.3
ANIL	Santa Ana	12.36	124	*e*P	P	01 05 32.6	+3.3
CRJC	Cerrejon, Guaj	12.60	91	*e*P	P	01 05 32.0	+0.4
OCAC	Ocana	12.64	104		Pn	01 05 29.3	+0.8
OCAC	Ocana	12.64	104	*e*P	Pn	01 05 26.8	-1.7
ORTC	Ortega, Tolima	12.83	125	*e*P	P	01 05 35.2	+1.0
SPBC	San Pablo de B	12.90	116	*e*P	P	01 05 37.0	+2.0
PAYG	Puerto Ayora	12.94	201	Pn	Pn	01 05 33.0	+0.9
SOTA	Rioblanco	12.98	135	*e*P	P	01 05 37.0	+0.7
PCON	Cinco Dias	12.99	134	*e*P	P	01 05 39.3	+2.8
ROSC	El Rosal	13.08	120	P	Pn	01 05 35.2	+0.9
	comp=Z,67nm,0.7s,baz=99,slow=2.0,SNR=27						
ROSC	El Rosal	13.08	120	*e*P	P	01 05 40.3	+3.0
GCUF	Volcan Galeras	13.17	140	*e*P	P	01 05 43.0	+4.5
GTBY	Guantanamo Bay	13.19	49	Pn	Pn	01 05 36.5	+1.2
PRAC	Prado	13.23	125	*e*P	P	01 05 38.8	+0.1
BARC	Barichara	13.30	111	*e*P	Pn	01 05 33.0	-3.9
OTAV	Otavalo	13.33	147	Pn	Pn	01 05 38.1	+0.6
OTAV	Otavalo	13.33	147	*e*P	Pn	01 05 38.0	+0.5
URIC	Uribia, Colomb	13.44	88	Pn	Pn	01 05 39.6	+1.2
URIC	Uribia, Colomb	13.44	88	*e*P	P	01 05 41.7	+0.7
PAMC	Pamplona, Colo	13.49	107	*e*P	P	01 05 42.2	+0.2
RUSC	La Rusia	13.68	113	*e*P	P	01 05 44.5	+0.5
CHIC	Chingaza	13.69	119	*e*P	P	01 05 45.5	+1.4
TLIG	Tlapa	13.81	297		P	01 05 44.7	-0.5
VILC	Villavicencio,	13.99	121	*e*P	P	01 05 49.7	+2.5
FLOC	Florencia	14.04	134	*e*P	P	01 05 49.1	+1.5
SDV	Santo Domingo	15.07	99	P	P	01 05 59.4	+0.2
	comp=Z,29nm,0.7s,baz=282,slow=6.3,SNR=38						
SDV	Santo Domingo	15.07	99		P	01 05 59.5	+0.2
SDV				IAmb	IAmb	01 06 18.7	
	comp=Z,42nm,0.7s						
SDV	Santo Domingo	15.07	99	*e*P	Pn	01 05 58.4	-0.3
SDDR	Presa de Saban	15.77	60	P	Pn	01 06 07.7	+0.7
SC01	Santiago de lo	16.44	60	P	Pn	01 06 14.7	-0.3
SC01				IAmb	IAmb	01 06 26.9	
	comp=Z,224nm,1.4s						
DWPF	Disney Wildern	16.99	13	P	Pn	01 06 21.2	-0.2
DWPF				IAmb	IAmb	01 06 25.1	
	comp=Z,72nm,0.8s						
DWPF	Disney Wildern	16.99	13	P	Pn	01 06 22.1	+0.7
	baz=194						
BAUV	El Baul	17.58	97	P	P	01 06 26.2	-0.4
BAUV				IAmb	IAmb	01 06 30.0	
	comp=Z,73nm,0.7s						
656A	Willston	18.01	9	P	Pn	01 06 32.7	-0.7
656A	Willston	18.01	9	P	Pn	01 06 33.7	+0.4
	baz=190,SNR=22						
553A	Crawfordville	18.62	3	P	Pn	01 06 39.9	-0.6
553A	Crawfordville	18.62	3	P	Pn	01 06 41.0	+0.5
	baz=184,SNR=26						
451A	Vernon	19.01	360	P	Pn	01 06 43.9	-1.2
451A	Vernon	19.01	360	P	Pn	01 06 44.9	-0.2
	baz=180,SNR=23						
CRPR	Cabo Rojo, PR	19.10	68	P	P	01 06 44.4	+1.3
CRPR				IAmb	IAmb	01 06 56.4	
	comp=Z,26nm,0.8s						
BIRV	Birongo	19.12	91	P	P	01 06 43.5	+0.2
BIRV				IAmb	IAmb	01 06 44.6	
	comp=Z,153nm,1.3s						
MLPR	Magueyes Islan	19.15	68	P	P	01 06 45.0	+1.4
MLPR				IAmb	IAmb	01 06 46.0	
	comp=Z,63nm,0.8s						
456A	Hilliard	19.42	10	P	P	01 06 48.1	+1.7
456A				IAmb	IAmb	01 06 49.9	
	comp=Z,166nm,1.0s						
456A	Hilliard	19.42	10	P	Pn	01 06 48.7	-1.3
	baz=191,SNR=12						
AOPR	Arecibo Observ	19.53	67	P	P	01 06 48.6	+0.9
AOPR				IAmb	IAmb	01 06 51.9	
	comp=Z,63nm,0.7s						
OBIP	Obispado Ponce	19.57	68	P	P	01 06 49.1	+0.9
OBIP				IAmb	IAmb	01 06 55.1	
	comp=Z,56nm,0.8s						
ZAIG	Zacatecas	19.59	307	P	P	01 06 50.1	+1.5
ZAIG				IAmb	IAmb	01 06 56.0	
	comp=Z,49nm,1.1s						
BRAL	Brewton	19.60	357	P	P	01 06 49.7	+1.5
BRAL	Brewton	19.60	357	P	Pn	01 06 51.0	-1.1
	baz=176,SNR=18						
BRAL	Brewton	19.60	357	P	Pn	01 06 50.8	-1.3
	baz=176,SNR=18						
ICMP	Isla Caja de M	19.60	69	P	P	01 06 49.8	+1.4
CELP	Cerrillos	19.61	68	P	P	01 06 48.8	+0.3
CELP				IAmb	IAmb	01 06 54.2	
	comp=Z,63nm,1.1s						
352A	Blakely	19.88	2	P	P	01 06 52.7	+1.4
352A	Blakely	19.88	2	P	Pn	01 06 53.7	-1.9
	baz=182,SNR=23						
ATAH	Atahualpa	19.91	158	P	Pn	01 06 55.0	-1.5
	comp=Z,7.5nm,0.7s,baz=324,slow=9.1,SNR=6.1						
TIGA	Tifton	19.92	5	P	P	01 06 52.9	+1.1
TIGA	Tifton	19.92	5	P	P	01 06 53.7	+1.9
	baz=186,SNR=16						
TIGA	Tifton	19.92	5	P	P	01 06 53.4	+1.7
	baz=186,SNR=16						
SJG	San Juan	20.01	69	P	P	01 06 54.4	+1.6
	comp=Z,49nm,0.5s,baz=247,slow=8.1,SNR=33						
SJG	San Juan	20.01	69	P	P	01 06 54.0	+1.2
SJG				IAmb	IAmb	01 06 56.8	
	comp=Z,64nm,0.7s						
346A	Big Creek Wild	20.08	351	P	P	01 06 55.1	+1.7
346A				IAmb	IAmb	01 06 58.7	
	comp=Z,131nm,0.8s						
346A	Big Creek Wild	20.08	351	P	P	01 06 55.7	+2.3
	baz=169,SNR=15						
PDPR	Patillas Dam,	20.10	69	P	P	01 06 54.5	+0.8
PDPR				IAmb	IAmb	01 06 57.6	
	comp=Z,110nm,1.4s						
GCPR	Guaynabo City	20.12	68	P	P	01 06 53.6	-0.5
GCPR				IAmb	IAmb	01 06 57.8	
	comp=Z,56nm,0.7s						
HUMP	Col San Antoni	20.29	69	P	P	01 06 56.8	+1.0
HUMP				IAmb	IAmb	01 07 00.6	
	comp=Z,64nm,1.1s						
CBYP	Canovanas	20.32	68	P	P	01 06 56.3	+0.1
CBYP				IAmb	IAmb	01 06 59.4	
	comp=Z,91nm,1.1s						
441A	DeRidder	20.36	341	P	P	01 06 58.1	+1.8
441A				IAmb	IAmb	01 07 01.1	
	comp=Z,96nm,0.7s						
250A	Grady	20.37	359	P	P	01 06 58.2	+1.6
250A	Grady	20.37	359	P	P	01 06 58.5	+2.0
	baz=178,SNR=33						
344A	Westbrook Farm	20.38	348	P	P	01 06 58.3	+1.7
344A	Westbrook Farm	20.38	348	P	P	01 06 58.9	+2.4
	baz=166,SNR=69						
255A	Hazlehurst	20.53	8	P	P	01 06 59.4	+1.2
255A	Hazlehurst	20.53	8	P	P	01 07 00.0	+1.8
	baz=189,SNR=27						
MTP	Monte Pirata	20.55	69	P	P	01 06 59.1	+0.5
MTP				IAmb	IAmb	01 07 01.7	
	comp=Z,87nm,0.9s						
HKT	Hockley	20.62	334	P	P	01 06 60.0	+0.9
HKT				IAmb	IAmb	01 07 04.8	
	comp=Z,86nm,1.4s						
HKT	Hockley	20.62	334	P	P	01 07 01.0	+1.9
	baz=151						
735A	Kenedy	20.62	329	P	P	01 07 00.6	+1.4
735A				IAmb	IAmb	01 07 04.3	
	comp=Z,84nm,0.8s						
342A	Flagon Creek P	20.69	344	P	P	01 07 01.4	+1.6
342A				IAmb	IAmb	01 07 03.8	
	comp=Z,156nm,0.9s						
342B	Flagon Creek P	20.69	344	P	Pn	01 07 02.8	-2.8
	baz=161,SNR=15						
257A	Skidaway Islan	20.81	11	P	P	01 07 02.8	+1.6
257A	Skidaway Islan	20.81	11	P	P	01 07 03.1	+1.9
	baz=193						
CUPR	Culebra, Puert	20.85	69	P	P	01 07 02.5	+0.7
CUPR				IAmb	IAmb	01 07 05.3	
	comp=Z,24nm,0.8s						
833A	Chaparral WMA,	21.06	325	P	P	01 07 04.2	+0.3
833A				IAmb	IAmb	01 07 06.4	
	comp=Z,66nm,0.8s						
833A	Chaparral WMA,	21.06	325	P	P	01 07 04.1	+0.3
	baz=140,SNR=17						
833A	Chaparral WMA,	21.06	325	P	P	01 07 04.2	+0.3
	baz=140,SNR=17						
152A	Waverly Hall	21.07	2	P	P	01 07 05.5	+1.5
152A	Waverly Hall	21.07	2	P	P	01 07 05.8	+1.8
	baz=183,SNR=153						
VBMS	Vicksburg	21.07	349	P	P	01 07 05.5	+1.5
VBMS	Vicksburg	21.07	349	P	P	01 07 05.6	+1.7
	baz=167,SNR=6.8						
VBMS	Vicksburg	21.07	349	P	P	01 07 05.3	+1.4
	baz=167,SNR=6.8						
154A	Montrose	21.13	6	P	P	01 07 06.2	+1.6
154A	Montrose	21.13	6	P	P	01 07 06.1	+1.6
	baz=187,SNR=57						
STVI	Saint Thomas	21.17	69	P	P	01 07 05.3	+0.2
CDVI	St. Croix	21.18	71	P	P	01 07 06.2	+1.0
CDVI				IAmb	IAmb	01 07 07.4	
	comp=Z,104nm,0.8s						
146A	Union	21.24	352	P	P	01 07 07.2	+1.5
146A	Union	21.24	352	P	P	01 07 07.3	+1.5
	baz=171,SNR=42						
LRAL	Lakeview Retre	21.45	357	P	P	01 07 09.8	+1.9
LRAL	Lakeview Retre	21.45	357	P	P	01 07 09.9	+2.1
	baz=176,SNR=154						
LRAL	Lakeview Retre	21.45	357	P	P	01 07 09.8	+1.9
	baz=176,SNR=154						
Z47A	Carrollton	21.69	355	P	P	01 07 12.0	+1.7
Z47A				IAmb	IAmb	01 07 15.5	
	comp=Z,88nm,0.7s						
Z47A	Carrollton	21.69	355	P	P	01 07 12.0	+1.7
	baz=174						
Z51A	Franklin	21.70	1	P	P	01 07 12.1	+1.6
Z51A	Franklin	21.70	1	P	P	01 07 12.3	+1.8
	baz=181,SNR=25						
143A	Socs Landing,	21.73	347	P	P	01 07 12.3	+1.7
143A				IAmb	IAmb	01 07 16.0	
	comp=Z,130nm,1.2s						
NATX	Nacogdoches	21.77	339	P	P	01 07 11.5	+0.3
NATX	Nacogdoches	21.77	339	P	P	01 07 11.5	+0.3
	baz=156,SNR=7.5						
NATX	Nacogdoches	21.77	339	P	P	01 07 11.7	+0.6
	baz=156,SNR=7.5						
GOGA	Godfrey	21.89	5	P	P	01 07 13.8	+1.5
	baz=186,SNR=81						
GOGA	Godfrey	21.89	5	P	P	01 07 13.7	+1.5
	baz=186,SNR=81						
CSU	Charleston Sou	21.99	13	P	P	01 07 14.8	+1.6
HAW	Hawthorne Fire	22.07	9	P	P	01 07 15.6	+1.7
	baz=191,SNR=84						
NHSC	New Hope	22.08	12	P	P	01 07 15.4	+1.3
NHSC	New Hope	22.08	12	P	P	01 07 15.9	+1.8
	baz=194,SNR=18						
NHSC	New Hope	22.08	12	P	P	01 07 15.7	+1.6
	baz=194,SNR=18						
435B	Jarrell	22.11	332	P	P	01 07 15.2	+0.8
435B	Jarrell	22.11	332	P	P	01 07 16.0	+1.6
	baz=148,SNR=43						
435B	Jarrell	22.11	332	P	P	01 07 15.0	+0.6
	baz=148						
TBTG	Tabatinga, AM	22.15	134	*e*P	P	01 07 16.2	+1.2
Y49A	Blount Mountai	22.25	358	P	P	01 07 16.9	+1.2
Y49A	Blount Mountai	22.25	358	P	P	01 07 17.2	+1.6
	baz=178,SNR=104						
Y52A	Lilburn	22.30	4	P	P	01 07 17.8	+1.6
Y52A	Lilburn	22.30	4	P	P	01 07 18.0	+1.9
	baz=184,SNR=96						
Y52A				P	P	01 07 18.0	+1.9
	baz=184,SNR=96						
237A	Washetta, Mont	22.41	337	P	P	01 07 18.4	+1.2
237A	Washetta, Mont	22.41	337	P	P	01 07 18.7	+1.5
	baz=153,SNR=14						
Y45A	Yeager Farm, C	22.52	352	P	P	01 07 19.6	+1.4
Y45A	Yeager Farm, C	22.52	352	P	P	01 07 19.8	+1.6
	baz=170,SNR=87						
Z41A	Richland Creek	22.59	344	P	P	01 07 19.4	+0.6
Z41A				IAmb	IAmb	01 07 21.8	
	comp=Z,81nm,0.8s						
Z41A	Richland Creek	22.59	344	P	P	01 07 19.6	+0.8
	baz=162,SNR=14						
Z41A				P	P	01 07 19.6	+0.8
	baz=162,SNR=14						
Z41A	Richland Creek	22.59	344	P	P	01 07 19.5	+0.6
	baz=162,SNR=14						
SEUS	St. Eustatius	22.78	72	P	P	01 07 21.9	+1.2
SMRT	St. Maarten	22.82	71	P	P	01 07 20.9	-0.1
HODGE	Hodges	22.83	7	P	P	01 07 22.9	+2.0
HODGE	Hodges	22.83	7	P	P	01 07 23.0	+2.0
	baz=189,SNR=257						
X48A	Hartselle	22.86	357	P	P	01 07 22.6	+1.3
X48A				IAmb	IAmb	01 07 24.0	
	comp=Z,103nm,0.8s						
X48A	Hartselle	22.86	357	P	P	01 07 22.5	+1.3
	baz=177,SNR=67						
FPAL	Fort Paine	22.92	0	P	P	01 07 23.3	+1.5
Y57A	Sumter	22.92	11	P	P	01 07 23.5	+1.7
Y57A				IAmb	IAmb	01 07 24.6	
	comp=Z,96nm,0.8s						
Y57A	Sumter	22.92	11	P	P	01 07 23.1	+1.4
	baz=193,SNR=11						
Y57A				P	P	01 07 23.1	+1.4
	baz=193,SNR=11						
JCT	Junction City	22.96	327	P	P	01 07 22.7	+0.5
JCT				IAmb	IAmb	01 07 24.6	
	comp=Z,33nm,0.6s						
JCT	Junction City	22.96	327	P	P	01 07 22.6	+0.5
	baz=142,SNR=15						
JCT	Junction City	22.96	327	P	P	01 07 22.5	+0.3
	baz=142,SNR=15						
X51A	Calhoun	22.96	2	P	P	01 07 23.9	+1.9
X51A	Calhoun	22.96	2	P	P	01 07 23.7	+1.6
	baz=182,SNR=84						
X51A				P	P	01 07 23.7	+1.6
	baz=182,SNR=84						
Y58A	Scranton	22.96	13	P	P	01 07 24.0	+1.9
Y58A	Scranton	22.96	13	P	P	01 07 23.7	+1.6
	baz=195,SNR=25						
Y58A				P	P	01 07 23.7	+1.6
	baz=195,SNR=25						
CCAR	Cane Creek	22.98	347	P	P	01 07 23.3	+1.1
CCAR	Cane Creek	22.98	347	P	P	01 07 23.2	+1.0
	baz=165,SNR=19						
JSC	Jenkinsville	23.02	9	P	P	01 07 24.8	+2.1
JSC	Jenkinsville	23.02	9	P	P	01 07 24.7	+2.1
	baz=191,SNR=137						
WHTX	Lake Whitney,	23.07	334	P	P	01 07 23.7	+0.5
WHTX	Lake Whitney,	23.07	334	P	P	01 07 23.6	+0.5
	baz=150,SNR=31						
WHTX	Lake Whitney,	23.07	334	P	P	01 07 23.4	+0.2
	baz=150,SNR=31						
WLAR	White Oak Lake	23.08	344	P	P	01 07 25.0	+1.8
OXF	Oxford	23.14	352	P	P	01 07 24.2	+0.6
OXF	Oxford	23.14	352	P	P	01 07 24.1	+0.4
	baz=171,SNR=25						
OXF	Oxford	23.14	352	P	P	01 07 24.0	+0.3
	baz=171,SNR=25						
Y59A	Loris	23.23	15	P	P	01 07 26.1	+1.7
Y59A	Loris	23.23	15	P	P	01 07 26.3	+1.8
	baz=197,SNR=25						
Y59A				P	P	01 07 26.3	+1.8
	baz=197,SNR=25						
Z38A	Mt. Pleasant	23.25	340	P	P	01 07 25.7	+0.9
Z38A				IAmb	IAmb	01 07 28.1	
	comp=Z,88nm,0.8s						
Z38A	Mt. Pleasant	23.25	340	P	P	01 07 25.7	+0.9
	baz=156,SNR=13						
Y60A	Bolivia	23.41	16	P	P	01 07 27.5	+1.3
Y60A	Bolivia	23.41	16	P	P	01 07 27.8	+1.7
	baz=199,SNR=8.5						
Y60A				P	P	01 07 27.8	+1.7
	baz=199,SNR=8.5						
PLAL	Pickwick Lake	23.46	355	P	P	01 07 27.4	+0.8
PLAL				IAmb	IAmb	01 07 30.1	
	comp=Z,72nm,1.1s						
PAULI	Pauline	23.47	8	P	P	01 07 28.8	+2.1
BG3	Lake Jocassee	23.51	6	P	P	01 07 29.4	+2.3
CASEE	Lake Jocassee	23.51	6	P	P	01 07 29.4	+2.3
	baz=187,SNR=132						
BIRD	Birdtown, Kers	23.52	11	P	P	01 07 29.0	+1.9
BIRD	Birdtown, Kers	23.52	11	P	P	01 07 29.0	+1.9
	baz=193,SNR=57						
GRGR	Grenville	23.56	86	P	P	01 07 29.3	+1.5
W50A	Signal Mountai	23.58	1	P	P	01 07 29.4	+1.5
W50A	Signal Mountai	23.58	1	P	P	01 07 29.3	+1.5
	baz=181,SNR=75						
SWET	Sewanee	23.59	360	P	P	01 07 29.2	+1.3
X58A	Rowland	23.66	13	P	P	01 07 30.4	+2.0
X58A				IAmb	IAmb	01 07 32.5	
	comp=Z,122nm,0.9s						
X58A	Rowland	23.66	13	P	P	01 07 30.2	+1.8
	baz=196,SNR=19						
X58A				P	P	01 07 30.2	+1.8
	baz=196,SNR=19						
GDHS	Morne Mazeau,	23.71	76	P	P	01 07 30.0	+0.8
W45A	Hickory Valley	23.75	353	P	P	01 07 29.8	+0.6
W45A	Hickory Valley	23.75	353	P	P	01 07 29.6	+0.4
	baz=172,SNR=22						
X40A	Basin Creek Fa	23.77	345	P	P	01 07 29.9	+0.4
X40A				IAmb	IAmb	01 07 31.8	
	comp=Z,68nm,1.1s						
X40A	Basin Creek Fa	23.77	345	P	P	01 07 30.0	+0.6
	baz=162,SNR=35						
X40A				P	P	01 07 30.0	+0.6
	baz=162,SNR=35						
X40A	Basin Creek Fa	23.77	345	P	P	01 07 29.8	+0.3
	baz=162,SNR=35						
TDBA	Terre de Bas,	23.78	77	P	P	01 07 30.4	+0.7
CBE	Ff, Capester	23.84	76	P	P	01 07 31.7	+1.4
CPCT	Cooper Cave	23.85	2	P	P	01 07 32.4	+2.2
KMSC	Kings Mountain	23.85	9	P	P	01 07 32.3	+2.1
KMSC	Kings Mountain	23.85	9	P	P	01 07 32.3	+2.1
	baz=191,SNR=142						
KMSC	Kings Mountain	23.85	9	P	P	01 07 32.1	+1.9
	baz=191,SNR=142						
UALR	University of	23.93	346	P	P	01 07 31.7	+0.8
UALR				IAmb	IAmb	01 07 32.6	
	comp=Z,111nm,0.8s						
MIAR	Mount Ida	24.02	344	P	P	01 07 32.3	+0.6
MIAR	Mount Ida	24.02	344	P	P	01 07 31.8	+0.1
	baz=161,SNR=196						
MIAR	Mount Ida	24.02	344	P	P	01 07 31.8	+0.1
	baz=161,SNR=196						
TKL	Tuckaleechee C	24.10	4	P	P	01 07 33.4	+1.0
	comp=Z,130nm,1.0s,baz=176,slow=10.0,SNR=125						
TKL	Tuckaleechee C	24.10	4	P	P	01 07 34.3	+1.9
TKL	Tuckaleechee C	24.10	4	P	P	01 07 34.2	+1.7
	baz=185,SNR=132						
W57A	Gilead	24.10	12	P	P	01 07 34.1	+1.6
W57A				IAmb	IAmb	01 07 35.0	
	comp=Z,131nm,1.1s						
W57A	Gilead	24.10	12	P	P	01 07 33.8	+1.4
	baz=194,SNR=45						
W57A				P	P	01 07 33.8	+1.4
	baz=194,SNR=45						
V48A	Smith Brothers	24.14	358	P	P	01 07 34.2	+1.4
V48A	Smith Brothers	24.14	358	P	P	01 07 34.0	+1.2
	baz=177,SNR=127						
Z35A	Perchaven, San	24.15	336	P	P	01 07 33.7	+0.7
Z35A				IAmb	IAmb	01 07 37.1	
	comp=Z,42nm,0.8s						
V53A	Saluda	24.19	6	P	P	01 07 35.4	+2.0
V53A	Saluda	24.19	6	P	P	01 07 35.3	+2.0
	baz=187,SNR=234						
V53A				P	P	01 07 35.3	+2.0
	baz=187,SNR=234						
V51A	Loudon	24.21	3	P	P	01 07 35.5	+2.0
V51A	Loudon	24.21	3	P	P	01 07 35.3	+1.9
	baz=183,SNR=121						
W41B	Gary Mavity, V	24.29	347	P	P	01 07 35.2	+1.0
W41B				IAmb	IAmb	01 07 35.9	
	comp=Z,92nm,0.9s						
W41B	Gary Mavity, V	24.29	347	P	P	01 07 34.4	+0.2
	baz=164,SNR=79						
W41B	Gary Mavity, V	24.29	347	P	P	01 07 34.3	+0.2
	baz=164,SNR=79						
V52A	Sevierville	24.29	4	P	P	01 07 36.0	+1.8
V52A				IAmb	IAmb	01 07 36.9	
	comp=Z,82nm,0.8s						
V52A	Sevierville	24.29	4	P	P	01 07 35.8	+1.6
	baz=185,SNR=56						
HBAR	Harrisburg	24.35	350	P	P	01 07 35.7	+1.0
HBAR	Harrisburg	24.35	350	P	P	01 07 35.4	+0.7
	baz=168,SNR=7.3						
TXAR	Lajitas Array	24.38	319	P	P	01 07 35.1	-0.1
	comp=Z,40nm,0.8s,baz=151,slow=8.6,SNR=102						
TXAR				PcP	PcP	01 11 10.0	+1.1
	comp=Z,5.3nm,0.9s,baz=141,slow=4.8,SNR=12						
TXAR				ScP	ScP	01 14 30.0	+1.5
	comp=Z,1.3nm,0.6s,baz=147,slow=6.5,SNR=17						
	comp=Z,40nm,0.8s						
TXAR	Lajitas Array	24.38	319	P	P	01 07 36.2	+1.0
TXAR					PcP	01 11 10.3	+1.4
TXAR				ScP	ScP	01 14 29.8	+1.3
TX31	Lajitas Ar. Si	24.38	319	P	P	01 07 36.2	+1.0
TX31	Lajitas Ar. Si	24.38	319	P	P	01 07 36.0	+0.8
	baz=133,SNR=174						
TX32	Lajitas Array	24.38	319	P	P	01 07 36.3	+1.1
TX32				IAmb	IAmb	01 07 39.8	
	comp=Z,47nm,0.8s						
GDSD	La Dsirade Is	24.39	76	IAmb	IAmb	01 07 36.0	
	comp=Z,64nm,1.0s						
MPOM	Morne Pois Mar	24.39	80	P	P	01 07 36.6	+1.3
WHAR	Wooly Hollow	24.41	347	P	P	01 07 35.7	+0.4
WHAR				IAmb	IAmb	01 07 36.8	
	comp=Z,109nm,0.8s						
CLTN	Cedars of Leba	24.47	359	P	P	01 07 37.4	+1.5
HALT	Halls	24.51	353	P	P	01 07 36.6	+0.5
V55A	Taylorsville	24.57	9	P	P	01 07 38.6	+1.9
V55A				IAmb	IAmb	01 07 39.8	
	comp=Z,119nm,1.0s						
V55A	Taylorsville	24.57	9	P	P	01 07 38.6	+1.9
	baz=191,SNR=64						
V55A				P	P	01 07 38.6	+1.9
	baz=191,SNR=64						
WVT	Waverly	24.58	356	P	P	01 07 37.2	+0.4
WVT				IAmb	IAmb	01 07 38.3	
	comp=Z,87nm,0.8s						
WVT	Waverly	24.58	356	P	P	01 07 37.1	+0.4
	baz=175,SNR=80						

WVT	Waverly	24.58	356	P	P	01 07 37.2	+0.4
	baz=175						
X37A	Clayton	24.60	341		P	01 07 37.7	+0.7
X37A				IAmb	IAmb	01 07 41.4	
	comp=Z,134nm,1.3s						
X37A	Clayton	24.60	341	P	P	01 07 37.7	+0.7
	baz=157,SNR=50						
ABTX	Abilene, Hawle	24.60	331	P	P	01 07 37.2	+0.1
ABTX				IAmb	IAmb	01 07 44.9	
	comp=Z,22nm,0.7s						
ABTX	Abilene, Hawle	24.60	331	P	P	01 07 37.3	+0.1
	baz=146						
ABTX	Abilene, Hawle	24.60	331	P	P	01 07 37.0	-0.1
	baz=146						
GNAR	Gosnell	24.65	352	P	P	01 07 38.4	+1.0
CNNC	Cliffs of the	24.66	15	P	P	01 07 39.2	+1.6
CNNC				IAmb	IAmb	01 07 40.0	
	comp=Z,65nm,0.8s						
CNNC	Cliffs of the	24.66	15	P	P	01 07 38.9	+1.3
	baz=198						
W39A	Magazine	24.69	344	P	P	01 07 38.8	+1.0
W39A				IAmb	IAmb	01 07 39.9	
	comp=Z,71nm,0.8s						
W39A	Magazine	24.69	344	P	P	01 07 38.5	+0.7
	baz=161,SNR=43						
W39A	Magazine	24.69	344	P	P	01 07 38.5	+0.7
	baz=161,SNR=43						
LNXT	Lenox	24.71	353	P	P	01 07 39.0	+1.0
LNXT	Lenox	24.71	353	P	P	01 07 38.7	+0.7
	baz=171,SNR=7.2						
PEBM	Pemiscott Bayo	24.77	352	P	P	01 07 39.5	+0.9
GLAT	Glass	24.86	353	P	P	01 07 40.1	+0.8
UTMT	University of	24.88	354	P	P	01 07 40.4	+0.9
U49A	Red Boiling Sp	24.89	360	P	P	01 07 41.1	+1.5
U49A	Red Boiling Sp	24.89	360	P	P	01 07 40.9	+1.3
	baz=180,SNR=102						
V58A	Windy Hill, Pi	24.90	13	P	P	01 07 41.2	+1.6
V58A	Windy Hill, Pi	24.90	13	P	P	01 07 41.3	+1.6
	baz=195,SNR=103						
V58A				P	P	01 07 41.3	+1.6
	baz=195,SNR=103						
LCAR	Lake Charles	24.94	350	P	P	01 07 40.4	+0.4
LCAR				IAmb	IAmb	01 07 41.4	
	comp=Z,99nm,0.7s						
LCAR	Lake Charles	24.94	350	P	P	01 07 40.3	+0.3
	baz=167,SNR=123						
FCAR	Ozark Folk Cen	24.95	348	P	P	01 07 40.3	+0.2
FCAR				IAmb	IAmb	01 07 44.0	
	comp=Z,65nm,0.7s						
TZTN	Tazewell	25.00	4	P	P	01 07 42.0	+1.4
TZTN	Tazewell	25.00	4	P	P	01 07 42.0	+1.4
	baz=185,SNR=64						
TZTN	Tazewell	25.00	4	P	P	01 07 42.0	+1.4
	baz=185,SNR=64						
HICK	Hickman	25.12	353	P	P	01 07 42.5	+0.8
U54A	Nelsons Funny	25.14	7	P	P	01 07 43.9	+1.9
U54A	Nelsons Funny	25.14	7	P	P	01 07 43.7	+1.7
	baz=189,SNR=42						
U54A				P	P	01 07 43.7	+1.7
	baz=189,SNR=42						
U56A	King	25.19	10	P	P	01 07 44.4	+2.0
U56A				IAmb	IAmb	01 07 45.5	
	comp=Z,98nm,0.9s						
U56A	King	25.19	10	P	P	01 07 44.3	+2.0
	baz=192,SNR=25						
U56A				P	P	01 07 44.3	+2.0
	baz=192,SNR=25						
PARMO	Parma	25.30	352	P	P	01 07 44.4	+1.1
T47A	Sharon Grove	25.39	357	P	P	01 07 45.1	+0.9
T47A	Sharon Grove	25.39	357	P	P	01 07 44.7	+0.6
	baz=177,SNR=71						
T50A	Nancy	25.41	2	P	P	01 07 45.6	+1.3
T50A				IAmb	IAmb	01 07 46.0	
	comp=Z,58nm,0.7s						
T50A	Nancy	25.41	2	P	P	01 07 45.4	+1.1
	baz=182						
T50A				P	P	01 07 45.4	+1.1
	baz=182						
X34A	Smith Ranch, M	25.50	336		P	01 07 45.7	+0.6
X34A				IAmb	IAmb	01 07 47.9	
	comp=Z,59nm,0.9s						
PBMO	Poplar Bluff	25.51	351	P	P	01 07 45.5	+0.3
PBMO				IAmb	IAmb	01 07 46.7	
	comp=Z,90nm,1.1s						
PBMO	Poplar Bluff	25.51	351	P	P	01 07 45.5	+0.3
	baz=169,SNR=8.8						
T45B	Paducah	25.53	355	P	P	01 07 46.0	+0.6
	baz=173,SNR=12						
U40A	Yellville	25.56	347	IAmb	IAmb	01 07 47.9	
	comp=Z,67nm,0.9s						
U40A	Yellville	25.56	347	P	P	01 07 45.8	+0.1
	baz=164,SNR=56						
U40A				P	P	01 07 45.8	+0.1
	baz=164,SNR=56						
U40A	Yellville	25.56	347	P	P	01 07 45.7	0.0
	baz=164,SNR=56						
U59A	Littleton	25.74	15	P	P	01 07 48.7	+1.4
	baz=198,SNR=9.6						
U59A				P	P	01 07 48.7	+1.4
	baz=198,SNR=9.6						
HHAR	Hobbs	25.75	345	IAmb	IAmb	01 07 48.7	
	comp=Z,21nm,0.7s						
TUL1	Leonard	25.94	341	IAmb	IAmb	01 07 50.8	
	comp=Z,45nm,0.8s						
TUL1	Leonard	25.94	341	P	P	01 07 48.6	-0.5
	baz=157,SNR=15						
TUL1	Leonard	25.94	341	P	P	01 07 48.6	-0.5
	baz=157,SNR=15						
WMOK	Wichita Mounta	26.00	335	IAmb	IAmb	01 07 56.2	
	comp=Z,44nm,1.2s						
WMOK	Wichita Mounta	26.00	335	P	P	01 07 49.2	-0.5
	baz=150						
BLA	Blacksburg	26.02	10	P	P	01 07 51.6	+1.7
	baz=192,SNR=23						
BLA	Blacksburg	26.02	10	P	P	01 07 51.7	+1.8
	baz=192,SNR=23						
SLBS	Sierra La Lagu	26.02	301	P	P	01 07 51.3	+1.2
SLBS				IAmb	IAmb	01 07 55.2	
	comp=Z,63nm,0.9s						
T57A	Hurt	26.03	12	IAmb	IAmb	01 07 52.6	
	comp=Z,124nm,1.2s						
T57A	Hurt	26.03	12	P	P	01 07 51.3	+1.5
	baz=194,SNR=51						
T57A				P	P	01 07 51.3	+1.5
	baz=194,SNR=51						
OKCFA	Oklahoma City	26.07	338	IAmb	IAmb	01 07 52.5	
	comp=Z,45nm,0.9s						
S51A	Beattyville	26.08	4	P	P	01 07 51.6	+1.3
	baz=185,SNR=111						
S51A				P	P	01 07 51.6	+1.3
	baz=185,SNR=111						
MGMO	Mountain Grove	26.20	348	IAmb	IAmb	01 07 53.6	
	comp=Z,76nm,1.0s						
S44A	Carbondale	26.26	354	P	P	01 07 52.5	+0.6
	baz=172,SNR=72						
T59A	Double "B" Far	26.39	15	IAmb	IAmb	01 07 55.8	
	comp=Z,105nm,1.3s						
T59A	Double "B" Far	26.39	15	P	P	01 07 54.5	+1.5
	baz=198,SNR=25						
T59A				P	P	01 07 54.5	+1.5
	baz=198,SNR=25						
S54A	Dingess, Beckl	26.47	8	IAmb	IAmb	01 07 56.4	
	comp=Z,140nm,1.3s						
S54A	Dingess, Beckl	26.47	8	P	P	01 07 55.2	+1.4
	baz=190,SNR=24						
S54A				P	P	01 07 55.2	+1.4
	baz=190,SNR=24						
LPIG	La Paz	26.50	302	P	P	01 07 56.6	+2.4
	comp=Z,16nm,0.3s,baz=270,slow=6.1,SNR=4.4						
	comp=Z,16nm,0.3s						
BOAV	Boa Vista	26.57	108	*e*P	P	01 07 55.2	+0.2
R49A	Shelbyville	26.67	1	P	P	01 07 56.5	+1.0
	baz=181,SNR=59						
R49A				P	P	01 07 56.5	+1.0
	baz=181,SNR=59						
R50A	Paris	26.68	2	P	P	01 07 56.8	+1.2
	baz=183,SNR=38						
R50A				P	P	01 07 56.8	+1.2
	baz=183,SNR=38						
FVM	French Village	26.69	352	IAmb	IAmb	01 07 58.2	
	comp=Z,30nm,0.8s						
FVM	French Village	26.69	352	P	P	01 07 55.7	-0.1
	baz=170,SNR=21						
T60A	Surry	26.76	16	IAmb	IAmb	01 07 59.0	
	comp=Z,65nm,0.8s						
T60A	Surry	26.76	16	P	P	01 07 58.0	+1.6
	baz=200,SNR=12						
T60A				P	P	01 07 58.0	+1.6
	baz=200,SNR=12						
S57A	Dark Hollow, R	26.83	12	IAmb	IAmb	01 07 59.3	
	comp=Z,64nm,1.3s						
S57A	Dark Hollow, R	26.83	12	P	P	01 07 58.2	+1.2
	baz=195,SNR=15						
S57A				P	P	01 07 58.2	+1.2
	baz=195,SNR=15						
CCM	Cathedral Cave	26.89	350	P	P	01 07 57.8	+0.3
CCM	Cathedral Cave	26.89	350	P	P	01 07 57.5	0.0
	baz=168,SNR=101						
CCM	Cathedral Cave	26.89	350	P	P	01 07 57.6	0.0
	baz=168						
R53A	Hurricane	26.91	7	P	P	01 07 59.1	+1.3
	baz=188,SNR=31						
R53A				P	P	01 07 59.1	+1.3
	baz=188,SNR=31						
S39A	Bolivar	26.94	347	IAmb	IAmb	01 08 00.2	
	comp=Z,40nm,0.8s						
S39A	Bolivar	26.94	347	P	P	01 07 57.8	-0.3
	baz=163,SNR=47						
MNTX	Cornudas Mount	27.07	321	P	P	01 07 59.6	+0.4
	baz=134,SNR=13						
MNTX	Cornudas Mount	27.07	321	P	P	01 07 59.5	+0.2
	baz=134,SNR=13						
T35A	Sooner Cattle	27.09	341	IAmb	IAmb	01 08 01.9	
	comp=Z,32nm,0.8s						
T35B	Sooner Cattle	27.10	341	P	P	01 07 59.6	+0.2
	baz=156,SNR=14						
R55A	Marlinton	27.12	10	P	P	01 08 01.8	+2.1
	baz=192,SNR=60						
R55A				P	P	01 08 01.8	+2.1
	baz=192,SNR=60						
OLIL	Olney	27.19	356	P	P	01 08 01.1	+1.0
	baz=175,SNR=25						
MSTX	Muleshoe	27.25	328	IAmb	IAmb	01 08 06.5	
	comp=Z,14nm,0.8s						
MSTX	Muleshoe	27.25	328	P	P	01 08 00.8	-0.1
	baz=141,SNR=7.6						
MSTX	Muleshoe	27.25	328	P	P	01 08 00.5	-0.4
	baz=141,SNR=7.6						
R58B	Mineral	27.25	14	IAmb	IAmb	01 08 03.7	
	comp=Z,54nm,1.1s						
R58B	Mineral	27.25	14	P	P	01 08 02.4	+1.6
	baz=197,SNR=22						
R58B				P	P	01 08 02.4	+1.6
	baz=197,SNR=22						
R40A	Maddies Statio	27.30	349	IAmb	IAmb	01 08 02.2	
	comp=Z,30nm,0.8s						
R40A	Maddies Statio	27.30	349	P	P	01 08 00.8	-0.4
	baz=166,SNR=10.0						
SLM	Saint Louis	27.31	352	P	P	01 08 01.8	+0.6
	baz=170,SNR=7.4						
AMTX	Amarillo	27.42	331	IAmb	IAmb	01 08 06.6	
	comp=Z,16nm,0.6s						
AMTX	Amarillo	27.42	331	P	P	01 08 02.1	-0.3
	baz=144,SNR=6.5						
AMTX	Amarillo	27.42	331	P	P	01 08 02.1	-0.3
	baz=144						
Q44A	Meyer Farm, Va	27.43	354	P	P	01 08 03.1	+0.7
	baz=173,SNR=42						
Q51A	Peebles	27.48	4	P	P	01 08 04.4	+1.6
	baz=185,SNR=95						
Q51A				P	P	01 08 04.4	+1.6
	baz=185,SNR=95						
Q52A	Bidwell	27.50	6	P	P	01 08 04.6	+1.6
	baz=187,SNR=67						
Q52A				P	P	01 08 04.6	+1.6
	baz=187,SNR=67						
U32A	Winter Ranch,	27.51	336	IAmb	IAmb	01 08 05.2	
	comp=Z,56nm,1.0s						
CBN	Corbin Frederi	27.60	14	P	P	01 08 05.9	+2.0
	baz=198,SNR=7.9						
CBN	Corbin Frederi	27.60	14	P	P	01 08 05.7	+1.8
	baz=198,SNR=7.9						
Q54A	Coxs Mills	27.70	8	P	P	01 08 06.4	+1.7
	baz=190,SNR=63						
Q54A				P	P	01 08 06.4	+1.7
	baz=190,SNR=63						
P48A	Milroy	27.83	0	P	P	01 08 06.4	+0.5
	baz=181,SNR=60						
P48A				P	P	01 08 06.4	+0.5
	baz=181,SNR=60						
P49A	Miami Univ. Ec	27.92	2	P	P	01 08 07.1	+0.5
	baz=182,SNR=51						
P49A	Miami Univ. Ec	27.92	2	P	P	01 08 07.0	+0.3
	baz=182,SNR=51						
P51A	Williamsport	27.95	4	P	P	01 08 08.1	+1.2
	baz=186,SNR=27						
P51A				P	P	01 08 08.1	+1.2
	baz=186,SNR=27						
P46A	Rosedale	28.02	358	P	P	01 08 08.2	+0.6
	baz=177,SNR=61						
Q56A	Snyder Ridge,	28.02	11	P	P	01 08 09.9	+2.3
	baz=194						
Q56A				P	P	01 08 09.9	+2.3
	baz=194						
P53A	Whipple	28.12	7	P	P	01 08 10.3	+1.9
	baz=189,SNR=88						
P53A				P	P	01 08 10.3	+1.9
	baz=189,SNR=88						
P43A	Skaggs, Pawnee	28.21	354	P	P	01 08 10.1	+0.8
	baz=172,SNR=17						
BBSR	BB Station	28.37	40	P	P	01 08 13.4	+2.7
	baz=228,SNR=6.8						
BBSR	BB Station	28.37	40	P	P	01 08 13.4	+2.7
P40A	Paris	28.46	350	IAmb	IAmb	01 08 12.7	
	comp=Z,52nm,0.9s						
P40A	Paris	28.46	350	P	P	01 08 11.6	+0.2
	baz=167,SNR=29						
MCWV	Mont Chateau	28.51	10	IAmb	IAmb	01 08 14.6	
	comp=Z,78nm,0.8s						
MCWV	Mont Chateau	28.51	10	P	P	01 08 13.7	+1.8
	baz=192,SNR=17						
MCWV	Mont Chateau	28.51	10	P	P	01 08 13.5	+1.6
	baz=192,SNR=17						
O49A	Covington	28.58	2	P	P	01 08 13.2	+0.7
	baz=183,SNR=24						
O49A				P	P	01 08 13.2	+0.7
	baz=183,SNR=24						
O44A	Mansfield	28.62	356	P	P	01 08 13.4	+0.5
	baz=174,SNR=23						
O48B	Farmland	28.63	1	P	P	01 08 13.5	+0.5
	baz=181,SNR=70						
O48B	Farmland	28.63	1	P	P	01 08 13.3	+0.4
	baz=181,SNR=70						
P57A	Homestead Farm	28.68	12	P	P	01 08 15.8	+2.4
	baz=196,SNR=50						
P57A				P	P	01 08 15.8	+2.4
	baz=196,SNR=50						
O52A	Adamsville	28.69	6	P	P	01 08 14.7	+1.2
	baz=188,SNR=69						
O52A				P	P	01 08 14.7	+1.2
	baz=188,SNR=69						
ACSO	Alum Creek Sta	28.70	4	P	P	01 08 14.8	+1.2
	baz=186,SNR=31						
ACSO	Alum Creek Sta	28.70	4	P	P	01 08 14.7	+1.1
	baz=186,SNR=31						
ETMB	Extrema	28.72	137	*e*P	P	01 08 14.9	+0.8
SFIN	Lafayette	28.77	358	P	P	01 08 14.3	+0.1
	baz=177,SNR=95						
SFIN	Lafayette	28.77	358	P	P	01 08 14.4	+0.2
	baz=177,SNR=95						
P38A	Dawn	28.84	347	IAmb	IAmb	01 08 15.8	
	comp=Z,62nm,0.7s						
P38A	Dawn	28.84	347	P	P	01 08 14.7	-0.1
	baz=164,SNR=33						
MACA	Manacapuru-AM	28.85	119	*e*P	P	01 08 15.8	+0.5
SDMD	Soldier's Deli	28.88	14	IAmb	IAmb	01 08 17.9	
	comp=Z,48nm,1.1s						
SDMD	Soldier's Deli	28.88	14	P	P	01 08 16.5	+1.3
	baz=198,SNR=21						
O53A	New Philadelph	28.89	7	P	P	01 08 16.7	+1.4
	baz=189,SNR=88						
O54A	Avella	28.94	8	IAmb	IAmb	01 08 17.9	
	comp=Z,39nm,0.8s						
O54A	Avella	28.94	8	P	P	01 08 17.0	+1.3
	baz=191,SNR=15						
O54A				P	P	01 08 17.0	+1.3
	baz=191,SNR=15						
HDIL	Hopedale	29.10	354	P	P	01 08 17.2	+0.1
	baz=173,SNR=49						
HDIL	Hopedale	29.10	354	P	P	01 08 17.4	+0.3
	baz=173,SNR=49						
KSU1	Kansas State U	29.13	342	IAmb	IAmb	01 08 19.2	
	comp=Z,38nm,0.8s						
KSU1	Kansas State U	29.13	342	P	P	01 08 17.5	+0.1
	baz=158						
KSU1	Kansas State U	29.13	342	P	P	01 08 17.0	-0.4
	baz=158						
121A	Cookes Peak, D	29.14	319	IAmb	IAmb	01 08 27.5	
	comp=Z,15nm,0.8s						
121A	Cookes Peak, D	29.14	319	P	P	01 08 20.0	+2.2
	baz=131,SNR=18						
121A	Cookes Peak, D	29.14	319	P	P	01 08 19.6	+1.8
	baz=131,SNR=18						
R32A	Long Quarter,	29.20	339	IAmb	IAmb	01 08 21.5	
	comp=Z,33nm,0.9s						
R32A	Long Quarter,	29.20	339	P	P	01 08 17.7	-0.4
	baz=153,SNR=8.5						
N47A	Urbana	29.25	0	IAmb	IAmb	01 08 19.1	
	comp=Z,105nm,1.4s						
N47A	Urbana	29.25	0	P	P	01 08 18.1	-0.3
	baz=180,SNR=12						
N47A				P	P	01 08 18.1	-0.3
	baz=180,SNR=12						
N49A	Columbus Grove	29.32	2	P	P	01 08 19.6	+0.5
	baz=183,SNR=75						
N49A				P	P	01 08 19.6	+0.5
	baz=183,SNR=75						
319A	Douglas	29.41	316	IAmb	IAmb	01 08 23.4	
	comp=Z,46nm,0.9s						
N41A	Harden Midland	29.43	352	P	P	01 08 20.3	+0.3
	baz=170,SNR=8.4						
N51A	Ashland	29.43	5	IAmb	IAmb	01 08 21.8	
	comp=Z,97nm,0.9s						
N51A	Ashland	29.43	5	P	P	01 08 20.6	+0.6
	baz=187,SNR=13						
N51A				P	P	01 08 20.6	+0.6
	baz=187,SNR=13						
SRIG	Santa Rosalia	29.45	306	IAmb	IAmb	01 08 24.6	
	comp=Z,50nm,0.9s						
N53A	Lisbon	29.49	8	P	P	01 08 21.8	+1.2
	baz=190,SNR=44						
N53A				P	P	01 08 21.8	+1.2
	baz=190,SNR=44						
MVL	Millersville	29.55	15	IAmb	IAmb	01 08 24.3	
	comp=Z,103nm,1.1s						
GEDE	Greenville	29.56	16	P	P	01 08 22.8	+1.6
	baz=200,SNR=6.7						
Y22A	Socorro	29.58	322	P	P	01 08 23.2	+1.5
	baz=134,SNR=16						
P61A	Hammonton	29.67	17	P	P	01 08 25.5	+3.4
	baz=202						
P61A				P	P	01 08 25.5	+3.4
	baz=202						
WUPA	West Chester U	29.68	16	IAmb	IAmb	01 08 25.0	
	comp=Z,22nm,1.1s						
SSPA	Standing Stone	29.82	12	P	P	01 08 25.1	+1.7
SSPA				IAmb	IAmb	01 08 26.2	
	comp=Z,100nm,0.9s						
SSPA	Standing Stone	29.82	12	P	P	01 08 25.1	+1.7
	baz=196,SNR=53						
SSPA	Standing Stone	29.82	12	P	P	01 08 25.0	+1.5
	baz=196						
SSPA	Standing Stone	29.82	12	P	P	01 08 25.1	+1.7
M44A	Midewin, Midew	29.83	356	IAmb	IAmb	01 08 24.1	
	comp=Z,94nm,0.9s						
M44A	Midewin, Midew	29.83	356	P	P	01 08 23.3	-0.2
	baz=175,SNR=13						
M50A	Fremont	29.86	4	P	P	01 08 24.2	+0.4
	baz=185,SNR=22						
M50A				P	P	01 08 24.2	+0.4
	baz=185,SNR=22						
N38A	Joes South For	29.91	349	IAmb	IAmb	01 08 25.4	
	comp=Z,50nm,0.7s						
N38A	Joes South For	29.91	349	P	P	01 08 24.2	0.0
	baz=165,SNR=8.5						
CBKS	Cedar Bluff	29.92	338	IAmb	IAmb	01 08 26.3	
	comp=Z,28nm,0.8s						
CBKS	Cedar Bluff	29.92	338	P	P	01 08 24.9	+0.5
	baz=152,SNR=6.6						
CBKS	Cedar Bluff	29.92	338	P	P	01 08 24.2	-0.3
	baz=152,SNR=6.6						
ANMO	Albuquerque	29.99	324	P	P	01 08 26.9	+1.6
	comp=Z,7.0nm,0.9s,baz=139,slow=8.3,SNR=21						
ANMO				LR	LR	01 22 29.2	
	comp=Z,28nm,21.7s,baz=94,slow=40						
	comp=Z,7.0nm,0.9s						
ANMO	Albuquerque	29.99	324	P	P	01 08 26.4	+1.1
ANMO	Albuquerque	29.99	324	P	P	01 08 26.6	+1.2
	baz=136,SNR=15						
ANMO	Albuquerque	29.99	324	P	P	01 08 26.3	+0.9
	baz=136						
ANMO	Albuquerque	29.99	324	P	P	01 08 26.6	+1.2
ANMO				sP	sP	01 09 30.3	+0.1
TUPA	Temple Univers	30.02	16	P	P	01 08 26.6	+1.5
	baz=201,SNR=26						
M53A	WI Miller and	30.13	8	P	P	01 08 27.3	+1.1
	baz=190,SNR=85						
M52A	Chesterland	30.15	7	IAmb	IAmb	01 08 28.1	
	comp=Z,66nm,0.8s						
M52A	Chesterland	30.15	7	P	P	01 08 26.9	+0.5
	baz=188,SNR=15						
M52A				P	P	01 08 26.9	+0.5
	baz=188,SNR=15						
SAML	Samuel	30.25	131	P	P	01 08 27.1	-0.5
SAML				IAmb	IAmb	01 08 28.1	
	comp=Z,28nm,1.3s						
SAML	Samuel	30.25	131	P	P	01 08 27.1	-0.5
SAML				ScP	ScP	01 14 47.8	+1.4
N58A	Sunbury	30.27	14	P	P	01 08 29.1	+1.7
	baz=198,SNR=46						
N58A				P	P	01 08 29.1	+1.7
	baz=198,SNR=46						
L48A	N Adams	30.33	2	P	P	01 08 28.3	+0.3
	baz=182,SNR=24						
L48A				P	P	01 08 28.3	+0.3
	baz=182,SNR=24						
PANJ	Princeton	30.35	17	P	P	01 08 30.0	+1.9
	baz=202,SNR=16						
LUPA	Lehigh Univers	30.37	16	IAmb	IAmb	01 08 31.5	
	comp=Z,64nm,1.1s						
L46A	Eue Claire	30.38	359	P	P	01 08 28.0	-0.4
	baz=179,SNR=9.6						
L46A				P	P	01 08 28.0	-0.4
	baz=179,SNR=9.6						
ALLY	Alegheny Colle	30.41	8	P	P	01 08 29.5	+0.8
	baz=191,SNR=6.7						
M55A	Ridgway	30.45	10	P	P	01 08 30.3	+1.2
	baz=193,SNR=44						
M55A				P	P	01 08 30.3	+1.2
	baz=193,SNR=44						
N35A	Tabor	30.51	345	P	P	01 08 29.4	-0.1
	baz=161,SNR=5.4						
T25A	Trinidad	30.55	330	P	P	01 08 31.2	+1.0
	baz=142,SNR=6.5						
L42A	Oliver, Polo	30.57	354	P	P	01 08 30.1	+0.1
	baz=172,SNR=63						
L44A	Lake County Fo	30.61	357	P	P	01 08 30.0	-0.3
	baz=176,SNR=5.4						
L44A	Lake County Fo	30.61	357	P	P	01 08 29.8	-0.6
	baz=176,SNR=5.4						
M57A	Sunshine Farm,	30.65	13	P	P	01 08 32.6	+1.9
	baz=197,SNR=50						
M57A				P	P	01 08 32.6	+1.9
	baz=197,SNR=50						
BRNJ	Basking Ridge	30.67	17	IAmb	IAmb	01 08 34.0	
	comp=Z,57nm,1.1s						
BRNJ	Basking Ridge	30.67	17	P	P	01 08 32.9	+2.0
	baz=202,SNR=9.3						
AAM	Ann Arbor	30.72	3	IAmb	IAmb	01 08 34.6	
	comp=Z,54nm,0.8s						
AAM	Ann Arbor	30.72	3	P	P	01 08 31.3	0.0
	baz=184						
L40A	Anamosa	30.81	352	P	P	01 08 31.8	-0.4
	baz=169,SNR=52						
ERPA	Erie	30.89	8	P	P	01 08 34.0	+1.1
	baz=191,SNR=34						
ERPA	Erie	30.89	8	P	P	01 08 33.8	+0.9
	baz=191,SNR=34						
CPNY	Central Park	30.94	18	IAmb	IAmb	01 08 36.0	
	comp=Z,65nm,1.3s						
SCIA	State Center	30.98	349	P	P	01 08 34.6	+1.0
	baz=166,SNR=7.2						
SCIA	State Center	30.98	349	P	P	01 08 33.6	-0.1
	baz=166,SNR=7.2						
TUC	Tucson	30.99	316	P	P	01 08 35.6	+1.6
TUC				IAmb	IAmb	01 08 36.9	
	comp=Z,23nm,1.2s						
TUC	Tucson	30.99	316	P	P	01 08 35.6	+1.6
	baz=126						
TUC	Tucson	30.99	316	P	P	01 08 35.6	+1.6
TUC				pP	pP	01 09 15.0	-0.5
ODNJ	Ogdensburg	31.03	16	IAmb	IAmb	01 08 36.7	
	comp=Z,42nm,1.2s						

ODNJ	Ogdensburg	31.03	16	P	P	01 08 35.5	+1.4
	baz=201,SNR=6.6						
FOR	Fordham	31.03	18	P	P	01 08 35.7	+1.6
	baz=203						
K43A	Burlington	31.16	356	IAmb	IAmb	01 08 35.7	
	comp=Z,102nm,1.0s						
K43A	Burlington	31.16	356	P	P	01 08 34.3	-0.9
	baz=175,SNR=9.2						
PAL	Palisades	31.16	17	IAmb	IAmb	01 08 37.9	
	comp=Z,77nm,1.1s						
PAL	Palisades	31.16	17	P	P	01 08 36.7	+1.5
	baz=203,SNR=9.5						
PAL	Palisades	31.16	17	P	P	01 08 36.6	+1.5
	baz=203,SNR=9.5						
KSPA	Keystone Colle	31.17	15	IAmb	IAmb	01 08 38.2	
	comp=Z,99nm,1.0s						
KSPA	Keystone Colle	31.17	15	P	P	01 08 37.0	+1.7
	baz=199,SNR=39						
KSCO	Kaye Shedlock'	31.25	334	IAmb	IAmb	01 08 39.5	
	comp=Z,18nm,0.8s						
KSCO	Kaye Shedlock'	31.25	334	P	P	01 08 36.6	+0.4
	baz=147						
K50A	Casco	31.26	4	IAmb	IAmb	01 08 37.1	
	comp=Z,85nm,0.8s						
K50A	Casco	31.26	4	P	P	01 08 36.4	+0.3
	baz=186,SNR=6.7						
K50A				P	P	01 08 36.4	+0.3
	baz=186,SNR=6.7						
L56A	Greenwood	31.32	12	P	P	01 08 37.9	+1.2
	baz=195,SNR=37						
L56A				P	P	01 08 37.9	+1.2
	baz=195,SNR=37						
WVNY	West Valley, N	31.39	10	P	P	01 08 38.3	+1.0
	baz=193,SNR=29						
WSPT	Westport, CT	31.48	18	P	P	01 08 39.3	+1.2
WSPT				IAmb	IAmb	01 08 40.6	
	comp=Z,77nm,1.1s						
BRNY	Black Rk. Fore	31.50	17	P	P	01 08 40.1	+1.9
	baz=202,SNR=7.3						
JFWS	Jewell Farm	31.53	354	IAmb	IAmb	01 08 40.0	
	comp=Z,106nm,0.9s						
JFWS	Jewell Farm	31.53	354	P	P	01 08 38.4	0.0
	baz=172,SNR=37						
JFWS	Jewell Farm	31.53	354	P	P	01 08 38.3	-0.2
	baz=172,SNR=37						
SDCO	Great Sand Dun	31.57	329	P	P	01 08 40.4	+1.2
	baz=141,SNR=17						
SDCO	Great Sand Dun	31.57	329	P	P	01 08 40.2	+1.0
	baz=141,SNR=17						
J47A	Sunmer	31.61	1	IAmb	IAmb	01 08 39.7	
	comp=Z,82nm,0.7s						
J47A	Sunmer	31.61	1	P	P	01 08 39.0	-0.1
	baz=182,SNR=8.0						
J47A				P	P	01 08 39.0	-0.1
	baz=182,SNR=8.0						
K38A	Parkersburg	31.62	350	P	P	01 08 39.4	+0.1
	baz=167,SNR=15						
BGNE	Belgrade	31.71	342	IAmb	IAmb	01 08 42.4	
	comp=Z,35nm,0.6s						
BINY	Binghamton	31.73	14	P	P	01 08 41.7	+1.4
	baz=198,SNR=46						
BINY	Binghamton	31.73	14	P	P	01 08 41.6	+1.4
	baz=198,SNR=46						
YLE	Yale	31.73	18	IAmb	IAmb	01 08 43.0	
	comp=Z,124nm,1.2s						
L34A	Svendsen Farm,	31.74	345	IAmb	IAmb	01 08 41.0	
	comp=Z,26nm,0.8s						
NPNY	Mohonk Preserv	31.78	17	P	P	01 08 42.3	+1.7
	baz=202,SNR=22						
X18A	Snowflake	31.81	320	IAmb	IAmb	01 08 44.4	
	comp=Z,24nm,1.1s						
KSCT	Kent School, K	31.94	17	IAmb	IAmb	01 08 44.8	
	comp=Z,78nm,1.5s						
L59A	Walton	31.95	15	IAmb	IAmb	01 08 45.0	
	comp=Z,140nm,1.1s						
L59A	Walton	31.95	15	P	P	01 08 43.8	+1.6
	baz=200,SNR=37						
L59A				P	P	01 08 43.8	+1.6
	baz=200,SNR=37						
W18A	Petrified Fore	32.06	321	IAmb	IAmb	01 08 46.7	
	comp=Z,22nm,0.9s						
W18A	Petrified Fore	32.06	321	P	P	01 08 45.3	+1.9
	baz=131,SNR=6.8						
M63A	Gales Ferry	32.10	20	IAmb	IAmb	01 08 46.5	
	comp=Z,122nm,1.4s						
M63A	Gales Ferry	32.10	20	P	P	01 08 45.1	+1.7
	baz=206,SNR=6.6						
M63A				P	P	01 08 45.1	+1.7
	baz=206,SNR=6.6						
K57A	Scipio Center	32.11	13	IAmb	IAmb	01 08 45.7	
	comp=Z,124nm,1.2s						
K57A	Scipio Center	32.11	13	P	P	01 08 44.5	+1.0
	baz=197,SNR=19						
MEDO	Medina	32.16	10	IAmb	IAmb	01 08 46.5	
	comp=Z,45nm,0.8s						
214A	Organ Pipe Nat	32.20	313	IAmb	IAmb	01 08 48.3	
	comp=Z,22nm,1.0s						
214A	Organ Pipe Nat	32.20	313	P	P	01 08 46.5	+2.0
	baz=123,SNR=10						
J54A	Appleton	32.23	10	IAmb	IAmb	01 08 46.4	
	comp=Z,76nm,0.9s						
J54A	Appleton	32.23	10	P	P	01 08 45.2	+0.7
	baz=193,SNR=6.6						
J54A				P	P	01 08 45.2	+0.7
	baz=193,SNR=6.6						
S22A	4UR Ranch, Cre	32.25	328	P	P	01 08 45.9	+0.7
	baz=139,SNR=12						
J55A	Hilton	32.37	11	IAmb	IAmb	01 08 46.9	
	comp=Z,33nm,0.8s						
J55A	Hilton	32.37	11	P	P	01 08 46.5	+0.7
	baz=194,SNR=12						
J55A				P	P	01 08 46.5	+0.7
	baz=194,SNR=12						
I42A	Draeger Farm,	32.38	356	IAmb	IAmb	01 08 46.8	
	comp=Z,108nm,0.9s						
I42A	Draeger Farm,	32.38	356	P	P	01 08 46.0	+0.1
	baz=174,SNR=38						
UCCT	U. Connecticut	32.39	19	IAmb	IAmb	01 08 48.9	
	comp=Z,92nm,1.4s						
I49A	Point Hope	32.40	4	IAmb	IAmb	01 08 46.9	
	comp=Z,73nm,0.8s						
I49A	Point Hope	32.40	4	P	P	01 08 46.0	-0.1
	baz=185,SNR=7.8						
I49A				P	P	01 08 46.0	-0.1
	baz=185,SNR=7.8						
I45A	Fountain	32.41	359	IAmb	IAmb	01 08 46.3	
	comp=Z,90nm,0.8s						
I45A	Fountain	32.41	359	P	P	01 08 45.4	-0.7
	baz=179,SNR=5.0						
I45A				P	P	01 08 45.4	-0.7
	baz=179,SNR=5.0						
I40A	Norwalk	32.53	353	IAmb	IAmb	01 08 48.0	
	comp=Z,52nm,0.7s						
I40A	Norwalk	32.53	353	P	P	01 08 47.1	-0.1
	baz=171,SNR=16						
J56A	Wolcott	32.56	12	P	P	01 08 48.3	+0.8
	baz=196,SNR=53						
J56A				P	P	01 08 48.3	+0.8
	baz=196,SNR=53						
HCNY	Howe Caverns	32.59	16	P	P	01 08 49.0	+1.3
	baz=201,SNR=19						
OGNE	Ogallala	32.64	337	IAmb	IAmb	01 08 51.7	
	comp=Z,71nm,1.2s						
OGNE	Ogallala	32.64	337	P	P	01 08 49.1	+0.8
	baz=149,SNR=7.7						
OGNE	Ogallala	32.64	337	P	P	01 08 49.1	+0.8
	baz=149,SNR=7.7						
LPAZ	La Paz	32.65	147	P	P	01 08 50.0	+0.9
	comp=Z,1.8nm,0.5s,baz=19,slow=4.9,SNR=15						
LPAZ				PcP	PcP	01 11 30.8	+0.4
	comp=Z,1.5nm,0.3s,baz=322,slow=7.2,SNR=8.1						
LPAZ				ScP	ScP	01 14 56.4	+1.2
	comp=Z,1.9nm,1.0s,baz=12,slow=5.6,SNR=4.7						
LPAZ				LR	LR	01 21 15.6	
	comp=Z,62nm,21.5s,baz=295,slow=34						
	comp=Z,1.8nm,0.5s						
LPAZ	La Paz	32.65	147	P	P	01 08 49.7	+0.6
LPAZ				PcP	PcP	01 11 31.0	+0.6
LPAZ	La Paz	32.65	147	*e*P	P	01 08 49.9	+0.7
LPAZ	La Paz	32.65	147	P	P	01 08 50.3	+1.1
LPAZ				ScP	ScP	01 14 56.9	+1.7
BRYW	Bryant College	32.73	20	IAmb	IAmb	01 08 50.8	
	comp=Z,38nm,1.2s						
MVCO	Mesa Verde	32.77	325	P	P	01 08 50.5	+0.9
	baz=136,SNR=16						
QUA2	Belchertown	32.79	18	P	P	01 08 50.5	+1.0
QUA2				IAmb	IAmb	01 08 52.0	
	comp=Z,49nm,1.2s						
TRY	Troy	32.82	16	IAmb	IAmb	01 08 52.7	
	comp=Z,136nm,1.2s						
TRY	Troy	32.82	16	P	P	01 08 51.4	+1.8
	baz=202,SNR=24						
H43A	Windswept, Lux	32.88	357	P	P	01 08 49.8	-0.5
	baz=176,SNR=33						
L64A	Middleborough	32.98	21	IAmb	IAmb	01 08 53.6	
	comp=Z,63nm,1.4s						
J58A	Remsen	32.99	14	IAmb	IAmb	01 08 53.4	
	comp=Z,111nm,1.0s						
J58A	Remsen	32.99	14	P	P	01 08 52.2	+1.0
	baz=199,SNR=48						
J58A				P	P	01 08 52.2	+1.0
	baz=199,SNR=48						
K31A	O'Neill	33.01	342	IAmb	IAmb	01 08 53.7	
	comp=Z,86nm,0.9s						
I37B	Waseca	33.05	350	P	P	01 08 51.4	-0.3
	baz=166,SNR=30						
PECO	Prince Edward	33.17	12	IAmb	IAmb	01 08 54.2	
	comp=Z,77nm,0.9s						
K62A	Royalston	33.18	18	IAmb	IAmb	01 08 55.5	
	comp=Z,100nm,1.3s						
K62A	Royalston	33.18	18	P	P	01 08 54.0	+1.2
	baz=205,SNR=11						
K62A				P	P	01 08 54.0	+1.2
	baz=205,SNR=11						
BCX	Boston College	33.22	20	IAmb	IAmb	01 08 56.0	
	comp=Z,60nm,1.3s						
ISCO	Idaho Springs	33.23	331	P	P	01 08 54.4	+0.7
	baz=143,SNR=9.4						
ISCO	Idaho Springs	33.23	331	P	P	01 08 54.3	+0.6
	baz=143,SNR=9.4						
HRV	Adam Dziewonsk	33.25	19	P	P	01 08 54.9	+1.5
HRV				IAmb	IAmb	01 08 56.1	
	comp=Z,32nm,1.1s						
HRV	Adam Dziewonsk	33.25	19	P	P	01 08 54.7	+1.3
	baz=206						
J59A	Piesco	33.28	15	IAmb	IAmb	01 08 55.8	
	comp=Z,50nm,1.0s						
J59A	Piesco	33.28	15	P	P	01 08 54.5	+0.7
	baz=200,SNR=23						
J59A				P	P	01 08 54.5	+0.7
	baz=200,SNR=23						
MPGF	Montagnes des	33.31	98	P	P	01 08 55.1	+0.7
MPGF				pP	pP	01 09 35.5	-0.7
113A	Mohawk Valley,	33.32	314	IAmb	IAmb	01 08 57.2	
	comp=Z,42nm,1.4s						
WUAZ	Wupatki	33.34	320	IAmb	IAmb	01 08 57.7	
	comp=Z,33nm,1.1s						
WUAZ	Wupatki	33.34	320	P	P	01 08 56.4	+1.8
	baz=130,SNR=8.5						
G45A	Suttons Bay	33.41	0	P	P	01 08 54.1	-0.6
	baz=180,SNR=18						
G45A				P	P	01 08 54.1	-0.6
	baz=180,SNR=18						
ACCN	Adirondack Com	33.42	16	IAmb	IAmb	01 08 57.5	
	comp=Z,84nm,1.4s						
ACCN	Adirondack Com	33.42	16	P	P	01 08 56.0	+1.1
	baz=202,SNR=13						
Y14A	Wickenburg	33.45	316	IAmb	IAmb	01 08 58.0	
	comp=Z,40nm,1.4s						
ECSD	EROS Data Cent	33.46	346	P	P	01 08 54.2	-1.0
	baz=160,SNR=11						
ECSD	EROS Data Cent	33.46	346	P	P	01 08 54.2	-1.0
	baz=160,SNR=11						
WCNY	West Carthage	33.49	13	P	P	01 08 56.2	+0.7
	baz=198,SNR=27						
DELO	Deloro Mine	33.61	10	IAmb	IAmb	01 08 58.8	
	comp=Z,38nm,0.9s						
PB16	IPOC Station P	33.70	151	P	P	01 08 59.1	+0.9
PB16				PcP	PcP	01 11 34.4	+1.1
J61A	Chester	33.70	17	IAmb	IAmb	01 09 00.3	
	comp=Z,80nm,1.1s						
J61A	Chester	33.70	17	P	P	01 08 58.9	+1.6
	baz=204,SNR=22						
J61A				P	P	01 08 58.9	+1.6
	baz=204,SNR=22						
ITTB	Itaituba	33.74	116	*e*P	P	01 08 57.7	-0.4
NCB	Newcomb	33.83	15	IAmb	IAmb	01 09 00.5	
	comp=Z,25nm,1.1s						
NCB	Newcomb	33.83	15	P	P	01 08 58.9	+0.5
	baz=200,SNR=8.8						
G40A	Rib Lake	33.85	354	IAmb	IAmb	01 08 59.8	
	comp=Z,43nm,0.7s						
G40A	Rib Lake	33.85	354	P	P	01 08 57.5	-1.1
	baz=172,SNR=26						
MALB	Monte Alegre	33.97	111	*e*P	P	01 08 59.6	-0.3
UNH	University of	34.00	20	P	P	01 09 01.0	+1.1
	baz=207,SNR=5.5						
FFD	Franklin Falls	34.09	18	IAmb	IAmb	01 09 03.8	
	comp=Z,69nm,1.2s						
HNH	Hanover	34.11	17	IAmb	IAmb	01 09 03.6	
	comp=Z,35nm,1.0s						
SPMN	Marine on St.	34.13	351	IAmb	IAmb	01 09 02.0	
	comp=Z,81nm,0.9s						
SPMN	Marine on St.	34.13	351	P	P	01 09 00.5	-0.5
	baz=168,SNR=29						
SPMN	Marine on St.	34.13	351	P	P	01 09 00.2	-0.8
	baz=168						
MCVT	Middlebury Col	34.14	16	P	P	01 09 02.0	+0.9
	baz=202,SNR=13						
GLA	Glamis	34.23	313	IAmb	IAmb	01 09 05.3	
	comp=Z,53nm,0.9s						
GLA	Glamis	34.23	313	P	P	01 09 04.3	+2.2
	baz=122						
N23A	Red Feather La	34.25	332	P	P	01 09 03.2	+0.7
	baz=143,SNR=13						
LONY	Lake Ozonia	34.35	14	IAmb	IAmb	01 09 04.8	
	comp=Z,96nm,0.9s						
LONY	Lake Ozonia	34.35	14	P	P	01 09 03.7	+0.8
	baz=200,SNR=62						
BLYC	Blythe	34.39	315	IAmb	IAmb	01 09 06.6	
	comp=Z,38nm,0.9s						
PDMCI	Parker Dam,Lak	34.43	316	P	P	01 09 05.5	+1.8
	baz=124,SNR=21						
U15A	North Rim	34.49	320	IAmb	IAmb	01 09 07.9	
	comp=Z,27nm,1.4s						
I62A	Tamworth	34.55	18	IAmb	IAmb	01 09 07.5	
	comp=Z,115nm,1.4s						
I62A	Tamworth	34.55	18	P	P	01 09 06.2	+1.6
	baz=205,SNR=16						
I62A				P	P	01 09 06.2	+1.6
	baz=205,SNR=16						
VT1	Waterbury	34.55	16	IAmb	IAmb	01 09 07.5	
	comp=Z,39nm,1.1s						
VT1	Waterbury	34.55	16	P	P	01 09 05.6	+1.0
	baz=203,SNR=13						
BMNY	Brushton-Moira	34.57	14	P	P	01 09 05.6	+0.8
	baz=200,SNR=55						
COWI	Conover	34.59	356	IAmb	IAmb	01 09 05.4	
	comp=Z,111nm,1.5s						
LBNH	Lisbon	34.70	18	IAmb	IAmb	01 09 08.7	
	comp=Z,95nm,1.5s						
LBNH	Lisbon	34.70	18	P	P	01 09 07.2	+1.3
	baz=204,SNR=10						
LBNH	Lisbon	34.70	18	P	P	01 09 07.4	+1.4
	baz=204,SNR=10						
W13A	Hualapai Mount	34.71	317	P	P	01 09 08.5	+2.0
W13A				IAmb	IAmb	01 09 09.8	
	comp=Z,22nm,1.0s						
W13A				PcP	PcP	01 11 36.5	+0.9
SUSD	Miller	34.73	343	IAmb	IAmb	01 09 07.4	
	comp=Z,97nm,0.8s						
SUSD	Miller	34.73	343	P	P	01 09 05.4	-0.8
	baz=157,SNR=6.2						
E46A	Sault Ste Mari	34.75	2	P	P	01 09 05.5	-0.8
	baz=182,SNR=7.9						
E43A	Lone Tree Farm	34.76	358	IAmb	IAmb	01 09 07.1	
	comp=Z,124nm,1.1s						
E43A	Lone Tree Farm	34.76	358	P	P	01 09 06.0	-0.4
	baz=178,SNR=44						
O20A	White River Ci	34.77	329	P	P	01 09 07.9	+1.1
	baz=139,SNR=15						
FRNY	Flat Rock	34.80	15	IAmb	IAmb	01 09 08.7	
	comp=Z,96nm,1.5s						
FRNY	Flat Rock	34.80	15	P	P	01 09 07.7	+1.0
	baz=201,SNR=17						
YUH	Yuha Desert	34.81	312	IAmb	IAmb	01 09 10.5	
	comp=Z,27nm,0.9s						
SWSC	Sam W. Stewart	34.87	312	P	P	01 09 09.5	+2.0
	baz=121,SNR=5.3						
F36A	Milaca	34.87	350	IAmb	IAmb	01 09 08.2	
	comp=Z,51nm,0.7s						
F36A	Milaca	34.87	350	P	P	01 09 06.3	-1.1
	baz=166,SNR=39						
IKP	In-Ko-Pah, Jac	34.94	312	P	P	01 09 10.3	+2.0
	baz=120,SNR=8.1						
I63A	Otisfield	34.95	19	IAmb	IAmb	01 09 10.9	
	comp=Z,94nm,1.1s						
I63A	Otisfield	34.95	19	P	P	01 09 09.8	+1.7
	baz=206,SNR=18						
I63A				P	P	01 09 09.8	+1.7
	baz=206,SNR=18						
BC3	Big Chuckawall	34.99	314	P	P	01 09 10.6	+2.0
	baz=122,SNR=13						
NEE2	Needles Airpor	35.02	316	P	P	01 09 10.8	+2.0
	baz=124						
IRM	Iron Mountain	35.04	315	P	P	01 09 10.8	+1.8
	baz=123,SNR=17						
VILB	Vilhena	35.10	133	*e*P	P	01 09 10.1	+0.4
PKCU	Pink Cliffs	35.15	322	IAmb	IAmb	01 09 13.7	
	comp=Z,85nm,1.4s						
SRU	San Rafael Swe	35.24	326	IAmb	IAmb	01 09 12.7	
	comp=Z,18nm,0.6s						
H62A	Milan	35.24	18	IAmb	IAmb	01 09 12.4	
	comp=Z,24nm,1.0s						
H62A	Milan	35.24	18	P	P	01 09 11.4	+0.8
	baz=205,SNR=9.4						
H62A				P	P	01 09 11.4	+0.8
	baz=205,SNR=9.4						
MONP2	Monument Peak	35.29	312	P	P	01 09 13.6	+2.2
	baz=120,SNR=9.5						
E38A	The Farm, Brul	35.32	353	IAmb	IAmb	01 09 12.4	
	comp=Z,37nm,0.8s						
F33A	5 Mile Ranch,	35.38	347	IAmb	IAmb	01 09 12.4	
	comp=Z,58nm,0.7s						
F33A	5 Mile Ranch,	35.38	347	P	P	01 09 10.7	-1.0
	baz=162,SNR=59						
MNTQ	Montreal, Queb	35.41	15	IAmb	IAmb	01 09 13.9	
	comp=Z,111nm,1.0s						
PB08	IPOC Station P	35.43	152	P	P	01 09 12.9	+0.1
PB08					PcP	01 11 39.3	+1.2
P18A	Preston Nutter	35.45	326	P	P	01 09 13.7	+0.9
P18A					PcP	01 11 39.1	+1.3
MCPB	Macapa, AP	35.45	107	*e*P	P	01 09 12.1	-0.6
RWWY	Rawlins	35.47	332	IAmb	IAmb	01 09 15.2	
	comp=Z,34nm,1.2s						
D41A	Chassel	35.51	357	IAmb	IAmb	01 09 13.6	
	comp=Z,56nm,1.1s						
BELC	Belle Mtn. Jos	35.56	314	P	P	01 09 15.6	+2.1
	baz=122,SNR=19						
TPFO	Pinon Flats	35.68	313	P	P	01 09 16.7	+2.2
	baz=121,SNR=21						
PFO	Pinyon Flats O	35.68	313	P	P	01 09 16.2	+1.6
PFO				IAmb	IAmb	01 09 17.8	
	comp=Z,30nm,0.8s						
PFO					PcP	01 11 39.3	+1.0
PFO	Pinyon Flats O	35.68	313	P	P	01 09 16.8	+2.3
	baz=121,SNR=8.8						
PFO	Pinyon Flats O	35.68	313	P	P	01 09 16.9	+2.3
WVL	Waterville	35.71	20	IAmb	IAmb	01 09 17.0	
	comp=Z,62nm,1.2s						
WVL	Waterville	35.71	20	P	P	01 09 16.6	+2.1
	baz=208,SNR=11						
SZCU	Shurtz Canyon	35.72	321	P	P	01 09 16.8	+1.8
SZCU					PcP	01 11 40.1	+1.6
GMRC	Granite Mounta	35.74	315	P	P	01 09 17.0	+1.9
	baz=123,SNR=11						
TMUT	Trail Mountain	35.75	325	P	P	01 09 16.4	+1.1
TMUT					PcP	01 11 39.7	+1.1
MSU	Marysvale	35.77	323	P	P	01 09 17.1	+1.7
MSU				PcP	PcP	01 11 39.9	+1.2
109C	Camp Elliot, M	35.79	311	IAmb	IAmb	01 09 18.5	
	comp=Z,40nm,0.9s						
109C	Camp Elliot, M	35.79	311	P	P	01 09 17.4	+2.0
	baz=119,SNR=5.8						
CCUT	Cedar City	35.86	321	P	P	01 09 17.1	+0.9
CCUT				PcP	PcP	01 11 40.6	+1.7
TRQ	Mont Tremblant	35.87	13	IAmb	IAmb	01 09 17.5	
	comp=Z,90nm,1.1s						
K22A	Casper	35.92	333	P	P	01 09 17.1	+0.6
	baz=144						
G62A	West of Eustis	36.01	18	IAmb	IAmb	01 09 19.9	
	comp=Z,162nm,1.4s						
G62A	West of Eustis	36.01	18	P	P	01 09 18.9	+1.8
	baz=206,SNR=25						
G62A				P	P	01 09 18.9	+1.8
	baz=206,SNR=25						
RSSD	Black Hills	36.13	337	P	P	01 09 19.1	+0.8
RSSD	Black Hills	36.13	337	P	P	01 09 19.2	+0.8
	baz=149,SNR=11						
RSSD	Black Hills	36.13	337	P	P	01 09 19.1	+0.8
	baz=149						
RSSD	Black Hills	36.13	337	P	P	01 09 19.7	+1.3
MURC	Murrieta	36.21	312	P	P	01 09 21.2	+2.3
	baz=120,SNR=20						
HEC	Hector,Ludlow	36.23	315	P	P	01 09 21.5	+2.3
	baz=122						
TUQ	Turquoise Moun	36.28	316	P	P	01 09 21.1	+1.4
	baz=124,SNR=12						
ELS	Elsinore Mount	36.40	312	IAmb	IAmb	01 09 23.7	
	comp=Z,32nm,0.8s						
PKME	Peaks-Kenny Pk	36.45	20	IAmb	IAmb	01 09 23.5	
	comp=Z,99nm,1.1s						
PKME	Peaks-Kenny Pk	36.45	20	P	P	01 09 22.5	+1.8
	baz=208,SNR=19						
PKME	Peaks-Kenny Pk	36.45	20	P	P	01 09 22.3	+1.5
	baz=208,SNR=19						
PB07	IPOC Station P	36.51	155	IAmb	IAmb	01 09 26.2	
	comp=Z,19nm,0.9s						
SIV	San Ignacio	36.63	138	LR	LR	01 23 48.3	
	comp=Z,66nm,20.1s,baz=304,slow=35						
EYMN	Ely	36.64	353	P	P	01 09 21.1	-1.2
	baz=170						
RRX	Edison Barstow	36.72	314	P	P	01 09 25.4	+2.2
	baz=122						
D32A	Dogwood Acres,	36.76	347	IAmb	IAmb	01 09 24.4	
	comp=Z,47nm,0.5s						
PSUT	Pine Spring	36.78	322	P	P	01 09 25.2	+1.2
PSUT					PcP	01 11 42.5	+0.8
GSC	Goldstone, Bar	36.81	315	P	P	01 09 25.0	+0.9
GSC				IAmb	IAmb	01 09 27.3	
	comp=Z,20nm,0.9s						
GSC					PcP	01 11 42.7	+1.0
GSC	Goldstone, Bar	36.81	315	P	P	01 09 26.1	+2.0
	baz=122,SNR=13						
PDRB	Porto dos Gac	36.83	128	*e*P	P	01 09 23.5	-0.9
PRN	Pahroc Range	36.83	319	P	P	01 09 24.9	+0.5
PRN					PcP	01 11 43.2	+1.4
BFSC	Mount Baldy Ra	36.86	313	P	P	01 09 26.6	+2.0
	baz=120						
F63A	Nahmakanta, Br	36.90	19	IAmb	IAmb	01 09 26.8	
	comp=Z,43nm,1.0s						
F63A	Nahmakanta, Br	36.90	19	P	P	01 09 25.9	+1.3
	baz=208,SNR=12						
F63A				P	P	01 09 25.9	+1.3
	baz=208,SNR=12						
SCI2	San Clemente I	36.90	311	P	P	01 09 26.9	+2.1
	baz=118						
G65A	Princeton	36.99	21	IAmb	IAmb	01 09 28.1	
	comp=Z,86nm,1.1s						
G65A	Princeton	36.99	21	P	P	01 09 27.1	+1.9
	baz=210,SNR=13						
G65A				P	P	01 09 27.1	+1.9
	baz=210,SNR=13						
CIS	Catalina Islan	37.00	311	P	P	01 09 27.8	+2.1
	baz=118,SNR=8.3						
CLDB	Colider	37.13	126	*e*P	P	01 09 25.5	-1.4
VLDQ	Val d'Or	37.13	9	IAmb	IAmb	01 09 27.7	
	comp=Z,61nm,1.1s						
E28A	Huff	37.18	343	IAmb	IAmb	01 09 28.1	
	comp=Z,49nm,0.9s						
GGN	Saint George	37.18	22	IAmb	IAmb	01 09 29.0	
	comp=Z,35nm,1.2s						
GWY	Greenwater Val	37.20	317	P	P	01 09 28.6	+1.2
GWY				IAmb	IAmb	01 09 30.3	
	comp=Z,19nm,0.9s						
GWY				PcP	PcP	01 11 43.6	+0.7
PASC	Pasadena Art C	37.20	313	IAmb	IAmb	01 09 30.5	
	comp=Z,39nm,1.2s						
QSM	Queen of Sheba	37.21	316	IAmb	IAmb	01 09 31.1	
	comp=Z,54nm,1.3s						
DUG	Dugway, Tooele	37.26	325	P	P	01 09 29.1	+1.2
	baz=133,SNR=5.9						
F64A	Sherman	37.29	20	IAmb	IAmb	01 09 30.4	
	comp=Z,97nm,1.2s						
F64A	Sherman	37.29	20	P	P	01 09 29.4	+1.5
	baz=209,SNR=24						
F64A				P	P	01 09 29.4	+1.5
	baz=209,SNR=24						
B35A	Bob, Littlefor	37.34	351	P	P	01 09 27.6	-0.6
	baz=167,SNR=6.0						
TPNV	Topopah Spring	37.34	318	IAmb	IAmb	01 09 32.2	
	comp=Z,26nm,1.0s						
TPNV	Topopah Spring	37.34	318	P	P	01 09 30.9	+2.2

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      baz=125,SNR=30
DECC  Green Verdugo    37.35 313  P     P     01 09 30.9 +2.3
      baz=120
BW06  Boulder Array    37.41 331  P     P     01 09 28.9 -0.2
      baz=139,SNR=12
PDAR  Pinedale Array   37.41 331  P     P     01 09 29.1  0.0
      comp=Z,16nm,0.3s,baz=133,slow=9.1,SNR=7.4
PDAR                              ScP   ScP   01 15 11.7 +0.2
      comp=Z,0.6nm,0.6s,baz=95,slow=1.8,SNR=5.2
      comp=Z,16nm,0.3s
S11A  Rachel           37.42 319  IAmb  IAmb  01 09 33.0
      comp=Z,31nm,0.9s
EDW2  Edwards Air Fo   37.42 314  P     P     01 09 30.9 +1.7
      baz=121,SNR=10
FURC  Furnace Creek,   37.48 317  P     P     01 09 31.7 +2.2
      baz=124,SNR=13
LRMC  Laurel Mtn Rad   37.51 315  P     P     01 09 31.8 +1.8
      baz=122,SNR=6.3
PTLB  Pontes e Lacer   37.55 135  eP    P     01 09 30.2 -0.1
HWUT  Hardware Ranch   37.56 328  IAmb  IAmb  01 09 32.0
      comp=Z,16nm,0.8s
CCAC  Calif City Air   37.58 314  IAmb  IAmb  01 09 34.5
      comp=Z,55nm,0.8s
AGMN  Agassiz Nation   37.64 349  IAmb  IAmb  01 09 32.3
      comp=Z,37nm,0.9s
AGMN  Agassiz Nation   37.64 349  P     P     01 09 29.8 -0.9
      baz=164,SNR=22
AGMN  Agassiz Nation   37.64 349  P     P     01 09 29.8 -0.9
      baz=164,SNR=22
LVC   Limon Verde      37.70 154  P     P     01 09 33.4 +1.4
LVC   Limon Verde      37.70 154  eP    P     01 09 34.3 +2.3
R11A  Troy Canyon, C   37.74 320  P     P     01 09 33.8 +1.8
      baz=127,SNR=21
E63A  Oxbow            37.76  20  P     P     01 09 33.2 +1.4
      baz=208,SNR=18
E63A                              P     P     01 09 33.2 +1.4
      baz=208,SNR=18
MDND  Maddock          38.05 345  P     P     01 09 34.0 -0.2
      baz=158,SNR=34
MDND  Maddock          38.05 345  P     P     01 09 33.8 -0.4
      baz=158,SNR=34
HAL   Halifax          38.08  26  IAmb  IAmb  01 09 37.4
      comp=Z,60nm,1.3s
GRAC  Grapevine Rang   38.11 317  IAmb  IAmb  01 09 39.3
      comp=Z,62nm,1.2s
GRAC  Grapevine Rang   38.11 317  P     P     01 09 37.2 +2.2
      baz=124,SNR=20
PQI   Presque Isle     38.11  20  IAmb  IAmb  01 09 37.1
      comp=Z,84nm,1.2s
ARVC  Arvin            38.14 314  P     P     01 09 37.4 +2.3
      baz=120,SNR=5.6
D62A  Allapoint, All   38.14  18  IAmb  IAmb  01 09 37.2
      comp=Z,80nm,0.9s
D62A  Allapoint, All   38.14  18  P     P     01 09 36.2 +1.3
      baz=207,SNR=32
D62A                              P     P     01 09 36.2 +1.3
      baz=207,SNR=32
ISA   Isabella, Lake   38.16 315  IAmb  IAmb  01 09 38.7
      comp=Z,24nm,1.0s
ISA   Isabella, Lake   38.16 315  P     P     01 09 37.3 +1.9
      baz=121,SNR=13
SCZ2  Santa Cruz Isl   38.18 311  P     P     01 09 37.2 +1.7
      baz=118
LMQ   La Malbaie       38.18  17  IAmb  IAmb  01 09 37.0
      comp=Z,83nm,1.0s
CWC   Cottonwood Cre   38.29 316  P     P     01 09 38.4 +1.9
      baz=122
BCW   Bitter Crk WRg   38.46 313  IAmb  IAmb  01 09 41.2
      comp=Z,30nm,0.9s
SNOW  Snow King Moun   38.51 330  IAmb  IAmb  01 09 43.9
      comp=Z,39nm,1.4s
VES   Vestal, Richgr   38.67 314  P     P     01 09 41.8 +2.2
      baz=120,SNR=15
TIN   Tinemaha, Big    38.72 317  P     P     01 09 42.6 +2.5
      baz=123
PKM   Mcpherson Peak   38.73 313  P     P     01 09 42.4 +2.1
      baz=119,SNR=11
SMMC  Simmler          39.06 313  P     P     01 09 45.3 +2.4
      baz=119,SNR=5.8
RLMT  Red Lodge        39.09 333  P     P     01 09 43.1 -0.1
      baz=142,SNR=12
LAO   LASA Array       39.12 338  P     P     01 09 43.5 +0.3
      baz=147,SNR=11
LAO   LASA Array       39.12 338  P     P     01 09 43.0 -0.2
      baz=147,SNR=11
BATG  Bathurst New B   39.30  21  IAmb  IAmb  01 09 47.1
      comp=Z,102nm,1.0s
NV11  Mina Array Sit   39.43 318  P     P     01 09 47.3 +1.3
NV11                              IAmb  IAmb  01 09 49.2
      comp=Z,63nm,1.4s
NV11                                    PcP   01 11 51.0 +1.1
MLAC  Mammoth, Mammo39.44 317     P     P     01 09 47.9 +1.7
      baz=123
PAGB  Antelope Grade   39.44 313  IAmb  IAmb  01 09 49.2
      comp=Z,62nm,0.8s
ULM   Lac du Bonnet    39.52 350  P     P     01 09 44.8 -1.5
      comp=Z,26nm,0.5s,baz=164,slow=8.4,SNR=46
      comp=Z,26nm,0.5s
ULM   Lac du Bonnet    39.52 350  IAmb  IAmb  01 09 46.6
      comp=Z,26nm,0.8s
NVAR  Mina Array Bea   39.52 318  P     P     01 09 47.9 +1.0
      comp=Z,12nm,0.6s,baz=130,slow=7.4,SNR=53
NVAR                              PcP   PcP   01 11 51.0 +0.7
      comp=Z,8.5nm,0.9s,baz=144,slow=4.5,SNR=11
NVAR                              ScP   ScP   01 15 20.5 +0.8
      comp=Z,1.4nm,0.7s,baz=116,slow=5.1,SNR=4.2
      comp=Z,12nm,0.6s
LHV   Little Huntoon   39.55 318  IAmb  IAmb  01 09 51.9
      comp=Z,20nm,0.8s
GBN   Guysborough      39.60  27  IAmb  IAmb  01 09 49.6
      comp=Z,83nm,1.2s
KVN   Kaiserville      39.74 319  IAmb  IAmb  01 09 51.2
      comp=Z,40nm,1.4s
RYN   Ryan             39.78 318  IAmb  IAmb  01 09 51.9
      comp=Z,36nm,1.4s
PRPB  Parauapebas      39.80 114  eP    P     01 09 48.7 -0.5
TMAB  Tom-Au,PA,Br     39.87 108  eP    P     01 09 49.7  0.0
DGMT  Dagmar           39.94 341  IAmb  IAmb  01 09 52.5
      comp=Z,43nm,0.7s
DGMT  Dagmar           39.94 341  P     P     01 09 51.1 +1.2
      baz=151
BMN   Battle Mountai   40.00 322  P     P     01 09 50.3 -0.4
PMPB  Monarch Peak     40.07 314  IAmb  IAmb  01 09 53.8
      comp=Z,34nm,0.9s
SALV  Santo Antonio    40.31 132  eP    P     01 09 52.9 -0.4
HLID  Hailey           40.43 327  P     P     01 09 54.8 +0.6
HLID  Hailey           40.43 327  P     P     01 09 54.5 +0.3
      baz=134,SNR=18
YERR  Yerington        40.44 318  IAmb  IAmb  01 09 57.3
      comp=Z,50nm,1.5s
BOZ   Bozeman (W)      40.52 332  P     P     01 09 55.4 +0.5
      baz=139,SNR=16
MCMT  McKenzie Canyo   40.53 330  P     P     01 09 56.0 +1.0
CMB   Columbia Colle   40.69 316  P     P     01 09 57.3 +1.0
MPK   Martis Peak      41.12 318  P     P     01 09 59.9 -0.2
MPK                               IAmb  IAmb  01 10 03.8
      comp=Z,35nm,1.1s
SNDB  Serra Nova Dou   41.39 123  eP    P     01 10 01.7 -0.4
AC02  Maricunga        41.39 157  P     P     01 10 02.6 +0.1
EGMT  Eagleton         41.59 336  P     P     01 10 03.4  0.0
      baz=143
BEKR  Beckworth        41.65 319  P     P     01 10 05.1 +0.9
MSO   Missoula         42.51 331  P     P     01 10 11.0  0.0
      baz=137
SMTB  Santa Maria do   42.98 117  eP    P     01 10 14.9 -0.2
ROSB  Rosrio           43.77 107  eP    P     01 10 20.8 -0.5
PEXB  Peixe            43.94 121  eP    P     01 10 21.8 -0.9
KMRM  Mail Ridge       44.03 317  IAmb  IAmb  01 10 26.4
      comp=Z,52nm,1.3s
J05D  Fort Rock, OR    44.10 322  P     P     01 10 23.8  0.0
      baz=125
YBH   Yreka Blue Hor   44.16 320  P     P     01 10 23.0 -1.2
      comp=Z,2.9nm,0.6s,baz=127,slow=5.4,SNR=18
      comp=Z,2.9nm,0.6s
L04D  Klamath Falls    44.16 321  IAmb  IAmb  01 10 27.2
      comp=Z,43nm,1.4s
L04D  Klamath Falls    44.16 321  P     P     01 10 24.3  0.0
      baz=123,SNR=5.7
DRLN  Deer Lake        44.29  26  P     P     01 10 25.5 +0.5
DRLN                              IAmb  IAmb  01 10 26.5
      comp=Z,180nm,1.1s
J04D  Umpqua Nationa   44.61 322  IAmb  IAmb  01 10 30.0
      comp=Z,25nm,0.7s
J04D  Umpqua Nationa   44.61 322  P     P     01 10 27.9 +0.1
      baz=124
NEW   Newport          45.05 331  P     P     01 10 30.5 -0.5
      baz=134
I04A  Tendick Farm,    45.10 322  P     P     01 10 31.1 -0.4
      baz=124
K02D  Willamette Mer   45.27 320  P     P     01 10 30.8 -2.1
      baz=122
G05D  Wamic, OR        45.30 325  P     P     01 10 34.1 +1.1
      baz=127
HOOD  Mount Hood Mea   45.54 325  IAmb  IAmb  01 10 37.3
      comp=Z,35nm,0.9s
I03D  Drain, OR        45.61 322  P     P     01 10 36.2 +0.8
      baz=123
J01E  Myrtle Point     45.68 321  IAmb  IAmb  01 10 40.1
      comp=Z,54nm,1.4s
J01E  Myrtle Point     45.68 321  P     P     01 10 36.4 +0.5
      baz=122
H04D  Lebanon          45.70 323  P     P     01 10 36.5 +0.3
      baz=124
SCHQ  Schefferville    45.70  15  P     P     01 10 35.6 -0.4
      comp=Z,116nm,0.8s,baz=217,slow=6.0,SNR=166
SCHQ                              LR    LR    01 29 35.0
      comp=Z,71nm,18.6s,baz=211,slow=36
SCHQ  Schefferville    45.70  15  P     P     01 10 35.7 -0.4
SCHQ                              IAmb  IAmb  01 10 36.6
      comp=Z,134nm,0.9s
F05D  White Salmon     45.77 325  P     P     01 10 37.1 +0.4
      baz=127
KEBM  Edson Butte      45.78 320  IAmb  IAmb  01 10 40.7
      comp=Z,64nm,1.2s
BDFB  Brasilia         46.05 125  P     P     01 10 38.8 -0.6
      comp=Z,13nm,0.6s,baz=283,slow=8.9,SNR=24
      comp=Z,13nm,0.6s
BDFB  Brasilia         46.05 125  eP    P     01 10 38.9 -0.5
I02E  Swisshome, OR    46.14 322  P     P     01 10 39.7 +0.2
      baz=123
G03D  McMinnville, O   46.40 323  P     P     01 10 42.0 +0.4
      baz=124
ITRB  Iturama          46.63 131  eP    P     01 10 43.1 -0.7
CPUP  Villa Florida    46.66 144  P     P     01 10 43.3 -0.6
      comp=Z,4.8nm,0.6s,baz=338,slow=8.6,SNR=18
CPUP                              PcP   PcP   01 12 14.9 +0.8
      comp=Z,5.7nm,0.8s,baz=304,slow=4.2,SNR=6.5
      comp=Z,4.8nm,0.6s
CPUP  Villa Florida    46.66 144  eP    P     01 10 43.5 -0.3
CPUP  Villa Florida    46.66 144  P     P     01 10 43.2 -0.6
CPUP                              pP    pP    01 11 27.6 -0.6
CPUP                              x     x     01 12 14.6
NBPS  Pedro II - PI    46.79 107  eP    P     01 10 44.8 -0.3
SDBA  SAO DESIDERIO    46.97 119  eP    P     01 10 44.9 -1.6
TRCB  Terra Rica       47.04 137  eP    P     01 10 45.9 -1.0
PCMB  Pacaembu         47.20 134  eP    P     01 10 47.1 -1.0
IPMB  Ipameri, GO      47.22 128  eP    P     01 10 47.4 -1.0
D03D  Eldon            47.65 326  P     P     01 10 50.7 -0.5
      baz=126
BO01  Tunca            47.72 164  P     P     01 10 53.1 +1.2
NBMO  Morrinhos-CE     47.75 105  eP    P     01 10 50.7 -1.8
PTGB  Pitanga          48.73 138  eP    P     01 10 59.6 -0.3
JANB  Januaria         48.77 122  eP    P     01 10 59.5 -0.8
BB19B Bebedouro        48.82 131  eP    P     01 10 59.6 -1.0
NBPB  Pedra_Branca-C   48.92 108  eP    P     01 11 00.9 -0.5
ITQB  Itaqui           49.63 146  P     P     01 11 06.4  0.0
ITQB  Itaqui           49.63 146  eP    P     01 11 06.7 +0.2
NBPN  Ponto Novo - B   50.39 115  eP    P     01 11 11.5 -1.0
ITAB  Concordia        50.45 140  P     P     01 11 12.4 -0.3
ITAB                              IAmb  IAmb  01 11 12.4
      comp=Z,29nm,0.9s
ITAB  Concordia        50.45 140  eP    P     01 11 11.8 -0.8
VAO   Valinhos         51.15 132  eP    P     01 11 17.4 -0.7
CPSB  Cacapava Do Su   51.97 144  eP    P     01 11 23.7 -0.2
GDU01 Guandu, BA       52.17 117  eP    P     01 11 25.4 -0.3
PARB  Paraibuna        52.34 132  eP    P     01 11 25.9 -0.9
RCBR  Riachuelo        52.47 107  LR    LR    01 34 25.4
      comp=Z,32nm,19.7s,baz=73,slow=36
RCBR  Riachuelo        52.47 107  eP    P     01 11 27.5 -0.5
CNLB  Canela           52.72 141  eP    P     01 11 28.9 -0.7
PLTB  Pedras Altas     52.90 145  IAmb  IAmb  01 11 31.1
      comp=Z,23nm,0.8s
PLTB  Pedras Altas     52.90 145  eP    P     01 11 30.6 -0.2
SJMB  Sao Joao De Ma   53.20 124  eP    P     01 11 32.7 -0.5
TER01 Tubaro-SC        53.26 139  eP    P     01 11 32.8 -0.6
GUA01 Guaratinga, BA   53.29 121  eP    P     01 11 33.3 -0.5
NBAN  Anadia - AL      53.47 111  eP    P     01 11 34.5 -0.7
FRB   Frobisher Bay    53.55   9  LR    LR    01 33 39.5
      comp=Z,66nm,19.3s,baz=216,slow=35
PLCA  Paso Flores      53.85 166  P     P     01 11 38.1 +0.6
      comp=Z,12nm,0.8s,baz=343,slow=7.4,SNR=22
PLCA                              PcP   PcP   01 12 41.5 +0.9
      comp=Z,6.1nm,0.8s,baz=328,slow=4.5,SNR=6.7
      comp=Z,12nm,0.8s
PLCA  Paso Flores      53.85 166  eP    P     01 11 38.6 +1.0
PLCA  Paso Flores      53.85 166  P     P     01 11 38.6 +1.0
PLCA                              pP    pP    01 12 24.1 +1.1
PLCA                              sP    PcP   01 12 41.4 +0.9
RIB01 Linhares ES      54.15 124  eP    P     01 11 39.6 -0.5
CAM01 Campos-RJ        54.47 127  eP    P     01 11 41.9 -0.4
YKA   Yellowknife Ar   54.96 344  P     P     01 11 44.2 -0.9
      comp=Z,3.8nm,0.4s,baz=132,slow=8.3,SNR=78
YKA                               ScP   ScP   01 16 22.9 -0.7
      comp=Z,0.7nm,0.8s,baz=139,slow=4.3,SNR=4.3
YKA                               LR    LR    01 37 26.0
      comp=Z,42nm,19.5s,baz=324,slow=38
      comp=Z,3.8nm,0.4s
DLBC  Dease Lake       57.48 334  IAmb  IAmb  01 12 05.0
      comp=Z,22nm,1.1s
S34M  Telegraph Cree   57.66 333  P     P     01 12 03.9 -0.4
      baz=124
NUUK  Nuuk             57.71  17  i P   P     01 12 02.7 -1.8
COYC  Coyhaique        58.14 169  IAmb  IAmb  01 12 10.0
      comp=Z,19nm,0.8s
COYC  Coyhaique        58.14 169  P     P     01 12 09.1 +1.3
TGTN  Hyland Airport   58.66 338  P     P     01 12 11.7 +0.4
      baz=129
P33M  Teslin, Yukon    59.67 335  P     P     01 12 18.0 -0.3
      baz=124,SNR=6.2
SFJD  Kangerlussuaq    60.16  15  LR    LR    01 37 46.7
      comp=Z,45nm,19.9s,baz=228,slow=35
SFJD  Kangerlussuaq    60.16  15  i P   P     01 12 18.4 -2.9
SFJD                              IAmb  IAmb  01 12 20.4
      comp=Z,17nm,0.7s
MMPY  Sheldon Lake,    60.45 338  P     P     01 12 23.6 +0.2
      baz=126,SNR=11
WHY   Whitehorse       60.77 335  P     P     01 12 25.2 -0.6
      baz=122
PLBC  Pleasant Camp    60.80 333  P     P     01 12 26.2 +0.4
      baz=120
DY2G  Dye2             60.95  17  i P   P     01 12 24.2 -2.8
DY2G                              IAmb  IAmb  01 12 26.2
      comp=Z,22nm,0.6s
FARO  Faro, Yukon      61.01 337  P     P     01 12 26.8 -0.4
      baz=124
M31M  Drury Creek, Y   61.41 336  P     P     01 12 29.7 -0.2
      baz=123
N31M  Braeburn, Yuko   61.58 335  P     P     01 12 30.9 -0.2
      baz=121,SNR=6.0
HYT   Haines Junctio   61.97 334  P     P     01 12 34.3 +0.5
HYT   Haines Junctio   61.97 334  P     P     01 12 34.0 +0.2
      baz=119
N30M  Aishikik Lake    62.11 335  P     P     01 12 34.6  0.0
      baz=120,SNR=6.6
PNL   Peninsula        62.26 332  P     P     01 12 35.5 -0.1
      baz=117
YUK6  Outpost Mounta   62.39 334  P     P     01 12 36.7  0.0
      baz=118
BCPM  Bancas Point     62.49 333  IAmb  IAmb  01 12 49.9
      comp=Z,21nm,0.6s
M30M  Minto, Yukon     62.55 336  P     P     01 12 37.0 -0.6
      baz=121,SNR=12
ISOG  Isortoq, Green   62.62  20  i P   P     01 12 35.8 -2.0
ISOG                              IAmb  IAmb  01 12 36.7
      comp=Z,24nm,0.6s
YUK4  Talbot Arm       62.70 334  P     P     01 12 38.9 +0.2
      baz=118
PINM  Pinnacle         62.83 333  P     P     01 12 39.4 -0.1
      baz=116
PCA   Pinnacle         62.84 333  IAmb  IAmb  01 12 47.7
      comp=Z,10nm,0.5s
ANGG  Ammassalik, Gr   63.11  20  i P   P     01 12 38.8 -2.2
ANGG                              IAmb  IAmb  01 12 39.6
      comp=Z,15nm,0.8s
NUUG  Nuugaatsiaq      63.17  11  i P   P     01 12 40.6 -0.8
NUUG                              IAmb  IAmb  01 12 41.5
      comp=Z,13nm,0.9s
RES   Resolute Bay     63.36 357  LR    LR    01 41 44.9
      comp=Z,33nm,19.6s,baz=60,slow=37
TABL  Table Mountain   63.38 333  IAmb  IAmb  01 12 44.6
      comp=Z,9.8nm,0.8s
YAH   Yahtse           63.62 333  IAmb  IAmb  01 12 46.7
      comp=Z,15nm,1.0s
YUK3  Moose Creek      63.67 334  P     P     01 12 44.8 -0.4
      baz=117,SNR=7.2
CTG   Chitna Glacier   63.70 333  P     P     01 12 45.3 +0.1
      baz=116
BVCY  Beaver Creek     64.13 335  P     P     01 12 47.8 -0.1
      baz=117
DAWY  Dawson           64.31 337  P     P     01 12 48.2 -0.8
      baz=119
EPYK  Eagle Plains     64.52 340  IAmb  IAmb  01 12 51.4
      comp=Z,13nm,0.9s
EPYK  Eagle Plains     64.52 340  P     P     01 12 50.0 -0.3
      baz=122,SNR=12
M27K  Edge Creek, AK   64.53 335  P     P     01 12 50.8 +0.2
      baz=116
I29M  Ogilvie Camp,    64.55 338  P     P     01 12 50.3 -0.2
      baz=120
ICESG Greenland Ices   64.58  17  i P   P     01 12 49.0 -2.0
ICESG                             IAmb  IAmb  01 12 50.2
      comp=Z,16nm,0.7s
INK   Inuvik           64.60 342  LR    LR    01 43 02.6
      comp=Z,30nm,20.6s,baz=150,slow=38
INK   Inuvik           64.60 342  IAmb  IAmb  01 12 51.8
      comp=Z,26nm,1.1s
INK   Inuvik           64.60 342  P     P     01 12 50.4 -0.3
      baz=126,SNR=17
MCARA McCarthy VSAT    64.61 333  IAmb  IAmb  01 12 52.7
      comp=Z,18nm,1.2s
MCARA McCarthy VSAT    64.61 333  P     P     01 12 51.4 +0.5
      baz=114
L27K  Beaver Creek,    64.82 335  IAmb  IAmb  01 12 53.5
      comp=Z,15nm,0.8s
L27K  Beaver Creek,    64.82 335  P     P     01 12 52.4  0.0
      baz=116,SNR=23
A36M  Sachs Harbour    64.93 347  P     P     01 12 51.6 -1.2
      baz=136,SNR=6.1
M26K  Nabesna, AK      65.02 334  P     P     01 12 53.5 -0.1
      baz=114
BMRM  Bremner River    65.15 333  P     P     01 12 55.0 +0.4
      baz=112
EGAK  Eagle            65.33 337  P     P     01 12 54.8 -0.7
      baz=117,SNR=7.3
K27K  Chicken          65.34 336  P     P     01 12 55.9 +0.2
      baz=116
N25K  Chitina, Valde   65.40 333  P     P     01 12 56.5 +0.4
      baz=113,SNR=6.8
L26K  Log Cabin Wild   65.43 335  P     P     01 12 56.4 +0.1
      baz=114
EYAK  Cordova Ski Ar   65.52 332  P     P     01 12 57.0 +0.2
      baz=111
KLU   Klutina          65.94 333  P     P     01 12 59.6  0.0
      baz=111,SNR=8.7
HARP  HAARP            65.94 334  P     P     01 12 59.1 -0.4
      baz=112
DOT   Dot Lake         65.98 335  IAmb  IAmb  01 13 00.9
      comp=Z,18nm,0.8s
SCRK  Sand Creek       66.08 336  P     P     01 13 00.5  0.0
      baz=114,SNR=11
J26L  Joseph Creek     66.14 336  P     P     01 13 01.1 +0.3
      baz=115,SNR=21
M24K  Tolsona, Glenn   66.28 333  P     P     01 13 02.0 +0.3
      baz=111
PAX   Paxson           66.30 334  P     P     01 13 01.5 -0.3
      baz=112,SNR=13
RIDG  Independent Ri   66.34 335  P     P     01 13 02.1 +0.1
      baz=113,SNR=21
SCM   Sheep Creek Mo   66.69 333  P     P     01 13 04.3 -0.1
      baz=110
K24K  Donnelly Dome    66.74 335  P     P     01 13 04.5 -0.1
      baz=112,SNR=12
M23K  Glacier View     66.85 333  P     P     01 13 05.0 -0.3
      baz=110
J25K  Salcha River,    66.89 336  IAmb  IAmb  01 13 06.8
      comp=Z,13nm,0.8s
J25K  Salcha River,    66.89 336  P     P     01 13 05.6 +0.1
      baz=113,SNR=21
KNK   Knik Glacier     67.06 332  IAmb  IAmb  01 13 07.5
      comp=Z,19nm,0.9s
KNK   Knik Glacier     67.06 332  P     P     01 13 06.2 -0.4
      baz=109,SNR=8.3
SUMG  Summit           67.07  14  i P   P     01 13 05.0 -2.0
SUMG                              i P   P     01 13 05.0 -2.0
SUMG                              IAmb  IAmb  01 13 06.5
      comp=Z,114nm,2.2s
SEW   Seward           67.11 331  IAmb  IAmb  01 13 07.4
      comp=Z,13nm,0.8s
SEW   Seward           67.11 331  P     P     01 13 06.4 -0.5
      baz=107
SML   Sawmill          67.13 333  P     P     01 13 06.5 -0.6
      baz=109,SNR=6.5
WAT6  Susitna Watana   67.13 334  P     P     01 13 06.7 -0.5
      baz=110,SNR=18
DHY   Denali Highway   67.14 334  P     P     01 13 06.7 -0.6
      baz=111
O22K  Cooper Landing   67.35 331  P     P     01 13 08.1 -0.4
      baz=107
GHO   Glory Hole Cre   67.38 333  IAmb  IAmb  01 13 09.4
      comp=Z,24nm,0.9s
PMR   Palmer           67.42 332  P     P     01 13 08.5 -0.3
      baz=108
HDA   Harding Lake     67.45 336  IAmb  IAmb  01 13 09.6
      comp=Z,22nm,0.8s
HDA   Harding Lake     67.45 336  P     P     01 13 08.5 -0.4
      baz=112,SNR=24
RC01  Rabbit Creek A   67.54 332  IAmb  IAmb  01 13 10.5
      comp=Z,19nm,1.0s
RC01  Rabbit Creek A   67.54 332  P     P     01 13 09.4 -0.3
      baz=108,SNR=6.0
IL31                   67.56 336  IAmb  IAmb  01 13 09.8
      comp=Z,12nm,0.8s
ILAR  Eielson Array    67.56 336  P     P     01 13 09.2 -0.5
      comp=Z,9.5nm,0.8s,baz=130,slow=4.2,SNR=88
ILAR                              PP    PP    01 15 39.4 -1.8
      comp=Z,1.3nm,0.9s,baz=101,slow=6.1,SNR=5.0
      comp=Z,9.5nm,0.8s
WAT1  Susitna Watana   67.56 334  P     P     01 13 09.4 -0.4
      baz=109
BRSE  Bradley Lake S   67.63 330  P     P     01 13 09.9 -0.3
      baz=106
BRLK  Bradley Lake     67.71 330  IAmb  IAmb  01 13 11.6
      comp=Z,21nm,1.0s
RND   Reindeer         67.89 334  IAmb  IAmb  01 13 13.0
      comp=Z,58nm,0.8s
POKR  Poker Plat Res   67.90 336  P     P     01 13 11.6 -0.2
      baz=111
COLA  College          67.98 336  P     P     01 13 12.3 +0.1
COLA                              IAmb  IAmb  01 13 12.7
      comp=Z,15nm,0.8s
COLA  College          67.98 336  P     P     01 13 11.9 -0.3
      baz=111
TCOL  CIGO, UAF Yank   67.98 336  IAmb  IAmb  01 13 12.6
      comp=Z,14nm,0.8s
TCOL  CIGO, UAF Yank   67.98 336  P     P     01 13 11.8 -0.5
      baz=111
MCK   McKinley         68.03 335  IAmb  IAmb  01 13 13.6
      comp=Z,27nm,1.0s
MCK   McKinley         68.03 335  P     P     01 13 12.2 -0.4
      baz=109,SNR=13
HOM   Homer            68.05 330  P     P     01 13 12.9 +0.2
      baz=105
KDAK  Kodiak Island    68.05 328  P     P     01 13 12.7 -0.1
      baz=104
CAPN  Captain Cook N   68.11 331  P     P     01 13 12.6 -0.5
      baz=106
CUT   Chulitna         68.18 333  P     P     01 13 13.5 -0.1
      baz=108
OHAK  Old Harbor       68.29 327  P     P     01 13 14.5 +0.1
      baz=103
H24K  Noodor Dome      68.34 337  P     P     01 13 14.4 -0.2
      baz=111,SNR=15
NEA2  Nenana           68.37 335  IAmb  IAmb  01 13 15.2
      comp=Z,14nm,0.8s
NEA2  Nenana           68.37 335  P     P     01 13 14.3 -0.4
      baz=110
TRF   Thorofare Moun   68.51 334  IAmb  IAmb  01 13 16.6
      comp=Z,20nm,1.0s
TRF   Thorofare Moun   68.51 334  P     P     01 13 15.3 -0.5
      baz=108,SNR=13
O20K  Slope Mountain   68.63 330  P     P     01 13 16.3 -0.2
      baz=104
I23K  Minto, Yukon-K   68.67 336  IAmb  IAmb  01 13 17.1
      comp=Z,14nm,0.6s
I23K  Minto, Yukon-K   68.67 336  P     P     01 13 16.6  0.0
      baz=110,SNR=17
Q19K  Cape Douglas,    68.86 329  P     P     01 13 17.0 -0.9
      baz=103
H23K  Yukon River      68.97 337  P     P     01 13 18.2 -0.3
      baz=110,SNR=7.2
BPAW  Bear Paw Mtn.    69.01 335  IAmb  IAmb  01 13 19.2
      comp=Z,28nm,1.0s
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BPAW	Bear Paw Mtn.	69.01	335	P	P	01 13 18.1	-0.6
	baz=108,SNR=22						
PPLA	Purkeypile	69.17	333	IAmb	IAmb	01 13 20.2	
	comp=Z,17nm,0.8s						
PPLA	Purkeypile	69.17	333	P	P	01 13 19.2	-0.7
	baz=106,SNR=9.6						
CAST	Castle Rocks	69.27	334	P	P	01 13 19.3	-1.0
	baz=106						
M20K	Styx River	69.33	332	IAmb	IAmb	01 13 20.8	
	comp=Z,12nm,0.7s						
M20K	Styx River	69.33	332	P	P	01 13 20.2	-0.6
	baz=105,SNR=13						
O19K	Port Alsworth	69.48	330	P	P	01 13 21.2	-0.4
	baz=103						
CHUM	Lake Minchumin	69.50	334	P	P	01 13 20.9	-0.8
	baz=106						
COLD	Coldfoot	69.69	338	P	P	01 13 23.5	+0.7
	baz=109,SNR=6.9						
N19K	Bonanza Creek	69.70	331	IAmb	IAmb	01 13 23.4	
	comp=Z,15nm,0.8s						
N19K	Bonanza Creek	69.70	331	P	P	01 13 22.5	-0.6
	baz=103,SNR=6.7						
I21K	Tanana	69.74	336	P	P	01 13 22.5	-0.6
	baz=107						
P18K	Big Mountain,	69.76	329	P	P	01 13 22.5	-0.9
	baz=102						
L20K	Farewell, AK	69.82	333	P	P	01 13 22.9	-0.8
	baz=104,SNR=22						
M19K	Big River Lodg	69.91	332	P	P	01 13 23.7	-0.5
	baz=104						
TOLK	Toolik Lake Re	69.95	340	P	P	01 13 24.2	-0.3
	baz=110,SNR=7.9						
K20K	Telida	70.12	334	IAmb	IAmb	01 13 25.8	
	comp=Z,21nm,1.2s						
K20K	Telida	70.12	334	P	P	01 13 24.6	-0.9
	baz=104,SNR=13						
L19K	White Mountain	70.19	332	P	P	01 13 25.1	-0.8
	baz=103,SNR=6.0						
H21K	Melozitna Rive	70.20	336	P	P	01 13 25.2	-0.8
	baz=106,SNR=8.0						
N18K	Kilae Creek	70.35	331	P	P	01 13 26.3	-0.7
	baz=102,SNR=7.0						
J20K	Nowinta River	70.36	334	P	P	01 13 26.2	-0.7
	baz=105,SNR=14						
TTA	Tatalina	70.88	333	P	P	01 13 29.2	-1.0
	baz=102,SNR=9.4						
CHGN	Chignik	70.90	326	IAmb	IAmb	01 13 31.1	
	comp=Z,25nm,0.8s						
CHGN	Chignik	70.90	326	P	P	01 13 29.9	-0.3
	baz=98,SNR=5.3						
MORF	Marmelete	72.86	54	eP	P	01 13 45.5	+3.1
A21K	Barrow	73.08	341	IAmb	IAmb	01 13 43.8	
	comp=Z,24nm,1.2s						
A21K	Barrow	73.08	341	P	P	01 13 42.5	-0.4
	baz=104,SNR=5.3						
PMTG	Montargil	73.15	53	eP	P	01 13 43.6	-0.4
	comp=Z,32nm,1.5s						
EVO	Evora	73.33	53	eP	P	01 13 44.3	-0.8
	comp=Z,30nm,1.8s						
PVIS	Viseu	73.38	51	eP	P	01 13 45.1	-0.3
PBDV	Barranco-do-Ve	73.44	54	eP	P	01 13 46.2	+0.4
POLO	Lamas de Olo	73.44	50	eP	P	01 13 45.4	-0.4
PVRL	Vila Real	73.50	50	eP	P	01 13 45.4	-0.7
PVAQ	Vaqueiros	73.60	54	eP	P	01 13 46.7	0.0
PESTR	Estremoz	73.65	53	eP	P	01 13 46.8	-0.2
DAG	Danmarks Havn	73.68	13	i P	P	01 13 43.0	-3.4
DAG				i P	P	01 13 43.0	-3.4
DAG				IAmb	IAmb	01 13 45.7	
	comp=Z,5.6nm,0.6s						
PCBR	Castelo Branco	73.71	52	eP	P	01 13 46.9	-0.4
PMRV	Marv??o	73.79	52	eP	P	01 13 48.1	+0.3
MVO	Moncorvo	74.02	50	eP	P	01 13 48.8	-0.4
	comp=Z,34nm,1.9s						
PBAR	Barrancos	74.11	53	eP	P	01 13 49.7	+0.1
PBRG	Braganca	74.22	50	eP	P	01 13 50.3	0.0
UNV	Unalaska Valle	75.36	323	P	P	01 13 56.7	+0.2
	baz=90						
ESDC	Sonseca Array	76.43	52	P	P	01 14 02.0	-0.9
	comp=Z,6.3nm,0.9s,baz=282,slow=5.6,SNR=33						
	comp=Z,6.3nm,0.9s						
MDT	Midelt	76.43	59	LR	LR	01 43 12.2	
	comp=Z,33nm,21.2s,baz=282,slow=32						
ORCD	Orcadas	79.00	161	P	P	01 14 16.9	+0.5
ORCD				IAmb	IAmb	01 14 17.2	
	comp=Z,25nm,1.0s						
DBIC	Dimbokro	79.77	85	P	P	01 14 20.5	-1.1
	comp=Z,1.2nm,0.3s,baz=300,slow=3.7,SNR=12						
	comp=Z,1.2nm,0.3s						
SPITS	Spitsbergen Ar	81.27	12	LR	LR	01 50 03.1	
	comp=Z,47nm,19.6s,baz=228,slow=35						
DOU	Dourbes	81.47	41	dP	P	01 14 28.4	-1.6
	comp=Z,5.2nm,1.0s						
DOU				dpP	pP	01 15 17.6	-1.7
BMRD	Maredsous	81.55	40	dP	P	01 14 29.5	-0.9
BGES	Gesves	81.74	40	dP	P	01 14 30.2	-1.2
	comp=Z,5.3nm,1.0s						
BGES				dPcP	PcP	01 14 38.2	+1.6
RCHB	Rochefort	81.86	41	dP	P	01 14 31.0	-1.1
	comp=Z,3.9nm,1.0s						
BCLA	Clavier	81.87	40	dP	P	01 14 31.0	-1.1
	comp=Z,5.8nm,1.0s						
BCLA				dPcP	PcP	01 14 38.5	+1.4
MEM	Membach	82.29	40	dP	P	01 14 34.5	+0.3
WLF	Walferdange	82.53	41	P	P	01 14 34.5	-1.0
WLF				IAmb	IAmb	01 14 35.8	
	comp=Z,18nm,1.1s						
WLF	Walferdange	82.53	41	dP	P	01 14 34.8	-0.7
	comp=Z,9.3nm,1.1s						
WLF				dPcP	PcP	01 14 39.8	-0.3
NB2	NORSAR Subarra	83.35	29	P	P	01 14 38.6	-1.0
	comp=Z,1.6nm,0.8s,baz=282,slow=5.1						
NOA	NORSAR Array B	83.35	29	P	P	01 14 38.4	-1.2
	comp=Z,3.3nm,0.9s,baz=284,slow=5.2,SNR=9.7						
	comp=Z,3.3nm,0.9s						
HFS	Hagfors	84.75	30	LR	LR	01 47 17.7	
	comp=Z,22nm,20.9s,baz=320,slow=32						
TORD	Torodi Ar. Bea	84.95	78	P	P	01 14 46.3	-2.2
	comp=Z,0.6nm,0.5s,baz=285,slow=5.2,SNR=22						
	comp=Z,0.6nm,0.5s						
TUE	Stuetta	85.20	44	P	P	01 14 49.4	0.0
DAVA	Damuels	85.40	43	i P	P	01 14 49.3	-1.0
	comp=Z,12nm,0.8s,SNR=6.5						
GRFO	Grafenberg	85.76	40	P	P	01 14 51.0	-0.8
RETA	Reutte	85.94	42	eP	P	01 14 51.7	-1.1
	comp=Z,10nm,1.1s						
BILL	Bilibino	86.00	339	P	P	01 14 52.0	-0.5
BILL				IAmb	IAmb	01 14 53.7	
	comp=Z,16nm,1.1s						
FETA	Feichten	86.02	43	i P	P	01 14 52.2	-1.1
	comp=Z,7.7nm,1.1s,SNR=5.5						
MOTA	Moosalm	86.20	43	eP	P	01 14 53.0	-1.2
	comp=Z,5.0nm,1.0s						
SQTA	Sankt Quirin	86.29	43	eP	P	01 14 53.7	-0.9
	comp=Z,5.8nm,1.2s						
NKC	Novy Kostel	86.41	40	eP	P	01 14 52.1	-2.9
CLL	Collm	86.49	38	P	P	01 14 54.5	-0.8
CLL	Collm	86.49	38	i P	P	01 14 54.7	-0.6
	comp=Z,8.0nm,1.0s						
CLL				epP	pP	01 15 46.0	+0.9
CLL				ePP	PP	01 18 23.0	+3.4
	comp=Z,17nm,1.5s						
CLL				ePS	PS	01 26 36.0	-5.3
CLL				eSS	SS	01 30 54.0	-4.9
CLL				eSSS	SSS	01 34 36.0	
ARCES	ARCESS Array B	86.51	19	P	P	01 14 53.6	-1.4
	comp=Z,1.0nm,0.5s,baz=287,slow=4.4,SNR=13						
ARCES				PP	PP	01 18 15.0	-4.2
	comp=Z,5.8nm,1.1s,baz=300,slow=11,SNR=2.8						
	comp=Z,1.0nm,0.5s						
WATA	Walderalm	86.51	43	eP	P	01 14 59.3	+3.6
	comp=Z,3.3nm,1.0s						
WTTA	Wattenberg	86.57	43	eP	P	01 14 55.3	-0.7
	comp=Z,2.1nm,1.0s						
BRG	Berggiesshubel	87.17	39	eP	P	01 14 57.5	-1.1
BRG				Amp		01 15 01.5	
	comp=Z,5.1nm,1.1s						
BRG				PP	PP	01 18 25.6	+0.5
BRG				Amp		01 18 28.1	
	comp=Z,9.3nm,1.6s						
ABTA	Abfaltersbach	87.27	43	i P	P	01 14 58.5	-0.8
	comp=Z,9.6nm,1.0s,SNR=8.0						
KHC	Kasperske Hory	87.39	40	eP	P	01 14 58.4	-1.3
KEST	Kesra	87.42	54	P	P	01 14 59.0	-1.3
	comp=Z,2.7nm,0.8s,baz=230,slow=7.9,SNR=3.9						
	comp=Z,2.7nm,0.8s						
GERES	GERESS Array B	87.53	41	P	P	01 14 59.2	-1.3
	comp=Z,1.1nm,0.8s,baz=323,slow=2.0,SNR=10						
GERES				PP	PP	01 18 24.3	-3.8
	comp=Z,0.2nm,0.4s,baz=293,slow=6.9,SNR=4.4						
	comp=Z,1.1nm,0.8s						
KBA	Koelnbreinsper	87.75	42	eP	P	01 15 00.8	-0.9
	comp=Z,8.7nm,1.3s						
PRU	Pruhonice	87.77	39	eP	P	01 15 00.8	-0.7
BIOA	Bad Ischl, Aus	87.78	42	eP	P	01 15 00.7	-1.0
CKRC	Cesky Krumlov	87.93	41	eP	P	01 15 00.9	-1.4
MYKA	Terra Mystica	88.05	43	eP	P	01 15 01.9	-1.1
	comp=Z,5.9nm,1.0s						
MOA	Molln	88.15	42	eP	P	01 15 02.4	-1.0
	comp=Z,4.3nm,1.4s						
CADS	Cadrg	88.22	43	eP	P	01 15 02.3	-1.4
UPC	Upice	88.54	39	eP	P	01 15 04.4	-0.7
CHVC	Chvalec	88.54	39	eP	P	01 15 04.1	-1.1
TREC	Trest	88.55	40	eP	P	01 15 04.5	-0.7
OSTC	Ostas	88.65	39	eP	P	01 15 04.4	-1.2
OBKA	Obir	88.69	43	eP	P	01 15 04.8	-1.2
	comp=Z,5.6nm,1.4s						
DPC	Dobruska-Polom	88.77	39	eP	P	01 15 04.6	-1.7
LJU	Ljubljana	88.80	43	eP	P	01 15 05.3	-1.2
SOKA	Soboth	88.97	43	eP	P	01 15 03.9	-3.4
	comp=Z,3.7nm,1.7s						
ARSA	Arzberg	89.13	42	eP	P	01 15 07.0	-1.0
	comp=Z,2.2nm,0.8s						
KRLC	Kraliky	89.14	39	eP	P	01 15 06.9	-1.1
CONA	Conrad Observa	89.17	41	eP	P	01 15 07.2	-1.0
	comp=Z,3.5nm,0.9s						
VRAC	Vranov	89.24	40	LR	LR	01 49 30.6	
	comp=Z,42nm,19.5s,baz=275,slow=32						
LEGS	Legarje	89.36	43	eP	P	01 15 08.0	-1.1
RONA	Rosalia, Austr	89.51	41	eP	P	01 15 09.0	-0.8
MODS	Modra-Piesok	89.95	41	eP	P	01 15 11.6	-0.1
FINES	FINESS Array B	90.05	26	P	P	01 15 10.4	-1.4
	comp=Z,4.6nm,1.0s,baz=280,slow=11,SNR=5.6						
FINES				PP	PP	01 18 47.4	-0.2
	comp=Z,5.0nm,1.0s,baz=291,slow=5.3,SNR=5.7						
	comp=Z,4.6nm,1.0s						
BELA	Belgrano 2	93.65	171	P	P	01 15 27.2	-0.9
BELA				IAmb	IAmb	01 15 29.5	
	comp=Z,6.3nm,1.0s						
MA2	Magadan	96.01	335	LR	LR	02 03 19.8	
	comp=Z,15nm,21.7s,baz=112,slow=38						
AKASG	Malin Array Be	96.30	35	PP	PP	01 19 34.4	-2.1
	comp=Z,0.4nm,0.4s,baz=306,slow=6.5,SNR=6.6						
AKASG				LR	LR	01 56 01.8	
	comp=Z,32nm,21.6s,baz=270,slow=33						
NRIK	Noril'sk	99.21	2	PP	PP	01 19 55.9	-2.1
	comp=Z,0.7nm,0.4s,baz=10,slow=19,SNR=3.6						
BRTR	Keskin Array B	104.14	44	PP	PKiKP	01 20 34.5	+2.2
	comp=Z,0.7nm,0.8s,baz=0.0,slow=5.4,SNR=3.9						
BOSA	Boshof	113.76	116	PKiKP	PKiKP	01 20 50.5	-0.1
	comp=Z,1.4nm,0.8s,baz=263,slow=4.1,SNR=5.1						
ZALV	Zalesovo Beam	114.30	6	PKP	PKPdf	01 20 49.6	-1.2
	comp=Z,0.2nm,0.3s,baz=309,slow=3.4,SNR=3.7						
ZALV				PP	PP	01 21 38.8	-10
	comp=Z,0.7nm,0.5s,baz=337,slow=6.4,SNR=3.8						
SONM	Songino Array	119.94	351	PKP	PKPdf	01 21 01.2	-0.8
	comp=Z,0.7nm,0.4s,baz=38,slow=2.6,SNR=4.6						
MAW	Mawson	120.25	167	PKP	PKPdf	01 21 00.1	-1.6
	comp=Z,2.1nm,0.4s,baz=208,slow=3.5,SNR=8.4						
GEYT	Alibeck	120.28	33	PKP	PKPdf	01 21 02.8	-0.1
	comp=Z,1.6nm,0.4s,baz=255,slow=3.9,SNR=2.8						
MKAR	Makanchi Array	120.97	10	PKP	PKPdf	01 21 02.3	-1.6
	comp=Z,0.6nm,0.6s,baz=36,slow=3.2,SNR=11						
KSRS	Korea Array	121.96	329	PKP	PKPdf	01 21 06.0	0.0
	comp=Z,2.6nm,0.6s,baz=350,slow=1.9,SNR=9.6						
WMQ	Urumqi	124.60	6	eP	PKiKP	01 21 13.3	+1.9
HHC	Hu-ho-hao-te	125.50	344	eP	PKPdf	01 21 09.8	-3.1
NJ2	Nanjing	130.71	332	eP	PKiKP	01 21 24.8	+1.0
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
STKA	Stephens Creek	132.04	237	PKP	PKPdf	01 21 25.7	+0.3
	comp=Z,7.2nm,0.5s,baz=102,slow=3.7,SNR=26						
CD2	Chengdu	136.85	348	PKP	PKPdf	01 21 34.5	0.0
ASAR	Alice Springs	140.48	247	PKhKP	PKPpre	01 21 35.0	
	comp=Z,2.2nm,0.4s,baz=110,slow=3.7,SNR=35						
ASAR				PKP	PKPdf	01 21 41.6	+0.3
	comp=Z,16nm,0.6s,baz=94,slow=2.0,SNR=54						
ASAR				SKPbc	SKPbc	01 24 58.0	-0.5
	comp=Z,6.6nm,0.7s,baz=107,slow=2.8,SNR=26						
WRA	Warramunga Arr	140.63	253	PKhKP	PKPpre	01 21 35.6	
	comp=Z,5.3nm,0.8s,baz=94,slow=3.1,SNR=55						
WRA				PKP	PKPdf	01 21 42.3	+0.7
	comp=Z,18nm,0.6s,baz=91,slow=2.1,SNR=48						
WRA				SKPbc	SKPbc	01 24 58.1	-0.9
	comp=Z,3.3nm,0.6s,baz=92,slow=3.5,SNR=21						
PZH	PanZhiHua	141.52	349	PKP	PKiKP	01 21 44.8	-1.3
HYBB	Hyderabad (bro	147.31	29	ePKPdf	PKPdf	01 21 53.8	+0.4
CMAR	Chiang Mai Arr	149.86	351	PKP	PKPdf	01 21 56.7	-0.7
	comp=Z,0.9nm,0.3s,baz=304,slow=2.8,SNR=5.2						
CMAR				PKPbc	PKPbc	01 22 01.8	-0.7
	comp=Z,3.6nm,0.7s,baz=341,slow=3.6,SNR=3.1						
CMAR	Chiang Mai Arr	149.86	351		PKPdf	01 21 57.2	-0.2
BATI	Baumata	151.12	270	PKPbc	PKiKP	01 22 07.1	+1.1
	comp=Z,40nm,0.6s,baz=312,slow=3.2,SNR=6.2						

KRSC 26 01:06:05.4±0.8, 52°.40N×159°.71E, h40km±10km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.73	15	eP	Pn	01 06 20.6	+1.4
SPN				eS	Sn	01 06 31.5	+2.3
RUS	Russkaya	0.73	273	eP	Pn	01 06 19.9	+0.6
RUS				eS	Sn	01 06 29.7	+0.5
NLC	Nalytchevo	0.81	344	eP	Pn	01 06 21.0	+0.7
NLC				eS	Sn	01 06 31.5	+0.4
DALK	Dalny	0.86	318	eP	Pn	01 06 21.8	+0.8
DALK				eS	Sn	01 06 33.6	+1.2
PET	Petropavlovsk	0.90	315	eP	Pn	01 06 22.3	+0.8
PET				eS	Sn	01 06 34.1	+0.8
MTVR	Mutnovka	0.94	276	eP	Pn	01 06 23.1	+0.9
MTVR				eS	Sn	01 06 35.4	+0.9
UGLR	Uglovaya	0.97	327	i P	Pn	01 06 23.9	+1.2
GRL	Gorelyy	1.01	280	eP	Pn	01 06 24.4	+1.2
SDLR	Sedlovina	1.01	331	eP	Pn	01 06 24.2	+0.9
SMAR	Somma	1.03	328	eP	Pn	01 06 24.3	+0.8
AVH	Avacha	1.05	326	eP	Pn	01 06 25.0	+1.3
KRMR	Karymshinskiy	1.05	295	eP	Pn	01 06 24.5	+0.8
KRMR				eS	Sn	01 06 38.3	+1.1
KRER	Koryakskii	1.08	328	eP	Pn	01 06 25.4	+1.2
ASAK	Asacha	1.11	270	eP	Pn	01 06 25.8	+1.3
ASAK				eS	Sn	01 06 40.3	+1.7
KOK	Koryaka	1.11	325	eP	Pn	01 06 25.8	+1.3
KRX	Arik	1.16	327	eP	Pn	01 06 26.3	+1.0
KDTR	Khodutka, Kamc	1.17	240	eP	Pn	01 06 26.0	+0.8
KDTR				eS	Sn	01 06 41.0	+1.2
APC	Apacha	1.64	290	eP	Pn	01 06 34.0	+2.3
APC				eS	Sn	01 06 55.3	+3.7
KII	Karymskiy	1.65	355	eP	Pn	01 06 34.7	+2.8
GNL	Ganaly	1.68	321	eP	Pn	01 06 34.5	+2.1
MIPR	Malaya Ipel'ka	1.81	267	eP	Pn	01 06 37.0	+2.9
MKZ	Mys Kozlova	2.48	28	eP	Pn	01 06 45.1	+1.9
MKZ				eS	Sn	01 07 14.4	+2.2
TUMD	Tumrok D	2.84	8	eP	Pn	01 06 51.7	+3.5
TUMD				eS	Sn	01 07 26.0	+4.8
TUMR	Tumrok	2.90	5	eP	Pn	01 06 53.1	+3.9
ESO	Esso	3.58	351	eP	Pn	01 07 02.5	+4.1
KBTR	Krutoberegovo	4.23	24	eP	Pn	01 07 10.8	+3.5

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*TUL **26** 01:21:26.5±0.6, 35°.73N±0°.04×97°.16W±0°.02, h6km±7km, ML3.3, mb_Lg3.0/86(NEIC), Error ellipse: s-maj=5.5km s-min=1.3km az=204.0*

*ANF **26** 01:21:26.9±0.3, 35°.75N×97°.16W, h12km, ML3.5/12, Error ellipse: s-maj=3.2km s-min=2.7km az=139.0*

*NEIC **26** 01:21:26.9±0.9, 35°.74N±0°.04×97°.15W±0°.05, h9km±7km, Error ellipse: s-maj=5.7km s-min=5.3km az=215.0*

ISC 26 01:21:26.4±1.2**, 35°.74N**±0°.03×**97°.15W**±0°.03**, h2**km±12km**, n70, σ0^{s}70**/47**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.09	203		Pg	01 21 28.5	+0.3
OKCFA	Oklahoma City	0.41	218	Pg	Pg	01 21 34.4	+0.2
OKCFA	Oklahoma City	0.41	218	S	Sg	01 21 40.1	+0.6
	baz=37						
OKCSW	OKLAHOMA CITY	0.41	215		Pg	01 21 34.4	+0.1
FNO	Franklin	0.52	203	Pg	Pg	01 21 36.5	0.0
TUL1	Leonard	1.12	81	Pn	Pg	01 21 47.1	-0.8
TUL1	Leonard	1.12	81	P	Pg	01 21 47.1	-0.8
	baz=261						
TUL1				S	Sg	01 22 02.8	+0.4
	baz=261						
X34A	Smith Ranch, M	1.27	206	Pn	Pn	01 21 50.1	-1.1
T35A	Sooner Cattle	1.28	23	Pn	Pn	01 21 50.3	-1.1
T35B	Sooner Cattle	1.28	23	P	Pn	01 21 50.3	-1.1
	baz=204,SNR=65						
T35B				S	Sg	01 22 08.3	+0.5
	baz=204						
U32A	Winter Ranch,	1.63	294	Pn	Pn	01 21 55.9	-0.3
U32A	Winter Ranch,	1.63	294	P	Pn	01 21 55.9	-0.3
	baz=113,SNR=20						
U32A				Sb	Sg	01 22 18.5	-0.4
	baz=113						
WMOK	Wichita Mounta	1.67	234		Pn	01 21 56.4	-0.3
WMOK	Wichita Mounta	1.67	234	P	Pn	01 21 56.5	-0.3
	baz=53,SNR=41						
X37A	Clayton	1.85	128		Pn	01 21 59.2	0.0
X37A	Clayton	1.85	128	P	Pn	01 21 59.5	+0.3
	baz=308,SNR=66						
X37A				Sb	Sg	01 22 25.7	-0.3
	baz=308						
Z35A	Perchaven, San	2.40	182		Pn	01 22 06.8	0.0
Z35A	Perchaven, San	2.40	182	P	Pn	01 22 07.2	+0.4
	baz=1.6,SNR=12						
HHAR	Hobbs	2.66	77		Pn	01 22 10.2	-0.1
W39A	Magazine	2.80	100		Pn	01 22 12.0	-0.3
W39A				IAmb_Lg		01 23 01.0	
	comp=Z,33nm,0.9s						
R32A	Long Quarter,	2.96	335	Pn	Pn	01 22 14.1	-0.3
R32A	Long Quarter,	2.96	335	P	Pg	01 22 21.8	-1.3
	baz=155						
R32A				Sb	Sb	01 22 57.9	+1.4
	baz=155						
Z38A	Mt. Pleasant	3.05	144	IAmb_Lg		01 23 03.5	
	comp=Z,31nm,0.8s						
MIAR	Mount Ida	3.16	111	IAmb_Lg		01 23 11.5	
	comp=Z,27nm,0.8s						
MIAR	Mount Ida	3.16	111	P	Pn	01 22 17.9	+0.7
	baz=293,SNR=31						
KSU1	Kansas State U	3.38	7	IAmb_Lg		01 23 19.7	
	comp=Z,29nm,0.7s						
KSU1	Kansas State U	3.38	7	P	Pb	01 22 29.0	+1.8
	baz=188						
U40A	Yellville	3.54	79	Pn	Pn	01 22 22.1	-0.3
U40A				IAmb_Lg		01 23 18.3	
	comp=Z,40nm,0.8s						
S39A	Bolivar	3.64	56	Pn	Pn	01 22 24.0	+0.2
S39A				IAmb_Lg		01 23 27.2	
	comp=Z,30nm,0.8s						
CBKS	Cedar Bluff	3.70	327	Pn	Pn	01 22 24.4	-0.3
CBKS				IAmb_Lg		01 23 29.2	
	comp=Z,36nm,0.8s						
ABTX	Abilene, Hawle	3.73	214	IAmb_Lg		01 23 31.8	
	comp=Z,26nm,0.9s						
WHTX	Lake Whitney,	3.75	184	Pn	Pn	01 22 24.9	-0.4
WHTX	Lake Whitney,	3.75	184	P	Pb	01 22 31.7	-1.6
	baz=3.6						
X40A	Basin Creek Fa	3.75	108		Pn	01 22 24.9	-0.4
X40A				IAmb_Lg		01 23 30.4	
	comp=Z,30nm,0.8s						
AMTX	Amarillo	3.80	258	Pn	Pn	01 22 25.5	-0.6
AMTX				IAmb_Lg		01 23 33.8	
	comp=Z,39nm,0.8s						
237A	Washetta, Mont	3.89	163	S	Sn	01 23 13.9	+0.4
	baz=344						
WLAR	White Oak Lake	3.90	120	IAmb_Lg		01 23 36.6	
	comp=Z,23nm,0.8s						
WHAR	Wooly Hollow	3.99	95	Pn	Pn	01 22 28.4	-0.2
WHAR				IAmb_Lg		01 23 36.8	
	comp=Z,28nm,0.7s						
W41B	Gary Mavity, V	4.04	97		Pn	01 22 29.2	-0.1
W41B				IAmb_Lg		01 23 45.2	
	comp=Z,32nm,1.1s						
W41B	Gary Mavity, V	4.04	97	P	Pn	01 22 29.5	+0.2
	baz=279,SNR=26						
UALR	University of	4.05	102	Pn	Pn	01 22 29.2	-0.2
FCAR	Ozark Folk Cen	4.09	86		Pn	01 22 29.6	-0.3
FCAR				IAmb_Lg		01 23 41.9	
	comp=Z,28nm,0.9s						
MGMO	Mountain Grove	4.18	69	Pn	Pn	01 22 30.2	-1.1
MGMO				IAmb_Lg		01 23 45.8	
	comp=Z,47nm,1.0s						
NATX	Nacogdoches	4.48	152	IAmb_Lg		01 24 00.2	
	comp=Z,21nm,0.8s						
R40A	Maddies Statio	4.66	55	IAmb_Lg		01 24 01.5	
	comp=Z,23nm,0.7s						
CCAR	Cane Creek	4.78	111	IAmb_Lg		01 24 10.0	
	comp=Z,21nm,0.7s						
P38A	Dawn	4.83	35	IAmb_Lg		01 24 08.7	
	comp=Z,28nm,1.0s						
LCAR	Lake Charles	4.88	84	Pn	Pn	01 22 40.3	-0.5
MSTX	Muleshoe	4.95	251	Pn	Pn	01 22 41.3	-0.6
N33A	J Bar K, Exete	5.00	357	IAmb_Lg		01 24 19.1	
	comp=Z,22nm,0.8s						
CCM	Cathedral Cave	5.27	62	IAmb_Lg		01 24 13.7	
	comp=Z,48nm,1.0s						
KSCO	Kaye Shedlock'	5.45	308	Pn	Pn	01 22 48.1	-0.7
KSCO				IAmb_Lg		01 24 27.1	
	comp=Z,25nm,0.7s						
PBMO	Poplar Bluff	5.53	77	IAmb_Lg		01 24 25.7	
	comp=Z,43nm,0.8s						
P40A	Paris	5.54	45	IAmb_Lg		01 24 25.8	
	comp=Z,38nm,0.7s						
JCT	Junction City	5.70	204	Pn	Pn	01 22 51.4	-0.8
JCT				IAmb_Lg		01 24 36.4	
	comp=Z,42nm,1.0s						
FVM	French Village	5.84	65	IAmb_Lg		01 24 33.0	
	comp=Z,26nm,0.8s						
T25A	Trinidad	6.02	286	IAmb_Lg		01 24 47.6	
	comp=Z,19nm,0.8s						
SIUC	Southern Illin	6.67	70	IAmb_Lg		01 25 08.6	
	comp=Z,36nm,0.8s						
WVT	Waverly	7.57	84	IAmb_Lg		01 25 38.8	
	comp=Z,9.9nm,1.1s						
K38A	Parkersburg	7.69	25	IAmb_Lg		01 25 39.0	
	comp=Z,20nm,0.8s						
OLIL	Olney	7.81	65	IAmb_Lg		01 25 43.9	
	comp=Z,30nm,0.9s						
L40A	Anamosa	7.82	34	IAmb_Lg		01 25 35.8	
	comp=Z,22nm,1.0s						
ISCO	Idaho Springs	7.83	304	IAmb_Lg		01 25 42.1	
	comp=Z,9.2nm,0.9s						
PHWY	Pilot Hill	8.56	313	IAmb_Lg		01 26 07.2	
	comp=Z,8.5nm,0.8s						
N23A	Red Feather La	8.62	309	IAmb_Lg		01 26 12.5	
	comp=Z,19nm,0.8s						
I37A	Lemond, Waseca	8.75	18	IAmb_Lg		01 26 20.5	
	comp=Z,16nm,1.1s						
SUSD	Miller	8.80	352	IAmb_Lg		01 26 16.5	
	comp=Z,16nm,0.8s						
JFWS	Jewell Farm	8.94	35	IAmb_Lg		01 26 12.1	
	comp=Z,20nm,0.9s						
I40A	Norwalk	9.56	30	IAmb_Lg		01 26 34.0	
	comp=Z,9.3nm,0.8s						
RSSD	Black Hills	9.90	330	IAmb_Lg		01 26 45.9	
	comp=Z,6.3nm,0.7s						

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*NOU **26** 01:27:41.3, 24°.85S×179°.87W, h535km, mb4.3/10, South of Fiji Islands*

*IDC **26** 01:27:42.5±1.2, 24°.83S×179°.76E, h510km±13km, mb3.5/12, mbtmp4.4/15, Error ellipse: s-maj=20.3km s-min=11.4km az=159.0*

*NEIC **26** 01:27:43.3±1.1, 24°.8S±0°.1×179°.8E±0°.1, h513km±9km, mb4.4/28, Error ellipse: s-maj=20.3km s-min=16.8km az=145.0*

ISC 26 01:27:41.4±0.5**, 24°.88S**±0°.06×**179°.86E**±0°.07**, h501**km**, n90, σ1^{s}50**/102**, mb4.2**/26**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.77	156	P	P	01 29 04.7	-1.6
RAO	Raoul Island	4.78	156	P	P	01 29 09.2	+2.8
	367nm,0.3s,baz=38,slow=17,SNR=5.2						
GLKZ	Green Lake	4.79	156	P	P	01 29 07.4	+0.9
GLKZ				S	S	01 30 15.0	-0.9
LKBA	Tubou, Lakemba	6.73	11	P	P	01 29 26.4	+1.4
MSVF	Nonsavu	7.31	346	P	P	01 29 31.3	+0.3
	30nm,0.5s,baz=142,slow=10,SNR=45						
MSVF	Nonsavu	7.31	346	P	P	01 29 31.7	+0.7
DGTI	Dogotuki	8.54	359	P	P	01 29 45.0	+1.4
MARNC	Mare, Loyalty	11.40	285	P	P	01 30 14.5	+0.9
MARNC	Mare, Loyalty	11.40	285	P	P	01 30 15.3	+1.7
OUZ	Omahuta	11.64	206	P	P	01 30 19.7	+3.7
WCZ	Waipu Caves	12.00	202	P	P	01 30 19.9	+0.1

YATNC	Mamie plateau,	12.23	281	P	P	01 30 25.7	+3.2
ABAZ	Army Bay	12.45	199	P	P	01 30 22.6	-1.9
DZM	Mont Dzumac	12.63	280	P	P	01 30 27.4	+0.6
	10nm,0.7s,baz=92,slow=15,SNR=6.4						
DZM	Mont Dzumac	12.63	280	P	P	01 30 27.9	+1.1
MXZ	Matakaoa Point	12.71	186	P	P	01 30 29.2	+1.9
HAZ	Te Kaha	12.96	187	P	P	01 30 30.1	+0.2
HAZ				S	S	01 32 51.9	+3.0
WMGZ	Waiomatatini S	12.96	185	P	P	01 30 28.2	-1.7
WMGZ				S	S	01 32 42.5	-6.4
PKGZ	Pakihiroa	13.06	186	P	P	01 30 33.8	+2.8
RUGZ	Raukumara Rang	13.18	188	P	P	01 30 35.2	+2.8
RUGZ				S	S	01 32 54.5	+1.1
PUZ	Puketiti	13.22	186	P	P	01 30 35.3	+2.6
PUZ				S	S	01 32 55.4	+1.4
TWGZ	Tauwhareparae	13.35	186	P	P	01 30 35.6	+1.5
TWGZ				S	S	01 32 59.0	+2.4
AFI	Afiamalu	13.46	37	P	P	01 30 32.4	-3.2
URZ	Urewera	13.54	189	P	P	01 30 36.2	+0.2
	10.0nm,0.3s,baz=12,slow=1.9,SNR=16						
URZ	Urewera	13.54	189	P	P	01 30 36.2	+0.2
URZ				S	S	01 33 02.2	+2.0
URZ	Urewera	13.54	189	P	P	01 30 36.3	+0.2
MWZ	Matawai	13.56	188	P	P	01 30 38.1	+1.7
MWZ				S	S	01 32 56.5	-4.1
CNGZ	Carnagh Statio	13.63	186	P	P	01 30 40.2	+3.1
RAHZ	Arahi	14.19	189	P	P	01 30 43.0	0.0
RAHZ				S	S	01 33 11.4	-1.3
HIZ	Hauiti	14.24	196	P	P	01 30 49.0	+5.5
MOVZ	Moawhango	14.89	192	P	P	01 30 52.1	+1.7
MOVZ				S	S	01 33 26.4	+0.1
KAHZ	Kahuranaki	15.08	189	P	P	01 30 52.9	+0.6
KAHZ				S	S	01 33 29.6	-0.2
QRZ	Quartz Range	17.04	199	P	P	01 31 11.8	-0.8
KHZ	Kahutara	18.25	195	P	P	01 31 23.4	-0.4
CTA	Charters Tower	31.37	272	P	P	01 33 21.2	+0.6
	19nm,0.5s,baz=101,slow=10,SNR=13 19nm,0.5s						
CTAO	Charters Tower	31.37	272	P	P	01 33 20.9	+0.3
STKA	Stephens Creek	34.25	249	P	P	01 33 45.4	+0.3
	3.7nm,0.5s,baz=101,slow=12,SNR=22 3.7nm,0.5s						
STKA	Stephens Creek	34.25	249	P	P	01 33 45.3	+0.3
COEN	Coen	36.16	281	P	P	01 34 00.9	-0.2
COEN				IAmb	IAmb	01 34 02.5	
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	41.76	262	P	P	01 34 46.2	-0.3
	comp=Z,3.1nm,0.4s,baz=93,slow=6.7,SNR=43						
ASAR				S	S	01 40 26.4	-0.9
	comp=Z,0.7nm,0.8s,baz=101,slow=15,SNR=4.8 comp=Z,3.1nm,0.4s						
ASAR	Alice Springs	41.76	262	P	P	01 34 46.1	-0.4
WR0	Warramunga Arr	42.04	267	P	P	01 34 48.0	-0.7
WR0				IAmb	IAmb	01 34 48.3	
	comp=Z,7.4nm,0.5s						
WB2	Warramunga Arr	42.21	267	P	P	01 34 49.6	-0.4
WRAB	Tennant Creek	42.22	267	P	P	01 34 49.5	-0.6
WRAB				IAmb	IAmb	01 34 50.0	
	comp=Z,9.3nm,0.7s						
WB0	Warramunga Arr	42.22	268	P	P	01 34 49.5	-0.7
WRA	Warramunga Arr	42.22	267	P	P	01 34 49.3	-0.9
	comp=Z,11nm,0.5s,baz=99,slow=6.8,SNR=477						
WRA				ScP	ScP	01 39 36.7	+1.1
	comp=Z,3.6nm,1.1s,baz=104,slow=4.1,SNR=10.0						
WRA				S	S	01 40 32.2	-1.8
	comp=Z,1.3nm,0.7s,baz=100,slow=14,SNR=10 comp=Z,11nm,0.5s						
WRA	Warramunga Arr	42.22	267	P	P	01 34 48.2	-2.0
FORT	Forrest	45.86	250	P	P	01 35 17.4	-0.8
KNRA	Kununurra	48.56	271	P	P	01 35 38.2	-0.6
FAKI	Fak Fak	50.75	288	P	P	01 35 54.3	-0.7
FAKI				IAmb	IAmb	01 35 54.5	
	comp=Z,6.4nm,0.7s						
TOLI2	Tolitoli	62.71	285	P	P	01 37 16.5	-0.8
TOLI2				IAmb	IAmb	01 37 17.9	
	comp=Z,9.5nm,0.8s						
MJAR	Matsushiro Arr	72.63	326	P	P	01 38 17.2	-0.4
	comp=Z,1.7nm,0.7s,baz=206,slow=2.1,SNR=4.5 comp=Z,1.7nm,0.7s						
MJAR	Matsushiro Arr	72.63	326	P	P	01 38 17.5	-0.1
KSRS	Korea Array	78.92	320	P	P	01 38 52.0	-0.4
	comp=Z,1.3nm,0.7s,baz=124,slow=7.3,SNR=2.4 comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	80.02	347	P	P	01 38 57.7	-0.3
	comp=Z,1.1nm,0.5s,baz=111,slow=6.6,SNR=5.4 comp=Z,1.1nm,0.5s						
TROLL	Troll, Antarti	83.35	181	P	P	01 39 15.2	+0.1
SNAA	Sanae	83.69	179	P	P	01 39 16.1	-0.6
ISA	Isabella, Lake	83.79	46	P	P	01 39 18.3	+0.6
ISA				IAmb	IAmb	01 39 19.7	
	comp=Z,5.0nm,0.8s						
VNA3	Neumayer Olymp	83.91	177	P	P	01 39 17.4	-0.3
VNA2	Neumayer--Watz	84.32	178	P	P	01 39 19.9	+0.1
	baz=168,slow=7.0						
NVAR	Mina Array Bea	85.54	44	P	P	01 39 27.0	+0.6
	comp=Z,0.9nm,0.6s,baz=221,slow=8.7,SNR=8.7 comp=Z,0.9nm,0.6s						
TPNV	Topopah Spring	86.00	46	P	P	01 39 29.0	+0.4
KVN	Kaiserville	86.04	44	P	P	01 39 29.3	+0.5
G03D	McMinnville, O	86.85	36		pP	01 41 26.8	+3.9
TUC	Tucson	87.21	52	P	P	01 39 34.7	+0.4
TUC				IAmb	IAmb	01 39 37.1	
	comp=Z,18nm,1.8s						
BMN	Battle Mountai	87.40	43	P	P	01 39 35.8	+0.7
LCMT	Little Creek M	88.02	47	P	P	01 39 38.6	+0.6
LCMT				IAmb	IAmb	01 39 40.5	
	comp=Z,9.3nm,1.7s						
I07A	Izee	88.23	39	P	P	01 39 40.0	+1.2
I07A				IAmb	IAmb	01 39 40.4	
	comp=Z,3.4nm,0.7s						
U15A	North Rim	88.35	48	P	P	01 39 40.0	+0.2
O22K	Cooper Landing	88.60	15	P	P	01 39 40.9	+0.9
MTPU	Mount Pierson	89.29	47	P	P	01 39 43.4	-0.9
MTPU				IAmb	IAmb	01 39 46.5	
	comp=Z,2.9nm,0.7s						
CMAR	Chiang Mai Arr	89.75	290	P	P	01 39 47.4	+1.0
	comp=Z,1.0nm,0.3s,baz=186,slow=3.0,SNR=4.7 comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	89.75	290	P	P	01 39 46.2	-0.1
TMUT	Trail Mountain	90.60	46	P	P	01 39 50.7	+0.5
SRU	San Rafael Swe	90.96	47	P	P	01 39 52.0	+0.3
SRU				IAmb	IAmb	01 39 53.3	
	comp=Z,2.6nm,0.6s						
TX31	Lajitas Ar. Si	91.05	58	P	P	01 39 53.0	+0.7
TX31				IAmb	IAmb	01 39 53.9	
	comp=Z,5.3nm,0.8s						
TX32	Lajitas Array	91.05	58	P	P	01 39 53.0	+0.7
TX32				IAmb	IAmb	01 39 53.9	
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	91.05	58	P	P	01 39 53.5	+1.3
	comp=Z,1.1nm,0.6s,baz=215,slow=6.5,SNR=20 comp=Z,1.1nm,0.6s						
BPAW	Bear Paw Mtn.	91.58	12	P	P	01 39 53.9	+0.1
BPAW				IAmb	IAmb	01 40 02.6	
	comp=Z,15nm,1.7s						
ILAR	Eielson Array	93.01	14	P	P	01 39 59.6	-0.7
	comp=Z,0.3nm,0.7s,baz=215,slow=5.4,SNR=5.7 comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	93.48	44	P	P	01 40 03.3	0.0
	comp=Z,0.2nm,0.6s,baz=224,slow=4.1,SNR=3.7 comp=Z,0.2nm,0.6s						
J56A	Wolcott	115.99	52		PKPdf	01 45 26.3	-0.6
K57A	Scipio Center	116.14	53		PKiKP	01 45 27.9	+0.7
ARCES	ARCESS Array B	132.82	348	PKP	PKPdf	01 45 58.5	+0.2
	comp=Z,1.2nm,0.7s,baz=38,slow=1.5,SNR=7.2						
FINES	FINESS Array B	139.33	341	PKhKP	PKPpre	01 46 01.7	
	comp=Z,0.5nm,0.5s,baz=90,slow=1.9,SNR=6.6						
NOA	NORSAR Array B	143.03	351	PKhKP	PKPpre	01 46 14.5	
	comp=Z,0.4nm,0.6s,baz=22,slow=1.1,SNR=2.0						
AKASG	Malin Array Be	145.72	326	PKPbc	PKPbc	01 46 22.9	-0.8
	comp=Z,1.0nm,0.4s,baz=45,slow=4.5,SNR=7.5						
BRTR	Keskin Array B	148.06	306	PKPbc	PKPbc	01 46 29.4	-1.1
	comp=Z,0.3nm,0.3s,baz=165,slow=4.8,SNR=2.3						
TORD	Torodi Ar. Bea	168.20	189	PKP	PKPdf	01 46 49.9	-1.0
	comp=Z,0.4nm,1.0s,baz=213,slow=1.0,SNR=1.6						
TORD				PKPab	PKPab	01 48 01.4	-0.9
	comp=Z,0.5nm,0.6s,baz=187,slow=3.1,SNR=5.0						
TORD	Torodi Ar. Bea	168.20	189	PKPdf	PKPdf	01 46 49.1	-1.8
TORD					PKPab	01 48 02.1	-0.2

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*SOME **26** 01:44:12.0, 39°.52N×75°.43E, h5^{km}*
*NNC **26** 01:44:21.9±2.6, 39°.88N×75°.46E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=20.6km s-min=14.3km az=151.0*
*KRNET **26** 01:44:23.3±0.1, 39°.88N×75°.43E, mb3.5*
*ISU **26** 01:44:24, 41°.05N×75°.43E, h5^{km}*
ISC 26 01:44:14.5±1.6**, 39°.65N**±0°.06×**75°.45E**±0°.03**, h9**^{km}±15^{km}**,**
n72, σ2^{s}29/106**, 22C-21D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	2.22	294	⇑*i*P	Pg	01 45 02.2	+5.1
	baz=89						
OHH				⇑*i*S	Sg	01 45 30.8	+4.8
	baz=89						
OHH	Osh	2.22	294	P	Pg	01 45 02.5	+5.4
OHH				S	Sg	01 45 30.7	+4.8
ARLS	Aral	2.37	339	⇓*i*P	Pg	01 45 02.5	+2.5
	baz=38						
ARLS				⇓*i*S	Sg	01 45 31.2	+0.5
	baz=38						
ULHL	Ulahol	2.67	13	P	Pg	01 45 08.3	+2.7
	SNR=38						
ULHL	Ulahol	2.67	13	⇑*i*P	Pg	01 45 06.7	+1.1
	baz=14						
ULHL				⇑*i*S	Sg	01 45 38.8	-1.4
	baz=14						
UCH	Uchtor	2.67	345	P	Pg	01 45 07.4	+1.6
	SNR=19						
UCH	Uchtor	2.67	345	⇑*i*P	Pg	01 45 07.3	+1.5
	baz=44						
UCH				⇑*i*S	Sg	01 45 39.1	-1.4
	baz=44						
TARG	Taragay, Kyrgy	2.75	40	⇓*i*P	Pg	01 45 08.8	+1.6
	baz=43						
TARG				⇓*i*S	Sg	01 45 41.8	-1.0
	baz=43						
KDJ	Kajisay	2.81	27	⇑*i*P	Pg	01 45 09.1	+0.8
	baz=30						
KDJ				⇑*i*S	Sb	01 45 42.7	+3.2
	baz=30						
AML	Almayashu	2.82	332	P	Pg	01 45 09.2	+0.7
	SNR=24						
DRK	Karamyk	2.82	268	⇑*i*P	Pg	01 45 12.3	+3.7
	baz=63						
DRK				⇑*i*S	Sg	01 45 47.8	+2.6
	baz=63						
BOOM	Boomskoye usch	2.87	7	⇑*e*P	Pg	01 45 09.4	0.0
	baz=8.0						
BOOM				⇑*i*S	Sb	01 45 43.5	+2.4
	baz=8.0						
FRG	Fergana	2.91	286	P	Pg	01 45 13.6	+3.4
FRG				S	Sb	01 45 39.4	-2.7
FRG				S	Sg	01 45 55.6	+7.8
KBK	Karagaybulak	3.03	353	P	Pg	01 45 12.9	+0.3
	SNR=9.4						
KBK	Karagaybulak	3.03	353	⇑*e*P	Pg	01 45 11.9	-0.7
	baz=53						
KBK				⇑*i*S	Sb	01 45 47.0	+1.1
	baz=53						
AAK	Ala-Archa	3.08	347	P	Pg	01 45 13.2	-0.2
	SNR=22						
AAK	Ala-Archa	3.08	347	⇓*i*P	Pg	01 45 12.2	-1.2
	baz=46						
AAK				⇓*i*S	Sb	01 45 48.3	+1.2
	baz=46						
CHMI	Chimion	3.08	283	P	Pg	01 45 16.7	+3.2
CHMI				S	Sg	01 46 01.8	+8.4
EKS2	Erkin-Say	3.27	338	P	Pg	01 45 15.6	-1.5
	SNR=6.9						
EKS2	Erkin-Say	3.27	338	⇓*i*P	Pg	01 45 15.1	-2.0
	baz=36						
EKS2				⇓*i*S	Sb	01 45 53.0	+0.4
	baz=36						
TKM2	Tokmak 2	3.27	2	P	Pg	01 45 15.4	-1.8
	SNR=27						
TKM2	Tokmak 2	3.27	2	⇓Pn	Pg	01 45 15.2	-2.1
	8.1nm,0.4s						
TKM2				⇑Lg	Lg	01 46 00.8	
	27nm,0.5s						
TKM2	Tokmak 2	3.27	2	⇓*i*P	Pg	01 45 15.2	-2.1
	baz=2.0						
TKM2				⇓*i*S	Sb	01 45 53.3	+0.4
	baz=2.0						
CHMS	Chumysh	3.39	351	P	Pg	01 45 17.4	-2.1
	SNR=12						
CHMS	Chumysh	3.39	351	⇑Pn	Pg	01 45 17.0	-2.5
	14nm,0.5s						
CHMS				⇓Lg	Lg	01 45 58.3	
	31nm,0.8s						
CHMS	Chumysh	3.39	351	⇓*e*P	Pb	01 45 16.8	+2.1
	baz=51						
CHMS				⇓*i*S	Sb	01 45 55.8	-0.3
	baz=51						
ARK	Arkit	3.41	310	⇑*i*P	Pg	01 45 17.7	-2.1
	baz=7.0						
ARK				⇑*i*S	Sb	01 45 57.6	+0.9
	baz=7.0						
KST	Kastek	3.42	6	*e*P	Pg	01 45 17.8	-2.2
	9.1nm,0.2s						
KST				*e*S	Sg	01 46 05.1	+0.9
	139nm,0.2s						
KST	Kastek	3.42	6	Pg	Pg	01 45 17.8	-2.2
	9.2nm,0.7s						
KST				Lg	Lg	01 46 06.4	
	139nm,0.8s						
MRKS	Merke	3.52	332	*e*P	Pb	01 45 18.9	+1.9
	11nm,0.6s						
MRKS				*e*S	Sg	01 46 07.1	-0.4
	24nm,0.1s						
MRKS	Merke	3.52	332	Pg	Pb	01 45 18.9	+1.9
	11nm,0.6s						
MRKS				Lg	Lg	01 46 07.1	
	24nm,0.5s						
MTBS	Maitube	3.56	12	*e*P	Pg	01 45 20.5	-2.1
	3.0nm,0.7s						
MTBS				*e*S	Sg	01 46 09.9	+1.1
	32nm,0.6s						
MTBS	Maitube	3.56	12	Pg	Pg	01 45 20.9	-1.8
	5.7nm,0.4s						
MTBS				Lg	Lg	01 46 10.6	
	32nm,0.6s						
TNSS	Tian-Shan	3.57	18	*e*P	Pg	01 45 20.8	-2.2
	11nm,0.5s						
TNSS				*e*S	Sg	01 46 10.2	+0.9
	17nm,0.9s						
TNSS	Tian-Shan	3.57	18	Pg	Pg	01 45 20.7	-2.2
	11nm,0.5s						
TNSS				Lg	Lg	01 46 10.2	
	17nm,0.9s						
BTK	Batken	3.59	278	⇑*i*P	Pg	01 45 22.2	-1.0
	baz=74						
BTK				⇑*i*S	Sg	01 46 04.8	-4.9
	baz=74						
DGS	Degeres	3.60	4	*e*P	Pb	01 45 20.3	+1.9
	13nm,0.6s						
DGS				*e*S	Sg	01 46 09.3	-0.9
	27nm,0.1s						
DGS	Degeres	3.60	4	Pg	Pb	01 45 20.3	+1.9
	13nm,0.6s						
DGS				Lg	Lg	01 46 10.4	
	27nm,0.7s						
USP	Ospenovka	3.69	349	P	Pg	01 45 22.2	-3.0
	SNR=6.0						
USP	Ospenovka	3.69	349	⇓*i*P	Pb	01 45 20.6	+0.8
	baz=49						
USP				⇓*i*S	Sb	01 46 03.0	-1.6
	baz=49						
MDOK	Medeo	3.71	18	*e*P	Pg	01 45 23.2	-2.5
	7.0nm,0.1s						
MDOK				*e*S	Sg	01 46 14.6	+0.8
	37nm,0.3s						
MDOK	Medeo	3.71	18	Pn	Pb	01 45 21.4	+1.1
	5.0nm,0.5s						
MDOK				Lg	Lg	01 46 14.9	
	40nm,0.7s						
MDOK	Medeo	3.71	18	Pg	Pg	01 45 23.2	-2.5
	7.0nm,0.5s						
MDOK				Lg	Lg	01 46 14.6	
	37nm,0.7s						
AAA	Alma-Ata	3.73	17	*e*P	Pg	01 45 24.1	-1.8
	27nm,0.0s						
AAA				*e*S	Sg	01 46 15.9	+1.7
	101nm,0.1s						
AAA	Alma-Ata	3.73	17	Pg	Pg	01 45 24.1	-1.8
AAA				Lg	Lg	01 46 15.9	
TRKS	Terek-Say	3.78	301	⇓*i*P	Pg	01 45 23.4	-3.5
	baz=97						
TRKS				⇓*i*S	Sb	01 46 06.3	-1.1
	baz=97						
SGDS	Sogindy	3.85	351	*e*P	Pg	01 45 25.9	-2.4
	9.5nm,0.5s						
SGDS				*e*S	Sg	01 46 19.0	+0.8
	32nm,0.3s						
SGDS	Sogindy	3.85	351	Pg	Pg	01 45 25.8	-2.4
	9.5nm,0.5s						
SGDS				Lg	Lg	01 46 19.0	
	32nm,1.0s						
KRBS	Karabastau	4.05	2	*e*P	Pg	01 45 29.5	-2.6
	1.2nm,0.2s						
KRBS				*e*S	Sg	01 46 25.4	+0.9
	11nm,0.2s						
KRBS	Karabastau	4.05	2	Pg	Pg	01 45 29.4	-2.6
	7.5nm,0.4s						
KRBS				Lg	Lg	01 46 25.4	
	11nm,0.5s						
SATY	Saty	4.07	32	*e*P	Pg	01 45 30.1	-2.5
	6.1nm,0.6s						
SATY				*e*S	Sg	01 46 26.2	+0.9
	14nm,0.8s						
SATY	Saty	4.07	32	Pg	Pg	01 45 30.1	-2.5
	6.1nm,0.6s						
SATY				Lg	Lg	01 46 26.2	
	14nm,0.8s						
KTBS	Karatobe	4.17	12	*e*P	Pg	01 45 31.4	-2.9
	1.0nm,0.1s						
KTBS				*e*S	Sg	01 46 28.9	+0.6
	37nm,0.2s						
KTBS	Karatobe	4.17	12	Pg	Pg	01 45 31.4	-2.9
	8.1nm,0.5s						
KTBS				Lg	Lg	01 46 28.9	
	37nm,0.7s						
KUU	Kurty	4.30	9	*e*P	Pg	01 45 33.7	-3.0
	0.9nm,0.0s						
KUU				*e*S	Sg	01 46 32.7	+0.3
	21nm,0.6s						
KUU	Kurty	4.30	9	Pg	Pg	01 45 33.7	-3.0
	2.2nm,0.6s						
KUU				Lg	Lg	01 46 32.7	
	21nm,0.6s						
KURS	Kuram	4.35	27	*e*P	Pg	01 45 34.5	-3.3
	2.8nm,0.2s						
KURS				*e*S	Sg	01 46 34.1	0.0
	11nm,0.4s						
KURS	Kuram	4.35	27	Pg	Pg	01 45 34.5	-3.3
	3.4nm,0.7s						
KURS				Lg	Lg	01 46 34.1	
	11nm,1.0s						
CHKK	Chushkaly	4.36	15	*e*P	Pg	01 45 35.2	-2.8
	7.8nm,0.5s						
CHKK				*e*S	Sg	01 46 35.0	+0.5
	36nm,0.9s						
CHKK	Chushkaly	4.36	15	Pg	Pg	01 45 35.2	-2.8
	7.8nm,0.5s						
CHKK				Lg	Lg	01 46 35.0	
	36nm,0.9s						
UZB	Uzynbulak	4.41	36	*e*P	Pb	01 45 35.0	+2.8
	3.4nm,0.4s						
UZB				*e*S	Sg	01 46 34.6	-1.6
	7.9nm,1.0s						
UZB	Uzynbulak	4.41	36	Pg	Pb	01 45 35.0	+2.8
	3.4nm,0.4s						
UZB				Lg	Lg	01 46 34.6	
	7.9nm,1.0s						
KPKS	Kokpek	4.52	31	*e*P	Pb	01 45 37.1	+3.0
	2.5nm,0.0s						
KPKS				*e*S	Sg	01 46 38.5	-1.2
	19nm,0.4s						
PDGK	Podgornoye	4.77	38	Pg	Pg	01 45 42.5	-3.4
	1.1nm,0.7s						
PDGK				Lg	Lg	01 46 47.6	
	6.4nm,0.8s						
PDGK	Podgornoye	4.77	38	⇓Pn	Pb	01 45 35.3	-3.0
	4.2nm,0.6s						
PDGK				⇑Lg	Lg	01 46 49.3	
	17nm,0.9s						
IUG	Iuzhnay	4.80	303	*e*P	Pg	01 45 41.8	-4.7
	39nm,0.1s						
IUG				*e*S	Sg	01 46 46.4	-2.4
	9.0nm,0.1s						
IUG	Iuzhnay	4.80	303	Pg	Pg	01 45 43.8	-2.7
	68nm,0.6s						
KK31	Karatay Array	5.07	315	⇑Pn	Pb	01 45 38.3	-5.0
	0.2nm,0.3s,baz=126,slow=13,SNR=8.7						
KK31				⇓Pg	Pg	01 45 53.3	+1.7
	1.0nm,0.5s,baz=127,slow=12,SNR=4.5						
KK31				⇓Lg	Lg	01 46 59.0	
	4.1nm,0.6s,baz=131,slow=27,SNR=5.7						
BRLS	Borolday	5.41	310	*e*P	Pg	01 45 53.7	-4.4
	0.7nm,0.2s						
BRLS				*e*S	Sg	01 47 06.8	-1.4
	6.1nm,0.3s						
BRLS	Borolday	5.41	310	Pg	Pg	01 45 55.1	-3.0
	1.9nm,0.4s						
BTLS	Baital	5.49	350	*e*P	Pg	01 45 56.3	-3.3
	2.0nm,0.7s						
BTLS				*e*S	Sg	01 47 10.9	+0.2
	2.4nm,0.5s						
BTLS	Baital	5.49	350	Pg	Pg	01 45 55.7	-3.9
	2.0nm,0.7s						
BTLS				Lg	Lg	01 47 10.8	
	2.4nm,0.5s						

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*IDC **26** 02:00:55.8±3.5, 5°.03N×127°.15E, h123^{km}±32^{km}, mb3.4/5, mbtmp3.8/6, MS3.0/1, Error ellipse: s-maj=120.4km s-min=16.9km az=68.0*
ISC 26 02:00:54.3±1.1**, 4°.8N**±0°.3×**126°.5E**±0°.6**, h100**^{km}**, n8,**
σ2^{s}60/8**, mb3.6**/5**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.44	337	P	Pn	02 01 36.6	+3.9
	97nm,0.3s,baz=29,slow=12,SNR=1.1						
DAV				S	Sn	02 01 58.5	-3.7
	172nm,0.4s,baz=252,slow=9.3,SNR=1.7						
KCP	Kidapawan	2.62	327	⇑*e*P	Pn	02 01 24.9	-10
KCP				*i* S	Sn	02 02 04.8	-1.6
KAPI	Kappang	11.87	215	LR	LR	02 09 21.7	
	comp=Z,70nm,18.8s,baz=34,slow=41						
WRA	Warramunga Arr	25.76	163	P	P	02 06 15.3	-0.6
	2.2nm,0.7s,baz=344,slow=10,SNR=32 2.2nm,0.7s						
ASAR	Alice Springs	29.20	166	P	P	02 06 46.9	+0.3
	0.4nm,0.6s,baz=354,slow=8.5,SNR=7.6 0.4nm,0.6s						
STKA	Stephens Creek	39.20	160	P	P	02 08 11.9	-0.8
	1.9nm,0.6s,baz=345,slow=11,SNR=4.9 1.9nm,0.6s						
SONM	Songino Array	46.23	341	P	P	02 09 08.2	-1.3
	0.3nm,0.5s,baz=149,slow=8.9,SNR=2.1 0.3nm,0.5s						
MKAR	Makanchi Array	56.57	325	P	P	02 10 27.0	+0.4
	0.3nm,0.5s,baz=122,slow=8.7,SNR=4.3 0.3nm,0.5s						

IDC 26 02:06:07.1±41.0**, 47°.43N**×**143°.58E, h628**^{km}±277^{km}**,**
mb2.7/4**, mbtmp3.7**/4**, Error ellipse: s-maj=746.8km s-min=154.6km az=149.0, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	24.91	285	P	P	02 10 43.2	+0.2
	0.3nm,0.3s,baz=67,slow=11,SNR=4.1 0.3nm,0.3s						
MKAR	Makanchi Array	40.75	293	P	P	02 12 55.5	0.0
	0.6nm,0.5s,baz=77,slow=8.6,SNR=7.7 0.6nm,0.5s						
FINES	FINESS Array B	60.45	331	P	P	02 15 17.4	+0.2
	1.0nm,0.6s,baz=48,slow=5.7,SNR=7.8 1.0nm,0.6s						
NOA	NORSAR Array B	65.25	337	P	P	02 15 47.9	-0.1
	0.6nm,0.8s,baz=36,slow=6.4,SNR=3.4 0.6nm,0.8s						

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*MAN **26** 02:09:19.7, 12°.68N×123°.30E, h12^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*
ISC 26 02:09:20.1±1.1**, 12°.68N**±0°.03×**123°.28E**±0°.04**, h14**^{km}±10^{km}**,**
n15, σ1^{s}27/27**, 3C-10D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.47	134	⇓*e*P	Pg	02 09 29.1	-0.3
MMPH				*e*S	Sg	02 09 35.8	+0.1
SCSP	San Jose Seism	0.99	14	⇓*e*P	Pb	02 09 38.0	-1.2
SCSP				*e*S	Sg	02 09 52.0	-0.3
RCP	Roxas	1.23	205	⇓*e*P	Pn	02 09 41.8	-1.1
RCP				*e*S	Sb	02 09 58.6	-0.4

PVCP	**Virac**	**1.25**	**43**	⇓*e*P	**Pn**	**02 09 42.8**	**-0.4**
PVCP				*e*S	**Sn**	**02 09 59.4**	**-0.3**
GQP	**Guinayangan**	**1.46**	**326**	⇑*i*P	**Pn**	**02 09 45.7**	**-0.4**
GQP				*i* S	**Sg**	**02 10 07.4**	**+0.2**
BOAC	**Boac**	**1.60**	**299**	⇑*e*P	**Pn**	**02 09 48.0**	**0.0**
BOAC				*e*S	**Sb**	**02 10 10.3**	**+0.9**
JCNP	**Jose Panganiba**	**1.69**	**341**	⇓*i*P	**Pn**	**02 09 48.7**	**-0.5**
JCNP				*i* S	**Sb**	**02 10 12.4**	**+0.2**
SJMP	**San Jose**	**2.12**	**264**	⇓*e*P	**Pn**	**02 09 55.2**	**+0.1**
SJMP				*e*S	**Sn**	**02 10 17.4**	**-3.9**
GUIM	**Jordan**	**2.15**	**198**	⇓*e*P	**Pb**	**02 09 57.8**	**-1.1**
GUIM				*e*S	**Sb**	**02 10 26.0**	**+0.5**
LLP	**Lapu-Lapu**	**2.45**	**164**	⇓*e*P	**Pn**	**02 09 59.9**	**+0.2**
LLP				*e*S	**Sn**	**02 10 31.1**	**+1.7**
MACP	**Maragondon, Ca**	**2.94**	**303**	⇓*e*P	**Pg**	**02 10 17.7**	**+1.1**
MACP				*e*S	**Sn**	**02 10 44.2**	**+2.5**
MSLP	**Maasin**	**2.97**	**148**	⇓*e*P	**Pn**	**02 10 07.1**	**+0.3**
MSLP	**Maasin**	**2.97**	**148**	*e*S	**Sg**	**02 10 57.6**	**+2.0**
TBP	**Tagbilaran**	**3.03**	**169**	*e*P	**Pn**	**02 10 07.7**	**+0.1**
SMPP	**San Manuel, Pa**	**4.27**	**324**	⇑*e*P	**Pn**	**02 10 25.5**	**+0.8**
SMPP				*e*S	**Sn**	**02 11 14.6**	**+0.2**

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*TUL **26** 02:11:27.4±0.8, 35°.72N±0°.02×97°.16W±0°.02, h5^{km}±7^{km}, ML2.7, mb_Lg2.3/25(NEIC), Error ellipse: s-maj=2.4km s-min=1.7km az=168.0*

NEIC 26 02:11:27.7±0.7**, 35°.74N**±0°.02×**97°.16W**±0°.02**, h8**^{km}±6^{km}**, Error ellipse: s-maj=2.5km s-min=1.8km az=169.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.09**	**198**	Pg	Pg	02 11 29.5	-0.4
OK005				Sg	Sg	02 11 31.0	-0.5
OK001	**Jones High Sch**	**0.20**	**211**	Pg	Pg	02 11 31.6	-0.2
OK001				Sg	Sg	02 11 34.7	+0.1
OKCFA	**Oklahoma City**	**0.40**	**217**	Pg	Pg	02 11 35.2	-0.2
OKCSW	**OKLAHOMA CITY**	**0.40**	**215**		Pg	02 11 35.2	-0.3
FNO	**Franklin**	**0.52**	**202**	Pg	Pg	02 11 37.3	-0.4
TUL1	**Leonard**	**1.12**	**81**		Pg	02 11 48.0	-1.2
X34A	**Smith Ranch, M**	**1.26**	**206**	Pn	Pn	02 11 50.9	-0.7
U32A	**Winter Ranch,**	**1.62**	**294**		Pn	02 11 56.9	+0.2
WMOK	**Wichita Mounta**	**1.66**	**234**	Pn	Pn	02 11 57.4	+0.3
WMOK				IAmb_Lg		02 12 18.8	
	comp=Z,13nm,1.0s						
X37A	**Clayton**	**1.86**	**128**		Pn	02 12 00.3	+0.5
HHAR	**Hobbs**	**2.67**	**77**		Pn	02 12 11.7	+0.8
Z38A	**Mt. Pleasant**	**3.05**	**143**	IAmb_Lg		02 13 10.6	
	comp=Z,10nm,0.8s						
MIAR	**Mount Ida**	**3.17**	**111**	Pn	Pn	02 12 17.5	-0.3
U40A	**Yellville**	**3.54**	**79**	Pn	Pn	02 12 22.8	-0.2
U40A				IAmb_Lg		02 13 19.3	
	comp=Z,6.8nm,0.7s						
S39A	**Bolivar**	**3.65**	**57**	IAmb_Lg		02 13 25.8	
	comp=Z,6.7nm,0.9s						
CBKS	**Cedar Bluff**	**3.70**	**327**	IAmb_Lg		02 13 26.2	
	comp=Z,8.0nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.09**	**86**	IAmb_Lg		02 13 42.2	
	comp=Z,4.7nm,0.8s						
MGMO	**Mountain Grove**	**4.19**	**69**	IAmb_Lg		02 13 41.7	
	comp=Z,6.5nm,0.7s						
CCM	**Cathedral Cave**	**5.27**	**62**	IAmb_Lg		02 14 15.0	
	comp=Z,5.1nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.44**	**309**	IAmb_Lg		02 14 31.2	
	comp=Z,8.2nm,0.8s						
PBMO	**Poplar Bluff**	**5.54**	**77**	IAmb_Lg		02 14 27.6	
	comp=Z,7.4nm,0.9s						
P40A	**Paris**	**5.55**	**45**	IAmb_Lg		02 14 25.7	
	comp=Z,5.6nm,0.8s						
FVM	**French Village**	**5.84**	**65**	IAmb_Lg		02 14 47.2	
	comp=Z,6.9nm,1.1s						
N38A	**Joes South For**	**5.92**	**30**	IAmb_Lg		02 14 43.9	
	comp=Z,7.0nm,0.7s						

IDC 26 02:25:28.5±3.1**, 30°.32S**×**177°.48W, h0**^{km}**, mb3.7**/2**, mbtmp3.7**/2**, MS3.1**/1**, Error ellipse: s-maj=65.7km s-min=32.8km az=108.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.13**	**340**	Pn	Pn	02 25 51.7	+0.1
	255nm,0.3s,baz=62,slow=21,SNR=16						
RAO				Sn	Sg	02 26 04.1	-0.7
	260nm,0.3s,baz=110,slow=23,SNR=9.8						
URZ	**Urewera**	**9.09**	**208**	Sn	Sn	02 29 19.8	-4.1
	1.1nm,0.3s,baz=214,slow=21,SNR=8.0						
ASAR	**Alice Springs**	**43.56**	**267**	P	P	02 33 34.4	0.0
	0.3nm,0.3s,baz=103,slow=7.2,SNR=5.6						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.54**	**272**	P	P	02 33 42.0	-0.3
	0.6nm,0.3s,baz=110,slow=8.1,SNR=62						
	0.6nm,0.3s						
GUMO	**Guam**	**56.74**	**315**	LR	LR	02 56 47.4	
	comp=Z,19nm,21.5s,baz=120,slow=33						
FINES	**FINESS Array B**	**145.23**	**340**	PKPbc	PKPbc	02 45 06.1	-0.9
	1.0nm,0.4s,baz=52,slow=3.7,SNR=15						

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*TUL **26** 02:43:13±0.9, 36°.41N±0°.02×97°.79W±0°.02, h6^{km}±6^{km}, ML2.7, mb_Lg2.6/56(NEIC), Error ellipse: s-maj=2.7km s-min=2.3km az=58.0*

NEIC 26 02:43:12.8±0.9**, 36°.41N**±0°.01×**97°.78W**±0°.02**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.5km s-min=1.6km az=92.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.99**	**269**	Pg	Pg	02 43 31.3	-0.4
OKCFA	**Oklahoma City**	**1.03**	**165**	Pg	Pg	02 43 32.0	-0.6
OKCSW	**OKLAHOMA CITY**	**1.04**	**164**		Pg	02 43 32.6	-0.2
T35A	**Sooner Cattle**	**1.14**	**63**		Pg	02 43 34.1	-0.5
FNO	**Franklin**	**1.19**	**165**	Pg	Pg	02 43 35.4	-0.2
TUL1	**Leonard**	**1.68**	**107**	Pn	Pn	02 43 42.8	-0.2
TUL1				IAmb_Lg		02 44 07.9	
	comp=Z,29nm,0.8s						
X34A	**Smith Ranch, M**	**1.81**	**181**	Pn	Pn	02 43 44.6	-0.1
WMOK	**Wichita Mounta**	**1.86**	**206**		Pn	02 43 45.8	+0.4
R32A	**Long Quarter,**	**2.14**	**340**	Pn	Pn	02 43 49.0	-0.3
X37A	**Clayton**	**2.67**	**132**	Pn	Pn	02 43 57.0	+0.4
X37A				IAmb_Lg		02 44 43.6	
	comp=Z,17nm,0.8s						
CBKS	**Cedar Bluff**	**2.86**	**328**	Pn	Pn	02 43 58.7	-0.5
HHAR	**Hobbs**	**3.10**	**91**	Pn	Pn	02 44 02.9	+0.4
W39A	**Magazine**	**3.47**	**109**		Pb	02 44 15.2	+0.5
W39A				IAmb_Lg		02 45 08.1	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**3.52**	**246**		Pb	02 44 15.9	+0.2
AMTX				IAmb_Lg		02 45 05.6	
	comp=Z,14nm,0.9s						
S39A	**Bolivar**	**3.79**	**69**	Pn	Pn	02 44 12.5	+0.5
Z38A	**Mt. Pleasant**	**3.89**	**143**	IAmb_Lg		02 45 19.7	
	comp=Z,23nm,0.8s						
MIAR	**Mount Ida**	**3.90**	**117**	Pn	Pn	02 44 14.1	+0.6
MIAR				IAmb_Lg		02 45 23.4	
	comp=Z,11nm,0.7s						
U40A	**Yellville**	**3.98**	**89**	Pn	Pn	02 44 15.2	+0.7
X40A	**Basin Creek Fa**	**4.47**	**114**	Pn	Pn	02 44 21.5	+0.2
X40A				IAmb_Lg		02 45 36.6	
	comp=Z,9.9nm,0.7s						
MGMO	**Mountain Grove**	**4.49**	**79**	IAmb_Lg		02 45 35.4	
	comp=Z,7.6nm,0.8s						
WHAR	**Wooly Hollow**	**4.60**	**102**	Pn	Pn	02 44 22.8	-0.3
WHAR				IAmb_Lg		02 45 42.4	
	comp=Z,8.0nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.61**	**95**	Pn	Pn	02 44 23.3	+0.1
KSCO	**Kaye Shedlock'**	**4.64**	**305**	IAmb_Lg		02 45 42.7	
	comp=Z,8.4nm,0.7s						
P38A	**Dawn**	**4.64**	**45**	IAmb_Lg		02 45 48.8	
	comp=Z,9.6nm,0.7s						
W41B	**Gary Mavity, V**	**4.66**	**104**	Pn	Pn	02 44 23.5	-0.5
W41B				IAmb_Lg		02 45 51.5	
	comp=Z,12nm,1.2s						
WLAR	**White Oak Lake**	**4.69**	**124**	IAmb_Lg		02 45 50.5	
	comp=Z,10nm,0.7s						
R40A	**Maddies Statio**	**4.78**	**65**	IAmb_Lg		02 45 53.9	
	comp=Z,7.0nm,0.8s						
Z41A	**Richland Creek**	**5.16**	**126**	IAmb_Lg		02 46 08.9	
	comp=Z,8.2nm,0.9s						
T25A	**Trinidad**	**5.37**	**280**	Pn	Pn	02 44 33.7	-0.3
CCM	**Cathedral Cave**	**5.47**	**71**	IAmb_Lg		02 46 15.8	
	comp=Z,7.3nm,0.8s						
P40A	**Paris**	**5.50**	**54**	IAmb_Lg		02 46 09.5	
	comp=Z,17nm,0.7s						
N38A	**Joes South For**	**5.64**	**38**	IAmb_Lg		02 46 27.7	
	comp=Z,11nm,0.8s						
FVM	**French Village**	**6.08**	**73**	IAmb_Lg		02 46 25.7	
	comp=Z,12nm,0.9s						
JCT	**Junction City**	**6.15**	**197**	IAmb_Lg		02 46 32.1	
	comp=Z,7.2nm,0.9s						
Q24A	**Divide**	**6.38**	**296**	IAmb_Lg		02 46 52.5	
	comp=Z,6.4nm,0.7s						
SCIA	**State Center**	**6.53**	**31**	IAmb_Lg		02 46 47.2	
	comp=Z,9.9nm,0.7s						
S44A	**Carbondale**	**6.94**	**77**	IAmb_Lg		02 46 51.8	
	comp=Z,11nm,0.9s						
PHWY	**Pilot Hill**	**7.73**	**312**	IAmb_Lg		02 47 29.9	
	comp=Z,7.1nm,1.1s						
N23A	**Red Feather La**	**7.80**	**308**	IAmb_Lg		02 47 32.8	
	comp=Z,6.1nm,0.8s						
JFWS	**Jewell Farm**	**8.71**	**39**	IAmb_Lg		02 47 53.0	
	comp=Z,8.1nm,0.7s						

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*IDC **26** 03:12:42.3±3.1, 28°.53S×167°.69E, h0^{km}, mb3.8/4, mbtmp4.1/5, ML4.6/1, MS3.7/21, Error ellipse: s-maj=61.9km s-min=38.2km az=133.0*

*NEIC **26** 03:12:45.6±1.6, 28°.53S±0°.07×167°.6E±0°.1, h17^{km}±5^{km}, mb4.6/11, Error ellipse: s-maj=14.6km s-min=10.5km az=76.0*

ISC 26 03:12:44.0±0.7**, 28°.48S**±0°.06×**167°.60E**±0°.10**, h10**^{km}**, n59, σ1^{s}.33**/41**, mb4.3**/8**, MS3.7**/21**, Norfolk Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**5.84**	**359**		**Pn**	**03 14 12.4**	**+1.7**
PINNC				Sn	**Sn**	**03 15 14.2**	**-3.5**
OUENC	**Ouen Island, N**	**6.07**	**353**	Pn	**Pn**	**03 14 15.3**	**+1.4**
OUENC				Sn	**Sn**	**03 15 24.3**	**+0.8**
ONTNC	**Ouen Toro**	**6.23**	**350**	Pn	**Pn**	**03 14 16.1**	**0.0**
DZM	**Mont Dzumac**	**6.47**	**350**	*e*Pn	**Pn**	**03 14 20.6**	**+1.3**
	169nm,0.8s						
DZM				*e*Sn	**Sn**	**03 15 33.2**	**-0.1**
	242nm,0.9s						
DZM				*e*LR	LR	03 15 46.3	
	comp=Z,1μm,24.6s						
DZM	**Mont Dzumac**	**6.47**	**350**	Pn	**Pn**	**03 14 20.3**	**+1.0**
	13nm,0.3s,baz=212,slow=9.9,SNR=92						
DZM				Sn	**Sn**	**03 15 31.1**	**-2.2**
	31nm,0.3s,baz=329,slow=22,SNR=8.7						
	41nm,0.3s						
DZM	**Mont Dzumac**	**6.47**	**350**	Pn	**Pn**	**03 14 19.5**	**+0.1**
DZM				Sn	**Sn**	**03 15 31.1**	**-2.2**
MARNC	**Mare, Loyalty**	**6.98**	**3**		**Pn**	**03 14 28.0**	**+1.7**
LIFNC	**LIFOU**	**7.67**	**357**	Pn	**Pn**	**03 14 37.6**	**+1.7**
LHI	**Lord Howe Isla**	**8.00**	**246**	Pn	**Pn**	**03 14 41.7**	**+1.4**
OUZ	**Omahuta**	**8.44**	**144**	Pn	**Pn**	**03 14 47.2**	**+0.9**
KOUNC	**Koumac, New Ca**	**8.45**	**338**	Pn	**Pn**	**03 14 47.1**	**+0.6**
HIZ	**Hauiti**	**11.69**	**151**	Pn	**Pn**	**03 15 31.0**	**+0.1**
URZ	**Urewera**	**12.57**	**143**	LR	LR	03 19 55.8	
	comp=Z,629nm,19.6s,baz=30,slow=35						
ARMA	**Armidale**	**14.05**	**258**	Pn	**Pn**	**03 16 00.7**	**-2.5**
BSWZ	**Blackbirch Sta**	**14.16**	**160**		**Pn**	**03 16 03.6**	**-1.0**
MSVF	**Nonsavu**	**14.37**	**44**	LR	LR	03 20 43.2	
	comp=Z,216nm,19.6s,baz=253,slow=34						
EIDS	**Eidsvold**	**15.05**	**278**	Pn	**Pn**	**03 16 17.0**	**+0.2**
RPZ	**Rata Peaks**	**15.46**	**171**	LR	LR	03 21 15.0	
	comp=Z,281nm,21.8s,baz=348,slow=33						
LBZ	**Lake Benmore**	**16.01**	**173**	Pn	**Pn**	**03 16 27.5**	**-1.7**
LBZ				IAmb	IAmb	03 16 42.2	
	comp=Z,62nm,1.4s						
WKZ	**Wanaka**	**16.36**	**176**	Pn	**Pn**	**03 16 34.0**	**+0.3**
WKZ				IAmb	IAmb	03 16 50.7	
	comp=Z,62nm,1.1s						
HNR	**Honiara**	**20.27**	**338**	LR	LR	03 23 32.0	
	comp=Z,128nm,22.0s,baz=136,slow=32						
TOO	**Toolangi**	**20.60**	**238**	P	**P**	**03 17 22.9**	**-0.4**
TOO				IAmb	IAmb	03 17 30.4	
	comp=Z,23nm,0.9s						
CTA	**Charters Tower**	**21.15**	**289**	P	**P**	**03 17 31.7**	**+2.4**
	comp=Z,5.3nm,0.7s,baz=124,slow=11,SNR=8.8						
	comp=Z,5.3nm,0.7s						
STKA	**Stephens Creek**	**22.71**	**255**	P	**P**	**03 17 48.1**	**+2.0**
	comp=Z,2.0nm,0.8s,baz=98,slow=12,SNR=2.1						
STKA				LR	LR	03 25 54.2	
	comp=Z,306nm,19.3s,baz=58,slow=35						
	comp=Z,2.0nm,0.8s						
AFI	**Afiamalu**	**24.02**	**57**	LR	LR	03 25 22.8	
	comp=Z,138nm,19.2s,baz=228,slow=32						
PMG	**Port Moresby**	**27.00**	**311**	LR	LR	03 27 56.5	
	comp=Z,135nm,19.2s,baz=134,slow=34						
RAR	**Rarotonga**	**30.41**	**84**	LR	LR	03 28 15.2	
	comp=Z,72nm,21.7s,baz=262,slow=31						
ASAR	**Alice Springs**	**30.58**	**271**	P	**P**	**03 18 57.9**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=97,slow=8.6,SNR=17						
	comp=Z,2.2nm,0.9s						
ASAR	**Alice Springs**	**30.58**	**271**	P	**P**	**03 18 57.5**	**-0.7**
WB2	**Warramunga Arr**	**31.41**	**278**	P	**P**	**03 19 05.8**	**+0.3**
WB2				IAmb	IAmb	03 19 31.7	
	comp=Z,8.3nm,0.9s						
WRA	**Warramunga Arr**	**31.42**	**278**	P	**P**	**03 19 04.8**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=111,slow=7.8,SNR=5.8						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**31.42**	**278**	P	**P**	**03 19 05.3**	**-0.3**
WB0	**Warramunga Arr**	**31.44**	**279**	P	**P**	**03 19 05.2**	**-0.5**
WB0				IAmb	IAmb	03 19 30.5	
	comp=Z,12nm,1.0s						
FORT	**Forrest**	**34.33**	**256**	P	**P**	**03 19 30.0**	**-0.9**
KNRA	**Kununurra**	**38.01**	**281**	P	**P**	**03 20 01.4**	**-1.1**
KNRA				IAmb	IAmb	03 20 05.7	
	comp=Z,8.6nm,0.9s						
TBI	**Tubuai**	**38.81**	**93**	*e*LR	LR	03 30 25.4	
	comp=Z,132nm,30.8s						
PPT2	**Papeete2**	**40.68**	**84**	*e*LR	LR	03 31 12.6	
	comp=Z,218nm,29.0s						
PPT	**Papeete**	**40.69**	**84**	LR	LR	03 33 51.9	
	comp=Z,63nm,18.6s,baz=274,slow=31						
SIJI	**Sorong**	**44.25**	**302**	LR	LR	03 38 40.1	
	comp=Z,153nm,21.9s,baz=136,slow=35						
VNDA	**Vanda**	**49.19**	**182**	LR	LR	03 40 16.3	
	comp=Z,47nm,18.1s,baz=332,slow=34						
KAPI	**Kappang**	**50.97**	**288**	LR	LR	03 46 12.8	
	comp=Z,78nm,18.2s,baz=98,slow=39						
TAOE	**Nuku Hiva Isla**	**52.76**	**79**	*e*LR	LR	03 36 46.9	
	comp=Z,82nm,26.4s						
LEM	**Lembang**	**60.44**	**279**	LR	LR	03 49 34.8	
	comp=Z,146nm,20.0s,baz=164,slow=37						
QSPA	**South Pole Qui**	**61.62**	**180**	P	**P**	**03 23 01.8**	**+0.2**
JOW	**Kunigami**	**66.70**	**322**	LR	LR	03 50 57.2	
	comp=Z,21nm,18.1s,baz=270,slow=34						
MJAR	**Matsushiro Arr**	**70.34**	**335**	LR	LR	03 53 51.2	
	comp=Z,9.5nm,19.5s,baz=132,slow=35						
TROLL	**Troll, Antarti**	**79.25**	**185**	P	**P**	**03 24 48.6**	**-0.6**
SNAA	**Sanae**	**79.90**	**183**	P	**P**	**03 24 51.9**	**-0.8**
SNAA	**Sanae**	**79.90**	**183**	P	**P**	**03 24 51.2**	**-1.4**
SNAA				IAmb	IAmb	03 25 04.7	
	comp=Z,7.1nm,1.2s						
VNA3	**Neumayer Olymp**	**80.54**	**181**	P	**P**	**03 24 55.2**	**-0.9**
VNA2	**Neumayer--Watz**	**80.81**	**182**	P	**P**	**03 24 56.8**	**-0.7**
	baz=157,slow=4.0						
SHEM	**Shemya Is, Ala**	**81.06**	**4**	LR	LR	03 53 15.2	
	comp=Z,82nm,21.1s,baz=186,slow=30						
PETK	**Petropavlovsk-**	**81.70**	**354**	LR	LR	03 55 45.0	
	comp=Z,52nm,19.2s,baz=192,slow=32						
MA2	**Magadan**	**88.83**	**352**	LR	LR	04 01 35.6	
	comp=Z,30nm,19.0s,baz=124,slow=33						
SEY	**Seymchan**	**91.90**	**353**	LR	LR	04 01 29.4	
	comp=Z,43nm,19.9s,baz=82,slow=32						
PLCA	**Paso Flores**	**92.56**	**140**	LR	LR	04 02 55.9	
	comp=Z,25nm,18.5s,baz=194,slow=33						
PFO	**Pinyon Flats O**	**94.76**	**54**	LR	LR	04 01 11.6	
	comp=Z,45nm,18.5s,baz=197,slow=31						
GERES	**GERESS Array B**	**151.44**	**323**	PKPbc	**PKiKP**	**03 32 38.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=46,slow=3.9,SNR=5.4						
GERES	**GERESS Array B**	**151.44**	**323**	PKPdf	**PKPdf**	**03 32 32.3**	**+0.4**

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*IDC **26** 03:14:20.6±0.7, 7°.10S×154°.47E, h0^{km}, mb4.4/12, mbtmp4.3/13, ML4.2/1, MS3.5/2, Error ellipse: s-maj=27.0km s-min=18.2km az=107.0*

*NEIC **26** 03:14:28.2±2.0, 6°.87S±0°.10×154°.4E±0°.1, h42^{km}±7^{km}, mb4.6/30, Error ellipse: s-maj=18.8km s-min=13.8km az=102.0*

ISC 26 03:14:26.7±0.6**, 6°.97S**±0°.08×**154°.4E**±0°.1**, h39**^{km}**, n54, σ0^{s}.97**/54**, mb4.6**/24**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.56**	**321**	Pn	**Pn**	**03 15 19.7**	**+0.2**
KRVT	**Keravat (AS076**	**3.56**	**318**	Pn	**Pn**	**03 15 19.9**	**+0.4**
	18nm,0.3s,baz=282,slow=1.1,SNR=11						
KRVT				Sn	**Sn**	**03 15 59.6**	**-0.8**
	13nm,0.3s,baz=233,slow=20,SNR=3.8						
	72nm,0.5s						
PMG	**Port Moresby**	**7.58**	**251**	Pn	**Pn**	**03 16 16.8**	**+2.0**
	1.6nm,0.3s,baz=58,slow=12,SNR=9.7						
PMG				LR	LR	03 19 10.7	
	comp=Z,163nm,19.3s,baz=60,slow=38						
PMG	**Port Moresby**	**7.58**	**251**		**Pn**	**03 16 16.9**	**+2.1**
CTAO	**Charters Tower**	**15.25**	**210**	Pn	**P**	**03 18 02.6**	**-1.2**
WR0	**Warramunga Arr**	**23.21**	**234**	P	**P**	**03 19 29.0**	**-1.5**
WR0				IAmb	IAmb	03 19 30.8	
	comp=Z,12nm,0.7s						
WB0	**Warramunga Arr**	**23.23**	**235**	P	**P**	**03 19 29.5**	**-1.2**
WRAB	**Tennant Creek**	**23.35**	**235**	P	**P**	**03 19 29.9**	**-1.9**
WB2	**Warramunga Arr**	**23.35**	**235**	P	**P**	**03 19 30.4**	**-1.5**
WRA	**Warramunga Arr**	**23.36**	**235**	P	**P**	**03 19 30.1**	**-1.9**
	comp=Z,7.7nm,0.8s,baz=57,slow=9.5,SNR=8.2						
	comp=Z,7.7nm,0.8s						
ASAR	**Alice Springs**	**25.76**	**228**	P	**P**	**03 19 52.9**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=60,slow=9.3,SNR=10						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**27.52**	**204**	P	**P**	**03 20 07.9**	**-1.8**
	comp=Z,1.5nm,0.5s,baz=30,slow=16,SNR=4.1						
	comp=Z,1.5nm,0.5s						
STKA	**Stephens Creek**	**27.52**	**204**	P	**P**	**03 20 09.2**	**-0.6**
KSRS	**Korea Array**	**50.66**	**333**	P	**P**	**03 23 22.8**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=146,slow=8.5,SNR=7.8						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	**69.01**	**328**	P	**P**	**03 25 29.7**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=124,slow=4.6,SNR=10						
	comp=Z,4.4nm,0.8s						
SONM	**Songino Array**	**69.01**	**328**	P	**P**	**03 25 29.9**	**+1.5**
SONM				IAmb	IAmb	03 25 30.8	
	comp=Z,8.3nm,1.1s						
M19K	**Big River Lodg**	**79.15**	**22**	P	**P**	**03 26 28.0**	**+0.8**
L19K	**White Mountain**	**79.15**	**22**	P	**P**	**03 26 27.2**	**+0.1**
L19K				IAmb	IAmb	03 26 28.8	
	comp=Z,8.5nm,1.2s						
GLI	**Glacier Island**	**81.45**	**25**	P	**P**	**03 26 38.3**	**-1.3**
MCK	**McKinley**	**82.25**	**22**	P	**P**	**03 26 43.5**	**-0.3**
MCK				IAmb	IAmb	03 26 44.4	
	comp=Z,4.9nm,0.8s						
KLU	**Klutina**	**82.26**	**25**	P	**P**	**03 26 43.5**	**-0.4**
KLU				IAmb	IAmb	03 26 49.9	
	comp=Z,8.9nm,1.4s						
QSPA	**South Pole Qui**	**83.00**	**180**	P	**P**	**03 26 47.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=294,slow=1.2,SNR=5.3						
	comp=Z,1.9nm,0.8s						
QSPA	**South Pole Qui**	**83.00**	**180**	P	**P**	**03 26 48.8**	**+1.0**
QSPA				IAmb	IAmb	03 27 22.7	
	comp=Z,5.7nm,1.2s						
MK31	**Makanchi Array**	**83.01**	**319**	P	**P**	**03 26 47.3**	**-0.8**
MK31				IAmb	IAmb	03 26 50.4	
	comp=Z,3.9nm,0.9s						
MKAR	**Makanchi Array**	**83.01**	**319**	P	**P**	**03 26 48.7**	**+0.6**
	comp=Z,5.0nm,0.9s,baz=105,slow=5.7,SNR=30						
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**83.01**	**319**	P	**P**	**03 26 48.0**	**-0.1**
MAKZ	**Makanchi**	**83.22**	**319**	P	**P**	**03 26 48.5**	**-0.7**
MAKZ				IAmb	IAmb	03 26 50.9	
	comp=Z,6.1nm,0.8s						
ILAR	**Eielson Array**	**83.56**	**22**	P	**P**	**03 26 49.7**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=250,slow=5.0,SNR=11						
	comp=Z,1.2nm,0.8s						
ZAA0	**Zalesovo Array**	**83.84**	**326**	P	**P**	**03 26 51.1**	**-1.0**
ZAA0				IAmb	IAmb	03 26 52.5	
	comp=Z,4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**83.84**	**326**	P	**P**	**03 26 51.7**	**-0.4**
	comp=Z,4.6nm,0.5s,baz=119,slow=5.7,SNR=17						
	comp=Z,4.6nm,0.5s						
ZALV	**Zalesovo Beam**	**83.84**	**326**	P	**P**	**03 26 51.9**	**-0.3**
J25K	**Salcha River,**	**84.04**	**22**	P	**P**	**03 26 52.6**	**-0.4**
J25K				IAmb	IAmb	03 26 53.2	
	comp=Z,3.4nm,0.9s						
M27K	**Edge Creek, AK**	**84.35**	**25**	P	**P**	**03 26 55.8**	**+1.0**
M27K				IAmb	IAmb	03 26 56.6	
	comp=Z,6.0nm,1.1s						
K27K	**Chicken**	**85.03**	**23**	P	**P**	**03 26 59.1**	**+1.2**
HYT	**Haines Junctio**	**85.61**	**27**	P	**P**	**03 27 02.0**	**+0.9**
HYT				IAmb	IAmb	03 27 03.1	
	comp=Z,4.8nm,0.8s						
N31M	**Braeburn, Yuko**	**86.64**	**27**	P	**P**	**03 27 06.5**	**+0.5**
M31M	**Drury Creek, Y**	**87.51**	**26**	P	**P**	**03 27 11.2**	**+1.1**
M31M				IAmb	IAmb	03 27 11.4	
	comp=Z,2.2nm,0.7s						
DLBC	**Dease Lake**	**88.41**	**31**	P	**P**	**03 27 15.4**	**+0.7**
LHV	**Little Huntoon**	**91.98**	**52**	P	**P**	**03 27 32.1**	**+0.5**
RYN	**Ryan**	**92.01**	**52**	P	**P**	**03 27 32.4**	**+0.4**
NVAR	**Mina Array Bea**	**92.16**	**52**	P	**P**	**03 27 33.0**	**+0.2**
	comp=Z,2.9nm,1.0s,baz=250,slow=6.2,SNR=16						
	comp=Z,2.9nm,1.0s						
NVAR	**Mina Array Bea**	**92.16**	**52**	P	**P**	**03 27 32.8**	**0.0**
NV11	**Mina Array Sit**	**92.27**	**52**	P	**P**	**03 27 33.7**	**+0.5**
KVN	**Kaiserville**	**92.39**	**51**	P	**P**	**03 27 33.7**	**-0.1**
KVN				IAmb	IAmb	03 27 38.4	
	comp=Z,2.7nm,0.9s						
TPH	**Tonopah**	**92.96**	**52**	P	**P**	**03 27 36.0**	**-0.5**
NEW	**Newport**	**94.12**	**42**	LR	LR	04 03 22.3	
	comp=Z,49nm,20.9s,baz=274,slow=31						
R11A	**Troy Canyon, C**	**94.27**	**52**	P	**P**	**03 27 43.2**	**+0.7**
R11A				IAmb	IAmb	03 27 44.6	
	comp=Z,2.9nm,1.1s						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**03 27 52.7**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=265,slow=4.3,SNR=11						
	comp=Z,1.4nm,0.8s						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**03 27 52.5**	**+0.3**
PDAR	**Pinedale Array**	**99.11**	**48**	P	**Pdif**	**03 28 03.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=224,slow=2.5,SNR=2.3						
	comp=Z,0.3nm,0.6s						
GERES	**GERESS Array B**	**126.74**	**329**	PKP	**PKiKP**	**03 33 27.1**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=64,slow=3.1,SNR=4.7						
BDFB	**Brasilia**	**148.40**	**135**	PKPbc	**PKPbc**	**03 34 10.1**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=131,slow=2.9,SNR=3.1						
BDFB	**Brasilia**	**148.40**	**135**		**PKPbc**	**03 34 09.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**152.47**	**285**	PKPbc	**PKPbc**	**03 34 19.4**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=37,slow=1.8,SNR=7.7						

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*GCG **26** 03:34:00.7±0.6, 13°.67N×91°.18W, h82^{km}±33^{km}, MD3.7*

*IDC **26** 03:34:02.0±9.0, 14°.84N×90°.74W, h0^{km}, mb3.8/3, mbtmp3.6/5, ML3.2/2, Error ellipse: s-maj=178.5km s-min=36.7km az=3.0*

ISC 26 03:34:04.5±3.3**, 14°.0N**±0°.4×**91°.17W**±0°.10**, h100**^{km}**, n11, σ2^{s}.43**/11**, mb3.8**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.58**	**33**	*e*P	**Pn**	**03 34 18.4**	**-2.8**
FUG				*e*S	**Sn**	**03 34 32.6**	**-1.1**
PCG	**Pacaya**	**0.70**	**51**	*e*P	**Pn**	**03 34 18.1**	**-4.1**
STG3	**Santiaguito 3,**	**0.85**	**333**	*e*S	**Sn**	**03 34 36.9**	**-1.0**
NBG	**Las Nubes**	**1.01**	**52**	*e*P	**Pn**	**03 34 24.1**	**-1.3**
MRL	**Marmol**	**1.82**	**52**	*e*P	**Pn**	**03 34 33.7**	**-1.3**
CMIG	**Matias Romero**	**4.75**	**312**	Pn	**Pn**	**03 35 11.8**	**-2.1**
	0.2nm,0.3s,baz=126,slow=6.9,SNR=5.5						
CMIG				Sn	**Sn**	**03 36 06.6**	**-1.2**
	0.3nm,0.3s,baz=131,slow=19,SNR=3.6						
	1.6nm,0.6s						
TXAR	**Lajitas Array**	**19.19**	**325**	P	**Pn**	**03 38 23.0**	**+0.5**
	0.1nm,0.3s,baz=165,slow=15,SNR=3.8						
	0.6nm,0.7s						
H06E1	**SOCORRO T-PHAS**	**19.55**	**287**	T	T	03 58 51.0	
	SNR=5.5						
NVAR	**Mina Array Bea**	**34.22**	**320**	P	P	03 40 46.9	+5.9
	1.0nm,0.7s,baz=132,slow=7.7,SNR=11						
	1.0nm,0.7s						
SCHQ	**Schefferville**	**44.99**	**20**	P	**P**	**03 42 11.3**	**+1.6**
	1.4nm,0.6s,baz=221,slow=5.7,SNR=4.2						
	1.4nm,0.6s						
YKA	**Yellowknife Ar**	**51.26**	**346**	P	**P**	**03 43 00.7**	**+2.9**
	0.5nm,0.6s,baz=149,slow=7.6,SNR=5.9						
	0.5nm,0.6s						

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*IDC **26** 04:00:28.1±0.6, 16°.91S×173°.59W, h0^{km}, mb4.4/11, mbtmp4.5/13, ML4.4/2, MS3.4/11, Error ellipse: s-maj=28.8km s-min=14.9km az=135.0*

*NOU **26** 04:00:36.7, 16°.91S×173°.25W, h76^{km}, mb5.0/27, Tonga Islands*

*NEIC **26** 04:00:36.1±1.9, 16°.90S±0°.09×173°.17W±0°.07, h45^{km}±7^{km}, mb4.4/37, Error ellipse: s-maj=12.7km s-min=9.7km az=158.0*

ISC 26 04:00:35.2±0.4, 16°.94S±0°.06×173°.28W±0°.07, h52km, n137, σ1s.31/119, mb4.4/28, MS3.5/10, 1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.34	26	Pn	Pn	04 01 25.4	+0.3
	126nm,0.3s,baz=298,slow=0.5,SNR=55						
AFI				Sn	Sn	04 02 00.7	-2.9
	219nm,0.3s,baz=41,slow=23,SNR=28						
	330nm,0.4s						
AFI	Afiamalu	3.34	26	P	Pn	04 01 26.0	+0.9
NIUE	Niue	3.84	124		Pn	04 01 31.7	-0.1
NIUE	Niue	3.84	124	P	Pn	04 01 31.8	0.0
MSVF	Nonsavu	8.31	263	Pn	Pn	04 02 39.8	+6.5
	2.6nm,0.3s,baz=96,slow=12,SNR=60						
MSVF	Nonsavu	8.31	263		Pn	04 02 36.2	+2.9
RAR	Rarotonga	13.46	111	Pn	Pn	04 03 43.0	-0.6
	4.5nm,0.3s,baz=256,slow=8.3,SNR=9.2						
RAR				LR	LR	04 07 40.4	
	comp=Z,52nm,19.6s,baz=344,slow=32						
	37nm,0.6s						
RAR	Rarotonga	13.46	111	Pn	Pn	04 03 43.5	0.0
RAR	Rarotonga	13.46	111	P	Pn	04 03 43.3	-0.3
OUENC	Ouen Island, N	19.49	251	P	Pn	04 04 59.0	-0.7
OUENC				IAmb	IAmb	04 05 03.0	
	comp=Z,18nm,0.9s						
DZM	Mont Dzumac	19.77	252	P	P	04 05 01.4	+0.1
	comp=Z,11nm,0.8s,baz=104,slow=16,SNR=6.0						
DZM	Mont Dzumac	19.77	252	P	P	04 05 00.9	-0.4
DZM				IAmb	IAmb	04 05 02.7	
	comp=Z,14nm,0.8s						
OUZ	Omahuta	21.65	210	P	P	04 05 20.3	-0.9
OUZ	Omahuta	21.65	210	P	P	04 05 22.2	+0.9
GRZ	Great Barrier	21.68	205	P	P	04 05 21.8	+0.3
MXZ	Matakaoa Point	21.84	198	P	P	04 05 26.1	+2.8
WCZ	Waipu Caves	21.89	208	P	P	04 05 24.4	+0.6
KUZ	Kuaotunu	22.00	204	P	P	04 05 25.8	+0.7
HAZ	Te Kaha	22.18	199	P	P	04 05 28.0	+1.0
PKGZ	Pakihiroa	22.21	198	P	P	04 05 29.6	+2.2
RUGZ	Raukumara Rang	22.41	199	P	P	04 05 30.4	+0.9
MKAZ	Moumakai	22.54	205	P	P	04 05 31.2	+0.5
MWZ	Matawai	22.79	199	P	P	04 05 35.3	+1.8
URZ	Urewera	22.86	200	P	P	04 05 33.0	-1.2
	comp=Z,25nm,0.5s,baz=54,slow=1.6,SNR=29						
	comp=Z,25nm,0.5s						
URZ	Urewera	22.86	200	P	P	04 05 33.1	-1.0
URZ	Urewera	22.86	200	P	P	04 05 33.1	-1.0
URZ	Urewera	22.86	200	P	P	04 05 33.8	-0.3
TOZ	Tahuroa Road	22.95	203	P	P	04 05 36.0	+0.9
OMRZ	Omania	22.96	201	P	P	04 05 37.6	+2.3
RAGZ	Rawiri	22.97	199	P	P	04 05 35.8	+0.4
SNGZ	Shannon Statio	23.26	199	P	P	04 05 39.1	+0.9
KNZ	Kokohu	23.38	198	P	P	04 05 41.2	+1.9
HIZ	Hauiti	23.88	203	P	P	04 05 45.7	+1.7
HIZ	Hauiti	23.88	203	P	P	04 05 45.7	+1.7
BKZ	Black Stump Fm	23.88	200	P	P	04 05 44.5	+0.5
QRZ	Quartz Range	26.78	204	P	P	04 06 10.9	+0.6
KHZ	Kahutara	27.78	201	P	P	04 06 20.0	+0.8
LTZ	Lake Taylor	28.56	203	P	P	04 06 27.9	+1.7
LTZ	Lake Taylor	28.56	203	P	P	04 06 27.8	+1.6
INZ	Inchbonnie	28.82	204	P	P	04 06 31.6	+3.1
LHI	Lord Howe Isla	28.99	235	P	P	04 06 31.0	+0.9
OXZ	Oxford	29.11	202	P	P	04 06 31.7	+0.6
MQZ	McQueen's Vall	29.23	201	P	P	04 06 37.0	+5.0
RPZ	Rata Peaks	29.81	203	P	P	04 06 37.7	+0.5
	comp=Z,6.1nm,0.4s,baz=299,slow=14,SNR=2.4						
	comp=Z,6.1nm,0.4s						
RPZ	Rata Peaks	29.81	203	P	P	04 06 37.6	+0.3
RPZ	Rata Peaks	29.81	203	P	P	04 06 38.3	+1.0
ARMA	Armidale	34.67	241	P	P	04 07 18.1	-2.1
CTA	Charters Tower	38.43	259	LR	LR	04 21 25.4	
	comp=Z,67nm,18.3s,baz=80,slow=33						
CMSA	Cobar Meteorol	39.89	241	P	P	04 08 02.1	-2.1
H11S2	WAKE ISLAND Hy	40.34	330	T	T	04 51 01.2	
	baz=145,slow=74						
H11S3	WAKE ISLAND Hy	40.35	330	T	T	04 50 47.8	
	baz=145,slow=74						
H11S1	WAKE ISLAND Hy	40.35	330	T	T	04 50 48.6	
	baz=145						
H11N3	WAKE ISLAND Hy	41.30	331	T	T	04 52 04.5	
	baz=149						
H11N1	WAKE ISLAND Hy	41.30	331	T	T	04 52 16.6	
	baz=149						
H11N2	WAKE ISLAND Hy	41.32	331	T	T	04 52 08.2	
	baz=149						
STKA	Stephens Creek	43.38	241	P	P	04 08 30.7	-2.2
	comp=Z,4.8nm,0.7s,baz=81,slow=11,SNR=11						
STKA				LR	LR	04 22 50.4	
	comp=Z,55nm,20.4s,baz=205,slow=31						
	comp=Z,4.8nm,0.7s						
HTT	Hallett	45.85	240	P	P	04 08 50.4	-2.2
	comp=Z,23nm,2.4s						
LCRK	Leigh Creek	46.08	244	P	P	04 08 52.1	-2.2
	comp=Z,39nm,0.7s						
OOD	Oodnadatta	48.12	248	P	P	04 09 09.8	-0.4
BBOO	Buckleboo	48.15	241	P	P	04 09 09.7	-0.8
WB0	Warramunga Arr	49.59	258	P	P	04 09 18.8	-2.8
WB0				IAmb	IAmb	04 09 49.3	
	comp=Z,6.5nm,1.4s						
WB2	Warramunga Arr	49.61	258	P	P	04 09 18.9	-2.9
WB2				IAmb	IAmb	04 09 19.6	
	comp=Z,3.6nm,0.6s						
WRAB	Tennant Creek	49.61	258	P	P	04 09 19.2	-2.6
WRA	Warramunga Arr	49.62	258	P	P	04 09 18.5	-3.4
	comp=Z,2.0nm,0.5s,baz=97,slow=7.3,SNR=104						
WRA				LR	LR	04 27 48.8	
	comp=Z,79nm,19.5s,baz=160,slow=33						
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	49.62	258	P	P	04 09 18.7	-3.2
MULG	Mulgathing	49.65	244	P	P	04 09 20.6	-1.3
ASAR	Alice Springs	49.76	253	P	P	04 09 20.4	-2.6
	comp=Z,17nm,0.6s,baz=87,slow=8.7,SNR=202						
	comp=Z,17nm,0.6s						
ASAR	Alice Springs	49.76	253	P	P	04 09 20.7	-2.3
WRKA	Warakurna	54.79	251	P	P	04 09 59.9	-0.4
FORT	Forrest	54.84	244	P	P	04 09 59.0	-1.4
YBH	Yreka Blue Hor	74.75	37	LR	LR	04 36 45.8	
	comp=Z,21nm,21.1s,baz=236,slow=29						
LHV	Little Huntoon	75.16	42	P	P	04 12 12.3	+0.1
LHV				IAmb	IAmb	04 12 14.8	
	comp=Z,4.1nm,1.1s						
GRAC	Grapevine Rang	75.17	43	P	P	04 12 12.9	+0.6
NVAR	Mina Array Bea	75.39	42	P	P	04 12 15.4	+1.6
	comp=Z,2.1nm,0.8s,baz=224,slow=9.5,SNR=16						
NVAR				LR	LR	04 38 23.7	
	comp=Z,28nm,19.5s,baz=302,slow=30						
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	75.39	42	P	P	04 12 15.0	+1.2
NV11	Mina Array Sit	75.49	42	P	P	04 12 15.2	+0.9
NV11				IAmb	IAmb	04 12 16.3	
	comp=Z,5.7nm,1.1s						
TPH	Tonopah	75.88	42	P	P	04 12 16.3	-0.3
KVN	Kaiserville	75.89	41	P	P	04 12 16.4	-0.2
PRN	Pahroc Range	76.93	44	P	P	04 12 22.3	-0.1
PRN				IAmb	IAmb	04 12 25.4	
	comp=Z,7.1nm,1.3s						
PINE	Pine Mountain	77.07	36	P	P	04 12 24.0	+0.9
BMN	Battle Mountai	77.24	40	P	P	04 12 24.1	-0.1
BMN				IAmb	IAmb	04 12 26.6	
	comp=Z,3.3nm,0.9s						
LCMT	Little Creek M	77.93	45	P	P	04 12 28.4	+0.3
I07A	Izee	78.06	36	P	P	04 12 28.4	-0.1
I07A				IAmb	IAmb	04 12 31.1	
	comp=Z,3.4nm,1.0s						
CCUT	Cedar City	78.14	45	P	P	04 12 29.5	+0.2
U15A	North Rim	78.28	46	P	P	04 12 30.7	+0.5
U15A				IAmb	IAmb	04 12 33.3	
	comp=Z,5.8nm,1.3s						
PSUT	Pine Spring	78.34	44	P	P	04 12 30.8	+0.4
PSUT				IAmb	IAmb	04 12 32.7	
	comp=Z,3.7nm,0.7s						
SZCU	Shurtz Canyon	78.35	45	P	P	04 12 31.6	+1.2
SZCU				IAmb	IAmb	04 12 33.3	
	comp=Z,5.8nm,1.3s						
ELK	Elko	78.66	41	LR	LR	04 38 43.7	
	comp=Z,22nm,21.8s,baz=222,slow=29						
ELK	Elko	78.66	41	P	P	04 12 33.4	+1.2
G08A	Pilot Rock	79.11	36	P	P	04 12 36.0	+1.7
G08A				IAmb	IAmb	04 12 36.6	
	comp=Z,3.8nm,1.0s						
MTPU	Mount Pierson	79.19	45	P	P	04 12 36.5	+1.2
MTPU				IAmb	IAmb	04 12 38.2	
	comp=Z,3.3nm,0.9s						
MSU	Marysvale	79.44	44	P	P	04 12 37.2	+0.8
BMO	Blue Mountains	79.78	37	P	P	04 12 38.7	+0.7
MFID	Camas Ranch	79.81	39	P	P	04 12 39.6	+1.4
TMUT	Trail Mountain	80.49	44	P	P	04 12 42.9	+0.6
TMUT				IAmb	IAmb	04 12 45.2	
	comp=Z,5.7nm,0.9s						
HLID	Hailey	80.74	39	P	P	04 12 45.1	+1.8
HVU	Hansel Valley	80.78	41	P	P	04 12 44.8	+1.3
MNTX	Cornudas Mount	81.05	53	P	P	04 12 45.2	+0.2
MNTX				IAmb	IAmb	04 12 47.6	
	comp=Z,6.0nm,1.4s						
TX31	Lajitas Ar. Si	81.37	56	P	P	04 12 47.4	+0.6
TXAR	Lajitas Array	81.37	56	P	P	04 12 48.7	+1.9
	comp=Z,3.9nm,1.2s,baz=212,slow=6.8,SNR=7.6						
	comp=Z,3.9nm,1.2s						
TXAR	Lajitas Array	81.37	56	P	P	04 12 47.2	+0.3
ANMO	Albuquerque	81.70	50	LR	LR	04 42 05.3	
	comp=Z,17nm,18.0s,baz=234,slow=30						
ANMO	Albuquerque	81.70	50	P	P	04 12 49.4	+0.8
ANMO				IAmb	IAmb	04 12 52.3	
	comp=Z,5.9nm,1.4s						
NEW	Newport	81.91	34	LR	LR	04 42 21.8	
	comp=Z,19nm,18.3s,baz=253,slow=31						
MCMT	McKenzie Canyo	82.38	39	P	P	04 12 52.8	+0.8
S22A	4UR Ranch, Cre	82.73	47	P	P	04 12 54.4	+0.4
PDAR	Pinedale Array	83.33	42	P	P	04 12 57.4	+0.4
	comp=Z,2.3nm,0.8s,baz=211,slow=3.7,SNR=16						
PDAR				LR	LR	04 43 37.4	
	comp=Z,16nm,18.1s,baz=294,slow=31						
	comp=Z,2.3nm,0.8s						
PDAR	Pinedale Array	83.33	42	P	P	04 12 57.5	+0.6
ILAR	Eielson Array	83.92	11	P	P	04 12 59.2	0.0
	comp=Z,0.6nm,0.9s,baz=216,slow=4.5,SNR=11						
	comp=Z,0.6nm,0.9s						
H03S2	Juan Fernandez	84.26	123	T	T	05 46 34.9	
	baz=250						
H03S1	Juan Fernandez	84.28	123	T	T	05 46 35.4	
	baz=250						
H03S3	Juan Fernandez	84.28	123	T	T	05 46 26.6	
	baz=250						
H03N2	Juan Fernandez	84.37	123	T	T	05 46 26.2	
	baz=259						
H03N3	Juan Fernandez	84.37	123	T	T	05 46 15.5	
	baz=259						
H03N1	Juan Fernandez	84.39	123	T	T	05 46 20.6	
	baz=259						
MAW	Mawson	86.38	199	P	P	04 13 11.8	+0.2
	comp=Z,1.9nm,0.8s,baz=186,slow=4.5,SNR=2.1						
	comp=Z,1.9nm,0.8s						
INK	Inuvik	89.72	14	LR	LR	04 51 55.0	
	comp=Z,12nm,19.3s,baz=164,slow=34						
YKA	Yellowknife Ar	91.46	23	P	P	04 13 36.6	+1.1
	comp=Z,0.4nm,0.9s,baz=249,slow=5.0,SNR=4.3						
	comp=Z,0.4nm,0.9s						
MKAR	Makanchi Array	111.98	314	PKiKP	PKiKP	04 19 04.7	-0.1
	comp=Z,0.1nm,0.4s,baz=57,slow=1.5,SNR=2.2						
CLL	Collm	145.34	353	⇓*i*PKPbc	PKPdf	04 20 07.2	0.0
	comp=Z,12nm,1.5s						
BRTR	Keskin Array B	147.41	320	PKPbc	PKPbc	04 20 14.3	+0.6
	comp=Z,1.1nm,1.0s,baz=112,slow=1.6,SNR=4.7						
BRTR	Keskin Array B	147.41	320	PKPdf	PKPdf	04 20 12.5	+1.2
GERES	GERESS Array B	147.67	351	PKPbc	PKPbc	04 20 14.5	+0.4
	comp=Z,0.8nm,0.9s,baz=38,slow=4.0,SNR=7.2						
CONA	Conrad Observa	148.19	348	*e*P	PKiKP	04 20 16.5	-0.8
	comp=Z,6.7nm,1.5s						
RONA	Rosalia, Austr	148.32	348	*e*P	PKPab	04 20 18.7	-0.3
RETA	Reutte	149.35	355	*e*P	PKPbc	04 20 19.1	+0.6
	comp=Z,3.0nm,1.2s						
KBA	Koelnbreinsper	149.45	351	*e*P	PKPbc	04 20 19.2	+0.3
	comp=Z,1.2nm,0.8s						
MOTA	Moosalm	149.46	354	*e*P	PKiKP	04 20 20.1	+0.1
	comp=Z,2.9nm,1.0s						
WTTA	Wattenberg	149.49	353	*e*P	PKiKP	04 20 19.6	-0.5
	comp=Z,2.6nm,0.5s						
SOKA	Soboth	149.55	349	*e*P	PKPbc	04 20 18.8	-0.2
	comp=Z,2.5nm,1.0s						
SQTA	Sankt Quirin	149.57	354	*e*P	PKiKP	04 20 20.0	-0.2
	comp=Z,3.4nm,1.0s						
DAVA	Damuels	149.62	356	*e*P	PKiKP	04 20 20.4	0.0
	comp=Z,4.7nm,1.1s						
OBKA	Obir	149.80	349	*e*P	PKPbc	04 20 17.6	-2.1
	comp=Z,4.4nm,1.6s						
FETA	Feichten	149.82	355	*e*P	PKiKP	04 20 20.5	-0.3
	comp=Z,4.2nm,1.1s						
MYKA	Terra Mystica	149.84	350	*e*P	PKPbc	04 20 18.7	-1.0
	comp=Z,2.3nm,0.7s						
ABTA	Abfaltersbach	149.89	352	*e*P	PKPbc	04 20 19.8	0.0
	comp=Z,8.6nm,1.2s						
TORD	Torodi Ar. Bea	173.86	127	PKP	PKPdf	04 20 39.0	-0.9
	comp=Z,0.5nm,0.8s,baz=154,slow=0.3,SNR=2.8						
TORD				PKPab	PKPab	04 22 10.5	+0.1
	comp=Z,1.1nm,0.8s,baz=258,slow=4.0,SNR=6.8						

IDC 26 04:33:04.2±7.1, 19°.16S×177°.84W, h420km±47km, mb3.0/4, mbtmp3.8/5, Error ellipse: s-maj=167.1km s-min=26.1km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.15	289	P	P	04 34 18.9	0.0
	4.7nm,0.3s,baz=128,slow=16,SNR=25						
WRA	Warramunga Arr	44.95	261	P	P	04 40 40.2	-0.1
	0.8nm,0.5s,baz=96,slow=7.3,SNR=28						
	0.8nm,0.5s						
ASAR	Alice Springs	44.99	255	P	P	04 40 40.3	-0.2
	1.9nm,0.5s,baz=92,slow=8.1,SNR=30						
	1.9nm,0.5s						
ILAR	Eielson Array	86.97	13	P	P	04 45 02.4	-0.5
	0.1nm,0.5s,baz=214,slow=5.1,SNR=1.8						
	0.1nm,0.5s						
PDAR	Pinedale Array	87.88	43	P	P	04 45 08.2	+0.3
	0.3nm,0.7s,baz=216,slow=2.9,SNR=2.3						
	0.3nm,0.7s						

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*AEIC **26** 04:33:31.6±1.1, 51°.4N±0°.2×179°.23E±0°.08, h55km±8km, Error ellipse: s-maj=27.3km s-min=6.9km az=178.0*

*NEIC **26** 04:33:32.4±1.4, 51°.5N±0°.2×179°.28E±0°.08, h74km±15km, mb3.7/9, ML3.4/24(AEIC), Error ellipse: s-maj=27.5km s-min=7.3km az=177.0*

*IDC **26** 04:33:33.9±3.7, 51°.71N×179°.26E, h78km±34km, mb3.5/8, mbtmp3.8/9, Error ellipse: s-maj=40.9km s-min=14.4km az=166.0*

ISC 26 04:33:32.9±1.0, 51°.6N±0°.2×179°.25E±0°.04, h74km, n51, σ1s.04/49, mb3.9/9, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GASW	Gareloi Southw	1.19	80		Sn	04 34 09.8	-0.1
GANO	Gareloi North	1.23	78		Pn	04 33 53.7	-0.8
GANO					Sn	04 34 10.7	0.0
GALAA	Gareloi Lava P	1.24	81		Pn	04 33 53.8	-0.8
TASE	Tanaga Southea	1.70	81		Pn	04 34 00.2	-0.5
TAFP	Tanaga Falls P	1.75	79		Pn	04 34 00.6	-0.7
TAFP					Sn	04 34 22.6	-0.1
TAPA	Tanaga Point A	1.84	82		Pn	04 34 02.1	-0.4
KIMD	Kanaga Island	2.19	84		Pn	04 34 06.8	-0.4
KICM	Kanaga Island	2.23	80		Pn	04 34 07.6	-0.1
KICM					Sn	04 34 35.0	+0.6
KIKV	Kanaga Island	2.24	81		Pn	04 34 07.7	-0.2
KIWB	Kanaga Island	2.25	82		Pn	04 34 07.8	-0.2
ADK	Adak	2.54	82		Pn	04 34 11.3	-0.6
ADK	Adak	2.54	82	Sn	Sn	04 34 40.0	-1.8
GSTD	Great Sitkin T	2.89	79		Pn	04 34 15.9	-0.9
GSTD					Sn	04 34 50.6	+0.1
GSMY	Great Sitkin M	2.95	79		Pn	04 34 16.8	-0.6
SHEM	Shemya Is, Ala	3.38	292	P	Pn	04 34 22.9	-0.3
	29nm,0.4s,baz=126,slow=3.9,SNR=14						
SHEM				S	Sn	04 35 03.0	+0.9
	45nm,0.4s,baz=329,slow=18,SNR=7.8						
SMY	Shemya	3.38	292		Pn	04 34 22.8	-0.4
SMY					Sn	04 35 03.3	+1.3
ATKA	Atka Island	4.10	79		Pn	04 34 32.6	-0.5
ATKA					Sn	04 35 20.4	+0.5
KOKL	Mount Kliuchef	4.12	77		Pn	04 34 33.5	+0.2
KOFP	Korovin Flat P	4.17	78		Pn	04 34 34.0	-0.1
UNV	Unalaska Valle	8.94	70	Pn	Pn	04 35 40.8	+1.7
AKUT	Akutan	9.41	68	Pn	Pn	04 35 48.0	+2.5
CNBA	Chernabura Isl	13.08	67	Pn	Pn	04 36 32.9	-2.5
CHGN	Chignik	13.95	61	Pn	Pn	04 36 45.9	-0.9
SVW2	Sparrevohn	16.78	46		P	04 37 24.9	+1.0
SVW2				IAmb	IAmb	04 37 30.1	
	comp=Z,2.3nm,0.6s						
KDAK	Kodiak Island	17.34	58	P	Pn	04 37 27.0	-2.7
	comp=Z,2.8nm,0.3s,baz=296,slow=9.0,SNR=16						
KDAK	Kodiak Island	17.34	58	Pn	Pn	04 37 27.3	-2.4
TTA	Tatalina	17.41	40		Pn	04 37 29.8	-0.9
TTA				IAmb	IAmb	04 37 34.7	
	comp=Z,4.0nm,1.2s						
L19K	White Mountain	17.55	43		Pn	04 37 33.7	+1.4
CNPM	China Poot	18.36	53		P	04 37 41.4	+0.1
K20K	Telida	18.39	40	Pn	Pn	04 37 43.7	+1.2
K20K				IAmb	IAmb	04 38 00.7	
	comp=Z,5.5nm,1.4s						
J20K	Nowinta River	18.76	38	Pn	Pn	04 37 47.2	+0.4
SEW	Seward	19.36	52	P	P	04 37 52.3	+0.1
SEW				IAmb	IAmb	04 37 52.3	
	comp=Z,14nm,1.3s						
ILAR	Eielson Array	21.85	40	P	P	04 38 18.0	-1.0
	comp=Z,0.3nm,0.5s,baz=238,slow=8.6,SNR=14						
	comp=Z,0.3nm,0.5s						
INK	Inuvik	27.99	36	P	P	04 39 16.6	+0.5
	comp=Z,1.1nm,0.6s,baz=244,slow=9.6,SNR=4.7						
	comp=Z,1.1nm,0.6s						
INK	Inuvik	27.99	36	P	P	04 39 15.8	-0.4
INK				IAmb	IAmb	04 39 55.6	
	comp=Z,3.6nm,1.2s						
H11N2	WAKE ISLAND Hy	33.24	202	T	T	05 15 03.3	
	baz=11,slow=75						
H11N3	WAKE ISLAND Hy	33.25	202	T	T	05 15 09.1	
	baz=11,slow=75						
H11N1	WAKE ISLAND Hy	33.26	202	T	T	05 15 07.6	
	baz=11,slow=75						
H11S1	WAKE ISLAND Hy	34.47	201	T	T	05 16 41.0	
	baz=19,slow=76						
H11S2	WAKE ISLAND Hy	34.48	201	T	T	05 16 42.2	
	baz=19,slow=76						
H11S3	WAKE ISLAND Hy	34.48	201	T	T	05 16 39.4	
	baz=19,slow=76						
YKA	Yellowknife Ar	35.97	46	P	P	04 40 26.1	+0.1
	comp=Z,1.2nm,0.6s,baz=281,slow=7.9,SNR=12						
	comp=Z,1.2nm,0.6s						
JNU	Nakatsue	39.40	261	P	P	04 40 56.2	+1.0
	comp=Z,12nm,0.3s,baz=353,slow=2.7,SNR=7.7						
NVAR	Mina Array Bea	44.73	82	P	P	04 41 39.8	+0.9
	comp=Z,1.1nm,0.6s,baz=300,slow=7.2,SNR=14						
	comp=Z,1.1nm,0.6s						
JOW	Kunigami	45.42	257	P	P	04 41 44.7	+0.5
	comp=Z,10nm,0.9s,baz=58,slow=7.5,SNR=2.6						
	comp=Z,10nm,0.9s						
PDAR	Pinedale Array	47.40	71	P	P	04 41 59.2	-0.6
	comp=Z,0.6nm,0.5s,baz=311,slow=4.1,SNR=5.6						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	58.95	307	P	P	04 43 23.6	-0.6
	comp=Z,0.3nm,0.3s,baz=46,slow=5.5,SNR=4.4						
	comp=Z,0.3nm,0.3s						
TXAR	Lajitas Array	59.82	80	P	P	04 43 30.4	-0.1
	comp=Z,0.6nm,0.6s,baz=306,slow=4.2,SNR=4.8						
	comp=Z,0.6nm,0.6s						
H03N2	Juan Fernandez	122.37	104	T	T	07 06 52.3	
	baz=317						
H03N1	Juan Fernandez	122.39	104	T	T	07 07 04.5	
	baz=317,slow=74						
H03N3	Juan Fernandez	122.39	104	T	T	07 06 46.7	
	baz=317,slow=74						

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*DJA **26** 04:35:38.8±1.0, 9°S±4°×11°0E±°, h17km±9km, M4.4/16, mb4.6/1, MLv4.2/16*

*IDC **26** 04:35:45.0±2.9, 9°.03S×110°.53E, h73km±25km, mb3.8/11, mbtmp4.1/13, MS3.1/3, Error ellipse: s-maj=31.0km s-min=14.6km az=51.0*

ISC 26 04:35:42.4±0.8, 9°.21S±0°.08×110°.52E±0°.06, h50km, n32, σ1s.67/35, mb4.2/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	1.20	33	P	Pn	04 36 00.8	-2.0
PCJI				S	Sn	04 36 20.5	+2.6
UGM	Wanagama	1.29	0	P	Pn	04 36 02.8	-1.2
YOGI	Yogyakarta	1.40	351	P	Pn	04 36 04.6	-0.9
YOGI				S	Sn	04 36 24.8	+1.9
WOJI	Wonogiri, Jawa	1.42	16	P	Pn	04 36 05.0	-0.8
WOJI				S	Sn	04 36 25.5	+2.2
PWJI	Pagerwojo	1.73	47	P	Pn	04 36 09.2	-0.9
PWJI				S	Sn	04 36 32.5	+1.5
SMRI	Semarang	2.15	358	P	Pn	04 36 16.5	+0.8
CMJI	Cimerak	2.49	304	P	Pn	04 36 18.0	-2.4
UWJI	Ujung Watu	2.80	9	P	Pn	04 36 25.0	+0.3
GMJI	Gumukmas	3.04	72	P	Pn	04 36 28.5	+0.6
BLJI	Banyuglugur	3.37	65	P	Pn	04 36 32.8	+0.3
JAGI	Jajag, Banyuwa	3.67	79	P	Pn	04 36 36.7	+0.1
LEM	Lembang	3.72	309	P	Pn	04 36 38.5	+1.0
	55nm,0.3s,baz=122,slow=15,SNR=5.4						
LEM				S	Sn	04 37 24.8	+4.6
	59nm,0.4s,baz=331,slow=23,SNR=4.7						
LEM				LR	LR	04 38 24.5	
	comp=Z,179nm,19.8s,baz=56,slow=44						
LEM	Lembang	3.72	309	P	Pn	04 36 35.7	-1.8
CNJI	Cibinong	3.85	299	P	Pn	04 36 37.2	-1.9
ABJI	Asem Bagus	3.93	69	P	Pn	04 36 40.6	+0.3
PLAI	Plampang	7.18	88	P	Pn	04 37 24.7	-0.1
KAPI	Kappang	10.06	66	P	Pn	04 38 07.3	+3.0
	2.5nm,0.3s,baz=239,slow=18,SNR=2.6						
WRA	Warramunga Arr	25.37	118	P	P	04 41 05.0	-0.1
	1.6nm,0.8s,baz=290,slow=11,SNR=16						
WRA				PcP	PcP	04 44 36.8	-0.1
	0.1nm,0.4s,baz=295,slow=1.6,SNR=1.6						
WRA				LR	LR	04 51 14.6	
	comp=Z,62nm,19.3s,baz=207,slow=36						
	1.6nm,0.8s						
ASAR	Alice Springs	26.58	126	P	P	04 41 18.6	+2.5
	0.7nm,0.7s,baz=302,slow=9.5,SNR=8.3						
ASAR				PcP	PcP	04 44 40.4	+0.8
	0.3nm,0.6s,baz=318,slow=1.2,SNR=2.4						
	0.7nm,0.7s						
STKA	Stephens Creek	36.59	133	P	P	04 42 44.1	+0.4
	0.7nm,0.4s,baz=319,slow=12,SNR=3.2						
	0.7nm,0.4s						
H08S2	Diego Garcia H	37.63	269	T	T	05 22 52.4	
	baz=94,slow=76,SNR=4.6						
H08S3	Diego Garcia H	37.65	269	T	T	05 22 52.0	
	baz=94,slow=76,SNR=4.9						
H08S1	Diego Carcia H	37.65	269	T	T	05 22 47.6	
	baz=94,slow=76,SNR=5.8						
GUMO	Guam	40.93	57	LR	LR	04 58 04.0	
	comp=Z,32nm,21.9s,baz=194,slow=33						
KSRS	Korea Array	49.20	18	P	P	04 44 25.9	+0.3
	1.9nm,0.8s,baz=201,slow=7.5,SNR=8.1						
	1.9nm,0.8s						
MJAR	Matsushiro Arr	52.42	28	P	P	04 44 47.9	-2.1
	1.7nm,0.5s,baz=204,slow=9.0,SNR=5.4						
	1.7nm,0.5s						
USRK	Ussuriysk Ar.	56.61	18	P	P	04 45 18.7	-1.4
	3.6nm,0.8s,baz=211,slow=8.2,SNR=5.5						
	3.6nm,0.8s						
SONM	Songino Array	56.91	357	P	P	04 45 21.7	-0.6
	1.2nm,0.5s,baz=179,slow=5.8,SNR=3.0						
	1.2nm,0.5s						
KLR	Kul'dur	61.10	16	P	P	04 45 49.8	-1.5
	1.7nm,0.4s,baz=236,slow=3.9,SNR=7.4						
	1.7nm,0.4s						
MKAR	Makanchi Array	61.17	338	P	P	04 45 50.6	-1.2
	1.9nm,0.4s,baz=152,slow=7.4,SNR=26						
	1.9nm,0.4s						
ZALV	Zalesovo Beam	66.57	344	P	P	04 46 25.7	-1.4
	3.1nm,0.3s,baz=158,slow=6.5,SNR=9.0						
	3.1nm,0.3s						
BRTR	Keskin Array B	85.89	311	P	P	04 48 17.5	+0.2
	0.5nm,0.5s,baz=122,slow=4.8,SNR=3.1						
	0.5nm,0.5s						

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*IDC **26** 05:11:55.7±13.0, 15°.00S×165°.84E, h0km, mb3.6/3, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=232.8km s-min=37.4km az=56.0*

*NOU **26** 05:12:02.8, 15°.16S×167°.45E, h66km, MLv4.5/15, Vanuatu Islands*

ISC 26 05:11:52.6±2.4, 14°.6S±0°.2×167°.3E±0°.2, h67km, n15, σ2s.46/15, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.90	183	P	Pn	05 12 15.8	+6.1
DVP	Devils Point	3.29	164	P	Pn	05 12 43.2	+1.5
RTV	Rentapao	3.42	161	P	Pn	05 12 46.7	+3.2
LIFNC	LIFOU	6.20	180	P	Pn	05 13 22.0	+0.5
KOUNC	Koumac, New Ca	6.61	205	P	Pn	05 13 31.5	+4.4
MARNC	Mare, Loyalty	6.94	174	P	Pn	05 13 33.2	+1.6
YATNC	Mamie plateau,	7.48	183	P	Pn	05 13 39.8	+0.7
DZM	Mont Dzumac	7.52	186	Pn	Pn	05 13 40.7	+1.0
	3.5nm,0.3s,baz=347,slow=6.5,SNR=30						

DZM				Sn	Sn	05 15 00.8	-2.9
	1.3nm,0.3s,baz=292,slow=23,SNR=1.8						
	7.0nm,0.3s						
DZM	Mont Dzumac	7.52	186	P	Pn	05 13 41.1	+1.4
NOUC	Port Laguerre	7.57	187	P	Pn	05 13 43.1	+2.8
ONTNC	Ouen Toro	7.76	185	P	Pn	05 13 45.8	+3.0
OUENC	Ouen Island, N	7.84	183	P	Pn	05 13 46.3	+2.3
STKA	Stephens Creek	29.09	229	P	P	05 17 46.6	-0.4
	0.8nm,0.4s,baz=45,slow=10.0,SNR=3.7						
	0.8nm,0.4s						
WRA	Warramunga Arr	31.85	256	P	P	05 18 09.9	-1.5
	0.2nm,0.9s,baz=84,slow=9.1,SNR=1.8						
	0.2nm,0.9s						
ASAR	Alice Springs	32.72	249	P	P	05 18 17.7	-1.4
	0.5nm,0.4s,baz=79,slow=8.6,SNR=8.0						
	0.5nm,0.4s						

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*NOU **26** 05:14:36.8, 42°.39S×174°.01E, h13km, MLv4.0/5, Off E. Coast of S. Island, N.Z.*
*WEL **26** 05:14:36.5, 42°S±4°×17°4E±°, h32km±9km, M3.0/21, ML3.2/29, MLv3.0/21, Error ellipse: s-maj=0.0km s-min=0.0km az=87.9*
ISC 26 05:14:36.2±1.1**, 42°.33S**±0°.03×**174°.09E**±0°.04**, h21km, n50, σ1s.15**/49**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.41	258	P	Pb	05 14 44.8	+0.1
KHZ				S	Sb	05 14 50.9	+0.6
KHZ	Kahutara	0.41	258	P	Pn	05 14 44.9	-1.9
CMWZ	Cape Campbell	0.59	9	P	Pn	05 14 49.2	-0.1
BSWZ	Blackbirch Sta	0.64	346	P	Pn	05 14 48.2	-1.7
TUWZ	Tuamarina	0.91	353	P	Pn	05 14 53.6	0.0
TUWZ				S	Sn	05 15 07.0	+1.0
GVZ	Greta Valley S	1.00	230	P	Pn	05 14 56.0	+1.0
THZ	Tophouse	1.05	303	P	Pn	05 14 55.2	-0.4
BHW	Baring Head	1.09	33	P	Pn	05 14 56.9	+0.7
TCW	Tory Channel	1.13	7	P	Pb	05 14 57.0	0.0
PLWZ	Palliser	1.16	49	P	Pb	05 14 57.8	+0.3
WEL	Wellington	1.17	26	P	Pb	05 14 57.8	+0.2
NNZ	Nelson	1.23	334	P	Pb	05 14 58.6	-0.1
MSWZ	Moikau Station	1.26	44	P	Pb	05 14 59.1	-0.1
AMCZ	Amberley	1.35	231	P	Pb	05 15 00.7	0.0
MRNZ	Matariki Terra	1.36	313	P	Pb	05 15 00.9	0.0
LTZ	Lake Taylor	1.41	251	P	Pb	05 15 01.3	-0.5
CAW	Cannon Point	1.43	31	P	Pb	05 15 01.5	-0.5
TRWZ	Traveller	1.52	53	P	Pb	05 15 03.0	-0.6
DUWZ	D'Urville Isla	1.53	355	P	Pb	05 15 03.5	-0.3
TKNZ	Takaka Hill	1.55	327	P	Pb	05 15 03.5	-0.6
MTW	Mount Morrison	1.58	43	P	Pb	05 15 03.3	-1.3
OKCZ	Okains Bay	1.58	208	P	Pb	05 15 04.0	-0.7
KIW	Kapiti Island	1.59	23	P	Pb	05 15 04.1	-0.8
OGWZ	Otaki Gorge	1.72	29	P	Pb	05 15 05.5	-1.5
MQZ	McQueen's Vall	1.73	217	P	Pn	05 15 05.0	+0.1
AKCZ	Akaroa Harbour	1.76	209	P	Pb	05 15 06.2	-1.6
DSZ	Denniston Nort	1.80	288	P	Pb	05 15 07.9	-0.5
OXZ	Oxford	1.80	236	P	Pn	05 15 06.1	+0.1
QRZ	Quartz Range	1.90	322	P	Pb	05 15 08.8	-1.4
QRZ	Quartz Range	1.90	322	P	Pb	05 15 09.1	-1.1
INZ	Inchbonnie	1.99	258	P	Pb	05 15 10.0	-1.6
RACZ	Rakaia	2.00	225	P	Pn	05 15 09.0	+0.4
MRZ	Mangatainoka R	2.01	34	P	Pb	05 15 09.2	-2.8
WACZ	Wakanui South	2.30	225	P	Pn	05 15 13.2	+0.4
DVHZ	Dannevirke	2.57	38	P	Pb	05 15 18.6	-2.8
WVZ	Waitaha Valley	2.58	252	P	Pn	05 15 17.7	+1.1
RPZ	Rata Peaks	2.62	237	P	Pn	05 15 17.7	+0.5
RPZ	Rata Peaks	2.62	237	P	Pn	05 15 17.7	+0.5
ARCZ	Arundel	2.67	232	P	Pn	05 15 18.3	+0.4
TMZ	Timaru	3.04	227	P	Pn	05 15 23.6	+0.6
VRZ	Vera Road	3.25	9	P	Pb	05 15 28.0	-5.0
LBZ	Lake Benmore	3.51	233	P	Pn	05 15 30.2	+0.8
BKZ	Black Stump Fm	3.65	31	P	Pb	05 15 37.4	-2.6
ODZ	Otahua Downs	3.68	221	P	Pn	05 15 32.3	+0.5
ODZ	Otahua Downs	3.68	221	P	Pn	05 15 32.4	+0.5
ARHZ	Aropaoanui	3.78	37	P	Pb	05 15 35.7	-6.4
NMHZ	Naumai	3.84	34	P	Pn	05 15 36.0	+2.0
HIZ	Hauiti	3.86	9	P	Pn	05 15 36.6	+2.3
RTZ	Ruatahuna	4.32	32	P	Pb	05 15 45.0	-6.3
EAZ	Earnscleugh	4.51	228	P	Pn	05 15 43.8	+0.6

IDC 26 05:47:05.2±1.4**, 5°.30S**×**151°.29E, h72km**±17km**, mb3.4**/2**, mbtmp3.8**/3**, Error ellipse: s-maj=124.6km s-min=12.5km az=130.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.22	37	P	Pn	05 47 25.7	-0.9
	394nm,0.3s,baz=287,slow=19,SNR=82						
KRVT				S	Sn	05 47 42.8	+0.1
	842nm,0.3s,baz=231,slow=22,SNR=8.8						
PMG	Port Moresby	5.79	225	P	Pn	05 48 30.5	+2.0
	9.5nm,0.4s,baz=31,slow=5.9,SNR=3.2						
PMG				S	Sn	05 49 33.6	+0.1
	41nm,0.5s,baz=155,slow=18,SNR=14						
WRA	Warramunga Arr	22.00	227	P	P	05 51 52.9	-0.7
	0.6nm,0.4s,baz=53,slow=9.9,SNR=14						
	0.6nm,0.4s						
ASAR	Alice Springs	24.79	221	P	P	05 52 21.2	+0.7
	2.2nm,0.7s,baz=54,slow=9.3,SNR=28						
	2.2nm,0.7s						
TORD	Torodi Ar. Bea	149.02	287	PKPbc	PKPbc	06 06 45.2	-0.9
	0.5nm,0.9s,baz=80,slow=1.9,SNR=2.8						

IDC 26 05:48:09.1±6.6**, 17°.66S**×**176°.81W, h0km, mb3.8**/2**, mbtmp3.8**/2**, Error ellipse: s-maj=336.0km s-min=52.3km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.17	259	P	P	05 56 35.4	-0.6
	0.4nm,1.0s,baz=96,slow=7.3,SNR=6.2						
	0.4nm,1.0s						
ASAR	Alice Springs	46.32	254	P	P	05 56 37.3	+0.2
	2.3nm,0.6s,baz=89,slow=8.3,SNR=27						
	2.3nm,0.6s						
GERES	GERESS Array B	147.75	347	PKPbc	PKPbc	06 07 55.2	-0.7
	0.3nm,0.4s,baz=44,slow=4.4,SNR=4.6						

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*CNRM **26** 06:02:41.3, 35°.96N×7°.88W, h30km, ml2.8*
*MDD **26** 06:02:45.3±1.0, 36°.27N×7°.55W, h2km±3km, mb_Lg2.0/7, Error ellipse: s-maj=6.1km s-min=4.4km az=5.0*
*INMG **26** 06:02:46.7±1.8, 36°.12N×7°.60W, h31km±13km, ML1.8, Error ellipse: s-maj=5.7km s-min=4.0km az=69.0*
*IGIL **26** 06:02:46.0, 36°.14N×7°.56W, h25km, ML1.9*
ISC 26 06:02:39.8±1.4**, 36°.04N**±0°.03×**7°.61W**±0°.04**, h10km**±11km**, n31, σ1s.52**/59**, 3C-1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	1.23	348	eP	Pn	06 03 05.0	+2.0
PBDV				eS	Sn	06 03 18.9	-0.7
PBDV				A	A	06 03 21.5	
	5.5nm,0.7s						
PVAQ	Vaqueiros	1.36	356	⇓eP	Pg	06 03 06.8	+0.9
PVAQ				eS	Sb	06 03 21.8	-1.0
PVAQ				A	A	06 03 22.4	
	12nm,0.3s						
PFVI	Vila Bisbo	1.47	318	eP	Pg	06 03 08.6	+0.7
PFVI				eS	Sb	06 03 25.8	0.0
PFVI				A	A	06 03 32.2	
	8.5nm,0.4s						
EGRO	El Granado	1.49	4	Pg	Pg	06 03 08.8	+0.4
EGRO				Sg	Sn	06 03 25.1	-1.0
EGRO				i Vmb_Lg		06 03 32.0	
MORF	Marmelete	1.52	327	eP	Pg	06 03 09.0	+0.1
MORF				eS	Sn	06 03 26.3	-0.5
MORF				IAML		06 03 30.7	
	comp=E,31nm,0.2s						
MORF	Marmelete	1.52	327	eP	Pg	06 03 09.0	+0.1
MORF				eS	Sn	06 03 26.2	-0.5
MORF				A	A	06 03 30.1	
	comp=E,16nm,0.2s						
PCVE	Castro Verde	1.62	348	⇑eP	Pg	06 03 10.8	-0.1
PCVE				eS	Sn	06 03 28.7	-0.7
PCVE				A	A	06 03 29.2	
	comp=E,4.3nm,0.2s						
PTEO	Sao Teotonio	1.75	329	ePn	Pb	06 03 12.5	+0.6
PTEO				eSn	Sn	06 03 31.9	-0.5
PTEO				A	A	06 03 38.8	
	comp=E,9.0nm,0.6s						
MESJ	Messejana	1.86	345	eP	Pb	06 03 13.9	+0.1
MESJ				eS	Sn	06 03 34.0	-1.2
MESJ				IAML		06 03 36.2	
	comp=E,3.8nm,0.1s						
MESJ	Messejana	1.86	345	ePn	Pb	06 03 13.9	+0.1
MESJ				eSn	Sn	06 03 34.1	-1.1
MESJ				A	A	06 03 36.4	
	comp=E,4.7nm,0.2s						
EMIN	Mina Concepcio	1.88	23	Pn	Pb	06 03 13.9	-0.2
EMIN				Sn	Sn	06 03 34.2	-1.4
EMIN				Sg	Sg	06 03 38.0	-2.2
EMIN				i Vmb_Lg		06 03 39.6	
PBEJ	Beja	1.99	354	eSn	Sn	06 03 37.9	-0.5
PBAR	Barrancos	2.17	12	ePn	Pb	06 03 18.4	-0.8
PBAR				eSn	Sn	06 03 41.3	-1.7
PNCL	Nicolau / Gran	2.19	341	⇑iPn	Pb	06 03 18.4	-1.1
PNCL				eSn	Sn	06 03 42.8	-0.6
PNCL				A	A	06 03 44.2	
	comp=E,3.1nm,0.2s						
ECAB	El Cabril	2.68	40	Pn	Pn	06 03 24.9	+1.9
ECAB				Sn	Sn	06 03 56.2	+0.8
ECAB				i Vmb_Lg		06 03 58.5	
EBAD	Badajoz	2.75	10	Pn	Pb	06 03 27.4	-1.6
EBAD				Sn	Sn	06 03 58.1	+1.0
EBAD				i Vmb_Lg		06 03 58.7	
PESTR	Estremoz	2.82	0	eSn	Sn	06 03 57.5	-1.4
PESTR				A	A	06 04 14.0	
	comp=E,2.0nm,0.6s						
PESTR	Estremoz	2.82	0	P	Pn	06 03 25.3	+0.4
PESTR				S	Sn	06 03 59.0	+0.1
PMTG	Montargil	3.06	351	ePn	Pn	06 03 30.7	+2.5
PMTG				eSn	Sn	06 04 03.5	-1.3
PMTG				A	A	06 04 04.0	
	comp=E,2.0nm,0.2s						
PMAFR	Mafra	3.20	336	ePn	Pn	06 03 32.7	+2.6
PMAFR				eSn	Sn	06 04 07.6	-0.6
EADA	Adamuz	3.22	48	Pn	Pn	06 03 33.5	+3.2
EADA				Sn	Sn	06 04 08.5	-0.3
EADA				i Vmb_Lg		06 04 09.5	
PMRV	Marv??o	3.38	3	⇑ePn	Pn	06 03 34.8	+2.2
PMRV				eSn	Sn	06 04 11.2	-1.6
PMRV				A	A	06 04 12.9	
	comp=E,1.5nm,0.3s						
PSBE	So Bento	3.59	345	ePn	Pn	06 03 38.1	+2.6
PSBE				eSn	Sn	06 04 17.3	-0.6
PCBR	Castelo Branco	3.79	1	ePn	Pn	06 03 40.6	+2.4
PCBR				eSn	Sn	06 04 21.0	-1.8
MD31	MD31	3.95	143	P	Pn	06 03 42.7	+2.2
MD31				S	Sn	06 04 26.6	-0.3
MDT	Midelt	4.06	142	P	Pn	06 03 44.7	+2.7
MDT				S	Sn	06 04 30.1	+0.3
EPLA	Plasencia	4.19	16	i Vmb_Lg		06 04 21.8	
EPLA				Sn	Sn	06 04 30.8	-2.0
PAB	San Pablo	4.34	35	Pn	Pn	06 03 48.5	+2.6
PAB				Sn	Sn	06 04 32.7	-3.9
PAB				i Vmb_Lg		06 05 23.4	
OUK	Oukaimeden	4.83	183	P	Pn	06 03 52.6	-0.2
OUK				S	Sn	06 04 46.8	-2.2
OUZM	OUZ	5.17	172	P	Pn	06 03 57.6	+0.3
OUZM				S	Sn	06 04 57.6	+0.5
TTIG	Tnine Tigouga,	5.53	188	P	Pn	06 04 02.2	0.0
TTIG				S	Sn	06 04 59.4	-6.5

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*JMA **26** 07:17:05.7±0.1, 24°.0N±0°.6×121°.6E±0°.8, h22km, MV3.0/10, TAIWAN REGION*
*ASIES **26** 07:17:06.6, 24°.21N×121°.73E, h17km, MW3.4*
*TAP **26** 07:17:07.4, 24°.19N×121°.76E, h12km, ML3.6, C*
ISC 26 07:17:07.2±0.8**, 24°.18N**±0°.01×**121°.77E**±0°.02**, h17km**±6km**, n111, σ1s.18**/187**, 3C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.13	262	i P	Pg	07 17 10.9	-0.2
	baz=257						
ETL				S	Sg	07 17 13.6	-0.2
	baz=257						
EHP	Heping Village	0.13	351	⇓iP	Pb	07 17 10.8	-0.6
	baz=355						
EHP				S	Sb	07 17 13.2	-0.9
	baz=355						
NACB	Ninganchiao	0.15	269	⇓iP	Pb	07 17 11.1	-0.6
	baz=258						
NACB				i S	Sb	07 17 13.8	-0.9
	baz=258						
TWD	Chiawan	0.18	238	⇓iP	Pb	07 17 11.7	-0.5
	baz=241						
TWD				S	Sb	07 17 14.9	-0.5
	baz=241						
HWA	Hwalien	0.25	216	eP	Pb	07 17 13.8	+0.5
	baz=223						
HWA				eS	Sb	07 17 19.1	+1.8
	baz=223						
ENA	Nanau	0.25	355	⇓iP	Pb	07 17 12.6	-0.7
	baz=357						
ENA				i S	Sb	07 17 16.4	-1.1
	baz=357						
ETLH	Xiulin Townshi	0.26	276	⇓iP	Pb	07 17 13.0	-0.5
	baz=275						
ETLH				S	Sb	07 17 17.0	-0.8
	baz=275						
EWUT	Wuta	0.27	3	⇓iP	Pb	07 17 13.0	-0.6
	baz=3.0						
EWUT				i S	Sb	07 17 16.9	-1.0
	baz=3.0						
LATG	Datong	0.42	329	⇓iP	Pb	07 17 15.8	-0.4
	baz=328						
LATG				i S	Sb	07 17 21.4	-1.0
	baz=328						
NNSB	Datong	0.43	306	⇓iP	Pb	07 17 16.2	-0.3
	baz=305						
NNSB				i S	Sb	07 17 22.0	-0.6
	baz=305						
TWC	Suao	0.44	10	⇓iP	Pb	07 17 16.0	-0.5
	baz=5.0						
TWC				i S	Sb	07 17 22.2	-0.6
	baz=5.0						
NNS	Nan Shan	0.44	306	i P	Pb	07 17 16.4	-0.3
	baz=306						
NNS				S	Sb	07 17 22.5	-0.5
	baz=306						
NDS	Dongshan	0.46	354	⇓iP	Pb	07 17 16.6	-0.3
	baz=354						
NDS				i S	Sb	07 17 23.1	-0.2
	baz=354						
WHF	Hehuan Shan	0.46	266	⇓iP	Pb	07 17 16.8	-0.4
	baz=265						
WHF				i S	Sb	07 17 22.9	-0.8
	baz=265						
FUSS	Fushou	0.48	278	i P	Pb	07 17 17.2	-0.1
	baz=278						
FUSS				eS	Sb	07 17 23.9	-0.4
	baz=278						
ENTT	Nioudou	0.49	339	⇓iP	Pb	07 17 17.4	-0.1
	baz=339						
ENTT				i S	Sb	07 17 24.3	-0.2
	baz=339						
TWE	Neicheng	0.55	351	⇓iP	Pb	07 17 18.4	0.0
	baz=352						
TWE				eS	Sb	07 17 25.9	-0.1
	baz=352						
CHGB	Renai	0.55	258	⇓iP	Pn	07 17 18.6	-1.9
	baz=251						
CHGB				S	Sb	07 17 26.1	-0.2
	baz=251						
TDCB	Techi	0.56	278	⇓iP	Pn	07 17 18.9	-1.7
	baz=278						
TDCB				i S	Sb	07 17 25.1	-1.4
	baz=278						
OWD	Renai	0.58	248	P	Pn	07 17 19.1	-1.8
	baz=247						
OWD				S	Sb	07 17 26.8	-0.3
	baz=247						
ILA	Ilan	0.59	359	i P	Pn	07 17 19.2	-1.6
	baz=354						
ILA				S	Sn	07 17 27.8	-2.2
	baz=354						
EGFH	Guangfu	0.59	211	eP	Pn	07 17 19.4	-1.5
	baz=219						
EGFH				eS	Sn	07 17 28.7	-1.4
	baz=219						
FUSB	Fushanzhiwuyua	0.60	344	i P	Pn	07 17 19.4	-1.7
	baz=344						
FUSB				i S	Sb	07 17 27.4	-0.2
	baz=344						
YHNB	Yeheng	0.60	324	⇑iP	Pn	07 17 19.6	-1.6
	baz=324						
YHNB				S	Sb	07 17 27.0	-0.7
	baz=324						
WUSB	Renai	0.62	253	i P	Pn	07 17 19.9	-1.4
	baz=245						
WUSB				i S	Sb	07 17 28.1	-0.1
	baz=245						
NWLT	Wulai	0.64	338	⇑iP	Pn	07 17 20.3	-1.3
	baz=338						
NWLT				S	Sb	07 17 28.7	0.0
	baz=338						
NTC	Toucheng	0.68	5	eP	Pn	07 17 20.6	-1.4
	baz=5.0						
NTC				eS	Sb	07 17 29.5	-0.2
	baz=5.0						
EGS		0.68	13	eP	Pn	07 17 20.8	-1.3
	baz=20						
EGS				eS	Sb	07 17 29.6	-0.3
	baz=20						
VWDT	VWDT	0.71	234	i P	Pn	07 17 21.4	-1.0
	baz=234						
VWDT				i S	Sn	07 17 32.4	-0.6
	baz=234						
NFF	Wufeng Townshi	0.74	308	eP	Pn	07 17 22.7	-0.3
	baz=307						
NFF				eS	Sn	07 17 32.2	-1.8
	baz=307						
HGSD	Ruisui	0.75	205	⇓iP	Pn	07 17 22.4	-0.7
	baz=194						
HGSD				eS	Sn	07 17 34.9	+0.9
	baz=194						
WHP	Taichung City	0.75	278	P	Pn	07 17 22.6	-0.6
	baz=278						
WHP				S	Sn	07 17 32.9	-1.3
	baz=278						
EHY	Hungye	0.78	211	eP	Pg	07 17 22.0	-0.5
	baz=223						
WCS	Beigang Elemen	0.79	261	eP	Pn	07 17 23.3	-0.3
	baz=254						
WCS				eS	Sn	07 17 32.9	-2.1
	baz=254						
TIPB	Shuangxi	0.79	4	P	Pn	07 17 22.8	-0.9
	baz=4.0						
TIPB				eS	Sg	07 17 32.7	-0.6
	baz=4.0						
NHDH	Xindian Distri	0.81	344	eP	Pn	07 17 23.5	-0.4
	baz=344						
NHDH				eS	Sn	07 17 34.3	-1.3
	baz=344						
TWA	Mucha	0.82	348	eP	Pn	07 17 22.9	-1.1
	baz=348						
TWA				eS	Sn	07 17 34.4	-1.4
	baz=348						
LIOB	Emei	0.83	304	eP	Pn	07 17 24.2	+0.1
	baz=304						
LIOB				eS	Sn	07 17 35.5	-0.5
	baz=304						
NSTT	Nanjuang	0.83	303	eP	Pn	07 17 24.2	0.0
	baz=303						
NSTT				eS	Sn	07 17 34.0	-2.0
	baz=303						
SSLB	Suanglung	0.84	243	⇑iP	Pn	07 17 23.8	-0.5
	baz=252						
SSLB				eS	Sn	07 17 34.4	-1.9
	baz=252						
SMLT	Sun Moon Lake	0.84	250	eP	Pn	07 17 24.5	+0.1
	baz=250						
SMLT				eS	Sn	07 17 35.3	-1.2
	baz=250						
TWB1	Santiao Chiao	0.85	14	P	Pn	07 17 23.6	-0.9
	baz=14						
TWB1				eS	Sg	07 17 35.0	0.0
	baz=14						
NWF	Wu-fen Shan	0.89	1	P	Pn	07 17 25.1	0.0
	baz=354						
NWF				eS	Sn	07 17 36.6	-1.0
	baz=354						
YULB	Yu-li	0.89	209	eP	Pb	07 17 23.5	-0.7
	baz=220						
YULB				eS	Sn	07 17 37.2	-0.4
	baz=220						
SXI1	Grass Mountain	0.92	6	P	Pn	07 17 25.2	-0.2
	baz=6.0						
SXI1				eS	Sn	07 17 37.3	-1.1
	baz=6.0						
TWQ1	Liyutan	0.92	281	eP	Pn	07 17 26.5	+1.1
	baz=281						
SBCB	Hsinchu	0.94	311	eP	Pn	07 17 26.3	+0.7
	baz=310						
SBCB				eS	Sn	07 17 39.8	+1.1
	baz=310						
NSY	Sanyi	0.95	285	eP	Pn	07 17 26.8	+1.0
	baz=285						
NSY				eS	Sn	07 17 40.0	+1.1
	baz=285						
NCUH	Zhongli	0.95	326	eP	Pn	07 17 26.6	+0.8
	baz=326						
NCUH				eS	Sn	07 17 41.1	+2.2
	baz=326						
NCU	National Centr	0.95	326	eP	Pn	07 17 26.5	+0.7
	baz=326						
NCU				eS	Sn	07 17 41.1	+2.1
	baz=326						
HSN	Hsinchu	0.95	311	eP	Pn	07 17 27.0	+1.1
	baz=313						
HSN				eS	Sn	07 17 41.1	+2.1
	baz=313						
NMLH	Miaoli	0.96	292	eP	Pn	07 17 27.2	+1.3
	baz=292						
TWS1	Kuangyinshan	0.97	341	P	Pn	07 17 26.8	+0.7
	baz=349						
TWS1				eS	Sn	07 17 39.5	-0.1
	baz=349						
YM01	YM01	0.98	350	i P	Pn	07 17 26.6	+0.3
	baz=349						
YM01				eS	Sn	07 17 39.8	0.0
	baz=349						
TCU	Taichung	0.99	268	eP	Pn	07 17 28.6	+2.2
	baz=269						
TCU				eS	Sn	07 17 42.8	+2.7
	baz=269						
YUS	Yu-Shan	1.01	228	eP	Pn	07 17 26.8	-0.3
	baz=229						
YUS				eS	Sn	07 17 42.1	+0.9
	baz=229						
WJS	Zhushan	1.01	250	eP	Pg	07 17 29.0	+2.2
	baz=246						
WJS				eS	Sn	07 17 41.9	+1.4
	baz=246						
NTST	Danshui	1.02	344	eP	Pg	07 17 28.0	+0.9
	baz=351						
NTST				eS	Sn	07 17 42.6	+1.8
	baz=351						
ANP	Anpu	1.03	348	eP	Pg	07 17 27.6	+0.4
	baz=347						
WNT	Mingjian	1.03	253	eP	Pg	07 17 28.0	+0.8
	baz=251						
WNT				eS	Sn	07 17 44.0	+3.0
	baz=251						
WDJ	Dajia District	1.04	280	eP	Pg	07 17 28.9	+1.6
	baz=280						
WDJ				eS	Sn	07 17 42.0	+0.8
	baz=280						
FULB	Fuli	1.07	204	eP	Pg	07 17 28.0	+0.1
	baz=194						
ALS	Alishan	1.10	233	eP	Pg	07 17 29.1	+0.5
	baz=223						
TWY	Chenhua	1.10	352	eP	Pg	07 17 28.7	+0.1
	baz=345						
TWY				eS	Sg	07 17 42.8	-0.3
	baz=345						
WCHH	Zhanghua	1.11	265	eP	Pg	07 17 30.0	+1.4
	baz=266						
WCHH				eS	Sg	07 17 46.0	+2.9
	baz=266						
JYNG	Yonagunijimaku	1.11	76	eP	Pg	07 17 28.9	+0.1
JYNG				eS	Sg	07 17 45.6	+2.3
YOJ	Yonaguni jima	1.17	76	eP	Pb	07 17 29.2	+0.2
	baz=64						
YOJ	Yonaguni jima	1.17	76	P	Pg	07 17 29.6	-0.3
YOJ				eS	Sg	07 17 46.3	+1.1
ELDTW	Lidau	1.20	215	eP	Pg	07 17 29.4	-1.1
	baz=205						
ELDTW				eS	Sg	07 17 45.9	-0.3
	baz=205						
WDLH	Douliu	1.22	247	eP	Pg	07 17 31.8	+1.0

	baz=248						
WDLH				eS	Sg	07 17 50.6	+3.8
	baz=248						
EDH	Donghe	1.27	199	eP	Pn	07 17 29.3	-0.9
	baz=202						
EDH				eS	Sg	07 17 49.6	+1.2
	baz=202						
WRL	Guolierlin Hig	1.30	258	eP	Pg	07 17 32.4	+0.1
	baz=259						
WRL				eS	Sg	07 17 51.6	+2.4
	baz=259						
WTK	Tuku	1.35	249	eP	Pg	07 17 33.4	+0.1
	baz=251						
WTK				eS	Sg	07 17 52.2	+1.4
	baz=251						
STYH	Taoyuan	1.35	222	eP	Pg	07 17 32.0	-1.3
	baz=225						
STYH				eS	Sg	07 17 51.9	+1.0
	baz=225						
TPUB	Ta-pu	1.36	230	eP	Pg	07 17 33.1	-0.3
	baz=232						
LONT	Longtian	1.39	205	eP	Pg	07 17 33.1	-1.0
	baz=207						
CHY	Chiayi	1.40	241	eP	Pg	07 17 34.5	+0.2
	baz=243						
WTP	Ta-pu	1.40	229	eP	Pg	07 17 34.0	-0.3
	baz=231						
PCYT	Pengchaiyu	1.47	11	eP	Pb	07 17 33.4	-0.8
	baz=9.0						
TWK	Hsinying	1.48	232	eP	Pg	07 17 35.8	0.0
	baz=234						
TWK				eS	Sg	07 17 54.7	-0.4
	baz=234						
TWG	Pinlang	1.49	205	eP	Pn	07 17 32.3	-0.9
	baz=191						
TWGBT	Beinan	1.49	205	eP	Pn	07 17 32.0	-1.2
	baz=191						
SNST	Tainan City	1.50	231	eP	Pg	07 17 36.8	+0.6
	baz=233						
CHN1	Nanshi	1.50	229	eP	Pg	07 17 36.1	-0.1
	baz=221						
CHN1				eS	Sg	07 17 57.5	+1.7
	baz=221						
LDUT	Ludao	1.52	190	eP	Pn	07 17 32.0	-1.7
	baz=179						
SGST	Jiashian	1.54	225	eP	Pb	07 17 34.8	-0.4
	baz=227						
WSL	Shuilin Townsh	1.55	245	eP	Pg	07 17 36.0	-1.1
	baz=248						
WSL				eS	Sg	07 17 58.7	+1.4
	baz=248						
ICHU	Yijhu	1.58	239	eP	Pg	07 17 37.2	-0.6
	baz=242						
ICHU				eS	Sg	07 18 00.9	+2.5
	baz=242						
SCST	Cishan	1.74	222	eP	Pg	07 17 39.9	-0.8
	baz=225						
ECL	Taimali	1.74	205	eP	Pn	07 17 37.0	+0.3
	baz=193						
TSMG	Majia	1.79	215	eP	Pb	07 17 39.3	-0.3
	baz=208						
IRIF	Iriomote-Funau	1.80	85	P	Pn	07 17 38.4	+0.9
IRIF				eS	Sb	07 18 01.7	-0.3
HATJ	Hateruma jima	1.87	93	P	Pn	07 17 39.1	+0.7
HATJ				eS	Sb	07 18 04.0	+0.1
MASBT	Mashibuluo	1.87	214	eP	Pb	07 17 40.3	-0.7
	baz=216						
EAST	Anshuo	1.98	205	eP	Pn	07 17 39.7	-0.3
	baz=195						
SSPT	Xinbi	2.01	213	eP	Pb	07 17 43.8	+0.4
	baz=199						
JKRS	Kuro-shima	2.05	88	P	Pb	07 17 42.6	-1.5
JKRS				eS	Sb	07 18 09.0	-0.2
PNG	Penghu	2.11	254	eP	Pg	07 17 45.4	-2.4
	baz=257						
PHUB	P'eng-hu	2.11	252	eP	Pb	07 17 43.2	-1.9
	baz=255						
WDGT	Dungji	2.13	245	eP	Pb	07 17 42.8	-2.6
	baz=248						
SLIU	Shizi	2.15	205	eP	Pb	07 17 45.0	-0.7
	baz=208						
LYUB	Lan-yu	2.17	184	eP	Pn	07 17 40.4	-2.2
	baz=187						
JIJ	Ishigaki jima	2.18	85	eP	Pn	07 17 43.4	+0.7
JIJ				eS	Sn	07 18 10.5	+1.2
VWUC	VWUC	2.26	291	eP	Pb	07 17 45.1	-2.4
	baz=280						
VCHM	Qimei	2.35	246	eP	Pn	07 17 45.6	+0.6
	baz=234						
PTMZ	Houxiangcun	2.56	290	eP	Pn	07 17 48.5	+0.6
	baz=290						
MATB	Ma-tsu	2.56	320	eP	Pn	07 17 48.1	0.0
	baz=319						
JTJ	Tarama	2.72	80	eP	Pn	07 17 51.6	+1.5
JTJ				eS	Sn	07 18 25.0	+2.4
KNMB	Chin-men Tao	3.09	276	eP	Pn	07 17 55.6	+0.3
	baz=277						
AXDP	Jialang	3.53	283	eP	Pn	07 18 01.8	+0.5
	baz=282						
ZPLA	Ao Xicun	3.68	267	eP	Pn	07 18 04.2	+0.9
	baz=268						

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*WEL **26** 07:21:00, 41°.52S×174°.41E, h16^{km}, ML4.3, Mw4.1, Moment Tensor Solution. s4 Moment tensor: Scale 10^{15} Nm; M_{rr}0.54; $M_{\theta\theta}$1.14; $M_{\phi\phi}$-1.68; $M_{r\theta}$0.78; $M_{\theta\phi}$-0.68; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.87000×10^{15} NP1: ϕ_s150.00000°, δ56.00000°, λ13.00000°. NP2: ϕ_s53.00000°, δ79.00000°, λ145.00000°. Principal axes: T -203.1700, Plg32.0000°, Azm6.0000°; N 170.0700, Plg54.0000°, Azm217.0000°; P 33.0900, Plg15.0000°, Azm106.0000°;*

*IDC **26** 07:21:09.0±1.1, 41°.56S×174°.54E, h0^{km}, mb4.3/3, mbtmp4.1/5, ML3.4/2, MS3.2/6 Error ellipse: s-maj=37.8km s-min=12.3km az=132.0*

*WEL **26** 07:21:13.8, 42°S±2°×17°4E±°, h15^{km}±5^{km}, M4.3/19, ML4.7/19, MLv4.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=119.5*

ISC 26 07:21:12.9±1.1**, 41°.62S**±0°.03×**174°.50E**±0°.03**, h16**^{km}±7^{km}**, n149, σ1^s.52**/161**, mb4.1**/4**, MS3.3**/4**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.25	239	P	Pb	07 21 20.5	+1.4
CMWZ				S	Sb	07 21 25.0	+1.7
BHW	Baring Head	0.35	53	P	Pb	07 21 22.1	+1.4
BHW				S	Sb	07 21 27.6	+1.7
WEL	Wellington	0.39	31	P	Pb	07 21 22.1	+0.7
WEL				S	Sb	07 21 27.9	+0.7
TCW	Tory Channel	0.44	337	P	Pg	07 21 21.5	-0.2
TUWZ	Tuamarina	0.46	294	P	Pg	07 21 21.9	-0.3
TUWZ				S	Sg	07 21 27.4	-1.0
BSWZ	Blackbirch Sta	0.48	258	P	Pg	07 21 23.3	+0.8
BSWZ				S	Sg	07 21 30.3	+1.3
PLWZ	Palliser	0.56	85	P	Pn	07 21 26.9	+0.6
PLWZ				S	Sn	07 21 35.9	+0.5
MSWZ	Moikau Station	0.60	70	P	Pn	07 21 27.0	+0.3
CAW	Cannon Point	0.66	40	P	Pb	07 21 26.9	+0.8
CAW				S	Sb	07 21 36.4	+1.3
PAWZ	Paruwai Farm	0.73	71	P	Pn	07 21 29.4	+0.8
PAWZ				S	Sn	07 21 41.8	+2.3
KIW	Kapiti Island	0.82	22	P	Pb	07 21 29.0	+0.3
KIW				S	Sb	07 21 40.2	+0.8
MTW	Mount Morrison	0.88	59	P	Pn	07 21 31.7	+1.0
TRWZ	Traveller	0.92	76	P	Pn	07 21 32.3	+1.2
DUWZ	D'Urville Isla	0.93	332	P	Pg	07 21 30.1	-0.8
DUWZ				S	Sg	07 21 41.3	-1.8
NNZ	Nelson	0.94	295	P	Pg	07 21 30.2	-0.9
OGWZ	Otaki Gorge	0.95	32	P	Pb	07 21 31.4	+0.5
HOWZ	Holdsworth Sta	1.05	47	P	Pn	07 21 33.9	+0.9
KHZ	Kahutara	1.07	222	P	Pb	07 21 34.3	+1.2
TMWZ	Te Maipa	1.16	64	P	Pn	07 21 35.3	+0.8
THZ	Tophouse	1.21	263	P	Pg	07 21 35.1	-1.1
MRZ	Mangatainoka R	1.25	41	P	Pn	07 21 36.8	+1.1
TKNZ	Takaka Hill	1.30	296	P	Pn	07 21 36.3	-0.1
MRNZ	Matariki Terra	1.33	279	P	Pn	07 21 36.9	+0.1
TIWZ	Tintock	1.34	52	P	Pb	07 21 38.0	+0.4
CPWZ	Castlepoint	1.46	62	P	Pg	07 21 41.2	+0.2
PRWZ	Pori Road	1.54	47	P	Pn	07 21 40.4	+0.8
OHWZ	Ohakea	1.54	24	P	Pg	07 21 41.9	-0.6
POWZ	Post Office Ro	1.56	38	P	Pn	07 21 40.8	+0.9
BFZ	Birch Farm	1.61	55	P	Pn	07 21 41.0	+0.3
QRZ	Quartz Range	1.69	297	P	Pn	07 21 42.5	+0.8
GVZ	Greta Valley S	1.73	218	P	Pn	07 21 43.1	+0.7
DVHZ	Dannevirke	1.82	44	P	Pn	07 21 43.8	+0.1
ANWZ	Angora Road	1.89	53	P	Pn	07 21 44.5	0.0
WAZ	Wanganui	1.90	11	P	Pb	07 21 47.0	-0.1
TSZ	Takapari Road	1.91	36	P	Pn	07 21 45.4	+0.6
LTZ	Lake Taylor	2.02	234	P	Pn	07 21 47.1	+0.7
DSZ	Denniston Nort	2.03	266	P	Pn	07 21 47.7	+1.3
AMCZ	Amberley	2.08	221	P	Pn	07 21 47.4	+0.3
PRHZ	Porangahau	2.10	51	P	Pn	07 21 47.2	-0.3
PNHZ	Pukenui	2.14	38	P	Pn	07 21 48.3	+0.4
PNHZ				P	Pn	07 21 48.3	+0.4
WPHZ	Waipukurau	2.14	44	P	Pn	07 21 48.1	+0.2
LREZ	Lake Rotokare	2.16	358	P	Pb	07 21 51.3	-0.3
NMEZ	Namu Road	2.25	348	P	Pn	07 21 52.1	+2.6
PREZ	Palmer Road	2.29	353	P	Pb	07 21 53.5	-0.3
MTVZ	Mangateitei	2.35	19	P	Pn	07 21 53.8	+2.9
KHEZ	Kahui Hut	2.35	351	P	Pn	07 21 53.6	+2.6
OKCZ	Okains Bay	2.36	206	P	Pn	07 21 51.0	0.0
NEZ	North Egmont	2.37	352	P	Pn	07 21 54.0	+2.9
PXZ	Pawanui	2.39	49	P	Pn	07 21 50.7	-0.6
NBEZ	Newall Road No	2.40	348	P	Pn	07 21 53.4	+1.9
MOVZ	Moawhango	2.41	24	P	Pn	07 21 52.7	+1.0
PKVZ	Pokaka	2.42	16	P	Pn	07 21 53.8	+2.0
KRHZ	Kereru	2.43	36	P	Pn	07 21 52.1	+0.1
BHHZ	Black Hill Sta	2.44	30	P	Pn	07 21 53.4	+1.3
WNVZ	Wahianoa	2.44	20	P	Pn	07 21 53.8	+1.6
DREZ	Durham Road	2.44	354	P	Pn	07 21 55.1	+3.1
TRVZ	Turoa	2.45	19	P	Pn	07 21 54.8	+2.3
PKE	Pukeiti	2.46	351	P	Pn	07 21 54.6	+2.3
DRZ	Dome Shelter	2.48	19	P	Pb	07 21 58.0	+0.8
WHVZ	Whangaehu Hut	2.48	20	P	Pn	07 21 54.5	+1.7
MQZ	McQueen's Vall	2.49	213	P	Pn	07 21 52.1	-0.7
FWVZ	Far West T-bar	2.49	19	P	Pn	07 21 54.9	+1.9
OXZ	Oxford	2.50	226	P	Pn	07 21 52.4	-0.5
VRZ	Vera Road	2.50	5	P	Pn	07 21 55.3	+2.4
TUVZ	Tukino	2.51	21	P	Pn	07 21 54.9	+1.7
INZ	Inchbonnie	2.53	243	P	Pn	07 21 54.1	+0.8
AKCZ	Akaroa Harbour	2.54	207	P	Pn	07 21 53.4	-0.1
KAHZ	Kahuranaki	2.56	45	P	Pn	07 21 53.5	-0.3
NGZ	Ngauruhoe	2.58	19	P	Pn	07 21 56.1	+2.0
SNVZ	South Ngauruho	2.58	20	P	Pb	07 21 58.9	0.0
OTVZ	Oturere	2.61	20	P	Pn	07 21 56.2	+1.7
NNVZ	North Ngauruho	2.63	19	P	Pn	07 21 56.8	+2.1
WTVZ	West Tongariro	2.63	19	P	Pn	07 21 57.0	+2.1
KWHZ	Kaweka Forest	2.64	34	P	Pn	07 21 56.4	+1.5
TWVZ	Taurewa	2.64	16	P	Pn	07 21 56.7	+1.7
ETVZ	East Tongariro	2.65	21	P	Pn	07 21 56.8	+1.8
TMVZ	Te Maari	2.66	21	P	Pn	07 21 56.8	+1.5
KRVZ	Karewarewa	2.67	19	P	Pn	07 21 57.7	+2.3
NTVZ	North Tongarir	2.67	20	P	Pb	07 22 00.1	-0.3
RACZ	Rakaia	2.73	219	P	Pn	07 21 55.5	-0.5
MCHZ	McNeill Hill	2.74	38	P	Pn	07 21 56.1	-0.1
KATZ	Kakaramea	2.79	19	P	Pb	07 22 02.7	+0.2
RITZ	Rihia Road	2.83	22	P	Pn	07 22 00.1	+2.6
BKZ	Black Stump Fm	2.88	32	P	Pn	07 21 58.5	+0.2
RATZ	Rangitukua	2.92	20	P	Pb	07 22 03.5	-1.1
HATZ	Hinemaiaia	2.98	25	P	Pb	07 22 05.7	0.0
ARHZ	Aropaoanui	3.03	40	P	Pn	07 22 01.0	+0.9
WACZ	Wakanui South	3.04	219	P	Pn	07 22 00.1	-0.2
WATZ	Wairara	3.06	18	P	Pb	07 22 06.3	-0.6
NMHZ	Naumai	3.07	36	P	Pn	07 22 01.1	+0.3
HIZ	Hauiti	3.11	5	P	Pn	07 22 03.7	+2.4
MRHZ	Matea Rd	3.14	28	P	Pn	07 22 01.7	-0.1
WVZ	Waitaha Valley	3.15	241	P	Pn	07 22 03.1	+1.3
WHTZ	Whakaora	3.15	21	P	Pb	07 22 08.8	+0.2
KUTZ	Kaahu Road	3.29	18	P	Pb	07 22 11.1	+0.3
RPZ	Rata Peaks	3.29	229	Pn	Pn	07 22 03.6	-0.2
	2.8nm,0.3s,baz=7.3,slow=2.3,SNR=20						
RPZ				Pg	Pb	07 22 11.5	+0.5
	60nm,0.3s,baz=348,slow=14,SNR=47						
RPZ				Sn	Sn	07 22 39.0	-3.7
	14nm,0.3s,baz=316,slow=22,SNR=8.4						
RPZ				Lg	Lg	07 22 55.5	
	7.8nm,0.3s,baz=338,slow=19,SNR=3.4						
RPZ				LR	LR	07 23 02.5	
	comp=Z,132nm,20.2s,baz=5.5,slow=34						
	9.6nm,0.4s						
RPZ	Rata Peaks	3.29	229	P	Pn	07 22 03.7	-0.2
WPRZ	Whakapapatarin	3.35	23	P	Pb	07 22 10.1	-1.7
ALRZ	Allen Road	3.36	25	P	Pb	07 22 10.3	-1.9
ARCZ	Arundel	3.38	225	P	Pn	07 22 05.0	0.0
TLZ	Tolley Road	3.38	14	P	Pn	07 22 08.3	+3.2
PRRZ	Plateau Road	3.44	26	P	Pn	07 22 05.6	-0.2
GCSZ	Gaunt Creek Bo	3.52	240	P	Pn	07 22 09.1	+2.2
HSRZ	Hossack Road	3.56	23	P	Pb	07 22 13.5	-2.1
MUGZ	Murupara	3.59	30	P	Pn	07 22 09.2	+1.4
TMZ	Timaru	3.77	222	P	Pn	07 22 10.2	-0.2
OMRZ	Omania	3.79	23	P	Pb	07 22 18.2	-1.3
URZ	Urewera	3.91	32	Pn	Pn	07 22 11.4	-0.9
	3.1nm,0.3s,baz=162,slow=13,SNR=2.3						
URZ				Pg	Pb	07 22 20.4	-1.0
	24nm,0.3s,baz=248,slow=6.3,SNR=21						
URZ				Sn	Sn	07 22 54.7	-3.1
	16nm,0.3s,baz=227,slow=5.0,SNR=4.2						
URZ				Lg	Lg	07 23 11.0	
	8.4nm,0.3s,baz=229,slow=20,SNR=1.8						
URZ				LR	LR	07 23 39.6	
	comp=Z,99nm,19.9s,baz=212,slow=39						
	7.5nm,0.4s						
URZ	Urewera	3.91	32	P	Pn	07 22 11.4	-0.9
FOZ	Fox Glacier	3.96	240	P	Pn	07 22 13.3	+0.5
TOZ	Tahuroa Road	3.96	12	P	Pn	07 22 16.4	+3.5
OPRZ	Ohinepanea	4.09	23	P	Pn	07 22 14.6	-0.1
TGRZ	Tauranga	4.12	20	P	Pn	07 22 16.4	+1.3
LBZ	Lake Benmore	4.20	227	P	Pn	07 22 16.7	+0.4
ODZ	Otahua Downs	4.43	218	P	Pn	07 22 19.2	-0.3
MKAZ	Moumakai	4.54	7	P	Pn	07 22 22.3	+1.4
AWAZ	Awhitu Peninsu	4.55	1	P	Pn	07 22 23.1	+2.1
HAZ	Te Kaha	4.61	34	P	Pn	07 22 21.9	0.0
PKGZ	Pakihiroa	4.63	38	P	Pn	07 22 21.5	-0.7
ETAZ	East Tamaki Re	4.67	4	P	Pn	07 22 25.3	+2.6
WTAZ	Waiatarua	4.68	1	P	Pn	07 22 25.8	+2.9
RVAZ	Riverhead Bore	4.84	1	P	Pn	07 22 27.5	+2.4
MBAZ	Motutapu North	4.85	4	P	Pn	07 22 28.0	+2.8
JCZ	Jackson Bay	4.87	238	P	Pn	07 22 25.7	+0.2
KUZ	Kuaotunu	4.96	11	P	Pn	07 22 27.7	+1.0
ABAZ	Army Bay	5.02	3	P	Pn	07 22 30.0	+2.5
WKZ	Wanaka	5.13	230	P	Pn	07 22 34.4	+5.3
EAZ	Earnscleugh	5.23	225	P	Pn	07 22 30.1	-0.3
TUZ	Tuapeka	5.59	218	P	Pn	07 22 35.3	0.0
MSZ	Milford Sound	5.70	235	P	Pn	07 22 40.9	+4.1
SYZ	Scrubby Hill	6.25	216	P	Pn	07 22 44.6	+0.2
WHZ	Wether Hill Ro	6.38	226	P	Pn	07 22 45.7	-0.6
OUZ	Omahuta	6.43	353	P	Pn	07 22 48.5	+1.7
CTZ	Chatham Island	6.88	111	P	Pn	07 22 53.7	+0.7
RAO	Raoul Island	13.79	29	Pn	Pn	07 24 26.9	-0.8
	37nm,0.3s,baz=223,slow=19,SNR=1.7						
DZM	Mont Dzumac	20.64	338	LR	LR	07 33 10.0	
	comp=Z,76nm,18.8s,baz=212,slow=35						
MSVF	Nonsavu	24.00	8	P	P	07 26 25.2	-1.7
	6.4nm,0.3s,baz=174,slow=19,SNR=5.5						
	6.4nm,0.3s						
CTA	Charters Tower	32.14	303	LR	LR	07 40 02.3	
	comp=Z,52nm,18.2s,baz=104,slow=35						
ASAR	Alice Springs	38.18	285	P	P	07 28 30.6	-1.2
	1.0nm,0.6s,baz=125,slow=6.7,SNR=24						
ASAR				PcP	PcP	07 30 44.2	-2.1
	0.3nm,0.7s,baz=116,slow=4.2,SNR=2.0						
	1.0nm,0.6s						
PMG	Port Moresby	40.13	315	LR	LR	07 47 36.0	
	comp=Z,50nm,18.1s,baz=129,slow=40						
WRA	Warramunga Arr	40.24	290	P	P	07 28 47.8	-1.1
	3.2nm,0.5s,baz=126,slow=8.4,SNR=104						
WRA				PcP	PcP	07 30 51.5	-1.3
	0.2nm,0.7s,baz=129,slow=2.9,SNR=1.7						
	3.2nm,0.5s						
QSPA	South Pole Qui	48.51	180	P	P	07 29 58.5	+3.7
	1.4nm,1.1s,baz=103,slow=19,SNR=1.3						
JOW	Kunigami	80.42	319	LR	LR	08 02 42.2	
	comp=Z,26nm,20.7s,baz=305,slow=31						
YKA	Yellowknife Ar	118.17	30	PKP	PKPdf	07 39 56.3	-1.8
	0.3nm,0.7s,baz=264,slow=1.6,SNR=4.8						
MKAR	Makanchi Array	120.04	308	PKP	PKPdf	07 40 00.3	-1.9
	0.1nm,0.5s,baz=137,slow=1.0,SNR=1.8						
ARCES	ARCESS Array B	147.72	340	PKPbc	PKPdf	07 40 52.0	-0.7
	1.8nm,0.7s,baz=44,slow=3.7,SNR=7.4						
BRTR	Keskin Array B	150.43	280	PKPbc	PKPdf	07 40 59.7	+1.5
	0.8nm,0.9s,baz=54,slow=2.5,SNR=2.3						
TORD	Torodi Ar. Bea	150.95	195	PKPbc	PKPbc	07 41 05.4	+0.2
	0.6nm,0.5s,baz=141,slow=2.1,SNR=7.1						
FINES	FINESS Array B	152.53	327	PKPbc	PKPdf	07 41 05.1	+4.7
	0.4nm,0.3s,baz=357,slow=35,SNR=1.6						

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*IDC **26** 07:29:08.9±3.2, 53°.73N×90°.76E, h0^{km}, mbtmp3.5/3, ML2.9/3, Error ellipse: s-maj=27.2km s-min=22.9km az=53.0*

*NNC **26** 07:29:11.5±2.7, 53°.42N×90°.64E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=20.6km s-min=16.9km az=76.0, Suspected Mining explosion.*

ISC 26 07:28:52.8±3.7**, 51°.99N**±0°.07×**90°.7E**±0°.2**, h0**^{km}**, n10, σ1^s.70**/15**, 9C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	4.04	301	⇑Pn	Pg	07 30 08.2	-1.9
	8.8nm,0.9s						
ZAA0				⇑Lg	Lg	07 31 01.4	
	20nm,0.9s						
ZALV	Zalesovo Beam	4.04	301	Pn	Pb	07 30 05.8	+1.1
	1.6nm,0.3s,baz=94,slow=14,SNR=18						
ZALV				Pg	Pg	07 30 10.5	+0.3
	1.8nm,0.3s,baz=93,slow=15,SNR=16						
ZALV				Lg	Lg	07 31 00.5	
	2.2nm,0.3s,baz=91,slow=27,SNR=9.9						
	8.5nm,0.6s						
I46RU	ZALESOVO INFRA	4.04	301	i		07 51 30.0	
	0.1nm,1.3s,baz=91,slow=321,SNR=3.5						
MK31	Makanchi Array	7.54	230	⇑Pn	Pg	07 31 17.3	+0.2
	0.5nm,0.5s,baz=39,slow=12,SNR=12						
MK31				Sn	Sg	07 32 53.5	-1.1
	8.3nm,0.9s,baz=45,slow=22,SNR=5.4						
MK31				⇓Lg	Lg	07 33 45.4	
	27nm,1.1s,baz=39,slow=26,SNR=4.0						
MKAR	Makanchi Array	7.54	230	Pn	Pg	07 31 17.9	+0.9
	0.3nm,0.3s,baz=37,slow=13,SNR=13						
MKAR				Sn	Sg	07 32 57.5	+2.9
	0.1nm,0.3s,baz=36,slow=20,SNR=3.1						
MKAR				Lg	Lg	07 33 46.4	
	0.1nm,0.3s,baz=37,slow=25,SNR=5.9						
	0.6nm,0.4s						
KURK	Kurchatov	7.65	265	⇑Pn	Pb	07 31 05.7	-0.5
	5.6nm,0.9s						
KURK				⇑Sn	Sb	07 32 41.1	+3.3
	19nm,1.1s						
KURK				⇑Lg	Lg	07 33 24.4	
	78nm,1.2s						
MAKZ	Makanchi	7.67	231	⇑Pn	Pg	07 31 17.9	-1.8
	0.7nm,0.6s						
MAKZ				⇓Sn	Sg	07 32 57.4	-1.7
	5.7nm,0.8s						
MAKZ				⇑Lg	Lg	07 33 46.9	
	14nm,1.2s						
KURBB	Kurchatov Arra	7.73	265	Pn	Pb	07 31 07.8	+0.3
	0.2nm,0.3s,baz=64,slow=14,SNR=7.9						
KURBB				Sn	Sb	07 32 39.1	-0.9
	baz=66,slow=24,SNR=3.7						
KURBB				Lg	Lg	07 33 26.7	
	0.1nm,0.3s,baz=63,slow=29,SNR=2.8						
	2.6nm,0.5s						
KURBB	Kurchatov Arra	7.73	265	⇑Pn	Pb	07 31 07.1	-0.4
	5.4nm,0.6s						
KURBB				⇓Sn	Sb	07 32 39.1	-0.9
	44nm,0.8s						
KURBB				⇓Lg	Lg	07 33 25.6	
	46nm,0.7s						
SONM	Songino Array	10.96	106	Lg	Lg	07 35 03.9	
	0.3nm,0.3s,baz=306,slow=25,SNR=8.6						

IDC 26 07:33:14.4±3.0**, 53°.73N×86°.84E, h0**^{km}**, mbtmp3.2**/2**, Error ellipse: s-maj=27.7km s-min=15.9km az=72.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.22	281	i		07 41 30.0	
	baz=100,slow=321,SNR=2.8						
ZALV	Zalesovo Beam	1.22	281	Pg	Pg	07 33 37.8	+0.1
	1.1nm,0.3s,baz=102,slow=18,SNR=7.3						
ZALV				Lg	Lg	07 33 53.5	
	1.0nm,0.3s,baz=98,slow=29,SNR=1.5						
KURBB	Kurchatov Arra	5.98	242	Pn	Pn	07 34 45.2	+1.1
	1.8nm,0.8s,baz=56,slow=13,SNR=0.7						
MKAR	Makanchi Array	7.53	205	Pn	Pn	07 35 06.2	+0.9
	2.2nm,0.9s,baz=19,slow=14,SNR=0.9						

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*IDC **26** 07:36:22.4±1.8, 1°.53N×124°.33E, h0^{km}, mb3.6/3, mbtmp3.7/3, Error ellipse: s-maj=186.3km s-min=24.9km az=63.0*

*DJA **26** 07:36:49.4±0.6, 1°N±4°×12°4E±°, h215^{km}±5^{km}, M3.7/9, MLv3.7/9*

ISC 26 07:36:50.4±1.2**, 0°.91N**±0°.08×**124°.51E**±0°.05**, h207**^{km}**, n12, σ1^s.37**/17**, mb3.4**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.62	238	P	Pn	07 37 19.0	+0.2
GTOI	Gorontalo	1.52	260	P	Pn	07 37 25.5	+0.6
GTOI				S	S	07 37 54.4	+3.0
LUWI	Luwuk	2.60	222	P	Pn	07 37 35.8	-0.1
LUWI				S	S	07 38 12.2	+1.3
MRSI	Marisa	2.60	261	P	Pn	07 37 35.5	-0.4
MRSI				S	S	07 38 11.9	+1.1
SGSI	Sangihe	2.94	20	P	Pn	07 37 39.8	0.0
SANI	Sanana	3.29	153	P	Pn	07 37 43.8	-0.1
SANI				S	S	07 38 26.4	+1.1
LBMI	Labuha	3.36	117	P	Pn	07 37 44.8	0.0
LBMI				S	S	07 38 28.4	+1.6
APSI	Ampana	3.38	238	P	Pn	07 37 45.0	+0.1
APSI				S	S	07 38 28.3	+1.2
MPSI	Mapaga	4.64	263	P	Pn	07 37 59.0	-1.5
WRA	Warramunga Arr	22.85	156	P	P	07 41 34.1	-1.9
	2.3nm,0.4s,baz=334,slow=10,SNR=46						
	2.3nm,0.4s						
ASAR	Alice Springs	26.08	160	P	P	07 42 03.6	-1.6
	0.3nm,0.5s,baz=340,slow=7.4,SNR=6.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	58.66	327	P	P	07 46 17.2	-8.9
	0.3nm,0.4s,baz=133,slow=7.0,SNR=6.4						
	0.3nm,0.4s						

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*VIE **26** 07:54:23.5, 51°.64N×16°.15E, h0^{km}, ML2.8/2 85 km NW of Wroclaw Suspected Mining induced.*

*IPEC **26** 07:54:23.9±0.2, 51°.52N×16°.23E, h1^{km}, ML2.3/3, Error ellipse: s-maj=2.0km s-min=1.3km az=30.0*

*IDC **26** 07:54:25.3±0.9, 51°.47N×15°.96E, h0^{km}, mb3.4/1, mbtmp3.2/7, ML2.9/6, Error ellipse: s-maj=16.0km s-min=9.3km az=115.0*

*PRU **26** 07:54:25.3±0.0, 51°.45N×16°.10E, h0^{km}*

ISC 26 07:54:23.7±0.8**, 51°.53N**±0°.04×**16°.20E**±0°.03**, h0**^{km}**, n50, σ2^s.13**/98**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	175	ePg	Pg	07 54 37.3	+0.3
KSP				eSg	Sg	07 54 45.8	-0.1
CHVC	Chvalec	0.95	186	ePG	Pg	07 54 41.4	-0.5
CHVC				eSG	Sg	07 54 53.0	-1.2
	comp=Z,42nm,0.4s						
OSTC	Ostas	0.98	180	ePG	Pg	07 54 42.5	+0.1
OSTC				eSG	Sg	07 54 54.3	-0.8
	comp=Z,45nm,0.6s						
UPC	Upice	1.03	187	ePG	Pg	07 54 43.6	+0.1
UPC				eSG	Sg	07 54 55.9	-1.0
	comp=Z,138nm,0.4s						
DPC	Dobruska-Polom	1.19	176	ePG	Pg	07 54 46.2	-0.2
DPC				eSG	Sg	07 55 00.7	-1.1
	comp=Z,31nm,0.4s						
PVCC	Panska Ves	1.44	226	ePG	Pn	07 54 50.5	-0.5
PVCC				eSG	Sg	07 55 08.7	-1.3
	comp=Z,152nm,0.3s						
KRLC	Kraliky	1.50	166	ePG	Pn	07 54 51.6	-0.4
KRLC				eSG	Sg	07 55 11.9	-0.1
	comp=Z,81nm,0.9s						
BRG	Berggiesshubel	1.57	246	Pn	Pn	07 54 51.6	-1.1
BRG				Pg	Pb	07 54 53.0	-0.5
BRG				Sg	Sn	07 55 13.1	-0.6
BRG				Amp		07 55 15.4	
	comp=Z,54nm,0.3s						
PRU	Pruhonice	1.87	215	ePG	Pn	07 54 57.5	+0.5
PRU				eSG	Sn	07 55 21.7	+0.4
	comp=Z,22nm,0.6s						
MORC	Moravsky Berou	1.95	154	ePn	Pn	07 54 57.9	-0.2
	baz=335						
MORC				eSg	Sb	07 55 24.6	-0.5

	comp=Z,24nm,0.4s,baz=335						
MORC	Moravsky Berou	1.95	154	ePN	Pn	07 54 58.0	-0.2
MORC				eSG	Sb	07 55 24.7	-0.4
CLL	Collm	2.02	265	ePg	Pb	07 55 00.0	-1.2
CLL				ex	x	07 55 05.0	
CLL				eSg	Sb	07 55 26.0	-0.8
	comp=Z,22nm,0.3s						
OKC	Ostrava-Krasne	2.10	143	ePG	Pg	07 55 03.6	-0.3
OKC				eSG	Sg	07 55 30.8	-0.3
	comp=Z,40nm,0.7s						
VRAC	Vranov	2.24	173	Pn	Pn	07 55 02.9	+0.8
	comp=Z,2.2nm,0.3s,baz=350,slow=11,SNR=12						
VRAC				Lg	Lg	07 55 33.7	
	comp=Z,3.6nm,0.3s,baz=270,slow=20,SNR=9.0						
	comp=Z,4.8nm,0.4s						
VRAC	Vranov	2.24	173	ePn	Pn	07 55 02.0	0.0
	baz=354						
VRAC				eSg	Sb	07 55 33.8	+0.5
	comp=Z,11nm,0.2s,baz=354						
VRAC	Vranov	2.24	173	ePN	Pn	07 55 02.1	0.0
VRAC				eSG	Sb	07 55 33.8	+0.5
TREC	Trest	2.29	192	ePN	Pn	07 55 03.3	+0.6
TREC				ePG	Pb	07 55 05.8	0.0
TREC				eSG	Sb	07 55 34.5	-0.1
	comp=Z,25nm,0.2s						
MAUC	Maruska	2.41	154	ePN	Pn	07 55 05.5	+1.2
MAUC				ePG	Pb	07 55 08.7	+0.8
MAUC				eSG	Sg	07 55 40.0	-0.9
	comp=Z,51nm,0.7s						
KRUC	Moravsky	2.48	177	ePn	Pn	07 55 05.0	-0.2
	baz=358						
KRUC				eSg	Sb	07 55 41.1	+1.0
	comp=Z,16nm,0.6s,baz=358						
KRUC	Moravsky	2.48	177	ePN	Pn	07 55 05.1	-0.2
KRUC				eSG	Sb	07 55 41.2	+1.1
OJC	Ojcow	2.63	119	ePg	Pg	07 55 13.9	-0.1
OJC				eSg	Sg	07 55 50.0	+1.9
NKC	Novy Kostel	2.71	243	ePN	Pn	07 55 08.4	-0.1
NKC				ePG	Pb	07 55 13.3	+0.2
NKC				eSG	Sg	07 55 49.1	-1.7
	comp=Z,36nm,0.3s						
JAVC	Velka Javorina	2.84	160	ePn	Pn	07 55 10.0	-0.3
	baz=341						
JAVC	Velka Javorina	2.84	160	ePN	Pn	07 55 10.0	-0.3
KHC	Kasperske Hory	2.94	216	ePN	Pn	07 55 11.4	-0.2
KHC				ePG	Pb	07 55 16.8	-0.1
KHC				eSN	Sn	07 55 46.4	-1.2
KHC				eSG	Sg	07 55 55.7	-2.2
	comp=Z,31nm,1.2s						
CKRC	Cesky Krumlov	2.98	205	ePG	Pb	07 55 18.0	+0.4
CKRC				eSG	Sg	07 55 56.9	-2.4
GERES	GERESS Array B	3.13	212	Pn	Pn	07 55 14.4	0.0
	comp=Z,0.8nm,0.3s,baz=29,slow=13,SNR=22						
GERES				Pg	Pb	07 55 20.1	-0.3
	comp=Z,3.3nm,0.3s,baz=31,slow=17,SNR=47						
GERES				Lg	Lg	07 55 59.6	
	comp=Z,2.5nm,0.3s,baz=28,slow=26,SNR=4.4						
	comp=Z,1.4nm,0.4s						
LANS	Liptovska Anna	3.17	137	ePG		07 53 39.3	
LANS				eSG		07 53 40.0	
LANS				ePG	Pg	07 55 25.0	+0.6
LANS				eSG	Sg	07 56 06.5	+1.0
MODS	Modra-Piesok	3.24	167	ePG	Pg	07 55 25.2	-0.5
MODS				eSG	Sg	07 56 05.8	-1.9
VYHS	Vyhne	3.48	150	ePG	Pg	07 55 30.1	-0.3
VYHS				eSG	Sg	07 56 14.7	-0.8
CONA	Conrad Observa	3.62	184	ePn	Pn	07 55 21.4	+0.3
	comp=Z,1.4nm,0.2s						
CONA				eSg	Sg	07 56 16.4	-3.3
	comp=Z,5.9nm,0.3s						
RONA	Rosalia, Austr	3.84	179	ePn	Pn	07 55 25.6	+1.6
RONA				eSg	Sg	07 56 24.6	-2.3
MOA	Molln	3.90	200	ePn	Pn	07 55 25.4	+0.6
MOA				eSg	Sg	07 56 27.4	-1.4
	comp=Z,3.6nm,0.2s						
BIOA	Bad Ischl, Aus	4.19	204	ePn	Pn	07 55 30.4	+1.5
BIOA				eSg	Sg	07 56 38.7	+0.4
ARSA	Arzberg	4.31	186	ePn	Pn	07 55 31.4	+0.9
	comp=Z,1.7nm,0.3s						
ARSA				eSg	Sg	07 56 40.7	-1.4
	comp=Z,1.3nm,0.3s						
KBA	Koelnbreinsper	4.83	204	ePn	Pn	07 55 37.8	-0.1
	comp=Z,0.5nm,0.2s						
KBA				eSg	Sg	07 56 53.9	-5.0
	comp=Z,5.3nm,0.5s						
OBKA	Obir	5.14	193	ePn	Pn	07 55 43.3	+1.2
	comp=Z,1.4nm,0.4s						
OBKA				eSg	Sb	07 57 01.0	+4.1
	comp=Z,2.9nm,0.5s						
WATA	Walderalm	5.17	217	ePn	Pn	07 55 43.2	+0.7
	comp=Z,0.9nm,0.2s						
WATA				eSg	Sg	07 57 16.0	+6.2
	comp=Z,4.6nm,0.4s						
WTTA	Wattenberg	5.21	217	ePn	Pn	07 55 44.2	+1.2
	comp=Z,0.9nm,0.2s						
WTTA				eSg	Sb	07 57 03.8	+4.9
	comp=Z,4.5nm,0.4s						
MOTA	Moosalm	5.35	220	ePn	Pn	07 55 44.9	0.0
	comp=Z,0.6nm,0.2s						
MOTA				eSg	Sg	07 57 23.8	+8.4
	comp=Z,1.6nm,0.3s						
ABTA	Abfaltersbach	5.37	208	ePn	Pn	07 55 46.0	+0.9
	comp=Z,0.1nm,0.1s						
ABTA				eSg	Sg	07 57 11.5	-4.5
	comp=Z,0.3nm,0.2s						
RETA	Reutte	5.38	223	ePn	Pn	07 55 44.2	-1.0
	comp=Z,0.9nm,0.2s						
RETA				eSg	Sg	07 57 22.7	+6.3
	comp=Z,2.9nm,0.4s						
SQTA	Sankt Quirin	5.41	219	ePn	Pn	07 55 46.9	+1.2
	comp=Z,0.9nm,0.1s						
SQTA				eSg	Sg	07 57 23.0	+5.6
	comp=Z,4.2nm,0.5s						
FETA	Feichten	5.76	221	ePn	Pn	07 55 49.5	-1.1
FETA				eSg	Sg	07 57 22.2	-6.5
	comp=Z,0.6nm,0.3s						
DAVA	Damuels	5.92	227	ePn	Pn	07 55 46.5	-6.3
	comp=Z,0.6nm,0.2s						
DAVA				eSg	Sg	07 57 38.4	+4.6
	comp=Z,2.8nm,0.3s						
DAVOX	Davos/Dischmat	6.31	224	Pn	Pn	07 55 55.9	-2.2
	comp=Z,0.4nm,0.3s,baz=328,slow=16,SNR=1.6						
DAVOX				Sn	Sn	07 57 06.7	-4.2
	comp=Z,0.3nm,0.3s,baz=354,slow=18,SNR=1.4						
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	8.24	91	Pn	Pn	07 56 24.7	+0.4
	comp=Z,0.9nm,0.3s,baz=281,slow=12,SNR=2.9						
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	11.32	25	Pn	Pn	07 57 05.7	-0.8
	comp=Z,0.2nm,0.3s,baz=216,slow=14,SNR=1.9						
	comp=Z,0.8nm,0.4s						
ARCES	ARCESS Array B	18.59	10	P	Pn	07 58 42.6	+0.4
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=6.9						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	59.86	336	P	P	08 04 31.1	+0.6
	comp=Z,0.4nm,0.9s,baz=36,slow=6.4,SNR=2.7						
	comp=Z,0.4nm,0.9s						

KRSC 26 08:07:03.5±2.1, 49°.00N×155°.13E, h232^{km}±23^{km}, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.69	23	iS	S	08 08 29.2	+0.1
KDTR	Khodutka, Kamc	3.38	33	iP	Pn	08 07 59.5	+0.4
KDTR				iS	S	08 08 41.9	-1.1
ASAK	Asacha	3.82	26	iP	Pn	08 08 06.9	+2.6
MTVR	Mutnovka	3.99	28	iS	S	08 08 57.7	+1.6
RUS	Russkaya	4.05	31	iP	Pn	08 08 08.0	+1.0
RUS				iS	S	08 08 57.0	-0.2
SPN	Mys Shipunski	5.13	35	iP	Pn	08 08 23.0	+2.8
SPN				iS	S	08 09 20.0	-1.2
MKZ	Mys Kozlova	6.90	34	iP	Pn	08 08 44.2	+1.7
KBTR	Krutoberegovo	8.60	30	P	Pn	08 09 05.4	+1.3

IDC 26 08:11:53.0±2.2, 8°.34S×128°.26E, h0^{km}, mb3.4/1, mbtmp3.7/3, ML4.0/2, Error ellipse: s-maj=117.1km s-min=33.4km az=64.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.95	154	Pn	Pn	08 14 58.1	-0.3
	0.9nm,0.3s,baz=332,slow=11,SNR=60						
WRA				Sn	Sn	08 17 19.7	-3.7
	1.0nm,0.3s,baz=337,slow=23,SNR=8.0						
	1.0nm,0.4s						
ASAR	Alice Springs	16.17	161	Pn	Pn	08 15 42.1	+0.4
	0.7nm,0.3s,baz=335,slow=9.0,SNR=59						
ASAR				Sn	Sn	08 18 34.7	-7.3
	0.2nm,0.3s,baz=317,slow=21,SNR=4.8						
	0.9nm,0.4s						
MKAR	Makanchi Array	68.42	328	P	P	08 22 56.7	0.0
	0.2nm,0.5s,baz=145,slow=5.1,SNR=2.7						
	0.2nm,0.5s						

*IDC **26** 08:25:20.9±1.6, 4°.26N×128°.31E, h0^{km}, mb3.9/4, mbtmp3.9/4, MS3.0/1, Error ellipse: s-maj=129.2km s-min=22.6km az=69.0*

*DJA **26** 08:25:31.1±0.8, 4°N±5°×12°8E±°, h15^{km}±6^{km}, M4.3/12, mb4.3/6, mB4.9/3, MLv4.2/12, Mw(mB)4.2/3*

ISC 26 08:25:31.1±1.1, 4°.10N±0°.06×127°.9E±0°.1, h71^{km}, n15, σ2^{s}20/17, mb3.8/4, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.38	260	P	Pn	08 26 06.9	-0.9
SGSI				S	Sn	08 26 34.5	-1.5
DDMP	Don Marcelino,	2.94	313	⇓eP	Pn	08 26 13.0	-2.4
DDMP				eS	Sn	08 26 51.0	+1.4
TNTI	Ternate	3.34	189	P	Pn	08 26 23.0	+2.0
KCP	Kidapawan	4.01	316	⇑eP	Pn	08 26 31.4	+1.3
KCP				iS	Sn	08 27 22.6	+6.7
KMSI	Cibinong	5.23	228	P	Pn	08 26 47.2	+0.4
	0.6nm107nm,0.6s						
GTOI	Gorontalo	5.95	235	P	Pn	08 26 56.6	-0.1
	0.0nm11nm,0.7s						
SANI	Sanana	6.39	197	P	Pn	08 27 02.5	-0.1
MRSI	Marisa	6.93	239	P	Pn	08 27 09.8	-0.3
	0.2nm819nm48nm,0.5s						
APSI	Ampana	7.96	231	P	Pn	08 27 25.4	+1.2
	0.1nm23nm,0.7s						
MPSI	Mapaga	8.80	245	P	Pn	08 27 36.2	+0.6
WRA	Warramunga Arr	24.72	165	P	P	08 30 44.8	-1.1
	1.3nm,0.7s,baz=346,slow=10,SNR=24						
	1.3nm,0.7s						
ASAR	Alice Springs	28.21	168	P	P	08 31 16.4	-1.0
	0.3nm,0.7s,baz=1.4,slow=8.2,SNR=6.3						
	0.3nm,0.7s						
MJAR	Matsushiro Arr	33.66	15	LR	LR	08 43 35.8	
	comp=Z,24nm,19.8s,baz=210,slow=33						
MKAR	Makanchi Array	57.91	325	P	P	08 35 16.3	+0.3
	1.4nm,0.4s,baz=113,slow=8.2,SNR=22						
	1.4nm,0.4s						
ARCES	ARCESS Array B	90.50	340	P	P	08 38 23.3	-1.5
	0.9nm,0.7s,baz=87,slow=5.5,SNR=4.5						
	0.9nm,0.7s						

IDC 26 08:27:27.7±28.0, 12°.17S×166°.43E, h520^{km}±354^{km}, mb2.9/6, mbtmp3.7/6, Error ellipse: s-maj=139.3km s-min=122.8km az=173.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.91	245	P	P	08 31 33.6	0.0
	2.1nm,0.6s,baz=73,slow=11,SNR=7.9						
	2.1nm,0.6s						
WRA	Warramunga Arr	31.75	252	P	P	08 33 08.9	-0.2
	0.5nm,0.6s,baz=84,slow=8.9,SNR=5.8						
	0.5nm,0.6s						
ASAR	Alice Springs	32.91	245	P	P	08 33 18.9	-0.1
	0.5nm,0.6s,baz=77,slow=9.6,SNR=8.4						
	0.5nm,0.6s						
ILAR	Eielson Array	84.36	18	P	P	08 39 04.1	-0.3
	0.6nm,0.7s,baz=238,slow=5.1,SNR=6.0						
	0.6nm,0.7s						
NVAR	Mina Array Bea	86.23	50	P	P	08 39 15.2	+0.8
	0.2nm,0.6s,baz=252,slow=7.5,SNR=2.2						
	0.2nm,0.6s						
YKA	Yellowknife Ar	95.66	27	P	P	08 39 56.2	-0.8
	0.1nm,0.5s,baz=260,slow=4.9,SNR=1.9						
	0.1nm,0.5s						

*IDC **26** 09:14:38.0±3.5, 8°.04S×74°.41W, h131^{km}±46^{km}, mb3.0/2, mbtmp3.5/6, Error ellipse: s-maj=67.7km s-min=19.4km az=38.0*

ISC 26 09:14:38.7±1.0, 8°.17S±0°.09×74°.60W±0°.09, h150^{km}, n7, σ1^{s}85/10, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.90	285	P	Pn	09 15 39.0	+0.8
	21nm,0.3s,baz=124,slow=7.3,SNR=99						
ATAH				S	Sn	09 16 21.7	-2.5
	9.5nm,0.4s,baz=31,slow=8.1,SNR=4.5						
NNA	Nana	4.39	210	P	Pn	09 15 46.9	+2.8
	2.7nm,0.3s,baz=208,slow=22,SNR=1.5						
NNA				S	Sn	09 16 34.0	-1.1
	16nm,0.2s,baz=249,slow=14,SNR=9.0						
LPAZ	La Paz	10.24	143	P	Pn	09 17 00.5	-2.1
	0.7nm,0.5s,baz=336,slow=7.8,SNR=5.6						
LPAZ				S	Sn	09 18 55.0	-1.4
	0.7nm,0.4s,baz=105,slow=23,SNR=3.8						
SIV	San Ignacio	15.33	122	P	Pn	09 18 07.2	-0.2
	0.8nm,0.5s,baz=296,slow=14,SNR=5.5						
SIV				S	Sn	09 20 44.9	-13
	0.2nm,0.3s,baz=308,slow=18,SNR=1.4						
PDAR	Pinedale Array	59.87	331	P	P	09 24 29.3	+0.4
	0.2nm,0.5s,baz=131,slow=12,SNR=1.5						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	78.66	75	P	P	09 26 26.0	+1.2
	0.3nm,0.5s,baz=271,slow=3.7,SNR=1.8						
	0.3nm,0.5s						
WRA	Warramunga Arr	140.10	225	PKP	PKPdf	09 33 50.5	+0.1
	0.2nm,0.5s,baz=118,slow=2.1,SNR=5.1						

*DNK **26** 09:15:11.7±2.0, 55°.53N×20°.69E, h0^{km}, ML1.7, Explosion*

*UPP **26** 09:15:11.6±2.2, 55°.63N×20°.92E, h0^{km}, ML2.5, Explosion*

*EST **26** 09:15:12.2±0.3, 55°.81N×21°.13E, h0^{km}, ML1.9(HEL), Explosion*

*HEL **26** 09:15:12.1±0.3, 55°.81N×21°.12E, h0^{km}, ML1.9, Explosion*

*LVSN **26** 09:15:13.6±5.3, 55°.83N×20°.85E, h0^{km}±41^{km}, ML3.0*

*IDC **26** 09:15:16.6±3.4, 56°.18N×21°.00E, h0^{km}, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=31.8km s-min=16.1km az=172.0*

ISC 26 09:15:11.4±0.9, 55°.88N±0°.04×20°.97E±0°.03, h0^{km}, n60, σ1^{s}65/86, 1D, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBUR	Paburge	0.56	75	eP	Pg	09 15 23.0	+0.9
PBUR				IAML		09 15 48.6	
	comp=Z,65nm,0.3s						
PBUR	Paburge	0.56	75	eP	Pg	09 15 23.0	+0.9
PBUR				eS	Sn	09 15 34.6	-2.0
PABE	Paberze	1.74	101	eP	Pn	09 15 43.1	+0.4
PABE				eS	Sn	09 16 05.3	-0.4
PABE				IAML		09 16 08.8	
	comp=Z,42nm,0.4s						
PABE	Paberze	1.74	101	eP	Pn	09 15 43.4	+0.6
PABE				AML	AML	09 15 44.3	
	comp=Z,68nm,0.1s						
PABE				eS	Sn	09 16 05.9	+0.2
PABE				AML	AML	09 16 07.8	
	comp=N,203nm,0.2s						
PABE				AML	AML	09 16 08.4	
	comp=E,98nm,0.2s						
SLIT	Slitere, Latvi	1.90	22	eP	Pn	09 15 46.3	+1.3
SLIT				IAML		09 16 17.5	
	comp=Z,154nm,0.1s						
SLIT	Slitere, Latvi	1.90	22	eP	Pn	09 15 46.3	+1.3
SLIT				AML	AML	09 15 48.5	
	comp=Z,145nm,0.1s						
SLIT				eS	Sg	09 16 13.5	+1.2
SLIT				AML	AML	09 16 15.3	
	comp=N,130nm,0.3s						
SLIT				AML	AML	09 16 17.7	
	comp=E,215nm,0.8s						
SLIT	Slitere, Latvi	1.90	22	eP	Pn	09 15 46.1	+1.1
SLIT				eS	Sg	09 16 12.0	-0.3
GOTU	Gotland	2.24	325	P	Pb	09 15 53.3	+0.6
GOTU				S	Sg	09 16 23.5	+0.3
GOTU	Gotland	2.24	325	P	Pb	09 15 53.3	+0.6
GOTU				S	Sg	09 16 23.5	+0.3
SUW	Suwalki	2.27	145	eP	Pn	09 15 50.1	0.0
SUW				eS	Sn	09 16 19.1	+0.5
SUW	Suwalki	2.27	145	eP	Pn	09 15 51.3	+1.3
SUW				AML	AML	09 15 51.6	
	comp=Z,471nm,0.2s						
SUW				eS	Sb	09 16 21.2	-0.4
SUW				AML	AML	09 16 23.4	
	comp=N,362nm,0.2s						
SUW				AML	AML	09 16 25.2	
	comp=E,501nm,0.2s						
BYXU	Byxelkrok	2.60	304	P	Pn	09 15 56.3	+1.7
BYXU				S	Sb	09 16 30.8	-0.6
BYXU	Byxelkrok	2.60	304	P	Pn	09 15 56.3	+1.7
BYXU				S	Sb	09 16 30.8	-0.6
BLEU	Blekinge	2.92	280	P	Pn	09 15 59.9	+1.0
BLEU				iP	Pb	09 16 00.1	-4.1
BLEU				iS	Sn	09 16 03.3	-31
BLEU				IAML		09 16 03.5	
	comp=Z,1.0nm,0.2s						
BLEU	Blekinge	2.92	280	P	Pn	09 15 59.9	+1.0
VSTU	Vaestervik	3.02	308	P	Pn	09 16 02.5	+2.1
VSTU	Vaestervik	3.02	308	P	Pn	09 16 02.5	+2.1
IIGN	Ignalina	3.03	98	eP	Pn	09 16 00.8	+0.3
MTSE	Matsula	3.23	27	eP	Pn	09 16 05.5	+2.2
MTSE	Matsula	3.23	27	eP	Pn	09 16 04.9	+1.6
MTSE				eS	Sn	09 16 42.9	+0.4
IDID	Didziasalis	3.32	97	IAML		09 16 16.9	
	comp=Z,9.3nm,0.4s						
VIKU	Vikbolandet	3.51	320	eP	Pn	09 16 08.7	+1.6
VIKU	Vikbolandet	3.51	320	P	Pn	09 16 09.1	+2.0
VIKU	Vikbolandet	3.51	320	P	Pn	09 16 09.1	+2.0
VXJU	Vaexsjoe	3.51	290	P	Pn	09 16 08.1	+1.0
VXJU	Vaexsjoe	3.51	290	P	Pn	09 16 08.1	+1.0
NYNU	Nynaeshamn	3.52	334	P	Pn	09 16 09.9	+2.7
NYNU				S	Sb	09 16 55.8	-1.9
NYNU	Nynaeshamn	3.52	334	P	Pn	09 16 09.9	+2.7
NYNU				S	Sb	09 16 55.8	-1.9
BSD	Bornholm Skovb	3.53	260	eP	Pn	09 16 06.9	-0.4
BSD	Bornholm Skovb	3.53	260	iP	Pn	09 16 06.0	-1.3
EE01	Perakula, Nova	3.63	22	eP	Pn	09 16 11.1	+2.4
LNKU	Linkoeping	3.80	310	P	Pn	09 16 12.9	+1.9
LNKU	Linkoeping	3.80	310	P	Pn	09 16 12.9	+1.9
DEL	Delary	4.01	281	eP	Pn	09 16 13.9	-0.1
DEL	Delary	4.01	281	iP	Pn	09 16 14.5	+0.5
DEL				iS	Pb	09 16 23.9	+1.1
DEL				IAML		09 16 27.1	
	comp=Z,0.9nm,0.2s						
VSU	Vasula	4.07	48	eP	Pn	09 16 16.7	+1.9
EE03	Tooma soojaam,	4.15	42	eP	Pn	09 16 18.2	+2.2
ESKU	Eskilstuna	4.17	326	P	Pn	09 16 18.4	+2.3
ESKU	Eskilstuna	4.17	326	P	Pn	09 16 18.4	+2.3
AAL	Aland	4.34	354	eP	Pn	09 16 20.7	+2.2
AAL	Aland	4.34	354	eP	Pn	09 16 20.3	+1.8
AAL				eS	Sn	09 17 11.2	+1.5
ASKU	Askersund	4.49	315	P	Pn	09 16 22.8	+2.2
ASKU	Askersund	4.49	315	P	Pn	09 16 22.8	+2.2
MEF	Metsahovi	4.71	21	eP	Pn	09 16 26.4	+2.8
EE05	Udria, Vaivara	5.13	44	eP	Pn	09 16 30.1	+0.7
RAF	Rauma	5.17	4	eP	Pn	09 16 31.3	+1.3
RAF	Rauma	5.17	4	eP	Pn	09 16 31.4	+1.4
RAF				eS	Sn	09 17 29.9	-0.4
RAF				MSG		09 17 33.0	
	comp=Z,1.7nm,0.1s						
PVF	Pernaja	5.34	27	eP	Pn	09 16 33.5	+1.2
PVF				eS	Sn	09 17 33.2	-1.2
PVF				MSG		09 17 39.4	
	comp=Z,0.9nm,0.1s						
TJOU	Tjoern	5.55	297	⇓iP	Pn	09 16 36.7	+1.7
STRU	Stroemstad	6.15	305	iP	Pn	09 16 43.8	+0.4
FIA0	FINESS Array S	6.18	23	eP	Pn	09 16 44.9	+1.1
FIA0				eS	Sn	09 17 53.6	-1.5
FINES	FINESS Array B	6.18	23	Pn	Pn	09 16 45.0	+1.3
	comp=Z,0.4nm,0.3s,baz=210,slow=13,SNR=9.2						
FINES				Sn	Sn	09 17 51.6	-3.4
	comp=Z,0.5nm,0.3s,baz=207,slow=23,SNR=1.4						
FINES				Lg	Lg	09 18 21.9	
	comp=Z,0.3nm,0.3s,baz=226,slow=25,SNR=1.3						
	comp=Z,0.6nm,0.3s						
FIA1	FINESS Array S	6.18	23	eP	Pn	09 16 44.9	+1.1
FIA1				eS	Sn	09 17 53.6	-1.5
KEF	Keuruu	6.62	16	eP	Pn	09 16 51.2	+1.4
KEF				eS	Sn	09 18 05.0	-0.8
KAF	Kangasniemi	6.83	22	eP	Pn	09 16 53.1	+0.4
KAF				eS	Sn	09 18 08.4	-2.6
RUFX	Ruokolahti	6.95	34	eP	Pn	09 16 53.6	-0.7
RUFX				eS	Sn	09 18 11.5	-2.4
VAF	Ylistaro	7.24	6	eP	Pn	09 16 59.7	+1.5
VAF				eS	Sn	09 18 19.4	-1.6
NOA	NORSAR Array B	7.27	319	Pn	Pn	09 16 58.2	-0.5
	baz=133,slow=12,SNR=5.0						
NOA				Sn	Sn	09 18 17.6	-4.4
	baz=153,slow=10.0,SNR=1.6						
NOA				Lg	Lg	09 18 57.0	
	baz=116,slow=21,SNR=2.1						
	comp=Z,0.2nm,0.4s						
SUF	Sumiainen	7.35	19	eP	Pn	09 17 00.2	+0.4
SUF				eS	Sn	09 18 21.5	-2.3
ARCES	ARCESS Array B	13.86	7	Pn	Pn	09 18 25.1	-3.6
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=5.9						
	comp=Z,0.4nm,0.4s						

*DMN **26** 09:29:23.6±0.3, 28°.53N×87°.55E, h10^{km}, Ml4.5/6, Error ellipse: s-maj=3.8km s-min=2.2km az=50.0*

*NDI **26** 09:29:23.9±3.6, 28°.69N×87°.69E, h10^{km}, ML3.5, mb4.0(NEIC)*

*IDC **26** 09:29:23.1±0.7, 28°.39N×87°.49E, h0^{km}, mb4.0/20, mbtmp4.0/22, ML4.0/2, MS3.2/13, Error ellipse: s-maj=21.4km s-min=14.0km az=42.0*

*MOS **26** 09:29:25.1±1.5, 28°.42N×87°.47E, h24^{km}, mb4.3/13, Error ellipse: s-maj=10.7km s-min=5.6km az=117.1*

*NEIC **26** 09:29:25.6±2.1, 28°.46N±0°.06×87°.48E±0°.05, h10^{km}±1^{km}, mb4.0/19, Error ellipse: s-maj=11.9km s-min=4.1km az=211.0*

ISC 26 09:29:24.8±1.2, 28°.48N±0°.03×87°.48E±0°.03, h9^{km}±7^{km}, n118, σ1^{s}64/134, mb4.1/31, MS3.3/12, 9C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	1.15	170	ePg	Pb	09 29 45.1	-2.0
TAPN				eSg	Sb	09 30 00.9	-1.3
	686nm,0.3s						
JIRN	Jiri	1.40	234	ePg	Pb	09 29 51.2	-0.2
JIRN				eSg	Sg	09 30 10.2	+0.2
GUN	Gumba	1.52	248	ePg	Pg	09 29 53.9	-0.2
GUN				eSg	Sg	09 30 14.2	+0.3
	1µm,0.3s						
ODAN	Odare	1.62	183	eSg	Sg	09 30 16.4	-0.6
ODAN				eSg	Sb	09 30 16.6	+0.9
ODAN				eSg	Sn	09 30 16.9	+2.0
	555nm,0.5s						
RAMN	Ramite	1.71	207	ePg	Pb	09 29 56.3	-0.4
RAMN				eSg	Sg	09 30 19.4	-0.6
PKI	Pulchoki	2.04	244	ePg	Pg	09 30 03.6	-0.4
PKI				eSg	Sg	09 30 30.9	+0.4
PKIN	Phulchoki	2.05	244	ePg	Pg	09 30 03.6	-0.6
PKIN				eSg	Sg	09 30 31.5	+0.7
	1µm,0.5s						
KKN	Kakani	2.06	251	ePg	Pb	09 30 02.9	+0.3
KKN	Kakani	2.06	251	ePg	Pg	09 30 03.3	-1.1
KKN				eSg	Sg	09 30 30.6	-0.5
KKN				eSg	Sb	09 30 31.0	+2.6
KKN				eSg	Sb	09 30 31.0	+2.6
DMN	Daman	2.27	248	ePg	Pb	09 30 07.0	+0.8
DMN				eSg	Sg	09 30 37.9	+0.1
GKN	Gorkha	2.55	260	ePg	Pg	09 30 12.7	-1.1
GKN				eSg	Sg	09 30 46.5	-0.4
	1µm,0.3s						
DANN	Dangsing	3.28	269	ePg	Pg	09 30 25.8	-1.9
DANN				eSg	Sg	09 31 08.5	-1.7
	514nm,0.6s						
LSA	Lhasa	3.44	68		Pn	09 30 21.1	+2.1
LSA	Lhasa	3.44	68	P	Pn	09 30 21.1	+2.1
LSA	Lhasa	3.44	68	Pg	Pb	09 30 25.0	-1.2
LSA				Sg	Sn	09 31 00.8	+0.7
LSA				smax	smax		
	comp=N,100nm,1.0s						
LSA				smax	smax		
	comp=E,60nm,0.9s						
KOLN	Koldanda	3.50	259	eSg	Sg	09 31 15.0	-2.2
PYUN	Piuthan	3.98	266	ePg	Pg	09 30 38.5	-2.5
BOK	Bokaro	4.88	197	eP	Pn	09 30 41.0	+2.5
BOK				eS	Sn	09 31 38.8	+3.6

BOK				IAML		09 32 05.2	
	comp=E,93nm,0.5s						
BOK				IAML		09 32 07.6	
	comp=N,51nm,0.1s						
SHL	Shillong	4.89	125		Pn	09 30 39.0	+0.3
SHL	Shillong	4.89	125	P	Pn	09 30 39.0	+0.3
ALBI	Allahabad	5.97	239	eP	Pn	09 30 56.8	+3.5
ALBI				eS	Sn	09 32 02.3	+0.4
PTH	Pithoragarh	6.45	281	eP	Pn	09 31 02.8	+2.7
JHNI	Jhansi	8.52	251	eP	Pn	09 31 28.7	+0.3
JHNI				eS	Sn	09 32 59.2	-5.6
SMLA	Simla	9.34	289	eP	Pn	09 31 40.9	+1.3
SMLA				IAML		09 33 31.1	
	comp=E,29nm,0.6s						
SMLA				IAML		09 33 32.3	
	comp=N,26nm,0.5s						
GOMU	GeErMu	9.88	37	P	Pn	09 31 52.5	+5.1
GOMU				pP		09 31 55.8	
GOMU				sP		09 32 00.3	
GOMU				S	Sn	09 33 39.0	+0.4
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,76nm,6.7s						
GOMU				LR	LR		
	comp=N,200nm,10.0s						
GOMU				LR	LR		
	comp=E,160nm,10.4s						
GOMU				LR	LR		
	comp=Z,66nm,10.9s						
BHPL	Bhopal	10.45	242	eP	Pn	09 31 55.2	+0.3
BHPL				eS	Sn	09 33 47.0	-5.1
AKL	Akola	12.27	233	eP	Pn	09 32 19.5	-0.3
AKL				eS	Sn	09 34 30.4	-6.3
NIL	Nilore	13.23	296	Pn	Pn	09 32 33.4	+0.4
NIL	Nilore	13.23	296	P	Pn	09 32 33.4	+0.4
CEP	Cherat	14.35	296	P	Pn	09 32 46.7	-1.6
CMAR	Chiang Mai Arr	14.49	131	Pn	Pn	09 32 48.3	-1.9
	comp=Z,0.5nm,0.3s,baz=310,slow=13,SNR=2.0						
CMAR				LR	LR	09 39 24.1	
	comp=Z,43nm,21.4s,baz=310,slow=42						
	comp=Z,0.7nm,0.3s						
KSH	Kashi	14.55	322	P	Pn	09 32 50.0	-1.0
KSH				pP	P	09 32 57.8	+0.1
KSH				sP		09 33 03.5	
KSH				S	Sn	09 35 27.0	-5.5
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ	Urumqi	15.31	1	eP	Pn	09 33 02.8	+1.7
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
TARG	Taragay, Kyrgy	15.39	332	Pn	Pn	09 33 03.8	+1.3
TARG				IAmb	IAmb	09 33 19.7	
	comp=Z,5.7nm,0.9s						
TARG	Taragay, Kyrgy	15.39	332	P	Pn	09 33 03.8	+1.3
TARG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOOM	Boomskoye usch	16.82	329	P	Pn	09 33 20.7	0.0
BOOM				IAmb	IAmb	09 33 29.3	
	comp=Z,14nm,1.1s						
BOOM	Boomskoye usch	16.82	329	P	Pn	09 33 20.7	0.0
BOOM				pmax	pmax		
	comp=Z,14nm,1.1s						
KBL	Kabul	16.83	296	Pn	Pn	09 33 20.9	-0.1
KBL				IAmb	IAmb	09 33 25.7	
	comp=Z,14nm,0.8s						
KBL	Kabul	16.83	296	eP	Pn	09 33 20.9	-0.1
KBL				pmax	pmax		
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	17.60	327	P	P	09 33 34.0	+2.5
	comp=Z,3.0nm,0.7s,baz=130,slow=14,SNR=7.5						
AAK				LR	LR	09 40 39.1	
	comp=Z,25nm,20.0s,baz=149,slow=38						
AAK	Ala-Archa	17.60	327	P	P	09 33 34.1	+2.5
AAK	Ala-Archa	17.60	327	P	P	09 33 34.1	+2.5
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GAR	Garm	17.68	311	P	P	09 33 33.1	+0.7
CHGR	Chuyangaron	18.30	308	P	Pn	09 33 39.3	+0.2
CHGR	Chuyangaron	18.30	308	P	Pn	09 33 39.3	+0.2
CHGR				pmax	pmax		
	comp=Z,35nm,0.9s						
MK31	Makanchi Array	18.73	349	P	P	09 33 44.0	+0.2
MK31	Makanchi Array	18.73	349	c iP	P	09 33 44.1	+0.4
MKAR	Makanchi Array	18.73	349	P	P	09 33 44.2	+0.5
	comp=Z,0.1nm,0.3s,baz=161,slow=12,SNR=25						
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	18.73	349	P	P	09 33 44.1	+0.4
MAKZ	Makanchi	18.79	348	P	P	09 33 45.0	+0.5
MAKZ	Makanchi	18.79	348	P	P	09 33 45.0	+0.5
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	Karatay Array	20.00	321	P	P	09 33 58.8	+1.1
KK31				IAmb	IAmb	09 34 04.2	
	comp=Z,4.5nm,0.8s						
KK31	Karatay Array	20.00	321	P	P	09 33 58.8	+1.1
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	Karatay Array	20.00	321	P	Pn	09 33 59.5	+0.1
KKAR				IAmb	IAmb	09 34 04.2	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	20.00	321		Pn	09 33 59.1	-0.3
KKAR	Karatay Array	20.00	321	P	Pn	09 33 59.1	-0.3
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PALK	Pallekele	22.05	198	LR	LR	09 43 40.1	
	comp=Z,66nm,18.3s,baz=169,slow=39						
KURBB	Kurchatov Arra	23.13	345	P	P	09 34 31.8	+0.7
	comp=Z,8.7nm,1.0s,baz=166,slow=9.1,SNR=30						
	comp=Z,8.7nm,1.0s						
KURK	Kurchatov	23.19	346	P	P	09 34 32.6	+0.8
KURK	Kurchatov	23.19	346	P	P	09 34 32.6	+0.8
KURK				pmax	pmax		
	comp=Z,21nm,1.2s						
KNGR	Kungurtug, Tuv	23.37	16	i P	P	09 34 33.2	-0.5
WHN	Wuhan	23.46	78	⇑P	P	09 34 37.8	+3.1
SONM	Songino Array	24.27	32	P	P	09 34 43.1	+0.7
	comp=Z,2.3nm,0.6s,baz=219,slow=9.2,SNR=8.1						
	comp=Z,2.3nm,0.6s						
SONM	Songino Array	24.27	32	IAmb	IAmb	09 34 51.6	
	comp=Z,5.2nm,1.4s						
SONM	Songino Array	24.27	32	P	P	09 34 43.1	+0.7
SONM				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ULN	Ulaanbaatar	24.60	33	ceP	P	09 34 45.5	0.0
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ZAA0	Zalesovo Array	25.52	356	P	P	09 34 53.1	-0.3
ZAA0				IAmb	IAmb	09 34 57.8	
	comp=Z,5.2nm,0.9s						
ZALV	Zalesovo Beam	25.52	356	P	P	09 34 54.1	+0.7
	comp=Z,4.2nm,0.7s,baz=186,slow=9.8,SNR=17						
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	25.52	356	P	P	09 34 53.2	-0.2
ZALV	Zalesovo Beam	25.52	356	eP	P	09 34 54.8	+1.3
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WSAR	Wadi Sarin	26.44	265	LR	LR	09 48 42.0	
	comp=Z,37nm,18.2s,baz=135,slow=44						
NJ2	Nanjing	27.28	75	eP	P	09 35 07.0	-2.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	Borovoye	27.64	337	i P	P	09 35 12.6	-0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ABKAR	Akbulak array	29.56	322	P	P	09 35 30.1	+0.3
ABKAR	Akbulak array	29.56	322	P	P	09 35 31.1	+1.3
ABKAR				IAmb	IAmb	09 35 32.2	
	comp=Z,2.8nm,0.7s						
AKTO	Aktyubinsk	31.25	323	P	P	09 35 44.9	+0.2
	comp=Z,1.6nm,0.6s,baz=122,slow=8.0,SNR=5.6						
AKTO				LR	LR	09 49 24.2	
	comp=Z,18nm,19.5s,baz=135,slow=38						
	comp=Z,1.6nm,0.6s						
ARU	Arti	34.66	332	P	P	09 36 14.5	+0.1
	comp=Z,0.6nm,0.3s,baz=156,slow=9.9,SNR=4.2						
	comp=Z,0.6nm,0.3s						
ARU	Arti	34.66	332	d iP	P	09 36 15.4	+1.0
ARU						09 37 28.8	
ARU						09 38 46.2	
ARU				S	S	09 41 43.1	-0.9
ARU				SS	SnSn	09 43 56.2	+0.1
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS	Korea Array	34.87	65	P	P	09 36 17.8	+1.3
	comp=Z,0.8nm,0.6s,baz=267,slow=6.7,SNR=2.2						
KSRS				LR	LR	09 51 18.8	
	comp=Z,43nm,21.6s,baz=275,slow=38						
	comp=Z,0.8nm,0.6s						
ZEI	Tsey	37.76	304	eP	P	09 36 42.8	+1.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BELG	Belogornoye	37.90	320	LR	LR	09 53 21.0	
	comp=Z,48nm,21.5s,baz=321,slow=38						
BELG	Belogornoye	37.90	320	i P	P	09 36 42.3	+0.1
BELG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	Khabaz	38.62	305	P	P	09 36 49.5	+1.2
	comp=Z,1.7nm,0.7s,baz=162,slow=2.4,SNR=4.0						
	comp=Z,1.7nm,0.7s						
KBZ	Khabaz	38.62	305	eP	P	09 36 51.2	+2.9
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLR	Kul'dur	39.51	46	P	P	09 36 55.0	-0.8
	comp=Z,3.8nm,1.1s,baz=282,slow=8.3,SNR=5.9						
KLR				LR	LR	09 55 30.3	
	comp=Z,25nm,21.2s,baz=226,slow=40						
	comp=Z,3.8nm,1.1s						
KLR	Kul'dur	39.51	46	ceP	P	09 36 55.0	-0.8
KLR				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KIRV	Kirov	39.90	330	LR	LR	09 54 40.8	
	comp=Z,46nm,18.2s,baz=344,slow=38						
KIRV	Kirov	39.90	330	ceP	P	09 36 58.2	-0.6
NRIK	Noril'sk	40.89	0	P	P	09 37 07.2	+0.4
	comp=Z,1.5nm,0.3s,baz=165,slow=7.8,SNR=4.6						
	comp=Z,1.5nm,0.3s						
NRIK	Noril'sk	40.89	0	IAmb	IAmb	09 37 08.3	
	comp=Z,3.1nm,0.9s						
NRIK	Noril'sk	40.89	0	eP	P	09 37 08.3	+1.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
OBN	Obninsk	44.99	321	⇑eP	P	09 37 40.1	-0.2
OBN				e		09 39 22.1	
OBN				e		09 39 30.4	
OBN				eS	S	09 44 17.8	-0.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,34nm,19.0s						
AKASG	Malin Array Be	48.65	314	P	P	09 38 08.7	-0.3
	comp=Z,0.5nm,0.5s,baz=75,slow=8.0,SNR=7.3						
AKASG				LR	LR	10 01 42.2	
	comp=Z,37nm,21.5s,baz=38,slow=40						
	comp=Z,0.5nm,0.5s						
AKASG	Malin Array Be	48.65	314	IAmb	IAmb	09 38 24.8	
	comp=Z,2.0nm,1.0s						
AKASG	Malin Array Be	48.65	314	eP	P	09 38 09.4	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	48.65	314	ceP	P	09 38 06.7	-2.3
TIXI	Tiksi	48.76	16	ceP	P	09 38 08.4	-1.2
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
FINES	FINESS Array B	51.79	328	P	P	09 38 31.9	-0.7
	comp=Z,1.1nm,0.5s,baz=109,slow=8.7,SNR=5.3						
FINES				LR	LR	10 01 45.2	
	comp=Z,49nm,18.2s,baz=112,slow=37						
	comp=Z,1.1nm,0.5s						
FINES	FINESS Array B	51.79	328	eP	P	09 38 33.5	+0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SEY	Seymchan	53.65	31	i P	P	09 38 44.8	-1.6
SEY				pmax	pmax		
	comp=Z,12nm,3.8s						
ARCES	ARCESS Array B	53.87	337	P	P	09 38 48.6	+0.7
	comp=Z,2.7nm,0.7s,baz=108,slow=7.8,SNR=7.5						
	comp=Z,2.7nm,0.7s						
ARCES	ARCESS Array B	53.87	337	eP	P	09 38 49.5	+1.6
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	57.74	325	LR	LR	10 05 35.9	
	comp=Z,41nm,18.1s,baz=80,slow=38						
GERES	GERESS Array B	58.76	312	P	P	09 39 23.6	+0.4
	comp=Z,1.2nm,0.7s,baz=69,slow=7.3,SNR=10.0						
	comp=Z,1.2nm,0.7s						
GERES	GERESS Array B	58.76	312	eP	P	09 39 26.1	+2.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	58.92	326	P	P	09 39 23.7	-0.4
	comp=Z,3.4nm,1.1s,baz=87,slow=7.4						
NOA	NORSAR Array B	58.92	326	P	P	09 39 24.2	0.0
	comp=Z,1.4nm,0.8s,baz=87,slow=6.9,SNR=3.6						
NOA				LR	LR	10 08 10.6	
	comp=Z,23nm,21.2s,baz=100,slow=39						
	comp=Z,1.4nm,0.8s						
KEST	Kesra	64.97	299	P	P	09 40 06.0	+0.8
	comp=Z,7.4nm,1.1s,baz=346,slow=4.2,SNR=2.5						
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	66.08	131	P	P	09 40 12.6	+0.1
	comp=Z,0.4nm,0.5s,baz=327,slow=6.5,SNR=13						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	66.08	131	eP	P	09 40 15.4	+2.9
ASAR	Alice Springs	68.47	134	P	P	09 40 26.0	-1.6
	comp=Z,0.8nm,0.9s,baz=320,slow=6.4,SNR=12						
	comp=Z,0.8nm,0.9s						
ESDC	Sonseca Array	73.46	306	P	P	09 40 57.9	0.0
	comp=Z,1.5nm,0.8s,baz=54,slow=6.3,SNR=9.7						
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	77.94	21	P	P	09 41 22.4	-0.5
	comp=Z,0.7nm,0.9s,baz=297,slow=5.5,SNR=5.7						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	77.94	21	eP	P	09 41 23.8	+0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	Torodi Ar. Bea	80.19	280	P	P	09 41 36.0	-0.1
	comp=Z,2.6nm,0.9s,baz=45,slow=4.6,SNR=12						
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	80.19	280	P	P	09 41 35.2	-1.0
KIP	Kipapa	99.67	59	ceP	Pdif	09 43 07.3	-2.1
KIP				pmax	pmax		
	comp=Z,93nm,1.7s						
TXAR	Lajitas Array	121.53	11	PKP	PKPdf	09 48 19.7	+0.2
	comp=Z,0.2nm,0.7s,baz=250,slow=3.7,SNR=4.1						

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*THE **26** 09:32:37.5, 34°.95N×26°.20E, h14^{km}, ML2.8/4, Error ellipse: s-maj=2.5km s-min=0.7km az=345.0*

*ATH **26** 09:32:37.1, 34°.95N×26°.22E, h20^{km}±4^{km}, ML2.9/5, Error ellipse: s-maj=10.2km s-min=1.7km az=347.0*

*ISK **26** 09:32:38.0, 35°.25N×26°.15E, h2^{km}, ML3.0/15*

ISC 26 09:32:34.7±2.1**, 34°.9N**±0°.1×**26°.24E**±0°.05**, h22**^{km}±9^{km}**, n29, σ1^{s}.51**/39**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.25	356	P	Pb	09 32 41.6	+0.8
ZKR				S	Sb	09 32 45.1	+0.1
ZKR				AML	AML	09 32 45.4	
	comp=E,24867µm,0.3s						
ZKR				AML	AML	09 32 46.1	
	comp=N,12360µm,0.2s						
ZKR	Zakros	0.25	356	P	Pb	09 32 41.6	+0.8
ZKR				S	Sb	09 32 45.0	0.0
	comp=N,9µm,0.3s						
ZKR	Zakros	0.25	356	PG	Pb	09 32 41.3	+0.5
ZKR				SG	Sb	09 32 44.5	-0.5
FRMA	Ierapetra Chan	0.44	290	P	Pb	09 32 43.5	-0.3
FRMA				S	Sb	09 32 48.8	-1.2
FRMA				AML	AML	09 32 49.4	
	comp=N,8835µm,0.2s						
FRMA				AML	AML	09 32 49.9	
	comp=E,8113µm,0.2s						
FRMA	Ierapetra Chan	0.44	290	P	Pb	09 32 43.5	-0.3
FRMA				S	Sb	09 32 48.8	-1.2
	comp=E,1µm,0.2s						
NPS	Neapolis	0.65	308	P	Pn	09 32 48.1	-0.5
NPS	Neapolis	0.65	308	P	Pn	09 32 48.2	-0.4
NPS				S	Sb	09 32 56.7	+0.7
KARP	Karpathos	1.02	48	P	Pb	09 32 55.0	+1.4
KARP				AML	AML	09 33 12.8	
	comp=E,1618µm,0.4s						
KARP				AML	AML	09 33 13.6	
	comp=N,2045µm,0.5s						
KARP	Karpathos	1.02	48	P	Pb	09 32 55.1	+1.4
KARP				S	Sn	09 33 09.7	+2.4
	comp=N,1µm,0.4s						
KARP	Karpathos	1.02	48	PG	Pb	09 32 55.2	+1.5
KARP				SG	Sn	09 33 08.8	+1.5
HRKL	Herakleio	1.03	296	PG	Pb	09 32 55.5	+1.6
KSTL	Kastelli Herak	1.05	295	P	Pn	09 32 51.3	-2.8
KSTL				AML	AML	09 33 08.3	
	comp=N,1774µm,0.4s						
KSTL				AML	AML	09 33 08.7	
	comp=E,901µm,0.4s						
KSTL	Kastelli Herak	1.05	295	P	Pn	09 32 52.6	-1.5
KSTL				S	Sb	09 33 03.0	-4.6
IDI	Anoyia	1.18	291	P	Pb	09 32 57.6	+1.1
IDI				AML	AML	09 33 17.6	
	comp=E,389µm,0.4s						
IDI				AML	AML	09 33 20.9	
	comp=N,510µm,0.6s						
IDI	Anoyia	1.18	291	P	Pb	09 32 57.6	+1.1
IDI				S	Sb	09 33 12.5	+1.1
	comp=N,232nm,0.5s						
IDI	Anoyia	1.18	291	PG	Pb	09 32 57.8	+1.3
SANT	Santorini	1.63	337	PN	Pn	09 33 03.0	+0.9
NIS1	Nisyros Isl.	1.89	24	PN	Pb	09 33 08.2	-0.4
IMMV	Iera Moni Meta	1.94	288	P	Pb	09 33 11.0	+1.6
IMMV	Iera Moni Meta	1.94	288	PN	Pb	09 33 10.8	+1.4
KOSK	Kos Island	1.98	18	PN	Pb	09 33 08.9	-1.1
ARG	Arkhangelos	2.04	48	PN	Pb	09 33 12.1	+0.9
KNDR	Palaiochora Ch	2.13	281	PN	Pb	09 33 14.6	+2.1
RODP	Rodopos	2.15	290	PN	Pb	09 33 13.5	+0.6
DAT	Datca	2.15	30	P	Pb	09 33 11.8	-1.3
DAT	Datca	2.15	30	PN	Pb	09 33 12.3	-0.8
TURN	Turunc	2.51	40	PN	Pb	09 33 17.9	-1.1
DALY	Dalyan (Mula)	2.76	45	PN	Pb	09 33 21.8	-1.6
FETY	Fethiye	2.91	52	PN	Pb	09 33 24.5	-1.4

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*IDC **26** 10:13:12.8±1.6, 6°.30S×152°.05E, h0^{km}, mb3.7/4, mbtmp3.9/5, ML2.3/1, Error ellipse: s-maj=53.0km s-min=17.9km az=116.0*

ISC 26 10:13:18.2±1.4**, 6°.3S**±0°.1×**152°.0E**±0°.2**, h37**^{km}**, n7, σ0^{s}.35**/10**, mb3.7**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.97	0	Pn	Pn	10 13 48.9	-0.2
	95nm,0.3s,baz=266,slow=1.3,SNR=102						
KRVT				Sn	Sn	10 14 12.9	+0.3
	199nm,0.3s,baz=39,slow=21,SNR=26						
PMG	Port Moresby	5.73	237	Pn	Pn	10 14 40.7	-0.1
	6.1nm,0.3s,baz=42,slow=7.3,SNR=14						
PMG				Sn	Sn	10 15 45.5	+0.2
	9.1nm,0.3s,baz=147,slow=23,SNR=9.4						
	21nm,0.4s						
WRA	Warramunga Arr	21.89	230	P	P	10 18 07.6	-0.6
	1.6nm,0.8s,baz=55,slow=11,SNR=14						
WRA				PcP	PcP	10 22 07.5	+0.6
	0.2nm,0.6s,baz=43,slow=1.9,SNR=1.9						
	1.6nm,0.8s						
ASAR	Alice Springs	24.54	223	P	P	10 18 34.7	+0.1
	3.1nm,0.8s,baz=59,slow=9.0,SNR=33						
	3.1nm,0.8s						
ILAR	Eielson Array	83.82	22	P	P	10 25 43.5	0.0
	1.0nm,0.8s,baz=251,slow=4.6,SNR=5.3						
	1.0nm,0.8s						
KURBB	Kurchatov Arra	84.49	322	P	P	10 25 47.2	0.0
	0.2nm,0.5s,baz=101,slow=4.8,SNR=2.2						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	150.00	285	PKPbc	PKPbc	10 33 05.7	-0.2
	0.3nm,0.5s,baz=67,slow=4.1,SNR=2.5						

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*IDC **26** 10:24:24.7±1.3, 32°.09S×71°.75W, h0^{km}, mb4.1/2, mbtmp3.7/7, ML3.6/5, MS2.7/3, Error ellipse: s-maj=48.4km s-min=22.2km az=102.0*

*GUC **26** 10:24:29.4±0.6, 32°.25S×71°.71W, h41^{km}±2^{km}, ML3.9*

ISC 26 10:24:25.4±1.3**, 32°.19S**±0°.02×**71°.73W**±0°.06**, h6**^{km}±9^{km}**, n43, σ1^{s}.00**/50**, 1C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.52	136	⇓iP	Pn	10 24 39.6	+0.3
VA06				eS	Sb	10 24 46.7	+1.9
VA06				IAML		10 24 48.4	
	comp=E,24µm,0.4s						
VA01	Torpederas	0.84	175	eP	Pn	10 24 43.8	+0.1
VA01				eS	Sb	10 24 54.9	+1.1
ROCH	El Roble	0.99	142	⇓iP	Pn	10 24 46.8	+0.8
ROCH				eS	Sn	10 24 59.8	-0.7
ROCH				IAML		10 25 01.9	
	comp=N,6µm,0.4s						
VA03	San Esteban	1.15	120	⇓iP	Pn	10 24 49.4	+1.3
VA03				eS	Sn	10 25 04.2	-0.1
VA03				IAML		10 25 07.0	
	comp=E,9µm,0.2s						
CO02	Combarbal	1.16	33	⇓iP	Pn	10 24 50.7	+2.5
CO02				eS	Sn	10 25 06.7	+2.2
CO02				IAML		10 25 12.0	
	comp=E,11µm,0.4s						
MT02	Curacav	1.18	155	⇓iP	Pn	10 24 49.4	+1.0
MT02				eS	Sn	10 25 04.1	-0.7
PEL	Peldehue	1.30	138	⇓iP	Pg	10 24 51.5	+1.2
PEL				eS	Sn	10 25 08.1	+0.3
PEL				IAML		10 25 11.6	
	comp=N,2µm,0.4s						
VA05	Santo Domingo	1.47	176	eP	Pb	10 24 53.3	+0.2
VA05				eS	Sn	10 25 10.9	-1.0
VA05				IAML		10 25 18.3	
	comp=N,4µm,0.4s						
CO06	Fray Jorge	1.51	3	eP	Pg	10 24 54.8	+0.4
CO06				eS	Sg	10 25 14.0	+0.1
CO06				IAML		10 25 21.8	
	comp=E,1µm,0.3s						
MT03	Universidad Ad	1.66	142	eP	Pg	10 24 57.0	-0.2
MT03				eS	Sg	10 25 17.6	-1.1
MT03				IAML		10 25 20.8	
	comp=E,3µm,0.2s						
FCH	Farellones	1.66	134	⇓eP	Pg	10 24 57.2	-0.1
FCH				eS	Sg	10 25 18.8	-0.1
FCH				IAML		10 25 21.0	
	comp=E,2µm,0.2s						
MT09	Talagante	1.70	159	eP	Pb	10 24 57.4	+0.2
MT09				eS	Sb	10 25 18.5	-0.5
MT09				IAML		10 25 24.9	
	comp=N,2µm,0.3s						
MT01	Popeta	1.72	167	eP	Pb	10 24 57.4	0.0
MT01				eS	Sn	10 25 17.0	-1.2
MT01				IAML		10 25 26.9	
	comp=E,1µm,0.5s						
BO04	La Punta	2.03	153	eP	Pb	10 25 02.2	-0.4
BO04				eS	Sb	10 25 27.8	-0.4
BO04				IAML		10 25 31.3	
	comp=N,982nm,0.4s						
LMEL	Las Melosas	2.10	143	⇑eP	Pb	10 25 03.8	-0.1
LMEL				eS	Sb	10 25 29.7	-0.5
LMEL				IAML		10 25 38.9	
	comp=N,1µm,0.2s						
GO04	Tololo Observa	2.16	22	eP	Pb	10 25 05.0	0.0
GO04				eS	Sb	10 25 30.5	-1.6
GO04				IAML		10 25 39.2	
	comp=E,6µm,0.4s						
BO01	Tunca	2.27	166	⇓eP	Pn	10 25 05.0	+1.7
BO01				eS	Sn	10 25 31.9	+0.4
CO05	La Serena	2.30	11	eP	Pb	10 25 07.3	0.0
CO05				eS	Sn	10 25 33.6	+1.2
CO05				IAML		10 25 47.0	
	comp=E,1µm,0.3s						
CO01	Juntas del Tor	2.61	33	eP	Pb	10 25 12.6	-0.1
CO01				eS	Sb	10 25 43.8	-1.4
CO01				IAML		10 25 51.2	
	comp=E,381nm,0.2s						
H03N1	Juan Fernandez	6.17	256	T	T	10 32 35.1	
	baz=84,slow=73,SNR=236						
H03N3	Juan Fernandez	6.19	256	T	T	10 32 34.3	
	baz=84,slow=73,SNR=287						
H03N2	Juan Fernandez	6.19	256	T	T	10 32 35.6	
	baz=84,slow=73,SNR=254						
H03S3	Juan Fernandez	6.25	253	T	T	10 32 34.5	
	baz=79						
H03S1	Juan Fernandez	6.25	253	T	T	10 32 28.4	
	baz=79						
H03S2	Juan Fernandez	6.27	253	T	T	10 32 29.1	
	baz=79						
PLCA	Paso Flores	8.58	174	Pn	Pn	10 26 31.5	+1.3
	comp=E,0.4nm,0.3s,baz=348,slow=14,SNR=4.6						
PLCA				LR	LR	10 30 26.6	
	comp=E,30nm,19.0s,baz=267,slow=42						
	comp=E,1.2nm,0.5s						
LVC	Limon Verde	9.86	15	Pn	Pn	10 26 46.0	-2.0
	comp=E,0.2nm,0.3s,baz=99,slow=11,SNR=2.3						
LVC				LR	LR	10 30 56.8	
	comp=E,58nm,21.1s,baz=208,slow=40						

	comp=E,1.9nm,0.5s						
CPUP	**Villa Florida**	**13.85**	**69**	Pn	**Pn**	**10 27 41.8**	**-0.5**
	comp=E,0.1nm,0.3s,baz=192,slow=6.5,SNR=3.1						
CPUP				Sn	**Sn**	**10 30 16.2**	**-0.2**
	comp=E,0.1nm,0.3s,baz=176,slow=10,SNR=3.2						
	comp=E,1.7nm,0.8s						
LPAZ	**La Paz**	**16.16**	**13**	Pn	**Pn**	**10 28 12.3**	**-1.5**
	baz=173,slow=13,SNR=1.9						
	comp=E,0.5nm,0.6s						
SIV	**San Ignacio**	**18.81**	**33**	P	**P**	**10 28 45.4**	**-0.3**
	baz=295,slow=19,SNR=2.5						
	comp=E,0.5nm,0.3s						
NNA	**Nana**	**20.65**	**346**	LR	LR	10 34 51.5	
	comp=E,21nm,19.6s,baz=186,slow=30						
SNAA	**Sanae**	**53.17**	**158**	P	**P**	**10 33 44.8**	**+1.0**
	comp=E,1.5nm,0.7s,baz=280,slow=10.0,SNR=14						
	comp=E,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.35**	**70**	P	**P**	**10 36 53.6**	**0.0**
	comp=E,1.1nm,0.7s,baz=254,slow=4.1,SNR=6.4						
	comp=E,1.1nm,0.7s						
WRA	**Warramunga Arr**	**122.47**	**209**	PKP	**PKPdf**	**10 43 21.5**	**-0.7**
	comp=E,0.3nm,0.7s,baz=135,slow=2.1,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**126.04**	**270**	T	T	13 02 28.9	
	baz=118,slow=75,SNR=48						
H11S1	**WAKE ISLAND Hy**	**126.05**	**270**	T	T	13 02 29.0	
	baz=118,slow=75,SNR=32						
H11S3	**WAKE ISLAND Hy**	**126.06**	**270**	T	T	13 02 30.5	
	baz=118,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**126.41**	**272**	T	T	13 02 53.1	
	baz=117,slow=75,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**126.42**	**272**	T	T	13 02 54.9	
	baz=117,slow=75,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**126.42**	**272**	T	T	13 02 57.8	
	baz=117,slow=75,SNR=32						
KURBB	**Kurchatov Arra**	**151.36**	**41**	PKPbc	**PKiKP**	**10 44 20.0**	**0.0**
	baz=300,slow=2.7						
ZALV	**Zalesovo Beam**	**152.55**	**31**	PKPbc	**PKPbc**	**10 44 22.3**	**+0.2**
	comp=E,1.1nm,0.4s,baz=325,slow=2.3,SNR=5.3						
MKAR	**Makanchi Array**	**155.35**	**46**	PKPab	**PKPab**	**10 44 45.0**	**+0.2**
	comp=E,0.4nm,0.6s,baz=297,slow=3.5,SNR=4.3						

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*IDC **26** 10:30:10.9±1.6, 24°.49N×121°.65E, h0^{km}, mb3.3/3, mbtmp3.3/4, ML3.2/1, MS2.9/2, Error ellipse: s-maj=73.1km s-min=27.6km az=69.0*

*JMA **26** 10:30:11.9±0.1, 24°.9N±0°.6×122°.4E±0°.3, h38^{km}±1^{km}, MV3.0/9, TAIWAN REGION*

*TAP **26** 10:30:12.2, 24°.93N×122°.30E, h13^{km}, ML3.3, C*

ISC 26 10:30:10.7±1.2**, 24°.98N**±0°.03×**122°.38E**±0°.02**, h15**^{km}±8^{km}**, n88,** σ1^{s}00/124**, mb3.4**/3**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.36**	**275**	*i* P	**Pb**	**10 30 18.9**	**+0.1**
	baz=286						
TWB1				*i* S	**Sb**	**10 30 23.3**	**-0.9**
	baz=286						
EGS		**0.43**	**252**	P	**Pb**	**10 30 20.0**	**0.0**
	baz=255						
EGS				*i* S	**Sb**	**10 30 25.4**	**-0.9**
	baz=255						
SXI1	**Grass Mountain**	**0.47**	**284**	P	**Pn**	**10 30 21.6**	**-1.4**
	baz=286						
SXI1				*e*S	**Sn**	**10 30 28.4**	**-2.9**
	baz=286						
TIPB	**Shuangxi**	**0.51**	**269**	*e*P	**Pb**	**10 30 21.6**	**+0.3**
	baz=276						
TIPB				*e*S	**Sb**	**10 30 28.5**	**0.0**
	baz=276						
NTC	**Toucheng**	**0.52**	**256**	P	**Pb**	**10 30 21.5**	**+0.1**
	baz=260						
NWF	**Wu-fen Shan**	**0.55**	**280**	*i* P	**Pn**	**10 30 23.0**	**-1.1**
	baz=287						
NWF				*i* S	**Sn**	**10 30 30.6**	**-2.6**
	baz=287						
WFSB	**Wu-fen Shan**	**0.55**	**280**	*i* P	**Pn**	**10 30 23.1**	**-1.0**
	baz=287						
WFSB				*i* S	**Sn**	**10 30 30.4**	**-2.7**
	baz=287						
TNOU	**National Taiwa**	**0.58**	**287**	P	**Pn**	**10 30 23.5**	**-0.9**
	baz=294						
TNOU				*e*S	**Sn**	**10 30 31.5**	**-2.2**
	baz=294						
TWC	**Suao**	**0.61**	**233**	P	**Pg**	**10 30 22.6**	**0.0**
	baz=232						
TWC				*e*S	**Sb**	**10 30 31.5**	**+0.1**
	baz=232						
NWRT	**Kuosheng**	**0.69**	**289**	*i* P	**Pn**	**10 30 25.6**	**-0.3**
	baz=302						
NWRT				*i* S	**Sn**	**10 30 35.0**	**-1.4**
	baz=302						
NDS	**Dongshan**	**0.70**	**241**	*i* P	**Pb**	**10 30 24.4**	**-0.1**
	baz=232						
NDS				S	**Sg**	**10 30 32.8**	**-0.7**
	baz=232						
TWE	**Neicheng**	**0.70**	**249**	P	**Pb**	**10 30 24.7**	**+0.2**
	baz=240						
TWE				S	**Sg**	**10 30 33.1**	**-0.4**
	baz=240						
PCYT	**Pengchaiyu**	**0.71**	**337**	P	**Pn**	**10 30 26.4**	**+0.3**
	baz=344						
TWA	**Mucha**	**0.73**	**270**	P	**Pn**	**10 30 26.2**	**-0.2**
	baz=274						
TWA				S	**Sb**	**10 30 35.0**	**+0.1**
	baz=274						
JYNG	**Yonagunijimaku**	**0.73**	**136**	P	**Pb**	**10 30 24.8**	**-0.3**
JYNG				S	**Sg**	**10 30 34.2**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.76**	**253**	*e*P	**Pb**	**10 30 25.8**	**+0.2**
	baz=256						
FUSB				*e*S	**Sb**	**10 30 35.5**	**-0.3**
	baz=256						
YM01	**YM01**	**0.76**	**283**	P	**Pn**	**10 30 26.6**	**-0.3**
	baz=288						
YM01				S	**Sn**	**10 30 36.8**	**-1.3**
	baz=288						
EWUT	**Wuta**	**0.77**	**226**	P	**Pb**	**10 30 25.4**	**-0.3**
	baz=218						
YOJ	**Yonaguni jima**	**0.77**	**132**	*e*P	**Pb**	**10 30 25.8**	**+0.1**
	baz=114						
YOJ				*e*S	**Sb**	**10 30 36.1**	**+0.1**
	baz=114						
YOJ	**Yonaguni jima**	**0.77**	**132**	*i* P	**Pb**	**10 30 25.4**	**-0.3**
YOJ				*e*S	**Sb**	**10 30 35.2**	**-0.8**
TWY	**Chenhua**	**0.77**	**293**	P	**Pn**	**10 30 26.9**	**-0.1**
	baz=298						
TWY				S	**Sn**	**10 30 37.8**	**-0.6**
	baz=298						
NHDH	**Xindian Distri**	**0.78**	**269**	P	**Pn**	**10 30 26.6**	**-0.6**
	baz=273						
NHDH				S	**Sn**	**10 30 36.7**	**-1.9**
	baz=273						
TAP1	**Taipei**	**0.78**	**275**	S	**Sn**	**10 30 37.7**	**-1.0**
	baz=279						
TAP	**Taipei**	**0.80**	**275**	S	**Sn**	**10 30 37.9**	**-1.1**
	baz=279						
ENA	**Nanau**	**0.80**	**227**	P	**Pb**	**10 30 25.7**	**-0.6**
	baz=217						
ENA				*e*S	**Sb**	**10 30 34.6**	**-2.4**
	baz=217						
ANP	**Anpu**	**0.81**	**285**	P	**Pn**	**10 30 27.3**	**-0.4**
	baz=290						
ANP				S	**Sn**	**10 30 37.7**	**-1.8**
	baz=290						
TATO	**Taipei**	**0.81**	**270**	P	**Pn**	**10 30 27.2**	**-0.4**
	baz=274						
TATO				*e*S	**Sn**	**10 30 37.5**	**-1.9**
	baz=274						
ENTT	**Nioudou**	**0.82**	**246**	P	**Pg**	**10 30 26.9**	**+0.4**
	baz=238						
NWLT	**Wulai**	**0.82**	**256**	P	**Pn**	**10 30 27.1**	**-0.7**
	baz=259						
NWLT				S	**Sg**	**10 30 37.4**	**-0.2**
	baz=259						
NTST	**Danshui**	**0.87**	**283**	*e*S	**Sn**	**10 30 40.6**	**-0.1**
	baz=287						
NDT	**Datong Townshi**	**0.88**	**245**	P	**Pg**	**10 30 27.7**	**+0.1**
	baz=238						
TWS1	**Kuangyinshan**	**0.89**	**278**	*e*P	**Pn**	**10 30 29.9**	**+1.3**
	baz=282						
TWS1				*e*S	**Sn**	**10 30 40.5**	**-0.6**
	baz=282						
LATG	**Datong**	**0.90**	**241**	P	**Pg**	**10 30 28.1**	**+0.1**
	baz=230						
LATG				*e*S	**Sb**	**10 30 39.5**	**-0.3**
	baz=230						
YHNB	**Yeheng**	**0.97**	**252**	*e*P	**Pg**	**10 30 29.3**	**-0.1**
	baz=263						
NSK	**Sanguang**	**0.98**	**252**	*e*P	**Pn**	**10 30 29.6**	**-0.4**
	baz=254						
NSK				*e*S	**Sg**	**10 30 42.2**	**-0.2**
	baz=254						
NNSB	**Datong**	**1.06**	**239**	P	**Pb**	**10 30 30.8**	**-0.1**
	baz=230						
NNSB				*e*S	**Sb**	**10 30 44.4**	**-0.2**
	baz=230						
NNS	**Nan Shan**	**1.06**	**240**	P	**Pn**	**10 30 31.1**	**-0.1**
	baz=231						
NNS				*e*S	**Sb**	**10 30 44.2**	**-0.4**
	baz=231						
ETL	**Fush Village**	**1.07**	**220**	*e*P	**Pb**	**10 30 30.6**	**-0.3**
	baz=219						
NACB	**Ninganchiao**	**1.08**	**222**	*e*P	**Pb**	**10 30 30.4**	**-0.6**
	baz=221						
NACB				*e*S	**Sb**	**10 30 42.9**	**-2.0**
	baz=221						
NCU	**National Centr**	**1.09**	**270**	*e*S	**Sn**	**10 30 46.4**	**+0.3**
	baz=273						
ETLH	**Xiulin Townshi**	**1.12**	**227**	*e*P	**Pb**	**10 30 31.9**	**0.0**
	baz=217						
ETLH				*e*S	**Sb**	**10 30 45.0**	**-1.4**
	baz=217						
TWD	**Chiawan**	**1.15**	**219**	*e*P	**Pn**	**10 30 32.0**	**-0.2**
	baz=217						
NFF	**Wufeng Townshi**	**1.20**	**254**	*e*P	**Pb**	**10 30 33.1**	**-0.1**
	baz=268						
NHW	**Xinwu Township**	**1.21**	**272**	*e*S	**Sg**	**10 30 49.3**	**-0.6**
	baz=274						
FUSS	**Fushou**	**1.27**	**235**	*e*P	**Pb**	**10 30 34.3**	**-0.1**
	baz=236						
FUSS				*e*S	**Sb**	**10 30 50.4**	**-0.2**
	baz=236						
LIOB	**Emei**	**1.29**	**255**	*e*P	**Pb**	**10 30 34.3**	**-0.3**
	baz=258						
NSTT	**Nanjuang**	**1.30**	**255**	*e*P	**Pg**	**10 30 37.4**	**+1.6**
	baz=257						
WHF	**Hehuan Shan**	**1.31**	**231**	*e*P	**Pn**	**10 30 35.0**	**+0.1**
	baz=231						
WHF				*e*S	**Sb**	**10 30 51.4**	**-0.7**
	baz=231						
TDCB	**Techi**	**1.33**	**237**	P	**Pb**	**10 30 35.4**	**0.0**
	baz=229						
TDCB				*e*S	**Sg**	**10 30 53.8**	**+0.2**
	baz=229						
IRIF	**Iriomote-Funau**	**1.38**	**117**	P	**Pn**	**10 30 34.6**	**-0.9**
CHGB	**Renai**	**1.43**	**231**	*e*P	**Pb**	**10 30 37.8**	**+0.6**
	baz=231						
CHGB				*e*S	**Sb**	**10 30 55.7**	**+0.3**
	baz=231						
ESL	**Shilin**	**1.45**	**217**	*e*P	**Pn**	**10 30 36.9**	**+0.5**
	baz=219						
ESL				*e*S	**Sn**	**10 30 54.9**	**-0.2**
	baz=219						
WHP	**Taichung City**	**1.48**	**242**	*e*P	**Pg**	**10 30 39.0**	**-0.2**
	baz=259						
OWD	**Renai**	**1.50**	**227**	*e*P	**Pb**	**10 30 38.1**	**-0.2**
	baz=212						
WUSB	**Renai**	**1.52**	**230**	*e*P	**Pb**	**10 30 38.5**	**0.0**
	baz=214						
EGFH	**Guangfu**	**1.57**	**214**	*e*P	**Pn**	**10 30 38.4**	**+0.4**
	baz=196						
HATJ	**Hateruma jima**	**1.59**	**125**	P	**Pn**	**10 30 38.1**	**-0.2**
HATJ				*e*S	**Sn**	**10 30 57.1**	**-1.4**
TWQ1	**Liyutan**	**1.59**	**247**	*e*P	**Pg**	**10 30 41.1**	**-0.2**
	baz=265						
WCS	**Beigang Elemen**	**1.62**	**236**	*e*P	**Pb**	**10 30 40.8**	**+0.5**
	baz=223						
JKRS	**Kuro-shima**	**1.65**	**116**	*e*P	**Pn**	**10 30 38.9**	**-0.2**
VWDT	**VWDT**	**1.66**	**223**	*e*P	**Pb**	**10 30 40.5**	**-0.6**
	baz=224						
JIJ	**Ishigaki jima**	**1.71**	**111**	P	**Pn**	**10 30 39.5**	**-0.5**
JIJ				*e*S	**Sn**	**10 30 59.4**	**-2.3**
HGSD	**Ruisui**	**1.72**	**211**	*e*P	**Pn**	**10 30 40.5**	**+0.4**
	baz=197						
SMLT	**Sun Moon Lake**	**1.74**	**231**	*e*P	**Pb**	**10 30 42.3**	**-0.1**
	baz=232						
SSLB	**Suanglung**	**1.76**	**228**	*e*P	**Pb**	**10 30 42.9**	**+0.2**
	baz=230						
YULB	**Yu-li**	**1.86**	**212**	*e*P	**Pn**	**10 30 41.7**	**-0.4**
	baz=213						
WJS	**Zhushan**	**1.90**	**233**	*e*P	**Pb**	**10 30 46.0**	**+1.0**
	baz=235						
YUS	**Yu-Shan**	**1.98**	**222**	*e*P	**Pn**	**10 30 45.0**	**+1.0**
	baz=223						
FULB	**Fuli**	**2.03**	**210**	*e*P	**Pn**	**10 30 45.0**	**+0.6**
	baz=194						
ALS	**Alishan**	**2.05**	**225**	*e*P	**Pb**	**10 30 46.8**	**-1.0**
	baz=227						
EDH	**Donghe**	**2.23**	**207**	*e*P	**Pn**	**10 30 46.5**	**-0.6**
	baz=196						
EDH				*e*S	**Sn**	**10 31 13.6**	**-0.7**
	baz=196						
STYH	**Taoyuan**	**2.32**	**220**	*e*P	**Pn**	**10 30 50.0**	**+1.6**
	baz=205						
WTP	**Ta-pu**	**2.36**	**224**	*e*P	**Pb**	**10 30 51.2**	**-1.8**
	baz=226						
TWGBT	**Beinan**	**2.46**	**209**	*e*P	**Pn**	**10 30 50.7**	**+0.4**
	baz=211						
TWG	**Pinlang**	**2.46**	**209**	*e*P	**Pn**	**10 30 50.2**	**-0.1**
	baz=211						
CHN1	**Nanshi**	**2.46**	**224**	*e*P	**Pb**	**10 30 53.2**	**-1.5**
	baz=226						
VWUC	**VWUC**	**2.66**	**271**	*e*P	**Pn**	**10 30 52.2**	**-0.9**
	baz=273						
TSMG	**Majia**	**2.77**	**215**	*e*P	**Pn**	**10 30 57.1**	**+2.6**
	baz=203						
EAST	**Anshuo**	**2.94**	**209**	*e*P	**Pn**	**10 30 59.5**	**+2.6**
	baz=199						
WDGT	**Dungji**	**3.02**	**236**	*e*P	**Pn**	**10 30 59.2**	**+1.2**
	baz=239						
SCZT	**Fangliau**	**3.06**	**212**	*e*P	**Pn**	**10 31 00.8**	**+2.3**
	baz=214						
AXDP	**Jialang**	**4.01**	**270**	*e*P	**Pn**	**10 31 11.2**	**-0.4**
	baz=272						
KSRS	**Korea Array**	**13.30**	**20**	Pn	**P**	**10 33 30.3**	**+1.6**
	0.1nm,0.3s,baz=202,slow=13,SNR=1.7						
	0.5nm,0.6s						
SONM	**Songino Array**	**26.09**	**335**	LR	LR	10 46 07.8	
	comp=Z,20nm,20.0s,baz=24,slow=36						
MKAR	**Makanchi Array**	**38.54**	**315**	P	**P**	**10 37 34.0**	**+1.3**
	0.1nm,0.4s,baz=103,slow=8.4,SNR=1.8						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**42.22**	**319**	LR	LR	10 57 41.1	
	comp=Z,22nm,21.9s,baz=248,slow=39						
WRA	**Warramunga Arr**	**46.14**	**164**	P	**P**	**10 38 34.8**	**0.0**
	0.6nm,0.8s,baz=346,slow=8.7,SNR=7.1						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**49.63**	**166**	P	**P**	**10 39 02.2**	**+0.5**
	0.3nm,0.8s,baz=344,slow=9.4,SNR=4.3						
	0.3nm,0.8s						

TRN 26 10:37:09.4, 11°.06N×62°.29W, h110^{km}, MD3.5, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.97**	**115**	*e*P	Pn	10 37 31.2	+0.9
TRN				*e*S	Sn	10 37 45.4	-0.6
TPP	**Pointe-a-Pierr**	**1.11**	**132**	*e*P	Pn	10 37 32.2	+0.4
TPP				*e*S	Sn	10 37 48.8	0.0
GRFF	**Grenada Fort F**	**1.12**	**29**	*e*P	Pn	10 37 31.7	-0.3
GRFF				*e*S	Sn	10 37 48.0	-1.0
GRGR	**Grenville**	**1.23**	**30**	*e*P	Pn	10 37 33.1	-0.1
GRGR				*e*S	Sn	10 37 50.0	-1.1
GRHS	**Sauteurs**	**1.32**	**29**	*e*P	Pn	10 37 34.5	+0.3
GRHS				*e*S	Sn	10 37 53.0	+0.1
GRSS	**Sisters**	**1.40**	**28**	*e*P	Pn	10 37 36.2	+1.2
GRSS				*e*S	Sn	10 37 54.5	0.0
GCMP	**Grenada, Carri**	**1.65**	**31**	*e*P	Pn	10 37 37.8	-0.2
GCMP				*e*S	Sn	10 37 59.2	-0.7
TOSP	**Speyside**	**1.74**	**82**	*e*P	Pn	10 37 38.9	-0.3
TOSP				*e*S	Sn	10 38 00.4	-1.4
SVOC	**Richmond Hill,**	**2.33**	**27**	*e*S	Sn	10 38 14.4	-0.8
SVV	**Soufriere Volc**	**2.48**	**25**	*e*P	Pn	10 37 48.6	+0.1
SVV				*e*S	Sn	10 38 18.1	-0.5
SSV	**Crater Summit**	**2.50**	**25**	*e*P	Pn	10 37 48.9	-0.1
SSV				*e*S	Sn	10 38 18.1	-1.1
MCLT	**Moule a Chique**	**2.94**	**27**	*e*P	Pn	10 37 54.8	+0.1
MCLT				*e*S	Sn	10 38 28.7	-0.9
SLB	**Belfond**	**3.01**	**24**	*e*P	Pn	10 37 56.0	+0.4
SLB				*e*S	Sn	10 38 29.1	-2.1
SLBI	**Saint Lucia, B**	**3.21**	**24**	*e*P	Pn	10 37 58.3	0.0
SLBI				*e*S	Sn	10 38 33.9	-2.0
BIM	**Bigot**	**3.63**	**19**	*e*P	Pn	10 38 04.2	+0.3
BIM				*e*S	Sn	10 38 44.0	-2.2
MPOM	**Morne Pois Mar**	**3.64**	**22**	*e*P	Pn	10 38 03.9	0.0
MPOM				*e*S	Sn	10 38 44.5	-1.7
TRMF	**Trois Ilets**	**3.66**	**19**	*e*P	Pn	10 38 04.6	+0.4
FDF	**Fort de France**	**3.82**	**17**	*e*P	Pn	10 38 06.6	+0.2
FDF				*e*S	Sn	10 38 47.6	-2.9
PCM	**Pelee Case Pet**	**3.88**	**16**	*e*P	Pn	10 38 07.5	+0.3
BAMF	**Morne Balai**	**3.90**	**17**	*e*P	Pn	10 38 07.9	+0.5
SVN	**Savane Anatole**	**3.91**	**16**	*e*P	Pn	10 38 07.9	+0.2
BAUV	**El Baul**	**6.04**	**250**	*e*P	Pn	10 38 35.5	-0.8
BAUV	**El Baul**	**6.04**	**250**	*e*S	Sn	10 39 40.1	-4.1

IDC 26 10:39:48.0±3.2**, 6°.12S**×**149°.10E, h67**^{km}±36^{km}**, mb3.0**/1**, mbtmp3.8**/4**, ML4.1**/2**, Error ellipse: s-maj=91.8km s-min=9.5km az=134.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.42**	**58**	P	Pn	10 40 38.1	-0.9
	16nm,0.3s,baz=1.5,slow=2.4,SNR=18						
KRVT				S	Sn	10 41 19.3	+0.9
	20nm,0.6s,baz=181,slow=21,SNR=3.6						
	62nm,0.5s						
PMG	**Port Moresby**	**3.79**	**210**	P	Pn	10 40 44.6	+0.5
	39nm,0.4s,baz=48,slow=5.7,SNR=26						
PMG				S	Sn	10 41 28.2	+0.7
	74nm,0.6s,baz=42,slow=17,SNR=12						
WRA	**Warramunga Arr**	**19.87**	**225**	P	P	10 44 13.3	-0.7
	0.6nm,0.3s,baz=51,slow=11,SNR=36						
WRA				PcP	PcP	10 48 29.3	+0.1
	0.2nm,0.6s,baz=32,slow=1.9,SNR=1.7						
	1.6nm,0.4s						
ASAR	**Alice Springs**	**22.77**	**218**	P	P	10 44 45.1	0.0
	0.5nm,0.5s,baz=53,slow=9.6,SNR=9.6						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**147.14**	**285**	PKPbc	PKPbc	10 59 23.8	-0.9
	0.2nm,0.4s,baz=139,slow=3.1,SNR=1.6						

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*IDC **26** 10:46:39.4±3.6, 36°.08N×71°.53E, h77^{km}±28^{km}, mb3.7/12, mbtmp4.0/17, MS3.2/2, Error ellipse: s-maj=34.4km s-min=18.2km az=146.0*

*NNC **26** 10:46:43.8±4.3, 36°.84N×71°.23E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=35.6km s-min=27.5km az=158.0*

ISC 26 10:46:43.0±0.6**, 36°.34N**±0°.06×**71°.62E**±0°.08**, h114**^{km}**, n43,** σ**2^{s}10**/46**, mb3.8**/11**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**3.00**	**153**	P	**Pn**	**10 47 30.6**	**+1.5**
THW	**Thamme Wali**	**3.54**	**178**	P	**Pn**	**10 47 35.6**	**-0.7**
AML	**Almayashu**	**6.00**	**15**	P	**Pn**	**10 48 10.6**	**+0.9**
	SNR=32						
UCH	**Uchtor**	**6.29**	**20**	P	**Pn**	**10 48 14.8**	**+1.2**
	SNR=9.1						
EKS2	**Erkin-Say**	**6.53**	**14**	P	**Pn**	**10 48 18.2**	**+1.7**
	SNR=11						
AAK	**Ala-Archa**	**6.67**	**19**	P	**Pn**	**10 48 19.9**	**+1.5**
	SNR=12						
AAK	**Ala-Archa**	**6.67**	**19**	P	**Pn**	**10 48 19.9**	**+1.5**
	9.0nm,0.3s,baz=162,slow=5.9,SNR=19						
AAK				S	**Sn**	**10 49 32.1**	**-0.9**
	5.8nm,0.4s,baz=322,slow=21,SNR=6.6						
KK31	**Karatay Array**	**6.81**	**353**	⇓P	**Pn**	**10 48 19.6**	**-0.6**
	10nm,0.3s,baz=176,slow=10,SNR=204						
KK31				⇑S	**Sn**	**10 49 33.1**	**-3.1**
	5.2nm,0.3s,baz=179,slow=23,SNR=5.2						
ULHL	**Ulahol**	**6.90**	**30**	P	**Pn**	**10 48 24.1**	**+2.4**
	SNR=7.2						
CHMS	**Chumysh**	**7.07**	**19**	⇓P	**Pn**	**10 48 24.4**	**+0.6**
	4.8nm,0.4s						
CHMS				⇑S	**Sn**	**10 49 40.0**	**-2.7**
	8.6nm,0.7s						
TKM2	**Tokmak 2**	**7.25**	**24**	P	**Pn**	**10 48 28.1**	**+1.7**
	SNR=6.7						
TKM2	**Tokmak 2**	**7.25**	**24**	⇑P	**Pn**	**10 48 27.7**	**+1.3**
	3.1nm,0.6s						
TKM2				⇓S	**Sn**	**10 49 47.6**	**+0.3**
	6.0nm,0.8s						
GEYT	**Alibeck**	**10.90**	**282**	P	Pn	10 49 10.8	-4.9
	4.9nm,0.4s,baz=112,slow=11,SNR=8.5						
GEYT				S	Sn	10 51 03.7	-12
	11nm,0.5s,baz=101,slow=14,SNR=11						
GEYT				LR	LR	10 54 48.1	
	comp=Z,23nm,18.2s,baz=80,slow=45						
PYUN	**Piuthan**	**12.64**	**127**	*e*P	**Pn**	**10 49 36.9**	**-2.1**
	26nm,0.3s						
DANN	**Dangsing**	**12.98**	**124**	*e*P	**Pn**	**10 49 40.7**	**-2.7**
	20nm,0.2s						
MKAR	**Makanchi Array**	**13.13**	**34**	P	**Pn**	**10 49 44.6**	**-0.4**
	0.3nm,0.5s,baz=210,slow=11,SNR=2.0						
KOLN	**Koldanda**	**13.26**	**127**	*e*P	**Pn**	**10 49 45.2**	**-1.8**
GKN	**Gorkha**	**13.79**	**123**	*e*P	**Pn**	**10 49 51.2**	**-2.6**
	35nm,0.5s						
DMN	**Daman**	**14.37**	**123**	*e*P	**Pn**	**10 49 58.7**	**-2.5**
	7.4nm,0.2s						
PKIN	**Phulchoki**	**14.58**	**123**	*e*P	**Pn**	**10 50 02.1**	**-1.9**
	19nm,0.3s						
PKI	**Pulchoki**	**14.59**	**123**	*e*P	**Pn**	**10 50 02.2**	**-2.0**
	11nm,0.3s						
GUN	**Gumba**	**14.70**	**121**	*e*P	**Pn**	**10 50 02.8**	**-2.8**
	8.2nm,0.3s						
JIRN	**Jiri**	**15.07**	**121**	*e*P	**Pn**	**10 50 07.6**	**-2.7**
	19nm,0.3s						
KURBB	**Kurchatov Arra**	**15.12**	**17**	P	**P**	**10 50 13.7**	**+0.9**
	1.5nm,0.6s,baz=203,slow=10,SNR=11						
AB31	**Akbulak array**	**15.47**	**330**	⇑P	**Pn**	**10 50 11.6**	**-3.1**
	0.7nm,0.2s,baz=140,slow=12,SNR=136						
AB31				S	**Sn**	**10 52 59.7**	**-6.1**
	1.5nm,0.5s,baz=143,slow=26,SNR=6.9						
RAMN	**Ramite**	**15.80**	**122**	*e*Pg	**Pn**	**10 50 16.6**	**-2.7**
TAPN	**Taplejung**	**16.33**	**119**	*e*P	**P**	**10 50 24.7**	**-2.0**
	16nm,0.3s						
AKTO	**Aktyubinsk**	**17.17**	**329**	P	**P**	**10 50 35.0**	**-0.5**
	12nm,0.9s,baz=146,slow=13,SNR=15						
AKTO				S	Sn	10 53 36.4	-10
	0.8nm,0.5s,baz=40,slow=12,SNR=1.3						
AKTO	**Aktyubinsk**	**17.17**	**329**	⇑P	**P**	**10 50 34.7**	**-0.8**
	10.0nm,0.8s						
ZALV	**Zalesovo Beam**	**19.86**	**23**	P	**P**	**10 51 06.6**	**+1.9**
	4.5nm,0.3s,baz=220,slow=10,SNR=10						
	4.5nm,0.3s						
GNI	**Garni**	**21.42**	**288**	P	**P**	**10 51 21.0**	**-0.9**
	11nm,0.4s,baz=81,slow=14,SNR=2.4						
	11nm,0.4s						
KBZ	**Khabaz**	**23.12**	**297**	P	**P**	**10 51 40.9**	**+1.9**
	2.0nm,0.9s,baz=121,slow=5.9,SNR=1.8						
	2.0nm,0.9s						
AKASG	**Malin Array Be**	**33.44**	**309**	P	**P**	**10 53 12.4**	**+1.7**
	0.2nm,0.3s,baz=81,slow=6.8,SNR=1.6						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**37.90**	**326**	P	**P**	**10 53 50.8**	**+2.1**
	1.1nm,0.3s,baz=121,slow=9.2,SNR=3.6						
	1.1nm,0.3s						
ARCES	**ARCESS Array B**	**41.48**	**338**	P	**P**	**10 54 20.5**	**+2.2**
	1.9nm,0.8s,baz=114,slow=8.2,SNR=5.9						
	1.9nm,0.8s						
NB2	**NORSAR Subarra**	**44.81**	**323**	P	**P**	**10 54 46.5**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=96,slow=8.6						
NOA	**NORSAR Array B**	**44.81**	**323**	P	**P**	**10 54 46.8**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=96,slow=7.8,SNR=6.0						
	comp=Z,0.5nm,0.4s						
MJAR	**Matsushiro Arr**	**52.54**	**69**	LR	LR	11 22 23.4	
	comp=Z,92nm,18.8s,baz=181,slow=41						
TORD	**Torodi Ar. Bea**	**66.22**	**269**	P	**P**	**10 57 17.5**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=56,slow=6.0,SNR=9.7						
	comp=Z,0.4nm,0.4s						
INK	**Inuvik**	**73.98**	**9**	P	**P**	**10 58 06.9**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=20,slow=6.9,SNR=3.9						
	comp=Z,1.3nm,0.7s						
ILAR	**Eielson Array**	**74.79**	**16**	P	**P**	**10 58 11.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=305,slow=7.2,SNR=4.5						
	comp=Z,0.2nm,0.6s						
BOSA	**Boshof**	**77.95**	**221**	P	**P**	**10 58 29.5**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=64,slow=5.3,SNR=4.4						
	comp=Z,2.3nm,0.6s						
YKA	**Yellowknife Ar**	**81.38**	**3**	P	**P**	**10 58 48.7**	**+2.1**
	comp=Z,1.4nm,0.7s,baz=351,slow=5.4,SNR=8.5						
	comp=Z,1.4nm,0.7s						

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*IDC **26** 10:47:16.0±1.4, 16°.46S×72°.11W, h128^{km}±14^{km}, mb3.5/4, mbtmp3.9/7, Error ellipse: s-maj=19.5km s-min=12.7km az=39.0*

ISC 26 10:47:16.1±0.8**, 16°.42S**±0°.09×**72°.06W**±0°.09**, h128**^{km}**, n11,**

σ1^{s}49/11,mb3.6/4,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	3.78	89	P	Pn	10 48 14.4	+0.9
	19nm,0.4s,baz=272,slow=11,SNR=73						
LPAZ				S	Sn	10 48 58.5	+0.7
	7.7nm,0.6s,baz=132,slow=23,SNR=1.6						
NNA	**Nana**	6.39	313	P	Pn	10 48 47.8	-0.1
	15nm,0.8s,baz=150,slow=16,SNR=6.1						
NNA				S	Sn	10 49 60.0	+0.3
	10nm,0.3s,baz=26,slow=23,SNR=3.9						
LVC	**Limon Verde**	6.84	155	P	Pn	10 48 55.2	+1.0
	4.8nm,0.4s,baz=343,slow=10,SNR=15						
LVC				S	Sn	10 50 11.6	+0.6
	8.0nm,0.4s,baz=88,slow=23,SNR=7.4						
SIV	**San Ignacio**	10.57	89	P	Pn	10 49 41.1	-3.1
	4.4nm,0.8s,baz=271,slow=11,SNR=17						
H03N1	**Juan Fernandez**	18.04	199	T	T	11 09 37.9	
	baz=21,slow=73,SNR=163						
H03N2	**Juan Fernandez**	18.05	199	T	T	11 09 36.4	
	baz=21,slow=73,SNR=197						
H03N3	**Juan Fernandez**	18.06	199	T	T	11 09 36.7	
	baz=21,slow=73,SNR=211						
PLCA	**Paso Flores**	24.27	177	P	P	10 52 19.4	-2.0
	1.5nm,0.9s,baz=26,slow=4.1,SNR=1.9						
	1.5nm,0.9s						
TORD	**Torodi Ar. Bea**	78.58	73	P	P	10 59 04.5	+0.4
	1.9nm,0.9s,baz=262,slow=5.4,SNR=7.1						
	1.9nm,0.9s						
ESDC	**Sonseca Array**	84.40	46	P	P	10 59 35.3	+1.0
	1.0nm,1.0s,baz=257,slow=4.8,SNR=4.1						
	1.0nm,1.0s						
YKA	**Yellowknife Ar**	85.44	342	P	P	10 59 38.7	-0.1
	0.5nm,0.6s,baz=134,slow=6.0,SNR=3.5						
	0.5nm,0.6s						

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*IDC **26** 10:53:56.7±0.4,8°.21S×128°.48E,h0^{km},mb4.5/22, mbtmp4.6/24,ML3.6/2,MS3.9/34,Error ellipse: s-maj=18.7km s-min=11.8km az=81.0*

*MOS **26** 10:53:57.4±1.2,8°.41S×128°.43E,h23^{km},mb5.0/21,Error ellipse: s-maj=15.0km s-min=8.6km az=119.6*

*NEIC **26** 10:53:57.4±2.6,8°.31S±0°.06×128°.51E±0°.05,h10^{km}±1^{km}, mb5.0/65,Error ellipse: s-maj=10.6km s-min=8.2km az=151.0*

*BJI **26** 10:53:58.5±0.0,8°.70S×128°.50E,h30^{km},mb4.7/31, mB4.8/20,Ms4.3/5,Ms7 4.1/4*

*GCMT **26** 10:54:01.4±0.3,8°.51S±0°.02×128°.47E±0°.05,h23^{km}, MW4.8/67,Moment Tensor Solution. s32,c36; s67,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.20±.13; M$_{θθ}$-1.78±.08; M$_{φφ}$-0.41±.09; M$_{rθ}$0.19±.11; M$_{θφ}$-0.15±.07; M$_{φr}$0.16±.18; Best double couple: M$_{0}$2.01300×10^{16} NP1:φ$_{s}$267.00000°,δ42.00000°,λ95.00000°. NP2: φ$_{s}$81.00000°,δ48.00000°,λ86.00000°. Principal axes: T 2.2180, Plg86.0000°, Azm307.0000°; N -0.4030, Plg3.0000°, Azm83.0000°; P -1.8070, Plg3.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **26** 10:54:03.6±0.4,9°S±2°×12°9E±°,h38^{km}±5^{km},M4.8/39, mB5.2/18,mb4.8/39,MLv5.0/11,Mw(mB)4.7/18*

ISC 26 10:54:01.3±0.3,**8°.41S**±0°.04×**128°.50E**±0°.05,**h35^{km},n300, σ1^{s}82**/237,**mb4.8**/76,**MS3.9**/34,**10C-1D,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.80	82	Pn	Pn	10 54 42.7	-0.9
SAUI	**Saumlaki**	2.80	82	P	Pn	10 54 45.3	+1.7
SOEI	**Soe**	4.39	252		Pn	10 55 04.3	-1.3
SOEI	**Soe**	4.39	252	P	Pn	10 55 08.7	+3.0
SOEI				S	Sn	10 55 59.2	+3.5
AAI	**Ambon**	4.70	356	P	Pn	10 55 13.5	+3.7
AAI				S	Sn	10 56 08.9	+5.8
MSAI	**Masohi**	5.05	5	P	Pn	10 55 21.0	+6.4
	0.2nm39nm,0.5s						
BATI	**Baumata**	5.10	249	Pn	Pn	10 55 16.2	+0.9
	14nm,0.3s,baz=133,slow=4.1,SNR=8.8						
BATI				Sn	Sn	10 56 15.0	+2.0
	2.4nm,0.3s,baz=351,slow=21,SNR=1.6						
	89nm,0.5s						
BATI	**Baumata**	5.10	249	P	Pn	10 55 15.5	+0.2
MTN	**Manton Dam**	5.11	150	Pn	Pn	10 55 15.8	+0.4
MMRI	**Maumere**	6.20	267	Pn	Pn	10 55 29.2	-1.3
MMRI	**Maumere**	6.20	267	P	Pn	10 55 35.3	+4.9
	0.8nm3μm156nm,1.1s						
BBSI	**Bau Bau**	6.56	296	P	Pn	10 55 39.3	+3.9
	0.1nm267nm28nm,0.7s						
FAKI	**Fak Fak**	6.61	35		Pn	10 55 33.1	-2.9
FAKI	**Fak Fak**	6.61	35	P	Pn	10 55 37.8	+1.8
EDFI	**Ende, Flores**	6.75	267	P	Pn	10 55 41.0	+3.0
	36nm,0.7s						
SANI	**Sanana**	6.79	338	P	Pn	10 55 45.3	+6.7
	0.1nm43nm,0.7s						
KMPI	**Kaimana, Papua**	7.00	48	P	Pn	10 55 44.3	+2.9
	1.1nm2μm82nm,0.5s						
KNRA	**Kununurra**	7.23	178	Pn	Pn	10 55 43.4	-1.2
LBMI	**Labuha**	7.78	353	P	Pn	10 55 58.8	+6.6
	2μm179nm,1.1s						
SIJI	**Sorong**	7.98	20	Pn	Pn	10 55 58.5	+3.7
	5.5nm,0.3s,baz=211,slow=14,SNR=6.0						
SIJI				Sn	Sn	10 57 25.4	+1.4
	baz=267,slow=22						
SIJI				LR	LR	10 59 47.1	
	comp=Z,1μm,18.7s,baz=242,slow=45						
SWI	**Sorong**	7.98	20	P	Pn	10 56 00.1	+5.2
	1μm111nm,0.8s						
BSSI	**Bau Bau, Buton**	8.26	285	P	Pn	10 56 04.4	+5.7
	1μm69nm,1.0s						
BKSI	**Bulukumba**	8.87	290	P	Pn	10 56 11.4	+4.4
	1μm87nm,1.3s						
TNTI	**Ternate**	9.19	353	P	Pn	10 56 18.1	+6.6
	1μm80nm,1.2s						
BNSI	**Bone**	9.24	295	P	Pn	10 56 16.1	+3.9
	2μm71nm,1.0s						
LUWI	**Luwuk**	9.28	322	Pn	Pn	10 56 09.6	-3.1
KAPI	**Kappang**	9.32	291	Pn	Pn	10 56 18.3	+5.0
	1.2nm,0.3s,baz=115,slow=8.2,SNR=6.9						
KAPI				Sn	Sn	10 58 01.2	+4.2
	0.1nm,0.3s,baz=198,slow=16,SNR=1.0						
KAPI				LR	LR	11 00 01.0	
	comp=Z,2μm,19.9s,baz=96,slow=39						
KAPI	**Kappang**	9.32	291	Pn	Pn	10 56 11.3	-2.0
KAPI	**Kappang**	9.32	291	P	Pn	10 56 11.3	-2.0
SPSI	**Sidrap Palu**	9.74	296	P	Pn	10 56 23.7	+4.7
	1μm39nm,0.7s						
KMSI	**Cibinong**	10.00	333	P	Pn	10 56 41.3	+19
APSI	**Ampana**	10.10	317	P	Pn	10 56 29.5	+5.5
	757nm36nm,1.0s						
TTSI	**Tana Toraja**	10.15	301	P	Pn	10 56 31.0	+6.4
	35nm,0.9s						
BAKI	**Biak**	10.43	47	P	Pn	10 56 31.7	+3.2
	120nm,0.6s						
PLAI	**Plampang**	10.62	267	P	Pn	10 56 33.5	+2.5
	72nm,0.7s						
MRSI	**Marisa**	10.99	323	P	Pn	10 56 42.9	+6.8
	711nm28nm,1.2s						
SMPI	**Sarmi**	11.99	58	P	Pn	10 56 52.1	+2.2
	29nm,1.1s						
MPSI	**Mapaga**	12.21	315	P	Pn	10 56 58.1	+5.3
	886nm39nm,1.3s						
SGSI	**Sangihe**	12.38	346	P	P	10 57 01.9	-4.8
	3μm138nm,0.7s						
WB0	**Warramunga Arr**	12.65	154		Pn	10 56 54.9	-4.0
WRAB	**Tennant Creek**	12.78	154		Pn	10 56 56.5	-4.1
WRAB	**Tennant Creek**	12.78	154	P	Pn	10 56 56.5	-4.1
WRA	**Warramunga Arr**	12.78	154	Pn	Pn	10 56 56.2	-4.5
	4.1nm,0.3s,baz=326,slow=14,SNR=183						
WRA				Sn	Sn	10 59 08.3	-13
	6.5nm,0.3s,baz=326,slow=24,SNR=18						
WRA				Lg	Lg	11 00 44.3	
	baz=18,slow=37						
WRA				LR	LR	11 02 08.6	
	comp=Z,332nm,18.9s,baz=358,slow=38						
WRA	**Warramunga Arr**	12.78	154		Pn	10 56 55.6	-5.1
WRA	**Warramunga Arr**	12.78	154	P	Pn	10 56 55.6	-5.1
WB2	**Warramunga Arr**	12.79	154		Pn	10 56 56.1	-4.6
WR0	**Warramunga Arr**	12.88	154		Pn	10 56 57.6	-4.5
JAGI	**Jajag, Banyuwa**	14.20	269	P	Pn	10 57 23.1	+3.1
	25nm,0.8s						
BBKI	**Banjar Baru**	14.45	289	P	P	10 57 27.4	-2.3
COEN	**Coen**	15.41	112	Pn	Pn	10 57 32.9	-3.4
COEN				IAmb	IAmb	10 57 45.2	
	comp=Z,53nm,0.8s						
PSA00	**Pilbara Seismi**	15.52	212	Pn	Pn	10 57 34.0	-3.6
PSA00				IAmb	IAmb	10 57 43.6	
	comp=Z,87nm,1.1s						
AS31	**Alice Springs**	16.03	162	Pn	Pn	10 57 41.5	-2.7
ASAR	**Alice Springs**	16.03	162	Pn	Pn	10 57 40.2	-4.0
	comp=Z,2.4nm,0.3s,baz=330,slow=10,SNR=89						
ASAR				Sn	Sn	11 00 19.1	-22
	comp=Z,0.5nm,0.3s,baz=331,slow=17,SNR=3.4						
ASAR				Lg	Lg	11 02 18.6	
	baz=150,slow=15						
ASAR				LR	LR	11 04 24.0	
	comp=Z,589nm,19.4s,baz=340,slow=39						
ASAR	**Alice Springs**	16.03	162	Pn	Pn	10 57 40.9	-3.3
ASAR	**Alice Springs**	16.03	162	P	Pn	10 57 40.9	-3.3
MYLDM	**Lahad Datu**	16.79	323	P	Pn	10 57 53.9	+0.1
PMG	**Port Moresby**	18.46	94	P	Pn	10 58 15.8	+1.3
	comp=Z,1.6nm,0.3s,baz=286,slow=7.1,SNR=17						
PMG				S	Sn	11 01 28.5	-11
	comp=Z,4.8nm,0.6s,baz=173,slow=23,SNR=1.5						
PMG				LR	LR	11 06 25.4	
	comp=Z,653nm,18.1s,baz=254,slow=40						
	comp=Z,44nm,0.8s						
PMG	**Port Moresby**	18.46	94		P	10 58 11.3	-2.9
PMG				IAmb	IAmb	10 58 20.0	
	comp=Z,62nm,0.9s						
PMG	**Port Moresby**	18.46	94	*ce*P	Pn	10 58 16.5	+2.0
PMG				pmax	pmax		
	comp=Z,84nm,1.0s						
KPJI	**Karang Pucung**	19.42	272	P	Pn	10 58 26.1	0.0
	comp=Z,36nm,0.5s						
SBUM	**Sibu**	19.49	303	P	P	10 58 23.9	-1.6
KSM	**Kuching**	20.62	298	P	P	10 58 36.4	-1.5
CTA	**Charters Tower**	20.73	126	P	Pn	10 58 42.0	+0.5
	comp=Z,35nm,1.0s,baz=303,slow=11,SNR=38						
CTA				S	S	11 02 30.4	+1.7
	comp=Z,2.3nm,0.7s,baz=60,slow=19,SNR=1.4						
CTA				Lg	Lg	11 04 45.6	
	comp=Z,0.3nm,0.3s,baz=32,slow=13,SNR=4.7						
CTA				LR	LR	11 08 00.8	
	comp=Z,849nm,18.9s,baz=304,slow=40						
	comp=Z,35nm,1.0s						
CTAO	**Charters Tower**	20.73	126	P	P	10 58 38.1	-0.9
CTAO				IAmb	IAmb	10 58 43.2	
	comp=Z,66nm,1.1s						
CTAO	**Charters Tower**	20.73	126	P	P	10 58 38.1	-0.9
CTAO				pmax	pmax		
	comp=Z,66nm,1.2s						
FORT	**Forrest**	22.26	181	P	P	10 58 54.6	-0.8
FORT				IAmb	IAmb	10 59 13.3	
	comp=Z,55nm,0.8s						
MORW	**Morawa**	23.66	208	P	P	10 59 09.3	-0.3
KRVT	**Keravat (AS076**	23.73	82	P	P	10 59 05.1	-5.3
	comp=Z,13nm,0.6s,baz=123,slow=11,SNR=3.6						
STKA	**Stephens Creek**	26.34	154	P	P	10 59 35.1	+1.0
	comp=Z,6.0nm,0.5s,baz=325,slow=9.1,SNR=35						
STKA				S	S	11 04 14.3	+10
	comp=Z,2.1nm,0.8s,baz=334,slow=21,SNR=1.4						
STKA				LR	LR	11 11 23.2	
	comp=Z,688nm,18.8s,baz=359,slow=40						
	comp=Z,6.0nm,0.5s						
STKA	**Stephens Creek**	26.34	154	P	P	10 59 31.9	-2.1
STKA	**Stephens Creek**	26.34	154	P	P	10 59 31.9	-2.1
STKA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HNR	**Honiara**	31.07	94	LR	LR	11 13 49.5	
	comp=Z,182nm,18.6s,baz=286,slow=38						
JOW	**Kunigami**	35.03	360	LR	LR	11 13 47.6	
	comp=Z,144nm,20.3s,baz=152,slow=34						
JCJ	**Chichijima**	37.70	20	LR	LR	11 14 46.8	
	comp=Z,123nm,18.8s,baz=166,slow=33						
DZM	**Mont Dzumac**	38.92	115	*e*LR	LR	11 12 15.6	
	comp=Z,360nm,22.6s						
DZM	**Mont Dzumac**	38.92	115	LR	LR	11 17 41.8	
	comp=Z,341nm,18.8s,baz=244,slow=36						
CMAR	**Chiang Mai Arr**	39.54	313	P	P	11 01 28.9	-0.3
	comp=Z,1.4nm,0.6s,baz=138,slow=6.9,SNR=8.2						
CMAR				PcP	PcP	11 03 38.5	+2.0
	comp=Z,1.0nm,0.5s,baz=159,slow=2.0,SNR=5.1						
CMAR				LR	LR	11 20 55.3	
	comp=Z,134nm,18.4s,baz=130,slow=41						
	comp=Z,1.4nm,0.6s						
WHN	**Wuhan**	41.04	341	⇓P	P	11 01 43.8	+2.4
NJ2	**Nanjing**	41.27	348	*e*P	P	11 01 50.8	+7.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	**Nakatsue**	41.36	3	P	P	11 01 42.8	-1.3
	comp=Z,8.0nm,0.4s,baz=255,slow=2.0,SNR=4.7						
	comp=Z,8.0nm,0.4s						
PZH	**PanZhiHua**	43.35	324	P	P	11 02 02.3	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
KSRS	**Korea Array**	45.62	359	P	P	11 02 16.3	-2.0
	comp=Z,0.9nm,0.5s,baz=182,slow=10,SNR=8.3						
KSRS				PcP	PcP	11 03 57.9	+1.7
	comp=Z,1.4nm,0.7s,baz=187,slow=3.7,SNR=6.9						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	45.63	11	P	P	11 02 16.5	-2.0
	comp=Z,2.5nm,0.9s,baz=185,slow=9.1,SNR=7.8						
MJAR				PcP	PcP	11 03 57.1	+0.8
	comp=Z,2.6nm,0.9s,baz=181,slow=5.7,SNR=5.5						
	comp=Z,2.5nm,0.9s						
CD2	**Chengdu**	45.73	330	*e*P	P	11 02 21.0	+1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	**Xi'an**	46.12	337	P	P	11 02 27.5	+5.1
XAN				pP	pP	11 02 32.5	-0.1
XAN				sP	sP	11 02 35.3	-1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HNS	**HongShan**	47.36	345	⇑P	P	11 02 32.5	+0.6
HNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MSVF	**Nonsavu**	49.02	106	LR	LR	11 23 08.4	
	comp=Z,122nm,19.0s,baz=251,slow=36						
MSVF	**Nonsavu**	49.02	106	*i* P	P	11 02 47.0	+1.7
MSVF				pmax	pmax		
	comp=Z,34nm,2.7s						
LZH	**Lanzhou**	49.97	334	*e*P	P	11 02 59.5	+7.2
LZH				pP	sP	11 03 04.8	-1.9
LZH				sP	pP	11 03 08.5	+5.9
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
RPZ	**Rata Peaks**	51.06	141	LR	LR	11 24 48.1	
	comp=Z,452nm,19.0s,baz=298,slow=36						
HHC	**Hu-ho-hao-te**	51.44	344	*e*P	P	11 03 06.0	+2.8
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
USRK	**Ussuriysk Ar.**	52.46	3	P	P	11 03 10.7	+0.2
	comp=Z,1.3nm,0.4s,baz=188,slow=8.0,SNR=9.3						
	comp=Z,1.3nm,0.4s						
URZ	**Urewera**	52.80	132	LR	LR	11 25 26.1	
	comp=Z,199nm,19.1s,baz=122,slow=36						
XLT	**XiLinHaoTe**	53.27	349	*e*P	P	11 03 26.0	+9.3
XLT				pP	sP	11 03 31.5	+0.5
XLT				sP	pP	11 03 33.5	+6.6
XLT				S	S	11 10 57.0	+11
XLT				sS	pS	11 10 58.3	+0.6
XLT				pmax	pmax		
	comp=Z,17nm,0.8s						
XLT				pmax	pmax		
	comp=Z,55nm,4.0s						
RAMN	**Ramite**	53.71	312	*e*P	P	11 03 20.1	-0.4
	comp=Z,100nm,1.3s						
ASAJ	**Asahikawa**	53.81	13	LR	LR	11 25 26.6	
	comp=Z,68nm,21.6s,baz=176,slow=35						
RAO	**Raoul Island**	54.27	120	LR	LR	11 26 28.7	
	comp=Z,203nm,18.5s,baz=274,slow=36						
JIRN	**Jiri**	54.42	313	*e*P	P	11 03 25.4	-0.3
GTA	**Gaotai**	54.51	333	*e*P	P	11 03 27.0	+1.1
GTA				pP	pP	11 03 33.0	-3.3
GTA				sP	sP	11 03 37.0	-3.4
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,17nm,5.1s						
GTA				LR	LR		
	comp=Z,61nm,16.4s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
GTA				LR	LR		
	comp=Z,100nm,17.1s						
GOMU	**GeErMu**	54.52	327	P	P	11 03 26.0	-0.3
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,57nm,3.8s						
GUN	**Gumba**	54.79	313	*e*P	P	11 03 27.2	-1.2
PKI	**Pulchoki**	54.94	312	*e*P	P	11 03 28.5	-1.0
	comp=Z,5.9nm,0.4s						
PKIN	**Phulchoki**	54.95	312	*e*P	P	11 03 29.2	-0.3
	comp=Z,11nm,0.5s						
DMN	**Daman**	55.18	312	*e*P	P	11 03 30.7	-0.4
GKN	**Gorkha**	55.74	312	*e*P	P	11 03 34.3	-0.8
DANN	**Dangsing**	56.58	312	*e*P	P	11 03 40.1	-1.1
PYUN	**Piuthan**	57.01	311	*e*P	P	11 03 43.5	-0.7
	comp=Z,68nm,1.1s						
KLR	**Kul'dur**	57.46	3	P	P	11 03 44.1	-2.6
	comp=Z,0.9nm,0.5s,baz=174,slow=21,SNR=1.7						
	comp=Z,0.9nm,0.5s						
KLR	**Kul'dur**	57.46	3	*i* P	P	11 03 45.5	-1.2
KLR				pmax	pmax		
	comp=Z,8.0nm,1.9s						
AFI	**Afiamalu**	58.73	101	LR	LR	11 27 16.1	
	comp=Z,74nm,19.1s,baz=277,slow=34						
ULN	**Ulaanbaatar**	59.16	343	*ce*P	P	11 03 58.7	0.0
ULN				pmax	pmax		
	comp=Z,10.0nm,1.7s						
SONM	**Songino Array**	59.32	343	P	P	11 03 58.0	-1.9
	comp=Z,2.0nm,0.8s,baz=168,slow=7.6,SNR=5.5						
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	59.32	343	P	P	11 04 00.1	+0.3
SONM	**Songino Array**	59.32	343	P	P	11 04 00.1	+0.3
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ZAK	**Zakamensk**	62.52	342	*e*P	P	11 04 21.5	0.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
WMQ	**Urumqi**	63.78	328	*e*P	P	11 04 30.0	+0.1
WMQ				pP	pP	11 04 38.3	-2.3
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
PEA0B	**Petropavlovsk-**	66.12	19	*ce*P	P	11 04 44.8	-0.1
PETK	**Petropavlovsk-**	66.12	19	P	P	11 04 44.8	-0.1
	comp=Z,6.4nm,0.8s,baz=193,slow=6.1,SNR=13						
PETK				LR	LR	11 29 45.9	
	comp=Z,54nm,21.3s,baz=198,slow=33						
	comp=Z,6.4nm,0.8s						
PET	**Petropavlovsk**	66.36	19	*i* P	P	11 04 45.5	-0.9
PET				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOD	**Bodaibo**	67.05	352	*e*P	P	11 04 50.8	+0.1
BOD				pmax	pmax		
	comp=Z,12nm,1.6s						
KSH	**Kashi**	68.07	319	P	P	11 04 58.3	+0.6
KSH				sP	pP	11 05 08.3	-0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	68.60	328	IAmb	IAmb	11 05 01.2	
	comp=Z,3.7nm,0.6s						
MK31	**Makanchi Array**	68.60	328	*i* P	P	11 05 00.8	0.0
MKAR	**Makanchi Array**	68.60	328	P	P	11 05 01.1	+0.3
	comp=Z,7.3nm,0.5s,baz=123,slow=8.0,SNR=129						
	comp=Z,7.3nm,0.5s						
RAR	**Rarotonga**	70.02	109	LR	LR	11 33 26.5	
	comp=Z,58nm,21.7s,baz=280,slow=34						
YAK	**Yakutsk**	70.23	1	LR	LR	11 35 30.7	
	comp=Z,40nm,20.7s,baz=90,slow=36						
AAK	**Ala-Archa**	70.67	321	LR	LR	11 40 18.6	
	comp=Z,39nm,18.8s,baz=142,slow=40						
AAK	**Ala-Archa**	70.67	321	P	P	11 05 13.7	-0.1
AAK				IAmb	IAmb	11 05 15.2	
	comp=Z,8.9nm,1.2s						
AAK	**Ala-Archa**	70.67	321	P	P	11 05 13.7	-0.1
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VNDA	**Vanda**	71.24	173	P	P	11 05 18.2	+1.7
	comp=Z,1.4nm,0.7s,baz=336,slow=7.3,SNR=9.6						
VNDA				LR	LR	11 35 38.8	
	comp=Z,79nm,18.1s,baz=350,slow=35						
	comp=Z,1.4nm,0.7s						
VNDA	**Vanda**	71.24	173	P	P	11 05 17.8	+1.3
VNDA	**Vanda**	71.24	173	P	P	11 05 17.8	+1.3
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAA0	**Zalesovo Array**	72.20	335	IAmb	IAmb	11 05 22.9	
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	72.20	335	P	P	11 05 22.2	-0.3
	comp=Z,8.0nm,0.6s,baz=129,slow=4.8,SNR=32						
	comp=Z,8.0nm,0.6s						
KURBB	**Kurchatov Arra**	72.94	329	P	P	11 05 26.9	-0.2
	comp=Z,8.1nm,0.4s,baz=130,slow=5.1,SNR=172						
	comp=Z,8.1nm,0.4s						
KURK	**Kurchatov**	72.95	329	P	P	11 05 26.6	-0.4
KURK	**Kurchatov**	72.95	329	*ce*P	P	11 05 27.2	+0.1
KURK				pmax	pmax		
	comp=Z,47nm,1.7s						
MAW	**Mawson**	73.11	201	P	P	11 05 29.6	+1.9
	comp=Z,3.1nm,0.7s,baz=85,slow=5.5,SNR=14						
MAW				LR	LR	11 35 34.6	
	comp=Z,121nm,18.3s,baz=15,slow=34						
	comp=Z,3.1nm,0.7s						
MAW	**Mawson**	73.11	201	IAmb	IAmb	11 05 31.3	
	comp=Z,3.3nm,1.5s						
KK31	**Karatay Array**	73.43	320	P	P	11 05 30.2	0.0
KK31	**Karatay Array**	73.43	320	P	P	11 05 30.2	0.0
KK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KKAR	**Karatay Array**	73.43	320	P	P	11 05 29.5	-0.6
KKAR	**Karatay Array**	73.43	320	P	P	11 05 29.0	-1.2
KKAR	**Karatay Array**	73.43	320	P	P	11 05 29.5	-0.6
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SEY	**Seymchan**	73.46	11	P	P	11 05 30.6	+0.8
	comp=Z,5.8nm,0.7s,baz=203,slow=4.3,SNR=22						
	comp=Z,5.8nm,0.7s						
SEY	**Seymchan**	73.46	11	*ce*P	P	11 05 29.6	-0.2
SEY				pmax	pmax		
	comp=Z,15nm,1.4s						
BRVK	**Borovoye**	78.54	328	P	P	11 05 58.4	-0.6
BRVK				IAmb	IAmb	11 06 00.7	
	comp=Z,19nm,1.2s						
BRVK	**Borovoye**	78.54	328	P	P	11 05 58.4	-0.6
BRVK				pmax	pmax		
	comp=Z,19nm,1.2s						
TBI	**Tubuai**	79.44	112	*e*LR	LR	11 31 20.0	
	comp=Z,121nm,24.5s						
PPT2	**Papeete2**	79.85	106	*e*LR	LR	11 31 36.5	
	comp=Z,100nm,22.5s						
TIXI	**Tiksi**	79.89	0	P	P	11 06 05.2	-0.7
	comp=Z,2.9nm,0.5s,baz=269,slow=23,SNR=12						
TIXI				LR	LR	11 42 45.1	
	comp=Z,41nm,19.4s,baz=181,slow=37						
	comp=Z,2.9nm,0.5s						
TIXI	**Tiksi**	79.89	0	P	P	11 06 04.6	-1.3
TIXI	**Tiksi**	79.89	0	*ce*P	P	11 06 04.7	-1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BILL	**Bilibino**	80.82	13	⇑*e*P	P	11 06 11.7	+0.6
BILL				*e*		11 06 20.1	
BILL				*e*		11 09 18.7	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.8s						
BILL				MLR	MLR		
	comp=Z,32nm,16.0s						
NIKH	**Nikolski High**	80.83	33	P	P	11 06 13.3	+1.9
	baz=243						
QSPA	**South Pole Qui**	81.58	180	P	P	11 06 16.8	+1.4
	comp=Z,4.6nm,1.0s,baz=113,slow=1.0,SNR=12						
QSPA				LR	LR	11 43 19.0	
	comp=Z,110nm,18.1s,baz=304,slow=36						
	comp=Z,4.6nm,1.0s						
QSPA	**South Pole Qui**	81.58	180	P	P	11 06 14.8	-0.6
QSPA				IAmb	IAmb	11 06 43.9	
	comp=Z,12nm,1.4s						
NRIK	**Noril'sk**	82.56	346	P	P	11 06 20.4	+0.1
	comp=Z,9.7nm,0.8s,baz=132,slow=5.7,SNR=11						
	comp=Z,9.7nm,0.8s						
NRIK	**Noril'sk**	82.56	346	IAmb	IAmb	11 06 22.4	
	comp=Z,15nm,1.1s						
NRIK	**Noril'sk**	82.56	346	*ce*P	P	11 06 20.0	-0.2
NRIK				pmax	pmax		
	comp=Z,12nm,0.9s						
AKTO	**Aktyubinsk**	84.28	323	LR	LR	11 47 50.4	
	comp=Z,44nm,21.9s,baz=131,slow=38						
SVE	**Sverdlovsk**	85.21	329	*e*P	P	11 06 34.5	+0.5
SVE				pmax	pmax		
	comp=Z,23nm,1.3s						
ARU	**Arti**	86.12	328	P	P	11 06 37.8	-0.7
ARU				IAmb	IAmb	11 06 39.9	
	comp=Z,20nm,1.2s						

ARU	Arti	86.12	328c	iP	P	11 06 37.5	-1.0
ARU						11 09 53.5	
ARU				S	S	11 17 03.5	-6.9
ARU				SS	SS	11 22 44.6	-5.0
ARU				pmax	pmax		
	comp=Z,21nm,1.3s						
SDPT	Sand Point	86.30	33	P	P	11 06 40.2	+0.8
	baz=250						
CHNA	Chernabura Isl	86.60	33	P	P	11 06 41.1	+0.2
	baz=250						
TNA	Tin City	87.07	22	P	P	11 06 43.5	+0.6
	baz=242						
SII	Sitkinak Islan	90.04	33	P	P	11 06 58.6	+1.3
	baz=255						
TAOE	Nuku Hiva Isla	90.05	99	eLR	LR	11 36 00.0	
	comp=Z,64nm,21.6s						
P18K	Big Mountain,	90.27	30	P	P	11 06 57.7	-0.6
	baz=254						
N18K	Kilae Creek	90.31	28	P	P	11 06 58.3	-0.2
	baz=253						
GNI	Garni	90.62	310	LR	LR	11 53 59.9	
	comp=Z,25nm,20.7s,baz=140,slow=40						
OHAK	Old Harbor	90.68	32	P	P	11 07 00.3	+0.1
	baz=256						
TTA	Tatalina	90.90	26	P	P	11 07 02.1	+0.8
	baz=253,SNR=5.2						
N19K	Bonanza Creek	91.01	29	P	P	11 07 01.6	-0.2
N19K				IAmb	IAmb	11 07 04.6	
	comp=Z,5.8nm,0.8s						
N19K	Bonanza Creek	91.01	29	P	P	11 07 02.9	+1.1
	baz=254						
GCSA	Galena City Sc	91.07	24	P	P	11 07 02.1	+0.2
	baz=252						
KMBO	Kilima Mbogo	91.08	269	P	P	11 07 05.0	+1.7
	comp=Z,2.4nm,0.6s,baz=37,slow=3.9,SNR=4.2						
KMBO				LR	LR	11 42 24.1	
	comp=Z,48nm,21.2s,baz=88,slow=32						
	comp=Z,2.4nm,0.6s						
KDAK	Kodiak Island	91.19	32	P	P	11 07 02.2	-0.3
	comp=Z,3.7nm,0.8s,baz=321,slow=3.4,SNR=6.4						
KDAK				LR	LR	11 44 54.0	
	comp=Z,50nm,18.9s,baz=261,slow=34						
	comp=Z,3.7nm,0.8s						
KDAK	Kodiak Island	91.19	32	P	P	11 07 03.9	+1.3
	baz=256						
L19K	White Mountain	91.21	27	P	P	11 07 01.5	-1.1
L19K				IAmb	IAmb	11 07 06.7	
	comp=Z,8.4nm,1.0s						
L19K	White Mountain	91.21	27	P	P	11 07 03.9	+1.3
	baz=254,SNR=7.5						
M19K	Big River Lodg	91.34	27	P	P	11 07 03.7	+0.5
	baz=255						
L20K	Farewell, AK	91.72	27	P	P	11 07 06.2	+1.2
	baz=255						
K20K	Telida	91.87	26	IAmb	IAmb	11 07 08.0	
	comp=Z,9.5nm,1.2s						
K20K	Telida	91.87	26	P	P	11 07 06.6	+1.0
	baz=255						
M20K	Styx River	91.92	28	IAmb	IAmb	11 07 08.1	
	comp=Z,12nm,1.1s						
M20K	Styx River	91.92	28	P	P	11 07 06.9	+1.0
	baz=256						
J20K	Nowinta River	92.05	25	IAmb	IAmb	11 07 08.6	
	comp=Z,4.2nm,0.9s						
J20K	Nowinta River	92.05	25	P	P	11 07 07.3	+0.9
	baz=255						
TROLL	Troll, Antarti	92.44	195	pP	P	11 07 11.1	+2.7
PPLA	Purkeypile	92.58	27	IAmb	IAmb	11 07 11.1	
	comp=Z,11nm,1.1s						
PPLA	Purkeypile	92.58	27	P	P	11 07 09.5	+0.4
	baz=257						
CAST	Castle Rocks	92.75	26	P	P	11 07 10.2	+0.5
	baz=257						
CHUM	Lake Minchumin	92.76	26	P	P	11 07 10.7	+1.0
	baz=256						
KIV	Kislovodsk	92.77	314	eP	P	11 07 08.5	-1.9
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
H21K	Melozitna Rive	92.97	24	P	P	11 07 11.6	+0.9
	baz=256						
M22K	Willow	93.28	28	P	P	11 07 11.9	-0.2
	baz=258						
RC01	Rabbit Creek A	93.33	29	P	P	11 07 12.6	+0.2
	baz=259						
CUT	Chulitna	93.34	27	P	P	11 07 12.3	-0.1
	baz=258						
BPAW	Bear Paw Mtn.	93.38	26	IAmb	IAmb	11 07 15.5	
	comp=Z,3.6nm,1.0s						
BPAW	Bear Paw Mtn.	93.38	26	P	P	11 07 12.6	0.0
	baz=258						
TRF	Thorofare Moun	93.54	26	IAmb	IAmb	11 07 17.4	
	comp=Z,7.7nm,1.2s						
TRF	Thorofare Moun	93.54	26	P	P	11 07 13.3	-0.3
	baz=258						
MLY	Manley	93.67	25	IAmb	IAmb	11 07 16.8	
	comp=Z,6.4nm,1.0s						
MLY	Manley	93.67	25	P	P	11 07 14.3	+0.4
	baz=258,SNR=6.4						
PMR	Palmer	93.71	28	P	P	11 07 14.1	0.0
	baz=259						
SNAA	Sanae	93.95	194	pP	P	11 07 17.6	+2.3
SNAA	Sanae	93.95	194	LR	LR	11 49 08.7	
	comp=Z,108nm,19.6s,baz=122,slow=35						
SNAA	Sanae	93.95	194	P	P	11 07 15.8	+0.5
SNAA				IAmb	IAmb	11 07 18.8	
	comp=Z,9.0nm,1.3s						
SNAA	Sanae	93.95	194	P	P	11 07 15.8	+0.5
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KNK	Knik Glacier	94.00	29	P	P	11 07 16.2	+0.7
	baz=260,SNR=5.8						
SML	Sawmill	94.12	28	P	P	11 07 16.5	+0.3
	baz=260,SNR=10						
MCK	McKinley	94.19	26	P	P	11 07 16.3	0.0
	baz=260						
WAT1	Susitna Watana	94.20	27	P	P	11 07 16.2	-0.2
	baz=260						
I23K	Minto, Yukon-K	94.27	25	P	P	11 07 17.0	+0.3
	baz=259,SNR=10.0						
NEA2	Nenana	94.29	25	P	P	11 07 17.5	+0.7
	baz=260						
H23K	Yukon River	94.32	24	IAmb	IAmb	11 07 19.3	
	comp=Z,7.3nm,1.1s						
H23K	Yukon River	94.32	24	P	P	11 07 17.5	+0.6
	baz=259,SNR=8.0						
M23K	Glacier View	94.41	28	P	P	11 07 17.5	+0.1
	baz=260,SNR=5.1						
WAT6	Susitna Watana	94.53	27	P	P	11 07 18.4	+0.3
	baz=260,SNR=8.7						
GLI	Glacier Island	94.56	29	P	P	11 07 18.4	+0.3
	baz=261						
SCM	Sheep Creek Mo	94.60	28	P	P	11 07 19.1	+0.8
	baz=261,SNR=8.5						
WRH	Wood River Hil	94.69	26	IAmb	IAmb	11 07 19.3	
	comp=Z,8.6nm,1.0s						
DHY	Denali Highway	94.77	27	P	P	11 07 19.6	+0.4
	baz=261,SNR=14						
TOLK	Toolik Lake Re	94.83	21	P	P	11 07 19.8	+0.6
	baz=259						
TCOL	CIGO, UAF Yank	94.85	25	P	P	11 07 19.9	+0.6
	baz=261						
COLA	College	94.85	25	iP	P	11 07 18.2	-1.1
COLA				pmax	pmax		
	comp=Z,12nm,2.8s						
COLA	College	94.85	25	P	P	11 07 19.8	+0.5
	baz=261						
H24K	Noodor Dome	95.00	24	IAmb	IAmb	11 07 21.8	
	comp=Z,10nm,1.1s						
H24K	Noodor Dome	95.00	24	P	P	11 07 20.7	+0.6
	baz=261,SNR=12						
POKR	Poker Plat Res	95.07	25	P	P	11 07 21.0	+0.7
	baz=261						
HDA	Harding Lake	95.17	26	IAmb	IAmb	11 07 21.5	
	comp=Z,6.0nm,0.8s						
HDA	Harding Lake	95.17	26	P	P	11 07 20.7	0.0
	baz=261						
M24K	Tolsona, Glenn	95.18	28	P	P	11 07 21.7	+0.7
	baz=262,SNR=7.1						
KLU	Klutina	95.21	29	P	P	11 07 21.7	+0.6
	baz=262						
DIV	Divide	95.23	29	P	P	11 07 22.2	+0.9
IL31		95.25	25	IAmb	IAmb	11 07 21.5	
	comp=Z,5.1nm,1.2s						
ILAR	Eielson Array	95.25	25	P	P	11 07 20.2	-0.9
	comp=Z,3.0nm,1.0s,baz=266,slow=4.4,SNR=18						
ILAR				LR	LR	11 48 44.4	
	comp=Z,14nm,18.9s,baz=239,slow=35						
	comp=Z,3.0nm,1.0s						
VNA2	Neumayer--Watz	95.53	193	pP	P	11 07 24.7	+2.3
	baz=131,slow=4.0						
K24K	Donnelly Dome	95.59	26	P	P	11 07 22.8	0.0
	baz=262,SNR=6.3						
PAX	Paxson	95.62	27	P	P	11 07 23.4	+0.5
	baz=262,SNR=7.5						
HARP	HAARP	95.69	28	P	P	11 07 24.9	+1.7
	baz=263						
BMRM	Bremner River	95.78	29	IAmb	IAmb	11 07 25.5	
	comp=Z,7.1nm,0.9s						
BMRM	Bremner River	95.78	29	P	P	11 07 24.3	+0.6
	baz=263						
N25K	Chitina, Valde	95.86	29	P	P	11 07 25.1	+1.0
	baz=263						
J25K	Salcha River,	95.87	26	IAmb	IAmb	11 07 26.8	
	comp=Z,4.8nm,1.2s						
J25K	Salcha River,	95.87	26	P	P	11 07 23.8	-0.3
	baz=263						
GLB	Gilahina Butte	96.21	29	IAmb	IAmb	11 07 27.5	
	comp=Z,5.6nm,1.0s						
SCRK	Sand Creek	96.40	26	P	P	11 07 26.8	+0.3
	baz=264,SNR=5.4						
MCARA	McCarthy VSAT	96.58	29	P	P	11 07 27.9	+0.6
	baz=264						
L26K	Log Cabin Wild	96.59	27	IAmb	IAmb	11 07 28.8	
	comp=Z,3.7nm,1.0s						
L26K	Log Cabin Wild	96.59	27	P	P	11 07 28.0	+0.7
	baz=264						
J26L	Joseph Creek	96.63	26	P	P	11 07 28.0	+0.4
	baz=264						
M26K	Nabesna, AK	96.69	28	P	P	11 07 28.1	+0.3
	baz=265						
MMAI	Mount Meron Ar	97.11	302	LR	LR	11 57 27.0	
	comp=Z,32nm,18.1s,baz=252,slow=39						
M27K	Edge Creek, AK	97.21	28	P	Pdif	11 07 31.2	+0.9
	baz=266						
K27K	Chicken	97.24	26	P	Pdif	11 07 31.3	+1.0
	baz=266						
L27K	Beaver Creek,	97.28	27	P	Pdif	11 07 31.6	+1.0
	baz=266						
CTG	Chitna Glacier	97.36	29	P	Pdif	11 07 32.3	+1.2
	baz=266						
BVCY	Beaver Creek	97.68	28	P	Pdif	11 07 33.1	+0.8
	baz=266						
EGAK	Eagle	97.69	26	P	Pdif	11 07 32.8	+0.6
	baz=267						
PINM	Pinnacle	97.84	30	P	P	11 07 32.9	-0.2
	baz=267						
LBTB	Lobatse	98.01	243	LR	LR	11 46 58.2	
	comp=Z,57nm,20.2s,baz=124,slow=32						
DAWY	Dawson	98.42	26	P	Pdif	11 07 36.1	+0.5
	baz=268						
YUK4	Talbot Arm	98.69	29	P	Pdif	11 07 37.4	+0.4
	baz=268						
I29M	Ogilvie Camp,	98.92	25	IAmb	IAmb	11 07 38.9	
	comp=Z,4.6nm,1.1s						
I29M	Ogilvie Camp,	98.92	25	P	Pdif	11 07 38.3	+0.5
	baz=269						
HYT	Haines Junctio	99.23	30	P	Pdif	11 07 40.1	+0.7
	baz=269						
N30M	Aishikik Lake	99.44	29	P	Pdif	11 07 41.2	+1.0
	baz=270						
EPYK	Eagle Plains	99.56	24	P	Pdif	11 07 41.6	+0.9
	baz=271						
M30M	Minto, Yukon	99.57	28	P	Pdif	11 07 41.4	+0.6
	baz=270						
PLBC	Pleasant Camp	99.79	31	P	Pdif	11 07 41.7	0.0
	baz=270						
WHY	Whitehorse	100.52	30	P	Pdif	11 07 45.8	+0.7
	baz=272						
FARO	Faro, Yukon	101.19	28	P	Pdif	11 07 48.8	+0.9
	baz=273						
WRAK	Wrangell Islan	102.02	34	P	Pdif	11 07 52.1	+0.5
	baz=273						
MMPY	Sheldon Lake,	102.13	28	P	Pdif	11 07 52.4	+0.3
	baz=275						
ARCES	ARCESS Array B	102.37	339	P	Pdif	11 07 52.2	-0.9
	comp=Z,2.0nm,0.9s,baz=83,slow=7.4,SNR=1.7						
ARCES				PKiKP	PKiKP	11 12 13.4	-1.1
	comp=Z,2.0nm,1.0s,baz=96,slow=2.7,SNR=4.4						
S34M	Telegraph Cree	102.58	33	P	Pdif	11 07 54.4	+0.2
	baz=274						
SPITS	Spitsbergen Ar	102.65	349	PKiKP	PKiKP	11 12 14.0	-0.8
	comp=Z,13nm,1.1s,baz=131,slow=4.2,SNR=1.7						
I03D	Drain, OR	108.88	47	P	PKiKP	11 12 26.5	-0.7
	baz=276						
YKA	Yellowknife Ar	109.66	26	PKiKP	PKiKP	11 12 28.8	+0.7
	comp=Z,0.2nm,0.5s,baz=296,slow=2.0,SNR=4.5						
G05D	Wamic, OR	110.12	45	P	PKiKP	11 12 29.4	-0.1
	baz=278						
GERES	GERESS Array B	112.53	320	PKiKP	PKiKP	11 12 33.5	-0.6
	comp=Z,0.3nm,0.4s,baz=357,slow=2.0,SNR=3.6						
RLMT	Red Lodge	118.44	43	P	PKiKP	11 12 46.3	+0.5
	baz=288						
PDAR	Pinedale Array	118.93	46	PKP	PKPdf	11 12 46.0	-0.8
	comp=Z,0.2nm,0.6s,baz=195,slow=4.6,SNR=3.9						
WUAZ	Wupatki	119.28	54	P	PKiKP	11 12 48.7	+1.0
	baz=281						
LAO	LASA Array	119.91	40	P	PKiKP	11 12 49.9	+1.5
	baz=291						
O20A	White River Ci	120.61	48	P	PKiKP	11 12 50.8	+0.6
	baz=286						
121A	Cookes Peak, D	122.79	57	P	PKiKP	11 12 55.4	+0.7
	baz=282						
SDCO	Great Sand Dun	123.33	50	P	PKPdf	11 12 55.6	+0.1
	baz=287						
MNTX	Cornudas Mount	124.96	57	P	PKiKP	11 12 59.2	+0.4
	baz=283						
TXAR	Lajitas Array	126.92	60	PKP	PKiKP	11 13 03.5	+0.7
	comp=Z,0.6nm,0.8s,baz=176,slow=4.0,SNR=7.8						
TORD	Torodi Ar. Bea	127.61	280	PKP	PKiKP	11 13 04.8	+0.4
	comp=Z,1.2nm,0.6s,baz=63,slow=2.3,SNR=14						
SCHQ	Schefferville	132.11	12	PKP	PKiKP	11 13 13.6	+1.2
	comp=Z,3.4nm,1.0s,baz=9.3,slow=3.2,SNR=8.4						
TZTN	Tazewell	139.59	41	P	PKPdf	11 13 26.7	+0.9
	baz=306						
CPUP	Villa Florida	145.01	171	PKPbc	PKPdf	11 13 36.5	+0.8
	comp=Z,7.5nm,0.6s,baz=195,slow=2.9,SNR=18						
CPUP	Villa Florida	145.01	171		PKPab	11 13 34.0	-1.0
CPUP	Villa Florida	145.01	171	PKIKP	PKPab	11 13 34.0	-1.0
LPAZ	La Paz	150.45	146	PKPbc	PKiKP	11 13 52.6	+0.8
	comp=Z,3.0nm,0.5s,baz=248,slow=2.3,SNR=16						

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*IPEC **26** 11:23:16.4±0.2, 50°.07N×18°.49E, h0^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0*

*VIE **26** 11:23:16.1±0.2, 50°.11N×18°.43E, h0^{km}, mb2.2/7, ml2.5/8, Error ellipse: s-maj=1.9km s-min=1.6km az=164.0 33 km NNE of Ostrava Suspected Mining induced.*

*PRU **26** 11:23:18.1±0.0, 50°.05N×18°.38E, h0^{km}*

ISC 26 11:23:16.7±0.8, 50°.06N±0°.03×18°.45E±0°.02, h0^{km}, n39, σ1^{s}.14/73, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.17	279	ePG	Pg	11 23 20.9	+1.1
RAC				eSG	Sg	11 23 24.1	+2.2
OKC	Ostrava-Krasne	0.29	221	ePG	Pg	11 23 22.7	+0.4
OKC				eSG	Sg	11 23 26.8	+0.7
	comp=Z,432nm,0.7s						
MORC	Moravsky Berou	0.65	245	ePg	Pg	11 23 29.0	0.0
	baz=64						
MORC				eSg	Sg	11 23 37.5	0.0
	160nm,0.7s,baz=64						
MORC	Moravsky Berou	0.65	245	ePG	Pg	11 23 29.1	0.0
MORC				eSG	Sg	11 23 37.5	0.0
MAUC	Maruska	0.80	210	ePG	Pg	11 23 31.7	-0.3
MAUC				eSG	Sb	11 23 43.5	-1.4
	comp=Z,218nm,1.1s						
OJC	Ojcow	0.88	79	ePg	Pg	11 23 33.1	-0.5
OJC				eSg	Sg	11 23 45.0	-0.1
KRLC	Kraliky	1.07	272	ePG	Pg	11 23 36.3	-0.9
KRLC				eSG	Sg	11 23 50.9	-0.2
	comp=Z,91nm,0.6s						
LANS	Liptovska Anna	1.13	143	ePG	Pb	11 23 38.5	-0.5
LANS				eSG	Sn	11 23 56.2	+0.3
LANS				eLG	Lg	11 23 58.1	
JAVC	Velka Javorina	1.30	203	ePg	Pg	11 23 41.3	-0.3
	baz=24						
JAVC	Velka Javorina	1.30	203	ePG	Pg	11 23 41.3	-0.3
DPC	Dobruska-Polom	1.40	283	ePG	Pg	11 23 42.6	-0.8
DPC				eSG	Sb	11 24 01.8	-0.2
	comp=Z,140nm,0.6s						
VRAC	Vranov	1.42	239	ePg	Pn	11 23 42.9	-0.8
	baz=58						
VRAC				eSg	Sg	11 24 01.6	-0.6
	45nm,0.6s,baz=58						
VRAC	Vranov	1.42	239	ePG	Pn	11 23 43.0	-0.8
VRAC				eSG	Sg	11 24 01.6	-0.6
OSTC	Ostas	1.52	290	ePG	Pn	11 23 43.9	-1.2
OSTC				eSG	Sn	11 24 05.9	+0.4
	comp=Z,95nm,0.8s						
KSP	Ksiaz	1.58	301	ePg	Pn	11 23 44.8	-1.2
KSP				eSg	Sn	11 24 06.8	-0.4
VYHS	Vyhne	1.59	171	ePG	Pn	11 23 45.8	-0.2
VYHS				eSG	Sb	11 24 07.3	-0.2
VYHS				eLG	Lg	11 24 09.6	
CHVC	Chvalec	1.62	290	ePG	Pn	11 23 46.3	-0.2
CHVC				eSG	Sg	11 24 09.1	+0.3
	comp=Z,156nm,1.5s						
UPC	Upice	1.62	287	ePG	Pn	11 23 46.0	-0.6
UPC				eSG	Sg	11 24 08.6	-0.3
	comp=Z,84nm,1.2s						
KRUC	Moravsky	1.67	234	ePn	Pn	11 23 47.0	-0.1
	baz=53						
KRUC				eSg	Sb	11 24 09.3	-0.5
	45nm,0.6s,baz=53						
KRUC	Moravsky	1.67	234	ePN	Pn	11 23 47.0	-0.1
KRUC				eSG	Sb	11 24 09.4	-0.4
SMOL	Smolenice	1.68	204	eSG	Sb	11 24 09.8	-0.4
KECS	Kecovo	2.07	139	ePN	Pn	11 23 51.9	-0.7
KECS				ePG	Pg	11 23 58.3	+2.0
CRVS	Cervenica-Dubn	2.28	119	ePG	Pb	11 23 58.9	+0.2
PSZ	Piszkesteto	2.34	155	P	Pn	11 23 56.2	-0.3
PRU	Pruhonice	2.52	270	ePG	Pb	11 24 02.4	-0.4
PRU				eSG	Sg	11 24 35.9	-1.7
	comp=Z,13nm,0.6s						
PVCC	Panska Ves	2.53	282	ePG	Pb	11 24 03.4	+0.5
PVCC				eSG	Sg	11 24 37.9	0.0
	comp=Z,45nm,0.7s						
CONA	Conrad Observa	2.73	220	ePn	Pn	11 24 01.4	-0.4
	0.8nm,0.3s						
CONA				eSn	Sn	11 24 36.5	+0.9
	6.9nm,0.6s						
KOLS	Kolonicke sedl	2.74	113	ePG	Pg	11 24 09.1	0.0
RONA	Rosalia, Austr	2.75	212	ePn	Pn	11 24 01.7	-0.4
RONA				eSn	Sn	11 24 36.4	+0.3
CKRC	Cesky Krumlov	2.97	247	ePG	Pb	11 24 10.9	+0.4
CKRC				eSG	Sg	11 24 50.1	-2.0
BRG	Berggiesshubel	2.99	288	Pg	Pg	11 24 12.8	-1.2
BRG				Sg	Sg	11 24 52.1	-0.6
BRG				Amp		11 24 57.0	
	comp=Z,23nm,0.8s						
KHC	Kasperske Hory	3.30	256	ePN	Pn	11 24 08.8	-0.8
KHC				ePG	Pb	11 24 17.4	+1.3
KHC				eSG	Sg	11 25 00.4	-2.3
	comp=Z,14nm,0.7s						
ARSA	Arzberg	3.41	216	ePn	Pn	11 24 11.2	+0.1
	comp=Z,2.8nm,0.7s						
ARSA				eSn	Sn	11 24 53.9	+1.5
	comp=Z,2.1nm,0.5s						
MOA	Molln	3.53	233	ePn	Pn	11 24 12.5	-0.3
	comp=Z,1.2nm,0.3s						
MOA				eSg	Sg	11 25 07.6	-2.5
	comp=Z,11nm,0.6s						
CLL	Collm	3.68	292	ePg	Pg	11 24 28.0	+0.8
CLL				eSg	Sg	11 25 14.0	-0.9
	comp=Z,39nm,1.5s						
NKC	Novy Kostel	3.86	275	ePG	Pb	11 24 27.5	+1.8
NKC				eSG	Sg	11 25 18.6	-2.1
	comp=Z,15nm,0.6s						
BIOA	Bad Ischl, Aus	3.96	235	ePn	Pn	11 24 18.5	-0.2
BIOA				eSg	Sg	11 25 21.6	-2.2
KBA	Koelnbreinsper	4.51	231	ePn	Pn	11 24 27.1	+0.7
	comp=Z,0.4nm,0.2s						
KBA				eSg	Sg	11 25 39.7	-1.8
	comp=Z,4.7nm,0.7s						
WTTA	Wattenberg	5.31	241	ePn	Pn	11 24 36.8	-0.6
	comp=Z,0.1nm,0.1s						
WTTA				eSg	Sb	11 25 59.7	+5.0
	comp=Z,4.3nm,0.5s						

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*IDC **26** 11:24:16.1±1.2, 4°.47S×126°.01E, h416^{km}±15^{km}, mb3.2/4, mbtmp4.1/7, Error ellipse: s-maj=22.0km s-min=11.6km az=93.0*

ISC 26 11:24:15.1±0.9, 4°.47S±0°.08×126°.0E±0°.1, h398^{km}, n7, σ1^{s}.76/11, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.15	202	P	Pn	11 25 51.0	+1.5
	47nm,0.5s,baz=10,slow=2.8,SNR=5.4						
BATI				S	S	11 27 07.2	+1.0
	21nm,0.4s,baz=269,slow=19,SNR=5.9						
SIJI	Sorong	6.36	56	P	Pn	11 25 52.3	+0.6
	5.8nm,0.3s,baz=221,slow=19,SNR=1.6						
SIJI				S	S	11 27 12.1	+1.7
	8.5nm,0.3s,baz=206,slow=23,SNR=2.1						
WRA	Warramunga Arr	17.39	153	P	P	11 27 53.3	-0.1
	3.7nm,0.4s,baz=333,slow=10.0,SNR=65						
WRA				S	S	11 30 50.6	-3.6
	0.5nm,0.7s,baz=324,slow=20,SNR=4.6						
ASAR	Alice Springs	20.55	159	P	P	11 28 25.4	+0.5
	3.9nm,0.6s,baz=336,slow=7.2,SNR=73						
ASAR				S	S	11 31 47.7	-1.0
	0.7nm,0.8s,baz=349,slow=23,SNR=4.4						
	3.9nm,0.6s						
USRK	Ussuriysk Ar.	48.74	6	P	P	11 32 19.7	-1.7
	1.1nm,0.5s,baz=179,slow=7.2,SNR=3.3						
	1.1nm,0.5s						
PETK	Petropavlovsk-	63.28	21	P	P	11 34 03.3	+0.4
	1.1nm,0.5s,baz=256,slow=5.8,SNR=2.4						
	1.1nm,0.5s						
MKAR	Makanchi Array	63.97	328	P	P	11 34 06.7	-0.9
	0.3nm,0.4s,baz=115,slow=8.1,SNR=4.6						
	0.3nm,0.4s						

IDC 26 11:38:51.3±2.0, 6°.53S×129°.05E, h0^{km}, mb4.2/1, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=141.2km s-min=30.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.29	159	Pn	Pn	11 42 14.8	-0.4
	0.5nm,0.3s,baz=342,slow=13,SNR=27						
WRA				Sn	Sn	11 44 41.1	-13
	1.3nm,0.3s,baz=332,slow=24,SNR=10						
	0.5nm,0.3s						
ASAR	Alice Springs	17.67	165	P	Pn	11 42 59.4	+0.3
	0.3nm,0.3s,baz=346,slow=10.0,SNR=21						
ASAR				S	Sn	11 46 00.2	-17
	0.2nm,0.5s,baz=253,slow=42,SNR=1.4						
	0.6nm,0.4s						
MKAR	Makanchi Array	67.32	327	P	P	11 49 48.1	0.0
	1.4nm,0.5s,baz=114,slow=8.2,SNR=13						
	1.4nm,0.5s						

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*NEIC **26** 11:41:01.1±2.9, 18°.79S±0°.05×69°.17W±0°.07, h118^{km}±8^{km}, mb4.3/10, ML3.9(GUC), Error ellipse: s-maj=12.7km s-min=1.7km az=126.0*

*GUC **26** 11:41:01.3±0.6, 18°.73S×69°.21W, h116^{km}±3^{km}, ML3.9*

*IDC **26** 11:41:02.1±1.6, 18°.78S×69°.08W, h130^{km}±12^{km}, mb3.9/7, mbtmp4.3/10, MS2.8/3, Error ellipse: s-maj=26.6km s-min=14.3km az=101.0*

*VAO **26** 11:41:02.4±0.7, 18°.71S×69°.14W, h125^{km}, mb4.3*

ISC 26 11:41:00.1±0.6, 18°.81S±0°.03×69°.25W±0°.06, h122^{km}±6^{km}, n78, σ1^{s}.57/92, mb4.0/7, 8C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	IPOC Station P	0.53	333		Pn	11 41 20.1	+1.0
PB16	IPOC Station P	0.53	333	⇑iP	Pn	11 41 19.8	+0.7
PB16				iS	Sn	11 41 33.6	+0.3
PB16				IAML		11 41 35.1	
	comp=N,3µm,0.6s						
PB11	IPOC Station P	1.02	202		Pn	11 41 24.0	+1.4
PB11	IPOC Station P	1.02	202	⇑iP	Pn	11 41 23.8	+1.2
PB11				eS	Sn	11 41 40.9	+1.2
PB11				IAML		11 41 42.6	
	comp=N,3µm,0.2s						
PB12	IPOC Station P	1.04	281		Pn	11 41 23.2	+0.5
PB12	IPOC Station P	1.04	281	⇑iP	Pn	11 41 23.0	+0.3
PB12				iS	Sn	11 41 39.8	0.0
PB12				IAML		11 41 43.6	
	comp=N,2µm,0.4s						
AP01	Chacalluta	1.12	293	⇑iP	Pn	11 41 24.1	+0.6
AP01				iS	Sn	11 41 41.5	+0.4
AP01				IAML		11 41 42.7	
	comp=E,5µm,0.4s						

PB08	IPOC Station P	1.33	176		Pn	11 41 28.2	+2.2
PB08	IPOC Station P	1.33	176	⇑iP	Pn	11 41 28.0	+1.9
PB08				eS	Sn	11 41 47.9	+2.2
PB08				IAML		11 41 50.6	
	comp=E,1μm,0.3s						
TA01	Diego Aracena	1.95	206		Pn	11 41 34.2	+1.2
TA01	Diego Aracena	1.95	206	⇑iP	Pn	11 41 34.0	+1.0
TA01				eS	Sn	11 41 57.3	-0.9
TA01				IAML		11 42 04.1	
	comp=N,767nm,0.3s						
PATCX	Punta Patache	2.17	203		Pn	11 41 37.0	+1.1
PATCX	Punta Patache	2.17	203	eP	Pn	11 41 36.9	+1.1
PATCX				eS	Sn	11 42 01.8	-1.5
PATCX				IAML		11 42 13.5	
	comp=E,767nm,0.5s						
PB01	IPOC Station P	2.23	186		Pn	11 41 38.5	+1.9
PB01	IPOC Station P	2.23	186	⇓eP	Pn	11 41 37.9	+1.3
PB01				eS	Sn	11 42 04.8	+0.2
PB01				IAML		11 42 06.5	
	comp=N,1μm,0.3s						
PB02	IPOC Station P	2.57	194		Pn	11 41 42.8	+1.9
PB02	IPOC Station P	2.57	194	⇓eP	Pn	11 41 42.1	+1.2
PB02				eS	Sn	11 42 09.1	-3.2
PB02				IAML		11 42 22.3	
	comp=E,909nm,0.2s						
LPAZ	La Paz	2.73	23	P	Pn	11 41 45.3	+1.8
	comp=E,27nm,0.3s,baz=179,slow=3.3,SNR=236						
LPAZ				S	Sn	11 42 17.9	+1.1
	comp=E,31nm,0.8s,baz=216,slow=8.6,SNR=4.5						
LPAZ	La Paz	2.73	23		Pn	11 41 45.5	+2.0
LPAZ	La Paz	2.73	23	⇓eP	Pn	11 41 45.2	+1.8
LPAZ				eS	Sn	11 42 16.2	-0.6
LPAZ	La Paz	2.73	23	eP	Pn	11 41 45.1	+1.6
PB07	IPOC Station P	2.96	191		Pn	11 41 48.3	+2.2
PB07	IPOC Station P	2.96	191	eP	Pn	11 41 47.7	+1.6
PB07				eS	Sn	11 42 16.4	-5.1
PB07				IAML		11 42 27.2	
	comp=E,369nm,0.4s						
PB09	IPOC Station P	2.97	180		Pn	11 41 48.3	+2.1
PB09	IPOC Station P	2.97	180	eP	Pn	11 41 48.1	+1.9
PB09				eS	Sn	11 42 19.4	-2.4
PB09				IAML		11 42 25.2	
	comp=N,250nm,0.3s						
PB04	IPOC Station P	3.60	193		Pn	11 41 56.5	+2.0
PB04	IPOC Station P	3.60	193	⇑eP	Pn	11 41 55.5	+0.9
PB04				eS	Sn	11 42 33.6	-3.1
LVC	Limon Verde	3.79	175	P	Pn	11 41 59.4	+2.2
	comp=N,21nm,0.4s,baz=25,slow=9.8,SNR=61						
LVC				S	Sn	11 42 41.7	+0.2
	comp=N,82nm,0.3s,baz=138,slow=20,SNR=7.0						
LVC				LR	LR	11 43 47.3	
	comp=N,49nm,18.0s,baz=22,slow=43						
LVC	Limon Verde	3.79	175		Pn	11 41 59.8	+2.5
LVC	Limon Verde	3.79	175	eP	Pn	11 41 59.4	+2.2
LVC				eS	Sn	11 42 41.8	+0.3
LVC	Limon Verde	3.79	175	eP	Pn	11 42 00.1	+2.9
PB06	IPOC Station P	3.89	184		Pn	11 41 59.3	+1.0
PB06	IPOC Station P	3.89	184	⇑eP	Pn	11 41 59.3	+1.0
PB06				eS	Sn	11 42 40.9	-2.5
PB15	IPOC Station P	4.38	183		Pn	11 42 06.5	+1.6
PB15	IPOC Station P	4.38	183	eP	Pn	11 42 05.9	+1.0
PB15				eS	Sn	11 42 53.6	-1.7
PB10	IPOC Station P	4.83	194	Pn	Pn	11 42 10.9	+0.1
PB14	IPOC Station P	5.88	190	Pn	Pn	11 42 24.0	-1.3
GO02	Mina Guanaco	6.33	183		Pn	11 42 31.4	+0.2
AC01	Pan de Azucar	7.41	189	Pn	Pn	11 42 43.7	-1.8
AC02	Maricunga	7.99	179		Pn	11 42 53.9	0.0
SIV	San Ignacio	8.30	72	P	Pn	11 42 55.9	-1.8
	comp=N,18nm,0.4s,baz=259,slow=10,SNR=99						
SIV				S	Sn	11 44 25.4	-4.4
	comp=N,2.2nm,0.6s,baz=41,slow=19,SNR=3.5						
SIV				LR	LR	11 46 05.9	
	comp=N,32nm,19.8s,baz=224,slow=37						
ETMB	Extrema	9.41	19	eP	Pn	11 43 11.8	-0.8
VILB	Vilhena	10.47	58	eP	Pn	11 43 25.0	-2.0
SALV	Santo Antonio	13.27	79	eP	Pn	11 44 03.8	+0.1
PDRB	Porto dos Gac	14.04	61	eP	Pn	11 44 13.8	0.0
MT02	Curacav	14.49	186	Pn	Pn	11 44 19.8	+0.4
MT09	Talagante	14.99	186	P	P	11 44 28.7	+0.4
MT09				IAmb	IAmb	11 44 31.7	
	comp=Z,12nm,0.7s						
LMEL	Las Melosas	15.00	183	P	P	11 44 28.3	-0.1
LMEL				IAmb	IAmb	11 44 33.0	
	comp=Z,7.2nm,0.7s						
MT01	Popeta	15.10	186		P	11 44 28.4	-1.0
CLDB	Colider	15.21	61	eP	Pn	11 44 27.4	-1.1
PTGB	Pitanga	17.01	113	eP	Pn	11 44 51.6	+0.9
PCMB	Pacaembu	17.11	102	eP	Pn	11 44 52.9	+0.9
ITRB	Iturama	17.86	96	eP	Pn	11 45 00.4	-0.6
CPSB	Cacapava Do Su	18.41	132	eP	Pn	11 45 08.4	+0.9
SNDB	Serra Nova Dou	18.59	71	eP	P	11 45 07.6	-0.4
FRTB	Fartura	18.91	107	eP	P	11 45 12.1	+0.6
ITTB	Itaituba	19.51	44	eP	P	11 45 16.8	-1.1
BB19B	Bebedouro	19.61	100	eP	P	11 45 18.8	-0.3
CNLB	Canela	19.76	125	eP	P	11 45 20.9	+0.3
TIJ01	Guaruva-PR	19.84	113	eP	Pn	11 45 23.0	-1.4
IPMB	Ipameri, GO	19.98	91	eP	P	11 45 22.4	-0.7
TRQA	Tornquist	20.20	163	P	Pn	11 45 27.0	-1.3
BDFB	Brasilia	20.53	84	P	Pn	11 45 30.7	-1.7
	comp=Z,7.2nm,0.4s,baz=269,slow=8.6,SNR=13						
	comp=Z,7.2nm,0.4s						
BDFB	Brasilia	20.53	84	IAmb	IAmb	11 45 31.7	
	comp=Z,8.7nm,0.5s						
PLCA	Paso Flores	21.88	183	P	P	11 45 45.2	+2.0
	comp=Z,4.0nm,0.8s,baz=357,slow=8.0,SNR=4.6						
	comp=Z,4.0nm,0.8s						
PLCA	Paso Flores	21.88	183	IAmb	IAmb	11 45 47.1	
	comp=Z,8.4nm,1.1s						
BOAV	Boa Vista	22.76	23	eP	P	11 45 52.9	+0.7
SMTB	Santa Maria do	23.22	68	eP	P	11 45 56.3	-0.4
BAUV	El Baul	27.60	3	P	P	11 46 34.5	-1.6
SJCC	San Jacinto, C	29.12	348	P	P	11 46 50.5	+0.9
SJCC				IAmb	IAmb	11 47 12.8	
	comp=Z,12nm,1.2s						
RCBR	Riachuelo	34.96	73	P	P	11 47 41.5	+0.6
	comp=Z,14nm,1.1s,baz=262,slow=3.4,SNR=1.4						
	comp=Z,14nm,1.1s						
DBIC	Dimbokro	68.31	75	P	P	11 51 48.0	-0.7
	comp=Z,4.6nm,0.6s,baz=254,slow=7.2,SNR=9.9						
	comp=Z,4.6nm,0.6s						
DBIC	Dimbokro	68.31	75	IAmb	IAmb	11 51 50.1	
	comp=Z,18nm,1.4s						
TORD	Torodi Ar. Bea	76.78	71	P	P	11 52 37.8	-0.9
	comp=Z,1.0nm,0.4s,baz=249,slow=5.0,SNR=5.3						
	comp=Z,1.0nm,0.4s						
ESDC	Sonseca Array	84.16	45	P	P	11 53 18.5	+0.7
	comp=Z,1.1nm,0.9s,baz=243,slow=5.4,SNR=6.8						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	88.56	341	P	P	11 53 39.6	+1.0
	comp=Z,1.0nm,0.7s,baz=135,slow=4.7,SNR=7.1						
YKA				pP	pP	11 54 11.8	+0.4
	comp=Z,0.7nm,0.7s,baz=136,slow=5.3,SNR=3.9						
	comp=Z,1.0nm,0.7s						
AFI	Afiamalu	97.06	253	LR	LR	12 30 43.1	
	comp=Z,26nm,18.6s,baz=116,slow=31						
SONM	Songino Array	150.83	6	PKPbc	PKPbc	12 00 39.6	+1.2
	comp=Z,1.6nm,0.6s,baz=330,slow=1.6,SNR=7.6						

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*IDC **26** 11:47:53.0±3.1, 30°.77S×139°.36E, h0km, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=84.2km s-min=16.3km az=41.0*

*AUST **26** 11:47:53.9±0.8, 31°.08S×139°.16E, h12km, Error ellipse: s-maj=10.1km s-min=8.4km az=21.0*

ISC 26 11:47:51.2±0.8**, 30°.89S**±0°.05×**139°.28E**±0°.05**, h10km, n11,** σ**2s.11**/22**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	Leigh Creek	1.02	296	P	Pn	11 48 13.7	+2.1
	baz=1.0						
LCRK				S	Sn	11 48 27.4	+1.5
	baz=1.0						
STKA	Stephens Creek	2.21	117	Pn	Pb	11 48 31.2	-0.1
	0.3nm,0.3s,baz=299,slow=14,SNR=8.9						
STKA				Pg	Pg	11 48 33.9	+0.3
	2.2nm,0.3s,baz=294,slow=17,SNR=10						
STKA				Sn	Sb	11 48 58.1	-0.7
	3.3nm,0.3s,baz=277,slow=17,SNR=8.2						
STKA				Lg	Lg	11 49 03.0	
	10nm,0.3s,baz=177,slow=19,SNR=18						
	1.2nm,0.3s						
STKA	Stephens Creek	2.21	117	P	Pb	11 48 31.1	-0.2
	baz=2.2						
STKA				S	Sb	11 48 58.7	-0.1
	baz=2.2						
HTT	Hallett	2.55	187	P	Pn	11 48 33.8	+1.1
	baz=2.4						
BBOO	Buckleboo	3.34	234	P	Pn	11 48 43.8	+0.3
	baz=3.1						
BBOO				S	Sn	11 49 21.0	-2.3
	baz=3.1						
INKA	Innaminka	3.39	23	P	Pb	11 48 50.4	-1.0
	baz=3.6						
INKA				S	Sb	11 49 32.7	0.0
	baz=3.6						
OOD	Oodnadatta	4.40	314	P	Pn	11 49 02.1	+4.1
	baz=4.5						
OOD				S	Sn	11 49 50.8	+1.4
	baz=4.5						
MULG	Mulgathing	4.54	276	P	Pn	11 49 01.8	+1.7
	baz=4.5						
MULG				S	Sn	11 49 51.9	-1.0
	baz=4.5						
CMSA	Cobar Meteorol	5.53	98	P	Pn	11 49 15.7	+2.0
	baz=5.6						
CMSA				S	Sn	11 50 16.8	-0.6
	baz=5.6						
ASAR	Alice Springs	8.64	325	Pn	Pn	11 49 58.5	+2.2
	baz=151,slow=12,SNR=1.5						
ASAR				Sn	Sn	11 51 31.4	-2.5
	0.3nm,0.3s,baz=149,slow=22,SNR=11						
	0.2nm,0.5s						
WRA	Warramunga Arr	11.78	337	Pn	Pn	11 50 40.8	+1.4
	0.1nm,0.3s,baz=153,slow=12,SNR=5.1						
WRA				Sn	Sn	11 52 45.5	-5.5
	baz=158,slow=25,SNR=2.3						
	0.1nm,0.3s						

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*IDC **26** 11:54:44.2±5.0, 13°.84N×88°.33W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=123.2km s-min=84.3km az=42.0*

*UCR **26** 11:54:51.8±1.0, 13°.20N×89°.71W, h38km±18km, ML3.9*

*INET **26** 11:54:51.7±0.9, 13°.18N×89°.64W, h15km±9km, MW3.9*

*SNET **26** 11:54:51.7±1.0, 13°.20N×89°.71W, h38km±17km, ML4.0*

*GCG **26** 11:54:57.3±0.8, 14°.01N×89°.76W, h92km±14km, MD3.8*

ISC 26 11:54:52.4±1.3**, 13°.25N**±0°.08×**89°.72W**±0°.05**, h49km**±10km**, n72,** σ**1s.08**/113**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.46	59	eP	Pn	11 55 02.3	-0.8
LALI				eS	Sn	11 55 09.9	-0.8
LALI	Alcalda de L	0.46	59	eP	Pn	11 55 02.3	-0.8
LALI				eS	Sn	11 55 09.9	-0.8
LALI	Alcalda de L	0.46	59	eP	Pn	11 55 02.3	-0.8
JAYA	Jayaque - finc	0.48	33	eS	Sn	11 55 11.4	-0.1
JAYA	Jayaque - finc	0.48	33	eS	Sn	11 55 11.4	-0.1
CEVE	Cerro Verde	0.58	9	iP	Pn	11 55 04.5	-0.4
CEVE				eS	Sn	11 55 14.8	+1.0
CEVE				IAML		11 55 17.8	
	comp=Z,8μm,0.3s						
CEVE	Cerro Verde	0.58	9	iP	Pn	11 55 04.5	-0.4
CEVE				eS	Sn	11 55 14.8	+1.0
CEVE				IAML		11 55 17.8	
	comp=Z,8μm,0.3s						
SBLS	San Blas	0.59	9	eP	Pn	11 55 04.6	-0.4
SBLS	San Blas	0.59	9	eP	Pn	11 55 04.6	-0.4
CEDA	San Andres	0.64	30	eP	Pn	11 55 04.9	-0.4
CEDA				eS	Sn	11 55 15.5	+0.8
CEDA	San Andres	0.64	30	eP	Pn	11 55 04.9	-0.4
CEDA				eS	Sn	11 55 15.5	+0.8
CEDA	San Andres	0.64	30	eP	Pn	11 55 04.9	-0.4
SNET	Serv Nac Est T	0.65	47	eP	Pn	11 55 04.7	-0.7
SNET				eS	Sn	11 55 14.7	-0.2
SNET	Serv Nac Est T	0.65	47	eP	Pn	11 55 04.7	-0.7
SNET				eS	Sn	11 55 14.7	-0.2
SNET	Serv Nac Est T	0.65	47	eP	Pn	11 55 04.8	-0.7
SNET				eS	Sn	11 55 14.6	-0.3
BOQS	Boqueron	0.65	42	eP	Pn	11 55 05.2	-0.4
BOQS	Boqueron	0.65	42	eP	Pn	11 55 05.2	-0.4
RTR	El Retiro	0.65	6	eP	Pn	11 55 05.5	-0.2
RTR	El Retiro	0.65	6	eP	Pn	11 55 05.5	-0.2
NUBE	Las Nubes	0.65	355	eP	Pn	11 55 05.2	-0.5
NUBE				eS	Sn	11 55 15.1	-0.1
NUBE	Las Nubes	0.65	355	eP	Pn	11 55 05.2	-0.5
NUBE				eS	Sn	11 55 15.1	-0.1
UEES	Universidad Ev	0.66	45	iP	Pn	11 55 05.1	-0.6
UEES	Universidad Ev	0.66	45	iP	Pn	11 55 05.1	-0.6
UESS	Universidad de	0.69	47	eP	Pn	11 55 05.7	-0.4
UESS				eS	Sn	11 55 16.1	+0.2
UESS	Universidad de	0.69	47	eP	Pn	11 55 05.7	-0.4
UESS				eS	Sn	11 55 16.1	+0.2
UDBS	Universidad Do	0.72	50	eP	Pn	11 55 06.0	-0.4
UDBS				eS	Sn	11 55 16.8	+0.2
UDBS				IAML		11 55 17.4	
	comp=Z,6μm,0.2s						
UDBS	Universidad Do	0.72	50	eP	Pn	11 55 06.0	-0.4
UDBS				eS	Sn	11 55 16.8	+0.2
UDBS				IAML		11 55 17.4	
	comp=Z,6μm,0.2s						
AEIL	Aeropuerto Ilo	0.74	53	eP	Pn	11 55 06.4	-0.2
AEIL				eS	Sn	11 55 18.0	+1.0
AEIL				IAML		11 55 23.0	
	comp=Z,7μm,0.3s						
AEIL	Aeropuerto Ilo	0.74	53	eP	Pn	11 55 06.4	-0.2
AEIL				eS	Sn	11 55 18.0	+1.0
AEIL				IAML		11 55 23.0	
	comp=Z,7μm,0.3s						
LFRS	El Faro	0.74	60	iP	Pn	11 55 06.1	-0.7
LFRS	El Faro	0.74	60	iP	Pn	11 55 06.1	-0.7
LFU	La Fuente	0.77	50	iP	Pn	11 55 06.9	-0.2
LFU	La Fuente	0.77	50	iP	Pn	11 55 06.9	-0.2
SLOZ	Alcaldia de Sa	0.78	355	eP	Pn	11 55 07.1	-0.1
SLOZ				eS	Sn	11 55 19.4	+1.5
SJTE	Alcalda de S	0.78	62	eP	Pn	11 55 06.6	-0.7
SJTE				eS	Sn	11 55 18.2	0.0
SJTE	Alcalda de S	0.78	62	eP	Pn	11 55 06.6	-0.7
SJTE				eS	Sn	11 55 18.2	0.0
LBRS	Las Brisas	0.82	53	eP	Pn	11 55 07.5	-0.2
LBRS	Las Brisas	0.82	53	eP	Pn	11 55 07.5	-0.2
PAVA	Las Pavas	0.89	59	eP	Pn	11 55 08.5	-0.2
PAVA				eS	Sn	11 55 21.9	+1.2
PAVA	Las Pavas	0.89	59	eP	Pn	11 55 08.5	-0.2
PAVA				eS	Sn	11 55 21.9	+1.2
PAVA	Las Pavas	0.89	59	eP	Pn	11 55 08.6	-0.2
COEG	Centro de Oper	0.90	66	eP	Pn	11 55 08.1	-0.6
COEG				eS	Sn	11 55 21.0	+0.2
COEG				IAML		11 55 23.7	
	comp=Z,4μm,0.2s						
COEG	Centro de Oper	0.90	66	eP	Pn	11 55 08.1	-0.6
COEG				eS	Sn	11 55 21.0	+0.2
COEG				IAML		11 55 23.7	
	comp=Z,4μm,0.2s						
UESV	Universidad de	0.99	67	eP	Pn	11 55 09.6	-0.3
UESV				eS	Sn	11 55 23.1	+0.3
UESV				IAML		11 55 24.8	
	comp=Z,3μm,0.2s						
UESV	Universidad de	0.99	67	eP	Pn	11 55 09.6	-0.3
UESV				eS	Sn	11 55 23.1	+0.3
UESV				IAML		11 55 24.8	
	comp=Z,3μm,0.2s						
SCLA	Alcaldia de Sa	1.06	65	eP	Pn	11 55 10.9	-0.2
SCLA				eS	Sn	11 55 25.9	+1.1
SCLA	Alcaldia de Sa	1.06	65	eP	Pn	11 55 10.9	-0.2
SCLA				eS	Sn	11 55 25.9	+1.1
COEB	Comit de Eme	1.18	78	eP	Pn	11 55 11.9	-0.7
COEB				eS	Sn	11 55 27.3	-0.5
COEB				IAML		11 55 29.4	
	comp=Z,2μm,0.3s						
COEB	Comit de Eme	1.18	78	eP	Pn	11 55 11.9	-0.7
COEB				eS	Sn	11 55 27.3	-0.5
COEB				IAML		11 55 29.4	
	comp=Z,2μm,0.3s						
COEB	Comit de Eme	1.18	78	eP	Pn	11 55 11.8	-0.9
PQSS	Presa 15 de Se	1.19	72	eP	Pn	11 55 12.4	-0.2
PQSS				eS	Sn	11 55 28.0	+0.3
PQSS	Presa 15 de Se	1.19	72	eP	Pn	11 55 12.4	-0.2
PQSS				eS	Sn	11 55 28.0	+0.3
MTO3	Montecristo	1.20	17	eP	Pn	11 55 12.9	-0.1
PACA	Pacayal	1.38	81	eP	Pn	11 55 15.3	-0.1
PACA	Pacayal	1.38	81	eP	Pn	11 55 15.3	-0.1
PCG	Pacaya	1.43	323	eS	Sn	11 55 32.0	-1.9
JUCU	Jucuar¡n	1.43	90	eP	Pn	11 55 15.1	-1.0
JUCU				eS	Sn	11 55 32.9	-0.9
JUCU				IAML		11 55 37.2	
	comp=Z,1μm,0.3s						
JUCU	Jucuar¡n	1.43	90	eP	Pn	11 55 15.1	-1.0
JUCU				eS	Sn	11 55 32.9	-0.9
JUCU				IAML		11 55 37.2	
	comp=Z,1μm,0.3s						
NBG	Las Nubes	1.46	336	eP	Pn	11 55 18.2	+1.6
FUG	Fuego 3	1.61	318	eP	Pn	11 55 19.4	+0.8
FUG				eS	Sn	11 55 37.1	-1.3
FAGO	Alcalda de S	1.63	74	eP	Pn	11 55 17.5	-1.2
LCND	La Caada	1.78	88	eP	Pn	11 55 20.4	-0.3
LCND				eS	Sn	11 55 42.8	+0.5
LCND				IAML		11 55 49.0	
	comp=Z,1μm,0.3s						
LCND	La Caada	1.78	88	eP	Pn	11 55 20.4	-0.3
LCND				eS	Sn	11 55 42.8	+0.5
LCND				IAML		11 55 49.0	
	comp=Z,1μm,0.3s						
MRL	Marmol	1.82	1	eP	Pn	11 55 22.8	+1.3
MRL				eS	Sn	11 55 35.5	-8.0
CNCH	Conchagua	1.84	89	eP	Pn	11 55 21.1	-0.5
CNCH				eS	Sn	11 55 44.0	+0.2
CNCH				IAML		11 55 50.9	
	comp=Z,3μm,0.3s						
CNCH	Conchagua	1.84	89	eP	Pn	11 55 21.1	-0.5
CNCH				eS	Sn	11 55 44.0	+0.2
CNCH				IAML		11 55 50.9	
	comp=Z,3μm,0.3s						
STG3	Santiaguito 3,	2.31	309	eP	Pn	11 55 29.0	+0.9
STG3				eS	Sn	11 55 53.6	-1.9
TGUH	Tegucigalpa,Un	2.51	71	eP	Pn	11 55 30.1	-0.7
TXAR	Lajitas Array	20.58	323	P	P	11 59 29.2	+1.8
	comp=Z,0.6nm,0.5s,baz=145,slow=11,SNR=14						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	35.66	320	P	P	12 01 47.2	+1.1
	comp=Z,0.5nm,0.7s,baz=132,slow=7.7,SNR=5.2						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	52.28	346	P	P	12 03 56.0	-2.5
	comp=Z,0.2nm,0.3s,baz=130,slow=7.7,SNR=5.2						
	comp=Z,0.2nm,0.3s						
WRA	Warramunga Arr	137.35	255	PKP	PKPdf	12 14 12.9	+1.5
	comp=Z,0.3nm,0.9s,baz=85,slow=1.0,SNR=5.4						

RHSSO 26 12:14:00.3±0.7**, 44°.89N**×**16°.88E, h6km**±4km**, ML1.1**/2**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A051A	Mrakovica	0.13	9	⇑iPg	Pg	12 14 03.0	0.0
A051A				eSg	Sg	12 14 05.9	+1.0
BLY	Banja Luka	0.26	122	ePg	Pg	12 14 05.2	-0.1
BLY				eSg	Sg	12 14 09.4	+0.7
A050A	Klekovaca	0.47	212	⇑iPg	Pg	12 14 08.4	-1.1
A050A				eSg	Sg	12 14 16.4	+0.7
MGRS	Mrkonjic Grad	0.49	163	eSg	Sg	12 14 17.2	+1.0
MOSL	Moslavina	0.73	353	ePg	Pg	12 14 13.5	-0.9
MOSL				Sg	Sg	12 14 24.6	+0.6
A252A	Venje	0.88	51	ePg	Pg	12 14 17.4	+0.3
A252A				Sg	Sb	12 14 29.4	-0.5
CRES	Cresnjev	1.38	314	eSg	Sb	12 14 44.1	-0.1

IDC 26 12:38:06.3±7.9**, 22°.48N**×**94°.88E, h0km, mb3.5**/3**, mbtmp3.5**/3**, MS3.3**/2**, Error ellipse: s-maj=679.9km s-min=28.9km az=60.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	26.30	340	P	P	12 43 43.6	0.0
	0.4nm,0.4s,baz=141,slow=11,SNR=4.1						
	0.4nm,0.4s						
LEM	Lembang	31.69	155	LR	LR	12 57 37.8	
	comp=Z,84nm,19.5s,baz=184,slow=37						
YAK	Yakutsk	46.11	22	LR	LR	13 08 55.8	
	comp=Z,21nm,18.5s,baz=118,slow=40						
WRA	Warramunga Arr	57.12	135	P	P	12 47 54.8	-0.2
	0.2nm,0.3s,baz=319,slow=7.6,SNR=15						
	0.2nm,0.3s						
ASAR	Alice Springs	59.53	138	P	P	12 48 11.9	+0.1
	0.3nm,0.6s,baz=312,slow=6.9,SNR=5.4						
	0.3nm,0.6s						

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*IDC **26** 12:58:44.7±1.9, 5°.98S×152°.28E, h0km, mb3.3/3, mbtmp3.4/4, ML1.4/1, Error ellipse: s-maj=57.5km s-min=19.2km az=108.0*

ISC 26 12:58:49.2±2.7**, 6°.0S**±0°.2×**152°.1E**±0°.3**, h35km, n6,** σ**3s.74**/6**, mb3.3**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.66	358	Pn	Pn	12 59 16.9	+1.0
	105nm,0.3s,baz=257,slow=1.6,SNR=279						
KRVT				Sn	Sn	12 59 36.8	+0.8
	58nm,0.3s,baz=197,slow=19,SNR=8.2						
PMG	Port Moresby	5.94	235	Pn	Pn	13 00 16.5	+1.8
	0.6nm,0.3s,baz=87,slow=17,SNR=1.2						
PMG				Sn	Sn	13 01 20.2	-1.5
	2.5nm,0.3s,baz=147,slow=23,SNR=7.6						
	2.3nm,0.4s						
WRA	Warramunga Arr	22.13	230	P	P	13 03 43.3	+1.3
	0.5nm,0.4s,baz=54,slow=10.0,SNR=4.8						
	0.5nm,0.4s						
ASAR	Alice Springs	24.80	223	P	P	13 04 10.5	+2.4
	0.4nm,0.5s,baz=57,slow=8.9,SNR=12						
	0.4nm,0.5s						
ILAR	Eielson Array	83.52	22	P	P	13 11 13.8	+0.6
	0.3nm,0.7s,baz=253,slow=4.6,SNR=2.7						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	149.96	286	PKPbc	PKPab	13 18 37.4	-5.3
	0.8nm,0.6s,baz=81,slow=2.2,SNR=6.9						

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*MOS **26** 13:08:34.3±1.0, 47°.87N×154°.12E, h78km, mb4.2/1, Error ellipse: s-maj=16.9km s-min=4.8km az=65.6*

*SKHL **26** 13:08:35.9±0.7, 47°.80N×154°.20E, h89km±4km, mb4.8/9, msha5.7/3*

*IDC **26** 13:08:40.5±2.7, 48°.37N×153°.45E, h121km±24km, mb3.3/8, mbtmp3.7/11, MS2.3/1, Error ellipse: s-maj=41.9km s-min=15.9km az=155.0*

ISC 26 13:08:36.1±0.9**, 47°.9N**±0°.1×**154°.1E**±0°.1**, h100km, n57,** σ**1s.85**/60**, mb3.7**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.06	25	PN	Pn	13 09 23.3	+0.7
SKR				S	Sn	13 09 58.0	-0.5
SKR	Severo-Kuril's	3.06	25	eP	Pn	13 09 22.9	+0.3
SKR				AMB	AMB	13 09 25.5	
	40nm,0.7s						
SKR				iS	Sn	13 09 58.7	+0.2
SKR				A	A	13 10 03.1	
	130nm,0.4s						
SKR				A	A	13 10 03.1	
	120nm,0.4s						
PAU	Pauzhetka	3.96	25	PN	Pn	13 09 35.4	+0.7
PAU				S	Sn	13 10 18.5	-1.6
PAU	Pauzhetka	3.96	25	iP	Pn	13 09 35.4	+0.7
PAU				AMB	AMB	13 09 36.3	
	30nm,0.4s						
PAU				eS	Sn	13 10 19.5	-0.6
PAU				A	A	13 10 20.7	
	120nm,0.3s						
PAU				A	A	13 10 20.7	
	290nm,0.3s						
KDTR	Khodutka, Kamc	4.66	32	PN	Pn	13 09 42.9	-1.3
KDTR				S	Sn	13 10 32.7	-4.4
MIPR	Malaya Ipel'ka	4.68	20	PN	Pn	13 09 45.0	+0.5
KUR	Kuril'sk	5.07	240	PN	Pn	13 09 51.0	+1.3
KUR				S	Sn	13 10 50.7	+3.6
KUR				pmax	pmax		
	comp=Z,27nm,0.6s						
KUR				smax	smax		
	comp=N,72nm,0.3s						
KUR				smax	smax		
	comp=E,39nm,0.4s						
KUR	Kuril'sk	5.07	240	eP	Pn	13 09 51.0	+1.3
KUR				AMB	AMB	13 09 54.0	
	comp=E,40nm,0.4s						
KUR				eS	Sn	13 10 47.0	-0.1
KUR				A	A	13 11 05.7	
	comp=E,90nm,0.3s						
KUR				A	A	13 11 05.7	
	comp=E,70nm,0.3s						

ASAK	**Asacha**	**5.09**	**27**	PN	**Pn**	**13 09 50.8**	**+0.8**
MTVR	**Mutnovka**	**5.26**	**28**	PN	**Pn**	**13 09 53.0**	**+0.5**
MTVR				S	**Sn**	**13 10 48.8**	**-3.1**
GRL	**Gorelyy**	**5.29**	**27**	PN	**Pn**	**13 09 54.2**	**+1.4**
RUS	**Russkaya**	**5.33**	**30**	PN	**Pn**	**13 09 51.9**	**-1.3**
RUS	**Russkaya**	**5.33**	**30**	*e*P	**Pn**	**13 09 51.9**	**-1.3**
APC	**Apacha**	**5.38**	**20**	PN	**Pn**	**13 09 54.7**	**+0.9**
PETK	**Petropavlovsk-**	**5.68**	**22**	P	**Pn**	**13 09 58.5**	**+0.5**
	comp=E,3.5nm,0.4s,baz=182,slow=10,SNR=39						
PETK				S	**Sn**	**13 11 06.8**	**+5.1**
	comp=E,2.3nm,0.7s,baz=149,slow=20,SNR=2.0						
PET	**Petropavlovsk**	**5.88**	**28**	*e*PN	**Pn**	**13 10 01.8**	**+1.2**
PET	**Petropavlovsk**	**5.88**	**28**	*e*P	**Pn**	**13 10 01.5**	**+0.9**
PET				AMB	AMB	13 10 05.9	
	comp=E,20nm,0.4s						
DALK	**Dalny**	**5.91**	**28**	PN	**Pn**	**13 10 00.6**	**-0.5**
UGLR	**Uglovaya**	**6.09**	**28**	PN	**Pn**	**13 10 04.9**	**+1.3**
KOK	**Koryaka**	**6.10**	**26**	PN	**Pn**	**13 10 05.5**	**+1.7**
KOK	**Koryaka**	**6.10**	**26**	*e*P	**Pn**	**13 10 05.5**	**+1.7**
AVH	**Avacha**	**6.11**	**27**	PN	**Pn**	**13 10 05.3**	**+1.4**
SMAR	**Somma**	**6.13**	**27**	PN	**Pn**	**13 10 06.5**	**+2.3**
KRX	**Arik**	**6.16**	**26**	PN	**Pn**	**13 10 05.6**	**+0.9**
SDLR	**Sedlovina**	**6.17**	**28**	PN	**Pn**	**13 10 04.9**	**+0.2**
SPN	**Mys Shipunski**	**6.41**	**34**	PN	**Pn**	**13 10 06.9**	**-1.0**
SHO	**Shikotan**	**6.49**	**234**	*i* PN	**Pn**	**13 10 07.4**	**-1.7**
SHO	**Shikotan**	**6.49**	**234**	*i* P	**Pn**	**13 10 08.3**	**-0.8**
SHO				AMB	AMB	13 10 08.7	
	comp=E,30nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.93**	**239**	*e*PN	**Pn**	**13 10 15.3**	**+0.3**
YUK				S	**Sn**	**13 11 30.7**	**-1.6**
YUK				pmax	pmax		
	comp=N,42nm,0.3s						
YUK				pmax	pmax		
	comp=Z,66nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.93**	**239**	*e*P	**Pn**	**13 10 15.4**	**+0.4**
YUK				AMB	AMB	13 10 15.8	
	comp=Z,40nm,0.4s						
YUK				AMB	AMB	13 10 15.8	
	comp=Z,60nm,0.4s						
YUK				*e*S	**Sn**	**13 11 30.7**	**-1.6**
RUSJ	**Misakicho**	**7.25**	**242**	*e*PN	**Pn**	**13 10 22.4**	**+3.0**
RUSJ				S	**Sn**	**13 11 43.2**	**+3.1**
NMR	**Nemuro--Hokkai**	**7.43**	**235**	*e*PN	**Pn**	**13 10 20.0**	**-1.7**
YSS	**Yuzh-Sakhalins**	**7.76**	**267**	*e*PN	**Pn**	**13 10 25.0**	**-1.2**
YSS	**Yuzh-Sakhalins**	**7.76**	**267**	*e*P	**Pn**	**13 10 27.1**	**+0.9**
YSS				AMB	AMB	13 10 27.4	
	comp=Z,20nm,0.2s						
MKZ	**Mys Kozlova**	**8.18**	**33**	PN	**Pn**	**13 10 30.7**	**-1.2**
JKA	**Kamikawa-asahi**	**8.86**	**249**	*e*P	**Pn**	**13 10 42.9**	**+1.6**
ASAJ	**Asahikawa**	**8.87**	**249**	P	**Pn**	**13 10 42.9**	**+1.6**
	comp=Z,11nm,0.6s,baz=75,slow=15,SNR=20						
ASAJ				LR	LR	13 14 06.7	
	comp=Z,17nm,19.0s,baz=176,slow=38						
KLR	**Kul'dur**	**14.85**	**283**	P	**Pn**	**13 11 59.5**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=260,slow=16,SNR=2.1						
KSRS	**Korea Array**	**21.81**	**251**	P	**P**	**13 13 20.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=36,slow=12,SNR=2.5						
	comp=Z,0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.97**	**155**	T	T	13 46 43.5	
	baz=342,slow=76,SNR=97						
H11N1	**WAKE ISLAND Hy**	**29.99**	**155**	T	T	13 46 44.6	
	baz=342,slow=76,SNR=91						
H11N3	**WAKE ISLAND Hy**	**29.99**	**155**	T	T	13 46 43.1	
	baz=342,slow=76,SNR=45						
H11S1	**WAKE ISLAND Hy**	**31.08**	**156**	T	T	13 48 20.0	
	baz=343,slow=76,SNR=128						
H11S3	**WAKE ISLAND Hy**	**31.09**	**156**	T	T	13 48 22.2	
	baz=343,slow=76,SNR=109						
H11S2	**WAKE ISLAND Hy**	**31.10**	**156**	T	T	13 48 20.1	
	baz=343,slow=76,SNR=120						
ILAR	**Eielson Array**	**35.21**	**40**	P	**P**	**13 15 21.9**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=275,slow=7.4,SNR=5.9						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**35.21**	**40**	P	**P**	**13 15 22.0**	**+1.7**
INK	**Inuvik**	**40.30**	**33**	P	**P**	**13 16 05.4**	**+2.5**
	comp=Z,0.6nm,0.4s,baz=303,slow=10,SNR=6.0						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**47.01**	**297**	P	**P**	**13 16 54.6**	**-2.5**
	comp=Z,0.7nm,0.8s,baz=73,slow=9.0,SNR=3.6						
	comp=Z,0.7nm,0.8s						
KURK	**Kurchatov**	**47.29**	**303**	P	**P**	**13 16 56.4**	**-2.7**
KURBB	**Kurchatov Arra**	**47.38**	**303**	P	**P**	**13 16 56.4**	**-3.4**
	comp=Z,0.9nm,0.3s,baz=68,slow=8.5,SNR=2.5						
	comp=Z,0.9nm,0.3s						
YKA	**Yellowknife Ar**	**49.58**	**38**	P	**P**	**13 17 17.7**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=299,slow=7.1,SNR=3.9						
	comp=Z,0.9nm,0.8s						
FINES	**FINESS Array B**	**63.27**	**335**	P	**P**	**13 18 51.5**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=44,slow=5.8,SNR=4.7						
	comp=Z,0.6nm,0.5s						
TXAR	**Lajitas Array**	**76.33**	**61**	P	**P**	**13 20 16.9**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=303,slow=4.5,SNR=6.2						
	comp=Z,0.3nm,0.5s						
H03N2	**Juan Fernandez**	**138.07**	**90**	T	T	16 01 45.9	
	baz=309,slow=77,SNR=6.8						
H03N1	**Juan Fernandez**	**138.09**	**90**	T	T	16 01 46.6	
	baz=309,slow=77,SNR=6.5						
H03N3	**Juan Fernandez**	**138.09**	**90**	T	T	16 01 44.1	
	baz=309,slow=77,SNR=7.4						

WEL ***26*** *13:09:00, 33°.81S×178°.07W, h10^{km}, ML5.4, Mw5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16} Nm; M_{rr}5.26; $M_{\theta\theta}$1.37; $M_{\phi\phi}$-6.64; $M_{r\theta}$0.30; $M_{\theta\phi}$-2.54; $M_{\phi r}$-3.73; Fault plane solution: $M_0$7.41000×10^{16} NP1: ϕ_s35.00000°, δ33.00000°, λ119.00000°. NP2: ϕ_s182.00000°, δ61.00000°, λ73.00000°. Principal axes: T -8286.5500, Plg69.0000°, Azm57.0000°; N 1744.8500, Plg15.0000°, Azm190.0000°; P 6541.7000, Plg15.0000°, Azm285.0000°;*

BJI ***26*** *13:09:51.9±0.0, 33°.51S×178°.00W, h4^{km}, mb5.1/12, mB5.7/10, Ms4.8/6, Ms7 4.6/6*

WEL ***26*** *13:09:53.9±1.1, 34°S±7°×17°8W±2°0, h33^{km}, M5.4/18, mB5.8/15, ML5.7/18, MLv5.5/18, Mw(mB)5.3/15, Error ellipse: s-maj=0.0km s-min=0.0km az=107.3*

IDC ***26*** *13:09:54.6±0.4, 33°.73S×178°.77W, h0^{km}, mb4.6/21, mbtmp4.7/25, ML5.3/3, MS4.4/46, Error ellipse: s-maj=15.4km s-min=14.5km az=64.0*

NEIC ***26*** *13:09:55.7±2.9, 33°.71S±0°.08×178°.5W±0°.2, h10^{km}±1^{km}, mb5.2/37, Error ellipse: s-maj=22.3km s-min=11.8km az=104.0*

GCMT ***26*** *13:09:58.7±0.2, 33°.80S±0°.01×178°.41W±0°.01, h17^{km}, MW5.2/113, Moment Tensor Solution. s75,c111; s113,c188; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.94±.16; $M_{\theta\theta}$-1.21±.10; $M_{\phi\phi}$-3.73±.11; $M_{r\theta}$1.68±.28; $M_{\theta\phi}$-2.14±.07; $M_{\phi r}$4.38±.29; Best double couple: $M_0$6.81700×10^{16} NP1:ϕ_s216.00000°, δ24.00000°, λ101.00000°. NP2:ϕ_s24.00000°, δ67.00000°, λ85.00000°. Principal axes: T 6.8380, Plg68.0000°, Azm285.0000°; N -0.0410, Plg4.0000°, Azm26.0000°; P -6.7970, Plg22.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 13:09:59.8±0.3**, 33°.70S**±0°.04×**178°.62W**±0°.06**, h41**^{km}**, n250,** σ**1**^{s}**87**/237**, mb5.0**/41**, MS4.5**/48**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.46**	**8**	P	Pn	13 10 59.9	-5.0
GLKZ				S	**Sn**	**13 11 49.6**	**-6.1**
RAO	**Raoul Island**	**4.47**	**8**	Pn	**Pn**	**13 11 04.6**	**-0.5**
	68nm,0.3s,baz=107,slow=19,SNR=2.0						
RAO				Sn	**Sn**	**13 11 51.1**	**-4.8**
	96nm,0.3s,baz=78,slow=21,SNR=2.4						
	194nm,0.3s						
RAO	**Raoul Island**	**4.47**	**8**	Pn	**Pn**	**13 11 00.9**	**-4.2**
RIZ	**Raoul Island**	**4.48**	**8**	S	**Sn**	**13 11 50.8**	**-5.3**
MXZ	**Matakaoa Point**	**4.60**	**212**	Pn	**Pn**	**13 11 04.0**	**-2.8**
MXZ	**Matakaoa Point**	**4.60**	**212**	P	**Pn**	**13 11 04.1**	**-2.7**
MXZ				S	**Sn**	**13 11 58.0**	**-1.0**
WMGZ	**Waiomatatini S**	**4.77**	**210**	P	**Pn**	**13 11 07.1**	**-2.0**
PKGZ	**Pakihiroa**	**4.97**	**212**	P	**Pn**	**13 11 09.0**	**-3.0**
PUZ	**Puketiti**	**5.05**	**209**	P	**Pn**	**13 11 09.7**	**-3.3**
WIZ	**White Island**	**5.12**	**221**	P	**Pn**	**13 11 12.9**	**-1.1**
RUGZ	**Raukumara Rang**	**5.21**	**214**	P	**Pn**	**13 11 13.3**	**-2.0**
RUGZ				S	**Sn**	**13 12 13.9**	**-0.4**
TWGZ	**Tauwhareparae**	**5.25**	**211**	P	**Pn**	**13 11 13.7**	**-2.2**
CNGZ	**Carnagh Statio**	**5.42**	**207**	P	**Pn**	**13 11 15.0**	**-3.1**
CNGZ				S	**Sn**	**13 12 21.1**	**+1.9**
WHRZ	**Whale Island**	**5.48**	**220**	P	**Pn**	**13 11 19.4**	**+0.5**
MYRZ	**Mayor Island**	**5.51**	**228**	P	**Pn**	**13 11 19.4**	**+0.1**
TKGZ	**Te Karaka**	**5.53**	**210**	P	**Pn**	**13 11 18.6**	**-1.0**
KUZ	**Kuaotunu**	**5.54**	**235**	P	**Pn**	**13 11 20.1**	**+0.3**
MWZ	**Matawai**	**5.58**	**213**	P	**Pn**	**13 11 17.1**	**-3.2**
OPRZ	**Ohinepanea**	**5.70**	**222**	P	**Pn**	**13 11 20.5**	**-1.5**
URZ	**Urewera**	**5.72**	**216**	Pn	**Pn**	**13 11 18.9**	**-3.3**
	54nm,0.3s,baz=301,slow=23,SNR=262						
URZ				Sn	**Sn**	**13 12 21.8**	**-4.7**
	59nm,0.3s,baz=213,slow=9.8,SNR=7.7						
	314nm,0.6s						
URZ	**Urewera**	**5.72**	**216**	Pn	**Pn**	**13 11 18.6**	**-3.6**
URZ	**Urewera**	**5.72**	**216**	P	**Pn**	**13 11 19.1**	**-3.1**
MARZ	**Manawahe**	**5.74**	**220**	P	**Pn**	**13 11 21.8**	**-0.7**
RAGZ	**Rawiri**	**5.76**	**213**	P	**Pn**	**13 11 19.9**	**-3.0**
TGRZ	**Tauranga**	**5.79**	**225**	P	**Pn**	**13 11 22.6**	**-0.6**
RIGZ	**Rimuhau**	**5.79**	**209**	P	**Pn**	**13 11 20.2**	**-3.0**
WIAZ	**Waiheke Island**	**5.97**	**237**	P	**Pn**	**13 11 27.1**	**+1.4**
KARZ	**Kaharoa**	**6.00**	**223**	P	**Pn**	**13 11 24.9**	**-1.2**
SNGZ	**Shannon Statio**	**6.03**	**212**	P	**Pn**	**13 11 23.8**	**-2.7**
MUGZ	**Murupara**	**6.06**	**217**	P	**Pn**	**13 11 23.7**	**-3.2**
OUZ	**Omahuta**	**6.61**	**255**	Pn	**Pn**	**13 11 35.4**	**+1.0**
BKZ	**Black Stump Fm**	**6.73**	**214**	Pn	**Pn**	**13 11 32.3**	**-3.8**
RPZ	**Rata Peaks**	**12.84**	**216**	Pn	Pn	13 12 53.7	-6.0
	4.2nm,0.3s,baz=72,slow=1.5,SNR=18						
RPZ				Sn	Sn	13 15 05.0	-16
	3.7nm,0.3s,baz=30,slow=16,SNR=9.0						
WHZ	**Wether Hill Ro**	**15.94**	**216**	Pn	**Pn**	**13 13 36.2**	**-4.9**
MSVF	**Nonsavu**	**16.18**	**349**	Pn	**Pn**	**13 13 42.6**	**-1.8**
	0.8nm,0.3s,baz=139,slow=14,SNR=19						
MSVF				LR	LR	13 19 04.6	
	comp=Z,3µm,18.4s,baz=172,slow=34						
	24nm,0.9s						
MSVF	**Nonsavu**	**16.18**	**349**		**Pn**	**13 13 42.5**	**-1.8**
PINNC	**Pines Island,**	**16.50**	**308**	P	**Pn**	**13 13 49.5**	**+1.2**
PINNC				IAmb	IAmb	13 13 55.2	
	comp=Z,228nm,1.4s						
DZM	**Mont Dzumac**	**17.54**	**308**	*e*P	**P**	**13 14 04.2**	**+2.1**
DZM				*e*LR	LR	13 18 10.8	
	comp=Z,5µm,23.4s						
DZM	**Mont Dzumac**	**17.54**	**308**	P	**Pn**	**13 14 00.0**	**-1.4**
	comp=Z,8.6nm,1.0s,baz=165,slow=20,SNR=1.3						
DZM				LR	LR	13 20 00.4	
	comp=Z,4µm,18.2s,baz=132,slow=35						
DZM	**Mont Dzumac**	**17.54**	**308**	P	**P**	**13 14 03.5**	**+1.3**
KOUNC	**Koumac, New Ca**	**20.04**	**306**		Pn	13 14 30.7	-0.7
KOUNC				IAmb	IAmb	13 14 44.4	
	comp=Z,102nm,1.0s						
AFI	**Afiamalu**	**20.66**	**19**	P	**P**	**13 14 35.1**	**-1.1**
AFI				IAmb	IAmb	13 14 53.7	
	comp=Z,182nm,1.4s						
RAR	**Rarotonga**	**20.80**	**58**	P	Pn	13 14 39.3	-1.0
	comp=Z,20nm,0.8s,baz=229,slow=7.7,SNR=5.1						
RAR				LR	LR	13 22 45.3	
	comp=Z,449nm,18.9s,baz=240,slow=37						
	comp=Z,20nm,0.8s						
SANVU	**Saraoutou**	**22.24**	**321**	P	**P**	**13 14 55.7**	**+2.6**
SANVU				IAmb	IAmb	13 15 02.1	
	comp=Z,57nm,0.6s						
MGCD	**Mangrove Creek**	**25.22**	**263**	P	**P**	**13 15 24.8**	**+3.0**
	baz=26,SNR=7.3						
ARMA	**Armidale**	**25.39**	**269**	P	**P**	**13 15 23.7**	**+0.2**
	baz=26,SNR=4.6						
ARMA	**Armidale**	**25.39**	**269**	P	**P**	**13 15 26.2**	**+2.7**
ARMA				IAmb	IAmb	13 15 49.9	
	comp=Z,60nm,1.2s						
CAN	**Canberra**	**26.67**	**257**	P	**P**	**13 15 36.3**	**+1.2**
TBI	**Tubuai**	**27.53**	**76**	*e*S	S	13 20 40.0	+19
TBI				*e*LR	LR	13 22 06.5	
	comp=Z,802nm,31.0s						
EIDS	**Eidsvold**	**27.56**	**279**	P	**P**	**13 15 45.3**	**+2.3**
	baz=28,SNR=8.9						
EIDS	**Eidsvold**	**27.56**	**279**	P	**P**	**13 15 44.1**	**+1.1**
EIDS				IAmb	IAmb	13 15 57.1	
	comp=Z,53nm,0.9s						
MOO	**Moorlands**	**28.14**	**242**	P	**P**	**13 15 47.9**	**-0.2**
	baz=28,SNR=3.7						
RMQ	**Roma**	**29.04**	**276**	P	**P**	**13 15 58.8**	**+2.6**
	baz=30,SNR=28						
CMSA	**Cobar Meteorol**	**30.05**	**264**	P	**P**	**13 16 06.5**	**+1.4**
	baz=30,SNR=34						
PPT2	**Papeete2**	**30.56**	**66**	*e*S	**S**	**13 21 12.6**	**+3.6**
PPT2				*e*LR	LR	13 23 27.2	
	comp=Z,764nm,30.8s						
PPT	**Papeete**	**30.57**	**66**	LR	LR	13 27 36.6	
	comp=Z,382nm,19.0s,baz=246,slow=35						
ARPS	**Mount Arapiles**	**32.29**	**253**	P	**P**	**13 16 24.4**	**-0.3**
	baz=33,SNR=11						
STKA	**Stephens Creek**	**33.36**	**262**	P	**P**	**13 16 34.8**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=104,slow=8.6,SNR=8.8						
STKA				PcP	**PcP**	**13 19 15.6**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=129,slow=9.5,SNR=3.1						
STKA				LR	LR	13 29 56.3	
	comp=Z,2µm,18.1s,baz=95,slow=36						
	comp=Z,5.5nm,0.8s						
STKA	**Stephens Creek**	**33.36**	**262**	P	**P**	**13 16 35.9**	**+1.7**
	baz=34,SNR=6.3						
STKA	**Stephens Creek**	**33.36**	**262**	P	**P**	**13 16 34.6**	**+0.4**
CTA	**Charters Tower**	**33.96**	**284**	ScP	**ScP**	**13 23 01.3**	**+2.6**
	comp=Z,4.2nm,1.0s,baz=146,slow=6.3,SNR=4.4						
CTA				LR	LR	13 29 05.7	
	comp=Z,640nm,18.4s,baz=117,slow=34						
CTAO	**Charters Tower**	**33.96**	**284**	P	**P**	**13 16 40.9**	**+1.4**
HTT	**Hallett**	**35.20**	**258**	P	**P**	**13 16 49.5**	**-0.6**
	baz=36,SNR=6.5						
MTSU	**Mount Surprise**	**36.54**	**286**	P	**P**	**13 17 03.1**	**+1.4**
	baz=37,SNR=26						
BBOO	**Buckleboo**	**37.68**	**258**	P	**P**	**13 17 10.6**	**-0.7**
BBOO				IAmb	IAmb	13 17 24.9	
	comp=Z,39nm,1.1s						
QIS	**Mount Isa**	**39.16**	**279**	P	**P**	**13 17 24.6**	**+0.8**
	baz=40,SNR=11						
PMG	**Port Moresby**	**39.66**	**300**	P	**P**	**13 17 28.4**	**+0.4**
	comp=Z,15nm,0.8s,baz=106,slow=2.7,SNR=4.9						
PMG				LR	LR	13 31 59.7	
	comp=Z,1µm,19.3s,baz=124,slow=34						
	comp=Z,15nm,0.8s						
COEN	**Coen**	**39.79**	**290**	P	**P**	**13 17 30.1**	**+1.0**
	baz=40,SNR=9.3						
COEN	**Coen**	**39.79**	**290**	P	**P**	**13 17 30.2**	**+1.0**
COEN				IAmb	IAmb	13 17 43.8	
	comp=Z,30nm,1.1s						
KRVT	**Keravat (AS076**	**40.02**	**311**	P	**P**	**13 17 30.8**	**-0.2**
	comp=Z,165nm,0.9s,baz=204,slow=1.9,SNR=33						
KRVT				LR	LR	13 33 09.6	
	comp=Z,279nm,18.6s,baz=273,slow=35						
RABL	**Rabaul**	**40.02**	**311**	P	**P**	**13 17 30.6**	**-0.5**
AS31	**Alice Springs**	**42.52**	**271**	P	**P**	**13 17 51.0**	**-0.5**
ASAR	**Alice Springs**	**42.52**	**271**	P	**P**	**13 17 51.0**	**-0.5**
	comp=Z,25nm,0.7s,baz=111,slow=7.4,SNR=363						
ASAR				PcP	**PcP**	**13 19 43.5**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=113,slow=4.2,SNR=1.3						
ASAR				ScP	**ScP**	**13 23 34.8**	**+3.7**
	comp=Z,0.5nm,0.8s,baz=123,slow=3.4,SNR=2.2						
ASAR				S	**S**	**13 24 08.2**	**-3.0**
	comp=Z,1.2nm,0.8s,baz=104,slow=14,SNR=5.7						
	comp=Z,25nm,0.7s						
ASAR	**Alice Springs**	**42.52**	**271**		**P**	**13 17 50.8**	**-0.7**
TAOE	**Nuku Hiva Isla**	**43.16**	**64**	*e*S	**S**	**13 24 18.5**	**-2.2**
TAOE				*e*LR	LR	13 29 15.0	
WR0	**Warramunga Arr**	**43.63**	**276**	P	**P**	**13 18 00.2**	**-0.3**
WR0				IAmb	IAmb	13 18 12.7	
	comp=Z,51nm,0.9s						
WB2	**Warramunga Arr**	**43.79**	**276**	P	**P**	**13 18 01.3**	**-0.5**
WB2				IAmb	IAmb	13 18 13.9	
	comp=Z,56nm,0.9s						
WRAB	**Tennant Creek**	**43.80**	**276**	P	**P**	**13 18 01.6**	**-0.3**
WRAB				IAmb	IAmb	13 18 13.9	
	comp=Z,55nm,0.9s						
WRA	**Warramunga Arr**	**43.80**	**276**	P	**P**	**13 18 01.4**	**-0.5**
	comp=Z,30nm,0.7s,baz=119,slow=7.3,SNR=238						
WRA				PcP	**PcP**	**13 19 47.9**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=109,slow=3.6,SNR=1.9						
WRA				ScP	**ScP**	**13 23 39.6**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=122,slow=3.3,SNR=1.8						
WRA				S	**S**	**13 24 27.3**	**-2.7**
	comp=Z,3.4nm,0.9s,baz=117,slow=14,SNR=8.2						
	comp=Z,30nm,0.7s						
WRA	**Warramunga Arr**	**43.80**	**276**	P	**P**	**13 18 00.8**	**-1.1**
WB0	**Warramunga Arr**	**43.84**	**276**	P	**P**	**13 18 01.8**	**-0.5**
VNDA	**Vanda**	**44.77**	**186**	P	**P**	**13 18 08.8**	**0.0**
	comp=Z,1.1nm,0.9s,baz=27,slow=11,SNR=2.3						
	comp=Z,1.1nm,0.9s						
VNDA	**Vanda**	**44.77**	**186**	P	**P**	**13 18 04.4**	**-4.4**
FORT	**Forrest**	**44.78**	**258**	P	**P**	**13 18 08.8**	**-0.8**
	baz=45,SNR=11						
FORT	**Forrest**	**44.78**	**258**	P	**P**	**13 18 08.5**	**-1.1**
WRKA	**Warakurna**	**46.63**	**266**	P	**P**	**13 18 22.9**	**-1.5**
	baz=47,SNR=23						
KDU	**Kakadu**	**49.06**	**283**	P	**P**	**13 18 42.3**	**-0.9**
	baz=50,SNR=8.2						
MTN	**Manton Dam**	**50.06**	**282**	P	**P**	**13 18 50.1**	**-0.8**
	baz=51,SNR=7.7						
MTN	**Manton Dam**	**50.06**	**282**	P	**P**	**13 18 49.8**	**-1.0**
MTN				IAmb	IAmb	13 19 02.1	
	comp=Z,24nm,1.2s						
KNRA	**Kununurra**	**50.52**	**277**	P	**P**	**13 18 53.9**	**-0.4**
	baz=51,SNR=28						
KNRA	**Kununurra**	**50.52**	**277**	P	**P**	**13 18 53.8**	**-0.4**
KNRA				IAmb	IAmb	13 19 06.5	
	comp=Z,43nm,0.8s						
KLBR	**Kellerberrin**	**52.85**	**254**	P	**P**	**13 19 10.6**	**-0.9**
	baz=53,SNR=10						
MUN	**Mundaring**	**53.95**	**253**	P	**P**	**13 19 18.4**	**-1.2**
	baz=54,SNR=5.9						
BLDU	**Ballidu**	**54.03**	**254**	P	**P**	**13 19 18.0**	**-2.2**
	baz=54,SNR=5.0						
FAKI	**Fak Fak**	**55.06**	**293**	P	**P**	**13 19 25.9**	**-1.9**
FAKI				IAmb	IAmb	13 19 32.1	
	comp=Z,17nm,0.9s						
PSA00	**Pilbara Seismi**	**55.13**	**266**	P	**P**	**13 19 27.1**	**-1.1**
PSA00				IAmb	IAmb	13 19 38.7	
	comp=Z,13nm,1.0s						
MORW	**Morawa**	**55.15**	**256**	P	**P**	**13 19 27.1**	**-1.2**
	baz=55,SNR=5.0						
MORW	**Morawa**	**55.15**	**256**	P	**P**	**13 19 27.4**	**-1.0**
MBWA	**Marble Bar**	**55.41**	**266**	P	**P**	**13 19 29.2**	**-1.1**
MBWA				IAmb	IAmb	13 19 41.2	
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**56.42**	**180**	P	**P**	**13 19 38.7**	**+1.7**
	comp=Z,30nm,0.9s,baz=39,slow=1.8,SNR=71						
QSPA				LR	LR	13 41 35.9	
	comp=Z,472nm,18.6s,baz=42,slow=34						
	comp=Z,30nm,0.9s						
QSPA	**South Pole Qui**	**56.42**	**180**	P	**P**	**13 19 37.2**	**+0.2**
SIJI	**Sorong**	**57.12**	**294**	P	**P**	**13 19 41.0**	**-1.6**
	comp=Z,9.6nm,0.8s,baz=207,slow=14,SNR=4.6						
SIJI				LR	LR	13 42 31.0	
	comp=Z,485nm,21.7s,baz=207,slow=34						
	comp=Z,9.6nm,0.8s						
SOEI	**Soe**	**57.37**	**281**	P	**P**	**13 19 43.3**	**-1.2**
BATI	**Baumata**	**57.62**	**280**	P	**P**	**13 19 47.3**	**+1.2**
	comp=Z,19nm,0.5s,baz=241,slow=1.8,SNR=5.9						
BATI				LR	LR	13 42 32.9	
	comp=Z,313nm,21.1s,baz=160,slow=34						
	comp=Z,19nm,0.5s						
GUMO	**Guam**	**58.49**	**317**	LR	LR	13 43 06.7	
	comp=Z,149nm,18.8s,baz=132,slow=34						
RPN	**Rapa Nui**	**59.12**	**104**	LR	LR	13 41 14.6	
	comp=Z,304nm,18.2s,baz=235,slow=32						
EDFI	**Ende, Flores**	**60.04**	**280**	P	**P**	**13 20 06.9**	**+3.9**
KAPI	**Kappang**	**63.73**	**282**	LR	LR	13 49 02.1	
	comp=Z,542nm,18.5s,baz=108,slow=37						
DAV	**Davao City (W)**	**66.58**	**297**	LR	LR	13 47 03.7	
	comp=Z,102nm,22.0s,baz=124,slow=34						
BELA	**Belgrano 2**	**66.60**	**172**	P	**P**	**13 20 45.5**	**+0.1**
BELA				IAmb	IAmb	13 21 10.5	
	comp=Z,15nm,1.0s						
MAW	**Mawson**	**69.05**	**201**	P	**P**	**13 21 01.5**	**+0.7**
	comp=Z,8.0nm,1.0s,baz=166,slow=12,SNR=6.1						
	comp=Z,8.0nm,1.0s						
MAW	**Mawson**	**69.05**	**201**	P	**P**	**13 21 01.5**	**+0.7**
PMSA	**Palmer Station**	**69.49**	**155**	LR	LR	13 49 54.6	
	comp=Z,295nm,18.3s,baz=241,slow=34						
JCJ	**Chichijima**	**70.99**	**323**	LR	LR	13 48 07.4	
	comp=Z,115nm,20.9s,baz=120,slow=32						
JCJ	**Chichijima**	**70.99**	**323**	P	**P**	**13 21 13.8**	**+0.6**
LEM	**Lembang**	**72.74**	**273**	LR	LR	13 53 08.4	
	comp=Z,353nm,19.9s,baz=158,slow=36						
USHA	**Ushuaia**	**73.50**	**146**	LR	LR	13 51 05.9	
	comp=Z,398nm,18.8s,baz=184,slow=34						
SNAA	**Sanae**	**74.88**	**179**	LR	LR	13 54 29.1	
	comp=Z,330nm,18.0s,baz=161,slow=36						
SNAA	**Sanae**	**74.88**	**179**	P	**P**	**13 21 36.1**	**+0.3**
SNAA				IAmb	IAmb	13 21 58.7	
	comp=Z,22nm,1.1s						
JHJ	**Hachijo jima 2**	**77.12**	**325**	LR	LR	13 53 58.4	
	comp=Z,145nm,18.7s,baz=82,slow=34						
JOW	**Kunigami**	**78.51**	**313**	LR	LR	13 53 25.3	
	comp=Z,114nm,18.6s,baz=131,slow=33						
PLCA	**Paso Flores**	**80.65**	**133**	P	**P**	**13 22 08.7**	**+0.1**
	comp=Z,4.5nm,1.0s,baz=253,slow=6.7,SNR=5.3						
PLCA				LR	LR	13 53 13.0	
	comp=Z,208nm,18.0s,baz=218,slow=32						
	comp=Z,4.5nm,1.0s						
MJAR	**Matsushiro Arr**	**80.66**	**326**	P	**P**	**13 22 07.8**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=158,slow=5.7,SNR=5.0						
MJAR				LR	LR	13 58 28.5	
	comp=Z,83nm,18.3s,baz=162,slow=36						
	comp=Z,1.9nm,0.9s						
ASAJ	**Asahikawa**	**85.12**	**333**	P	**P**	**13 22 31.7**	**+0.5**
	comp=Z,7.8nm,1.0s,baz=88,slow=14,SNR=2.5						
ASAJ				LR	LR	13 53 22.4	
	comp=Z,303nm,21.8s,baz=172,slow=31						
	comp=Z,7.8nm,1.0s						
PSI	**Prapat**	**85.27**	**277**	LR	LR	14 01 39.2	
	comp=Z,244nm,19.9s,baz=116,slow=36						
SHEM	**Shemya Is, Ala**	**86.30**	**356**	LR	LR	13 56 13.3	
	comp=Z,303nm,19.8s,baz=110,slow=32						
KSRS	**Korea Array**	**86.53**	**320**	P	**P**	**13 22 39.3**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=134,slow=5.3,SNR=8.6						
KSRS				LR	LR	14 00 51.4	
	comp=Z,60nm,18.2s,baz=135,slow=35						
	comp=Z,1.4nm,0.7s						
LPIG	**La Paz**	**86.71**	**58**	LR	LR	13 55 50.8	
	comp=Z,311nm,18.5s,baz=215,slow=32						
NJ2	**Nanjing**	**88.00**	**311**	*e*P	**P**	**13 22 48.8**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PFO	**Pinyon Flats O**	**88.82**	**48**	P	**P**	**13 22 51.7**	**+2.1**
	comp=Z,1.5nm,0.5s,baz=270,slow=6.1,SNR=2.1						
PFO				LR	LR	13 59 32.6	
	comp=Z,336nm,18.1s,baz=230,slow=34						
	comp=Z,1.5nm,0.5s						
PEA0B	**Petropavlovsk-**	**88.87**	**346**	P	**P**	**13 22 50.8**	**+1.6**
PETK	**Petropavlovsk-**	**88.87**	**346**	P	**P**	**13 22 50.3**	**+1.1**
	comp=Z,9.7nm,0.7s,baz=129,slow=5.1,SNR=35						
PETK				LR	LR	13 55 59.1	
	comp=Z,198nm,21.9s,baz=162,slow=31						
	comp=Z,9.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**89.62**	**327**	P	**P**	**13 22 54.2**	**+1.3**
	comp=Z,3.6nm,0.8s,baz=83,slow=8.9,SNR=3.3						
USRK				LR	LR	14 00 01.9	
	comp=Z,209nm,19.5s,baz=108,slow=34						
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	**91.01**	**43**	P	**P**	**13 23 02.8**	**+2.9**
	comp=Z,1.5nm,0.9s,baz=219,slow=8.5,SNR=9.0						
	comp=Z,1.5nm,0.9s						
TIA	**Tai'an**	**91.83**	**313**	P	**P**	**13 23 05.3**	**+1.9**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CN2	**Changchun**	**92.45**	**323**	*e*P	**P**	**13 23 05.3**	**-0.8**
CN2				*e*PP	**PP**	**13 26 51.5**	**+3.5**
CN2				SKS	**SKSac**	**13 33 37.3**	**+1.3**
CN2				*e*sS	pS	13 34 17.0	-3.5
CN2				LR	LR		
	comp=Z,110nm,19.0s						
CN2				LR	LR		
	comp=Z,100nm,19.0s						
CN2				LR	LR		
	comp=Z,140nm,21.0s						
LVC	**Limon Verde**	**92.79**	**119**	LR	LR	13 56 42.9	
	comp=Z,160nm,20.9s,baz=209,slow=30						
NNA	**Nana**	**93.01**	**106**	LR	LR	13 59 10.7	
	comp=Z,309nm,18.0s,baz=227,slow=32						
KLR	**Kul'dur**	**93.61**	**330**	LR	LR	14 02 14.6	
	comp=Z,338nm,19.9s,baz=152,slow=34						
KDAK	**Kodiak Island**	**93.73**	**14**	LR	LR	14 01 34.5	
	comp=Z,163nm,18.9s,baz=229,slow=33						
CMAR	**Chiang Mai Arr**	**93.99**	**289**	P	**P**	**13 23 15.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=131,slow=2.7,SNR=1.8						
CMAR				PP	**PP**	**13 26 58.5**	**-2.0**
	comp=Z,0.6nm,0.4s,baz=135,slow=6.3,SNR=5.2						
CMAR				LR	LR	14 08 40.3	
	comp=Z,102nm,19.4s,baz=135,slow=38						
	comp=Z,0.5nm,0.6s						
HNS	**HongShan**	**94.08**	**313**	⇓P	P	13 23 04.3	-9.4
HNS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ATAH	**Atahualpa**	**94.51**	**102**	LR	LR	13 59 59.4	
	comp=Z,122nm,18.1s,baz=227,slow=32						
TXAR	**Lajitas Array**	**94.60**	**58**	P	**P**	**13 23 18.7**	**+2.2**
	comp=Z,0.7nm,0.9s,baz=220,slow=7.5,SNR=6.1						
TXAR				LR	LR	14 00 29.5	

	comp=Z,205nm,18.3s,baz=230,slow=32						
	comp=Z,0.7nm,0.9s						
ANMO	**Albuquerque**	**96.03**	**52**	LR	LR	14 01 32.5	
	comp=Z,143nm,18.6s,baz=242,slow=32						
BBB	**Bella Bella**	**96.24**	**29**	LR	LR	13 57 02.8	
	comp=Z,119nm,21.6s,baz=194,slow=29						
MA2	**Magadan**	**96.33**	**345**	LR	LR	14 02 24.6	
	comp=Z,132nm,20.2s,baz=141,slow=33						
PZH	**PanZhiHua**	**96.36**	**298**	P	**P**	**13 23 25.5**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,5.7s						
LPAZ	**La Paz**	**97.26**	**115**	P	Pdif	13 23 30.9	+1.2
	comp=Z,0.5nm,0.5s,baz=207,slow=4.5,SNR=2.9						
LPAZ				LR	LR	13 58 03.7	
	comp=Z,47nm,21.1s,baz=236,slow=30						
	comp=Z,0.5nm,0.5s						
L19K	**White Mountain**	**97.45**	**11**	P	Pdif	13 23 31.7	+3.0
L19K				IAmb	IAmb	13 23 44.2	
	comp=Z,7.1nm,1.2s						
HHC	**Hu-ho-hao-te**	**98.14**	**314**	*e*P	**P**	**13 23 31.5**	**-0.8**
HHC				pmax	pmax		
	comp=Z,35nm,1.1s						
HHC				pmax	pmax		
	comp=Z,270nm,5.6s						
CPUP	**Villa Florida**	**98.33**	**129**	LR	LR	14 03 59.3	
	comp=Z,359nm,18.0s,baz=230,slow=33						
JTS	**Las Juntas de**	**98.65**	**83**	LR	LR	14 01 36.3	
	comp=Z,91nm,18.2s,baz=312,slow=31						
SEY	**Seymchan**	**99.06**	**347**	LR	LR	14 02 11.1	
	comp=Z,285nm,22.0s,baz=166,slow=32						
ILAR	**Eielson Array**	**101.25**	**13**	P	**Pdif**	**13 23 46.6**	**+1.2**
	comp=Z,0.1nm,0.8s,baz=221,slow=4.8,SNR=1.3						
ILAR				PP	**PP**	**13 27 54.4**	**-1.0**
	comp=Z,2.2nm,1.2s,baz=218,slow=9.0,SNR=4.8						
PCHI	**Peechi**	**108.24**	**271**	*e*P	PKiKP	13 28 16.3	-7.8
PCHI				*e*x	x	13 42 21.5	
WMQ	**Urumqi**	**114.82**	**307**	*e*PKP	PKPdf	13 28 34.0	-1.8
MK31	**Makanchi Array**	**119.46**	**309**	PKPdf	**PKiKP**	**13 28 45.4**	**+0.7**
MKAR	**Makanchi Array**	**119.46**	**309**	PKP	**PKiKP**	**13 28 45.1**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=201,slow=1.1,SNR=12						
MKAR	**Makanchi Array**	**119.46**	**309**	PKPdf	**PKPdf**	**13 28 44.7**	**+0.1**
ZALV	**Zalesovo Beam**	**120.12**	**317**	PKP	**PKiKP**	**13 28 45.7**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=108,slow=2.0,SNR=11						
ZALV	**Zalesovo Beam**	**120.12**	**317**	PKPdf	**PKiKP**	**13 28 46.5**	**+0.9**
KURK	**Kurchatov**	**122.91**	**312**	PKPdf	**PKiKP**	**13 28 52.3**	**+1.0**
KKAR	**Karatay Array**	**126.41**	**302**	PKPdf	**PKiKP**	**13 28 59.3**	**+0.8**
KMBO	**Kilima Mbogo**	**131.66**	**232**	SKPbc	**SKPab**	**13 32 36.2**	**+4.0**
	comp=Z,3.2nm,0.8s,baz=142,slow=2.0,SNR=6.2						
GEYT	**Alibeck**	**134.40**	**292**	PKP	**PKPdf**	**13 29 13.0**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=190,slow=0.9,SNR=1.7						
SPA0	**Spitsbergen Ar**	**134.94**	**356**	*e*PKPdf	**PKPdf**	**13 29 11.8**	**-1.4**
SPITS	**Spitsbergen Ar**	**134.94**	**356**	PKP	**PKiKP**	**13 29 14.7**	**0.0**
	comp=Z,9.4nm,0.8s,baz=339,slow=3.2,SNR=2.7						
ARU	**Arti**	**135.25**	**318**	PKP	**PKiKP**	**13 29 15.4**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=21,slow=1.0,SNR=8.1						
ARU				SKPbc	**SKPab**	**13 32 46.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=108,slow=20,SNR=3.1						
AKTO	**Aktyubinsk**	**135.87**	**310**	PKP	**PKiKP**	**13 29 16.9**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=14,slow=0.7,SNR=12						
ARA0	**ARCESS Array S**	**141.68**	**347**	*e*PKPdf	**PKPdf**	**13 29 23.9**	**-1.9**
ARCES	**ARCESS Array B**	**141.68**	**347**	PKhKP	PKPpre	13 29 20.9	
	comp=Z,2.7nm,0.7s,baz=27,slow=3.0,SNR=10.0						
ARCES				SKPbc	**SKiKP**	**13 33 04.8**	**+3.4**
	comp=Z,5.9nm,1.0s,baz=353,slow=6.4,SNR=4.1						
ARCES	**ARCESS Array B**	**141.68**	**347**	PKPdf	**PKPdf**	**13 29 23.1**	**-2.7**
BELG	**Belogornoye**	**142.16**	**314**	PKhKP	PKPpre	13 29 22.8	
	comp=Z,23nm,0.9s,baz=349,slow=8.4,SNR=3.7						
KTK1	**Kautokeino**	**142.55**	**347**	*e*PKPdf	**PKPdf**	**13 29 26.9**	**-0.4**
TRO	**Tromso**	**142.71**	**350**	*e*PKPdf	**PKPdf**	**13 29 27.5**	**0.0**
KLMR	**Klimovskoe**	**143.37**	**330**	*e*PKPdf	PKPab	13 29 24.0	-1.1
KLMR				AMP		13 29 39.7	
	comp=Z,35nm,1.3s						
KLMR				*e*PP	**PP**	**13 32 38.9**	**-1.9**
STEI	**Steigen**	**144.80**	**351**	*e*PKPab	**PKPab**	**13 29 30.1**	**-0.2**
LOF	**Lofoten**	**144.82**	**352**	*e*PKPbc	**PKPab**	**13 29 29.9**	**-0.5**
FAUS	**Fauske**	**145.31**	**351**	*e*PKPab	**PKPbc**	**13 29 32.1**	**+0.1**
CLDR	**Caldiran**	**145.58**	**292**	*e*P	**PKPab**	**13 29 34.6**	**+0.2**
AKDM	**Akdamar-Van**	**146.24**	**290**	*e*P	**PKPab**	**13 29 36.8**	**-0.1**
AGRB	**Hanur-Agry**	**146.32**	**292**	*e*P	**PKPab**	**13 29 37.3**	**+0.1**
KBZ	**Khabaz**	**146.40**	**300**	PKPbc	**PKPbc**	**13 29 36.4**	**+0.3**
	comp=Z,9.0nm,0.9s,baz=119,slow=1.3,SNR=17						
KONS	**Konsvik**	**146.43**	**352**	*e*PKPab	**PKPab**	**13 29 36.1**	**-0.3**
MOR8	**Moi Rana**	**146.57**	**350**	*e*PKPab	**PKPbc**	**13 29 36.3**	**+0.4**
STOK	**Stokkvaagen**	**146.60**	**351**	*e*PKPdf	**PKPdf**	**13 29 34.3**	**-0.1**
GURO	**Guroymak-BITLI**	**147.00**	**290**	*e*P	**PKPab**	**13 29 39.2**	**-0.6**
OBN	**Obninsk**	**147.51**	**322**	PKPbc	**PKPbc**	**13 29 39.7**	**+0.8**
	comp=Z,5.1nm,0.3s,baz=84,slow=2.8,SNR=13						
SVAN	**Silvan-Diyarba**	**147.63**	**289**	*e*P	**PKPbc**	**13 29 40.6**	**+0.8**
FINES	**FINESS Array B**	**148.02**	**338**	PKPbc	**PKPbc**	**13 29 40.6**	**+0.6**
	comp=Z,46nm,0.9s,baz=85,slow=4.0,SNR=59						
FINES	**FINESS Array B**	**148.02**	**338**		**PKPbc**	**13 29 40.8**	**+0.8**
BNGB	**Bingl**	**148.09**	**291**	*e*P	**PKiKP**	**13 29 42.3**	**-0.6**
DYBB	**Diyarbakir**	**148.44**	**289**	*e*P	**PKPbc**	**13 29 42.9**	**+0.9**
MEF	**Metsahovi**	**149.49**	**337**	*e*P	**PKiKP**	**13 29 44.8**	**0.0**
RAF	**Rauma**	**149.64**	**340**	*e*P	**PKiKP**	**13 29 45.9**	**+0.8**
ARPR	**Arapgir-MALATY**	**149.91**	**291**	*e*P	**PKiKP**	**13 29 47.3**	**+0.6**
VSU	**Vasula**	**149.97**	**333**	*e*P	**PKiKP**	**13 29 46.6**	**+0.7**
DARE	**Darende-Malaty**	**150.56**	**290**	*e*P	**PKPbc**	**13 29 47.5**	**+0.2**
RSDY	**Resadiye-TOKAT**	**150.69**	**294**	*e*P	**PKiKP**	**13 29 48.5**	**+0.4**
MTSE	**Matsula**	**150.84**	**336**	*e*P	**PKiKP**	**13 29 48.3**	**+0.6**
MOL	**Molde**	**150.84**	**354**	*e*PKPdf	**PKPdf**	**13 29 41.0**	**-0.3**
SVSK	**Karacayir**	**150.95**	**293**	*e*P	**PKiKP**	**13 29 49.1**	**+0.5**
KMRS	**Kahramanmaras**	**150.98**	**288**	*e*P	**PKiKP**	**13 29 49.1**	**+0.3**
DOMB	**Dombas**	**151.22**	**352**	*e*PKPbc	**PKPbc**	**13 29 48.0**	**+0.1**
EIL	**Elat**	**151.23**	**271**	*e*P	**PKiKP**	**13 29 50.2**	**+0.7**
SARI	**SarD1z-Kayseri**	**151.40**	**290**	*e*P	**PKiKP**	**13 29 50.4**	**+0.6**
TAHT	**Tahtakopru-Hat**	**151.47**	**285**	*e*P	**PKiKP**	**13 29 50.5**	**+0.7**
YAYL	**Yayladag**	**151.50**	**285**	*e*P	**PKiKP**	**13 29 50.6**	**+0.6**
MMLI	**Mount Malkishu**	**151.52**	**277**	*e*P	**PKiKP**	**13 29 51.2**	**+1.1**
KOZT	**Kozan**	**151.83**	**288**	*e*P	**PKPdf**	**13 29 42.8**	**-0.9**
BNN	**Bunyan**	**151.85**	**291**	*e*P	**PKPbc**	**13 29 49.1**	**-1.2**
CEYT	**Ceyhan**	**151.87**	**287**	*e*P	**PKiKP**	**13 29 51.2**	**+0.6**
NB2	**NORSAR Subarra**	**151.91**	**350**	PKP	**PKiKP**	**13 29 50.0**	**0.0**
	comp=Z,40nm,1.7s,baz=17,slow=2.6						
NB2	**NORSAR Subarra**	**151.91**	**350**	PKPbc	**PKiKP**	**13 29 50.0**	**0.0**
	baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.91**	**350**	PKPbc	**PKiKP**	**13 29 50.4**	**+0.4**
	comp=Z,9.3nm,1.1s,baz=15,slow=4.6,SNR=25						
FOO	**Floro**	**151.98**	**356**	*e*PKPdf	**PKPdf**	**13 29 42.1**	**-1.0**
LIC	**Lamto**	**152.02**	**166**	*e*P	**PKiKP**	**13 29 52.9**	**+1.3**
	comp=Z,50nm,1.3s						
MNK	**Minsk**	**152.10**	**326**	*i* PKP	**PKiKP**	**13 29 51.1**	**+0.7**
	comp=E,4.0nm,1.0s						
MNK				*i* PKP	**PKiKP**	**13 29 51.1**	**+0.7**
	comp=N,32nm,0.8s						
MNK				*i* PKP	**PKiKP**	**13 29 51.1**	**+0.7**
	comp=Z,41nm,0.8s,baz=54						
MNK				*i* SKP		13 33 24.4	
MNK				*i* PKS	**PP**	**13 33 25.7**	**-6.2**
MNK				*i* PP	PP	13 33 42.3	+10
MNK				*i* SKS	SKSdf	13 36 58.5	+11
MNK				*i* SS	SS	13 53 14.6	+18
MNK				*i* SSS	SSS	13 58 59.1	
MNK				*i* LR	LR	14 37 04.0	
MNK				*i* LRM	MLR	14 46 00.6	
	comp=N,151nm,21.7s						
MNK				*i* LRM	MLR	14 46 23.6	
	comp=E,21nm,17.9s						
MNK				*i* LRM	MLR	14 46 23.6	
	comp=Z,773nm,26.8s						
NAO01	**NORSAR Array S**	**152.15**	**350**	*e*PKPbc	**PKPbc**	**13 29 50.2**	**+0.1**
NC602	**NORSAR Array S**	**152.15**	**349**	*e*PKPbc	**PKPbc**	**13 29 49.9**	**-0.2**
KIC	**Kosan Boka**	**152.21**	**167**	*e*PKIKP	**PKiKP**	**13 29 52.9**	**+0.9**
	comp=Z,30nm,0.8s						
YOZ	**Yozgat**	**152.25**	**292**	*e*P	**PKPdf**	**13 29 47.3**	**+2.9**
NACGM	**Naroch**	**152.35**	**328**	*e*PKP	**PKiKP**	**13 29 52.7**	**+1.7**
TIC	**Toumodi**	**152.43**	**166**	*e*PKIKP	**PKPbc**	**13 29 52.2**	**0.0**
	comp=Z,61nm,1.2s						
DBIC	**Dimbokro**	**152.49**	**166**	PKPbc	**PKPbc**	**13 29 51.1**	**-1.1**
	comp=Z,11nm,1.0s,baz=197,slow=4.3,SNR=4.6						
CMRD	**Camardi-Nigde**	**152.50**	**288**	*e*P	**PKiKP**	**13 29 52.7**	**+0.7**
SUE	**Sulen**	**152.54**	**356**	*e*PKPdf	**PKPdf**	**13 29 41.1**	**-2.8**
SKAR	**Skarslia**	**152.63**	**353**	*e*PKPbc	**PKPbc**	**13 29 51.0**	**-0.2**
CORM	**Corum**	**152.76**	**293**	*e*P	**PKiKP**	**13 29 53.6**	**+1.1**
MERS	**Mersin**	**152.84**	**286**	*e*P	**PKPbc**	**13 29 52.4**	**-0.1**
PABE	**Paberze**	**153.13**	**331**	*e*P	**PKiKP**	**13 29 52.8**	**+0.2**
AKASG	**Malin Array Be**	**153.50**	**318**	PKPbc	**PKPbc**	**13 29 53.4**	**+0.1**
	comp=Z,11nm,0.7s,baz=59,slow=3.3,SNR=40						
AKBB	**Malin Array Si**	**153.50**	**318**		**PKiKP**	**13 29 54.6**	**+1.1**
BRTR	**Keskin Array B**	**153.54**	**293**	PKPbc	**PKiKP**	**13 29 54.4**	**+0.2**
	comp=Z,8.8nm,0.9s,baz=146,slow=3.6,SNR=24						
BRTR	**Keskin Array B**	**153.54**	**293**	*e*P	**PKiKP**	**13 29 54.4**	**+0.2**
CSS	**Mathiatis**	**153.64**	**282**	*e*P	**PKPbc**	**13 29 52.1**	**-2.2**
BERE	**Bereket-Mersin**	**153.85**	**285**	*e*P	**PKPbc**	**13 29 53.3**	**-1.5**
AFSR	**Afar-Bala (An**	**153.99**	**292**	*e*P	**PKiKP**	**13 29 55.5**	**+0.5**
KMY	**Karmoy**	**154.35**	**355**	*e*PKPbc	**PKPbc**	**13 29 54.6**	**-0.3**
GAZI	**Gazipasa**	**154.57**	**285**	*e*P	**PKPdf**	**13 29 43.6**	**-4.1**
EKA	**Eskdalemuir Ar**	**158.14**	**7**	PKPab	**PKPab**	**13 30 27.1**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=350,slow=2.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**159.54**	**181**	PKP	**PKPdf**	**13 29 57.1**	**+2.5**
	comp=Z,3.2nm,1.1s,baz=203,slow=1.1,SNR=8.0						
TORD				PKPab	**PKPab**	**13 30 32.8**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=174,slow=4.8,SNR=7.1						
DPC	**Dobruska-Polom**	**160.06**	**331**	*e*PKPAB	**PKPab**	**13 30 39.1**	**+4.9**
CLL	**Collm**	**160.47**	**338**	*e*PKPab	**PKPab**	**13 30 36.0**	**+0.2**
	comp=Z,10.0nm,0.6s						
CLL				*i* pPKPab	**pPKPab**	**13 30 40.5**	**-6.0**
CLL				*e*(SKKSac)		13 40 54.0	
CLL				*e*x	x	13 42 00.0	
CLL				*e*PPPPrev		13 45 36.0	
CLL				*e*PPS	PPS	13 47 54.0	
CLL				*e*(SS)		13 55 06.0	
CLL				*e*SSS	SSS	14 00 54.0	
CLL				*e*SSSS		14 04 54.0	
BRG	**Berggiesshubel**	**160.53**	**336**	*e*PKP	PKPdf	13 30 03.2	+8.6
BRG				Amp		13 30 10.5	
	comp=Z,2.5nm,0.7s						
BRG				*e*x	**PKPab**	**13 30 36.0**	**-0.1**
BRG				Amp		13 30 38.8	
	comp=Z,5.3nm,1.1s						
BRG				*e*x	x	13 30 48.0	
BRG				Amp		13 30 49.2	
	comp=Z,9.8nm,1.1s						
NKC	**Novy Kostel**	**161.58**	**337**	*e*PKPAB	**PKPab**	**13 30 42.5**	**+1.8**
KHC	**Kasperske Hory**	**162.11**	**333**	*e*PKPAB	**PKPab**	**13 30 43.6**	**+0.5**
GERES	**GERESS Array B**	**162.29**	**332**	PKP	**PKPdf**	**13 29 59.0**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=43,slow=4.4,SNR=3.9						
GERES				PKPab	**PKPab**	**13 30 44.7**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=46,slow=3.9,SNR=3.6						
ESDC	**Sonseca Array**	**172.65**	**34**	PKP	**PKPdf**	**13 30 06.2**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=270,slow=2.6,SNR=2.6						

IDC 26 13:17:07.9±1.0, 12.°26N×144.°23E, h0^{km}, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=44.0km s-min=16.9km az=110.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.46**	**25**	Pn	Pb	13 17 37.5	+1.5
	97nm,0.3s,baz=170,slow=3.4,SNR=57						
GUMO				Sn	Sn	13 17 55.7	+0.2
	133nm,0.3s,baz=282,slow=22,SNR=16						
WRA	**Warramunga Arr**	**33.45**	**197**	P	P	13 23 48.8	0.0
	0.8nm,0.6s,baz=19,slow=9.7,SNR=5.4						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**37.10**	**196**	P	P	13 24 20.6	+0.3
	0.8nm,0.8s,baz=18,slow=9.5,SNR=10						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**62.02**	**317**	P	P	13 27 30.6	+0.4
	0.5nm,0.8s,baz=95,slow=9.4,SNR=2.5						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**62.35**	**325**	P	P	13 27 31.8	-0.4
	0.5nm,0.5s,baz=99,slow=8.9,SNR=1.9						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**70.03**	**25**	P	P	13 28 19.7	-1.6
	0.6nm,1.0s,baz=249,slow=5.3,SNR=4.3						
	0.6nm,1.0s						
NVAR	**Mina Array Bea**	**88.23**	**51**	P	P	13 30 01.7	0.0
	0.6nm,0.8s,baz=278,slow=5.6,SNR=4.5						
	0.6nm,0.8s						

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*BJI **26** 13:25:19.0±0.0, 46.°38N×150.°56E, h158^{km}, mb4.6/45, mB4.6/29*

*MOS **26** 13:25:22.5±1.2, 46.°37N×150.°33E, h175^{km}, mb4.5/19, Error ellipse: s-maj=7.6km s-min=5.2km az=71.8*

*SKHL **26** 13:25:23.4±0.3, 46.°30N×150.°40E, h163^{km}±6^{km}, mb5.1/11, mbv4.9/2, msh4.9/4, msha5.7/6*

*IDC **26** 13:25:24.9±1.4, 46.°46N×150.°17E, h179^{km}±13^{km}, mb3.8/26, mbtmp4.4/34, Error ellipse: s-maj=11.6km s-min=8.3km az=145.0*

*NEIC **26** 13:25:24.3±1.9, 46.°4N±0.°1×150.°2E±0.°1, h172^{km}±7^{km}, mb4.6/114, Error ellipse: s-maj=16.1km s-min=11.6km az=148.0*

*JMA **26** 13:25:26.4±0.6, 46°N±2°×15°0E±°, h167^{km}, MV4.4/17, KURILE ISLANDS REGION*

ISC 26 13:25:22.5±0.5, 46.°26N±0.°04×150.°38E±0.°04, h167^{km}±4^{km}, n522, σ1^{s}44/563, mb4.5/122, 11C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.03**	**241**	*d i*PN	**Pn**	**13 26 01.2**	**+2.3**
KUR				*i* S	**Sn**	**13 26 29.2**	**+2.1**
KUR				pmax	pmax		
	comp=Z,1µm,0.7s						
KUR				pmax	pmax		
	comp=N,182nm,0.4s						
KUR				pmax	pmax		
	comp=E,112nm,0.4s						
KUR				smax	smax		
	comp=E,5µm,3.6s						
KUR				smax	smax		
	comp=N,2µm,2.2s						
KUR				smax	smax		
	comp=N,829nm,0.6s						
KUR				smax	smax		
	comp=E,380nm,0.3s						
KUR	**Kuril'sk**	**2.03**	**241**	*i* P	**Pn**	**13 26 00.6**	**+1.7**
KUR				AMB	AMB	13 26 01.8	
	comp=E,180nm,0.6s						
KUR				AMB	AMB	13 26 01.8	
	comp=E,110nm,0.6s						
KUR				AMB	AMB	13 26 01.8	
	comp=E,1µm,0.6s						
KUR				*i* S	**Sn**	**13 26 28.8**	**+1.7**
KUR				A	A	13 26 31.4	
	comp=E,2µm,3.0s						
KUR				A	A	13 26 31.4	
	comp=E,5µm,3.0s						
KUR				A	A	13 26 37.3	
	comp=E,890nm,0.5s						
KUR				A	A	13 26 37.3	
	comp=E,760nm,0.5s						
SHO	**Shikotan**	**3.46**	**228**	*d i*PN	**Pn**	**13 26 16.3**	**0.0**
SHO				*i* S	**Sn**	**13 26 55.4**	**-2.7**
SHO				pmax	pmax		
	comp=Z,638nm,0.6s						
SHO				pmax	pmax		
	comp=N,183nm,0.4s						
SHO				smax	smax		
	comp=E,606nm,1.0s						
SHO				smax	smax		
	comp=N,627nm,1.1s						
SHO				smax	smax		
	comp=N,641nm,0.2s						
SHO				smax	smax		
	comp=E,862nm,0.2s						
SHO	**Shikotan**	**3.46**	**228**	*i* P	**Pn**	**13 26 16.6**	**+0.3**
SHO				AMB	AMB	13 26 17.4	
	comp=E,540nm,0.5s						
SHO				*i* S	**Sn**	**13 26 56.4**	**-1.7**
SHO				A	A	13 26 57.5	
	comp=E,600nm,1.1s						
SHO				A	A	13 26 57.5	
	comp=E,600nm,1.1s						
SHO				A	A	13 26 59.2	
	comp=E,640nm,0.4s						
SHO				A	A	13 26 59.2	
	comp=E,860nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.89**	**237**	*d i*PN	**Pn**	**13 26 23.3**	**+1.6**
YUK				*i* S	**Sn**	**13 27 07.5**	**-0.4**
YUK				pmax	pmax		
	comp=Z,1µm,0.6s						
YUK				pmax	pmax		
	comp=E,373nm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.6s						
YUK				smax	smax		
	comp=E,894nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.89**	**237**	*i* P	**Pn**	**13 26 23.5**	**+1.8**
YUK				AMB	AMB	13 26 24.4	
	comp=E,1µm,0.7s						
YUK				*i* S	**Sn**	**13 27 08.7**	**+0.8**
YUK				A	A	13 27 12.3	
	comp=E,1µm,0.6s						
YUK				A	A	13 27 12.3	
	comp=E,890nm,0.6s						
RUSJ	**Misakicho**	**4.21**	**241**	⇓*i*PN	**Pn**	**13 26 27.7**	**+1.8**
RUSJ				*i* S	**Sn**	**13 27 21.2**	**+5.8**
JRA	**Rausu**	**4.38**	**240**	P	**Pn**	**13 26 29.6**	**+1.6**
NEM2	**Nemuro 2**	**4.38**	**230**	P	**Pn**	**13 26 27.7**	**-0.4**
NEM2				*e*S	**Sn**	**13 27 15.0**	**-4.3**
NMR	**Nemuro--Hokkai**	**4.39**	**231**	⇑*i*PN	**Pn**	**13 26 27.6**	**-0.5**
NMR	**Nemuro--Hokkai**	**4.39**	**231**	*i* P	**Pn**	**13 26 27.6**	**-0.5**
JNK	**Nakash**	**4.82**	**238**	*e*P	**Pn**	**13 26 34.7**	**+0.9**
JNK				*e*S	**Sn**	**13 27 28.1**	**-1.5**
JTKR	**Abashiri--Toko**	**5.12**	**246**	P	**Pn**	**13 26 39.4**	**+1.7**
JTKR				*e*S	**Sn**	**13 27 36.1**	**-0.3**
JAK	**Akkeshi**	**5.20**	**233**	*e*P	**Pn**	**13 26 38.5**	**-0.2**
JAK				*e*S	**Sn**	**13 27 34.2**	**-4.2**
YSS	**Yuzh-Sakhalins**	**5.30**	**280**	Pn	**Pn**	**13 26 42.1**	**+2.1**
YSS	**Yuzh-Sakhalins**	**5.30**	**280**	α*e*PN	**Pn**	**13 26 42.1**	**+2.1**
YSS				*e*S	**Sn**	**13 27 41.9**	**+1.2**
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,2.5s						
YSS				smax	smax		
	comp=N,30nm,0.9s						
YSS				smax	smax		
	comp=N,300nm,5.0s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.30**	**280**	*i* P	**Pn**	**13 26 42.1**	**+2.1**
YSS				*i* P	**Pn**	**13 26 42.1**	**+2.1**
YSS				AMB	AMB	13 26 43.1	
	comp=Z,140nm,0.7s						
YSS				AMB	AMB	13 26 44.5	
	comp=Z,200nm,2.5s						
YSS				*e*S	**Sn**	**13 27 41.9**	**+1.2**
YSS				A	A	13 27 46.4	
	comp=Z,30nm,0.9s						
YSS				A	A	13 27 51.7	
	comp=Z,300nm,5.0s						
JAR	**Ashorobuto**	**5.55**	**240**	*e*P	**Pn**	**13 26 44.8**	**+1.4**
JAR				*e*S	**Sn**	**13 27 45.8**	**-1.0**
JOB	**Onbets**	**5.75**	**237**	*e*P	**Pn**	**13 26 46.3**	**+0.3**
JOB				*e*S	**Sn**	**13 27 47.5**	**-4.0**
SKR	**Severo-Kuril's**	**5.85**	**39**	*e*PN	**Pn**	**13 26 47.2**	**0.0**
SKR				*e*S	**Sn**	**13 27 49.2**	**-4.5**
SKR				pmax	pmax		
	comp=Z,47nm,0.9s						
SKR				smax	smax		
	comp=N,30nm,0.7s						
SKR				smax	smax		
	comp=E,47nm,0.6s						
SKR	**Severo-Kuril's**	**5.85**	**39**	*e*P	**Pn**	**13 26 47.5**	**+0.3**
SKR				AMB	AMB	13 26 48.5	
	comp=E,40nm,0.4s						
SKR				*e*S	**Sn**	**13 27 54.2**	**+0.5**
SKR				A	A	13 27 59.5	
	comp=E,60nm,0.5s						
SKR				A	A	13 27 59.5	
	comp=E,70nm,0.5s						
JKA	**Kamikawa-asahi**	**5.90**	**252**	Pn	**Pn**	**13 26 49.5**	**+1.6**
JKA	**Kamikawa-asahi**	**5.90**	**252**	*e*P	**Pn**	**13 26 50.9**	**+3.0**
ASAJ	**Asahikawa**	**5.90**	**252**	P	**Pn**	**13 26 50.9**	**+3.0**
	comp=E,184nm,0.7s,baz=80,slow=12,SNR=231						
ASAJ				S	**Sn**	**13 27 57.0**	**+2.0**
	comp=E,30nm,0.9s,baz=190,slow=30,SNR=8.6						
JKK2	**Kamakawa 2**	**5.90**	**249**	*e*P	**Pn**	**13 26 50.3**	**+2.2**
JWK2	**Keihoku**	**6.00**	**264**	*e*P	**Pn**	**13 26 53.4**	**+4.1**
JCH	**Churui**	**6.20**	**237**	*e*P	**Pn**	**13 26 51.5**	**-0.4**
JCH				*e*S	**Sn**	**13 27 57.0**	**-5.2**
UGL	**Uglegorsk**	**6.28**	**300**	*e*PN	**Pn**	**13 26 54.7**	**+1.8**
UGL				pmax	pmax		
	comp=Z,80nm,1.0s						
UGL	**Uglegorsk**	**6.28**	**300**	*e*P	**Pn**	**13 26 54.7**	**+1.8**
UGL				AMB	AMB	13 26 55.0	
	comp=Z,120nm,0.6s						
JAB	**Ashibetsu**	**6.41**	**248**	*e*P	**Pn**	**13 26 57.6**	**+2.9**
JRBN	**Rebuntou**	**6.56**	**266**	*e*P	**Pn**	**13 26 59.6**	**+3.0**
ERM	**Erimo**	**6.70**	**233**	Pn	**Pn**	**13 26 59.0**	**+0.4**
ERM	**Erimo**	**6.70**	**233**	PN	**Pn**	**13 26 59.0**	**+0.4**
PAU	**Pauzhetka**	**6.72**	**37**	*e*P	**Pn**	**13 26 58.2**	**-0.5**
PAU				AMB	AMB	13 26 59.1	
	comp=Z,50nm,0.3s						
PAU				*e*S	**Sn**	**13 28 12.4**	**-2.1**
PAU				A	A	13 28 15.5	
	comp=Z,40nm,0.2s						
PAU				A	A	13 28 15.5	
	comp=Z,80nm,0.2s						
JNBK	**Urakawa-nobuka**	**6.76**	**237**	*e*P	**Pn**	**13 26 57.8**	**-1.5**
JNBK				*e*S	**Sn**	**13 28 08.8**	**-6.8**
TYV	**Tymovskoe**	**6.89**	**315**	*e*PN	**Pn**	**13 27 03.1**	**+2.1**
TYV				*e*S	**Sn**	**13 28 17.5**	**-1.0**
TYV				pmax	pmax		
	comp=Z,300nm,2.7s						
TYV				pmax	pmax		
	comp=Z,34nm,1.1s						
TYV				smax	smax		
	comp=N,11nm,1.2s						
TYV				smax	smax		
	comp=E,13nm,1.2s						
TYV				smax	smax		
	comp=N,100nm,3.0s						
TYV				smax	smax		
	comp=E,100nm,3.0s						
TYV	**Tymovskoe**	**6.89**	**315**	*e*P	**Pn**	**13 27 03.1**	**+2.1**
TYV				AMB	AMB	13 27 03.9	
	comp=E,300nm,2.7s						
TYV				AMB	AMB	13 27 04.0	
	comp=E,30nm,1.1s						
TYV				*e*S	**Sn**	**13 28 17.7**	**-0.8**
TYV				A	A	13 28 27.8	
	comp=E,50nm,0.9s						
TYV				A	A	13 28 27.8	
	comp=E,20nm,0.9s						
TYV				A	A	13 28 28.0	
	comp=E,400nm,3.0s						
TYV				A	A	13 28 28.0	
	comp=E,500nm,3.0s						
JEW	**Eniwo**	**7.23**	**245**	Pn	**Pn**	**13 27 07.0**	**+1.4**
PEA0B	**Petropavlovsk-**	**8.34**	**32**	Pn	**Pn**	**13 27 19.0**	**-1.1**
PEA0B	**Petropavlovsk-**	**8.34**	**32**	*ce*PN	**Pn**	**13 27 20.5**	**+0.4**
PETK	**Petropavlovsk-**	**8.34**	**32**	P	**Pn**	**13 27 19.2**	**-0.9**
	comp=E,19nm,0.6s,baz=204,slow=8.1,SNR=91						
PETK	**Petropavlovsk-**	**8.34**	**32**	Pn	**Pn**	**13 27 19.6**	**-0.6**
PETK	**Petropavlovsk-**	**8.34**	**32**	PN	**Pn**	**13 27 19.6**	**-0.6**
PET	**Petropavlovsk**	**8.64**	**35**		**Pn**	**13 27 21.7**	**-2.4**
PET	**Petropavlovsk**	**8.64**	**35**	*e*PN	**Pn**	**13 27 21.2**	**-2.9**
PET				*e*S	**Sn**	**13 28 55.9**	**-4.4**
PET				pmax	pmax		
	comp=Z,12nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,8.0s						
PET				MLR	MLR		
	comp=Z,200nm,7.0s						
PET	**Petropavlovsk**	**8.64**	**35**	*e*P	**Pn**	**13 27 22.3**	**-1.8**
PET				AMB	AMB	13 27 26.8	
	comp=Z,20nm,0.4s						
JTM	**Tenmabayashi**	**8.69**	**234**	Pn	**Pn**	**13 27 22.5**	**-2.4**
JANG	**Nango**	**8.73**	**231**	*e*P	**Pn**	**13 27 22.7**	**-2.8**
JANG				*e*S	Sn	13 28 52.8	-10
OKH	**Okha**	**8.73**	**329**	*e*P	**Pn**	**13 27 29.0**	**+3.7**
JTH	**Tanohata**	**8.86**	**228**	*e*P	**Pn**	**13 27 23.6**	**-3.6**
JTH				*e*S	Sn	13 28 56.0	-10
JMM	**Marumori**	**10.99**	**224**	Pn	**Pn**	**13 27 53.6**	**-1.6**
JSD	**Sado**	**12.17**	**232**	Pn	**Pn**	**13 28 09.0**	**-1.3**
KLR	**Kul'dur**	**12.88**	**290**	P	**Pn**	**13 28 20.5**	**+1.1**
	comp=Z,15nm,0.9s,baz=92,slow=12,SNR=38						
USA0B	**Ussuriysk Arra**	**13.12**	**268**		**Pn**	**13 28 23.7**	**+1.2**
USA0B	**Ussuriysk Arra**	**13.12**	**268**	PN	**Pn**	**13 28 23.7**	**+1.2**
USRK	**Ussuriysk Ar.**	**13.12**	**268**	P	**Pn**	**13 28 23.4**	**+0.8**
	comp=Z,8.2nm,0.5s,baz=70,slow=13,SNR=24						
USRK	**Ussuriysk Ar.**	**13.12**	**268**	Pn	**Pn**	**13 28 23.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**13.12**	**268**	PN	**Pn**	**13 28 23.5**	**+1.0**
MJAR	**Matsushiro Arr**	**13.31**	**227**	P	**Pn**	**13 28 24.8**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=29,slow=12,SNR=7.2						
MJAR	**Matsushiro Arr**	**13.31**	**227**	P	**Pn**	**13 28 26.3**	**+1.3**
MJAR	**Matsushiro Arr**	**13.31**	**227**	PN	**Pn**	**13 28 26.3**	**+1.3**
MAJO	**Matsushiro**	**13.31**	**228**	Pn	**Pn**	**13 28 25.4**	**+0.5**
MAJO	**Matsushiro**	**13.31**	**228**	PN	**Pn**	**13 28 25.5**	**+0.5**
MA2	**Magadan**	**13.35**	**1**	P	**Pn**	**13 28 24.4**	**-0.8**
	comp=Z,6.3nm,0.8s,baz=153,slow=14,SNR=5.1						
MA2	**Magadan**	**13.35**	**1**	*ce*PN	**Pn**	**13 28 25.2**	**0.0**
MA2				pmax	pmax		
	comp=Z,21nm,2.5s						
MA2	**Magadan**	**13.35**	**1**	*e*P	**Pn**	**13 28 25.2**	**0.0**
JGF	**Kuroka**	**14.47**	**227**	Pn	**P**	**13 28 40.8**	**-0.9**

MDJ	Mudanjiang	14.68	271	P	Pn	13 28 42.5	+0.4
MDJ				pmax	pmax		
	comp=Z,14nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.9s						
BNX	BinXian	15.96	276	⇓P	Pn	13 28 56.0	-1.8
BNX				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,88nm,4.6s						
ZEA	Zeya	16.59	305	*e*P	Pn	13 29 05.9	+0.6
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA	Zeya	16.59	305	*e*P	Pn	13 29 05.9	+0.6
ZEA				AMB	AMB	13 29 07.0	
	comp=Z,10.0nm,0.8s						
ZEA				AMB	AMB	13 29 07.0	
	comp=Z,10.0nm,0.8s						
ZEA				AMB	AMB	13 29 07.0	
	comp=Z,20nm,0.8s						
SEY	Seymchan	16.75	3	P	P	13 29 05.7	-0.8
	comp=Z,4.7nm,0.7s,baz=175,slow=10,SNR=16						
SEY	Seymchan	16.75	3	*ce*P	P	13 29 05.9	-0.6
SEY				pmax	pmax		
	comp=Z,20nm,1.1s						
SEY	Seymchan	16.75	3	*e*P	P	13 29 05.9	-0.6
SEHB	SEOHWA	18.18	252	P	P	13 29 22.4	0.0
KSRS	Korea Array	18.85	250	P	Pn	13 29 31.4	-0.7
	comp=Z,11nm,0.7s,baz=52,slow=11,SNR=37						
KSAR	Wonju Array Be	18.88	250		P	13 29 31.2	+1.3
KSAR	Wonju Array Be	18.88	250	P	P	13 29 31.3	+1.3
KSAR	Wonju Array Be	18.88	250	*e*P	P	13 29 31.3	+1.3
YAK	Yakutsk	19.77	330	P	P	13 29 37.7	-1.6
	comp=Z,9.4nm,0.3s,baz=125,slow=3.1,SNR=6.4						
YAK	Yakutsk	19.77	330	*e*P	P	13 29 38.7	-0.6
YAK				*e*S	S	13 33 07.0	-5.7
YAK				pmax	pmax		
	comp=Z,34nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax	smax		
	comp=N,60nm,1.7s						
YAK				smax	smax		
	comp=E,75nm,1.9s						
YAK	Yakutsk	19.77	330	*e*P	P	13 29 38.3	-1.0
BILL	Bilibino	23.33	15	P	P	13 30 15.0	-0.3
BILL	Bilibino	23.33	15	⇓*e*P	P	13 30 14.8	-0.5
BILL				e*PP	pwP	13 30 50.7	+0.6
BILL				*i* S	S	13 33 54.4	-21
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	Bilibino	23.33	15	*e*P	P	13 30 14.8	-0.5
TIXI	Tiksi	27.44	345	P	P	13 30 50.1	-2.1
	comp=Z,1.7nm,0.5s,baz=22,slow=5.4,SNR=12						
TIXI				PcP	PcP	13 34 05.4	-0.7
	comp=Z,0.8nm,0.3s,baz=90,slow=23,SNR=2.5						
	comp=Z,1.7nm,0.5s						
TIXI	Tiksi	27.44	345	P	P	13 30 49.8	-2.4
NJ2	Nanjing	28.05	251	*e*P	P	13 30 56.0	-2.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
UNV	Unalaska Valle	28.34	59	P	P	13 31 01.1	+0.7
	baz=272						
HHC	Hu-ho-hao-te	28.44	273	*e*P	P	13 31 01.5	-0.1
HHC				pmax	pmax		
	comp=Z,46nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
ULN	Ulaanbaatar	29.27	289	*ce*P	P	13 31 06.9	-2.1
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	29.27	289	*e*P	P	13 31 06.9	-2.1
TNA	Tin City	29.50	34	P	P	13 31 10.0	-0.5
	baz=250						
SONM	Songino Array	29.71	289	P	P	13 31 11.9	-0.9
	comp=Z,1.3nm,0.8s,baz=71,slow=8.6,SNR=6.5						
SONM				PcP	PcP	13 34 12.6	+0.1
	comp=Z,0.8nm,0.8s,baz=48,slow=2.1,SNR=3.3						
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	29.71	289	P	P	13 31 10.4	-2.5
H11N2	WAKE ISLAND Hy	29.74	147	T	T	14 02 29.0	
	baz=336,slow=76,SNR=57						
H11N1	WAKE ISLAND Hy	29.75	147	T	T	14 02 30.2	
	baz=336,slow=76,SNR=52						
H11N3	WAKE ISLAND Hy	29.75	147	T	T	14 02 29.4	
	baz=336,slow=76,SNR=68						
FALS	False Pass	30.10	56	P	P	13 31 16.1	+0.1
	baz=273						
ANM	Nome	30.22	37	P	P	13 31 16.7	-0.2
	baz=254						
H11S1	WAKE ISLAND Hy	30.79	149	T	T	14 03 53.7	
	baz=338,SNR=107						
H11S3	WAKE ISLAND Hy	30.79	149	T	T	14 03 53.7	
	baz=338,slow=74,SNR=85						
H11S2	WAKE ISLAND Hy	30.80	149	T	T	14 03 54.3	
	baz=338,slow=74,SNR=64						
SDPT	Sand Point	31.75	55	P	P	13 31 30.4	-0.1
	baz=274						
CHNA	Chernabura Isl	32.31	56	P	P	13 31 35.4	+0.1
	baz=276						
CHGN	Chignik	32.84	53	P	P	13 31 39.9	0.0
	baz=274						
GCSA	Galena City Sc	33.83	38	P	P	13 31 49.0	+0.6
	baz=263,SNR=6.3						
N18K	Kilae Creek	34.02	45	P	P	13 31 52.1	+2.0
N18K				IAmb	IAmb	13 31 53.2	
	comp=Z,19nm,1.1s						
N18K	Kilae Creek	34.02	45	P	P	13 31 51.1	+1.0
	baz=270,SNR=8.7						
TTA	Tatalina	34.04	41	P	P	13 31 51.6	+1.2
TTA				IAmb	IAmb	13 31 52.5	
	comp=Z,12nm,0.7s						
TTA				PcP	PcP	13 34 25.4	+1.5
TTA	Tatalina	34.04	41	P	P	13 31 51.6	+1.2
TTA						13 34 25.4	
TTA				pmax	pmax		
	comp=Z,12nm,0.7s						
TTA	Tatalina	34.04	41	P	P	13 31 50.9	+0.5
	baz=266,SNR=16						
SVW2	Sparrevohn	34.17	44	P	P	13 31 48.9	-2.6
SVW2				PcP	PcP	13 34 25.5	+1.2
P18K	Big Mountain,	34.37	47	P	P	13 31 53.2	0.0
P18K				IAmb	IAmb	13 31 55.5	
	comp=Z,13nm,0.9s						
P18K	Big Mountain,	34.37	47	P	P	13 31 53.9	+0.7
	baz=272						
CHIR	Chirikof Islan	34.45	54	P	P	13 31 54.4	+0.5
	baz=277						
L19K	White Mountain	34.54	43	P	P	13 31 55.2	+0.6
L19K	White Mountain	34.54	43	P	P	13 31 55.3	+0.7
	baz=269						
N19K	Bonanza Creek	34.71	45	P	P	13 31 57.0	+0.9
N19K				IAmb	IAmb	13 31 58.9	
	comp=Z,10.0nm,0.8s						
N19K	Bonanza Creek	34.71	45	P	P	13 31 57.0	+0.9
	baz=271,SNR=5.5						
M19K	Big River Lodg	34.75	43	P	P	13 31 58.1	+1.7
M19K	Big River Lodg	34.75	43	P	P	13 31 56.6	+0.1
	baz=269						
O19K	Port Alsworth	34.80	46	P	P	13 31 58.1	+1.2
	baz=272						
K20K	Telida	34.95	40	P	P	13 31 59.3	+1.2
K20K				IAmb	IAmb	13 32 00.4	
	comp=Z,15nm,1.4s						
K20K	Telida	34.95	40	P	P	13 31 59.1	+1.0
	baz=268,SNR=7.2						
J20K	Nowinta River	34.96	39	P	P	13 31 59.4	+1.3
J20K				IAmb	IAmb	13 32 00.4	
	comp=Z,14nm,0.7s						
J20K				PcP	PcP	13 34 28.1	+1.7
J20K	Nowinta River	34.96	39	P	P	13 31 59.2	+1.1
	baz=266,SNR=24						
L20K	Farewell, AK	35.00	42	P	P	13 31 59.3	+0.8
	baz=269						
SII	Sitkinak Islan	35.16	52	P	P	13 32 00.6	+0.7
	baz=277						
Q19K	Cape Douglas,	35.21	48	P	P	13 32 01.0	+0.6
	baz=274						
IMAR	Indian Mountai	35.28	36	P	P	13 32 01.3	+0.4
IMAR				PcP	PcP	13 34 28.8	+1.4
IMAR				ScP	ScP	13 37 57.4	+0.1
A21K	Barrow	35.29	26	P	P	13 32 01.5	+0.7
	baz=254						
M20K	Styx River	35.35	43	P	P	13 32 02.3	+0.7
M20K				IAmb	IAmb	13 32 04.5	
	comp=Z,9.3nm,0.8s						
M20K	Styx River	35.35	43	P	P	13 32 02.7	+1.0
	baz=271,SNR=8.8						
OHAK	Old Harbor	35.56	51	P	P	13 32 03.5	+0.1
	baz=277						
RSO	Redoubt South	35.57	46	P	P	13 32 03.4	-0.2
H21K	Melozitna Rive	35.64	37	P	P	13 32 05.2	+1.3
H21K				IAmb	IAmb	13 32 06.1	
	comp=Z,13nm,0.8s						
H21K	Melozitna Rive	35.64	37	P	P	13 32 04.9	+0.9
	baz=266,SNR=22						
O20K	Slope Mountain	35.66	46	P	P	13 32 04.3	+0.1
	baz=274						
CHUM	Lake Minchumin	35.75	40	P	P	13 32 06.1	+1.2
	baz=268,SNR=7.2						
PPLA	Purkeypile	35.79	41	P	P	13 32 07.0	+1.6
PPLA				PcP	PcP	13 34 30.0	+0.8
PPLA	Purkeypile	35.79	41	P	P	13 32 06.7	+1.3
	baz=270,SNR=5.1						
CAST	Castle Rocks	35.84	40	P	P	13 32 07.3	+1.7
CAST				IAmb	IAmb	13 32 08.4	
	comp=Z,13nm,0.8s						
CAST	Castle Rocks	35.84	40	P	P	13 32 07.4	+1.7
	baz=269,SNR=18						
KDAK	Kodiak Island	35.88	50	P	P	13 32 06.4	+0.4
KDAK				IAmb	IAmb	13 32 07.1	
	comp=Z,21nm,0.9s						
KDAK				PcP	PcP	13 34 30.4	+1.2
KDAK	Kodiak Island	35.88	50	P	P	13 32 06.4	+0.4
KDAK						13 34 30.5	
KDAK				pmax	pmax		
	comp=Z,21nm,1.0s						
KDAK	Kodiak Island	35.88	50	P	P	13 32 05.9	-0.1
	baz=277						
Q20K	Shuyak Island	35.89	49	P	P	13 32 06.5	+0.4
	baz=276						
I21K	Tanana	35.95	37	P	P	13 32 07.5	+1.0
	baz=267						
LZH	Lanzhou	36.01	271	*e*P	P	13 32 08.3	+0.7
LZH				pP	pwP	13 32 47.5	+1.0
LZH				sP	sP	13 33 01.0	+0.5
LZH				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH				LR	LR		
	comp=Z,150nm,18.7s						
BPAW	Bear Paw Mtn.	36.34	39	P	P	13 32 10.1	+0.2
BPAW				IAmb	IAmb	13 32 12.3	
	comp=Z,8.0nm,0.8s						
BPAW	Bear Paw Mtn.	36.34	39	P	P	13 32 10.5	+0.6
	baz=269,SNR=9.8						
KTH	Kantishna Hill	36.36	40	P	P	13 32 11.4	+1.2
CNPM	China Poot	36.40	47	P	P	13 32 10.7	+0.3
CNPM				IAmb	IAmb	13 32 37.7	
	comp=Z,28nm,1.4s						
MLY	Manley	36.47	38	P	P	13 32 12.5	+1.5
MLY				IAmb	IAmb	13 32 13.5	
	comp=Z,12nm,0.7s						
MLY	Manley	36.47	38	P	P	13 32 12.2	+1.2
	baz=268,SNR=26						
BRLK	Bradley Lake	36.55	47	P	P	13 32 12.4	+0.6
BRLK				IAmb	IAmb	13 32 15.3	
	comp=Z,9.9nm,0.7s						
BRLK				PcP	PcP	13 34 32.1	+0.7
BRSE	Bradley Lake S	36.63	47	P	P	13 32 13.4	+1.0
	baz=276						
TRF	Thorofare Moun	36.65	40	P	P	13 32 14.1	+1.4
TRF	Thorofare Moun	36.65	40	P	P	13 32 12.9	+0.2
	baz=271,SNR=7.4						
CUT	Chulitna	36.68	42	P	P	13 32 13.4	+0.6
	baz=272						
M22K	Willow	36.78	43	P	P	13 32 13.7	+0.1
	baz=273						
COLD	Coldfoot	36.80	34	P	P	13 32 13.8	0.0
COLD	Coldfoot	36.80	34	P	P	13 32 14.8	+1.0
	baz=266,SNR=6.4						
H23K	Yukon River	36.99	36	P	P	13 32 16.6	+1.2
H23K	Yukon River	36.99	36	P	P	13 32 16.6	+1.2
	baz=268,SNR=33						
RC01	Rabbit Creek A	37.01	44	P	P	13 32 15.5	-0.1
RC01				IAmb	IAmb	13 32 17.3	
	comp=Z,15nm,0.8s						
RC01	Rabbit Creek A	37.01	44	P	P	13 32 16.2	+0.7
	baz=274,SNR=10						
I23K	Minto, Yukon-K	37.05	38	P	P	13 32 16.9	+1.1
I23K	Minto, Yukon-K	37.05	38	P	P	13 32 16.9	+1.1
	baz=270,SNR=16						
O22K	Cooper Landing	37.07	45	P	P	13 32 16.4	+0.3
	baz=275						
TOLK	Toolik Lake Re	37.16	32	P	P	13 32 17.7	+0.9
TOLK				IAmb	IAmb	13 32 19.0	
	comp=Z,23nm,1.1s						
TOLK	Toolik Lake Re	37.16	32	P	P	13 32 17.5	+0.7
	baz=265,SNR=16						
GTA	Gaotai	37.17	278	*e*P	P	13 32 18.3	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,46nm,5.8s						
GTA				LR	LR		
	comp=Z,79nm,14.2s						
GTA				LR	LR		
	comp=Z,83nm,17.1s						
GTA				LR	LR		
	comp=Z,120nm,15.6s						
NEA2	Nenana	37.17	38	P	P	13 32 17.8	+0.8
NEA2	Nenana	37.17	38	P	P	13 32 17.7	+0.8
	baz=270,SNR=12						
SEW	Seward	37.24	46	P	P	13 32 17.6	+0.1
	baz=276						
MCK	McKinley	37.25	40	P	P	13 32 18.6	+1.0
MCK				IAmb	IAmb	13 32 19.5	
	comp=Z,10.0nm,0.8s						
MCK	McKinley	37.25	40	P	P	13 32 18.6	+1.0
MCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MCK	McKinley	37.25	40	P	P	13 32 18.0	+0.4
	baz=272,SNR=8.2						
PMR	Palmer	37.26	43	P	P	13 32 18.5	+0.8
	baz=274						
RND	Reindeer	37.29	40	P	P	13 32 18.2	+0.1
RND				IAmb	IAmb	13 32 19.6	
	comp=Z,10.0nm,1.0s						
RND	Reindeer	37.29	40	P	P	13 32 18.2	+0.1
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GHO	Glory Hole Cre	37.35	43	P	P	13 32 18.6	+0.1
GHO				IAmb	IAmb	13 32 20.4	
	comp=Z,12nm,1.0s						
WAT1	Susitna Watana	37.46	41	P	P	13 32 19.6	+0.2
	baz=273						
MDM	Murphy Dome	37.53	38	P	P	13 32 21.2	+1.2
KNK	Knik Glacier	37.60	44	P	P	13 32 21.2	+0.6
	baz=275,SNR=12						
WRH	Wood River Hil	37.60	39	P	P	13 32 20.9	+0.4
WRH				IAmb	IAmb	13 32 28.9	
	comp=Z,9.1nm,0.7s						
SML	Sawmill	37.63	43	P	P	13 32 21.7	+0.9
SML	Sawmill	37.63	43	P	P	13 32 21.9	+1.0
	baz=275,SNR=28						
H24K	Noodor Dome	37.68	36	P	P	13 32 22.8	+1.6
H24K				IAmb	IAmb	13 32 23.9	
	comp=Z,13nm,0.8s						
H24K				PcP	PcP	13 34 36.1	+1.4
H24K	Noodor Dome	37.68	36	P	P	13 32 22.9	+1.7
	baz=270,SNR=18						
TCOL	CIGO, UAF Yank	37.69	38	P	P	13 32 22.7	+1.5
TCOL	CIGO, UAF Yank	37.69	38	P	P	13 32 22.7	+1.5
	baz=271,SNR=23						
COLA	College	37.69	38	P	P	13 32 22.9	+1.6
COLA	College	37.69	38	P	P	13 32 22.9	+1.6
COLA				pmax	pmax		
	comp=Z,51nm,0.6s						
COLA	College	37.69	38	P	P	13 32 22.6	+1.4
	baz=271						
CCB	Clear Creek Bu	37.72	38	P	P	13 32 22.4	+0.9
WAT6	Susitna Watana	37.85	42	P	P	13 32 23.2	+0.4
	baz=274						
POKR	Poker Plat Res	37.87	38	P	P	13 32 24.4	+1.6
POKR	Poker Plat Res	37.87	38	P	P	13 32 24.2	+1.4
	baz=271,SNR=16						
M23K	Glacier View	37.91	43	P	P	13 32 23.8	+0.6
	baz=275,SNR=6.3						
DHY	Denali Highway	37.98	41	P	P	13 32 24.8	+0.9
DHY				IAmb	IAmb	13 32 25.4	
	comp=Z,23nm,1.4s						
DHY	Denali Highway	37.98	41	P	P	13 32 24.5	+0.6
	baz=274,SNR=12						
HDA	Harding Lake	38.10	39	P	P	13 32 24.9	+0.2
HDA	Harding Lake	38.10	39	P	P	13 32 24.9	+0.2
	baz=273,SNR=24						
SCM	Sheep Creek Mo	38.10	43	P	P	13 32 26.0	+1.2
SCM				IAmb	IAmb	13 32 28.0	
	comp=Z,7.3nm,0.8s						
SCM	Sheep Creek Mo	38.10	43	P	P	13 32 26.0	+1.2
SCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SCM	Sheep Creek Mo	38.10	43	P	P	13 32 25.9	+1.0
	baz=276,SNR=6.6						
IL31		38.11	38	P	P	13 32 25.3	+0.5
IL31				IAmb	IAmb	13 32 26.4	
	comp=Z,24nm,1.4s						
ILAR	Eielson Array	38.11	38	P	P	13 32 25.4	+0.6
	comp=Z,6.2nm,0.6s,baz=266,slow=7.4,SNR=96						
ILAR				PcP	PcP	13 34 35.0	-1.0
	comp=Z,0.5nm,0.6s,baz=283,slow=3.7,SNR=3.1						
	comp=Z,6.2nm,0.6s						
ILAR	Eielson Array	38.11	38	P	P	13 32 25.1	+0.3
GLI	Glacier Island	38.31	44	P	P	13 32 27.2	+0.7
GLI				IAmb	IAmb	13 32 28.0	
	comp=Z,12nm,0.8s						
GLI	Glacier Island	38.31	44	P	P	13 32 27.0	+0.5
	baz=277						
M24K	Tolsona, Glenn	38.62	42	P	P	13 32 30.1	+1.0
	baz=276						
K24K	Donnelly Dome	38.65	40	P	P	13 32 29.7	+0.4
	baz=274,SNR=16						
J25K	Salcha River,	38.77	38	P	P	13 32 30.1	-0.2
J25K				IAmb	IAmb	13 32 32.1	
	comp=Z,9.9nm,0.7s						
J25K	Salcha River,	38.77	38	P	P	13 32 30.3	0.0
	baz=274,SNR=20						
KLU	Klutina	38.80	43	P	P	13 32 31.8	+1.1
KLU				IAmb	IAmb	13 32 33.0	
	comp=Z,15nm,1.0s						
KLU	Klutina	38.80	43	P	P	13 32 31.8	+1.1
	baz=277,SNR=11						
PAX	Paxson	38.85	41	P	P	13 32 32.3	+1.2
	baz=276,SNR=5.6						
Q23K	Middleton Isla	38.88	47	P	P	13 32 32.3	+1.1
	baz=279						
BMAR	Burnt Mountain	38.99	34	P	P	13 32 33.2	+1.1
EYAK	Cordova Ski Ar	39.01	45	P	P	13 32 33.0	+0.7
	baz=278						
HARP	HAARP	39.06	42	P	P	13 32 33.9	+1.2
	baz=277						
N25K	Chitina, Valde	39.42	43	P	P	13 32 36.6	+0.8
	baz=278						
SCRK	Sand Creek	39.42	39	P	P	13 32 36.0	+0.2
SCRK				IAmb	IAmb	13 32 37.1	
	comp=Z,8.5nm,0.6s						
SCRK	Sand Creek	39.42	39	P	P	13 32 36.1	+0.2
	baz=276,SNR=14						
BMRM	Bremner River	39.51	44	P	P	13 32 36.9	+0.4
BMRM				IAmb	IAmb	13 32 38.9	
	comp=Z,14nm,0.8s						
BMRM	Bremner River	39.51	44	P	P	13 32 37.9	+1.4
	baz=279,SNR=12						
J26L	Joseph Creek	39.55	38	P	P	13 32 36.9	0.0
	baz=275,SNR=12						
HMT	Hamilton	39.77	45	P	P	13 32 40.0	+1.3
HMT				IAmb	IAmb	13 32 41.3	
	comp=Z,19nm,1.1s						
L26K	Log Cabin Wild	39.81	41	P	P	13 32 40.7	+1.8
L26K	Log Cabin Wild	39.81	41	P	P	13 32 40.5	+1.5
	baz=277,SNR=7.7						
GLB	Gilahina Butte	39.81	43	P	P	13 32 40.5	+1.4
VRDI	Verde Repeater	40.02	43	P	P	13 32 42.4	+1.5
VRDI				IAmb	IAmb	13 32 43.3	
	comp=Z,7.3nm,0.7s						
M26K	Nabesna, AK	40.05	42	P	P	13 32 43.0	+2.0
M26K				IAmb	IAmb	13 32 44.1	
	comp=Z,21nm,0.9s						
M26K				PcP	PcP	13 34 44.1	+1.8
M26K	Nabesna, AK	40.05	42	P	P	13 32 43.0	+2.0
	baz=278,SNR=39						
SUCK	Suckling Hills	40.06	45	P	P	13 32 40.5	-0.5
SUCK				IAmb	IAmb	13 33 08.3	
	comp=Z,23nm,1.2s						
MCARA	McCarthy VSAT	40.20	43	P	P	13 32 43.7	+1.5
	baz=280						
K27K	Chicken	40.25	39	P	P	13 32 43.4	+0.9
K27K	Chicken	40.25	39	P	P	13 32 44.0	+1.5
	baz=277						
TGL	Tana Glacier	40.40	44	P	P	13 32 43.6	-0.3
TGL				IAmb	IAmb	13 32 46.7	
	comp=Z,16nm,1.2s						
WAX	Waxell Ridge	40.44	45	P	P	13 32 46.3	+2.1
L27K	Beaver Creek,	40.49	40	P	P	13 32 46.6	+2.0
L27K				IAmb	IAmb	13 32 47.6	
	comp=Z,17nm,0.7s						
L27K	Beaver Creek,	40.49	40	P	P	13 32 46.1	+1.6
	baz=279,SNR=45						
SNH	Sunshine Point	40.50	45	P	P	13 32 46.9	+2.2
BCAR	Beaver Creek A	40.51	40	P	P	13 32 46.7	+2.0
EGAK	Eagle	40.56	38	P	P	13 32 45.7	+0.7
EGAK				IAmb	IAmb	13 32 46.6	
	comp=Z,16nm,0.8s						
EGAK	Eagle	40.56	38	P	P	13 32 45.5	+0.5
	baz=277,SNR=21						
M27K	Edge Creek, AK	40.58	42	P	P	13 32 46.6	+1.2
M27K				IAmb	IAmb	13 32 48.4	
	comp=Z,19nm,0.9s						
M27K	Edge Creek, AK	40.58	42	P	P	13 32 47.1	+1.7
	baz=279,SNR=27						
ISLE	Juniper Island	40.66	44	P	P	13 32 47.3	+1.2
ISLE				IAmb	IAmb	13 32 48.6	
	comp=Z,14nm,0.6s						
BARN	Barnard Glacie	40.90	44	P	P	13 32 48.8	+0.7
BARN				IAmb	IAmb	13 32 51.0	
	comp=Z,16nm,0.7s						
GRNC	Granite Creek	40.92	44	P	P	13 32 50.1	+1.8
MESA	MESA	40.94	45	P	P	13 32 49.7	+1.3
MESA				IAmb	IAmb	13 32 50.9	
	comp=Z,14nm,0.6s						
MESA	MESA	40.94	45	P	P	13 32 50.3	+1.9
	baz=282						
YAH	Yahtse	41.00	45	P	P	13 32 50.8	+1.8
BVCY	Beaver Creek	41.03	41	P	P	13 32 50.8	+1.8
	baz=280,SNR=16						
CTG	Chitna Glacier	41.08	44	P	P	13 32 51.3	+1.8
	baz=281,SNR=19						
CTGM	Chitina Glacie	41.08	44	P	P	13 32 50.8	+1.3
CTGM				IAmb	IAmb	13 32 52.2	
	comp=Z,22nm,0.8s						
LOGN	Logan Glacier	41.27	44	P	P	13 32 52.5	+1.4
LOGN				IAmb	IAmb	13 32 53.6	
	comp=Z,22nm,1.3s						
TABL	Table Mountain	41.28	44	P	P	13 32 52.7	+1.5
TABL				IAmb	IAmb	13 32 53.6	
	comp=Z,17nm,0.8s						
YUK3	Moose Creek	41.34	42	P	P	13 32 53.1	+1.4
	baz=281,SNR=17						
ZALV	Zalesovo Beam	41.36	305	P	P	13 32 49.7	-2.0
	comp=Z,0.7nm,0.6s,baz=54,slow=7.4,SNR=2.4						
ZALV				PcP	PcP	13 34 46.9	+0.3
	comp=Z,2.0nm,0.7s,baz=110,slow=2.7,SNR=7.5						
	comp=Z,0.7nm,0.6s						
DAWY	Dawson	41.41	39	P	P	13 32 52.3	+0.2
DAWY	Dawson	41.41	39	P	P	13 32 53.2	+1.1
	baz=279,SNR=6.5						
I29M	Ogilvie Camp,	41.67	37	P	P	13 32 55.2	+1.0
	baz=279						
PCA	Pinnacle	41.78	45	P	P	13 32 55.8	+0.6
PCA				IAmb	IAmb	13 32 57.4	
	comp=Z,10nm,0.6s						
PINM	Pinnacle	41.78	45	P	P	13 32 56.6	+1.4
	baz=283,SNR=5.5						
EPYK	Eagle Plains	42.16	35	P	P	13 32 59.6	+1.5
EPYK	Eagle Plains	42.16	35	P	P	13 32 59.5	+1.3
	baz=279						
GOMU	GeErMu	42.20	277	P	P	13 32 59.3	+0.1
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,61nm,4.7s						
YUK4	Talbot Arm	42.27	43	P	P	13 33 00.7	+1.4
	baz=283						

PNL	Peninsula	42.30	45	P	P	13 33 00.4	+1.1
	baz=284						
YUK6	Outpost Mounta	42.50	43	P	P	13 33 02.6	+1.4
	baz=284						
M30M	Minto, Yukon	42.85	41	P	P	13 33 05.4	+1.7
M30M	Minto, Yukon	42.85	41	P	P	13 33 05.9	+2.1
	baz=283,SNR=13						
HYT	Haines Junctio	42.94	43	P	P	13 33 06.8	+2.3
HYT	Haines Junctio	42.94	43	P	P	13 33 07.0	+2.4
	baz=284,SNR=37						
N30M	Aishikik Lake	42.98	42	P	P	13 33 06.4	+1.6
	baz=284,SNR=5.7						
PZH	PanZhiHua	43.07	260	P	P	13 33 06.8	+0.8
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,6.5s						
INK	Inuvik	43.08	32	P	P	13 33 06.7	+1.4
	comp=Z,7.1nm,0.5s,baz=303,slow=11,SNR=36						
	comp=Z,7.1nm,0.5s						
INK	Inuvik	43.08	32	P	P	13 33 06.6	+1.2
INK				IAmb	IAmb	13 33 07.7	
	comp=Z,17nm,1.1s						
INK	Inuvik	43.08	32	P	P	13 33 06.7	+1.4
	baz=280,SNR=15						
WMQ	Urumqi	43.33	290	*e*P	P	13 33 07.8	-0.1
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
N31M	Braeburn, Yuko	43.58	42	P	P	13 33 11.8	+2.3
N31M				IAmb	IAmb	13 33 13.1	
	comp=Z,16nm,0.8s						
N31M	Braeburn, Yuko	43.58	42	P	P	13 33 11.8	+2.3
	baz=285						
O30N	Mendenhall	43.62	43	P	P	13 33 11.8	+1.9
	baz=286						
PLBC	Pleasant Camp	43.85	45	P	P	13 33 14.1	+2.5
	baz=287,SNR=6.8						
M31M	Drury Creek, Y	44.03	41	P	P	13 33 15.1	+2.0
M31M				IAmb	IAmb	13 33 16.1	
	comp=Z,14nm,0.9s						
M31M	Drury Creek, Y	44.03	41	P	P	13 33 14.8	+1.7
	baz=285,SNR=16						
WHY	Whitehorse	44.22	43	P	P	13 33 16.6	+1.8
	baz=286,SNR=5.7						
SKAG	Skagway	44.35	45	P	P	13 33 17.7	+2.0
	baz=287						
FARO	Faro, Yukon	44.49	40	P	P	13 33 18.4	+1.6
	baz=286,SNR=17						
SIT	Sitka	45.11	48	P	P	13 33 22.9	+1.3
	baz=290						
A36M	Sachs Harbour	45.13	26	P	P	13 33 23.1	+1.5
	baz=283						
MMPY	Sheldon Lake,	45.31	40	P	P	13 33 24.9	+1.6
	baz=287,SNR=10						
P33M	Teslin, Yukon	45.33	43	P	P	13 33 25.6	+2.0
	baz=288,SNR=6.4						
MK31	Makanchi Array	45.48	297	P	P	13 33 23.7	-1.1
MK31	Makanchi Array	45.48	297	*i* P	P	13 33 24.0	-0.8
MKAR	Makanchi Array	45.48	297	P	P	13 33 24.0	-0.8
	comp=Z,2.6nm,0.7s,baz=65,slow=6.8,SNR=25						
MKAR				PcP	PcP	13 35 00.9	+0.1
	comp=Z,0.9nm,0.6s,baz=63,slow=4.7,SNR=4.0						
MKAR				ScP	ScP	13 38 36.6	-1.0
	comp=Z,0.6nm,0.8s,baz=52,slow=3.3,SNR=2.8						
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	45.48	297	P	P	13 33 24.5	-0.3
KURK	Kurchatov	46.05	303	*ce*P	P	13 33 27.2	-2.0
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
C36M	Paulatuk	46.18	29	P	P	13 33 30.9	+0.9
C36M	Paulatuk	46.18	29	P	P	13 33 30.8	+0.9
	baz=287						
CRAG	Craig	46.83	49	P	P	13 33 37.1	+2.0
	baz=292						
WRAK	Wrangell Islan	46.88	48	P	P	13 33 37.2	+1.8
	baz=292						
S34M	Telegraph Cree	46.94	46	P	P	13 33 37.8	+1.9
	baz=292						
EUNU	Eureka	49.98	11	P	P	13 33 58.6	-0.4
EUNU				PcP	PcP	13 35 17.0	+0.6
CMAR	Chiang Mai Arr	50.41	254	P	P	13 34 04.6	+1.6
	comp=Z,0.8nm,0.4s,baz=37,slow=6.7,SNR=2.1						
	comp=Z,0.8nm,0.4s						
TAPN	Taplejung	52.23	272	*e*P	P	13 34 18.0	+1.2
AAK	Ala-Archa	52.35	295	*ce*P	P	13 34 16.2	-1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	52.44	36	P	P	13 34 18.6	+1.2
	comp=Z,6.9nm,0.8s,baz=298,slow=6.9,SNR=30						
YKA				PcP	PcP	13 35 25.7	-0.1
	comp=Z,0.7nm,0.7s,baz=306,slow=4.0,SNR=4.0						
	comp=Z,6.9nm,0.8s						
KSH	Kashi	53.08	291	P	P	13 34 27.3	+4.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JIRN	Jiri	53.09	273	*e*P	P	13 34 24.6	+1.4
GUN	Gumba	53.15	273	*e*P	P	13 34 24.8	+1.2
	comp=Z,11nm,0.4s						
RAMN	Ramite	53.25	272	*e*P	P	13 34 25.3	+1.1
PKI	Pulchoki	53.69	273	*e*P	P	13 34 28.4	+0.9
	comp=Z,5.7nm,0.5s						
PKIN	Phulchoki	53.69	273	*e*P	P	13 34 28.5	+1.1
	comp=Z,6.7nm,0.4s						
GKN	Gorkha	53.95	274	*e*P	P	13 34 30.8	+1.6
ARU	Arti	54.09	317	P	P	13 34 28.1	-1.4
	comp=Z,1.1nm,0.4s,baz=60,slow=4.5,SNR=4.8						
	comp=Z,1.1nm,0.4s						
ARU	Arti	54.09	317	*c i*P	P	13 34 27.1	-2.4
ARU				*PP	pP	13 35 02.7	-3.7
ARU						13 35 29.5	
ARU				S	S	13 41 49.6	-3.0
ARU				SS	SKiKP	13 45 28.3	+5.5
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DANN	Dangsing	54.34	275	*e*P	P	13 34 33.8	+1.6
	comp=Z,23nm,0.5s						
PYUN	Piuthan	55.03	276	*e*P	P	13 34 38.5	+1.5
	comp=Z,11nm,0.5s						
D03D	Eldon	56.08	55	P	P	13 34 45.8	+1.8
	baz=304						
E04D	Cinebar	56.92	55	P	P	13 34 51.3	+1.4
	baz=304						
GAR	Garm	57.00	294	P	P	13 34 51.7	+1.0
ABKAR	Akbulak array	57.28	309	P	P	13 34 51.4	-1.0
I02E	Swisshome, OR	57.57	58	P	P	13 34 56.1	+1.7
	baz=305						
AKTO	Aktyubinsk	57.63	311	P	P	13 34 55.6	+0.8
	comp=Z,1.5nm,0.6s,baz=41,slow=6.7,SNR=5.2						
	comp=Z,1.5nm,0.6s						
ARCES	ARCESS Array B	57.68	340	P	P	13 34 53.9	-1.0
	comp=Z,2.0nm,1.0s,baz=35,slow=7.1,SNR=1.6						
	comp=Z,2.0nm,1.0s						
B08A	Colville Reser	57.71	52	P	P	13 34 54.7	-0.8
CHGR	Chuyangaron	57.93	294	P	P	13 34 57.6	+0.4
CHGR	Chuyangaron	57.93	294	P	P	13 34 57.6	+0.4
CHGR				pmax	pmax		
	comp=Z,45nm,0.5s						
H04D	Lebanon	57.98	57	P	P	13 34 59.0	+1.6
	baz=305						
EDM	Edmonton	58.01	45	P	P	13 34 57.8	+0.3
EDM	Edmonton	58.01	45	P	P	13 34 57.8	+0.3
EDM				pmax	pmax		
	comp=Z,18nm,0.7s						
G05D	Wamic, OR	58.39	56	P	P	13 35 01.7	+1.4
	baz=306						
I04A	Tendick Farm,	58.60	58	P	P	13 35 02.6	+0.9
	baz=306						
I05D	Terrebonne, OR	58.91	57	P	P	13 35 05.1	+1.3
	baz=306						
NEW	Newport	58.97	51	P	P	13 35 05.3	+1.1
	baz=306						
J04D	Umpqua Nationa	59.10	58	P	P	13 35 06.7	+1.4
	baz=306						
KLMR	Klimovskoe	59.54	328	*e*P	P	13 35 05.8	-2.0
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLMR	Klimovskoe	59.54	328	*e*P	P	13 35 05.8	-2.0
KLMR				AMP		13 35 11.2	
	comp=Z,8.0nm,1.0s						
J05D	Fort Rock, OR	59.59	58	P	P	13 35 10.6	+1.9
	baz=307						
L04D	Klamath Falls	59.59	59	P	P	13 35 09.8	+1.1
	baz=307						
K05A	Summer Lake	60.12	58	P	P	13 35 12.1	-0.2
K05A				IAmb	IAmb	13 35 15.6	
	comp=Z,11nm,1.1s						
WALA	Waterton Lakes	60.20	49	P	P	13 35 13.8	+1.1
WALA				IAmb	IAmb	13 35 14.8	
	comp=Z,9.8nm,0.9s						
SUMG	Summit	61.31	3	P	P	13 35 20.0	-0.1
SUMG	Summit	61.31	3	P	P	13 35 20.0	-0.1
SUMG				pmax	pmax		
	comp=Z,145nm,1.1s						
PLID	Pearl Lake	61.50	54	P	P	13 35 22.8	+1.1
PLID				IAmb	IAmb	13 35 23.9	
	comp=Z,7.3nm,0.9s						
MSO	Missoula	61.55	51	P	P	13 35 23.1	+1.3
	baz=308						
LRM	Limekiln Ridge	62.99	51	P	P	13 35 32.7	+1.2
EGMT	Eagleton	63.01	48	P	P	13 35 32.3	+0.9
EGMT				IAmb	IAmb	13 35 33.5	
	comp=Z,14nm,1.2s						
EGMT	Eagleton	63.01	48	P	P	13 35 32.5	+1.0
	baz=310						
HLID	Hailey	63.34	54	P	P	13 35 35.2	+1.4
	baz=310						
BOZ	Bozeman (W)	63.58	51	P	P	13 35 36.5	+1.3
BOZ				IAmb	IAmb	13 35 37.7	
	comp=Z,5.2nm,0.8s						
BOZ	Bozeman (W)	63.58	51	P	P	13 35 36.6	+1.3
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOZ	Bozeman (W)	63.58	51	P	P	13 35 36.6	+1.3
	baz=310						
FINES	FINESS Array B	63.66	334	P	P	13 35 34.0	-1.4
	comp=Z,2.6nm,0.6s,baz=48,slow=5.2,SNR=9.4						
	comp=Z,2.6nm,0.6s						
FINES	FINESS Array B	63.66	334	P	P	13 35 33.9	-1.4
FINES	FINESS Array B	63.66	334	*i* P	P	13 35 34.7	-0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KVN	Kaiserville	64.06	60	P	P	13 35 38.9	+0.3
KVN	Kaiserville	64.06	60	P	P	13 35 38.9	+0.3
KVN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RYN	Ryan	64.07	61	P	P	13 35 39.2	+0.6
NVAR	Mina Array Bea	64.33	61	P	P	13 35 42.0	+1.6
	comp=Z,3.8nm,0.7s,baz=292,slow=7.2,SNR=34						
	comp=Z,3.8nm,0.7s						
NVAR	Mina Array Bea	64.33	61	P	P	13 35 41.3	+0.8
GCMT	Greycliff	64.50	50	P	P	13 35 41.7	+0.4
H17A	Grant Village	64.92	51	P	P	13 35 46.7	+2.5
	baz=311						
RLMT	Red Lodge	65.15	50	P	P	13 35 47.0	+1.3
	baz=311						
GEYT	Alibeck	65.22	300	P	P	13 35 45.5	-0.4
	comp=Z,2.5nm,0.5s,baz=102,slow=4.3,SNR=3.0						
	comp=Z,2.5nm,0.5s						
LAO	LASA Array	65.69	47	P	P	13 35 50.2	+1.3
	baz=312						
CWC	Cottonwood Cre	65.75	62	P	P	13 35 51.0	+1.4
	baz=311						
GRAC	Grapevine Rang	65.82	61	P	P	13 35 51.5	+1.7
	baz=311						
R11A	Troy Canyon, C	66.01	59	P	P	13 35 52.0	+0.8
R11A	Troy Canyon, C	66.01	59	P	P	13 35 52.5	+1.3
	baz=311						
DUG	Dugway, Tooele	66.43	56	P	P	13 35 54.7	+0.9
	baz=312						
FURC	Furnace Creek,	66.47	61	P	P	13 35 55.7	+1.8
	baz=311						
TPNV	Topopah Spring	66.53	61	P	P	13 35 55.7	+1.2
	baz=311						
BW06	Boulder Array	66.55	52	P	P	13 35 55.9	+1.2
BW06	Boulder Array	66.55	52	P	P	13 35 55.7	+1.1
	baz=312						
PD31	Pinedale Array	66.56	52	P	P	13 35 56.1	+1.4
PDAR	Pinedale Array	66.56	52	P	P	13 35 55.7	+1.0
	comp=Z,3.8nm,0.8s,baz=286,slow=1.7,SNR=33						
	comp=Z,3.8nm,0.8s						
EDW2	Edwards Air Fo	66.81	63	P	P	13 35 57.7	+1.5
	baz=311						
GSC	Goldstone, Bar	67.27	62	P	P	13 36 00.3	+1.2
	baz=312						
BFSC	Mount Baldy Ra	67.44	64	P	P	13 36 02.0	+1.7
	baz=312						
WR0	Warramunga Arr	67.44	196	P	P	13 36 00.8	+0.7
WRA	Warramunga Arr	67.47	196	P	P	13 36 00.9	+0.7
	comp=Z,1.6nm,0.9s,baz=17,slow=6.9,SNR=11						
	comp=Z,1.6nm,0.9s						
WRA	Warramunga Arr	67.47	196	P	P	13 36 01.1	+0.8
TUQ	Turquoise Moun	67.72	62	P	P	13 36 03.2	+1.2
	baz=312						
HEC	Hector,Ludlow	67.87	62	P	P	13 36 04.0	+1.1
	baz=312						
NB201	NORSAR Array S	68.04	340	P	P	13 36 03.0	-0.3
NB2	NORSAR Subarra	68.06	340	P	P	13 36 02.4	-1.2
	comp=Z,1.2nm,0.4s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.06	340	P	P	13 36 02.8	-0.8
	comp=Z,1.5nm,0.4s,baz=29,slow=6.5,SNR=8.6						
	comp=Z,1.5nm,0.4s						
ULM	Lac du Bonnet	68.12	39	P	P	13 36 04.2	+0.1
	comp=Z,3.8nm,0.5s,baz=330,slow=6.9,SNR=5.1						
	comp=Z,3.8nm,0.5s						
MDND	Maddock	68.15	43	P	P	13 36 05.0	+0.7
	baz=316						
MURC	Murrieta	68.16	64	P	P	13 36 06.1	+1.5
	baz=312						
K22A	Casper	68.28	51	P	P	13 36 06.7	+1.3
	baz=314						
GMRC	Granite Mounta	68.32	62	P	P	13 36 07.0	+1.3
	baz=312						
RSSD	Black Hills	68.57	48	P	P	13 36 07.4	+0.1
RSSD				IAmb	IAmb	13 36 08.9	
	comp=Z,8.0nm,0.9s						
RSSD	Black Hills	68.57	48	P	P	13 36 07.4	+0.1
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RSSD	Black Hills	68.57	48	P	P	13 36 07.9	+0.6
	baz=314						
IRM	Iron Mountain	69.05	62	P	P	13 36 11.3	+1.1
	baz=312						
O20A	White River Ci	69.06	54	P	P	13 36 10.8	+0.5
	baz=314						
BC3	Big Chuckawall	69.20	63	P	P	13 36 11.7	+0.6
	baz=312						
IKP	In-Ko-Pah, Jac	69.47	64	P	P	13 36 14.1	+1.3
	baz=313						
PDMCI	Parker Dam,Lak	69.57	62	P	P	13 36 14.7	+1.4
	baz=313						
KIV	Kislovodsk	69.77	313	*e*P	P	13 36 14.4	0.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV	Kislovodsk	69.77	313	*e*P	P	13 36 14.6	+0.2
N23A	Red Feather La	69.81	52	P	P	13 36 15.9	+0.9
	baz=314						
KBZ	Khabaz	69.82	313	P	P	13 36 14.6	-0.1
	comp=Z,5.7nm,0.9s,baz=288,slow=1.2,SNR=8.8						
	comp=Z,5.7nm,0.9s						
KBZ	Khabaz	69.82	313	*e*P	P	13 36 14.4	-0.2
GLA	Glamis	69.99	63	P	P	13 36 17.1	+1.2
	baz=313						
B35A	Bob, Littlefor	70.46	40	P	P	13 36 18.1	-0.4
B35A				IAmb	IAmb	13 36 18.9	
	comp=Z,4.6nm,0.6s						
ISCO	Idaho Springs	70.75	52	P	P	13 36 22.0	+1.2
	baz=315						
AKASG	Malin Array Be	70.88	325	P	P	13 36 19.9	-1.0
	comp=Z,1.8nm,0.4s,baz=37,slow=6.1,SNR=8.6						
	comp=Z,1.8nm,0.4s						
MVCO	Mesa Verde	70.93	56	P	P	13 36 22.8	+1.0
	baz=314						
AS31	Alice Springs	71.17	196	P	P	13 36 24.6	+1.6
ASAR	Alice Springs	71.18	196	P	P	13 36 25.2	+2.2
	comp=Z,1.7nm,0.8s,baz=7.9,slow=5.5,SNR=23						
	comp=Z,1.7nm,0.8s						
ASAR	Alice Springs	71.18	196	P	P	13 36 24.7	+1.8
S22A	4UR Ranch, Cre	71.51	55	P	P	13 36 26.5	+1.2
	baz=315						
Q24A	Divide	71.59	53	P	P	13 36 27.1	+1.2
	baz=315						
W18A	Petrified Fore	71.66	58	P	P	13 36 27.2	+1.1
	baz=314						
EYMN	Ely	71.75	39	P	P	13 36 26.6	+0.3
EYMN				IAmb	IAmb	13 36 27.3	
	comp=Z,11nm,0.9s						
EYMN	Ely	71.75	39	P	P	13 36 26.1	-0.1
	baz=320						
OGNE	Ogallala	71.87	49	P	P	13 36 27.8	+0.6
	baz=316						
SDCO	Great Sand Dun	72.26	54	P	P	13 36 30.8	+1.0
	baz=315						
ECSD	EROS Data Cent	72.58	44	P	P	13 36 31.4	+0.2
	baz=318						
TUC	Tucson	72.98	61	P	P	13 36 34.7	+0.8
	baz=314						
T25A	Trinidad	73.30	54	P	P	13 36 36.5	+0.7
	baz=316						
ANMO	Albuquerque	73.69	56	*ce*P	P	13 36 39.9	+1.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	Albuquerque	73.69	56	P	P	13 36 39.3	+1.1
	baz=316						
SCHQ	Schefferville	74.48	21	P	P	13 36 42.4	+0.3
	comp=Z,5.4nm,0.8s,baz=308,slow=6.5,SNR=7.2						
	comp=Z,5.4nm,0.8s						
SCHQ	Schefferville	74.48	21	P	P	13 36 42.1	0.0
121A	Cookes Peak, D	74.62	59	P	P	13 36 44.9	+1.4
	baz=316						
BUR08	Bucovina Ar. S	74.92	325	P	P	13 36 45.1	+0.2
BURAR	Bucovina Array	74.93	325	P	P	13 36 45.2	+0.2
KOLS	Kolonicke sedl	74.99	328	*e*P	P	13 36 47.1	+1.9
KOLS	Kolonicke sedl	74.99	328	*e*P	P	13 36 47.1	+1.9
LANS	Liptovska Anna	75.83	329	*e*P	P	13 36 51.5	+1.5
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	Liptovska Anna	75.83	329	*e*P	P	13 36 51.5	+1.5
DPC	Dobruska-Polom	75.89	332	*e*P	P	13 36 50.9	+0.6
DPC	Dobruska-Polom	75.89	332	*e*P	P	13 36 50.9	+0.6
KRLC	Kraliky	75.97	331	*e*P	P	13 36 51.1	+0.3
KRLC	Kraliky	75.97	331	*e*P	P	13 36 51.1	+0.3
CLL	Collm	76.11	334	⇓*i*P	P	13 36 51.3	-0.1
CLL				*e**SP	sP	13 37 51.0	+2.9
CLL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CLL	Collm	76.11	334	⇓*i*P	P	13 36 51.3	-0.1
	comp=Z,9.0nm,0.6s						
CLL				*e*sP	sP	13 37 51.0	+2.9
AMTX	Amarillo	76.45	54	P	P	13 36 54.3	+0.5
	baz=318						
VYHS	Vyhne	76.61	329	*e*P	P	13 36 55.1	+0.8
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VYHS	Vyhne	76.61	329	*e*P	P	13 36 55.1	+0.8
MNTX	Cornudas Mount	76.64	58	P	P	13 36 55.7	+0.9
MNTX	Cornudas Mount	76.64	58	P	P	13 36 56.1	+1.2
	baz=316						
VRAC	Vranov	76.69	331	*e*P	P	13 36 55.7	+0.9
JAVC	Velka Javorina	76.71	330	*e*P	P	13 36 55.5	+0.6
PRU	Pruhonice	76.78	332	*e*P	P	13 36 55.7	+0.5
PRU	Pruhonice	76.78	332	*e*P	P	13 36 55.7	+0.5
KRUC	Moravsky	76.97	331	*e*P	P	13 36 56.7	+0.4
TREC	Trest	77.07	332	*e*P	P	13 36 53.6	-3.3
TREC	Trest	77.07	332	*e*P	P	13 36 53.6	-3.3
SMOL	Smolenice	77.08	330	*e*P	P	13 36 58.3	+1.3
SMOL	Smolenice	77.08	330	*e*P	P	13 36 58.3	+1.3
MODS	Modra-Piesok	77.26	330	*e*P	P	13 36 59.0	+1.0
MODS	Modra-Piesok	77.26	330	*e*P	P	13 36 59.0	+1.0
BRTR	Keskin Array B	77.43	315	P	P	13 36 59.7	+0.5
	comp=Z,1.5nm,0.7s,baz=71,slow=4.2,SNR=6.6						
	comp=Z,1.5nm,0.7s						
BRTR	Keskin Array B	77.43	315	P	P	13 36 59.5	+0.3
KHC	Kasperske Hory	77.83	333	P	P	13 37 00.7	-0.5
KHC				IAmb	IAmb	13 37 02.6	
	comp=Z,7.3nm,0.7s						
KHC	Kasperske Hory	77.83	333	*e*P	P	13 37 01.4	+0.2
KHC	Kasperske Hory	77.83	333	*e*P	P	13 37 01.4	+0.2
CKRC	Cesky Krumlov	77.87	332	*e*P	P	13 37 01.7	+0.3
GERES	GERESS Array B	78.04	332	P	P	13 37 02.4	-0.1
	comp=Z,2.4nm,0.6s,baz=42,slow=5.8,SNR=22						
	comp=Z,2.4nm,0.6s						
GERES	GERESS Array B	78.04	332	P	P	13 37 01.9	-0.5
CONA	Conrad Observa	78.13	331	*i* P	P	13 37 03.6	+0.7
	comp=Z,4.7nm,0.6s,SNR=9.4						
WMOK	Wichita Mounta	78.16	52	P	P	13 37 03.9	+0.7
	baz=319						
STKA	Stephens Creek	78.17	188	P	P	13 37 04.1	+1.1
	comp=Z,1.5nm,0.8s,baz=327,slow=13,SNR=3.6						
	comp=Z,1.5nm,0.8s						
RONA	Rosalia, Austr	78.17	330	*e*P	P	13 37 04.1	+1.0
HDIL	Hopedale	78.50	42	P	P	13 37 05.0	+0.1
	baz=323						
MEM	Membach	78.72	338	*d*P	P	13 37 06.6	+0.7
	comp=Z,7.8nm,0.8s						
MOA	Molln	78.73	332	*e*P	P	13 37 06.8	+0.7
	comp=Z,2.4nm,0.6s						
ARSA	Arzberg	78.83	331	*e*P	P	13 37 07.3	+0.7
	comp=Z,1.6nm,0.4s						
BHOU	Houvegnez	78.95	338	*d*P	P	13 37 07.8	+0.5
BCLA	Clavier	79.07	338	*d*P	P	13 37 08.2	+0.4
BGES	Gesves	79.16	338	*d*P	P	13 37 08.7	+0.3
BMRD	Maredsous	79.32	338	*d*P	P	13 37 09.0	-0.2
TX31	Lajitas Ar. Si	79.37	59	P	P	13 37 11.2	+1.1
TX32	Lajitas Array	79.37	59	P	P	13 37 10.4	+0.4
TXAR	Lajitas Array	79.37	59	P	P	13 37 11.2	+1.1
	comp=Z,5.1nm,0.6s,baz=299,slow=4.2,SNR=61						
	comp=Z,5.1nm,0.6s						
TXAR	Lajitas Array	79.37	59	P	P	13 37 11.0	+1.0
SOKA	Soboth	79.49	331	*i* P	P	13 37 10.8	+0.5
	comp=Z,4.9nm,0.9s,SNR=4.8						
CCM	Cathedral Cave	79.53	45	P	P	13 37 10.7	+0.1
	baz=322						
SFIN	Lafayette	79.65	41	P	P	13 37 11.2	0.0
	baz=324						
KBA	Koelnbreinsper	79.71	332	*e*P	P	13 37 12.4	+0.8
	comp=Z,4.9nm,0.5s						
OBKA	Obir	79.80	331	*e*P	P	13 37 12.4	+0.3
	comp=Z,3.2nm,0.8s						
VTS	Vitosha	79.83	323	P	P	13 37 11.4	-0.9
VTS				IAmb	IAmb	13 37 13.8	
	comp=Z,9.1nm,0.8s						
VTS	Vitosha	79.83	323	P	P	13 37 11.4	-0.9
VTS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WATA	Walderalm	80.05	333	*i* P	P	13 37 14.0	+0.5
	comp=Z,6.9nm,0.5s,SNR=7.0						
U40A	Yellville	80.05	47	P	P	13 37 13.4	0.0
	baz=321						
WTTA	Wattenberg	80.09	333	*i* P	P	13 37 14.3	+0.6
	comp=Z,8.0nm,0.4s,SNR=11						
RETA	Reutte	80.17	334	*e*P	P	13 37 14.7	+0.7
	comp=Z,3.0nm,0.7s						
MOTA	Moosalm	80.19	333	*i* P	P	13 37 14.8	+0.6
	comp=Z,6.4nm,0.9s,SNR=5.6						
SQTA	Sankt Quirin	80.27	333	*e*P	P	13 37 15.4	+0.8
	comp=Z,6.0nm,0.8s						
FETA	Feichten	80.59	333	*e*P	P	13 37 17.3	+1.0
	comp=Z,3.4nm,0.9s						
O48B	Farmland	80.62	40	P	P	13 37 16.0	-0.4
	baz=325						
JCT	Junction City	80.78	55	P	P	13 37 18.0	+0.6
	baz=319						
MIAR	Mount Ida	81.08	49	P	P	13 37 19.5	+0.5
	baz=321						
LONY	Lake Ozonia	81.17	31	P	P	13 37 18.8	-0.4
	baz=330						
W41B	Gary Mavity, V	81.28	47	P	P	13 37 20.4	+0.4
	baz=322						
TUE	Stuetta	81.51	334	P	P	13 37 20.4	-0.9
TUE				IAmb	IAmb	13 37 22.5	
	comp=Z,6.1nm,0.7s						
M53A	WI Miller and	81.56	36	P	P	13 37 21.1	-0.2
	baz=327						
O53A	New Philadelph	82.33	37	P	P	13 37 25.3	0.0
	baz=327						
LBNH	Lisbon	82.43	29	P	P	13 37 24.9	-0.9
	baz=332						
SSPA	Standing Stone	83.36	35	P	P	13 37 30.7	0.0
	baz=329						
H03N2	Juan Fernandez	140.65	89	T	T	16 21 52.8	
	baz=298						
H03N1	Juan Fernandez	140.66	89	T	T	16 21 51.8	
	baz=298						
H03N3	Juan Fernandez	140.66	89	T	T	16 21 52.7	
	baz=298						
BDFB	Brasilia	145.82	33	PKPbc	PKPab	13 44 42.9	-0.1
	comp=Z,3.1nm,0.6s,baz=58,slow=26,SNR=4.7						
PLCA	Paso Flores	150.05	94	PKPbc	PKiKP	13 44 53.9	+0.2
	comp=Z,5.6nm,0.7s,baz=240,slow=2.8,SNR=12						
TROLL	Troll, Antarti	150.11	199	PKPbc	PKiKP	13 44 53.0	+0.1
CPUP	Villa Florida	150.34	57	PKPbc	PKiKP	13 44 54.5	-0.1
	comp=Z,3.0nm,0.8s,baz=0.5,slow=3.6,SNR=5.6						
SNAA	Sanae	151.53	197	PKPbc	PKPbc	13 44 55.4	0.0
VNA2	Neumayer--Watz	153.03	196	PKPbc	PKiKP	13 44 59.2	+0.4
	baz=95,slow=1.0						
VNA3	Neumayer Olymp	153.17	194	PKPbc	PKiKP	13 44 59.8	+0.6

IDC **26** *13:25:29.7±1.9, 38°.18S×72°.82W, h0^{km}, mb3.6/4,*

mbtmp3.6/5, ML4.2/1, MS3.8/5, Error ellipse: s-maj=58.3km s-min=15.9km az=66.0

*GUC **26** 13:25:32.6±0.8, 38°.42S×73°.34W, h39km±3km, ML4.4*

*NEIC **26** 13:25:32.2±1.0, 38°.37S±0°.02×73°.4W±0°.2, h27km±8km, mb4.4/2, ML4.4(GUC), Error ellipse: s-maj=20.5km s-min=3.1km az=92.0*

ISC 26 13:25:30.9±0.8, **38°.40S**±0°.03×**73°.37W**±0°.09, **h18**km, **n45**, σ**0.85**/47, **mb3.8**/6, **MS4.1**/3, **1C-2D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LC02	Puerto Saavedr	0.40	182		Pn	13 25 41.5	-0.1
LC02	Puerto Saavedr	0.40	182	⇑*i*P	Pn	13 25 41.6	-0.1
LC02				*i* S	Sn	13 25 47.5	-1.3
LC02				IAML		13 25 52.8	
	comp=N,129µm,0.4s						
LR02	Universidad Au	1.41	176	*e*P	Pn	13 25 55.9	+0.3
LR02				*i* S	Sn	13 26 13.6	-0.1
LR02				IAML		13 26 25.1	
	comp=N,29µm,0.4s						
LR03	Panguipulli	1.47	148		Pn	13 25 57.0	+0.6
LR03	Panguipulli	1.47	148	*i* P	Pn	13 25 57.3	+0.8
LR03				*i* S	Sn	13 26 14.8	-0.4
LR03				IAML		13 26 26.9	
	comp=E,7µm,0.4s						
LR04	Corral	1.48	182	Pn	Pn	13 25 57.0	+0.3
LR04	Corral	1.48	182	⇓*i*P	Pn	13 25 56.9	+0.3
LR04				IAML		13 26 22.5	
	comp=E,8µm,0.3s						
CCSP	San Pedro de C	1.56	8	*e*P	Pn	13 25 58.4	+0.6
CCSP				IAML		13 26 26.9	
	comp=E,13µm,0.4s						
BI05	Punta Hualpn	1.65	5	Pn	Pb	13 26 00.2	-0.6
BI05	Punta Hualpn	1.65	5	⇓*i*P	Pb	13 26 00.2	-0.6
BI05				*i* S	Sn	13 26 20.2	+0.5
BI05				IAML		13 26 31.6	
	comp=E,3µm,0.3s						
LL04	Puerto Octay	2.62	164	Pn	Pn	13 26 12.6	+0.4
LL04	Puerto Octay	2.62	164	*i* P	Pn	13 26 12.5	+0.2
LL04				IAML		13 26 55.1	
	comp=N,757nm,0.3s						
LL03	Petrohue	2.84	165		Pn	13 26 15.9	+0.5
LL03	Petrohue	2.84	165	*e*P	Pn	13 26 15.8	+0.5
LL03				IAML		13 27 16.1	
	comp=N,2µm,0.3s						
LL05	Los Muermos	3.01	182		Pn	13 26 18.2	+0.6
LL05	Los Muermos	3.01	182	*e*P	Pn	13 26 17.9	+0.3
LL05				IAML		13 27 18.3	
	comp=E,522nm,0.4s						
ML02	Panimavida	3.06	31		Pn	13 26 17.9	-0.4
ML02	Panimavida	3.06	31	*e*P	Pn	13 26 19.0	+0.8
ML02				*e*S	Sn	13 26 54.8	+0.4
ML02				IAML		13 27 16.6	
	comp=N,2µm,0.4s						
PLCA	Paso Flores	3.19	138	Pn	Pn	13 26 21.8	+1.6
	comp=N,6.8nm,0.3s,baz=319,slow=11,SNR=44						
PLCA				Pg	Pb	13 26 25.6	-1.4
	comp=N,7.3nm,0.3s,baz=309,slow=14,SNR=27						
PLCA				Lg	Lg	13 27 07.0	
	comp=N,22nm,0.3s,baz=54,slow=14,SNR=6.1						
PLCA				LR	LR	13 27 50.0	
	comp=N,375nm,20.3s,baz=314,slow=45						
	comp=N,14nm,0.3s						
PLCA	Paso Flores	3.19	138	Pn	Pn	13 26 21.6	+1.3
GO05	Huala	3.57	19	Pn	Pn	13 26 24.2	-1.2
GO05	Huala	3.57	19	*e*P	Pn	13 26 24.7	-0.7
GO05				IAML		13 27 33.3	
	comp=E,618nm,0.5s						
BO03	Pichilemu	4.05	17	*e*P	Pn	13 26 32.1	+0.1
BO01	Tunca	4.40	25	Pn	Pn	13 26 36.9	+0.2
MT01	Popeta	4.84	21		Pn	13 26 42.7	0.0
LL02	Futaleuf	4.93	167	Pn	Pn	13 26 44.4	+0.4
BO04	La Punta	4.93	28	Pn	Pn	13 26 44.4	+0.3
MT09	Talagante	5.00	23		Pn	13 26 44.8	-0.3
MT02	Curacav	5.44	20		Pn	13 26 50.5	-0.6
PEL	Peldehue	5.68	23		Pn	13 26 53.1	-1.3
ROC1	El Roble	5.74	20		Pn	13 26 55.5	+0.2
VA03	San Esteban	6.07	23		Pn	13 27 00.2	+0.4
CO02	Combarbal	7.43	16		Pn	13 27 18.5	-0.1
CPUP	Villa Florida	18.09	53	LR	LR	13 37 13.7	
	comp=E,156nm,21.6s,baz=202,slow=40						
LPAZ	La Paz	22.50	13	P	P	13 30 28.6	-1.5
	comp=E,0.4nm,0.4s,baz=180,slow=10,SNR=2.0						
	comp=E,0.4nm,0.4s						
SIV	San Ignacio	24.80	29	P	P	13 30 49.7	-2.2
	comp=E,0.8nm,0.3s,baz=177,slow=17,SNR=2.4						
	comp=E,0.8nm,0.3s						
RCBR	Riachuelo	46.93	56	LR	LR	13 55 10.2	
	comp=E,154nm,18.2s,baz=351,slow=38						
SNAA	Sanae	47.96	156	P	P	13 34 09.1	+1.1
SNAA	Sanae	47.96	156	P	P	13 34 09.1	+1.1
SNAA				IAmb	IAmb	13 34 24.8	
	comp=Z,5.3nm,1.2s						
TROLL	Troll, Antarti	49.65	157	P	P	13 34 21.1	0.0
QSPA	South Pole Qui	51.85	180	P	P	13 34 39.0	+1.2
QSPA				IAmb	IAmb	13 34 56.2	
	comp=Z,6.9nm,1.3s						
TXAR	Lajitas Array	73.09	333	P	P	13 37 01.7	+1.7
	comp=Z,0.6nm,0.9s,baz=156,slow=9.6,SNR=4.3						
	comp=Z,0.6nm,0.9s						
TKL	Tuckaleechee C	74.31	351	LR	LR	14 11 30.1	
	comp=Z,105nm,18.2s,baz=232,slow=37						
SADO	Sadowa	82.95	356	LR	LR	14 19 30.4	
	comp=Z,81nm,18.4s,baz=186,slow=39						
TORD	Torodi Ar. Bea	86.70	71	P	P	13 38 13.1	-0.7
	comp=Z,0.5nm,0.8s,baz=237,slow=3.1,SNR=2.0						
	comp=Z,0.5nm,0.8s						

PRU 26 13:36:37.8±0.0, **49°.77N**×**18°.48E**, **h0**km, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.23	288	*e*P	Pg	13 36 42.1	0.0
OKC	Ostrava-Krasne	0.23	288	*e*PG	Pg	13 36 42.1	0.0
OKC				*e*SG	Sg	13 36 45.1	+0.1
	comp=Z,14nm,0.4s						
MORC	Moravsky Berou	0.61	271	*e*PG	Pg	13 36 49.3	-0.1
MORC				*e*SG	Sg	13 36 57.1	-0.2
MORC	Moravsky Berou	0.61	271	*e*P	Pb	13 36 51.4	+0.1
KRLC	Kraliky	1.14	286	*e*SG	Sg	13 37 13.7	-0.7
	comp=Z,2.1nm,0.6s						
DPC	Dobruska-Polom	1.51	293	*e*PG	Pn	13 37 06.1	0.0
DPC				*e*SG	Sg	13 37 25.1	-1.1
	comp=Z,1.2nm,0.4s						
DPC	Dobruska-Polom	1.51	293	*e*	Pn	13 37 06.1	0.0

*TUL **26** 13:53:21.3±0.6, 36°.38N±0°.01×97°.73W±0°.02, h5km±6km, ML2.6, mb_Lg2.5/40(NEIC), Error ellipse: s-maj=2.1km s-min=1.7km az=200.0*

NEIC 26 13:53:21.3±0.7, **36°.38N**±0°.02×**97°.718W**±0°.008, **h5**km±7km, **Error ellipse: s-maj=2.2km s-min=0.9km az=181.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.04	271	Pg	Pg	13 53 40.7	-0.4
T35A	Sooner Cattle	1.11	61	Pg	Pg	13 53 42.3	-0.2
FNO	Franklin	1.15	167		Pg	13 53 42.7	-0.6
TUL1	Leonard	1.63	106		Pn	13 53 50.7	+0.1
TUL1				IAmb_Lg		13 54 17.0	
	comp=Z,27nm,0.8s						
X34A	Smith Ranch, M	1.77	183		Pb	13 53 53.8	-0.5
WMOK	Wichita Mounta	1.85	208		Pn	13 53 54.0	+0.3
X37A	Clayton	2.62	132	Pn	Pn	13 54 02.7	-1.5
X37A				IAmb_Lg		13 54 46.4	
	comp=Z,16nm,0.7s						
KSU1	Kansas State U	2.86	18	IAmb_Lg		13 54 59.6	
	comp=Z,10nm,0.9s						
W39A	Magazine	3.41	109	IAmb_Lg		13 55 18.3	
	comp=Z,17nm,0.8s						
AMTX	Amarillo	3.56	246	Pn	Pn	13 54 17.4	+0.2
AMTX				IAmb_Lg		13 55 22.2	
	comp=Z,14nm,0.9s						
MIAR	Mount Ida	3.84	117	IAmb_Lg		13 55 29.5	
	comp=Z,11nm,0.9s						
X40A	Basin Creek Fa	4.41	114	IAmb_Lg		13 55 43.1	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	4.54	102	IAmb_Lg		13 55 49.3	
	comp=Z,9.7nm,0.9s						
W41B	Gary Mavity, V	4.61	103	IAmb_Lg		13 55 56.0	
	comp=Z,6.6nm,0.8s						
UALR	University of	4.66	108	IAmb_Lg		13 56 00.6	
	comp=Z,8.2nm,0.7s						
R40A	Maddies Statio	4.74	65	IAmb_Lg		13 55 55.0	
	comp=Z,6.0nm,0.8s						
T25A	Trinidad	5.43	280	IAmb_Lg		13 56 21.9	
	comp=Z,6.4nm,0.8s						
CCM	Cathedral Cave	5.43	70	IAmb_Lg		13 56 18.7	
	comp=Z,6.3nm,0.8s						
P40A	Paris	5.47	53	IAmb_Lg		13 56 15.3	
	comp=Z,9.8nm,0.7s						
PBMO	Poplar Bluff	5.88	84	IAmb_Lg		13 56 27.3	
	comp=Z,5.6nm,0.7s						
Q24A	Divide	6.43	296	IAmb_Lg		13 56 52.9	
	comp=Z,5.1nm,0.8s						
L40A	Anamosa	7.59	40	IAmb_Lg		13 57 37.7	
	comp=Z,5.8nm,0.7s						
N23A	Red Feather La	7.86	308	IAmb_Lg		13 57 33.4	
	comp=Z,3.4nm,0.8s						

*INET **26** 14:04:27.7±1.2, 11°.82N×88°.05W, h15km±23km, MW3.0*

*SNET **26** 14:04:29.2±1.1, 12°.78N×87°.35W, h158km±11km, ML3.1*

ISC 26 14:04:30.6±1.4, **12°.8N**±0°.1×**87°.34W**±0°.09, **h150**km, **n17**, σ**0.79**/22, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.29	102	*e*P	Pn	14 04 51.2	0.0
CRIN				*e*S	Sn	14 05 08.3	+1.5
TEL3	Telica 3	0.52	111	*e*P	Pn	14 04 51.8	-0.2
TELN	Telica	0.52	107	*e*P	Pn	14 04 51.8	-0.4
CNGN	Cerro Negro	0.68	112	*e*P	Pn	14 04 52.6	-0.5
CNCH	Conchagua	0.70	317	*e*P	Pn	14 04 52.7	-0.7
CNCH				IAML		14 04 53.7	
	comp=Z,469nm,0.2s						
CNCH	Conchagua	0.70	317	*e*P	Pn	14 04 52.6	-0.7
LCND	La Caada	0.77	316	*e*P	Pn	14 04 52.9	-0.7
LCND				IAML		14 05 25.4	
	comp=Z,107nm,0.3s						
MOMN	Momotombo	0.85	114	*e*P	Pn	14 04 53.8	-0.5
COPN	Copaltepe	0.93	128	*e*P	Pn	14 04 53.8	-1.1
RANC	El Ranchito	1.14	306	*e*P	Pn	14 04 56.4	-0.4
PACA	Pacayal	1.19	306	*e*P	Pn	14 04 57.1	-0.1
PACA				*e*S	Sn	14 05 18.9	+1.3
TGUH	Tegucigalpa,Un	1.29	3	*e*P	Pn	14 04 57.5	-0.7
SJTE	Alcalda de S	1.83	298	*e*P	Pn	14 05 03.4	-0.6
LFRS	El Faro	1.88	297	*e*P	Pn	14 05 04.2	-0.3
LFRS				*e*S	Sn	14 05 32.1	+1.6
JAYA	Jayaque - finc	2.24	294	*e*P	Pn	14 05 08.2	-0.5
JAYA				*e*S	Sn	14 05 37.7	-0.3
MTO3	Montecristo	2.55	310	*e*P	Pn	14 05 12.3	-0.3
NUBE	Las Nubes	2.63	296	*e*P	Pn	14 05 13.5	-0.1
NUBE				*e*S	Sn	14 05 45.9	-0.7

*IDC **26** 14:55:59.1±1.0, 47°.38N×156°.04E, h0km, mb3.7/9, mbtmp3.7/11, ML3.1/2, MS2.5/3, Error ellipse: s-maj=26.9km s-min=19.4km az=140.0*

ISC 26 14:56:01.9±0.9, **47°.4N**±0°.1×**156°.0E**±0°.1, **h18**km, **n16**, σ**0.74**/12, **mb3.7**/9, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.83	10	Pn	Pn	14 57 26.0	-1.4
	0.6nm,0.3s,baz=183,slow=12,SNR=24						
PETK				Sn	Sn	14 58 34.8	+1.1
	0.2nm,0.3s,baz=179,slow=24,SNR=1.8						
PETK				LR	LR	14 58 58.9	
	comp=Z,19nm,21.9s,baz=231,slow=31						
	1.9nm,0.5s						
ASAJ	Asahikawa	9.95	256	Pn	Pn	14 58 24.0	+0.1
	0.3nm,0.3s,baz=78,slow=24,SNR=4.4						
	3.7nm,0.8s						
MA2	Magadan	12.61	348	LR	LR	15 04 19.3	
	comp=Z,24nm,18.4s,baz=66,slow=40						
KSRS	Korea Array	22.89	255	P	P	15 01 04.2	-0.2
	0.8nm,0.9s,baz=61,slow=10,SNR=4.8						
	0.8nm,0.9s						
TIXI	Tiksi	27.46	342	P	P	15 01 46.5	+0.1
	0.4nm,0.2s,baz=90,slow=24,SNR=2.0						
	0.4nm,0.2s						
JOW	Kunigami	29.92	237	LR	LR	15 15 03.2	
	comp=Z,26nm,20.7s,baz=328,slow=38						
H11S1	WAKE ISLAND Hy	30.10	160	T	T	15 33 43.4	
	baz=346,slow=76,SNR=3.3						
H11S3	WAKE ISLAND Hy	30.11	160	T	T	15 33 42.4	
	baz=346,slow=76,SNR=5.8						
H11S2	WAKE ISLAND Hy	30.11	160	T	T	15 33 42.4	
	baz=346,slow=76,SNR=4.7						
INK	Inuvik	40.04	33	P	P	15 03 36.2	+0.8
	1.0nm,0.7s,baz=290,slow=10,SNR=2.3						
	1.0nm,0.7s						
MKAR	Makanchi Array	48.41	298	P	P	15 04 43.2	+0.5
	0.9nm,0.8s,baz=71,slow=9.0,SNR=5.0						
	0.9nm,0.8s						
NVAR	Mina Array Bea	60.36	64	P	P	15 06 09.6	-0.4
	0.1nm,0.3s,baz=294,slow=8.8,SNR=2.0						
	0.1nm,0.3s						
FINES	FINESS Array B	64.30	336	P	P	15 06 35.9	+0.2
	1.7nm,0.7s,baz=34,slow=7.1,SNR=5.4						
	1.7nm,0.7s						
AKASG	Malin Array Be	72.11	328	P	P	15 07 24.2	-0.7
	0.3nm,0.4s,baz=35,slow=6.8,SNR=1.7						
	0.3nm,0.4s						
ASAR	Alice Springs	73.48	201	P	P	15 07 33.2	0.0
	0.2nm,0.6s,baz=15,slow=5.7,SNR=5.3						
	0.2nm,0.6s						
TXAR	Lajitas Array	75.43	63	P	P	15 07 45.2	+0.4
	0.6nm,0.6s,baz=304,slow=5.0,SNR=8.3						
	0.6nm,0.6s						

*NEIC **26** 15:06:41.5±0.8, 18°.8S±0°.1×177°.5W±0°.1, h525km±6km, mb4.1/17, Error ellipse: s-maj=19.7km s-min=18.1km az=126.0*

*IDC **26** 15:06:43.2±1.5, 18°.84S×177°.69W, h533km±17km, mb2.9/7, mbtmp3.8/10, Error ellipse: s-maj=25.5km s-min=15.2km az=140.0*

ISC 26 15:06:42.7±0.7, **18°.8S**±0°.1×**177°.5W**±0°.1, **h550**km, **n31**, σ**1.09**/29, **mb3.9**/15, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.34	284	P	P	15 08 07.1	-0.3
	4.2nm,0.8s,baz=260,slow=23,SNR=7.1						
AFI	Afiamalu	7.36	49	P	P	15 08 33.9	-0.5
	24nm,0.7s,baz=111,slow=23,SNR=1.3						
AFI	Afiamalu	7.36	49	P	P	15 08 31.2	-3.1
ONTNC	Ouen Toro	15.40	254	P	P	15 09 54.5	-1.8
MXZ	Matakaoa Point	19.03	190	P	P	15 10 28.6	-1.2
URZ	Urewera	19.93	192	P	P	15 10 38.2	+0.2
	3.9nm,0.4s,baz=164,slow=0.8,SNR=7.6						
NNZ	Nelson	23.65	197	P	P	15 11 12.2	+1.0
KHZ	Kahutara	24.72	196	P	P	15 11 21.1	+0.3
WHZ	Wether Hill Ro	29.56	201	P	P	15 12 02.1	-1.0
CTA	Charters Tower	34.14	262	P	P	15 12 42.6	+0.1
	0.8nm,0.3s,baz=58,slow=13,SNR=1.9						
	0.8nm,0.3s						
CTAO	Charters Tower	34.14	262	P	P	15 12 42.4	-0.1
COEN	Coen	37.96	271	P	P	15 13 14.0	-0.1
COEN				IAmb	IAmb	15 13 41.3	
	comp=Z,24nm,1.6s						
WR0	Warramunga Arr	45.11	260	P	P	15 14 10.5	-0.1
WR0				IAmb	IAmb	15 14 14.3	
	comp=Z,8.4nm,1.5s						
WB0	Warramunga Arr	45.27	261	P	P	15 14 11.4	-0.4
WB0				IAmb	IAmb	15 14 39.1	
	comp=Z,4.6nm,1.3s						
WRA	Warramunga Arr	45.30	260	P	P	15 14 12.0	0.0
	comp=Z,0.9nm,0.4s,baz=98,slow=6.7,SNR=46						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	45.36	255	P	P	15 14 13.1	+0.6
	comp=Z,1.3nm,0.6s,baz=88,slow=8.5,SNR=31						
	comp=Z,1.3nm,0.6s						
ASAR	Alice Springs	45.36	255	P	P	15 14 12.5	+0.1
MTN	Manton Dam	49.62	269	P	P	15 14 43.9	-0.5
MTN				IAmb	IAmb	15 15 06.0	
	comp=Z,10nm,1.6s						
KNRA	Kununurra	51.24	265	P	P	15 14 56.5	+0.3
KNRA				IAmb	IAmb	15 15 34.5	
	comp=Z,15nm,1.6s						
MAJO	Matsushiro	69.14	323	P	P	15 16 54.5	+0.3
MAJO				IAmb	IAmb	15 17 33.0	
	comp=Z,5.4nm,1.2s						
MJB9	Matsu-Tunnel	69.14	323	P	P	15 16 54.7	+0.4
MJB9				IAmb	IAmb	15 17 33.0	
	comp=Z,5.3nm,1.2s						
QSPA	South Pole Qui	71.24	180	P	P	15 17 08.9	+2.4
PEA0B	Petropavlovsk-	74.77	345	P	P	15 17 27.7	+1.2
PEA0B				IAmb	IAmb	15 17 34.9	
	comp=Z,26nm,1.6s						
PETK	Petropavlovsk-	74.77	345	P	P	15 17 27.8	+1.2
	comp=Z,0.7nm,0.5s,baz=125,slow=8.1,SNR=8.9						
	comp=Z,0.7nm,0.5s						
NVAR	Mina Array Bea	79.50	43	P	P	15 17 56.6	+3.7
	comp=Z,0.1nm,0.4s,baz=235,slow=11,SNR=1.9						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	85.77	57	P	P	15 18 29.0	+4.5
	comp=Z,0.3nm,0.7s,baz=302,slow=2.8,SNR=4.1						
	comp=Z,0.3nm,0.7s						
TXAR	Lajitas Array	85.77	57	P	P	15 18 24.4	-0.1
ILAR	Eielson Array	86.58	13	P	P	15 18 28.6	+1.3
	comp=Z,0.2nm,0.5s,baz=211,slow=4.9,SNR=5.5						
	comp=Z,0.2nm,0.5s						
ARCES	ARCESS Array B	127.35	350	PKP	PKiKP	15 24 46.0	+0.9
	comp=Z,3.4nm,1.0s,baz=352,slow=1.3,SNR=4.6						
BRTR	Keskin Array B	146.02	314	PKPbc	PKiKP	15 25 23.2	-1.0
	comp=Z,0.7nm,0.8s,baz=40,slow=2.5,SNR=2.0						
CLL	Collm	146.53	348	*i* PKPbc	PKPab	15 25 24.5	-0.5
	comp=Z,5.0nm,0.4s						

*JMA **26** 15:16:35.8±0.2, 24°N±1°×122°.5E±0°.4, h18km±3km, MV2.6/11, NW OFF ISHIGAKIJIMA IS*

*TAP **26** 15:16:36.2, 24°.04N×122°.43E, h29km, ML2.9, D*

ISC 26 15:16:35.4±1.2, **23°.99N**±0°.02×**122°.49E**±0°.03, **h24**km±15km, **n102**, σ**1.12**/199, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.62	42	P	Pn	15 16 47.7	-1.0
JYNG				S	Sb	15 16 55.6	-0.3
YOJ	Yonaguni jima	0.67	45	P	Pn	15 16 48.9	-0.5
	baz=57						
YOJ				S	Sn	15 16 59.5	+0.4
	baz=57						
YOJ	Yonaguni jima	0.67	45	P	Pn	15 16 48.6	-0.8
YOJ				S	Sn	15 16 57.2	-2.0
EWUT	Wuta	0.80	305	P	Pn	15 16 50.0	-1.2
	baz=304						
EWUT				S	Sn	15 16 60.0	-2.3
	baz=304						
HWA	Hwalien	0.81	269	*e*P	Pn	15 16 50.1	-1.3
	baz=252						
HWA				*e*S	Sn	15 17 00.5	-2.2
	baz=252						
ETL	Fush Village	0.81	282	*e*P	Pn	15 16 51.1	-0.4
	baz=264						
ETL				*e*S	Sn	15 17 00.5	-2.3
	baz=264						
ENA	Nanau	0.81	303	P	Pn	15 16 50.2	-1.2
	baz=310						
ENA				S	Sn	15 17 01.1	-1.7
	baz=310						
NACB	Ninganchiao	0.84	283	P	Pn	15 16 50.9	-0.9
	baz=266						
NACB				S	Sn	15 17 01.0	-2.4
	baz=266						
TWC	Suao	0.85	317	P	Pn	15 16 50.9	-1.0
	baz=317						
TWC				S	Sn	15 17 01.0	-2.7
	baz=317						
ETLH	Xiulin Townshi	0.95	284	P	Pn	15 16 52.6	-0.8
	baz=268						
ETLH				*e*S	Sn	15 17 04.5	-1.7
	baz=268						
NDS	Dongshan	0.96	312	P	Pn	15 16 53.0	-0.4
	baz=312						
NDS				S	Sn	15 17 04.3	-1.9
	baz=312						
ESL	Shilin	0.98	260	*e*P	Pn	15 16 52.2	-1.6
	baz=246						
ESL				*e*S	Sn	15 17 05.5	-1.5
	baz=246						
EGS		0.99	329	*e*P	Pn	15 16 53.8	-0.1
	baz=319						
EGS				*e*S	Sn	15 17 06.3	-0.9
	baz=319						
EGFH	Guangfu	1.02	252	*e*P	Pn	15 16 53.4	-1.0
	baz=248						
EGFH				*e*S	Sn	15 17 06.2	-1.8
	baz=248						
ILA	Ilan	1.03	319	*e*P	Pn	15 16 54.2	-0.1
	baz=312						
ILA				*e*S	Sn	15 17 06.9	-1.2
	baz=312						
LATG	Datong	1.04	302	P	Pn	15 16 54.4	-0.2
	baz=300						
LATG				*e*S	Sn	15 17 07.0	-1.4
	baz=300						
TWE	Neicheng	1.05	314	P	Pn	15 16 54.8	+0.2
	baz=314						
TWE				S	Sn	15 17 07.4	-1.2
	baz=314						
ENTT	Nioudou	1.07	308	P	Pn	15 16 55.1	+0.2
	baz=293						
ENTT				S	Sn	15 17 08.2	-0.8
	baz=293						
HGSD	Ruisui	1.10	243	P	Pn	15 16 54.0	-1.3
	baz=239						
HGSD				S	Sn	15 17 08.6	-1.2
	baz=239						
NNSB	Datong	1.10	294	P	Pn	15 16 55.5	0.0
	baz=292						
NNSB				S	Sn	15 17 09.6	-0.5
	baz=292						
TWB1	Santiao Chiao	1.11	336	*e*P	Pn	15 16 55.6	+0.1
	baz=353						
TWB1				*e*S	Sn	15 17 10.4	+0.3
	baz=353						
NNS	Nan Shan	1.12	294	P	Pn	15 16 55.8	+0.1
	baz=292						
NNS				*e*S	Sn	15 17 09.1	-1.3
	baz=292						
FUSB	Fushanzhiwuyua	1.13	313	P	Pn	15 16 56.4	+0.6
	baz=313						
FUSB				S	Sn	15 17 10.5	-0.1
	baz=313						
WHF	Hehuan Shan	1.13	278	P	Pn	15 16 55.1	-1.1
	baz=262						
WHF				*e*S	Sn	15 17 10.0	-1.2
	baz=262						
TIPB	Shuangxi	1.15	328	P	Pn	15 16 57.0	+0.9
	baz=329						
TIPB				S	Sn	15 17 10.6	-0.6
	baz=329						
FUSS	Fushou	1.17	283	P	Pn	15 16 56.2	-0.3
	baz=280						
FUSS				*e*S	Sn	15 17 11.2	-0.7
	baz=280						
EHY	Hungye	1.18	246	P	Pn	15 16 55.4	-1.0
	baz=257						
EHY				S	Sn	15 17 10.7	-0.9
	baz=257						
IRIF	Iriomote-Funau	1.18	73	*i* P	Pb	15 16 57.4	+0.3
IRIF				*e*S	Sb	15 17 13.0	+1.0
NWLT	Wulai	1.20	311	P	Pn	15 16 57.6	+0.9
	baz=311						
NWLT				S	Sn	15 17 12.6	+0.3
	baz=311						
HATJ	Hateruma jima	1.20	86	P	Pb	15 16 58.1	+0.6
HATJ				*e*S	Sb	15 17 13.8	+1.2
OWD	Renai	1.21	269	P	Pn	15 16 56.3	-0.6
	baz=265						
OWD				*e*S	Sn	15 17 11.8	-0.8
	baz=265						
CHGB	Renai	1.21	274	P	Pn	15 16 56.6	-0.5
	baz=271						
CHGB				*e*S	Sn	15 17 11.2	-1.6
	baz=271						
YHNB	Yeheng	1.22	304	P	Pn	15 16 57.8	+0.6
	baz=290						
YHNB				S	Sn	15 17 12.0	-1.0
	baz=290						
SXI1	Grass Mountain	1.24	333	P	Pn	15 16 57.4	+0.1
	baz=334						
SXI1				*e*S	Sn	15 17 13.7	+0.4
	baz=334						
NSK	Sanguang	1.24	304	P	Pn	15 16 57.3	0.0
	baz=290						
NSK				S	Sn	15 17 13.0	-0.4
	baz=290						
YULB	Yu-li	1.25	242	P	Pn	15 16 56.5	-0.9

	baz=253						
YULB	baz=253			eS	Sn	15 17 12.0	-1.4
TDCB	**Techi** baz=268	1.25	283	eP	Pn	15 16 58.0	+0.4
TDCB	baz=268			eS	Sn	15 17 13.2	-0.5
WUSB	**Renai** baz=267	1.26	270	P	Pn	15 16 57.3	-0.3
WUSB	baz=267			eS	Sn	15 17 12.4	-1.5
NWF	**Wu-fen Shan** baz=330	1.26	329	P	Pn	15 16 58.3	+0.7
NWF	baz=330			eS	Sn	15 17 13.8	0.0
VWDT	**VWDT** baz=256	1.26	260	P	Pn	15 16 56.8	-0.7
VWDT	baz=256			eS	Sn	15 17 12.8	-0.9
TWA	**Mucha** baz=320	1.29	320	eP	Pn	15 16 58.9	+0.9
TWA	baz=320			eS	Sn	15 17 14.9	+0.4
NHDH	**Xindian Distri** baz=318	1.31	318	eP	Pn	15 16 58.7	+0.5
NHDH	baz=318			eS	Sn	15 17 15.1	+0.1
FULB	**Fuli** baz=220	1.35	235	eP	Pn	15 16 57.2	-1.6
FULB	baz=220			eS	Sn	15 17 15.7	-0.4
JKRS	**Kuro-shima**	1.41	80	P	Pb	15 17 01.2	+0.2
JKRS				eS	Sb	15 17 20.0	+1.5
NFF	**Wufeng Townshi** baz=296	1.41	297	eP	Pn	15 17 00.4	+0.7
NFF	baz=296			eS	Sn	15 17 17.7	+0.1
SSLB	**Suanglung** baz=259	1.42	262	eP	Pn	15 17 00.0	+0.2
SSLB	baz=259			eS	Sn	15 17 17.4	-0.4
YM01	**YM01** baz=339	1.43	324	eP	Pn	15 17 00.7	+0.8
YM01	baz=339			eS	Sn	15 17 17.8	-0.2
WHP	**Taichung City** baz=269	1.44	282	eP	Pn	15 17 00.7	+0.6
WHP	baz=269			eS	Sn	15 17 18.7	+0.3
WCS	**Beigang Elemen** baz=263	1.45	273	eP	Pn	15 17 00.5	+0.4
WCS	baz=263			eS	Sn	15 17 18.5	+0.1
SMLT	**Sun Moon Lake** baz=263	1.46	266	eP	Pn	15 17 00.2	-0.2
SMLT	baz=263			eS	Sn	15 17 18.5	-0.4
TWS1	**Kuangyinshan** baz=335	1.48	319	eP	Pn	15 17 00.5	-0.1
TWS1	baz=335			eS	Sn	15 17 19.7	+0.5
EDH	**Donghe** baz=214	1.49	227	eP	Pn	15 16 59.0	-1.7
EDH	baz=214			eS	Sn	15 17 16.2	-3.2
YUS	**Yu-Shan** baz=247	1.50	251	eP	Pn	15 17 01.2	-0.1
YUS	baz=247			eS	Sn	15 17 20.2	-0.1
LIOB	**Emei** baz=295	1.50	296	eP	Pn	15 17 02.3	+1.4
LIOB	baz=295			eS	Sn	15 17 19.2	-0.5
NSTT	**Nanjuang** baz=294	1.50	296	eP	Pn	15 17 01.4	+0.5
NSTT	baz=294			eS	Sn	15 17 19.7	-0.1
JIJ	**Ishigaki jima**	1.55	76	P	Pb	15 17 02.9	-0.6
JIJ				S	Sb	15 17 23.1	+0.4
ELDTW	**Lidau** baz=236	1.57	240	eP	Pn	15 17 00.8	-1.1
ELDTW	baz=236			eS	Sn	15 17 20.2	-1.4
LDUT	**Ludao** baz=212	1.61	216	eP	Pn	15 17 00.9	-1.5
LDUT	baz=212			eS	Sn	15 17 20.3	-2.1
TWQ1	**Liyutan** baz=281	1.61	283	eP	Pn	15 17 03.4	+1.0
TWQ1	baz=281			eS	Sn	15 17 23.2	+0.8
ALS	**Alishan** baz=250	1.62	253	eP	Pn	15 17 03.0	+0.2
ALS	baz=250			eS	Sn	15 17 22.9	-0.2
WJS	**Zhushan** baz=262	1.62	265	eP	Pn	15 17 03.5	+0.9
WJS	baz=262			eS	Sn	15 17 24.6	+1.9
LONT	**Longtian** baz=239	1.65	230	eP	Pn	15 17 02.7	-0.2
LONT	baz=239			eS	Sn	15 17 22.6	-0.9
WNT	**Mingjian** baz=264	1.66	267	eP	Pn	15 17 03.5	+0.5
WNT	baz=264			eS	Sn	15 17 23.2	-0.4
PCYT	**Pengchaiyu** baz=349	1.68	347	eP	Pn	15 17 04.0	+0.6
PCYT	baz=349			eS	Sn	15 17 24.4	+0.3
CHN5	**Tsauling** baz=244	1.71	257	eP	Pn	15 17 05.0	+1.2
CHN5	baz=244			eS	Sn	15 17 25.1	+0.2
TWGBT	**Beinan** baz=237	1.74	228	eP	Pn	15 17 03.0	-1.2
TWGBT	baz=237			eS	Sn	15 17 25.3	-0.4
TWG	**Pinlang** baz=237	1.75	229	eP	Pn	15 17 04.9	+0.6
TWG	baz=237			eS	Sn	15 17 25.8	0.0
JISG	**Ishigakijimahi**	1.76	70	P	Pb	15 17 05.5	-1.6
STYH	**Taoyuan** baz=230	1.77	243	eP	Pn	15 17 05.5	+0.9
STYH	baz=230			eS	Sn	15 17 27.2	+0.8
WDLH	**Douliu** baz=258	1.81	261	eP	Pn	15 17 06.4	+1.2
WDLH	baz=258			eS	Sn	15 17 28.2	+0.8
TPUB	**Ta-pu** baz=245	1.84	249	eP	Pn	15 17 06.9	+1.3
TPUB	baz=245			eS	Sn	15 17 29.0	+0.9
WTP	**Ta-pu** baz=244	1.87	247	eP	Pn	15 17 07.3	+1.2
WTP	baz=244			eS	Sn	15 17 29.9	+0.9
WRL	**Guolierlin Hig** baz=279	1.94	268	eP	Pn	15 17 08.0	+1.1
WRL	baz=279			eS	Sn	15 17 30.7	+0.2
WTK	**Tuku** baz=259	1.95	262	eP	Pn	15 17 08.4	+1.4
WTK	baz=259			eS	Sn	15 17 31.5	+0.7
CHN1	**Nanshi** baz=243	1.97	246	eP	Pn	15 17 08.8	+1.4
CHN1	baz=243			eS	Sn	15 17 32.4	+1.0
SGST	**Jiashian** baz=231	1.97	243	eP	Pn	15 17 08.8	+1.4
SGST	baz=231			eS	Sn	15 17 33.0	+1.6
TWK	**Hsinying** baz=246	1.97	249	eP	Pn	15 17 08.8	+1.3
TWK	baz=246			eS	Sn	15 17 32.4	+0.9
ECL	**Taimali** baz=222	1.98	226	eP	Pn	15 17 07.2	-0.3
ECL	baz=222			eS	Sn	15 17 30.0	-1.5
SNST	**Tainan City** baz=244	1.98	248	eS	Sn	15 17 32.6	+1.0
WSF	**Szhu** baz=258	2.11	261	eP	Pn	15 17 10.6	+1.4
WSF	baz=258			eS	Sn	15 17 35.3	+0.6
JTJ	**Tarama**	2.12	72	eS	Sb	15 17 37.6	-1.4
ICHU	**Yijhu** baz=250	2.12	253	eP	Pn	15 17 11.1	+1.7
ICHU	baz=250			eS	Sn	15 17 35.6	+0.6
TSMG	**Majia** baz=225	2.12	233	eP	Pn	15 17 11.4	+2.0
TSMG	baz=225			eS	Sn	15 17 36.6	+1.5
LAY	**Lan-yu** baz=201	2.12	204	eP	Pn	15 17 09.0	-0.4
LAY	baz=201			eS	Sn	15 17 34.4	-0.8
WSL	**Shuilin Townsh** baz=255	2.13	258	eP	Pn	15 17 10.3	+0.9
WSL	baz=255			eS	Sn	15 17 36.0	+0.9
SCST	**Cishan** baz=224	2.14	240	eP	Pb	15 17 12.1	-1.3
SCST	baz=224			eS	Sb	15 17 39.4	-0.1
LYUB	**Lan-yu** baz=200	2.15	203	eP	Pn	15 17 09.5	-0.2
LYUB	baz=200			eS	Sn	15 17 34.6	-1.1
MASBT	**Mashibuluo** baz=224	2.19	232	eP	Pn	15 17 12.3	+2.0
MASBT	baz=224			eS	Sn	15 17 38.9	+2.2
SHHT	**Tainan City** baz=241	2.19	244	eP	Pn	15 17 12.1	+1.8
SHHT	baz=241			eS	Sn	15 17 39.1	+2.4
SLIU	**Shizi** baz=228	2.35	222	eP	Pn	15 17 14.9	+2.3
SLIU	baz=228			eS	Sn	15 17 43.1	+2.3
SCZT	**Fangliau** baz=218	2.36	227	eP	Pn	15 17 13.3	+0.7
SCZT	baz=218			eS	Sn	15 17 40.8	0.0
HEN	**Hengchun** baz=217	2.55	220	eS	Sn	15 17 47.9	+2.3
PHUB	**P'eng-hu** baz=272	2.72	261	eP	Pn	15 17 19.1	+1.5
PHUB	baz=272			eS	Sn	15 17 50.1	+0.4
PNG	**Penghu** baz=259	2.72	262	eP	Pn	15 17 19.1	+1.4
PNG	baz=259			eS	Sn	15 17 50.2	+0.4
VCHM	**Qimei** baz=253	2.92	255	eP	Pn	15 17 21.9	+1.5
VCHM	baz=253			eS	Sn	15 17 55.8	+1.2
VWUC	**VWUC** baz=287	2.95	290	eP	Pn	15 17 21.9	+1.1
VWUC	baz=287			eS	Sn	15 17 55.3	-0.1
MATB	**Ma-tsu** baz=310	3.16	314	eP	Pn	15 17 24.9	+1.3
MATB	baz=310			eS	Sn	15 18 00.3	-0.4
PTMZ	**Houxiangcun** baz=286	3.25	290	eP	Pn	15 17 25.7	+0.9
PTMZ	baz=286			eS	Sn	15 18 02.3	-0.5
XPSS	**Dashiqiu** baz=322	3.59	325	eP	Pn	15 17 30.9	+1.2
KNMB	**Chin-men Tao** baz=275	3.78	278	eP	Pn	15 17 33.2	+1.0
KNMB	baz=275			eS	Sn	15 18 15.2	-0.7
AXDP	**Jialang** baz=270	4.22	283	eP	Pn	15 17 39.6	+1.4
AXDP	baz=270			eS	Sn	15 18 25.8	-1.0
ZPLA	**Ao Xicun** baz=268	4.34	270	eP	Pn	15 17 41.8	+1.9
ZPLA	baz=268			eS	Sn	15 18 28.8	-1.0

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*TAP **26** 15:29:57.4, 24°.82N×122°.14E, h19km, ML2.7, C*
*JMA **26** 15:29:58.5±0.1, 24°.7N±0°.4×122°.1E±0°.3, h38km±3km, MV2.2/9, TAIWAN REGION*
ISC 26 15:29:56.5±0.9**, 24°.81N**±0°.02×**122°.21E**±0°.02**, h16**km±7km**,**
n65, σ0^{s}48/129**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=279	0.26	279	P	Pb	15 30 02.6	-0.2
EGS	baz=279			S	Sg	15 30 06.4	+0.4
TWB1	**Santiao Chiao** baz=331	0.29	315	P	Pb	15 30 03.4	0.0
TWB1	baz=331			S	Sg	15 30 06.8	0.0
NTC	**Toucheng** baz=278	0.35	278	eP	Pg	15 30 03.8	+0.1
NTC	baz=278			eS	Sg	15 30 09.2	+0.4
TWC	**Suao** baz=231	0.39	239	P	Pg	15 30 04.3	-0.1
TWC	baz=231			S	Sg	15 30 08.3	-1.4
TIPB	**Shuangxi** baz=299	0.39	295	P	Pb	15 30 05.3	+0.2
TIPB	baz=299			S	Sg	15 30 09.8	0.0
SXI1	**Grass Mountain** baz=323	0.42	313	P	Pb	15 30 06.1	+0.4
SXI1	baz=323			S	Sb	15 30 11.2	-0.6
ILA	**Ilan** baz=255	0.42	265	eP	Pb	15 30 05.4	-0.2
ILA	baz=255			eS	Sg	15 30 11.3	+0.4
NWF	**Wu-fen Shan** baz=309	0.47	304	eP	Pb	15 30 06.5	-0.1
NWF	baz=309			eS	Sb	15 30 12.8	-0.6
NDS	**Dongshan** baz=245	0.48	249	P	Pg	15 30 06.2	0.0
NDS	baz=245			S	Sg	15 30 13.0	+0.3
TWE	**Neicheng** baz=251	0.50	260	P	Pb	15 30 06.7	-0.3
TWE	baz=251			eS	Sb	15 30 13.9	-0.2
EWUT	**Wuta** baz=216	0.53	228	eP	Pb	15 30 07.7	+0.2
EWUT	baz=216			eS	Sb	15 30 15.4	+0.4
FUSB	**Fushanzhiwuyua** baz=264	0.57	265	P	Pg	15 30 07.8	0.0
FUSB	baz=264			S	Sg	15 30 15.5	0.0
ENA	**Nanau** baz=217	0.57	229	eP	Pb	15 30 08.2	0.0
ENA	baz=217			eS	Sb	15 30 16.3	+0.2
ENTT	**Nioudou** baz=251	0.61	254	P	Pb	15 30 08.9	0.0
ENTT	baz=251			S	Sg	15 30 16.9	+0.2
NHDH	**Xindian Distri** baz=278	0.64	284	eP	Pg	15 30 09.2	+0.1
NHDH	baz=278			eS	Sg	15 30 17.8	0.0
NWLT	**Wulai** baz=267	0.65	268	P	Pg	15 30 09.3	+0.1
NWLT	baz=267			S	Sg	15 30 17.4	-0.4
YM01	**YM01** baz=302	0.67	300	eP	Pg	15 30 09.9	+0.1
YM01	baz=302			eS	Sb	15 30 18.7	-0.4
LATG	**Datong** baz=235	0.68	247	P	Pg	15 30 10.0	+0.1
LATG	baz=235			S	Sb	15 30 19.1	-0.3
TAP	**Taipei** baz=292	0.68	290	eP	Pb	15 30 09.7	-0.4
TAP	baz=292			eS	Sb	15 30 18.5	-0.8
JYNG	**Yonagunijimaku**	0.76	118	P	Pn	15 30 13.5	+0.9
JYNG				S	Sn	15 30 24.3	+0.6
YHNB	**Yeheng** baz=259	0.77	260	P	Pg	15 30 11.6	0.0
YHNB	baz=259			S	Sb	15 30 21.4	-0.6
NTST	**Danshui** baz=300	0.78	297	eP	Pg	15 30 11.8	+0.1
NTST	baz=300			eS	Sb	15 30 21.7	-0.4
NSK	**Sanguang** baz=259	0.79	261	P	Pg	15 30 11.8	-0.1
NSK	baz=259			eS	Sb	15 30 21.6	-0.8
YOJ	**Yonaguni jima** baz=114	0.80	115	eP	Pn	15 30 14.2	+1.0
YOJ	baz=114			eS	Sn	15 30 25.9	+1.1
YOJ	**Yonaguni jima**	0.80	115	P	Pn	15 30 14.0	+0.8
YOJ				eS	Sn	15 30 25.4	+0.5
PCYT	**Pengchaiyu** baz=355	0.83	351	P	Pn	15 30 13.5	-0.1
PCYT	baz=355			S	Sn	15 30 25.1	-0.4
ETL	**Fush Village** baz=208	0.84	220	eP	Pg	15 30 12.9	0.0
ETL	baz=208			eS	Sg	15 30 24.5	+0.6
NNSB	**Datong** baz=234	0.84	244	P	Pg	15 30 12.9	-0.1
NNSB	baz=234			eS	Sg	15 30 24.2	+0.1
NACB	**Ninganchiao** baz=211	0.84	222	eP	Pn	15 30 13.2	-0.6
NACB	baz=211			eS	Sb	15 30 23.9	0.0
NNS	**Nan Shan** baz=234	0.85	245	eP	Pb	15 30 12.8	-0.1
NNS	baz=234			eS	Sb	15 30 24.0	-0.2
ETLH	**Xiulin Townshi** baz=232	0.89	228	P	Pg	15 30 14.0	+0.1
ETLH	baz=232			S	Sg	15 30 25.7	0.0
TWD	**Chiawan** baz=214	0.92	218	eP	Pn	15 30 14.4	-0.3
TWD	baz=214			eS	Sg	15 30 26.6	+0.3
NFF	**Wufeng Townshi** baz=272	1.01	260	eP	Pg	15 30 17.6	+1.5
NFF	baz=272			eS	Sn	15 30 31.1	+1.0
FUSS	**Fushou** baz=236	1.04	238	eP	Pg	15 30 16.9	+0.2
FUSS	baz=236			eS	Sg	15 30 30.2	-0.2
WHF	**Hehuan Shan** baz=230	1.09	233	eP	Pg	15 30 17.8	+0.2
WHF	baz=230			eS	Sg	15 30 31.6	-0.3
LIOB	**Emei** baz=262	1.10	262	eP	Pn	15 30 17.3	0.0
LIOB	baz=262			eS	Sn	15 30 32.0	-0.2
TDCB	**Techi** baz=231	1.11	240	eP	Pg	15 30 17.8	-0.2
TDCB	baz=231			eS	Sb	15 30 31.3	-0.4
NSTT	**Nanjuang** baz=261	1.12	261	eP	Pg	15 30 18.8	+0.7
NSTT	baz=261			eS	Sn	15 30 32.4	-0.2
CHGB	**Renai** baz=230	1.20	232	eP	Pb	15 30 19.1	0.0
CHGB	baz=230			eS	Sn	15 30 34.7	-0.4
WHP	**Taichung City** baz=244	1.27	246	eP	Pb	15 30 20.4	+0.3
WHP	baz=244			eS	Sn	15 30 36.4	-0.1
OWD	**Renai** baz=226	1.27	228	P	Pb	15 30 20.4	+0.2
OWD	baz=226			S	Sn	15 30 36.4	-0.2
WUSB	**Renai** baz=229	1.29	231	eP	Pb	15 30 20.6	+0.2
WUSB	baz=229			eS	Sb	15 30 36.5	-0.3
TWQ1	**Liyutan** baz=269	1.39	251	eP	Pb	15 30 22.3	+0.2
TWQ1	baz=269			eS	Sn	15 30 39.1	-0.2
WCS	**Beigang Elemen** baz=224	1.40	238	eP	Pg	15 30 23.4	-0.1
WCS	baz=224			eS	Sb	15 30 39.9	-0.1
VWDT	**VWDT** baz=222	1.43	223	eP	Pb	15 30 22.4	-0.4
VWDT	baz=222			eS	Sb	15 30 41.1	+0.1
IRIF	**Iriomote-Funau**	1.46	108	P	Pg	15 30 24.1	-0.5
IRIF				S	Sg	15 30 42.9	-0.7
HGSD	**Ruisui** baz=189	1.49	209	eP	Pb	15 30 24.1	+0.2
HGSD	baz=189			eS	Sg	15 30 44.1	-0.6
SMLT	**Sun Moon Lake** baz=232	1.51	233	eP	Pg	15 30 25.1	-0.5
SMLT	baz=232			eS	Sb	15 30 43.8	+0.6
EHY	**Hungye** baz=225	1.53	212	eP	Pb	15 30 23.7	-0.8
EHY	baz=225			eS	Sb	15 30 43.7	0.0
SSLB	**Suanglung** baz=227	1.53	229	eP	Pb	15 30 24.9	+0.3
SSLB	baz=227			eS	Sb	15 30 44.2	+0.4
HATJ	**Hateruma jima**	1.63	117	eS	Sb	15 30 46.4	-0.2
YULB	**Yu-li** baz=209	1.64	211	eP	Pn	15 30 25.2	+0.5
YULB	baz=209			eS	Sb	15 30 45.9	-1.0
WJS	**Zhushan** baz=234	1.67	234	eP	Pg	15 30 28.7	0.0
WJS	baz=234			eS	Sg	15 30 50.6	+0.2
JKRS	**Kuro-shima**	1.73	109	P	Pb	15 30 27.5	-0.4
JKRS				S	Sb	15 30 48.7	-0.8
YUS	**Yu-Shan** baz=203	1.75	222	eP	Pn	15 30 27.0	+0.4
YUS	baz=203			eS	Sn	15 30 48.8	0.0
FULB	**Fuli** baz=221	1.81	208	eP	Pb	15 30 28.0	-1.3
FULB	baz=221			eS	Sb	15 30 50.8	-0.9
JIJ	**Ishigaki jima**	1.81	104	P	Pb	15 30 29.4	+0.1
JIJ				eS	Sb	15 30 51.8	-0.1
ALS	**Alishan** baz=211	1.82	225	eP	Pb	15 30 29.7	0.0
ALS	baz=211			eS	Sb	15 30 53.2	+0.8
CHN5	**Tsauling** baz=229	1.85	230	eP	Pb	15 30 29.6	-0.4
CHN5	baz=229			eS	Sb	15 30 53.9	+1.0
ELDTW	**Lidau** baz=212	1.95	214	eP	Pn	15 30 29.8	+0.7
ELDTW	baz=212			eS	Sn	15 30 53.5	+0.2
EDH	**Donghe** baz=189	2.01	205	eP	Pn	15 30 30.0	+0.2
EDH	baz=189			eS	Sn	15 30 54.2	-0.3
TPUB	**Ta-pu** baz=210	2.08	224	eP	Pb	15 30 33.6	-0.4
TPUB	baz=210			eS	Sb	15 31 00.2	+0.5
STYH	**Taoyuan** baz=218	2.09	219	eP	Pb	15 30 33.5	-0.6
STYH	baz=218			eS	Sb	15 30 59.9	0.0
WTP	**Ta-pu** baz=205	2.13	224	eP	Pb	15 30 34.4	-0.5
WTP	baz=205			eS	Sb	15 31 01.9	+0.8

TWK	**Hsinying**	2.20	226	*e*P	Pb	15 30 35.3	-0.7
	baz=225						
TWK				*e*S	Sb	15 31 03.2	+0.1
	baz=225						

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*JMA **26** 15:52:09.4±0.3, 23°N±1°×122°.1E±0°.6, h40km, MV2.1/9, TAIWAN REGION*
*TAP **26** 15:52:09.7, 23°.33N×122°.06E, h42km, ML2.6, D*
ISC 26 15:52:07.3±1.1**, 23°.31N**±0°.02×**122°.06E**±0°.02**, h19**km±3km**,**
n88, σ0s.77/163**, 3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin**	0.56	271	*e*P	Pn	15 52 22.1	+2.0
	baz=261						
ECBN				*e*S	Sn	15 52 28.6	-0.2
	baz=261						
HGSD	**Ruisui**	0.61	288	P	Pn	15 52 20.9	+0.1
	baz=285						
HGSD				S	Sn	15 52 29.1	-1.1
	baz=285						
TEGC	**Jichi Village**	0.62	310	P	Pn	15 52 21.5	+0.5
	baz=309						
TEGC				S	Sn	15 52 30.1	-0.2
	baz=309						
EGFH	**Guangfu**	0.68	302	*e*P	Pn	15 52 22.1	+0.2
	baz=308						
EGFH				*e*S	Sn	15 52 31.8	-0.1
	baz=308						
TEYL	**Yanliau Villag**	0.70	323	*e*P	Pn	15 52 23.1	+1.0
	baz=331						
TEYL				S	Sn	15 52 34.0	+1.7
	baz=331						
TWF1	**Yuli**	0.70	274	*i* P	Pn	15 52 22.7	+0.6
	baz=267						
TWF1				*i* S	Sn	15 52 32.4	0.0
	baz=267						
EHY	**Hungye**	0.70	286	*i* P	Pn	15 52 22.6	+0.5
	baz=284						
EHY				*i* S	Sn	15 52 32.7	+0.2
	baz=284						
YULB	**Yu-li**	0.70	277	P	Pn	15 52 22.6	+0.5
	baz=273						
YULB				S	Sn	15 52 32.9	+0.4
	baz=273						
FULB	**Fuli**	0.71	261	*i* P	Pn	15 52 22.5	+0.2
	baz=251						
FULB				*i* S	Sn	15 52 31.8	-0.9
	baz=251						
ESL	**Shilin**	0.76	312	*i* P	Pn	15 52 23.0	0.0
	baz=310						
ESL				*i* S	Sn	15 52 32.5	-1.4
	baz=310						
EDH	**Donghe**	0.77	244	*e*P	Pn	15 52 23.4	+0.4
	baz=238						
EDH				S	Sn	15 52 33.7	-0.4
	baz=238						
LDUT	**Ludao**	0.83	221	*e*P	Pn	15 52 24.4	+0.5
	baz=219						
LDUT				S	Sg	15 52 34.2	-0.4
	baz=219						
TWD	**Chiawan**	0.88	331	P	Pg	15 52 24.2	-0.2
	baz=331						
TWD				*i* S	Sn	15 52 35.8	-1.0
	baz=331						
ETL	**Fush Village**	0.94	335	*e*S	Sn	15 52 37.6	-0.6
	baz=334						
LONT	**Longtian**	0.94	245	*i* P	Pn	15 52 26.7	+1.3
	baz=239						
LONT				S	Sn	15 52 39.6	+1.3
	baz=239						
VWDT	**VWDT**	0.95	298	⇓P	Pn	15 52 26.6	+1.1
	baz=296						
VWDT				S	Sn	15 52 38.8	+0.2
	baz=296						
NACB	**Ninganchiao**	0.96	334	P	Pn	15 52 26.0	+0.3
	baz=333						
NACB				S	Sg	15 52 37.8	-0.8
	baz=333						
ELDTW	**Lidau**	0.96	263	⇓*i*P	Pn	15 52 26.3	+0.4
	baz=261						
ELDTW				*i* S	Sn	15 52 38.0	-1.0
	baz=261						
TTN	**Taitung**	1.00	237	P	Pg	15 52 26.9	+0.1
	baz=235						
TTN				S	Sn	15 52 39.9	+0.1
	baz=235						
TWGBT	**Beinan**	1.02	242	P	Pg	15 52 27.5	+0.3
	baz=234						
TWGBT				S	Sn	15 52 39.9	-0.4
	baz=234						
TWG	**Pinlang**	1.03	242	*i* P	Pg	15 52 27.4	+0.1
	baz=234						
TWG				*i* S	Sn	15 52 40.4	-0.1
	baz=234						
OWD	**Renai**	1.03	309	*i* P	Pg	15 52 27.6	+0.2
	baz=307						
OWD				*i* S	Sn	15 52 40.1	-0.7
	baz=307						
ETLH	**Xiulin Townshi**	1.04	330	P	Pg	15 52 27.7	+0.2
	baz=329						
ETLH				S	Sn	15 52 40.6	-0.3
	baz=329						
WUSB	**Renai**	1.10	309	P	Pg	15 52 28.6	0.0
	baz=307						
WUSB				*e*S	Sg	15 52 41.7	-1.4
	baz=307						
CHGB	**Renai**	1.10	313	P	Pg	15 52 28.9	+0.2
	baz=312						
CHGB				S	Sn	15 52 42.0	-0.6
	baz=312						
WHF	**Hehuan Shan**	1.10	319	*i* P	Pg	15 52 28.4	-0.4
	baz=318						
WHF				*i* S	Sg	15 52 42.1	-1.3
	baz=318						
SSLB	**Suanglung**	1.12	295	P	Pg	15 52 28.6	-0.3
	baz=294						
SSLB				S	Sg	15 52 43.4	-0.3
	baz=294						
ENA	**Nanau**	1.15	346	*i* P	Pb	15 52 28.9	+0.4
	baz=345						
ENA				*i* S	Sb	15 52 42.9	-0.2
	baz=345						
EWUT	**Wuta**	1.16	347	*e*P	Pb	15 52 29.1	+0.4
	baz=340						
EWUT				S	Sn	15 52 43.9	+0.1
	baz=340						
ALS	**Alishan**	1.17	280	⇓*i*P	Pg	15 52 30.5	+0.6
	baz=279						
ALS				*i* S	Sg	15 52 45.7	+0.4
	baz=279						
STYH	**Taoyuan**	1.19	264	*e*P	Pg	15 52 30.3	0.0
	baz=258						
STYH				*e*S	Sg	15 52 44.6	-1.2
	baz=258						
FUSS	**Fushou**	1.19	322	*e*P	Pg	15 52 30.1	-0.5
	baz=331						
FUSS				S	Sg	15 52 45.0	-1.2
	baz=331						
SMLT	**Sun Moon Lake**	1.20	299	P	Pg	15 52 30.6	-0.1
	baz=304						
SMLT				*i* S	Sg	15 52 46.8	+0.3
	baz=304						
ECL	**Taimali**	1.24	235	S	Sb	15 52 44.9	-0.6
	baz=244						
TDCB	**Techi**	1.25	319	P	Pg	15 52 31.2	-0.3
	baz=318						
TDCB				S	Sn	15 52 45.6	-0.5
	baz=318						
NNSB	**Datong**	1.27	331	P	Pg	15 52 31.3	-0.7
	baz=321						
NNSB				S	Sb	15 52 46.1	-0.6
	baz=321						
WCS	**Beigang Elemen**	1.29	306	*e*P	Pg	15 52 31.7	-0.5
	baz=311						
WCS				S	Sg	15 52 46.8	-2.3
	baz=311						
NNS	**Nan Shan**	1.29	331	P	Pg	15 52 33.1	+0.9
	baz=321						
NNS				S	Sn	15 52 47.2	+0.1
	baz=321						
TWC	**Suao**	1.31	352	P	Pb	15 52 31.8	+0.5
	baz=352						
TWC				S	Sn	15 52 47.2	-0.3
	baz=352						
TPUB	**Ta-pu**	1.31	270	P	Pg	15 52 33.0	+0.4
	baz=269						
TPUB				S	Sg	15 52 49.9	+0.1
	baz=269						
LATG	**Datong**	1.31	339	P	Pb	15 52 31.7	+0.3
	baz=338						
LATG				*e*S	Sb	15 52 47.1	-0.8
	baz=338						
WJS	**Zhushan**	1.32	293	*e*P	Pg	15 52 33.6	+0.8
	baz=292						
WJS				*e*S	Sg	15 52 50.7	+0.5
	baz=292						
WTP	**Ta-pu**	1.33	268	*i* P	Pg	15 52 33.0	+0.1
	baz=266						
WTP				S	Sg	15 52 50.7	+0.3
	baz=266						
LAY	**Lan-yu**	1.35	200	P	Pn	15 52 31.0	-0.1
	baz=199						
LAY				S	Sn	15 52 46.6	-1.8
	baz=199						
NDS	**Dongshan**	1.35	347	*e*P	Pb	15 52 32.4	+0.4
	baz=340						
NDS				*e*S	Sn	15 52 48.6	0.0
	baz=340						
LYUB	**Lan-yu**	1.37	199	*e*S	Sn	15 52 47.1	-1.9
	baz=198						
SGST	**Jiashian**	1.37	261	P	Pg	15 52 34.2	+0.4
	baz=258						
SGST				*e*S	Sg	15 52 52.0	+0.2
	baz=258						
WNT	**Mingjian**	1.38	295	P	Pg	15 52 34.9	+0.9
	baz=293						
WNT				S	Sg	15 52 52.9	+0.9
	baz=293						
ENTT	**Nioudou**	1.40	341	*i* P	Pb	15 52 32.9	+0.1
	baz=341						
ENTT				*i* S	Sb	15 52 50.5	+0.2
	baz=341						
JYNG	**Yonagunijimaku**	1.40	35	*e*S	Sn	15 52 49.2	-0.4
WHP	**Taichung City**	1.40	314	P	Pg	15 52 35.1	+0.7
	baz=313						
WHP				S	Sg	15 52 50.8	-2.0
	baz=313						
CHN1	**Nanshi**	1.41	265	*i* P	Pg	15 52 34.9	+0.3
	baz=264						
CHN1				*i* S	Sg	15 52 53.8	+0.9
	baz=264						
TSMG	**Majia**	1.43	245	*e*P	Pb	15 52 33.6	+0.3
	baz=238						
SNST	**Tainan City**	1.44	267	P	Pg	15 52 34.9	-0.1
	baz=265						
SNST				S	Sg	15 52 55.0	+1.2
	baz=265						
TWK	**Hsinying**	1.44	269	*i* P	Pg	15 52 35.3	+0.1
	baz=267						
TWK				S	Sg	15 52 54.4	+0.4
	baz=267						
WDLH	**Douliu**	1.44	286	*e*P	Pg	15 52 36.0	+0.8
	baz=284						
WDLH				*e*S	Sg	15 52 54.8	+0.8
	baz=284						
YOJ	**Yonaguni jima**	1.44	37	*e*P	Pn	15 52 33.6	+1.3
	baz=47						
YOJ				*e*S	Sn	15 52 50.7	-0.1
	baz=47						
EAST	**Anshuo**	1.45	231	P	Pb	15 52 33.3	-0.3
	baz=236						
EAST				S	Sb	15 52 51.1	-0.5
	baz=236						
TWE	**Neicheng**	1.45	346	P	Pb	15 52 34.4	+0.7
	baz=346						
TWE				*e*S	Sb	15 52 52.1	+0.4
	baz=346						
MASBT	**Mashibuluo**	1.48	242	P	Pg	15 52 34.7	-1.2
	baz=236						
MASBT				S	Sn	15 52 51.2	-0.6
	baz=236						
YHNB	**Yeheng**	1.49	336	P	Pb	15 52 34.7	+0.3
	baz=335						
YHNB				S	Sn	15 52 51.4	-0.7
	baz=335						
SCST	**Cishan**	1.50	254	*e*P	Pg	15 52 36.3	+0.1
	baz=247						
NSK	**Sanguang**	1.50	335	*i* P	Pb	15 52 34.7	0.0
	baz=334						
NSK				S	Sn	15 52 52.0	-0.4
	baz=334						
FUSB	**Fushanzhiwuyua**	1.51	344	P	Pb	15 52 34.9	+0.2
	baz=332						
FUSB				S	Sb	15 52 53.0	-0.4
	baz=332						
TCU	**Taichung**	1.52	304	*e*S	Sg	15 52 57.0	+0.7
	baz=303						
NWLT	**Wulai**	1.55	341	*e*P	Pb	15 52 35.7	+0.4
	baz=330						
NWLT				*e*S	Sn	15 52 53.4	0.0
	baz=330						
TWQ1	**Liyutan**	1.56	312	P	Pg	15 52 37.3	-0.2
	baz=323						
TWQ1				S	Sg	15 52 57.0	-0.9
	baz=323						
NFF	**Wufeng Townshi**	1.57	327	*e*P	Pg	15 52 37.5	-0.1
	baz=326						
NFF				S	Sb	15 52 55.4	+0.1
	baz=326						
WTK	**Tuku**	1.58	284	*e*P	Pg	15 52 37.7	+0.1
	baz=283						
WTK				*e*S	Sg	15 52 57.0	-1.2
	baz=283						
TWM1	**Shoushan**	1.58	253	*e*P	Pg	15 52 38.8	+1.0
	baz=251						
SLIU	**Shizi**	1.59	227	*e*P	Pb	15 52 35.9	-0.1
	baz=226						
SHHT	**Tainan City**	1.60	260	*e*P	Pg	15 52 39.0	+0.9
	baz=259						
SHHT				*e*S	Sg	15 52 59.3	+0.4
	baz=259						
SCZT	**Fangliau**	1.62	235	P	Pg	15 52 38.1	-0.3
	baz=234						
SCZT				S	Sb	15 52 56.9	+0.4
	baz=234						
NSTT	**Nanjuang**	1.63	324	*e*P	Pg	15 52 38.1	-0.6
	baz=323						
NSTT				*e*S	Sb	15 52 56.6	-0.3
	baz=323						
ICHU	**Yijhu**	1.63	272	*e*P	Pg	15 52 38.7	-0.1
	baz=283						
LIOB	**Emei**	1.64	325	*e*P	Pg	15 52 38.1	-0.7
	baz=324						
LIOB				S	Sg	15 52 57.8	-2.3
	baz=324						
WRL	**Guolierlin Hig**	1.65	291	*e*S	Sg	15 52 59.7	-0.9
	baz=290						
TIPB	**Shuangxi**	1.67	353	*e*P	Pb	15 52 37.5	+0.1
	baz=4.0						
TIPB				*e*S	Sn	15 52 57.2	+0.8
	baz=4.0						
WSL	**Shuilin Townsh**	1.69	278	P	Pb	15 52 37.7	0.0
	baz=277						
WSL				S	Sg	15 52 59.7	-2.2
	baz=277						
NHDH	**Xindian Distri**	1.72	344	*e*P	Pb	15 52 38.1	-0.1
	baz=334						
NHDH				S	Sb	15 52 59.3	-0.1
	baz=334						
HATJ	**Hateruma jima**	1.77	65	P	Pn	15 52 37.8	+1.0
HATJ				*e*S	Sn	15 52 58.4	-0.4
SXI1	**Grass Mountain**	1.79	355	P	Pb	15 52 39.0	-0.5
	baz=7.0						
SXI1				*e*S	Sn	15 52 58.9	-0.5
	baz=7.0						
IRIF	**Iriomote-Funau**	1.84	56	P	Pn	15 52 39.1	+1.3
IRIF				S	Sn	15 53 00.9	+0.3
YM01	**YM01**	1.88	347	*e*P	Pb	15 52 41.6	+0.6
	baz=334						
YM01				*e*S	Sb	15 53 03.0	-1.3
	baz=334						
JKRS	**Kuro-shima**	2.02	62	P	Pn	15 52 41.7	+1.4
JKRS				*e*S	Sn	15 53 05.1	+0.3
JIJ	**Ishigaki jima**	2.18	61	P	Pn	15 52 43.3	+0.8
JIJ				S	Sn	15 53 08.0	-1.0
JTJ	**Tarama**	2.76	61	*e*S	Sn	15 53 22.9	-0.3
VWUC	**VWUC**	2.91	306	*e*P	Pn	15 52 53.9	+1.4
	baz=306						

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*IDC **26** 16:27:25.4±1.8, 57°.74S×26°.82W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=67.1km s-min=35.4km az=18.0*
*NEIC **26** 16:27:42.9±1.6, 57°.3S±0°.1×27°.1W±0°.3, h129km±8km, mb4.4/22, Error ellipse: s-maj=21.8km s-min=19.0km az=61.0*
ISC 26 16:27:45.3±0.7**, 57°.30S**±0°.10×**27°.5W**±0°.1**, h150**km**, n32,**
σ1s.59/31**, mb4.3**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	9.52	242	Pn	Pn	16 29 56.3	-2.4
VNA1	**Neumayer--Stat**	15.71	156	P	P	16 31 20.2	+1.3
VNA3	**Neumayer Olymp**	15.87	159	P	P	16 31 22.3	+1.6
VNA2	**Neumayer--Watz**	16.10	156	P	P	16 31 25.3	+2.0
	baz=313,slow=13						
SNAA	**Sanae**	17.68	154	P	Pn	16 31 44.8	+3.0
SNAA	**Sanae**	17.68	154	P	Pn	16 31 39.1	-2.7
BELA	**Belgrano 2**	20.81	184	P	P	16 32 13.1	-1.3
DSPA	**Despedida**	23.00	261	P	P	16 32 38.8	+2.1
MG02	**Cerro Sombrero**	24.04	263	P	P	16 32 46.8	+0.8
PLTB	**Pedras Altas**	31.22	314	P	P	16 33 50.1	-0.2
QSPA	**South Pole Qui**	32.94	180	P	P	16 34 06.1	+0.9
QSPA				IAmb	IAmb	16 34 07.1	
	comp=Z,11nm,1.4s						
CPUP	**Villa Florida**	37.52	313	P	P	16 34 45.0	+0.5
	comp=Z,1.8nm,0.9s,baz=150,slow=9.9,SNR=3.8						
	comp=Z,1.8nm,0.9s						
CPUP	**Villa Florida**	37.52	313	IAmb	IAmb	16 35 14.5	
	comp=Z,7.6nm,1.5s						
CO01	**Juntas del Tor**	40.16	294	P	P	16 35 08.8	+2.1
CO01				IAmb	IAmb	16 35 40.2	
	comp=Z,8.9nm,1.3s						
GO02	**Mina Guanaco**	43.93	299	P	P	16 35 37.7	+0.3
BDFB	**Brasilia**	44.37	331	P	P	16 35 42.5	+1.8
	comp=Z,1.3nm,0.5s,baz=179,slow=6.3,SNR=3.3						
	comp=Z,1.3nm,0.5s						
BDFB	**Brasilia**	44.37	331	P	P	16 35 40.9	+0.2
BDFB				IAmb	IAmb	16 35 53.2	
	comp=Z,13nm,1.5s						
LVC	**Limon Verde**	45.79	302	P	P	16 35 53.2	+1.0
LVC				IAmb	IAmb	16 35 56.7	
	comp=Z,9.1nm,1.2s						
PB07	**IPOC Station P**	47.01	301	P	P	16 36 01.9	+0.4
PB01	**IPOC Station P**	47.41	302	P	P	16 36 04.7	+0.2
PB01				IAmb	IAmb	16 36 06.9	
	comp=Z,5.6nm,0.9s						
PATCX	**Punta Patache**	47.91	301	P	P	16 36 08.7	+0.3
PB11	**IPOC Station P**	48.60	303	P	P	16 36 13.9	+0.2
PB11				IAmb	IAmb	16 36 14.1	
	comp=Z,10.0nm,1.1s						
PB16	**IPOC Station P**	49.78	304	P	P	16 36 24.4	+1.2
LPAZ	**La Paz**	50.97	306	P	P	16 36 33.6	+1.5
	comp=Z,3.5nm,0.5s,baz=171,slow=4.2,SNR=18						
	comp=Z,3.5nm,0.5s						
LPAZ	**La Paz**	50.97	306	P	P	16 36 32.9	+0.8
LPAZ				IAmb	IAmb	16 36 34.9	
	comp=Z,4.0nm,0.6s						
SAML	**Samuel**	55.57	316	P	P	16 37 06.1	+1.1
SAML				IAmb	IAmb	16 37 07.3	
	comp=Z,2.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	74.23	30	P	P	16 39 03.1	-2.4
TORD	**Torodi Ar. Bea**	74.23	30	P	P	16 39 04.9	-0.7
	comp=Z,0.9nm,0.5s,baz=201,slow=6.4,SNR=8.3						
	comp=Z,0.9nm,0.5s						
YKA	**Yellowknife Ar**	136.98	317	PKP	PKiKP	16 46 47.5	-3.0
	comp=Z,0.4nm,0.6s,baz=109,slow=3.0,SNR=2.6						
ILAR	**Eielson Array**	150.81	310	PKPbc	PKiKP	16 47 18.9	+0.1
	comp=Z,1.2nm,0.8s,baz=116,slow=2.1,SNR=10						
ILAR	**Eielson Array**	150.81	310		PKiKP	16 47 17.7	-1.1
SONM	**Songino Array**	150.95	89	PKPbc	PKiKP	16 47 18.5	-1.3
	comp=Z,0.5nm,0.5s,baz=234,slow=3.4,SNR=3.6						

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*IDC **26** 16:49:32.1±1.2, 44°.73N×36°.11E, h0km, mb3.5/2, mbtmp3.7/7, ML3.5/5, Error ellipse: s-maj=25.1km s-min=10.8km az=91.0*
*SIGU **26** 16:49:33.9, 44°.73N×36°.21E, h23km, Mc3.0, MD2.8/5, msh3.0/6, Black Sea region 5*
ISC 26 16:49:34.8±1.0**, 44°.86N**±0°.07×**36°.22E**±0°.04**, h42**km±19km**,**
n26, σ1s.92/38**, 4C-10D, Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEO	**Feodosiya**	0.61	285	*e*(Pg)	Pn	16 49 47.3	+0.2
FEO				Pgm		16 49 47.5	
	comp=Z,66nm,0.1s						
FEO				*e*Sg	Sn	16 49 57.0	+1.1
FEO				Sgm		16 49 58.0	
	comp=E,333nm,0.3s						
FEO				Sgm		16 49 59.3	
	comp=N,404nm,0.3s						
ANN	**Anapa**	0.86	94	*e*Pg	Pn	16 49 50.2	-0.3
ANN				Pgm		16 49 51.0	
	comp=Z,68nm,0.4s						
ANN				*e*Sg	Sn	16 50 01.3	-0.6
ANN				Sgm		16 50 03.8	
	comp=E,475nm,0.4s						
SUDU	**Sudak**	0.87	272	⇓*i*Pg	Pn	16 49 51.4	+0.8
SUDU				Pgm		16 49 51.6	
	comp=Z,25nm,0.2s						
SUDU				*i* Sg	Sn	16 50 03.3	+1.1
SUDU				Sgm		16 50 04.1	
	comp=N,493nm,0.2s						
SUDU				Sgm		16 50 04.3	
	comp=E,310nm,0.3s						
ALU	**Alushta**	1.31	263	*e*Pn	Pn	16 49 57.1	+0.5
ALU				Pnm		16 49 58.1	
	comp=Z,10.0nm,0.3s						
ALU				*i* Sn	Sn	16 50 13.1	+0.2
ALU				Snm		16 50 15.1	
	comp=E,138nm,0.3s						
ALU				Snm		16 50 17.1	
	comp=N,341nm,0.2s						
SIM	**Simferopol'**	1.50	274	*e*Sn	Sn	16 50 18.5	+0.9
SIM				Snm		16 50 19.1	
	comp=E,59nm,0.2s						
SIM				Snm		16 50 19.3	
	comp=N,78nm,0.3s						
YAL	**Yalta**	1.52	257	⇓*e*Pn	Pn	16 49 59.8	+0.3
YAL				Pnm		16 50 00.7	
	comp=Z,137nm,0.2s						
YAL				*i* Sn	Sn	16 50 18.1	0.0
YAL				Snm		16 50 19.5	
	comp=E,483nm,0.2s						
YAL				Snm		16 50 19.7	
	comp=N,353nm,0.2s						
SEV	**Sevastopol'**	1.85	261	*e*Pn	Pn	16 50 04.3	+0.3
SEV				Pnm		16 50 04.8	
	comp=Z,11nm,0.2s						
SEV				*i* Sn	Sn	16 50 26.6	+0.4
SEV				Snm		16 50 28.1	
	comp=N,75nm,0.3s						
SEV				Snm		16 50 28.6	
	comp=E,60nm,0.2s						
KVAR	**Kislovodsk Arr**	4.72	99	Sn	Sn	16 51 37.4	+0.2
	baz=290,slow=12						
KBZ	**Khabaz**	4.92	101	Sn	Sn	16 51 45.6	+3.8
	comp=E,0.5nm,0.3s,baz=180,slow=20,SNR=1.5						
TLCR		5.26	276	⇑P	Pn	16 50 53.2	+2.3
TLCR				⇓S	Sn	16 51 49.6	-0.6
BRTR	**Keskin Array B**	5.48	201	Pn	Pn	16 50 54.6	+0.6
	comp=E,2.2nm,0.3s,baz=18,slow=10,SNR=42						
BRTR				Sn	Sn	16 51 53.9	-1.9
	comp=E,0.4nm,0.3s,baz=25,slow=14,SNR=4.2						
	comp=E,4.9nm,0.3s						
TPGR	**Topolog**	5.55	273	⇓P	Pn	16 50 56.6	+1.8
TPGR				⇓S	Sn	16 51 54.3	-3.0
MANR	**Mangalia**	5.58	262	⇓P	Pn	16 50 55.9	+0.7
TIRR	**Tirgusor**	5.59	269	⇓P	Pn	16 50 56.0	+0.6
TIRR				⇑S	Sn	16 51 54.7	-3.6
CFR	**Carcaliu**	5.74	276	⇓P	Pn	16 50 59.1	+1.6
CFR				⇑S	Sn	16 51 59.3	-2.7
PSN	**Preselentsi**	5.89	261	P	Pn	16 51 00.3	+0.8
ROIA	**ROIAK**	6.62	258	P	Pn	16 51 09.7	+0.1
TESR	**Tescani**	6.91	287	⇑P	Pn	16 51 14.5	+1.0
TESR				⇓S	Sn	16 52 28.7	-2.1
MLR	**Muntele Rosu**	7.29	279	⇓S	Sn	16 52 38.7	-1.7
AKASG	**Malin Array Be**	7.51	324	Pn	Pn	16 51 21.9	+0.2
	comp=E,3.0nm,0.3s,baz=135,slow=14,SNR=10						
AKASG				Sn	Sn	16 52 41.2	-4.1
	comp=E,3.1nm,0.3s,baz=138,slow=25,SNR=6.1						
	comp=E,2.0nm,0.3s						
SZH	**Strazhica**	7.58	261	P	Pn	16 51 22.2	-0.5
ASF	**Jabal al Asfar**	12.68	177	Pn	Pn	16 52 33.0	+0.5
	comp=E,0.3nm,0.3s,baz=31,slow=14,SNR=4.3						
	comp=E,2.8nm,0.5s						
GERES	**GERESS Array B**	15.90	293	Pn	P	16 53 18.1	-0.5

	comp=E,0.1nm,0.3s,baz=97,slow=11,SNR=4.8						
	comp=E,0.3nm,0.5s						
FINES	**FINESS Array B**	**17.65**	**344**	Pn	**Pn**	**16 53 33.6**	**-3.6**
	comp=E,0.2nm,0.3s,baz=152,slow=14,SNR=7.3						
	comp=E,1.7nm,0.7s						
ARCES	**ARCESS Array B**	**25.33**	**351**	P	**P**	**16 55 01.7**	**+4.5**
	comp=E,0.8nm,0.8s,baz=166,slow=13,SNR=1.2						
	comp=E,0.8nm,0.8s						
MKAR	**Makanchi Array**	**31.81**	**70**	P	P	16 55 58.8	+3.6
	comp=E,0.5nm,0.8s,baz=293,slow=7.2,SNR=1.1						
	comp=E,0.5nm,0.8s						

IDC ***26*** *17:14:31.1±1.6, 38°.22N×142°.52E, h0^{km}, mb3.4/4, mbtmp3.4/5, ML2.3/1, MS2.9/2, Error ellipse: s-maj=37.4km s-min=27.0km az=134.0*

NIED ***26*** *17:14:36.5, 38°.26N×142°.14E, h37^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.39; $M_{\theta\theta}$0.06; $M_{\phi\phi}$1.33; $M_{r\theta}$-0.11; $M_{\theta\phi}$-0.12; $M_{\phi r}$1.90; Fault plane solution: $M_0$2.34000×10^{14} NP1: ϕ_s353.00000°, δ18.00000°, λ-93.00000°. NP2: ϕ_s176.00000°, δ72.00000°, λ-89.00000°.*

JMA ***26*** *17:14:36.5±0.2, 38°.3N±0°.4×142°.1E±0°.8, h37^{km}±1^{km}, MV3.7/39, E OFF MIYAGI PREF*

ISC 26 17:14:32.0±2.1**, 38°.21N**±0°.04×**142°.23E**±0°.07**, h5**^{km}±12^{km}**, n25, σ1^{s}09**/29**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.61**	**280**	*i* P	**Pn**	**17 14 47.4**	**+0.1**
JIKH				S	**Sb**	**17 14 54.8**	**+0.7**
JIO	**Ouri**	**0.74**	**290**	*i* P	**Pn**	**17 14 49.2**	**+0.2**
JIO				S	**Sb**	**17 14 58.0**	**+0.3**
JKMT	**Kesennumamotoy**	**0.85**	**316**	*i* P	**Pn**	**17 14 50.9**	**+0.3**
JKMT				S	**Sb**	**17 15 01.0**	**+0.1**
OFUJ	**Ofunato**	**0.98**	**333**	*i* P	**Pn**	**17 14 52.5**	**+0.1**
OFUJ				S	**Sb**	**17 15 04.4**	**-0.3**
JMK	**Ichinoseki**	**1.09**	**314**	*i* P	**Pn**	**17 14 54.4**	**+0.5**
JMM	**Marumori**	**1.19**	**254**	P	**Pn**	**17 14 55.7**	**+0.4**
JMM				S	**Sg**	**17 15 09.7**	**-0.4**
JOU	**Okura**	**1.24**	**278**	*i* P	**Pn**	**17 14 57.1**	**+1.1**
JOU				*e*S	**Sn**	**17 15 12.5**	**-0.8**
JFK	**Kawauchi**	**1.36**	**233**	*i* P	**Pn**	**17 14 58.1**	**+0.4**
JFK				S	**Sb**	**17 15 13.5**	**-2.3**
JOM	**Ohasama**	**1.46**	**330**	*i* P	**Pg**	**17 15 00.1**	**+0.1**
JOM				S	**Sb**	**17 15 17.3**	**-1.3**
JYK	**Kaneyama**	**1.63**	**296**	*i* P	**Pb**	**17 15 02.4**	**-0.1**
JFT	**Otama**	**1.65**	**246**	*i* P	**Pb**	**17 15 03.1**	**+0.2**
JFT				S	**Sn**	**17 15 23.1**	**-0.1**
JYS	**Shirataka**	**1.71**	**271**	P	**Pb**	**17 15 03.5**	**-0.4**
JYS				*e*S	**Sn**	**17 15 24.1**	**-0.5**
JRG	**Rokugo**	**1.72**	**314**	*e*P	**Pb**	**17 15 04.0**	**-0.2**
MJAR	**Matsushiro Arr**	**3.61**	**244**	Pn	**Pn**	**17 15 31.6**	**+3.0**
	0.2nm,0.3s,baz=66,slow=11,SNR=17						
MJAR				Sn	**Sb**	**17 16 18.0**	**-2.4**
	0.1nm,0.3s,baz=94,slow=31,SNR=1.5						
MJAR				LR	LR	17 17 11.0	
	comp=Z,78nm,19.8s,baz=36,slow=42						
	4.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.22**	**124**	T	T	17 50 36.5	
	baz=316,slow=76,SNR=66						
H11N1	**WAKE ISLAND Hy**	**28.23**	**124**	T	T	17 50 35.9	
	baz=316,slow=76,SNR=50						
H11N3	**WAKE ISLAND Hy**	**28.24**	**124**	T	T	17 50 39.3	
	baz=316,slow=76,SNR=54						
H11S1	**WAKE ISLAND Hy**	**28.98**	**126**	T	T	17 51 37.9	
	baz=318,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.98**	**126**	T	T	17 51 37.9	
	baz=318,slow=76,SNR=39						
H11S2	**WAKE ISLAND Hy**	**29.00**	**126**	T	T	17 51 40.5	
	baz=318,slow=76,SNR=32						
ZALV	**Zalesovo Beam**	**41.62**	**311**	P	**P**	**17 22 21.7**	**+0.9**
	0.4nm,0.4s,baz=79,slow=7.5,SNR=2.4						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**44.06**	**301**	P	**P**	**17 22 42.1**	**+1.3**
	0.3nm,0.6s,baz=92,slow=9.1,SNR=2.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**48.16**	**33**	P	**P**	**17 23 11.6**	**-1.2**
	0.3nm,0.6s,baz=270,slow=5.5,SNR=4.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**58.31**	**189**	P	**P**	**17 24 28.0**	**+0.1**
	0.4nm,0.8s,baz=2.3,slow=7.1,SNR=1.8						
	0.4nm,0.8s						
JMIC	**Jan Mayen**	**69.11**	**350**	LR	LR	17 56 41.4	
	comp=Z,17nm,19.0s,baz=233,slow=37						

JMA ***26*** *17:20:10.9±0.3, 24°N±1°×122°.5E±0°.5, h13^{km}±3^{km}, MV2.3/10, NW OFF ISHIGAKIJIMA IS*

TAP ***26*** *17:20:10.7, 24°.01N×122°.48E, h22^{km}, ML3.2, D*

ISC 26 17:20:09.6±1.0**, 23°.93N**±0°.02×**122°.45E**±0°.02**, h13**^{km}±9^{km}**, n104, σ0^{s}92**/187**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**41**	P	**Pg**	**17 20 23.1**	**+0.1**
JYNG				*e*S	**Sg**	**17 20 31.1**	**-1.0**
YOJ	**Yonaguni jima**	**0.74**	**44**	P	**Pb**	**17 20 23.8**	**-0.4**
	baz=57						
YOJ				S	**Sb**	**17 20 32.3**	**-1.9**
	baz=57						
YOJ	**Yonaguni jima**	**0.74**	**44**	P	**Pb**	**17 20 24.1**	**-0.2**
YOJ				*e*S	**Sb**	**17 20 32.5**	**-1.7**
HWA	**Hwalien**	**0.77**	**274**	P	**Pn**	**17 20 26.0**	**-0.1**
	baz=253						
HWA				S	**Sn**	**17 20 38.3**	**+0.7**
	baz=253						
ETL	**Fush Village**	**0.79**	**287**	*e*P	**Pn**	**17 20 26.0**	**-0.4**
	baz=264						
ETL				*e*S	**Sn**	**17 20 38.4**	**+0.3**
	baz=264						
EWUT	**Wuta**	**0.80**	**310**	P	**Pn**	**17 20 25.5**	**-1.0**
	baz=304						
EWUT				S	**Sn**	**17 20 36.5**	**-1.7**
	baz=304						
ENA	**Nanau**	**0.81**	**308**	P	**Pn**	**17 20 25.7**	**-1.1**
	baz=301						
ENA				*e*S	**Sn**	**17 20 36.9**	**-1.7**
	baz=301						
NACB	**Ninganchiao**	**0.82**	**287**	P	**Pn**	**17 20 26.3**	**-0.5**
	baz=266						
NACB				*e*S	**Sg**	**17 20 36.1**	**-0.1**
	baz=266						
TWC	**Suao**	**0.87**	**321**	P	**Pg**	**17 20 26.3**	**-0.1**
	baz=307						
TWC				S	**Sg**	**17 20 36.2**	**-1.6**
	baz=307						
ETLH	**Xiulin Townshi**	**0.93**	**287**	P	**Pn**	**17 20 28.1**	**-0.2**
	baz=268						
ETLH				*e*S	**Sn**	**17 20 41.1**	**-0.4**
	baz=268						
ESL	**Shilin**	**0.94**	**263**	P	**Pb**	**17 20 27.6**	**0.0**
	baz=247						
ESL				*e*S	**Sn**	**17 20 40.5**	**-1.2**
	baz=247						
NDS	**Dongshan**	**0.97**	**316**	P	**Pn**	**17 20 28.5**	**-0.3**
	baz=303						
NDS				*e*S	**Sn**	**17 20 40.8**	**-1.7**
	baz=303						
EGFH	**Guangfu**	**0.97**	**255**	*e*P	**Pn**	**17 20 29.2**	**+0.3**
	baz=250						
EGFH				*e*S	**Sn**	**17 20 42.6**	**0.0**
	baz=250						
LATG	**Datong**	**1.03**	**306**	P	**Pn**	**17 20 30.0**	**+0.1**
	baz=300						
LATG				*e*S	**Sn**	**17 20 43.5**	**-0.8**
	baz=300						
HGSD	**Ruisui**	**1.04**	**245**	*e*P	**Pb**	**17 20 29.4**	**0.0**
	baz=241						
HGSD				*e*S	**Sb**	**17 20 42.9**	**+0.1**
	baz=241						
TWE	**Neicheng**	**1.06**	**318**	*e*P	**Pn**	**17 20 30.2**	**0.0**
	baz=314						
TWE				*e*S	**Sn**	**17 20 43.8**	**-0.9**
	baz=314						
ENTT	**Nioudou**	**1.07**	**311**	P	**Pg**	**17 20 30.5**	**+0.3**
	baz=307						
ENTT				*e*S	**Sn**	**17 20 45.9**	**+0.9**
	baz=307						
NTC	**Toucheng**	**1.08**	**329**	*e*P	**Pg**	**17 20 30.6**	**+0.2**
	baz=325						
NTC				*e*S	**Sn**	**17 20 44.4**	**-0.8**
	baz=325						
NNSB	**Datong**	**1.09**	**297**	P	**Pg**	**17 20 31.0**	**+0.4**
	baz=292						
NNSB				S	**Sn**	**17 20 46.0**	**+0.2**
	baz=292						
WHF	**Hehuan Shan**	**1.10**	**281**	*e*P	**Pg**	**17 20 31.0**	**+0.1**
	baz=262						
WHF				*e*S	**Sn**	**17 20 46.2**	**-0.2**
	baz=262						
NNS	**Nan Shan**	**1.10**	**297**	*e*P	**Pg**	**17 20 31.3**	**+0.4**
	baz=279						
EHY	**Hungye**	**1.12**	**248**	P	**Pb**	**17 20 30.9**	**+0.1**
	baz=244						
EHY				S	**Sg**	**17 20 46.1**	**+0.5**
	baz=244						
FUSB	**Fushanzhiwuyua**	**1.14**	**317**	P	**Pg**	**17 20 32.0**	**+0.5**
	baz=312						
FUSB				*e*S	**Sn**	**17 20 46.6**	**-0.2**
	baz=312						
FUSS	**Fushou**	**1.15**	**286**	P	**Pg**	**17 20 31.9**	**+0.2**
	baz=281						
TWB1	**Santiao Chiao**	**1.15**	**339**	*e*P	**Pg**	**17 20 31.9**	**+0.1**
	baz=353						
TWB1				*e*S	**Sg**	**17 20 46.8**	**0.0**
	baz=353						
OWD	**Renai**	**1.17**	**271**	*e*P	**Pg**	**17 20 32.0**	**-0.1**
	baz=255						
OWD				*e*S	**Sg**	**17 20 47.0**	**-0.3**
	baz=255						
CHGB	**Renai**	**1.17**	**277**	P	**Pg**	**17 20 32.1**	**-0.1**
	baz=259						
CHGB				*e*S	**Sg**	**17 20 47.7**	**+0.2**
	baz=259						
TIPB	**Shuangxi**	**1.18**	**331**	*e*P	**Pg**	**17 20 32.6**	**+0.3**
	baz=328						
TIPB				*e*S	**Sg**	**17 20 47.0**	**-0.8**
	baz=328						
YULB	**Yu-li**	**1.18**	**243**	P	**Pn**	**17 20 31.9**	**+0.1**
	baz=239						
YULB				S	**Sb**	**17 20 47.5**	**+0.3**
	baz=239						
TWF1	**Yuli**	**1.20**	**242**	P	**Pn**	**17 20 32.4**	**+0.3**
	baz=238						
TWF1				*e*S	**Sn**	**17 20 48.2**	**-0.1**
	baz=238						
NWLT	**Wulai**	**1.21**	**314**	*e*P	**Pg**	**17 20 32.9**	**+0.1**
	baz=310						
NWLT				*e*S	**Sg**	**17 20 49.1**	**+0.6**
	baz=310						
TWT	**Tachien**	**1.21**	**286**	*e*P	**Pg**	**17 20 33.4**	**+0.6**
	baz=267						
TWT				*e*S	**Sg**	**17 20 50.3**	**+1.7**
	baz=267						
VWDT	**VWDT**	**1.21**	**262**	P	**Pb**	**17 20 32.7**	**+0.4**
	baz=257						
VWDT				S	**Sg**	**17 20 48.5**	**-0.2**
	baz=257						
WUSB	**Renai**	**1.22**	**273**	P	**Pb**	**17 20 32.7**	**+0.2**
	baz=268						
WUSB				*e*S	**Sg**	**17 20 49.2**	**+0.2**
	baz=268						
TDCB	**Techi**	**1.22**	**285**	P	**Pg**	**17 20 33.1**	**0.0**
	baz=269						
YHNB	**Yeheng**	**1.22**	**307**	P	**Pg**	**17 20 33.2**	**+0.1**
	baz=288						
YHNB				S	**Sg**	**17 20 48.2**	**-0.9**
	baz=288						
IRIF	**Iriomote-Funau**	**1.24**	**71**	P	**Pn**	**17 20 32.8**	**+0.3**
IRIF				*e*S	**Sb**	**17 20 48.9**	**+0.3**
NSK	**Sanguang**	**1.24**	**307**	P	**Pg**	**17 20 33.3**	**-0.2**
	baz=288						
NSK				*e*S	**Sg**	**17 20 49.7**	**0.0**
	baz=288						
HATJ	**Hateruma jima**	**1.25**	**84**	P	**Pn**	**17 20 33.6**	**+0.9**
HATJ				*e*S	**Sn**	**17 20 49.3**	**0.0**
SXI1	**Grass Mountain**	**1.27**	**336**	P	**Pg**	**17 20 33.4**	**-0.6**
	baz=350						
SXI1				S	**Sg**	**17 20 50.5**	**-0.1**
	baz=350						
FULB	**Fuli**	**1.29**	**236**	P	**Pn**	**17 20 33.2**	**0.0**
	baz=219						
FULB				*e*S	**Sb**	**17 20 49.8**	**-0.3**
	baz=219						
NWF	**Wu-fen Shan**	**1.29**	**332**	P	**Pg**	**17 20 33.9**	**-0.5**
	baz=329						
NWF				S	**Sg**	**17 20 50.8**	**-0.4**
	baz=329						
TWA	**Mucha**	**1.31**	**323**	*e*P	**Pg**	**17 20 35.4**	**+0.7**
	baz=320						
TWA				*e*S	**Sg**	**17 20 52.0**	**+0.2**
	baz=320						
SSLB	**Suanglung**	**1.38**	**264**	*e*P	**Pb**	**17 20 35.4**	**+0.3**
	baz=260						
SSLB				*e*S	**Sn**	**17 20 51.7**	**-0.9**
	baz=260						
NFF	**Wufeng Townshi**	**1.40**	**300**	*e*P	**Pg**	**17 20 36.9**	**+0.4**
	baz=296						
WCS	**Beigang Elemen**	**1.41**	**275**	*e*P	**Pb**	**17 20 36.0**	**+0.2**
	baz=271						
WHP	**Taichung City**	**1.42**	**284**	*e*P	**Pg**	**17 20 37.9**	**+1.0**
	baz=269						
SMLT	**Sun Moon Lake**	**1.42**	**268**	*e*P	**Pb**	**17 20 36.0**	**0.0**
	baz=253						
SMLT				*e*S	**Sg**	**17 20 55.2**	**-0.1**
	baz=253						
EDH	**Donghe**	**1.42**	**228**	*e*P	**Pn**	**17 20 35.1**	**0.0**
	baz=215						
EDH				*e*S	**Sn**	**17 20 51.9**	**-1.7**
	baz=215						
YM01	**YM01**	**1.45**	**327**	*e*P	**Pg**	**17 20 37.2**	**-0.3**
	baz=324						
YM01				*e*S	**Sg**	**17 20 55.1**	**-1.2**
	baz=324						
JKRS	**Kuro-shima**	**1.46**	**78**	P	**Pn**	**17 20 36.9**	**+1.3**
JKRS				*e*S	**Sn**	**17 20 55.2**	**+0.7**
LIOB	**Emei**	**1.49**	**299**	*e*P	**Pg**	**17 20 38.1**	**-0.1**
	baz=294						
LIOB				*e*S	**Sg**	**17 20 57.7**	**+0.2**
	baz=294						
NSTT	**Nanjuang**	**1.49**	**298**	*e*P	**Pg**	**17 20 38.0**	**-0.3**
	baz=294						
NSTT				*e*S	**Sg**	**17 20 57.4**	**-0.4**
	baz=294						
TWS1	**Kuangyinshan**	**1.50**	**321**	*e*P	**Pg**	**17 20 39.5**	**+1.1**
	baz=336						
TWS1				*e*S	**Sg**	**17 20 57.8**	**0.0**
	baz=336						
ELDTW	**Lidau**	**1.51**	**241**	*e*P	**Pn**	**17 20 36.4**	**0.0**
	baz=237						
ELDTW				*e*S	**Sn**	**17 20 55.6**	**-0.4**
	baz=237						
LDUT	**Ludao**	**1.54**	**216**	*e*P	**Pn**	**17 20 36.4**	**-0.4**
	baz=214						
LDUT				*e*S	**Sn**	**17 20 54.7**	**-1.9**
	baz=214						
TWY	**Chenhua**	**1.54**	**330**	*e*P	**Pg**	**17 20 40.1**	**+0.8**
	baz=328						
TWY				*e*S	**Sg**	**17 21 00.0**	**+0.6**
	baz=328						
ALS	**Alishan**	**1.56**	**255**	*e*P	**Pb**	**17 20 38.4**	**-0.1**
	baz=250						
ALS				*e*S	**Sb**	**17 20 58.6**	**+0.3**
	baz=250						
WJS	**Zhushan**	**1.58**	**266**	*e*P	**Pg**	**17 20 39.7**	**-0.3**
	baz=263						
LONT	**Longtian**	**1.58**	**230**	*e*P	**Pn**	**17 20 37.5**	**+0.2**
	baz=218						
LONT				*e*S	**Sn**	**17 20 58.2**	**+0.5**
	baz=218						
TWQ1	**Liyutan**	**1.59**	**285**	*e*P	**Pg**	**17 20 39.6**	**-0.4**
	baz=281						
WWF	**Wufeng**	**1.60**	**274**	*e*P	**Pg**	**17 20 40.0**	**-0.4**
	baz=270						
JIJ	**Ishigaki jima**	**1.61**	**74**	P	**Pn**	**17 20 38.4**	**+0.8**
JIJ				S	**Sn**	**17 20 59.1**	**+0.9**
NSY	**Sanyi**	**1.61**	**288**	*e*P	**Pg**	**17 20 40.4**	**-0.3**
	baz=283						
WNT	**Mingjian**	**1.62**	**268**	*e*P	**Pg**	**17 20 40.4**	**-0.2**
	baz=264						
WNT				*e*S	**Sg**	**17 21 01.5**	**-0.1**
	baz=264						
TCU	**Taichung**	**1.64**	**278**	*e*P	**Pg**	**17 20 40.7**	**-0.2**
	baz=273						
CHN5	**Tsauling**	**1.66**	**259**	*e*P	**Pg**	**17 20 42.0**	**+0.6**
	baz=243						
CHN5				*e*S	**Sg**	**17 21 02.3**	**-0.6**
	baz=243						
TWGBT	**Beinan**	**1.68**	**229**	*e*P	**Pn**	**17 20 39.0**	**+0.4**
	baz=239						
TWGBT				*e*S	**Sn**	**17 20 59.1**	**-0.8**
	baz=239						
TWG	**Pinlang**	**1.68**	**229**	*e*P	**Pn**	**17 20 38.9**	**+0.3**
	baz=239						
TWG				*e*S	**Sn**	**17 20 59.3**	**-0.7**
	baz=239						
STYH	**Taoyuan**	**1.71**	**244**	*e*P	**Pn**	**17 20 40.3**	**+1.2**
	baz=230						
STYH				*e*S	**Sb**	**17 21 02.0**	**-0.3**
	baz=230						
STYT	**Tauyuan**	**1.73**	**244**	P	**Pb**	**17 20 40.8**	**-0.4**
	baz=230						
STYT				*e*S	**Sn**	**17 21 01.4**	**0.0**
	baz=230						
WCHH	**Zhanghua**	**1.73**	**275**	*e*P	**Pg**	**17 20 41.9**	**-1.0**
	baz=271						
WDLH	**Douliu**	**1.77**	**263**	*e*P	**Pb**	**17 20 42.2**	**+0.4**
	baz=258						
WDLH				*e*S	**Sg**	**17 21 07.0**	**+0.5**
	baz=258						
TPUB	**Ta-pu**	**1.78**	**250**	*e*P	**Pb**	**17 20 42.2**	**0.0**
	baz=246						
TPUB				*e*S	**Sb**	**17 21 05.4**	**+1.0**
	baz=246						
WTP	**Ta-pu**	**1.82**	**248**	*e*P	**Pb**	**17 20 42.5**	**-0.3**
	baz=233						
WTP				*e*S	**Sg**	**17 21 08.1**	**0.0**
	baz=233						
WRL	**Guolierlin Hig**	**1.90**	**270**	*e*P	**Pb**	**17 20 44.0**	**0.0**
	baz=265						
WRL				*e*S	**Sg**	**17 21 08.6**	**-2.0**
	baz=265						
WTK	**Tuku**	**1.90**	**263**	*e*P	**Pb**	**17 20 44.5**	**+0.3**
	baz=259						
WTK				*e*S	**Sg**	**17 21 09.5**	**-1.3**
	baz=259						
CHY	**Chiayi**	**1.91**	**257**	*e*P	**Pb**	**17 20 44.8**	**+0.6**
	baz=253						
CHY				*e*S	**Sg**	**17 21 09.1**	**-1.8**
	baz=253						
SGST	**Jiashian**	**1.91**	**244**	*e*P	**Pb**	**17 20 44.6**	**+0.3**
	baz=230						
SGST				*e*S	**Sb**	**17 21 08.8**	**+0.8**
	baz=230						
ECL	**Taimali**	**1.91**	**226**	*e*P	**Pn**	**17 20 41.5**	**-0.3**
	baz=223						
ECL				*e*S	**Sn**	**17 21 03.6**	**-2.2**
	baz=223						
CHN1	**Nanshi**	**1.91**	**248**	*e*P	**Pb**	**17 20 44.2**	**-0.1**
	baz=243						
CHN1				*e*S	**Sg**	**17 21 09.8**	**-1.4**
	baz=243						
TWK	**Hsinying**	**1.92**	**250**	*e*P	**Pb**	**17 20 44.4**	**-0.1**
	baz=246						
TWK				*e*S	**Sg**	**17 21 09.8**	**-1.4**
	baz=246						
SNST	**Tainan City**	**1.93**	**249**	*e*P	**Pb**	**17 20 45.2**	**+0.7**
	baz=245						
SNST				*e*S	**Sb**	**17 21 10.0**	**+1.6**
	baz=245						
LAY	**Lan-yu**	**2.06**	**204**	*e*P	**Pn**	**17 20 43.6**	**-0.2**
	baz=202						
LAY				*e*S	**Sn**	**17 21 05.5**	**-4.0**
	baz=202						
TSMG	**Majia**	**2.06**	**234**	*e*P	**Pb**	**17 20 47.0**	**+0.2**
	baz=224						
SCST	**Cishan**	**2.08**	**240**	*e*P	**Pb**	**17 20 47.6**	**+0.5**
	baz=237						
SCST				*e*S	**Sg**	**17 21 15.1**	**-1.2**
	baz=237						
WSL	**Shuilin Townsh**	**2.08**	**259**	*e*P	**Pb**	**17 20 46.3**	**-0.8**
	baz=255						
WSL				*e*S	**Sb**	**17 21 12.7**	**-0.1**
	baz=255						
LYUB	**Lan-yu**	**2.08**	**203**	*e*P	**Pn**	**17 20 43.9**	**-0.2**
	baz=201						
LYUB				*e*S	**Sn**	**17 21 06.2**	**-3.6**
	baz=201						
MASBT	**Mashibuluo**	**2.12**	**232**	*e*P	**Pn**	**17 20 46.4**	**+1.6**
	baz=222						
SHHT	**Tainan City**	**2.13**	**245**	*e*P	**Pb**	**17 20 48.9**	**+0.8**
	baz=241						
SHHT				*e*S	**Sg**	**17 21 17.6**	**-0.5**
	baz=241						
EAST	**Anshuo**	**2.13**	**224**	*e*P	**Pn**	**17 20 45.2**	**+0.3**
	baz=222						
JTJ	**Tarama**	**2.17**	**71**	*e*S	**Sn**	**17 21 14.9**	**+2.7**
SSPT	**Xinbi**	**2.25**	**231**	*e*P	**Pb**	**17 20 50.7**	**+0.6**
	baz=221						
SSPT				*e*S	**Sb**	**17 21 20.6**	**+2.7**
	baz=221						
SLIU	**Shizi**	**2.29**	**222**	*e*P	**Pb**	**17 20 51.0**	**+0.4**
	baz=230						
SCZT	**Fangliau**	**2.29**	**228**	*e*P	**Pb**	**17 20 51.0**	**+0.3**
	baz=217						
HEN	**Hengchun**	**2.48**	**220**	*e*P	**Pb**	**17 20 53.4**	**-0.7**
	baz=217						
HEN				*e*S	**Sn**	**17 21 20.7**	**+0.9**
	baz=217						
WDGT	**Dungji**	**2.64**	**256**	*e*P	**Pn**	**17 20 53.6**	**+1.7**
	baz=253						
PHUB	**P'eng-hu**	**2.67**	**262**	*e*P	**Pn**	**17 20 53.8**	**+1.6**
	baz=257						
PHUB				*e*S	**Sn**	**17 21 25.6**	**+1.1**
	baz=257						
PNG	**Penghu**	**2.68**	**263**	*e*P	**Pn**	**17 20 53.9**	**+1.6**
	baz=258						
PNG				*e*S	**Sn**	**17 21 26.4**	**+1.8**
	baz=258						
VCHM	**Qimei**	**2.86**	**256**	*e*P	**Pn**	**17 20 56.8**	**+1.9**
	baz=252						
VCHM				*e*S	**Sn**	**17 21 30.0**	**+0.8**
	baz=252						
VWUC	**VWUC**	**2.93**	**292**	*e*P	**Pn**	**17 20 56.3**	**+0.5**
	baz=287						
VWUC				*e*S	**Sn**	**17 21 29.1**	**-1.7**
	baz=287						
PTMZ	**Houxiangcun**	**3.23**	**291**	*e*P	**Pn**	**17 21 00.3**	**+0.4**
	baz=286						
PTMZ				*e*S	**Sn**	**17 21 37.0**	**-1.2**
	baz=286						
AXDP	**Jialang**	**4.20**	**284**	*e*P	**Pn**	**17 21 13.9**	**+0.7**
	baz=279						
ZPLA	**Ao Xicun**	**4.30**	**271**	*e*P	**Pn**	**17 21 15.5**	**+0.9**
	baz=268						

IDC ***26*** *18:35:29.1±2.2, 5°.23S×133°.70E, h0^{km}, mb3.6/1, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=50.8km s-min=26.9km az=86.0*

ISC 26 18:35:30.2±1.4**, 5°.14S**±0°.08×**133°.7E**±0°.1**, h10**^{km}**, n5, σ2^{s}09**/7**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.87**	**330**	Pn	**Pn**	**18 36 45.1**	**+1.5**
	0.9nm,0.3s,baz=116,slow=23,SNR=5.1						
SIJI				Sn	**Sn**	**18 37 36.9**	**-3.3**
	1.2nm,0.3s,baz=311,slow=24,SNR=2.6						
	2.6nm,0.4s						
BATI	**Baumata**	**11.12**	**242**	Pn	**Pn**	**18 38 10.3**	**+0.9**
	1.5nm,0.3s,baz=314,slow=22,SNR=1.6						
BATI				Sn	**Sn**	**18 40 13.7**	**-0.3**
	1.2nm,0.3s,baz=80,slow=9.0,SNR=1.7						
	5.6nm,0.4s						
WRA	**Warramunga Arr**	**14.73**	**178**	Pn	**Pn**	**18 38 58.4**	**-0.4**
	0.1nm,0.3s,baz=354,slow=13,SNR=4.6						
WRA				Sn	Sn	18 41 28.9	-13
	0.1nm,0.3s,baz=355,slow=24,SNR=3.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**18.42**	**179**	P	**P**	**18 39 44.4**	**-1.5**
	0.1nm,0.3s,baz=5.5,slow=12,SNR=7.5						
	1.0nm,0.9s						
MKAR	**Makanchi Array**	**68.75**	**325**	P	**P**	**18 46 35.4**	**+1.0**
	0.3nm,0.6s,baz=110,slow=8.2,SNR=5.0						
	0.3nm,0.6s						

BJI ***26*** *18:40:22.5±0.0, 5°.54S×146°.55E, h149^{km}, mb4.5/44, mB4.9/27*

DJA ***26*** *18:40:26.8±0.3, 5°S±3°×14°6E±°, h124^{km}±4^{km}, M4.8/29, mB5.2/15, mb4.8/29, MLv5.4/5, Mw(mB)4.5/15*

NEIC ***26*** *18:40:26.3±1.7, 5°.24S±0°.06×145°.88E±0°.09, h131^{km}±6^{km}, mb4.7/103, Error ellipse: s-maj=12.8km s-min=9.0km az=90.0*

IDC ***26*** *18:40:28.5±0.6, 5°.22S×145°.96E, h153^{km}±5^{km}, mb4.1/18, mbtmp4.7/23, MS3.5/25, Error ellipse: s-maj=12.2km*

s-min=7.6km az=100.0

*GCMT **26** 18:40:29.3±0.2, 5°.21S±0°.01×146°.01E±0°.02, h139^{km}±2^{km}, MW5.0/111, Moment Tensor Solution. s33,c40; s111,c171; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.51±.10; $M_{\theta\theta}$-1.52±.09; $M_{\phi\phi}$3.02±.10; $M_{r\theta}$-1.80±.07; $M_{\theta\phi}$1.81±.11; $M_{\phi r}$0.36±.09; Best double couple: $M_0$3.67500×10^{16} NP1:ϕ_s162.00000°, δ60.00000°, λ-151.00000°. NP2:ϕ_s57.00000°, δ65.00000°, λ-33.00000°. Principal axes: T 3.6670, Plg3.0000°, Azm110.0000°; N 0.0060, Plg50.0000°, Azm204.0000°; P -3.6830, Plg40.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 18:40:28.0±0.3**, 5°.31S**±0°.04×**145°.95E**±0°.05**, h150**^{km}**, n302,** σ**1s.06**/289**, mb4.6**/85**, 2C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.54	24		Pn	18 41 20.3	-1.9
PMG	Port Moresby	4.24	164	P	Pn	18 41 28.6	-2.8
	162nm,0.3s,baz=66,slow=6.2,SNR=46						
PMG				S	Sn	18 42 16.2	-4.6
	715nm,0.4s,baz=126,slow=23,SNR=32						
PMG	Port Moresby	4.24	164	Pn	Pn	18 41 28.3	-3.1
KRVT	Keravat (AS076	6.13	81	P	Pn	18 41 56.2	-0.3
	374nm,0.7s,baz=113,slow=0.9,SNR=86						
KRVT				LR	LR	18 44 21.1	
	comp=Z,373nm,20.9s,baz=35,slow=38						
RABL	Rabaul	6.29	80		Pn	18 41 58.5	-0.1
MMPI	Merauke	6.36	240	P	Pn	18 41 57.4	-2.0
	2.2nm109nm,0.6s						
SMPI	Sarmi	7.94	294	P	Pn	18 42 18.7	-2.0
	0.8nm3µm115nm,1.0s						
COEN	Coen	9.02	197		Pn	18 42 35.2	+0.2
SRPI	Serui, Papua	10.28	289	P	Pn	18 42 48.4	-3.3
	8µm204nm,0.5s						
BAKI	Biak	10.65	292	P	Pn	18 42 55.5	-1.1
FAKI	Fak Fak	13.87	279	Pn	Pn	18 43 35.8	-2.6
FAKI	Fak Fak	13.87	279	P	Pn	18 43 36.3	-2.1
	793nm59nm,1.1s						
HNR	Honiara	14.47	107	P	Pn	18 43 43.0	-2.8
	172nm,0.9s,baz=256,slow=5.5,SNR=8.5						
HNR	Honiara	14.47	107		Pn	18 43 43.2	-2.7
CTA	Charters Tower	14.69	179	P	P	18 43 50.1	-0.8
	9.5nm,0.9s,baz=0.3,slow=11,SNR=12						
CTA				S	Sn	18 46 31.3	-0.5
	2.2nm,0.5s,baz=282,slow=19,SNR=1.3						
CTA				LR	LR	18 49 37.5	
	comp=Z,251nm,18.9s,baz=1.5,slow=37						
CTAO	Charters Tower	14.69	179	P	P	18 43 50.0	-0.8
SIJI	Sorong	15.31	286	P	Pn	18 43 55.2	-1.1
	48nm,0.8s,baz=94,slow=8.7,SNR=25						
SIJI				LR	LR	18 50 15.7	
	comp=Z,182nm,20.1s,baz=58,slow=38						
SWI	Sorong	15.32	286	P	Pn	18 43 55.7	-0.8
	1µm124nm,0.7s						
MTN	Manton Dam	16.43	242	P	P	18 44 10.5	+0.4
WB0	Warramunga Arr	18.25	217	P	P	18 44 30.8	+0.7
WR0	Warramunga Arr	18.31	216	P	Pn	18 44 31.9	-0.7
WR0				IAmb	IAmb	18 44 43.6	
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	18.41	217	P	Pn	18 44 33.1	-0.5
WRAB				IAmb	IAmb	18 44 36.0	
	comp=Z,20nm,0.8s						
WB2	Warramunga Arr	18.41	217	P	Pn	18 44 33.4	-0.3
WB2				IAmb	IAmb	18 44 35.8	
	comp=Z,19nm,0.6s						
WRA	Warramunga Arr	18.42	217	P	Pn	18 44 33.3	-0.5
	comp=Z,5.5nm,0.3s,baz=40,slow=11,SNR=76						
WRA				S	S	18 47 55.9	+1.3
	comp=Z,2.1nm,0.7s,baz=42,slow=23,SNR=6.6						
WRA				LR	LR	18 52 32.4	
	comp=Z,281nm,19.4s,baz=144,slow=39						
WRA	Warramunga Arr	18.42	217	P	Pn	18 44 33.1	-0.7
GUMO	Guam	18.81	357	P	P	18 44 35.8	-0.4
	comp=Z,147nm,1.0s,baz=197,slow=12,SNR=5.6						
GUMO	Guam	18.81	357	P	P	18 44 35.7	-0.4
LBMI	Labuha	19.00	284	P	Pn	18 44 40.2	-0.5
	comp=Z,826nmcomp=Z,36nm,1.1s						
TNTI	Ternate	19.52	287	P	P	18 44 42.8	-1.2
TNTI				IAmb	IAmb	18 44 57.2	
	comp=Z,27nm,1.1s						
TNTI	Ternate	19.52	287	P	Pn	18 44 46.5	-0.3
	comp=Z,904nmcomp=Z,29nm,1.4s						
KNRA	Kununurra	19.77	237	P	P	18 44 47.3	+0.7
KNRA				IAmb	IAmb	18 44 53.9	
	comp=Z,23nm,0.6s						
SANI	Sanana	20.18	278	P	P	18 44 51.3	+0.2
	comp=Z,1µmcomp=Z,47nm,1.7s						
EIDS	Eidsvold	20.54	167	P	Pn	18 44 57.1	-1.7
AS31	Alice Springs	21.63	211	P	P	18 45 07.5	+1.0
ASAR	Alice Springs	21.63	211	P	P	18 45 08.3	+1.8
	comp=Z,5.8nm,0.5s,baz=40,slow=10,SNR=103						
ASAR				pP	pP	18 45 36.1	+2.5
	comp=Z,24nm,0.7s,baz=45,slow=12,SNR=7.8						
ASAR				S	S	18 48 57.4	+0.8
	comp=Z,3.9nm,1.0s,baz=26,slow=20,SNR=5.9						
ASAR				LR	LR	18 54 11.3	
	comp=Z,337nm,20.0s,baz=353,slow=38						
	comp=Z,5.8nm,0.5s						
ASAR	Alice Springs	21.63	211	P	P	18 45 07.3	+0.8
SOEI	Soe	21.94	257	P	P	18 45 10.3	+0.4
SOEI	Soe	21.94	257	P	P	18 45 10.8	+0.9
	comp=Z,1µmcomp=Z,56nm,1.1s						
BATI	Baumata	22.61	256	P	P	18 45 18.1	+1.8
	comp=Z,23nm,0.5s,baz=75,slow=20,SNR=13						
	comp=Z,23nm,0.5s						
BATI	Baumata	22.61	256	P	P	18 45 17.6	+1.3
	comp=Z,35nm,1.0s						
KMSI	Cibinong	22.71	284	P	P	18 45 16.6	-0.6
	comp=Z,749nmcomp=Z,61nm,1.0s						
SANVU	Saraoutou	23.18	117	P	P	18 45 21.3	-0.2
LUWI	Luwuk	23.52	280	P	P	18 45 24.2	-0.5
LUWI	Luwuk	23.52	280	P	P	18 45 25.5	+0.8
	comp=Z,987nmcomp=Z,52nm,1.2s						
MMRI	Maumere	23.77	261	P	P	18 45 26.5	-0.5
MMRI	Maumere	23.77	261	P	P	18 45 26.4	-0.5
	comp=Z,30nm,0.5s						
EDFI	Ende, Flores	24.32	261	P	P	18 45 31.5	-0.6
	comp=Z,9.7nm,0.9s						
ARMA	Armidale	25.54	169	P	P	18 45 42.9	0.0
ARMA				IAmb	IAmb	18 45 58.4	
	comp=Z,36nm,1.4s						
LIFNC	LIFOU	25.76	129	P	P	18 45 45.2	+0.3
DZM	Mont Dzumac	25.90	132	P	P	18 45 46.6	+0.4
	comp=Z,11nm,0.7s,baz=7.2,slow=10,SNR=6.6						
	comp=Z,11nm,0.7s						
DZM	Mont Dzumac	25.90	132	P	P	18 45 46.2	-0.1
DZM				IAmb	IAmb	18 45 54.7	
	comp=Z,24nm,1.0s						
TOLI2	Tolitoli	25.94	284	P	P	18 45 45.8	-0.8
TOLI2				IAmb	IAmb	18 46 11.6	
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	26.74	188	P	P	18 45 55.0	+1.4
	comp=Z,25nm,0.8s,baz=350,slow=9.4,SNR=33						
STKA				LR	LR	18 56 39.7	
	comp=Z,171nm,21.5s,baz=13,slow=36						
	comp=Z,25nm,0.8s						
STKA	Stephens Creek	26.74	188	P	P	18 45 57.2	+3.6
H11S3	WAKE ISLAND Hy	31.27	40	T	T	19 19 59.7	
	baz=223,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	31.27	40	T	T	19 20 04.6	
	baz=223,slow=76,SNR=8.4						
H11S1	WAKE ISLAND Hy	31.28	40	T	T	19 20 05.9	
	baz=223,slow=76,SNR=6.3						
H11N1	WAKE ISLAND Hy	32.29	39	T	T	19 21 23.3	
	baz=222						
H11N3	WAKE ISLAND Hy	32.31	39	T	T	19 21 22.4	
	baz=222,slow=74						
H11N2	WAKE ISLAND Hy	32.31	39	T	T	19 21 24.0	
	baz=222,slow=74						
MSVF	Nonsavu	33.72	114	P	P	18 46 56.4	+1.0
	comp=Z,14nm,0.8s,baz=282,slow=11,SNR=8.4						
MSVF				LR	LR	18 59 18.4	
	comp=Z,169nm,18.5s,baz=272,slow=34						
	comp=Z,14nm,0.8s						
MSVF	Nonsavu	33.72	114	P	P	18 46 56.7	+1.3
JOW	Kunigami	36.25	333	LR	LR	19 02 03.8	
	comp=Z,70nm,19.2s,baz=100,slow=36						
JGF	Kuroka	41.49	349	P	P	18 47 59.3	-1.0
JGF				IAmb	IAmb	18 48 00.4	
	comp=Z,11nm,0.7s						
JHS	Saijyo	41.88	344	P	P	18 48 03.1	-0.4
JHS				IAmb	IAmb	18 48 03.9	
	comp=Z,11nm,0.9s						
MJAR	Matsushiro Arr	42.26	351	P	P	18 48 04.8	-1.8
	comp=Z,8.0nm,1.1s,baz=165,slow=8.0,SNR=12						
	comp=Z,8.0nm,1.1s						
MJAR	Matsushiro Arr	42.26	351	P	P	18 48 05.0	-1.5
MAJO	Matsushiro	42.26	351	P	P	18 48 05.5	-1.1
MAJO				IAmb	IAmb	18 48 06.7	
	comp=Z,23nm,1.1s						
MJB9	Matsu-Tunnel	42.26	351	P	P	18 48 05.5	-1.1
MJB9				IAmb	IAmb	18 48 06.7	
	comp=Z,24nm,1.2s						
URZ	Urewera	43.32	144	LR	LR	19 05 53.4	
	comp=Z,100nm,18.4s,baz=25,slow=35						
URZ	Urewera	43.32	144	P	P	18 48 17.5	+2.4
MTHZ	Maungataniwha	43.56	144	P	P	18 48 19.7	+2.6
BKZ	Black Stump Fm	43.57	145	P	P	18 48 19.7	+2.6
MWZ	Matawai	43.62	143	P	P	18 48 20.6	+3.0
JSD	Sado	43.72	351	P	P	18 48 18.7	+0.5
JSD				IAmb	IAmb	18 48 18.9	
	comp=Z,13nm,0.8s						
WMGZ	Waiomatatini S	43.82	142	P	P	18 48 21.9	+2.8
KRHZ	Kereru	43.83	146	P	P	18 48 21.9	+2.8
TSZ	Takapari Road	43.88	146	P	P	18 48 22.2	+2.6
PNHZ	Pukenui	43.91	146	P	P	18 48 22.5	+2.6
NAWB	Namwon	44.11	338	P	P	18 48 20.6	-0.8
NAWB				IAmb	IAmb	18 48 22.4	
	comp=Z,19nm,1.2s						
CNGZ	Carnagh Statio	44.12	143	P	P	18 48 24.2	+2.7
KAHZ	Kahuranaki	44.21	145	P	P	18 48 24.7	+2.4
BFZ	Birch Farm	44.47	147	P	P	18 48 26.2	+1.9
TJN	Taejon	44.98	339	P	P	18 48 27.3	-0.9
KSCHJ	Chungju	45.20	340	P	P	18 48 29.1	-0.9
NJ2	Nanjing	45.24	327	*e*P	P	18 48 31.3	+0.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	Korea Array	45.74	340	P	P	18 48 34.4	+0.1
	comp=Z,10nm,0.8s,baz=158,slow=9.2,SNR=62						
KSRS				LR	LR	19 05 26.0	
	comp=Z,69nm,20.3s,baz=135,slow=33						
	comp=Z,10nm,0.8s						
KSAR	Wonju Array Be	45.75	340	P	P	18 48 33.1	-1.2
KS19	Wonju Array Si	45.81	340	P	P	18 48 33.6	-1.2
JTM	Tenmabayashi	46.09	355	P	P	18 48 35.9	-1.0
INCN	Inchon	46.23	339	P	P	18 48 36.9	-1.2
INCN				IAmb	IAmb	18 48 39.5	
	comp=Z,20nm,0.9s						
SEHB	SEOHWA	46.37	341	P	P	18 48 38.5	-0.7
SEHB				IAmb	IAmb	18 48 40.7	
	comp=Z,25nm,1.2s						
ASAJ	Asahikawa	49.29	357	LR	LR	19 08 00.5	
	comp=Z,12nm,21.7s,baz=174,slow=34						
USA0B	Ussuriysk Arra	50.86	347	P	P	18 49 12.9	-0.5
USA0B				IAmb	IAmb	18 49 15.7	
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	50.86	347	P	P	18 49 13.2	-0.2
	comp=Z,7.5nm,0.6s,baz=176,slow=6.5,SNR=17						
USRK				pP	pP	18 49 49.0	+1.6
	comp=Z,2.6nm,0.7s,baz=145,slow=8.4,SNR=2.2						
	comp=Z,7.5nm,0.6s						
CMAR	Chiang Mai Arr	52.01	298	P	P	18 49 23.1	+0.7
	comp=Z,1.6nm,0.8s,baz=120,slow=5.6,SNR=10						
CMAR				pP	pP	18 49 58.1	+1.1
	comp=Z,3.2nm,0.9s,baz=124,slow=6.1,SNR=3.5						
	comp=Z,1.6nm,0.8s						
CMAR	Chiang Mai Arr	52.01	298	P	P	18 49 20.5	-1.9
XAN	Xi'an	52.49	321	P	P	18 49 26.0	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJI	Beijing	52.80	331	P	P	18 49 27.5	-0.3
BJI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
PZH	PanZhiHua	53.22	309	P	P	18 49 33.0	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,80nm,6.9s						
BNX	BinXian	53.45	344	⇑P	P	18 49 32.3	-0.2
BNX				pmax	pmax		
	comp=Z,30nm,1.0s						
BNX				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC	Hu-ho-hao-te	55.70	329	*e*P	P	18 49 53.3	+4.3
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
KLR	Kul'dur	55.71	349	LR	LR	19 12 52.3	
	comp=Z,37nm,20.4s,baz=162,slow=35						
XLT	XiLinHaoTe	55.90	334	*e*P	P	18 50 00.0	+10
XLT				sP	PcP	18 50 47.5	+0.3
XLT				pmax	pmax		
	comp=Z,15nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,5.9s						
LZH	Lanzhou	57.01	320	*e*P	P	18 49 59.5	+1.1
LZH				pP	pP	18 50 32.8	-0.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
PEA0B	Petropavlovsk-	59.04	8	P	P	18 50 12.7	+0.7
PETK	Petropavlovsk-	59.04	8	P	P	18 50 12.3	+0.3
	comp=Z,7.1nm,0.9s,baz=164,slow=5.9,SNR=11						
PETK				LR	LR	19 12 23.2	
	comp=Z,22nm,21.8s,baz=188,slow=32						
	comp=Z,7.1nm,0.9s						
PETK	Petropavlovsk-	59.04	8	P	P	18 50 12.0	0.0
GTA	Gaotai	61.55	321	⇑P	P	18 50 30.8	+1.3
GTA				pP	PcP	18 51 08.5	-1.3
GTA				sP	sP	18 51 21.8	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,24nm,6.5s						
GTA				LR	LR		
	comp=Z,71nm,15.3s						
GTA				LR	LR		
	comp=Z,64nm,16.4s						
GTA				LR	LR		
	comp=Z,74nm,17.8s						
ULN	Ulaanbaatar	63.01	332	P	P	18 50 39.2	+0.1
ULN				IAmb	IAmb	18 50 40.9	
	comp=Z,5.3nm,0.8s						
SONM	Songino Array	63.30	331	P	P	18 50 40.9	-0.1
	comp=Z,2.0nm,0.7s,baz=153,slow=6.1,SNR=19						
SONM				LR	LR	19 20 08.8	
	comp=Z,37nm,18.1s,baz=108,slow=38						
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	63.30	331	P	P	18 50 40.9	-0.1
MA2	Magadan	64.80	3	LR	LR	19 16 03.9	
	comp=Z,17nm,21.8s,baz=268,slow=33						
TAPN	Taplejung	64.90	303	*e*P	P	18 50 52.2	+0.2
	comp=Z,4.7nm,0.4s						
RAMN	Ramite	65.69	303	*e*P	P	18 50 57.3	+0.2
	comp=Z,7.0nm,0.5s						
JIRN	Jiri	66.28	303	*e*P	P	18 51 01.0	+0.1
	comp=Z,7.4nm,0.4s						
GUN	Gumba	66.62	303	*e*P	P	18 51 03.2	+0.1
	comp=Z,11nm,0.3s						
PKI	Pulchoki	66.90	303	*e*P	P	18 51 04.5	-0.3
DMN	Daman	67.17	303	*e*P	P	18 51 06.6	+0.2
	comp=Z,9.4nm,0.4s						
GKN	Gorkha	67.69	303	*e*P	P	18 51 09.4	-0.2
	comp=Z,12nm,0.7s						
SEY	Seymchan	68.23	3	LR	LR	19 15 45.9	
	comp=Z,18nm,21.8s,baz=283,slow=31						
YAK	Yakutsk	68.31	352	LR	LR	19 18 17.0	
	comp=Z,18nm,21.9s,baz=88,slow=33						
YAK	Yakutsk	68.31	352	P	P	18 51 12.0	-0.5
YAK				IAmb	IAmb	18 51 13.2	
	comp=Z,7.7nm,0.6s						
PYUN	Piuthan	69.10	303	*e*P	P	18 51 17.9	-0.5
	comp=Z,8.3nm,0.4s						
WMQ	Urumqi	71.59	320	*e*P	P	18 51 33.8	+0.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	Vanda	72.66	176	P	P	18 51 40.4	+1.6
	comp=Z,2.9nm,0.6s,baz=334,slow=6.1,SNR=12						
	comp=Z,2.9nm,0.6s						
VNDA	Vanda	72.66	176	P	P	18 51 41.0	+2.2
BILL	Bilibino	74.57	8	P	P	18 51 49.2	-0.7
BILL				IAmb	IAmb	18 51 51.6	
	comp=Z,13nm,1.5s						
SDPT	Sand Point	74.80	28	P	P	18 51 50.8	-0.7
	baz=236						
CHNA	Chernabura Isl	74.94	29	P	P	18 51 52.5	+0.2
	baz=237						
CHGN	Chignik	76.29	28	P	P	18 51 59.9	-0.1
CHGN				IAmb	IAmb	18 52 01.1	
	comp=Z,9.6nm,0.8s						
CHGN	Chignik	76.29	28	P	P	18 52 00.6	+0.7
	baz=238						
MK31	Makanchi Array	76.31	321	P	P	18 51 59.9	-0.5
MKAR	Makanchi Array	76.31	321	P	P	18 51 59.8	-0.6
	comp=Z,1.3nm,0.5s,baz=100,slow=7.4,SNR=21						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	76.31	321	P	P	18 51 59.4	-1.0
MAKZ	Makanchi	76.51	321	P	P	18 52 00.8	-0.7
CHIR	Chirikof Islan	77.39	30	P	P	18 52 06.0	-0.2
	baz=240						
ZAA0	Zalesovo Array	77.88	328	P	P	18 52 08.4	-0.5
ZALV	Zalesovo Beam	77.88	328	P	P	18 52 07.4	-1.6
	comp=Z,1.9nm,0.6s,baz=104,slow=5.4,SNR=7.1						
ZALV				pP	pP	18 52 45.5	-0.6
	comp=Z,1.4nm,0.6s,baz=115,slow=5.7,SNR=3.6						
ZALV				LR	LR	19 26 58.9	
	comp=Z,26nm,20.2s,baz=207,slow=36						
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	77.88	328	P	P	18 52 07.2	-1.7
TNA	Tin City	78.26	18	P	P	18 52 10.6	-0.1
	baz=227						
ANM	Nome	78.40	19	P	P	18 52 11.2	-0.4
	baz=230						
SII	Sitkinak Islan	78.45	29	P	P	18 52 12.5	+0.4
	baz=242						
OHAK	Old Harbor	79.20	29	P	P	18 52 16.2	+0.1
	baz=242						
P18K	Big Mountain,	79.35	26	P	P	18 52 16.5	-0.5
	baz=240						
N18K	Kilae Creek	79.72	25	P	P	18 52 18.3	-0.6
	baz=239						
KDAK	Kodiak Island	79.79	29	P	P	18 52 19.5	+0.2
	baz=243						
KURK	Kurchatov	80.04	323	P	P	18 52 20.3	-0.5
SVW2	Sparrevohn	80.06	25	P	P	18 52 21.3	+0.6
N19K	Bonanza Creek	80.38	25	P	P	18 52 22.4	-0.1
	baz=241						
TTA	Tatalina	80.83	23	P	P	18 52 25.2	+0.4
	baz=239						
O20K	Slope Mountain	80.84	26	P	P	18 52 24.3	-0.7
	baz=242						
L19K	White Mountain	80.91	24	P	P	18 52 25.8	+0.6
L19K				IAmb	IAmb	18 52 27.3	
	comp=Z,8.7nm,0.9s						
L19K	White Mountain	80.91	24	P	P	18 52 25.8	+0.6
	baz=240						
M19K	Big River Lodg	80.96	24	P	P	18 52 25.6	+0.1
	baz=240						
CNPM	China Poot	81.21	27	P	P	18 52 27.1	+0.3
CNPM				IAmb	IAmb	18 52 28.2	
	comp=Z,13nm,0.7s						
L20K	Farewell, AK	81.45	24	P	P	18 52 28.5	+0.4
	baz=241						
M20K	Styx River	81.47	25	P	P	18 52 28.4	+0.1
	baz=242						
BRSE	Bradley Lake S	81.53	27	P	P	18 52 28.1	-0.4
	baz=244						
K20K	Telida	81.80	23	P	P	18 52 30.5	+0.6
K20K				IAmb	IAmb	18 52 32.0	
	comp=Z,6.4nm,0.8s						
K20K	Telida	81.80	23	P	P	18 52 30.0	+0.1
	baz=241,SNR=5.9						
J20K	Nowinta River	82.18	22	P	P	18 52 31.9	+0.1
J20K				IAmb	IAmb	18 52 34.0	
	comp=Z,9.8nm,0.9s						
J20K	Nowinta River	82.18	22	P	P	18 52 32.3	+0.5
	baz=240,SNR=9.8						
SEW	Seward	82.27	27	P	P	18 52 31.7	-0.7
	baz=245						
O22K	Cooper Landing	82.31	27	P	P	18 52 32.5	0.0
	baz=245						
PPLA	Purkeypile	82.33	24	P	P	18 52 33.1	+0.3
	baz=242						
MAW	Mawson	82.48	203	P	P	18 52 34.2	+0.9
	comp=Z,4.5nm,0.7s,baz=82,slow=9.9,SNR=8.6						
MAW				LR	LR	19 26 17.9	
	comp=Z,51nm,20.0s,baz=265,slow=33						
	comp=Z,4.5nm,0.7s						
MAW	Mawson	82.48	203	IAmb	IAmb	18 52 35.8	
	comp=Z,1.4nm,0.9s						
RC01	Rabbit Creek A	82.56	26	P	P	18 52 33.4	-0.5
RC01				IAmb	IAmb	18 52 34.6	
	comp=Z,10nm,0.6s						
RC01	Rabbit Creek A	82.56	26	P	P	18 52 33.6	-0.3
	baz=245						
CAST	Castle Rocks	82.62	24	P	P	18 52 33.7	-0.5
CAST				IAmb	IAmb	18 52 35.0	
	comp=Z,7.5nm,1.0s						
CAST	Castle Rocks	82.62	24	P	P	18 52 33.6	-0.5
	baz=242,SNR=7.4						
CHUM	Lake Minchumin	82.75	23	P	P	18 52 35.1	+0.4
	baz=242,SNR=14						
PMR	Palmer	83.04	26	P	P	18 52 36.3	0.0
	baz=245						
KKAR	Karatay Array	83.07	314	P	P	18 52 35.8	-1.1
KTH	Kantishna Hill	83.15	24	P	P	18 52 35.7	-1.3
KTH				IAmb	IAmb	18 52 37.3	
	comp=Z,8.4nm,1.0s						
IMAR	Indian Mountai	83.22	21	P	P	18 52 36.9	-0.3
KNK	Knik Glacier	83.26	26	P	P	18 52 37.3	-0.2
	baz=246						
TRF	Thorofare Moun	83.35	24	P	P	18 52 37.3	-0.8
TRF	Thorofare Moun	83.35	24	P	P	18 52 37.5	-0.6
	baz=244						
BPAW	Bear Paw Mtn.	83.36	23	P	P	18 52 37.4	-0.6
BPAW	Bear Paw Mtn.	83.36	23	P	P	18 52 37.2	-0.8
	baz=243,SNR=5.7						
H21K	Melozitna Rive	83.40	21	P	P	18 52 38.2	+0.1
H21K	Melozitna Rive	83.40	21	P	P	18 52 38.1	0.0
	baz=242,SNR=5.3						
Q23K	Middleton Isla	83.45	28	P	P	18 52 38.5	+0.1
	baz=248						
SML	Sawmill	83.48	26	P	P	18 52 38.4	-0.3
SML				IAmb	IAmb	18 52 39.7	
	comp=Z,14nm,1.0s						
SML	Sawmill	83.48	26	P	P	18 52 38.2	-0.5
	baz=246,SNR=9.1						
I21K	Tanana	83.48	22	P	P	18 52 37.5	-1.0
I21K				IAmb	IAmb	18 52 40.4	
	comp=Z,21nm,1.4s						
I21K	Tanana	83.48	22	P	P	18 52 37.9	-0.5
	baz=242						
GLI	Glacier Island	83.66	27	P	P	18 52 39.2	-0.3
	baz=247						
M23K	Glacier View	83.74	26	P	P	18 52 39.4	-0.6
	baz=247						
WAT1	Susitna Watana	83.81	25	P	P	18 52 39.5	-0.8
	baz=246						
MLY	Manley	83.88	22	P	P	18 52 40.4	-0.2
MLY				IAmb	IAmb	18 52 41.9	
	comp=Z,9.7nm,0.7s						
MLY	Manley	83.88	22	P	P	18 52 40.5	-0.1
	baz=244,SNR=20						
RND	Reindeer	83.92	24	P	P	18 52 39.8	-1.1
SCM	Sheep Creek Mo	83.93	26	P	P	18 52 40.7	-0.3
SCM				IAmb	IAmb	18 52 42.2	
	comp=Z,14nm,1.1s						
SCM	Sheep Creek Mo	83.93	26	P	P	18 52 40.7	-0.3
	baz=247,SNR=6.3						
MCK	McKinley	84.02	24	P	P	18 52 40.7	-0.6
MCK				IAmb	IAmb	18 52 41.7	
	comp=Z,13nm,0.9s						
MCK	McKinley	84.02	24	P	P	18 52 40.4	-1.0
	baz=245,SNR=5.8						
WAT6	Susitna Watana	84.05	25	P	P	18 52 40.9	-0.8
	baz=246,SNR=6.2						
NRIK	Noril'sk	84.31	342	P	P	18 52 42.2	-0.4
	comp=Z,2.1nm,0.6s,baz=126,slow=6.7,SNR=6.9						
NRIK				pP	pP	18 53 20.2	+0.1
	comp=Z,2.5nm,0.6s,baz=148,slow=3.3,SNR=3.2						
	comp=Z,2.1nm,0.6s						
NRIK	Noril'sk	84.31	342	P	P	18 52 42.1	-0.4
NRIK				IAmb	IAmb	18 52 43.3	
	comp=Z,14nm,1.4s						
NEA2	Nenana	84.33	23	P	P	18 52 42.0	-0.9
NEA2				IAmb	IAmb	18 52 43.2	
	comp=Z,6.5nm,0.7s						
NEA2	Nenana	84.33	23	P	P	18 52 41.9	-0.9
	baz=245,SNR=6.0						
DHY	Denali Highway	84.40	25	P	P	18 52 42.9	-0.5
DHY				IAmb	IAmb	18 52 44.5	
	comp=Z,8.7nm,0.8s						
DHY	Denali Highway	84.40	25	P	P	18 52 43.2	-0.2
	baz=247,SNR=11						
KLU	Klutina	84.42	27	P	P	18 52 43.4	0.0
KLU				IAmb	IAmb	18 52 44.9	

	comp=Z,8.6nm,1.0s						
KLU	**Klutina**	84.42	27	P	**P**	**18 52 43.5**	**0.0**
	baz=248,SNR=7.1						
I23K	**Minto, Yukon-K**	84.46	23	P	**P**	**18 52 43.2**	**-0.2**
I23K	**Minto, Yukon-K**	84.46	23	P	**P**	**18 52 43.0**	**-0.4**
	baz=245,SNR=6.4						
M24K	**Tolsona, Glenn**	84.53	26	P	**P**	**18 52 44.2**	**+0.2**
	baz=248						
WRH	**Wood River Hil**	84.67	23	P	**P**	**18 52 43.0**	**-1.5**
WRH				IAmb	IAmb	18 52 44.7	
	comp=Z,11nm,0.9s						
H23K	**Yukon River**	84.68	22	P	**P**	**18 52 45.0**	**+0.4**
H23K				IAmb	IAmb	18 52 46.1	
	comp=Z,7.3nm,0.8s						
H23K	**Yukon River**	84.68	22	P	**P**	**18 52 44.1**	**-0.5**
	baz=245,SNR=10						
HMT	**Hamilton**	84.76	28	P	**P**	**18 52 45.4**	**+0.3**
HMT				IAmb	IAmb	18 52 46.6	
	comp=Z,11nm,0.8s						
BMRM	**Bremner River**	84.82	27	P	**P**	**18 52 44.8**	**-0.7**
BMRM				IAmb	IAmb	18 52 46.6	
	comp=Z,14nm,1.2s						
BMRM	**Bremner River**	84.82	27	P	**P**	**18 52 45.1**	**-0.3**
	baz=250						
CCB	**Clear Creek Bu**	84.85	23	P	**P**	**18 52 43.9**	**-1.5**
N25K	**Chitina, Valde**	85.05	27	P	**P**	**18 52 45.9**	**-0.7**
N25K	**Chitina, Valde**	85.05	27	P	**P**	**18 52 46.7**	**+0.1**
	baz=249,SNR=5.3						
COLD	**Coldfoot**	85.06	21	P	**P**	**18 52 46.5**	**+0.1**
	baz=244						
HDA	**Harding Lake**	85.10	24	P	**P**	**18 52 45.4**	**-1.3**
HDA				IAmb	IAmb	18 52 46.7	
	comp=Z,6.0nm,0.8s						
HDA	**Harding Lake**	85.10	24	P	**P**	**18 52 46.2**	**-0.5**
	baz=247						
PAX	**Paxson**	85.16	25	P	**P**	**18 52 46.6**	**-0.6**
PAX	**Paxson**	85.16	25	P	**P**	**18 52 47.0**	**-0.1**
	baz=249						
POKR	**Poker Plat Res**	85.19	23	P	**P**	**18 52 46.6**	**-0.5**
	baz=247						
IL31		85.26	23	P	**P**	**18 52 45.8**	**-1.6**
ILAR	**Eielson Array**	85.26	23	P	**P**	**18 52 45.9**	**-1.6**
	comp=Z,11nm,0.7s,baz=251,slow=5.0,SNR=107						
ILAR				pP	**pP**	**18 53 23.9**	**-0.9**
	comp=Z,3.4nm,0.8s,baz=256,slow=4.9,SNR=3.8						
	comp=Z,11nm,0.7s						
H24K	**Noodor Dome**	85.31	22	P	**P**	**18 52 47.6**	**-0.2**
H24K	**Noodor Dome**	85.31	22	P	**P**	**18 52 48.1**	**+0.3**
	baz=246						
K24K	**Donnelly Dome**	85.34	24	P	**P**	**18 52 48.2**	**+0.2**
	baz=248						
VRDI	**Verde Repeater**	85.43	27	P	**P**	**18 52 48.2**	**-0.4**
VRDI				IAmb	IAmb	18 52 49.9	
	comp=Z,5.9nm,0.7s						
WAX	**Waxell Ridge**	85.45	28	P	**P**	**18 52 48.9**	**+0.3**
WAX				IAmb	IAmb	18 52 50.2	
	comp=Z,9.2nm,1.0s						
TGL	**Tana Glacier**	85.56	28	P	**P**	**18 52 49.6**	**+0.4**
TGL				IAmb	IAmb	18 52 50.7	
	comp=Z,10nm,1.0s						
MCARA	**McCarthy VSAT**	85.68	27	P	**P**	**18 52 50.1**	**+0.4**
	baz=251						
MESA	**MESA**	85.79	28	P	**P**	**18 52 50.5**	**0.0**
	baz=252						
J25K	**Salcha River,**	85.81	24	P	**P**	**18 52 50.0**	**-0.3**
	baz=248						
TOLK	**Toolik Lake Re**	85.89	19	P	**P**	**18 52 51.0**	**+0.5**
TOLK	**Toolik Lake Re**	85.89	19	P	**P**	**18 52 51.1**	**+0.5**
	baz=244						
M26K	**Nabesna, AK**	86.03	26	P	**P**	**18 52 51.7**	**+0.3**
M26K	**Nabesna, AK**	86.03	26	P	**P**	**18 52 51.5**	**+0.1**
	baz=251						
GRNC	**Granite Creek**	86.06	28	P	**P**	**18 52 51.9**	**+0.1**
GRNC				IAmb	IAmb	18 52 53.3	
	comp=Z,8.4nm,1.1s						
L26K	**Log Cabin Wild**	86.09	26	P	**P**	**18 52 51.8**	**+0.2**
	baz=250						
SCRK	**Sand Creek**	86.14	25	P	**P**	**18 52 51.7**	**-0.3**
SCRK	**Sand Creek**	86.14	25	P	**P**	**18 52 51.7**	**-0.3**
	baz=250,SNR=7.1						
BARN	**Barnard Glacie**	86.20	28	P	**P**	**18 52 52.7**	**+0.3**
TABL	**Table Mountain**	86.26	28	P	**P**	**18 52 53.0**	**+0.2**
TABL				IAmb	IAmb	18 52 54.2	
	comp=Z,7.7nm,0.8s						
CTG	**Chitna Glacier**	86.32	28	P	**P**	**18 52 53.1**	**+0.1**
	baz=252,SNR=13						
CTGM	**Chitina Glacie**	86.33	28	P	**P**	**18 52 52.9**	**-0.1**
J26L	**Joseph Creek**	86.50	24	P	**P**	**18 52 53.6**	**-0.1**
	baz=250,SNR=12						
M27K	**Edge Creek, AK**	86.51	26	P	**P**	**18 52 53.5**	**-0.3**
M27K	**Edge Creek, AK**	86.51	26	P	**P**	**18 52 54.2**	**+0.3**
	baz=252,SNR=20						
PCA	**Pinnacle**	86.58	29	P	**P**	**18 52 54.5**	**+0.3**
PCA				IAmb	IAmb	18 52 55.6	
	comp=Z,12nm,0.9s						
PINM	**Pinnacle**	86.58	29	P	**P**	**18 52 53.9**	**-0.3**
	baz=253						
L27K	**Beaver Creek,**	86.75	26	P	**P**	**18 52 54.9**	**-0.1**
L27K				IAmb	IAmb	18 52 56.6	
	comp=Z,6.3nm,0.9s						
L27K	**Beaver Creek,**	86.75	26	P	**P**	**18 52 55.2**	**+0.3**
	baz=252,SNR=12						
BCAR	**Beaver Creek A**	86.77	26	P	**P**	**18 52 54.5**	**-0.5**
PNL	**Peninsula**	86.87	29	P	**P**	**18 52 55.5**	**0.0**
	baz=254						
K27K	**Chicken**	86.95	25	P	**P**	**18 52 55.9**	**+0.1**
	baz=252						
YUK3	**Moose Creek**	86.97	27	P	**P**	**18 52 56.3**	**+0.1**
	baz=253,SNR=9.3						
BVCY	**Beaver Creek**	86.98	27	P	**P**	**18 52 56.2**	**+0.2**
	baz=253						
BMAR	**Burnt Mountain**	87.13	21	P	**P**	**18 52 57.2**	**+0.6**
EGAK	**Eagle**	87.57	24	P	**P**	**18 52 58.4**	**-0.4**
EGAK				IAmb	IAmb	18 53 00.1	
	comp=Z,8.6nm,1.0s						
EGAK	**Eagle**	87.57	24	P	**P**	**18 52 58.7**	**0.0**
	baz=252						
YUK4	**Talbot Arm**	87.68	28	P	**P**	**18 53 00.3**	**+0.7**
	baz=255,SNR=6.2						
YUK6	**Outpost Mounta**	87.71	28	P	**P**	**18 52 59.9**	**+0.2**
	baz=255						
HYT	**Haines Junctio**	88.09	28	P	**P**	**18 53 01.9**	**+0.5**
HYT				IAmb	IAmb	18 53 03.3	
	comp=Z,5.8nm,0.7s						
HYT	**Haines Junctio**	88.09	28	P	**P**	**18 53 01.9**	**+0.5**
	baz=256,SNR=7.5						
DAWY	**Dawson**	88.09	25	P	**P**	**18 53 01.7**	**+0.4**
DAWY	**Dawson**	88.09	25	P	**P**	**18 53 01.6**	**+0.4**
	baz=254						
PLBC	**Pleasant Camp**	88.31	30	P	**P**	**18 53 02.9**	**+0.5**
	baz=257						
SIT	**Sitka**	88.32	32	P	**P**	**18 53 03.1**	**+0.8**
	baz=258						
N30M	**Aishikik Lake**	88.44	28	P	**P**	**18 53 03.5**	**+0.5**
	baz=256						
O30N	**Mendenhall**	88.75	29	P	**P**	**18 53 04.7**	**+0.2**
	baz=257						
M30M	**Minto, Yukon**	88.84	27	P	**P**	**18 53 04.5**	**-0.3**
M30M	**Minto, Yukon**	88.84	27	P	**P**	**18 53 04.2**	**-0.6**
	baz=256						
I29M	**Ogilvie Camp,**	88.89	24	P	**P**	**18 53 04.6**	**-0.4**
I29M				IAmb	IAmb	18 53 06.2	
	comp=Z,5.2nm,1.0s						
I29M	**Ogilvie Camp,**	88.89	24	P	**P**	**18 53 05.3**	**+0.4**
	baz=255						
N31M	**Braeburn, Yuko**	89.06	28	P	**P**	**18 53 06.2**	**+0.4**
	baz=257						
CRAG	**Craig**	89.21	34	P	**P**	**18 53 07.0**	**+0.4**
	baz=260						
WHY	**Whitehorse**	89.30	29	P	**P**	**18 53 07.1**	**-0.1**
	baz=258						
EPYK	**Eagle Plains**	89.78	23	P	**P**	**18 53 09.2**	**+0.1**
EPYK	**Eagle Plains**	89.78	23	P	**P**	**18 53 09.2**	**+0.1**
	baz=256						
DLBC	**Dease Lake**	91.35	32	LR	LR	19 29 11.7	
	comp=Z,31nm,18.7s,baz=266,slow=32						
INK	**Inuvik**	91.40	22	LR	LR	19 29 56.7	
	comp=Z,47nm,19.5s,baz=222,slow=32						
INK	**Inuvik**	91.40	22	P	**P**	**18 53 16.6**	**+0.1**
	baz=259						
BBB	**Bella Bella**	91.66	38	LR	LR	19 27 05.4	
	comp=Z,24nm,21.5s,baz=195,slow=30						
ARU	**Arti**	92.94	326	LR	LR	19 35 08.6	
	comp=Z,18nm,20.3s,baz=100,slow=35						
J01E	**Myrtle Point**	93.68	47	P	**P**	**18 53 27.1**	**-0.5**
	baz=266						
YBH	**Yreka Blue Hor**	94.49	49	LR	LR	19 27 45.8	
	comp=Z,43nm,22.0s,baz=278,slow=30						
BELA	**Belgrano 2**	96.93	180	P	**P**	**18 53 41.3**	**-0.6**
NVAR	**Mina Array Bea**	97.77	52	P	**P**	**18 53 46.7**	**0.0**
	comp=Z,0.1nm,0.3s,baz=228,slow=6.7,SNR=2.2						
	comp=Z,0.1nm,0.3s						
PFO	**Pinyon Flats O**	99.23	57	LR	LR	19 28 44.8	
	comp=Z,22nm,20.3s,baz=94,slow=29						
TROLL	**Troll, Antarti**	99.27	191	Pdiff	**Pdif**	**18 53 53.0**	**+0.4**
121A	**Cookes Peak, D**	106.54	58	P	**PKiKP**	**18 58 34.9**	**-1.1**
	baz=274						
OGNE	**Ogallala**	110.05	48	P	**PKiKP**	**18 58 42.3**	**+0.1**
	baz=281						
WHTX	**Lake Whitney,**	115.29	57	P	**PKPdf**	**18 58 52.4**	**+0.1**
	baz=280						
W39A	**Magazine**	117.63	53	P	**PKiKP**	**18 58 56.8**	**0.0**
	baz=284						
PLCA	**Paso Flores**	123.26	147	PKP	**PKiKP**	**18 59 08.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=297,slow=2.3,SNR=4.6						
PKME	**Peaks-Kenny Pk**	129.75	32	P	**PKiKP**	**18 59 21.3**	**+0.9**
	baz=312						
TORD	**Torodi Ar. Bea**	143.91	285	PKP	PKPab	18 59 43.9	-0.2
	comp=Z,2.5nm,1.1s,baz=62,slow=2.7,SNR=8.3						
DBIC	**Dimbokro**	150.94	274	PKPbc	**PKPbc**	**19 00 03.7**	**-0.4**
	comp=Z,7.6nm,1.2s,baz=130,slow=2.5,SNR=4.5						

KRSC 26 18:52:34.7±1.5**, 48°.04N**×**155°.42E, h60**^{km}±33^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	2.69	9	S	Sn	18 53 49.8	+3.0
KDTR	**Khodutka, Kamc**	4.15	23	P	Pn	18 53 39.1	+3.7
KDTR				S	Sn	18 54 26.2	+3.6
MIPR	**Malaya Ipel'ka**	4.33	11	P	Pn	18 53 41.0	+3.0
ASAK	**Asacha**	4.63	19	P	Pn	18 53 46.2	+4.0
RUS	**Russkaya**	4.83	23	P	Pn	18 53 47.6	+2.9
GRL	**Gorelyy**	4.83	20	P	Pn	18 53 48.2	+3.3
AVH	**Avacha**	5.64	21	P	Pn	18 54 00.4	+4.4

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*IDC **26** 19:24:20.9±1.5, 16°.38S×175°.76W, h355^{km}±15^{km}, mb3.3/4, mbtmp4.1/6, Error ellipse: s-maj=85.9km s-min=16.1km az=148.0*

ISC 26 19:24:21.1±1.3**, 16°.4S**±0°.5×**175°.8W**±0°.3**, h350**^{km}**, n7, σ1^{s}.31**/10**, mb3.4**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	4.57	58	P	**Pn**	**19 25 37.6**	**+1.5**
	19nm,0.5s,baz=90,slow=2.1,SNR=5.6						
AFI				S	**S**	**19 26 35.9**	**-0.8**
	9.7nm,0.3s,baz=291,slow=23,SNR=1.4						
MSVF	**Nonsavu**	6.06	256	P	**Pn**	**19 25 54.7**	**+2.1**
	9.6nm,0.7s,baz=121,slow=18,SNR=7.4						
STKA	**Stephens Creek**	41.58	240	P	**P**	**19 31 35.5**	**-0.4**
	1.0nm,0.5s,baz=96,slow=10,SNR=1.8						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	47.40	258	P	**P**	**19 32 20.1**	**-1.6**
	0.6nm,0.3s,baz=92,slow=7.4,SNR=25						
WRA				PcP	**PcP**	**19 33 46.0**	**-0.2**
	0.3nm,0.6s,baz=104,slow=3.5,SNR=2.2						
	0.6nm,0.3s						
ASAR	**Alice Springs**	47.64	253	P	**P**	**19 32 22.5**	**-1.1**
	4.3nm,0.4s,baz=90,slow=7.5,SNR=100						
ASAR				PcP	**PcP**	**19 33 46.7**	**-0.3**
	0.4nm,0.8s,baz=94,slow=5.9,SNR=1.6						
	4.3nm,0.4s						
ILAR	**Eielson Array**	83.84	12	P	**P**	**19 36 10.8**	**-0.7**
	0.4nm,0.6s,baz=218,slow=5.5,SNR=7.3						
	0.4nm,0.6s						
BRTR	**Keskin Array B**	145.40	318	PKPbc	**PKPdf**	**19 43 18.4**	**+0.3**
	0.6nm,0.5s,baz=114,slow=2.5,SNR=5.1						

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*NIED **26** 19:35:08.7, 38°.47N×142°.35E, h36^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.47; M$_{\theta\theta}$0.14; M$_{\phi\phi}$-2.60; M$_{r\theta}$-0.80; M$_{\theta\phi}$-0.08; M$_{\phi r}$0.38; Fault plane solution: M$_{0}$2.69000×10^{14} NP1: φ$_{s}$198.00000°, δ44.00000°, λ115.00000°. NP2: φ$_{s}$345.00000°, δ52.00000°, λ68.00000°.*

JMA 26 19:35:08.7±0.1**, 38°.5N**±0°.2×**142°.4E**±0°.6**, h36**^{km}±1^{km}**, MV3.6**/39**, E OFF MIYAGI PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.71	257	*i* P	Pn	19 35 22.1	-0.1
JIKH				S	Sn	19 35 31.8	-0.1
JKMT	**Kesennumamotoy**	0.76	297	*i* P	Pn	19 35 23.1	+0.2
JKMT				S	Sn	19 35 33.4	+0.3
JIO	**Ouri**	0.78	269	*i* P	Pn	19 35 23.3	+0.1
JIO				S	Sn	19 35 34.0	+0.3
OFUJ	**Ofunato**	0.81	319	*i* P	Pn	19 35 23.7	+0.2
OFUJ				S	Sn	19 35 34.5	+0.2
JMK	**Ichinoseki**	1.00	299	P	Pn	19 35 26.7	+0.5
JOM	**Ohasama**	1.29	321	P	Pn	19 35 31.4	+1.1
JOM				S	Sn	19 35 47.4	+1.1
JOU	**Okura**	1.32	266	*i* P	Pn	19 35 31.6	+0.9
JOU				S	Sn	19 35 48.5	+1.4
JFK	**Kawauchi**	1.60	227	P	Pn	19 35 34.5	0.0
JFK				S	Sn	19 35 53.5	-0.4
JYK	**Kaneyama**	1.62	287	P	Pn	19 35 36.0	+1.3
JYK				S	Sn	19 35 56.1	+1.9
JRG	**Rokugo**	1.62	305	P	Pn	19 35 36.7	+1.9
JRG				S	Sn	19 35 58.0	+3.6
JYS	**Shirataka**	1.81	263	P	Pn	19 35 38.4	+1.0
JFT	**Otama**	1.85	240	P	Pn	19 35 39.3	+1.4
JFT				S	Sn	19 36 02.5	+2.5

KRSC 26 19:41:49.6±1.6**, 52°.38N**×**160°.79E, h21**^{km}±18^{km}**, ML3.9, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.85	327	*e*P	Pn	19 42 06.1	-0.2
SPN				*e*S	Sb	19 42 16.4	-0.3
NLC	**Nalytchevo**	1.18	313	*e*P	Pn	19 42 11.0	+0.2
RUS	**Russkaya**	1.39	273	*e*P	Pb	19 42 14.6	-0.2
RUS				*e*S	Sb	19 42 32.5	+0.3
DALK	**Dalny**	1.40	299	*e*P	Pn	19 42 14.3	+0.5
PET	**Petropavlovsk**	1.45	297	*e*P	Pn	19 42 15.1	+0.6
PET				*e*S	Sb	19 42 33.9	+0.1
UGLR	**Uglovaya**	1.45	306	*e*P	Pb	19 42 15.8	-0.1
SDLR	**Sedlovina**	1.46	309	*e*P	Pb	19 42 15.7	-0.4
SMAR	**Somma**	1.49	307	*e*P	Pb	19 42 16.1	-0.6
AVH	**Avacha**	1.53	306	*i* P	Pb	19 42 17.0	-0.2
KRER	**Koryakskii**	1.54	308	*e*P	Pb	19 42 17.3	-0.2
KOK	**Koryaka**	1.59	306	*e*P	Pb	19 42 17.8	-0.5
MTVR	**Mutnovka**	1.60	275	*e*P	Pb	19 42 18.0	-0.4
MTVR				*e*S	Sb	19 42 38.5	+0.3
KRX	**Arik**	1.62	308	*e*P	Pb	19 42 18.4	-0.5
GRL	**Gorelyy**	1.67	277	*e*P	Pb	19 42 19.5	-0.1
KRMR	**Karymshinskiy**	1.68	287	*e*P	Pn	19 42 18.7	+1.0
KDTR	**Khodutka, Kamc**	1.77	252	*e*P	Pn	19 42 19.7	+0.9
KDTR				*e*S	Sn	19 42 40.2	-0.4
ASAK	**Asacha**	1.77	271	*i* P	Pb	19 42 20.7	-0.6
ASAK				*e*S	Sb	19 42 43.6	+0.5
KII	**Karymskiy**	1.84	335	*e*P	Pb	19 42 21.7	-0.9
GNL	**Ganaly**	2.16	309	*e*P	Pb	19 42 27.0	-1.1
MKZ	**Mys Kozlova**	2.25	14	*e*P	Pn	19 42 27.4	+1.9
MKZ				*e*S	Sn	19 42 53.9	+1.3
APC	**Apacha**	2.28	285	*e*P	Pb	19 42 28.4	-1.5
MIPR	**Malaya Ipel'ka**	2.47	269	*e*P	Pb	19 42 31.4	-1.9
TUMD	**Tumrok D**	2.84	356	*e*P	Pn	19 42 36.0	+2.4
TUMD				*e*S	Sn	19 43 09.0	+1.9
TUMR	**Tumrok**	2.93	353	*e*P	Pb	19 42 38.3	-2.9
TUMR				*e*S	Sb	19 43 14.8	-1.8
KMNR	**Kamenistaya**	3.40	355	*e*P	Pn	19 42 45.2	+3.8
KBTR	**Krutoberegovo**	4.02	16	*e*P	Pn	19 42 53.1	+3.4
SMKR	**Semkarok**	4.23	5	*e*P	Pn	19 42 57.9	+5.1

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*IDC **26** 19:50:29.5±2.3, 21°.90N×143°.46E, h188^{km}±21^{km}, mb3.1/8, mbtmp3.7/9, Error ellipse: s-maj=28.7km s-min=14.3km az=88.0*

ISC 26 19:50:30.4±1.0**, 21°.9N**±0°.1×**143°.4E**±0°.3**, h200**^{km}**, n10, σ1^{s}.19**/10**, mb3.5**/7**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	5.28	348	P	**Pn**	**19 51 48.9**	**+0.6**
	21nm,0.3s,baz=198,slow=20,SNR=23						
JCJ				S	**Sn**	**19 52 48.2**	**-1.8**
	27nm,0.3s,baz=267,slow=23,SNR=6.8						
KSRS	**Korea Array**	20.49	323	P	Pn	19 54 55.0	-3.1
	0.9nm,0.7s,baz=144,slow=9.2,SNR=7.5						
	0.9nm,0.7s						
KLR	**Kul'dur**	28.80	344	P	**P**	**19 56 10.2**	**+0.7**
	1.3nm,0.5s,baz=156,slow=10.0,SNR=6.6						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	42.54	193	P	**P**	**19 58 06.2**	**-0.3**
	0.3nm,0.3s,baz=12,slow=9.7,SNR=25						
	0.3nm,0.3s						
ASAR	**Alice Springs**	46.25	192	P	**P**	**19 58 35.8**	**0.0**
	0.5nm,1.0s,baz=23,slow=8.0,SNR=4.5						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	54.73	313	P	**P**	**19 59 39.4**	**+0.3**
	0.1nm,0.3s,baz=72,slow=9.3,SNR=5.2						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	57.53	317	P	**P**	**19 59 59.0**	**+0.2**
	0.4nm,0.4s,baz=92,slow=7.4,SNR=8.9						
	0.4nm,0.4s						
ILAR	**Eielson Array**	61.73	27	P	**P**	**20 00 26.5**	**-0.7**
	0.5nm,0.7s,baz=261,slow=5.6,SNR=6.5						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	76.15	28	P	**P**	**20 01 57.4**	**+1.5**
	0.6nm,0.5s,baz=293,slow=6.0,SNR=3.0						
	0.6nm,0.5s						
PLCA	**Paso Flores**	145.72	131	PKPbc	**PKiKP**	**20 09 47.6**	**-1.7**
	1.1nm,0.4s,baz=269,slow=6.3,SNR=5.7						

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*IDC **26** 19:55:42.1±1.0, 64°.57N×4°.53W, h0^{km}, mb3.4/7, mbtmp3.4/14, ML3.1/4, MS3.2/1, Error ellipse: s-maj=20.7km s-min=18.1km az=44.0*

*NAO **26** 19:55:42.7±4.0, 64°.43N×4°.42W, ML3.3*

*BGS **26** 19:55:45.6±0.9, 64°.40N×4°.22W, h10^{km}, ML3.3*

*BER **26** 19:55:47.3±2.8, 64°.49N×4°.43W, h31^{km}±18^{km}, ML2.6, ML3.3(BGS), Confirmed Earthquake*

ISC 26 19:55:43.8±0.7**, 64°.33N**±0°.05×**4°.15W**±0°.05**, h10**^{km}**, n108, σ2^{s}.20**/150**, mb3.4**/7**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOFL	**Sornfelli, Far**	2.60	211	*e*P	**Pn**	**19 56 26.5**	**+0.5**
SOFL				*e*S	**Sn**	**19 56 57.7**	**+0.1**
SOFL				IAML		19 56 58.7	
	comp=E,156nm,0.6s						
SOFL				IAML		19 57 06.8	
	comp=N,89nm,0.5s						
SOFL	**Sornfelli, Far**	2.60	211	*e*P	**Pn**	**19 56 26.5**	**+0.5**
SOFL				*e*S	**Sn**	**19 56 57.7**	**+0.1**
SOFL				IAML		19 56 58.7	
	comp=E,156nm,0.6s						
SOFL				IAML		19 57 06.8	
	comp=N,89nm,0.5s						
SOFL	**Sornfelli, Far**	2.60	211	*e*P	**Pn**	**19 56 26.7**	**+0.7**
SOFL				*e*S	**Sn**	**19 56 57.1**	**-0.5**
SOFL				IAML		19 56 58.7	
	comp=E,156nm,0.6s						
LRW	**Lerwick**	4.43	160	*e*P	**Pn**	**19 56 52.5**	**+1.5**
LRW				*e*S	**Sn**	**19 57 40.5**	**-2.0**
LRW				IAML		19 57 44.0	
	comp=E,71nm,0.3s						
LRW				IAML		19 57 44.2	
	comp=N,69nm,0.3s						
LRW	**Lerwick**	4.43	160	*e*P	**Pn**	**19 56 52.5**	**+1.5**
LRW				*e*S	**Sn**	**19 57 40.5**	**-2.0**
LRW				IAML		19 57 44.0	
	comp=E,71nm,0.3s						
LRW				IAML		19 57 44.2	
	comp=N,69nm,0.3s						
LRW	**Lerwick**	4.43	160	*e*P	**Pn**	**19 56 52.5**	**+1.5**
LRW				*e*S	**Sn**	**19 57 40.5**	**-2.0**
LRW				IAML		19 57 44.0	
	comp=E,71nm,0.3s						
FOO	**Floro**	5.01	119	*e*P	**Pn**	**19 57 00.7**	**+1.8**
FOO				*e*S	**Sn**	**19 57 54.5**	**-2.2**
FOO				IAML		19 58 00.8	
	comp=E,6.3nm,0.2s						
FOO				IAML		19 58 01.0	
	comp=N,8.7nm,0.2s						
FOO	**Floro**	5.01	119	*e*P	**Pn**	**19 57 00.7**	**+1.8**
FOO				*e*S	**Sn**	**19 57 54.5**	**-2.2**
FOO				IAML		19 58 00.8	
	comp=E,6.3nm,0.2s						
FOO				IAML		19 58 01.0	
	comp=N,8.7nm,0.2s						
FOO	**Floro**	5.01	119	Pn	**Pn**	**19 57 01.2**	**+2.3**
FOO				Sn	**Sn**	**19 57 55.6**	**-1.1**
FOO	**Floro**	5.01	119	Pn	**Pn**	**19 57 01.2**	**+2.3**
FOO				Sn	**Sn**	**19 57 55.6**	**-1.1**
FOO	**Floro**	5.01	119	*e*P	**Pn**	**19 57 01.2**	**+2.3**
FOO				*e*S	**Sn**	**19 57 55.7**	**-1.1**
FOO				IAML		19 58 00.0	
	comp=Z,19nm,0.2s						
SUE	**Sulen**	5.25	125	*e*P	**Pn**	**19 57 04.2**	**+2.0**
SUE				*e*S	**Sn**	**19 58 00.1**	**-2.7**
SUE				IAML		19 58 05.2	
	comp=Z,27nm,0.2s						
AKN	**Aaknes**	5.48	108	Pn	**Pn**	**19 57 08.2**	**+2.9**
AKN				Sn	**Sn**	**19 58 08.8**	**+0.5**
AKN	**Aaknes**	5.48	108	Pn	**Pn**	**19 57 08.2**	**+2.9**
AKN				Sn	**Sn**	**19 58 08.8**	**+0.5**
AKN	**Aaknes**	5.48	108	Pn	**Pn**	**19 57 08.2**	**+2.9**
AKN				Sn	**Sn**	**19 58 08.8**	**+0.5**
MOL	**Molde**	5.54	103	Pn	**Pn**	**19 57 08.5**	**+2.4**
MOL				Sn	**Sn**	**19 58 09.6**	**-0.1**
MOL	**Molde**	5.54	103	Pn	**Pn**	**19 57 08.5**	**+2.4**
MOL				Sn	**Sn**	**19 58 09.6**	**-0.1**
MOL	**Molde**	5.54	103	*e*P	**Pn**	**19 57 08.3**	**+2.2**
MOL				*e*S	**Sn**	**19 58 08.3**	**-1.4**
MOL				IAML		19 58 14.1	
	comp=Z,19nm,0.3s						
HYA	**Hoyanger**	5.71	119	*e*P	**Pn**	**19 57 10.7**	**+2.2**
HYA				*e*S	**Sn**	**19 58 12.7**	**-1.3**
HYA				IAML		19 58 20.1	
	comp=Z,14nm,0.3s						
ASK	**Askoy**	5.81	127	*e*P	**Pn**	**19 57 11.5**	**+1.7**
ASK				*e*S	**Sn**	**19 58 13.8**	**-2.6**
ASK				IAML		19 58 19.7	
	comp=Z,15nm,0.2s						
BIGH	**Upper Bighouse**	5.86	179	*e*P	**Pn**	**19 57 11.3**	**+0.8**
BIGH				IAML		19 58 18.6	
	comp=N,15nm,0.4s						
BIGH				IAML		19 58 19.9	
	comp=E,9.1nm,0.3s						
BIGH	**Upper Bighouse**	5.86	179	*e*P	**Pn**	**19 57 11.3**	**+0.8**
BIGH				IAML		19 58 18.6	
	comp=N,15nm,0.4s						
BIGH				IAML		19 58 19.9	
	comp=E,9.1nm,0.3s						
BIGH	**Upper Bighouse**	5.86	179	*e*P	**Pn**	**19 57 11.7**	**+1.1**
BIGH				*e*S	**Sn**	**19 58 13.8**	**-3.9**
BIGH				IAML		19 58 18.6	
	comp=N,15nm,0.4s						
BER	**Bergen**	5.93	128	*e*P	**Pn**	**19 57 13.0**	**+1.6**
BER				*e*S	**Sn**	**19 58 16.4**	**-2.9**
BER				IAML		19 58 20.4	
	comp=Z,7.9nm,0.2s						
LINV	**Loch Inver, As**	6.23	185	*e*P	**Pn**	**19 57 16.3**	**+0.7**
LINV				IAML		19 58 26.7	
	comp=E,9.3nm,0.4s						
LINV				IAML		19 58 29.4	
	comp=N,5.0nm,0.3s						
LINV	**Loch Inver, As**	6.23	185	*e*P	**Pn**	**19 57 16.3**	**+0.7**
LINV				IAML		19 58 26.7	
	comp=E,9.3nm,0.4s						
LINV				IAML		19 58 29.4	
	comp=N,5.0nm,0.3s						
LINV	**Loch Inver, As**	6.23	185	*e*P	**Pn**	**19 57 16.3**	**+0.7**
LINV				IAML		19 58 26.7	
	comp=E,9.3nm,0.4s						
LEWI	**Lewis, Hebride**	6.34	193	*e*P	**Pn**	**19 57 17.7**	**+0.5**
LEWI				IAML		19 58 27.4	
	comp=E,6.0nm,0.8s						
LEWI				IAML		19 58 33.8	
	comp=N,5.1nm,0.3s						
LEWI	**Lewis, Hebride**	6.34	193	*e*P	**Pn**	**19 57 17.7**	**+0.5**
LEWI				IAML		19 58 27.4	
	comp=E,6.0nm,0.8s						
LEWI				IAML		19 58 33.8	
	comp=N,5.1nm,0.3s						
LEWI	**Lewis, Hebride**	6.34	193	*e*P	**Pn**	**19 57 17.7**	**+0.5**
LEWI				IAML		19 58 27.4	
	comp=E,6.0nm,0.8s						

```
DOMB  Dombas             6.40 105 eP       Pn      19 57 18.3 +0.3
DOMB                              eS       Sn      19 58 28.9 -2.2
DOMB                               IAML            19 58 33.3
      comp=Z,7.6nm,0.3s
TBLU  Trondheim          6.47  93 eP       Pn      19 57 19.7 +0.7
TBLU                              eS       Sn      19 58 30.7 -2.1
TBLU                               IAML            19 58 37.6
      comp=Z,6.8nm,0.5s
ODD1  Odda               6.72 126 eP       Pn      19 57 23.6 +1.2
ODD1                              eS       Sn      19 58 35.9 -2.9
ODD1                               IAML            19 58 38.5
      comp=Z,8.1nm,0.3s
MCD   Coleburn Disti     6.79 176 eP       Pn      19 57 24.9 +1.6
MCD   Coleburn Disti     6.79 176 eP       Pn      19 57 24.9 +1.6
MCD   Coleburn Disti     6.79 176 eP       Pn      19 57 24.9 +1.6
KMY   Karmoy             6.79 135  Pn      Pn      19 57 25.0 +1.6
KMY                                Sn      Sn      19 58 37.2 -3.5
KMY   Karmoy             6.79 135  Pn      Pn      19 57 25.0 +1.6
KMY                                Sn      Sn      19 58 37.2 -3.5
KMY   Karmoy             6.79 135 eP       Pn      19 57 24.8 +1.4
KMY                               eS       Sn      19 58 37.0 -3.7
KMY                                IAML            19 58 41.3
      comp=Z,14nm,0.2s
SKAR  Skarslia           6.83 117 eP       Pn      19 57 26.5 +2.6
SKAR                              eS       Sn      19 58 39.7 -1.9
SKAR                               IAML            19 58 57.3
      comp=Z,7.2nm,0.3s
KAC   Achnashellach      6.88 185 eP       Pn      19 57 25.6 +1.1
KAC   Achnashellach      6.88 185 eP       Pn      19 57 25.6 +1.1
KAC   Achnashellach      6.88 185 eP       Pn      19 57 25.6 +1.1
NSS   Namsos             6.98  81 eP       Pn      19 57 25.6 -0.2
NSS                               eS       Sn      19 58 38.8 -6.3
NSS                                IAML            19 58 45.8
      comp=Z,12nm,0.2s
BLS5  Blasjo             7.02 130 eP       Pn      19 57 28.2 +1.7
BLS5                              eS       Sn      19 58 41.0 -5.3
BLS5                               IAML            19 58 51.0
      comp=Z,6.5nm,0.4s
KPL   Plockton           7.05 187 eP       Pn      19 57 27.8 +0.8
KPL                                IAML            19 57 38.3
      comp=N,4.2nm,0.3s
KPL                                IAML            19 58 43.7
      comp=E,4.8nm,0.6s
KPL   Plockton           7.05 187 eP       Pn      19 57 27.8 +0.8
KPL                                IAML            19 57 38.3
      comp=N,4.2nm,0.3s
KPL                                IAML            19 58 43.7
      comp=E,4.8nm,0.6s
KPL   Plockton           7.05 187 eP       Pn      19 57 27.8 +0.8
KPL                               eS       Sn      19 58 42.8 -4.3
KPL                                IAML            19 58 43.7
      comp=E,4.8nm,0.6s
STOK  Stokkvaagen        7.45  67 eP       Pn      19 57 31.5 -0.9
STOK                              eS       Sn      19 58 46.8  -10
NC204 NORSAR Array S     7.48 107 eP       Pn      19 57 34.9 +2.0
NC204                             e                19 58 57.0
DRUM  Mains of Drumt     7.49 173 eP       Pn      19 57 34.2 +1.3
DRUM  Mains of Drumt     7.49 173 eP       Pn      19 57 34.2 +1.3
DRUM  Mains of Drumt     7.49 173 eP       Pn      19 57 34.2 +1.3
KONS  Konsvik            7.52  65 eP       Pn      19 57 32.5 -0.7
KONS                              eS       Sn      19 58 48.5  -10
KONS                               IAML            19 58 51.6
      comp=Z,19nm,0.4s
NB2   NORSAR Subarra     7.79 108  Pn      Pn      19 57 38.8 +1.7
      baz=307,slow=14
NB2   NORSAR Subarra     7.79 108  Pn      Pn      19 57 38.8 +1.7
      baz=307,slow=14
NB2   NORSAR Subarra     7.79 108  Pn      Pn      19 57 38.8 +1.7
      baz=307,slow=14
NOA   NORSAR Array B     7.79 108  Pn      Pn      19 57 39.1 +1.9
      baz=305,slow=14,SNR=4.1
NOA                                Sn      Sn      19 59 03.1 -2.3
      comp=Z,0.1nm,0.3s,baz=308,slow=22,SNR=4.5
      comp=Z,0.3nm,0.3s
INVG  Invergeldie, C     7.93 180 eP       Pn      19 57 40.1 +1.1
INVG                               IAML            19 59 09.0
      comp=E,8.7nm,0.5s
INVG                               IAML            19 59 18.7
      comp=N,5.4nm,0.5s
INVG  Invergeldie, C     7.93 180 eP       Pn      19 57 40.1 +1.1
INVG                               IAML            19 59 09.0
      comp=E,8.7nm,0.5s
INVG                               IAML            19 59 18.7
      comp=N,5.4nm,0.5s
INVG  Invergeldie, C     7.93 180 eP       Pn      19 57 40.1 +1.1
INVG                               IAML            19 59 09.0
      comp=E,8.7nm,0.5s
NRA0  NORESS Array S     8.09 109  Pn      Pn      19 57 42.9 +1.8
      baz=318,slow=14
NRA0                               Sn      Sn      19 59 09.9 -2.7
      baz=304,slow=22
NRA0  NORESS Array S     8.09 109  Pn      Pn      19 57 42.9 +1.8
      baz=318,slow=14
NRA0                               Sn      Sn      19 59 09.9 -2.7
      baz=304,slow=22
NRA0  NORESS Array S     8.09 109  Pn      Pn      19 57 42.9 +1.8
      baz=318,slow=14
NRA0                               Sn      Sn      19 59 09.9 -2.7
      baz=304,slow=22
SNART Snartemo           8.11 133 i P      Pn      19 57 42.0 +0.6
SNART                             i S      Sn      19 59 08.8 -4.3
SNART                              IAML            19 59 18.6
      comp=Z,7.7nm,0.4s
LAWE  Loch Awe, Argy     8.12 185 eP       Pn      19 57 42.7 +1.1
LAWE                               IAML            19 59 16.7
      comp=N,3.3nm,1.0s
LAWE                               IAML            19 59 17.8
      comp=E,3.0nm,0.3s
LAWE  Loch Awe, Argy     8.12 185 eP       Pn      19 57 42.7 +1.1
LAWE                               IAML            19 59 16.7
      comp=N,3.3nm,1.0s
LAWE                               IAML            19 59 17.8
      comp=E,3.0nm,0.3s
LAWE  Loch Awe, Argy     8.12 185 eP       Pn      19 57 42.7 +1.1
LAWE                               IAML            19 59 16.7
      comp=N,3.3nm,1.0s
EAB   Aberfoyle          8.17 181 eP       Pn      19 57 43.7 +1.4
EAB   Aberfoyle          8.17 181 eP       Pn      19 57 43.7 +1.4
EAB   Aberfoyle          8.17 181 eP       Pn      19 57 43.7 +1.4
FAUS  Fauske             8.52  60 eP       Pn      19 57 46.2 -0.7
FAUS                              eS       Sn      19 59 12.4  -11
FAUS                               IAML            19 59 19.8
      comp=Z,14nm,0.6s
HOMB  Homborsund         8.59 129 i P      Pn      19 57 51.0 +3.0
HOMB                              i S      Sn      19 59 23.1 -1.7
STRU  Stroemstad         9.00 119 i P      Pn      19 57 55.2 +1.6
STRU                              i S      Sn      19 59 29.1 -5.8
EKA   Eskdalemuir Ar     9.04 176  Pn      Pn      19 57 55.0 +0.8
      comp=Z,1.2nm,0.3s,baz=358,slow=13,SNR=59
EKA                                Sn      Sn      19 59 32.9 -3.0
      baz=350,slow=25
EKA   Eskdalemuir Ar     9.04 176  Pn      Pn      19 57 55.4 +1.2
EKA   Eskdalemuir Ar     9.04 176  Pn      Pn      19 57 55.4 +1.2
EKA   Eskdalemuir Ar     9.04 176  Pn      Pn      19 57 55.4 +1.2
ESK   Eskdalemuir        9.06 177 eP       Pn      19 57 55.7 +1.3
ESK   Eskdalemuir        9.06 177 eP       Pn      19 57 55.7 +1.3
ESK   Eskdalemuir        9.06 177 eP       Pn      19 57 55.7 +1.3
HFS   Hagfors            9.31 109  Pn      Pn      19 57 59.7 +1.7
      comp=Z,0.2nm,0.3s,baz=248,slow=20,SNR=1.9
HFS                                Sn      Sn      19 59 39.3 -3.3
      comp=Z,0.5nm,0.3s,baz=251,slow=14,SNR=6.2
      comp=Z,0.4nm,0.5s
EDMD  Edmundbyers        9.59 172 eP       Pn      19 58 03.0 +1.2
EDMD  Edmundbyers        9.59 172 eP       Pn      19 58 03.0 +1.2
EDMD  Edmundbyers        9.59 172 eP       Pn      19 58 03.0 +1.2
TJOU  Tjoern             9.87 122 i S      Sn      19 59 50.6 -5.6
ONAU  Onsala            10.45 124 i P      Pn      19 58 16.8 +3.4
ONAU                              i S      Sn      20 00 02.6 -7.7
ARA0  ARCESS Array S    12.64  53  Pn      Pn      19 58 43.7 +0.4
      baz=255,slow=11
ARA0  ARCESS Array S    12.64  53  Pn      Pn      19 58 43.7 +0.4
      baz=255,slow=11
ARA0  ARCESS Array S    12.64  53  Pn      Pn      19 58 43.7 +0.4
      baz=255,slow=11
ARCES ARCESS Array B    12.64  53  Pn      Pn      19 58 42.8 -0.5
      comp=Z,0.4nm,0.3s,baz=254,slow=13,SNR=1.7
FIA0  FINESS Array S    14.01  88  Pn      Pn      19 59 03.3 +1.3
      baz=296,slow=11
FIA0  FINESS Array S    14.01  88  Pn      Pn      19 59 03.3 +1.3
      baz=296,slow=11
FIA0  FINESS Array S    14.01  88  Pn      Pn      19 59 03.3 +1.3
      baz=296,slow=11
FINES FINESS Array B    14.01  88  Pn      Pn      19 59 03.0 +1.0
      comp=Z,0.2nm,0.3s,baz=297,slow=11,SNR=8.8
FINES                              Sn      Sn      20 01 30.8 -6.4
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      comp=Z,0.1nm,0.3s,baz=304,slow=24,SNR=2.3
      comp=Z,3.7nm,0.9s
SPA0  Spitsbergen Ar    15.22  16  P       Pn      19 59 18.8 +0.5
SPA0  Spitsbergen Ar    15.22  16  P       Pn      19 59 18.8 +0.5
SPA0  Spitsbergen Ar    15.22  16 e        Pn      19 59 18.8 +0.5
SPITS Spitsbergen Ar    15.22  16  Pn      Pn      19 59 17.8 -0.6
      comp=Z,0.9nm,0.3s,baz=185,slow=14,SNR=15
GERES GERESS Array B    18.26 140  P       P       20 00 00.6 +3.4
      comp=Z,0.1nm,0.3s,baz=343,slow=13,SNR=3.3
      comp=Z,0.4nm,0.6s
AKASG Malin Array Be    22.18 112  P       P       20 00 42.6 +2.9
      comp=Z,0.3nm,0.4s,baz=321,slow=9.5,SNR=2.6
      comp=Z,0.3nm,0.4s
ESDC  Sonseca Array     24.70 180  P       P       20 01 08.0 +3.3
      comp=Z,0.6nm,0.8s,baz=0.3,slow=9.5,SNR=6.3
      comp=Z,0.6nm,0.8s
EIL   Elat              42.48 126  LR      LR      20 24 13.6
      comp=Z,30nm,18.3s,baz=302,slow=40
KURBB Kurchatov Arra    43.17  67  P       P       20 03 45.1 +0.9
      comp=Z,0.2nm,0.3s,baz=301,slow=6.1,SNR=0.9
      comp=Z,0.2nm,0.3s
YKA   Yellowknife Ar    43.40 321  P       P       20 03 43.5 -2.4
      comp=Z,0.9nm,0.7s,baz=34,slow=8.6,SNR=4.5
      comp=Z,0.9nm,0.7s
MKAR  Makanchi Array    47.73  68  P       P       20 04 19.6 -0.8
      comp=Z,0.2nm,0.5s,baz=340,slow=7.8,SNR=2.0
      comp=Z,0.2nm,0.5s
TORD  Torodi Ar. Bea    51.28 173  P       P       20 04 48.8 +1.1
      comp=Z,0.8nm,1.0s,baz=355,slow=11,SNR=3.3
      comp=Z,0.8nm,1.0s
PDAR  Pinedale Array    58.41 304  P       P       20 05 36.7 -2.7
      comp=Z,0.4nm,0.7s,baz=46,slow=7.7,SNR=3.5
      comp=Z,0.4nm,0.7s
```

IDC ***26*** *20:00:53.7±0.5, 47.°10N×150.°83E, h0km, mb4.3/29, mbtmp4.3/35, ML4.2/6, MS3.8/53, Error ellipse: s-maj=13.3km s-min=10.0km az=136.0*

SKHL ***26*** *20:00:54.7±0.1, 47.°00N×151.°00E, h28km±4km, mb5.5/8, ms4.4/7*

MOS ***26*** *20:00:56.4±0.9, 47.°07N×150.°75E, h30km, mb4.6/12, MS3.6/8, Error ellipse: s-maj=6.7km s-min=4.9km az=66.9*

NEIC ***26*** *20:00:58.7±1.5, 47.°15N±0.°08×150.°7E±0.°1, h28km±4km, mb4.7/161, Error ellipse: s-maj=12.8km s-min=9.0km az=142.0*

GCMT ***26*** *20:00:58.7±0.4, 47.°14N±0.°02×150.°77E±0.°03, h20km±1km, MW4.8/83, Moment Tensor Solution. s10,c13; s83,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.10; $M_{\theta\theta}$0.23±.09; $M_{\phi\phi}$-0.22±.07; $M_{r\theta}$-0.04±.14; $M_{\theta\phi}$-1.63±.06; $M_{\phi r}$-0.12±.14; Best double couple: $M_0$1.65100×10^{16} NP1:ϕ_s86.00000°,δ86.00000°,λ-178.00000°. NP2: ϕ_s356.00000°,δ88.00000°,λ-4.00000°. Principal axes: T 1.6520, Plg2.0000°, Azm41.0000°; N -0.0030, Plg86.0000°, Azm153.0000°; P -1.6490, Plg4.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 20:00:58.8±0.3**, 47.°11N**±0.°04×**150.°73E**±0.°04**, h35km, n552, σ1.°30**/539**, mb4.7**/131**, MS3.9**/59**, 15C-4D, Kuril Islands**

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Code  Station Name         Δ°  AZ°   Phase ID          Time     Res
                                  Op       ISC      h  m  s   ISC
KUR   Kuril'sk           2.73 228c iPN     Pn      20 01 38.3 -1.8
KUR                               i S      Sn      20 02 10.2 -1.7
KUR                                pmax    pmax
      comp=Z,1μm,0.6s
KUR                                pmax    pmax
      comp=E,288nm,0.5s
KUR                                pmax    pmax
      comp=N,746nm,0.4s
KUR                                smax    smax
      comp=E,3μm,0.5s
KUR                                smax    smax
      comp=N,932nm,0.3s
KUR                                MLR     MLR
      comp=Z,4μm,11.0s
KUR   Kuril'sk           2.73 228 i P      Pn      20 01 37.8 -2.3
KUR                                AMB     AMB     20 01 46.1
      comp=Z,750nm,0.6s
KUR                                AMB     AMB     20 01 46.1
      comp=Z,290nm,0.6s
KUR                                AMB     AMB     20 01 46.1
      comp=Z,1μm,0.6s
KUR                               i S      Sn      20 02 10.0 -1.9
KUR                                A       A       20 02 15.5
      comp=Z,930nm,0.5s
KUR                                A       A       20 02 15.5
      comp=Z,3μm,0.5s
KUR                                AMS     AMS     20 02 58.0
      comp=Z,4μm,11.0s
SHO   Shikotan           4.24 222c iPN     Pn      20 01 59.0 -1.9
SHO                               i S      Sn      20 02 49.1  0.0
SHO                                pmax    pmax
      comp=Z,148nm,0.3s
SHO                                pmax    pmax
      comp=E,54nm,0.4s
SHO                                pmax    pmax
      comp=N,87nm,0.3s
SHO                                pmax    pmax
      comp=Z,211nm,1.5s
SHO                                smax    smax
      comp=N,404nm,0.4s
SHO                                smax    smax
      comp=E,434nm,0.4s
SHO   Shikotan           4.24 222 i P      Pn      20 01 59.0 -1.9
SHO                                AMB     AMB     20 02 02.4
      comp=E,150nm,0.3s
SHO                                AMB     AMB     20 02 06.6
      comp=E,200nm,1.5s
SHO                               i S      Sn      20 02 47.3 -1.8
SHO                                A       A       20 02 58.1
      comp=E,610nm,0.4s
SHO                                A       A       20 02 58.1
      comp=E,470nm,0.4s
SHO                                AMS     AMS     20 03 38.5
      comp=E,3μm,11.0s
SHO                                AMS     AMS     20 03 38.5
      comp=E,3μm,11.0s
SHO                                AMS     AMS     20 03 38.5
      comp=E,1μm,11.0s
YUK   Yuzh-Kuril'sk      4.59 230c iPN     Pn      20 02 05.9 +0.2
YUK                                S       Sn      20 03 02.6 +4.8
YUK                                pmax    pmax
      comp=Z,685nm,1.3s
YUK                                pmax    pmax
      comp=Z,860nm,0.4s
YUK                                pmax    pmax
      comp=N,257nm,0.2s
YUK                                pmax    pmax
      comp=E,133nm,0.2s
YUK                                smax    smax
      comp=E,985nm,1.2s
YUK                                smax    smax
      comp=N,554nm,0.6s
YUK                                smax    smax
      comp=N,844nm,0.3s
YUK                                smax    smax
      comp=E,1μm,0.5s
YUK   Yuzh-Kuril'sk      4.59 230 i P      Pn      20 02 04.5 -1.2
YUK                                AMB     AMB     20 02 09.8
      comp=E,700nm,1.3s
YUK                                AMB     AMB     20 02 12.0
      comp=E,260nm,0.5s
YUK                                AMB     AMB     20 02 12.0
      comp=E,130nm,0.5s
YUK                                AMB     AMB     20 02 12.0
      comp=E,860nm,0.5s
YUK                               eS       Sn      20 02 57.1 -0.7
YUK                                A       A       20 03 05.1
      comp=E,600nm,1.2s
YUK                                A       A       20 03 05.1
      comp=E,1μm,1.2s
YUK                                A       A       20 03 08.9
      comp=E,840nm,0.6s
YUK                                A       A       20 03 08.9
      comp=E,1μm,0.6s
YUK                                AMS     AMS     20 03 46.0
      comp=E,5μm,13.0s
YUK                                AMS     AMS     20 03 46.0
      comp=E,5μm,13.0s
YUK                                AMS     AMS     20 03 46.0
      comp=E,2μm,13.0s
RUSJ  Misakicho          4.88 234 ePN      Pn      20 02 08.1 -1.5
GLVR  Golovnino          4.98 229 ePN      Pn      20 02 11.0  0.0
GLVR                              eS       Sn      20 03 16.9  +10
GLVR                               pmax    pmax
      comp=Z,270nm,0.6s
GLVR                               pmax    pmax
      comp=N,73nm,0.3s
GLVR                               pmax    pmax
      comp=E,90nm,0.3s
GLVR                               smax    smax
      comp=N,751nm,0.4s
GLVR                               smax    smax
      comp=E,635nm,0.4s
GLVR  Golovnino          4.98 229 eP       Pn      20 02 10.2 -0.8
GLVR                               AMB     AMB     20 02 16.1
      comp=E,270nm,0.6s
GLVR                              eS       Sn      20 03 07.0 -0.3
GLVR                               A       A       20 03 23.2
      comp=E,750nm,0.4s
GLVR                               A       A       20 03 23.2
      comp=E,640nm,0.4s
SKR   Severo-Kuril's     5.04  43ceePN     Pn      20 02 11.8  0.0
SKR   Severo-Kuril's     5.04  43 i P      Pn      20 02 09.7 -2.1
SKR                                AMB     AMB     20 02 13.1
      comp=E,200nm,2.8s
SKR                                AMB     AMB     20 02 18.4
      comp=E,250nm,0.7s
SKR                               eS       Sn      20 03 05.5 -3.3
SKR                                A       A       20 03 09.6
      comp=E,60nm,0.8s
SKR                                A       A       20 03 09.6
      comp=E,160nm,0.8s
SKR                                AMS     AMS     20 05 07.3
      comp=E,800nm,11.0s
SKR                                AMS     AMS     20 05 07.3
      comp=E,1μm,11.0s
SKR                                AMS     AMS     20 05 07.3
      comp=E,900nm,11.0s
NMR   Nemuro--Hokkai     5.14 225 ePN      Pn      20 02 11.5 -1.7
NMR                               eS       Sn      20 03 13.3 +2.0
NMR   Nemuro--Hokkai     5.14 225 eP       Pn      20 02 11.5 -1.7
NMR                               eS       Sn      20 03 10.0 -1.3
YSS   Yuzh-Sakhalins     5.45 271  Pn      Pn      20 02 16.8 -0.7
YSS   Yuzh-Sakhalins     5.45 271 ePN      Pn      20 02 18.4 +0.9
YSS                                pmax    pmax
      comp=Z,100nm,2.5s
YSS                                pmax    pmax
      comp=Z,80nm,0.8s
YSS                                MLR     MLR
      comp=Z,900nm,15.0s
YSS                                MLR     MLR
      comp=E,500nm,14.0s
YSS   Yuzh-Sakhalins     5.45 271 eP       Pn      20 02 18.4 +0.9
YSS                                AMB     AMB     20 02 23.0
      comp=E,200nm,2.5s
YSS                                AMB     AMB     20 02 25.8
      comp=E,80nm,0.8s
YSS                               eS       Sn      20 03 21.0 +2.0
YSS                                A       A       20 03 23.0
      comp=E,310nm,0.6s
YSS                                AMS     AMS     20 04 01.0
      comp=E,800nm,14.0s
YSS                                AMS     AMS     20 04 01.0
      comp=E,1μm,14.0s
YSS                                AMS     AMS     20 04 01.0
      comp=E,900nm,14.0s
PAU   Pauzhetka          5.90  40 eP       Pn      20 02 23.6 -0.1
PAU                                AMB     AMB     20 02 24.2
      comp=E,40nm,0.6s
UGL   Uglegorsk          6.13 292⇓iPN      Pn      20 02 28.3 +1.6
UGL                                pmax    pmax
      comp=Z,1μm,0.8s
UGL                                pmax    pmax
      comp=Z,1μm,0.8s
UGL   Uglegorsk          6.13 292 i P      Pn      20 02 28.3 +1.6
UGL                                AMB     AMB     20 02 29.0
      comp=Z,1μm,0.8s
UGL                                AMB     AMB     20 02 29.0
      comp=Z,1μm,0.8s
UGL                               eS       Sn      20 03 36.0 +0.5
UGL                                A       A       20 03 39.0
      comp=Z,300nm,0.8s
UGL                                A       A       20 03 39.0
      comp=Z,800nm,0.8s
UGL                                AMS     AMS     20 04 40.0
      comp=Z,2μm,15.0s
UGL                                AMS     AMS     20 04 40.0
      comp=Z,2μm,15.0s
UGL                                AMS     AMS     20 04 40.0
      comp=Z,2μm,15.0s
JKA   Kamikawa-asahi     6.44 245  Pn      Pn      20 02 30.7 -0.3
JKA   Kamikawa-asahi     6.44 245          Sn      20 03 40.1 -3.2
JKA   Kamikawa-asahi     6.44 245 eP       Pn      20 02 31.6 +0.6
ASAJ  Asahikawa          6.44 245  Pn      Pn      20 02 31.6 +0.6
      comp=Z,3.4nm,0.3s,baz=88,slow=13,SNR=19
ASAJ                               Sn      Sn      20 03 40.1 -3.2
      comp=Z,4.8nm,0.3s,baz=92,slow=4.5,SNR=1.4
ASAJ                               LR      LR      20 04 48.4
      comp=Z,739nm,20.7s,baz=67,slow=36
      comp=Z,14nm,0.4s
TYV   Tymovskoe          6.50 308 ePN      Pn      20 02 32.7 +0.8
TYV                                pmax    pmax
      comp=Z,128nm,0.5s
TYV                                pmax    pmax
      comp=Z,200nm,0.7s
TYV   Tymovskoe          6.50 308 eP       Pn      20 02 32.7 +0.8
TYV                                AMB     AMB     20 02 33.1
      comp=Z,130nm,0.5s
TYV                                AMB     AMB     20 02 33.2
      comp=Z,200nm,0.7s
TYV                               eS       Sn      20 03 46.1 +1.3
TYV                                A       A       20 03 47.9
      comp=Z,40nm,0.6s
TYV                                A       A       20 03 47.9
      comp=Z,100nm,0.6s
ERM   Erimo              7.42 229  Pn      Pn      20 02 45.6 +1.0
ERM   Erimo              7.42 229ceePN     Pn      20 02 46.1 +1.5
ERM                                pmax    pmax
      comp=Z,225nm,1.7s
PEA0B Petropavlovsk-     7.49  34  Pn      Pn      20 02 45.8 +0.4
PEA0B Petropavlovsk-     7.49  34ceePN     Pn      20 02 46.4 +0.9
PETK  Petropavlovsk-     7.49  34  Pn      Pn      20 02 45.3 -0.2
      comp=Z,2.1nm,0.3s,baz=213,slow=16,SNR=47
      comp=Z,104nm,0.9s
PETK  Petropavlovsk-     7.49  34  Pn      Pn      20 02 44.9 -0.6
PET   Petropavlovsk      7.81  38          Pn      20 02 51.4 +1.5
PET   Petropavlovsk      7.81  38αiPN      Pn      20 02 51.8 +2.0
PET                                pmax    pmax
      comp=Z,300nm,5.4s
PET                                pmax    pmax
      comp=Z,149nm,1.1s
PET                                pmax    pmax
      comp=Z,500nm,6.0s
PET                                MLR     MLR
      comp=Z,2μm,18.0s
PET                                MLR     MLR
      comp=Z,2μm,14.0s
PET   Petropavlovsk      7.81  38 eP       Pn      20 02 50.6 +0.8
PET                                AMB     AMB     20 02 53.9
      comp=Z,150nm,1.0s
PET                                AMB     AMB     20 02 54.0
      comp=Z,500nm,6.0s
PET                                AMS     AMS     20 05 50.5
      comp=Z,2μm,14.0s
JEW   Eniwo              7.84 240  Pn      Pn      20 02 51.7 +1.5
OKH   Okha               8.15 325 eP       Pn      20 02 57.0 +2.6
OKH                                AMB     AMB     20 02 58.0
      comp=Z,50nm,0.5s
OKH                                AMS     AMS     20 07 54.0
      comp=Z,800nm,11.0s
OKH                                AMS     AMS     20 07 54.0
      comp=Z,600nm,11.0s
OKH                                AMS     AMS     20 07 54.0
      comp=Z,400nm,11.0s
NKL   Nikolayevsk        8.84 317  AMS     AMS     20 08 09.5
      comp=Z,500nm,14.0s
NKL                                AMS     AMS     20 08 09.5
      comp=Z,800nm,14.0s
NKL                                AMS     AMS     20 08 09.5
      comp=Z,400nm,14.0s
JTM   Tenmabayashi       9.40 231  Pn      Pn      20 03 10.9 -0.8
GRNR  Gornyy            10.10 297⇑iPN      Pn      20 03 22.7 +1.5
GRNR                               pmax    pmax
      comp=E,50nm,0.5s
GRNR                               pmax    pmax
      comp=N,100nm,0.4s
GRNR                               pmax    pmax
      comp=Z,50nm,0.5s
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GRNR				MLR	MLR		
	comp=E,340nm,20.0s						
GRNR				MLR	MLR		
	comp=N,560nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,340nm,18.0s						
GRNR	Gornyy	10.10	297	*e*P	Pn	20 03 22.7	+1.5
GRNR				AMB	AMB	20 03 23.6	
	comp=Z,50nm,0.5s						
GRNR				AMS	AMS	20 07 04.0	
	comp=Z,600nm,17.0s						
GRNR				AMS	AMS	20 07 04.0	
	comp=Z,300nm,17.0s						
GRNR				AMS	AMS	20 07 04.0	
	comp=Z,100nm,17.0s						
MA2	Magadan	12.49	0	Pn	Pn	20 03 52.1	-1.7
	comp=Z,2.0nm,0.3s,baz=166,slow=12,SNR=11						
MA2				Sn	Sn	20 06 03.0	-8.6
	comp=Z,0.8nm,0.3s,baz=34,slow=23,SNR=1.5						
MA2	Magadan	12.49	0	Pn	Pn	20 03 51.2	-2.6
MA2	Magadan	12.49	0	c*e*PN	Pn	20 03 51.6	-2.2
MA2				pmax	pmax		
	comp=Z,27nm,1.7s						
KLR	Kul'dur	12.84	286	Pn	Pn	20 04 00.2	+1.5
	comp=Z,0.5nm,0.3s,baz=99,slow=19,SNR=18						
KLR				LR	LR	20 09 14.0	
	comp=Z,210nm,19.7s,baz=96,slow=39						
	comp=Z,4.6nm,0.7s						
KLR	Kul'dur	12.84	286	*e*P	Pn	20 03 59.4	+0.7
JSD	Sado	12.89	230		Pn	20 03 56.4	-3.1
USA0B	Ussuriysk Arra	13.43	264		P	20 04 11.2	-4.4
USA0B	Ussuriysk Arra	13.43	264	PN	P	20 04 11.2	-4.4
USRK	Ussuriysk Ar.	13.43	264	Pn	P	20 04 12.3	-3.3
	comp=Z,0.2nm,0.3s,baz=70,slow=12,SNR=12						
USRK	Ussuriysk Ar.	13.43	264		Pn	20 04 09.3	+2.6
USRK	Ussuriysk Ar.	13.43	264	PN	Pn	20 04 09.3	+2.6
VLA	Vladivostok	13.89	260	*e*P	Pn	20 04 13.2	+0.2
VLA	Vladivostok	13.89	260	*e*P	Pn	20 04 13.2	+0.2
MJB9	Matsu-Tunnel	14.07	226		Pn	20 04 13.7	-1.9
MAJO	Matsushiro	14.07	226	Pn	Pn	20 04 15.1	-0.5
MAJO	Matsushiro	14.07	226	P	Pn	20 04 15.1	-0.5
MJAR	Matsushiro Arr	14.07	226	Pn	Pn	20 04 12.2	-3.4
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=7.9						
MJAR				LR	LR	20 10 13.6	
	comp=Z,552nm,18.4s,baz=35,slow=40						
MJAR	Matsushiro Arr	14.07	226		Pn	20 04 14.6	-1.0
MJAR	Matsushiro Arr	14.07	226	P	Pn	20 04 14.6	-1.0
MDJ	Mudanjiang	14.93	268		Pn	20 04 23.6	-3.5
MDJ				P	P	20 04 31.8	-0.5
MDJ	Mudanjiang	14.93	268	P	P	20 04 29.8	-2.5
MDJ				S	S	20 07 23.0	-5.2
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.3s						
MDJ				LR	LR		
	comp=Z,700nm,12.2s						
MDJ				LR	LR		
	comp=Z,420nm,13.9s						
MDJ				LR	LR		
	comp=Z,370nm,15.8s						
JGF	Kuroka	15.24	226		Pn	20 04 28.7	-2.5
JGF				IAmb	IAmb	20 04 37.3	
	comp=Z,20nm,0.6s						
INU	Inuyama	15.61	226		Pn	20 04 34.4	-1.6
INU				IAmb	IAmb	20 04 41.1	
	comp=Z,36nm,0.7s						
SEY	Seymchan	15.89	3	Pn	Pn	20 04 39.4	-0.1
	comp=Z,2.2nm,0.3s,baz=178,slow=12,SNR=70						
	comp=Z,8.3nm,0.5s						
SEY	Seymchan	15.89	3	*e*P	Pn	20 04 38.3	-1.1
SHEM	Shemya Is, Ala	16.04	61	Pn	Pn	20 04 40.4	-1.0
	comp=Z,30nm,0.3s,baz=274,slow=1.9,SNR=23						
SHEM				LR	LR	20 09 57.9	
	comp=Z,264nm,21.0s,baz=250,slow=34						
BNX	BinXian	16.13	274	⇑P	P	20 04 46.5	+0.9
BNX				pP	pP	20 04 52.5	-1.4
BNX				S	S	20 07 53.0	+0.2
BNX				pmax	pmax		
	comp=Z,20nm,1.1s						
BNX				pmax	pmax		
	comp=Z,130nm,5.7s						
BNX				LR	LR		
	comp=Z,1µm,14.6s						
BNX				LR	LR		
	comp=Z,2µm,20.7s						
BNX				LR	LR		
	comp=Z,1µm,14.8s						
ZEA	Zeya	16.32	303	*e*P	P	20 04 46.4	-1.3
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA				MLR	MLR		
	comp=N,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,20.0s						
ZEA	Zeya	16.32	303	*e*P	Pn	20 04 44.5	-0.5
ZEA				AMB	AMB	20 04 49.6	
	comp=Z,20nm,0.9s						
ZEA				AMB	AMB	20 04 49.6	
	comp=Z,20nm,0.9s						
ZEA				AMB	AMB	20 04 49.6	
	comp=Z,30nm,0.9s						
ZEA				AMS	AMS	20 11 18.0	
	comp=Z,200nm,12.0s						
ZEA				AMS	AMS	20 11 18.0	
	comp=Z,200nm,12.0s						
JHS	Saijyo	17.92	234	P	Pn	20 05 03.0	-2.1
CN2	Changchun	18.02	269	*e*P	Pn	20 05 05.8	-0.4
CN2				*e*PP	pwP	20 05 20.5	+1.8
CN2				*e*S	Sn	20 08 21.8	-4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,830nm,18.0s						
CN2				LR	LR		
	comp=Z,320nm,18.0s						
CN2				LR	LR		
	comp=Z,310nm,19.0s						
SEHB	SEOHWA	18.68	250	P	P	20 05 13.5	-0.4
YAK	Yakutsk	19.15	329	P	Pn	20 05 19.4	-0.5
	comp=Z,0.1nm,0.3s,baz=315,slow=0.9,SNR=10						
YAK				LR	LR	20 12 20.9	
	comp=Z,119nm,22.0s,baz=104,slow=36						
	comp=Z,4.1nm,0.4s						
YAK	Yakutsk	19.15	329	P	Pn	20 05 19.7	-0.2
YAK				IAmb	IAmb	20 05 29.5	
	comp=Z,29nm,0.8s						
YAK	Yakutsk	19.15	329	*e*P	Pn	20 05 19.8	0.0
YAK				*e*S	S	20 08 54.9	+1.2
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,26nm,1.3s						
YAK				pmax	pmax		
	comp=N,20nm,1.4s						
YAK				pmax	pmax		
	comp=E,26nm,1.4s						
YAK				smax	smax		
	comp=N,21nm,2.2s						
YAK				smax	smax		
	comp=E,13nm,2.0s						
YAK				MLR	MLR		
	comp=Z,137nm,15.0s						
YAK				MLR	MLR		
	comp=N,169nm,14.0s						
YAK				MLR	MLR		
	comp=E,88nm,14.0s						
KSRS	Korea Array	19.38	248	P	Pn	20 05 22.1	-0.6
	comp=E,0.9nm,0.3s,baz=53,slow=11,SNR=85						
KSRS				LR	LR	20 12 19.2	
	comp=E,506nm,18.3s,baz=45,slow=35						
	comp=E,22nm,0.9s						
KS19	Wonju Array Si	19.38	249	P	Pn	20 05 22.7	-0.1
KS19				IAmb	IAmb	20 05 33.0	
	comp=Z,36nm,0.8s						
KSAR	Wonju Array Be	19.41	248	P	P	20 05 21.6	-0.2
KSAR	Wonju Array Be	19.41	248	P	P	20 05 21.6	-0.2
KSCHJ	Chungju	19.70	247	P	Pn	20 05 25.6	-1.0
KSCHJ				IAmb	IAmb	20 05 37.0	
	comp=Z,52nm,1.5s						
INCN	Inchon	20.18	250	P	P	20 05 30.3	0.0
INCN	Inchon	20.18	250	P	P	20 05 30.3	0.0
INCN				pmax	pmax		
	comp=Z,15nm,0.7s						
JTU	Tsushima	20.38	240	P	Pn	20 05 34.7	+0.1
JTU				IAmb	IAmb	20 05 37.2	
	comp=Z,37nm,1.0s						
TJN	Taejon	20.39	247	P	P	20 05 32.9	+0.4
TJN	Taejon	20.39	247	P	P	20 05 32.9	+0.4
TJN				pmax	pmax		
	comp=Z,72nm,0.9s						
JNU	Nakatsue	20.55	234	P	P	20 05 33.9	-0.4
	comp=Z,22nm,0.3s,baz=25,slow=0.2,SNR=15						
	comp=Z,22nm,0.3s						
JNU	Nakatsue	20.55	234	P	P	20 05 33.9	-0.4
HIA	Hailar	20.70	287	Pn	Pn	20 05 38.1	-0.2
HIA	Hailar	20.70	287	P	Pn	20 05 38.1	-0.2
HIA				pmax	pmax		
	comp=Z,32nm,1.3s						
NAWB	Namwon	20.98	245	P	P	20 05 39.1	+0.2
NAWB				IAmb	IAmb	20 05 51.8	
	comp=Z,40nm,1.0s						
JCJ	Chichijima	21.08	202	P	P	20 05 39.9	-0.1
	comp=Z,76nm,0.8s,baz=85,slow=12,SNR=5.0						
JCJ				LR	LR	20 15 09.8	
	comp=Z,81nm,18.6s,baz=352,slow=41						
	comp=Z,76nm,0.8s						
JCJ	Chichijima	21.08	202	IAmb	IAmb	20 05 47.3	
	comp=Z,90nm,0.9s						
JSU	Suzuyama	22.01	232	P	P	20 05 50.1	+0.1
JSU				IAmb	IAmb	20 05 51.4	
	comp=Z,28nm,0.9s						
BILL	Bilibino	22.44	15	P	P	20 05 55.1	+0.8
BILL				IAmb	IAmb	20 06 02.6	
	comp=Z,39nm,1.3s						
BILL	Bilibino	22.44	15	⇓*e*P	P	20 05 55.4	+1.1
BILL				*e*		20 06 19.7	
BILL				*e*S	S	20 09 52.0	-6.2
BILL				pmax	pmax		
	comp=Z,38nm,1.7s						
BILL				MLR	MLR		
	comp=Z,516nm,17.0s						
BILL	Bilibino	22.44	15	*e*P	P	20 05 55.4	+1.1
XLT	XiLinHaoTe	24.37	275	*e*P	P	20 06 15.0	+1.4
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
BOD	Bodaibo	24.50	309	*e*P	P	20 06 15.2	+0.7
BOD				pmax	pmax		
	comp=Z,25nm,0.9s						
BOD	Bodaibo	24.50	309	*e*P	P	20 06 15.2	+0.7
GAMB	Gambell	26.51	37	P	P	20 06 32.7	+0.1
	baz=249						
TIXI	Tiksi	26.68	345	P	P	20 06 34.4	+0.4
	comp=Z,5.1nm,0.7s,baz=270,slow=24,SNR=40						
	comp=Z,5.1nm,0.7s						
TIXI	Tiksi	26.68	345	P	P	20 06 33.4	-0.6
JOW	Kunigami	26.88	229	P	P	20 06 36.1	-0.1
	comp=Z,15nm,0.9s,baz=5.4,slow=5.9,SNR=8.8						
JOW				LR	LR	20 18 27.4	
	comp=Z,123nm,18.5s,baz=88,slow=39						
	comp=Z,15nm,0.9s						
JOW	Kunigami	26.88	229	P	P	20 06 35.8	-0.4
JOW				IAmb	IAmb	20 06 37.6	
	comp=Z,18nm,0.9s						
UNV	Unalaska Valle	27.69	60	P	P	20 06 43.2	-0.1
	baz=274						
SSE	Sheshan	27.73	245	P	P	20 06 43.8	-0.1
SSE				S	S	20 11 27.3	+3.4
SSE				pmax	pmax		
	comp=Z,12nm,0.7s						
SSE				pmax	pmax		
	comp=Z,55nm,5.0s						
SSE				LR	LR		
	comp=Z,130nm,17.3s						
SSE				LR	LR		
	comp=Z,120nm,16.7s						
HNS	HongShan	28.15	263	*e*P	P	20 06 45.5	-2.1
HNS				S	S	20 11 27.8	-2.6
HNS				LR	LR		
	comp=Z,340nm,14.3s						
HNS				LR	LR		
	comp=Z,260nm,13.2s						
HNS				LR	LR		
	comp=Z,290nm,17.9s						
NJ2	Nanjing	28.56	250	*e*P	P	20 06 51.0	-0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,660nm,15.6s						
NJ2				LR	LR		
	comp=Z,550nm,15.2s						
NJ2				LR	LR		
	comp=Z,580nm,18.5s						
HHC	Hu-ho-hao-te	28.64	272	*e*P	P	20 06 52.0	-0.1
HHC				S	S	20 11 38.5	+0.2
HHC				SS	SnSn	20 13 08.5	+8.7
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,6.3s						
HHC				LR	LR		
	comp=Z,730nm,12.6s						
HHC				LR	LR		
	comp=Z,640nm,14.1s						
HHC				LR	LR		
	comp=Z,870nm,13.1s						
TNA	Tin City	28.66	35	P	P	20 06 51.7	-0.1
	baz=250						
ULN	Ulaanbaatar	29.23	288	*i* P	P	20 06 59.0	+1.7
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ULN	Ulaanbaatar	29.23	288	*e*P	P	20 06 59.0	+1.7
ANM	Nome	29.39	38	P	P	20 06 59.6	+1.2
	baz=255						
SONM	Songino Array	29.67	288	P	P	20 07 01.7	+0.6
	comp=Z,0.2nm,0.4s,baz=67,slow=11,SNR=1.4						
SONM				LR	LR	20 19 12.8	
	comp=Z,196nm,19.9s,baz=78,slow=37						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	29.67	288	P	P	20 07 01.7	+0.6
SONM				pmax	pmax		
	comp=Z,3.0nm,1.3s						
H11N2	WAKE ISLAND Hy	30.33	149	T	T	20 38 32.1	
	baz=338,slow=75,SNR=4323						
H11N1	WAKE ISLAND Hy	30.35	149	T	T	20 38 33.1	
	baz=338,slow=75,SNR=4582						
H11N3	WAKE ISLAND Hy	30.35	149	T	T	20 38 33.4	
	baz=338,slow=75,SNR=3925						
ZAK	Zakamensk	31.04	294	*e*P	P	20 07 14.4	+1.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ZAK	Zakamensk	31.04	294	*e*P	P	20 07 14.4	+1.2
SDPT	Sand Point	31.07	56	P	P	20 07 13.4	+0.1
	baz=275						
LYN	LuoYang	31.24	260	*e*P	P	20 07 20.5	+5.6
LYN				S	S	20 12 28.0	+9.1
LYN				pmax	pmax		
	comp=Z,90nm,4.3s						
LYN				LR	LR		
	comp=Z,300nm,14.1s						
LYN				LR	LR		
	comp=Z,190nm,13.1s						
LYN				LR	LR		
	comp=Z,270nm,12.2s						
H11S1	WAKE ISLAND Hy	31.40	150	T	T	20 40 26.8	
	baz=339,slow=76,SNR=3971						
H11S3	WAKE ISLAND Hy	31.40	150	T	T	20 40 25.2	
	baz=339,slow=76,SNR=3188						
H11S2	WAKE ISLAND Hy	31.41	150	T	T	20 40 16.1	
	baz=339,slow=76,SNR=2696						
CHNA	Chernabura Isl	31.64	57	P	P	20 07 19.1	+0.9
	baz=277						
CHGN	Chignik	32.14	54	P	P	20 07 23.2	+0.5
	baz=275						
GCSA	Galena City Sc	33.01	39	P	P	20 07 30.2	+0.1
	baz=263						
TTA	Tatalina	33.24	42	P	P	20 07 32.4	+0.1
TTA				IAmb	IAmb	20 07 33.9	
	comp=Z,15nm,0.9s						
TTA	Tatalina	33.24	42	P	P	20 07 32.4	+0.1
TTA				pmax	pmax		
	comp=Z,15nm,0.9s						
TTA	Tatalina	33.24	42	P	P	20 07 32.8	+0.5
	baz=267,SNR=18						
N18K	Kilae Creek	33.25	46	P	P	20 07 33.2	+0.9
N18K	Kilae Creek	33.25	46	P	P	20 07 33.4	+1.1
	baz=271,SNR=16						
SVW2	Sparrevohn	33.40	45	P	P	20 07 34.3	+0.7
SVW2				IAmb	IAmb	20 07 35.7	
	comp=Z,13nm,1.0s						
P18K	Big Mountain,	33.62	48	P	P	20 07 35.9	+0.3
P18K				IAmb	IAmb	20 07 37.2	
	comp=Z,16nm,1.0s						
P18K	Big Mountain,	33.62	48	P	P	20 07 35.7	+0.1
	baz=273						
L19K	White Mountain	33.75	43	P	P	20 07 37.0	+0.3
L19K				IAmb	IAmb	20 07 38.6	
	comp=Z,16nm,1.2s						
L19K	White Mountain	33.75	43	P	P	20 07 37.2	+0.5
	baz=269,SNR=7.5						
GUMO	Guam	33.77	190	LR	LR	20 20 54.4	
	comp=Z,154nm,19.6s,baz=13,slow=36						
XAN	Xi'an	33.93	263	P	P	20 07 50.5	+12
XAN				pP	sP	20 07 57.5	+5.9
XAN				sP	pwP	20 08 01.0	+9.4
XAN				S	S	20 13 48.0	+47
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,110nm,5.8s						
XAN				LR	LR		
	comp=N,290nm,15.8s						
XAN				LR	LR		
	comp=E,270nm,13.7s						
XAN				LR	LR		
	comp=Z,300nm,18.1s						
N19K	Bonanza Creek	33.94	46	P	P	20 07 39.5	+1.1
N19K				IAmb	IAmb	20 07 40.5	
	comp=Z,16nm,1.1s						
N19K	Bonanza Creek	33.94	46	P	P	20 07 39.1	+0.7
	baz=272,SNR=9.4						
M19K	Big River Lodg	33.97	44	P	P	20 07 38.9	+0.4
	baz=270						
K20K	Telida	34.14	41	P	P	20 07 40.3	+0.3
K20K				IAmb	IAmb	20 07 42.5	
	comp=Z,14nm,0.9s						
K20K	Telida	34.14	41	P	P	20 07 40.5	+0.5
	baz=268,SNR=14						
J20K	Nowinta River	34.14	40	P	P	20 07 40.1	+0.1
J20K				IAmb	IAmb	20 07 41.9	
	comp=Z,14nm,0.9s						
J20K	Nowinta River	34.14	40	P	P	20 07 40.7	+0.6
	baz=267,SNR=18						
L20K	Farewell, AK	34.21	43	P	P	20 07 41.0	+0.3
	baz=270,SNR=11						
A21K	Barrow	34.42	27	P	P	20 07 42.0	-0.3
	baz=254						
IMAR	Indian Mountai	34.45	37	P	P	20 07 42.2	-0.4
SII	Sitkinak Islan	34.45	53	P	P	20 07 42.6	-0.2
	baz=278						
Q19K	Cape Douglas,	34.47	49	P	P	20 07 42.6	-0.3
	baz=275						
M20K	Styx River	34.56	44	P	P	20 07 44.6	+0.8
	baz=271						
RSO	Redoubt South	34.80	46	P	P	20 07 47.3	+1.3
H21K	Melozitna Rive	34.81	37	P	P	20 07 45.8	0.0
H21K	Melozitna Rive	34.81	37	P	P	20 07 45.1	-0.7
	baz=266,SNR=10						
O20K	Slope Mountain	34.89	47	P	P	20 07 46.9	+0.3
	baz=274						
CHUM	Lake Minchumin	34.94	40	P	P	20 07 48.1	+1.2
	baz=269,SNR=5.2						
PPLA	Purkeypile	34.99	42	P	P	20 07 48.4	+0.9
PPLA	Purkeypile	34.99	42	P	P	20 07 47.8	+0.3
	baz=270,SNR=14						
CAST	Castle Rocks	35.04	41	P	P	20 07 48.1	+0.3
CAST	Castle Rocks	35.04	41	P	P	20 07 48.1	+0.3
	baz=270,SNR=25						
I21K	Tanana	35.12	38	P	P	20 07 49.3	+0.8
I21K				IAmb	IAmb	20 07 50.6	
	comp=Z,8.9nm,0.8s						
I21K	Tanana	35.12	38	P	P	20 07 48.8	+0.3
	baz=267						
KDAK	Kodiak Island	35.15	51	P	P	20 07 47.8	-0.9
	comp=Z,13nm,0.9s,baz=276,slow=3.7,SNR=12						
KDAK				LR	LR	20 23 18.3	
	comp=Z,87nm,19.4s,baz=288,slow=38						
	comp=Z,13nm,0.9s						
KDAK	Kodiak Island	35.15	51	P	P	20 07 48.0	-0.7
KDAK				IAmb	IAmb	20 07 49.4	
	comp=Z,14nm,0.9s						
KDAK	Kodiak Island	35.15	51	P	P	20 07 48.0	-0.7
KDAK				pmax	pmax		
	comp=Z,14nm,0.9s						
KDAK	Kodiak Island	35.15	51	P	P	20 07 48.0	-0.7
	baz=278						
Q20K	Shuyak Island	35.15	50	P	P	20 07 48.2	-0.5
	baz=276						
BPAW	Bear Paw Mtn.	35.53	40	P	P	20 07 52.0	+0.1
BPAW				IAmb	IAmb	20 07 53.9	
	comp=Z,12nm,0.9s						
BPAW	Bear Paw Mtn.	35.53	40	P	P	20 07 52.3	+0.3
	baz=270,SNR=14						
KTH	Kantishna Hill	35.56	41	P	P	20 07 52.8	+0.5
MLY	Manley	35.65	38	P	P	20 07 53.3	+0.2
MLY				IAmb	IAmb	20 07 55.1	
	comp=Z,11nm,1.0s						
MLY	Manley	35.65	38	P	P	20 07 53.7	+0.7
	baz=269,SNR=13						
TRF	Thorofare Moun	35.84	41	P	P	20 07 55.0	+0.1
TRF				IAmb	IAmb	20 07 57.8	
	comp=Z,13nm,1.0s						
TRF	Thorofare Moun	35.84	41	P	P	20 07 55.4	+0.5
	baz=271,SNR=15						
BRSE	Bradley Lake S	35.87	47	P	P	20 07 55.3	+0.3
	baz=276						
CUT	Chulitna	35.89	43	P	P	20 07 55.0	-0.1
COLD	Coldfoot	35.96	35	P	P	20 07 55.9	+0.2
COLD				IAmb	IAmb	20 07 59.1	
	comp=Z,6.4nm,0.8s						
COLD	Coldfoot	35.96	35	P	P	20 07 55.8	+0.2
	baz=266						
H23K	Yukon River	36.16	37	P	P	20 07 58.2	+0.8
H23K				IAmb	IAmb	20 07 59.7	
	comp=Z,14nm,1.1s						
H23K	Yukon River	36.16	37	P	P	20 07 58.5	+1.1
	baz=269,SNR=12						
I23K	Minto, Yukon-K	36.23	38	P	P	20 07 58.6	+0.7
I23K				IAmb	IAmb	20 07 60.0	
	comp=Z,11nm,1.1s						
I23K	Minto, Yukon-K	36.23	38	P	P	20 07 58.7	+0.8
	baz=270,SNR=8.4						
RC01	Rabbit Creek A	36.23	45	P	P	20 07 58.0	0.0
RC01				IAmb	IAmb	20 07 59.1	
	comp=Z,13nm,0.8s						
RC01	Rabbit Creek A	36.23	45	P	P	20 07 58.1	0.0
	baz=275,SNR=6.4						
LZH	Lanzhou	36.25	270	*e*P	P	20 08 00.5	+1.9
LZH				pP	pP	20 08 06.8	-1.1
LZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH				LR	LR		
	comp=Z,540nm,14.6s						
LZH				LR	LR		
	comp=Z,310nm,13.8s						
LZH				LR	LR		
	comp=Z,310nm,16.0s						
TOLK	Toolik Lake Re	36.31	32	P	P	20 07 58.8	+0.1
TOLK				IAmb	IAmb	20 07 59.8	
	comp=Z,6.8nm,0.9s						
TOLK	Toolik Lake Re	36.31	32	P	P	20 07 59.0	+0.3
	baz=265,SNR=8.6						
NEA2	Nenana	36.36	39	P	P	20 07 59.7	+0.6
NEA2	Nenana	36.36	39	P	P	20 07 59.6	+0.5
	baz=271,SNR=7.8						
MCK	McKinley	36.44	41	P	P	20 08 00.1	+0.4
MCK	McKinley	36.44	41	P	P	20 08 00.2	+0.4
MCK				pmax	pmax		
	comp=Z,22nm,1.0s						
MCK	McKinley	36.44	41	P	P	20 07 59.9	+0.1
	baz=272,SNR=10						
SEW	Seward	36.47	47	P	P	20 07 59.8	-0.2
SEW				IAmb	IAmb	20 08 00.8	
	comp=Z,12nm,1.0s						
SEW	Seward	36.47	47	P	P	20 07 59.7	-0.4
	baz=277,SNR=6.2						
PMR	Palmer	36.48	44	P	P	20 07 59.6	-0.5
	baz=275						
RND	Reindeer	36.49	41	P	P	20 08 00.1	-0.1
RND	Reindeer	36.49	41	P	P	20 08 00.2	-0.1
RND				pmax	pmax		

	comp=Z,25nm,1.0s						
WAT1	Susitna Watana	36.66	42	P	P	20 08 01.1	-0.6
	baz=274						
MDM	Murphy Dome	36.71	39	P	P	20 08 02.7	+0.6
MDM				IAmb	IAmb	20 08 04.0	
	comp=Z,17nm,1.0s						
WRH	Wood River Hil	36.78	39	P	P	20 08 02.9	+0.3
KNK	Knik Glacier	36.82	44	P	P	20 08 02.9	-0.2
KNK	Knik Glacier	36.82	44	P	P	20 08 03.2	+0.1
	baz=276,SNR=23						
SML	Sawmill	36.84	44	P	P	20 08 03.5	+0.2
SML	Sawmill	36.84	44	P	P	20 08 03.6	+0.3
	baz=275,SNR=50						
H24K	Noodor Dome	36.85	37	P	P	20 08 04.0	+0.7
H24K				IAmb	IAmb	20 08 05.6	
	comp=Z,11nm,1.0s						
H24K	Noodor Dome	36.85	37	P	P	20 08 04.2	+0.9
	baz=270,SNR=13						
TCOL	CIGO, UAF Yank	36.87	39	P	P	20 08 04.4	+1.0
TCOL	CIGO, UAF Yank	36.87	39	P	P	20 08 04.0	+0.6
	baz=272						
COLA	College	36.88	39	P	P	20 08 04.1	+0.7
COLA	College	36.88	39	P	P	20 08 04.1	+0.7
COLA				pmax	pmax		
	comp=Z,25nm,0.7s						
COLA	College	36.88	39	P	P	20 08 03.8	+0.4
	baz=272						
CCB	Clear Creek Bu	36.90	39	P	P	20 08 04.1	+0.4
CCB				IAmb	IAmb	20 08 05.3	
	comp=Z,16nm,1.2s						
POKR	Poker Plat Res	37.05	38	P	P	20 08 06.1	+1.2
POKR	Poker Plat Res	37.05	38	P	P	20 08 05.8	+0.9
	baz=272,SNR=5.8						
WAT6	Susitna Watana	37.05	42	P	P	20 08 04.7	-0.5
	baz=275,SNR=7.2						
M23K	Glacier View	37.13	44	P	P	20 08 05.7	+0.1
	baz=276,SNR=7.6						
DHY	Denali Highway	37.18	42	P	P	20 08 06.0	-0.1
DHY	Denali Highway	37.18	42	P	P	20 08 06.1	-0.1
	baz=274,SNR=19						
HDA	Harding Lake	37.28	39	P	P	20 08 06.3	-0.6
HDA				IAmb	IAmb	20 08 08.0	
	comp=Z,9.9nm,0.7s						
HDA	Harding Lake	37.28	39	P	P	20 08 06.5	-0.4
	baz=273,SNR=15						
IL31		37.29	39	P	P	20 08 06.6	-0.4
IL31				IAmb	IAmb	20 08 08.3	
	comp=Z,25nm,1.3s						
ILAR	Eielson Array	37.29	39	P	P	20 08 07.0	0.0
	comp=Z,12nm,1.1s,baz=266,slow=7.8,SNR=58						
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	37.29	39	P	P	20 08 06.6	-0.4
ILAR	Eielson Array	37.29	39	P	P	20 08 07.0	0.0
GTA	Gaotai	37.30	277	⇓P	P	20 08 08.8	+1.3
GTA				pP	pP	20 08 17.8	+1.0
GTA				sP	pwP	20 08 22.0	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,34nm,4.7s						
GTA				LR	LR		
	comp=Z,250nm,18.2s						
GTA				LR	LR		
	comp=Z,220nm,17.1s						
GTA				LR	LR		
	comp=Z,310nm,16.0s						
SCM	Sheep Creek Mo	37.31	44	P	P	20 08 07.6	+0.3
SCM	Sheep Creek Mo	37.31	44	P	P	20 08 07.6	+0.3
SCM				pmax	pmax		
	comp=Z,42nm,1.2s						
SCM	Sheep Creek Mo	37.31	44	P	P	20 08 07.4	+0.1
	baz=276,SNR=10						
GLI	Glacier Island	37.54	45	P	P	20 08 09.0	-0.2
GLI				IAmb	IAmb	20 08 10.0	
	comp=Z,14nm,0.8s						
GLI	Glacier Island	37.54	45	P	P	20 08 09.0	-0.2
	baz=278,SNR=8.1						
NRIK	Noril'sk	37.61	329	P	P	20 08 11.7	+2.1
	comp=Z,1.1nm,0.2s,baz=98,slow=8.3,SNR=5.8						
	comp=Z,1.1nm,0.2s						
M24K	Tolsona, Glenn	37.82	43	P	P	20 08 12.7	+1.0
M24K	Tolsona, Glenn	37.82	43	P	P	20 08 12.2	+0.6
	baz=277,SNR=6.8						
K24K	Donnelly Dome	37.84	40	P	P	20 08 11.3	-0.4
	baz=275,SNR=5.5						
FID	Port Fidalgo	37.85	45	P	P	20 08 11.6	-0.2
FID				IAmb	IAmb	20 08 12.8	
	comp=Z,24nm,1.3s						
HIN	Hinchinbrook I	37.89	46	P	P	20 08 12.7	+0.5
J25K	Salcha River,	37.95	39	P	P	20 08 11.7	-0.9
J25K	Salcha River,	37.95	39	P	P	20 08 12.5	-0.2
	baz=274,SNR=7.4						
KLU	Klutina	38.02	44	P	P	20 08 13.5	+0.2
KLU	Klutina	38.02	44	P	P	20 08 13.7	+0.5
	baz=278,SNR=15						
PAX	Paxson	38.05	42	P	P	20 08 14.9	+1.3
PAX	Paxson	38.05	42	P	P	20 08 14.9	+1.3
PAX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PAX	Paxson	38.05	42	P	P	20 08 13.9	+0.3
	baz=276						
DIV	Divide	38.14	45	P	P	20 08 14.6	+0.3
BMAR	Burnt Mountain	38.14	34	P	P	20 08 15.0	+0.8
EYAK	Cordova Ski Ar	38.24	46	P	P	20 08 15.6	+0.6
	baz=279						
HARP	HAARP	38.26	43	P	P	20 08 16.2	+0.9
	baz=277,SNR=5.5						
SCRK	Sand Creek	38.61	40	P	P	20 08 17.7	-0.6
SCRK				IAmb	IAmb	20 08 19.1	
	comp=Z,23nm,1.4s						
SCRK	Sand Creek	38.61	40	P	P	20 08 17.8	-0.4
	baz=276,SNR=18						
N25K	Chitina, Valde	38.63	44	P	P	20 08 19.0	+0.6
N25K				IAmb	IAmb	20 08 20.4	
	comp=Z,9.4nm,0.9s						
N25K	Chitina, Valde	38.63	44	P	P	20 08 19.3	+0.8
	baz=279,SNR=6.6						
BMRM	Bremner River	38.73	45	P	P	20 08 19.7	+0.5
BMRM	Bremner River	38.73	45	P	P	20 08 19.9	+0.7
	baz=279,SNR=11						
J26L	Joseph Creek	38.74	39	P	P	20 08 19.4	+0.1
	baz=276						
HMT	Hamilton	39.00	46	P	P	20 08 22.4	+1.0
HMT				IAmb	IAmb	20 08 23.5	
	comp=Z,26nm,1.2s						
L26K	Log Cabin Wild	39.01	41	P	P	20 08 22.2	+0.7
L26K	Log Cabin Wild	39.01	41	P	P	20 08 22.4	+0.9
	baz=278,SNR=7.9						
GLB	Gilahina Butte	39.03	44	P	P	20 08 22.2	+0.5
VRDI	Verde Repeater	39.24	44	P	P	20 08 24.1	+0.5
VRDI				IAmb	IAmb	20 08 25.5	
	comp=Z,14nm,1.0s						
M26K	Nabesna, AK	39.26	42	P	P	20 08 24.9	+1.2
M26K	Nabesna, AK	39.26	42	P	P	20 08 25.2	+1.6
	baz=279,SNR=32						
MCARA	McCarthy VSAT	39.41	44	P	P	20 08 26.3	+1.4
MCARA				IAmb	IAmb	20 08 41.6	
	comp=Z,8.9nm,0.8s						
MCARA	McCarthy VSAT	39.41	44	P	P	20 08 26.0	+1.1
	baz=280						
K27K	Chicken	39.44	40	P	P	20 08 25.9	+0.9
	baz=278						
TGL	Tana Glacier	39.62	45	P	P	20 08 27.9	+1.2
TGL				IAmb	IAmb	20 08 28.9	
	comp=Z,16nm,1.0s						
WAX	Waxell Ridge	39.67	45	P	P	20 08 28.3	+1.2
L27K	Beaver Creek,	39.69	41	P	P	20 08 28.4	+1.2
L27K	Beaver Creek,	39.69	41	P	P	20 08 28.9	+1.7
	baz=279,SNR=49						
BCAR	Beaver Creek A	39.71	41	P	P	20 08 28.6	+1.2
SNH	Sunshine Point	39.73	46	P	P	20 08 28.9	+1.4
EGAK	Eagle	39.73	38	P	P	20 08 27.1	-0.4
EGAK				IAmb	IAmb	20 08 28.7	
	comp=Z,26nm,1.2s						
EGAK	Eagle	39.73	38	P	P	20 08 27.6	+0.1
	baz=278,SNR=23						
M27K	Edge Creek, AK	39.78	42	P	P	20 08 29.3	+1.3
M27K				IAmb	IAmb	20 08 30.7	
	comp=Z,23nm,0.9s						
M27K	Edge Creek, AK	39.78	42	P	P	20 08 29.7	+1.6
	baz=280,SNR=35						
ISLE	Juniper Island	39.89	45	P	P	20 08 29.8	+0.9
BARN	Barnard Glacie	40.12	44	P	P	20 08 32.3	+1.3
GRNC	Granite Creek	40.14	45	P	P	20 08 32.2	+1.0
MESA	MESA	40.16	46	P	P	20 08 32.5	+1.2
MESA				IAmb	IAmb	20 08 33.7	
	comp=Z,16nm,0.9s						
MESA	MESA	40.16	46	P	P	20 08 32.4	+1.1
	baz=282						
YAH	Yahtse	40.22	45	P	P	20 08 33.0	+1.2
BVCY	Beaver Creek	40.24	42	P	P	20 08 33.0	+1.3
	baz=281						
CTG	Chitna Glacier	40.29	44	P	P	20 08 33.6	+1.3
	baz=282,SNR=24						
CTGM	Chitina Glacie	40.30	44	P	P	20 08 33.5	+1.1
LOGN	Logan Glacier	40.48	45	P	P	20 08 35.1	+1.1
LOGN				IAmb	IAmb	20 08 36.1	
	comp=Z,21nm,1.1s						
TABL	Table Mountain	40.50	45	P	P	20 08 35.2	+1.0
YUK3	Moose Creek	40.54	43	P	P	20 08 35.5	+1.0
	baz=282,SNR=20						
DAWY	Dawson	40.60	39	P	P	20 08 34.9	+0.1
DAWY	Dawson	40.60	39	P	P	20 08 35.1	+0.3
	baz=280						
I29M	Ogilvie Camp,	40.85	37	P	P	20 08 37.3	+0.6
I29M				IAmb	IAmb	20 08 38.8	
	comp=Z,19nm,0.9s						
I29M	Ogilvie Camp,	40.85	37	P	P	20 08 37.6	+0.8
	baz=279,SNR=20						
PCA	Pinnacle	41.01	45	P	P	20 08 39.1	+1.0
PCA				IAmb	IAmb	20 08 40.0	
	comp=Z,15nm,0.7s						
PINM	Pinnacle	41.01	45	P	P	20 08 39.0	+0.8
	baz=284,SNR=5.7						
ZALV	Zalesovo Beam	41.07	305	P	P	20 08 39.7	+1.0
	comp=Z,1.1nm,0.5s,baz=72,slow=6.2,SNR=5.1						
ZALV				PcP	PcP	20 10 38.9	+1.1
	comp=Z,3.2nm,0.8s,baz=87,slow=3.0,SNR=8.3						
ZALV				LR	LR	20 26 29.5	
	comp=Z,288nm,18.7s,baz=106,slow=37						
	comp=Z,1.1nm,0.5s						
EPYK	Eagle Plains	41.33	36	P	P	20 08 42.0	+1.3
EPYK				IAmb	IAmb	20 08 43.0	
	comp=Z,33nm,1.4s						
EPYK	Eagle Plains	41.33	36	P	P	20 08 41.3	+0.7
	baz=279						
YUK4	Talbot Arm	41.48	43	P	P	20 08 43.1	+0.9
	baz=284						
PNL	Peninsula	41.53	46	P	P	20 08 42.9	+0.5
	baz=285						
YUK6	Outpost Mounta	41.71	44	P	P	20 08 45.2	+1.0
	baz=284						
M30M	Minto, Yukon	42.05	41	P	P	20 08 47.9	+1.3
M30M	Minto, Yukon	42.05	41	P	P	20 08 48.3	+1.6
	baz=284,SNR=7.8						
HYT	Haines Junctio	42.15	44	P	P	20 08 49.2	+1.6
HYT				IAmb	IAmb	20 08 50.6	
	comp=Z,24nm,1.0s						
HYT	Haines Junctio	42.15	44	P	P	20 08 49.2	+1.6
	baz=285,SNR=23						
N30M	Aishikik Lake	42.19	43	P	P	20 08 48.7	+1.0
	baz=284						
INK	Inuvik	42.22	32	P	P	20 08 48.4	+0.5
	comp=Z,5.3nm,0.7s,baz=294,slow=6.0,SNR=12						
INK				LR	LR	20 29 26.1	
	comp=Z,124nm,18.5s,baz=290,slow=41						
	comp=Z,5.3nm,0.7s						
INK	Inuvik	42.22	32	P	P	20 08 48.6	+0.7
INK	Inuvik	42.22	32	P	P	20 08 48.6	+0.7
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
INK	Inuvik	42.22	32	P	P	20 08 48.9	+1.0
	baz=280,SNR=7.7						
GOMU	GeErMu	42.34	276	P	P	20 08 50.0	+0.2
GOMU				pP	pP	20 08 53.3	-5.9
GOMU				sP	pwP	20 08 58.0	-4.9
GOMU				S	S	20 15 06.8	-1.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,36nm,5.3s						
GOMU				LR	LR		
	comp=Z,200nm,15.4s						
GOMU				LR	LR		
	comp=Z,140nm,15.9s						
GOMU				LR	LR		
	comp=Z,94nm,15.3s						
N31M	Braeburn, Yuko	42.78	43	P	P	20 08 54.5	+1.9
N31M				IAmb	IAmb	20 08 55.8	
	comp=Z,25nm,1.1s						
N31M	Braeburn, Yuko	42.78	43	P	P	20 08 54.5	+1.9
	baz=286,SNR=6.7						
O30N	Mendenhall	42.83	44	P	P	20 08 54.5	+1.4
	baz=286						
PLBC	Pleasant Camp	43.08	46	P	P	20 08 56.8	+1.8
	baz=287,SNR=8.8						
M31M	Drury Creek, Y	43.23	41	P	P	20 08 57.8	+1.6
M31M				IAmb	IAmb	20 08 58.8	
	comp=Z,12nm,0.8s						
M31M	Drury Creek, Y	43.23	41	P	P	20 08 57.8	+1.6
	baz=286,SNR=8.4						
WMQ	Urumqi	43.27	290	eP	P	20 08 56.8	0.0
WMQ				LR	LR		
	comp=Z,550nm,14.7s						
WMQ				LR	LR		
	comp=Z,160nm,22.3s						
WHY	Whitehorse	43.44	44	P	P	20 08 59.9	+1.9
WHY	Whitehorse	43.44	44	P	P	20 08 59.7	+1.7
	baz=287,SNR=9.3						
PZH	PanZhiHua	43.46	259	P	P	20 09 00.5	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,90nm,6.7s						
FARO	Faro, Yukon	43.69	41	P	P	20 09 01.2	+1.3
	baz=286						
KMI	Kunming	43.71	257	⇑P	P	20 09 02.5	+1.7
KMI				sP	pP	20 09 08.8	-1.5
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
A36M	Sachs Harbour	44.26	26	P	P	20 09 04.7	+0.5
A36M	Sachs Harbour	44.26	26	P	P	20 09 05.1	+0.9
	baz=283,SNR=5.2						
MMPY	Sheldon Lake,	44.50	40	P	P	20 09 08.1	+1.7
	baz=288,SNR=8.3						
P33M	Teslin, Yukon	44.55	44	P	P	20 09 08.4	+1.5
P33M				IAmb	IAmb	20 09 09.7	
	comp=Z,17nm,1.1s						
P33M	Teslin, Yukon	44.55	44	P	P	20 09 08.4	+1.5
	baz=289,SNR=5.9						
MK31	Makanchi Array	45.32	296	P	P	20 09 13.2	+0.1
MK31	Makanchi Array	45.32	296	i P	P	20 09 13.5	+0.4
MKAR	Makanchi Array	45.32	296	P	P	20 09 13.4	+0.3
	comp=Z,1.3nm,0.7s,baz=67,slow=9.3,SNR=18						
MKAR				PcP	PcP	20 10 53.1	+0.9
	comp=Z,0.9nm,0.7s,baz=61,slow=5.4,SNR=1.9						
MKAR				LR	LR	20 28 51.1	
	comp=Z,297nm,20.8s,baz=64,slow=37						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	45.32	296	P	P	20 09 13.6	+0.5
C36M	Paulatuk	45.32	30	P	P	20 09 13.2	+0.5
	baz=287						
DAV	Davao City (W)	45.33	216	LR	LR	20 25 36.6	
	comp=Z,93nm,20.6s,baz=57,slow=33						
KURK	Kurchatov	45.80	302	P	P	20 09 16.9	+0.2
KURK	Kurchatov	45.80	302	P	P	20 09 18.1	+1.3
KURK						20 10 54.5	
KURK	Kurchatov	45.80	302	eP	P	20 09 18.1	+1.3
KURBB	Kurchatov Arra	45.89	302	P	P	20 09 18.1	+0.6
	comp=Z,2.7nm,0.6s,baz=71,slow=8.9,SNR=26						
KURBB				PcP	PcP	20 10 54.5	+0.4
	comp=Z,1.6nm,0.7s,baz=68,slow=3.3,SNR=4.9						
KURBB				LR	LR	20 28 39.8	
	comp=Z,88nm,21.5s,baz=45,slow=36						
	comp=Z,2.7nm,0.6s						
CRAG	Craig	46.09	50	P	P	20 09 20.0	+1.0
	baz=293						
S34M	Telegraph Cree	46.17	46	P	P	20 09 19.8	+0.2
	baz=292						
DLBC	Dease Lake	46.51	45	LR	LR	20 31 25.2	
	comp=Z,59nm,19.4s,baz=284,slow=39						
DLBC	Dease Lake	46.51	45	P	P	20 09 24.7	+2.3
DLBC				IAmb	IAmb	20 09 25.8	
	comp=Z,10nm,1.2s						
WRGLY	Wrigley	47.64	38	P	P	20 09 32.2	+1.2
	baz=293						
BRVK	Borovoye	49.40	308	ceP	P	20 09 45.7	+1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	49.40	308	eP	P	20 09 45.7	+1.0
CHTO	Chiang Mai	50.62	254	P	P	20 09 55.5	+1.1
CHTO				IAmb	IAmb	20 10 05.4	
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	50.62	254	P	P	20 09 55.5	+1.1
CHTO				pmax	pmax		
	comp=Z,11nm,1.1s						
SIJI	Sorong	50.73	205	LR	LR	20 28 40.1	
	comp=Z,42nm,21.5s,baz=166,slow=33						
CMAR	Chiang Mai Arr	50.88	254	P	P	20 09 57.8	+1.5
	comp=Z,2.5nm,0.8s,baz=44,slow=6.8,SNR=12						
CMAR				LR	LR	20 32 48.5	
	comp=Z,110nm,18.1s,baz=100,slow=38						
	comp=Z,2.5nm,0.8s						
CMAR	Chiang Mai Arr	50.88	254	P	P	20 09 57.0	+0.7
YKA	Yellowknife Ar	51.61	36	P	P	20 10 02.0	+0.8
	comp=Z,10nm,0.8s,baz=300,slow=7.3,SNR=33						
YKA				LR	LR	20 35 51.9	
	comp=Z,55nm,18.4s,baz=324,slow=41						
	comp=Z,10nm,0.8s						
YKA	Yellowknife Ar	51.61	36	P	P	20 10 01.1	-0.1
YKA	Yellowknife Ar	51.61	36	ceP	P	20 10 02.0	+0.8
YKA				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	52.20	295	LR	LR	20 33 23.3	
	comp=Z,191nm,19.6s,baz=56,slow=37						
AAK	Ala-Archa	52.20	295	P	P	20 10 07.8	+1.6
AAK	Ala-Archa	52.20	295	P	P	20 10 07.8	+1.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	52.20	295	eP	P	20 10 07.8	+1.6
SVE	Sverdlovsk	52.45	316	eP	P	20 10 09.1	+1.6
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
SVE	Sverdlovsk	52.45	316	eP	P	20 10 09.1	+1.6
ARU	Arti	53.63	316	LR	LR	20 33 35.2	
	comp=Z,85nm,20.5s,baz=53,slow=36						
ARU	Arti	53.63	316	P	P	20 10 16.1	-0.2
ARU				IAmb	IAmb	20 10 22.2	
	comp=Z,7.5nm,0.7s						
ARU	Arti	53.63	316	d iP	P	20 10 16.7	+0.4
ARU						20 12 13.9	
ARU				S	S	20 17 51.5	+4.3
ARU				SS	SS	20 21 24.5	-2.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,108nm,13.0s						
ARU	Arti	53.63	316	eP	P	20 10 16.7	+0.4
KK31	Karatay Array	54.39	297	P	P	20 10 22.3	+0.3
KK31	Karatay Array	54.39	297	P	P	20 10 22.3	+0.3
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	54.39	297	P	P	20 10 22.1	0.0
KKAR	Karatay Array	54.39	297	P	P	20 10 22.1	0.0
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
D03D	Eldon	55.39	55	P	P	20 10 30.1	+0.9
	baz=304						
PRGR	Permogore	56.17	326	eP	P	20 10 34.0	-0.5
KIRV	Kirov	56.50	322	i P	P	20 10 36.3	-0.6
GAR	Garm	56.88	293	P	P	20 10 41.3	+1.2
GAR				IAmb	IAmb	20 10 50.6	
	comp=Z,7.6nm,0.9s						
HNR	Honiara	56.88	169	P	P	20 10 40.9	+0.8
	comp=Z,53nm,0.6s,baz=212,slow=8.0,SNR=2.5						
HNR	Honiara	56.88	169	IAmb	IAmb	20 10 43.0	
	comp=Z,46nm,0.7s						
HNR	Honiara	56.88	169	P	P	20 10 40.9	+0.8
HNR				pmax	pmax		
	comp=Z,46nm,0.7s						
ABKAR	Akbulak array	56.93	309	P	P	20 10 40.4	+0.2
ABKAR				IAmb	IAmb	20 10 50.8	
	comp=Z,3.2nm,0.6s						
ABKAR	Akbulak array	56.93	309	P	P	20 10 40.1	-0.1
ARCES	ARCESS Array B	56.97	340	P	P	20 10 40.0	-0.1
	comp=Z,3.5nm,0.9s,baz=34,slow=6.6,SNR=3.5						
ARCES				LR	LR	20 37 22.6	
	comp=Z,115nm,21.4s,baz=32,slow=38						
	comp=Z,3.5nm,0.9s						
AKTO	Aktyubinsk	57.26	311	LR	LR	20 37 40.1	
	comp=Z,236nm,18.5s,baz=46,slow=38						
I03D	Drain, OR	57.45	59	P	P	20 10 44.2	+0.3
	baz=306						
G05D	Wamic, OR	57.72	57	P	P	20 10 46.3	+0.5
	baz=306						
C09A	Chrisman Ranch	57.90	53	P	P	20 10 47.2	+0.2
C09A				IAmb	IAmb	20 10 48.5	
	comp=Z,6.5nm,1.0s						
NIL	Nilore	58.24	287	P	P	20 10 50.0	+0.4
NIL				IAmb	IAmb	20 10 51.6	
	comp=Z,7.1nm,0.8s						
NIL	Nilore	58.24	287	P	P	20 10 50.0	+0.4
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	Newport	58.25	52	LR	LR	20 35 57.6	
	comp=Z,58nm,20.0s,baz=339,slow=36						
NEW	Newport	58.25	52	P	P	20 10 49.6	+0.1
	baz=307						
L02F	Cave Junction	58.26	61	P	P	20 10 50.7	+1.1
	baz=307						
KLMR	Klimovskoe	58.94	328	eP	P	20 10 52.9	-1.1
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KLMR	Klimovskoe	58.94	328	eP	P	20 10 53.0	-1.1
KLMR				AMP		20 11 04.4	
	comp=Z,9.0nm,1.2s						
L04D	Klamath Falls	58.95	60	P	P	20 10 54.9	+0.3
	baz=307						
PLID	Pearl Lake	60.80	54	P	P	20 11 08.0	+0.6
PLID				IAmb	IAmb	20 11 20.3	
	comp=Z,5.1nm,1.1s						
MSO	Missoula	60.83	52	P	P	20 11 07.9	+0.5
MSO				IAmb	IAmb	20 11 10.4	
	comp=Z,5.9nm,1.1s						
MSO	Missoula	60.83	52	P	P	20 11 07.3	-0.1
	baz=309						
COEN	Coen	61.16	188	P	P	20 11 09.3	-0.4
BELG	Belogornoye	61.17	317	P	P	20 11 09.6	+0.2
	comp=Z,6.8nm,0.8s,baz=310,slow=1.6,SNR=6.0						
	comp=Z,6.8nm,0.8s						
PAHR	Pah Rah Range	62.24	61	P	P	20 11 17.8	+0.7
PAHR				IAmb	IAmb	20 11 44.2	
	comp=Z,9.6nm,1.5s						
EGMT	Eagleton	62.26	48	P	P	20 11 17.5	+0.6
EGMT				IAmb	IAmb	20 11 30.1	
	comp=Z,6.8nm,1.1s						
EGMT	Eagleton	62.26	48	P	P	20 11 16.9	-0.1
	baz=311						
LRM	Limekiln Ridge	62.27	52	P	P	20 11 18.0	+0.8
PSI	Prapat	62.78	242	LR	LR	20 40 52.9	
	comp=Z,97nm,18.4s,baz=78,slow=38						
BOZ	Bozeman (W)	62.85	51	P	P	20 11 21.8	+0.7
BOZ	Bozeman (W)	62.85	51	P	P	20 11 21.8	+0.7
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOZ	Bozeman (W)	62.85	51	P	P	20 11 21.6	+0.6
	baz=311						
FINES	FINESS Array B	63.01	334	P	P	20 11 21.2	-0.4
	comp=Z,3.7nm,0.8s,baz=31,slow=5.5,SNR=13						
	comp=Z,3.7nm,0.8s						
FINES	FINESS Array B	63.01	334	i P	P	20 11 21.6	0.0
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BMN	Battle Mountai	63.05	59	P	P	20 11 23.2	+0.7
BMN	Battle Mountai	63.05	59	P	P	20 11 23.2	+0.7
BMN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KVN	Kaiserville	63.42	61	P	P	20 11 25.8	+0.8
KVN	Kaiserville	63.42	61	P	P	20 11 25.8	+0.8
KVN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LHV	Little Huntoon	63.70	61	P	P	20 11 28.1	+1.5
LHV				IAmb	IAmb	20 11 29.1	
	comp=Z,11nm,1.3s						
NVAR	Mina Array Bea	63.70	61	P	P	20 11 27.1	+0.2
	comp=Z,0.7nm,0.5s,baz=300,slow=7.9,SNR=8.1						
	comp=Z,0.7nm,0.5s						
ELK	Elko	64.00	57	LR	LR	20 35 12.1	
	comp=Z,46nm,21.6s,baz=330,slow=32						
RLMT	Red Lodge	64.42	51	P	P	20 11 30.6	-0.9
RLMT	Red Lodge	64.42	51	P	P	20 11 32.1	+0.6
	baz=312						
MOOW	Moose Ponds	64.54	53	P	P	20 11 33.5	+1.2
LOHW	Long Hollow	64.71	53	P	P	20 11 34.4	+0.9
GEYT	Alibeck	65.01	299	P	P	20 11 36.5	+1.3
	comp=Z,0.8nm,0.4s,baz=58,slow=37,SNR=2.6						
	comp=Z,0.8nm,0.4s						
SFJD	Kangerlussuaq	65.07	9	LR	LR	20 43 14.0	
	comp=Z,78nm,18.5s,baz=345,slow=39						

PKM	**Mcpherson Peak**	**65.09**	**65**	P	**P**	**20 11 36.4**	**+0.4**
	baz=311						
CWC	**Cottonwood Cre**	**65.14**	**63**	P	**P**	**20 11 36.6**	**+0.3**
	baz=311						
GRAC	**Grapevine Rang**	**65.20**	**62**	P	**P**	**20 11 36.9**	**+0.4**
	baz=311						
FRB	**Frobisher Bay**	**65.23**	**18**	P	**P**	**20 11 34.7**	**-1.4**
	comp=Z,9.6nm,0.8s,baz=340,slow=5.8,SNR=8.6						
FRB				LR	LR	20 41 39.8	
	comp=Z,74nm,19.9s,baz=26,slow=38						
	comp=Z,9.6nm,0.8s						
R11A	**Troy Canyon, C**	**65.37**	**60**	P	**P**	**20 11 37.7**	**0.0**
R11A	**Troy Canyon, C**	**65.37**	**60**	P	**P**	**20 11 37.8**	**0.0**
	baz=312						
DUG	**Dugway, Tooele**	**65.75**	**57**	P	**P**	**20 11 39.6**	**-0.5**
DUG	**Dugway, Tooele**	**65.75**	**57**	P	**P**	**20 11 39.6**	**-0.5**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	**Dugway, Tooele**	**65.75**	**57**	P	**P**	**20 11 40.3**	**+0.1**
	baz=312						
BW06	**Boulder Array**	**65.84**	**53**	P	**P**	**20 11 40.7**	**-0.1**
BW06	**Boulder Array**	**65.84**	**53**	P	**P**	**20 11 41.2**	**+0.4**
	baz=313						
PD31	**Pinedale Array**	**65.84**	**53**	P	**P**	**20 11 41.1**	**+0.4**
PDAR	**Pinedale Array**	**65.84**	**53**	P	**P**	**20 11 41.1**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=312,slow=1.3,SNR=20						
PDAR				LR	LR	20 43 42.7	
	comp=Z,28nm,18.0s,baz=7.0,slow=39						
	comp=Z,1.6nm,0.7s						
FURC	**Furnace Creek,**	**65.85**	**62**	P	**P**	**20 11 41.1**	**+0.5**
	baz=312						
LEM	**Lembang**	**65.86**	**228**	LR	LR	20 42 22.9	
	comp=Z,42nm,18.1s,baz=358,slow=38						
TPNV	**Topopah Spring**	**65.90**	**61**	P	**P**	**20 11 41.5**	**+0.3**
	baz=312						
QSM	**Queen of Sheba**	**66.18**	**62**	P	**P**	**20 11 43.7**	**+0.9**
EDW2	**Edwards Air Fo**	**66.22**	**64**	P	**P**	**20 11 43.3**	**+0.2**
	baz=312						
CTA	**Charters Tower**	**67.00**	**185**	LR	LR	20 41 06.0	
	comp=Z,36nm,19.2s,baz=316,slow=36						
HEC	**Hector,Ludlow**	**67.27**	**63**	P	**P**	**20 11 49.8**	**0.0**
	baz=312						
ULM	**Lac du Bonnet**	**67.30**	**40**	LR	LR	20 43 44.2	
	comp=Z,88nm,18.8s,baz=313,slow=38						
NB2	**NORSAR Subarra**	**67.34**	**340**	P	**P**	**20 11 49.1**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**67.34**	**340**	P	**P**	**20 11 49.1**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=30,slow=6.5,SNR=4.6						
NOA				LR	LR	20 44 25.7	
	comp=Z,41nm,18.1s,baz=30,slow=39						
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**67.53**	**338**	LR	LR	20 45 45.7	
	comp=Z,76nm,18.1s,baz=18,slow=40						
MURC	**Murrieta**	**67.57**	**64**	P	**P**	**20 11 52.4**	**+0.7**
	baz=313						
GMRC	**Granite Mounta**	**67.71**	**63**	P	**P**	**20 11 52.5**	**-0.1**
	baz=313						
SRU	**San Rafael Swe**	**67.79**	**56**	P	**P**	**20 11 54.0**	**+0.8**
SRU				IAmb	IAmb	20 12 21.3	
	comp=Z,4.2nm,0.8s						
SRU	**San Rafael Swe**	**67.79**	**56**	P	**P**	**20 11 54.0**	**+0.8**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	**Black Hills**	**67.83**	**49**	P	**P**	**20 11 53.4**	**0.0**
RSSD				IAmb	IAmb	20 11 54.8	
	comp=Z,8.1nm,1.4s						
RSSD	**Black Hills**	**67.83**	**49**	P	**P**	**20 11 53.4**	**0.0**
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
RSSD	**Black Hills**	**67.83**	**49**	P	**P**	**20 11 53.4**	**0.0**
	baz=315						
PFO	**Pinyon Flats O**	**68.01**	**64**	P	**P**	**20 11 54.6**	**0.0**
	baz=313						
TPFO	**Pinon Flats**	**68.02**	**64**	P	**P**	**20 11 54.8**	**+0.1**
	baz=313						
BELC	**Belle Mtn. Jos**	**68.03**	**63**	P	**P**	**20 11 54.7**	**0.0**
	baz=313						
WB0	**Warramunga Arr**	**68.17**	**197**	P	**P**	**20 11 56.0**	**+0.6**
WB0				IAmb	IAmb	20 12 14.7	
	comp=Z,8.8nm,1.2s						
WR0	**Warramunga Arr**	**68.33**	**196**	P	**P**	**20 11 57.8**	**+1.4**
WR0				IAmb	IAmb	20 12 05.9	
	comp=Z,7.2nm,1.1s						
WRAB	**Tennant Creek**	**68.34**	**197**	P	**P**	**20 11 57.9**	**+1.4**
WRAB				IAmb	IAmb	20 12 07.7	
	comp=Z,4.9nm,0.8s						
WRAB	**Tennant Creek**	**68.34**	**197**	P	**P**	**20 11 57.9**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WB2	**Warramunga Arr**	**68.35**	**197**	P	**P**	**20 11 57.7**	**+1.2**
WB2				IAmb	IAmb	20 12 09.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**68.36**	**197**	P	**P**	**20 11 56.0**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=13,slow=6.6,SNR=16						
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**68.36**	**197**	P	**P**	**20 11 57.5**	**+1.0**
WRA	**Warramunga Arr**	**68.36**	**197**	*i* P	**P**	**20 11 57.9**	**+1.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
O20A	**White River Ci**	**68.36**	**54**	P	**P**	**20 11 56.8**	**0.0**
	baz=314						
IRM	**Iron Mountain**	**68.44**	**63**	P	**P**	**20 11 57.6**	**+0.4**
	baz=313						
MONP2	**Monument Peak**	**68.52**	**65**	P	**P**	**20 11 58.7**	**+0.8**
	baz=313						
BC3	**Big Chuckawall**	**68.60**	**63**	P	**P**	**20 11 58.6**	**+0.4**
	baz=313						
AGMN	**Agassiz Nation**	**68.75**	**41**	P	**P**	**20 11 59.4**	**+0.6**
AGMN				IAmb	IAmb	20 11 59.7	
	comp=Z,4.7nm,1.0s						
AGMN	**Agassiz Nation**	**68.75**	**41**	P	**P**	**20 11 58.9**	**+0.1**
	baz=318						
MSVF	**Nonsavu**	**69.07**	**152**	LR	LR	20 38 37.1	
	comp=Z,90nm,20.5s,baz=297,slow=33						
N23A	**Red Feather La**	**69.09**	**52**	P	**P**	**20 12 01.2**	**-0.2**
	baz=315						
KIV	**Kislovodsk**	**69.37**	**313**	*e*P	**P**	**20 12 03.3**	**+0.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**69.37**	**313**	*e*P	**P**	**20 12 03.3**	**+0.5**
AFI	**Afiamalu**	**69.40**	**141**	LR	LR	20 42 52.8	
	comp=Z,29nm,18.1s,baz=310,slow=36						
KBZ	**Khabaz**	**69.42**	**313**	P	**P**	**20 12 03.5**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=38,slow=4.8,SNR=7.7						
KBZ				LR	LR	20 44 21.0	
	comp=Z,96nm,19.9s,baz=43,slow=38						
	comp=Z,3.1nm,0.8s						
AKASG	**Malin Array Be**	**70.32**	**325**	P	**P**	**20 12 07.3**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=34,slow=6.6,SNR=3.1						
AKASG				LR	LR	20 45 41.9	
	comp=Z,59nm,18.1s,baz=19,slow=38						
	comp=Z,0.6nm,0.5s						
S22A	**4UR Ranch, Cre**	**70.82**	**55**	P	**P**	**20 12 12.3**	**+0.2**
	baz=315						
EYMN	**Ely**	**70.94**	**39**	P	**P**	**20 12 12.1**	**-0.1**
EYMN				IAmb	IAmb	20 12 13.2	
	comp=Z,6.1nm,0.8s						
EYMN	**Ely**	**70.94**	**39**	P	**P**	**20 12 11.9**	**-0.4**
	baz=320						
GNI	**Garni**	**71.04**	**309**	LR	LR	20 46 55.7	
	comp=Z,104nm,19.8s,baz=51,slow=39						
SOC	**Sochi**	**71.11**	**314**	*e*P	**P**	**20 12 11.7**	**-1.6**
SOC				*e*		20 14 50.6	
SOC				*e*PPP	PPP	20 16 28.0	
SOC				*e*S	**S**	**20 21 27.5**	**+0.2**
SOC				*e*SS	**SS**	**20 26 02.1**	**+2.0**
SOC				MLR	MLR		
	comp=Z,138nm,21.0s						
PALK	**Pallekele**	**71.14**	**260**	LR	LR	20 43 59.8	
	comp=Z,28nm,21.8s,baz=165,slow=36						
ECSD	**EROS Data Cent**	**71.80**	**45**	P	**P**	**20 12 17.6**	**+0.1**
ECSD				IAmb	IAmb	20 12 18.5	
	comp=Z,14nm,1.4s						
ECSD	**EROS Data Cent**	**71.80**	**45**	P	**P**	**20 12 17.5**	**-0.1**
	baz=319						
E38A	**The Farm, Brul**	**71.94**	**40**	P	**P**	**20 12 17.9**	**-0.4**
E38A				IAmb	IAmb	20 12 18.9	
	comp=Z,6.5nm,0.6s						
AS31	**Alice Springs**	**72.06**	**196**	P	**P**	**20 12 21.2**	**+2.0**
ASAR	**Alice Springs**	**72.06**	**196**	P	**P**	**20 12 20.3**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=9.9,slow=6.5,SNR=15						
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**72.06**	**196**	P	**P**	**20 12 20.9**	**+1.8**
ASAR	**Alice Springs**	**72.06**	**196**	P	**P**	**20 12 21.0**	**+1.8**
ANMO	**Albuquerque**	**73.02**	**57**	P	**P**	**20 12 24.9**	**-0.3**
	baz=316						
I37A	**Lemond, Waseca**	**73.10**	**43**	P	**P**	**20 12 25.9**	**+0.6**
SCHQ	**Schefferville**	**73.59**	**22**	LR	LR	20 46 03.7	
	comp=Z,61nm,21.7s,baz=347,slow=37						
BUR08	**Bucovina Ar. S**	**74.36**	**325**	P	**P**	**20 12 33.2**	**+0.5**
BURAR	**Bucovina Array**	**74.37**	**325**	P	**P**	**20 12 32.6**	**-0.1**
WSAR	**Wadi Sarin**	**74.72**	**288**	LR	LR	20 49 14.9	
	comp=Z,91nm,18.8s,baz=60,slow=39						
CRVS	**Cervenica-Dubn**	**74.72**	**328**	*e*P	**P**	**20 12 34.8**	**+0.1**
CRVS	**Cervenica-Dubn**	**74.72**	**328**	*e*P	**P**	**20 12 34.8**	**+0.1**
SCIA	**State Center**	**74.81**	**44**	P	**P**	**20 12 35.6**	**+0.3**
SCIA	**State Center**	**74.81**	**44**	P	**P**	**20 12 35.5**	**+0.3**
	baz=321						
LANS	**Liptovska Anna**	**75.22**	**329**	*e*P	**P**	**20 12 38.7**	**+1.1**
LANS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LANS	**Liptovska Anna**	**75.22**	**329**	*e*P	**P**	**20 12 38.7**	**+1.1**
CLL	**Collm**	**75.44**	**334**	*e*P	**P**	**20 12 39.0**	**+0.2**
CLL				e*PP	**pP**	**20 12 43.0**	**-5.6**
CLL	**Collm**	**75.44**	**334**	*e*P	**P**	**20 12 39.0**	**+0.2**
CLL				LmH		20 45 00.0	
	comp=N,100nm,21.6s						
CLL				LmH		20 45 00.0	
	comp=E,200nm,18.4s						
MSTX	**Muleshoe**	**75.82**	**55**	P	**P**	**20 12 41.2**	**-0.1**
	baz=318						
VRAC	**Vranov**	**76.06**	**331**	LR	LR	20 49 58.8	
	comp=E,100nm,19.3s,baz=24,slow=39						
VLDQ	**Val d'Or**	**76.30**	**31**	P	**P**	**20 12 42.8**	**-0.9**
VLDQ				IAmb	IAmb	20 12 43.7	
	comp=Z,13nm,1.1s						
BRTR	**Keskin Array B**	**77.00**	**315**	P	**P**	**20 12 48.6**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=76,slow=5.2,SNR=5.0						
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**77.00**	**315**	*ce*P	**P**	**20 12 49.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**77.40**	**333**	P	**P**	**20 12 48.9**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=15,slow=8.1,SNR=2.0						
	comp=Z,0.2nm,0.5s						
SADO	**Sadowa**	**78.52**	**34**	LR	LR	20 48 30.2	
	comp=Z,60nm,21.7s,baz=328,slow=36						
TX31	**Lajitas Ar. Si**	**78.72**	**59**	P	**P**	**20 12 58.2**	**+0.5**
TX32	**Lajitas Array**	**78.72**	**59**	P	**P**	**20 12 57.9**	**+0.2**
TX32				IAmb	IAmb	20 12 59.2	
	comp=Z,11nm,1.5s						
TXAR	**Lajitas Array**	**78.72**	**59**	P	**P**	**20 12 56.6**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=303,slow=4.7,SNR=9.6						
	comp=Z,1.4nm,0.5s						
TXAR	**Lajitas Array**	**78.72**	**59**	P	**P**	**20 12 57.9**	**+0.2**
TXAR	**Lajitas Array**	**78.72**	**59**	P	**P**	**20 12 57.9**	**+0.2**
CCM	**Cathedral Cave**	**78.76**	**45**	P	**P**	**20 12 57.4**	**-0.3**
	baz=322						
SFIN	**Lafayette**	**78.85**	**41**	P	**P**	**20 12 57.8**	**-0.3**
	baz=324						
TRQ	**Mont Tremblant**	**78.93**	**30**	P	**P**	**20 12 58.5**	**-0.1**
TRQ				IAmb	IAmb	20 12 59.3	
	comp=Z,6.6nm,0.8s						
N47A	**Urbana**	**79.06**	**40**	P	**P**	**20 12 58.8**	**-0.5**
N47A				IAmb	IAmb	20 12 59.7	
	comp=Z,9.8nm,0.8s						
U40A	**Yellville**	**79.30**	**47**	P	**P**	**20 12 59.8**	**-0.8**
U40A				IAmb	IAmb	20 13 01.8	
	comp=Z,17nm,1.4s						
U40A	**Yellville**	**79.30**	**47**	P	**P**	**20 13 00.3**	**-0.4**
	baz=322						
O48B	**Farmland**	**79.81**	**40**	P	**P**	**20 13 02.7**	**-0.7**
	baz=325						
LONY	**Lake Ozonia**	**80.32**	**31**	P	**P**	**20 13 05.7**	**-0.4**
	baz=331						
DAVOX	**Davos/Dischmat**	**80.41**	**334**	LR	LR	20 52 08.2	
	comp=Z,58nm,18.6s,baz=18,slow=38						
W41B	**Gary Mavity, V**	**80.53**	**48**	P	**P**	**20 13 07.5**	**+0.3**
	baz=322						
M53A	**WI Miller and**	**80.73**	**37**	P	**P**	**20 13 08.4**	**+0.2**
	baz=327						
ACSO	**Alum Creek Sta**	**80.77**	**39**	P	**P**	**20 13 08.6**	**+0.1**
	baz=326						
MMAI	**Mount Meron Ar**	**81.34**	**310**	LR	LR	20 53 54.6	
	comp=Z,110nm,18.7s,baz=212,slow=39						
M55A	**Ridgway**	**81.47**	**35**	P	**P**	**20 13 12.6**	**+0.3**
M55A				IAmb	IAmb	20 13 13.2	
	comp=Z,7.1nm,0.9s						
O53A	**New Philadelph**	**81.50**	**38**	P	**P**	**20 13 12.6**	**+0.2**
	baz=327						
LBNH	**Lisbon**	**81.56**	**29**	P	**P**	**20 13 13.2**	**+0.6**
	baz=332						
WVT	**Waverly**	**81.94**	**44**	P	**P**	**20 13 15.3**	**+0.6**
	baz=324						
NATX	**Nacogdoches**	**81.94**	**51**	P	**P**	**20 13 15.6**	**+0.8**
	baz=321						
SSPA	**Standing Stone**	**82.52**	**35**	P	**P**	**20 13 17.8**	**+0.1**
	baz=329						
T50A	**Nancy**	**82.60**	**42**	P	**P**	**20 13 18.3**	**+0.1**
T50A				IAmb	IAmb	20 13 19.4	
	comp=Z,4.3nm,0.8s						
L61B	**Northampton**	**82.88**	**31**	P	**P**	**20 13 19.6**	**0.0**
	baz=332						
TZTN	**Tazewell**	**83.58**	**41**	P	**P**	**20 13 22.9**	**-0.4**
	baz=326						
PPT	**Papeete**	**83.70**	**124**	LR	LR	20 47 33.0	
	comp=Z,56nm,19.7s,baz=356,slow=34						
EIL	**Elat**	**84.19**	**308**	LR	LR	20 53 54.9	
	comp=Z,57nm,19.7s,baz=62,slow=38						
TKL	**Tuckaleechee C**	**84.21**	**42**	LR	LR	20 53 60.0	
	comp=Z,94nm,18.4s,baz=347,slow=38						
BLA	**Blacksburg**	**84.39**	**39**	P	**P**	**20 13 28.1**	**+0.6**
	baz=328						
KMSC	**Kings Mountain**	**85.74**	**40**	P	**P**	**20 13 34.4**	**+0.2**
	baz=328						
VAE	**Valguarnera**	**87.16**	**327**	LR	LR	20 58 49.8	
	comp=Z,49nm,19.7s,baz=311,slow=40						
KEST	**Kesra**	**90.55**	**329**	LR	LR	20 57 57.2	
	comp=Z,70nm,21.1s,baz=271,slow=38						
ATD	**Arta Tunnel**	**93.47**	**291**	LR	LR	21 00 53.1	
	comp=Z,53nm,18.3s,baz=340,slow=38						
H03N2	**Juan Fernandez**	**140.38**	**88**	T	T	22 57 00.6	
	baz=307,slow=77,SNR=49						
H03N1	**Juan Fernandez**	**140.40**	**88**	T	T	22 57 06.9	
	baz=307,slow=77,SNR=47						
H03N3	**Juan Fernandez**	**140.40**	**88**	T	T	22 56 52.2	
	baz=307,slow=77,SNR=52						
BDFB	**Brasilia**	**144.97**	**33**	PKP	**PKPdf**	**20 20 32.0**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=40,slow=7.5,SNR=3.3						
CPUP	**Villa Florida**	**149.67**	**57**	PKPbc	**PKiKP**	**20 20 45.5**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=331,slow=4.4,SNR=4.9						
PLCA	**Paso Flores**	**149.86**	**93**	PKPbc	**PKPbc**	**20 20 43.6**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=1.7,slow=1.8,SNR=3.3						
PLCA	**Paso Flores**	**149.86**	**93**		**PKPdf**	**20 20 40.0**	**0.0**
PLCA	**Paso Flores**	**149.86**	**93**	PKHKP	PKPpre	20 20 40.0	
TROLL	**Troll, Antarti**	**151.00**	**200**	PKPbc	**PKiKP**	**20 20 47.7**	**+0.5**
SNAA	**Sanae**	**152.42**	**198**	PKPbc	**PKiKP**	**20 20 51.4**	**+1.4**
VNA2	**Neumayer--Watz**	**153.92**	**196**	PKPbc	**PKiKP**	**20 20 54.9**	**+1.9**
	baz=105,slow=1.0						
VNA3	**Neumayer Olymp**	**154.06**	**194**	PKPbc	**PKiKP**	**20 20 55.1**	**+1.8**

JMA ***26*** *20:07:47.8±0.1, 41°.0N±0°.5×143°.1E±0°.8, h25^{km}, MD4.2/40, MV4.4/40, E OFF AOMORI PREF*

JMA Felt I J1 at E OFF AOMORI PREF .

NIED ***26*** *20:07:47.8, 41°.02N×143°.06E, h25^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.86; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.07; $M_{r\theta}$0.76; $M_{\theta\phi}$-1.41; $M_{\phi r}$1.20; Fault plane solution: $M_0$2.07000×10^{15} NP1: ϕ_s271.00000°, δ35.00000°, λ150.00000°. NP2: ϕ_s26.00000°, δ74.00000°, λ59.00000°.*

MOS ***26*** *20:07:48.9±0.9, 41°.13N×143°.09E, h51^{km}, mb4.5/14 Error ellipse: s-maj=8.4km s-min=5.6km az=92.1*

IDC ***26*** *20:07:50.7±1.8, 41°.05N×143°.00E, h47^{km}±17^{km}, mb3.9/25, mbtmp4.1/30, ML3.5/5, MS3.3/2, Error ellipse: s-maj=15.4km s-min=13.2km az=101.0*

NEIC ***26*** *20:07:51.7±1.4, 41°.16N±0°.06×142°.91E±0°.10, h51^{km}±3^{km}, mb4.5/39, Error ellipse: s-maj=12.3km s-min=6.6km az=125.0*

ISC 26 20:07:49.5±0.7**, 41°.02N**±0°.04×**143°.18E**±0°.04**, h45**^{km}±5^{km}**, n203,** σ**1**^{s}**75**/207**, mb4.4**/64**, MS3.8**/6**, 4C-16D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**0.99**	**359**	Pn	**Pn**	**20 08 05.9**	**-1.1**
ERM	**Erimo**	**0.99**	**359**	P	**Pn**	**20 08 05.9**	**-1.1**
JEM	**Erimo**	**0.99**	**359**	*i* P	**Pn**	**20 08 06.2**	**-0.8**
JEM				*e*S	**Sn**	**20 08 18.9**	**-1.0**
JTHR	**Tokachihiroo**	**1.27**	**4**	*i* P	**Pn**	**20 08 10.2**	**-0.5**
JTHR				*e*S	**Sn**	**20 08 26.9**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.30**	**346**	*i* P	**Pn**	**20 08 10.5**	**-0.6**
JNBK	**Urakawa-nobuka**	**1.30**	**346**	A	A	20 08 10.5	
	comp=E,6.0nm,0.7s,comp=E,6.0nm,1.3s						
JARK	**Aomorirokkasho**	**1.37**	**270**	⇓*i*P	**Pn**	**20 08 10.0**	**-2.1**
JARK				⇓*e*S	**Sn**	**20 08 26.5**	**-2.6**
JKEN	**Kujiedanarisaw**	**1.38**	**234**	⇓P	**Pn**	**20 08 10.5**	**-1.8**
JAHD	**Aomorihigashid**	**1.41**	**281**	A	A	20 08 11.0	
	comp=E,12nm,0.4s,comp=E,9.0nm,0.7s						
JANG	**Nango**	**1.42**	**243**	⇓*i*P	**Pn**	**20 08 11.0**	**-1.8**
JSHD	**Hidakashinhida**	**1.49**	**339**	A	A	20 08 13.1	
	comp=E,8.0nm,2.3s,comp=E,6.0nm,2.3s						
JCH	**Churui**	**1.60**	**5**	P	**Pn**	**20 08 14.7**	**-0.6**
JCH				*e*S	**Sn**	**20 08 34.2**	**-0.4**
JTM	**Tenmabayashi**	**1.62**	**262**		**Pn**	**20 08 14.7**	**-0.7**
JTM				Sn	**Sn**	**20 08 33.3**	**-1.8**
JTM	**Tenmabayashi**	**1.62**	**262**	⇓P	**Pn**	**20 08 14.2**	**-1.3**
JTM				⇓*e*S	**Sn**	**20 08 33.0**	**-2.1**
JTM	**Tenmabayashi**	**1.62**	**262**	A	A	20 08 14.2	
	comp=E,5.0nm,0.4s,comp=E,6.0nm,1.1s						
JOT	**Ohata**	**1.65**	**283**	⇓*i*P	**Pn**	**20 08 14.3**	**-1.6**
JKB	**Kayabe**	**1.83**	**299**	*i* P	**Pn**	**20 08 17.1**	**-1.3**
JKB				*e*S	**Sn**	**20 08 39.1**	**-1.2**
JIAM	**Iburiatsuma**	**1.85**	**330**	P	**Pn**	**20 08 19.5**	**+0.7**
JIAM	**Iburiatsuma**	**1.85**	**330**	A	A	20 08 19.5	
	comp=E,13nm,0.9s,comp=E,12nm,0.5s						
JBT2	**Biratori 2**	**1.86**	**341**	*e*S	**Sn**	**20 08 42.9**	**+1.9**
JSI2	**Shiura 2**	**2.09**	**272**	A	A	20 08 21.1	
	comp=E,7.0nm,0.6s,comp=E,8.0nm,0.6s						
JOM	**Ohasama**	**2.12**	**224**	*i* P	**Pn**	**20 08 22.6**	**+0.3**
JOM	**Ohasama**	**2.12**	**224**	A	A	20 08 22.6	
	comp=E,4.0nm,0.2s,comp=E,2.0nm,0.8s						
JEW	**Eniwo**	**2.23**	**325**		**Pn**	**20 08 23.5**	**-0.4**
JEW	**Eniwo**	**2.23**	**325**	*e*P	**Pn**	**20 08 23.7**	**-0.2**
JEW				*e*S	**Sn**	**20 08 51.2**	**+1.1**
JAK	**Akkeshi**	**2.27**	**29**	*i* P	**Pn**	**20 08 23.9**	**-0.6**
JAK				*e*S	**Sn**	**20 08 49.6**	**-1.7**
JAR	**Ashorobuto**	**2.32**	**11**	⇓P	**Pn**	**20 08 24.5**	**-0.6**
JAR				⇓*e*S	**Sn**	**20 08 51.4**	**-0.9**
JOMM	**Oshimamatsumae**	**2.44**	**283**	P	**Pn**	**20 08 26.6**	**-0.1**
JMK	**Ichinoseki**	**2.56**	**217**	⇓*i*P	**Pn**	**20 08 28.7**	**+0.4**
NMR	**Nemuro--Hokkai**	**3.02**	**38**	⇑*i*P	**Pn**	**20 08 33.8**	**-0.8**
NMR				*i* S	**Sn**	**20 09 06.6**	**-2.9**
ASAJ	**Asahikawa**	**3.12**	**352**	P	**Pn**	**20 08 37.0**	**+0.8**
	10nm,0.3s,baz=209,slow=19,SNR=11						
ASAJ				S	**Sn**	**20 09 19.0**	**+6.8**
	80nm,0.6s,baz=218,slow=32,SNR=1.9						
	46nm,0.4s						
ASAJ	**Asahikawa**	**3.12**	**352**	P	**Pn**	**20 08 37.0**	**+0.8**
JKA	**Kamikawa-asahi**	**3.12**	**352**	Pn	**Pn**	**20 08 36.3**	**+0.1**
JKA	**Kamikawa-asahi**	**3.12**	**352**		**Sn**	**20 09 19.0**	**+6.8**
GLVR	**Golovnino**	**3.22**	**32**	⇓*i*P	**Pn**	**20 08 37.8**	**+0.3**
GLVR				*i* S	**Sn**	**20 09 12.7**	**-1.9**
GLVR				pmax	pmax		
	comp=Z,170nm,0.4s						
GLVR				pmax	pmax		
	comp=E,58nm,0.3s						
GLVR				pmax	pmax		
	comp=N,81nm,0.4s						
GLVR				smax	smax		
	comp=N,496nm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.5s						
RUSJ	**Misakicho**	**3.44**	**26**	*e*P	**Pn**	**20 08 40.8**	**+0.3**
RUSJ				*e*S	**Sn**	**20 09 19.9**	**0.0**
YUK	**Yuzh-Kuril'sk**	**3.60**	**32**	*d* *i*P	**Pn**	**20 08 42.4**	**-0.3**
YUK				*i* S	**Sn**	**20 09 21.4**	**-2.6**
YUK				pmax	pmax		
	comp=Z,433nm,0.4s						
YUK				pmax	pmax		
	comp=E,151nm,0.2s						
YUK				smax	smax		
	comp=E,688nm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
JMM	**Marumori**	**3.65**	**211**	Pn	**Pn**	**20 08 42.4**	**-1.0**
SHO	**Shikotan**	**3.92**	**42**	⇓*i*P	**Pn**	**20 08 46.4**	**-0.7**
SHO				*i* S	**Sn**	**20 09 27.7**	**-4.2**
SHO				pmax	pmax		
	comp=Z,48nm,0.2s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.1s						
SHO				pmax	pmax		
	comp=N,16nm,0.2s						
SHO				smax	smax		
	comp=N,346nm,0.3s						
SHO				smax	smax		
	comp=E,318nm,0.3s						
JSD	**Sado**	**4.83**	**233**	Pn	**Pn**	**20 08 59.2**	**-0.4**
KUR	**Kuril'sk**	**5.43**	**38**	*e*P	**Pn**	**20 09 08.6**	**+0.8**
KUR				*i* S	**Sn**	**20 10 08.2**	**-0.7**
KUR				pmax	pmax		
	comp=Z,88nm,0.6s						
KUR				pmax	pmax		
	comp=E,25nm,0.5s						
KUR				smax	smax		
	comp=N,131nm,0.3s						
KUR				smax	smax		
	comp=E,103nm,0.3s						
MJB9	**Matsu-Tunnel**	**5.92**	**223**		**Pn**	**20 09 16.4**	**+1.8**
MAJO	**Matsushiro**	**5.92**	**223**		**Pn**	**20 09 16.4**	**+1.8**
MAJO	**Matsushiro**	**5.92**	**223**	*ce*P	**Pn**	**20 09 18.9**	**+4.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	**Matsushiro Arr**	**5.92**	**223**	P	**Pn**	**20 09 15.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=27,slow=13,SNR=8.7						
	comp=Z,2.5nm,0.6s						
MJAR	**Matsushiro Arr**	**5.92**	**223**		**Pn**	**20 09 15.8**	**+1.2**
MJAR	**Matsushiro Arr**	**5.92**	**223**	P	**Pn**	**20 09 15.8**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.94**	**357**	*e*P	**Pn**	**20 09 17.3**	**+2.6**
YSS				*e*S	**Sn**	**20 10 21.7**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=E,10.0nm,0.7s						
JGF	**Kuroka**	**7.09**	**222**	Pn	**Pn**	**20 09 32.7**	**+2.1**
JHJ	**Hachijo jima 2**	**8.34**	**200**	P	**Pn**	**20 09 47.0**	**-0.8**
	comp=E,17nm,0.3s,baz=49,slow=20,SNR=8.2						
JHJ				S	Sn	20 11 11.6	-9.0
	comp=E,28nm,0.4s,baz=69,slow=24,SNR=0.9						
	comp=E,41nm,0.3s						
USA0B	**Ussuriysk Arra**	**8.84**	**295**	*i* P	**Pn**	**20 09 51.4**	**-3.1**
USRK	**Ussuriysk Ar.**	**8.84**	**295**	P	**Pn**	**20 09 55.2**	**+0.7**
	comp=E,0.8nm,0.3s,baz=96,slow=15,SNR=12						
	comp=E,11nm,0.7s						
USRK	**Ussuriysk Ar.**	**8.84**	**295**	Pn	**Pn**	**20 09 51.5**	**-3.1**
JHS	**Saijyo**	**9.96**	**236**	Pn	**Pn**	**20 10 09.8**	**-0.1**
MDJ	**Mudanjiang**	**10.61**	**294**	P	**Pn**	**20 10 23.5**	**+4.8**
MDJ				pmax	pmax		
	comp=Z,19nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,290nm,11.2s						
KLR	**Kul'dur**	**11.50**	**319**	P	**Pn**	**20 10 30.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=5.3						
	comp=Z,3.6nm,0.9s						
KSRS	**Korea Array**	**12.35**	**258**	P	**Pn**	**20 10 45.2**	**+2.7**
	comp=Z,0.9nm,0.4s,baz=64,slow=14,SNR=3.4						
BNX	**BinXian**	**12.40**	**298**	⇓P	**Pn**	**20 10 43.8**	**+0.6**
BNX				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA	**Zeya**	**16.63**	**325**	*e*P	**Pn**	**20 11 36.4**	**-2.7**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DL2	**Dalian**	**16.65**	**270**	P	**P**	**20 11 40.5**	**-0.9**
DL2				pmax	pmax		
	comp=Z,15nm,1.0s						
BJI	**Beijing**	**20.52**	**276**	P	**P**	**20 12 22.0**	**-1.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIA	**Tai'an**	**20.88**	**265**	P	**P**	**20 12 27.0**	**-0.7**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK	**Yakutsk**	**22.56**	**343**	P	**P**	**20 12 41.5**	**-4.0**
	comp=Z,9.6nm,0.7s,baz=349,slow=3.8,SNR=15						
YAK				LR	LR	20 22 10.3	
	comp=Z,132nm,18.3s,baz=88,slow=38						
YAK	**Yakutsk**	**22.56**	**343**	P	**P**	**20 12 40.3**	**-5.2**
YAK				IAmb	IAmb	20 12 43.3	
	comp=Z,21nm,0.8s						
YAK	**Yakutsk**	**22.56**	**343**	*e*P	**P**	**20 12 41.3**	**-4.1**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
SEY	**Seymchan**	**22.62**	**11**	P	**P**	**20 12 42.9**	**-3.1**
	comp=E,3.7nm,0.8s,baz=186,slow=7.3,SNR=10						
SEY				LR	LR	20 22 27.1	
	comp=E,47nm,21.7s,baz=152,slow=39						
SEY	**Seymchan**	**22.62**	**11**	*i* P	**P**	**20 12 40.7**	**-5.4**
SEY				pmax	pmax		
	comp=Z,15nm,2.3s						
HHC	**Hu-ho-hao-te**	**23.82**	**280**	*e*P	**P**	**20 12 56.0**	**-2.3**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
BOD	**Bodaibo**	**25.06**	**322**	*e*P	**P**	**20 13 08.1**	**-1.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**26.50**	**297**	P	**P**	**20 13 21.7**	**-0.9**
ULN	**Ulaanbaatar**	**26.50**	**297**	*i* P	**P**	**20 13 22.0**	**-0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**26.94**	**297**	P	**P**	**20 13 26.7**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=83,slow=8.7,SNR=15						
	comp=Z,1.7nm,0.5s						
SONM	**Songino Array**	**26.94**	**297**	P	**P**	**20 13 25.8**	**-0.7**
ZAK	**Zakamensk**	**29.08**	**302**	*e*P	**P**	**20 13 44.9**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.31**	**129**	T	T	20 44 34.3	
	baz=322,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**29.32**	**129**	T	T	20 44 53.6	
	baz=322,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**29.33**	**129**	T	T	20 44 44.0	
	baz=322,slow=75,SNR=30						
BILL	**Bilibino**	**29.82**	**17**	⇑*e*P	**P**	**20 13 51.9**	**+0.1**
BILL				*e*		20 14 52.5	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,57nm,16.0s						
H11S1	**WAKE ISLAND Hy**	**30.16**	**131**	T	T	20 46 11.7	
	baz=324,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**30.16**	**131**	T	T	20 46 18.5	
	baz=324,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**30.18**	**131**	T	T	20 45 50.7	
	baz=324,slow=76,SNR=19						
TIXI	**Tiksi**	**31.53**	**351**	P	**P**	**20 14 04.7**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=270,slow=23,SNR=2.2						
TIXI	**Tiksi**	**31.53**	**351**	*i* P	**P**	**20 14 02.6**	**-4.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
GTA	**Gaotai**	**32.90**	**282**	*e*P	**P**	**20 14 19.3**	**-0.1**
GTA				pP	pP	20 14 31.8	+0.9
GTA				sP	sP	20 14 37.5	+1.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,73nm,5.8s						
GTA				LR	LR		
	comp=N,200nm,16.0s						
GTA				LR	LR		
	comp=E,290nm,16.4s						
GTA				LR	LR		
	comp=Z,310nm,16.0s						
GYA	**Guiyang**	**33.40**	**256**	⇓P	**P**	**20 14 23.5**	**-0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH	**PanZhiHua**	**37.01**	**260**	P	**P**	**20 14 55.0**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,120nm,6.3s						
NRIK	**Noril'sk**	**40.28**	**333**	P	**P**	**20 15 20.2**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=69,slow=7.9,SNR=4.4						
	comp=Z,1.2nm,0.3s						
NRIK	**Noril'sk**	**40.28**	**333**	IAmb	IAmb	20 15 35.3	
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**40.28**	**333**	P	**P**	**20 15 20.3**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZAA0	**Zalesovo Array**	**40.36**	**309**	P	**P**	**20 15 21.8**	**-0.7**
ZAA0				IAmb	IAmb	20 15 38.6	
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	**40.36**	**309**	P	**P**	**20 15 21.7**	**-0.7**
	comp=Z,4.2nm,0.4s,baz=88,slow=8.9,SNR=20						
	comp=Z,4.2nm,0.4s						
ZALV	**Zalesovo Beam**	**40.36**	**309**	P	**P**	**20 15 21.6**	**-0.9**
WMQ	**Urumqi**	**40.41**	**293**	*e*P	**P**	**20 15 24.3**	**+1.2**
WMQ				pP	pP	20 15 35.5	+0.7
WMQ				sP	sP	20 15 43.0	+3.1
WMQ				pmax	pmax		
	comp=Z,19nm,0.6s						
WMQ				LR	LR		
	comp=N,430nm,15.1s						
WMQ				LR	LR		
	comp=Z,120nm,16.7s						
J20K	**Nowinta River**	**42.28**	**35**	P	**P**	**20 15 41.1**	**+3.0**
IMAR	**Indian Mountai**	**42.54**	**33**	P	**P**	**20 15 42.3**	**+2.1**
H21K	**Melozitna Rive**	**42.91**	**33**	P	**P**	**20 15 45.2**	**+2.0**
H21K				IAmb	IAmb	20 15 60.0	
	comp=Z,8.0nm,1.1s						
KDAK	**Kodiak Island**	**43.26**	**45**	P	**P**	**20 15 47.0**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=302,slow=9.5,SNR=5.1						
	comp=Z,1.0nm,0.4s						
KDAK	**Kodiak Island**	**43.26**	**45**	IAmb	IAmb	20 16 12.8	
	comp=Z,14nm,1.3s						
KDAK	**Kodiak Island**	**43.26**	**45**	P	**P**	**20 15 47.0**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,15nm,1.3s						
MK31	**Makanchi Array**	**43.28**	**299**	P	**P**	**20 15 46.0**	**-0.5**
MK31	**Makanchi Array**	**43.28**	**299**	P	**P**	**20 15 46.0**	**-0.5**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MKAR	**Makanchi Array**	**43.28**	**299**	P	**P**	**20 15 46.0**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=85,slow=11,SNR=28						
	comp=Z,2.9nm,0.7s						
MKAR	**Makanchi Array**	**43.28**	**299**	P	**P**	**20 15 45.7**	**-0.8**
MKAR	**Makanchi Array**	**43.28**	**299**	*i* P	**P**	**20 15 46.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**43.48**	**299**	P	**P**	**20 15 47.4**	**-0.7**
MAKZ				IAmb	IAmb	20 16 02.5	
	comp=Z,7.1nm,0.8s						
MAKZ	**Makanchi**	**43.48**	**299**	P	**P**	**20 15 47.4**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KTH	**Kantishna Hill**	**43.70**	**36**	P	**P**	**20 15 52.9**	**+3.2**
KTH				IAmb	IAmb	20 16 06.0	
	comp=Z,6.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.92**	**253**	P	**P**	**20 15 52.1**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=47,slow=7.0,SNR=4.1						
	comp=Z,0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.92**	**253**	*i* P	**P**	**20 15 53.0**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**44.66**	**305**	P	**P**	**20 15 56.4**	**-1.0**
KURK				IAmb	IAmb	20 16 11.0	
	comp=Z,11nm,1.0s						
KURK	**Kurchatov**	**44.66**	**305**	P	**P**	**20 15 56.4**	**-1.0**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
MDM	**Murphy Dome**	**44.83**	**34**		pP	20 16 12.4	+2.1
H24K	**Noodor Dome**	**44.95**	**33**	P	**P**	**20 16 00.8**	**+1.2**
H24K				IAmb	IAmb	20 16 17.0	
	comp=Z,8.4nm,1.1s						
COLA	**College**	**44.99**	**34**	*i* P	**P**	**20 16 00.2**	**+0.3**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**20 16 04.4**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=255,slow=5.9,SNR=11						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**20 16 03.6**	**+0.3**
M24K	**Tolsona, Glenn**	**45.98**	**38**	P	**P**	**20 16 07.8**	**0.0**
BMAR	**Burnt Mountain**	**46.19**	**31**	P	**P**	**20 16 11.2**	**+1.8**
N25K	**Chitina, Valde**	**46.79**	**39**	P	**P**	**20 16 15.7**	**+1.5**
N25K				IAmb	IAmb	20 16 35.5	
	comp=Z,5.1nm,0.7s						
TAPN	**Taplejung**	**47.13**	**271**	*e*P	**P**	**20 16 18.7**	**+1.1**
L26K	**Log Cabin Wild**	**47.15**	**37**	P	**P**	**20 16 17.8**	**+0.8**
VRDI	**Verde Repeater**	**47.39**	**39**	P	**P**	**20 16 19.0**	**0.0**
VRDI				IAmb	IAmb	20 16 43.1	
	comp=Z,3.9nm,0.8s						
L27K	**Beaver Creek,**	**47.83**	**36**	P	**P**	**20 16 24.9**	**+2.6**
L27K				IAmb	IAmb	20 16 38.8	
	comp=Z,3.9nm,0.8s						
BCAR	**Beaver Creek A**	**47.85**	**36**	P	**P**	**20 16 24.7**	**+2.3**
JIRN	**Jiri**	**48.12**	**273**	*e*P	**P**	**20 16 27.0**	**+1.7**
RAMN	**Ramite**	**48.18**	**272**	*e*P	**P**	**20 16 30.0**	**+4.3**
GUN	**Gumba**	**48.22**	**273**	*e*P	**P**	**20 16 26.2**	**+0.1**
PKI	**Pulchoki**	**48.76**	**273**	*e*P	**P**	**20 16 33.0**	**+2.8**
PKIN	**Phulchoki**	**48.76**	**273**	*e*P	**P**	**20 16 33.1**	**+2.9**
I29M	**Ogilvie Camp,**	**48.95**	**33**	P	**P**	**20 16 32.5**	**+1.7**
I29M				IAmb	IAmb	20 16 46.9	
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**49.03**	**310**	P	**P**	**20 16 32.0**	**+0.4**
BRVK				IAmb	IAmb	20 16 40.8	
	comp=Z,7.9nm,1.3s						
BRVK	**Borovoye**	**49.03**	**310**	P	**P**	**20 16 32.0**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TKM2	**Tokmak 2**	**49.03**	**296**	*i* P	**P**	**20 16 32.4**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,16nm,1.1s						
GKN	**Gorkha**	**49.12**	**274**	*e*P	**P**	**20 16 33.6**	**+0.9**
DANN	**Dangsing**	**49.60**	**275**	*e*P	**P**	**20 16 36.8**	**+0.2**
AAK	**Ala-Archa**	**49.89**	**296**	*i* P	**P**	**20 16 37.9**	**-0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**50.22**	**29**	P	**P**	**20 16 42.1**	**+1.7**
	comp=Z,2.0nm,0.5s,baz=300,slow=4.8,SNR=9.1						
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**50.22**	**29**	P	**P**	**20 16 42.2**	**+1.9**
INK	**Inuvik**	**50.22**	**29**	P	**P**	**20 16 42.3**	**+1.9**
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HYT	**Haines Junctio**	**50.31**	**39**	P	**P**	**20 16 43.9**	**+2.6**
PYUN	**Piuthan**	**50.31**	**275**	*e*P	**P**	**20 16 44.4**	**+2.5**
KK31	**Karatay Array**	**52.39**	**298**	P	**P**	**20 16 56.4**	**-0.6**
KK31				IAmb	IAmb	20 17 10.8	
	comp=Z,4.6nm,0.8s						
KK31	**Karatay Array**	**52.39**	**298**	P	**P**	**20 16 56.4**	**-0.6**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**52.39**	**298**	P	**P**	**20 16 56.4**	**-0.6**
KKAR				IAmb	IAmb	20 17 10.8	
	comp=Z,4.6nm,0.8s						
KKAR	**Karatay Array**	**52.39**	**298**	P	**P**	**20 16 56.1**	**-0.9**
KKAR	**Karatay Array**	**52.39**	**298**	P	**P**	**20 16 56.4**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SVE	**Sverdlovsk**	**53.12**	**317**	*e*P	P	20 17 09.2	+7.1
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**54.33**	**317**	P	**P**	**20 17 11.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=42,slow=9.6,SNR=4.1						
	comp=Z,0.3nm,0.3s						
ARU	**Arti**	**54.33**	**317**	P	**P**	**20 17 10.7**	**-0.3**
ARU				IAmb	IAmb	20 17 19.5	
	comp=Z,6.8nm,1.1s						
ARU	**Arti**	**54.33**	**317**	*d i*P	**P**	**20 17 10.4**	**-0.6**
ARU				*PP	**pP**	**20 17 24.2**	**+1.1**
ARU						20 18 16.0	
ARU						20 19 12.1	
ARU				S	**S**	**20 24 42.7**	**-2.8**
ARU				SS	**SKiKP**	**20 28 20.8**	**+3.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHGR	**Chuyangaron**	**55.26**	**294**	P	**P**	**20 17 16.9**	**-1.3**
CHGR	**Chuyangaron**	**55.26**	**294**	P	**P**	**20 17 16.9**	**-1.3**
CHGR				pmax	pmax		
	comp=Z,11nm,0.8s						
ABKAR	**Akbulak array**	**56.47**	**309**	P	**P**	**20 17 25.9**	**-0.7**
ABKAR				IAmb	IAmb	20 17 41.6	
	comp=Z,6.6nm,1.2s						
ABKAR	**Akbulak array**	**56.47**	**309**	P	**P**	**20 17 25.8**	**-0.7**
SPITS	**Spitsbergen Ar**	**56.89**	**349**	P	**P**	**20 17 29.7**	**+0.6**
	comp=Z,7.3nm,1.1s,baz=109,slow=6.6,SNR=1.0						
	comp=Z,7.3nm,1.1s						
AKTO	**Aktyubinsk**	**57.08**	**311**	P	**P**	**20 17 32.8**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=75,slow=14,SNR=2.3						
	comp=Z,0.9nm,0.4s						
KIRV	**Kirov**	**57.93**	**322**	*i* P	**P**	**20 17 35.8**	**-0.8**
KLMR	**Klimovskoe**	**61.14**	**327**	*e*P	**P**	**20 17 57.7**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLMR	**Klimovskoe**	**61.14**	**327**	*e*P	**P**	**20 17 57.7**	**-1.0**
KLMR				AMP		20 17 59.2	
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**61.20**	**189**	P	**P**	**20 18 00.1**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=6.0,slow=6.9,SNR=16						
	comp=Z,1.0nm,0.6s						
BELG	**Belogornoye**	**61.85**	**316**	P	**P**	**20 18 03.7**	**+0.1**
	comp=Z,14nm,0.8s,baz=56,slow=2.0,SNR=9.6						
	comp=Z,14nm,0.8s						
GEYT	**Alibeck**	**63.14**	**298**	P	**P**	**20 18 12.2**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=132,slow=3.6,SNR=3.9						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**64.93**	**189**	P	**P**	**20 18 25.6**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=5.3,slow=5.7,SNR=8.4						
	comp=Z,0.6nm,0.7s						
FINES	**FINESS Array B**	**65.93**	**332**	P	**P**	**20 18 30.4**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=58,slow=6.9,SNR=30						
	comp=Z,4.4nm,0.6s						
FINES	**FINESS Array B**	**65.93**	**332**	P	**P**	**20 18 30.9**	**+0.6**
FINES	**FINESS Array B**	**65.93**	**332**	P	**P**	**20 18 31.0**	**+0.6**
VORR	**Voronezh**	**66.56**	**319**	*e*P	**P**	**20 18 35.1**	**+0.6**
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
KVAR	**Kislovodsk Arr**	**69.34**	**311**	P	**P**	**20 18 53.8**	**+1.5**
	comp=Z,3.4nm,0.8s,baz=261,slow=23,SNR=4.0						
	comp=Z,3.4nm,0.8s						
KIV	**Kislovodsk**	**69.34**	**311**	*i* P	**P**	**20 18 53.0**	**+0.7**
KIV	**Kislovodsk**	**69.34**	**311**	*e*P	**P**	**20 18 51.3**	**-1.0**
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	**Khabaz**	**69.36**	**310**	P	**P**	**20 18 53.5**	**+1.3**
	comp=Z,4.7nm,0.8s,baz=48,slow=5.5,SNR=12						
	comp=Z,4.7nm,0.8s						
NACGM	**Naroch**	**70.15**	**327**	⇑*e*P	**P**	**20 18 57.3**	**+0.3**
	baz=46						
HFS	**Hagfors**	**71.02**	**336**	P	**P**	**20 19 02.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=157,slow=16,SNR=3.0						
	comp=Z,0.3nm,0.4s						
NB2	**NORSAR Subarra**	**71.04**	**338**	P	**P**	**20 19 02.1**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**71.04**	**338**	P	**P**	**20 19 01.5**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=36,slow=6.1,SNR=7.3						
	comp=Z,1.4nm,0.8s						
NBO00	**NORSAR Array S**	**71.17**	**338**	P	**P**	**20 19 02.4**	**-0.6**
KVN	**Kaiserville**	**71.28**	**54**	P	**P**	**20 19 05.8**	**+1.5**
NVAR	**Mina Array Bea**	**71.54**	**55**	P	**P**	**20 19 08.7**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=309,slow=6.2,SNR=3.9						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**71.54**	**55**	P	**P**	**20 19 08.3**	**+2.4**
AKASG	**Malin Array Be**	**71.98**	**322**	P	**P**	**20 19 08.3**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=44,slow=6.3,SNR=16						
	comp=Z,3.8nm,0.6s						
AKASG	**Malin Array Be**	**71.98**	**322**	*i* P	**P**	**20 19 08.3**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	**Malin Array Si**	**71.98**	**322**		**P**	**20 19 08.2**	**+0.2**
AKBB				IAmb	IAmb	20 19 09.1	
	comp=Z,7.5nm,0.8s						
AKBB	**Malin Array Si**	**71.98**	**322**	P	**P**	**20 19 08.3**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PDAR	**Pinedale Array**	**73.92**	**47**	P	**P**	**20 19 21.9**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=214,slow=0.8,SNR=8.9						
	comp=Z,0.6nm,0.6s						
MARD	**Mardin**	**74.62**	**306**	P	**P**	**20 19 24.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**76.02**	**322**	P	**P**	**20 19 32.2**	**+0.4**
BUR08				IAmb	IAmb	20 19 34.4	
	comp=Z,7.1nm,1.4s						
BURAR	**Bucovina Array**	**76.03**	**322**	P	**P**	**20 19 32.2**	**+0.2**
OJC	**Ojcow**	**76.49**	**327**	*e*P	**P**	**20 19 34.7**	**+0.4**
OJC				*e*pP	**pwP**	**20 19 49.0**	**-0.5**
OJC	**Ojcow**	**76.49**	**327**	P	**P**	**20 19 34.5**	**+0.2**
OJC				IAmb	IAmb	20 19 36.8	
	comp=Z,4.7nm,0.8s						
OJC	**Ojcow**	**76.49**	**327**	P	**P**	**20 19 34.5**	**+0.2**
OJC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIE	**Niedzica**	**76.88**	**326**	*e*P	**P**	**20 19 38.2**	**+1.6**
KSP	**Ksiaz**	**77.42**	**329**	*e*pP	**P**	**20 19 41.2**	**+1.6**
CLL	**Collm**	**78.31**	**331**	*e*P	**P**	**20 19 45.0**	**+0.5**
CLL				*e**PP	**pP**	**20 19 58.0**	**+0.9**
CLL	**Collm**	**78.31**	**331**	*e*P	**P**	**20 19 45.0**	**+0.5**
CLL				*e*pP	**pP**	**20 19 58.0**	**+0.9**
CLL				Lm	MLR	21 42 00.0	
	comp=Z,100nm,20.3s						
SDCO	**Great Sand Dun**	**79.60**	**49**	P	**P**	**20 19 51.7**	**-0.5**
EKA	**Eskdalemuir Ar**	**79.82**	**341**	P	**P**	**20 19 53.1**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=31,slow=5.1,SNR=5.5						
	comp=Z,0.5nm,0.5s						
KHC	**Kasperske Hory**	**79.85**	**329**	P	**P**	**20 19 52.8**	**-0.2**
KHC	**Kasperske Hory**	**79.85**	**329**	P	**P**	**20 19 52.8**	**-0.2**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**80.03**	**329**	P	**P**	**20 19 54.5**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=32,slow=5.8,SNR=2.6						
	comp=Z,0.3nm,0.5s						
H03N2	**Juan Fernandez**	**145.89**	**91**	T	T	23 10 41.7	
	baz=290						
H03N3	**Juan Fernandez**	**145.90**	**91**	T	T	23 10 44.8	
	baz=290						
H03N1	**Juan Fernandez**	**145.91**	**91**	T	T	23 10 47.9	
	baz=290						
VNA3	**Neumayer Olymp**	**146.77**	**196**	PKPdf	**PKPab**	**20 27 26.6**	**0.0**

TEH ***26*** *20:11:47.8, 27°.88N×57°.35E, h40^{km}, ML3.5*
OMAN ***26*** *20:11:51.0±1.9, 27°.91N×57°.41E, h33^{km}, ml3.2/13, Error ellipse: s-maj=20.5km s-min=8.3km az=28.0*
DSN ***26*** *20:11:53.0±0.0, 27°.90N×57°.18E, h10^{km}, ML3.2/5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 26 20:11:48.4±1.1**, 28°.00N**±0°.03×**57°.30E**±0°.04**, h26**^{km}±12^{km}**, n40,** σ**1^{s}57**/52**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.36**	**98**	*e*Pg	**Pb**	**20 11 56.2**	**-0.2**
IBND	**Bandar-abas**	**0.87**	**231**	*e*Sg	**Sb**	**20 12 16.6**	**+0.5**
IBND				*e*Pg	**Pn**	**20 12 04.8**	**-0.1**
GENO	**Geno**	**1.17**	**240**	*e*Sg	**Sb**	**20 12 26.0**	**+1.2**
GENO				*e*Pg	**Pb**	**20 12 09.9**	**-0.1**
GENO				*e*		20 12 28.6	
	comp=Z,5µm,0.2s						
NGRK	**Negar Kerman**	**1.72**	**343**	*e*Pn	**Pn**	**20 12 17.7**	**+0.8**
NGRK				*e*		20 12 44.0	
	comp=Z,4µm,0.2s						
CHMN	**Cheshme madani**	**1.87**	**6**	*e*Pn	**Pn**	**20 12 19.8**	**+0.8**
CHMN				*e*		20 12 51.0	
	comp=Z,5µm,0.4s						
TVBK	**TV Kerman**	**2.04**	**347**	*e*Pn	**Pb**	**20 12 23.1**	**-1.8**
TVBK				*e*		20 12 55.1	
	comp=Z,4µm,0.2s						
JASK	**Jask - Hormozg**	**2.18**	**167**	*e*Pg	**Pb**	**20 12 25.1**	**-2.1**
SHME	**Shamm**	**2.20**	**208**	P	**Pn**	**20 12 25.0**	**+1.7**
	SNR=7.4						
SHME				S	**Sb**	**20 12 54.4**	**+0.1**
SHME	**Shamm**	**2.20**	**208**	P	**Pb**	**20 12 25.7**	**-1.7**
SHME				S	**Sb**	**20 12 54.9**	**+0.6**
BANOM	**Banah**	**2.25**	**204**	P	**Pn**	**20 12 25.6**	**+1.6**
	SNR=17						
BANOM				S	**Sb**	**20 12 56.1**	**+0.3**
BANOM	**Banah**	**2.25**	**204**	P	**Pb**	**20 12 26.7**	**-1.7**
BANOM				S	**Sb**	**20 12 56.3**	**+0.4**
KHGB	**Koh Gabri**	**2.48**	**343**	*e*Pn	**Pb**	**20 12 30.2**	**-2.1**
MASF	**Masafi**	**2.81**	**202**	P	**Pn**	**20 12 32.9**	**+1.2**
MASF				S	**Sb**	**20 13 10.6**	**-1.3**
MSFE	**Esma-Masafi**	**2.82**	**202**	P	**Pb**	**20 12 35.8**	**-2.3**
MSFE				S	**Sb**	**20 13 13.1**	**+0.9**
UMQ	**Umm Al-Quwin**	**2.87**	**211**	P	**Pn**	**20 12 33.5**	**+1.1**
UOSS	**Minazif**	**3.20**	**198**	P	**Pn**	**20 12 38.4**	**+1.4**
UOSS	**Minazif**	**3.20**	**198**	P	**Pb**	**20 12 43.7**	**-0.8**
HATD	**Hatta, Dubai**	**3.33**	**199**	P	**Pn**	**20 12 40.3**	**+1.5**
HATD	**Hatta, Dubai**	**3.33**	**199**	P	**Pb**	**20 12 46.2**	**-0.5**
NAZ	**Nazwa, Dubai**	**3.34**	**207**	P	**Pn**	**20 12 40.8**	**+1.9**
ZHDN	**Zahedan**	**3.38**	**65**	*e*Pn	**Pn**	**20 12 39.8**	**+0.1**
ASHO	**Ashiyiah**	**3.48**	**199**	P	**Pn**	**20 12 42.8**	**+1.9**
ASHO	**Ashiyiah**	**3.48**	**199**	P	**Pb**	**20 12 45.2**	**-4.2**
FAQ	**Al Faqa, Dubai**	**3.58**	**206**	P	**Pn**	**20 12 43.6**	**+1.3**
IBAF	**Bafgh**	**3.88**	**338**	*e*Pn	**Pn**	**20 12 48.4**	**+1.8**
AJN	**Ajban**	**4.00**	**212**	P	**Pn**	**20 12 49.4**	**+1.4**
IMEH	**Mehriz**	**4.11**	**326**	*e*Pn	**Pn**	**20 12 50.8**	**+1.0**
ALNE	**Al Ain**	**4.17**	**200**	P	**Pn**	**20 12 51.6**	**+1.3**
BSRN	**Basiran**	**4.26**	**21**	*e*Pn	**Pn**	**20 12 54.8**	**+3.1**
HOQ	**Hoqain**	**4.40**	**180**	P	**Pn**	**20 12 53.2**	**-0.3**
BIDO	**Bidbid**	**4.52**	**170**	P	**Pn**	**20 12 56.1**	**+0.9**
IKOO	**Kooshah**	**4.65**	**18**	*e*Pn	**Pn**	**20 12 59.9**	**+2.7**
WSAR	**Wadi Sarin**	**4.89**	**166**	P	**Pn**	**20 13 01.6**	**+1.4**
WSAR				S	**Sn**	**20 13 54.9**	**-1.1**
SMDO	**Samad**	**4.96**	**172**	P	**Pn**	**20 13 02.6**	**+1.2**
SMDO				S	**Sn**	**20 13 59.3**	**+1.3**
YZKH	**Yazd**	**4.97**	**332**	*e*Pn	**Pn**	**20 13 03.2**	**+1.8**
BSY	**Bisya**	**5.23**	**181**	P	**Pn**	**20 13 06.7**	**+1.7**
WBK	**Wadi Bani Khal**	**5.57**	**164**	P	**Pn**	**20 13 10.6**	**+0.9**
	SNR=10						
WBK				S	**Sn**	**20 14 13.0**	**+0.1**
TABS	**Tabas**	**5.63**	**358**	*e*Pn	**Pn**	**20 13 13.0**	**+2.4**
IRAM	**Ramesheh**	**5.72**	**313**	*e*Pn	**Pn**	**20 13 13.2**	**+1.4**
JLN	**Jalan Bani Buh**	**6.13**	**161**	P	**Pn**	**20 13 18.3**	**+1.0**
JLN				S	**Sn**	**20 14 25.5**	**-1.1**

IDC ***26*** *20:29:44.1±1.7, 43°.59N×105°.33W, h0^{km}, mbtmp3.2/5, ML3.2/5, Error ellipse: s-maj=42.1km s-min=8.9km az=150.0*
NEIC ***26*** *20:29:45.1±1.9, 43°.66N±0°.05×105°.21W±0°.08, h0^{km}±2^{km}, ML3.5/52, Error ellipse: s-maj=10.1km s-min=8.0km az=84.0*
ISC 26 20:29:44.9±0.8**, 43°.67N**±0°.04×**105°.31W**±0°.04**, h0**^{km}**, n62,** σ**1^{s}53**/58**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**64**	Pg	**Pg**	**20 30 03.9**	**-0.6**
K22A	**Casper**	**1.35**	**221**		**Pg**	**20 30 08.9**	**-1.9**
K22A				IAML		20 30 34.9	
	comp=N,749nm,0.3s						
K22A				IAML		20 30 39.0	
	comp=E,610nm,0.7s						
PHWY	**Pilot Hill**	**2.37**	**183**		**Pn**	**20 30 25.4**	**+0.1**
PHWY				IAML		20 31 02.3	
	comp=E,178nm,1.0s						
RWWY	**Rawlins**	**2.43**	**216**		**Pn**	**20 30 26.8**	**+0.8**
N23A	**Red Feather La**	**2.82**	**190**	Pn	**Pn**	**20 30 32.2**	**+0.8**
N23A				IAML		20 31 14.5	
	comp=N,216nm,0.8s						
N23A				IAML		20 31 18.4	
	comp=E,171nm,0.8s						
LAO	**LASA Array**	**3.08**	**348**	Pn	**Pn**	**20 30 36.3**	**+1.4**
RLMT	**Red Lodge**	**3.18**	**298**		**Pn**	**20 30 38.0**	**+1.6**
RLMT				IAML		20 31 41.9	
	comp=E,90nm,0.9s						
BW06	**Boulder Array**	**3.23**	**255**		**Pn**	**20 30 38.6**	**+1.6**
PD31	**Pinedale Array**	**3.23**	**255**	Pn	**Pn**	**20 30 38.3**	**+1.2**
PDAR	**Pinedale Array**	**3.23**	**255**	Pn	**Pn**	**20 30 38.5**	**+1.4**
	comp=E,2.4nm,0.3s,baz=83,slow=16,SNR=31						
PDAR				Lg	Lg	20 31 23.2	
	comp=E,5.6nm,0.3s,baz=76,slow=30,SNR=7.3						
	comp=E,4.1nm,0.4s						
PDAR	**Pinedale Array**	**3.23**	**255**	Pn	**Pn**	**20 30 38.0**	**+0.9**
OGNE	**Ogallala**	**3.65**	**137**	Pn	**Pn**	**20 30 42.5**	**-0.2**
OGNE				IAML		20 31 55.7	
	comp=E,124nm,0.9s						
LOHW	**Long Hollow**	**3.84**	**271**		**Pn**	**20 30 47.1**	**+1.6**
ISCO	**Idaho Springs**	**3.88**	**183**	Pn	**Pn**	**20 30 47.2**	**+1.2**
ISCO				IAML		20 31 50.1	
	comp=E,57nm,0.7s						
FLWY	**Flagg Ranch**	**3.92**	**278**		**Pn**	**20 30 48.3**	**+1.8**
FLWY				IAML		20 31 59.2	
	comp=E,76nm,0.9s						
FLWY				IAML		20 32 03.2	
	comp=E,78nm,1.0s						
MOOW	**Moose Ponds**	**3.94**	**273**	Pn	**Pn**	**20 30 48.2**	**+1.4**
YPP	**Pitchstone Pla**	**4.01**	**280**		**Pn**	**20 30 48.7**	**+0.9**
REDW	**Red Top Meadow**	**4.04**	**267**		**Pn**	**20 30 49.7**	**+1.5**
REDW				IAML		20 32 14.2	
	comp=E,84nm,0.8s						
TPAW	**Teton Pass**	**4.10**	**269**		**Pn**	**20 30 50.0**	**+0.9**
TPAW				IAML		20 32 12.2	
	comp=E,44nm,0.9s						
TPAW				IAML		20 32 15.7	
	comp=E,80nm,0.8s						
O20A	**White River Ci**	**4.16**	**213**		**Pn**	**20 30 51.0**	**+1.2**
O20A				IAML		20 32 08.0	
	comp=E,76nm,0.9s						
AHID	**Auburn Hatcher**	**4.33**	**260**	Pn	**Pn**	**20 30 51.4**	**-0.7**
AHID				IAML		20 32 07.7	
	comp=E,61nm,1.0s						
AHID				IAML		20 32 22.4	
	comp=E,51nm,1.0s						

E28A	Huff	4.37	47		Pn	20 30 52.8	+0.2
YHL	Hebgen Lake	4.38	288	Pn	Pn	20 30 51.8	-1.1
YHL				IAML		20 32 24.6	
	comp=N,53nm,0.9s						
YHL				IAML		20 32 29.4	
	comp=E,51nm,0.9s						
RDMU	Red Mountain	4.43	227		Pb	20 31 05.3	+1.6
RDMU				IAML		20 32 10.5	
	comp=N,58nm,0.9s						
RDMU				IAML		20 32 10.7	
	comp=E,62nm,0.8s						
QLMT	Earthquake Lak	4.54	287		Pb	20 31 07.0	+1.3
SMCO	Snowmass	4.66	196	Pg	Pb	20 31 09.5	+1.8
SMCO				IAML		20 32 22.1	
	comp=E,47nm,0.8s						
Q24A	Divide	4.71	178	Pn	Pn	20 30 52.3	-5.1
Q24A				IAML		20 32 14.0	
	comp=E,56nm,1.0s						
Q24A				IAML		20 32 20.7	
	comp=N,38nm,0.9s						
DGMT	Dagmar	4.86	9		Pn	20 30 57.9	-1.4
BOZ	Bozeman (W)	4.90	295		Pn	20 31 02.8	+2.8
BOZ				IAML		20 32 25.2	
	comp=N,21nm,0.8s						
BOZ				IAML		20 32 28.7	
	comp=N,27nm,0.8s						
HWUT	Hardware Ranch	5.05	248	Pn	Pn	20 31 01.4	-0.6
HWUT				IAML		20 33 04.1	
	comp=N,38nm,1.0s						
KSCO	Kaye Shedlock'	5.08	156		Pb	20 31 17.8	+3.1
EGMT	Eagleton	5.34	326	Pn	Pn	20 31 06.6	+0.7
DLMT	Dillon	5.47	290		Pb	20 31 21.8	+0.4
P18A	Preston Nutter	5.47	224		Pn	20 31 08.1	+0.2
JLU	Jordanelle	5.50	238	Pn	Pn	20 31 08.9	+0.6
JLU					Pg	20 31 28.4	-1.8
HVU	Hansel Valley	5.81	254		Pn	20 31 13.3	+0.9
P17A	Butcher Ranch,	5.84	226		Pn	20 31 13.4	+0.4
SDCO	Great Sand Dun	5.92	181		Pn	20 31 13.4	-0.7
S22A	4UR Ranch, Cre	6.03	192	Pn	Pn	20 31 15.2	-0.4
TMUT	Trail Mountain	6.22	227		Pn	20 31 20.4	+2.2
NLU	North Lily Min	6.27	236	Pn	Pn	20 31 19.7	+0.9
ECSD	EROS Data Cent	6.31	86		Pn	20 31 19.3	+0.2
BGU	Big Grassy Mou	6.35	247	Pn	Pn	20 31 20.1	+0.3
Q16A	Castle Valley	6.48	225		Pn	20 31 19.9	-1.8
T25A	Trinidad	6.56	174	Pn	Pn	20 31 20.6	-2.3
DUG	Dugway, Tooele	6.58	241		Pn	20 31 23.1	+0.1
HLID	Hailey	6.61	272	Pn	Pn	20 31 26.6	+3.2
MSU	Marysvale	7.31	227	Pn	Pn	20 31 33.4	+0.3
MFID	Camas Ranch	7.64	272	Pn	Pn	20 31 40.6	+3.0
MTPU	Mount Pierson	7.66	225		Pn	20 31 38.8	+0.7
ELK	Elko	7.93	252	Pn	Pn	20 31 43.6	+2.1
	comp=N,0.1nm,0.3s,baz=57,slow=17,SNR=1.9						
ELK				Lg	Lg	20 33 52.9	
	comp=N,0.1nm,0.3s,baz=185,slow=16,SNR=1.5						
	comp=N,0.4nm,0.4s						
ELK	Elko	7.93	252		Pn	20 31 41.1	-0.5
AGMN	Agassiz Nation	8.04	52	Pn	Pn	20 31 41.1	-1.8
ANMO	Albuquerque	8.76	186	Lg	Lg	20 34 19.5	
	comp=N,0.1nm,0.3s,baz=78,slow=18,SNR=1.3						
I10CA	LAC DU BONNET	9.11	41	*i*		21 31 30.0	
	baz=224,slow=311,SNR=2.0						
ULM	Lac du Bonnet	9.21	41	Pn	Pn	20 31 56.4	-2.5
	comp=N,1.2nm,0.3s,baz=225,slow=11,SNR=7.0						
ULM				Lg	Lg	20 34 30.4	
	comp=N,0.4nm,0.3s,baz=137,slow=18,SNR=2.0						
	comp=N,4.3nm,0.5s						
ULM	Lac du Bonnet	9.21	41	Pn	Pn	20 31 56.3	-2.6
K38A	Parkersburg	9.23	92	Pn	Pn	20 31 57.1	-2.0
NEW	Newport	9.42	303	Lg	Lg	20 34 38.6	
	comp=N,0.3nm,0.3s,baz=119,slow=3.9,SNR=1.9						
I56US	NEWPORT INFRAS	9.42	303	*i*		21 28 30.0	
	baz=114,slow=311,SNR=5.7						
NVAR	Mina Array Bea	11.12	246	Pn	Pn	20 32 27.3	+2.0
	comp=N,0.1nm,0.3s,baz=66,slow=16,SNR=2.3						
	comp=N,0.2nm,0.6s						
YKA	Yellowknife Ar	19.62	347	P	Pn	20 34 16.0	+0.1
	comp=N,0.1nm,0.3s,baz=154,slow=12,SNR=3.5						
	comp=N,0.4nm,0.6s						

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*IDC **26** 20:36:15.4±0.6, 13°.83N×145°.12E, h124^{km}±3^{km}, mb3.7/13, mbtmp4.1/13, MS3.1/3, Error ellipse: s-maj=21.8km s-min=12.6km az=88.0*

*NEIC **26** 20:36:16.7±1.6, 13°.85N±0°.09×144°.9E±0°.1, h128^{km}±4^{km}, mb4.3/73, ML4.0/6, Error ellipse: s-maj=20.0km s-min=13.1km az=95.0*

ISC 26 20:36:16.0±0.5**, 13°.85N**±0°.08×**145°.0E**±0°.1**, h125^{km}, n107, σ0^{s}91**/101**, mb4.3**/47**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.28	198	P	Pn	20 36 34.8	+1.3
	2μm,0.3s,baz=331,slow=1.7,SNR=767						
GUMO				S	Sn	20 36 47.8	+1.1
	7μm,0.4s,baz=116,slow=4.7,SNR=26						
GUMO	Guam	0.28	198	IAML		20 36 25.7	
	92nm,1.7s						
GUMO					Pn	20 36 34.9	+1.3
GUMO	Guam	0.28	198	P	Pn	20 36 34.8	+1.3
SIJI	Sorong	19.95	224	LR	LR	20 49 54.7	
	comp=Z,23nm,18.1s,baz=216,slow=41						
JOW	Kunigami	20.25	312	P	Pn	20 40 44.1	-0.6
	7.8nm,0.6s,baz=131,slow=9.2,SNR=5.3						
	7.8nm,0.6s						
JOW	Kunigami	20.25	312	P	P	20 40 41.8	+0.2
JOW				IAmb	IAmb	20 40 45.2	
	comp=Z,19nm,1.2s						
FAKI	Fak Fak	20.89	218	P	P	20 40 48.6	0.0
H11S3	WAKE ISLAND Hy	21.37	75	T	T	21 03 09.2	
	baz=261,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	21.39	75	T	T	21 02 56.6	
	baz=261,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	21.39	75	T	T	21 03 07.3	
	baz=261,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	21.79	71	T	T	21 04 11.0	
	baz=258,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	21.80	71	T	T	21 04 11.8	
	baz=258,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	21.80	71	T	T	21 04 13.5	
	baz=258,slow=75,SNR=40						
JHS	Saijyo	23.61	335	P	P	20 41 16.3	+0.6
JSD	Sado	24.81	347	P	P	20 41 27.3	+0.8
JSD				IAmb	IAmb	20 41 27.5	
	comp=Z,5.3nm,0.7s						
KSRS	Korea Array	27.98	330	P	P	20 41 54.5	-0.5
	comp=Z,0.6nm,0.5s,baz=146,slow=9.1,SNR=5.5						
	comp=Z,0.6nm,0.5s						
MTN	Manton Dam	29.85	208	P	P	20 42 10.9	-0.9
MTN				IAmb	IAmb	20 42 34.8	
	comp=Z,8.6nm,1.1s						
WB0	Warramunga Arr	34.99	198	P	P	20 42 55.7	-0.8
WB0				IAmb	IAmb	20 42 56.0	
	comp=Z,4.2nm,0.6s						
WR0	Warramunga Arr	35.13	197	P	P	20 42 56.9	-0.9
WR0				IAmb	IAmb	20 42 57.6	
	comp=Z,3.6nm,0.6s						
WRAB	Tennant Creek	35.16	197	P	P	20 42 57.2	-0.8
WRAB				IAmb	IAmb	20 42 57.9	
	comp=Z,7.6nm,0.8s						
WB2	Warramunga Arr	35.17	197	P	P	20 42 57.4	-0.7
WB2				IAmb	IAmb	20 42 58.6	
	comp=Z,8.1nm,0.9s						
WRA	Warramunga Arr	35.17	198	P	P	20 42 56.9	-1.2
	comp=Z,5.8nm,0.9s,baz=19,slow=9.1,SNR=44						
WRA				PcP	PcP	20 45 26.6	-0.2
	comp=Z,0.4nm,0.7s,baz=19,slow=3.3,SNR=2.8						
WRA				ScP	ScP	20 48 58.5	-2.5
	comp=Z,0.5nm,0.9s,baz=13,slow=3.7,SNR=2.1						
	comp=Z,5.8nm,0.9s						
ASAR	Alice Springs	38.82	196	P	P	20 43 28.1	-0.8
	comp=Z,1.2nm,0.7s,baz=16,slow=13,SNR=31						
ASAR				PcP	PcP	20 45 38.0	+0.2
	comp=Z,0.5nm,0.6s,baz=40,slow=2.5,SNR=5.7						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	38.82	196	P	P	20 43 27.6	-1.4
DZM	Mont Dzumac	41.46	149	P	P	20 43 51.1	+0.3
OUENC	Ouen Island, N	41.95	149	P	P	20 43 55.3	+0.6
CMAR	Chiang Mai Arr	44.34	282	P	P	20 44 15.1	+1.0
	comp=Z,0.3nm,0.6s,baz=80,slow=7.4,SNR=2.1						
CMAR				PcP	PcP	20 45 57.9	+1.7
	comp=Z,0.5nm,0.7s,baz=122,slow=2.2,SNR=4.6						
	comp=Z,0.3nm,0.6s						
ARMA	Armidale	44.48	172	P	P	20 44 14.5	-0.6
STKA	Stephens Creek	45.58	184	P	P	20 44 22.6	-1.0
	comp=Z,2.5nm,0.4s,baz=16,slow=7.2,SNR=19						
	comp=Z,2.5nm,0.4s						
STKA	Stephens Creek	45.58	184	P	P	20 44 22.7	-0.9
SONM	Songino Array	46.56	325	P	P	20 44 31.7	+0.4
	comp=Z,0.3nm,0.5s,baz=138,slow=9.6,SNR=3.1						
SONM				PcP	PcP	20 46 03.0	-0.5
	comp=Z,0.4nm,0.6s,baz=117,slow=1.6,SNR=1.9						
	comp=Z,0.3nm,0.5s						
BBOO	Buckleboo	47.17	190	P	P	20 44 35.4	-0.6
ADK	Adak	48.80	31	P	P	20 44 48.5	+0.2
SEY	Seymchan	49.30	4	LR	LR	21 04 10.0	
	comp=Z,21nm,21.3s,baz=282,slow=34						
TOO	Toolangi	51.15	179	P	P	20 45 07.0	+0.7
QRZ	Quartz Range	60.10	156	P	P	20 46 10.5	+0.3
NNZ	Nelson	60.77	156	P	P	20 46 14.7	0.0
MK31	Makanchi Array	61.36	316	P	P	20 46 19.0	+0.3
MKAR	Makanchi Array	61.36	316	P	P	20 46 19.1	+0.3
	comp=Z,1.0nm,0.5s,baz=88,slow=8.3,SNR=21						
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	61.36	316	P	P	20 46 18.8	0.0
MAKZ	Makanchi	61.57	316	P	P	20 46 20.4	+0.2
MAKZ				IAmb	IAmb	20 46 20.9	
	comp=Z,1.5nm,0.5s						
N18K	Kilae Creek	63.12	28	P	P	20 46 30.6	+0.5
N18K				IAmb	IAmb	20 46 32.8	
	comp=Z,4.0nm,1.2s						
N19K	Bonanza Creek	63.81	28	P	P	20 46 35.1	+0.3
N19K				IAmb	IAmb	20 46 35.6	
	comp=Z,2.4nm,0.7s						
KURK	Kurchatov	64.44	320	P	P	20 46 38.7	-0.3
KURK				IAmb	IAmb	20 46 39.0	
	comp=Z,2.2nm,0.5s						
CNPM	China Poot	64.97	30	P	P	20 46 41.1	-1.2
J20K	Nowinta River	65.12	25	P	P	20 46 43.1	0.0
J20K				IAmb	IAmb	20 46 59.3	
	comp=Z,3.2nm,1.2s						
PPLA	Purkeypile	65.52	27	P	P	20 46 45.3	-0.7
PPLA				IAmb	IAmb	20 46 47.4	
	comp=Z,3.2nm,0.7s						
CAST	Castle Rocks	65.72	26	P	P	20 46 46.1	-1.1
CAST				IAmb	IAmb	20 46 49.0	
	comp=Z,2.4nm,0.9s						
IMAR	Indian Mountai	65.92	23	P	P	20 46 47.7	-0.6
H21K	Melozitna Rive	66.17	24	P	P	20 46 49.6	-0.3
BPAW	Bear Paw Mtn.	66.40	26	P	P	20 46 50.5	-1.0
BPAW				IAmb	IAmb	20 47 13.2	
	comp=Z,5.3nm,1.5s						
TRF	Thorofare Moun	66.50	26	P	P	20 46 50.6	-1.7
TRF				IAmb	IAmb	20 47 12.1	
	comp=Z,5.9nm,1.4s						
MLY	Manley	66.79	25	P	P	20 46 53.0	-0.9
MLY				IAmb	IAmb	20 46 54.0	
	comp=Z,3.8nm,1.3s						
SCM	Sheep Creek Mo	67.41	28	P	P	20 46 57.0	-0.9
COLD	Coldfoot	67.67	22	P	P	20 46 59.3	-0.1
DHY	Denali Highway	67.68	27	P	P	20 46 57.9	-1.7
WRH	Wood River Hil	67.72	26	P	P	20 46 58.4	-1.3
MDM	Murphy Dome	67.79	25	P	P	20 47 00.1	-0.1
H24K	Noodor Dome	68.16	24	P	P	20 47 01.8	-0.8
ILAR	Eielson Array	68.30	25	P	P	20 47 00.9	-2.4
	comp=Z,0.8nm,0.5s,baz=251,slow=5.8,SNR=14						
	comp=Z,0.8nm,0.5s						
TOLK	Toolik Lake Re	68.34	21	P	P	20 47 03.5	-0.1
TOLK				IAmb	IAmb	20 47 03.9	
	comp=Z,7.6nm,1.4s						
PAX	Paxson	68.50	27	P	P	20 47 04.0	-0.8
SUCK	Suckling Hills	68.76	31	P	P	20 47 06.3	-0.1
J25K	Salcha River,	68.89	26	P	P	20 47 05.4	-1.7
VRDI	Verde Repeater	69.11	29	P	P	20 47 07.7	-1.0
VRDI				IAmb	IAmb	20 47 20.2	
	comp=Z,5.9nm,1.4s						
SNH	Sunshine Point	69.24	31	P	P	20 47 09.5	+0.2
SCRK	Sand Creek	69.36	26	P	P	20 47 09.6	-0.5
YAH	Yahtse	69.81	30	P	P	20 47 13.3	+0.2
YAH				IAmb	IAmb	20 47 17.4	
	comp=Z,3.3nm,0.8s						
BMAR	Burnt Mountain	69.83	23	P	P	20 47 12.8	0.0
BRVK	Borovoye	69.84	322	P	P	20 47 12.9	-0.1
GRNC	Granite Creek	69.85	30	P	P	20 47 13.5	+0.2
GRNC				IAmb	IAmb	20 47 14.0	
	comp=Z,3.3nm,0.6s						
M27K	Edge Creek, AK	70.02	28	P	P	20 47 14.6	+0.4
CTGM	Chitina Glacie	70.09	30	P	P	20 47 14.7	0.0
CTGM				IAmb	IAmb	20 47 15.6	
	comp=Z,3.1nm,0.8s						
TABL	Table Mountain	70.11	30	P	P	20 47 14.2	-0.7
TABL				IAmb	IAmb	20 47 15.7	
	comp=Z,5.8nm,0.8s						
BCAR	Beaver Creek A	70.17	28	P	P	20 47 14.0	-1.0
HYT	Haines Junctio	71.94	30	P	P	20 47 25.6	-0.2
M30M	Minto, Yukon	72.40	28	P	P	20 47 28.3	0.0
ABKAR	Akbulak array	76.40	318	P	P	20 47 50.4	-1.4
I02E	Swisshome, OR	81.35	47	P	P	20 48 19.5	+0.6
HUMO	Hull Mountain	82.28	48	P	P	20 48 24.8	+1.0
HUMO				IAmb	IAmb	20 48 25.9	
	comp=Z,3.4nm,0.8s						
YKA	Yellowknife Ar	82.59	27	P	P	20 48 23.6	-1.3
	comp=Z,0.6nm,0.3s,baz=287,slow=5.0,SNR=5.4						
	comp=Z,0.6nm,0.3s						
YBH	Yreka Blue Hor	82.64	49	P	P	20 48 26.6	+0.8
YBH				IAmb	IAmb	20 48 27.4	
	comp=Z,5.8nm,0.8s						
L04D	Klamath Falls	82.83	48	P	P	20 48 26.7	-0.1
PINE	Pine Mountain	83.47	47	P	P	20 48 31.1	+0.9
K05A	Summer Lake	83.74	48	P	P	20 48 32.1	+0.6
K05A				IAmb	IAmb	20 48 33.1	
	comp=Z,7.5nm,0.9s						
I07A	Izee	84.41	46	P	P	20 48 35.1	+0.3
I07A				IAmb	IAmb	20 48 35.7	
	comp=Z,4.4nm,1.3s						
BEKR	Beckworth	84.79	50	P	P	20 48 37.2	+0.3
BEKR				IAmb	IAmb	20 48 37.9	
	comp=Z,4.6nm,0.7s						
BMO	Blue Mountains	85.75	45	P	P	20 48 41.1	-0.3
BMO				IAmb	IAmb	20 48 42.3	
	comp=Z,5.3nm,0.9s						
PLID	Pearl Lake	86.58	44	P	P	20 48 44.7	-1.0
PLID				IAmb	IAmb	20 48 45.8	
	comp=Z,4.4nm,0.7s						
KVN	Kaiserville	86.69	51	P	P	20 48 46.3	0.0
KVN				IAmb	IAmb	20 48 47.6	
	comp=Z,3.1nm,0.8s						
NVAR	Mina Array Bea	86.69	51	P	P	20 48 46.8	+0.4
	comp=Z,2.0nm,0.7s,baz=263,slow=5.9,SNR=16						
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	86.69	51	P	P	20 48 46.4	0.0
ARCES	ARCESS Array B	86.86	342	P	P	20 48 45.4	-0.9
	comp=Z,3.1nm,0.8s,baz=52,slow=5.8,SNR=4.0						
	comp=Z,3.1nm,0.8s						
ARCES	ARCESS Array B	86.86	342	IAmb	IAmb	20 48 46.2	
	comp=Z,9.2nm,1.1s						
MFID	Camas Ranch	87.16	46		P	20 48 48.3	-0.1
HLID	Hailey	88.10	46	P	P	20 48 52.8	-0.2
HLID				IAmb	IAmb	20 48 54.1	
	comp=Z,3.7nm,0.9s						
ELK	Elko	88.34	49	P	P	20 48 54.5	+0.3
ELK				IAmb	IAmb	20 48 55.5	
	comp=Z,4.3nm,0.8s						
BCYI	Bear Canyon	88.57	45	P	P	20 48 55.7	+0.5
TPNV	Topopah Spring	88.66	52	P	P	20 48 55.9	+0.1
TPNV				IAmb	IAmb	20 48 57.1	
	comp=Z,3.7nm,0.8s						
YHL	Hebgen Lake	89.90	44	P	P	20 49 02.2	+0.7
YHL				IAmb	IAmb	20 49 03.3	
	comp=Z,7.6nm,1.4s						
PSUT	Pine Spring	90.01	50	P	P	20 49 01.9	-0.2
PSUT				IAmb	IAmb	20 49 03.9	
	comp=Z,3.5nm,0.8s						
FINES	FINESS Array B	90.96	335	P	P	20 49 03.5	-2.2
	comp=Z,0.5nm,0.4s,baz=56,slow=5.9,SNR=7.0						
	comp=Z,0.5nm,0.4s						
FRB	Frobisher Bay	98.46	14	LR	LR	21 37 41.0	
	comp=Z,24nm,19.1s,baz=226,slow=37						
TORD	Torodi Ar. Bea	134.78	305	PKP	PKPdf	20 55 22.2	+1.1
	comp=Z,0.1nm,0.4s,baz=47,slow=3.2,SNR=4.2						
TORD	Torodi Ar. Bea	134.78	305	PKPdf	PKPdf	20 55 21.7	+0.7
DBIC	Dimbokro	143.75	302	PKP	PKPab	20 55 34.8	+0.3
	comp=Z,1.4nm,0.3s,baz=63,slow=5.2,SNR=8.8						
LPAZ	La Paz	147.98	99	PKPbc	PKPdf	20 55 47.9	+2.7
	comp=Z,1.1nm,0.5s,baz=276,slow=3.9,SNR=5.0						

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*IDC **26** 20:36:47.6±0.7, 30°.01S×71°.81W, h0^{km}, mb4.3/9, mbtmp4.3/14, ML4.2/5, MS4.0/28, Error ellipse: s-maj=20.7km s-min=17.4km az=90.0*

*SJA **26** 20:36:48.5±0.8, 30°.05S×72°.09W, h13^{km}±3^{km}, ML4.8, MW4.6*

*NEIC **26** 20:36:49.4, 29°.93S×71°.92W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}6.98; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-7.47; $M_{r\theta}$0.90; $M_{\theta\phi}$0.67; $M_{\phi r}$-5.68; Fault plane solution: $M_0$9.27000×10^{15} NP1:ϕ_s172.50000°, δ64.23000°, λ87.48000°. NP2:ϕ_s358.28000°, δ25.89000°, λ95.21000°. Principal axes: T 8.9970, Plg71.0000°, Azm77.0000°; N 0.5227, Plg2.0000°, Azm174.0000°; P -9.5197, Plg19.0000°, Azm264.0000°;*

*VAO **26** 20:36:50.0±0.5, 29°.94S×71°.94W, h12^{km}, mb4.5*

*GUC **26** 20:36:50.7±0.6, 29°.96S×71°.88W, h17^{km}±3^{km}, ML4.8*

*NEIC **26** 20:36:50.5±1.2, 29°.94S±0°.04×71°.88W±0°.06, h17^{km}±1^{km}, mb4.8/57, Mwr4.6/66, Mwr4.8(GUC), Error ellipse: s-maj=9.5km s-min=6.2km az=234.0*

ISC 26 20:36:49.2±1.2**, 29°.94S**±0°.02×**71°.93W**±0°.03**, h12^{km}**±7^{km}**, n249, σ1^{s}60**/273**, mb4.8**/32**, MS4.0**/23**, 6C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.60	88		Pb	20 37 01.8	+0.1
CO05	La Serena	0.60	88	⇓*i*P	Pb	20 37 01.9	+0.1
CO05				*i* S	Sb	20 37 09.5	-0.7
CO05				IAML		20 37 12.6	
	comp=E,90μm,0.4s						
CO06	Fray Jorge	0.78	161		Pg	20 37 04.1	-0.2
CO06	Fray Jorge	0.78	161	⇓*i*P	Pg	20 37 04.2	-0.1
CO06				*i* S	Sb	20 37 14.9	-0.3
CO06				IAML		20 37 17.0	
	comp=E,36μm,0.5s						
GO04	Tololo Observa	1.01	104	Pn	Pg	20 37 08.5	-0.2
GO04	Tololo Observa	1.01	104	*e*P	Pg	20 37 08.5	-0.2
GO04				*i* S	Sb	20 37 21.8	-0.4
GO04				IAML		20 37 27.9	
	comp=E,117μm,0.5s						
GO04	Tololo Observa	1.01	104	*e*P	Pn	20 37 10.2	+0.7
GO04				*e*S	Sn	20 37 24.8	+1.0
LCO	Las Campanas	1.42	50	Pn	Pn	20 37 15.0	0.0
LCO	Las Campanas	1.42	50	⇑*e*P	Pn	20 37 15.2	+0.2
LCO				*i* S	Sb	20 37 34.4	+0.5
LCO	Las Campanas	1.42	50	*e*P	Pn	20 37 15.3	+0.2
LCO				*e*S	Sg	20 37 34.9	+0.1
CO02	Combarbal	1.50	148		Pn	20 37 16.1	0.0
CO02	Combarbal	1.50	148	⇑*i*P	Pn	20 37 16.4	+0.4
CO02				*i* S	Sb	20 37 35.6	-0.5
CO02				IAML		20 37 43.9	
	comp=N,66μm,0.3s						
CO02	Combarbal	1.50	148	*e*P	Pn	20 37 16.3	+0.2
CO02				*e*S	Sg	20 37 37.2	-0.2
CO02				IAML		20 37 43.5	
	comp=Z,17μm,0.6s						
CO01	Juntas del Tor	1.60	92	Pn	Pn	20 37 18.0	+0.5
CO01	Juntas del Tor	1.60	92	⇓*i*P	Pb	20 37 18.3	-0.5
CO01				*i* S	Sb	20 37 38.8	-0.3
CO01				IAML		20 37 41.3	
	comp=N,23μm,0.3s						
CO01	Juntas del Tor	1.60	92	*e*P	Pb	20 37 18.5	-0.3
CO01				*e*S	Sg	20 37 40.7	0.0
CO01				IAML		20 37 41.0	
	comp=Z,10μm,0.5s						
AC04	Llanos de Chal	1.88	24	Pn	Pn	20 37 20.3	-0.9
AC04	Llanos de Chal	1.88	24	*e*P	Pn	20 37 20.4	-0.9
AC04				*i* S	Sb	20 37 47.7	+0.6
AC04				IAML		20 37 57.5	
	comp=E,3μm,0.6s						
AC04	Llanos de Chal	1.88	24	*e*P	Pn	20 37 20.6	-0.6
AC04				*e*S	Sg	20 37 51.4	+1.6
AROD	Rodeo	2.15	97	*e*P	Pb	20 37 28.2	0.0
AROD				*e*S	Sg	20 37 58.8	+0.6
ACDV	Cuesta del Vie	2.45	96	*e*P	Pb	20 37 33.1	-0.2
ACDV				*e*S	Sg	20 38 05.5	-2.5
ACCO	Cerro Coronel	2.56	105	*e*P	Pb	20 37 35.0	-0.4
ACCO				*e*S	Sg	20 38 12.7	+1.0
VA06	Catapilco	2.67	168	Pn	Pn	20 37 31.9	-0.2
VA06	Catapilco	2.67	168	*e*P	Pn	20 37 31.7	-0.4
VA06				*i* S	Sb	20 38 07.8	-1.9
VA06				IAML		20 38 20.0	
	comp=E,8μm,0.3s						
GO03	Copiap	2.77	33	Pn	Pn	20 37 33.6	+0.1
GO03	Copiap	2.77	33	*e*P	Pn	20 37 35.3	+1.8
GO03				*i* S	Sb	20 38 10.7	-2.0
GO03				IAML		20 38 29.4	
	comp=E,2μm,0.5s						
GO03	Copiap	2.77	33	*e*P	Pn	20 37 33.7	+0.2
GO03				*e*S	Sb	20 38 15.3	+2.7
AC06	Mina Casimiro	2.92	29	Pn	Pn	20 37 35.5	-0.1
AC06	Mina Casimiro	2.92	29	*e*P	Pn	20 37 35.9	+0.4
AC06				IAML		20 38 27.8	
	comp=N,2μm,0.7s						
RTLS	Leoncito	2.93	130	*e*P	Pn	20 37 38.3	+2.4
RTLS				*e*S	Sb	20 38 17.5	0.0
RTLS				*e*S	Sg	20 38 25.0	+1.6
RTLS				IAML		20 38 26.7	
	comp=Z,5μm,0.8s						
VA03	San Esteban	3.06	158		Pn	20 37 38.8	+1.3
VA03	San Esteban	3.06	158	*e*P	Pn	20 37 38.8	+1.3
VA03				*i* S	Sn	20 38 16.7	+2.6
VA03				IAML		20 38 34.5	
	comp=E,5μm,0.6s						
VA03	San Esteban	3.06	158	*e*P	Pn	20 37 38.8	+1.3
VA03				*e*S	Sb	20 38 19.5	-1.4
VA03				IAML		20 38 39.1	
	comp=Z,3μm,0.8s						
VA01	Torpederas	3.09	176		Pn	20 37 37.5	-0.2
VA01	Torpederas	3.09	176	*e*P	Pb	20 37 44.0	0.0
VA01				*i* S	Sb	20 38 23.4	+1.8
VA01				IAML		20 38 39.3	
	comp=E,1μm,0.4s						
VA01	Torpederas	3.09	176	*e*P	Pn	20 37 38.5	+0.8
VA01				*e*S	Sg	20 38 27.7	-0.6
ROCH	El Roble	3.13	166	*e*P	Pn	20 37 38.9	+0.3
ROCH				*e*P	Pb	20 37 38.9	-6.0
ROCH				*i* S	Sn	20 38 18.0	+2.0
ROCH				*i* S	Sb	20 38 18.7	-4.4
ROCH				IAML		20 38 35.7	
	comp=E,3μm,0.5s						
ROCH				IAML		20 38 38.1	
	comp=N,4μm,0.5s						
ROC1	El Roble	3.13	166		Pn	20 37 38.5	-0.1
ROC1	El Roble	3.13	166	*e*P	Pn	20 37 38.9	+0.3
ROC1				*e*S	Sn	20 38 16.0	-0.1
AUSP	Uspallata	3.16	137	*e*P	Pb	20 37 42.7	-2.7
AUSP				*e*S	Sb	20 38 25.0	+1.0
ZON	Zonda	3.23	121	Pn	Pb	20 37 43.2	-3.4
ZON	Zonda	3.23	121	*e*P	Pb	20 37 43.4	-3.1
ZON				*e*S	Sg	20 38 30.7	-2.3
RTLL	Cerro Villicun	3.29	116	*e*P	Pn	20 37 44.0	+3.3
RTLL				*e*S	Sb	20 38 27.5	-0.1
PEL	Peldehue	3.37	162		Pn	20 37 41.8	+0.1
PEL	Peldehue	3.37	162	*e*P	Pn	20 37 42.6	+0.9
PEL				*e*S	Sg	20 38 37.4	0.0
MT02	Curacav	3.38	169		Pn	20 37 41.6	-0.2
MT02	Curacav	3.38	169	*e*P	Pn	20 37 43.9	+2.1
MT02				*i* S	Sn	20 38 24.6	+2.6
MT02				IAML		20 38 50.6	
	comp=E,1μm,0.7s						
MT02	Curacav	3.38	169	*e*P	Pn	20 37 41.8	-0.1
MT02				*e*S	Sn	20 38 21.9	0.0
VCA	Vinchina	3.47	71	*e*P	Pb	20 37 47.6	-3.1
VCA				*e*S	Sb	20 38 33.0	+0.2
VCA				*e*S	Sg	20 38 38.5	-2.1
VCA				IAML		20 38 47.0	
	comp=Z,2μm,0.6s						
FCH	Farellones	3.66	158	*e*P	Pn	20 37 48.3	+2.4
FCH				*i* S	Sn	20 38 32.6	+3.3
VA05	Santo Domingo	3.72	176		Pn	20 37 47.4	+0.9
VA05	Santo Domingo	3.72	176	*e*P	Pn	20 37 49.0	+2.6
VA05				*e*S	Sn	20 38 32.8	+2.5
MT03	Universidad Ad	3.75	161	Pn	Pn	20 37 47.4	+0.4
MT03	Universidad Ad	3.75	161	⇑*e*P	Pn	20 37 49.1	+2.1
MT03				*i* S	Sn	20 38 31.9	+0.8
MT03	Universidad Ad	3.75	161	*e*P	Pn	20 37 48.5	+1.5
MT03				*e*S	Sg	20 38 46.5	-3.1
MT03				IAML		20 38 56.8	
	comp=Z,2μm,1.1s						
MT09	Talagante	3.91	168		Pn	20 37 49.4	+0.2
MT09	Talagante	3.91	168	⇑*i*P	Pn	20 37 49.9	+0.6
MT09				*i* S	Sn	20 38 37.8	+2.6
AVFE	Valle Fertil	3.94	102	*e*P	Pn	20 37 52.7	+3.1

AVFE				eS	Sg	20 38 52.9	-2.8
AVFE				IAML		20 38 56.2	
	comp=Z,2µm,0.6s						
AC01	Pan de Azucar	3.96	18	Pn	Pn	20 37 47.6	-2.2
AC01	Pan de Azucar	3.96	18	eP	Pn	20 37 48.2	-1.5
AC01	Pan de Azucar	3.96	18	eP	Pn	20 37 48.0	-1.7
AC01				eS	Sb	20 38 47.5	+0.8
AC01				IAML		20 38 58.2	
	comp=Z,681nm,1.7s						
AC02	Maricunga	3.96	39	Pn	Pn	20 37 51.2	+1.0
AC02	Maricunga	3.96	39⇑	eP	Pn	20 37 51.3	+1.0
AC02				i S	Sn	20 38 39.3	+2.5
AC02	Maricunga	3.96	39	eP	Pn	20 37 45.5	-4.7
AC02				eP	Pb	20 37 51.4	-7.8
AC02				eS	Sb	20 38 45.5	-1.7
AC02				IAML		20 39 03.5	
	comp=Z,1µm,0.8s						
MT01	Popeta	3.96	172		Pn	20 37 49.3	-0.5
MT01	Popeta	3.96	172	eP	Pn	20 37 49.6	-0.2
MT01				i S	Sn	20 38 38.4	+2.2
MT01	Popeta	3.96	172	eP	Pn	20 37 49.6	-0.2
MT01				eS	Sn	20 38 34.9	-1.3
MT01				IAML		20 38 58.1	
	comp=Z,1µm,0.6s						
LMEL	Las Melosas	4.17	160		Pn	20 37 54.0	+1.2
LMEL	Las Melosas	4.17	160	eP	Pn	20 37 54.6	+1.8
LMEL				i S	Sn	20 38 43.2	+1.7
BO04	La Punta	4.19	165	Pn	Pn	20 37 53.6	+0.6
BO04	La Punta	4.19	165⇑	eP	Pn	20 37 53.9	+0.8
ACLC	CERRO LA CRUZ	4.37	85	eP	Pn	20 37 58.3	+2.7
ACLC				eS	Sb	20 38 55.5	-3.2
ACLC				IAML		20 39 08.9	
	comp=Z,1µm,1.8s						
BO01	Tunca	4.50	171	Pn	Pn	20 37 57.0	-0.2
BO01	Tunca	4.50	171	eP	Pn	20 37 57.1	-0.2
BO01	Tunca	4.50	171	eP	Pn	20 37 57.0	-0.2
BO01				eS	Sb	20 39 05.0	+2.6
BO01				IAML		20 39 16.0	
	comp=Z,701nm,1.0s						
APLL	PUNTA DE LOS L	4.70	97	eP	Pn	20 38 02.4	+2.3
ACHE	Chepes	4.71	106	eP	Pn	20 38 02.8	+2.5
ACHE				eS	Sn	20 38 57.5	+2.6
GO05	Huala	5.06	180		Pn	20 38 04.0	-0.9
GO02	Mina Guanaco	5.19	24		Pn	20 38 05.9	-1.1
PB14	IPOC Station P	5.46	15		Pn	20 38 07.9	-2.8
BI05	Punta Hualpn	6.87	188		Pn	20 38 27.7	-2.1
H03N1	Juan Fernandez	6.90	238	T	T	20 45 47.2	
	baz=67,slow=71,SNR=1563						
H03N2	Juan Fernandez	6.91	238	T	T	20 45 42.9	
	baz=67,slow=71,SNR=1344						
H03N3	Juan Fernandez	6.91	238	T	T	20 45 44.5	
	baz=67,slow=71,SNR=1453						
PB15	IPOC Station P	7.05	19		Pn	20 38 30.5	-2.0
H03S3	Juan Fernandez	7.09	235	T	T	20 45 54.6	
	baz=70						
H03S1	Juan Fernandez	7.09	235	T	T	20 45 52.2	
	baz=70						
H03S2	Juan Fernandez	7.10	235	T	T	20 45 52.8	
	baz=70						
PB06	IPOC Station P	7.51	17	Pn	Pn	20 38 35.8	-2.9
LVC	Limon Verde	7.79	21	Pn	Pn	20 38 40.6	-2.1
	comp=Z,1.6nm,0.3s,baz=168,slow=7.3,SNR=18						
LVC				Sn	Sn	20 40 06.3	-4.7
	comp=Z,3.8nm,0.3s,baz=199,slow=16,SNR=3.4						
LVC				Lg	Lg	20 40 41.6	
	comp=Z,8.0nm,0.3s,baz=109,slow=23,SNR=8.0						
	comp=Z,3.7nm,0.2s						
LVC	Limon Verde	7.79	21	eP	Pn	20 38 41.8	-0.9
PB07	IPOC Station P	8.38	13	Pn	Pn	20 38 47.3	-3.4
PB09	IPOC Station P	8.46	17	Pn	Pn	20 38 49.8	-2.0
PB02	IPOC Station P	8.78	13	Pn	Pn	20 38 53.8	-2.2
PB01	IPOC Station P	9.13	15	Pn	Pn	20 38 56.4	-4.5
PB08	IPOC Station P	10.07	15	Pn	Pn	20 39 10.5	-3.6
PB11	IPOC Station P	10.34	12	Pn	Pn	20 39 13.1	-4.4
PLCA	Paso Flores	10.83	174	Pn	Pn	20 39 22.7	-1.5
	comp=Z,0.6nm,0.3s,baz=226,slow=23,SNR=4.0						
PLCA				Lg	Lg	20 42 28.1	
	comp=Z,0.1nm,0.3s,baz=312,slow=17,SNR=2.0						
PLCA				LR	LR	20 44 03.4	
	comp=Z,407nm,18.7s,baz=350,slow=40						
	comp=Z,1.5nm,0.4s						
PLCA	Paso Flores	10.83	174	Pn	Pn	20 39 23.6	-0.5
PLCA	Paso Flores	10.83	174	eP	Pn	20 39 23.7	-0.5
TRQA	Tornquist	11.56	137		Pn	20 39 33.6	-0.5
PB16	IPOC Station P	11.76	11	Pn	Pn	20 39 38.9	+1.5
LPA	La Plata	12.82	116	eP	Pn	20 39 48.9	-2.4
LPA				sP	P	20 39 55.1	-7.2
LPA				pPP		20 40 01.9	
LPA				PP	PbPb	20 40 33.1	0.0
LPA				PPP	PPP	20 40 55.2	
LPA				S	Sn	20 42 07.9	-6.1
LPA	La Plata	12.82	116	SN	Sn	20 42 15.4	+1.4
LPA				sS		20 42 19.9	
LPA				SS	SnSn	20 42 28.6	+2.5
LPA				SSS	SSS	20 42 41.6	
LPA				SS	SbSb	20 43 14.8	+7.8
LPA				SSS	SSS	20 43 45.4	
LPA				PCP	PcP	20 45 25.9	-0.9
LPA				SCS	ScS	20 52 27.2	-9.0
LPA				PKIKP	PKiKP	20 53 27.9	+3.9
LPA				SKIKP		20 56 58.5	
LPA				PKIKS		20 57 04.4	
LPA				SKIKS		21 00 28.8	
ITQB	Itaqui	13.30	93		Pn	20 39 57.5	-0.5
ITQB	Itaqui	13.30	93	eP	Pn	20 39 57.4	-0.5
CPUP	Villa Florida	13.38	78	Pn	Pn	20 39 57.4	-1.6
	comp=Z,0.3nm,0.3s,baz=268,slow=13,SNR=3.0						
CPUP				Sn	Sn	20 42 29.6	+2.0
	baz=269,slow=18						
CPUP				Lg	Lg	20 43 45.7	
	comp=Z,0.5nm,0.3s,baz=348,slow=20,SNR=3.3						
CPUP				LR	LR	20 45 30.1	
	comp=Z,995nm,20.7s,baz=268,slow=39						
	comp=Z,0.9nm,0.3s						
CPUP	Villa Florida	13.38	78	Pn	Pn	20 39 59.0	0.0
CPUP	Villa Florida	13.38	78	eP	Pn	20 39 58.7	-0.3
LPAZ	La Paz	14.03	15	Pn	Pn	20 40 10.4	+2.0
	comp=Z,0.4nm,0.3s,baz=183,slow=8.2,SNR=17						
LPAZ				LR	LR	20 46 30.6	
	comp=Z,431nm,19.4s,baz=162,slow=41						
	comp=Z,3.4nm,0.6s						
LPAZ	La Paz	14.03	15	P	Pn	20 40 10.5	+2.1
PLTB	Pedras Altas	15.85	101	eP	Pn	20 40 32.0	-0.2
CPSB	Cacapava Do Su	16.00	96	eP	Pn	20 40 33.5	-0.7
SIV	San Ignacio	17.09	38	P	Pn	20 40 48.9	+0.8
	baz=219,slow=11,SNR=37						
SIV				LR	LR	20 48 39.7	
	comp=Z,620nm,18.3s,baz=220,slow=42						
	comp=Z,12nm,0.8s						
ITAB	Concordia	17.60	86	P	P	20 40 56.1	+0.7
ITAB	Concordia	17.60	86	eP	Pn	20 40 54.0	-0.4
CNLB	Canela	18.34	93	eP	Pn	20 41 03.2	-0.4
PTGB	Pitanga	18.40	78	eP	Pn	20 41 03.3	-1.0
NNA	Nana	18.43	345	LR	LR	20 46 31.9	
	comp=Z,175nm,20.1s,baz=174,slow=32						
PTLB	Pontes e Lacer	18.61	42	eP	P	20 41 06.5	-0.1
TRCB	Terra Rica	18.69	72	P	P	20 41 07.3	-0.2
TRCB				IAmb	IAmb	20 41 25.7	
	comp=Z,68nm,1.5s						
TER01	Tubaro-SC	19.95	92	eP	P	20 41 21.2	0.0
VILB	Vilhena	20.10	35	eP	P	20 41 22.9	0.0
PCMB	Pacaembu	20.36	71	eP	P	20 41 26.2	+0.5
SALV	Santo Antonio	20.43	50	eP	P	20 41 26.4	-0.1
ETMB	Extrema	20.72	16	eP	P	20 41 31.1	+1.5
TIJ01	Guaruva-PR	20.82	83	eP	P	20 41 29.8	-1.0
FRTB	Fartura	21.03	77	eP	P	20 41 32.9	-0.1
ITRB	Iturama	22.04	67	eP	P	20 41 43.3	-0.5
CZSB	Cruzeiro do Su	22.10	358	eP	P	20 41 45.8	+1.2
SAML	Samuel	22.43	23	P	P	20 41 45.7	-2.3
PET01	Itanhaem-SP	22.64	82	eP	P	20 41 51.5	+1.3
PDRB	Porto dos Gac	23.07	41	eP	P	20 41 53.9	-0.9
RCLB	Rio Claro- Sao	23.11	77	eP	P	20 41 55.6	+0.3
VAO	Valinhos	23.36	79	eP	P	20 41 56.7	-1.1
ATAH	Atahualpa	23.48	344	LR	LR	20 49 19.3	
	comp=Z,126nm,18.6s,baz=209,slow=32						
CLDB	Colider	24.20	42	eP	P	20 42 05.2	-0.7
IPMB	Ipameri, GO	24.67	67	eP	P	20 42 09.9	-0.3
USHA	Ushuaia	25.01	175	P	P	20 42 12.4	-0.3
	comp=Z,8.5nm,0.7s,baz=102,slow=3.0,SNR=5.9						
	comp=Z,8.5nm,0.7s						
BDFB	Brasilia	26.17	62	P	P	20 42 23.3	-0.5
	comp=Z,9.4nm,0.9s,baz=237,slow=7.6,SNR=9.8						
BDFB				LR	LR	20 54 24.5	
	comp=Z,110nm,19.0s,baz=245,slow=40						
	comp=Z,9.4nm,0.9s						
BDFB	Brasilia	26.17	62	P	P	20 42 22.5	-1.3
BDFB				IAmb	IAmb	20 42 25.1	
	comp=Z,23nm,1.2s						
BDFB	Brasilia	26.17	62	eP	P	20 42 23.7	-0.1
SNDB	Serra Nova Dou	26.21	51	eP	P	20 42 23.7	-0.3
PEXB	Peixe	28.21	56	eP	P	20 42 41.9	-0.2
JANB	Januaria	29.40	66	eP	P	20 42 52.5	-0.2
ITTB	Itaituba	29.69	34	eP	P	20 42 54.5	-0.6
SJMB	Sao Joao De Ma	30.08	75	eP	P	20 42 58.3	-0.4
SDBA	SAO DESIDERIO	30.53	61	eP	P	20 43 02.5	-0.1
SMTB	Santa Maria do	30.96	52	eP	P	20 43 06.2	-0.2
RPN	Rapa Nui	32.88	266	LR	LR	20 53 00.6	
	comp=Z,262nm,19.0s,baz=230,slow=30						
BOAV	Boa Vista	33.95	21	eP	P	20 43 32.8	+0.2
NBPN	Ponto Novo - B	35.11	64	eP	P	20 43 43.1	+0.3
PMSA	Palmer Station	35.21	174	LR	LR	20 58 33.1	
	comp=Z,183nm,18.9s,baz=347,slow=37						
TMAB	Tom-Au,PA,Br	35.54	44	eP	P	20 43 47.3	+1.0
NBMA	Muriti-CE	38.38	61	eP	P	20 44 10.6	-0.1
NBPS	Pedro II - PI	38.41	55	eP	P	20 44 10.3	-0.6
BAUV	El Baul	38.84	6	P	P	20 44 13.9	-0.4
BAUV				IAmb	IAmb	20 44 15.4	
	comp=Z,22nm,1.0s						
NBPB	Pedra_Branca-C	38.96	58	eP	P	20 44 16.1	+0.7
MDP	Montagnes des	39.45	31	LR	LR	21 02 29.7	
	comp=Z,265nm,19.1s,baz=224,slow=39						
RCBR	Riachuelo	41.54	62	LR	LR	21 02 14.7	
	comp=Z,212nm,20.4s,baz=358,slow=37						
BELA	Belgrano 2	50.86	170	P	P	20 45 49.5	+0.2
CMIG	Matias Romero	51.73	332	LR	LR	21 03 59.5	
	comp=Z,76nm,18.4s,baz=186,slow=32						
VNA3	Neumayer Olymp	53.09	159	P	P	20 46 06.7	+0.6
VNA1	Neumayer--Stat	53.38	158	P	P	20 46 09.0	+0.8
VNA2	Neumayer--Watz	53.73	158	P	P	20 46 11.3	+0.6
	baz=289,slow=9.0						
SNAA	Sanae	55.32	159	P	P	20 46 22.9	+0.5
SNAA	Sanae	55.32	159	LR	LR	21 07 55.8	
	comp=Z,89nm,20.8s,baz=249,slow=34						
SNAA	Sanae	55.32	159	P	P	20 46 22.3	-0.2
TROLL	Troll, Antarti	57.03	159	P	P	20 46 35.2	+0.5
X51A	Calhoun	65.31	348	P	P	20 47 31.7	+0.7
X48A	Hartselle	65.61	346	P	P	20 47 33.2	+0.2
X48A				IAmb	IAmb	20 47 34.5	
	comp=Z,5.8nm,0.8s						
V53A	Saluda	66.06	350	P	P	20 47 35.8	-0.1
V53A				IAmb	IAmb	20 47 37.3	
	comp=Z,7.1nm,1.3s						
CPCT	Cooper Cave	66.11	349	P	P	20 47 36.4	+0.2
CPCT				IAmb	IAmb	20 47 37.7	
	comp=Z,9.0nm,1.2s						
SWET	Sewanee	66.14	347	P	P	20 47 36.9	+0.5
SWET				IAmb	IAmb	20 47 37.8	
	comp=Z,6.3nm,0.7s						
TKL	Tuckaleechee C	66.19	349	P	P	20 47 36.9	+0.2
TKL				IAmb	IAmb	20 47 37.9	
	comp=Z,13nm,1.3s						
TXAR	Lajitas Array	66.26	330	P	P	20 47 38.1	+0.7
	comp=Z,0.5nm,0.6s,baz=158,slow=10,SNR=3.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	66.26	330	P	P	20 47 37.0	-0.4
PLAL	Pickwick Lake	66.34	346	P	P	20 47 37.6	0.0
PLAL				IAmb	IAmb	20 47 38.2	
	comp=Z,5.5nm,1.0s						
V52A	Sevierville	66.34	350	P	P	20 47 37.9	+0.2
V52A				IAmb	IAmb	20 47 39.0	
	comp=Z,12nm,1.1s						
CLTN	Cedars of Leba	67.06	347	P	P	20 47 42.2	0.0
CLTN				IAmb	IAmb	20 47 43.9	
	comp=Z,6.3nm,1.0s						
U49A	Red Boiling Sp	67.37	348	P	P	20 47 44.1	0.0
U49A				IAmb	IAmb	20 47 46.2	
	comp=Z,12nm,1.2s						
WVT	Waverly	67.39	346	P	P	20 47 44.2	-0.2
WVT				IAmb	IAmb	20 47 45.7	
	comp=Z,7.2nm,1.1s						
W39A	Magazine	67.98	341	P	P	20 47 48.9	+0.8
W39A				IAmb	IAmb	20 47 59.9	
	comp=Z,6.8nm,1.1s						
T47A	Sharon Grove	68.08	347	P	P	20 47 49.2	+0.5
Q52A	Bidwell	69.22	351	P	P	20 47 55.6	-0.1
Q52A				IAmb	IAmb	20 47 57.5	
	comp=Z,6.6nm,0.8s						
FVM	French Village	69.75	345	P	P	20 47 59.4	+0.4
P51A	Williamsport	69.84	351	P	P	20 47 59.2	-0.3
P52A	Corning	69.86	352	P	P	20 47 59.4	-0.3
P52A				IAmb	IAmb	20 48 00.9	
	comp=Z,6.6nm,0.9s						
CCM	Cathedral Cave	70.01	344	P	P	20 48 01.1	+0.4
CCM				IAmb	IAmb	20 48 02.5	
	comp=Z,7.6nm,1.1s						
S39A	Bolivar	70.19	342	P	P	20 48 02.2	+0.4
R40A	Maddies Statio	70.48	343	P	P	20 48 03.8	+0.3
R40A				IAmb	IAmb	20 48 05.3	
	comp=Z,6.7nm,0.8s						
P46A	Rosedale	70.64	348	P	P	20 48 04.5	0.0
P43A	Skaggs, Pawnee	71.13	346	P	P	20 48 07.7	+0.3
P43A				IAmb	IAmb	20 48 08.9	
	comp=Z,11nm,1.0s						
N49A	Columbus Grove	71.41	350	P	P	20 48 09.7	+0.6
P40A	Paris	71.60	344	P	P	20 48 11.4	+1.2
L48A	N Adams	72.45	350	P	P	20 48 14.9	-0.4
L40A	Anamosa	73.82	345	P	P	20 48 24.0	+0.6
L40A				IAmb	IAmb	20 48 24.9	
	comp=Z,11nm,0.8s						
DBIC	Dimbokro	73.83	72	P	P	20 48 23.8	-0.4
	comp=Z,6.0nm,0.8s,baz=241,slow=6.8,SNR=7.4						
DBIC				LR	LR	21 19 11.1	
	comp=Z,204nm,19.0s,baz=252,slow=34						
	comp=Z,6.0nm,0.8s						
DBIC	Dimbokro	73.83	72	IAmb	IAmb	20 48 25.3	
	comp=Z,17nm,1.2s						
SDCO	Great Sand Dun	74.30	333	P	P	20 48 28.1	+1.4
ECSD	EROS Data Cent	76.72	342	P	P	20 48 41.0	+0.9
ECSD				IAmb	IAmb	20 48 42.0	
	comp=Z,9.3nm,0.8s						
SUR	Sutherland	76.73	120	LR	LR	21 18 56.7	
	comp=Z,98nm,18.3s,baz=200,slow=33						
MAW	Mawson	77.04	164	LR	LR	21 22 16.1	
	comp=Z,167nm,20.2s,baz=243,slow=36						
RAR	Rarotonga	77.93	252	LR	LR	21 16 36.0	
	comp=Z,78nm,19.8s,baz=178,slow=31						
R11A	Troy Canyon, C	79.22	326	P	P	20 48 55.5	+1.1
PDAR	Pinedale Array	80.19	333	P	P	20 49 00.3	+0.7
	comp=Z,0.5nm,0.6s,baz=126,slow=6.8,SNR=5.0						
PDAR				LR	LR	21 21 19.7	
	comp=Z,43nm,18.9s,baz=160,slow=33						
	comp=Z,0.5nm,0.6s						
TSUM	Tsumeb	80.26	106	LR	LR	21 21 00.2	
	comp=Z,179nm,18.4s,baz=212,slow=33						
B35A	Bob, Littlefor	80.35	345	P	P	20 49 00.2	+0.2
NVAR	Mina Array Bea	80.62	325	P	P	20 49 03.5	+1.5
	comp=Z,0.5nm,0.7s,baz=139,slow=7.2,SNR=4.2						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	80.62	325	P	P	20 49 01.3	-0.6
HVU	Hansel Valley	80.70	330	P	P	20 49 02.1	-0.2
AGMN	Agassiz Nation	80.78	344	P	P	20 49 03.0	+0.6
AGMN				IAmb	IAmb	20 49 04.0	
	comp=Z,5.1nm,0.7s						
BOSA	Boshof	81.89	118	P	P	20 49 08.7	-0.4
	comp=Z,4.6nm,0.8s,baz=222,slow=5.0,SNR=9.3						
BOSA				LR	LR	21 23 31.0	
	comp=Z,82nm,18.0s,baz=186,slow=34						
	comp=Z,4.6nm,0.8s						
BOSA	Boshof	81.89	118	IAmb	IAmb	20 49 10.7	
	comp=Z,5.1nm,0.8s						
ULM	Lac du Bonnet	82.61	345	P	P	20 49 11.4	-0.5
	comp=Z,3.9nm,0.8s,baz=324,slow=1.9,SNR=4.0						
	comp=Z,3.9nm,0.8s						
ULM	Lac du Bonnet	82.61	345	P	P	20 49 12.3	+0.4
ULM				IAmb	IAmb	20 49 22.7	
	comp=Z,5.9nm,0.9s						
TOA0	Torodi Ar. Sit	82.75	70	P	P	20 49 13.6	+0.1
TORD	Torodi Ar. Bea	82.75	70	P	P	20 49 13.7	+0.1
	comp=Z,9.2nm,0.9s,baz=256,slow=4.9,SNR=39						
	comp=Z,9.2nm,0.9s						
TORD	Torodi Ar. Bea	82.75	70	P	P	20 49 13.6	+0.1
HLID	Hailey	82.85	330	P	P	20 49 14.4	+0.8
ORV	Oroville	83.09	324	P	P	20 49 16.5	+1.8
ORV				IAmb	IAmb	20 49 27.4	
	comp=Z,9.6nm,1.1s						
LBTB	Lobatse	83.94	115	LR	LR	21 21 15.9	
	comp=Z,153nm,18.2s,baz=218,slow=32						
LBTB	Lobatse	83.94	115	P	P	20 49 19.5	-0.3
J08A	Circle Bar Ran	84.50	328		P	20 49 22.7	+0.7
PLID	Pearl Lake	84.76	330		P	20 49 24.3	+0.9
PLID				IAmb	IAmb	20 49 35.1	
	comp=Z,4.5nm,0.9s						
YBH	Yreka Blue Hor	85.32	324	LR	LR	21 20 56.9	
	comp=Z,25nm,18.8s,baz=176,slow=31						
I07A	Izee	85.54	328	P	P	20 49 28.3	+1.1
I07A				IAmb	IAmb	20 49 39.5	
	comp=Z,4.6nm,1.0s						
URZ	Urewera	86.46	227	LR	LR	21 20 13.9	
	comp=Z,81nm,18.0s,baz=211,slow=30						
NEW	Newport	87.75	332	LR	LR	21 25 48.3	
	comp=Z,54nm,19.5s,baz=124,slow=34						
MDT	Midelt	89.20	51	LR	LR	21 30 53.4	
	comp=Z,71nm,18.2s,baz=235,slow=36						
LSZ	Lusaka	90.99	108	LR	LR	21 28 25.2	
	comp=Z,108nm,18.7s,baz=150,slow=34						
AFI	Afiamalu	91.46	253	LR	LR	21 20 44.2	
	comp=Z,62nm,20.6s,baz=106,slow=29						
ESDC	Sonseca Array	93.70	46	LR	LR	21 32 16.1	
	comp=Z,133nm,18.1s,baz=226,slow=36						
WRA	Warramunga Arr	124.33	210	PKP	PKPdf	20 55 48.1	-0.7
	comp=Z,0.3nm,0.5s,baz=145,slow=1.6,SNR=9.1						
H11S2	WAKE ISLAND Hy	125.82	272	T	T	23 14 42.5	
	baz=116,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	125.83	272	T	T	23 14 38.8	
	baz=116,slow=75,SNR=44						
H11S3	WAKE ISLAND Hy	125.84	272	T	T	23 14 43.5	
	baz=116,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	126.13	273	T	T	23 15 07.8	
	baz=116,slow=74						
H11N1	WAKE ISLAND Hy	126.14	273	T	T	23 15 16.0	
	baz=116						
H11N2	WAKE ISLAND Hy	126.15	273	T	T	23 15 10.8	
	baz=116,slow=74						
ZALV	Zalesovo Beam	150.68	28	PKPbc	PKPbc	20 56 41.5	+0.7
	comp=Z,14nm,0.7s,baz=301,slow=3.3,SNR=53						
ZALV	Zalesovo Beam	150.68	28		PKPbc	20 56 40.9	+0.1
KSH	Kashi	152.07	61	PKPbc	PKPbc	20 56 44.8	+0.1
MKAR	Makanchi Array	153.87	43	PKPbc	PKPbc	20 56 48.7	+0.4
	comp=Z,0.8nm,0.8s,baz=318,slow=1.9,SNR=6.9						
MKAR				PKPab	PKPab	20 57 02.0	+0.6
	comp=Z,0.9nm,0.8s,baz=323,slow=2.4,SNR=5.7						
WMQ	Urumqi	158.69	44	eP	PKPdf	20 56 47.5	+0.7
SONM	Songino Array	162.08	4	PKPab	PKPab	20 57 38.1	+1.2
	comp=Z,0.4nm,0.7s,baz=342,slow=3.0,SNR=4.9						
GTA	Gaotai	168.37	33	ePKPbc	PKPdf	20 56 57.0	+0.9
GTA				PKPab	PKPab	20 58 05.8	+0.9
HHC	Hu-ho-hao-te	168.75	346	eP	PKPdf	20 56 53.3	-2.9
PZH	PanZhiHua	173.46	120	PKP	PKPdf	20 56 58.8	-0.3

JMA ***26*** *20:41:41.5±0.2, 25°N±1°×122°.4E±0°.4, h108^{km}±2^{km},*
MV1.6/9, TAIWAN REGION
TAP ***26*** *20:41:41.5, 24°.80N×122°.42E, h104^{km}, ML2.7, D*
ISC 26 20:41:42.8±1.8**, 24°.73N**±0°.06×**122°.40E**±0°.03**, h98**^{km}±12^{km}**,**
n47, σ0^{s}68/84**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.51	257	i P	Pn	20 41 58.3	-0.1
	baz=246						
TWC				eS	Sn	20 42 09.8	-0.3
	baz=246						
NTC	Toucheng	0.53	284	eP	Pn	20 41 58.1	-0.5
	baz=273						
JYNG	Yonagunijimaku	0.57	119	P	Pn	20 41 59.1	+0.3
JYNG				eS	Sn	20 42 11.9	+1.0
TIPB	Shuangxi	0.57	295	P	Pn	20 41 58.7	-0.2
	baz=284						
TIPB				S	Sn	20 42 10.6	-0.4
	baz=284						
SXI1	Grass Mountain	0.60	308	eP	Pn	20 41 59.9	+0.7
	baz=300						
SXI1				eS	Sn	20 42 11.1	-0.4
	baz=300						
YOJ	Yonaguni jima	0.62	115	i P	Pn	20 41 59.0	-0.2
	baz=129						
YOJ				i S	Sn	20 42 12.0	+0.3
	baz=129						
NDS	Dongshan	0.62	262	i P	Pn	20 41 59.0	-0.3
	baz=252						
NDS				S	Sn	20 42 11.4	-0.3
	baz=252						
EWUT	Wuta	0.63	244	i P	Pn	20 41 59.6	+0.3
	baz=238						
EWUT				S	Sn	20 42 12.6	+0.9
	baz=238						
TWE	Neicheng	0.66	270	i P	Pn	20 41 59.5	-0.1
	baz=262						
TWE				S	Sn	20 42 12.2	-0.1
	baz=262						
ENA	Nanau	0.67	244	i P	Pn	20 41 59.8	+0.2
	baz=239						
ENA				S	Sn	20 42 13.2	+0.8
	baz=239						
FUSB	Fushanzhiwuyua	0.73	273	i P	Pn	20 42 00.1	-0.3
	baz=266						
FUSB				S	Sn	20 42 12.8	-0.8
	baz=266						
ENTT	Nioudou	0.76	264	i P	Pn	20 42 00.9	+0.3
	baz=261						
ENTT				S	Sn	20 42 15.2	+1.3
	baz=261						
LATG	Datong	0.81	257	i P	Pn	20 42 01.6	+0.4
	baz=245						
LATG				eS	Sn	20 42 15.8	+0.7
	baz=245						
NWLT	Wulai	0.81	274	eP	Pn	20 42 00.2	-0.9
	baz=272						
NWLT				eS	Sn	20 42 15.7	+0.8
	baz=272						
YM01	YM01	0.86	299	eP	Pn	20 42 01.0	-0.6
	baz=286						
YM01				eS	Sn	20 42 15.1	-0.6
	baz=286						
ETL	Fush Village	0.90	231	eP	Pn	20 42 01.6	-0.4
	baz=223						
NACB	Ninganchiao	0.91	233	i P	Pn	20 42 01.6	-0.5
	baz=224						
NACB				eS	Sn	20 42 15.8	-0.9
	baz=224						
YHNB	Yeheng	0.93	267	P	Pn	20 42 02.3	-0.1
	baz=267						
YHNB				S	Sn	20 42 17.3	+0.2
	baz=267						
NSK	Sanguang	0.94	267	P	Pn	20 42 02.3	-0.2
	baz=267						
NSK				eS	Sn	20 42 17.4	+0.1
	baz=267						
NNSB	Datong	0.97	252	i P	Pn	20 42 02.9	+0.1
	baz=242						
NNSB				S	Sn	20 42 18.5	+0.6
	baz=242						
TWD	Chiawan	0.97	229	eP	Pn	20 42 02.6	-0.1
	baz=221						
TWD				eS	Sn	20 42 17.7	0.0
	baz=221						
NNS	Nan Shan	0.97	253	i P	Pn	20 42 03.1	+0.3
	baz=243						
NNS				eS	Sn	20 42 18.1	+0.1
	baz=243						
ETLH	Xiulin Townshi	0.98	238	i P	Pn	20 42 02.8	-0.2
	baz=228						
ETLH				S	Sn	20 42 17.8	-0.3
	baz=228						
FUSS	Fushou	1.15	246	P	Pn	20 42 05.1	+0.1
	baz=237						
FUSS				eS	Sn	20 42 21.7	0.0
	baz=237						
NFF	Wufeng Townshi	1.17	266	eP	Pn	20 42 04.7	-0.3
	baz=261						
NFF				eS	Sn	20 42 21.1	-0.6
	baz=261						
WHF	Hehuan Shan	1.18	241	P	Pn	20 42 05.7	+0.2
	baz=232						
WHF				S	Sn	20 42 22.1	-0.5
	baz=232						
TWT	Tachien	1.21	247	P	Pn	20 42 06.1	+0.5
	baz=238						
TWT				eS	Sn	20 42 23.4	+0.6
	baz=238						
TDCB	Techi	1.22	248	P	Pn	20 42 06.0	+0.3
	baz=238						
TDCB				S	Sn	20 42 23.1	+0.1
	baz=238						
LIOB	Emei	1.26	267	eP	Pn	20 42 05.2	-0.8

	baz=263						
ESL	Shilin	1.26	224	eP	Pn	20 42 05.3	-0.7
	baz=230						
IRIF	Iriomote-Funau	1.28	107	P	Pn	20 42 05.9	-0.2
IRIF				S	Sn	20 42 24.2	+0.3
CHGB	Renai	1.30	239	P	Pn	20 42 06.8	+0.2
	baz=230						
CHGB				eS	Sn	20 42 24.4	-0.2
	baz=230						
OWD	Renai	1.35	236	eP	Pn	20 42 07.2	0.0
	baz=228						
OWD				eS	Sn	20 42 24.8	-1.0
	baz=228						
EGFH	Guangfu	1.37	220	eP	Pn	20 42 06.5	-0.9
	baz=211						
EGFH				eS	Sn	20 42 24.3	-1.7
	baz=211						
WUSB	Renai	1.38	238	eP	Pn	20 42 07.7	+0.1
	baz=230						
WUSB				eS	Sn	20 42 26.6	+0.3
	baz=230						
HATJ	Hateruma jima	1.45	117	S	Sn	20 42 27.7	+0.1
VWDT	VWDT	1.50	230	eP	Pn	20 42 08.6	-0.3
	baz=222						
VWDT				eS	Sn	20 42 28.6	-0.1
	baz=222						
WCS	Beigang Elemen	1.51	244	eP	Pn	20 42 09.7	+0.7
	baz=236						
HGSD	Ruisui	1.52	216	eP	Pn	20 42 08.3	-0.8
	baz=209						
HGSD				eS	Sn	20 42 29.0	-0.1
	baz=209						
JKRS	Kuro-shima	1.55	108	P	Pn	20 42 09.7	+0.2
JKRS				S	Sn	20 42 30.5	+0.7
SMLT	Sun Moon Lake	1.60	239	eP	Pn	20 42 11.3	+1.0
	baz=231						
SMLT				eS	Sn	20 42 33.8	+2.6
	baz=231						
SSLB	Suanglung	1.61	235	eP	Pn	20 42 10.7	+0.3
	baz=228						
SSLB				eS	Sn	20 42 32.7	+1.4
	baz=228						
JIJ	Ishigaki jima	1.63	102	P	Pn	20 42 10.2	-0.3
JIJ				S	Sn	20 42 31.0	-0.7
YULB	Yu-li	1.66	217	eP	Pn	20 42 09.4	-1.6
	baz=223						
ALS	Alishan	1.89	231	eP	Pn	20 42 14.9	+0.8
	baz=222						
ELDTW	Lidau	1.98	220	eP	Pn	20 42 16.4	+1.2
	baz=214						
EDH	Donghe	2.01	210	eP	Pn	20 42 14.4	-1.0
	baz=205						

*RSNC **26** 20:55:55.9±0.9, 9.°82N×72.°85W, h4^{km}±4^{km}, ML3.0, Mw3.2*
*FUNV **26** 20:55:56.4, 9.°81N×72.°80W, h9^{km}, MW3.5*
ISC 26 20:55:55.1±1.1, **9.°83N**±0.°03×**72.°83W**±0.°02, **h14**^{km}±8^{km},
n30, σ1^{s}**78**/52, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQV	Machiques	0.36	53	eP	Pg	20 56 03.0	+0.6
MCQV				eS	Sg	20 56 08.6	+1.3
LL6C	La Loma 6 Bece	0.45	257	eP	Pg	20 56 03.5	-0.5
LL6C				eS	Sg	20 56 09.5	-0.6
LL6C				i		20 56 11.0	
	comp=Z,928nm,0.3s						
LL1C	La Loma 1 Cana	0.78	248	eP	Pg	20 56 08.8	-1.4
LL1C				eS	Sg	20 56 19.6	-0.8
LL1C				i		20 56 27.1	
	comp=Z,976nm,0.3s						
CVALL	Valledupar, Ce	0.79	328	eP	Pg	20 56 10.0	-0.6
CRJC	Cerrejon, Guaj	1.18	357	eP	Pg	20 56 16.8	-1.1
CRJC				eS	Sg	20 56 32.9	-0.4
ARGC	Ariguani, Magd	1.40	271	eP	Pn	20 56 20.7	+0.4
ARGC				eS	Sb	20 56 39.9	+1.0
ARGC				i		20 56 41.4	
	comp=Z,198nm,0.2s						
OCAC	Ocana	1.66	197	eP	Pn	20 56 24.3	+0.3
OCAC				eS	Sn	20 56 46.1	+0.9
SMRC	Santa Marta, M	1.91	314	eP	Pn	20 56 26.9	-0.4
SMRC				eS	Sn	20 56 49.7	-1.5
SMRC				i		20 56 51.0	
	comp=Z,43nm,0.3s						
CAPV	Capacho	2.02	165	eP	Pn	20 56 29.8	+0.8
CAPV				eS	Sn	20 56 54.3	0.0
URIC	Uribia, Colomb	2.03	24	eP	Pn	20 56 30.2	+1.2
URIC				eS	Sn	20 56 56.5	+2.3
URIC				i		20 57 00.2	
	comp=Z,228nm,0.3s						
SJCC	San Jacinto, C	2.32	272	eP	Pn	20 56 35.1	+2.1
SJCC				eS	Sb	20 57 06.4	+1.0
SDV	Santo Domingo	2.36	113	eP	Pn	20 56 34.0	+0.3
SDV				eS	Sn	20 57 02.5	-0.2
DABV	Dabajuro	2.41	63	eP	Pn	20 56 34.7	+0.4
DABV				eS	Sn	20 57 03.7	+0.1
PAMC	Pamplona, Colo	2.48	177	eP	Pn	20 56 37.9	+2.3
PAMC				eS	Sb	20 57 11.3	+0.8
PAMC				i		20 57 15.9	
	comp=Z,111nm,0.2s						
SOCV	Socops	2.48	128	eP	Pn	20 56 35.8	+0.5
SOCV				eS	Sn	20 57 05.7	+0.3
BRRC	Barranca, Sant	2.85	198	eP	Pn	20 56 40.6	+0.3
BRRC				eS	Sb	20 57 21.2	+0.6
BRRC				i		20 57 28.2	
	comp=Z,39nm,0.2s						
SIQV	Siquisique	3.08	74	eP	Pn	20 56 43.9	+0.5
SIQV				eS	Sn	20 57 19.5	-0.6
BARC	Barichara	3.24	186	eP	Pn	20 56 42.1	-3.8
BARC				eS	Sb	20 57 32.4	+0.3
BARC				i		20 57 38.9	
	comp=Z,43nm,0.3s						
SANV	Sanarito	3.26	96	eP	Pn	20 56 46.6	+0.6
SANV				eS	Sn	20 57 23.4	-1.4
UREC	San Jos de Ur	3.38	232	eP	Pn	20 56 49.8	+2.2
UREC				i		20 57 44.2	
	comp=Z,25nm,0.5s						
PTBC	PUERTO BERRIO,	3.65	206	eP	Pn	20 56 52.9	+1.6
PTBC				eS	Sb	20 57 41.0	-2.7
PTBC				i		20 57 48.2	
	comp=Z,26nm,0.7s						
RUSC	La Rusia	3.92	184	eP	Pn	20 56 56.1	+0.6
RUSC				i		20 57 58.4	
	comp=Z,21nm,0.4s						
MAPV	Macapo	4.31	90	eP	Pn	20 57 01.2	+0.8
MAPV				eS	Sn	20 57 47.4	-3.1
SPBC	San Pablo de B	4.33	197	eP	Pn	20 57 02.5	+1.8
SPBC				i		20 58 13.3	
	comp=Z,16nm,0.2s						
ELOV	Elorza	4.34	130	eP	Pn	20 57 01.1	+0.3
ELOV				eS	Sn	20 57 48.2	-3.1
BAUV	El Baul	4.80	100	eP	Pn	20 57 06.6	-0.6
BAUV				eS	Sn	20 57 59.1	-3.6
CBOC	Ciudad Bolivar	5.05	219	eP	Pn	20 57 14.1	+3.4
BENV	Beln	5.15	88	eP	Pn	20 57 12.1	+0.1
BENV				eS	Sn	20 58 07.4	-4.0
BIRV	Birongo	6.49	84	eP	Pn	20 57 29.8	-0.5
CACV	CAICARA DEL OR	6.61	109	eP	Pn	20 57 37.6	+5.6
CACV				eS	Sn	20 58 53.6	+6.3

DJA 26 21:27:31.9±0.7, **3°S**±3°×**12°8E**±°, **h14**^{km}±7^{km}, **M3.8**/10,
mb4.3/3, **MLv3.5**/10, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	140	P	Pb	21 27 50.7	-0.4
MSAI				S	Sg	21 28 04.5	-0.1
AAI	Ambon	1.11	184	P	Pb	21 27 52.6	-0.4
AAI				S	Sn	21 28 08.9	+0.7
LBMI	Labuha	2.07	338	P	Pn	21 28 07.5	+1.2
LBMI				S	Sb	21 28 33.8	-1.1
SANI	Sanana	2.35	283	P	Pn	21 28 09.7	-0.4
SANI				S	Sn	21 28 37.3	-1.4
SWI	Sorong	3.43	60	P	Pn	21 28 25.3	+0.4
FAKI	Fak Fak	3.98	95	P	Pn	21 28 31.7	-0.9
GTOI	Gorontalo	6.16	301	P	Pn	21 29 06.3	+3.8
	0.0nm3.8nm,1.0s						
SGSI	Sangihe	6.79	336	P	Pn	21 29 10.3	-1.0
	0.6nm118nm,0.6s						
APSI	Ampana	6.83	284	P	Pn	21 29 11.0	-0.7

*IDC **26** 21:52:01.9±1.2, 23.°49S×179.°76E, h533^{km}±12^{km}, mb3.6/12, mbtmp4.4/14, Error ellipse: s-maj=16.0km s-min=12.9km az=128.0*
*NEIC **26** 21:52:01.8±1.8, 23.°61S±0.°08×179.°91W±0.°10, h538^{km}±4^{km}, mb4.5/61, Error ellipse: s-maj=14.8km s-min=9.3km az=125.0*
ISC 26 21:52:01.5±0.4, **23.°62S**±0.°05×**179.°97E**±0.°07, **h535**^{km},
n153, σ1^{s}**54**/173, **mb4.4**/40, **5C**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.92	162	P	P	21 53 38.9	+0.4
GLKZ	Green Lake	5.93	162	P	P	21 53 38.0	-0.6
MSVF	Nonsavu	6.13	343	P	P	21 53 40.1	-0.7
	18nm,0.6s,baz=208,slow=21,SNR=28						
MSVF				S	S	21 54 59.9	-2.0
	3.6nm,0.5s,baz=287,slow=19,SNR=0.7						
MSVF	Nonsavu	6.13	343	P	P	21 53 39.9	-1.0
MARNC	Mare, Loyalty	11.24	279	P	P	21 54 32.7	+0.6
PINNC	Pines Island,	11.57	273	P	P	21 54 37.8	+2.2
LIFNC	LIFOU	12.13	281	P	P	21 54 41.5	+0.1
OUENC	Ouen Island, N	12.15	273	P	P	21 54 43.4	+1.8
AFI	Afiamalu	12.42	40	P	P	21 54 44.0	-0.7
DZM	Mont Dzumac	12.57	274	P	P	21 54 43.8	-2.3
	2.4nm,0.6s,baz=100,slow=19,SNR=1.6						
DZM	Mont Dzumac	12.57	274	P	P	21 54 47.7	+1.6
OUZ	Omahuta	12.82	204	P	P	21 54 49.0	+0.7
KUZ	Kuaotunu	13.58	195	P	P	21 54 57.6	+1.3
MXZ	Matakaoa Point	13.97	185	P	P	21 55 01.4	+1.1
MXZ	Matakaoa Point	13.97	185	P	P	21 55 01.2	+0.9
WMGZ	Waiomatatini S	14.21	185	P	P	21 55 02.7	-0.2
WMGZ				S	S	21 57 31.3	-1.0
RUGZ	Raukumara Rang	14.43	187	P	P	21 55 04.8	-0.5
RUGZ				S	S	21 57 30.9	-5.9
PUZ	Puketiti	14.48	185	P	P	21 55 05.6	0.0
PUZ				S	S	21 57 35.8	-1.7
SANVU	Saraoutou	14.52	302	P	P	21 55 08.9	+2.6
KMRZ	Kaimai	14.59	193	P	P	21 55 07.9	+1.0
TWGZ	Tauwhareparae	14.61	186	P	P	21 55 06.6	-0.4
TWGZ				S	S	21 57 39.2	-0.8
URZ	Urewera	14.79	189	P	P	21 55 07.4	-1.4
	50nm,0.5s,baz=30,slow=1.7,SNR=59						
URZ				S	S	21 57 39.0	-4.4
	18nm,0.5s,baz=43,slow=23,SNR=13						
URZ	Urewera	14.79	189	P	P	21 55 07.5	-1.4
URZ					S	21 57 42.8	-0.6
URZ	Urewera	14.79	189	P	P	21 55 06.9	-2.0
URZ				S	S	21 57 39.2	-4.2
CNGZ	Carnagh Statio	14.89	185	P	P	21 55 10.4	+0.5
RAGZ	Rawiri	14.99	188	P	P	21 55 10.1	-0.9
MUGZ	Murupara	15.06	190	P	P	21 55 11.3	-0.4
TLZ	Tolley Road	15.14	193	P	P	21 55 15.2	+2.7
RIGZ	Rimuhau	15.15	187	P	P	21 55 12.4	-0.3
RIGZ				S	S	21 57 51.3	+1.2
SNGZ	Shannon Statio	15.28	188	P	P	21 55 12.8	-1.2
SNGZ				S	S	21 57 48.4	-4.0
MTHZ	Maungataniwha	15.41	189	P	P	21 55 14.9	-0.5
HIZ	Hauiti	15.47	195	P	P	21 55 19.6	+3.7
BKZ	Black Stump Fm	15.78	190	P	P	21 55 16.6	-2.5
BKZ					S	21 57 60.0	-1.1
BFZ	Birch Farm	17.30	190	P	P	21 55 32.4	-1.1
MSWZ	Moikau Station	18.18	191	P	P	21 55 40.9	-0.7
BHW	Baring Head	18.24	192	P	P	21 55 42.0	-0.2
QRZ	Quartz Range	18.26	198	P	P	21 55 43.4	+1.1
PLWZ	Palliser	18.33	191	P	P	21 55 42.9	0.0
NNZ	Nelson	18.39	196	P	P	21 55 43.6	+0.1
TUWZ	Tuamarina	18.46	194	P	P	21 55 45.0	+0.9
BSWZ	Blackbirch Sta	18.75	194	P	P	21 55 47.9	+1.1
THZ	Tophouse	19.03	196	P	P	21 55 49.7	+0.3
THZ				IAmb	IAmb	21 56 05.5	
	comp=Z,7.6nm,0.8s						
KHZ	Kahutara	19.49	194	P	P	21 55 53.1	-0.4
KHZ				IAmb	IAmb	21 55 59.6	
	comp=Z,9.1nm,0.9s						
LTZ	Lake Taylor	20.15	197	P	P	21 55 59.0	-0.5
LTZ				IAmb	IAmb	21 56 05.6	
	comp=Z,20nm,0.9s						
OXZ	Oxford	20.72	197	P	P	21 56 04.5	-0.1
RPZ	Rata Peaks	21.34	198	P	P	21 56 11.3	+1.0
	comp=Z,6.9nm,0.4s,baz=54,slow=8.7,SNR=2.8						
	comp=Z,6.9nm,0.4s						
RPZ	Rata Peaks	21.34	198	P	P	21 56 10.2	-0.1
RPZ				IAmb	IAmb	21 56 24.9	
	comp=Z,20nm,1.1s						
FOZ	Fox Glacier	21.55	200	P	P	21 56 11.5	-0.6
MLZ	Mavora Lakes	23.74	201	P	P	21 56 32.3	+0.6
MLZ				IAmb	IAmb	21 56 34.4	
	comp=Z,3.3nm,0.3s						
DCZ	Deep Cove	24.15	202	P	P	21 56 35.3	+0.1
WHZ	Wether Hill Ro	24.26	201	P	P	21 56 37.2	+1.0
TARA	Tarawa	25.75	344		PcP	21 59 57.8	-4.0
ARMA	Armidale	26.09	249	P	P	21 56 54.9	+2.0
EIDS	Eidsvold	26.32	260	P	P	21 56 56.0	+1.2
CTAO	Charters Tower	31.45	270	P	P	21 57 40.4	+1.0
PMG	Port Moresby	34.38	289	P	P	21 58 04.8	+0.5
STKA	Stephens Creek	34.80	248	P	P	21 58 07.5	0.0
	comp=Z,3.6nm,0.8s,baz=89,slow=11,SNR=6.3						
	comp=Z,3.6nm,0.8s						
STKA	Stephens Creek	34.80	248	P	P	21 58 08.4	+0.8
COEN	Coen	36.04	279	P	P	21 58 19.0	+0.8
BBOO	Buckleboo	39.53	247	P	P	21 58 46.2	-0.1
BBOO				IAmb	IAmb	21 58 55.6	
	comp=Z,22nm,1.1s						
AS31	Alice Springs	42.05	260	P	P	21 59 07.3	+0.7
ASAR	Alice Springs	42.05	260	P	P	21 59 06.2	-0.4
	comp=Z,5.4nm,0.5s,baz=102,slow=7.2,SNR=67						
ASAR				ScP	ScP	22 03 50.9	+2.1
	comp=Z,2.2nm,0.7s,baz=104,slow=4.3,SNR=14						
ASAR				S	S	22 04 45.1	-2.3
	comp=Z,0.6nm,0.9s,baz=101,slow=14,SNR=2.8						
	comp=Z,5.4nm,0.5s						
ASAR	Alice Springs	42.05	260	P	P	21 59 06.7	0.0
WR0	Warramunga Arr	42.21	266	P	P	21 59 07.5	-0.4
WR0				IAmb	IAmb	21 59 07.8	
	comp=Z,6.3nm,0.5s						
WB2	Warramunga Arr	42.38	266	P	P	21 59 08.9	-0.3
WB2				IAmb	IAmb	21 59 09.2	
	comp=Z,14nm,0.5s						
WB0	Warramunga Arr	42.39	266	P	P	21 59 08.7	-0.6
WB0				IAmb	IAmb	21 59 09.5	
	comp=Z,16nm,0.7s						
WRAB	Tennant Creek	42.39	266	P	P	21 59 08.8	-0.4
WRA	Warramunga Arr	42.40	266	P	P	21 59 08.2	-1.1
	comp=Z,11nm,0.5s,baz=90,slow=5.9,SNR=329						
WRA				ScP	ScP	22 03 52.4	+2.3
	comp=Z,1.6nm,0.9s,baz=99,slow=4.3,SNR=7.6						
WRA				S	S	22 04 49.2	-3.2
	comp=Z,0.6nm,0.7s,baz=99,slow=13,SNR=5.0						
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	42.40	266	P	P	21 59 08.7	-0.7
PTCN	Pitcairn Islan	45.31	103		pP	22 01 04.4	-2.5
FORT	Forrest	46.38	249	P	P	21 59 40.2	+0.3
MTN	Manton Dam	47.41	274	P	P	21 59 47.3	-0.5
MTN				IAmb	IAmb	21 59 48.7	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	48.66	270	P	P	21 59 57.4	+0.2
FAKI	Fak Fak	50.48	287	P	P	22 00 10.2	-0.4
FAKI				IAmb	IAmb	22 00 25.5	
	comp=Z,25nm,1.1s						
SBA	Scott Base	54.65	183	P	P	22 00 42.4	+3.0
VNDA	Vanda	54.65	185	P	P	22 00 40.9	+1.4
	comp=Z,1.3nm,0.7s,baz=358,slow=8.1,SNR=6.6						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	54.65	185	P	P	22 00 40.8	+1.3
SOEI	Soe	54.79	275	P	P	22 00 43.2	+1.6
SOEI				IAmb	IAmb	22 00 52.8	
	comp=Z,23nm,0.9s						
BATI	Baumata	55.18	274	P	P	22 00 43.3	-0.9
	comp=Z,18nm,0.5s,baz=132,slow=3.3,SNR=5.5						
	comp=Z,18nm,0.5s						
PSA00	Pilbara Seismi	55.19	259	P	P	22 00 42.6	-1.4
MBWA	Marble Bar	55.39	260	P	P	22 00 44.9	-0.6
MBWA				IAmb	IAmb	22 01 02.4	
	comp=Z,11nm,1.1s						
MORW	Morawa	56.94	250	P	P	22 00 56.3	+0.2
CASY	Casey	60.35	206	P	P	22 01 18.2	-0.1
JCJ	Chichijima	62.24	322	P	P	22 01 31.0	-0.4
TOLI2	Tolitoli	62.48	284	P	P	22 01 32.6	-0.6
TOLI2				IAmb	IAmb	22 01 34.8	
	comp=Z,9.0nm,0.6s						
JAGI	Jajag, Banyuwa	64.53	272	P	P	22 01 45.5	-0.9
JAGI				IAmb	IAmb	22 01 59.4	
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	66.46	180	P	P	22 01 58.7	+1.0
QSPA				IAmb	IAmb	22 01 59.7	
	comp=Z,12nm,0.8s						
JOW	Kunigami	70.78	312	P	P	22 02 25.0	+0.8
JOW				IAmb	IAmb	22 02 25.8	
	comp=Z,19nm,0.9s						
JGF	Kuroka	71.39	324	P	P	22 02 27.7	0.0
JGF				IAmb	IAmb	22 02 27.8	
	comp=Z,6.4nm,0.9s						
MJAR	Matsushiro Arr	71.65	326	P	P	22 02 27.2	-2.0
	comp=Z,2.7nm,0.8s,baz=174,slow=5.0,SNR=7.3						
	comp=Z,2.7nm,0.8s						
JSU	Suzuyama	72.46	317	P	P	22 02 34.2	+0.3
JSU				IAmb	IAmb	22 02 34.6	
	comp=Z,12nm,0.6s						
JHS	Saijyo	73.29	321	P	P	22 02 39.1	+0.4
JHS				IAmb	IAmb	22 02 40.1	
	comp=Z,10nm,1.0s						
SSLB	Suanglung	74.17	305	P	P	22 02 43.8	-0.1
SSLB				IAmb	IAmb	22 02 43.8	
	comp=Z,7.0nm,0.8s						
YHNB	Yeheng	74.37	306	P	P	22 02 44.9	-0.2
YHNB				IAmb	IAmb	22 02 52.7	
	comp=Z,7.4nm,0.8s						
KIWB	Kanaga Island	75.19	2	P	P	22 02 48.9	-0.1
ADK	Adak	75.23	2	P	P	22 02 48.5	-0.6
ADK				IAmb	IAmb	22 02 52.4	
	comp=Z,8.7nm,0.8s						
BELA	Belgrano 2	76.71	173		P	22 02 57.1	-0.1
BELA				IAmb	IAmb	22 02 57.6	
	comp=Z,6.6nm,0.7s						
MAW	Mawson	78.00	200	P	P	22 03 05.3	+1.1
KSRS	Korea Array	78.02	320	P	P	22 03 04.4	-0.3
	comp=Z,1.3nm,0.6s,baz=138,slow=5.6,SNR=7.1						
	comp=Z,1.3nm,0.6s						
PEA0B	Petropavlovsk-	78.82	347	P	P	22 03 09.0	+0.3
PETK	Petropavlovsk-	78.82	347	P	P	22 03 08.1	-0.6
	comp=Z,3.9nm,0.6s,baz=116,slow=6.8,SNR=11						
	comp=Z,3.9nm,0.6s						
PETK	Petropavlovsk-	78.82	347	P	P	22 03 08.8	+0.1
PMSA	Palmer Station	79.17	157	P	P	22 03 11.1	+0.6
PMSA				IAmb	IAmb	22 03 19.5	
	comp=Z,18nm,1.0s						
CNBA	Chernabura Isl	80.07	12	P	P	22 03 14.3	-0.9
CHIR	Chirikof Islan	81.81	14	P	P	22 03 24.0	-0.2
MG03	Isla Dawson	82.01	146	P	P	22 03 25.5	0.0
MG03				IAmb	IAmb	22 03 34.8	
	comp=Z,18nm,1.1s						
KULM	Kulim	82.37	279	P	P	22 03 28.3	+0.3
KULM				IAmb	IAmb	22 03 31.7	
	comp=Z,14nm,1.1s						
GSI	Gunungsitoli	83.55	274	P	P	22 03 34.9	+0.9
GSI				IAmb	IAmb	22 03 35.6	
	comp=Z,10.0nm,0.7s						
TROLL	Troll, Antarti	84.61	181	P	P	22 03 38.0	-0.3
SNAA	Sanae	84.94	179	P	P	22 03 39.0	-0.8
SNAA	Sanae	84.94	179	P	P	22 03 39.2	-0.6
VNA3	Neumayer Olymp	85.15	177	P	P	22 03 40.3	-0.5
VNA2	Neumayer--Watz	85.57	178	P	P	22 03 42.4	-0.4
	baz=182,slow=5.0						
CMAR	Chiang Mai Arr	89.40	290	P	P	22 04 02.0	+0.3
	comp=Z,0.8nm,0.3s,baz=115,slow=4.1,SNR=6.3						
	comp=Z,0.8nm,0.3s						
HHC	Hu-ho-hao-te	90.20	315	eP	P	22 04 05.3	+0.2
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
TXAR	Lajitas Array	90.31	58	P	P	22 04 06.5	+0.7
	comp=Z,0.8nm,0.7s,baz=231,slow=7.9,SNR=4.9						
	comp=Z,0.8nm,0.7s						
PZH	PanZhiHua	90.52	299	P	P	22 04 07.5	+0.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.9s						
BCYI	Bear Canyon	90.93	41		pwP	22 06 09.2	+3.1
ILAR	Eielson Array	91.77	14	P	P	22 04 11.7	+0.1
	comp=Z,0.4nm,0.8s,baz=225,slow=7.7,SNR=5.2						
	comp=Z,0.4nm,0.8s						
BILL	Bilibino	91.95	355	P	P	22 04 13.0	+0.7
BILL				IAmb	IAmb	22 04 13.1	
	comp=Z,3.3nm,0.4s						
Q24A	Divide	93.61	49	P	P	22 04 19.9	-1.1
Q24A				IAmb	IAmb	22 04 32.2	
	comp=Z,5.2nm,0.8s						
FINES	FINESS Array B	138.17	342	PKhKP	PKPpre	22 10 15.6	
	comp=Z,3.6nm,1.0s,baz=166,slow=32,SNR=4.4						
FINES				PKP	PKPdf	22 10 25.6	+0.5
	comp=Z,0.5nm,0.3s,baz=98,slow=4.2,SNR=8.8						
KARS	Kars	140.18	306	PKPdf	PKPdf	22 10 30.8	+1.1
NB2	NORSAR Subarra	141.80	351	PKP	PKPdf	22 10 27.1	-4.7
	comp=Z,0.4nm,0.5s,baz=20,slow=3.6						
NOA	NORSAR Array B	141.80	351	PKhKP	PKPpre	22 10 27.3	
	comp=Z,0.7nm,0.6s,baz=16,slow=4.6,SNR=6.5						
PABE	Paberze	143.55	337		PKPab	22 10 33.4	-0.1
AKASG	Malin Array Be	144.72	327	PKP	PKPdf	22 10 36.6	-0.5
	comp=Z,1.8nm,0.3s,baz=45,slow=4.7,SNR=16						
AKBB	Malin Array Si	144.72	327	PKPab	PKPdf	22 10 37.0	-0.2
SUW	Suwalki	145.00	336	ePKPbc	PKPab	22 10 39.0	-0.1
BRTR	Keskin Array B	147.39	308	PKPbc	PKPbc	22 10 44.9	-0.7
	comp=Z,1.9nm,0.6s,baz=138,slow=4.7,SNR=5.8						
KOLS	Kolonicke sedl	149.22	331	ePKP	PKiKP	22 10 50.6	+0.1
OJC	Ojcow	149.27	335	ePKPbc	PKPbc	22 10 49.5	-0.2
KSP	Ksiaz	150.02	339	ePKPbc	PKPbc	22 10 51.8	+0.3
OSTC	Ostas	150.29	339⇑	ePKP	PKPbc	22 10 52.3	+0.2
CHVC	Chvalec	150.31	339⇑	ePKP	PKPbc	22 10 52.2	0.0
CHVC				ePKPAB	PKPab	22 11 01.0	+0.1
KECS	Kecovo	150.34	332	ePKP	PKPbc	22 10 51.3	-1.0
DPC	Dobruska-Polom	150.43	339⇑	ePKP	PKPbc	22 10 51.7	-0.8
DPC				ePKPAB	PKPab	22 11 01.7	+0.3
KRLC	Kraliky	150.51	338⇑	ePKP	PKPbc	22 10 52.3	-0.4
KRLC				ePKPAB	PKPab	22 11 01.9	+0.2
CLL	Collm	150.58	343	ePKPdf	PKPdf	22 10 48.0	+1.3
CLL				i PKPbc	PKPbc	22 10 52.7	0.0
	comp=Z,4.0nm,0.7s						
CLL				i PKPab	PKPab	22 11 01.6	-0.3
	comp=Z,3.0nm,0.8s						
CLL				epPKPbc	pPKPbc	22 12 58.0	+1.3
CLL				i pPKiKP	pPKPab	22 13 00.0	-0.7
CLL				epPKPab	pPKPdf	22 13 02.0	+10
KOLL	Kolacno	151.13	334	ePKP	PKiKP	22 10 54.4	0.0
KOLL				e		22 11 04.7	
MODS	Modra-Piesok	151.74	335	ePKP	PKiKP	22 10 55.8	+0.1
KHC	Kasperske Hory	152.37	341⇑	ePKP	PKPbc	22 10 56.2	-0.7
KHC				ex	PKPab	22 11 08.1	-1.5
CONA	Conrad Observa	152.64	336	eP	PKPab	22 11 11.5	+0.6
	comp=Z,3.0nm,0.7s						
RONA	Rosalia, Austr	152.67	336	eP	PKPab	22 11 11.7	+0.8
SOKA	Soboth	154.00	336	eP	PKPab	22 11 16.6	0.0
	comp=Z,0.9nm,0.4s						
KBA	Koelnbreinsper	154.25	339	eP	PKPab	22 11 18.6	+0.8
	comp=Z,0.6nm,0.5s						
OBKA	Obir	154.32	336	eP	PKPab	22 11 18.0	0.0
	comp=Z,2.0nm,0.9s						
WATA	Walderalm	154.58	341	eP	PKPab	22 11 20.2	+1.0
	comp=Z,2.4nm,0.9s						
WTTA	Wattenberg	154.62	341	eP	PKPab	22 11 19.8	+0.4
	comp=Z,1.2nm,0.4s						
RETA	Reutte	154.67	343	eP	PKPab	22 11 19.8	+0.3
	comp=Z,3.9nm,1.0s						
MOTA	Moosalm	154.71	342	eP	PKPab	22 11 20.2	+0.5
	comp=Z,3.0nm,1.1s						
DAVA	Damuels	155.09	344	eP	PKPab	22 11 21.4	0.0
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	169.45	189	PKPab	PKPab	22 12 23.6	-1.3
	comp=Z,1.1nm,0.7s,baz=173,slow=3.6,SNR=6.4						

*IDC **26** 21:57:47.8±1.7, 48.°19N×155.°22E, h0^{km}, mb3.5/2, mbtmp3.4/3, ML2.1/1, Error ellipse: s-maj=263.5km s-min=27.8km az=108.0*
*KRSC **26** 21:57:54.9±1.9, 48.°52N×156.°60E, h32^{km}±54^{km}, ML4.0*
ISC 26 21:57:52.6±1.4, **48.°3N**±0.°1×**156.°0E**±0.°3, **h35**^{km}, **n24**,
σ1^{s}**92**/23, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	3.27	9	eP	Pn	21 58 43.0	+1.7
PAU				eS	Sn	21 59 17.0	-1.9
KDTR	Khodutka, Kamc	3.81	20	eP	Pn	21 58 50.1	+1.3
KDTR				eS	Sn	21 59 30.6	-1.7
ASAK	Asacha	4.32	16	eP	Pn	21 58 57.7	+1.9
MTVR	Mutnovka	4.47	18	eP	Pn	21 59 00.1	+2.2
MTVR				eS	Sn	21 59 47.8	-0.9
RUS	Russkaya	4.49	20	eP	Pn	21 58 58.9	+0.8

RUS				eS	Sn	21 59 46.7	-2.4
GRL	Gorelyy	4.51	17	eP	Pn	21 59 00.6	+2.1
GRL				eS	Sn	21 59 49.4	-0.4
PETK	Petropavlovsk-	4.99	12	Pn	Pn	21 59 05.8	+0.8
	0.3nm,0.3s,baz=172,slow=12,SNR=5.4						
PETK				Sn	Sn	22 00 09.2	+7.9
	0.1nm,0.3s,baz=175,slow=20,SNR=1.4						
	1.5nm,0.5s						
UGLR	Uglovaya	5.29	19	eP	Pn	21 59 11.8	+2.7
AVH	Avacha	5.32	18	eP	Pn	21 59 12.3	+2.8
KOK	Koryaka	5.33	18	eP	Pn	21 59 12.4	+2.8
SMAR	Somma	5.33	19	eP	Pn	21 59 12.5	+2.7
SDLR	Sedlovina	5.36	19	eP	Pn	21 59 11.6	+1.4
KRX	Arik	5.39	17	eP	Pn	21 59 12.6	+2.0
SPN	Mys Shipunski	5.50	26	eP	Pn	21 59 13.8	+1.9
GNL	Ganaly	5.59	12	eP	Pn	21 59 14.1	+0.8
MKZ	Mys Kozlova	7.27	28	eP	Pn	21 59 36.6	+0.4
H11S1	WAKE ISLAND Hy	30.93	160	T	T	22 37 35.6	
	baz=345,slow=76						
H11S3	WAKE ISLAND Hy	30.93	160	T	T	22 37 41.4	
	baz=345,slow=76						
H11S2	WAKE ISLAND Hy	30.94	160	T	T	22 38 01.8	
	baz=345,slow=76						
WRA	Warramunga Arr	70.59	202	P	P	22 09 02.9	-1.2
	0.3nm,0.6s,baz=22,slow=6.4,SNR=6.0						
	0.3nm,0.6s						
ASAR	Alice Springs	74.27	201	P	P	22 09 25.8	-0.2
	0.3nm,0.6s,baz=14,slow=5.1,SNR=4.1						
	0.3nm,0.6s						
H03N2	Juan Fernandez	136.83	91	T	T	00 50 33.3	
	baz=308						
H03N1	Juan Fernandez	136.84	91	T	T	00 50 40.5	
	baz=308						
H03N3	Juan Fernandez	136.84	91	T	T	00 50 32.8	
	baz=308						

*IDC **26** 23:09:41.8±1.1, 3°.12S×128°.66E, h0^{km}, mb3.9/4, mbtmp3.9/6, ML4.1/2, MS3.0/2, Error ellipse: s-maj=41.4km s-min=22.4km az=73.0*

*DJA **26** 23:09:46.1±0.4, 3°S±5°×12°9E±°, h20^{km}±6^{km}, M4.3/11, mb4.7/3, MLv4.1/11*

*NEIC **26** 23:09:47.1±1.9, 3°.19S±0°.04×128°.91E±0°.06, h35^{km}±2^{km}, mb4.2/20, Error ellipse: s-maj=10.3km s-min=7.0km az=270.0*

ISC 26 23:09:46.4±0.5**, 3°.18S**±0°.05×**128°.90E**±0°.04**, h33**^{km}**, n49, σ1^{s}10**/54**, mb4.1**/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.17	171	P	Pb	23 09 52.8	+0.1
MSAI				S	Sb	23 09 58.6	+1.6
AAI	Ambon	0.87	235	P	Pb	23 10 03.8	+0.7
LBMI	Labuha	2.89	331	P	Pn	23 10 30.6	+0.4
LBMI				S	Sn	23 11 03.9	+0.1
SANI	Sanana	3.12	291	P	Pn	23 10 32.9	-0.5
SANI				S	Sn	23 11 08.2	-1.3
SIJI	Sorong	3.29	46	Pn	Pn	23 10 36.5	+0.7
	60nm,0.3s,baz=248,slow=6.7,SNR=130						
SIJI				Sn	Sn	23 11 13.0	-0.8
	30nm,0.3s,baz=93,slow=22,SNR=22						
SIJI				LR	LR	23 12 28.8	
	comp=Z,172nm,19.2s,baz=112,slow=49						
	164nm,0.4s						
SWI	Sorong	3.29	46	P	Pn	23 10 36.3	+0.5
SWI				S	Sn	23 11 13.9	+0.1
FAKI	Fak Fak	3.35	86	Pn	Pn	23 10 37.5	+1.0
FAKI				Sn	Sn	23 11 17.5	+2.2
FAKI	Fak Fak	3.35	86	P	Pn	23 10 38.1	+1.5
TNTI	Ternate	4.22	339	Pn	Pn	23 10 48.7	+0.2
GTOI	Gorontalo	7.00	303	P	Pn	23 11 30.3	+3.5
	0.1nm24nm,0.6s						
BAKI	Biak	7.47	75	P	Pn	23 11 38.8	+5.7
APSI	Ampana	7.59	287	P	Pn	23 11 37.1	+2.3
	0.2nm41nm,0.5s						
MRSI	Marisa	7.85	297	P	Pn	23 11 39.5	+1.1
SOEI	Soe	7.99	215	Pn	Pn	23 11 40.1	-0.3
MMRI	Maumere	8.56	230	Pn	Pn	23 11 48.8	+0.6
TOLI2	Tolitoli	9.17	298	Pn	Pn	23 11 58.2	+1.7
KAPI	Kappang	9.31	258	Pn	Pn	23 11 58.3	-0.1
KNRA	Kununurra	12.42	181	Pn	Pn	23 12 42.3	+1.3
MYLDM	Lahad Datu	13.30	309	Pn	Pn	23 12 54.1	+1.0
WB0	Warramunga Arr	17.34	162		Pn	23 13 46.7	+0.7
WRAB	Tennant Creek	17.48	163		Pn	23 13 48.2	+0.4
WRAB				IAmb	IAmb	23 14 06.7	
	comp=Z,9.2nm,1.4s						
WRA	Warramunga Arr	17.48	163	P	Pn	23 13 48.2	+0.3
	comp=Z,0.4nm,0.3s,baz=340,slow=12,SNR=21						
WRA				S	Sn	23 17 03.0	+1.3
	comp=Z,0.6nm,1.0s,baz=341,slow=23,SNR=2.3						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	17.48	163	P	P	23 13 48.7	-0.1
WB2	Warramunga Arr	17.49	163		Pn	23 13 48.3	+0.4
WB2				IAmb	IAmb	23 14 04.6	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	17.56	162		Pn	23 13 48.9	+0.1
COEN	Coen	17.70	128	Pn	Pn	23 13 48.4	-2.2
MBWA	Marble Bar	19.98	206	P	P	23 14 16.0	-0.1
MBWA				IAmb	IAmb	23 14 30.4	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	20.29	205	P	P	23 14 19.8	+0.2
PSA00				IAmb	IAmb	23 14 20.2	
	comp=Z,6.5nm,0.7s						
ASAR	Alice Springs	20.93	167	P	P	23 14 27.2	+0.7
	comp=Z,6.2nm,0.7s,baz=350,slow=12,SNR=47						
ASAR				S	S	23 18 17.4	-0.8
	comp=Z,1.6nm,0.9s,baz=349,slow=24,SNR=5.7						
	comp=Z,6.2nm,0.7s						
ASAR	Alice Springs	20.93	167	P	P	23 14 27.5	+0.9
JOW	Kunigami	29.84	359	LR	LR	23 25 44.6	
	comp=Z,43nm,21.5s,baz=187,slow=32						
BBOO	Buckleboo	30.23	168	P	P	23 15 53.8	-0.4
EIDS	Eidsvold	30.69	138	P	P	23 15 56.9	-1.5
NWAO	Narrogin (SRO)	31.55	199	P	P	23 16 05.1	-0.7
GSI	Gunungsitoli	31.63	278	P	P	23 16 06.7	-0.1
ARMA	Armidale	34.58	144	P	P	23 16 32.8	+0.3
KOUNC	Koumac, New Ca	38.55	119	P	P	23 17 04.8	-1.5
KOUNC				IAmb	IAmb	23 17 20.7	
	comp=Z,14nm,1.1s						
JSD	Sado	41.92	11	P	P	23 17 34.5	+0.5
JSD				IAmb	IAmb	23 17 53.3	
	comp=Z,21nm,1.2s						
SONM	Songino Array	54.50	342	P	P	23 19 10.8	-0.3
	comp=Z,0.4nm,0.5s,baz=167,slow=6.8,SNR=4.4						
	comp=Z,0.4nm,0.5s						
PEA0B	Petropavlovsk-	61.08	19	P	P	23 19 58.1	+1.0
MK31	Makanchi Array	64.46	326	P	P	23 20 19.2	-0.5
MK31				IAmb	IAmb	23 20 21.9	
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	64.46	326	P	P	23 20 19.2	-0.5
	comp=Z,0.8nm,0.7s,baz=124,slow=8.3,SNR=10						
	comp=Z,0.8nm,0.7s						
ZAA0	Zalesovo Array	67.70	334	P	P	23 20 39.5	-0.9
ZAA0				IAmb	IAmb	23 20 53.0	
	comp=Z,1.5nm,0.8s						
ZALV	Zalesovo Beam	67.70	334	P	P	23 20 39.6	-0.7
KURBB	Kurchatov Arra	68.71	328	P	P	23 20 45.9	-0.9
	comp=Z,1.3nm,0.8s,baz=129,slow=5.5,SNR=13						
	comp=Z,1.3nm,0.8s						
KURK	Kurchatov	68.71	328	P	P	23 20 45.9	-0.9
KURK	Kurchatov	68.71	328	IAmb	IAmb	23 20 47.6	
	comp=Z,1.7nm,0.8s						
GSTR	Great Sitkin T	71.97	32	P	P	23 21 05.2	-1.6
TORD	Torodi Ar. Bea	126.91	284	PKP	PKPdf	23 28 48.1	+0.1
	comp=Z,0.6nm,0.9s,baz=70,slow=1.6,SNR=3.1						

*NEIC **26** 23:20:12.9±2.5, 31°.5S±0°.1×179°.8E±0°.2, h459^{km}±10^{km}, mb4.0/17, Error ellipse: s-maj=20.6km s-min=14.3km az=105.0*

*IDC **26** 23:20:17.6±7.4, 32°.01S×179°.50E, h495^{km}±98^{km}, mb2.9/2, mbtmp4.0/3, Error ellipse: s-maj=117.8km s-min=40.0km az=7.0*

*WEL **26** 23:20:18.2±0.8, 32°S±7°×18°0E±1°9, h360^{km}±13^{km}, M4.2/13, mB4.5/8, ML4.7/12, MLv4.8/13, Mw(mB)3.6/8, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1*

ISC 26 23:20:12.0±0.7**, 31°.26S**±0°.06×**179°.0E**±0°.1**, h400**^{km}**, n57, σ1^{s}88**/70**, mb3.7**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.33	54	S	S	23 22 09.2	-2.2
RIZ	Raoul Island	3.33	54	S	S	23 22 08.2	-3.3
RAO	Raoul Island	3.34	54	P	Pn	23 21 19.3	+1.2
RAO				S	S	23 22 12.9	+1.4
OUZ	Omahuta	6.00	227	P	Pn	23 21 52.8	+8.3
WCZ	Waipu Caves	6.07	219	P	Pn	23 21 52.8	+7.5
MXZ	Matakaoa Point	6.31	185	P	Pn	23 21 49.8	+1.9
MXZ				S	S	23 23 06.8	+0.7
MXZ	Matakaoa Point	6.31	185	P	Pn	23 21 50.4	+2.5
MXZ				S	S	23 23 05.6	-0.5
ABAZ	Army Bay	6.35	212	P	Pn	23 21 56.0	+7.6
HAZ	Te Kaha	6.55	188	P	Pn	23 21 51.8	+1.2
HAZ				S	S	23 23 10.2	-0.9
WMGZ	Waiomatatini S	6.56	184	P	Pn	23 21 52.7	+2.1
WMGZ				S	S	23 23 10.4	-0.7
PKGZ	Pakihiroa	6.65	186	P	P	23 21 55.4	+3.0
RUGZ	Raukumara Rang	6.77	189	P	P	23 21 54.9	+1.2
RUGZ				S	S	23 23 12.5	-3.3
TWGZ	Tauwhareparae	6.95	187	P	P	23 21 57.9	+2.3
TWGZ				S	S	23 23 19.0	-0.2
URZ	Urewera	7.15	192	P	P	23 21 59.8	+2.1
	22nm,0.3s,baz=260,slow=2.7,SNR=44						
URZ				S	S	23 23 20.9	-2.3
	15nm,0.4s,baz=55,slow=21,SNR=18						
URZ	Urewera	7.15	192	P	P	23 21 59.3	+1.5
URZ	Urewera	7.15	192	P	P	23 21 58.9	+1.2
URZ				S	S	23 23 21.5	-1.7
MWZ	Matawai	7.16	189	P	P	23 21 59.3	+1.4
MWZ				S	S	23 23 19.8	-3.7
TKGZ	Te Karaka	7.22	187	P	P	23 22 00.2	+1.6
TKGZ				S	S	23 23 23.0	-1.7
CNGZ	Carnagh Statio	7.23	185	P	P	23 22 00.7	+2.0
RAGZ	Rawiri	7.33	190	P	P	23 22 01.6	+1.7
MUGZ	Murupara	7.43	194	P	P	23 22 02.8	+1.9
MUGZ				S	S	23 23 29.3	+0.3
RIGZ	Rimuhau	7.49	187	P	P	23 22 04.1	+2.4
RIGZ				S	S	23 23 29.9	-0.5
TLZ	Tolley Road	7.60	201	P	P	23 22 07.7	+4.8
SNGZ	Shannon Statio	7.62	190	P	P	23 22 05.1	+2.0
SNGZ				S	S	23 23 32.2	-0.9
MTHZ	Maungataniwha	7.78	193	P	P	23 22 06.4	+1.7
MTHZ				S	S	23 23 35.3	-1.1
RAHZ	Arahi	7.79	191	P	P	23 22 06.5	+1.5
KNZ	Kokohu	7.82	188	P	P	23 22 06.6	+1.4
KNZ				S	S	23 23 34.0	-3.1
MHGZ	Mahia Peninsul	7.92	186	P	P	23 22 08.0	+1.6
MHGZ				S	S	23 23 40.0	+0.6
HIZ	Hauiti	7.99	204	P	P	23 22 08.6	+1.4
BKZ	Black Stump Fm	8.15	194	P	P	23 22 09.7	+0.8
BKZ				S	S	23 23 44.2	0.0
ARHZ	Aropaoanui	8.15	191	P	P	23 22 10.2	+1.3
ARHZ				S	S	23 23 43.2	-0.9
KWHZ	Kaweka Forest	8.41	194	P	Pn	23 22 11.8	+0.2
KWHZ				S	S	23 23 46.7	-3.0
BFZ	Birch Farm	9.66	193	P	P	23 22 25.6	0.0
MSWZ	Moikau Station	10.57	196	P	P	23 22 36.5	+0.8
KHZ	Kahutara	11.96	200	P	P	23 22 51.5	+0.5
MSVF	Nonsavu	13.50	356	P	Pn	23 23 11.8	+1.1
LIFNC	LIFOU	14.85	312	P	P	23 23 30.7	+7.8
DCZ	Deep Cove	16.92	210	P	P	23 23 48.2	+3.3
DCZ				IAmb	IAmb	23 23 52.2	
	comp=Z,14nm,1.2s						
KNTN	Kanton	29.66	19	P	P	23 25 39.2	-3.7
KNTN				IAmb	IAmb	23 25 58.1	
	comp=Z,26nm,1.0s						
STKA	Stephens Creek	31.77	259	P	P	23 26 03.3	+2.1
BBOO	Buckleboo	36.25	256	P	P	23 26 38.2	-1.0
BBOO				IAmb	IAmb	23 26 52.2	
	comp=Z,27nm,1.1s						
ASAR	Alice Springs	40.50	269	P	P	23 27 16.4	+2.2
	comp=Z,0.7nm,0.6s,baz=102,slow=7.1,SNR=7.1						
	comp=Z,0.7nm,0.6s						
WR0	Warramunga Arr	41.39	275	P	P	23 27 23.6	+2.2
WR0				IAmb	IAmb	23 27 24.1	
	comp=Z,2.2nm,1.1s						
WB2	Warramunga Arr	41.56	275	P	P	23 27 25.2	+2.3
WB2				IAmb	IAmb	23 27 40.0	
	comp=Z,1.4nm,1.0s						
WRAB	Tennant Creek	41.57	275	P	P	23 27 24.9	+2.1
WRA	Warramunga Arr	41.57	275	P	P	23 27 25.2	+2.3
	comp=Z,0.7nm,0.3s,baz=111,slow=8.0,SNR=44						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	41.57	275	P	P	23 27 24.3	+1.4
WB0	Warramunga Arr	41.60	275	P	P	23 27 25.4	+2.2
WB0				IAmb	IAmb	23 27 36.2	
	comp=Z,2.3nm,1.1s						
FORT	Forrest	43.34	257	P	P	23 27 37.4	+0.6
MTN	Manton Dam	47.60	282	P	P	23 28 10.1	+0.2
MTN				IAmb	IAmb	23 28 11.3	
	comp=Z,8.3nm,1.1s						
KNRA	Kununurra	48.22	277	P	P	23 28 13.6	-0.9
KNRA				IAmb	IAmb	23 28 23.6	
	comp=Z,11nm,1.1s						
FAKI	Fak Fak	52.26	293	P	P	23 28 42.8	-1.7
PSA00	Pilbara Seismi	53.31	265	P	P	23 28 49.0	-3.0
PSA00				IAmb	IAmb	23 29 03.7	
	comp=Z,8.0nm,1.1s						
GIRL	Giralia	57.66	262	P	P	23 29 21.6	-1.0
QSPA	South Pole Qui	58.85	180	P	P	23 29 27.0	-3.1
GLA	Glamis	89.42	50	P	P	23 32 17.7	-7.0
FINES	FINESS Array B	145.01	338	PKPbc	PKPdf	23 38 59.4	-2.2
	comp=Z,1.1nm,0.6s,baz=46,slow=4.0,SNR=6.9						

*TEH **26** 23:20:52.1, 39°.82N×48°.43E, h17^{km}, ML3.2*

*DRS **26** 23:20:59.5±0.0, 39°.80N×48°.76E, h28^{km}*

ISC 26 23:20:51.8±1.5**, 39°.83N**±0°.03×**48°.37E**±0°.06**, h11**^{km}±13^{km}**, n31, σ1^{s}74**/42**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRMI	Germi	1.08	200	ePg	Pg	23 21 13.9	+1.3
AKT	Akhty	1.72	344	ePg	Pg	23 21 25.5	+0.8
	16nm,0.5s						
AKT				eSg	Sb	23 21 45.5	+0.4
	3.0nm,0.2s						
KSMR	Kasumkent	1.78	354	ePg	Pg	23 21 26.0	0.0
	17nm,0.3s						
KSMR				eSg	Sb	23 21 47.7	+0.8
	3.0nm,0.3s						
IHRS	Heris	1.83	215	ePn	Pb	23 21 25.3	0.0
IHRS				e		23 21 27.7	
	comp=Z,2μm,0.2s						
TVRZ	Varzaqan	1.87	226	ePg	Pb	23 21 26.4	+0.4
TVRZ				e		23 21 54.7	
	comp=Z,2μm,0.3s						
ISRB	Sarab	2.07	196	ePn	Pb	23 21 28.5	-1.0
ISRB				e		23 21 31.8	
	comp=Z,441nm,0.2s						
DRN	Derbent	2.20	359	ePg	Pb	23 21 31.1	-0.4
	comp=Z,17nm,0.7s						
DRN				eSg	Sb	23 21 56.7	-2.1
	comp=Z,12nm,0.2s						
CSN1	Caspian	2.33	166	ePn	Pb	23 21 31.4	-2.4
IMRD	Marand	2.35	243	ePn	Pb	23 21 32.8	-1.4
IMRD				e		23 21 33.8	
	comp=Z,1μm,0.4s						
ITBZ	Tabriz	2.35	228	ePn	Pn	23 21 32.2	+1.8
ITBZ				e		23 21 32.7	
	comp=Z,659nm,0.5s						
URKR	Urkarakh	2.40	347	ePn	Pb	23 21 34.6	-0.4
	comp=Z,6.0nm,0.7s						
URKR				eSn	Sb	23 22 03.0	-1.6
	comp=Z,28nm,0.5s						
IBST	Bostanabad	2.42	209	ePn	Pb	23 21 33.7	-1.7
KMKR	Kumukh	2.49	338	ePn	Pb	23 21 36.3	-0.4
	comp=Z,16nm,0.1s						
KMKR				eSn	Sb	23 22 06.3	-1.1
	comp=Z,16nm,0.7s						
ISHB	Shabestar	2.64	235	ePn	Pn	23 21 36.0	+1.5
ISHB				e		23 21 45.7	
	comp=Z,338nm,0.5s						
SGKR	Sergokala	2.68	349	ePn	Pb	23 21 38.9	-0.9
	comp=Z,2.0nm,0.3s						
SGKR				eSn	Sb	23 22 10.2	-2.5
	comp=Z,14nm,0.9s						
GNBR	Gunib	2.77	338	ePn	Pb	23 21 39.8	-1.5
	comp=Z,7.0nm,0.7s						
GNBR				eSn	Sb	23 22 12.6	-2.7
	comp=Z,9.0nm,0.4s						
IAZR	Azarshahr	2.84	222	ePn	Pn	23 21 39.2	+1.9
IAZR				e		23 21 40.4	
	comp=Z,638nm,0.2s						
ARKR	Arakani	2.96	340	ePn	Pb	23 21 43.1	-1.4
	comp=Z,2.0nm,0.6s						
ARKR				eSn	Sb	23 22 17.8	-2.9
	comp=Z,16nm,0.3s						
LHJ2	Lahijan - Gila	2.97	153	ePn	Pn	23 21 39.5	+0.7
KRNR	Karanay	3.19	340	ePn	Pb	23 21 45.9	-2.6
	comp=Z,3.0nm,0.2s						
KRNR				eSn	Sn	23 22 22.6	+2.6
	comp=Z,4.0nm,0.3s						
BTLR	Botlikh	3.26	331	ePn	Pb	23 21 47.3	-2.4
	comp=Z,2.0nm,0.4s						
BTLR				eSn	Sb	23 22 25.9	-3.5
	comp=Z,8.0nm,0.7s						
DBC	Dubki	3.39	341	ePn	Pn	23 21 47.9	+3.3
	comp=Z,3.0nm,0.3s						
DBC				eSn	Sn	23 22 26.7	+1.8
	comp=Z,8.0nm,0.7s						
IGZV	Ghazvin	3.73	156	ePn	Pn	23 21 49.5	0.0
IGZV				e		23 22 35.8	
	comp=N,900nm,0.2s						
QALM	Alamut, Qazvin	3.84	151	ePn	Pn	23 21 50.8	-0.2
QALM				e		23 22 32.9	
	comp=Z,300nm,0.4s						
QABG	Abgarm-Qazvin	4.22	166	e	Sn	23 22 44.9	-0.8
	comp=Z,42nm,0.8s						
IPRN	Peran	4.76	138	ePn	Pn	23 22 04.2	+0.7
IPRN				e		23 22 58.3	
	comp=Z,1μm,0.2s						
IFIR	Firoozkooh	5.44	139	ePn	Pn	23 22 14.2	+1.2
IGLO	Ghaloghah	5.44	126	ePn	Pn	23 22 13.9	+1.0
ISHM	Shahmirzad	5.60	134	ePn	Pn	23 22 16.5	+1.3
ISHM				e		23 23 21.2	
	comp=Z,372nm,0.2s						
IAKL	Akhelmad	8.79	108	ePn	Pn	23 23 00.1	+1.1
IPAY	Payeh	9.03	109	ePn	Pn	23 23 03.9	+1.7

*INET **26** 23:24:04.9±1.3, 12°.32N×87°.82W, h15^{km}±22^{km}, MW3.2*

*SNET **26** 23:24:06.9±0.8, 12°.54N×87°.85W, h62^{km}±15^{km}, ML3.1*

ISC 26 23:24:04.8±2.5**, 12°.4N**±0°.2×**87°.8W**±0°.1**, h72**^{km}±30^{km}**, n17, σ0^{s}60**/23**, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.60	24	eP	Pn	23 24 18.5	-0.4
CRIN	San Cristobal	0.80	70	eP	Pn	23 24 21.6	+0.6
CRIN				eS	Sn	23 24 33.8	+0.8
CNCH	Conchagua	0.85	359	i P	Pn	23 24 21.6	-0.1
CNCH				eS	Sn	23 24 34.1	-0.1
CNCH				IAML		23 24 37.3	
	comp=Z,1μm,0.3s						
LCND	La Caada	0.89	355⇓	eP	Pn	23 24 22.0	0.0
LCND				eS	Sn	23 24 34.4	-0.4
LCND				IAML		23 24 37.2	
	comp=Z,470nm,0.2s						
JUCU	Jucuar¡n	0.93	333	eP	Pn	23 24 22.8	+0.2
JUCU				eS	Sn	23 24 35.0	-0.8
JUCU				IAML		23 24 38.7	
	comp=Z,378nm,0.2s						
TEL3	Telica 3	0.96	81	eP	Pn	23 24 23.1	+0.2
TELN	Telica	0.98	79	eP	Pn	23 24 24.0	+0.8
CNGN	Cerro Negro	1.09	86	eP	Pn	23 24 24.7	+0.1
CNGN				eS	Sn	23 24 39.2	-0.2
VSM	San Miguel	1.10	336	eP	Pn	23 24 25.8	+0.9
LCY	Lacayo	1.10	335	eP	Pn	23 24 25.5	+0.7
RANC	El Ranchito	1.11	335	eP	Pn	23 24 25.6	+0.6
PACA	Pacayal	1.15	335	eP	Pn	23 24 26.2	+0.7
COPN	Copaltepe	1.22	101	eP	Pn	23 24 25.9	-0.2
MOMN	Momotombo	1.24	90	eP	Pn	23 24 27.0	+0.5
FAGO	Alcalda de S	1.30	347	eP	Pn	23 24 27.1	-0.1
FAGO				eS	Sn	23 24 43.3	-0.7
APYN	Apoyeque	1.44	97	eP	Pn	23 24 28.2	-0.9
BOAB	BOACO BROADBAN	2.10	89	eP	Pn	23 24 38.0	+0.2

*IDC **26** 23:39:32.4±9.7, 20°.81S×175°.18W, h162^{km}±71^{km}, mb3.5/2, mbtmp4.0/4, Error ellipse: s-maj=146.2km s-min=29.3km az=152.0*

*NEIC **26** 23:39:39.8±3.0, 19°.91S±0°.10×175°.52W±0°.04, h203^{km}±9^{km}, mb4.3/28, Error ellipse: s-maj=15.0km s-min=4.5km az=196.0*

ISC 26 23:39:39.1±0.6**, 19°.84S**±0°.07×**175°.50W**±0°.07**, h200**^{km}**, n40, σ1^{s}69**/44**, mb4.2**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.31	83	Pn	Pn	23 40 58.7	+1.2
NIUE				Sn	Sn	23 42 00.4	+1.0
MSVF	Nonsavu	6.46	288	P	Pn	23 41 15.2	+2.8
	5.9nm,0.7s,baz=117,slow=15,SNR=5.6						
MSVF	Nonsavu	6.46	288		Pn	23 41 13.8	+1.3
AFI	Afiamalu	6.89	32	P	Pn	23 41 19.4	+1.3
	15nm,0.7s,baz=55,slow=16,SNR=1.9						
AFI				S	Sn	23 42 32.4	-4.2
	12nm,0.3s,baz=123,slow=18,SNR=2.0						
AFI	Afiamalu	6.89	32		Pn	23 41 19.3	+1.3
AFI				Sn	Sn	23 42 34.3	-2.3
FUNA	Funafuti	12.37	335	Pn	Pn	23 42 28.9	+0.2
PINNC	Pines Island,	16.14	257	P	P	23 43 14.7	+0.2
PINNC				IAmb	IAmb	23 43 27.2	
	comp=Z,23nm,1.1s						
LIFNC	LIFOU	16.22	264	P	Pn	23 43 17.2	+1.1
DZM	Mont Dzumac	17.01	259	P	Pn	23 43 25.4	-0.3
	comp=Z,5.8nm,0.9s,baz=80,slow=20,SNR=5.0						
DZM	Mont Dzumac	17.01	259	P	P	23 43 24.8	+0.5
DZM				IAmb	IAmb	23 43 27.0	
	comp=Z,6.7nm,0.8s						
URZ	Urewera	19.44	198	P	P	23 43 47.0	-3.3
URZ				IAmb	IAmb	23 43 57.4	
	comp=Z,23nm,1.2s						
BKZ	Black Stump Fm	20.46	198	P	P	23 43 59.1	-2.3
BKZ				IAmb	IAmb	23 44 06.4	
	comp=Z,4.5nm,1.1s						
BFZ	Birch Farm	21.94	197	P	P	23 44 15.9	-0.7
BFZ				IAmb	IAmb	23 44 33.6	
	comp=Z,16nm,1.1s						
QRZ	Quartz Range	23.28	203	P	P	23 44 28.5	-0.3
NNZ	Nelson	23.32	202	P	P	23 44 29.5	+0.3
BSWZ	Blackbirch Sta	23.60	200	P	P	23 44 30.7	-1.0
THZ	Tophouse	23.96	202	P	P	23 44 34.7	-0.5
THZ				IAmb	IAmb	23 44 50.6	
	comp=Z,12nm,0.9s						
KHZ	Kahutara	24.34	200	P	P	23 44 37.3	-1.1
KHZ				IAmb	IAmb	23 44 56.7	
	comp=Z,11nm,1.0s						
LTZ	Lake Taylor	25.09	202	P	P	23 44 45.9	+0.6
OXZ	Oxford	25.65	201	P	P	23 44 50.7	+0.4
OXZ				IAmb	IAmb	23 45 00.6	
	comp=Z,7.1nm,1.1s						
MQZ	McQueen's Vall	25.78	200	P	P	23 44 51.4	0.0
MQZ				IAmb	IAmb	23 45 11.1	
	comp=Z,11nm,1.1s						
FOZ	Fox Glacier	26.64	204	P	P	23 44 59.5	+0.4
WKZ	Wanaka	28.04	204	P	P	23 45 10.0	-1.6
WHZ	Wether Hill Ro	29.34	204	P	P	23 45 22.9	-0.3
WHZ				IAmb	IAmb	23 45 25.4	
	comp=Z,3.6nm,1.1s						
CTAO	Charters Tower	35.90	263	P	P	23 46 19.0	-1.4
CTAO				IAmb	IAmb	23 46 19.8	
	comp=Z,2.6nm,0.6s						
BBOO	Buckleboo	44.94	243	P	P	23 47 35.2	+0.9
BBOO				IAmb	IAmb	23 47 47.8	
	comp=Z,16nm,1.1s						
WR0	Warramunga Arr	46.83	261	P	P	23 47 47.3	-1.9
ASAR	Alice Springs	46.95	256	P	P	23 47 48.1	-2.1
	comp=Z,1.0nm,0.8s,baz=91,slow=8.2,SNR=8.7						
ASAR				PcP	PcP	23 49 18.2	-1.2
	comp=Z,0.2nm,0.4s,baz=104,slow=3.7,SNR=1.7						
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	46.95	256	P	P	23 47 48.5	-1.8
WB0	Warramunga Arr	47.00	261	P	P	23 47 48.6	-1.9
WB0				IAmb	IAmb	23 48 02.3	
	comp=Z,5.2nm,1.1s						
WB2	Warramunga Arr	47.01	261	P	P	23 47 48.7	-1.9
WRAB	Tennant Creek	47.01	261	P	P	23 47 48.8	-1.9
WRA	Warramunga Arr	47.02	261	P	P	23 47 47.6	-3.1
	comp=Z,0.8nm,0.3s,baz=99,slow=7.9,SNR=90						
	comp=Z,0.8nm,0.3s						
WRA	Warramunga Arr	47.02	261	P	P	23 47 48.5	-2.2
TNTI	Ternate	59.58	283	P	P	23 49 24.7	+2.4
CASY	Casey	65.56	205	P	P	23 49 59.7	-1.2
JMZ	Minamidaito 2	68.83	309	P	P	23 50 20.7	-1.4
QSPA	South Pole Qui	70.22	180	P	P	23 50 30.6	+0.4
RC01	Rabbit Creek A	83.28	12	P	P	23 51 44.9	+2.0
RC01				IAmb	IAmb	23 51 56.4	
	comp=Z,4.1nm,1.0s						
BRTR	Keskin Array B	148.09	315	PKPbc	PKPbc	23 59 01.6	0.0

comp=Z,0.5nm,0.6s,baz=25,slow=4.8,SNR=3.9

*ATH **26** 23:59:21.0, 37°.59N×19°.82E, h52^{km}±6^{km}, ML2.5/1, Error ellipse: s-maj=9.1km s-min=3.0km az=37.0*

*THE **26** 23:59:21.8, 37°.62N×19°.75E, h8^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=3.4km s-min=1.1km az=121.0*

ISC 26 23:59:20.3±3.4**, 37°.6N**±0°.1×**19°.7E**±0°.1**, h10**^{km}±13^{km}**, n38, σ0^{s}.38**/43**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.80**	**41**	P	**Pg**	**23 59 36.6**	**+0.7**
KEF3	**Kipouria, Keph**	**0.80**	**41**	P	**Pg**	**23 59 36.5**	**+0.7**
DMLN	**Damoulianata-K**	**0.84**	**41**	P	**Pg**	**23 59 36.7**	**+0.1**
DMLN				S	**Sb**	**23 59 48.3**	**-0.2**
DMLN	**Damoulianata-K**	**0.84**	**41**	P	**Pg**	**23 59 36.7**	**+0.1**
DMLN				S	**Sb**	**23 59 48.7**	**+0.2**
	390nm,0.6s						
PSDA	**Pessada-Kefalo**	**0.88**	**54**	P	**Pg**	**23 59 37.2**	**-0.2**
PSDA				S	**Sg**	**23 59 48.6**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.88**	**54**	P	**Pg**	**23 59 37.1**	**-0.2**
PSDA				S	**Sg**	**23 59 48.7**	**-0.2**
KEF4	**Livadi, Kephal**	**0.89**	**42**	P	**Pg**	**23 59 37.3**	**-0.1**
KEF4	**Livadi, Kephal**	**0.89**	**42**	P	**Pg**	**23 59 37.2**	**-0.1**
KEF4				S	**Sb**	**23 59 49.9**	**+0.2**
	850nm,0.2s						
VLS	**Valsamata**	**0.93**	**51**	P	**Pg**	**23 59 37.9**	**-0.3**
VLS				S	**Sb**	**23 59 50.6**	**-0.3**
VLS				AML	AML	23 59 57.4	
	comp=E,417µm,0.4s						
VLS				AML	AML	23 59 59.5	
	comp=N,617µm,0.4s						
VLS	**Valsamata**	**0.93**	**51**	P	**Pg**	**23 59 37.8**	**-0.3**
VLS				S	**Sb**	**23 59 50.8**	**-0.1**
	comp=N,265nm,0.5s						
FSK	**Fiskardo**	**1.11**	**39**	P	**Pg**	**23 59 41.4**	**-0.2**
FSK	**Fiskardo**	**1.11**	**39**	P	**Pg**	**23 59 41.4**	**-0.2**
FSK				S	**Sb**	**23 59 56.3**	**+0.2**
EVGI	**Lefkada island**	**1.28**	**37**	P	**Pn**	**23 59 43.7**	**-0.6**
EVGI	**Lefkada island**	**1.28**	**37**	P	**Pn**	**23 59 44.0**	**-0.3**
EVGI				S	**Sb**	**00 00 00.9**	**-0.2**
	comp=N,42nm,0.2s						
DRAG	**Dragano-Lefkad**	**1.29**	**33**	P	**Pn**	**23 59 44.4**	**-0.1**
DRAG	**Dragano-Lefkad**	**1.29**	**33**	P	**Pn**	**23 59 44.4**	**-0.1**
NYDR	**Nydri-Lefkada**	**1.37**	**36**	P	**Pn**	**23 59 45.1**	**-0.4**
NYDR	**Nydri-Lefkada**	**1.37**	**36**	P	**Pn**	**23 59 45.2**	**-0.4**
NYDR				S	**Sg**	**00 00 04.4**	**-0.1**
	comp=N,120nm,0.5s						
LKD2	**Lefkada island**	**1.42**	**33**	P	**Pn**	**23 59 46.4**	**+0.2**
LKD2	**Lefkada island**	**1.42**	**33**	P	**Pn**	**23 59 45.8**	**-0.4**
LKD2				S	**Sg**	**00 00 06.3**	**+0.4**
	comp=N,88nm,0.3s						
TSLK	**Tsoukalades, L**	**1.45**	**32**	P	**Pn**	**23 59 46.5**	**-0.1**
RLS	**Riolos of Patr**	**1.49**	**72**	P	**Pn**	**23 59 46.7**	**-0.5**
RLS	**Riolos of Patr**	**1.49**	**72**	P	**Pn**	**23 59 47.1**	**-0.1**
DRO	**Drossia**	**1.65**	**77**	P	**Pn**	**23 59 49.0**	**-0.4**
DRO	**Drossia**	**1.65**	**77**	P	**Pn**	**23 59 49.7**	**+0.3**
PVO	**Paravola**	**1.78**	**55**	P	**Pn**	**23 59 51.6**	**+0.5**
PVO	**Paravola**	**1.78**	**55**	P	**Pn**	**23 59 51.7**	**+0.5**
LAKA	**Lakka**	**1.93**	**70**	P	**Pn**	**23 59 54.2**	**+0.9**
KLV	**Kalavryta, Ach**	**2.01**	**76**	P	**Pn**	**23 59 54.4**	**0.0**
ANX	**Ano Chora**	**2.03**	**60**	P	**Pn**	**23 59 55.0**	**+0.2**
ANX	**Ano Chora**	**2.03**	**60**	P	**Pn**	**23 59 55.1**	**+0.4**
EVR	**Evrytania**	**2.13**	**51**	P	**Pn**	**23 59 56.9**	**+0.8**
DBRK	**Dubrovnik**	**5.20**	**347**	*e*Pn	Pn	00 00 33.9	-4.2
DBRK				Sn	Sn	00 01 28.3	-10
LSTV	**Lastovo**	**5.59**	**338**	*e*Pn	Pn	00 00 39.9	-3.6
LSTV				Sn	Sn	00 01 37.4	-10
HVAR	**Hvar**	**6.09**	**337**	*e*Pn	Pn	00 00 46.5	-3.9
HVAR				Sn	Sn	00 01 48.3	-12
RICI	**Ricice**	**6.20**	**343**	*e*Pn	Pn	00 00 47.7	-4.2
RICI				Sn	Sn	00 01 52.2	-11
KIJV	**Kijevo**	**6.86**	**340**	*e*Pn	Pn	00 00 57.5	-3.6
KIJV				Sn	Sn	00 02 07.1	-12
MORI	**Morici**	**6.95**	**336**	*e*Pn	Pn	00 00 57.6	-4.6
MORI				Sn	Sn	00 02 09.6	-12

*IDC **27** 00:50:01.2±1.3, 6°.75S×150°.91E, h0^{km}, mb3.7/3, mbtmp4.1/6, ML1.8/1, MS2.6/1, Error ellipse: s-maj=40.6km s-min=18.6km az=129.0*

ISC 27 00:50:06.0±0.9**, 6°.7S**±0°.1×**151°.0E**±0°.1**, h36**^{km}**, n7, σ1^{s}.12**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.64**	**24**	Pn	**Pn**	**00 50 45.6**	**-0.4**
	114nm,0.3s,baz=324,slow=3.7,SNR=13						
KRVT				Sn	**Sn**	**00 51 17.7**	**+1.0**
	50nm,0.3s,baz=231,slow=21,SNR=11						
PMG	**Port Moresby**	**4.60**	**234**	Pn	**Pn**	**00 51 12.3**	**-0.7**
	3.0nm,0.3s,baz=259,slow=9.1,SNR=2.5						
PMG				Sn	**Sn**	**00 52 07.3**	**+2.1**
	9.6nm,0.3s,baz=3.5,slow=22,SNR=7.6						
PMG				LR	LR	00 53 09.4	
	comp=Z,79nm,20.6s,baz=125,slow=41 8.6nm,0.2s						
HNR	**Honiara**	**9.31**	**107**	Pn	**Pn**	**00 52 18.1**	**+0.4**
	71nm,0.6s,baz=316,slow=1.6,SNR=1.7						
WRA	**Warramunga Arr**	**20.79**	**229**	P	**P**	**00 54 43.3**	**-1.0**
	2.0nm,0.6s,baz=56,slow=11,SNR=36 2.0nm,0.6s						
ASAR	**Alice Springs**	**23.49**	**222**	P	**P**	**00 55 12.2**	**-0.5**
	2.2nm,0.8s,baz=55,slow=9.3,SNR=18 2.2nm,0.8s						
STKA	**Stephens Creek**	**26.50**	**198**	P	**P**	**00 55 39.9**	**-0.3**
	0.6nm,0.3s,baz=50,slow=6.5,SNR=1.3 0.6nm,0.3s						
TORD	**Torodi Ar. Bea**	**149.07**	**284**	PKPbc	**PKiKP**	**01 09 52.7**	**-0.1**
	0.2nm,0.4s,baz=73,slow=1.8,SNR=1.2						

*NEIC **27** 01:07:10.2±1.8, 43°.5N±0°.1×128°.4W±0°.2, h10^{km}±2^{km}, ML3.2/38, Error ellipse: s-maj=24.1km s-min=19.2km az=243.0*

*ANF **27** 01:07:17.1±1.9, 43°.67N×127°.58W, h0^{km}, ML3.2/9, Error ellipse: s-maj=20.7km s-min=9.2km az=74.0*

ISC 27 01:07:17.1±3.3**, 43°.69N**±0°.09×**127°.7W**±0°.2**, h10**^{km}**, n38, σ1^{s}.39**/42**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**2.56**	**107**	Pn	**Pn**	**01 07 58.0**	**-0.6**
KEBM				IAML		01 08 34.9	
	comp=E,78nm,0.8s						
KEBM				IAML		01 08 35.7	
	comp=N,70nm,0.9s						
J01E	**Myrtle Point**	**2.76**	**100**	Pn	**Pn**	**01 08 01.0**	**-0.3**
J01E				IAML		01 08 40.4	
	comp=E,37nm,0.3s						
J01E	**Myrtle Point**	**2.76**	**100**	P	**Pn**	**01 08 01.2**	**-0.2**
	baz=282,SNR=45						
J01E				S	**Sb**	**01 08 36.2**	**-4.2**
	baz=282						
I02E	**Swisshome, OR**	**2.78**	**80**	Pn	**Pn**	**01 08 02.0**	**+0.3**
I02E				IAML		01 08 31.1	
	comp=E,37nm,2.3s						
I02E	**Swisshome, OR**	**2.78**	**80**	P	**Pn**	**01 08 01.7**	**0.0**
	baz=262						
I02E				S	**Sn**	**01 08 36.2**	**+1.0**
	baz=262						
K02D	**Willamette Mer**	**3.08**	**107**	P	**Pn**	**01 08 05.5**	**-0.3**
	baz=290,SNR=145						
K02D				S	**Sn**	**01 08 43.3**	**+0.6**
	baz=290						
I03D	**Drain, OR**	**3.12**	**88**	P	**Pn**	**01 08 06.7**	**+0.3**
	baz=271,SNR=89						
HEBO	**Mount Hebo**	**3.18**	**60**	Pn	**Pn**	**01 08 06.8**	**-0.4**
DBO	**Dodson Butte**	**3.26**	**99**		**Pn**	**01 08 09.0**	**+0.6**
BUCK	**Buck Mountain**	**3.41**	**80**	Pn	**Pn**	**01 08 12.1**	**+1.7**
BUCK				IAML		01 09 54.9	
	comp=E,25nm,3.0s						
BUCK				IAML		01 10 16.2	
	comp=N,25nm,3.0s						
G03D	**McMinnville, O**	**3.49**	**63**		**Pn**	**01 08 11.7**	**+0.3**
G03D				IAML		01 09 06.2	
	comp=N,35nm,2.1s						
G03D				IAML		01 09 59.2	
	comp=E,28nm,2.4s						
G03D	**McMinnville, O**	**3.49**	**63**	P	**Pn**	**01 08 12.4**	**+1.0**
	baz=245,SNR=103						
HUMO	**Hull Mountain**	**3.60**	**106**	Pn	**Pn**	**01 08 13.5**	**+0.5**
H04D	**Lebanon**	**3.64**	**75**	Pn	**Pn**	**01 08 14.6**	**+1.1**
H04D				IAML		01 09 07.2	
	comp=E,20nm,1.6s						
H04D				IAML		01 10 45.6	
	comp=N,23nm,2.9s						
H04D	**Lebanon**	**3.64**	**75**	P	**Pn**	**01 08 14.9**	**+1.5**
	baz=258,SNR=15						
I04A	**Tendick Farm,**	**3.80**	**87**	P	**Pn**	**01 08 17.3**	**+1.5**
	baz=270,SNR=16						
H04A	**Detroit Lake**	**4.05**	**74**	Pn	**Pn**	**01 08 20.9**	**+1.7**
H04A				IAML		01 09 15.9	
	comp=N,21nm,0.3s						
J04D	**Umpqua Nationa**	**4.06**	**94**	Pn	**Pn**	**01 08 21.0**	**+1.5**
E03A	**Lebam**	**4.07**	**44**	Pn	**Pn**	**01 08 19.0**	**-0.4**
E03A				IAML		01 09 42.6	
	comp=E,25nm,3.2s						
E03A				IAML		01 11 09.1	
	comp=N,26nm,3.0s						
F04D	**Rainier, OR**	**4.08**	**52**	P	**Pn**	**01 08 20.1**	**+0.6**
	baz=235,SNR=13						
L04D	**Klamath Falls**	**4.19**	**109**	Pn	**Pn**	**01 08 22.5**	**+1.3**
L04D				IAML		01 09 18.2	
	comp=N,19nm,2.8s						
L04D				IAML		01 09 19.2	
	comp=E,22nm,2.7s						
L04D	**Klamath Falls**	**4.19**	**109**	P	**Pn**	**01 08 23.6**	**+2.4**
	baz=292						
F04A	**Amboy**	**4.35**	**57**		**Pn**	**01 08 24.4**	**+1.2**
NLWA	**Neilton Lookou**	**4.56**	**34**	Pn	**Pn**	**01 08 24.9**	**-1.3**
NLWA				IAML		01 10 29.3	
	comp=E,18nm,3.1s						
NLWA				IAML		01 10 49.6	
	comp=E,15nm,3.2s						
HOOD	**Mount Hood Mea**	**4.59**	**67**		**Pn**	**01 08 28.5**	**+1.8**
HOOD				IAML		01 11 42.7	
	comp=N,13nm,0.7s						
E04D	**Cinebar**	**4.60**	**50**	Pn	**Pn**	**01 08 26.8**	**+0.2**
E04D				IAML		01 10 37.2	
	comp=N,17nm,3.3s						
E04D	**Cinebar**	**4.60**	**50**	P	**Pn**	**01 08 27.1**	**+0.5**
	baz=233,SNR=15						
J05D	**Fort Rock, OR**	**4.69**	**93**	P	**Pn**	**01 08 29.8**	**+1.8**
	baz=277						
G05D	**Wamic, OR**	**4.79**	**69**	P	**Pn**	**01 08 32.0**	**+2.6**
	baz=253,SNR=19						
PINE	**Pine Mountain**	**4.86**	**86**	Pn	**Pn**	**01 08 31.2**	**+0.7**
F05D	**White Salmon**	**4.92**	**61**		**Pn**	**01 08 33.0**	**+1.8**
F05D	**White Salmon**	**4.92**	**61**	P	**Pn**	**01 08 33.1**	**+2.0**
	baz=245,SNR=7.2						
D03D	**Eldon**	**5.00**	**38**	P	**Pn**	**01 08 32.4**	**+0.1**
	baz=221,SNR=17						
D03D				S	**Sn**	**01 09 31.3**	**+1.2**
	baz=221						
D05A	**Enumclaw**	**5.30**	**47**	Pn	**Pn**	**01 08 36.9**	**+0.6**
I07A	**Izee**	**5.90**	**83**	Pn	**Pn**	**01 08 46.4**	**+1.7**
LTY	**Liberty**	**6.07**	**52**	Pn	**Pn**	**01 08 47.9**	**+0.9**
HAWA	**Hanford**	**6.36**	**62**	Pn	**Pn**	**01 08 51.6**	**+0.8**
G08A	**Pilot Rock**	**6.42**	**73**	Pn	**Pn**	**01 08 53.1**	**+1.3**

*IDC **27** 01:12:54.7±2.5, 5°.10N×126°.21E, h0^{km}, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=207.9km s-min=27.7km az=65.0*

*MAN **27** 01:13:02.4, 4°.86N×125°.18E, h14^{km}, mb4.9, ML3.8, MS3.8, Hypocentre not reviewed by the ISC*

ISC 27 01:13:02.6±1.3**, 4°.69N**±0°.09×**125°.3E**±0°.1**, h50**^{km}**, n7, σ1^{s}.05**/9**, mb3.4**/3**, 2C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.46**	**15**	⇑*e*P	**Pn**	**01 13 25.2**	**-1.3**
DDMP				*e*S	**Sn**	**01 13 44.7**	**+0.2**
KCP	**Kidapawan**	**2.32**	**354**	⇓*i*P	**Pn**	**01 13 38.8**	**+0.5**
KCP				*i* S	**Sn**	**01 14 07.1**	**+1.4**
MATI	**Mati**	**2.43**	**22**	⇓*e*P	Pn	01 13 46.6	+6.8
PAGZ	**Pagadian**	**3.69**	**329**	⇑*e*P	**Pn**	**01 13 56.5**	**-0.6**
PAGZ				*e*S	**Sn**	**01 14 38.4**	**-0.8**
WRA	**Warramunga Arr**	**26.03**	**160**	P	**P**	**01 18 30.4**	**-0.9**
	0.8nm,0.6s,baz=342,slow=10,SNR=14 0.8nm,0.6s						
ASAR	**Alice Springs**	**29.40**	**164**	P	**P**	**01 19 02.2**	**+0.8**
	0.2nm,0.4s,baz=343,slow=7.6,SNR=2.2 0.2nm,0.4s						
MKAR	**Makanchi Array**	**55.98**	**326**	P	**P**	**01 22 36.1**	**+0.2**
	0.3nm,0.6s,baz=124,slow=10,SNR=4.4 0.3nm,0.6s						

*TUL **27** 01:26:34.9±0.6, 36°.47N±0°.03×98°.76W±0°.06, h7^{km}±5^{km}, ML3.2, mb_Lg2.7/58(NEIC), Error ellipse: s-maj=6.7km s-min=4.2km az=111.0*

NEIC 27 01:26:35.6±0.5**, 36°.46N**±0°.03×**98°.75W**±0°.02**, h6**^{km}±5^{km}**, Error ellipse: s-maj=4.8km s-min=2.7km az=168.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.22**	**248**	Pg	Pg	01 26 39.6	-0.4
U32A				Sg	Sg	01 26 43.1	+0.2
OKCFA	**Oklahoma City**	**1.48**	**134**		Pn	01 27 02.5	-0.5
OKCSW	**OKLAHOMA CITY**	**1.50**	**134**		Pn	01 27 02.6	-0.5
FNO	**Franklin**	**1.63**	**137**		Pn	01 27 04.5	-0.4
WMOK	**Wichita Mounta**	**1.72**	**181**	Pn	Pn	01 27 05.3	-0.9
WMOK				IAmb_Lg		01 27 29.7	
	comp=Z,25nm,0.9s						
T35A	**Sooner Cattle**	**1.85**	**75**	Pn	Pn	01 27 08.1	+0.1
X34A	**Smith Ranch, M**	**2.00**	**158**	Pn	Pn	01 27 11.0	+0.9
X34A				IAmb_Lg		01 27 40.7	
	comp=Z,62nm,0.7s						
TUL1	**Leonard**	**2.46**	**102**	Pn	Pn	01 27 15.6	-0.7
CBKS	**Cedar Bluff**	**2.47**	**342**	Pn	Pn	01 27 17.1	+0.5
AMTX	**Amarillo**	**2.86**	**237**	Pn	Pn	01 27 21.7	-0.2
KSU1	**Kansas State U**	**3.13**	**32**	IAmb_Lg		01 28 21.1	
	comp=Z,27nm,0.9s						
X37A	**Clayton**	**3.33**	**123**		Pn	01 27 27.7	-0.6
X37A				IAmb_Lg		01 28 28.6	
	comp=Z,16nm,0.7s						
HHAR	**Hobbs**	**3.88**	**91**	Pn	Pn	01 27 36.0	+0.1
MSTX	**Muleshoe**	**4.13**	**234**	IAmb_Lg		01 28 50.6	
	comp=Z,19nm,0.8s						
W39A	**Magazine**	**4.23**	**106**	IAmb_Lg		01 28 57.2	
	comp=Z,16nm,0.8s						
S39A	**Bolivar**	**4.51**	**73**		Pn	01 27 44.0	-0.5
S39A				IAmb_Lg		01 29 02.8	
	comp=Z,16nm,0.7s						
T25A	**Trinidad**	**4.59**	**280**	IAmb_Lg		01 29 00.1	
	comp=Z,8.9nm,0.8s						
MIAR	**Mount Ida**	**4.63**	**113**		Pn	01 27 45.6	-0.6
MIAR				IAmb_Lg		01 29 14.6	
	comp=Z,9.7nm,0.9s						
U40A	**Yellville**	**4.76**	**90**		Pn	01 27 47.4	-0.5
U40A				IAmb_Lg		01 29 07.1	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**5.19**	**51**	IAmb_Lg		01 29 23.8	
	comp=Z,8.2nm,0.8s						
MGMO	**Mountain Grove**	**5.25**	**81**	IAmb_Lg		01 29 21.8	
	comp=Z,18nm,0.7s						
WHAR	**Wooly Hollow**	**5.38**	**101**	Pn	Pn	01 27 54.9	-1.5
WHAR				IAmb_Lg		01 29 37.9	
	comp=Z,10.0nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.39**	**94**	Pn	Pn	01 27 55.9	-0.7
FCAR				IAmb_Lg		01 29 26.2	
	comp=Z,13nm,0.8s						
R40A	**Maddies Statio**	**5.47**	**69**	IAmb_Lg		01 29 29.8	
	comp=Z,9.1nm,0.7s						
UALR	**University of**	**5.48**	**106**	IAmb_Lg		01 29 35.2	
	comp=Z,8.2nm,0.7s						
JCT	**Junction City**	**6.03**	**189**	IAmb_Lg		01 30 03.0	
	comp=Z,11nm,0.7s						
P40A	**Paris**	**6.11**	**58**	IAmb_Lg		01 29 50.6	
	comp=Z,16nm,0.8s						
LCAR	**Lake Charles**	**6.15**	**91**	IAmb_Lg		01 29 49.7	
	comp=Z,8.7nm,0.8s						
PBMO	**Poplar Bluff**	**6.70**	**85**	IAmb_Lg		01 30 19.4	
	comp=Z,14nm,0.7s						
SLM	**Saint Louis**	**7.10**	**70**	IAmb_Lg		01 30 23.8	
	comp=Z,9.7nm,0.8s						
N23A	**Red Feather La**	**7.16**	**310**	IAmb_Lg		01 30 27.0	
	comp=Z,9.5nm,0.8s						
MNTX	**Cornudas Mount**	**7.27**	**231**	IAmb_Lg		01 30 34.6	
	comp=Z,7.8nm,1.2s						
S44A	**Carbondale**	**7.69**	**78**	IAmb_Lg		01 30 49.6	
	comp=Z,13nm,0.7s						
K38A	**Parkersburg**	**7.71**	**35**	IAmb_Lg		01 30 58.4	
	comp=Z,11nm,0.9s						
L42A	**Oliver, Polo**	**8.96**	**49**	IAmb_Lg		01 31 23.3	
	comp=Z,7.7nm,0.8s						
JFWS	**Jewell Farm**	**9.19**	**43**	IAmb_Lg		01 31 38.0	
	comp=Z,5.6nm,0.8s						

DJA 27 01:33:09.7±0.6**, 10°S**±4°×**11°9E**±°**, h12**^{km}±4^{km}**, M3.7**/8**, mb3.9**/2**, MLv3.6**/8**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.43**	**13**	P	Pg	01 33 18.6	+0.4
BASI	**Baing, Sumba**	**1.28**	**97**	P	Pn	01 33 33.5	+0.1
PLAI	**Plampang**	**1.93**	**309**	P	Pn	01 33 41.3	-1.1
PLAI				S	Sn	01 34 07.4	+0.8
EDFI	**Ende, Flores**	**2.70**	**61**	P	Pn	01 33 52.5	-0.6
EDFI				S	Sn	01 34 25.6	-0.2
MMRI	**Maumere**	**3.23**	**64**	P	Pn	01 34 00.7	+0.4
BSSI	**Bau Bau, Buton**	**4.07**	**17**	P	Pn	01 34 12.1	+0.3
BSSI				S	Sn	01 35 01.4	+2.0
IGBI	**Denpasar**	**4.27**	**286**	P	Pn	01 34 14.1	-0.5
SRBI	**Singaraja**	**4.48**	**296**	P	Pn	01 34 18.8	+1.3
BKSI	**Bulukumba**	**4.78**	**10**	P	Pn	01 34 21.3	-0.3
BKSI				S	Sn	01 35 16.8	-0.1
JAGI	**Jajag, Banyuwa**	**5.31**	**287**	P	Pn	01 34 29.5	+0.6

*NIED **27** 01:39:17.7, 38°.58N×142°.09E, h50^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.80; $M_{θθ}$3.41; $M_{φφ}$-5.20; $M_{rθ}$2.51; $M_{θφ}$-6.17; $M_{φr}$-0.82; Fault plane solution: $M_0$8.10000×10^{14} NP1: $φ_s$165.00000°, δ72.00000°, λ15.00000°. NP2: $φ_s$70.00000°, δ75.00000°, λ161.00000°.*

*JMA **27** 01:39:17.7±0.1, 38°.6N±0°.2×142°.1E±0°.5, h50^{km}, MD4.0/40, MV4.1/40, E OFF MIYAGI PREF*

JMA Felt II J1 at E OFF MIYAGI PREF .

*IDC **27** 01:39:18.6±2.6, 38°.59N×142°.09E, h55^{km}±26^{km}, mb3.4/6, mbtmp3.8/10, ML3.5/4, MS2.7/3, Error ellipse: s-maj=30.3km s-min=18.7km az=112.0*

ISC 27 01:39:16.7±1.9**, 38°.51N**±0°.05×**142°.2E**±0°.1**, h40**^{km}±18^{km}**, n39, σ1^{s}.26**/34**, mb3.6**/6**, 15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.64**	**252**	*i* P	**Pn**	**01 39 29.7**	**+0.3**
JIKH				S	**Sn**	**01 39 38.1**	**-0.3**
JIKH	**Ishinomakikobu**	**0.64**	**252**	A	A	01 39 29.7	
	comp=E,25nm,0.4s,comp=E,20nm,0.5s						
JKMT	**Kesennumamotoy**	**0.67**	**297**	⇓*i*P	**Pn**	**01 39 29.5**	**-0.3**
JKMT				⇓S	**Sn**	**01 39 37.6**	**-1.5**
JKMT	**Kesennumamotoy**	**0.67**	**297**	A	A	01 39 29.5	
	comp=E,8.0nm,1.1s,comp=E,7.0nm,1.2s						
JIO	**Ouri**	**0.70**	**266**	⇓*i*P	**Pn**	**01 39 30.1**	**-0.1**
JIO				⇓S	**Sn**	**01 39 38.6**	**-1.2**
JIO	**Ouri**	**0.70**	**266**	A	A	01 39 30.1	
	comp=E,11nm,1.3s,comp=E,13nm,0.4s						
OFUJ	**Ofunato**	**0.72**	**322**	⇓P	**Pn**	**01 39 30.2**	**-0.3**
OFUJ				⇓S	**Sn**	**01 39 39.2**	**-1.2**
OFUJ	**Ofunato**	**0.72**	**322**	A	A	01 39 30.2	
	comp=E,17nm,0.3s,comp=E,12nm,0.4s						
JMK	**Ichinoseki**	**0.91**	**299**	⇓*i*P	**Pn**	**01 39 32.5**	**-0.5**
JMK				⇓S	**Sn**	**01 39 43.4**	**-1.6**
JOFO	**Osakifurukawao**	**1.04**	**275**	A	A	01 39 34.6	
	comp=E,24nm,0.7s,comp=E,73nm,0.4s						
JOM	**Ohasama**	**1.21**	**323**	⇓*i*P	**Pn**	**01 39 36.9**	**-0.3**
JOM				⇓S	**Sn**	**01 39 51.2**	**-1.2**
JOM	**Ohasama**	**1.21**	**323**	A	A	01 39 36.9	
	comp=E,9.0nm,0.3s,comp=E,10.0nm,0.3s						
JOU	**Okura**	**1.25**	**264**	⇓*i*P	**Pn**	**01 39 37.5**	**-0.2**
JOU				⇓S	**Sn**	**01 39 52.1**	**-1.2**
JOU	**Okura**	**1.25**	**264**	A	A	01 39 37.5	
	comp=E,7.0nm,0.5s,comp=E,9.0nm,0.7s						
JMM	**Marumori**	**1.31**	**241**	*i* P	**Pn**	**01 39 38.5**	**0.0**
JMM				S	**Sn**	**01 39 53.7**	**-1.1**
JYK	**Kaneyama**	**1.53**	**286**	⇓*i*P	**Pn**	**01 39 41.1**	**-0.4**
JYK				⇓S	**Sn**	**01 39 59.4**	**-0.8**
JRG	**Rokugo**	**1.53**	**306**	⇓*i*P	**Pn**	**01 39 41.1**	**-0.5**
JFK	**Kawauchi**	**1.57**	**224**	S	**Sn**	**01 40 01.6**	**+0.3**
JYS	**Shirataka**	**1.73**	**261**	*i* P	**Pn**	**01 39 44.4**	**0.0**
JYS				S	**Sn**	**01 40 05.0**	**-0.3**
JKEN	**Kujiedanarisaw**	**1.74**	**347**	A	A	01 39 44.9	
	comp=E,6.0nm,2.2s,comp=E,5.0nm,0.7s						
MJAR	**Matsushiro Arr**	**3.76**	**240**	P	**Pn**	**01 40 13.7**	**+1.5**
	0.6nm,0.3s,baz=30,slow=11,SNR=32						
MJAR				LR	LR	01 41 54.1	
	comp=Z,74nm,21.0s,baz=330,slow=42 6.3nm,0.6s						
ASAJ	**Asahikawa**	**5.61**	**3**	P	**Pn**	**01 40 38.0**	**+0.5**
	2.5nm,0.3s,baz=165,slow=18,SNR=2.3						
ASAJ				S	Sn	01 41 33.2	-7.4
	7.3nm,0.5s,baz=217,slow=20,SNR=1.4 5.8nm,0.3s						
JHJ	**Hachijo jima 2**	**5.74**	**201**	P	**Pn**	**01 40 39.6**	**+0.2**
	9.9nm,0.3s,baz=276,slow=18,SNR=2.7						
JHJ				S	**Sn**	**01 41 40.3**	**-3.7**
	46nm,0.6s,baz=107,slow=19,SNR=1.3 76nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.57**	**310**	P	**Pn**	**01 41 35.0**	**+3.1**
	5.8nm,0.8s,baz=127,slow=12,SNR=9.2						
KSRS	**Korea Array**	**11.35**	**269**	P	**Pn**	**01 41 58.1**	**+1.8**
	0.2nm,0.3s,baz=70,slow=14,SNR=4.4 0.6nm,0.3s						
KLR	**Kul'dur**	**13.10**	**328**	LR	LR	01 47 22.1	
	comp=Z,62nm,18.3s,baz=196,slow=37						
PETK	**Petropavlovsk-**	**18.08**	**31**	LR	LR	01 50 02.8	
	comp=Z,20nm,22.0s,baz=257,slow=36						
SEY	**Seymchan**	**25.22**	**11**	P	**P**	**01 44 38.9**	**+0.5**
	2.7nm,0.5s,baz=207,slow=7.4,SNR=5.5 2.7nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.39**	**124**	T	T	02 15 38.1	
	baz=317,slow=75,SNR=495						
H11N1	**WAKE ISLAND Hy**	**28.40**	**124**	T	T	02 15 38.8	
	baz=317,slow=75,SNR=696						
H11N3	**WAKE ISLAND Hy**	**28.41**	**124**	T	T	02 15 39.5	
	baz=317,slow=75,SNR=649						
H11S1	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	02 16 24.5	
	baz=318,slow=76,SNR=111						
H11S3	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	02 16 24.7	
	baz=318,slow=76,SNR=139						
H11S2	**WAKE ISLAND Hy**	**29.17**	**126**	T	T	02 16 25.8	
	baz=318,slow=76,SNR=135						
MKAR	**Makanchi Array**	**43.91**	**301**	P	**P**	**01 47 17.9**	**-1.4**
	1.0nm,0.7s,baz=88,slow=10,SNR=9.8 1.0nm,0.7s						
ILAR	**Eielson Array**	**47.90**	**33**	P	**P**	**01 47 51.0**	**+0.5**
	0.6nm,0.6s,baz=266,slow=6.4,SNR=9.3 0.6nm,0.6s						
WRA	**Warramunga Arr**	**58.62**	**189**	P	**P**	**01 49 10.8**	**+1.1**
	0.3nm,0.6s,baz=5.3,slow=7.2,SNR=5.8 0.3nm,0.6s						
NOA	**NORSAR Array B**	**73.08**	**337**	P	**P**	**01 50 41.5**	**-0.8**
	0.4nm,0.6s,baz=38,slow=5.9,SNR=3.5 0.4nm,0.6s						
PDAR	**Pinedale Array**	**76.17**	**46**	P	**P**	**01 51 00.9**	**+0.1**
	0.4nm,0.6s,baz=308,slow=1.8,SNR=5.8 0.4nm,0.6s						

*NOU **27** 02:08:30.2, 18°.45S×176°.97W, h384^{km}, MLv4.4/7, Fiji Islands Region*

*IDC **27** 02:08:34.1±3.8, 18°.23S×177°.60W, h421^{km}±33^{km}, mb3.4/5, mbtmp4.1/6, Error ellipse: s-maj=110.3km s-min=20.3km az=151.0*

ISC 27 02:08:30.5±0.9**, 18°.7S**±0°.3×**177°.1W**±0°.1**, h400**^{km}**, n10, σ1^{s}.58**/10**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**1.68**	**287**	P	**Pn**	**02 09 23.4**	**-1.2**
DGTI	**Dogotuki**	**3.84**	**308**	P	**Pn**	**02 09 39.4**	**-1.8**
MSVF	**Nonsavu**	**4.69**	**281**	P	**Pn**	**02 09 49.1**	**-0.4**
	8.8nm,0.5s,baz=129,slow=12,SNR=7.6						
MSVF	**Nonsavu**	**4.69**	**281**	P	**Pn**	**02 09 49.1**	**-0.4**
NIUE	**Niue**	**6.82**	**94**	P	**Pn**	**02 10 10.3**	**-1.9**
STKA	**Stephens Creek**	**39.32**	**242**	P	**P**	**02 15 23.8**	**+0.7**
	2.2nm,0.4s,baz=74,slow=12,SNR=7.1 2.2nm,0.4s						
WRA	**Warramunga Arr**	**45.69**	**260**	P	**P**	**02 16 12.6**	**-1.3**
	1.3nm,0.5s,baz=97,slow=6.7,SNR=53 1.3nm,0.5s						
ASAR	**Alice Springs**	**45.75**	**255**	P	**P**	**02 16 14.0**	**-0.3**
	7.7nm,0.5s,baz=90,slow=8.4,SNR=151 7.7nm,0.5s						
NVAR	**Mina Array Bea**	**79.17**	**43**	P	**P**	**02 19 54.2**	**+1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.5nm,0.6s,baz=234,slow=6.9,SNR=3.6						
	0.5nm,0.6s						
TXAR	Lajitas Array	85.40	57	P	P	02 20 26.6	+2.1
	0.8nm,0.9s,baz=207,slow=5.2,SNR=6.8						
	0.8nm,0.9s						

IDC 27 02:15:58.3±1.2, 21°.63N×95°.49E, h0^{km}, mb3.5/4, mbtmp3.5/5, ML4.0/1, Error ellipse: s-maj=52.6km s-min=18.1km az=42.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	4.53	134	Pn	Pn	02 17 08.0	-0.2
	1.7nm,0.3s,baz=313,slow=14,SNR=5.5						
CMAR				Pg	Pg	02 17 22.8	-2.3
	1.2nm,0.3s,baz=311,slow=16,SNR=11						
CMAR				Lg	Lg	02 18 18.9	
	1.6nm,0.3s,baz=310,slow=30,SNR=7.2						
	2.5nm,0.4s						
WRA	Warramunga Arr	56.12	135	P	P	02 25 39.2	-0.7
	0.5nm,0.9s,baz=322,slow=7.7,SNR=4.8						
	0.5nm,0.9s						
ASAR	Alice Springs	58.52	138	P	P	02 25 57.9	+1.1
	0.3nm,0.7s,baz=321,slow=6.9,SNR=3.5						
	0.3nm,0.7s						
GERES	GERESS Array B	68.72	315	P	P	02 27 03.6	-0.4
	0.3nm,0.5s,baz=79,slow=5.1,SNR=4.4						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	88.69	284	P	P	02 28 53.9	-0.4
	0.5nm,0.9s,baz=85,slow=4.6,SNR=2.2						
	0.5nm,0.9s						

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*RSPR **27** 02:25:33.5, 18°.41N×68°.80W, h140^{km}±2^{km}, MD3.6/9*
*NEIC **27** 02:25:35.1±1.7, 18°.4N±0°.3×68°.79W±0°.09, h120^{km}±19^{km}, Error ellipse: s-maj=44.3km s-min=6.4km az=193.0*
*OSPL **27** 02:25:36.4±1.9, 18°.48N×68°.74W, h125^{km}±13^{km}, ML2.4*
ISC 27 02:25:34.1±1.2, 18°.56N±0°.10×68°.77W±0°.03, h134^{km}, n63, σ0^{s}.89/64, 15C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	Loma Pena Alta	0.62	292	⇑*i*P	Pn	02 25 54.6	+0.2
DR12	Loma Pena Alta	0.62	292		Pn	02 25 54.6	+0.2
IDE	Isla Desecheo	1.25	98	⇑*e*P	Pn	02 25 58.5	-1.2
IDE	Isla Desecheo	1.25	98	*e*S	Sn	02 26 19.5	+0.2
BANI	BANI	1.51	264	⇑*e*P	Pn	02 26 05.8	+3.0
BANI	BANI	1.51	264	Pn	Pn	02 26 02.2	-0.6
BANI	BANI	1.51	264	*i* P	Pn	02 26 04.5	+1.7
BANI				*e*S	Sn	02 26 22.0	-2.5
BANI				IAML		02 26 26.9	
	comp=Z,23nm,1.2s						
AGPR	Aguadilla, PR	1.58	93	⇑*e*P	Pn	02 26 04.1	+0.7
AGPR	Aguadilla, PR	1.58	93	*e*S	Sn	02 26 25.9	+0.2
AGPR	Aguadilla, PR	1.58	93		Pn	02 26 04.1	+0.7
AGPR	Aguadilla, PR	1.58	93	IAML		02 26 13.9	
	comp=N,104nm,2.4s						
AGPR				IAML		02 26 21.1	
	comp=E,94nm,2.3s						
AGPR	Aguadilla, PR	1.58	93		Sn	02 26 25.9	+0.2
AGPR	Aguadilla, PR	1.58	93	*i* P	Pn	02 26 03.1	-0.3
AGPR				*e*S	Sn	02 26 24.2	-1.5
AGPR				IAML		02 26 25.3	
	comp=Z,61nm,1.0s						
LSP	Las Mesas	1.65	103	⇑*e*P	Pn	02 26 04.2	0.0
LSP	Las Mesas	1.65	103	*e*S	Sn	02 26 27.9	+0.8
CRPR	Cabo Rojo, PR	1.67	109	⇑*e*P	Pn	02 26 03.2	-1.2
CRPR	Cabo Rojo, PR	1.67	109	*e*S	Sn	02 26 27.9	+0.3
CRPR	Cabo Rojo, PR	1.67	109		Pn	02 26 03.2	-1.2
CRPR					Sn	02 26 27.9	+0.3
CRPR	Cabo Rojo, PR	1.67	109	*i* P	Pn	02 26 03.5	-1.0
CRPR				IAML		02 26 28.0	
	comp=Z,32nm,2.2s						
MLPR	Magueyes Islan	1.75	109	⇓*e*P	Pn	02 26 03.9	-1.3
MLPR	Magueyes Islan	1.75	109	*e*S	Sn	02 26 28.9	-0.2
MLPR	Magueyes Islan	1.75	109		Pn	02 26 03.9	-1.3
MLPR					Sn	02 26 28.9	-0.2
AOPR	Arecibo Observ	1.93	96	⇑*e*P	Pn	02 26 07.8	+0.3
AOPR	Arecibo Observ	1.93	96	*e*S	Sn	02 26 33.0	0.0
AOPR	Arecibo Observ	1.93	96		Pn	02 26 07.8	+0.3
AOPR					Sn	02 26 33.0	0.0
AOPR	Arecibo Observ	1.93	96	IAML		02 26 36.8	
	comp=N,122nm,0.2s						
SC01	Santiago de lo	2.04	295	Pn	Pn	02 26 09.4	+0.6
SC01				IAML		02 26 46.1	
	comp=E,48nm,0.4s						
SC01				IAML		02 27 00.9	
	comp=N,48nm,2.4s						
SC01	Santiago de lo	2.04	295	*i* P	Pn	02 26 09.5	+0.6
SC01				IAML		02 26 46.1	
	comp=Z,19nm,1.4s						
OBIP	Obispado Ponce	2.12	104	⇑*e*P	Pn	02 26 09.2	-0.6
OBIP	Obispado Ponce	2.12	104	*e*S	Sn	02 26 37.9	+0.8
OBIP	Obispado Ponce	2.12	104		Pn	02 26 09.2	-0.6
OBIP					Sn	02 26 37.9	+0.8
EMPR	Esperanza - Ma	2.13	92	⇑*e*P	Pn	02 26 10.4	+0.5
EMPR	Esperanza - Ma	2.13	92		Pn	02 26 10.4	+0.5
EMPR	Esperanza - Ma	2.13	92	IAML		02 27 29.4	
	comp=E,84nm,2.2s						
CELP	Cerrillos	2.14	103	⇑*e*P	Pn	02 26 09.4	-0.6
CELP	Cerrillos	2.14	103	*e*S	Sn	02 26 37.4	-0.1
CELP	Cerrillos	2.14	103		Pn	02 26 09.4	-0.6
CELP					Sn	02 26 37.4	-0.1
CELP	Cerrillos	2.14	103	IAML		02 26 40.1	
	comp=N,27nm,0.3s						
LOBA2	Hotel Casa Bon	2.25	258	*i* P	Pn	02 26 12.7	+1.3
LOBA2				*e*S	Sn	02 26 38.7	-1.3
LOBA2				IAML		02 26 42.5	
	comp=Z,17nm,2.0s						
SDDR	Presa de Saban	2.42	280	*i* P	Pn	02 26 14.0	+0.4
SDDR				IAML		02 26 57.6	
	comp=Z,9.5nm,0.3s						
SJG	San Juan	2.53	100	Pn	Pn	02 26 15.1	+0.3
SJG				IAML		02 26 46.9	
	comp=Z,16nm,0.6s						
SJG				IAML		02 26 49.3	
	comp=Z,22nm,0.2s						
LONE2	Loma La Sidra	2.56	270	*i* P	Pn	02 26 16.1	+0.8
LONE2				IAML		02 26 51.7	
	comp=Z,15nm,3.0s						
GCPR	Guaynabo City	2.56	95	⇑*e*P	Pn	02 26 14.8	-0.5
GCPR	Guaynabo City	2.56	95	*e*S	Sn	02 26 48.2	+1.2
GCPR	Guaynabo City	2.56	95		Pn	02 26 14.8	-0.5
GCPR					Sn	02 26 48.2	+1.2
GCPR	Guaynabo City	2.56	95	IAML		02 27 04.8	
	comp=N,13nm,2.6s						
GCPR				IAML		02 27 12.4	
	comp=E,15nm,3.3s						
IGPR	InterUniversit	2.60	103	⇑*e*P	Pn	02 26 15.9	+0.1
IGPR	InterUniversit	2.60	103	*e*S	Sn	02 26 47.6	-0.2
PDPR	Patillas Dam,	2.67	101	Pn	Pn	02 26 16.5	-0.1
CBYP	Canovanas	2.78	95	⇓*e*P	Pn	02 26 17.6	-0.5
CBYP	Canovanas	2.78	95		Pn	02 26 17.6	-0.5
HUMP	Col San Antoni	2.81	98	⇑*e*P	Pn	02 26 18.5	+0.1
HUMP	Col San Antoni	2.81	98		Pn	02 26 18.5	+0.1
HUMP	Col San Antoni	2.81	98	IAML		02 26 52.8	
	comp=N,19nm,0.3s						
MTP	Monte Pirata	3.09	98	⇑*e*P	Pn	02 26 22.1	0.0
MTP	Monte Pirata	3.09	98		Pn	02 26 22.1	0.0
MTP	Monte Pirata	3.09	98	IAML		02 27 05.8	
	comp=E,13nm,0.9s						
STVI	Saint Thomas	3.63	93	⇑*e*P	Pn	02 26 29.6	+0.5
STVI	Saint Thomas	3.63	93		Pn	02 26 29.6	+0.5
STVI	Saint Thomas	3.63	93	IAML		02 28 32.4	
	comp=N,15nm,1.8s						
GRTK	Grand Turk	3.68	323	*e*S	Sn	02 27 11.3	-1.6
GRTK				IAML		02 27 13.4	
	comp=Z,20nm,1.1s						
SJVI	Gifft Hill Sch	3.81	93	⇑*e*P	Pn	02 26 31.1	-0.3
SJVI	Gifft Hill Sch	3.81	93		Pn	02 26 31.1	-0.3

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*NEIC **27** 02:34:30.5±1.2, 18°.4N±0°.2×68°.67W±0°.08, h145^{km}±8^{km}, Error ellipse: s-maj=27.2km s-min=7.6km az=195.0*
*RSPR **27** 02:34:31.1, 18°.48N×68°.65W, h141^{km}±1^{km}, MD3.5/5*
*OSPL **27** 02:34:31.7±1.0, 18°.53N×68°.66W, h142^{km}±18^{km}, ML2.5*
ISC 27 02:34:30.2±1.2, 18°.5N±0°.2×68°.69W±0°.04, h143^{km}, n34, σ0^{s}.69/36, 8C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	Loma Pena Alta	0.73	297	⇑*e*P	Pn	02 34 52.6	+0.3
DR12	Loma Pena Alta	0.73	297		Pn	02 34 52.0	-0.3
DR12					Sn	02 35 09.5	+0.4
IDE	Isla Desecheo	1.16	93	⇑*e*P	Pn	02 34 56.4	+0.6
AGPR	Aguadilla, PR	1.50	89	⇑*e*P	Pn	02 35 00.1	+0.9
AGPR	Aguadilla, PR	1.50	89		Pn	02 35 00.1	+0.9
AGPR	Aguadilla, PR	1.50	89	IAML		02 35 20.0	
	comp=N,68nm,2.2s						
AGPR				IAML		02 35 34.5	
	comp=E,83nm,2.5s						
LSP	Las Mesas	1.55	100	⇑*e*P	Pn	02 35 00.2	+0.4
CRPR	Cabo Rojo, PR	1.57	106	⇓*e*P	Pn	02 34 60.0	0.0
CRPR	Cabo Rojo, PR	1.57	106	*e*S	Sn	02 35 22.6	-0.1
CRPR	Cabo Rojo, PR	1.57	106		Pn	02 34 60.0	0.0
CRPR					Sn	02 35 22.6	-0.1
CRPR	Cabo Rojo, PR	1.57	106	IAML		02 35 49.1	
	comp=N,41nm,2.4s						
CRPR	Cabo Rojo, PR	1.57	106	*i* P	Pn	02 34 59.9	0.0
CRPR				IAML		02 35 23.7	
	comp=Z,13nm,1.6s						
BANI	BANI	1.58	268	Pn	Pn	02 35 01.7	+1.4
MLPR	Magueyes Islan	1.64	107	⇑*e*P	Pn	02 35 00.6	-0.2
MLPR	Magueyes Islan	1.64	107	*e*S	Sn	02 35 24.6	+0.5
MLPR	Magueyes Islan	1.64	107		Pn	02 35 00.6	-0.2
MLPR					Sn	02 35 24.6	+0.5
MLPR	Magueyes Islan	1.64	107	IAML		02 35 33.2	
	comp=N,22nm,2.4s						
AOPR	Arecibo Observ	1.84	93	⇑*e*P	Pn	02 35 03.0	-0.1
AOPR	Arecibo Observ	1.84	93	*e*S	Sn	02 35 28.1	-0.2
AOPR	Arecibo Observ	1.84	93		Pn	02 35 03.0	-0.1
AOPR					Sn	02 35 28.1	-0.2
AOPR	Arecibo Observ	1.84	93	IAML		02 35 30.1	
	comp=N,39nm,0.4s						
OBIP	Obispado Ponce	2.02	101	Pn	Pn	02 35 05.3	+0.1
CELP	Cerrillos	2.04	100	⇑*e*P	Pn	02 35 05.8	+0.3
CELP	Cerrillos	2.04	100	*e*S	Sn	02 35 33.0	+0.6
CELP	Cerrillos	2.04	100		Pn	02 35 05.8	+0.3
CELP					Sn	02 35 33.0	+0.6
CELP	Cerrillos	2.04	100	IAML		02 35 38.4	
	comp=N,15nm,1.6s						
EMPR	Esperanza - Ma	2.05	89	⇑*e*P	Pn	02 35 05.9	+0.4
EMPR	Esperanza - Ma	2.05	89	*e*S	Sn	02 35 32.5	-0.1
EMPR	Esperanza - Ma	2.05	89		Pn	02 35 05.9	+0.4
EMPR					Sn	02 35 32.5	-0.1
LOBA2	Hotel Casa Bon	2.31	261	*i* P	Pn	02 35 08.9	+0.2
LOBA2				*e*S	Sn	02 35 36.5	-1.8
LOBA2				IAML		02 35 39.0	
	comp=Z,24nm,1.2s						
SDDR	Presa de Saban	2.52	282	*i* P	Pn	02 35 10.6	-0.7
SDDR				IAML		02 35 54.3	
	comp=Z,12nm,2.1s						
LONE2	Loma La Sidra	2.64	273	*i* P	Pn	02 35 13.6	+0.7
LONE2				IAML		02 35 57.3	
	comp=Z,21nm,2.5s						
CBYP	Canovanas	2.70	93	Pn	Pn	02 35 11.4	-2.1
CBYP				IAML		02 35 52.3	
	comp=E,25nm,0.2s						
HUMP	Col San Antoni	2.72	96	Pn	Pn	02 35 12.8	-0.9
HUMP				IAML		02 35 38.6	
	comp=N,10nm,2.6s						

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*IDC **27** 02:42:47.8±9.0, 2°.56S×139°.11E, h0^{km}, mb3.5/2, mbtmp3.6/3, ML3.9/1, MS3.4/1, Error ellipse: s-maj=375.7km s-min=30.6km az=86.0*
*DJA **27** 02:42:54.8±0.4, 3°S±3°×13°9E±°, h10^{km}, M3.5/3, MLv3.5/3*
ISC 27 02:42:55.4±1.1, 2°.41S±0°.07×139°.19E±0°.06, h50^{km}, n7, σ3^{s}.07/9, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	Sarmi	0.63	311	P	Pn	02 43 09.1	+0.8
SMPI				S	Sn	02 43 19.9	+2.4
GENI	Genyem	1.00	101	P	Pn	02 43 15.2	+2.1
GENI				S	Sn	02 43 26.6	+0.4
WAMI	Wamena	1.54	198	P	Pn	02 43 22.7	+2.2
WAMI				S	Sn	02 43 41.8	+2.4
WRA	Warramunga Arr	18.06	195	P	P	02 46 58.0	-4.8
	0.4nm,0.3s,baz=15,slow=12,SNR=29						
	0.9nm,0.4s						
ASAR	Alice Springs	21.74	193	P	P	02 47 39.4	-3.4
	0.9nm,0.6s,baz=17,slow=11,SNR=14						
	0.9nm,0.6s						
STKA	Stephens Creek	29.40	176	LR	LR	03 01 02.3	
	comp=Z,81nm,20.1s,baz=202,slow=37						
MKAR	Makanchi Array	69.84	322	P	P	02 54 00.9	0.0
	0.3nm,0.4s,baz=100,slow=7.6,SNR=4.4						
	0.3nm,0.4s						

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*ASRS **27** 02:55:16.0±0.3, 48°N±2°×8°4E±°, h5^{km}, MLh3.1/6, Error ellipse: s-maj=5.7km s-min=2.5km az=138.2, confirmed*
*NNC **27** 02:55:18.4±1.8, 48°.45N×84°.04E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=16.5km s-min=5.2km az=83.0*
*SOME **27** 02:55:18.5, 48°.22N×83°.97E, h0^{km}*
ISC 27 02:55:17.0±1.1, 48°.25N±0°.03×84°.15E±0°.03, h6^{km}±13^{km}, n22, σ2^{s}.13/40, 7C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	0.94	149	*e*P	Pn	02 55 36.7	0.0
	24nm,0.1s						
ZSN				*e*S	Sg	02 55 49.2	+2.2
	71nm,0.2s						
MK31	Makanchi Array	1.93	222	⇑Pn	Pg	02 55 53.9	+0.1
	0.8nm,0.2s,baz=47,slow=16,SNR=131						
MK31				⇑Sn	Sg	02 56 20.9	+2.1
	15nm,0.3s,baz=51,slow=26,SNR=44						
MKAR	Makanchi Array	1.93	222	Pg	Pg	02 55 54.8	+0.9
MKAR				Sg	Sg	02 56 21.1	+2.3
MAKZ	Makanchi	2.06	226	⇓Pn	Pb	02 55 55.8	+1.0
	2.0nm,0.2s						
MAKZ				⇑Sn	Sg	02 56 24.3	+1.2
	27nm,0.3s						
MAKZ	Makanchi	2.06	226	Pg	Pg	02 55 56.8	+0.3
MAKZ				Sg	Sg	02 56 24.7	+1.5
DGZ	Jazzator, Alta	2.60	55	Pg	Pg	02 56 08.0	+1.1
DGZ				Sg	Sg	02 56 39.3	-1.3
CHBI	Chibit, Altay	3.02	46	Pg	Pg	02 56 15.0	+0.3
CHBI				Sg	Sg	02 56 52.6	-1.2
CUR	Chagan-Uzun	3.32	55	Pg	Pg	02 56 21.5	+0.9
CUR				Sg	Sg	02 57 01.4	-2.2
SEM	Semipalatinsk	3.34	312	*e*P	Pg	02 56 21.7	+0.7
	4.7nm,0.1s						
SEM				*e*S	Sg	02 57 06.5	+2.2
	41nm,0.2s						
ULGR	Ulagan, Altay	3.44	45	Pg	Pg	02 56 21.7	-1.1
ULGR				Sg	Sg	02 57 04.7	-2.7
ARTR	Artybash	4.09	28	Pg	Pg	02 56 33.4	-1.8
ARTR				Sg	Sg	02 57 25.7	-2.5
KURBB	Kurchatov Arra	4.37	305	⇓Pn	Pn	02 56 24.1	+0.2
	0.6nm,0.3s						
KURBB				⇓Sn	Sn	02 57 14.0	-1.1
	5.8nm,0.5s						
KURBB				⇑Lg	Lg	02 57 33.3	
	28nm,0.6s						
KURK	Kurchatov	4.37	306	⇑Pn	Pn	02 56 23.8	-0.1
	0.8nm,0.6s						
KURK				⇑Sn	Sn	02 57 13.7	-1.3
	2.0nm,0.5s						
KURK				⇑Lg	Lg	02 57 33.4	
	12nm,0.5s						
KURK	Kurchatov	4.37	306	Pg	Pg	02 56 40.0	-0.6
KURK				Sg	Sg	02 57 37.6	+0.5
KAPS	Kapalarasan	4.43	230	*e*P	Pb	02 56 38.6	+3.4
	0.7nm,0.2s						
KAPS				*e*S	Sg	02 57 36.0	-3.3
	6.7nm,0.7s						
KAPS	Kapalarasan	4.43	230	Pg	Pb	02 56 38.6	+3.4
	1.1nm,0.2s						
KAPS				Lg	Lg	02 57 35.2	
	6.7nm,0.5s						
DJR	Jarkent	4.95	219	*e*P	Pg	02 56 49.5	-2.3
	0.9nm,0.1s						
DJR				*e*S	Sg	02 57 54.7	-1.1
	5.4nm,0.4s						
DJR	Jarkent	4.95	219	Pg	Pg	02 56 49.3	-2.4
DJR				Lg	Lg	02 57 53.8	
ELT	Eltsovka	5.19	14	Sg	Sg	02 58 05.4	+1.9
KPKS	Kokpek	6.12	221	*e*P	Pg	02 57 10.0	-4.1
	1.5nm,0.2s						
KPKS				*e*S	Sg	02 58 30.3	-3.1
	7.3nm,0.5s						
UZB	Uzynbulak	6.24	217	*e*P	Pg	02 57 12.8	-3.6
	3.8nm,0.3s						
UZB				*e*S	Sg	02 58 35.1	-2.1
	2.8nm,0.5s						
UZB	Uzynbulak	6.24	217	Pg	Pg	02 57 12.8	-3.6
	3.8nm,0.3s						
UZB				Lg	Lg	02 58 33.5	
	2.8nm,0.5s						

IDC 27 03:04:07.9±2.0, 30°.83S×177°.55W, h0^{km}, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=71.2km s-min=46.5km az=7.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.48	267	P	P	03 12 13.0	-0.1
	0.8nm,0.6s,baz=106,slow=7.6,SNR=10						
	0.8nm,0.6s						
WRA	Warramunga Arr	44.51	272	P	P	03 12 21.2	-0.2
	1.0nm,0.4s,baz=112,slow=7.6,SNR=40						
	1.0nm,0.4s						
FINES	FINESS Array B	145.68	340	PKPbc	PKPdf	03 23 47.4	-0.2
	2.3nm,0.8s,baz=43,slow=2.6,SNR=8.3						
TORD	Torodi Ar. Bea	162.39	178	PKPab	PKPab	03 24 58.6	-0.8
	0.4nm,0.7s,baz=193,slow=3.3,SNR=2.9						

IDC 27 03:18:34.5±7.3, 18°.67S×173°.58W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=315.2km s-min=38.6km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	49.01	260	P	P	03 27 22.8	-0.6
	0.6nm,0.4s,baz=98,slow=7.0,SNR=39						
	0.6nm,0.4s						
ASAR	Alice Springs	49.01	255	P	P	03 27 23.8	+0.4
	6.4nm,0.6s,baz=90,slow=8.4,SNR=103						
	6.4nm,0.6s						
ILAR	Eielson Array	85.67	11	P	P	03 31 14.7	0.0
	0.1nm,0.5s,baz=229,slow=5.3,SNR=4.9						
	0.1nm,0.5s						

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*MAN **27** 03:25:50.0, 6°.93N×126°.47E, h4^{km}, mb5.2, ML4.2, MS4.3, Hypocentre not reviewed by the ISC*
*DJA **27** 03:25:50.1±0.4, 7°N±4°×12°7E±°, h10^{km}, M4.8/17, mB5.3/6, mb4.8/17, MLv4.8/6, Mw(mB)4.7/6*
*IDC **27** 03:25:51.4±2.5, 6°.96N×126°.67E, h44^{km}±24^{km}, mb3.8/9, mbtmp4.1/11, ML4.1/2, MS3.2/5, Error ellipse: s-maj=26.6km s-min=12.2km az=51.0*
*NEIC **27** 03:25:52.7±1.9, 6°.94N±0°.09×126°.51E±0°.08, h40^{km}±6^{km}, mb4.3/22, Error ellipse: s-maj=14.7km s-min=8.6km az=218.0*
ISC 27 03:25:49.7±1.0, 6°.96N±0°.04×126°.58E±0°.05, h19^{km}±3^{km}, n77, σ1^{s}.83/79, mb4.3/26, 2C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.32	268	⇓*e*P	Pg	03 25 54.6	-2.0
MATI				*e*S	Sg	03 25 59.8	-1.5
DAV	Davao City (W)	1.00	277	P	Pb	03 26 08.7	+0.4
	848nm,0.4s,baz=243,slow=14,SNR=5.3						
DAV				S	Sg	03 26 24.4	+2.2
	4μm,0.6s,baz=83,slow=23,SNR=28						
DAV	Davao City (W)	1.00	277	Pn	Pb	03 26 08.2	-0.2
DDMP	Don Marcelino,	1.21	226	⇑*e*P	Pn	03 26 09.4	-2.1
DDMP				*e*S	Sb	03 26 27.1	-0.1
BIPH	Bislig	1.24	350	⇓*i*P	Pn	03 26 09.6	-2.4
BIPH				*i* S	Sb	03 26 25.6	-2.4
KCP	Kidapawan	1.48	272	⇓*i*P	Pn	03 26 14.3	-1.0
KCP				*i* S	Sn	03 26 32.1	-2.1
GSPH	General Santos	1.83	242	⇑*e*P	Pn	03 26 19.4	-1.0
GSPH				*e*S	Sn	03 26 40.5	-2.6
CTBH	Cotabato--PC H	2.33	277	⇓*i*P	Pn	03 26 26.4	-0.6
CTBH				*i* S	Sn	03 26 54.3	-0.9
LLP	Lapu-Lapu	4.22	322	*e*P	Pn	03 26 44.0	-9.1
LLP				*e*S	Sn	03 27 44.0	+2.1
RCP	Roxas	5.94	321	⇓*e*P	Pn	03 27 20.8	+4.1
TNTI	Ternate	6.19	173	Pn	Pn	03 27 22.0	+1.9
TNTI	Ternate	6.19	173	P	Pn	03 27 23.6	+3.4
	0.4nm1μm122nm,0.9s						
KMSI	Cibinong	6.85	202	P	Pn	03 27 30.6	+1.4
	0.9nm6μm180nm,0.6s						
GTOI	Gorontalo	7.22	210	P	Pn	03 27 34.4	+0.2
	0.2nm502nm56nm,0.7s						
MRSI	Marisa	7.93	216	P	Pn	03 27 45.9	+1.9
	59nm,0.6s						
TOLI2	Tolitoli	8.19	225	Pn	Pn	03 27 44.8	-2.8
MYLDM	Lahad Datu	8.22	258	Pn	Pn	03 27 48.7	+0.6
LUWI	Luwuk	8.81	206	Pn	Pn	03 27 56.2	+0.2
LUWI	Luwuk	8.81	206	P	Pn	03 27 59.2	+3.1
	8μm120nm,0.5s						
SANI	Sanana	8.96	184	P	Pn	03 27 57.9	-0.3
	730nm70nm,0.8s						
SWI	Sorong	9.06	149	P	Pn	03 28 01.1	+1.5
	894nm27nm,0.9s						
SIJI	Sorong	9.07	149	P	Pn	03 27 59.0	-0.7
	1.6nm,0.3s,baz=350,slow=17,SNR=6.8						
SIJI				LR	LR	03 31 42.0	
	comp=Z,125nm,20.2s,baz=286,slow=39						
	9.7nm,0.5s						
APSI	Ampana	9.23	212	P	Pn	03 28 04.8	+2.9
	42nm,1.1s						
TTSI	Tana Toraja	12.01	214	P	Pn	03 28 45.3	+5.3
	41nm,0.8s						
BNSI	Bone	13.00	210	P	Pn	03 28 58.6	+5.1
	23nm,1.1s						
SRPI	Serui, Papua	13.03	132	P	P	03 29 01.8	-2.5
KAPI	Kappang	13.71	210	P	Pn	03 29 05.5	+2.4
	1.2nm,0.3s,baz=336,slow=10.0,SNR=3.3						
KAPI				LR	LR	03 34 13.4	
	comp=Z,103nm,20.1s,baz=37,slow=36						
	4.0nm,0.3s						
KAPI	Kappang	13.71	210	Pn	Pn	03 29 03.4	+0.3
SBUM	Sibu	14.99	253	Pn	Pn	03 29 20.0	-0.7
SMPI	Sarmi	15.02	126	P	P	03 29 24.9	-1.4
	41nm,1.2s						
MMRI	Maumere	16.08	196		P	03 29 36.8	-1.3
EDFI	Ende, Flores	16.34	197	P	P	03 29 48.4	+7.2
BATI	Baumata	17.30	190	P	P	03 29 53.3	+1.7
	37nm,0.5s,baz=272,slow=2.7,SNR=6.5						
BATI				LR	LR	03 38 13.5	
	comp=Z,89nm,18.3s,baz=322,slow=43						
BATI	Baumata	17.30	190	P	P	03 29 54.8	+3.2
	27nm,0.6s						
GUMO	Guam	19.16	68	LR	LR	03 38 35.4	
	comp=Z,48nm,18.4s,baz=186,slow=40						
MTN	Manton Dam	20.18	167	P	P	03 30 24.0	+0.6
MTN				IAmb	IAmb	03 30 31.9	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	22.59	175	P	P	03 30 49.5	+0.2
LEM	Lembang	23.35	234	LR	LR	03 40 49.7	
	comp=Z,72nm,19.7s,baz=133,slow=38						
MDSI	Maura Dua	25.08	244	P	P	03 31 17.0	+3.7
	comp=Z,7.2nm,1.7s						
NJ2	Nanjing	25.99	345	*e*P	P	03 31 24.0	+2.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WB0	Warramunga Arr	27.65	164	P	P	03 31 37.9	+1.5
WB0				IAmb	IAmb	03 31 48.2	
	comp=Z,6.2nm,0.8s						
WRAB	Tennant Creek	27.79	164	P	P	03 31 38.5	+0.8
WRAB				IAmb	IAmb	03 32 05.6	
	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	27.80	164	P	P	03 31 36.0	-1.9
	comp=Z,1.8nm,0.7s,baz=346,slow=10,SNR=11						
	comp=Z,1.8nm,0.7s						
WB2	Warramunga Arr	27.80	164	P	P	03 31 39.0	+1.2
WB2				IAmb	IAmb	03 32 02.1	
	comp=Z,7.1nm,0.8s						
PZH	PanZhiHua	30.60	312	P	P	03 32 04.5	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,4.5s						
ASAR	Alice Springs	31.27	167	P	P	03 32 07.2	-1.4
	comp=Z,0.9nm,0.5s,baz=340,slow=7.5,SNR=11						
ASAR				PcP	PcP	03 35 01.1	-1.9
	comp=Z,0.2nm,0.6s,baz=346,slow=3.5,SNR=1.3						
	comp=Z,0.9nm,0.5s						
LZH	Lanzhou	35.69	328	*e*P	P	03 32 55.8	+8.7
LZH				pP	sP	03 33 05.0	+11
LZH				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC	Hu-ho-hao-te	36.32	341	*e*P	P	03 32 55.3	+2.9
HHC				pmax	pmax		

	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
FORT	**Forrest**	**37.55**	**178**	P	**P**	**03 33 03.9**	**+1.1**
SHL	**Shillong**	**37.92**	**303**	P	**P**	**03 33 06.5**	**+0.1**
GTA	**Gaotai**	**40.29**	**327**	*e*P	**P**	**03 33 28.5**	**+2.6**
GTA				pP	pP	03 33 32.5	+1.0
GTA				sP	sP	03 33 36.0	+3.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**41.19**	**160**	P	**P**	**03 33 32.2**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=324,slow=8.7,SNR=4.4						
	comp=Z,4.6nm,0.8s						
ULN	**Ulaanbaatar**	**44.03**	**341**	P	**P**	**03 33 55.6**	**-0.7**
SONM	**Songino Array**	**44.22**	**341**	P	**P**	**03 33 58.2**	**+0.4**
WMQ	**Urumqi**	**50.03**	**324**	*e*P	**P**	**03 34 45.3**	**+2.1**
PETK	**Petropavlovsk-**	**52.53**	**23**	P	**P**	**03 35 00.5**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=216,slow=6.8,SNR=2.4						
	comp=Z,1.0nm,0.5s						
PETK	**Petropavlovsk-**	**52.53**	**23**	P	**P**	**03 35 03.3**	**+1.7**
MK31	**Makanchi Array**	**54.85**	**324**	P	**P**	**03 35 18.3**	**-0.6**
MK31				IAmb	IAmb	03 35 26.8	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**54.85**	**324**	P	**P**	**03 35 18.4**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=116,slow=8.2,SNR=10						
	comp=Z,2.2nm,0.9s						
MAKZ	**Makanchi**	**55.04**	**324**	P	**P**	**03 35 19.1**	**-1.2**
MAKZ				IAmb	IAmb	03 35 29.2	
	comp=Z,4.8nm,1.1s						
ZALV	**Zalesovo Beam**	**57.67**	**332**	P	**P**	**03 35 38.2**	**-0.6**
AAK	**Ala-Archa**	**57.90**	**317**	P	**P**	**03 35 41.2**	**+0.4**
KURK	**Kurchatov**	**58.97**	**327**	P	**P**	**03 35 46.9**	**-1.0**
KURBB	**Kurchatov Arra**	**58.97**	**326**	P	**P**	**03 35 46.9**	**-1.0**
	comp=Z,3.3nm,0.9s,baz=128,slow=5.8,SNR=21						
	comp=Z,3.3nm,0.9s						
KK31	**Karatay Array**	**60.80**	**316**	P	**P**	**03 35 59.9**	**-0.8**
KK31				IAmb	IAmb	03 36 03.4	
	comp=Z,2.9nm,0.9s						
KKAR	**Karatay Array**	**60.80**	**316**	P	**P**	**03 36 00.0**	**-0.7**
BRVK	**Borovoye**	**64.63**	**326**	P	**P**	**03 36 25.5**	**-0.5**
BRVK				IAmb	IAmb	03 36 34.1	
	comp=Z,4.2nm,1.0s						
ABKAR	**Akbulak array**	**69.58**	**320**	P	**P**	**03 36 56.5**	**-1.1**
ARU	**Arti**	**72.15**	**327**	P	**P**	**03 37 13.0**	**0.0**
ARU				IAmb	IAmb	03 37 15.7	
	comp=Z,5.1nm,1.1s						
RAYN	**Ar Rayn**	**79.10**	**293**	P	**P**	**03 37 50.7**	**-2.9**
RAYN				IAmb	IAmb	03 37 52.7	
	comp=Z,2.8nm,0.9s						
GURO	**Guroymak-BITLI**	**81.45**	**308**	P	**P**	**03 38 05.9**	**-0.2**
GURO				IAmb	IAmb	03 38 06.6	
	comp=Z,3.7nm,1.0s						
ILAR	**Eielson Array**	**82.28**	**26**	P	**P**	**03 38 07.4**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=229,slow=6.7,SNR=3.9						
	comp=Z,0.2nm,0.5s						
FINES	**FINESS Array B**	**88.94**	**332**	P	**P**	**03 38 41.1**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=182,slow=12,SNR=4.8						
	comp=Z,1.4nm,0.8s						
AKASG	**Malin Array Be**	**89.31**	**321**	P	**P**	**03 38 42.1**	**-2.8**
	comp=Z,0.3nm,0.4s,baz=62,slow=3.7,SNR=3.4						
	comp=Z,0.3nm,0.4s						
BURAR	**Bucovina Array**	**92.51**	**318**	P	**P**	**03 39 00.3**	**+0.4**
BURAR				IAmb	IAmb	03 39 03.9	
	comp=Z,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**121.73**	**290**	PKP	**PKPdf**	**03 44 41.1**	**-2.3**
	comp=Z,0.7nm,0.8s,baz=44,slow=2.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**121.73**	**290**		**PKPdf**	**03 44 40.4**	**-3.0**

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*KEA **27** 03:44:23.2,26°.03N×129°.16E,h85^{km},MS5.4/4*

*BJI **27** 03:44:26.5±0.0,27°.02N×130°.26E,h12^{km},mb5.3/79,mB5.6/73,Ms5.8/96,Ms7 5.6/90*

*IDC **27** 03:44:27.1±0.3,27°.02N×130°.28E,h0^{km},mb5.3/36,mbtmp5.3/44,ML4.1/5,MS5.2/32,Error ellipse: s-maj=10.5km s-min=7.9km az=81.0*

*MOS **27** 03:44:28.2±1.1,27°.02N×130°.22E,h17^{km},mb5.9/85,MS5.4/47,Error ellipse: s-maj=5.6km s-min=3.2km az=109.8*

*JMA **27** 03:44:29.1±0.1,27°.0N±0°.3×130°.3E±0°.4,h64^{km},MD5.6/27,MW5.8/27,NEAR MINAMI-DAITOJIMA IS*

JMA Felt II J1 at NEAR MINAMI-DAITOJIMA IS.

*NIED **27** 03:44:29.1,26°.97N×130°.30E,h64^{km},MW5.9,Moment Tensor Solution. s2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-5.62; M$_{\theta\theta}$1.47; M$_{\phi\phi}$4.15; M$_{r\theta}$4.13; M$_{\theta\phi}$2.40; M$_{\phi r}$0.97; Fault plane solution: M$_0$6.95000×10^{17} NP1:ϕ_s13.00000°,δ34.00000°,λ-126.00000°. NP2:ϕ_s234.00000°,δ63.00000°,λ-69.00000°.*

*NEIC **27** 03:44:29.5±1.7,26°.99N±0°.06×130°.14E±0°.06,h10^{km}±1^{km},mb5.7/474,Ms_20 5.5/299,Mww5.9 Error ellipse: s-maj=11.3km s-min=8.3km az=154.0*

*GCMT **27** 03:44:32.5±0.1,26°.94N±0°.01×130°.20E±0°.01,h14^{km},MW5.9/150,Moment Tensor Solution. s150,c327; s147,c475; Duration: 2^{s}1 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-0.68±.01; M$_{\theta\theta}$0.04±.01; M$_{\phi\phi}$0.63±.01; M$_{r\theta}$0.13±.01; M$_{\theta\phi}$0.35±.01; M$_{\phi r}$0.32±.01; Best double couple: M$_0$0.81700×10^{18} NP1:ϕ_s26.00000°,δ32.00000°,λ-87.00000°. NP2:ϕ_s203.00000°,δ58.00000°,λ-92.00000°. Principal axes: T 0.8750, Plg13.0000°, Azm294.0000°; N -0.1160, Plg1.0000°, Azm204.0000°; P -0.7590, Plg77.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 03:44:36,26°.79N×130°.31E,h12^{km},Moment Tensor Solution. Duration: 14^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-7.18; M$_{\theta\theta}$0.67; M$_{\phi\phi}$6.51; M$_{r\theta}$-2.05; M$_{\theta\phi}$2.68; M$_{\phi r}$-1.25; Fault plane solution: M$_0$7.75000×10^{17} NP1: ϕ_s190.00000°,δ39.00000°,λ-107.00000°. NP2: ϕ_s32.00000°,δ53.00000°,λ-76.00000°. Principal axes: T 7.7964, Plg7.0000°, Azm113.0000°; N -0.0904, Plg11.0000°, Azm204.0000°; P -7.7060, Plg77.0000°, Azm349.0000°;*

ISC 27 03:44:29.9±0.3**,26°.98N**±0°.02×**130°.29E**±0°.02**,h16**^{km}±1^{km}**,h17**^{km}**:pP-P,n1541,**σ1^s**64**/1574**,mb5.7**/428**,MS5.6**/225**,239C-244D,Fault plane solution: NP1:**ϕ_s208.21899°**,**δ82.66158°**,**λ-62.81752°. **NP2:**ϕ_s312.18631°**,**δ28.08261°**,**λ-164.25624°. **Principal axes:** T Plg32.2450°**,** Azm275.7659°**;** N Plg26.9417°**,** Azm24.4661°**;** P Plg45.5758°**,** Azm145.7021°**; Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.36**	**348**	P	**Pn**	**03 44 52.9**	**-1.4**
JZK	**Kikaishima**	**1.36**	**348**	A	A	03 44 52.9	
	comp=E,373nm,3.4s,comp=E,443nm,3.3s						
JKDJ	**Kitadaitoujima**	**1.36**	**138**	P	**Pn**	**03 44 52.0**	**-2.2**
JKDJ				S	**Sn**	**03 45 09.2**	**-2.8**
JKDJ	**Kitadaitoujima**	**1.36**	**138**	A	A	03 44 52.0	
	comp=E,389nm,3.6s,comp=E,472nm,3.2s						
JMZ	**Minamidaito 2**	**1.42**	**144**	P	**Pn**	**03 44 53.0**	**-2.1**
JMZ				*e*S	**Sn**	**03 45 10.8**	**-2.7**
JMZ	**Minamidaito 2**	**1.42**	**144**	A	A	03 44 53.0	
	comp=E,482nm,4.5s,comp=E,634nm,3.8s						
JTK	**Tokunoshima**	**1.44**	**304**	P	**Pn**	**03 44 53.8**	**-1.5**
JTK	**Tokunoshima**	**1.44**	**304**	A	A	03 44 53.8	
	comp=E,188nm,2.9s,comp=E,156nm,3.5s						
JAM	**Amami Oshima**	**1.55**	**337**	P	**Pn**	**03 44 55.3**	**-1.6**
JAM	**Amami Oshima**	**1.55**	**337**	A	A	03 44 55.3	
	comp=E,214nm,2.9s,comp=E,128nm,1.1s						
JOKE	**Okinoerabujima**	**1.58**	**284**	P	**Pn**	**03 44 55.9**	**-1.3**
JOKE				S	**Sn**	**03 45 14.7**	**-2.6**
JOKE	**Okinoerabujima**	**1.58**	**284**	A	A	03 44 55.9	
	comp=E,238nm,1.7s,comp=E,154nm,3.0s						
JAMN	**Amaminishikomi**	**1.60**	**322**	P	**Pn**	**03 44 55.7**	**-1.8**
JAMN	**Amaminishikomi**	**1.60**	**322**	A	A	03 44 55.7	
	comp=E,87nm,3.1s,comp=E,110nm,3.8s						
JYRO	**Yoronjima**	**1.64**	**272**	P	**Pn**	**03 44 56.5**	**-1.5**
JYRO				*e*S	**Sn**	**03 45 15.7**	**-3.2**
JYRO	**Yoronjima**	**1.64**	**272**	A	A	03 44 56.5	
	comp=E,183nm,2.5s,comp=E,191nm,1.7s						
JOW	**Kunigami**	**1.81**	**266**	Pn	**Pn**	**03 44 59.0**	**-1.4**
	8µm,0.3s,baz=106,slow=14,SNR=2695						
JOW				Sn	**Sn**	**03 45 19.8**	**-3.1**
	10µm,0.3s,baz=8.1,slow=28,SNR=34						
JOW				LR	LR	03 45 54.5	
	comp=Z,92µm,21.9s,baz=282,slow=49						
JOW	**Kunigami**	**1.81**	**266**	Pn	**Pn**	**03 44 59.2**	**-1.1**
JOW	**Kunigami**	**1.81**	**266**	P	**Pn**	**03 44 59.0**	**-1.4**
JOW				*e*S	**Sn**	**03 45 19.7**	**-3.1**
JOW	**Kunigami**	**1.81**	**266**	A	A	03 44 59.0	
	comp=E,154nm,1.4s,comp=E,496nm,1.7s						
JIH	**Iheya**	**2.07**	**272**	P	**Pn**	**03 45 02.7**	**-1.3**
JIH				S	**Sn**	**03 45 26.2**	**-3.2**
JIH	**Iheya**	**2.07**	**272**	A	A	03 45 02.7	
	comp=E,151nm,1.8s,comp=E,144nm,2.7s						
JNTH	**Nagotoyohara**	**2.08**	**258**	P	**Pn**	**03 45 02.4**	**-1.6**
JNTH				S	**Sn**	**03 45 25.0**	**-4.6**
JNTH	**Nagotoyohara**	**2.08**	**258**	A	A	03 45 02.4	
	comp=E,169nm,0.6s,comp=E,213nm,1.1s						
JTAJ	**Takarajima**	**2.37**	**336**	P	**Pn**	**03 45 05.9**	**-2.2**
JTAJ				S	**Sn**	**03 45 33.1**	**-3.8**
JTAJ	**Takarajima**	**2.37**	**336**	A	A	03 45 05.9	
	comp=E,65nm,3.5s,comp=E,89nm,4.5s						
JJT3	**Tamagusuku3**	**2.39**	**250**	P	**Pn**	**03 45 07.1**	**-1.3**
JJT3				S	**Sn**	**03 45 35.4**	**-2.0**
JJT3	**Tamagusuku3**	**2.39**	**250**	A	A	03 45 07.1	
	comp=E,312nm,2.0s,comp=E,301nm,2.0s						
JAGN	**Aguni-jima**	**2.75**	**263**	P	**Pn**	**03 45 11.7**	**-1.6**
JAGN				S	**Sn**	**03 45 43.1**	**-3.1**
JAGN	**Aguni-jima**	**2.75**	**263**	A	A	03 45 11.7	
	comp=E,200nm,2.0s,comp=E,134nm,2.3s						
JNN	**Nakanoshima**	**2.88**	**353**	P	**Pn**	**03 45 13.2**	**-1.9**
JNN	**Nakanoshima**	**2.88**	**353**	A	A	03 45 13.2	
	comp=E,46nm,4.5s,comp=E,61nm,7.8s						
JKE	**Kume jima 2**	**3.20**	**259**	*e*P	**Pn**	**03 45 17.3**	**-2.2**
JKE				*e*S	**Sn**	**03 45 54.5**	**-2.9**
JKE	**Kume jima 2**	**3.20**	**259**	A	A	03 45 17.3	
	comp=E,47nm,4.8s,comp=E,54nm,7.1s						
JYAK	**Yakushimahirau**	**3.25**	**3**	P	**Pn**	**03 45 18.6**	**-1.7**
JYAK				*e*S	**Sn**	**03 45 55.8**	**-2.8**
JYAK	**Yakushimahirau**	**3.25**	**3**	A	A	03 45 18.6	
	comp=E,18nm,3.3s,comp=E,24nm,3.7s						
JMTN	**Minamitane**	**3.45**	**9**	P	**Pn**	**03 45 21.5**	**-1.4**
JMTN				S	**Sn**	**03 46 00.8**	**-2.7**
JMTN	**Minamitane**	**3.45**	**9**	A	A	03 45 21.5	
	comp=E,19nm,3.4s,comp=E,40nm,3.6s						
JKC	**Kuchinoerabu**	**3.47**	**359**	P	**Pn**	**03 45 22.4**	**-0.9**
JKC	**Kuchinoerabu**	**3.47**	**359**	A	A	03 45 22.4	
	comp=E,20nm,4.3s,comp=E,20nm,4.9s						
JTN	**Tanegashima 3**	**3.71**	**9**	P	**Pn**	**03 45 24.6**	**-2.0**
JTN	**Tanegashima 3**	**3.71**	**9**	A	A	03 45 24.6	
	comp=E,19nm,3.4s,comp=E,17nm,6.0s						
JTSR	**Tashiro 2**	**4.21**	**7**	A	A	03 45 32.5	
	comp=E,12nm,4.0s,comp=E,11nm,3.7s						
JSU	**Suzuyama**	**4.51**	**2**	Pn	**Pn**	**03 45 35.6**	**-2.0**
JSU	**Suzuyama**	**4.51**	**2**	A	A	03 45 36.6	
	comp=E,11nm,5.4s,comp=E,6.0nm,5.6s						
JNAR	**Kushima--Naru**	**4.61**	**10**	A	A	03 45 38.0	
	comp=E,10.0nm,5.0s,comp=E,9.0nm,3.7s						
JSJ	**Shimokoshiki**	**4.71**	**354**	A	A	03 45 39.5	
	comp=E,9.0nm,3.3s,comp=E,7.0nm,6.7s						
JOGS	**Gusukube**	**4.92**	**244**	A	A	03 45 42.2	
	comp=E,44nm,3.5s,comp=E,60nm,5.2s						
JTZ	**Takazaki**	**4.96**	**8**	A	A	03 45 42.9	
	comp=E,6.0nm,4.7s,comp=E,6.0nm,3.8s						
JIKM	**Ikemajima**	**4.98**	**247**	A	A	03 45 43.0	
	comp=E,38nm,4.2s,comp=E,56nm,7.3s						
JMJ2	**Miyako jima3**	**4.99**	**245**	A	A	03 45 43.2	
	comp=E,55nm,3.6s,comp=E,55nm,4.5s						
JIRB	**Irabujima**	**5.08**	**246**	A	A	03 45 44.5	
	comp=E,28nm,5.6s,comp=E,35nm,2.9s						
JZO	**Okuchi**	**5.15**	**3**	A	A	03 45 45.5	
	comp=E,5.0nm,3.9s,comp=E,6.0nm,3.5s						
JTSN	**Tsuno**	**5.36**	**11**	A	A	03 45 48.4	
	comp=E,4.0nm,5.9s,comp=E,3.0nm,4.1s						
JTJ	**Tarama**	**5.55**	**246**	A	A	03 45 51.0	
	comp=E,22nm,8.1s,comp=E,33nm,6.6s						
JNU	**Nakatsue**	**6.14**	**5**	Pn	**Pn**	**03 45 59.4**	**-0.6**
	7.2nm,0.3s,baz=229,slow=0.1,SNR=25						
JNU				Sn	**Sn**	**03 47 08.8**	**-1.2**
	49nm,0.3s,baz=108,slow=23,SNR=6.6						
JNU				LR	LR	03 47 38.1	
	comp=Z,5µm,19.7s,baz=145,slow=31						
	136nm,0.4s						
JNU	**Nakatsue**	**6.14**	**5**		**Pn**	**03 46 00.3**	**+0.3**
YOJ	**Yonaguni jima**	**7.03**	**251**	Pn	**Pn**	**03 46 09.0**	**-3.1**
YOJ	**Yonaguni jima**	**7.03**	**251**	P	**Pn**	**03 46 09.0**	**-3.1**
JMN	**Monobe**	**7.41**	**24**	Pn	**Pn**	**03 46 17.8**	**+0.4**
JTU	**Tsushima**	**7.56**	**354**	Pn	**Pn**	**03 46 18.8**	**-0.6**
TATO	**Taipei**	**8.17**	**258**		**Pn**	**03 46 25.4**	**-2.4**
NACB	**Ninganchiao**	**8.33**	**252**		**Pn**	**03 46 27.1**	**-2.9**
YHNB	**Yeheng**	**8.35**	**256**		**Pn**	**03 46 28.0**	**-2.4**
JHS	**Saijyo**	**8.36**	**16**	Pn	**Pn**	**03 46 30.0**	**-0.3**
NAWB	**Namwon**	**8.77**	**344**	Pn	**Pn**	**03 46 35.4**	**-0.6**
SSE	**Sheshan**	**8.96**	**299**	P	**Pn**	**03 46 38.3**	**-0.3**
SSE				S	**Sn**	**03 48 18.0**	**-1.2**
SSE				pmax	pmax		
	comp=Z,36nm,0.7s						
SSE				pmax	pmax		
	comp=Z,2µm,9.5s						
SSE				LR	LR		
	comp=N,3µm,17.8s						
SSE				LR	LR		
	comp=E,8µm,17.4s						
TJN	**Taejon**	**9.70**	**346**		**Pn**	**03 46 48.7**	**0.0**
TJN	**Taejon**	**9.70**	**346**	*c i*P	**Pn**	**03 46 49.0**	**+0.3**
KSCHJ	**Chungju**	**10.06**	**349**		**Pn**	**03 46 54.3**	**+0.6**
INU	**Inuyama**	**10.14**	**33**	Pn	**Pn**	**03 46 54.8**	**0.0**
JHJ	**Hachijo jima 2**	**10.25**	**51**	Pn	**Pn**	**03 46 57.4**	**+1.1**
	607nm,0.4s,baz=23,slow=20,SNR=44						
JHJ				Sn	**Sn**	**03 48 54.3**	**+3.4**
	12nm,0.3s,baz=72,slow=19,SNR=1.9						
JHJ				LR	LR	03 50 37.6	
	comp=Z,19µm,19.0s,baz=266,slow=36						
JHJ2	**Mitsune**	**10.27**	**51**	Pn	**Pn**	**03 46 57.9**	**+1.3**
JGF	**Kuroka**	**10.51**	**33**		**Pn**	**03 47 00.4**	**+0.5**
JCJ	**Chichijima**	**10.61**	**87**	Pn	**Pn**	**03 46 58.6**	**-2.6**
	122nm,0.4s,baz=132,slow=5.9,SNR=20						
JCJ				Sn	**Sn**	**03 48 56.5**	**-3.2**
	18nm,0.3s,baz=156,slow=20,SNR=2.2						
JCJ				LR	LR	03 50 36.0	
	comp=Z,17µm,19.4s,baz=258,slow=35						
KSAR	**Wonju Array Be**	**10.63**	**350**	Pn	**Pn**	**03 47 01.9**	**+0.4**
KSAR	**Wonju Array Be**	**10.63**	**350**	P	**Pn**	**03 47 01.9**	**+0.4**
KSRS	**Korea Array**	**10.64**	**350**	Pn	**Pn**	**03 47 02.0**	**+0.4**
	1.2nm,0.3s,baz=168,slow=13,SNR=114						
KSRS				LR	LR	03 51 35.0	
	comp=Z,13µm,19.6s,baz=170,slow=40						
	26nm,0.8s						
KS19	**Wonju Array Si**	**10.69**	**350**		**Pn**	**03 47 01.9**	**-0.5**
QZH	**Quanzhou**	**10.72**	**262**	⇑*i*P	**Pn**	**03 47 00.5**	**-2.3**
QZH				S	**Sn**	**03 49 08.0**	**+5.6**
QZH				pmax	pmax		
	comp=Z,2µm,11.6s						
QZH				LR	LR		
	comp=N,14µm,16.6s						
QZH				LR	LR		
	comp=E,10µm,12.2s						
QZH				LR	LR		
	comp=Z,16µm,17.7s						
INCN	**Inchon**	**10.92**	**344**	Pn	**Pn**	**03 47 05.9**	**+0.4**
INCN	**Inchon**	**10.92**	**344**	P	**Pn**	**03 47 05.9**	**+0.4**
KNMB	**Chin-men Tao**	**11.02**	**260**	Pn	**Pn**	**03 47 04.6**	**-2.3**
NJ2	**Nanjing**	**11.17**	**300**	⇑P	**Pn**	**03 47 08.8**	**-0.1**
NJ2				pP		03 47 12.3	
NJ2				sP		03 47 16.0	
NJ2				PP	**PnPn**	**03 47 18.0**	**+1.4**
NJ2				S	**Sn**	**03 49 15.8**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,66nm,1.8s						
NJ2				pmax	pmax		
	comp=Z,5µm,11.8s						
NJ2				LR	LR		
	comp=N,28µm,12.3s						
NJ2				LR	LR		
	comp=E,43µm,11.8s						
NJ2				LR	LR		
	comp=Z,40µm,14.2s						
SEHB	**SEOHWA**	**11.39**	**352**		**Pn**	**03 47 11.5**	**-0.4**
MAJO	**Matsushiro**	**11.67**	**33**		**Pn**	**03 47 17.4**	**+1.6**
MAJO	**Matsushiro**	**11.67**	**33**	P	**Pn**	**03 47 17.4**	**+1.6**
MJAR	**Matsushiro Arr**	**11.67**	**33**	Pn	**Pn**	**03 47 16.0**	**+0.2**
	0.9nm,0.3s,baz=228,slow=13,SNR=20						
	5.0nm,0.4s						
MJAR	**Matsushiro Arr**	**11.67**	**33**	P	**Pn**	**03 47 16.0**	**+0.2**
HJU	**Haeju**	**11.68**	**342**	P	**Pn**	**03 47 15.4**	**-0.5**
HJU				pP		03 47 30.8	
HJU				S	**Sn**	**03 49 31.6**	**+5.6**
HJU				AMS	AMS		
	comp=N,6µm,4.4s						
HJU				AMS	AMS		
	comp=E,21µm,14.5s						
HJU				AMS	AMS		
	comp=Z,11µm,7.5s						
JYT	**Yasato**	**12.49**	**40**		**Pn**	**03 47 29.5**	**+2.5**
PYAG	**Pyongyang**	**12.62**	**344**	P	**Pn**	**03 47 28.9**	**+0.2**
PYAG				pP	P	03 47 45.1	+5.0
PYAG				S	**Sn**	**03 49 56.2**	**+7.2**
PYAG				AMS	AMS		
	comp=N,1µm,7.9s						
PYAG				AMS	AMS		
	comp=E,2µm,16.9s						
PYAG				AMS	AMS		
	comp=Z,205nm,1.6s						
HHU	**Hamhung**	**13.12**	**351**	P	**Pn**	**03 47 36.2**	**+0.7**
HHU				pP	**P**	**03 47 49.9**	**+4.3**
HHU				S	**Sn**	**03 50 08.5**	**+7.4**
HHU				AMS	AMS		
	comp=N,3µm,6.5s						
HHU				AMS	AMS		
	comp=E,5µm,13.7s						
HHU				AMS	AMS		
	comp=Z,2µm,6.4s						
DL2	**Dalian**	**13.93**	**331**	P	**Pn**	**03 47 46.5**	**-0.1**
DL2				S	**Sn**	**03 50 22.0**	**+1.1**
DL2				pmax	pmax		
	comp=Z,71nm,1.5s						
DL2				pmax	pmax		
	comp=Z,3µm,6.1s						
DL2				LR	LR		
	comp=Z,19µm,19.4s						
DL2				LR	LR		
	comp=Z,22µm,18.7s						
DL2				LR	LR		
	comp=Z,14µm,15.4s						
SUJ	**Sinuiju**	**13.95**	**341**	P	**Pn**	**03 47 46.1**	**-0.8**
SUJ				pP	**P**	**03 47 57.4**	**+2.6**
SUJ				S	**Sn**	**03 50 30.2**	**+8.9**
SUJ				AMS	AMS		
	comp=N,24µm,16.7s						
SUJ				AMS	AMS		
	comp=E,17µm,12.2s						
SUJ				AMS	AMS		
	comp=Z,13µm,9.4s						
WHN	**Wuhan**	**14.42**	**288**	⇓P	**Pn**	**03 47 52.3**	**-1.1**
WHN				S	**Sn**	**03 50 34.8**	**+1.8**
WHN				pmax	pmax		
	comp=Z,600nm,1.3s						
WHN				LR	LR		
	comp=Z,17µm,10.1s						
WHN				LR	LR		
	comp=Z,42µm,11.7s						
WHN				LR	LR		
	comp=Z,48µm,19.4s						
JCNP	**Jose Panganiba**	**14.48**	**211**	⇓*e*P	**Pn**	**03 47 52.9**	**-1.4**
JCNP	**Jose Panganiba**	**14.48**	**211**	⇑*i*P	**S**	**03 51 01.6**	**+7.5**
TIA	**Tai'an**	**14.50**	**313**	⇑P	**Pn**	**03 47 53.8**	**-0.6**
TIA				S	**Sn**	**03 50 41.0**	**+6.2**
TIA				pmax	pmax		
	comp=Z,110nm,2.5s						
TIA				pmax	pmax		
	comp=Z,5µm,12.0s						
TIA				LR	LR		
	comp=Z,16µm,14.7s						
TIA				LR	LR		
	comp=Z,15µm,13.2s						
TIA				LR	LR		
	comp=Z,26µm,12.9s						
CNSH	**ChangSha**	**15.44**	**278**	⇑P	**Pn**	**03 48 08.0**	**+0.9**
CNSH				pmax	pmax		
	comp=Z,360nm,1.7s						
CNSH				LR	LR		
	comp=Z,37µm,17.1s						
CNSH				LR	LR		
	comp=Z,22µm,17.8s						
CNSH				LR	LR		
	comp=Z,27µm,16.7s						
TGY	**Tagaytay City**	**15.51**	**216**	Pn	**Pn**	**03 48 09.6**	**+1.5**
	comp=Z,118nm,0.3s,baz=327,slow=5.6,SNR=9.5						
MSHR	**Mys Shultsa**	**15.58**	**2**	*i* P	**Pn**	**03 48 07.2**	**-1.6**
VLA	**Vladivostok**	**16.16**	**4**	*i* P	**Pn**	**03 48 16.5**	**+0.3**
LUBP	**Lubang**	**16.18**	**217**	⇑*e*P	**Pn**	**03 48 16.7**	**0.0**
HNS	**HongShan**	**16.77**	**312**	⇑P	**Pn**	**03 48 23.0**	**-1.0**
HNS				PP	**pwP**	**03 48 35.0**	**-1.1**
HNS				S	**Sn**	**03 51 34.0**	**+4.0**
HNS				pmax	pmax		
	comp=Z,310nm,1.2s						
HNS				LR	LR		
	comp=Z,10µm,16.3s						
HNS				LR	LR		
	comp=Z,21µm,15.6s						
HNS				LR	LR		
	comp=Z,22µm,15.5s						
RCP	**Roxas**	**16.90**	**206**	⇑*e*P	**P**	**03 48 26.9**	**-0.9**
LYN	**LuoYang**	**17.06**	**301**	⇑P	**Pn**	**03 48 25.5**	**-2.3**
LYN				PP	**sP**	**03 48 35.8**	**+1.7**
LYN				S	**Sn**	**03 51 41.0**	**+3.8**
LYN				SS	**SnSn**	**03 51 52.8**	**+2.3**
LYN				pmax	pmax		
	comp=Z,410nm,2.0s						
LYN				pmax	pmax		
	comp=Z,6µm,3.5s						
LYN				LR	LR		
	comp=Z,22µm,12.8s						
LYN				LR	LR		
	comp=Z,34µm,13.9s						
LYN				LR	LR		
	comp=Z,33µm,13.9s						
CN2	**Changchun**	**17.24**	**348**	*e*P	**Pn**	**03 48 29.0**	**-0.9**
CN2				*e*S	**Sn**	**03 51 38.8**	**-2.5**
CN2				pmax	pmax		
	comp=Z,800nm,4.0s						
CN2				LR	LR		
	comp=Z,10µm,18.0s						
CN2				LR	LR		
	comp=Z,29µm,18.0s						
CN2				LR	LR		
	comp=Z,13µm,16.5s						
USA0B	**Ussuriysk Arra**	**17.24**	**4**	Pn	**Pn**	**03 48 29.8**	**-0.1**
USA0B	**Ussuriysk Arra**	**17.24**	**4**	P	**Pn**	**03 48 29.8**	**-0.1**
USA0B				pmax	pmax		
	comp=Z,150nm,1.3s						
USRK	**Ussuriysk Ar.**	**17.24**	**4**	P	**Pn**	**03 48 29.3**	**-0.6**
	comp=Z,1.7nm,0.3s,baz=180,slow=9.5,SNR=41						
USRK				LR	LR	03 55 23.4	
	comp=Z,6µm,18.4s,baz=174,slow=38						
	comp=Z,94nm,1.2s						
BJT	**Baijiatuau**	**17.52**	**322**	Pn	**Pn**	**03 48 31.2**	**-2.2**
BJT				IAmb	IAmb	03 48 40.1	
	comp=Z,464nm,1.0s						
BJT	**Baijiatuau**	**17.52**	**322**	P	**Pn**	**03 48 31.2**	**-2.2**
BJT				pmax	pmax		
	comp=Z,464nm,1.0s						
BJI	**Beijing**	**17.53**	**322**	P	**Pn**	**03 48 32.5**	**-1.0**
BJI				pP	**P**	**03 48 36.0**	**+1.4**
BJI				sP	**sP**	**03 48 39.3**	**+0.2**
BJI				PP	**pwP**	**03 48 47.3**	**+2.7**
BJI				S	**Sn**	**03 51 50.8**	**+2.5**
BJI				pmax	pmax		
	comp=Z,25nm,1.3s						
BJI				pmax	pmax		
	comp=Z,1µm,3.7s						
BJI				LR	LR		
	comp=Z,14µm,13.1s						
BJI				LR	LR		
	comp=Z,8µm,13.5s						
BJI				LR	LR		
	comp=Z,14µm,13.6s						
MDJ	**Mudanjiang**	**17.61**	**358**	Pn	**Pn**	**03 48 32.3**	**-2.2**
MDJ	**Mudanjiang**	**17.61**	**358**	P	**Pn**	**03 48 33.3**	**-1.2**
MDJ				pP	pwP	03 48 43.0	-2.8
MDJ				S	**Sn**	**03 51 53.0**	**+2.7**
MDJ				pmax	pmax		
	comp=Z,2µm,8.2s						
MDJ				LR	LR		
	comp=Z,4µm,22.1s						
MDJ				LR	LR		
	comp=Z,9µm,17.2s						
MDJ				LR	LR		
	comp=Z,8µm,17.3s						
TBP	**Tagbilaran**	**18.24**	**201**	⇓*i*P	**P**	**03 48 43.6**	**+1.1**
TBP				*i* S	**S**	**03 52 17.3**	**+6.5**
ERM	**Erimo**	**18.34**	**32**	P	**P**	**03 48 42.6**	**-0.9**
ERM	**Erimo**	**18.34**	**32**	*ce*P	**P**	**03 48 43.5**	**0.0**
ERM				pmax	pmax		
	comp=Z,118nm,1.3s						
ERM				MLR	MLR		
	comp=Z,10µm,19.0s						
TIY	**Taiyuan**	**18.47**	**310**	*e*P	**P**	**03 48 44.8**	**-0.3**

TIY				S	**Sn**	**03 52 13.5**	**+2.2**
TIY				pmax	pmax		
	comp=Z,290nm,2.5s						
TIY				pmax	pmax		
	comp=Z,5µm,4.5s						
TIY				LR	LR		
	comp=Z,14µm,14.3s						
TIY				LR	LR		
	comp=Z,23µm,13.9s						
TIY				LR	LR		
	comp=Z,24µm,15.7s						
CNOP	**Candoni, Negro**	**18.53**	**204**	⇓*i*P	**Pn**	**03 48 46.1**	**+0.1**
ENH	**Enshi**	**18.55**	**285**	P	**P**	**03 48 44.1**	**-1.9**
TEY	**Ternei**	**18.72**	**14**	⇑*e*P	**Pn**	**03 48 48.5**	**+0.4**
TEY				*e*S	**Sn**	**03 52 15.8**	**-1.3**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,1µm,8.2s						
TEY				pmax	pmax		
	comp=N,900nm,8.4s						
TEY				pmax	pmax		
	comp=E,200nm,8.0s						
TEY				smax	smax		
	comp=N,2µm,17.0s						
TEY				smax	smax		
	comp=E,1µm,5.5s						
TEY				MLR	MLR		
	comp=E,3µm,13.0s						
TEY				MLR	MLR		
	comp=N,3µm,18.0s						
TEY				MLR	MLR		
	comp=Z,4µm,16.0s						
BNX	**BinXian**	**18.87**	**354**	⇓P	**P**	**03 48 48.5**	**-0.8**
BNX				pP	**pP**	**03 48 52.0**	**-0.5**
BNX				sP	**sP**	**03 48 54.3**	**+0.4**
BNX				S	**Sn**	**03 52 18.5**	**-2.1**
BNX				pmax	pmax		
	comp=Z,50nm,1.2s						
BNX				LR	LR		
	comp=Z,16µm,11.5s						
BNX				LR	LR		
	comp=Z,11µm,12.2s						
BNX				LR	LR		
	comp=Z,22µm,21.3s						
GUMO	**Guam**	**19.06**	**131**	P	**Pn**	**03 48 52.9**	**+0.5**
	comp=Z,40nm,0.3s,baz=198,slow=20,SNR=2.5						
GUMO				LR	LR	03 54 52.9	
	comp=Z,14µm,19.2s,baz=330,slow=33						
GUMO	**Guam**	**19.06**	**131**	P	**P**	**03 48 51.7**	**+0.1**
XAN	**Xi'an**	**19.69**	**296**	P	**P**	**03 48 57.5**	**-1.0**
XAN				pP	pwP	03 49 06.5	-2.0
XAN				sP	sP	03 49 09.8	+6.7
XAN				S	**S**	**03 52 35.8**	**-4.3**
XAN				pmax	pmax		
	comp=Z,520nm,1.8s						
XAN				pmax	pmax		
	comp=Z,8µm,9.0s						
XAN				LR	LR		
	comp=Z,31µm,15.8s						
XAN				LR	LR		
	comp=Z,25µm,16.5s						
XAN				LR	LR		
	comp=Z,31µm,17.9s						
ASAJ	**Asahikawa**	**19.78**	**27**	P	**P**	**03 49 00.1**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=246,slow=13,SNR=9.6						
ASAJ				LR	LR	03 56 33.7	
	comp=Z,9µm,21.0s,baz=210,slow=37						
PAGZ	**Pagadian**	**20.12**	**200**	⇓*e*P	**P**	**03 49 03.5**	**+0.3**
DAV	**Davao City (W)**	**20.30**	**194**	P	**P**	**03 49 05.4**	**+0.3**
	comp=Z,134nm,0.3s,baz=17,slow=5.0,SNR=5.2						
DAV				LR	LR	03 57 16.7	
	comp=Z,9µm,18.7s,baz=36,slow=38						
	comp=Z,134nm,0.3s						
DAV	**Davao City (W)**	**20.30**	**194**	P	**P**	**03 49 02.8**	**-2.4**
DAV				IAmb	IAmb	03 49 29.4	
	comp=Z,880nm,1.4s						
DAV	**Davao City (W)**	**20.30**	**194**	IAMs_20	IAMs_20	03 58 16.5	
	comp=Z,16µm,20.0s						
QIZ	**Qiongzhong**	**20.40**	**251**	IAmb	IAmb	03 49 15.9	
	comp=Z,374nm,1.3s						
QIZ	**Qiongzhong**	**20.40**	**251**	P	**P**	**03 49 05.3**	**-0.9**
QIZ				S	**S**	**03 52 53.5**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,4µm,6.9s						
QIZ				LR	LR		
	comp=Z,12µm,25.0s						
QIZ				LR	LR		
	comp=Z,8µm,17.2s						
QIZ				LR	LR		
	comp=Z,6µm,26.9s						
XLT	**XiLinHaoTe**	**20.42**	**329**	⇓*i*P	**P**	**03 49 05.5**	**-0.9**
XLT				pP	Pn	03 49 08.8	+0.3
XLT				sP	sP	03 49 12.0	+1.0
XLT				S	**S**	**03 52 53.3**	**-1.3**
XLT				sS	pS	03 53 03.5	-1.6
XLT				pmax	pmax		
	comp=Z,130nm,1.4s						
XLT				pmax	pmax		
	comp=Z,2µm,3.5s						
XLT				LR	LR		
	comp=Z,16µm,19.8s						
XLT				LR	LR		
	comp=Z,11µm,15.9s						
KCP	**Kidapawan**	**20.46**	**195**	⇓*i*P	**P**	**03 49 07.1**	**+0.1**
CTBH	**Cotabato--PC H**	**20.47**	**197**	*e*P	Pn	03 49 07.9	-1.2
HHC	**Hu-ho-hao-te**	**20.75**	**317**	*e*P	**P**	**03 49 08.5**	**-1.5**
HHC				S	**S**	**03 52 59.5**	**-1.6**
HHC				pmax	pmax		
	comp=Z,120nm,1.2s						
HHC				pmax	pmax		
	comp=Z,4µm,6.2s						
HHC				LR	LR		
	comp=Z,20µm,12.4s						
HHC				LR	LR		
	comp=Z,25µm,13.5s						
HHC				LR	LR		
	comp=Z,33µm,14.6s						
GYA	**Guiyang**	**21.11**	**274**	⇓*i*P	**P**	**03 49 14.0**	**0.0**
GYA				sP	sP	03 49 20.3	+1.8
GYA				S	**S**	**03 53 05.8**	**-2.7**
GYA				pmax	pmax		
	comp=Z,89nm,1.8s						
GYA				LR	LR		
	comp=Z,33µm,14.8s						
GYA				LR	LR		
	comp=Z,29µm,17.4s						
GYA				LR	LR		
	comp=Z,48µm,15.6s						
YUK	**Yuzh-Kuril'sk**	**21.16**	**32**	*d* *i*P	**P**	**03 49 14.5**	**+0.2**
YUK				*i* PPP	PPP	03 49 41.9	
YUK				*i* S	**S**	**03 53 10.1**	**+1.1**
YUK				*i* SS	**SnSn**	**03 53 33.8**	**+2.8**
YUK				*e*SSS	SSS	03 53 46.9	
YUK				pmax	pmax		
	comp=Z,150nm,0.7s						
YUK				pmax	pmax		
	comp=E,153nm,0.6s						
YUK				pmax	pmax		
	comp=N,128nm,0.7s						
YUK				pmax	pmax		
	comp=Z,869nm,1.5s						
YUK				MLR	MLR		
	comp=Z,6µm,20.0s						
YUK				MLR	MLR		
	comp=N,7µm,17.0s						
YUK				MLR	MLR		
	comp=E,3µm,17.0s						
BTO	**Baotou**	**21.58**	**314**	*e*P	**P**	**03 49 21.5**	**+2.6**
BTO				LR	LR		
	comp=E,48µm,15.6s						
BTO				LR	LR		
	comp=E,33µm,13.2s						
YSS	**Yuzh-Sakhalins**	**22.23**	**23**	P	**P**	**03 49 25.3**	**-0.4**
YSS				IAmb	IAmb	03 49 34.5	
	comp=Z,276nm,1.1s						
YSS	**Yuzh-Sakhalins**	**22.23**	**23**	*e*P	**P**	**03 49 25.9**	**+0.1**
YSS				e*SP	**pP**	**03 49 29.7**	**+0.9**
YSS				*e*		03 49 49.8	
YSS				*e*PPP	PPP	03 50 05.5	
YSS				*e*S	**S**	**03 53 24.0**	**-5.9**
YSS				*e*SSS	SSS	03 54 17.1	
YSS				pmax	pmax		
	comp=Z,80nm,1.3s						
YSS				MLR	MLR		
	comp=Z,6µm,18.0s						
YSS				MLR	MLR		
	comp=N,6µm,16.0s						
KLR	**Kul'dur**	**22.25**	**3**	P	**P**	**03 49 24.1**	**-1.8**
	comp=N,26nm,0.8s,baz=180,slow=7.7,SNR=78						
KLR				LR	LR	03 58 31.4	
	comp=N,5µm,19.3s,baz=174,slow=38						
	comp=N,26nm,0.8s						
KUR	**Kuril'sk**	**23.01**	**33**	*e*P	**P**	**03 49 34.7**	**+0.7**
KUR				*i* PPP	PPP	03 50 05.7	
KUR				*e*S	**S**	**03 53 46.8**	**+2.9**
KUR				*i* SSS	SSS	03 54 31.4	
KUR				pmax	pmax		
	comp=Z,599nm,2.8s						
KUR				pmax	pmax		
	comp=Z,5µm,4.3s						
KUR				MLR	MLR		
	comp=Z,6µm,20.0s						
KUR				MLR	MLR		
	comp=E,8µm,18.0s						
KUR				MLR	MLR		
	comp=N,2µm,17.0s						
CD2	**Chengdu**	**23.52**	**286**	P	**P**	**03 49 35.3**	**-4.1**
CD2				sP	sP	03 49 44.5	+0.6
CD2				S	**S**	**03 53 48.0**	**-4.8**
CD2				sS	pS	03 53 53.8	-2.8
CD2				pmax	pmax		
	comp=N,290nm,1.0s						
CD2				pmax	pmax		
	comp=N,1µm,6.6s						
CD2				LR	LR		
	comp=N,3µm,18.1s						
CD2				LR	LR		
	comp=N,19µm,13.2s						
CD2				LR	LR		
	comp=N,21µm,11.8s						
SGSI	**Sangihe**	**23.60**	**192**	P	**P**	**03 49 38.7**	**-1.5**
	comp=N,5µmcomp=N,555nm,1.0s						
HIA	**Hailar**	**23.70**	**343**	P	**P**	**03 49 41.8**	**+0.9**
HIA				IAmb	IAmb	03 49 46.5	
	comp=Z,163nm,1.3s						
HIA	**Hailar**	**23.70**	**343**	*d* *i*P	**P**	**03 49 42.0**	**+1.1**
HIA				pmax	pmax		
	comp=Z,172nm,1.4s						
UGL	**Uglegorsk**	**23.88**	**19**	*c* *i*P	**P**	**03 49 44.6**	**+2.1**
UGL				*e*S	**S**	**03 54 03.0**	**+5.1**
UGL				pmax	pmax		
	comp=Z,5µm,4.0s						
UGL				pmax	pmax		
	comp=Z,230nm,1.5s						
UGL				smax	smax		
	comp=E,4µm,6.0s						
UGL				smax	smax		
	comp=N,2µm,5.0s						
GRNR	**Gornyy**	**24.22**	**10**	⇓*i*P	**P**	**03 49 45.7**	**0.0**
GRNR				MLR	MLR		
	comp=N,3µm,15.0s						
GRNR				MLR	MLR		
	comp=E,2µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,15.0s						
LZH	**Lanzhou**	**24.24**	**299**	*e*P	**P**	**03 49 45.5**	**-0.8**
LZH				sP	sP	03 49 52.5	+1.4
LZH				S	**S**	**03 53 58.0**	**-6.4**
LZH				SS	**SnSn**	**03 54 54.0**	**+7.2**
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,2µm,4.9s						
LZH				LR	LR		
	comp=Z,28µm,13.3s						
LZH				LR	LR		
	comp=Z,10µm,12.2s						
LZH				LR	LR		
	comp=Z,15µm,15.7s						
MYLDM	**Lahad Datu**	**24.42**	**209**	IAMs_20	IAMs_20	03 56 02.9	
	comp=Z,10µm,20.0s						
KMI	**Kunming**	**24.80**	**272**	⇑P	**P**	**03 49 51.5**	**-0.1**
KMI				pP	pP	03 49 54.0	-0.8
KMI				S	**S**	**03 54 09.5**	**-4.2**
KMI				pmax	pmax		
	comp=Z,48nm,1.5s						
KMI				pmax	pmax		
	comp=Z,2µm,6.4s						
KMI				LR	LR		
	comp=Z,16µm,12.2s						
KMI				LR	LR		
	comp=Z,25µm,15.2s						
KMI				LR	LR		
	comp=Z,29µm,15.8s						
PZH	**PanZhiHua**	**25.48**	**275**	P	**P**	**03 49 56.3**	**-1.3**
PZH				pP	**pP**	**03 49 59.5**	**-1.3**
PZH				sP	**sP**	**03 50 03.3**	**+1.2**
PZH				PP	**PnPn**	**03 50 39.3**	**+6.3**
PZH				S	**S**	**03 54 22.3**	**-2.0**
PZH				sS	**pS**	**03 54 28.5**	**+0.5**
PZH				SS		03 55 22.0	
PZH				pmax	pmax		
	comp=Z,120nm,1.4s						
PZH				pmax	pmax		
	comp=Z,2µm,4.6s						
PZH				LR	LR		
	comp=Z,28µm,16.9s						
PZH				LR	LR		
	comp=Z,17µm,16.6s						
PZH				LR	LR		
	comp=Z,28µm,17.4s						
TYV	**Tymovskoe**	**25.65**	**18**	*e*P	**P**	**03 49 58.8**	**+0.1**
TYV				*e*S	**S**	**03 54 30.2**	**+4.0**
TYV				pmax	pmax		
	comp=Z,200nm,3.3s						
TYV				pmax	pmax		
	comp=Z,15nm,1.0s						
TYV				smax	smax		
	comp=N,500nm,4.2s						
TYV				smax	smax		
	comp=E,600nm,4.2s						
TYV				MLR	MLR		
	comp=N,3µm,20.0s						
TYV				MLR	MLR		
	comp=Z,4µm,20.0s						
SPMM	**Sapulut**	**25.78**	**213**	P	**P**	**03 50 02.0**	**+1.8**
TNTI	**Ternate**	**26.21**	**187**	P	**P**	**03 50 03.8**	**-0.2**
TNTI	**Ternate**	**26.21**	**187**	P	**P**	**03 50 03.2**	**-0.8**
	comp=Z,3µmcomp=Z,4µmcomp=Z,332nm,1.3s						
ZEA	**Zeya**	**26.83**	**356**	*e*P	**P**	**03 50 09.1**	**-0.2**
ZEA				*e*S	**S**	**03 54 40.2**	**-4.6**
ZEA				pmax	pmax		
	comp=E,200nm,3.2s						
ZEA				pmax	pmax		
	comp=N,500nm,2.5s						
ZEA				pmax	pmax		
	comp=Z,700nm,2.5s						
ZEA				pmax	pmax		
	comp=N,80nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,140nm,0.9s						
ZEA				smax	smax		
	comp=N,3µm,15.7s						
ZEA				smax	smax		
	comp=E,1µm,15.7s						
ZEA				MLR	MLR		
	comp=N,3µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,12.0s						
KMSI	**Cibinong**	**26.94**	**194**	P	**P**	**03 50 10.7**	**0.0**
	comp=Z,6µmcomp=Z,666nm,1.0s						
GTOI	**Gorontalo**	**27.11**	**196**	P	**P**	**03 50 10.1**	**-2.1**
	comp=Z,868nmcomp=Z,63nm,0.9s						
NKL	**Nikolayevsk**	**27.27**	**14**	*e*P	**P**	**03 50 10.0**	**-3.2**
NKL				*e*S	**S**	**03 54 49.7**	**-2.0**
NKL				pmax	pmax		
	comp=E,4.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,114nm,1.0s						
NKL				smax	smax		
	comp=E,2.0nm,1.0s						
NKL				smax	smax		
	comp=N,2.0nm,1.2s						
NKL				MLR	MLR		
	comp=N,6.0nm,13.0s						
NKL				MLR	MLR		
	comp=E,92nm,13.0s						
NKL				MLR	MLR		
	comp=Z,2µm,19.0s						
MRSI	**Marisa**	**27.54**	**198**	P	**P**	**03 50 15.8**	**-0.3**
	comp=Z,3µmcomp=Z,196nm,1.4s						
LBMI	**Labuha**	**27.59**	**186**	P	**P**	**03 50 15.3**	**-1.2**
	comp=Z,2µmcomp=Z,2µmcomp=Z,236nm,1.0s						
ULN	**Ulaanbaatar**	**27.66**	**325**	P	**P**	**03 50 15.3**	**-1.7**
ULN	**Ulaanbaatar**	**27.66**	**325**	P	**P**	**03 50 15.3**	**-1.7**
ULN				pmax	pmax		
	comp=Z,34nm,1.0s						
SWI	**Sorong**	**27.70**	**178**	P	**P**	**03 50 16.6**	**-0.8**
	comp=Z,4µmcomp=Z,1µmcomp=Z,116nm,1.1s						
SIJI	**Sorong**	**27.70**	**178**	P	**P**	**03 50 16.2**	**-1.3**
	comp=Z,44nm,0.8s,baz=355,slow=13,SNR=20						
SIJI				PcP	**PcP**	**03 53 32.8**	**-1.7**
	comp=Z,17nm,0.8s,baz=350,slow=9.1,SNR=3.0						
SIJI				LR	LR	04 00 00.8	
	comp=Z,10µm,19.4s,baz=5.0,slow=34						
	comp=Z,44nm,0.8s						
SONM	**Songino Array**	**27.97**	**324**	P	**P**	**03 50 17.6**	**-2.3**
	comp=Z,3.9nm,0.5s,baz=136,slow=11,SNR=16						
SONM				LR	LR	04 02 23.0	
	comp=Z,5µm,21.6s,baz=122,slow=38						
	comp=Z,3.9nm,0.5s						
SONM	**Songino Array**	**27.97**	**324**	P	**P**	**03 50 18.1**	**-1.7**
SONM	**Songino Array**	**27.97**	**324**	P	**P**	**03 50 18.1**	**-1.7**
SONM				pmax	pmax		
	comp=Z,34nm,0.9s						
CIT	**Chita**	**28.01**	**338**	*e*P	**P**	**03 50 18.1**	**-1.9**
CIT				*e*		03 51 10.2	
CIT				*e*		03 53 30.8	
CIT				pmax	pmax		
	comp=Z,115nm,2.1s						
GTA	**Gaotai**	**28.22**	**304**	⇑P	**P**	**03 50 20.3**	**-1.8**
GTA				pP	pP	03 50 25.5	0.0
GTA				sP	sP	03 50 28.8	+1.8
GTA				PP	**PnPn**	**03 51 13.8**	**+3.5**
GTA				S	**S**	**03 55 03.0**	**-4.4**
GTA				pmax	pmax		
	comp=Z,27nm,1.2s						
GTA				pmax	pmax		
	comp=Z,630nm,6.9s						
GTA				LR	LR		
	comp=Z,12µm,19.3s						
GTA				LR	LR		
	comp=Z,14µm,20.0s						
GTA				LR	LR		
	comp=Z,16µm,21.8s						
MPSI	**Mapaga**	**28.31**	**202**	P	**P**	**03 50 22.9**	**0.0**
	comp=Z,3µmcomp=Z,3µmcomp=Z,125nm,2.5s						
BAKI	**Biak**	**28.56**	**168**	P	**P**	**03 50 24.5**	**-0.7**
	comp=Z,3µmcomp=Z,144nm,1.2s						
LUWI	**Luwuk**	**28.78**	**196**	P	**P**	**03 50 25.7**	**-1.5**
LUWI	**Luwuk**	**28.78**	**196**	P	**P**	**03 50 25.6**	**-1.5**
	comp=Z,3µmcomp=Z,7µmcomp=Z,252nm,1.2s						
APSI	**Ampana**	**28.95**	**198**	P	**P**	**03 50 28.6**	**0.0**
	comp=Z,2µmcomp=Z,132nm,1.0s						
SANI	**Sanana**	**29.15**	**189**	P	**P**	**03 50 28.4**	**-2.0**
	comp=Z,3µmcomp=Z,227nm,0.6s						
SRPI	**Serui, Papua**	**29.25**	**168**	P	P	03 50 36.2	+4.9
FAKI	**Fak Fak**	**29.78**	**176**	P	**P**	**03 50 35.5**	**-0.5**
FAKI				IAMs_20	IAMs_20	04 01 05.7	
	comp=Z,10µm,19.0s						
FAKI	**Fak Fak**	**29.78**	**176**	P	**P**	**03 50 35.3**	**-0.7**
	comp=Z,4µmcomp=Z,5µmcomp=Z,368nm,1.3s						
SBUM	**Sibu**	**29.91**	**218**	P	**P**	**03 50 36.5**	**-0.7**
SBUM	**Sibu**	**29.91**	**218**	P	**P**	**03 50 39.0**	**+1.8**
SMPI	**Sarmi**	**29.92**	**163**	P	**P**	**03 50 37.8**	**+0.6**
	comp=Z,189nm,1.2s						
CHTO	**Chiang Mai**	**29.94**	**261**	P	**P**	**03 50 37.2**	**-0.1**
CHTO				IAmb	IAmb	03 50 54.0	
	comp=Z,116nm,1.1s						
CHTO	**Chiang Mai**	**29.94**	**261**	IAMs_20	IAMs_20	04 04 43.3	
	comp=Z,10µm,20.0s						
CHTO	**Chiang Mai**	**29.94**	**261**	P	**P**	**03 50 37.3**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,116nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,10µm,20.0s						
CM31	**Chiang Mai Arr**	**30.07**	**260**	P	**P**	**03 50 39.0**	**+0.4**
CM31	**Chiang Mai Arr**	**30.07**	**260**	P	**P**	**03 50 41.2**	**+2.6**
	SNR=10						
CM31				P	**P**	**03 50 41.2**	**+2.6**
	SNR=10						
CMAR	**Chiang Mai Arr**	**30.07**	**260**	P	**P**	**03 50 38.7**	**+0.1**
	comp=Z,4.1nm,0.5s,baz=49,slow=7.7,SNR=20						
CMAR				PcP	**PcP**	**03 53 41.1**	**+0.8**
	comp=Z,11nm,1.0s,baz=351,slow=0.4,SNR=6.4						
CMAR				LR	LR	04 04 40.5	
	comp=Z,8µm,18.2s,baz=35,slow=40						
	comp=Z,4.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.07**	**260**	P	**P**	**03 50 37.9**	**-0.7**
CMAR				PcP	**PcP**	**03 53 40.1**	**-0.3**
MSAI	**Masohi**	**30.17**	**183**	P	**P**	**03 50 40.5**	**+1.0**
	comp=Z,33nm,1.3s						
AAI	**Ambon**	**30.55**	**184**	P	**P**	**03 50 42.5**	**-0.3**
	comp=Z,3µmcomp=Z,286nm,1.5s						
KMPI	**Kaimana, Papua**	**30.64**	**173**	P	**P**	**03 50 44.7**	**+1.2**
	comp=Z,2µmcomp=Z,2µmcomp=Z,114nm,1.3s						
SKR	**Severo-Kuril’s**	**30.78**	**33**	*i* P	**P**	**03 50 44.0**	**-0.5**
GENI	**Genyem**	**30.91**	**161**	P	**P**	**03 50 49.6**	**+3.7**
	comp=Z,5µmcomp=Z,130nm,0.4s						
ZAK	**Zakamensk**	**31.17**	**326**	*e*P	**P**	**03 50 45.3**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
GOMU	**GeErMu**	**31.44**	**296**	P	**P**	**03 50 49.5**	**-1.5**
GOMU				pP	pP	03 50 53.5	-0.9
GOMU				sP	sP	03 50 57.5	+1.6
GOMU				S	**S**	**03 55 50.0**	**-8.5**
GOMU				pmax	pmax		
	comp=Z,19nm,0.9s						
GOMU				LR	LR		
	comp=Z,5µm,17.2s						
GOMU				LR	LR		
	comp=Z,4µm,17.2s						
GOMU				LR	LR		
	comp=Z,5µm,17.8s						
MTKI	**Muara Teweh, K**	**31.47**	**211**	P	**P**	**03 50 46.4**	**-4.5**
	comp=Z,68nm,0.5s						
TTSI	**Tana Toraja**	**31.51**	**200**	P	**P**	**03 50 55.5**	**+4.2**
	comp=Z,2µmcomp=Z,37nm,1.1s						
KSM	**Kuching**	**31.79**	**220**	P	**P**	**03 50 53.7**	**-0.1**
KSM				IAmb	IAmb	03 50 58.2	
	comp=Z,224nm,1.4s						
KSM	**Kuching**	**31.79**	**220**	P	**P**	**03 50 55.0**	**+1.2**
IRK	**Irkutsk**	**31.90**	**329**	*e*P	**P**	**03 50 52.2**	**-2.2**
IRK				pmax	pmax		
	comp=Z,62nm,1.7s						
SPSI	**Sidrap Palu**	**32.40**	**200**	P	**P**	**03 51 01.1**	**+2.1**
	comp=Z,1µmcomp=Z,38nm,1.2s						
BNSI	**Bone**	**32.71**	**199**	P	**P**	**03 51 04.3**	**+2.5**
	comp=Z,1µmcomp=Z,66nm,2.5s						
BOD	**Bodaibo**	**32.90**	**344**	*e*P	**P**	**03 51 02.7**	**-0.4**
BOD				pmax	pmax		
	comp=Z,53nm,2.0s						
MOY	**Mondy**	**33.10**	**326**	*e*P	**P**	**03 51 03.2**	**-1.8**
MOY				pmax	pmax		
	comp=Z,30nm,1.8s						
PEA0B	**Petropavlovsk-**	**33.11**	**31**	P	**P**	**03 51 05.2**	**+0.2**
PEA0B				IAmb	IAmb	03 51 25.1	
	comp=Z,115nm,1.4s						
PEA0B	**Petropavlovsk-**	**33.11**	**31**	*ce*P	**P**	**03 51 05.7**	**+0.7**
PETK	**Petropavlovsk-**	**33.11**	**31**	P	**P**	**03 51 02.7**	**-2.3**
	comp=Z,12nm,0.9s,baz=209,slow=20,SNR=21						
PETK				LR	LR	04 04 55.5	
	comp=Z,3µm,18.1s,baz=224,slow=37						
PETK	**Petropavlovsk-**	**33.11**	**31**	P	**P**	**03 51 04.3**	**-0.6**
PETK	**Petropavlovsk-**	**33.11**	**31**	P	**P**	**03 51 04.4**	**-0.6**
BBSI	**Bau Bau**	**33.13**	**194**	P	**P**	**03 51 08.7**	**+3.3**
	comp=Z,29nm,1.1s						
PATS	**Pohnpei**	**33.32**	**122**	IAMs_20	IAMs_20	04 04 10.2	
	comp=Z,7µm,19.0s						
KAPI	**Kappang**	**33.40**	**199**	LR	LR	04 05 43.2	
	comp=Z,1µm,19.2s,baz=30,slow=38						
KAPI	**Kappang**	**33.40**	**199**	P	**P**	**03 51 07.0**	**-0.8**
KAPI	**Kappang**	**33.40**	**199**	P	**P**	**03 51 07.0**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,30nm,0.9s						
KAPI				MLR	MLR		
	comp=Z,4µm,21.0s						
PET	**Petropavlovsk**	**33.49**	**31**	P	**P**	**03 51 08.6**	**+0.3**
PET				IAmb	IAmb	03 51 28.7	
	comp=Z,118nm,1.3s						
PET	**Petropavlovsk**	**33.49**	**31**	*e*P	**P**	**03 51 08.6**	**+0.3**
PET				*e*S	**S**	**03 56 27.1**	**-2.2**
PET				pmax	pmax		
	comp=Z,87nm,1.2s						
PET				pmax	pmax		

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       comp=Z,1µm,12.5s
PET                                 pmax      pmax
       comp=Z,2µm,14.9s
PET                                 MLR       MLR
       comp=Z,5µm,19.0s
PET                                 MLR       MLR
       comp=Z,4µm,19.0s
BKSI   Bulukumba          33.58 199 P         P         03 51 08.6 -0.8
       comp=Z,856nmcomp=Z,39nm,0.8s
BBKI   Banjar Baru        33.74 209 P         P         03 51 11.8 +1.0
       comp=Z,9µmcomp=Z,112nm,1.2s
WAKE   Wake Island        34.22  95 IAMs_20   IAMs_20   04 02 24.0
       comp=Z,5µm,20.0s
BSSI   Bau Bau, Buton     34.26 197 P         P         03 51 15.5 +0.2
       comp=Z,2µmcomp=Z,162nm,1.1s
SRIT   Nakonsritamara     34.32 244 IAmb      IAmb      03 51 35.1
       comp=Z,137nm,1.0s
KNGR   Kungurtug, Tuv     34.32 322 i P       P         03 51 13.6 -2.1
KNGR                                pmax      pmax
       comp=Z,15nm,1.0s
SHL    Shillong           34.38 276 P         P         03 51 15.8 -0.8
SHL    Shillong           34.38 276 P         P         03 51 15.8 -0.8
SHL                                 pmax      pmax
       comp=Z,193nm,1.1s
SHL    Shillong           34.38 276 eP        P         03 51 16.3 -0.2
SHL                                 IAmb      IAmb      03 51 20.6
       comp=Z,97nm,0.8s
SHL    Shillong           34.38 276 P         P         03 51 16.8 +0.2
       SNR=62
LSA    Lhasa              34.45 284 P         P         03 51 16.6 -0.8
LSA                                 IAMs_20   IAMs_20   04 06 41.7
       comp=Z,5µm,19.0s
LSA    Lhasa              34.45 284 P         P         03 51 16.6 -0.8
LSA                                 pmax      pmax
       comp=Z,45nm,0.8s
LSA                                 MLR       MLR
       comp=Z,5µm,19.0s
LSA    Lhasa              34.45 284 P         P         03 51 17.5 +0.1
LSA                                 LR        LR
       comp=Z,6µm,14.7s
LSA                                 LR        LR
       comp=Z,6µm,15.3s
LSA                                 LR        LR
       comp=Z,5µm,14.7s
LSA    Lhasa              34.45 284 P         P         03 51 16.9 -0.6
YAK    Yakutsk            35.05 360 LR        LR        04 06 13.9
       comp=Z,3µm,19.1s,baz=176,slow=37
YAK    Yakutsk            35.05 360 P         P         03 51 21.0 -0.7
YAK    Yakutsk            35.05 360 eP        P         03 51 20.6 -1.1
YAK                                 e                   03 52 37.4
YAK                                 e                   03 53 53.6
YAK                                 eS        S         03 56 53.2 +0.1
YAK                                 e*SS      sS        03 57 00.5 +1.9
YAK                                 eSS       SS        03 59 11.3  -14
YAK                                 e                   04 01 38.3
YAK                                 pmax      pmax
       comp=Z,114nm,1.3s
YAK                                 pmax      pmax
       comp=E,14nm,1.3s
YAK                                 pmax      pmax
       comp=N,94nm,1.4s
YAK                                 pmax      pmax
       comp=Z,122nm,2.2s
YAK                                 pmax      pmax
       comp=N,84nm,2.4s
YAK                                 smax      smax
       comp=E,1µm,3.9s
YAK                                 smax      smax
       comp=N,398nm,3.2s
YAK                                 MLR       MLR
       comp=Z,4µm,17.0s
YAK                                 MLR       MLR
       comp=E,2µm,13.0s
YAK                                 MLR       MLR
       comp=N,3µm,15.0s
MA2    Magadan            35.52  18 P         P         03 51 25.6 -0.1
       comp=N,30nm,0.8s,baz=202,slow=6.4,SNR=7.5
MA2                                 LR        LR        04 07 18.7
       comp=N,2µm,18.0s,baz=210,slow=39
       comp=N,30nm,0.8s
MA2    Magadan            35.52  18 P         P         03 51 26.1 +0.3
MA2    Magadan            35.52  18 P         P         03 51 26.1 +0.3
MA2                                 pmax      pmax
       comp=Z,44nm,0.9s
MA2                                 MLR       MLR
       comp=Z,3µm,18.0s
KULM   Kulim              35.54 238 P         P         03 51 24.6 -1.8
KULM                                IAmb      IAmb      03 51 31.3
       comp=Z,106nm,1.3s
KULM                                IAMs_20   IAMs_20   04 05 24.3
       comp=Z,5µm,19.0s
KULM   Kulim              35.54 238 P         P         03 51 29.0 +2.6
MYKOM  Kota Tinggi        35.64 230 P         P         03 51 26.6 -0.6
MYKOM                               IAmb      IAmb      03 51 32.9
       comp=Z,162nm,1.4s
MYKOM                               IAMs_20   IAMs_20   04 06 32.4
       comp=Z,5µm,19.0s
MYKOM  Kota Tinggi        35.64 230 P         P         03 51 30.0 +2.7
IPM    Ipoh               35.79 236 IAmb      IAmb      03 51 32.7
       comp=Z,158nm,1.4s
IPM    Ipoh               35.79 236 P         P         03 51 30.0 +1.4
MMRI   Maumere            36.25 194 P         P         03 51 31.3 -1.1
MMRI   Maumere            36.25 194 P         P         03 51 31.7 -0.7
       comp=Z,2µmcomp=Z,4µmcomp=Z,320nm,1.3s
EDFI   Ende, Flores       36.48 194 P         P         03 51 32.2 -2.3
       comp=Z,1µmcomp=Z,65nm,0.9s
TPI    Tanjungpandan      36.76 220 P         P         03 51 39.9 +3.1
       comp=Z,46nm,1.2s
DSRI   Dabo               36.84 226 P         P         03 51 41.4 +3.8
       comp=Z,54nm,1.2s
RABL   Rabaul             37.51 142 P         P         03 51 42.3 -0.9
BATI   Baumata            37.52 191 LR        LR        04 06 10.6
       comp=Z,2µm,21.0s,baz=14,slow=35
BATI   Baumata            37.52 191 P         P         03 51 40.9 -2.3
       comp=Z,3µmcomp=Z,330nm,0.7s
KRVT   Keravat (AS076     37.53 143 P         P         03 51 43.6 +0.2
       comp=Z,212nm,0.8s,baz=195,slow=4.9,SNR=11
KRVT                                LR        LR        04 05 54.7
       comp=Z,2µm,18.3s,baz=113,slow=34
       comp=Z,212nm,0.8s
PLAI   Plampang           37.60 201 P         P         03 51 43.9 -0.1
       comp=Z,3µmcomp=Z,4µmcomp=Z,210nm,2.1s
WMQ    Urumqi             38.11 307 eP        P         03 51 49.3 +1.2
WMQ                                 pP        pP        03 51 51.5 -0.1
WMQ                                 PP        PnPn      03 53 19.0 +2.3
WMQ                                 S         S         03 57 43.3 +2.9
WMQ                                 pmax      pmax
       comp=Z,52nm,1.1s
WMQ                                 pmax      pmax
       comp=Z,640nm,4.1s
WMQ                                 LR        LR
       comp=Z,10µm,14.7s
WMQ                                 LR        LR
       comp=Z,6µm,15.5s
WMQ                                 LR        LR
       comp=Z,6µm,19.7s
JMBI   JAMBI              38.32 226 P         P         03 51 55.3 +5.2
       comp=Z,174nm,0.4s
PSI    Prapat             38.46 237 P         P         03 51 51.3 -0.1
       comp=Z,40nm,1.1s,baz=45,slow=4.0,SNR=10
PSI                                 PcP       PcP       03 54 05.8 +1.3
       comp=Z,39nm,1.0s,baz=0.7,slow=1.9,SNR=6.2
       comp=Z,40nm,1.1s
JAGI   Jajag, Banyuwa     38.56 206 IAmb      IAmb      03 51 54.9
       comp=Z,127nm,1.3s
JAGI   Jajag, Banyuwa     38.56 206 P         P         03 51 54.1 +2.1
       comp=Z,50nm,1.5s
BKNI   Bangkinang         38.63 232 P         P         03 51 55.5 +2.8
       comp=Z,3µmcomp=Z,4µmcomp=Z,225nm,1.5s
SEY    Seymchan           38.78  16 LR        LR        04 09 27.3
       comp=Z,2µm,18.5s,baz=210,slow=39
SEY    Seymchan           38.78  16ceP        P         03 51 52.6 -0.8
SEY                                 pmax      pmax
       comp=Z,128nm,2.3s
SEY                                 MLR       MLR
       comp=Z,3µm,23.0s
KCSI   Kotacane, Aceh     38.86 239 P         P         03 51 56.4 +1.7
       comp=Z,1µmcomp=Z,44nm,1.2s
SMRI   Semarang           38.91 212 P         P         03 51 54.5 -0.5
SMRI                                IAmb      IAmb      03 51 58.7
       comp=Z,344nm,1.4s
SMRI   Semarang           38.91 212 P         P         03 51 59.1 +4.1
       comp=Z,192nm,1.2s
PWJI   Pagerwojo          39.14 210 P         P         03 51 57.6 +0.7
       comp=Z,151nm,1.2s
MNSI   Mandailing Nat     39.34 234 P         P         03 52 00.3 +1.7
       comp=Z,6µmcomp=Z,58nm,0.7s
WOJI   Wonogiri, Jawa     39.37 211 P         P         03 52 00.2 +1.4
       comp=Z,171nm,1.6s
MTN    Manton Dam         39.59 179 P         P         03 51 59.2 -1.4
MTN                                 IAmb      IAmb      03 52 03.0
       comp=Z,194nm,0.7s
MTN                                 PcP       PcP       03 54 08.3 +0.5
UGM    Wanagama           39.62 212 P         P         03 52 02.7 +1.7
       comp=Z,565nm,1.1s
YOGI   Yogyakarta         39.65 212 P         P         03 52 05.2 +4.0
       comp=Z,8µmcomp=Z,562nm,1.6s
PMG    Port Moresby       39.70 153 P         P         03 52 00.8 -0.7
       comp=Z,84nm,0.9s,baz=13,slow=13,SNR=15
PMG                                 LR        LR        04 06 20.5
       comp=Z,6µm,21.0s,baz=316,slow=33
       comp=Z,84nm,0.9s
PMG    Port Moresby       39.70 153 P         P         03 52 01.3 -0.2
PMG                                 IAmb      IAmb      03 52 05.5
       comp=Z,149nm,1.1s
PMG    Port Moresby       39.70 153 P         P         03 52 01.3 -0.2
PMG                                 pmax      pmax
       comp=Z,149nm,1.1s
KLI    Kotabumi           40.09 222 P         P         03 52 07.6 +2.8
       comp=Z,216nm,0.5s
BOK    Bokaro             40.09 276 eP        P         03 52 05.2 +0.4
BOK                                 IAmb      IAmb      03 52 11.3
       comp=Z,87nm,0.6s
KRJI   Kerinci            40.10 228 P         P         03 52 08.8 +3.8
       comp=Z,44µmcomp=Z,230nm,0.5s
LEM    Lembang            40.15 216 P         P         03 52 06.0 +0.5
       comp=Z,132nm,0.8s,baz=23,slow=7.6,SNR=19
       comp=Z,132nm,0.8s
LEM    Lembang            40.15 216 P         P         03 52 06.0 +0.5
MDSI   Maura Dua          40.19 223 P         P         03 52 06.3 +0.6
       comp=Z,2µmcomp=Z,1µmcomp=Z,80nm,1.3s
SBJI   Serang             40.37 219 P         P         03 52 09.9 +2.8
       comp=Z,6µmcomp=Z,429nm,1.2s
DBJI   Dramaga            40.38 218 P         P         03 52 08.8 +1.5
       comp=Z,303nm,1.4s
GSI    Gunungsitoli       40.46 236 P         P         03 52 07.6 -0.3
GSI    Gunungsitoli       40.46 236 P         P         03 52 09.0 +1.0
       comp=Z,4µmcomp=Z,212nm,1.6s
LWLI   Liwa               40.69 222 P         P         03 52 18.8 +8.9
KASI   Kota Agung         40.83 221 P         P         03 52 12.5 +1.6
       comp=Z,1µmcomp=Z,58nm,1.2s
ZSN    Zaisan             40.84 312 eP        P         03 52 09.2 -1.6
ZSN                                 eS        S         03 58 21.0 -0.3
ZSN    Zaisan             40.84 312 eP        P         03 52 09.2 -1.6
       baz=312
ZSN                                 eS        S         03 58 21.0 -0.3
       baz=312
VLK    Valmikinagar       41.12 281 eP        P         03 52 12.7 -0.6
BWNR   Bhubaneshwar       41.13 270 eP        P         03 52 13.7 +0.2
SHEM   Shemya Is, Ala     41.42  40 P         P         03 52 15.4  0.0
       comp=Z,41nm,0.8s,baz=6.3,slow=5.4,SNR=3.7
       comp=Z,41nm,0.8s
VAR    Varanasi           42.28 279 eP        P         03 52 23.2 +0.4
KNRA   Kununurra          42.42 182 P         P         03 52 23.4 -0.5
MK31   Makanchi Array     42.43 311 P         P         03 52 22.4 -1.4
MK31   Makanchi Array     42.43 311 P         P         03 52 22.4 -1.4
MK31                                pmax      pmax
       comp=Z,28nm,1.0s
MKAR   Makanchi Array     42.43 311 P         P         03 52 22.4 -1.5
       comp=Z,20nm,0.7s,baz=95,slow=10,SNR=69
MKAR                                PcP       PcP       03 54 18.7 +2.0
       comp=Z,11nm,0.9s,baz=119,slow=5.3,SNR=2.5
MKAR                                LR        LR        04 11 06.9
       comp=Z,2µm,21.1s,baz=118,slow=38
       comp=Z,20nm,0.7s
JHSG   JHARSUGUGA         42.51 273 eP        P         03 52 24.4 -0.3
JHSG                                i x       x         03 54 03.8
COEN   Coen               42.57 161 P         P         03 52 25.5 +0.3
COEN                                IAmb      IAmb      03 52 30.6
       comp=Z,115nm,0.8s
MAKZ   Makanchi           42.64 311 P         P         03 52 24.3 -1.2
MAKZ                                IAMs_20   IAMs_20   04 13 20.2
       comp=Z,3µm,18.0s
MAKZ   Makanchi           42.64 311 P         P         03 52 24.3 -1.2
MAKZ                                pmax      pmax
       comp=Z,77nm,1.3s
MAKZ                                MLR       MLR
       comp=Z,3µm,18.0s
ZALV   Zalesovo Beam      42.79 322 P         P         03 52 24.5 -2.0
       comp=Z,22nm,0.7s,baz=108,slow=9.3,SNR=50
ZALV                                PcP       PcP       03 54 19.7 +2.0
       comp=Z,17nm,1.0s,baz=116,slow=3.4,SNR=4.8
ZALV                                LR        LR        04 10 21.0
       comp=Z,3µm,18.7s,baz=117,slow=36
       comp=Z,22nm,0.7s
ZALV   Zalesovo Beam      42.79 322 P         P         03 52 24.6 -2.0
ZALV                                PcP       PcP       03 54 18.4 +0.7
ZALV   Zalesovo Beam      42.79 322 P         P         03 52 24.6 -2.0
ZALV                                                    03 54 18.4
ALBI   Allahabad          43.34 279 eP        P         03 52 30.4 -1.0
BLSP   Bilaspur           43.86 275 eP        P         03 52 35.2 -0.6
LGTI   Lohaghat           43.90 285 eP        P         03 52 36.1 +0.3
PTH    Pithoragarh        43.91 286 eP        P         03 52 34.9 -1.3
PDGK   Podgornoye         43.94 305 P         P         03 52 34.0 -2.2
UZB    Uzynbulak          44.26 305 eP        P         03 52 37.7 -1.1
UZB                                 eS        S         03 59 12.0 -0.1
UZB                                 pmax      pmax
       comp=Z,57nm,1.7s
UZB    Uzynbulak          44.26 305 eP        P         03 52 37.7 -1.1
       comp=Z,57nm,1.7s,baz=305
UZB                                 eS        S         03 59 12.0 -0.1
       baz=305
SEM    Semipalatinsk      44.48 316 eP        P         03 52 38.7 -1.8
SEM                                 eS        S         03 59 14.6 -0.5
SEM                                 MLR       MLR
       comp=Z,3µm,14.0s
SEM    Semipalatinsk      44.48 316 eP        P         03 52 38.8 -1.8
       baz=316
SEM                                 eS        S         03 59 14.7 -0.5
       baz=316
SEM                                 LR        LR        04 11 23.2
       comp=Z,3µm,13.6s,baz=316
KPKS   Kokpek             44.53 306 eP        P         03 52 39.6 -1.3
KPKS                                i S       S         03 59 15.2 -0.6
KPKS                                pmax      pmax
       comp=Z,71nm,2.1s
KPKS   Kokpek             44.53 306 eP        P         03 52 39.6 -1.3
       comp=Z,71nm,2.1s,baz=306
KPKS                                i S       S         03 59 15.3 -0.6
       baz=306
ZHN    Zhinishke          44.69 305 eP        P         03 52 41.2 -1.0
ZHN                                 eS        S         03 59 18.3 +0.1
ZHN    Zhinishke          44.69 305 eP        P         03 52 41.3 -1.0
       baz=305
ZHN                                 eS        S         03 59 18.4 +0.1
       baz=305
TIXI   Tiksi              44.72 359 LR        LR        04 12 39.2
       comp=Z,4µm,18.1s,baz=180,slow=38
TIXI   Tiksi              44.72 359 P         P         03 52 41.2 -0.6
TIXI                                IAMs_20   IAMs_20   04 12 19.6
       comp=Z,4µm,19.0s
TIXI   Tiksi              44.72 359ceP        P         03 52 41.9 +0.1
TIXI                                pmax      pmax
       comp=Z,205nm,2.5s
TIXI                                MLR       MLR
       comp=Z,4µm,18.0s
TDK    Taldyqorghan       44.86 308 eP        P         03 52 42.9 -0.5
TDK                                 eS        S         03 59 20.6 +0.1
TDK                                 pmax      pmax
       comp=Z,61nm,1.2s
TDK                                 MLR       MLR
       comp=Z,4µm,13.0s
TDK    Taldyqorghan       44.86 308 eP        P         03 52 43.0 -0.5
       comp=Z,61nm,1.2s,baz=308
TDK                                 eS        S         03 59 20.6 +0.1
       baz=308
TDK                                 LR        LR        04 11 52.7
       comp=Z,4µm,12.8s,baz=308
TARG   Taragay, Kyrgy     45.09 303 IAmb      IAmb      03 53 04.6
       comp=Z,98nm,1.1s
KURK   Kurchatov          45.56 316 P         P         03 52 47.5 -1.4
KURK                                IAmb      IAmb      03 53 01.9
       comp=Z,52nm,1.0s
KURK   Kurchatov          45.56 316 IAMs_20   IAMs_20   04 12 33.5
       comp=Z,8µm,21.0s
KURK   Kurchatov          45.56 316 P         P         03 52 47.6 -1.2
KURBB  Kurchatov Arra     45.60 316 P         P         03 52 47.6 -1.5
       comp=Z,20nm,0.8s,baz=102,slow=8.5,SNR=75
       comp=Z,20nm,0.8s
KURBB  Kurchatov Arra     45.60 316 P         P         03 52 47.8 -1.3
MDOK   Medeo              45.71 305 eP        P         03 52 49.6 -0.7
MDOK                                i S       S         03 59 33.3 +0.4
MDOK                                MLR       MLR
       comp=Z,4µm,14.0s
MDOK   Medeo              45.71 305 eP        P         03 52 49.7 -0.7
       baz=305
MDOK                                i S       S         03 59 33.4 +0.4
       baz=305
MDOK                                LR        LR        04 14 47.8
       comp=Z,4µm,14.2s,baz=305
TNSS   Tian-Shan          45.77 305 eP        P         03 52 50.8 -0.4
TNSS   Tian-Shan          45.77 305 eP        P         03 52 50.8 -0.4
       baz=305
CHKK   Chushkaly          45.79 306 eP        P         03 52 49.9 -0.9
CHKK   Chushkaly          45.79 306 eP        P         03 52 50.0 -0.9
       baz=306
AAA    Alma-Ata           45.81 305 eP        P         03 52 50.9 -0.1
AAA                                 eS        S         03 59 35.2 +1.0
AAA    Alma-Ata           45.81 305 eP        P         03 52 51.0 -0.1
       baz=305
AAA                                 eS        S         03 59 35.2 +1.0
       baz=305
MIDW   Midway             46.10  76 P         P         03 52 53.0 -0.4
MIDW                                IAmb      IAmb      03 52 58.1
       comp=Z,92nm,0.8s
JHNI   Jhansi             46.18 280 eP        P         03 52 50.8 -3.4
KUU    Kurty              46.26 306 i P       P         03 52 53.9 -0.6
KUU                                 eS        S         03 59 41.1 +0.5
KUU                                 pmax      pmax
       comp=Z,65nm,1.8s
KUU                                 MLR       MLR
       comp=Z,2µm,13.0s
KUU    Kurty              46.26 306 i P       P         03 52 54.0 -0.6
       comp=Z,65nm,1.8s,baz=306
KUU                                 eS        S         03 59 41.2 +0.5
       baz=306
KUU                                 LR        LR        04 15 18.2
       comp=Z,2µm,13.2s,baz=306
SMLA   Simla              46.26 288 eP        P         03 52 54.0 -0.7
SMLA                                IAmb      IAmb      03 52 58.1
       comp=Z,135nm,1.0s
ULHL   Ulahol             46.27 304 P         P         03 52 58.8 +3.9
       SNR=15
BILL   Bilibino           46.39  18 P         P         03 52 54.6 -0.6
BILL                                IAmb      IAmb      03 52 59.9
       comp=Z,105nm,1.2s
BILL   Bilibino           46.39  18c iP       P         03 52 54.8 -0.4
BILL                                e*SP      pwP       03 53 03.8 -1.8
BILL                                e                   03 54 33.6
BILL                                ePPP      PPP       03 55 23.7
BILL                                i S       S         03 59 41.7 -0.1
BILL                                i                   03 59 49.3
BILL                                pmax      pmax
       comp=Z,118nm,1.3s
BILL                                MLR       MLR
       comp=Z,2µm,21.0s
KSH    Kashi              46.48 300 P         P         03 52 59.5 +3.1
KSH                                 PP        PP        03 54 49.5 +3.9
KSH                                 PcS       PcS       03 58 30.0 +4.3
KSH                                 S         S         03 59 51.8 +7.7
KSH                                 SS        SS        04 03 07.0 -2.9
KSH                                 pmax      pmax
       comp=Z,36nm,1.7s
KSH                                 pmax      pmax
       comp=Z,560nm,3.5s
KSH                                 LR        LR
       comp=Z,5µm,14.8s
KSH                                 LR        LR
       comp=Z,3µm,13.7s
KSH                                 LR        LR
       comp=Z,12µm,16.5s
BOOM   Boomskoye usch     46.50 304 P         P         03 52 56.1 -0.5
BOOM   Boomskoye usch     46.50 304 P         P         03 52 56.1 -0.5
BOOM                                pmax      pmax
       comp=Z,37nm,1.5s
AYAN   Aya Nagar          46.76 285 eP        P         03 52 57.5 -1.1
TKM2   Tokmak 2           46.76 305 P         P         03 52 58.8  0.0
       SNR=24
TKM2   Tokmak 2           46.76 305 i P       P         03 52 58.3 -0.4
TKM2                                pmax      pmax
       comp=Z,64nm,1.2s
WRAB   Tennant Creek      46.80 175 P         P         03 52 58.5 -0.4
WRAB   Tennant Creek      46.80 175 IAMs_20   IAMs_20   04 16 05.9
       comp=Z,4µm,20.0s
WRAB   Tennant Creek      46.80 175 P         P         03 52 58.5 -0.4
WRAB                                pmax      pmax
       comp=Z,165nm,0.7s
WRAB                                MLR       MLR
       comp=Z,4µm,20.0s
WRA    Warramunga Arr     46.81 175 P         P         03 52 58.3 -0.6
       comp=Z,99nm,0.5s,baz=354,slow=8.5,SNR=377
WRA                                 S         S         03 59 46.0 -2.7
       comp=Z,6.0nm,1.2s,baz=349,slow=14,SNR=10.0
       comp=Z,99nm,0.5s
WB2    Warramunga Arr     46.81 175 P         P         03 52 58.5 -0.5
SONA   Sohna              46.84 284 eP        P         03 52 58.7 -0.5
BHK    Bhakra             46.85 289 eP        P         03 52 58.8 -0.5
VJD    Vijayawada         47.01 268 eP        P         03 53 03.9 +3.2
KBK    Karagaybulak       47.23 304 P         P         03 53 02.6 +0.3
       SNR=7.1
THN    Thein Dam          47.29 290 eP        P         03 53 01.4 -1.2
CHMS   Chumysh            47.38 305 P         P         03 53 07.2 +3.9
       SNR=8.3
CHMS   Chumysh            47.38 305 i P       P         03 53 02.9 -0.5
CHMS                                pmax      pmax
       comp=Z,57nm,2.0s
UCH    Uchtor             47.55 304 P         P         03 53 05.8 +0.7
       SNR=28
AAK    Ala-Archa          47.57 304 P         P         03 53 05.8 +0.9
       SNR=9.1
AAK    Ala-Archa          47.57 304 LR        LR        04 17 27.0
       comp=Z,5µm,18.3s,baz=94,slow=42
AAK    Ala-Archa          47.57 304 P         P         03 53 04.6 -0.3
AAK    Ala-Archa          47.57 304 IAMs_20   IAMs_20   04 14 04.9
       comp=Z,4µm,19.0s
AAK    Ala-Archa          47.57 304ceP        P         03 53 04.7 -0.3
AAK                                 pmax      pmax
       comp=Z,58nm,2.5s
AAK    Ala-Archa          47.57 304 i P       P         03 53 03.8 -1.2
       SNR=9.8
USP    Ospenovka          47.57 305 P         P         03 53 06.0 +1.2
       SNR=5.1
BHPL   Bhopal             47.73 278 eP        P         03 53 05.5 -0.9
BHPL                                IAmb      IAmb      03 53 09.9
       comp=Z,187nm,1.6s
JMU    Jammu              47.93 291 eP        P         03 53 08.0 +0.3
BTLS   Baital             47.95 307c iP       P         03 53 06.9 -0.7
BTLS                                i S       S         04 00 04.8 +0.2
BTLS                                pmax      pmax
       comp=Z,57nm,1.7s
BTLS   Baital             47.95 307⇑iP        P         03 53 07.0 -0.7
       comp=Z,57nm,1.7s,baz=307
BTLS                                i S       S         04 00 04.9 +0.2
       baz=307
KHET   Khetri             47.98 285 eP        P         03 53 07.2 -1.0
EKS2   Erkin-Say          48.10 304 P         P         03 53 12.9 +3.9
       SNR=8.9
AML    Almayashu          48.16 304 i P       P         03 53 09.7 -0.1
       SNR=15
TARA   Tarawa             48.17 115 IAMs_20   IAMs_20   04 13 14.9
       comp=Z,6µm,21.0s
HYB    Hyderabad          48.56 270 eP        P         03 53 13.9 +1.2
HYB                                 IAmb      IAmb      03 53 16.7
       comp=Z,197nm,1.8s
HYBB   Hyderabad (bro     48.56 270 eP        P         03 53 12.0 -0.8
HYBB                                IVmB_BB             03 53 19.7
       comp=Z,638nm,2.4s
HYBB                                eS        S         04 00 13.9 -0.1
HYBB                                IVMs_BB   IVMs_BB   04 19 44.1
       comp=Z,1µm,13.4s
HYBB   Hyderabad (bro     48.56 270 IVmB_BB             03 53 19.8
       comp=Z,638nm,2.4s
HYBB   Hyderabad (bro     48.56 270 eP        P         03 53 15.4 +2.7
AKL    Akola              48.84 275 eP        P         03 53 15.0 +0.1
MBWA   Marble Bar         48.93 193 P         P         03 53 14.9 -0.4
NRIK   Noril'sk           49.12 341 P         P         03 53 16.2 -0.1
       comp=Z,30nm,1.0s,baz=123,slow=8.6,SNR=33
       comp=Z,30nm,1.0s
NRIK   Noril'sk           49.12 341 P         P         03 53 15.6 -0.7
NRIK                                IAmb      IAmb      03 53 40.9
       comp=Z,73nm,1.1s
NIL    Nilore             49.16 292 P         P         03 53 15.7 -1.5
NIL    Nilore             49.16 292 P         P         03 53 15.7 -1.5
NIL                                 pmax      pmax
       comp=Z,171nm,1.2s
BRZS   Berezniki          49.22 314c iP       P         03 53 16.4 -1.0
BRZS                                i S       S         04 00 22.7 +0.3
BRZS                                pmax      pmax
       comp=Z,37nm,1.2s
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BRZS	**Berezniki**	49.22	314	⇑iP	P	03 53 16.4	-1.0
	comp=Z,37nm,1.2s,baz=314						
BRZS				i S	S	04 00 22.8	+0.3
	baz=314						
CTA	**Charters Tower**	49.28	160	P	P	03 53 18.7	+0.6
	comp=Z,248nm,0.9s,baz=338,slow=8.1,SNR=190						
	comp=Z,248nm,0.9s						
CTAO	**Charters Tower**	49.28	160	P	P	03 53 18.6	+0.6
CTAO	**Charters Tower**	49.28	160	IAMs_20	IAMs_20	04 14 37.0	
	comp=Z,6μm,18.0s						
CTAO	**Charters Tower**	49.28	160	P	P	03 53 18.6	+0.5
CTAO				pmax	pmax		
	comp=Z,327nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,6μm,18.0s						
OTUK	**Ortayu**	49.30	312	P	P	03 53 17.4	-0.6
PSA00	**Pilbara Seismi**	49.31	193	P	P	03 53 18.0	-0.3
AJM	**Ajmer**	49.35	283	eP	P	03 53 17.6	-1.1
DZA	**Taraz**	49.90	305	⇑iP	P	03 53 22.4	-0.2
DZA				eS	S	04 00 33.1	+1.0
DZA	**Taraz**	49.90	305	⇑iP	P	03 53 22.5	-0.2
	baz=305						
DZA				eS	S	04 00 33.2	+1.0
	baz=305						
LATR	**Latur**	49.99	272	eP	P	03 53 25.3	+1.7
ASAR	**Alice Springs**	50.47	176	P	P	03 53 26.9	-0.1
	comp=Z,74nm,0.6s,baz=7.0,slow=10,SNR=310						
ASAR				PcP	PcP	03 54 45.1	-0.1
	comp=Z,22nm,0.9s,baz=354,slow=3.4,SNR=4.9						
	comp=Z,74nm,0.6s						
KK31	**Karatay Array**	50.49	305	P	P	03 53 27.0	-0.2
KK31				IAmb	IAmb	03 53 31.3	
	comp=Z,92nm,1.3s						
KK31	**Karatay Array**	50.49	305	i P	P	03 53 27.6	+0.4
KKAR	**Karatay Array**	50.49	305	P	P	03 53 26.9	-0.3
KKAR	**Karatay Array**	50.49	305	P	P	03 53 26.9	-0.3
COCO	**West Island**	50.70	224	P	P	03 53 29.5	+0.6
COCO	**West Island**	50.70	224	P	P	03 53 29.5	+0.6
COCO				pmax	pmax		
	comp=Z,265nm,0.4s						
IUG	**Iuzhnay**	50.88	304	c iP	P	03 53 30.2	-0.1
IUG				eS	S	04 00 47.0	+0.9
IUG	**Iuzhnay**	50.88	304	⇑iP	P	03 53 30.2	-0.1
	baz=304						
IUG				eS	S	04 00 47.1	+0.9
	baz=304						
PALK	**Pallekele**	50.90	257	P	P	03 53 29.4	-1.2
PALK				IAmb	IAmb	03 53 41.8	
	comp=Z,137nm,1.4s						
PALK	**Pallekele**	50.90	257	IAMs_20	IAMs_20	04 14 32.6	
	comp=Z,2μm,20.0s						
PALK	**Pallekele**	50.90	257	P	P	03 53 29.4	-1.2
PALK				pmax	pmax		
	comp=Z,137nm,1.4s						
PALK				MLR	MLR		
	comp=Z,2μm,20.0s						
BRVK	**Borovoye**	51.02	318	P	P	03 53 30.3	-0.7
BRVK				IAmb	IAmb	03 53 35.6	
	comp=Z,120nm,1.1s						
BRVK	**Borovoye**	51.02	318	IAMs_20	IAMs_20	04 16 46.0	
	comp=Z,6μm,21.0s						
BRVK	**Borovoye**	51.02	318	P	P	03 53 30.4	-0.6
SPIA	**Saint Paul Isl**	51.29	37	P	P	03 53 34.6	+1.7
	baz=260						
TAS	**Tashkent**	51.48	303	P	P	03 53 34.5	-0.2
TAS				IAmb	IAmb	03 53 50.2	
	comp=Z,98nm,0.9s						
TAS	**Tashkent**	51.48	303	P	P	03 53 34.5	-0.2
TAS				pmax	pmax		
	comp=Z,98nm,0.9s						
NIKH	**Nikolski High**	51.52	42	P	P	03 53 34.9	+0.2
	baz=265						
GAMB	**Gambell**	52.10	29	P	P	03 53 38.9	+0.1
	baz=254						
GAMB				S	S	04 01 03.9	+2.0
	baz=254						
POO	**Poona**	52.37	273	eP	P	03 53 41.5	-0.1
POO				IAmb	IAmb	03 53 46.0	
	comp=Z,86nm,1.0s						
POO	**Poona**	52.37	273	⇑iP	P	03 53 40.0	-1.6
	comp=Z,190nm,1.4s						
KOD	**Kodaikanal**	52.38	262	eP	P	03 53 42.8	+0.8
KBL	**Kabul**	52.48	294	P	P	03 53 41.9	-0.5
KBL	**Kabul**	52.48	294	P	P	03 53 41.9	-0.5
KBL				pmax	pmax		
	comp=Z,417nm,1.5s						
KBL	**Kabul**	52.48	294	P	P	03 53 43.2	+0.8
	SNR=82						
KBL				P	P	03 53 43.2	+0.8
	SNR=82						
KBL				P	P	03 53 43.2	+0.8
	SNR=82						
JASL	**Jaisalmer**	52.48	284	eP	P	03 53 42.3	0.0
UNV	**Unalaska Valle**	53.00	41	P	P	03 53 43.8	-1.9
	baz=266						
PCHI	**Peechi**	53.24	263	⇓eP	P	03 53 46.3	-1.7
PCHI				eS	S	04 01 21.8	+2.9
TRD	**Trivandrum**	53.60	260	eP	P	03 53 50.9	+0.3
TRD				IAmb	IAmb	03 53 54.4	
	comp=Z,62nm,0.8s						
TNA	**Tin City**	54.14	27	P	P	03 53 54.6	+0.8
TNA				IAmb	IAmb	03 53 59.3	
	comp=Z,83nm,1.1s						
TNA	**Tin City**	54.14	27	P	P	03 53 53.8	0.0
	baz=256						
TNA				S	S	04 01 31.2	+1.6
	baz=256						
FALS	**False Pass**	54.86	40	P	P	03 53 57.3	-2.0
	baz=268						
ANM	**Nome**	54.98	28	P	P	03 54 00.8	+0.8
ANM				IAmb	IAmb	03 54 24.1	
	comp=Z,84nm,1.4s						
ANM	**Nome**	54.98	28	P	P	03 54 00.8	+0.8
ANM				pmax	pmax		
	comp=Z,84nm,1.4s						
ANM				MLR	MLR		
	comp=Z,1μm,20.0s						
ANM	**Nome**	54.98	28	P	P	03 54 00.2	+0.2
	baz=259,SNR=5.2						
ANM				S	S	04 01 44.3	+3.2
	baz=259						
SANVU	**Saraoutou**	55.34	135	P	P	03 54 03.2	+0.1
EIDS	**Eidsvold**	55.77	157	P	P	03 54 06.0	-0.1
JOHN	**Johnston Islan**	56.34	87	IAMs_20	IAMs_20	04 15 06.7	
	comp=Z,3μm,19.0s						
SDPT	**Sand Point**	56.56	40	P	P	03 54 09.2	-2.2
	baz=270						
RDOG	**Red Dog Mine**	56.62	24	IAmb	IAmb	03 54 29.9	
	comp=Z,60nm,1.2s						
RDOG				IAMs_20	IAMs_20	04 19 02.2	
	comp=Z,2μm,22.0s						
RDOG	**Red Dog Mine**	56.62	24	P	P	03 54 09.0	-2.7
	baz=259						
RDOG				S	S	04 02 02.1	-0.7
	baz=259						
SVE	**Sverdlovsk**	56.80	322	deP	P	03 54 13.3	+0.1
SVE				eS	S	04 02 04.6	-1.0
SVE				e		04 04 00.6	
SVE				pmax	pmax		
	comp=Z,119nm,1.2s						
SVE				MLR	MLR		
	comp=Z,6μm,14.0s						
CHNA	**Chernabura Isl**	57.07	40	P	P	03 54 13.7	-1.4
	baz=271						
CHNA				S	S	04 02 08.9	-0.2
	baz=271						
CNBA	**Chernabura Isl**	57.07	40	P	P	03 54 15.0	-0.1
CNBA				IAmb	IAmb	03 54 20.3	
	comp=Z,77nm,1.4s						
MNCI	**Minicoy**	57.14	262	P	P	03 54 15.0	-1.2
MORW	**Morawa**	57.38	195	IAmb	IAmb	03 54 20.9	
	comp=Z,146nm,1.5s						
FORT	**Forrest**	57.47	182	P	P	03 54 18.1	0.0
AB31	**Akbulak array**	57.48	313	i P	P	03 54 18.3	+0.2
ABKAR	**Akbulak array**	57.48	313	P	P	03 54 17.8	-0.4
KOUNC	**Koumac, New Ca**	57.59	142	P	P	03 54 19.3	+0.2
KOUNC				IAmb	IAmb	03 54 24.0	
	comp=Z,85nm,1.0s						
CHGN	**Chignik**	57.72	39	IAmb	IAmb	03 54 29.2	
	comp=Z,43nm,0.9s						
CHGN	**Chignik**	57.72	39	P	P	03 54 17.6	-1.9
	baz=271						
ARU	**Arti**	57.95	322	P	P	03 54 20.5	-0.8
ARU				IAmb	IAmb	03 54 33.9	
	comp=Z,69nm,1.0s						
ARU				IAMs_20	IAMs_20	04 21 50.3	
	comp=Z,5μm,18.0s						
ARU	**Arti**	57.95	322	c iP	P	03 54 20.8	-0.5
ARU						03 55 11.7	
ARU						03 56 29.7	
ARU				PPP	PPP	03 57 48.3	
ARU				S	S	04 02 23.2	+2.5
ARU						04 04 07.7	
ARU				SS	SS	04 06 15.7	+4.4
ARU				pmax	pmax		
	comp=Z,84nm,1.1s						
ARU				MLR	MLR		
	comp=Z,5μm,18.0s						
HRA	**Herat**	58.02	295	IAmb	IAmb	03 54 41.1	
	comp=Z,43nm,0.9s						
AKTO	**Aktyubinsk**	58.62	314	P	P	03 54 26.0	-0.1
GCSA	**Galena City Sc**	58.63	29	P	P	03 54 25.9	+0.1
	baz=267						
GCSA				S	S	04 02 32.5	+3.3
	baz=267						
TTA	**Tatalina**	58.95	31	P	P	03 54 27.9	-0.4
	baz=269						
TTA				S	S	04 02 35.5	+1.9
	baz=269						
N18K	**Kilae Creek**	58.99	33	P	P	03 54 28.7	+0.2
	baz=270,SNR=18						
N18K				S	S	04 02 35.9	+1.7
	baz=270						
A21K	**Barrow**	59.28	21	P	P	03 54 30.1	-0.2
	baz=263						
CHIR	**Chirikof Islan**	59.30	39	IAmb	IAmb	03 54 39.2	
	comp=Z,44nm,0.8s						
CHIR	**Chirikof Islan**	59.30	39	P	P	03 54 30.2	-0.5
	baz=274						
P18K	**Big Mountain,**	59.35	35	IAmb	IAmb	03 54 35.2	
	comp=Z,36nm,0.8s						
P18K	**Big Mountain,**	59.35	35	P	P	03 54 31.0	0.0
	baz=272						
P18K				S	S	04 02 40.4	+1.6
	baz=272						
LIFNC	**LIFOU**	59.45	139	IAmb	IAmb	03 54 36.4	
	comp=Z,98nm,1.0s						
L19K	**White Mountain**	59.48	32	IAmb	IAmb	03 54 52.3	
	comp=Z,44nm,1.2s						
L19K	**White Mountain**	59.48	32	P	P	03 54 32.1	+0.2
	baz=270,SNR=32						
L19K				S	S	04 02 40.7	+0.3
	baz=270						
STKA	**Stephens Creek**	59.51	169	P	P	03 54 32.3	0.0
	comp=Z,18nm,0.5s,baz=342,slow=7.2,SNR=32						
	comp=Z,18nm,0.5s						
STKA	**Stephens Creek**	59.51	169	P	P	03 54 32.1	-0.2
N19K	**Bonanza Creek**	59.68	33	P	P	03 54 33.3	-0.1
	baz=272						
N19K				S	S	04 02 46.7	+3.5
	baz=272						
M19K	**Big River Lodg**	59.70	32	P	P	03 54 34.0	+0.6
	baz=271						
M19K				S	S	04 02 47.4	+4.1
	baz=271						
BBOO	**Buckleboo**	59.71	174	P	P	03 54 33.3	-0.3
O19K	**Port Alsworth**	59.78	34	IAmb	IAmb	03 54 38.6	
	comp=Z,35nm,0.7s						
O19K	**Port Alsworth**	59.78	34	P	P	03 54 34.4	+0.6
	baz=272						
O19K				S	S	04 02 46.7	+2.4
	baz=272						
J20K	**Nowinta River**	59.80	29	IAmb	IAmb	03 54 39.7	
	comp=Z,125nm,1.2s						
J20K				IAMs_20	IAMs_20	04 20 32.7	
	comp=Z,2μm,20.0s						
J20K	**Nowinta River**	59.80	29	P	P	03 54 34.2	+0.2
	baz=270,SNR=58						
J20K				S	S	04 02 48.3	+3.9
	baz=270						
K20K	**Telida**	59.83	30	IAmb	IAmb	03 54 40.1	
	comp=Z,98nm,1.1s						
K20K	**Telida**	59.83	30	P	P	03 54 34.1	-0.1
	baz=270						
K20K				S	S	04 02 46.2	+1.3
	baz=270						
L20K	**Farewell, AK**	59.93	31	P	P	03 54 34.9	0.0
	baz=271,SNR=31						
L20K				S	S	04 02 49.2	+3.0
	baz=271						
DZM	**Mont Dzumac**	60.01	141	LR	LR	04 15 15.4	
	comp=Z,22μm,21.4s,baz=122,slow=31						
DZM	**Mont Dzumac**	60.01	141	P	P	03 54 36.3	+0.2
DZM				IAmb	IAmb	03 54 40.1	
	comp=Z,61nm,1.2s						
SII	**Sitkinak Islan**	60.05	38	IAmb	IAmb	03 54 40.3	
	comp=Z,88nm,0.9s						
SII				IAMs_20	IAMs_20	04 23 01.5	
	comp=Z,2μm,22.0s						
SII	**Sitkinak Islan**	60.05	38	P	P	03 54 35.1	-0.8
	baz=274,SNR=6.6						
Q19K	**Cape Douglas,**	60.18	35	IAmb	IAmb	03 54 54.9	
	comp=Z,53nm,0.9s						
Q19K	**Cape Douglas,**	60.18	35	P	P	03 54 35.4	-1.3
	baz=274,SNR=15						
Q19K				S	S	04 02 51.7	+2.2
	baz=274						
ONTNC	**Ouen Toro**	60.20	141	P	P	03 54 38.0	+0.7
ONTNC				IAmb	IAmb	03 54 41.7	
	comp=Z,80nm,1.3s						
M20K	**Styx River**	60.30	32	IAmb	IAmb	03 55 05.0	
	comp=Z,61nm,1.4s						
M20K	**Styx River**	60.30	32	P	P	03 54 37.4	-0.2
	baz=272						
M20K				S	S	04 02 54.0	+2.9
	baz=272						
H21K	**Melozitna Rive**	60.37	28	IAmb	IAmb	03 54 43.6	
	comp=Z,108nm,1.3s						
H21K	**Melozitna Rive**	60.37	28	P	P	03 54 37.7	-0.2
	baz=270,SNR=49						
H21K				S	S	04 02 54.5	+2.7
	baz=270						
OHAK	**Old Harbor**	60.49	37	P	P	03 54 38.5	-0.4
OHAK				IAmb	IAmb	03 54 44.1	
	comp=Z,36nm,0.9s						
OHAK	**Old Harbor**	60.49	37	P	P	03 54 37.6	-1.2
	baz=275,SNR=8.9						
OHAK				S	S	04 02 52.3	-1.1
	baz=275						
GEYT	**Alibeck**	60.51	300	P	P	03 54 39.3	-0.1
	comp=Z,21nm,0.9s,baz=92,slow=3.6,SNR=23						
	comp=Z,21nm,0.9s						
GEYT	**Alibeck**	60.51	300	IAmb	IAmb	03 54 59.4	
	comp=Z,47nm,1.1s						
GYA0B	**ALIBECK ARRAY**	60.51	300	P	P	03 54 39.4	0.0
GYA0B				IAmb	IAmb	03 54 59.3	
	comp=Z,70nm,1.1s						
OUENC	**Ouen Island, N**	60.51	141	P	P	03 54 39.8	+0.4
OUENC				IAmb	IAmb	03 54 45.1	
	comp=Z,35nm,1.0s						
CHUM	**Lake Minchumin**	60.61	30	P	P	03 54 39.8	+0.3
	baz=272,SNR=41						
CHUM				S	S	04 02 56.1	+1.4
	baz=272						
ARMA	**Armidale**	60.61	159	P	P	03 54 40.5	+0.5
ARMA				IAmb	IAmb	03 55 00.0	
	comp=Z,101nm,1.1s						
O20K	**Slope Mountain**	60.63	34	P	P	03 54 39.4	-0.4
	baz=274,SNR=6.4						
O20K				S	S	04 02 58.7	+3.3
	baz=274						
PPLA	**Purkeypile**	60.70	31	IAmb	IAmb	03 55 02.5	
	comp=Z,99nm,1.2s						
PPLA	**Purkeypile**	60.70	31	P	P	03 54 39.8	-0.5
	baz=272,SNR=29						
PPLA				S	S	04 02 57.5	+1.2
	baz=272						
I21K	**Tanana**	60.72	28	IAmb	IAmb	03 55 07.3	
	comp=Z,56nm,1.1s						
I21K	**Tanana**	60.72	28	P	P	03 54 40.6	+0.3
	baz=271,SNR=45						
I21K				S	S	04 02 57.6	+1.5
	baz=271						
CAST	**Castle Rocks**	60.73	30	IAmb	IAmb	03 54 45.8	
	comp=Z,79nm,1.0s						
CAST	**Castle Rocks**	60.73	30	P	P	03 54 40.3	-0.1
	baz=272,SNR=24						
KDAK	**Kodiak Island**	60.82	37	P	P	03 54 40.5	-0.6
KDAK				IAmb	IAmb	03 55 00.3	
	comp=Z,60nm,0.8s						
KDAK	**Kodiak Island**	60.82	37	P	P	03 54 40.5	-0.6
KDAK				pmax	pmax		
	comp=Z,60nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,1μm,20.0s						
KDAK	**Kodiak Island**	60.82	37	P	P	03 54 40.1	-0.9
	baz=275						
KDAK				S	S	04 02 57.7	0.0
	baz=275						
NWAO	**Narrogin (SRO)**	60.85	193	P	P	03 54 41.5	0.0
NWAO	**Narrogin (SRO)**	60.85	193	IAMs_20	IAMs_20	04 19 47.5	
	comp=Z,2μm,18.0s						
NWAO	**Narrogin (SRO)**	60.85	193	P	P	03 54 41.5	0.0
NWAO				pmax	pmax		
	comp=Z,236nm,1.5s						
Q20K	**Shuyak Island**	60.85	36	P	P	03 54 40.6	-0.7
	baz=275,SNR=9.2						
Q20K				S	S	04 02 55.6	-2.5
	baz=275						
PINNC	**Pines Island,**	61.01	140	P	P	03 54 43.9	+1.1
PINNC				IAmb	IAmb	03 54 48.6	
	comp=Z,58nm,1.2s						
HOM	**Homer**	61.16	35	P	P	03 54 42.3	-1.0
	baz=275						
BPAW	**Bear Paw Mtn.**	61.18	29	P	P	03 54 43.8	+0.3
BPAW				IAMs_20	IAMs_20	04 23 39.7	
	comp=Z,2μm,21.0s						
BPAW	**Bear Paw Mtn.**	61.18	29	P	P	03 54 43.6	+0.1
	baz=273,SNR=50						
BPAW				S	S	04 03 04.7	+2.4
	baz=273						
KTH	**Kantishna Hill**	61.24	30	IAmb	IAmb	03 55 07.7	
	comp=Z,86nm,1.5s						
KTH				IAMs_20	IAMs_20	04 20 32.9	
	comp=Z,2μm,18.0s						
MLY	**Manley**	61.25	28	IAmb	IAmb	03 54 49.5	
	comp=Z,123nm,1.4s						
MLY	**Manley**	61.25	28	P	P	03 54 44.4	+0.5
	baz=273,SNR=58						
MLY				S	S	04 03 03.5	+0.5
	baz=273						
CAPN	**Captain Cook N**	61.31	33	P	P	03 54 44.3	0.0
	baz=274						
CAPN				S	S	04 03 07.9	+4.1
	baz=274						
COLD	**Coldfoot**	61.39	26	P	P	03 54 44.7	-0.1
	baz=272,SNR=5.1						
COLD				S	S	04 03 06.8	+2.1
	baz=272						
TRF	**Thorofare Moun**	61.53	30	P	P	03 54 45.6	-0.4
	baz=274,SNR=24						
TRF				S	S	04 03 07.0	+0.1
	baz=274						
BRLK	**Bradley Lake**	61.53	34	IAmb	IAmb	03 55 05.8	
	comp=Z,41nm,0.8s						
TOLK	**Toolik Lake Re**	61.59	24	P	P	03 54 46.6	+0.4
TOLK				IAmb	IAmb	03 55 15.7	
	comp=Z,36nm,1.1s						
TOLK	**Toolik Lake Re**	61.59	24	P	P	03 54 46.4	+0.2
	baz=272,SNR=42						
TOLK				S	S	04 03 08.1	+0.8
	baz=272						
BRSE	**Bradley Lake S**	61.60	34	P	P	03 54 46.2	-0.2
	baz=275,SNR=20						
CUT	**Chulitna**	61.61	31	IAmb	IAmb	03 55 10.3	
	comp=Z,59nm,0.8s						
CUT	**Chulitna**	61.61	31	P	P	03 54 45.8	-0.5
	baz=274,SNR=6.6						
H23K	**Yukon River**	61.71	27	IAmb	IAmb	03 54 53.1	
	comp=Z,103nm,1.1s						
H23K	**Yukon River**	61.71	27	P	P	03 54 47.5	+0.5
	baz=273,SNR=68						
H23K				S	S	04 03 11.3	+2.4
	baz=273						
M22K	**Willow**	61.73	32	P	P	03 54 45.9	-1.2
	baz=275						
I23K	**Minto, Yukon-K**	61.83	28	IAmb	IAmb	03 54 53.2	
	comp=Z,74nm,1.3s						
I23K	**Minto, Yukon-K**	61.83	28	P	P	03 54 47.7	0.0
	baz=274,SNR=42						
I23K				S	S	04 03 13.6	+3.4
	baz=274						
RC01	**Rabbit Creek A**	61.98	33	IAmb	IAmb	03 55 11.0	
	comp=Z,63nm,1.3s						
RC01	**Rabbit Creek A**	61.98	33	P	P	03 54 48.0	-0.8
	baz=276,SNR=9.1						
NEA2	**Nenana**	61.99	29	IAmb	IAmb	03 54 54.0	
	comp=Z,92nm,1.0s						
NEA2	**Nenana**	61.99	29	P	P	03 54 48.4	-0.5
	baz=274,SNR=60						
NEA2				S	S	04 03 15.5	+3.1
	baz=274						
O22K	**Cooper Landing**	62.04	34	P	P	03 54 48.6	-0.6
	baz=276						
MCK	**McKinley**	62.11	30	IAmb	IAmb	03 55 09.5	
	comp=Z,76nm,1.1s						
MCK	**McKinley**	62.11	30	P	P	03 54 49.2	-0.6
	baz=275,SNR=32						
MCK				S	S	04 03 11.7	-2.3
	baz=275						
SEW	**Seward**	62.22	34	IAmb	IAmb	03 55 09.2	
	comp=Z,33nm,0.9s						
SEW	**Seward**	62.22	34	P	P	03 54 49.5	-0.9
	baz=276						
SEW				S	S	04 03 12.4	-2.8
	baz=276						
PMR	**Palmer**	62.22	32	IAmb	IAmb	03 55 13.3	
	comp=Z,72nm,1.4s						
PMR	**Palmer**	62.22	32	P	P	03 54 49.3	-1.2
	baz=276,SNR=8.0						
PMR				S	S	04 03 15.5	+0.3
	baz=276						
MDM	**Murphy Dome**	62.32	28	P	P	03 54 51.3	+0.1
WAT1	**Susitna Watana**	62.37	31	P	P	03 54 50.5	-1.0
	baz=276						
WAT1				S	S	04 03 16.5	-0.8
	baz=276						
H24K	**Noodor Dome**	62.39	27	IAmb	IAmb	03 55 15.3	
	comp=Z,61nm,1.1s						
H24K	**Noodor Dome**	62.39	27	P	P	03 54 52.1	+0.5
	baz=275,SNR=56						
H24K				S	S	04 03 19.0	+1.4
	baz=275						
TCOL	**CIGO, UAF Yank**	62.48	28	P	P	03 54 52.1	0.0
	baz=275						
COLA	**College**	62.49	28	d iP	P	03 54 51.1	-1.1
COLA				pmax	pmax		
	comp=Z,127nm,2.1s						
COLA	**College**	62.49	28	P	P	03 54 51.8	-0.3
	baz=275						
KNK	**Knik Glacier**	62.56	32	IAmb	IAmb	03 54 57.2	
	comp=Z,56nm,0.9s						
KNK	**Knik Glacier**	62.56	32	P	P	03 54 52.1	-0.6
	baz=276,SNR=24						
KNK				S	S	04 03 20.1	+0.4
	baz=276						
SML	**Sawmill**	62.57	32	P	P	03 54 52.2	-0.7
	baz=276,SNR=30						
SML				S	S	04 03 19.4	-0.5
	baz=276						
POKR	**Poker Plat Res**	62.64	28	P	P	03 54 53.4	+0.1
POKR				IAmb	IAmb	03 55 17.2	
	comp=Z,61nm,0.9s						
POKR	**Poker Plat Res**	62.64	28	P	P	03 54 52.7	-0.5
	baz=276,SNR=8.2						
POKR				S	S	04 03 21.4	+0.8
	baz=276						
KIRV	**Kirov**	62.71	324	ceP	P	03 54 54.1	+0.4
WAT6	**Susitna Watana**	62.76	31	P	P	03 54 53.5	-0.8
	baz=276,SNR=43						
WAT6				S	S	04 03 23.0	+0.5
	baz=276						
M23K	**Glacier View**	62.86	32	P	P	03 54 54.2	-0.5
	baz=277,SNR=12						
DHY	**Denali Highway**	62.88	30	IAMs_20	IAMs_20	04 22 32.2	
	comp=Z,2μm,20.0s						
DHY	**Denali Highway**	62.88	30	P	P	03 54 54.4	-0.7
	baz=277,SNR=9.1						
DHY				S	S	04 03 25.3	+1.4
	baz=277						
ILAR	**Eielson Array**	62.91	29	P	P	03 54 53.6	-1.4
	comp=Z,6.0nm,0.7s,baz=267,slow=5.4,SNR=36						
	comp=Z,6.0nm,0.7s						
HDA	**Harding Lake**	62.92	29	IAmb	IAmb	03 54 59.0	
	comp=Z,62nm,0.9s						
HDA	**Harding Lake**	62.92	29	P	P	03 54 53.8	-1.3
	baz=276,SNR=58						
HDA				S	S	04 03 21.7	-2.4
	baz=276						
HDA				S	S	04 03 21.7	-2.4
	baz=276						
SCM	**Sheep Creek Mo**	63.04	32	IAmb	IAmb	03 55 15.3	

	comp=Z,43nm,0.9s						
SCM	**Sheep Creek Mo**	**63.04**	**32**	P	**P**	**03 54 55.6**	**-0.5**
	baz=277,SNR=28						
SCM				S	**S**	**04 03 28.0**	**+2.1**
	baz=277						
GLI	**Glacier Island**	**63.28**	**33**	IAmb	IAmb	03 55 01.9	
	comp=Z,47nm,0.8s						
GLI	**Glacier Island**	**63.28**	**33**	P	**P**	**03 54 57.0**	**-0.6**
	baz=278,SNR=20						
GLI				S	**S**	**04 03 28.0**	**-0.7**
	baz=278						
K24K	**Donnelly Dome**	**63.50**	**30**	P	**P**	**03 54 58.1**	**-0.9**
	baz=278,SNR=19						
K24K				S	**S**	**04 03 31.0**	**-0.5**
	baz=278						
BMAR	**Burnt Mountain**	**63.55**	**25**	P	**P**	**03 55 00.2**	**+0.9**
M24K	**Tolsona, Glenn**	**63.55**	**31**	IAmb	IAmb	03 55 22.6	
	comp=Z,74nm,1.1s						
M24K				IAMs_20	IAMs_20	04 23 45.1	
	comp=Z,2µm,19.0s						
M24K	**Tolsona, Glenn**	**63.55**	**31**	P	**P**	**03 54 59.3**	**-0.1**
	baz=278,SNR=8.3						
M24K				S	**S**	**04 03 31.3**	**-0.8**
	baz=278						
J25K	**Salcha River,**	**63.57**	**29**	P	**P**	**03 54 57.7**	**-1.8**
	baz=278,SNR=6.0						
J25K				S	**S**	**04 03 31.4**	**-0.9**
	baz=278						
FID	**Port Fidalgo**	**63.60**	**33**	IAmb	IAmb	03 55 10.1	
	comp=Z,29nm,0.8s						
PAX	**Paxson**	**63.75**	**30**	P	**P**	**03 55 00.3**	**-0.5**
	baz=278,SNR=30						
PAX				S	**S**	**04 03 34.2**	**-0.5**
	baz=278						
KLU	**Klutina**	**63.75**	**32**	P	**P**	**03 55 00.2**	**-0.6**
	baz=279,SNR=20						
KLU				S	**S**	**04 03 36.5**	**+1.8**
	baz=279						
Q23K	**Middleton Isla**	**63.86**	**34**	P	**P**	**03 55 01.4**	**0.0**
	baz=279						
Q23K				S	**S**	**04 03 38.8**	**+3.0**
	baz=279						
DIV	**Divide**	**63.88**	**33**	IAmb	IAmb	03 55 21.0	
	comp=Z,38nm,0.8s						
RIDG	**Independent Ri**	**63.92**	**30**	P	**P**	**03 55 01.1**	**-0.7**
	baz=278						
RIDG				S	**S**	**04 03 36.8**	**+0.1**
	baz=278						
HARP	**HAARP**	**63.98**	**31**	P	**P**	**03 55 01.5**	**-0.7**
	baz=279						
HARP				S	**S**	**04 03 43.4**	**+6.0**
	baz=279						
EYAK	**Cordova Ski Ar**	**63.98**	**33**	P	**P**	**03 55 02.1**	**0.0**
	baz=279						
EYAK				S	**S**	**04 03 39.6**	**+2.2**
	baz=279						
WBK	**Wadi Bani Khal**	**64.11**	**283**	P	**P**	**03 55 05.5**	**+1.8**
	SNR=8.9						
WBK				P	**P**	**03 55 05.5**	**+1.8**
	SNR=8.9						
PRGR	**Permogore**	**64.14**	**328**	⇑*i*P	**P**	**03 55 03.5**	**+0.3**
WSAR	**Wadi Sarin**	**64.19**	**284**	P	**P**	**03 55 05.4**	**+1.1**
	SNR=9.2						
MSVF	**Nonsavu**	**64.20**	**128**	P	**P**	**03 55 04.0**	**-0.3**
MSVF	**Nonsavu**	**64.20**	**128**	*i* P	**P**	**03 55 05.0**	**+0.7**
MSVF				pmax	pmax		
	comp=Z,85nm,1.0s						
SCRK	**Sand Creek**	**64.26**	**29**	IAmb	IAmb	03 55 09.7	
	comp=Z,70nm,1.1s						
SCRK	**Sand Creek**	**64.26**	**29**	P	**P**	**03 55 03.1**	**-1.0**
	baz=279,SNR=71						
SCRK				S	**S**	**04 03 39.8**	**-1.2**
	baz=279						
J26L	**Joseph Creek**	**64.36**	**29**	IAmb	IAmb	03 55 08.8	
	comp=Z,45nm,0.9s						
J26L	**Joseph Creek**	**64.36**	**29**	P	**P**	**03 55 03.6**	**-1.1**
	baz=279,SNR=58						
J26L				S	**S**	**04 03 42.0**	**-0.2**
	baz=279						
N25K	**Chitina, Valde**	**64.36**	**32**	IAmb	IAmb	03 55 28.9	
	comp=Z,57nm,1.4s						
N25K	**Chitina, Valde**	**64.36**	**32**	P	**P**	**03 55 04.7**	**-0.1**
	baz=280,SNR=24						
N25K				S	**S**	**04 03 42.8**	**+0.5**
	baz=280						
CAN	**Canberra**	**64.44**	**163**	P	**P**	**03 55 06.1**	**+0.7**
CAN	**Canberra**	**64.44**	**163**	P	**P**	**03 55 06.1**	**+0.7**
CAN				pmax	pmax		
	comp=Z,208nm,1.4s						
BMRM	**Bremner River**	**64.47**	**33**	P	**P**	**03 55 05.4**	**0.0**
	baz=280,SNR=33						
BIDO	**Bidbid**	**64.53**	**285**	P	**P**	**03 55 07.7**	**+1.3**
	SNR=9.5						
BIDO				P	**P**	**03 55 07.7**	**+1.3**
	SNR=9.5						
BIDO				P	**P**	**03 55 07.7**	**+1.3**
	SNR=9.5						
MENT	**Mentasta**	**64.55**	**30**	IAmb	IAmb	03 55 11.2	
	comp=Z,68nm,1.1s						
L26K	**Log Cabin Wild**	**64.70**	**30**	IAMs_20	IAMs_20	04 25 21.4	
	comp=Z,1µm,19.0s						
L26K	**Log Cabin Wild**	**64.70**	**30**	P	**P**	**03 55 06.8**	**-0.1**
	baz=280,SNR=36						
HMT	**Hamilton**	**64.75**	**33**	IAmb	IAmb	03 55 18.3	
	comp=Z,43nm,1.0s						
SMDO	**Samad**	**64.76**	**284**	P	**P**	**03 55 09.0**	**+1.0**
	SNR=11						
SMDO				P	**P**	**03 55 09.0**	**+1.0**
	SNR=11						
SMDO				P	**P**	**03 55 09.0**	**+1.0**
	SNR=11						
BELG	**Belogornoye**	**64.76**	**318**	*i* P	**P**	**03 55 05.7**	**-1.7**
BELG				pmax	pmax		
	comp=Z,26nm,1.5s						
OPA	**Opana**	**64.76**	**77**	P	**P**	**03 55 09.9**	**+1.9**
OPA				IAmb	IAmb	03 55 13.3	
	comp=Z,79nm,1.0s						
OPA	**Opana**	**64.76**	**77**	P	**P**	**03 55 09.9**	**+1.9**
OPA				pmax	pmax		
	comp=Z,79nm,1.0s						
GLB	**Gilahina Butte**	**64.76**	**32**	IAmb	IAmb	03 55 27.4	
	comp=Z,50nm,0.9s						
KIP	**Kipapa**	**64.85**	**78**	IAMs_20	IAMs_20	04 16 04.9	
	comp=Z,2µm,22.0s						
JMDO	**Jabal Madar**	**64.95**	**283**	P	**P**	**03 55 10.2**	**+1.0**
	SNR=7.4						
JMDO				P	**P**	**03 55 10.2**	**+1.0**
	SNR=7.4						
M26K	**Nabesna, AK**	**64.97**	**31**	IAmb	IAmb	03 55 31.6	
	comp=Z,106nm,1.2s						
M26K	**Nabesna, AK**	**64.97**	**31**	P	**P**	**03 55 08.3**	**-0.4**
	baz=281,SNR=66						
M26K				S	**S**	**04 03 51.4**	**+1.7**
	baz=281						
VRDI	**Verde Repeater**	**64.97**	**32**	IAmb	IAmb	03 55 28.7	
	comp=Z,62nm,1.2s						
SUCK	**Suckling Hills**	**65.03**	**33**	IAmb	IAmb	03 55 29.6	
	comp=Z,109nm,1.4s						
K27K	**Chicken**	**65.08**	**29**	IAmb	IAmb	03 55 14.7	
	comp=Z,123nm,1.5s						
K27K	**Chicken**	**65.08**	**29**	P	**P**	**03 55 09.3**	**0.0**
	baz=281						
K27K				S	**S**	**04 03 52.1**	**+1.2**
	baz=281						
MCARA	**McCarthy VSAT**	**65.15**	**32**	P	**P**	**03 55 09.5**	**-0.3**
	baz=281,SNR=6.4						
HOQ	**Hoqain**	**65.22**	**285**	P	**P**	**03 55 12.4**	**+1.5**
	SNR=12						
HOQ				P	**P**	**03 55 12.4**	**+1.5**
	SNR=12						
BGLC	**Bering Glacier**	**65.27**	**33**	P	**P**	**03 55 10.5**	**0.0**
	baz=281						
BANOM	**Banah**	**65.30**	**288**	P	**P**	**03 55 11.4**	**-0.1**
EGAK	**Eagle**	**65.33**	**28**	P	**P**	**03 55 10.1**	**-0.8**
	baz=281,SNR=11						
EGAK				S	**S**	**04 03 55.3**	**+1.3**
	baz=281						
TGL	**Tana Glacier**	**65.36**	**33**	IAmb	IAmb	03 55 16.0	
	comp=Z,43nm,0.8s						
L27K	**Beaver Creek,**	**65.37**	**30**	P	**P**	**03 55 11.2**	**-0.1**
	baz=281,SNR=27						
L27K				S	**S**	**04 03 54.8**	**+0.2**
	baz=281						
SHME	**Shamm**	**65.39**	**288**	P	**P**	**03 55 12.8**	**+0.8**
WAX	**Waxell Ridge**	**65.41**	**33**	IAmb	IAmb	03 55 15.9	
	comp=Z,32nm,0.8s						
WAX				IAMs_20	IAMs_20	04 26 54.7	
	comp=Z,1µm,20.0s						
SNH	**Sunshine Point**	**65.47**	**33**	IAmb	IAmb	03 55 18.2	
	comp=Z,44nm,0.8s						
M27K	**Edge Creek, AK**	**65.49**	**31**	IAmb	IAmb	03 55 17.2	
	comp=Z,35nm,1.0s						
M27K				IAMs_20	IAMs_20	04 24 16.9	
	comp=Z,1µm,20.0s						
M27K	**Edge Creek, AK**	**65.49**	**31**	P	**P**	**03 55 10.5**	**-1.7**
	baz=282						
M27K				S	**S**	**04 03 58.6**	**+2.4**
	baz=282						
MHTO	**MHTO**	**65.55**	**282**	P	**P**	**03 55 13.6**	**+0.5**
	SNR=15						
MHTO				P	**P**	**03 55 13.6**	**+0.5**
	SNR=15						
DGAR	**Diego Garcia**	**65.59**	**247**	P	**P**	**03 55 13.7**	**+0.4**
DGAR				IAmb	IAmb	03 55 35.6	
	comp=Z,75nm,0.8s						
DGAR	**Diego Garcia**	**65.59**	**247**	*ce*P	**P**	**03 55 15.3**	**+2.0**
DGAR				pmax	pmax		
	comp=Z,210nm,2.5s						
BSY	**Bisya**	**65.60**	**284**	P	**P**	**03 55 14.3**	**+0.9**
	SNR=9.1						
BSY				P	**P**	**03 55 14.3**	**+0.9**
	SNR=9.1						
BSY				P	**P**	**03 55 14.3**	**+0.9**
	SNR=9.1						
ISLE	**Juniper Island**	**65.63**	**33**	IAmb	IAmb	03 55 27.0	
	comp=Z,32nm,0.9s						
SOHO	**SOHO**	**65.70**	**286**	*i* P	**P**	**03 55 14.7**	**+0.8**
	SNR=14						
TOO	**Toolangi**	**65.78**	**167**	P	**P**	**03 55 15.3**	**+1.2**
TOO				IAmb	IAmb	03 55 18.6	
	comp=Z,76nm,1.1s						
TOO	**Toolangi**	**65.78**	**167**	P	**P**	**03 55 15.3**	**+1.2**
TOO				pmax	pmax		
	comp=Z,76nm,1.1s						
HATD	**Hatta, Dubai**	**65.81**	**287**	P	**P**	**03 55 16.1**	**+1.4**
	SNR=5.5						
HATD				P	**P**	**03 55 16.1**	**+1.4**
	SNR=5.5						
HATD	**Hatta, Dubai**	**65.81**	**287**	*i* P	**P**	**03 55 15.5**	**+0.8**
	SNR=6.3						
BARN	**Barnard Glacie**	**65.86**	**32**	IAmb	IAmb	03 55 42.4	
	comp=Z,46nm,1.3s						
GRNC	**Granite Creek**	**65.88**	**33**	IAmb	IAmb	03 55 34.0	
	comp=Z,22nm,0.8s						
MESA	**MESA**	**65.91**	**33**	IAmb	IAmb	03 55 25.9	
	comp=Z,38nm,0.8s						
MESA	**MESA**	**65.91**	**33**	P	**P**	**03 55 14.9**	**-0.1**
	baz=282,SNR=14						
ASHO	**Ashiyiah**	**65.92**	**286**	P	**P**	**03 55 16.3**	**+0.9**
	SNR=8.4						
ASHO				P	**P**	**03 55 16.3**	**+0.9**
	SNR=8.4						
ASHO	**Ashiyiah**	**65.92**	**286**	*i* P	**P**	**03 55 15.7**	**+0.3**
	SNR=7.1						
BVCY	**Beaver Creek**	**65.94**	**31**	P	**P**	**03 55 14.9**	**-0.1**
	baz=282						
ARQ	**Araqi**	**65.98**	**285**	P	**P**	**03 55 16.8**	**+0.9**
	SNR=9.5						
ARQ				P	**P**	**03 55 16.8**	**+0.9**
	SNR=9.5						
CTG	**Chitna Glacier**	**66.03**	**32**	P	**P**	**03 55 15.0**	**-0.6**
	baz=283,SNR=16						
CTGM	**Chitina Glacie**	**66.03**	**32**	IAmb	IAmb	03 55 35.2	
	comp=Z,37nm,1.0s						
CTGM				IAMs_20	IAMs_20	04 23 39.1	
	comp=Z,1µm,19.0s						
LOGN	**Logan Glacier**	**66.22**	**32**	P	**P**	**03 55 17.1**	**+0.2**
DAWY	**Dawson**	**66.23**	**29**	P	**P**	**03 55 16.8**	**0.0**
	baz=283,SNR=20						
DAWY				S	**S**	**04 04 06.4**	**+1.4**
	baz=283						
TABL	**Table Mountain**	**66.24**	**33**	IAmb	IAmb	03 55 36.5	
	comp=Z,32nm,0.9s						
YUK3	**Moose Creek**	**66.27**	**31**	P	**P**	**03 55 17.1**	**-0.2**
	baz=283,SNR=47						
YUK3				S	**S**	**04 04 07.5**	**+1.6**
	baz=283						
FAQ	**Al Faqa, Dubai**	**66.30**	**287**	P	**P**	**03 55 18.5**	**+0.6**
	SNR=5.8						
FAQ				P	**P**	**03 55 18.5**	**+0.6**
	SNR=5.8						
FAQ	**Al Faqa, Dubai**	**66.30**	**287**	*i* P	**P**	**03 55 17.6**	**-0.2**
	SNR=8.9						
I29M	**Ogilvie Camp,**	**66.39**	**27**	P	**P**	**03 55 17.2**	**-0.5**
	baz=283,SNR=29						
I29M				S	**S**	**04 04 09.8**	**+2.9**
	baz=283						
ALNE	**Al Ain**	**66.40**	**286**	P	**P**	**03 55 19.6**	**+1.1**
	SNR=14						
ALNE	**Al Ain**	**66.40**	**286**	*i* P	**P**	**03 55 19.1**	**+0.5**
	SNR=8.5						
ASUD	**Al Ashush, Dub**	**66.56**	**287**	P	**P**	**03 55 20.6**	**+1.0**
J29M	**Klondike Camp**	**66.64**	**28**	IAMs_20	IAMs_20	04 23 58.5	
	comp=Z,2µm,20.0s						
J29M	**Klondike Camp**	**66.64**	**28**	P	**P**	**03 55 19.3**	**-0.1**
	baz=284						
J29M				S	**S**	**04 04 12.2**	**+2.1**
	baz=284						
PCA	**Pinnacle**	**66.75**	**33**	IAmb	IAmb	03 55 25.3	
	comp=Z,77nm,1.0s						
PINM	**Pinnacle**	**66.75**	**33**	P	**P**	**03 55 20.0**	**-0.3**
	baz=284,SNR=18						
EPYK	**Eagle Plains**	**66.79**	**26**	IAmb	IAmb	03 55 24.7	
	comp=Z,37nm,0.8s						
EPYK	**Eagle Plains**	**66.79**	**26**	P	**P**	**03 55 19.8**	**-0.5**
	baz=284,SNR=48						
EPYK				S	**S**	**04 04 14.6**	**+2.9**
	baz=284						
BCPM	**Bancas Point**	**67.09**	**33**	IAmb	IAmb	03 55 47.2	
	comp=Z,109nm,1.4s						
MAK	**Makhachkala**	**67.13**	**308**	*e*P	P	03 55 16.0	-6.8
MAK				*i* S	S	04 04 06.9	-10
MAK				*e*SSS	SSS	04 11 38.8	
MAK				pmax	pmax		
	comp=Z,178nm,1.3s						
KLMR	**Klimovskoe**	**67.20**	**328**	*e*P	**P**	**03 55 21.2**	**-1.7**
KLMR				*e*		03 55 49.3	
KLMR				*e*		03 57 49.4	
KLMR				*e*S	**S**	**04 04 16.2**	**-0.4**
KLMR				*e*SS	**SS**	**04 08 42.2**	**+6.9**
KLMR				pmax	pmax		
	comp=Z,226nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,5µm,15.0s						
KLMR	**Klimovskoe**	**67.20**	**328**	*e*P	**P**	**03 55 21.2**	**-1.7**
KLMR				AMP		03 55 27.7	
	comp=Z,226nm,1.5s						
KLMR				*e*PcP	**PcP**	**03 55 49.3**	**-1.5**
KLMR				*e*PP	**PP**	**03 57 49.5**	**-1.2**
KLMR				*e*S	**S**	**04 04 16.3**	**-0.4**
KLMR				*e*S	**S**	**04 04 16.3**	**-0.4**
KLMR				*e*SS	**SS**	**04 08 42.3**	**+6.9**
KLMR				*e*SS	**SS**	**04 08 42.3**	**+6.9**
KLMR				LQ	LQ	04 20 00.0	
KLMR				LQ	LQ	04 20 00.0	
KLMR				LR	LR	04 23 56.0	
KLMR				AMP		04 29 56.6	
	comp=Z,5µm,14.9s						
YUK4	**Talbot Arm**	**67.21**	**32**	P	**P**	**03 55 23.4**	**+0.1**
	baz=285,SNR=13						
PNL	**Peninsula**	**67.28**	**33**	P	**P**	**03 55 23.3**	**-0.2**
	baz=285,SNR=6.7						
HPAH	**Hawaii Prepara**	**67.37**	**78**	P	**P**	**03 55 25.8**	**+1.0**
LVZ	**Lovozero**	**67.39**	**336**	P	**P**	**03 55 23.3**	**-0.8**
LVZ				IAmb	IAmb	03 55 50.1	
	comp=Z,30nm,0.8s						
LVZ				IAMs_20	IAMs_20	04 29 38.0	
	comp=Z,2µm,20.0s						
LVZ	**Lovozero**	**67.39**	**336**	P	**P**	**03 55 23.3**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,30nm,0.8s						
LVZ				MLR	MLR		
	comp=Z,2µm,20.0s						
YUK6	**Outpost Mounta**	**67.45**	**32**	P	**P**	**03 55 25.1**	**+0.3**
	baz=285,SNR=7.1						
YUK6				S	**S**	**04 04 22.7**	**+2.5**
	baz=285						
INK	**Inuvik**	**67.47**	**24**	P	**P**	**03 55 24.2**	**-0.4**
	baz=286,SNR=29						
INK				S	**S**	**04 04 19.7**	**-0.1**
	baz=286						
M30M	**Minto, Yukon**	**67.73**	**30**	P	**P**	**03 55 26.5**	**+0.1**
	baz=286,SNR=28						
M30M				S	**S**	**04 04 26.8**	**+3.6**
	baz=286						
HYT	**Haines Junctio**	**67.88**	**32**	IAmb	IAmb	03 55 39.5	
	comp=Z,30nm,1.0s						
HYT	**Haines Junctio**	**67.88**	**32**	P	**P**	**03 55 27.7**	**+0.2**
	baz=286,SNR=24						
HYT				S	**S**	**04 04 26.2**	**+1.0**
	baz=286						
N30M	**Aishikik Lake**	**67.90**	**31**	P	**P**	**03 55 27.8**	**+0.3**
	baz=286,SNR=6.7						
N30M				S	**S**	**04 04 26.4**	**+1.0**
	baz=286						
APA	**Apatity**	**67.94**	**336**	⇓*i*P	**P**	**03 55 26.6**	**-0.9**
APA				*i*		03 55 48.2	
APA				*i* PPP	PPP	03 59 42.0	
APA				*i* S	**S**	**04 04 22.0**	**-3.4**
APA				*i*		04 05 07.0	
APA				*i* SS	**SS**	**04 08 42.0**	**-4.6**
APA				pmax	pmax		
	comp=Z,27nm,1.4s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
GROC	**Groznyy**	**68.26**	**308**	*e*P	**P**	**03 55 30.2**	**+0.2**
GROC				*e*		03 55 54.6	
GROC				*e*S	**S**	**04 04 31.7**	**+1.7**
GROC				pmax	pmax		
	comp=Z,158nm,1.2s						
SPA0	**Spitsbergen Ar**	**68.47**	**348**	*e*P	**P**	**03 55 31.8**	**+1.1**
SPITS	**Spitsbergen Ar**	**68.47**	**348**	LR	LR	04 28 46.5	
	comp=Z,2µm,18.5s,baz=9.5,slow=39						
SPITS	**Spitsbergen Ar**	**68.47**	**348**	P	**P**	**03 55 30.9**	**+0.1**
SPITS				pmax	pmax		
	comp=Z,198nm,1.5s						
O30N	**Mendenhall**	**68.56**	**32**	P	**P**	**03 55 31.7**	**+0.1**
	baz=287,SNR=8.8						
O30N				S	**S**	**04 04 36.7**	**+3.5**
	baz=287						
VRH	**Novokhopyorsk**	**68.61**	**318**	*e*P	**P**	**03 55 31.5**	**-0.5**
VRH				*e*S	**S**	**04 04 25.8**	**-8.0**
VRH				pmax	pmax		
	comp=Z,160nm,1.5s						
VRH				smax	smax		
	comp=N,550nm,7.1s						
VRH				MLR	MLR		
	comp=Z,3µm,19.0s						
MZR	**Muzera**	**68.72**	**286**	P	**P**	**03 55 33.8**	**+0.6**
	SNR=7.1						
MZR	**Muzera**	**68.72**	**286**	*i* P	**P**	**03 55 32.4**	**-0.8**
	SNR=5.9						
PLBC	**Pleasant Camp**	**68.82**	**33**	P	**P**	**03 55 33.2**	**+0.1**
	baz=287,SNR=9.1						
KBS	**Kingsbay**	**68.85**	**349**	IAMs_20	IAMs_20	04 24 56.2	
	comp=Z,4µm,21.0s						
M31M	**Drury Creek, Y**	**68.91**	**30**	IAmb	IAmb	03 55 54.0	
	comp=Z,46nm,1.3s						
M31M				IAMs_20	IAMs_20	04 30 54.1	
	comp=Z,2µm,19.0s						
M31M	**Drury Creek, Y**	**68.91**	**30**	P	**P**	**03 55 34.0**	**+0.3**
	baz=288,SNR=21						
M31M				S	**S**	**04 04 38.8**	**+1.6**
	baz=288						
A36M	**Sachs Harbour**	**68.93**	**19**	P	**P**	**03 55 33.6**	**0.0**
	baz=292,SNR=18						
A36M				S	**S**	**04 04 38.8**	**+1.7**
	baz=292						
WHY	**Whitehorse**	**69.16**	**32**	IAmb	IAmb	03 55 47.5	
	comp=Z,51nm,1.3s						
WHY	**Whitehorse**	**69.16**	**32**	P	**P**	**03 55 35.8**	**+0.4**
	baz=288,SNR=8.9						
WHY				S	**S**	**04 04 41.2**	**+0.7**
	baz=288						
SKAG	**Skagway**	**69.32**	**33**	IAmb	IAmb	03 55 56.8	
	comp=Z,43nm,1.1s						
SKAG	**Skagway**	**69.32**	**33**	P	**P**	**03 55 36.4**	**+0.1**
	baz=288,SNR=6.8						
SKAG				S	**S**	**04 04 43.7**	**+1.7**
	baz=288						
FARO	**Faro, Yukon**	**69.37**	**30**	P	**P**	**03 55 36.5**	**-0.1**
	baz=289,SNR=22						
AFI	**Afiamalu**	**69.37**	**118**	P	**P**	**03 55 37.8**	**+0.5**
AFI				IAmb	IAmb	03 55 56.4	
	comp=Z,117nm,1.4s						
AFI	**Afiamalu**	**69.37**	**118**	P	**P**	**03 55 37.8**	**+0.5**
AFI				pmax	pmax		
	comp=Z,117nm,1.4s						
KEV	**Kevo**	**69.41**	**339**	P	**P**	**03 55 36.6**	**0.0**
KEV				IAmb	IAmb	03 55 40.4	
	comp=Z,44nm,0.8s						
KEV				IAMs_20	IAMs_20	04 29 21.5	
	comp=Z,5µm,21.0s						
KEV	**Kevo**	**69.41**	**339**	P	**P**	**03 55 36.6**	**0.0**
KEV				pmax	pmax		
	comp=Z,44nm,0.8s						
KEV				MLR	MLR		
	comp=Z,5µm,21.0s						
GOF	**Gofitskoye**	**69.59**	**311**	⇓*i*P	**P**	**03 55 39.0**	**+0.8**
GOF				*e*S	**S**	**04 04 47.6**	**+1.8**
GOF				pmax	pmax		
	comp=Z,304nm,1.2s						
GOF				smax	smax		
	comp=N,211nm,2.0s						
GOF				smax	smax		
	comp=E,53nm,1.3s						
MOS	**Moscow**	**69.59**	**323**	*e*P	**P**	**03 55 36.1**	**-1.9**
MOS				*e*		03 55 55.7	
MOS				*e*S	**S**	**04 04 43.5**	**-1.9**
MOS				*e*		04 05 38.0	
MOS				pmax	pmax		
	comp=Z,219nm,1.5s						
MOS				pmax	pmax		
	comp=Z,700nm,2.2s						
MOS				smax	smax		
	comp=N,1µm,4.0s						
MOS				smax	smax		
	comp=E,1µm,4.5s						
MOS				MLR	MLR		
	comp=E,4µm,15.0s						
MOS				MLR	MLR		
	comp=Z,5µm,15.0s						
ZEI	**Tsey**	**69.71**	**308**	*e*P	**P**	**03 55 37.0**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,149nm,1.4s						
DOK	**Doka**	**69.78**	**281**	P	**P**	**03 55 40.2**	**+0.4**
	SNR=5.8						
BESE	**Bessie Mountai**	**69.83**	**34**	P	**P**	**03 55 40.9**	**+1.4**
LPSR	**Galich'ya Gora**	**69.84**	**319**	*e*P	**P**	**03 55 39.0**	**-0.6**
LPSR				*e*S	**S**	**04 04 44.8**	**-3.6**
LPSR				pmax	pmax		
	comp=Z,150nm,1.4s						
LPSR				smax	smax		
	comp=E,980nm,10.3s						
LPSR				MLR	MLR		
	comp=Z,4µm,15.0s						
GNI	**Garni**	**69.95**	**306**	P	**P**	**03 55 40.9**	**+0.2**
GNI	**Garni**	**69.95**	**306**	*ce*P	**P**	**03 55 42.0**	**+1.3**
GNI				pmax	pmax		
	comp=Z,167nm,1.3s						
GNI				MLR	MLR		
	comp=Z,2µm,19.0s						
GNI	**Garni**	**69.95**	**306**	P	**P**	**03 55 42.0**	**+1.3**
VORR	**Voronezh**	**69.97**	**318**	⇓*i*P	**P**	**03 55 41.4**	**+1.0**
VORR				S	**S**	**04 04 50.4**	**+0.5**
VORR				pmax	pmax		
	comp=Z,358nm,1.9s						
VORR				MLR	MLR		
	comp=Z,4µm,16.0s						
ARA0	**ARCESS Array S**	**69.98**	**339**	*e*P	**P**	**03 55 40.6**	**+0.4**
ARCES	**ARCESS Array B**	**69.98**	**339**	P	**P**	**03 55 40.5**	**+0.3**
	comp=Z,39nm,1.0s,baz=64,slow=8.2,SNR=28						
ARCES				LR	LR	04 29 51.1	
	comp=Z,3µm,20.7s,baz=41,slow=39						
	comp=Z,39nm,1.0s						
ARCES	**ARCESS Array B**	**69.98**	**339**	IAmb	IAmb	03 55 44.1	
	comp=Z,92nm,1.2s						
SIT	**Sitka**	**70.09**	**35**	P	**P**	**03 55 41.7**	**+0.7**
	baz=289						
HAMF	**Hammerfest**	**70.10**	**340**	*e*P	**P**	**03 55 41.6**	**+0.7**
KBZ	**Khabaz**	**70.11**	**310**	P	**P**	**03 55 42.3**	**+0.9**
	comp=Z,110nm,1.1s,baz=96,slow=4.1,SNR=92						
KBZ				PKPPKP		04 23 41.2	
	comp=Z,0.6nm,0.4s,baz=305,slow=3.4,SNR=11						
	comp=Z,110nm,1.1s						
KBZ	**Khabaz**	**70.11**	**310**	*ce*P	**P**	**03 55 42.3**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,216nm,1.2s						
VSR	**Storozhevoye**	**70.14**	**318**	*e*P	**P**	**03 55 40.9**	**-0.5**
VSR				*e*S	**S**	**04 04 45.7**	**-6.2**
VSR				pmax	pmax		

	comp=Z,180nm,1.6s						
VSR				smax	smax		
	comp=E,1µm,10.8s						
VSR				MLR	MLR		
	comp=Z,6µm,24.0s						
VORD	**Divnogorie**	**70.14**	**318**	*e*P	**P**	**03 55 40.5**	**-0.9**
VORD				*e*S	**S**	**04 04 51.4**	**-0.5**
VORD				pmax	pmax		
	comp=Z,50nm,0.8s						
VORD				smax	smax		
	comp=N,90nm,4.1s						
RBK	**Rabkut**	**70.14**	**280**	P	**P**	**03 55 43.4**	**+1.3**
	SNR=6.6						
MMPY	**Sheldon Lake,**	**70.16**	**29**	P	**P**	**03 55 41.7**	**+0.2**
	baz=290,SNR=9.3						
MMPY				S	**S**	**04 04 55.7**	**+3.8**
	baz=290						
JIS	**Juneau Island**	**70.17**	**34**	IAmb	IAmb	03 55 48.1	
	comp=Z,60nm,1.3s						
JIS				IAMs_20	IAMs_20	04 31 37.5	
	comp=Z,3µm,22.0s						
KVAR	**Kislovodsk Arr**	**70.17**	**310**	LR	LR	04 29 15.1	
	comp=Z,2µm,18.9s,baz=267,slow=38						
KIV	**Kislovodsk**	**70.18**	**310**	P	**P**	**03 55 42.1**	**+0.1**
KIV				IAMs_20	IAMs_20	04 31 18.9	
	comp=Z,2µm,18.0s						
KIV	**Kislovodsk**	**70.18**	**310**	*e*P	**P**	**03 55 42.7**	**+0.7**
KIV				*e*S	**S**	**04 04 54.6**	**+1.7**
KIV				*e*SS	**SS**	**04 09 26.4**	**+3.9**
KIV				pmax	pmax		
	comp=Z,220nm,1.1s						
KIV				pmax	pmax		
	comp=Z,159nm,4.7s						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	**Kislovodsk**	**70.18**	**310**	*i* P	**P**	**03 55 43.1**	**+1.1**
	SNR=60						
SHA1	**Shidzhatmaz**	**70.27**	**310**	*i* P	**P**	**03 55 42.7**	**0.0**
P33M	**Teslin, Yukon**	**70.28**	**32**	IAMs_20	IAMs_20	04 31 59.0	
	comp=Z,3µm,20.0s						
P33M	**Teslin, Yukon**	**70.28**	**32**	P	**P**	**03 55 42.3**	**0.0**
	baz=290,SNR=14						
P33M				S	**S**	**04 04 55.7**	**+2.3**
	baz=290						
C36M	**Paulatuk**	**70.34**	**21**	IAmb	IAmb	03 55 55.4	
	comp=Z,64nm,1.1s						
C36M	**Paulatuk**	**70.34**	**21**	P	**P**	**03 55 42.3**	**0.0**
	baz=294,SNR=7.8						
C36M				S	**S**	**04 04 54.4**	**+0.8**
	baz=294						
NOR	**Nord**	**70.35**	**355**	*i* P	**P**	**03 55 42.0**	**-0.3**
NOR				IAmb	IAmb	03 55 45.8	
	comp=Z,201nm,1.8s						
OBN	**Obninsk**	**70.36**	**323**	P	**P**	**03 55 43.1**	**+0.3**
OBN				IAmb	IAmb	03 55 46.6	
	comp=Z,101nm,1.1s						
OBN	**Obninsk**	**70.36**	**323***c*	*i*P	**P**	**03 55 43.2**	**+0.5**
OBN				*i* *PP	**pP**	**03 55 45.8**	**-0.4**
OBN				*e**SP	**sP**	**03 55 48.5**	**+1.0**
OBN				*e*		03 58 19.4	
OBN				*e*PPP	PPP	04 00 07.6	
OBN				*i* S	**S**	**04 04 53.2**	**-1.2**
OBN				*e*		04 05 42.2	
OBN				pmax	pmax		
	comp=Z,154nm,1.3s						
OBN				MLR	MLR		
	comp=Z,5µm,15.0s						
ALE	**Alert**	**70.55**	**2**	IAMs_20	IAMs_20	04 28 23.7	
	comp=Z,1µm,20.0s						
KTK1	**Kautokeino**	**70.94**	**339**	*e*P	**P**	**03 55 46.1**	**+0.1**
ABTO	**Aybut**	**71.00**	**280**	P	**P**	**03 55 47.8**	**+0.4**
	SNR=7.5						
TAU	**Tasmania Unive**	**71.29**	**167**	P	**P**	**03 55 49.2**	**+0.9**
TAU	**Tasmania Unive**	**71.29**	**167**	P	**P**	**03 55 49.2**	**+0.9**
TAU				pmax	pmax		
	comp=Z,28nm,0.9s						
JETT	**Jettan, Norway**	**71.59**	**340**	*e*P	**P**	**03 55 50.0**	**0.0**
CRAG	**Craig**	**71.78**	**37**	P	**P**	**03 55 53.2**	**+1.9**
	baz=291						
GEVA	**Gevas**	**71.79**	**304**	IAmb	IAmb	03 55 57.4	
	comp=Z,138nm,1.4s						
WRAK	**Wrangell Islan**	**71.85**	**35**	IAMs_20	IAMs_20	04 31 29.1	
	comp=Z,3µm,20.0s						
WRAK	**Wrangell Islan**	**71.85**	**35**	P	**P**	**03 55 52.1**	**+0.4**
	baz=292						
TGTN	**Hyland Airport**	**71.87**	**30**	P	**P**	**03 55 52.0**	**+0.1**
	baz=293,SNR=6.6						
TGTN				S	**S**	**04 05 12.3**	**+0.4**
	baz=293						
S34M	**Telegraph Cree**	**71.91**	**34**	P	**P**	**03 55 52.3**	**+0.2**
	baz=292,SNR=7.0						
TRO	**Tromso**	**72.01**	**340**	*e*P	**P**	**03 55 52.6**	**+0.2**
WTLY	**Watson Lake, Y**	**72.19**	**31**	P	**P**	**03 55 54.0**	**+0.3**
	baz=293						
DLBC	**Dease Lake**	**72.25**	**33**	IAmb	IAmb	03 56 01.2	
	comp=Z,55nm,1.4s						
SOC	**Sochi**	**72.33**	**310**	*e*P	**P**	**03 55 53.2**	**-1.7**
SOC				*e*		03 58 33.5	
SOC				*e*PPP	PPP	04 00 12.6	
SOC				*i* S	**S**	**04 05 18.0**	**+0.4**
SOC				*e*SS	**SS**	**04 09 55.2**	**0.0**
SOC				pmax	pmax		
	comp=Z,175nm,1.4s						
GURO	**Guroymak-BITLI**	**72.46**	**305**	IAmb	IAmb	03 56 17.9	
	comp=Z,61nm,1.1s						
SOCY	**Socotra**	**72.47**	**275**	P	**P**	**03 55 54.8**	**-1.5**
FINES	**FINESS Array B**	**73.12**	**331**	P	**P**	**03 55 58.7**	**-0.5**
	comp=Z,23nm,0.7s,baz=72,slow=6.2,SNR=34						
	comp=Z,23nm,0.7s						
FINES	**FINESS Array B**	**73.12**	**331**	P	**P**	**03 55 57.9**	**-1.3**
WRGLY	**Wrigley**	**73.19**	**27**	P	**P**	**03 55 60.0**	**+0.4**
	baz=297						
XMAS	**Kiritimati**	**73.28**	**96**	P	**P**	**03 56 01.7**	**+0.7**
XMAS	**Kiritimati**	**73.28**	**96**	IAMs_20	IAMs_20	04 27 55.2	
	comp=Z,3µm,20.0s						
ANN	**Anapa**	**73.43**	**312**	*e*P	**P**	**03 56 01.0**	**-0.3**
ANN				*e**PP	**pP**	**03 56 04.3**	**-0.5**
ANN				*e*		03 56 11.4	
ANN				*e*		03 58 51.5	
ANN				*e*S	**S**	**04 05 29.5**	**-0.5**
ANN				pmax	pmax		
	comp=Z,285nm,1.3s						
ANN				pmax	pmax		
	comp=N,96nm,1.2s						
ANN				pmax	pmax		
	comp=E,81nm,1.5s						
ANN				MLR	MLR		
	comp=E,1µm,16.0s						
ANN				MLR	MLR		
	comp=N,5µm,18.0s						
ANN				MLR	MLR		
	comp=Z,4µm,25.0s						
MARD	**Mardin**	**73.83**	**304**	IAmb	IAmb	03 56 07.9	
	comp=Z,56nm,0.7s						
STEI	**Steigen**	**74.04**	**339**	*e*P	**P**	**03 56 03.9**	**-0.6**
VSU	**Vasula**	**74.10**	**328**	*i* P	**P**	**03 56 03.8**	**-1.2**
VSU				pmax	pmax		
	comp=Z,400nm,1.2s						
VSU	**Vasula**	**74.10**	**328**	*e*P	**P**	**03 56 04.3**	**-0.7**
OUZ	**Omahuta**	**74.18**	**144**	P	**P**	**03 56 07.1**	**+1.4**
OUZ				IAmb	IAmb	03 56 11.9	
	comp=Z,66nm,1.3s						
FAUS	**Fauske**	**74.32**	**339**	*e*P	**P**	**03 56 05.7**	**-0.5**
LOF	**Lofoten**	**74.46**	**340**	*e*P	**P**	**03 56 07.2**	**+0.2**
RES	**Resolute Bay**	**74.46**	**11**	IAmb	IAmb	03 56 12.6	
	comp=Z,116nm,1.5s						
DAG	**Danmarks Havn**	**74.75**	**353**	*i* P	**P**	**03 56 08.1**	**-0.5**
DAG				IAmb	IAmb	03 56 11.9	
	comp=Z,335nm,1.8s						
RAF	**Rauma**	**75.17**	**331**	*e*P	**P**	**03 56 11.5**	**+0.3**
MNK	**Minsk**	**75.25**	**324**	*i* P	**P**	**03 56 09.5**	**-2.2**
MNK				*i*		03 58 57.6	
MNK				*i* PPP	PPP	04 00 43.5	
MNK				*i* S	**S**	**04 05 50.1**	**+0.1**
MNK				*i* SS	**SS**	**04 10 39.4**	**+0.4**
MNK				pmax	pmax		
	comp=N,27nm,1.4s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,109nm,1.1s						
MNK				MLR	MLR		
	comp=E,789nm,23.0s						
MNK				MLR	MLR		
	comp=Z,4µm,18.0s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK	**Minsk**	**75.25**	**324**	*i* P	**P**	**03 56 09.6**	**-2.2**
	comp=E,6.0nm,1.4s						
MNK				*i* P	**P**	**03 56 09.6**	**-2.2**
	comp=N,27nm,1.4s						
MNK				*i* P	**P**	**03 56 09.6**	**-2.2**
	comp=Z,109nm,1.1s,baz=64						
MNK				*i* PP	**PP**	**03 58 57.6**	**-2.2**
MNK				*i* PPP	PPP	04 00 43.5	
MNK				*i* S	**S**	**04 05 50.1**	**+0.1**
MNK				*i* SS	**SS**	**04 10 39.4**	**+0.4**
MNK				*i* SSS	SSS	04 14 01.9	
MNK				*i* LQ	LQ	04 24 02.6	
MNK				*i* LR	LR	04 29 59.5	
MNK				*i* LRM	MLR	04 32 56.9	
	comp=E,789nm,22.9s						
MNK				*i* LRM	MLR	04 32 56.9	
	comp=N,2µm,20.4s						
MNK				*i* LRM	MLR	04 32 56.9	
	comp=Z,4µm,17.8s						
MOR8	**Moi Rana**	**75.27**	**338**	*e*P	**P**	**03 56 10.0**	**-1.7**
RAYN	**Ar Rayn**	**75.31**	**289**	P	**P**	**03 56 12.3**	**-0.5**
RAYN	**Ar Rayn**	**75.31**	**289**	IAMs_20	IAMs_20	04 33 21.5	
	comp=Z,3µm,21.0s						
RAYN	**Ar Rayn**	**75.31**	**289**	P	**P**	**03 56 12.3**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,146nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,3µm,21.0s						
RAYN	**Ar Rayn**	**75.31**	**289**	*i* P	**P**	**03 56 13.3**	**+0.5**
	SNR=94						
MTSE	**Matsula**	**75.36**	**329**	*e*P	**P**	**03 56 13.0**	**+0.7**
IDID	**Didziasalis**	**75.48**	**325**	*e*P	**P**	**03 56 13.8**	**+0.7**
KONS	**Konsvik**	**75.53**	**338**	*e*P	**P**	**03 56 13.6**	**+0.5**
SIM	**Simferopol'**	**75.55**	**313**	*e*P	**P**	**03 56 13.3**	**-0.4**
SIM				*e*		03 56 33.0	
SIM				*e*SSS	SSS	04 14 00.0	
SIM				pmax	pmax		
	comp=Z,155nm,1.0s						
SIM				MLR	MLR		
	comp=Z,1µm,16.9s						
NACGM	**Naroch**	**75.64**	**325**	*i* P	**P**	**03 56 12.8**	**-1.2**
STOK	**Stokkvaagen**	**75.66**	**338**	*e*P	**P**	**03 56 12.2**	**-1.7**
ISAL	**Salakas**	**75.68**	**325**	*e*P	**P**	**03 56 14.5**	**+0.3**
IIGN	**Ignalina**	**75.73**	**325**	*e*P	**P**	**03 56 15.6**	**+1.1**
TULEG	**Thule**	**76.05**	**5**	IAMs_20	IAMs_20	04 30 32.1	
	comp=Z,2µm,21.0s						
AKASG	**Malin Array Be**	**76.15**	**320**	P	**P**	**03 56 16.3**	**-0.7**
	comp=Z,48nm,1.0s,baz=51,slow=6.6,SNR=52						
	comp=Z,48nm,1.0s						
AKBB	**Malin Array Si**	**76.15**	**320**	P	**P**	**03 56 16.6**	**-0.4**
AKBB	**Malin Array Si**	**76.15**	**320**	P	**P**	**03 56 16.6**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,230nm,1.5s						
AAL	**Aland**	**76.34**	**331**	*e*P	**P**	**03 56 17.5**	**-0.4**
SLIT	**Slitere, Latvi**	**76.58**	**328**	*e*P	**P**	**03 56 19.0**	**-0.3**
VSVD	**Vaisvydziai**	**76.59**	**326**	*e*P	**P**	**03 56 19.4**	**0.0**
PABE	**Paberze**	**76.80**	**326**	*e*P	**P**	**03 56 21.3**	**+0.7**
YKA	**Yellowknife Ar**	**77.07**	**26**	P	**P**	**03 56 21.8**	**-0.2**
	comp=Z,9.8nm,0.7s,baz=301,slow=5.2,SNR=38						
YKA				PKKPbc	**PKKPbc**	**04 15 27.4**	**-2.9**
	comp=Z,1.1nm,0.9s,baz=126,slow=2.4,SNR=5.4						
	comp=Z,9.8nm,0.7s						
YKA	**Yellowknife Ar**	**77.07**	**26**	P	**P**	**03 56 21.7**	**-0.3**
NSS	**Namsos**	**77.07**	**337**	*e*P	**P**	**03 56 20.9**	**-1.0**
DBG	**Daneborg**	**77.13**	**352**	*i* P	**P**	**03 56 22.6**	**+0.5**
DBG				IAmb	IAmb	03 56 25.7	
	comp=Z,204nm,1.7s						
HIZ	**Hauiti**	**77.35**	**146**	P	**P**	**03 56 24.3**	**+0.5**
KMRZ	**Kaimai**	**77.40**	**145**	P	**P**	**03 56 26.6**	**+2.4**
UPP	**Uppsala**	**77.53**	**332**	*e*P	**P**	**03 56 24.3**	**-0.3**
PBUR	**Paburge**	**77.55**	**327**	*e*P	**P**	**03 56 25.8**	**+1.0**
PURM	**Purcari**	**77.58**	**316**	⇓P	**P**	**03 56 25.4**	**+0.2**
SORM	**Soroca**	**77.80**	**318**	⇑P	**P**	**03 56 25.3**	**-1.0**
SORM	**Soroca**	**77.80**	**318**	⇑P	**P**	**03 56 25.3**	**-1.0**
LREZ	**Lake Rotokare**	**77.85**	**147**	P	**P**	**03 56 29.8**	**+3.2**
SUW	**Suwalki**	**77.92**	**325**	*e*P	**P**	**03 56 26.5**	**-0.4**
SUW				*e*pP	**pP**	**03 56 29.1**	**-1.3**
SUW				*e*S	**S**	**04 06 21.4**	**+2.1**
SUW				*e*L	L	04 33 23.7	
	comp=Z,4µm,19.3s						
SUW	**Suwalki**	**77.92**	**325**	IAMs_20	IAMs_20	04 33 23.3	
	comp=Z,4µm,19.0s						
SUW	**Suwalki**	**77.92**	**325**	*e*P	**P**	**03 56 26.6**	**-0.4**
BR131	**Keskin Array S**	**78.02**	**308**	P	**P**	**03 56 28.1**	**+0.1**
BR131	**Keskin Array S**	**78.02**	**308**	P	**P**	**03 56 28.1**	**+0.1**
BR131				pmax	pmax		
	comp=Z,128nm,1.0s						
BR131	**Keskin Array S**	**78.02**	**308**	P	**P**	**03 56 28.2**	**+0.3**
	SNR=55						
BRTR	**Keskin Array B**	**78.02**	**308**	P	**P**	**03 56 27.9**	**-0.1**
	comp=Z,82nm,1.1s,baz=93,slow=4.3,SNR=117						
	comp=Z,82nm,1.1s						
KIS	**Kishinev**	**78.03**	**317**	*e*P	**P**	**03 56 27.0**	**-0.6**
	comp=Z,220nm,2.9s						
KIS	**Kishinev**	**78.03**	**317**	*e*PcP	**PcP**	**03 56 38.0**	**+0.7**
KIS	**Kishinev**	**78.03**	**317**	*e*PP	PP	03 59 35.0	+12
KIS	**Kishinev**	**78.03**	**317**	*e*P	**P**	**03 56 27.0**	**-0.6**
KIS				*e*		03 56 38.0	
KIS				*e*S	**S**	**04 06 18.0**	**-2.8**
KIS				pmax	pmax		
	comp=Z,220nm,2.9s						
KIS				smax	smax		
	comp=E,600nm,10.4s						
KIS				smax	smax		
	comp=E,1µm,16.5s						
KIS				MLR	MLR		
	comp=Z,1µm,21.0s						
MILM	**Milestii Mici**	**78.06**	**317**	⇓*i*P	**P**	**03 56 27.0**	**-0.8**
	comp=Z,320nm,1.8s						
MILM	**Milestii Mici**	**78.06**	**317**	*e*PcP	**PcP**	**03 56 38.0**	**+0.5**
MILM	**Milestii Mici**	**78.06**	**317**	*e*PP	PP	03 59 34.0	+10
MILM	**Milestii Mici**	**78.06**	**317**	⇑P	**P**	**03 56 27.2**	**-0.6**
MILM	**Milestii Mici**	**78.06**	**317***d*	*i*P	**P**	**03 56 27.0**	**-0.8**
MILM				*i* S	**S**	**04 06 17.0**	**-4.2**
MILM				*e*SS	**SS**	**04 11 26.0**	**+4.1**
MILM				pmax	pmax		
	comp=Z,580nm,2.9s						
MILM				pmax	pmax		
	comp=N,700nm,3.6s						
MILM				pmax	pmax		
	comp=E,1µm,12.5s						
MILM				pmax	pmax		
	comp=N,2µm,18.0s						
MILM				MLR	MLR		
	comp=Z,3µm,16.5s						
TWVZ	**Taurewa**	**78.07**	**146**	P	**P**	**03 56 28.2**	**+0.3**
JMIC	**Jan Mayen**	**78.10**	**347**	LR	LR	04 33 07.6	
	comp=Z,650nm,19.7s,baz=52,slow=37						
WTVZ	**West Tongariro**	**78.18**	**146**	P	**P**	**03 56 28.9**	**+0.4**
NNVZ	**North Ngauruho**	**78.21**	**146**	P	**P**	**03 56 28.4**	**-0.4**
OTVZ	**Oturere**	**78.26**	**146**	P	**P**	**03 56 28.9**	**-0.1**
FWVZ	**Far West T-bar**	**78.27**	**146**	P	**P**	**03 56 28.6**	**-0.6**
HAZ	**Te Kaha**	**78.30**	**143**	P	**P**	**03 56 31.3**	**+2.3**
URZ	**Urewera**	**78.32**	**144**	P	**P**	**03 56 27.9**	**-1.2**
	comp=Z,23nm,0.7s,baz=265,slow=4.1,SNR=6.3						
	comp=Z,23nm,0.7s						
URZ	**Urewera**	**78.32**	**144**	IAmb	IAmb	03 56 49.4	
	comp=Z,79nm,1.3s						
TBLU	**Trondheim**	**78.44**	**336**	*e*P	**P**	**03 56 29.5**	**-0.2**
MOVZ	**Moawhango**	**78.48**	**146**	P	**P**	**03 56 29.5**	**-0.7**
ANTO	**Ankara**	**78.55**	**309**	P	**P**	**03 56 30.6**	**-0.2**
ANTO				IAMs_20	IAMs_20	04 30 55.4	
	comp=Z,3µm,22.0s						
ANTO	**Ankara**	**78.55**	**309**	P	**P**	**03 56 30.6**	**-0.2**
ANTO				pmax	pmax		
	comp=Z,179nm,1.4s						
ANTO				MLR	MLR		
	comp=Z,4µm,22.0s						
BR231	**Keskin MP Arra**	**78.57**	**309**	P	**P**	**03 56 30.8**	**-0.2**
MWZ	**Matawai**	**78.59**	**144**	P	**P**	**03 56 30.1**	**-0.6**
MTHZ	**Maungataniwha**	**78.62**	**145**	P	**P**	**03 56 30.3**	**-0.6**
MSEY	**Mahe Island**	**78.67**	**259**	IAMs_20	IAMs_20	04 29 28.5	
	comp=Z,2µm,21.0s						
VIKU	**Vikbolandet**	**78.67**	**331**	*e*P	**P**	**03 56 30.7**	**-0.2**
BKZ	**Black Stump Fm**	**78.68**	**145**	IAmb	IAmb	03 56 35.1	
	comp=Z,114nm,1.4s						
BKZ	**Black Stump Fm**	**78.68**	**145**	P	**P**	**03 56 29.8**	**-1.4**
BHHZ	**Black Hill Sta**	**78.70**	**146**	P	**P**	**03 56 30.2**	**-1.1**
TLCR		**78.84**	**315**	⇑P	**P**	**03 56 32.2**	**0.0**
TLCR		**78.84**	**315**	⇑P	**P**	**03 56 32.2**	**0.0**
RIGZ	**Rimuhau**	**78.99**	**144**	P	**P**	**03 56 32.1**	**-0.8**
FOZ	**Fox Glacier**	**78.99**	**152**	IAmb	IAmb	03 56 36.2	
	comp=Z,83nm,1.2s						
VLDR	**Vladesti**	**79.00**	**316**	⇓P	**P**	**03 56 33.0**	**0.0**
TSZ	**Takapari Road**	**79.08**	**146**	P	**P**	**03 56 32.6**	**-0.8**
KLNR	**Kaliningrad**	**79.12**	**326**	*i* P	**P**	**03 56 34.9**	**+1.4**
KLNR				pmax	pmax		
	comp=Z,97nm,1.4s						
KNZ	**Kokohu**	**79.18**	**144**	P	**P**	**03 56 32.8**	**-1.0**
TPGR	**Topolog**	**79.24**	**315**	⇑P	**P**	**03 56 34.9**	**+0.5**
CFR	**Carcaliu**	**79.28**	**315**	⇑P	**P**	**03 56 34.6**	**+0.1**
CFR	**Carcaliu**	**79.28**	**315**	⇑P	**P**	**03 56 34.6**	**+0.1**
GHRR		**79.32**	**316**	P	**P**	**03 56 35.4**	**+0.7**
MDUB	**Mudurnu**	**79.39**	**310**	P	**P**	**03 56 35.7**	**+0.2**
NB201	**NORSAR Array S**	**79.41**	**334**	IAmb	IAmb	03 56 39.2	
	comp=Z,120nm,1.1s						
TIRR	**Tirgusor**	**79.43**	**315**	⇓P	**P**	**03 56 35.4**	**0.0**
TIRR	**Tirgusor**	**79.43**	**315**	⇓P	**P**	**03 56 35.4**	**0.0**
NB2	**NORSAR Subarra**	**79.45**	**334**	P	**P**	**03 56 34.2**	**-1.1**
	comp=Z,90nm,0.9s,baz=52,slow=5.9						
NB2	**NORSAR Subarra**	**79.45**	**334**	P	**P**	**03 56 34.2**	**-1.1**
	baz=52,slow=5.9						
NOA	**NORSAR Array B**	**79.45**	**334**	P	**P**	**03 56 34.1**	**-1.1**
	comp=Z,24nm,0.7s,baz=50,slow=5.5,SNR=86						
	comp=Z,24nm,0.7s						
NC204	**NORSAR Array S**	**79.48**	**335**	IAmb	IAmb	03 56 56.5	
	comp=Z,84nm,1.0s						
NC602	**NORSAR Array S**	**79.51**	**334**	*e*P	**P**	**03 56 34.5**	**-1.0**
LVV	**L'vov**	**79.52**	**321**	*e*P	**P**	**03 56 36.8**	**+1.0**
LVV				*e*		03 59 38.0	
LVV				*e*		04 01 32.7	
LVV				*e*S	**S**	**04 06 33.8**	**-2.8**
LVV				*e*		04 07 26.8	
LVV				MLR	MLR		
	comp=E,4µm,18.0s						
LVV				MLR	MLR		
	comp=N,500nm,14.0s						
LVV				MLR	MLR		
	comp=Z,3µm,17.0s						
PANC	**Panciu**	**79.57**	**316**	⇑P	**P**	**03 56 36.7**	**+0.6**
TESR	**Tescani**	**79.57**	**317**	⇓P	**P**	**03 56 36.3**	**+0.1**
MMAI	**Mount Meron Ar**	**79.58**	**302**	LR	LR	04 37 51.6	
	comp=Z,1µm,18.4s,baz=228,slow=40						
TLBR	**Topalu**	**79.62**	**315**	⇓P	**P**	**03 56 36.3**	**-0.2**
HARR	**Harsova**	**79.63**	**315**	⇓P	**P**	**03 56 37.3**	**+0.8**
HARR	**Harsova**	**79.63**	**315**	⇓P	**P**	**03 56 37.3**	**+0.8**
DOMB	**Dombas**	**79.63**	**336**	*e*P	**P**	**03 56 34.7**	**-1.5**
RPZ	**Rata Peaks**	**79.67**	**151**	P	**P**	**03 56 35.3**	**-1.2**
	comp=Z,27nm,0.8s,baz=144,slow=6.6,SNR=12						
	comp=Z,27nm,0.8s						
BFZ	**Birch Farm**	**79.70**	**146**	P	**P**	**03 56 35.6**	**-1.1**
BIZ	**Bicaz**	**79.70**	**318**	⇑P	**P**	**03 56 37.3**	**+0.4**
VRI	**Vrincioaia**	**79.83**	**316**	⇑P	**P**	**03 56 38.8**	**+1.2**
VRI	**Vrincioaia**	**79.83**	**316**	⇑P	**P**	**03 56 38.8**	**+1.2**
MOL	**Molde**	**79.84**	**337**	*e*P	**P**	**03 56 37.7**	**+0.4**
PLOR	**Plostina**	**79.89**	**316**	⇓P	**P**	**03 56 38.8**	**+0.8**
BUR08	**Bucovina Ar. S**	**79.90**	**318**	P	**P**	**03 56 38.1**	**0.0**
BUR08				IAmb	IAmb	03 56 42.3	
	comp=Z,97nm,1.3s						
BURAR	**Bucovina Array**	**79.91**	**318**	⇑P	**P**	**03 56 38.4**	**+0.3**
BURAR	**Bucovina Array**	**79.91**	**318**	⇑P	**P**	**03 56 38.4**	**+0.3**
PSN	**Preselentsi**	**79.94**	**314**	P	**P**	**03 56 39.0**	**+0.8**
ICOR	**Ion Corvin**	**79.98**	**314**	⇑P	**P**	**03 56 39.4**	**+1.0**
BORA	**Eskisehir**	**80.16**	**310**	P	**P**	**03 56 39.5**	**-0.1**
BORA				IAmb	IAmb	03 56 43.3	
	comp=Z,122nm,1.1s						
COVR	**Voineasa-Covas**	**80.16**	**317**	⇓P	**P**	**03 56 39.7**	**+0.2**
GHAJ	**Ghor Haditha**	**80.19**	**300**	IAmb	IAmb	03 56 44.2	
	comp=Z,158nm,1.2s						
BEL	**Belsk**	**80.27**	**324**	*e*P	**P**	**03 56 40.2**	**+0.4**
BEL				*e*pP	**pP**	**03 56 42.9**	**-0.4**
BEL				*e*S	**S**	**04 06 45.9**	**+1.4**
AKN	**Aaknes**	**80.29**	**337**	*e*P	**P**	**03 56 39.4**	**-0.4**
CSS	**Mathiatis**	**80.29**	**304**	IAmb	IAmb	03 56 44.1	
	comp=Z,90nm,1.0s						
CSS				IAMs_20	IAMs_20	04 34 24.7	
	comp=Z,3µm,22.0s						
OZUR		**80.30**	**317**	⇓P	**P**	**03 56 40.9**	**+0.7**
NEHR	**Nehoiu**	**80.31**	**316**	⇑P	**P**	**03 56 41.2**	**+1.0**
OSL	**Oslo**	**80.32**	**334**	*e*P	**P**	**03 56 39.3**	**-0.6**
UPNV	**Upernavik**	**80.41**	**2**	*i* P	**P**	**03 56 42.2**	**+2.0**
UPNV				IAmb	IAmb	03 56 43.5	
	comp=Z,180nm,1.8s						
SUMG	**Summit**	**80.41**	**357**	P	**P**	**03 56 41.0**	**+0.3**
SUMG				IAmb	IAmb	03 57 00.2	
	comp=Z,68nm,0.8s						
SUMG	**Summit**	**80.41**	**357**	P	**P**	**03 56 41.0**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,68nm,0.8s						
SUMG	**Summit**	**80.41**	**357**	*i* P	**P**	**03 56 41.8**	**+1.0**
SUMG				IAmb	IAmb	03 56 45.2	
	comp=Z,726nm,2.0s						
MLR	**Muntele Rosu**	**80.49**	**316**	⇑P	**P**	**03 56 42.5**	**+1.2**
MLR	**Muntele Rosu**	**80.49**	**316**	IAmb	IAmb	03 56 45.5	
	comp=Z,113nm,1.3s						
MLR				IAMs_20	IAMs_20	04 36 00.5	
	comp=Z,4µm,21.0s						
MLR	**Muntele Rosu**	**80.49**	**316**	⇑P	**P**	**03 56 42.5**	**+1.2**
DOPR	**Dopca**	**80.60**	**317**	⇓P	**P**	**03 56 42.5**	**+0.7**
SECR		**80.64**	**316**	⇓P	**P**	**03 56 42.8**	**+0.8**
PRD	**Provadia**	**80.67**	**314**	P	**P**	**03 56 41.5**	**-0.6**
WISH	**Wishkah**	**80.67**	**42**	IAmb	IAmb	03 57 03.6	
	comp=Z,69nm,1.2s						
ARCR	**ARCALIA**	**80.68**	**318**	⇑P	**P**	**03 56 42.5**	**+0.4**
SKAR	**Skarslia**	**80.79**	**335**	*e*P	**P**	**03 56 42.1**	**-0.4**
SCO	**Scoresbysund**	**80.82**	**351**	IAmb	IAmb	03 56 47.1	
	comp=Z,195nm,1.5s						
SCO				IAMs_20	IAMs_20	04 32 05.0	
	comp=Z,1µm,21.0s						
SCO	**Scoresbysund**	**80.82**	**351**	*i* P	**P**	**03 56 43.7**	**+1.3**
SCO				IAmb	IAmb	03 56 46.7	
	comp=Z,204nm,1.5s						
D03D	**Eldon**	**80.86**	**41**	P	**P**	**03 56 43.7**	**+0.6**
	baz=300,SNR=9.8						
BMR	**Baia Mare**	**80.89**	**319**	⇓P	**P**	**03 56 43.2**	**0.0**
BMR	**Baia Mare**	**80.89**	**319**	⇓P	**P**	**03 56 43.2**	**0.0**
KONO	**Kongsberg**	**80.94**	**334**	P	**P**	**03 56 43.2**	**-0.1**
KONO				IAmb	IAmb	03 56 46.6	
	comp=Z,66nm,1.3s						
KONO	**Kongsberg**	**80.94**	**334**	IAMs_20	IAMs_20	04 39 03.3	
	comp=Z,2µm,18.0s						
KONO	**Kongsberg**	**80.94**	**334**	P	**P**	**03 56 43.2**	**-0.1**
KONO				pmax	pmax		
	comp=Z,66nm,1.3s						
KONO	**Kongsberg**	**80.94**	**334**	*e*P	**P**	**03 56 43.0**	**-0.2**
KOLS	**Kolonicke sedl**	**80.96**	**321**	*e*P	**P**	**03 56 44.2**	**+0.6**
KOLS				pmax	pmax		
	comp=Z,16nm,0.7s						
KOLS	**Kolonicke sedl**	**80.96**	**321**	*e*P	**P**	**03 56 44.2**	**+0.6**
ISP	**Isparta**	**81.05**	**308**	IAMs_20	IAMs_20	04 30 37.5	
	comp=Z,2µm,19.0s						
ISP	**Isparta**	**81.05**	**308**	*i* P	**P**	**03 56 44.6**	**+0.2**
ISP				pmax	pmax		
	comp=Z,50nm,1.1s						
VOIR		**81.07**	**317**	⇓P	**P**	**03 56 44.6**	**+0.3**
VOIR		**81.07**	**317**	⇓P	**P**	**03 56 44.7**	**+0.3**
DEL	**Delary**	**81.08**	**330**	*e*P	**P**	**03 56 43.9**	**-0.2**
UZH	**Uzhgorod**	**81.10**	**320**	*e*P	**P**	**03 56 45.0**	**+0.7**
UZH				*i*		03 56 47.3	
UZH				*e*		03 56 51.2	
UZH				*i* S	**S**	**04 06 49.8**	**-3.5**
UZH				*e*PS	**PnS**	**04 07 35.0**	**-5.3**
UZH				MLR	MLR		
	comp=N,600nm,16.0s						
UZH				MLR	MLR		
	comp=E,600nm,16.0s						
UZH				MLR	MLR		
	comp=Z,400nm,16.0s						
D04E	**Lakebay**	**81.22**	**41**	P	**P**	**03 56 45.8**	**+0.8**
	baz=300						
HYA	**Hoyanger**	**81.25**	**336**	*e*P	**P**	**03 56 44.2**	**-0.6**
B06A	**Marblemount**	**81.29**	**40**	P	**P**	**03 56 45.6**	**+0.3**
GKP	**Gorka Klasztor**	**81.32**	**326**	*e*P	**P**	**03 56 46.2**	**+0.8**
GKP				*e*pP	**pP**	**03 56 48.5**	**-0.4**
GKP				*e*S	**S**	**04 06 57.0**	**+1.7**
GKP				*e*SKSac	**SKSac**	**04 07 03.4**	**-0.6**
GKP				*e*L	L	04 37 18.4	
GKP	**Gorka Klasztor**	**81.32**	**326**	*e*P	**P**	**03 56 46.5**	**+1.1**
FOO	**Floro**	**81.37**	**337**	*e*P	**P**	**03 56 44.5**	**-1.0**
EIL	**Elat**	**81.38**	**299**	LR	LR	04 37 51.1	
	comp=Z,1µm,19.0s,baz=50,slow=39						
BSD	**Bornholm Skovb**	**81.40**	**328**	*e*P	**P**	**03 56 45.8**	**0.0**
BSD	**Bornholm Skovb**	**81.40**	**328**	*i* P	**P**	**03 56 45.5**	**-0.2**
BSD				IAmb	IAmb	03 56 49.3	
	comp=Z,291nm,1.6s						
CRVS	**Cervenica-Dubn**	**81.43**	**321**	*e*P	**P**	**03 56 47.0**	**+0.9**
CRVS				pmax	pmax		

	comp=Z,207nm,1.4s						
CRVS	Cervenica-Dubn	81.43	321	eP	P	03 56 47.0	+0.9
HUMR	Humele	81.56	316	⇑P	P	03 56 46.5	-0.4
SZH	Strazhica	81.57	314	P	P	03 56 46.0	-1.0
F04D	Rainier, OR	81.64	42	P	P	03 56 48.3	+1.1
	baz=300						
OJC	Ojcow	81.66	323	eP	P	03 56 47.4	+0.1
OJC				epP	pP	03 56 50.0	-0.8
OJC				eS	S	04 06 59.1	+0.1
OJC				eL	L	04 36 35.5	
	comp=Z,8µm,16.5s						
E04D	Cinebar	81.66	42	P	P	03 56 48.1	+0.8
	baz=301,SNR=6.9						
D05A	Enumclaw	81.68	41	IAmb	IAmb	03 57 07.5	
	comp=Z,40nm,1.0s						
NUUG	Nuugaatsiaq	81.72	1	eP	P	03 56 49.2	+2.0
NUUG				IAmb	IAmb	03 56 51.9	
	comp=Z,122nm,2.1s						
DRGR		81.80	319	⇑P	P	03 56 48.5	+0.3
DRGR		81.80	319	⇑P	P	03 56 48.5	+0.3
SUE	Sulen	81.84	336	eP	P	03 56 46.8	-1.2
LOT	Lotru	81.84	317	⇑P	P	03 56 48.9	+0.3
G03D	McMinnville, O	81.92	43	IAMs_20	IAMs_20	04 29 51.4	
	comp=Z,3µm,21.0s						
G03D	McMinnville, O	81.92	43	P	P	03 56 49.0	+0.2
	baz=300						
ODD1	Odda	81.92	335	eP	P	03 56 48.3	-0.2
KULA	Kula-Manisa	82.03	309	P	P	03 56 49.6	0.0
F04A	Amboy	82.07	42	IAmb	IAmb	03 56 54.7	
	comp=Z,82nm,1.3s						
ASK	Askoy	82.07	336	eP	P	03 56 48.2	-1.0
BER	Bergen	82.09	336	eP	P	03 56 48.8	-0.5
I02E	Swisshome, OR	82.11	44	P	P	03 56 50.6	+0.9
	baz=300						
OVD	Ostervraa, Den	82.16	332	i P	P	03 56 51.6	+1.9
OVD				IAmb	IAmb	03 56 53.0	
	comp=Z,568nm,1.7s						
COP	Copenhagen	82.20	330	i P	P	03 56 51.0	+1.0
COP				IAmb	IAmb	03 56 53.7	
	comp=Z,909nm,1.8s						
KECS	Kecovo	82.20	321	eP	P	03 56 51.3	+1.1
KECS				pmax	pmax		
	comp=Z,114nm,1.7s						
KECS	Kecovo	82.20	321	eP	P	03 56 51.3	+1.1
COR	Corvallis	82.21	44	IAMs_20	IAMs_20	04 34 17.2	
	comp=Z,2µm,22.0s						
HOMB	Homborsund	82.26	333	eP	P	03 56 49.2	-1.0
BLS5	Blasjo	82.31	335	eP	P	03 56 50.3	-0.3
LANS	Liptovska Anna	82.41	322	eP	P	03 56 52.2	+0.9
LANS				pmax	pmax		
	comp=Z,31nm,1.5s						
LANS	Liptovska Anna	82.41	322	eP	P	03 56 52.2	+0.9
GZR	Gura Zlata	82.47	317	⇑P	P	03 56 51.3	-0.5
GZR	Gura Zlata	82.47	317	⇑P	P	03 56 51.3	-0.5
RGN	Rugen	82.48	328	IAMs_20	IAMs_20	04 36 20.8	
	comp=Z,3µm,20.0s						
LLD	Lille Linde	82.51	329	i P	P	03 56 52.2	+0.6
LLD				IAmb	IAmb	03 56 55.2	
	comp=Z,340nm,1.7s						
J01E	Myrtle Point	82.53	45	IAmb	IAmb	03 56 58.8	
	comp=Z,74nm,1.2s						
J01E	Myrtle Point	82.53	45	P	P	03 56 54.0	+2.1
	baz=300						
SRE	Strehaia	82.59	317	⇑P	P	03 56 51.7	-0.6
SRE	Strehaia	82.59	317	⇑P	P	03 56 51.7	-0.6
H04D	Lebanon	82.59	44	IAMs_20	IAMs_20	04 29 49.2	
	comp=Z,4µm,21.0s						
H04D	Lebanon	82.59	44	P	P	03 56 52.8	+0.5
	baz=301,SNR=6.0						
ATD	Arta Tunnel	82.61	279	P	P	03 56 52.9	-0.1
ATD				IAMs_20	IAMs_20	04 34 13.2	
	comp=Z,3µm,19.0s						
ATD	Arta Tunnel	82.61	279	P	P	03 56 55.2	+2.3
	SNR=13						
ATD	Arta Tunnel	82.61	279	eP	P	03 56 53.4	+0.5
ATD				eS	S	04 07 09.7	-0.4
I03D	Drain, OR	82.63	45	P	P	03 56 52.7	+0.2
	baz=300,SNR=8.8						
ALN	Alexandroupoli	82.66	312	IAmb	IAmb	03 56 56.6	
	comp=Z,128nm,1.3s						
F05D	White Salmon	82.67	42	IAMs_20	IAMs_20	04 31 06.0	
	comp=Z,4µm,19.0s						
F05D	White Salmon	82.67	42	P	P	03 56 52.6	-0.1
	baz=302,SNR=5.7						
SIRR	Siria	82.69	318	⇓P	P	03 56 51.9	-0.9
KDZ	Kurdzhali	82.70	313	P	P	03 56 54.0	+1.1
SNART	Snartemo	82.74	334	eP	P	03 56 51.9	-0.8
OKC	Ostrava-Krasne	82.76	323	eP	P	03 56 53.7	+0.7
OKC				e		04 07 09.6	
OKC				MLR	MLR		
	comp=Z,6µm,15.2s						
OKC	Ostrava-Krasne	82.76	323	eP	P	03 56 53.7	+0.7
OKC				eSKS	S	04 07 09.6	-0.7
OKC				AMS	AMS	04 37 00.0	
	comp=Z,6µm,15.2s						
GOET	G??ttrup	82.76	332	i P	P	03 56 53.0	+0.2
GOET				IAmb	IAmb	03 56 56.7	
	comp=Z,392nm,1.5s						
PSZ	Piszkesteto	82.84	321	IAmb	IAmb	03 57 13.8	
	comp=Z,54nm,1.1s						
PSZ	Piszkesteto	82.84	321	P	P	03 56 54.7	+1.1
HOOD	Mount Hood Mea	82.84	43	P	P	03 56 54.8	+1.0
KMY	Karmoy	82.91	335	eP	P	03 56 52.9	-0.7
K02D	Willamette Mer	82.93	46	P	P	03 56 54.7	+0.4
	baz=300						
PLD	Plovdiv	82.94	314	P	P	03 56 55.0	+0.9
YER	Yerkesik	82.94	308	P	P	03 56 54.0	-0.3
PUNG	Punghina	82.95	316	P	P	03 56 54.9	+0.8
BSZH	Besenyszg	82.96	320	P	P	03 56 54.4	+0.3
HERR	Herculane	82.96	317	⇑P	P	03 56 54.3	+0.1
EDM	Edmonton	82.98	33	IAmb	IAmb	03 57 14.2	
	comp=Z,44nm,1.2s						
PGB	Panagyurishte	83.06	314	P	P	03 56 55.0	+0.2
G05D	Wamic, OR	83.09	42	P	P	03 56 54.9	0.0
	baz=302,SNR=5.2						
MORC	Moravsky Berou	83.12	323	⇓iP	P	03 56 55.2	+0.2
MORC	Moravsky Berou	83.12	323	eS	S	04 07 15.4	+1.3
VYHS	Vyhne	83.12	321	eP	P	03 56 55.8	+0.8
VYHS				pmax	pmax		
	comp=Z,122nm,1.9s						
VYHS	Vyhne	83.12	321	eP	P	03 56 55.8	+0.8
MUD	Monsted U'grnd	83.15	331	i P	P	03 56 54.4	-0.5
MUD				IAmb	IAmb	03 56 58.4	
	comp=Z,219nm,1.4s						
I04A	Tendick Farm,	83.17	44	P	P	03 56 55.4	0.0
	baz=301,SNR=8.0						
KSP	Ksiaz	83.17	324	eP	P	03 56 55.7	+0.5
KSP				epP	pP	03 56 58.3	-0.4
KSP				eSKSac	SKSac	04 07 15.9	-0.7
MAUC	Maruska	83.19	323	eP	P	03 56 56.0	+0.6
MAUC				ex	x	03 56 59.1	
MAUC				eSKS	SKSac	04 07 18.7	+1.8
MAUC				AMS	AMS	04 37 20.0	
	comp=Z,11µm,15.9s						
BLCB	Balcova	83.20	310	P	P	03 56 55.5	-0.1
E07A	Sunnyside	83.26	41	IAmb	IAmb	03 57 01.2	
	comp=Z,110nm,1.3s						
L02F	Cave Junction	83.28	46	P	P	03 56 56.2	+0.2
	baz=300						
KOLL	Kolacno	83.31	322	eP	P	03 56 56.9	+1.0
KRLC	Kraliky	83.36	323	eP	P	03 56 56.5	+0.3
KRLC				e		03 56 59.2	
KRLC				e		04 07 17.7	
KRLC				MLR	MLR		
	comp=Z,5µm,15.0s						
KRLC	Kraliky	83.36	323	eP	P	03 56 56.5	+0.3
KRLC				epP	pP	03 56 59.2	-0.5
KRLC				eSKS	S	04 07 17.7	+1.2
KRLC				AMS	AMS	04 37 30.0	
	comp=Z,5µm,15.0s						
OSTC	Ostas	83.38	324	eP	P	03 56 57.7	+1.4
OSTC				AMS	AMS	04 37 30.0	
	comp=Z,5µm,14.7s						
HUMO	Hull Mountain	83.43	45	IAMs_20	IAMs_20	04 34 06.6	
	comp=Z,4µm,21.0s						
MDVR	Moldovita	83.44	317	⇑P	P	03 56 56.9	+0.1
DPC	Dobruska-Polom	83.44	324	eP	P	03 56 57.4	+0.8
DPC				e		03 57 00.6	
DPC				e		04 07 16.7	
DPC				MLR	MLR		
	comp=Z,4µm,15.1s						
DPC	Dobruska-Polom	83.44	324	eP	P	03 56 57.4	+0.8
DPC				epP	pP	03 57 00.6	+0.4
DPC				eSKS	S	04 07 16.7	-0.7
DPC				AMS	AMS	04 37 30.0	
	comp=Z,4µm,15.1s						
CHVC	Chvalec	83.44	324	eP	P	03 56 57.0	+0.4
CHVC				eSKS	S	04 07 17.7	+0.3
CHVC				AMS	AMS	04 37 50.0	
	comp=Z,6µm,14.2s						
C09A	Chrisman Ranch	83.49	39	IAmb	IAmb	03 57 17.0	
	comp=Z,39nm,1.2s						
UPC	Upice	83.51	324	eP	P	03 56 57.5	+0.6
UPC				e		04 07 17.7	
UPC				MLR	MLR		
	comp=Z,5µm,14.2s						
UPC	Upice	83.51	324	eP	P	03 56 57.5	+0.6
UPC				eSKS	S	04 07 17.7	-0.3
UPC				AMS	AMS	04 37 50.0	
	comp=Z,5µm,14.2s						
D08A	Wollman Farm,	83.53	40	IAmb	IAmb	03 57 17.1	
	comp=Z,33nm,0.8s						
HAWA	Hanford	83.53	41	IAmb	IAmb	03 57 03.6	
	comp=Z,35nm,1.1s						
I05D	Terrebonne, OR	83.54	43	P	P	03 56 57.2	-0.1
	baz=302,SNR=7.7						
JAVC	Velka Javorina	83.56	322	⇓iP	P	03 56 58.6	+1.3
JAVC	Velka Javorina	83.56	322	eS	S	04 07 22.3	+3.6
BUD	Budapest	83.57	320	P	P	03 57 00.3	+3.0
F07A	Phinny Hill Vi	83.57	41	IAmb	IAmb	03 57 02.8	
	comp=Z,53nm,1.0s						
VTS	Vitosha	83.61	315	P	P	03 56 57.8	0.0
VTS	Vitosha	83.61	315	P	P	03 56 57.8	0.0
VTS				pmax	pmax		
	comp=Z,119nm,1.1s						
VTS	Vitosha	83.61	315	P	P	03 56 58.0	+0.2
DAT	Datca	83.63	308	P	P	03 56 57.7	-0.3
J04D	Umpqua Nationa	83.64	44	P	P	03 56 58.4	+0.4
	baz=301,SNR=22						
BODT	Bodrum	83.66	308	P	P	03 56 58.5	+0.5
SRO	Srobarova	83.79	321	eP	P	03 56 59.2	+0.8
SRO				pmax	pmax		
	comp=Z,167nm,2.1s						
SRO	Srobarova	83.79	321	eP	P	03 56 59.2	+0.8
MMB	Musomiste	83.83	314	P	P	03 56 57.0	-1.8
NEW	Newport	83.88	38	IAMs_20	IAMs_20	04 31 49.7	
	comp=Z,4µm,22.0s						
NEW	Newport	83.88	38	P	P	03 56 58.8	-0.1
	baz=304,SNR=20						
NEW				S	S	04 07 22.5	+0.6
	baz=304						
CHOS	Chios island	83.88	310	P	P	03 56 59.7	+0.5
SMOL	Smolenice	83.89	322	eP	P	03 57 00.6	+1.7
SMOL				pmax	pmax		
	comp=Z,140nm,1.5s						
SMOL	Smolenice	83.89	322	eP	P	03 57 00.6	+1.7
VRAC	Vranov	83.89	323	⇓iP	P	03 56 59.5	+0.6
VRAC	Vranov	83.89	323	eS	S	04 07 22.6	+0.7
ICESG	Greenland Ices	83.93	356	i P	P	03 56 60.0	+0.8
ICESG				IAmb	IAmb	03 57 03.1	
	comp=Z,660nm,2.3s						
KOKK	Kokkinochori,	84.04	313	P	P	03 56 59.1	-0.7
L04D	Klamath Falls	84.04	45	P	P	03 57 00.5	+0.5
	baz=301,SNR=9.2						
MODS	Modra-Piesok	84.05	322	eP	P	03 57 01.4	+1.6
MODS				pmax	pmax		
	comp=Z,565nm,1.5s						
MODS	Modra-Piesok	84.05	322	eP	P	03 57 01.4	+1.6
CSKK	Cskako	84.07	321	P	P	03 57 01.2	+1.3
ILULI	Ilulissat	84.09	0	P	P	03 56 58.9	-0.6
ILULI				IAmb	IAmb	03 57 20.6	
	comp=Z,48nm,1.1s						
ILULI				IAMs_20	IAMs_20	04 40 06.2	
	comp=Z,3µm,18.0s						
ILULI	Ilulissat	84.09	0	P	P	03 56 58.9	-0.6
ILULI				pmax	pmax		
	comp=Z,48nm,1.1s						
ILULI	Ilulissat	84.09	0	i P	P	03 56 58.6	-0.9
ILULI				IAmb	IAmb	03 57 03.1	
	comp=Z,349nm,2.0s						
SOEG	Soedalen	84.13	353	i P	P	03 57 02.0	+2.3
SOEG				IAmb	IAmb	03 57 03.5	
	comp=Z,442nm,1.9s						
KRUC	Moravsky	84.14	323	⇓iP	P	03 57 00.6	+0.4
KRUC	Moravsky	84.14	323	eS	S	04 07 23.3	-1.0
J05D	Fort Rock, OR	84.16	44	P	P	03 57 01.2	+0.6
	baz=302,SNR=26						
K04D	Chiloquin, OR	84.18	45	P	P	03 57 01.4	+0.7
	baz=302						
ZST	Bratislava	84.25	322	eP	P	03 57 03.1	+2.4
ZST				pmax	pmax		
	comp=Z,423nm,1.5s						
ZST	Bratislava	84.25	322	eP	P	03 57 03.1	+2.4
PVCC	Panska Ves	84.25	325	eP	P	03 57 01.4	+0.7
PVCC				e		04 07 20.7	
PVCC				MLR	MLR		
	comp=Z,7µm,15.9s						
PVCC	Panska Ves	84.25	325	eP	P	03 57 01.4	+0.7
PVCC				eSKS	SKSac	04 07 20.7	-2.9
PVCC				AMS	AMS	04 38 20.0	
	comp=Z,7µm,15.9s						
OUR	Ouranopolis	84.30	312	P	P	03 57 00.2	-0.9
BRG	Berggiesshubel	84.37	325	eP	P	03 57 01.2	-0.1
BRG				Amp		03 57 03.1	
	comp=Z,16nm,0.9s						
BRG				ex	x	03 57 04.9	
BRG				Amp		03 57 06.5	
	comp=Z,164nm,1.6s						
BRG				ex	x	03 57 20.3	
BRG				Amp		03 57 21.7	
	comp=Z,39nm,1.0s						
BRG	Berggiesshubel	84.37	325	S	S	04 07 26.0	-0.5
BRG	Berggiesshubel	84.37	325	SS	SS	04 12 59.0	+3.5
BRG	Berggiesshubel	84.37	325	eP	P	03 57 01.2	-0.1
BRG				e		03 57 04.9	
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG				pmax	pmax		
	comp=Z,164nm,1.6s						
BRG				pmax	pmax		
	comp=Z,39nm,1.0s						
FRGS	Fruska Gora	84.38	318	⇓iP	P	03 57 01.1	-0.4
MORH	Mrgy, Hungar	84.48	320	eP	P	03 57 02.0	+0.1
MORH	Mrgy, Hungar	84.48	320	P	P	03 57 01.8	-0.1
TREC	Trest	84.49	323	eP	P	03 57 02.7	+0.7
TREC				MLR	MLR		
	comp=Z,5µm,15.7s						
TREC	Trest	84.49	323	eP	P	03 57 02.7	+0.7
TREC				AMS	AMS	04 38 00.0	
	comp=Z,5µm,15.7s						
TIH	Tihany	84.53	320	P	P	03 57 04.4	+2.2
EGYH	Egyhazaskeszo	84.56	321	P	P	03 57 03.8	+1.4
CLL	Collm	84.58	326	i P	P	03 57 02.5	+0.2
	comp=Z,51nm,1.0s						
CLL				i Pmax		03 57 05.3	
	comp=Z,128nm,1.1s						
CLL				ePmax		03 57 11.0	
CLL				ex	x	03 57 20.0	
CLL				eS	S	04 07 27.0	-1.6
	comp=N,500nm,18.3s						
CLL				eS	S	04 07 27.0	-1.6
	comp=E,2µm,20.9s						
CLL				eS	S	04 07 27.0	-1.6
	comp=Z,1µm,17.9s						
CLL				ePS	PnS	04 08 18.0	-5.0
CLL				eSS	SS	04 12 58.0	-0.6
CLL				eSSS	SSS	04 16 24.0	
CLL				ex	x	04 17 30.0	
CLL				LmH		04 32 00.0	
	comp=N,13µm,18.5s						
CLL				LmH		04 32 00.0	
	comp=E,9µm,18.4s						
CLL				Lmax		04 39 00.0	
KNT	Kendrikon	84.58	314	P	P	03 57 02.3	-0.3
MPLH	Magyarpolny	84.58	321	P	P	03 57 03.1	+0.7
PRU	Pruhonice	84.58	324	eP	P	03 57 02.9	+0.5
PRU				e		04 07 20.7	
PRU				MLR	MLR		
	comp=Z,5µm,14.9s						
PRU	Pruhonice	84.58	324	eP	P	03 57 02.9	+0.5
PRU				eSKS	SKSac	04 07 20.7	-5.1
PRU				AMS	AMS	04 38 20.0	
	comp=Z,5µm,14.9s						
K05A	Summer Lake	84.67	44	IAmb	IAmb	03 57 23.2	
	comp=Z,115nm,1.5s						
VAY	Valandovo	84.71	314	i P	P	03 57 03.6	+0.5
STIP	Stip	84.76	314	i P	P	03 57 02.3	-1.2
SOP	Sopron	84.84	322	P	P	03 57 05.5	+1.8
DIVS	Divibare	84.84	317	P	P	03 57 03.6	-0.3
DIVS				IAMs_20	IAMs_20	04 38 26.7	
	comp=Z,2µm,18.0s						
DIVS	Divibare	84.84	317	eP	P	03 57 03.3	-0.7
KOVH	Kovagotottos	84.87	320	P	P	03 57 05.1	+1.1
TEKS	Tekeris	84.88	318	eP	P	03 57 04.3	+0.3
APE	Apeiranthos	84.89	309	i P	P	03 57 03.3	-1.0
APE				pmax	pmax		
	comp=Z,51nm,1.7s						
RONA	Rosalia, Austr	84.97	322	i P	P	03 57 05.2	+0.7
	comp=Z,66nm,1.3s,SNR=51						
CONA	Conrad Observa	85.08	322	i P	P	03 57 05.9	+0.8
	comp=Z,198nm,1.6s,SNR=124						
SKO	Skopje	85.09	315	i P	P	03 57 06.4	+1.2
WALA	Waterton Lakes	85.16	36	IAmb	IAmb	03 57 18.0	
	comp=Z,38nm,1.2s						
HOPS	Hopland Field	85.20	49	IAMs_20	IAMs_20	04 34 03.9	
	comp=Z,3µm,22.0s						
SANT	Santorini	85.29	308	IAMs_20	IAMs_20	04 31 39.9	
	comp=Z,2µm,18.0s						
SJES	Sjenica	85.31	317	eP	P	03 57 06.8	+0.5
BBLS	Lazići	85.33	317	eP	P	03 57 06.0	-0.4
LIT	Litokhoron	85.40	313	IAmb	IAmb	03 57 10.8	
	comp=Z,70nm,1.1s						
CKRC	Cesky Krumlov	85.40	323	eP	P	03 57 06.8	+0.2
CKRC				eSKS	SKSac	04 07 30.9	-0.2
CKRC				AMS	AMS	04 38 30.0	
	comp=Z,5µm,16.6s						
BEHE	Becsehely	85.41	321	eP	P	03 57 05.3	-1.3
BEHE	Becsehely	85.41	321	P	P	03 57 06.6	-0.1
MOD	Modoc Plateau	85.48	45	IAmb	IAmb	03 57 12.5	
	comp=Z,99nm,1.3s						
MOD				IAMs_20	IAMs_20	04 30 47.8	
	comp=Z,4µm,20.0s						
GDXM	Geysers	85.48	49	P	P	03 57 08.0	+0.7
GDXM				IAmb	IAmb	03 57 13.6	
	comp=Z,50nm,1.4s						
RUDO	Rudo	85.48	317	eP	P	03 57 06.0	-1.1
NKC	Novy Kostel	85.51	325	eP	P	03 57 07.7	+0.6
NKC				MLR	MLR		
	comp=Z,10µm,14.9s						
NKC	Novy Kostel	85.51	325	eP	P	03 57 07.7	+0.6
NKC				AMS	AMS	04 39 20.0	
	comp=Z,10µm,14.9s						
KHC	Kasperske Hory	85.60	324	P	P	03 57 07.1	-0.5
KHC				IAmb	IAmb	03 57 31.1	
	comp=Z,84nm,1.5s						
KHC	Kasperske Hory	85.60	324	eP	P	03 57 07.5	-0.1
KHC				e		03 57 10.3	
KHC				e		04 07 30.9	
KHC				MLR	MLR		
	comp=Z,5µm,14.6s						
KHC	Kasperske Hory	85.60	324	eP	P	03 57 07.5	-0.1
KHC				epP	PcP	03 57 10.3	-0.2
KHC				eSKS	SKSac	04 07 30.9	-1.5
KHC				AMS	AMS	04 38 50.0	
	comp=Z,5µm,14.6s						
DESE	Dese	85.61	280	eP	P	03 57 02.6	-6.0
DESE				⇑eP	PcP	03 57 11.2	-0.3
DESE				eS	S	04 07 43.2	+2.4
ARSA	Arzberg	85.66	322	i P	P	03 57 08.2	+0.3
	comp=Z,73nm,1.4s,SNR=30						
BMO	Blue Mountains	85.69	41	IAmb	IAmb	03 57 14.4	
	comp=Z,42nm,1.2s						
GERES	GERESS Array B	85.70	324	P	P	03 57 07.7	-0.5
	comp=Z,13nm,0.9s,baz=49,slow=6.2,SNR=66						
GERES				PKKPbc	PKKPbc	04 15 08.9	-1.7
	comp=Z,0.7nm,0.5s,baz=134,slow=2.8,SNR=6.6						
	comp=Z,13nm,0.9s						
KOGS	Kog	85.72	321	i P	P	03 57 08.8	+0.6
KOGS				IAMb		03 57 12.4	
	comp=Z,45nm,1.4s						
KOGS				i		03 57 30.5	
KOGS				eSKSac	SKSac	04 07 34.0	+0.9
KOGS				e		04 07 41.3	
KOGS				e		04 08 32.4	
FNA	Florina	85.76	314	P	P	03 57 08.2	-0.4
MCCM	Marconi Confer	85.77	49	IAMs_20	IAMs_20	04 30 03.0	
	comp=Z,3µm,21.0s						
J08A	Circle Bar Ran	85.82	43	IAmb	IAmb	03 57 14.4	
	comp=Z,100nm,1.2s						
OHR	Ohrid	85.95	314	i P	P	03 57 10.1	+0.5
ORV	Oroville	85.95	47	IAmb	IAmb	03 57 13.9	
	comp=Z,40nm,1.1s						
ORV				IAMs_20	IAMs_20	04 34 03.7	
	comp=Z,4µm,22.0s						
UPM	Unac-Piva	85.99	317	eP	P	03 57 09.7	-0.1
MOA	Molln	86.00	323	i P	P	03 57 09.3	-0.3
	comp=Z,53nm,1.3s,SNR=33						
BLY	Banja Luka	86.16	319	eP	P	03 57 10.1	-0.3
PDG	Podgorica	86.21	316	IAmb	IAmb	03 57 30.5	
	comp=Z,57nm,0.9s						
PDG				IAMs_20	IAMs_20	04 39 39.6	
	comp=Z,2µm,19.0s						
PDG	Podgorica	86.21	316	eP	P	03 57 09.8	-0.8
KPRO	Kipourio	86.21	313	P	P	03 57 08.3	-2.5
IDI	Anoyia	86.24	308	IAMs_20	IAMs_20	04 28 09.9	
	comp=Z,1µm,18.0s						
PERS	Pernice	86.25	321	eP	P	03 57 11.2	+0.3
PERS				i		03 57 33.1	
PERS				e		03 59 21.5	
SOKA	Soboth	86.27	321	i P	P	03 57 10.7	-0.3
	comp=Z,116nm,1.5s,SNR=84						
PLID	Pearl Lake	86.32	41	IAMs_20	IAMs_20	04 37 59.4	
	comp=Z,2µm,22.0s						
SFJD	Kangerlussuaq	86.32	0	P	P	03 57 10.2	-0.5
SFJD				IAmb	IAmb	03 57 31.5	
	comp=Z,47nm,0.9s						
SFJD	Kangerlussuaq	86.32	0	IAMs_20	IAMs_20	04 40 16.1	
	comp=Z,3µm,20.0s						
SFJD	Kangerlussuaq	86.32	0	P	P	03 57 10.2	-0.5
SFJD				pmax	pmax		
	comp=Z,47nm,0.9s						
SFJD	Kangerlussuaq	86.32	0	i P	P	03 57 11.0	+0.3
SFJD				IAmb	IAmb	03 57 13.9	
	comp=Z,461nm,2.2s						
DRME	Dracevica, Mon	86.38	316	eP	P	03 57 10.8	-0.7
BRY	Bratogost	86.39	317	eP	P	03 57 11.1	-0.6
MGRS	Mrkonjic Grad	86.40	319	eP	P	03 57 12.3	+0.7
TIR	Tirane	86.42	315	IAmb	IAmb	03 57 27.2	
	comp=Z,72nm,0.9s						
TIR				IAMs_20	IAMs_20	04 41 09.4	
	comp=Z,3µm,19.0s						
BIOA	Bad Ischl, Aus	86.43	323	i P	P	03 57 12.0	+0.3
	comp=Z,40nm,1.1s,SNR=24						
MSO	Missoula	86.47	38	IAmb	IAmb	03 57 18.3	
	comp=Z,60nm,1.4s						
MSO				IAMs_20	IAMs_20	04 32 01.9	
	comp=Z,4µm,21.0s						
MSO	Missoula	86.47	38	P	P	03 57 11.7	-0.3
	baz=307,SNR=42						
GRFO	Grafenberg	86.47	325	P	P	03 57 12.1	+0.3
GRFO				IAMs_20	IAMs_20	04 39 37.5	
	comp=Z,3µm,20.0s						
GRFO	Grafenberg	86.47	325	P	P	03 57 12.1	+0.3
GRFO				pmax	pmax		
	comp=Z,182nm,1.4s						
GRFO				MLR	MLR		
	comp=Z,3µm,20.0s						
CRES	Cresnjev	86.53	321	eP	P	03 57 11.5	-0.7
BEKR	Beckworth	86.53	47	IAmb	IAmb	03 57 17.3	
	comp=Z,59nm,1.0s						
SRKY	Kupres RS	86.56	318	eP	P	03 57 12.6	+0.1
ANX	Ano Chora	86.56	312	P	P	03 57 11.2	-1.4
TREB	Trebinje	86.60	317	eP	P	03 57 10.5	-2.1
OBKA	Obir	86.64	321	i P	P	03 57 12.8	0.0
	comp=Z,14nm,0.8s,SNR=18						
HCY	Herceg Novi	86.67	316	eP	P	03 57 11.9	-1.0
DY2G	Dye2	86.81	359	i P	P	03 57 15.1	+1.7
DY2G				IAmb	IAmb	03 57 17.8	
	comp=Z,62nm,1.0s						
TRIP	Tripoli	86.89	311	P	P	03 57 12.7	-1.5
LJU	Ljubljana	86.93	321	eP	P	03 57 13.4	-0.7
LJU	Ljubljana	86.93	321	i P	P	03 57 14.4	+0.3
LJU				i		03 57 36.3	
LJU				e		03 59 24.6	
LJU				e		03 59 44.0	
LJU				eSKSac	SKSac	04 07 41.0	+0.3
LJU				e		04 07 52.2	
LJU				i		04 08 48.0	
LJU				e		04 08 49.4	
KBA	Koelnbreinsper	86.96	322	i P	P	03 57 13.5	-1.0
	comp=Z,14nm,0.6s,SNR=17						
FCC	Fort Churchill	86.98	21	P	P	03 57 13.8	-0.3
FCC				IAmb	IAmb	03 57 41.5	

	comp=Z,48nm,1.2s						
FCC	**Fort Churchill**	**86.98**	**21**	P	**P**	**03 57 13.8**	**-0.3**
FCC				pmax	pmax		
	comp=Z,49nm,1.3s						
DRO	**Drossia**	**87.04**	**311**	P	**P**	**03 57 14.9**	**0.0**
MYKA	**Terra Mystica**	**87.07**	**322**	*i* P	**P**	**03 57 13.8**	**-1.1**
	comp=Z,18nm,0.8s,SNR=13						
CEY	**Cerknica**	**87.17**	**321**	⇓*i*P	**P**	**03 57 14.7**	**-0.6**
CEY	**Cerknica**	**87.17**	**321**	*i* P	**P**	**03 57 16.2**	**+0.9**
EMB	**Emerald Bay**	**87.18**	**47**	IAmb	IAmb	03 57 20.8	
	comp=Z,84nm,1.1s						
ANGG	**Ammassalik, Gr**	**87.24**	**355**	IAMs_20	IAMs_20	04 42 42.8	
	comp=Z,2µm,19.0s						
PAHR	**Pah Rah Range**	**87.25**	**46**	IAmb	IAmb	03 57 21.0	
	comp=Z,48nm,1.1s						
AAE	**Adis Abeba**	**87.31**	**279**	⇓*e*P	**P**	**03 57 15.0**	**-1.9**
AAE				*e*S	**S**	**04 07 52.3**	**-5.0**
FURI	**Furi**	**87.45**	**279**	IAMs_20	IAMs_20	04 27 25.4	
	comp=Z,2µm,19.0s						
CMB	**Columbia Colle**	**87.50**	**48**	IAmb	IAmb	03 57 21.9	
	comp=Z,41nm,0.9s						
SKDS	**Skadanscina**	**87.51**	**321**	⇓*i*P	**P**	**03 57 15.4**	**-1.6**
TRI	**Trieste**	**87.56**	**321**	P	**P**	**03 57 16.9**	**-0.3**
TRI				IAmb	IAmb	03 57 39.7	
	comp=Z,81nm,1.5s						
TRI	**Trieste**	**87.56**	**321**	P	**P**	**03 57 16.9**	**-0.3**
TRI				pmax	pmax		
	comp=Z,81nm,1.5s						
ABTA	**Abfaltersbach**	**87.61**	**322**	*i* P	**P**	**03 57 16.0**	**-1.5**
	comp=Z,26nm,1.4s,SNR=25						
YERR	**Yerington**	**87.74**	**47**	P	**P**	**03 57 18.8**	**+0.4**
WTTA	**Wattenberg**	**87.77**	**323**	*i* P	**P**	**03 57 19.0**	**+0.6**
	comp=Z,38nm,1.1s,SNR=18						
STAL	**STALIGIAL**	**87.81**	**322**	IAmb	IAmb	03 57 40.7	
	comp=Z,90nm,1.3s						
EGMT	**Eagleton**	**87.98**	**36**	IAmb	IAmb	03 57 38.6	
	comp=Z,36nm,0.9s						
EGMT	**Eagleton**	**87.98**	**36**	P	**P**	**03 57 19.5**	**+0.2**
	baz=310,SNR=17						
EGMT				S	**S**	**04 08 02.0**	**-0.2**
	baz=310						
MOTA	**Moosalm**	**88.00**	**324**	*i* P	**P**	**03 57 21.0**	**+1.5**
	comp=Z,19nm,1.3s,SNR=7.3						
SQTA	**Sankt Quirin**	**88.02**	**323**	*i* P	**P**	**03 57 20.6**	**+1.1**
	comp=Z,25nm,1.3s,SNR=13						
STU	**Stuttgart**	**88.08**	**325**	IAMs_20	IAMs_20	04 35 47.1	
	comp=Z,2µm,18.0s						
RETA	**Reutte**	**88.09**	**324**	*i* P	**P**	**03 57 21.0**	**+1.2**
	comp=Z,15nm,1.2s,SNR=6.5						
DLMT	**Dillon**	**88.09**	**39**	IAMs_20	IAMs_20	04 30 58.3	
	comp=Z,3µm,22.0s						
HLID	**Hailey**	**88.13**	**41**	IAmb	IAmb	03 57 28.2	
	comp=Z,23nm,1.0s						
HLID	**Hailey**	**88.13**	**41**	P	**P**	**03 57 21.2**	**+1.0**
	baz=306,SNR=63						
HLID				S	**S**	**04 08 05.1**	**+1.2**
	baz=306						
BCYI	**Bear Canyon**	**88.27**	**40**	P	**P**	**03 57 21.9**	**+1.0**
BTNL	**Ternell**	**88.38**	**328**	*d*P	**P**	**03 57 20.2**	**-0.8**
BTNL				*d*pP	**PcP**	**03 57 23.5**	**+0.7**
FETA	**Feichten**	**88.40**	**323**	*i* P	**P**	**03 57 19.4**	**-2.0**
	comp=Z,15nm,1.1s,SNR=11						
MEM	**Membach**	**88.42**	**328**	*d*P	**P**	**03 57 20.2**	**-1.0**
BEBN	**Eben Emael**	**88.45**	**328**	*d*P	**P**	**03 57 21.7**	**+0.4**
BOZ	**Bozeman (W)**	**88.49**	**38**	IAMs_20	IAMs_20	04 31 05.4	
	comp=Z,3µm,20.0s						
BOZ	**Bozeman (W)**	**88.49**	**38**	P	**P**	**03 57 22.1**	**+0.3**
	baz=308,SNR=55						
BOZ				S	**S**	**04 08 06.0**	**-1.3**
	baz=308						
CTI	**Castel Tesino**	**88.52**	**322**	IAmb	IAmb	03 57 45.4	
	comp=Z,45nm,1.1s						
BHOU	**Houvegnez**	**88.60**	**328**	*d*P	**P**	**03 57 21.2**	**-0.8**
BHOU				*d*PcP	**PcP**	**03 57 22.6**	**-1.0**
BHOU				*d*pP	**pP**	**03 57 24.6**	**-1.0**
BHOU				*d*sP	**sP**	**03 57 25.4**	**-1.6**
LHV	**Little Huntoon**	**88.62**	**47**	IAmb	IAmb	03 57 33.5	
	comp=Z,38nm,1.4s						
BSTI	**Sart Tilman**	**88.65**	**328**	*d*P	**P**	**03 57 21.4**	**-0.9**
BSTI				*d*PcP	**PcP**	**03 57 22.8**	**-1.1**
NVAR	**Mina Array Bea**	**88.66**	**47**	P	**P**	**03 57 23.2**	**+0.4**
	comp=Z,6.8nm,0.7s,baz=290,slow=5.5,SNR=23						
	comp=Z,6.8nm,0.7s						
DAVA	**Damuels**	**88.68**	**324**	*i* P	**P**	**03 57 21.7**	**-1.0**
	comp=Z,48nm,1.7s,SNR=8.7						
SGRT	**San Giovanni R**	**88.74**	**317**	P	**P**	**03 57 21.9**	**-1.1**
MLAC	**Mammoth, Mammo**	**88.75**	**48**	P	**P**	**03 57 23.3**	**0.0**
	baz=304						
NV11	**Mina Array Sit**	**88.75**	**47**	P	**P**	**03 57 23.6**	**+0.4**
BFO	**Black Forest**	**88.81**	**326**	P	**P**	**03 57 22.3**	**-0.8**
BFO				IAmb	IAmb	03 57 47.5	
	comp=Z,29nm,1.2s						
BFO	**Black Forest**	**88.81**	**326**	P	**P**	**03 57 22.3**	**-0.8**
BFO				pmax	pmax		
	comp=Z,29nm,1.2s						
EKA	**Eskdalemuir Ar**	**88.88**	**335**	LR	LR	04 42 33.2	
	comp=Z,2µm,18.3s,baz=35,slow=39						
BCLA	**Clavier**	**88.88**	**328**	*d*P	**P**	**03 57 22.7**	**-0.6**
ESK	**Eskdalemuir**	**88.91**	**335**	P	**P**	**03 57 22.7**	**-0.6**
ESK				IAmb	IAmb	03 57 47.6	
	comp=Z,29nm,1.0s						
ESK	**Eskdalemuir**	**88.91**	**335**	IAMs_20	IAMs_20	04 42 21.7	
	comp=Z,2µm,19.0s						
ESK	**Eskdalemuir**	**88.91**	**335**	P	**P**	**03 57 22.7**	**-0.6**
ESK				pmax	pmax		
	comp=Z,29nm,1.0s						
TEOL	**Teolo**	**88.93**	**322**	IAmb	IAmb	03 57 40.2	
	comp=Z,42nm,0.8s						
WLF	**Walferdange**	**88.99**	**327**	IAmb	IAmb	03 57 27.9	
	comp=Z,77nm,1.3s						
WLF	**Walferdange**	**88.99**	**327**	*d*P	**P**	**03 57 21.9**	**-2.0**
BGES	**Gesves**	**89.01**	**328**	*d*P	**P**	**03 57 23.3**	**-0.7**
BGES				*d*x	x	03 57 26.4	
RCHB	**Rochefort**	**89.10**	**328**	*d*P	**P**	**03 57 23.1**	**-1.2**
VOG	**Valley Oaks Go**	**89.10**	**49**	P	**P**	**03 57 24.2**	**-0.5**
	baz=303						
YHL	**Hebgen Lake**	**89.20**	**39**	IAmb	IAmb	03 57 38.9	
	comp=Z,40nm,1.1s						
BMRD	**Maredsous**	**89.21**	**329**	*d*P	**P**	**03 57 24.2**	**-0.7**
BMRD				*d*pP	**PcP**	**03 57 27.4**	**+1.0**
SMMC	**Simmler**	**89.23**	**50**	P	**P**	**03 57 26.6**	**+1.2**
	baz=303						
SNF	**Seneffe**	**89.30**	**329**	*d*P	**P**	**03 57 24.2**	**-1.0**
SALO	**Salr**	**89.40**	**322**	IAmb	IAmb	03 57 32.9	
	comp=Z,54nm,0.9s						
YMR	**Madison River**	**89.43**	**39**	IAmb	IAmb	03 57 50.7	
	comp=Z,81nm,1.5s						
DOU	**Dourbes**	**89.44**	**328**	*d*P	**P**	**03 57 24.7**	**-1.2**
	comp=Z,16nm,1.2s						
DOU				*d*x	x	03 57 27.6	
TIN	**Tinemaha, Big**	**89.47**	**48**	P	**P**	**03 57 25.9**	**-0.7**
	baz=304						
ECH	**Echery**	**89.47**	**326**	IAmb	IAmb	03 57 30.1	
	comp=Z,42nm,1.5s						
ECH				IAMs_20	IAMs_20	04 38 26.8	
	comp=Z,2µm,20.0s						
TUE	**Stuetta**	**89.49**	**324**	P	**P**	**03 57 25.9**	**-0.7**
TUE				IAmb	IAmb	03 57 52.1	
	comp=Z,42nm,0.9s						
VES	**Vestal, Richgr**	**89.56**	**50**	P	**P**	**03 57 26.1**	**-0.8**
	baz=304						
PKM	**Mcpherson Peak**	**89.58**	**51**	P	**P**	**03 57 26.2**	**-1.0**
	baz=303						
TIP	**Timpagrande**	**89.60**	**315**	IAmb	IAmb	03 57 47.3	
	comp=Z,28nm,1.1s						
TIP				IAMs_20	IAMs_20	04 44 32.6	
	comp=Z,3µm,21.0s						
YPP	**Pitchstone Pla**	**89.77**	**39**	IAmb	IAmb	03 57 50.9	
	comp=Z,84nm,1.5s						
LKWY	**Lake**	**89.81**	**39**	IAmb	IAmb	03 57 43.1	
	comp=Z,59nm,1.2s						
H17A	**Grant Village**	**89.82**	**39**	P	**P**	**03 57 29.6**	**+1.3**
	baz=309,SNR=10						
H17A				S	**S**	**04 08 23.8**	**+3.8**
	baz=309						
PAOL	**Paolisi**	**89.88**	**317**	IAmb	IAmb	03 57 50.9	
	comp=Z,46nm,1.2s						
SBC	**Santa Barbara**	**89.90**	**51**	P	**P**	**03 57 28.9**	**+0.4**
	baz=303						
CWC	**Cottonwood Cre**	**89.91**	**49**	P	**P**	**03 57 27.6**	**-1.1**
	baz=304						
FLWY	**Flagg Ranch**	**89.95**	**39**	P	**P**	**03 57 29.6**	**+0.8**
FLWY				IAmb	IAmb	03 57 50.3	
	comp=Z,62nm,1.1s						
GRAC	**Grapevine Rang**	**90.07**	**48**	P	**P**	**03 57 29.0**	**-0.3**
	baz=305						
ISA	**Isabella, Lake**	**90.08**	**49**	P	**P**	**03 57 30.5**	**+1.2**
	baz=304						
RLMT	**Red Lodge**	**90.08**	**38**	IAmb	IAmb	03 57 53.9	
	comp=Z,42nm,1.2s						
RLMT	**Red Lodge**	**90.08**	**38**	P	**P**	**03 57 29.2**	**-0.2**
	baz=310,SNR=51						
RLMT				S	**S**	**04 08 21.2**	**-1.2**
	baz=310						
ARVC	**Arvin**	**90.13**	**50**	P	**P**	**03 57 29.3**	**-0.2**
	baz=304						
ARVC				S	**S**	**04 08 24.7**	**+2.1**
	baz=304						
MOOW	**Moose Ponds**	**90.13**	**39**	IAMs_20	IAMs_20	04 32 10.2	
	comp=Z,4µm,22.0s						
HVU	**Hansel Valley**	**90.16**	**42**	IAmb	IAmb	03 57 50.6	
	comp=Z,33nm,1.0s						
TPAW	**Teton Pass**	**90.17**	**40**	IAmb	IAmb	03 57 42.4	
	comp=Z,42nm,1.3s						
SCZ2	**Santa Cruz Isl**	**90.19**	**51**	P	**P**	**03 57 29.7**	**-0.2**
	baz=303						
SNOW	**Snow King Moun**	**90.30**	**40**	IAmb	IAmb	03 57 50.8	
	comp=Z,62nm,1.5s						
REDW	**Red Top Meadow**	**90.31**	**40**	IAmb	IAmb	03 57 37.3	
	comp=Z,77nm,1.4s						
VLC	**Villacollemand**	**90.40**	**321**	IAMs_20	IAMs_20	04 42 35.5	
	comp=Z,3µm,19.0s						
R11A	**Troy Canyon, C**	**90.46**	**46**	P	**P**	**03 57 31.5**	**+0.3**
	baz=306,SNR=42						
R11A				S	**S**	**04 08 27.7**	**+1.8**
	baz=306						
DGMT	**Dagmar**	**90.47**	**33**	IAmb	IAmb	03 57 51.0	
	comp=Z,49nm,1.2s						
DGMT	**Dagmar**	**90.47**	**33**	IAMs_20	IAMs_20	04 33 17.5	
	comp=Z,3µm,19.0s						
DGMT	**Dagmar**	**90.47**	**33**	P	**P**	**03 57 31.5**	**+0.6**
	baz=314						
DGMT	**Dagmar**	**90.47**	**33**	P	**P**	**03 57 30.9**	**+0.1**
	baz=314,SNR=5.7						
DGMT				S	**S**	**04 08 25.9**	**+0.6**
	baz=314						
OSI	**Osito Audit: C**	**90.49**	**50**	P	**P**	**03 57 31.3**	**0.0**
	baz=304						
LATE	**Laterza**	**90.56**	**320**	P	**P**	**03 57 32.4**	**+0.9**
LAO	**LASA Array**	**90.67**	**35**	P	**P**	**03 57 32.3**	**+0.4**
LAO				IAmb	IAmb	03 57 52.3	
	comp=Z,42nm,1.1s						
LAO	**LASA Array**	**90.67**	**35**	P	**P**	**03 57 32.8**	**+0.9**
	baz=312						
LAO	**LASA Array**	**90.67**	**35**	P	**P**	**03 57 31.7**	**-0.2**
	baz=312,SNR=22						
SNCC	**San Nicolas Is**	**90.68**	**52**	P	**P**	**03 57 30.1**	**-2.0**
	baz=303						
CEL	**Celeste**	**90.68**	**314**	IAMs_20	IAMs_20	04 41 32.3	
	comp=Z,2µm,20.0s						
FURC	**Furnace Creek,**	**90.70**	**48**	P	**P**	**03 57 32.2**	**0.0**
	baz=305,SNR=9.6						
LRMC	**Laurel Mtn Rad**	**90.71**	**49**	P	**P**	**03 57 32.2**	**-0.2**
	baz=304,SNR=6.5						
S11A	**Rachel**	**90.76**	**47**	IAmb	IAmb	03 57 57.8	
	comp=Z,75nm,1.5s						
TPNV	**Topopah Spring**	**90.83**	**47**	IAmb	IAmb	03 57 46.9	
	comp=Z,42nm,1.5s						
TPNV	**Topopah Spring**	**90.83**	**47**	P	**P**	**03 57 32.5**	**-0.5**
	baz=305,SNR=30						
EDW2	**Edwards Air Fo**	**90.84**	**50**	P	**P**	**03 57 32.8**	**-0.1**
	baz=304,SNR=6.0						
EDW2				S	**S**	**04 08 32.7**	**+3.4**
	baz=304						
DECC	**Green Verdugo**	**90.95**	**50**	P	**P**	**03 57 33.5**	**0.0**
	baz=304						
QSM	**Queen of Sheba**	**90.99**	**48**	IAmb	IAmb	03 57 39.9	
	comp=Z,67nm,1.2s						
GWY	**Greenwater Val**	**90.99**	**48**	IAmb	IAmb	03 57 41.7	
	comp=Z,36nm,1.5s						
DUG	**Dugway, Tooele**	**91.10**	**43**	P	**P**	**03 57 34.7**	**+0.6**
	baz=308,SNR=72						
DUG				S	**S**	**04 08 32.2**	**+0.5**
	baz=308						
PASC	**Pasadena Art C**	**91.10**	**50**	P	**P**	**03 57 34.3**	**+0.2**
FMP	**Fort Macarthur**	**91.28**	**51**	P	**P**	**03 57 34.7**	**-0.2**
	baz=304						
PRN	**Pahroc Range**	**91.35**	**46**	IAmb	IAmb	03 58 02.4	
	comp=Z,30nm,1.3s						
CIS	**Catalina Islan**	**91.37**	**51**	P	**P**	**03 57 35.4**	**+0.1**
	baz=304						
GSC	**Goldstone, Bar**	**91.41**	**49**	IAmb	IAmb	03 57 41.9	
	comp=Z,58nm,1.2s						
GSC	**Goldstone, Bar**	**91.41**	**49**	P	**P**	**03 57 35.8**	**+0.3**
	baz=305,SNR=18						
GSC				S	**S**	**04 08 36.0**	**+1.5**
	baz=305						
SHOC	**Shoshone, Teco**	**91.42**	**48**	P	**P**	**03 57 35.7**	**+0.2**
	baz=305,SNR=6.6						
BW06	**Boulder Array**	**91.42**	**40**	P	**P**	**03 57 35.3**	**-0.4**
	baz=310,SNR=21						
BW06				S	**S**	**04 08 35.1**	**+0.4**
	baz=310						
PD31	**Pinedale Array**	**91.42**	**40**	IAmb	IAmb	03 57 40.4	
	comp=Z,39nm,1.2s						
PDAR	**Pinedale Array**	**91.42**	**40**	P	**P**	**03 57 35.5**	**-0.3**
	comp=Z,7.7nm,0.9s,baz=313,slow=0.9,SNR=35						
PDAR				PKKP	**PKKPdf**	**04 14 53.8**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=4.1						
	comp=Z,7.7nm,0.9s						
BFSC	**Mount Baldy Ra**	**91.42**	**50**	P	**P**	**03 57 34.4**	**-1.3**
	baz=304						
PSUT	**Pine Spring**	**91.45**	**45**	IAmb	IAmb	03 57 41.2	
	comp=Z,47nm,1.1s						
RRX	**Edison Barstow**	**91.52**	**49**	P	**P**	**03 57 35.7**	**-0.3**
	baz=305						
JLU	**Jordanelle**	**91.67**	**42**	IAmb	IAmb	03 57 45.3	
	comp=Z,38nm,1.3s						
NLU	**North Lily Min**	**91.69**	**43**	IAmb	IAmb	03 57 42.6	
	comp=Z,73nm,1.2s						
SHPR	**Sheep Range**	**91.81**	**47**	IAmb	IAmb	03 57 45.3	
	comp=Z,44nm,1.5s						
BNI	**Bardonecchia**	**91.83**	**324**	P	**P**	**03 57 37.3**	**-0.1**
BNI	**Bardonecchia**	**91.83**	**324**	P	**P**	**03 57 37.3**	**-0.1**
BNI				pmax	pmax		
	comp=Z,28nm,1.4s						
BBRC	**Big Bear Solar**	**91.92**	**50**	P	**P**	**03 57 37.3**	**-0.8**
	baz=305						
TUQ	**Turquoise Moun**	**91.92**	**48**	P	**P**	**03 57 37.9**	**-0.1**
	baz=305,SNR=12						
TUQ				S	**S**	**04 08 39.2**	**-0.1**
	baz=305						
HEC	**Hector,Ludlow**	**91.99**	**49**	P	**P**	**03 57 38.8**	**+0.5**
	baz=305,SNR=9.6						
MURC	**Murrieta**	**92.10**	**50**	P	**P**	**03 57 38.6**	**-0.1**
	baz=305,SNR=5.2						
GMRC	**Granite Mounta**	**92.47**	**49**	P	**P**	**03 57 40.4**	**-0.2**
	baz=306,SNR=13						
GMRC				S	**S**	**04 08 47.1**	**+2.9**
	baz=306						
ABPO	**Ambohimpanom**	**92.53**	**250**	P	**P**	**03 57 40.5**	**-0.5**
ABPO				IAmb	IAmb	03 57 44.5	
	comp=Z,57nm,1.4s						
ABPO	**Ambohimpanom**	**92.53**	**250**	IAMs_20	IAMs_20	04 39 45.2	
	comp=Z,3µm,20.0s						
ABPO	**Ambohimpanom**	**92.53**	**250**	P	**P**	**03 57 40.5**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,57nm,1.4s						
ABPO				MLR	MLR		
	comp=Z,3µm,20.0s						
109C	**Camp Elliot, M**	**92.57**	**51**	IAMs_20	IAMs_20	04 29 18.1	
	comp=Z,3µm,19.0s						
109C	**Camp Elliot, M**	**92.57**	**51**	P	**P**	**03 57 41.2**	**+0.4**
	baz=305						
109C				S	**S**	**04 08 45.3**	**+0.5**
	baz=305						
PFO	**Pinyon Flats O**	**92.60**	**50**	P	**P**	**03 57 41.9**	**+0.7**
PFO				IAmb	IAmb	03 57 45.4	
	comp=Z,42nm,1.2s						
PFO	**Pinyon Flats O**	**92.60**	**50**	IAMs_20	IAMs_20	04 33 10.9	
	comp=Z,2µm,22.0s						
PFO	**Pinyon Flats O**	**92.60**	**50**	P	**P**	**03 57 41.9**	**+0.7**
PFO				pmax	pmax		
	comp=Z,43nm,1.3s						
PFO	**Pinyon Flats O**	**92.60**	**50**	P	**P**	**03 57 41.0**	**-0.2**
	baz=305,SNR=23						
TPFO	**Pinon Flats**	**92.61**	**50**	P	**P**	**03 57 41.3**	**+0.1**
	baz=305,SNR=21						
TPFO				S	**S**	**04 08 44.7**	**-0.8**
	baz=305						
BELC	**Belle Mtn. Jos**	**92.69**	**50**	P	**P**	**03 57 41.4**	**-0.2**
	baz=305,SNR=14						
BELC				S	**S**	**04 08 49.0**	**+2.7**
	baz=305						
SSB	**Saint Sauveur**	**92.78**	**325**	P	**P**	**03 57 40.8**	**-0.9**
SSB	**Saint Sauveur**	**92.78**	**325**	IAMs_20	IAMs_20	04 41 56.5	
	comp=Z,2µm,19.0s						
SSB	**Saint Sauveur**	**92.78**	**325**	P	**P**	**03 57 40.8**	**-0.9**
SSB				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SSB				MLR	MLR		
	comp=Z,2µm,19.0s						
CLTB	**Caltabellotta**	**92.79**	**315**	IAMs_20	IAMs_20	04 40 26.3	
	comp=Z,3µm,22.0s						
RDMU	**Red Mountain**	**92.81**	**41**	IAmb	IAmb	03 57 53.7	
	comp=Z,39nm,1.3s						
LODK	**Lodwar**	**92.85**	**275**	IAMs_20	IAMs_20	04 27 15.8	
	comp=Z,2µm,21.0s						
LODK	**Lodwar**	**92.85**	**275**	*e*P	P	03 57 51.3	+8.7
LODK				*e*S	**SKSac**	**04 08 22.8**	**+6.3**
ULM	**Lac du Bonnet**	**92.91**	**28**	P	**P**	**03 57 40.5**	**-1.6**
	comp=Z,5.2nm,0.8s,baz=322,slow=4.6,SNR=17						
	comp=Z,5.2nm,0.8s						
ULM	**Lac du Bonnet**	**92.91**	**28**	IAmb	IAmb	03 57 54.1	
	comp=Z,20nm,1.1s						
P18A	**Preston Nutter**	**93.00**	**42**	IAmb	IAmb	03 57 56.5	
	comp=Z,41nm,1.0s						
MONP2	**Monument Peak**	**93.04**	**51**	P	**P**	**03 57 44.0**	**+0.7**
	baz=305,SNR=15						
KIBK	**Kibwezi**	**93.05**	**269**	P	**P**	**03 57 43.6**	**+0.1**
KIBK				IAmb	IAmb	03 57 47.4	
	comp=Z,39nm,1.5s						
KIBK				IAMs_20	IAMs_20	04 45 10.5	
	comp=Z,2µm,20.0s						
PKCU	**Pink Cliffs**	**93.08**	**45**	IAmb	IAmb	03 58 04.7	
	comp=Z,59nm,1.4s						
MDND	**Maddock**	**93.08**	**31**	P	**P**	**03 57 43.4**	**+0.4**
	baz=317						
MDND	**Maddock**	**93.08**	**31**	P	**P**	**03 57 42.9**	**0.0**
	baz=317,SNR=8.7						
MDND				S	**S**	**04 08 48.0**	**-0.9**
	baz=317						
TKX	**Tecate**	**93.09**	**51**	P	**P**	**03 57 43.5**	**+0.1**
SRU	**San Rafael Swe**	**93.16**	**43**	IAmb	IAmb	03 57 50.8	
	comp=Z,28nm,1.1s						
NEE2	**Needles Airpor**	**93.18**	**48**	P	**P**	**03 57 43.1**	**-0.6**
	baz=306						
IRM	**Iron Mountain**	**93.18**	**49**	P	**P**	**03 57 44.2**	**+0.4**
	baz=306,SNR=31						
IRM				S	**S**	**04 08 49.6**	**-0.7**
	baz=306						
K22A	**Casper**	**93.20**	**38**	P	**P**	**03 57 44.1**	**+0.3**
	baz=312						
K22A	**Casper**	**93.20**	**38**	P	**P**	**03 57 43.7**	**-0.1**
	baz=312						
K22A				S	**S**	**04 08 50.2**	**-0.2**
	baz=312						
CBX	**Cerro Bola**	**93.20**	**51**	IAmb	IAmb	03 57 49.3	
	comp=Z,15nm,0.8s						
KMBO	**Kilima Mbogo**	**93.22**	**270**	P	**P**	**03 57 43.4**	**-1.1**
	comp=Z,8.1nm,1.1s,baz=73,slow=5.1,SNR=9.4						
	comp=Z,8.1nm,1.1s						
KMBO	**Kilima Mbogo**	**93.22**	**270**	P	**P**	**03 57 44.1**	**-0.4**
KMBO	**Kilima Mbogo**	**93.22**	**270**	IAMs_20	IAMs_20	04 34 11.5	
	comp=Z,2µm,21.0s						
KMBO	**Kilima Mbogo**	**93.22**	**270**	P	**P**	**03 57 44.1**	**-0.4**
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMBO	**Kilima Mbogo**	**93.22**	**270**	P	**P**	**03 57 45.2**	**+0.7**
BC3	**Big Chuckawall**	**93.26**	**50**	P	**P**	**03 57 44.6**	**+0.4**
	baz=306,SNR=24						
IKP	**In-Ko-Pah, Jac**	**93.39**	**51**	P	**P**	**03 57 45.4**	**+0.6**
	baz=305,SNR=7.2						
SWSC	**Sam W. Stewart**	**93.44**	**50**	P	**P**	**03 57 45.0**	**+0.1**
	baz=305,SNR=7.4						
RWWY	**Rawlins**	**93.45**	**39**	IAmb	IAmb	03 57 56.1	
	comp=Z,34nm,1.4s						
W13A	**Hualapai Mount**	**93.47**	**48**	IAmb	IAmb	03 57 50.6	
	comp=Z,38nm,1.0s						
E28A	**Huff**	**93.49**	**32**	IAmb	IAmb	03 58 07.3	
	comp=Z,22nm,0.9s						
RSSD	**Black Hills**	**93.54**	**36**	P	**P**	**03 57 46.0**	**+0.6**
RSSD				IAmb	IAmb	03 58 06.0	
	comp=Z,37nm,1.5s						
RSSD	**Black Hills**	**93.54**	**36**	P	**P**	**03 57 46.0**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,37nm,1.5s						
RSSD	**Black Hills**	**93.54**	**36**	P	**P**	**03 57 45.8**	**+0.3**
	baz=314						
RSSD	**Black Hills**	**93.54**	**36**	P	**P**	**03 57 45.3**	**-0.2**
	baz=314						
RSSD				S	**S**	**04 08 50.2**	**-3.3**
	baz=314						
PDMCI	**Parker Dam,Lak**	**93.77**	**48**	P	**P**	**03 57 46.6**	**+0.2**
	baz=306,SNR=6.9						
O20A	**White River Ci**	**93.87**	**41**	P	**P**	**03 57 47.0**	**0.0**
	baz=310,SNR=18						
O20A				S	**S**	**04 08 57.2**	**+0.7**
	baz=310						
VSL	**Villasalto**	**93.95**	**318**	IAMs_20	IAMs_20	04 32 13.6	
	comp=Z,2µm,18.0s						
GLA	**Glamis**	**94.04**	**50**	P	**P**	**03 57 48.2**	**+0.5**
	baz=306,SNR=13						
CASY	**Casey**	**94.18**	**188**	P	**P**	**03 57 47.0**	**-0.3**
CASY				IAmb	IAmb	03 57 48.3	
	comp=Z,20nm,1.0s						
VOI	**Vohitsoka**	**94.22**	**248**	IAMs_20	IAMs_20	04 40 50.2	
	comp=Z,3µm,21.0s						
AGMN	**Agassiz Nation**	**94.41**	**29**	IAMs_20	IAMs_20	04 35 05.9	
	comp=Z,2µm,19.0s						
AGMN	**Agassiz Nation**	**94.41**	**29**	P	**P**	**03 57 48.5**	**-0.5**
	baz=320						
AGMN	**Agassiz Nation**	**94.41**	**29**	P	**P**	**03 57 47.6**	**-1.5**
	baz=320						
N23A	**Red Feather La**	**94.69**	**39**	IAmb	IAmb	03 57 55.5	
	comp=Z,32nm,1.4s						
N23A	**Red Feather La**	**94.69**	**39**	P	**P**	**03 57 51.2**	**+0.4**
	baz=312,SNR=8.0						
N23A				S	**S**	**04 09 04.8**	**+1.0**
	baz=312						
WUAZ	**Wupatki**	**94.85**	**46**	P	**P**	**03 57 52.4**	**+0.8**
	baz=308,SNR=33						
113A	**Mohawk Valley,**	**94.93**	**50**	IAmb	IAmb	03 57 57.0	
	comp=Z,52nm,1.1s						
SFX	**San Felipe**	**95.19**	**51**	P	**P**	**03 57 53.1**	**+0.2**
B35A	**Bob, Littlefor**	**95.27**	**28**	P	**P**	**03 57 52.6**	**-0.4**
	baz=322						
MVCO	**Mesa Verde**	**95.60**	**43**	P	**P**	**03 57 55.8**	**+0.8**
MVCO	**Mesa Verde**	**95.60**	**43**	P	**P**	**03 57 55.4**	**+0.4**
	baz=310,SNR=6.3						
MVCO				S	**S**	**04 09 14.5**	**+2.7**
	baz=310						
ISCO	**Idaho Springs**	**95.61**	**40**	P	**P**	**03 57 55.3**	**+0.2**
	baz=312,SNR=8.5						
ISCO				S	**S**	**04 09 13.6**	**+1.7**
	baz=312						
SUSD	**Miller**	**95.88**	**33**	P	**P**	**03 57 55.6**	**-0.3**
	baz=317						
214A	**Organ Pipe Nat**	**96.06**	**50**	IAmb	IAmb	03 58 09.3	
	comp=Z,23nm,1.4s						
214A	**Organ Pipe Nat**	**96.06**	**50**	P	**P**	**03 57 57.5**	**+0.5**
	baz=307,SNR=7.4						
214A				S	**S**	**04 09 20.5**	**+5.0**
	baz=307						
F33A	**5 Mile Ranch,**	**96.09**	**31**	IAmb	IAmb	03 58 01.2	
	comp=Z,50nm,1.4s						
W18A	**Petrified Fore**	**96.15**	**46**	P	**P**	**03 57 58.3**	**+0.8**
	baz=309						
S22A	**4UR Ranch, Cre**	**96.26**	**42**	P	**P**	**03 57 57.8**	**-0.3**
	baz=311						
KEST	**Kesra**	**96.37**	**315**	P	**P**	**03 57 58.4**	**0.0**
	comp=Z,5.8nm,1.1s,baz=37,slow=18,SNR=2.5						
	comp=Z,5.8nm,1.1s						
Q24A	**Divide**	**96.44**	**40**	P	**P**	**03 57 58.3**	**-0.6**
	baz=312						
Q24A				S	**S**	**04 09 21.2**	**+2.1**
	baz=312						
EYMN	**Ely**	**96.51**	**27**	IAmb	IAmb	03 58 02.8	
	comp=Z,32nm,1.3s						
EYMN	**Ely**	**96.51**	**27**	IAMs_20	IAMs_20	04 43 41.1	
	comp=Z,3µm,22.0s						
EYMN	**Ely**	**96.51**	**27**	P	**P**	**03 57 57.5**	**-1.1**
	baz=323						
EYMN	**Ely**	**96.51**	**27**	P	**P**	**03 57 58.0**	**-0.6**
	baz=323,SNR=5.5						
OGNE	**Ogallala**	**96.81**	**37**	P	**P**	**03 57 59.3**	**-1.0**
	baz=315						
SDCO	**Great Sand Dun**	**97.05**	**41**	P	Pdif	03 58 01.8	+0.1
	baz=312						
SDCO	**Great Sand Dun**	**97.05**	**41**	P	**P**	**03 58 01.6**	**0.0**
	baz=312,SNR=6.3						
SDCO				S	**S**	**04 09 25.6**	**+1.2**

	baz=312						
TUC	Tucson	97.21	48	P	Pdif	03 58 03.0	+0.7
TUC	Tucson	97.21	48	IAMs_20	IAMs_20	04 31 01.6	
	comp=Z,3μm,22.0s						
TUC	Tucson	97.21	48	P	Pdif	03 58 03.0	+0.7
TUC				pmax	pmax		
	comp=Z,16nm,1.5s						
TUC	Tucson	97.21	48	P	Pdif	03 58 03.2	+0.9
	baz=308						
ECSD	EROS Data Cent	97.54	32	IAMs_20	IAMs_20	04 34 06.0	
	comp=Z,2μm,21.0s						
ECSD	EROS Data Cent	97.54	32	P	P	03 58 02.4	-1.0
	baz=319,SNR=6.5						
ECSD				S	S	04 09 24.4	-3.3
	baz=319						
KSCO	Kaye Shedlock'	97.84	39	P	P	03 58 04.8	-0.2
	baz=314						
T25A	Trinidad	98.10	41	P	P	03 58 04.0	-2.4
	baz=313						
T25A				S	S	04 09 34.9	+1.7
	baz=313						
SPMN	Marine on St.	98.12	29	P	P	03 58 05.9	-0.1
	baz=322						
ANMO	Albuquerque	98.32	44	P	Pdif	03 58 07.8	+0.4
ANMO	Albuquerque	98.32	44	P	Pdif	03 58 07.8	+0.4
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	98.32	44	P	P	03 58 06.2	-1.1
	baz=311						
BGNE	Belgrade	98.51	35	P	P	03 58 06.2	-1.6
	baz=318						
Y22D	IRIS PASSCAL I	98.60	45	P	P	03 58 07.5	-1.0
	baz=311						
MBAR	Mbarara	98.79	274	P	P	03 58 08.9	-0.8
MBAR				IAmb	IAmb	03 58 13.3	
	comp=Z,16nm,1.2s						
MBAR	Mbarara	98.79	274	*i* P	P	03 58 09.3	-0.4
MBAR				pmax	pmax		
	comp=Z,18nm,1.4s						
MBAR	Mbarara	98.79	274	*e*P	Pdif	03 58 15.6	+5.9
MBAR				*e*S	SKSac	04 08 48.6	+0.7
319A	Douglas	98.79	48	IAmb	IAmb	03 58 39.0	
	comp=Z,20nm,1.5s						
COWI	Conover	98.95	27	IAMs_20	IAMs_20	04 38 18.7	
	comp=Z,2μm,22.0s						
121A	Cookes Peak, D	99.04	47	P	Pdif	03 58 09.8	-0.8
	baz=310						
HSIG		99.11	51	P	Pdif	03 58 10.3	-0.4
CBKS	Cedar Bluff	99.57	37	IAMs_20	IAMs_20	04 30 53.8	
	comp=Z,2μm,22.0s						
CBKS	Cedar Bluff	99.57	37	P	Pdif	03 58 12.5	-0.2
	baz=316						
SCIA	State Center	100.54	32	P	Pdif	03 58 15.4	-1.4
	baz=322						
KSU1	Kansas State U	101.01	35	IAMs_20	IAMs_20	04 34 33.5	
	comp=Z,2μm,21.0s						
KSU1	Kansas State U	101.01	35	P	Pdif	03 58 17.6	-1.4
	baz=319						
JFWS	Jewell Farm	101.08	29	IAMs_20	IAMs_20	04 35 39.3	
	comp=Z,2μm,20.0s						
JFWS	Jewell Farm	101.08	29	P	Pdif	03 58 20.5	+1.3
	baz=324						
ESDC	Sonseca Array	101.17	326	P	Pdif	03 58 18.8	-1.0
	comp=Z,2.7nm,1.1s,baz=39,slow=4.4,SNR=11						
ESDC				PP	PP	04 02 25.0	-2.7
	comp=Z,1.3nm,0.9s,baz=32,slow=5.0,SNR=4.5						
ESDC				PKKPbc	PKKPbc	04 14 29.2	-1.1
	comp=Z,1.0nm,1.0s,baz=253,slow=4.7,SNR=3.9						
CART	Cartagena	101.17	323	IAMs_20	IAMs_20	04 50 42.6	
	comp=Z,2μm,19.0s						
MSTX	Muleshoe	101.23	43	P	Pdif	03 58 19.7	-0.5
	baz=314						
AMTX	Amarillo	101.25	41	IAMs_20	IAMs_20	04 30 35.8	
	comp=Z,2μm,22.0s						
AMTX	Amarillo	101.25	41	P	Pdif	03 58 22.2	+1.9
	baz=314						
L44A	Lake County Fo	102.68	28	P	Pdif	03 58 27.5	+1.2
	baz=326						
WMOK	Wichita Mounta	103.03	40	IAMs_20	IAMs_20	04 32 48.8	
	comp=Z,2μm,18.0s						
WMOK	Wichita Mounta	103.03	40	P	Pdif	03 58 29.4	+1.3
	baz=316						
HDIL	Hopedale	103.40	30	IAMs_20	IAMs_20	04 35 40.0	
	comp=Z,2μm,19.0s						
TXAR	Lajitas Array	103.80	47	Pdiff	Pdif	03 58 32.0	+0.3
	comp=Z,1.9nm,0.7s,baz=302,slow=2.5,SNR=14						
TXAR				PKiKP	PKiKP	04 02 49.5	-0.2
	comp=Z,0.8nm,0.9s,baz=248,slow=1.3,SNR=5.2						
TXAR				PKKPbc	PKKPbc	04 14 21.1	-1.2
	comp=Z,1.4nm,0.9s,baz=144,slow=5.3,SNR=7.9						
TUL1	Leonard	103.83	37	IAMs_20	IAMs_20	04 33 18.5	
	comp=Z,2μm,18.0s						
TUL1	Leonard	103.83	37	P	Pdif	03 58 31.4	-0.2
	baz=319						
ABTX	Abilene, Hawle	104.04	42	P	Pdif	03 58 33.1	+0.4
	baz=316						
AAM	Ann Arbor	104.28	25	IAMs_20	IAMs_20	04 53 31.5	
	comp=Z,1μm,19.0s						
LIS	Lisbon	104.44	328	*e*PP	PP	04 02 52.4	+0.4
LIS				IAMs_20	IAMs_20	04 43 13.3	
	comp=N,6μm,21.7s						
CCM	Cathedral Cave	104.50	33	IAMs_20	IAMs_20	04 34 01.4	
	comp=Z,2μm,18.0s						
CCM	Cathedral Cave	104.50	33	P	Pdif	03 58 33.9	-0.6
	baz=323						
SFIN	Lafayette	104.51	29	P	Pdif	03 58 34.2	-0.3
	baz=326						
MESJ	Messejana	104.69	327	*e*PP	PP	04 02 54.3	+0.4
MESJ				*e*SS	SS	04 17 48.0	+3.1
MESJ				IAMs_20	IAMs_20	04 44 33.2	
	comp=N,5μm,28.8s						
PQI	Presque Isle	104.85	13	IAMs_20	IAMs_20	04 37 05.1	
	comp=Z,2μm,22.0s						
U40A	Yellville	105.03	35	IAMs_20	IAMs_20	04 31 25.0	
	comp=Z,1μm,22.0s						
U40A	Yellville	105.03	35	P	Pdif	03 58 35.8	-1.2
	baz=321						
LONY	Lake Ozonia	105.21	18	IAMs_20	IAMs_20	04 37 41.3	
	comp=Z,2μm,21.0s						
LONY	Lake Ozonia	105.21	18	P	Pdif	03 58 37.1	-0.5
	baz=337						
MORF	Marmelete	105.32	327	*e*PP	PP	04 02 59.1	+0.4
MORF				*e*SS	SS	04 17 56.6	+2.9
MORF				IAMs_20	IAMs_20	04 45 01.5	
	comp=N,4μm,16.1s						
W39A	Magazine	105.44	36	IAMs_20	IAMs_20	04 33 43.0	
	comp=Z,3μm,21.0s						
JCT	Junction City	105.46	43	P	Pdif	03 58 39.7	+0.7
	baz=315						
ERPA	Erie	105.78	23	IAMs_20	IAMs_20	04 36 54.9	
	comp=Z,2μm,20.0s						
WHTX	Lake Whitney,	105.78	41	P	PKiKP	04 02 55.4	+2.3
	baz=317						
VNDA	Vanda	105.96	173	PP	PP	04 02 59.0	-4.6
	comp=Z,2.8nm,0.8s,baz=304,slow=10.0,SNR=4.2						
MIAR	Mount Ida	106.05	37	IAMs_20	IAMs_20	04 34 50.1	
	comp=Z,2μm,20.0s						
MIAR	Mount Ida	106.05	37	P	PKiKP	04 02 55.8	+2.3
	baz=320						
M53A	WI Miller and	106.13	24	IAMs_20	IAMs_20	04 54 10.4	
	comp=Z,2μm,20.0s						
W41B	Gary Mavity, V	106.26	35	P	PKiKP	04 02 56.8	+2.9
	baz=321						
X40A	Basin Creek Fa	106.48	36	P	PKiKP	04 02 55.4	+1.1
	baz=321						
435B	Jarrell	106.58	42	P	PKiKP	04 02 56.3	+1.6
	baz=317						
HNH	Hanover	106.67	17	IAMs_20	IAMs_20	04 56 39.9	
	comp=Z,1μm,22.0s						
EMMW	East Machias	106.84	13	IAMs_20	IAMs_20	04 51 12.9	
	comp=Z,2μm,21.0s						
O53A	New Philadelph	106.98	25	IAMs_20	IAMs_20	04 36 42.8	
	comp=Z,2μm,18.0s						
FFD	Franklin Falls	107.06	17	IAMs_20	IAMs_20	04 56 54.0	
	comp=Z,2μm,21.0s						
P52A	Corning	107.16	26	IAMs_20	IAMs_20	04 36 22.9	
	comp=Z,2μm,22.0s						
TRY	Troy	107.21	18	IAMs_20	IAMs_20	04 56 16.2	
	comp=Z,2μm,20.0s						
WVT	Waverly	107.67	32	IAMs_20	IAMs_20	04 35 37.1	
	comp=Z,2μm,18.0s						
MCWV	Mont Chateau	108.00	24	IAMs_20	IAMs_20	04 35 36.8	
	comp=Z,2μm,20.0s						
OXF	Oxford	108.21	34	IAMs_20	IAMs_20	04 46 25.1	
	comp=Z,1μm,22.0s						
PAL	Palisades	108.73	19	IAMs_20	IAMs_20	04 56 12.6	
	comp=Z,2μm,22.0s						
TZTN	Tazewell	109.23	28	IAMs_20	IAMs_20	04 35 12.1	
	comp=Z,2μm,21.0s						
BLA	Blacksburg	109.93	26	IAMs_20	IAMs_20	04 36 33.1	
	comp=Z,2μm,21.0s						
CBN	Corbin Frederi	110.17	23	IAMs_20	IAMs_20	04 56 25.1	
	comp=Z,1μm,19.0s						
LRAL	Lakeview Retre	110.58	33	IAMs_20	IAMs_20	04 34 21.7	
	comp=Z,2μm,21.0s						
GOGA	Godfrey	111.92	30	IAMs_20	IAMs_20	04 35 04.7	
	comp=Z,2μm,22.0s						
GOGA	Godfrey	111.92	30	P	PKiKP	04 03 08.2	+3.7
	baz=328						
NHSC	New Hope	113.60	28	IAMs_20	IAMs_20	04 35 30.8	
	comp=Z,2μm,20.0s						
BOSA	Boshof	114.74	249	PKP	PKPdf	04 03 09.6	-0.6
	comp=Z,1.6nm,0.7s,baz=101,slow=3.0,SNR=7.0						
BOSA				PKKPab	PKKPbc	04 13 48.8	+1.4
	comp=Z,1.3nm,0.7s,baz=216,slow=6.9,SNR=3.7						
TORD	Torodi Ar. Bea	116.12	302	PKP	PKPdf	04 03 11.6	-1.5
	comp=Z,2.1nm,0.7s,baz=35,slow=2.4,SNR=18						
TORD				PP	PP	04 04 17.9	+0.5
	comp=Z,5.2nm,1.0s,baz=54,slow=5.3,SNR=5.9						
TORD				PKKPbc	PKKPbc	04 13 42.7	+0.4
	comp=Z,4.4nm,1.1s,baz=238,slow=2.5,SNR=12						
TORD	Torodi Ar. Bea	116.12	302		PKPdf	04 03 11.7	-1.3
QSPA	South Pole Qui	116.75	180	PKPdf	PKPdf	04 03 12.4	-0.3
QSPA	South Pole Qui	116.75	180	IAMs_20	IAMs_20	04 56 15.8	
	comp=Z,2μm,22.0s						
CMIG	Matias Romero	118.03	50	PKP	PKPdf	04 03 16.0	-0.7
	baz=271,slow=5.3						
TSUM	Tsumeb	118.23	262	PKPdf	PKPdf	04 03 14.3	-2.8
TSUM	Tsumeb	118.23	262	IAMs_20	IAMs_20	04 45 04.0	
	comp=Z,2μm,20.0s						
DBIC	Dimbokro	125.19	301	PKP	PKPdf	04 03 29.6	-0.9
	comp=Z,4.0nm,0.7s,baz=354,slow=4.1,SNR=5.5						
TROLL	Troll, Antarti	126.78	198	PKPdf	PKPdf	04 03 32.0	+0.1
BOAB	BOACO BROADBAN	127.52	46	PKPdf	PKPdf	04 03 34.3	-0.6
SNAA	Sanae	128.39	197	PKPdf	PKPdf	04 03 34.7	-0.3
SNAA	Sanae	128.39	197	PKPdf	PKPdf	04 03 34.5	-0.4
SNAA	Sanae	128.39	197	PKIKP	PKPdf	04 03 34.6	-0.4
BELA	Belgrano 2	128.55	184	PKPdf	PKPdf	04 03 34.0	-1.1
JTS	Las Juntas de	129.58	47	PKP	PKPdf	04 03 37.6	-1.3
	comp=Z,14nm,1.1s,baz=79,slow=14,SNR=4.2						
JTS	Las Juntas de	129.58	47	PKPdf	PKPdf	04 03 38.0	-0.9
JTS	Las Juntas de	129.58	47	PKIKP	PKPdf	04 03 38.0	-0.9
VNA2	Neumayer--Watz	130.02	197	PKPdf	PKPdf	04 03 37.7	-0.3
	baz=111,slow=1.0						
VNA3	Neumayer Olymp	130.39	196	PKPdf	PKPdf	04 03 38.3	-0.4
VNA1	Neumayer--Stat	130.42	197	PKPdf	PKiKP	04 03 39.4	-0.2
PAYG	Puerto Ayora	133.08	63	PKPdf	PKPdf	04 03 42.7	-2.9
SEUS	St. Eustatius	133.96	18	IAMs_20	IAMs_20	04 43 55.2	
	comp=Z,909nm,20.0s						
SJCC	San Jacinto, C	135.79	37	PKPdf	PKPdf	04 03 48.5	-2.2
SDV	Santo Domingo	138.98	33	PKP	PKPdf	04 03 56.7	0.0
	comp=Z,36nm,0.8s,baz=31,slow=1.3,SNR=25						
SDV	Santo Domingo	138.98	33	PKPdf	PKPdf	04 03 55.9	-0.8
SDV	Santo Domingo	138.98	33	IAMs_20	IAMs_20	05 01 04.7	
	comp=Z,895nm,22.0s						
ROSC	El Rosal	140.41	41	PKP	PKPdf	04 03 58.7	-0.9
	comp=Z,4.8nm,0.4s,baz=137,slow=15,SNR=4.0						
PMSA	Palmer Station	141.10	170	*e*P	PKiKP	04 04 01.1	-0.3
OTAV	Otavalo	141.32	50		PKPdf	04 03 58.9	-2.4
OTAV	Otavalo	141.32	50	IAMs_20	IAMs_20	04 50 35.9	
	comp=Z,982nm,21.0s						
OTAV	Otavalo	141.32	50	PKIKP	PKPdf	04 03 58.9	-2.4
OTAV	Otavalo	141.32	50	*e*P	PKPdf	04 04 02.3	+1.0
ATAH	Atahualpa	146.37	59	PKPbc	PKPdf	04 04 10.0	0.0
	comp=Z,65nm,1.1s,baz=343,slow=3.1,SNR=11						
MDP	Montagnes des	147.99	6	PKPbc	PKPbc	04 04 15.6	+0.3
	comp=Z,21nm,0.8s,baz=342,slow=2.4,SNR=9.4						
MG05	Puerto Natales	149.92	151		PKPbc	04 04 17.8	-1.2
NNA	Nana	150.49	65	PKPbc	PKPbc	04 04 19.9	-1.7
	comp=Z,115nm,0.8s,baz=322,slow=4.0,SNR=20						
HOPE	Hope Point	151.03	196		PKPbc	04 04 21.3	-0.3
HOPE	Hope Point	151.03	196	PKIKP	PKPbc	04 04 21.3	-0.3
MCPB	Macapa, AP	153.44	5	*e*P	PKPdf	04 04 22.5	+1.7
MACA	Manacapuru-AM	154.09	26	*e*P	PKPdf	04 04 23.1	+1.4
NBMO	Morrinhos-CE	154.71	337	*e*P	PKPdf	04 04 24.9	+2.4
RCBR	Riachuelo	155.19	326	*e*P	PKPdf	04 04 25.5	+2.3
TMAB	Tom-Au,PA,Br	155.48	356	*e*P	PKPdf	04 04 25.8	+2.2
NBPB	Pedra_Branca-C	156.60	334	*e*P	PKPdf	04 04 27.3	+2.2
ITTB	Itaituba	156.79	15	*e*P	PKPdf	04 04 27.3	+2.0
ETMB	Extrema	156.88	45	*e*P	PKPdf	04 04 27.6	+2.2
NBMA	Muriti-CE	157.90	330	*e*P	PKPdf	04 04 28.8	+2.1
PLCA	Paso Flores	157.99	134	PKP	PKPdf	04 04 27.4	+1.3
	comp=Z,6.4nm,1.2s,baz=252,slow=6.1,SNR=4.5						
PLCA				PKPab	PKPab	04 05 00.1	+0.8
	comp=Z,25nm,1.2s,baz=229,slow=2.7,SNR=8.2						
PLCA	Paso Flores	157.99	134	PKPdf	PKPdf	04 04 25.2	-0.9
PLCA				PKPab	PKPab	04 04 59.7	+0.4
SAML	Samuel	158.00	38	IAMs_20	IAMs_20	05 05 44.5	
	comp=Z,528nm,21.0s						
GO05	Huala	159.37	118	PKPdf	PKPdf	04 04 27.1	-0.7
GO05				PKPab	PKPab	04 05 05.1	-0.4
LPAZ	La Paz	159.87	62	PKP	PKPdf	04 04 30.7	+1.1
	comp=Z,16nm,1.3s,baz=6.2,slow=0.4,SNR=14						
LPAZ				PKPab	PKPab	04 05 08.7	-0.1
	comp=Z,7.2nm,0.7s,baz=326,slow=5.7,SNR=6.5						
LPAZ	La Paz	159.87	62	*e*P	PKPdf	04 04 30.8	+1.1
PB11	IPOC Station P	160.35	73		PKPdf	04 04 26.1	-3.4
PB11				PKPab	PKPab	04 05 08.9	-1.4
NBLA	Lagarto - SE	160.53	323	*e*P	PKPdf	04 04 31.6	+2.0
NBPN	Ponto Novo - B	161.62	329	*e*P	PKPdf	04 04 31.6	+0.8
SMTB	Santa Maria do	161.87	353	*e*P	PKPdf	04 04 33.2	+2.0
LVC	Limon Verde	162.04	80	PKP	PKPdf	04 04 32.9	+1.4
	comp=Z,7.7nm,0.8s,baz=139,slow=5.5,SNR=4.7						
LVC				PKPab	PKPab	04 05 16.9	-1.0
	comp=Z,7.5nm,0.8s,baz=352,slow=7.1,SNR=2.9						
LVC	Limon Verde	162.04	80	*e*P	PKPdf	04 04 32.8	+1.2
VILB	Vilhena	162.93	37	*e*P	PKPdf	04 04 35.6	+3.5
CLDB	Colider	162.99	21	*e*P	PKPdf	04 04 34.0	+1.7
GDU01	Guandu, BA	163.76	322	*e*P	PKPdf	04 04 33.1	+0.2
SIV	San Ignacio	164.80	46	PKP	PKPdf	04 04 34.7	+0.9
	comp=Z,15nm,0.9s,baz=31,slow=0.5,SNR=18						
SIV				PKPab	PKPab	04 05 29.4	-0.2
	comp=Z,6.3nm,0.9s,baz=293,slow=5.3,SNR=5.4						
SDBA	SAO DESIDERIO	164.82	342	*e*P	PKPdf	04 04 34.4	+0.5
TRQA	Tornquist	164.88	140	*e*P	PKPdf	04 04 35.0	+1.7
SNDB	Serra Nova Dou	165.00	6	*e*P	PKPdf	04 04 34.7	+0.7
CMC01	Camacan, BA	165.05	319	*e*P	PKPdf	04 04 36.2	+2.2
PEXB	Peixe	165.15	355	*e*P	PKPdf	04 04 35.8	+1.6
PTLB	Pontes e Lacer	165.56	39	*e*P	PKPdf	04 04 36.2	+1.8
GUA01	Guaratinga, BA	166.17	316	*e*P	PKPdf	04 04 36.5	+1.6
JANB	Januaria	167.12	336	*e*P	PKPdf	04 04 37.4	+1.7
NAN01	Guarapari, ES	167.31	314	*e*P	PKPdf	04 04 37.6	+1.8
SALV	Santo Antonio	167.66	28	*e*P	PKPdf	04 04 39.1	+3.0
BDFB	Brasilia	168.61	352	PKP	PKPdf	04 04 37.1	+0.3
	comp=Z,9.6nm,0.9s,baz=195,slow=4.4,SNR=12						
BDFB				PKPab	PKPab	04 05 45.0	-1.3
	comp=Z,4.3nm,0.8s,baz=19,slow=7.7,SNR=3.7						
BDFB				SKP	SKPdf	04 08 10.7	+3.1
	comp=Z,1.5nm,0.5s,baz=81,slow=5.9,SNR=3.3						
BDFB	Brasilia	168.61	352		PKPdf	04 04 37.2	+0.4
BDFB	Brasilia	168.61	352	*e*P	PKPdf	04 04 38.8	+1.9
SJMB	Sao Joao De Ma	168.62	315	*e*P	PKPdf	04 04 39.4	+2.7
IPMB	Ipameri, GO	170.94	351	*e*P	PKPdf	04 04 40.0	+1.9
CAM01	Campos-RJ	171.05	303	*e*P	PKPdf	04 04 39.5	+1.6
DUB01	Friburgo-RJ	171.73	305	*e*P	PKPdf	04 04 39.5	+1.1
ITRB	Iturama	172.74	5	*e*P	PKPdf	04 04 40.5	+1.6
CPUP	Villa Florida	173.15	86	PKP	PKPdf	04 04 40.0	+1.2
	comp=Z,12nm,1.0s,baz=20,slow=1.4,SNR=14						
CPUP				PKPab	PKPab	04 06 06.0	-0.5
	comp=Z,3.4nm,0.8s,baz=321,slow=4.1,SNR=5.4						
ITQB	Itaqui	173.34	115	*e*P	PKPdf	04 04 39.9	+1.1
BB19B	Bebedouro	174.02	349	*e*P	PKPdf	04 04 40.8	+1.5
PLTB	Pedras Altas	174.15	145	*e*P	PKPdf	04 04 40.5	+1.4
PCMB	Pacaembu	174.47	15	*e*P	PKPdf	04 04 40.2	+0.7
RCLB	Rio Claro- Sao	175.05	336	*e*P	PKPdf	04 04 40.8	+1.1
TRCB	Terra Rica	175.06	33	*e*P	PKPdf	04 04 40.2	+0.6
CPSB	Cacapava Do Su	175.27	137	*e*P	PKPdf	04 04 40.8	+1.4
FRTB	Fartura	176.38	358	*e*P	PKPdf	04 04 41.4	+1.5
ITAB	Concordia	177.83	97	*e*P	PKPdf	04 04 41.7	+1.7
TER01	Tubaro-SC	178.37	198	*e*P	PKPdf	04 04 41.7	+1.6

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*IDC **27** 03:46:37.9±0.5, 26.°89N×130.°14E, h0^{km}, mb5.0/26, mbtmp5.1/29, ML3.9/2 Error ellipse: s-maj=16.7km s-min=12.2km az=74.0*

*JMA **27** 03:46:40.6±0.1, 26.°9N±0.°5×130.°2E±0.°6, h49^{km}, MV5.2/25, NEAR MINAMI-DAITOJIMA IS*

JMA Felt II J1 at NEAR MINAMI-DAITOJIMA IS.

*MOS **27** 03:46:49.6±1.5, 27.°73N×128.°45E, h18^{km}, mb5.6/35, Error ellipse: s-maj=12.0km s-min=5.9km az=112.0*

*NEIC **27** 03:46:51.1±1.9, 27.°69N±0.°06×128.°6E±0.°1, h10^{km}±1^{km}, mb5.5/76, Error ellipse: s-maj=18.6km s-min=8.9km az=107.0*

ISC 27 03:46:40.7±0.8**, 26.°92N**±0.°04×**130.°19E**±0.°03**, h17**^{km}±5^{km}**, n241, σ1^{s}.76**/215**, mb5.4**/102**, 4C-2D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKDJ	Kitadaitoujima	1.39	134	P	Pn	03 47 03.8	-1.5
JKDJ				S	Sn	03 47 20.3	-2.9
JTK	Tokunoshima	1.40	308	P	Pn	03 47 04.7	-0.8
JTK				S	Sn	03 47 21.6	-1.9
JZK	Kikaishima	1.40	352	P	Pn	03 47 05.4	-0.1
JMZ	Minamidaito 2	1.44	140	P	Pn	03 47 04.3	-1.6
JMZ				S	Sn	03 47 21.2	-3.2
JOKE	Okinoerabujima	1.51	287	P	Pn	03 47 06.3	-0.6
JYRO	Yoronjima	1.55	274	P	Pn	03 47 07.0	-0.5
JYRO				S	Sn	03 47 26.1	-1.2
JAM	Amami Oshima	1.57	341	P	Pn	03 47 06.9	-0.9
JAM				S	Sn	03 47 24.9	-2.8
JAMN	Amaminishikomi	1.59	326	P	Pn	03 47 07.2	-0.9
JAMN				S	Sn	03 47 26.2	-2.1
JOW	Kunigami	1.71	267	Pn	Pn	03 47 09.2	-0.6
	2μm,0.3s,baz=106,slow=16,SNR=4.6						
JOW				Sn	Sn	03 47 28.1	-3.1
	2μm,0.3s,baz=83,slow=28,SNR=6.3						
JOW	Kunigami	1.71	267	Pn	Pn	03 47 09.5	-0.2
JOW	Kunigami	1.71	267	P	Pn	03 47 09.2	-0.6
JOW				S	Sn	03 47 30.3	-0.9
JNTH	Nagotoyohara	1.98	259	P	Pn	03 47 12.6	-0.8
JNTH				S	Sn	03 47 35.8	-2.0
JIH	Iheya	1.98	274	P	Pn	03 47 13.3	-0.2
JIH				*e*S	Sn	03 47 36.4	-1.6
JJT3	Tamagusuku3	2.29	251	P	Pn	03 47 17.4	-0.2
JTAJ	Takarajima	2.39	339	P	Pn	03 47 17.9	-1.1
JTAJ				S	Sn	03 47 44.0	-3.9
JAGN	Aguni-jima	2.66	263	P	Pn	03 47 22.2	-0.5
JAGN				S	Sn	03 47 52.6	-1.9
JKE	Kume jima 2	3.10	260	P	Pn	03 47 27.9	-1.0
JYAK	Yakushimahirau	3.31	5	S	Sn	03 48 06.6	-4.2
JMTN	Minamitane	3.52	10	S	Sn	03 48 12.1	-3.7
JKC	Kuchinoerabu	3.53	0	S	Sn	03 48 12.0	-4.0
JTN	Tanegashima 3	3.78	10	P	Pn	03 47 37.2	-1.0
JSU	Suzuyama	4.57	3	Pn	Pn	03 47 53.0	+3.9
JNU	Nakatsue	6.21	5	Pn	Pn	03 48 11.3	-0.3
	4.2nm,0.3s,baz=141,slow=6.5,SNR=1.4						
JNU				Sn	Sn	03 49 16.0	-6.2
	8.5nm,0.3s,baz=233,slow=20,SNR=2.9						
	95nm,0.4s						
JNU	Nakatsue	6.21	5	Pn	Pn	03 48 14.9	+3.3
JTU	Tsushima	7.61	355	Pn	Pn	03 48 31.3	+0.5
TJN	Taejon	9.73	346	Pn	Pn	03 48 56.9	-3.0
TJN	Taejon	9.73	346	P	Pn	03 48 56.9	-3.0
JHJ	Hachijo jima 2	10.36	51	Pn	Pn	03 49 09.3	+0.8
	182nm,0.3s,baz=104,slow=9.9,SNR=5.3						
JHJ				Sn	Sn	03 50 59.8	-4.4
	11nm,0.3s,baz=264,slow=19,SNR=1.8						
KSAR	Wonju Array Be	10.67	350	Pn	Pn	03 49 12.4	-0.3
KSAR	Wonju Array Be	10.67	350	P	Pn	03 49 12.4	-0.3
KSRS	Korea Array	10.67	350	Pn	Pn	03 49 15.1	+2.3
	1.3nm,0.3s,baz=169,slow=14,SNR=9.5						
JCJ	Chichijima	10.70	86	Sn	Sn	03 51 02.0	-11
	9.4nm,0.3s,baz=139,slow=19,SNR=2.2						
KS19	Wonju Array Si	10.73	350	Pn	Pn	03 49 12.5	-1.1
INCN	Inchon	10.95	345	Pn	Pn	03 49 15.1	-1.5
INCN	Inchon	10.95	345	P	Pn	03 49 15.1	-1.5
JSD	Sado	13.00	30	Pn	P	03 49 58.2	+3.1
LYN	LuoYang	17.01	301	⇑P	P	03 50 39.5	-0.1
LYN				PP	pwP	03 50 52.0	+2.5
LYN				pmax	pmax		
	comp=Z,490nm,1.2s						
CN2	Changchun	17.27	348	*e*P	P	03 50 42.0	-0.4
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
USA0B	Ussuriysk Arra	17.30	4		P	03 50 43.7	+1.0
USA0B	Ussuriysk Arra	17.30	4	P	P	03 50 43.7	+1.0
USA0B				pmax	pmax		
	comp=Z,148nm,1.2s						
USRK	Ussuriysk Ar.	17.30	4	P	P	03 50 43.2	+0.5
	comp=Z,1.7nm,0.3s,baz=182,slow=9.1,SNR=8.4						
	comp=Z,59nm,0.9s						
KLR	Kul'dur	22.30	3	P	P	03 51 36.1	-1.1
	comp=Z,49nm,0.7s,baz=197,slow=7.3,SNR=9.6						
	comp=Z,49nm,0.7s						
YSS	Yuzh-Sakhalins	22.32	23	P	P	03 51 42.2	+4.8
YSS				IAmb	IAmb	03 51 50.3	
	comp=Z,336nm,1.5s						
YSS	Yuzh-Sakhalins	22.32	23	*e*P	P	03 51 37.8	+0.4
YSS				pmax	pmax		
	comp=Z,50nm,1.1s						
HIA	Hailar	23.73	343	P	P	03 51 51.1	-0.8
HIA	Hailar	23.73	343	P	P	03 51 51.1	-0.8
HIA				pmax	pmax		
	comp=Z,91nm,1.2s						
UGL	Uglegorsk	23.96	19	*e*P	P	03 51 53.2	-0.8
UGL				pmax	pmax		
	comp=Z,190nm,1.2s						
UGL				pmax	pmax		
	comp=Z,2μm,4.5s						
LZH	Lanzhou	24.19	299	P	P	03 52 01.5	+5.0
LZH				pP	pwP	03 52 06.8	-0.5
LZH				pmax	pmax		
	comp=Z,130nm,1.3s						
KMI	Kunming	24.71	272	⇓P	P	03 52 02.0	+0.5
KMI				pmax	pmax		
	comp=Z,160nm,1.3s						
ZEA	Zeya	26.88	356	*e*P	P	03 52 20.4	0.0
ZEA				pmax	pmax		
	comp=N,100nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,180nm,0.9s						
SONM	Songino Array	27.97	325	P	P	03 52 31.5	+1.1
	comp=Z,21nm,0.8s,baz=135,slow=8.1,SNR=6.3						
	comp=Z,21nm,0.8s						
SONM	Songino Array	27.97	325	P	P	03 52 27.6	-2.8
SONM	Songino Array	27.97	325	P	P	03 52 27.6	-2.8
SONM				pmax	pmax		
	comp=Z,29nm,1.0s						
GTA	Gaotai	28.17	304	*e*P	P	03 52 31.0	-1.4
GTA				pP	pP	03 52 35.8	-0.1
GTA				pmax	pmax		
	comp=Z,72nm,1.0s						
CMAR	Chiang Mai Arr	29.97	260	P	P	03 52 48.0	-0.4
	comp=Z,6.5nm,0.9s,baz=62,slow=6.2,SNR=3.0						
	comp=Z,6.5nm,0.9s						
CMAR	Chiang Mai Arr	29.97	260	P	P	03 52 48.0	-0.4
PEA0B	Petropavlovsk-	33.20	31	P	P	03 53 28.9	+12
PEA0B	Petropavlovsk-	33.20	31	P	P	03 53 28.9	+12
PEA0B				pmax	pmax		
	comp=Z,36nm,1.0s						
PETK	Petropavlovsk-	33.20	31	P	P	03 53 17.1	+0.6
	comp=Z,4.0nm,0.9s,baz=231,slow=11,SNR=4.2						
	comp=Z,4.0nm,0.9s						
SHL	Shillong	34.30	277	P	P	03 53 24.1	-2.4
SHL	Shillong	34.30	277	P	P	03 53 24.2	-2.4
SHL				pmax	pmax		
	comp=Z,147nm,1.3s						
MA2	Magadan	35.60	18	P	P	03 53 38.9	+1.8
	comp=Z,25nm,0.8s,baz=225,slow=9.5,SNR=4.0						
	comp=Z,25nm,0.8s						
PMG	Port Moresby	39.69	153	P	P	03 54 10.6	-1.5
	comp=Z,26nm,0.7s,baz=353,slow=12,SNR=3.7						
	comp=Z,26nm,0.7s						
MK31	Makanchi Array	42.39	311	P	P	03 54 33.5	-0.7
MK31	Makanchi Array	42.39	311	P	P	03 54 33.5	-0.7
MK31				pmax	pmax		
	comp=Z,24nm,0.9s						
MKAR	Makanchi Array	42.39	311	P	P	03 54 33.6	-0.6
	comp=Z,16nm,0.7s,baz=102,slow=10,SNR=5.8						
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	42.39	311	P	P	03 54 32.7	-1.5
MKAR	Makanchi Array	42.39	311	P	P	03 54 32.7	-1.5
MAKZ	Makanchi	42.61	311	P	P	03 54 34.2	-1.8
MAKZ				IAmb	IAmb	03 54 37.9	
	comp=Z,97nm,1.2s						
MAKZ	Makanchi	42.61	311	P	P	03 54 34.2	-1.8
MAKZ				pmax	pmax		
	comp=Z,97nm,1.2s						
ZAA0	Zalesovo Array	42.77	322	P	P	03 54 36.7	-0.5
ZALV	Zalesovo Beam	42.77	322	P	P	03 54 36.2	-0.9
	comp=Z,24nm,0.7s,baz=111,slow=7.9,SNR=6.2						
ZALV				PcP	PcP	03 56 28.6	+0.3
	comp=Z,5.7nm,0.8s,baz=88,slow=4.9,SNR=2.7						
	comp=Z,24nm,0.7s						

TIXI	**Tiksi**	**44.77**	**359**	P	P	03 54 58.5	+5.5
TIXI	**Tiksi**	**44.77**	**359**	P	P	03 54 58.5	+5.5
TIXI				pmax	pmax		
	comp=Z,29nm,0.9s						
KURK	**Kurchatov**	**45.54**	**316**	P	**P**	**03 54 58.3**	**-1.0**
KURK				IAmb	IAmb	03 55 00.4	
	comp=Z,80nm,1.0s						
KURK	**Kurchatov**	**45.54**	**316**	P	**P**	**03 54 58.8**	**-0.5**
KURBB	**Kurchatov Arra**	**45.57**	**316**	P	**P**	**03 54 58.8**	**-0.9**
	comp=Z,67nm,1.0s,baz=102,slow=8.5,SNR=9.0						
	comp=Z,67nm,1.0s						
BILL	**Bilibino**	**46.47**	**18**	P	P	03 55 16.9	+10
BILL				IAmb	IAmb	03 55 19.9	
	comp=Z,74nm,1.2s						
BILL	**Bilibino**	**46.47**	**18**	*ce*P	**P**	**03 55 10.8**	**+4.3**
BILL				*e*		03 55 18.6	
BILL				*e*S	**S**	**04 01 57.9**	**+4.3**
BILL				pmax	pmax		
	comp=Z,32nm,1.3s						
BILL				MLR	MLR		
	comp=Z,938nm,14.0s						
WRA	**Warramunga Arr**	**46.76**	**175**	P	**P**	**03 55 08.6**	**-0.6**
	comp=Z,49nm,0.9s,baz=354,slow=8.4,SNR=7.0						
WRA				PP	**PP**	**03 56 59.9**	**+0.4**
	comp=Z,14nm,0.8s,baz=354,slow=8.2,SNR=4.6						
	comp=Z,49nm,0.9s						
NIL	**Nilore**	**49.10**	**292**	P	**P**	**03 55 25.6**	**-1.8**
NIL	**Nilore**	**49.10**	**292**	P	**P**	**03 55 25.6**	**-1.8**
NIL				pmax	pmax		
	comp=Z,180nm,0.9s						
NRIK	**Noril'sk**	**49.14**	**341**	P	**P**	**03 55 26.8**	**-0.3**
	comp=Z,34nm,0.9s,baz=125,slow=8.5,SNR=4.1						
	comp=Z,34nm,0.9s						
NRIK	**Noril'sk**	**49.14**	**341**	IAmb	IAmb	03 55 28.1	
	comp=Z,57nm,1.1s						
CTA	**Charters Tower**	**49.26**	**160**	P	**P**	**03 55 29.2**	**+0.6**
	comp=Z,120nm,0.9s,baz=336,slow=7.9,SNR=10						
	comp=Z,120nm,0.9s						
ASAR	**Alice Springs**	**50.42**	**176**	P	**P**	**03 55 37.2**	**-0.2**
	comp=Z,22nm,0.8s,baz=4.3,slow=15,SNR=7.1						
ASAR				PP	**PP**	**03 57 29.0**	**-4.3**
	comp=Z,11nm,0.8s,baz=2.7,slow=8.4,SNR=4.5						
	comp=Z,22nm,0.8s						
KK31	**Karatay Array**	**50.45**	**305**	P	**P**	**03 55 36.9**	**-0.6**
KK31				IAmb	IAmb	03 55 39.1	
	comp=Z,88nm,1.3s						
KK31	**Karatay Array**	**50.45**	**305**	P	**P**	**03 55 36.9**	**-0.6**
KK31				pmax	pmax		
	comp=Z,88nm,1.3s						
KKAR	**Karatay Array**	**50.45**	**305**	P	**P**	**03 55 36.7**	**-0.8**
KKAR				IAmb	IAmb	03 55 39.1	
	comp=Z,88nm,1.3s						
KKAR	**Karatay Array**	**50.45**	**305**	P	**P**	**03 55 36.7**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,88nm,1.3s						
GAR	**Garm**	**50.84**	**300**	P	**P**	**03 55 41.2**	**+0.5**
BRVK	**Borovoye**	**51.00**	**318**	P	**P**	**03 55 40.5**	**-1.0**
TAS	**Tashkent**	**51.44**	**303**	P	**P**	**03 55 44.7**	**-0.3**
TAS	**Tashkent**	**51.44**	**303**	P	**P**	**03 55 44.7**	**-0.3**
TAS				pmax	pmax		
	comp=Z,119nm,0.9s						
KBL	**Kabul**	**52.42**	**294**	P	**P**	**03 55 51.9**	**-0.8**
KBL	**Kabul**	**52.42**	**294**	P	**P**	**03 55 51.9**	**-0.8**
KBL				pmax	pmax		
	comp=Z,178nm,1.1s						
ANM	**Nome**	**55.07**	**28**	P	P	03 56 23.4	+12
ANM	**Nome**	**55.07**	**28**	P	P	03 56 23.4	+12
ANM				pmax	pmax		
	comp=Z,20nm,0.9s						
ABKAR	**Akbulak array**	**57.45**	**313**	P	**P**	**03 56 28.8**	**+0.2**
ARU	**Arti**	**57.94**	**322**	P	**P**	**03 56 32.0**	**+0.1**
HRA	**Herat**	**57.96**	**295**	P	**P**	**03 56 32.8**	**+0.1**
HRA				IAmb	IAmb	03 56 34.6	
	comp=Z,44nm,0.9s						
STKA	**Stephens Creek**	**59.48**	**169**	P	**P**	**03 56 42.3**	**-0.4**
	comp=Z,7.2nm,0.6s,baz=6.7,slow=7.3,SNR=3.8						
	comp=Z,7.2nm,0.6s						
GEYT	**Alibeck**	**60.46**	**300**	P	**P**	**03 56 50.7**	**+1.0**
	comp=Z,29nm,1.0s,baz=199,slow=3.1,SNR=6.9						
	comp=Z,29nm,1.0s						
GEYT	**Alibeck**	**60.46**	**300**	P	**P**	**03 56 50.4**	**+0.7**
GEYT				IAmb	IAmb	03 56 51.8	
	comp=Z,43nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**60.46**	**300**	P	**P**	**03 56 49.6**	**-0.1**
GYA0B				IAmb	IAmb	03 56 51.8	
	comp=Z,72nm,1.2s						
SEW	**Seward**	**62.31**	**34**	P	P	03 57 13.8	+12
SEW				IAmb	IAmb	03 57 15.8	
	comp=Z,27nm,0.9s						
CCB	**Clear Creek Bu**	**62.62**	**29**	P	P	03 57 16.4	+13
ILAR	**Eielson Array**	**63.00**	**29**	P	**P**	**03 57 07.1**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=264,slow=6.9,SNR=4.1						
	comp=Z,4.0nm,0.9s						
RIDG	**Independent Ri**	**64.01**	**30**	P	P	03 57 25.8	+13
SCRK	**Sand Creek**	**64.35**	**29**	P	P	03 57 28.0	+13
SCRK				IAmb	IAmb	03 57 29.7	
	comp=Z,24nm,1.0s						
DOT	**Dot Lake**	**64.37**	**30**	P	P	03 57 26.8	+11
DOT				IAmb	IAmb	03 57 31.1	
	comp=Z,30nm,1.1s						
MCARA	**McCarthy VSAT**	**65.24**	**32**	P	P	03 57 33.8	+13
MCARA				IAmb	IAmb	03 57 42.0	
	comp=Z,33nm,1.0s						
GROC	**Groznyy**	**68.22**	**308**	*e*P	**P**	**03 57 40.2**	**-0.2**
GROC				*e*		03 58 06.2	
GROC				pmax	pmax		
	comp=Z,69nm,0.8s						
A36M	**Sachs Harbour**	**69.01**	**19**	P	P	03 57 55.1	+10
GOF	**Gofitskoye**	**69.56**	**311**⇑	*e*P	**P**	**03 57 49.2**	**+0.5**
MOS	**Moscow**	**69.58**	**323**	*e*P	**P**	**03 57 47.0**	**-1.6**
MOS				*e*		03 57 59.1	
MOS				pmax	pmax		
	comp=Z,145nm,1.1s						
MOS				pmax	pmax		
	comp=Z,164nm,1.1s						
ZEI	**Tsey**	**69.67**	**308**	*e*P	**P**	**03 57 49.2**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,73nm,1.0s						
VORR	**Voronezh**	**69.95**	**318**	P	**P**	**03 57 49.9**	**-1.0**
VORR				pmax	pmax		
	comp=Z,67nm,1.5s						
ARCES	**ARCESS Array B**	**70.00**	**339**	P	**P**	**03 57 50.8**	**-0.2**
	comp=Z,22nm,1.1s,baz=46,slow=5.2,SNR=4.8						
	comp=Z,22nm,1.1s						
ARCES	**ARCESS Array B**	**70.00**	**339**	P	**P**	**03 57 53.0**	**+2.0**
ARCES				IAmb	IAmb	03 57 54.1	
	comp=Z,31nm,1.1s						
ARCES	**ARCESS Array B**	**70.00**	**339**	P	**P**	**03 57 53.0**	**+2.0**
ARCES				pmax	pmax		
	comp=Z,31nm,1.2s						
KBZ	**Khabaz**	**70.07**	**310**	P	**P**	**03 57 52.9**	**+1.0**
	comp=Z,71nm,1.0s,baz=179,slow=2.9,SNR=6.1						
	comp=Z,71nm,1.0s						
KIV	**Kislovodsk**	**70.15**	**310**	*e*P	**P**	**03 57 51.6**	**-0.9**
KIV				pmax	pmax		
	comp=Z,117nm,1.1s						
OBN	**Obninsk**	**70.35**	**322**	P	**P**	**03 57 53.9**	**+0.5**
OBN	**Obninsk**	**70.35**	**322**	*ce*P	**P**	**03 57 54.0**	**+0.7**
OBN				*SP	**sP**	**03 57 58.0**	**-0.6**
OBN				pmax	pmax		
	comp=Z,101nm,1.6s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
C36M	**Paulatuk**	**70.42**	**21**	P	P	03 58 03.7	+10
KOPT	**Kop Dagi**	**73.01**	**307**	P	**P**	**03 58 11.3**	**+1.2**
KOPT				IAmb	IAmb	03 58 14.9	
	comp=Z,66nm,1.2s						
FIA1	**FINESS Array S**	**73.12**	**331**	IAmb	IAmb	03 58 14.5	
	comp=Z,48nm,1.4s						
FINES	**FINESS Array B**	**73.12**	**331**	P	**P**	**03 58 09.1**	**-0.8**
	comp=Z,13nm,0.8s,baz=103,slow=6.1,SNR=4.1						
	comp=Z,13nm,0.8s						
FINES	**FINESS Array B**	**73.12**	**331**	P	**P**	**03 58 09.4**	**-0.5**
FINES	**FINESS Array B**	**73.12**	**331**	P	**P**	**03 58 09.4**	**-0.5**
MARD	**Mardin**	**73.79**	**304**	IAmb	IAmb	03 58 15.9	
	comp=Z,33nm,0.8s						
RES	**Resolute Bay**	**74.53**	**11**	P	P	03 58 27.9	+10
RES				IAmb	IAmb	03 58 31.4	
	comp=Z,35nm,0.9s						
RES	**Resolute Bay**	**74.53**	**11**	P	P	03 58 27.9	+10
RES				pmax	pmax		
	comp=Z,35nm,1.0s						
RAYN	**Ar Rayn**	**75.25**	**289**	P	**P**	**03 58 23.3**	**+0.2**
RAYN				IAmb	IAmb	03 58 25.1	
	comp=Z,35nm,1.0s						
RAYN	**Ar Rayn**	**75.25**	**289**	P	**P**	**03 58 23.3**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,35nm,1.0s						
SIM	**Simferopol'**	**75.52**	**313**	*e*P	**P**	**03 58 24.4**	**+0.2**
TOKA	**Tokat**	**75.75**	**308**	P	**P**	**03 58 26.2**	**+0.5**
TOKA				IAmb	IAmb	03 58 27.1	
	comp=Z,43nm,1.0s						
AKASG	**Malin Array Be**	**76.14**	**320**	P	**P**	**03 58 27.2**	**-0.4**
	comp=Z,16nm,0.7s,baz=54,slow=7.0,SNR=7.4						
	comp=Z,16nm,0.7s						
AKBB	**Malin Array Si**	**76.14**	**320**	P	**P**	**03 58 28.0**	**+0.4**
AKBB				IAmb	IAmb	03 58 29.8	
	comp=Z,30nm,0.8s						
AKBB	**Malin Array Si**	**76.14**	**320**	P	**P**	**03 58 28.0**	**+0.4**
AKBB				pmax	pmax		
	comp=Z,30nm,0.9s						
PABE	**Paberze**	**76.79**	**326**	P	**P**	**03 58 31.9**	**+0.7**
PABE				IAmb	IAmb	03 58 32.3	
	comp=Z,46nm,0.7s						
YKA	**Yellowknife Ar**	**77.15**	**26**	P	**P**	**03 58 33.0**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=300,slow=5.1,SNR=2.5						
	comp=Z,3.4nm,0.8s						
YKA	**Yellowknife Ar**	**77.15**	**26**	P	**P**	**03 58 33.0**	**-0.1**
SUW	**Suwalki**	**77.91**	**325**	*e*P	**P**	**03 58 37.2**	**-0.3**
BR131	**Keskin Array S**	**77.99**	**308**	IAmb	IAmb	03 58 41.3	
	comp=Z,50nm,0.8s						
BRTR	**Keskin Array B**	**77.99**	**308**	P	**P**	**03 58 38.6**	**+0.2**
	comp=Z,25nm,0.9s,baz=92,slow=5.5,SNR=8.3						
	comp=Z,25nm,0.9s						
BRTR	**Keskin Array B**	**77.99**	**308**	P	**P**	**03 58 38.9**	**+0.4**
BRTR	**Keskin Array B**	**77.99**	**308**	P	**P**	**03 58 38.9**	**+0.4**
MDUB	**Mudurnu**	**79.35**	**310**	P	**P**	**03 58 47.1**	**+1.2**
NB2	**NORSAR Subarra**	**79.46**	**334**	P	**P**	**03 58 44.6**	**-1.4**
	comp=Z,17nm,0.8s,baz=50,slow=5.6						
NB2	**NORSAR Subarra**	**79.46**	**334**	P	**P**	**03 58 44.6**	**-1.4**
	baz=50,slow=5.6						
NOA	**NORSAR Array B**	**79.46**	**334**	P	**P**	**03 58 44.9**	**-1.1**
	comp=Z,13nm,0.8s,baz=50,slow=5.4,SNR=5.3						
	comp=Z,13nm,0.8s						
BURAR	**Bucovina Array**	**79.89**	**318**	P	**P**	**03 58 48.9**	**+0.2**
BORA	**Eskisehir**	**80.13**	**310**	P	**P**	**03 58 50.2**	**+0.1**
BORA				IAmb	IAmb	03 58 50.8	
	comp=Z,35nm,0.8s						
GHAJ	**Ghor Haditha**	**80.14**	**300**	IAmb	IAmb	03 58 54.5	
	comp=Z,40nm,1.0s						
CSS	**Mathiatis**	**80.25**	**304**	IAmb	IAmb	03 58 54.1	
	comp=Z,29nm,0.8s						
SCO	**Scoresbysund**	**80.86**	**351**	P	P	03 58 59.6	+6.3
SCO				IAmb	IAmb	03 59 07.0	
	comp=Z,39nm,1.1s						
SCO	**Scoresbysund**	**80.86**	**351**	P	P	03 58 59.6	+6.3
SCO				pmax	pmax		
	comp=Z,39nm,1.1s						
CRVS	**Cervenica-Dubn**	**81.42**	**321**	*e*P	**P**	**03 58 56.9**	**+0.2**
CRVS	**Cervenica-Dubn**	**81.42**	**321**	*e*P	**P**	**03 58 56.9**	**+0.2**
OJC	**Ojcow**	**81.64**	**323**	*e*P	**P**	**03 58 58.1**	**+0.2**
LANS	**Liptovska Anna**	**82.40**	**322**	*e*P	**P**	**03 59 05.0**	**+3.0**
LANS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	**Liptovska Anna**	**82.40**	**322**	*e*P	**P**	**03 59 04.9**	**+3.0**
LTY	**Liberty**	**82.51**	**40**	P	P	03 59 15.5	+13
ALN	**Alexandroupoli**	**82.62**	**312**	P	**P**	**03 59 03.9**	**+0.7**
ALN	**Alexandroupoli**	**82.62**	**312**	P	**P**	**03 59 03.9**	**+0.7**
ALN				pmax	pmax		
	comp=Z,16nm,0.9s						
PSZ	**Piszkesteto**	**82.82**	**321**	P	**P**	**03 59 07.3**	**+3.2**
PSZ	**Piszkesteto**	**82.82**	**321**	P	**P**	**03 59 07.4**	**+3.2**
PSZ				pmax	pmax		
	comp=Z,22nm,1.1s						
MORC	**Moravsky Berou**	**83.11**	**323**	P	**P**	**03 59 07.1**	**+1.5**
MORC	**Moravsky Berou**	**83.11**	**323**	P	**P**	**03 59 07.1**	**+1.5**
MORC				pmax	pmax		
	comp=Z,23nm,1.2s						
MORC	**Moravsky Berou**	**83.11**	**323**	*e*P	**P**	**03 59 05.9**	**+0.3**
VYHS	**Vyhne**	**83.11**	**321**	*e*P	**P**	**03 59 06.2**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,15nm,0.9s						
VYHS	**Vyhne**	**83.11**	**321**	*e*P	**P**	**03 59 06.1**	**+0.5**
KSP	**Ksiaz**	**83.17**	**324**	*e*P	**P**	**03 59 06.3**	**+0.4**
KOLL	**Kolacno**	**83.30**	**322**	*e*P	**P**	**03 59 07.7**	**+1.2**
DPC	**Dobruska-Polom**	**83.43**	**324**	*e*P	**P**	**03 59 08.1**	**+0.8**
DPC				*e*		03 59 20.3	
DPC	**Dobruska-Polom**	**83.43**	**324**	*e*P	**P**	**03 59 08.1**	**+0.8**
DPC				*e*x	x	03 59 20.3	
CHVC	**Chvalec**	**83.44**	**324**	*e*P	**P**	**03 59 07.2**	**-0.1**
JAVC	**Velka Javorina**	**83.55**	**322**	*e*P	**P**	**03 59 09.3**	**+1.4**
VTS	**Vitosha**	**83.59**	**315**	IAmb	IAmb	03 59 10.1	
	comp=Z,29nm,1.0s						
SMOL	**Smolenice**	**83.87**	**322**	*e*P	**P**	**03 59 10.8**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,22nm,1.1s						
SMOL	**Smolenice**	**83.87**	**322**	*e*P	**P**	**03 59 10.8**	**+1.3**
VRAC	**Vranov**	**83.88**	**323**	*e*P	**P**	**03 59 10.2**	**+0.7**
MODS	**Modra-Piesok**	**84.04**	**322**	*e*P	**P**	**03 59 11.2**	**+0.8**
MODS				pmax	pmax		
	comp=Z,92nm,1.1s						
MODS	**Modra-Piesok**	**84.04**	**322**	*e*P	**P**	**03 59 11.2**	**+0.8**
KRUC	**Moravsky**	**84.13**	**323**	*e*P	**P**	**03 59 11.1**	**+0.3**
ZST	**Bratislava**	**84.23**	**322**	*e*P	**P**	**03 59 13.4**	**+2.1**
ZST	**Bratislava**	**84.23**	**322**	*e*P	**P**	**03 59 13.4**	**+2.1**
PVCC	**Panska Ves**	**84.24**	**325**	*e*P	**P**	**03 59 12.3**	**+1.0**
PVCC				*e*		03 59 24.6	
PVCC	**Panska Ves**	**84.24**	**325**	*e*P	**P**	**03 59 12.3**	**+1.0**
PVCC				*e*x	x	03 59 24.6	
BRG	**Berggiesshubel**	**84.36**	**325**	*e*P	**P**	**03 59 12.5**	**+0.5**
BRG				Amp		03 59 13.9	
	comp=Z,38nm,1.5s						
BRG	**Berggiesshubel**	**84.36**	**325**	*e*P	**P**	**03 59 12.4**	**+0.5**
BRG				pmax	pmax		
	comp=Z,38nm,1.5s						
TREC	**Trest**	**84.48**	**323**	*e*P	**P**	**03 59 13.3**	**+0.7**
TREC	**Trest**	**84.48**	**323**	*e*P	**P**	**03 59 13.3**	**+0.7**
CLL	**Collm**	**84.58**	**326**⇓	*i*P	**P**	**03 59 13.3**	**+0.3**
	comp=Z,34nm,0.9s						
CLL				*e*x	x	03 59 19.0	
CLL				*e*x	x	03 59 25.0	
PRU	**Pruhonice**	**84.58**	**324**	*e*P	**P**	**03 59 13.5**	**+0.5**
PRU	**Pruhonice**	**84.58**	**324**	*e*P	**P**	**03 59 13.5**	**+0.5**
PRU				*e*x	x	03 59 26.2	
RONA	**Rosalia, Austr**	**84.96**	**322**	*e*P	**P**	**03 59 16.5**	**+1.4**
	comp=Z,27nm,1.2s						
CONA	**Conrad Observa**	**85.07**	**322**	*e*P	**P**	**03 59 17.5**	**+1.9**
	comp=Z,58nm,1.1s						
CKRC	**Cesky Krumlov**	**85.39**	**323**	*e*P	**P**	**03 59 17.4**	**+0.2**
KHC	**Kasperske Hory**	**85.59**	**324**	*e*P	P	03 59 24.7	+6.5
KHC	**Kasperske Hory**	**85.59**	**324**	*e*pP	pP	03 59 24.7	+2.6
ARSA	**Arzberg**	**85.65**	**322**	*e*P	**P**	**03 59 19.8**	**+1.2**
	comp=Z,29nm,1.2s						
GERES	**GERESS Array B**	**85.69**	**324**	P	**P**	**03 59 18.8**	**0.0**
	comp=Z,4.8nm,0.8s,baz=54,slow=6.8,SNR=4.9						
	comp=Z,4.8nm,0.8s						
JTMT	**Jette**	**85.83**	**38**	P	P	03 59 31.9	+12
MOA	**Molln**	**85.99**	**323**	*e*P	**P**	**03 59 21.6**	**+1.4**
	comp=Z,36nm,1.0s						
PDG	**Podgorica**	**86.18**	**316**	P	**P**	**03 59 22.1**	**+0.9**
PDG				IAmb	IAmb	03 59 25.4	
	comp=Z,31nm,0.9s						
SOKA	**Soboth**	**86.26**	**321**	*e*P	**P**	**03 59 21.7**	**+0.1**
	comp=Z,34nm,1.2s						
SFJD	**Kangerlussuaq**	**86.37**	**0**	P	P	03 59 29.3	+7.7
SFJD				IAmb	IAmb	03 59 34.2	
	comp=Z,43nm,1.1s						
SFJD	**Kangerlussuaq**	**86.37**	**0**	P	P	03 59 29.3	+7.7
SFJD				pmax	pmax		
	comp=Z,43nm,1.1s						
BIOA	**Bad Ischl, Aus**	**86.42**	**323**	*e*P	**P**	**03 59 22.9**	**+0.6**
	comp=Z,35nm,1.1s						
MSO	**Missoula**	**86.56**	**38**	P	P	03 59 35.8	+13
OBKA	**Obir**	**86.62**	**321**	*e*P	**P**	**03 59 24.1**	**+0.7**
	comp=Z,9.9nm,0.8s						
KBA	**Koelnbreinsper**	**86.95**	**322**	*e*P	**P**	**03 59 24.8**	**-0.3**
	comp=Z,19nm,0.9s						
FCC	**Fort Churchill**	**87.06**	**21**	P	P	03 59 35.9	+11
FCC				IAmb	IAmb	03 59 40.6	
	comp=Z,24nm,1.1s						
FCC	**Fort Churchill**	**87.06**	**21**	P	P	03 59 35.9	+11
FCC				pmax	pmax		
	comp=Z,24nm,1.1s						
PAHR	**Pah Rah Range**	**87.35**	**46**	P	P	03 59 39.9	+13
ABTA	**Abfaltersbach**	**87.60**	**322**	*e*P	**P**	**03 59 28.3**	**+0.1**
	comp=Z,33nm,0.9s						
WATA	**Walderalm**	**87.75**	**323**	*e*P	**P**	**03 59 29.7**	**+0.7**
	comp=Z,21nm,1.0s						
WTTA	**Wattenberg**	**87.76**	**323**	*e*P	**P**	**03 59 30.2**	**+1.2**
	comp=Z,30nm,1.1s						
MOTA	**Moosalm**	**87.99**	**324**	*e*P	**P**	**03 59 31.0**	**+0.9**
	comp=Z,18nm,0.8s						
SQTA	**Sankt Quirin**	**88.01**	**323**	*e*P	**P**	**03 59 32.3**	**+2.1**
	comp=Z,17nm,1.1s						
RETA	**Reutte**	**88.08**	**324**	*e*P	**P**	**03 59 33.5**	**+3.1**
	comp=Z,19nm,1.4s						
FETA	**Feichten**	**88.39**	**323**	*e*P	**P**	**03 59 34.2**	**+2.2**
	comp=Z,20nm,1.0s						
KVN	**Kaiserville**	**88.55**	**46**	P	P	03 59 46.1	+13
KVN				IAmb	IAmb	03 59 48.1	
	comp=Z,29nm,1.5s						
KVN	**Kaiserville**	**88.55**	**46**	P	P	03 59 46.1	+13
KVN				pmax	pmax		
	comp=Z,29nm,1.5s						
DAVA	**Damuels**	**88.67**	**324**	*e*P	**P**	**03 59 33.1**	**-0.2**
	comp=Z,24nm,1.1s						
NVAR	**Mina Array Bea**	**88.76**	**47**	P	**P**	**03 59 35.7**	**+1.7**
	comp=Z,3.2nm,0.9s,baz=280,slow=5.4,SNR=3.6						
	comp=Z,3.2nm,0.9s						
DUG	**Dugway, Tooele**	**91.20**	**43**	P	P	03 59 58.9	+14
DUG				IAmb	IAmb	04 00 01.6	
	comp=Z,24nm,1.4s						
DUG	**Dugway, Tooele**	**91.20**	**43**	P	P	03 59 58.9	+14
DUG				pmax	pmax		
	comp=Z,24nm,1.4s						
PDAR	**Pinedale Array**	**91.52**	**40**	P	**P**	**03 59 46.6**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=298,slow=3.8,SNR=2.7						
	comp=Z,2.1nm,0.9s						
NLU	**North Lily Min**	**91.80**	**43**	P	P	04 00 01.6	+13
MSU	**Marysvale**	**92.61**	**44**	P	P	04 00 06.6	+15
MSU	**Marysvale**	**92.61**	**44**	P	P	04 00 06.6	+15
P18A	**Preston Nutter**	**93.10**	**42**	P	P	04 00 07.0	+13
P18A				IAmb	IAmb	04 00 10.4	
	comp=Z,19nm,1.0s						
WUAZ	**Wupatki**	**94.95**	**46**	P	P	04 00 15.7	+13
WUAZ				IAmb	IAmb	04 00 18.1	
	comp=Z,29nm,1.4s						
ESDC	**Sonseca Array**	**101.16**	**326**	PP	**PP**	**04 04 35.6**	**-2.8**
	comp=Z,2.0nm,1.0s,baz=34,slow=8.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**116.08**	**302**	PP	**PP**	**04 06 23.4**	**-4.4**
	comp=Z,5.7nm,1.1s,baz=49,slow=5.4,SNR=4.9						
SNAA	**Sanae**	**128.31**	**197**	P	**PKiKP**	**04 05 53.7**	**+7.5**
NNA	**Nana**	**150.59**	**65**	PKPbc	**PKPbc**	**04 06 31.4**	**-1.1**
	comp=Z,20nm,0.7s,baz=330,slow=4.6,SNR=5.3						

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*THE **27** 03:53:08.3, 39°.43N×20°.74E, h0^{km}±1^{km}, ML2.5/12, Error ellipse: s-maj=1.9km s-min=0.5km az=203.0*

*ATH **27** 03:53:08.2, 39°.42N×20°.73E, h10^{km}±31^{km}, ML2.8/2, Error ellipse: s-maj=31.6km s-min=1.1km az=0.0*

ISC 27 03:53:06.6±1.2**, 39°.35N**±0°.03×**20°.67E**±0°.03**, h10**^{km}±9^{km}**, n40, σ1^{s}.17**/68**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.32**	**304**	P	**Pb**	**03 53 14.4**	**-0.1**
IGT				S	**Sb**	**03 53 19.8**	**+0.2**
IGT				AML	AML	03 53 20.5	
	comp=N,3149µm,0.2s						
IGT				AML	AML	03 53 21.1	
	comp=E,3627µm,0.2s						
IGT	**Igoumenitsa**	**0.32**	**304**	P	**Pb**	**03 53 14.2**	**-0.2**
IGT				S	**Sb**	**03 53 19.7**	**+0.1**
	comp=E,2µm,0.2s						
JAN	**Janina**	**0.33**	**25**	P	**Pg**	**03 53 12.6**	**-0.7**
JAN				S	**Sg**	**03 53 17.2**	**-0.6**
JAN				AML	AML	03 53 17.6	
	comp=E,15292µm,0.3s						
JAN				AML	AML	03 53 17.7	
	comp=N,8195µm,0.4s						
JAN	**Janina**	**0.33**	**25**	P	**Pg**	**03 53 12.4**	**-0.9**
JAN				S	**Sg**	**03 53 16.9**	**-0.8**
	comp=N,6µm,0.3s						
TSLK	**Tsoukalades, L**	**0.53**	**181**	P	**Pn**	**03 53 20.1**	**-0.1**
TSLK	**Tsoukalades, L**	**0.53**	**181**	P	**Pn**	**03 53 20.2**	**-0.1**
TSLK				S	**Sn**	**03 53 29.6**	**+0.4**
	comp=N,642nm,0.4s						
LKD2	**Lefkada island**	**0.56**	**181**	P	**Pn**	**03 53 20.2**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.64**	**178**	P	**Pn**	**03 53 21.7**	**0.0**
DRAG	**Dragano-Lefkad**	**0.67**	**186**	P	**Pn**	**03 53 22.1**	**-0.1**
KASA	**Kassiopi**	**0.69**	**305**	P	**Pg**	**03 53 20.5**	**+0.5**
EVGI	**Lefkada island**	**0.73**	**181**	P	**Pn**	**03 53 23.1**	**+0.1**
SRN	**Sarande**	**0.74**	**316**	P	**Pb**	**03 53 21.8**	**+0.2**
SRN				S	**Sb**	**03 53 32.7**	**+1.0**
	comp=N,205nm,0.4s						
KEK	**Kerkira**	**0.77**	**298**	P	**Pb**	**03 53 22.5**	**+0.5**
KEK	**Kerkira**	**0.77**	**298**	P	**Pb**	**03 53 22.7**	**+0.7**
KEK				S	**Sn**	**03 53 35.2**	**+0.1**
	comp=N,420nm,0.4s						
LSK	**Leskovik**	**0.80**	**356**	P	**Pg**	**03 53 22.2**	**+0.2**
LSK				S	**Sg**	**03 53 33.1**	**+0.7**
	comp=N,530nm,0.5s						
KPRO	**Kipourio**	**0.80**	**41**	P	**Pg**	**03 53 21.8**	**-0.3**
KPRO				S	**Sg**	**03 53 31.6**	**-1.0**
KPRO	**Kipourio**	**0.80**	**41**	P	**Pg**	**03 53 21.8**	**-0.3**
KPRO				S	**Sg**	**03 53 32.4**	**-0.2**
	comp=N,620nm,0.4s						
PENT	**Pentalofos**	**0.91**	**23**	P	**Pg**	**03 53 24.2**	**0.0**
PENT	**Pentalofos**	**0.91**	**23**	P	**Pg**	**03 53 23.7**	**-0.5**
PENT				S	**Sg**	**03 53 36.5**	**+0.3**
EVR	**Evrytania**	**0.99**	**116**	P	**Pn**	**03 53 26.7**	**+0.1**
EVR				S	**Sn**	**03 53 40.4**	**-0.3**
	comp=N,170nm,0.5s						
THL	**Klokotos Trika**	**1.06**	**78**	P	**Pg**	**03 53 26.1**	**-0.9**
THL				S	**Sb**	**03 53 41.6**	**+0.6**
	comp=N,80nm,0.4s						
MAKR	**Makrakomi, Fth**	**1.18**	**106**	P	**Pn**	**03 53 30.5**	**+1.2**
MAKR				S	**Sn**	**03 53 46.7**	**+1.2**
	comp=N,490nm,0.6s						
KZN	**Kozani**	**1.27**	**41**	P	**Pn**	**03 53 30.9**	**+0.3**
KZN				S	**Sg**	**03 53 47.6**	**0.0**
	comp=N,160nm,0.4s						
FNA	**Florina**	**1.53**	**21**	P	**Pb**	**03 53 35.6**	**+0.5**
FNA	**Florina**	**1.53**	**21**	P	**Pb**	**03 53 35.0**	**-0.1**
FNA				S	**Sg**	**03 53 56.1**	**+0.4**
	comp=N,168nm,0.5s						
LIT	**Litokhoron**	**1.59**	**61**	P	**Pb**	**03 53 35.9**	**-0.2**
OHR	**Ohrid**	**1.76**	**3**	*i* Pn	**Pg**	**03 53 43.1**	**+2.8**
STIP	**Stip**	**2.61**	**26**	*i* Pn	**Pb**	**03 53 54.8**	**+1.4**
DBRK	**Dubrovnik**	**3.82**	**331**	*e*Pn	**Pn**	**03 54 06.4**	**+0.9**
DBRK				Sn	**Sn**	**03 54 48.8**	**-1.8**
LSTV	**Lastovo**	**4.45**	**321**	*e*Pn	**Pn**	**03 54 14.2**	**+0.1**
LSTV				Sn	**Sn**	**03 55 03.3**	**-2.7**
MAKA	**Makarska**	**4.80**	**326**	*e*Pn	**Pn**	**03 54 19.9**	**+1.1**
MAKA				Sn	**Sn**	**03 55 12.6**	**-1.8**
RICI	**Ricice**	**4.92**	**328**	*e*Pn	**Pn**	**03 54 21.6**	**+1.0**
RICI				Sn	**Sn**	**03 55 15.7**	**-1.8**
HVAR	**Hvar**	**4.97**	**322**	*e*Pn	**Pn**	**03 54 22.3**	**+1.0**
HVAR				Sn	**Sn**	**03 55 16.5**	**-2.3**
KIJV	**Kijevo**	**5.64**	**327**	*e*Pn	**Pn**	**03 54 31.5**	**+1.0**
KIJV				Sn	**Sn**	**03 55 33.4**	**-1.9**
ZIRJ	**Zirje**	**5.72**	**320**	*e*Pn	**Pn**	**03 54 32.2**	**+0.7**
ZIRJ				Sn	**Sn**	**03 55 35.3**	**-1.9**
MORI	**Morici**	**5.84**	**322**	*e*Pn	**Pn**	**03 54 34.5**	**+1.2**
MORI				Sn	**Sn**	**03 55 38.4**	**-1.9**
DUGI	**Dugi Otok**	**6.25**	**320**	*e*Pn	**Pn**	**03 54 39.6**	**+0.7**
DUGI				Sn	**Sn**	**03 55 48.6**	**-1.9**
UDBI	**Udbina**	**6.33**	**326**	*e*Pn	**Pn**	**03 54 41.8**	**+1.7**
UDBI				Sn	**Sn**	**03 55 49.8**	**-2.6**
VIRC	**Vir**	**6.48**	**321**	*e*Pn	**Pn**	**03 54 43.4**	**+1.4**
VIRC				Sn	**Sn**	**03 55 53.7**	**-2.1**
A250A	**Rusevo Krmpots**	**7.14**	**325**	*e*Pn	**Pn**	**03 54 51.4**	**+0.2**
A250A				Sn	**Sn**	**03 56 10.2**	**-2.3**

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*BJI **27** 03:58:41.4±0.0, 26°.96N×130°.21E, h7^{km}, mb4.4/25, mB4.5/1*

*IDC **27** 03:58:41.1±0.5, 26°.98N×130°.20E, h0^{km}, mb4.3/21, mbtmp4.3/24, ML4.0/2, Error ellipse: s-maj=17.2km s-min=11.7km az=80.0*

*NEIC **27** 03:58:43.8±1.6, 26°.94N±0°.07×130°.17E±0°.09, h10^{km}±1^{km}, mb4.7/71, Error ellipse: s-maj=16.4km s-min=7.9km az=131.0*

*JMA **27** 03:58:43.4±0.1, 27°.0N±0°.5×130°.3E±0°.6, h54^{km}, MD4.5/24, MV4.6/24, NEAR MINAMI-DAITOJIMA IS*

ISC 27 03:58:43.4±0.8**, 26°.97N**±0°.03×**130°.27E**±0°.04**, h15**^{km}±5^{km}**, n155, σ1^{s}.43**/140**, mb4.7**/64**, 4C-3D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**1.37**	**349**	P	**Pn**	**03 59 07.5**	**-0.5**
JZK				S	**Sn**	**03 59 24.4**	**-1.5**

JZK	Kikaishima	1.37	349	A	A	03 59 07.5	
	comp=E,22nm,8.5s,comp=E,25nm,4.5s						
JKDJ	Kitadaitoujima	1.37	138	*e*P	Pn	03 59 06.5	-1.5
JKDJ				*e*S	Sn	03 59 23.4	-2.6
JKDJ	Kitadaitoujima	1.37	138	A	A	03 59 06.5	
	comp=E,20nm,7.2s,comp=E,18nm,7.3s						
JTK	Tokunoshima	1.43	305	P	Pn	03 59 07.8	-1.0
JTK				S	Sn	03 59 25.2	-2.1
JTK	Tokunoshima	1.43	305	A	A	03 59 07.8	
	comp=E,7.0nm,8.2s,comp=E,5.0nm,3.8s						
JMZ	Minamidaito 2	1.43	143	P	Pn	03 59 07.2	-1.6
JMZ				*e*S	Sn	03 59 24.4	-3.0
JMZ	Minamidaito 2	1.43	143	A	A	03 59 07.2	
	comp=E,23nm,5.2s,comp=E,18nm,3.7s						
JAM	Amami Oshima	1.55	338	P	Pn	03 59 09.2	-1.3
JAM				S	Sn	03 59 27.3	-3.2
JAM	Amami Oshima	1.55	338	A	A	03 59 09.2	
	comp=E,5.0nm,8.9s,comp=E,5.0nm,4.5s						
JOKE	Okinoerabujima	1.56	285	P	Pn	03 59 09.8	-0.9
JOKE				S	Sn	03 59 28.9	-1.8
JOKE	Okinoerabujima	1.56	285	A	A	03 59 09.8	
	comp=E,11nm,4.7s,comp=E,8.0nm,2.1s						
JAMN	Amaminishikomi	1.60	323	*i* P	Pn	03 59 09.9	-1.3
JAMN				*e*S	Sn	03 59 28.1	-3.5
JAMN	Amaminishikomi	1.60	323	A	A	03 59 09.9	
	comp=E,5.0nm,0.6s						
JYRO	Yoronjima	1.62	272	*i* P	Pn	03 59 10.7	-0.8
JYRO				*e*S	Sn	03 59 29.6	-2.6
JYRO	Yoronjima	1.62	272	A	A	03 59 10.7	
	comp=E,8.0nm,0.7s,comp=E,8.0nm,0.8s						
JOW	Kunigami	1.79	266	Pn	Pn	03 59 13.1	-0.7
	408nm,0.3s,baz=105,slow=23,SNR=392						
JOW				Sn	Sn	03 59 34.4	-1.8
	2μm,0.3s,baz=287,slow=30,SNR=46						
JOW	Kunigami	1.79	266	P	Pn	03 59 13.1	-0.7
JOW				S	Sn	03 59 34.3	-1.9
JOW	Kunigami	1.79	266	A	A	03 59 13.1	
	comp=E,13nm,0.4s,comp=E,16nm,1.8s						
JIH	Iheya	2.05	272	P	Pn	03 59 16.6	-0.8
JIH				S	Sn	03 59 41.5	-1.3
JIH	Iheya	2.05	272	A	A	03 59 16.6	
	comp=E,8.0nm,1.4s,comp=E,10.0nm,0.7s						
JNTH	Nagotoyohara	2.06	258	P	Pn	03 59 16.3	-1.2
JNTH				*e*S	Sn	03 59 40.5	-2.4
JNTH	Nagotoyohara	2.06	258	A	A	03 59 16.3	
	comp=E,9.0nm,0.5s,comp=E,13nm,5.3s						
JJT3	Tamagusuku3	2.37	250	P	Pn	03 59 21.4	-0.4
JJT3				S	Sn	03 59 49.1	-1.5
JJT3	Tamagusuku3	2.37	250	A	A	03 59 21.4	
	comp=E,20nm,6.6s,comp=E,19nm,5.8s						
JTAJ	Takarajima	2.37	337	P	Pn	03 59 20.2	-1.6
JTAJ				*e*S	Sn	03 59 46.5	-4.1
JTAJ	Takarajima	2.37	337	A	A	03 59 20.2	
	comp=E,4.0nm,4.6s,comp=E,4.0nm,7.6s						
JAGN	Aguni-jima	2.73	263	P	Pn	03 59 25.9	-0.9
JAGN				*e*S	Sn	03 59 57.1	-2.4
JAGN	Aguni-jima	2.73	263	A	A	03 59 25.9	
	comp=E,7.0nm,7.8s						
JNN	Nakanoshima	2.88	353	*e*S	Sn	03 59 59.9	-3.4
JNN	Nakanoshima	2.88	353	A	A	03 59 59.9	
	comp=E,6.0nm,7.3s,comp=E,7.0nm,8.3s						
JKE	Kume jima 2	3.18	259	P	Pn	03 59 31.9	-1.0
JKE				*e*S	Sn	04 00 08.8	-1.9
JYAK	Yakushimahirau	3.27	4	P	Pn	03 59 32.9	-1.2
JYAK				S	Sn	04 00 09.1	-3.6
JMTN	Minamitane	3.46	9	P	Pn	03 59 36.5	-0.3
JMTN				S	Sn	04 00 15.5	-2.1
JTN	Tanegashima 3	3.73	9	*e*P	Pn	03 59 39.6	-0.9
JSU	Suzuyama	4.53	2		Pn	03 59 52.1	+0.7
JNU	Nakatsue	6.16	5	Pn	Pn	04 00 13.7	-0.2
	5.3nm,0.3s,baz=354,slow=1.0,SNR=8.0						
	22nm,0.4s						
YHNB	Yeheng	8.33	256		Pn	04 00 42.0	-1.8
YULB	Yu-li	8.87	248	Pn	Pn	04 00 49.5	-1.7
SSLB	Suanglung	9.00	251	Pn	Pn	04 00 51.1	-1.9
KSRS	Korea Array	10.64	350	Pn	Pn	04 01 16.1	+0.7
	0.4nm,0.3s,baz=168,slow=14,SNR=37						
	9.3nm,0.9s						
KS19	Wonju Array Si	10.70	350	Pn	Pn	04 01 15.6	-0.5
NJ2	Nanjing	11.16	300	*e*P	Pn	04 01 21.8	-0.6
NJ2				pmax	pmax		
	comp=Z,15nm,1.1s						
SEHB	SEOHWA	11.39	352	Pn	Pn	04 01 26.3	+0.6
MJAR	Matsushiro Arr	11.69	33	Pn	Pn	04 01 29.6	-0.1
	1.3nm,0.7s,baz=204,slow=13,SNR=2.3						
HNS	HongShan	16.76	312	⇑P	P	04 02 39.8	0.0
HNS				pmax	pmax		
	comp=Z,68nm,1.0s						
LYN	LuoYang	17.05	301	⇑P	P	04 02 43.3	+0.2
LYN				pP	pP	04 02 46.5	+0.7
LYN				PP	pwP	04 02 54.0	+1.3
LYN				pmax	pmax		
	comp=Z,40nm,0.8s						
CN2	Changchun	17.24	348	*e*P	P	04 02 45.8	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USRK	Ussuriysk Ar.	17.25	4	P	P	04 02 46.1	+0.9
	6.9nm,1.0s,baz=188,slow=8.6,SNR=8.2						
USRK	Ussuriysk Ar.	17.25	4	Pn	Pn	04 02 43.8	+0.1
BJI	Beijing	17.52	322	P	Pn	04 02 46.8	-0.4
BJI				pP	pP	04 02 50.0	-1.0
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XLT	XiLinHaoTe	20.42	329	*e*P	Pn	04 03 22.0	-0.2
XLT				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC	Hu-ho-hao-te	20.74	317	*e*P	Pn	04 03 26.3	+0.3
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
BTO	Baotou	21.57	314	*e*P	P	04 03 37.5	+4.9
KLR	Kul'dur	22.26	3	P	P	04 03 39.5	-0.2
	6.3nm,0.7s,baz=183,slow=6.1,SNR=23						
	6.3nm,0.7s						
MYLDM	Lahad Datu	24.40	209	P	P	04 04 00.6	-0.8
MYLDM				IAmb	IAmb	04 04 05.5	
	comp=Z,36nm,1.3s						
KMI	Kunming	24.79	272	⇑P	P	04 04 08.0	+2.9
KMI				pP	sP	04 04 11.8	+2.6
KMI				pmax	pmax		
	comp=Z,17nm,1.4s						
PZH	PanZhiHua	25.46	275	P	P	04 04 12.5	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TNTI	Ternate	26.20	187	P	P	04 04 17.7	0.0
	comp=Z,23nm,1.3s						
TOLI2	Tolitoli	27.28	201	P	P	04 04 27.0	-0.4
MRSI	Marisa	27.53	198	P	P	04 04 29.4	-0.3
	comp=Z,17nm,1.4s						
ULN	Ulaanbaatar	27.65	325	P	P	04 04 31.9	+1.1
SONM	Songino Array	27.97	324	P	P	04 04 33.1	-0.4
GTA	Gaotai	28.21	304	*e*P	P	04 04 34.0	-1.8
GTA				pP	pP	04 04 39.3	+0.6
GTA				sP	sP	04 04 42.8	+2.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SBUM	Sibu	29.89	218	P	P	04 04 51.2	+0.4
PETK	Petropavlovsk-	33.13	31	P	P	04 05 20.3	+1.4
SHL	Shillong	34.36	276	P	P	04 05 30.9	+0.7
SHL				IAmb	IAmb	04 05 33.1	
	comp=Z,12nm,1.1s						
EDFI	Ende, Flores	36.47	194	P	P	04 05 45.2	-3.0
	comp=Z,6.5nm,1.2s						
BATI	Baumata	37.51	191	P	P	04 05 55.0	-1.8
	comp=Z,19nm,0.5s,baz=310,slow=3.2,SNR=6.3						
BATI	Baumata	37.51	191	P	P	04 05 55.1	-1.8
	comp=Z,30nm,0.7s						
WMQ	Urumqi	38.10	307	*e*P	P	04 06 04.0	+2.2
MTN	Manton Dam	39.58	179	P	P	04 06 13.3	-1.0
MTN				IAmb	IAmb	04 06 14.2	
	comp=Z,14nm,0.7s						
MDSI	Maura Dua	40.17	223	P	P	04 06 19.0	-0.3
	comp=Z,5.7nm,0.4s						
KNRA	Kununurra	42.41	182	P	P	04 06 37.6	0.0
MK31	Makanchi Array	42.42	311	P	P	04 06 36.5	-1.0
MKAR	Makanchi Array	42.42	311	P	P	04 06 36.9	-0.6
	comp=Z,1.3nm,0.7s,baz=99,slow=11,SNR=9.0						
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	42.42	311	P	P	04 06 36.5	-1.0
COEN	Coen	42.57	161	P	P	04 06 39.5	+0.6
MAKZ	Makanchi	42.63	311	P	P	04 06 40.9	+1.7
ZAA0	Zalesovo Array	42.78	322	P	P	04 06 40.7	+0.4
ZALV	Zalesovo Beam	42.78	322	P	P	04 06 39.9	-0.4
	comp=Z,2.8nm,0.6s,baz=103,slow=8.3,SNR=9.1						
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	42.78	322	P	P	04 06 40.9	+0.7
TIXI	Tiksi	44.73	359	P	P	04 06 57.5	+1.9
KURK	Kurchatov	45.55	316	P	P	04 07 03.4	+0.8
WRAB	Tennant Creek	46.79	175	P	P	04 07 12.4	-0.2
WRA	Warramunga Arr	46.80	175	P	P	04 07 12.5	-0.1
	comp=Z,7.9nm,0.7s,baz=355,slow=8.5,SNR=92						
	comp=Z,7.9nm,0.7s						
WRA	Warramunga Arr	46.80	175	P	P	04 07 13.0	+0.4
WB2	Warramunga Arr	46.80	175	P	P	04 07 12.9	+0.3
WR0	Warramunga Arr	46.83	174	P	P	04 07 13.2	+0.4
NRIK	Noril'sk	49.12	341	P	P	04 07 29.6	-0.5
	comp=Z,3.0nm,0.8s,baz=114,slow=9.7,SNR=3.7						
	comp=Z,3.0nm,0.8s						
NIL	Nilore	49.15	292	P	P	04 07 31.1	+0.2
NIL				IAmb	IAmb	04 07 31.6	
	comp=Z,9.7nm,0.8s						
CTA	Charters Tower	49.28	160	P	P	04 07 33.1	+1.3
	comp=Z,16nm,0.8s,baz=342,slow=8.3,SNR=26						
	comp=Z,16nm,0.8s						
CTAO	Charters Tower	49.28	160	P	P	04 07 32.7	+0.9
PSA00	Pilbara Seismi	49.30	193	P	P	04 07 32.5	+0.6
PSA00	Pilbara Seismi	49.30	193	P	P	04 07 32.0	+0.1
PSA00				IAmb	IAmb	04 07 33.1	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	50.46	176	P	P	04 07 41.3	+0.5
	comp=Z,5.2nm,0.8s,baz=7.2,slow=14,SNR=61						
ASAR				PcP	PcP	04 08 59.0	+0.1
	comp=Z,2.2nm,0.9s,baz=356,slow=3.3,SNR=7.6						
	comp=Z,5.2nm,0.8s						
BRVK	Borovoye	51.02	318	P	P	04 07 46.1	+1.4
BRVK				IAmb	IAmb	04 07 59.0	
	comp=Z,11nm,1.2s						
ABKAR	Akbulak array	57.48	313	P	P	04 08 32.4	+0.6
ABKAR	Akbulak array	57.48	313	P	P	04 08 32.8	+1.0
ABKAR				IAmb	IAmb	04 08 46.6	
	comp=Z,7.3nm,1.1s						
STKA	Stephens Creek	59.51	169	P	P	04 08 45.8	-0.2
	comp=Z,2.2nm,0.7s,baz=338,slow=10,SNR=3.4						
	comp=Z,2.2nm,0.7s						
J20K	Nowinta River	59.81	29	P	P	04 08 48.2	+0.4
J20K				IAmb	IAmb	04 08 49.9	
	comp=Z,9.7nm,1.2s						
K20K	Telida	59.85	30	P	P	04 08 49.2	+1.0
K20K				IAmb	IAmb	04 09 03.6	
	comp=Z,6.9nm,1.1s						
H21K	Melozitna Rive	60.38	28	P	P	04 08 52.5	+0.8
I21K	Tanana	60.73	28	IAmb	IAmb	04 08 56.3	
	comp=Z,4.8nm,1.1s						
BPAW	Bear Paw Mtn.	61.20	29	IAmb	IAmb	04 09 16.7	
	comp=Z,5.6nm,1.3s						
H23K	Yukon River	61.73	27	P	P	04 09 02.3	+1.4
H23K				IAmb	IAmb	04 09 03.3	
	comp=Z,6.0nm,1.1s						
NEA2	Nenana	62.00	29	IAmb	IAmb	04 09 04.2	
	comp=Z,8.4nm,1.0s						
MCK	McKinley	62.13	30	IAmb	IAmb	04 09 04.6	
	comp=Z,6.6nm,0.9s						
RND	Reindeer	62.19	30	P	P	04 09 03.0	-1.2
ILAR	Eielson Array	62.92	29	P	P	04 09 08.2	-0.7
	comp=Z,0.8nm,0.8s,baz=264,slow=5.9,SNR=8.8						
	comp=Z,0.8nm,0.8s						
HDA	Harding Lake	62.94	29	IAmb	IAmb	04 09 09.2	
	comp=Z,6.0nm,0.9s						
SCRK	Sand Creek	64.28	29	IAmb	IAmb	04 09 18.1	
	comp=Z,3.7nm,0.9s						
BMRM	Bremner River	64.48	33	IAmb	IAmb	04 09 41.8	
	comp=Z,9.4nm,1.1s						
M26K	Nabesna, AK	64.99	31	IAmb	IAmb	04 09 23.9	
	comp=Z,6.1nm,1.1s						
VRDI	Verde Repeater	64.99	32	IAmb	IAmb	04 09 23.4	
	comp=Z,3.5nm,0.8s						
ARCES	ARCESS Array B	69.98	339	P	P	04 09 52.6	-1.3
	comp=Z,1.7nm,0.8s,baz=71,slow=6.1,SNR=4.2						
	comp=Z,1.7nm,0.8s						
KBZ	Khabaz	70.10	310	P	P	04 09 55.7	+0.6
	comp=Z,3.2nm,0.7s,baz=85,slow=5.9,SNR=7.6						
	comp=Z,3.2nm,0.7s						
FINES	FINESS Array B	73.11	331	P	P	04 10 12.6	-0.4
	comp=Z,2.2nm,0.7s,baz=77,slow=4.9,SNR=9.1						
	comp=Z,2.2nm,0.7s						
AKASG	Malin Array Be	76.15	320	P	P	04 10 30.4	-0.4
	comp=Z,1.6nm,0.7s,baz=50,slow=7.0,SNR=6.4						
	comp=Z,1.6nm,0.7s						
YKA	Yellowknife Ar	77.08	26	P	P	04 10 36.0	+0.2
	comp=Z,1.3nm,0.7s,baz=300,slow=5.5,SNR=9.6						
	comp=Z,1.3nm,0.7s						
BR131	Keskin Array S	78.01	308	P	P	04 10 42.2	+0.5
BR131				IAmb	IAmb	04 10 42.8	
	comp=Z,5.9nm,0.9s						
BRTR	Keskin Array B	78.01	308	P	P	04 10 41.7	0.0
	comp=Z,2.5nm,0.8s,baz=96,slow=4.0,SNR=12						
	comp=Z,2.5nm,0.8s						
BRTR	Keskin Array B	78.01	308	P	P	04 10 41.6	-0.1
ASF	Jabal al Asfar	78.78	300	P	P	04 10 47.8	+1.8
	comp=Z,8.4nm,0.9s,baz=19,slow=12,SNR=5.2						
	comp=Z,8.4nm,0.9s						
NC405	NORSAR Array S	79.21	334	P	P	04 10 47.0	-0.7
NB2	NORSAR Subarra	79.45	334	P	P	04 10 47.9	-1.1
	comp=Z,2.6nm,0.7s,baz=51,slow=5.9						
NOA	NORSAR Array B	79.45	334	P	P	04 10 48.4	-0.6
	comp=Z,2.3nm,0.7s,baz=50,slow=5.3,SNR=15						
	comp=Z,2.3nm,0.7s						
SUMG	Summit	80.42	357	*i* P	P	04 10 54.0	-0.5
OJC	Ojcow	81.65	323	P	P	04 11 01.6	+0.6
OJC				IAmb	IAmb	04 11 02.2	
	comp=Z,6.3nm,0.7s						
VYHS	Vyhne	83.11	321	*e*P	P	04 11 09.9	+1.2
KOLL	Kolacno	83.31	322	*e*P	P	04 11 11.4	+1.7
SMOL	Smolenice	83.88	322	*e*P	P	04 11 14.3	+1.7
MODS	Modra-Piesok	84.05	322	*e*P	P	04 11 15.8	+2.3
PINE	Pine Mountain	84.09	44	P	P	04 11 15.6	+1.5
CLL	Collm	84.58	326	⇑*i*P	P	04 11 16.6	+0.5
	comp=Z,24nm,2.0s						
GERES	GERESS Array B	85.70	324	P	P	04 11 21.9	-0.1
	comp=Z,1.0nm,0.6s,baz=46,slow=5.8,SNR=11						
	comp=Z,1.0nm,0.6s						
PDG	Podgorica	86.20	316	P	P	04 11 24.6	+0.2
PDG				IAmb	IAmb	04 11 32.1	
	comp=Z,5.5nm,0.9s						
BEKR	Beckworth	86.55	47	IAmb	IAmb	04 11 27.6	
	comp=Z,5.6nm,0.9s						
DLMT	Dillon	88.11	39	IAmb	IAmb	04 11 35.7	
	comp=Z,6.8nm,1.1s						
HLID	Hailey	88.15	41	P	P	04 11 35.3	+1.2
HLID				IAmb	IAmb	04 11 36.3	
	comp=Z,3.8nm,1.2s						
NVAR	Mina Array Bea	88.67	47	P	P	04 11 37.9	+1.2
	comp=Z,1.6nm,0.9s,baz=279,slow=5.2,SNR=7.4						
	comp=Z,1.6nm,0.9s						
DAVOX	Davos/Dischmat	89.00	324	P	P	04 11 37.8	-0.2
	comp=Z,1.0nm,0.7s,baz=0.0,slow=17,SNR=1.8						
	comp=Z,1.0nm,0.7s						
BMRD	Maredsous	89.21	329	*d*P	P	04 11 38.2	-0.4
BMRD				*d*pP	pP	04 11 41.5	-0.4
YHL	Hebgen Lake	89.22	39	IAmb	IAmb	04 11 42.2	
	comp=Z,4.1nm,1.1s						
DOU	Dourbes	89.43	328	*d*P	P	04 11 39.2	-0.5
FLWY	Flagg Ranch	89.97	39	IAmb	IAmb	04 11 45.6	
	comp=Z,11nm,1.3s						
RLMT	Red Lodge	90.10	38	IAmb	IAmb	04 11 45.2	
	comp=Z,6.8nm,1.4s						
HVU	Hansel Valley	90.18	42	IAmb	IAmb	04 11 46.0	
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	91.12	43	P	P	04 11 49.5	+1.6
DUG				IAmb	IAmb	04 11 50.3	
	comp=Z,4.4nm,1.1s						
PDAR	Pinedale Array	91.44	40	P	P	04 11 50.1	+0.6
	comp=Z,0.5nm,0.3s,baz=328,slow=2.3,SNR=9.2						
	comp=Z,0.5nm,0.3s						
NLU	North Lily Min	91.71	43	IAmb	IAmb	04 11 53.1	
	comp=Z,4.7nm,1.0s						
MPU	Maple Canyon	91.94	43	IAmb	IAmb	04 11 54.0	
	comp=Z,4.6nm,1.0s						
LCMT	Little Creek M	92.77	46	IAmb	IAmb	04 11 57.9	
	comp=Z,6.2nm,1.2s						
SRU	San Rafael Swe	93.18	43	IAmb	IAmb	04 11 60.0	
	comp=Z,2.7nm,0.8s						
U15A	North Rim	93.73	46	IAmb	IAmb	04 12 03.7	
	comp=Z,3.8nm,1.1s						

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*IDC **27** 04:00:34.4±2.3, 26°.90N×130°.13E, h0^{km}, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=51.4km s-min=25.1km az=35.0*

*JMA **27** 04:00:35.6±0.1, 27°.0N±0°.4×130°.3E±0°.4, h49^{km}, MV3.6/20, NEAR MINAMI-DAITOJIMA IS*

ISC 27 04:00:32.2±1.6**, 26°.98N**±0°.04×**130°.25E**±0°.04**, h0**^{km}±11^{km}**, n19, σ1^{s}.55**/29**, mb3.7**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKDJ	Kitadaitoujima	1.39	137	P	Pg	04 00 59.1	+0.2
JKDJ				*e*S	Sn	04 01 16.1	-1.8
JTK	Tokunoshima	1.40	305	P	Pg	04 00 59.6	+0.5
JTK				*e*S	Sb	04 01 17.0	-0.8
JMZ	Minamidaito 2	1.45	143	P	Pg	04 00 59.8	-0.2
JMZ				S	Sn	04 01 16.9	-2.5
JAM	Amami Oshima	1.53	338	P	Pg	04 01 01.4	-0.2
JAM				*e*S	Sn	04 01 19.6	-1.9
JOKE	Okinoerabujima	1.54	285	P	Pg	04 01 01.9	+0.1
JOKE				S	Sn	04 01 19.9	-1.7
JAMN	Amaminishikomi	1.58	323	P	Pb	04 01 01.7	-0.5
JYRO	Yoronjima	1.60	272	P	Pg	04 01 02.8	-0.1
JYRO				*e*S	Sn	04 01 21.4	-1.7
JOW	Kunigami	1.77	266	Pn	Pb	04 01 05.7	+0.2
	80nm,0.3s,baz=110,slow=15,SNR=1.7						
JOW				Sn	Sn	04 01 25.9	-1.3
	92nm,0.3s,baz=252,slow=20,SNR=3.9						
JOW	Kunigami	1.77	266	*e*S	Sn	04 01 26.7	-0.6
JIH	Iheya	2.04	272	*e*S	Sn	04 01 32.5	-1.4
JNTH	Nagotoyohara	2.04	257	P	Pb	04 01 08.6	-1.6
JNTH				*e*S	Sn	04 01 31.8	-2.2
JTAJ	Takarajima	2.35	337	P	Pn	04 01 12.5	+0.5
JJT3	Tamagusuku3	2.36	250	P	Pb	04 01 13.5	-2.0
JJT3				*e*S	Sn	04 01 41.0	-0.9
JAGN	Aguni-jima	2.71	262	S	Sn	04 01 48.8	-1.8
JKE	Kume jima 2	3.17	259	*e*P	Pn	04 01 24.1	+0.9
JKE				*e*S	Sn	04 02 00.2	-1.5
JYAK	Yakushimahirau	3.25	4	S	Sn	04 02 01.1	-2.8
MKAR	Makanchi Array	42.40	311	P	P	04 08 30.1	+1.7
	0.4nm,0.7s,baz=90,slow=11,SNR=1.9						
	0.4nm,0.7s						
WRA	Warramunga Arr	46.81	175	P	P	04 09 04.6	+0.8
	1.1nm,0.7s,baz=355,slow=8.5,SNR=4.0						
	1.1nm,0.7s						
ASAR	Alice Springs	50.48	176	P	P	04 09 34.2	+2.3
	0.5nm,0.5s,baz=7.0,slow=14,SNR=4.4						
	0.5nm,0.5s						

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*MOS **27** 04:08:41.3±0.9, 20°.74S×178°.73W, h552^{km}, mb5.8/46, Error ellipse: s-maj=8.2km s-min=6.5km az=121.5*

*BJI **27** 04:08:42.0±0.0, 20°.51S×178°.31W, h571^{km}, mb5.7/80, mB6.2/71*

*NEIC **27** 04:08:44.0±1.7, 20°.81S±0°.08×178°.65W±0°.06, h567^{km}±3^{km}, mb5.8/566, Mwc6.4/76, Mww6.4, Error ellipse: s-maj=11.5km s-min=7.6km az=165.0*

*IDC **27** 04:08:43.0±0.6, 20°.80S×178°.71W, h564^{km}±5^{km}, mb5.4/48, mbtmp6.3/51, Error ellipse: s-maj=6.7km s-min=5.6km az=20.0*

*GCMT **27** 04:08:48.0±0.1, 20°.77S×178°.61W, h581^{km}, MW6.5/169, Moment Tensor Solution. s169,c429; s162,c254; Duration: 4^{s}.1 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.28±.02; $M_{\theta\theta}$1.92±.03; $M_{\phi\phi}$0.35±.03; $M_{r\theta}$-1.31±.03; $M_{\theta\phi}$-3.43±.03; $M_{\phi r}$-4.24±.03; Best double couple: $M_0$5.87100×10^{18} NP1:ϕ_s96.00000°, δ45.00000°, λ-155.00000°. NP2:ϕ_s348.00000°, δ73.00000°, λ-48.00000°. Principal axes: T 5.1620, Plg17.0000°, Azm48.0000°; N 1.4120, Plg40.0000°, Azm153.0000°; P -6.5800, Plg45.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **27** 04:08:48, 20°.73S×178°.67W, h580^{km}, Moment Tensor Solution. Duration: 8^{s}.2 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.30; $M_{\theta\theta}$1.79; $M_{\phi\phi}$0.51; $M_{r\theta}$-1.38; $M_{\theta\phi}$-3.49; $M_{\phi r}$-4.01; Fault plane solution: $M_0$5.88000×10^{18} NP1:ϕ_s97.00000°, δ46.00000°, λ-154.00000°. NP2:ϕ_s348.00000°, δ72.00000°, λ-46.00000°. Principal axes: T 5.1241, Plg16.0000°, Azm48.0000°; N 1.2922, Plg41.0000°, Azm152.0000°; P -6.4162, Plg45.0000°, Azm302.0000°;*

*NEIC **27** 04:09:03.8, 20°.86S×178°.63W, h591^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.63; $M_{\theta\theta}$2.48; $M_{\phi\phi}$0.16; $M_{r\theta}$-0.96; $M_{\theta\phi}$-3.08; $M_{\phi r}$-4.45; Fault plane solution: $M_0$5.92000×10^{18} NP1:ϕ_s94.17000°, δ42.38000°, λ-152.86000°. NP2:ϕ_s343.43000°, δ72.09000°, λ-50.93000°. Principal axes: T 5.1803, Plg18.0000°, Azm46.0000°; N 1.4860, Plg37.0000°, Azm149.0000°; P -6.6663, Plg48.0000°, Azm295.0000°;*

ISC 27 04:08:43.9±0.2**, 20°.88S**±0°.03×**178°.72W**±0°.03**, h576**^{km}±1^{km}**, h578**^{km}**:pP-P, n1994, σ1^{s}.82**/2392**, mb5.8**/436**, 232C-288D, Fault plane solution: NP1:**ϕ_s351.04483°**,** δ73.06353°**,** λ-37.44886°. **NP2:**ϕ_s93.62253°**,** δ54.43115°**,** λ-159.01445°. **Principal axes:** T Plg11.8484°**,** Azm46.0439°**;** N Plg49.4170°**,** Azm150.2207°**;** P Plg38.1191°**,** Azm306.5692°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.37	315	P	P	04 10 11.9	+1.5
	2μm,0.6s,baz=145,slow=9.1,SNR=608						
MSVF				ScP	ScP	04 18 47.4	+0.8
	82nm,1.1s,baz=120,slow=7.0,SNR=6.9						
MSVF				ScS	ScS	04 22 24.6	+5.0
	59nm,1.2s,baz=310,slow=23,SNR=7.9						
MSVF	Nonsavu	4.37	315	P	P	04 10 12.0	+1.5
MSVF	Nonsavu	4.37	315	P	P	04 10 12.0	+1.5
MSVF	Nonsavu	4.37	315	⇑P	P	04 10 11.8	+1.3
RIZ	Raoul Island	8.36	175	P	P	04 10 44.1	-1.7
RIZ				S	S	04 12 23.0	-2.8
RAO	Raoul Island	8.37	175	P	P	04 10 44.8	-1.1
	1μm,0.3s,baz=81,slow=8.3,SNR=26						
RAO				S	S	04 12 13.8	-12
	3μm,0.3s,baz=198,slow=24,SNR=6.1						
RAO	Raoul Island	8.37	175	P	P	04 10 45.0	-0.9
RAO	Raoul Island	8.37	175	P	P	04 10 45.0	-0.9
RAO	Raoul Island	8.37	175	⇑P	P	04 10 44.8	-1.1
RAO				⇑S	S	04 12 24.4	-1.5
GLKZ	Green Lake	8.38	175	P	P	04 10 45.2	-0.7
GLKZ				S	S	04 12 11.3	-15
NIUE	Niue	8.46	79	P	P	04 10 45.5	-1.5
	baz=8.3						
NIUE				S	S	04 12 29.4	+1.6
	baz=8.3						
NIUE	Niue	8.46	79	P	P	04 10 45.4	-1.6
NIUE	Niue	8.46	79	⇓P	P	04 10 45.2	-1.7
AFI	Afiamalu	9.59	45	P	P	04 10 54.4	-3.9
	6μm,1.0s,baz=69,slow=0.8,SNR=118						
AFI				S	S	04 12 39.1	-9.4
	2μm,0.9s,baz=17,slow=19,SNR=4.5						
AFI	Afiamalu	9.59	45	⇑P	P	04 10 54.3	-3.9
MARNC	Mare, Loyalty	12.38	265	P	P	04 11 26.9	+0.6
MARNC				ScP	ScP	04 18 54.5	-0.5
MARNC	Mare, Loyalty	12.38	265	⇑P	P	04 11 26.9	+0.6
FUNA	Funafuti	12.45	350	P	P	04 11 24.5	-2.7
FUNA	Funafuti	12.45	350	⇓P	P	04 11 25.7	-1.5
PINNC	Pines Island,	12.97	260	P	P	04 11 32.8	+0.3
PINNC				ScP	ScP	04 18 56.3	+0.4
LIFNC	LIFOU	13.13	268	P	P	04 11 33.1	-1.0
LIFNC				ScP	ScP	04 18 55.7	-0.5
OUENC	Ouen Island, N	13.51	261	P	P	04 11 38.4	+0.3
OUENC				ScP	ScP	04 18 57.3	+0.5
DZM	Mont Dzumac	13.86	262	P	P	04 11 42.1	+0.3
	373nm,0.7s,baz=150,slow=6.1,SNR=106						
DZM				S	S	04 14 08.5	+0.8
	458nm,1.1s,baz=18,slow=20,SNR=2.3						
DZM				ScP	ScP	04 18 59.5	+1.9
	102nm,1.0s,baz=66,slow=9.3,SNR=8.2						
DZM				ScS	ScS	04 22 42.1	+6.8
	101nm,1.3s,baz=153,slow=23,SNR=13						
DZM	Mont Dzumac	13.86	262	P	P	04 11 41.4	-0.4
DZM				ScP	ScP	04 18 57.5	-0.1
DZM	Mont Dzumac	13.86	262	⇑P	P	04 11 42.0	+0.3
ONTNC	Ouen Toro	13.87	261	P	P	04 11 42.0	+0.4
ONTNC	Ouen Toro	13.87	261	⇑P	P	04 11 41.9	+0.2
SANVU	Saraoutou	14.42	290	P	P	04 11 47.0	-0.3
SANVU	Saraoutou	14.42	290	⇓P	P	04 11 45.2	-2.0
NFK	Norfolk Island	14.57	233	P	P	04 11 50.8	+2.3
	baz=15,SNR=19						
NFK	Norfolk Island	14.57	233	⇑P	P	04 11 50.6	+2.1
OUZ	Omahuta	15.80	204	P	P	04 12 01.2	+0.9
OUZ				ScP	ScP	04 19 00.9	+0.1
OUZ	Omahuta	15.80	204	P	P	04 12 01.8	+1.5
OUZ	Omahuta	15.80	204	⇑P	P	04 12 01.9	+1.7
OUZ				⇓S	ScP	04 19 05.4	+4.7

KOUNC	Koumac, New Ca	15.90	268	P	P	04 12 02.3	+0.9
KOUNC				ScP	ScP	04 19 01.5	+0.3
KOUNC	Koumac, New Ca	15.90	268	⇓P	P	04 12 03.0	+1.5
GRZ	Great Barrier	16.14	197	P	P	04 12 04.4	+0.9
GRZ	Great Barrier	16.14	197	P	ScP	04 19 02.1	+0.8
WCZ	Waipu Caves	16.19	201	P	P	04 12 06.2	+2.4
KUZ	Kuaotunu	16.54	196	P	P	04 12 08.9	+1.9
KUZ	Kuaotunu	16.54	196	P	ScP	04 19 02.8	+0.6
WIAZ	Waiheke Island	16.74	197	P	P	04 12 11.3	+2.4
MBAZ	Motutapu North	16.78	198	P	P	04 12 11.8	+2.6
MXZ	Matakaoa Point	16.82	188	P	P	04 12 08.5	-1.1
MXZ	Matakaoa Point	16.82	188	P	P	04 12 08.7	-1.0
MXZ				S	S	04 14 50.8	-6.4
MXZ	Matakaoa Point	16.82	188	P	ScP	04 19 03.6	+0.9
WSRZ	White Island S	16.96	191	P	P	04 12 13.1	+2.2
WIZ	White Island	16.96	191	P	P	04 12 11.3	+0.4
MKAZ	Moumakai	17.02	197	P	ScP	04 19 04.0	+0.9
WTAZ	Waiatarua	17.03	199	P	ScP	04 19 06.6	+3.4
WMGZ	Waiomatatini S	17.06	188	P	P	04 12 11.3	-0.5
WMGZ				S	S	04 14 56.1	-4.9
WMGZ	Waiomatatini S	17.06	188	P	ScP	04 19 05.0	+1.8
HAZ	Te Kaha	17.09	189	P	P	04 12 10.9	-1.1
HAZ				S	S	04 14 56.5	-5.0
HAZ	Te Kaha	17.09	189	P	ScP	04 19 03.5	+0.3
PKGZ	Pakihiroa	17.18	189	P	P	04 12 11.2	-1.7
PKGZ				S	S	04 14 59.4	-3.7
PKGZ	Pakihiroa	17.18	189	P	ScP	04 19 04.2	+0.7
RUGZ	Raukumara Rang	17.31	190	P	P	04 12 13.4	-0.8
WHRZ	Whale Island	17.32	192	P	P	04 12 15.9	+1.8
PUZ	Puketiti	17.33	188	P	P	04 12 13.8	-0.4
PUZ				S	S	04 15 00.9	-4.6
PUZ	Puketiti	17.33	188	P	ScP	04 19 05.0	+1.2
TGRZ	Tauranga	17.35	193	P	P	04 12 16.0	+1.6
OPRZ	Ohinepanea	17.39	193	P	P	04 12 15.3	+0.5
TWGZ	Tauwhareparae	17.47	189	P	P	04 12 15.5	-0.1
TWGZ				S	S	04 15 04.8	-3.1
TWGZ	Tauwhareparae	17.47	189	P	ScP	04 19 05.4	+1.2
MARZ	Manawahe	17.51	192	P	P	04 12 16.6	+0.8
TOZ	Tahuroa Road	17.52	195	P	P	04 12 17.8	+1.8
KMRZ	Kaimai	17.53	194	P	P	04 12 18.0	+1.9
EDRZ	Edgecumbe	17.61	192	P	P	04 12 14.2	-2.6
EDRZ				S	S	04 15 09.1	-1.0
KARZ	Kaharoa	17.63	193	P	P	04 12 17.5	+0.6
OMRZ	Omania	17.68	193	P	P	04 12 18.2	+0.7
RAR	Rarotonga	17.69	94	P	P	04 12 16.6	-1.1
	345nm,1.0s,baz=239,slow=7.4,SNR=40						
RAR				ScP	ScP	04 19 06.3	+1.5
	134nm,1.0s,baz=228,slow=6.1,SNR=5.0						
RAR	Rarotonga	17.69	94	P	P	04 12 16.8	-1.0
RAR	Rarotonga	17.69	94	P	P	04 12 16.8	-1.0
RAR				pmax	pmax		
	comp=Z,2μm,1.5s						
RAR	Rarotonga	17.69	94	⇑P	P	04 12 16.7	-1.1
URZ	Urewera	17.69	191	P	P	04 12 15.0	-2.5
	comp=Z,1μm,0.8s,baz=251,slow=2.1,SNR=162						
URZ				S	S	04 15 05.3	-6.0
	comp=Z,486nm,0.8s,baz=44,slow=22,SNR=6.7						
URZ				ScP	ScP	04 19 04.9	+0.4
	comp=Z,59nm,0.7s,baz=23,slow=3.4,SNR=3.6						
URZ				ScS	ScS	04 22 42.0	-3.3
	comp=Z,36nm,1.1s,baz=194,slow=23,SNR=16						
URZ	Urewera	17.69	191	P	P	04 12 14.8	-2.7
URZ				S	S	04 15 05.8	-5.5
URZ	Urewera	17.69	191	P	ScP	04 19 03.8	-0.7
URZ	Urewera	17.69	191	⇑P	P	04 12 14.3	-3.2
MWZ	Matawai	17.70	190	P	P	04 12 14.9	-2.7
MWZ				S	S	04 15 05.3	-6.2
MWZ	Matawai	17.70	190	P	ScP	04 19 04.9	+0.3
MKRZ	Makatiti	17.70	193	P	P	04 12 20.7	+3.1
NGRZ	Ngongotaha	17.72	193	P	P	04 12 19.9	+2.1
CNGZ	Carnagh Statio	17.74	188	P	P	04 12 17.7	-0.3
CNGZ				S	S	04 15 10.4	-1.8
TKGZ	Te Karaka	17.75	189	P	P	04 12 17.4	-0.6
TKGZ				S	S	04 15 07.8	-4.4
TARZ	Mount Tarawera	17.78	192	P	P	04 12 18.7	+0.2
UTU	Utuhina	17.79	193	P	P	04 12 21.4	+3.0
HLRZ	Highlands Stat	17.83	193	P	P	04 12 19.9	+1.1
RAGZ	Rawiri	17.87	190	P	P	04 12 19.0	-0.2
RAGZ				S	S	04 15 10.5	-3.9
RAGZ	Rawiri	17.87	190	P	ScP	04 19 05.5	+0.4
RRRZ	Republican Roa	17.88	192	P	P	04 12 19.7	+0.4
HSRZ	Hossack Road	17.91	193	P	P	04 12 20.7	+1.2
MUGZ	Murupara	17.96	192	P	P	04 12 19.0	-1.0
MUGZ				S	S	04 15 09.4	-6.4
GRRZ	Galatos Road	17.98	193	P	P	04 12 21.6	+1.5
HRRZ	Handcock Road	17.98	193	P	P	04 12 20.2	0.0
RIGZ	Rimuhau	18.02	189	P	P	04 12 20.4	-0.2
RIGZ				S	S	04 15 12.4	-4.3
PRRZ	Plateau Road	18.06	192	P	P	04 12 20.3	-0.6
RTZ	Ruatahuna	18.06	191	P	P	04 12 19.7	-1.2
RTZ				S	S	04 15 10.1	-7.3
TLZ	Tolley Road	18.09	195	P	P	04 12 23.2	+2.1
WPRZ	Whakapapatarin	18.13	193	P	P	04 12 21.6	+0.1
ALRZ	Allen Road	18.13	193	P	P	04 12 22.8	+1.3
SNGZ	Shannon Statio	18.16	190	P	P	04 12 20.7	-1.2
KUTZ	Kaahu Road	18.17	194	P	P	04 12 22.6	+0.7
WHTZ	Whakaora	18.31	193	P	P	04 12 25.7	+2.4
MTHZ	Maungataniwha	18.32	191	P	P	04 12 22.5	-0.8
RAHZ	Arahi	18.34	190	P	P	04 12 22.4	-1.1
KNZ	Kokohu	18.35	189	P	P	04 12 22.9	-0.6
KNZ	Kokohu	18.35	189	P	ScP	04 19 07.1	+1.1
MRHZ	Matea Rd	18.38	192	P	P	04 12 23.3	-0.5
WATZ	Wairara	18.40	194	P	P	04 12 24.4	+0.4
HIZ	Hauiti	18.43	196	P	P	04 12 26.7	+2.4
MHGZ	Mahia Peninsul	18.44	188	P	P	04 12 24.1	-0.3
MHGZ	Mahia Peninsul	18.44	188	P	ScP	04 19 07.8	+1.7
HATZ	Hinemaiaia	18.50	193	P	P	04 12 25.2	+0.3
RATZ	Rangitukua	18.54	194	P	P	04 12 25.1	-0.2
NMHZ	Naumai	18.56	191	P	P	04 12 24.7	-0.8
KATZ	Kakaramea	18.66	194	P	P	04 12 27.0	+0.4
BKZ	Black Stump Fm	18.68	192	P	P	04 12 25.3	-1.3
BKZ	Black Stump Fm	18.68	192	P	P	04 12 24.3	-2.4
ARHZ	Aropaoanui	18.69	190	P	P	04 12 25.6	-1.0
NTVZ	North Tongarir	18.79	194	P	P	04 12 27.7	+0.1
KRVZ	Karewarewa	18.79	194	P	P	04 12 27.3	-0.4
TMVZ	Te Maari	18.80	194	P	P	04 12 27.3	-0.5
TWVZ	Taurewa	18.82	194	P	P	04 12 27.3	-0.6
ETVZ	East Tongariro	18.82	194	P	P	04 12 27.4	-0.5
WTVZ	West Tongariro	18.82	194	P	P	04 12 27.2	-0.8
NNVZ	North Ngauruho	18.83	194	P	P	04 12 27.7	-0.4
OTVZ	Oturere	18.85	194	P	P	04 12 26.3	-2.0
NGZ	Ngauruhoe	18.88	194	P	P	04 12 28.7	+0.2
SNVZ	South Ngauruho	18.88	194	P	P	04 12 27.8	-0.8
MCHZ	McNeill Hill	18.92	191	P	P	04 12 27.2	-1.5
KWHZ	Kaweka Forest	18.95	192	P	P	04 12 26.6	-2.5
TUVZ	Tukino	18.95	194	P	P	04 12 28.9	-0.2
FWVZ	Far West T-bar	18.96	194	P	P	04 12 29.3	0.0
DRZ	Dome Shelter	18.98	194	P	P	04 12 30.8	+1.1
WHVZ	Whangaehu Hut	18.98	194	P	P	04 12 29.3	-0.2
TRVZ	Turoa	19.01	194	P	P	04 12 29.7	-0.1
WNVZ	Wahianoa	19.02	194	P	P	04 12 28.5	-1.3
VRZ	Vera Road	19.03	196	P	P	04 12 31.2	+1.5
PKVZ	Pokaka	19.04	194	P	P	04 12 30.3	+0.4
CKHZ	Cape Kidnapper	19.06	190	P	P	04 12 29.4	-0.6
MOVZ	Moawhango	19.07	193	P	P	04 12 29.2	-0.9
BHHZ	Black Hill Sta	19.08	192	P	P	04 12 27.3	-3.0
MTVZ	Mangateitei	19.11	194	P	P	04 12 31.1	+0.6
KRHZ	Kereru	19.17	192	P	ScP	04 19 08.1	+0.2
KAHZ	Kahuranaki	19.23	190	P	P	04 12 30.6	-0.9
KAHZ	Kahuranaki	19.23	190	P	ScP	04 19 09.5	+1.5
KNTN	Kanton	19.25	22	P	P	04 12 29.9	-2.1
PKE	Pukeiti	19.30	197	P	P	04 12 35.5	+3.3
NEZ	North Egmont	19.34	197	P	P	04 12 35.6	+3.0
PXZ	Pawanui	19.46	190	P	P	04 12 32.1	-1.4
PXZ	Pawanui	19.46	190	P	ScP	04 19 10.0	+1.5
PNHZ	Pukenui	19.46	192	P	P	04 12 32.4	-1.2
PNHZ	Pukenui	19.46	192	P	ScP	04 19 09.0	+0.4
WPHZ	Waipukurau	19.57	191	P	P	04 12 34.4	-0.1
WAZ	Wanganui	19.57	195	P	P	04 12 34.8	+0.2
TSZ	Takapari Road	19.65	192	P	P	04 12 33.4	-2.0
TSZ	Takapari Road	19.65	192	P	ScP	04 19 08.8	-0.1
BFZ	Birch Farm	20.20	191	P	ScP	04 19 11.7	+1.5
MRZ	Mangatainoka R	20.31	193	P	ScP	04 19 10.9	+0.4
OGWZ	Otaki Gorge	20.54	193	P	ScP	04 19 11.3	+0.3
MSWZ	Moikau Station	21.10	193	ScP	ScP	04 19 12.6	+0.1
SNZO	South Karori	21.12	194	P	P	04 12 46.8	-1.7
SNZO	South Karori	21.12	194	⇑P	P	04 12 46.4	-2.1
BHW	Baring Head	21.17	193	ScP	ScP	04 19 12.5	-0.1
PLWZ	Palliser	21.25	193	ScP	ScP	04 19 13.9	+1.1
KHZ	Kahutara	22.44	195	⇑P	P	04 12 58.4	-1.9
LHI	Lord Howe Isla	22.53	237	P	P	04 13 03.9	+2.6
	baz=23,SNR=4.4						
LHI	Lord Howe Isla	22.53	237	P	P	04 13 01.4	0.0
LHI				IAmb	IAmb	04 13 04.8	
	comp=Z,337nm,0.9s						
HNR	Honiara	23.49	296	P	P	04 13 08.8	-1.3
	comp=Z,265nm,0.3s,baz=221,slow=5.8,SNR=13						
	comp=Z,265nm,0.3s						
HNR	Honiara	23.49	296	P	P	04 13 09.1	-1.0
HNR	Honiara	23.49	296	P	P	04 13 09.1	-1.0
HNR				pmax	pmax		
	comp=Z,1μm,1.0s						
HNR	Honiara	23.49	296	⇓P	P	04 13 09.3	-0.7
TARA	Tarawa	23.56	339	P	P	04 13 09.6	-1.1
TARA				IAmb	IAmb	04 13 13.6	
	comp=Z,3μm,0.8s						
TARA	Tarawa	23.56	339	⇓P	P	04 13 09.8	-0.9
RPZ	Rata Peaks	24.32	198	P	P	04 13 16.0	-1.0
	comp=Z,209nm,0.5s,baz=296,slow=1.1,SNR=34						
RPZ				ScP	ScP	04 19 23.5	+2.6
	comp=Z,148nm,1.1s,baz=114,slow=4.9,SNR=4.0						
RPZ				ScS	ScS	04 23 06.6	-2.8
	comp=Z,115nm,1.2s,baz=90,slow=20,SNR=12						
	comp=Z,209nm,0.5s						
RPZ	Rata Peaks	24.32	198	P	P	04 13 16.1	-1.0
ODZ	Otahua Downs	25.65	198	⇑P	P	04 13 27.9	-0.8
PPT	Papeete	27.70	88	P	P	04 13 46.7	-0.4
	comp=Z,321nm,0.5s,baz=267,slow=3.8,SNR=37						
PPT				ScP	ScP	04 19 34.0	+2.5
	comp=Z,549nm,1.0s,baz=308,slow=3.2,SNR=18						
	comp=Z,321nm,0.5s						
PPTF	Pamatai, Papee	27.70	88	P	P	04 13 46.5	-0.8
PPTF				ScP	ScP	04 19 30.8	-0.8
PPTF	Pamatai, Papee	27.70	88	⇑P	P	04 13 46.4	-0.8
PPTF				⇑S	ScP	04 19 33.9	+2.2
EIDS	Eidsvold	28.10	255	P	P	04 13 51.1	+0.6
	baz=28,SNR=78						
EIDS	Eidsvold	28.10	255	P	P	04 13 50.3	-0.2
EIDS				IAmb	IAmb	04 13 52.8	
	comp=Z,417nm,1.1s						
EIDS	Eidsvold	28.10	255	⇓P	P	04 13 51.1	+0.6
ARMA	Armidale	28.30	244	P	P	04 13 53.6	+1.4
	baz=28,SNR=78						
ARMA	Armidale	28.30	244	P	P	04 13 53.3	+1.0
ARMA				IAmb	IAmb	04 13 58.4	
	comp=Z,188nm,0.7s						
ARMA	Armidale	28.30	244	⇑P	P	04 13 53.0	+0.7
MGCD	Mangrove Creek	29.43	239	P	P	04 14 03.8	+1.8
	baz=30,SNR=44						
RIV	Riverview	29.58	238	P	P	04 14 05.1	+1.9
	baz=30,SNR=4.6						
RMQ	Roma	30.25	253	P	P	04 14 10.8	+1.7
	baz=30,SNR=91						
XMAS	Kiritimati	30.88	45	P	P	04 14 13.7	-0.8
XMAS				ScP	ScP	04 19 42.1	+0.2
XMAS	Kiritimati	30.88	45	⇑P	P	04 14 13.6	-1.0
XMAS				⇑S	ScP	04 19 45.6	+3.8
XMAS	Kiritimati	30.88	45	P	P	04 14 13.6	-1.0
XMAS				pP	pP	04 15 50.3	+2.2
XMAS				ScP	ScP	04 19 44.0	+2.1
CNB	Canberra Magne	31.45	236	P	P	04 14 20.9	+1.6
	baz=32,SNR=66						
CAN	Canberra	31.74	236	P	P	04 14 22.9	+1.1
CAN				IAmb	IAmb	04 14 24.5	
	comp=Z,231nm,1.0s						
CAN				ScP	ScP	04 19 43.0	-1.5
CAN	Canberra	31.74	236	P	P	04 14 22.9	+1.1
CAN				pmax	pmax		
	comp=Z,231nm,1.0s						
CAN	Canberra	31.74	236	⇑P	P	04 14 23.1	+1.4
CAN				⇓p	pP	04 15 55.5	+0.8
CAN	Canberra	31.74	236	P	P	04 14 23.1	+1.4
CAN				pP	pwP	04 15 58.1	-2.6
CAN				sP	sP	04 17 03.0	+2.2
CAN				ScP	ScP	04 19 48.2	+3.7
KWAJ	Kwajalein Atol	32.41	334	P	P	04 14 27.7	+0.1
KWAJ	Kwajalein Atol	32.41	334	P	P	04 14 27.7	+0.1
KWAJ				pmax	pmax		
	comp=Z,2μm,1.0s						
KWAJ	Kwajalein Atol	32.41	334	⇓P	P	04 14 27.6	+0.1
KWAJ	Kwajalein Atol	32.41	334	P	P	04 14 27.7	+0.1
KWAJ				ScP	ScP	04 19 49.1	+2.1
CTA	Charters Tower	32.78	265	P	P	04 14 31.6	+0.8
	comp=Z,377nm,0.4s,baz=90,slow=9.7,SNR=374						
CTA				PcP	PcP	04 16 59.4	+0.9
	comp=Z,47nm,0.8s,baz=107,slow=1.6,SNR=3.9						
CTA				S	S	04 19 07.7	-0.3
	comp=Z,60nm,1.1s,baz=329,slow=20,SNR=7.8						
CTA				ScS	ScS	04 23 53.8	+3.5
	comp=Z,1.2nm,0.3s,baz=343,slow=19,SNR=7.8						
	comp=Z,377nm,0.4s						
CTAO	Charters Tower	32.78	265	P	P	04 14 31.0	+0.3
CTAO				IAmb	IAmb	04 14 33.2	
	comp=Z,930nm,0.9s						
CTAO				PcP	PcP	04 16 59.9	+1.4
CTAO				ScP	ScP	04 19 48.2	-0.2
CTAO	Charters Tower	32.78	265	⇑P	P	04 14 30.3	-0.4
CTAO	Charters Tower	32.78	265	P	P	04 14 31.8	+1.1
CTAO				pP	pP	04 16 04.3	-0.5
CTAO				x	x	04 16 59.2	
CTAO				ScP	ScP	04 19 50.3	+1.9
RABL	Rabaul	32.80	296	P	P	04 14 31.1	+0.1
RABL				PcP	PcP	04 16 59.8	+1.2
RABL				ScP	ScP	04 19 48.4	-0.2
RABL	Rabaul	32.80	296	⇓P	P	04 14 29.8	-1.2
KRVT	Keravat (AS076	32.86	296	P	P	04 14 30.6	-0.8
	comp=Z,1μm,0.6s,baz=85,slow=2.4,SNR=59						
	comp=Z,1μm,0.6s						
CMSA	Cobar Meteorol	33.51	244	P	P	04 14 37.5	+0.8
	baz=34,SNR=549						
QLP	Quilpie	34.30	253	P	P	04 14 44.0	+0.6
	baz=34,SNR=93						
QLP	Quilpie	34.30	253	⇓P	P	04 14 44.0	+0.6
PMG	Port Moresby	34.77	284	P	P	04 14 48.1	+0.6
	comp=Z,2μm,0.7s,baz=96,slow=5.2,SNR=447						
PMG				S	S	04 19 37.7	-0.3
	comp=Z,52nm,1.1s,baz=342,slow=22,SNR=8.7						
	comp=Z,2μm,0.7s						
PMG	Port Moresby	34.77	284	P	P	04 14 48.0	+0.6
PMG	Port Moresby	34.77	284	⇓P	P	04 14 48.1	+0.6
PMG	Port Moresby	34.77	284	P	P	04 14 48.2	+0.8
PMG				ScP	ScP	04 19 56.6	+1.1
MTSU	Mount Surprise	34.90	268	P	P	04 14 49.2	+0.7
	baz=35,SNR=926						
TOO	Toolangi	35.13	234	P	P	04 14 51.2	+1.1
	baz=35,SNR=57						
TOO	Toolangi	35.13	234	IAmb	IAmb	04 14 52.7	
	comp=Z,204nm,0.9s						
TOO				ScP	ScP	04 19 56.5	-0.1
TOO	Toolangi	35.13	234	⇑P	P	04 14 51.1	+0.9
PATS	Pohnpei	35.60	318	P	P	04 14 55.1	+0.8
	baz=36						
MOO	Moorlands	35.76	225	P	P	04 14 56.1	+0.9
	baz=36,SNR=9.6						
TAU	Tasmania Unive	35.88	224	P	P	04 14 56.1	-0.1
TAU				ScP	ScP	04 19 59.0	-0.1
TAU	Tasmania Unive	35.88	224	P	P	04 14 56.1	-0.1
TAU						04 19 59.0	
TAU				pmax	pmax		
	comp=Z,56nm,0.7s						
TAU	Tasmania Unive	35.88	224	⇑P	P	04 14 57.2	+0.9
TAU	Tasmania Unive	35.88	224	P	P	04 14 56.9	+0.7
TAU				PP	pwP	04 16 35.6	-1.9
TAU				ScP	ScP	04 19 59.7	+0.6
COEN	Coen	36.94	274	P	P	04 15 06.5	+1.2
	baz=37,SNR=106						
COEN	Coen	36.94	274	ScP	ScP	04 20 04.3	+0.7
COEN	Coen	36.94	274	⇓P	P	04 15 06.4	+1.1
STKA	Stephens Creek	37.02	244	P	P	04 15 07.1	+1.4
	comp=Z,169nm,0.5s,baz=93,slow=10,SNR=370						
STKA				PcP	PcP	04 17 12.0	+1.1
	comp=Z,54nm,0.7s,baz=66,slow=5.0,SNR=3.6						
STKA				ScP	ScP	04 20 05.5	+1.8
	comp=Z,67nm,1.0s,baz=160,slow=5.2,SNR=6.0						
STKA				P3KPbc		04 45 19.0	
	comp=Z,12nm,0.9s,baz=315,slow=1.4,SNR=9.3						
	comp=Z,169nm,0.5s						
STKA	Stephens Creek	37.02	244	P	P	04 15 06.8	+1.1
	baz=37,SNR=236						
STKA	Stephens Creek	37.02	244	P	P	04 15 06.8	+1.1
STKA				ScP	ScP	04 20 03.9	+0.2
MCQ	Macquarie Isla	37.59	201	P	P	04 15 11.9	+2.0
	baz=38,SNR=19						
ARPS	Mount Arapiles	37.72	236	P	P	04 15 12.1	+0.8
	baz=38,SNR=45						
MANU	Manus Island	37.99	295	⇓P	P	04 15 14.8	+0.9
JOHN	Johnston Islan	38.45	14	P	P	04 15 16.7	-0.8
JOHN	Johnston Islan	38.45	14	⇑P	P	04 15 17.3	-0.1
JOHN	Johnston Islan	38.45	14	P	P	04 15 17.0	-0.4
JOHN				pP	pP	04 16 55.8	+0.3
JOHN				PP	PP	04 17 02.0	-2.5
JOHN				ScP	ScP	04 20 12.4	+3.3
QIS	Mount Isa	38.90	263	P	P	04 15 21.1	-0.1
	baz=39,SNR=177						
TAOE	Nuku Hiva Isla	39.04	78	P	P	04 15 20.9	-1.6
TAOE	Nuku Hiva Isla	39.04	78	⇑P	P	04 15 21.8	-0.7
TAOE	Nuku Hiva Isla	39.04	78	P	P	04 15 21.8	-0.7
HTT	Hallett	39.45	242	P	P	04 15 26.1	+0.7
	baz=40,SNR=101						
HTT	Hallett	39.45	242	⇑P	P	04 15 26.2	+0.7
MMPI	Merauke	41.31	281	P	P	04 15 41.3	+0.8
	comp=Z,70μmcomp=Z,6μm,0.6s						
BBOO	Buckleboo	41.77	244	P	P	04 15 44.2	+0.4
	baz=42,SNR=263						
BBOO	Buckleboo	41.77	244	P	P	04 15 44.3	+0.4
WAKE	Wake Island	42.41	339	P	P	04 15 48.8	0.0
WAKE	Wake Island	42.41	339	⇓P	P	04 15 48.5	-0.4
WAKE	Wake Island	42.41	339	P	P	04 15 48.4	-0.4
H11N3	WAKE ISLAND Hy	42.73	340	P	P	04 15 51.5	+0.3
H11N1	WAKE ISLAND Hy	42.73	340	P	P	04 15 51.4	+0.2
H11N2	WAKE ISLAND Hy	42.74	340	P	P	04 15 51.7	+0.4
ASAR	Alice Springs	43.78	257	P	P	04 15 60.0	+0.3
	comp=Z,681nm,0.8s,baz=98,slow=7.6,SNR=3020						
ASAR				PcP	PcP	04 17 33.9	+0.5
	comp=Z,156nm,0.6s,baz=97,slow=4.4,SNR=11						
ASAR				ScP	ScP	04 20 32.6	+2.0
	comp=Z,77nm,0.8s,baz=92,slow=4.3,SNR=10						
ASAR				S	S	04 21 47.5	-1.7
	comp=Z,131nm,0.8s,baz=94,slow=16,SNR=27						
ASAR				ScS	ScS	04 24 55.6	+0.6
	comp=Z,18nm,1.0s,baz=121,slow=6.0,SNR=4.9						
ASAR				P3KPbc		04 44 49.1	
	comp=Z,1.4nm,0.7s,baz=284,slow=3.7,SNR=11						
ASAR				PKP2bc		04 48 01.8	
	comp=Z,14nm,1.0s,baz=282,slow=3.7,SNR=24						
ASAR				P4KPbc		04 53 46.9	
	comp=Z,1.9nm,0.8s,baz=101,slow=4.3,SNR=16						
	comp=Z,681nm,0.8s						
ASAR	Alice Springs	43.78	257	P	P	04 15 59.8	+0.1
ASAR				PcP	PcP	04 17 33.2	-0.2
WRAB	Tennant Creek	43.87	263	P	P	04 16 00.1	-0.3
WRAB				IAmb	IAmb	04 16 04.0	
	comp=Z,2μm,1.1s						
WRAB	Tennant Creek	43.87	263	P	P	04 16 00.1	-0.3
WRAB				pmax	pmax		
	comp=Z,2μm,1.2s						
WRAB	Tennant Creek	43.87	263	P	P	04 16 00.2	-0.2
WRAB				pP	pwP	04 17 43.5	-1.6
WRA	Warramunga Arr	43.88	263	P	P	04 15 59.6	-0.9
	comp=Z,751nm,0.9s,baz=97,slow=7.6,SNR=2478						
WRA				PcP	PcP	04 17 34.1	+0.3
	comp=Z,182nm,1.1s,baz=99,slow=3.6,SNR=4.4						
WRA				ScP	ScP	04 20 31.9	+0.8
	comp=Z,25nm,0.8s,baz=100,slow=4.8,SNR=6.0						
WRA				S	S	04 21 48.2	-2.6
	comp=Z,88nm,0.8s,baz=98,slow=13,SNR=10.0						
WRA				ScS	ScS	04 24 55.3	-0.4
	comp=Z,39nm,1.1s,baz=99,slow=5.5,SNR=7.0						
WRA				P3KPbc		04 44 50.3	
	comp=Z,0.9nm,0.8s,baz=296,slow=2.6,SNR=5.9						
WRA				P4KPbc		04 53 46.6	
	comp=Z,3.1nm,1.1s,baz=94,slow=4.5,SNR=9.1						
	comp=Z,751nm,0.9s						
GENI	Genyem	43.97	289	P	P	04 16 02.0	+0.8
	comp=Z,35μmcomp=Z,74μmcomp=Z,7μm,1.2s						
GENI	Genyem	43.97	289	⇓P	P	04 16 01.8	+0.7
SMPI	Sarmi	45.53	289	P	P	04 16 13.0	-0.2
	comp=Z,17μmcomp=Z,16μmcomp=Z,898nm,1.1s						
HLP	Hilina Pali	46.04	31	P	P	04 16 16.8	-0.2
HLP				IAmb	IAmb	04 16 21.4	
	comp=Z,354nm,1.0s						
PUH	Pauahi	46.15	31	P	P	04 16 17.9	0.0
POHA	Pohakuloa	46.33	31	P	P	04 16 18.6	-0.7
POHA	Pohakuloa	46.33	31	⇑P	P	04 16 18.5	-0.7
POHA	Pohakuloa	46.33	31	P	P	04 16 18.7	-0.6
POHA				x	x	04 16 27.9	
POHA				ScP	ScP	04 20 44.2	+2.9
KIP	Kipapa	46.66	27	P	P	04 16 21.3	-0.2
KIP	Kipapa	46.66	27	P	P	04 16 21.3	-0.2
KIP				pmax	pmax		
	comp=Z,641nm,1.1s						
KIP	Kipapa	46.66	27	P	P	04 16 21.2	-0.2
KIP				ScP	ScP	04 20 45.8	+3.4
KDU	Kakadu	47.28	272	P	P	04 16 26.3	-0.1
	baz=47,SNR=502						
KDU	Kakadu	47.28	272	⇓P	P	04 16 26.3	-0.1
SRPI	Serui, Papua	47.78	287	P	P	04 16 31.3	+1.2
	comp=Z,17μmcomp=Z,858nm,0.9s						
BAKI	Biak	48.21	288	P	P	04 16 33.9	+0.6
	comp=Z,31μmcomp=Z,3μm,1.1s						
MTN	Manton Dam	48.49	271	P	P	04 16 34.8	-0.5
	baz=49,SNR=343						
MTN	Manton Dam	48.49	271	P	P	04 16 34.9	-0.5
MTN				ScP	ScP	04 20 51.1	+0.6
MTN	Manton Dam	48.49	271	⇓P	P	04 16 34.9	-0.5
FORT	Forrest	48.52	247	P	P	04 16 35.3	-0.1
	baz=49,SNR=293						
FORT	Forrest	48.52	247	P	P	04 16 35.3	-0.1
FORT	Forrest	48.52	247	⇓P	P	04 16 35.1	-0.3
WRKA	Warakurna	48.71	255	P	P	04 16 37.1	+0.1
	baz=49,SNR=1000						
WRKA	Warakurna	48.71	255	⇓P	P	04 16 37.1	+0.1
MIDW	Midway	48.83	2	P	P	04 16 36.6	-0.8
MIDW				IAmb	IAmb	04 16 40.3	
	comp=Z,175nm,0.8s						
MIDW	Midway	48.83	2	⇓P	P	04 16 37.2	-0.3
MIDW	Midway	48.83	2	P	P	04 16 36.9	-0.6
KMPI	Kaimana, Papua	49.30	284	P	P	04 16 41.9	+0.5
	comp=Z,18μmcomp=Z,1μm,1.6s						
GUMO	Guam	49.53	311	P	P	04 16 43.3	+0.3
	comp=Z,1μm,0.5s,baz=175,slow=9.1,SNR=68						
GUMO				ScP	ScP	04 20 55.9	+1.1
	comp=Z,524nm,1.0s,baz=166,slow=7.3,SNR=8.2						
	comp=Z,1μm,0.5s						
GUMO	Guam	49.53	311	P	P	04 16 43.3	+0.3
GUMO				ScP	ScP	04 20 55.5	+0.7
GUMO	Guam	49.53	311	⇓P	P	04 16 43.1	+0.2
GUMO	Guam	49.53	311	P	P	04 16 43.4	+0.3
GUMO				ScP	ScP	04 20 56.8	+2.0
KNRA	Kununurra	49.96	267	P	P	04 16 46.3	+0.1
	baz=50,SNR=260						
KNRA	Kununurra	49.96	267	P	P	04 16 46.2	0.0
KNRA				ScP	ScP	04 20 58.1	+1.3
FAKI	Fak Fak	50.93	284	P	P	04 16 53.1	-0.2
FAKI				ScP	ScP	04 21 02.2	+1.2
FAKI	Fak Fak	50.93	284	P	P	04 16 53.2	-0.1
	comp=Z,19μmcomp=Z,932nm,1.3s						
FAKI	Fak Fak	50.93	284	⇓P	P	04 16 52.9	-0.4
BNDI	Bandanaira	52.43	281	⇓P	P	04 17 04.0	-0.1
SIJI	Sorong	52.69	286	P	P	04 17 06.2	+0.3
	comp=Z,3μm,0.8s,baz=80,slow=5.4,SNR=471						
SIJI				S	S	04 23 53.0	+1.5
	comp=Z,7.0nm,0.5s,baz=256,slow=21,SNR=9.6						
	comp=Z,3μm,0.8s						
SWI	Sorong	52.69	286	P	P	04 17 05.9	0.0
	comp=Z,36μmcomp=Z,5μm,1.1s						
DRV	Dumont d’Urvil	52.77	199	⇑P	P	04 17 06.4	+0.8
DRV				pP	pP	04 18 53.9	+0.9
DRV				PP	PP	04 19 15.9	+2.7
MSAI	Masohi	53.79	282	P	P	04 17 13.7	0.0
	comp=Z,3μmcomp=Z,138nm,0.7s						
AAI	Ambon	54.33	281	P	P	04 17 17.2	-0.3
	comp=Z,18μmcomp=Z,2μm,1.1s						
LBMI	Labuha	56.19	284	P	P	04 17 31.1	+0.7
	comp=Z,13μmcomp=Z,1μm,1.3s						
BATI	Baumata	56.26	272	P	P	04 17 32.2	+1.3
	comp=Z,738nm,0.6s,baz=164,slow=1.5,SNR=94						
	comp=Z,738nm,0.6s						
BATI	Baumata	56.26	272	P	P	04 17 32.5	+1.6
	comp=Z,11μmcomp=Z,8μmcomp=Z,727nm,1.1s						
TNTI	Ternate	56.91	285	P	P	04 17 35.6	+0.3
	comp=Z,12μmcomp=Z,22μmcomp=Z,2μm,1.1s						
TNTI	Ternate	56.91	285	⇓P	P	04 17 35.4	+0.1
PSA00	Pilbara Seismi	56.92	257	P	P	04 17 35.6	+0.3
SANI	Sanana	56.99	282	P	P	04 17 35.6	-0.3
	comp=Z,21μmcomp=Z,15μmcomp=Z,2μm,1.1s						
SANI	Sanana	56.99	282	⇑P	P	04 17 33.9	-2.0
MBWA	Marble Bar	57.11	258	P	P	04 17 36.4	-0.2
MBWA				IAmb	IAmb	04 17 40.2	
	comp=Z,906nm,1.0s						

MBWA	Marble Bar	57.11	258	P	P	04 17 36.5	-0.1
MBWA	Marble Bar	57.11	258	⇓P	P	04 17 36.4	-0.2
MBWA	Marble Bar	57.11	258	P	P	04 17 36.5	-0.2
MBWA				pP	pP	04 19 26.9	+0.8
KLBR	Kellerberrin	57.28	245	P	P	04 17 37.9	+0.2
	baz=57,SNR=290						
SBA	Scott Base	57.45	184	P	P	04 17 39.6	+1.7
SBA				ScP	ScP	04 21 29.9	+1.5
SBA	Scott Base	57.45	184	P	P	04 17 39.6	+1.7
SBA						04 21 29.9	
SBA				pmax	pmax		
	comp=Z,283nm,1.0s						
SBA	Scott Base	57.45	184	P	P	04 17 40.8	+2.8
SBA				pP	pP	04 19 36.7	+8.1
SBA				PP	PP	04 20 00.4	+6.1
SBA				ScP	ScP	04 21 30.5	+2.1
VNDA	Vanda	57.48	185	P	P	04 17 40.0	+1.9
	comp=Z,37nm,0.7s,baz=357,slow=7.1,SNR=105						
VNDA				ScP	ScP	04 21 28.9	+0.4
	comp=Z,45nm,1.0s,baz=342,slow=3.6,SNR=8.1						
	comp=Z,37nm,0.7s						
VNDA	Vanda	57.48	185	P	P	04 17 39.6	+1.4
VNDA				ScP	ScP	04 21 28.9	+0.4
VNDA	Vanda	57.48	185	P	P	04 17 39.9	+1.9
VNDA				ScP	ScP	04 21 29.9	+1.3
NWAO	Narrogin (SRO)	57.60	244	P	P	04 17 40.6	+0.9
NWAO				IAmb	IAmb	04 17 41.6	
	comp=Z,411nm,0.9s						
NWAO	Narrogin (SRO)	57.60	244	P	P	04 17 40.6	+0.9
NWAO				pmax	pmax		
	comp=Z,411nm,1.0s						
NWAO	Narrogin (SRO)	57.60	244	P	P	04 17 40.1	+0.3
NWAO	Narrogin (SRO)	57.60	244	P	P	04 17 40.0	+0.3
NWAO				pP	pP	04 19 31.8	+2.4
NWAO				pwP	pwP	04 19 38.1	+3.1
NWAO				sP	sP	04 20 31.5	+0.9
RKGY	Rocky Gully	57.67	242	P	P	04 17 41.1	+0.9
	baz=58,SNR=48						
MMRI	Maumere	58.09	273	P	P	04 17 43.2	-0.3
MMRI	Maumere	58.09	273	P	P	04 17 43.1	-0.3
	comp=Z,19µmcomp=Z,19µmcomp=Z,1µm,1.1s						
MMRI	Maumere	58.09	273	⇓P	P	04 17 43.1	-0.3
BLDU	Ballidu	58.28	246	P	P	04 17 44.3	-0.2
	baz=58,SNR=292						
MUN	Mundaring	58.55	245	P	P	04 17 46.6	+0.4
	baz=59,SNR=87						
EDFI	Ende, Flores	58.57	272	P	P	04 17 45.8	-0.9
	comp=Z,10µmcomp=Z,10µmcomp=Z,638nm,0.9s						
BBSI	Bau Bau	58.86	276	P	P	04 17 50.2	+1.7
	comp=Z,855nmcomp=Z,92nm,1.1s						
MORW	Morawa	59.06	248	P	P	04 17 49.5	-0.2
	baz=59,SNR=193						
MORW	Morawa	59.06	248	IAmb	IAmb	04 17 52.9	
	comp=Z,737nm,1.1s						
MORW	Morawa	59.06	248	⇓P	P	04 17 49.5	-0.2
SGSI	Sangihe	59.83	287	P	P	04 17 55.9	+0.9
	comp=Z,8µmcomp=Z,671nm,0.8s						
KMSI	Cibinong	59.89	283	P	P	04 17 56.4	+1.0
	comp=Z,546nmcomp=Z,858nm,0.8s						
H01W1	Cape Leeuwin H	59.96	241	P	P	04 17 57.6	+2.3
	baz=113,slow=6.1,SNR=43						
H01W2	Cape Leeuwin H	59.98	241	P	P	04 17 57.8	+2.4
	baz=113,slow=6.1,SNR=28						
H01W3	Cape Leeuwin H	59.98	241	P	P	04 17 57.5	+2.1
	baz=113,slow=6.1,SNR=34						
LUWI	Luwuk	60.34	281	P	P	04 17 58.5	+0.2
LUWI	Luwuk	60.34	281	P	P	04 17 59.0	+0.6
	comp=Z,25µmcomp=Z,33µmcomp=Z,2µm,1.2s						
LUWI	Luwuk	60.34	281	⇓P	P	04 17 58.9	+0.5
BSSI	Bau Bau, Buton	60.56	275	P	P	04 18 00.0	+0.2
	comp=Z,9µmcomp=Z,7µmcomp=Z,349nm,1.6s						
JCJ	Chichijima	60.89	320	P	P	04 18 01.6	0.0
	comp=Z,451nm,0.8s,baz=235,slow=3.0,SNR=43						
	comp=Z,451nm,0.8s						
JCJ	Chichijima	60.89	320	P	P	04 18 00.8	-0.8
JCJ	Chichijima	60.89	320	⇑P	P	04 18 01.2	-0.5
BIPH	Bislig	61.19	292	⇓iP	P	04 18 02.6	-1.3
BKSI	Bulukumba	61.19	276	P	P	04 18 03.5	-0.5
	comp=Z,13µmcomp=Z,8µmcomp=Z,484nm,2.4s						
DAV	Davao City (W)	61.34	291	P	P	04 18 04.3	-0.6
	comp=Z,839nm,0.8s,baz=105,slow=2.2,SNR=23						
	comp=Z,839nm,0.8s						
DAV	Davao City (W)	61.34	291	P	P	04 18 04.2	-0.6
DAV	Davao City (W)	61.34	291	P	P	04 18 04.8	0.0
APSI	Ampana	61.42	281	P	P	04 18 06.5	+1.0
	comp=Z,11µmcomp=Z,12µmcomp=Z,703nm,1.5s						
GSPH	General Santos	61.43	290	⇓iP	P	04 18 04.9	-0.7
BNSI	Bone	61.54	276	P	P	04 18 06.2	0.0
	comp=Z,18µmcomp=Z,15µmcomp=Z,969nm,1.4s						
KAPI	Kappang	61.65	276	P	P	04 18 07.0	+0.1
	comp=Z,104nm,0.7s,baz=151,slow=2.1,SNR=60						
KAPI				PP	PP	04 20 29.3	-3.2
	comp=Z,81nm,1.0s,baz=119,slow=7.1,SNR=4.2						
	comp=Z,104nm,0.7s						
KAPI	Kappang	61.65	276	P	P	04 18 06.8	-0.1
KAPI				IAmb	IAmb	04 18 21.0	
	comp=Z,429nm,1.2s						
KAPI	Kappang	61.65	276	P	P	04 18 07.0	+0.1
KAPI	Kappang	61.65	276	P	P	04 18 07.0	+0.1
KAPI	Kappang	61.65	276	⇓P	P	04 18 06.8	-0.1
KAPI	Kappang	61.65	276	P	P	04 18 07.0	+0.1
KAPI				pP	pwP	04 20 02.6	-0.5
KAPI				PP	PP	04 20 29.3	-3.2
KAPI				sP	sP	04 20 59.9	-0.1
MRSI	Marisa	61.71	282	P	P	04 18 06.6	-0.7
	comp=Z,17µmcomp=Z,8µmcomp=Z,688nm,1.2s						
KCP	Kidapawan	61.73	291	⇓iP	P	04 18 07.5	-0.1
GIRL	Giralia	61.80	255	P	P	04 18 08.9	+1.1
	baz=62,SNR=187						
GIRL	Giralia	61.80	255	P	P	04 18 09.1	+1.3
GIRL	Giralia	61.80	255	⇓P	P	04 18 08.8	+1.0
CCD	Concordia, Ant	61.93	194	P	P	04 18 09.4	+1.2
SPSI	Sidrap Palu	62.01	277	P	P	04 18 08.3	-1.0
	comp=Z,13µmcomp=Z,6µmcomp=Z,461nm,1.3s						
PLAI	Plampang	62.20	271	P	P	04 18 10.4	-0.1
	comp=Z,17µmcomp=Z,23µmcomp=Z,2µm,1.9s						
TTSI	Tana Toraja	62.30	278	P	P	04 18 11.0	-0.1
	comp=Z,12µmcomp=Z,6µmcomp=Z,329nm,1.8s						
CTBH	Cotabato--PC H	62.57	290	*e*P	P	04 18 13.6	+0.7
RPN	Rapa Nui	62.99	111	P	P	04 18 15.2	-0.2
	comp=Z,335nm,1.0s,baz=300,slow=3.1,SNR=8.8						
	comp=Z,335nm,1.0s						
RPN	Rapa Nui	62.99	111	P	P	04 18 15.9	+0.5
RPN				IAmb	IAmb	04 18 19.6	
	comp=Z,304nm,0.8s						
RPN	Rapa Nui	62.99	111	P	P	04 18 15.9	+0.5
RPN				pmax	pmax		
	comp=Z,304nm,0.9s						
CASY	Casey	63.33	205	P	P	04 18 17.6	+0.8
CASY				IAmb	IAmb	04 18 21.2	
	comp=Z,398nm,1.1s						
CASY	Casey	63.33	205	P	P	04 18 17.6	+0.8
CASY				pP	pwP	04 20 14.8	+1.6
MSLP	Maasin	63.43	293	⇓iP	P	04 18 18.3	0.0
MPSI	Mapaga	63.52	281	P	P	04 18 18.7	-0.3
	comp=Z,14µmcomp=Z,1µm,1.1s						
PAGZ	Pagadian	63.62	290	⇓iP	P	04 18 19.8	+0.2
TBP	Tagbilaran	64.07	293	⇓iP	P	04 18 22.3	-0.1
LLP	Lapu-Lapu	64.28	293	*e*P	P	04 18 23.0	-0.8
SNPH	Sibulan	64.45	292	*e*P	P	04 18 24.9	0.0
DNP	Denpasar	64.65	270	P	P	04 18 27.7	+1.6
	comp=Z,32µmcomp=Z,1µm,0.5s						
IGBI	Denpasar	64.67	270	P	P	04 18 26.6	+0.4
	comp=Z,9µmcomp=Z,17µmcomp=Z,1µm,1.7s						
SRBI	Singaraja	64.84	271	P	P	04 18 27.3	0.0
	comp=Z,17µmcomp=Z,15µmcomp=Z,1µm,2.1s						
CNOP	Candoni, Negro	65.19	292	⇓iP	P	04 18 27.8	-1.7
BKB	Balikpapan	65.67	278	P	P	04 18 36.0	+3.5
	comp=Z,12µmcomp=Z,544nm,2.4s						
SMKI	Samarinda	65.69	279	P	P	04 18 34.8	+2.1
	comp=Z,16µmcomp=Z,831nm,1.8s						
JAGI	Jajag, Banyuwa	65.71	270	P	P	04 18 31.8	-1.0
	comp=Z,10µmcomp=Z,829nm,1.0s						
JAGI	Jajag, Banyuwa	65.71	270	⇓P	P	04 18 31.3	-1.5
ABJI	Asem Bagus	65.85	271	P	P	04 18 34.4	+0.8
	comp=Z,19µmcomp=Z,16µmcomp=Z,952nm,1.5s						
RCP	Roxas	65.93	294	⇓*e*P	P	04 18 33.8	-0.3
KMMI	Kalianget	66.35	271	P	P	04 18 37.2	+0.5
	comp=Z,13µmcomp=Z,711nm,2.2s						
GMJI	Gumukmas	66.43	270	P	P	04 18 36.6	-0.7
	comp=Z,8µmcomp=Z,572nm,2.0s						
BLJI	Banyuglugur	66.47	271	P	P	04 18 37.5	+0.1
	comp=Z,12µmcomp=Z,609nm,1.3s						
JHJ2	Mitsune	66.70	323	P	P	04 18 38.7	+0.2
JHJ2	Mitsune	66.70	323	⇓P	P	04 18 38.4	-0.1
JHJ	Hachijo jima 2	66.73	323	P	P	04 18 38.6	0.0
	comp=Z,889nm,0.4s,baz=179,slow=6.8,SNR=85						
	comp=Z,889nm,0.4s						
BBKI	Banjar Baru	66.77	275	P	P	04 18 40.1	+0.7
	comp=Z,10µmcomp=Z,12µmcomp=Z,507nm,1.8s						
MYLDM	Lahad Datu	66.78	285	⇓P	P	04 18 41.4	+2.0
MYLDM				⇓P	P	04 18 41.5	+2.1
MTKI	Muara Teweh, K	67.64	278	P	P	04 18 45.1	+0.4
	comp=Z,10µmcomp=Z,323nm,1.2s						
GRJI	Gresik	67.78	271	P	P	04 18 47.1	+1.6
	comp=Z,9µmcomp=Z,765nm,0.9s						
PWJI	Pagerwojo	68.05	270	P	P	04 18 47.1	0.0
	comp=Z,10µmcomp=Z,750nm,1.3s						
TBJI	Tambak Boyo	68.41	271	P	P	04 18 51.3	+2.0
	comp=Z,13µmcomp=Z,942nm,1.4s						
SPMM	Sapulut	68.42	284	P	P	04 18 51.0	+1.5
PCJI	Pacitan	68.58	269	P	P	04 18 50.7	+0.4
TGY	Tagaytay City	68.71	295	P	P	04 18 51.3	+0.2
	comp=Z,980nm,0.9s,baz=18,slow=0.6,SNR=32						
	comp=Z,980nm,0.9s						
JYT	Yasato	68.81	325	IAmb	IAmb	04 18 55.2	
	comp=Z,553nm,1.1s						
JYT	Yasato	68.81	325	⇓P	P	04 18 51.3	+0.1
JYT				⇑P	P	04 18 51.7	+0.5
WOJI	Wonogiri, Jawa	68.93	269	P	P	04 18 52.7	+0.2
	comp=Z,10µmcomp=Z,12µmcomp=Z,622nm,1.7s						
QSPA	South Pole Qui	69.19	180	P	P	04 18 54.3	+1.0
	comp=Z,303nm,0.9s,baz=248,slow=0.5,SNR=252						
QSPA				S	S	04 27 15.1	+1.3
	comp=Z,21nm,1.1s,baz=77,slow=22,SNR=20						
	comp=Z,303nm,0.9s						
QSPA	South Pole Qui	69.19	180	P	P	04 18 54.0	+0.7
QSPA				IAmb	IAmb	04 18 58.4	
	comp=Z,394nm,0.9s						
QSPA	South Pole Qui	69.19	180	⇑P	P	04 18 54.2	+1.0
QSPA	South Pole Qui	69.19	180	P	P	04 18 54.4	+1.0
QSPA				pP	pP	04 20 55.8	+5.9
QSPA				PP	PP	04 21 30.4	-5.6
UGM	Wanagama	69.28	269	P	P	04 18 55.1	+0.5
	comp=Z,12µmcomp=Z,854nm,0.6s						
PCPH	Palayan	69.29	297	⇑*e*P	P	04 18 54.9	+0.5
JRY	Ryogami san	69.35	324	P	P	04 18 54.4	-0.1
UWJI	Ujung Watu	69.38	271	P	P	04 18 57.9	+2.7
	comp=Z,25µmcomp=Z,767nm,1.4s						
JIE	Ise	69.41	322	P	P	04 18 55.2	+0.4
YOGI	Yogyakarta	69.53	269	P	P	04 18 57.1	+1.0
	comp=Z,8µmcomp=Z,664nm,1.5s						
SMRI	Semarang	69.64	270	P	P	04 18 57.4	+0.6
	comp=Z,22µmcomp=Z,16µmcomp=Z,846nm,1.8s						
SMRI	Semarang	69.64	270	⇓P	P	04 18 57.3	+0.5
JMM	Marumori	69.74	327	IAmb	IAmb	04 18 59.7	
	comp=Z,245nm,0.7s						
JMM	Marumori	69.74	327	P	P	04 18 56.8	0.0
JMM	Marumori	69.74	327	⇑P	P	04 18 56.6	0.0
JMM				⇓P	P	04 18 56.8	0.0
JOW	Kunigami	69.89	311	P	P	04 18 58.7	+0.8
	comp=Z,324nm,1.0s,baz=143,slow=4.7,SNR=20						
	comp=Z,324nm,1.0s						
JOW	Kunigami	69.89	311	IAmb	IAmb	04 19 01.7	
	comp=Z,488nm,1.0s						
JOW	Kunigami	69.89	311	⇓P	P	04 18 58.8	+0.8
JGF	Kuroka	69.91	323	IAmb	IAmb	04 19 00.5	
	comp=Z,173nm,0.7s						
JGF	Kuroka	69.91	323	P	P	04 18 57.3	-0.5
JGF	Kuroka	69.91	323	⇓P	P	04 18 57.3	-0.5
JGF				⇓P	P	04 18 57.5	-0.4
JGF				⇑P	P	04 19 00.2	+2.3
INU	Inuyama	69.92	323	⇓P	P	04 18 57.6	-0.3
INU	Inuyama	69.92	323	P	P	04 18 57.8	-0.1
INU				pP	pP	04 20 54.3	-0.4
INU				pwP	pwP	04 21 03.4	+5.9
INU				PP	PP	04 21 41.7	-1.6
JAM	Amami Oshima	69.93	313	P	P	04 18 59.0	+0.9
PBKI	Pangkalan Bun	70.00	275	P	P	04 19 00.1	+1.2
	comp=Z,18µmcomp=Z,1µm,1.3s						
MJAR	Matsushiro Arr	70.12	324	P	P	04 18 58.2	-0.8
	comp=Z,118nm,0.5s,baz=153,slow=6.5,SNR=135						
	comp=Z,118nm,0.5s						
MAJO	Matsushiro	70.12	324	P	P	04 18 58.8	-0.3
MAJO				IAmb	IAmb	04 19 01.8	
	comp=Z,287nm,0.7s						
MAJO	Matsushiro	70.12	324	P	P	04 18 58.8	-0.3
MAJO				pmax	pmax		
	comp=Z,287nm,0.7s						
MAJO	Matsushiro	70.12	324	⇓P	P	04 18 58.7	-0.3
MAJO	Matsushiro	70.12	324	P	P	04 18 58.8	-0.3
MAT	Matsushiro	70.12	324	P	P	04 18 58.7	-0.4
MJB9	Matsu-Tunnel	70.12	324	IAmb	IAmb	04 19 01.7	
	comp=Z,281nm,0.7s						
JGN	Niukaw	70.38	323	P	P	04 19 00.2	-0.4
JMN	Monobe	70.63	319	P	P	04 19 02.5	+0.3
JMN	Monobe	70.63	319	⇑P	P	04 19 04.0	+1.9
JOM	Ohasama	70.72	328	P	P	04 19 02.4	-0.1
JWT	Wachi	70.80	322	P	P	04 19 03.1	0.0
STKI	Sintang	71.19	277	P	P	04 19 06.9	+1.0
	comp=Z,423nm,1.0s						
JSD	Sado	71.19	325	IAmb	IAmb	04 19 10.1	
	comp=Z,257nm,0.7s						
JSD	Sado	71.19	325	P	P	04 19 05.2	0.0
CMJI	Cimerak	71.26	269	P	P	04 19 05.6	-0.7
	comp=Z,9µmcomp=Z,5µmcomp=Z,390nm,1.4s						
JAD	Aida	71.29	321	P	P	04 19 06.3	+0.4
JSU	Suzuyama	71.32	316	P	P	04 19 06.4	+0.1
SBUM	Sibu	71.41	280	P	P	04 19 08.0	+0.9
SBUM	Sibu	71.41	280	⇓P	P	04 19 07.8	+0.7
SBUM				⇓P	P	04 19 07.9	+0.7
ERM	Erimo	71.82	331	P	P	04 19 09.9	+1.1
ERM	Erimo	71.82	331	P	P	04 19 10.0	+1.1
ERM				pmax	pmax		
	comp=Z,176nm,1.1s						
ERM	Erimo	71.82	331	P	P	04 19 09.8	+1.0
JTM	Tenmabayashi	71.84	329	IAmb	IAmb	04 19 12.3	
	comp=Z,300nm,0.8s						
JTM	Tenmabayashi	71.84	329	⇓P	P	04 19 09.2	+0.2
JTM				⇓P	P	04 19 09.2	+0.2
JCJI	Jatiwangi	71.86	270	P	P	04 19 10.0	+0.2
	comp=Z,21µmcomp=Z,1µm,1.6s						
JHS	Saijyo	71.95	320	P	P	04 19 10.2	+0.3
JHS	Saijyo	71.95	320	⇓P	P	04 19 10.1	+0.3
JNU	Nakatsue	72.09	317	P	P	04 19 10.1	-0.6
	comp=Z,246nm,0.7s,baz=121,slow=5.4,SNR=28						
	comp=Z,246nm,0.7s						
JNU	Nakatsue	72.09	317	IAmb	IAmb	04 19 15.4	
	comp=Z,466nm,0.9s						
JNU	Nakatsue	72.09	317	P	P	04 19 10.4	-0.3
JNU	Nakatsue	72.09	317	⇓P	P	04 19 10.7	-0.1
JNU				⇑P	P	04 19 12.8	+2.0
YUK	Yuzh-Kuril'sk	72.29	334	*i* P	P	04 19 11.2	-0.3
JOT	Ohata	72.31	329	P	P	04 19 12.9	+1.2
LEM	Lembang	72.36	269	P	P	04 19 13.1	+0.2
	comp=Z,1µm,1.0s,baz=117,slow=5.2,SNR=97						
	comp=Z,1µm,1.0s						
YOJ	Yonaguni jima	72.41	306	P	P	04 19 12.5	-0.2
ADK	Adak	72.47	1	P	P	04 19 11.7	-0.6
ADK	Adak	72.47	1	P	P	04 19 11.7	-0.6
ADK				pmax	pmax		
	comp=Z,499nm,0.6s						
ADK	Adak	72.47	1	⇓P	P	04 19 11.3	-1.0
KUR	Kuril'sk	72.49	336	*d i*P	P	04 19 13.1	+0.5
KUR				*i* S	S	04 27 53.8	+2.7
KUR				pmax	pmax		
	comp=Z,6µm,6.4s						
KUR				pmax	pmax		
	comp=Z,1µm,1.7s						
CNJI	Cibinong	72.65	269	P	P	04 19 13.9	-0.4
	comp=Z,11µmcomp=Z,957nm,1.2s						
KSM	Kuching	72.80	278	P	P	04 19 16.0	+0.8
ATKA	Atka Island	72.88	3	⇑P	P	04 19 13.4	-1.2
ATKA				⇑P	P	04 19 13.7	-1.0
ATKA				⇑P	P	04 19 16.1	+1.4
XMIS	Christmas Isla	73.00	265	P	P	04 19 16.5	+0.1
YULB	Yu-li	73.14	304	IAmb	IAmb	04 19 19.7	
	comp=Z,274nm,0.6s						
JFU	Fukue jima 2	73.17	316	P	P	04 19 16.8	-0.1
CBJI	Citeko	73.21	269	P	P	04 19 16.6	-0.9
	comp=Z,25µmcomp=Z,1µm,1.5s						
DBJI	Dramaga	73.26	269	P	P	04 19 17.8	0.0
	comp=Z,26µmcomp=Z,1µm,1.4s						
SKJI	Sukabumi	73.29	269	P	P	04 19 18.4	+0.4
	comp=Z,6µmcomp=Z,633nm,0.8s						
NACB	Ninganchiao	73.33	305	P	P	04 19 17.2	-0.8
SHEM	Shemya Is, Ala	73.56	355	P	P	04 19 17.8	-0.7
	comp=Z,231nm,0.7s,baz=124,slow=2.2,SNR=25						
	comp=Z,231nm,0.7s						
SMY	Shemya	73.56	355	IAmb	IAmb	04 19 22.0	
	comp=Z,321nm,0.9s						
TPI	Tanjungpandan	73.72	273	P	P	04 19 21.3	+0.8
	comp=Z,5µmcomp=Z,377nm,1.4s						
ASAJ	Asahikawa	73.74	332	P	P	04 19 21.2	+1.4
	comp=Z,349nm,0.7s,baz=218,slow=6.0,SNR=64						
	comp=Z,349nm,0.7s						
ASAJ	Asahikawa	73.74	332	P	P	04 19 21.2	+1.4
TATO	Taipei	73.84	305	P	P	04 19 20.3	-0.5
TATO	Taipei	73.84	305	P	P	04 19 20.2	-0.5
JTU	Tsushima	73.94	317	P	P	04 19 21.9	+0.7
JTU	Tsushima	73.94	317	⇓P	P	04 19 20.6	-0.5
JTU				⇑P	P	04 19 21.8	+0.7
JTU				⇑P	P	04 19 23.6	+2.5
SBJI	Serang	73.99	269	P	P	04 19 22.3	+0.4
	comp=Z,18µmcomp=Z,1µm,1.2s						
NIKH	Nikolski High	74.04	6	P	P	04 19 19.9	-1.4
	baz=190						
NIKH				S	S	04 28 06.1	-1.7
	baz=190						
SKR	Severo-Kuril's	74.63	344	*e*P	P	04 19 24.3	-0.3
SKR				*e*S	S	04 28 15.7	+1.4
SKR				pmax	pmax		
	comp=Z,224nm,1.7s						
SKR				pmax	pmax		
	comp=Z,1µm,2.4s						
SKR				pmax	pmax		
	comp=Z,900nm,6.0s						
BLSI	Bandar Lampung	75.07	270	P	P	04 19 27.5	-0.5
	comp=Z,10µmcomp=Z,576nm,1.1s						
UNV	Unalaska Valle	75.16	7	IAmb	IAmb	04 19 29.4	
	comp=Z,174nm,0.6s						
UNV	Unalaska Valle	75.16	7	P	P	04 19 25.9	-1.6
	baz=192,SNR=23						
UNV				S	S	04 28 16.7	-3.1
	baz=192						
PPBI	Pangkal Pinang	75.35	273	P	P	04 19 30.3	+0.7
	comp=Z,33µmcomp=Z,770nm,2.3s						
AKUT	Akutan	75.53	8	IAmb	IAmb	04 19 31.0	
	comp=Z,132nm,0.6s						
KLI	Kotabumi	75.61	270	P	P	04 19 30.6	-0.4
	comp=Z,11µmcomp=Z,533nm,0.9s						
KASI	Kota Agung	75.72	269	P	P	04 19 30.7	-0.9
	comp=Z,13µmcomp=Z,1µm,1.2s						
NAWB	Namwon	75.77	317	IAmb	IAmb	04 19 33.7	
	comp=Z,645nm,1.5s						
YSS	Yuzh-Sakhalins	75.93	334	P	P	04 19 32.4	+0.4
YSS				IAmb	IAmb	04 19 35.8	
	comp=Z,340nm,0.8s						
YSS	Yuzh-Sakhalins	75.93	334	κ *i*P	P	04 19 32.8	+0.8
YSS				*e*		04 19 42.4	
YSS				*e**SP	PP	04 22 37.1	+3.6
YSS				*e*S	S	04 28 28.2	-0.3
YSS				*e*		04 28 52.9	
YSS				pmax	pmax		
	comp=Z,410nm,0.8s						
YSS				pmax	pmax		
	comp=N,130nm,0.6s						
YSS				pmax	pmax		
	comp=E,80nm,0.6s						
YSS				pmax	pmax		
	comp=N,1µm,3.0s						
YSS				pmax	pmax		
	comp=Z,4µm,3.0s						
YSS				pmax	pmax		
	comp=E,800nm,2.3s						
YSS				smax	smax		
	comp=N,5µm,8.8s						
YSS				smax	smax		
	comp=E,6µm,8.6s						
YSS	Yuzh-Sakhalins	75.93	334	⇓P	P	04 19 32.6	+0.7
YSS				⇑P	P	04 19 33.1	+1.1
KNMB	Chin-men Tao	75.97	303	IAmb	IAmb	04 19 34.9	
	comp=Z,303nm,0.9s						
QZH	Quanzhou	76.06	304	⇓*i*P	P	04 19 33.5	+0.3
QZH				sP	sP	04 22 32.3	+1.5
QZH				S	S	04 28 31.0	+0.3
QZH				pmax	pmax		
	comp=Z,450nm,1.4s						
QZH				pmax	pmax		
	comp=Z,3µm,6.4s						
PET	Petropavlovsk	76.17	346	P	P	04 19 32.6	-0.5
PET				IAmb	IAmb	04 19 35.3	
	comp=Z,172nm,0.7s						
PET	Petropavlovsk	76.17	346	*e*P	P	04 19 31.3	-1.8
PET				*e**SP	sP	04 22 33.3	+1.7
PET				*e*S	S	04 28 30.0	-0.7
PET				*e*SS	SS	04 33 44.8	+3.2
PET				*e*SSS	SSS	04 37 05.0	
PET				pmax	pmax		
	comp=Z,3µm,8.9s						
PET				pmax	pmax		
	comp=Z,345nm,0.7s						
PET				pmax	pmax		
	comp=Z,3µm,11.5s						
LWLI	Liwa	76.30	270	P	P	04 19 34.3	-0.7
	comp=Z,13µmcomp=Z,970nm,0.7s						
PMBI	Palembang	76.36	272	P	P	04 19 35.5	+0.4
PMBI	Palembang	76.36	272	P	P	04 19 37.0	+1.9
	comp=Z,23µmcomp=Z,2µm,1.4s						
MDSI	Maura Dua	76.37	270	P	P	04 19 33.6	-1.6
	comp=Z,6µmcomp=Z,524nm,1.0s						
TJN	Taejon	76.39	318	IAmb	IAmb	04 19 41.4	
	comp=Z,337nm,1.0s						
TJN	Taejon	76.39	318	*ce*P	P	04 19 35.1	+0.3
PEA0B	Petropavlovsk-	76.47	346	IAmb	IAmb	04 19 37.9	
	comp=Z,281nm,0.7s						
PEA0B	Petropavlovsk-	76.47	346	*ce*P	P	04 19 34.4	-0.4
PETK	Petropavlovsk-	76.47	346	P	P	04 19 33.8	-1.0
	comp=Z,202nm,0.6s,baz=130,slow=6.5,SNR=120						
	comp=Z,202nm,0.6s						
FALS	False Pass	76.56	9	IAmb	IAmb	04 19 39.7	
	comp=Z,222nm,0.6s						
FALS	False Pass	76.56	9	P	P	04 19 33.5	-1.7
	baz=195,SNR=10						
FALS				S	S	04 28 31.6	-3.2
	baz=195						
KSRS	Korea Array	76.73	319	P	P	04 19 36.9	+0.3
	comp=Z,70nm,0.7s,baz=131,slow=6.1,SNR=130						
KSRS				PP	PP	04 22 39.5	-0.6
	comp=Z,9.2nm,0.9s,baz=138,slow=6.7,SNR=5.2						
KSRS				ScS	ScS	04 28 57.2	-2.8
	comp=Z,0.8nm,0.6s,baz=124,slow=6.6,SNR=4.7						
	comp=Z,70nm,0.7s						
KS19	Wonju Array Si	76.79	319	P	P	04 19 37.4	+0.4
SEHB	SEOHWA	77.05	320	IAmb	IAmb	04 19 42.5	
	comp=Z,248nm,0.8s						
CNBA	Chernabura Isl	77.15	11	IAmb	IAmb	04 19 42.0	
	comp=Z,445nm,1.4s						
CHNA	Chernabura Isl	77.16	11	P	P	04 19 37.4	-1.1
	baz=198,SNR=33						
CHNA				S	S	04 28 37.7	-3.5
	baz=198						
TEY	Ternei	77.19	329	⇓*e*P	P	04 19 39.5	+0.6
TEY				*e*		04 28 40.4	
TEY				*e*		04 37 28.6	
TEY				pmax	pmax		
	comp=Z,90nm,2.4s						
TEY				pmax	pmax		
	comp=E,20nm,2.2s						
TEY				pmax	pmax		
	comp=N,30nm,2.4s						
TEY				pmax	pmax		
	comp=Z,2µm,8.6s						
TEY				pmax	pmax		
	comp=N,800nm,9.7s						
TEY				pmax	pmax		
	comp=E,2µm,10.6s						
TEY				pmax	pmax		
	comp=N,3µm,10.5s						
DSRI	Dabo	77.41	274	P	P	04 19 41.6	+0.8
	comp=N,7µmcomp=N,430nm,2.4s						
SSE	Sheshan	77.42	310	P	P	04 19 42.0	+1.5
SSE				S	S	04 28 47.5	+2.6
SSE				pmax	pmax		
	comp=N,47nm,0.9s						
SSE				pmax	pmax		
	comp=N,2µm,7.1s						
SDPT	Sand Point	77.50	11	IAmb	IAmb	04 19 42.2	
	comp=Z,274nm,0.6s						
SDPT	Sand Point	77.50	11	P	P	04 19 38.7	-1.7
	baz=197,SNR=35						
SDPT				S	S	04 28 41.4	-3.3
	baz=197						
INCN	Inchon	77.54	318	P	P	04 19 41.3	+0.3
INCN	Inchon	77.54	318	P	P	04 19 41.3	+0.3
INCN				pmax	pmax		
	comp=Z,284nm,1.2s						

INCN	Inchon	77.54	318	P	P	04 19 41.6	+0.6
MNAI	Manna	77.56	270	P	P	04 19 42.7	+1.0
	comp=Z,30µmcomp=Z,1µm,1.8s						
JMBI	JAMBI	77.87	273	P	P	04 19 45.2	+1.9
	comp=Z,20µmcomp=Z,2µm,1.3s						
UGL	Uglegorsk	77.91	335	d *i*P	P	04 19 43.0	+0.3
UGL				*e*S	S	04 28 42.2	-7.0
UGL				pmax	pmax		
	comp=Z,560nm,0.8s						
UGL				pmax	pmax		
	comp=Z,4µm,4.0s						
UGL				smax	smax		
	comp=E,8µm,8.5s						
UGL				smax	smax		
	comp=N,5µm,6.0s						
TPRI	Tanjung Pinang	77.96	276	P	P	04 19 44.9	+1.1
	comp=N,11µmcomp=N,491nm,2.2s						
SNCC	San Nicolas Is	78.00	47	P	P	04 19 45.4	+1.8
SNCC				IAmb	IAmb	04 19 47.8	
	comp=Z,260nm,1.0s						
SNCC	San Nicolas Is	78.00	47	P	P	04 19 41.0	-2.5
	baz=235						
SNCC				S	S	04 28 58.2	+7.2
	baz=235						
SPIA	Saint Paul Isl	78.08	5	P	P	04 19 42.6	-0.8
	baz=188						
SPIA				S	S	04 28 49.9	-0.8
	baz=188						
VLA	Vladivostok	78.21	325	d *i*P	P	04 19 44.7	+0.3
VLA				pmax	pmax		
	comp=Z,466nm,0.8s						
MSHR	Mys Shultsa	78.23	325	c *e*P	P	04 19 45.3	+0.7
MSHR				pmax	pmax		
	comp=Z,570nm,1.7s						
HKPS	Hong Kong Po S	78.29	299	IAmb	IAmb	04 19 49.8	
	comp=Z,427nm,0.9s						
SCZ2	Santa Cruz Isl	78.35	47	P	P	04 19 45.9	+0.4
	baz=235,SNR=14						
SCZ2				S	S	04 29 00.4	+5.8
	baz=235						
HJU	Haeju	78.45	318	P	P	04 19 46.1	+0.2
HJU				S	S	04 28 58.0	+2.6
HJU				AmB			
	comp=Z,218nm,0.6s						
HJU				AMS	AMS		
	comp=N,54nm,2.7s						
HJU				AMS	AMS		
	comp=E,154nm,7.5s						
HJU				AMS	AMS		
	comp=Z,238nm,11.6s						
SMAI	San Martin Ant	78.50	159	P	P	04 19 46.9	+1.3
SMAI				IAmb	IAmb	04 19 50.7	
	comp=Z,624nm,1.1s						
SCI2	San Clemente I	78.52	48	P	P	04 19 46.6	+0.3
	baz=236,SNR=9.7						
SCI2				S	S	04 29 01.3	+4.9
	baz=236						
HHU	Hamhung	78.54	321	P	P	04 19 47.1	+0.8
HHU				S	S	04 29 01.1	+4.9
HHU				AmB			
	comp=Z,3µm,3.9s						
HHU				AMS	AMS		
	comp=N,256nm,5.9s						
HHU				AMS	AMS		
	comp=E,3µm,63.4s						
HHU				AMS	AMS		
	comp=Z,182nm,4.2s						
SBC	Santa Barbara	78.55	46	P	P	04 19 47.1	+0.6
	baz=235						
SBC				S	S	04 29 02.1	+5.5
	baz=235						
MCCM	Marconi Confer	78.69	42	IAmb	IAmb	04 19 51.0	
	comp=Z,213nm,0.8s						
PKM	Mcpherson Peak	78.74	46	P	P	04 19 48.5	+0.8
	baz=235,SNR=23						
PKM				S	S	04 29 04.4	+5.4
	baz=235						
SAO	San Andreas Ge	78.77	44	IAmb	IAmb	04 19 51.7	
	comp=Z,276nm,0.8s						
CHGN	Chignik	78.77	11	IAmb	IAmb	04 19 49.8	
	comp=Z,614nm,1.4s						
CHGN	Chignik	78.77	11	P	P	04 19 46.0	-1.1
	baz=199,SNR=51						
CHGN				S	S	04 28 55.4	-2.5
	baz=199						
CIS	Catalina Islan	78.85	48	P	P	04 19 48.3	+0.2
	baz=236,SNR=10						
CIS				S	S	04 29 04.6	+4.7
	baz=236						
PMPB	Monarch Peak	78.86	44	IAmb	IAmb	04 19 52.5	
	comp=Z,281nm,1.0s						
SMMC	Simmler	78.86	45	P	P	04 19 48.2	0.0
	baz=234,SNR=12						
SMMC				S	S	04 29 05.3	+5.4
	baz=234						
CHIR	Chirikof Islan	78.88	13	IAmb	IAmb	04 19 51.5	
	comp=Z,646nm,1.4s						
CHIR	Chirikof Islan	78.88	13	P	P	04 19 47.0	-0.7
	baz=202,SNR=22						
CHIR				S	S	04 28 57.8	-1.3
	baz=202						
USA0B	Ussuriysk Arra	78.90	326	P	P	04 19 48.8	+0.7
USA0B				IAmb	IAmb	04 19 53.7	
	comp=Z,367nm,1.1s						
USA0B	Ussuriysk Arra	78.90	326	P	P	04 19 48.8	+0.7
USA0B				pmax	pmax		
	comp=Z,367nm,1.1s						
USRK	Ussuriysk Ar.	78.90	326	P	P	04 19 48.8	+0.7
	comp=Z,143nm,0.6s,baz=128,slow=4.0,SNR=108						
	comp=Z,143nm,0.6s						
MYKOM	Kota Tinggi	78.91	276	P	P	04 19 49.1	+0.2
MYKOM				IAmb	IAmb	04 19 51.3	
	comp=Z,537nm,0.9s						
MYKOM	Kota Tinggi	78.91	276	P	P	04 19 50.0	+1.1
BBGB	Big Mountain B	78.92	44	IAmb	IAmb	04 19 53.2	
	comp=Z,562nm,1.3s						
BCW	Bitter Crk WRg	79.04	46	IAmb	IAmb	04 19 53.0	
	comp=Z,250nm,0.8s						
PYAG	Pyongyang	79.05	319	P	P	04 19 49.7	+0.7
PYAG				S	S	04 29 05.2	+3.7
PYAG				AmB			
	comp=Z,662nm,1.4s						
PYAG				AMS	AMS		
	comp=N,458nm,2.9s						
PYAG				AMS	AMS		
	comp=E,514nm,3.3s						
PYAG				AMS	AMS		
	comp=Z,558nm,3.6s						
HOPS	Hopland Field	79.10	41	IAmb	IAmb	04 19 53.4	
	comp=Z,357nm,0.9s						
FMP	Fort Macarthur	79.11	48	P	P	04 19 49.9	+0.5
	baz=236,SNR=5.9						
FMP				S	S	04 29 07.2	+4.8
	baz=236						
TYV	Tymovskoe	79.11	336	*e*P	P	04 19 49.4	+0.4
TYV				*e*S	S	04 29 05.0	+3.3
TYV				pmax	pmax		
	comp=Z,2µm,2.2s						
TYV				pmax	pmax		
	comp=Z,200nm,1.1s						
TYV				smax	smax		
	comp=N,52nm,1.8s						
TYV				smax	smax		
	comp=E,163nm,1.8s						
TYV				smax	smax		
	comp=N,4µm,6.4s						
TYV				smax	smax		
	comp=E,8µm,6.4s						
KCPM	Cahto Peak	79.22	40	IAmb	IAmb	04 19 54.4	
	comp=Z,362nm,0.9s						
BELA	Belgrano 2	79.27	173	P	P	04 19 50.0	+0.3
TJX	Tijuana	79.31	49	IAmb	IAmb	04 19 54.7	
	comp=Z,524nm,0.9s						
GZH	Guangzhou	79.32	300	P	P	04 19 50.5	-0.3
GZH				PP	PP	04 23 03.8	+2.1
GZH				S	S	04 29 07.8	+2.8
GZH				pmax	pmax		
	comp=Z,3µm,2.5s						
OSI	Osito Audit: C	79.32	47	P	P	04 19 51.4	+0.7
	baz=235						
OSI				S	S	04 29 09.9	+5.2
	baz=235						
KMPM	Mount Pierce	79.35	39	IAmb	IAmb	04 19 55.8	
	comp=Z,611nm,1.0s						
DECC	Green Verdugo	79.38	47	P	P	04 19 51.3	+0.3
	baz=236,SNR=5.4						
DECC				S	S	04 29 09.6	+4.3
	baz=236						
109C	Camp Elliot, M	79.48	49	P	P	04 19 52.0	+0.6
	baz=237,SNR=28						
109C				S	S	04 29 11.3	+5.0
	baz=237						
ARVC	Arvin	79.54	46	P	P	04 19 52.0	+0.3
	baz=235,SNR=39						
ARVC				S	S	04 29 11.4	+4.6
	baz=235						
RGRI	Rengat	79.55	274	P	P	04 19 54.7	+2.5
	comp=Z,952nmcomp=Z,25µmcomp=Z,1µm,1.3s						
NJ2	Nanjing	79.60	310	⇓*i*P	P	04 19 52.8	+0.7
NJ2				PP	PP	04 23 01.5	-2.4
NJ2				S	S	04 29 11.0	+3.4
NJ2				SKS	SKSac	04 29 15.5	+1.2
NJ2				ScS	ScS	04 29 22.5	-1.3
NJ2				pmax	pmax		
	comp=Z,370nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,5µm,4.7s						
JCC	Jacoby Creek,	79.66	39	IAmb	IAmb	04 19 56.5	
	comp=Z,452nm,1.4s						
KRJI	Kerinci	79.74	272	P	P	04 19 53.4	0.0
	comp=Z,16µmcomp=Z,1µm,1.1s						
VES	Vestal, Richgr	79.78	45	P	P	04 19 53.3	+0.4
	baz=235,SNR=83						
VES				S	S	04 29 12.6	+3.5
	baz=235						
MURC	Murrieta	79.81	48	P	P	04 19 53.8	+0.6
	baz=236,SNR=74						
MURC				S	S	04 29 15.3	+5.5
	baz=236						
BFSC	Mount Baldy Ra	79.84	47	P	P	04 19 53.7	+0.3
	baz=236,SNR=45						
BFSC				S	S	04 29 14.8	+4.6
	baz=236						
VOG	Valley Oaks Go	79.85	45	P	P	04 19 53.7	+0.4
	baz=235,SNR=8.1						
VOG				S	S	04 29 14.0	+4.1
	baz=235						
SII	Sitkinak Islan	79.87	14	P	P	04 19 52.8	-0.1
SII				IAmb	IAmb	04 19 57.0	
	comp=Z,548nm,1.2s						
SII	Sitkinak Islan	79.87	14	P	P	04 19 52.6	-0.3
	baz=203,SNR=39						
SII				S	S	04 29 09.9	+0.6
	baz=203						
KHMM	Horse Mountain	79.87	39	IAmb	IAmb	04 19 58.0	
	comp=Z,271nm,0.9s						
KRPM	Rodgers	79.88	39	IAmb	IAmb	04 19 58.2	
	comp=Z,438nm,1.1s						
MONP2	Monument Peak	79.97	49	P	P	04 19 55.1	+0.8
	baz=237,SNR=115						
MONP2				S	S	04 29 16.7	+5.0
	baz=237						
EDW2	Edwards Air Fo	79.97	47	P	P	04 19 54.8	+0.7
	baz=236,SNR=106						
EDW2				S	S	04 29 14.9	+3.5
	baz=236						
IKP	In-Ko-Pah, Jac	80.06	50	P	P	04 19 55.4	+0.9
	baz=237,SNR=69						
IKP				S	S	04 29 17.8	+5.4
	baz=237						
ISA	Isabella, Lake	80.08	46	IAmb	IAmb	04 19 58.7	
	comp=Z,594nm,1.5s						
ISA	Isabella, Lake	80.08	46	P	P	04 19 55.3	+0.7
	baz=235,SNR=136						
ISA				S	S	04 29 16.7	+4.2
	baz=235						
LPIG	La Paz	80.18	60	P	P	04 19 55.7	+0.4
	comp=Z,102nm,0.8s,baz=72,slow=1.1,SNR=18						
	comp=Z,102nm,0.8s						
SRIG	Santa Rosalia	80.20	56	IAmb	IAmb	04 19 59.2	
	comp=Z,408nm,0.9s						
SLBS	Sierra La Lagu	80.28	60	P	P	04 19 56.4	+0.4
PFO	Pinyon Flats O	80.33	49	P	P	04 19 56.4	+0.4
PFO	Pinyon Flats O	80.33	49	P	P	04 19 56.4	+0.4
PFO				pmax	pmax		
	comp=Z,151nm,1.0s						
PFO	Pinyon Flats O	80.33	49	P	P	04 19 56.6	+0.6
	baz=237,SNR=51						
PFO				S	S	04 29 19.2	+4.0
	baz=237						
TPFO	Pinon Flats	80.33	49	P	P	04 19 56.7	+0.7
	baz=237,SNR=52						
TPFO				S	S	04 29 19.8	+4.6
	baz=237						
BBRC	Big Bear Solar	80.36	48	P	P	04 19 56.5	+0.2
	baz=237						
BBRC				S	S	04 29 20.7	+4.9
	baz=237						
KSXB	Camp Six Broad	80.39	38	IAmb	IAmb	04 20 00.6	
	comp=Z,236nm,0.9s						
QIZ	Qiongzhong	80.40	295	P	P	04 19 57.8	+1.3
QIZ				sP	sP	04 22 57.8	+2.2
QIZ				S	S	04 29 17.0	+0.8
QIZ				pmax	pmax		
	comp=Z,120nm,2.0s						
QIZ				pmax	pmax		
	comp=Z,4µm,10.4s						
ORV	Oroville	80.41	41	IAmb	IAmb	04 19 59.9	
	comp=Z,246nm,0.9s						
KBO	Bosley Butte	80.43	38	IAmb	IAmb	04 20 00.9	
	comp=Z,289nm,1.2s						
SWSC	Sam W. Stewart	80.44	49	P	P	04 19 57.2	+0.8
	baz=238,SNR=83						
SWSC				S	S	04 29 21.0	+5.0
	baz=238						
MDJ	Mudanjiang	80.44	325	P	P	04 19 56.9	+0.7
MDJ				IAmb	IAmb	04 19 59.0	
	comp=Z,263nm,1.0s						
MDJ	Mudanjiang	80.44	325	P	P	04 19 56.8	+0.6
MDJ				S	S	04 29 19.3	+3.7
MDJ				pmax	pmax		
	comp=Z,120nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,6µm,6.9s						
SUJ	Sinuiju	80.47	319	P	P	04 19 55.8	-0.6
SUJ				S	S	04 29 16.5	+0.5
SUJ				AmB			
	comp=Z,2µm,1.8s						
SUJ				AMS	AMS		
	comp=N,1µm,7.0s						
SUJ				AMS	AMS		
	comp=E,700nm,4.4s						
SUJ				AMS	AMS		
	comp=Z,579nm,3.6s						
CPBX	Cerro Prieto	80.51	50	P	P	04 19 57.3	+0.4
CPBX				IAmb	IAmb	04 20 01.3	
	comp=Z,287nm,1.1s						
LRMC	Laurel Mtn Rad	80.51	46	P	P	04 19 57.4	+0.5
	baz=236,SNR=80						
LRMC				S	S	04 29 21.8	+4.7
	baz=236						
COCO	West Island	80.63	261	P	P	04 19 58.7	+0.9
COCO	West Island	80.63	261	P	P	04 19 58.7	+0.9
COCO				pmax	pmax		
	comp=Z,2µm,1.3s						
RRX	Edison Barstow	80.64	47	P	P	04 19 57.9	+0.4
	baz=236						
RRX				S	S	04 29 21.8	+3.7
	baz=236						
OHAK	Old Harbor	80.67	14	P	P	04 19 56.6	-0.5
	baz=204,SNR=43						
OHAK				S	S	04 29 17.2	-0.2
	baz=204						
L02F	Cave Junction	80.75	38	P	P	04 19 59.0	+1.1
	baz=231,SNR=38						
L02F				S	S	04 29 23.1	+4.3
	baz=231						
CWC	Cottonwood Cre	80.78	45	P	P	04 19 59.1	+0.7
	baz=236						
CWC				S	S	04 29 23.8	+4.0
	baz=236						
KEBM	Edson Butte	80.79	37	IAmb	IAmb	04 20 02.5	
	comp=Z,217nm,1.0s						
MDPB	Devils Postpil	80.81	44	IAmb	IAmb	04 20 02.5	
	comp=Z,244nm,1.0s						
BELC	Belle Mtn. Jos	80.86	48	P	P	04 19 59.5	+0.7
	baz=237,SNR=160						
BELC				S	S	04 29 25.1	+4.5
	baz=237						
PPSI	Pulau Pagai	80.87	271	P	P	04 20 01.5	+2.4
	comp=Z,20µmcomp=Z,1µm,1.7s						
EMB	Emerald Bay	80.93	42	IAmb	IAmb	04 20 03.1	
	comp=Z,322nm,1.3s						
JRMM	Jerantut	80.95	278	P	P	04 20 01.0	+1.5
MLAC	Mammoth, Mammo	80.96	44	P	P	04 20 00.2	+0.9
	baz=235,SNR=41						
MLAC				S	S	04 29 27.6	+5.9
	baz=235						
MAW	Mawson	80.98	200	P	P	04 19 59.2	+0.6
	comp=Z,109nm,0.8s,baz=133,slow=6.1,SNR=39						
	comp=Z,109nm,0.8s						
MAW	Mawson	80.98	200	P	P	04 19 59.1	+0.6
	baz=81,SNR=57						
MAW	Mawson	80.98	200	P	P	04 19 59.1	+0.5
BKNI	Bangkinang	81.00	274	P	P	04 19 59.7	-0.1
BKNI	Bangkinang	81.00	274	P	P	04 20 00.1	+0.3
	comp=Z,16µmcomp=Z,782nm,1.4s						
YBH	Yreka Blue Hor	81.01	39	IAmb	IAmb	04 20 03.7	
	comp=Z,336nm,0.9s						
GSC	Goldstone, Bar	81.01	47	P	P	04 19 59.9	+0.4
	baz=236,SNR=127						
GSC				S	S	04 29 26.8	+4.9
	baz=236						
TIN	Tinemaha, Big	81.03	45	P	P	04 20 00.4	+0.8
	baz=235,SNR=46						
TIN				S	S	04 29 27.0	+4.8
	baz=235						
K02D	Willamette Mer	81.06	38	P	P	04 20 00.6	+1.0
	baz=231,SNR=44						
K02D				S	S	04 29 26.0	+3.9
	baz=231						
BC3	Big Chuckawall	81.06	49	P	P	04 20 00.8	+1.0
	baz=238,SNR=104						
BC3				S	S	04 29 26.1	+3.5
	baz=238						
HEC	Hector,Ludlow	81.08	48	P	P	04 20 00.2	+0.4
	baz=237,SNR=137						
HEC				S	S	04 29 26.8	+4.2
	baz=237						
GLA	Glamis	81.18	50	IAmb	IAmb	04 20 04.9	
	comp=Z,457nm,0.9s						
GLA	Glamis	81.18	50	P	P	04 20 01.6	+1.2
	baz=238,SNR=93						
GLA				S	S	04 29 28.3	+4.6
	baz=238						
J01E	Myrtle Point	81.20	37	IAmb	IAmb	04 20 04.3	
	comp=Z,271nm,0.9s						
J01E	Myrtle Point	81.20	37	P	P	04 20 01.2	+1.1
	baz=230,SNR=27						
J01E				S	S	04 29 25.8	+2.5
	baz=230						
PMSA	Palmer Station	81.21	157	P	P	04 20 01.0	+1.1
	comp=Z,114nm,0.8s,baz=223,slow=4.9,SNR=14						
	comp=Z,114nm,0.8s						
PMSA	Palmer Station	81.21	157	P	P	04 20 01.4	+1.5
PMSA	Palmer Station	81.21	157	*e*P	P	04 20 01.5	+1.7
BEKR	Beckworth	81.30	42	IAmb	IAmb	04 20 04.8	
	comp=Z,331nm,1.1s						
PPI	Padang Panjang	81.32	273	P	P	04 20 00.2	-1.2
	comp=Z,4µmcomp=Z,128nm,1.3s						
KDAK	Kodiak Island	81.34	14	P	P	04 20 00.0	-0.4
KDAK				IAmb	IAmb	04 20 04.7	
	comp=Z,466nm,1.5s						
KDAK	Kodiak Island	81.34	14	P	P	04 20 00.0	-0.4
KDAK				pmax	pmax		
	comp=Z,466nm,1.5s						
KDAK	Kodiak Island	81.34	14	P	P	04 20 00.2	-0.3
	baz=204						
KDAK				S	S	04 29 24.0	0.0
	baz=204						
VCNR	Virginia City	81.40	42	IAmb	IAmb	04 20 05.5	
	comp=Z,244nm,1.0s						
HUMO	Hull Mountain	81.41	38	IAmb	IAmb	04 20 05.8	
	comp=Z,340nm,1.1s						
YERR	Yerington	81.48	43	IAmb	IAmb	04 20 05.7	
	comp=Z,304nm,0.9s						
GMRC	Granite Mounta	81.52	48	P	P	04 20 02.8	+0.7
	baz=237,SNR=113						
GMRC				S	S	04 29 29.4	+2.2
	baz=237						
GRNR	Gornyy	81.53	333	⇓*i*P	P	04 20 02.5	+0.8
GRNR				pmax	pmax		
	comp=E,30nm,1.1s						
GRNR				pmax	pmax		
	comp=N,30nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,130nm,1.1s						
IRM	Iron Mountain	81.54	49	P	P	04 20 03.2	+1.0
	baz=238,SNR=199						
IRM				S	S	04 29 29.2	+1.9
	baz=238						
DL2	Dalian	81.55	317	P	P	04 20 02.3	+0.3
DL2				S	S	04 29 25.0	-1.9
DL2				pmax	pmax		
	comp=Z,280nm,1.1s						
DL2				pmax	pmax		
	comp=Z,4µm,5.6s						
L04D	Klamath Falls	81.55	39	P	P	04 20 02.9	+0.8
L04D	Klamath Falls	81.55	39	P	P	04 20 03.1	+1.0
	baz=232,SNR=125						
L04D				S	S	04 29 26.3	-0.9
	baz=232						
DBO	Dodson Butte	81.56	38	IAmb	IAmb	04 20 06.4	
	comp=Z,215nm,1.1s						
GRAC	Grapevine Rang	81.57	45	IAmb	IAmb	04 20 06.3	
	comp=Z,711nm,1.4s						
GRAC	Grapevine Rang	81.57	45	P	P	04 20 03.2	+1.0
	baz=236,SNR=58						
GRAC				S	S	04 29 28.5	+1.0
	baz=236						
FURC	Furnace Creek,	81.61	46	P	P	04 20 02.9	+0.5
	baz=236,SNR=120						
FURC				S	S	04 29 28.7	+1.0
	baz=236						
TUQ	Turquoise Moun	81.69	47	P	P	04 20 03.8	+0.8
	baz=237,SNR=153						
TUQ				S	S	04 29 30.9	+2.0
	baz=237						
SHOC	Shoshone, Teco	81.70	47	P	P	04 20 03.4	+0.5
	baz=237,SNR=68						
SHOC				S	S	04 29 30.7	+1.9
	baz=237						
NVAR	Mina Array Bea	81.76	44	P	P	04 20 03.8	+0.4
	comp=Z,132nm,0.7s,baz=223,slow=8.4,SNR=466						
NVAR				PKKPbc	PKKPbc	04 38 31.3	+0.1
	comp=Z,4.2nm,0.7s,baz=82,slow=3.5,SNR=19						
NVAR				PKPPKP		04 46 30.9	
	comp=Z,1.6nm,0.7s,baz=98,slow=3.1,SNR=6.4						
	comp=Z,132nm,0.7s						
BLYC	Blythe	81.77	49	IAmb	IAmb	04 20 07.5	
	comp=Z,252nm,0.9s						
113A	Mohawk Valley,	81.80	50	IAmb	IAmb	04 20 07.7	
	comp=Z,316nm,1.0s						
PAHR	Pah Rah Range	81.81	42	IAmb	IAmb	04 20 07.3	
	comp=Z,264nm,1.0s						
I02E	Swisshome, OR	81.84	37	IAmb	IAmb	04 20 07.8	
	comp=Z,246nm,1.1s						
I02E	Swisshome, OR	81.84	37	P	P	04 20 04.5	+1.1
	baz=230						
I02E				S	S	04 29 30.6	+0.9
	baz=230						
NV11	Mina Array Sit	81.86	44	IAmb	IAmb	04 20 07.6	
	comp=Z,277nm,1.1s						
I03D	Drain, OR	81.86	37	P	P	04 20 04.2	+0.7
	baz=231,SNR=54						
I03D				S	S	04 29 29.8	-0.1
	baz=231						
HSIG		82.02	55	P	P	04 20 04.7	0.0
HSIG				IAmb	IAmb	04 20 08.5	
	comp=Z,251nm,1.0s						
214A	Organ Pipe Nat	82.08	52	IAmb	IAmb	04 20 09.4	
	comp=Z,368nm,1.2s						
214A	Organ Pipe Nat	82.08	52	P	P	04 20 06.2	+1.3
	baz=239,SNR=115						
214A				S	S	04 29 33.4	+0.7
	baz=239						
K04D	Chiloquin, OR	82.12	39	P	P	04 20 06.0	+1.0
	baz=232,SNR=23						
K04D				S	S	04 29 30.4	-2.4
	baz=232						
WHN	Wuhan	82.13	307	⇓P	P	04 20 05.5	+0.4
WHN				S	S	04 29 31.3	-1.8
WHN				pmax	pmax		
	comp=Z,5µm,2.3s						
WHN				pmax	pmax		
	comp=Z,9µm,9.5s						
Q20K	Shuyak Island	82.14	14	P	P	04 20 04.2	-0.3
	baz=205,SNR=34						
Q20K				S	S	04 29 32.1	+0.1
	baz=205						
Q19K	Cape Douglas,	82.16	13	P	P	04 20 04.0	-0.7
	baz=204,SNR=73						

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Q19K                                 S       S        04 29 31.9  -0.4
       baz=204
CN2    Changchun         82.19 323  eP       P        04 20 05.0  -0.1
CN2                                 eS       S        04 29 31.0  -2.2
CN2                                  pmax    pmax
       comp=Z,200nm,1.8s
SISI   Saibi             82.23 272   P       P        04 20 06.8  +0.7
       comp=Z,8µmcomp=Z,407nm,2.1s
NEE2   Needles Airpor    82.23  48   P       P        04 20 06.4  +0.8
       baz=238,SNR=15
NEE2                                 S       S        04 29 35.5  +1.5
       baz=238
KVN    Kaiserville       82.25  43   IAmb    IAmb     04 20 09.4
       comp=Z,232nm,0.9s
P18K   Big Mountain,     82.28  12   IAmb    IAmb     04 20 08.0
       comp=Z,611nm,1.5s
P18K   Big Mountain,     82.28  12   P       P        04 20 04.3  -0.9
       baz=202
P18K                                 S       S        04 29 32.8  -0.6
       baz=202
J04D   Umpqua Nationa    82.29  38   P       P        04 20 07.1  +1.2
       baz=232,SNR=132
J04D                                 S       S        04 29 31.9  -2.7
       baz=232
TPNV   Topopah Spring    82.29  46   IAmb    IAmb     04 20 09.9
       comp=Z,241nm,0.8s
TPNV   Topopah Spring    82.29  46   P       P        04 20 06.7  +0.7
       baz=237,SNR=324
TPNV                                 S       S        04 29 35.2  +0.4
       baz=237
PDMCI  Parker Dam,Lak    82.33  49   P       P        04 20 07.0  +1.0
       baz=238,SNR=80
PDMCI                                S       S        04 29 35.3  +0.4
       baz=238
BNX    BinXian           82.35 325 ⇓P       P        04 20 05.5  -0.4
BNX                                  PcP     PcP      04 20 08.5  -0.9
BNX                                  PP      PP       04 23 23.8  -2.1
BNX                                  S       S        04 29 31.0  -3.6
BNX                                  ScS     ScS      04 29 41.5  -4.2
BNX                                  pmax    pmax
       comp=Z,490nm,0.8s
BNX                                  pmax    pmax
       comp=Z,6µm,7.1s
BUCK   Buck Mountain     82.38  37   IAmb    IAmb     04 20 11.1
       comp=Z,530nm,1.1s
COR    Corvallis         82.45  36   P       P        04 20 07.2  +0.8
COR                                  IAmb    IAmb     04 20 10.7
       comp=Z,205nm,0.9s
COR    Corvallis         82.45  36   P       P        04 20 07.2  +0.8
COR                                  pmax    pmax
       comp=Z,205nm,0.9s
I04A   Tendick Farm,     82.46  37   P       P        04 20 06.3  -0.3
       baz=232,SNR=84
I04A                                 S       S        04 29 37.5  +1.5
       baz=232
IPM    Ipoh              82.51 278   P       P        04 20 08.0  +0.5
KLR    Kul'dur           82.51 330   P       P        04 20 07.0  +0.4
       comp=Z,87nm,0.7s,baz=101,slow=3.2,SNR=102
KLR                                  PP      PP       04 23 26.6  -0.6
       comp=Z,14nm,0.9s,baz=134,slow=9.0,SNR=5.0
KLR                                  PKKPbc  PKKPbc   04 38 27.1  -2.7
       comp=Z,2.0nm,0.6s,baz=109,slow=1.8,SNR=4.0
       comp=Z,87nm,0.7s
MNSI   Mandailing Nat    82.53 274   P       P        04 20 06.7  -0.9
       comp=Z,619nm,1.1s
MOD    Modoc Plateau     82.54  40   IAmb    IAmb     04 20 11.0
       comp=Z,269nm,0.9s
HEBO   Mount Hebo        82.60  36   IAmb    IAmb     04 20 11.5
       comp=Z,304nm,0.8s
H04D   Lebanon           82.73  37   IAmb    IAmb     04 20 12.1
       comp=Z,338nm,0.9s
H04D   Lebanon           82.73  37   P       P        04 20 08.0  +0.2
       baz=231,SNR=60
H04D                                 S       S        04 29 41.7  +3.2
       baz=231
GULI   GuiLin            82.75 300 ⇓P       P        04 20 07.8  -0.6
GULI                                 S       SKSac    04 29 32.5  -3.0
GULI                                 pmax    pmax
       comp=Z,370nm,1.6s
SHPR   Sheep Range       82.78  47   P       P        04 20 08.8  +0.3
J05D   Fort Rock, OR     82.82  38   P       P        04 20 09.8  +1.3
       baz=232,SNR=341
J05D                                 S       S        04 29 43.4  +3.5
       baz=232
G03D   McMinnville, O    82.87  36   IAmb    IAmb     04 20 12.6
       comp=Z,256nm,1.0s
G03D   McMinnville, O    82.87  36   P       P        04 20 09.5  +1.0
       baz=231,SNR=23
G03D                                 S       S        04 29 42.7  +2.9
       baz=231
Y14A   Wickenburg        82.94  50   IAmb    IAmb     04 20 13.2
       comp=Z,225nm,1.1s
S11A   Rachel            83.00  45   IAmb    IAmb     04 20 13.2
       comp=Z,245nm,0.9s
TIA    Tai'an            83.03 313 ⇓P       P        04 20 10.0  +0.4
TIA                                  S       S        04 29 37.8  -4.1
TIA                                  pmax    pmax
       comp=Z,200nm,1.9s
TIA                                  pmax    pmax
       comp=Z,6µm,6.3s
H04A   Detroit Lake      83.13  37   IAmb    IAmb     04 20 13.4
       comp=Z,257nm,1.0s
KULM   Kulim             83.16 278   P       P        04 20 10.9  +0.2
KULM   Kulim             83.16 278   P       P        04 20 12.0  +1.3
O19K   Port Alsworth     83.19  12   P       P        04 20 09.0  -0.8
       baz=203
O19K                                 S       S        04 29 41.8  -0.5
       baz=203
CNPM   China Poot        83.22  14   IAmb    IAmb     04 20 13.3
       comp=Z,676nm,1.5s
HOM    Homer             83.25  13   P       P        04 20 09.6  -0.5
       baz=205,SNR=9.5
HOM                                  S       S        04 29 42.7  -0.3
       baz=205
PRN    Pahroc Range      83.34  46   IAmb    IAmb     04 20 15.5
       comp=Z,305nm,0.9s
N18K   Kilae Creek       83.35  11   P       P        04 20 09.4  -1.2
       baz=201,SNR=49
N18K                                 S       S        04 29 43.2  -0.8
       baz=201
I05D   Terrebonne, OR    83.40  37   P       P        04 20 11.5  +0.2
       baz=232,SNR=92
I05D                                 S       S        04 29 48.4  +3.2
       baz=232
MG05   Puerto Natales    83.42 143   IAmb    IAmb     04 20 15.9
       comp=Z,279nm,1.2s
MG04   Isla Riesco       83.42 144   P       P        04 20 13.0  +1.7
MG04                                 IAmb    IAmb     04 20 16.7
       comp=Z,369nm,1.4s
O20K   Slope Mountain    83.43  13   P       P        04 20 09.9  -1.2
       baz=204,SNR=64
O20K                                 S       S        04 29 43.3  -1.6
       baz=204
R11A   Troy Canyon, C    83.49  45   P       P        04 20 11.0  -1.0
       baz=237,SNR=94
R11A                                 S       S        04 29 49.7  +3.0
       baz=237
BRLK   Bradley Lake      83.52  14   IAmb    IAmb     04 20 15.1
       comp=Z,190nm,0.7s
BRSE   Bradley Lake S    83.53  14   P       P        04 20 10.9  -0.6
       baz=206,SNR=140
BRSE                                 S       S        04 29 44.7  -1.1
       baz=206
E03A   Lebam             83.55  35   IAmb    IAmb     04 20 16.4
       comp=Z,452nm,1.1s
F04D   Rainier, OR       83.55  35   P       P        04 20 12.1  +0.2
       baz=231,SNR=12
F04D                                 S       S        04 29 50.5  +4.0
       baz=231
GO10   Punta Arenas      83.58 145   IAmb    IAmb     04 20 17.6
       comp=Z,308nm,1.2s
BMN    Battle Mountai    83.59  42   IAmb    IAmb     04 20 16.1
       comp=Z,241nm,0.9s
N19K   Bonanza Creek     83.73  12   P       P        04 20 11.3  -1.3
       baz=203
N19K                                 S       S        04 29 46.7  -1.2
       baz=203
TUC    Tucson            83.74  52   P       P        04 20 13.9  +0.6
TUC                                  IAmb    IAmb     04 20 17.9
       comp=Z,296nm,1.0s
TUC    Tucson            83.74  52   P       P        04 20 13.9  +0.6
TUC                                  pmax    pmax
       comp=Z,296nm,1.0s
TUC    Tucson            83.74  52   P       P        04 20 14.7  +1.4
       baz=241
TUC                                  S       S        04 29 55.2  +6.0
       baz=241
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F04A   Amboy             83.78  36   IAmb    IAmb     04 20 16.7
       comp=Z,185nm,0.9s
WISH   Wishkah           83.80  34   IAmb    IAmb     04 20 17.6
       comp=Z,217nm,0.9s
HOOD   Mount Hood Mea    83.83  37   IAmb    IAmb     04 20 22.3
       comp=Z,126nm,0.8s
WVOR   Wild Horse Val    83.85  40   IAmb    IAmb     04 20 17.7
       comp=Z,227nm,1.1s
H02S1  DAWSON INLET T    83.92  26   P       P        04 20 13.7  +0.2
       SNR=19
C03A   Quillayute Air    83.92  33   IAmb    IAmb     04 20 18.4
       comp=Z,319nm,0.9s
NLWA   Neilton Lookou    83.93  34   IAmb    IAmb     04 20 18.4
       comp=Z,216nm,0.9s
G05D   Wamic, OR         83.96  37   P       P        04 20 14.3  +0.3
       baz=232,SNR=19
G05D                                 S       S        04 29 53.4  +2.8
       baz=232
MA2    Magadan           83.97 345   P       P        04 20 14.1  +0.4
MA2                                  IAmb    IAmb     04 20 15.8
       comp=Z,178nm,0.8s
MA2    Magadan           83.97 345   P       P        04 20 14.1  +0.4
MA2                                  pmax    pmax
       comp=Z,178nm,0.8s
E04D   Cinebar           84.09  35   IAmb    IAmb     04 20 18.8
       comp=Z,195nm,1.0s
E04D   Cinebar           84.09  35   P       P        04 20 14.7  +0.2
       baz=231,SNR=37
E04D                                 S       S        04 29 54.7  +3.0
       baz=231
SEW    Seward            84.15  14   IAmb    IAmb     04 20 17.3
       comp=Z,250nm,1.2s
SEW    Seward            84.15  14   P       P        04 20 13.4  -1.1
       baz=207,SNR=44
SEW                                  S       S        04 29 50.8  -0.8
       baz=207
USHA   Ushuaia           84.18 147   P       P        04 20 17.4  +2.4
       comp=Z,63nm,1.0s,baz=261,slow=6.4,SNR=20
USHA                                 PKKPbc  PKKPbc   04 38 24.3  -1.3
       comp=Z,12nm,0.9s,baz=106,slow=0.7,SNR=5.3
       comp=Z,63nm,1.0s
F05D   White Salmon      84.28  36   P       P        04 20 13.7  -1.9
       baz=232,SNR=12
I07A   Izee              84.30  38   IAmb    IAmb     04 20 19.9
       comp=Z,205nm,0.9s
Q23K   Middleton Isla    84.31  16   IAmb    IAmb     04 20 18.6
       comp=Z,451nm,1.4s
Q23K   Middleton Isla    84.31  16   P       P        04 20 14.5  -0.7
       baz=210,SNR=5.3
Q23K                                 S       S        04 29 53.8  +0.6
       baz=210
MID    Middleton Isla    84.31  16   IAmb    IAmb     04 20 18.6
       comp=Z,428nm,1.4s
LCMT   Little Creek M    84.36  47   P       P        04 20 15.7  -0.6
CAPN   Captain Cook N    84.36  13   IAmb    IAmb     04 20 20.4
       comp=Z,251nm,1.0s
CAPN   Captain Cook N    84.36  13   P       P        04 20 15.7  +0.2
       baz=206,SNR=5.9
CAPN                                 S       S        04 29 56.3  +2.6
       baz=206
D04E   Lakebay           84.37  35   P       P        04 20 15.8  -0.1
       baz=231
D04E                                 S       S        04 29 58.6  +4.2
       baz=231
O22K   Cooper Landing    84.42  14   IAmb    IAmb     04 20 24.0
       comp=Z,214nm,0.8s
O22K   Cooper Landing    84.42  14   P       P        04 20 14.9  -0.9
       baz=207
O22K                                 S       S        04 29 53.4  -0.8
       baz=207
D03D   Eldon             84.43  34   P       P        04 20 16.9  +0.7
       baz=231,SNR=35
D03D                                 S       S        04 29 57.9  +3.0
       baz=231
TSI    Tuntungan         84.44 276   P       P        04 20 18.4  +1.4
       comp=Z,10µmcomp=Z,680nm,1.2s
J08A   Circle Bar Ran    84.49  40   IAmb    IAmb     04 20 20.7
       comp=Z,349nm,1.4s
ESPZ   Base Esperanza    84.55 157   P       P        04 20 15.2  -1.4
ESPZ                                 IAmb    IAmb     04 20 15.7
       comp=Z,309nm,1.2s
GAMB   Gambell           84.55   3   P       P        04 20 16.3   0.0
       baz=186,SNR=8.6
GAMB                                 S       S        04 29 57.6  +2.2
       baz=186
GSI    Gunungsitoli      84.58 273   P       P        04 20 18.9  +1.2
       comp=Z,21µmcomp=Z,1µm,1.5s
U15A   North Rim         84.72  48   IAmb    IAmb     04 20 22.4
       comp=Z,318nm,0.8s
MG02   Cerro Sombrero    84.73 145   P       P        04 20 19.1  +1.4
M19K   Big River Lodg    84.76  11   P       P        04 20 16.5  -0.9
       baz=203
M19K                                 S       S        04 29 56.0  -1.6
       baz=203
D05A   Enumclaw          84.79  35   IAmb    IAmb     04 20 22.9
       comp=Z,457nm,1.2s
WUAZ   Wupatki           84.90  49   P       P        04 20 19.0   0.0
       baz=240,SNR=99
WUAZ                                 S       S        04 30 06.9  +6.4
       baz=240
L19K   White Mountain    84.94  11   IAmb    IAmb     04 20 23.5
       comp=Z,166nm,0.9s
L19K   White Mountain    84.94  11   P       P        04 20 17.9  -0.4
       baz=202,SNR=210
L19K                                 S       S        04 29 59.1  -0.2
       baz=202
PGC    Sidney            84.95  33   IAmb    IAmb     04 20 22.4
       comp=Z,152nm,0.8s
RC01   Rabbit Creek A    84.96  14   IAmb    IAmb     04 20 22.2
       comp=Z,530nm,1.4s
RC01   Rabbit Creek A    84.96  14   P       P        04 20 17.5  -1.0
       baz=207,SNR=120
RC01                                 S       S        04 29 57.6  -1.9
       baz=207
M20K   Styx River        84.98  12   P       P        04 20 17.0  -1.6
       baz=204
M20K                                 S       S        04 29 57.7  -2.1
       baz=204
ELK    Elko              85.02  43   P       P        04 20 19.8  +0.3
ELK    Elko              85.02  43   P       P        04 20 19.8  +0.3
ELK                                  pmax    pmax
       comp=Z,68nm,0.8s
HIN    Hinchinbrook I    85.11  15   IAmb    IAmb     04 20 22.3
       comp=Z,367nm,1.4s
KCSI   Kotacane, Aceh    85.19 276   P       P        04 20 20.4  -0.3
       comp=Z,5µmcomp=Z,223nm,1.1s
HPIG                     85.20  59   IAmb    IAmb     04 20 24.4
       comp=Z,171nm,1.1s
PKCU   Pink Cliffs       85.22  47   IAmb    IAmb     04 20 25.4
       comp=Z,242nm,0.9s
HNS    HongShan          85.31 313 ⇓P       P        04 20 21.3  +0.6
HNS                                  sP      sP       04 23 18.0  -3.3
HNS                                  SKS     SKSac    04 29 50.5  -0.5
HNS                                  S       S        04 30 05.3  +1.5
HNS                                  sS      sS       04 33 41.3  -3.4
HNS                                  pmax    pmax
       comp=Z,300nm,1.5s
G08A   Pilot Rock        85.33  38   IAmb    IAmb     04 20 24.6
       comp=Z,222nm,0.9s
CRAG   Craig             85.33  24   P       P        04 20 19.8  -0.5
       baz=222,SNR=10
CRAG                                 S       S        04 30 05.9  +2.6
       baz=222
GLI    Glacier Island    85.39  15   P       P        04 20 19.7  -0.8
       baz=209,SNR=119
GLI                                  S       S        04 30 02.1  -1.5
       baz=209
L20K   Farewell, AK      85.39  11   P       P        04 20 19.5  -1.1
       baz=203,SNR=137
L20K                                 S       S        04 30 02.8  -0.8
       baz=203
FID    Port Fidalgo      85.42  15   IAmb    IAmb     04 20 24.2
       comp=Z,292nm,1.2s
EYAK   Cordova Ski Ar    85.43  16   IAmb    IAmb     04 20 23.9
       comp=Z,195nm,1.1s
EYAK   Cordova Ski Ar    85.43  16   P       P        04 20 20.0  -0.7
       baz=211,SNR=40
EYAK                                 S       S        04 30 03.3  -0.7
       baz=211
TTA    Tatalina          85.44  10   P       P        04 20 20.1  -0.7
TTA                                  IAmb    IAmb     04 20 25.8
       comp=Z,227nm,1.4s
TTA    Tatalina          85.44  10   P       P        04 20 20.1  -0.7
TTA                                  pmax    pmax
       comp=Z,227nm,1.4s
TTA    Tatalina          85.44  10   P       P        04 20 20.2  -0.6
       baz=201,SNR=191
TTA                                  S       S        04 30 05.5  +1.4
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       baz=201
LYN    LuoYang           85.47 309⇓iP       P        04 20 22.3  +0.7
LYN                                  pP      pP       04 22 22.3  -2.3
LYN                                  sP      sP       04 23 16.3  -5.8
LYN                                  PP      PP       04 23 49.0  -2.2
LYN                                  SKS     SKSac    04 29 51.0  -1.2
LYN                                  S       ScS      04 30 14.5  +2.4
LYN                                  pmax    pmax
       comp=Z,440nm,1.0s
LYN                                  pmax    pmax
       comp=Z,5µm,4.5s
M22K   Willow            85.47  13   P       P        04 20 19.8  -1.0
       baz=207,SNR=34
M22K                                 S       S        04 30 04.4  +0.1
       baz=207
KNK    Knik Glacier      85.54  14   IAmb    IAmb     04 20 25.0
       comp=Z,166nm,0.9s
KNK    Knik Glacier      85.54  14   P       P        04 20 20.7  -0.6
       baz=208,SNR=90
KNK                                  S       S        04 30 03.5  -1.6
       baz=208
PMR    Palmer            85.54  14   IAmb    IAmb     04 20 24.9
       comp=Z,461nm,1.4s
PMR    Palmer            85.54  14   P       P        04 20 20.3  -0.9
       baz=208,SNR=117
PMR                                  S       S        04 30 03.8  -1.2
       baz=208
E07A   Sunnyside         85.57  36   IAmb    IAmb     04 20 25.8
       comp=Z,233nm,0.9s
HMT    Hamilton          85.63  16   IAmb    IAmb     04 20 25.1
       comp=Z,182nm,1.1s
HAWA   Hanford           85.65  37   IAmb    IAmb     04 20 26.1
       comp=Z,262nm,0.9s
BJT    Baijiatuau        85.68 316   P       P        04 20 22.8  +0.4
BJT    Baijiatuau        85.68 316   P       P        04 20 22.8  +0.4
BJT                                  pmax    pmax
       comp=Z,32nm,1.1s
BJI    Beijing           85.69 316   P       P        04 20 22.8  +0.4
BJI                                  SKS     SKSac    04 29 51.5  -1.7
BJI                                  S       ScS      04 30 11.0  -2.6
BJI                                  pmax    pmax
       comp=Z,3µm,4.2s
ENH    Enshi             85.69 305   P       P        04 20 23.3  +0.5
BGLC   Bering Glacier    85.71  17   P       P        04 20 22.6  +0.6
       baz=213
BGLC                                 S       S        04 30 08.4  +1.7
       baz=213
SIT    Sitka             85.73  22   P       P        04 20 23.5  +1.3
       baz=220,SNR=8.1
SIT                                  S       S        04 30 06.8  -0.1
       baz=220
ANM    Nome              85.79   6   P       P        04 20 22.1  -0.2
       baz=192,SNR=8.3
ANM                                  S       S        04 30 08.8  +1.5
       baz=192
W18A   Petrified Fore    85.87  50   IAmb    IAmb     04 20 27.6
       comp=Z,208nm,1.3s
W18A   Petrified Fore    85.87  50   P       P        04 20 24.2  +0.5
       baz=241,SNR=38
W18A                                 S       S        04 30 15.6  +5.8
       baz=241
MOIG   Morelia           85.89  67   P       P        04 20 23.8  -0.4
SML    Sawmill           85.91  14   IAmb    IAmb     04 20 27.7
       comp=Z,222nm,1.5s
SML    Sawmill           85.91  14   P       P        04 20 22.1  -1.0
       baz=208,SNR=81
SML                                  S       S        04 30 07.1  -1.6
       baz=208
DIV    Divide            85.93  15   IAmb    IAmb     04 20 26.3
       comp=Z,209nm,1.0s
ZAIG   Zacatecas         85.97  64   P       P        04 20 24.6  +0.1
ZAIG                                 IAmb    IAmb     04 20 29.0
       comp=Z,205nm,1.1s
E08A   Dider Farm, El    85.97  37   IAmb    IAmb     04 20 27.5
       comp=Z,179nm,0.9s
CUT    Chulitna          86.03  13   P       P        04 20 22.4  -1.1
       baz=206,SNR=46
CUT                                  S       S        04 30 07.4  -2.2
       baz=206
BMO    Blue Mountains    86.03  39   IAmb    IAmb     04 20 27.6
       comp=Z,156nm,0.8s
M23K   Glacier View      86.04  14   P       P        04 20 22.7  -0.9
       baz=209,SNR=55
M23K                                 S       S        04 30 08.0  -1.8
       baz=209
121A   Cookes Peak, D    86.08  53   IAmb    IAmb     04 20 29.3
       comp=Z,207nm,1.1s
121A   Cookes Peak, D    86.08  53   P       P        04 20 25.7  +1.0
       baz=242
121A   Cookes Peak, D    86.08  53   P       P        04 20 23.9  -0.9
       baz=242,SNR=104
121A                                 S       S        04 30 19.0  +7.2
       baz=242
BMRM   Bremner River     86.08  16   IAmb    IAmb     04 20 27.2
       comp=Z,240nm,1.0s
BMRM   Bremner River     86.08  16   P       P        04 20 23.2  -0.7
       baz=212,SNR=146
BMRM                                 S       S        04 30 09.5  -0.8
       baz=212
PPLA   Purkeypile        86.09  12   P       P        04 20 21.7  -2.3
       baz=205,SNR=35
PPLA                                 S       S        04 30 06.4  -4.1
       baz=205
MFID   Camas Ranch       86.11  41   IAmb    IAmb     04 20 28.3
       comp=Z,166nm,0.9s
MESA   MESA              86.13  17   P       P        04 20 24.2  -0.1
MESA   MESA              86.13  17   P       P        04 20 24.1  -0.1
       baz=214,SNR=75
MESA                                 S       S        04 30 11.9  +0.8
       baz=214
K20K   Telida            86.16  11   IAmb    IAmb     04 20 27.4
       comp=Z,421nm,1.4s
K20K   Telida            86.16  11   P       P        04 20 23.5  -0.7
       baz=203,SNR=165
K20K                                 S       S        04 30 09.6  -1.3
       baz=203
SCM    Sheep Creek Mo    86.17  14   IAmb    IAmb     04 20 28.1
       comp=Z,212nm,0.8s
SCM    Sheep Creek Mo    86.17  14   P       P        04 20 23.5  -0.8
       baz=209,SNR=230
SCM                                  S       S        04 30 09.2  -1.9
       baz=209
KLU    Klutina           86.20  15   P       P        04 20 23.8  -0.7
       baz=210,SNR=94
KLU                                  S       S        04 30 10.7  -0.8
       baz=210
GYA    Guiyang           86.25 300⇓iP       P        04 20 26.3  +0.7
GYA                                  pP      pP       04 22 29.8  +1.0
GYA                                  PP      PP       04 23 57.0  -0.7
GYA                                  SKS     SKSac    04 29 57.0  -0.6
GYA                                  S       S        04 30 12.5  -1.1
GYA                                  pmax    pmax
       comp=Z,200nm,1.4s
GYA                                  pmax    pmax
       comp=Z,3µm,6.8s
DUG    Dugway, Tooele    86.30  44   P       P        04 20 24.6  -1.0
       baz=239,SNR=39
DUG                                  S       S        04 30 17.3  +3.9
       baz=239
WRAK   Wrangell Islan    86.33  24   IAmb    IAmb     04 20 29.3
       comp=Z,170nm,0.9s
WRAK   Wrangell Islan    86.33  24   P       P        04 20 25.3  +0.2
       baz=223,SNR=45
WRAK                                 S       S        04 30 15.0  +2.3
       baz=223
GO07   Milladeo Hill,    86.36 135   P       P        04 20 28.0  +2.2
GO07                                 IAmb    IAmb     04 20 30.5
       comp=Z,267nm,1.4s
TGL    Tana Glacier      86.37  17   IAmb    IAmb     04 20 28.8
       comp=Z,395nm,1.4s
ISLE   Juniper Island    86.37  17   IAmb    IAmb     04 20 28.8
       comp=Z,358nm,1.3s
D08A   Wollman Farm,     86.39  36   IAmb    IAmb     04 20 29.5
       comp=Z,234nm,0.8s
PNL    Peninsula         86.45  19   P       P        04 20 25.4  -0.3
       baz=216,SNR=42
PNL                                  S       S        04 30 14.0  +0.2
       baz=216
AY01   Puyuhuapi         86.47 136   IAmb    IAmb     04 20 30.8
       comp=Z,153nm,1.2s
H03N2  Juan Fernandez    86.48 124   P       P        04 20 27.4  +1.3
       baz=174,slow=17,SNR=12
H03N3  Juan Fernandez    86.48 124   P       P        04 20 27.0  +0.8
       baz=174,slow=17,SNR=8.1
H03N1  Juan Fernandez    86.50 124   P       P        04 20 27.4  +1.2
       baz=174,slow=17,SNR=11
E09A   Wood Farm, Sta    86.50  37   IAmb    IAmb     04 20 30.3
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	comp=Z,220nm,1.0s						
BGU	**Big Grassy Mou**	**86.53**	**44**	P	**P**	**04 20 26.8**	**+0.2**
PCA	**Pinnacle**	**86.55**	**18**	IAmb	IAmb	04 20 29.6	
	comp=Z,238nm,1.2s						
PINM	**Pinnacle**	**86.55**	**18**	P	**P**	**04 20 25.6**	**-0.5**
	baz=216,SNR=31						
PINM				S	**S**	**04 30 14.8**	**0.0**
	baz=216						
TNA	**Tin City**	**86.56**	**4**	P	**P**	**04 20 25.5**	**-0.4**
	baz=190						
TNA				S	**S**	**04 30 15.6**	**+1.1**
	baz=190						
CAST	**Castle Rocks**	**86.58**	**12**	IAmb	IAmb	04 20 28.6	
	comp=Z,185nm,0.9s						
CAST	**Castle Rocks**	**86.58**	**12**	P	**P**	**04 20 24.1**	**-2.1**
	baz=205,SNR=93						
CAST				S	**S**	**04 30 10.6**	**-4.3**
	baz=205						
SEY	**Seymchan**	**86.59**	**347**	P	**P**	**04 20 25.6**	**-0.6**
	comp=Z,160nm,0.5s,baz=148,slow=5.3,SNR=122						
	comp=Z,160nm,0.5s						
VRDI	**Verde Repeater**	**86.60**	**16**	IAmb	IAmb	04 20 29.9	
	comp=Z,214nm,1.1s						
N25K	**Chitina, Valde**	**86.63**	**16**	IAmb	IAmb	04 20 30.7	
	comp=Z,461nm,1.4s						
N25K	**Chitina, Valde**	**86.63**	**16**	P	**P**	**04 20 26.0**	**-0.5**
	baz=212,SNR=153						
N25K				S	**S**	**04 30 15.2**	**-0.3**
	baz=212						
GRNC	**Granite Creek**	**86.64**	**17**	IAmb	IAmb	04 20 30.3	
	comp=Z,302nm,1.2s						
M24K	**Tolsona, Glenn**	**86.67**	**15**	P	**P**	**04 20 26.5**	**-0.1**
	baz=210,SNR=90						
M24K				S	**S**	**04 30 16.3**	**+0.5**
	baz=210						
GLB	**Gilahina Butte**	**86.69**	**16**	IAmb	IAmb	04 20 30.9	
	comp=Z,373nm,1.4s						
KIDD	**KIDD Seismic O**	**86.70**	**54**	P	**P**	**04 20 28.5**	**+0.9**
	baz=243,SNR=35						
WAT6	**Susitna Watana**	**86.73**	**14**	P	**P**	**04 20 26.2**	**-0.9**
	baz=209,SNR=350						
WAT6				S	**S**	**04 30 14.4**	**-2.2**
	baz=209						
WAT1	**Susitna Watana**	**86.77**	**13**	P	**P**	**04 20 26.0**	**-1.1**
	baz=208						
WAT1				S	**S**	**04 30 14.3**	**-2.4**
	baz=208						
MCARA	**McCarthy VSAT**	**86.84**	**16**	P	**P**	**04 20 27.8**	**+0.3**
MCARA				IAmb	IAmb	04 20 31.7	
	comp=Z,259nm,1.1s						
MCARA	**McCarthy VSAT**	**86.84**	**16**	P	**P**	**04 20 26.9**	**-0.5**
	baz=213,SNR=62						
MCARA				S	**S**	**04 30 16.8**	**-0.6**
	baz=213						
TMUT	**Trail Mountain**	**86.90**	**46**	IAmb	IAmb	04 20 32.9	
	comp=Z,204nm,1.1s						
J20K	**Nowinta River**	**86.91**	**11**	P	**P**	**04 20 27.0**	**-0.6**
	baz=203,SNR=170						
J20K				S	**S**	**04 30 17.2**	**-0.7**
	baz=203						
B08A	**Colville Reser**	**86.93**	**35**	IAmb	IAmb	04 20 31.2	
	comp=Z,189nm,0.8s						
KTH	**Kantishna Hill**	**86.93**	**12**	IAmb	IAmb	04 20 29.8	
	comp=Z,184nm,1.1s						
LOGN	**Logan Glacier**	**86.93**	**17**	P	**P**	**04 20 27.6**	**-0.4**
LOGN				IAmb	IAmb	04 20 32.2	
	comp=Z,338nm,1.3s						
PLID	**Pearl Lake**	**86.93**	**39**	IAmb	IAmb	04 20 32.0	
	comp=Z,231nm,1.1s						
CTG	**Chitna Glacier**	**86.95**	**17**	P	**P**	**04 20 27.8**	**-0.3**
	baz=215,SNR=97						
CTG				S	**S**	**04 30 18.9**	**+0.2**
	baz=215						
CTGM	**Chitina Glacie**	**86.95**	**17**	IAmb	IAmb	04 20 31.7	
	comp=Z,332nm,1.3s						
TRF	**Thorofare Moun**	**86.96**	**12**	P	**P**	**04 20 26.6**	**-1.6**
	baz=206,SNR=260						
TRF				S	**S**	**04 30 14.9**	**-3.9**
	baz=206						
CHUM	**Lake Minchumin**	**86.96**	**11**	P	**P**	**04 20 26.1**	**-1.7**
	baz=204,SNR=145						
CHUM				S	**S**	**04 30 15.2**	**-3.1**
	baz=204						
LLLB	**Lillooet**	**86.97**	**32**	IAmb	IAmb	04 20 31.8	
	comp=Z,130nm,1.0s						
GCSA	**Galena City Sc**	**87.00**	**9**	P	**P**	**04 20 27.7**	**-0.4**
	baz=200,SNR=36						
GCSA				S	**S**	**04 30 19.5**	**+0.9**
	baz=200						
TIY	**Taiyuan**	**87.03**	**312**	⇑P	**P**	**04 20 29.5**	**+0.5**
TIY				SKS	**SKSac**	**04 30 01.8**	**+0.1**
TIY				S	**S**	**04 30 22.5**	**+2.2**
TIY				pmax	pmax		
	comp=Z,200nm,1.1s						
TIY				pmax	pmax		
	comp=Z,4µm,6.4s						
HLID	**Hailey**	**87.05**	**41**	IAmb	IAmb	04 20 33.1	
	comp=Z,168nm,0.9s						
HLID	**Hailey**	**87.05**	**41**	P	**P**	**04 20 29.5**	**+0.4**
	baz=237,SNR=301						
HLID				S	**S**	**04 30 25.6**	**+5.2**
	baz=237						
BESE	**Bessie Mountai**	**87.06**	**21**	P	**P**	**04 20 29.2**	**+0.7**
BESE				IAmb	IAmb	04 20 32.8	
	comp=Z,180nm,1.0s						
HVU	**Hansel Valley**	**87.14**	**43**	IAmb	IAmb	04 20 34.0	
	comp=Z,196nm,1.4s						
HARP	**HAARP**	**87.17**	**15**	P	**P**	**04 20 28.5**	**-0.5**
	baz=211,SNR=41						
HARP				S	**S**	**04 30 19.9**	**-0.5**
	baz=211						
C09A	**Chrisman Ranch**	**87.18**	**36**	IAmb	IAmb	04 20 32.8	
	comp=Z,187nm,0.9s						
LL05	**Los Muermos**	**87.22**	**133**	P	**P**	**04 20 31.2**	**+1.4**
LL05				IAmb	IAmb	04 20 34.7	
	comp=Z,355nm,1.3s						
PLBC	**Pleasant Camp**	**87.23**	**20**	P	**P**	**04 20 29.3**	**+0.1**
	baz=219,SNR=88						
PLBC				S	**S**	**04 30 22.6**	**+1.6**
	baz=219						
PAF	**Port-aux-Franc**	**87.23**	**218**	P	**P**	**04 20 31.3**	**+1.6**
PAF	**Port-aux-Franc**	**87.23**	**218**	P	**P**	**04 20 31.3**	**+1.6**
PAF				pmax	pmax		
	comp=Z,360nm,1.0s						
DHY	**Denali Highway**	**87.24**	**14**	IAmb	IAmb	04 20 32.4	
	comp=Z,232nm,1.2s						
DHY	**Denali Highway**	**87.24**	**14**	P	**P**	**04 20 28.3**	**-1.1**
	baz=209,SNR=119						
DHY				S	**S**	**04 30 18.7**	**-2.7**
	baz=209						
SRU	**San Rafael Swe**	**87.27**	**46**	IAmb	IAmb	04 20 33.8	
	comp=Z,231nm,0.9s						
P17A	**Butcher Ranch,**	**87.31**	**46**	IAmb	IAmb	04 20 34.4	
	comp=Z,206nm,1.2s						
Y22A	**Socorro**	**87.33**	**52**	P	**P**	**04 20 31.3**	**+0.7**
	baz=243						
TROLL	**Troll, Antarti**	**87.35**	**180**	P	**P**	**04 20 29.9**	**-0.1**
TROLL	**Troll, Antarti**	**87.35**	**180**	PKKPbc	PKKPbc	04 38 15.0	-4.0
TROLL	**Troll, Antarti**	**87.35**	**180**	pP	pP	04 22 39.1	+4.8
BPAW	**Bear Paw Mtn.**	**87.41**	**12**	P	**P**	**04 20 28.0**	**-2.0**
	baz=206,SNR=98						
BPAW				S	**S**	**04 30 17.9**	**-4.7**
	baz=206						
Y22D	**IRIS PASSCAL I**	**87.43**	**52**	P	**P**	**04 20 31.0**	**0.0**
	baz=243						
Y22D				S	S	04 30 33.5	+9.2
	baz=243						
MCK	**McKinley**	**87.49**	**13**	IAmb	IAmb	04 20 33.2	
	comp=Z,192nm,0.9s						
MCK	**McKinley**	**87.49**	**13**	P	**P**	**04 20 29.2**	**-1.2**
	baz=208,SNR=119						
MCK				S	**S**	**04 30 20.8**	**-2.5**
	baz=208						
MNTX	**Cornudas Mount**	**87.52**	**55**	P	**P**	**04 20 31.9**	**+0.6**
MNTX				IAmb	IAmb	04 20 35.4	
	comp=Z,290nm,1.1s						
MNTX	**Cornudas Mount**	**87.52**	**55**	P	**P**	**04 20 32.0**	**+0.7**
	baz=244,SNR=376						
MNTX	**Cornudas Mount**	**87.52**	**55**	P	**P**	**04 20 32.1**	**+0.7**
	baz=244,SNR=376						
MNTX				S	**S**	**04 30 32.3**	**+7.3**
	baz=244						
LL02	**Futaleuf**	**87.53**	**136**	IAmb	IAmb	04 20 36.0	
	comp=Z,250nm,1.1s						
SKAG	**Skagway**	**87.57**	**21**	IAmb	IAmb	04 20 35.5	
	comp=Z,262nm,1.3s						
SKAG	**Skagway**	**87.57**	**21**	P	**P**	**04 20 31.1**	**+0.3**
	baz=220,SNR=43						
SKAG				S	**S**	**04 30 26.4**	**+2.3**
	baz=220						
PAX	**Paxson**	**87.59**	**15**	P	**P**	**04 20 29.9**	**-1.1**
	baz=211,SNR=72						
PAX				S	**S**	**04 30 21.5**	**-2.9**
	baz=211						
ZEA	**Zeya**	**87.63**	**331**	*e*P	**P**	**04 20 31.5**	**+0.2**
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=N,90nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,120nm,0.8s						
SNAA	**Sanae**	**87.65**	**179**	P	**P**	**04 20 31.0**	**-0.3**
SNAA	**Sanae**	**87.65**	**179**	PKKPbc	PKKPbc	04 38 13.9	-4.2
SNAA	**Sanae**	**87.65**	**179**	P	**P**	**04 20 31.1**	**-0.3**
	comp=Z,35nm,0.8s,baz=206,slow=8.2,SNR=56						
SNAA				pP	**pP**	**04 22 37.9**	**+2.3**
	comp=Z,24nm,1.1s,baz=198,slow=6.7,SNR=11						
SNAA				S	**SKSac**	**04 30 02.5**	**-1.9**
	comp=Z,17nm,1.1s,baz=6.0,slow=23,SNR=23						
SNAA				PKKPbc	**PKKPdf**	**04 38 13.7**	**+4.3**
	comp=Z,2.2nm,0.8s,baz=251,slow=3.5,SNR=12						
SNAA				SKKPbc	**SKKPbc**	**04 40 59.5**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=22,slow=2.7,SNR=3.9						
	comp=Z,35nm,0.8s						
SNAA	**Sanae**	**87.65**	**179**	P	**P**	**04 20 31.8**	**+0.5**
SNAA				pP	**pP**	**04 22 38.4**	**+2.8**
M26K	**Nabesna, AK**	**87.71**	**16**	IAmb	IAmb	04 20 35.0	
	comp=Z,265nm,1.2s						
M26K	**Nabesna, AK**	**87.71**	**16**	P	**P**	**04 20 31.2**	**-0.4**
	baz=213,SNR=250						
M26K				S	**S**	**04 30 25.5**	**+0.1**
	baz=213						
P18A	**Preston Nutter**	**87.71**	**46**	IAmb	IAmb	04 20 36.1	
	comp=Z,131nm,1.2s						
MVCO	**Mesa Verde**	**87.75**	**49**	P	**P**	**04 20 31.5**	**-1.0**
	baz=242,SNR=25						
MVCO				S	**S**	**04 30 31.3**	**+3.9**
	baz=242						
XLT	**XiLinHaoTe**	**87.78**	**319**	⇓*i*P	**P**	**04 20 32.0**	**-0.3**
XLT				sP	sP	04 23 36.0	+2.2
XLT				SKS	**SKSac**	**04 30 03.0**	**-2.9**
XLT				S	**SKKSac**	**04 30 15.8**	**-2.5**
XLT				SS	**SS**	**04 36 29.5**	**-2.8**
XLT				pmax	pmax		
	comp=Z,180nm,1.3s						
XLT				pmax	pmax		
	comp=Z,3µm,9.1s						
YUK6	**Outpost Mounta**	**87.79**	**18**	P	**P**	**04 20 31.9**	**-0.3**
	baz=217,SNR=61						
YUK6				S	**S**	**04 30 26.5**	**-0.1**
	baz=217						
VNA3	**Neumayer Olymp**	**87.81**	**176**	P	**P**	**04 20 31.9**	**-0.1**
VNA3	**Neumayer Olymp**	**87.81**	**176**	PKKPbc	PKKPbc	04 38 13.4	-4.3
VNA3	**Neumayer Olymp**	**87.81**	**176**	pP	pP	04 22 39.8	+3.6
TX31	**Lajitas Ar. Si**	**87.83**	**58**	P	**P**	**04 20 34.2**	**+1.3**
	baz=245						
TX32	**Lajitas Array**	**87.83**	**58**	IAmb	IAmb	04 20 37.3	
	comp=Z,275nm,1.0s						
XAN	**Xi'an**	**87.83**	**308**	P	**P**	**04 20 33.0**	**+0.3**
XAN				sP	sP	04 23 32.0	-2.1
XAN				pmax	pmax		
	comp=Z,560nm,1.4s						
XAN				pmax	pmax		
	comp=Z,4µm,4.8s						
TXAR	**Lajitas Array**	**87.83**	**58**	P	**P**	**04 20 33.8**	**+0.8**
	comp=Z,157nm,0.9s,baz=219,slow=6.0,SNR=439						
TXAR				pP	**pwP**	**04 22 40.2**	**+0.1**
	comp=Z,38nm,1.1s,baz=213,slow=6.5,SNR=7.4						
TXAR				PKKPbc	**PKKPbc**	**04 38 17.3**	**+0.9**
	comp=Z,14nm,1.0s,baz=158,slow=2.5,SNR=32						
TXAR				SKKPbc	SKKPbc	04 41 01.7	+0.1
	comp=Z,2.2nm,1.1s,baz=145,slow=2.6,SNR=3.5						
TXAR				PKPPKP	P'P'df	04 46 12.6	-11
	comp=Z,0.6nm,0.9s,baz=90,slow=1.8,SNR=2.2						
	comp=Z,157nm,0.9s						
YUK3	**Moose Creek**	**87.86**	**17**	P	**P**	**04 20 32.3**	**-0.1**
	baz=215,SNR=376						
YUK3				S	**S**	**04 30 27.2**	**-0.1**
	baz=215						
S34M	**Telegraph Cree**	**87.88**	**23**	P	**P**	**04 20 33.1**	**+0.8**
	baz=224,SNR=108						
S34M				S	**S**	**04 30 29.4**	**+2.3**
	baz=224						
HYT	**Haines Junctio**	**87.95**	**19**	P	**P**	**04 20 33.2**	**+0.4**
HYT				IAmb	IAmb	04 20 36.6	
	comp=Z,129nm,1.0s						
HYT	**Haines Junctio**	**87.95**	**19**	P	**P**	**04 20 32.7**	**-0.1**
	baz=218,SNR=83						
HYT				S	**S**	**04 30 28.5**	**+0.6**
	baz=218						
M27K	**Edge Creek, AK**	**87.96**	**16**	P	**P**	**04 20 32.9**	**+0.1**
	baz=214						
M27K				S	**S**	**04 30 28.6**	**+0.6**
	baz=214						
MENT	**Mentasta**	**87.98**	**15**	IAmb	IAmb	04 20 36.2	
	comp=Z,289nm,1.4s						
YUK4	**Talbot Arm**	**88.02**	**18**	P	**P**	**04 20 33.2**	**0.0**
	baz=217,SNR=67						
LL03	**Petrohue**	**88.06**	**134**	P	**P**	**04 20 34.9**	**+1.1**
LL03				IAmb	IAmb	04 20 38.1	
	comp=Z,130nm,0.9s						
NEW	**Newport**	**88.08**	**36**	P	**P**	**04 20 33.3**	**-0.2**
	baz=235,SNR=68						
NEW				S	**S**	**04 30 31.1**	**+1.7**
	baz=235						
L26K	**Log Cabin Wild**	**88.14**	**15**	IAmb	IAmb	04 20 37.7	
	comp=Z,146nm,1.2s						
L26K	**Log Cabin Wild**	**88.14**	**15**	P	**P**	**04 20 32.9**	**-0.6**
	baz=213,SNR=59						
L26K				S	**S**	**04 30 29.8**	**+0.4**
	baz=213						
LL04	**Puerto Octay**	**88.16**	**133**	IAmb	IAmb	04 20 38.5	
	comp=Z,130nm,1.1s						
ANMO	**Albuquerque**	**88.17**	**52**	PKPPKP	**P'P'df**	**04 46 23.0**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=229,slow=2.6,SNR=4.5						
ANMO	**Albuquerque**	**88.17**	**52**	P	**P**	**04 20 34.7**	**+0.2**
ANMO				IAmb	IAmb	04 20 38.7	
	comp=Z,161nm,1.1s						
ANMO	**Albuquerque**	**88.17**	**52**	P	**P**	**04 20 34.7**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,161nm,1.1s						
ANMO	**Albuquerque**	**88.17**	**52**	P	**P**	**04 20 34.8**	**+0.2**
	baz=243,SNR=264						
ANMO	**Albuquerque**	**88.17**	**52**	P	**P**	**04 20 35.0**	**+0.5**
	baz=243						
ANMO				S	**S**	**04 30 38.2**	**+7.0**
	baz=243						
I21K	**Tanana**	**88.21**	**11**	IAmb	IAmb	04 20 37.2	
	comp=Z,232nm,1.1s						
I21K	**Tanana**	**88.21**	**11**	P	**P**	**04 20 32.7**	**-1.0**
	baz=205,SNR=199						
I21K				S	**S**	**04 30 27.6**	**-2.2**
	baz=205						
NEA2	**Nenana**	**88.23**	**12**	P	**P**	**04 20 31.9**	**-1.9**
	baz=208,SNR=31						
NEA2				S	**S**	**04 30 26.7**	**-3.3**
	baz=208						
K24K	**Donnelly Dome**	**88.23**	**14**	P	**P**	**04 20 33.2**	**-0.7**
	baz=210,SNR=174						
K24K				S	**S**	**04 30 27.7**	**-2.5**
	baz=210						
VNA2	**Neumayer--Watz**	**88.24**	**177**	P	**P**	**04 20 33.9**	**-0.1**
	baz=174,slow=4.0						
VNA2	**Neumayer--Watz**	**88.24**	**177**	PKKPbc	PKKPbc	04 38 13.0	-3.6
VNA2	**Neumayer--Watz**	**88.24**	**177**	pP	pP	04 22 40.4	+1.7
BVCY	**Beaver Creek**	**88.28**	**17**	P	**P**	**04 20 34.0**	**-0.1**
	baz=215,SNR=96						
BVCY				S	**S**	**04 30 31.0**	**+0.3**
	baz=215						
MLY	**Manley**	**88.30**	**11**	IAmb	IAmb	04 20 37.0	
	comp=Z,196nm,1.2s						
MLY	**Manley**	**88.30**	**11**	P	**P**	**04 20 32.5**	**-1.7**
	baz=206,SNR=287						
MLY				S	**S**	**04 30 26.4**	**-4.4**
	baz=206						
PAYG	**Puerto Ayora**	**88.30**	**90**	P	**P**	**04 20 36.5**	**+1.2**
PAYG				IAmb	IAmb	04 20 41.1	
	comp=Z,248nm,1.2s						
O30N	**Mendenhall**	**88.34**	**19**	P	**P**	**04 20 34.5**	**0.0**
	baz=219,SNR=106						
O30N				S	**S**	**04 30 32.5**	**+1.2**
	baz=219						
RIDG	**Independent Ri**	**88.39**	**14**	IAmb	IAmb	04 20 38.5	
	comp=Z,237nm,1.2s						
RIDG	**Independent Ri**	**88.39**	**14**	P	**P**	**04 20 34.0**	**-0.7**
	baz=211						
RIDG				S	**S**	**04 30 31.9**	**+0.1**
	baz=211						
VNA1	**Neumayer--Stat**	**88.47**	**177**	P	**P**	**04 20 35.3**	**+0.3**
VNA1	**Neumayer--Stat**	**88.47**	**177**	PKKPbc	PKKPbc	04 38 13.1	-2.9
VNA1	**Neumayer--Stat**	**88.47**	**177**	pP	pP	04 22 43.5	+4.1
DOT	**Dot Lake**	**88.50**	**15**	IAmb	IAmb	04 20 39.0	
	comp=Z,228nm,1.3s						
H21K	**Melozitna Rive**	**88.50**	**10**	IAmb	IAmb	04 20 37.7	
	comp=Z,84nm,0.7s						
H21K	**Melozitna Rive**	**88.50**	**10**	P	**P**	**04 20 34.4**	**-0.7**
	baz=204,SNR=171						
H21K				S	**S**	**04 30 31.4**	**-1.1**
	baz=204						
HDA	**Harding Lake**	**88.50**	**13**	IAmb	IAmb	04 20 37.1	
	comp=Z,131nm,0.6s						
HDA	**Harding Lake**	**88.50**	**13**	P	**P**	**04 20 34.0**	**-1.1**
	baz=209,SNR=249						
HDA				S	**S**	**04 30 30.5**	**-2.1**
	baz=209						
HDA				S	**S**	**04 30 30.5**	**-2.1**
	baz=209						
L27K	**Beaver Creek,**	**88.56**	**16**	IAmb	IAmb	04 20 39.6	
	comp=Z,172nm,1.4s						
L27K	**Beaver Creek,**	**88.56**	**16**	P	**P**	**04 20 34.8**	**-0.6**
	baz=214,SNR=126						
L27K				S	**S**	**04 30 33.6**	**+0.3**
	baz=214						
N30M	**Aishikik Lake**	**88.57**	**19**	P	**P**	**04 20 35.3**	**-0.3**
	baz=218,SNR=36						
N30M				S	**S**	**04 30 33.3**	**-0.2**
	baz=218						
HIA	**Hailar**	**88.61**	**325**	P	**P**	**04 20 36.4**	**+0.4**
HIA				IAmb	IAmb	04 20 38.9	
	comp=Z,102nm,0.7s						
HIA	**Hailar**	**88.61**	**325**	P	**P**	**04 20 36.4**	**+0.4**
HIA				pmax	pmax		
	comp=Z,102nm,0.7s						
RDMU	**Red Mountain**	**88.63**	**45**	IAmb	IAmb	04 20 39.9	
	comp=Z,147nm,0.9s						
WHY	**Whitehorse**	**88.64**	**20**	P	**P**	**04 20 35.9**	**-0.1**
WHY				IAmb	IAmb	04 20 39.9	
	comp=Z,139nm,1.1s						
WHY					**pwP**	**04 22 42.8**	**-0.9**
WHY	**Whitehorse**	**88.64**	**20**	P	**P**	**04 20 35.9**	**-0.1**
	baz=220,SNR=65						
WHY				S	**S**	**04 30 36.4**	**+2.2**
	baz=220						
DLBC	**Dease Lake**	**88.66**	**23**	IAmb	IAmb	04 20 40.3	
	comp=Z,107nm,1.1s						
I23K	**Minto, Yukon-K**	**88.66**	**12**	IAmb	IAmb	04 20 38.9	
	comp=Z,108nm,0.9s						
I23K	**Minto, Yukon-K**	**88.66**	**12**	P	**P**	**04 20 34.4**	**-1.4**
	baz=207,SNR=142						
I23K				S	**S**	**04 30 30.3**	**-3.6**
	baz=207						
AHID	**Auburn Hatcher**	**88.71**	**43**	IAmb	IAmb	04 20 41.2	
	comp=Z,148nm,0.9s						
TCOL	**CIGO, UAF Yank**	**88.72**	**13**	P	**P**	**04 20 34.5**	**-1.6**
	baz=209,SNR=15						
TCOL				S	**S**	**04 30 30.2**	**-4.2**
	baz=209						
COLA	**College**	**88.72**	**13**	P	**P**	**04 20 35.2**	**-0.8**
COLA	**College**	**88.72**	**13**	P	**P**	**04 20 35.2**	**-0.8**
COLA				pmax	pmax		
	comp=Z,339nm,1.1s						
COLA	**College**	**88.72**	**13**	P	**P**	**04 20 35.1**	**-1.0**
	baz=209						
COLA				S	**S**	**04 30 30.6**	**-3.9**
	baz=209						
LR03	**Panguipulli**	**88.77**	**132**	P	**P**	**04 20 37.8**	**+0.7**
SCRK	**Sand Creek**	**88.80**	**15**	IAmb	IAmb	04 20 39.9	
	comp=Z,132nm,1.1s						
SCRK	**Sand Creek**	**88.80**	**15**	P	**P**	**04 20 35.8**	**-0.8**
	baz=212,SNR=142						
SCRK				S	**S**	**04 30 35.0**	**-0.6**
	baz=212						
ILAR	**Eielson Array**	**88.83**	**13**	P	**P**	**04 20 35.1**	**-1.5**
	comp=Z,49nm,0.7s,baz=217,slow=5.1,SNR=274						
ILAR				pP	**pwP**	**04 22 44.4**	**+0.7**
	comp=Z,11nm,0.9s,baz=222,slow=5.6,SNR=4.5						
ILAR				PKiKP	**PKiKP**	**04 25 30.6**	**-1.3**
	comp=Z,2.8nm,0.5s,baz=272,slow=2.9,SNR=8.8						
ILAR				S	**SKSac**	**04 30 11.8**	**+0.9**
	comp=Z,3.1nm,1.1s,baz=238,slow=6.3,SNR=5.8						
ILAR				PKKP	**PKKPdf**	**04 38 11.7**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=354,slow=2.2,SNR=12						
ILAR				PKPPKP	P'P'df	04 46 08.4	-10
	comp=Z,0.9nm,1.0s,baz=335,slow=2.7,SNR=5.2						
	comp=Z,49nm,0.7s						
KMI	**Kunming**	**88.92**	**297**	⇓P	**P**	**04 20 39.8**	**+1.5**
KMI				sP	sP	04 23 37.0	-2.9
KMI				PP	**PP**	**04 24 19.3**	**+0.4**
KMI				SKS	**SKSac**	**04 30 12.8**	**-0.9**
KMI				S	**S**	**04 30 39.3**	**+0.7**
KMI				sS	sS	04 34 16.0	-4.5
KMI				SS	**SS**	**04 36 57.8**	**+8.2**
KMI				pmax	pmax		
	comp=Z,290nm,1.8s						
KMI				pmax	pmax		
	comp=Z,2µm,3.5s						
P33M	**Teslin, Yukon**	**88.97**	**21**	P	**P**	**04 20 37.3**	**-0.2**
	baz=222,SNR=52						
P33M				S	**S**	**04 30 38.9**	**+1.7**
	baz=222						
POKR	**Poker Plat Res**	**89.02**	**13**	IAmb	IAmb	04 20 39.9	
	comp=Z,250nm,1.4s						
POKR	**Poker Plat Res**	**89.02**	**13**	P	**P**	**04 20 36.1**	**-1.4**
	baz=209,SNR=33						
POKR				S	**S**	**04 30 33.2**	**-4.1**
	baz=209						
J25K	**Salcha River,**	**89.02**	**14**	P	**P**	**04 20 36.6**	**-1.1**
	baz=211,SNR=148						
J25K				S	**S**	**04 30 35.4**	**-2.1**
	baz=211						
MSO	**Missoula**	**89.08**	**38**	P	**P**	**04 20 37.9**	**-0.5**
	baz=238,SNR=61						
MSO				S	**S**	**04 30 41.4**	**+2.5**
	baz=238						
DLMT	**Dillon**	**89.11**	**40**	IAmb	IAmb	04 20 42.4	
	comp=Z,124nm,1.0s						
HHC	**Hu-ho-hao-te**	**89.14**	**315**	*e*P	**P**	**04 20 39.5**	**+0.8**
HHC				PP	**PP**	**04 24 19.3**	**-0.8**
HHC				pmax	pmax		
	comp=Z,210nm,1.3s						
HHC				pmax	pmax		
	comp=Z,3µm,4.8s						
TPAW	**Teton Pass**	**89.17**	**42**	P	**P**	**04 20 39.0**	**-0.1**
TPAW				IAmb	IAmb	04 20 42.9	
	comp=Z,135nm,0.9s						
S22A	**4UR Ranch, Cre**	**89.17**	**49**	IAmb	IAmb	04 20 43.8	
	comp=Z,116nm,1.1s						
S22A	**4UR Ranch, Cre**	**89.17**	**49**	P	**P**	**04 20 39.9**	**+0.7**
	baz=243,SNR=140						
S22A				S	**S**	**04 30 46.1**	**+5.6**
	baz=243						
H23K	**Yukon River**	**89.23**	**12**	P	**P**	**04 20 37.0**	**-1.5**
	baz=207,SNR=34						
H23K				S	**S**	**04 30 35.8**	**-3.5**
	baz=207						
K27K	**Chicken**	**89.30**	**15**	IAmb	IAmb	04 20 43.3	
	comp=Z,214nm,1.2s						
K27K	**Chicken**	**89.30**	**15**	P	**P**	**04 20 38.6**	**-0.2**
	baz=214						
K27K				S	**S**	**04 30 40.8**	**+0.9**
	baz=214						
O20A	**White River Ci**	**89.31**	**46**	IAmb	IAmb	04 20 43.2	
	comp=Z,184nm,1.1s						
O20A	**White River Ci**	**89.31**	**46**	P	**P**	**04 20 40.0**	**+0.3**
	baz=242,SNR=110						
O20A				S	**S**	**04 30 46.1**	**+4.7**
	baz=242						
J26L	**Joseph Creek**	**89.34**	**14**	P	**P**	**04 20 39.1**	**0.0**
	baz=212,SNR=385						
J26L				S	**S**	**04 30 40.6**	**+0.3**
	baz=212						
BILL	**Bilibino**	**89.34**	**354**	P	**P**	**04 20 38.2**	**-0.7**
BILL				IAmb	IAmb	04 20 41.6	
	comp=Z,70nm,0.8s						
BILL	**Bilibino**	**89.34**	**354**	*c* *i*P	**P**	**04 20 38.4**	**-0.5**
BILL				*e*		04 24 19.3	
BILL				*e*PPP	PPP	04 26 23.2	
BILL				*i*		04 30 12.0	
BILL				*i* S	**S**	**04 30 37.6**	**-2.5**
BILL				*i* SS	**SS**	**04 36 49.5**	**-4.0**
BILL				pmax	pmax		
	comp=Z,227nm,1.7s						

RDOG	**Red Dog Mine**	**89.43**	**6**	P	**P**	**04 20 35.7**	**-3.7**
	baz=195,SNR=10						
RDOG				S	**S**	**04 30 36.7**	**-4.2**
	baz=195						
LOHW	**Long Hollow**	**89.45**	**42**	P	**P**	**04 20 40.4**	**+0.2**
LOHW				IAmb	IAmb	04 20 43.9	
	comp=Z,87nm,0.8s						
LOHW					**pP**	**04 22 46.3**	**+1.4**
PLCA	**Paso Flores**	**89.50**	**134**	P	**P**	**04 20 41.8**	**+1.3**
	comp=Z,46nm,1.0s,baz=218,slow=5.3,SNR=41						
PLCA				PKKPbc	**PKKPbc**	**04 38 10.0**	**-2.5**
	comp=Z,12nm,0.9s,baz=98,slow=0.9,SNR=16						
	comp=Z,46nm,1.0s						
PLCA	**Paso Flores**	**89.50**	**134**	P	**P**	**04 20 41.5**	**+1.0**
PLCA				IAmb	IAmb	04 20 45.1	
	comp=Z,92nm,1.1s						
PLCA	**Paso Flores**	**89.50**	**134**	*e*P	**P**	**04 20 41.9**	**+1.3**
M30M	**Minto, Yukon**	**89.54**	**18**	IAmb	IAmb	04 20 43.5	
	comp=Z,150nm,0.8s						
M30M	**Minto, Yukon**	**89.54**	**18**	P	**P**	**04 20 39.6**	**-0.4**
	baz=219,SNR=289						
M30M				S	**S**	**04 30 42.1**	**0.0**
	baz=219						
H24K	**Noodor Dome**	**89.57**	**12**	P	**P**	**04 20 37.6**	**-2.5**
	baz=209,SNR=29						
H24K				S	**S**	**04 30 39.2**	**-3.1**
	baz=209						
CM31	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**04 20 42.5**	**+1.2**
CM31	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**04 20 43.0**	**+1.8**
	SNR=93						
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**04 20 42.9**	**+1.6**
	comp=Z,241nm,1.0s,baz=125,slow=2.7,SNR=174						
CMAR				PP	**PP**	**04 24 21.7**	**-2.3**
	comp=Z,24nm,1.1s,baz=130,slow=5.2,SNR=4.9						
CMAR				SKKPbc	SKKPbc	04 40 55.8	-0.5
	comp=Z,2.0nm,0.3s,baz=293,slow=4.5,SNR=5.6						
	comp=Z,241nm,1.0s						
BW06	**Boulder Array**	**89.70**	**43**	IAmb	IAmb	04 20 44.5	
	comp=Z,126nm,0.8s						
BW06	**Boulder Array**	**89.70**	**43**	P	**P**	**04 20 40.8**	**-0.7**
	baz=241,SNR=242						
BW06				S	**S**	**04 30 47.9**	**+3.0**
	baz=241						
PD31	**Pinedale Array**	**89.70**	**43**	IAmb	IAmb	04 20 44.5	
	comp=Z,114nm,0.8s						
PDAR	**Pinedale Array**	**89.70**	**43**	P	**P**	**04 20 41.2**	**-0.2**
	comp=Z,91nm,0.8s,baz=211,slow=3.3,SNR=392						
PDAR				PP	**PP**	**04 24 21.6**	**-3.1**
	comp=Z,5.3nm,0.9s,baz=235,slow=5.2,SNR=4.4						
PDAR				PKKPbc	**PKKPbc**	**04 38 10.8**	**-1.8**
	comp=Z,5.5nm,0.8s,baz=82,slow=4.7,SNR=15						
PDAR				PKPPKP		04 46 19.4	
	comp=Z,2.5nm,1.0s,baz=150,slow=3.3,SNR=9.8						
	comp=Z,91nm,0.8s						
YHL	**Hebgen Lake**	**89.71**	**41**	IAmb	IAmb	04 20 46.0	
	comp=Z,174nm,1.1s						
SMCO	**Snowmass**	**89.73**	**48**	IAmb	IAmb	04 20 45.3	
	comp=Z,115nm,1.2s						
CHTO	**Chiang Mai**	**89.74**	**290**	P	**P**	**04 20 42.1**	**+0.2**
CHTO	**Chiang Mai**	**89.74**	**290**	P	**P**	**04 20 42.1**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,265nm,0.8s						
CHTO	**Chiang Mai**	**89.74**	**290**	P	**P**	**04 20 43.0**	**+1.1**
YMR	**Madison River**	**89.75**	**41**	IAmb	IAmb	04 20 46.1	
	comp=Z,137nm,1.0s						
BOZ	**Bozeman (W)**	**89.81**	**40**	IAmb	IAmb	04 20 45.6	
	comp=Z,97nm,0.9s						
BOZ	**Bozeman (W)**	**89.81**	**40**	P	**P**	**04 20 41.7**	**-0.1**
	baz=239,SNR=171						
BOZ				S	**S**	**04 30 48.8**	**+3.2**
	baz=239						
H17A	**Grant Village**	**89.86**	**42**	IAmb	IAmb	04 20 47.6	
	comp=Z,104nm,0.9s						
H17A	**Grant Village**	**89.86**	**42**	P	**P**	**04 20 41.9**	**-0.3**
	baz=240,SNR=27						
H17A				S	**S**	**04 30 53.7**	**+7.4**
	baz=240						
M31M	**Drury Creek, Y**	**89.96**	**19**	P	**P**	**04 20 41.1**	**-0.9**
	baz=221,SNR=45						
M31M				S	**S**	**04 30 45.3**	**-0.6**
	baz=221						
DAWY	**Dawson**	**90.01**	**16**	IAmb	IAmb	04 20 45.6	
	comp=Z,105nm,0.9s						
DAWY	**Dawson**	**90.01**	**16**	P	**P**	**04 20 41.6**	**-0.5**
	baz=216,SNR=207						
DAWY				S	**S**	**04 30 45.9**	**-0.4**
	baz=216						
LKWY	**Lake**	**90.05**	**42**	IAmb	IAmb	04 20 48.1	
	comp=Z,97nm,1.0s						
BTO	**Baotou**	**90.06**	**314**	*e*P	**P**	**04 20 44.3**	**+1.3**
BTO				SKS	**SKSac**	**04 30 18.5**	**-0.8**
BTO				S	**S**	**04 30 42.0**	**-5.9**
SDCO	**Great Sand Dun**	**90.11**	**49**	P	**P**	**04 20 43.6**	**0.0**
SDCO					**pwP**	**04 22 50.6**	**-1.0**
SDCO	**Great Sand Dun**	**90.11**	**49**	P	**P**	**04 20 43.6**	**0.0**
	baz=244						
SDCO	**Great Sand Dun**	**90.11**	**49**	P	**P**	**04 20 42.1**	**-1.5**
	baz=244,SNR=147						
SDCO				S	**S**	**04 30 53.2**	**+4.3**
	baz=244						
EGAK	**Eagle**	**90.14**	**15**	P	**P**	**04 20 42.6**	**-0.1**
	baz=215,SNR=226						
EGAK				S	**S**	**04 30 46.8**	**-0.5**
	baz=215						
WALA	**Waterton Lakes**	**90.29**	**37**	IAmb	IAmb	04 20 47.6	
	comp=Z,89nm,0.9s						
PZH	**PanZhiHua**	**90.29**	**298**	P	**P**	**04 20 45.0**	**+0.5**
PZH				sP	**sP**	**04 23 46.0**	**-0.2**
PZH				PP	**PP**	**04 24 30.0**	**+0.6**
PZH				SKS	**SKSac**	**04 30 16.8**	**-4.5**
PZH				S	**S**	**04 30 45.8**	**-4.8**
PZH				sS	**sS**	**04 34 31.5**	**-1.8**
PZH				SS	**SS**	**04 37 14.3**	**+5.4**
PZH				pmax	pmax		
	comp=Z,180nm,0.8s						
PZH				pmax	pmax		
	comp=Z,3µm,5.2s						
FARO	**Faro, Yukon**	**90.31**	**19**	P	**P**	**04 20 43.0**	**-0.6**
	baz=222,SNR=32						
FARO				S	**S**	**04 30 49.7**	**+0.7**
	baz=222						
COLD	**Coldfoot**	**90.37**	**11**	IAmb	IAmb	04 20 48.0	
	comp=Z,120nm,1.0s						
COLD	**Coldfoot**	**90.37**	**11**	P	**P**	**04 20 43.9**	**+0.2**
	baz=206,SNR=26						
COLD				S	**S**	**04 30 48.5**	**-0.8**
	baz=206						
CD2	**Chengdu**	**90.43**	**303**	P	**P**	**04 20 45.5**	**+0.6**
CD2				sP	sP	04 23 47.8	+1.2
CD2				PP	**PP**	**04 24 30.8**	**+0.5**
CD2				S	**S**	**04 30 56.5**	**+5.0**
CD2				sS	sS	04 34 33.3	-0.9
CD2				SS	**SS**	**04 37 13.8**	**+3.3**
CD2				pmax	pmax		
	comp=Z,80nm,1.4s						
CD2				pmax	pmax		
	comp=Z,3µm,13.3s						
CMIG	**Matias Romero**	**90.43**	**72**	P	**P**	**04 20 45.5**	**+0.4**
	comp=Z,90nm,0.9s,baz=279,slow=4.1,SNR=51						
	comp=Z,90nm,0.9s						
MSTX	**Muleshoe**	**90.48**	**54**	IAmb	IAmb	04 20 48.2	
	comp=Z,144nm,0.8s						
MSTX	**Muleshoe**	**90.48**	**54**	P	**P**	**04 20 45.0**	**-0.1**
	baz=245,SNR=57						
MSTX	**Muleshoe**	**90.48**	**54**	P	**P**	**04 20 45.0**	**-0.1**
	baz=245,SNR=57						
MSTX				S	**S**	**04 30 56.1**	**+4.1**
	baz=245						
MAYO	**Mayo, Yukon**	**90.59**	**18**	S	**S**	**04 30 51.0**	**-0.4**
	baz=219						
ORCD	**Orcadas**	**90.60**	**159**	P	**P**	**04 20 46.5**	**+1.4**
ORCD				IAmb	IAmb	04 20 48.8	
	comp=Z,99nm,1.3s						
ORCD					**pwP**	**04 22 52.3**	**-1.0**
T25A	**Trinidad**	**90.62**	**50**	IAmb	IAmb	04 20 49.0	
	comp=Z,84nm,0.9s						
T25A	**Trinidad**	**90.62**	**50**	P	**P**	**04 20 45.8**	**-0.1**
	baz=244,SNR=82						
T25A				S	**S**	**04 30 56.5**	**+3.1**
	baz=244						
J29M	**Klondike Camp**	**90.63**	**16**	IAmb	IAmb	04 20 49.6	
	comp=Z,121nm,0.8s						
J29M	**Klondike Camp**	**90.63**	**16**	P	**P**	**04 20 45.7**	**+0.7**
	baz=217						
J29M				S	**S**	**04 30 51.5**	**-0.3**
	baz=217						
833A	**Chaparral WMA,**	**90.83**	**60**	P	**P**	**04 20 47.0**	**+0.2**
	baz=247,SNR=27						
833A	**Chaparral WMA,**	**90.83**	**60**	P	**P**	**04 20 46.9**	**+0.2**
	baz=247						
833A				S	**S**	**04 30 57.9**	**+2.8**
	baz=247						
Q24A	**Divide**	**90.90**	**48**	IAmb	IAmb	04 20 52.4	
	comp=Z,60nm,0.8s						
Q24A	**Divide**	**90.90**	**48**	P	**P**	**04 20 47.4**	**+0.2**
	baz=244,SNR=29						
Q24A				S	**S**	**04 31 00.9**	**+5.0**
	baz=244						
ISCO	**Idaho Springs**	**90.95**	**47**	P	**P**	**04 20 47.9**	**+0.5**
	baz=243						
ISCO	**Idaho Springs**	**90.95**	**47**	P	**P**	**04 20 47.5**	**+0.1**
	baz=243,SNR=62						
ISCO				S	**S**	**04 31 01.1**	**+4.8**
	baz=243						
RLMT	**Red Lodge**	**91.02**	**42**	P	**P**	**04 20 47.9**	**+0.4**
	baz=241,SNR=51						
RLMT				S	**S**	**04 31 01.6**	**+5.0**
	baz=241						
GO05	**Huala**	**91.11**	**128**	IAmb	IAmb	04 20 51.6	
	comp=Z,124nm,1.2s						
EFI	**East Falkland**	**91.13**	**148**	*i* P	**P**	**04 20 48.8**	**+1.1**
EFI				pmax	pmax		
	comp=Z,68nm,0.9s						
ML02	**Panimavida**	**91.15**	**129**	P	**P**	**04 20 48.1**	**-0.1**
ML02				IAmb	IAmb	04 20 51.8	
	comp=Z,168nm,1.1s						
N23A	**Red Feather La**	**91.21**	**46**	IAmb	IAmb	04 20 52.8	
	comp=Z,123nm,1.0s						
N23A	**Red Feather La**	**91.21**	**46**	P	**P**	**04 20 48.9**	**+0.3**
	baz=243,SNR=114						
N23A				S	**S**	**04 31 02.7**	**+4.2**
	baz=243						
MMPY	**Sheldon Lake,**	**91.25**	**20**	P	**P**	**04 20 48.0**	**+0.1**
	baz=224,SNR=24						
MMPY				S	**S**	**04 30 58.1**	**+0.7**
	baz=224						
I29M	**Ogilvie Camp,**	**91.33**	**16**	IAmb	IAmb	04 20 51.8	
	comp=Z,135nm,1.2s						
I29M	**Ogilvie Camp,**	**91.33**	**16**	P	**P**	**04 20 48.8**	**+0.6**
	baz=217,SNR=46						
I29M				S	**S**	**04 30 56.6**	**-1.3**
	baz=217						
JCT	**Junction City**	**91.36**	**58**	IAmb	IAmb	04 20 52.0	
	comp=Z,82nm,0.8s						
JCT	**Junction City**	**91.36**	**58**	P	**P**	**04 20 49.0**	**-0.2**
	baz=247,SNR=42						
JCT	**Junction City**	**91.36**	**58**	P	**P**	**04 20 48.7**	**-0.5**
	baz=247						
JCT				S	**S**	**04 31 02.9**	**+3.1**
	baz=247						
TGTN	**Hyland Airport**	**91.47**	**22**	P	**P**	**04 20 49.0**	**0.0**
	baz=226,SNR=6.2						
TGTN				S	**S**	**04 31 01.3**	**+2.0**
	baz=226						
K22A	**Casper**	**91.62**	**45**	IAmb	IAmb	04 20 53.5	
	comp=Z,125nm,1.0s						
K22A	**Casper**	**91.62**	**45**	P	**P**	**04 20 50.2**	**0.0**
	baz=243						
K22A	**Casper**	**91.62**	**45**	P	**P**	**04 20 49.9**	**-0.4**
	baz=243,SNR=56						
K22A				S	**S**	**04 31 05.8**	**+4.1**
	baz=243						
AMTX	**Amarillo**	**91.68**	**53**	IAmb	IAmb	04 20 53.5	
	comp=Z,64nm,0.9s						
AMTX	**Amarillo**	**91.68**	**53**	P	**P**	**04 20 50.2**	**-0.4**
	baz=246,SNR=16						
AMTX	**Amarillo**	**91.68**	**53**	P	**P**	**04 20 50.2**	**-0.4**
	baz=246						
AMTX				S	**S**	**04 31 06.3**	**+3.8**
	baz=246						
TOLK	**Toolik Lake Re**	**91.75**	**10**	IAmb	IAmb	04 20 54.2	
	comp=Z,215nm,1.5s						
TOLK	**Toolik Lake Re**	**91.75**	**10**	P	**P**	**04 20 51.0**	**+0.9**
	baz=207,SNR=62						
TOLK				S	**S**	**04 31 00.5**	**-1.0**
	baz=207						
EGMT	**Eagleton**	**92.14**	**39**	P	**P**	**04 20 52.1**	**-0.3**
	baz=241,SNR=9.3						
EGMT				S	**S**	**04 31 09.5**	**+3.6**
	baz=241						
YAK	**Yakutsk**	**92.21**	**338**	P	**P**	**04 20 51.7**	**-0.6**
	comp=Z,116nm,0.6s,baz=44,slow=0.3,SNR=32						
	comp=Z,116nm,0.6s						
YAK	**Yakutsk**	**92.21**	**338**	P	**P**	**04 20 51.7**	**-0.6**
YAK	**Yakutsk**	**92.21**	**338**	*e*P	**P**	**04 20 52.1**	**-0.1**
YAK				*e**PP	**pP**	**04 22 54.7**	**-2.5**
YAK				*e*		04 24 41.4	
YAK				*e*S	**SKSac**	**04 30 30.9**	**+0.9**
YAK				*e*		04 31 08.5	
YAK				pmax	pmax		
	comp=Z,197nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,33nm,1.1s						
YAK				pmax	pmax		
	comp=Z,348nm,2.3s						
YAK				pmax	pmax		
	comp=E,226nm,2.3s						
YAK				pmax	pmax		
	comp=N,225nm,2.2s						
YAK				smax	smax		
	comp=E,295nm,2.1s						
YAK				smax	smax		
	comp=N,228nm,1.9s						
735A	**Kenedy**	**92.32**	**60**	P	**P**	**04 20 54.4**	**+0.8**
	baz=248,SNR=10						
ABTX	**Abilene, Hawle**	**92.33**	**56**	IAmb	IAmb	04 20 56.6	
	comp=Z,152nm,1.1s						
ABTX	**Abilene, Hawle**	**92.33**	**56**	P	**P**	**04 20 53.4**	**-0.2**
	baz=247,SNR=30						
ABTX	**Abilene, Hawle**	**92.33**	**56**	P	**P**	**04 20 53.6**	**0.0**
	baz=247						
ABTX				S	**S**	**04 31 10.8**	**+2.7**
	baz=247						
MT09	**Talagante**	**92.36**	**127**	IAmb	IAmb	04 20 57.4	
	comp=Z,89nm,1.1s						
LZH	**Lanzhou**	**92.46**	**308**	⇓P	**P**	**04 20 55.0**	**+0.7**
LZH				SKS	**SKSac**	**04 30 31.3**	**-1.7**
LZH				S	**ScS**	**04 31 15.0**	**+4.5**
LZH				pmax	pmax		
	comp=Z,330nm,1.1s						
LZH				pmax	pmax		
	comp=Z,2µm,4.0s						
EPYK	**Eagle Plains**	**92.53**	**16**	IAmb	IAmb	04 20 57.5	
	comp=Z,207nm,1.4s						
EPYK	**Eagle Plains**	**92.53**	**16**	P	**P**	**04 20 53.1**	**-0.6**
	baz=219,SNR=63						
EPYK				S	**S**	**04 31 06.8**	**-1.6**
	baz=219						
CCIG	**Comitan**	**92.59**	**74**	P	**P**	**04 20 55.0**	**-0.2**
CCIG				IAmb	IAmb	04 20 59.3	
	comp=Z,104nm,1.3s						
CCIG					**pP**	**04 23 00.6**	**+0.4**
KSCO	**Kaye Shedlock'**	**92.70**	**49**	P	**P**	**04 20 55.5**	**+0.3**
	baz=245,SNR=26						
KSCO	**Kaye Shedlock'**	**92.70**	**49**	P	**P**	**04 20 55.3**	**0.0**
	baz=245,SNR=26						
KSCO				S	**S**	**04 31 14.1**	**+2.9**
	baz=245						
EDM	**Edmonton**	**92.80**	**33**	IAmb	IAmb	04 20 58.4	
	comp=Z,104nm,1.2s						
MT03	**Universidad Ad**	**92.84**	**127**	IAmb	IAmb	04 20 59.8	
	comp=Z,62nm,1.1s						
PEL	**Peldehue**	**92.87**	**127**	P	**P**	**04 20 56.4**	**+0.2**
PEL				IAmb	IAmb	04 20 59.9	
	comp=Z,120nm,1.2s						
PEL	**Peldehue**	**92.87**	**127**	P	**P**	**04 20 56.4**	**+0.2**
PEL				pmax	pmax		
	comp=Z,120nm,1.2s						
LMEL	**Las Melosas**	**92.91**	**128**	P	**P**	**04 20 57.5**	**+1.0**
DGPR	**DIGLIPUR**	**93.10**	**283**	*i* x	**P**	**04 20 58.6**	**+1.2**
A21K	**Barrow**	**93.23**	**7**	P	**P**	**04 20 57.1**	**+0.5**
	baz=201						
A21K				S	**S**	**04 31 10.3**	**-3.8**
	baz=201						
435B	**Jarrell**	**93.23**	**58**	IAmb	IAmb	04 21 00.9	
	comp=Z,72nm,0.9s						
435B	**Jarrell**	**93.23**	**58**	P	**P**	**04 20 57.9**	**+0.2**
	baz=248,SNR=6.9						
435B	**Jarrell**	**93.23**	**58**	P	**P**	**04 20 57.6**	**-0.1**
	baz=248						
435B				S	**S**	**04 31 19.9**	**+3.9**
	baz=248						
CIT	**Chita**	**93.41**	**325**	*e*P	**P**	**04 20 57.6**	**-0.5**
CIT				pmax	pmax		
	comp=Z,372nm,2.0s						
CO02	**Combarbal**	**93.51**	**125**	IAmb	IAmb	04 21 03.0	
	comp=Z,143nm,1.1s						
LAO	**LASA Array**	**93.64**	**41**	IAmb	IAmb	04 21 03.2	
	comp=Z,70nm,0.8s						
LAO	**LASA Array**	**93.64**	**41**	P	**P**	**04 20 59.5**	**+0.3**
	baz=243,SNR=60						
LAO	**LASA Array**	**93.64**	**41**	P	**P**	**04 20 59.6**	**+0.3**
	baz=243,SNR=60						
LAO				S	**S**	**04 31 22.6**	**+3.6**
	baz=243						
WHTX	**Lake Whitney,**	**93.79**	**57**	P	**P**	**04 20 58.6**	**-1.7**
	baz=248						
WHTX				S	**S**	**04 31 23.7**	**+2.9**
	baz=248						
WMOK	**Wichita Mounta**	**93.81**	**54**	P	**P**	**04 20 59.3**	**-1.0**
	baz=247						
WMOK				S	**S**	**04 31 24.4**	**+3.6**
	baz=247						
RSSD	**Black Hills**	**93.89**	**44**	P	**P**	**04 21 00.3**	**-0.4**
RSSD				IAmb	IAmb	04 21 03.5	
	comp=Z,56nm,0.8s						
RSSD	**Black Hills**	**93.89**	**44**	P	**P**	**04 21 00.3**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,56nm,0.8s						
RSSD	**Black Hills**	**93.89**	**44**	P	**P**	**04 20 60.0**	**-0.7**
	baz=245,SNR=61						
RSSD	**Black Hills**	**93.89**	**44**	P	**P**	**04 21 00.3**	**-0.4**
	baz=245						
RSSD				S	**S**	**04 31 24.6**	**+3.0**
	baz=245						
OGNE	**Ogallala**	**93.91**	**48**	IAmb	IAmb	04 21 03.7	
	comp=Z,82nm,1.3s						
OGNE	**Ogallala**	**93.91**	**48**	P	**P**	**04 21 00.8**	**+0.1**
	baz=246						
OGNE	**Ogallala**	**93.91**	**48**	P	**P**	**04 21 00.4**	**-0.3**
	baz=246						
OGNE				S	**S**	**04 31 25.6**	**+4.0**
	baz=246						
GO04	**Tololo Observa**	**94.13**	**124**	IAmb	IAmb	04 21 05.6	
	comp=Z,82nm,1.2s						
U32A	**Winter Ranch,**	**94.28**	**53**	IAmb	IAmb	04 21 05.4	
	comp=Z,58nm,0.9s						
U32A	**Winter Ranch,**	**94.28**	**53**	P	**P**	**04 21 02.4**	**0.0**
	baz=247,SNR=7.2						
HKT	**Hockley**	**94.33**	**60**	P	**P**	**04 21 03.2**	**+0.6**
HKT				IAmb	IAmb	04 21 07.4	
	comp=Z,58nm,1.2s						
HKT	**Hockley**	**94.33**	**60**	P	**P**	**04 21 03.2**	**+0.6**
HKT				pmax	pmax		
	comp=Z,58nm,1.3s						
Z35A	**Perchaven, San**	**94.45**	**56**	IAmb	IAmb	04 21 06.1	
	comp=Z,60nm,0.9s						
X34A	**Smith Ranch, M**	**94.48**	**55**	IAmb	IAmb	04 21 06.8	
	comp=Z,116nm,1.4s						
CBKS	**Cedar Bluff**	**94.68**	**50**	IAmb	IAmb	04 21 07.3	
	comp=Z,94nm,0.9s						
CBKS	**Cedar Bluff**	**94.68**	**50**	P	**P**	**04 21 03.9**	**-0.3**
	baz=247,SNR=8.3						
CBKS	**Cedar Bluff**	**94.68**	**50**	P	**P**	**04 21 04.0**	**-0.2**
	baz=247						
CBKS				S	**S**	**04 31 30.9**	**+2.7**
	baz=247						
LCO	**Las Campanas**	**94.73**	**123**	P	**P**	**04 21 05.5**	**+0.5**
LCO	**Las Campanas**	**94.73**	**123**	P	**P**	**04 21 05.5**	**+0.5**
LCO				pmax	pmax		
	comp=Z,34nm,1.1s						
INK	**Inuvik**	**94.81**	**15**	pP	pP	04 23 12.1	+2.6
	comp=Z,17nm,1.1s,baz=196,slow=6.6,SNR=4.1						
INK	**Inuvik**	**94.81**	**15**	IAmb	IAmb	04 21 07.3	
	comp=Z,75nm,1.2s						
INK	**Inuvik**	**94.81**	**15**	P	**P**	**04 21 04.4**	**+0.4**
	baz=222						
INK				S	**S**	**04 31 25.2**	**-2.7**
	baz=222						
FNO	**Franklin**	**95.06**	**54**	IAmb	IAmb	04 21 09.6	
	comp=Z,63nm,0.9s						
ZON	**Zonda**	**95.11**	**126**	IAmb	IAmb	04 21 10.4	
	comp=Z,66nm,1.3s						
ULN	**Ulaanbaatar**	**95.21**	**319**	P	**P**	**04 21 06.0**	**-0.5**
ULN				IAmb	IAmb	04 21 08.9	
	comp=Z,54nm,1.0s						
ULN	**Ulaanbaatar**	**95.21**	**319**	P	**P**	**04 21 06.0**	**-0.5**
ULN				pmax	pmax		
	comp=Z,55nm,1.0s						
R32A	**Long Quarter,**	**95.27**	**51**	P	**P**	**04 21 06.9**	**+0.1**
	baz=248,SNR=32						
SONM	**Songino Array**	**95.60**	**319**	P	**P**	**04 21 07.3**	**-1.0**
	comp=Z,9.2nm,0.5s,baz=118,slow=3.6,SNR=23						
	comp=Z,9.2nm,0.5s						
SONM	**Songino Array**	**95.60**	**319**	P	**P**	**04 21 07.1**	**-1.1**
SONM				IAmb	IAmb	04 21 10.5	
	comp=Z,54nm,1.3s						
DGMT	**Dagmar**	**95.65**	**40**	IAmb	IAmb	04 21 11.8	
	comp=Z,82nm,0.8s						
DGMT	**Dagmar**	**95.65**	**40**	P	**P**	**04 21 09.1**	**+0.8**
	baz=245						
DGMT	**Dagmar**	**95.65**	**40**	P	**P**	**04 21 08.5**	**+0.2**
	baz=245,SNR=18						
DGMT				S	**S**	**04 31 41.9**	**+5.9**
	baz=245						
CRIN	**San Cristobal**	**95.97**	**79**	IAmb	IAmb	04 21 16.6	
	comp=Z,68nm,0.7s						
BOD	**Bodaibo**	**96.08**	**330**	*e*P	**P**	**04 21 08.4**	**-1.6**
BOD				pmax	pmax		
	comp=Z,76nm,2.0s						
T35B	**Sooner Cattle**	**96.33**	**53**	P	**P**	**04 21 12.4**	**+0.8**
	baz=249						
X37A	**Clayton**	**96.37**	**56**		**P**	**04 21 11.4**	**-0.4**
X37A				pP	**pP**	**04 23 17.2**	**+0.2**
X37A	**Clayton**	**96.37**	**56**	P	**P**	**04 21 11.6**	**-0.2**
	baz=249,SNR=5.8						
TUL1	**Leonard**	**96.51**	**54**	Pdiff	**P**	**04 21 12.1**	**-0.3**
	baz=249						
TUL1				S	**S**	**04 31 47.2**	**+3.3**
	baz=249						
GTA	**Gaotai**	**96.69**	**310**	⇓P	**P**	**04 21 13.5**	**+0.2**
GTA				sP	sP	04 24 20.0	+4.4
GTA				SKS	**SKSac**	**04 30 57.0**	**+1.9**
GTA				S	**ScS**	**04 31 48.5**	**+2.9**
GTA				pmax	pmax		
	comp=Z,39nm,1.5s						
GTA				pmax	pmax		
	comp=Z,540nm,6.9s						
BGNE	**Belgrade**	**96.79**	**48**	P	**P**	**04 21 14.5**	**+0.9**
	baz=248,SNR=7.4						
BGNE	**Belgrade**	**96.79**	**48**	Pdiff	**P**	**04 21 13.8**	**+0.2**
	baz=248						
BGNE				S	**S**	**04 31 50.7**	**+4.6**
	baz=248						
K31A	**O'Neill**	**96.82**	**47**	P	**P**	**04 21 13.9**	**+0.1**
	baz=248,SNR=6.2						
ATAH	**Atahualpa**	**97.04**	**100**	P	**P**	**04 21 15.0**	**-0.9**
	comp=Z,2.7nm,0.6s,baz=321,slow=13,SNR=1.7						
	comp=Z,2.7nm,0.6s						
E28A	**Huff**	**97.05**	**43**	IAmb	IAmb	04 21 17.1	
	comp=Z,38nm,0.8s						
E28A	**Huff**	**97.05**	**43**	P	Pdif	04 21 14.1	-0.5
	baz=247,SNR=9.3						
KSU1	**Kansas State U**	**97.05**	**51**	IAmb	IAmb	04 21 18.5	
	comp=Z,44nm,0.9s						
KSU1	**Kansas State U**	**97.05**	**51**	Pdiff	Pdif	04 21 15.2	+0.4
	baz=249						
JTS	**Las Juntas de**	**97.09**	**82**	P	Pdif	04 21 15.9	+0.4
JTS					pP	04 23 21.8	+0.9
JTS	**Las Juntas de**	**97.09**	**82**	P	Pdif	04 21 15.9	+0.4
YKA	**Yellowknife Ar**	**97.14**	**25**	P	Pdif	04 21 13.9	-0.6
	comp=Z,13nm,0.9s,baz=242,slow=4.4,SNR=46						
YKA				pP	pP	04 23 21.3	+1.3
	comp=Z,6.9nm,1.1s,baz=235,slow=4.2,SNR=3.4						
YKA				PP	**PP**	**04 25 15.4**	**-5.5**
	comp=Z,7.0nm,1.0s,baz=240,slow=7.1,SNR=4.4						
YKA				ScS	**S**	**04 31 48.3**	**+0.4**
	comp=Z,3.8nm,1.2s,baz=248,slow=7.7,SNR=4.6						
YKA				PKKPbc	**PKKPbc**	**04 37 46.7**	**-6.9**
	comp=Z,1.6nm,0.5s,baz=43,slow=2.5,SNR=8.7						
YKA				PKPPKP		04 46 02.1	
	comp=Z,1.2nm,1.0s,baz=58,slow=2.7,SNR=5.3						
	comp=Z,13nm,0.9s						
SUSD	**Miller**	**97.37**	**45**	IAmb	IAmb	04 21 19.0	
	comp=Z,24nm,0.8s						
SUSD	**Miller**	**97.37**	**45**	Pdiff	Pdif	04 21 15.7	-0.3
	baz=248						
MIAR	**Mount Ida**	**97.74**	**56**	Pdiff	Pdif	04 21 17.8	-0.1
	baz=250						
W39A	**Magazine**	**97.80**	**55**	P	**P**	**04 21 19.9**	**+1.7**
	baz=250,SNR=6.5						

W39A	Magazine	97.80	55	Pdiff	P	04 21 18.4	+0.2
	baz=250						
C36M	Paulatuk	98.01	17	Pdiff	P	04 21 18.8	+0.5
	baz=230						
HHAR	Hobbs	98.05	54		Pdif	04 21 19.1	-0.3
MDND	Maddock	98.22	42	Pdiff	P	04 21 20.9	+1.1
	baz=248						
SHL	Shillong	98.23	294	i x	P	04 21 23.1	+2.5
SHL	Shillong	98.23	294	P	P	04 21 21.1	+0.5
	SNR=16						
ZAK	Zakamensk	98.49	321	eP	Pdif	04 21 19.8	-1.2
ZAK				pmax	pmax		
	comp=Z,32nm,1.9s						
ECSD	EROS Data Cent	98.68	47	P	Pdif	04 21 21.5	-0.5
	baz=250						
ECSD	EROS Data Cent	98.68	47	Pdiff	Pdif	04 21 21.7	-0.3
	baz=250						
U40A	Yellville	98.90	55	P	P	04 21 24.3	+1.1
	baz=251,SNR=18						
U40A				P	P	04 21 24.3	+1.1
	baz=251,SNR=18						
U40A	Yellville	98.90	55	Pdiff	Pdif	04 21 22.7	-0.4
	baz=251						
TIXI	Tiksi	98.94	345	P	Pdif	04 21 21.0	-1.4
	comp=Z,7.7nm,0.8s,baz=270,slow=24,SNR=17						
TIXI				PKKPbc	PKKPbc	04 37 45.4	-3.4
	comp=Z,1.6nm,0.3s,baz=91,slow=10.0,SNR=3.0						
	comp=Z,7.7nm,0.8s						
W41B	Gary Mavity, V	98.98	56	P	P	04 21 24.6	+1.1
	baz=251,SNR=7.3						
W41B	Gary Mavity, V	98.98	56	Pdiff	Pdif	04 21 23.4	0.0
	baz=251						
S39A	Bolivar	98.99	53	P	P	04 21 23.7	+0.1
	baz=251						
LVC	Limon Verde	99.06	118	eP	Pdif	04 21 26.9	+2.3
GOMU	GeErMu	99.31	305	P	Pdif	04 21 26.5	+1.1
GOMU				SKS		04 31 08.0	
A36M	Sachs Harbour	99.41	15	Pdiff	Pdif	04 21 24.8	+0.3
	baz=230						
F33A	5 Mile Ranch,	99.63	45	P	Pdif	04 21 25.9	-0.2
	baz=250,SNR=16						
R40A	Maddies Statio	99.97	53	P	Pdif	04 21 27.6	-0.2
	baz=251,SNR=18						
LSA	Lhasa	100.17	298	P	Pdif	04 21 30.3	+0.8
LSA	Lhasa	100.17	298	Pdiff	Pdif	04 21 30.8	+1.4
MOY	Mondy	100.31	321	eP	Pdif	04 21 27.1	-2.0
MOY				pmax	pmax		
	comp=Z,37nm,2.6s						
CCM	Cathedral Cave	100.66	53	P	Pdif	04 21 30.7	-0.2
	baz=252,SNR=9.5						
CCM	Cathedral Cave	100.66	53	Pdiff	Pdif	04 21 31.1	+0.2
	baz=252						
AGMN	Agassiz Nation	100.73	42	P	Pdif	04 21 32.3	+1.4
	baz=251						
I37B	Waseca	100.97	47	P	Pdif	04 21 33.1	+1.0
	baz=252						
FVM	French Village	101.25	54	P	Pdif	04 21 33.2	-0.3
	baz=252,SNR=6.5						
ULM	Lac du Bonnet	101.36	41	P	Pdif	04 21 33.2	-0.4
	comp=Z,2.1nm,0.5s,baz=249,slow=3.1,SNR=2.9						
ULM				pP	pwP	04 23 42.1	-0.1
	comp=Z,4.6nm,0.8s,baz=253,slow=7.1,SNR=4.7						
ULM				PP	PP	04 25 43.5	-9.2
	comp=Z,10nm,1.0s,baz=250,slow=9.7,SNR=3.7						
ULM				PKKPbc	PKKPbc	04 37 39.0	-2.4
	comp=Z,5.8nm,0.9s,baz=52,slow=2.9,SNR=5.2						
F36A	Milaca	101.46	45	P	Pdif	04 21 34.2	0.0
	baz=252,SNR=16						
SPMN	Marine on St.	101.75	46	P	Pdif	04 21 36.4	+0.9
	baz=252,SNR=7.9						
SPMN	Marine on St.	101.75	46	Pdiff	Pdif	04 21 35.5	0.0
	baz=252						
KNGR	Kungurtug, Tuv	102.02	320	i P	Pdif	04 21 37.4	+0.6
KNGR				pmax	pmax		
	comp=Z,14nm,1.2s						
B35A	Bob, Littlefor	102.10	43	P	Pdif	04 21 38.5	+1.5
	baz=252						
PALK	Pallekele	102.41	273	P	Pdif	04 21 41.6	+2.4
	comp=Z,18nm,1.0s,baz=207,slow=5.9,SNR=3.2						
PALK				PKiKP	PKiKP	04 25 57.8	+0.6
	comp=Z,41nm,1.0s,baz=146,slow=3.6,SNR=6.5						
PALK	Pallekele	102.41	273	P	Pdif	04 21 41.6	+2.4
PALK				i		04 25 58.4	
LPAZ	La Paz	102.54	113	P	Pdif	04 21 42.2	+1.7
	comp=Z,15nm,1.0s,baz=212,slow=3.2,SNR=30						
LPAZ				PP	PP	04 26 02.6	+0.2
	comp=Z,12nm,1.2s,baz=242,slow=7.4,SNR=7.9						
LPAZ				PKKPbc	PKKPbc	04 37 38.5	+0.5
	comp=Z,8.1nm,0.7s,baz=52,slow=2.6,SNR=14						
JFWS	Jewell Farm	102.83	49	P	Pdif	04 21 40.8	+0.4
	baz=253,SNR=8.4						
JFWS	Jewell Farm	102.83	49	Pdiff	Pdif	04 21 41.3	+0.9
	baz=253						
EYMN	Ely	103.41	44	Pdiff	Pdif	04 21 43.2	+0.4
	baz=254						
ROSC	El Rosal	105.16	91	PP	PP	04 26 22.6	+0.9
	comp=Z,4.3nm,0.5s,baz=137,slow=2.2,SNR=8.9						
ROSC				PKKPbc	PKKPbc	04 37 30.9	+1.1
	comp=Z,21nm,0.7s,baz=120,slow=5.9,SNR=5.8						
CPUP	Villa Florida	106.31	127	PP	PP	04 26 29.1	+0.3
	comp=Z,6.6nm,1.0s,baz=245,slow=7.7,SNR=7.6						
CPUP				SKP		04 28 45.8	
	comp=Z,3.3nm,0.9s,baz=279,slow=2.5,SNR=4.5						
CPUP				PKKPbc	PKKPbc	04 37 23.7	-2.7
	comp=Z,4.9nm,0.9s,baz=40,slow=2.8,SNR=5.2						
WMQ	Urumqi	106.67	311	ePdif	Pdif	04 21 58.3	+0.8
WMQ				PP	PP	04 26 32.5	+0.7
WMQ				AMB	AMB		
	comp=Z,2µm,6.9s						
HYBB	Hyderabad (bro	107.58	282	ePKiKP	PKiKP	04 26 05.8	-0.8
RES	Resolute Bay	108.35	16	PKKP	PKKPab	04 37 33.7	+0.2
	comp=Z,10nm,0.9s,baz=88,slow=3.0,SNR=6.1						
SIV	San Ignacio	108.68	116	PP	PP	04 26 47.5	+1.2
	comp=Z,29nm,1.3s,baz=239,slow=9.7,SNR=21						
ZSN	Zaisan	109.34	314	ePKiKP	PKiKP	04 26 08.2	-0.8
	baz=314						
ZSN				i PP	PP	04 26 48.8	-2.0
	baz=314						
ZALV	Zalesovo Beam	110.36	321	Pdiff	Pdif	04 22 12.8	-0.8
	comp=Z,1.7nm,0.6s,baz=133,slow=4.6,SNR=7.4						
ZALV				PKiKP	PKiKP	04 26 09.3	-1.4
	comp=Z,33nm,0.6s,baz=120,slow=0.7,SNR=64						
ZALV				PP	PP	04 26 59.7	+1.9
	comp=Z,14nm,0.8s,baz=118,slow=5.2,SNR=4.7						
ZALV				SKP	SKPdf	04 28 51.8	-0.2
	comp=Z,12nm,0.9s,baz=140,slow=1.1,SNR=5.6						
ZALV				S	SKSac	04 31 51.1	-5.3
	comp=Z,7.6nm,0.9s,baz=72,slow=4.7,SNR=4.6						
ZALV				PKKPab	PKKPab	04 37 26.2	+1.3
	comp=Z,1.4nm,0.4s,baz=286,slow=5.5,SNR=4.1						
ZALV				SKKPbc	SKKPbc	04 39 59.3	-5.6
	comp=Z,2.1nm,0.6s,baz=271,slow=3.9,SNR=3.6						
NRIK	Noril'sk	110.66	338	Pdiff	Pdif	04 22 13.9	-0.7
	comp=Z,1.9nm,0.6s,baz=70,slow=4.8,SNR=6.8						
NRIK				PKiKP	PKiKP	04 26 10.2	-0.7
	comp=Z,10nm,0.5s,baz=126,slow=2.7,SNR=13						
NRIK				SKP	SKPdf	04 28 54.6	+2.6
	comp=Z,12nm,0.8s,baz=147,slow=3.3,SNR=5.3						
NRIK				S	SKSac	04 31 56.3	-0.7
	comp=Z,1.2nm,0.3s,baz=237,slow=20,SNR=6.1						
MK31	Makanchi Array	110.97	313	i PKIKP	PKiKP	04 26 10.8	-1.4
MKAR	Makanchi Array	110.97	313	Pdiff	Pdif	04 22 15.3	-1.2
	comp=Z,5.7nm,0.6s,baz=96,slow=6.1,SNR=26						
MKAR				PKiKP	PKiKP	04 26 10.8	-1.4
	comp=Z,39nm,0.8s,baz=105,slow=0.8,SNR=51						
MKAR				SKP	SKPdf	04 28 54.1	+0.7
	comp=Z,11nm,0.9s,baz=59,slow=4.7,SNR=4.2						
MKAR				PKKPbc	PKKPbc	04 37 12.3	+0.2
	comp=Z,2.2nm,0.5s,baz=269,slow=2.4,SNR=10.0						
MKAR				PKKPab	PKKPab	04 37 24.3	+1.8
	comp=Z,4.7nm,0.9s,baz=264,slow=4.9,SNR=7.8						
MKAR				SKKPbc	SKKPbc	04 39 58.7	-4.0
	comp=Z,7.6nm,1.0s,baz=278,slow=2.6,SNR=8.3						
POO	Poona	112.19	282	eP	PKiKP	04 26 17.0	+1.6
SMLA	Simla	112.20	296	eP	Pdif	04 22 29.9	+7.6
PDGK	Podgornoye	112.44	309	PKIKP	PKiKP	04 26 13.3	-2.0
UZB	Uzynbulak	112.75	309	i PKIKP	PKiKP	04 26 13.5	-2.4
UZB	Uzynbulak	112.75	309	ePKiKP	PKiKP	04 26 13.6	-2.4
	baz=309						
SEM	Semipalatinsk	112.75	317	i PKIKP	PKiKP	04 26 14.3	-1.4
SEM	Semipalatinsk	112.75	317	ePKiKP	PKiKP	04 26 14.3	-1.4
	baz=317						
BHK	Bhakra	112.88	296	ex	PKiKP	04 26 12.0	-4.3
BHK	Bhakra	112.88	296	ex	PKiKP	04 26 12.0	-4.3
KPKS	Kokpek	113.04	309	i PKIKP	PKiKP	04 26 15.6	-0.8
KPKS	Kokpek	113.04	309	ePKiKP	PKiKP	04 26 15.6	-0.8
	baz=310						
ZHN	Zhinishke	113.18	309	i PKIKP	PKiKP	04 26 15.6	-1.0
ZHN	Zhinishke	113.18	309	ePKiKP	PKiKP	04 26 15.7	-1.0
	baz=309						
SATY	Saty	113.19	309	i PKIKP	PKiKP	04 26 15.4	-1.3
SATY	Saty	113.19	309	ePKiKP	PKiKP	04 26 15.4	-1.3
	baz=309						
TDK	Taldyqorghan	113.42	311	i PKIKP	PKiKP	04 26 15.9	-1.0
TDK	Taldyqorghan	113.42	311	ePKiKP	PKiKP	04 26 16.0	-1.0
	baz=311						
KURK	Kurchatov	113.81	317	i PKIKP	PKiKP	04 26 16.3	-1.1
KURBB	Kurchatov Arra	113.86	317	Pdiff	Pdif	04 22 30.6	+1.3
	comp=Z,0.7nm,0.6s,baz=94,slow=4.2,SNR=5.6						
KURBB				PKiKP	PKiKP	04 26 16.3	-1.3
	comp=Z,39nm,0.8s,baz=95,slow=1.9,SNR=100						
KURBB				PP	PP	04 27 16.6	-5.9
	comp=Z,15nm,0.9s,baz=96,slow=6.4,SNR=13						
KURBB				SKP	SKPdf	04 28 59.0	+0.2
	comp=Z,22nm,0.9s,baz=99,slow=1.9,SNR=6.9						
KURBB				PKKPbc	PKKPbc	04 37 04.1	+1.5
	comp=Z,3.8nm,1.0s,baz=274,slow=4.4,SNR=9.4						
KURBB				SKKPbc	SKKPbc	04 39 50.4	-4.0
	comp=Z,16nm,0.9s,baz=275,slow=3.6,SNR=24						
KURBB	Kurchatov Arra	113.86	317	PKIKP	PKiKP	04 26 15.7	-1.8
MDOK	Medeo	114.19	309	i PKIKP	PKPdf	04 26 17.5	-1.1
MDOK	Medeo	114.19	309	ePKiKP	PKPdf	04 26 17.5	-1.1
	baz=309						
TNSS	Tian-Shan	114.25	309	i PKIKP	PKPdf	04 26 17.8	-1.3
TNSS				e		04 27 24.3	
TNSS	Tian-Shan	114.25	309	ePKiKP	PKPdf	04 26 17.9	-1.2
	baz=309						
TNSS				ePP	PP	04 27 24.3	-1.6
	baz=309						
AAA	Alma-Ata	114.29	309	i PKIKP	PKPdf	04 26 17.7	-1.0
AAA	Alma-Ata	114.29	309	ePKiKP	PKPdf	04 26 17.7	-1.0
	baz=309						
CHKK	Chushkaly	114.31	310	i PKIKP	PKPdf	04 26 17.2	-1.5
CHKK	Chushkaly	114.31	310	ePKiKP	PKPdf	04 26 17.2	-1.4
	baz=310						
PAL	Palisades	114.36	53	SKPdf	SKiKP	04 29 01.3	+1.2
KSH	Kashi	114.55	305	PKP	PKiKP	04 26 19.5	+0.1
KSH				PP	PP	04 27 30.3	+2.5
KSH				SKKS		04 33 28.5	
ULHL	Ulahol	114.68	308	P	PKPdf	04 26 19.4	-0.3
	SNR=22						
TRY	Troy	114.74	52		PKPdf	04 26 19.2	-0.3
TRY				SKPdf	SKPdf	04 28 59.7	-1.0
KSCT	Kent School, K	114.77	53		PKPdf	04 26 19.5	0.0
KSCT				SKPdf	SKiKP	04 29 01.0	+0.1
KUU	Kurty	114.78	310	i PKIKP	PKPdf	04 26 18.2	-1.4
KUU				i		04 27 27.2	
KUU	Kurty	114.78	310	ePKiKP	PKPdf	04 26 18.2	-1.4
	baz=310						
KUU				i PP	PP	04 27 27.2	-1.8
	baz=310						
BOOM	Boomskoye usch	114.92	308		PKPdf	04 26 19.4	-0.7
BOOM				SKPdf	SKiKP	04 29 01.8	+0.4
TKM2	Tokmak 2	115.22	309	P	PKPdf	04 26 18.7	-2.1
	SNR=36						
TKM2	Tokmak 2	115.22	309	PKIKP	PKPdf	04 26 18.8	-1.9
J61A	Chester	115.61	51		PKPdf	04 26 20.4	-0.8
J61A				SKPdf	SKiKP	04 29 03.4	+0.9
KBK	Karagaybulak	115.67	308	P	PKPdf	04 26 20.8	-0.8
	SNR=13						
CHMS	Chumysh	115.84	309	P	PKPdf	04 26 20.4	-1.3
	SNR=15						
NIL	Nilore	115.90	298		PKPdf	04 26 20.7	-1.4
NIL	Nilore	115.90	298	PKIKP	PKPdf	04 26 20.7	-1.4
UCH	Uchtor	115.95	308	P	PKPdf	04 26 22.2	-0.2
	SNR=45						
SGDS	Sogindy	115.97	309	i PKIKP	PKPdf	04 26 20.5	-1.4
SGDS				e		04 27 36.0	
SGDS	Sogindy	115.97	309	i PKiKP	PKPdf	04 26 20.6	-1.4
	baz=309						
SGDS				ePP	PP	04 27 36.0	-1.4
	baz=309						
AAK	Ala-Archa	116.00	308	P	PKPdf	04 26 21.1	-1.0
	SNR=17						
AAK	Ala-Archa	116.00	308	PKP	PKPdf	04 26 21.4	-0.8
	comp=Z,22nm,0.9s,baz=162,slow=3.3,SNR=28						
AAK				PP	PP	04 27 31.2	-6.5
	comp=Z,6.9nm,0.8s,baz=117,slow=4.2,SNR=4.4						
AAK				PKKPab	PKKPab	04 36 58.0	-2.5
	comp=Z,7.9nm,0.8s,baz=265,slow=4.7,SNR=3.9						
AAK	Ala-Archa	116.00	308		PKPdf	04 26 21.1	-1.0
AAK	Ala-Archa	116.00	308	i PKPdf	PKPdf	04 26 17.1	-5.1
	SNR=18						
USP	Ospenovka	116.05	309	P	PKPdf	04 26 21.3	-0.8
	SNR=22						
BTLS	Baital	116.51	311	i PKIKP	PKPdf	04 26 21.6	-1.2
BTLS	Baital	116.51	311	i PKiKP	PKPdf	04 26 21.6	-1.2
	baz=311						
EKS2	Erkin-Say	116.53	308	P	PKPdf	04 26 22.7	-0.4
	SNR=20						
AML	Almayashu	116.55	308	P	PKPdf	04 26 22.6	-1.0
	SNR=45						
AML	Almayashu	116.55	308	P	PKPdf	04 26 22.5	-1.0
AML	Almayashu	116.55	308	i PKPdf	PKPdf	04 26 22.0	-1.6
	SNR=46						
SJG	San Juan	116.80	80	SKP	SKPdf	04 29 04.4	-1.0
	comp=Z,87nm,0.9s,baz=162,slow=1.0,SNR=16						
SJG				PKKPbc	PKKPbc	04 36 50.1	-1.9
	comp=Z,8.6nm,0.6s,baz=45,slow=4.6,SNR=6.8						
SJG	San Juan	116.80	80		PKPdf	04 26 22.8	-1.3
SJG				SKPdf	SKPdf	04 29 04.7	-0.8
SJG	San Juan	116.80	80	PKIKP	PKPdf	04 26 22.8	-1.3
PDPR	Patillas Dam,	116.89	80		PKPdf	04 26 23.4	-0.9
PDPR				SKPdf	SKPdf	04 29 04.3	-1.3
BRZS	Berezniki	117.59	316	i PKIKP	PKPdf	04 26 23.1	-1.7
BRZS	Berezniki	117.59	316	i PKiKP	PKPdf	04 26 23.1	-1.7
	baz=316						
OTUK	Ortayu	117.80	314	PKIKP	PKPdf	04 26 23.7	-1.6
D62A	Allapoint, All	118.28	47		PKPdf	04 26 24.8	-1.4
D62A				PP	PP	04 27 50.2	-2.7
D62A				SKPdf	SKiKP	04 29 07.7	+0.1
DZA	Taraz	118.34	308	i PKIKP	PKPdf	04 26 25.5	-0.9
DZA	Taraz	118.34	308	ePKiKP	PKPdf	04 26 25.6	-0.9
	baz=308						
VOI	Vohitsoka	118.50	229		PKPdf	04 26 26.3	-1.3
VOI				SKPdf	SKiKP	04 29 08.0	-1.2
VOI	Vohitsoka	118.50	229	PKP	PKiKP	04 26 28.4	+0.8
NOR	Nord	118.77	3	eP	PKPdf	04 26 25.8	-0.5
NOR	Nord	118.77	3	IAmb	IAmb	04 36 51.0	
	comp=Z,5.2nm,0.9s						
NOR				eP	PKKPab	04 36 47.0	-0.3
KK31	Karatay Array	118.95	308	i PKIKP	PKPdf	04 26 26.5	-1.1
BRVK	Borovoye	119.00	320		PKPdf	04 26 26.2	-1.2
BRVK				PP	PP	04 27 53.2	-4.4
BRVK				SKPdf	SKiKP	04 29 09.4	+0.5
BRVK	Borovoye	119.00	320	PKIKP	PKPdf	04 26 26.2	-1.2
UPNV	Upernavik	119.22	17	eP	PKPdf	04 26 25.6	-1.6
IUG	Iuzhnay	119.27	307	i PKIKP	PKPdf	04 26 27.5	-0.9
IUG	Iuzhnay	119.27	307	i PKiKP	PKPdf	04 26 27.6	-0.9
	baz=307						
G65A	Princeton	119.29	49		PKPdf	04 26 27.2	-0.9
G65A				PP	PP	04 27 56.4	-3.4
G65A				SKPdf	SKiKP	04 29 10.5	+0.7
SCHQ	Schefferville	119.39	38	PKP	PKPdf	04 26 26.1	-1.9
	comp=Z,9.4nm,0.9s,baz=274,slow=3.6,SNR=7.3						
SCHQ				PP	PP	04 27 52.2	-8.0
	comp=Z,16nm,1.2s,baz=272,slow=11,SNR=3.4						
SCHQ				PKKPbc	PKKPbc	04 36 42.5	-1.2
	comp=Z,7.5nm,0.7s,baz=177,slow=4.4,SNR=7.7						
KBL	Kabul	119.48	299		PKPdf	04 26 28.7	-0.5
KBL				SKPdf	SKiKP	04 29 13.0	+2.2
KBL	Kabul	119.48	299	PKIKP	PKPdf	04 26 28.7	-0.5
KBL	Kabul	119.48	299	P	PKPdf	04 26 28.6	-0.5
	SNR=66						
BDFB	Brasilia	119.52	123	PKP	PKPdf	04 26 28.6	-1.1
	comp=Z,3.3nm,0.6s,baz=178,slow=1.6,SNR=7.5						
BDFB				SKP	SKPdf	04 29 10.2	-0.7
	comp=Z,28nm,0.9s,baz=139,slow=1.9,SNR=11						
BDFB				PKKPbc	PKKPbc	04 36 43.5	+0.6
	comp=Z,19nm,0.6s,baz=96,slow=2.2,SNR=23						
CHM	Chimkent	119.59	308	PKIKP	PKPpre	04 26 19.6	
CHGR	Chuyangaron	119.74	303		PKPdf	04 26 29.0	-0.4
CHGR				PP	PP	04 28 00.8	-2.5
CHGR				SKPdf	SKiKP	04 29 11.9	+0.9
TAS	Tashkent	119.78	306		PKPdf	04 26 29.2	0.0
TAS				SKPdf	SKiKP	04 29 12.3	+1.4
ABPO	Ambohimpanom	120.03	232		PKPdf	04 26 30.1	-0.6
ABPO	Ambohimpanom	120.03	232	PKIKP	PKPdf	04 26 30.1	-0.6
OPO	Ambohidratompo	120.33	232	PKP	PKiKP	04 26 31.6	+0.3
	comp=Z,64nm,0.9s,baz=109,slow=1.6,SNR=36						
NUUG	Nuugaatsiaq	120.59	18	eP	PKPdf	04 26 28.2	-1.7
MSEY	Mahe Island	121.10	251		PKPdf	04 26 32.7	0.0
MSEY	Mahe Island	121.10	251	PKIKP	PKPdf	04 26 32.7	0.0
MSEY	Mahe Island	121.10	251	P	PKiKP	04 26 32.8	-0.1
MSEY	Mahe Island	121.10	251	PKPdf	PKPdf	04 26 32.5	-0.2
SBV	Sambava	121.28	239	P	PKPdf	04 26 32.5	-0.4
SBV	Sambava	121.28	239	PKP	PKiKP	04 26 37.6	+4.5
KBS	Kingsbay	121.69	358		PKPdf	04 26 31.6	-0.2
KBS	Kingsbay	121.69	358	i PKIKP	PKPdf	04 26 31.8	-0.1
KBS	Kingsbay	121.69	358	ePKPdf	PKPdf	04 26 31.8	-0.1
KBS				IVmB_BB		04 26 34.7	
	comp=Z,1µm,1.5s						
SPA0	Spitsbergen Ar	122.20	356	ePKPdf	PKPdf	04 26 31.9	-1.0
SPA0				ePP	PP	04 28 18.6	+0.3
SPA0				eSP	SP	04 37 18.7	+3.8
SPITS	Spitsbergen Ar	122.20	356	PKKPbc	PKKPbc	04 36 32.6	-1.1
	comp=Z,9.0nm,0.8s,baz=167,slow=6.8,SNR=6.6						
ILULI	Ilulissat	122.33	20	i P	PKPdf	04 26 31.9	-1.4
DAG	Danmarks Havn	123.18	5	i P	PKPdf	04 26 32.7	-2.1
DAG	Danmarks Havn	123.18	5	IAmb	IAmb	04 36 31.4	
	comp=Z,7.7nm,0.9s						
DAG				eP	PKKPab	04 36 29.5	+1.5
HSPB	Hornsund (broa	123.39	356	ePKPdf	PKPdf	04 26 34.6	-0.6
SFJD	Kangerlussuaq	123.54	22	PKKPab	PKKPab	04 36 25.9	-0.6
	comp=Z,3.4nm,0.5s,baz=111,slow=8.6,SNR=4.2						
SFJD	Kangerlussuaq	123.54	22		PKPdf	04 26 34.2	-1.5
SFJD	Kangerlussuaq	123.54	22	PKIKP	PKPdf	04 26 34.2	-1.5
SFJD	Kangerlussuaq	123.54	22	eP	PKPdf	04 26 34.3	-1.3
SFJD	Kangerlussuaq	123.54	22	IAmb	IAmb	04 36 28.4	
	comp=Z,6.9nm,0.7s						
SFJD				eP	PKKPab	04 36 26.4	-0.2
SFJD				i P	PKKPab	04 36 27.6	+1.0
SUMG	Summit	123.68	13		PKPdf	04 26 36.1	-0.2
SUMG	Summit	123.68	13	PKIKP	PKPdf	04 26 36.1	-0.2
SUMG	Summit	123.68	13	i P	PKPdf	04 26 35.6	-0.7
SUMG				eP	PKiKP	04 26 35.8	-0.9
SUMG	Summit	123.68	13	IAmb	IAmb	04 36 29.9	
	comp=Z,8.1nm,0.9s						
SUMG				i P	PKKPab	04 36 27.0	+0.5
SUR	Sutherland	123.84	200	PKP	PKPdf	04 26 37.6	-0.1
	comp=Z,158nm,1.1s,baz=178,slow=1.8,SNR=91						
SUR				PKKPbc	PKKPbc	04 36 26.4	-1.5
	comp=Z,14nm,1.1s,baz=327,slow=4.9,SNR=7.3						
SUR				SKKPbc	SKKPbc	04 39 21.8	+2.0
	comp=Z,4.8nm,0.9s,baz=356,slow=2.8,SNR=5.1						
SUR	Sutherland	123.84	200	P	PKPdf	04 26 37.6	-0.1
SVE	Sverdlovsk	123.92	325c	iPKIKP	PKPdf	04 26 35.8	-0.9
SVE				pmax	pmax		
	comp=Z,203nm,1.0s						
NAN01	Guarapari, ES	124.07	130	eP	pPKPdf	04 28 60.0	+8.7
CNG	Changalane	124.34	214	i P	PKPdf	04 26 38.5	-0.1
CNG	Changalane	124.34	214	i P	PKPdf	04 26 38.5	-0.1
NUUK	Nuuk	124.40	25	eP	PKPdf	04 26 36.8	-0.6
GUA01	Guaratinga, BA	125.13	130	eP	pPKPdf	04 29 04.1	+11
ARU	Arti	125.13	325	PKP	PKPdf	04 26 38.6	-0.4
	comp=Z,84nm,0.7s,baz=76,slow=0.8,SNR=145						
ARU				SKKPbc	SKKPbc	04 39 13.8	-4.9
	comp=Z,3.1nm,0.6s,baz=253,slow=2.5,SNR=6.9						
ARU	Arti	125.13	325		PKPdf	04 26 37.8	-1.2
ARU	Arti	125.13	325	i PKIKP	PKPdf	04 26 38.4	-0.6
ARU						04 28 34.7	
ARU				PPP	PPP	04 31 23.6	
ARU						04 32 48.5	
ARU				SP	SP	04 37 37.6	-4.1
DBG	Daneborg	125.29	7	eP	PKPdf	04 26 37.9	-1.0
DY2G	Dye2	125.30	21	i P	PKPdf	04 26 38.2	-1.1
DY2G	Dye2	125.30	21	IAmb	IAmb	04 36 23.8	
	comp=Z,8.1nm,1.0s						
DY2G				eP	PKKPab	04 36 20.6	+1.2
MDP	Montagnes des	125.44	99	PKKPab	PKKPab	04 36 21.6	+0.8
	comp=Z,12nm,0.8s,baz=41,slow=3.1,SNR=13						
BJO1	Bjornoya	125.50	354	ePKPdf	PKPdf	04 26 39.4	+0.2
BJO1				eSS	SS	04 44 57.2	+3.0
BOSA	Boshof	125.62	206	PKP	PKPdf	04 26 41.1	-0.1
	comp=Z,55nm,0.9s,baz=133,slow=1.7,SNR=43						
BOSA				PKKPab	PKKPab	04 36 21.3	-0.5
	comp=Z,3.0nm,0.6s,baz=335,slow=5.2,SNR=10						
BOSA				SKKPbc	SKKPbc	04 39 14.9	+1.2
	comp=Z,15nm,1.0s,baz=330,slow=2.6,SNR=11						
BOSA	Boshof	125.62	206	i P	PKiKP	04 26 41.9	+0.3
BOSA	Boshof	125.62	206	i P	PKiKP	04 26 41.9	+0.3
ICESG	Greenland Ices	125.76	17	i P	PKPdf	04 26 38.9	-1.5
ICESG	Greenland Ices	125.76	17	IAmb	IAmb	04 36 23.7	
	comp=Z,6.2nm,1.1s						
ICESG				eP	PKKPab	04 36 18.2	+0.6
AB31	Akbulak array	125.89	316	i PKIKP	PKPdf	04 26 39.2	-1.5
CMC01	Camacan, BA	126.13	129	eP	pPKPdf	04 29 05.9	+11
WBK	Wadi Bani Khal	126.68	283	P	PKPdf	04 26 42.1	-1.0
	SNR=9.3						
AKTO	Aktyubinsk	126.90	318	PKhKP	PKPpre	04 26 31.4	
	comp=Z,1.7nm,0.6s,baz=93,slow=6.0,SNR=3.5						
AKTO				PKP	PKPdf	04 26 42.1	-0.5
	comp=Z,75nm,0.7s,baz=78,slow=2.4,SNR=103						
AKTO				SKKPbc	SKKPbc	04 39 05.4	-6.9
	comp=Z,4.0nm,0.7s,baz=252,slow=5.4,SNR=2.7						
MOPA	Mopani	127.01	215	i P	PKPdf	04 26 44.0	+0.2
MOPA	Mopani	127.01	215	i P	PKPdf	04 26 44.0	+0.2
WSAR	Wadi Sarin	127.09	284	P	PKPdf	04 26 43.2	-0.6
	SNR=11						
GDU01	Guandu, BA	127.15	127	eP	pPKPdf	04 29 08.1	+11
IVI	Ivigtut	127.18	28	eP	PKPdf	04 26 41.6	-1.2
MHTO	MHTO	127.31	281	P	PKPdf	04 26 43.0	-1.2
	SNR=26						
JMDO	Jabal Madar	127.43	283	P	PKPdf	04 26 43.4	-1.1
	SNR=15						
DQM	DQM	127.50	280	P	PKPdf	04 26 44.0	-0.6
	SNR=18						
SMDO	Samad	127.59	284	P	PKPdf	04 26 44.1	-0.8
	SNR=19						
BIDO	Bidbid	127.59	284	P	PKPdf	04 26 45.0	+0.3
	SNR=11						
BSY	Bisya	128.31	283	P	PKPdf	04 26 45.8	-0.4
	SNR=12						
HOQ	Hoqain	128.34	284	P	PKPdf	04 26 46.2	0.0
	SNR=14						
NRS	Narsarsuaq	128.38	27	eP	PKPdf	04 26 45.0	-0.1
NRS	Narsarsuaq	128.38	27	IAmb	IAmb	04 36 07.6	
	comp=Z,16nm,0.8s						
NRS				eP	Sdif	04 36 06.0	-2.7
GEYT	Alibeck	128.42	302	PKhKP	PKPpre	04 26 34.2	
	comp=Z,8.9nm,0.6s,baz=0.0,slow=1.8,SNR=9.6						
GEYT				PKP	PKPdf	04 26 46.0	+0.1
	comp=Z,67nm,0.9s,baz=173,slow=1.2,SNR=32						
GEYT				PP	PP	04 29 00.1	-0.3
	comp=Z,23nm,1.1s,baz=202,slow=7.4,SNR=8.2						
GEYT				SKPbc	SKPbc	04 29 14.2	
	comp=Z,82nm,1.1s,baz=95,slow=1.8,SNR=12						
GYA0B	ALIBECK ARRAY	128.42	302	PKPdf	PKPdf	04 26 46.3	+0.3
NBPN	Ponto Novo - B	128.46	124	eP	pPKPdf	04 29 06.4	+6.6
HAMF	Hammerfest	128.49	351	ePKPdf	PKPdf	04 26 44.2	-0.8
SCO	Scoresbysund	128.50	10	i P	PKPdf	04 26 45.3	+0.3
LVZ	Lovozero	128.57	345		PKPpre	04 26 38.2	
LVZ				PKPdf	PKPdf	04 26 45.2	-0.1
LVZ	Lovozero	128.57	345	PKIKP	PKPdf	04 26 45.2	-0.1
LBTB	Lobatse	128.62	209	PKP	PKPdf	04 26 47.2	+0.3
	comp=Z,38nm,0.9s,baz=164,slow=2.5,SNR=31						
LBTB				SKPbc	SKPbc	04 29 15.2	
	comp=Z,16nm,0.8s,baz=171,slow=6.5,SNR=4.9						
LBTB				SKKPbc	SKKPbc	04 39 05.5	+2.0
	comp=Z,15nm,0.9s,baz=313,slow=4.8,SNR=12						
LBTB	Lobatse	128.62	209	i P	PKPdf	04 26 46.7	-0.2
LBTB	Lobatse	128.62	209	i P	PKPdf	04 26 46.7	-0.2
KEV	Kevo	128.71	349		PKPdf	04 26 44.7	-0.8
KEV	Kevo	128.71	349	PKIKP	PKPdf	04 26 44.7	-0.8
SHAO	Shalim	128.88	277	P	PKPdf	04 26 47.7	+0.4
SOCY	Socotra	128.92	269	P	PKPdf	04 26 47.7	+0.1
	SNR=5.4						
KIRV	Kirov	128.95	330	PKP	PKPdf	04 26 46.4	+0.2
	comp=Z,98nm,0.5s,baz=19,slow=0.6,SNR=29						
KIRV				SKPbc	SKPbc	04 29 14.3	
	comp=Z,220nm,1.0s,baz=261,slow=10,SNR=14						
ARQ	Araqi	129.02	284	P	PKPdf	04 26 47.4	-0.1
	SNR=15						
PRGR	Permogore	129.10	335⇑	iPKIKP	PKPdf	04 26 45.7	-0.7
PRGR				e		04 29 04.0	
SOHO	SOHO	129.12	285	P	PKPdf	04 26 47.3	-0.3
SOHO	SOHO	129.12	285	i PKPdf	PKPdf	04 26 47.0	-0.7
	SNR=38						
APA	Apatity	129.13	345⇓	iPKIKP	PKPdf	04 26 45.4	-0.9
APA				i		04 29 02.0	
APA				i PPP	PPP	04 31 54.0	
APA				pmax	pmax		
	comp=Z,42nm,1.5s						
ARA0	ARCESS Array S	129.17	349	ePKPdf	PKPdf	04 26 46.3	-0.1
ARCES	ARCESS Array B	129.17	349	PKhKP	PKPpre	04 26 30.1	

	comp=Z,1.2nm,0.4s,baz=50,slow=3.8,SNR=6.2						
ARCES				PKP	PKPdf	04 26 46.5	+0.1
	comp=Z,74nm,0.6s,baz=28,slow=1.0,SNR=57						
ARCES				PP	PP	04 29 04.1	+0.3
	comp=Z,8.5nm,0.9s,baz=11,slow=1.9,SNR=2.4						
ARCES				SKPbc	SKPbc	04 29 16.3	+1.8
	comp=Z,111nm,1.1s,baz=20,slow=3.9,SNR=18						
DMTO	DMTO	129.44	276	P	PKPdf	04 26 48.0	-0.4
	SNR=7.7						
UOSS	Minazif	129.53	286		PKPdf	04 26 47.7	-0.6
UOSS				SKPbc	SKPab	04 29 16.3	-0.8
UOSS	Minazif	129.53	286	P	PKPdf	04 26 48.0	-0.4
UOSS	Minazif	129.53	286	*i* PKPdf	PKPdf	04 26 47.8	-0.6
	SNR=15						
BANOM	Banah	129.56	287	P	PKPdf	04 26 48.1	-0.3
HATD	Hatta, Dubai	129.58	285	P	PKPdf	04 26 48.5	0.0
	SNR=13						
HATD	Hatta, Dubai	129.58	285	*i* PKPdf	PKPdf	04 26 48.1	-0.4
	SNR=21						
MSFE	Esma-Masafi	129.62	286	*i* PKPdf	PKPdf	04 26 46.9	-1.7
	SNR=19						
MASF	Masafi	129.62	286	P	PKPdf	04 26 48.7	0.0
	SNR=9.0						
ASHO	Ashiyiah	129.62	285	P	PKPdf	04 26 48.5	-0.1
	SNR=12						
ASHO	Ashiyiah	129.62	285	*i* PKPdf	PKPdf	04 26 47.9	-0.8
	SNR=6.6						
SHME	Shamm	129.71	287	P	PKPdf	04 26 48.6	-0.1
SHME	Shamm	129.71	287	PKPdf	PKPdf	04 26 48.5	-0.1
ALNE	Al Ain	129.82	284	P	PKPdf	04 26 48.8	-0.2
	SNR=24						
ALNE	Al Ain	129.82	284	*i* PKPdf	PKPdf	04 26 49.2	+0.2
	SNR=18						
JETT	Jettan, Norway	129.95	351	*e*PKPdf	PKPdf	04 26 46.6	-1.3
JETT				*e*PP	PP	04 29 09.3	+0.5
JETT				*e*SKSac	SKSac	04 33 06.4	+3.5
JETT				*e*SP	SP	04 38 27.0	+4.6
JETT				*e*SS	SS	04 45 52.2	+3.4
KTK1	Kautokeino	130.01	350	*e*PKPdf	PKPdf	04 26 46.9	-1.1
KTK1				*e*SKSdf	SKSdf	04 33 09.3	+4.4
NAZ	Nazwa, Dubai	130.02	286	P	PKPdf	04 26 48.8	-0.5
	SNR=10						
NAZ	Nazwa, Dubai	130.02	286	*i* PKPdf	PKPdf	04 26 48.4	-0.9
	SNR=14						
FAQ	Al Faqa, Dubai	130.05	285	P	PKPdf	04 26 49.0	-0.4
	SNR=6.4						
FAQ	Al Faqa, Dubai	130.05	285	*i* PKPdf	PKPdf	04 26 48.5	-0.9
	SNR=5.8						
TRO	Tromso	130.08	352	*e*PKPdf	PKPdf	04 26 47.0	-1.1
TRO				*e*SKPdf	SKiKP	04 29 32.7	+2.0
TRO				*e*SKSac	SKSdf	04 33 06.7	+1.7
UMQ	Umm Al-Quwin	130.08	286	P	PKiKP	04 26 50.4	0.0
RBK	Rabkut	130.08	276	P	PKiKP	04 26 50.4	-0.2
	SNR=15						
NBLA	Lagarto - SE	130.22	126	*e*P	PKPdf	04 26 48.9	-1.2
ASUD	Al Ashush, Dub	130.28	285	P	PKPdf	04 26 50.0	+0.2
	SNR=6.1						
ASUD	Al Ashush, Dub	130.28	285	*i* PKPdf	PKPdf	04 26 49.3	-0.5
	SNR=9.8						
DOK	Doka	130.39	277	P	PKPdf	04 26 50.0	-0.2
	SNR=12						
WHFO	Wadi Hawf	130.58	276	P	PKPdf	04 26 50.6	0.0
	SNR=11						
AJN	Ajban	130.58	285	P	PKPdf	04 26 50.8	+0.4
	SNR=5.9						
AJN	Ajban	130.58	285	*i* PKPdf	PKPdf	04 26 49.0	-1.4
	SNR=5.2						
ABTO	Aybut	130.89	275	P	PKPdf	04 26 51.5	+0.3
	SNR=11						
MATP	Matopo	131.07	215	PKhKP	PKPpre	04 26 37.3	
	comp=Z,7.3nm,0.8s,baz=155,slow=4.0,SNR=13						
MATP				PKP	PKPdf	04 26 51.4	-0.3
	comp=Z,31nm,0.7s,baz=162,slow=2.2,SNR=34						
MATP				SKPbc	SKPbc	04 29 23.5	+0.4
	comp=Z,42nm,0.6s,baz=165,slow=4.2,SNR=12						
MATP	Matopo	131.07	215	*i* P	PKiKP	04 26 52.2	-0.5
MATP	Matopo	131.07	215	*i* P	PKiKP	04 26 52.2	-0.5
NBPS	Pedro II - PI	131.15	116	*e*P	pPKPdf	04 29 11.5	+6.5
BLWY	Bulawayo	131.25	215	*i* P	PKPdf	04 26 51.6	-0.5
BLWY	Bulawayo	131.25	215	*i* P	PKPdf	04 26 51.6	-0.5
NBMA	Muriti-CE	131.68	121	*e*P	PKPdf	04 26 51.4	-1.4
NBMA	Muriti-CE	131.68	121	*e*P	SKPbc	04 29 24.5	-0.8
MZR	Muzera	131.74	283	P	PKPdf	04 26 52.2	-0.5
	SNR=14						
MZR	Muzera	131.74	283	*i* PKPdf	PKPdf	04 26 50.1	-2.5
	SNR=11						
KLMR	Klimovskoe	131.95	336	*e*PKIKP	PKPdf	04 26 51.0	-0.8
KLMR				*e*		04 29 20.1	
KLMR				pmax	pmax		
	comp=Z,159nm,1.0s						
KLMR	Klimovskoe	131.95	336	*e*PKPdf	PKPdf	04 26 51.1	-0.8
KLMR				AMP		04 26 53.6	
	comp=Z,159nm,1.0s						
KLMR				*e*PP	PP	04 29 20.2	-1.5
NBPB	Pedra_Branca-C	132.06	119	*e*P	PP	04 29 23.2	-0.3
LOF	Lofoten	132.13	354	*e*PKPdf	PKPdf	04 26 52.3	+0.3
STEI	Steigen	132.14	353	*e*PKPdf	PKPdf	04 26 51.6	-0.4
STEI				*e*SKSac	SKSac	04 33 12.5	+3.7
STEI				*e*SP	SKKPbc	04 38 44.7	-10
BELG	Belogornoye	132.50	323	PKhKP	PKPpre	04 26 42.1	
	comp=Z,32nm,0.8s,baz=295,slow=2.3,SNR=9.1						
BELG				PKP	PKPdf	04 26 53.3	+0.2
	comp=Z,720nm,0.9s,baz=82,slow=0.6,SNR=65						
BELG				SKPbc	SKPbc	04 29 27.0	+0.2
	comp=Z,1µm,1.1s,baz=55,slow=0.3,SNR=34						
BELG				SKKPbc	SKKPbc	04 38 51.1	-1.6
	comp=Z,12nm,0.8s,baz=190,slow=2.3,SNR=4.7						
JRN	Qarnain Island	132.55	285	P	PKPdf	04 26 54.1	0.0
FAUS	Fauske	132.66	353	*e*PKPdf	PKPdf	04 26 52.8	-0.2
BORG	Borgarnes	133.66	13	PKP	PKPdf	04 26 55.3	+0.3
	comp=Z,51nm,1.0s,baz=294,slow=2.1,SNR=6.4						
BORG				SKPbc	SKPab	04 29 32.2	-1.4
	comp=Z,97nm,1.0s,baz=283,slow=4.3,SNR=8.6						
BORG	Borgarnes	133.66	13		PKiKP	04 26 55.9	-0.5
KONS	Konsvik	133.76	353	*e*PKPdf	PKiKP	04 26 56.3	-0.2
KONS				*e*PP	PP	04 29 33.5	+0.8
MOR8	Moi Rana	133.92	353	*e*PKPdf	PKPdf	04 26 53.4	-2.1
MOR8				*e*pPKPdf	pPKPdf	04 29 02.5	-6.4
MOR8				*e*PP	PP	04 29 33.6	-0.2
MOR8				*e*SKSdf	SKSdf	04 33 15.7	+3.7
MOR8				*e*SS	SS	04 46 38.1	+1.9
STOK	Stokkvaagen	133.93	353	*e*PKPdf	PKPdf	04 26 52.8	-2.6
TRNA	Turayna	134.01	285	P	PKiKP	04 26 57.9	-0.4
SAKB	Bahrain	134.73	286	P	PKiKP	04 26 59.9	+0.2
RCBR	Riachuelo	134.87	122	SKPbc	SKPbc	04 29 34.7	-1.2
	comp=Z,91nm,1.0s,baz=32,slow=4.2,SNR=17						
LSZ	Lusaka	135.40	218	PKhKP	PKPpre	04 26 47.0	
	comp=Z,4.6nm,0.5s,baz=112,slow=2.0,SNR=8.8						
LSZ				PKP	PKPdf	04 27 00.1	+0.2
	comp=Z,42nm,0.6s,baz=124,slow=3.5,SNR=18						
LSZ				SKPbc	SKPbc	04 29 39.4	+1.9
	comp=Z,32nm,1.0s,baz=54,slow=2.8,SNR=6.4						
LSZ				SKKPbc	SKKPbc	04 38 34.7	-4.6
	comp=Z,2.0nm,0.5s,baz=38,slow=4.4,SNR=3.0						
MAK	Makhachkala	135.69	311	*ce*P	Pdif	04 24 05.6	-0.8
MAK				*e*		04 29 47.0	
MAK				*e*PPP	PPP	04 32 53.1	
MAK				*e*		04 33 20.5	
MAK				*e*SS	SS	04 47 02.4	+3.3
MAK				*e*SSS	SSS	04 52 15.2	
MAK				pmax	pmax		
	comp=Z,209nm,0.8s						
NSS	Namsos	135.79	353	*e*PKPdf	PKPdf	04 26 56.7	-2.2
NSS				*e*SKPdf	SKPab	04 29 43.3	+0.3
NSS				*e*SKSdf	SKSac	04 33 18.7	+0.5
NSS				*e*SS	SS	04 47 02.0	+3.8
MOS	Moscow	135.91	331	*e*PKHKP	PKPpre	04 26 50.2	
MOS				*e*		04 26 57.5	
MOS				pmax	pmax		
	comp=Z,53nm,0.8s						
FIA1	FINESS Array S	135.94	343	PKPdf	PKPdf	04 26 58.3	-1.0
FIA1				SKPbc	SKPbc	04 29 38.4	+0.9
FINES	FINESS Array B	135.94	343	PKhKP	PKPpre	04 26 45.7	
	comp=Z,5.2nm,0.5s,baz=47,slow=4.2,SNR=16						
FINES				PKP	PKPdf	04 26 59.2	-0.1
	comp=Z,48nm,0.6s,baz=54,slow=3.6,SNR=20						
FINES				SKPbc	SKPbc	04 29 38.9	+1.4
	comp=Z,287nm,0.9s,baz=50,slow=3.0,SNR=40						
FINES				SKKPbc	SKKPbc	04 38 33.1	-7.4
	comp=Z,2.5nm,0.7s,baz=248,slow=1.5,SNR=6.1						
VRH	Novokhopyorsk	136.31	324	*e*PKIKP	PKPdf	04 27 00.4	+0.1
VRH				pmax	pmax		
	comp=Z,170nm,0.6s						
OBN	Obninsk	136.76	331	PKhKP	PKPpre	04 26 48.9	
	comp=Z,7.5nm,0.5s,baz=62,slow=2.7,SNR=9.5						
OBN				PKP	PKPdf	04 27 00.8	-0.1
	comp=Z,29nm,0.6s,baz=28,slow=1.3,SNR=17						
OBN				SKPbc	SKPbc	04 29 40.1	0.0
	comp=Z,30nm,0.7s,baz=112,slow=4.0,SNR=12						
OBN	Obninsk	136.76	331		PKPpre	04 26 50.9	
OBN					PKPdf	04 26 59.5	-1.4
OBN				SKPbc	SKPbc	04 29 40.2	+0.1
OBN	Obninsk	136.76	331	*de*PKIKP	PKPdf	04 27 00.0	-1.0
OBN				*e*		04 33 11.3	
OBN				*i* SS	SS	04 47 06.2	-4.3
OBN				*e*SSS	SSS	04 52 23.5	
OBN				pmax	pmax		
	comp=Z,85nm,0.8s						
OBN				pmax	pmax		
	comp=Z,422nm,1.6s						
TSUM	Tsumeb	137.08	203	PKhKP	PKPpre	04 26 52.5	
	comp=Z,5.0nm,0.8s,baz=245,slow=5.2,SNR=4.6						
TSUM				PKP	PKiKP	04 27 04.4	-0.5
	comp=Z,51nm,0.9s,baz=128,slow=4.8,SNR=25						
TSUM				SKPbc	SKPbc	04 29 43.3	+0.8
	comp=Z,65nm,1.1s,baz=188,slow=3.6,SNR=14						
TSUM	Tsumeb	137.08	203		PKPpre	04 26 52.9	
LPSR	Galich'ya Gora	137.09	327	*e*PKIKP	PKiKP	04 27 04.5	+0.8
LPSR				pmax	pmax		
	comp=Z,250nm,1.5s						
TBLU	Trondheim	137.22	354	*e*PKPdf	PKPdf	04 27 02.4	+0.8
TBLU				*e*SKPdf	SKiKP	04 29 44.4	-1.1
TBLU				*e*PP	PP	04 29 53.6	-0.5
TBLU				*e*SKSdf	SKSac	04 33 21.2	-0.4
RAF	Rauma	137.40	345	*e*P	PKPdf	04 26 56.7	-5.3
VORR	Voronezh	137.44	326	PKHKP	PKPpre	04 26 55.5	
VORR				pmax	pmax		
	comp=Z,424nm,1.9s						
VSR	Storozhevoye	137.70	325	*e*PKIKP	PKPdf	04 27 02.2	-0.7
VSR				pmax	pmax		
	comp=Z,130nm,0.8s						
VORD	Divnogorie	137.76	325	*e*PKIKP	PKPdf	04 27 01.9	-1.1
VORD				pmax	pmax		
	comp=Z,110nm,0.8s						
GOF	Gofitskoye	138.10	315	⇑*e*PKHKP	PKPpre	04 26 56.6	
GOF				pmax	pmax		
	comp=Z,44nm,0.8s						
MOL	Molde	138.12	356	*e*SKPdf	SKiKP	04 29 47.1	-0.3
MOL				*e*PKPdf	PKPpre	04 26 56.6	
MOL				*e*PKSdf	PKSdf	04 30 40.2	+1.2
VSU	Vasula	138.18	340	*e*P	PKPpre	04 26 55.3	
ZEI	Tsey	138.28	311	*i* PKHKP	PKPpre	04 26 55.4	
ZEI				pmax	pmax		
	comp=Z,70nm,1.0s						
GNI	Garni	138.40	307	PKhKP	PKPpre	04 26 56.3	
	comp=Z,16nm,0.6s,baz=32,slow=0.3,SNR=11						
GNI				PKP	PKPdf	04 27 04.6	-0.1
	comp=Z,104nm,1.0s,baz=249,slow=1.7,SNR=26						
GNI				SKPbc	SKPbc	04 29 46.4	+0.8
	comp=Z,88nm,1.1s,baz=35,slow=2.9,SNR=5.7						
GNI				SKKPbc	SKKPbc	04 38 31.2	+1.0
	comp=Z,5.9nm,0.4s,baz=300,slow=2.9,SNR=5.1						
GNI	Garni	138.40	307	PKPdf	PKPdf	04 27 04.7	-0.1
GNI				SKPbc	SKPbc	04 29 47.2	+1.7
GNI	Garni	138.40	307	PKPdf	PKPdf	04 26 58.9	-5.8
DOMB	Dombas	138.52	354	*e*	PKPpre	04 26 55.5	
DOMB				*e*SKPdf	SKiKP	04 29 47.4	-0.8
DOMB				*e*PKSdf	PKSdf	04 30 41.0	+1.1
DOMB				*e*SKSdf	SKSac	04 33 23.4	-1.4
DOMB				*e*SS	SS	04 47 34.2	+4.0
AKN	Aaknes	138.54	356	*e*	PKPpre	04 26 55.9	
AKN				*e*SKPdf	SKiKP	04 29 47.7	-0.6
AKN				*e*PKSdf	PKSdf	04 30 40.6	+0.7
AKN				*e*SKSdf	SKSac	04 33 23.1	-1.8
AKN				*e*SS	SS	04 47 32.9	+2.4
AAL	Aland	138.55	346	*e*P	PKPpre	04 26 55.5	
KMBO	Kilima Mbogo	138.57	243	PKhKP	PKPpre	04 26 57.9	
	comp=Z,9.2nm,0.6s,baz=88,slow=3.4,SNR=21						
KMBO				SKPbc	SKPbc	04 29 48.4	+1.4
	comp=Z,101nm,1.1s,baz=83,slow=1.9,SNR=13						
KMBO				SKKPbc	SKKPbc	04 38 29.9	+2.3
	comp=Z,4.3nm,0.9s,baz=346,slow=6.2,SNR=5.2						
KMBO	Kilima Mbogo	138.57	243	*e*P	PKPdf	04 27 01.9	-4.0
KMBO				⇓*e*S	SKiKP	04 29 49.9	-0.3
KMBO	Kilima Mbogo	138.57	243	*e*P	PKPdf	04 27 01.9	-4.0
KMBO				⇓*e*S	SKiKP	04 29 49.9	-0.3
KMBO	Kilima Mbogo	138.57	243	*i* PKPdf	PKPpre	04 26 58.4	
	SNR=6.4						
KBZ	Khabaz	138.66	313	PKhKP	PKPpre	04 26 56.2	
	comp=Z,8.1nm,0.7s,baz=95,slow=3.0,SNR=18						
KBZ				SKPbc	SKPbc	04 29 46.2	+0.3
	comp=Z,15nm,1.0s,baz=106,slow=5.0,SNR=6.7						
KBZ				SKKPbc	SKKPbc	04 38 29.1	-0.1
	comp=Z,11nm,1.2s,baz=261,slow=3.7,SNR=6.8						
KVAR	Kislovodsk Arr	138.72	314	PKhKP	PKPpre	04 26 59.6	
	comp=Z,9.3nm,0.6s,baz=90,slow=20,SNR=7.4						
KIV	Kislovodsk	138.73	314		PKPpre	04 26 57.4	
KIV				PKPdf	PKPdf	04 27 05.0	-0.1
KIV				SKPbc	SKPbc	04 29 47.2	+1.0
KIV	Kislovodsk	138.73	314	*e*PKHKP	PKPpre	04 26 57.6	
KIV				*i*		04 27 05.8	
KIV				*e*		04 30 02.1	
KIV				*e*PPP	PPP	04 33 12.7	
KIV				pmax	pmax		
	comp=Z,92nm,1.0s						
KIV	Kislovodsk	138.73	314	*i* PKPdf	PKPpre	04 26 58.4	
	SNR=7.3						
MTSE	Matsula	138.85	342	*e*P	PKPpre	04 26 56.9	
RAYN	Ar Rayn	139.09	282		PKPpre	04 26 57.9	
RAYN				PKPdf	PKPdf	04 27 04.7	-1.7
RAYN				SKPbc	SKPbc	04 29 48.0	+0.2
RAYN	Ar Rayn	139.09	282	*i* PKPdf	PKPpre	04 26 58.8	
	SNR=34						
ATD	Arta Tunnel	139.12	264	PKhKP	PKPpre	04 27 00.8	
	baz=238,slow=1.8						
ATD				SKPbc	SKiKP	04 29 50.3	-0.7
	comp=Z,99nm,1.0s,baz=110,slow=2.1,SNR=14						
ATD	Arta Tunnel	139.12	264	*e*S	SKiKP	04 29 49.9	-1.1
ATD				*e*P	PKPpre	04 27 00.6	
ATD	Arta Tunnel	139.12	264	*e*S	SKiKP	04 29 49.9	-1.1
ATD				*e*P	PKPpre	04 27 00.6	
FOO	Floro	139.23	357	*e*SKPdf	SKiKP	04 29 50.2	+0.5
FOO				*e*	PKPpre	04 26 57.8	
FOO				*e*PP	PP	04 30 08.0	+1.6
FOO				*e*SS	SS	04 47 41.6	+3.3
NB2	NORSAR Subarra	139.27	353	PKP	PKPpre	04 26 56.4	
	comp=Z,185nm,2.0s,baz=10,slow=3.2						
NB2	NORSAR Subarra	139.27	353	*e*	PKPpre	04 26 56.4	
	baz=10,slow=3.2						
NOA	NORSAR Array B	139.27	353	PKhKP	PKPpre	04 26 56.4	
	comp=Z,41nm,0.9s,baz=15,slow=4.4,SNR=85						
NOA				SKPbc	SKPbc	04 29 48.2	+1.1
	comp=Z,75nm,1.0s,baz=15,slow=4.4,SNR=14						
NOA				SKKPbc	SKKPbc	04 38 27.6	-0.4
	comp=Z,7.7nm,1.0s,baz=191,slow=4.1,SNR=4.4						
UPP	Uppsala	139.35	347	*e*P	PKPpre	04 26 58.3	
NC602	NORSAR Array S	139.53	352	*e*	PKPpre	04 26 58.1	
NC602				*e*SKPdf	SKiKP	04 29 50.8	+0.5
NC602				*e*SS	SS	04 47 46.0	+4.2
HYA	Hoyanger	139.60	356	*e*PKPdf	PKPdf	04 27 00.8	-5.2
HYA				*e*SKPdf	SKiKP	04 29 51.8	+1.4
HYA				*e*PKSdf	PKSbc	04 30 43.3	0.0
SUE	Sulen	139.78	357	*e*	PKPdf	04 26 59.1	-7.2
SUE				*e*SKPdf	SKiKP	04 29 50.3	-0.5
SUE				*e*SKSdf	SKSac	04 33 25.7	-1.8
SUE				*e*SS	SS	04 47 49.3	+4.6
HFS	Hagfors	139.80	350	PKhKP	PKPpre	04 26 57.6	
	comp=Z,51nm,0.5s,baz=143,slow=20,SNR=159						
SKAR	Skarslia	139.93	355	*e*	PKPdf	04 27 00.3	-6.4
SKAR				*e*SKPdf	SKiKP	04 29 50.4	-0.8
SKAR				*e*PP	PP	04 30 11.6	+0.9
SKAR				*e*SKSdf	SKSac	04 33 26.0	-2.1
SKAR				*e*SS	SS	04 47 50.2	+3.6
SLIT	Slitere, Latvi	140.20	342	*e*P	PKPpre	04 26 59.6	
ASK	Askoy	140.34	357	*e*	PKPdf	04 27 01.0	-6.3
ASK				*e*SKPdf	SKiKP	04 29 52.9	+1.0
ASK				*e*SKSac	SKSac	04 33 32.5	+3.8
OSL	Oslo	140.40	353	*e*	PKPpre	04 27 00.7	
BER	Bergen	140.43	357	*e*SS	SS	04 47 54.4	+2.3
BER				*e*	PKPpre	04 27 00.8	
IDID	Didziasalis	140.66	337	*e*P	PKPpre	04 27 02.9	
ISAL	Salakas	140.68	338	*e*P	PKPpre	04 27 02.5	
LRW	Lerwick	140.74	2	*e*P	PKPpre	04 27 01.6	
VIKU	Vikbolandet	140.79	347	*e*P	PKPpre	04 27 01.5	
IIGN	Ignalina	140.81	338	*e*P	PKPpre	04 27 02.8	
KONO	Kongsberg	140.81	353		PKPpre	04 27 01.6	
KONO				SKPbc	SKPbc	04 29 51.0	0.0
KONO	Kongsberg	140.81	353	*e*SKPdf	SKPbc	04 29 51.8	+0.8
KONO				*e*	PKPpre	04 27 02.5	
KONO				*e*SS	SS	04 48 00.7	+4.0
ODD1	Odda	140.82	356	IVmB_BB		04 27 13.5	
	comp=Z,1µm,2.6s						
ODD1				*e*	PKPpre	04 27 02.3	
ODD1				*e*SKPdf	SKPbc	04 29 51.9	+0.7
ODD1				*e*SS	SS	04 48 01.1	+4.3
MNK	Minsk	140.85	336	*i* PKIKP	PKiKP	04 27 23.7	+12
MNK				*i*		04 29 32.4	
MNK				*i*		04 30 25.9	
MNK				pmax	pmax		
	comp=E,9.0nm,1.5s						
MNK				pmax	pmax		
	comp=Z,86nm,1.1s						
MNK				pmax	pmax		
	comp=N,75nm,1.3s						
MNK	Minsk	140.85	336	*i* PKP	PKiKP	04 27 23.7	+12
	comp=E,9.0nm,1.4s						
MNK				*i* PKP	PKiKP	04 27 23.7	+12
	comp=N,75nm,1.3s						
MNK				*i* PKP	PKiKP	04 27 23.7	+12
	comp=Z,86nm,1.1s,baz=41						
MNK				*i* pPKP	pPKPdf	04 29 32.5	+10
MNK				*i* sPKP		04 30 26.0	
MNK				*i* PP	sPKPdf	04 30 34.0	+17
MNK				*i* PPP	PPP	04 33 44.2	
MNK				*i* SKKS		04 43 05.2	
MNK				*i* SS	SS	04 48 16.8	+19
MNK				*i* SSS	SSS	04 53 43.3	
MNK				*i* LR	LR	05 22 19.6	
SOC	Sochi	140.87	314	*e*P	Pdif	04 24 25.1	-4.4
SOC				*i*		04 27 10.2	
SOC				*e*		04 30 16.1	
SOC				pmax	pmax		
	comp=Z,45nm,0.7s						
SOC				pmax	pmax		
	comp=Z,86nm,1.0s						
NACGM	Naroch	140.96	337	⇑*e*PKP	PKPdf	04 27 03.5	-5.1
	baz=40						
BLS5	Blasjo	141.32	356	*e*PKPdf	PKPdf	04 27 03.9	-5.4
BLS5				*e*SKPdf	SKiKP	04 29 54.0	-0.1
BLS5				*e*SKSdf	SKSdf	04 33 26.7	+1.9
BLS5				IVMs_BB	IVMs_BB	04 39 34.4	
	comp=Z,2µm,18.8s						
BLS5				*e*SS	SS	04 48 06.3	+3.8
PABE	Paberze	141.47	339	*e*P	PKPdf	04 27 05.0	-4.6
KMY	Karmoy	141.60	357	*e*PKPdf	PKPdf	04 27 04.8	-4.8
KMY				*e*SKPdf	SKPbc	04 29 53.6	+0.6
KMY				*e*PP	PP	04 30 20.3	-0.3
KMY				*e*SKSdf	SKSac	04 33 30.2	-1.4
PBUR	Paburge	141.67	341	*e*P	PKPdf	04 27 05.4	-4.5
ANN	Anapa	141.85	317	*d i*PKHKP	PKPpre	04 27 05.1	
ANN				*e*		04 33 23.5	
ANN				pmax	pmax		
	comp=N,45nm,0.7s						
ANN				pmax	pmax		
	comp=Z,174nm,0.7s						
ANN				pmax	pmax		
	comp=E,20nm,0.5s						
DESE	Dese	141.96	261	*e*P	PKiKP	04 27 14.3	-0.9
DESE				*e*S	SKPbc	04 29 51.5	-4.3
DESE	Dese	141.96	261	*e*P	PKiKP	04 27 14.3	-0.9
DESE				*e*S	SKPbc	04 29 51.5	-4.3
AAE	Adis Abeba	142.02	258	*e*P	PKPdf	04 27 07.8	-4.4
AAE	Adis Abeba	142.02	258	*e*P	PKPdf	04 27 07.8	-4.4
FURI	Furi	142.05	257	PKPdf	PKPdf	04 27 10.8	-1.4
MARD	Mardin	142.11	304		PKPdf	04 27 08.1	-3.4
MARD				SKPbc	SKPbc	04 29 55.7	+0.5
BIGH	Upper Bighouse	142.24	4	*e*P	PKPdf	04 27 06.2	-4.6
HOMB	Homborsund	142.28	354	*e*PKPdf	PKPdf	04 27 06.8	-4.1
HOMB				*e*SKPdf	SKPbc	04 29 54.0	-0.7
HOMB				*e*PP	PP	04 30 25.9	+1.2
HOMB				*e*SKSdf	SKSac	04 33 30.0	-3.1
HOMB				*e*SS	SS	04 48 16.7	+3.3
LEWI	Lewis, Hebride	142.31	7	*e*P	PKPdf	04 27 06.8	-4.2
SNART	Snartemo	142.34	355	*e*PKPdf	PKPdf	04 27 06.6	-4.4
SNART				*e*SKPdf	SKiKP	04 29 56.2	+0.1
MLA1	Latheron	142.47	4	*e*P	PKPdf	04 27 07.2	-4.0
LINV	Loch Inver, As	142.48	6	*e*P	PKPdf	04 27 07.2	-4.0
LODK	Lodwar	142.57	247		PKPdf	04 27 10.4	-2.5
LODK	Lodwar	142.57	247	P	PKPdf	04 27 11.1	-1.8
	SNR=159						
LODK	Lodwar	142.57	247	*e*P	PKPdf	04 27 10.4	-2.5
LODK				*e*S	SKiKP	04 29 59.2	+1.0
LODK	Lodwar	142.57	247	*e*P	PKPdf	04 27 10.4	-2.5
LODK				*e*S	SKiKP	04 29 59.2	+1.0
SHEL	Horse Pasture	142.75	169		PKPdf	04 27 11.6	-1.5
SHEL	Horse Pasture	142.75	169	PKIKP	PKPdf	04 27 11.6	-1.5
SUW	Suwalki	142.95	339	*e*PKPdf	PKPdf	04 27 08.9	-3.3
SUW	Suwalki	142.95	339	*e*P	PKPpre	04 27 09.1	
AKASG	Malin Array Be	143.01	330	PKhKP	PKPpre	04 27 09.3	
	comp=E,360nm,0.5s,baz=42,slow=4.6,SNR=1184						
AKASG				SKPbc	SKiKP	04 29 57.6	-0.2
	comp=E,173nm,1.0s,baz=42,slow=3.7,SNR=13						
AKASG				SKKPbc	SKKPab	04 38 08.7	-2.9
	comp=E,12nm,0.8s,baz=237,slow=3.7,SNR=16						
AKBB	Malin Array Si	143.01	330	PKPdf	PKPab	04 27 09.2	-0.9
AKBB	Malin Array Si	143.01	330	PKHKP	PKPpre	04 27 09.2	
OVD	Ostervraa, Den	143.02	352	*i* P	PKPab	04 27 09.0	-0.9
OVD				*e*P	PKPbc	04 27 09.2	-1.2
KAC	Achnashellach	143.11	6	*e*P	PKPab	04 27 09.4	-0.9
MCD	Coleburn Disti	143.19	4	*e*P	PKPab	04 27 09.1	-1.5
KPL	Plockton	143.23	6	*e*P	PKPab	04 27 09.3	-1.3
DEL	Delary	143.25	348	*e*P	PKPab	04 27 09.4	-1.4
MDO	Dochfour	143.25	5	*e*P	PKPab	04 27 09.1	-1.8
BUJA	Bujumbura/Buru	143.37	232	*i* P	PKPdf	04 27 13.9	-0.5
GOET	G??ttrup	143.42	353	*e*P	PKPab	04 27 10.6	-0.8
SIM	Simferopol'	143.84	319	*i* PKIKP	PKiKP	04 27 16.0	-1.8
SIM				*e*		04 30 19.0	
SIM				pmax	pmax		
	comp=Z,2µm,1.1s						
DRUM	Mains of Drumt	143.91	4	*e*P	PKPbc	04 27 10.5	-2.7
MUD	Monsted U'grnd	143.99	353	*e*P	PKPbc	04 27 12.8	-0.6
MBAR	Mbarara	144.14	237		PKPbc	04 27 15.1	-0.4
MBAR	Mbarara	144.14	237	PKIKP	PKPbc	04 27 15.1	-0.3
MBAR	Mbarara	144.14	237	*e*P	PKPdf	04 27 16.9	+1.1
MBAR				*e*S	SKPbc	04 30 00.7	-0.2
MBAR	Mbarara	144.14	237	*e*P	PKPdf	04 27 16.9	+1.1
MBAR				*e*S	SKPbc	04 30 00.7	-0.2
EDU	Dundee	144.24	4	*e*P	PKPbc	04 27 13.1	-1.2
COP	Copenhagen	144.25	349	*i* P	PKPbc	04 27 13.3	-0.9
INVG	Invergeldie, C	144.28	5	*e*P	PKPbc	04 27 10.8	-3.5
BSD	Bornholm Skovb	144.30	347	*e*P	PKPbc	04 27 13.5	-0.9
BSD	Bornholm Skovb	144.30	347	*i* P	PKPbc	04 27 13.3	-1.1
LAWE	Loch Awe, Argy	144.32	6	*e*P	PKPbc	04 27 11.1	-3.4
TOKA	Tokat	144.35	311		PKPbc	04 27 15.0	-0.2
SAHA	Sahara	144.47	235	*i* P	PKiKP	04 27 18.9	-1.5
EAB	Aberfoyle	144.49	5	*e*P	PKPdf	04 27 12.8	-2.0
IDJ	Idjwi	144.50	233	*i* P	PKPbc	04 27 16.6	0.0
LWI	Lwiro	144.58	233	*i* P	PKPab	04 27 18.3	+0.9
BUTK	Butaka	144.59	234	*i* P	PKiKP	04 27 20.0	-0.7
LLD	Lille Linde	144.63	349	*e*P	PKPdf	04 27 14.4	-0.7
RSY	Rusayo	144.73	234	*i* P	PKPab	04 27 19.2	+1.2
BOBN	Bobandana	144.77	234	*i* P	PKPab	04 27 18.8	+0.6
EDI	Edinburgh	144.85	4	*e*P	PKPdf	04 27 12.0	-3.4
ESY	Stoneypath	144.89	4	*e*P	PKPdf	04 27 13.8	-1.8
EBL	Broad Law	145.01	4	*e*P	PKPdf	04 27 14.9	-0.8
SORM	Soroca	145.17	328	⇑P	PKPdf	04 27 15.8	-0.4
SORM	Soroca	145.17	328	⇑PKIKP	PKPdf	04 27 15.8	-0.4
CLGH	Cloghs, Cushen	145.40	7	*e*P	PKPdf	04 27 13.2	-3.2
PURM	Purcari	145.41	324	⇓P	PKPdf	04 27 16.7	+0.1
GKP	Gorka Klasztor	145.42	343	*e*PKPbc	PKPdf	04 27 16.1	-0.4
GKP	Gorka Klasztor	145.42	343	*e*P	PKPdf	04 27 16.9	+0.4
EKA	Eskdalemuir Ar	145.44	4	PKPbc	PKPdf	04 27 15.8	-0.7
	comp=Z,258nm,1.0s,baz=344,slow=2.3,SNR=146						
EKA				SKKPbc	SKKPbc	04 37 52.9	-10
	comp=Z,1.4nm,0.6s,baz=149,slow=5.8,SNR=3.4						
ESK	Eskdalemuir	145.45	5	*e*P	PKPdf	04 27 13.5	-3.0
ESK	Eskdalemuir	145.45	5		PKPdf	04 27 16.1	-0.4
ESK	Eskdalemuir	145.45	5	PKIKP	PKPdf	04 27 16.1	-0.4
NEWG	New Galloway	145.56	6	*e*P	PKPdf	04 27 14.5	-2.2
BEL	Belsk	145.57	339	*e*PKPab	PKPdf	04 27 16.3	-0.5
BEL				*e*SS	SS	04 48 53.9	+2.9
KIS	Kishinev	145.68	326	*e*PKP	PKPdf	04 27 16.0	-1.1
	comp=Z,2µm,7.4s						
KIS				*e*pPKP	pPKPdf	04 29 31.0	+0.3
KIS				LRM	MLR	05 34 12.0	
	comp=Z,200nm,18.0s						
KIS	Kishinev	145.68	326	⇑P	PKPdf	04 27 17.5	+0.4
KIS	Kishinev	145.68	326	*e*PKIKP	PKPdf	04 27 16.0	-1.1
KIS				pmax	pmax		
	comp=Z,2µm,7.4s						

MILM	Milestii Mici	145.73	326	⇓iPKP	PKPdf	04 27 18.0	+0.8
	comp=Z,6µm,7.3s						
MILM				i pPKP	pPKPdf	04 29 32.0	+1.2
MILM				LRM	MLR	05 34 06.0	
	comp=Z,500nm,17.5s						
MILM	Milestii Mici	145.73	326	⇓P	PKPdf	04 27 17.3	+0.1
MILM	Milestii Mici	145.73	326	d iPKIKP	PKPdf	04 27 18.0	+0.8
MILM				pmax	pmax		
	comp=Z,6µm,7.3s						
MILM				MLR	MLR		
	comp=Z,500nm,17.5s						
GAL1	Galloway	145.76	6	eP	PKPdf	04 27 15.2	-1.9
LVV	L'vov	145.95	333	ePKIKP	PKPbc	04 27 18.8	-0.7
LVV				e		04 34 13.9	
LVV				e		04 49 04.8	
LVV				e		04 54 42.9	
EDMD	Edmundbyers	146.01	3	eP	PKPdf	04 27 17.2	-0.2
IAS	Iasi	146.20	327	⇑P	PKPbc	04 27 19.4	-0.8
IAS	Iasi	146.20	327	⇑PKIKP	PKPbc	04 27 19.4	-0.8
LEOM	Leova	146.31	326	⇑P	PKPbc	04 27 19.6	-1.0
LEOM	Leova	146.31	326	⇑PKIKP	PKPbc	04 27 19.6	-1.0
ASF	Jabal al Asfar	146.35	297	PKPbc	PKPdf	04 27 19.5	+0.6
	comp=Z,337nm,0.8s,baz=93,slow=1.4,SNR=142						
IOMK	Kirk Michael	146.38	6	eP	PKPdf	04 27 15.7	-2.4
ILTH	Belurgan, Co L	146.40	8	eP	PKPdf	04 27 15.7	-2.5
VASR	Vaslui	146.44	326	⇑P	PKPdf	04 27 19.3	+0.9
GDLE	Glaisdale, N Y	146.47	2	eP	PKPdf	04 27 16.0	-2.3
WIM	Isle of Man	146.48	6	eP	PKPdf	04 27 17.0	-1.3
IGLA	Glengowla, Co	146.50	12	eP	PKPdf	04 27 16.1	-2.2
H07N1	FLORES T-PHASE	146.57	49	ePKP	PKPbc	04 27 20.3	-1.3
BR131	Keskin Array S	146.59	311	P	PKPdf	04 27 19.2	0.0
	SNR=220						
BRTR	Keskin Array B	146.59	311	PKP	PKPdf	04 27 17.9	-1.3
	comp=Z,154nm,0.7s,baz=141,slow=2.0,SNR=216						
BRTR				PKPbc	PKPbc	04 27 21.6	-0.1
	comp=Z,217nm,0.7s,baz=136,slow=4.6,SNR=338						
BRTR				SKPbc	SKiKP	04 30 07.6	+1.8
	comp=Z,22nm,0.8s,baz=94,slow=1.7,SNR=4.2						
BRTR				SKKPbc	SKKPab	04 37 55.6	-0.4
	comp=Z,21nm,1.1s,baz=244,slow=3.9,SNR=17						
MQOL	MQOL	146.59	276	i P	PKPbc	04 27 22.1	0.0
MQOL	MQOL	146.59	276	i P	PKPbc	04 27 22.1	0.0
H07S1	FLORES T-PHASE	146.64	49	ePKP	PKPdf	04 27 18.8	-0.3
HWQ	Hawqa	146.67	301	eP	PKPdf	04 27 18.2	-1.2
BIR	Birlad	146.78	326	⇑P	PKPdf	04 27 19.9	+0.9
BIR	Birlad	146.78	326	⇑PKIKP	PKPdf	04 27 19.9	+0.9
VLDR	Vladesti	146.81	325	⇓P	PKPdf	04 27 20.1	+1.1
TLCR		146.81	323	⇓P	PKPdf	04 27 19.1	0.0
TLCR		146.81	323	⇓PKIKP	PKPdf	04 27 19.1	0.0
HPK	Haverah Park	146.90	3	eP	PKPdf	04 27 16.7	-2.3
SCTR	Scanteiesti	146.96	325	⇓P	PKPdf	04 27 20.5	+1.2
TATR	Tatarca	146.98	325	⇓P	PKPdf	04 27 20.6	+1.2
BHL	Bhannes	147.00	300	eP	PKPdf	04 27 19.1	-0.8
GHRR		147.02	326	⇑P	PKPbc	04 27 21.2	-1.3
JURR	Jurilovca	147.04	323	⇑P	PKPdf	04 27 20.0	+0.5
BUR01	Bucovina Ar. S	147.05	330	⇑P	PKPdf	04 27 21.0	+1.4
SHBL	Chebaa	147.06	299	eP	PKPdf	04 27 19.4	-0.7
BIZ	Bicaz	147.10	328	⇓P	PKPdf	04 27 20.5	+0.9
ANTO	Ankara	147.12	312	PKPdf	PKPdf	04 27 19.2	-0.7
ANTO				PKPbc	PKPbc	04 27 22.4	-0.7
ANTO	Ankara	147.12	312	PKIKP	PKPbc	04 27 22.4	-0.7
TESR	Tescani	147.12	327	⇓P	PKPdf	04 27 20.2	+0.6
SLCR	Slobozia Conac	147.14	325	⇓P	PKPdf	04 27 20.7	+1.1
SCHL	Schela	147.16	325	⇑P	PKPdf	04 27 20.9	+1.3
IZVR	Izvoarele	147.17	325	⇑P	PKPdf	04 27 21.3	+1.6
CFR	Carcaliu	147.20	324	⇓P	PKPdf	04 27 19.9	+0.2
CFR	Carcaliu	147.20	324	⇓PKIKP	PKPdf	04 27 19.9	+0.2
TPGR	Topolog	147.24	323	⇓P	PKPdf	04 27 21.3	+1.4
WME	Myndd Eilian	147.26	6	eP	PKPdf	04 27 17.8	-1.8
OJC	Ojcow	147.26	338	ePKPdf	PKPdf	04 27 19.0	-0.8
OJC				ePP	sPKPab	04 30 36.8	+5.9
PANC	Panciu	147.28	326	⇓P	PKPdf	04 27 20.3	+0.4
WLF1	Llynfaes	147.35	6	eP	PKPdf	04 27 15.7	-4.0
KOLS	Kolonicke sedl	147.36	334	ePKIKP	PKPdf	04 27 21.2	+1.3
KOLS				e		04 27 24.3	
KOLS	Kolonicke sedl	147.36	334	ePKP	PKPdf	04 27 21.2	+1.3
KOLS				e		04 27 24.3	
YRC	Rhoscolyn	147.37	7	eP	PKPdf	04 27 18.5	-1.2
MMAI	Mount Meron Ar	147.41	299	PKP	PKPdf	04 27 20.3	-0.3
	comp=Z,40nm,0.4s,baz=231,slow=22,SNR=47						
MMAI				PKPbc	PKPbc	04 27 24.2	+0.2
	comp=Z,106nm,0.5s,baz=14,slow=18,SNR=74						
LBWR	Ladybower, Pea	147.45	3	eP	PKPdf	04 27 17.4	-2.5
LMK	Market Rasen	147.46	2	eP	PKPdf	04 27 19.4	-0.5
TIRR	Tirgusor	147.49	323	⇓P	PKPdf	04 27 21.6	+1.4
TIRR	Tirgusor	147.49	323	⇓PKIKP	PKPdf	04 27 21.6	+1.4
ASCN	Ascension	147.50	150		PKPbc	04 27 23.7	-1.0
VRI	Vrincioaia	147.51	326	⇑P	PKPdf	04 27 20.5	+0.2
VRI	Vrincioaia	147.51	326	⇑PKIKP	PKPdf	04 27 20.5	+0.2
H10N3	ASCENSION HYDR	147.52	150	PKPbc	PKPbc	04 27 24.7	+0.3
	baz=192,slow=3.9,SNR=8.3						
YLL	Llanberis	147.52	6	eP	PKPdf	04 27 18.1	-1.9
H10N1	ASCENSION HYDR	147.52	150	PKPbc	PKiKP	04 27 25.4	-0.6
	baz=192,slow=3.9,SNR=9.2						
H10N2	ASCENSION HYDR	147.54	150	PKPbc	PKiKP	04 27 25.7	-0.3
	baz=192,slow=3.9,SNR=12						
PLOR	Plostina	147.56	326	⇓P	PKPdf	04 27 21.3	+0.9
PLOR	Plostina	147.56	326	⇓PKIKP	PKPdf	04 27 21.3	+0.9
EFOR	EFORIE	147.59	322	⇓P	PKPdf	04 27 21.9	+1.5
UZH	Uzhgorod	147.59	334	i		04 27 26.7	
UZH				ePKHKP	PKPdf	04 27 19.3	-1.0
HARR	Harsova	147.62	323	⇑P	PKPdf	04 27 22.0	+1.6
HARR	Harsova	147.62	323	⇑PKIKP	PKPdf	04 27 22.0	+1.6
GHAJ	Ghor Haditha	147.62	296		PKPdf	04 27 20.3	-0.6
GHAJ				PKPbc	PKPbc	04 27 25.1	+0.6
MFTR	Murfatlar	147.65	322	⇓P	PKPdf	04 27 21.7	+1.2
CRVS	Cervenica-Dubn	147.71	335	ePKIKP	PKPdf	04 27 21.1	+0.6
CRVS				e		04 27 25.3	
CRVS	Cervenica-Dubn	147.71	335	ePKP	PKPdf	04 27 21.1	+0.6
CRVS				e		04 27 25.3	
BISRR	Bisoca	147.73	326	⇑P	PKPbc	04 27 22.8	-1.7
STNC	Stoke	147.73	4	eP	PKPdf	04 27 17.7	-2.7
MANR	Mangalia	147.77	321	⇑P	PKPdf	04 27 22.0	+1.3
COVR	Voineasa-Covas	147.79	326	⇑P	PKPdf	04 27 22.5	+1.8
BMR	Baia Mare	147.80	331	⇑P	PKPdf	04 27 21.7	+1.1
OZUR		147.84	327	⇓P	PKPdf	04 27 21.9	+1.0
ARCR	ARCALIA	147.84	330	⇑P	PKPdf	04 27 21.6	+0.8
KSP	Ksiaz	147.85	342	ePKPdf	PKPdf	04 27 20.2	-0.4
KSP				ePP	sPKPab	04 30 40.7	+7.4
FOEL	Foel Wylfa	147.86	5	eP	PKPdf	04 27 18.5	-2.1
LLW	Llanuwychllyn	147.86	6	eP	PKPdf	04 27 17.6	-3.0
IWEX	Carrickbyrne,	147.95	9	eP	PKPdf	04 27 17.5	-3.2
AMRR	Amara	148.00	324	⇓P	PKPbc	04 27 23.8	-1.2
NEHR	Nehoiu	148.03	326	⇑P	PKPdf	04 27 22.2	+1.1
ICOR	Ion Corvin	148.04	323	⇑P	PKPdf	04 27 22.7	+1.6
PSN	Preselentsi	148.09	322	P	PKPdf	04 27 21.0	-0.3
ISR	Istrita	148.10	325	⇑P	PKPdf	04 27 23.1	+1.8
OSTC	Ostas	148.12	342	ePKPDF	PKPdf	04 27 21.4	+0.3
OSTC				⇑ePKP	PKiKP	04 27 25.9	-0.6
DOPR	Dopca	148.13	327	⇓P	PKPdf	04 27 23.1	+1.8
CWF	Charnwood Fore	148.14	3	eP	PKPdf	04 27 17.1	-3.9
CHVC	Chvalec	148.14	342	ePKPDF	PKPdf	04 27 21.9	+0.7
CHVC				⇑ePKP	PKiKP	04 27 26.0	-0.5
OKC	Ostrava-Krasne	148.15	339	⇑ePKP	PKPbc	04 27 24.5	-0.8
MLR	Muntele Rosu	148.17	326	⇑P	PKPdf	04 27 21.9	+0.4
MLR	Muntele Rosu	148.17	326	PKP	PKPdf	04 27 19.9	-1.6
	comp=Z,27nm,0.4s,baz=343,slow=3.1,SNR=27						
MLR				PKPbc	PKPbc	04 27 25.6	-0.1
	comp=Z,415nm,0.9s,baz=135,slow=1.4,SNR=78						
MLR				SKKPbc		04 37 47.7	
	comp=Z,12nm,0.9s,baz=229,slow=3.0,SNR=5.3						
WACR	West Acre	148.21	1	eP	PKPdf	04 27 18.7	-2.4
UPC	Upice	148.23	342	ePKP2	PKPbc	04 27 25.6	+0.1
UPC	Upice	148.23	342	⇑ePKP	PKPbc	04 27 25.6	+0.1
HLM1	Long Mynd	148.25	5	eP	PKPdf	04 27 19.0	-2.2
CLL	Collm	148.27	346	ePKPdf	PKPdf	04 27 21.0	-0.3
	comp=Z,102nm,1.4s						
CLL				i PKPbc	PKPbc	04 27 25.3	-0.2
	comp=Z,2µm,1.6s						
CLL				ePKPab	PKPab	04 27 31.0	+0.2
	comp=Z,297nm,0.7s						
CLL				ex	x	04 29 20.0	
CLL				ex	x	04 29 42.0	
CLL				eSKPbc	SKiKP	04 30 12.0	+3.4
	comp=Z,112nm,1.1s						
CLL				eSKKSac	SKKSac	04 36 54.0	+0.2
CLL				eSS	SS	04 49 17.0	-3.8
CLL				esSS		04 53 00.0	
CLL				eSSS	SSS	04 55 00.0	
CLL				eSSSS		04 59 00.0	
CLL				ex	x	05 02 42.0	
CLL				ex	x	05 09 06.0	
LANS	Liptovska Anna	148.27	337	ePKP	PKPdf	04 27 22.6	+1.1
LANS				e		04 27 27.4	
LANS				e		04 27 32.6	
DPC	Dobruska-Polom	148.28	342	ePKPDF	PKPdf	04 27 21.3	-0.1
DPC				⇑ePKP	PKPbc	04 27 26.1	+0.4
DPC				eSS	SS	04 49 17.7	-3.5
LEHL	Lehliu	148.37	324	⇑P	PKPdf	04 27 22.8	+1.1
KRLC	Kraliky	148.38	341	ePKPDF	PKPdf	04 27 21.7	+0.1
KRLC				⇑ePKP	PKPbc	04 27 25.9	0.0
MORC	Moravsky Berou	148.40	340	ePKP	PKPdf	04 27 20.9	-0.8
SECR		148.41	325	⇓P	PKPdf	04 27 22.7	+0.9
EIL	Elat	148.41	293	PKP	PKPdf	04 27 20.9	-1.4
	comp=Z,71nm,1.1s,baz=147,slow=1.7,SNR=19						
EIL				PKPbc	PKPbc	04 27 26.3	-0.3
	comp=Z,249nm,0.7s,baz=100,slow=1.6,SNR=80						
KECS	Kecovo	148.44	335	ePKP2	PKiKP	04 27 27.3	+0.1
KECS	Kecovo	148.44	335	ePKP	PKiKP	04 27 27.3	+0.1
KECS				e		04 27 32.7	
MESR	Meseseni	148.44	331	⇑P	PKPdf	04 27 23.3	+1.6
CBBR	Cluj-Babes-Bol	148.45	330	⇑P	PKPbc	04 27 24.2	-2.0
BRG	Berggiesshubel	148.45	345	i PKP	PKPdf	04 27 21.0	-0.6
BRG				Amp		04 27 23.8	
	comp=Z,214nm,1.5s						
BRG				i x	x	04 27 26.6	
BRG				Amp		04 27 27.9	
	comp=Z,1µm,1.5s						
BRG				ex	x	04 27 47.6	
BRG				Amp		04 27 49.5	
	comp=Z,134nm,1.4s						
BRG				ex	x	04 29 22.5	
BRG				Amp		04 29 26.0	
	comp=Z,49nm,1.1s						
BRG				ex	x	04 29 47.0	
BRG				Amp		04 29 48.3	
	comp=Z,47nm,0.9s						
BRG				ex	x	04 30 13.2	
BRG				Amp		04 30 14.6	
	comp=Z,91nm,1.2s						
BRG				Amp		04 39 02.0	
	comp=E,4.2nm,15.4s						
BRG				Amp		04 39 05.0	
	comp=Z,6.1nm,15.1s						
BRG				Amp		04 39 09.0	
	comp=N,1.9nm,16.5s						
BRG	Berggiesshubel	148.45	345	i PKIKP	PKPdf	04 27 21.0	-0.6
BRG				e		04 29 22.5	
BRG				SS	SS	04 49 26.0	+3.1
BRG				pmax	pmax		
	comp=Z,214nm,1.5s						
BRG				pmax	pmax		
	comp=Z,1µm,1.5s						
BRG				pmax	pmax		
	comp=Z,134nm,1.4s						
BRG				pmax	pmax		
	comp=Z,49nm,1.1s						
BRG				pmax	pmax		
	comp=Z,47nm,0.9s						
BRG				pmax	pmax		
	comp=Z,91nm,1.2s						
CJR	Cluj-Napoca	148.47	330	⇓P	PKPdf	04 27 23.7	+1.8
MDB	Medias	148.51	329	⇓P	PKPdf	04 27 22.6	+0.7
SULR		148.54	325	⇓P	PKPbc	04 27 24.3	-2.1
PVCC	Panska Ves	148.61	344	ePKPDF	PKPdf	04 27 22.8	+0.9
PVCC				⇑ePKP	PKPbc	04 27 26.7	+0.3
PVCC				eSS	SS	04 49 17.5	-7.2
RSBS	Rosebush, Pemb	148.63	7	eP	PKPdf	04 27 17.6	-4.3
MAUC	Maruska	148.66	339	ePKPDF	PKPdf	04 27 22.9	+0.8
MAUC				⇑ePKP	PKiKP	04 27 27.8	+0.1
VOIR		148.67	327	⇑P	PKPdf	04 27 24.3	+2.1
PCED	Cedros	148.73	49	ePKP	PKiKP	04 27 28.5	+0.4
CALA	Caldeira	148.75	49	ePKP	PKPdf	04 27 24.7	+2.1
MCH1	Michaelchurch	148.76	5	eP	PKPdf	04 27 20.2	-1.9
DRGR		148.82	331	⇓P	PKPdf	04 27 22.8	+0.4
HOR	Horta	148.82	49	ePKP	PKPbc	04 27 26.6	-0.7
PRD	Provadia	148.83	322	P	PKPdf	04 27 22.0	-0.4
ELMS	Elmsett, Ipswi	148.84	0	eP	PKPdf	04 27 20.4	-1.8
BUC1	Bucharest	148.88	324	⇑P	PKPdf	04 27 23.3	+0.9
MONM	Monmouth	148.94	5	eP	PKPdf	04 27 20.2	-2.1
PCAN	Candelaria	148.95	49	ePKP	PKPbc	04 27 27.2	-0.5
PICO	Pico	148.98	49	ePKP	PKiKP	04 27 28.8	+0.1
BORR	Bors	149.00	332	⇓P	PKPdf	04 27 24.6	+2.0
SRBC	Serra Branca	149.01	48	ePKP	PKPdf	04 27 24.4	+1.5
STRD	Stroud	149.04	4	eP	PKPdf	04 27 20.0	-2.5
VYHS	Vyhne	149.05	337	ePKP	PKPdf	04 27 23.0	+0.3
VYHS				e		04 27 27.9	
VYHS				e		04 27 35.1	
PPNO	Prainha do Nor	149.10	49	ePKP	PKPdf	04 27 22.6	-0.6
PRU	Pruhonice	149.11	343	ePKPDF	PKPdf	04 27 23.4	+0.7
PRU				⇑ePKP	PKPbc	04 27 27.6	0.0
VRAC	Vranov	149.11	340	PKP	PKPdf	04 27 21.4	-1.3
	comp=Z,8.3nm,0.8s,baz=219,slow=6.5,SNR=25						
VRAC				PKPbc	PKPbc	04 27 27.8	+0.1
	comp=Z,134nm,1.1s,baz=16,slow=1.6,SNR=41						
VRAC	Vranov	149.11	340	ePKP	PKPdf	04 27 21.9	-0.9
PSZ	Piszkesteto	149.12	335		PKPdf	04 27 22.1	-0.8
PSZ				PKPbc	PKiKP	04 27 29.3	+0.6
PSZ	Piszkesteto	149.12	335	PKIKP	PKPdf	04 27 22.1	-0.8
OLDB	Oldbury-Upon-S	149.13	5	eP	PKPdf	04 27 21.1	-1.6
KOLL	Kolacno	149.14	338	ePKP	PKPdf	04 27 23.5	+0.7
KOLL				e		04 27 28.2	
JAVC	Velka Javorina	149.15	339	ePKP	PKPdf	04 27 23.2	+0.3
PMAN	Manadas	149.16	49	ePKP	PKPdf	04 27 25.5	+2.4
PID	Ribeirinha	149.22	49	ePKP	PKPdf	04 27 25.6	+2.3
LOT	Lotru	149.30	328	⇑P	PKPdf	04 27 24.1	+0.8
HUMR	Humele	149.32	326	⇑P	PKPdf	04 27 24.6	+1.4
SWN1	Swindon	149.33	4	eP	PKPdf	04 27 21.0	-2.0
KRUC	Moravsky	149.39	340	ePKP	PKPdf	04 27 22.3	-0.9
NKC	Novy Kostel	149.40	346	⇑ePKP	PKPbc	04 27 28.4	0.0
DEV	Deva	149.40	330	⇑P	PKPdf	04 27 25.6	+2.3
COPA	Copaceanca	149.46	325	⇑P	PKPdf	04 27 25.0	+1.6
SMOL	Smolenice	149.53	339	ePKP	PKPdf	04 27 24.9	+1.5
SMOL				e		04 27 29.5	
SMOL				e		04 27 37.6	
HTL	Hartland	149.60	7	eP	PKPdf	04 27 20.4	-3.0
SZH	Strazhica	149.63	323	P	PKPdf	04 27 23.0	-0.8
SIRR	Siria	149.69	331	⇑P	PKPdf	04 27 24.3	+0.5
MODS	Modra-Piesok	149.70	339	ePKP	PKPdf	04 27 24.2	+0.5
MODS				e		04 27 29.7	
PAGU	Agualva, Azore	149.72	48	ePKP	PKPbc	04 27 29.1	-0.4
ADH	Angra Heroismo	149.74	48	ePKP	PKPbc	04 27 26.9	-2.6
JMB	Yambol	149.75	321	P	PKPdf	04 27 24.0	0.0
ELSH	Elham, Standar	149.79	0	eP	PKPdf	04 27 22.1	-1.6
SRO	Srobarova	149.81	337	ePKP	PKiKP	04 27 30.0	0.0
SRO				e		04 27 38.1	
GZR	Gura Zlata	149.82	329	⇑P	PKPdf	04 27 24.9	+0.8
GZR	Gura Zlata	149.82	329	⇑PKIKP	PKPdf	04 27 24.9	+0.8
JAWL	J.Aulia	149.83	264	i P	PKiKP	04 27 30.8	-0.2
JAWL				i		04 27 35.6	
	baz=249,slow=16						
JAWL	J.Aulia	149.83	264	i P	PKiKP	04 27 30.8	-0.2
JAWL				i		04 27 35.6	
	baz=249,slow=16						
ZST	Bratislava	149.91	339	ePKP	PKPdf	04 27 25.3	+1.3
ZST				e		04 27 30.5	
BEBN	Eben Emael	149.94	354	dPKPdf	PKPdf	04 27 24.4	+0.5
BEBN				dPKPbc	PKPbc	04 27 29.0	-0.5
BEBN				dPKiKP	PKiKP	04 27 30.0	-0.1
BEBN				dPKPab	PKPab	04 27 36.4	-1.3
UCC	Uccle	150.04	356	dPKPbc	PKPbc	04 27 29.4	-0.3
MEM	Membach	150.10	354	dPKPdf	PKPdf	04 27 23.3	-0.9
MEM				dPKPbc	PKPbc	04 27 29.3	-0.6
MEM				dPKiKP	PKiKP	04 27 30.1	-0.4
BTNL	Ternell	150.11	354	dPKPdf	PKPdf	04 27 23.3	-1.0
BTNL				dPKPbc	PKPbc	04 27 29.6	-0.4
BTNL				dPKiKP	PKiKP	04 27 30.3	-0.3
BTNL				dPKPab	PKPab	04 27 39.7	+1.2
SRE	Strehaia	150.14	328	⇑P	PKPdf	04 27 26.5	+2.0
SRE	Strehaia	150.14	328	⇑PKIKP	PKPdf	04 27 26.5	+2.0
KHC	Kasperske Hory	150.15	344	ePKIKP	PKPdf	04 27 24.0	-0.4
KHC				e		04 27 38.5	
KHC				eSS	SS	04 49 42.9	+1.2
KHC	Kasperske Hory	150.15	344	ePKPDF	PKPdf	04 27 24.0	-0.4
KHC				⇑ePKP	PKPbc	04 27 30.0	-0.2
KHC				ePKPAB	PKPab	04 27 38.5	-0.2
KHC				eSS	SS	04 49 42.9	+1.2
BSTI	Sart Tilman	150.16	355	dPKPdf	PKPdf	04 27 24.2	-0.1
BSTI				dPKPbc	PKPbc	04 27 29.8	-0.3
BSTI				dPKiKP	PKiKP	04 27 30.4	-0.2
GRFO	Grafenberg	150.18	347		PKPdf	04 27 23.5	-0.9
GRFO				PKPbc	PKiKP	04 27 31.2	+0.5
GRFO				PKPab	PKPab	04 27 39.7	+0.9
GRFO	Grafenberg	150.18	347	PKIKP	PKPdf	04 27 23.5	-0.9
GRFO						04 27 39.7	
DYA	Yadsworthy	150.22	7	eP	PKPdf	04 27 21.4	-3.0
CKRC	Cesky Krumlov	150.23	343	ePKPDF	PKPdf	04 27 24.1	-0.4
CKRC				⇑ePKP	PKPbc	04 27 30.4	0.0
CKRC				eSS	SS	04 49 34.9	-7.7
SNF	Seneffe	150.34	356	dPKPdf	PKPdf	04 27 24.4	-0.2
SNF				dPKPbc	PKPbc	04 27 29.6	-0.8
BCLA	Clavier	150.35	355	dPKPdf	PKPdf	04 27 24.4	-0.2
BCLA				dPKPbc	PKPbc	04 27 30.3	-0.2
BCLA				dPKPab	PKPab	04 27 39.2	-0.2
BHOU	Houvegnez	150.35	354	dPKPdf	PKPdf	04 27 24.2	-0.4
BHOU				dPKiKP	PKiKP	04 27 31.0	-0.1
BHOU				dPKPab	PKPab	04 27 39.9	+0.4
HERR	Herculane	150.37	329	⇓P	PKPdf	04 27 25.7	+0.8
GERES	GERESS Array B	150.38	343	PKP	PKPdf	04 27 24.3	-0.6
	comp=Z,7.4nm,0.8s,baz=64,slow=3.1,SNR=60						
GERES				PKPbc	PKPbc	04 27 30.5	-0.3
	comp=Z,104nm,0.8s,baz=44,slow=3.0,SNR=124						
BGES	Gesves	150.40	355	dPKPdf	PKPdf	04 27 24.7	0.0
BGES				dPKPab	PKPab	04 27 39.9	+0.2
BMRD	Maredsous	150.51	355	dPKPdf	PKPdf	04 27 24.2	-0.7
BMRD				dPKPab	PKPab	04 27 40.0	-0.1
BAIL	Bailesti	150.53	327	⇑P	PKPdf	04 27 25.6	+0.6
PUNG	Punghina	150.55	327	⇓P	PKPdf	04 27 25.7	+0.6
CONA	Conrad Observa	150.56	340	i P	PKPdf	04 27 24.8	-0.4
	comp=Z,82nm,1.6s,SNR=56						
CONA				eP	PKiKP	04 27 32.1	+0.4
	comp=Z,328nm,0.8s						
CONA				eP	PKPab	04 27 42.4	+1.8
	comp=Z,494nm,1.7s						
KULA	Kula-Manisa	150.59	313	P	PKPdf	04 27 23.9	-1.6
BANR	Banloc	150.60	331	⇑P	PKPdf	04 27 27.0	+1.9
RONA	Rosalia, Austr	150.62	339	i P	PKPdf	04 27 24.4	-0.8
	comp=Z,62nm,1.6s,SNR=28						
RONA				eP	PKPbc	04 27 31.1	-0.2
	comp=Z,161nm,0.5s						
RONA				eP	PKPab	04 27 41.2	+0.4
	comp=Z,200nm,1.0s						
DOU	Dourbes	150.73	356	dPKPdf	PKPdf	04 27 25.1	0.0
DOU				dPKPbc	PKPbc	04 27 31.1	-0.3
MDVR	Moldovita	150.78	329	⇓P	PKPdf	04 27 26.1	+0.5
MORH	Mrgy, Hungar	151.01	335	⇓iP	PKPdf	04 27 24.6	-1.1
WLF	Walferdange	151.02	353	dPKPdf	PKPdf	04 27 25.2	-0.5
WLF				dPKiKP	PKPbc	04 27 32.1	0.0
WLF				dPKPab	PKPab	04 27 42.7	+0.4
PLD	Plovdiv	151.07	322	P	PKPdf	04 27 24.0	-2.0
MOA	Molln	151.12	342	i P	PKPdf	04 27 25.2	-0.8
	comp=Z,49nm,1.4s,SNR=24						
MOA				eP	PKPbc	04 27 32.1	-0.3
	comp=Z,91nm,1.0s						
PDA	Ponta Delgada	151.26	48	ePKP	PKPdf	04 27 28.8	+2.4
ARSA	Arzberg	151.26	340	i P	PKPdf	04 27 24.9	-1.2
	comp=Z,66nm,1.8s,SNR=20						
ARSA				eP	PKiKP	04 27 33.6	+0.5
	comp=Z,122nm,1.3s						
ARSA				eP	PKPab	04 27 44.1	+0.6
	comp=Z,134nm,1.5s						
RZN	Rozhen	151.33	322	P	PKPdf	04 27 25.0	-1.6
GRON	Grota Negra	151.34	48	ePKP	PKPdf	04 27 22.8	-3.8
CMLA	Cha da Macela	151.35	48	ePKP	PKPdf	04 27 21.9	-4.7
CMLA	Cha da Macela	151.35	48		PKPbc	04 27 31.7	-1.5
CMLA	Cha da Macela	151.35	48	PKIKP	PKPbc	04 27 31.7	-1.5
PCALD	Caldeiras da R	151.36	48	ePKP	PKPdf	04 27 27.2	+0.6
FRGS	Fruska Gora	151.37	332	⇓iP	PKPdf	04 27 24.8	-1.6
BIOA	Bad Ischl, Aus	151.44	342	i P	PKPdf	04 27 24.9	-1.5
	comp=Z,74nm,1.5s,SNR=33						
BIOA				eP	PKiKP	04 27 33.5	0.0
	comp=Z,145nm,1.1s						
BIOA				eP	PKPab	04 27 44.6	+0.4
	comp=Z,450nm,1.5s						
YER	Yerkesik	151.50	310	P	PKPdf	04 27 24.4	-2.5
BEHE	Becsehely	151.51	337	⇓iP	PKPdf	04 27 25.3	-1.2
JVM	Valle D.L. Mar	151.59	5	eP	PKPdf	04 27 26.0	-0.5
BART	Pico Bartolome	151.59	48	ePKP	PKPdf	04 27 26.2	-0.8
JQE	Queens East	151.62	5	eP	PKPdf	04 27 25.8	-0.7
JSA	Saint Aubin	151.62	5	eP	PKPdf	04 27 23.0	-3.6
KOGS	Kog	151.72	338	ePKPdf	PKPdf	04 27 25.3	-1.5
KOGS				ePKPbc	PKPbc	04 27 33.3	-0.4
KOGS				ePKPab	PKPab	04 27 44.4	-1.0
BLCB	Balcova	151.76	314	P	PKPdf	04 27 25.1	-2.0
BLJ	Bijeljina	151.90	332	eP	PKPdf	04 27 27.2	+0.1
SOKA	Soboth	151.93	340	i P	PKPdf	04 27 25.7	-1.5
	comp=Z,81nm,1.7s,SNR=67						
SOKA				eP	PKPbc	04 27 34.0	-0.3
	comp=Z,118nm,0.9s						
TEKS	Tekeris	151.97	332	eP	PKPdf	04 27 25.5	-1.8
PSMA	Santa Maria	151.99	49	ePKP	PKPdf	04 27 26.9	-0.6
BFO	Black Forest	152.03	350		PKPdf	04 27 26.0	-1.2
BFO				PKPbc	PKPbc	04 27 33.7	-0.7
BFO				PKPab	PKPab	04 27 45.1	-1.5
KBA	Koelnbreinsper	152.09	342	i P	PKPdf	04 27 25.9	-1.7
	comp=Z,71nm,1.5s,SNR=48						
KBA				eP	PKPbc	04 27 34.3	-0.5
	comp=Z,297nm,1.8s						
DIVS	Divibare	152.11	330	⇓iP	PKPdf	04 27 26.2	-1.4
BODT	Bodrum	152.22	311	P	PKPdf	04 27 25.7	-2.2
OBKA	Obir	152.23	340	i P	PKPdf	04 27 26.8	-0.9
	comp=Z,54nm,2.1s,SNR=18						
OBKA				eP	PKPbc	04 27 35.0	-0.1
	comp=Z,34nm,0.8s						
KOKK	Kokkinochori,	152.30	321	P	PKPdf	04 27 25.2	-2.7
WATA	Walderalm	152.32	345	i P	PKPdf	04 27 27.0	-0.9
	comp=Z,101nm,1.8s,SNR=26						
WATA				eP	PKPbc	04 27 34.9	-0.3
	comp=Z,247nm,1.3s						
WATA				eP	PKPab	04 27 49.4	+1.3
	comp=Z,434nm,1.7s						
RETA	Reutte	152.37	346	i P	PKPdf	04 27 27.2	-0.7
	comp=Z,60nm,1.6s,SNR=16						
RETA				eP	PKiKP	04 27 35.8	+0.4
	comp=Z,87nm,0.7s						
RETA				eP	PKPab	04 27 49.9	+1.7
	comp=Z,97nm,0.5s						
WTTA	Wattenberg	152.37	345	i P	PKPdf	04 27 26.9	-1.1
	comp=Z,103nm,1.4s,SNR=47						
WTTA				eP	PKPbc	04 27 35.0	-0.5
	comp=Z,151nm,0.6s						
WTTA				eP	PKPab	04 27 50.0	+1.7
	comp=Z,310nm,1.2s						
MYKA	Terra Mystica	152.40	341	i P	PKPdf	04 27 27.8	-0.2
	comp=Z,76nm,1.7s,SNR=21						
MYKA				eP	PKPbc	04 27 34.9	-0.4
	comp=Z,121nm,0.8s						
MYKA				eP	PKPab	04 27 50.1	+1.7
	comp=Z,89nm,0.7s						
MYKA				eP	pPKPab	04 29 55.5	+0.4
	comp=Z,25nm,0.9s						
CHOS	Chios island	152.42	315	P	PKPdf	04 27 26.2	-2.0
MOTA	Moosalm	152.42	345	i P	PKPdf	04 27 27.3	-0.8
	comp=Z,57nm,1.1s,SNR=34						
MOTA				eP	PKiKP	04 27 35.9	+0.2
	comp=Z,269nm,1.1s						
MOTA				eP	PKPab	04 27 49.2	+0.7
	comp=Z,147nm,0.9s						
SQTA	Sankt Quirin	152.51	345	i P	PKPdf	04 27 27.2	-1.0
	comp=Z,43nm,1.1s,SNR=34						
SQTA				eP	PKiKP	04 27 36.0	+0.2
	comp=Z,156nm,0.9s						
SQTA				eP	PKPab	04 27 49.5	+0.6
	comp=Z,295nm,1.3s						
CRES	Cresnjev	152.53	338	eP	PKPdf	04 27 27.7	-0.4
BBLS	Lazići	152.56	331	⇓iP	PKPdf	04 27 27.0	-1.2
OUR	Ouranopolis	152.61	320	P	PKPdf	04 27 25.6	-2.7
ABTA	Abfaltersbach	152.62	343	i P	PKPdf	04 27 26.9	-1.4
	comp=Z,127nm,1.3s,SNR=63						
ABTA				eP	PKPbc	04 27 35.8	0.0
	comp=Z,138nm,0.6s						
ABTA				eP	pPKPbc	04 29 52.4	+3.6
	comp=Z,37nm,0.9s						
LJU	Ljubljana	152.65	340	⇓iP	PKPdf	04 27 27.0	-1.2
LJU	Ljubljana	152.65	340	i PKPdf	PKPdf	04 27 27.2	-1.0
LJU				i PKPbc	PKPbc	04 27 35.7	-0.2
LJU				epPKPbc	pPKPdf	04 29 44.1	+1.9
KNT	Kendrikon	152.71	323	P	PKPdf	04 27 25.7	-2.8
DAVA	Damuels	152.75	347	i P	PKPdf	04 27 27.9	-0.6
	comp=Z,72nm,1.3s,SNR=34						
DAVA				eP	PKiKP	04 27 37.8	+1.5
	comp=Z,179nm,1.1s						
DAVA				eP	pPKPab	04 29 58.1	+1.2
	comp=Z,55nm,1.1s						
STIP	Stip	152.75	324	i P	PKPdf	04 27 26.5	-2.0
SJES	Sjenica	152.75	329	⇓iP	PKPdf	04 27 27.6	-1.0
RUDO	Rudo	152.76	330	eP	PKPdf	04 27 26.9	-1.6

VAY	Valandovo	152.79	323	iP	PKPdf	04 27 27.3	-1.2
BLY	Banja Luka	152.80	335	⇓iP	PKPdf	04 27 27.5	-1.0
FETA	Feichten	152.81	346	iP	PKPdf	04 27 27.6	-1.0
	comp=Z,73nm,1.0s,SNR=57						
FETA				eP	PKiKP	04 27 37.3	+0.8
	comp=Z,132nm,0.9s						
FETA				eP	PKPab	04 27 51.8	+1.6
	comp=Z,91nm,1.0s						
FETA				eP	pPKPab	04 29 53.4	-4.0
	comp=Z,49nm,1.1s						
CEY	Cerknica	152.96	339	⇓iP	PKPdf	04 27 27.4	-1.3
SKO	Skopje	152.96	326	iP	PKPdf	04 27 28.0	-0.8
MGRS	Mrkonjic Grad	153.12	334	eP	PKPdf	04 27 28.8	-0.2
DAVOX	Davos/Dischmat	153.23	347	PKP	PKPdf	04 27 28.4	-0.8
	comp=Z,28nm,0.8s,baz=43,slow=1.5,SNR=54						
DAVOX				PKPbc	PKPbc	04 27 37.1	-0.2
	comp=Z,132nm,0.6s,baz=247,slow=3.4,SNR=49						
DAVOX				PKPab	PKPab	04 27 53.3	+1.3
	comp=Z,134nm,0.9s,baz=47,slow=3.3,SNR=8.7						
SKDS	Skadanscina	153.26	340	⇓iP	PKPdf	04 27 27.4	-1.7
UPM	Unac-Piva	153.30	330	eP	PKPdf	04 27 28.0	-1.5
SRKY	Kupres RS	153.37	334	eP	PKPbc	04 27 36.5	-1.1
CTI	Castel Tesino	153.50	344		PKPdf	04 27 28.1	-1.4
CTI				PKPab	PKPab	04 27 53.3	+0.2
CTI	Castel Tesino	153.50	344	PKP2	PKPab	04 27 53.3	+0.2
CTI						05 27 28.1	
BRY	Bratogost	153.70	331	eP	PKPdf	04 27 28.8	-1.2
PDG	Podgorica	153.73	329	⇓iP	PKPdf	04 27 28.2	-1.6
FNA	Florina	153.82	324	P	PKPdf	04 27 27.7	-2.4
OHR	Ohrid	153.91	325	iP	PKPdf	04 27 29.6	-0.6
TREB	Trebinje	153.94	331	eP	PKPdf	04 27 33.6	+3.5
DRME	Dracevica, Mon	153.95	329	⇓iP	PKPdf	04 27 28.6	-1.6
HCY	Herceg Novi	154.08	330	eP	PKPdf	04 27 28.5	-1.8
KPRO	Kipourio	154.39	322	P	PKPdf	04 27 28.9	-2.0
IDI	Anoyia	154.79	310	PKP	PKPdf	04 27 31.2	-0.5
	comp=Z,59nm,1.0s,baz=72,slow=4.0,SNR=25						
IDI				PKPbc	PKPbc	04 27 41.7	+0.8
	comp=Z,49nm,0.6s,baz=337,slow=6.7,SNR=19						
IDI				PKPab	PKPab	04 27 58.8	-0.3
	comp=Z,60nm,0.5s,baz=157,slow=11,SNR=12						
ANX	Ano Chora	154.94	319	P	PKPdf	04 27 30.4	-1.4
ZCCA	Zocca	155.25	343		PKPdf	04 27 31.1	-0.8
ZCCA				PKPab	PKPab	04 28 01.9	+1.3
TRIP	Tripoli	155.37	317	P	PKPdf	04 27 30.2	-2.1
DRO	Drossia	155.47	318	P	PKPdf	04 27 31.2	-1.2
ITM	Ithomi	155.80	317		PKPdf	04 27 31.7	-1.2
ITM				PKPab	PKPab	04 28 03.5	+0.3
PGAV	Gavieira, Arco	157.49	19	ePKPdf	PKPdf	04 27 34.0	-0.9
PCAB	Cabril	157.79	19	ePKPdf	PKPdf	04 27 35.7	+0.5
PCAB	Cabril	157.79	19	ePKPab	PKPab	04 28 13.1	+1.4
PBRG	Braganca	158.06	16	ePKPdf	PKPdf	04 27 34.8	-0.8
PBRG	Braganca	158.06	16	ePKPab	PKPab	04 28 14.4	+1.5
POLO	Lamas de Olo	158.17	19	ePKPdf	PKPdf	04 27 35.3	-0.5
POLO	Lamas de Olo	158.17	19	ePKPab	PKPab	04 28 15.5	+2.1
PVRL	Vila Real	158.28	19	ePKPdf	PKPdf	04 27 37.1	+1.2
PVRL	Vila Real	158.28	19	ePKPab	PKPab	04 28 16.4	+2.6
CEL	Celeste	158.56	327		PKPdf	04 27 34.7	-1.6
CEL					PKPab	04 28 14.6	-0.7
MVO	Moncorvo	158.58	17	ePKPdf	PKPdf	04 27 36.0	-0.2
MVO	Moncorvo	158.58	17	ePKPab	PKPab	04 28 15.4	+0.2
PVIS	Viseu	158.74	20	ePKPdf	PKPdf	04 27 36.3	-0.1
PVIS	Viseu	158.74	20	ePKPab	PKPab	04 28 15.4	-0.5
COI	Coimbra	159.03	21	ePKPdf	PKPdf	04 27 34.9	-1.8
COI	Coimbra	159.03	21	ePKPab	PKPab	04 28 15.9	-1.1
MTE	Manteigas	159.14	19	ePKPdf	PKPdf	04 27 36.1	-0.8
MTE	Manteigas	159.14	19	ePKPab	PKPab	04 28 17.4	-0.2
PCAS	Casmilo, Conde	159.14	21	ePKPdf	PKPdf	04 27 36.1	-0.7
PCAS	Casmilo, Conde	159.14	21	ePKPab	PKPab	04 28 17.1	-0.5
PSBE	So Bento	159.51	23	ePKPdf	PKPdf	04 27 37.4	+0.1
PSBE	So Bento	159.51	23	ePKPab	PKPab	04 28 21.2	+2.0
PCBR	Castelo Branco	159.67	20	ePKPdf	PKPdf	04 27 37.3	-0.1
PCBR	Castelo Branco	159.67	20	ePKPab	PKPab	04 28 19.0	-0.8
PMAFR	Mafra	159.82	24	ePKPdf	PKPdf	04 27 38.2	+0.6
PMAFR	Mafra	159.82	24	ePKPab	PKPab	04 28 20.6	0.0
VAE	Valguarnera	159.91	328	PKP	PKPdf	04 27 38.0	+0.2
	comp=Z,6.3nm,0.4s,baz=336,slow=1.2,SNR=6.9						
PMAR	Madeira	159.96	50	ePKPab	PKPab	04 28 24.2	+2.5
FUL	Funchal	160.02	50	ePKPdf	PKPdf	04 27 38.6	+0.6
PMST	Lisbon--Monsan	160.05	25	ePKPdf	PKPdf	04 27 37.4	-0.5
PMRV	Marv??o	160.07	20	ePKPdf	PKPdf	04 27 37.3	-0.6
PMRV	Marv??o	160.07	20	ePKPab	PKPab	04 28 20.8	-0.9
LIS	Lisbon	160.08	25	ePKPdf	PKPdf	04 27 37.8	-0.1
PMTG	Montargil	160.11	22	ePKPdf	PKPdf	04 27 37.4	-0.5
PMTG	Montargil	160.11	22	ePKPab	PKPab	04 28 20.7	-1.1
PACT	Alcochete	160.16	24	ePKPdf	PKPdf	04 27 38.1	+0.1
PACT	Alcochete	160.16	24	ePKPab	PKPab	04 28 22.0	0.0
UCM	Universidad Co	160.25	10	PKP	PKPdf	04 27 35.3	-2.8
PESTR	Estremoz	160.51	21	ePKPdf	PKPdf	04 27 38.1	-0.3
PESTR	Estremoz	160.51	21	ePKPab	PKPab	04 28 22.6	-1.0
PESTR	Estremoz	160.51	21	P	PKPdf	04 27 39.7	+1.3
EVO	Evora	160.67	22	PKP	PKPdf	04 27 38.3	-0.3
ESDC	Sonseca Array	160.74	12	PKP	PKPdf	04 27 38.5	-0.2
	comp=Z,15nm,1.1s,baz=345,slow=2.7,SNR=33						
ESDC				PKPab	PKPab	04 28 23.9	-0.7
	comp=Z,62nm,1.1s,baz=342,slow=4.7,SNR=18						
ESDC				PP	PP	04 32 04.0	-4.5
	comp=Z,6.5nm,1.1s,baz=3.0,slow=3.3,SNR=3.0						
PAB	San Pablo	160.78	13		PKPdf	04 27 38.2	-0.5
PAB				PKPab	PKPab	04 28 25.5	+0.7
PAB	San Pablo	160.78	13	PKIKP	PKPdf	04 27 38.3	-0.5
PAB						04 28 25.5	
PAB	San Pablo	160.78	13	P	PKPdf	04 27 39.6	+0.8
PNCL	Nicolau / Gran	160.84	24	ePKPdf	PKPdf	04 27 38.6	-0.1
PNCL	Nicolau / Gran	160.84	24	ePKPab	PKPab	04 28 24.6	-0.5
MAHO	Mahon	160.87	353	PKP	PKPdf	04 27 37.3	-1.4
PBEJ	Beja	161.17	23	ePKPdf	PKPdf	04 27 38.8	-0.3
PBEJ	Beja	161.17	23	ePKPab	PKPab	04 28 28.3	+1.8
MESJ	Messejana	161.20	24	ePKPdf	PKPdf	04 27 39.0	-0.1
MESJ	Messejana	161.20	24	ePKPdf	PKPdf	04 27 38.6	-0.5
MESJ	Messejana	161.20	24	ePKPab	PKPab	04 28 25.9	-0.7
PTEO	Sao Teotonio	161.26	25	ePKPdf	PKPdf	04 27 39.8	+0.6
PTEO	Sao Teotonio	161.26	25	ePKPab	PKPab	04 28 26.8	-0.1
PBAR	Barrancos	161.32	21	ePKPdf	PKPdf	04 27 39.2	-0.1
PBAR	Barrancos	161.32	21	ePKPab	PKPab	04 28 26.6	-0.5
MORF	Marmelete	161.50	26	ePKPdf	PKPdf	04 27 39.3	-0.2
MORF	Marmelete	161.50	26	ePKPdf	PKPdf	04 27 39.6	+0.1
MORF	Marmelete	161.50	26	ePKPab	PKPab	04 28 29.0	+1.0
PFVI	Vila Bisbo	161.57	26	ePKPdf	PKPdf	04 27 39.9	+0.4
PFVI	Vila Bisbo	161.57	26	ePKPab	PKPab	04 28 30.0	+1.7
PFVI	Vila Bisbo	161.57	26	P	PKPdf	04 27 41.1	+1.5
PVAQ	Vaqueiros	161.77	23	ePKPdf	PKPdf	04 27 39.6	-0.1
PVAQ	Vaqueiros	161.77	23	ePKPab	PKPab	04 28 28.7	-0.5
PVAQ	Vaqueiros	161.77	23	P	PKPdf	04 27 41.1	+1.3
PVAQ	Vaqueiros	161.77	23	P	PKPab	04 28 32.1	+3.0
PBDV	Barranco-do-Ve	161.83	24	ePKPdf	PKPdf	04 27 40.6	+0.8
PBDV	Barranco-do-Ve	161.83	24	ePKPab	PKPab	04 28 32.4	+2.9
SFS	San Fernando	163.15	21	PKP	PKPdf	04 27 40.8	-0.3
CART	Cartagena	163.23	6	PKP	PKPdf	04 27 39.1	-2.0
CMAH	Djebel Manchou	163.42	342	P	PKPdf	04 27 40.9	-0.6
KEST	Kesra	163.60	336	PKP	PKPdf	04 27 40.6	-1.0
	comp=Z,23nm,1.1s,baz=302,slow=2.4,SNR=8.6						
KEST				PKPab	PKPab	04 28 37.0	-0.3
	comp=Z,71nm,0.8s,baz=291,slow=3.6,SNR=20						
KEST	Kesra	163.60	336	PKPdf	PKPdf	04 27 40.8	-0.9
KEST					PKPab	04 28 36.5	-0.8
KEST	Kesra	163.60	336	P	PKPdf	04 27 41.3	-0.4
	SNR=5.5						
CKFL	Kef-Lekhel	163.82	344	P	PKPdf	04 27 41.7	-0.2
DFRA	Djebel Bou Aff	163.88	347	P	PKPdf	04 27 42.3	+0.4
CEU	Ceuta	163.94	20	PKP	PKPdf	04 27 41.9	+0.1
CASM	Ain Smara	164.01	345	P	PKPdf	04 27 44.5	+2.5
SMIR	Smir Dam	164.14	20	P	PKPdf	04 27 44.0	+2.0
SMIR	Smir Dam	164.14	20	P	PKPab	04 28 44.0	+4.4
LIC	Lamto	164.20	156	eP	PKPdf	04 27 42.1	-0.6
	comp=Z,165nm,1.2s						
KIC	Kosan Boka	164.43	157	ePKIKP	PKPdf	04 27 41.6	-1.3
	comp=Z,129nm,0.9s						
TIC	Toumodi	164.59	156	ePKIKP	PKPdf	04 27 41.9	-1.2
	comp=Z,239nm,1.1s						
EBNR	Beni Rached	164.64	359	P	PKPdf	04 27 42.0	-0.5
CHEFC	Chefchaouen	164.68	21	P	PKPdf	04 27 44.2	+1.6
CHEFC	Chefchaouen	164.68	21	P	PKPab	04 28 47.0	+4.9
DBIC	Dimbokro	164.68	156	PKP	PKPdf	04 27 42.3	-0.8
	comp=Z,55nm,0.9s,baz=141,slow=0.9,SNR=38						
DBIC				PKPab	PKPab	04 28 43.7	+1.3
	comp=Z,59nm,1.0s,baz=208,slow=4.6,SNR=9.6						
DBIC	Dimbokro	164.68	156		PKPdf	04 27 41.8	-1.3
DBIC				PKPab	PKPab	04 28 43.7	+1.3
PVLZ	Peæn de	164.94	18	PKP	PKPdf	04 27 39.8	-2.9
EANR	'Ain N'Sour	164.98	1	P	PKPdf	04 27 42.6	-0.2
PALE	Palemas	165.00	17	P	PKPdf	04 27 43.1	+0.3
WMELI	Melilla	165.14	14	PKP	PKPdf	04 27 40.1	-2.8
CHAS	Isla Isabel II	165.38	12	PKP	PKPdf	04 27 42.2	-0.9
AVE	Averroes	165.42	30	PKP	PKPdf	04 27 41.7	-1.5
AVE	Averroes	165.42	30	P	PKPdf	04 27 44.5	+1.3
ZHG	ZHG	165.64	28	P	PKPdf	04 27 45.0	+1.5
AKLM	AKL	165.68	17	P	PKPdf	04 27 44.0	+0.5
SRHM	Skhour des Reh	165.85	33	P	PKPdf	04 27 45.0	+1.3
SRHM	Skhour des Reh	165.85	33	P	PKPab	04 28 50.0	+2.6
LCRM	LCR	166.13	22	P	PKPdf	04 27 45.0	+1.0
JBK	JBK	166.17	13	P	PKPdf	04 27 45.0	+0.9
OUK	Oukaimeden	166.84	37	P	PKPdf	04 27 47.0	+2.2
OUK	Oukaimeden	166.84	37	P	PKPab	04 28 54.0	+1.8
TTIG	Tnine Tigouga,	166.99	40	P	PKPdf	04 27 46.0	+1.3
TTIG	Tnine Tigouga,	166.99	40	P	PKPab	04 28 54.0	+1.3
MDT	Midelt	167.01	23	PKP	PKPdf	04 27 45.0	+0.4
	comp=Z,37nm,1.0s,baz=87,slow=0.9,SNR=58						
MDT				PKPab	PKPab	04 28 51.1	-1.4
	comp=Z,20nm,0.9s,baz=170,slow=2.7,SNR=12						
MDT	Midelt	167.01	23	P	PKPdf	04 27 45.0	+0.4
MDT	Midelt	167.01	23	P	PKPab	04 28 55.6	+3.1
OUZM	OUZ	167.67	34	P	PKPdf	04 27 46.0	+0.8
TZRR	Tazzarine	168.37	31	P	PKPdf	04 27 47.0	+1.4
FIGM	Figuig	168.56	11	P	PKPdf	04 27 46.0	+0.3
ZGR	Zagora	168.89	33	P	PKPdf	04 27 47.0	+1.0
ZGR	Zagora	168.89	33	P	PKPab	04 29 04.0	+3.0
KOWA	Kowa	171.89	141		PKPdf	04 27 46.0	-1.8
KOWA				PKPab	PKPab	04 29 14.4	-0.1
KOWA	Kowa	171.89	141	P	PKPdf	04 27 47.3	-0.4
TOA0	Torodi Ar. Sit	172.30	183	P	PKPdf	04 27 46.7	-1.3
	SNR=21						
TORD	Torodi Ar. Bea	172.30	183	PKP	PKPdf	04 27 46.4	-1.6
	comp=Z,36nm,0.8s,baz=326,slow=0.8,SNR=122						
TORD				PKPab	PKPab	04 29 15.7	-0.3
	comp=Z,46nm,0.9s,baz=171,slow=3.4,SNR=14						
TORD				PP	PP	04 33 04.6	-2.1
	comp=Z,13nm,1.1s,baz=165,slow=4.5,SNR=2.8						
TORD	Torodi Ar. Bea	172.30	183		PKPdf	04 27 46.2	-1.8
TORD				PKPab	PKPab	04 29 15.6	-0.4

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*IDC **27** 04:22:16.4±3.8, 20°.81S×178°.50W, h578km±27km, mb3.5/6, mbtmp4.4/8 Error ellipse: s-maj=76.5km s-min=22.3km az=142.0*

ISC 27 04:22:16.7±1.8**, 20°.8S**±0°.3×**178°.6W**±0°.2**, h579**km**, n11, σ0ˢ.75**/11**, mb4.1**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.38	313	P	P	04 23 44.1	+0.5
	19nm,0.6s,baz=290,slow=23,SNR=20						
DZM	Mont Dzumac	14.00	262	P	P	04 25 14.4	-1.5
	4.7nm,0.6s,baz=94,slow=15,SNR=7.4						
CTA	Charters Tower	32.92	265	P	P	04 28 05.1	+0.6
	5.4nm,0.4s,baz=93,slow=11,SNR=10						
	5.4nm,0.4s						
STKA	Stephens Creek	37.18	244	P	P	04 28 40.3	+0.6
	4.8nm,0.8s,baz=100,slow=7.6,SNR=2.8						
	4.8nm,0.8s						
ASAR	Alice Springs	43.92	257	P	P	04 29 33.5	+0.1
	3.8nm,0.6s,baz=93,slow=8.0,SNR=15						
ASAR				PcP	PcP	04 31 07.0	+0.5
	0.8nm,0.6s,baz=97,slow=4.2,SNR=4.3						
	3.8nm,0.6s						
WRA	Warramunga Arr	44.02	262	P	P	04 29 33.9	-0.3
	2.2nm,0.5s,baz=96,slow=7.7,SNR=38						
	2.2nm,0.5s						
SIJI	Sorong	52.78	285	P	P	04 30 39.6	+0.5
	12nm,0.7s,baz=301,slow=23,SNR=4.9						
	12nm,0.7s						
ILAR	Eielson Array	88.70	13	P	P	04 34 08.3	-0.3
	1.0nm,0.8s,baz=220,slow=5.2,SNR=5.0						
	1.0nm,0.8s						
AKASG	Malin Array Be	142.98	330	PKP		04 40 42.4	
	1.5nm,0.3s,baz=43,slow=4.6,SNR=12						
EKA	Eskdalemuir Ar	145.32	5	PKPbc	PKPbc	04 40 49.4	-0.6
	0.3nm,0.5s,baz=280,slow=4.7,SNR=3.5						
BRTR	Keskin Array B	146.61	312	PKPbc	PKPbc	04 40 54.2	-0.2
	1.1nm,0.6s,baz=132,slow=3.5,SNR=4.1						

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*MDD **27** 04:47:18.8±0.5, 34°.35N×16°.00W, h0km, Mb4.3/15, M_mb3.6/15, Error ellipse: s-maj=7.5km s-min=2.1km az=121.0*

*INMG **27** 04:47:24.4±3.2, 34°.48N×16°.53W, h10km, MD3.3, ML3.2, Error ellipse: s-maj=21.7km s-min=5.0km az=113.0*

*CNRM **27** 04:47:34.8, 34°.93N×15°.32W, h100km*

ISC 27 04:47:15.9±0.7**, 34°.53N**±0°.04×**16°.17W**±0°.05**, h35**km**, n65, σ2ˢ.28**/66**, 19C, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	1.45	185	⇑iP	Pn	04 47 44.3	+4.7
PMPST				eS	Sn	04 47 59.6	+2.2
PMPST				A	A	04 48 00.8	
	363nm,0.3s						
PMAR	Madeira	1.90	199	⇑eP	Pn	04 47 49.8	+3.8
PMAR				eS	Sn	04 48 09.6	+0.8
PMAR				A	A	04 48 13.9	
	343nm,0.2s						
PMOZ	Porto Moniz, M	1.90	207	⇑eP	Pn	04 47 49.5	+3.6
PMOZ				eS	Sn	04 48 09.2	+0.5
PMOZ				A	A	04 48 19.7	
	352nm,0.4s						
FUL	Funchal	1.97	198	⇑eP	Pn	04 47 50.5	+3.8
FUL				eS	Sn	04 48 10.3	+0.1
FUL				A	A	04 48 12.3	
	367nm,0.2s						
TBT	Taburiente	6.02	195	P	Pn	04 48 44.8	+2.4
TBT				⇑iVmb_V		04 48 45.2	
	466nm,SNR=1.1						
TBT				S	Sn	04 49 45.2	-4.9
EHIG	Higuera	6.11	194	P	Pn	04 48 46.6	+2.8
EHIG				S	Sn	04 49 49.7	-2.8
CFUE	Fuerteventura	6.16	161	P	Pn	04 48 49.8	+5.4
CFUE				⇑iVmb_V		04 48 50.6	
	413nm,SNR=2.7						
CFUE				S	Sn	04 49 50.3	-3.4
MACI	Morro de la Ar	6.26	183	P	Pn	04 48 49.7	+3.7
MACI				⇑iVmb_V		04 48 50.3	
	150nm,SNR=0.4						
CCAN	Las Canadas	6.30	184	P	Pn	04 48 48.7	+2.2
CCAN				⇑iVmb_V		04 48 49.9	
	78nm,SNR=0.3						
CCAN				S	Sn	04 49 54.6	-2.7
CFTV	Fuerteventura	6.35	163	P	Pn	04 48 51.5	+4.5
CFTV				⇑iVmb_V		04 48 54.7	
	178nm,SNR=1.0						
CFTV				S	Sn	04 49 55.9	-2.5
EGOM	La Gomera	6.41	188	P	Pn	04 48 49.4	+1.6
EGOM				⇑iVmb_V		04 48 50.7	
	282nm,SNR=1.5						
EGOM				S	Sn	04 49 56.8	-2.9
PFVI	Vila Bisbo	6.51	64	eP	Pn	04 48 56.9	+7.8
PFVI				eS	Sn	04 50 03.1	+1.1
PFVI				A	A	04 50 11.2	
	13nm,0.4s						
CGIN	Giniginamar, F	6.55	164	P	Pn	04 48 53.3	+3.6
CGIN				⇑iVmb_V		04 48 55.6	
	138nm,SNR=0.7						
CGIN				S	Sn	04 49 59.4	-3.8
MORF	Marmelete	6.70	63	eP	Pn	04 49 01.3	+9.5
MORF				eS	Sn	04 50 09.6	+2.7
MORF				A	A	04 50 12.5	
	14nm,0.2s						
PTEO	Sao Teotonio	6.74	61	eP	Pn	04 49 01.1	+8.8
PTEO				eS	Sn	04 50 09.9	+2.1
PTEO				A	A	04 50 35.3	
	8.2nm,0.5s						
PMST	Lisbon--Monsan	7.01	51	eS	Sn	04 50 15.6	+1.1
PMAFR	Mafra	7.08	49	eS	Sn	04 50 16.5	+0.4
PMAFR				A	A	04 50 24.4	
	20nm,0.5s						
PNCL	Nicolau / Gran	7.13	58	eP	Pn	04 49 06.5	+8.9
PNCL				eS	Sn	04 50 18.5	+1.1
PNCL				A	A	04 50 25.7	
	5.5nm,0.5s						
SRHM	Skhour des Reh	7.21	104	P	Pn	04 49 10.6	+12
SRHM				S	Sn	04 50 24.7	+5.3
PBDV	Barranco-do-Ve	7.21	66	eP	Pn	04 49 07.4	+8.6
PBDV				eS	Sn	04 50 21.8	+2.3
PBDV				A	A	04 50 29.8	
	6.0nm,0.2s						
MESJ	Messejana	7.23	60	eP	Pn	04 49 08.2	+9.2
MESJ				eS	Sn	04 50 22.6	+2.8
MESJ				A	A	04 50 27.4	
	4.3nm,0.3s						
PACT	Alcochete	7.26	52	eP	Pn	04 49 07.4	+8.0
PACT				eS	Sn	04 50 22.2	+1.7
AVE	Averroes	7.38	97	P	Pn	04 49 11.9	+11
AVE				S	Sn	04 50 29.1	+5.4
PVAQ	Vaqueiros	7.43	65	eP	Pn	04 49 10.3	+8.5
PVAQ				eS	Sn	04 50 26.1	+1.3
PVAQ				A	A	04 50 33.1	
	7.9nm,0.4s						
PVAQ	Vaqueiros	7.43	65	P	Pn	04 49 11.1	+9.4
PBEJ	Beja	7.56	60	eS	Sn	04 50 29.5	+1.5
PBEJ				A	A	04 50 34.1	
	5.0nm,0.3s						
TTIG	Tnine Tigouga,	7.63	119	P	Pn	04 49 15.2	+10
EGRO	El Granado	7.65	64	P	Pn	04 49 12.8	+8.1
EGRO				⇑iVmb_V		04 49 14.9	
	54nm,SNR=0.7						
EGRO				S	Sn	04 50 31.4	+1.2
EVO	Evora	7.69	56	P	Pn	04 49 13.6	+8.4
EVO				S	Sn	04 50 31.1	0.0
PSBE	So Bento	7.71	48	eP	Pn	04 49 13.9	+8.2
PSBE				eS	Sn	04 50 33.2	+1.3
PSBE				A	A	04 50 43.9	
	11nm,0.5s						
PMTG	Montargil	7.82	52	eP	Pn	04 49 13.6	+6.5
PMTG				eS	Sn	04 50 34.4	+0.1
PMTG				A	A	04 50 40.0	
	5.3nm,0.7s						
ZHG	ZHG	7.99	95	P	Pn	04 49 19.2	+10
ZHG				S	Sn	04 50 37.5	-1.2
PESTR	Estremoz	8.14	55	eP	Pn	04 49 20.6	+9.1
PESTR				eS	Sn	04 50 41.6	-0.6
PESTR				A	A	04 50 46.0	
	2.7nm,0.3s						
PESTR	Estremoz	8.14	55	P	Pn	04 49 16.6	+5.1
PESTR				S	Sn	04 50 40.4	-1.8
PBAR	Barrancos	8.21	61	eS	Sn	04 50 45.8	+1.7
PBAR				A	A	04 51 06.6	
	3.5nm,0.6s						
PCAS	Casmilo, Conde	8.23	46	eP	Pn	04 49 23.1	+10
PCAS				eS	Sn	04 50 45.7	+1.2
PCAS				A	A	04 50 50.2	
	5.2nm,0.9s						
EMIN	Mina Concepcio	8.33	64	P	Pn	04 49 21.8	+7.7
EMIN				⇑iVmb_V		04 49 23.8	
	75nm,SNR=1.2						
EMIN				S	Sn	04 50 47.3	+0.3
EBAD	Badajoz	8.48	58	P	Pn	04 49 22.1	+5.9
EBAD				⇑iVmb_V		04 49 26.4	
	104nm,SNR=1.9						
EBAD				S	Sn	04 50 48.5	-2.1
PMRV	Marv??o	8.56	53	eP	Pn	04 49 24.4	+7.2
PMRV				eS	Sn	04 50 52.5	0.0
PMRV				A	A	04 51 00.5	
	3.4nm,0.3s						
OUZM	OUZ	8.71	112	P	Pn	04 49 30.2	+11
PCBR	Castelo Branco	8.73	50	eS	Sn	04 50 56.3	-0.4
PCBR				A	A	04 51 07.1	
	3.7nm,0.6s						
SMIR	Smir Dam	8.91	80	P	Pn	04 49 31.1	+8.9
PVIS	Viseu	9.01	44	eP	Pn	04 49 32.9	+9.4
PVIS				eS	Sn	04 51 02.3	-1.4
PVIS				A	A	04 51 08.6	
	5.6nm,0.3s						
MTE	Manteigas	9.02	47	eP	Pn	04 49 33.4	+10
MTE				eS	Sn	04 51 04.5	+0.6
MTE				A	A	04 51 07.3	
	5.6nm,0.4s						
ECAB	El Cabril	9.37	65	P	Pn	04 49 35.8	+7.4
ECAB				⇑iVmb_V		04 49 37.8	
	29nm,SNR=0.6						
ECAB				S	Sn	04 51 11.2	-1.3
PVRL	Vila Real	9.48	42	eS	Sn	04 51 15.9	+0.6
EMIJ	Mijas	9.51	74	P	Pn	04 49 30.4	+0.1
EMIJ				⇑iVmb_V		04 49 31.0	
	35nm,SNR=0.4						
EMIJ				S	Sn	04 51 15.6	-0.3
POLO	Lamas de Olo	9.51	42	eP	Pn	04 49 38.2	+7.9
POLO				eS	Sn	04 51 15.1	-0.9
POLO				A	A	04 51 17.6	
	1.5nm,0.6s						
EZAM	Zamans	9.61	35	⇑iVmb_V		04 49 39.4	
	75nm,SNR=0.4						
EZAM				S	Sn	04 51 17.3	-1.0
MD31	MD31	9.65	97	P	Pn	04 49 42.6	+10
PGAV	Gavieira, Arco	9.68	38	eS	Sn	04 51 18.8	-1.3
PGAV				A	A	04 51 25.8	
	3.0nm,0.7s						
ELOB	Lobios	9.71	39	S	Sn	04 51 18.8	-2.2
EPLA	Plasencia	9.75	53	P	Pn	04 49 40.4	+6.7
EPLA				⇑iVmb_V		04 49 42.6	
	91nm,SNR=1.4						
EPLA				S	Sn	04 51 19.5	-2.4
MDT	Midelt	9.79	97	P	Pn	04 49 44.4	+10
MVO	Moncorvo	9.80	45	eP	Pn	04 49 42.2	+7.9
MVO				eS	Sn	04 51 22.1	-1.0
MVO				A	A	04 51 26.0	
	4.5nm,0.5s						
EADA	Adamuz	10.03	65	P	Pn	04 49 45.3	+7.9
EADA				⇑iVmb_V		04 49 47.2	
	43nm,SNR=0.9						
EADA				S	Sn	04 51 27.9	-0.8
EMAZ	Mazaricos	10.11	32	S	Sn	04 51 27.7	-2.9
PBRG	Braganca	10.38	43	eS	Sn	04 51 36.7	-0.6
PBRG				A	A	04 51 53.3	
	1.4nm,0.5s						
EAGO	Agolada(Pontev	10.39	35	P	Pn	04 49 50.0	+7.6
EAGO				S	Sn	04 51 33.1	-4.6
ELGU	Los Guajares,	10.46	74	S	Sn	04 51 39.8	+0.3
ECAL	Calabor	10.47	42	P	Pn	04 49 51.0	+7.5
ECAL				S	Sn	04 51 37.7	-1.9
PAB	San Pablo	10.69	59	P	Pn	04 49 53.1	+6.6
PAB				S	Sn	04 51 43.9	-1.1
EQES	Quesada	11.08	69	S	Sn	04 51 53.6	-1.0
GUD	Guadarrama	11.31	54	S	Sn	04 51 57.6	-2.7
ETOR	Torete	12.82	57	P	Pn	04 50 22.2	+6.5

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*IDC **27** 04:53:27.3±1.6, 2°.66N×93°.04E, h0km, mb3.6/5, mbtmp3.8/8, ML4.4/3, Error ellipse: s-maj=46.2km s-min=20.9km az=49.0*

*NEIC **27** 04:53:32.3±1.4, 2°.75N±0°.08×93°.2E±0°.1, h28km±6km, mb4.1/6, Error ellipse: s-maj=15.4km s-min=10.8km az=69.0*

*DJA **27** 04:53:33.6±0.4, 3°N±4°×9°3E±°, h20km, M4.9/13, mb5.0/13, mB5.4/4, MLv4.8/10, Mw(mB)4.8/4*

ISC 27 04:53:32.3±0.9**, 2°.73N**±0°.09×**93°.20E**±0°.08**, h35**km**, n39, σ1ˢ.61**/35**, mb3.9**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	4.49	56	Pn	Pn	04 54 38.3	+0.5
LHMI	Lhok Sumawe	4.49	56	P	Pn	04 54 40.0	+2.1
GSI	Gunungsitoli	4.60	108		Pn	04 54 40.4	+1.1
GSI	Gunungsitoli	4.60	108	P	Pn	04 54 40.5	+1.1
GSI				S	Sn	04 55 30.1	-1.5
KCSI	Kotacane, Aceh	4.63	80	P	Pn	04 54 42.9	+3.0
KCSI				S	Sn	04 55 29.5	-3.0
TSI	Tuntungan	5.41	82	P	Pn	04 54 52.8	+2.2
	2.0nm186nm,0.4s						
PSI	Prapat	5.72	89	Pn	Pn	04 54 57.0	+2.1
	4.4nm,0.3s,baz=302,slow=8.1,SNR=12						
PSI				Sn	Sn	04 55 58.0	-1.4
	6.8nm,0.3s,baz=155,slow=19,SNR=3.9						
	21nm,0.5s						
RPSI	Rantau Prapat	5.72	90		Pn	04 54 57.0	+2.2
MNSI	Mandailing Nat	6.66	107	P	Pn	04 55 09.5	+1.8
	2.0nm7μm123nm,0.4s						
MNSI				S	Sn	04 56 19.7	-2.8
	2.0nm7μm123nm,0.4s						
SISI	Saibi	7.13	124	P	Pn	04 55 14.9	+0.6
	0.2nm52nm,0.7s						
KULM	Kulim	7.86	71	Pn	Pn	04 55 24.4	+0.3
PPI	Padang Panjang	7.86	114	P	Pn	04 55 25.7	+1.5
BKNI	Bangkinang	8.19	107	Pn	Pn	04 55 28.9	+0.1
BKNI	Bangkinang	8.19	107	P	Pn	04 55 31.1	+2.3
	0.4nm50nm,0.5s						
SRIT	Nakonsritamara	8.63	47	Pn	Pn	04 55 35.0	+0.1
KRJI	Kerinci	9.55	120	P	Pn	04 55 50.3	+2.8
	252nm,0.7s						
MNAI	Manna	12.03	126	P	Pn	04 56 20.8	-0.6
	285nm,1.1s						
MDSI	Maura Dua	13.10	123	P	Pn	04 56 31.6	-4.5

	855nm14nm,0.5s						
PALK	**Pallekele**	**13.24**	**290**	Pn	**Pn**	**04 56 36.0**	**-2.0**
	3.4nm,0.3s,baz=213,slow=13,SNR=11						
PALK				Sn	Sn	04 58 48.8	-15
	3.0nm,0.3s,baz=315,slow=2.9,SNR=4.1						
	7.2nm,0.4s						
CM31	**Chiang Mai Arr**	**16.61**	**19**		**P**	**04 57 23.8**	**-1.0**
CM31				IAmb	IAmb	04 57 35.7	
	comp=Z,6.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.61**	**19**	Pn	**P**	**04 57 24.1**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=211,slow=14,SNR=1.4						
	comp=Z,0.8nm,0.3s						
SHL	**Shillong**	**22.74**	**357**	P	**P**	**04 58 31.1**	**-0.7**
SHL				IAmb	IAmb	04 58 49.1	
	comp=Z,5.4nm,0.6s						
H08S2	**Diego Garcia H**	**23.09**	**243**	T	T	05 24 16.8	
	baz=62,slow=76,SNR=68						
H08S3	**Diego Garcia H**	**23.09**	**243**	T	T	05 24 15.4	
	baz=62,slow=76,SNR=102						
H08S1	**Diego Carcia H**	**23.10**	**243**	T	T	05 24 18.1	
	baz=62,slow=76,SNR=54						
H01W3	**Cape Leeuwin H**	**42.26**	**154**	T	T	05 46 33.7	
	baz=332,SNR=3.2						
H01W2	**Cape Leeuwin H**	**42.28**	**154**	T	T	05 46 53.5	
	baz=332,slow=74,SNR=4.2						
H01W1	**Cape Leeuwin H**	**42.28**	**154**	T	T	05 46 51.1	
	baz=332,slow=74,SNR=4.5						
MK31	**Makanchi Array**	**44.91**	**349**	P	**P**	**05 01 44.2**	**+0.6**
MKAR	**Makanchi Array**	**44.91**	**349**	P	**P**	**05 01 44.0**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=170,slow=7.9,SNR=5.8						
	comp=Z,0.7nm,0.6s						
KK31	**Karatay Array**	**44.99**	**336**	P	**P**	**05 01 46.0**	**+1.6**
KK31				IAmb	IAmb	05 01 50.7	
	comp=Z,3.2nm,1.2s						
KKAR	**Karatay Array**	**44.99**	**336**	P	**P**	**05 01 45.5**	**+1.1**
WRA	**Warramunga Arr**	**46.24**	**121**	P	**P**	**05 01 55.2**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=302,slow=8.7,SNR=18						
	comp=Z,1.3nm,0.8s						
WRAB	**Tennant Creek**	**46.24**	**121**	P	**P**	**05 01 54.8**	**+0.2**
SONM	**Songino Array**	**46.36**	**12**	P	**P**	**05 01 55.9**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=200,slow=7.7,SNR=2.5						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**47.51**	**126**	P	**P**	**05 02 05.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=301,slow=7.2,SNR=2.3						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**49.31**	**348**	P	**P**	**05 02 18.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=168,slow=7.3,SNR=4.5						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	**49.38**	**348**	P	**P**	**05 02 18.1**	**-0.3**
KURK	**Kurchatov**	**49.38**	**348**	IAmb	IAmb	05 02 26.7	
	comp=Z,4.5nm,1.5s						

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*IDC **27** 04:58:28.7±2.2, 36°.79N×141°.45E, h0^{km}, mb3.3/3, mbtmp3.2/4, ML2.1/1, Error ellipse: s-maj=43.9km s-min=29.4km az=56.0*

*JMA **27** 04:58:32.3±0.1, 36°.7N±0°.2×141°.2E±0°.6, h29^{km}±1^{km}, MV3.1/29, E OFF IBARAKI PREF*

ISC 27 04:58:31.2±2.5**, 36°.62N**±0°.08×**141°.3E**±0°.1**, h13**^{km}±13^{km}**, n15, σ0^{s}.82**/14**, mb3.3**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.54**	**269**	P	**Pb**	**04 58 43.0**	**+0.3**
JHO				S	**Sb**	**04 58 50.9**	**+0.5**
ONAJ	**Iwakimizuishiy**	**0.60**	**323**	S	**Sg**	**04 58 50.8**	**-0.1**
JHYU	**Hitachinakayam**	**0.60**	**242**	P	**Pn**	**04 58 44.6**	**-0.8**
JHYU				*e*S	**Sn**	**04 58 53.9**	**-1.1**
JFFD	**Fukushimafurud**	**0.72**	**311**	P	**Pg**	**04 58 45.1**	**-0.2**
JFFD				*e*S	**Sg**	**04 58 54.3**	**-0.4**
JYT	**Yasato**	**0.94**	**245**	P	**Pn**	**04 58 49.5**	**-0.6**
JYT				*e*S	**Sg**	**04 59 01.8**	**+0.3**
MJAR	**Matsushiro Arr**	**2.44**	**269**	Pn	**Pn**	**04 59 11.9**	**+1.0**
	0.4nm,0.3s,baz=86,slow=20,SNR=16						
MJAR				Sn	**Sb**	**04 59 45.7**	**+0.6**
	1.2nm,0.3s,baz=80,slow=16,SNR=4.7						
	3.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.06**	**120**	T	T	05 33 45.4	
	baz=313,slow=75,SNR=216						
H11N1	**WAKE ISLAND Hy**	**28.07**	**120**	T	T	05 33 47.3	
	baz=313,slow=75,SNR=284						
H11N3	**WAKE ISLAND Hy**	**28.07**	**120**	T	T	05 33 51.0	
	baz=313,slow=75,SNR=172						
H11S1	**WAKE ISLAND Hy**	**28.75**	**122**	T	T	05 34 40.2	
	baz=314,slow=76,SNR=134						
H11S3	**WAKE ISLAND Hy**	**28.75**	**122**	T	T	05 34 39.1	
	baz=314,slow=76,SNR=127						
H11S2	**WAKE ISLAND Hy**	**28.77**	**122**	T	T	05 34 41.3	
	baz=314,slow=76,SNR=96						
MKAR	**Makanchi Array**	**44.22**	**302**	P	**P**	**05 06 38.9**	**-1.2**
	0.2nm,0.4s,baz=89,slow=10,SNR=2.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**46.15**	**308**	P	**P**	**05 06 55.4**	**+0.2**
	0.4nm,0.7s,baz=85,slow=8.5,SNR=4.4						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**56.64**	**188**	P	**P**	**05 08 15.0**	**+0.9**
	0.2nm,0.6s,baz=5.3,slow=7.6,SNR=5.4						
	0.2nm,0.6s						

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*IDC **27** 05:03:01.3±0.6, 26°.41N×96°.55E, h0^{km}, mb4.1/22, mbtmp4.1/22, Error ellipse: s-maj=19.3km s-min=14.5km az=54.0*

*BJI **27** 05:03:06.7±0.0, 26°.60N×96°.47E, h39^{km}, mb4.4/33, mB5.0/14, ML4.2/2, Ms3.8/1, Ms7 3.8/2*

*NDI **27** 05:03:06.5±3.8, 26°.50N×96°.82E, h48^{km}±34^{km}, mb4.2, mb4.6(NEIC)*

*MOS **27** 05:03:07.3±0.9, 26°.45N×96°.53E, h59^{km}, mb4.6/30, Error ellipse: s-maj=11.1km s-min=5.6km az=125.1*

*NEIC **27** 05:03:10.2±1.6, 26°.53N±0°.09×96°.50E±0°.10, h64^{km}±7^{km}, mb4.6/45, Error ellipse: s-maj=13.1km s-min=11.7km az=222.0*

ISC 27 05:03:08.6±0.4**, 26°.46N**±0°.05×**96°.49E**±0°.05**, h50**^{km}**, n165, σ1^{s}.55**/175**, mb4.4**/67**, 5C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKP	**Lekhapani**	**1.05**	**327**	*e*P	**Pn**	**05 03 26.4**	**-0.5**
DIBR	**DIBRUGARH**	**1.73**	**306**	*e*P	**Pn**	**05 03 37.7**	**+1.4**
MOKO	**MOKOCHONG**	**1.78**	**266**	*e*P	**Pn**	**05 03 39.6**	**+2.5**
JORH	**JORHAT**	**2.03**	**279**	*e*P	Pn	05 03 45.2	+4.9
KOHI	**KOHIMA**	**2.27**	**252**	*e*P	**Pn**	**05 03 46.5**	**+2.7**
ITAN	**ITANAGAR**	**2.57**	**286**	*e*P	**Pn**	**05 03 48.6**	**+0.9**
IMP	**Imphal**	**2.81**	**235**	*e*P	**Pn**	**05 03 53.1**	**+2.0**
IMP				IAmb	IAmb	05 04 04.8	
	comp=Z,220nm,0.3s						
TEZP	**TEZPUR**	**3.31**	**274**	*e*P	**Pn**	**05 03 59.5**	**+1.6**
SILR	**SILCHAR**	**3.73**	**244**	*e*P	**Pn**	**05 04 06.3**	**+2.7**
SILR				IAmb	IAmb	05 04 06.5	
	comp=Z,235nm,0.8s						
SHL	**Shillong**	**4.24**	**259**		**Pn**	**05 04 10.9**	**0.0**
SHL	**Shillong**	**4.24**	**259**	P	**Pn**	**05 04 10.9**	**0.0**
SHL	**Shillong**	**4.24**	**259**	*e*P	**Pn**	**05 04 10.8**	**0.0**
GUWA	**GUWAHATI**	**4.32**	**268**	*e*P	**Pn**	**05 04 10.8**	**-0.9**
AZL	**Aizawl**	**4.38**	**233**	*e*P	**Pn**	**05 04 13.8**	**+1.1**
PZH	**PanZhiHua**	**4.70**	**88**	P	**Pn**	**05 04 16.8**	**-0.4**
PZH				S	**Sn**	**05 05 14.0**	**+3.5**
LSA	**Lhasa**	**5.72**	**306**	Pn	**Pn**	**05 04 32.5**	**+1.1**
LSA	**Lhasa**	**5.72**	**306**	P	**Pn**	**05 04 32.5**	**+1.1**
CHTO	**Chiang Mai**	**7.94**	**163**	Pn	**Pn**	**05 05 02.8**	**+1.4**
CHTO	**Chiang Mai**	**7.94**	**163**	P	**Pn**	**05 05 02.8**	**+1.4**
GOMU	**GeErMu**	**9.82**	**352**	P	**Pn**	**05 05 26.0**	**-1.4**
GOMU				pP		05 05 29.8	
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BOK	**Bokaro**	**9.97**	**257**	*e*P	**Pn**	**05 05 28.6**	**-0.6**
LZH	**Lanzhou**	**11.47**	**31**	*e*P	Pn	05 05 45.5	-4.4
LZH				pP		05 05 58.0	
LZH				sP		05 06 07.0	
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LGTI	**Lohaghat**	**14.67**	**285**	*e*P	**Pn**	**05 06 31.6**	**-1.4**
PBA	**Port Blair**	**15.14**	**194**	Pn	**Pn**	**05 06 39.2**	**-0.1**
LYN	**LuoYang**	**15.94**	**56**	*e*P	**Pn**	**05 06 47.3**	**-2.3**
LYN				pP	P	05 06 54.8	+2.4
JHNI	**Jhansi**	**16.18**	**270**	*e*P	**Pn**	**05 06 54.5**	**+1.9**
SMLA	**Simla**	**17.57**	**290**	*e*P	**Pn**	**05 07 05.6**	**-4.3**
SMLA				IAmb	IAmb	05 07 07.2	
	comp=Z,29nm,1.3s						
BHPL	**Bhopal**	**17.60**	**264**	*e*P	**Pn**	**05 07 10.9**	**+0.5**
BHPL				IAmb	IAmb	05 07 14.7	
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**18.74**	**340**	*e*P	**Pn**	**05 07 25.0**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
HYB	**Hyderabad**	**18.90**	**245**	IAmb	IAmb	05 07 27.0	
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**19.02**	**37**	*e*P	**Pn**	**05 07 29.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
AJM	**Ajmer**	**19.56**	**275**	*e*P	**P**	**05 07 34.1**	**+1.7**
NJ2	**Nanjing**	**20.28**	**69**	*e*P	**P**	**05 07 41.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NIL	**Nilore**	**21.33**	**295**	P	**P**	**05 07 49.3**	**-2.2**
NIL				IAmb	IAmb	05 07 54.0	
	comp=Z,25nm,0.8s						
NIL	**Nilore**	**21.33**	**295**	P	**P**	**05 07 49.3**	**-2.2**
NIL				pmax	pmax		
	comp=Z,25nm,0.9s						
KSH	**Kashi**	**21.52**	**312**	P	**P**	**05 07 55.5**	**+1.9**
KSH				pmax	pmax		
	comp=Z,26nm,1.0s						
TARG	**Taragay, Kyrgy**	**21.65**	**319**	P	**P**	**05 07 55.3**	**+0.1**
TARG				IAmb	IAmb	05 08 08.7	
	comp=Z,16nm,0.8s						
TARG	**Taragay, Kyrgy**	**21.65**	**319**	P	**P**	**05 07 55.3**	**+0.1**
TARG				pmax	pmax		
	comp=Z,16nm,0.8s						
TATO	**Taipei**	**22.56**	**88**	P	**P**	**05 08 06.1**	**+1.4**
SONM	**Songino Array**	**22.71**	**17**	P	**P**	**05 08 05.1**	**-1.2**
	comp=Z,2.7nm,0.6s,baz=189,slow=10,SNR=7.1						
	comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**22.71**	**17**	P	**P**	**05 08 05.3**	**-1.0**
SONM	**Songino Array**	**22.71**	**17**	P	**P**	**05 08 05.3**	**-1.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	**Ulaanbaatar**	**22.92**	**18**	*ce*P	**P**	**05 08 05.3**	**-3.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOOM	**Boomskoye usch**	**23.21**	**319**	P	**P**	**05 08 11.5**	**+0.2**
BOOM	**Boomskoye usch**	**23.21**	**319**	P	**P**	**05 08 11.5**	**+0.2**
BOOM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**23.21**	**335**	P	**P**	**05 08 10.6**	**-0.6**
MK31	**Makanchi Array**	**23.21**	**335**	P	**P**	**05 08 10.6**	**-0.6**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MKAR	**Makanchi Array**	**23.21**	**335**	P	**P**	**05 08 11.3**	**+0.2**
	comp=Z,2.6nm,0.4s,baz=138,slow=9.7,SNR=30						
MKAR				PcP	**PcP**	**05 11 56.6**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=191,slow=2.2,SNR=4.8						
	comp=Z,2.6nm,0.4s						
MKAR	**Makanchi Array**	**23.21**	**335**	P	**P**	**05 08 10.6**	**-0.6**
MAKZ	**Makanchi**	**23.34**	**334**	P	**P**	**05 08 12.1**	**-0.3**
MAKZ	**Makanchi**	**23.34**	**334**	P	**P**	**05 08 12.1**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	**24.16**	**318**	P	**P**	**05 08 20.7**	**+0.5**
	comp=Z,6.6nm,0.9s,baz=145,slow=9.4,SNR=9.4						
	comp=Z,6.6nm,0.9s						
AAK	**Ala-Archa**	**24.16**	**318**	P	**P**	**05 08 21.0**	**+0.8**
AAK	**Ala-Archa**	**24.16**	**318**	P	**P**	**05 08 21.0**	**+0.8**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOD	**Kodaikanal**	**24.16**	**232**	*e*P	**P**	**05 08 20.7**	**+0.1**
KBL	**Kabul**	**24.93**	**295**	P	**P**	**05 08 26.9**	**-0.5**
KBL				IAmb	IAmb	05 08 30.8	
	comp=Z,20nm,0.8s						
KBL	**Kabul**	**24.93**	**295**	P	**P**	**05 08 26.9**	**-0.5**
KBL				pmax	pmax		
	comp=Z,20nm,0.8s						
GAR	**Garm**	**25.23**	**306**	P	**P**	**05 08 29.5**	**-0.5**
CHGR	**Chuyangaron**	**25.95**	**305**	P	**P**	**05 08 35.9**	**-0.6**
CHGR				IAmb	IAmb	05 08 40.3	
	comp=Z,16nm,0.5s						
CHGR	**Chuyangaron**	**25.95**	**305**	P	**P**	**05 08 35.9**	**-0.6**
CHGR				pmax	pmax		
	comp=Z,16nm,0.5s						
KK31	**Karatay Array**	**26.88**	**315**	P	**P**	**05 08 44.8**	**0.0**
KK31	**Karatay Array**	**26.88**	**315**	P	**P**	**05 08 44.8**	**0.0**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	**Karatay Array**	**26.88**	**315**	P	**P**	**05 08 44.3**	**-0.5**
KKAR	**Karatay Array**	**26.88**	**315**	P	**P**	**05 08 44.3**	**-0.5**
KURBB	**Kurchatov Arra**	**27.77**	**335**	P	**P**	**05 08 53.1**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=145,slow=9.6,SNR=17						
KURBB				PcP	**PcP**	**05 12 07.2**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=154,slow=2.0,SNR=5.7						
	comp=Z,1.5nm,0.5s						
KURK	**Kurchatov**	**27.82**	**335**	P	**P**	**05 08 51.8**	**-1.2**
KURK				IAmb	IAmb	05 09 14.5	
	comp=Z,13nm,1.0s						
KURK	**Kurchatov**	**27.82**	**335**	P	**P**	**05 08 53.2**	**+0.3**
KURK						05 12 07.3	
ZAA0	**Zalesovo Array**	**28.79**	**346**	P	**P**	**05 09 00.1**	**-1.5**
ZALV	**Zalesovo Beam**	**28.79**	**346**	P	**P**	**05 09 00.9**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=163,slow=6.2,SNR=5.5						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**28.79**	**346**	P	**P**	**05 09 00.7**	**-0.9**
ZALV	**Zalesovo Beam**	**28.79**	**346**	*i* P	**P**	**05 09 01.7**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	**Mudanjiang**	**32.16**	**47**	P	**P**	**05 09 32.3**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,250nm,9.0s						
BRVK	**Borovoye**	**32.99**	**331**	P	**P**	**05 09 38.2**	**-0.4**
BRVK				IAmb	IAmb	05 09 41.0	
	comp=Z,4.3nm,0.6s						
BRVK	**Borovoye**	**32.99**	**331**	*ce*P	**P**	**05 09 38.3**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**33.61**	**49**	*i* P	P	05 09 40.5	-3.6
KLR	**Kul'dur**	**35.46**	**41**	P	**P**	**05 09 58.8**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=282,slow=6.9,SNR=5.4						
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**36.23**	**319**	P	**P**	**05 10 06.6**	**-0.1**
ABKAR	**Akbulak array**	**36.23**	**319**	P	**P**	**05 10 06.6**	**-0.1**
ARU	**Arti**	**40.42**	**328**	P	**P**	**05 10 42.7**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=107,slow=2.6,SNR=4.9						
	comp=Z,1.1nm,0.4s						
ARU	**Arti**	**40.42**	**328**	P	**P**	**05 10 40.9**	**-0.9**
ARU				IAmb	IAmb	05 10 43.3	
	comp=Z,5.3nm,1.0s						
ARU	**Arti**	**40.42**	**328**	*d i*P	**P**	**05 10 42.2**	**+0.4**
ARU						05 12 14.4	
ARU				S	**S**	**05 16 48.8**	**+2.3**
ARU				SS	**SS**	**05 19 48.3**	**+1.4**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**43.23**	**355**	P	**P**	**05 11 04.7**	**+0.2**
NRIK				IAmb	IAmb	05 12 06.7	
	comp=Z,17nm,1.9s						
NRIK	**Noril'sk**	**43.23**	**355**	P	**P**	**05 11 04.7**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,17nm,1.9s						
GNI	**Garni**	**44.77**	**301**	*i* P	**P**	**05 11 18.2**	**+0.7**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZEI	**Tsey**	**45.51**	**305**	*e*P	**P**	**05 11 23.9**	**+0.5**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIRV	**Kirov**	**45.79**	**328**	*ce*P	**P**	**05 11 25.0**	**-0.1**
RAYN	**Ar Rayn**	**46.07**	**278**	P	**P**	**05 11 27.5**	**-0.3**
RAYN				IAmb	IAmb	05 11 29.0	
	comp=Z,7.5nm,1.1s						
RAYN	**Ar Rayn**	**46.07**	**278**	P	**P**	**05 11 27.5**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	**Khabaz**	**46.30**	**306**	*i* P	**P**	**05 11 28.8**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	**46.46**	**306**	P	**P**	**05 11 28.7**	**-2.1**
KIV				IAmb	IAmb	05 11 33.4	
	comp=Z,11nm,1.3s						
KIV	**Kislovodsk**	**46.46**	**306**	*e*P	**P**	**05 11 31.5**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SHA1	**Shidzhatmaz**	**46.47**	**306**	*i* P	**P**	**05 11 30.2**	**-0.8**
MARD	**Mardin**	**47.93**	**297**	P	**P**	**05 11 40.0**	**-2.3**
VRH	**Novokhopyorsk**	**47.95**	**316**	*e*P	**P**	**05 11 40.8**	**-1.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SOC	**Sochi**	**48.60**	**306**	*e*P	**P**	**05 11 45.3**	**-1.9**
SOC				*e*		05 13 33.4	
SOC				*e*S	**S**	**05 18 40.6**	**-4.8**
SOC				*e*		05 21 27.8	
SOC				*e*SSS	SSS	05 23 31.0	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PRGR	**Permogore**	**48.74**	**330**	*e*P	**P**	**05 11 47.6**	**-0.3**
LPSR	**Galich'ya Gora**	**49.88**	**318**	*e*P	**P**	**05 11 55.2**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLMR	**Klimovskoe**	**51.28**	**328**	*e*P	**P**	**05 12 06.2**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	**Klimovskoe**	**51.28**	**328**	*e*P	**P**	**05 12 06.3**	**-0.9**
KLMR				AMP		05 12 08.4	
	comp=Z,8.0nm,1.1s						
PETK	**Petropavlovsk-**	**52.13**	**42**	P	**P**	**05 12 14.2**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=237,slow=4.3,SNR=3.0						
	comp=Z,1.8nm,0.9s						
BRTR	**Keskin Array B**	**53.31**	**301**	P	**P**	**05 12 21.9**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=114,slow=7.4,SNR=6.2						
	comp=Z,1.2nm,0.7s						
BRTR	**Keskin Array B**	**53.31**	**301**	P	**P**	**05 12 21.8**	**-1.0**
BRTR	**Keskin Array B**	**53.31**	**301**	*ce*P	**P**	**05 12 22.6**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**55.79**	**315**	P	**P**	**05 12 39.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=72,slow=7.3,SNR=6.8						
	comp=Z,0.6nm,0.3s						
AKASG	**Malin Array Be**	**55.79**	**315**	IAmb	IAmb	05 12 40.1	
	comp=Z,1.9nm,1.1s						
MNK	**Minsk**	**56.59**	**319**	*i* P	**P**	**05 12 50.4**	**+4.3**
MNK				*i* *PP	**sP**	**05 13 08.4**	**+2.7**
MNK				*i* *SP	pP	05 13 16.6	+17
MNK				*i*		05 14 57.0	
MNK				*i* PPP	PPP	05 16 13.0	
MNK				*i* S	**S**	**05 20 37.4**	**+3.2**
MNK				*i* SS	**SS**	**05 24 27.6**	**+5.7**
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MNK	**Minsk**	**56.59**	**319**	*i* P	**P**	**05 12 50.4**	**+4.3**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**05 12 50.4**	**+4.3**
	comp=N,9.0nm,0.6s						
MNK				*i* P	**P**	**05 12 50.4**	**+4.3**
	comp=Z,5.0nm,0.5s,baz=90						
MNK				*i* pP	**sP**	**05 13 08.4**	**+2.7**
MNK				*i* sP	pP	05 13 16.6	+17
MNK				*i* PP	**PP**	**05 14 57.0**	**+4.9**
MNK				*i* PPP	PPP	05 16 13.0	
MNK				*i* S	**S**	**05 20 37.4**	**+3.2**
MNK				*i* sS	sS	05 21 09.0	+11
MNK				*i* SS	**SS**	**05 24 27.6**	**+5.7**
MNK				*i* SSS	SSS	05 26 52.1	
MNK				*i* LR	LR	05 37 32.4	
FINES	**FINESS Array B**	**57.79**	**328**	P	**P**	**05 12 55.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=75,slow=8.7,SNR=6.2						
	comp=Z,0.8nm,0.3s						
FINES	**FINESS Array B**	**57.79**	**328**	P	**P**	**05 12 54.8**	**+0.4**
FINES	**FINESS Array B**	**57.79**	**328**	*i* P	**P**	**05 12 55.9**	**+1.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**58.19**	**25**	⇑*e*P	**P**	**05 12 56.6**	**-0.5**
BILL				*e**PP	**sP**	**05 13 16.3**	**-0.5**
BILL				S	**S**	**05 20 55.0**	**+0.2**
BILL				SSS	SSS	05 27 16.0	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,165nm,18.0s						
MLR	**Muntele Rosu**	**58.34**	**309**	P	**P**	**05 12 58.6**	**0.0**
MLR	**Muntele Rosu**	**58.34**	**309**	P	**P**	**05 12 58.7**	**0.0**
MLR				pmax	pmax		
	comp=Z,11nm,0.9s						
KEV	**Kevo**	**58.35**	**337**	P	**P**	**05 12 58.1**	**-0.1**
KEV	**Kevo**	**58.35**	**337**	P	**P**	**05 12 58.1**	**-0.1**
KEV				pmax	pmax		
	comp=Z,57nm,1.7s						
BURAR	**Bucovina Array**	**58.60**	**311**	P	**P**	**05 12 59.4**	**-1.1**
ARCES	**ARCESS Array B**	**58.83**	**337**	P	**P**	**05 13 01.9**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=65,slow=3.2,SNR=14						
	comp=Z,1.1nm,0.5s						
ARCES	**ARCESS Array B**	**58.83**	**337**	P	**P**	**05 13 00.9**	**-0.7**
WRA	**Warramunga Arr**	**58.95**	**138**	P	**P**	**05 13 02.6**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=326,slow=7.6,SNR=29						
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**58.95**	**138**	P	**P**	**05 13 02.2**	**-0.9**
WB2	**Warramunga Arr**	**58.96**	**138**	P	**P**	**05 13 02.3**	**-0.9**
VTS	**Vitosha**	**60.69**	**306**	P	**P**	**05 13 14.4**	**-0.6**
VTS				IAmb	IAmb	05 13 16.2	
	comp=Z,5.6nm,1.0s						
VTS	**Vitosha**	**60.69**	**306**	P	**P**	**05 13 14.4**	**-0.6**
VTS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ASAR	**Alice Springs**	**61.58**	**141**	P	**P**	**05 13 20.5**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=323,slow=6.8,SNR=17						
	comp=Z,1.2nm,0.4s						
KMBO	**Kilima Mbogo**	**63.27**	**254**	P	**P**	**05 13 33.1**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=52,slow=11,SNR=6.4						
	comp=Z,4.2nm,0.8s						
KMBO	**Kilima Mbogo**	**63.27**	**254**	IAmb	IAmb	05 13 34.6	
	comp=Z,4.6nm,0.9s						
KMBO	**Kilima Mbogo**	**63.27**	**254**	*i* P	**P**	**05 13 33.7**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RONA	**Rosalia, Austr**	**64.54**	**313**	*i* P	**P**	**05 13 41.0**	**+0.5**
	comp=Z,4.1nm,1.0s						
CONA	**Conrad Observa**	**64.78**	**313**	*e*P	**P**	**05 13 42.3**	**+0.2**
	comp=Z,4.8nm,0.7s						
NB2	**NORSAR Subarra**	**64.97**	**328**	P	**P**	**05 13 42.5**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=79,slow=6.9						
NOA	**NORSAR Array B**	**64.97**	**328**	P	**P**	**05 13 42.2**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=81,slow=6.5,SNR=4.7						
	comp=Z,0.4nm,0.4s						
NC204	**NORSAR Array S**	**65.15**	**328**	P	**P**	**05 13 43.5**	**-0.7**
BRG	**Berggiesshubel**	**65.39**	**316**	*e*P	**P**	**05 13 46.6**	**+0.7**
BRG				Amp		05 13 47.3	
	comp=Z,4.3nm,1.0s						
BRG	**Berggiesshubel**	**65.39**	**316**	*e*P	**P**	**05 13 46.5**	**+0.7**
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SOKA	**Soboth**	**65.61**	**312**	*e*P	**P**	**05 13 47.4**	**0.0**
	comp=Z,1.8nm,0.5s						
MOA	**Molln**	**65.85**	**313**	*e*P	**P**	**05 13 48.8**	**-0.1**
	comp=Z,1.9nm,0.7s						
GERES	**GERESS Array B**	**65.98**	**314**	P	**P**	**05 13 50.1**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=79,slow=6.9,SNR=22						
	comp=Z,1.5nm,0.4s						
KBA	**Koelnbreinsper**	**66.64**	**312**	*e*P	**P**	**05 13 53.7**	**-0.5**
	comp=Z,1.3nm,0.5s						
TRI	**Trieste**	**66.69**	**311**	P	**P**	**05 13 53.3**	**-1.0**
TRI				IAmb	IAmb	05 13 54.6	
	comp=Z,11nm,1.0s						
TRI	**Trieste**	**66.69**	**311**	P	**P**	**05 13 53.3**	**-1.0**
TRI				pmax	pmax		
	comp=Z,11nm,1.0s						
STAL	**STALIGIAL**	**67.27**	**312**	P	**P**	**05 13 56.2**	**-1.8**
STAL				IAmb	IAmb	05 13 57.9	
	comp=Z,8.1nm,1.0s						
ABTA	**Abfaltersbach**	**67.27**	**312**	*e*P	**P**	**05 13 57.6**	**-0.5**
	comp=Z,5.0nm,1.2s						
WTTA	**Wattenberg**	**67.72**	**313**	*e*P	**P**	**05 14 01.5**	**+0.4**
	comp=Z,7.6nm,0.9s						
MOTA	**Moosalm**	**68.05**	**313**	*e*P	**P**	**05 14 02.6**	**-0.4**
	comp=Z,7.2nm,0.9s						
RETA	**Reutte**	**68.23**	**313**	*e*P	**P**	**05 14 04.0**	**-0.1**
	comp=Z,6.5nm,0.9s						
FETA	**Feichten**	**68.38**	**313**	*e*P	**P**	**05 14 04.7**	**-0.5**
	comp=Z,6.2nm,1.0s						
MBAR	**Mbarara**	**68.69**	**258**	*i* P	**P**	**05 14 06.7**	**-0.9**
MBAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IMAR	**Indian Mountai**	**73.72**	**24**	P	**P**	**05 14 36.0**	**-1.0**
H21K	**Melozitna Rive**	**74.22**	**24**	P	**P**	**05 14 39.6**	**-0.3**
H21K				IAmb	IAmb	05 14 40.7	
	comp=Z,3.6nm,0.8s						
MLY	**Manley**	**75.29**	**24**	P	**P**	**05 14 45.3**	**-0.8**
MLY				IAmb	IAmb	05 14 46.8	
	comp=Z,3.0nm,0.8s						
BMAR	**Burnt Mountain**	**76.03**	**20**	P	**P**	**05 14 50.6**	**+0.3**
COLA	**College**	**76.41**	**23**	*i* P	**P**	**05 14 51.9**	**-0.5**

COLA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
ILAR	Eielson Array	76.81	23	P	P	05 14 54.0	-0.7
	comp=Z,0.6nm,0.6s,baz=289,slow=4.4,SNR=7.0						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	76.81	23	P	P	05 14 54.0	-0.7
SML	Sawmill	77.94	26	P	P	05 15 00.7	-0.5
SML				IAmb	IAmb	05 15 01.2	
	comp=Z,4.8nm,0.8s						
EPYK	Eagle Plains	79.10	19	P	P	05 15 06.0	-1.4
BCAR	Beaver Creek A	79.64	23	P	P	05 15 09.6	-0.8
BMRM	Bremner River	79.89	26	P	P	05 15 11.4	-0.5
BMRM				IAmb	IAmb	05 15 13.1	
	comp=Z,5.9nm,1.0s						
ESDC	Sonseca Array	81.01	310	P	P	05 15 18.2	-0.1
	comp=Z,1.2nm,1.0s,baz=64,slow=6.8,SNR=6.3						
	comp=Z,1.2nm,1.0s						
BOSA	Boshof	87.57	236	P	P	05 15 51.5	-0.1
	comp=Z,5.0nm,1.3s,baz=123,slow=4.1,SNR=4.1						
	comp=Z,5.0nm,1.3s						
YKA	Yellowknife Ar	87.93	14	P	P	05 15 51.7	-1.0
	comp=Z,1.3nm,0.7s,baz=328,slow=4.2,SNR=13						
	comp=Z,1.3nm,0.7s						
TORD	Torodi Ar. Bea	88.45	284	P	P	05 15 55.6	-0.4
	comp=Z,1.8nm,0.9s,baz=68,slow=4.6,SNR=8.8						
	comp=Z,1.8nm,0.9s						
TORD	Torodi Ar. Bea	88.45	284	IAmb	IAmb	05 15 56.7	
	comp=Z,2.9nm,1.1s						
BDFB	Brasilia	145.28	281	PKPbc	PKPbc	05 22 41.5	+0.1
	comp=Z,3.9nm,0.9s,baz=160,slow=6.3,SNR=5.8						
ROSC	El Rosal	147.64	343	PKPbc	PKPbc	05 22 49.0	+0.2
	comp=Z,17nm,0.7s,baz=134,slow=15,SNR=8.0						

*IDC **27** 05:31:21.4±0.7, 17.°18S×167.°69E, h0^{km}, mb4.4/16, mbtmp4.4/17, ML3.8/1, MS4.1/5, Error ellipse: s-maj=23.1km s-min=16.7km az=94.0*
*NEIC **27** 05:31:22.4±1.4, 17.°23S±0.°04×167.°63E±0.°08, h5^{km}±5^{km}, mb5.0/23, Error ellipse: s-maj=11.4km s-min=5.2km az=71.0*
*MOS **27** 05:31:23.0±1.0, 17.°10S×167.°43E, h20^{km}, mb5.0/16, Error ellipse: s-maj=14.6km s-min=11.4km az=44.8*
*BJI **27** 05:31:25.4±0.0, 16.°58S×167.°76E, h21^{km}, mb4.8/32, mB5.1/19, Ms4.7/3, Ms7 4.6/2*
ISC 27 05:31:25.1±0.3**, 17.°25S**±0.°04×**167.°53E**±0.°07**, h25^{km}, n135,** σ**1.s36**/129**, mb4.8**/39**, MS4.0**/4**, 11C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.81	350		Pn	05 31 53.8	-1.0
SANVU				Sn	Sn	05 32 16.3	-0.7
LIFNC	LIFOU	3.52	184		Pn	05 32 16.8	-1.5
MARNC	Mare, Loyalty	4.24	174		Pn	05 32 27.8	-0.3
KOUNC	Koumac, New Ca	4.50	223		Pn	05 32 32.4	+0.7
DZM	Mont Dzumac	4.91	192	Pn	Pn	05 32 36.5	-1.0
	3.4nm,0.3s,baz=57,slow=12,SNR=42						
DZM				Sn	Sn	05 33 32.1	-1.4
	4.5nm,0.3s,baz=327,slow=19,SNR=3.4						
	25nm,0.7s						
DZM	Mont Dzumac	4.91	192		Pn	05 32 37.2	-0.2
ONTNC	Ouen Toro	5.14	191		Pn	05 32 39.6	-0.9
ONTNC				Sn	Sn	05 33 36.6	-2.4
OUENC	Ouen Island, N	5.19	187		Pn	05 32 40.8	-0.3
PINNC	Pines Island,	5.34	181		Pn	05 32 43.0	-0.2
MSVF	Nonsavu	10.05	94	Pn	Pn	05 33 49.9	+1.9
	baz=274,slow=8.2						
MSVF				LR	LR	05 36 50.5	
	comp=Z,3µm,18.1s,baz=253,slow=33						
MSVF	Nonsavu	10.05	94	*i* P	Pn	05 33 51.7	+3.7
FUNA	Funafuti	14.29	54	Pn	Pn	05 34 43.9	-2.0
LHI	Lord Howe Isla	16.16	207	Pn	Pn	05 35 09.1	-1.5
EIDS	Eidsvold	17.32	239	P	Pn	05 35 24.6	-0.6
RAO	Raoul Island	17.91	134	LR	LR	05 41 02.5	
	comp=Z,403nm,18.4s,baz=350,slow=33						
OUZ	Omahuta	18.70	164	P	Pn	05 35 42.9	+0.8
OUZ				IAmb	IAmb	05 35 43.1	
	comp=Z,49nm,1.3s						
CTA	Charters Tower	20.36	259	P	Pn	05 36 03.2	+1.2
	comp=Z,20nm,1.0s,baz=92,slow=11,SNR=15						
CTA				LR	LR	05 43 36.2	
	comp=Z,574nm,18.1s,baz=6.0,slow=36						
	comp=Z,20nm,1.0s						
CTAO	Charters Tower	20.36	259		P	05 36 00.5	+0.6
CTAO	Charters Tower	20.36	259	P	P	05 36 00.5	+0.6
CTAO				pmax	pmax		
	comp=Z,26nm,1.0s						
PMG	Port Moresby	21.29	289	*i* P	P	05 36 08.5	-1.5
PMG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MXZ	Matakaoa Point	22.35	157	P	P	05 36 20.3	-1.0
MXZ				IAmb	IAmb	05 36 21.9	
	comp=Z,166nm,1.4s						
URZ	Urewera	22.56	160	P	P	05 36 24.5	+1.1
	comp=Z,33nm,1.0s,baz=351,slow=8.7,SNR=8.2						
	comp=Z,33nm,1.0s						
URZ	Urewera	22.56	160	P	P	05 36 23.5	+0.1
URZ				IAmb	IAmb	05 36 26.3	
	comp=Z,112nm,1.4s						
MSWZ	Moikau Station	24.99	166	P	P	05 36 46.0	-0.8
WRAB	Tennant Creek	31.54	260	*i* P	P	05 37 42.4	-3.2
WRA	Warramunga Arr	31.55	260	P	P	05 37 45.9	+0.2
	comp=Z,2.7nm,0.9s,baz=89,slow=8.7,SNR=20						
	comp=Z,2.7nm,0.9s						
WRA	Warramunga Arr	31.55	260	P	P	05 37 46.0	+0.2
WRA	Warramunga Arr	31.55	260	P	P	05 37 46.0	+0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ASAR	Alice Springs	32.10	253	P	P	05 37 51.0	+0.5
	comp=Z,4.6nm,0.6s,baz=79,slow=8.4,SNR=86						
	comp=Z,4.6nm,0.6s						
KNRA	Kununurra	37.17	267	P	P	05 38 34.5	+0.1
KNRA				IAmb	IAmb	05 38 35.7	
	comp=Z,17nm,0.9s						
PSA00	Pilbara Seismi	45.05	257	P	P	05 39 40.2	+0.9
PSA00				IAmb	IAmb	05 39 42.0	
	comp=Z,33nm,1.2s						
PSA00	Pilbara Seismi	45.05	257	P	P	05 39 40.2	+0.9
PSA00				IAmb	IAmb	05 39 42.1	
	comp=Z,16nm,1.2s						
MBWA	Marble Bar	45.18	257	P	P	05 39 41.5	+1.2
MBWA				IAmb	IAmb	05 39 42.6	
	comp=Z,34nm,1.0s						
MJAR	Matsushiro Arr	60.24	333	P	P	05 41 30.7	-0.7
	comp=Z,10.0nm,1.0s,baz=163,slow=7.4,SNR=13						
	comp=Z,10.0nm,1.0s						
MJAR	Matsushiro Arr	60.24	333	P	P	05 41 30.7	-0.7
MJAR				IAmb	IAmb	05 41 32.2	
	comp=Z,6.1nm,0.9s						
MJAR	Matsushiro Arr	60.24	333	P	P	05 41 30.7	-0.7
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAJO	Matsushiro	60.25	333	⇑*i*P	P	05 41 29.7	-1.7
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
VNDA	Vanda	60.37	181	P	P	05 41 31.9	+0.2
	comp=Z,1.6nm,0.9s,baz=341,slow=9.0,SNR=4.0						
	comp=Z,1.6nm,0.9s						
VNDA	Vanda	60.37	181	P	P	05 41 32.3	+0.7
VNDA	Vanda	60.37	181	P	P	05 41 32.3	+0.7
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SBA	Scott Base	60.64	180	P	P	05 41 34.3	+0.8
SBA				IAmb	IAmb	05 41 36.3	
	comp=Z,14nm,1.1s						
SBA	Scott Base	60.64	180	P	P	05 41 34.3	+0.8
SBA				pmax	pmax		
	comp=Z,14nm,1.1s						
KSRS	Korea Array	65.95	326	P	P	05 42 09.2	0.0
	comp=Z,0.9nm,0.7s,baz=144,slow=8.1,SNR=4.6						
KSRS				PcP	PcP	05 42 41.4	+1.5
	comp=Z,2.7nm,0.9s,baz=131,slow=5.0,SNR=6.8						
	comp=Z,0.9nm,0.7s						
KSAR	Wonju Array Be	65.97	326	P	P	05 42 09.3	0.0
KSAR	Wonju Array Be	65.97	326	P	P	05 42 09.3	0.0
NJ2	Nanjing	67.66	316	*e*P	P	05 42 22.0	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	Ussuriysk Ar.	69.23	333	P	P	05 42 31.1	+1.4
	comp=Z,4.8nm,1.0s,baz=93,slow=3.8,SNR=7.4						
	comp=Z,4.8nm,1.0s						
USRK	Ussuriysk Ar.	69.23	333	P	P	05 42 29.6	-0.2
USRK	Ussuriysk Ar.	69.23	333	P	P	05 42 29.6	-0.2
SHEM	Shemya Is, Ala	69.91	4	LR	LR	06 08 36.2	
	comp=Z,132nm,19.6s,baz=206,slow=32						
PET	Petropavlovsk	70.40	354	P	P	05 42 38.7	+2.0
PEA0B	Petropavlovsk-	70.58	354	*ce*P	P	05 42 36.4	-1.5
PETK	Petropavlovsk-	70.58	354	P	P	05 42 36.3	-1.5
	comp=Z,1.8nm,0.8s,baz=149,slow=10.0,SNR=3.9						
	comp=Z,1.8nm,0.8s						
BNX	BinXian	72.46	332	⇑P	P	05 42 49.8	+0.4
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
BNX				pmax	pmax		
	comp=Z,200nm,5.0s						
QSPA	South Pole Qui	72.80	180	P	P	05 42 51.8	+0.4
QSPA				IAmb	IAmb	05 42 53.2	
	comp=Z,26nm,0.9s						
KLR	Kul'dur	73.40	336	*ce*P	P	05 42 54.5	-0.4
KLR				pmax	pmax		
	comp=Z,13nm,1.7s						
LYN	LuoYang	73.42	315	⇑P	P	05 42 56.0	+0.7
LYN				sP	pwP	05 43 08.8	-0.1
LYN				S	S	05 52 23.5	+0.2
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
HNS	HongShan	73.64	319	⇑P	P	05 42 57.5	+0.9
HNS				pmax	pmax		
	comp=Z,11nm,1.2s						
BJI	Beijing	74.38	321	P	P	05 43 02.0	+1.2
BJI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI	Kunming	75.85	302	⇓P	P	05 43 12.0	+2.1
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	76.21	295	P	P	05 43 14.1	+2.3
	comp=Z,1.5nm,0.3s,baz=128,slow=4.2,SNR=13						
	comp=Z,1.5nm,0.3s						
PZH	PanZhiHua	77.27	303	P	P	05 43 18.5	+0.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC	Hu-ho-hao-te	77.66	320	*e*P	P	05 43 21.5	+1.8
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
CD2	Chengdu	77.74	308	*e*P	P	05 43 22.0	+1.7
MA2	Magadan	77.76	351	LR	LR	06 13 14.7	
	comp=Z,37nm,21.1s,baz=322,slow=32						
BTO	Baotou	78.48	319	*e*P	P	05 43 26.0	+1.8
MAW	Mawson	79.66	202	P	P	05 43 31.6	+1.5
	comp=Z,5.6nm,1.0s,baz=135,slow=8.6,SNR=3.6						
	comp=Z,5.6nm,1.0s						
MAW	Mawson	79.66	202	P	P	05 43 31.6	+1.5
MAW				pmax	pmax		
	comp=Z,4.0nm,1.4s						
LZH	Lanzhou	80.19	313	*e*P	P	05 43 40.8	+7.0
LZH				pP	pwP	05 43 48.5	+1.1
LZH				pmax	pmax		
	comp=Z,21nm,0.9s						
SEY	Seymchan	80.80	353	*ce*P	P	05 43 34.8	-1.3
SEY				pmax	pmax		
	comp=Z,11nm,1.1s						
BELA	Belgrano 2	84.21	175	P	P	05 43 53.4	-0.6
ULN	Ulaanbaatar	84.31	324	P	P	05 43 55.2	+0.2
ULN	Ulaanbaatar	84.31	324	P	P	05 43 55.2	+0.2
ULN				pmax	pmax		
	comp=Z,34nm,1.5s						
GTA	Gaotai	84.58	314	*e*P	P	05 43 57.5	+0.9
GTA				pP	sP	05 44 04.5	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	84.66	324	P	P	05 43 57.5	+0.8
	comp=Z,5.6nm,1.1s,baz=147,slow=4.0,SNR=20						
	comp=Z,5.6nm,1.1s						
SONM	Songino Array	84.66	324	P	P	05 43 57.1	+0.3
SONM				IAmb	IAmb	05 43 59.3	
	comp=Z,18nm,1.4s						
SONM	Songino Array	84.66	324	P	P	05 43 57.1	+0.3
SONM				pmax	pmax		
	comp=Z,18nm,1.4s						
SHL	Shillong	84.98	299	P	P	05 43 59.4	+0.4
SHL				IAmb	IAmb	05 44 00.4	
	comp=Z,16nm,1.0s						
SHL	Shillong	84.98	299	P	P	05 43 59.4	+0.4
SHL				pmax	pmax		
	comp=Z,16nm,1.0s						
BILL	Bilibino	85.05	360	⇑*i*P	P	05 43 57.5	-0.6
BILL				*e*		05 44 05.1	
BILL				S	S	05 54 23.0	-2.5
BILL				SS	SS	06 00 03.0	+3.5
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,65nm,17.0s						
ZAK	Zakamensk	87.74	325	*e*P	P	05 44 11.3	-0.6
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
NVAR	Mina Array Bea	88.71	49	P	P	05 44 16.4	-0.5
	comp=Z,0.9nm,0.8s,baz=234,slow=9.4,SNR=6.6						
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	88.83	18	P	P	05 44 16.1	-0.4
	comp=Z,0.4nm,0.7s,baz=234,slow=6.2,SNR=4.9						
	comp=Z,0.4nm,0.7s						
TROLL	Troll, Antarti	90.39	185	P	P	05 44 24.6	+0.4
SNAA	Sanae	91.06	183	P	P	05 44 27.1	-0.1
SNAA	Sanae	91.06	183	P	P	05 44 27.4	+0.2
SNAA	Sanae	91.06	183	P	P	05 44 27.4	+0.2
SNAA				pmax	pmax		
	comp=Z,20nm,1.2s						
VNA3	Neumayer Olymp	91.72	181	P	P	05 44 30.0	-0.2
VNA2	Neumayer--Watz	91.99	182	P	P	05 44 31.4	0.0
	baz=169,slow=5.0						
VNA1	Neumayer--Stat	92.28	181	P	P	05 44 32.6	-0.1
VNA1	Neumayer--Stat	92.28	181	P	P	05 44 36.6	+3.9
TIXI	Tiksi	92.47	349	*i* P	P	05 44 31.8	-1.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.0s						
WMQ	Urumqi	94.66	314	*e*P	P	05 44 45.8	+1.6
MK31	Makanchi Array	99.19	316	⇑*i*P	Pdif	05 45 05.2	+0.7
MK31	Makanchi Array	99.19	316	⇑Pn	Pdif	05 45 03.1	-1.4
	comp=Z,2.1nm,1.1s,baz=95,slow=13,SNR=4.9						
MK31				⇓Lg	Lg	05 46 45.9	
	comp=Z,0.9nm,0.6s,baz=98,slow=26,SNR=3.7						
MKAR	Makanchi Array	99.19	316	P	Pdif	05 45 05.2	+0.6
	comp=Z,0.3nm,0.5s,baz=69,slow=6.6,SNR=4.5						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	99.19	316		Pdif	05 45 04.1	-0.4
MKAR	Makanchi Array	99.19	316	P	Pdif	05 45 04.1	-0.4
ZAA0	Zalesovo Array	99.56	324	P	Pdif	05 45 04.9	-1.0
ZAA0				IAmb	IAmb	05 45 06.4	
	comp=Z,7.6nm,1.4s						
ZALV	Zalesovo Beam	99.56	324	P	Pdif	05 45 05.8	-0.1
	comp=Z,0.9nm,0.4s,baz=114,slow=3.5,SNR=6.4						
	comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	99.56	324		Pdif	05 45 04.9	-1.1
ZALV	Zalesovo Beam	99.56	324	*i* P	Pdif	05 45 06.3	+0.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLMR	Klimovskoe	123.03	333	*e*PKIKP	PKPdf	05 50 16.4	-2.5
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	123.03	333	AMP		05 50 19.8	
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	123.03	333	*e*PKPdf	PKPdf	05 50 16.5	-2.5
ZEI	Tsey	126.09	311	*i* PKIKP	PKiKP	05 50 28.0	+1.9
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	FINESS Array B	128.14	338	PKP	PKPdf	05 50 28.6	-0.1
	comp=Z,3.5nm,1.0s,baz=203,slow=1.5,SNR=6.7						
NB2	NORSAR Subarra	133.10	344	PKPdf	PKPdf	05 50 37.8	-0.4
	comp=Z,1.6nm,1.0s,baz=39,slow=1.9						
NOA	NORSAR Array B	133.10	344	PKP	PKPdf	05 50 37.8	-0.4
	comp=Z,0.9nm,0.7s,baz=38,slow=2.1,SNR=4.2						
BRTR	Keskin Array B	134.31	309	PKP	PKiKP	05 50 42.5	-0.1
	comp=Z,0.7nm,0.7s,baz=166,slow=11,SNR=4.4						
BRTR	Keskin Array B	134.31	309	*c i*PKIKP	PKiKP	05 50 42.7	+0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CLL	Collm	140.44	335	*e*PKPdf	PKPdf	05 50 52.0	0.0
RONA	Rosalia, Austr	141.55	328	*e*P	PKPdf	05 50 50.0	-4.2
	comp=Z,4.5nm,1.3s						
CONA	Conrad Observa	141.61	329	*e*P	PKPdf	05 50 49.8	-4.6
	comp=Z,4.2nm,1.2s						
KHC	Kasperske Hory	141.82	332	*e*PKIKP	PKiKP	05 50 57.7	+0.2
KHC	Kasperske Hory	141.82	332	*e*PKP	PKiKP	05 50 57.7	+0.2
GERES	GERESS Array B	141.98	332	PKhKP	PKPpre	05 50 49.5	
	comp=Z,0.4nm,0.4s,baz=60,slow=4.0,SNR=6.4						
BIOA	Bad Ischl, Aus	142.84	331	*e*P	PKPdf	05 50 53.6	-2.9
	comp=Z,2.6nm,0.8s						
SOKA	Soboth	142.87	328	*e*P	PKPdf	05 50 53.7	-3.0
	comp=Z,2.7nm,0.9s						
OBKA	Obir	143.23	328	*e*P	PKPbc	05 50 54.7	+0.4
	comp=Z,4.1nm,1.0s						
KBA	Koelnbreinsper	143.42	330	*i* P	PKPbc	05 50 55.1	+0.1
	comp=Z,9.7nm,1.2s,SNR=6.0						
LJU	Ljubljana	143.56	328	*i* PKPbc	PKPbc	05 50 55.4	+0.3
MYKA	Terra Mystica	143.60	329	*e*P	PKPbc	05 50 55.3	0.0
	comp=Z,3.1nm,0.7s						
WATA	Walderalm	144.05	332	*e*P	PKPdf	05 50 58.0	-0.8
	comp=Z,8.1nm,1.2s						
ABTA	Abfaltersbach	144.06	330	*i* P	PKPbc	05 50 56.8	+0.1
	comp=Z,23nm,1.3s,SNR=11						
WTTA	Wattenberg	144.08	332	*e*P	PKPdf	05 50 58.7	-0.2
	comp=Z,12nm,0.9s						
SKDS	Skadanscina	144.16	328	*i* PKPbc	PKPbc	05 50 56.9	-0.1
MOTA	Moosalm	144.26	332	*i* P	PKPbc	05 50 58.0	+0.6
	comp=Z,16nm,1.0s,SNR=6.5						
RETA	Reutte	144.30	333	*e*P	PKPdf	05 50 58.1	-1.0
	comp=Z,6.6nm,0.9s						
SQTA	Sankt Quirin	144.31	332	*i* P	PKPdf	05 50 58.2	-1.0
	comp=Z,14nm,0.8s,SNR=5.6						
FETA	Feichten	144.67	332	*i* P	PKPdf	05 50 59.7	-0.2
	comp=Z,29nm,1.0s,SNR=19						
DAVA	Damuels	144.84	333	*i* P	PKPdf	05 50 59.8	-0.3
	comp=Z,53nm,1.3s,SNR=12						
DAVOX	Davos/Dischmat	145.23	333	PKPbc	PKPdf	05 51 01.4	+0.5
	comp=Z,22nm,0.6s,baz=51,slow=1.3,SNR=34						
KEST	Kesra	153.27	318	PKPab	PKPab	05 51 34.2	+0.9
	comp=Z,3.4nm,1.0s,baz=80,slow=6.1,SNR=4.0						
TORD	Torodi Ar. Bea	165.74	255	PKP	PKPdf	05 51 27.4	-1.2
	comp=Z,1.8nm,1.0s,baz=65,slow=0.9,SNR=7.7						
TORD				PKPab	PKPab	05 52 28.2	+0.3
	comp=Z,1.9nm,1.0s,baz=98,slow=3.1,SNR=4.8						

*IDC **27** 05:33:43.7±10.0, 19.°03N×145.°28E, h276^{km}±105^{km}, mb3.1/7, mbtmp3.8/7, Error ellipse: s-maj=37.6km s-min=22.7km az=92.0*
ISC 27 05:33:37.2±0.9**, 19.°1N**±0.°2×**145.°3E**±0.°3**, h214^{km}, n9,** σ**1.s19**/9**, mb3.3**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.24	196	P	P	05 40 53.6	+0.2
	1.2nm,0.4s,baz=19,slow=8.4,SNR=31						
	1.2nm,0.4s						
ASAR	Alice Springs	43.92	195	P	P	05 41 23.1	0.0
	0.5nm,0.5s,baz=18,slow=7.5,SNR=8.5						
	0.5nm,0.5s						
MKAR	Makanchi Array	57.96	314	P	P	05 43 08.9	+1.6
	0.3nm,0.6s,baz=86,slow=8.6,SNR=3.9						
	0.3nm,0.6s						
ILAR	Eielson Array	63.46	26	P	P	05 43 43.9	-0.2
	0.2nm,0.6s,baz=281,slow=5.4,SNR=2.5						
	0.2nm,0.6s						
YKA	Yellowknife Ar	77.82	28	P	P	05 45 11.1	+0.5
	0.3nm,0.6s,baz=289,slow=5.2,SNR=4.9						
	0.3nm,0.6s						
NVAR	Mina Array Bea	83.17	52	P	P	05 45 40.6	+0.7
	0.6nm,0.5s,baz=265,slow=5.7,SNR=4.4						
	0.6nm,0.5s						
FINES	FINESS Array B	86.41	335	P	P	05 45 53.2	-2.0
	0.9nm,0.4s,baz=68,slow=4.4,SNR=7.9						
	0.9nm,0.4s						
ESDC	Sonseca Array	114.91	334	PKP	PKiKP	05 51 51.8	-1.1
	0.5nm,0.6s,baz=16,slow=2.4,SNR=5.1						
LPAZ	La Paz	148.01	90	PKPbc	PKPbc	05 52 59.0	-0.1
	0.4nm,0.5s,baz=297,slow=2.3,SNR=1.4						

*HEL **27** 05:48:35.1±0.3, 67.°60N×34.°03E, h0^{km}, ML2.0, Explosion*
*KOLA **27** 05:48:35.8, 67.°58N×33.°97E, h0^{km}, ML2.0*
ISC 27 05:48:35.4±1.0**, 67.°60N**±0.°05×**33.°96E**±0.°04**, h0^{km}, n22,** σ**1.s06**/39**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
APA	Apatity	0.21	263	P	Pg	05 48 39.6	+0.2
APA				S	Sg	05 48 42.5	+0.3
APA0	Apatity Array	0.37	272	P	Pg	05 48 42.2	-0.3
APA0				S	Sg	05 48 47.5	+0.3
LVZ	Lovozero	0.40	41	P	Pg	05 48 43.1	-0.1
LVZ				S	Sg	05 48 48.8	+0.4
VRF	Varrio	1.67	277	PG	Pn	05 49 05.3	-0.6
VRF				MSG		05 49 25.6	
	comp=Z,17nm,0.2s						
VRF				SB	Sn	05 49 26.4	-1.5
TERR	Teriberka	1.67	14	P	Pn	05 49 05.4	-0.4
TERR				S	Sn	05 49 26.5	-1.4
OLKF	Oulanka, Finla	2.20	237	PG	Pb	05 49 15.1	-0.9
OLKF				SG	Sb	05 49 44.0	+0.1
KU6	Riekki	2.25	227	PG	Pn	05 49 15.5	+1.6
KU6				MSG		05 49 42.5	
	comp=Z,5.6nm,0.2s						
KU6				SG	Sb	05 49 45.5	+0.2
PRVG	Vayda Guba	2.26	344	P	Pn	05 49 14.8	+0.9
PRVG				S	Sn	05 49 43.6	+1.2
MSF	Maaselka	2.58	231	PG	Pb	05 49 21.6	-0.9
	baz=46						
MSF				SG	Sb	05 49 54.5	-0.2
SGF	Sodankyl	2.86	270	PN	Pn	05 49 21.0	-1.2
SGF				SB	Sb	05 50 01.7	-1.0
RNF	Rovaniemi	3.26	256	PN	Pn	05 49 27.9	+0.2
	baz=68						
RNF				SN	Sn	05 50 08.3	+1.2
KEV	Kevo	3.34	314	*e*P	Pn	05 49 28.8	0.0
KEV	Kevo	3.34	314	PN	Pn	05 49 29.1	+0.4
KEV				SN	Sn	05 50 07.5	-1.5
ARA0	ARCESS Array S	3.66	306	*e*P	Pn	05 49 32.3	-1.0
ARA0	ARCESS Array S	3.66	306	PN	Pn	05 49 32.9	-0.3
ARCES	ARCESS Array B	3.66	306	P	Pn	05 49 33.0	-0.3
ARCES				S	Sn	05 50 15.4	-1.6
KLF	Kolari	3.87	269	PG	Pb	05 49 45.3	+0.8
	baz=78						
HEF	Hetta	3.96	287	PN	Pn	05 49 37.6	+0.3
HEF				SN	Sn	05 50 22.9	-1.5
TOF	Tornio	4.10	253	PG	Pb	05 49 49.5	+1.2
PAJU	Pajala	4.24	267	PN	Pn	05 49 41.3	+0.1
PAJU				SN	Sn	05 50 30.0	-1.3
LANU	Lannavaara	4.56	281	PN	Pn	05 49 44.8	-0.7
LANU				SG	Sb	05 50 55.0	+3.4
ERTU	Ertsjaerv	4.72	263	PN	Pn	05 49 47.4	-0.3
ERTU				SN	Sn	05 50 42.5	-0.5

*IDC **27** 06:07:50.0±1.5, 37.°69N×143.°85E, h0^{km}, mb3.6/2, mbtmp3.9/5, ML4.1/2, Error ellipse: s-maj=38.8km s-min=23.4km az=121.0*
*JMA **27** 06:07:54.0±0.2, 37.°8N±0.°7×143.°7E±1.°0, h44^{km}, MV4.0/31, FAR E OFF MIYAGI PREF*
ISC 27 06:07:50.0±3.6**, 37.°69N**±0.°05×**143.°70E**±0.°08**, h17^{km}**±23^{km}**, n27,** σ**2.s94**/33**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.87	290	*i* P	Pn	06 08 23.7	+2.4
JIKH				S	Sn	06 08 45.2	+0.7
JIO	Ouri	2.01	293	*i* P	Pn	06 08 25.6	+2.4
JIO				S	Sn	06 08 48.6	+0.7
JKMT	Kesennumamotoy	2.08	303	*i* P	Pn	06 08 26.2	+2.1
JKMT				S	Sn	06 08 49.9	+0.2
OFUJ	Ofunato	2.12	312	*e*P	Pn	06 08 26.4	+1.7
OFUJ				*e*S	Sn	06 08 50.3	-0.3
JMK	Ichinoseki	2.33	304	*i* P	Pn	06 08 29.8	+2.3
JMK				*e*S	Sn	06 08 56.6	+0.9
JOM	Ohasama	2.60	314	*i* P	Pn	06 08 33.6	+2.3
JOM				S	Sn	06 09 02.8	+0.3
JFT	Otama	2.68	267	P	Pb	06 08 36.5	-1.0
JFT				S	Sb	06 09 07.3	-2.8
JYK	Kaneyama	2.90	296	P	Pn	06 08 38.6	+3.2
JYK				S	Sn	06 09 12.3	+2.4
JANG	Nango	3.18	328	*e*P	Pn	06 08 41.1	+1.9
JANG				*e*S	Sn	06 09 15.1	-1.6
JAW	Awa shima	3.60	284	P	Pn	06 08 49.2	+4.2
JAG	Ashikaga	3.62	251	*i* P	Pn	06 08 49.2	+3.9
JAG				S	Sn	06 09 29.9	+2.1
JRY	Ryogami san	4.19	248	*i* P	Pn	06 08 56.8	+3.6
JRY				S	Sn	06 09 42.7	+0.8
JOT	Ohata	4.22	332	*e*S	Sn	06 09 40.4	-2.1
JOD2	Odawara 2	4.43	238	*e*P	Pn	06 08 59.6	+3.0
JOD2				S	Sn	06 09 48.5	+0.7
MJAR	Matsushiro Arr	4.54	257	Pn	Pn	06 09 02.0	+4.1
	2.4nm,0.4s,baz=93,slow=15,SNR=12						

MJAR				Sn	**Sb**	**06 09 56.7**	**-6.9**
	0.3nm,0.3s,baz=100,slow=32,SNR=4.1						
JCH	**Churui**	**4.93**	**357**	P	Pn	06 09 03.6	+0.3
JCH				S	Sn	06 09 55.8	-4.1
JHJ	**Hachijo jima 2**	**5.57**	**216**	Pn	**Pn**	**06 09 14.4**	**+2.3**
	12nm,0.3s,baz=328,slow=19,SNR=15						
JHJ				Sn	**Sn**	**06 10 14.1**	**-1.6**
	3.5nm,0.3s,baz=297,slow=2.3,SNR=1.8						
	36nm,0.3s						
ASAJ	**Asahikawa**	**6.48**	**353**	Pn	Pn	06 09 25.8	+1.2
	4.3nm,0.3s,baz=187,slow=10,SNR=6.9						
ASAJ				Sn	Sn	06 10 36.2	-1.8
	1.1nm,0.3s,baz=53,slow=20,SNR=1.8						
	8.5nm,0.3s						
JCJ	**Chichijima**	**10.64**	**187**	Pn	**Pn**	**06 10 20.6**	**-1.1**
	3.1nm,0.3s,baz=17,slow=20,SNR=7.8						
JCJ				Sn	**Sn**	**06 12 13.9**	**-6.5**
	2.0nm,0.3s,baz=300,slow=20,SNR=1.2						
H11N2	**WAKE ISLAND Hy**	**26.97**	**125**	T	T	06 41 45.5	
	baz=317,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**26.98**	**125**	T	T	06 41 44.7	
	baz=317,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**26.99**	**125**	T	T	06 41 52.8	
	baz=317,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**27.74**	**127**	T	T	06 42 52.1	
	baz=319,slow=76,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**27.74**	**127**	T	T	06 42 54.0	
	baz=319,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**27.76**	**127**	T	T	06 42 49.6	
	baz=319,slow=76,SNR=4.5						
ILAR	**Eielson Array**	**47.97**	**33**	P	P	06 16 29.9	+2.4
	0.5nm,0.9s,baz=251,slow=5.6,SNR=3.0						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**57.99**	**190**	P	**P**	**06 17 44.5**	**+2.7**
	1.1nm,0.8s,baz=12,slow=7.3,SNR=11						
	1.1nm,0.8s						

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*ISU **27** 06:11:16, 41.°68N×72.°95E, h5^{km}*
*KRNET **27** 06:11:17.5±0.1, 41.°67N×73.°02E, h22^{km}, mb4.5*
*SOME **27** 06:11:17.1, 41.°62N×73.°02E, h15^{km}, MS3.4*
*IDC **27** 06:11:18.8±1.8, 41.°63N×73.°19E, h0^{km}, mb3.5/2, mbtmp3.5/5, ML3.2/3, MS3.7/2, Error ellipse: s-maj=32.4km s-min=14.0km az=153.0*
*MOS **27** 06:11:19.1±2.4, 41.°65N×72.°86E, h18^{km}, mb4.2/7, Error ellipse: s-maj=6.8km s-min=4.7km az=55.4*
MOS Felt (IV) at Ketmen-Tebe, Kek-Bel', Bor-Debe, (III) at Toktogul, Kara-Kul'.
*NNC **27** 06:11:20.0±0.7, 41.°81N×73.°01E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=7.6km s-min=2.7km az=170.0*
*KNET **27** 06:11:20.1±0.4, 41.°78N×73.°16E, h17^{km}±2^{km}, ml3.8, Error ellipse: s-maj=2.5km s-min=2.4km az=89.0*
ISC 27 06:11:17.3±1.0, **41.°65N**±0.°02×**72.°98E**±0.°01, **h1**^{km}±7^{km}, **n166**, σ**1.ˢ72**/229, **mb3.8**/5, **MS3.5**/3, **53C-32D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.72**	**48**	P	**Pg**	**06 11 30.8**	**-0.3**
	381nm,0.2s,SNR=967						
AML				⇓S	**Sg**	**06 11 39.7**	**-0.7**
	5µm,0.5s						
AML	**Almayashu**	**0.72**	**48**	*i* PG	**Pg**	**06 11 30.8**	**-0.3**
ARK	**Arkit**	**0.78**	**281**	*e*PG	**Pg**	**06 11 32.7**	**+0.6**
ARK				*e*S	**Sg**	**06 11 43.7**	**+1.5**
ARK	**Arkit**	**0.78**	**281**	⇓*i*P	**Pg**	**06 11 32.7**	**+0.6**
	baz=80						
ARK				⇓*i*S	**Sg**	**06 11 43.7**	**+1.5**
	baz=80						
ARK	**Arkit**	**0.78**	**281**	P	**Pg**	**06 11 32.4**	**+0.3**
ARK				S	**Sg**	**06 11 42.5**	**+0.3**
ARLS	**Aral**	**1.03**	**78**	*i* PG	**Pg**	**06 11 35.8**	**-1.2**
ARLS	**Aral**	**1.03**	**78**	⇓*i*P	**Pg**	**06 11 35.8**	**-1.2**
	baz=79						
ARLS				⇓*i*S	**Sg**	**06 11 49.2**	**-1.1**
	baz=79						
MRKS	**Merke**	**1.11**	**9**	*e*P	**Pn**	**06 11 42.1**	**+2.0**
	455nm,0.2s						
MRKS				*e*S	**Sn**	**06 11 56.6**	**+0.5**
	2µm,0.3s						
OHH	**Osh**	**1.13**	**188**	*i* PG	**Pg**	**06 11 38.9**	**-0.1**
OHH				*i* S	**Sb**	**06 11 54.4**	**-0.5**
OHH	**Osh**	**1.13**	**188**	⇑*i*P	**Pg**	**06 11 38.9**	**-0.1**
	baz=89						
OHH				⇑*i*S	**Sb**	**06 11 54.4**	**-0.5**
	baz=89						
OHH	**Osh**	**1.13**	**188**	P	**Pg**	**06 11 38.8**	**-0.2**
OHH				S	**Sb**	**06 11 54.6**	**-0.3**
EKS2	**Erkin-Say**	**1.17**	**30**	⇓P	**Pg**	**06 11 38.9**	**-0.8**
	35nm,0.1s,SNR=46						
EKS2				⇓S	**Sg**	**06 11 53.8**	**-1.2**
	521nm,0.4s						
EKS2	**Erkin-Say**	**1.17**	**30**	*e*PG	**Pg**	**06 11 38.7**	**-1.1**
EKS2	**Erkin-Say**	**1.17**	**30**	⇑*i*P	**Pg**	**06 11 38.7**	**-1.1**
	baz=29						
EKS2				⇑*i*S	**Sg**	**06 11 53.9**	**-1.1**
	baz=29						
UCH	**Uchtor**	**1.28**	**63**	⇑P	**Pg**	**06 11 40.9**	**-0.9**
	252nm,0.2s,SNR=775						
UCH				⇓S	**Sg**	**06 11 57.7**	**-0.8**
	1µm,0.3s						
UCH	**Uchtor**	**1.28**	**63**	*i* PG	**Pg**	**06 11 40.7**	**-1.2**
UCH	**Uchtor**	**1.28**	**63**	⇓*i*P	**Pg**	**06 11 40.7**	**-1.2**
	baz=63						
UCH				⇓*i*S	**Sg**	**06 11 57.3**	**-1.2**
	baz=63						
TRKS	**Terek-Say**	**1.39**	**266**	*i* PG	**Pn**	**06 11 43.3**	**-0.6**
TRKS				*i* S	**Sb**	**06 12 02.3**	**0.0**
TRKS	**Terek-Say**	**1.39**	**266**	⇑*i*P	**Pn**	**06 11 43.0**	**-0.9**
	baz=62						
TRKS				⇑*e*S	**Sb**	**06 12 02.1**	**-0.2**
	baz=62						
AAK	**Ala-Archa**	**1.50**	**48**	P	**Pn**	**06 11 44.6**	**-0.9**
	393nm,0.5s,SNR=82						
AAK				⇓S	**Sn**	**06 12 03.9**	**-1.9**
	446nm,0.3s						
AAK	**Ala-Archa**	**1.50**	**48**	Pg	**Pn**	**06 11 45.0**	**-0.5**
	98nm,0.3s,baz=165,slow=5.2,SNR=202						
AAK				Lg	Lg	06 12 04.0	
	76nm,0.3s,baz=348,slow=20,SNR=8.2						
AAK	**Ala-Archa**	**1.50**	**48**	PN	**Pn**	**06 11 45.0**	**-0.5**
AAK	**Ala-Archa**	**1.50**	**48**	⇑*i*P	**Pn**	**06 11 44.4**	**-1.1**
	baz=48						
AAK				⇑*i*S	**Sn**	**06 12 03.6**	**-2.1**
	baz=48						
FRG	**Fergana**	**1.56**	**216**	P	**Pg**	**06 11 47.5**	**+0.3**
FRG				S	**Sg**	**06 12 10.7**	**+3.3**
DZA	**Taraz**	**1.74**	**316**	*e*PN	**Pn**	**06 11 49.2**	**+0.5**
DZA				*e*		06 12 13.2	
DZA	**Taraz**	**1.74**	**316**	*e*P	**Pb**	**06 11 50.2**	**+0.1**
	174nm,0.2s						
DZA				*e*S	**Sb**	**06 12 12.8**	**+0.3**
	1µm,0.3s						
DZA	**Taraz**	**1.74**	**316**	*e*Pg	**Pn**	**06 11 49.3**	**+0.5**
	baz=313						
DZA				*e*Lg	Lg	06 12 13.3	
	baz=313						
CHMI	**Chimion**	**1.77**	**219**	P	**Pb**	**06 11 50.4**	**-0.1**
CHMI				S	**Sg**	**06 12 16.0**	**+2.0**
KBK	**Karagaybulak**	**1.78**	**55**	⇑P	**Pn**	**06 11 49.9**	**+0.6**
	474nm,0.4s,SNR=94						
KBK				⇑S	**Sn**	**06 12 11.8**	**-0.8**
	1µm,0.4s						
KBK	**Karagaybulak**	**1.78**	**55**	*i* PN	**Pn**	**06 11 49.3**	**0.0**
KBK				*i* S	**Sn**	**06 12 12.4**	**-0.2**
KBK	**Karagaybulak**	**1.78**	**55**	⇓*i*P	**Pn**	**06 11 49.3**	**0.0**
	baz=55						
KBK				⇓*i*S	**Sn**	**06 12 12.4**	**-0.2**
	baz=55						
CHDK	**Chadak**	**1.81**	**249**	P	**Pb**	**06 11 51.6**	**+0.4**
CHDK				S	**Sg**	**06 12 16.9**	**+1.5**
CHMS	**Chumysh**	**1.88**	**44**	⇑P	**Pn**	**06 11 51.5**	**+0.9**
	191nm,0.3s,SNR=56						
CHMS				⇓S	**Sn**	**06 12 15.9**	**+0.9**
	821nm,0.4s						
CHMS	**Chumysh**	**1.88**	**44**	*e*PN	**Pn**	**06 11 50.9**	**+0.3**
CHMS	**Chumysh**	**1.88**	**44**	⇑P	**Pn**	**06 11 51.8**	**+1.2**
	395nm,0.7s						
CHMS				⇑S	**Sn**	**06 12 15.2**	**+0.2**
	841nm,0.6s						
CHMS	**Chumysh**	**1.88**	**44**	⇑*i*P	**Pn**	**06 11 50.9**	**+0.3**
	baz=43						
CHMS				⇑*i*S	**Sn**	**06 12 14.9**	**-0.1**
	baz=43						
MINT	**Mingtut**	**1.92**	**233**	P	**Pb**	**06 11 52.8**	**-0.3**
MINT				S	**Sg**	**06 12 19.9**	**+0.9**
SHAK	**Shakhimardan**	**1.94**	**210**	P	**Pb**	**06 11 52.5**	**-1.0**
SHAK				S	Sn	06 11 55.7	-21
SHAK				S	**Sg**	**06 12 20.0**	**+0.5**
USP	**Ospenovka**	**1.97**	**34**	⇑P	**Pn**	**06 11 53.0**	**+1.2**
	329nm,0.4s,SNR=209						
USP				⇓S	**Sn**	**06 12 17.7**	**+0.5**
	2µm,0.6s						
USP	**Ospenovka**	**1.97**	**34**	*e*PN	**Pn**	**06 11 52.1**	**+0.3**
USP				*i* S	**Sn**	**06 12 16.8**	**-0.4**
USP	**Ospenovka**	**1.97**	**34**	⇑*e*P	**Pn**	**06 11 52.1**	**+0.3**
	baz=34						
USP				⇑*i*S	**Sn**	**06 12 16.8**	**-0.4**
	baz=34						
SGDS	**Sogindy**	**2.18**	**34**	c *i*PN	**Pn**	**06 11 55.9**	**+1.2**
SGDS				*i*		06 12 24.7	
SGDS	**Sogindy**	**2.18**	**34**	*e*P	**Pn**	**06 11 55.9**	**+1.2**
	123nm,0.8s						
SGDS				*e*S	**Sb**	**06 12 24.3**	**-0.7**
	2µm,1.0s						
SGDS	**Sogindy**	**2.18**	**34**	⇑*i*Pg	**Pn**	**06 11 56.0**	**+1.2**
	baz=35						
SGDS				*i* Lg	Lg	06 12 24.8	
	baz=35						
SGDS	**Sogindy**	**2.18**	**34**	Pg	**Pb**	**06 11 58.8**	**+1.3**
	53nm,0.4s						
SGDS				Lg	Lg	06 12 25.0	
	2µm,1.0s						
CHMG	**Chimgan**	**2.23**	**268**	P	Pg	06 12 30.6	+31
IUG	**Iuzhnay**	**2.26**	**284**	*i* PN	**Pb**	**06 11 57.7**	**-1.2**
IUG				*e*		06 12 28.5	
IUG	**Iuzhnay**	**2.26**	**284**	*e*P	**Pb**	**06 11 57.7**	**-1.2**
	2µm,0.7s						
IUG				*e*S	**Sb**	**06 12 27.0**	**-0.3**
	1µm,0.5s						
IUG	**Iuzhnay**	**2.26**	**284**	*i* Pg	**Pb**	**06 11 57.7**	**-1.2**
	baz=281						
IUG				*e*Lg	Lg	06 12 28.5	
	baz=281						
IUG	**Iuzhnay**	**2.26**	**284**	Pg	**Pb**	**06 11 59.8**	**+1.0**
	7µm,0.8s						
IUG				Lg	Lg	06 12 27.8	
	1µm,0.5s						
CHRV	**Charvak**	**2.27**	**271**	P	Pg	06 12 32.0	+31
BTK	**Batken**	**2.28**	**227**	*e*PN	**Pn**	**06 11 57.3**	**+1.1**
BTK				*i* S	**Sb**	**06 12 26.3**	**-1.8**
BTK	**Batken**	**2.28**	**227**	⇑*e*P	**Pn**	**06 11 57.3**	**+1.1**
	baz=27						
BTK				⇑*i*S	**Sb**	**06 12 26.3**	**-1.8**
	baz=27						
TKM2	**Tokmak 2**	**2.32**	**56**	⇑P	**Pn**	**06 11 58.2**	**+1.4**
	456nm,0.3s,SNR=828						
TKM2	**Tokmak 2**	**2.32**	**56**	PN	**Pn**	**06 11 58.4**	**+1.6**
TKM2						06 12 29.2	
TKM2	**Tokmak 2**	**2.32**	**56**	⇓Pn	**Pn**	**06 11 58.5**	**+1.6**
	313nm,0.5s						
TKM2				⇓Lg	Lg	06 12 29.3	
	879nm,0.6s						
TKM2	**Tokmak 2**	**2.32**	**56**	⇑*i*P	**Pn**	**06 11 56.9**	**+0.1**
	baz=56						
TKM2				⇑*i*S	**Sn**	**06 12 25.4**	**-0.7**
	baz=56						
KK31	**Karatay Array**	**2.34**	**309**	*e*PN	**Pb**	**06 11 59.0**	**-1.1**
KK31	**Karatay Array**	**2.34**	**309**	⇑Pn	**Pb**	**06 11 59.1**	**-1.1**
	85nm,0.7s,baz=119,slow=12,SNR=512						
KK31				Lg	Lg	06 12 31.6	
	118nm,0.3s,baz=126,slow=26,SNR=22						
KKAR	**Karatay Array**	**2.34**	**309**	*e*PN	**Pn**	**06 11 58.0**	**+1.2**
KKAR				*i* S	**Sn**	**06 12 27.1**	**+0.9**
KKAR	**Karatay Array**	**2.34**	**309**	⇑*e*P	**Pn**	**06 11 58.0**	**+1.2**
	baz=8.0						
KKAR				⇑*i*S	**Sn**	**06 12 27.1**	**+0.9**
	baz=8.0						
DRK	**Karamyk**	**2.34**	**203**	⇑*i*P	**Pn**	**06 11 58.1**	**+0.9**
	baz=3.0						
DRK				⇑*i*S	**Sb**	**06 12 27.9**	**-2.2**
	baz=3.0						
BOOM	**Boomskoye usch**	**2.36**	**68**	*e*PN	**Pn**	**06 11 57.6**	**+0.3**
BOOM	**Boomskoye usch**	**2.36**	**68**	⇑*e*P	**Pn**	**06 11 57.6**	**+0.3**
	baz=68						
BOOM				⇑*i*S	**Sn**	**06 12 26.5**	**-0.5**
	baz=68						
ULHL	**Ulahol**	**2.51**	**75**	⇓P	**Pn**	**06 12 00.2**	**+0.9**
	111nm,0.3s,SNR=110						
ULHL	**Ulahol**	**2.51**	**75**	*i* PN	**Pn**	**06 11 59.5**	**+0.2**
ULHL	**Ulahol**	**2.51**	**75**	⇑*i*P	**Pn**	**06 11 59.5**	**+0.2**
	baz=75						
ULHL				⇑*i*S	**Sn**	**06 12 29.9**	**-0.7**
	baz=75						
CHM	**Chimkent**	**2.60**	**286**	*e*P	**Pb**	**06 12 05.8**	**+1.0**
	160nm,0.3s						
CHM				*e*S	**Sg**	**06 12 40.9**	**-0.1**
	1µm,0.5s						
KST	**Kastek**	**2.61**	**57**	*e*P	**Pb**	**06 12 04.4**	**-0.6**
	242nm,0.8s						
KST				*e*S	**Sb**	**06 12 38.7**	**+1.1**
	872nm,0.6s						
KST	**Kastek**	**2.61**	**57**	Pg	**Pb**	**06 12 06.7**	**+1.7**
	311nm,0.8s						
KST				Lg	Lg	06 12 38.7	
	872nm,0.6s						
BRLS	**Borolday**	**2.71**	**302**	*e*PN	**Pb**	**06 12 06.1**	**-0.4**
BRLS				*e*		06 12 42.3	
BRLS	**Borolday**	**2.71**	**302**	*e*P	**Pb**	**06 12 06.9**	**+0.4**
	6.3nm,0.5s						
BRLS				*e*S	**Sb**	**06 12 43.0**	**+2.7**
	389nm,0.6s						
BRLS	**Borolday**	**2.71**	**302**	*e*Pg	**Pb**	**06 12 06.1**	**-0.4**
	baz=294						
BRLS				*e*Lg	Lg	06 12 42.3	
	baz=294						
BRLS	**Borolday**	**2.71**	**302**	Pg	**Pg**	**06 12 08.8**	**-0.4**
BRLS				Lg	Lg	06 12 43.0	
TAS	**Tashkent**	**2.79**	**265**	*i* PN	**Pn**	**06 12 04.1**	**+1.1**
TAS				*i* S	**Sn**	**06 12 38.3**	**+1.0**
TAS	**Tashkent**	**2.79**	**265**	⇑*i*P	**Pn**	**06 12 04.1**	**+1.1**
	baz=64						
TAS				⇑*i*S	**Sn**	**06 12 38.3**	**+1.0**
	baz=64						
KRBS	**Karabastau**	**2.85**	**43**	*e*P	**Pb**	**06 12 08.4**	**-0.6**
	33nm,0.4s						
KRBS				*e*S	**Sb**	**06 12 45.8**	**+1.3**
	981nm,0.7s						
KRBS	**Karabastau**	**2.85**	**43**	Pg	**Pb**	**06 12 10.8**	**+1.7**
	82nm,0.6s						
KRBS				Lg	Lg	06 12 45.8	
	981nm,0.7s						
MTBS	**Maitube**	**2.95**	**59**	*e*P	**Pb**	**06 12 10.8**	**0.0**
	213nm,0.6s						
MTBS				*e*S	**Sb**	**06 12 49.0**	**+1.6**
	486nm,0.4s						
MTBS	**Maitube**	**2.95**	**59**	Pg	**Pb**	**06 12 12.8**	**+2.0**
	88nm,0.4s						
MTBS				Lg	Lg	06 12 49.0	
	486nm,0.4s						
KSH	**Kashi**	**3.12**	**132**	Pn	**Pn**	**06 12 10.5**	**+2.8**
KSH				sP	Pg	06 12 16.8	-0.3
KSH				Sn	**Sb**	**06 12 51.5**	**-0.7**
KSH				pmax	pmax		
	comp=Z,18nm,0.5s						
KSH				smax	smax		
	comp=N,350nm,0.7s						
KSH				smax	smax		
	comp=E,260nm,0.7s						
KDJ	**Kajisay**	**3.17**	**80**	⇑*e*P	**Pn**	**06 12 09.0**	**+0.5**
	baz=80						
KDJ				⇑*e*S	**Sn**	**06 12 46.3**	**-0.8**
	baz=80						
TNSS	**Tian-Shan**	**3.25**	**63**	*i* PN	**Pb**	**06 12 16.2**	**+0.2**
TNSS				*e*		06 12 58.9	
TNSS	**Tian-Shan**	**3.25**	**63**	*e*P	**Pb**	**06 12 16.4**	**+0.3**
	comp=E,130nm,0.5s						
TNSS				*e*S	**Sb**	**06 12 58.8**	**+2.6**
	comp=E,225nm,0.6s						
TNSS	**Tian-Shan**	**3.25**	**63**	*i* Pg	**Pb**	**06 12 16.3**	**+0.2**
	baz=65						
TNSS				*e*Lg	Lg	06 12 59.0	
	baz=65						
TNSS	**Tian-Shan**	**3.25**	**63**	Pg	**Pb**	**06 12 18.5**	**+2.5**
	comp=E,163nm,0.7s						
TNSS				Lg	Lg	06 12 58.8	
	comp=E,225nm,0.6s						
AAA	**Alma-Ata**	**3.30**	**61**	*e*PN	**Pb**	**06 12 17.3**	**+0.6**
AAA	**Alma-Ata**	**3.30**	**61**	*e*P	**Pb**	**06 12 17.5**	**+0.8**
	comp=E,203nm,0.7s						
AAA				*e*S	**Sb**	**06 13 00.1**	**+2.6**
	comp=E,742nm,0.5s						
AAA	**Alma-Ata**	**3.30**	**61**	*e*Pg	**Pb**	**06 12 17.4**	**+0.6**
	baz=62						
AAA	**Alma-Ata**	**3.30**	**61**	Pg	**Pb**	**06 12 19.0**	**+2.3**
	comp=E,188nm,0.5s						
AAA				Lg	Lg	06 13 00.1	
	comp=E,742nm,0.5s						
GAR	**Garm**	**3.34**	**218**	⇑*e*P	**Pn**	**06 12 12.2**	**+1.5**
	baz=19						
GAR				⇑*i*S	**Sn**	**06 12 51.8**	**+0.8**
	baz=19						
KUU	**Kurty**	**3.34**	**47**	*i* PN	**Pb**	**06 12 17.6**	**+0.4**
KUU				*i*		06 13 00.2	
KUU	**Kurty**	**3.34**	**47**	*e*P	**Pb**	**06 12 17.8**	**+0.5**
	comp=E,89nm,0.4s						
KUU				*e*S	**Sb**	**06 13 00.3**	**+1.9**
	comp=E,897nm,0.7s						
KUU	**Kurty**	**3.34**	**47**	*i* Pg	**Pb**	**06 12 17.7**	**+0.4**
	baz=48						
KUU				*i* Lg	Lg	06 13 00.3	
	baz=48						
KUU	**Kurty**	**3.34**	**47**	Pg	**Pb**	**06 12 19.3**	**+2.1**
	comp=E,89nm,0.4s						
KUU				Lg	Lg	06 13 00.3	
	comp=E,897nm,0.7s						
KNDC	**Almaty**	**3.34**	**61**	PN	**Pb**	**06 12 17.9**	**+0.6**
KNDC	**Almaty**	**3.34**	**61**	⇑Pg	**Pb**	**06 12 18.4**	**+1.0**
	comp=E,463nm,0.7s						
KNDC				⇑Lg	Lg	06 13 01.0	
	comp=E,776nm,0.7s						
MDOK	**Medeo**	**3.37**	**62**	*i* PN	**Pb**	**06 12 18.3**	**+0.4**
MDOK				*i*		06 13 02.1	
MDOK	**Medeo**	**3.37**	**62**	*e*P	**Pb**	**06 12 18.0**	**+0.1**
	comp=E,176nm,0.8s						
MDOK				*e*S	**Sb**	**06 13 02.2**	**+2.7**
	comp=E,411nm,0.7s						
MDOK	**Medeo**	**3.37**	**62**	*i* Pg	**Pb**	**06 12 18.4**	**+0.5**
	baz=63						
MDOK				*i* Lg	Lg	06 13 02.2	
	baz=63						
MDOK	**Medeo**	**3.37**	**62**	⇑Pn	**Pn**	**06 12 12.5**	**+1.3**
	comp=E,301nm,0.8s						
MDOK				⇑Lg	Lg	06 13 01.8	
	comp=E,412nm,0.9s						
MDOK	**Medeo**	**3.37**	**62**	Pg	**Pb**	**06 12 20.3**	**+2.4**
	comp=E,87nm,0.4s						
MDOK				Lg	Lg	06 13 02.2	
	comp=E,411nm,0.7s						
BTLS	**Baital**	**3.48**	**13**	*i* PN	**Pb**	**06 12 19.8**	**+0.2**
BTLS				*i*		06 13 04.7	
BTLS	**Baital**	**3.48**	**13**	*e*P	**Pb**	**06 12 19.3**	**-0.3**
	comp=E,63nm,0.7s						
BTLS				*e*S	**Sb**	**06 13 04.8**	**+2.4**
	comp=E,188nm,0.5s						
BTLS	**Baital**	**3.48**	**13**	*i* Pg	**Pb**	**06 12 19.8**	**+0.2**
	baz=13						
BTLS				*i* Lg	Lg	06 13 04.8	
	baz=13						
BTLS	**Baital**	**3.48**	**13**	Pg	**Pb**	**06 12 21.8**	**+2.1**
	comp=E,63nm,0.7s						
BTLS				Lg	Lg	06 13 04.8	
	comp=E,188nm,0.5s						
ANVS	**Anan'yevo**	**3.66**	**70**	⇓*e*P	**Pn**	**06 12 15.7**	**+0.5**
	baz=71						
ANVS				⇓*e*S	**Sn**	**06 12 57.8**	**-1.3**
	baz=71						
CHKK	**Chushkaly**	**3.68**	**52**	*e*PN	**Pb**	**06 12 23.1**	**0.0**
CHKK				*i*		06 13 11.1	
CHKK	**Chushkaly**	**3.68**	**52**	*e*Pg	**Pb**	**06 12 23.1**	**0.0**
	baz=53						
CHKK				*i* Lg	Lg	06 13 11.1	
	baz=53						
PRZ	**Przheval'sk**	**4.12**	**77**	⇓*e*P	**Pn**	**06 12 21.9**	**+0.4**
	baz=76						
PRZ				⇓*e*S	**Sn**	**06 13 08.9**	**-1.5**
	baz=76						
CHGR	**Chuyangaron**	**4.18**	**226**	⇑*e*P	**Pn**	**06 12 23.6**	**+1.3**
	baz=26						
CHGR				⇑*i*S	**Sn**	**06 13 12.2**	**+0.4**
	baz=26						
KURS	**Kuram**	**4.25**	**63**	*e*P	**Pb**	**06 12 33.9**	**+1.1**
	comp=E,49nm,0.6s						
KURS				*e*S	**Sb**	**06 13 29.8**	**+5.1**
	comp=E,144nm,0.8s						
KURS	**Kuram**	**4.25**	**63**	Pg	**Pb**	**06 12 36.5**	**+3.7**
	comp=E,69nm,0.9s						
KURS				Lg	Lg	06 13 29.8	
	comp=E,144nm,0.8s						
SATY	**Saty**	**4.26**	**69**	*i* PN	**Pb**	**06 12 34.7**	**+1.7**
SATY				*e*		06 13 32.3	
SATY	**Saty**	**4.26**	**69**	*e*P	**Pb**	**06 12 34.4**	**+1.3**
	comp=E,50nm,0.6s						
SATY				*e*S	**Sb**	**06 13 29.9**	**+4.9**
	comp=E,201nm,0.3s						
SATY	**Saty**	**4.26**	**69**	*i* Pg	**Pb**	**06 12 34.8**	**+1.7**
	baz=70						
SATY				*e*Lg	Lg	06 13 32.4	
	baz=70						
SATY	**Saty**	**4.26**	**69**	Pg	**Pg**	**06 12 37.5**	**-1.4**
	comp=E,89nm,0.8s						
SATY				Lg	Lg	06 13 31.3	
	comp=E,201nm,0.3s						
ZHN	**Zhinishke**	**4.32**	**68**	*e*PN	**Pb**	**06 12 35.4**	**+1.5**
ZHN				*i*		06 13 33.2	
ZHN	**Zhinishke**	**4.32**	**68**	*e*P	**Pb**	**06 12 36.0**	**+2.0**
	comp=E,59nm,0.4s						
ZHN				*e*S	**Sg**	**06 13 32.1**	**-3.8**
	comp=E,172nm,0.2s						
ZHN	**Zhinishke**	**4.32**	**68**	*e*Pg	**Pb**	**06 12 35.5**	**+1.5**
	baz=69						
ZHN				*i* Lg	Lg	06 13 33.3	
	baz=69						
ZHN	**Zhinishke**	**4.32**	**68**	Pg	**Pg**	**06 12 38.1**	**-1.9**
	comp=E,84nm,0.4s						
ZHN				Lg	Lg	06 13 32.1	
	comp=E,172nm,0.2s						
KPKS	**Kokpek**	**4.59**	**65**	*i* PN	**Pb**	**06 12 39.5**	**+0.9**
KPKS				*i*		06 13 39.6	
KPKS	**Kokpek**	**4.59**	**65**	*i* Pg	**Pb**	**06 12 39.5**	**+0.9**
	baz=66						
KPKS				*i* Lg	Lg	06 13 39.7	
	baz=66						
UZB	**Uzynbulak**	**4.72**	**69**	*i* PN	**Pb**	**06 12 41.7**	**+0.9**
UZB				*i*		06 13 44.9	
UZB	**Uzynbulak**	**4.72**	**69**	*e*P	**Pb**	**06 12 41.6**	**+0.7**
	comp=E,33nm,0.4s						
UZB				*e*S	**Sb**	**06 13 43.5**	**+5.3**
	comp=E,116nm,0.5s						
UZB	**Uzynbulak**	**4.72**	**69**	*i* Pg	**Pb**	**06 12 41.7**	**+0.9**
	baz=70						
UZB				*i* Lg	Lg	06 13 45.0	
	baz=70						
UZB	**Uzynbulak**	**4.72**	**69**	Pg	**Pb**	**06 12 44.7**	**+3.8**
	comp=E,84nm,0.9s						
UZB				Lg	Lg	06 13 43.5	
	comp=E,116nm,0.5s						
PDGK	**Podgornoye**	**5.10**	**69**	PN	**Pb**	**06 12 45.9**	**-1.4**
PDGK	**Podgornoye**	**5.10**	**69**	Pg	**Pb**	**06 12 51.8**	**+4.5**
	comp=E,17nm,0.7s						
PDGK				Lg	Lg	06 13 55.9	
	comp=E,57nm,0.8s						
PDGK	**Podgornoye**	**5.10**	**69**	⇑Pg	**Pb**	**06 12 50.6**	**+3.3**
	comp=E,36nm,0.7s						
PDGK				⇑Lg	Lg	06 13 58.6	
	comp=E,177nm,0.8s						
TDK	**Taldyqorghan**	**5.19**	**48**	*i* PN	**Pb**	**06 12 50.6**	**+1.9**
TDK				*i*		06 13 58.9	
TDK	**Taldyqorghan**	**5.19**	**48**	*i* Pg	**Pb**	**06 12 50.7**	**+1.9**
	baz=49						
TDK				*i* Lg	Lg	06 13 58.9	
	baz=49						
OTUK	**Ortayu**	**6.61**	**356**	PN	**Pn**	**06 12 55.9**	**+0.3**
OTUK	**Ortayu**	**6.61**	**356**	⇑Pn	**Pn**	**06 12 56.3**	**+0.7**
	comp=E,13nm,0.8s						
OTUK				⇓Lg	Lg	06 14 45.9	
	comp=E,161nm,0.7s						
CEP	**Cherat**	**7.86**	**187**	P	**Pn**	**06 13 14.4**	**+1.6**
CHCP	**Chirah Chowk**	**7.98**	**178**	P	**Pn**	**06 13 16.1**	**+1.7**
MAKZ	**Makanchi**	**8.26**	**48**	⇓Pn	**Pn**	**06 13 19.7**	**+1.5**
	comp=E,3.0nm,0.9s						
MAKZ				⇓Lg	Lg	06 15 38.8	
	comp=E,39nm,0.8s						
MK31	**Makanchi Array**	**8.43**	**49**	d *i*P	**Pn**	**06 13 21.4**	**+0.8**
MK31	**Makanchi Array**	**8.43**	**49**	⇓Pn	**Pn**	**06 13 21.1**	**+0.6**
	comp=E,3.0nm,0.5s,baz=234,slow=14,SNR=45						
MK31				⇓Lg	Lg	06 15 45.5	
	comp=E,28nm,0.8s,baz=236,slow=28,SNR=4.6						
MKAR	**Makanchi Array**	**8.43**	**49**	Pn	**Pn**	**06 13 21.6**	**+1.1**
	comp=E,0.4nm,0.3s,baz=234,slow=14,SNR=22						

MKAR				Lg	Lg	06 15 38.5	
	comp=E,1.9nm,0.3s,baz=238,slow=28,SNR=7.4 comp=E,2.5nm,0.7s						
THW	**Thamme Wali**	**8.89**	**187**	P	**Pn**	**06 13 26.4**	**-0.5**
KURBB	**Kurchatov Arra**	**9.76**	**21**	Pn	**Pn**	**06 13 40.7**	**+1.9**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=13						
KURBB				Lg	Lg	06 16 25.6	
	comp=E,0.5nm,0.3s,baz=201,slow=28,SNR=12 comp=E,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**9.76**	**21**	⇑Pn	**Pn**	**06 13 41.0**	**+2.3**
	comp=E,2.3nm,0.5s						
KURBB				⇓Lg	Lg	06 16 26.2	
	comp=E,103nm,0.8s						
KURK	**Kurchatov**	**9.87**	**21**	P	**Pn**	**06 13 40.7**	**+0.5**
KURK	**Kurchatov**	**9.87**	**21**	⇓Lg	Lg	06 16 27.7	
	comp=E,84nm,0.9s						
SEM	**Semipalatinsk**	**10.11**	**27**	ePg	Pn	06 14 21.1	+37
	baz=28						
SEM				eLg	Lg	06 16 32.5	
	baz=28						
ZSN	**Zaisan**	**10.27**	**52**	ePg	Pn	06 14 24.0	+38
	baz=52						
ZSN				eLg	Lg	06 16 42.5	
	baz=52						
BRVK	**Borovoye**	**11.56**	**352**	⇑eP	**Pn**	**06 14 02.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AB31	**Akbulak array**	**11.89**	**314**	Pn	**Pn**	**06 14 09.0**	**+1.1**
	comp=Z,5.3nm,0.6s,baz=126,slow=13,SNR=91						
AKTO	**Aktyubinsk**	**13.59**	**315**	Pn	**Pn**	**06 14 31.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=131,slow=16,SNR=4.2 comp=Z,1.6nm,0.6s						
AKTO	**Aktyubinsk**	**13.59**	**315**	P	**Pn**	**06 14 31.0**	**0.0**
AKTO	**Aktyubinsk**	**13.59**	**315**	⇓Pn	**Pn**	**06 14 33.3**	**+2.3**
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**14.63**	**29**	Lg	Lg	06 18 58.8	
	comp=Z,0.2nm,0.3s,baz=214,slow=22,SNR=2.9						
ARU	**Arti**	**17.50**	**333**	P	**P**	**06 15 25.2**	**+1.6**
GOMU	**GeErMu**	**17.82**	**101**	P	**P**	**06 15 27.8**	**+0.1**
GOMU				pP	sP	06 15 31.5	+2.2
GOMU				sP	pP	06 15 35.0	+6.2
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,41nm,6.0s						
KBZ	**Khabaz**	**22.16**	**286**	⇑eP	**P**	**06 16 11.1**	**-3.3**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KIV	**Kislovodsk**	**22.29**	**286**	eP	**P**	**06 16 14.6**	**-1.4**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	**Keskin Array B**	**29.72**	**280**	LR	LR	06 29 30.9	
	comp=Z,119nm,21.1s,baz=228,slow=37						
AKASG	**Malin Array Be**	**31.22**	**302**	i P	**P**	**06 17 35.2**	**-2.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**31.22**	**302**	⇓eP	**P**	**06 17 37.1**	**-0.9**
MNK	**Minsk**	**32.18**	**309**	i P	**P**	**06 17 42.2**	**-4.2**
MNK				i PPP	PPP	06 18 57.9	
MNK				i S	**S**	**06 22 59.5**	**-0.4**
MNK				i SS	**SnSn**	**06 24 48.1**	**-1.6**
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,188nm,19.0s						
MNK				MLR	MLR		
	comp=N,62nm,20.0s						
MNK				MLR	MLR		
	comp=E,11nm,17.0s						
MNK	**Minsk**	**32.18**	**309**	i P	**P**	**06 17 42.2**	**-4.2**
	comp=E,2.0nm,0.8s						
MNK				i P	**P**	**06 17 42.2**	**-4.2**
	comp=N,16nm,1.0s						
MNK				i P	**P**	**06 17 42.2**	**-4.2**
	comp=Z,6.0nm,0.8s,baz=94						
MNK				i PP	**PP**	**06 18 48.4**	**-10**
MNK				i PPP	PPP	06 18 58.0	
MNK				i S	**S**	**06 22 59.5**	**-0.4**
MNK				i SS	**SnSn**	**06 24 48.1**	**-1.6**
MNK				i SSS	SSS	06 25 03.4	
MNK				i LQ	LQ	06 27 56.1	
MNK				i LR	LR	06 30 24.9	
MNK				i LRM	MLR	06 31 51.5	
	comp=Z,188nm,19.1s						
MNK				i LRM	MLR	06 32 05.6	
	comp=E,11nm,16.5s						
MNK				i LRM	MLR	06 32 05.6	
	comp=N,62nm,20.4s						
USRK	**Ussuriysk Ar.**	**42.48**	**66**	LR	LR	06 38 39.8	
	comp=N,144nm,21.8s,baz=325,slow=39						
TORD	**Torodi Ar. Bea**	**67.42**	**268**	P	**P**	**06 22 17.0**	**+2.3**
	comp=N,0.4nm,0.7s,baz=63,slow=5.8,SNR=2.4 comp=N,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**76.03**	**4**	P	**P**	**06 23 08.9**	**+3.2**
	comp=N,0.4nm,0.8s,baz=349,slow=5.8,SNR=4.6 comp=N,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**76.03**	**4**	P	**P**	**06 23 09.0**	**+3.2**

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*TUL **27** 06:25:10.1±0.2, 36°.79N±0°.02×98°.33W±0°.02, h5km±4km, ML2.8, mb_Lg2.5/50(NEIC), Error ellipse: s-maj=2.7km s-min=1.4km az=134.0*

NEIC 27 06:25:10.7±0.2**, 36°.79N**±0°.01×**98°.33W**±0°.02**, h4**km±4km**, Error ellipse: s-maj=2.5km s-min=1.5km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.68**	**234**		Pg	06 25 23.1	-0.6
T35A	**Sooner Cattle**	**1.46**	**84**	Pg	Pn	06 25 37.0	-1.0
OKCSW	**OKLAHOMA CITY**	**1.55**	**152**		Pn	06 25 38.5	-0.7
R32A	**Long Quarter,**	**1.66**	**350**		Pn	06 25 40.7	-0.1
FNO	**Franklin**	**1.70**	**154**		Pn	06 25 40.8	-0.5
WMOK	**Wichita Mounta**	**2.08**	**190**		Pn	06 25 46.0	-0.4
X34A	**Smith Ranch, M**	**2.22**	**169**		Pn	06 25 48.8	+0.5
TUL1	**Leonard**	**2.22**	**112**	IAmb_Lg		06 26 21.3	
	comp=Z,19nm,0.8s						
X37A	**Clayton**	**3.25**	**131**	IAmb_Lg		06 27 02.1	
	comp=Z,19nm,0.8s						
AMTX	**Amarillo**	**3.32**	**236**	IAmb_Lg		06 26 58.4	
	comp=Z,12nm,0.7s						
W39A	**Magazine**	**4.01**	**112**	IAmb_Lg		06 27 28.1	
	comp=Z,15nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.06**	**304**	IAmb_Lg		06 27 23.7	
	comp=Z,12nm,1.0s						
S39A	**Bolivar**	**4.09**	**76**	IAmb_Lg		06 27 20.6	
	comp=Z,11nm,0.8s						
U40A	**Yellville**	**4.43**	**94**	IAmb_Lg		06 27 39.1	
	comp=Z,8.0nm,0.7s						
Z38A	**Mt. Pleasant**	**4.46**	**141**	IAmb_Lg		06 27 33.0	
	comp=Z,15nm,0.9s						
MGMO	**Mountain Grove**	**4.87**	**84**	IAmb_Lg		06 27 50.5	
	comp=Z,10nm,1.0s						
T25A	**Trinidad**	**4.88**	**276**	IAmb_Lg		06 27 45.0	
	comp=Z,10nm,0.8s						
X40A	**Basin Creek Fa**	**5.03**	**116**	IAmb_Lg		06 27 49.3	
	comp=Z,6.4nm,0.7s						
R40A	**Maddies Statio**	**5.04**	**71**	IAmb_Lg		06 27 53.7	
	comp=Z,9.6nm,0.8s						
WHAR	**Wooly Hollow**	**5.12**	**105**	IAmb_Lg		06 28 04.4	
	comp=Z,9.6nm,1.2s						
WLAR	**White Oak Lake**	**5.27**	**124**	IAmb_Lg		06 28 08.4	
	comp=Z,8.1nm,1.0s						
L34A	**Svendsen Farm,**	**5.39**	**16**	IAmb_Lg		06 28 08.2	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**5.78**	**75**	IAmb_Lg		06 28 24.3	
	comp=Z,6.1nm,0.8s						
PBMO	**Poplar Bluff**	**6.34**	**88**	IAmb_Lg		06 28 34.2	
	comp=Z,6.2nm,0.8s						
FVM	**French Village**	**6.40**	**77**	IAmb_Lg		06 28 36.0	
	comp=Z,7.1nm,0.8s						
SCIA	**State Center**	**6.47**	**36**	IAmb_Lg		06 28 49.9	
	comp=Z,8.2nm,0.7s						
S44A	**Carbondale**	**7.29**	**80**	IAmb_Lg		06 29 08.7	
	comp=Z,6.1nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.50**	**65**	IAmb_Lg		06 29 23.5	
	comp=Z,7.9nm,0.7s						
L40A	**Anamosa**	**7.62**	**44**	IAmb_Lg		06 29 14.9	
	comp=Z,8.5nm,0.8s						
RSSD	**Black Hills**	**8.52**	**331**	IAmb_Lg		06 29 54.9	
	comp=Z,3.3nm,0.7s						
K22A	**Casper**	**8.61**	**315**	IAmb_Lg		06 29 53.0	
	comp=Z,6.0nm,1.1s						

ISC 27 06:26:04.4±1.0**, 49°.05N**±0°.04×**19°.35E**±0°.04**, h8**km±10km**, n7,** σ**0ˢ.58**/14**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**0.13**	**39**	ePG	**Pg**	**06 26 06.7**	**-0.5**
LANS				eSG	**Sg**	**06 26 09.5**	**+0.4**
LANS				eLG	Lg	06 26 10.4	
VYHS	**Vyhne**	**0.65**	**211**	ePG	**Pg**	**06 26 17.4**	**+0.5**
VYHS				eSG	**Sg**	**06 26 25.6**	**+0.2**
KOLL	**Kolacno**	**0.78**	**233**	ePG	**Pg**	**06 26 18.4**	**-1.0**
KOLL				eSG	**Sg**	**06 26 29.8**	**+0.2**
KECS	**Kecovo**	**0.94**	**127**	ePG	**Pg**	**06 26 22.7**	**+0.2**
KECS				eSG	**Sg**	**06 26 35.1**	**+0.4**
JAVC	**Velka Javorina**	**1.12**	**261**	ePG	**Pb**	**06 26 25.9**	**-0.1**
JAVC				eSG	**Sn**	**06 26 42.3**	**+0.2**
PSZ	**Piszkesteto**	**1.19**	**162**	P	**Pn**	**06 26 27.3**	**-0.1**
PSZ				S	**Sn**	**06 26 43.4**	**-0.4**
MORC	**Moravsky Berou**	**1.38**	**302**	ePG	**Pn**	**06 26 30.1**	**0.0**
MORC				eSG	**Sg**	**06 26 49.9**	**+1.1**

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*GCG **27** 07:01:26.5±0.5, 13°.24N×90°.92W, h106km±31km, MD3.8*
*SNET **27** 07:01:28.7±1.2, 13°.26N×90°.83W, h17km±15km, ML3.1*
*INET **27** 07:01:45.5±2.9, 13°.77N×89°.60W, h15km±999km, MW2.6*

ISC 27 07:01:25.1±2.4**, 13°.1N**±0°.1×**90°.93W**±0°.09**, h10**km**, n14,** σ**0ˢ.99**/18**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.31**	**4**	eP	**Pb**	**07 01 48.6**	**-1.3**
FUG				eS	**Sn**	**07 02 09.0**	**+1.7**
NUBE	**Las Nubes**	**1.35**	**56**	eP	**Pb**	**07 01 49.5**	**-1.2**
CEVE	**Cerro Verde**	**1.45**	**61**	eP	**Pn**	**07 01 51.9**	**+0.2**
CEVE				eS	**Sn**	**07 02 10.8**	**0.0**
CEVE				IAML		07 02 24.7	
	comp=Z,364nm,0.3s						
JAYA	**Jayaque - finc**	**1.53**	**70**	eP	**Pn**	**07 01 53.6**	**+0.9**
NBG	**Las Nubes**	**1.55**	**21**	eP	**Pn**	**07 01 53.9**	**+0.8**
NBG				eS	**Sg**	**07 02 14.8**	**-0.4**
STG3	**Santiaguito 3,**	**1.69**	**338**	eP	**Pn**	**07 01 55.0**	**+0.1**
STG3				eS	**Sn**	**07 02 17.6**	**+1.0**
SJTE	**Alcalda de S**	**1.93**	**76**	eP	**Pn**	**07 01 59.2**	**+1.1**
MTO3	**Montecristo**	**1.98**	**50**	eP	**Pn**	**07 01 59.5**	**+0.6**
MTO3	**Montecristo**	**1.98**	**50**	eP	**Pn**	**07 01 59.4**	**+0.6**
PAVA	**Las Pavas**	**2.02**	**73**	eP	**Pn**	**07 02 00.3**	**+0.9**
COEG	**Centro de Oper**	**2.05**	**76**	eP	**Pn**	**07 02 01.2**	**+1.4**
COEG	**Centro de Oper**	**2.05**	**76**	eP	**Pn**	**07 02 00.7**	**+0.9**
COEB	**Comit de Eme**	**2.36**	**81**	eP	**Pn**	**07 02 04.8**	**+0.6**
COEB	**Comit de Eme**	**2.36**	**81**	eP	**Pn**	**07 02 03.6**	**-0.6**

IDC 27 07:07:07.1±4.4**, 2°.42S**×**140°.64E, h0**km**, mb3.5**/2**, mbtmp3.7**/3**, ML3.8**/1**, MS3.5**/2**, Error ellipse: s-maj=159.6km s-min=31.2km az=89.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.47**	**199**	P	P	07 11 24.2	-0.5
	0.3nm,0.3s,baz=18,slow=12,SNR=21 2.2nm,0.8s						
ASAR	**Alice Springs**	**22.11**	**197**	P	P	07 12 04.5	+0.2
	1.3nm,0.8s,baz=30,slow=9.8,SNR=17 1.3nm,0.8s						
DZM	**Mont Dzumac**	**31.79**	**130**	LR	LR	07 24 45.1	
	comp=Z,165nm,20.2s,baz=210,slow=33						
MKAR	**Makanchi Array**	**70.74**	**322**	P	P	07 18 25.3	0.0
	0.7nm,0.9s,baz=107,slow=7.7,SNR=2.5 0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**74.61**	**324**	LR	LR	07 53 44.6	
	comp=Z,18nm,19.4s,baz=118,slow=38						

IDC 27 07:15:32.3±2.4**, 53°.90N**×**86°.50E, h0**km**, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=19.6km s-min=12.2km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**274**	i		07 22 30.0	
	baz=90,slow=313,SNR=4.7						
ZALV	**Zalesovo Beam**	**0.99**	**274**	Pg	Pg	07 15 50.3	-1.0
	1.1nm,0.3s,baz=90,slow=17,SNR=13						
ZALV				Lg	Lg	07 16 05.1	
	3.0nm,0.3s,baz=96,slow=30,SNR=20						
KURBB	**Kurchatov Arra**	**5.89**	**239**	Pn	Pn	07 17 02.0	+1.3
	0.1nm,0.3s,baz=56,slow=14,SNR=11						
KURBB				Lg	Lg	07 18 39.1	
	baz=58,slow=27,SNR=3.5 1.2nm,0.5s						
MKAR	**Makanchi Array**	**7.60**	**202**	Pn	Pn	07 17 25.0	+0.7
	0.3nm,0.3s,baz=24,slow=11,SNR=5.4						
MKAR				Lg	Lg	07 19 32.8	
	baz=23,slow=27,SNR=8.3 0.3nm,0.4s						

IDC 27 07:18:34.6±2.6**, 53°.93N**×**86°.53E, h0**km**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=21.5km s-min=13.4km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**272**	i		07 25 10.0	
	baz=89,slow=311,SNR=0.9						
ZALV	**Zalesovo Beam**	**1.01**	**272**	Pg	Pg	07 18 53.9	-0.1
	0.5nm,0.3s,baz=88,slow=13,SNR=3.5						
ZALV				Lg	Lg	07 19 07.6	
	1.6nm,0.3s,baz=91,slow=29,SNR=7.8						
KURBB	**Kurchatov Arra**	**5.92**	**239**	Pn	Pn	07 20 05.1	+1.6
	0.1nm,0.3s,baz=56,slow=13,SNR=5.9						
KURBB				Lg	Lg	07 21 40.9	
	baz=54,slow=33,SNR=2.1 0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.64**	**202**	Pn	Pn	07 20 27.6	+0.5
	0.2nm,0.3s,baz=24,slow=14,SNR=7.3						
MKAR				Lg	Lg	07 22 36.6	
	0.1nm,0.3s,baz=24,slow=33,SNR=4.1 0.3nm,0.3s						

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*IDC **27** 07:26:32.9±1.2, 4°.26S×153°.07E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=39.5km s-min=20.5km az=163.0*

ISC 27 07:26:39.8±1.3**, 4°.2S**±0°.3×**153°.0E**±0°.1**, h50**km**, n6,** σ**0ˢ.37**/7**, mb3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.92**	**265**	Pn	**Pn**	**07 26 56.1**	**-0.4**
	38nm,0.3s,baz=25,slow=4.3,SNR=21						
KRVT				Sn	**Sn**	**07 27 09.2**	**+0.5**
	219nm,0.3s,baz=43,slow=19,SNR=14						
WRA	**Warramunga Arr**	**23.93**	**228**	P	**P**	**07 31 49.3**	**-0.2**
	1.0nm,0.5s,baz=51,slow=9.5,SNR=30 1.0nm,0.5s						
ASAR	**Alice Springs**	**26.67**	**222**	P	**P**	**07 32 14.4**	**+0.1**
	0.2nm,0.6s,baz=56,slow=8.8,SNR=1.8 0.2nm,0.6s						
ILAR	**Eielson Array**	**81.58**	**22**	P	**P**	**07 38 52.0**	**0.0**
	0.4nm,0.7s,baz=253,slow=5.6,SNR=4.9 0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.26**	**289**	PKPbc	**PKPbc**	**07 46 26.7**	**+0.2**
	0.7nm,0.5s,baz=75,slow=2.1,SNR=9.3						
BDFB	**Brasilia**	**151.36**	**134**	PKPbc	**PKPbc**	**07 46 29.5**	**+0.2**
	2.0nm,0.8s,baz=138,slow=3.6,SNR=4.0						

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*IDC **27** 07:40:24.7±1.3, 51°.38N×81°.85E, h0km, mbtmp2.3/2, ML1.6/2, Error ellipse: s-maj=14.4km s-min=11.0km az=143.0*
*NNC **27** 07:40:25.0±1.5, 51°.38N×82°.03E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=15.6km s-min=6.5km az=16.0, Suspected Mining explosion.*

ISC 27 07:40:24.9±1.2**, 51°.46N**±0°.07×**82°.03E**±0°.07**, h0**km**, n8,** σ**0ˢ.55**/11**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.27**	**252**	⇑Pn	**Pn**	**07 41 03.2**	**-0.4**
	3.2nm,0.6s						
KURK				⇑Sn	**Sn**	**07 41 32.9**	**+0.6**
	7.9nm,0.5s						
KURBB	**Kurchatov Arra**	**2.36**	**251**	Pg	**Pn**	**07 41 05.0**	**+0.1**
	0.2nm,0.3s,baz=71,slow=18,SNR=16						
KURBB				Lg	Lg	07 41 34.9	
	0.2nm,0.3s,baz=70,slow=31,SNR=11						
KURBB	**Kurchatov Arra**	**2.36**	**251**	⇑Pn	**Pn**	**07 41 04.3**	**-0.5**
	1.6nm,0.3s						
KURBB				⇑Sn	**Sn**	**07 41 35.1**	**+0.7**
	22nm,0.6s						
I46RU	**ZALESOVO INFRA**	**3.02**	**33**	i		07 59 10.0	
	baz=217,slow=326,SNR=2.6						
ZALV	**Zalesovo Beam**	**3.02**	**33**	Pn	**Pn**	**07 41 13.9**	**0.0**
	0.1nm,0.3s,baz=220,slow=13,SNR=3.8						
ZALV				Pg	**Pg**	**07 41 22.2**	**-0.5**
	0.5nm,0.3s,baz=219,slow=16,SNR=6.7						
ZALV				Sn	**Sn**	**07 41 51.6**	**+0.8**
	0.2nm,0.3s,baz=217,slow=22,SNR=4.1						
ZALV				Lg	Lg	07 42 04.1	
	0.4nm,0.3s,baz=218,slow=25,SNR=3.5 0.9nm,0.6s						
MAKZ	**Makanchi**	**4.65**	**180**	⇑Pn	**Pn**	**07 41 36.0**	**-0.4**
	1.1nm,0.7s						
MAKZ				⇓Lg	Lg	07 42 48.7	
	2.5nm,0.8s						
MK31	**Makanchi Array**	**4.67**	**178**	⇑Pn	**Pn**	**07 41 36.5**	**-0.2**
	0.7nm,0.6s,baz=9.3,slow=14,SNR=3.7						
MK31				⇓Lg	Lg	07 42 49.1	
	1.5nm,0.6s,baz=4.3,slow=28,SNR=5.6						
MKAR	**Makanchi Array**	**4.67**	**178**	Pn	**Pn**	**07 41 37.0**	**+0.3**
	0.1nm,0.3s,baz=3.4,slow=11,SNR=9.9						
MKAR				Lg	Lg	07 42 47.5	
	0.3nm,0.3s,baz=3.5,slow=26,SNR=8.7 0.2nm,0.2s						

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*IDC **27** 07:49:46.1±1.1, 1°.37S×137°.03E, h0km, mb3.9/6, mbtmp4.0/7, ML4.4/1, MS3.4/6, Error ellipse: s-maj=52.6km s-min=19.1km az=78.0*
*NEIC **27** 07:49:48.8±1.4, 1°.6S±0°.1×137°.21E±0°.06, h10km±1km, mb4.3/15, Error ellipse: s-maj=21.2km s-min=5.1km az=23.0*
*DJA **27** 07:49:49.2±1.9, 1°S±8°×13°7E±°, h25km±20km, M4.5/6, mB4.9/4, mb4.4/6, MLv4.7/4, Mw(mB)4.1/4*

ISC 27 07:49:50.8±0.6**, 1°.53S**±0°.07×**137°.20E**±0°.04**, h32**km**, n51,** σ**1ˢ.61**/47**, mb4.3**/10**, MS3.4**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.02**	**251**	P	**Pn**	**07 50 08.4**	**-0.4**
SRPI				S	**Sb**	**07 50 23.2**	**+0.2**
BAKI	**Biak**	**1.15**	**287**	P	**Pn**	**07 50 08.4**	**-2.2**
SMPI	**Sarmi**	**1.57**	**107**	P	**Pn**	**07 50 16.6**	**+0.1**
SMPI				S	**Sb**	**07 50 37.6**	**-1.2**
KMPI	**Kaimana, Papua**	**4.08**	**239**	P	**Pb**	**07 51 04.5**	**+2.5**
FAKI	**Fak Fak**	**5.14**	**254**	Pn	**Pn**	**07 51 05.5**	**-0.1**
FAKI	**Fak Fak**	**5.14**	**254**	P	**Pn**	**07 51 06.2**	**+0.7**
	0.3nm696nm48nm,0.7s						
FAKI	**Fak Fak**	**5.14**	**254**	P	**Pn**	**07 51 06.2**	**+0.7**
SIJI	**Sorong**	**5.97**	**276**	Pn	**Pn**	**07 51 18.6**	**+1.5**
	1.0nm,0.3s,baz=253,slow=19,SNR=2.1						
KDU	**Kakadu**	**12.03**	**203**	P	**Pn**	**07 52 39.3**	**-0.8**
PMG	**Port Moresby**	**12.62**	**129**	LR	LR	07 58 15.8	
	comp=Z,170nm,20.3s,baz=263,slow=40						
MTN	**Manton Dam**	**12.74**	**208**	Pn	**Pn**	**07 52 49.7**	**-0.2**
MTN	**Manton Dam**	**12.74**	**208**	P	**Pn**	**07 52 50.2**	**+0.3**
COEN	**Coen**	**13.69**	**155**	Pn	**Pn**	**07 53 01.3**	**-1.5**
COEN	**Coen**	**13.69**	**155**	P	**Pn**	**07 53 01.3**	**-1.5**
KNRA	**Kununurra**	**16.33**	**210**	Pn	**Pn**	**07 53 35.9**	**-2.0**
KNRA				IAmb	IAmb	07 53 40.7	
	comp=Z,15nm,0.6s						
KNRA	**Kununurra**	**16.33**	**210**	P	**Pn**	**07 53 35.8**	**-2.0**
EDFI	**Ende, Flores**	**17.02**	**245**	P	**Pn**	**07 53 44.8**	**-1.9**
	comp=Z,625nmcomp=Z,7.2nm,0.5s						
BKSI	**Bulukumba**	**17.46**	**257**	P	**Pn**	**07 53 46.4**	**-5.6**
MTSU	**Mount Surprise**	**17.92**	**157**	P	**P**	**07 53 59.7**	**+1.6**
WB0	**Warramunga Arr**	**18.33**	**188**		**P**	**07 54 01.9**	**-0.7**
WB0				IAmb	IAmb	07 54 06.4	
	comp=Z,10nm,0.6s						
WRAB	**Tennant Creek**	**18.50**	**188**	P	**P**	**07 54 04.2**	**-0.3**
WRAB	**Tennant Creek**	**18.50**	**188**	P	**Pn**	**07 54 05.2**	**+0.4**
WB2	**Warramunga Arr**	**18.51**	**188**	P	**P**	**07 54 04.3**	**-0.3**
WRA	**Warramunga Arr**	**18.51**	**189**	P	**Pn**	**07 54 04.6**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=9.4,slow=12,SNR=47						
WRA				S	Sn	07 57 17.6	-13
	comp=Z,4.2nm,0.8s,baz=15,slow=23,SNR=8.9						
WRA				LR	LR	08 01 13.6	
	comp=Z,95nm,18.9s,baz=302,slow=37 comp=Z,5.8nm,0.5s						
WRA	**Warramunga Arr**	**18.51**	**189**	P	**P**	**07 54 04.5**	**-0.1**
QIS	**Mount Isa**	**19.05**	**173**	P	**Pn**	**07 54 10.8**	**-0.7**
CTA	**Charters Tower**	**20.46**	**155**	P	Pn	07 54 28.2	+0.1
	comp=Z,3.3nm,0.8s,baz=346,slow=9.0,SNR=6.5						
CTA				LR	LR	08 03 53.8	
	comp=Z,197nm,20.8s,baz=336,slow=41 comp=Z,3.3nm,0.8s						
CTAO	**Charters Tower**	**20.46**	**155**	P	**P**	**07 54 26.6**	**+0.7**
CTAO				IAmb	IAmb	07 54 34.3	
	comp=Z,6.3nm,0.8s						
ASAR	**Alice Springs**	**22.23**	**188**	P	**P**	**07 54 46.4**	**+1.4**
	comp=Z,12nm,0.8s,baz=15,slow=11,SNR=95						
ASAR				S	**S**	**07 58 43.3**	**-4.8**
	comp=Z,0.7nm,0.9s,baz=13,slow=26,SNR=1.9 comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**22.23**	**188**	P	**P**	**07 54 44.6**	**-0.4**
MTKI	**Muara Teweh, K**	**22.31**	**271**	P	P	07 54 36.0	-10
JAGI	**Jajag, Banyuwa**	**23.96**	**253**	P	**P**	**07 55 04.0**	**+1.5**
SBUM	**Sibu**	**25.29**	**279**	P	**P**	**07 55 14.8**	**+0.2**
SBUM				IAmb	IAmb	07 55 24.1	
	comp=Z,9.6nm,1.2s						
PSA00	**Pilbara Seismi**	**26.13**	**219**	P	**P**	**07 55 21.5**	**-0.6**
PSA00				IAmb	IAmb	07 55 43.8	
	comp=Z,8.5nm,1.1s						
STKA	**Stephens Creek**	**30.47**	**173**	P	**P**	**07 56 02.4**	**+1.6**
	comp=Z,4.3nm,0.6s,baz=343,slow=9.1,SNR=10.0 comp=Z,4.3nm,0.6s						
STKA	**Stephens Creek**	**30.47**	**173**	P	**P**	**07 56 00.1**	**-0.6**
STKA				IAmb	IAmb	07 56 10.3	
	comp=Z,3.1nm,0.8s						
MJAR	**Matsushiro Arr**	**37.89**	**1**	LR	LR	08 10 14.1	
	comp=Z,41nm,20.8s,baz=185,slow=32						
ASAJ	**Asahikawa**	**45.70**	**5**	LR	LR	08 14 44.7	
	comp=Z,32nm,20.1s,baz=110,slow=33						
LBZ	**Lake Benmore**	**51.70**	**150**	P	**P**	**07 58 55.4**	**+0.5**
BSWZ	**Blackbirch Sta**	**51.84**	**145**	P	**P**	**07 58 56.0**	**0.0**
NIUE	**Niue**	**54.60**	**112**	P	**P**	**07 59 17.3**	**+0.7**
SONM	**Songino Array**	**56.02**	**335**	LR	LR	08 25 00.4	
	comp=Z,36nm,18.1s,baz=26,slow=38						
PETK	**Petropavlovsk-**	**57.09**	**15**	P	**P**	**07 59 34.4**	**+0.5**
CASY	**Casey**	**67.31**	**191**	P	**P**	**08 00 44.9**	**+2.7**
CASY				IAmb	IAmb	08 00 48.8	
	comp=Z,4.7nm,1.2s						
MKAR	**Makanchi Array**	**67.94**	**323**	P	**P**	**08 00 44.9**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=110,slow=7.0,SNR=5.2 comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.94**	**323**	P	**P**	**08 00 47.5**	**+0.9**
KURK	**Kurchatov**	**71.89**	**325**	P	**P**	**08 01 11.1**	**+0.3**
KURK	**Kurchatov**	**71.89**	**325**	IAmb	IAmb	08 01 33.0	
	comp=Z,1.4nm,0.9s						
KURBB	**Kurchatov Arra**	**71.91**	**325**	P	**P**	**08 01 11.1**	**+0.3**
	comp=Z,0.2nm,0.2s,baz=111,slow=5.5,SNR=4.8 comp=Z,0.2nm,0.2s						
ILAR	**Eielson Array**	**85.39**	**25**	P	**P**	**08 02 23.9**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=256,slow=3.6,SNR=2.5 comp=Z,0.2nm,0.6s						
QSPA	**South Pole Qui**	**88.41**	**180**	P	**P**	**08 02 40.4**	**+0.9**
QSPA				IAmb	IAmb	08 02 54.3	
	comp=Z,6.5nm,1.4s						

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*TEH **27** 08:00:13.4, 35°.12N×46°.32E, h6km, ML3.4*
*ISN **27** 08:00:13.5±1.1, 35°.10N×46°.31E, h19km±63km, ML3.5*
*AZER **27** 08:00:17.2±17.0, 35°.10N×47°.72E, h5km±945km, Error ellipse: s-maj=3051.0km s-min=49.2km az=353.0*

ISC 27 08:00:13.3±0.8**, 35°.12N**±0°.02×**46°.26E**±0°.04**, h10**km**, n42,** σ**2ˢ.23**/49**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.43**	**166**	ePg	**Pb**	**08 00 22.7**	**-0.5**
IDHR				e		08 00 35.9	
	comp=Z,80μm,0.6s						
IGHG	**Ghaleghazi**	**0.83**	**162**	ePg	**Pb**	**08 00 30.2**	**+0.2**
IGHG				eSg	**Sn**	**08 00 42.7**	**-1.0**
IGHG				e		08 00 46.6	

	comp=Z,51µm,0.6s						
KER	Kermanshah	1.03	135	ePg	Pg	08 00 32.1	-1.0
KCHF	Cheshme Sefid,	1.06	142	ePg	Pg	08 00 33.1	-0.7
KCHF				e		08 00 53.8	
	comp=Z,22µm,0.6s						
IKOM	Komasi	1.40	132	ePg	Pg	08 00 40.2	0.0
IKOM				e		08 01 07.5	
	comp=Z,22µm,0.5s						
IBZA	Bozab	1.47	116	ePn	Pb	08 00 40.4	-0.5
IBZA				e		08 01 09.3	
	comp=Z,8µm,0.3s						
IKRK	Kirkuk	1.59	281	ePg	Pn	08 00 43.0	+1.4
IKRK				eSg	Sn	08 01 04.0	+1.7
IKRK				AML	AML	08 01 13.3	
	comp=E,584nm,0.6s						
IKRK				AML	AML	08 01 20.3	
	comp=N,650nm,0.6s						
MAHB	Mahabad	1.70	345	ePn	Pb	08 00 45.5	+0.7
MAHB				e		08 01 16.3	
	comp=Z,9µm,0.6s						
IBDR	Badra	2.02	188	ePn	Pn	08 00 48.0	+0.5
IBDR				eSn	Sn	08 01 14.0	+1.1
IBDR				AML	AML	08 01 25.7	
	comp=E,436nm,0.4s						
IBDR				AML	AML	08 01 35.8	
	comp=N,354nm,0.5s						
IKFM	Kafar-mosalman	2.06	140	ePn	Pb	08 00 50.7	-0.2
IKFM				e		08 01 26.6	
	comp=Z,9µm,1.1s						
IDOB	Doab	2.07	129	ePn	Pg	08 00 51.8	-1.2
IDOB				e		08 01 28.0	
	comp=Z,3µm,0.5s						
HSAM	Samen	2.13	114	ePn	Pb	08 00 51.8	-0.5
HSAM				e		08 01 29.9	
	comp=Z,97nm,0.9s						
IHSH	Hashtrud	2.33	20	ePn	Pb	08 00 54.4	-1.2
IHSH				e		08 01 33.7	
	comp=Z,2µm,0.6s						
HAGD	Aghdareh	2.38	96	ePn	Pb	08 00 55.1	-1.4
HAGD				e		08 01 35.9	
	comp=Z,2µm,0.5s						
BHD	Baghdad	2.42	221	ePn	Pn	08 00 53.5	+0.6
BHD				eSn	Sn	08 01 24.0	+1.5
BHD				AML	AML	08 01 35.4	
	comp=E,420nm,0.6s						
ZNJK	Zanjan	2.50	51	ePn	Pb	08 00 57.5	-1.1
IAZR	Azarshahr	2.56	355	ePn	Pb	08 00 58.8	-0.8
IAZR				e		08 01 44.9	
	comp=Z,9µm,1.1s						
IBST	Bostanabad	2.62	11	ePn	Pb	08 00 58.8	-1.8
IBST				e		08 01 39.6	
	comp=Z,577nm,0.6s						
QABG	Abgarm-Qazvin	2.78	77	ePn	Pn	08 00 59.8	+1.7
QABG				e		08 01 47.9	
	comp=Z,1µm,0.7s						
ISRB	Sarab	2.93	22	ePn	Pb	08 01 02.9	-2.9
ISRB				e		08 01 53.2	
	comp=Z,801nm,0.6s						
IRAZ	Razeghan	3.02	84	ePn	Pn	08 01 03.6	+2.2
IRAZ				e		08 02 01.2	
	comp=Z,2µm,0.8s						
ITBZ	Tabriz	3.11	358	ePn	Pn	08 01 05.3	+2.7
ASAO	Ashtian	3.15	99	ePn	Pb	08 01 07.7	-1.9
ISHB	Shabestar	3.20	351	ePn	Pn	08 01 06.9	+3.0
ISHB				e		08 02 11.6	
	comp=Z,1µm,0.6s						
IHRS	Heris	3.25	11	e		08 01 20.5	
	comp=Z,557nm,0.5s						
IHRS				ePn	Pn	08 01 07.7	+3.0
KHMZ	Khomeyn	3.35	113	ePn	Pb	08 01 11.0	-2.1
RAFI	Al-Rafai	3.39	182	ePn	Pn	08 01 08.0	+1.7
RAFI				eSn	Sn	08 01 46.0	-0.6
RAFI				AML	AML	08 01 55.4	
	comp=E,274nm,0.5s						
ORD	Ordubad	3.81	357	P	Pg	08 01 24.8	-1.5
ORD				S	Sg	08 02 15.8	+0.2
LRK	Lerik	3.89	25	P	Pn	08 01 17.0	+3.7
LRK				S	Sn	08 02 03.7	+4.5
GRMI	Germi	3.91	19	ePn	Pn	08 01 16.7	+3.2
YRD	Yardimli	4.11	22	P	Pb	08 01 21.6	-4.3
YRD				S	Sb	08 02 11.1	-4.5
AMIS	Naft Sefid	4.28	143	ePn	Pn	08 01 21.2	+2.7
QAMS	Qamsar	4.46	107	ePn	Pn	08 01 23.9	+2.6
IVRN	Varamin	4.49	90	ePn	Pn	08 01 23.9	+2.4
IPIR	Pirpir	4.55	121	ePn	Pn	08 01 25.1	+2.5
IPIR				e		08 03 01.2	
	comp=Z,415nm,0.7s						
IKLH	Kolahrood	4.76	111	ePn	Pn	08 01 27.8	+2.4
KRSH	Karshahi	4.98	102	ePn	Pn	08 01 31.1	+2.7
ISFB	Sefidab	4.99	97	ePn	Pn	08 01 31.6	+3.3
IZEF	Zefreh	5.51	112	ePn	Pn	08 01 38.7	+3.0
NASN	Na'in	5.91	111	ePn	Pn	08 01 46.4	+5.1
KLNJ	Kolanjah	6.07	131	ePn	Pn	08 01 45.7	+2.2
IRAM	Ramesheh	6.09	121	ePn	Pn	08 01 46.0	+2.4

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*ANF **27** 08:02:01.9±0.3, 36°.01N×97°.56W, h6km, ML3.1/8, Error ellipse: s-maj=3.3km s-min=2.7km az=26.0*

*NEIC **27** 08:02:02.6±0.2, 35°.982N±0°.005×97°.55W±0°.02, h4km±5km, Error ellipse: s-maj=2.1km s-min=0.6km az=107.0*

*TUL **27** 08:02:02.1±0.3, 35°.98N±0°.01×97°.55W±0°.01, h6km±6km, ML2.6, mb_Lg2.5/61(NEIC), Error ellipse: s-maj=2.2km s-min=1.2km az=205.0*

ISC 27 08:02:02.0±1.0**, 36°.02N**±0°.05×**97°.52W**±0°.04**, h10km, n46, σ1^{s}.23**/22**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.60	174	Pg	Pg	08 02 13.1	-0.6
OKCFA	Oklahoma City	0.60	174	P	Pg	08 02 13.2	-0.5
	baz=352						
OKCFA				S	Sg	08 02 21.6	0.0
	baz=352						
OKCSW	OKLAHOMA CITY	0.61	173		Pg	08 02 13.4	-0.5
FNO	Franklin	0.76	172	Pg	Pg	08 02 15.9	-0.8
T35A	Sooner Cattle	1.21	42		Pn	08 02 25.6	+0.5
T35B	Sooner Cattle	1.21	42	P	Pn	08 02 25.7	+0.6
	baz=222						
U32A	Winter Ranch,	1.25	287		Pn	08 02 25.1	-0.5
U32A	Winter Ranch,	1.25	287	P	Pn	08 02 25.2	-0.4
	baz=108						
U32A				S	Sg	08 02 42.6	+0.3
	baz=108						
TUL1	Leonard	1.41	94		Pn	08 02 27.8	+0.1
TUL1				IAmb_Lg		08 02 48.8	
	comp=Z,34nm,0.9s						
TUL1	Leonard	1.41	94	P	Pn	08 02 27.8	+0.1
	baz=273						
TUL1				S	Sn	08 02 47.4	+1.0
	baz=273						
X34A	Smith Ranch, M	1.43	190		Pn	08 02 28.5	+0.4
WMOK	Wichita Mounta	1.64	219		Pn	08 02 31.2	+0.2
WMOK	Wichita Mounta	1.64	219	P	Pn	08 02 31.1	+0.2
	baz=39						
X37A	Clayton	2.26	128	IAmb_Lg		08 03 15.3	
	comp=Z,17nm,0.7s						
X37A	Clayton	2.26	128	P	Pn	08 02 40.8	+1.3
	baz=309						
X37A				S	Sb	08 03 10.4	-0.6
	baz=309						
HHAR	Hobbs	2.91	84	IAmb_Lg		08 03 33.0	
	comp=Z,13nm,0.8s						
W39A	Magazine	3.15	104	IAmb_Lg		08 03 50.4	
	comp=Z,12nm,0.7s						
KSU1	Kansas State U	3.16	13	IAmb_Lg		08 03 45.8	
	comp=Z,13nm,1.0s						
CBKS	Cedar Bluff	3.30	328	IAmb_Lg		08 03 51.0	
	comp=Z,17nm,0.8s						
Z38A	Mt. Pleasant	3.46	142	IAmb_Lg		08 03 55.0	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	3.55	113	IAmb_Lg		08 04 03.0	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	3.55	113	P	Pn	08 02 59.2	+2.1
	baz=295						
S39A	Bolivar	3.76	62	IAmb_Lg		08 04 03.8	
	comp=Z,15nm,0.9s						
U40A	Yellville	3.79	83	IAmb_Lg		08 04 08.0	
	comp=Z,11nm,0.7s						
U40A	Yellville	3.79	83	Pb	Pb	08 03 10.0	+0.9
	baz=266						
U40A				Pb	Pb	08 03 10.0	+0.9
	baz=266						
ABTX	Abilene, Hawle	3.81	208	IAmb_Lg		08 04 00.5	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	4.13	110	IAmb_Lg		08 04 12.9	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	4.31	121	IAmb_Lg		08 04 23.8	
	comp=Z,9.7nm,0.7s						
WHAR	Wooly Hollow	4.32	98	IAmb_Lg		08 04 17.6	
	comp=Z,11nm,0.7s						
MGMO	Mountain Grove	4.38	73	IAmb_Lg		08 04 26.9	
	comp=Z,11nm,0.8s						
W41B	Gary Mavity, V	4.38	100	IAmb_Lg		08 04 26.7	
	comp=Z,9.7nm,0.7s						
W41B	Gary Mavity, V	4.38	100	Sb	Sg	08 04 18.6	-4.1
	baz=282						
UALR	University of	4.41	105	IAmb_Lg		08 04 25.8	
	comp=Z,15nm,1.1s						
R40A	Maddies Statio	4.77	60	IAmb_Lg		08 04 42.0	
	comp=Z,8.6nm,0.9s						
P38A	Dawn	4.79	40	IAmb_Lg		08 04 37.4	
	comp=Z,8.6nm,0.8s						
CCM	Cathedral Cave	5.42	66	IAmb_Lg		08 05 00.5	
	comp=Z,9.7nm,1.0s						
P40A	Paris	5.58	49	IAmb_Lg		08 05 00.5	
	comp=Z,11nm,0.7s						
T25A	Trinidad	5.66	283	IAmb_Lg		08 05 15.6	
	comp=Z,9.0nm,0.9s						
FVM	French Village	6.01	69	IAmb_Lg		08 05 16.6	
	comp=Z,9.0nm,1.1s						
S44A	Carbondale	6.84	73	IAmb_Lg		08 05 53.0	
	comp=Z,8.3nm,0.9s						
SIUC	Southern Illin	6.87	73	IAmb_Lg		08 05 45.9	
	comp=Z,6.2nm,0.7s						
P43A	Skaggs, Pawnee	7.29	58	IAmb_Lg		08 05 58.4	
	comp=Z,7.6nm,0.8s						
Q44A	Meyer Farm, Va	7.35	64	IAmb_Lg		08 06 00.6	
	comp=Z,7.7nm,0.8s						
PHWY	Pilot Hill	8.14	313	IAmb_Lg		08 06 24.4	
	comp=Z,4.1nm,0.9s						
N23A	Red Feather La	8.21	309	IAmb_Lg		08 06 28.5	
	comp=Z,6.1nm,0.9s						
JFWS	Jewell Farm	8.89	37	IAmb_Lg		08 06 51.0	
	comp=Z,6.0nm,0.8s						

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*JMA **27** 08:22:19.1±0.1, 23°.8N±0°.4×121°.7E±0°.5, h27km±1km, MV3.5/13, TAIWAN REGION*

*TAP **27** 08:22:19.8, 23°.80N×121°.61E, h31km, ML3.7, B*

ISC 27 08:22:19.7±0.9**, 23°.78N**±0°.02×**121°.63E**±0°.02**, h33**km±3km**, n120, σ0^{s}.86**/201**, 3C-25D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEYL	Yanliau Villag	0.09	340	⇑iP	Pb	08 22 25.5	+0.1
	baz=6.0						
TEYL				i S	Sb	08 22 30.1	+0.8
	baz=6.0						
TEGC	Jichi Village	0.11	229	P	Pb	08 22 25.7	+0.2
	baz=201						
TEGC				S	Sb	08 22 30.0	+0.5
	baz=201						
ESL	Shilin	0.18	280	⇓iP	Pb	08 22 25.7	-0.4
	baz=273						
ESL				i S	Sb	08 22 29.9	-0.6
	baz=273						
HWA	Hwalien	0.20	353	i P	Pb	08 22 26.2	0.0
	baz=8.0						
HWA				S	Sb	08 22 31.1	+0.5
	baz=8.0						
EGFH	Guangfu	0.22	239	⇓iP	Pb	08 22 26.3	-0.2
	baz=241						
EGFH				i S	Sb	08 22 30.8	-0.3
	baz=241						
ETM	Tongmen	0.22	325	⇓iP	Pb	08 22 26.2	-0.4
	baz=316						
ETM				S	Sb	08 22 31.1	0.0
	baz=316						
TWD	Chiawan	0.30	354	⇑iP	Pb	08 22 26.9	-0.5
	baz=350						
TWD				i S	Sb	08 22 32.5	-0.2
	baz=350						
HGSD	Ruisui	0.35	213	⇓iP	Pb	08 22 28.5	+0.4
	baz=220						
HGSD				S	Sn	08 22 35.4	+1.2
	baz=220						
ETL	Fush Village	0.38	359	eP	Pb	08 22 27.9	-0.6
	baz=360						
ETL				eS	Sb	08 22 34.3	-0.2
	baz=360						
NACB	Ninganchiao	0.39	355	⇓iP	Pb	08 22 28.0	-0.7
	baz=350						
NACB				i S	Sb	08 22 33.8	-1.0
	baz=350						
EHY	Hungye	0.40	226	eP	Pb	08 22 28.0	-0.7
	baz=221						
EHY				eS	Sb	08 22 34.3	-0.6
	baz=221						
ETLH	Xiulin Townshi	0.44	342	⇓iP	Pb	08 22 28.8	-0.8
	baz=336						
ETLH				i S	Sb	08 22 34.9	-1.4
	baz=336						
OWD	Renai	0.45	292	⇑iP	Pb	08 22 29.2	-0.5
	baz=297						
OWD				i S	Sb	08 22 35.6	-0.9
	baz=297						
WHF	Hehuan Shan	0.49	317	⇓iP	Pb	08 22 29.6	-0.9
	baz=316						
WHF				S	Sb	08 22 36.3	-1.7
	baz=316						
YULB	Yu-li	0.50	218	⇓iP	Pb	08 22 29.4	-0.9
	baz=226						
YULB				i S	Sb	08 22 36.4	-1.0
	baz=226						
CHGB	Renai	0.50	303	⇓iP	Pb	08 22 30.1	-0.5
	baz=308						
CHGB				i S	Sb	08 22 37.3	-0.7
	baz=308						
WUSB	Renai	0.52	294	⇓iP	Pb	08 22 30.2	-0.4
	baz=292						
WUSB				eS	Sb	08 22 37.5	-0.6
	baz=292						
EHP	Heping Village	0.53	11	eP	Pb	08 22 30.9	0.0
	baz=21						
EHP				eS	Sb	08 22 39.1	+0.6
	baz=21						
FUSS	Fushou	0.58	323	⇓iP	Pb	08 22 31.3	-0.6
	baz=322						
FUSS				S	Sb	08 22 39.8	-0.3
	baz=322						
SSLB	Suanglung	0.62	271	⇓iP	Pb	08 22 31.5	-0.8
	baz=274						
SSLB				eS	Sb	08 22 39.9	-1.0
	baz=274						
TWT	Tachien	0.63	318	⇓iP	Pb	08 22 32.1	-0.4
	baz=312						
TWT				i S	Sb	08 22 40.2	-1.0
	baz=312						
TDCB	Techi	0.64	317	⇓iP	Pb	08 22 32.2	-0.5
	baz=312						
TDCB				S	Sb	08 22 40.2	-1.3
	baz=312						
ENA	Nanau	0.65	9	eP	Pb	08 22 32.1	-0.6
	baz=358						
ENA				eS	Sb	08 22 41.0	-0.7
	baz=358						
FULB	Fuli	0.66	208	i P	Pb	08 22 32.5	-0.4
	baz=219						
FULB				eS	Sb	08 22 42.6	+0.7
	baz=219						
EWUT	Wuta	0.67	11	eP	Pb	08 22 32.4	-0.7
	baz=18						
EWUT				eS	Sb	08 22 41.2	-1.1
	baz=18						
SMLT	Sun Moon Lake	0.68	279	i S	Sb	08 22 41.8	-0.7
	baz=282						
NNSB	Datong	0.68	341	⇓iP	Pb	08 22 32.4	-1.0
	baz=341						
NNSB				eS	Sb	08 22 40.2	-2.4
	baz=341						
YUS	Yu-Shan	0.69	245	⇓iP	Pb	08 22 33.3	-0.4
	baz=243						
YUS				S	Sb	08 22 42.3	-0.9
	baz=243						
NNS	Nan Shan	0.70	340	eP	Pb	08 22 32.7	-0.9
	baz=341						
NNS				eS	Sb	08 22 41.8	-1.3
	baz=341						
WCS	Beigang Elemen	0.71	293	⇓iP	Pn	08 22 33.3	-0.2
	baz=289						
WCS				i S	Sb	08 22 43.2	-0.2
	baz=289						
TYC	Yuchr	0.72	280	⇓iP	Pn	08 22 33.2	-0.4
	baz=283						
TYC				i S	Sb	08 22 42.7	-0.8
	baz=283						
LATG	Datong	0.76	353	⇓P	Pn	08 22 33.3	-0.9
	baz=345						
LATG				S	Sb	08 22 43.9	-0.8
	baz=345						
WHP	Taichung City	0.80	308	⇓eP	Pn	08 22 34.7	-0.1
	baz=305						
WHP				eS	Sb	08 22 45.1	-0.7
	baz=305						
ALS	Alishan	0.81	250	⇓iP	Pn	08 22 35.2	+0.1
	baz=249						
ALS				i S	Sb	08 22 45.8	-0.5
	baz=249						
ELDTW	Lidau	0.82	224	P	Pn	08 22 34.2	-0.9
	baz=217						
ELDTW				eS	Sb	08 22 44.9	-1.5
	baz=217						
WJS	Zhushan	0.83	273	eP	Pn	08 22 35.9	+0.8
	baz=272						
WJS				eS	Sn	08 22 46.4	+0.1
	baz=272						
TWC	Suao	0.85	13	eP	Pn	08 22 35.8	+0.4
	baz=22						
TWC				eS	Sn	08 22 47.6	+1.0
	baz=22						
NDS	Dongshan	0.85	5	eP	Pn	08 22 35.2	-0.2
	baz=353						
NDS				eS	Sn	08 22 46.5	-0.2
	baz=353						
ENTT	Nioudou	0.85	356	⇓P	Pn	08 22 35.0	-0.6
	baz=347						
ENTT				eS	Sn	08 22 46.2	-0.7
	baz=347						
EDH	Donghe	0.86	201	eP	Pn	08 22 35.0	-0.5
	baz=214						
EDH				eS	Sn	08 22 46.9	-0.1
	baz=214						
WNT	Mingjian	0.87	276	eP	Pn	08 22 36.6	+0.9
	baz=275						
WNT				eS	Sb	08 22 48.6	+0.7
	baz=275						
CHN5	Tsauling	0.89	258	P	Pn	08 22 36.8	+0.7
	baz=257						
CHN5				eS	Sn	08 22 48.9	+1.0
	baz=257						
YHNB	Yeheng	0.91	345	⇓iP	Pn	08 22 36.1	-0.2
	baz=353						
YHNB				eS	Sn	08 22 46.8	-1.6
	baz=353						
NSK	Sanguang	0.92	344	⇓iP	Pn	08 22 36.2	-0.3
	baz=353						
NSK				i S	Sn	08 22 47.8	-0.9
	baz=353						
TWE	Neicheng	0.94	2	eP	Pn	08 22 36.8	+0.2
	baz=354						
TWE				eS	Sn	08 22 49.1	+0.3
	baz=354						
TCU	Taichung	0.95	293	eP	Pn	08 22 36.9	+0.2
	baz=292						
TCU				eS	Sb	08 22 50.9	+1.0
	baz=292						
NFF	Wufeng Townshi	0.97	331	eP	Pn	08 22 37.4	+0.3
	baz=336						
NFF				eS	Sn	08 22 49.7	-0.1
	baz=336						
FUSB	Fushanzhiwuyua	0.97	358	P	Pn	08 22 36.6	-0.5
	baz=348						
FUSB				eS	Sn	08 22 49.9	0.0
	baz=348						
LONT	Longtian	0.99	208	eP	Pn	08 22 36.5	-0.8
	baz=209						
LONT				eS	Sn	08 22 48.6	-1.6
	baz=209						
STYH	Taoyuan	0.99	232	eP	Pn	08 22 37.7	+0.4
	baz=226						
STYH				eS	Sn	08 22 50.5	+0.2
	baz=226						
NWLT	Wulai	1.00	353	P	Pn	08 22 37.5	0.0
	baz=345						
NWLT				eS	Sn	08 22 50.5	+0.1
	baz=345						
WDLH	Douliu	1.01	265	eP	Pn	08 22 38.2	+0.7
	baz=264						
WDLH				eS	Sb	08 22 52.2	+0.6
	baz=264						
NSY	Sanyi	1.02	309	eP	Pn	08 22 38.4	+0.7
	baz=307						
NSY				eS	Sb	08 22 52.4	+0.5
	baz=307						
NSTT	Nanjuang	1.02	326	⇓P	Pn	08 22 38.6	+0.8
	baz=324						
NSTT				eS	Sn	08 22 51.4	+0.4
	baz=324						
WCHH	Zhanghua	1.03	287	P	Pn	08 22 38.7	+0.9
	baz=286						
WCHH				eS	Sb	08 22 52.9	+0.7
	baz=286						
LIOB	Emei	1.03	327	eP	Pn	08 22 38.9	+1.1
	baz=325						
LIOB				eS	Sn	08 22 51.8	+0.6
	baz=325						
TPUB	Ta-pu	1.04	243	eP	Pn	08 22 39.1	+1.1
	baz=242						
TPUB				eS	Sn	08 22 52.2	+0.7
	baz=242						
WDJ	Dajia District	1.07	302	eP	Pn	08 22 39.7	+1.3
	baz=301						
WDJ				eS	Sb	08 22 54.4	+1.0
	baz=301						
NMLH	Miaoli	1.07	315	eP	Pn	08 22 39.5	+1.0
	baz=313						
NMLH				eS	Sn	08 22 53.9	+1.6
	baz=313						
WTP	Ta-pu	1.08	240	eP	Pn	08 22 39.3	+0.8
	baz=240						
WTP				eS	Sn	08 22 53.2	+0.8
	baz=240						
NTC	Toucheng	1.08	10	eP	Pn	08 22 39.2	+0.6
	baz=356						
NTC				eS	Sn	08 22 53.0	+0.6
	baz=356						
TWGBT	Beinan	1.09	208	eP	Pn	08 22 37.2	-1.5
	baz=209						
TWGBT				eS	Sn	08 22 50.9	-1.7
	baz=209						
TWG	Pinlang	1.09	208	eP	Pn	08 22 37.2	-1.5
	baz=209						
TWG				eS	Sn	08 22 50.7	-1.9
	baz=209						
CHN2	Minshiung	1.09	257	eP	Pn	08 22 39.6	+0.9
	baz=256						
EGS		1.09	14	eP	Pn	08 22 40.2	+1.5
	baz=23						
EGS				eS	Sn	08 22 54.1	+1.4
	baz=23						
LDUT	Ludao	1.11	188	eP	Pn	08 22 37.8	-1.3
	baz=180						
LDUT				eS	Sn	08 22 52.0	-1.2
	baz=180						
CHY	Chiayi	1.14	256	eP	Pn	08 22 40.4	+1.0
	baz=254						
WTK	Tuku	1.14	265	eP	Pn	08 22 40.2	+0.8
	baz=264						
WRL	Guolierlin Hig	1.16	276	P	Pn	08 22 40.9	+1.3
	baz=275						
WRL				eS	Sn	08 22 55.9	+1.6
	baz=275						
SBCB	Hsinchu	1.17	330	eP	Pn	08 22 41.4	+1.7
	baz=329						
TWK	Hsinying	1.17	244	eP	Pn	08 22 40.9	+1.0
	baz=244						
TWK				eS	Sn	08 22 55.2	+0.5
	baz=244						
CHN1	Nanshi	1.18	240	P	Pn	08 22 41.1	+1.2
	baz=240						
CHN1				eS	Sn	08 22 56.0	+1.2
	baz=240						
SNST	Tainan City	1.18	242	eP	Pn	08 22 41.8	+1.8
	baz=241						
SGST	Jiashian	1.19	234	eP	Pn	08 22 40.2	+0.1
	baz=226						
SGST				eS	Sn	08 22 56.6	+1.5
	baz=226						
TWA	Mucha	1.19	358	eP	Pn	08 22 40.5	+0.4
	baz=6.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIPB	**Shuangxi**	**1.20**	**8**	*e*P	**Pn**	**08 22 40.6**	**+0.4**
	baz=359						
NCUH	**Zhongli**	**1.25**	**341**	*e*P	**Pn**	**08 22 41.2**	**+0.3**
	baz=340						
NCU	**National Centr**	**1.25**	**341**	*e*P	**Pn**	**08 22 41.6**	**+0.7**
	baz=338						
NCU				*e*S	**Sb**	**08 22 58.9**	**+0.4**
	baz=338						
TWB1	**Santiao Chiao**	**1.26**	**15**	*e*P	**Pn**	**08 22 42.3**	**+1.3**
TWB1				*e*S	**Sn**	**08 22 58.0**	**+1.1**
NWF	**Wu-fen Shan**	**1.29**	**6**	*e*P	**Pn**	**08 22 43.1**	**+1.6**
	baz=6.0						
ICHU	**Yijhu**	**1.31**	**252**	*e*P	**Pn**	**08 22 42.8**	**+1.1**
	baz=252						
ICHU				*e*S	**Sn**	**08 22 59.6**	**+1.5**
	baz=252						
WSL	**Shuilin Townsh**	**1.31**	**259**	*e*P	**Pn**	**08 22 42.5**	**+0.8**
	baz=259						
WSL				*e*S	**Sb**	**08 23 00.6**	**+0.2**
	baz=259						
SXI1	**Grass Mountain**	**1.32**	**10**	*e*P	**Pn**	**08 22 42.6**	**+0.6**
	baz=357						
TWS1	**Kuangyinshan**	**1.33**	**352**	*e*P	**Pn**	**08 22 43.4**	**+1.4**
	baz=350						
ECL	**Taimali**	**1.33**	**208**	*e*P	**Pn**	**08 22 42.1**	**+0.1**
	baz=197						
YM01	**YM01**	**1.36**	**358**	*e*P	**Pn**	**08 22 43.4**	**+0.9**
	baz=354						
YM01				*e*S	**Sn**	**08 22 59.8**	**+0.4**
	baz=354						
JYNG	**Yonagunijimaku**	**1.37**	**61**	P	**Pn**	**08 22 43.0**	**+0.4**
JYNG				*e*S	**Sn**	**08 23 00.2**	**+0.6**
SCST	**Cishan**	**1.38**	**230**	*e*P	**Pb**	**08 22 44.8**	**-0.1**
	baz=242						
SSD	**Sandimen**	**1.38**	**222**	*e*P	**Pn**	**08 22 43.8**	**+1.1**
	baz=221						
TSMG	**Majia**	**1.41**	**220**	*e*P	**Pn**	**08 22 44.6**	**+1.6**
	baz=220						
YOJ	**Yonaguni jima**	**1.43**	**62**	*e*P	**Pn**	**08 22 43.6**	**+0.2**
	baz=62						
YOJ	**Yonaguni jima**	**1.43**	**62**	P	**Pn**	**08 22 43.8**	**+0.5**
YOJ				S	**Sn**	**08 23 01.3**	**+0.3**
TWM1	**Shoushan**	**1.47**	**230**	*e*P	**Pb**	**08 22 46.9**	**+0.4**
	baz=229						
MASBT	**Mashibuluo**	**1.48**	**218**	*e*P	**Pn**	**08 22 44.4**	**+0.2**
	baz=218						
EAST	**Anshuo**	**1.57**	**208**	*e*P	**Pn**	**08 22 44.3**	**-1.1**
	baz=198						
TAW	**Tawu**	**1.57**	**206**	*e*P	**Pn**	**08 22 46.2**	**+0.9**
	baz=196						
SSPT	**Xinbi**	**1.62**	**217**	*e*P	**Pn**	**08 22 47.5**	**+1.5**
	baz=218						
SCZT	**Fangliau**	**1.69**	**214**	*e*P	**Pn**	**08 22 48.5**	**+1.6**
	baz=214						
LAY	**Lan-yu**	**1.74**	**182**	*e*P	**Pn**	**08 22 48.4**	**+0.8**
	baz=182						
SLIU	**Shizi**	**1.74**	**206**	*e*P	**Pn**	**08 22 49.0**	**+1.4**
	baz=197						
WDGT	**Dungji**	**1.88**	**254**	*e*P	**Pn**	**08 22 50.0**	**+0.4**
	baz=254						
PHUB	**P'eng-hu**	**1.91**	**262**	*e*P	**Pn**	**08 22 50.5**	**+0.5**
	baz=249						
PHUB				*e*S	**Sn**	**08 23 12.7**	**-0.2**
	baz=249						
PNG	**Penghu**	**1.92**	**264**	*e*P	**Pn**	**08 22 50.5**	**+0.4**
	baz=264						
PNG				*e*S	**Sn**	**08 23 13.5**	**+0.5**
	baz=264						
IRIF	**Iriomote-Funau**	**2.00**	**74**	S	**Sn**	**08 23 15.8**	**+0.8**
HATJ	**Hateruma jima**	**2.01**	**82**	*e*S	**Sn**	**08 23 15.3**	**0.0**
VCHM	**Qimei**	**2.10**	**255**	*e*P	**Pn**	**08 22 52.7**	**+0.1**
	baz=254						
JKRS	**Kuro-shima**	**2.22**	**78**	P	**Pn**	**08 22 55.4**	**+1.1**
JKRS				S	**Sn**	**08 23 22.0**	**+1.4**
VWUC	**VWUC**	**2.33**	**302**	*e*P	**Pn**	**08 22 55.6**	**-0.1**
	baz=300						
JIJ	**Ishigaki jima**	**2.37**	**75**	P	**Pn**	**08 22 56.5**	**+0.3**
JIJ				S	**Sn**	**08 23 24.2**	**0.0**
JISG	**Ishigakijimahi**	**2.57**	**71**	*e*P	**Pn**	**08 22 59.4**	**+0.3**
JISG				S	**Sn**	**08 23 28.5**	**-0.8**
PTMZ	**Houxiangcun**	**2.61**	**299**	*e*P	**Pn**	**08 22 59.9**	**+0.3**
	baz=297						
MATB	**Ma-tsu**	**2.81**	**327**	*e*P	**Pn**	**08 23 02.4**	**0.0**
	baz=325						
JTJ	**Tarama**	**2.93**	**72**	P	**Pn**	**08 23 04.8**	**+0.8**
JTJ				S	**Sn**	**08 23 38.2**	**+0.1**
KNMB	**Chin-men Tao**	**3.04**	**284**	*e*P	**Pn**	**08 23 05.1**	**-0.4**
	baz=282						
MHZQ	**Yeshan**	**3.30**	**315**	*e*P	**Pn**	**08 23 09.9**	**+0.8**
	baz=312						
XPSS	**Dashiqiu**	**3.40**	**338**	*e*P	**Pn**	**08 23 09.7**	**-0.7**
	baz=347						
JIKM	**Ikemajima**	**3.49**	**70**	*e*S	**Sn**	**08 23 52.7**	**+0.8**
JMJ2	**Miyako jima3**	**3.50**	**73**	*e*S	**Sn**	**08 23 53.3**	**+1.0**
ZPLA	**Ao Xicun**	**3.56**	**273**	*e*P	**Pn**	**08 23 12.3**	**-0.3**
	baz=272						
SXFK	**Yanhouchang**	**4.46**	**307**	*e*P	**Pn**	**08 23 24.8**	**-0.3**
	baz=304						

IDC 27 08:47:51.0±2.4**, 54°.10N×86°.46E, h0km, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=19.9km s-min=12.5km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**262**	*i*		08 53 50.0	
	baz=81,slow=314,SNR=3.5						
ZALV	**Zalesovo Beam**	**0.98**	**262**	Pg	Pg	08 48 08.6	-1.3
	1.2nm,0.3s,baz=82,slow=17,SNR=7.2						
ZALV				Lg	Lg	08 48 24.1	
	1.9nm,0.3s,baz=79,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	08 49 21.6	+0.9
	0.1nm,0.3s,baz=54,slow=13,SNR=7.5						
KURBB				Lg	Lg	08 50 59.4	
	baz=51,slow=34,SNR=4.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.78**	**202**	Pn	Pn	08 49 46.6	+1.1
	0.3nm,0.3s,baz=18,slow=11,SNR=12						
MKAR				Lg	Lg	08 51 56.0	
	baz=24,slow=29,SNR=7.0						
	0.4nm,0.2s						

NOU 27 08:54:49.6, 16°.39S×167°.36E, h9km, MLv4.4/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.55**	**149**	P	Pb	08 55 18.1	-0.3
RTV	**Rentapao**	**1.73**	**144**	P	Pb	08 55 20.7	-0.8
LIFNC	**LIFOU**	**4.37**	**181**	P	Pn	08 55 56.4	+0.3
KOUNC	**Koumac, New Ca**	**5.06**	**215**	P	Pn	08 56 05.7	0.0
YATNC	**Mamie plateau,**	**5.66**	**184**	P	Pn	08 56 13.2	-0.7
DZM	**Mont Dzumac**	**5.72**	**189**	P	Pn	08 56 14.0	-0.8
OUENC	**Ouen Island, N**	**6.02**	**185**	P	Pn	08 56 19.3	+0.5

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*GCG **27** 09:06:58.9±0.3, 14°.27N×90°.17W, h171km±3km, MD3.6*
*SNET **27** 09:07:00.3±0.9, 13°.26N×89°.96W, h26km±6km, ML3.3*
ISC 27 09:06:56.5±4.1**, 13°.1N**±0°.2×**90°.1W**±0°.1**, h10**km±21km**, n11, σ1ˢ.05**/16**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.80**	**48**	*e*P	**Pg**	**09 07 13.2**	**+1.2**
CEVE	**Cerro Verde**	**0.83**	**31**	*e*P	**Pg**	**09 07 13.5**	**+1.0**
CEVE				*e*S	**Sg**	**09 07 23.6**	**+0.2**
CEVE				IAML		09 07 26.0	
	comp=Z,1µm,0.3s						
NUBE	**Las Nubes**	**0.83**	**19**	*e*P	**Pg**	**09 07 13.3**	**+0.7**
NUBE				*e*S	**Sg**	**09 07 23.3**	**-0.2**
SBLS	**San Blas**	**0.84**	**30**	*e*P	**Pg**	**09 07 13.6**	**+0.8**
SLOZ	**Alcaldia de Sa**	**0.95**	**16**	*e*P	**Pg**	**09 07 14.8**	**+0.1**
SJTE	**Alcalda de S**	**1.14**	**64**	*e*P	**Pg**	**09 07 18.4**	**0.0**
SJTE				*e*S	**Sg**	**09 07 32.7**	**-0.6**
COEG	**Centro de Oper**	**1.25**	**66**	*e*P	**Pg**	**09 07 20.0**	**-0.6**
COEG				*e*S	**Sg**	**09 07 36.0**	**-0.9**
PCG	**Pacaya**	**1.38**	**337**	*e*P	**Pn**	**09 07 23.5**	**+1.4**
NBG	**Las Nubes**	**1.50**	**349**	*e*P	**Pn**	**09 07 23.2**	**-0.5**
NBG				*e*S	**Sg**	**09 07 42.2**	**-2.5**
FUG	**Fuego 3**	**1.53**	**330**	*e*P	**Pn**	**09 07 24.4**	**+0.2**
FUG				*e*S	**Sn**	**09 07 44.0**	**-0.2**
STG3	**Santiaguito 3,**	**2.17**	**317**	*e*P	Pn	09 07 30.4	-2.4

WEL 27 09:28:12.3, 39°S±10°×**17°5E**±1°8**, h201**km±21km**, M2.8**/29**, mB4.2**/1**, MLv2.8**/29**, Mw(mB)3.2**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=94.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTVZ	**West Tongariro**	**0.46**	**81**	P	Pn	09 28 40.1	+0.5
NNVZ	**North Ngauruho**	**0.48**	**83**	P	Pn	09 28 40.3	+0.6
KRVZ	**Karewarewa**	**0.51**	**79**	P	Pn	09 28 40.2	+0.5
OTVZ	**Oturere**	**0.52**	**87**	P	Pn	09 28 40.7	+0.8
WAZ	**Wanganui**	**0.56**	**181**	P	Pn	09 28 41.3	+1.5
HIZ	**Hauiti**	**0.69**	**350**	P	Pn	09 28 39.4	-1.0
NEZ	**North Egmont**	**0.71**	**263**	P	Pn	09 28 41.1	+0.5
BHHZ	**Black Hill Sta**	**0.88**	**110**	P	Pn	09 28 41.9	+0.5
KWHZ	**Kaweka Forest**	**1.13**	**102**	P	Pn	09 28 35.7	-7.5
TSZ	**Takapari Road**	**1.14**	**140**	P	Pn	09 28 44.6	+1.4
KRHZ	**Kereru**	**1.15**	**113**	P	Pn	09 28 44.2	+0.9
BKZ	**Black Stump Fm**	**1.16**	**89**	P	Pn	09 28 43.3	-0.1
PNHZ	**Pukenui**	**1.17**	**128**	P	Pn	09 28 44.7	+1.2
MCHZ	**McNeill Hill**	**1.34**	**101**	P	Pn	09 28 45.8	+1.1
MTHZ	**Maungataniwha**	**1.47**	**77**	P	Pn	09 28 45.4	-0.6
MRZ	**Mangatainoka R**	**1.53**	**163**	P	Pn	09 28 47.2	+0.8
ARHZ	**Aropaoanui**	**1.55**	**93**	P	Pn	09 28 47.1	+0.5
KAHZ	**Kahuranaki**	**1.57**	**113**	P	Pn	09 28 47.8	+1.0
OGWZ	**Otaki Gorge**	**1.63**	**175**	P	Pn	09 28 48.2	+1.0
RAHZ	**Arahi**	**1.65**	**81**	P	Pn	09 28 49.0	+1.5
PRHZ	**Porangahau**	**1.66**	**131**	P	Pn	09 28 48.5	+1.0
PXZ	**Pawanui**	**1.66**	**121**	P	Pn	09 28 48.3	+0.7
KIW	**Kapiti Island**	**1.67**	**182**	P	Pn	09 28 48.3	+0.7
CKHZ	**Cape Kidnapper**	**1.67**	**107**	P	Pn	09 28 48.5	+0.9
ANWZ	**Angora Road**	**1.70**	**139**	P	Pn	09 28 49.0	+1.1
TIWZ	**Tintock**	**1.72**	**157**	P	Pn	09 28 49.0	+0.8
HOWZ	**Holdsworth Sta**	**1.75**	**167**	P	Pn	09 28 49.0	+0.6
BFZ	**Birch Farm**	**1.77**	**148**	P	Pn	09 28 49.2	+0.6
DUWZ	**D'Urville Isla**	**1.81**	**207**	P	Pn	09 28 49.2	+0.2
URZ	**Urewera**	**1.90**	**61**	P	Pn	09 28 47.3	-2.5
CAW	**Cannon Point**	**1.91**	**179**	P	Pn	09 28 50.5	+0.5
MTW	**Mount Morrison**	**2.00**	**169**	P	Pn	09 28 51.3	+0.4
TCW	**Tory Channel**	**2.09**	**195**	P	Pn	09 28 52.3	+0.5
MWZ	**Matawai**	**2.15**	**67**	P	Pn	09 28 50.3	-2.2
RIGZ	**Rimuhau**	**2.21**	**78**	P	Pn	09 28 51.8	-1.3
PAWZ	**Paruwai Farm**	**2.21**	**172**	P	Pn	09 28 53.3	+0.2
BHW	**Baring Head**	**2.21**	**183**	P	Pn	09 28 53.2	+0.1
MSWZ	**Moikau Station**	**2.23**	**175**	P	Pn	09 28 53.4	+0.1
TKGZ	**Te Karaka**	**2.35**	**72**	P	Pn	09 28 52.8	-1.7
NNZ	**Nelson**	**2.37**	**211**	P	Pn	09 28 54.2	-0.6
TUWZ	**Tuamarina**	**2.38**	**200**	P	Pn	09 28 54.9	0.0
PLWZ	**Palliser**	**2.38**	**175**	P	Pn	09 28 54.9	-0.1
TKNZ	**Takaka Hill**	**2.41**	**220**	P	Pn	09 28 53.9	-1.4
RUGZ	**Raukumara Rang**	**2.43**	**61**	P	Pn	09 28 51.9	-3.7
QRZ	**Quartz Range**	**2.50**	**229**	P	Pn	09 28 54.5	-1.7
TWGZ	**Tauwhareparae**	**2.54**	**67**	P	Pn	09 28 54.6	-2.2
CNGZ	**Carnagh Statio**	**2.60**	**75**	P	Pn	09 28 55.2	-2.2
BSWZ	**Blackbirch Sta**	**2.66**	**198**	P	Pn	09 28 58.1	+0.1
PKGZ	**Pakihiroa**	**2.74**	**63**	P	Pn	09 28 55.8	-3.3
PUZ	**Puketiti**	**2.79**	**67**	P	Pn	09 28 56.4	-3.1
MRNZ	**Matariki Terra**	**2.79**	**217**	P	Pn	09 28 57.9	-1.6
WMGZ	**Waiomatatini S**	**3.01**	**64**	P	Pn	09 28 58.0	-4.2
THZ	**Tophouse**	**3.02**	**211**	P	Pn	09 29 01.1	-1.2
MXZ	**Matakaoa Point**	**3.07**	**59**	P	Pn	09 28 59.2	-3.6
KHZ	**Kahutara**	**3.41**	**199**	P	Pn	09 29 05.8	-0.9
DSZ	**Denniston Nort**	**3.53**	**223**	P	Pn	09 29 05.8	-2.5
GVZ	**Greta Valley S**	**4.05**	**201**	P	Pn	09 29 13.2	-1.5
LTZ	**Lake Taylor**	**4.14**	**209**	P	Pn	09 29 13.7	-2.1
INZ	**Inchbonnie**	**4.44**	**216**	P	Pn	09 29 16.6	-3.0
OXZ	**Oxford**	**4.69**	**207**	P	Pn	09 29 19.8	-3.0
OKCZ	**Okains Bay**	**4.76**	**197**	P	Pn	09 29 21.3	-2.3
MQZ	**McQueen's Vall**	**4.84**	**201**	P	Pn	09 29 21.4	-3.2
AKCZ	**Akaroa Harbour**	**4.93**	**198**	P	Pn	09 29 23.3	-2.5
RACZ	**Rakaia**	**5.01**	**204**	P	Pn	09 29 23.8	-3.0
WVZ	**Waitaha Valley**	**5.04**	**218**	P	Pn	09 29 24.2	-2.9
WACZ	**Wakanui South**	**5.30**	**206**	P	Pn	09 29 27.7	-2.8
RPZ	**Rata Peaks**	**5.40**	**212**	P	Pn	09 29 28.3	-3.6
ARCZ	**Arundel**	**5.55**	**210**	P	Pn	09 29 30.4	-3.3
FOZ	**Fox Glacier**	**5.83**	**220**	P	Pn	09 29 32.9	-4.4
TMZ	**Timaru**	**5.98**	**209**	P	Pn	09 29 36.2	-3.1
ODZ	**Otahua Downs**	**6.68**	**208**	P	Pn	09 29 45.4	-2.9

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*NNC **27** 09:31:22.8±2.4, 54°.42N×86°.97E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=26.7km s-min=12.3km az=173.0, Suspected Mining explosion.*
*IDC **27** 09:31:24.5±2.8, 54°.40N×86°.90E, h0km, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=23.9km s-min=17.1km az=55.0*
ISC 27 09:31:26.0±4.6**, 54°.4N**±0°.2×**86°.7E**±0°.2**, h0**km**, n8, σ1ˢ.07**/13**, 8C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.19**	**250**	*i*		09 39 20.0	
	0.1nm,0.8s,baz=69,slow=320,SNR=10						
ZAA0	**Zalesovo Array**	**1.19**	**250**	⇑P	**Pg**	**09 31 47.4**	**-1.3**
	0.5nm,0.4s						
ZAA0				⇓S	**Sn**	**09 32 06.6**	**-0.1**
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**1.19**	**250**	Pg	**Pg**	**09 31 47.4**	**-1.3**
	2.6nm,0.3s,baz=65,slow=17,SNR=20						
ZALV				Lg	Lg	09 32 06.3	
	1.7nm,0.3s,baz=72,slow=24,SNR=5.3						
KURK	**Kurchatov**	**6.14**	**237**	⇑Pn	**Pn**	**09 32 58.3**	**+0.5**
	5.0nm,1.1s						
KURK				⇑Sn	**Sn**	**09 34 10.7**	**+2.0**
	1.3nm,0.7s						
KURK				⇑Lg	Lg	09 34 42.9	
	3.4nm,1.3s						
KURBB	**Kurchatov Arra**	**6.24**	**236**	Pn	**Pn**	**09 33 00.4**	**+1.1**
	0.2nm,0.3s,baz=54,slow=14,SNR=22						
KURBB				Sn	**Sn**	**09 34 11.7**	**+0.5**
	0.1nm,0.3s,baz=43,slow=21,SNR=2.9						
KURBB				Lg	Lg	09 34 47.7	
	baz=55,slow=29,SNR=5.4						
	2.5nm,0.4s						
KURBB	**Kurchatov Arra**	**6.24**	**236**	⇑Pn	**Pn**	**09 32 60.0**	**+0.7**
	3.5nm,0.6s						
KURBB				⇑Sn	**Sn**	**09 34 11.9**	**+0.6**
	3.5nm,0.5s						
MK31	**Makanchi Array**	**8.08**	**202**	⇑Pn	**Pn**	**09 33 25.0**	**+0.5**
	0.3nm,0.5s,baz=26,slow=13,SNR=6.4						
MK31				⇑Sn	**Sn**	**09 34 56.7**	**+0.1**
	0.3nm,0.4s						
MK31				⇓Lg	Lg	09 35 42.6	
	3.4nm,1.1s,baz=20,slow=28						
MKAR	**Makanchi Array**	**8.08**	**202**	Pn	**Pn**	**09 33 25.4**	**+0.8**
	0.1nm,0.3s,baz=23,slow=11,SNR=6.4						
MKAR				Sn	**Sn**	**09 34 55.8**	**-0.8**
	0.1nm,0.3s,baz=26,slow=26,SNR=1.9						
	0.3nm,0.4s						

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*IDC **27** 09:31:27.7±2.6, 0°.37S×96°.65E, h0km, mb3.9/6, mbtmp3.9/7, ML4.6/1, MS3.4/1, Error ellipse: s-maj=92.9km s-min=20.7km az=60.0*
*DJA **27** 09:31:32.3±0.7, 0°S±3°×9°7E±°, h64km±30km, M4.0/7, MLv4.0/7*
*NEIC **27** 09:31:33.8±2.6, 0°.25S±0°.09×97°.0E±0°.2, h26km±7km, mb4.2/8, Error ellipse: s-maj=26.4km s-min=11.3km az=74.0*
ISC 27 09:31:31.5±1.0**, 0°.28S**±0°.06×**96°.89E**±0°.09**, h21**km**, n37, σ0ˢ.77**/32**, mb4.0**/9**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.72**	**24**		**Pn**	**09 32 00.1**	**-0.1**
GSI	**Gunungsitoli**	**1.72**	**24**	P	**Pn**	**09 32 00.5**	**+0.3**
GSI				S	**Sb**	**09 32 22.7**	**-0.8**
SISI	**Saibi**	**2.44**	**115**	P	**Pn**	**09 32 09.2**	**-0.8**
SISI				S	**Sn**	**09 32 39.1**	**-0.1**
MNSI	**Mandailing Nat**	**2.90**	**68**	P	**Pn**	**09 32 17.4**	**+1.0**
MNSI				S	**Sn**	**09 32 49.7**	**-0.9**
PPI	**Padang Panjang**	**3.52**	**93**	P	**Pn**	**09 32 27.1**	**+2.2**
KCSI	**Kotacane, Aceh**	**3.88**	**13**	P	**Pn**	**09 32 29.9**	**0.0**
KCSI				S	**Sn**	**09 33 14.3**	**-0.6**
PPSI	**Pulau Pagai**	**3.98**	**128**	P	**Pn**	**09 32 30.6**	**-0.7**
BKNI	**Bangkinang**	**4.20**	**82**	P	**Pn**	**09 32 34.2**	**-0.1**
IPM	**Ipoh**	**6.28**	**41**	Pn	**Pn**	**09 33 01.9**	**-1.0**
KULM	**Kulim**	**6.69**	**34**	Pn	**Pn**	**09 33 08.0**	**-0.5**
MNAI	**Manna**	**7.29**	**124**	Pn	**Pn**	**09 33 15.7**	**-1.2**
CMAR	**Chiang Mai Arr**	**18.73**	**6**	P	**Pn**	**09 35 49.5**	**+0.1**
	0.8nm,0.3s,baz=193,slow=12,SNR=7.0						
	1.5nm,0.4s						
H08S2	**Diego Garcia H**	**25.39**	**253**	T	T	10 03 06.6	
	baz=72,slow=74,SNR=16						
H08S3	**Diego Garcia H**	**25.40**	**253**	T	T	10 03 04.7	
	baz=72,slow=74,SNR=13						
H08S1	**Diego Carcia H**	**25.41**	**253**	T	T	10 03 12.2	
	baz=72,slow=74,SNR=19						
H01W3	**Cape Leeuwin H**	**38.01**	**157**	T	T	10 19 32.2	
	baz=334,slow=76,SNR=4.2						
H01W2	**Cape Leeuwin H**	**38.02**	**157**	T	T	10 19 33.8	
	baz=334,slow=76,SNR=3.5						
H01W1	**Cape Leeuwin H**	**38.03**	**157**	T	T	10 19 33.2	
	baz=334,slow=76,SNR=3.9						
WB0	**Warramunga Arr**	**41.52**	**120**	P	**P**	**09 39 18.3**	**+0.6**
WB0				IAmb	IAmb	09 39 25.5	
	comp=Z,8.7nm,1.4s						
WRA	**Warramunga Arr**	**41.54**	**120**	P	**P**	**09 39 18.1**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=294,slow=9.0,SNR=5.6						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**41.54**	**120**	IAmb	IAmb	09 39 21.4	
	comp=Z,0.2nm,1.2s						
WRAB	**Tennant Creek**	**41.55**	**120**	P	**P**	**09 39 18.6**	**+0.7**
WB2	**Warramunga Arr**	**41.55**	**120**	P	**P**	**09 39 17.7**	**-0.2**
WR0	**Warramunga Arr**	**41.72**	**120**	P	**P**	**09 39 20.2**	**+0.9**
WR0				IAmb	IAmb	09 39 40.9	
	comp=Z,10nm,1.5s						
AS31	**Alice Springs**	**42.78**	**126**	P	**P**	**09 39 27.3**	**-0.6**
ASAR	**Alice Springs**	**42.78**	**126**	P	**P**	**09 39 28.7**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=299,slow=8.1,SNR=13						
	comp=Z,1.1nm,0.7s						
AAK	**Ala-Archa**	**47.23**	**337**	P	**P**	**09 40 03.8**	**+0.5**
MKAR	**Makanchi Array**	**48.60**	**347**	P	**P**	**09 40 13.4**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=155,slow=8.0,SNR=14						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**48.60**	**347**	P	**P**	**09 40 13.6**	**0.0**
MK31	**Makanchi Array**	**48.60**	**347**	P	**P**	**09 40 13.8**	**+0.3**
MK31				IAmb	IAmb	09 40 14.0	
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	**48.63**	**9**	P	**P**	**09 40 14.7**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=192,slow=10,SNR=4.1						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**48.63**	**9**	IAmb	IAmb	09 40 24.6	
	comp=Z,1.6nm,0.9s						
JHJ	**Hachijo jima 2**	**52.26**	**46**	LR	LR	10 01 18.2	
	comp=Z,37nm,21.6s,baz=266,slow=34						
ZALV	**Zalesovo Beam**	**54.96**	**351**	P	**P**	**09 40 60.0**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=179,slow=6.6,SNR=7.1						
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**54.96**	**351**	P	**P**	**09 41 00.6**	**-0.3**
KLR	**Kul'dur**	**57.71**	**26**	P	**P**	**09 41 21.1**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=211,slow=5.9,SNR=3.8						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**145.08**	**32**	PKPbc	**PKPdf**	**09 51 07.6**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=248,slow=1.0,SNR=7.0						

IDC 27 09:37:51.6±4.0**, 53°.51N×87°.74E, h0km, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=45.8km s-min=22.9km az=79.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**285**	*i*		09 48 50.0	
	baz=102,slow=317,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.79**	**285**	Pn	Pn	09 38 23.2	-0.4
	0.8nm,0.3s,baz=107,slow=12,SNR=6.2						
ZALV				Sn	Sb	09 38 47.8	-0.4
	1.1nm,0.3s,baz=105,slow=26,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.37**	**247**	Pn	Pn	09 39 27.4	+0.8
	baz=61,slow=14,SNR=3.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.58**	**210**	Pn	Pn	09 39 44.4	+1.1
	0.1nm,0.3s,baz=28,slow=14,SNR=4.1						
	0.2nm,0.4s						

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*HEL **27** 09:58:30.3±0.1, 64°.69N×30°.77E, h0km, ML2.0, Explosion*
*IDC **27** 09:58:32.6±2.8, 64°.77N×30°.84E, h0km, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=43.3km s-min=11.5km az=94.0*
*KOLA **27** 09:58:32.7, 64°.64N×30°.54E, h0km, ML2.2*
ISC 27 09:58:31.0±0.9**, 64°.70N**±0°.02×**30°.37E**±0°.05**, h0**km**, n32, σ1ˢ.75**/50**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSF	**Maaselka**	**1.33**	**336**	PG	**Pg**	**09 58 52.7**	**-3.8**
MSF				SG	**Sn**	**09 59 15.3**	**0.0**
KU6	**Riekki**	**1.34**	**352**	PG	**Pg**	**09 58 55.2**	**-1.4**
	baz=169						
KU6				MSG		09 59 12.0	
	comp=Z,9.4nm,0.2s						
KU6				SB	**Sb**	**09 59 14.3**	**-0.3**
OLKF	**Oulanka, Finla**	**1.67**	**347**	PG	**Pn**	**09 59 01.3**	**-0.2**
OLKF				SN	**Sg**	**09 59 25.7**	**+1.0**
JOF	**Joensuu**	**1.84**	**166**	PG	**Pn**	**09 59 02.6**	**-1.2**
	baz=351						
JOF				SG	**Sn**	**09 59 28.4**	**+0.8**
OUL	**Oulu**	**1.94**	**283**	PB	**Pb**	**09 59 07.3**	**+0.1**
OUL				SN	**Sg**	**09 59 33.2**	**-0.2**
OUF	**Merijarvi**	**2.46**	**265**	PB	**Pb**	**09 59 16.0**	**+0.1**
	baz=80						
OUF				MSG		09 59 47.8	
	comp=Z,13nm,0.2s						
OUF				SB	**Sg**	**09 59 48.7**	**-1.1**
RNF	**Rovaniemi**	**2.63**	**319**	PB	**Pb**	**09 59 18.2**	**-0.7**
RNF				SG	**Sg**	**09 59 54.5**	**-0.8**
OBF0	**Syolatti, Pyha**	**2.65**	**268**	PG	**Pg**	**09 59 20.7**	**-1.0**
OBF0				SB	**Sb**	**09 59 53.5**	**+1.3**
SUF	**Sumiainen**	**2.74**	**225**	PB	**Pb**	**09 59 20.3**	**-0.4**
SUF				MSG		09 59 54.5	
	comp=Z,5.3nm,0.2s						
SUF				SB	**Sb**	**09 59 55.4**	**+0.6**
TOF	**Tornio**	**2.88**	**301**	PG	**Pg**	**09 59 25.2**	**-0.9**
TOF				MSG		09 59 59.4	
	comp=Z,5.7nm,0.2s						
TOF				SB	**Sb**	**09 59 59.7**	**+0.8**
VRF	**Varrio**	**3.07**	**355**	PB	**Pn**	**09 59 23.2**	**+2.5**
	baz=172						
VRF				MSG		10 00 01.5	
	comp=Z,2.9nm,0.2s						
APA0	**Apatity Array**	**3.10**	**19**	S	**Sn**	**09 59 59.5**	**+0.6**
SGF	**Sodankyl**	**3.17**	**332**	PG	**Pg**	**09 59 31.3**	**-0.2**
SGF				SB	**Sb**	**10 00 06.8**	**-0.3**
KALU	**Kalix**	**3.17**	**295**	PB	**Pb**	**09 59 25.6**	**-2.3**
KAF	**Kangasniemi**	**3.18**	**217**	PG	**Pb**	**09 59 27.8**	**-0.4**
	baz=40						
KEF	**Keuruu**	**3.55**	**227**	PB	**Pb**	**09 59 31.3**	**-3.2**
LVZ	**Lovozero**	**3.65**	**26**	P	**Pn**	**09 59 31.9**	**+3.3**
LVZ				S	**Sn**	**10 00 12.5**	**+0.3**
KLF	**Kolari**	**3.65**	**317**	PB	**Pn**	**09 59 31.8**	**+3.3**
KLF				SG	**Sg**	**10 00 27.9**	**-0.2**
PAJU	**Pajala**	**3.78**	**311**	PN	**Pn**	**09 59 33.7**	**+3.3**
VAF	**Ylistaro**	**3.79**	**247**	PG	**Pb**	**09 59 39.3**	**+0.7**
VAF				SG	**Sg**	**10 00 33.2**	**+0.6**
FIA0	**FINESS Array S**	**3.81**	**213**	PN	**Pn**	**09 59 33.4**	**+2.6**
FIA0				SG	**Sg**	**10 00 33.6**	**+0.4**
FINES	**FINESS Array B**	**3.81**	**213**	Pn	**Pn**	**09 59 33.6**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=31,slow=16,SNR=5.5						
FINES				Lg	Lg	10 00 31.4	
	comp=Z,1.3nm,0.3s,baz=35,slow=27,SNR=11						
	comp=Z,0.4nm,0.3s						
ERTU	**Ertsjaerv**	**3.87**	**302**	PN	**Pn**	**09 59 34.6**	**+3.1**
VJF	**Virojoki**	**4.38**	**199**	SG	**Sg**	**10 00 49.0**	**-2.4**
HEF	**Hetta**	**4.58**	**327**	SG	**Sg**	**10 00 54.2**	**-3.7**
PVF	**Pernaja**	**4.66**	**209**	SG	**Sg**	**10 00 59.6**	**-0.9**
TERR	**Teriberka**	**4.89**	**20**	P	**Pn**	**09 59 48.1**	**+2.5**
TERR				S	**Sn**	**10 00 41.6**	**-1.1**
PRVG	**Vayda Guba**	**5.12**	**7**	P	**Pn**	**09 59 50.0**	**+1.4**
PRVG				S	**Sn**	**10 00 47.6**	**-0.7**
ARCES	**ARCESS Array B**	**5.21**	**341**	Pn	**Pn**	**09 59 49.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=152,slow=14,SNR=22						
ARCES				Sn	**Sn**	**10 00 48.8**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=156,slow=23,SNR=5.7						
ARCES				Lg	Lg	10 01 13.2	
	comp=Z,0.2nm,0.3s,baz=155,slow=30,SNR=3.9						
	comp=Z,0.6nm,0.2s						
ARCES	**ARCESS Array B**	**5.21**	**341**	P	**Pn**	**09 59 51.0**	**+1.0**
ARCES				S	**Sn**	**10 00 51.3**	**+0.6**
I37NO	**I37NO**	**6.37**	**319**	*i*		10 35 40.0	
	baz=130,slow=319,SNR=3.3						
NOA	**NORSAR Array B**	**9.47**	**256**	Pn	**Pn**	**10 00 49.8**	**+1.3**
	baz=49,slow=14,SNR=1.5						
	comp=Z,0.1nm,0.4s						

VIE 27 10:00:04.9±0.5**, 48°.52N×17°.53E, h0km, mb1.0**/2**, ml1.6**/4**,**

Error ellipse: s-maj=4.2km s-min=1.8km az=116.0 47 km NNE of Bratislava Suspected Mining explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMOL	**Smolenice**	**0.06**	**263**	*e*PG	Pg	10 00 04.9	-1.3
SMOL				*e*SG	Sg	10 00 06.0	-1.0
MODS	**Modra-Piesok**	**0.22**	**228**	*e*PG	Pg	10 00 08.3	-0.9
MODS				*e*SG	Sg	10 00 12.3	+0.3
JAVC	**Velka Javorina**	**0.35**	**16**	*e*PG	Pg	10 00 11.1	-0.6
JAVC				*e*SG	Sg	10 00 17.7	+1.5
ZST	**Bratislava**	**0.43**	**221**	*e*PG	Pg	10 00 13.2	0.0
ZST				*e*SG	Sg	10 00 19.0	+0.3
VYHS	**Vyhne**	**0.87**	**91**	*e*PG	Pn	10 00 24.1	-0.4
VYHS				*e*SG	Sb	10 00 35.8	+0.6
KRUC	**Moravsky**	**0.92**	**306**	*e*PG	Pg	10 00 22.4	-0.2
VRAC	**Vranov**	**1.00**	**322**	*e*PG	Pg	10 00 24.0	-0.1
RONA	**Rosalia, Austr**	**1.16**	**225**	*i* Pg	Pb	10 00 27.9	0.0
	0.9nm,0.1s						
RONA				*e*Sg	Sn	10 00 44.7	-0.4
	2.0nm,0.2s						
CONA	**Conrad Observa**	**1.26**	**243**	*i* Pg	Pg	10 00 28.4	-0.7
	0.4nm,0.1s						
CONA				*i* Sg	Sb	10 00 46.0	-0.4
	5.7nm,0.3s						

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*ARE **27** 10:00:44±4.3, 8°.44S±0°.06×75°.13W±0°.07, h156^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=169.0*

*MOS **27** 10:00:47.4±1.1, 8°.43S×75°.09W, h138^{km}, mb5.0/32, Error ellipse: s-maj=10.9km s-min=4.6km az=109.0*

*IDC **27** 10:00:48.2±0.3, 8°.43S×75°.01W, h133^{km}±2^{km}, mb4.6/47, mbtmp5.0/54, MS3.7/10, Error ellipse: s-maj=10.0km s-min=6.4km az=44.0*

*VAO **27** 10:00:48.8±0.5, 8°.48S×74°.83W, h132^{km}±4^{km}, mb5.5*

*NEIC **27** 10:00:48.4±1.7, 8°.46S±0°.06×75°.00W±0°.06, h132^{km}±4^{km}, mb5.2/677, Mww5.0, ML5.1(ARE), Error ellipse: s-maj=9.1km s-min=8.8km az=80.0*

*GCMT **27** 10:00:49.3±0.2, 8°.43S±0°.02×74°.94W±0°.02, h138^{km}±2^{km}, MW5.0/108, Moment Tensor Solution. s49,c55; s108,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.97±.12; M$_{\theta\theta}$0.48±.14; M$_{\phi\phi}$3.49±.17; M$_{r\theta}$1.48±.10; M$_{\theta\phi}$-0.97±.15; M$_{\phi r}$-1.96±.14; Best double couple: M$_0$4.58100×10^{16} NP1:φ$_s$173.00000°,δ30.00000°, λ-73.00000°. NP2:φ$_s$333.00000°,δ61.00000°, λ-100.00000°. Principal axes: T 4.4210, Plg16.0000°, Azm70.0000°; N 0.3180, Plg8.0000°, Azm338.0000°; P -4.7420, Plg72.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 10:00:50, 8°.55S×74°.83W, h120^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.95; M$_{\theta\theta}$0.06; M$_{\phi\phi}$2.89; M$_{r\theta}$1.65; M$_{\theta\phi}$-1.90; M$_{\phi r}$-0.44; Fault plane solution: M$_0$3.88000×10^{16} NP1: φ$_s$177.00000°,δ41.00000°,λ-52.00000°. NP2: φ$_s$311.00000°,δ59.00000°,λ-117.00000°. Principal axes: T 4.0394, Plg10.0000°, Azm61.0000°; N -0.3351, Plg23.0000°, Azm327.0000°; P -3.7043, Plg64.0000°, Azm172.0000°;*

ISC 27 10:00:47.6±0.2**, 8°.48S**±0°.04×**75°.01W**±0°.05**, h131**^{km}±1^{km}**, h131**^{km}**:pP-P, n1499,** σ**1^{s}01**/1831**, mb5.2**/411**, 4C-36D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**2.40**	**72**	*e*P	**Pn**	**10 01 27.9**	**+1.3**
ATAH	**Atahualpa**	**3.61**	**292**	P	**Pn**	**10 01 42.5**	**-0.1**
	1μm,0.5s,baz=108,slow=5.1,SNR=2048						
ATAH				S	**Sn**	**10 02 23.2**	**-1.9**
	2μm,0.6s,baz=90,slow=17,SNR=6.7						
NNA	**Nana**	**3.92**	**207**	P	**Pn**	**10 01 46.6**	**+0.2**
	335nm,0.3s,baz=354,slow=5.8,SNR=135						
NNA				S	**Sn**	**10 02 31.1**	**-1.0**
	818nm,0.4s,baz=136,slow=22,SNR=4.3						
ETMB	**Extrema**	**8.79**	**99**	*e*P	**Pn**	**10 02 49.8**	**-1.9**
OTAV	**Otavalo**	**9.32**	**338**		**Pn**	**10 02 58.7**	**-0.5**
OTAV	**Otavalo**	**9.32**	**338**	P	**Pn**	**10 02 58.7**	**-0.5**
OTAV	**Otavalo**	**9.32**	**338**	*e*P	**Pn**	**10 03 00.0**	**+0.8**
OTAV	**Otavalo**	**9.32**	**338**	*e*P	**Pn**	**10 02 59.1**	**-0.1**
CMBC	**Cumbal**	**9.77**	**343**	*e*P	**Pn**	**10 03 06.4**	**+1.1**
GCUF	**Volcan Galeras**	**9.92**	**346**	*e*P	**Pn**	**10 03 03.8**	**-3.5**
FLOC	**Florencia**	**10.02**	**356**	*e*P	**Pn**	**10 03 05.5**	**-2.8**
LPAZ	**La Paz**	**10.26**	**140**	P	**Pn**	**10 03 11.4**	**-0.6**
	32nm,0.6s,baz=316,slow=9.8,SNR=129						
LPAZ				LR	LR	10 07 48.8	
	comp=Z,261nm,19.6s,baz=354,slow=41						
LPAZ	**La Paz**	**10.26**	**140**	Pn	**Pn**	**10 03 11.3**	**-0.7**
LPAZ	**La Paz**	**10.26**	**140**	*e*P	**Pn**	**10 03 11.1**	**-1.0**
LPAZ	**La Paz**	**10.26**	**140**	*e*P	**Pn**	**10 03 11.7**	**-0.3**
GARC	**Garzon, Huila**	**10.61**	**357**	*e*P	**Pn**	**10 03 15.3**	**-1.1**
MACC	**Macarena, Meta**	**10.62**	**6**	*e*P	**Pn**	**10 03 13.2**	**-3.1**
SOTA	**Rioblanco**	**10.67**	**351**	*e*P	**Pn**	**10 03 15.3**	**-2.1**
PCON	**Cinco Dias**	**10.83**	**353**	*e*P	**Pn**	**10 03 18.9**	**-0.7**
PB12	**IPOC Station P**	**11.05**	**156**		**Pn**	**10 03 20.8**	**-1.3**
BETC	**Betania**	**11.10**	**358**	*e*P	**Pn**	**10 03 22.8**	**+0.1**
PB16	**IPOC Station P**	**11.16**	**152**	Pn	**Pn**	**10 03 25.0**	**+1.0**
MARP	**Paez Belalcaza**	**11.29**	**355**	*e*P	**Pn**	**10 03 23.9**	**-1.5**
SAML	**Samuel**	**11.70**	**93**		**Pn**	**10 03 27.4**	**-3.1**
SAML	**Samuel**	**11.70**	**93**	P	**Pn**	**10 03 27.5**	**-3.1**
PRAC	**Prado**	**12.12**	**1**	*e*P	**Pn**	**10 03 37.2**	**+1.1**
ORTC	**Ortega, Tolima**	**12.31**	**359**	*e*P	**Pn**	**10 03 36.7**	**-2.0**
PB11	**IPOC Station P**	**12.35**	**156**		**Pn**	**10 03 37.4**	**-1.9**
YOTC	**Yotoco, Valle**	**12.45**	**354**	*e*P	**Pn**	**10 03 40.9**	**+0.3**
TA01	**Diego Aracena**	**12.89**	**159**	Pn	**Pn**	**10 03 45.9**	**-0.1**
ANIL	**Santa Ana**	**12.89**	**358**	*e*P	**P**	**10 03 54.4**	**+2.3**
PB08	**IPOC Station P**	**12.90**	**155**		**Pn**	**10 03 47.2**	**+0.6**
PTGC	**Puerto Gaitan,**	**12.92**	**13**	*e*P	**Pn**	**10 03 43.4**	**-3.1**
CHIC	**Chingaza**	**13.09**	**6**	*e*P	**Pn**	**10 03 47.4**	**-1.7**
PATCX	**Punta Patache**	**13.13**	**160**	Pn	**Pn**	**10 03 49.7**	**+0.4**
ROSC	**El Rosal**	**13.25**	**3**	P	**Pn**	**10 03 52.2**	**+1.0**
	12nm,0.5s,baz=180,slow=19,SNR=6.5						
ROSC	**El Rosal**	**13.25**	**3**		**Pn**	**10 03 51.1**	**-0.1**
ROSC	**El Rosal**	**13.25**	**3**	*e*P	**Pn**	**10 03 52.9**	**+1.8**
PLMC	**San Jos del P**	**13.36**	**354**	*e*P	**Pn**	**10 03 52.9**	**+0.6**
PB01	**IPOC Station P**	**13.58**	**157**		**Pn**	**10 03 53.8**	**-1.3**
PB02	**IPOC Station P**	**13.68**	**159**	Pn	**Pn**	**10 03 55.4**	**-1.0**
NORC	**Norcasia**	**13.95**	**1**	*e*P	**Pn**	**10 03 57.8**	**-2.0**
PB07	**IPOC Station P**	**14.06**	**160**		**Pn**	**10 03 59.4**	**-2.0**
SPBC	**San Pablo de B**	**14.07**	**4**	*e*P	**P**	**10 04 04.6**	**-0.4**
CBOC	**Ciudad Bolivar**	**14.29**	**356**	*e*P	**P**	**10 04 06.8**	**-0.7**
PB09	**IPOC Station P**	**14.36**	**158**	Pn	**Pn**	**10 04 04.7**	**-0.3**
RUSC	**La Rusia**	**14.41**	**8**	*e*P	**Pn**	**10 04 06.3**	**+0.3**
PB04	**IPOC Station P**	**14.54**	**162**	Pn	**Pn**	**10 04 08.0**	**+0.6**
HELC	**Santa Helena**	**14.58**	**358**	*e*P	**Pn**	**10 04 05.2**	**-2.9**
PTBC	**PUERTO BERRIO,**	**14.93**	**2**	*e*P	**Pn**	**10 04 09.8**	**-2.4**
PB06	**IPOC Station P**	**15.08**	**160**	Pn	**Pn**	**10 04 12.4**	**-1.7**
BARC	**Barichara**	**15.08**	**7**	*e*P	**P**	**10 04 16.4**	**0.0**
TAMC	**Tame, Arauca**	**15.16**	**12**	*e*P	**Pn**	**10 04 13.4**	**-1.7**
MACA	**Manacapuru-AM**	**15.20**	**70**	*e*P	**Pn**	**10 04 12.1**	**-3.4**
VILB	**Vilhena**	**15.21**	**108**	*e*P	**Pn**	**10 04 14.0**	**-1.7**
LVC	**Limon Verde**	**15.22**	**158**	P	**Pn**	**10 04 16.3**	**+0.2**
	42nm,0.8s,baz=329,slow=13,SNR=2.6						
LVC	**Limon Verde**	**15.22**	**158**	Pn	**Pn**	**10 04 15.5**	**-0.6**
LVC	**Limon Verde**	**15.22**	**158**	*e*P	**Pn**	**10 04 17.0**	**+0.9**
DBBC	**Dabeiba**	**15.44**	**356**	*e*P	**P**	**10 04 21.7**	**+1.4**
SIV	**San Ignacio**	**15.52**	**120**	P	**Pn**	**10 04 19.2**	**-0.4**
	113nm,0.6s,baz=295,slow=11,SNR=316						
SIV				S	**Sn**	**10 07 08.1**	**-3.9**
	43nm,0.5s,baz=214,slow=22,SNR=3.8						
BRRC	**Barranca, Sant**	**15.54**	**5**	*e*P	**Pn**	**10 04 19.6**	**-0.1**
PB10	**IPOC Station P**	**15.54**	**165**	Pn	**Pn**	**10 04 19.7**	**0.0**
PB10				IAmb	IAmb	10 04 24.2	
	comp=Z,107nm,1.1s						
PB15	**IPOC Station P**	**15.58**	**161**	Pn	**Pn**	**10 04 20.8**	**+0.4**
AF01	**San Pedro de A**	**15.81**	**156**	Pn	**Pn**	**10 04 21.8**	**-1.5**
AF01				IAmb	IAmb	10 05 21.0	
	comp=Z,138nm,1.1s						
PAMC	**Pamplona, Colo**	**15.88**	**8**	*e*P	**P**	**10 04 25.3**	**-0.2**
UREC	**San Jos de Ur**	**16.13**	**358**	*e*P	**P**	**10 04 28.2**	**+0.4**
PB14	**IPOC Station P**	**16.65**	**165**	Pn	**Pn**	**10 04 32.0**	**-1.6**
OCAC	**Ocana**	**16.70**	**6**		**Pn**	**10 04 32.3**	**-1.8**
OCAC	**Ocana**	**16.70**	**6**	*e*P	**Pn**	**10 04 32.3**	**-1.8**
PTLB	**Pontes e Lacer**	**16.99**	**116**	*e*P	**P**	**10 04 36.2**	**-1.1**
PAYG	**Puerto Ayora**	**17.08**	**296**	P	**P**	**10 04 36.9**	**-1.4**
GO02	**Mina Guanaco**	**17.38**	**163**	P	**P**	**10 04 40.8**	**-0.9**
SDV	**Santo Domingo**	**17.80**	**14**	P	**Pn**	**10 04 46.8**	**-0.6**
	comp=Z,28nm,0.4s,baz=199,slow=12,SNR=13						
SDV				S	S	10 07 52.5	-12
	comp=Z,9.6nm,0.4s,baz=345,slow=12,SNR=1.4						
SDV	**Santo Domingo**	**17.80**	**14**	P	**P**	**10 04 46.7**	**+0.4**
SDV				IAmb	IAmb	10 04 51.6	
	comp=Z,128nm,1.4s						
SDV	**Santo Domingo**	**17.80**	**14**	*e*P	**P**	**10 04 45.9**	**-0.4**
SDV	**Santo Domingo**	**17.80**	**14**	*e*P	**Pn**	**10 04 47.0**	**-0.4**
BOAV	**Boa Vista**	**18.04**	**54**	*e*P	**P**	**10 04 48.9**	**+0.1**
BCIP	**Isla Barro Col**	**18.18**	**345**	P	**P**	**10 04 50.4**	**+0.1**
BCIP	**Isla Barro Col**	**18.18**	**345**	P	**P**	**10 04 50.4**	**+0.1**
BCIP				pmax	pmax		
	comp=Z,101nm,1.3s						
ARGC	**Ariguani, Magd**	**18.23**	**2**	*e*P	**Pn**	**10 04 52.0**	**-0.4**
SJCC	**San Jacinto, C**	**18.26**	**359**		**P**	**10 04 51.1**	**-0.1**
SJCC	**San Jacinto, C**	**18.26**	**359**	*e*P	**Pn**	**10 04 52.2**	**-0.5**
PDRB	**Porto dos Gac**	**18.27**	**101**	*e*P	**P**	**10 04 50.6**	**-0.7**
BAUV	**El Baul**	**18.65**	**22**	P	**P**	**10 04 55.3**	**-0.2**
BRU2	**Volcan**	**18.79**	**336**	P	**P**	**10 04 57.5**	**+0.3**
BRU2				IAmb	IAmb	10 05 54.9	
	comp=Z,81nm,1.0s						
CLDB	**Colider**	**19.09**	**99**	*e*P	**P**	**10 04 59.4**	**-0.9**
AC02	**Maricunga**	**19.09**	**164**	P	**P**	**10 05 01.2**	**+0.6**
AC06	**Mina Casimiro**	**19.29**	**167**	P	**P**	**10 05 00.2**	**-2.1**
DRK0	**Durika**	**19.44**	**335**	P	**P**	**10 05 05.0**	**+0.7**
DRK0				IAmb	IAmb	10 05 46.0	
	comp=Z,86nm,1.0s						
SRBA	**San Rafael, Bu**	**19.46**	**335**	P	**P**	**10 05 05.3**	**+0.9**
CRJC	**Cerrejon, Guaj**	**19.49**	**6**	*e*P	**P**	**10 05 03.1**	**-1.6**
GO03	**Copiap**	**19.54**	**167**	P	**P**	**10 05 05.4**	**+0.3**
ITTB	**Itaituba**	**19.58**	**79**	*e*P	**P**	**10 05 05.5**	**-0.2**
PEZE	**Perez Zeledon,**	**19.73**	**334**	P	**P**	**10 05 08.7**	**+1.4**
AC04	**Llanos de Chal**	**19.97**	**170**	P	**P**	**10 05 10.6**	**+0.9**
RIMA	**Rio Macho**	**20.16**	**334**	P	**P**	**10 05 12.2**	**+0.1**
SALV	**Santo Antonio**	**20.26**	**113**	*e*P	**P**	**10 05 12.1**	**-0.8**
URIC	**Uribia, Colomb**	**20.27**	**9**	P	**P**	**10 05 10.4**	**-2.6**
HDC	**Heredia**	**20.48**	**334**	P	**P**	**10 05 15.2**	**-0.2**
BIRV	**Birongo**	**20.74**	**25**	P	**P**	**10 05 17.6**	**-0.4**
LCO	**Las Campanas**	**20.82**	**169**	P	**P**	**10 05 19.3**	**+0.2**
LCO	**Las Campanas**	**20.82**	**169**	P	**P**	**10 05 19.3**	**+0.2**
LCO				pmax	pmax		
	comp=Z,47nm,0.9s						
JTS	**Las Juntas de**	**21.11**	**332**	P	**P**	**10 05 23.0**	**+1.0**
	comp=Z,12nm,0.8s,baz=243,slow=2.6,SNR=7.9						
	comp=Z,12nm,0.8s						
JTS	**Las Juntas de**	**21.11**	**332**	*de*P	**P**	**10 05 23.1**	**+1.0**
JTS				pmax	pmax		
	comp=Z,34nm,1.2s						
ORTG	**Ortega, Santa**	**21.42**	**331**	P	**P**	**10 05 24.4**	**-1.0**
CO05	**La Serena**	**21.62**	**171**	P	**P**	**10 05 27.6**	**+0.3**
CO05				IAmb	IAmb	10 06 10.0	
	comp=Z,154nm,1.3s						
MALB	**Monte Alegre**	**21.67**	**73**	*e*P	**P**	**10 05 27.2**	**-0.9**
HZTE	**Horizontes, Gu**	**21.79**	**331**	P	**P**	**10 05 29.9**	**+0.7**
HZTE				IAmb	IAmb	10 05 34.2	
	comp=Z,96nm,1.0s						
CO01	**Juntas del Tor**	**21.88**	**168**	P	**P**	**10 05 30.9**	**+0.5**
GO04	**Tololo Observa**	**21.94**	**170**	P	**P**	**10 05 30.2**	**-0.7**
ESPN	**Las Esperanzas**	**22.52**	**336**	P	**P**	**10 05 37.6**	**+1.0**
ACON	**Acoyapa**	**22.69**	**333**	P	**P**	**10 05 37.9**	**-0.4**
CO02	**Combarbal**	**22.91**	**171**	P	**P**	**10 05 41.9**	**+1.5**
CO02				IAmb	IAmb	10 05 43.7	
	comp=Z,152nm,0.8s						
BOAB	**BOACO BROADBAN**	**23.34**	**333**	P	**P**	**10 05 45.0**	**+0.7**
SNDB	**Serra Nova Dou**	**23.59**	**100**	*e*P	**P**	**10 05 45.8**	**-0.9**
ZON	**Zonda**	**23.69**	**166**	P	**P**	**10 05 48.1**	**+0.6**
ZON				IAmb	IAmb	10 05 50.9	
	comp=Z,88nm,1.4s						
ZON	**Zonda**	**23.69**	**166**	P	**P**	**10 05 48.1**	**+0.6**
ZON				pmax	pmax		
	comp=Z,88nm,1.4s						
MATN	**Matagalpa**	**23.88**	**333**	P	**P**	**10 05 49.7**	**+0.4**
VA06	**Catapilco**	**24.21**	**172**	P	**P**	**10 05 53.0**	**+1.0**
VA06				IAmb	IAmb	10 05 55.7	
	comp=Z,70nm,0.9s						
MCPB	**Macapa, AP**	**24.25**	**72**	*e*P	**P**	**10 05 52.1**	**-0.6**
TOSP	**Speyside**	**24.36**	**36**	P	**P**	**10 05 53.9**	**+0.3**
TOSP				IAmb	IAmb	10 05 58.7	
	comp=Z,58nm,0.6s						
GRGR	**Grenville**	**24.41**	**33**	P	**P**	**10 05 53.7**	**-0.3**
CPUP	**Villa Florida**	**24.43**	**139**	P	**P**	**10 05 53.6**	**-0.6**
	comp=Z,17nm,0.6s,baz=323,slow=9.9,SNR=37						
CPUP				PcP	**PcP**	**10 09 30.4**	**+0.5**
	comp=Z,8.1nm,1.0s,baz=349,slow=6.8,SNR=3.0						
	comp=Z,17nm,0.6s						
CPUP	**Villa Florida**	**24.43**	**139**	P	**P**	**10 05 53.8**	**-0.3**
CPUP	**Villa Florida**	**24.43**	**139**	*e*P	**P**	**10 05 53.9**	**-0.3**
VA03	**San Esteban**	**24.51**	**171**	P	**P**	**10 05 55.8**	**+0.8**
VA03				IAmb	IAmb	10 05 59.7	
	comp=Z,79nm,1.0s						
ROC1	**El Roble**	**24.65**	**172**	P	**P**	**10 05 57.3**	**+0.9**
ROC1				IAmb	IAmb	10 06 00.6	
	comp=Z,62nm,0.9s						
PEL	**Peldehue**	**24.87**	**171**	P	**P**	**10 05 59.0**	**+0.9**
PEL				IAmb	IAmb	10 06 02.6	
	comp=Z,96nm,1.1s						
PEL	**Peldehue**	**24.87**	**171**	P	**P**	**10 05 59.0**	**+0.9**
PEL				pmax	pmax		
	comp=Z,96nm,1.1s						
MT02	**Curacav**	**24.92**	**172**	P	**P**	**10 05 59.9**	**+1.4**
MT02				IAmb	IAmb	10 06 03.9	
	comp=Z,52nm,0.9s						
PRPB	**Parauapebas**	**25.09**	**86**	*e*P	**P**	**10 05 59.0**	**-1.3**
MT03	**Universidad Ad**	**25.24**	**171**	P	**P**	**10 06 03.5**	**+1.9**
MT09	**Talagante**	**25.45**	**172**	P	**P**	**10 06 04.6**	**+1.2**
TGUH	**Tegucigalpa,Un**	**25.49**	**331**	P	**P**	**10 06 04.2**	**+0.2**
MT01	**Popeta**	**25.50**	**173**	P	**P**	**10 06 04.4**	**+0.7**
LMEL	**Las Melosas**	**25.63**	**171**	P	**P**	**10 06 06.6**	**+1.4**
LMEL				IAmb	IAmb	10 06 11.0	
	comp=Z,54nm,0.9s						
BO04	**La Punta**	**25.71**	**172**	P	**P**	**10 06 05.7**	**-0.1**
TRCB	**Terra Rica**	**25.77**	**126**	P	**P**	**10 06 06.1**	**-0.3**
TRCB	**Terra Rica**	**25.77**	**126**	*e*P	**P**	**10 06 05.7**	**-0.7**
BO01	**Tunca**	**26.04**	**173**	P	**P**	**10 06 09.6**	**+0.9**
MDP	**Montagnes des**	**26.07**	**60**	P	**P**	**10 06 08.5**	**-0.7**
	comp=Z,22nm,0.7s,baz=232,slow=8.1,SNR=23						
	comp=Z,22nm,0.7s						
MCLT	**Moule a Chique**	**26.10**	**32**	P	**P**	**10 06 10.7**	**+1.4**
PCMB	**Pacaembu**	**26.33**	**122**	*e*P	**P**	**10 06 10.7**	**-0.8**
ITRB	**Iturama**	**26.34**	**118**	*e*P	**P**	**10 06 11.1**	**-0.5**
PEXB	**Peixe**	**26.52**	**100**	*e*P	**P**	**10 06 12.5**	**-0.7**
MPOM	**Morne Pois Mar**	**26.75**	**32**	P	**P**	**10 06 14.5**	**-0.7**
MPOM				IAmb	IAmb	10 06 21.3	
	comp=Z,107nm,0.9s						
MTO3	**Montecristo**	**26.82**	**328**	P	**P**	**10 06 17.1**	**+1.0**
FDF	**Fort de France**	**26.85**	**31**	P	**P**	**10 06 13.6**	**-2.5**
FDF	**Fort de France**	**26.85**	**31**	P	**P**	**10 06 13.6**	**-2.5**
FDF				pmax	pmax		
	comp=Z,113nm,0.7s						
SVN	**Savane Anatole**	**26.93**	**31**	P	**P**	**10 06 14.3**	**-2.6**
SMTB	**Santa Maria do**	**27.11**	**93**	*e*P	**P**	**10 06 17.3**	**-1.2**
PTGB	**Pitanga**	**27.20**	**129**	*e*P	**P**	**10 06 18.9**	**-0.5**
ITQB	**Itaqui**	**27.23**	**143**	P	**P**	**10 06 20.2**	**+0.8**
ITQB				IAmb	IAmb	10 07 21.2	
	comp=Z,46nm,0.9s						
ITQB	**Itaqui**	**27.23**	**143**	*e*P	**P**	**10 06 19.8**	**+0.3**
BDFB	**Brasilia**	**27.32**	**108**	P	**P**	**10 06 20.7**	**+0.2**
	comp=Z,124nm,0.7s,baz=275,slow=11,SNR=108						
BDFB				LR	LR	10 17 06.9	
	comp=Z,101nm,21.3s,baz=253,slow=36						
	comp=Z,124nm,0.7s						
BDFB	**Brasilia**	**27.32**	**108**	P	**P**	**10 06 20.1**	**-0.4**
BDFB	**Brasilia**	**27.32**	**108**	*e*P	**P**	**10 06 20.4**	**-0.1**
ML02	**Panimavida**	**27.35**	**174**	P	**P**	**10 06 20.4**	**0.0**
TMAB	**Tom-Au,PA,Br**	**27.46**	**79**	*e*P	**P**	**10 06 20.8**	**-0.8**
OBIP	**Obispado Ponce**	**27.63**	**17**	P	**P**	**10 06 23.6**	**+0.5**
OBIP				IAmb	IAmb	10 06 46.5	
	comp=Z,38nm,0.9s						
DR12	**Loma Pena Alta**	**27.66**	**12**	P	**P**	**10 06 23.0**	**-0.4**
CELP	**Cerrillos**	**27.67**	**17**	P	**P**	**10 06 23.6**	**+0.2**
CELP				IAmb	IAmb	10 06 54.9	
	comp=Z,38nm,0.8s						
IPMB	**Ipameri, GO**	**27.71**	**113**	*e*P	**P**	**10 06 22.8**	**-1.1**
PDPR	**Patillas Dam,**	**27.79**	**19**	P	**P**	**10 06 24.0**	**-0.4**
PDPR				IAmb	IAmb	10 06 55.0	
	comp=Z,37nm,0.8s						
SJG	**San Juan**	**27.83**	**18**	P	**P**	**10 06 24.6**	**-0.2**
	comp=Z,42nm,0.6s,baz=165,slow=3.4,SNR=5.1						
	comp=Z,42nm,0.6s						
SJG	**San Juan**	**27.83**	**18**	P	**P**	**10 06 25.1**	**+0.3**
SJG				IAmb	IAmb	10 06 34.8	
	comp=Z,44nm,0.6s						
SJG	**San Juan**	**27.83**	**18**	P	**P**	**10 06 25.1**	**+0.3**
SJG				pmax	pmax		
	comp=Z,44nm,0.6s						
GDHS	**Morne Mazeau,**	**27.87**	**28**	P	**P**	**10 06 23.9**	**-1.3**
GDHS				IAmb	IAmb	10 06 31.1	
	comp=Z,76nm,0.9s						
AOPR	**Arecibo Observ**	**27.88**	**17**	P	**P**	**10 06 25.3**	**+0.1**
AOPR				IAmb	IAmb	10 06 56.0	
	comp=Z,68nm,0.8s						
HUMP	**Col San Antoni**	**27.96**	**19**	P	**P**	**10 06 27.3**	**+1.3**
HUMP				IAmb	IAmb	10 06 37.1	
	comp=Z,32nm,0.8s						
CDVI	**St. Croix**	**27.96**	**21**	P	**P**	**10 06 24.5**	**-1.5**
MTP	**Monte Pirata**	**28.01**	**19**	P	**P**	**10 06 26.2**	**-0.3**
MTP				IAmb	IAmb	10 06 36.1	
	comp=Z,40nm,1.0s						
GCPR	**Guaynabo City**	**28.04**	**18**	P	**P**	**10 06 25.1**	**-1.5**
GCPR				IAmb	IAmb	10 06 58.3	
	comp=Z,38nm,0.8s						
SC01	**Santiago de lo**	**28.05**	**9**	P	**P**	**10 06 28.4**	**+1.6**
SC01				IAmb	IAmb	10 07 00.5	
	comp=Z,48nm,0.7s						
CBYP	**Canovanas**	**28.08**	**19**	P	**P**	**10 06 27.3**	**+0.3**
CBYP				IAmb	IAmb	10 06 38.3	
	comp=Z,38nm,0.8s						
CUPR	**Culebra, Puert**	**28.30**	**20**	P	**P**	**10 06 28.6**	**-0.3**
CUPR				IAmb	IAmb	10 06 35.1	
	comp=Z,44nm,0.8s						
BB19B	**Bebedouro**	**28.44**	**119**	*e*P	**P**	**10 06 29.5**	**-0.9**
STVI	**Saint Thomas**	**28.45**	**20**	P	**P**	**10 06 28.9**	**-1.4**
STVI				IAmb	IAmb	10 06 39.7	
	comp=Z,47nm,0.6s						
BPA	**Boggy Peak**	**28.50**	**27**	*e*P	**P**	**10 06 29.1**	**-1.8**
BPA	**Boggy Peak**	**28.50**	**27**	*e*	**P**	**10 06 33.6**	**+2.8**
FRTB	**Fartura**	**28.51**	**124**	*e*P	**P**	**10 06 30.1**	**-0.8**
ANBD	**Bethesda, Anti**	**28.55**	**27**	*e*P	**P**	**10 06 28.9**	**-2.3**
ANBD	**Bethesda, Anti**	**28.55**	**27**	*e*	**P**	**10 06 33.9**	**+2.8**
ITAB	**Concordia**	**28.57**	**134**	P	**P**	**10 06 31.5**	**+0.1**
ITAB				IAmb	IAmb	10 06 37.6	
	comp=Z,39nm,0.7s						
ITAB	**Concordia**	**28.57**	**134**	*e*P	**P**	**10 06 31.8**	**+0.4**
SMRT	**St. Maarten**	**28.88**	**24**	P	**P**	**10 06 34.7**	**+0.6**
ANWB	**Willy Bob**	**29.08**	**27**	*e*P	**P**	**10 06 34.9**	**-1.1**
ANWB	**Willy Bob**	**29.08**	**27**	*e*	**P**	**10 06 38.9**	**+3.0**
CPSB	**Cacapava Do Su**	**29.71**	**140**	*e*P	**P**	**10 06 40.9**	**-0.5**
RCLB	**Rio Claro- Sao**	**29.82**	**121**	*e*P	**P**	**10 06 41.1**	**-1.4**
SDBA	**SAO DESIDERIO**	**29.85**	**100**	*e*P	**P**	**10 06 42.2**	**-0.8**
VAO	**Valinhos**	**30.53**	**121**	*e*P	**P**	**10 06 47.3**	**-1.5**
PLTB	**Pedras Altas**	**30.54**	**142**	P	**P**	**10 06 48.7**	**0.0**
PLTB				IAmb	IAmb	10 07 47.7	
	comp=Z,51nm,1.4s						
PLTB	**Pedras Altas**	**30.54**	**142**	*e*P	**P**	**10 06 48.8**	**0.0**
JANB	**Januaria**	**30.73**	**105**	*e*P	**P**	**10 06 49.5**	**-1.1**
PET01	**Itanhaem-SP**	**30.81**	**124**	*e*P	**P**	**10 06 49.7**	**-1.5**
LR03	**Panguipulli**	**31.11**	**176**	P	**P**	**10 06 52.6**	**-1.0**
ROSB	**Rosrio**	**31.21**	**82**	*e*P	**P**	**10 06 55.1**	**+0.2**
TRQA	**Tornquist**	**31.71**	**160**	P	**P**	**10 06 59.3**	**+0.3**
TRQA				IAmb	IAmb	10 06 59.9	
	comp=Z,42nm,1.1s						
TRQA	**Tornquist**	**31.71**	**160**	P	**P**	**10 06 59.3**	**+0.3**
TRQA				pmax	pmax		
	comp=Z,42nm,1.2s						
CMIG	**Matias Romero**	**32.12**	**322**	P	**P**	**10 07 03.5**	**+0.8**
	comp=Z,12nm,0.8s,baz=126,slow=6.9,SNR=15						
CMIG				PcP	**PcP**	**10 09 49.0**	**0.0**
	comp=Z,2.3nm,0.6s,baz=24,slow=2.2,SNR=2.5						
	comp=Z,12nm,0.8s						
PLCA	**Paso Flores**	**32.36**	**174**	P	**P**	**10 07 05.2**	**+0.5**
	comp=Z,9.2nm,0.8s,baz=347,slow=9.6,SNR=46						
PLCA				PcP	**PcP**	**10 09 50.8**	**+1.4**
	comp=Z,11nm,0.7s,baz=353,slow=5.1,SNR=9.4						
	comp=Z,9.2nm,0.8s						
PLCA	**Paso Flores**	**32.36**	**174**	P	**P**	**10 07 05.3**	**+0.6**
PLCA					**PcP**	**10 09 50.0**	**+0.6**
PLCA	**Paso Flores**	**32.36**	**174**	*e*P	**P**	**10 07 04.9**	**+0.3**
PLCA	**Paso Flores**	**32.36**	**174**	P	**P**	**10 07 05.2**	**+0.5**
PLCA				pP	**pP**	**10 07 30.5**	**-2.7**
PLCA				sP	**sP**	**10 07 47.3**	**-1.1**
LL04	**Puerto Octay**	**32.38**	**176**	P	**P**	**10 07 04.6**	**-0.1**
LL04				IAmb	IAmb	10 07 05.9	
	comp=Z,28nm,0.8s						
LL04					**PcP**	**10 09 50.0**	**+0.6**
MAN01	**Angra dos Reis**	**33.04**	**119**	*e*P	**P**	**10 07 11.2**	**+0.4**
NBPS	**Pedro II - PI**	**33.59**	**85**	*e*P	**P**	**10 07 14.8**	**-0.9**
DUB01	**Friburgo-RJ**	**34.16**	**117**	*e*P	**P**	**10 07 22.4**	**+1.9**
SJMB	**Sao Joao De Ma**	**34.35**	**111**	*e*P	**P**	**10 07 23.3**	**+1.2**
NBPN	**Ponto Novo - B**	**34.38**	**97**	*e*P	**P**	**10 07 23.2**	**+0.7**
LL02	**Futaleuf**	**34.68**	**176**	IAmb	IAmb	10 07 25.9	
	comp=Z,27nm,0.9s						
CAM01	**Campos-RJ**	**34.72**	**116**	*e*P	**P**	**10 07 26.3**	**+1.0**
TLIG	**Tlapa**	**34.81**	**318**	P	**P**	**10 07 27.4**	**+1.3**
GDU01	**Guandu, BA**	**35.13**	**102**	*e*P	**P**	**10 07 28.1**	**-0.8**
NBMO	**Morrinhos-CE**	**35.14**	**84**	*e*P	**P**	**10 07 29.3**	**+0.3**
NAN01	**Guarapari, ES**	**35.16**	**109**	*e*P	**P**	**10 07 29.3**	**+0.2**
RIB01	**Linhares ES**	**35.21**	**112**	*e*P	**P**	**10 07 28.4**	**-1.2**
ALF01	**Guarapari-ES**	**35.22**	**114**	*e*P	**P**	**10 07 29.6**	**0.0**
GUA01	**Guaratinga, BA**	**35.25**	**107**	*e*P	**P**	**10 07 29.4**	**-0.5**
NBPB	**Pedra_Branca-C**	**35.27**	**88**	*e*P	**P**	**10 07 30.4**	**+0.3**
CMC01	**Camacan, BA**	**35.35**	**105**	*e*P	**P**	**10 07 30.4**	**-0.3**
NBMA	**Muriti-CE**	**35.91**	**91**	*e*P	**P**	**10 07 37.3**	**+1.7**
NBLA	**Lagarto - SE**	**36.75**	**97**	*e*P	**P**	**10 07 42.5**	**-0.3**
DWPF	**Disney Wildern**	**36.90**	**351**	P	**P**	**10 07 44.0**	**+0.3**
	baz=169						
COYC	**Coyhaique**	**37.04**	**177**	IAmb	IAmb	10 07 46.3	
	comp=Z,22nm,0.8s						
COYC	**Coyhaique**	**37.04**	**177**	P	**P**	**10 07 45.3**	**+0.6**
COYC				pP	**pP**	**10 08 11.0**	**-2.7**
RPN	**Rapa Nui**	**37.39**	**236**	LR	LR	10 20 11.8	
	comp=Z,182nm,19.4s,baz=123,slow=31						
NBAN	**Anadia - AL**	**38.26**	**95**	*e*P	**P**	**10 07 54.3**	**-1.1**
656A	**Willston**	**38.32**	**349**	P	**P**	**10 07 56.3**	**+0.7**
	baz=168						
RCBR	**Riachuelo**	**38.88**	**89**	P	**P**	**10 08 02.4**	**+1.7**
RCBR				IAmb	IAmb	10 08 04.5	
	comp=Z,28nm,0.7s						
RCBR	**Riachuelo**	**38.88**	**89**	P	**P**	**10 08 02.4**	**+1.7**
RCBR				pmax	pmax		
	comp=Z,28nm,0.7s						
RCBR	**Riachuelo**	**38.88**	**89**	*e*P	**P**	**10 08 01.0**	**+0.3**
RCBR	**Riachuelo**	**38.88**	**89**	P	**P**	**10 08 03.0**	**+2.3**
RCBR				pP	**pP**	**10 08 31.0**	**+1.2**
NBRF	**Rio Formoso -**	**39.42**	**93**	*e*P	**P**	**10 08 05.7**	**+0.5**
553A	**Crawfordville**	**39.50**	**347**	P	**P**	**10 08 06.5**	**+1.0**
553A					**pP**	**10 08 37.2**	**+2.6**
451A	**Vernon**	**40.22**	**346**	P	**P**	**10 08 11.9**	**+0.6**
451A					**pP**	**10 08 42.8**	**+2.2**
451A				sP	**sP**	**10 08 52.9**	**-2.6**
TIGA	**Tifton**	**40.53**	**349**	P	**P**	**10 08 13.3**	**-0.7**
TIGA				pP	**pP**	**10 08 45.5**	**+2.2**
TIGA				IAmb	IAmb	10 08 46.1	
	comp=Z,37nm,0.9s						
TIGA				sP	**sP**	**10 08 55.7**	**-2.5**
TIGA	**Tifton**	**40.53**	**349**	P	**P**	**10 08 14.3**	**+0.3**
	baz=167						
TIGA	**Tifton**	**40.53**	**349**	P	**P**	**10 08 13.8**	**-0.2**
	baz=167						
352A	**Blakely**	**40.85**	**347**	P	**P**	**10 08 15.9**	**-0.7**
352A				IAmb	IAmb	10 08 48.8	
	comp=Z,106nm,1.2s						
BRAL	**Brewton**	**41.08**	**344**	P	**P**	**10 08 18.8**	**+0.3**
	baz=162						
BRAL	**Brewton**	**41.08**	**344**	P	**P**	**10 08 18.1**	**-0.4**
	baz=162,SNR=6.4						
ZAIG	**Zacatecas**	**41.14**	**320**	P	**P**	**10 08 19.5**	**0.0**
CSU	**Charleston Sou**	**41.52**	**354**	P	**P**	**10 08 22.8**	**+0.8**
CSU					**pP**	**10 08 52.8**	**+1.3**
CSU				sP	**sP**	**10 09 07.7**	**+1.5**
154A	**Montrose**	**41.59**	**350**	P	**P**	**10 08 23.0**	**+0.4**
154A	**Montrose**	**41.59**	**350**	P	**P**	**10 08 23.0**	**+0.4**
	baz=168,SNR=11						
250A	**Grady**	**41.65**	**346**	P	**P**	**10 08 22.9**	**-0.2**
250A					**pP**	**10 08 53.5**	**+1.0**
250A				sP	**sP**	**10 09 06.6**	**-0.8**
NHSC	**New Hope**	**41.65**	**353**	P	**P**	**10 08 23.8**	**+0.7**
NHSC					**pP**	**10 08 55.0**	**+2.5**
NHSC	**New Hope**	**41.65**	**353**	P	**P**	**10 08 23.6**	**+0.6**
	baz=172						
152A	**Waverly Hall**	**41.95**	**348**	IAmb	IAmb	10 08 57.5	
	comp=Z,56nm,0.8s						
152A	**Waverly Hall**	**41.95**	**348**	P	**P**	**10 08 25.2**	**-0.4**
	baz=166,SNR=11						
HAW	**Hawthorne Fire**	**42.08**	**352**	P	**P**	**10 08 26.9**	**+0.3**
	baz=170,SNR=8.4						
GOGA	**Godfrey**	**42.43**	**349**	IAmb	IAmb	10 09 01.5	
	comp=Z,45nm,0.9s						
GOGA	**Godfrey**	**42.43**	**349**	P	**P**	**10 08 29.2**	**-0.3**
	baz=168,SNR=12						
GOGA	**Godfrey**	**42.43**	**349**	P	**P**	**10 08 28.7**	**-0.7**

	baz=168,SNR=12					
344A	Westbrook Farm	42.47 340	IAmb	IAmb	10 09 03.1	
	comp=Z,121nm,1.5s					
Z51A	Franklin	42.68 347	IAmb	IAmb	10 09 03.5	
	comp=Z,64nm,1.1s					
GO09	Cerro Castillo	42.71 178	P	P	10 08 33.0	+1.5
GO09			IAmb	IAmb	10 08 34.5	
	comp=Z,56nm,1.0s					
LRAL	Lakeview Retre	42.84 345	IAmb	IAmb	10 09 05.1	
	comp=Z,70nm,1.1s					
LRAL	Lakeview Retre	42.84 345	P	P	10 08 32.0	-0.7
	baz=162,SNR=8.0					
LRAL	Lakeview Retre	42.84 345	P	P	10 08 31.8	-0.9
	baz=162,SNR=8.0					
JSC	Jenkinsville	42.94 352	P	P	10 08 33.6	+0.1
JSC	Jenkinsville	42.94 352	P	P	10 08 33.6	+0.1
JSC			pmax	pmax		
	comp=Z,16nm,0.7s					
342A	Flagon Creek P	42.96 338	IAmb	IAmb	10 08 35.4	
	comp=Z,92nm,0.9s					
342B	Flagon Creek P	42.96 338	P	P	10 08 33.8	+0.1
	baz=154,SNR=8.9					
Y52A	Lilburn	42.98 349	IAmb	IAmb	10 09 06.5	
	comp=Z,43nm,1.1s					
HODGE	Hodges	43.03 351	IAmb	IAmb	10 09 06.4	
	comp=Z,112nm,1.4s					
HODGE	Hodges	43.03 351	P	P	10 08 34.2	0.0
	baz=169,SNR=5.4					
VBMS	Vicksburg	43.10 341	P	P	10 08 34.1	-0.7
	baz=157					
MG05	Puerto Natales	43.12 178	IAmb	IAmb	10 08 37.5	
	comp=Z,37nm,0.9s					
HKT	Hockley	43.14 333	P	P	10 08 35.0	-0.2
HKT	Hockley	43.14 333⇓	*e*P	P	10 08 35.4	+0.3
HKT			pmax	pmax		
	comp=Z,23nm,1.3s					
735A	Kenedy	43.15 330	IAmb	IAmb	10 08 37.7	
	comp=Z,78nm,1.0s					
BIRD	Birdtown, Kers	43.20 353	P	P	10 08 35.9	+0.2
	baz=172,SNR=6.8					
Z47A	Carrollton	43.27 344	IAmb	IAmb	10 09 07.9	
	comp=Z,43nm,0.8s					
Z47A	Carrollton	43.27 344	P	P	10 08 35.3	-0.9
	baz=161,SNR=6.5					
833A	Chaparral WMA,	43.52 328	P	P	10 08 39.5	+1.2
	baz=144,SNR=6.1					
833A	Chaparral WMA,	43.52 328	P	P	10 08 38.8	+0.5
	baz=144,SNR=6.1					
PAULI	Pauline	43.55 352	P	P	10 08 38.1	-0.3
PAULI				pP	10 09 07.5	-0.5
PAULI			IAmb	IAmb	10 09 10.8	
	comp=Z,35nm,0.8s					
PAULI	Pauline	43.55 352	P	P	10 08 38.4	0.0
	baz=170,SNR=6.3					
CNNC	Cliffs of the	43.57 357	P	P	10 08 38.3	-0.2
	baz=176					
W57A	Gilead	43.65 354	P	P	10 08 39.3	+0.2
W57A			pP	pP	10 09 07.7	-1.2
W57A			IAmb	IAmb	10 09 11.5	
	comp=Z,52nm,0.8s					
W57A	Gilead	43.65 354	P	P	10 08 39.4	+0.2
	baz=173,SNR=8.8					
W57A			P	P	10 08 39.4	+0.2
	baz=173,SNR=8.8					
KMSC	Kings Mountain	43.80 353	P	P	10 08 40.1	-0.3
KMSC			pP	pP	10 09 10.1	0.0
KMSC			IAmb	IAmb	10 09 12.8	
	comp=Z,115nm,1.4s					
KMSC	Kings Mountain	43.80 353	P	P	10 08 40.6	+0.2
	baz=171,SNR=6.1					
KMSC	Kings Mountain	43.80 353	P	P	10 08 40.0	-0.4
	baz=171,SNR=6.1					
X51A	Calhoun	43.82 348	IAmb	IAmb	10 09 12.5	
	comp=Z,65nm,1.1s					
X51A	Calhoun	43.82 348	P	P	10 08 40.0	-0.6
	baz=166					
X51A			P	P	10 08 40.0	-0.6
	baz=166					
BG3	Lake Jocassee	43.88 351	IAmb	IAmb	10 09 14.2	
	comp=Z,47nm,1.0s					
CASEE	Lake Jocassee	43.88 351	P	P	10 08 41.5	+0.4
	baz=169,SNR=5.6					
FPAL	Fort Paine	43.95 347	IAmb	IAmb	10 09 13.9	
	comp=Z,66nm,1.0s					
V61A	Roper	44.06 358	IAmb	IAmb	10 08 44.5	
	comp=Z,86nm,1.1s					
W52A	Murphy	44.15 349	IAmb	IAmb	10 09 15.5	
	comp=Z,54nm,1.1s					
W52A	Murphy	44.15 349	P	P	10 08 43.0	-0.2
	baz=167					
X48A	Hartselle	44.20 346	P	P	10 08 42.3	-1.3
	baz=163					
V58A	Windy Hill, Pi	44.21 355	IAmb	IAmb	10 09 15.9	
	comp=Z,90nm,1.5s					
V58A	Windy Hill, Pi	44.21 355	P	P	10 08 43.8	+0.2
	baz=174,SNR=13					
V58A			P	P	10 08 43.8	+0.2
	baz=174,SNR=13					
NATX	Nacogdoches	44.21 336	P	P	10 08 42.7	-1.1
NATX			pP	pP	10 09 13.6	+0.1
NATX	Nacogdoches	44.21 336	P	P	10 08 44.7	+0.9
	baz=152,SNR=11					
NATX	Nacogdoches	44.21 336	P	P	10 08 44.6	+0.8
	baz=152,SNR=11					
Y45A	Yeager Farm, C	44.32 343	P	P	10 08 43.5	-1.1
Y45A			pP	pP	10 09 14.8	+0.5
V55A	Taylorsville	44.48 353	IAmb	IAmb	10 09 19.5	
	comp=Z,40nm,1.1s					
W50A	Signal Mountai	44.52 348	IAmb	IAmb	10 09 18.7	
	comp=Z,82nm,1.1s					
W50A	Signal Mountai	44.52 348	P	P	10 08 45.5	-0.7
	baz=165,SNR=10.0					
V53A	Saluda	44.53 351	IAmb	IAmb	10 09 03.6	
	comp=Z,30nm,0.6s					
V53A	Saluda	44.53 351	P	P	10 08 46.0	-0.3
	baz=169,SNR=5.5					
V53A			P	P	10 08 46.0	-0.3
	baz=169,SNR=5.5					
CPCT	Cooper Cave	44.61 349	IAmb	IAmb	10 09 18.9	
	comp=Z,48nm,1.0s					
435B	Jarrell	44.65 332	IAmb	IAmb	10 08 50.0	
	comp=Z,29nm,0.8s					
435B	Jarrell	44.65 332	P	P	10 08 47.7	+0.4
	baz=147					
GO10	Punta Arenas	44.66 177	P	P	10 08 47.7	+0.6
SWET	Sewanee	44.67 347	P	P	10 08 46.6	-0.8
SWET			IAmb	IAmb	10 09 19.0	
	comp=Z,47nm,1.0s					
U59A	Littleton	44.67 357	P	P	10 08 47.2	-0.1
U59A			IAmb	IAmb	10 08 48.6	
	comp=Z,27nm,0.7s					
U59A	Littleton	44.67 357	P	P	10 08 47.9	+0.5
	baz=176,SNR=7.7					
U59A			P	P	10 08 47.9	+0.5
	baz=176,SNR=7.7					
TKL	Tuckaleechee C	44.67 350	P	P	10 08 46.7	-0.7
	comp=Z,11nm,1.1s,baz=161,slow=8.0,SNR=7.0					
	comp=Z,11nm,1.1s					
TKL	Tuckaleechee C	44.67 350	IAmb	IAmb	10 09 20.0	
	comp=Z,65nm,1.4s					
V52A	Sevierville	44.82 350	P	P	10 08 47.9	-0.7
V52A			IAmb	IAmb	10 09 20.6	
	comp=Z,73nm,1.0s					
V52A	Sevierville	44.82 350	P	P	10 08 47.9	-0.7
	baz=168,SNR=12					
Z41A	Richland Creek	44.83 339	P	P	10 08 48.5	-0.1
	baz=155					
Z41A			P	P	10 08 48.5	-0.1
	baz=155					
Z41A	Richland Creek	44.83 339	P	P	10 08 48.4	-0.3
	baz=155					
U56A	King	44.88 354	P	P	10 08 49.6	+0.7
	baz=172,SNR=7.0					
U56A			P	P	10 08 49.6	+0.7
	baz=172,SNR=7.0					
OXF	Oxford	44.88 343	P	P	10 08 48.4	-0.6
	baz=160					
237A	Washetta, Mont	44.89 335	P	P	10 08 50.7	+1.5
	baz=150,SNR=8.3					
V51A	Loudon	44.92 349	IAmb	IAmb	10 09 21.3	
	comp=Z,55nm,0.9s					
V51A	Loudon	44.92 349	P	P	10 08 48.8	-0.6
	baz=167,SNR=8.2					
CCAR	Cane Creek	45.07 340	IAmb	IAmb	10 09 12.8	
	comp=Z,60nm,0.9s					
EFI	East Falkland	45.26 165⇓	*e*P	P	10 08 52.8	+1.0
EFI			pmax	pmax		
	comp=Z,41nm,1.2s					
T59A	Double "B" Far	45.27 357	IAmb	IAmb	10 08 53.4	
	comp=Z,54nm,0.9s					
T59A	Double "B" Far	45.27 357	P	P	10 08 52.6	+0.5
	baz=176,SNR=26					
T59A			P	P	10 08 52.6	+0.5
	baz=176,SNR=26					
WLAR	White Oak Lake	45.33 339	IAmb	IAmb	10 09 26.3	
	comp=Z,85nm,1.2s					
V48A	Smith Brothers	45.37 346	IAmb	IAmb	10 09 25.1	
	comp=Z,51nm,0.8s					
V48A	Smith Brothers	45.37 346	P	P	10 08 51.9	-1.0
	baz=163,SNR=18					
MG03	Isla Dawson	45.39 176	P	P	10 08 53.0	+0.2
MG03			IAmb	IAmb	10 08 55.6	
	comp=Z,80nm,0.9s					
T57A	Hurt	45.41 355	P	P	10 08 53.3	+0.1
T57A	Hurt	45.41 355	P	P	10 08 53.5	+0.3
	baz=174,SNR=38					
T57A			P	P	10 08 53.5	+0.3
	baz=174,SNR=38					
W45A	Hickory Valley	45.42 344	P	P	10 08 51.8	-1.5
W45A	Hickory Valley	45.42 344	P	P	10 08 51.7	-1.6
	baz=160,SNR=6.8					
JCT	Junction City	45.47 329	P	P	10 08 51.8	-2.0
JCT			PcP	PcP	10 10 30.2	-0.5
JCT	Junction City	45.47 329	P	P	10 08 51.8	-2.0
JCT					10 10 30.2	
JCT			pmax	pmax		
	comp=Z,13nm,0.9s					
JCT	Junction City	45.47 329	P	P	10 08 54.3	+0.5
	baz=144					
JCT	Junction City	45.47 329	P	P	10 08 54.0	+0.2
	baz=144					
TZTN	Tazewell	45.50 350	IAmb	IAmb	10 09 25.8	
	comp=Z,55nm,0.9s					
TZTN	Tazewell	45.50 350	P	P	10 08 53.3	-0.6
	baz=168,SNR=7.5					
TZTN	Tazewell	45.50 350	P	P	10 08 53.1	-0.8
	baz=168,SNR=7.5					
WHTX	Lake Whitney,	45.60 333	IAmb	IAmb	10 08 56.5	
	comp=Z,35nm,0.8s					
WHTX	Lake Whitney,	45.60 333	P	P	10 08 55.8	+1.0
	baz=148					
WHTX	Lake Whitney,	45.60 333	P	P	10 08 55.5	+0.8
	baz=148					
Z38A	Mt. Pleasant	45.66 336	IAmb	IAmb	10 08 57.0	
	comp=Z,77nm,0.8s					
Z38A	Mt. Pleasant	45.66 336	P	P	10 08 55.7	+0.6
	baz=152,SNR=6.0					
BLA	Blacksburg	45.73 354	IAmb	IAmb	10 09 28.7	
	comp=Z,109nm,1.2s					
BLA	Blacksburg	45.73 354	P	P	10 08 56.0	+0.2
	baz=172					
U49A	Red Boiling Sp	45.89 348	IAmb	IAmb	10 09 29.1	
	comp=Z,61nm,1.6s					
U49A	Red Boiling Sp	45.89 348	P	P	10 08 55.6	-1.3
	baz=165,SNR=5.5					
X40A	Basin Creek Fa	45.95 339	P	P	10 08 57.1	-0.4
	baz=155,SNR=6.8					
X40A			P	P	10 08 57.1	-0.4
	baz=155,SNR=6.8					
X40A	Basin Creek Fa	45.95 339	P	P	10 08 56.4	-1.1
	baz=155,SNR=6.8					
WVT	Waverly	45.98 346	P	P	10 08 55.7	-2.0
WVT			PcP	PcP	10 10 31.8	-0.5
WVT	Waverly	45.98 346	P	P	10 08 55.7	-2.0
WVT					10 10 31.8	
WVT			pmax	pmax		
	comp=Z,26nm,1.2s					
WVT	Waverly	45.98 346	P	P	10 08 55.8	-1.9
	baz=162,SNR=7.7					
WVT	Waverly	45.98 346	P	P	10 08 55.8	-2.0
	baz=162					
WVT	Waverly	45.98 346	P	P	10 08 55.7	-2.0
WVT			x	x	10 09 14.9	
WVT			pP	pP	10 09 27.4	-0.2
WVT			pwP	sP	10 09 33.6	-8.7
JSRW	J. Sargeant Re	46.01 357	P	P	10 08 57.3	-0.5
JSRW			PcP	PcP	10 10 32.7	+0.3
UALR	University of	46.04 340	P	P	10 08 57.2	-1.0
UALR			IAmb	IAmb	10 08 58.4	
	comp=Z,57nm,0.9s					
HPIG		46.08 321	P	P	10 08 59.1	+0.2
S57A	Dark Hollow, R	46.15 356	P	P	10 08 59.1	+0.1
S57A				pP	10 09 27.4	-1.5
S57A			PcP	PcP	10 10 33.5	+0.6
S57A	Dark Hollow, R	46.15 356	P	P	10 08 59.5	+0.5
	baz=174,SNR=9.2					
S57A			P	P	10 08 59.5	+0.5
	baz=174,SNR=9.2					
T50A	Nancy	46.19 349	P	P	10 08 58.4	-1.0
T50A			pP	pP	10 09 28.7	-0.6
T50A			PcP	PcP	10 10 32.4	-0.6
T50A	Nancy	46.19 349	P	P	10 08 58.0	-1.3
	baz=166					
T50A			P	P	10 08 58.0	-1.3
	baz=166					
HBAR	Harrisburg	46.22 342	P	P	10 08 58.3	-1.3
HBAR			IAmb	IAmb	10 09 31.9	
	comp=Z,105nm,1.3s					
MIAR	Mount Ida	46.27 339	P	P	10 08 59.5	-0.4
MIAR			pP	pP	10 09 29.6	-0.3
MIAR	Mount Ida	46.27 339	P	P	10 08 59.5	-0.4
	baz=154,SNR=19					
MIAR	Mount Ida	46.27 339	P	P	10 08 59.2	-0.7
	baz=154,SNR=19					
R58B	Mineral	46.28 357	P	P	10 09 00.1	+0.1
R58B			pP	pP	10 09 29.9	0.0
R58B			IAmb	IAmb	10 09 33.9	
	comp=Z,158nm,1.6s					
R58B	Mineral	46.28 357	P	P	10 09 00.6	+0.6
	baz=176,SNR=15					
R58B			P	P	10 09 00.6	+0.6
	baz=176,SNR=15					
W41B	Gary Mavity, V	46.37 340	P	P	10 08 60.0	-0.7
W41B			IAmb	IAmb	10 09 01.0	
	comp=Z,32nm,0.8s					
W41B			pP	pP	10 09 31.4	+0.6
W41B			PcP	PcP	10 10 33.0	-0.6
W41B	Gary Mavity, V	46.37 340	P	P	10 09 00.1	-0.7
	baz=156,SNR=33					
W41B	Gary Mavity, V	46.37 340	P	P	10 08 59.8	-0.9
	baz=156,SNR=33					
LNXT	Lenox	46.39 344	P	P	10 09 00.5	-0.4
LNXT			IAmb	IAmb	10 10 34.4	
	comp=Z,54nm,0.8s					
GNAR	Gosnell	46.41 343	P	P	10 09 00.5	-0.6
GNAR			pP	pP	10 09 32.6	+1.6
GNAR			IAmb	IAmb	10 09 33.2	
	comp=Z,42nm,0.9s					
GNAR			sP	sP	10 09 48.0	+2.3
GNAR			PcP	PcP	10 10 34.0	+0.3
S54A	Dingess, Beckl	46.41 353	P	P	10 09 00.1	-1.0
S54A			IAmb	IAmb	10 09 17.6	
	comp=Z,50nm,0.7s					
S54A			pP	pP	10 09 32.2	+1.1
S54A	Dingess, Beckl	46.41 353	P	P	10 09 01.3	+0.2
	baz=171,SNR=7.4					
S54A			P	P	10 09 01.3	+0.2
	baz=171,SNR=7.4					
WHAR	Wooly Hollow	46.49 340	P	P	10 09 00.9	-0.8
WHAR			IAmb	IAmb	10 09 01.8	
	comp=Z,38nm,0.8s					
WHAR			pP	pP	10 09 32.0	+0.3
WHAR			sP	sP	10 09 45.8	-0.5
CBN	Corbin Frederi	46.50 357	P	P	10 09 01.9	+0.3
CBN				pP	10 09 33.0	+1.4
CBN	Corbin Frederi	46.50 357	P	P	10 09 02.4	+0.8
	baz=177					
CBN	Corbin Frederi	46.50 357	P	P	10 09 01.8	+0.2
	baz=177					
S51A	Beattyville	46.58 351	P	P	10 09 01.4	-0.8
S51A			IAmb	IAmb	10 09 19.4	
	comp=Z,47nm,0.7s					
S51A			pP	pP	10 09 33.8	+1.5
S51A			PcP	PcP	10 10 34.5	+0.1
S51A	Beattyville	46.58 351	P	P	10 09 01.5	-0.8
	baz=168,SNR=7.5					
S51A			P	P	10 09 01.5	-0.8
	baz=168,SNR=7.5					
T47A	Sharon Grove	46.63 347	P	P	10 09 01.4	-1.4
T47A			IAmb	IAmb	10 09 21.5	
	comp=Z,30nm,0.8s					
T47A			pP	pP	10 09 33.1	+0.3
T47A			PcP	PcP	10 10 34.0	-0.6
TXAR	Lajitas Array	46.64 325	P	P	10 09 03.5	+0.4
	comp=Z,8.3nm,0.6s,baz=151,slow=8.7,SNR=139					
TXAR			pP	pP	10 09 33.8	+0.7
	comp=Z,3.8nm,0.7s,baz=141,slow=10.0,SNR=5.5					
TXAR			PcP	PcP	10 10 34.6	-0.3
	comp=Z,5.1nm,0.8s,baz=144,slow=7.8,SNR=5.2					
	comp=Z,8.3nm,0.6s					
TXAR	Lajitas Array	46.64 325	P	P	10 09 03.3	+0.2
TXAR				pP	10 09 31.7	-1.5
TX31	Lajitas Ar. Si	46.65 325	P	P	10 09 03.4	+0.3
TX31			IAmb	IAmb	10 09 04.1	
	comp=Z,26nm,0.7s					
TX31	Lajitas Ar. Si	46.65 325	P	P	10 09 03.5	+0.4
	baz=139,SNR=43					
TX32	Lajitas Array	46.65 325	P	P	10 09 03.2	+0.1
Z35A	Perchaven, San	46.65 334	P	P	10 09 03.0	0.0
Z35A	Perchaven, San	46.65 334	P	P	10 09 04.0	+1.0
	baz=149,SNR=14					
HICK	Hickman	46.73 344	pP	pP	10 09 33.1	-0.5
R55A	Marlinton	46.77 354	P	P	10 09 03.5	-0.4
R55A			pP	pP	10 09 36.3	+2.5
R55A			PcP	PcP	10 10 35.8	+0.7
R55A	Marlinton	46.77 354	P	P	10 09 04.5	+0.6
	baz=173,SNR=7.0					
R55A			P	P	10 09 04.5	+0.6
	baz=173,SNR=7.0					
SLBS	Sierra La Lagu	46.77 314	P	P	10 09 03.5	-0.6
SLBS			IAmb	IAmb	10 09 06.8	
	comp=Z,72nm,1.3s					
SLBS	Sierra La Lagu	46.77 314	P	P	10 09 05.7	+1.5
LCAR	Lake Charles	46.85 342	P	P	10 09 03.2	-1.2
LCAR			pP	pP	10 09 34.8	+0.3
LCAR			IAmb	IAmb	10 09 36.6	
	comp=Z,58nm,1.3s					
LCAR			PcP	PcP	10 10 35.0	-0.4
LCAR	Lake Charles	46.85 342	P	P	10 09 03.5	-0.9
	baz=158,SNR=15					
W39A	Magazine	46.92 339	P	P	10 09 05.2	+0.1
W39A			IAmb	IAmb	10 09 06.2	
	comp=Z,52nm,1.1s					
W39A			PcP	PcP	10 10 35.8	+0.2
W39A	Magazine	46.92 339	P	P	10 09 05.3	+0.2
	baz=154,SNR=22					
W39A	Magazine	46.92 339	P	P	10 09 05.1	+0.1
	baz=154,SNR=22					
X37A	Clayton	46.98 337		P	10 09 05.1	-0.3
X37A			IAmb	IAmb	10 09 07.1	
	comp=Z,49nm,0.8s					
X37A	Clayton	46.98 337	P	P	10 09 06.2	+0.8
	baz=152,SNR=25					
FCAR	Ozark Folk Cen	46.99 341	P	P	10 09 04.3	-1.2
FCAR			pP	pP	10 09 35.9	+0.3
FCAR			PcP	PcP	10 10 35.8	-0.1
PARMO	Parma	46.99 344	P	P	10 09 04.0	-1.5
PARMO			IAmb	IAmb	10 09 25.7	
	comp=Z,82nm,0.9s					
PARMO				pP	10 09 35.1	-0.5
PARMO			PcP	PcP	10 10 35.7	-0.1
R53A	Hurricane	47.02 353	P	P	10 09 05.6	-0.2
R53A			IAmb	IAmb	10 09 37.9	
	comp=Z,46nm,1.0s					
R53A	Hurricane	47.02 353	P	P	10 09 05.5	-0.2
	baz=170					
R53A			P	P	10 09 05.5	-0.2
	baz=170					
ABTX	Abilene, Hawle	47.14 331	P	P	10 09 07.4	+0.6
ABTX			IAmb	IAmb	10 09 08.4	
	comp=Z,67nm,0.9s					
ABTX			pP	pP	10 09 39.4	+2.5
ABTX	Abilene, Hawle	47.14 331	P	P	10 09 07.5	+0.7
	baz=146,SNR=31					
ABTX	Abilene, Hawle	47.14 331	P	P	10 09 07.5	+0.6
	baz=146,SNR=31					
LPIG	La Paz	47.29 314	P	P	10 09 08.1	0.0
	comp=Z,40nm,0.9s,baz=347,slow=2.1,SNR=3.7					
	comp=Z,40nm,0.9s					
PBMO	Poplar Bluff	47.29 343	P	P	10 09 06.5	-1.3
PBMO			IAmb	IAmb	10 09 27.3	
	comp=Z,24nm,0.6s					
PBMO			pP	pP	10 09 37.8	-0.1
PBMO			PcP	PcP	10 10 35.9	-0.9
PBMO	Poplar Bluff	47.29 343	P	P	10 09 06.5	-1.3
	baz=159					
R50A	Paris	47.33 350	P	P	10 09 07.3	-0.8
R50A				pP	10 09 38.4	+0.2
R50A			IAmb	IAmb	10 09 40.0	
	comp=Z,47nm,0.8s					
R50A			PcP	PcP	10 10 36.6	-0.4
R50A	Paris	47.33 350	P	P	10 09 07.4	-0.8
	baz=167,SNR=6.5					
R50A			P	P	10 09 07.4	-0.8
	baz=167,SNR=6.5					
R49A	Shelbyville	47.49 349	P	P	10 09 08.5	-0.8
R49A				pP	10 09 40.4	+1.0
R49A			IAmb	IAmb	10 09 41.5	
	comp=Z,56nm,1.1s					
R49A	Shelbyville	47.49 349	P	P	10 09 08.4	-1.0
	baz=166					
R49A			P	P	10 09 08.4	-1.0
	baz=166					
Q54A	Coxs Mills	47.53 354	P	P	10 09 09.5	-0.2
Q54A			pP	pP	10 09 40.3	+0.6
Q54A	Coxs Mills	47.53 354	P	P	10 09 09.6	-0.2
	baz=172,SNR=13					
Q54A			P	P	10 09 09.6	-0.2
	baz=172,SNR=13					
U40A	Yellville	47.65 340	IAmb	IAmb	10 09 43.6	
	comp=Z,84nm,1.4s					
U40A	Yellville	47.65 340	P	P	10 09 09.9	-0.8
	baz=156,SNR=30					
U40A			P	P	10 09 09.9	-0.8
	baz=156,SNR=30					
U40A	Yellville	47.65 340	P	P	10 09 09.8	-0.9
	baz=156,SNR=30					
SDMD	Soldier's Deli	47.68 358	P	P	10 09 10.7	-0.1
SDMD			pP	pP	10 09 39.5	-1.4
SDMD			PcP	PcP	10 10 38.1	-0.1
SDMD	Soldier's Deli	47.68 358	P	P	10 09 11.6	+0.8
	baz=177,SNR=5.8					
Q52A	Bidwell	47.68 352	IAmb	IAmb	10 09 43.7	
	comp=Z,60nm,0.9s					
Q52A	Bidwell	47.68 352	P	P	10 09 11.0	+0.1
	baz=170					
Q52A			P	P	10 09 11.0	+0.1
	baz=170					
P57A	Homestead Farm	47.80 357	P	P	10 09 12.1	+0.3
P57A			pP	pP	10 09 41.9	0.0
P57A			IAmb	IAmb	10 09 46.3	
	comp=Z,44nm,1.1s					
P57A	Homestead Farm	47.80 357	P	P	10 09 12.8	+1.0
	baz=176					
P57A			P	P	10 09 12.8	+1.0
	baz=176					
S44A	Carbondale	47.83 345	P	P	10 09 10.8	-1.2
S44A			IAmb	IAmb	10 09 31.0	
	comp=Z,31nm,0.8s					
S44A			pP	pP	10 09 42.8	+0.6
S44A			PcP	PcP	10 10 38.7	-0.1
S44A	Carbondale	47.83 345	P	P	10 09 10.7	-1.3
	baz=161,SNR=9.6					
SIUC	Southern Illin	47.84 345	P	P	10 09 10.7	-1.4
SIUC			IAmb	IAmb	10 09 31.1	
	comp=Z,38nm,0.8s					
SIUC			pP	pP	10 09 42.7	+0.5
SIUC			PcP	PcP	10 10 37.7	-1.1
HHAR	Hobbs	47.95 339	P	P	10 09 12.4	-0.6
HHAR			IAmb	IAmb	10 09 13.3	
	comp=Z,34nm,0.8s					
HHAR			pP	pP	10 09 43.9	+0.7
HHAR	Hobbs	47.95 339	P	P	10 09 12.3	-0.8
	baz=154					
X34A	Smith Ranch, M	47.99 334		P	10 09 14.2	+0.8
X34A			pP	pP	10 09 44.3	+0.8
P53A	Whipple	48.09 353	P	P	10 09 13.9	-0.1
	baz=171,SNR=9.7					
P53A			P	P	10 09 13.9	-0.1
	baz=171,SNR=9.7					
MCWV	Mont Chateau	48.10 355	P	P	10 09 13.8	-0.3
MCWV			pP	pP	10 09 45.7	+1.4
MCWV	Mont Chateau	48.10 355	P	P	10 09 13.8	-0.3
	baz=174					
MGMO	Mountain Grove	48.19 341	P	P	10 09 13.3	-1.6
MGMO			pP	pP	10 09 46.3	+1.2
MGMO			IAmb	IAmb	10 09 47.5	
	comp=Z,76nm,1.1s					

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MGMO                                 PcP    PcP    10 10 40.3 +0.1
P51A   Williamsport       48.30 352  IAmb   IAmb   10 09 47.4
       comp=Z,36nm,0.8s
P51A   Williamsport       48.30 352  P      P      10 09 14.6  -1.0
       baz=169
P51A                                 P      P      10 09 14.6  -1.0
       baz=169
TUL1   Leonard            48.30 337         P      10 09 15.7   0.0
TUL1                                 IAmb   IAmb   10 09 48.8
       comp=Z,58nm,1.0s
TUL1   Leonard            48.30 337  P      P      10 09 15.8 +0.1
       baz=152,SNR=22
TUL1   Leonard            48.30 337  P      P      10 09 15.6   0.0
       baz=152,SNR=22
P52A   Corning            48.32 353  P      P      10 09 14.8  -1.0
P52A   Corning            48.32 353  P      P      10 09 14.9  -0.9
       baz=170,SNR=8.2
FNO    Franklin           48.37 335         P      10 09 16.0  -0.2
TUPA   Temple Univers     48.40 360  P      P      10 09 16.9 +0.5
       baz=180,SNR=11
FVM    French Village     48.41 344  P      P      10 09 15.4  -1.1
FVM                                  IAmb   IAmb   10 09 36.3
       comp=Z,46nm,0.6s
FVM                                         pP     10 09 46.4  -0.3
FVM    French Village     48.41 344  P      P      10 09 15.4  -1.1
FVM                                  *PP    pP     10 09 46.4  -0.3
FVM                                  pmax   pmax
       comp=Z,46nm,0.6s
FVM    French Village     48.41 344  P      P      10 09 15.5  -1.0
       baz=159,SNR=6.6
PAGS   Pennsylvania G     48.49 358  IAmb   IAmb   10 09 50.9
       comp=Z,73nm,0.9s
WMOK   Wichita Mounta     48.51 334  P      P      10 09 16.4  -0.9
WMOK                                 IAmb   IAmb   10 09 33.0
       comp=Z,35nm,0.9s
WMOK                                        pP     10 09 48.6 +1.0
WMOK   Wichita Mounta     48.51 334  P      P      10 09 17.1  -0.3
       baz=148
OKCFA  Oklahoma City      48.53 335         P      10 09 17.2  -0.2
OKCFA                                IAmb   IAmb   10 09 18.0
       comp=Z,47nm,0.8s
BLO    Bloomington        48.60 348  P      P      10 09 16.9  -1.0
BLO                                  pP     pP     10 09 49.0 +0.8
P49A   Miami Univ. Ec     48.61 350  P      P      10 09 16.6  -1.4
P49A                                 pP     pP     10 09 48.5 +0.3
P49A                                 IAmb   IAmb   10 09 49.2
       comp=Z,57nm,0.9s
P49A   Miami Univ. Ec     48.61 350  P      P      10 09 16.5  -1.4
       baz=167
P49A   Miami Univ. Ec     48.61 350  P      P      10 09 16.5  -1.6
       baz=167
PANJ   Princeton          48.61   0  P      P      10 09 18.7 +0.7
       baz=180,SNR=17
P48A   Milroy             48.67 349  P      P      10 09 16.7  -1.7
P48A                                        pP     10 09 48.4  -0.3
P48A                                 IAmb   IAmb   10 09 49.4
       comp=Z,42nm,1.0s
P48A   Milroy             48.67 349  P      P      10 09 16.8  -1.7
       baz=166,SNR=6.4
P48A                                 P      P      10 09 16.8  -1.7
       baz=166,SNR=6.4
O54A   Avella             48.67 355  IAmb   IAmb   10 09 51.0
       comp=Z,35nm,0.9s
O54A   Avella             48.67 355  P      P      10 09 17.9  -0.6
       baz=173
O54A                                 P      P      10 09 17.9  -0.6
       baz=173
CCM    Cathedral Cave     48.72 343  P      P      10 09 17.3  -1.5
CCM                                  pP     pP     10 09 48.8  -0.3
CCM                                  PcP    PcP    10 10 42.1 +0.1
CCM                                  IAmb   IAmb   10 10 42.7
       comp=Z,26nm,0.8s
CCM    Cathedral Cave     48.72 343  P      P      10 09 17.3  -1.5
CCM                                  *PP    pP     10 09 48.8  -0.3
CCM                                                10 10 42.1
CCM                                  pmax   pmax
       comp=Z,26nm,0.9s
CCM    Cathedral Cave     48.72 343  P      P      10 09 17.4  -1.4
       baz=158,SNR=16
CCM    Cathedral Cave     48.72 343  P      P      10 09 17.3  -1.5
       baz=158
CCM    Cathedral Cave     48.72 343  P      P      10 09 17.3  -1.5
O52A   Adamsville         48.76 353  P      P      10 09 18.2  -1.0
O52A                                 pP     pP     10 09 50.2 +0.8
O52A   Adamsville         48.76 353  P      P      10 09 18.6  -0.5
       baz=171,SNR=9.8
O52A                                 P      P      10 09 18.6  -0.5
       baz=171,SNR=9.8
O53A   New Philadelph     48.82 354  IAmb   IAmb   10 09 52.1
       comp=Z,67nm,1.0s
O53A   New Philadelph     48.82 354  P      P      10 09 18.9  -0.7
       baz=172,SNR=6.9
LUPA   Lehigh Univers     48.84 360  P      P      10 09 20.1 +0.4
LUPA                                 IAmb   IAmb   10 09 21.2
       comp=Z,42nm,0.8s
LUPA                                        pP     10 09 49.9   0.0
LUPA                                 PcP    PcP    10 10 42.7 +0.4
Q44A   Meyer Farm, Va     48.91 345  P      P      10 09 18.6  -1.7
       baz=161,SNR=5.9
BRNJ   Basking Ridge      48.92   0  IAmb   IAmb   10 09 21.7
       comp=Z,25nm,0.9s
BRNJ   Basking Ridge      48.92   0  P      P      10 09 21.3 +1.0
       baz=180,SNR=5.7
SSPA   Standing Stone     48.94 357  P      P      10 09 20.4  -0.1
SSPA                                 pP     pP     10 09 49.5  -1.2
SSPA                                 PcP    PcP    10 10 42.3  -0.4
SSPA   Standing Stone     48.94 357  P      P      10 09 21.0 +0.5
       baz=176,SNR=7.9
SSPA   Standing Stone     48.94 357  P      P      10 09 21.0 +0.5
       baz=176
SSPA   Standing Stone     48.94 357  P      P      10 09 20.8 +0.3
SSPA                                 pP     pP     10 09 49.4  -1.3
SSPA                                 x      x      10 09 53.1
SSPA                                 sP     sP     10 10 06.8 +1.5
S39A   Bolivar            49.02 341  P      P      10 09 20.1  -1.1
S39A                                 IAmb   IAmb   10 09 21.0
       comp=Z,28nm,0.9s
S39A                                 pP     pP     10 09 51.9 +0.5
S39A                                 PcP    PcP    10 10 42.1  -1.0
S39A   Bolivar            49.02 341  P      P      10 09 20.1  -1.1
       baz=156,SNR=29
ACSO   Alum Creek Sta     49.03 352  P      P      10 09 20.3  -0.8
       baz=170,SNR=9.6
ACSO   Alum Creek Sta     49.03 352  P      P      10 09 20.1  -1.0
       baz=170,SNR=9.6
N58A   Sunbury            49.10 358  P      P      10 09 22.3 +0.6
       baz=178,SNR=15
N58A                                 P      P      10 09 22.3 +0.6
       baz=178,SNR=15
P46A   Rosedale           49.17 348  P      P      10 09 21.1  -1.2
P46A                                 IAmb   IAmb   10 09 40.0
       comp=Z,57nm,0.8s
P46A                                 pP     pP     10 09 53.1 +0.5
P46A   Rosedale           49.17 348  P      P      10 09 21.1  -1.2
       baz=164
O49A   Covington          49.19 351  P      P      10 09 21.1  -1.2
O49A                                 IAmb   IAmb   10 09 39.4
       comp=Z,48nm,0.7s
O49A                                        pP     10 09 52.9 +0.2
O49A   Covington          49.19 351  P      P      10 09 21.3  -1.1
       baz=168,SNR=6.5
O49A                                 P      P      10 09 21.3  -1.1
       baz=168,SNR=6.5
R40A   Maddies Statio     49.24 342  P      P      10 09 21.4  -1.4
       baz=157,SNR=16
PAL    Palisades          49.25   1  P      P      10 09 22.5  -0.3
PAL                                  IAmb   IAmb   10 09 23.7
       comp=Z,33nm,1.1s
PAL                                  pP     pP     10 09 52.7  -0.4
PAL                                  PcP    PcP    10 10 44.4 +0.6
PAL    Palisades          49.25   1  P      P      10 09 23.1 +0.3
       baz=181,SNR=5.1
PAL    Palisades          49.25   1  P      P      10 09 22.5  -0.3
       baz=181,SNR=5.1
ODNJ   Ogdensburg         49.32   0  P      P      10 09 23.3  -0.1
ODNJ                                        pP     10 09 53.7   0.0
ODNJ                                 PcP    PcP    10 10 44.1   0.0
ODNJ   Ogdensburg         49.32   0  P      P      10 09 23.8 +0.4
       baz=180,SNR=5.2
N53A   Lisbon             49.34 354  P      P      10 09 23.2  -0.3
       baz=172,SNR=7.9
N53A                                 P      P      10 09 23.2  -0.3
       baz=172,SNR=7.9
TRNY   Table Rock, Ra     49.38   1  IAmb   IAmb   10 09 25.0
       comp=Z,28nm,0.8s
O48B   Farmland           49.39 350  P      P      10 09 22.7  -1.2
       baz=167,SNR=20
O48B   Farmland           49.39 350  P      P      10 09 22.6  -1.4
       baz=167,SNR=20
MNTX   Cornudas Mount     49.39 325  P      P      10 09 23.7  -0.5
MNTX                                 pP     pP     10 09 55.6 +1.1
MNTX                                 PcP    PcP    10 10 43.3  -1.4
MNTX   Cornudas Mount     49.39 325  P      P      10 09 23.4  -0.8
       baz=139,SNR=23
MNTX   Cornudas Mount     49.39 325  P      P      10 09 23.8  -0.3
       baz=139,SNR=23
WSPT   Westport, CT       49.43   2  P      P      10 09 23.8  -0.3
WSPT                                 IAmb   IAmb   10 09 25.2
       comp=Z,34nm,1.1s
WSPT                                 pP     pP     10 09 54.5   0.0
T35A   Sooner Cattle      49.46 337         P      10 09 24.1  -0.5
T35A                                 pP     pP     10 09 57.1 +2.3
T35A                                 IAmb   IAmb   10 09 58.4
       comp=Z,39nm,0.9s
T35B   Sooner Cattle      49.46 337  P      P      10 09 24.7 +0.1
       baz=152,SNR=9.8
M57A   Sunshine Farm,     49.61 358  P      P      10 09 26.4 +0.8
M57A                                 pP     pP     10 09 55.0  -0.9
M57A   Sunshine Farm,     49.61 358  P      P      10 09 26.4 +0.8
       baz=177,SNR=11
M57A                                 P      P      10 09 26.4 +0.8
       baz=177,SNR=11
N51A   Ashland            49.62 353  P      P      10 09 24.3  -1.3
       baz=170
N51A                                 P      P      10 09 24.3  -1.3
       baz=170
M63A   Gales Ferry        49.71   3  IAmb   IAmb   10 09 27.5
       comp=Z,29nm,1.1s
P43A   Skaggs, Pawnee     49.73 345  P      P      10 09 25.4  -1.1
P43A                                 pP     pP     10 09 58.1 +1.3
P43A   Skaggs, Pawnee     49.73 345  P      P      10 09 25.4  -1.1
       baz=161,SNR=22
MSTX   Muleshoe           49.76 330  P      P      10 09 26.9  -0.1
MSTX                                 pP     pP     10 09 55.4  -1.9
MSTX   Muleshoe           49.76 330  P      P      10 09 27.0   0.0
       baz=143,SNR=11
MSTX   Muleshoe           49.76 330  P      P      10 09 26.7  -0.3
       baz=143,SNR=11
KSPA   Keystone Colle     49.80 359  P      P      10 09 27.5 +0.6
KSPA                                 pP     pP     10 09 55.7  -1.6
KSPA                                 IAmb   IAmb   10 10 00.4
       comp=Z,41nm,0.9s
KSPA   Keystone Colle     49.80 359  P      P      10 09 27.6 +0.6
       baz=179,SNR=12
M55A   Ridgway            49.82 356  P      P      10 09 27.4 +0.2
       baz=175,SNR=11
M55A                                 P      P      10 09 27.4 +0.2
       baz=175,SNR=11
N49A   Columbus Grove     49.88 351  P      P      10 09 26.6  -1.1
       baz=168,SNR=12
N49A                                 P      P      10 09 26.6  -1.1
       baz=168,SNR=12
SFIN   Lafayette          49.88 348  P      P      10 09 25.9  -1.7
SFIN                                        pP     10 09 58.4 +0.5
SFIN   Lafayette          49.88 348  P      P      10 09 25.9  -1.7
       baz=164
SFIN   Lafayette          49.88 348  P      P      10 09 25.6  -2.0
       baz=164
M53A   WI Miller and      49.95 354  P      P      10 09 27.9  -0.3
M53A                                 pP     pP     10 09 59.7 +1.3
M53A   WI Miller and      49.95 354  P      P      10 09 27.3  -0.8
       baz=173,SNR=5.7
AMTX   Amarillo           49.96 331  P      P      10 09 27.7  -0.8
AMTX                                 IAmb   IAmb   10 09 56.7
       comp=Z,17nm,0.5s
AMTX                                 PcP    PcP    10 10 46.2  -0.5
AMTX   Amarillo           49.96 331  P      P      10 09 28.4  -0.1
       baz=145,SNR=5.3
AMTX   Amarillo           49.96 331  P      P      10 09 28.1  -0.4
       baz=145
O44A   Mansfield          49.97 347  P      P      10 09 26.9  -1.3
O44A                                 pP     pP     10 09 59.1 +0.4
O44A                                 IAmb   IAmb   10 10 00.3
       comp=Z,75nm,1.1s
O44A                                 PcP    PcP    10 10 46.4  -0.1
O44A   Mansfield          49.97 347  P      P      10 09 27.0  -1.3
       baz=162,SNR=9.2
KSCT   Kent School, K     49.98   1  P      P      10 09 28.7 +0.3
KSCT                                        pP     10 09 58.1  -0.6
KSCT                                 PcP    PcP    10 10 46.0  -0.6
NPNY   Mohonk Preserv     49.99   1  P      P      10 09 29.1 +0.7
       baz=181,SNR=9.0
U32A   Winter Ranch,      50.00 335         P      10 09 29.3 +0.6
U32A                                        pP     10 10 00.1 +1.1
U32A   Winter Ranch,      50.00 335  P      P      10 09 29.3 +0.6
       baz=148,SNR=6.5
N47A   Urbana             50.09 349  P      P      10 09 27.6  -1.6
N47A                                 pP     pP     10 09 59.8 +0.2
N47A   Urbana             50.09 349  P      P      10 09 27.8  -1.5
       baz=166,SNR=26
N47A                                 P      P      10 09 27.8  -1.5
       baz=166,SNR=26
M50A   Fremont            50.19 352  P      P      10 09 29.2  -0.7
       baz=170
M50A                                 P      P      10 09 29.2  -0.7
       baz=170
BRYW   Bryant College     50.25   3  P      P      10 09 30.2  -0.3
BRYW                                 pP     pP     10 10 00.9 +0.1
BRYW                                 IAmb   IAmb   10 10 03.1
       comp=Z,30nm,1.1s
P40A   Paris              50.31 343  P      P      10 09 29.5  -1.4
P40A                                 IAmb   IAmb   10 09 51.6
       comp=Z,28nm,0.9s
P40A                                 pP     pP     10 10 01.4 +0.1
P40A   Paris              50.31 343  P      P      10 09 29.6  -1.3
       baz=158,SNR=9.3
L59A   Walton             50.42 360  P      P      10 09 31.9 +0.1
L59A                                 IAmb   IAmb   10 09 33.3
       comp=Z,55nm,0.9s
L59A   Walton             50.42 360  P      P      10 09 32.4 +0.6
       baz=180,SNR=23
L59A                                 P      P      10 09 32.4 +0.6
       baz=180,SNR=23
L56A   Greenwood          50.42 358  P      P      10 09 32.0 +0.2
       baz=177,SNR=10
L56A                                 P      P      10 09 32.0 +0.2
       baz=177,SNR=10
BINY   Binghamton         50.44 359  P      P      10 09 32.7 +0.8
       baz=179,SNR=43
BINY   Binghamton         50.44 359  P      P      10 09 32.6 +0.7
       baz=179,SNR=43
HDIL   Hopedale           50.54 346  P      P      10 09 31.4  -1.2
HDIL                                 pP     pP     10 10 02.5  -0.6
HDIL   Hopedale           50.54 346  P      P      10 09 31.0  -1.6
       baz=162
ERPA   Erie               50.56 355  P      P      10 09 31.8  -0.9
ERPA                                        pP     10 10 01.7  -1.4
ERPA   Erie               50.56 355  P      P      10 09 32.4  -0.3
       baz=174,SNR=7.0
ERPA   Erie               50.56 355  P      P      10 09 32.1  -0.6
       baz=174,SNR=7.0
WVNY   West Valley, N     50.75 357  P      P      10 09 33.9  -0.3
WVNY                                 pP     pP     10 10 03.2  -1.4
WVNY   West Valley, N     50.75 357  P      P      10 09 34.3 +0.2
       baz=175,SNR=14
HRV    Adam Dziewonsk     50.84   3  P      P      10 09 35.1 +0.3
       baz=184
HRV    Adam Dziewonsk     50.84   3  P      P      10 09 34.9 +0.1
       baz=184
P38A   Dawn               50.85 342  P      P      10 09 33.9  -1.0
P38A                                 IAmb   IAmb   10 09 56.2
       comp=Z,25nm,0.6s
P38A                                 pP     pP     10 10 05.6 +0.2
P38A   Dawn               50.85 342  P      P      10 09 34.0  -1.0
       baz=156,SNR=9.4
L48A   N Adams            50.92 351  P      P      10 09 34.0  -1.3
L48A                                 pP     pP     10 10 06.1 +0.2
L48A   N Adams            50.92 351  P      P      10 09 34.1  -1.3
       baz=168,SNR=6.8
L48A                                 P      P      10 09 34.1  -1.3
       baz=168,SNR=6.8
TRY    Troy               50.98   1  P      P      10 09 36.6 +0.8
TRY                                  pP     pP     10 10 08.5 +2.2
K57A   Scipio Center      50.98 359  P      P      10 09 35.7  -0.2
K57A                                 pP     pP     10 10 04.9  -1.4
K57A   Scipio Center      50.98 359  P      P      10 09 36.1 +0.2
       baz=178,SNR=13
M44A   Midewin, Midew     51.05 347  IAmb   IAmb   10 10 08.1
       comp=Z,62nm,1.4s
N41A   Harden Midland     51.08 345  P      P      10 09 35.2  -1.4
       baz=160,SNR=17
AAM    Ann Arbor          51.15 352  P      P      10 09 35.7  -1.5
       baz=169
L46A   Eue Claire         51.30 349  P      P      10 09 36.7  -1.6
L46A                                        pP     10 10 08.7  -0.1
121A   Cookes Peak, D     51.38 324  P      P      10 09 40.4 +1.2
       baz=137,SNR=12
121A   Cookes Peak, D     51.38 324  P      P      10 09 40.0 +0.7
       baz=137,SNR=12
KSU1   Kansas State U     51.42 339  P      P      10 09 38.4  -0.8
KSU1   Kansas State U     51.42 339  P      P      10 09 39.0  -0.2
       baz=152
KSU1   Kansas State U     51.42 339  P      P      10 09 38.5  -0.7
       baz=152
319A   Douglas            51.45 322  P      P      10 09 39.5  -0.2
319A                                 IAmb   IAmb   10 09 41.6
       comp=Z,28nm,1.1s
K50A   Casco              51.48 353  P      P      10 09 38.5  -1.1
K50A                                        pP     10 10 10.0  -0.1
MEDO   Medina             51.49 357  P      P      10 09 39.8 +0.1
MEDO                                        pP     10 10 08.5  -1.7
J56A   Wolcott            51.54 358  P      P      10 09 39.3  -0.6
J56A                                 pP     pP     10 10 08.9  -1.6
J56A   Wolcott            51.54 358  P      P      10 09 39.9   0.0
       baz=178,SNR=15
J56A                                 P      P      10 09 39.9   0.0
       baz=178,SNR=15
J55A   Hilton             51.56 357  P      P      10 09 39.6  -0.6
J55A                                        pP     10 10 09.4  -1.3
J55A   Hilton             51.56 357  P      P      10 09 40.0  -0.2
       baz=176,SNR=11
J55A                                 P      P      10 09 40.0  -0.2
       baz=176,SNR=11
J58A   Remsen             51.59 360  P      P      10 09 40.8 +0.3
J58A                                 pP     pP     10 10 09.2  -1.7
J58A                                 IAmb   IAmb   10 10 13.8
       comp=Z,57nm,0.8s
J58A   Remsen             51.59 360  P      P      10 09 40.8 +0.3
       baz=180,SNR=14
J58A                                 P      P      10 09 40.8 +0.3
       baz=180,SNR=14
J54A   Appleton           51.61 357  P      P      10 09 39.8  -0.7
J54A                                        pP     10 10 11.0  -0.1
J54A   Appleton           51.61 357  P      P      10 09 40.3  -0.2
       baz=175
J54A                                 P      P      10 09 40.3  -0.2
       baz=175
R32A   Long Quarter,      51.63 336  P      P      10 09 40.3  -0.5
R32A                                 pP     pP     10 10 13.2 +1.8
R32A   Long Quarter,      51.63 336  P      P      10 09 41.2 +0.4
       baz=150,SNR=14
J61A   Chester            51.63   2  P      P      10 09 40.9 +0.2
J61A                                        pP     10 10 11.5 +0.3
ACCN   Adirondack Com     51.63   1  P      P      10 09 41.4 +0.7
ACCN                                        pP     10 10 11.1  -0.1
ACCN   Adirondack Com     51.63   1  P      P      10 09 41.2 +0.5
       baz=182,SNR=5.3
J59A   Piesco             51.70   0  P      P      10 09 41.4 +0.2
J59A                                 pP     pP     10 10 09.9  -1.9
J59A   Piesco             51.70   0  P      P      10 09 41.8 +0.5
       baz=180,SNR=35
J59A                                 P      P      10 09 41.8 +0.5
       baz=180,SNR=35
L44A   Lake County Fo     51.78 348  P      P      10 09 39.9  -1.9
L44A                                 pP     pP     10 10 11.8  -0.5
L44A                                 IAmb   IAmb   10 10 13.5
       comp=Z,70nm,1.2s
L44A   Lake County Fo     51.78 348  P      P      10 09 39.7  -2.1
       baz=164
N38A   Joes South For     51.83 342  P      P      10 09 41.1  -1.1
N38A                                 pP     pP     10 10 13.1 +0.4
N38A   Joes South For     51.83 342  P      P      10 09 41.1  -1.1
       baz=157,SNR=12
CRNM   Carthage           51.83 326  P      P      10 09 42.9 +0.3
BNM    Barren Site        51.92 326  P      P      10 09 42.0  -1.4
Y22A   Socorro            51.95 326  P      P      10 09 43.5   0.0
       baz=138,SNR=6.3
L42A   Oliver, Polo       52.00 346  P      P      10 09 41.8  -1.7
L42A                                        pP     10 10 13.6  -0.4
L42A                                 IAmb   IAmb   10 10 14.9
       comp=Z,74nm,1.4s
L42A   Oliver, Polo       52.00 346  P      P      10 09 41.6  -1.9
       baz=161,SNR=6.9
PECO   Prince Edward      52.20 358  P      P      10 09 44.3  -0.6
PECO                                 pP     pP     10 10 14.2  -1.2
NCB    Newcomb            52.21   1  P      P      10 09 45.4 +0.4
NCB                                  pP     pP     10 10 16.4 +0.8
NCB                                  IAmb   IAmb   10 10 18.4
       comp=Z,46nm,0.9s
NCB    Newcomb            52.21   1  P      P      10 09 45.4 +0.4
       baz=181,SNR=20
WCNY   West Carthage      52.22 359  P      P      10 09 45.2 +0.2
       baz=179,SNR=13
MCVT   Middlebury Col     52.22   2  P      P      10 09 45.6 +0.5
       baz=182,SNR=6.7
J47A   Sunmer             52.24 351  P      P      10 09 43.8  -1.5
J47A                                 pP     pP     10 10 16.1 +0.2
J47A   Sunmer             52.24 351  P      P      10 09 43.9  -1.3
       baz=168,SNR=19
J47A                                 P      P      10 09 43.9  -1.3
       baz=168,SNR=19
K43A   Burlington         52.37 348  P      P      10 09 44.7  -1.5
K43A                                        pP     10 10 17.0 +0.2
K43A                                 IAmb   IAmb   10 10 17.5
       comp=Z,58nm,0.9s
K43A   Burlington         52.37 348  P      P      10 09 44.8  -1.5
       baz=163,SNR=7.7
CBKS   Cedar Bluff        52.38 336  P      P      10 09 45.7  -0.7
CBKS                                 IAmb   IAmb   10 09 47.6
       comp=Z,48nm,0.9s
CBKS                                 pP     pP     10 10 17.5 +0.5
CBKS   Cedar Bluff        52.38 336  P      P      10 09 45.7  -0.7
CBKS                                 *PP    pP     10 10 17.5 +0.5
CBKS                                 pmax   pmax
       comp=Z,48nm,0.9s
CBKS   Cedar Bluff        52.38 336  P      P      10 09 47.0 +0.7
       baz=148,SNR=6.1
CBKS   Cedar Bluff        52.38 336  P      P      10 09 46.7 +0.3
       baz=148,SNR=6.1
ANMO   Albuquerque        52.43 327  P      P      10 09 47.3 +0.3
       comp=Z,17nm,1.1s,baz=139,slow=8.0,SNR=49
       comp=Z,17nm,1.1s
ANMO   Albuquerque        52.43 327  P      P      10 09 46.5  -0.5
ANMO                                 pP     pP     10 10 17.5  -0.2
ANMO   Albuquerque        52.43 327  P      P      10 09 46.6  -0.5
ANMO                                 *PP    pP     10 10 17.5  -0.2
ANMO                                 pmax   pmax
       comp=Z,17nm,1.0s
ANMO   Albuquerque        52.43 327  P      P      10 09 47.4 +0.3
       baz=139,SNR=33
ANMO   Albuquerque        52.43 327  P      P      10 09 47.3 +0.3
       baz=139
ANMO   Albuquerque        52.43 327  P      P      10 09 47.3 +0.3
ANMO                                 pP     pP     10 10 16.4  -1.3
ANMO                                 x      x      10 10 19.5
L40A   Anamosa            52.45 345  P      P      10 09 45.0  -1.7
L40A                                 pP     pP     10 10 17.4 +0.1
L40A                                 IAmb   IAmb   10 10 19.2
       comp=Z,44nm,1.1s
L40A   Anamosa            52.45 345  P      P      10 09 45.2  -1.6
       baz=160,SNR=19
LBNH   Lisbon             52.55   3  P      P      10 09 47.8 +0.3
LBNH   Lisbon             52.55   3  P      P      10 09 47.8 +0.3
LBNH                                 pmax   pmax
       comp=Z,14nm,0.8s
LBNH   Lisbon             52.55   3  P      P      10 09 48.3 +0.9
       baz=184,SNR=5.1
LBNH   Lisbon             52.55   3  P      P      10 09 47.8 +0.3
       baz=184,SNR=5.1
VT1    Waterbury          52.60   2  P      P      10 09 48.7 +0.8
VT1                                  pP     pP     10 10 20.1 +1.6
N35A   Tabor              52.65 340  P      P      10 09 47.0  -1.3
N35A                                 pP     pP     10 10 18.9   0.0
N35A   Tabor              52.65 340  P      P      10 09 47.4  -0.9
       baz=154
DELO   Deloro Mine        52.80 358  P      P      10 09 49.0  -0.3
DELO                                 pP     pP     10 10 18.1  -1.8
SCIA   State Center       52.85 343  P      P      10 09 48.5  -1.2
SCIA                                 IAmb   IAmb   10 10 09.4
       comp=Z,27nm,0.8s
SCIA   State Center       52.85 343  P      P      10 09 48.6  -1.2
       baz=157,SNR=5.2
SCIA   State Center       52.85 343  P      P      10 09 48.4  -1.2
       baz=157,SNR=5.2
LONY   Lake Ozonia        52.85   0  P      P      10 09 49.9 +0.2
LONY                                 IAmb   IAmb   10 10 23.0
       comp=Z,37nm,0.7s
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LONY	Lake Ozonia	52.85	0	P	P	10 09 49.9	+0.2
	baz=180,SNR=16						
H62A	Milan	52.92	3	P	P	10 09 50.7	+0.5
JFWS	Jewell Farm	53.00	346	P	P	10 09 49.3	-1.5
JFWS				pP	pP	10 10 22.1	+0.6
JFWS				IAmb	IAmb	10 10 22.9	
	comp=Z,33nm,0.7s						
JFWS	Jewell Farm	53.00	346	P	P	10 09 49.3	-1.5
JFWS				*PP	pP	10 10 22.1	+0.6
JFWS				pmax	pmax		
	comp=Z,33nm,0.7s						
JFWS	Jewell Farm	53.00	346	P	P	10 09 49.5	-1.4
	baz=161,SNR=8.9						
JFWS	Jewell Farm	53.00	346	P	P	10 09 49.2	-1.7
	baz=161,SNR=8.9						
TUC	Tucson	53.01	322	P	P	10 09 51.6	+0.4
TUC				IAmb	IAmb	10 09 52.8	
	comp=Z,52nm,1.9s						
TUC	Tucson	53.01	322	P	P	10 09 51.6	+0.4
TUC				pmax	pmax		
	comp=Z,52nm,2.0s						
TUC	Tucson	53.01	322	P	P	10 09 51.4	+0.2
	baz=134						
TUC	Tucson	53.01	322	P	P	10 09 51.6	+0.4
BMNY	Brushton-Moira	53.08	0	P	P	10 09 51.7	+0.4
	baz=180,SNR=17						
FRNY	Flat Rock	53.08	1	P	P	10 09 51.8	+0.4
FRNY				pP	pP	10 10 22.9	+0.9
FRNY				IAmb	IAmb	10 10 25.6	
	comp=Z,52nm,1.0s						
FRNY	Flat Rock	53.08	1	P	P	10 09 51.9	+0.5
	baz=182,SNR=22						
T25A	Trinidad	53.09	331	P	P	10 09 51.8	-0.1
T25A				IAmb	IAmb	10 09 54.0	
	comp=Z,51nm,1.1s						
T25A				pP	pP	10 10 23.6	+1.1
T25A	Trinidad	53.09	331	P	P	10 09 52.5	+0.6
	baz=143,SNR=15						
SADO	Sadowa	53.13	356	P	P	10 09 50.7	-1.0
	comp=Z,19nm,0.6s,baz=196,slow=7.0,SNR=23						
SADO				pP	pP	10 10 23.1	+0.7
	comp=Z,41nm,0.8s,baz=190,slow=7.0,SNR=11						
	comp=Z,19nm,0.6s						
SADO	Sadowa	53.13	356	P	P	10 09 50.7	-1.0
SADO				pP	pP	10 10 22.1	-0.4
SADO				IAmb	IAmb	10 10 24.0	
	comp=Z,62nm,1.1s						
N33B	J Bar K, Exete	53.17	339	P	P	10 09 51.9	-0.2
	baz=152,SNR=5.9						
N33A	J Bar K, Exete	53.17	339	P	P	10 09 51.3	-0.9
N33A					pP	10 10 23.5	+0.7
K38A	Parkersburg	53.41	344	P	P	10 09 52.2	-1.6
K38A					pP	10 10 24.6	+0.1
K38A				IAmb	IAmb	10 10 25.5	
	comp=Z,24nm,1.0s						
K38A	Parkersburg	53.41	344	P	P	10 09 52.3	-1.5
	baz=158,SNR=5.0						
G62A	West of Eustis	53.60	4	P	P	10 09 54.9	-0.3
G62A				IAmb	IAmb	10 10 28.9	
	comp=Z,47nm,1.1s						
G62A	West of Eustis	53.60	4	P	P	10 09 56.1	+0.9
	baz=185,SNR=9.1						
G62A				P	P	10 09 56.1	+0.9
	baz=185,SNR=9.1						
I42A	Draeger Farm,	53.63	348	P	P	10 09 54.1	-1.3
I42A				pP	pP	10 10 26.6	+0.5
I42A	Draeger Farm,	53.63	348	P	P	10 09 54.3	-1.1
	baz=163,SNR=30						
PKME	Peaks-Kenny Pk	53.74	5	P	P	10 09 56.6	+0.4
	baz=187						
PKME	Peaks-Kenny Pk	53.74	5	P	P	10 09 56.4	+0.2
	baz=187						
MNTQ	Montreal, Queb	53.75	1	P	P	10 09 56.6	+0.4
KSCO	Kaye Shedlock’	53.77	333	P	P	10 09 57.1	+0.4
	baz=145,SNR=21						
KSCO	Kaye Shedlock’	53.77	333	P	P	10 09 56.9	+0.2
	baz=145,SNR=21						
G65A	Princeton	53.85	7	IAmb	IAmb	10 09 58.3	
	comp=Z,21nm,0.9s						
G65A	Princeton	53.85	7	P	P	10 09 57.7	+0.8
	baz=189,SNR=5.4						
G65A				P	P	10 09 57.7	+0.8
	baz=189,SNR=5.4						
H43A	Windswept, Lux	53.95	349	P	P	10 09 56.4	-1.3
H43A				pP	pP	10 10 28.7	+0.2
H43A				IAmb	IAmb	10 10 29.4	
	comp=Z,51nm,1.0s						
H43A	Windswept, Lux	53.95	349	P	P	10 09 56.5	-1.2
	baz=164,SNR=9.1						
BGNE	Belgrade	54.01	339	P	P	10 09 58.0	-0.3
BGNE	Belgrade	54.01	339	P	P	10 09 57.1	-1.1
	baz=151,SNR=10						
BGNE	Belgrade	54.01	339	P	P	10 09 57.7	-0.6
	baz=151,SNR=10						
I40A	Norwalk	54.02	346	P	P	10 09 57.1	-1.2
I40A					pP	10 10 29.2	+0.2
I40A	Norwalk	54.02	346	P	P	10 09 57.0	-1.2
	baz=161,SNR=9.1						
214A	Organ Pipe Nat	54.04	320	P	P	10 09 59.3	+0.6
214A				IAmb	IAmb	10 10 00.6	
	comp=Z,48nm,1.2s						
214A	Organ Pipe Nat	54.04	320	P	P	10 09 59.5	+0.8
	baz=132,SNR=17						
X18A	Snowflake	54.07	324	P	P	10 09 59.5	+0.4
X18A				IAmb	IAmb	10 10 00.9	
	comp=Z,35nm,1.3s						
SDCO	Great Sand Dun	54.10	330	P	P	10 09 59.7	+0.4
SDCO				IAmb	IAmb	10 10 00.8	
	comp=Z,36nm,0.8s						
SDCO	Great Sand Dun	54.10	330	P	P	10 09 59.7	+0.4
	baz=142						
SDCO	Great Sand Dun	54.10	330	P	P	10 09 59.8	+0.5
	baz=142						
G45A	Suttons Bay	54.13	351	P	P	10 09 57.4	-1.7
G45A				pP	pP	10 10 29.9	+0.1
G45A	Suttons Bay	54.13	351	P	P	10 09 58.5	-0.5
	baz=167,SNR=5.9						
G45A				P	P	10 09 58.5	-0.5
	baz=167,SNR=5.9						
W18A	Petrified Fore	54.37	325	P	P	10 10 01.5	+0.3
W18A				IAmb	IAmb	10 10 03.0	
	comp=Z,31nm,1.0s						
W18A					pP	10 10 33.1	+1.1
W18A	Petrified Fore	54.37	325	P	P	10 10 01.7	+0.5
	baz=136,SNR=7.0						
F64A	Sherman	54.43	6	P	P	10 10 01.6	+0.5
F64A				pP	pP	10 10 32.8	+0.9
TRQ	Mont Tremblant	54.46	0	P	P	10 10 01.4	0.0
TRQ				pP	pP	10 10 31.5	-0.7
TRQ				IAmb	IAmb	10 10 34.5	
	comp=Z,34nm,0.9s						
S22A	4UR Ranch, Cre	54.76	329	P	P	10 10 04.3	+0.2
S22A	4UR Ranch, Cre	54.76	329	P	P	10 10 04.3	+0.2
	baz=140,SNR=18						
SFX	San Felipe	54.78	318	P	P	10 10 03.4	-0.6
SFX				IAmb	IAmb	10 10 05.6	
	comp=Z,25nm,1.0s						
SFX				pP	pP	10 10 35.4	+0.5
I37A	Lemond, Waseca	54.84	344	P	P	10 10 02.7	-1.5
I37A				pP	pP	10 10 33.9	-1.1
I37A				IAmb	IAmb	10 11 05.8	
	comp=Z,22nm,0.9s						
I37B	Waseca	54.84	344	P	P	10 10 02.9	-1.4
	baz=158						
LMN	Caledonia Moun	54.85	9	P	P	10 10 03.1	-1.1
LMN					pP	10 10 33.9	-1.2
LMN				IAmb	IAmb	10 10 37.3	
	comp=Z,29nm,1.1s						
Q24A	Divide	54.89	331	P	P	10 10 05.0	-0.1
Q24A					pP	10 10 33.3	-2.6
Q24A	Divide	54.89	331	P	P	10 10 04.9	-0.1
	baz=143						
HOPE	Hope Point	55.08	154	P	P	10 10 06.5	+0.8
HOPE	Hope Point	55.08	154	P	P	10 10 06.5	+0.8
HOPE				pmax	pmax		
	comp=Z,53nm,0.8s						
HOPE	Hope Point	55.08	154	P	P	10 10 06.1	+0.4
OGNE	Ogallala	55.12	335	P	P	10 10 05.5	-0.8
OGNE				IAmb	IAmb	10 10 40.6	
	comp=Z,56nm,1.2s						
OGNE	Ogallala	55.12	335	P	P	10 10 05.8	-0.5
	baz=147,SNR=9.2						
OGNE	Ogallala	55.12	335	P	P	10 10 06.6	+0.3
	baz=147,SNR=9.2						
113A	Mohawk Valley,	55.18	320	P	P	10 10 06.4	-0.4
MVCO	Mesa Verde	55.22	328	P	P	10 10 06.5	-0.9
MVCO	Mesa Verde	55.22	328	P	P	10 10 07.3	0.0
	baz=138,SNR=6.8						
G40A	Rib Lake	55.22	347	P	P	10 10 05.6	-1.3
G40A				pP	pP	10 10 37.2	-0.6
G40A				IAmb	IAmb	10 10 39.0	
	comp=Z,25nm,0.9s						
G40A	Rib Lake	55.22	347	P	P	10 10 05.7	-1.3
	baz=162,SNR=13						
E46A	Sault Ste Mari	55.23	352	P	P	10 10 05.2	-1.7
E46A				pP	pP	10 10 37.8	0.0
E46A	Sault Ste Mari	55.23	352	P	P	10 10 05.2	-1.7
	baz=169,SNR=13						
F42A	Maple Grove Fa	55.26	349	P	P	10 10 05.9	-1.3
F42A					pP	10 10 38.7	+0.6
F42A				IAmb	IAmb	10 10 39.1	
	comp=Z,72nm,1.2s						
K31A	O'Neill	55.29	339	P	P	10 10 06.9	-0.6
K31A					pP	10 10 37.5	-0.9
K31A	O'Neill	55.29	339	P	P	10 10 07.4	-0.1
	baz=151,SNR=10						
Y14A	Wickenburg	55.48	322	P	P	10 10 09.0	-0.1
ECSD	EROS Data Cent	55.55	341	P	P	10 10 08.2	-1.1
ECSD				IAmb	IAmb	10 10 09.2	
	comp=Z,42nm,1.4s						
ECSD				pP	pP	10 10 39.9	-0.3
ECSD	EROS Data Cent	55.55	341	P	P	10 10 08.2	-1.1
	baz=154,SNR=22						
ECSD	EROS Data Cent	55.55	341	P	P	10 10 08.0	-1.3
	baz=154,SNR=22						
D62A	Allapoint, All	55.57	5	P	P	10 10 09.5	+0.1
D62A				IAmb	IAmb	10 10 10.7	
	comp=Z,27nm,1.1s						
D62A					pP	10 10 40.6	+0.4
D62A	Allapoint, All	55.57	5	P	P	10 10 09.4	+0.1
	baz=187,SNR=6.6						
D62A				P	P	10 10 09.4	+0.1
	baz=187,SNR=6.6						
WUAZ	Wupatki	55.59	324	P	P	10 10 09.9	-0.1
WUAZ				IAmb	IAmb	10 10 11.9	
	comp=Z,39nm,1.1s						
WUAZ				pP	pP	10 10 39.7	-1.2
WUAZ	Wupatki	55.59	324	P	P	10 10 10.7	+0.7
	baz=135,SNR=25						
E43A	Lone Tree Farm	55.65	350	P	P	10 10 08.7	-1.3
E43A				pP	pP	10 10 40.3	-0.6
E43A				IAmb	IAmb	10 10 41.6	
	comp=Z,50nm,0.9s						
E43A	Lone Tree Farm	55.65	350	P	P	10 10 08.5	-1.4
	baz=166,SNR=19						
LATQ	La Tuque	55.65	2	P	P	10 10 09.8	-0.1
LATQ					pP	10 10 39.7	-1.2
ISCO	Idaho Springs	55.77	332	P	P	10 10 10.8	-0.5
ISCO				PcP	PcP	10 11 09.3	+0.4
ISCO	Idaho Springs	55.77	332	P	P	10 10 10.8	-0.5
ISCO						10 11 09.3	
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ISCO	Idaho Springs	55.77	332	P	P	10 10 11.4	+0.1
	baz=142,SNR=17						
ISCO	Idaho Springs	55.77	332	P	P	10 10 11.5	+0.2
	baz=142,SNR=17						
COWI	Conover	55.79	348	P	P	10 10 09.7	-1.3
COWI				pP	pP	10 10 42.3	+0.4
COWI				IAmb	IAmb	10 10 43.2	
	comp=Z,39nm,0.8s						
COWI	Conover	55.79	348	P	P	10 10 10.0	-0.9
	baz=163						
SPMN	Marine on St.	55.81	345	P	P	10 10 09.8	-1.2
SPMN				pP	pP	10 10 42.3	+0.3
SPMN	Marine on St.	55.81	345	P	P	10 10 09.9	-1.2
	baz=158,SNR=23						
SPMN	Marine on St.	55.81	345	P	P	10 10 09.8	-1.2
	baz=158,SNR=23						
SMCO	Snowmass	55.94	330	P	P	10 10 13.5	+0.9
GLA	Glamis	56.04	320	P	P	10 10 13.2	+0.2
GLA	Glamis	56.04	320	P	P	10 10 13.2	+0.2
GLA				pmax	pmax		
	comp=Z,12nm,0.9s						
GLA	Glamis	56.04	320	P	P	10 10 13.2	+0.2
	baz=130						
BATG	Bathurst New B	56.08	7	P	P	10 10 13.3	+0.4
BATG				IAmb	IAmb	10 10 14.9	
	comp=Z,43nm,1.5s						
BLYC	Blythe	56.30	320	P	P	10 10 14.8	0.0
VLDQ	Val d'Or	56.39	358	P	P	10 10 14.7	-0.4
VLDQ				pP	pP	10 10 46.8	+0.7
VLDQ				IAmb	IAmb	10 10 48.3	
	comp=Z,29nm,0.8s						
PDMCI	Parker Dam,Lak	56.43	321	P	P	10 10 15.9	+0.3
	baz=132						
YUH	Yuha Desert	56.50	318	P	P	10 10 17.4	+1.2
F36A	Milaca	56.59	345	P	P	10 10 15.5	-1.2
F36A				pP	pP	10 10 48.6	+0.9
F36A	Milaca	56.59	345	P	P	10 10 15.4	-1.2
	baz=158,SNR=58						
D41A	Chassel	56.60	349	P	P	10 10 15.6	-1.1
D41A				pP	pP	10 10 48.5	+0.8
D41A	Chassel	56.60	349	P	P	10 10 15.3	-1.4
	baz=164,SNR=13						
SWSC	Sam W. Stewart	56.60	319	P	P	10 10 17.6	+0.6
	baz=129						
IKP	In-Ko-Pah, Jac	56.62	318	P	P	10 10 17.5	+0.2
	baz=129						
PMSA	Palmer Station	56.73	174	P	P	10 10 17.6	+0.2
PMSA				IAmb	IAmb	10 10 20.5	
	comp=Z,36nm,1.0s						
PMSA	Palmer Station	56.73	174	*e*P	P	10 10 19.7	+2.3
U15A	North Rim	56.76	324	P	P	10 10 18.7	+0.3
U15A				IAmb	IAmb	10 10 20.4	
	comp=Z,20nm,1.0s						
N23A	Red Feather La	56.79	332	P	P	10 10 17.9	-0.6
N23A	Red Feather La	56.79	332	P	P	10 10 18.6	+0.1
	baz=143,SNR=10						
E38A	The Farm, Brul	56.80	346	P	P	10 10 16.9	-1.1
E38A					pP	10 10 49.6	+0.5
E38A	The Farm, Brul	56.80	346	P	P	10 10 17.2	-0.8
	baz=160,SNR=18						
W13A	Hualapai Mount	56.80	322	P	P	10 10 17.5	-1.1
W13A				pP	pP	10 10 48.7	-1.0
BC3	Big Chuckawall	56.83	320	P	P	10 10 19.5	+0.8
	baz=130,SNR=15						
PHWY	Pilot Hill	56.90	333	P	P	10 10 18.9	-0.4
PHWY				IAmb	IAmb	10 10 20.5	
	comp=Z,37nm,1.4s						
SUSD	Miller	56.95	340	P	P	10 10 18.4	-0.8
SUSD					pP	10 10 50.2	-0.1
SUSD	Miller	56.95	340	P	P	10 10 18.7	-0.5
	baz=151,SNR=16						
SUSD	Miller	56.95	340	P	P	10 10 18.5	-0.8
	baz=151,SNR=16						
IRM	Iron Mountain	56.96	320	P	P	10 10 20.4	+0.9
	baz=130,SNR=24						
MONP2	Monument Peak	56.98	318	P	P	10 10 19.9	0.0
	baz=129						
NEE2	Needles Airpor	57.03	321	P	P	10 10 20.6	+0.7
	baz=131						
O20A	White River Ci	57.30	330	P	P	10 10 21.4	-0.6
O20A				IAmb	IAmb	10 10 23.4	
	comp=Z,25nm,1.0s						
O20A	White River Ci	57.30	330	P	P	10 10 22.3	+0.3
	baz=140,SNR=26						
F33A	5 Mile Ranch,	57.34	342	P	P	10 10 21.3	-0.7
F33A					pP	10 10 53.8	+0.8
F33A				IAmb	IAmb	10 10 54.6	
	comp=Z,20nm,0.9s						
F33A	5 Mile Ranch,	57.34	342	P	P	10 10 21.1	-0.8
	baz=155						
BELC	Belle Mtn. Jos	57.40	320	P	P	10 10 23.4	+0.6
	baz=130,SNR=13						
109C	Camp Elliot, M	57.42	318	P	P	10 10 23.6	+0.8
109C				IAmb	IAmb	10 10 24.5	
	comp=Z,25nm,1.2s						
109C	Camp Elliot, M	57.42	318	P	P	10 10 23.3	+0.6
	baz=128						
TPFO	Pinon Flats	57.45	319	P	P	10 10 23.7	+0.6
	baz=129,SNR=8.2						
PFO	Pinyon Flats O	57.45	319	P	P	10 10 24.1	+1.0
	comp=Z,14nm,1.1s,baz=126,slow=5.9,SNR=12						
PFO				pP	pP	10 10 55.4	+1.2
	comp=Z,5.5nm,0.9s,baz=181,slow=9.2,SNR=3.4						
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	57.45	319	P	P	10 10 21.9	-1.2
PFO				IAmb	IAmb	10 10 25.0	
	comp=Z,22nm,1.1s						
PFO	Pinyon Flats O	57.45	319	P	P	10 10 23.7	+0.6
	baz=129,SNR=8.4						
PFO	Pinyon Flats O	57.45	319	P	P	10 10 23.9	+0.8
PFO				pP	pP	10 10 56.5	+2.3
PFO				pwP	sP	10 11 02.4	-6.2
GMRC	Granite Mounta	57.69	321	P	P	10 10 25.5	+0.8
	baz=130,SNR=12						
SRU	San Rafael Swe	57.70	328	P	P	10 10 24.8	0.0
SRU	San Rafael Swe	57.70	328	P	P	10 10 24.8	0.0
SRU				pmax	pmax		
	comp=Z,16nm,0.9s						
LCMT	Little Creek M	57.72	324	P	P	10 10 25.2	+0.3
MTPU	Mount Pierson	57.83	326	P	P	10 10 26.4	+0.4
MURC	Murrieta	57.92	319	P	P	10 10 27.0	+0.7
	baz=128,SNR=5.2						
P18A	Preston Nutter	57.93	328	P	P	10 10 26.6	0.0
RWWY	Rawlins	58.01	332	P	P	10 10 26.4	-0.6
RWWY				IAmb	IAmb	10 10 28.5	
	comp=Z,64nm,1.4s						
SZCU	Shurtz Canyon	58.03	325	P	P	10 10 26.9	-0.2
EYMN	Ely	58.05	347	P	P	10 10 25.3	-1.5
EYMN				pP	pP	10 10 58.0	0.0
EYMN	Ely	58.05	347	P	P	10 10 25.5	-1.3
	baz=161,SNR=31						
EYMN	Ely	58.05	347	P	P	10 10 25.3	-1.5
	baz=161,SNR=31						
P17A	Butcher Ranch,	58.08	328	P	P	10 10 27.6	+0.2
P17A				IAmb	IAmb	10 10 28.6	
	comp=Z,18nm,0.9s						
ELS	Elsinore Mount	58.10	318	P	P	10 10 27.1	-0.6
HEC	Hector,Ludlow	58.14	320	P	P	10 10 28.7	+0.9
	baz=130,SNR=5.4						
CCUT	Cedar City	58.16	325	P	P	10 10 28.6	+0.6
BBRC	Big Bear Solar	58.16	319	P	P	10 10 29.0	+0.8
	baz=129,SNR=8.7						
MSU	Marysvale	58.16	326	P	P	10 10 28.7	+0.6
MSU	Marysvale	58.16	326	P	P	10 10 28.7	+0.6
TMUT	Trail Mountain	58.20	327	P	P	10 10 27.6	-0.9
TUQ	Turquoise Moun	58.27	321	P	P	10 10 29.2	+0.4
	baz=130						
RDMU	Red Mountain	58.29	329	P	P	10 10 28.5	-0.5
RDMU				IAmb	IAmb	10 10 29.9	
	comp=Z,26nm,0.7s						
RDMU				pP	pP	10 10 58.4	-1.7
TCRU	Three Creeks R	58.38	326	P	P	10 10 29.6	0.0
SCI2	San Clemente I	58.44	317	P	P	10 10 30.5	+0.7
	baz=127						
K22A	Casper	58.45	333	P	P	10 10 29.3	-0.6
K22A				IAmb	IAmb	10 10 31.1	
	comp=Z,27nm,0.9s						
K22A				pP	pP	10 11 01.6	+0.4
K22A	Casper	58.45	333	P	P	10 10 30.2	+0.2
	baz=143,SNR=17						
K22A	Casper	58.45	333	P	P	10 10 30.2	+0.2
	baz=143,SNR=17						
SHPR	Sheep Range	58.51	322	P	P	10 10 30.2	-0.2
SHPR				IAmb	IAmb	10 10 32.4	
	comp=Z,34nm,1.5s						
RSSD	Black Hills	58.58	336	P	P	10 10 31.1	+0.2
RSSD				IAmb	IAmb	10 10 32.4	
	comp=Z,27nm,1.1s						
RSSD	Black Hills	58.58	336	P	P	10 10 31.1	+0.2
RSSD				pmax	pmax		
	comp=Z,27nm,1.1s						
RSSD	Black Hills	58.58	336	P	P	10 10 31.3	+0.5
	baz=146,SNR=18						
RSSD	Black Hills	58.58	336	P	P	10 10 31.0	+0.2
	baz=146						
RSSD	Black Hills	58.58	336	P	P	10 10 31.2	+0.2
RSSD				x	x	10 10 54.7	
RRX	Edison Barstow	58.59	320	P	P	10 10 31.9	+1.0
	baz=129						
CIS	Catalina Islan	58.61	318	P	P	10 10 31.5	+0.4
	baz=127						
BFSC	Mount Baldy Ra	58.62	319	P	P	10 10 31.5	+0.2
	baz=128						
FMP	Fort Macarthur	58.72	318	P	P	10 10 32.5	+0.7
	baz=128						
D32A	Dogwood Acres,	58.73	343	P	P	10 10 31.3	-0.3
D32A				IAmb	IAmb	10 10 31.8	
	comp=Z,39nm,0.8s						
D32B	Dogwood Acres,	58.73	343	P	P	10 10 31.2	-0.4
	baz=154						
GSC	Goldstone, Bar	58.74	320	P	P	10 10 31.9	-0.1
GSC				IAmb	IAmb	10 10 33.9	
	comp=Z,46nm,1.7s						
GSC	Goldstone, Bar	58.74	320	P	P	10 10 31.9	-0.1
GSC				pmax	pmax		
	comp=Z,45nm,1.7s						
GSC	Goldstone, Bar	58.74	320	P	P	10 10 32.5	+0.4
	baz=130,SNR=7.9						
SHOC	Shoshone, Teco	58.79	321	P	P	10 10 32.6	+0.3
	baz=130,SNR=6.0						
PASC	Pasadena Art C	58.92	319	P	P	10 10 32.6	-0.6
PASC				IAmb	IAmb	10 10 35.2	
	comp=Z,31nm,1.4s						
MPU	Maple Canyon	58.95	328	P	P	10 10 33.3	-0.2
MPU					pP	10 11 02.0	-2.8
B35A	Bob, Littlefor	58.96	346	P	P	10 10 31.9	-1.2
B35A				pP	pP	10 11 04.4	0.0
B35A	Bob, Littlefor	58.96	346	P	P	10 10 32.0	-1.2
	baz=158,SNR=35						
PRN	Pahroc Range	59.04	323	P	P	10 10 35.3	+1.2
DECC	Green Verdugo	59.07	319	P	P	10 10 35.1	+0.9
	baz=128						
PSUT	Pine Spring	59.11	325	P	P	10 10 35.0	+0.3
PSUT				IAmb	IAmb	10 10 36.4	
	comp=Z,18nm,0.8s						
NLU	North Lily Min	59.14	327	P	P	10 10 35.3	+0.5
QSM	Queen of Sheba	59.20	321	P	P	10 10 35.1	0.0
QSM					pP	10 11 04.9	-1.5
GWY	Greenwater Val	59.22	321	P	P	10 10 35.2	-0.2
EDW2	Edwards Air Fo	59.23	319	P	P	10 10 35.6	+0.2
	baz=128						
JLU	Jordanelle	59.27	328	P	P	10 10 35.7	-0.1
JLU				IAmb	IAmb	10 10 37.2	
	comp=Z,16nm,0.8s						
LRMC	Laurel Mtn Rad	59.41	320	P	P	10 10 37.1	+0.5
	baz=129,SNR=5.9						
E28A	Huff	59.41	340	P	P	10 10 36.4	0.0
E28A				pP	pP	10 11 08.4	+0.7
E28A	Huff	59.41	340	P	P	10 10 36.7	+0.4
	baz=150,SNR=12						
CCAC	Calif City Air	59.42	320	P	P	10 10 36.5	-0.1
CCAC				IAmb	IAmb	10 10 37.8	
	comp=Z,12nm,0.7s						
AGMN	Agassiz Nation	59.46	344	P	P	10 10 35.9	-0.7
AGMN				pP	pP	10 11 08.5	+0.7
AGMN				IAmb	IAmb	10 11 09.7	
	comp=Z,37nm,0.9s						
AGMN	Agassiz Nation	59.46	344	P	P	10 10 35.9	-0.7
	baz=156,SNR=29						
AGMN	Agassiz Nation	59.46	344	P	P	10 10 35.8	-0.7
	baz=156,SNR=29						
TPNV	Topopah Spring	59.46	322	P	P	10 10 37.5	+0.5
TPNV				IAmb	IAmb	10 10 39.0	
	comp=Z,21nm,0.9s						
TPNV	Topopah Spring	59.46	322	P	P	10 10 37.5	+0.5
TPNV				pmax	pmax		
	comp=Z,21nm,1.0s						
TPNV	Topopah Spring	59.46	322	P	P	10 10 38.0	+0.9
	baz=131,SNR=27						
CTU	Camp Tracy	59.50	328	P	P	10 10 37.4	+0.1
DRLN	Deer Lake	59.51	13	pP	pP	10 11 07.7	-0.5
FURC	Furnace Creek,	59.52	321	P	P	10 10 38.0	+0.8
	baz=130,SNR=18						
OSI	Osito Audit: C	59.55	319	P	P	10 10 39.0	+1.5
	baz=128						
S11A	Rachel	59.61	323	P	P	10 10 39.6	+1.6
S11A				IAmb	IAmb	10 11 25.4	
	comp=Z,18nm,0.9s						
DUG	Dugway, Tooele	59.70	327	P	P	10 10 39.4	+0.7
DUG				IAmb	IAmb	10 10 40.3	
	comp=Z,28nm,0.8s						
DUG	Dugway, Tooele	59.70	327	P	P	10 10 39.4	+0.7
DUG				pmax	pmax		
	comp=Z,28nm,0.9s						
DUG	Dugway, Tooele	59.70	327	P	P	10 10 39.3	+0.7
	baz=135,SNR=40						
SCZ2	Santa Cruz Isl	59.78	318	P	P	10 10 39.3	+0.2
	baz=126						
ARVC	Arvin	59.93	319	P	P	10 10 40.7	+0.7
	baz=128						
BW06	Boulder Array	59.94	331	P	P	10 10 39.2	-1.1
BW06	Boulder Array	59.94	331	P	P	10 10 39.7	-0.6

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      baz=140,SNR=21
PD31  Pinedale Array   59.94 331  P      P      10 10 39.8 -0.6
PDAR  Pinedale Array   59.94 331  P      P      10 10 39.7 -0.6
      comp=Z,4.4nm,0.7s,baz=146,slow=8.2,SNR=50
PDAR                              pP     pP     10 11 12.7 +1.0
      comp=Z,5.7nm,0.9s,baz=153,slow=8.2,SNR=4.5
      comp=Z,4.4nm,0.7s
R11A  Troy Canyon, C   59.98 324  P      P      10 10 41.1 +0.5
R11A  Troy Canyon, C   59.98 324  P      P      10 10 41.5 +0.9
      baz=132,SNR=39
ISA   Isabella, Lake   60.03 320  P      P      10 10 41.4 +0.6
ISA   Isabella, Lake   60.03 320  P      P      10 10 41.4 +0.6
ISA                               pmax   pmax
      comp=Z,8.0nm,0.8s
ISA   Isabella, Lake   60.03 320  P      P      10 10 41.5 +0.6
      baz=128,SNR=6.0
HWUT  Hardware Ranch   60.07 329  P      P      10 10 40.7 -0.4
SBC   Santa Barbara    60.09 318  P      P      10 10 43.0 +1.8
      baz=127
MDND  Maddock          60.16 341  P      P      10 10 41.4  0.0
MDND  Maddock          60.16 341  P      P      10 10 41.8 +0.4
      baz=152
MDND  Maddock          60.16 341  P      P      10 10 41.6 +0.2
      baz=152,SNR=28
GRAC  Grapevine Rang   60.17 322  P      P      10 10 42.5 +0.8
GRAC                              IAmb   IAmb   10 10 43.8
      comp=Z,70nm,1.8s
GRAC  Grapevine Rang   60.17 322  P      P      10 10 42.5 +0.8
      baz=130,SNR=7.8
CWC   Cottonwood Cre   60.26 321  P      P      10 10 43.0 +0.5
      baz=129
BGU   Big Grassy Mou   60.34 328  P      P      10 10 43.0 +0.1
PKM   Mcpherson Peak   60.43 318  P      P      10 10 43.7  0.0
      baz=127
LCH   Last Change Ra   60.49 322  P      P      10 10 45.0 +0.9
LCH                               IAmb   IAmb   10 10 45.8
      comp=Z,48nm,1.9s
VES   Vestal, Richgr   60.53 320  P      P      10 10 44.6 +0.5
      baz=128,SNR=6.3
AHID  Auburn Hatcher   60.69 330  P      P      10 10 44.9 -0.5
AHID                              IAmb   IAmb   10 10 46.0
      comp=Z,17nm,0.8s
TIN   Tinemaha, Big    60.74 321  P      P      10 10 46.5 +0.8
      baz=129
TPH   Tonopah          60.78 323  P      P      10 10 46.9 +0.9
TPH   Tonopah          60.78 323  P      P      10 10 46.9 +0.9
TPH                               pmax   pmax
      comp=Z,72nm,1.1s
SMMC  Simmler          60.80 319  P      P      10 10 46.8 +0.8
      baz=127
HVU   Hansel Valley    60.82 328  P      P      10 10 46.3 +0.1
HVU   Hansel Valley    60.82 328  P      P      10 10 46.3 +0.1
HVU                               pmax   pmax
      comp=Z,15nm,0.9s
VOG   Valley Oaks Go   61.01 320  P      P      10 10 47.9 +0.6
      baz=128
REDW  Red Top Meadow   61.02 331  P      P      10 10 47.4 -0.2
ECR   Eagle Creek      61.04 330  P      P      10 10 47.7  0.0
SNOW  Snow King Moun   61.04 331  P      P      10 10 46.8 -1.0
SNOW                              IAmb   IAmb   10 10 50.6
      comp=Z,12nm,0.7s
LOHW  Long Hollow      61.08 331  P      P      10 10 47.2 -0.8
TPAW  Teton Pass       61.16 331  P      P      10 10 48.4 -0.2
PAGB  Antelope Grade   61.22 319  P      P      10 10 49.0 +0.2
PAGB                              IAmb   IAmb   10 10 50.6
      comp=Z,25nm,1.1s
ULM   Lac du Bonnet    61.24 345  P      P      10 10 47.5 -1.2
      comp=Z,41nm,0.9s,baz=155,slow=6.9,SNR=40
ULM                               pP     pP     10 11 20.9 +0.7
      comp=Z,32nm,0.7s,baz=152,slow=6.2,SNR=9.7
      comp=Z,41nm,0.9s
ULM   Lac du Bonnet    61.24 345  P      P      10 10 47.5 -1.2
ULM                                      pP     10 11 20.2  0.0
MOOW  Moose Ponds      61.25 331  P      P      10 10 49.0 -0.2
ELK   Elko             61.41 326  P      P      10 10 50.4 +0.1
      comp=Z,6.4nm,1.0s,baz=147,slow=7.4,SNR=17
ELK                               LR     LR     10 40 12.6
      comp=Z,20nm,18.4s,baz=152,slow=38
      comp=Z,6.4nm,1.0s
ELK   Elko             61.41 326  P      P      10 10 50.4 +0.1
MLAC  Mammoth, Mammo61.48 321     P      P      10 10 51.2 +0.4
      baz=129
FLWY  Flagg Ranch      61.48 331  P      P      10 10 51.1 +0.4
FLWY                              IAmb   IAmb   10 10 52.2
      comp=Z,33nm,0.9s
NV11  Mina Array Sit   61.57 322  P      P      10 10 50.7 -0.6
LAO   LASA Array       61.57 336  P      P      10 10 50.8 -0.3
LAO   LASA Array       61.57 336  P      P      10 10 50.6 -0.4
      baz=144
LAO   LASA Array       61.57 336  P      P      10 10 50.7 -0.3
      baz=144,SNR=12
OMMB  Old Mammoth Mi   61.57 321  P      P      10 10 52.2 +0.7
OMMB                              IAmb   IAmb   10 10 53.2
      comp=Z,17nm,0.8s
RLMT  Red Lodge        61.62 333  P      P      10 10 51.5 -0.1
RLMT  Red Lodge        61.62 333  P      P      10 10 51.5 -0.1
      baz=141,SNR=20
MDPB  Devils Postpil   61.63 321  P      P      10 10 52.6 +0.8
NVAR  Mina Array Bea   61.66 322  P      P      10 10 52.6 +0.6
      comp=Z,7.2nm,0.8s,baz=143,slow=7.1,SNR=54
      comp=Z,7.2nm,0.8s
NVAR  Mina Array Bea   61.66 322  P      P      10 10 51.4 -0.6
H17A  Grant Village    61.66 332  P      P      10 10 52.6 +0.6
H17A  Grant Village    61.66 332  P      P      10 10 52.3 +0.4
      baz=139,SNR=12
LHV   Little Huntoon   61.66 322  P      P      10 10 52.3 +0.6
LHV                               IAmb   IAmb   10 10 54.0
      comp=Z,18nm,0.9s
YPP   Pitchstone Pla   61.67 331  P      P      10 10 52.3 +0.2
LKWY  Lake             61.71 332  P      P      10 10 53.2 +0.9
LKWY                              IAmb   IAmb   10 10 54.4
      comp=Z,15nm,0.8s
LKWY  Lake             61.71 332  P      P      10 10 53.2 +0.9
LKWY                              pmax   pmax
      comp=Z,15nm,0.8s
RYN   Ryan             61.91 322  P      P      10 10 53.5 -0.2
KVN   Kaiserville      61.93 323  P      P      10 10 54.0 +0.2
KVN   Kaiserville      61.93 323  P      P      10 10 54.0 +0.2
KVN                               pmax   pmax
      comp=Z,12nm,1.1s
YNR   Norris Junctio   61.95 332  P      P      10 10 53.8  0.0
YMR   Madison River    62.05 332  P      P      10 10 54.9 +0.4
YMR                               IAmb   IAmb   10 10 56.5
      comp=Z,31nm,0.8s
DGMT  Dagmar           62.27 338  P      P      10 10 56.4 +0.7
DGMT                              IAmb   IAmb   10 10 57.3
      comp=Z,44nm,1.1s
DGMT  Dagmar           62.27 338  P      P      10 10 56.3 +0.7
      baz=147
DGMT  Dagmar           62.27 338  P      P      10 10 56.2 +0.6
      baz=147,SNR=9.6
YHL   Hebgen Lake      62.29 332  P      P      10 10 57.3 +1.1
GCMT  Greycliff        62.31 333  P      P      10 10 56.4 +0.3
BMN   Battle Mountai   62.31 325  P      P      10 10 56.4 +0.1
BMN   Battle Mountai   62.31 325  P      P      10 10 56.4 +0.1
BMN                               pmax   pmax
      comp=Z,14nm,0.8s
QLMT  Earthquake Lak   62.39 332  P      P      10 10 57.3 +0.6
YERR  Yerington        62.57 322  P      P      10 10 58.9 +0.8
YERR                              IAmb   IAmb   10 10 59.9
      comp=Z,24nm,1.1s
CMB   Columbia Colle   62.69 321  P      P      10 10 59.3 +0.6
CMB   Columbia Colle   62.69 321  P      P      10 10 59.3 +0.6
CMB                               pmax   pmax
      comp=Z,5.0nm,1.0s
PNTR  Pine Nut         62.86 322  P      P      10 11 01.1 +1.1
PNTR                              IAmb   IAmb   10 11 02.0
      comp=Z,22nm,0.9s
HLID  Hailey           62.94 329  P      P      10 11 00.5 +0.2
HLID  Hailey           62.94 329  P      P      10 11 00.7 +0.3
      baz=135,SNR=29
BCYI  Bear Canyon      62.96 330  P      P      10 11 00.6  0.0
VCNR  Virginia City    63.02 322  P      P      10 11 01.9 +0.9
VCNR                              IAmb   IAmb   10 11 03.0
      comp=Z,26nm,0.9s
BOZ   Bozeman (W)      63.06 332  P      P      10 11 01.3 +0.2
BOZ                               IAmb   IAmb   10 11 37.4
      comp=Z,28nm,1.1s
BOZ   Bozeman (W)      63.06 332  P      P      10 11 01.3 +0.2
BOZ                               pmax   pmax
      comp=Z,28nm,1.1s
BOZ   Bozeman (W)      63.06 332  P      P      10 11 01.3 +0.2
      baz=139,SNR=47
MCMT  McKenzie Canyo   63.07 331  P      P      10 11 01.5 +0.2
EMB   Emerald Bay      63.09 322  P      P      10 11 01.0 -0.5
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PAHR  Pah Rah Range    63.11 323  P      P      10 11 01.7 +0.1
PAHR                              IAmb   IAmb   10 11 03.6
      comp=Z,29nm,1.0s
MPK   Martis Peak      63.25 322  IAmb   IAmb   10 11 04.8
      comp=Z,45nm,1.4s
DLMT  Dillon           63.34 331  P      P      10 11 03.2 +0.2
SCHQ  Schefferville    63.45   5  P      P      10 11 03.0 -0.2
      comp=Z,15nm,0.7s,baz=204,slow=5.4,SNR=19
      comp=Z,15nm,0.7s
SCHQ  Schefferville    63.45   5  P      P      10 11 03.1 -0.2
SCHQ                              pP     pP     10 11 33.0 -1.9
SCHQ                              IAmb   IAmb   10 12 14.7
      comp=Z,20nm,0.7s
MFID  Camas Ranch      63.57 328  P      P      10 11 04.8 +0.4
MFID                              IAmb   IAmb   10 11 06.1
      comp=Z,55nm,0.9s
LRM   Limekiln Ridge   63.61 332  P      P      10 11 04.3 -0.6
BEKR  Beckworth        63.80 322  P      P      10 11 06.3 +0.2
BEKR                              IAmb   IAmb   10 11 07.9
      comp=Z,22nm,1.0s
HRY   Holter Researc   63.99 333  P      P      10 11 07.7 +0.6
EGMT  Eagleton         64.08 335  P      P      10 11 07.8 +0.1
EGMT                              IAmb   IAmb   10 11 08.7
      comp=Z,38nm,1.2s
EGMT                              pP     pP     10 11 40.3 +0.9
EGMT  Eagleton         64.08 335  P      P      10 11 07.7 +0.1
      baz=141,SNR=21
ORV   Oroville         64.31 322  P      P      10 11 10.3 +1.1
ORV                               IAmb   IAmb   10 11 11.3
      comp=Z,46nm,1.1s
ORV                               pP     pP     10 11 41.0  0.0
WVOR  Wild Horse Val   64.43 326  P      P      10 11 09.8 -0.3
WVOR                              pP     PcP    10 11 43.0 -0.4
PLID  Pearl Lake       64.82 329  P      P      10 11 11.5 -1.2
J08A  Circle Bar Ran   64.95 326  P      P      10 11 12.7 -0.7
MOD   Modoc Plateau    65.04 324  P      P      10 11 14.5 +0.4
MOD                               IAmb   IAmb   10 11 15.5
      comp=Z,54nm,1.4s
MSO   Missoula         65.05 332  P      P      10 11 14.5 +0.5
MSO                               IAmb   IAmb   10 11 15.6
      comp=Z,43nm,1.1s
MSO   Missoula         65.05 332  P      P      10 11 14.4 +0.5
      baz=137,SNR=39
BMO   Blue Mountains   65.33 328  P      P      10 11 15.7 -0.1
BMO   Blue Mountains   65.33 328  P      P      10 11 15.7 -0.1
BMO                               pmax   pmax
      comp=Z,6.0nm,0.9s
JTMT  Jette            65.88 332  P      P      10 11 19.7 +0.3
JTMT                              IAmb   IAmb   10 11 21.0
      comp=Z,22nm,0.8s
K05A  Summer Lake      65.90 325  P      P      10 11 20.9 +1.2
K05A                              IAmb   IAmb   10 11 21.8
      comp=Z,47nm,1.0s
I07A  Izee             65.99 326  P      P      10 11 20.8 +0.7
I07A                              IAmb   IAmb   10 11 21.8
      comp=Z,33nm,0.8s
F10A  Beach Ranch, E   66.05 329  P      P      10 11 21.1 +0.6
F10A                              IAmb   IAmb   10 11 22.1
      comp=Z,20nm,0.7s
K04D  Chiloquin, OR    66.33 324  P      P      10 11 22.4 +0.1
      baz=128
YBH   Yreka Blue Hor   66.35 323  P      P      10 11 21.8 -0.7
      comp=Z,10nm,0.8s,baz=127,slow=4.1,SNR=15
      comp=Z,10nm,0.8s
YBH   Yreka Blue Hor   66.35 323  P      P      10 11 21.3 -1.1
L04D  Klamath Falls    66.41 323  P      P      10 11 22.8  0.0
L04D                              IAmb   IAmb   10 11 23.8
      comp=Z,42nm,1.1s
L04D  Klamath Falls    66.41 323  P      P      10 11 22.6 -0.2
      baz=128,SNR=6.7
J05D  Fort Rock, OR    66.44 325  P      P      10 11 23.6 +0.5
      baz=129,SNR=16
KHMM  Horse Mountain   66.46 322  P      P      10 11 23.5 +0.3
KHMM                              IAmb   IAmb   10 11 25.1
      comp=Z,25nm,0.8s
G08A  Pilot Rock       66.49 328  P      P      10 11 22.9 -0.4
PINE  Pine Mountain    66.60 325  P      P      10 11 25.1 +1.0
PINE                              IAmb   IAmb   10 11 27.4
      comp=Z,27nm,0.8s
WALA  Waterton Lakes   66.67 333  P      P      10 11 24.5 +0.1
WALA                              IAmb   IAmb   10 11 25.5
      comp=Z,26nm,0.8s
J04D  Umpqua Nationa   66.92 324  P      P      10 11 26.3 +0.1
J04D                              IAmb   IAmb   10 11 27.5
      comp=Z,45nm,0.8s
J04D  Umpqua Nationa   66.92 324  P      P      10 11 26.3 +0.1
      baz=128,SNR=8.6
L02F  Cave Junction    67.10 323  P      P      10 11 27.6 +0.5
      baz=126
KSXB  Camp Six Broad   67.11 322  P      P      10 11 28.5 +1.2
I05D  Terrebonne, OR   67.17 326  P      P      10 11 28.4 +0.9
      baz=129,SNR=14
E08A  Dider Farm, El   67.34 329  P      P      10 11 28.0 -0.5
F07A  Phinny Hill Vi   67.40 328  P      P      10 11 29.3 +0.5
I04A  Tendick Farm,    67.43 325  P      P      10 11 28.9 -0.3
      baz=128,SNR=6.0
K02D  Willamette Mer   67.50 323  P      P      10 11 30.2 +0.6
      baz=126,SNR=10
DBO   Dodson Butte     67.50 324  P      P      10 11 30.3 +0.6
HAWA  Hanford          67.52 328  P      P      10 11 29.9 +0.3
NEW   Newport          67.58 331  P      P      10 11 30.1  0.0
      comp=Z,10.0nm,0.8s,baz=129,slow=5.4,SNR=19
NEW                               PcP    PcP    10 11 55.1 -1.2
      comp=Z,3.4nm,0.6s,baz=185,slow=5.5,SNR=4.2
      comp=Z,10.0nm,0.8s
NEW   Newport          67.58 331  P      P      10 11 30.1  0.0
NEW   Newport          67.58 331  P      P      10 11 30.0 -0.1
      baz=134,SNR=13
D08A  Wollman Farm,    67.65 329  P      P      10 11 30.6 +0.2
D08A                              PcP    PcP    10 11 55.1 -1.4
G05D  Wamic, OR        67.72 326  P      P      10 11 32.0 +1.0
      baz=129,SNR=6.1
E07A  Sunnyside        67.80 328  P      P      10 11 31.8 +0.4
E07A                              IAmb   IAmb   10 11 33.3
      comp=Z,20nm,0.9s
C09A  Chrisman Ranch   67.83 330  P      P      10 11 31.3 -0.2
C09A                              PcP    PcP    10 11 57.3 +0.1
H04A  Detroit Lake     67.85 326  P      P      10 11 32.2 +0.4
I03D  Drain, OR        67.91 324  P      P      10 11 32.3 +0.2
      baz=127
J01E  Myrtle Point     67.93 323  P      P      10 11 32.9 +0.6
      baz=126
HOOD  Mount Hood Mea   67.96 326  IAmb   IAmb   10 11 37.5
      comp=Z,21nm,0.8s
BUCK  Buck Mountain    68.01 325  P      P      10 11 33.2 +0.4
BUCK                              IAmb   IAmb   10 11 33.9
      comp=Z,32nm,0.8s
H04D  Lebanon          68.06 325  P      P      10 11 33.5 +0.4
      baz=128
F05D  White Salmon     68.21 327  P      P      10 11 34.5 +0.6
      baz=129
COR   Corvallis        68.42 325  P      P      10 11 36.1 +0.9
I02E  Swisshome, OR    68.44 324  P      P      10 11 36.0 +0.6
      baz=127
PMOZ  Porto Moniz, M   68.61  50  eP     P      10 11 41.3 +4.4
PMOZ                              epP    pP     10 12 09.7 +0.7
LTY   Liberty          68.68 328  P      P      10 11 37.0 +0.1
B08A  Colville Reser   68.73 330  P      P      10 11 36.8 -0.4
B08A                              PcP    PcP    10 12 00.7 -0.3
F04A  Amboy            68.76 327  P      P      10 11 37.5 +0.2
F04A                              IAmb   IAmb   10 11 38.6
      comp=Z,23nm,0.9s
FCC   Fort Churchill   68.77 349  P      P      10 11 36.9 -0.2
FCC                               IAmb   IAmb   10 11 37.6
      comp=Z,65nm,1.2s
FCC   Fort Churchill   68.77 349  P      P      10 11 36.9 -0.2
FCC                               pmax   pmax
      comp=Z,65nm,1.3s
G03D  McMinnville, O   68.78 326  P      P      10 11 38.1 +0.6
      baz=128
F04D  Rainier, OR      69.18 326  P      P      10 11 40.8 +0.9
      baz=128
E04D  Cinebar          69.23 327  P      P      10 11 40.4 +0.2
      baz=129
D05A  Enumclaw         69.32 328  P      P      10 11 41.0 +0.2
D05A                              IAmb   IAmb   10 11 42.2
      comp=Z,40nm,0.9s
EDM   Edmonton         69.55 337  P      P      10 11 41.7 -0.4
EDM   Edmonton         69.55 337  P      P      10 11 41.7 -0.4
EDM                               pmax   pmax
      comp=Z,74nm,1.0s
D04E  Lakebay          69.73 327  P      P      10 11 43.7 +0.4
      baz=129
B06A  Marblemount      69.91 329  P      P      10 11 43.8 -0.6
B06A                              IAmb   IAmb   10 11 45.3
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      comp=Z,28nm,0.8s
D03D  Eldon            70.12 328  P      P      10 11 46.2 +0.5
      baz=128,SNR=5.3
NLWA  Neilton Lookou   70.45 327  P      P      10 11 48.7 +1.0
NLWA                              IAmb   IAmb   10 11 49.9
      comp=Z,32nm,0.9s
LIC   Lamto            71.28  80  eP     P      10 11 53.8 +0.3
      comp=Z,65nm,1.0s
TIC   Toumodi          71.37  80  ePKP1  P      10 11 54.1 +0.1
      comp=Z,138nm,0.9s
LLLB  Lillooet         71.46 331  P      P      10 11 53.6 -0.2
DBIC  Dimbokro         71.54  80  P      P      10 11 54.5 -0.4
      comp=Z,19nm,0.6s,baz=267,slow=5.0,SNR=19
      comp=Z,19nm,0.6s
DBIC  Dimbokro         71.54  80  P      P      10 11 54.6 -0.4
DBIC  Dimbokro         71.54  80  P      P      10 11 54.6 -0.4
DBIC                              pmax   pmax
      comp=Z,92nm,0.9s
DBIC  Dimbokro         71.54  80  P      P      10 11 54.6 -0.4
DBIC                              pP     pP     10 12 27.4 +0.1
KIC   Kosan Boka       71.59  80  ePKP1  P      10 11 54.8 -0.5
      comp=Z,126nm,0.6s
FRB   Frobisher Bay    72.19   3  P      P      10 11 57.3 -0.4
      comp=Z,19nm,0.5s,baz=199,slow=6.0,SNR=36
      comp=Z,19nm,0.5s
BELA  Belgrano 2       72.39 172  P      P      10 11 59.8 +0.9
PPT   Papeete          72.84 254  LR     LR     10 37 15.9
      comp=Z,70nm,19.5s,baz=132,slow=30
CBB   Campbell River   72.84 329  P      P      10 12 03.2 +1.2
CBB                               IAmb   IAmb   10 12 04.0
      comp=Z,24nm,0.8s
KOWA  Kowa             74.00  72  P      P      10 12 09.0 -0.5
KOWA                              IAmb   IAmb   10 12 15.4
      comp=Z,31nm,0.7s
VNA3  Neumayer Olymp   74.21 162  P      P      10 12 10.3 +0.6
VNA1  Neumayer--Stat   74.44 161  P      P      10 12 12.0 +1.1
VNA2  Neumayer--Watz   74.80 162  P      P      10 12 13.8 +0.7
      baz=291,slow=6.0
BBB   Bella Bella      75.51 329  P      P      10 12 18.4 +1.1
      comp=Z,13nm,0.7s,baz=173,slow=8.1,SNR=25
      comp=Z,13nm,0.7s
SNAA  Sanae            76.42 162  P      P      10 12 22.9 +0.5
SNAA  Sanae            76.42 162  P      P      10 12 23.6 +1.2
      comp=Z,24nm,0.8s,baz=279,slow=5.4,SNR=25
      comp=Z,24nm,0.8s
SNAA  Sanae            76.42 162  P      P      10 12 22.8 +0.5
SNAA                              IAmb   IAmb   10 12 24.3
      comp=Z,30nm,0.9s
PFVI  Vila Bisbo       76.63  49  epP    pP     10 12 58.1 +1.2
MORF  Marmelete        76.83  49  eP     P      10 12 28.0 +2.7
MORF  Marmelete        76.83  49  ePcP   PcP    10 12 32.5 -3.5
MORF                              epP    pP     10 12 59.4 +1.4
PTEO  Sao Teotonio     76.86  48  epP    pP     10 12 59.5 +1.4
YKA   Yellowknife Ar   77.05 342  P      P      10 12 25.4 -0.5
      comp=Z,32nm,0.8s,baz=139,slow=6.3,SNR=347
YKA                               pP     pP     10 12 59.8 +1.1
      comp=Z,11nm,0.7s,baz=138,slow=6.1,SNR=5.5
      comp=Z,32nm,0.8s
PNCL  Nicolau / Gran   77.21  48  eP     P      10 12 28.2 +0.9
PNCL  Nicolau / Gran   77.21  48  ePcP   PcP    10 12 34.4 -3.1
PNCL                              epP    pP     10 13 00.7 +0.6
SFJD  Kangerlussuaq    77.33  10  P      P      10 12 26.7 -0.6
      comp=Z,14nm,0.8s,baz=215,slow=2.6,SNR=5.4
SFJD                              pP     pP     10 13 00.3 +0.2
      comp=Z,26nm,0.8s,baz=208,slow=5.6,SNR=7.7
      comp=Z,14nm,0.8s
SFJD  Kangerlussuaq    77.33  10  pP     pP     10 13 00.3 +0.2
SFJD                              IAmb   IAmb   10 13 01.3
      comp=Z,42nm,0.9s
SFJD  Kangerlussuaq    77.33  10  eP     P      10 12 26.5 -0.8
SFJD                              IAmb   IAmb   10 12 26.8
      comp=Z,16nm,0.8s
PBDV  Barranco-do-Ve   77.34  49  ePcP   PcP    10 12 37.0 -1.1
MESJ  Messejana        77.34  48  epP    pP     10 13 01.6 +0.8
GRNB  Grenville Isla   77.37 330  P      P      10 12 29.3 +1.4
PCVE  Castro Verde     77.40  48  eP     P      10 12 29.9 +1.5
PCVE  Castro Verde     77.40  48  ePcP   PcP    10 12 35.6 -2.8
PCVE                              epP    pP     10 13 02.3 +1.1
PVAQ  Vaqueiros        77.56  49  ePcP   PcP    10 12 36.3 -2.7
DY2G  Dye2             77.65  11  i P    P      10 12 28.9 -0.6
DY2G                              IAmb   IAmb   10 12 29.7
      comp=Z,235nm,1.7s
PBEJ  Beja             77.67  48  ePcP   P      10 12 31.2 +1.3
PBEJ                              epP    pP     10 13 03.6 +0.9
PMTG  Montargil        77.78  47  eP     P      10 12 30.5  0.0
PMTG  Montargil        77.78  47  ePcP   PcP    10 12 37.2 -2.8
PMTG                              epP    pP     10 13 03.6 +0.3
PCAS  Casmilo, Conde   77.95  46  ePcP   PcP    10 12 38.2 -2.5
PCAS                              epP    pP     10 13 04.6 +0.3
COI   Coimbra          78.07  46  epP    pP     10 13 05.9 +1.0
TROLL Troll, Antarti   78.14 162  P      P      10 12 32.8 +0.7
PESTR Estremoz         78.17  47  ePcP   PcP    10 12 38.5 -3.2
PESTR                             epP    pP     10 13 06.2 +0.7
MDT   Midelt           78.44  54  P      P      10 12 35.5 +1.1
      comp=Z,4.2nm,0.8s,baz=292,slow=4.0,SNR=8.6
MDT                               pP     pP     10 13 07.9 +0.7
      comp=Z,11nm,1.1s,baz=282,slow=6.6,SNR=6.5
      comp=Z,4.2nm,0.8s
PCBR  Castelo Branco   78.60  47  ePcP   PcP    10 12 41.0 -2.5
PCBR                              epP    pP     10 13 07.7 -0.2
PVIS  Viseu            78.63  46  ePcP   PcP    10 12 41.5 -2.2
PVIS                              epP    pP     10 13 07.9 -0.2
MTE   Manteigas        78.76  46  ePcP   PcP    10 12 42.4 -1.9
MTE                               epP    pP     10 13 09.0 +0.2
PCAB  Cabril           78.90  45  epP    pP     10 13 09.9 +0.4
POLO  Lamas de Olo     78.94  45  ePcP   PcP    10 12 43.7 -1.4
POLO                              epP    pP     10 13 09.9 +0.1
TOA0  Torodi Ar. Sit   79.14  75  P      P      10 12 38.0 -0.4
TOA0                              IAmb   IAmb   10 12 44.9
      comp=Z,38nm,0.7s
TORD  Torodi Ar. Bea   79.14  75  P      P      10 12 38.0 -0.5
      comp=Z,10nm,0.8s,baz=286,slow=5.8,SNR=58
TORD                              pP     pP     10 13 11.2 -0.1
      comp=Z,14nm,0.7s,baz=281,slow=5.6,SNR=4.2
      comp=Z,10nm,0.8s
TORD  Torodi Ar. Bea   79.14  75  P      P      10 12 37.9 -0.5
TORD                              IAmb   IAmb   10 12 44.9
      comp=Z,39nm,0.7s
TORD                              pP     pP     10 13 10.8 -0.5
ILULI Ilulissat        79.28   8  P      P      10 12 37.6 -0.4
ILULI                                    pP     10 13 11.5 +0.5
ILULI                             IAmb   IAmb   10 13 12.4
      comp=Z,56nm,0.8s
ILULI Ilulissat        79.28   8  P      P      10 12 37.6 -0.4
ILULI                             *PP    pP     10 13 11.5 +0.5
ILULI                             pmax   pmax
      comp=Z,56nm,0.8s
ILULI Ilulissat        79.28   8  i P    P      10 12 37.4 -0.6
ILULI                             IAmb   IAmb   10 12 37.8
      comp=Z,31nm,0.7s
MVO   Moncorvo         79.40  45  eP     P      10 12 40.0 +0.6
MVO   Moncorvo         79.40  45  ePcP   PcP    10 12 46.1 -1.0
MVO                               epP    pP     10 13 12.4  0.0
CRAG  Craig            79.80 331  P      P      10 12 41.6 +0.5
      baz=121
PBRG  Braganca         79.83  45  eP     P      10 12 42.1 +0.4
PBRG  Braganca         79.83  45  ePcP   PcP    10 12 47.7 -1.2
PBRG                              epP    pP     10 13 14.7  0.0
WRAK  Wrangell Islan   79.93 332  P      P      10 12 41.9 +0.1
      baz=122
DLBC  Dease Lake       80.00 334  P      P      10 12 43.1 +0.8
      comp=Z,9.4nm,0.9s,baz=119,slow=4.9,SNR=23
DLBC                              pP     pP     10 13 16.8 +1.5
      comp=Z,13nm,1.0s,baz=168,slow=2.5,SNR=5.3
      comp=Z,9.4nm,0.9s
DLBC  Dease Lake       80.00 334  P      P      10 12 42.8 +0.6
S34M  Telegraph Cree   80.19 333  P      P      10 12 43.6 +0.4
      baz=124,SNR=5.6
WRGLY Wrigley          80.42 340  P      P      10 12 44.4 +0.2
      baz=131
PAB   San Pablo        80.77  48  P      P      10 12 47.4 +0.5
PAB                               pP     pP     10 13 19.6 -0.2
TGTN  Hyland Airport   81.09 337  P      P      10 12 48.9 +0.9
      baz=127,SNR=5.7
ESDC  Sonseca Array    81.09  48  P      P      10 12 49.0 +0.5
      comp=Z,5.6nm,0.8s,baz=258,slow=5.7,SNR=28
ESDC                              pP     pP     10 13 22.6 +1.0
      comp=Z,10nm,1.1s,baz=256,slow=5.8,SNR=5.0
ESDC                              LR     LR     10 46 46.3
      comp=Z,23nm,18.9s,baz=184,slow=34
      comp=Z,5.6nm,0.8s
ESDC  Sonseca Array    81.09  48  P      P      10 12 48.8 +0.3
ESDC                              pP     pP     10 13 21.9 +0.3
ESBB  Sonseca Array    81.10  48  P      P      10 12 48.8 +0.3
ESBB                                     pP     10 13 22.2 +0.7
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ICESG	Greenland Ices	81.21	12	*i* P	P	10 12 48.2	-0.6
ICESG				IAmb	IAmb	10 12 49.0	
	comp=Z,60nm,1.2s						
QSPA	South Pole Qui	81.63	180	P	P	10 12 51.5	+0.6
QSPA				IAmb	IAmb	10 12 53.2	
	comp=Z,95nm,1.4s						
QSPA				pP	pP	10 13 23.2	-0.9
SIT	Sitka	81.67	331	P	P	10 12 52.2	+1.2
	baz=120						
JIS	Juneau Island	81.84	333	P	P	10 12 52.8	+0.9
P33M	Teslin, Yukon	82.17	335	P	P	10 12 54.2	+0.4
P33M	Teslin, Yukon	82.17	335	P	P	10 12 54.1	+0.3
	baz=122,SNR=8.5						
BESE	Bessie Mountai	82.21	333	P	P	10 12 53.7	-0.2
BESE				IAmb	IAmb	10 12 55.9	
	comp=Z,38nm,1.0s						
BESE				pP	pP	10 13 28.2	+1.1
IGLA	Glengowla, Co	82.71	33	*e*P	pP	10 13 29.7	0.0
SKAG	Skagway	82.87	333	P	P	10 12 57.9	+0.6
SKAG	Skagway	82.87	333	P	P	10 12 57.7	+0.5
	baz=120,SNR=8.7						
MMPY	Sheldon Lake,	82.87	337	P	P	10 12 57.7	+0.4
	baz=124,SNR=19						
BORG	Borgarnes	83.17	20	P	P	10 13 00.3	+1.7
	comp=Z,21nm,0.9s,baz=191,slow=5.2,SNR=3.2						
	comp=Z,21nm,0.9s						
WHY	Whitehorse	83.28	335	P	P	10 12 59.9	+0.4
WHY					pP	10 13 32.2	-0.5
WHY	Whitehorse	83.28	335	P	P	10 12 59.4	-0.1
	baz=120,SNR=6.8						
PLBC	Pleasant Camp	83.33	333	P	P	10 13 00.4	+0.8
	baz=119,SNR=9.5						
FARO	Faro, Yukon	83.47	336	P	P	10 13 00.7	+0.4
	baz=122,SNR=36						
IWEX	Carrickbyrne,	83.73	35	*e*P	pP	10 13 34.9	-0.2
CCA1	Carnmenellis	83.83	37	*e*P	pP	10 13 35.6	0.0
O30N	Mendenhall	83.85	334	P	P	10 13 03.0	+0.7
	baz=119,SNR=22						
M31M	Drury Creek, Y	83.87	336	P	P	10 13 02.8	+0.4
M31M	Drury Creek, Y	83.87	336	P	P	10 13 02.8	+0.4
	baz=121,SNR=23						
RES	Resolute Bay	83.92	355	P	P	10 13 02.1	-0.2
	comp=Z,6.6nm,0.9s,baz=110,slow=4.9,SNR=14						
	comp=Z,6.6nm,0.9s						
SUMG	Summit	84.28	10	P	P	10 13 04.6	-0.1
SUMG				pP	pP	10 13 36.2	-1.8
SUMG	Summit	84.28	10	P	P	10 13 04.6	-0.1
SUMG				*PP	pP	10 13 36.2	-1.8
SUMG				pmax	pmax		
	comp=Z,102nm,0.9s						
SUMG	Summit	84.28	10	*i* P	P	10 13 04.0	-0.7
SUMG				IAmb	IAmb	10 13 05.8	
	comp=Z,62nm,0.8s						
IDGL	Inch Island, C	84.38	32	*e*P	pP	10 13 38.4	0.0
HYT	Haines Junctio	84.48	334	P	P	10 13 07.0	+1.4
HYT	Haines Junctio	84.48	334	P	P	10 13 06.5	+0.9
	baz=118,SNR=9.6						
HTL	Hartland	84.56	37	*e*P	pP	10 13 39.0	-0.3
HTL				IAmb	IAmb	10 13 40.1	
	comp=Z,35nm,0.8s						
N30M	Aishikik Lake	84.61	335	P	P	10 13 07.2	+1.1
	baz=118						
RSBS	Rosebush, Pemb	84.74	36	*e*P	pP	10 13 39.9	-0.3
RSBS				IAmb	IAmb	10 13 40.7	
	comp=Z,41nm,0.9s						
PNL	Peninsula	84.79	333	P	P	10 13 07.7	+0.6
	baz=116,SNR=6.4						
GMM	Mts of Mourne	84.90	33	*e*P	pP	10 13 40.9	-0.1
YUK6	Outpost Mounta	84.91	334	P	P	10 13 08.9	+1.0
	baz=117,SNR=25						
TULEG	Thule	84.95	1	P	P	10 13 08.0	+0.5
BCPM	Bancas Point	85.03	333	P	P	10 13 09.3	+1.1
BCPM					pP	10 13 41.9	+0.3
BCPM				IAmb	IAmb	10 14 52.3	
	comp=Z,34nm,0.8s						
M30M	Minto, Yukon	85.03	336	P	P	10 13 08.2	0.0
M30M	Minto, Yukon	85.03	336	P	P	10 13 08.1	-0.1
	baz=119						
YUK4	Talbot Arm	85.22	334	P	P	10 13 10.3	+0.9
	baz=117,SNR=34						
PINM	Pinnacle	85.37	333	P	P	10 13 10.6	+0.6
	baz=116,SNR=10						
PCA	Pinnacle	85.37	333	P	P	10 13 10.6	+0.6
PCA				IAmb	IAmb	10 13 11.7	
	comp=Z,26nm,0.9s						
PCA				pP	pP	10 13 44.9	+1.5
WPS	Cemaes, Angles	85.40	34	*e*P	pP	10 13 42.9	-0.6
WPS				IAmb	IAmb	10 13 44.7	
	comp=Z,72nm,1.7s						
WLF1	Llynfaes	85.41	35	*e*P	pP	10 13 43.3	-0.3
WLF1				IAmb	IAmb	10 13 44.1	
	comp=Z,46nm,0.9s						
WME	Myndd Eilian	85.50	35	*e*P	pP	10 13 43.3	-0.7
WIM	Isle of Man	85.56	34	*e*P	pP	10 13 44.0	-0.3
IOMK	Kirk Michael	85.66	34	*e*P	pP	10 13 44.8	-0.1
IOMK				IAmb	IAmb	10 13 45.7	
	comp=Z,124nm,1.3s						
LLW	Llanuwychllyn	85.67	35	*e*P	pP	10 13 44.1	-0.8
MCH1	Michaelchurch	85.77	36	*e*P	pP	10 13 44.9	-0.5
MCH1				IAmb	IAmb	10 13 45.7	
	comp=Z,16nm,0.7s						
GAL1	Galloway	85.80	33	*e*P	pP	10 13 45.3	-0.2
GAL1				IAmb	IAmb	10 13 46.0	
	comp=Z,23nm,0.7s						
MONM	Monmouth	85.83	36	*e*P	pP	10 13 45.1	-0.6
MONM				IAmb	IAmb	10 13 46.2	
	comp=Z,36nm,0.7s						
TABL	Table Mountain	85.92	333	P	P	10 13 13.4	+0.5
TABL				IAmb	IAmb	10 13 14.4	
	comp=Z,32nm,0.8s						
TABL					pP	10 13 48.0	+1.7
LAWE	Loch Awe, Argy	85.94	32	*e*P	pP	10 13 46.0	-0.2
LAWE				IAmb	IAmb	10 13 46.8	
	comp=Z,20nm,0.9s						
FOEL	Foel Wylfa	85.95	35	*e*P	pP	10 13 45.9	-0.5
FOEL				IAmb	IAmb	10 13 46.7	
	comp=Z,23nm,0.9s						
HLM1	Long Mynd	86.01	36	*e*P	pP	10 13 46.2	-0.4
HLM1				IAmb	IAmb	10 13 47.1	
	comp=Z,30nm,0.8s						
NEWG	New Galloway	86.15	33	*e*P	pP	10 13 47.0	-0.2
NEWG				IAmb	IAmb	10 13 47.9	
	comp=Z,28nm,0.8s						
YAH	Yahtse	86.16	333	P	P	10 13 14.7	+0.7
YAH				IAmb	IAmb	10 13 15.5	
	comp=Z,26nm,0.7s						
MESA	MESA	86.17	333	P	P	10 13 14.9	+0.8
MESA				IAmb	IAmb	10 13 15.9	
	comp=Z,26nm,0.9s						
MESA	MESA	86.17	333	P	P	10 13 14.7	+0.6
	baz=114,SNR=9.8						
YUK3	Moose Creek	86.19	334	P	P	10 13 14.6	+0.4
	baz=116,SNR=44						
KPL	Plockton	86.22	31	*e*P	pP	10 13 47.3	-0.2
KPL				IAmb	IAmb	10 13 48.1	
	comp=Z,34nm,0.9s						
CTGM	Chitina Glacie	86.22	333	P	P	10 13 14.7	+0.4
CTGM				IAmb	IAmb	10 13 16.1	
	comp=Z,33nm,1.0s						
CTGM					pP	10 13 48.0	+0.3
CTG	Chitna Glacier	86.23	333	P	P	10 13 15.0	+0.7
	baz=115,SNR=15						
GRNC	Granite Creek	86.31	333	P	P	10 13 15.3	+0.4
GRNC				IAmb	IAmb	10 13 16.4	
	comp=Z,40nm,1.0s						
BARN	Barnard Glacie	86.41	333	P	P	10 13 15.8	+0.6
BARN				IAmb	IAmb	10 13 18.4	
	comp=Z,62nm,1.4s						
KAC	Achnashellach	86.45	30	*e*P	pP	10 13 48.7	0.0
SCO	Scoresbysund	86.46	16	P	P	10 13 15.6	+0.6
SCO				pP	pP	10 13 49.4	+1.0
SCO				IAmb	IAmb	10 13 50.6	
	comp=Z,32nm,1.2s						
SCO	Scoresbysund	86.46	16	*i* P	P	10 13 15.2	+0.2
SCO				IAmb	IAmb	10 13 16.1	
	comp=Z,12nm,0.7s						
EAB	Aberfoyle	86.47	32	*e*P	pP	10 13 48.5	-0.3
J29M	Klondike Camp	86.48	337	P	P	10 13 15.8	+0.4
	baz=118						
ISLE	Juniper Island	86.52	333	P	P	10 13 15.2	-0.6
ISLE				IAmb	IAmb	10 13 17.1	
	comp=Z,41nm,1.0s						
KESW	Keswick, Cumbr	86.58	34	*e*P	pP	10 13 49.4	0.0
KESW				IAmb	IAmb	10 13 49.7	
	comp=Z,32nm,0.7s						
SNH	Sunshine Point	86.58	332	P	P	10 13 16.7	+0.8
SNH					pP	10 13 50.3	+0.9
BVCY	Beaver Creek	86.63	335	P	P	10 13 16.5	+0.4
	baz=115,SNR=45						
WAX	Waxell Ridge	86.69	333	P	P	10 13 17.2	+0.7
WAX				IAmb	IAmb	10 13 17.7	
	comp=Z,23nm,0.7s						
WAX				pP	pP	10 13 50.2	+0.2
A36M	Sachs Harbour	86.70	346	P	P	10 13 15.5	-0.6
A36M	Sachs Harbour	86.70	346	P	P	10 13 15.5	-0.6
	baz=130,SNR=18						
INVG	Invergeldie, C	86.71	32	*e*P	pP	10 13 49.6	-0.4
INVG				IAmb	IAmb	10 13 50.5	
	comp=Z,12nm,0.8s						
DAWY	Dawson	86.76	337	P	P	10 13 16.5	-0.3
DAWY				pP	pP	10 13 50.0	-0.2
DAWY	Dawson	86.76	337	P	P	10 13 16.4	-0.3
	baz=117,SNR=22						
ESK	Eskdalemuir	86.77	33	*e*P	pP	10 13 49.8	-0.5
ESK				IAmb	IAmb	10 13 50.8	
	comp=Z,15nm,0.8s						
INK	Inuvik	86.79	341	P	P	10 13 16.4	-0.2
	comp=Z,30nm,0.8s,baz=104,slow=4.9,SNR=110						
INK				pP	pP	10 13 49.5	-0.6
	comp=Z,17nm,0.7s,baz=99,slow=7.3,SNR=12						
	comp=Z,30nm,0.8s						
INK	Inuvik	86.79	341	P	P	10 13 16.5	-0.2
INK				IAmb	IAmb	10 13 17.6	
	comp=Z,41nm,0.9s						
INK	Inuvik	86.79	341	P	P	10 13 16.5	-0.2
	baz=122,SNR=48						
EKA	Eskdalemuir Ar	86.80	33	P	P	10 13 16.9	-0.1
	comp=Z,5.1nm,0.8s,baz=238,slow=5.8,SNR=16						
EKA				pP	pP	10 13 50.2	-0.3
	comp=Z,17nm,0.9s,baz=238,slow=5.2,SNR=15						
	comp=Z,5.1nm,0.8s						
TGL	Tana Glacier	86.81	333	P	P	10 13 16.5	-0.5
EPYK	Eagle Plains	86.85	339	P	P	10 13 17.0	-0.2
EPYK				IAmb	IAmb	10 13 18.1	
	comp=Z,28nm,1.1s						
EPYK	Eagle Plains	86.85	339	P	P	10 13 16.9	-0.2
	baz=119,SNR=20						
I29M	Ogilvie Camp,	86.94	338	P	P	10 13 17.2	-0.3
I29M				IAmb	IAmb	10 13 18.6	
	comp=Z,46nm,1.1s						
I29M	Ogilvie Camp,	86.94	338	P	P	10 13 17.3	-0.3
	baz=118,SNR=39						
LBWR	Ladybower, Pea	86.96	35	*e*P	pP	10 13 51.4	+0.1
LBWR				IAmb	IAmb	10 13 52.2	
	comp=Z,33nm,0.7s						
SUCK	Suckling Hills	86.97	332	P	P	10 13 18.7	+0.9
M27K	Edge Creek, AK	87.04	335	P	P	10 13 18.6	+0.3
MCARA	McCarthy VSAT	87.14	333	P	P	10 13 19.3	+0.8
MCARA	McCarthy VSAT	87.14	333	P	P	10 13 19.2	+0.6
	baz=113,SNR=31						
HPK	Haverah Park	87.19	35	*e*P	pP	10 13 52.4	-0.1
HPK				IAmb	IAmb	10 13 53.2	
	comp=Z,22nm,0.8s						
VRDI	Verde Repeater	87.27	333	P	P	10 13 19.7	+0.3
ESY	Stoneypath	87.29	32	*e*P	pP	10 13 52.6	-0.2
HMT	Hamilton	87.30	332	P	P	10 13 20.0	+0.6
HMT				pP	pP	10 13 54.3	+1.5
BCAR	Beaver Creek A	87.30	335	P	P	10 13 19.7	+0.4
L27K	Beaver Creek,	87.31	335	P	P	10 13 19.8	+0.5
L27K				pP	pP	10 13 54.1	+1.2
L27K	Beaver Creek,	87.31	335	P	P	10 13 19.9	+0.5
	baz=114						
SBA	Scott Base	87.47	191	P	P	10 13 21.5	+1.5
SBA	Scott Base	87.47	191	P	P	10 13 21.5	+1.5
SBA				pmax	pmax		
	comp=Z,11nm,1.1s						
GLB	Gilahina Butte	87.51	333	P	P	10 13 20.6	+0.2
GLB				IAmb	IAmb	10 13 21.7	
	comp=Z,50nm,1.2s						
MCD	Coleburn Disti	87.51	31	*e*P	pP	10 13 54.0	0.0
M26K	Nabesna, AK	87.53	334	P	P	10 13 20.1	-0.4
M26K				IAmb	IAmb	10 13 21.5	
	comp=Z,21nm,1.0s						
M26K	Nabesna, AK	87.53	334	P	P	10 13 20.4	-0.1
	baz=113						
BMRM	Bremner River	87.69	333	P	P	10 13 21.5	+0.2
BMRM				IAmb	IAmb	10 13 22.5	
	comp=Z,60nm,1.3s						
BMRM	Bremner River	87.69	333	P	P	10 13 21.2	0.0
	baz=112,SNR=14						
MLA1	Latheron	87.71	30	*e*P	pP	10 13 55.0	+0.1
EGAK	Eagle	87.77	337	P	P	10 13 20.9	-0.6
EGAK	Eagle	87.77	337	P	P	10 13 21.3	-0.2
	baz=115,SNR=69						
K27K	Chicken	87.81	336	P	P	10 13 22.4	+0.8
K27K	Chicken	87.81	336	P	P	10 13 22.5	+0.8
	baz=114						
CLF	Chambon-Foret	87.84	41	P	P	10 13 21.8	-0.4
CLF					pP	10 13 55.5	-0.2
CLF				IAmb	IAmb	10 13 57.4	
	comp=Z,33nm,1.0s						
N25K	Chitina, Valde	87.92	333	P	P	10 13 21.8	-0.6
N25K				IAmb	IAmb	10 13 23.6	
	comp=Z,36nm,1.6s						
N25K	Chitina, Valde	87.92	333	P	P	10 13 22.4	0.0
	baz=112,SNR=7.4						
L26K	Log Cabin Wild	87.93	335	P	P	10 13 22.4	+0.1
L26K				IAmb	IAmb	10 13 23.4	
	comp=Z,27nm,0.9s						
L26K	Log Cabin Wild	87.93	335	P	P	10 13 22.2	-0.1
	baz=113,SNR=31						
Q23K	Middleton Isla	87.95	331	P	P	10 13 23.0	+0.7
	baz=110						
MENT	Mentasta	88.05	335	P	P	10 13 22.8	-0.1
MENT				IAmb	IAmb	10 13 23.9	
	comp=Z,17nm,1.0s						
EYAK	Cordova Ski Ar	88.06	332	P	P	10 13 23.4	+0.5
EYAK				IAmb	IAmb	10 13 25.2	
	comp=Z,14nm,0.8s						
EYAK	Cordova Ski Ar	88.06	332	P	P	10 13 22.7	-0.2
	baz=111						
DIV	Divide	88.28	333	P	P	10 13 23.9	-0.1
HARP	HAARP	88.46	334	P	P	10 13 24.6	-0.2
	baz=111,SNR=8.2						
FID	Port Fidalgo	88.47	332	P	P	10 13 24.5	-0.3
FID				IAmb	IAmb	10 13 25.6	
	comp=Z,32nm,0.9s						
FID				pP	pP	10 13 57.8	-0.7
DOT	Dot Lake	88.47	335	P	P	10 13 24.8	0.0
KLU	Klutina	88.47	333	P	P	10 13 25.0	+0.1
KLU	Klutina	88.47	333	P	P	10 13 25.1	+0.1
	baz=111,SNR=65						
VNDA	Vanda	88.55	190	P	P	10 13 26.5	+1.5
	comp=Z,9.3nm,0.9s,baz=126,slow=4.0,SNR=42						
VNDA				pP	pP	10 13 59.7	+1.1
	comp=Z,6.7nm,0.8s,baz=60,slow=3.0,SNR=7.4						
VNDA				LR	LR	10 44 09.2	
	comp=Z,45nm,21.4s,baz=222,slow=29						
	comp=Z,9.3nm,0.9s						
VNDA	Vanda	88.55	190	P	P	10 13 26.3	+1.3
VNDA				pP	pP	10 14 00.8	+2.1
SCRK	Sand Creek	88.56	336	P	P	10 13 25.4	0.0
SCRK				pP	pP	10 14 00.1	+1.0
SCRK	Sand Creek	88.56	336	P	P	10 13 25.4	0.0
	baz=112,SNR=91						
J26L	Joseph Creek	88.60	336	P	P	10 13 25.5	0.0
J26L				pP	pP	10 14 00.1	+0.9
J26L	Joseph Creek	88.60	336	P	P	10 13 25.7	+0.2
	baz=113						
SSB	Saint Sauveur	88.69	44	P	P	10 13 26.5	+0.2
SSB					pP	10 14 00.2	+0.3
SSB	Saint Sauveur	88.69	44	P	P	10 13 26.5	+0.2
SSB				*PP	pP	10 14 00.2	+0.3
SSB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GLI	Glacier Island	88.80	332	P	P	10 13 25.7	-0.7
GLI				IAmb	IAmb	10 13 26.9	
	comp=Z,42nm,1.0s						
GLI					pP	10 14 01.0	+0.9
GLI	Glacier Island	88.80	332	P	P	10 13 25.8	-0.7
	baz=110,SNR=9.3						
M24K	Tolsona, Glenn	88.80	334	P	P	10 13 26.7	+0.2
M24K	Tolsona, Glenn	88.80	334	P	P	10 13 26.8	+0.2
	baz=110,SNR=30						
PAX	Paxson	88.81	334	P	P	10 13 26.1	-0.4
PAX				IAmb	IAmb	10 13 27.2	
	comp=Z,36nm,0.9s						
PAX	Paxson	88.81	334	P	P	10 13 26.1	-0.4
PAX				pmax	pmax		
	comp=Z,36nm,0.9s						
PAX	Paxson	88.81	334	P	P	10 13 26.1	-0.4
	baz=111,SNR=52						
RIDG	Independent Ri	88.83	335	P	P	10 13 26.7	+0.1
DBG	Daneborg	89.18	13	*e*P	P	10 13 27.8	-0.1
DBG				IAmb	IAmb	10 13 29.2	
	comp=Z,16nm,1.2s						
SCM	Sheep Creek Mo	89.22	333	P	P	10 13 28.3	-0.2
SCM				IAmb	IAmb	10 13 29.5	
	comp=Z,32nm,0.8s						
SCM				pP	pP	10 14 03.3	+1.2
SCM	Sheep Creek Mo	89.22	333	P	P	10 13 28.3	-0.2
SCM				*PP	pP	10 14 03.3	+1.2
SCM				pmax	pmax		
	comp=Z,32nm,0.8s						
SCM	Sheep Creek Mo	89.22	333	P	P	10 13 28.6	+0.1
	baz=110,SNR=19						
K24K	Donnelly Dome	89.24	335	P	P	10 13 28.3	-0.2
	baz=111,SNR=12						
J25K	Salcha River,	89.36	336	P	P	10 13 29.1	0.0
J25K	Salcha River,	89.36	336	P	P	10 13 29.2	+0.1
	baz=111						
M23K	Glacier View	89.39	333	P	P	10 13 28.9	-0.2
	baz=109,SNR=13						
KNK	Knik Glacier	89.59	333	P	P	10 13 30.1	-0.1
KNK				IAmb	IAmb	10 13 31.2	
	comp=Z,16nm,1.0s						
KNK	Knik Glacier	89.59	333	P	P	10 13 30.0	-0.1
	baz=108,SNR=6.6						
SEW	Seward	89.65	331	P	P	10 13 30.0	-0.4
SEW				IAmb	IAmb	10 13 31.0	
	comp=Z,28nm,1.0s						
SEW				pP	pP	10 14 04.5	+0.4
SEW	Seward	89.65	331	P	P	10 13 29.9	-0.5
	baz=108,SNR=16						
WAT6	Susitna Watana	89.65	334	P	P	10 13 30.4	-0.2
	baz=109,SNR=49						
DHY	Denali Highway	89.66	334	P	P	10 13 30.0	-0.6
DHY	Denali Highway	89.66	334	P	P	10 13 30.0	-0.6
	baz=109,SNR=11						
SML	Sawmill	89.66	333	P	P	10 13 30.5	-0.1
SML				pP	pP	10 14 03.6	-0.6
SML	Sawmill	89.66	333	P	P	10 13 30.4	-0.1
	baz=109,SNR=46						
TSUM	Tsumeb	89.68	109	P	P	10 13 32.8	+1.1
	comp=Z,22nm,0.9s,baz=265,slow=4.7,SNR=26						
TSUM				pP	pP	10 14 05.8	+0.5
	comp=Z,6.1nm,0.9s,baz=90,slow=1.8,SNR=2.0						
	comp=Z,22nm,0.9s						
TSUM	Tsumeb	89.68	109	P	P	10 13 31.8	+0.1
TSUM				IAmb	IAmb	10 13 33.4	
	comp=Z,22nm,0.9s						
SNF	Seneffe	89.74	39	*d*pP	pP	10 14 04.7	0.0
SNF				*d*sP	sP	10 14 19.4	+1.0
DOU	Dourbes	89.83	39	*d*P	P	10 13 31.3	-0.2
DOU				*d*x	x	10 13 38.9	
DOU				*d*pP	pP	10 14 05.0	-0.1
O22K	Cooper Landing	89.89	331	P	P	10 13 31.6	+0.1
O22K	Cooper Landing	89.89	331	P	P	10 13 31.1	-0.4
	baz=107						
GHO	Glory Hole Cre	89.92	333	P	P	10 13 31.6	-0.1
GHO					pP	10 14 05.6	+0.2
HDA	Harding Lake	89.93	336	P	P	10 13 31.2	-0.4
HDA				IAmb	IAmb	10 13 32.3	
	comp=Z,27nm,0.9s						
HDA				pP	pP	10 14 06.3	+1.0
HDA	Harding Lake	89.93	336	P	P	10 13 31.1	-0.5
	baz=110,SNR=34						
PMR	Palmer	89.96	333	P	P	10 13 30.9	-0.9
PMR				IAmb	IAmb	10 14 08.7	
	comp=Z,27nm,1.4s						
PMR	Palmer	89.96	333	P	P	10 13 30.9	-0.9
PMR				pmax	pmax		
	comp=Z,27nm,1.4s						
PMR	Palmer	89.96	333	P	P	10 13 31.3	-0.4
	baz=108,SNR=11						
BMRD	Maredsous	89.99	39	*d*P	P	10 13 32.5	+0.2
BMRD				*d*x	x	10 13 39.6	
BMRD				*d*pP	pP	10 14 05.9	+0.1
IL31		90.03	336	P	P	10 13 31.8	-0.3
IL31				IAmb	IAmb	10 13 32.8	
	comp=Z,22nm,1.1s						
IL31				pP	pP	10 14 06.5	+0.8
ILAR	Eielson Array	90.03	336	P	P	10 13 31.6	-0.5
	comp=Z,14nm,1.0s,baz=141,slow=3.2,SNR=77						
ILAR				pP	pP	10 14 06.7	+0.9
	comp=Z,9.4nm,0.9s,baz=133,slow=3.5,SNR=10						
ILAR				PP	PP	10 17 04.8	-2.3
	comp=Z,2.7nm,0.9s,baz=106,slow=6.7,SNR=8.3						
ILAR				LR	LR	10 57 41.7	
	comp=Z,32nm,18.4s,baz=117,slow=38						
	comp=Z,14nm,1.0s						
RC01	Rabbit Creek A	90.08	332	P	P	10 13 31.7	-0.7
RC01				IAmb	IAmb	10 13 33.4	
	comp=Z,46nm,1.3s						
RC01	Rabbit Creek A	90.08	332	P	P	10 13 32.2	-0.2
	baz=107,SNR=16						
WAT1	Susitna Watana	90.09	334	P	P	10 13 32.1	-0.3
	baz=108						
BMAR	Burnt Mountain	90.11	339	P	P	10 13 32.1	-0.3
BMAR				pP	pP	10 14 06.0	-0.1
BRSE	Bradley Lake S	90.17	331	P	P	10 13 32.6	-0.2
	baz=106,SNR=21						
BGES	Gesves	90.21	39	*d*P	P	10 13 33.3	0.0
BGES				*d*x	x	10 13 40.7	
BGES				*d*pP	pP	10 14 06.9	0.0
BGES				*d*sP	sP	10 14 21.2	+0.6
BRLK	Bradley Lake	90.24	331	P	P	10 13 33.0	-0.2
BRLK				IAmb	IAmb	10 13 34.0	
	comp=Z,34nm,1.0s						
BRLK				pP	pP	10 14 08.1	+1.2
RCHB	Rochefort	90.25	39	*d*P	P	10 13 33.2	-0.1
RCHB				*d*Lg	Lg	10 13 40.3	
RCHB				*d*pP	pP	10 14 07.0	0.0
RCHB				*d*sP	sP	10 14 21.7	+0.9
KEST	Kesra	90.34	54	P	P	10 13 34.2	-0.2
	comp=Z,4.8nm,0.7s,baz=95,slow=4.2,SNR=5.6						
	comp=Z,4.8nm,0.7s						
KEST	Kesra	90.34	54	IAmb	IAmb	10 15 37.8	
	comp=Z,41nm,1.8s						
CNPM	China Poot	90.35	330	P	P	10 13 33.2	-0.5
CNPM				IAmb	IAmb	10 13 34.6	
	comp=Z,31nm,1.3s						
CNPM				pP	pP	10 14 06.8	-0.6
BCLA	Clavier	90.35	39	*d*P	P	10 13 34.1	+0.2
BCLA				*d*pP	pP	10 14 07.4	-0.2
CCB	Clear Creek Bu	90.36	336	P	P	10 13 33.2	-0.4
CCB				IAmb	IAmb	10 13 34.4	
	comp=Z,19nm,0.8s						
CCB				pP	pP	10 14 08.2	+0.9
POKR	Poker Plat Res	90.37	336	P	P	10 13 33.1	-0.6
POKR	Poker Plat Res	90.37	336	P	P	10 13 33.7	0.0
	baz=109,SNR=9.1						
SUR	Sutherland	90.39	123	P	P	10 13 35.2	+0.4
	comp=Z,8.5nm,0.9s,baz=150,slow=4.1,SNR=4.5						
	comp=Z,8.5nm,0.9s						
RND	Reindeer	90.40	334	P	P	10 13 34.2	+0.3
RND	Reindeer	90.40	334	P	P	10 13 34.2	+0.3
RND				pmax	pmax		
	comp=Z,103nm,1.4s						
WRH	Wood River Hil	90.42	336	P	P	10 13 33.7	-0.2
WRH				IAmb	IAmb	10 13 35.3	
	comp=Z,27nm,1.1s						
COLA	College	90.45	336	P	P	10 13 34.2	+0.2
COLA					pP	10 14 08.9	+1.2
COLA	College	90.45	336	P	P	10 13 34.2	+0.2
COLA				*PP	pP	10 14 08.9	+1.2
COLA				pmax	pmax		
	comp=Z,52nm,0.9s						
COLA	College	90.45	336	P	P	10 13 33.9	-0.1
	baz=109						
M22K	Willow	90.46	333	P	P	10 13 34.3	+0.2
M22K	Willow	90.46	333	P	P	10 13 33.9	-0.2
	baz=107,SNR=14						
TCOL	CIGO, UAF Yank	90.46	336	P	P	10 13 34.2	+0.1
TCOL					pP	10 14 08.6	+0.9
TCOL	CIGO, UAF Yank	90.46	336	P	P	10 13 33.8	-0.2
	baz=109,SNR=16						
MCK	McKinley	90.54	335	P	P	10 13 34.5	0.0
MCK				IAmb	IAmb	10 13 35.4	
	comp=Z,21nm,1.1s						
MCK	McKinley	90.54	335	P	P	10 13 34.5	0.0
MCK				pmax	pmax		
	comp=Z,21nm,1.1s						
MCK	McKinley	90.54	335	P	P	10 13 34.4	-0.1
	baz=108,SNR=10						

BSTI	**Sart Tilman**	**90.55**	**39**	*d*pP	pP	10 14 08.8	+0.3
KDAK	**Kodiak Island**	**90.56**	**328**	P	**P**	**10 13 34.5**	**-0.1**
	comp=Z,26nm,0.7s,baz=142,slow=2.1,SNR=80						
KDAK				pP	**pP**	**10 14 08.9**	**+0.5**
	comp=Z,14nm,0.8s,baz=114,slow=8.2,SNR=5.8						
	comp=Z,26nm,0.7s						
KDAK	**Kodiak Island**	**90.56**	**328**	P	**P**	**10 13 34.6**	**-0.1**
KDAK				pP	**pP**	**10 14 08.8**	**+0.5**
KDAK	**Kodiak Island**	**90.56**	**328**	P	**P**	**10 13 34.1**	**-0.6**
	baz=105						
HOM	**Homer**	**90.58**	**330**	P	**P**	**10 13 35.0**	**+0.3**
	baz=106						
MDM	**Murphy Dome**	**90.63**	**336**	P	**P**	**10 13 34.6**	**-0.4**
Q20K	**Shuyak Island**	**90.67**	**329**	P	**P**	**10 13 35.4**	**+0.2**
	baz=105,SNR=22						
CUT	**Chulitna**	**90.71**	**333**	P	**P**	**10 13 34.9**	**-0.3**
CUT					**pP**	**10 14 09.8**	**+0.8**
CUT	**Chulitna**	**90.71**	**333**	P	**P**	**10 13 35.1**	**-0.2**
	baz=107,SNR=11						
WLF	**Walferdange**	**90.72**	**40**	P	**P**	**10 13 36.1**	**+0.4**
WLF				pP	**pP**	**10 14 09.3**	**0.0**
WLF	**Walferdange**	**90.72**	**40**	*d*P	**P**	**10 13 36.2**	**+0.6**
WLF				*d*x	x	10 13 43.7	
WLF				*d*pP	**pP**	**10 14 09.7**	**+0.4**
BHOU	**Houvegnez**	**90.78**	**39**	*d*P	**P**	**10 13 36.0**	**+0.1**
BHOU				*d*x	x	10 13 43.5	
BHOU				*d*pP	**pP**	**10 14 09.8**	**+0.3**
BHOU				*d*sP	**sP**	**10 14 24.5**	**+1.2**
H24K	**Noodor Dome**	**90.78**	**337**	P	**P**	**10 13 35.7**	**+0.1**
H24K				IAmb	IAmb	10 13 36.8	
	comp=Z,24nm,0.9s						
H24K	**Noodor Dome**	**90.78**	**337**	P	**P**	**10 13 35.6**	**-0.1**
	baz=109						
OHAK	**Old Harbor**	**90.78**	**328**	P	**P**	**10 13 35.7**	**0.0**
OHAK				pP	**pP**	**10 14 10.8**	**+1.4**
OHAK	**Old Harbor**	**90.78**	**328**	P	**P**	**10 13 35.7**	**0.0**
	baz=104,SNR=23						
SENIN	**Lac Senin/Sane**	**90.80**	**43**	P	**P**	**10 13 35.2**	**-1.2**
SENIN				pP	**pP**	**10 14 09.9**	**-0.1**
NEA2	**Nenana**	**90.86**	**335**	P	**P**	**10 13 35.8**	**-0.2**
NEA2					**pP**	**10 14 10.4**	**+0.7**
NEA2	**Nenana**	**90.86**	**335**	P	**P**	**10 13 35.7**	**-0.2**
	baz=108,SNR=23						
BTNL	**Ternell**	**90.90**	**39**	*d*P	**P**	**10 13 36.7**	**+0.2**
BTNL				*d*pP	**pP**	**10 14 10.3**	**+0.2**
DAG	**Danmarks Havn**	**90.94**	**11**	*i* P	**P**	**10 13 35.6**	**-0.5**
DAG				IAmb	IAmb	10 13 36.6	
	comp=Z,21nm,0.9s						
DAG				*e*pP	**pP**	**10 14 09.6**	**-0.2**
TRF	**Thorofare Moun**	**91.03**	**334**	P	**P**	**10 13 36.4**	**-0.6**
TRF				IAmb	IAmb	10 13 37.5	
	comp=Z,15nm,0.6s						
TRF				pP	**pP**	**10 14 10.8**	**+0.2**
TRF	**Thorofare Moun**	**91.03**	**334**	P	**P**	**10 13 36.5**	**-0.5**
	baz=107,SNR=22						
ECH	**Echery**	**91.08**	**42**	P	**P**	**10 13 37.2**	**-0.2**
ECH					**pP**	**10 14 10.9**	**-0.1**
ECH				IAmb	IAmb	10 14 11.6	
	comp=Z,19nm,1.0s						
ECH	**Echery**	**91.08**	**42**	P	**P**	**10 13 37.2**	**-0.2**
ECH				*PP	**pP**	**10 14 10.9**	**-0.1**
ECH				pmax	pmax		
	comp=Z,19nm,1.0s						
SII	**Sitkinak Islan**	**91.10**	**327**	P	**P**	**10 13 36.5**	**-0.8**
SII				IAmb	IAmb	10 13 38.3	
	comp=Z,30nm,0.9s						
SII				pP	**pP**	**10 14 11.7**	**+0.7**
SII	**Sitkinak Islan**	**91.10**	**327**	P	**P**	**10 13 37.0**	**-0.3**
	baz=104						
I23K	**Minto, Yukon-K**	**91.15**	**336**	P	**P**	**10 13 37.1**	**-0.1**
I23K				IAmb	IAmb	10 13 38.0	
	comp=Z,18nm,0.7s						
I23K				pP	**pP**	**10 14 10.2**	**-0.7**
I23K	**Minto, Yukon-K**	**91.15**	**336**	P	**P**	**10 13 36.9**	**-0.3**
	baz=108,SNR=31						
O20K	**Slope Mountain**	**91.17**	**331**	P	**P**	**10 13 37.4**	**-0.2**
	baz=105						
SPU	**Mount Spurr**	**91.19**	**332**	P	**P**	**10 13 36.9**	**-0.7**
SPU					**pP**	**10 14 09.7**	**-1.6**
KTH	**Kantishna Hill**	**91.33**	**334**	P	**P**	**10 13 37.8**	**-0.5**
KTH				pP	**pP**	**10 14 13.1**	**+1.1**
KTH				IAmb	IAmb	10 14 14.9	
	comp=Z,24nm,0.9s						
RSO	**Redoubt South**	**91.33**	**331**	P	**P**	**10 13 38.2**	**-0.3**
Q19K	**Cape Douglas,**	**91.39**	**329**	P	**P**	**10 13 38.5**	**0.0**
Q19K	**Cape Douglas,**	**91.39**	**329**	P	**P**	**10 13 38.3**	**-0.3**
	baz=104,SNR=20						
H23K	**Yukon River**	**91.43**	**337**	P	**P**	**10 13 38.6**	**0.0**
H23K	**Yukon River**	**91.43**	**337**	P	**P**	**10 13 38.3**	**-0.3**
	baz=107						
BPAW	**Bear Paw Mtn.**	**91.51**	**335**	P	**P**	**10 13 38.5**	**-0.5**
BPAW				pP	**pP**	**10 14 13.2**	**+0.5**
BPAW	**Bear Paw Mtn.**	**91.51**	**335**	P	**P**	**10 13 38.7**	**-0.4**
	baz=106,SNR=60						
MLY	**Manley**	**91.67**	**336**	P	**P**	**10 13 39.3**	**-0.5**
MLY				IAmb	IAmb	10 13 40.2	
	comp=Z,12nm,0.7s						
MLY				pP	**pP**	**10 14 14.1**	**+0.7**
MLY	**Manley**	**91.67**	**336**	P	**P**	**10 13 39.1**	**-0.6**
	baz=106,SNR=29						
PPLA	**Purkeypile**	**91.70**	**333**	P	**P**	**10 13 39.7**	**-0.4**
PPLA				IAmb	IAmb	10 13 40.8	
	comp=Z,21nm,0.8s						
PPLA	**Purkeypile**	**91.70**	**333**	P	**P**	**10 13 39.6**	**-0.4**
	baz=105,SNR=17						
CAST	**Castle Rocks**	**91.80**	**334**	P	**P**	**10 13 39.7**	**-0.7**
CAST				IAmb	IAmb	10 13 40.7	
	comp=Z,26nm,0.8s						
CAST	**Castle Rocks**	**91.80**	**334**	P	**P**	**10 13 39.7**	**-0.7**
	baz=105,SNR=54						
M20K	**Styx River**	**91.87**	**332**	P	**P**	**10 13 40.1**	**-0.7**
M20K				IAmb	IAmb	10 13 41.2	
	comp=Z,13nm,0.9s						
CHUM	**Lake Minchumin**	**92.02**	**334**	P	**P**	**10 13 40.6**	**-0.7**
	baz=105,SNR=14						
O19K	**Port Alsworth**	**92.02**	**331**	P	**P**	**10 13 40.5**	**-0.9**
O19K				IAmb	IAmb	10 13 41.4	
	comp=Z,10.0nm,0.7s						
COLD	**Coldfoot**	**92.09**	**338**	P	**P**	**10 13 42.3**	**+0.6**
COLD				IAmb	IAmb	10 13 43.3	
	comp=Z,16nm,1.0s						
COLD				pP	**pP**	**10 14 15.8**	**+0.5**
COLD	**Coldfoot**	**92.09**	**338**	P	**P**	**10 13 42.2**	**+0.6**
	baz=107,SNR=24						
TUE	**Stuetta**	**92.22**	**43**	P	**P**	**10 13 42.7**	**-0.2**
TUE				IAmb	IAmb	10 14 17.4	
	comp=Z,18nm,0.9s						
I21K	**Tanana**	**92.22**	**336**	P	**P**	**10 13 41.7**	**-0.5**
I21K	**Tanana**	**92.22**	**336**	P	**P**	**10 13 42.6**	**+0.4**
	baz=105						
N19K	**Bonanza Creek**	**92.24**	**331**	P	**P**	**10 13 41.6**	**-0.9**
N19K				IAmb	IAmb	10 13 42.6	
	comp=Z,9.4nm,0.8s						
TOLK	**Toolik Lake Re**	**92.29**	**339**	P	**P**	**10 13 42.4**	**-0.1**
TOLK				IAmb	IAmb	10 13 43.4	
	comp=Z,12nm,0.9s						
TOLK				pP	**pP**	**10 14 17.2**	**+1.0**
TOLK	**Toolik Lake Re**	**92.29**	**339**	P	**P**	**10 13 42.5**	**-0.1**
	baz=107,SNR=13						
P18K	**Big Mountain,**	**92.29**	**330**	P	**P**	**10 13 41.8**	**-0.9**
P18K				IAmb	IAmb	10 13 42.3	
	comp=Z,8.2nm,0.7s						
P18K	**Big Mountain,**	**92.29**	**330**	P	**P**	**10 13 41.8**	**-0.9**
	baz=103,SNR=10						
L20K	**Farewell, AK**	**92.35**	**333**	P	**P**	**10 13 42.1**	**-0.9**
	baz=104,SNR=13						
M19K	**Big River Lodg**	**92.45**	**332**	IAmb	IAmb	10 13 44.0	
	comp=Z,11nm,0.8s						
M19K				pP	pP	10 14 15.8	-1.3
M19K	**Big River Lodg**	**92.45**	**332**	P	**P**	**10 13 43.0**	**-0.4**
	baz=103,SNR=10						
DAVOX	**Davos/Dischmat**	**92.63**	**43**	P	**P**	**10 13 45.5**	**+0.6**
	comp=Z,4.8nm,0.7s,baz=349,slow=20,SNR=8.4						
DAVOX				pP	**pP**	**10 14 18.6**	**+0.1**
	comp=Z,22nm,0.8s,baz=346,slow=8.3,SNR=11						
	comp=Z,4.8nm,0.7s						
K20K	**Telida**	**92.65**	**334**	P	**P**	**10 13 43.6**	**-0.7**
K20K				IAmb	IAmb	10 13 44.6	
	comp=Z,11nm,0.9s						
K20K	**Telida**	**92.65**	**334**	P	**P**	**10 13 43.3**	**-1.0**
	baz=104,SNR=17						
H21K	**Melozitna Rive**	**92.67**	**336**	P	**P**	**10 13 43.6**	**-0.7**
H21K	**Melozitna Rive**	**92.67**	**336**	P	**P**	**10 13 43.7**	**-0.7**
	baz=104						
DAVA	**Damuels**	**92.71**	**43**	*e*P	**P**	**10 13 45.6**	**+0.5**
	comp=Z,6.9nm,1.1s						
DAVA				*e*P	**PcP**	**10 13 52.8**	**+7.0**
	comp=Z,12nm,0.8s						
DAVA				*i* P	**pP**	**10 14 19.3**	**+0.5**
	comp=Z,17nm,0.8s,SNR=5.1						
L19K	**White Mountain**	**92.73**	**332**	IAmb	IAmb	10 13 44.9	
	comp=Z,12nm,1.1s						
L19K	**White Mountain**	**92.73**	**332**	P	**P**	**10 13 43.7**	**-1.0**
	baz=103						
SVW2	**Sparrevohn**	**92.83**	**331**	P	**P**	**10 13 44.0**	**-1.1**
SVW2				IAmb	IAmb	10 13 45.1	
	comp=Z,9.2nm,1.0s						
J20K	**Nowinta River**	**92.87**	**334**	P	**P**	**10 13 44.0**	**-1.2**
	baz=103						
N18K	**Kilae Creek**	**92.89**	**331**	P	**P**	**10 13 44.8**	**-0.6**
N18K				IAmb	IAmb	10 13 45.7	
	comp=Z,18nm,0.8s						
N18K	**Kilae Creek**	**92.89**	**331**	P	**P**	**10 13 44.7**	**-0.8**
	baz=102						
ZCCA	**Zocca**	**93.00**	**46**	IAmb	IAmb	10 14 20.9	
	comp=Z,26nm,1.1s						
IMAR	**Indian Mountai**	**93.13**	**336**	P	**P**	**10 13 45.9**	**-0.5**
IMAR				pP	**pP**	**10 14 20.0**	**-0.1**
FETA	**Feichten**	**93.24**	**43**	*e*P	**P**	**10 13 48.6**	**+1.0**
	comp=Z,7.8nm,1.3s						
FETA				*e*P	**PcP**	**10 13 55.2**	**+7.0**
	comp=Z,5.7nm,0.9s						
FETA				*i* P	**pP**	**10 14 21.7**	**+0.4**
	comp=Z,13nm,1.0s,SNR=5.1						
RETA	**Reutte**	**93.34**	**43**	*e*P	**P**	**10 13 48.3**	**+0.4**
	comp=Z,4.2nm,0.8s						
RETA				*e*P	**pP**	**10 14 21.7**	**+0.1**
	comp=Z,6.9nm,0.7s						
CHGN	**Chignik**	**93.34**	**326**	P	**P**	**10 13 47.1**	**-0.4**
	baz=100						
TTA	**Tatalina**	**93.41**	**333**	P	**P**	**10 13 47.2**	**-0.6**
	baz=102						
MOTA	**Moosalm**	**93.54**	**43**	*e*P	**P**	**10 13 49.1**	**+0.1**
	comp=Z,4.7nm,0.7s						
MOTA				*e*P	**PcP**	**10 13 56.5**	**+7.1**
	comp=Z,8.7nm,0.6s						
MOTA				*i* P	**pP**	**10 14 22.8**	**+0.1**
	comp=Z,13nm,0.7s,SNR=6.1						
SQTA	**Sankt Quirin**	**93.60**	**43**	*e*P	**P**	**10 13 49.5**	**+0.3**
	comp=Z,2.7nm,0.5s						
SQTA				*e*P	**PcP**	**10 13 56.9**	**+7.2**
	comp=Z,9.7nm,0.8s						
SQTA				*i* P	**pP**	**10 14 22.9**	**0.0**
	comp=Z,15nm,0.7s,SNR=5.1						
CTI	**Castel Tesino**	**93.73**	**44**	P	**P**	**10 13 50.0**	**+0.3**
CTI				pP	**pP**	**10 14 23.6**	**+0.1**
CTI				IAmb	IAmb	10 14 24.1	
	comp=Z,18nm,0.7s						
CTI	**Castel Tesino**	**93.73**	**44**	P	**P**	**10 13 50.0**	**+0.3**
CTI				*PP	**pP**	**10 14 23.6**	**+0.1**
CTI				pmax	pmax		
	comp=Z,18nm,0.7s						
CHNA	**Chernabura Isl**	**93.75**	**325**	P	**P**	**10 13 49.6**	**+0.1**
	baz=99						
WATA	**Walderalm**	**93.86**	**43**	*e*P	**P**	**10 13 50.7**	**+0.3**
	comp=Z,0.8nm,0.3s						
WATA				*e*P	**PcP**	**10 13 57.6**	**+6.8**
	comp=Z,4.8nm,0.5s						
WATA				*e*P	**pP**	**10 14 24.3**	**+0.2**
	comp=Z,15nm,1.2s						
WTTA	**Wattenberg**	**93.89**	**43**	*e*P	**P**	**10 13 51.0**	**+0.4**
	comp=Z,6.8nm,0.8s						
WTTA				*e*P	**PcP**	**10 13 58.4**	**+7.4**
	comp=Z,11nm,0.8s						
WTTA				*e*P	**pP**	**10 14 24.7**	**+0.4**
	comp=Z,18nm,0.9s						
GCSA	**Galena City Sc**	**94.15**	**335**	P	**P**	**10 13 51.2**	**+0.1**
	baz=101,SNR=9.4						
SDPT	**Sand Point**	**94.34**	**325**	P	**P**	**10 13 51.7**	**-0.4**
	baz=98						
ABTA	**Abfaltersbach**	**94.41**	**44**	*e*P	**P**	**10 13 53.3**	**+0.5**
	comp=Z,6.9nm,0.9s						
ABTA				*i* P	**pP**	**10 14 27.0**	**+0.4**
	comp=Z,14nm,0.8s,SNR=6.1						
AFI	**Afiamalu**	**94.48**	**255**	LR	LR	10 48 31.5	
	comp=Z,38nm,20.3s,baz=141,slow=30						
STAL	**STALIGIAL**	**94.49**	**44**	P	**P**	**10 13 53.3**	**+0.1**
STAL					**pP**	**10 14 26.8**	**-0.1**
STAL				IAmb	IAmb	10 14 27.4	
	comp=Z,12nm,0.9s						
BOSA	**Boshof**	**94.89**	**120**	P	**P**	**10 13 56.0**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=276,slow=4.4,SNR=6.6						
BOSA				PKKP	**PKKPdf**	**10 30 49.0**	**-2.1**
	comp=Z,1.6nm,0.7s,baz=112,slow=3.4,SNR=4.1						
	comp=Z,4.0nm,0.8s						
KBA	**Koelnbreinsper**	**95.02**	**43**	*e*P	**P**	**10 13 55.6**	**-0.2**
	comp=Z,2.5nm,0.7s						
KBA				*e*P	**pP**	**10 14 29.6**	**+0.1**
	comp=Z,9.3nm,0.8s						
MYKA	**Terra Mystica**	**95.17**	**44**	*e*P	**P**	**10 13 56.8**	**+0.5**
	comp=Z,8.2nm,0.9s						
MYKA				*e*P	**pP**	**10 14 30.2**	**+0.2**
	comp=Z,12nm,0.9s						
A21K	**Barrow**	**95.29**	**341**	P	**P**	**10 13 55.3**	**-0.9**
	baz=101						
BIOA	**Bad Ischl, Aus**	**95.29**	**43**	*e*P	pP	10 14 30.6	0.0
	comp=Z,6.8nm,0.8s						
SKDS	**Skadanscina**	**95.30**	**45**	*i* P	**P**	**10 13 56.7**	**-0.2**
SKDS				*e*pP	**pP**	**10 14 30.2**	**-0.4**
CLL	**Collm**	**95.31**	**39**	*e*P	**P**	**10 13 56.0**	**-0.7**
CLL				*e*pP	**pP**	**10 14 31.0**	**+0.6**
NBO00	**NORSAR Array S**	**95.31**	**29**	P	**P**	**10 13 56.1**	**-0.5**
NBO00					**pP**	**10 14 31.0**	**+0.7**
NC204	**NORSAR Array S**	**95.34**	**29**	P	**P**	**10 13 57.5**	**+0.7**
NC204				pP	**pP**	**10 14 31.0**	**+0.5**
KHC	**Kasperske Hory**	**95.42**	**41**⇓	*e*P	**P**	**10 13 58.1**	**+0.7**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KHC	**Kasperske Hory**	**95.42**	**41**	*e*pP	pP	10 14 30.8	-0.3
GERES	**GERESS Array B**	**95.47**	**42**	P	**P**	**10 13 57.2**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=269,slow=5.3,SNR=7.3						
GERES				pP	**pP**	**10 14 31.5**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=321,slow=3.4,SNR=4.5						
GERES				PKKPbc	**PKKPbc**	**10 30 48.5**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=64,slow=4.5,SNR=5.5						
	comp=Z,0.8nm,0.8s						
NB2	**NORSAR Subarra**	**95.53**	**29**	P	**P**	**10 13 58.0**	**+0.4**
	comp=Z,8.7nm,1.0s,baz=263,slow=4.6						
NB2	**NORSAR Subarra**	**95.53**	**29**	P	**P**	**10 13 58.0**	**+0.4**
	baz=263,slow=4.6						
NOA	**NORSAR Array B**	**95.53**	**29**	P	**P**	**10 13 58.5**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=262,slow=4.7,SNR=10						
NOA				pP	**pP**	**10 14 32.6**	**+1.3**
	comp=Z,4.3nm,0.8s,baz=259,slow=4.6,SNR=8.9						
	comp=Z,4.1nm,0.9s						
CRNS	**Crni Vrh**	**95.53**	**44**	*i* P	**P**	**10 13 58.0**	**+0.1**
CRNS				*e*		10 14 05.1	
CRNS				*e*pP	**pP**	**10 14 31.4**	**-0.2**
NC303	**NORSAR Array S**	**95.62**	**29**	P	**P**	**10 13 57.9**	**0.0**
NC303					**pP**	**10 14 32.3**	**+0.6**
NC303				IAmb	IAmb	10 14 33.9	
	comp=Z,13nm,0.9s						
MOA	**Molln**	**95.73**	**43**	*e*P	**P**	**10 13 59.6**	**+0.8**
	comp=Z,6.8nm,1.3s						
MOA				*e*P	**pP**	**10 14 32.8**	**+0.3**
	comp=Z,6.9nm,0.9s						
NC405	**NORSAR Array S**	**95.78**	**29**	P	**P**	**10 13 59.6**	**+0.9**
OBKA	**Obir**	**95.78**	**44**	*e*P	**P**	**10 13 59.5**	**+0.4**
	comp=Z,3.6nm,0.7s						
OBKA				*e*P	PcP	10 14 07.3	+8.0
	comp=Z,4.6nm,0.8s						
OBKA				*i* P	**pP**	**10 14 32.2**	**-0.7**
	comp=Z,8.1nm,0.8s,SNR=5.1						
GBRS	**Gornja Briga**	**95.86**	**45**	*i* P	**P**	**10 13 59.6**	**+0.2**
GBRS				*i*		10 14 07.0	
GBRS				*i* pP	**pP**	**10 14 33.2**	**0.0**
LBTB	**Lobatse**	**95.94**	**116**	P	**P**	**10 14 00.9**	**+0.5**
	comp=Z,7.0nm,0.8s,baz=261,slow=5.6,SNR=11						
	comp=Z,7.0nm,0.8s						
LBTB	**Lobatse**	**95.94**	**116**	P	**P**	**10 14 00.3**	**-0.1**
LBTB				IAmb	IAmb	10 14 01.6	
	comp=Z,9.0nm,0.9s						
SOKA	**Soboth**	**96.13**	**44**	*e*P	**P**	**10 14 00.6**	**-0.1**
	comp=Z,2.7nm,0.9s						
SOKA				*e*P	**pP**	**10 14 34.1**	**-0.3**
	comp=Z,3.8nm,0.8s						
ARSA	**Arzberg**	**96.52**	**43**	*e*P	**P**	**10 14 02.6**	**+0.2**
	comp=Z,5.8nm,0.9s						
ARSA				*e*P	**pP**	**10 14 36.4**	**+0.2**
	comp=Z,8.5nm,0.9s						
HFS	**Hagfors**	**96.64**	**30**	P	**P**	**10 14 02.6**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=106,slow=24,SNR=5.5						
	comp=Z,1.3nm,0.8s						
CONA	**Conrad Observa**	**96.81**	**43**	*e*P	**P**	**10 14 04.4**	**+0.6**
	comp=Z,4.8nm,1.0s						
CONA				*e*P	PcP	10 14 11.7	+7.9
	comp=Z,5.7nm,0.8s						
CONA				*e*P	**pP**	**10 14 38.0**	**+0.5**
	comp=Z,8.8nm,1.0s						
RDOG	**Red Dog Mine**	**97.02**	**338**	P	**P**	**10 14 03.0**	**-1.2**
	baz=95						
RONA	**Rosalia, Austr**	**97.08**	**43**	*e*P	Pdif	10 14 05.5	+0.5
	comp=Z,4.8nm,1.1s						
RONA				*e*P	PcP	10 14 12.9	+7.9
	comp=Z,4.4nm,0.7s						
RONA				*e*P	pP	10 14 39.1	+0.4
	comp=Z,9.8nm,1.0s						
CHVC	**Chvalec**	**97.16**	**40**	*e*pP	pP	10 14 39.4	+0.5
DPC	**Dobruska-Polom**	**97.31**	**40**	*e*pP	pP	10 14 40.3	+0.6
VRAC	**Vranov**	**97.41**	**41**	pP	pP	10 14 40.6	+0.5
	comp=Z,2.3nm,0.5s,baz=260,slow=5.9,SNR=3.0						
KRLC	**Kraliky**	**97.58**	**41**	*e*pP	pP	10 14 42.1	+1.2
UNV	**Unalaska Valle**	**97.66**	**323**	P	Pdif	10 14 07.5	+0.2
	baz=94						
ANM	**Nome**	**97.75**	**334**	P	**P**	**10 14 06.4**	**-1.1**
	baz=93						
MODS	**Modra-Piesok**	**97.79**	**42**	*e*P	Pdif	10 14 08.6	+0.5
MODS	**Modra-Piesok**	**97.79**	**42**	*e*PDIFF	**P**	**10 14 08.6**	**+0.5**
MORC	**Moravsky Berou**	**98.05**	**41**		Pdif	10 14 10.3	+1.0
MORC				IAmb	IAmb	10 14 44.9	
	comp=Z,11nm,1.3s						
MORC	**Moravsky Berou**	**98.05**	**41**	P	Pdif	10 14 10.3	+1.0
MORC				pmax	pmax		
	comp=Z,11nm,1.3s						
MAUC	**Maruska**	**98.22**	**41**	*e*pP	pP	10 14 45.0	+1.2
URZ	**Urewera**	**98.55**	**229**	LR	LR	10 51 50.0	
	comp=Z,59nm,18.0s,baz=212,slow=31						
MATP	**Matopo**	**99.55**	**112**	P	**Pdif**	**10 14 17.7**	**+1.0**
	comp=Z,4.3nm,0.7s,baz=288,slow=5.0,SNR=8.6						
	comp=Z,4.3nm,0.7s						
ARCES	**ARCESS Array B**	**101.58**	**21**	PKKPbc	PKKPbc	10 30 31.6	-2.9
	comp=Z,1.1nm,0.7s,baz=80,slow=5.0,SNR=3.8						
FINES	**FINESS Array B**	**102.70**	**29**	PKKPbc	PKKPbc	10 30 28.8	-2.2
	comp=Z,1.0nm,0.6s,baz=107,slow=4.7,SNR=4.6						
AKASG	**Malin Array Be**	**105.53**	**40**	PKKPbc	PKKPbc	10 30 18.9	-3.2
	comp=Z,0.7nm,0.5s,baz=70,slow=4.3,SNR=4.2						
BRTR	**Keskin Array B**	**109.71**	**51**	PP	**PP**	**10 19 37.0**	**0.0**
	comp=Z,1.0nm,0.9s,baz=298,slow=6.2,SNR=4.5						
VORR	**Voronezh**	**111.55**	**38**	*e*PKIKP	**PKiKP**	**10 19 05.4**	**-1.0**
VORR				pmax	pmax		
	comp=Z,40nm,0.3s						
KIV	**Kislovodsk**	**115.68**	**45**	*e*PKIKP	**PKiKP**	**10 19 16.1**	**+1.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	**Khabaz**	**115.88**	**45**	PKP	**PKiKP**	**10 19 15.7**	**+0.7**
	comp=Z,6.0nm,0.9s,baz=218,slow=2.9,SNR=15						
KBZ				pPKP	**pPKiKP**	**10 19 49.1**	**-1.1**
	comp=Z,7.6nm,0.8s,baz=194,slow=3.0,SNR=9.3						
SEY	**Seymchan**	**115.89**	**338**	PKP	**PKPdf**	**10 19 14.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=48,slow=15,SNR=4.5						
ARU	**Arti**	**120.04**	**28**	PKP	**PKiKP**	**10 19 22.9**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=121,slow=5.9,SNR=7.1						
ARU				pPKP	**pPKPdf**	**10 19 59.2**	**+1.4**
	comp=Z,2.8nm,0.5s,baz=294,slow=3.2,SNR=10						
ARU	**Arti**	**120.04**	**28**		**PKPdf**	**10 19 22.5**	**-0.1**
ARU				pPKPdf	**pPKPdf**	**10 19 59.0**	**+1.3**
ARU	**Arti**	**120.04**	**28**	*i* PKIKP	**PKiKP**	**10 19 22.9**	**+0.2**
ARU						10 20 49.7	
ARU						10 26 22.4	
ARU				SS	SS	10 37 02.3	-2.1
AKTO	**Aktyubinsk**	**122.97**	**34**	PKP	**PKiKP**	**10 19 29.0**	**+0.3**
	comp=Z,5.9nm,0.7s,baz=318,slow=1.5,SNR=26						
AKTO				pPKP	**pPKPdf**	**10 20 05.4**	**+1.7**
	comp=Z,11nm,0.7s,baz=307,slow=2.0,SNR=14						
ABKAR	**Akbulak array**	**124.65**	**34**	PKPdf	**PKiKP**	**10 19 32.2**	**+0.1**
ABKAR				pPKPdf	**pPKPdf**	**10 20 08.8**	**+1.9**
STKA	**Stephens Creek**	**126.77**	**219**	PKP	**PKiKP**	**10 19 36.9**	**+0.1**
	comp=Z,14nm,0.7s,baz=101,slow=2.1,SNR=26						
STKA				pPKP	**pPKPdf**	**10 20 12.7**	**+1.2**
	comp=Z,5.9nm,0.8s,baz=341,slow=3.2,SNR=3.6						
BRVK	**Borovoye**	**127.42**	**26***c*	*i*PKIKP	**PKiKP**	**10 19 37.6**	**+0.2**
GEYT	**Alibeck**	**128.64**	**48**	PKP	**PKiKP**	**10 19 40.5**	**+0.1**
	comp=Z,4.8nm,0.7s,baz=44,slow=15,SNR=7.2						
GEYT				pPKP	**pPKPdf**	**10 20 16.8**	**+1.9**
	comp=Z,6.8nm,0.7s,baz=277,slow=3.7,SNR=5.4						
GEYT	**Alibeck**	**128.64**	**48**	PKPdf	**PKPdf**	**10 19 39.1**	**-0.7**
GEYT					**pPKPdf**	**10 20 16.0**	**+1.1**
CTAO	**Charters Tower**	**130.46**	**235**	PKPdf	**PKPdf**	**10 19 40.8**	**-2.9**
CTAO	**Charters Tower**	**130.46**	**235**	PKIKP	**PKPdf**	**10 19 40.8**	**-2.9**
JKA	**Kamikawa-asahi**	**131.76**	**324**		**PKPdf**	**10 19 44.9**	**-0.5**
ASAJ	**Asahikawa**	**131.77**	**324**	PKP	**PKPdf**	**10 19 44.9**	**-0.5**
	comp=Z,8.3nm,1.1s,baz=333,slow=9.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**131.84**	**16**	PKP	**PKPdf**	**10 19 45.4**	**+0.2**
	comp=Z,11nm,0.7s,baz=318,slow=2.0,SNR=42						
ZALV				pPKP	**pPKPdf**	**10 20 22.2**	**+1.8**
	comp=Z,30nm,0.9s,baz=300,slow=2.9,SNR=11						
ZALV	**Zalesovo Beam**	**131.84**	**16**	PKPdf	**PKPdf**	**10 19 45.4**	**+0.2**
ZALV				pPKPdf	**pPKPdf**	**10 20 19.5**	**-0.9**
KURK	**Kurchatov**	**132.57**	**23**	PKIKP	**PKPdf**	**10 19 47.2**	**+0.5**
KURK						10 20 24.0	
KURBB	**Kurchatov Arra**	**132.61**	**23**	PKP	**PKPdf**	**10 19 47.2**	**+0.4**
	comp=Z,8.9nm,0.9s,baz=314,slow=2.6,SNR=37						
KURBB				pPKP	**pPKPdf**	**10 20 24.0**	**+2.1**
	comp=Z,22nm,1.0s,baz=314,slow=2.7,SNR=17						
KURBB				SKPbc	**SKPbc**	**10 23 02.3**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=321,slow=5.1,SNR=7.3						
WSAR	**Wadi Sarin**	**133.27**	**66**	PKP	**PKPdf**	**10 19 49.2**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=273,slow=3.9,SNR=7.3						
WSAR				pPKP	**pPKPdf**	**10 20 26.4**	**+2.4**
	comp=Z,8.4nm,0.7s,baz=236,slow=3.6,SNR=2.9						
KLR	**Kul'dur**	**133.60**	**336**	PKP	**PKPdf**	**10 19 48.8**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=108,slow=4.1,SNR=8.9						
PMG	**Port Moresby**	**134.40**	**248**⇑	*e*PKIKP	**PKPdf**	**10 19 51.2**	**0.0**
USP	**Ospenovka**	**136.28**	**32**	P	**PKiKP**	**10 19 55.6**	**-0.1**
	SNR=5.1						
EKS2	**Erkin-Say**	**136.30**	**34**	P	**PKiKP**	**10 19 56.0**	**+0.2**
	SNR=8.8						
AML	**Almayashu**	**136.61**	**34**	P	**PKiKP**	**10 19 56.6**	**-0.3**
	SNR=7.8						
AAK	**Ala-Archa**	**136.71**	**33**	P	**PKiKP**	**10 19 56.8**	**+0.1**
	SNR=5.9						
AAK	**Ala-Archa**	**136.71**	**33**	PKP	**PKiKP**	**10 19 56.2**	**-0.6**
	comp=Z,6.4nm,0.7s,baz=276,slow=4.0,SNR=10						
AAK				pPKP	**pPKPdf**	**10 20 32.7**	**+2.6**
	comp=Z,11nm,0.8s,baz=294,slow=5.8,SNR=6.4						
UCH	**Uchtor**	**137.00**	**34**	P	**PKiKP**	**10 19 57.6**	**-0.2**
	SNR=14						
TKM2	**Tokmak 2**	**137.10**	**32**	P	**PKiKP**	**10 19 57.1**	**-0.5**
	SNR=12						
MK31	**Makanchi Array**	**137.18**	**23***d*	*i*PKIKP	**PKPdf**	**10 19 55.0**	**-0.5**
MKAR	**Makanchi Array**	**137.18**	**23**	PKhKP	PKPpre	10 19 45.0	
	comp=Z,0.6nm,0.7s,baz=321,slow=1.7,SNR=5.0						
MKAR				PKP	**PKPdf**	**10 19 55.5**	**0.0**
	comp=Z,7.2nm,0.8s,baz=338,slow=2.0,SNR=40						
MKAR				pPKP	pPKPdf	10 20 32.0	+1.3
	comp=Z,11nm,0.9s,baz=332,slow=2.1,SNR=10						
MKAR	**Makanchi Array**	**137.18**	**23**	pPKPdf	pPKPdf	10 20 32.2	+1.5
ASAR	**Alice Springs**	**137.34**	**221**	PKhKP	PKPpre	10 19 45.0	
	comp=Z,1.4nm,0.7s,baz=138,slow=2.6,SNR=7.4						
ASAR				PKP	**PKPdf**	**10 19 56.6**	**+0.1**
	comp=Z,7.7nm,0.6s,baz=131,slow=2.3,SNR=29						
ASAR				pPKP	pPKPdf	10 20 31.8	0.0
	comp=Z,3.9nm,0.7s,baz=138,slow=1.1,SNR=2.9						
ASAR	**Alice Springs**	**137.34**	**221**	PKPdf	**PKPdf**	**10 19 56.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**137.37**	**331**	PKP	**PKPdf**	**10 19 55.2**	**-0.7**
	comp=Z,6.2nm,0.8s,baz=75,slow=2.2,SNR=8.7						
HIA	**Hailar**	**137.50**	**346***d*	*e*PKIKP	**PKPdf**	**10 19 56.3**	**+0.2**
KNGR	**Kungurtug, Tuv**	**137.55**	**7**⇑	*e*PKIKP	**PKiKP**	**10 19 57.3**	**-0.9**
BNX	**BinXian**	**138.16**	**336**	PKP	**PKPdf**	**10 19 56.5**	**-0.8**
BNX				AMB	AMB		
	comp=Z,110nm,4.8s						
MJAR	**Matsushiro Arr**	**138.88**	**318**	PKhKP	PKPpre	10 19 51.7	
	comp=Z,4.0nm,0.9s,baz=85,slow=5.0,SNR=6.2						
MJAR				PKP	**PKPdf**	**10 19 59.3**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=104,slow=2.5,SNR=8.2						
WR0	**Warramunga Arr**	**139.44**	**226**	PKPdf	**PKPdf**	**10 19 57.8**	**-2.7**
WB2	**Warramunga Arr**	**139.59**	**225**	PKPdf	**PKPdf**	**10 20 00.2**	**-0.5**
WRAB	**Tennant Creek**	**139.59**	**225***d*	*e*PKIKP	**PKPdf**	**10 20 00.6**	**-0.1**
WRA	**Warramunga Arr**	**139.60**	**225**	PKhKP	PKPpre	10 19 52.6	
	comp=Z,3.2nm,0.8s,baz=129,slow=2.6,SNR=14						
WRA				PKP	**PKPdf**	**10 20 01.2**	**+0.4**
	comp=Z,20nm,0.9s,baz=128,slow=1.7,SNR=37						
WRA				pPKP	pPKPdf	10 20 35.8	-0.2
	comp=Z,6.5nm,0.9s,baz=136,slow=1.3,SNR=3.9						
WRA	**Warramunga Arr**	**139.60**	**225**	PKPdf	**PKPdf**	**10 19 60.0**	**-0.8**
WRA				pPKPdf	**pPKPdf**	**10 20 36.0**	**0.0**
KSH	**Kashi**	**139.64**	**35**	PKP	**PKiKP**	**10 20 02.3**	**-0.5**
WB0	**Warramunga Arr**	**139.67**	**226**	PKPdf	**PKPdf**	**10 19 59.0**	**-1.9**

SONM	**Songino Array**	**140.76**	**359**	PKhKP	PKPpre	10 19 53.9	
	comp=Z,2.9nm,0.7s,baz=294,slow=1.5,SNR=4.1						
SONM	**Songino Array**	**140.76**	**359**	PKPdf	**PKPdf**	**10 20 00.6**	**-1.6**
SONM				pPKPdf	**pPKPdf**	**10 20 33.7**	**-3.7**
WMQ	**Urumqi**	**141.70**	**20**	*e*PKP	**PKPdf**	**10 20 04.5**	**+0.6**
KSRS	**Korea Array**	**144.46**	**328**	PKP	**PKPab**	**10 20 07.2**	**-0.2**
	comp=Z,13nm,0.8s,baz=65,slow=3.2,SNR=62						
BJI	**Beijing**	**147.02**	**344**	PKPbc	**PKPdf**	**10 20 13.8**	**+0.7**
HHC	**Hu-ho-hao-te**	**147.24**	**351**	*e*PKPbc	**PKPbc**	**10 20 16.5**	**+0.4**
BTO	**Baotou**	**147.70**	**353**	*e*PKPbc	**PKPbc**	**10 20 17.5**	**+0.2**
POO	**Poona**	**148.17**	**68**	*e*x	**PKPdf**	**10 20 13.0**	**-2.7**
GTA	**Gaotai**	**148.86**	**8**	⇓PKPbc	**PKPdf**	**10 20 17.0**	**+0.6**
HNS	**HongShan**	**149.90**	**344**	⇑PKPbc	**PKPdf**	**10 20 19.0**	**+1.1**
TIA	**Tai'an**	**150.26**	**340**	*e*PKPbc	**PKPdf**	**10 20 18.0**	**-0.5**
JOW	**Kunigami**	**151.37**	**313**	PKPbc	**PKPbc**	**10 20 26.8**	**+0.1**
	comp=Z,28nm,0.8s,baz=215,slow=2.5,SNR=10.0						
PYUN	**Piuthan**	**151.51**	**44**	*e*P	**PKPdf**	**10 20 21.1**	**+0.1**
DANN	**Dangsing**	**151.87**	**43**	*e*P	**PKPdf**	**10 20 22.2**	**+0.6**
	comp=Z,50nm,0.9s						
KOLN	**Koldanda**	**152.14**	**44**	*e*P	**PKPdf**	**10 20 21.6**	**-0.3**
SIJI	**Sorong**	**152.21**	**252**	PKPbc	**PKiKP**	**10 20 29.2**	**-0.1**
	baz=50,slow=6.6						
LZH	**Lanzhou**	**152.50**	**2**	*e*PKPbc	**PKiKP**	**10 20 30.3**	**+0.9**
LZH				pPKP	pPKPdf	10 20 55.8	-1.6
LZH				sPKP		10 21 06.5	
GKN	**Gorkha**	**152.69**	**42**	*e*P	**PKPdf**	**10 20 22.8**	**+0.1**
HYBB	**Hyderabad (bro**	**152.78**	**68**	*e*PKPbc	**PKPbc**	**10 20 29.9**	**-0.2**
LYN	**LuoYang**	**153.16**	**346**	*e*PKPbc	**PKPdf**	**10 20 17.5**	**-5.4**
LYN				PKPab	**PKPab**	**10 20 42.0**	**-0.4**
LYN				pPKP	pPKPdf	10 20 58.8	+0.6
KKN	**Kakani**	**153.25**	**42**	*e*P	**PKPdf**	**10 20 23.7**	**+0.1**
DMN	**Daman**	**153.26**	**42**	*e*P	**PKPdf**	**10 20 23.5**	**-0.1**
	comp=Z,8.5nm,0.4s						
PKIN	**Phulchoki**	**153.47**	**42**	*e*P	**PKPdf**	**10 20 23.5**	**-0.4**
GUN	**Gumba**	**153.56**	**41**	*e*P	**PKPdf**	**10 20 23.9**	**-0.3**
JIRN	**Jiri**	**153.93**	**41**	*e*P	**PKPdf**	**10 20 25.5**	**+0.8**
XAN	**Xi'an**	**154.31**	**352**	PKPbc	**PKPdf**	**10 20 25.3**	**+0.6**
RAMN	**Ramite**	**154.68**	**41**	*e*P	**PKPdf**	**10 20 25.3**	**-0.3**
	comp=Z,49nm,0.8s						
TAPN	**Taplejung**	**155.11**	**39**	*e*P	**PKPdf**	**10 20 27.0**	**+0.7**
CD2	**Chengdu**	**157.66**	**3**	PKP	**PKPdf**	**10 20 28.8**	**-0.4**
PZH	**PanZhiHua**	**161.81**	**9**	PKP	**PKPdf**	**10 20 33.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**168.47**	**30**	PKP	**PKPdf**	**10 20 40.0**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=302,slow=1.9,SNR=18						
CMAR				pPKP	**pPKPdf**	**10 21 16.6**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=299,slow=1.8,SNR=2.6						
CMAR				PKPab	**PKPab**	**10 21 49.9**	**+0.4**
	comp=Z,11nm,0.8s,baz=318,slow=6.0,SNR=35						
CMAR	**Chiang Mai Arr**	**168.47**	**30**	PKPdf	**PKPdf**	**10 20 39.6**	**-0.1**
CMAR					**pPKPdf**	**10 21 14.2**	**-1.0**
CMAR				PKPab	**PKPab**	**10 21 48.5**	**-1.0**

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*NOU **27** 10:08:12.9, 37°.18S×177°.05E, h254km, mb3.6/5, Off E. Coast of N. Island, N.Z.*

*WEL **27** 10:08:32.9, 38°S±9°×17°6E±1°0, h103km±19km, M2.4/24, MLv2.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=129.6*

ISC 27 10:08:23.8±2.6**, 37°.7S**±0°.1×**176°.47E**±0°.07**, h185**km±18km**,**
n58, σ0ˢ.83/56**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.15**	**154**	P	**Pn**	**10 08 46.9**	**-1.2**
TGRZ	**Tauranga**	**0.17**	**264**	P	**Pn**	**10 08 47.3**	**-0.9**
LIRZ	**Lichensteins R**	**0.30**	**193**	P	Pn	10 08 51.0	+2.5
OMRZ	**Omania**	**0.40**	**191**	P	**Pn**	**10 08 48.2**	**-0.6**
KMRZ	**Kaimai**	**0.44**	**252**	P	**Pn**	**10 08 48.3**	**-0.7**
URZ	**Urewera**	**0.74**	**138**	P	**Pn**	**10 08 49.1**	**-1.2**
URZ	**Urewera**	**0.74**	**138**	P	**Pn**	**10 08 48.9**	**-1.3**
TOZ	**Tahuroa Road**	**0.77**	**268**	P	**Pn**	**10 08 50.6**	**+0.2**
TLZ	**Tolley Road**	**0.96**	**230**	P	**Pn**	**10 08 52.1**	**+0.4**
MWZ	**Matawai**	**1.04**	**127**	P	**Pn**	**10 08 51.8**	**-0.5**
MTHZ	**Maungataniwha**	**1.18**	**166**	P	**Pn**	**10 08 53.4**	**+0.1**
SNGZ	**Shannon Statio**	**1.27**	**148**	P	**Pn**	**10 08 54.2**	**+0.1**
TWGZ	**Tauwhareparae**	**1.28**	**112**	P	**Pn**	**10 08 55.8**	**+1.6**
PKGZ	**Pakihiroa**	**1.28**	**98**	P	**Pn**	**10 08 54.5**	**+0.3**
RAHZ	**Arahi**	**1.30**	**158**	P	**Pn**	**10 08 54.7**	**+0.4**
TKGZ	**Te Karaka**	**1.31**	**124**	P	Pn	10 08 57.0	+2.7
NMHZ	**Naumai**	**1.41**	**169**	P	**Pn**	**10 08 56.3**	**+1.0**
RIGZ	**Rimuhau**	**1.42**	**135**	P	**Pn**	**10 08 55.4**	**0.0**
BKZ	**Black Stump Fm**	**1.45**	**179**	P	**Pn**	**10 08 55.6**	**-0.1**
BKZ	**Black Stump Fm**	**1.45**	**179**	P	**Pn**	**10 08 55.6**	**-0.1**
PUZ	**Puketiti**	**1.46**	**105**	P	**Pn**	**10 08 58.2**	**+2.5**
HIZ	**Hauiti**	**1.51**	**237**	P	**Pn**	**10 08 57.5**	**+1.4**
HIZ	**Hauiti**	**1.51**	**237**	P	**Pn**	**10 08 57.6**	**+1.4**
NTVZ	**North Tongarir**	**1.52**	**204**	P	**Pn**	**10 08 57.8**	**+1.4**
TMVZ	**Te Maari**	**1.53**	**203**	P	**Pn**	**10 08 57.6**	**+1.2**
ETVZ	**East Tongariro**	**1.54**	**203**	P	**Pn**	**10 08 57.7**	**+1.1**
WMGZ	**Waiomatatini S**	**1.54**	**95**	P	**Pn**	**10 08 56.2**	**-0.3**
ARHZ	**Aropaoanui**	**1.60**	**165**	P	**Pn**	**10 08 57.9**	**+0.9**
SNVZ	**South Ngauruho**	**1.61**	**204**	P	**Pn**	**10 08 58.6**	**+1.3**
KNZ	**Kokohu**	**1.61**	**145**	P	**Pn**	**10 08 57.1**	**-0.1**
KWHZ	**Kaweka Forest**	**1.71**	**181**	P	**Pn**	**10 08 58.7**	**+0.5**
MCHZ	**McNeill Hill**	**1.74**	**174**	P	**Pn**	**10 08 59.3**	**+0.9**
WNVZ	**Wahianoa**	**1.75**	**203**	P	**Pn**	**10 08 59.6**	**+0.9**
MOVZ	**Moawhango**	**1.78**	**198**	P	**Pn**	**10 08 59.3**	**+0.3**
BHHZ	**Black Hill Sta**	**1.80**	**190**	P	**Pn**	**10 08 59.4**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.83**	**142**	P	**Pn**	**10 08 59.8**	**+0.5**
CKHZ	**Cape Kidnapper**	**2.00**	**166**	P	**Pn**	**10 09 00.9**	**-0.2**
KAHZ	**Kahuranaki**	**2.10**	**171**	P	**Pn**	**10 09 02.8**	**+0.5**
PNHZ	**Pukenui**	**2.21**	**185**	P	**Pn**	**10 09 03.5**	**+0.1**
PXZ	**Pawanui**	**2.33**	**173**	P	**Pn**	**10 09 04.9**	**+0.1**
WPHZ	**Waipukurau**	**2.35**	**181**	P	**Pn**	**10 09 05.0**	**0.0**
TSZ	**Takapari Road**	**2.38**	**190**	P	**Pn**	**10 09 05.4**	**+0.1**
PRHZ	**Porangahau**	**2.55**	**177**	P	**Pn**	**10 09 07.3**	**0.0**
DVHZ	**Dannevirke**	**2.59**	**185**	P	**Pn**	**10 09 07.5**	**-0.2**
POWZ	**Post Office Ro**	**2.73**	**191**	P	**Pn**	**10 09 09.6**	**+0.2**
ANWZ	**Angora Road**	**2.74**	**180**	P	**Pn**	**10 09 09.5**	**0.0**
BFZ	**Birch Farm**	**2.97**	**183**	P	**Pn**	**10 09 11.9**	**-0.3**
BFZ	**Birch Farm**	**2.97**	**183**	P	**Pn**	**10 09 12.1**	**-0.1**
MRZ	**Mangatainoka R**	**3.03**	**193**	P	**Pn**	**10 09 12.5**	**-0.4**
TIWZ	**Tintock**	**3.09**	**188**	P	**Pn**	**10 09 13.3**	**-0.4**
CPWZ	**Castlepoint**	**3.20**	**184**	P	**Pn**	**10 09 15.4**	**+0.4**
OGWZ	**Otaki Gorge**	**3.26**	**198**	P	**Pn**	**10 09 15.4**	**-0.3**
HOWZ	**Holdsworth Sta**	**3.27**	**193**	P	**Pn**	**10 09 15.1**	**-0.8**
CAW	**Cannon Point**	**3.56**	**197**	P	**Pn**	**10 09 18.7**	**-0.8**
PLWZ	**Palliser**	**3.97**	**193**	P	**Pn**	**10 09 23.1**	**-1.4**
KHZ	**Kahutara**	**5.21**	**205**	P	**Pn**	**10 09 39.5**	**-0.9**
KHZ	**Kahutara**	**5.21**	**205**	P	**Pn**	**10 09 39.5**	**-0.9**
DSZ	**Denniston Nort**	**5.40**	**220**	P	**Pn**	**10 09 43.3**	**+0.4**

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*NEIC **27** 10:17:17.7±1.5, 18°.50N±0°.05×67°.56W±0°.04, h22km±9km, Error ellipse: s-maj=7.4km s-min=4.4km az=202.0*

*OSPL **27** 10:17:18.3±1.4, 18°.45N×67°.53W, h31km±23km, ML2.5*

*RSPR **27** 10:17:18.1, 18°.51N×67°.56W, h17km, MD3.1/16*

ISC 27 10:17:14.6±1.1**, 18°.44N**±0°.07×**67°.69W**±0°.03**, h27**km**, n55,**
σ**1ˢ.11**/61**, 13C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.21**	**105**	⇑*e*P	**Pn**	**10 17 22.1**	**0.0**
IDE	**Isla Desecheo**	**0.21**	**105**	*e*S	**Sb**	**10 17 25.3**	**+0.5**
AGPR	**Aguadilla, PR**	**0.55**	**87**	⇑*e*P	**Pb**	**10 17 26.1**	**+0.3**
AGPR	**Aguadilla, PR**	**0.55**	**87**	*e*S	**Sb**	**10 17 32.5**	**-0.8**
AGPR	**Aguadilla, PR**	**0.55**	**87**		**Pb**	**10 17 26.1**	**+0.3**
AGPR					**Sb**	**10 17 32.5**	**-0.8**
AGPR	**Aguadilla, PR**	**0.55**	**87**	IAML		10 17 32.8	
	comp=E,1µm,0.3s						
AGPR				IAML		10 17 33.0	
	comp=N,1µm,0.2s						
AGPR	**Aguadilla, PR**	**0.55**	**87**	*i* P	**Pb**	**10 17 26.0**	**+0.3**
AGPR				*e*S	**Sb**	**10 17 31.1**	**-2.3**
AGPR				IAML		10 17 32.3	
	comp=Z,508nm,0.9s						
PRSN	**Puerto Rico Se**	**0.56**	**113**	Pg	**Pn**	**10 17 27.0**	**+0.1**
LSP	**Las Mesas**	**0.63**	**115**	⇑*i*P	**Pn**	**10 17 28.4**	**+0.5**
LSP	**Las Mesas**	**0.63**	**115**	*e*S	**Sn**	**10 17 36.3**	**-0.8**
CRPR	**Cabo Rojo, PR**	**0.70**	**128**	⇑*e*P	**Pn**	**10 17 29.5**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.70**	**128**	*e*S	**Sn**	**10 17 38.3**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.70**	**128**		**Pn**	**10 17 29.5**	**+0.7**
CRPR					**Sn**	**10 17 38.3**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.70**	**128**	*i* P	**Pn**	**10 17 29.4**	**+0.7**
CRPR				*e*S	**Sb**	**10 17 35.5**	**-2.1**
CRPR				IAML		10 17 42.2	
	comp=Z,196nm,0.7s						
MLPR	**Magueyes Islan**	**0.77**	**127**	⇑*e*P	**Pn**	**10 17 30.5**	**+0.7**
MLPR	**Magueyes Islan**	**0.77**	**127**	*e*S	**Sn**	**10 17 40.1**	**-0.4**
MLPR	**Magueyes Islan**	**0.77**	**127**		**Pn**	**10 17 30.5**	**+0.7**
MLPR					**Sn**	**10 17 40.1**	**-0.4**
MLPR	**Magueyes Islan**	**0.77**	**127**	IAML		10 17 41.0	
	comp=E,312nm,0.2s						
AOPR	**Arecibo Observ**	**0.90**	**96**	⇑*e*P	**Pn**	**10 17 31.3**	**-0.2**
AOPR	**Arecibo Observ**	**0.90**	**96**	*e*S	**Sn**	**10 17 43.6**	**0.0**
AOPR	**Arecibo Observ**	**0.90**	**96**		**Pn**	**10 17 31.3**	**-0.2**
AOPR					**Sn**	**10 17 43.6**	**0.0**
AOPR	**Arecibo Observ**	**0.90**	**96**	IAML		10 17 46.9	
	comp=N,323nm,0.3s						
GBPR	**Guanica, Bosqu**	**0.90**	**121**	⇑*e*P	**Pn**	**10 17 32.6**	**+1.1**
GBPR	**Guanica, Bosqu**	**0.90**	**121**	*e*S	**Sn**	**10 17 45.0**	**+1.3**
EMPR	**Esperanza - Ma**	**1.10**	**88**	⇑*e*P	**Pb**	**10 17 35.1**	**0.0**
EMPR	**Esperanza - Ma**	**1.10**	**88**	*e*S	**Sn**	**10 17 48.3**	**-0.3**
EMPR	**Esperanza - Ma**	**1.10**	**88**		**Pb**	**10 17 35.1**	**0.0**
EMPR					**Sn**	**10 17 48.3**	**-0.3**
EMPR	**Esperanza - Ma**	**1.10**	**88**	IAML		10 17 55.5	
	comp=N,271nm,0.5s						
EMPR				IAML		10 17 58.5	
	comp=E,390nm,0.4s						
OBIP	**Obispado Ponce**	**1.10**	**111**	⇑*e*P	**Pb**	**10 17 35.1**	**0.0**
OBIP	**Obispado Ponce**	**1.10**	**111**	*e*S	**Sb**	**10 17 49.2**	**+0.1**
OBIP	**Obispado Ponce**	**1.10**	**111**		**Pb**	**10 17 35.1**	**0.0**
OBIP					**Sb**	**10 17 49.2**	**+0.1**
CELP	**Cerrillos**	**1.12**	**109**	⇓*e*P	**Pb**	**10 17 35.5**	**+0.2**
CELP	**Cerrillos**	**1.12**	**109**	*e*S	**Sb**	**10 17 48.8**	**-0.7**
CELP	**Cerrillos**	**1.12**	**109**		**Pb**	**10 17 35.5**	**+0.2**
CELP					**Sb**	**10 17 49.3**	**-0.2**
ICMP	**Isla Caja de M**	**1.24**	**116**	Pn	**Pb**	**10 17 38.9**	**+1.6**
SJG	**San Juan**	**1.50**	**102**		**Pb**	**10 17 41.9**	**+0.1**
SJG				IAML		10 18 03.4	
	comp=E,171nm,0.2s						
SJG				IAML		10 18 07.3	
	comp=E,124nm,0.3s						
GCPR	**Guaynabo City**	**1.53**	**95**	⇑*e*P	**Pb**	**10 17 43.0**	**+0.6**
GCPR	**Guaynabo City**	**1.53**	**95**	*e*S	**Sb**	**10 18 00.5**	**-0.9**
GCPR	**Guaynabo City**	**1.53**	**95**		**Pb**	**10 17 42.8**	**+0.4**
GCPR					**Sb**	**10 18 00.4**	**-0.9**
GCPR				IAML		10 18 08.1	
	comp=E,88nm,0.7s						
IGPR	**InterUniversit**	**1.58**	**107**	⇑*e*P	**Pb**	**10 17 43.2**	**0.0**
DR12	**Loma Pena Alta**	**1.64**	**282**		**Pb**	**10 17 46.3**	**+2.0**
PDPR	**Patillas Dam,**	**1.64**	**105**		**Pb**	**10 17 43.9**	**-0.3**
PDPR				IAML		10 18 07.1	
	comp=E,95nm,2.9s						
CBYP	**Canovanas**	**1.75**	**95**	⇑*e*P	**Pb**	**10 17 45.3**	**-0.8**
CBYP	**Canovanas**	**1.75**	**95**		**Pb**	**10 17 45.3**	**-0.8**
HUMP	**Col San Antoni**	**1.77**	**99**	⇑*e*P	**Pb**	**10 17 45.8**	**-0.7**
HUMP	**Col San Antoni**	**1.77**	**99**	*e*S	**Sb**	**10 18 06.4**	**-2.0**
HUMP	**Col San Antoni**	**1.77**	**99**		**Pb**	**10 17 45.8**	**-0.7**
HUMP					**Sb**	**10 18 06.4**	**-2.0**
MTP	**Monte Pirata**	**2.06**	**99**	⇑*e*P	**Pb**	**10 17 50.2**	**-1.2**
MTP	**Monte Pirata**	**2.06**	**99**		**Pb**	**10 17 50.2**	**-1.2**
MTP	**Monte Pirata**	**2.06**	**99**	IAML		10 18 25.7	
	comp=E,62nm,0.2s						
CUPR	**Culebra, Puert**	**2.29**	**93**	Pn	**Pn**	**10 17 52.9**	**+2.2**
BANI	**BANI**	**2.53**	**269**	Pn	**Pb**	**10 17 59.5**	**0.0**
STVI	**Saint Thomas**	**2.60**	**92**	Pn	**Pn**	**10 17 57.5**	**+2.5**
STVI				IAML		10 18 50.5	
	comp=N,30nm,0.8s						
SDDR	**Presa de Saban**	**3.45**	**280**	Pn	**Pb**	**10 18 11.9**	**-3.2**
SDDR				IAML		10 19 15.4	
	comp=N,26nm,0.7s						
SDDR				IAML		10 19 15.7	
	comp=N,24nm,0.7s						
SMRT	**St. Maarten**	**4.40**	**94**	Pn	**Pn**	**10 18 22.8**	**+3.0**

IDC 27 10:45:10.6±3.2**, 8°.40S**×**149°.67E, h0**km**, mb3.4**/1**,**
mbtmp3.5/3**, ML3.4**/1**, MS2.9**/3**, Error ellipse:**
s-maj=91.9km s-min=44.4km az=134.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.68**	**248**	Pn	Pn	10 45 56.5	+1.5
	42nm,0.6s,baz=68,slow=5.9,SNR=17						
PMG				LR	LR	10 47 02.8	
	comp=Z,98nm,19.4s,baz=302,slow=42						
WRA	**Warramunga Arr**	**18.76**	**231**	P	P	10 49 29.5	-1.9
	0.1nm,0.3s,baz=52,slow=10,SNR=15						
	0.9nm,0.8s						
SIJI	**Sorong**	**19.80**	**291**	LR	LR	10 56 57.4	
	comp=Z,34nm,21.7s,baz=22,slow=36						
ASAR	**Alice Springs**	**21.42**	**223**	P	P	10 49 58.8	-1.6
	1.2nm,0.7s,baz=57,slow=10,SNR=13						
	1.2nm,0.7s						
PETK	**Petropavlovsk-**	**61.65**	**5**	LR	LR	11 16 57.7	
	comp=Z,19nm,20.6s,baz=96,slow=31						
TORD	**Torodi Ar. Bea**	**148.21**	**281**	PKPbc	PKPbc	11 05 00.5	+0.9
	0.5nm,0.7s,baz=56,slow=2.5,SNR=3.6						

NOU 27 11:23:15.2, 14°.62S×**166°.61E, h7**km**, MLv4.6**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.44**	**154**	P	Pn	11 24 10.1	+0.9
KOUNC	**Koumac, New Ca**	**6.30**	**200**	P	Pn	11 24 49.0	+0.4
	32nm,1.0s						
YATNC	**Mamie plateau,**	**7.40**	**178**	P	Pn	11 25 02.8	-1.0
	19nm,1.1s						
DZM	**Mont Dzumac**	**7.41**	**181**	P	Pn	11 25 03.3	-0.7
	20nm,2.0s						
OUENC	**Ouen Island, N**	**7.76**	**178**	P	Pn	11 25 09.2	+0.6
	10nm,0.9s						

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*DDA **27** 11:25:56.0±0.0, 37°.01N×37°.01E, h3km±2km, ML2.6*

*ISK **27** 11:25:56.3, 36°.98N×36°.94E, h8km, ML2.5/10*

ISC 27 11:25:55.7±1.2**, 36°.97N**±0°.03×**37°.00E**±0°.02**, h3**km±10km**,**
n25, σ**0ˢ.69**/42**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.35**	**309**	P	**Pg**	**11 26 03.0**	**+0.6**
KAMA				S	**Sg**	**11 26 07.5**	**+0.6**
HCB	**Kahramanmara**	**0.38**	**349**	P	**Pg**	**11 26 02.5**	**-0.6**
HCB				S	**Sg**	**11 26 08.4**	**+0.3**
KMRS	**Kahramanmaras**	**0.54**	**351**	PG	**Pg**	**11 26 06.5**	**+0.4**
KAHM	**Kahramanmaras,**	**0.55**	**359**	P	**Pg**	**11 26 06.0**	**-0.2**
KAHM				S	**Sg**	**11 26 13.7**	**+0.4**
GZT	**Gaziantep**	**0.59**	**49**	P	**Pg**	**11 26 07.1**	**0.0**
GZT				S	**Sb**	**11 26 19.1**	**+1.4**
ANDN	**Andirin**	**0.81**	**320**	P	**Pb**	**11 26 11.6**	**-0.8**
ANDN				S	**Sn**	**11 26 24.7**	**-1.9**
ANDN				*i* AML	AML	11 26 26.0	
	comp=N,200nm,0.3s						
TAHT	**Tahtakopru-Hat**	**0.88**	**228**	PG	**Pg**	**11 26 13.3**	**+0.7**
CEYT	**Ceyhan**	**1.01**	**273**	PG	**Pb**	**11 26 15.3**	**-0.5**
KOZT	**Kozan**	**1.07**	**299**	PG	**Pb**	**11 26 16.5**	**-0.4**
KOZT				SG	**Sb**	**11 26 30.6**	**-0.7**
ATAB	**Bozova**	**1.15**	**64**	P	**Pg**	**11 26 17.9**	**+0.2**
ATAB				S	**Sg**	**11 26 31.9**	**-0.6**
ATAB				*i* AML	AML	11 26 36.0	
	comp=N,165nm,0.4s						
YAYL	**Yayladag**	**1.18**	**218**	PN	**Pg**	**11 26 18.6**	**+0.3**
YAYL				SN	**Sb**	**11 26 35.2**	**+0.7**
SAIM	**ADANA**	**1.25**	**324**	P	**Pn**	**11 26 20.5**	**+0.3**
SAIM				S	**Sn**	**11 26 37.8**	**+0.3**
SAIM				*i* AML	AML	11 26 39.0	
	comp=N,234nm,0.3s						
SAIM				*i* AML	AML	11 26 39.0	
	comp=E,268nm,0.5s						
SURC	**SANLIURFA_SURC**	**1.29**	**93**	P	**Pn**	**11 26 19.9**	**-0.8**
SURC				S	**Sg**	**11 26 36.0**	**-1.2**
SURC				*i* AML	AML	11 26 39.0	
	comp=N,153nm,0.3s						
SURC				*i* AML	AML	11 26 41.0	
	comp=E,165nm,0.3s						
ELBS	**KAHRAMANMARAS**	**1.36**	**4**	P	**Pg**	**11 26 21.8**	**0.0**
ELBS				S	**Sn**	**11 26 41.5**	**+1.2**
ELBS				*i* AML	AML	11 26 42.0	
	comp=E,115nm,0.5s						
SARI	**SarD1z-Kayseri**	**1.51**	**342**	PN	**Pb**	**11 26 23.9**	**-0.6**
SARI				SN	**Sg**	**11 26 44.1**	**-0.1**
AKCD	**Akcadag**	**1.51**	**29**	P	**Pb**	**11 26 24.3**	**-0.2**
AKCD				S	**Sn**	**11 26 43.7**	**-0.5**
AKCD				*i* AML	AML	11 26 45.0	
	comp=N,131nm,0.4s						
AKCD				*i* AML	AML	11 26 46.0	
	comp=E,96nm,0.5s						
SANL	**SANLIURFA_Merk**	**1.60**	**82**	P	**Pn**	**11 26 25.0**	**+0.1**
SANL				S	**Sn**	**11 26 46.4**	**+0.2**
SANL				*i* AML	AML	11 26 47.0	
	comp=N,106nm,0.6s						
SANL				*i* AML	AML	11 26 54.0	
	comp=E,56nm,0.2s						
DARE	**Darende-Malaty**	**1.65**	**13**	PN	**Pb**	**11 26 26.5**	**-0.2**
DARE				SN	**Sg**	**11 26 48.2**	**-0.4**
CMRD	**Camardi-Nigde**	**1.75**	**294**	PN	**Pn**	**11 26 26.7**	**-0.3**
MALT	**Malatya**	**1.75**	**40**	PN	**Pb**	**11 26 29.1**	**+0.5**
MERS	**Mersin**	**1.99**	**268**	PN	**Pn**	**11 26 30.2**	**-0.1**
HEKM	**Malatya_Hekimh**	**2.05**	**21**	P	**Pb**	**11 26 33.8**	**0.0**
HEKM				S	**Sg**	**11 27 00.7**	**-1.0**
HEKM				*i* AML	AML	11 27 03.0	
	comp=E,56nm,0.4s						
HEKM				*i* AML	AML	11 27 08.0	
	comp=N,58nm,0.4s						
BNN	**Bunyan**	**2.09**	**334**	PN	**Pn**	**11 26 32.5**	**+0.7**
ELZG	**Elazig**	**2.19**	**45**	P	**Pn**	**11 26 34.2**	**+1.0**
ELZG				S	**Sg**	**11 27 05.5**	**-0.6**
ELZG				*i* AML	AML	11 27 08.0	
	comp=N,34nm,0.6s						
ELZG				*i* AML	AML	11 27 16.0	
	comp=E,30nm,1.2s						
KEBE	**Keben-Mersin**	**2.69**	**260**	PN	**Pn**	**11 26 40.1**	**+0.1**

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*JMA **27** 11:26:18.9±0.1, 24°N±1°×123°.0E±0°.5, h31km±2km, MV3.3/11, NW OFF ISHIGAKIJIMA IS*

*TAP **27** 11:26:18.9, 24°.14N×122°.94E, h23km±2km, ML3.2, D*

ISC 27 11:26:17.0±1.1**, 24°.15N**±0°.04×**122°.92E**±0°.02**, h17**km±9km**,**
n53, σ**0ˢ.79**/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.30**	**5**	*i* P	**Pn**	**11 26 26.7**	**+0.1**
JYNG				*e*S	**Sn**	**11 26 31.9**	**-0.7**
YOJ	**Yonaguni jima**	**0.32**	**15**	*i* P	**Pn**	**11 26 26.8**	**-0.1**
	baz=10.0						
YOJ				S	**Sn**	**11 26 32.4**	**-0.7**
	baz=10.0						
YOJ	**Yonaguni jima**	**0.32**	**15**	P	**Pn**	**11 26 27.0**	**+0.1**
YOJ				S	**Sn**	**11 26 32.5**	**-0.7**
IRIF	**Iriomote-Funau**	**0.76**	**76**	P	**Pb**	**11 26 32.8**	**+0.9**
IRIF				S	**Sb**	**11 26 43.1**	**+1.2**
HATJ	**Hateruma jima**	**0.82**	**97**	P	**Pb**	**11 26 32.8**	**+0.1**
HATJ				*e*S	**Sb**	**11 26 43.7**	**+0.2**
JKRS	**Kuro-shima**	**1.00**	**85**	P	**Pb**	**11 26 36.1**	**+0.2**
JKRS				*e*S	**Sb**	**11 26 49.2**	**+0.4**
TWC	**Suao**	**1.08**	**295**	P	**Pg**	**11 26 39.2**	**+1.3**
	baz=295						
TWC				*e*S	**Sn**	**11 26 53.7**	**+1.8**
	baz=295						
EWUT	**Wuta**	**1.08**	**286**	*e*P	**Pg**	**11 26 39.4**	**+1.4**
	baz=285						
EWUT				*e*S	**Sn**	**11 26 54.2**	**+2.3**
	baz=285						
ENA	**Nanau**	**1.11**	**285**	*e*P	**Pg**	**11 26 39.4**	**+0.9**
	baz=284						
ENA				*e*S	**Sn**	**11 26 54.7**	**+2.0**
	baz=284						
EGS		**1.13**	**308**	*e*P	**Pg**	**11 26 39.8**	**+0.8**
	baz=307						
EGS				*e*S	**Sn**	**11 26 54.9**	**+1.7**
	baz=307						
JIJ	**Ishigaki jima**	**1.14**	**79**	P	**Pn**	**11 26 38.2**	**0.0**
JIJ				S	**Sb**	**11 26 52.4**	**-0.4**
NDS	**Dongshan**	**1.20**	**294**	*e*P	**Pg**	**11 26 41.3**	**+1.1**
	baz=293						
NDS				*e*S	**Sg**	**11 26 57.2**	**+1.4**
	baz=293						
TWB1	**Santiao Chiao**	**1.20**	**315**	*e*P	**Pg**	**11 26 40.4**	**+0.1**
	baz=315						
TWB1				*e*S	**Sg**	**11 26 56.2**	**+0.3**
	baz=315						
NACB	**Ninganchiao**	**1.21**	**271**	*e*P	**Pg**	**11 26 40.7**	**+0.3**
	baz=271						
NACB				*e*S	**Sg**	**11 26 57.4**	**+1.1**
	baz=271						
NTC	**Toucheng**	**1.21**	**305**	*e*P	**Pg**	**11 26 41.2**	**+0.7**
	baz=305						
NTC				*e*S	**Sg**	**11 26 56.8**	**+0.4**
	baz=305						
TWE	**Neicheng**	**1.27**	**297**	P	**Pg**	**11 26 41.7**	**+0.1**
	baz=296						
TWE				*e*S	**Sg**	**11 26 58.3**	**+0.1**
	baz=296						
TIPB	**Shuangxi**	**1.29**	**310**	*i* P	**Pg**	**11 26 41.9**	**0.0**
	baz=309						
TIPB				S	**Sg**	**11 26 59.1**	**+0.4**
	baz=309						
ETLH	**Xiulin Townshi**	**1.31**	**273**	P	**Pg**	**11 26 42.4**	**0.0**
	baz=272						
ETLH				*e*S	**Sg**	**11 26 59.9**	**+0.3**
	baz=272						
ENTT	**Nioudou**	**1.32**	**292**	P	**Pg**	**11 26 43.3**	**+0.7**
	baz=291						
ENTT				*e*S	**Sg**	**11 27 00.1**	**+0.2**
	baz=291						
LATG	**Datong**	**1.33**	**287**	*e*P	**Pg**	**11 26 42.6**	**0.0**
	baz=286						
LATG				*e*S	**Sg**	**11 26 59.2**	**-0.8**
	baz=286						
SXI1	**Grass Mountain**	**1.33**	**315**	P	**Pg**	**11 26 42.7**	**-0.1**
	baz=314						
SXI1				*e*S	**Sg**	**11 26 59.4**	**-0.8**
	baz=314						
JISG	**Ishigakijimahi**	**1.34**	**71**	P	**Pn**	**11 26 41.1**	**+0.2**
JISG				S	**Sn**	**11 26 58.4**	**0.0**
FUSB	**Fushanzhiwuyua**	**1.35**	**297**	P	**Pg**	**11 26 42.9**	**-0.3**
	baz=296						
FUSB				*e*S	**Sg**	**11 27 00.5**	**-0.4**
	baz=296						
NWF	**Wu-fen Shan**	**1.38**	**312**	*i* P	**Pg**	**11 26 43.8**	**+0.1**
	baz=311						
NWF				*e*S	**Sg**	**11 27 01.2**	**-0.5**
	baz=311						
WFSB	**Wu-fen Shan**	**1.38**	**312**	*i* P	**Pg**	**11 26 43.9**	**+0.2**
	baz=311						
WFSB				*e*S	**Sg**	**11 27 01.1**	**-0.6**
	baz=311						
NNSB	**Datong**	**1.43**	**281**	*e*P	**Pg**	**11 26 44.5**	**-0.1**
	baz=281						
NNSB				*e*S	**Sg**	**11 27 03.3**	**+0.1**
	baz=281						
NWLT	**Wulai**	**1.43**	**296**	*e*P	**Pg**	**11 26 43.7**	**-0.9**
	baz=295						
NWLT				*e*S	**Sg**	**11 27 02.5**	**-0.9**
	baz=295						
NNS	**Nan Shan**	**1.44**	**282**	*e*P	**Pg**	**11 26 44.3**	**-0.5**
	baz=281						
NNS				*e*S	**Sg**	**11 27 03.1**	**-0.5**
	baz=281						
TWA	**Mucha**	**1.47**	**304**	P	**Pg**	**11 26 44.3**	**-1.0**
	baz=304						
TWA				*e*S	**Sg**	**11 27 03.2**	**-1.2**
	baz=304						
YHNB	**Yeheng**	**1.50**	**290**	P	**Pg**	**11 26 46.4**	**+0.5**
YHNB	**Yeheng**	**1.50**	**290**	*e*P	**Pg**	**11 26 45.1**	**-0.8**
	baz=290						
YHNB				*e*S	**Sg**	**11 27 04.5**	**-0.9**
	baz=290						
WHF	**Hehuan Shan**	**1.51**	**270**	*e*P	**Pb**	**11 26 44.8**	**-0.1**
	baz=269						
WHF				*e*S	**Sg**	**11 27 04.7**	**-1.3**
	baz=269						
NSK	**Sanguang**	**1.52**	**290**	*e*P	**Pg**	**11 26 46.1**	**-0.2**
	baz=290						
NSK				*e*S	**Sg**	**11 27 04.4**	**-1.6**
	baz=290						
HGSD	**Ruisui**	**1.52**	**245**	*e*P	**Pb**	**11 26 44.9**	**+0.2**
	baz=244						
HGSD				*e*S	**Sb**	**11 27 03.9**	**+0.1**
	baz=244						
YM01	**YM01**	**1.58**	**309**	*e*P	**Pg**	**11 26 46.3**	**-1.1**
	baz=308						
YM01				*e*S	**Sg**	**11 27 06.5**	**-1.4**
	baz=308						
CHGB	**Renai**	**1.60**	**267**	*e*P	**Pb**	**11 26 46.4**	**+0.2**
	baz=267						
CHGB				*e*S	**Sb**	**11 27 06.6**	**+0.4**
	baz=267						
EHY	**Hungye**	**1.60**	**247**	*e*P	**Pn**	**11 26 44.7**	**+0.2**
	baz=246						
OWD	**Renai**	**1.61**	**263**	*e*P	**Pb**	**11 26 46.1**	**-0.2**
	baz=263						
OWD				*e*S	**Sb**	**11 27 06.6**	**+0.2**
	baz=263						
WUSB	**Renai**	**1.65**	**265**	*e*P	**Pb**	**11 26 47.1**	**0.0**
	baz=264						

WUSB				*e*S	Sb	11 27 07.2	-0.6
	baz=264						
YULB	Yu-li	1.67	243	*e*P	Pn	11 26 46.0	+0.5
	baz=243						
YULB				*e*S	Sn	11 27 06.1	-0.4
	baz=243						
VWDT	VWDT	1.67	257	*e*P	Pb	11 26 46.9	-0.5
	baz=256						
VWDT				*e*S	Sb	11 27 08.3	+0.1
	baz=256						
JTJ	Tarama	1.70	73	P	Pn	11 26 46.6	+0.7
JTJ				*e*S	Sn	11 27 07.5	+0.3
FULB	Fuli	1.77	238	*e*P	Pb	11 26 48.3	-0.7
	baz=237						
FULB				*e*S	Sn	11 27 08.1	-0.9
	baz=237						
SSLB	Suanglung	1.83	259	P	Pb	11 26 51.0	+0.8
SSLB	Suanglung	1.83	259	*e*P	Pb	11 26 49.9	-0.3
	baz=258						
SSLB				*e*S	Sb	11 27 13.4	+0.6
	baz=258						
WCS	Beigang Elemen	1.84	267	*e*P	Pb	11 26 50.1	0.0
	baz=267						
WCS				*e*S	Sb	11 27 12.2	-0.6
	baz=267						
SMLT	Sun Moon Lake	1.87	262	*e*P	Pb	11 26 50.3	-0.4
	baz=261						
SMLT				*e*S	Sb	11 27 13.0	-0.9
	baz=261						
EDH	Donghe	1.89	232	*e*P	Pn	11 26 48.8	+0.2
	baz=232						
EDH				*e*S	Sn	11 27 10.2	-1.8
	baz=232						
TYC	Yuchr	1.90	263	*e*P	Pb	11 26 50.6	-0.7
	baz=262						
TYC				*e*S	Sb	11 27 14.1	-0.7
	baz=262						
TWQ1	Liyutan	1.97	276	*e*P	Pb	11 26 52.1	-0.3
	baz=275						
TWQ1				*e*S	Sb	11 27 16.1	-0.6
	baz=275						
ELDTW	Lidau	1.99	242	*e*P	Pn	11 26 50.6	+0.6
	baz=241						
ELDTW				*e*S	Sn	11 27 14.5	-0.2
	baz=241						
JMJ	Miyako jima 2	2.26	73	P	Pb	11 26 55.9	-1.5
TPUB	Ta-pu	2.26	248	P	Pb	11 26 57.0	-0.5

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*IDC **27** 11:29:26.7±4.0, 4°.43S×145°.63E, h80^{km}±39^{km}, mb3.8/11, mbtmp4.0/14, MS3.1/9, Error ellipse: s-maj=27.2km s-min=22.8km az=86.0*

ISC 27 11:29:23.7±0.8**, 4°.32S**±0°.10×**145°.6E**±0°.2**, h50^{km}, n20, σ0^{s}.95**/14**, mb4.0**/10**, MS3.0**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.30	163	P	Pn	11 30 41.2	+0.8
	20nm,0.3s,baz=24,slow=6.2,SNR=22						
PMG				S	Sn	11 31 41.2	+1.0
	56nm,0.5s,baz=150,slow=22,SNR=7.9						
PMG				LR	LR	11 32 57.8	
	comp=Z,77nm,20.2s,baz=308,slow=41						
CTA	Charters Tower	15.69	178	P	P	11 33 03.7	-1.1
	0.8nm,0.3s,baz=3.9,slow=17,SNR=1.6						
CTA				LR	LR	11 39 41.2	
	comp=Z,76nm,18.4s,baz=324,slow=39						
WRA	Warramunga Arr	18.98	214	P	P	11 33 40.1	-1.2
	1.7nm,0.7s,baz=33,slow=11,SNR=17						
WRA				LR	LR	11 40 47.0	
	comp=Z,86nm,18.0s,baz=102,slow=36						
ASAR	Alice Springs	22.27	209	P	P	11 34 16.1	-0.8
	0.5nm,0.5s,baz=39,slow=7.5,SNR=13						
	0.5nm,0.5s						
DZM	Mont Dzumac	26.86	133	LR	LR	11 43 33.4	
	comp=Z,22nm,19.2s,baz=248,slow=32						
STKA	Stephens Creek	27.66	187	P	P	11 35 07.4	+0.4
	1.3nm,0.4s,baz=330,slow=17,SNR=1.9						
STKA				LR	LR	11 47 57.8	
	comp=Z,79nm,19.0s,baz=20,slow=40						
	1.3nm,0.4s						
JOW	Kunigami	35.19	333	LR	LR	11 50 22.4	
	comp=Z,20nm,18.1s,baz=322,slow=36						
KSRS	Korea Array	44.69	340	LR	LR	11 55 19.6	
	comp=Z,19nm,20.0s,baz=225,slow=35						
CMAR	Chiang Mai Arr	51.19	298	P	P	11 38 24.1	+1.7
	2.4nm,0.6s,baz=120,slow=6.1,SNR=13						
	2.4nm,0.6s						
PETK	Petropavlovsk-	58.13	9	LR	LR	11 59 21.2	
	comp=Z,9.2nm,21.2s,baz=160,slow=31						
VNDA	Vanda	73.66	176	LR	LR	12 12 02.2	
	comp=Z,48nm,19.2s,baz=230,slow=35						
MKAR	Makanchi Array	75.29	321	P	P	11 41 02.2	+0.6
	1.5nm,0.8s,baz=108,slow=7.8,SNR=8.8						
	1.5nm,0.8s						
ZALV	Zalesovo Beam	76.83	328	P	P	11 41 09.8	-0.4
	0.6nm,0.5s,baz=84,slow=6.9,SNR=4.1						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	79.03	323	P	P	11 41 22.5	0.0
	0.5nm,0.4s,baz=120,slow=4.8,SNR=6.9						
	0.5nm,0.4s						
NRIK	Noril'sk	83.25	342	P	P	11 41 44.5	-0.1
	3.1nm,0.7s,baz=116,slow=2.1,SNR=3.9						
	3.1nm,0.7s						
ILAR	Eielson Array	84.52	23	P	P	11 41 50.5	-0.7
	1.8nm,0.8s,baz=251,slow=5.1,SNR=21						
	1.8nm,0.8s						
QSPA	South Pole Qui	85.63	180	P	P	11 41 55.9	-1.0
	1.0nm,0.8s,baz=294,slow=2.4,SNR=5.4						
	1.0nm,0.8s						
INK	Inuvik	90.63	22	P	P	11 42 20.4	-0.1
	1.1nm,0.8s,baz=263,slow=7.0,SNR=4.1						
	1.1nm,0.8s						
YKA	Yellowknife Ar	98.37	28	P	Pdif	11 42 55.7	-0.3
	0.3nm,0.7s,baz=285,slow=4.1,SNR=3.7						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	143.26	286	PKP	PKPbc	11 48 51.0	+0.3
	0.5nm,0.8s,baz=81,slow=4.8,SNR=2.8						

IDC 27 11:48:41.9±6.9**, 21°.02S**×**173°.46E, h0^{km}, mb3.6**/2**, mbtmp3.6**/2**, Error ellipse: s-maj=256.9km s-min=105.4km az=157.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	36.60	258	P	P	11 55 49.8	-0.3
	0.6nm,0.5s,baz=94,slow=8.2,SNR=7.7						
	0.6nm,0.5s						
WRA	Warramunga Arr	36.60	265	P	P	11 55 50.2	+0.1
	0.2nm,0.3s,baz=96,slow=8.7,SNR=15						
	0.2nm,0.3s						
AKASG	Malin Array Be	139.23	325	PKP	PKPdf	12 08 10.5	-0.3
	0.9nm,0.3s,baz=54,slow=3.0,SNR=7.9						

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*NEIC **27** 12:07:53.9±1.2, 34°.73N±0°.05×140°.82E±0°.10, h35^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=13.5km s-min=8.1km az=93.0*

*JMA **27** 12:07:54.0±0.2, 34°.7N±0°.6×140°.6E±0°.7, h56^{km}±1^{km}, MV3.7/39, SE OFF BOSO PENINSULA*

JMA Felt I J1 at SE OFF BOSO PENINSULA .

*IDC **27** 12:07:54.3±2.9, 34°.71N×140°.72E, h38^{km}±22^{km}, mb3.7/7, mbtmp4.0/10, ML3.4/2, MS2.5/5, Error ellipse: s-maj=40.6km s-min=13.8km az=76.0*

*NIED **27** 12:07:54.0, 34°.69N×140°.63E, h56^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.30; M$_{θθ}$-0.80; M$_{φφ}$-4.50; M$_{rθ}$-1.63; M$_{θφ}$0.22; M$_{φr}$4.63; Fault plane solution: M$_0$6.92000×10^{14} NP1: φ$_s$183.00000°, δ23.00000°, λ106.00000°. NP2: φ$_s$346.00000°, δ68.00000°, λ83.00000°.*

ISC 27 12:07:55.0±0.8**, 34°.67N**±0°.04×**140°.63E**±0°.05**, h46^{km}**±8^{km}**, n66, σ1^{s}.51**/70**, mb4.4**/14**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	0.16	321	*i* P	Pn	12 08 02.5	+0.1
BSO3				X		12 08 09.1	
BSO1	Boso 1	0.28	94	*i* P	Pn	12 08 03.5	+0.6
BSO1				X		12 08 10.2	
BSO4	Boso 4	0.40	322	*i* P	Pn	12 08 04.9	+0.1
BSO4				X		12 08 12.9	
KTR	Katsuura	0.54	331	*i* P	Pn	12 08 06.2	-0.4
KTR				S	Sn	12 08 14.3	-0.5
JKUC	kamogawauchiur	0.60	324	*i* P	Pn	12 08 06.8	-0.5
JKUC				S	Sn	12 08 15.5	-0.7
TATJ	Tateyama 2	0.71	301	⇓*i*P	Pn	12 08 08.8	+0.1
TATJ				⇓S	Sn	12 08 19.3	+0.7
JSMT	Sammumatsuo	0.98	351	P	Pn	12 08 11.7	-0.6
JSMT				S	Sn	12 08 24.3	-0.8
JIM2	Oshima 3	0.99	273	⇓*i*P	Pn	12 08 11.8	-0.7
JIM2				⇓S	Sn	12 08 24.1	-1.3
JTHY	Toshimahigashi	1.12	263	P	Pn	12 08 14.0	-0.3
JTHY				S	Sn	12 08 27.9	-0.6
JMKN	Mikurajimanish	1.16	228	P	Pn	12 08 14.6	-0.3
JMKN				S	Sn	12 08 29.5	-0.1
KTJ3	Kamata3	1.31	282	⇓*i*P	Pn	12 08 15.9	-1.0
KTJ3				⇓S	Sn	12 08 30.3	-2.9
JKO	Kozu shima	1.33	249	P	Pn	12 08 17.0	-0.1
JOD2	Odawara 2	1.40	295	⇓*i*P	Pn	12 08 17.1	-1.0
JOD2				⇓S	Sn	12 08 33.1	-2.3
JIZS	Izushimoda	1.45	272	⇓*i*P	Pn	12 08 18.1	-0.6
JYT	Yasato	1.59	347		Pn	12 08 18.6	-2.1
JHJ2	Mitsune	1.70	204	Pn	Pn	12 08 22.6	+0.4
JHJ	Hachijo jima 2	1.70	205	Pn	Pn	12 08 22.6	+0.4
	79nm,0.3s,baz=329,slow=21,SNR=17						
JHJ				Sn	Sn	12 08 43.1	+0.2
	241nm,0.3s,baz=119,slow=23,SNR=16						
JHJ				LR	LR	12 09 12.5	
	comp=Z,155nm,18.2s,baz=274,slow=44						
MJAR	Matsushiro Arr	2.72	314	Pn	Pn	12 08 35.3	-0.9
	2.1nm,0.3s,baz=175,slow=14,SNR=130						
MJAR				Sn	Sn	12 09 06.7	-1.1
	2.6nm,0.3s,baz=152,slow=8.5,SNR=7.0						
MJAR				LR	LR	12 09 57.2	
	comp=Z,113nm,20.8s,baz=152,slow=45						
	9.5nm,0.3s						
MJAR	Matsushiro Arr	2.72	314		Pn	12 08 36.0	-0.2
MAJO	Matsushiro	2.72	314		Pn	12 08 36.3	+0.1
MJB9	Matsu-Tunnel	2.72	314		Pn	12 08 36.1	-0.1
JGF	Kuroka	2.84	290		Pn	12 08 38.3	+0.4
INU	Inuyama	3.04	284		Pn	12 08 41.3	+0.7
JMM	Marumori	3.19	2		Pn	12 08 41.7	-1.0
JSD	Sado	3.87	331		Pn	12 08 51.5	-0.4
JTM	Tenmabayashi	6.11	3	Pn	Pn	12 09 20.3	-2.5
JHS	Saijyo	6.19	275	Pn	Pn	12 09 24.8	+1.0
ERM	Erimo	7.59	14	Pn	Pn	12 09 40.3	-2.7
JCJ	Chichijima	7.67	170	Pn	Pn	12 09 43.4	-0.7
	22nm,0.3s,baz=360,slow=20,SNR=19						
JCJ				Sn	Sn	12 11 01.9	-7.8
	5.9nm,0.3s,baz=120,slow=20,SNR=1.3						
JCJ	Chichijima	7.67	170		Pn	12 09 43.3	-0.9
JEW	Eniwo	8.18	4	Pn	Pn	12 09 47.8	-3.2
ASAJ	Asahikawa	9.55	9	Pn	Pn	12 10 08.6	-1.3
	0.7nm,0.3s,baz=220,slow=12,SNR=6.9						
ASAJ				LR	LR	12 14 41.8	
	comp=Z,30nm,18.1s,baz=184,slow=43						
	2.3nm,0.4s						
JKA	Kamikawa-asahi	9.55	9		Pn	12 10 08.6	-1.3
KSRS	Korea Array	10.66	289	Pn	Pn	12 10 29.1	+4.2
	0.1nm,0.3s,baz=99,slow=14,SNR=5.0						
KSRS				LR	LR	12 14 20.3	
	comp=Z,27nm,20.8s,baz=220,slow=36						
JOW	Kunigami	13.18	237	LR	LR	12 16 05.1	
	comp=Z,18nm,18.4s,baz=110,slow=37						
MA2	Magadan	25.79	12	LR	LR	12 24 33.9	
	comp=Z,5.7nm,18.2s,baz=81,slow=39						
H11N2	WAKE ISLAND Hy	27.59	116	T	T	12 42 56.4	
	baz=309,slow=75,SNR=111						
H11N1	WAKE ISLAND Hy	27.59	116	T	T	12 42 55.8	
	baz=309,slow=75,SNR=103						
H11N3	WAKE ISLAND Hy	27.61	116	T	T	12 42 48.2	
	baz=309,slow=75,SNR=95						
H11S3	WAKE ISLAND Hy	28.21	118	T	T	12 43 40.0	
	baz=310,slow=74,SNR=30						
H11S1	WAKE ISLAND Hy	28.21	118	T	T	12 43 41.7	
	baz=310,slow=74,SNR=37						
H11S2	WAKE ISLAND Hy	28.22	118	T	T	12 43 40.7	
	baz=310,SNR=34						
ZAA0	Zalesovo Array	43.07	314	P	P	12 15 48.3	-1.8
ZALV	Zalesovo Beam	43.07	314	P	P	12 15 49.2	-1.0
	0.5nm,0.4s,baz=98,slow=10,SNR=2.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	44.87	304	P	P	12 16 05.4	+0.6
	0.6nm,0.4s,baz=84,slow=9.7,SNR=9.9						
	0.6nm,0.4s						
KURK	Kurchatov	46.92	310	P	P	12 16 21.1	+0.4
KURBB	Kurchatov Arra	46.98	310	P	P	12 16 21.1	-0.1
	0.7nm,0.4s,baz=85,slow=7.8,SNR=9.6						
	0.7nm,0.4s						
MTN	Manton Dam	48.11	192	P	P	12 16 30.8	+0.5
MTN				IAmb	IAmb	12 16 31.2	
	comp=Z,6.0nm,0.9s						
COEN	Coen	48.42	177	P	P	12 16 33.3	+0.6
COEN				IAmb	IAmb	12 16 43.0	
	comp=Z,8.4nm,1.4s						
KNRA	Kununurra	51.33	195	P	P	12 16 55.1	+0.3
KNRA				IAmb	IAmb	12 16 56.1	
	comp=Z,6.7nm,0.7s						
GSI	Gunungsitoli	52.06	240	P	P	12 16 59.6	-0.8
KKAR	Karatay Array	53.78	301	P	P	12 17 13.8	+1.0
WB0	Warramunga Arr	54.46	187	P	P	12 17 17.8	-0.1
WB0				IAmb	IAmb	12 17 22.7	
	comp=Z,3.9nm,1.0s						
WR0	Warramunga Arr	54.64	187	P	P	12 17 19.3	+0.2
WR0				IAmb	IAmb	12 17 32.2	
	comp=Z,5.4nm,1.2s						
WB2	Warramunga Arr	54.64	187	P	P	12 17 19.6	+0.5
WB2				IAmb	IAmb	12 17 19.8	
	comp=Z,3.4nm,0.7s						
WRA	Warramunga Arr	54.64	187	P	P	12 17 19.2	+0.1
	comp=Z,3.1nm,0.5s,baz=2.8,slow=7.6,SNR=84						
	comp=Z,3.1nm,0.5s						
WRA	Warramunga Arr	54.64	187	P	P	12 17 18.4	-0.8
CHGR	Chuyangaron	56.13	297	P	P	12 17 30.0	+0.1
ASAR	Alice Springs	58.37	187	P	P	12 17 46.1	+0.5
	comp=Z,0.8nm,0.7s,baz=15,slow=12,SNR=18						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	58.37	187	P	P	12 17 45.2	-0.5
ABKAR	Akbulak array	58.99	311	P	P	12 17 49.9	+0.2
C36M	Paulatuk	59.84	24	P	P	12 17 55.9	+0.7
C36M				IAmb	IAmb	12 18 12.9	
	comp=Z,5.1nm,1.4s						
FIA1	FINESS Array S	70.61	332	P	P	12 19 04.4	-0.7
FINES	FINESS Array B	70.61	332	P	P	12 19 05.3	+0.2
KBZ	Khabaz	71.96	311	P	P	12 19 14.8	+1.2
	comp=Z,1.5nm,0.7s,baz=60,slow=5.6,SNR=5.2						
	comp=Z,1.5nm,0.7s						
AKASG	Malin Array Be	75.78	322	P	P	12 19 35.9	+0.1
	comp=Z,0.2nm,0.3s,baz=56,slow=3.6,SNR=2.2						
	comp=Z,0.2nm,0.3s						

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*ARE **27** 13:27:29±4.4, 5°.25S±0°.10×81°.1W±0°.1, h34^{km}±8^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=145.0*

*NEIC **27** 13:27:31.5±3.6, 5°.16S±0°.04×80°.89W±0°.10, h35^{km}±2^{km}, mb4.1/8, ML4.0(ARE), Error ellipse: s-maj=16.5km s-min=6.5km az=274.0*

*IDC **27** 13:27:36.9±2.8, 5°.36S×80°.90W, h83^{km}±28^{km}, mb3.2/8, mbtmp3.7/11, MS3.4/12, Error ellipse: s-maj=32.6km s-min=19.0km az=53.0*

ISC 27 13:27:32.9±0.7**, 5°.16S**±0°.07×**80°.9W**±0°.1**, h43^{km}, n31, σ1^{s}.75**/24**, mb3.7**/9**, MS3.3**/7**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	3.15	129	P	Pn	13 28 22.4	+1.9
	83nm,0.4s,baz=304,slow=3.5,SNR=106						
ATAH				S	Sn	13 29 00.2	+3.2
	120nm,0.4s,baz=54,slow=13,SNR=4.1						
OTAV	Otavalo	5.88	24	Pn	Pn	13 28 59.9	+1.8
NNA	Nana	7.87	150	P	Pn	13 29 26.1	+1.2
	6.1nm,0.3s,baz=268,slow=8.6,SNR=2.0						
NNA				S	Sn	13 30 52.2	-0.6
	6.0nm,0.3s,baz=240,slow=13,SNR=1.6						
NNA				LR	LR	13 32 12.9	
	comp=Z,96nm,19.5s,baz=310,slow=36						
NNA	Nana	7.87	150	Pn	Pn	13 29 25.2	+0.3
PAYG	Puerto Ayora	10.40	295	Pn	Pn	13 29 60.0	+0.3
ROSC	El Rosal	11.90	33	LR	LR	13 35 25.0	
	comp=Z,349nm,18.8s,baz=260,slow=39						
RGM0	Gandoca	14.76	353	Pn	Pn	13 30 55.7	-3.2
JTS	Las Juntas de	15.88	345	LR	LR	13 36 04.0	
	comp=Z,77nm,21.5s,baz=230,slow=32						
SJCC	San Jacinto, C	16.00	21		Pn	13 31 12.6	-2.6
SJCC				IAmb	IAmb	13 31 33.2	
	comp=Z,19nm,1.1s						
LPAZ	La Paz	16.69	132	P	P	13 31 25.6	-0.7
	comp=Z,1.9nm,0.6s,baz=314,slow=18,SNR=5.6						
LPAZ				LR	LR	13 38 01.0	
	comp=Z,107nm,18.4s,baz=313,slow=38						
LPAZ	La Paz	16.69	132	P	Pn	13 31 22.5	-2.0
PB16	IPOC Station P	17.17	141	P	Pn	13 31 29.0	-1.4
SDV	Santo Domingo	17.29	36	LR	LR	13 39 22.0	
	comp=Z,143nm,18.1s,baz=224,slow=40						
BAUV	El Baul	18.97	42	P	P	13 31 49.4	-1.5
BAUV				IAmb	IAmb	13 31 59.5	
	comp=Z,8.4nm,0.7s						
LVC	Limon Verde	20.85	147	LR	LR	13 40 40.3	
	comp=Z,84nm,18.1s,baz=314,slow=38						
BIRV	Birongo	21.28	43	P	P	13 32 14.0	-1.9
AF01	San Pedro de A	21.52	146	P	P	13 32 18.1	-0.6
SIV	San Ignacio	22.22	120	P	P	13 32 25.8	-0.2
	comp=Z,2.7nm,0.7s,baz=292,slow=14,SNR=7.3						
SIV				LR	LR	13 41 56.0	
	comp=Z,238nm,18.2s,baz=298,slow=39						
	comp=Z,2.7nm,0.7s						
CMIG	Matias Romero	26.09	328	LR	LR	13 40 58.9	
	comp=Z,61nm,20.9s,baz=212,slow=31						
SJG	San Juan	27.31	32	P	P	13 33 15.6	+1.9
	comp=Z,6.5nm,0.2s,baz=314,slow=20,SNR=1.4						
MDP	Montagnes des	29.98	71	LR	LR	13 48 26.5	
	comp=Z,28nm,18.8s,baz=230,slow=42						
RPN	Rapa Nui	34.82	228	LR	LR	13 44 34.8	
	comp=Z,109nm,20.5s,baz=194,slow=29						
PLCA	Paso Flores	36.61	167	P	P	13 34 33.8	-1.3
	comp=Z,1.2nm,0.7s,baz=351,slow=10,SNR=3.1						
	comp=Z,1.2nm,0.7s						
TXAR	Lajitas Array	40.69	329	P	P	13 35 12.0	+2.4
	comp=Z,0.1nm,0.4s,baz=151,slow=11,SNR=1.4						
	comp=Z,0.1nm,0.4s						
TKL	Tuckaleechee C	40.69	356	LR	LR	13 52 15.5	
	comp=Z,39nm,18.8s,baz=156,slow=36						
RCBR	Riachuelo	44.76	93	LR	LR	13 56 28.1	
	comp=Z,102nm,18.5s,baz=7.0,slow=39						
PDAR	Pinedale Array	54.34	334	P	P	13 36 56.0	+0.5
	comp=Z,0.4nm,0.7s,baz=127,slow=9.6,SNR=5.4						
	comp=Z,0.4nm,0.7s						
NVAR	Mina Array Bea	55.54	325	P	P	13 37 06.0	+1.7
	comp=Z,0.3nm,0.6s,baz=152,slow=8.4,SNR=3.9						
	comp=Z,0.3nm,0.6s						
YKA	Yellowknife Ar	72.22	344	P	P	13 38 52.5	-0.6
	comp=Z,0.4nm,0.8s,baz=134,slow=6.0,SNR=6.0						
	comp=Z,0.4nm,0.8s						
ESDC	Sonseca Array	83.27	49	P	P	13 39 56.0	+0.7
	comp=Z,0.8nm,0.6s,baz=269,slow=5.6,SNR=6.2						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	83.96	76	P	P	13 39 58.9	-0.4
	comp=Z,0.4nm,0.6s,baz=283,slow=4.6,SNR=2.3						
	comp=Z,0.4nm,0.6s						

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*NIED **27** 13:29:45.3, 40°.29N×142°.29E, h38^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.51; M$_{θθ}$-0.14; M$_{φφ}$-1.38; M$_{rθ}$0.88; M$_{θφ}$-0.00; M$_{φr}$1.19; Fault plane solution: M$_0$2.04000×10^{14} NP1: φ$_s$167.00000°, δ26.00000°, λ57.00000°. NP2:φ$_s$23.00000°, δ68.00000°, λ105.00000°.*

JMA 27 13:29:45.3±0.1**, 40°.3N**±0°.2×**142°.3E**±0°.6**, h38^{km}, MV3.7**/40**, 15D, NE OFF IWATE PREF, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.45	259	*i* P	Pn	13 29 55.1	-0.1
JKEN				S	Sn	13 30 02.0	-0.2
JTH	Tanohata	0.48	223	⇓*i*P	Pn	13 29 55.7	+0.1
JTH				⇓S	Sn	13 30 03.3	+0.4
JANG	Nango	0.60	278	⇓*i*P	Pn	13 29 57.3	-0.2
JANG				⇓S	Sn	13 30 05.9	0.0
JKZ	Kuzumaki	0.80	248	⇓*i*P	Pn	13 30 00.3	+0.2
JKZ				⇓S	Sn	13 30 10.9	0.0
JARK	Aomorirokkasho	1.00	316	⇓*i*P	Pn	13 30 02.8	0.0
JARK				⇓S	Sn	13 30 15.4	-0.2
JTM	Tenmabayashi	1.05	298	⇓*i*P	Pn	13 30 03.6	0.0
JTM				⇓S	Sn	13 30 17.5	+0.5
JOM	Ohasama	1.12	224	⇓*i*P	Pn	13 30 05.0	+0.5
JOM				⇓S	Sn	13 30 19.8	+1.1
JAH	Hinai	1.27	266	⇓*i*P	Pn	13 30 07.0	+0.5
JAH				⇓S	Sn	13 30 22.1	-0.2
JOT	Ohata	1.44	319	P	Pn	13 30 08.7	-0.1
JRG	Rokugo	1.56	235	P	Pn	13 30 11.2	+0.7
JMK	Ichinoseki	1.57	212	⇓P	Pn	13 30 11.4	+0.7

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*SJA **27** 13:36:27.6±1.8, 24°.97S×69°.03W, h90^{km}, ML4.5, MW4.3*

*NEIC **27** 13:36:28.0±2.4, 25°.04S±0°.05×68°.94W±0°.06, h101^{km}±6^{km}, Error ellipse: s-maj=8.5km s-min=7.7km az=104.0*

*GUC **27** 13:36:28.1±0.6, 24°.98S×69°.15W, h118^{km}±3^{km}, ML4.2, Fault plane solution: NP1:φ$_s$22.00000°, δ38.00000°, λ-167.00000°.*

*IDC **27** 13:36:29.1±0.8, 24°.91S×68°.90W, h107^{km}±5^{km}, mb3.9/9, mbtmp4.1/13, MS3.4/2, Error ellipse: s-maj=18.7km s-min=11.0km az=80.0*

*VAO **27** 13:36:33.8±1.2, 24°.74S×68°.72W, h141^{km}, mb4.5*

ISC 27 13:36:27.8±0.5**, 25°.01S**±0°.03×**69°.02W**±0°.05**, h109^{km}**±4^{km}**, n117, σ1^{s}.50**/148**, mb4.3**/17**, 12C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO02	Mina Guanaco	0.54	253	Pn	Pn	13 36 45.4	+0.2
GO02	Mina Guanaco	0.54	253	⇑*i*P	Pn	13 36 45.4	+0.2
GO02				*i* S	Sn	13 36 58.8	+0.6
GO02				IAML		13 36 59.5	
	comp=E,22μm,0.2s						
GO02	Mina Guanaco	0.54	253	*e*P	Pn	13 36 45.4	+0.2
GO02				*e*S	Sn	13 36 59.5	+1.3
PB14	IPOC Station P	1.31	286	Pn	Pn	13 36 52.8	0.0
PB14	IPOC Station P	1.31	286	⇑*i*P	Pn	13 36 52.7	0.0
PB14				*i* S	Sn	13 37 10.8	-0.7
PB14				IAML		13 37 12.7	
	comp=E,2μm,0.3s						
PB14	IPOC Station P	1.31	286	*e*P	Pn	13 36 52.0	-0.7
PB14				*e*S	Sn	13 37 11.5	0.0
PB14				IAML		13 37 13.7	
	comp=Z,3μm,0.7s						
AC01	Pan de Azucar	1.82	231	⇑*i*P	Pn	13 36 58.2	-0.3
AC01				*i* S	Sn	13 37 21.2	-0.8
AC01				IAML		13 37 22.8	
	comp=N,2μm,0.1s						
AC01	Pan de Azucar	1.82	231	*e*P	Pn	13 36 58.4	-0.2
AC01				*e*S	Sn	13 37 21.9	-0.1
AC02	Maricunga	1.82	183	Pn	Pn	13 37 00.4	+1.4
AC02	Maricunga	1.82	183	⇑*e*P	Pn	13 37 00.4	+1.4
AC02				*i* S	Sn	13 37 24.4	+1.6
AC02				IAML		13 37 25.8	
	comp=E,1μm,0.7s						
PB15	IPOC Station P	1.84	347	⇑*i*P	Pn	13 36 59.3	+0.4
PB15				*i* S	Sn	13 37 23.1	+0.5
PB15	IPOC Station P	1.84	347	*e*P	Pn	13 36 59.3	+0.4
PB15				*e*S	Sn	13 37 23.1	+0.5
PB15				IAML		13 37 24.5	
	comp=Z,14μm,0.2s						
PB10	IPOC Station P	2.04	316	⇑*i*P	Pn	13 37 01.0	-0.4
PB10				*i* S	Sn	13 37 25.3	-1.6
PB10				IAML		13 37 33.8	
	comp=E,2μm,0.3s						
PB10	IPOC Station P	2.04	316	*e*P	Pn	13 37 01.4	+0.1
PB10				*e*S	Sn	13 37 25.6	-1.3
AF01	San Pedro de A	2.19	21		Pn	13 37 04.8	+1.3
AF01	San Pedro de A	2.19	21	*e*P	Pn	13 37 04.5	+1.1
AF01				*i* S	Sn	13 37 32.2	+1.6
PB06	IPOC Station P	2.35	347	⇑*i*P	Pn	13 37 05.7	+0.3
PB06				*i* S	Sn	13 37 33.0	-1.1
PB06				IAML		13 37 34.9	
	comp=N,2μm,0.3s						
PB06	IPOC Station P	2.35	347	*e*P	Pn	13 37 05.6	+0.3
PB06				*e*S	Sn	13 37 33.8	-0.3
PB06				IAML		13 37 41.6	
	comp=Z,2μm,0.4s						
LVC	Limon Verde	2.39	2	P	Pn	13 37 06.4	+0.3
	comp=Z,116nm,0.2s,baz=163,slow=8.6,SNR=259						
LVC				S	Sn	13 37 33.1	-2.3
	comp=Z,586nm,0.4s,baz=184,slow=12,SNR=11						
LVC	Limon Verde	2.39	2	⇓*e*P	Pn	13 37 06.4	+0.3
LVC				*i* S	Sn	13 37 36.0	+0.6
LVC	Limon Verde	2.39	2	*e*P	Pn	13 37 06.0	-0.1
LVC				*e*S	Sn	13 37 34.6	-0.8
AC06	Mina Casimiro	2.63	207	*e*P	Pn	13 37 08.5	-0.4
AC06				*i* S	Sn	13 37 40.0	-0.5

AC06				IAML		13 37 42.4	
	comp=N,542nm,0.3s						
GO03	Copiap	2.80	203	⇑eP	Pn	13 37 11.0	-0.1
GO03				iS	Sn	13 37 38.6	-6.0
GO03				IAML		13 37 46.0	
	comp=E,612nm,0.3s						
GO03	Copiap	2.80	203	eP	Pn	13 37 11.2	0.0
GO03				eS	Sn	13 37 44.5	0.0
PB04	IPOC Station P	2.86	338	⇑iP	Pn	13 37 11.3	-0.8
PB04	IPOC Station P	2.86	338	eP	Pn	13 37 05.6	-6.4
PB04				eP	Pn	13 37 11.4	-0.6
PB04				eS	Sn	13 37 44.9	-1.2
PB04				IAML		13 38 09.2	
	comp=Z,1µm,0.3s						
FSA	Cafayete	2.96	112	eP	Pn	13 37 15.0	+1.6
PB09	IPOC Station P	3.20	356	⇑iP	Pn	13 37 17.3	+0.6
PB09				iS	Sn	13 37 45.9	-8.5
PB09				IAML		13 37 49.1	
	comp=N,2µm,0.4s						
PB09	IPOC Station P	3.20	356	eP	Pn	13 37 15.8	-0.9
PB09				eS	Sn	13 37 55.9	+1.6
PB09				IAML		13 38 23.0	
	comp=Z,1µm,0.9s						
SLA	San Lorenzo	3.20	86	eP	Pn	13 37 18.5	+1.9
PB07	IPOC Station P	3.36	346	eS	Sn	13 37 55.5	-2.6
PB07	IPOC Station P	3.36	346	eP	Pn	13 37 17.9	-0.9
PB07				eS	Sn	13 37 57.9	-0.2
PB07				IAML		13 38 18.2	
	comp=Z,760nm,0.3s						
AC04	Llanos de Chal	3.68	210	eP	Pn	13 37 20.9	-1.9
AC04				iS	Sn	13 38 02.0	-3.3
PB02	IPOC Station P	3.76	347	⇑iP	Pn	13 37 23.0	-1.1
PB02	IPOC Station P	3.76	347	eP	Pn	13 37 23.1	-0.9
PB02				eP	Pn	13 37 23.4	-0.6
PB02				eS	Sn	13 38 05.9	-1.6
PB02				IAML		13 38 36.0	
	comp=Z,1µm,0.5s						
PB01	IPOC Station P	3.97	354	⇑iP	Pn	13 37 26.0	-0.8
PB01				iS	Sn	13 38 09.3	-3.2
LCO	Las Campanas	4.26	200	Pn	Pn	13 37 30.1	-0.8
PATCX	Punta Patache	4.30	346	Pn	Pn	13 37 29.6	-1.7
TA01	Diego Aracena	4.55	346	Pn	Pn	13 37 31.9	-2.6
MT02	Curacav	8.43	192	Pn	Pn	13 38 24.2	-2.9
LPAZ	La Paz	8.71	6	P	Pn	13 38 31.4	-0.2
	comp=Z,1.7nm,0.4s,baz=129,slow=7.8,SNR=9.1						
LPAZ	La Paz	8.71	6	Pn	Pn	13 38 31.8	+0.2
LPAZ	La Paz	8.71	6	eP	Pn	13 38 31.8	+0.2
CPUP	Villa Florida	10.63	100	P	Pn	13 38 54.0	-2.9
	comp=Z,1.2nm,0.5s,baz=29,slow=9.1,SNR=3.7						
CPUP				LR	LR	13 43 51.6	
	comp=Z,63nm,19.2s,baz=302,slow=42						
CPUP	Villa Florida	10.63	100	Pn	Pn	13 38 53.5	-3.4
SIV	San Ignacio	11.65	41	P	Pn	13 39 06.0	-4.8
	comp=Z,17nm,0.5s,baz=230,slow=9.7,SNR=28						
ITQB	Itaqui	11.96	116	eP	Pn	13 39 17.4	+2.7
TRQA	Tornquist	14.32	157	Pn	Pn	13 39 45.3	-0.1
VILB	Vilhena	14.60	36	eP	Pn	13 39 47.4	-1.7
CPSB	Cacapava Do Su	14.80	115	eP	P	13 39 53.3	-1.4
PLTB	Pedras Altas	15.14	120	Pn	Pn	13 39 52.3	-3.6
PLTB				IAmb	IAmb	13 40 04.1	
	comp=Z,27nm,1.4s						
ITAB	Concordia	15.33	102	Pn	Pn	13 39 57.4	-0.9
ITAB				IAmb	IAmb	13 40 00.8	
	comp=Z,21nm,0.9s						
ETMB	Extrema	15.34	11	eP	Pn	13 39 57.9	-0.6
PTGB	Pitanga	15.39	92	eP	P	13 40 01.5	+0.1
PLCA	Paso Flores	15.73	184	P	P	13 40 05.1	0.0
	comp=Z,1.9nm,0.8s,baz=9.5,slow=12,SNR=4.2						
PLCA	Paso Flores	15.73	184	P	P	13 40 04.7	-0.4
PCMB	Pacaembu	16.66	82	eP	Pn	13 40 13.8	-1.0
SAML	Samuel	16.91	20	P	Pn	13 40 17.6	-0.3
FRTB	Fartura	17.83	89	eP	P	13 40 28.4	+0.1
ITRB	Iturama	18.04	77	eP	P	13 40 30.5	-0.1
CLDB	Colider	18.84	44	eP	P	13 40 38.4	-0.9
BB19B	Bebedouro	19.26	82	eP	P	13 40 43.5	-0.4
PET01	Itanhaem-SP	19.78	93	eP	P	13 40 48.7	-0.8
RCLB	Rio Claro- Sao	19.84	87	eP	P	13 40 49.8	-0.4
VAO	Valinhos	20.24	89	eP	P	13 40 53.8	-0.8
SNDB	Serra Nova Dou	21.19	55	eP	P	13 41 02.8	-1.9
PARB	Paraibuna	21.41	90	eP	P	13 41 07.4	+0.3
BDFB	Brasilia	21.76	69	P	P	13 41 09.9	-1.1
	comp=Z,4.2nm,0.5s,baz=263,slow=3.2,SNR=4.5						
	comp=Z,4.2nm,0.5s						
BDFB	Brasilia	21.76	69	P	P	13 41 09.8	-1.1
BDFB	Brasilia	21.76	69	eP	P	13 41 10.3	-0.6
PEXB	Peixe	23.42	61	eP	P	13 41 26.9	-0.5
ITTB	Itaituba	24.17	34	eP	P	13 41 33.8	-0.3
JANB	Januaria	25.19	72	eP	P	13 41 42.2	-1.3
SMTB	Santa Maria do	25.97	56	eP	P	13 41 50.1	-0.4
SDBA	SAO DESIDERIO	26.00	66	eP	P	13 41 49.9	-0.9
PRPB	Parauapebas	26.25	48	eP	P	13 41 52.1	-0.9
MALB	Monte Alegre	27.07	34	eP	P	13 41 59.9	-0.4
RIB01	Linhares ES	27.08	84	eP	P	13 41 60.0	-0.4
GUA01	Guaratinga, BA	28.52	79	eP	P	13 42 12.8	-0.5
CMC01	Camacan, BA	29.25	76	eP	P	13 42 18.9	-0.8
MCPB	Macapa, AP	29.49	36	eP	P	13 42 21.7	-0.1
GDU01	Guandu, BA	29.89	73	eP	P	13 42 24.1	-1.3
NBPN	Ponto Novo - B	30.73	68	eP	P	13 42 32.0	-0.9
NBLA	Lagarto - SE	32.70	70	eP	P	13 42 48.6	-1.5
NBPS	Pedro II - PI	33.49	57	eP	P	13 42 56.9	-0.2
NBMA	Muriti-CE	33.81	64	eP	P	13 42 59.5	-0.2
RCBR	Riachuelo	37.02	65	P	P	13 43 27.9	+0.7
	comp=Z,12nm,0.6s,baz=16,slow=9.9,SNR=11						
	comp=Z,12nm,0.6s						
RCBR	Riachuelo	37.02	65	P	P	13 43 27.0	-0.2
RCBR	Riachuelo	37.02	65	eP	P	13 43 27.3	+0.1
SNAA	Sanae	59.02	160	P	P	13 46 15.5	-0.3
SNAA				IAmb	IAmb	13 46 26.3	
	comp=Z,4.8nm,1.4s						
CPCT	Cooper Cave	61.89	346	P	P	13 46 37.4	+1.7
TXAR	Lajitas Array	63.46	326	P	P	13 46 47.4	+1.1
	comp=Z,0.3nm,0.5s,baz=159,slow=8.2,SNR=5.8						
	comp=Z,0.3nm,0.5s						
TXAR	Lajitas Array	63.46	326	P	P	13 46 48.2	+1.9
S54A	Dingess, Beckl	63.53	349	P	P	13 46 47.0	+0.4
QSPA	South Pole Qui	65.20	180	P	P	13 46 58.9	+1.5
QSPA				IAmb	IAmb	13 47 28.5	
	comp=Z,2.8nm,0.7s						
P38A	Dawn	68.25	340	P	P	13 47 16.4	-0.4
P38A				IAmb	IAmb	13 47 19.2	
	comp=Z,2.8nm,0.8s						
LIC	Lamto	69.50	73	eP	P	13 47 26.0	+1.0
	comp=Z,10nm,0.8s						
TIC	Toumodi	69.71	72	eP	P	13 47 26.8	+0.4
	comp=Z,4.6nm,0.2s						
KIC	Kosan Boka	69.81	73	eP	P	13 47 27.6	+0.6
	comp=Z,19nm,0.5s						
DBIC	Dimbokro	69.86	72	P	P	13 47 27.8	+0.5
	comp=Z,8.9nm,0.6s,baz=245,slow=5.5,SNR=17						
	comp=Z,8.9nm,0.6s						
DBIC	Dimbokro	69.86	72	P	P	13 47 28.1	+0.8
DBIC				IAmb	IAmb	13 47 28.4	
	comp=Z,10nm,0.7s						
KOWA	Kowa	74.53	66	P	P	13 47 55.5	+0.5
KOWA				IAmb	IAmb	13 47 56.7	
	comp=Z,9.7nm,0.7s						
CCUT	Cedar City	74.89	325	P	P	13 47 58.7	+1.7
CCUT				IAmb	IAmb	13 48 00.9	
	comp=Z,2.8nm,0.9s						
PDAR	Pinedale Array	77.09	331	P	P	13 48 10.8	+1.4
	comp=Z,0.2nm,0.5s,baz=134,slow=8.5,SNR=3.0						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	77.09	331	P	P	13 48 09.8	+0.5
NVAR	Mina Array Bea	78.19	323	P	P	13 48 17.2	+1.7
	comp=Z,0.4nm,0.7s,baz=158,slow=6.1,SNR=4.3						
	comp=Z,0.4nm,0.7s						
TOA0	Torodi Ar. Sit	78.64	70	P	P	13 48 19.0	+0.7
TORD	Torodi Ar. Bea	78.64	70	P	P	13 48 18.9	+0.6
	comp=Z,13nm,0.6s,baz=260,slow=5.4,SNR=125						
	comp=Z,13nm,0.6s						
TORD	Torodi Ar. Bea	78.64	70	P	P	13 48 19.1	+0.9
TORD				IAmb	IAmb	13 48 19.7	
	comp=Z,11nm,0.6s						
ESDC	Sonseca Array	88.39	44	P	P	13 49 09.6	+2.0
	comp=Z,0.4nm,0.7s,baz=274,slow=5.0,SNR=2.3						
	comp=Z,0.4nm,0.7s						
YKA	Yellowknife Ar	94.45	341	P	P	13 49 36.0	+1.0
	comp=Z,0.6nm,0.7s,baz=139,slow=4.3,SNR=9.8						
YKA				pP	pP	13 50 04.7	+0.1
	comp=Z,0.4nm,0.9s,baz=94,slow=36,SNR=2.9						
YKA				sP	sP	13 50 16.1	-0.4
	comp=Z,0.6nm,0.7s,baz=137,slow=4.6,SNR=7.3						
	comp=Z,0.6nm,0.7s						
MBAR	Mbarara	98.59	95	LR	LR	14 31 19.0	
	comp=Z,43nm,20.3s,baz=120,slow=33						
ASAR	Alice Springs	126.76	206	PKP	PKiKP	13 55 19.9	+0.1
	comp=Z,0.5nm,0.5s,baz=116,slow=1.3,SNR=1.7						
WRA	Warramunga Arr	129.87	209	PKP	PKiKP	13 55 26.0	-0.1
	comp=Z,0.2nm,0.3s,baz=159,slow=1.7,SNR=1.9						
ZALV	Zalesovo Beam	145.13	27	PKPbc	PKPdf	13 55 53.4	+1.2
	comp=Z,1.4nm,0.5s,baz=319,slow=4.3,SNR=10						
ZALV				pPKP	pPKPdf	13 56 22.8	-0.1
	comp=Z,5.2nm,0.6s,baz=308,slow=4.1,SNR=14						
ZALV	Zalesovo Beam	145.13	27		PKPdf	13 55 53.1	+1.0
MKAR	Makanchi Array	148.47	39	PKPbc	PKiKP	13 56 03.1	-0.1
	comp=Z,0.8nm,0.6s,baz=311,slow=2.8,SNR=7.8						
MKAR				pPKPbc	pPKPbc	13 56 32.6	+0.3
	comp=Z,2.8nm,0.8s,baz=305,slow=2.5,SNR=8.5						

BJI ***27*** *13:39:42.1±0.0, 2°.07N×128°.78E, h126^{km}, mb4.8/63, mB4.9/35*

DJA ***27*** *13:39:49.1±0.3, 3°N±2°×12°8E±°, h114^{km}±2^{km}, M5.0/40, mb5.0/40, mB5.4/19, MLv5.3/17, Mw(mB)4.8/19, MwMwp4.7/2, Mwp5.0/2*

IDC ***27*** *13:39:49.6±0.7, 2°.64N×128°.37E, h128^{km}±6^{km}, mb4.2/20, mbtmp4.7/24, MS3.4/15, Error ellipse: s-maj=15.1km s-min=7.6km az=72.0*

NEIC ***27*** *13:39:50.1±1.4, 2°.59N±0°.04×128°.2E±0°.1, h132^{km}±7^{km}, mb4.6/55, Error ellipse: s-maj=14.8km s-min=5.6km az=79.0*

GCMT ***27*** *13:39:50.1±0.4, 2°.83N±0°.02×128°.09E±0°.03, h117^{km}±3^{km}, MW4.9/68, Moment Tensor Solution. s30,c35; s68,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.39±.12; $M_{\theta\theta}$2.09±.12; $M_{\phi\phi}$-1.70±.13; $M_{r\theta}$0.47±.10; $M_{\theta\phi}$2.36±.12; $M_{\phi r}$-0.03±.11; Best double couple: $M_0$3.06000×10^{16} NP1:ϕ_s19.00000°, δ82.00000°, λ179.00000°. NP2: ϕ_s109.00000°, δ89.00000°, λ8.00000°. Principal axes: T 3.2680, Plg6.0000°, Azm335.0000°; N -0.4160, Plg82.0000°, Azm115.0000°; P -2.8530, Plg5.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 13:39:48.9±0.5**, 2°.64N**±0°.04×**128°.32E**±0°.06**, h121**^{km}±4^{km}**, h123**^{km}**:pP-P, n202,** σ1^s**.56**/209**, mb4.7**/75**, 11C-3D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.09	207		Pn	13 40 23.5	0.0
TNTI	Ternate	2.09	207	P	Pn	13 40 23.2	-0.3
TNTI				S	Sn	13 40 49.3	-0.7
SGSI	Sangihe	2.97	291	P	Pn	13 40 34.2	-0.7
SGSI				S	Sn	13 41 08.2	-2.2
LBMI	Labuha	3.36	194	P	Pn	13 40 39.6	-0.4
SWI	Sorong	4.56	140	P	Pn	13 40 57.1	+1.2
SIJI	Sorong	4.56	140	P	Pn	13 40 57.4	+1.3
	300nm,0.4s,baz=333,slow=11,SNR=349						
SIJI				S	Sn	13 41 47.4	-0.9
	149nm,0.5s,baz=126,slow=21,SNR=12						
GSPH	General Santos	4.80	316	⇑iP	Pn	13 40 57.9	-1.4
GSPH				eS	Sn	13 41 50.5	-3.5
KMSI	Cibinong	4.80	245	P	Pn	13 40 58.6	-0.6
DAV	Davao City (W)	5.18	328	P	Pn	13 41 04.9	+0.6
	401nm,0.5s,baz=153,slow=4.1,SNR=11						
DAV	Davao City (W)	5.18	328		Pn	13 41 05.0	+0.7
SANI	Sanana	5.21	207	P	Pn	13 41 03.6	-1.1
	1.2nm5µm220nm,0.5s						
KCP	Kidapawan	5.40	324	⇑iP	Pn	13 41 07.0	-0.4
GTOI	Gorontalo	5.67	250	P	Pn	13 41 10.8	-0.1
	2.3nm8µm494nm,0.7s						
MSAI	Masohi	5.98	174	P	Pn	13 41 17.7	+2.6
	0.3nm2µm71nm,0.5s						
AAI	Ambon	6.29	181	P	Pn	13 41 19.7	+0.4
	0.5nm2µm154nm,0.7s						
LUWI	Luwuk	6.64	237	Pn	Pn	13 41 22.3	-1.8
LUWI	Luwuk	6.64	237	P	Pn	13 41 24.2	+0.1
	2.3nm352nm,0.5s						
MRSI	Marisa	6.73	251	P	Pn	13 41 25.5	+0.3
	14nm4µm31µm3µm,0.9s						
FAKI	Fak Fak	6.78	145	Pn	Pn	13 41 27.0	+1.1
FAKI	Fak Fak	6.78	145	P	Pn	13 41 27.7	+1.8
	1.4nm4µm365nm,0.7s						
PAGZ	Pagadian	7.14	317	⇑iP	Pn	13 41 29.2	-1.5
ZCP	Zamboanga City	7.54	305	⇑eP	Pn	13 41 35.2	-1.0
ZCP				eS	Sn	13 42 53.9	-6.3
APSI	Ampana	7.54	242	P	Pn	13 41 35.5	-0.8
	1.7nm5µm407nm,0.5s						
TOLI2	Tolitoli	7.69	259	Pn	Pn	13 41 36.8	-1.4
TBP	Tagbilaran	8.29	328	⇑eP	Pn	13 41 44.2	-2.1
SNPH	Sibulan	8.36	323	⇑eP	Pn	13 41 46.8	-0.5
MPSI	Mapaga	8.72	255	P	Pn	13 41 51.8	-0.4
	2µm186nm,1.1s						
BBSI	Bau Bau	9.91	215	P	Pn	13 42 07.8	-0.4
	134nm10nm,0.7s						
MYLDM	Lahad Datu	10.12	285	Pn	Pn	13 42 13.7	+2.7
TTSI	Tana Toraja	10.20	236	P	Pn	13 42 09.7	-2.5
	3µm243nm,0.9s						
RCP	Roxas	10.44	328	⇓eP	Pn	13 42 15.5	0.0
SPSI	Sidrap Palu	10.77	233	P	Pn	13 42 19.0	-0.9
	2µm168nm,1.3s						
BNSI	Bone	10.78	230	P	Pn	13 42 19.3	-0.7
	1µm184nm,1.3s						
SAUI	Saumlaki	10.96	164	Pn	Pn	13 42 22.2	-0.2
BKSI	Bulukumba	11.38	226	P	Pn	13 42 26.4	-1.6
	2µm109nm,0.5s						
KAPI	Kappang	11.45	228	P	Pn	13 42 29.1	+0.2
	76nm,0.4s,baz=180,slow=18,SNR=13						
KAPI	Kappang	11.45	228	Pn	Pn	13 42 28.3	-0.6
BSSI	Bau Bau, Buton	11.71	222	P	Pn	13 42 31.8	-0.6
	923nm59nm,0.5s						
SOEI	Soe	12.96	198	Pn	Pn	13 42 47.6	-1.2
SOEI	Soe	12.96	198	P	Pn	13 42 49.6	+0.8
	44nm,0.9s						
EDFI	Ende, Flores	13.10	210	P	Pn	13 42 48.1	-2.6
	24nm,0.8s						
TGY	Tagaytay City	13.52	328	P	Pn	13 42 56.7	+0.7
	193nm,0.3s,baz=195,slow=4.7,SNR=12						
BATI	Baumata	13.58	200	P	Pn	13 42 58.5	+1.7
	21nm,0.4s,baz=350,slow=0.7,SNR=5.3						
BATI	Baumata	13.58	200	P	Pn	13 42 58.4	+1.7
	34nm,0.6s						
LUBP	Lubang	13.61	325	⇑iP	Pn	13 42 57.4	+0.4
MTKI	Muara Teweh, K	13.88	255	P	Pn	13 43 01.0	+0.4
	4µm24nm,0.4s						
BBKI	Banjar Baru	14.77	246	P	Pn	13 43 12.0	0.0
	5µm28nm,1.5s						
PLAI	Plampang	15.50	223	P	Pn	13 43 21.8	+0.8
	99nm,1.1s						
MTN	Manton Dam	15.63	170	Pn	Pn	13 43 21.6	-1.1
SBUM	Sibu	16.09	270		Pn	13 43 27.6	-0.7
SRBI	Singaraja	16.86	231	P	P	13 43 38.8	+0.9
	84nm,1.2s						
STKI	Sintang	17.03	262	P	Pn	13 43 40.7	+0.8
JAGI	Jajag, Banyuwa	17.93	232		P	13 43 49.4	-0.2
JAGI	Jajag, Banyuwa	17.93	232	P	Pn	13 43 50.9	+0.2
	2µm150nm,1.3s						
KNRA	Kununurra	18.20	179		P	13 43 53.0	+0.4
KNRA				IAmb	IAmb	13 44 00.3	
	comp=Z,36nm,0.6s						
GMJI	Gumukmas	18.37	234	P	Pn	13 43 56.4	+0.4
	comp=Z,123nm,1.2s						
PWJI	Pagerwojo	19.59	237	P	P	13 44 08.5	+0.8
	comp=Z,3µmcomp=Z,212nm,0.7s						
PCJI	Pacitan	20.20	238	P	P	13 44 15.4	+1.0
	comp=Z,155nm,0.8s						
WOJI	Wonogiri, Jawa	20.24	239	P	P	13 44 15.9	+1.2
	comp=Z,53nm,1.4s						
SMRI	Semarang	20.27	242	P	P	13 44 14.4	-0.8
	comp=Z,173nm,1.2s						
UGM	Wanagama	20.62	239	P	P	13 44 19.5	+0.6
TWG	Pinlang	21.26	341	P	P	13 44 23.0	-2.6
TWG				IAmb	IAmb	13 44 39.1	
	comp=Z,22nm,0.8s						
YULB	Yu-li	21.72	342	P	P	13 44 26.7	-3.8
YULB				IAmb	IAmb	13 44 36.3	
	comp=Z,24nm,0.8s						
TPUB	Ta-pu	21.85	341	P	P	13 44 29.6	-2.3
SSLB	Suanglung	22.20	342	P	P	13 44 35.0	-0.5
SSLB				IAmb	IAmb	13 44 40.2	
	comp=Z,34nm,1.0s						
YOJ	Yonaguni jima	22.29	347	P	P	13 44 36.2	-0.3
NACB	Ninganchiao	22.37	344	P	P	13 44 35.4	-1.9
NACB				IAmb	IAmb	13 44 45.5	
	comp=Z,28nm,0.8s						
LEM	Lembang	22.70	245	P	P	13 44 42.0	+1.1
	comp=Z,27nm,0.5s,baz=67,slow=10,SNR=7.3						
	comp=Z,27nm,0.5s						
YHNB	Yeheng	22.90	344	P	P	13 44 41.7	-0.8
WB0	Warramunga Arr	23.05	165	P	P	13 44 43.4	-0.5
WB0				IAmb	IAmb	13 44 44.8	
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	23.20	165	P	P	13 44 45.3	0.0
WRAB				IAmb	IAmb	13 44 54.8	
	comp=Z,22nm,0.6s						
WRA	Warramunga Arr	23.21	166	P	P	13 44 44.5	-0.8
	comp=Z,7.0nm,0.6s,baz=338,slow=11,SNR=87						
WRA				LR	LR	13 54 14.7	
	comp=Z,133nm,19.8s,baz=120,slow=37						
	comp=Z,7.0nm,0.6s						
WRA	Warramunga Arr	23.21	166	P	P	13 44 43.8	-1.6
WB2	Warramunga Arr	23.21	165	P	P	13 44 45.0	-0.4
WB2				IAmb	IAmb	13 44 55.0	
	comp=Z,21nm,0.6s						
WR0	Warramunga Arr	23.27	165	P	P	13 44 45.7	-0.3
WR0				IAmb	IAmb	13 44 56.7	
	comp=Z,13nm,0.7s						
DBJI	Dramaga	23.39	247	P	P	13 44 47.8	+0.6
	comp=Z,61nm,1.2s						
JOW	Kunigami	24.05	360	P	P	13 44 53.2	+0.2
	comp=Z,45nm,1.0s,baz=175,slow=10,SNR=33						
JOW				LR	LR	13 53 31.2	
	comp=Z,66nm,19.8s,baz=260,slow=34						
	comp=Z,45nm,1.0s						
JOW	Kunigami	24.05	360	P	P	13 44 53.2	+0.2
QZH	Quanzhou	24.08	338	⇑iP	P	13 44 53.8	+0.6
QZH				eS	S	13 49 03.8	+1.8
QZH				sS	sS	13 49 46.3	-0.3
QZH				pmax	pmax		
	comp=Z,57nm,0.8s						
QIZ	Qiongzhong	24.34	313	P	P	13 44 56.8	+1.2
QIZ				S	S	13 49 14.5	+8.2
QIZ				sS	sS	13 49 53.5	+2.4
PSA00	Pilbara Seismi	25.45	199	P	P	13 45 04.3	-1.4
PSA00				IAmb	IAmb	13 45 09.7	
	comp=Z,8.1nm,0.7s						
PSA00	Pilbara Seismi	25.45	199	P	P	13 45 04.4	-1.4
PSA00				IAmb	IAmb	13 45 09.7	
	comp=Z,3.9nm,0.8s						
ASAR	Alice Springs	26.71	169	P	P	13 45 16.6	-0.4
	comp=Z,2.4nm,0.5s,baz=353,slow=7.9,SNR=111						
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	26.71	169		P	13 45 16.8	-0.3
CTA	Charters Tower	28.64	143	P	P	13 45 35.0	+0.7
	comp=Z,1.1nm,0.5s,baz=253,slow=5.9,SNR=1.6						
CTA				LR	LR	13 58 13.5	
	comp=Z,107nm,18.3s,baz=312,slow=39						
	comp=Z,1.1nm,0.5s						
CTAO	Charters Tower	28.64	143	P	P	13 45 34.3	0.0
WHN	Wuhan	30.74	336	⇓P	P	13 45 54.5	+1.8
JHS	Saijyo	32.50	7	P	P	13 46 07.7	-0.5
JHS				IAmb	IAmb	13 46 10.1	
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	32.79	301	P	P	13 46 11.9	+1.1
	comp=Z,6.6nm,0.9s,baz=119,slow=7.3,SNR=33						
	comp=Z,6.6nm,0.9s						
FORT	Forrest	33.23	180	P	P	13 46 15.0	+0.4
FORT				IAmb	IAmb	13 46 24.6	
	comp=Z,18nm,0.8s						
KMI	Kunming	33.27	314	⇑P	P	13 46 16.0	+0.8
KMI				pP	pwP	13 46 48.8	+3.9
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,3.9s						
MORW	Morawa	33.66	200	P	P	13 46 17.1	-1.2
KSRS	Korea Array	34.65	359	P	P	13 46 26.6	-0.1
	comp=Z,10nm,0.9s,baz=177,slow=10,SNR=49						
KSRS				LR	LR	14 00 04.0	
	comp=Z,25nm,21.3s,baz=210,slow=35						
	comp=Z,10nm,0.9s						
KS19	Wonju Array Si	34.70	359	P	P	13 46 26.6	-0.6
KS19				IAmb	IAmb	13 46 27.6	
	comp=Z,14nm,1.0s						
PZH	PanZhiHua	34.83	315	P	P	13 46 29.0	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,4.1s						
MAJO	Matsushiro	34.95	14	P	P	13 46 27.7	-1.6
MJAR	Matsushiro Arr	34.95	14	P	P	13 46 28.0	-1.3
	comp=Z,9.9nm,0.9s,baz=186,slow=9.0,SNR=18						
MJAR				LR	LR	13 59 04.6	
	comp=Z,80nm,20.4s,baz=186,slow=33						
	comp=Z,9.9nm,0.9s						
MJB9	Matsu-Tunnel	34.95	14	P	P	13 46 27.2	-2.1
TIA	Tai'an	34.97	344	eP	P	13 46 28.8	-0.7
TIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LYN	LuoYang	35.01	337	eP	P	13 46 35.5	+5.6
LYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SEHB	SEOHWA	35.46	360	P	P	13 46 32.7	-1.0
SEHB				IAmb	IAmb	13 46 35.4	
	comp=Z,16nm,0.9s						
EIDS	Eidsvold	35.53	143	P	P	13 46 34.0	-0.4
BBOO	Buckleboo	36.01	169	P	P	13 46 37.8	-0.7
BBOO				IAmb	IAmb	13 46 44.8	
	comp=Z,16nm,1.0s						
XAN	Xi'an	36.11	332	P	P	13 46 39.3	0.0
XAN				pmax	pmax		
	comp=Z,23nm,0.7s						
JSD	Sado	36.39	13	P	P	13 46 40.6	-1.0
JSD				IAmb	IAmb	13 46 41.3	
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	36.57	161	P	P	13 46 43.2	-0.1
	comp=Z,8.5nm,0.3s,baz=338,slow=8.8,SNR=49						
STKA				LR	LR	14 03 26.7	
	comp=Z,82nm,18.7s,baz=10,slow=39						
	comp=Z,8.5nm,0.3s						
STKA	Stephens Creek	36.57	161	P	P	13 46 43.1	-0.1
STKA				IAmb	IAmb	13 46 49.1	
	comp=Z,3.3nm,0.6s						
HNS	HongShan	36.78	342	⇑P	P	13 46 45.0	+0.1
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
JMM	Marumori	36.88	17	P	P	13 46 45.4	-0.3
BJI	Beijing	38.82	345	P	P	13 47 01.8	-0.2
BJI				pP	pwP	13 47 31.5	-0.5
BJI				sP	sP	13 47 43.0	+1.2
BJI				pmax	pmax		
	comp=Z,16nm,1.2s						
ARMA	Armidale	39.70	148	P	P	13 47 10.1	+0.5
ARMA				IAmb	IAmb	13 47 11.6	
	comp=Z,12nm,1.0s						
LZH	Lanzhou	40.25	329	eP	P	13 47 15.5	+1.4
LZH				pP	pP	13 47 41.0	+0.4
LZH				sP	sP	13 47 59.5	+5.4
LZH				S	S	13 53 17.0	+4.4
LZH				SS	SS	13 56 20.5	+4.7
LZH				pmax	pmax		
	comp=Z,46nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.6s						
H11S3	WAKE ISLAND Hy	40.74	65	T	T	14 30 57.4	
	baz=252,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	40.75	65	T	T	14 30 55.9	
	baz=252,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	40.75	64	T	T	14 30 56.9	
	baz=252,slow=75,SNR=10						
HHC	Hu-ho-hao-te	40.94	341	eP	P	13 47 20.5	+0.8
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,99nm,5.5s						
H11N1	WAKE ISLAND Hy	41.31	63	T	T	14 31 37.6	
	baz=250,slow=75,SNR=8.8						
H11N2	WAKE ISLAND Hy	41.32	63	T	T	14 31 41.2	
	baz=250,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	41.33	63	T	T	14 31 36.4	
	baz=250,slow=75,SNR=11						
USA0B	Ussuriysk Arra	41.51	4	P	P	13 47 24.5	+0.3
USA0B				IAmb	IAmb	13 47 25.4	
	comp=Z,22nm,0.9s						
USRK	Ussuriysk Ar.	41.51	4	P	P	13 47 24.4	+0.2
	comp=Z,20nm,0.9s,baz=190,slow=7.7,SNR=23						
	comp=Z,20nm,0.9s						
USRK	Ussuriysk Ar.	41.51	4	P	P	13 47 24.1	0.0
MDJ	Mudanjiang	41.82	1	P	P	13 47 26.3	-0.3
MDJ				pmax	pmax		
	comp=Z,23nm,1.0s						
MDJ				pmax	pmax		

	comp=Z,140nm,5.3s						
CAN	**Canberra**	**42.45**	**155**	P	**P**	**13 47 31.6**	**-0.4**
CAN				IAmb	IAmb	13 47 44.0	
	comp=Z,6.1nm,0.9s						
XLT	**XiLinHaoTe**	**42.50**	**347**	*e*P	**P**	**13 47 32.3**	**0.0**
XLT				pmax	pmax		
	comp=Z,15nm,1.3s						
XLT				pmax	pmax		
	comp=Z,100nm,4.1s						
BNX	**BinXian**	**42.93**	**359**	⇓P	**P**	**13 47 34.8**	**-0.9**
BNX				pmax	pmax		
	comp=Z,14nm,0.9s						
BNX				pmax	pmax		
	comp=Z,170nm,4.0s						
TOO	**Toolangi**	**43.07**	**160**	P	**P**	**13 47 37.8**	**+0.9**
ASAJ	**Asahikawa**	**43.20**	**15**	P	**P**	**13 47 38.0**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=212,slow=9.0,SNR=8.0						
ASAJ				LR	LR	14 05 35.7	
	comp=Z,57nm,20.1s,baz=201,slow=36						
	comp=Z,8.3nm,0.8s						
LSA	**Lhasa**	**44.34**	**311**	P	**P**	**13 47 48.6**	**+0.8**
LSA				IAmb	IAmb	13 47 51.4	
	comp=Z,10.0nm,0.8s						
GTA	**Gaotai**	**44.84**	**328**	⇑P	**P**	**13 47 51.5**	**+0.2**
GTA				PcP	**PcP**	**13 49 32.3**	**+1.2**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,48nm,4.4s						
GTA				LR	LR		
	comp=Z,75nm,17.5s						
GTA				LR	LR		
	comp=Z,64nm,17.4s						
GTA				LR	LR		
	comp=Z,69nm,17.1s						
GOMU	**GeErMu**	**45.52**	**321**	P	**P**	**13 47 58.3**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,99nm,5.4s						
TAPN	**Taplejung**	**45.94**	**306**	*e*P	**P**	**13 48 00.8**	**+0.5**
	comp=Z,80nm,1.1s						
ODAN	**Odare**	**45.99**	**306**	*e*P	**P**	**13 48 01.2**	**+0.6**
KLR	**Kul'dur**	**46.51**	**3**	P	**P**	**13 48 03.8**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=195,slow=5.4,SNR=26						
	comp=Z,5.9nm,0.6s						
RAMN	**Ramite**	**46.67**	**305**	*e*P	**P**	**13 48 06.7**	**+0.8**
JIRN	**Jiri**	**47.29**	**306**	*e*P	**P**	**13 48 11.4**	**+0.5**
GUN	**Gumba**	**47.65**	**306**	*e*P	**P**	**13 48 14.2**	**+0.6**
	comp=Z,52nm,0.7s						
PKI	**Pulchoki**	**47.89**	**305**	*e*P	**P**	**13 48 15.6**	**+0.1**
PKIN	**Phulchoki**	**47.90**	**305**	*e*P	**P**	**13 48 15.5**	**0.0**
	comp=Z,21nm,0.7s						
KKN	**Kakani**	**48.08**	**306**	*e*P	**P**	**13 48 17.2**	**+0.4**
DMN	**Daman**	**48.15**	**305**	*e*P	**P**	**13 48 17.7**	**+0.3**
	comp=Z,57nm,1.0s						
GKN	**Gorkha**	**48.69**	**306**	*e*P	**P**	**13 48 21.6**	**+0.2**
SONM	**Songino Array**	**48.84**	**340**	P	**P**	**13 48 22.4**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=163,slow=10,SNR=2.0						
	comp=Z,3.0nm,0.6s						
KOLN	**Koldanda**	**49.44**	**305**	*e*P	**P**	**13 48 28.0**	**+0.8**
DANN	**Dangsing**	**49.54**	**306**	*e*P	**P**	**13 48 28.5**	**+0.5**
	comp=Z,74nm,0.7s						
PYUN	**Piuthan**	**50.07**	**305**	*e*P	**P**	**13 48 32.7**	**+0.7**
	comp=Z,52nm,0.8s						
WMQ	**Urumqi**	**54.52**	**325**	*e*P	**P**	**13 49 06.0**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
PEA0B	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**13 49 14.9**	**+1.2**
PETK	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**13 49 14.6**	**+0.9**
	comp=Z,11nm,0.9s,baz=192,slow=5.4,SNR=19						
	comp=Z,11nm,0.9s						
PETK	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**13 49 14.3**	**+0.6**
ZSN	**Zaisan**	**58.28**	**327**	*e*P	**P**	**13 49 30.2**	**-0.8**
	baz=327						
YAK	**Yakutsk**	**59.26**	**1**	P	**P**	**13 49 36.9**	**-0.4**
MKAR	**Makanchi Array**	**59.35**	**325**	P	**P**	**13 49 38.4**	**0.0**
	comp=Z,3.9nm,0.6s,baz=118,slow=8.2,SNR=49						
MKAR				pP	**pwP**	**13 50 09.5**	**-1.1**
	comp=Z,4.9nm,0.7s,baz=123,slow=8.1,SNR=5.7						
	comp=Z,3.9nm,0.6s						
MA2	**Magadan**	**59.38**	**13**	LR	LR	14 17 54.5	
	comp=Z,15nm,18.4s,baz=208,slow=38						
UZB	**Uzynbulak**	**59.47**	**320**	*e*P	**P**	**13 49 39.0**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=320						
MAKZ	**Makanchi**	**59.54**	**325**	P	**P**	**13 49 38.8**	**-0.8**
MAKZ				IAmb	IAmb	13 49 40.1	
	comp=Z,6.5nm,0.8s						
SATY	**Saty**	**59.83**	**320**	*e*P	**P**	**13 49 41.5**	**-0.4**
	comp=Z,6.1nm,0.8s,baz=320						
KPKS	**Kokpek**	**59.84**	**320**	*e*P	**P**	**13 49 41.5**	**-0.4**
	baz=320						
LBZ	**Lake Benmore**	**59.90**	**146**	P	**P**	**13 49 41.7**	**-0.4**
KSH	**Kashi**	**59.93**	**315**	P	**P**	**13 49 44.5**	**+1.9**
KSH				pP	pwP	13 50 16.8	+1.5
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KHZ	**Kahutara**	**60.64**	**143**	P	**P**	**13 49 46.6**	**-0.6**
KHZ				IAmb	IAmb	13 49 46.9	
	comp=Z,11nm,1.0s						
TDK	**Taldyqorghan**	**60.75**	**322**	*e*P	**P**	**13 49 47.3**	**-0.7**
	comp=Z,7.7nm,0.5s,baz=322						
MDOK	**Medeo**	**60.76**	**319**	*e*P	**P**	**13 49 47.3**	**-1.0**
	baz=319						
TNSS	**Tian-Shan**	**60.77**	**319**	*e*P	**P**	**13 49 48.5**	**-0.1**
	baz=319						
CHKK	**Chushkaly**	**61.11**	**320**	*e*P	**P**	**13 49 49.6**	**-0.8**
	baz=320						
KUU	**Kurty**	**61.55**	**320**	*e*P	**P**	**13 49 52.9**	**-0.5**
	comp=Z,11nm,1.4s,baz=320						
ZALV	**Zalesovo Beam**	**62.27**	**333**	P	**P**	**13 49 56.7**	**-1.3**
	comp=Z,2.2nm,0.7s,baz=111,slow=5.9,SNR=9.2						
ZALV				pP	**pP**	**13 50 28.7**	**+2.4**
	comp=Z,1.9nm,0.7s,baz=120,slow=8.8,SNR=3.4						
ZALV				LR	LR	14 20 08.0	
	comp=Z,24nm,18.2s,baz=147,slow=39						
	comp=Z,2.2nm,0.7s						
SGDS	**Sogindy**	**62.47**	**319**	*e*P	**P**	**13 49 58.7**	**-0.9**
	baz=319						
SHEM	**Shemya Is, Ala**	**62.61**	**29**	LR	LR	14 15 49.7	
	comp=Z,13nm,18.8s,baz=171,slow=34						
KURK	**Kurchatov**	**63.51**	**327**	P	**P**	**13 50 05.2**	**-1.0**
KURK				IAmb	IAmb	13 50 06.3	
	comp=Z,9.3nm,0.8s						
BTLS	**Baital**	**63.52**	**320**	*e*P	**P**	**13 50 05.3**	**-1.1**
	baz=320						
IUG	**Iuzhnay**	**65.10**	**316**	*e*P	**P**	**13 50 16.2**	**-0.7**
	baz=316						
KKAR	**Karatay Array**	**65.11**	**317**	P	**P**	**13 50 15.4**	**-1.4**
BRZS	**Berezniki**	**66.49**	**324**	*e*P	**P**	**13 50 24.7**	**-0.8**
	baz=324						
GSTR	**Great Sitkin T**	**67.42**	**33**	P	**P**	**13 50 31.9**	**+0.5**
TIXI	**Tiksi**	**68.91**	**0**	P	**P**	**13 50 39.0**	**-1.3**
TIXI				IAmb	IAmb	13 50 40.5	
	comp=Z,5.1nm,0.7s						
BRVK	**Borovoye**	**69.17**	**327**	P	**P**	**13 50 40.8**	**-1.4**
BRVK				IAmb	IAmb	13 50 42.2	
	comp=Z,6.4nm,0.9s						
NRIK	**Noril'sk**	**71.86**	**346**	P	**P**	**13 50 57.9**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=162,slow=4.3,SNR=8.7						
	comp=Z,4.4nm,0.7s						
ABKAR	**Akbulak array**	**73.99**	**321**	P	**P**	**13 51 09.2**	**-2.0**
ABKAR	**Akbulak array**	**73.99**	**321**	P	**P**	**13 51 11.0**	**-0.3**
AKTO	**Aktyubinsk**	**75.49**	**322**	LR	LR	14 26 51.1	
	comp=Z,28nm,20.0s,baz=113,slow=37						
KDAK	**Kodiak Island**	**81.96**	**32**	LR	LR	14 21 41.7	
	comp=Z,24nm,20.5s,baz=268,slow=31						
KDAK	**Kodiak Island**	**81.96**	**32**	P	**P**	**13 51 56.7**	**+1.6**
VNDA	**Vanda**	**82.16**	**173**	P	**P**	**13 51 56.5**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=299,slow=5.6,SNR=5.5						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**82.16**	**173**	P	**P**	**13 51 55.8**	**+0.1**
IMAR	**Indian Mountai**	**82.69**	**24**	P	**P**	**13 51 59.8**	**+1.0**
RND	**Reindeer**	**84.43**	**27**	P	**P**	**13 52 07.7**	**-0.1**
RND				IAmb	IAmb	13 52 14.5	
	comp=Z,6.4nm,1.2s						
SML	**Sawmill**	**84.54**	**28**	P	**P**	**13 52 08.8**	**+0.4**
SML				IAmb	IAmb	13 52 14.0	
	comp=Z,5.1nm,0.8s						
TOLK	**Toolik Lake Re**	**84.67**	**21**	P	**P**	**13 52 09.8**	**+0.9**
ILAR	**Eielson Array**	**85.40**	**25**	P	**P**	**13 52 13.5**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=239,slow=5.7,SNR=1.7						
ILAR				pP	**pwP**	**13 52 45.5**	**-0.4**
	comp=Z,1.4nm,1.0s,baz=255,slow=6.5,SNR=2.4						
BMAR	**Burnt Mountain**	**86.46**	**23**	P	**P**	**13 52 18.5**	**+0.8**
KLMR	**Klimovskoe**	**87.13**	**331**	*e*P	**P**	**13 52 18.2**	**-2.8**
KLMR				AMP		13 52 19.9	
	comp=Z,7.0nm,1.0s						
BCAR	**Beaver Creek A**	**87.62**	**27**	P	**P**	**13 52 23.9**	**+0.5**
ARCES	**ARCESS Array B**	**92.01**	**340**	P	**P**	**13 52 42.5**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=74,slow=5.7,SNR=6.9						
	comp=Z,1.8nm,0.7s						
ARCES	**ARCESS Array B**	**92.01**	**340**	P	**P**	**13 52 41.9**	**-1.9**
ARCES				IAmb	IAmb	13 52 43.0	
	comp=Z,3.3nm,0.9s						
QSPA	**South Pole Qui**	**92.55**	**180**		**P**	**13 52 47.0**	**+0.5**
AKASG	**Malin Array Be**	**93.73**	**321**	LR	LR	14 37 33.6	
	comp=Z,23nm,18.7s,baz=72,slow=37						
MNK	**Minsk**	**93.92**	**325**	*i* P	P	13 52 47.0	-5.8
	comp=E,1.0nm,0.7s						
MNK				*i* P	P	13 52 47.0	-5.8
	comp=N,15nm,0.8s						
MNK				*i* P	P	13 52 47.0	-5.8
	comp=Z,12nm,0.7s,baz=81						
MNK				*i* pP	pP	13 53 18.1	-4.8
MNK				*i* sP	pwP	13 53 31.1	+3.2
MNK				*i* PP	**PP**	**13 56 44.3**	**+4.3**
MNK				*i* PPP	PPP	13 58 36.9	
MNK				*i* SKS		14 02 40.8	
MNK				*i* S	**SKSac**	**14 03 10.4**	**-6.0**
MNK				*i* sS	ScS	14 04 06.9	+13
MNK				*i* PS	**PS**	**14 05 15.4**	**-7.3**
MNK				*i* SS	**SS**	**14 10 13.3**	**-0.9**
MNK				*i* SSS	SSS	14 13 55.8	
MNK				*i* LR	LR	14 28 37.0	
MLR	**Muntele Rosu**	**96.78**	**316**	LR	LR	14 44 59.6	
	comp=Z,21nm,18.1s,baz=42,slow=40						
YKA	**Yellowknife Ar**	**99.82**	**25**	P	**Pdif**	**13 53 19.3**	**0.0**
	comp=Z,0.1nm,0.6s,baz=296,slow=4.8,SNR=1.6						
YKA				LR	LR	14 38 10.7	
	comp=Z,15nm,19.3s,baz=349,slow=35						
	comp=Z,0.1nm,0.6s						
NOA	**NORSAR Array B**	**100.46**	**334**	P	**Pdif**	**13 53 20.4**	**-1.9**
	comp=Z,1.1nm,1.1s,baz=65,slow=4.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**124.76**	**288**	PKP	**PKPdf**	**13 58 34.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=59,slow=1.6,SNR=4.9						

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*ISN **27** 13:40:43.4±1.1, 36°.32N×41°.40E, h17^{km}±130^{km}, ML3.5*
*DDA **27** 13:40:44.0±0.0, 36°.30N×41°.40E, h17^{km}±2^{km}, ML3.6*
*ISK **27** 13:40:45.1, 36°.19N×41°.46E, h18^{km}, ML3.8/12*
ISC 27 13:40:44.7±1.4**, 36°.30N**±0°.03×**41°.46E**±0°.03**, h0**^{km}±11^{km}**,**
n39, σ1^{s}13/63**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIDY	**Mardin/Midyat-**	**1.11**	**357**	P	**Pg**	**13 41 05.0**	**-1.0**
MIDY				S	**Sg**	**13 41 19.6**	**-0.7**
MIDY				*i* AML	AML	13 41 23.0	
	comp=E,939nm,0.3s						
MIDY				*i* AML	AML	13 41 29.0	
	comp=N,1µm,0.7s						
MARD	**Mardin**	**1.15**	**332**	S	**Sg**	**13 41 22.0**	**+0.3**
BTMN	**Batman**	**1.60**	**355**	P	**Pn**	**13 41 13.5**	**-0.7**
PERV	**Siirt/Pervari-**	**1.86**	**27**	P	**Pn**	**13 41 17.9**	**+0.1**
PERV				S	**Sg**	**13 41 45.0**	**+0.6**
PERV				*i* AML	AML	13 41 48.0	
	comp=N,2µm,0.5s						
PERV				*i* AML	AML	13 41 54.0	
	comp=E,2µm,0.5s						
SVAN	**Silvan-Diyarba**	**1.86**	**354**	PN	**Pn**	**13 41 18.4**	**+0.6**
SVAN				SN	**Sb**	**13 41 42.9**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.86**	**354**	P	**Pn**	**13 41 17.5**	**-0.3**
SVAN				S	**Sb**	**13 41 42.1**	**-1.3**
DIYA	**Diyarbakir**	**1.94**	**327**	P	**Pb**	**13 41 20.4**	**-0.7**
DIYA				S	**Sn**	**13 41 41.6**	**-2.6**
DIYA				*i* AML	AML	13 41 48.0	
	comp=E,877nm,0.4s						
DIYA				*i* AML	AML	13 41 49.0	
	comp=N,1µm,1.0s						
DYBB	**Diyarbakir**	**1.96**	**328**	PN	**Pn**	**13 41 19.8**	**+0.6**
DYBB				SN	**Sb**	**13 41 45.0**	**-1.3**
CUKT	**Cukurca**	**1.96**	**61**	PN	**Pn**	**13 41 19.3**	**-0.1**
CUKT				SN	**Sn**	**13 41 44.4**	**-0.4**
CUKT	**Cukurca**	**1.96**	**61**	P	**Pn**	**13 41 19.2**	**-0.2**
CUKT				S	**Sg**	**13 41 48.4**	**+0.5**
CUKT				*i* AML	AML	13 41 55.0	
	comp=N,689nm,0.5s						
CUKT				*i* AML	AML	13 41 55.0	
	comp=E,740nm,0.6s						
SANL	**SANLIURFA_Merk**	**2.17**	**294**	P	Pn	13 41 14.6	-7.5
SANL				S	**Sn**	**13 41 49.9**	**+0.3**
HAKT	**HAKKARI**	**2.19**	**54**	P	**Pn**	**13 41 22.4**	**-0.2**
HAKT				S	**Sn**	**13 41 51.8**	**+1.2**
HAKT				*i* AML	AML	13 41 58.0	
	comp=N,360nm,0.5s						
HAKT				*i* AML	AML	13 42 02.0	
	comp=E,315nm,0.8s						
HANI	**Diyarbakir_Han**	**2.28**	**338**	P	**Pb**	**13 41 27.0**	**+0.4**
AKDM	**Akdamar-Van**	**2.36**	**30**	PN	**Pn**	**13 41 25.3**	**+0.5**
AKDM				SN	**Sn**	**13 41 54.9**	**+0.3**
SURC	**SANLIURFA_SURC**	**2.37**	**285**	P	**Pn**	**13 41 24.3**	**-0.5**
SURC				S	**Sn**	**13 41 54.6**	**+0.1**
SURC				*i* AML	AML	13 42 02.0	
	comp=E,274nm,0.6s						
SURC				*i* AML	AML	13 42 07.0	
	comp=N,232nm,0.4s						
GEVA	**Gevas**	**2.38**	**32**	P	**Pn**	**13 41 25.2**	**+0.1**
GEVA				*i* AML	AML	13 42 13.0	
	comp=E,230nm,0.7s						
MUSM	**Mu-Merkez**	**2.42**	**1**	P	**Pn**	**13 41 23.6**	**-2.0**
MUSM				*i* AML	AML	13 42 09.0	
	comp=N,114nm,0.9s						
IKRK	**Kirkuk**	**2.50**	**110**	*e*Pn	**Pn**	**13 41 27.0**	**+0.4**
IKRK				*e*Sn	**Sn**	**13 41 58.5**	**+0.7**
IKRK				AML	AML	13 42 20.0	
	comp=N,328nm,0.5s						
IKRK				AML	AML	13 42 21.5	
	comp=E,328nm,0.4s						
SLHN	**Bingol, Solhan**	**2.68**	**353**	P	**Pg**	**13 41 37.0**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.69**	**321**	PN	**Pn**	**13 41 30.6**	**+1.2**
SVRC				SN	**Sn**	**13 42 02.7**	**-0.1**
ADCV	**BITLIS_Adilcev**	**2.70**	**21**	P	**Pn**	**13 41 29.6**	**+0.1**
VANB	**Van**	**2.76**	**33**	PN	**Pn**	**13 41 30.3**	**+0.1**
VANB				SN	**Sn**	**13 42 02.9**	**-1.4**
BNGB	**Bingl**	**2.76**	**347**	PN	**Pn**	**13 41 31.6**	**+1.3**
BNGB				SN	**Sn**	**13 42 05.0**	**+0.7**
ATAB	**Bozova**	**2.80**	**296**	P	**Pb**	**13 41 35.1**	**-0.4**
ATAB				S	**Sb**	**13 42 11.9**	**+1.6**
ATAB				*i* AML	AML	13 42 20.0	
	comp=E,555nm,0.8s						
ATAB				*i* AML	AML	13 42 20.0	
	comp=E,358nm,0.8s						
ELZG	**Elazig**	**2.95**	**319**	P	**Pb**	**13 41 38.7**	**+0.5**
ELZG				S	**Sb**	**13 42 13.1**	**-1.9**
ELZG				*i* AML	AML	13 42 23.0	
	comp=E,260nm,0.5s						
ELZG				*i* AML	AML	13 42 33.0	
	comp=E,307nm,0.6s						
MLAZ	**Malazgirt-MUS**	**2.97**	**17**	PN	**Pn**	**13 41 34.3**	**+1.2**
MLAZ				SN	**Sn**	**13 42 10.2**	**+0.7**
KARO	**Karliova-Bingo**	**3.02**	**354**	PN	**Pn**	**13 41 34.9**	**+0.9**
KARO				SN	**Sn**	**13 42 11.6**	**+0.6**
MALT	**Malatya**	**3.15**	**311**	PN	**Pn**	**13 41 36.1**	**+0.5**
MALT				SN	**Sn**	**13 42 13.9**	**0.0**
YEDI	**Yedisu-Bingol**	**3.22**	**347**	PN	**Pn**	**13 41 38.3**	**+1.7**
AKCD	**Akcadag**	**3.46**	**306**	P	**Pn**	**13 41 39.7**	**-0.2**
AKCD				S	**Sb**	**13 42 31.7**	**+2.3**
AKCD				*i* AML	AML	13 42 40.0	
	comp=E,378nm,0.6s						
AKCD				*i* AML	AML	13 42 45.0	
	comp=E,176nm,0.6s						
AGRB	**Hanur-Agry**	**3.49**	**20**	PN	**Pn**	**13 41 41.9**	**+1.6**
ERZN	**Erzincan**	**3.56**	**338**	PN	**Pn**	**13 41 43.1**	**+1.8**
ARPR	**Arapgir-MALATY**	**3.73**	**319**	PN	**Pn**	**13 41 45.4**	**+1.7**
KEMA	**Kemaliye**	**3.79**	**322**	P	**Pg**	**13 41 56.2**	**-1.1**
KMRS	**Kahramanmaras**	**3.85**	**290**	PN	**Pn**	**13 41 45.4**	**+0.2**
BHD	**Baghdad**	**3.86**	**141**	*e*Pn	**Pn**	**13 41 47.0**	**+1.8**
BHD				*e*Sn	**Sn**	**13 42 30.0**	**-1.2**
DARE	**Darende-Malaty**	**3.90**	**307**	PN	**Pn**	**13 41 45.9**	**0.0**
IBDR	**Badra**	**4.86**	**130**	*e*Pn	**Pn**	**13 42 00.0**	**+0.9**
IBDR				*e*Sn	**Sn**	**13 42 54.0**	**-2.0**
RAFI	**Al-Rafai**	**5.98**	**138**	*e*Pn	**Pn**	**13 42 16.0**	**+1.6**
RAFI				*e*Sn	**Sn**	**13 43 21.0**	**-2.5**

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*NEIC **27** 13:42:30.8±2.9, 6°.2S±0°.1×147°.6E±0°.1, h95^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=20.8km s-min=11.0km az=130.0*
*IDC **27** 13:42:30.4±3.6, 6°.30S×147°.74E, h104^{km}±47^{km}, mb3.5/5, mbtmp4.0/8, Error ellipse: s-maj=77.9km s-min=15.9km az=124.0*
ISC 27 13:42:30.4±0.6**, 6°.24S**±0°.08×**147°.7E**±0°.1**, h100**^{km}**, n28,**
σ0^{s}80/29**, mb4.2**/10**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.18**	**189**	P	**Pn**	**13 43 19.0**	**+0.4**
	269nm,0.6s,baz=352,slow=9.3,SNR=27						
PMG				S	**Sn**	**13 43 54.7**	**-1.2**
	63nm,0.3s,baz=217,slow=20,SNR=11						
KRVT	**Keravat (AS076**	**4.76**	**66**	P	**Pn**	**13 43 40.5**	**+0.6**
	139nm,0.6s,baz=250,slow=0.2,SNR=47						
RABL	**Rabaul**	**4.93**	**66**	Pn	**Pn**	**13 43 43.2**	**+0.9**
COEN	**Coen**	**8.84**	**210**		**Pn**	**13 44 35.1**	**-0.4**
COEN	**Coen**	**8.84**	**210**	P	**Pn**	**13 44 35.1**	**-0.4**
WR0	**Warramunga Arr**	**18.66**	**222**	P	**Pn**	**13 46 42.6**	**+0.4**
WB2	**Warramunga Arr**	**18.78**	**222**	P	**P**	**13 46 42.1**	**+0.2**
WB2				IAmb	IAmb	13 46 43.9	
	comp=Z,9.2nm,0.8s						
WRA	**Warramunga Arr**	**18.78**	**222**	P	**P**	**13 46 42.6**	**+0.5**
	comp=Z,1.7nm,0.4s,baz=48,slow=11,SNR=2.0						
KNRA	**Kununurra**	**20.76**	**242**	P	**P**	**13 47 03.5**	**0.0**
KNRA				IAmb	IAmb	13 47 32.5	
	comp=Z,19nm,1.1s						
KOUNC	**Koumac, New Ca**	**21.51**	**133**	P	**P**	**13 47 11.5**	**0.0**
KOUNC				IAmb	IAmb	13 47 25.5	
	comp=Z,15nm,1.0s						
ASAR	**Alice Springs**	**21.80**	**216**	P	**P**	**13 47 15.4**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=56,slow=9.2,SNR=11						
	comp=Z,1.9nm,0.3s						
ASAR	**Alice Springs**	**21.80**	**216**	P	**P**	**13 47 14.5**	**-0.1**
MBWA	**Marble Bar**	**30.83**	**239**	P	**P**	**13 48 38.6**	**+1.4**
MBWA				IAmb	IAmb	13 48 56.1	
	comp=Z,9.2nm,1.2s						
MORW	**Morawa**	**37.50**	**229**	P	**P**	**13 49 35.8**	**+1.1**
MORW				IAmb	IAmb	13 49 47.5	
	comp=Z,12nm,1.4s						
NWAO	**Narrogin (SRO)**	**38.79**	**223**	P	**P**	**13 49 46.4**	**+0.9**
PLWZ	**Palliser**	**42.91**	**149**	P	**P**	**13 50 18.9**	**-0.4**
PEA0B	**Petropavlovsk-**	**59.73**	**7**	P	**P**	**13 52 23.7**	**-0.8**
PETK	**Petropavlovsk-**	**59.73**	**7**	P	**P**	**13 52 24.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=167,slow=7.2,SNR=6.7						
	comp=Z,1.5nm,0.8s						
PETK	**Petropavlovsk-**	**59.73**	**7**	P	**P**	**13 52 23.7**	**-0.8**
VNDA	**Vanda**	**71.64**	**177**	P	**P**	**13 53 39.8**	**-0.9**
VNDA				IAmb	IAmb	13 53 40.5	
	comp=Z,5.9nm,1.5s						
MKAR	**Makanchi Array**	**78.09**	**320**	P	**P**	**13 54 17.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=92,slow=8.5,SNR=2.8						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**79.56**	**328**	P	**P**	**13 54 25.5**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=95,slow=8.8,SNR=1.9						
	comp=Z,0.4nm,0.4s						
KDAK	**Kodiak Island**	**79.81**	**28**	P	**P**	**13 54 28.4**	**+0.9**
IMAR	**Indian Mountai**	**83.48**	**21**	P	**P**	**13 54 46.0**	**-0.7**
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**13 54 49.3**	**+1.1**
QSPA				IAmb	IAmb	13 54 50.0	
	comp=Z,8.1nm,1.4s						
ILAR	**Eielson Array**	**85.45**	**23**	P	**P**	**13 54 55.0**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=244,slow=6.0,SNR=4.3						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.78**	**284**	PKPbc	**PKPbc**	**14 01 59.0**	**0.0**
	comp=Z,1.1nm,0.6s,baz=76,slow=3.8,SNR=13						
TORD				pPKPbc	pPKPbc	14 02 26.2	-0.8
	comp=Z,0.6nm,0.7s,baz=84,slow=2.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**145.78**	**284**		**PKPbc**	**14 01 58.9**	**-0.1**

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*IASPEI **27** 13:44:28.4±0.9, 46°.58N±0°.02×122°.64W±0°.02, h26^{km}±5^{km}, Error ellipse: s-maj=3.7km s-min=3.3km az=50.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ANF **27** 13:44:28.2±0.3, 46°.57N×122°.68W, h26^{km}±2^{km}, ML2.5/10, Error ellipse: s-maj=4.2km s-min=2.1km az=80.0*
*NEIC **27** 13:44:28.4±1.8, 46°.59N±0°.02×122°.65W±0°.03, h24^{km}±8^{km}, Error ellipse: s-maj=3.3km s-min=2.9km az=67.0*
*PNSN **27** 13:44:29.3, 46°.57N×122°.64W, h22^{km}, MD2.6, Fault plane solution: NP1:ϕ_s125.00000°, δ40.00000°, λ150.00000°.*
*SEA **27** 13:44:29.4±2.3, 46°.57N±0°.02×122°.63W±0°.03, h23^{km}±5^{km}, ML2.6/82, ML2.4/34(NEIC), Error ellipse: s-maj=3.3km s-min=2.4km az=51.0*
ISC 27 13:44:28.5±0.9**, 46°.59N**±0°.02×**122°.66W**±0°.02**, h26**^{km}±5^{km}**,**
n96, σ0^{s}73/109**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
E04D	**Cinebar**	**0.07**	**114**		**Pb**	**13 44 33.0**	**-0.1**
E04D	**Cinebar**	**0.07**	**114**		**Sb**	**13 44 36.2**	**-0.1**
E04D	**Cinebar**	**0.07**	**114**	P	**Pb**	**13 44 32.9**	**-0.2**
	baz=287,SNR=625						
E04D				S	**Sb**	**13 44 36.1**	**-0.1**
	baz=287						
RRHS	**Rochester High**	**0.34**	**310**		**Pb**	**13 44 36.5**	**+0.4**
RRHS					**Sn**	**13 44 42.7**	**-1.1**
ERK	**Elk Rock**	**0.36**	**142**		**Pn**	**13 44 37.5**	**-0.7**
TDL	**Tradedollar La**	**0.39**	**127**		**Pb**	**13 44 36.7**	**-0.4**
TDL					**Sb**	**13 44 42.4**	**-0.5**
B201	**Coldwater, Mou**	**0.39**	**136**		**Pb**	**13 44 36.6**	**-0.5**
B201					**Sb**	**13 44 42.2**	**-0.7**
BMW	**Boistfort Moun**	**0.41**	**254**		**Pb**	**13 44 37.3**	**0.0**
BMW					**Sb**	**13 44 43.7**	**+0.4**
PCFR	**Pierce County**	**0.43**	**20**		**Pb**	**13 44 37.6**	**0.0**
JRO	**Jston Ridge Ob**	**0.44**	**135**		**Pb**	**13 44 37.4**	**-0.4**
JRO					**Sb**	**13 44 43.7**	**-0.5**
RVW	**Rose Valley**	**0.44**	**187**		**Pb**	**13 44 37.5**	**-0.3**
FL2	**Flat Top 2**	**0.45**	**151**		**Pb**	**13 44 37.6**	**-0.4**
STD	**Studebaker Rid**	**0.46**	**139**		**Pb**	**13 44 37.8**	**-0.4**
STD					**Sb**	**13 44 44.4**	**-0.4**
B203	**Quarry, Mount**	**0.47**	**151**		**Pb**	**13 44 37.9**	**-0.4**
B203					**Sb**	**13 44 44.5**	**-0.6**
SHW	**Mount Saint He**	**0.49**	**143**		**Pb**	**13 44 38.4**	**-0.3**
VALT	**Mount Saint He**	**0.49**	**138**		**Pb**	**13 44 38.5**	**-0.3**
SOSW	**Source of Smit**	**0.50**	**133**		**Pb**	**13 44 38.4**	**-0.4**
BOLM	**Sugar Bowl**	**0.50**	**138**		**Pb**	**13 44 38.7**	**-0.2**
B941	**Kapowsin**	**0.50**	**37**		**Pb**	**13 44 38.3**	**-0.5**
SEPW	**September Lobe**	**0.51**	**140**		**Pb**	**13 44 38.8**	**-0.2**
ESD	**East Dome**	**0.53**	**137**		**Pb**	**13 44 39.0**	**-0.3**
GHW	**Garrison Hill**	**0.53**	**30**		**Pb**	**13 44 38.9**	**-0.3**
HSR	**South Ridge**	**0.53**	**141**		**Pb**	**13 44 39.2**	**-0.2**
F04D	**Rainier, OR**	**0.56**	**206**		**Pb**	**13 44 39.6**	**-0.2**
F04D	**Rainier, OR**	**0.56**	**206**	P	**Pb**	**13 44 39.5**	**-0.2**
	baz=28,SNR=21						
F04D				S	**Sb**	**13 44 47.8**	**+0.4**
	baz=28						
RVC	**Mount Rainier-**	**0.59**	**53**		**Pb**	**13 44 40.3**	**-0.1**
D04E	**Lakebay**	**0.60**	**353**		**Pn**	**13 44 40.8**	**-0.5**
D04E	**Lakebay**	**0.60**	**353**	P	**Pn**	**13 44 40.8**	**-0.5**
	baz=171,SNR=46						
D04E				Sn	**Sn**	**13 44 50.8**	**+0.6**
	baz=171						
LON	**Longmire**	**0.61**	**74**		**Pb**	**13 44 40.3**	**-0.3**
REMR	**Mount Rainier-**	**0.61**	**67**		**Pb**	**13 44 40.5**	**-0.2**
E03A	**Lebam**	**0.62**	**267**		**Pb**	**13 44 40.7**	**-0.1**
E03A				IAML		13 44 50.4	
	comp=E,126nm,0.5s						
CDFW	**Cedar Flats**	**0.63**	**138**		**Pb**	**13 44 40.7**	**-0.3**
MTMW	**Mount Mitchell**	**0.64**	**151**		**Pb**	**13 44 40.8**	**-0.3**
OBSR	**Observation Ro**	**0.66**	**61**		**Pb**	**13 44 41.5**	**-0.2**
F04A	**Amboy**	**0.68**	**165**		**Pb**	**13 44 41.1**	**-0.5**
B019	**Raymond**	**0.69**	**276**		**Pb**	**13 44 42.1**	**+0.3**
RCM	**Mount Rainier-**	**0.69**	**68**		**Pb**	**13 44 41.4**	**-0.8**
RCS	**Mount Rainier-**	**0.70**	**66**		**Pb**	**13 44 41.9**	**-0.4**
B017	**Montesano**	**0.74**	**304**		**Pn**	**13 44 43.1**	**-0.2**
PANH	**Panhandle Gap,**	**0.75**	**68**		**Pb**	**13 44 42.4**	**-0.7**
D05A	**Enumclaw**	**0.76**	**37**		**Pn**	**13 44 43.4**	**-0.2**
D05A				IAML		13 44 56.0	
	comp=N,144nm,0.3s						
FMW	**Mount Fremont**	**0.76**	**63**		**Pb**	**13 44 42.9**	**-0.4**
GSM	**Grass Mountain**	**0.86**	**44**		**Pn**	**13 44 44.9**	**-0.2**
WISH	**Wishkah**	**0.93**	**305**		**Pn**	**13 44 46.6**	**+0.8**
WISH	**Wishkah**	**0.93**	**305**	IAML		13 45 08.4	
	comp=N,69nm,0.5s						
GMW	**Gold Mountain**	**0.97**	**355**		**Pb**	**13 44 45.9**	**-0.7**
GNW	**Green Mountain**	**0.98**	**354**		**Pn**	**13 44 46.1**	**-0.6**
D03D	**Eldon**	**0.99**	**343**		**Pn**	**13 44 46.5**	**-0.3**
D03D	**Eldon**	**0.99**	**343**	P	**Pn**	**13 44 46.5**	**-0.3**
	baz=162,SNR=8.2						
D03D				S	**Sn**	**13 45 00.4**	**+0.5**

	baz=162						
RATT	Rattlesnake La	1.02	35		Pn	13 44 47.1	-0.1
F05D	White Salmon	1.09	130	P	Pn	13 44 48.2	+0.1
	baz=311						
F05D				S	Sn	13 45 03.0	+0.7
	baz=311						
HDW	Hoodsport	1.10	346		Pn	13 44 48.1	-0.2
KMOR	Kings Mountain	1.11	212		Pn	13 44 48.1	-0.4
C04A	Brinnon	1.15	350		Pn	13 44 48.7	-0.2
NLWA	Neilton Lookou	1.16	315		Pn	13 44 49.3	+0.2
NLWA				IAML		13 45 06.3	
	comp=N,43nm,0.4s						
NLWA				IAML		13 45 10.6	
	comp=N,60nm,0.7s						
OLQ	Olympics--Lake	1.22	320		Pn	13 44 50.1	+0.3
B013	Quilcene	1.24	352		Pn	13 44 50.1	0.0
B013	Quilcene	1.24	352		Pn	13 44 50.1	0.0
NAC	Naches	1.27	83		Pb	13 44 52.4	+0.6
C05A	Tolt Reservoir	1.29	31		Pb	13 44 51.9	-0.2
HTW	Haystack Looko	1.36	26		Pb	13 44 52.7	-0.7
G04A	Mulino	1.39	175		Pb	13 44 53.1	-0.6
TDH	Tom, Dick, Har	1.43	155		Pb	13 44 53.8	-0.8
G03D	McMinnville, O	1.44	197	Pn	Pn	13 44 52.9	+0.1
G03D				IAML		13 45 15.4	
	comp=N,52nm,0.7s						
G03D				IAML		13 45 26.2	
	comp=E,54nm,1.6s						
G03D	McMinnville, O	1.44	197	Sb	Sb	13 45 13.0	+0.5
	baz=18						
HOOD	Mount Hood Mea	1.45	151		Pn	13 44 53.5	+0.3
EBG	Ellensburg	1.48	77		Pb	13 44 55.3	0.0
TRW	Toppenish Ridg	1.49	101		Pb	13 44 56.0	+0.4
LTY	Liberty	1.52	63		Pb	13 44 55.1	-1.0
LTY				IAML		13 45 16.0	
	comp=N,64nm,0.3s						
HEBO	Mount Hebo	1.57	209	Pn	Pn	13 44 55.7	+0.9
HEBO				IAML		13 45 23.1	
	comp=N,74nm,2.1s						
B04A	Port Angeles	1.58	339		Pb	13 44 57.5	+0.5
MXC	Moxie City	1.63	89		Pb	13 44 57.5	-0.4
G05D	Wamic, OR	1.64	145		Pb	13 44 58.6	+0.6
G05D	Wamic, OR	1.64	145	Pb	Pb	13 44 57.7	-0.3
	baz=326,SNR=7.6						
G05D				Sb	Sb	13 45 20.4	+2.1
	baz=326						
VBEM	Beaver Butte	1.70	153		Pb	13 44 59.2	0.0
WRW	Wenatchee Ridg	1.76	43		Pb	13 45 00.2	0.0
GPW	Glacier Peak	1.85	33		Pb	13 45 01.4	-0.4
ETW	Entiat	1.89	57		Pb	13 45 02.3	-0.1
H04A	Detroit Lake	1.93	170		Pb	13 45 01.5	-1.5
RPW	Rockport	2.02	22		Pb	13 45 03.4	-1.2
COR	Corvallis	2.05	193	Pn	Pn	13 45 02.8	+1.6
COR				IAML		13 45 34.3	
	comp=N,28nm,2.5s						
COR				IAML		13 45 37.3	
	comp=N,26nm,2.3s						
H04D	Lebanon	2.06	182		Pb	13 45 03.5	-1.7
H04D				IAML		13 45 31.7	
	comp=N,28nm,0.3s						
H04D				IAML		13 45 40.1	
	comp=E,30nm,0.6s						
H04D	Lebanon	2.06	182	Pb	Pb	13 45 03.6	-1.7
	baz=2.0,SNR=11						
H04D				Sb	Sb	13 45 30.8	+0.3
	baz=2.0						
B06A	Marblemount	2.09	22		Pb	13 45 04.3	-1.4
PGC	Sidney	2.13	346	Pn	Pn	13 45 03.7	+1.3
HAWA	Hanford	2.17	94		Pn	13 45 04.5	+1.5
MBW	Mount Baker	2.26	13		Pb	13 45 07.2	-1.5
SHUK	Shuksan-Mt. Ba	2.36	16		Pb	13 45 09.4	-1.1
BUCK	Buck Mountain	2.40	186	Pn	Pn	13 45 06.3	+0.1
BUCK				IAML		13 45 40.4	
	comp=N,21nm,2.9s						
PRLK	Prince Lake	2.43	168		Pb	13 45 10.3	-1.2
I05D	Terrebonne, OR	2.43	157	Sb	Sb	13 45 42.5	+1.3
	baz=338						
HUOR	Husband	2.53	167		Pb	13 45 12.2	-1.1
I02E	Swisshome, OR	2.62	199	Pn	Pb	13 45 11.9	-2.7
I04A	Tendick Farm,	2.80	176	Sb	Sb	13 45 52.3	+0.6
	baz=357						
PINE	Pine Mountain	3.05	156	Pn	Pn	13 45 15.3	+0.1
PINE				IAML		13 46 48.6	
	comp=E,9.5nm,3.5s						
PINE				IAML		13 47 04.5	
	comp=N,9.3nm,3.4s						
I07A	Izee	3.35	137	Pn	Pn	13 45 19.9	+0.6

ISK ***27*** *13:46:34.8, 36°.31N×41°.15E, h5^{km}, ML2.6/4*

DDA ***27*** *13:46:46.9±0.0, 37°.53N×39°.97E, h7^{km}±23^{km}, ML2.0*

ISC 27 13:46:35.0±2.5**, 36°.33N**±0°.10×**41°.18E**±0°.07**, h1**^{km}±13^{km}**,**
n9, σ0^{s}80/17**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARD	Mardin	1.04	342	P	Pn	13 46 56.3	-0.5
MARD				S	Sn	13 47 12.2	+0.2
MARD				*i* AML	AML	13 47 15.0	
	comp=E,199nm,0.7s						
MARD				*i* AML	AML	13 47 16.0	
	comp=N,126nm,0.5s						
MAZI	Mazidag	1.27	333	PN	Pn	13 47 00.3	+0.3
MAZI				SN	Sn	13 47 19.2	+1.4
BTMN	Batman	1.56	3	P	Pn	13 47 03.9	-0.1
BTMN				S	Sg	13 47 26.1	+0.8
BTMN				*i* AML	AML	13 47 29.0	
	comp=N,57nm,0.7s						
BTMN				*i* AML	AML	13 47 30.0	
	comp=E,60nm,0.9s						
SVAN	Silvan-Diyarba	1.82	1	PN	Pb	13 47 08.7	-0.5
SVAN				SN	Sg	13 47 33.6	0.0
SVAN	Silvan-Diyarba	1.82	1	P	Pg	13 47 09.9	-0.1
SVAN				S	Sb	13 47 32.2	-0.3
SVAN				*i* AML	AML	13 47 34.0	
	comp=N,8.6nm,0.4s						
SVAN				*i* AML	AML	13 47 38.0	
	comp=E,15nm,0.4s						
DYBB	Diyarbakir	1.82	333	PN	Pb	13 47 08.7	-0.5
DYBB				SN	Sg	13 47 33.6	0.0
PERV	Siirt/Pervari-	1.95	34	P	Pn	13 47 09.1	-0.3
PERV				S	Sn	13 47 33.8	-0.8
PERV				*i* AML	AML	13 47 38.0	
	comp=E,80nm,0.4s						
PERV				*i* AML	AML	13 47 41.0	
	comp=N,68nm,0.4s						
SURC	SANLIURFA_SURC	2.13	286	P	Pb	13 47 13.7	-0.8
SURC				S	Sg	13 47 44.4	+0.8
SURC				*i* AML	AML	13 47 54.0	
	comp=N,16nm,0.7s						
SURC				*i* AML	AML	13 48 01.0	
	comp=E,15nm,0.4s						
AKDM	Akdamar-Van	2.46	35	PN	Pn	13 47 18.1	+1.7

IDC ***27*** *13:59:24.9±0.7, 2°.86S×122°.35E, h0^{km}, mb4.0/13, mbtmp4.1/16, ML3.9/3, MS3.5/18, Error ellipse: s-maj=21.6km s-min=13.6km az=78.0*

DJA ***27*** *13:59:29.0±0.4, 3°S±2°×12°2E±°, h28^{km}±4^{km}, M4.6/22, mb4.6/13, mB5.2/6, MLv4.7/22, Mw(mB)4.5/6*

NEIC ***27*** *13:59:31.6±2.0, 2°.91S±0°.06×122°.46E±0°.07, h51^{km}±7^{km}, mb4.4/17, Error ellipse: s-maj=10.3km s-min=8.3km az=88.0*

ISC 27 13:59:29.8±0.5**, 2°.91S**±0°.05×**122°.50E**±0°.05**, h35**^{km}**, n83,**
σ1^{s}04/74**, mb4.3**/18**, MS3.5**/14**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.88	8	Pn	Pn	13 59 59.2	-0.2
LUWI	Luwuk	1.88	8	P	Pn	13 59 59.1	-0.2
APSI	Ampana	2.16	337	P	Pn	14 00 02.9	-0.4
BBSI	Bau Bau	2.56	178	P	Pn	14 00 09.5	+0.7
TTSI	Tana Toraja	2.68	267	P	Pn	14 00 10.2	-0.2
BNSI	Bone	2.81	238	P	Pn	14 00 11.4	-0.8
SPSI	Sidrap Palu	2.92	249	P	Pn	14 00 13.7	0.0
SPSI				S	Sn	14 00 47.5	-0.1
BKSI	Bulukumba	3.37	225	P	Pn	14 00 20.1	+0.2
MRSI	Marisa	3.41	351	P	Pn	14 00 19.9	-0.6
MRSI				S	Sn	14 01 00.7	+1.0
KAPI	Kappang	3.45	233	Pn	Pn	14 00 19.9	-1.1
	14nm,0.3s,baz=33,slow=5.2,SNR=27						
KAPI				Sn	Sn	14 00 59.4	-1.2
	28nm,0.3s,baz=103,slow=23,SNR=8.2						
KAPI				LR	LR	14 01 25.6	
	comp=Z,242nm,21.3s,baz=48,slow=36						
	30nm,0.3s						
KAPI	Kappang	3.45	233		Pn	14 00 21.4	+0.5
GTOI	Gorontalo	3.56	8	P	Pn	14 00 23.9	+1.4
SANI	Sanana	3.59	76	P	Pn	14 00 21.6	-1.3
SANI				S	Sn	14 01 02.3	-1.8
KMSI	Cibinong	3.77	23	P	Pn	14 00 25.1	-0.3
BSSI	Bau Bau, Buton	3.79	212	P	Pn	14 00 26.5	+0.9
MPSI	Mapaga	4.14	321	P	Pn	14 00 30.0	-0.6
TOLI2	Tolitoli	4.35	337		Pn	14 00 34.6	+1.2
LBMI	Labuha	5.48	66	P	Pn	14 00 50.1	+1.1
	0.3nm88nm,1.1s						
MMRI	Maumere	5.69	183		Pn	14 00 51.6	-0.3
MMRI	Maumere	5.69	183	P	Pn	14 00 52.4	+0.5
	0.4nm1µm67nm,0.7s						
BKB	Balikpapan	5.83	286	Pn	Pn	14 00 54.9	+1.0
BKB	Balikpapan	5.83	286	P	Pn	14 00 54.5	+0.7
	0.5nm1µm124nm,1.1s						
EDFI	Ende, Flores	5.86	188	P	Pn	14 00 54.3	+0.1
	0.1nm508nm31nm,0.5s						
TNTI	Ternate	6.09	53		Pn	14 00 58.5	+1.2
TNTI	Ternate	6.09	53	P	Pn	14 00 58.3	+1.0
	0.3nm1µm52nm,0.6s						
SOEI	Soe	7.02	166	Pn	Pn	14 01 14.4	+4.1
SOEI	Soe	7.02	166	P	Pn	14 01 09.5	-0.8
	0.4nm103nm,0.9s						
BATI	Baumata	7.34	171	Pn	Pn	14 01 15.8	+1.3
	0.6nm,0.3s,baz=3.2,slow=10,SNR=2.3						
BATI				LR	LR	14 04 57.3	
	comp=Z,683nm,18.2s,baz=8.5,slow=45						
	8.4nm,0.6s						
BATI	Baumata	7.34	171	P	Pn	14 01 13.7	-0.8
	0.1nm33nm,0.9s						
MYLDM	Lahad Datu	8.97	334		Pn	14 01 39.0	+2.0
SWI	Sorong	8.99	77	P	Pn	14 01 38.0	+0.9
	680nm20nm,0.7s						
SIJI	Sorong	8.99	77	Pn	Pn	14 01 39.0	+1.7
	2.8nm,0.3s,baz=279,slow=7.6,SNR=13						
	11nm,0.5s						
FAKI	Fak Fak	9.74	90	Pn	Pn	14 01 47.9	+0.4
DAV	Davao City (W)	10.38	17	LR	LR	14 06 26.1	
	comp=Z,132nm,19.3s,baz=200,slow=41						
MTN	Manton Dam	13.05	140	Pn	Pn	14 02 31.7	-1.1
KNRA	Kununurra	14.11	154	Pn	Pn	14 02 46.8	-0.4
LEM	Lembang	15.33	255	LR	LR	14 09 53.4	
	comp=Z,353nm,19.6s,baz=151,slow=41						
WB0	Warramunga Arr	20.39	146	P	P	14 04 04.1	+0.3
WB0				IAmb	IAmb	14 04 26.2	
	comp=Z,22nm,1.5s						
WRA	Warramunga Arr	20.50	147	P	P	14 04 05.2	+0.3
	comp=Z,1.5nm,0.7s,baz=322,slow=12,SNR=13						
WRA				LR	LR	14 12 54.3	
	comp=Z,123nm,18.1s,baz=40,slow=39						
	comp=Z,1.5nm,0.7s						
WRA	Warramunga Arr	20.50	147	P	P	14 04 04.2	-0.7
WB2	Warramunga Arr	20.50	147	P	P	14 04 03.2	-1.8
WR0	Warramunga Arr	20.62	146	P	P	14 04 06.6	+0.4
COEN	Coen	23.18	119	P	P	14 04 34.2	+0.6
COEN				IAmb	IAmb	14 04 52.6	
	comp=Z,17nm,1.3s						
ASAR	Alice Springs	23.40	153	P	P	14 04 36.8	+1.1
	comp=Z,0.9nm,0.8s,baz=318,slow=7.7,SNR=18						
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	23.40	153	P	P	14 04 35.8	+0.1
PSI	Prapat	24.24	283	LR	LR	14 15 19.7	
	comp=Z,155nm,19.1s,baz=139,slow=40						
PMG	Port Moresby	25.34	106	LR	LR	14 16 46.0	
	comp=Z,61nm,19.8s,baz=326,slow=41						
CTA	Charters Tower	28.79	128	LR	LR	14 17 28.3	
	comp=Z,130nm,19.4s,baz=260,slow=37						
JOW	Kunigami	30.09	10	LR	LR	14 16 52.8	
	comp=Z,57nm,21.7s,baz=179,slow=35						
CMAR	Chiang Mai Arr	31.45	313	P	P	14 05 48.2	0.0
	comp=Z,1.1nm,0.6s,baz=141,slow=7.2,SNR=11						
	comp=Z,1.1nm,0.6s						
CMAR	Chiang Mai Arr	31.45	313	P	P	14 05 47.6	-0.5
STKA	Stephens Creek	33.96	150	P	P	14 06 11.8	+1.8
	comp=Z,3.2nm,0.9s,baz=333,slow=12,SNR=3.1						
STKA				LR	LR	14 20 10.5	
	comp=Z,112nm,19.1s,baz=7.7,slow=36						
	comp=Z,3.2nm,0.9s						
STKA	Stephens Creek	33.96	150	P	P	14 06 11.1	+1.1
KSRS	Korea Array	40.48	7	P	P	14 07 05.2	0.0
	comp=Z,1.2nm,0.8s,baz=180,slow=11,SNR=9.8						
	comp=Z,1.2nm,0.8s						
MJAR	Matsushiro Arr	41.90	19	P	P	14 07 16.9	0.0
	comp=Z,4.3nm,0.8s,baz=185,slow=9.5,SNR=14						
MJAR				LR	LR	14 23 40.0	
	comp=Z,37nm,21.1s,baz=192,slow=35						
	comp=Z,4.3nm,0.8s						
PALK	Pallekele	42.92	284	LR	LR	14 26 41.6	
	comp=Z,68nm,18.0s,baz=229,slow=38						
KOUNC	Koumac, New Ca	44.32	117	P	P	14 07 35.6	-1.1
USRK	Ussuriysk Ar.	47.66	9	P	P	14 08 02.9	+0.2
	comp=Z,4.2nm,0.8s,baz=179,slow=8.7,SNR=6.2						
	comp=Z,4.2nm,0.8s						
KLR	Kul'dur	52.55	8	LR	LR	14 31 11.2	
	comp=Z,18nm,20.2s,baz=200,slow=36						
RPZ	Rata Peaks	59.06	141	LR	LR	14 35 22.3	
	comp=Z,99nm,18.2s,baz=272,slow=36						
KSH	Kashi	60.03	320	P	P	14 09 42.0	+8.6
BKZ	Black Stump Fm	60.78	134	P	P	14 09 36.7	-1.8
MKAR	Makanchi Array	60.83	329	P	P	14 09 38.1	-0.4
	comp=Z,1.6nm,0.7s,baz=126,slow=7.2,SNR=14						
	comp=Z,1.6nm,0.7s						
MAKZ	Makanchi	61.00	329	P	P	14 09 40.2	+0.5
MAKZ				IAmb	IAmb	14 09 40.4	
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	62.67	322	LR	LR	14 41 31.4	
	comp=Z,14nm,18.1s,baz=110,slow=40						
PEA0B	Petropavlovsk-	63.14	23	P	P	14 09 55.3	+1.3
PETK	Petropavlovsk-	63.14	23	P	P	14 09 54.9	+0.9
	comp=Z,2.4nm,0.8s,baz=110,slow=0.8,SNR=7.1						
	comp=Z,2.4nm,0.8s						
PETK	Petropavlovsk-	63.14	23	P	P	14 09 55.3	+1.3
ZALV	Zalesovo Beam	64.75	336	P	P	14 10 03.0	-1.5
	comp=Z,0.3nm,0.3s,baz=111,slow=8.1,SNR=4.0						
	comp=Z,0.3nm,0.3s						
YAK	Yakutsk	65.00	4	P	P	14 10 06.4	+0.5
KURK	Kurchatov	65.25	331	P	P	14 10 06.6	-1.1
KURK				IAmb	IAmb	14 10 16.2	
	comp=Z,4.4nm,1.1s						
TIXI	Tiksi	74.54	2	P	P	14 11 04.5	0.0
TIXI				IAmb	IAmb	14 11 05.5	
	comp=Z,13nm,1.0s						
ABKAR	Akbulak array	74.72	323	P	P	14 11 04.7	-1.3
NRIK	Noril'sk	75.91	348	P	P	14 11 12.3	-0.1
	comp=Z,2.7nm,0.5s,baz=136,slow=6.5,SNR=3.9						
	comp=Z,2.7nm,0.5s						
NRIK	Noril'sk	75.91	348	P	P	14 11 12.0	-0.4
NRIK				IAmb	IAmb	14 11 14.0	
	comp=Z,3.9nm,0.6s						
AKTO	Aktyubinsk	76.33	324	P	P	14 11 14.4	-0.8
	comp=Z,1.3nm,0.7s,baz=132,slow=6.1,SNR=4.8						
AKTO				LR	LR	14 48 47.2	
	comp=Z,27nm,18.3s,baz=108,slow=39						
	comp=Z,1.3nm,0.7s						
VNDA	Vanda	77.45	172	P	P	14 11 21.4	+0.3
	comp=Z,0.8nm,0.9s,baz=301,slow=6.4,SNR=4.8						
	comp=Z,0.8nm,0.9s						
VNDA	Vanda	77.45	172	P	P	14 11 21.7	+0.7
VNDA				IAmb	IAmb	14 11 29.5	
	comp=Z,2.5nm,1.1s						
QSPA	South Pole Qui	87.04	180	P	P	14 12 11.4	-0.2
QSPA				IAmb	IAmb	14 12 28.4	
	comp=Z,4.2nm,1.5s						
IMAR	Indian Mountai	90.09	24	P	P	14 12 26.3	+0.5
BRTR	Keskin Array B	90.96	310	LR	LR	14 58 48.7	
	comp=Z,25nm,21.2s,baz=136,slow=39						
MBAR	Mbarara	91.73	269	LR	LR	14 49 43.5	
	comp=Z,44nm,19.1s,baz=118,slow=33						
I23K	Minto, Yukon-K	91.83	25	P	P	14 12 34.4	+0.5
I23K				IAmb	IAmb	14 12 36.0	
	comp=Z,6.8nm,1.4s						

NEIC ***27*** *14:21:04.7±1.6, 17°.98N±0°.07×146°.8E±0°.1, h44^{km}±7^{km}, mb4.4/48, Error ellipse: s-maj=15.3km s-min=10.5km az=82.0*

IDC ***27*** *14:21:06.6±2.5, 18°.08N×146°.68E, h69^{km}±23^{km}, mb3.8/16, mbtmp4.2/19, MS2.9/5, Error ellipse: s-maj=22.9km s-min=11.1km az=89.0*

ISC 27 14:21:04.7±0.5**, 18°.06N**±0°.05×**146°.82E**±0°.09**, h50**^{km}**, n93,**
σ1^{s}31/84**, mb4.4**/38**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.82	203	P	Pn	14 22 16.6	+1.8
	32nm,0.3s,baz=156,slow=3.3,SNR=12						
GUMO				S	Sn	14 23 12.1	+2.7
	38nm,0.4s,baz=188,slow=23,SNR=1.5						
GUMO				LR	LR	14 23 44.9	
	comp=Z,21nm,19.3s,baz=26,slow=33						
GUMO	Guam	4.82	203	Pn	Pn	14 22 16.2	+1.4
JCJ	Chichijima	9.96	335	P	Pn	14 23 26.0	+0.8
	11nm,0.3s,baz=109,slow=22,SNR=5.9						
JCJ				S	Sn	14 25 12.2	-3.5
	20nm,0.5s,baz=330,slow=19,SNR=1.5						
PATS	Pohnpei	15.81	133	Pn	Pn	14 24 41.2	-2.9
JHJ	Hachijo jima 2	16.28	338	LR	LR	14 30 16.7	
	comp=Z,74nm,20.7s,baz=116,slow=34						
H11S3	WAKE ISLAND Hy	18.88	86	T	T	14 44 40.5	
	baz=272,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	18.89	86	T	T	14 44 43.2	
	baz=272,slow=76,SNR=6.0						
H11S2	WAKE ISLAND Hy	18.89	86	T	T	14 44 44.3	
	baz=272,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	19.07	82	T	T	14 45 00.4	
	baz=266,slow=74,SNR=5.0						
H11N2	WAKE ISLAND Hy	19.07	82	T	T	14 44 57.8	
	baz=266,slow=74,SNR=4.0						
H11N3	WAKE ISLAND Hy	19.09	82	T	T	14 44 55.8	
	baz=266,slow=74,SNR=5.5						
JOW	Kunigami	19.22	300	LR	LR	14 32 00.0	
	comp=Z,57nm,18.7s,baz=282,slow=34						
JOW	Kunigami	19.22	300	Pn	Pn	14 25 26.4	+0.3
INU	Inuyama	19.30	335	P	P	14 25 26.0	+0.5
INU				IAmb	IAmb	14 25 47.4	
	comp=Z,21nm,1.1s						
JGF	Kuroka	19.39	336		P	14 25 26.6	0.0
JGF				IAmb	IAmb	14 25 38.6	
	comp=Z,32nm,1.5s						
MJAR	Matsushiro Arr	19.92	339	P	P	14 25 32.3	-0.1
	comp=Z,1.6nm,0.5s,baz=168,slow=10,SNR=8.8						
MJAR	Matsushiro Arr	19.92	339	P	P	14 25 33.2	+0.9
MAJO	Matsushiro	19.92	339	P	P	14 25 32.4	0.0
MJB9	Matsu-Tunnel	19.93	339	P	P	14 25 33.2	+0.8
JMM	Marumori	20.43	346	P	P	14 25 37.7	-0.1
JMM				IAmb	IAmb	14 25 41.7	
	comp=Z,24nm,0.9s						
JHS	Saijyo	20.82	327	P	P	14 25 40.1	-1.9
JSD	Sado	21.27	341		P	14 25 48.2	+1.4
JSD				IAmb	IAmb	14 25 52.6	
	comp=Z,17nm,0.8s						
JTM	Tenmabayashi	23.19	349	P	P	14 26 08.4	+1.3
FAKI	Fak Fak	25.31	216	P	P	14 26 26.2	-0.6
KSRS	Korea Array	25.46	323	P	P	14 26 27.1	-1.0
	comp=Z,1.5nm,0.7s,baz=151,slow=8.2,SNR=6.6						
	comp=Z,1.5nm,0.7s						
USRK	Ussuriysk Ar.	28.89	338	P	P	14 26 58.2	-0.5
	comp=Z,3.6nm,0.7s,baz=127,slow=11,SNR=5.8						
	comp=Z,3.6nm,0.7s						
TOLI2	Tolitoli	30.62	240	P	P	14 27 14.1	-0.3
TOLI2				IAmb	IAmb	14 27 18.6	
	comp=Z,6.1nm,0.9s						
COEN	Coen	32.01	187	P	P	14 27 25.0	-1.6
COEN				IAmb	IAmb	14 27 50.4	
	comp=Z,10nm,1.4s						
HHC	Hu-ho-hao-te	37.81	314	*e*P	P	14 28 18.8	+2.3
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
KNRA	Kununurra	37.95	209	P	P	14 28 15.9	-1.8
KNRA				IAmb	IAmb	14 28 40.3	
	comp=Z,8.0nm,1.2s						
WB0	Warramunga Arr	39.52	199	P	P	14 28 30.4	-0.5
WR0	Warramunga Arr	39.66	198	P	P	14 28 30.6	-1.4
WR0				IAmb	IAmb	14 28 53.3	
	comp=Z,9.0nm,1.4s						
WRAB	Tennant Creek	39.69	199	P	P	14 28 30.4	-1.8
WB2	Warramunga Arr	39.70	199	P	P	14 28 31.9	-0.4
WB2				IAmb	IAmb	14 28 39.9	
	comp=Z,8.7nm,1.4s						
WRA	Warramunga Arr	39.70	199	P	P	14 28 30.9	-1.5
	comp=Z,0.8nm,0.6s,baz=27,slow=8.7,SNR=12						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	39.70	199	P	P	14 28 29.6	-2.8
SHEM	Shemya Is, Ala	40.64	25	LR	LR	14 42 54.5	
	comp=Z,30nm,21.9s,baz=258,slow=32						
PZH	PanZhiHua	42.37	290	P	P	14 28 55.0	+0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
ASAR	Alice Springs	43.34	197	P	P	14 29 01.9	-0.2
	comp=Z,0.2nm,0.3s,baz=15,slow=10,SNR=9.0						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	43.34	197	P	P	14 29 01.4	-0.7
CMAR	Chiang Mai Arr	45.36	278	LR	LR	14 46 00.6	
	comp=Z,14nm,21.9s,baz=205,slow=33						
MSVF	Nonsavu	47.00	137	P	P	14 29 31.8	+0.5
STKA	Stephens Creek	49.90	186	P	P	14 29 53.2	-0.1
	comp=Z,1.0nm,0.4s,baz=355,slow=12,SNR=4.0						
	comp=Z,1.0nm,0.4s						
STKA	Stephens Creek	49.90	186	P	P	14 29 53.9	+0.5
BBOO	Buckleboo	51.62	192	P	P	14 30 05.5	-0.8
MORW	Morawa	55.48	213	P	P	14 30 33.8	-0.9
WMQ	Urumqi	55.53	311	*e*P	P	14 30 37.0	+2.0
CHGN	Chignik	55.83	33	P	P	14 30 37.8	+1.0
SII	Sitkinak Islan	58.14	34		P	14 30 53.9	+0.7
N18K	Kilae Creek	58.59	29	P	P	14 30 57.4	+1.2
N18K				IAmb	IAmb	14 30 58.9	
	comp=Z,2.0nm,0.6s						
SVW2	Sparrevohn	58.87	29	P	P	14 30 58.7	+0.4
SVW2				IAmb	IAmb	14 31 00.8	
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	59.17	323	P	P	14 30 58.9	-1.5
	comp=Z,1.8nm,0.4s,baz=112,slow=8.4,SNR=8.6						
	comp=Z,1.8nm,0.4s						
N19K	Bonanza Creek	59.28	29	P	P	14 31 03.1	+2.0
N19K				IAmb	IAmb	14 31 03.9	
	comp=Z,3.1nm,0.7s						
KDAK	Kodiak Island	59.31	33	P	P	14 31 01.6	+0.3
	comp=Z,2.0nm,0.6s,baz=287,slow=7.2,SNR=7.0						
	comp=Z,2.0nm,0.6s						
KDAK	Kodiak Island	59.31	33	P	P	14 31 02.2	+1.0
KDAK				IAmb	IAmb	14 31 05.0	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	59.67	314	P	P	14 31 04.2	+0.2
	comp=Z,1.3nm,0.6s,baz=92,slow=9.2,SNR=13						
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	59.67	314	P	P	14 31 03.1	-0.9
MAKZ	Makanchi	59.89	314	P	P	14 31 04.6	-0.9
MAKZ				IAmb	IAmb	14 31 07.2	
	comp=Z,3.0nm,1.0s						
K20K	Telida	60.32	26	P	P	14 31 09.3	+1.2
CNPM	China Poot	60.45	31	P	P	14 31 09.8	+0.7
J20K	Nowinta River	60.57	26	P	P	14 31 11.7	+1.8
IMAR	Indian Mountai	61.37	24	P	P	14 31 16.7	+1.4
H21K	Melozitna Rive	61.62	24	P	P	14 31 18.5	+1.6
H21K				IAmb	IAmb	14 31 20.1	
	comp=Z,3.4nm,0.9s						
I21K	Tanana	61.79	25	P	P	14 31 18.6	+0.6
I21K				IAmb	IAmb	14 31 20.8	
	comp=Z,3.4nm,0.8s						
BPAW	Bear Paw Mtn.	61.86	26	P	P	14 31 19.5	+1.0
BPAW				IAmb	IAmb	14 31 20.9	
	comp=Z,4.3nm,0.9s						
MLY	Manley	62.24	25	P	P	14 31 22.5	+1.4
MLY				IAmb	IAmb	14 31 24.0	
	comp=Z,3.2nm,0.8s						
KURK	Kurchatov	62.45	318	P	P	14 31 21.9	-0.8
KURK				IAmb	IAmb	14 31 23.5	
	comp=Z,2.5nm,0.8s						
KURBB	Kurchatov Arra	62.50	318	P	P	14 31 22.6	-0.4
	comp=Z,2.4nm,0.4s,baz=91,slow=7.6,SNR=36						
	comp=Z,2.4nm,0.4s						
NRIK	Noril'sk	62.57	340	P	P	14 31 23.3	+0.1
	comp=Z,1.9nm,0.3s,baz=102,slow=7.6,SNR=5.3						
	comp=Z,1.9nm,0.3s						
H23K	Yukon River	62.95	24	P	P	14 31 27.5	+1.7
H23K				IAmb	IAmb	14 31 28.5	
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	63.75	26	P	P	14 31 30.9	-0.2
	comp=Z,1.4nm,0.8s,baz=257,slow=5.3,SNR=16						
	comp=Z,1.4nm,0.8s						
ILAR	Eielson Array	63.75	26	P	P	14 31 30.2	-1.0
TOLK	Toolik Lake Re	63.80	21	P	P	14 31 33.2	+1.8
TOLK				IAmb	IAmb	14 31 34.2	
	comp=Z,2.4nm,0.8s						

SCRK	Sand Creek	64.82	27	P	P	14 31 39.0	+0.7
SCRK				IAmb	IAmb	14 31 40.2	
	comp=Z,3.4nm,1.1s						
J26L	Joseph Creek	65.09	27	P	P	14 31 40.9	+0.9
J26L				IAmb	IAmb	14 31 41.8	
	comp=Z,3.0nm,0.9s						
BMAR	Burnt Mountain	65.28	23	P	P	14 31 43.3	+2.2
L27K	Beaver Creek,	65.62	28	P	P	14 31 44.2	+0.8
BCAR	Beaver Creek A	65.64	28	P	P	14 31 44.8	+1.3
HYT	Haines Junctio	67.43	31	P	P	14 31 57.2	+2.1
HYT				IAmb	IAmb	14 31 58.2	
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	67.99	310	P	P	14 31 59.5	+0.7
INK	Inuvik	69.54	23	P	P	14 32 07.7	-0.3
	comp=Z,1.6nm,0.6s,baz=267,slow=7.7,SNR=5.4						
	comp=Z,1.6nm,0.6s						
ABKAR	Akbulak array	74.53	317	P	P	14 32 36.9	-1.3
YKA	Yellowknife Ar	78.06	28	P	P	14 32 58.3	+0.4
	comp=Z,0.8nm,0.5s,baz=287,slow=5.4,SNR=11						
	comp=Z,0.8nm,0.5s						
YKA	Yellowknife Ar	78.06	28	P	P	14 32 58.7	+0.8
EUNU	Eureka	78.21	8	P	P	14 33 00.1	+1.5
NVAR	Mina Array Bea	82.69	52	P	P	14 33 24.3	+0.7
	comp=Z,0.6nm,0.5s,baz=266,slow=5.8,SNR=7.8						
	comp=Z,0.6nm,0.5s						
NVAR	Mina Array Bea	82.69	52	P	P	14 33 24.6	+1.0
ARCES	ARCESS Array B	83.42	342	P	P	14 33 26.3	-0.2
	comp=Z,1.3nm,0.6s,baz=72,slow=7.8,SNR=2.6						
	comp=Z,1.3nm,0.6s						
ARCES	ARCESS Array B	83.42	342	P	P	14 33 26.7	+0.2
FIA1	FINESS Array S	87.91	336	P	P	14 33 46.7	-2.1
FINES	FINESS Array B	87.91	336	P	P	14 33 47.1	-1.7
	comp=Z,1.2nm,0.3s,baz=62,slow=4.5,SNR=31						
	comp=Z,1.2nm,0.3s						
FINES	FINESS Array B	87.91	336	P	P	14 33 47.6	-1.3
H06S1	SOCORRO T	95.31	68	T	T	16 21 45.8	
	SNR=7.6						

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*KRSC **27** 14:41:43.4±0.7, 53°.30N×159°.49E, h123^{km}±6^{km}, ML4.2*

*IDC **27** 14:41:44.8±0.9, 53°.53N×158°.99E, h129^{km}±6^{km}, mb3.3/10, mbtmp3.8/13, Error ellipse: s-maj=20.2km s-min=16.5km az=126.0*

*MOS **27** 14:41:44.1±0.7, 53°.33N×159°.24E, h126^{km}, mb3.9/11, Error ellipse: s-maj=14.0km s-min=5.0km az=74.2*

*NEIC **27** 14:41:44.4±1.3, 53°.6N±0°.2×159°.0E±0°.2, h123^{km}±13^{km}, mb4.2/11, Error ellipse: s-maj=27.9km s-min=13.5km az=170.0*

ISC 27 14:41:44.0±0.6**, 53°.39N**±0°.04×**159°.22E**±0°.05**, h129**^{km}±4^{km}**, n125, σ1^{s}43**/155**, mb3.8**/21**, 9C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.23	161	PN	Pn	14 42 01.7	0.0
NLC				S	Sn	14 42 15.0	-0.1
NLC	Nalytchevo	0.23	161	eP	Pn	14 42 01.7	0.0
NLC				eS	Sn	14 42 15.0	-0.1
SDLR	Sedlovina	0.23	241	PN	Pn	14 42 02.3	+0.4
SDLR				S	Sn	14 42 15.6	+0.2
SDLR	Sedlovina	0.23	241	eP	Pn	14 42 02.3	+0.4
SDLR				eS	Sn	14 42 15.6	+0.2
SMAR	Somma	0.28	244	PN	Pn	14 42 02.7	+0.5
SMAR	Somma	0.28	244	eP	Pn	14 42 02.7	+0.5
KRER	Koryakskii	0.30	253	PN	Pn	14 42 02.9	+0.7
KRER				S	Sn	14 42 16.8	+0.8
KRER	Koryakskii	0.30	253	eP	Pn	14 42 02.9	+0.7
KRER				eS	Sn	14 42 16.8	+0.8
UGLR	Uglovaya	0.30	233	PN	Pn	14 42 02.8	+0.7
UGLR				S	Sn	14 42 16.6	+0.8
UGLR	Uglovaya	0.30	233	eP	Pn	14 42 02.8	+0.7
UGLR				eS	Sn	14 42 16.6	+0.8
AVH	Avacha	0.32	247	PN	Pn	14 42 02.9	+0.7
AVH				S	Sn	14 42 17.1	+1.3
AVH	Avacha	0.32	247	eP	Pn	14 42 02.9	+0.7
AVH				eS	Sn	14 42 17.1	+1.3
KRX	Arik	0.34	265	PN	Pn	14 42 03.0	+0.7
KRX	Arik	0.34	265	eP	Pn	14 42 03.0	+0.7
KOK	Koryaka	0.36	255	PN	Pn	14 42 03.0	+0.6
KOK	Koryaka	0.36	255	eP	Pn	14 42 03.0	+0.6
DALK	Dalny	0.46	218	PN	Pn	14 42 02.7	0.0
DALK				S	Sn	14 42 16.3	-0.4
DALK	Dalny	0.46	218	eP	Pn	14 42 02.7	0.0
DALK				eS	Sn	14 42 16.3	-0.4
PET	Petropavlovsk	0.50	223	Pn	Pn	14 42 03.3	+0.4
PET	Petropavlovsk	0.50	223	ePN	Pn	14 42 03.5	+0.6
PET				eS	Sn	14 42 15.9	-1.3
PET				pmax	pmax		
	comp=Z,177nm,0.3s						
PET				smax	smax		
	comp=E,4μm,0.7s						
PET				smax	smax		
	comp=N,498nm,0.6s						
PET	Petropavlovsk	0.50	223	eP	Pn	14 42 03.2	+0.3
PET				eS	Sn	14 42 17.4	+0.2
KII	Karymskiy	0.66	12	PN	Pn	14 42 04.9	+0.8
KII	Karymskiy	0.66	12	eP	Pn	14 42 04.9	+0.8
GNL	Ganaly	0.82	292	PN	Pn	14 42 06.3	+1.0
GNL				S	Sn	14 42 22.9	+1.4
GNL	Ganaly	0.82	292	eP	Pn	14 42 06.3	+1.0
GNL				eS	Sn	14 42 22.9	+1.4
KRMR	Karymshinskiy	0.86	230	PN	Pn	14 42 05.9	+0.4
KRMR				S	Sn	14 42 22.6	+0.8
KRMR	Karymshinskiy	0.86	230	eP	Pn	14 42 05.9	+0.4
KRMR				eS	Sn	14 42 22.6	+0.8
PEA0B	Petropavlovsk-	0.96	254		Pn	14 42 06.9	+0.5
PEA0B	Petropavlovsk-	0.96	254	c iPN	Pn	14 42 07.1	+0.7
PETK	Petropavlovsk-	0.96	254	P	Pn	14 42 06.3	-0.1
	comp=N,98nm,0.3s,baz=96,slow=13,SNR=176						
PETK				S	Sn	14 42 23.7	+0.3
	comp=N,173nm,0.8s,baz=200,slow=43,SNR=11						
PETK				LR	LR	14 42 41.3	
	comp=N,103nm,19.3s,baz=136,slow=64						
RUS	Russkaya	1.05	204	PN	Pn	14 42 07.0	-0.2
RUS				S	Sn	14 42 23.9	-0.9
RUS	Russkaya	1.05	204	eP	Pn	14 42 07.0	-0.2
RUS				eS	Sn	14 42 23.9	-0.9
GRL	Gorelyy	1.09	220	PN	Pn	14 42 08.8	+1.0
GRL	Gorelyy	1.09	220	eP	Pn	14 42 08.8	+1.0
MTVR	Mutnovka	1.10	215	PN	Pn	14 42 08.6	+0.6
MTVR				S	Sn	14 42 26.8	+0.7
MTVR	Mutnovka	1.10	215	eP	Pn	14 42 08.6	+0.6
MTVR				eS	Sn	14 42 26.8	+0.7
ASAK	Asacha	1.29	219	PN	Pn	14 42 10.7	+0.9
ASAK				S	Sn	14 42 30.1	+0.8
ASAK	Asacha	1.29	219	eP	Pn	14 42 10.7	+0.9
ASAK				eS	Sn	14 42 30.1	+0.8
MIPR	Malaya Ipel'ka	1.86	234	PN	Pn	14 42 17.4	+1.1
MIPR	Malaya Ipel'ka	1.86	234	eP	Pn	14 42 17.4	+1.1
MKZ	Mys Kozlova	1.89	51	PN	Pn	14 42 16.6	+0.2
MKZ				S	Sn	14 42 39.6	-1.7
MKZ	Mys Kozlova	1.89	51	eP	Pn	14 42 16.6	+0.2
MKZ				eS	Sn	14 42 39.6	-1.7
TUMR	Tumrok	1.97	16	PN	Pn	14 42 19.6	+2.0
TUMR				S	Sn	14 42 45.6	+2.2
TUMR	Tumrok	1.97	16	eP	Pn	14 42 19.6	+2.0
TUMR				eS	Sn	14 42 45.6	+2.2
KMNR	Kamenistaya	2.44	14	PN	Pn	14 42 25.2	+1.7
KMNR	Kamenistaya	2.44	14	eP	Pn	14 42 25.2	+1.7
ESO	Esso	2.56	353	PN	Pn	14 42 26.5	+1.6
ESO	Esso	2.56	353	eP	Pn	14 42 26.5	+1.6
KPT	Kopyto	2.65	12	PN	Pn	14 42 28.0	+2.0
KPT	Kopyto	2.65	12	eP	Pn	14 42 28.0	+2.0
KIRR	Kirishev	2.65	14	PN	Pn	14 42 27.9	+1.8
KIRR	Kirishev	2.65	14	eP	Pn	14 42 27.9	+1.8
BZWR	Bezymyannyi-We	2.69	15	PN	Pn	14 42 28.6	+2.0
BZWR	Bezymyannyi-We	2.69	15	eP	Pn	14 42 28.6	+2.0
BZGR	Bezymyannyi-Gr	2.70	18	PN	Pn	14 42 28.6	+1.9
BZGR	Bezymyannyi-Gr	2.70	18	eP	Pn	14 42 28.6	+1.9
ZLN	Zelenaya	2.79	19	PN	Pn	14 42 30.7	+2.8
ZLN	Zelenaya	2.79	19	eP	Pn	14 42 30.7	+2.8
KRSR	Krestovskiy	2.94	15	PN	Pn	14 42 31.4	+1.6
KRSR	Krestovskiy	2.94	15	eP	Pn	14 42 31.4	+1.6
KLY	Klyuchi	3.04	15	PN	Pn	14 42 33.3	+2.3
KLY	Klyuchi	3.04	15	eP	Pn	14 42 33.3	+2.3
SKR	Severo-Kuril's	3.32	217	ePN	Pn	14 42 34.8	+0.1
SKR				eS	Sn	14 43 13.7	-0.1
SKR				pmax	pmax		
	comp=Z,20nm,1.0s						
SKR				smax	smax		
	comp=E,135nm,0.3s						
SKR				smax	smax		
	comp=N,198nm,0.5s						
SKR	Severo-Kuril's	3.32	217	eP	Pn	14 42 35.7	+1.0
BDR	Baidarnaya	3.38	19	PN	Pn	14 42 38.3	+2.7
BDR	Baidarnaya	3.38	19	eP	Pn	14 42 38.3	+2.7
KBG	Krutoberegovo	3.51	34	PN	Pn	14 42 39.7	+2.6
KBG				S	Sn	14 43 17.0	-1.2
KBG	Krutoberegovo	3.51	34	eP	Pn	14 42 39.7	+2.6
KBG				eS	Sn	14 43 17.0	-1.2
KBTR	Krutoberegovo	3.51	35	PN	Pn	14 42 38.0	+0.9
KBTR				S	Sn	14 43 16.8	-1.5
KBTR	Krutoberegovo	3.51	35	eP	Pn	14 42 38.0	+0.9
KBTR				eS	Sn	14 43 16.8	-1.5
BKI	Bering	4.35	63	PN	Pn	14 42 47.9	-0.4
BKI	Bering	4.35	63	eP	Pn	14 42 47.9	-0.4
SHEM	Shemya Is, Ala	8.99	88	P	Pn	14 43 53.0	+2.4
	comp=N,11nm,0.3s,baz=100,slow=3.0,SNR=10						
SMY	Shemya	8.99	88	Pn	Pn	14 43 52.5	+1.9
SMY	Shemya	8.99	88	PN	Pn	14 43 52.5	+1.9
SEY	Seymchan	10.22	342	⇓ePN	Pn	14 44 08.7	+1.6
ASAJ	Asahikawa	14.33	236	P	Pn	14 45 01.8	+0.9
	comp=N,8.4nm,1.0s,baz=67,slow=12,SNR=6.8						
ERM	Erimo	15.65	230	i P	Pn	14 45 16.2	-1.2
KLR	Kul'dur	17.62	267	P	P	14 45 39.6	-0.7
	comp=N,1.7nm,0.5s,baz=77,slow=9.5,SNR=6.4						
KLR	Kul'dur	17.62	267	⇑eP	P	14 45 40.0	-0.4
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YAK	Yakutsk	17.85	311	eP	P	14 45 41.1	-1.6
YAK				eS	S	14 48 55.9	-5.2
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				smax	smax		
	comp=E,56nm,3.1s						
YAK				smax	smax		
	comp=N,44nm,3.2s						
JMM	Marumori	20.08	227	P	P	14 46 07.8	+0.6
JMM				IAmb	IAmb	14 46 15.7	
	comp=Z,30nm,1.5s						
JSD	Sado	21.09	232	P	P	14 46 18.2	+0.2
JSD				IAmb	IAmb	14 46 21.3	
	comp=Z,8.6nm,0.9s						
MJB9	Matsu-Tunnel	22.33	229	P	P	14 46 31.6	+0.6
MJB9				IAmb	IAmb	14 46 33.8	
	comp=Z,5.7nm,0.8s						
MAJO	Matsushiro	22.33	229	P	P	14 46 31.7	+0.6
MAJO				IAmb	IAmb	14 46 33.8	
	comp=Z,5.8nm,0.8s						
MAJO	Matsushiro	22.33	229	P	P	14 46 31.7	+0.6
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	Matsushiro Arr	22.33	229	P	P	14 46 31.8	+0.7
	comp=Z,4.4nm,0.6s,baz=30,slow=9.1,SNR=11						
	comp=Z,4.4nm,0.6s						
MJAR	Matsushiro Arr	22.33	229	P	P	14 46 31.4	+0.3
TIXI	Tiksi	22.59	335	P	P	14 46 32.5	-0.7
	comp=Z,1.2nm,0.3s,baz=90,slow=23,SNR=7.6						
	comp=Z,1.2nm,0.3s						
TIXI	Tiksi	22.59	335	⇑eP	P	14 46 33.6	+0.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JGF	Kuroka	23.50	230	P	P	14 46 42.8	+0.8
INU	Inuyama	23.86	230	P	P	14 46 46.3	+1.0
KSRS	Korea Array	26.85	246	P	P	14 47 13.6	+1.3
	comp=Z,0.8nm,0.8s,baz=43,slow=9.3,SNR=4.3						
	comp=Z,0.8nm,0.8s						
KDAK	Kodiak Island	27.12	61	P	P	14 47 17.6	+3.1
KDAK				IAmb	IAmb	14 47 19.8	
	comp=Z,8.6nm,1.4s						
KDAK	Kodiak Island	27.12	61	P	P	14 47 17.6	+3.1
KDAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TOLK	Toolik Lake Re	28.04	37	P	P	14 47 23.8	+1.0
H11N2	WAKE ISLAND Hy	34.12	167	T	T	15 25 13.6	
H11N3	WAKE ISLAND Hy	34.13	167	T	T	15 25 10.8	
	baz=354,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	34.13	167	T	T	15 25 14.7	
	baz=158,slow=74,SNR=21						
H11S1	WAKE ISLAND Hy	35.29	168	T	T	15 25 52.8	
	baz=352,slow=76,SNR=2.6						
H11S3	WAKE ISLAND Hy	35.31	168	T	T	15 25 53.6	
	baz=352,slow=76,SNR=3.2						
H11S2	WAKE ISLAND Hy	35.31	168	T	T	15 25 53.6	
	baz=352,slow=76,SNR=2.2						
NRIK	Noril'sk	35.36	324	⇑eP	P	14 48 25.6	-0.9
NRIK				pmax	pmax		
	comp=Z,5.0nm,2.2s						
EUNU	Eureka	41.79	14	P	P	14 49 20.4	+0.2
EUNU				IAmb	IAmb	14 49 22.1	
	comp=Z,8.7nm,1.4s						
KURK	Kurchatov	47.13	301	P	P	14 50 01.5	-1.3
KURK				IAmb	IAmb	14 50 02.4	
	comp=Z,3.8nm,0.6s						
KURK	Kurchatov	47.13	301	P	P	14 50 01.5	-1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	47.55	295	P	P	14 50 04.7	-1.5
	comp=Z,0.4nm,0.3s,baz=52,slow=6.1,SNR=7.8						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	47.55	295	ceP	P	14 50 05.1	-1.1
BRVK	Borovoye	49.82	308	ceP	P	14 50 22.8	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	Ala-Archa	54.48	295	⇑eP	P	14 50 58.0	-0.1
AAK				i *PP	pP	14 51 24.0	-4.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KKAR	Karatay Array	56.28	298	P	P	14 51 09.2	-1.6
KKAR	Karatay Array	56.28	298	P	P	14 51 09.2	-1.6
ABKAR	Akbulak array	57.20	310	P	P	14 51 16.1	-1.1
FINES	FINESS Array B	59.64	336	P	P	14 51 33.6	-0.3
	comp=Z,0.6nm,0.6s,baz=45,slow=8.7,SNR=7.8						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	59.64	336	P	P	14 51 32.8	-1.1
FINES	FINESS Array B	59.64	336	ceP	P	14 51 33.7	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BELG	Belogornoye	60.15	319	deP	P	14 51 37.4	-0.1
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	63.11	343	P	P	14 51 57.0	-0.3
	comp=Z,0.3nm,0.6s,baz=23,slow=6.8,SNR=1.9						
	comp=Z,0.3nm,0.6s						
NOA	NORSAR Array B	63.11	343	P	P	14 51 57.0	-0.3
KONO	Kongsberg	64.69	343	⇑eP	P	14 52 08.3	+0.7
KONO				pmax	pmax		
	comp=Z,12nm,2.5s						
AKASG	Malin Array Be	68.09	328	P	P	14 52 27.9	-1.4
	comp=Z,0.7nm,0.5s,baz=41,slow=3.0,SNR=1.5						
	comp=Z,0.7nm,0.5s						
TXAR	Lajitas Array	71.00	66	P	P	14 52 49.5	+1.8
	comp=Z,0.1nm,0.5s,baz=284,slow=3.6,SNR=2.2						
	comp=Z,0.1nm,0.5s						
WRA	Warramunga Arr	76.13	204	P	P	14 53 16.8	-0.7
	comp=Z,0.5nm,1.0s,baz=21,slow=5.9,SNR=1.6						
	comp=Z,0.5nm,1.0s						
WRA	Warramunga Arr	76.13	204	i P	P	14 53 21.7	+4.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	79.82	203	P	P	14 53 39.6	+1.9
	comp=Z,0.3nm,0.5s,baz=16,slow=5.7,SNR=7.6						
	comp=Z,0.3nm,0.5s						

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*IDC **27** 15:03:35.0±0.4, 5°.01S×152°.43E, h0^{km}, mb4.8/26, mbtmp4.8/26, MS4.2/58, Error ellipse: s-maj=15.8km s-min=9.5km az=113.0*

*MOS **27** 15:03:41.5±0.9, 4°.79S×152°.40E, h49^{km}, mb5.1/27, MS4.5/8, Error ellipse: s-maj=11.7km s-min=7.1km az=94.3*

*BJI **27** 15:03:41.3±0.0, 4°.86S×152°.64E, h63^{km}, mb4.7/64, mB5.0/44, Ms4.6/47, Ms7 4.5/46*

*NEIC **27** 15:03:42.7±2.2, 4°.90S±0°.06×152°.54E±0°.04, h46^{km}±5^{km}, mb5.2/101, Mww5.2, Error ellipse: s-maj=9.3km s-min=5.1km az=152.0*

*GCMT **27** 15:03:44.7±0.2, 5°.03S±0°.01×152°.50E±0°.01, h50^{km}, MW5.2/101, Moment Tensor Solution. s101,c164; s99,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.32±.16; M$_{\theta\theta}$-4.91±.11; M$_{\phi\phi}$-1.41±.13; M$_{r\theta}$1.19±.10; M$_{\theta\phi}$-3.94±.09; M$_{\phi r}$0.99±.10; Best double couple: M$_{0}$7.06800×10^{16} NP1:φ$_{s}$239.00000°, δ39.00000°, λ93.00000°. NP2:φ$_{s}$55.00000°, δ51.00000°, λ88.00000°. Principal axes: T 6.4950, Plg83.0000°, Azm310.0000°; N 1.1450, Plg2.0000°, Azm57.0000°; P -7.6400, Plg6.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **27** 15:03:44.0±0.3, 5°S±2°×15°2E±°, h59^{km}±3^{km}, M5.1/46, mb5.1/46, mB5.4/15, MLv5.6/3, Mw(mB)4.9/15, MwMwp5.0/3, Mwp5.2/3*

*NEIC **27** 15:03:48, 4°.89S×152°.64E, h50^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$7.04; M$_{\theta\theta}$-7.66; M$_{\phi\phi}$0.62; M$_{r\theta}$2.70; M$_{\theta\phi}$-3.47; M$_{\phi r}$-0.58; Fault plane solution: M$_{0}$8.60000×10^{16} NP1: φ$_{s}$235.00000°, δ39.00000°, λ68.00000°. NP2:φ$_{s}$83.00000°, δ55.00000°, λ107.00000°. Principal axes: T 7.7337, Plg74.0000°, Azm41.0000°; N 1.5260, Plg14.0000°, Azm253.0000°; P -9.2596, Plg8.0000°, Azm161.0000°;*

ISC 27 15:03:43.1±0.3**, 4°.89S**±0°.04×**152°.45E**±0°.04**, h55**^{km}±2^{km}**, h55**^{km}**:pP-P, n611, σ1^{s}23**/607**, mb5.1**/133**, MS4.4**/82**, 113C-40D, Fault plane solution: NP1:**φ$_{s}$94.07675°, δ29.17856°, λ114.18036°. **NP2:**φ$_{s}$246.86165°, δ63.59220°, λ77.11678°. **Principal axes:** T Plg68.7281°, Azm131.1037°; N Plg11.5193°, Azm252.6701°; P Plg17.6311°, Azm346.3839°; **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.72	324	Pn	Pn	15 03 57.1	-0.3
	13μm,0.3s,baz=273,slow=2.6						
KRVT				Sn	Sn	15 04 07.6	-0.1
	10μm,0.3s,baz=201,slow=22,SNR=13						
KRVT				LR	LR	15 04 15.7	
	comp=Z,82μm,20.8s,baz=148,slow=51						
RABL	Rabaul	0.75	338	Pn	Pn	15 03 57.9	+0.1
RABL	Rabaul	0.75	338	P	Pn	15 03 58.4	+0.6
MANU	Manus Island	5.81	299	Pn	Pn	15 05 09.8	+3.0
PMG	Port Moresby	6.90	229	Pn	Pn	15 05 23.4	+1.7
	14nm,0.3s,baz=31,slow=4.3,SNR=36						
PMG				Sn	Sn	15 06 35.6	-3.3
	22nm,0.3s,baz=11,slow=5.0,SNR=3.7						
PMG	Port Moresby	6.90	229	Pn	Pn	15 05 24.3	+2.7
PMG	Port Moresby	6.90	229	ceP	Pn	15 05 24.4	+2.7
PMG				pmax	pmax		
	comp=Z,119nm,0.6s						
PMG	Port Moresby	6.90	229	P	Pn	15 05 24.5	+2.8
HNR	Honiara	8.70	122	Pn	Pn	15 05 45.0	-1.4
	comp=Z,4.9nm,0.3s,baz=125,slow=3.2,SNR=2.6						
HNR				LR	LR	15 09 16.9	
	comp=Z,3μm,21.0s,baz=300,slow=40						
COEN	Coen	12.83	225	P	Pn	15 06 44.5	+1.7
	baz=13,SNR=13						
COEN	Coen	12.83	225	Pn	Pn	15 06 45.1	+2.3
COEN	Coen	12.83	225	P	Pn	15 06 44.2	+1.4
PATS	Pohnpei	13.04	27	P	Pn	15 06 45.3	-0.4
	baz=13,SNR=7.0						
PATS	Pohnpei	13.04	27	Pn	Pn	15 06 45.4	-0.4
SMPI	Sarmi	14.01	281	P	Pn	15 06 59.5	+0.6
	comp=Z,2μmcomp=Z,94nm,1.4s						
MTSU	Mount Surprise	15.37	210	P	Pn	15 07 17.7	+1.0
	baz=16,SNR=47						
MTSU	Mount Surprise	15.37	210	P	Pn	15 07 18.3	+1.6
CTA	Charters Tower	16.26	201	Pn	Pn	15 07 27.5	-0.5
	comp=Z,0.4nm,0.3s,baz=26,slow=12,SNR=5.9						
CTA				LR	LR	15 12 49.9	
	comp=Z,1μm,22.0s,baz=26,slow=34						
CTAO	Charters Tower	16.26	201		Pn	15 07 28.7	+0.7
CTAO	Charters Tower	16.26	201	P	Pn	15 07 28.7	+0.7
CTAO				pmax	pmax		
	comp=Z,23nm,1.0s						
SRPI	Serui, Papua	16.45	280	P	Pn	15 07 30.0	-0.4
	comp=Z,100nm,0.6s						
GUMO	Guam	19.84	338	P	Pn	15 08 11.8	+0.2
	comp=Z,145nm,0.8s,baz=169,slow=7.1,SNR=10						
GUMO				LR	LR	15 16 33.0	
	comp=Z,386nm,18.9s,baz=164,slow=39						
GUMO	Guam	19.84	338	Pn	Pn	15 08 12.7	+1.1
GUMO	Guam	19.84	338	P	Pn	15 08 12.7	+1.1
GUMO				pmax	pmax		
	comp=Z,321nm,1.2s						
QIS	Mount Isa	19.96	218	P	P	15 08 11.5	+0.7
	baz=20,SNR=48						
QIS	Mount Isa	19.96	218	P	P	15 08 11.9	+1.0
FAKI	Fak Fak	20.24	275	P	Pn	15 08 15.6	-0.8
FAKI				IAmb	IAmb	15 08 20.1	
	comp=Z,147nm,0.9s						
FAKI	Fak Fak	20.24	275	P	P	15 08 15.1	+1.1
	comp=Z,2μmcomp=Z,184nm,0.9s						
FAKI	Fak Fak	20.24	275	P	Pn	15 08 16.1	-0.3
EIDS	Eidsvold	20.40	184	P	P	15 08 16.5	+0.8
	baz=20,SNR=4.2						
EIDS	Eidsvold	20.40	184	P	P	15 08 15.3	-0.3
KDU	Kakadu	21.19	247	P	P	15 08 23.1	-1.1
	baz=21,SNR=159						
KDU	Kakadu	21.19	247	P	P	15 08 23.8	-0.4
LIFNC	LIFOU	21.35	139	P	P	15 08 26.2	+0.3
LIFNC				IAmb	IAmb	15 08 50.7	
	comp=Z,91nm,0.8s						
LIFNC	LIFOU	21.35	139	P	P	15 08 27.7	+1.8
SIJI	Sorong	21.52	280	P	P	15 08 28.6	+0.8
	comp=Z,96nm,0.6s,baz=131,slow=7.2,SNR=83						
SIJI				S	S	15 12 24.7	+1.0
	comp=Z,3.6nm,0.8s,baz=164,slow=24,SNR=1.6						
SIJI				LR	LR	15 15 44.0	
	comp=Z,1μm,21.2s,baz=80,slow=34						
SWI	Sorong	21.53	280	P	P	15 08 31.4	+3.5
	comp=Z,2μmcomp=Z,2μmcomp=Z,174nm,0.7s						
NOUC	Port Laguerre	21.74	143	P	P	15 08 32.1	+2.1
RMQ	Roma	21.76	189	P	P	15 08 30.9	+0.7
	baz=22,SNR=17						
RMQ	Roma	21.76	189	P	P	15 08 30.8	+0.7
DZM	Mont Dzumac	21.80	143	P	P	15 08 31.1	+0.3
	comp=Z,34nm,0.6s,baz=296,slow=5.8,SNR=51						
DZM				LR	LR	15 15 52.3	
	comp=Z,2μm,21.6s,baz=338,slow=34						
DZM	Mont Dzumac	21.80	143	P	P	15 08 32.1	+1.3
DZM				IAmb	IAmb	15 08 50.0	
	comp=Z,125nm,1.3s						
DZM	Mont Dzumac	21.80	143	P	P	15 08 32.6	+1.8
YATNC	Mamie plateau,	22.07	142	P	P	15 08 36.6	+3.1
OUENC	Ouen Island, N	22.30	143	P	P	15 08 36.2	+0.1
OUENC	Ouen Island, N	22.30	143	P	P	15 08 37.7	+1.6
	comp=Z,72nm,0.8s						
MTN	Manton Dam	22.47	248	P	P	15 08 36.6	-1.4
	baz=23,SNR=42						
MTN	Manton Dam	22.47	248	P	P	15 08 36.9	-1.1
MTN				IAmb	IAmb	15 08 41.1	
	comp=Z,108nm,1.4s						
MTN	Manton Dam	22.47	248	P	P	15 08 37.6	-0.4
QLP	Quilpie	22.95	199	P	P	15 08 43.1	+0.2
	baz=23,SNR=9.4						
QLP	Quilpie	22.95	199	P	P	15 08 43.7	+0.8
WB0	Warramunga Arr	22.97	228	P	P	15 08 42.3	-0.8
WB0				IAmb	IAmb	15 08 44.7	
	comp=Z,199nm,1.2s						
WR0	Warramunga Arr	22.98	228	P	P	15 08 42.5	-0.7
WRAB	Tennant Creek	23.10	228	c iP	P	15 08 43.2	-1.3
WRAB				pmax	pmax		
	comp=Z,170nm,1.3s						
WRAB	Tennant Creek	23.10	228	P	P	15 08 43.6	-0.9
WB2	Warramunga Arr	23.11	228	P	P	15 08 43.9	-0.7
WB2				IAmb	IAmb	15 08 46.1	
	comp=Z,142nm,1.1s						
WRA	Warramunga Arr	23.12	228	P	P	15 08 43.5	-1.1
	comp=Z,59nm,0.7s,baz=53,slow=10,SNR=148						
WRA				S	S	15 12 50.5	-1.5
	comp=Z,22nm,1.1s,baz=55,slow=18,SNR=14						
WRA				LR	LR	15 17 59.0	
	comp=Z,552nm,21.7s,baz=28,slow=38						
WRA				PKiKP	PKiKP	15 20 15.4	-1.2
	comp=Z,0.2nm,0.5s,baz=325,slow=1.0,SNR=4.9						
	comp=Z,59nm,0.7s						
WRA	Warramunga Arr	23.12	228	P	P	15 08 42.7	-1.9
LBMI	Labuha	25.27	279	P	P	15 09 05.2	+0.7
	comp=Z,1μmcomp=Z,124nm,1.0s						
INKA	Innaminka	25.30	205	P	P	15 09 05.6	+1.0
ARMA	Armidale	25.40	182	P	P	15 09 06.9	+1.2
ARMA	Armidale	25.40	182	P	P	15 09 08.5	+2.9
KNRA	Kununurra	25.61	244	P	P	15 09 07.3	-0.3
	baz=26,SNR=41						
KNRA	Kununurra	25.61	244	P	P	15 09 07.5	-0.1

KNRA				IAmb	IAmb	15 09 09.6	
	comp=Z,69nm,0.8s						
KNRA	**Kununurra**	**25.61**	**244**	P	**P**	**15 09 07.9**	**+0.3**
TNTI	**Ternate**	**25.68**	**282**	P	**P**	**15 09 09.1**	**+0.9**
	comp=Z,20nm,0.9s						
AS31	**Alice Springs**	**25.84**	**222**	P	**P**	**15 09 11.7**	**+2.0**
ASAR	**Alice Springs**	**25.84**	**222**	P	**P**	**15 09 08.9**	**-0.7**
	comp=Z,29nm,0.8s,baz=55,slow=8.7,SNR=71						
ASAR				S	**S**	**15 13 36.2**	**+0.6**
	comp=Z,1.9nm,1.0s,baz=42,slow=22,SNR=2.3						
	comp=Z,29nm,0.8s						
ASAR	**Alice Springs**	**25.84**	**222**	P	**P**	**15 09 09.2**	**-0.5**
SANI	**Sanana**	**26.56**	**275**	P	**P**	**15 09 17.1**	**+1.0**
	comp=Z,523nmcomp=Z,38nm,0.8s						
SANI	**Sanana**	**26.56**	**275**	P	**P**	**15 09 15.4**	**-0.7**
CMSA	**Cobar Meteorol**	**27.25**	**193**	P	**P**	**15 09 22.0**	**-0.2**
	baz=27,SNR=7.5						
CMSA	**Cobar Meteorol**	**27.25**	**193**	P	**P**	**15 09 24.0**	**+1.8**
OOD	**Oodnadatta**	**27.80**	**213**	P	**P**	**15 09 27.4**	**+0.2**
MSVF	**Nonsavu**	**28.11**	**119**	P	**P**	**15 09 30.3**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=263,slow=12,SNR=5.6						
MSVF				LR	LR	15 20 09.0	
	comp=Z,1µm,21.3s,baz=296,slow=35						
	comp=Z,6.0nm,0.8s						
MSVF	**Nonsavu**	**28.11**	**119**	P	**P**	**15 09 30.9**	**+0.8**
MSVF	**Nonsavu**	**28.11**	**119**	P	**P**	**15 09 30.9**	**+0.8**
MSVF				pmax	pmax		
	comp=Z,13nm,1.1s						
MSVF	**Nonsavu**	**28.11**	**119**	P	**P**	**15 09 31.3**	**+1.2**
	comp=Z,14nm,0.5s						
MSVF	**Nonsavu**	**28.11**	**119**	P	**P**	**15 09 31.3**	**+1.2**
MSVF				x	x	15 09 37.3	
MSVF				pP	**pP**	**15 09 45.5**	**+2.1**
MSVF				sP	**sP**	**15 09 51.5**	**+1.8**
SGSI	**Sangihe**	**28.21**	**287**	P	**P**	**15 09 32.5**	**+1.5**
	comp=Z,92nm,0.7s						
SOEI	**Soe**	**28.35**	**259**	P	**P**	**15 09 32.5**	**+0.1**
	comp=Z,26nm,1.1s						
SOEI	**Soe**	**28.35**	**259**	P	**P**	**15 09 33.8**	**+1.4**
STKA	**Stephens Creek**	**28.71**	**199**	P	**P**	**15 09 34.0**	**-1.2**
	comp=Z,4.3nm,0.5s,baz=32,slow=13,SNR=13						
STKA				LR	LR	15 21 13.0	
	comp=Z,672nm,19.8s,baz=18,slow=37						
	comp=Z,4.3nm,0.5s						
STKA	**Stephens Creek**	**28.71**	**199**	P	**P**	**15 09 35.2**	**0.0**
	baz=29,SNR=6.9						
STKA	**Stephens Creek**	**28.71**	**199**	P	**P**	**15 09 33.9**	**-1.2**
STKA	**Stephens Creek**	**28.71**	**199**	P	**P**	**15 09 34.0**	**-1.2**
LCRK	**Leigh Creek**	**28.74**	**206**	P	**P**	**15 09 36.6**	**+1.1**
KMSI	**Cibinong**	**28.95**	**280**	P	**P**	**15 09 37.5**	**0.0**
	comp=Z,92nm,0.8s						
BATI	**Baumata**	**29.00**	**258**	P	**P**	**15 09 38.0**	**-0.1**
	comp=Z,22nm,0.7s,baz=70,slow=1.7,SNR=7.2						
BATI				LR	LR	15 22 59.8	
	comp=Z,904nm,21.5s,baz=113,slow=40						
	comp=Z,22nm,0.7s						
BATI	**Baumata**	**29.00**	**258**	P	**P**	**15 09 38.3**	**+0.2**
	comp=Z,32nm,1.1s						
DAV	**Davao City (W)**	**29.33**	**294**	LR	LR	15 21 04.5	
	comp=Z,564nm,18.4s,baz=99,slow=36						
LUWI	**Luwuk**	**29.87**	**276**	P	**P**	**15 09 46.2**	**+0.5**
	comp=Z,1µmcomp=Z,65nm,1.1s						
GTOI	**Gorontalo**	**29.91**	**280**	P	**P**	**15 09 48.1**	**+2.0**
	comp=Z,14nm,0.9s						
MMRI	**Maumere**	**30.22**	**261**	P	**P**	**15 09 49.8**	**+1.0**
	comp=Z,1µmcomp=Z,32nm,1.2s						
MULG	**Mulgathing**	**30.64**	**212**	P	**P**	**15 09 51.8**	**-0.5**
WRKA	**Warakurna**	**30.64**	**227**	P	**P**	**15 09 51.1**	**-1.3**
	baz=31,SNR=49						
WRKA	**Warakurna**	**30.64**	**227**	P	**P**	**15 09 51.5**	**-0.9**
EDFI	**Ende, Flores**	**30.77**	**261**	P	**P**	**15 09 51.5**	**-2.3**
	comp=Z,16nm,0.8s						
MRSI	**Marisa**	**30.93**	**279**	P	**P**	**15 09 54.1**	**-1.0**
	comp=Z,19nm,0.7s						
APSI	**Ampana**	**31.00**	**276**	P	**P**	**15 09 56.9**	**+1.2**
	comp=Z,43nm,1.1s						
HTT	**Hallett**	**31.06**	**202**	P	**P**	**15 09 55.7**	**-0.3**
	baz=31,SNR=4.9						
HTT	**Hallett**	**31.06**	**202**	P	**P**	**15 09 56.0**	**-0.1**
NAPP	**Napperby**	**31.14**	**204**	P	**P**	**15 09 59.6**	**+2.9**
	comp=Z,13nm,0.9s						
BBOO	**Buckleboo**	**31.71**	**207**	P	**P**	**15 10 01.3**	**-0.4**
	baz=32,SNR=12						
BBOO	**Buckleboo**	**31.71**	**207**	P	**P**	**15 10 01.2**	**-0.4**
BBOO				IAmb	IAmb	15 10 07.4	
	comp=Z,61nm,1.3s						
BBOO	**Buckleboo**	**31.71**	**207**	P	**P**	**15 10 01.0**	**-0.7**
TOLI2	**Tolitoli**	**32.19**	**280**	P	**P**	**15 10 04.3**	**-1.9**
KAPI	**Kappang**	**32.57**	**268**	LR	LR	15 24 56.0	
	comp=Z,207nm,21.7s,baz=72,slow=39						
MPSI	**Mapaga**	**32.92**	**278**	P	**P**	**15 10 11.1**	**-1.5**
	comp=Z,16nm,0.9s						
ARPS	**Mount Arapiles**	**33.18**	**196**	P	**P**	**15 10 16.7**	**+2.2**
JCJ	**Chichijima**	**33.31**	**343**	LR	LR	15 22 20.5	
	comp=Z,595nm,21.8s,baz=128,slow=34						
FORT	**Forrest**	**34.49**	**219**	P	**P**	**15 10 25.1**	**-0.9**
	baz=35,SNR=14						
FORT	**Forrest**	**34.49**	**219**	P	**P**	**15 10 25.1**	**-0.9**
FORT	**Forrest**	**34.49**	**219**	P	**P**	**15 10 25.5**	**-0.5**
PLAI	**Plampang**	**34.63**	**262**	P	**P**	**15 10 25.6**	**-1.8**
MYLDM	**Lahad Datu**	**35.35**	**286**	P	**P**	**15 10 36.3**	**+2.7**
MYLDM				IAmb	IAmb	15 10 51.3	
	comp=Z,46nm,1.2s						
MBWA	**Marble Bar**	**35.62**	**240**	P	**P**	**15 10 35.0**	**-0.9**
MBWA	**Marble Bar**	**35.62**	**240**	P	**P**	**15 10 35.2**	**-0.6**
MBWA	**Marble Bar**	**35.62**	**240**	P	**P**	**15 10 34.9**	**-0.9**
MBWA				pP	**pP**	**15 10 47.4**	**-1.9**
MBWA				sP	**sP**	**15 10 54.1**	**-1.4**
PSA00	**Pilbara Seismi**	**35.68**	**239**	P	**P**	**15 10 35.4**	**-0.9**
PSA00				IAmb	IAmb	15 10 36.3	
	comp=Z,57nm,0.9s						
PSA00	**Pilbara Seismi**	**35.68**	**239**	P	**P**	**15 10 34.7**	**-1.6**
PSA00				IAmb	IAmb	15 10 36.3	
	comp=Z,26nm,1.1s						
PSA00	**Pilbara Seismi**	**35.68**	**239**	P	**P**	**15 10 35.9**	**-0.5**
AFI	**Afiamalu**	**36.37**	**107**	LR	LR	15 24 53.0	
	comp=Z,498nm,18.3s,baz=286,slow=35						
JAGI	**Jajag, Banyuwa**	**38.19**	**263**	P	**P**	**15 10 58.5**	**+0.7**
	comp=Z,42nm,1.0s						
JOW	**Kunigami**	**39.27**	**325**	LR	LR	15 24 16.9	
	comp=Z,363nm,21.4s,baz=118,slow=32						
JHJ	**Hachijo jima 2**	**39.67**	**343**	LR	LR	15 26 41.8	
	comp=Z,164nm,19.8s,baz=184,slow=35						
URZ	**Urewera**	**40.09**	**149**	LR	LR	15 27 43.3	
	comp=Z,388nm,18.2s,baz=30,slow=36						
URZ	**Urewera**	**40.09**	**149**	P	**P**	**15 11 14.2**	**+0.9**
BKZ	**Black Stump Fm**	**40.48**	**151**	P	**P**	**15 11 16.4**	**-0.2**
BKZ				IAmb	IAmb	15 11 22.5	
	comp=Z,29nm,1.1s						
PBKI	**Pangkalan Bun**	**40.74**	**272**	P	**P**	**15 11 18.5**	**-0.5**
	comp=Z,67nm,0.7s						
YOJ	**Yonaguni jima**	**40.90**	**317**	P	**P**	**15 11 22.3**	**+2.2**
YOJ	**Yonaguni jima**	**40.90**	**317**	P	**P**	**15 11 22.3**	**+2.2**
YOJ				pmax	pmax		
	comp=Z,97nm,1.0s						
GIRL	**Giralia**	**40.91**	**241**	P	**P**	**15 11 20.5**	**+0.2**
	baz=41,SNR=4.8						
GIRL	**Giralia**	**40.91**	**241**	P	**P**	**15 11 20.6**	**+0.2**
GIRL	**Giralia**	**40.91**	**241**	P	**P**	**15 11 20.0**	**-0.3**
TUWZ	**Tuamarina**	**41.15**	**155**	P	**P**	**15 11 23.3**	**+1.4**
BSWZ	**Blackbirch Sta**	**41.36**	**156**	P	**P**	**15 11 23.0**	**-0.7**
YULB	**Yu-li**	**41.41**	**314**	P	**P**	**15 11 24.3**	**-0.1**
BFZ	**Birch Farm**	**41.55**	**152**	P	**P**	**15 11 24.9**	**-0.5**
BFZ	**Birch Farm**	**41.55**	**152**	P	**P**	**15 11 26.5**	**+1.2**
KHZ	**Kahutara**	**41.81**	**156**	P	**P**	**15 11 25.5**	**-1.9**
KHZ	**Kahutara**	**41.81**	**156**	P	**P**	**15 11 29.0**	**+1.6**
TPUB	**Ta-pu**	**41.83**	**313**	P	**P**	**15 11 28.9**	**+1.0**
TPUB				IAmb	IAmb	15 11 29.8	
	comp=Z,20nm,0.7s						
JSU	**Suzuyama**	**41.83**	**331**	P	**P**	**15 11 29.6**	**+1.9**
SSLB	**Suanglung**	**41.90**	**314**	P	**P**	**15 11 29.0**	**+0.6**
KLBR	**Kellerberrin**	**41.98**	**227**	P	**P**	**15 11 27.6**	**-1.4**
	baz=42,SNR=7.0						
KLBR	**Kellerberrin**	**41.98**	**227**	P	**P**	**15 11 27.9**	**-1.1**
RPZ	**Rata Peaks**	**42.01**	**160**	LR	LR	15 27 44.6	
	comp=Z,1µm,19.6s,baz=320,slow=35						
MORW	**Morawa**	**42.01**	**231**	P	**P**	**15 11 28.5**	**-0.8**
	baz=42,SNR=9.7						
MORW	**Morawa**	**42.01**	**231**	P	**P**	**15 11 28.5**	**-0.8**
MORW				IAmb	IAmb	15 11 29.4	
	comp=Z,27nm,0.9s						
MORW	**Morawa**	**42.01**	**231**	P	**P**	**15 11 28.6**	**-0.7**
YHNB	**Yeheng**	**42.16**	**316**	P	**P**	**15 11 32.1**	**+1.6**
YHNB				IAmb	IAmb	15 11 51.1	
	comp=Z,80nm,1.4s						
BLDU	**Ballidu**	**42.25**	**228**	P	**P**	**15 11 30.0**	**-1.2**
	baz=42,SNR=12						
BLDU	**Ballidu**	**42.25**	**228**	P	**P**	**15 11 29.9**	**-1.3**
KSM	**Kuching**	**42.57**	**277**	P	**P**	**15 11 33.9**	**-0.1**
JGF	**Kuroka**	**42.70**	**342**	P	**P**	**15 11 34.7**	**0.0**
JNU	**Nakatsue**	**42.98**	**333**	P	**P**	**15 11 36.6**	**-0.5**
	comp=Z,32nm,0.8s,baz=133,slow=1.2,SNR=7.2						
	comp=Z,32nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.07**	**225**	P	**P**	**15 11 40.9**	**+3.1**
MJAR	**Matsushiro Arr**	**43.32**	**343**	P	**P**	**15 11 38.2**	**-1.5**
	comp=Z,3.4nm,0.9s,baz=162,slow=8.5,SNR=6.2						
MJAR				PcP	**PcP**	**15 13 27.5**	**-0.3**
	comp=Z,4.4nm,1.0s,baz=183,slow=4.4,SNR=6.2						
MJAR				LR	LR	15 27 58.5	
	comp=Z,292nm,21.9s,baz=178,slow=34						
	comp=Z,3.4nm,0.9s						
MAJO	**Matsushiro**	**43.32**	**343**	⇓*e*P	**P**	**15 11 40.3**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAJO	**Matsushiro**	**43.32**	**343**	P	**P**	**15 11 40.6**	**+0.9**
JHS	**Saijyo**	**43.65**	**337**	P	**P**	**15 11 42.5**	**0.0**
LEM	**Lembang**	**44.62**	**265**	LR	LR	15 33 59.6	
	comp=Z,174nm,20.5s,baz=146,slow=41						
JSD	**Sado**	**44.70**	**344**	P	**P**	**15 11 50.2**	**-0.5**
TPI	**Tanjungpandan**	**44.74**	**271**	P	**P**	**15 11 50.6**	**-0.8**
	comp=Z,26nm,1.2s						
JTU	**Tsushima**	**44.83**	**333**	P	**P**	**15 11 51.1**	**-0.7**
JTU				IAmb	IAmb	15 12 14.9	
	comp=Z,30nm,1.2s						
SSE	**Sheshan**	**46.60**	**322**	P	**P**	**15 12 03.0**	**-2.8**
SSE				S	**S**	**15 18 55.5**	**+4.5**
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,54nm,5.3s						
SSE				LR	LR		
	comp=Z,110nm,21.4s						
SSE				LR	LR		
	comp=Z,120nm,20.0s						
JTM	**Tenmabayashi**	**46.64**	**348**	P	**P**	**15 12 05.4**	**-0.6**
JTM				IAmb	IAmb	15 12 22.9	
	comp=Z,44nm,1.2s						
TJN	**Taejon**	**47.29**	**332**	*de*P	**P**	**15 12 12.0**	**+0.8**
ERM	**Erimo**	**47.45**	**351**	⇑*e*P	**P**	**15 12 11.4**	**-0.8**
ERM				pmax	pmax		
	comp=Z,48nm,1.3s						
KASI	**Kota Agung**	**47.74**	**267**	P	**P**	**15 12 15.3**	**+0.2**
	comp=Z,34nm,1.1s						
KSRS	**Korea Array**	**47.92**	**334**	P	**P**	**15 12 15.8**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=148,slow=8.8,SNR=23						
KSRS				LR	LR	15 31 02.5	
	comp=Z,127nm,19.6s,baz=150,slow=34						
	comp=Z,3.7nm,0.8s						
QIZ	**Qiongzhong**	**48.21**	**301**	P	P	15 12 24.8	+6.2
QIZ				S	S	15 19 25.0	+11
QIZ				LR	LR		
	comp=E,340nm,23.0s						
QIZ				LR	LR		
	comp=Z,420nm,22.9s						
RAR	**Rarotonga**	**49.06**	**114**	LR	LR	15 32 06.0	
	comp=Z,139nm,19.0s,baz=278,slow=35						
ASAJ	**Asahikawa**	**49.59**	**351**	P	**P**	**15 12 28.6**	**0.0**
	comp=Z,8.1nm,0.9s,baz=177,slow=30,SNR=2.4						
ASAJ				LR	LR	15 33 25.3	
	comp=Z,46nm,19.5s,baz=182,slow=36						
	comp=Z,8.1nm,0.9s						
WHN	**Wuhan**	**50.68**	**317**	⇑P	**P**	**15 12 39.0**	**+1.8**
USA0B	**Ussuriysk Arra**	**52.22**	**341**	⇑*e*P	**P**	**15 12 49.1**	**+0.6**
USRK	**Ussuriysk Ar.**	**52.22**	**341**	P	**P**	**15 12 48.5**	**0.0**
	comp=Z,4.1nm,0.7s,baz=192,slow=11,SNR=6.5						
USRK				LR	LR	15 34 05.9	
	comp=Z,87nm,19.1s,baz=149,slow=35						
	comp=Z,4.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.22**	**341**	P	**P**	**15 12 49.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.22**	**341**	P	**P**	**15 12 49.0**	**+0.5**
MNSI	**Mandailing Nat**	**53.11**	**275**	P	P	15 12 48.7	-6.9
MDJ	**Mudanjiang**	**53.38**	**340**	P	**P**	**15 12 58.8**	**+1.7**
MDJ				pP	pP	15 13 13.8	+2.0
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,85nm,3.9s						
MDJ				LR	LR		
	comp=Z,200nm,24.2s						
MDJ				LR	LR		
	comp=Z,240nm,24.7s						
MDJ				LR	LR		
	comp=Z,560nm,23.7s						
ENH	**Enshi**	**53.96**	**313**	P	**P**	**15 13 02.6**	**+1.0**
ENH				sP	**sP**	**15 13 20.6**	**-2.3**
PSI	**Prapat**	**54.02**	**277**	LR	LR	15 42 54.8	
	comp=Z,100nm,18.2s,baz=106,slow=44						
GYA	**Guiyang**	**54.17**	**308**	⇓P	**P**	**15 13 04.5**	**+1.2**
GYA				pmax	pmax		
	comp=Z,11nm,1.4s						
GYA				LR	LR		
	comp=Z,550nm,19.4s						
CN2	**Changchun**	**54.24**	**336**	*e*P	**P**	**15 13 02.3**	**-1.0**
CN2				*e*S	**S**	**15 20 28.5**	**-8.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,100nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,21.3s						
LYN	**LuoYang**	**54.38**	**319**	*e*P	**P**	**15 13 04.8**	**+0.2**
LYN				pP	pP	15 13 22.0	+2.5
LYN				pmax	pmax		
	comp=Z,120nm,7.5s						
LYN				LR	LR		
	comp=Z,520nm,20.2s						
LYN				LR	LR		
	comp=Z,410nm,20.2s						
LYN				LR	LR		
	comp=Z,670nm,21.6s						
HNS	**HongShan**	**54.81**	**323**	⇓P	**P**	**15 13 08.5**	**+0.9**
HNS				S	**S**	**15 20 45.0**	**+0.4**
HNS				SS	**SS**	**15 24 24.5**	**-4.2**
HNS				pmax	pmax		
	comp=Z,13nm,1.1s						
HNS				LR	LR		
	comp=Z,120nm,16.2s						
HNS				LR	LR		
	comp=Z,230nm,16.6s						
HNS				LR	LR		
	comp=Z,340nm,22.0s						
BNX	**BinXian**	**55.13**	**339**	⇑P	**P**	**15 13 10.0**	**+0.3**
BNX				pmax	pmax		
	comp=Z,26nm,1.0s						
BNX				pmax	pmax		
	comp=Z,130nm,9.2s						
GSI	**Gunungsitoli**	**55.16**	**275**	P	**P**	**15 13 09.2**	**-1.4**
GSI				IAmb	IAmb	15 13 09.3	
	comp=Z,35nm,1.0s						
SKR	**Severo-Kuril's**	**55.45**	**3**	*e*P	P	15 13 25.2	+13
XAN	**Xi'an**	**56.45**	**317**	P	**P**	**15 13 19.3**	**-0.2**
XAN				S	**S**	**15 21 03.3**	**-3.4**
XAN				pmax	pmax		
	comp=Z,17nm,1.2s						
XAN				LR	LR		
	comp=Z,340nm,19.6s						
XAN				LR	LR		
	comp=Z,340nm,18.5s						
XAN				LR	LR		
	comp=Z,550nm,20.6s						
XAN	**Xi'an**	**56.45**	**317**	P	**P**	**15 13 21.3**	**+1.8**
KMI	**Kunming**	**56.75**	**304**	⇑P	**P**	**15 13 22.0**	**0.0**
KMI				pP	sP	15 13 41.0	-2.7
KMI				sP	pP	15 13 49.5	+12
KMI				S	**S**	**15 21 14.5**	**+3.2**
KMI				pmax	pmax		
	comp=Z,12nm,1.5s						
KMI				LR	LR		
	comp=Z,160nm,9.5s						
KMI				LR	LR		
	comp=Z,280nm,20.3s						
KMI				LR	LR		
	comp=Z,370nm,24.3s						
KLR	**Kul'dur**	**56.84**	**344**	P	**P**	**15 13 21.9**	**0.0**
	comp=Z,3.7nm,0.6s,baz=183,slow=3.8,SNR=17						
KLR				LR	LR	15 35 50.8	
	comp=Z,86nm,21.5s,baz=171,slow=34						
	comp=Z,3.7nm,0.6s						
KLR	**Kul'dur**	**56.84**	**344**	*de*P	**P**	**15 13 22.0**	**+0.1**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**57.60**	**295**	P	**P**	**15 13 28.2**	**+0.3**
	comp=Z,9.8nm,0.8s,baz=121,slow=5.4,SNR=35						
CMAR				LR	LR	15 38 09.1	
	comp=Z,134nm,19.2s,baz=110,slow=36						
	comp=Z,9.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**57.60**	**295**	P	**P**	**15 13 28.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**57.60**	**295**	*i* P	**P**	**15 13 28.8**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	**Chiang Mai**	**57.71**	**296**	P	**P**	**15 13 28.9**	**+0.3**
CHTO				sP	**sP**	**15 13 47.9**	**-2.4**
PET	**Petropavlovsk**	**57.94**	**4**	*e*P	**P**	**15 13 27.2**	**-2.3**
PET				*e*S	**S**	**15 21 24.6**	**-0.9**
PET				pmax	pmax		
	comp=Z,21nm,1.7s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PEA0B	**Petropavlovsk-**	**57.95**	**4**	P	**P**	**15 13 30.4**	**+0.7**
PEA0B				IAmb	IAmb	15 13 52.8	
	comp=Z,20nm,1.2s						
PEA0B	**Petropavlovsk-**	**57.95**	**4**	P	**P**	**15 13 30.4**	**+0.7**
PEA0B				pmax	pmax		
	comp=Z,20nm,1.2s						
PETK	**Petropavlovsk-**	**57.95**	**4**	P	**P**	**15 13 29.4**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=167,slow=8.0,SNR=16						
PETK				LR	LR	15 33 36.8	
	comp=Z,229nm,21.7s,baz=193,slow=31						
	comp=Z,2.6nm,0.6s						
PPT	**Papeete**	**58.03**	**108**	LR	LR	15 34 21.6	
	comp=Z,122nm,21.6s,baz=306,slow=32						
PZH	**PanZhiHua**	**58.14**	**305**	P	**P**	**15 13 32.0**	**+0.3**
PZH				S	**S**	**15 21 29.8**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,5.9s						
PZH				LR	LR		
	comp=Z,480nm,20.1s						
PZH				LR	LR		
	comp=Z,700nm,20.0s						
PZH				LR	LR		
	comp=Z,1µm,20.1s						
CD2	**Chengdu**	**58.53**	**311**	P	**P**	**15 13 34.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
XLT	**XiLinHaoTe**	**58.57**	**330**	*e*P	**P**	**15 13 34.8**	**+0.5**
XLT				pP	sP	15 13 52.3	-3.5
XLT				sP	pP	15 14 00.5	+11
XLT				S	**S**	**15 21 34.0**	**-0.3**
XLT				sS	sS	15 22 01.3	+1.8
XLT				SS	**SS**	**15 25 26.5**	**-1.4**
XLT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,90nm,5.0s						
XLT				LR	LR		
	comp=Z,150nm,19.0s						
XLT				LR	LR		
	comp=Z,320nm,23.0s						
HHC	**Hu-ho-hao-te**	**58.92**	**325**	*e*P	**P**	**15 13 41.3**	**+4.5**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
BTO	**Baotou**	**59.66**	**323**	*e*P	**P**	**15 13 46.5**	**+4.5**
BTO				LR	LR		
	comp=Z,770nm,17.0s						
BTO				LR	LR		
	comp=Z,510nm,17.2s						
SHEM	**Shemya Is, Ala**	**60.27**	**15**	LR	LR	15 35 16.9	
	comp=Z,482nm,21.9s,baz=218,slow=32						
HIA	**Hailar**	**60.97**	**336**	⇑*e*P	**P**	**15 13 51.5**	**+0.9**
HIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**61.05**	**316**	*e*P	**P**	**15 13 53.0**	**+1.4**
LZH				pP	sP	15 14 10.8	-2.3
LZH				sP	pP	15 14 19.3	+12
LZH				*e*S	**S**	**15 22 13.5**	**+6.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=Z,210nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,14.6s						
LZH				LR	LR		
	comp=Z,380nm,18.4s						
DRV	**Dumont d'Urvil**	**62.27**	**186**	P	**P**	**15 13 59.5**	**+0.5**
DRV				sP	**pwP**	**15 14 16.9**	**-0.6**
MA2	**Magadan**	**64.28**	**359**	LR	LR	15 42 22.3	
	comp=Z,90nm,19.0s,baz=183,slow=36						
MA2	**Magadan**	**64.28**	**359**	P	**P**	**15 14 11.9**	**-0.5**
MA2				IAmb	IAmb	15 14 32.9	
	comp=Z,21nm,1.2s						
MA2	**Magadan**	**64.28**	**359**	P	**P**	**15 14 11.9**	**-0.5**
MA2				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA	**Gaotai**	**65.48**	**317**	*e*P	**P**	**15 14 21.5**	**+0.7**
GTA				pP	pP	15 14 33.0	-3.2
GTA				sP	sP	15 14 40.5	-2.0
GTA				S	**S**	**15 23 00.5**	**-1.3**
GTA				SS	**SS**	**15 27 17.0**	**+0.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,130nm,5.5s						
GTA				LR	LR		
	comp=Z,140nm,19.6s						
GTA				LR	LR		
	comp=Z,220nm,20.0s						
GTA				LR	LR		
	comp=Z,280nm,20.0s						
ULN	**Ulaanbaatar**	**65.89**	**328**	⇓*e*P	**P**	**15 14 24.4**	**+1.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**66.22**	**328**	P	**P**	**15 14 25.5**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=68,slow=5.3,SNR=5.0						
SONM				LR	LR	15 41 19.3	
	comp=Z,265nm,21.9s,baz=130,slow=34						
	comp=Z,3.2nm,0.8s						
NIKH	**Nikolski High**	**66.25**	**24**	P	**P**	**15 14 24.6**	**-0.7**
	baz=223						
GOMU	**GeErMu**	**67.56**	**312**	P	**P**	**15 14 35.0**	**+0.5**
GOMU				S	S	15 23 16.0	-12
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,80nm,4.8s						
GOMU				LR	LR		
	comp=Z,96nm,19.8s						
GOMU				LR	LR		
	comp=Z,270nm,19.1s						
GOMU				LR	LR		
	comp=Z,400nm,19.2s						
SEY	**Seymchan**	**67.64**	**360**	LR	LR	15 43 50.8	
	comp=Z,68nm,19.4s,baz=190,slow=36						
SEY	**Seymchan**	**67.64**	**360**	⇑*e*P	**P**	**15 14 34.6**	**+0.7**
SEY				pmax	pmax		
	comp=Z,10.0nm,2.5s						
CASY	**Casey**	**67.82**	**197**	P	**P**	**15 14 34.9**	**-0.2**
UNV	**Unalaska Valle**	**67.85**	**25**	P	**P**	**15 14 34.4**	**-1.0**
UNV				IAmb	IAmb	15 15 02.3	
	comp=Z,22nm,1.0s						
UNV	**Unalaska Valle**	**67.85**	**25**	P	**P**	**15 14 35.3**	**-0.1**
	baz=225						
SPIA	**Saint Paul Isl**	**68.86**	**21**	P	**P**	**15 14 41.5**	**-0.2**
	baz=220						
YAK	**Yakutsk**	**69.00**	**349**	P	**P**	**15 14 43.0**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=186,slow=4.6,SNR=4.3						
YAK				LR	LR	15 43 06.5	
	comp=Z,132nm,21.8s,baz=102,slow=34						
	comp=Z,2.4nm,0.4s						
YAK	**Yakutsk**	**69.00**	**349**	*e*P	**P**	**15 14 42.4**	**0.0**
YAK				*e**PP	**sP**	**15 15 03.8**	**-0.2**
YAK				*e*		15 15 09.0	
YAK				*e*		15 17 13.7	
YAK				*e*S	**S**	**15 23 41.6**	**-1.2**
YAK				*e**SS	**SKiKP**	**15 24 19.7**	**-9.0**
YAK				*e*		15 24 34.5	
YAK				*e*SS	**SS**	**15 28 15.6**	**+6.0**
YAK				pmax	pmax		

	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,42nm,2.8s						
YAK				pmax	pmax		
	comp=N,29nm,2.8s						
YAK				pmax	pmax		
	comp=E,35nm,3.0s						
YAK				smax	smax		
	comp=N,72nm,4.6s						
YAK				smax	smax		
	comp=E,62nm,3.8s						
ZAK	**Zakamensk**	**69.39**	**329**	*e*P	**P**	**15 14 44.6**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
FALS	**False Pass**	**69.86**	**25**	P	**P**	**15 14 47.4**	**-0.5**
	baz=228						
TAPN	**Taplejung**	**70.15**	**301**	*e*P	**P**	**15 14 50.3**	**-0.4**
ODAN	**Odare**	**70.29**	**301**	*e*P	**P**	**15 14 50.9**	**-0.5**
	comp=Z,28nm,1.6s						
RAMN	**Ramite**	**70.99**	**301**	*e*P	**P**	**15 14 55.0**	**-0.7**
SDPT	**Sand Point**	**71.46**	**26**	P	**P**	**15 14 56.6**	**-0.9**
	baz=230						
CHNA	**Chernabura Isl**	**71.53**	**27**	P	**P**	**15 14 57.6**	**-0.4**
	baz=231						
JIRN	**Jiri**	**71.53**	**301**	*e*P	**P**	**15 14 58.7**	**-0.4**
GUN	**Gumba**	**71.87**	**301**	*e*P	**P**	**15 15 00.7**	**-0.4**
	comp=Z,16nm,0.4s						
PKI	**Pulchoki**	**72.18**	**301**	*e*P	**P**	**15 15 01.8**	**-1.2**
	comp=Z,48nm,1.2s						
PKIN	**Phulchoki**	**72.19**	**301**	*e*P	**P**	**15 15 02.1**	**-0.9**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**72.35**	**301**	*e*P	**P**	**15 15 02.5**	**-1.3**
	comp=Z,6.7nm,0.5s						
DMN	**Daman**	**72.45**	**301**	*e*P	**P**	**15 15 03.6**	**-0.9**
PALK	**Pallekele**	**72.60**	**279**	LR	LR	15 49 19.2	
	comp=Z,30nm,18.2s,baz=209,slow=38						
VNDA	**Vanda**	**72.75**	**178**	P	**P**	**15 15 05.0**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=324,slow=6.4,SNR=33						
	comp=Z,6.3nm,0.8s						
VNDA	**Vanda**	**72.75**	**178**	P	**P**	**15 15 05.7**	**+0.7**
VNDA	**Vanda**	**72.75**	**178**	P	**P**	**15 15 05.7**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GKN	**Gorkha**	**72.95**	**301**	*e*P	**P**	**15 15 06.7**	**-0.6**
CHGN	**Chignik**	**72.96**	**26**	P	**P**	**15 15 06.1**	**-0.5**
CHGN				IAmb	IAmb	15 15 10.0	
	comp=Z,17nm,0.8s						
CHGN	**Chignik**	**72.96**	**26**	P	**P**	**15 15 06.0**	**-0.5**
	baz=232						
BILL	**Bilibino**	**73.42**	**5***c*	*i*P	**P**	**15 15 09.6**	**+0.6**
BILL						15 15 22.0	
BILL				*i* *PP	**sP**	**15 15 29.8**	**-0.2**
BILL				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL				MLR	MLR		
	comp=Z,82nm,19.0s						
GAMB	**Gambell**	**73.57**	**16**	P	**P**	**15 15 09.4**	**-0.6**
	baz=217						
KOLN	**Koldanda**	**73.78**	**301**	*e*P	**P**	**15 15 10.5**	**-1.8**
DANN	**Dangsing**	**73.79**	**301**	*e*P	**P**	**15 15 11.4**	**-1.0**
	comp=Z,16nm,0.6s						
CHIR	**Chirikof Islan**	**73.93**	**28**	P	**P**	**15 15 12.3**	**0.0**
	baz=235						
PYUN	**Piuthan**	**74.38**	**301**	*e*P	**P**	**15 15 14.9**	**-0.9**
	comp=Z,40nm,0.8s						
SII	**Sitkinak Islan**	**75.02**	**27**	P	**P**	**15 15 18.8**	**+0.3**
	baz=236						
WMQ	**Urumqi**	**75.57**	**317**	*e*P	**P**	**15 15 23.5**	**+1.3**
WMQ				PcP	**pP**	**15 15 36.3**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.1s						
WMQ				LR	LR		
	comp=Z,220nm,21.7s						
WMQ				LR	LR		
	comp=Z,250nm,19.5s						
OHAK	**Old Harbor**	**75.79**	**27**	P	**P**	**15 15 23.2**	**+0.2**
OHAK				IAmb	IAmb	15 15 24.2	
	comp=Z,29nm,0.9s						
OHAK	**Old Harbor**	**75.79**	**27**	P	**P**	**15 15 23.1**	**+0.2**
	baz=236						
ANM	**Nome**	**75.97**	**17**	P	**P**	**15 15 24.7**	**+0.8**
	baz=224,SNR=7.5						
TNA	**Tin City**	**75.98**	**16**	P	**P**	**15 15 24.4**	**+0.5**
	baz=221						
P18K	**Big Mountain,**	**76.18**	**25**	P	**P**	**15 15 24.8**	**-0.5**
P18K	**Big Mountain,**	**76.18**	**25**	P	**P**	**15 15 24.4**	**-0.8**
	baz=234						
HYBB	**Hyderabad (bro**	**76.19**	**289**	*e*P	**P**	**15 15 28.4**	**+2.2**
KDAK	**Kodiak Island**	**76.42**	**27**	P	**P**	**15 15 26.7**	**+0.2**
	comp=Z,37nm,1.1s,baz=270,slow=3.4,SNR=27						
KDAK				LR	LR	15 43 47.4	
	comp=Z,156nm,21.6s,baz=255,slow=32						
	comp=Z,37nm,1.1s						
KDAK	**Kodiak Island**	**76.42**	**27**	P	**P**	**15 15 26.8**	**+0.2**
KDAK				IAmb	IAmb	15 15 28.9	
	comp=Z,22nm,0.9s						
KDAK	**Kodiak Island**	**76.42**	**27**	P	**P**	**15 15 26.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,22nm,0.9s						
KDAK	**Kodiak Island**	**76.42**	**27**	P	**P**	**15 15 26.7**	**+0.2**
	baz=237						
Q19K	**Cape Douglas,**	**76.59**	**26**	P	**P**	**15 15 27.3**	**-0.2**
Q19K	**Cape Douglas,**	**76.59**	**26**	P	**P**	**15 15 27.3**	**-0.2**
	baz=236						
N18K	**Kilae Creek**	**76.68**	**23**	P	**P**	**15 15 29.0**	**+1.0**
N18K				IAmb	IAmb	15 15 30.3	
	comp=Z,32nm,1.1s						
N18K	**Kilae Creek**	**76.68**	**23**	P	**P**	**15 15 29.1**	**+1.0**
	baz=233,SNR=27						
Q20K	**Shuyak Island**	**76.95**	**26**	P	**P**	**15 15 29.9**	**+0.3**
	baz=237						
SVW2	**Sparrevohn**	**77.05**	**23**	P	**P**	**15 15 31.1**	**+1.1**
SVW2				IAmb	IAmb	15 15 32.3	
	comp=Z,17nm,1.0s						
N19K	**Bonanza Creek**	**77.32**	**24**	P	**P**	**15 15 32.0**	**+0.4**
N19K	**Bonanza Creek**	**77.32**	**24**	P	**P**	**15 15 31.9**	**+0.2**
	baz=235,SNR=12						
O20K	**Slope Mountain**	**77.66**	**25**	P	**P**	**15 15 33.1**	**-0.5**
	baz=236,SNR=5.6						
RSO	**Redoubt South**	**77.82**	**24**	P	**P**	**15 15 34.1**	**-0.6**
HOM	**Homer**	**77.85**	**25**	P	**P**	**15 15 34.8**	**+0.3**
	baz=237,SNR=8.2						
TIXI	**Tiksi**	**77.94**	**353**	P	**P**	**15 15 34.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=91,slow=23,SNR=8.6						
TIXI				LR	LR	15 45 48.4	
	comp=Z,65nm,22.0s,baz=180,slow=32						
	comp=Z,1.6nm,0.5s						
TIXI	**Tiksi**	**77.94**	**353**	P	**P**	**15 15 35.5**	**+0.7**
TIXI	**Tiksi**	**77.94**	**353**	P	**P**	**15 15 35.5**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
CNPM	**China Poot**	**77.95**	**26**	P	**P**	**15 15 35.9**	**+0.8**
L19K	**White Mountain**	**77.97**	**22**	P	**P**	**15 15 36.2**	**+0.9**
L19K				IAmb	IAmb	15 15 37.3	
	comp=Z,41nm,0.9s						
L19K	**White Mountain**	**77.97**	**22**	P	**P**	**15 15 36.0**	**+0.8**
	baz=234,SNR=44						
M19K	**Big River Lodg**	**77.98**	**23**	P	**P**	**15 15 36.3**	**+1.1**
	baz=234						
TTA	**Tatalina**	**77.99**	**21**	P	**P**	**15 15 36.2**	**+0.8**
TTA				IAmb	IAmb	15 15 37.2	
	comp=Z,32nm,1.2s						
TTA	**Tatalina**	**77.99**	**21**	P	**P**	**15 15 36.2**	**+0.8**
TTA				pmax	pmax		
	comp=Z,32nm,1.2s						
TTA	**Tatalina**	**77.99**	**21**	P	**P**	**15 15 36.0**	**+0.6**
	baz=233,SNR=32						
BRLK	**Bradley Lake**	**78.23**	**26**	P	**P**	**15 15 37.0**	**+0.3**
BRSE	**Bradley Lake S**	**78.28**	**26**	P	**P**	**15 15 36.9**	**-0.1**
	baz=238,SNR=23						
M20K	**Styx River**	**78.46**	**23**	P	**P**	**15 15 38.6**	**+0.6**
	baz=236						
L20K	**Farewell, AK**	**78.51**	**22**	P	**P**	**15 15 39.1**	**+0.9**
	baz=235,SNR=28						
CAPN	**Captain Cook N**	**78.65**	**25**	P	**P**	**15 15 39.8**	**+0.9**
	baz=238						
GCSA	**Galena City Sc**	**78.80**	**20**	P	**P**	**15 15 40.1**	**+0.4**
	baz=232,SNR=32						
K20K	**Telida**	**78.95**	**22**	P	**P**	**15 15 41.8**	**+1.2**
K20K				IAmb	IAmb	15 15 42.8	
	comp=Z,33nm,0.9s						
K20K	**Telida**	**78.95**	**22**	P	**P**	**15 15 41.4**	**+0.8**
	baz=235,SNR=40						
SEW	**Seward**	**79.02**	**26**	P	**P**	**15 15 41.0**	**0.0**
SEW				IAmb	IAmb	15 15 42.3	
	comp=Z,62nm,1.2s						
SEW	**Seward**	**79.02**	**26**	P	**P**	**15 15 41.1**	**+0.2**
	baz=239,SNR=14						
O22K	**Cooper Landing**	**79.10**	**25**	P	**P**	**15 15 41.5**	**+0.1**
	baz=239						
RDOG	**Red Dog Mine**	**79.17**	**16**	P	**P**	**15 15 39.6**	**-2.1**
	baz=225						
PPLA	**Purkeypile**	**79.39**	**23**	P	**P**	**15 15 43.2**	**0.0**
PPLA				IAmb	IAmb	15 15 44.2	
	comp=Z,38nm,1.4s						
PPLA	**Purkeypile**	**79.39**	**23**	P	**P**	**15 15 42.5**	**-0.7**
	baz=236,SNR=11						
J20K	**Nowinta River**	**79.40**	**21**	P	**P**	**15 15 44.0**	**+1.0**
J20K				IAmb	IAmb	15 15 45.2	
	comp=Z,51nm,0.9s						
J20K	**Nowinta River**	**79.40**	**21**	P	**P**	**15 15 44.1**	**+1.2**
	baz=234,SNR=62						
RC01	**Rabbit Creek A**	**79.41**	**25**	P	**P**	**15 15 42.6**	**-0.5**
RC01	**Rabbit Creek A**	**79.41**	**25**	P	**P**	**15 15 43.2**	**+0.1**
	baz=239,SNR=31						
M22K	**Willow**	**79.59**	**24**	P	**P**	**15 15 43.5**	**-0.5**
	baz=238,SNR=16						
CAST	**Castle Rocks**	**79.72**	**22**	P	**P**	**15 15 44.8**	**0.0**
CAST				IAmb	IAmb	15 15 45.7	
	comp=Z,43nm,1.0s						
CAST	**Castle Rocks**	**79.72**	**22**	P	**P**	**15 15 44.3**	**-0.5**
	baz=236,SNR=30						
CUT	**Chulitna**	**79.88**	**23**	P	**P**	**15 15 44.6**	**-1.0**
	baz=238,SNR=6.0						
CHUM	**Lake Minchumin**	**79.89**	**22**	P	**P**	**15 15 46.2**	**+0.6**
	baz=236,SNR=76						
PMR	**Palmer**	**79.92**	**24**	P	**P**	**15 15 45.6**	**-0.2**
	baz=239,SNR=9.3						
Q23K	**Middleton Isla**	**80.07**	**27**	P	**P**	**15 15 47.1**	**+0.5**
	baz=242						
KNK	**Knik Glacier**	**80.11**	**25**	P	**P**	**15 15 47.1**	**+0.2**
	baz=240,SNR=15						
MKAR	**Makanchi Array**	**80.16**	**319**	P	**P**	**15 15 47.2**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=95,slow=6.6,SNR=43						
MKAR				PKKPbc	**PKKPbc**	**15 34 32.3**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=333,slow=1.6,SNR=5.3						
	comp=Z,4.6nm,0.6s						
MKAR	**Makanchi Array**	**80.16**	**319**	P	**P**	**15 15 47.9**	**+0.4**
MKAR	**Makanchi Array**	**80.16**	**319**	P	**P**	**15 15 47.9**	**+0.4**
SML	**Sawmill**	**80.35**	**24**	P	**P**	**15 15 48.8**	**+0.5**
SML	**Sawmill**	**80.35**	**24**	P	**P**	**15 15 48.6**	**+0.3**
	baz=240,SNR=60						
MAKZ	**Makanchi**	**80.37**	**319**	P	**P**	**15 15 49.9**	**+1.2**
MAKZ	**Makanchi**	**80.37**	**319**	P	**P**	**15 15 49.9**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	**80.42**	**23**	P	**P**	**15 15 48.3**	**-0.4**
TRF				IAmb	IAmb	15 15 50.5	
	comp=Z,18nm,0.7s						
TRF	**Thorofare Moun**	**80.42**	**23**	P	**P**	**15 15 47.8**	**-0.9**
	baz=238,SNR=27						
GLI	**Glacier Island**	**80.42**	**26**	P	**P**	**15 15 48.7**	**+0.1**
GLI	**Glacier Island**	**80.42**	**26**	P	**P**	**15 15 48.7**	**+0.1**
	baz=241,SNR=14						
HIN	**Hinchinbrook I**	**80.45**	**26**	P	**P**	**15 15 49.3**	**+0.5**
BPAW	**Bear Paw Mtn.**	**80.50**	**22**	P	**P**	**15 15 48.9**	**-0.1**
BPAW				IAmb	IAmb	15 15 49.6	
	comp=Z,36nm,1.3s						
BPAW	**Bear Paw Mtn.**	**80.50**	**22**	P	**P**	**15 15 48.4**	**-0.6**
	baz=237,SNR=26						
IMAR	**Indian Mountai**	**80.59**	**20**	P	**P**	**15 15 49.6**	**+0.2**
M23K	**Glacier View**	**80.60**	**25**	P	**P**	**15 15 49.6**	**+0.1**
	baz=241,SNR=18						
FID	**Port Fidalgo**	**80.63**	**26**	P	**P**	**15 15 49.8**	**+0.1**
H21K	**Melozitna Rive**	**80.72**	**20**	P	**P**	**15 15 50.8**	**+0.7**
H21K				IAmb	IAmb	15 15 52.0	
	comp=Z,27nm,1.1s						
H21K	**Melozitna Rive**	**80.72**	**20**	P	**P**	**15 15 50.6**	**+0.5**
	baz=235,SNR=28						
I21K	**Tanana**	**80.74**	**21**	P	**P**	**15 15 51.1**	**+0.9**
I21K	**Tanana**	**80.74**	**21**	P	**P**	**15 15 51.0**	**+0.8**
	baz=236,SNR=99						
WAT1	**Susitna Watana**	**80.78**	**23**	P	**P**	**15 15 50.3**	**-0.2**
	baz=240						
SCM	**Sheep Creek Mo**	**80.78**	**25**	P	**P**	**15 15 51.2**	**+0.6**
SCM				IAmb	IAmb	15 15 52.1	
	comp=Z,42nm,0.9s						
SCM	**Sheep Creek Mo**	**80.78**	**25**	P	**P**	**15 15 51.2**	**+0.6**
SCM				pmax	pmax		
	comp=Z,42nm,0.9s						
SCM	**Sheep Creek Mo**	**80.78**	**25**	P	**P**	**15 15 51.0**	**+0.4**
	baz=241,SNR=32						
EYAK	**Cordova Ski Ar**	**80.85**	**26**	P	**P**	**15 15 51.1**	**+0.3**
	baz=243						
RND	**Reindeer**	**80.95**	**23**	P	**P**	**15 15 51.2**	**-0.3**
RND	**Reindeer**	**80.95**	**23**	P	**P**	**15 15 51.2**	**-0.3**
RND				pmax	pmax		
	comp=Z,47nm,0.7s						
WAT6	**Susitna Watana**	**80.98**	**24**	P	**P**	**15 15 51.6**	**-0.1**
	baz=241,SNR=32						
ZALV	**Zalesovo Beam**	**81.03**	**326**	P	**P**	**15 15 50.7**	**-1.3**
	comp=Z,5.0nm,0.6s,baz=116,slow=6.3,SNR=22						
ZALV				LR	LR	15 50 24.3	
	comp=Z,105nm,21.8s,baz=126,slow=35						
	comp=Z,5.0nm,0.6s						
ZALV	**Zalesovo Beam**	**81.03**	**326**	*i* P	**P**	**15 15 51.5**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MCK	**McKinley**	**81.08**	**23**	P	**P**	**15 15 52.0**	**-0.1**
MCK	**McKinley**	**81.08**	**23**	P	**P**	**15 15 52.0**	**-0.1**
MCK				pmax	pmax		
	comp=Z,102nm,1.0s						
MCK	**McKinley**	**81.08**	**23**	P	**P**	**15 15 51.6**	**-0.6**
	baz=239,SNR=43						
MLY	**Manley**	**81.10**	**21**	P	**P**	**15 15 52.3**	**+0.1**
	baz=237,SNR=133						
KLU	**Klutina**	**81.21**	**25**	P	**P**	**15 15 53.5**	**+0.6**
	baz=242,SNR=50						
DHY	**Denali Highway**	**81.37**	**24**	P	**P**	**15 15 53.7**	**-0.1**
	baz=241,SNR=30						
M24K	**Tolsona, Glenn**	**81.39**	**25**	P	**P**	**15 15 54.6**	**+0.8**
	baz=242,SNR=25						
NEA2	**Nenana**	**81.47**	**22**	P	**P**	**15 15 53.9**	**-0.3**
NEA2				IAmb	IAmb	15 15 54.5	
	comp=Z,43nm,0.9s						
NEA2	**Nenana**	**81.47**	**22**	P	**P**	**15 15 53.4**	**-0.7**
	baz=239,SNR=61						
BMRM	**Bremner River**	**81.54**	**26**	P	**P**	**15 15 55.0**	**+0.3**
	baz=244,SNR=19						
I23K	**Minto, Yukon-K**	**81.66**	**21**	P	**P**	**15 15 54.7**	**-0.4**
	baz=239,SNR=35						
BGLC	**Bering Glacier**	**81.77**	**27**	P	**P**	**15 15 56.9**	**+1.2**
	baz=245						
N25K	**Chitina, Valde**	**81.83**	**25**	P	**P**	**15 15 56.8**	**+0.7**
	baz=244,SNR=18						
H23K	**Yukon River**	**81.94**	**21**	IAmb	IAmb	15 15 58.3	
	comp=Z,49nm,1.3s						
H23K	**Yukon River**	**81.94**	**21**	P	**P**	**15 15 56.9**	**+0.3**
	baz=238,SNR=36						
HARP	**HAARP**	**81.95**	**25**	P	**P**	**15 15 57.0**	**+0.3**
	baz=243,SNR=10						
MDM	**Murphy Dome**	**81.97**	**22**	IAmb	IAmb	15 15 57.2	
	comp=Z,29nm,1.1s						
TCOL	**CIGO, UAF Yank**	**82.06**	**22**	P	**P**	**15 15 56.2**	**-1.0**
	baz=240,SNR=9.7						
COLA	**College**	**82.07**	**22***c*	*i*P	**P**	**15 15 56.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,63nm,0.9s						
COLA	**College**	**82.07**	**22**	P	**P**	**15 15 56.4**	**-0.8**
	baz=240						
PAX	**Paxson**	**82.08**	**24**	IAmb	IAmb	15 15 58.6	
	comp=Z,14nm,0.8s						
PAX	**Paxson**	**82.08**	**24**	P	**P**	**15 15 57.1**	**-0.4**
	baz=243,SNR=13						
HDA	**Harding Lake**	**82.18**	**22**	P	**P**	**15 15 57.1**	**-0.8**
	baz=241,SNR=23						
POKR	**Poker Plat Res**	**82.34**	**22**	P	**P**	**15 15 57.6**	**-1.1**
	baz=241,SNR=7.9						
K24K	**Donnelly Dome**	**82.34**	**23**	P	**P**	**15 15 58.7**	**0.0**
	baz=242,SNR=19						
ILAR	**Eielson Array**	**82.38**	**22**	P	**P**	**15 15 57.7**	**-1.2**
	comp=Z,29nm,0.9s,baz=251,slow=5.2,SNR=115						
ILAR				LR	LR	15 50 07.2	
	comp=Z,174nm,19.6s,baz=245,slow=34						
	comp=Z,29nm,0.9s						
MESA	**MESA**	**82.40**	**27**	P	**P**	**15 16 00.2**	**+0.9**
	baz=246,SNR=6.5						
MCARA	**McCarthy VSAT**	**82.42**	**26**	P	**P**	**15 15 59.6**	**+0.5**
	baz=245,SNR=15						
COLD	**Coldfoot**	**82.46**	**19**	IAmb	IAmb	15 16 01.4	
	comp=Z,38nm,1.2s						
COLD	**Coldfoot**	**82.46**	**19**	P	**P**	**15 16 00.1**	**+0.9**
	baz=238,SNR=28						
H24K	**Noodor Dome**	**82.54**	**21**	P	**P**	**15 15 59.0**	**-0.7**
	baz=240,SNR=25						
RIDG	**Independent Ri**	**82.68**	**23**	P	**P**	**15 16 00.4**	**-0.1**
	baz=243						
KSH	**Kashi**	**82.73**	**311**	P	**P**	**15 16 03.5**	**+2.1**
KSH				sP	sP	15 16 25.5	+2.0
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
M26K	**Nabesna, AK**	**82.86**	**25**	P	**P**	**15 16 01.7**	**+0.2**
	baz=245,SNR=17						
J25K	**Salcha River,**	**82.88**	**23**	P	**P**	**15 16 01.4**	**-0.1**
	baz=242,SNR=119						
L26K	**Log Cabin Wild**	**82.98**	**24**	P	**P**	**15 16 02.4**	**+0.4**
	baz=245,SNR=29						
A21K	**Barrow**	**82.99**	**15**	P	**P**	**15 16 03.2**	**+1.4**
	baz=231						
CTG	**Chitna Glacier**	**82.99**	**27**	P	**P**	**15 16 03.1**	**+0.8**
	baz=247,SNR=36						
SCRK	**Sand Creek**	**83.13**	**23**	IAmb	IAmb	15 16 04.2	
	comp=Z,30nm,1.0s						
SCRK	**Sand Creek**	**83.13**	**23**	P	**P**	**15 16 03.0**	**0.0**
	baz=244,SNR=52						
PINM	**Pinnacle**	**83.15**	**28**	P	**P**	**15 16 03.7**	**+0.6**
	baz=248,SNR=12						
M27K	**Edge Creek, AK**	**83.31**	**25**	P	**P**	**15 16 04.8**	**+0.8**
	baz=246,SNR=78						
PNL	**Peninsula**	**83.39**	**28**	P	**P**	**15 16 05.0**	**+0.7**
	baz=248,SNR=23						
TOLK	**Toolik Lake Re**	**83.42**	**18**	IAmb	IAmb	15 16 06.1	
	comp=Z,31nm,0.9s						
TOLK	**Toolik Lake Re**	**83.42**	**18**	P	**P**	**15 16 04.8**	**+0.5**
	baz=238						
J26L	**Joseph Creek**	**83.53**	**23**	IAmb	IAmb	15 16 06.4	
	comp=Z,17nm,0.8s						
J26L	**Joseph Creek**	**83.53**	**23**	P	**P**	**15 16 05.3**	**+0.4**
	baz=244,SNR=31						
L27K	**Beaver Creek,**	**83.62**	**25**	P	**P**	**15 16 06.1**	**+0.8**
	baz=246,SNR=44						
KURK	**Kurchatov**	**83.62**	**322**	P	**P**	**15 16 04.8**	**-0.8**
KURK	**Kurchatov**	**83.62**	**322**	*de*P	**P**	**15 16 05.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURBB	**Kurchatov Arra**	**83.66**	**322**	PKKPbc	PKKPbc	15 34 24.0	-1.2
	comp=Z,0.4nm,0.2s,baz=276,slow=2.8,SNR=4.0						
KURBB				LR	LR	15 52 12.9	
	comp=Z,203nm,21.9s,baz=87,slow=35						
YUK3	**Moose Creek**	**83.70**	**26**	P	**P**	**15 16 06.7**	**+0.7**
	baz=247,SNR=26						
NIL	**Nilore**	**83.74**	**304**	P	**P**	**15 16 06.0**	**-0.6**
NIL				IAmb	IAmb	15 16 08.4	
	comp=Z,18nm,0.7s						
NIL	**Nilore**	**83.74**	**304**	P	**P**	**15 16 06.0**	**-0.6**
NIL				pmax	pmax		
	comp=Z,18nm,0.7s						
BVCY	**Beaver Creek**	**83.77**	**25**	P	**P**	**15 16 07.1**	**+1.0**
	baz=247,SNR=13						
K27K	**Chicken**	**83.92**	**24**	P	**P**	**15 16 07.9**	**+1.1**
	baz=246						
YUK6	**Outpost Mounta**	**84.33**	**27**	P	**P**	**15 16 10.2**	**+0.9**
	baz=249,SNR=8.7						
YUK4	**Talbot Arm**	**84.34**	**27**	P	**P**	**15 16 10.9**	**+1.6**
	baz=249,SNR=23						
AAK	**Ala-Archa**	**84.47**	**314**	LR	LR	15 54 09.1	
	comp=Z,199nm,20.6s,baz=113,slow=36						
AAK	**Ala-Archa**	**84.47**	**314**	⇓*e*P	**P**	**15 16 10.9**	**+0.6**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SIT	**Sitka**	**84.54**	**32**	IAmb	IAmb	15 16 12.2	
	comp=Z,27nm,1.0s						
SIT	**Sitka**	**84.54**	**32**	P	**P**	**15 16 11.1**	**+1.0**
	baz=252,SNR=5.8						
EGAK	**Eagle**	**84.58**	**23**	P	**P**	**15 16 10.8**	**+0.6**
	baz=246,SNR=57						
HYT	**Haines Junctio**	**84.68**	**28**	P	**P**	**15 16 12.0**	**+1.1**
	baz=250,SNR=51						
PLBC	**Pleasant Camp**	**84.77**	**29**	P	**P**	**15 16 11.9**	**+0.7**
	baz=251,SNR=9.8						
DAWY	**Dawson**	**85.02**	**24**	P	**P**	**15 16 13.5**	**+1.0**
	baz=248,SNR=9.7						
H02S1	**DAWSON INLET T**	**85.03**	**36**	T	T	16 49 40.2	
	SNR=60						
QSPA	**South Pole Qui**	**85.07**	**180**	LR	LR	15 52 39.8	
	comp=Z,69nm,18.9s,baz=356,slow=35						
N30M	**Aishikik Lake**	**85.08**	**27**	P	**P**	**15 16 13.7**	**+0.8**
	baz=250,SNR=9.2						
CRAG	**Craig**	**85.26**	**33**	P	**P**	**15 16 14.8**	**+1.1**
	baz=254						
SKAG	**Skagway**	**85.27**	**29**	P	**P**	**15 16 14.7**	**+1.0**
	baz=252,SNR=6.4						
MAW	**Mawson**	**85.35**	**203**	P	**P**	**15 16 13.3**	**-0.7**
	comp=Z,14nm,0.9s,baz=87,slow=7.2,SNR=12						
MAW				LR	LR	15 51 04.3	
	comp=Z,344nm,21.3s,baz=116,slow=33						
	comp=Z,14nm,0.9s						
MAW	**Mawson**	**85.35**	**203**	P	**P**	**15 16 14.5**	**+0.5**
	baz=85,SNR=7.3						
MAW	**Mawson**	**85.35**	**203**	P	**P**	**15 16 13.6**	**-0.3**
MAW	**Mawson**	**85.35**	**203**	P	**P**	**15 16 13.6**	**-0.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
M30M	**Minto, Yukon**	**85.59**	**26**	IAmb	IAmb	15 16 17.3	
	comp=Z,33nm,1.1s						
M30M	**Minto, Yukon**	**85.59**	**26**	P	**P**	**15 16 16.2**	**+0.9**
	baz=251,SNR=38						
J29M	**Klondike Camp**	**85.64**	**24**	P	**P**	**15 16 16.9**	**+1.4**
	baz=249						
N31M	**Braeburn, Yuko**	**85.69**	**27**	P	**P**	**15 16 17.0**	**+1.1**
	baz=252,SNR=22						
WHY	**Whitehorse**	**85.85**	**28**	P	**P**	**15 16 17.6**	**+0.9**
	baz=252,SNR=11						
I29M	**Ogilvie Camp,**	**85.92**	**23**	P	**P**	**15 16 17.4**	**+0.5**
	baz=249,SNR=61						
WRAK	**Wrangell Islan**	**85.93**	**33**	P	**P**	**15 16 17.9**	**+0.8**
	baz=255,SNR=5.9						
NRIK	**Noril'sk**	**85.94**	**341**	P	**P**	**15 16 17.0**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=110,slow=3.9,SNR=5.9						
NRIK				LR	LR	15 52 55.1	
	comp=Z,94nm,21.9s,baz=141,slow=34						
	comp=Z,2.3nm,0.4s						
M31M	**Drury Creek, Y**	**86.53**	**27**	P	**P**	**15 16 20.5**	**+0.5**
	baz=253,SNR=31						
P33M	**Teslin, Yukon**	**86.70**	**29**	P	**P**	**15 16 21.5**	**+0.6**
	baz=254,SNR=7.8						
S34M	**Telegraph Cree**	**86.95**	**31**	P	**P**	**15 16 23.5**	**+1.4**
	baz=256,SNR=27						
FARO	**Faro, Yukon**	**87.01**	**27**	P	**P**	**15 16 22.8**	**+0.5**
	baz=254,SNR=45						
T35M	**Bob Quinn**	**87.19**	**32**	P	**P**	**15 16 24.2**	**+0.9**
	baz=257,SNR=17						
BBB	**Bella Bella**	**87.39**	**37**	LR	LR	15 49 40.5	
	comp=Z,52nm,19.7s,baz=264,slow=32						
DLBC	**Dease Lake**	**87.64**	**31**	LR	LR	15 49 45.2	
	comp=Z,417nm,20.5s,baz=278,slow=32						
MMPY	**Sheldon Lake,**	**88.05**	**27**	P	**P**	**15 16 28.1**	**+0.8**
	baz=256,SNR=25						
WTLY	**Watson Lake, Y**	**88.63**	**29**	P	**P**	**15 16 31.2**	**+1.1**
	baz=258,SNR=6.0						
INK	**Inuvik**	**88.67**	**21**	LR	LR	15 55 36.9	
	comp=Z,104nm,19.0s,baz=237,slow=35						
INK	**Inuvik**	**88.67**	**21**	P	**P**	**15 16 29.9**	**-0.1**
	baz=253						
J01E	**Myrtle Point**	**88.67**	**47**	P	**P**	**15 16 31.7**	**+1.1**
	baz=262						
L02F	**Cave Junction**	**88.79**	**48**	P	**P**	**15 16 31.4**	**+0.2**
	baz=262						
K02D	**Willamette Mer**	**88.80**	**47**	P	**P**	**15 16 31.4**	**0.0**
	baz=262						
I02E	**Swisshome, OR**	**88.86**	**46**	P	**P**	**15 16 31.8**	**+0.4**
	baz=262						
I03D	**Drain, OR**	**89.16**	**46**	P	**P**	**15 16 33.1**	**+0.2**
	baz=262						
BRVK	**Borovoye**	**89.17**	**323**	P	**P**	**15 16 33.0**	**+0.3**
BRVK				IAmb	IAmb	15 16 34.6	
	comp=Z,7.9nm,0.8s						
BRVK	**Borovoye**	**89.17**	**323**	P	**P**	**15 16 33.0**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TGTN	**Hyland Airport**	**89.17**	**28**	P	**P**	**15 16 33.6**	**+0.9**
	baz=258						
YBH	**Yreka Blue Hor**	**89.38**	**48**	LR	LR	15 56 30.3	
	comp=Z,105nm,18.0s,baz=300,slow=36						
G03D	**McMinnville, O**	**89.42**	**45**	P	**P**	**15 16 34.2**	**+0.2**
	baz=262						

H04D	Lebanon	89.70	45	P	P	15 16 35.7	+0.3
	baz=263						
L04D	Klamath Falls	89.74	48	P	P	15 16 36.0	+0.2
	baz=263						
D03D	Eldon	89.84	42	P	P	15 16 36.4	+0.5
	baz=263						
I04A	Tendick Farm,	89.85	46	P	P	15 16 36.5	+0.3
	baz=263						
J04D	Umpqua Nationa	90.00	47	P	P	15 16 37.5	+0.3
	baz=263,SNR=6.9						
D04E	Lakebay	90.01	43	P	P	15 16 37.3	+0.5
	baz=263						
E04D	Cinebar	90.07	43	P	P	15 16 37.5	+0.4
	baz=263						
K04D	Chiloquin, OR	90.19	47	P	P	15 16 38.1	+0.2
	baz=264						
J05D	Fort Rock, OR	90.64	47	P	P	15 16 40.8	+0.8
	baz=264,SNR=17						
I05D	Terrebonne, OR	90.68	46	P	P	15 16 40.4	+0.4
	baz=264,SNR=6.0						
F05D	White Salmon	90.76	44	P	P	15 16 40.6	+0.3
	baz=264						
G05D	Wamic, OR	90.79	45	P	P	15 16 41.0	+0.5
	baz=264						
SMMC	Simmler	90.81	55	P	P	15 16 40.5	-0.4
	baz=265						
K05A	Summer Lake	90.83	47	P	P	15 16 42.2	+1.2
K05A				IAmb	IAmb	15 16 43.1	
	comp=Z,20nm,1.1s						
SNCC	San Nicolas Is	91.00	57	P	P	15 16 42.0	+0.2
	baz=265						
A36M	Sachs Harbour	92.24	18	P	P	15 16 46.3	-0.2
A36M	Sachs Harbour	92.24	18	P	P	15 16 46.4	-0.1
	baz=261						
C36M	Paulatuk	92.24	21	P	P	15 16 46.0	-0.6
C36M	Paulatuk	92.24	21	P	P	15 16 46.3	-0.3
	baz=262						
EDW2	Edwards Air Fo	92.41	55	P	P	15 16 48.4	+0.1
	baz=266						
NVAR	Mina Array Bea	92.42	52	P	P	15 16 49.2	+0.7
	comp=Z,2.9nm,0.8s,baz=262,slow=5.9,SNR=22						
NVAR				LR	LR	15 53 52.0	
	comp=Z,200nm,19.1s,baz=251,slow=33						
	comp=Z,2.9nm,0.8s						
CWC	Cottonwood Cre	92.45	54	P	P	15 16 48.5	-0.1
	baz=266						
LRMC	Laurel Mtn Rad	92.70	55	P	P	15 16 50.3	+0.5
	baz=266						
FURC	Furnace Creek,	93.43	54	P	P	15 16 54.0	+1.2
	baz=266						
PFO	Pinyon Flats O	93.59	57	LR	LR	15 50 54.5	
	comp=Z,205nm,21.6s,baz=242,slow=30						
PFO	Pinyon Flats O	93.59	57	P	P	15 16 54.6	+0.8
	baz=266						
TPFO	Pinon Flats	93.59	57	P	P	15 16 54.7	+0.8
	baz=266						
HEC	Hector,Ludlow	93.76	56	P	P	15 16 54.7	+0.1
	baz=267						
IKP	In-Ko-Pah, Jac	93.83	58	P	P	15 16 55.0	+0.1
	baz=267						
NEW	Newport	93.90	42	LR	LR	15 53 47.8	
	comp=Z,183nm,20.1s,baz=272,slow=32						
NEW	Newport	93.90	42	P	P	15 16 55.0	+0.2
	baz=267						
TPNV	Topopah Spring	93.95	53	P	P	15 16 55.9	+0.4
	baz=267						
BELC	Belle Mtn. Jos	93.99	56	P	P	15 16 55.9	+0.2
	baz=267						
SWSC	Sam W. Stewart	94.10	57	P	P	15 16 56.5	+0.5
	baz=267						
TUQ	Turquoise Moun	94.13	55	P	P	15 16 56.8	+0.5
	baz=267						
GMRC	Granite Mounta	94.31	56	P	P	15 16 57.3	+0.1
	baz=267						
BC3	Big Chuckawall	94.43	57	P	P	15 16 58.6	+0.9
	baz=267						
R11A	Troy Canyon, C	94.55	52	P	P	15 16 58.8	+0.6
	baz=267						
IRM	Iron Mountain	94.71	56	P	P	15 17 00.1	+1.2
	baz=267						
ELK	Elko	94.92	50	LR	LR	15 52 46.5	
	comp=Z,151nm,21.4s,baz=270,slow=31						
RPN	Rapa Nui	95.08	118	LR	LR	15 53 03.4	
	comp=Z,160nm,20.8s,baz=258,slow=31						
WSAR	Wadi Sarin	95.41	293	LR	LR	16 01 50.5	
	comp=Z,25nm,20.0s,baz=112,slow=37						
HLID	Hailey	95.62	47	P	P	15 17 03.5	+0.5
	baz=269						
YKA	Yellowknife Ar	95.67	28	P	P	15 17 02.9	+0.3
	comp=Z,6.5nm,0.8s,baz=273,slow=4.6,SNR=84						
YKA				PKKPbc	PKKPbc	15 33 52.2	-3.3
	comp=Z,0.4nm,0.8s,baz=88,slow=3.0,SNR=5.1						
YKA				LR	LR	15 56 15.1	
	comp=Z,230nm,20.5s,baz=258,slow=33						
	comp=Z,6.5nm,0.8s						
YKA	Yellowknife Ar	95.67	28	P	P	15 17 02.5	0.0
MSO	Missoula	96.01	44	P	P	15 17 05.5	+0.8
	baz=269						
ARU	Arti	96.20	326	LR	LR	16 01 23.3	
	comp=Z,250nm,20.1s,baz=84,slow=36						
ARU	Arti	96.20	326	c iP	P	15 17 05.1	0.0
ARU						15 21 00.4	
ARU				S	SKSac	15 27 34.3	-2.5
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,257nm,19.0s						
AKTO	Aktyubinsk	96.57	320	LR	LR	16 02 27.9	
	comp=Z,78nm,18.9s,baz=85,slow=37						
214A	Organ Pipe Nat	96.58	59	P	P	15 17 08.4	+0.9
	baz=268						
DUG	Dugway, Tooele	96.75	50	P	P	15 17 08.7	+0.5
	baz=269						
BOZ	Bozeman (W)	97.62	45	P	Pdif	15 17 12.1	+0.1
	baz=271						
WUAZ	Wupatki	97.85	55	P	Pdif	15 17 14.1	+0.8
	baz=270						
H17A	Grant Village	98.39	46	P	P	15 17 14.7	-0.9
	baz=271						
LPIG	La Paz	98.58	66	LR	LR	15 58 19.7	
	comp=Z,86nm,18.1s,baz=242,slow=33						
BW06	Boulder Array	99.17	48	P	Pdif	15 17 18.3	-0.9
	baz=272						
PDAR	Pinedale Array	99.17	48	P	Pdif	15 17 18.9	-0.2
	comp=Z,3.0nm,0.8s,baz=252,slow=3.0,SNR=23						
PDAR				LR	LR	16 00 01.3	
	comp=Z,130nm,18.2s,baz=273,slow=34						
	comp=Z,3.0nm,0.8s						
RLMT	Red Lodge	99.30	45	P	Pdif	15 17 19.0	-0.6
	baz=272						
MVCO	Mesa Verde	100.15	53	P	Pdif	15 17 23.2	-0.4
	baz=272						
121A	Cookes Peak, D	100.85	58	P	Pdif	15 17 25.8	-1.0
	baz=271						
LAO	LASA Array	101.32	44	P	Pdif	15 17 28.4	0.0
	baz=275						
K22A	Casper	101.41	48	P	Pdif	15 17 28.9	-0.1
	baz=274						
N23A	Red Feather La	101.96	49	P	Pdif	15 17 31.9	+0.3
	baz=274						
SDCO	Great Sand Dun	102.51	53	P	Pdif	15 17 33.2	-1.0
	baz=274						
RSSD	Black Hills	103.09	46	P	Pdif	15 17 35.6	-0.9
	baz=276						
ARCES	ARCESS Array B	106.85	343	PKiKP	PKiKP	15 22 02.3	+0.2
	comp=Z,1.4nm,0.6s,baz=85,slow=1.3,SNR=7.3						
EYMN	Ely	110.92	40	P	PKiKP	15 22 09.6	-0.7
	baz=287						
FINES	FINESS Array B	110.99	336	Pdiff	Pdif	15 18 10.4	-0.5
	comp=Z,2.0nm,1.1s,baz=56,slow=3.4,SNR=5.5						
FINES				PKiKP	PKiKP	15 22 09.7	-0.3
	comp=Z,1.4nm,0.8s,baz=121,slow=1.1,SNR=5.6						
W39A	Magazine	112.18	54	P	PKiKP	15 22 12.2	-0.9
	baz=280						
U40A	Yellville	112.71	53	P	PKiKP	15 22 13.4	-0.7
	baz=281						
JFWS	Jewell Farm	113.16	45	P	PKiKP	15 22 14.4	-0.3
	baz=286						
W41B	Gary Mavity, V	113.42	54	P	PKiKP	15 22 15.3	-0.1
	baz=281						
MNK	Minsk	113.49	328	i P	Pdif	15 18 19.1	-3.0
MNK				i		15 23 09.4	
MNK				i PPP	PPP	15 25 33.4	
MNK				i		15 29 21.8	
MNK				i PS	PS	15 32 46.8	+3.1
MNK				i SS	SS	15 38 49.5	+0.5
MNK				i SSS	SSS	15 43 05.3	
MNK				MLR	MLR		
	comp=Z,186nm,19.0s						
MNK				MLR	MLR		
	comp=E,23nm,18.0s						
MNK				MLR	MLR		
	comp=N,137nm,17.0s						
MNK	Minsk	113.49	328	i P	Pdif	15 18 19.1	-3.0
MNK				i P	Pdif	15 18 19.1	-3.0
MNK				i P	Pdif	15 18 19.1	-3.0
MNK				i pP	pPdif	15 18 37.8	+0.1
MNK				i PP	PP	15 23 09.5	+2.9
MNK				i PPP	PPP	15 25 33.5	
MNK				i SKS	SKSdf	15 29 21.8	-0.5
MNK				i PS	PS	15 32 46.8	+3.1
MNK				i SS	SS	15 38 49.5	+0.5
MNK				i SSS	SSS	15 43 05.4	
MNK				i LR	LR	16 08 17.4	
MNK				i LRM	MLR	16 11 45.1	
	comp=Z,186nm,19.1s						
MNK				i LRM	MLR	16 11 52.7	
	comp=E,23nm,17.8s						
MNK				i LRM	MLR	16 11 55.3	
	comp=N,137nm,16.5s						
AKBB	Malin Array Si	114.36	324	⇓iPKIKP	PKPdf	15 22 16.2	-0.5
BRTR	Keskin Array B	115.10	312	PKP	PKiKP	15 22 17.6	-1.1
	comp=N,0.6nm,0.6s,baz=100,slow=1.7,SNR=4.6						
NB2	NORSAR Subarra	116.88	340	PKPdf	PKPdf	15 22 20.1	-1.3
	comp=Z,6.4nm,1.7s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.88	340	PKP	PKPdf	15 22 20.8	-0.6
	comp=Z,1.2nm,0.7s,baz=47,slow=2.0,SNR=7.3						
O48B	Farmland	117.59	47	P	PKPdf	15 22 22.7	-0.6
	baz=288						
LRAL	Lakeview Retre	118.13	55	P	PKPdf	15 22 23.8	-0.7
	baz=283						
MLR	Muntele Rosu	118.50	320	PKP	PKPdf	15 22 24.7	-0.4
	comp=Z,1.0nm,0.4s,baz=326,slow=3.0,SNR=3.9						
ACSO	Alum Creek Sta	119.17	46	P	PKPdf	15 22 26.3	0.0
	baz=290						
PLCA	Paso Flores	119.92	143	PKP	PKiKP	15 22 27.9	-0.1
	comp=Z,2.1nm,0.7s,baz=288,slow=4.4,SNR=7.7						
PLCA	Paso Flores	119.92	143		PKiKP	15 22 28.3	+0.3
PLCA	Paso Flores	119.92	143	PKIKP	PKiKP	15 22 28.3	+0.3
TZTN	Tazewell	119.94	50	P	PKPdf	15 22 27.5	-0.4
	baz=288						
P52A	Corning	119.99	47	P	PKPdf	15 22 27.3	-0.7
	baz=290						
M53A	WI Miller and	120.36	44	P	PKPdf	15 22 28.0	-0.6
	baz=292						
O53A	New Philadelph	120.43	46	P	PKPdf	15 22 28.6	-0.1
	baz=291						
ERPA	Erie	120.57	43	P	PKPdf	15 22 28.7	-0.3
	baz=294						
GOGA	Godfrey	120.90	54	P	PKPdf	15 22 29.4	-0.5
	baz=286						
MORC	Moravsky Berou	121.37	327	ePKP	PKiKP	15 22 30.5	0.0
KRLC	Kraliky	121.60	328	AMS	AMS	16 14 20.0	
	comp=Z,200nm,21.8s						
MCWV	Mont Chateau	121.62	46	P	PKPdf	15 22 31.0	0.0
	baz=292						
DPC	Dobruska-Polom	121.68	329	ePKIKP	PKiKP	15 22 31.3	+0.2
DPC				MLR	MLR		
	comp=Z,100nm,21.7s						
DPC	Dobruska-Polom	121.68	329	ePKPDF	PKiKP	15 22 31.3	+0.2
DPC				AMS	AMS	16 15 50.0	
	comp=Z,100nm,21.7s						
JAVC	Velka Javorina	121.81	327	ePKP	PKiKP	15 22 32.2	+0.8
KMSC	Kings Mountain	122.08	51	P	PKPdf	15 22 31.9	-0.2
	baz=288						
BLA	Blacksburg	122.09	49	P	PKPdf	15 22 31.5	-0.6
	baz=290						
VRAC	Vranov	122.14	327	PKP	PKPdf	15 22 31.8	+0.1
	comp=Z,1.7nm,0.5s,baz=288,slow=1.9,SNR=3.5						
VRAC	Vranov	122.14	327	ePKP	PKPdf	15 22 31.6	-0.2
KRUC	Moravsky	122.39	327	ePKP	PKPdf	15 22 32.0	-0.2
PVCC	Panska Ves	122.47	330	AMS	AMS	16 19 30.0	
	comp=Z,100nm,21.0s						
BRG	Berggiesshubel	122.58	330	ePKP	PKiKP	15 22 33.1	+0.3
BRG				Amp		15 22 34.6	
	comp=Z,6.9nm,1.1s						
BRG	Berggiesshubel	122.58	330	ePKIKP	PKiKP	15 22 33.0	+0.3
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SSPA	Standing Stone	122.62	44	P	PKPdf	15 22 32.6	-0.3
	baz=294						
CLL	Collm	122.76	331	⇓iPKPdf	PKiKP	15 22 33.2	+0.1
	comp=Z,8.0nm,1.0s						
CLL				i x	x	15 22 35.3	
CLL				epPKPdf	pPKPdf	15 22 50.0	+1.8
CLL				ePP	PP	15 24 12.0	+1.2
CLL				epPS		15 34 18.0	
CLL				ePPS	PPS	15 35 33.0	
CLL				eSS	SS	15 41 06.0	+17
CLL				eSSS	SSS	15 45 36.0	
CLL				eSSSS		15 48 48.0	
CLL				Lm	MLR	16 20 00.0	
	comp=Z,100nm,20.1s						
PRU	Pruhonice	122.82	329	ePKIKP	PKPdf	15 22 32.8	-0.2
PRU				MLR	MLR		
	comp=Z,100nm,17.8s						
PRU	Pruhonice	122.82	329	ePKPDF	PKPdf	15 22 32.8	-0.2
PRU				AMS	AMS	16 19 10.0	
	comp=Z,100nm,17.8s						
LONY	Lake Ozonia	122.98	39	P	PKPdf	15 22 33.1	-0.4
	baz=300						
IDI	Anoyia	123.06	309	PKP	PKPdf	15 22 33.9	-0.2
	comp=Z,4.5nm,0.6s,baz=334,slow=22,SNR=5.5						
RONA	Rosalia, Austr	123.22	326	eP	PKPdf	15 22 33.7	-0.2
BINY	Binghamton	123.23	42	P	PKPdf	15 22 34.0	-0.1
	baz=297						
CONA	Conrad Observa	123.33	326	eP	PKPdf	15 22 33.4	-0.8
	comp=Z,2.5nm,0.7s						
CKRC	Cesky Krumlov	123.64	328	ePKPDF	PKiKP	15 22 35.0	0.0
CKRC				AMS	AMS	16 16 40.0	
	comp=Z,200nm,18.7s						
NKC	Novy Kostel	123.72	330	AMS	AMS	16 19 00.0	
	comp=Z,200nm,16.0s						
KHC	Kasperske Hory	123.84	329	ePKIKP	PKiKP	15 22 35.4	0.0
KHC				MLR	MLR		
	comp=Z,100nm,19.7s						
KHC	Kasperske Hory	123.84	329	ePKPDF	PKiKP	15 22 35.4	0.0
KHC				AMS	AMS	16 16 40.0	
	comp=Z,100nm,19.7s						
GERES	GERESS Array B	123.95	328	PKP	PKPdf	15 22 35.0	-0.4
	comp=Z,2.5nm,0.7s,baz=64,slow=3.1,SNR=26						
DWPF	Disney Wildern	123.96	59	P	PKPdf	15 22 35.6	-0.3
	baz=284						
MOA	Molln	124.25	327	i P	PKPdf	15 22 34.9	-1.0
	comp=Z,1.5nm,0.6s						
SOKA	Soboth	124.51	326	eP	PKPdf	15 22 35.2	-1.3
	comp=Z,7.4nm,1.6s						
BIOA	Bad Ischl, Aus	124.68	327	i P	PKPdf	15 22 35.6	-1.1
CRES	Cresnjev	124.75	325	i PKPdf	PKPdf	15 22 36.8	-0.2
LBNH	Lisbon	124.81	38	P	PKPdf	15 22 36.9	-0.2
	baz=302						
OBKA	Obir	124.88	326	i P	PKPdf	15 22 36.7	-0.5
	comp=Z,1.8nm,0.5s						
MOZS	Mozjanca	125.06	325	i PKPdf	PKPdf	15 22 37.0	-0.5
PAL	Palisades	125.16	42	P	PKiKP	15 22 38.0	-0.2
	baz=298						
KBA	Koelnbreinsper	125.21	327	i P	PKPdf	15 22 36.6	-1.4
	comp=Z,2.1nm,0.7s						
L61B	Northampton	125.26	40	P	PKPdf	15 22 37.8	-0.1
	baz=300						
CRNS	Crni Vrh	125.29	325	i PKPdf	PKPdf	15 22 37.5	-0.5
MYKA	Terra Mystica	125.32	326	eP	PKPdf	15 22 37.2	-0.8
	comp=Z,2.4nm,0.7s						
PKME	Peaks-Kenny Pk	125.81	35	P	PKPdf	15 22 38.6	-0.2
	baz=305						
ABTA	Abfaltersbach	125.87	327	eP	PKPdf	15 22 37.8	-1.3
	comp=Z,12nm,1.7s						
HRV	Adam Dziewonsk	125.95	39	P	PKPdf	15 22 39.3	+0.1
	baz=301						
WATA	Walderalm	126.00	328	eP	PKPdf	15 22 38.7	-0.7
	comp=Z,12nm,1.2s						
WTTA	Wattenberg	126.02	328	eP	PKPdf	15 22 39.3	-0.2
	comp=Z,20nm,1.5s,SNR=5.7						
EKA	Eskdalemuir Ar	126.02	343	PKP	PKPdf	15 22 39.0	+0.1
	comp=Z,1.9nm,0.6s,baz=24,slow=2.9,SNR=11						
MOTA	Moosalm	126.25	328	eP	PKPdf	15 22 39.3	-0.6
	comp=Z,10.0nm,1.0s,SNR=5.0						
SQTA	Sankt Quirin	126.27	328	eP	PKPdf	15 22 39.4	-0.5
	comp=Z,9.8nm,1.3s						
RETA	Reutte	126.33	329	i P	PKPdf	15 22 39.6	-0.4
	comp=Z,1.4nm,0.5s						
MEM	Membach	126.47	334	dPKiKP	PKiKP	15 22 40.4	0.0
FETA	Feichten	126.65	328	eP	PKPdf	15 22 40.7	0.0
	comp=Z,11nm,1.1s,SNR=7.3						
DAVA	Damuels	126.92	329	eP	PKPdf	15 22 40.9	-0.3
	comp=Z,8.9nm,1.0s						
BGES	Gesves	127.03	334	dPKiKP	PKiKP	15 22 41.4	-0.2
WLF	Walferdange	127.09	333	dPKiKP	PKiKP	15 22 42.1	+0.4
BMRD	Maredsous	127.23	334	dPKiKP	PKiKP	15 22 41.9	-0.1
DAVOX	Davos/Dischmat	127.25	328	PKP	PKPdf	15 22 41.8	-0.1
	comp=Z,3.4nm,0.5s,baz=193,slow=1.7,SNR=9.0						
DOU	Dourbes	127.46	334	dPKiKP	PKiKP	15 22 42.3	-0.1
LPAZ	La Paz	134.68	119	PKP	PKPdf	15 22 57.9	+0.6
	comp=Z,3.9nm,0.8s,baz=2.8,slow=0.7,SNR=10						
LPAZ	La Paz	134.68	119	PKPdf	PKiKP	15 22 59.0	+0.2
LPAZ	La Paz	134.68	119	PKIKP	PKiKP	15 22 59.0	+0.2
CPUP	Villa Florida	137.63	139	PKP	PKPdf	15 23 02.2	+0.4
	comp=Z,3.2nm,0.8s,baz=348,slow=1.1,SNR=7.1						
MDT	Midelt	144.92	325	PKPbc	PKPbc	15 23 14.4	+0.4
	comp=Z,8.4nm,1.0s,baz=93,slow=0.4,SNR=12						
MPOM	Morne Pois Mar	145.87	71		PKPab	15 23 17.9	0.0
TOSP	Speyside	146.76	77		PKPab	15 23 21.3	0.0
TORD	Torodi Ar. Bea	150.00	288	PKP	PKPdf	15 23 23.0	-0.6
	comp=Z,20nm,1.1s,baz=211,slow=0.4,SNR=21						
TORD				PKPbc	PKPbc	15 23 27.6	-1.0
	comp=Z,32nm,0.7s,baz=72,slow=2.2,SNR=73						
TORD	Torodi Ar. Bea	150.00	288		PKPbc	15 23 28.2	-0.3
BDFB	Brasilia	151.25	136	PKP	PKPdf	15 23 26.4	+0.7
	comp=Z,6.4nm,0.9s,baz=43,slow=1.9,SNR=6.0						
BDFB				PKPbc	PKPbc	15 23 31.8	+0.2
	comp=Z,15nm,0.8s,baz=23,slow=1.7,SNR=15						
DBIC	Dimbokro	157.35	276	PKPab	PKPab	15 24 05.0	-0.6
	comp=Z,6.9nm,1.0s,baz=37,slow=6.1,SNR=4.9						

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*TAP **27** 15:06:40.8, 24°.85N×121°.93E, h85km, ML3.8, B*
*JMA **27** 15:06:41.1±0.2, 24°.8N±0°.5×122°.0E±0°.5, h82km±2km,*
MV2.8/14, TAIWAN REGION
ISC 27 15:06:41.3±1.2**, 24°.79N**±0°.03×**121°.95E**±0°.02**, h84**km±5km**,**
n126, σ0ˢ82/239**, 38C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.06	340	eP	Pn	15 06 53.1	-0.1
	baz=112						
EGS				eS	Sn	15 07 01.9	-0.1
	baz=112						
NTC	Toucheng	0.13	300	P	Pn	15 06 53.0	-0.3
	baz=274						
NTC				eS	Sn	15 07 01.3	-0.9
	baz=274						
ILA	Ilan	0.19	263	eP	Pn	15 06 53.7	+0.2
	baz=242						
ILA				eS	Sn	15 07 02.9	+0.5
	baz=242						
TWC	Suao	0.20	208	⇑P	Pn	15 06 53.5	-0.1
	baz=195						
TWC				eS	Sn	15 07 02.2	-0.3
	baz=195						
TIPB	Shuangxi	0.22	327	⇑iP	Pn	15 06 53.4	-0.2
	baz=322						
TIPB				i S	Sn	15 07 01.9	-0.8
	baz=322						
TWB1	Santiao Chiao	0.22	8	⇓iP	Pn	15 06 53.4	-0.2
	baz=21						
TWB1				i S	Sn	15 07 01.9	-0.8
	baz=21						
NDS	Dongshan	0.27	235	⇑iP	Pn	15 06 54.1	+0.2
	baz=222						
NDS				i S	Sn	15 07 04.2	+1.1
	baz=222						
TWE	Neicheng	0.27	256	⇑P	Pn	15 06 53.9	+0.1
	baz=240						
TWE				eS	Sn	15 07 03.8	+0.7
	baz=240						
SXI1	Grass Mountain	0.31	347	i P	Pn	15 06 53.8	-0.4
	baz=349						
SXI1				eS	Sn	15 07 02.9	-0.9
	baz=349						
NWF	Wu-fen Shan	0.32	331	⇑P	Pn	15 06 54.0	-0.2
	baz=329						
NWF				eS	Sn	15 07 03.0	-0.8
	baz=329						
WFSB	Wu-fen Shan	0.32	331	⇑P	Pn	15 06 54.0	-0.1
	baz=329						
WFSB				eS	Sn	15 07 03.0	-0.6
	baz=329						
FUSB	Fushanzhiwuyua	0.33	265	⇑iP	Pn	15 06 54.4	+0.1
	baz=254						
FUSB				i S	Sn	15 07 03.5	-0.4
	baz=254						
EWUT	Wuta	0.38	205	⇑eP	Pn	15 06 54.7	+0.2
	baz=199						
EWUT				eS	Sn	15 07 04.6	+0.4
	baz=199						
ENTT	Nioudou	0.38	247	⇑iP	Pn	15 06 55.0	+0.5
	baz=237						
ENTT				S	Sn	15 07 05.6	+1.3
	baz=237						
TWA	Mucha	0.39	300	⇑eP	Pn	15 06 54.4	-0.2
	baz=293						
TWA				eS	Sn	15 07 03.8	-0.6
	baz=293						
TNOU	National Taiwa	0.40	335	eP	Pn	15 06 54.4	-0.2
	baz=335						
ENA	Nanau	0.41	208	⇑eP	Pn	15 06 54.9	+0.2
	baz=201						
ENA				eS	Sn	15 07 05.3	+0.7
	baz=201						
NWLT	Wulai	0.41	269	⇑iP	Pn	15 06 54.8	0.0
	baz=260						
NWLT				i S	Sn	15 07 04.3	-0.5
	baz=260						
NHDH	Xindian Distri	0.43	294	⇑eP	Pn	15 06 54.8	0.0
	baz=287						
NHDH				eS	Sn	15 07 05.1	+0.2
	baz=287						
NHY	Taipei	0.43	306	eP	Pn	15 06 53.9	-1.0
	baz=300						
NHY				eS	Sn	15 07 05.1	+0.2
	baz=300						
NDT	Datong Townshi	0.44	245	⇑iP	Pn	15 06 55.5	+0.5
	baz=237						
NDT				eS	Sn	15 07 05.9	+0.8
	baz=237						
TATO	Taipei	0.46	294	eP	Pn	15 06 55.0	-0.1
	baz=288						
TATO				eS	Sn	15 07 04.5	-0.9
	baz=288						
LATG	Datong	0.46	237	⇑iP	Pn	15 06 55.7	+0.4
	baz=230						
LATG				eS	Sn	15 07 06.8	+1.2
	baz=230						
YM01	YM01	0.50	316	eP	Pn	15 06 55.2	-0.2
	baz=312						
YM01				eS	Sn	15 07 05.2	-0.7
	baz=312						
YM08	YM08	0.52	320	eP	Pn	15 06 55.3	-0.3
	baz=318						
YM08				eS	Sn	15 07 04.9	-1.3
	baz=318						
YHNB	Yeheng	0.54	257	⇑iP	Pn	15 06 55.8	0.0
	baz=251						
YHNB				eS	Sn	15 07 06.4	-0.2
	baz=251						
NSK	Sanguang	0.55	258	⇑iP	Pn	15 06 55.9	0.0
	baz=251						
NSK				i S	Sn	15 07 06.5	-0.3
	baz=251						
TWS1	Kuangyinshan	0.58	303	eP	Pn	15 06 56.4	+0.4
	baz=299						
TWS1				eS	Sn	15 07 07.3	+0.3
	baz=299						
TWY	Chenhua	0.58	327	eP	Pn	15 06 56.2	+0.1
	baz=325						
TWY				eS	Sn	15 07 07.2	+0.1
	baz=325						
NTST	Danshui	0.59	309	eP	Pn	15 06 56.6	+0.4
	baz=306						
NNSB	Datong	0.63	236	⇑eP	Pn	15 06 57.0	+0.2
	baz=230						
NNSB				eS	Sn	15 07 08.1	-0.1
	baz=230						
NTY	Taoyuan	0.63	290	eP	Pn	15 06 57.1	+0.5
	baz=285						
NTY				eS	Sn	15 07 08.9	+1.0
	baz=285						
NNS	Nan Shan	0.63	237	⇑eP	Pn	15 06 57.0	+0.2
	baz=231						
NNS				eS	Sn	15 07 08.5	+0.3
	baz=231						
NACB	Ninganchiao	0.69	208	⇑P	Pn	15 06 56.6	-0.7

	baz=205						
NACB				eS	Sn	15 07 09.3	+0.2
	baz=205						
ETL	**Fush Village**	**0.70**	**206**	eP	**Pn**	**15 06 56.8**	**-0.5**
	baz=202						
ETL				eS	**Sn**	**15 07 09.9**	**+0.8**
	baz=202						
NCU	**National Centr**	**0.72**	**285**	eP	**Pn**	**15 06 57.8**	**+0.3**
	baz=280						
NCU				eS	**Sn**	**15 07 10.4**	**+0.9**
	baz=280						
ETLH	**Xiulin Townshi**	**0.72**	**217**	⇑P	**Pn**	**15 06 57.2**	**-0.4**
	baz=213						
ETLH				eS	**Sn**	**15 07 09.4**	**-0.3**
	baz=213						
NCUH	**Zhongli**	**0.72**	**284**	eP	**Pn**	**15 06 57.7**	**+0.2**
	baz=280						
NCUH				eS	**Sn**	**15 07 10.0**	**+0.4**
	baz=280						
NFF	**Wufeng Townshi**	**0.78**	**259**	⇑P	**Pn**	**15 06 58.0**	**-0.1**
	baz=254						
NFF				eS	**Sn**	**15 07 10.2**	**-0.5**
	baz=254						
TWD	**Chiawan**	**0.78**	**205**	⇑eP	**Pn**	**15 06 57.4**	**-0.7**
	baz=201						
TWD				eS	**Sn**	**15 07 10.1**	**-0.5**
	baz=201						
FUSS	**Fushou**	**0.84**	**230**	⇑eP	**Pn**	**15 06 59.4**	**+0.3**
	baz=226						
FUSS				eS	**Sn**	**15 07 12.2**	**-0.1**
	baz=226						
PCYT	**Pengchaiyu**	**0.84**	**7**	P	**Pn**	**15 06 58.9**	**+0.1**
	baz=10.0						
PCYT				eS	**Sn**	**15 07 11.2**	**-0.7**
	baz=10.0						
HSN1	**Hsinchu**	**0.85**	**269**	eP	**Pn**	**15 06 59.1**	**+0.2**
	baz=265						
HSN1				eS	**Sn**	**15 07 12.5**	**+0.5**
	baz=265						
NHW	**Xinwu Township**	**0.85**	**285**	eP	**Pn**	**15 06 59.1**	**+0.3**
	baz=281						
NHW				eS	**Sn**	**15 07 12.9**	**+0.9**
	baz=281						
LIOB	**Emei**	**0.86**	**261**	⇑eP	**Pn**	**15 06 59.1**	**+0.1**
	baz=256						
LIOB				eS	**Sn**	**15 07 12.2**	**-0.1**
	baz=256						
HWA	**Hwalien**	**0.87**	**202**	eP	**Pn**	**15 06 58.9**	**-0.2**
	baz=198						
HWA				eS	**Sn**	**15 07 13.9**	**+1.6**
	baz=198						
SBCB	**Hsinchu**	**0.88**	**270**	eP	**Pn**	**15 06 59.5**	**+0.3**
	baz=266						
SBCB				eS	**Sn**	**15 07 12.9**	**+0.4**
	baz=266						
NSTT	**Nanjuang**	**0.88**	**260**	⇑eP	**Pn**	**15 06 59.1**	**-0.1**
	baz=255						
NSTT				eS	**Sn**	**15 07 12.4**	**-0.2**
	baz=255						
TWT	**Tachien**	**0.89**	**233**	eP	**Pn**	**15 07 00.2**	**+0.8**
	baz=230						
TWT				eS	**Sn**	**15 07 13.9**	**+0.9**
	baz=230						
HSN	**Hsinchu**	**0.90**	**271**	⇑P	**Pn**	**15 06 59.2**	**-0.1**
	baz=269						
HSN				eS	**Sn**	**15 07 12.5**	**-0.3**
	baz=269						
WHF	**Hehuan Shan**	**0.90**	**225**	⇑eP	**Pn**	**15 06 59.8**	**-0.1**
	baz=221						
WHF				eS	**Sn**	**15 07 13.9**	**+0.2**
	baz=221						
TDCB	**Techi**	**0.90**	**234**	⇑eP	**Pn**	**15 07 00.2**	**+0.6**
	baz=230						
TDCB				eS	**Sn**	**15 07 13.8**	**+0.6**
	baz=230						
ETM	**Tongmen**	**0.92**	**207**	eP	**Pn**	**15 06 58.7**	**-1.0**
	baz=204						
ETM				eS	**Sn**	**15 07 13.3**	**-0.1**
	baz=204						
JYNG	**Yonagunijimaku**	**0.96**	**110**	P	**Pn**	**15 06 59.9**	**-0.2**
JYNG				eS	**Sn**	**15 07 13.7**	**-0.5**
TEYL	**Yanliau Villag**	**0.97**	**200**	eP	**Pn**	**15 06 59.9**	**-0.3**
	baz=198						
TEYL				eS	**Sn**	**15 07 15.5**	**+1.1**
	baz=198						
YOJ	**Yonaguni jima**	**1.01**	**108**	⇓P	**Pn**	**15 07 00.4**	**-0.3**
	baz=111						
YOJ				eS	**Sn**	**15 07 15.6**	**+0.3**
	baz=111						
YOJ	**Yonaguni jima**	**1.01**	**108**	P	**Pn**	**15 07 00.5**	**-0.3**
YOJ				eS	**Sn**	**15 07 15.4**	**+0.2**
CHGB	**Renai**	**1.02**	**225**	⇑eP	**Pn**	**15 07 01.3**	**+0.3**
	baz=221						
CHGB				eS	**Sn**	**15 07 15.8**	**+0.1**
	baz=221						
WHP	**Taichung City**	**1.05**	**241**	⇑eP	**Pn**	**15 07 01.9**	**+0.6**
	baz=238						
WHP				eS	**Sn**	**15 07 16.7**	**+0.5**
	baz=238						
ESL	**Shilin**	**1.08**	**206**	eP	**Pn**	**15 07 00.1**	**-1.4**
	baz=203						
ESL				eS	**Sn**	**15 07 15.9**	**-0.8**
	baz=203						
NMLH	**Miaoli**	**1.09**	**257**	⇑eP	**Pn**	**15 07 01.8**	**+0.1**
	baz=253						
NMLH				eS	**Sn**	**15 07 16.7**	**-0.2**
	baz=253						
OWD	**Renai**	**1.09**	**221**	⇑eP	**Pn**	**15 07 01.8**	**-0.1**
	baz=218						
OWD				eS	**Sn**	**15 07 17.1**	**-0.1**
	baz=218						
WUSB	**Renai**	**1.10**	**224**	⇑eP	**Pn**	**15 07 02.3**	**+0.3**
	baz=221						
WUSB				eS	**Sn**	**15 07 17.6**	**+0.2**
	baz=221						
TEGC	**Jichi Village**	**1.14**	**199**	eP	**Pn**	**15 07 02.1**	**-0.1**
	baz=197						
TEGC				eS	**Sn**	**15 07 18.9**	**+1.0**
	baz=197						
NSY	**Sanyi**	**1.15**	**251**	⇑eP	**Pn**	**15 07 02.8**	**+0.4**
	baz=248						
NSY				eS	**Sn**	**15 07 18.6**	**+0.4**
	baz=248						
TWQ1	**Liyutan**	**1.16**	**248**	eP	**Pn**	**15 07 02.6**	**+0.1**
	baz=245						
TWQ1				eS	**Sn**	**15 07 18.2**	**-0.2**
	baz=245						
WPL	**Puli Township**	**1.19**	**230**	eP	**Pn**	**15 07 03.6**	**+0.6**
	baz=227						
WPL				eS	**Sn**	**15 07 20.4**	**+1.2**
	baz=227						
WCS	**Beigang Elemen**	**1.20**	**233**	eP	**Pn**	**15 07 03.4**	**+0.4**
	baz=230						
WCS				eS	**Sn**	**15 07 20.0**	**+0.8**
	baz=230						
DPDB	**Guoxing**	**1.20**	**231**	eP	**Pn**	**15 07 03.6**	**+0.5**
	baz=228						
EGFH	**Guangfu**	**1.21**	**203**	eP	**Pn**	**15 07 01.5**	**-1.7**
	baz=201						
EGFH				eS	**Sn**	**15 07 19.8**	**+0.2**
	baz=201						
VWDT	**VWDT**	**1.27**	**216**	⇑eP	**Pn**	**15 07 04.0**	**+0.2**
	baz=213						
VWDT				eS	**Sn**	**15 07 22.0**	**+1.2**
	baz=213						
WDJ	**Dajia District**	**1.27**	**250**	eP	**Pn**	**15 07 04.3**	**+0.4**
	baz=247						
WDJ				eS	**Sn**	**15 07 21.3**	**+0.4**
	baz=247						
SMLT	**Sun Moon Lake**	**1.32**	**227**	⇑eP	**Pn**	**15 07 05.0**	**+0.4**
	baz=224						
SMLT				eS	**Sn**	**15 07 23.4**	**+1.3**
	baz=224						
TCU	**Taichung**	**1.33**	**242**	eP	**Pn**	**15 07 04.8**	**+0.3**
	baz=238						
TYC	**Yuchr**	**1.33**	**229**	⇑eP	**Pn**	**15 07 05.0**	**+0.3**
	baz=226						
TYC				eS	**Sn**	**15 07 23.0**	**+0.8**
	baz=226						
SSLB	**Suanglung**	**1.35**	**223**	eP	**Pn**	**15 07 05.3**	**+0.4**
	baz=220						
SSLB				eS	**Sn**	**15 07 23.5**	**+0.8**
	baz=220						
HGSD	**Ruisui**	**1.38**	**201**	eP	**Pn**	**15 07 04.6**	**-0.6**
	baz=199						
HGSD				eS	**Sn**	**15 07 23.6**	**+0.3**
	baz=199						
EHY	**Hungye**	**1.40**	**204**	eP	**Pn**	**15 07 03.8**	**-1.8**
	baz=202						
EHY				eS	**Sn**	**15 07 21.9**	**-1.8**
	baz=202						
WCHH	**Zhanghua**	**1.46**	**241**	eP	**Pn**	**15 07 05.9**	**-0.3**
	baz=239						
WCHH				eS	**Sn**	**15 07 24.8**	**-0.2**
	baz=239						
WNT	**Mingjian**	**1.47**	**232**	eP	**Pn**	**15 07 06.8**	**+0.3**
	baz=229						
WJS	**Zhushan**	**1.48**	**230**	eP	**Pn**	**15 07 06.7**	**+0.2**
	baz=227						
WJS				eS	**Sn**	**15 07 26.2**	**+0.8**
	baz=227						
YULB	**Yu-li**	**1.51**	**203**	eP	**Pn**	**15 07 05.3**	**-1.6**
	baz=202						
YULB				eS	**Sn**	**15 07 24.7**	**-1.7**
	baz=202						
TWF1	**Yuli**	**1.55**	**203**	eP	**Pn**	**15 07 05.8**	**-1.6**
	baz=201						
TWF1				eS	**Sn**	**15 07 25.6**	**-1.6**
	baz=201						
YUS	**Yu-Shan**	**1.58**	**215**	eP	**Pn**	**15 07 08.6**	**+0.3**
	baz=213						
YUS				eS	**Sn**	**15 07 29.8**	**+1.1**
	baz=213						
ALS	**Alishan**	**1.65**	**220**	eP	**Pn**	**15 07 09.5**	**+0.5**
	baz=217						
ALS				eS	**Sn**	**15 07 31.3**	**+1.4**
	baz=217						
IRIF	**Iriomote-Funau**	**1.68**	**105**	P	**Pn**	**15 07 08.7**	**-0.4**
WGK	**Gukeng**	**1.68**	**229**	eP	**Pn**	**15 07 09.6**	**+0.5**
	baz=227						
WGK				eS	**Sn**	**15 07 31.1**	**+1.0**
	baz=227						
WRL	**Guolierlin Hig**	**1.69**	**239**	eP	**Pn**	**15 07 08.9**	**-0.3**
	baz=236						
WRL				eS	**Sn**	**15 07 29.4**	**-1.0**
	baz=236						
FULB	**Fuli**	**1.69**	**201**	eP	**Pn**	**15 07 08.8**	**-0.5**
	baz=200						
FULB				eS	**Sn**	**15 07 31.7**	**+1.2**
	baz=200						
WDLH	**Douliu**	**1.69**	**230**	eP	**Pn**	**15 07 09.5**	**+0.2**
	baz=228						
WDLH				eS	**Sn**	**15 07 30.8**	**+0.2**
	baz=228						
CHKT	**Chengkung**	**1.77**	**198**	eP	**Pn**	**15 07 09.3**	**-0.9**
	baz=196						
CHKT				eS	**Sn**	**15 07 30.2**	**-2.0**
	baz=196						
WTCT	**Ta-ch'eng**	**1.78**	**239**	eP	**Pn**	**15 07 10.5**	**+0.1**
	baz=237						
WTCT				eS	**Sn**	**15 07 32.1**	**-0.5**
	baz=237						
WTK	**Tuku**	**1.80**	**233**	eP	**Pn**	**15 07 10.6**	**-0.1**
	baz=231						
WTK				eS	**Sn**	**15 07 32.8**	**-0.2**
	baz=231						
ELDTW	**Lidau**	**1.81**	**208**	eP	**Pn**	**15 07 10.7**	**-0.2**
	baz=207						
ELDTW				eS	**Sn**	**15 07 32.9**	**-0.5**
	baz=207						
ECS	**Chishang**	**1.81**	**202**	eP	**Pn**	**15 07 11.2**	**+0.3**
	baz=200						
HATJ	**Hateruma jima**	**1.84**	**113**	P	**Pn**	**15 07 11.1**	**-0.1**
CHY	**Chiayi**	**1.90**	**228**	eP	**Pn**	**15 07 12.1**	**+0.1**
	baz=225						
CHY				eS	**Sn**	**15 07 35.9**	**+0.6**
	baz=225						
EDH	**Donghe**	**1.90**	**198**	eP	**Pn**	**15 07 11.2**	**-0.9**
	baz=197						
EDH				eS	**Sn**	**15 07 33.6**	**-1.8**
	baz=197						
TPUB	**Ta-pu**	**1.91**	**220**	eP	**Pn**	**15 07 12.7**	**+0.5**
	baz=218						
TPUB				eS	**Sn**	**15 07 37.4**	**+1.7**
	baz=218						
STYH	**Taoyuan**	**1.94**	**214**	eP	**Pn**	**15 07 13.1**	**+0.6**
	baz=212						
STYH				eS	**Sn**	**15 07 38.4**	**+2.2**
	baz=212						
JKRS	**Kuro-shima**	**1.95**	**106**	P	**Pn**	**15 07 12.7**	**0.0**
JKRS				eS	**Sn**	**15 07 36.6**	**+0.1**
WSF	**Szhu**	**1.95**	**234**	eP	**Pn**	**15 07 12.7**	**0.0**
	baz=232						
WSF				eS	**Sn**	**15 07 36.6**	**+0.1**
	baz=232						
STYT	**Tauyuan**	**1.95**	**214**	eP	**Pn**	**15 07 13.3**	**+0.6**
	baz=212						
WTP	**Ta-pu**	**1.96**	**219**	eP	**Pn**	**15 07 13.2**	**+0.3**
	baz=217						
WTP				eS	**Sn**	**15 07 38.1**	**+1.2**
	baz=217						
WSL	**Shuilin Townsh**	**2.02**	**232**	eP	**Pn**	**15 07 13.5**	**0.0**
	baz=230						
WSL				eS	**Sn**	**15 07 37.7**	**-0.4**
	baz=230						
LONT	**Longtian**	**2.02**	**202**	eP	**Pn**	**15 07 12.2**	**-1.4**
	baz=201						
LONT				eS	**Sn**	**15 07 37.7**	**-0.5**
	baz=201						
TWK	**Hsinying**	**2.02**	**222**	eP	**Pn**	**15 07 14.2**	**+0.5**
	baz=220						
TWK				eS	**Sn**	**15 07 39.8**	**+1.5**
	baz=220						
JIJ	**Ishigaki jima**	**2.04**	**102**	P	**Pn**	**15 07 13.2**	**-0.5**
SNST	**Tainan City**	**2.05**	**221**	eP	**Pn**	**15 07 14.3**	**+0.3**
	baz=219						
CHN1	**Nanshi**	**2.06**	**220**	eP	**Pn**	**15 07 14.5**	**+0.4**
	baz=218						
CHN1				eS	**Sn**	**15 07 39.8**	**+0.6**
	baz=218						
ICHU	**Yijhu**	**2.09**	**227**	eP	**Pn**	**15 07 14.6**	**+0.1**
	baz=226						
ICHU				eS	**Sn**	**15 07 39.8**	**0.0**
	baz=226						
TWG	**Pinlang**	**2.12**	**203**	eP	**Pn**	**15 07 13.5**	**-1.4**
	baz=201						
TWG				eS	**Sn**	**15 07 38.4**	**-2.2**
	baz=201						
TWGBT	**Beinan**	**2.12**	**202**	eP	**Pn**	**15 07 13.5**	**-1.4**
	baz=201						
TWGBT				eS	**Sn**	**15 07 38.4**	**-2.1**
	baz=201						
CHN8	**Yiju**	**2.15**	**228**	eP	**Pn**	**15 07 15.2**	**0.0**
	baz=226						
CHN8				eS	**Sn**	**15 07 42.5**	**+1.3**
	baz=226						
LDUT	**Ludao**	**2.15**	**192**	eP	**Pn**	**15 07 13.8**	**-1.6**
	baz=191						
LDUT				eS	**Sn**	**15 07 38.2**	**-3.1**
	baz=191						
JISG	**Ishigakijimahi**	**2.15**	**95**	P	**Pn**	**15 07 15.6**	**+0.3**
JISG				eS	**Sn**	**15 07 41.8**	**+0.5**
MATB	**Ma-tsu**	**2.27**	**307**	P	**Pn**	**15 07 16.2**	**-0.6**
	baz=305						
MATB				eS	**Sn**	**15 07 42.7**	**-1.3**
	baz=305						
VWUC	**VWUC**	**2.28**	**276**	eP	**Pn**	**15 07 16.3**	**-0.7**
	baz=274						
VWUC				eS	**Sn**	**15 07 42.0**	**-2.5**
	baz=274						
ECL	**Taimali**	**2.37**	**203**	eP	**Pn**	**15 07 16.8**	**-1.4**
	baz=202						
ECL				eS	**Sn**	**15 07 44.3**	**-2.1**
	baz=202						
SSD	**Sandimen**	**2.37**	**211**	eP	**Pn**	**15 07 19.2**	**+1.0**
	baz=209						
SSD				eS	**Sn**	**15 07 46.3**	**-0.1**
	baz=209						
TSMG	**Majia**	**2.40**	**210**	eP	**Pn**	**15 07 20.0**	**+1.4**
	baz=209						
TSMG				eS	**Sn**	**15 07 48.6**	**+1.5**
	baz=209						
MASBT	**Mashibuluo**	**2.48**	**209**	eP	**Pn**	**15 07 20.9**	**+1.1**
	baz=208						
MASBT				eS	**Sn**	**15 07 50.0**	**+0.8**
	baz=208						
JTJ	**Tarama**	**2.50**	**93**	P	**Pn**	**15 07 20.9**	**+0.8**
JTJ				eS	**Sn**	**15 07 50.5**	**+0.8**
JIRB	**Irabujima**	**2.92**	**89**	P	**Pn**	**15 07 27.0**	**+1.3**
JMJ2	**Miyako jima3**	**3.07**	**90**	P	**Pn**	**15 07 28.8**	**+1.2**
JMJ2				eS	**Sn**	**15 08 04.7**	**+1.4**
JOGS	**Gusukube**	**3.14**	**90**	P	**Pn**	**15 07 29.6**	**+1.0**

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*IDC **27** 15:25:57.4±5.4, 7°.25S×129°.35E, h170^{km}±53^{km}, mb3.6/3, mbtmp4.1/6, Error ellipse: s-maj=50.9km s-min=21.4km az=52.0*

ISC 27 15:25:55.6±1.4**, 7°.2S**±0°.1×**129°.5E**±0°.1**, h150^{km}, n6, σ1.^{s}45**/9**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.46**	**242**	P	**Pn**	**15 27 30.1**	**+1.5**
	48nm,0.4s,baz=101,slow=4.4,SNR=19						
BATI				S	**Sn**	**15 28 39.8**	**-1.6**
	17nm,0.4s,baz=123,slow=18,SNR=2.8						
WRA	**Warramunga Arr**	**13.49**	**160**	P	**Pn**	**15 29 01.3**	**+0.2**
	1.0nm,0.5s,baz=339,slow=13,SNR=16						
WRA				S	**Sn**	**15 31 28.7**	**-1.8**
	3.3nm,0.8s,baz=327,slow=23,SNR=7.8						
ASAR	**Alice Springs**	**16.89**	**166**	P	**P**	**15 29 44.5**	**+1.7**
	1.1nm,0.6s,baz=335,slow=9.3,SNR=23						
ASAR				S	**S**	**15 32 51.3**	**+0.2**
	0.3nm,0.3s,baz=22,slow=23,SNR=5.2						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**15 36 38.6**	**-0.9**
	0.6nm,0.4s,baz=119,slow=8.0,SNR=9.8						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**71.56**	**334**	P	**P**	**15 36 59.4**	**-0.8**
	0.6nm,0.5s,baz=151,slow=3.3,SNR=2.2						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**72.44**	**329**	P	**P**	**15 37 05.0**	**-0.5**
	0.8nm,0.2s,baz=134,slow=5.2,SNR=2.3						
	0.8nm,0.2s						

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*MAN **27** 15:50:36.7, 9°.88N×124°.06E, h3^{km}, mb4.6, ML3.4, MS3.3, Hypocentre not reviewed by the ISC*

ISC 27 15:50:37.8±1.1**, 9°.89N**±0°.03×**124°.05E**±0°.03**, h8^{km}**±10^{km}**, n12, σ1.^{s}51**/22**, 5C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.28**	**223**	⇓iP	**Pg**	**15 50 43.2**	**-0.1**
TBP				i S	**Sg**	**15 50 48.0**	**+1.0**
LLP	**Lapu-Lapu**	**0.43**	**348**	⇓iP	**Pg**	**15 50 45.9**	**-0.4**
LLP				i S	**Sg**	**15 50 52.4**	**+0.5**
MSLP	**Maasin**	**0.83**	**73**	⇓eP	**Pg**	**15 50 52.7**	**-1.1**
MSLP				eS	**Sg**	**15 51 04.7**	**+0.1**
SNPH	**Sibulan**	**0.97**	**236**	⇑iP	**Pg**	**15 50 55.5**	**-1.0**
SNPH				i S	**Sg**	**15 51 11.4**	**+2.1**
OCLP	**Ormoc**	**1.27**	**25**	⇓eP	**Pg**	**15 51 00.4**	**-1.9**
OCLP				eS	**Sg**	**15 51 20.8**	**+1.9**
CNOP	**Candoni, Negro**	**1.40**	**267**	⇓eP	**Pn**	**15 51 05.9**	**+2.3**
CNOP				eS	**Sg**	**15 51 21.8**	**-0.9**
DCPH	**Dipolog City**	**1.48**	**208**	⇑eP	**Pn**	**15 51 06.8**	**+2.0**
DCPH				i S	**Sg**	**15 51 23.6**	**-1.8**
GUIM	**Jordan**	**1.61**	**297**	⇓eP	**Pn**	**15 51 06.0**	**-0.7**
GUIM				eS	**Sn**	**15 51 28.6**	**+0.9**
BUTP	**Butuan**	**1.80**	**121**	⇓eP	**Pn**	**15 51 10.5**	**+1.3**
BUTP				eS	**Sn**	**15 51 32.5**	**+0.3**
GLSP	**General Luna,**	**2.05**	**93**	⇑eP	Pn	15 51 11.3	-1.3
GLSP				eS	**Sn**	**15 51 39.3**	**+1.0**
RCP	**Roxas**	**2.10**	**322**	⇑eP	**Pn**	**15 51 12.9**	**-0.4**
PAGZ	**Pagadian**	**2.14**	**198**	⇑eP	**Pn**	**15 51 13.3**	**-0.5**
PAGZ				eS	**Sn**	**15 51 37.8**	**-2.8**

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*IDC **27** 15:54:05.6±0.7, 1°.67N×127°.06E, h0^{km}, mb4.1/12, mbtmp4.1/12, MS2.6/1, Error ellipse: s-maj=36.3km s-min=13.9km az=78.0*

*NEIC **27** 15:54:15.0±2.5, 1°.7N±0°.1×127°.12E±0°.09, h76^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=19.4km s-min=5.0km az=218.0*

*DJA **27** 15:54:15.4±1.1, 2°N±3°×12°7E±°, h29^{km}±12^{km}, M4.1/12, mb4.2/5, MLv4.0/12*

ISC 27 15:54:16.7±0.6**, 1°.67N**±0°.06×**127°.09E**±0°.07**, h103^{km}, n40, σ1.^{s}89**/43**, mb4.0**/17**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.93**	**163**		**Pn**	**15 54 33.0**	**-3.7**
TNTI	**Ternate**	**0.93**	**163**	P	**Pn**	**15 54 33.2**	**-3.5**
TNTI				S	**Sn**	**15 54 46.7**	**-5.0**
LBMI	**Labuha**	**2.33**	**170**	P	**Pn**	**15 54 51.8**	**-1.9**
SGSI	**Sangihe**	**2.54**	**322**	P	**Pn**	**15 54 54.0**	**-2.4**
SGSI				S	**Sn**	**15 55 22.3**	**-4.6**
KMSI	**Cibinong**	**3.29**	**251**	P	**Pn**	**15 55 05.4**	**-1.0**
SANI	**Sanana**	**3.85**	**197**	P	**Pn**	**15 55 12.6**	**-1.4**
GTOI	**Gorontalo**	**4.20**	**256**	P	**Pn**	**15 55 18.0**	**-0.7**
SIJI	**Sorong**	**4.88**	**121**	Pn	**Pn**	**15 55 27.5**	**-0.4**
	0.5nm,0.3s,baz=154,slow=23,SNR=1.9						
SIJI				Sn	**Sn**	**15 56 21.1**	**-2.1**
	0.2nm,0.3s,baz=274,slow=23,SNR=1.4						
SIJI				LR	LR	15 57 41.2	
	comp=Z,61nm,19.5s,baz=64,slow=44						
AAI	**Ambon**	**5.43**	**168**	P	**Pn**	**15 55 35.4**	**0.0**
	0.1nm21nm,0.4s						
APSI	**Ampana**	**6.01**	**245**	P	**Pn**	**15 55 43.4**	**+0.2**
	0.1nm14nm,0.5s						
TOLI2	**Tolitoli**	**6.33**	**265**		**Pn**	**15 55 45.7**	**-1.9**
FAKI	**Fak Fak**	**6.88**	**131**	P	**Pn**	**15 55 56.8**	**+1.7**
MTN	**Manton Dam**	**14.97**	**165**	Pn	**Pn**	**15 57 41.8**	**-1.2**
KNRA	**Kununurra**	**17.31**	**175**	P	**P**	**15 58 11.8**	**-0.2**
TPUB	**Ta-pu**	**22.40**	**344**	P	**P**	**15 59 04.6**	**-2.2**
TPUB				IAmb	IAmb	15 59 21.3	
	comp=Z,24nm,1.2s						
WB0	**Warramunga Arr**	**22.48**	**162**	P	**P**	**15 59 06.8**	**-0.9**
WB0				IAmb	IAmb	15 59 08.5	
	comp=Z,7.1nm,1.1s						
WRA	**Warramunga Arr**	**22.62**	**162**	P	**P**	**15 59 08.4**	**-0.8**
	comp=Z,3.6nm,0.6s,baz=340,slow=11,SNR=27						
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**22.62**	**162**	P	**P**	**15 59 07.0**	**-2.2**
WB2	**Warramunga Arr**	**22.63**	**162**	P	**P**	**15 59 08.2**	**-1.1**
WB2				IAmb	IAmb	15 59 10.1	
	comp=Z,6.1nm,0.8s						
WR0	**Warramunga Arr**	**22.70**	**162**	P	**P**	**15 59 09.2**	**-0.8**
JOW	**Kunigami**	**25.05**	**3**	P	**P**	**15 59 33.3**	**+1.8**
	comp=Z,4.9nm,0.6s,baz=196,slow=12,SNR=4.9						
	comp=Z,4.9nm,0.6s						
ASAR	**Alice Springs**	**26.04**	**166**	P	**P**	**15 59 41.5**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=341,slow=9.9,SNR=18						
	comp=Z,0.7nm,0.3s						
ASAR	**Alice Springs**	**26.04**	**166**	P	**P**	**15 59 41.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**32.25**	**303**	P	**P**	**16 00 36.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=111,slow=6.9,SNR=4.3						
	comp=Z,0.3nm,0.3s						
MORW	**Morawa**	**32.34**	**198**	P	**P**	**16 00 35.6**	**-0.7**
MORW				IAmb	IAmb	16 00 46.2	
	comp=Z,16nm,1.4s						
KSRS	**Korea Array**	**35.62**	**1**	P	**P**	**16 01 06.2**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=178,slow=9.7,SNR=9.2						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**16 01 09.8**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=340,slow=7.8,SNR=7.1						
	comp=Z,1.9nm,0.3s						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**16 01 09.8**	**+1.1**
STKA				IAmb	IAmb	16 01 13.9	
	comp=Z,1.9nm,1.2s						
MJAR	**Matsushiro Arr**	**36.19**	**15**	P	**P**	**16 01 09.3**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=172,slow=9.0,SNR=8.8						
	comp=Z,1.0nm,0.4s						
JMM	**Marumori**	**38.16**	**18**	P	**P**	**16 01 26.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**42.57**	**5**	P	**P**	**16 02 02.1**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=165,slow=7.4,SNR=3.2						
	comp=Z,1.7nm,0.6s						
PETK	**Petropavlovsk-**	**57.20**	**21**	P	**P**	**16 03 54.2**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=134,slow=1.9,SNR=4.5						
	comp=Z,2.5nm,0.9s						
MKAR	**Makanchi Array**	**59.45**	**326**	P	**P**	**16 04 10.7**	**+1.9**
	comp=Z,2.5nm,0.5s,baz=122,slow=8.3,SNR=44						
	comp=Z,2.5nm,0.5s						
MKAR	**Makanchi Array**	**59.45**	**326**	P	**P**	**16 04 10.4**	**+1.6**
MAKZ	**Makanchi**	**59.63**	**326**	P	**P**	**16 04 11.9**	**+1.9**
MAKZ				IAmb	IAmb	16 04 12.7	
	comp=Z,3.8nm,0.7s						
ZALV	**Zalesovo Beam**	**62.58**	**333**	P	**P**	**16 04 30.8**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=136,slow=7.8,SNR=6.2						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**62.58**	**333**	P	**P**	**16 04 30.5**	**+0.8**
KURK	**Kurchatov**	**63.66**	**328**	P	**P**	**16 04 38.6**	**+1.7**
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**16 06 23.0**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=324,slow=3.4,SNR=2.7						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**123.88**	**287**	PKP	**PKiKP**	**16 13 04.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=46,slow=4.2,SNR=2.5						

TAP 27 16:16:15.4, 24°.01N×121°.60E, h9^{km}, ML2.4, 18D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**174**	⇓*i*P	Pg	16 16 17.3	+0.3
	baz=161						
HWA				*i* S	Sg	16 16 18.9	+0.7
	baz=161						
TWD	**Chiawan**	**0.07**	**356**	*i* P	Pg	16 16 17.9	+0.4
	baz=2.0						
TWD				*i* S	Sg	16 16 19.7	+0.6
	baz=2.0						
ETL	**Fush Village**	**0.15**	**7**	⇓*i*P	Pg	16 16 19.1	+0.3
	baz=7.0						
ETL				*e*S	Sg	16 16 21.7	+0.6
	baz=7.0						
NACB	**Ninganchiao**	**0.17**	**358**	⇓*i*P	Pg	16 16 19.3	+0.3
	baz=358						
NACB				*i* S	Sg	16 16 21.9	+0.5
	baz=358						
ETLH	**Xiulin Townshi**	**0.23**	**331**	⇓*i*P	Pg	16 16 20.7	+0.6
	baz=331						
ESL	**Shilin**	**0.24**	**219**	⇓*i*P	Pg	16 16 20.4	0.0
	baz=217						
WHF	**Hehuan Shan**	**0.34**	**294**	⇓*i*P	Pg	16 16 22.9	+0.6
	baz=295						
WHF				*e*S	Sg	16 16 28.0	+1.2
	baz=295						
EGFH	**Guangfu**	**0.37**	**206**	*e*P	Pg	16 16 22.9	+0.2
	baz=205						
OWD	**Renai**	**0.39**	**263**	⇓*i*P	Pg	16 16 23.8	+0.6
	baz=263						
CHGB	**Renai**	**0.40**	**278**	⇓P	Pb	16 16 24.1	-0.6
	baz=278						
FUSS	**Fushou**	**0.41**	**306**	⇓*i*P	Pb	16 16 24.4	-0.5
	baz=306						
ENA	**Nanau**	**0.44**	**17**	⇓*e*P	Pg	16 16 24.2	+0.2
	baz=18						
WUSB	**Renai**	**0.44**	**268**	⇓*e*P	Pb	16 16 25.0	-0.5
	baz=268						
EWUT	**Wuta**	**0.47**	**20**	⇓*e*P	Pg	16 16 24.6	+0.1
	baz=20						
NNSB	**Datong**	**0.47**	**335**	⇓*e*P	Pb	16 16 25.3	-0.6
	baz=335						
TDCB	**Techi**	**0.47**	**301**	⇓*e*P	Pb	16 16 25.8	-0.2
	baz=301						
VWDT	**VWDT**	**0.49**	**239**	⇓*e*P	Pb	16 16 25.6	-0.6
	baz=239						
LATG	**Datong**	**0.53**	**353**	⇓*e*P	Pg	16 16 26.2	+0.4
	baz=353						
HGSD	**Ruisui**	**0.54**	**198**	*e*P	Pb	16 16 26.8	-0.2
	baz=198						
EHY	**Hungye**	**0.56**	**207**	*e*P	Pg	16 16 26.3	0.0
	baz=207						
SSLB	**Suanglung**	**0.63**	**250**	⇓*e*P	Pb	16 16 28.3	-0.3
	baz=250						
ENTT	**Nioudou**	**0.63**	**357**	⇓*e*P	Pb	16 16 28.4	-0.3
	baz=358						
NDS	**Dongshan**	**0.63**	**9**	*e*P	Pg	16 16 28.1	+0.4
	baz=10.0						
YULB	**Yu-li**	**0.67**	**205**	*e*P	Pg	16 16 28.4	0.0
	baz=205						
ALS	**Alishan**	**0.88**	**236**	*e*P	Pb	16 16 33.2	+0.2
	baz=236						
ELDTW	**Lidau**	**0.97**	**214**	*e*P	Pg	16 16 33.7	-0.5
	baz=213						

TAP 27 16:17:47.8,24°.00N×121°.59E,h9^{km},ML1.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**159**	*i* P	Pg	16 17 49.6	+0.3
	baz=148						
HWA				*i* S	Sg	16 17 51.2	+0.7
	baz=148						
TWD	**Chiawan**	**0.08**	**1**	*i* P	Pg	16 17 50.3	+0.4
	baz=8.0						
TWD				S	Sg	16 17 52.0	+0.6
	baz=8.0						
ETM	**Tongmen**	**0.10**	**248**	P	Pg	16 17 50.7	+0.5
	baz=247						
ETM				*e*S	Sg	16 17 52.6	+0.7
	baz=247						
TEYL	**Yanliau Villag**	**0.14**	**178**	*e*P	Pg	16 17 50.9	+0.1
	baz=176						
TEYL				*e*S	Sg	16 17 53.8	+0.9
	baz=176						
ETL	**Fush Village**	**0.16**	**10**	*i* P	Pg	16 17 51.5	+0.3
	baz=10.0						
ETL				S	Sg	16 17 54.2	+0.7
	baz=10.0						
NACB	**Ninganchiao**	**0.17**	**0**	*i* P	Pg	16 17 51.7	+0.3
NACB				S	Sg	16 17 54.4	+0.5
ETLH	**Xiulin Townshi**	**0.23**	**333**	*i* P	Pg	16 17 53.1	+0.6
	baz=333						
ESL	**Shilin**	**0.24**	**218**	P	Pg	16 17 52.9	+0.2
	baz=216						
WHF	**Hehuan Shan**	**0.33**	**295**	P	Pg	16 17 55.1	+0.6
	baz=295						
OWD	**Renai**	**0.39**	**263**	*e*P	Pb	16 17 56.4	-0.6
	baz=263						

IDC 27 16:26:59.8±4.8**,55°.60S×145°.13W,h0^{km},mb3.8**/2**,**
mbtmp3.8/2**,MS3.3**/1**,Error ellipse: s-maj=555.5km**
s-min=103.1km az=168.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**49.69**	**93**	T	T	17 29 05.3	
	SNR=18						
H03S1	**Juan Fernandez**	**49.70**	**93**	T	T	17 29 07.8	
	SNR=20						
H03S3	**Juan Fernandez**	**49.71**	**93**	T	T	17 29 07.7	
	SNR=19						
H03N3	**Juan Fernandez**	**49.97**	**93**	T	T	17 29 18.5	
	baz=224,slow=72,SNR=55						
H03N2	**Juan Fernandez**	**49.98**	**93**	T	T	17 29 20.0	
	baz=224,slow=72,SNR=62						
H03N1	**Juan Fernandez**	**49.99**	**93**	T	T	17 29 17.4	
	baz=224,slow=72,SNR=73						
STKA	**Stephens Creek**	**55.13**	**263**	LR	LR	16 55 41.4	
	comp=Z,30nm,21.0s,baz=204,slow=31						
ASAR	**Alice Springs**	**65.77**	**263**	P	P	16 37 46.4	-0.2
	1.2nm,0.7s,baz=137,slow=6.4,SNR=22						
	1.2nm,0.7s						
H01W1	**Cape Leeuwin H**	**67.53**	**241**	T	T	17 52 19.9	
H01W2	**Cape Leeuwin H**	**67.54**	**241**	T	T	17 52 19.9	
H01W3	**Cape Leeuwin H**	**67.55**	**241**	T	T	17 52 19.9	
WRA	**Warramunga Arr**	**68.47**	**266**	P	P	16 38 04.0	+0.3
	0.5nm,0.7s,baz=150,slow=5.5,SNR=6.3						
	0.5nm,0.7s						
H10N3	**ASCENSION HYDR**	**104.75**	**129**	T	T	18 38 31.8	
H10N1	**ASCENSION HYDR**	**104.76**	**129**	T	T	18 38 31.8	
H10N2	**ASCENSION HYDR**	**104.77**	**129**	T	T	18 38 31.8	
MKAR	**Makanchi Array**	**149.55**	**273**	PKPbc	PKPbc	16 46 49.7	-0.4
	0.8nm,0.9s,baz=98,slow=3.7,SNR=6.5						

IDC 27 16:27:20.6±2.7**,6°.12S×147°.71E,h0^{km},mb3.8**/2**,**
mbtmp3.8/5**,ML3.8**/2**,MS3.0**/2**,Error ellipse:**
s-maj=61.1km s-min=27.6km az=136.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.31**	**189**	Pn	Pn	16 28 15.5	+1.8
	6.3nm,0.3s,baz=46,slow=8.8,SNR=13						
PMG				Sn	Sn	16 28 54.2	+0.3
	9.4nm,0.3s,baz=180,slow=20,SNR=7.4						
KRVT	**Keravat (AS076**	**4.66**	**67**	Pn	Pn	16 28 32.7	+0.4
	4.2nm,0.3s,baz=255,slow=20,SNR=8.2						
	13nm,0.3s						
WRA	**Warramunga Arr**	**18.91**	**222**	P	P	16 31 42.8	-0.2
	0.3nm,0.3s,baz=48,slow=11,SNR=16						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**21.93**	**216**	P	P	16 32 15.8	0.0
	1.4nm,0.5s,baz=50,slow=9.3,SNR=76						
	1.4nm,0.5s						
STKA	**Stephens Creek**	**26.26**	**192**	P	P	16 32 56.8	-0.8
	1.0nm,0.5s,baz=15,slow=12,SNR=1.8						
	1.0nm,0.5s						
KAPI	**Kappang**	**27.84**	**271**	LR	LR	16 44 45.3	
	comp=Z,10nm,19.5s,baz=296,slow=38						
YKA	**Yellowknife Ar**	**98.95**	**28**	LR	LR	17 23 20.6	
	comp=Z,21nm,19.3s,baz=2.0,slow=34						

*IDC **27** 16:28:16.2±1.5,55°.42S×144°.80W,h0^{km},mb3.7/3,*
mbtmp3.7/3,MS3.2/1,Error ellipse: s-maj=57.3km
s-min=39.4km az=28.0
ISC 27 16:28:17.2±1.8**,55°.4S**±0°.3×**144°.7W**±0°.4**,h10^{km},n19,**
σ0^{s}.17/6**,mb3.8**/3**,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**34.81**	**180**	P	**P**	**16 35 07.8**	**0.0**
	1.0nm,1.0s,baz=103,slow=3.3,SNR=1.7						
	1.0nm,1.0s						
AFI	**Afiamalu**	**46.38**	**322**	LR	LR	16 52 22.2	
	comp=Z,28nm,20.2s,baz=244,slow=31						
H03S2	**Juan Fernandez**	**49.44**	**93**	T	T	17 30 22.0	
	SNR=12						
H03S1	**Juan Fernandez**	**49.45**	**93**	T	T	17 30 24.3	
	SNR=12						
H03S3	**Juan Fernandez**	**49.46**	**93**	T	T	17 30 23.1	
	SNR=12						
H03N3	**Juan Fernandez**	**49.72**	**92**	T	T	17 30 38.7	
	baz=224,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**49.73**	**92**	T	T	17 30 36.3	
	baz=224,slow=72,SNR=16						
H03N1	**Juan Fernandez**	**49.74**	**92**	T	T	17 30 37.8	
	baz=224,slow=72,SNR=17						
ASAR	**Alice Springs**	**66.06**	**263**	P	**P**	**16 39 04.0**	**-0.1**
	0.9nm,0.6s,baz=140,slow=6.4,SNR=14						
	0.9nm,0.6s						
H01W1	**Cape Leeuwin H**	**67.89**	**241**	T	T	17 53 47.5	
	baz=142,slow=75,SNR=38						
H01W2	**Cape Leeuwin H**	**67.89**	**240**	T	T	17 53 47.8	
	baz=142,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**67.90**	**241**	T	T	17 53 48.8	
	baz=142,slow=75,SNR=35						
WRA	**Warramunga Arr**	**68.75**	**266**	P	**P**	**16 39 21.2**	**0.0**
	0.4nm,0.6s,baz=147,slow=5.7,SNR=7.8						
	0.4nm,0.6s						
H10N3	**ASCENSION HYDR**	**104.70**	**128**	T	T	18 39 50.7	
	baz=206,slow=74,SNR=8.3						
H10N1	**ASCENSION HYDR**	**104.71**	**129**	T	T	18 39 51.2	
	baz=206,slow=74,SNR=9.8						
H10N2	**ASCENSION HYDR**	**104.72**	**128**	T	T	18 39 52.1	
	baz=206,slow=74,SNR=7.9						
ESDC	**Sonseca Array**	**149.67**	**105**	PKPbc	**PKPbc**	**16 48 06.2**	**-0.1**
	1.1nm,1.0s,baz=237,slow=2.0,SNR=4.8						
MKAR	**Makanchi Array**	**149.79**	**273**	PKPbc	**PKiKP**	**16 48 07.3**	**0.0**
	1.1nm,0.9s,baz=101,slow=4.4,SNR=5.8						
ZALV	**Zalesovo Beam**	**151.81**	**288**	PKPbc	**PKiKP**	**16 48 11.4**	**+0.2**
	0.3nm,0.3s,baz=132,slow=2.1,SNR=2.1						

*ISK **27** 16:51:36.9,35°.85N×29°.89E,h8^{km},ML2.5/11*
*DDA **27** 16:51:38.1±0.0,35°.79N×29°.75E,h9^{km}±1^{km},ML2.2*
*NIC **27** 16:51:40.6±0.0,35°.88N×30°.31E,h2^{km}±3^{km},Ml2.6/3*
ISC 27 16:51:36.1±1.6**,35°.80N**±0°.04×**29°.88E**±0°.03**,h7**^{km}±13^{km}**,**
n27,σ1^{s}.22/41**,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMR	**Demre-Antalya**	**0.43**	**3**	PG	**Pb**	**16 51 45.2**	**-0.9**
DEMR				SG	**Sb**	**16 51 51.2**	**-1.6**
AKAS	**Kas**	**0.48**	**333**	PG	**Pb**	**16 51 46.5**	**-0.5**
AKAS				SG	**Sb**	**16 51 53.2**	**-1.2**
AKAS	**Kas**	**0.48**	**333**	P	**Pb**	**16 51 46.5**	**-0.5**
AKAS				S	**Sb**	**16 51 52.8**	**-1.6**
AKAS				*i* AML	AML	16 51 57.0	
	comp=E,337nm,0.3s						
AKAS				*i* AML	AML	16 51 59.0	
	comp=N,532nm,0.6s						
AKUM	**Antalya-Kumluc**	**0.64**	**36**	P	**Pn**	**16 51 51.4**	**-0.2**
AKUM				S	**Sn**	**16 52 01.3**	**-0.7**
AKUM				*i* AML	AML	16 52 03.0	
	comp=E,109nm,0.4s						
AKUM				*i* AML	AML	16 52 07.0	
	comp=N,61nm,0.3s						
ELL	**Elmali**	**0.94**	**1**	PG	**Pb**	**16 51 54.7**	**-0.2**
ELL				SG	**Sb**	**16 52 07.6**	**0.0**
ELL	**Elmali**	**0.94**	**1**	P	**Pn**	**16 51 58.9**	**+3.0**
ELL				S	**Sn**	**16 52 13.4**	**+3.7**
FETY	**Fethiye**	**1.05**	**322**	PG	**Pb**	**16 51 56.5**	**-0.2**
FETY	**Fethiye**	**1.05**	**322**	P	**Pn**	**16 51 56.8**	**-0.5**
CAME	**Cameli-Denizli**	**1.23**	**338**	PN	**Pn**	**16 51 59.6**	**-0.3**
CAME				SN	**Sn**	**16 52 16.5**	**-0.3**
KORT	**Korkueli**	**1.25**	**17**	PN	**Pn**	**16 52 00.5**	**+0.3**
KORT				SN	**Sn**	**16 52 17.8**	**+0.4**
KORT	**Korkueli**	**1.25**	**17**	P	**Pb**	**16 51 59.4**	**-0.8**
KORT				*i* AML	AML	16 52 30.0	
	comp=E,42nm,0.5s						
KORT				*i* AML	AML	16 52 34.0	
	comp=N,28nm,0.5s						
DALY	**Dalyan (Mula)**	**1.42**	**316**	PN	**Pg**	**16 52 03.0**	**-0.3**
DALY				SN	**Sn**	**16 52 22.7**	**+1.6**
GOLH	**Golhisar**	**1.45**	**350**	P	**Pn**	**16 52 02.5**	**-0.4**
GOLH				*i* AML	AML	16 52 30.0	
	comp=E,45nm,0.6s						
GOLH				*i* AML	AML	16 52 31.0	
	comp=N,34nm,0.4s						
ARG	**Arkhangelos**	**1.48**	**287**	PN	**Pg**	**16 52 04.5**	**0.0**
BUCA	**Burdur, Bucak-**	**1.62**	**20**	P	**Pg**	**16 52 08.8**	**+1.6**
TURN	**Turunc**	**1.64**	**307**	PN	**Pb**	**16 52 06.2**	**-0.4**
TURN	**Turunc**	**1.64**	**307**	P	**Pn**	**16 52 05.3**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.83**	**335**	P	**Pb**	**16 52 09.5**	**-0.5**
TAVA				S	**Sn**	**16 52 31.5**	**-0.1**
TAVA				*i* AML	AML	16 52 36.0	
	comp=E,23nm,0.5s						
YER	**Yerkesik**	**1.85**	**316**	PN	**Pb**	**16 52 09.5**	**-0.8**
BRDR	**BURDUR-Merkez**	**1.90**	**4**	P	**Pg**	**16 52 12.8**	**+0.3**
BRDR				*i* AML	AML	16 52 40.0	
	comp=E,19nm,0.7s						
MULA	**Mugla, Merkez-**	**1.92**	**320**	P	**Pn**	**16 52 10.1**	**+0.8**
MULA				*i* AML	AML	16 52 40.0	
	comp=E,22nm,0.5s						
DAT	**Datca**	**2.08**	**297**	PN	**Pn**	**16 52 12.9**	**+1.4**
AKMS	**Akamas**	**2.15**	**111**	P	**Pn**	**16 52 13.3**	**+0.9**
AKMS				S	**Sn**	**16 52 38.7**	**-0.6**
AKMS				AML	AML	16 52 39.7	
	0.2nm,0.7s						
AKMS				AML	AML	16 52 39.7	
	0.2nm,0.7s						
AKMS				AML	AML	16 52 41.8	
	0.1nm,0.2s						
AKMS				AML	AML	16 52 41.8	
	0.1nm,0.2s						
SEYD	**Seydisehir-KON**	**2.25**	**44**	PN	**Pb**	**16 52 14.9**	**-2.2**
ALFC	**Alefka**	**2.31**	**105**	P	**Pn**	**16 52 15.4**	**+0.7**
ALFC				S	**Sn**	**16 52 42.5**	**-0.8**
ALFC				AML	AML	16 52 43.1	
	0.1nm,0.2s						
ALFC				AML	AML	16 52 43.1	
	0.1nm,0.2s						
ALFC				AML	AML	16 52 44.7	
	0.1nm,0.2s						
ALFC				AML	AML	16 52 44.7	
	0.1nm,0.2s						
SZAC	**Souni**	**2.67**	**112**	P	**Pn**	**16 52 21.1**	**+1.6**
SZAC				S	**Sn**	**16 52 52.3**	**+0.2**
SZAC				AML	AML	16 52 53.8	
	0.1nm,0.7s						
SZAC				AML	AML	16 52 53.8	
	0.1nm,0.7s						
SZAC				AML	AML	16 52 54.9	
	0.2nm,0.3s						
SZAC				AML	AML	16 52 54.9	
	0.2nm,0.3s						
ASGA	**Asgata**	**2.94**	**109**	P	**Pn**	**16 52 25.0**	**+1.8**
ASGA				S	**Sn**	**16 52 58.7**	**+0.1**

*IDC **27** 16:58:24.8±1.3,12°.76N×93°.01E,h0^{km},mb3.5/6,*
mbtmp3.5/7,ML4.0/1,Error ellipse: s-maj=49.7km
s-min=22.9km az=56.0
ISC 27 16:58:29.8±1.3**,12°.8N**±0°.2×**93°.1E**±0°.2**,h32^{km},n7,σ0^{s}.36**/7**,**
mb3.5/6**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.95**	**44**	Pn	**Pn**	**17 00 23.2**	**0.0**
	0.5nm,0.3s,baz=236,slow=15,SNR=9.6						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**35.07**	**347**	P	**P**	**17 05 19.4**	**-0.4**
	0.4nm,0.6s,baz=163,slow=8.7,SNR=6.5						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**41.55**	**353**	P	**P**	**17 06 14.2**	**0.0**
	0.4nm,0.3s,baz=177,slow=8.3,SNR=2.4						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**52.02**	**128**	P	**P**	**17 07 36.4**	**-0.3**
	0.3nm,0.8s,baz=314,slow=7.8,SNR=1.6						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**53.91**	**132**	P	**P**	**17 07 50.8**	**+0.2**
	0.8nm,1.1s,baz=310,slow=7.2,SNR=4.6						
	0.8nm,1.1s						
ARCES	**ARCESS Array B**	**70.30**	**340**	P	**P**	**17 09 40.2**	**+0.4**
	0.8nm,0.8s,baz=79,slow=6.3,SNR=5.3						
	0.8nm,0.8s						
GERES	**GERESS Array B**	**73.50**	**317**	P	**P**	**17 09 59.4**	**-0.1**
	0.3nm,0.5s,baz=42,slow=13,SNR=4.1						
	0.3nm,0.5s						

RSNC 27 17:10:59.3±1.1**,3°.95N×76°.35W,h142**^{km}±4^{km}**,ML3.8,**
Mw4.2,9C-14D,Fault plane solution: NP1:φ$_{s}$90.00000°,
δ35.00000°,λ78.00000°.**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOTC	**Yotoco, Valle**	**0.04**	**3**	⇑*i*P	Pn	17 11 17.8	-0.7
YOTC				*e*S	Sn	17 11 32.5	-0.7
YOTC				*i*		17 11 33.9	
	comp=Z,1μm,0.1s						
PLMC	**San Jos del P**	**0.95**	**4**	⇑*i*P	Pn	17 11 22.2	-0.7
PLMC				*e*S	Sn	17 11 41.0	0.0
MALC	**Bahia Malaga**	**0.99**	**274**	⇑*e*P	Pn	17 11 24.1	+0.9
MALC				*e*S	Sn	17 11 40.6	-0.7
MALC				*i*		17 11 47.5	
	comp=Z,1μm,0.2s						
ANIL	**Santa Ana**	**1.08**	**60**	⇑*i*P	Pn	17 11 23.4	-0.9
ANIL				*e*S	Sn	17 11 43.4	-0.1
ANIL				*i*		17 11 45.9	
	comp=Z,3μm,0.3s						
ORTC	**Ortega, Tolima**	**1.10**	**92**	⇑*i*P	Pn	17 11 23.8	-0.4
ORTC				*e*S	Sn	17 11 42.6	-0.5
ORTC				*i*		17 11 43.3	
	comp=Z,1μm,0.3s						
MARP	**Paez Belalcaza**	**1.17**	**160**	⇓*i*P	Pn	17 11 25.2	+0.1
MARP				*e*S	Sn	17 11 44.2	-0.6
MARP				*i*		17 11 46.7	
	comp=Z,452nm,0.4s						
PIZC	**Pizarro, Choco**	**1.43**	**315**	⇑*i*P	Pn	17 11 28.1	+0.7
PIZC				*e*S	Sn	17 11 49.2	+0.2
PIZC				*i*		17 11 52.8	
	comp=Z,740nm,0.2s						
PRAC	**Prado**	**1.48**	**99**	⇑*i*P	Pn	17 11 27.7	-0.4
PRAC				*e*S	Sn	17 11 48.9	-1.0
PRAC				*i*		17 11 50.9	
	comp=Z,2μm,0.3s						
BETC	**Betania**	**1.55**	**144**	⇓*e*P	Pn	17 11 28.4	-0.4
BETC				*e*S	Sn	17 11 50.7	-0.8
BETC				*i*		17 11 51.8	
	comp=Z,1μm,0.6s						
PCON	**Cinco Dias**	**1.61**	**182**	⇓*i*P	Pn	17 11 30.5	+0.4
PCON				*e*S	Sn	17 11 53.5	0.0
PCON				*i*		17 11 58.6	
	comp=Z,1μm,0.6s						
SOTA	**Rioblanco**	**1.82**	**188**	⇓*i*P	Pn	17 11 32.1	-0.2
SOTA				*e*S	Sn	17 11 57.7	+0.1
SOTA				*i*		17 12 07.3	
	comp=Z,474nm,0.7s						
CBOC	**Ciudad Bolivar**	**1.93**	**10**	⇓*i*P	Pn	17 11 32.9	-0.5
CBOC				*e*S	Sn	17 11 58.5	-1.0
CBOC				*i*		17 12 05.2	
	comp=Z,381nm,0.4s						
GARC	**Garzon, Huila**	**1.95**	**154**	⇓*i*P	Pn	17 11 32.8	-0.8
GARC				*e*S	Sn	17 11 57.3	-2.5
GARC				*i*		17 12 00.6	
	comp=Z,793nm,0.2s						
GR1C	**Gorgona, Isla**	**2.04**	**243**	*e*P	Pn	17 11 33.0	-1.4
GR1C				*e*S	Sn	17 11 58.7	-2.8
NORC	**Norcasia**	**2.18**	**42**	⇓*i*P	Pn	17 11 35.9	-0.2
NORC				*e*S	Sn	17 12 03.2	-1.3
NORC				*i*		17 12 06.2	
	comp=Z,295nm,0.5s						
ROSC	**El Rosal**	**2.21**	**66**	⇑*i*P	Pn	17 11 37.9	+1.1
ROSC				*e*S	Sn	17 12 05.5	0.0
ROSC				*i*		17 12 10.0	
	comp=Z,138nm,0.4s						
HELC	**Santa Helena**	**2.37**	**20**	⇓*i*P	Pn	17 11 38.3	-0.5
HELC				*e*S	Sn	17 12 09.0	-0.2
HELC				*i*		17 12 11.7	
	comp=Z,584nm,0.5s						
CRUC	**La Cruz**	**2.44**	**194**	*e*P	Pn	17 11 39.2	-0.4
CRUC				*e*S	Sn	17 12 07.0	-3.7
FLOC	**Florencia**	**2.45**	**164**	⇓*i*P	Pn	17 11 39.0	-0.4
FLOC				*e*S	Sn	17 12 09.6	-0.8
FLOC				*i*		17 12 11.2	
	comp=Z,405nm,0.9s						
SOLC	**Bahia Solano**	**2.50**	**335**	*e*P	Pn	17 11 39.9	-0.1
SOLC				*e*S	Sn	17 12 04.8	-6.6
SOLC				*i*		17 12 12.7	
	comp=Z,303nm,0.3s						
VILC	**Villavicencio,**	**2.65**	**86**	*e*P	Pn	17 11 42.8	+0.8
VILC				*e*S	Sn	17 12 17.0	+2.0
CHIC	**Chingaza**	**2.69**	**75**	⇑*e*P	Pn	17 11 43.3	+0.4
CHIC				*e*S	Sn	17 12 16.3	0.0
SPBC	**San Pablo de B**	**2.83**	**53**	*e*P	Pn	17 11 44.4	+0.2
SPBC				*e*S	Sn	17 12 19.4	+0.4
GCUF	**Volcan Galeras**	**2.88**	**200**	⇓*e*P	Pn	17 11 44.2	-1.2
GCUF				*e*S	Sn	17 12 18.4	-2.4
GCUF				*i*		17 12 23.4	
	comp=Z,240nm,0.4s						
DBBC	**Dabeiba**	**3.05**	**3**	*e*P	Pn	17 11 46.9	-0.2
DBBC				*e*S	Sn	17 12 23.1	-1.0
DBBC				*i*		17 12 29.7	
	comp=Z,751nm,0.6s						
MACC	**Macarena, Meta**	**3.07**	**126**	*e*P	Pn	17 11 46.4	-0.9
MACC				*e*S	Sn	17 12 20.0	-4.4
MACC				*i*		17 12 58.5	
	comp=Z,146nm,0.5s						
TUMC	**Tumaco**	**3.18**	**228**	*e*P	Pn	17 11 47.0	-1.7
TUMC				*e*S	Sn	17 12 24.3	-2.5
TUMC				*i*		17 12 26.8	
	comp=Z,292nm,0.4s						
PTBC	**PUERTO BERRIO,**	**3.19**	**36**	⇓*i*P	Pn	17 11 47.8	-1.0
PTBC				*e*S	Sn	17 12 22.9	-4.2
PTBC				*i*		17 12 29.3	
	comp=Z,133nm,0.4s						
PTAC	**Punta Ardita,**	**3.50**	**335**	⇓*i*P	Pn	17 11 52.3	-0.5
PTAC				*e*S	Sn	17 12 32.1	-2.1
RUSC	**La Rusia**	**3.78**	**59**	⇓*i*P	Pn	17 11 57.5	+0.5
RUSC				*e*S	Sn	17 12 42.0	+0.4
UREC	**San Jos de Ur**	**3.87**	**12**	*e*P	Pn	17 11 56.8	-0.8
UREC				*e*S	Sn	17 12 40.4	-2.4
UREC				*i*		17 12 48.4	
	comp=Z,70nm,0.3s						
BRRC	**Barranca, Sant**	**4.09**	**40**	*e*P	Pn	17 11 59.8	-0.8
BRRC				*e*S	Sn	17 12 45.4	-2.7
BARC	**Barichara**	**4.10**	**50**	*e*P	Pn	17 12 00.9	-0.1
BARC				*e*S	Sn	17 12 48.0	-0.7
BARC				*i*		17 12 54.5	
	comp=Z,86nm,0.4s						
OTAV	**Otavalo**	**4.24**	**210**	⇓*e*P	Pn	17 12 01.6	-1.4
OTAV				*e*S	Sn	17 12 51.8	-0.6
LCBC	**Los crdobas,**	**4.88**	**360**	*e*P	Pn	17 12 11.8	+0.8
PAMC	**Pamplona, Colo**	**4.95**	**47**	*e*P	Pn	17 12 11.6	-0.8
PAMC				*e*S	Sn	17 13 06.7	-2.6
PAMC				*i*		17 13 31.0	
	comp=Z,32nm,0.7s						
OCAC	**Ocana**	**5.22**	**35**	*e*P	Pn	17 12 14.8	-0.9
OCAC				*e*S	Sn	17 13 12.1	-3.1
OCAC				*i*		17 13 17.0	
	comp=Z,119nm,0.3s						
AZU	**Azuero**	**5.46**	**315**	*e*S	Sn	17 13 20.1	-0.7
UPA	**Univ. de Panam**	**5.92**	**328**	*e*P	Pn	17 12 24.8	0.0
UPA				*e*S	Sn	17 13 33.1	+1.4
UPA				*i*		17 13 41.3	
	comp=Z,27nm,0.5s						
SJCC	**San Jacinto, C**	**6.02**	**11**	*e*P	Pn	17 12 25.8	-0.5
SJCC				*e*S	Sn	17 13 27.3	-7.0
SJCC				*i*		17 13 43.5	
	comp=Z,22nm,0.2s						
BCIP	**Isla Barro Col**	**6.24**	**326**	*e*P	Pn	17 12 30.1	+1.0
BCIP				*e*S	Sn	17 13 39.0	-0.4
BCIP				*i*		17 13 50.6	
	comp=Z,44nm,0.8s						
LL6C	**La Loma 6 Bece**	**6.51**	**28**	*e*P	Pn	17 12 32.0	-0.8
LL6C				*e*S	Sn	17 13 41.2	-4.8
LL6C				*i*		17 13 45.7	
	comp=Z,20nm,0.4s						
SDV	**Santo Domingo**	**7.50**	**49**	*e*P	Pn	17 12 44.5	-1.8
SDV				*e*S	Sn	17 14 05.6	-4.6
SDV				*i*		17 14 08.5	
	comp=Z,22nm,0.4s						

CRJC	Cerrejon, Guaj	7.82	26	eP	Pn	17 12 48.4	-2.1
CRJC				eS	Sn	17 14 09.0	-8.7
CRJC				i		17 14 18.6	
	comp=Z,30nm,0.3s						

MEX 27 17:47:32.9±0.7, 13.°86N×93.°40W, h14^{km}±350^{km}, MD4.0
IDC 27 17:47:35.2±2.1, 14.°08N×95.°98W, h0^{km}, mb3.8/3, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=60.7km s-min=38.7km az=89.0
ISC 27 17:47:31.3±2.0, **13.°9N**±0.°1×**93.°26W**±0.°07, **h10**^{km}, **n13**, σ**1^{s}72**/18, **mb3.6**/3, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATR	El Naranjo	1.56	39	eP	Pn	17 47 58.6	-0.7
PATR				eS	Sn	17 48 18.6	-1.2
CHUJ	Union Juarez	1.62	43	eP	Pn	17 47 59.5	-0.8
CHUJ				eS	Sn	17 48 20.9	-0.4
PAVE	Pavencul	1.65	39	eP	Pn	17 48 00.0	-0.7
PAVE				eS	Sn	17 48 21.5	-0.6
PCIG		1.79	1	eP	Pn	17 48 01.6	-0.7
PCIG				eS	Sn	17 48 22.0	-3.1
CCIG	Comitan	2.60	24	eP	Pn	17 48 14.2	+0.6
CCIG				eS	Sn	17 48 47.7	+2.3
TGIG		2.86	3	eP	Pn	17 48 20.0	+2.9
TGIG				eS	Sn	17 48 51.6	0.0
UXUV	UXUV	3.50	346	eP	Pn	17 48 27.8	+1.9
UXUV				eS	Sn	17 49 07.9	+0.6
CMIG	Matias Romero	3.53	334	Pn	Pn	17 48 25.9	-0.5
	1.2nm,0.3s,baz=179,slow=12,SNR=18						
CMIG				Sn	Sn	17 49 04.8	-3.4
	2.1nm,0.3s,baz=157,slow=19,SNR=6.6						
	2.5nm,0.3s						
TXAR	Lajitas Array	18.13	330	Pn	Pn	17 51 34.7	-8.7
	baz=146,slow=15,SNR=1.2						
	0.3nm,0.9s						
YKA	Yellowknife Ar	50.84	347	P	P	17 56 31.8	-0.1
	0.3nm,0.7s,baz=161,slow=6.7,SNR=5.3						
	0.3nm,0.7s						
NOA	NORSAR Array B	84.81	28	P	P	18 00 17.8	+12
	0.3nm,0.7s,baz=289,slow=4.7,SNR=2.4						
	0.3nm,0.7s						
TORD	Torodi Ar. Bea	91.59	76	P	P	18 00 56.6	+17
	0.9nm,0.8s,baz=272,slow=4.8,SNR=4.9						
	0.9nm,0.8s						
CMAR	Chiang Mai Arr	145.66	339	PKP	PKPdf	18 07 12.0	+1.0
	0.4nm,0.3s,baz=4.1,slow=2.8,SNR=5.4						

GUC 27 17:48:33.6±0.6, 31.°09S×71.°81W, h23^{km}±3^{km}, ML3.8
NEIC 27 17:48:34.5±1.5, 31.°09S±0.°02×71.°70W±0.°07, h26^{km}±6^{km}, mb4.0/6, ML3.8(GUC), Error ellipse: s-maj=8.4km s-min=2.5km az=107.0
ISC 27 17:48:31.7±1.9, **31.°10S**±0.°02×**71.°80W**±0.°05, **h11**^{km}±13^{km}, **n64**, σ**1^{s}23**/88, **4C-3D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.44	19		Pb	17 48 42.9	+1.3
CO06					Sb	17 48 47.9	-0.3
CO06	Fray Jorge	0.44	19	⇓iP	Pb	17 48 42.9	+1.3
CO06				i S	Sb	17 48 49.0	+0.8
CO06				IAML		17 48 49.8	
	comp=N,5μm,0.3s						
CO02	Combarbal	0.69	99		Pb	17 48 46.7	+0.8
CO02				Sn	Sb	17 48 56.2	+0.7
CO02	Combarbal	0.69	99	⇓iP	Pn	17 48 47.0	-0.6
CO02				i S	Sn	17 48 56.6	-1.8
CO02				IAML		17 48 58.2	
	comp=N,17μm,0.3s						
GO04	Tololo Observa	1.26	43		Pn	17 48 55.5	0.0
GO04				Sn	Sn	17 49 11.8	-0.7
GO04	Tololo Observa	1.26	43	⇓iP	Pb	17 48 55.6	0.0
GO04				i S	Sg	17 49 12.6	+0.2
GO04				IAML		17 49 15.7	
	comp=N,7μm,0.4s						
CO05	La Serena	1.27	23		Pb	17 48 55.8	+0.2
CO05				Sn	Sb	17 49 11.3	-0.6
CO05	La Serena	1.27	23	eP	Pb	17 48 56.0	+0.4
CO05				i S	Sg	17 49 12.5	-0.1
CO05				IAML		17 49 14.5	
	comp=N,2μm,0.4s						
VA06	Catapilco	1.52	164	Pn	Pn	17 48 59.7	+0.9
VA06				Sn	Sn	17 49 18.6	-0.1
VA06	Catapilco	1.52	164	⇑iP	Pn	17 48 59.8	+0.9
VA06				i S	Sb	17 49 19.7	+0.4
VA06				IAML		17 49 24.9	
	comp=N,3μm,0.5s						
CO01	Juntas del Tor	1.85	53		Pb	17 49 05.0	-0.6
CO01				Sn	Sb	17 49 27.7	-1.2
CO01	Juntas del Tor	1.85	53	eP	Pb	17 49 05.5	-0.1
CO01				i S	Sb	17 49 29.3	+0.4
CO01				IAML		17 49 30.7	
	comp=N,521nm,0.4s						
VA01	Torpederas	1.93	176		Pn	17 49 05.0	+0.5
VA01	Torpederas	1.93	176	i S	Sn	17 49 27.0	-1.6
VA01				IAML		17 49 40.3	
	comp=E,451nm,0.6s						
VA03	San Esteban	1.98	148		Pn	17 49 06.6	+1.4
VA03	San Esteban	1.98	148	⇑iP	Pb	17 49 07.2	-0.5
VA03				i S	Sb	17 49 32.8	+0.4
VA03				IAML		17 49 36.4	
	comp=E,2μm,0.3s						
ROCH	El Roble	1.99	160	eP	Pn	17 49 07.0	+1.5
ROCH				eP	Pb	17 49 07.3	-0.7
ROCH				i S	Sb	17 49 33.3	+0.5
ROCH				i S	Sb	17 49 33.4	+0.5
ROCH				IAML		17 49 40.4	
	comp=E,1μm,0.5s						
ROCH				IAML		17 49 40.5	
	comp=N,2μm,0.5s						
ROC1	El Roble	1.99	161		Pn	17 49 06.2	+0.6
MT02	Curacav	2.23	166		Pn	17 49 09.5	+0.9
MT02	Curacav	2.23	166	eP	Pn	17 49 09.8	+1.2
MT02				i S	Sb	17 49 39.5	-0.1
MT02				IAML		17 49 48.1	
	comp=E,381nm,0.5s						
PEL	Peldehue	2.25	155		Pn	17 49 10.0	+1.1
LCO	Las Campanas	2.29	25	Pn	Pn	17 49 09.7	+0.1
LCO	Las Campanas	2.29	25	⇑iP	Pn	17 49 09.3	-0.3
LCO				i S	Sb	17 49 41.3	-0.2
MT05	Renca	2.46	159		Pn	17 49 12.2	+0.3
VA05	Santo Domingo	2.56	177		Pn	17 49 14.7	+1.5
VA05	Santo Domingo	2.56	177	i S	Sb	17 49 47.9	-1.3
VA05				IAML		17 49 56.2	
	comp=E,1μm,0.3s						
FCH	Farellones	2.57	150	eP	Pn	17 49 15.6	+2.1
FCH				i S	Sb	17 49 49.6	-0.1
FCH				IAML		17 49 52.4	
	comp=E,313nm,0.4s						
MT03	Universidad Ad	2.63	156	Pn	Pn	17 49 15.1	+0.9
MT03	Universidad Ad	2.63	156	eP	Pn	17 49 16.1	+1.9
MT03				IAML		17 50 00.3	
	comp=N,1μm,0.7s						
MT09	Talagante	2.76	166		Pn	17 49 17.4	+1.4
MT09	Talagante	2.76	166	⇑iP	Pn	17 49 18.1	+2.1
MT09				i S	Sb	17 49 53.9	-1.2
MT09				IAML		17 50 03.9	
	comp=N,583nm,0.4s						
MT01	Popeta	2.80	171		Pn	17 49 17.6	+1.1
MT01	Popeta	2.80	171	eP	Pn	17 49 19.0	+2.5
MT01				i S	Sb	17 49 56.7	+0.6
MT01				IAML		17 50 04.0	
	comp=E,400nm,0.8s						
AC04	Llanos de Chal	2.95	13	Pn	Pn	17 49 17.9	-0.6
AC04	Llanos de Chal	2.95	13	eP	Pn	17 49 18.2	-0.3
AC04				IAML		17 50 08.0	
	comp=N,166nm,0.2s						
BO04	La Punta	3.06	161		Pn	17 49 21.8	+1.7
BO04	La Punta	3.06	161	eP	Pn	17 49 22.2	+2.2
BO04				i S	Sn	17 49 57.3	+0.7
BO04				IAML		17 50 13.8	
	comp=N,308nm,0.3s						
LMEL	Las Melosas	3.06	154		Pn	17 49 22.0	+1.8
LMEL	Las Melosas	3.06	154	eP	Pn	17 49 22.6	+2.4
LMEL				i S	Sn	17 49 59.8	+3.0
LMEL				IAML		17 50 10.5	
	comp=N,394nm,0.4s						
BO01	Tunca	3.34	170	Pn	Pn	17 49 24.8	+0.9
BO01	Tunca	3.34	170	eP	Pn	17 49 25.3	+1.4
BO01				IAML		17 50 21.0	
	comp=E,103nm,0.3s						
BO03	Pichilemu	3.40	182	eP	Pn	17 49 24.4	-0.2
BO03				IAML		17 50 30.3	
	comp=N,86nm,0.4s						
GO03	Copiap	3.75	22		Pn	17 49 29.4	-0.2
GO05	Huala	3.91	182	Pn	Pn	17 49 31.4	-0.2
GO05	Huala	3.91	182	eP	Pn	17 49 33.3	+1.6
GO05				eS	Sn	17 50 19.4	+1.9
AC06	Mina Casimiro	3.93	19		Pn	17 49 31.1	-0.9
ML02	Panimavida	4.67	176		Pn	17 49 39.6	-2.5
AC02	Maricunga	4.85	30		Pn	17 49 45.3	+0.3
AC01	Pan de Azucar	5.04	12	Pn	Pn	17 49 48.8	+1.5
BI05	Punta Hualpn	5.75	191	Pn	Pn	17 49 55.7	-1.3
GO02	Mina Guanaco	6.22	19		Pn	17 50 04.4	+0.6
LVC	Limon Verde	8.84	18	Pn	Pn	17 50 40.1	+0.4
PB04	IPOC Station P	8.85	10	Pn	Pn	17 50 40.7	+1.0
PB07	IPOC Station P	9.49	11	Pn	Pn	17 50 50.1	+1.6
PB09	IPOC Station P	9.54	15	Pn	Pn	17 50 49.7	+0.5
PB01	IPOC Station P	10.22	12	Pn	Pn	17 50 58.9	+0.4
TRQA	Tornquist	10.66	133		Pn	17 51 02.2	-2.2
PB08	IPOC Station P	11.16	13	Pn	Pn	17 51 09.2	-2.5
PB16	IPOC Station P	12.87	10	Pn	Pn	17 51 35.5	+0.3
LPAZ	La Paz	15.12	14	Pn	Pn	17 52 06.0	+0.2
OTAV	Otavalo	31.79	347	P	P	17 54 54.3	-2.6
OTAV				IAmb	IAmb	17 55 04.8	
	comp=Z,1.6nm,0.8s						
DR12	Loma Pena Alta	49.65	3	P	P	17 57 24.9	+1.4
SNAA	Sanae	54.20	159	P	P	17 57 57.2	+0.3
SNAA				IAmb	IAmb	17 58 15.1	
	comp=Z,4.4nm,1.4s						
QSPA	South Pole Qui	59.13	180	P	P	17 58 32.7	+0.6

WEL 27 17:48:48.6±0.9, **34°S**±18°×**18°0W**±2°6, **h339**^{km}±18^{km}, **M4.0**/10, **mB4.5**/6, **MLv4.2**/10, **Mw(mB)3.7**/6, **Error ellipse: s-maj=0.0km s-min=0.0km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.26	199	P	Pn	17 49 59.4	-0.2
MXZ				S	S	17 50 57.7	+0.9
WMGZ	Waiomatatini S	4.48	197	P	Pn	17 50 01.4	-0.5
WMGZ				S	S	17 51 02.5	+1.5
PKGZ	Pakihiroa	4.63	200	P	Pn	17 50 03.9	+0.3
PKGZ				S	S	17 51 04.1	0.0
PUZ	Puketiti	4.75	198	P	Pn	17 50 04.8	-0.2
PUZ				S	S	17 51 07.2	+0.7
RUGZ	Raukumara Rang	4.82	203	P	Pn	17 50 05.9	+0.1
RUGZ				S	S	17 51 05.8	-2.3
TWGZ	Tauwhareparae	4.93	200	P	Pn	17 50 07.7	+0.8
TWGZ				S	S	17 51 11.2	+1.2
CNGZ	Carnagh Statio	5.16	197	P	Pn	17 50 10.0	+0.6
MWZ	Matawai	5.21	203	P	Pn	17 50 10.4	+0.4
MWZ				S	S	17 51 16.4	+0.6
TKGZ	Te Karaka	5.21	200	P	Pn	17 50 08.6	-1.3
TKGZ				S	S	17 51 17.1	+1.4
URZ	Urewera	5.29	206	P	Pn	17 50 10.1	-0.7
URZ				S	S	17 51 16.6	-0.6
RIGZ	Rimuhau	5.48	199	P	Pn	17 50 13.4	+0.4
RIGZ				S	S	17 51 21.6	+0.3
SNGZ	Shannon Statio	5.68	202	P	Pn	17 50 15.8	+0.5
SNGZ				S	S	17 51 26.4	+1.1
KNZ	Kokohu	5.80	199	P	Pn	17 50 16.7	0.0
KNZ				S	S	17 51 27.0	-0.8
MHGZ	Mahia Peninsul	5.87	197	P	Pn	17 50 19.3	+1.9
RAHZ	Arahi	5.88	203	P	Pn	17 50 17.9	+0.3
RAHZ				S	S	17 51 30.2	+0.5
TLZ	Tolley Road	6.03	216	P	Pn	17 50 17.9	-1.5
ARHZ	Aropaoanui	6.22	203	P	Pn	17 50 21.2	-0.4
ARHZ				S	S	17 51 38.7	+1.8
HIZ	Hauiti	6.51	219	P	Pn	17 50 28.2	+3.2
KAHZ	Kahuranaki	6.75	201	P	Pn	17 50 28.4	+0.7
BHHZ	Black Hill Sta	6.75	207	P	Pn	17 50 27.6	-0.2
BHHZ				S	S	17 51 50.3	+2.0
KRHZ	Kereru	6.78	205	P	Pn	17 50 27.5	-0.5
KRHZ				S	S	17 51 48.6	-0.1
PNHZ	Pukenui	7.08	205	P	Pn	17 50 30.9	-0.7
PRHZ	Porangahau	7.25	201	P	Pn	17 50 33.9	+0.3
TSZ	Takapari Road	7.29	206	P	Pn	17 50 33.8	-0.3
BFZ	Birch Farm	7.75	202	P	Pn	17 50 39.5	0.0
TIWZ	Tintock	7.96	204	P	Pn	17 50 42.0	0.0
MRZ	Mangatainoka R	7.96	205	P	Pn	17 50 41.3	-0.7
HOWZ	Holdsworth Sta	8.19	205	P	Pn	17 50 44.0	-0.8

IDC 27 18:02:24.4±1.2, 0.°19S×124.°57E, h0^{km}, mb3.7/4, mbtmp3.8/4, MS2.9/1, Error ellipse: s-maj=170.8km s-min=21.7km az=64.0
DJA 27 18:02:30.1±0.3, 0°S±2°×12°5E±°, h10^{km}, M4.1/12, mb4.2/4, mB4.7/2, MLv4.1/12, Mw(mB)3.9/2
NEIC 27 18:02:31.7±2.3, 0.°21S±0.°10×124.°71E±0.°01, h58^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=13.8km s-min=1.9km az=177.0
ISC 27 18:02:30.6±0.7, **0.°07S**±0.°06×**124.°79E**±0.°04, **h50**^{km}, **n34**, σ**2^{s}24**/38, **mb4.1**/9, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.03	309	P	Pn	18 02 49.1	+0.3
KMSI				S	Sn	18 03 03.0	+0.8
LUWI	Luwuk	2.23	244		Pn	18 03 04.8	-0.4
LUWI				Sn	Sn	18 03 36.7	+5.1
LUWI	Luwuk	2.23	244	P	Pn	18 03 07.8	+2.6
LUWI				S	Sn	18 03 37.2	+5.6
SANI	Sanana	2.30	149	P	Pn	18 03 04.7	-1.4
TNTI	Ternate	2.71	72		Pn	18 03 15.0	+3.3
TNTI				Sn	Sn	18 03 47.1	+3.7
MRSI	Marisa	2.90	281	P	Pn	18 03 12.8	-1.5
APSI	Ampana	3.25	255	P	Pn	18 03 21.3	+2.2
TOLI2	Tolitoli	4.17	286		Pn	18 03 32.4	+0.5
TOLI2				Sn	Sn	18 04 19.1	-0.3
MPSI	Mapaga	4.91	275	P	Pn	18 03 45.3	+3.4
AAI	Ambon	4.95	137	P	Pn	18 03 44.2	+1.8
MSAI	Masohi	5.26	128	P	Pn	18 03 50.0	+3.2
	0.1nm327nm28nm,0.6s						
TTSI	Tana Toraja	5.78	239	P	Pn	18 03 54.5	+0.7
	0.2nm1μm30nm,0.7s						
BBSI	Bau Bau	5.81	202	P	Pn	18 03 55.4	+1.0
	0.0nm3.2nm,0.9s						
SPSI	Sidrap Palu	6.33	232	P	Pn	18 04 04.3	+2.9
KAPI	Kappang	7.03	226	Pn	Pn	18 04 08.4	-2.6
DAV	Davao City (W)	7.14	6	LR	LR	18 07 16.7	
	comp=Z,95nm,20.4s,baz=170,slow=40						
FAKI	Fak Fak	7.98	111	Pn	Pn	18 04 24.0	0.0
MYLDM	Lahad Datu	8.16	310	Pn	Pn	18 04 21.7	-4.9
MTN	Manton Dam	14.16	154	Pn	Pn	18 05 47.4	-1.2
KNRA	Kununurra	15.99	166	Pn	Pn	18 06 11.9	-0.5
KNRA				IAmb	IAmb	18 06 16.1	
	comp=Z,18nm,1.4s						
XMIS	Christmas Isla	21.66	241	P	P	18 07 13.9	-3.3
WB0	Warramunga Arr	21.72	155	P	P	18 07 15.3	-2.4
WB0				IAmb	IAmb	18 08 11.7	
	comp=Z,19nm,1.9s						
WRA	Warramunga Arr	21.85	155	P	P	18 07 17.7	-1.5
	comp=Z,1.0nm,0.5s,baz=333,slow=11,SNR=11						
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	21.85	155	P	P	18 07 18.8	-0.4
WB2	Warramunga Arr	21.86	155	P	P	18 07 16.6	-2.7
WB2				IAmb	IAmb	18 07 41.4	
	comp=Z,12nm,1.5s						
WR0	Warramunga Arr	21.95	155	P	P	18 07 19.3	-1.0
COEN	Coen	22.84	128	P	P	18 07 29.8	0.0
COEN				IAmb	IAmb	18 07 51.8	
	comp=Z,11nm,1.6s						
YULB	Yu-li	23.57	352	P	P	18 07 36.1	-0.8
YULB				IAmb	IAmb	18 08 12.5	
	comp=Z,31nm,1.5s						
ASAR	Alice Springs	25.07	160	P	P	18 07 50.9	+0.3
	comp=Z,1.6nm,0.6s,baz=345,slow=11,SNR=24						
ASAR				PcP	PcP	18 11 25.6	+1.2
	comp=Z,0.4nm,0.5s,baz=347,slow=2.0,SNR=14						
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	25.07	160	P	P	18 07 49.8	-0.8
FORT	Forrest	30.69	174	P	P	18 08 40.3	-0.4
MKAR	Makanchi Array	59.62	327	P	P	18 12 29.4	-0.2
	comp=Z,1.0nm,0.6s,baz=128,slow=6.8,SNR=6.7						
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	63.13	335	P	P	18 12 54.5	+1.5
	comp=Z,0.3nm,0.4s,baz=126,slow=7.3,SNR=1.9						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	63.94	329	P	P	18 12 58.1	-0.4
KURK				IAmb	IAmb	18 13 00.2	
	comp=Z,7.6nm,1.4s						

IDC 27 18:06:38.6±2.8, 33.°77S×178.°37W, h0^{km}, mb4.0/4, mbtmp4.0/5, ML3.9/1, Error ellipse: s-maj=63.7km s-min=34.6km az=125.0
ISC 27 18:06:39.2±3.5, **34.°0S**±0.°2×**177.°7W**±0.°5, **h35**^{km}, **n6**, σ**1^{s}34**/7, **mb4.1**/4, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.01	223	Pn	Pn	18 08 05.9	+0.2
	3.2nm,0.3s,baz=35,slow=12,SNR=19						
URZ				Sn	Sn	18 09 12.8	-0.5
	5.4nm,0.3s,baz=169,slow=15,SNR=11						
	22nm,0.6s						
STKA	Stephens Creek	34.10	262	P	P	18 13 22.1	+1.5
	2.4nm,0.7s,baz=105,slow=12,SNR=2.8						
	2.4nm,0.7s						
CTA	Charters Tower	34.80	284	P	P	18 13 27.2	+0.5
	3.2nm,0.9s,baz=107,slow=11,SNR=2.8						
	3.2nm,0.9s						
ASAR	Alice Springs	43.31	271	P	P	18 14 36.5	-1.5
	1.0nm,0.7s,baz=111,slow=7.6,SNR=11						
	1.0nm,0.7s						
WRA	Warramunga Arr	44.62	276	P	P	18 14 47.0	-1.5
	0.8nm,0.4s,baz=120,slow=7.7,SNR=6.2						
	0.8nm,0.4s						
FINES	FINESS Array B	148.57	338	PKPbc	PKPab	18 26 24.9	-0.2
	0.7nm,0.5s,baz=30,slow=3.1,SNR=13						

NNC 27 18:07:58.0±1.0, 40.°89N×77.°75E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=6.8km s-min=4.9km az=172.0
KRNET 27 18:07:58.9±0.1, 40.°95N×77.°68E, h17^{km}, mb3.2
SOME 27 18:08:00.7, 40.°97N×77.°73E, h15^{km}
ISC 27 18:07:58.5±2.1, **40.°94N**±0.°08×**77.°75E**±0.°03, **h1**^{km}±11^{km}, **n58**, σ**1^{s}03**/85, **18C-17D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	0.80	3	⇓eP	Pg	18 08 13.8	+0.1
	baz=7.0						
TARG				⇓iS	Sg	18 08 25.0	+1.0
	baz=7.0						
KDJ	Kajisay	1.27	340	⇑eP	Pn	18 08 22.0	-1.6
	baz=43						
KDJ				⇑eS	Sb	18 08 38.8	-1.4
	baz=43						
PRZ	Przheval'sk	1.62	17	⇑eP	Pb	18 08 29.3	-0.1
	baz=19						
PRZ				⇑eS	Sg	18 08 51.2	+0.6
	baz=19						
ULHL	Ulahol	1.73	320	P	Pn	18 08 30.3	+0.4
	SNR=24						
ULHL	Ulahol	1.73	320	⇓eP	Pn	18 08 30.1	+0.2
	baz=21						
ULHL				⇓iS	Sb	18 08 52.5	-1.1
	baz=21						
ANVS	Anan'yevo	1.85	358	⇑eP	Pb	18 08 32.7	-0.5
	baz=60						
ANVS				⇑eS	Sb	18 08 57.2	+0.3
	baz=60						
BOOM	Boomskoye usch	2.06	320	⇑iP	Pn	18 08 35.4	+0.9
	baz=20						
BOOM				⇑iS	Sb	18 09 01.9	-1.2
	baz=20						
SATY	Saty	2.18	13	eP	Pg	18 08 41.1	+0.9
	9.1nm,0.5s						
SATY				eS	Sg	18 09 10.4	+1.9
	46nm,0.4s						
SATY	Saty	2.18	13	Pg	Pb	18 08 39.0	+0.2
	14nm,0.7s						
SATY				Lg	Lg	18 09 09.9	
	46nm,0.4s						
TNSS	Tian-Shan	2.18	344	eP	Pg	18 08 40.8	+0.5
	16nm,0.3s						
TNSS				eS	Sg	18 09 09.8	+1.1
	39nm,0.6s						
TNSS	Tian-Shan	2.18	344	Pg	Pb	18 08 39.0	-0.1
	17nm,0.5s						
TNSS				Lg	Lg	18 09 09.8	
	39nm,0.6s						
MDOK	Medeo	2.29	347	eP	Pg	18 08 42.5	+0.1
	10.0nm,0.5s						
MDOK				eS	Sg	18 09 12.3	+0.4
	55nm,0.8s						
MDOK	Medeo	2.29	347	Pg	Pb	18 08 39.9	-0.8
	15nm,0.5s						
MDOK				Lg	Lg	18 09 12.2	
	44nm,0.6s						
MDOK	Medeo	2.29	347	Pg	Pb	18 08 40.7	0.0
	10.0nm,0.5s						
MDOK				Lg	Lg	18 09 12.3	
	55nm,0.8s						
ZHN	Zhinishke	2.29	13	eP	Pg	18 08 43.0	+0.6
	11nm,0.1s						
ZHN				eS	Sg	18 09 13.4	+1.4
	41nm,0.6s						
ZHN	Zhinishke	2.29	13	Pg	Pb	18 08 41.2	+0.5
	17nm,0.2s						
ZHN				Lg	Lg	18 09 13.4	
	41nm,0.6s						
KNDC	Almaty	2.35	346	⇑Pg	Pb	18 08 41.2	-0.6
	14nm,0.5s						
KNDC				⇓Lg	Lg	18 09 16.0	
	60nm,0.4s						
MTBS	Maitube	2.40	336	eP	Pg	18 08 44.6	+0.1
	4.6nm,0.5s						
MTBS				eS	Sg	18 09 16.4	+0.7
	26nm,0.3s						
MTBS	Maitube	2.40	336	Pg	Pb	18 08 42.9	+0.3
	5.4nm,0.2s						
MTBS				Lg	Lg	18 09 16.4	
	32nm,0.5s						
UZB	Uzynbulak	2.41	23	eP	Pg	18 08 44.3	-0.3
	4.6nm,0.1s						
UZB				eS	Sg	18 09 16.0	+0.2
	21nm,0.4s						
UZB	Uzynbulak	2.41	23	Pg	Pb	18 08 42.2	-0.5
	5.5nm,0.5s						
UZB				Lg	Lg	18 09 14.9	
	21nm,0.4s						
KST	Kastek	2.49	328	eP	Pg	18 08 46.0	-0.2
	6.8nm,0.3s						
KST				eS	Sg	18 09 18.8	+0.2
	34nm,0.9s						
KST	Kastek	2.49	328	Pg	Pb	18 08 43.6	-0.5
	6.7nm,0.6s						
KST				Lg	Lg	18 09 17.7	
	34nm,0.9s						
TKM2	Tokmak 2	2.55	322	P	Pb	18 08 43.2	-2.0
	SNR=14						
TKM2	Tokmak 2	2.55	322	⇑Pn	Pn	18 08 42.9	+1.7
	7.8nm,0.5s						
TKM2				⇑Lg	Lg	18 09 20.7	
	19nm,0.6s						
TKM2	Tokmak 2	2.55	322	⇓iP	Pn	18 08 42.1	+0.8
	baz=22						
TKM2				⇓iS	Sn	18 09 13.7	+0.6
	baz=22						
KURS	Kuram	2.57	7	eP	Pg	18 08 47.7	0.0
	6.5nm,0.2s						
KURS				eS	Sg	18 09 21.7	+0.6
	15nm,0.9s						
KURS	Kuram	2.57	7	Pg	Pb	18 08 46.4	+1.0
	5.6nm,0.5s						
KURS				Lg	Lg	18 09 22.0	
	15nm,0.9s						
KPKS	Kokpek	2.62	15	eP	Pg	18 08 48.6	-0.1
	15nm,0.7s						
KPKS				eS	Sg	18 09 23.1	+0.3
	44nm,0.8s						
KBK	Karagaybulak	2.71	310	P	Pb	18 08 48.4	+0.5
	SNR=9.2						
KBK	Karagaybulak	2.71	310	⇑iP	Pn	18 08 44.1	+0.7
	baz=11						
KBK				⇑iS	Sn	18 09 17.1	+0.2
	baz=11						
PDGK	Podgornoye	2.72	28	Pg	Pb	18 08 48.3	+0.3
	6.5nm,0.6s						
PDGK				Lg	Lg	18 09 25.4	
	20nm,0.8s						
PDGK	Podgornoye	2.72	28	⇑Pn	Pn	18 08 44.5	+1.0
	8.7nm,0.5s						
PDGK				⇑Lg	Lg	18 09 25.7	

	75nm,0.7s						
UCH	**Uchtor**	2.75	299	P	Pn	18 08 44.6	+0.5
	SNR=13						
UCH	**Uchtor**	2.75	299	⇑eP	Pn	18 08 44.5	+0.3
	baz=99						
UCH				⇑iS	Sn	18 09 18.2	-0.1
	baz=99						
KTBS	**Karatobe**	2.89	344	eP	Pg	18 08 53.7	-0.1
	6.0nm,0.2s						
KTBS				eS	Sg	18 09 31.8	+0.7
	67nm,0.5s						
KTBS	**Karatobe**	2.89	344	Pg	Pb	18 08 51.7	+0.9
	5.8nm,0.3s						
KTBS				Lg	Lg	18 09 31.4	
	67nm,0.5s						
AAK	**Ala-Archa**	2.97	306	P	Pb	18 08 52.4	+0.1
	SNR=9.5						
AAK	**Ala-Archa**	2.97	306	⇓iP	Pn	18 08 47.7	+0.8
	baz=6.0						
AAK				⇓iS	Sn	18 09 23.3	0.0
	baz=6.0						
CHMS	**Chumysh**	3.04	314	P	Pb	18 08 54.3	+0.8
	SNR=8.9						
CHMS	**Chumysh**	3.04	314	⇓Pg	Pb	18 08 53.9	+0.4
	10nm,0.6s						
CHMS				⇓Lg	Lg	18 09 35.6	
	8.6nm,0.6s						
KUU	**Kurty**	3.14	341	eP	Pb	18 08 56.8	+1.7
	1.7nm,0.2s						
KUU				eS	Sg	18 09 37.1	-2.1
	13nm,0.5s						
KUU	**Kurty**	3.14	341	Pg	Pb	18 08 55.2	+0.1
	1.5nm,0.3s						
KUU				Lg	Lg	18 09 37.2	
	13nm,0.5s						
KRBS	**Karabastau**	3.16	332	eP	Pg	18 08 57.8	-1.2
	7.8nm,0.5s						
KRBS				eS	Sg	18 09 38.9	-1.1
	27nm,0.8s						
KRBS	**Karabastau**	3.16	332	Pg	Pb	18 08 56.0	+0.5
	7.7nm,0.7s						
KRBS				Lg	Lg	18 09 38.4	
	27nm,0.8s						
KTMS	**Ketmen**	3.17	37	eP	Pb	18 08 57.2	+1.6
	2.0nm,0.3s						
KTMS				eS	Sg	18 09 38.0	-2.2
	14nm,0.4s						
KTMS	**Ketmen**	3.17	37	Pg	Pb	18 08 55.0	-0.6
	1.8nm,0.3s						
KTMS				Lg	Lg	18 09 37.0	
	11nm,0.5s						
AML	**Almayashu**	3.27	293	P	Pb	18 08 55.2	-2.3
	SNR=9.4						
USP	**Ospenovka**	3.36	315	P	Pb	18 08 59.3	+0.5
	SNR=19						
USP	**Ospenovka**	3.36	315	⇓eP	Pn	18 08 53.0	+0.8
	baz=15						
USP				⇓eS	Sn	18 09 32.7	0.0
	baz=15						
SGDS	**Sogindy**	3.42	318	eP	Pg	18 09 02.6	-1.4
	1.4nm,0.3s						
SGDS				eS	Sg	18 09 47.1	-1.2
	8.0nm,0.6s						
SGDS	**Sogindy**	3.42	318	Pg	Pb	18 09 00.7	+0.8
	1.4nm,0.4s						
SGDS				Lg	Lg	18 09 47.1	
	8.0nm,0.6s						
EKS2	**Erkin-Say**	3.43	301	P	Pb	18 09 01.4	+1.2
	SNR=18						
EKS2	**Erkin-Say**	3.43	301	⇓iP	Pn	18 08 54.1	+0.8
	baz=2.0						
EKS2				⇓iS	Sn	18 09 34.5	-0.2
	baz=2.0						
DJR	**Jarkent**	3.71	23	eP	Pg	18 09 07.9	-1.7
	2.3nm,0.3s						
DJR				eS	Sg	18 09 56.2	-1.6
	10nm,0.5s						
DJR	**Jarkent**	3.71	23	Pg	Pb	18 09 06.2	+1.3
	2.4nm,0.4s						
DJR				Lg	Lg	18 09 56.2	
	10nm,0.5s						
KK31	**Karatay Array**	5.81	294	Pg	Pb	18 09 44.2	+3.6
	0.4nm,0.4s,baz=113,slow=16,SNR=11						
KK31				⇓Lg	Lg	18 11 03.9	
	1.3nm,0.6s,baz=113,slow=26,SNR=5.5						
MK08	**Makanchi Array**	6.68	28	⇑Pn	Pn	18 09 36.8	-0.9
	0.9nm,0.9s						
MK08				⇓Lg	Lg	18 11 32.3	
	1.2nm,0.7s						

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*IDC **27** 18:08:20.6±1.5, 7°.40S×126°.20E, h276^{km}±16^{km}, mb3.4/4, mbtmp3.9/8, Error ellipse: s-maj=23.2km s-min=12.8km az=67.0*

ISC 27 18:08:22.1±0.8**, 7°.43S**±0°.08×**126°.1E**±0°.1**, h300**^{km}**, n8,** σ**2^{s}39**/11**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	3.69	221	P	Pn	18 09 24.8	-0.3
	36nm,0.3s,baz=44,slow=3.2,SNR=37						
BATI				S	S	18 10 12.2	-3.2
	233nm,0.7s,baz=23,slow=1.6,SNR=9.5						
SIJI	**Sorong**	8.28	38	P	Pn	18 10 16.3	-3.0
	7.5nm,0.6s,baz=195,slow=20,SNR=7.4						
WRA	**Warramunga Arr**	14.77	148	P	P	18 11 35.1	-1.7
	0.3nm,0.5s,baz=324,slow=13,SNR=11						
WRA				S	S	18 14 21.6	+3.3
	0.3nm,0.5s,baz=333,slow=23,SNR=2.2						
ASAR	**Alice Springs**	17.79	156	P	P	18 12 09.6	0.0
	1.2nm,0.5s,baz=334,slow=12,SNR=21						
ASAR				S	S	18 15 20.4	+2.0
	0.7nm,0.8s,baz=329,slow=16,SNR=4.9						
CMAR	**Chiang Mai Arr**	37.17	314	P	P	18 15 06.5	+1.2
	0.2nm,0.3s,baz=149,slow=11,SNR=0.8						
	0.2nm,0.3s						
SONM	**Songino Array**	57.72	344	P	P	18 17 44.8	+2.6
	1.3nm,0.3s,baz=163,slow=6.2,SNR=2.5						
	1.3nm,0.3s						
MKAR	**Makanchi Array**	66.54	329	P	P	18 18 41.1	+0.8
	1.5nm,0.6s,baz=131,slow=7.7,SNR=24						
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	70.33	336	P	P	18 19 03.1	-0.3
	1.0nm,0.5s,baz=108,slow=4.8,SNR=6.0						
	1.0nm,0.5s						

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*IDC **27** 18:14:43.5±0.9, 35°.51N×27°.79E, h0^{km}, mb3.8/8, mbtmp3.7/17, ML3.6/9, MS3.0/10, Error ellipse: s-maj=18.0km s-min=10.9km az=170.0*
*DDA **27** 18:14:48.1±0.0, 35°.42N×27°.54E, h26^{km}, MW4.1*
*ISK **27** 18:14:49.1, 35°.56N×27°.67E, h22^{km}, ML3.9/30*
*THE **27** 18:14:49.7, 35°.63N×27°.63E, h0^{km}, ML3.7/8, Error ellipse: s-maj=1.9km s-min=0.6km az=134.0*
*NIC **27** 18:14:49.5±0.0, 35°.50N×27°.79E, h32^{km}±19^{km}, Ml4.1/5*
*ATH **27** 18:14:49.5, 35°.61N×27°.60E, h31^{km}±1^{km}, ML3.7/5, Error ellipse: s-maj=3.6km s-min=1.2km az=139.0*
*GII **27** 18:14:50.8±0.0, 35°.19N×27°.97E, h15^{km}, MD3.4/4, Mm3.6/2*
*HLW **27** 18:14:52.2, 35°.23N×27°.84E, h26^{km}±9^{km}, Md4.1*

ISC 27 18:14:47.7±1.0**, 35°.45N**±0°.03×**27°.81E**±0°.02**, h26**^{km}±9^{km}**, n176,** σ**1^{s}73**/226**, mb3.7**/8**, MS3.0**/3**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	0.54	281	P	Pb	18 14 58.3	-0.4
KARP				S	Sb	18 15 04.3	-1.9
KARP				AML	AML	18 15 06.6	
	comp=N,53529µm,0.4s						
KARP				AML	AML	18 15 07.4	
	comp=E,35592µm,0.4s						
KARP	**Karpathos**	0.54	281	P	Pb	18 14 58.5	-0.2
KARP				S	Sb	18 15 05.2	-1.0
	comp=E,22µm,0.3s						
KARP	**Karpathos**	0.54	281	PG	Pb	18 14 58.5	-0.2
KARP				SG	Sb	18 15 04.8	-1.4
KARP	**Karpathos**	0.54	281	P	Pb	18 14 58.5	-0.2
KARP				S	Sb	18 15 05.2	-1.0
KARP				AML	AML	18 15 05.9	
	comp=E,64nm,0.7s						
KARP				AML	AML	18 15 05.9	
	comp=E,64nm,0.7s						
KARP				AML	AML	18 15 06.8	
	comp=E,36nm,0.4s						
KARP				AML	AML	18 15 06.8	
	comp=E,36nm,0.4s						
ARG	**Arkhangelos**	0.81	18	P	Pn	18 15 04.3	+0.9
ARG				S	Sn	18 15 14.8	+0.2
ARG				AML	AML	18 15 19.5	
	comp=N,16728µm,0.4s						
ARG				AML	AML	18 15 20.0	
	comp=E,21311µm,0.3s						
ARG	**Arkhangelos**	0.81	18	P	Pn	18 15 04.5	+1.0
ARG				S	Sn	18 15 15.8	+1.2
	comp=E,10µm,0.4s						
ARG	**Arkhangelos**	0.81	18	PG	Pn	18 15 04.4	+0.9
ARG				SG	Sn	18 15 15.8	+1.2
ARG	**Arkhangelos**	0.81	18	P	Pn	18 15 04.4	+0.9
ARG				S	Sn	18 15 14.9	+0.3
NIS1	**Nisyros Isl.**	1.26	336	P	Pn	18 15 09.6	-0.2
NIS1				S	Sn	18 15 25.6	-0.3
	comp=E,6µm,0.4s						
NIS1	**Nisyros Isl.**	1.26	336	PN	Pn	18 15 09.5	-0.2
NIS1				SN	Sn	18 15 24.9	-1.0
NISR	**Nisiros**	1.29	335	P	Pn	18 15 09.5	-0.5
NISR				S	Sn	18 15 25.1	-1.3
NISR				AML	AML	18 15 30.6	
	comp=N,4180µm,0.5s						
NISR				AML	AML	18 15 40.6	
	comp=E,6680µm,0.9s						
NISR	**Nisiros**	1.29	335	P	Pn	18 15 09.6	-0.5
NISR				S	Sn	18 15 25.9	-0.5
	comp=E,4µm,0.6s						
DAT	**Datca**	1.29	352	P	Pb	18 15 10.5	-1.0
DAT				S	Sn	18 15 26.7	-0.1
DAT	**Datca**	1.29	352	PN	Pb	18 15 10.7	-0.8
DAT				SN	Sn	18 15 26.7	-0.1
DAT	**Datca**	1.29	352	P	Pb	18 15 10.5	-1.0
DAT				S	Sb	18 15 27.6	-0.1
ZKR	**Zakros**	1.35	256	P	Pb	18 15 12.1	-0.2
ZKR				AML	AML	18 15 38.1	
	comp=N,4024µm,0.7s						
ZKR				AML	AML	18 15 38.8	
	comp=E,9808µm,0.6s						
ZKR	**Zakros**	1.35	256	P	Pb	18 15 12.4	+0.1
ZKR				S	Sb	18 15 31.7	+2.6
	comp=E,4µm,0.6s						
ZKR	**Zakros**	1.35	256	PN	Pb	18 15 12.1	-0.2
ZKR				SN	Sb	18 15 28.8	-0.3
ZKR	**Zakros**	1.35	256	P	Pb	18 15 12.2	-0.2
ZKR				S	Sb	18 15 29.1	0.0
ZKR				AML	AML	18 15 34.3	
	comp=E,4.2nm,0.5s						
ZKR				AML	AML	18 15 34.3	
	comp=E,4.2nm,0.5s						
ZKR				AML	AML	18 15 34.4	
	comp=E,10.0nm,0.8s						
ZKR				AML	AML	18 15 34.4	
	comp=E,10.0nm,0.8s						
TURN	**Turunc**	1.37	15	PN	Pb	18 15 12.8	+0.1
TURN	**Turunc**	1.37	15	P	Pb	18 15 13.2	+0.5
TURN				S	Sb	18 15 32.1	+2.3
KOSK	**Kos Island**	1.47	333	P	Pn	18 15 12.3	-0.2
KOSK				S	Sb	18 15 31.2	-1.4
	comp=E,2µm,0.6s						
KOSK	**Kos Island**	1.47	333	PN	Pn	18 15 12.3	-0.2
KOSK				SN	Sn	18 15 30.2	-0.6
DALY	**Dalyan (Mula)**	1.53	26	PN	Pb	18 15 15.4	0.0
FETY	**Fethiye**	1.57	41	PN	Pb	18 15 16.3	+0.2
FETY	**Fethiye**	1.57	41	P	Pb	18 15 17.1	+0.9
FETY				S	Sb	18 15 38.2	+2.6
BDRM	**Kayabasi**	1.64	350	P	Pn	18 15 15.0	0.0
BDRM				S	Sn	18 15 35.7	+0.4
AKAS	**Kas**	1.65	61	PN	Pb	18 15 18.2	+0.6
AKAS	**Kas**	1.65	61	P	Pb	18 15 18.2	+0.6
AKAS				S	Sb	18 15 38.3	+0.2
BODT	**Bodrum**	1.66	346	P	Pn	18 15 15.1	-0.1
BODT				S	Sn	18 15 35.8	+0.1
BODT	**Bodrum**	1.66	346	PN	Pn	18 15 15.4	+0.2
YER	**Yerkesik**	1.73	13	P	Pb	18 15 18.1	-0.7
YER				S	Sb	18 15 39.4	-0.7
YER	**Yerkesik**	1.73	13	PN	Pb	18 15 17.6	-1.2
FRMA	**Ierapetra Chan**	1.76	256	P	Pn	18 15 17.6	+1.2
FRMA				S	Sn	18 15 38.8	+0.9
	comp=E,2µm,0.8s						
NPS	**Neapolis**	1.81	265	P	Pb	18 15 19.3	-0.9
NPS	**Neapolis**	1.81	265	P	Pb	18 15 19.6	-0.6
NPS				S	Sb	18 15 41.5	-0.9
MLSB	**Milas**	1.84	359	PN	Pn	18 15 18.9	+1.2
MULA	**Mugla, Merkez-**	1.85	13	P	Pb	18 15 21.4	+0.4
MULA				S	Sb	18 15 45.9	+2.1
CAME	**Cameli-Denizli**	1.92	38	PN	Pb	18 15 21.2	-0.9
DDIM	**Aydin, Didim**	2.06	347	P	Pn	18 15 21.3	+0.7
CAEL	**Denizli, Camel**	2.07	36	P	Pb	18 15 23.6	-1.1
SANT	**Santorini**	2.12	296	P	Pn	18 15 21.6	+0.1
SANT				S	Sn	18 15 46.6	-0.5
	comp=E,1µm,0.4s						
SANT	**Santorini**	2.12	296	PN	Pn	18 15 21.9	+0.4
ELL	**Elmali**	2.14	52	PN	Pb	18 15 24.9	-1.0
SNT5	**Nea Kammeni, S**	2.18	297	P	Pn	18 15 22.2	-0.1
TAVA	**DENIZLI_Tavas**	2.20	23	P	Pb	18 15 24.5	-2.4
TAVA				S	Sb	18 15 53.4	-0.4
AYDN	**Tasoluk**	2.21	1	P	Pn	18 15 24.3	+1.5
HRKL	**Herakleio**	2.22	267	PN	Pn	18 15 24.1	+1.3
AKUM	**Antalya-Kumluc**	2.23	66	P	Pb	18 15 25.4	-1.9
AKUM				S	Sb	18 15 53.3	-1.3
GOLH	**Golhisar**	2.28	38	P	Pb	18 15 26.8	-1.4
GOLH				S	Sb	18 15 56.3	+0.3
GCAM	**G?zelcaml?**	2.30	348	PN	Pn	18 15 25.2	+1.3
GCAM	**G?zelcaml?**	2.30	348	P	Pn	18 15 25.0	+1.1
SMG	**Samos**	2.39	341	P	Pn	18 15 25.2	0.0
SMG	**Samos**	2.39	341	P	Pn	18 15 25.4	+0.2
IDI	**Anoyia**	2.39	267	Pn	Pn	18 15 24.4	-0.9
	comp=E,5.6nm,0.3s,baz=21,slow=6.0,SNR=43						
IDI				Sn	Sn	18 15 53.2	-0.6
	comp=E,21nm,0.3s,baz=106,slow=18,SNR=4.6						
IDI				Lg	Lg	18 16 00.4	
	comp=E,41nm,0.3s,baz=307,slow=22,SNR=4.6						
IDI				LR	LR	18 16 35.9	
	comp=E,255nm,19.8s,baz=87,slow=47						
	comp=E,11nm,0.3s						
IDI	**Anoyia**	2.39	267	P	Pn	18 15 26.3	+1.0
IDI				AML	AML	18 16 01.6	
	comp=N,943µm,0.8s						
IDI				AML	AML	18 16 15.0	
	comp=E,701µm,0.8s						
IDI	**Anoyia**	2.39	267	P	Pn	18 15 26.4	+1.0
IDI				S	Sn	18 15 56.3	+2.5
IDI	**Anoyia**	2.39	267	PN	Pn	18 15 26.6	+1.3
APE	**Apeiranthos**	2.45	312	PN	Pn	18 15 25.8	-0.3
AYDB	**Zeytinkoy-Aydi**	2.50	1	PN	Pn	18 15 28.3	+1.5
KORT	**Korkueli**	2.57	52	PN	Pb	18 15 31.2	-2.1
KORT	**Korkueli**	2.57	52	P	Pb	18 15 31.6	-1.7
DGB	**zmir**	2.71	344	P	Pn	18 15 29.7	+0.1
ANTB	**Antalya**	2.72	57	PN	Pb	18 15 33.5	-2.1
BRDR	**BURDUR-Merkez**	2.88	38	P	Pb	18 15 35.2	-3.3
BUCA	**Burdur, Bucak-**	2.90	49	P	Pb	18 15 35.8	-3.1
BUCA				S	Sn	18 16 09.2	+2.7
ZEYE	**Izmir, Urla-Ze**	2.98	340	P	Pn	18 15 34.1	+0.8
BLCB	**Balcova**	3.00	348	PN	Pn	18 15 34.0	+0.5
BASM	**Basmaki-Afyon**	3.05	35	PN	Pn	18 15 37.2	+2.8
URLA	**Izmir**	3.07	342	PN	Pn	18 15 34.7	+0.1
URLA	**Izmir**	3.07	342	P	Pn	18 15 34.7	+0.1
GVD	**Gavdhos**	3.11	260	P	Pn	18 15 37.1	+2.0
GVD	**Gavdhos**	3.11	260	PN	Pn	18 15 37.1	+2.0
IMMV	**Iera Moni Meta**	3.13	271	P	Pn	18 15 37.0	+1.6
IMMV	**Iera Moni Meta**	3.13	271	PN	Pn	18 15 36.9	+1.6
KULA	**Kula-Manisa**	3.14	12	PN	Pn	18 15 37.0	+1.5
PASA	**Karahalli, USA**	3.19	24	P	Pn	18 15 37.5	+1.2
ISP	**Isparta**	3.22	42	PN	Pn	18 15 39.8	+3.1
CHOS	**Chios island**	3.25	335	PN	Pn	18 15 38.4	+1.2
KZIL	**AFYON_Kizioren**	3.37	33	P	Pn	18 15 40.9	+2.1
KNDR	**Palaiochora Ch**	3.38	268	PN	Pn	18 15 41.3	+2.5
USAK	**Uak-Merkez**	3.40	16	P	Pn	18 15 39.8	+0.7
OSC1	**CSNet OBS 1**	3.46	123	P	Pn	18 15 41.9	+2.0
OSC1				S	Sn	18 16 23.0	+3.0
BAGO	**Egridir - ISPA**	3.49	42	P	Pn	18 15 43.7	+3.3
ZEDA	**zmir-Bergama**	3.56	351	P	Pn	18 15 41.8	+0.5
DEMI	**Demirci**	3.66	11	P	Pn	18 15 43.5	+0.8
DKL	**Dikili**	3.69	349	PN	Pn	18 15 44.2	+1.2
AKMS	**Akamas**	3.73	95	P	Pn	18 15 45.6	+2.0
AKMS				S	Sn	18 16 29.4	+2.8
AKMS				AML	AML	18 16 29.7	
	comp=E,1.2nm,0.4s						
AKMS				AML	AML	18 16 29.7	
	comp=E,1.2nm,0.4s						
AKMS				AML	AML	18 16 31.9	
	comp=E,0.9nm,0.3s						
AKMS				AML	AML	18 16 31.9	
	comp=E,0.9nm,0.3s						
GAZI	**Gazipasa**	3.74	77	P	Pn	18 15 45.8	+2.0
GAZI				S	Sn	18 16 27.0	-0.1
SEDI	**Konya, Seydise**	3.75	57	P	Pb	18 15 48.9	-4.5
SEDI				S	Sb	18 16 33.5	-5.0
GDZ	**Gediz**	3.87	20	P	Pn	18 15 46.4	+0.7
STEP	**BALIKESIR_Sava**	3.92	359	P	Pn	18 15 46.0	-0.3
ALFC	**Alefka**	3.93	93	P	Pn	18 15 48.3	+2.0
ALFC				S	Sn	18 16 34.3	+2.7
ALFC				AML	AML	18 16 34.9	
	comp=E,1.0nm,0.3s						
ALFC				AML	AML	18 16 34.9	
	comp=E,1.0nm,0.3s						
ALFC				AML	AML	18 16 35.1	
	comp=E,0.7nm,0.2s						
ALFC				AML	AML	18 16 35.1	
	comp=E,0.7nm,0.2s						
YVAC	**Isparta, Yalva**	3.94	43	P	Pn	18 15 48.7	+2.2
NATA	**Nata**	3.96	98	P	Pn	18 15 49.6	+2.8
AYVA	**Ayvalik**	3.96	347	P	Pn	18 15 47.7	+1.0
DOGA	**KONYA_Doganhis**	4.08	48	P	Pn	18 15 52.4	+3.8
BUHA	**Balikesir, Bur**	4.09	352	P	Pn	18 15 49.1	+0.5
LEF	**Lefka**	4.17	93	P	Pn	18 15 52.4	+2.8
LEF				S	Sn	18 16 38.3	+0.8
DURS	**Dursunbey**	4.18	7	P	Pn	18 15 50.8	+0.9
SZAC	**Souni**	4.21	98	P	Pn	18 15 52.6	+2.3
SZAC				AML	AML	18 16 43.3	
	comp=E,1.2nm,0.2s						
SZAC				AML	AML	18 16 44.2	
	comp=E,1.8nm,0.2s						
KOCA	**Canakkale, Ayv**	4.26	342	P	Pn	18 15 51.1	+0.2
BALY	**Balya**	4.29	358	P	Pn	18 15 51.6	+0.2
ERMK	**Ermenek**	4.30	72	P	Pn	18 15 55.0	+3.4
ANDZ	**Kutahya, Merke**	4.38	22	P	Pn	18 15 53.4	+0.8
OSC2	**CSNet OBS 4**	4.38	121	P	Pn	18 15 55.3	+2.8
BAYC	**CANAKKALE_Bayr**	4.40	347	P	Pn	18 15 53.1	+0.2
KONT	**Konya--Tatoy**	4.42	54	P	Pn	18 15 57.5	+4.3
KKBE	**Karaman, Kazim**	4.50	65	P	Pn	18 15 58.8	+4.5
SLUM	**Salum**	4.50	210	P	Pn	18 15 56.1	+1.8
	baz=212						
ASGA	**Asgata**	4.50	97	P	Pn	18 15 56.7	+2.4
CSS	**Mathiatis**	4.54	95	P	Pn	18 15 56.8	+2.0
KDHN	**Kadinhani**	4.61	47	P	Pn	18 15 59.1	+3.3
GULN	**MERSIN_Gulnar**	4.71	79	P	Pn	18 15 59.5	+2.4
MVOU	**Mavrovouni**	4.78	93	P	Pn	18 16 00.3	+2.2
BORA	**Eskisehir**	4.90	25	P	Pn	18 16 00.9	+1.2
KESN	**Edirne-Kesan**	5.44	351	P	Pn	18 16 08.1	+0.6
HMYD	**Mayadein**	6.17	155	P	Pn	18 16 19.8	+2.6
	baz=154						
BRTR	**Keskin Array B**	6.29	46	Pn	Pn	18 16 20.1	+1.1
	comp=E,0.6nm,0.3s,baz=222,slow=13,SNR=13						
BRTR				Sn	Sn	18 17 31.2	+1.1
	comp=E,0.8nm,0.3s,baz=216,slow=25,SNR=5.9						
BRTR				LR	LR	18 19 43.2	
	comp=E,418nm,18.7s,baz=234,slow=48						
	comp=E,1.1nm,0.3s						
KOT	**Kottamia**	6.46	147	P	Pn	18 16 23.2	+2.0
	baz=146						
KDZ	**Kurdzhali**	6.47	344	i P	Pn	18 16 23.1	+1.8
SWA2		6.50	199	P	Pn	18 16 23.7	+2.1
	baz=200						
SWA2				S	Sn	18 17 32.5	-2.4
	baz=200						
HNTI	**Hanita**	6.54	109	Pn	Pn	18 16 24.4	+2.2
HHAG	**Hagoal**	6.56	145	P	Pn	18 16 25.7	+3.1
	baz=144						
HHAG				S	Sn	18 17 34.7	-1.9
	baz=144						
HSAF	**As Saff**	6.61	150	P	Pn	18 16 25.2	+2.0
	baz=149						
RYAN	**Fayoum**	6.68	161	P	Pn	18 16 25.7	+1.5
	baz=160						
RZN	**Rozhen**	6.69	340	i P	Pn	18 16 28.7	+4.3
GLL	**Jalalah**	6.71	150	P	Pn	18 16 27.3	+2.6
	baz=148						
MMA0B	**Mount Meron ar**	6.74	109	Pn	Pn	18 16 27.0	+2.0
MMAI	**Mount Meron Ar**	6.74	109	Pn	Pn	18 16 22.6	-2.4
	comp=E,9.8nm,0.3s,baz=353,slow=35,SNR=7.2						
MMAI				Sn	Sn	18 17 42.5	+1.5
	comp=E,14nm,0.3s,baz=350,slow=31,SNR=9.2						
	comp=E,1.8nm,0.3s						
QRWL	**Qaraoun**	6.77	104	eP	Pn	18 16 27.1	+1.7
HWQ	**Hawqa**	6.79	98	eP	Pn	18 16 27.8	+2.0
GEM	**Giv'at Ha'Em**	6.87	107	Pn	Pn	18 16 27.8	+1.1
NATI	**Neve Ativ**	6.91	106	Pn	Pn	18 16 28.1	+0.9
NATI				Sn	Sn	18 17 46.2	+1.2
RCY	**Rachaya**	6.91	104	eP	Pn	18 16 29.1	+1.7
MMB	**Musomiste**	6.92	334	i P	Pn	18 16 30.6	+3.2
MMLI	**Mount Malkishu**	7.00	113	Pn	Pn	18 16 30.4	+1.8
SUZ	**Suez**	7.01	141	P	Pn	18 16 31.2	+2.5
	baz=140						
AMAZ	**Amatzia**	7.10	121	Pn	Pn	18 16 31.0	+1.0
KZIT	**Kziot**	7.14	128	Pn	Pn	18 16 31.1	+0.6
KZIT				Sn	Sn	18 17 49.4	-1.3
HMDT	**Nahal Hemdat**	7.16	114	Pn	Pn	18 16 32.3	+1.5
YTIR	**Yattir**	7.34	122	Pn	Pn	18 16 34.6	+1.3
YTIR				Sn	Sn	18 17 55.6	-0.2
DSI	**Dead Sea**	7.41	119	Pn	Pn	18 16 35.8	+1.6
DSI				Sn	Sn	18 17 57.4	+0.1
ZNM	**Zenema**	7.41	143	P	Pn	18 16 36.5	+2.3
	baz=142						
GHAJ	**Ghor Haditha**	7.69	120	Pn	Pn	18 16 40.3	+2.3
KRMI	**Paran Flat**	7.88	130	Pn	Pn	18 16 41.6	+0.9
PRNI	**Paran**	7.90	128	Pn	Pn	18 16 42.1	+1.2
PRNI				Sn	Sn	18 18 08.1	-1.3
VTS	**Vitosha**	8.00	335	i P	Pn	18 16 45.1	+2.8
HRFI	**Mount Harif**	8.13	130	Pn	Pn	18 16 45.6	+1.5
HRFI				Sn	Sn	18 18 14.1	-1.1
TAMRE	**El Minia**	8.18	160	P	Pn	18 16 46.5	+1.7
	baz=159						
MBRI	**Mt Berech**	8.22	131	Pn	Pn	18 16 46.8	+1.4
ASF	**Jabal al Asfar**	8.23	111	Pn	Pn	18 16 45.0	-0.6
	comp=E,1.2nm,0.3s,baz=311,slow=7.1,SNR=10						
	comp=E,2.2nm,0.3s						
HFRF	**Wahat Farafira**	8.28	177	P	Pn	18 16 48.2	+2.0
	baz=176						
HFRF				S	Sn	18 18 14.4	-4.5
	baz=176						
GRB	**Gharib**	8.31	148	P	Pn	18 16 48.6	+2.1
	baz=147						
EIL	**Elat**	8.33	132	Pn	Pn	18 16 46.5	-0.3
	comp=E,1.8nm,0.3s,baz=359,slow=3.4,SNR=29						
EIL				Sn	Sn	18 18 17.1	-3.0
	comp=E,3.8nm,0.3s,baz=104,slow=7.0,SNR=7.2						
	comp=E,3.6nm,0.3s						
EIL	**Elat**	8.33	132	Pn	Pn	18 16 48.1	+1.2
EIL				Sn	Sn	18 18 18.3	-1.8
NUB	**Nuweibaa**	8.63	136	P	Pn	18 16 54.0	+3.1
	baz=135						
MLR	**Muntele Rosu**	10.13	353	Pn	Pn	18 17 11.8	+0.2
	comp=E,0.2nm,0.3s,baz=151,slow=4.6,SNR=3.9						
MLR				LR	LR	18 21 49.0	
	comp=E,117nm,21.0s,baz=160,slow=42						
	comp=E,1.7nm,0.5s						
KBZ	**Khabaz**	14.26	50	Pn	Pn	18 18 10.3	+2.5
	comp=E,0.1nm,0.3s,baz=229,slow=21,SNR=1.6						
KBZ				LR	LR	18 24 21.2	
	comp=E,26nm,20.5s,baz=220,slow=41						
	comp=E,0.6nm,0.5s						
AKASG	**Malin Array Be**	15.28	3	Pn	Pn	18 18 19.2	-2.3
	comp=E,0.6nm,0.3s,baz=193,slow=11,SNR=1.8						
AKASG				LR	LR	18 24 45.6	
	comp=E,44nm,21.2s,baz=214,slow=40						
	comp=E,0.1nm,0.2s						
VRAC	**Vranov**	16.12	333	LR	LR	18 25 54.2	
	comp=E,34nm,20.9s,baz=156,slow=42						
GERES	**GERESS Array B**	16.95	326	Pn	Pn	18 18 40.8	-2.3
	baz=142,slow=14,SNR=3.2						
	comp=E,0.6nm,0.7s						
KHC	**Kasperske Hory**	17.22	327	eP	P	18 18 47.3	-0.4
DAVOX	**Davos/Dischmat**	17.58	316	LR	LR	18 26 58.1	
	comp=E,39nm,18.8s,baz=90,slow=42						
NACGM	**Naroch**	19.47	358	eP	Pn	18 19 13.9	+0.3
	baz=177						
GEYT	**Alibeck**	24.38	75	P	P	18 20 01.8	-2.0
	comp=E,2.0nm,0.5s,baz=277,slow=4.6,SNR=2.7						
	comp=E,2.0nm,0.5s						
ESDC	**Sonseca Array**	25.47	289	P	P	18 20 12.2	-1.4
	comp=E,1.0nm,0.6s,baz=77,slow=9.3,SNR=10.0						
	comp=E,1.0nm,0.6s						
FINES	**FINESS Array B**	26.04	358	P	P	18 20 16.7	-1.8
	comp=E,0.3nm,0.3s,baz=163,slow=14,SNR=5.6						
	comp=E,0.3nm,0.3s						
HFS	**Hagfors**	26.34	344	LR	LR	18 30 45.7	

	comp=E,28nm,19.9s,baz=150,slow=37						
AKTO	Aktyubinsk	26.48	46	P	P	18 20 22.7	+0.1
	comp=E,0.8nm,0.4s,baz=242,slow=7.8,SNR=4.7						
	comp=E,0.8nm,0.4s						
NOA	NORSAR Array B	27.73	343	LR	LR	18 32 58.4	
	comp=E,34nm,18.0s,baz=160,slow=40						
TORD	Torodi Ar. Bea	32.37	233	P	P	18 21 15.3	+0.1
	comp=E,1.9nm,0.5s,baz=33,slow=8.5,SNR=16						
	comp=E,1.9nm,0.5s						
ARCES	ARCESS Array B	34.17	359	P	P	18 21 28.8	-1.6
	comp=E,1.1nm,0.8s,baz=177,slow=8.1,SNR=5.6						
	comp=E,1.1nm,0.8s						
MBAR	Mbarara	35.97	175	LR	LR	18 36 10.6	
	comp=E,55nm,20.2s,baz=300,slow=36						
MKAR	Makanchi Array	41.80	57	P	P	18 22 35.4	+0.4
	comp=E,0.4nm,0.3s,baz=268,slow=8.8,SNR=12						
	comp=E,0.4nm,0.3s						
ZALV	Zalesovo Beam	43.24	46	P	P	18 22 46.6	+0.1
	comp=E,0.7nm,0.5s,baz=266,slow=10,SNR=4.3						
	comp=E,0.7nm,0.5s						

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*IDC **27** 18:16:12.4±2.6, 35°.75N×27°.57E, h0^{km}, mb3.6/3, mbtmp3.6/4, MS3.7/1, Error ellipse: s-maj=52.4km s-min=21.9km az=151.0*
*ISK **27** 18:16:18.4, 35°.66N×27°.58E, h2^{km}, ML3.3/9*
*DDA **27** 18:16:20.4±0.0, 35°.67N×27°.70E, h12^{km}±2^{km}, ML3.1*
ISC 27 18:16:18.9±1.2, **35°.53N**±0°.06×**27°.57E**±0°.05, **h34**^{km}±3^{km}, **n28**, σ1^{s}.**38**/36, **mb3.7**/3, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.33	273	PG	Pb	18 16 26.7	-0.5
KARP				SG	Sn	18 16 32.8	+0.2
ARG	Arkhangelos	0.82	33	PG	Pn	18 16 33.4	-0.7
ARG				SG	Sn	18 16 44.1	-1.0
NIS1	Nisyros Isl.	1.11	344	PG	Pn	18 16 38.2	0.0
ZKR	Zakros	1.18	250	PN	Pb	18 16 41.1	+0.3
ZKR				SN	Sb	18 17 00.5	+4.7
DAT	Datca	1.20	0	PG	Pn	18 16 39.3	-0.1
DAT	Datca	1.20	0	P	Pn	18 16 39.2	-0.2
DAT				S	Sn	18 16 55.8	+1.3
DAT				*i* AML	AML	18 16 57.0	
	comp=E,520nm,0.5s						
DAT				*i* AML	AML	18 16 58.0	
	comp=N,425nm,0.5s						
TURN	Turunc	1.36	24	PN	Pn	18 16 42.4	+0.9
TURN				SN	Sb	18 17 01.2	+0.4
TURN	Turunc	1.36	24	P	Pn	18 16 42.7	+1.2
TURN				S	Sn	18 16 59.5	+1.2
TURN				*i* AML	AML	18 17 04.0	
	comp=N,325nm,0.3s						
TURN				*i* AML	AML	18 17 05.0	
	comp=E,493nm,0.6s						
BDRM	Kayabasi	1.54	356	P	Pb	18 16 46.6	-0.2
BDRM				S	Sn	18 17 03.1	+0.3
BDRM				*i* AML	AML	18 17 09.0	
	comp=E,300nm,0.6s						
BDRM				*i* AML	AML	18 17 10.0	
	comp=N,307nm,0.5s						
BODT	Bodrum	1.54	352	PN	Pb	18 16 46.2	-0.7
DALY	Dalyan (Mula)	1.56	34	PN	Pb	18 16 46.2	-0.9
DALY				SN	Sb	18 17 06.6	+0.2
FETY	Fethiye	1.65	48	PN	Pb	18 16 47.9	-0.8
YER	Yerkesik	1.70	20	PN	Pn	18 16 48.4	+2.1
MLSB	Milas	1.77	5	PN	Pb	18 16 49.6	-1.2
MULA	Mugla, Merkez-	1.83	19	P	Pb	18 16 52.0	+0.2
MULA				S	Sb	18 17 14.6	+0.3
MULA				*i* AML	AML	18 17 25.0	
	comp=E,218nm,0.5s						
SANT	Santorini	1.91	297	PN	Pb	18 16 52.7	-0.4
DDIM	Aydin, Didim	1.94	352	P	Pb	18 16 54.4	+0.8
DDIM				*i* AML	AML	18 17 22.0	
	comp=N,194nm,1.6s						
CAME	Cameli-Denizli	1.99	44	PN	Pn	18 16 52.5	+2.2
AYDN	Tasoluk	2.14	7	P	Pn	18 16 54.1	+1.8
AYDN				*i* AML	AML	18 17 28.0	
	comp=E,121nm,0.4s						
GCAM	G?zelcaml?	2.18	353	PN	Pb	18 16 55.9	-1.8
GCAM	G?zelcaml?	2.18	353	P	Pb	18 16 58.0	+0.3
GCAM				*i* AML	AML	18 17 35.0	
	comp=E,126nm,0.6s						
GCAM				*i* AML	AML	18 17 36.0	
	comp=N,101nm,0.7s						
IDI	Anoyia	2.20	264	Pn	Pn	18 16 50.5	-2.7
	56nm,0.6s,baz=77,slow=14,SNR=0.7						
IDI				Lg	Lg	18 17 22.6	
	3.6nm,0.3s,baz=163,slow=19,SNR=0.8						
IDI	Anoyia	2.20	264	PN	Pb	18 16 57.3	-0.8
TAVA	DENIZLI_Tavas	2.21	29	P	Pb	18 16 57.7	-0.7
TAVA				S	Sb	18 17 24.1	-1.3
TAVA				*i* AML	AML	18 17 28.0	
	comp=N,212nm,0.8s						
TAVA				*i* AML	AML	18 17 32.0	
	comp=E,206nm,0.8s						
ESDC	Sonseca Array	25.25	289	P	P	18 21 41.0	-0.9
	0.4nm,0.6s,baz=80,slow=9.2,SNR=4.7						
	0.4nm,0.6s						
TORD	Torodi Ar. Bea	32.26	233	P	P	18 22 43.7	-0.7
	1.1nm,0.6s,baz=38,slow=8.5,SNR=3.3						
	1.1nm,0.6s						
ARCES	ARCESS Array B	34.08	359	P	P	18 22 55.3	-4.5
	0.8nm,0.9s,baz=170,slow=7.3,SNR=1.1						
	0.8nm,0.9s						
TSUM	Tsumeb	55.25	192	LR	LR	18 52 01.1	
	comp=Z,62nm,18.4s,baz=113,slow=39						

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*IDC **27** 18:19:49.9±6.8, 5°.11S×154°.89E, h85^{km}±45^{km}, mb3.0/4, mbtmp3.5/6, ML2.8/2, Error ellipse: s-maj=59.2km s-min=27.8km az=78.0*
ISC 27 18:19:52.1±1.9, **5°.0S**±0°.2×**154°.8E**±0°.2, **h100**^{km}, **n6**, σ1^{s}.**60**/7, **mb3.1**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.82	283	P	Pn	18 20 33.6	-1.8
	7.4nm,0.3s,baz=195,slow=2.6,SNR=24						
KRVT				S	Sn	18 21 10.1	+1.2
	42nm,0.3s,baz=72,slow=20,SNR=6.3						
	26nm,0.4s						
PMG	Port Moresby	8.75	239	P	Pn	18 21 56.1	+0.2
	1.5nm,0.3s,baz=80,slow=6.1,SNR=6.4						
	3.9nm,0.4s						
WRA	Warramunga Arr	24.85	231	P	P	18 25 04.6	-0.8
	0.3nm,0.5s,baz=55,slow=9.7,SNR=6.2						
	0.3nm,0.5s						
ASAR	Alice Springs	27.40	225	P	P	18 25 26.8	-1.7
	0.3nm,1.0s,baz=58,slow=9.2,SNR=8.8						
	0.3nm,1.0s						
CMAR	Chiang Mai Arr	59.73	295	P	P	18 29 48.2	+1.3
	0.4nm,0.6s,baz=126,slow=5.8,SNR=3.1						
	0.4nm,0.6s						
MKAR	Makanchi Array	81.75	319	P	P	18 32 00.3	+0.5
	0.2nm,0.5s,baz=89,slow=6.9,SNR=2.9						
	0.2nm,0.5s						

IDC 27 18:23:41.9±3.7, **30°.92S**×**176°.96W**, **h0**^{km}, **mb3.0**/2, **mbtmp3.3**/3, **ML5.2**/1, **Error ellipse: s-maj=90.5km s-min=52.0km az=135.0**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	13.89	340	Pn	Pn	18 27 01.6	+1.3
	0.4nm,0.3s,baz=193,slow=18,SNR=2.8						
	1.7nm,0.5s						
ASAR	Alice Springs	43.98	267	P	P	18 31 52.0	+0.7
	0.1nm,0.5s,baz=98,slow=6.3,SNR=4.5						
	0.1nm,0.5s						
WRA	Warramunga Arr	45.02	272	P	P	18 31 58.6	-0.9
	0.2nm,0.6s,baz=109,slow=7.6,SNR=32						
	0.2nm,0.6s						
FINES	FINESS Array B	145.94	340	PKPbc	PKPdf	18 43 21.8	-0.2
	0.7nm,0.7s,baz=73,slow=4.8,SNR=5.4						

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*KRSC **27** 18:46:37.0±0.9, 54°.60N×161°.70E, h52^{km}±12^{km}, ML4.5*
*IDC **27** 18:46:38.5±0.6, 54°.83N×161°.27E, h42^{km}±5^{km}, mb3.8/23, mbtmp4.0/28, ML3.4/4, MS3.2/22, Error ellipse: s-maj=12.2km s-min=10.2km az=151.0*
*MOS **27** 18:46:38.8±0.9, 54°.65N×161°.61E, h65^{km}, mb4.3/7, Error ellipse: s-maj=7.2km s-min=3.5km az=77.9*
*NEIC **27** 18:46:40.0±1.5, 54°.65N±0°.08×161°.5E±0°.1, h60^{km}±7^{km}, mb4.2/74, Error ellipse: s-maj=13.1km s-min=9.3km az=148.0*
ISC 27 18:46:38.9±0.5, **54°.65N**±0°.03×**161°.63E**±0°.03, **h49**^{km}±4^{km}, **n357**, σ1^{s}.**31**/402, **mb4.2**/64, **MS3.4**/17, **6C-5D**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.11	148	PN	Pn	18 46 45.8	-0.8
MKZ	Mys Kozlova	0.11	148	*i* P	Pn	18 46 45.8	-0.8
TUMD	Tumrok D	0.90	309	*e*P	Pn	18 46 55.1	-0.2
TUMD				*e*S	Sn	18 47 06.7	-0.6
TUMR	Tumrok	1.06	307	PN	Pn	18 46 57.9	+0.3
TUMR				S	Sn	18 47 11.6	+0.2
TUMR	Tumrok	1.06	307	*i* P	Pn	18 46 57.9	+0.3
TUMR				*e*S	Sn	18 47 11.6	+0.2
KMNR	Kamenistaya	1.37	325	PN	Pn	18 47 02.9	+1.2
KMNR				S	Sn	18 47 20.0	+1.3
KMNR	Kamenistaya	1.37	325	*i* P	Pn	18 47 02.9	+1.2
KMNR				*e*S	Sn	18 47 20.0	+1.3
BZGR	Bezymyannyi-Gr	1.40	338	PN	Pn	18 47 03.1	+1.0
BZGR	Bezymyannyi-Gr	1.40	338	*e*P	Pn	18 47 03.1	+1.0
KII	Karymskiy	1.42	245	PN	Pn	18 47 02.8	+0.5
KII				S	Sn	18 47 19.4	-0.5
KII	Karymskiy	1.42	245	*e*P	Pn	18 47 02.8	+0.5
KII				*e*S	Sn	18 47 19.4	-0.5
ZLN	Zelenaya	1.45	341	PN	Pn	18 47 04.0	+1.2
ZLN				S	Sn	18 47 21.6	+0.9
ZLN	Zelenaya	1.45	341	*e*P	Pn	18 47 04.0	+1.2
ZLN				*e*S	Sn	18 47 21.6	+0.9
BZWR	Bezymyannyi-We	1.47	334	PN	Pn	18 47 04.2	+1.1
BZWR	Bezymyannyi-We	1.47	334	*e*P	Pn	18 47 04.2	+1.1
KIRR	Kirishev	1.50	331	PN	Pn	18 47 04.7	+1.2
KIRR				S	Sn	18 47 22.0	0.0
KIRR	Kirishev	1.50	331	*e*P	Pn	18 47 04.7	+1.2
KIRR				*e*S	Sn	18 47 22.0	0.0
LGNR	Loginova	1.53	340	PN	Pn	18 47 05.7	+1.6
LGNR	Loginova	1.53	340	*e*P	Pn	18 47 05.7	+1.6
KPT	Kopyto	1.55	329	PN	Pn	18 47 05.7	+1.6
KPT	Kopyto	1.55	329	*e*P	Pn	18 47 05.7	+1.6
CIRR	Tsirk	1.55	341	PN	Pn	18 47 05.6	+1.3
CIRR	Tsirk	1.55	341	*e*P	Pn	18 47 05.6	+1.3
KBTR	Krutoberegovo	1.70	23	PN	Pn	18 47 07.3	+1.1
KBTR				S	Sn	18 47 27.5	+0.8
KBTR	Krutoberegovo	1.70	23	P	Pn	18 47 07.3	+1.1
KBTR				S	Sn	18 47 27.5	+0.8
KBG	Krutoberegovo	1.72	20	PN	Pn	18 47 08.0	+1.6
KBG				S	Sn	18 47 29.2	+2.0
KBG	Krutoberegovo	1.72	20	*e*P	Pn	18 47 08.0	+1.6
KBG				*e*S	Sn	18 47 29.2	+2.0
KOZ	Kozyrevsk	1.73	325	PN	Pn	18 47 08.2	+1.6
KOZ	Kozyrevsk	1.73	325	*e*P	Pn	18 47 08.2	+1.6
KLY	Klyuchi	1.76	342	PN	Pn	18 47 07.5	+0.6
KLY				S	Sn	18 47 27.7	-0.4
KLY	Klyuchi	1.76	342	*e*P	Pn	18 47 07.5	+0.6
KLY				*e*S	Sn	18 47 27.7	-0.4
SPN	Mys Shipunski	1.82	212	PN	Pn	18 47 07.0	-0.8
SPN				S	Sn	18 47 27.1	-2.5
SPN	Mys Shipunski	1.82	212	*e*P	Pn	18 47 07.0	-0.8
SPN				*e*S	Sn	18 47 27.1	-2.5
BDR	Baidarnaya	1.94	353	PN	Pn	18 47 11.0	+1.5
BDR	Baidarnaya	1.94	353	*e*P	Pn	18 47 11.0	+1.5
SMKR	Semkarok	1.94	357	PN	Pn	18 47 11.1	+1.6
SMKR	Semkarok	1.94	357	*e*P	Pn	18 47 11.1	+1.6
NLC	Nalytchevo	2.00	223	PN	Pn	18 47 10.8	+0.5
NLC				S	Sn	18 47 34.4	+0.3
NLC	Nalytchevo	2.00	223	*e*P	Pn	18 47 10.8	+0.5
NLC				*e*S	Sn	18 47 34.4	+0.3
SRKR	Sorokina	2.03	353	PN	Pn	18 47 12.1	+1.4
SRKR	Sorokina	2.03	353	*e*P	Pn	18 47 12.1	+1.4
ESO	Esso	2.11	309	PN	Pn	18 47 13.0	+1.3
ESO	Esso	2.11	309	*e*P	Pn	18 47 13.0	+1.3
SDLR	Sedlovina	2.12	231	PN	Pn	18 47 12.9	+0.8
SDLR				S	Sn	18 47 40.0	+2.7
SDLR	Sedlovina	2.12	231	*i* P	Pn	18 47 12.9	+0.8
SDLR				*e*S	Sn	18 47 40.0	+2.7
KRER	Koryakskii	2.17	233	PN	Pn	18 47 13.8	+1.1
KRER				S	Sn	18 47 39.5	+1.0
KRER	Koryakskii	2.17	233	*i* P	Pn	18 47 13.8	+1.1
KRER				*e*S	Sn	18 47 39.5	+1.0
SMAR	Somma	2.17	231	PN	Pn	18 47 13.8	+1.0
SMAR				S	Sn	18 47 39.4	+0.8
SMAR	Somma	2.17	231	*i* P	Pn	18 47 13.8	+1.0
SMAR				*e*S	Sn	18 47 39.4	+0.8
KRX	Arik	2.18	235	PN	Pn	18 47 13.8	+0.9
KRX				S	Sn	18 47 39.4	+0.7
KRX	Arik	2.18	235	*i* P	Pn	18 47 13.8	+0.9
KRX				*e*S	Sn	18 47 39.4	+0.7
UGLR	Uglovaya	2.20	230	PN	Pn	18 47 14.1	+1.1
UGLR				S	Sn	18 47 40.7	+1.6
UGLR	Uglovaya	2.20	230	*i* P	Pn	18 47 14.1	+1.1
UGLR				*e*S	Sn	18 47 40.7	+1.6
AVH	Avacha	2.20	232	PN	Pn	18 47 14.4	+1.4
AVH	Avacha	2.20	232	*i* P	Pn	18 47 14.4	+1.4
KOK	Koryaka	2.23	234	PN	Pn	18 47 14.8	+1.3
KOK	Koryaka	2.23	234	*e*P	Pn	18 47 14.8	+1.3
DALK	Dalny	2.35	228	PN	Pn	18 47 16.0	+1.0
DALK				S	Sn	18 47 42.9	+0.3
DALK	Dalny	2.35	228	*e*P	Pn	18 47 16.0	+1.0
DALK				*e*S	Sn	18 47 42.9	+0.3
GNL	Ganaly	2.37	248	PN	Pn	18 47 16.7	+1.3
GNL	Ganaly	2.37	248	*e*P	Pn	18 47 16.7	+1.3
PET	Petropavlovsk	2.40	228		Pn	18 47 16.5	+0.8
PET				Sn	Sn	18 47 43.6	-0.2
PET	Petropavlovsk	2.40	228	PN	Pn	18 47 16.8	+1.1
PET				S	Sn	18 47 44.3	+0.5
PET	Petropavlovsk	2.40	228	*i* P	Pn	18 47 16.8	+1.1
PET				*e*S	Sn	18 47 44.3	+0.5
BKI	Bering	2.57	76	PN	Pn	18 47 18.0	0.0
BKI				S	Sn	18 47 45.6	-2.3
BKI	Bering	2.57	76	*e*P	Pn	18 47 18.0	0.0
BKI				*e*S	Sn	18 47 45.6	-2.3
KRMR	Karymshinskiy	2.76	230	PN	Pn	18 47 22.3	+1.6
KRMR				S	Sn	18 47 53.9	+1.1
KRMR	Karymshinskiy	2.76	230	*e*P	Pn	18 47 22.3	+1.6
KRMR				S	Sn	18 47 53.9	+1.1
PEA0B	Petropavlovsk-	2.79	238		Pn	18 47 21.8	+0.7
PEA0B				Sn	Sn	18 47 54.8	+1.3
PEA0B	Petropavlovsk-	2.79	238	PN	Pn	18 47 21.8	+0.7
PEA0B						18 47 54.8	
PETK	Petropavlovsk-	2.79	238	P	Pn	18 47 21.2	+0.1
	5.4nm,0.3s,baz=70,slow=16,SNR=67						
PETK				S	Sn	18 47 56.2	+2.7
	46nm,0.5s,baz=86,slow=22,SNR=2.7						
PETK				LR	LR	18 48 41.2	
	comp=Z,200nm,19.5s,baz=40,slow=45						
	14nm,0.5s						
RUS	Russkaya	2.90	221	PN	Pn	18 47 22.9	+0.4
RUS				S	Sn	18 47 55.4	-0.6
RUS	Russkaya	2.90	221	P	Pn	18 47 22.9	+0.4
RUS				*e*S	Sn	18 47 55.4	-0.6
GRL	Gorelyy	2.98	227	PN	Pn	18 47 25.9	+2.1
GRL				S	Sn	18 48 00.3	+1.9
GRL	Gorelyy	2.98	227	*e*P	Pn	18 47 25.9	+2.1
GRL				*e*S	Sn	18 48 00.3	+1.9
MTVR	Mutnovka	2.99	225	PN	Pn	18 47 25.6	+1.7
MTVR				S	Sn	18 47 59.3	+0.8
MTVR	Mutnovka	2.99	225	*i* P	Pn	18 47 25.6	+1.7
MTVR				*e*S	Sn	18 47 59.3	+0.8
APC	Apacha	3.17	239	PN	Pn	18 47 28.0	+1.8
APC	Apacha	3.17	239	*e*P	Pn	18 47 28.0	+1.8
ASAK	Asacha	3.18	226	PN	Pn	18 47 28.5	+2.0
ASAK				S	Sn	18 48 05.4	+2.3
ASAK	Asacha	3.18	226	*e*P	Pn	18 47 28.5	+2.0
ASAK				*e*S	Sn	18 48 05.4	+2.3
KDTR	Khodutka, Kamc	3.56	218	PN	Pn	18 47 33.8	+2.3
KDTR				S	Sn	18 48 13.2	+0.9
KDTR	Khodutka, Kamc	3.56	218	*e*P	Pn	18 47 33.8	+2.3
KDTR				*e*S	Sn	18 48 13.2	+0.9
MIPR	Malaya Ipel'ka	3.76	233	PN	Pn	18 47 35.9	+1.6
MIPR	Malaya Ipel'ka	3.76	233	*e*P	Pn	18 47 35.9	+1.6
PAU	Pauzhetka	4.31	224	PN	Pn	18 47 44.8	+2.9
PAU	Pauzhetka	4.31	224	P	Pn	18 47 44.8	+2.9
PALN	Palana	4.54	349	PN	Pn	18 47 48.4	+3.4
PALN	Palana	4.54	349	*e*P	Pn	18 47 48.4	+3.4
OSSR	Ossora	4.68	9	PN	Pn	18 47 48.4	+1.5
OSSR	Ossora	4.68	9	*e*P	Pn	18 47 48.4	+1.5
SKR	Severo-Kuril's	5.20	222	*e*PN	Pn	18 47 59.0	+5.0
SKR				*e*S	Sn	18 49 00.8	+8.2
SKR				pmax	pmax		
	comp=Z,71nm,0.9s						
SKR				smax	smax		
	comp=N,141nm,0.7s						
SKR				smax	smax		
	comp=E,127nm,0.8s						
TILK	Tilichiki	6.30	21	PN	Pn	18 48 10.1	+1.0
TILK	Tilichiki	6.30	21	P	Pn	18 48 10.1	+1.0
SHEM	Shemya Is, Ala	7.65	99	P	Pn	18 48 27.8	+0.2
	comp=E,36nm,0.5s,baz=256,slow=19,SNR=13						
SHEM				S	Sn	18 49 49.7	-3.1
	comp=E,38nm,0.9s,baz=277,slow=19,SNR=1.8						
SHEM				LR	LR	18 51 40.3	
	comp=E,97nm,19.7s,baz=68,slow=38						
MA2	Magadan	7.70	314	P	Pn	18 48 25.3	-2.9
	baz=46,slow=21,SNR=2.6						
MA2				LR	LR	18 51 39.3	
	comp=E,182nm,21.2s,baz=130,slow=40						
	comp=E,13nm,1.1s						
MA2	Magadan	7.70	314	Pn	Pn	18 48 28.6	+0.4
MA2	Magadan	7.70	314	PN	Pn	18 48 28.7	+0.4
SEY	Seymchan	9.58	334	⇓*e*PN	Pn	18 48 53.7	-0.3
SEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIWB	Kanaga Island	13.00	94	Pn	Pn	18 49 40.9	+0.2
ADK	Adak	13.26	93	Pn	Pn	18 49 44.9	+0.6
ADK	Adak	13.26	93	PN	Pn	18 49 44.9	+0.6
BILL	Bilibino	13.61	7	Pn	Pn	18 49 50.4	+1.4
BILL	Bilibino	13.61	7	⇑*e*P	Pn	18 49 51.2	+2.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SHO	Shikotan	14.45	228	*e*P	Pn	18 49 58.8	-1.5
SHO				S	Sn	18 52 46.4	+7.4
JKA	Kamikawa-asahi	16.21	237		Pn	18 50 21.9	-1.3
JKA				IAmb	IAmb	18 50 39.3	
	comp=Z,34nm,1.2s						
ASAJ	Asahikawa	16.21	237	P	Pn	18 50 21.4	-1.8
	comp=Z,0.8nm,0.3s,baz=62,slow=18,SNR=6.9						
ASAJ				LR	LR	18 56 08.7	
	comp=Z,49nm,20.0s,baz=43,slow=35						
	comp=Z,7.3nm,0.7s						
ASAJ	Asahikawa	16.21	237	P	Pn	18 50 21.9	-1.3
ASAJ				pmax	pmax		
	comp=Z,34nm,1.2s						
ERM	Erimo	17.55	232	P	Pn	18 50 37.0	-2.8
ERM	Erimo	17.55	232	⇑*e*P	Pn	18 50 38.1	-1.7
ERM				pmax	pmax		
	comp=Z,18nm,1.2s						
YAK	Yakutsk	18.16	307	P	P	18 50 45.0	-2.0
	comp=Z,18nm,0.6s,baz=102,slow=4.0,SNR=21						
YAK				S	S	18 54 12.9	+0.8
	comp=Z,1.2nm,0.3s,baz=90,slow=3.0,SNR=2.4						
YAK				LR	LR	18 58 08.4	
	comp=Z,83nm,20.2s,baz=89,slow=39						
YAK	Yakutsk	18.16	307		P	18 50 43.8	-3.1
YAK	Yakutsk	18.16	307	*e*P	P	18 50 46.7	-0.3
YAK				*e*S	Sn	18 54 08.7	-0.1
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				smax	smax		
	comp=N,35nm,2.3s						
YAK				smax	smax		
	comp=E,16nm,1.5s						
KLR	Kul'dur	19.11	266	P	P	18 50 54.7	-2.8
	comp=E,0.1nm,0.3s,baz=85,slow=20,SNR=2.4						
KLR				LR	LR	18 58 23.0	
	comp=E,66nm,20.2s,baz=71,slow=37						
	comp=E,0.6nm,0.5s						
KLR	Kul'dur	19.11	266	⇓*e*P	P	18 50 57.7	+0.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JTM	Tenmabayashi	19.48	233	P	P	18 50 59.4	-2.2
ZEA	Zeya	20.02	282	*e*P	Pn	18 51 10.0	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	21.77	254	P	P	18 51 26.4	+0.2
	comp=Z,1.8nm,0.6s,baz=75,slow=12,SNR=3.5						
	comp=Z,1.8nm,0.6s						
JMM	Marumori	21.98	229	P	P	18 51 28.2	-0.3
TIXI	Tiksi	22.08	333	P	P	18 51 27.5	-1.8
	comp=Z,2.8nm,0.5s,baz=90,slow=20,SNR=14						
TIXI				S	S	18 55 24.3	-5.2
	comp=Z,1.2nm,0.6s,baz=93,slow=20,SNR=8.1						
	comp=Z,2.8nm,0.5s						
TIXI	Tiksi	22.08	333	P	P	18 51 28.3	-1.0
GCSA	Galena City Sc	22.80	47	P	P	18 51 36.6	-0.5
	baz=264						
JSD	Sado	22.99	233	P	P	18 51 38.2	-1.0
JSD				IAmb	IAmb	18 51 43.2	
	comp=Z,14nm,1.0s						
TTA	Tatalina	23.06	52	P	P	18 51 40.8	+1.0
TTA				IAmb	IAmb	18 51 42.8	
	comp=Z,6.6nm,0.8s						
TTA	Tatalina	23.06	52	P	P	18 51 40.8	+1.0
TTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	Tatalina	23.06	52	P	P	18 51 39.6	-0.2
	baz=269,SNR=14						
N18K	Kilae Creek	23.17	58	P	P	18 51 42.1	+1.2
N18K	Kilae Creek	23.17	58	P	P	18 51 41.1	+0.2
	baz=274						
BNX	BinXian	23.45	262	⇓P	P	18 51 43.8	+0.2
BNX				pmax	pmax		
	comp=Z,22nm,0.4s						
BNX				pmax	pmax		
	comp=Z,180nm,5.6s						
L19K	White Mountain	23.60	54	P	P	18 51 46.0	+1.1
L19K	White Mountain	23.60	54	P	P	18 51 45.7	+0.8
	baz=272						
M19K	Big River Lodg	23.82	54	P	P	18 51 48.1	+1.1
M19K				IAmb	IAmb	18 51 49.9	
	comp=Z,6.4nm,1.1s						
M19K	Big River Lodg	23.82	54	P	P	18 51 47.4	+0.4
	baz=272						
N19K	Bonanza Creek	23.85	57	P	P	18 51 48.3	+0.9
N19K	Bonanza Creek	23.85	57	P	P	18 51 48.0	+0.6
	baz=275,SNR=5.3						
J20K	Nowinta River	23.94	49	P	P	18 51 48.6	+0.6
J20K				IAmb	IAmb	18 51 50.9	
	comp=Z,14nm,1.0s						
J20K	Nowinta River	23.94	49	P	P	18 51 48.1	+0.1
	baz=268,SNR=14						
K20K	Telida	23.95	51	P	P	18 51 48.8	+0.6
K20K				IAmb	IAmb	18 51 50.6	
	comp=Z,6.7nm,0.8s						
K20K	Telida	23.95	51	P	P	18 51 49.3	+1.1
	baz=270,SNR=9.6						
O19K	Port Alsworth	23.99	59	P	P	18 51 49.9	+1.3
O19K				IAmb	IAmb	18 51 51.5	
	comp=Z,5.1nm,0.6s						
L20K	Farewell, AK	24.04	53	P	P	18 51 49.6	+0.5
	baz=272,SNR=5.3						
MJB9	Matsu-Tunnel	24.23	231	P	P	18 51 50.7	-0.2
MJB9				IAmb	IAmb	18 51 53.7	
	comp=Z,10nm,0.8s						
MAJO	Matsushiro	24.23	231	P	P	18 51 50.8	-0.2
MAJO				IAmb	IAmb	18 51 53.7	
	comp=Z,10nm,0.8s						
MAJO	Matsushiro	24.23	231	*ce*P	P	18 51 50.9	-0.1
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	24.23	231	P	P	18 51 50.8	-0.2
	comp=Z,4.1nm,0.6s,baz=36,slow=8.6,SNR=12						
	comp=Z,4.1nm,0.6s						
IMAR	Indian Mountai	24.24	44	P	P	18 51 50.8	0.0
M20K	Styx River	24.42	54	P	P	18 51 54.0	+1.4
M20K				IAmb	IAmb	18 51 55.9	
	comp=Z,5.2nm,0.8s						
M20K	Styx River	24.42	54	P	P	18 51 53.3	+0.7
	baz=274						
Q19K	Cape Douglas,	24.50	62	P	P	18 51 54.6	+1.3
	baz=280						
H21K	Melozitna Rive	24.60	45	P	P	18 51 54.3	+0.2
H21K				IAmb	IAmb	18 51 57.5	
	comp=Z,10.0nm,1.5s						
H21K	Melozitna Rive	24.60	45	P	P	18 51 54.7	+0.6
	baz=266,SNR=5.2						
CHUM	Lake Minchumin	24.74	50	P	P	18 51 56.3	+1.0
	baz=270						
PPLA	Purkeypile	24.81	52	P	P	18 51 56.9	+0.8
PPLA	Purkeypile	24.81	52	P	P	18 51 56.5	+0.3
	baz=272,SNR=5.2						
CAST	Castle Rocks	24.84	51	P	P	18 51 58.6	+2.3
O20K	Slope Mountain	24.84	59	P	P	18 51 57.8	+1.4
	baz=278						
I21K	Tanana	24.91	47	P	P	18 51 57.8	+0.9
	baz=267						
OHAK	Old Harbor	25.03	66	P	P	18 51 59.2	+1.1

	baz=284						
Q20K	Shuyak Island	25.20	62	P	P	18 52 00.1	+0.5
	baz=281						
KDAK	Kodiak Island	25.28	64	P	P	18 52 00.4	+0.1
	comp=Z,2.7nm,0.6s,baz=299,slow=7.8,SNR=5.4						
KDAK				LR	LR	19 01 18.7	
	comp=Z,50nm,20.4s,baz=248,slow=35						
	comp=Z,2.7nm,0.6s						
KDAK	Kodiak Island	25.28	64	P	P	18 52 00.2	0.0
KDAK	Kodiak Island	25.28	64	P	P	18 52 00.8	+0.6
	baz=283						
BPAW	Bear Paw Mtn.	25.32	49	P	P	18 52 01.1	+0.4
BPAW	Bear Paw Mtn.	25.32	49	P	P	18 52 00.6	-0.1
	baz=271						
KTH	Kantishna Hill	25.36	50	P	P	18 52 01.6	+0.5
MLY	Manley	25.43	47	P	P	18 52 02.5	+0.8
MLY	Manley	25.43	47	P	P	18 52 01.9	+0.2
	baz=269						
CNPM	China Poot	25.62	60	P	P	18 52 04.2	+0.7
CNPM				IAmb	IAmb	18 52 21.5	
	comp=Z,6.4nm,1.0s						
TRF	Thorofare Moun	25.65	51	P	P	18 52 04.7	+0.9
TRF				IAmb	IAmb	18 52 36.3	
	comp=Z,6.6nm,1.2s						
TRF	Thorofare Moun	25.65	51	P	P	18 52 04.2	+0.4
	baz=273						
BRSE	Bradley Lake S	25.83	59	P	P	18 52 05.5	+0.2
	baz=280						
H23K	Yukon River	25.96	45	P	P	18 52 06.5	+0.1
H23K				IAmb	IAmb	18 52 10.6	
	comp=Z,5.6nm,1.1s						
H23K	Yukon River	25.96	45	P	P	18 52 06.6	+0.2
	baz=268,SNR=7.1						
I23K	Minto, Yukon-K	26.02	47	P	P	18 52 07.2	+0.3
I23K	Minto, Yukon-K	26.02	47	P	P	18 52 07.0	+0.1
	baz=270						
NEA2	Nenana	26.15	48	P	P	18 52 08.0	-0.1
NEA2	Nenana	26.15	48	P	P	18 52 08.3	+0.1
	baz=271						
TOLK	Toolik Lake Re	26.18	39	P	P	18 52 08.2	-0.2
TOLK	Toolik Lake Re	26.18	39	P	P	18 52 08.2	-0.2
	baz=263						
MCK	McKinley	26.24	50	P	P	18 52 09.3	+0.3
	baz=273						
RND	Reindeer	26.30	51	P	P	18 52 09.2	-0.3
RND	Reindeer	26.30	51	P	P	18 52 09.2	-0.3
RND				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRH	Wood River Hil	26.58	48	P	P	18 52 12.4	+0.4
WRH				IAmb	IAmb	18 52 13.8	
	comp=Z,7.1nm,1.1s						
H24K	Noodor Dome	26.64	45	P	P	18 52 13.5	+0.9
	baz=270						
KNK	Knik Glacier	26.69	55	P	P	18 52 12.8	-0.2
KNK				IAmb	IAmb	18 52 14.9	
	comp=Z,16nm,1.4s						
KNK	Knik Glacier	26.69	55	P	P	18 52 12.7	-0.2
	baz=278						
CCB	Clear Creek Bu	26.69	48	P	P	18 52 12.9	-0.1
SML	Sawmill	26.69	54	P	P	18 52 13.4	+0.3
SML				IAmb	IAmb	18 52 43.3	
	comp=Z,6.5nm,1.2s						
SML	Sawmill	26.69	54	P	P	18 52 13.3	+0.2
	baz=278						
WAT6	Susitna Watana	26.88	52	P	P	18 52 14.7	-0.2
	baz=276						
M23K	Glacier View	26.98	54	P	P	18 52 15.9	+0.2
	baz=278						
DHY	Denali Highway	26.99	51	P	P	18 52 15.8	-0.1
	baz=276						
HDA	Harding Lake	27.07	48	P	P	18 52 16.3	-0.2
	baz=274						
ILAR	Eielson Array	27.08	47	P	P	18 52 16.2	-0.3
	comp=Z,1.5nm,0.9s,baz=263,slow=7.8,SNR=12						
ILAR				PcP	PcP	18 55 34.9	-1.1
	comp=Z,0.3nm,0.5s,baz=285,slow=3.8,SNR=2.2						
	comp=Z,1.5nm,0.9s						
SCM	Sheep Creek Mo	27.16	54	P	P	18 52 17.9	+0.6
SCM				IAmb	IAmb	18 52 19.0	
	comp=Z,8.5nm,1.0s						
SCM	Sheep Creek Mo	27.16	54	P	P	18 52 17.9	+0.6
SCM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCM	Sheep Creek Mo	27.16	54	P	P	18 52 18.0	+0.6
	baz=278						
M24K	Tolsona, Glenn	27.66	53	P	P	18 52 22.2	+0.4
	baz=279						
J25K	Salcha River,	27.74	48	P	P	18 52 22.1	-0.4
	baz=274						
KLU	Klutina	27.88	54	P	P	18 52 23.8	0.0
	baz=280						
BMAR	Burnt Mountain	27.96	42	P	P	18 52 24.1	-0.3
RIDG	Independent Ri	28.05	50	P	P	18 52 24.9	-0.4
RIDG				IAmb	IAmb	18 52 26.5	
	comp=Z,8.2nm,1.3s						
RIDG	Independent Ri	28.05	50	P	P	18 52 24.7	-0.6
	baz=276						
SCRK	Sand Creek	28.40	49	P	P	18 52 27.9	-0.6
SCRK				IAmb	IAmb	18 52 29.8	
	comp=Z,8.2nm,1.4s						
SCRK	Sand Creek	28.40	49	P	P	18 52 28.3	-0.2
	baz=277,SNR=6.1						
DOT	Dot Lake	28.41	50	P	P	18 52 28.0	-0.4
N25K	Chitina, Valde	28.48	54	P	P	18 52 29.3	+0.2
	baz=281						
J26L	Joseph Creek	28.53	48	P	P	18 52 29.0	-0.5
J26L	Joseph Creek	28.53	48	P	P	18 52 29.1	-0.5
	baz=276						
BMRM	Bremner River	28.60	55	P	P	18 52 30.5	+0.3
BMRM				IAmb	IAmb	18 52 35.4	
	comp=Z,7.1nm,1.0s						
BMRM	Bremner River	28.60	55	P	P	18 52 29.9	-0.3
	baz=282						
KSRS	Korea Array	28.65	247	LR	LR	19 03 45.2	
	comp=Z,16nm,20.9s,baz=350,slow=36						
M26K	Nabesna, AK	29.08	52	P	P	18 52 33.6	-0.9
	baz=280						
K27K	Chicken	29.23	49	P	P	18 52 35.7	0.0
K27K	Chicken	29.23	49	P	P	18 52 35.0	-0.7
	baz=278						
L27K	Beaver Creek,	29.49	51	P	P	18 52 38.9	+0.8
L27K				IAmb	IAmb	18 52 40.5	
	comp=Z,3.4nm,0.9s						
L27K	Beaver Creek,	29.49	51	P	P	18 52 37.9	-0.1
	baz=280,SNR=7.2						
BCAR	Beaver Creek A	29.51	51	P	P	18 52 38.9	+0.7
EGAK	Eagle	29.52	47	P	P	18 52 37.9	-0.3
	baz=278						
M27K	Edge Creek, AK	29.60	52	P	P	18 52 40.0	+0.9
M27K				IAmb	IAmb	18 52 41.9	
	comp=Z,4.2nm,0.9s						
M27K	Edge Creek, AK	29.60	52	P	P	18 52 38.7	-0.4
	baz=281,SNR=5.0						
BVCY	Beaver Creek	30.05	52	P	P	18 52 42.8	-0.2
	baz=282						
MESA	MESA	30.06	56	P	P	18 52 43.0	-0.2
	baz=285						
CTG	Chitna Glacier	30.16	55	P	P	18 52 43.7	-0.3
	baz=284						
YUK3	Moose Creek	30.38	53	P	P	18 52 46.4	+0.3
	baz=283						
I29M	Ogilvie Camp,	30.64	45	P	P	18 52 48.3	+0.2
I29M				IAmb	IAmb	18 52 50.4	
	comp=Z,7.2nm,1.3s						
I29M	Ogilvie Camp,	30.64	45	P	P	18 52 48.6	+0.5
	baz=279						
YUK8	Steele Glacier	30.82	54	P	P	18 52 50.6	+0.6
	baz=285						
PINM	Pinnacle	30.90	56	P	P	18 52 50.9	+0.4
	baz=286						
YUK4	Talbot Arm	31.32	53	P	P	18 52 54.7	+0.3
	baz=285						
PNL	Peninsula	31.44	56	P	P	18 52 55.1	0.0
	baz=287						
YUK6	Outpost Mounta	31.57	54	P	P	18 52 56.3	-0.3
	baz=286						
M30M	Minto, Yukon	31.86	50	P	P	18 52 58.7	-0.2
	baz=284						
HYT	Haines Junctio	32.00	54	P	P	18 53 01.3	+1.0
HYT				IAmb	IAmb	18 53 03.0	
	comp=Z,4.1nm,0.8s						
HYT	Haines Junctio	32.00	54	P	P	18 53 00.3	0.0
	baz=287,SNR=5.3						
INK	Inuvik	32.08	39	P	P	18 53 00.6	0.0
	comp=Z,2.5nm,0.6s,baz=293,slow=8.2,SNR=5.5						
	comp=Z,2.5nm,0.6s						
INK	Inuvik	32.08	39	P	P	18 53 01.0	+0.3
INK				IAmb	IAmb	18 53 02.1	
	comp=Z,2.6nm,0.6s						
INK	Inuvik	32.08	39	P	P	18 53 01.0	+0.3
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	Inuvik	32.08	39	P	P	18 53 00.6	0.0
	baz=278						
O30N	Mendenhall	32.68	54	P	P	18 53 06.8	+0.7
	baz=288						
M31M	Drury Creek, Y	33.03	51	P	P	18 53 09.4	+0.3
	baz=287						
WHY	Whitehorse	33.28	53	P	P	18 53 11.3	-0.1
WHY				IAmb	IAmb	18 53 14.4	
	comp=Z,5.2nm,0.9s						
WHY	Whitehorse	33.28	53	P	P	18 53 12.4	+0.9
	baz=289						
SKAG	Skagway	33.47	56	P	P	18 53 14.1	+1.2
	baz=290						
FARO	Faro, Yukon	33.49	50	P	P	18 53 13.9	+0.7
	baz=287						
MMPY	Sheldon Lake,	34.30	49	P	P	18 53 20.2	+0.1
	baz=288						
A36M	Sachs Harbour	34.32	32	P	P	18 53 19.7	-0.4
	baz=280						
P33M	Teslin, Yukon	34.39	54	P	P	18 53 21.8	+0.8
	baz=291						
H11N2	WAKE ISLAND Hy	35.09	171	T	T	19 30 39.5	
	baz=355,slow=76,SNR=519						
H11N3	WAKE ISLAND Hy	35.10	171	T	T	19 30 40.6	
	baz=355,slow=76,SNR=601						
H11N1	WAKE ISLAND Hy	35.11	171	T	T	19 30 40.8	
	baz=355,slow=76,SNR=692						
C36M	Paulatuk	35.25	36	P	P	18 53 28.5	+0.3
C36M	Paulatuk	35.25	36	P	P	18 53 28.7	+0.5
	baz=284						
S34M	Telegraph Cree	36.08	57	P	P	18 53 36.2	+0.7
	baz=295						
H11S1	WAKE ISLAND Hy	36.28	172	T	T	19 32 23.3	
	baz=353,slow=78						
H11S3	WAKE ISLAND Hy	36.30	172	T	T	19 32 23.9	
	baz=353,slow=78						
H11S2	WAKE ISLAND Hy	36.30	172	T	T	19 32 28.7	
	baz=353,slow=78						
DLBC	Dease Lake	36.40	55	P	P	18 53 39.1	+0.8
	baz=295						
T35M	Bob Quinn	36.91	58	P	P	18 53 43.2	+0.6
	baz=296						
EUNU	Eureka	40.22	14	P	P	18 54 11.1	+1.0
BBB	Bella Bella	40.35	64	LR	LR	19 09 06.9	
	comp=Z,28nm,21.1s,baz=320,slow=33						
YKA	Yellowknife Ar	41.41	44	P	P	18 54 20.6	+0.7
	comp=Z,2.2nm,0.6s,baz=299,slow=7.8,SNR=19						
YKA				PcP	PcP	18 56 17.6	+0.6
	comp=Z,1.1nm,0.8s,baz=306,slow=3.3,SNR=7.2						
	comp=Z,2.2nm,0.6s						
YKA	Yellowknife Ar	41.41	44	P	P	18 54 20.0	+0.1
RES	Resolute Bay	41.54	23	P	P	18 54 21.9	+1.1
RES	Resolute Bay	41.54	23	P	P	18 54 21.9	+1.1
RES				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZALV	Zalesovo Beam	42.71	302	P	P	18 54 28.9	-1.8
	comp=Z,0.3nm,0.5s,baz=93,slow=10,SNR=1.7						
ZALV				LR	LR	19 13 11.4	
	comp=Z,61nm,20.8s,baz=56,slow=38						
	comp=Z,0.3nm,0.5s						
YULB	Yu-li	43.26	240	P	P	18 54 36.8	+1.4
D03D	Eldon	45.69	66	P	P	18 54 55.3	+0.7
	baz=308						
SPITS	Spitsbergen Ar	45.75	351	P	P	18 54 54.8	+0.1
SPITS				pmax	pmax		
	comp=Z,90nm,1.5s						
SPB2	Spitsbergen Ar	45.75	351	P	P	18 54 54.6	-0.1
EDM	Edmonton	47.11	55	P	P	18 55 07.0	+1.3
EDM	Edmonton	47.11	55	P	P	18 55 07.0	+1.3
EDM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	47.69	301	P	P	18 55 07.2	-3.0
KURK				IAmb	IAmb	18 55 12.3	
	comp=Z,1.9nm,0.5s						
KURK	Kurchatov	47.69	301	*de*P	P	18 55 08.7	-1.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	47.79	301	LR	LR	19 16 00.7	
	comp=Z,58nm,21.7s,baz=9.6,slow=37						
I03D	Drain, OR	48.00	71	P	P	18 55 13.2	+0.5
	baz=311						
MKAR	Makanchi Array	48.30	295	P	P	18 55 11.5	-3.6
	comp=Z,0.4nm,0.4s,baz=60,slow=7.8,SNR=7.3						
	comp=Z,0.4nm,0.4s						
MKAR	Makanchi Array	48.30	295	P	P	18 55 11.2	-3.8
NEW	Newport	48.35	62	LR	LR	19 14 25.7	
	comp=Z,17nm,18.2s,baz=214,slow=34						
I04A	Tendick Farm,	48.45	70	P	P	18 55 16.7	+0.5
	baz=311						
MAKZ	Makanchi	48.46	295	P	P	18 55 13.4	-2.8
MAKZ				IAmb	IAmb	18 55 43.2	
	comp=Z,3.3nm,1.4s						
MAKZ	Makanchi	48.46	295	P	P	18 55 13.4	-2.8
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
L04D	Klamath Falls	49.55	71	P	P	18 55 26.1	+1.4
	baz=312						
BRVK	Borovoye	50.16	308	P	P	18 55 28.0	-1.1
BRVK				IAmb	IAmb	18 55 45.9	
	comp=Z,1.4nm,0.8s						
BRVK	Borovoye	50.16	308	P	P	18 55 28.0	-1.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MSO	Missoula	50.92	62	P	P	18 55 36.1	+1.1
	baz=312						
FCC	Fort Churchill	51.70	40	P	P	18 55 40.9	+0.4
FCC	Fort Churchill	51.70	40	P	P	18 55 40.9	+0.4
FCC				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ARCES	ARCESS Array B	52.09	342	PcP	PcP	18 56 54.7	+0.1
	comp=Z,1.8nm,0.8s,baz=334,slow=11,SNR=1.7						
SUMG	Summit	52.30	8	P	P	18 55 45.0	-0.3
SUMG	Summit	52.30	8	P	P	18 55 45.0	-0.3
SUMG				pmax	pmax		
	comp=Z,18nm,1.0s						
ARU	Arti	52.87	317	LR	LR	19 21 09.8	
	comp=Z,61nm,19.3s,baz=54,slow=39						
ARU	Arti	52.87	317	*c i*P	P	18 55 47.6	-1.6
ARU				*PP	pP	18 56 04.8	+2.1
ARU						18 57 45.4	
ARU				S	S	19 03 12.1	-2.0
ARU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BOZ	Bozeman (W)	52.94	61	P	P	18 55 50.7	+0.6
	baz=314						
H17A	Grant Village	54.31	62	P	P	18 55 59.6	-0.7
	baz=314						
NVAR	Mina Array Bea	54.38	72	P	P	18 56 02.8	+2.0
	comp=Z,0.9nm,0.7s,baz=294,slow=8.8,SNR=7.5						
NVAR				pP	pP	18 56 14.5	+0.1
	comp=Z,1.0nm,0.6s,baz=302,slow=7.5,SNR=8.2						
	comp=Z,0.9nm,0.7s						
JMIC	Jan Mayen	54.47	356	LR	LR	19 18 05.0	
	comp=Z,15nm,19.0s,baz=236,slow=35						
RLMT	Red Lodge	54.47	60	P	P	18 56 02.6	+1.2
RLMT				IAmb	IAmb	18 56 04.1	
	comp=Z,2.8nm,0.8s						
RLMT	Red Lodge	54.47	60	P	P	18 56 02.3	+0.9
	baz=315						
AAK	Ala-Archa	55.20	296	LR	LR	19 20 02.6	
	comp=Z,46nm,18.1s,baz=122,slow=36						
PD31	Pinedale Array	55.98	63	P	P	18 56 13.6	+1.3
PDAR	Pinedale Array	55.98	63	P	P	18 56 13.4	+1.1
	comp=Z,0.7nm,0.8s,baz=344,slow=3.1,SNR=8.2						
	comp=Z,0.7nm,0.8s						
DUG	Dugway, Tooele	56.11	67	P	P	18 56 14.4	+1.3
	baz=316						
TPNV	Topopah Spring	56.57	72	P	P	18 56 17.6	+1.0
TPNV				IAmb	IAmb	18 56 18.9	
	comp=Z,5.5nm,1.4s						
TPNV	Topopah Spring	56.57	72	P	P	18 56 17.6	+1.0
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TPNV	Topopah Spring	56.57	72	P	P	18 56 18.4	+1.9
	baz=316						
FURC	Furnace Creek,	56.58	73	P	P	18 56 17.9	+1.6
	baz=317						
LRMC	Laurel Mtn Rad	56.84	74	P	P	18 56 20.1	+1.7
	baz=317						
MDND	Maddock	57.19	52	P	P	18 56 21.0	+0.4
	baz=317						
AKTO	Aktyubinsk	57.44	312	LR	LR	19 22 44.6	
	comp=Z,30nm,19.0s,baz=90,slow=38						
ABKAR	Akbulak array	57.48	310	P	P	18 56 21.5	-1.0
ABKAR				IAmb	IAmb	18 56 33.2	
	comp=Z,2.0nm,1.3s						
RSSD	Black Hills	57.80	58	P	P	18 56 25.4	+0.3
RSSD				IAmb	IAmb	18 56 27.4	
	comp=Z,2.3nm,0.8s						
RSSD	Black Hills	57.80	58	P	P	18 56 25.5	+0.3
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RSSD	Black Hills	57.80	58	P	P	18 56 25.8	+0.7
	baz=317						
O20A	White River Ci	58.57	64	P	P	18 56 30.7	+0.2
	baz=317						
FIA0	FINESS Array S	59.05	337	P	P	18 56 32.6	-0.7
FIA0	FINESS Array S	59.05	337	P	P	18 56 32.6	-0.7
FINES	FINESS Array B	59.05	337	P	P	18 56 32.1	-1.2
	comp=Z,3.3nm,0.7s,baz=35,slow=7.1,SNR=24						
FINES				PcP	PcP	18 57 20.9	-0.7
	comp=Z,0.7nm,0.5s,baz=12,slow=7.3,SNR=1.2						
FINES				LR	LR	19 26 00.7	
	comp=Z,18nm,18.7s,baz=30,slow=40						
	comp=Z,3.3nm,0.7s						
FINES	FINESS Array B	59.05	337	P	P	18 56 31.9	-1.3
N23A	Red Feather La	59.20	62	P	P	18 56 35.4	+0.3
	baz=318						
IRM	Iron Mountain	59.23	73	P	P	18 56 36.2	+1.2
	baz=318						
CMAR	Chiang Mai Arr	59.39	259	P	P	18 56 36.0	-0.2
	comp=Z,1.0nm,0.5s,baz=28,slow=7.2,SNR=9.4						
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	59.39	259	*i* P	P	18 56 36.5	+0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
IKP	In-Ko-Pah, Jac	59.80	75	P	P	18 56 40.7	+1.6
	baz=318						
EYMN	Ely	60.73	48	P	P	18 56 45.1	+0.1
	baz=320						
NC405	NORSAR Array S	62.15	344	P	P	18 56 53.6	-0.8
214A	Organ Pipe Nat	62.17	73	P	P	18 56 56.2	+1.2
	baz=319						
NB201	NORSAR Array S	62.27	344	P	P	18 56 54.6	-0.6
NB2	NORSAR Subarra	62.29	344	P	P	18 56 54.8	-0.6
	comp=Z,0.9nm,0.5s,baz=20,slow=6.9						
NOA	NORSAR Array B	62.29	344	P	P	18 56 54.0	-1.4
	comp=Z,1.6nm,0.7s,baz=20,slow=6.7,SNR=12						
NOA				LR	LR	19 25 23.4	
	comp=Z,5.6nm,21.8s,baz=325,slow=38						
	comp=Z,1.6nm,0.7s						
ANMO	Albuquerque	63.38	67	LR	LR	19 22 10.3	
	comp=Z,17nm,20.4s,baz=204,slow=34						
SCHQ	Schefferville	63.85	29	P	P	18 57 05.1	-0.7
	comp=Z,3.4nm,0.6s,baz=3.8,slow=7.5,SNR=8.4						
	comp=Z,3.4nm,0.6s						
SCHQ	Schefferville	63.85	29	P	P	18 57 05.8	+0.1
SCHQ				IAmb	IAmb	18 57 06.9	
	comp=Z,3.7nm,0.8s						
KONO	Kongsberg	63.87	345	P	P	18 57 05.1	-0.7
KONO				IAmb	IAmb	18 57 06.1	
	comp=Z,3.8nm,0.8s						
KONO	Kongsberg	63.87	345	P	P	18 57 05.1	-0.7
KONO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	67.74	330	P	P	18 57 29.4	-1.5
	comp=Z,0.6nm,0.4s,baz=27,slow=7.1,SNR=4.3						
AKASG				LR	LR	19 30 59.9	
	comp=Z,46nm,18.4s,baz=91,slow=39						
	comp=Z,0.6nm,0.4s						
AKASG	Malin Array Be	67.74	330	IAmb	IAmb	18 57 31.4	
	comp=Z,2.6nm,1.1s						
AKASG	Malin Array Be	67.74	330	*i* P	P	18 57 31.5	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	67.74	330	⇑*i*P	P	18 57 30.3	-0.5
KIV	Kislovodsk	68.91	317	*e*P	P	18 57 36.5	-2.0
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,32nm,17.0s						
KBZ	Khabaz	69.02	317	P	P	18 57 37.8	-1.1
	comp=Z,1.2nm,0.6s,baz=68,slow=2.4,SNR=5.4						
	comp=Z,1.2nm,0.6s						
KBZ	Khabaz	69.02	317	⇑*e*P	P	18 57 39.2	+0.2
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	69.20	69	P	P	18 57 42.0	+1.5
	comp=Z,0.9nm,0.7s,baz=290,slow=4.6,SNR=11						
	comp=Z,0.9nm,0.7s						
TXAR	Lajitas Array	69.20	69	P	P	18 57 42.0	+1.5
COEN	Coen	70.11	199	P	P	18 57 46.2	+0.3
M53A	WI Miller and	70.52	45	P	P	18 57 48.1	-0.1
	baz=327						
CLL	Collm	71.21	340	⇓*i*P	P	18 57 51.9	-0.4
	comp=Z,7.0nm,1.3s						
GNI	Garni	71.26	314	LR	LR	19 32 00.9	
	comp=Z,32nm,21.0s,baz=80,slow=38						
LBNH	Lisbon	71.48	38	P	P	18 57 54.0	-0.1
	baz=331						
PKME	Peaks-Kenny Pk	71.49	35	P	P	18 57 54.0	-0.1
	baz=332						
VRAC	Vranov	72.33	337	LR	LR	19 33 37.1	
	comp=Z,20nm,20.7s,baz=34,slow=39						
GERES	GERESS Array B	73.40	339	P	P	18 58 04.6	-0.9
	comp=Z,0.6nm,0.6s,baz=41,slow=4.6,SNR=7.8						
	comp=Z,0.6nm,0.6s						
BRTR	Keskin Array B	75.99	321	P	P	18 58 20.0	-0.7
	comp=Z,0.2nm,0.3s,baz=12,slow=2.8,SNR=2.6						
	comp=Z,0.2nm,0.3s						
BRTR	Keskin Array B	75.99	321	P	P	18 58 20.0	-0.7
WRA	Warramunga Arr	77.88	206	P	P	18 58 30.8	-0.4
	comp=Z,1.8nm,0.8s,baz=18,slow=5.8,SNR=12						
WRA				pP	PcP	18 58 43.3	+2.4
	comp=Z,1.8nm,0.7s,baz=19,slow=6.0,SNR=11						
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	81.56	206	P	P	18 58 51.9	+0.8
	comp=Z,2.2nm,0.9s,baz=17,slow=5.4,SNR=29						
ASAR				pP	pP	18 59 04.0	-1.3
	comp=Z,1.8nm,0.8s,baz=14,slow=4.8,SNR=11						
	comp=Z,2.2nm,0.9s						
ESDC	Sonseca Array	85.24	349	P	P	18 59 09.8	-0.2
	comp=Z,1.3nm,0.9s,baz=5.4,slow=5.2,SNR=7.9						
ESDC				pP	pP	18 59 23.0	-1.5
	comp=Z,1.4nm,0.9s,baz=6.7,slow=3.9,SNR=6.5						
	comp=Z,1.3nm,0.9s						

GUC 27 18:51:11.0±0.7, 27°.50S×70°.24W, h95km±3km, ML3.6, 5C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.09	178	*i* P	Pn	18 51 24.0	-0.4
GO03				*i* S	Sn	18 51 33.9	-0.5
GO03				IAML		18 51 34.8	
	comp=E,5µm,0.1s						
AC06	Mina Casimiro	0.18	325	⇓*i*P	Pn	18 51 24.5	-0.1
AC06				*i* S	Sn	18 51 34.2	-0.5
AC06				IAML		18 51 34.7	
	comp=E,4µm,0.3s						
AC04	Llanos de Chal	1.02	226	⇑*i*P	Pn	18 51 31.6	+0.4
AC04				*i* S	Sn	18 51 47.2	+0.7
AC04				IAML		18 51 48.4	
	comp=N,2µm,0.1s						
AC02	Maricunga	1.19	56	⇑*i*P	Pn	18 51 34.3	+0.5
AC02				*i* S	Sn	18 51 51.2	+0.3
AC02				IAML		18 51 51.4	
	comp=E,3µm,0.2s						
AC01	Pan de Azucar	1.39	347	*i* P	Pn	18 51 35.8	+0.1
AC01				*i* S	Sn	18 51 53.2	-1.1
AC01				IAML		18 51 55.4	
	comp=E,700nm,0.2s						
LCO	Las Campanas	1.56	195	*e*P	Pn	18 51 38.0	0.0
LCO				*i* S	Sn	18 51 59.4	+1.0
GO02	Mina Guanaco	2.40	14	*i* P	Pn	18 51 48.8	-0.2
GO02				IAML		18 52 20.6	
	comp=N,283nm,0.3s						
CO01	Juntas del Tor	2.47	177	*e*P	Pn	18 51 50.8	+1.0
CO05	La Serena	2.56	200	*e*P	Pn	18 51 50.2	-0.5
GO04	Tololo Observa	2.70	190	⇑*i*P	Pn	18 51 52.7	-0.2
CO06	Fray Jorge	3.39	201	*i* P	Pn	18 52 00.1	-1.8
PB10	IPOC Station P	3.98	356	*e*P	Pn	18 52 07.4	-2.6
PB15	IPOC Station P	4.33	9	⇑*i*P	Pn	18 52 13.8	-1.0
PB06	IPOC Station P	4.82	7	⇑*i*P	Pn	18 52 19.2	-2.1

IDC ***27*** *18:59:59.2±0.9, 26°.99N×130°.07E, h0km, mb3.7/8,*

mbtmp3.7/10, ML3.5/2, MS3.1/3, Error ellipse: s-maj=23.8km s-min=16.3km az=68.0

*JMA **27** 19:00:02.5±0.1, 26°.9N±0°.4×130°.2E±0°.4, h58^{km}, MV3.9/26, NEAR AMAMI-OSHIMA ISLAND*

*NIED **27** 19:00:02.5, 26°.90N×130°.15E, h58^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.85; M$_{\theta\theta}$3.15; M$_{\phi\phi}$1.70; M$_{r\theta}$1.58; M$_{\theta\phi}$2.23; M$_{\phi r}$2.83; Fault plane solution: M$_0$5.80000×10^{14} NP1:φ$_s$66.00000°, δ30.00000°, λ-68.00000°. NP2:φ$_s$221.00000°, δ62.00000°, λ-102.00000°.*

ISC 27 19:00:00.8±3.0, 26°.93N±0°.03×130°.14E±0°.03, h14^{km}±20^{km}, n33, σ1^{s}30/48, mb3.7/8, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.36	309	*i* P	Pb	19 00 26.2	+0.3
JZK	Kikaishima	1.38	354	P	Pb	19 00 27.1	+0.7
JKDJ	Kitadaitoujima	1.43	133	*i* P	Pn	19 00 26.1	-0.1
JKDJ				S	Sn	19 00 43.6	-1.2
JOKE	Okinoerabujima	1.46	287	*i* P	Pb	19 00 27.7	-0.1
JOKE				*e*S	Sb	19 00 45.4	-0.8
JMZ	Minamidaito 2	1.47	139	*i* P	Pn	19 00 26.9	0.0
JMZ				S	Sn	19 00 44.1	-1.8
JYRO	Yoronjima	1.51	274	*i* P	Pb	19 00 28.1	-0.5
JYRO				*e*S	Sn	19 00 45.9	-1.0
JAM	Amami Oshima	1.55	342	*i* P	Pn	19 00 28.9	+0.9
JAM				*e*S	Sn	19 00 47.3	-0.4
JAMN	Amaminishikomi	1.56	327	*i* P	Pn	19 00 28.8	+0.7
JAMN				*e*S	Sn	19 00 47.6	-0.5
JOW	Kunigami	1.67	267	Pn	Pn	19 00 29.9	+0.3
	258nm,0.3s,baz=108,slow=16,SNR=1257						
JOW				Sn	Sn	19 00 50.0	-0.8
	162nm,0.3s,baz=114,slow=26,SNR=18						
JOW	Kunigami	1.67	267	*i* P	Pb	19 00 30.4	-0.9
JOW				*e*S	Sn	19 00 50.1	-0.7
JNTH	Nagotoyohara	1.94	258	*i* P	Pn	19 00 33.8	+0.5
JNTH				S	Sn	19 00 55.5	-1.9
JIH	Iheya	1.94	273	*i* P	Pb	19 00 34.2	-1.7
JIH				S	Sn	19 00 57.2	-0.3
JJT3	Tamagusuku3	2.25	250	*i* P	Pn	19 00 38.3	+0.7
JJT3				S	Sn	19 01 04.2	-1.0
JTAJ	Takarajima	2.36	340	P	Pn	19 00 39.7	+0.6
JTAJ				S	Sn	19 01 05.9	-2.0
JAGN	Aguni-jima	2.61	263	P	Pn	19 00 43.2	+0.6
JAGN				S	Sn	19 01 13.3	-0.8
JNN	Nakanoshima	2.91	355	P	Pn	19 00 47.4	+0.8
JKE	Kume jima 2	3.06	259	P	Pn	19 00 48.7	0.0
JKE				S	Sn	19 01 24.1	-1.1
JYAK	Yakushimahirau	3.31	6	P	Pn	19 00 53.2	+1.0
JYAK				S	Sn	19 01 29.2	-2.0
JMTN	Minamitane	3.52	11	P	Pn	19 00 56.2	+1.3
JMTN				*e*S	Sn	19 01 35.0	-1.4
JKC	Kuchinoerabu	3.52	1	P	Pn	19 00 55.9	+0.9
JKC				S	Sn	19 01 34.8	-1.6
JNU	Nakatsue	6.20	6	Pn	Pn	19 01 31.9	-0.1
	1.7nm,0.3s,baz=337,slow=1.8,SNR=2.0						
JNU				Sn	Sn	19 02 38.3	-4.4
	baz=230,slow=16						
	6.2nm,0.4s						
KSRS	Korea Array	10.66	350	Pn	Pn	19 02 30.4	-2.5
	0.2nm,0.3s,baz=244,slow=23,SNR=2.9						
	0.8nm,0.7s						
GUMO	Guam	19.14	131	LR	LR	19 10 33.6	
	comp=Z,35nm,18.4s,baz=85,slow=33						
PMG	Port Moresby	39.72	153	LR	LR	19 21 36.1	
	comp=Z,51nm,20.4s,baz=293,slow=33						
MKAR	Makanchi Array	42.35	311	P	P	19 07 54.1	-0.3
	0.2nm,0.7s,baz=88,slow=7.5,SNR=3.3						
	0.2nm,0.7s						
ZALV	Zalesovo Beam	42.74	322	P	P	19 07 55.7	-1.7
	0.3nm,0.3s,baz=120,slow=8.7,SNR=1.7						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	45.54	316	P	P	19 08 19.3	-0.6
	0.4nm,0.5s,baz=99,slow=8.9,SNR=4.6						
	0.4nm,0.5s						
WRA	Warramunga Arr	46.77	175	P	P	19 08 30.8	+0.9
	1.4nm,0.6s,baz=354,slow=8.5,SNR=23						
	1.4nm,0.6s						
CTA	Charters Tower	49.28	160	P	P	19 08 50.0	+0.6
	3.6nm,0.9s,baz=7.1,slow=5.3,SNR=4.0						
	3.6nm,0.9s						
ASAR	Alice Springs	50.44	176	P	P	19 08 59.1	+1.1
	0.7nm,0.7s,baz=8.1,slow=13,SNR=27						
	0.7nm,0.7s						
FINES	FINESS Array B	73.09	331	P	P	19 11 32.4	+2.1
	0.5nm,0.6s,baz=92,slow=5.9,SNR=5.2						
	0.5nm,0.6s						
YKA	Yellowknife Ar	77.16	26	P	P	19 11 54.2	+0.5
	0.3nm,0.7s,baz=300,slow=4.0,SNR=3.0						
	0.3nm,0.7s						
NOA	NORSAR Array B	79.43	334	LR	LR	19 51 10.6	
	comp=Z,7.5nm,18.1s,baz=140,slow=39						

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*NEIC **27** 19:08:11.0±1.9, 36°.20N±0°.05×77°.9E±0°.1, h85^{km}±8^{km}, mb4.1/27, Error ellipse: s-maj=13.2km s-min=5.0km az=117.0*

*IDC **27** 19:08:12.8±0.7, 36°.32N×78°.01E, h109^{km}±6^{km}, mb3.4/15, mbtmp3.8/19, Error ellipse: s-maj=21.3km s-min=11.1km az=46.0*

*NNC **27** 19:08:12.5±4.5, 36°.58N×77°.92E, h0^{km}, mb4.7, mpv4.2, Error ellipse: s-maj=34.9km s-min=30.5km az=153.0*

ISC 27 19:08:11.0±0.5, 36°.21N±0°.04×77°.82E±0°.06, h88^{km}, n89, σ1^{s}99/106, mb3.9/24, 3C-9D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	3.61	337	Pn	Pn	19 09 06.3	+1.5
KSH				Sn	Sn	19 09 45.3	-1.1
KSH				pmax	pmax		
	comp=Z,54nm,0.6s						
KSH				smax	smax		
	comp=N,200nm,0.6s						
KSH				smax	smax		
	comp=E,220nm,0.6s						
THN	Thein Dam	4.15	205	*e*P	Pn	19 09 15.5	+3.4
THN				*e*S	Sn	19 09 59.9	+0.4
JMU	Jammu	4.24	216	*e*P	Pn	19 09 16.8	+3.6
JMU				*e*S	Sn	19 10 03.1	+1.5
CHCP	Chirah Chowk	4.53	237	P	Pn	19 09 20.0	+2.8
NIL	Nilore	4.54	237	Pn	Pn	19 09 18.8	+1.3
BHK	Bhakra	4.93	194	*e*PN	Pn	19 09 22.0	-0.6
BHK				*e*P	Pn	19 09 25.9	+3.2
BHK				*e*SN	Sn	19 10 14.4	-4.0
BHK				*e*S	Sn	19 10 18.0	-0.3
SMLA	Simla	5.10	186	*e*P	Pn	19 09 27.4	+2.4
SMLA				*e*S	Sn	19 10 20.6	-2.0
SMLA				IAML		19 10 21.1	
	comp=N,416nm,0.4s						
SMLA				IAML		19 10 21.3	
	comp=E,242nm,0.6s						
SMLA				IAML		19 10 25.9	
	comp=E,323nm,0.3s						
CEP	Cherat	5.41	246	P	Pn	19 09 30.2	+0.9
TARG	Taragay, Kyrgy	5.51	360		Pn	19 09 33.8	+3.0
DRK	Karamyk	5.77	306	Pn	Pn	19 09 36.1	+1.7
KDJ	Kajisay	5.93	355	Pn	Pn	19 09 39.4	+3.0
THW	Thamme Wali	6.07	238	P	Pn	19 09 38.9	+0.7
BOOM	Boomskoye usch	6.43	347	Pn	Pn	19 09 43.4	+0.1
GAR	Garm	6.57	297		Pn	19 09 43.3	-1.9
BTK	Batken	6.72	307	Pn	Pn	19 09 46.6	-0.5
AAK	Ala-Archa	6.91	339	P	Pn	19 09 52.1	+2.3
	comp=E,7.0nm,0.4s,baz=157,slow=7.7,SNR=18						
AAK	Ala-Archa	6.91	339	Pn	Pn	19 09 52.6	+2.8
TKM2	Tokmak 2	6.92	346	⇓P	Pn	19 09 52.3	+2.4
	comp=E,3.6nm,0.7s						
TKM2				⇓S	Sn	19 11 08.4	+1.4
	comp=E,10nm,0.8s						
MDOK	Medeo	6.97	355	⇓P	Pn	19 09 52.9	+2.4
	comp=E,15nm,0.6s						
MDOK				⇓S	Sn	19 11 10.0	+1.8
	comp=E,26nm,0.7s						
PDGK	Podgornoye	7.22	10	⇓P	Pn	19 09 55.6	+1.7
	comp=E,115nm,0.6s						
PDGK				⇑S	Sn	19 11 13.0	-1.4
	comp=E,220nm,1.0s						
CHGR	Chuyangaron	7.31	292	Pn	Pn	19 09 55.2	+0.1
KBL	Kabul	7.36	259	Pn	Pn	19 09 54.1	-1.9
KK31	Karatay Array	8.89	323		Pn	19 10 16.8	+0.2
KK31	Karatay Array	8.89	323	P	Pn	19 10 17.1	+0.5
	comp=E,1.8nm,0.6s,baz=144,slow=13,SNR=28						
KK31				⇑S	Sn	19 11 56.8	+1.8
	comp=E,3.2nm,0.6s,baz=144,slow=24,SNR=3.9						
KKAR	Karatay Array	8.89	323		Pn	19 10 16.9	+0.3
KKAR	Karatay Array	8.89	323		Pn	19 10 16.9	+0.3
AJM	Ajmer	10.08	197	*e*P	Pn	19 10 33.0	+0.1
AJM				*e*P	Pn	19 10 33.2	+0.4
AJM				*e*S	Sn	19 12 17.9	-6.2
AJM				*i* S	Sn	19 12 19.0	-5.1
WMQ	Urumqi	10.72	42	*e*P	Pn	19 10 45.5	+4.0
WMQ				S	Sn	19 12 42.5	+2.9
WMQ				smax	smax		
	comp=N,63nm,0.5s						
WMQ				smax	smax		
	comp=E,54nm,0.5s						
MAKZ	Makanchi	11.03	15		Pn	19 10 45.0	-0.7
MAKZ	Makanchi	11.03	15	⇓P	Pn	19 10 45.3	-0.4
	comp=E,29nm,0.5s						
MAKZ				⇑S	Sn	19 12 45.1	-2.0
	comp=E,15nm,0.8s						
MK09	Makanchi Array	11.06	16	⇓P	Pn	19 10 45.5	-0.7
	comp=E,11nm,0.6s						
MK09				⇓S	Sn	19 12 46.4	-1.5
	comp=E,49nm,0.8s						
MKAR	Makanchi Array	11.09	16	P	Pn	19 10 46.0	-0.5
	comp=E,5.6nm,0.4s,baz=202,slow=14,SNR=144						
MKAR				S	Sn	19 12 33.7	-15
	comp=E,3.5nm,0.6s,baz=190,slow=16,SNR=2.5						
MKAR	Makanchi Array	11.09	16	Pn	Pn	19 10 46.2	-0.2
BHPL	Bhopal	12.93	182	*e*S	Sn	19 13 20.7	-13
KURBB	Kurchatov Arra	14.41	2	P	Pn	19 11 29.6	-0.9
	comp=E,1.0nm,0.5s,baz=184,slow=12,SNR=16						
KURK	Kurchatov	14.51	2	Pn	Pn	19 11 31.1	-0.6
GEYT	Alibeck	15.82	282	S	Sn	19 14 32.0	-11
	comp=E,1.1nm,0.5s,baz=60,slow=30,SNR=2.0						
SHL	Shillong	16.05	127		P	19 11 52.2	-1.3
SHL				IAmb	IAmb	19 12 13.5	
	comp=Z,5.1nm,0.4s						
BRVK	Borovoye	17.66	345	P	Pn	19 12 12.2	+1.2
BRVK				IAmb	IAmb	19 12 36.2	
	comp=Z,6.8nm,0.8s						
GTA	Gaotai	17.66	73	⇓P	Pn	19 12 13.3	+1.9
GTA				pP	sP	19 12 49.3	+8.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,44nm,5.8s						
GTA				LR	LR		
	comp=N,220nm,14.5s						
GTA				LR	LR		
	comp=E,100nm,16.7s						
GTA				LR	LR		
	comp=Z,60nm,15.3s						
ZAA0	Zalesovo Array	18.39	13	P	P	19 12 18.1	-0.7
ZALV	Zalesovo Beam	18.39	13	P	P	19 12 16.8	-2.0
	comp=Z,0.8nm,0.4s,baz=195,slow=12,SNR=4.6						
ZALV				S	S	19 15 33.9	-10
	comp=Z,0.3nm,0.3s,baz=173,slow=24,SNR=1.8						
ZALV	Zalesovo Beam	18.39	13	P	Pn	19 12 19.4	-0.5
ABKAR	Akbulak array	18.44	321		Pn	19 12 20.7	+0.2
ABKAR	Akbulak array	18.44	321		Pn	19 12 20.9	+0.4
AKTO	Aktyubinsk	20.15	321	P	P	19 12 37.7	-0.3
	comp=Z,1.5nm,0.7s,baz=113,slow=14,SNR=3.7						
	comp=Z,1.5nm,0.7s						
ARU	Arti	24.05	333	P	P	19 13 17.4	-0.3
	comp=Z,1.2nm,0.5s,baz=126,slow=7.4,SNR=7.0						
	comp=Z,1.2nm,0.5s						
ARU	Arti	24.05	333	P	P	19 13 18.0	+0.3
ARU				IAmb	IAmb	19 13 19.3	
	comp=Z,2.9nm,0.6s						
ULN	Ulaanbaatar	24.48	53	P	P	19 13 21.2	-0.7
CMAR	Chiang Mai Arr	25.69	128	P	P	19 13 32.0	-0.9
	comp=Z,1.6nm,0.6s,baz=312,slow=8.7,SNR=8.5						
	comp=Z,1.6nm,0.6s						
BRTR	Keskin Array B	34.74	289	P	P	19 14 53.8	+0.9
	comp=Z,0.5nm,0.8s,baz=77,slow=7.0,SNR=3.6						
	comp=Z,0.5nm,0.8s						
AKASG	Malin Array Be	37.43	308	P	P	19 15 15.8	+0.4
	comp=Z,0.4nm,0.5s,baz=76,slow=8.6,SNR=6.2						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	37.43	308	IAmb	IAmb	19 15 34.9	
	comp=Z,1.8nm,0.8s						
MLR	Muntele Rosu	39.71	300		P	19 15 35.9	+1.1
BURAR	Bucovina Array	40.05	303	P	P	19 15 38.9	+1.4
FIA1	FINESS Array S	40.85	325	P	P	19 15 44.6	+0.9
FIA1				IAmb	IAmb	19 15 52.2	
	comp=Z,7.6nm,1.2s						
FINES	FINESS Array B	40.85	325	P	P	19 15 44.8	+1.0
	comp=Z,0.7nm,0.5s,baz=115,slow=9.4,SNR=13						
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	40.85	325	P	P	19 15 44.6	+0.9
KEV	Kevo	43.17	337	P	P	19 16 01.7	-0.9
ARCES	ARCESS Array B	43.57	336	P	P	19 16 05.4	-0.4
	comp=Z,1.1nm,0.6s,baz=102,slow=8.3,SNR=6.8						
	comp=Z,1.1nm,0.6s						
ARCES	ARCESS Array B	43.57	336	P	P	19 16 06.2	+0.4
GERES	GERESS Array B	47.56	306	P	P	19 16 38.2	+0.6
	comp=Z,0.9nm,0.8s,baz=71,slow=10.0,SNR=7.6						
	comp=Z,0.9nm,0.8s						
NC405	NORSAR Array S	47.68	323	P	P	19 16 38.7	+0.4
NB2	NORSAR Subarra	47.92	323	P	P	19 16 40.7	+0.5
	comp=Z,0.3nm,0.5s,baz=89,slow=7.9						
NOA	NORSAR Array B	47.92	323	P	P	19 16 38.5	-1.7
	comp=Z,0.6nm,0.6s,baz=90,slow=7.5,SNR=5.6						
	comp=Z,0.6nm,0.6s						
CUC	Castrocucco	48.07	294	P	P	19 16 42.8	+1.1
CUC				IAmb	IAmb	19 16 44.7	
	comp=Z,5.0nm,1.0s						
NRCA	Norcia	49.26	299	P	P	19 16 52.7	+1.9
NRCA				IAmb	IAmb	19 16 53.0	
	comp=Z,2.1nm,0.7s						
ESDC	Sonseca Array	62.41	300	P	P	19 18 24.5	-0.2
	comp=Z,0.7nm,0.9s,baz=49,slow=9.0,SNR=5.1						
	comp=Z,0.7nm,0.9s						
ESDC	Sonseca Array	62.41	300	IAmb	IAmb	19 18 26.0	
	comp=Z,1.9nm,1.3s						
TOLK	Toolik Lake Re	69.71	17	P	P	19 19 11.6	+0.6
TOLK				IAmb	IAmb	19 19 50.7	
	comp=Z,5.0nm,1.4s						
IMAR	Indian Mountai	70.67	20	P	P	19 19 16.9	+0.1
TORD	Torodi Ar. Bea	71.23	273	P	P	19 19 19.9	-1.1
	comp=Z,0.4nm,0.6s,baz=48,slow=5.7,SNR=5.5						
TORD				pP	pP	19 19 47.9	+2.5
	comp=Z,1.2nm,0.8s,baz=36,slow=5.7,SNR=6.2						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	71.23	273	P	P	19 19 20.3	-0.6
BMAR	Burnt Mountain	71.81	16	P	P	19 19 24.9	+1.2
J20K	Nowinta River	71.91	21	P	P	19 19 25.3	+1.0
J20K				IAmb	IAmb	19 19 26.7	
	comp=Z,1.5nm,0.8s						
K20K	Telida	72.54	22	P	P	19 19 28.7	+0.6
K20K				IAmb	IAmb	19 19 45.1	
	comp=Z,3.1nm,1.4s						
ILAR	Eielson Array	73.43	18	P	P	19 19 29.9	-3.4
	comp=Z,0.4nm,0.7s,baz=329,slow=3.9,SNR=5.5						
	comp=Z,0.4nm,0.7s						
RIDG	Independent Ri	74.79	18	P	P	19 19 41.2	-0.1
RIDG				IAmb	IAmb	19 19 41.6	
	comp=Z,2.9nm,1.1s						
SCRK	Sand Creek	74.81	18	P	P	19 19 41.7	+0.3
SCRK				IAmb	IAmb	19 20 09.0	
	comp=Z,4.0nm,1.6s						
BCAR	Beaver Creek A	76.12	17	P	P	19 19 49.3	+0.4
M27K	Edge Creek, AK	76.69	18	P	P	19 19 52.4	+0.2
M27K				IAmb	IAmb	19 20 17.4	
	comp=Z,4.9nm,1.6s						
WB0	Warramunga Arr	77.18	126	P	P	19 19 54.6	-0.8
WB0				IAmb	IAmb	19 20 12.7	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	77.28	126	P	P	19 19 55.6	-0.3
	comp=Z,0.7nm,0.6s,baz=326,slow=6.0,SNR=11						
WRA				pP	pP	19 20 23.6	+3.0
	comp=Z,0.9nm,1.0s,baz=310,slow=6.4,SNR=4.1						
	comp=Z,0.7nm,0.6s						
WB2	Warramunga Arr	77.28	126	P	P	19 19 55.7	-0.3
AS31	Alice Springs	79.69	129	P	P	19 20 07.7	-1.5
ASAR	Alice Springs	79.69	129	P	P	19 20 08.2	-0.9
	comp=Z,0.7nm,0.7s,baz=317,slow=5.8,SNR=17						
ASAR				pP	pP	19 20 36.0	+2.1
	comp=Z,0.6nm,0.8s,baz=321,slow=4.8,SNR=4.3						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	79.69	129	P	P	19 20 08.8	-0.4
YKA	Yellowknife Ar	81.12	6	P	P	19 20 15.3	-0.9
	comp=Z,0.7nm,0.6s,baz=339,slow=5.0,SNR=7.7						
	comp=Z,0.7nm,0.6s						
FORT	Forrest	81.62	138	P	P	19 20 19.7	+0.4

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*IDC **27** 19:15:43.8±1.3, 32°.08N×137°.98E, h331^{km}±18^{km}, mb2.8/3, mbtmp3.6/6, Error ellipse: s-maj=35.7km s-min=18.6km az=51.0*

*JMA **27** 19:15:45.0±0.6, 32°N±4°×13°8E±°, h352^{km}, MV2.7/15, FAR S OFF TOKAI DISTRICT*

ISC 27 19:15:44.3±0.9, 32°.26N±0°.08×138°.26E±0°.09, h350^{km}, n14, σ1^{s}96/16, mb2.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	2.49	329	*e*P	Pn	19 16 40.1	+1.0
JTNC	Tanabenakahech	2.71	306	P	Pn	19 16 41.3	+0.2
JWY	Kouya	2.96	312	*e*P	Pn	19 16 44.1	+0.7
BSO1	Boso 1	3.29	43	*e*S	S	19 17 34.1	-1.1
JAI	Aioi	3.54	297	*e*P	Pn	19 16 48.8	+0.1
JRY	Ryogami san	3.78	8	*e*P	Pn	19 16 52.5	+1.5
JMN	Monobe	3.96	293	P	Pn	19 16 53.2	+0.3
JAG	Ashikaga	4.27	13	*e*P	Pn	19 16 55.2	-0.7
JAG				*e*S	S	19 17 49.3	-4.5
MJAR	Matsushiro Arr	4.27	359	P	Pn	19 16 55.7	-0.3
	3.5nm,1.0s,baz=186,slow=9.5,SNR=5.8						
JCJ	Chichijima	6.18	145	P	Pn	19 17 16.6	-0.7
	46nm,0.7s,baz=342,slow=19,SNR=6.2						
JCJ				S	S	19 18 30.8	-1.9
	20nm,0.3s,baz=293,slow=22,SNR=7.1						
KSRS	Korea Array	9.94	304	P	P	19 18 00.9	-2.1
	0.7nm,0.5s,baz=114,slow=12,SNR=5.1						
MKAR	Makanchi Array	44.62	306	P	P	19 23 23.6	+0.5
	0.5nm,0.6s,baz=89,slow=9.2,SNR=7.2						
	0.5nm,0.6s						
ILAR	Eielson Array	54.91	30	P	P	19 24 43.3	+3.9
	0.2nm,0.4s,baz=246,slow=6.8,SNR=2.3						
	0.2nm,0.4s						
FINES	FINESS Array B	71.81	332	P	P	19 26 29.9	+0.7
	0.3nm,0.4s,baz=50,slow=4.3,SNR=5.0						
	0.3nm,0.4s						

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*IDC **27** 19:17:09.9±4.5, 34°.60N×86°.25E, h0^{km}, mb3.5/2, mbtmp3.3/6, ML2.8/4, Error ellipse: s-maj=244.8km s-min=23.5km az=67.0*

ISC 27 19:17:15.8±1.0, 34°.90N±0°.10×86°.7E±0°.2, h35^{km}, n14, σ0^{s}74/14, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	7.00	202	*e*P	Pn	19 18 56.3	+0.1
	8.0nm,0.4s						
GKN	Gorkha	7.11	195	*e*P	Pn	19 18 58.1	+0.7
	10nm,0.7s						
JIRN	Jiri	7.23	184	*e*P	Pn	19 19 00.5	+1.1
PKIN	Phulchoki	7.39	189	*e*P	Pn	19 19 01.9	+0.4
	11nm,0.4s						
PKI	Pulchoki	7.39	189	*e*P	Pn	19 19 01.9	+0.3
	7.9nm,0.3s						
PYUN	Piuthan	7.49	206	*e*P	Pn	19 19 03.0	+0.2
TAPN	Taplejung	7.57	173	*e*P	Pn	19 19 04.7	+0.7
KOLN	Koldanda	7.60	202	*e*P	Pn	19 19 04.1	-0.1
MKAR	Makanchi Array	12.35	346	Pn	Pn	19 20 09.8	+0.8
	0.1nm,0.3s,baz=160,slow=8.9,SNR=3.6						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	16.81	342	Pn	Pn	19 21 07.4	-0.9
	baz=152,slow=13,SNR=3.5						
	0.5nm,1.0s						
ZALV	Zalesovo Beam	19.09	357	P	Pn	19 21 36.1	-0.2
	0.1nm,0.3s,baz=173,slow=15,SNR=2.2						
	0.5nm,0.6s						
CMAR	Chiang Mai Arr	19.65	143	P	P	19 21 40.2	-1.4
	baz=319,slow=9.6,SNR=1.2						
	0.2nm,0.3s						
WRA	Warramunga Arr	70.84	133	P	P	19 28 29.0	-0.1
	0.5nm,0.9s,baz=326,slow=6.4,SNR=2.5						
	0.5nm,0.9s						
ASAR	Alice Springs	73.44	135	P	P	19 28 44.9	+0.2
	0.6nm,1.0s,baz=304,slow=5.4,SNR=2.5						
	0.6nm,1.0s						

IDC 27 19:30:16.6±1.6, 4°.32S×127°.46E, h0^{km}, mb3.2/2, mbtmp3.5/5, ML3.4/3, MS2.7/1, Error ellipse: s-maj=30.4km s-min=27.0km az=107.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.12	48	Pn	Pn	19 31 36.0	+1.3
	3.0nm,0.3s,baz=252,slow=19,SNR=14						
SIJI				Sn	Sn	19 32 35.6	+1.1
	2.3nm,0.3s,baz=218,slow=19,SNR=8.8						
	6.2nm,0.3s						
KAPI	Kappang	7.71	265	Pn	Pn	19 32 10.6	+0.4
	3.2nm,0.3s,baz=55,slow=4.8,SNR=5.4						
KAPI				LR	LR	19 36 06.8	
	comp=Z,50nm,19.0s,baz=120,slow=45						
	6.2nm,0.3s						
WRA	Warramunga Arr	16.92	157	Pn	Pn	19 34 13.2	-1.8
	baz=343,slow=13,SNR=3.0						
	0.3nm,0.7s						
ASAR	Alice Springs	20.22	163	P	P	19 34 54.1	+0.7
	1.0nm,0.6s,baz=340,slow=11,SNR=19						
	1.0nm,0.6s						
MKAR	Makanchi Array	64.61	327	P	P	19 40 55.5	-0.6
	0.1nm,0.4s,baz=128,slow=6.0,SNR=2.1						
	0.1nm,0.4s						

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*NEIC **27** 19:43:55.0±1.6, 56°.2S±0°.1×27°.4W±0°.2, h122^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=17.4km s-min=15.4km az=114.0*

*IDC **27** 19:44:00.2±11.0, 56°.18S×27°.38W, h169^{km}±107^{km}, mb3.6/4, mbtmp4.0/4, Error ellipse: s-maj=45.5km s-min=25.9km az=82.0*

ISC 27 19:43:53.6±0.8, 56°.2S±0°.1×27°.4W±0°.1, h112^{km}, n24, σ0^{s}91/23, mb4.1/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.54	286	Pn	Pn	19 45 15.4	+1.8
HOPE				Sn	Sn	19 46 14.4	-1.6
VNA1	Neumayer--Stat	16.71	158	P	P	19 47 41.2	+0.3
VNA3	Neumayer Olymp	16.89	160	P	P	19 47 43.2	+0.2
VNA2	Neumayer--Watz	17.10	158	P	Pn	19 47 45.5	+0.2
	baz=318,slow=13						
SNAA	Sanae	18.66	156	P	P	19 48 02.3	-0.1
SNAA	Sanae	18.66	156	P	P	19 48 01.9	-0.5
PMSA	Palmer Station	19.71	229	P	P	19 48 12.7	-1.1
PMSA				IAmb	IAmb	19 48 39.0	
	comp=Z,23nm,1.0s						
TROLL	Troll, Antarti	20.17	153	P	P	19 48 18.6	-0.3
BELA	Belgrano 2	21.92	184	P	P	19 48 36.5	-0.9
BELA				IAmb	IAmb	19 48 39.1	
	comp=Z,26nm,1.6s						
QSPA	South Pole Qui	34.05	180	P	P	19 50 27.2	+0.4
QSPA				IAmb	IAmb	19 50 36.0	
	comp=Z,2.1nm,0.8s						
SBA	Scott Base	45.93	184	P	P	19 52 05.5	+1.2
VNDA	Vanda	46.42	183	P	P	19 52 09.2	+1.0
	comp=Z,2.7nm,0.8s,baz=183,slow=6.9,SNR=14						
	comp=Z,2.7nm,0.8s						
VNDA	Vanda	46.42	183	P	P	19 52 09.1	+0.9
VNDA				IAmb	IAmb	19 52 11.0	
	comp=Z,2.5nm,0.7s						
PB07	IPOC Station P	46.49	300	P	P	19 52 10.3	+0.6
PB16	IPOC Station P	49.22	303	P	P	19 52 31.9	+0.7
PB16				IAmb	IAmb	19 53 09.7	
	comp=Z,4.9nm,1.2s						
LPAZ	La Paz	50.36	306	P	P	19 52 40.3	+0.5
	comp=Z,0.6nm,0.5s,baz=96,slow=12,SNR=2.2						
	comp=Z,0.6nm,0.5s						
LPAZ	La Paz	50.36	306	IAmb	IAmb	19 52 49.3	
	comp=Z,4.4nm,1.4s						
SAML	Samuel	54.82	315	P	P	19 53 10.6	-1.4
TORD	Torodi Ar. Bea	73.24	30	P	P	19 55 12.6	+0.3
	comp=Z,0.5nm,0.6s,baz=197,slow=6.7,SNR=6.1						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	73.24	30	IAmb	IAmb	19 55 18.8	
	comp=Z,3.0nm,1.4s						
ASAR	Alice Springs	98.89	163	P	P	19 57 20.3	-0.7
	comp=Z,0.5nm,0.8s,baz=183,slow=4.0,SNR=2.5						
	comp=Z,0.5nm,0.8s						
FINES	FINESS Array B	124.57	28	PKP	PKPdf	20 02 37.2	-0.9
	comp=Z,0.4nm,0.5s,baz=162,slow=0.6,SNR=5.9						
ILAR	Eielson Array	150.12	312	PKPbc	PKPbc	20 03 29.2	-0.4
	comp=Z,1.1nm,0.8s,baz=92,slow=1.5,SNR=9.1						
ILAR	Eielson Array	150.12	312		PKPbc	20 03 28.9	-0.7

IDC 27 20:26:44.5±2.5, 7°.92S×129°.94E, h0^{km}, mb3.1/1, mbtmp3.0/3, ML3.1/2, Error ellipse: s-maj=166.5km s-min=30.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	12.69	161	Pn	Pn	20 29 45.6	-0.7
	0.1nm,0.3s,baz=334,slow=13,SNR=2.0						
WRA				Sn	Sn	20 32 11.0	+2.5
	0.2nm,0.3s,baz=342,slow=21,SNR=6.2						
	0.1nm,0.4s						
ASAR	**Alice Springs**	16.11	167	Pn	Pn	20 30 32.8	+0.3
	0.1nm,0.3s,baz=350,slow=8.7,SNR=5.1						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	68.96	327	P	P	20 37 51.6	+0.1
	0.1nm,0.3s,baz=119,slow=5.3,SNR=2.0						
	0.1nm,0.3s						

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*AUST **27** 20:39:27.4±1.1, 25°.49S×129°.85E, h0^{km}, Error ellipse: s-maj=20.4km s-min=11.9km az=30.0*
*IDC **27** 20:39:28.0±2.3, 25°.47S×130°.00E, h0^{km}, mb3.2/1, mbtmp3.6/4, ML3.8/3, MS3.7/1, Error ellipse: s-maj=26.3km s-min=21.5km az=158.0*
*NOU **27** 20:39:28.2, 25°.47S×129°.88E, h0^{km}, MLv4.4/9, Northern Territory, Australia*
ISC 27 20:39:28.6±0.8, **25°.53S**±0°.06×**129°.84E**±0°.05, **h10^{km}, n24,** σ1^{s}.**43**/30, **Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	1.48	289	P	**Pn**	**20 39 55.3**	**-0.1**
	baz=1.5,SNR=320						
WRKA				S	**Sb**	**20 40 16.1**	**+0.9**
	baz=1.5,SNR=8.5						
WRKA	**Warakurna**	1.48	289	P	**Pn**	**20 39 55.4**	**0.0**
ASAR	**Alice Springs**	4.14	64	Pn	**Pn**	**20 40 32.4**	**+0.4**
	2.6nm,0.3s,baz=243,slow=12,SNR=91						
ASAR				Pg	**Pb**	**20 40 42.0**	**+0.4**
	2.6nm,0.3s,baz=243,slow=17,SNR=38						
ASAR				Sn	**Sn**	**20 41 20.4**	**0.0**
	3.7nm,0.3s,baz=246,slow=22,SNR=12						
ASAR				Lg	Lg	20 41 32.8	
	6.6nm,0.3s,baz=240,slow=27,SNR=8.8						
	3.6nm,0.3s						
FORT	**Forrest**	5.46	196	P	**Pn**	**20 40 51.6**	**+1.5**
	baz=5.5,SNR=8.0						
FORT				S	**Sn**	**20 41 52.9**	**0.0**
	baz=5.5						
FORT	**Forrest**	5.46	196	P	**Pn**	**20 40 52.0**	**+1.9**
OOD	**Oodnadatta**	5.70	115	P	**Pn**	**20 40 53.8**	**+0.4**
	baz=5.7,SNR=27						
OOD				S	**Sn**	**20 41 59.7**	**+0.8**
	baz=5.7						
OOD	**Oodnadatta**	5.70	115	P	**Pn**	**20 40 53.9**	**+0.6**
MULG	**Mulgathing**	6.03	143	P	**Pn**	**20 40 59.1**	**+1.2**
WRA	**Warramunga Arr**	6.94	38	Pn	**Pn**	**20 41 10.1**	**-0.4**
	1.0nm,0.3s,baz=218,slow=13,SNR=32						
WRA				Pg	**Pb**	**20 41 32.5**	**+3.1**
	0.6nm,0.3s,baz=218,slow=13,SNR=4.6						
WRA				Sn	**Sn**	**20 42 27.2**	**-2.3**
	1.7nm,0.3s,baz=218,slow=23,SNR=9.1						
WRA				Lg	Lg	20 43 01.8	
	2.3nm,0.3s,baz=213,slow=26,SNR=10						
	1.1nm,0.3s						
WC3	**Warramunga Arr**	6.94	38	P	**Pn**	**20 41 10.4**	**-0.2**
	baz=6.9						
WRAB	**Tennant Creek**	6.95	38	P	**Pn**	**20 41 10.5**	**-0.1**
LCRK	**Leigh Creek**	8.88	125	P	**Pn**	**20 41 36.9**	**-0.2**
	baz=8.9,SNR=3.5						
LCRK	**Leigh Creek**	8.88	125	P	**Pn**	**20 41 36.8**	**-0.2**
BBOO	**Buckleboo**	9.06	145	P	**Pn**	**20 41 38.6**	**-0.9**
	baz=9.1,SNR=8.6						
KNRA	**Kununurra**	9.86	354	P	**Pn**	**20 41 50.6**	**+0.1**
	baz=9.9,SNR=13						
KNRA	**Kununurra**	9.86	354	P	**Pn**	**20 41 50.2**	**-0.2**
INKA	**Innaminka**	10.00	105	P	**Pn**	**20 41 53.0**	**+0.6**
QIS	**Mount Isa**	10.26	63	P	**Pn**	**20 41 56.1**	**+0.1**
STKA	**Stephens Creek**	12.10	124	Pn	**Pn**	**20 42 18.4**	**-2.7**
	0.9nm,0.3s,baz=302,slow=13,SNR=7.5						
STKA				Sn	Sn	20 44 27.1	-9.0
	0.9nm,0.3s,baz=327,slow=7.8,SNR=6.6						
	1.8nm,0.3s						
STKA	**Stephens Creek**	12.10	124	P	**Pn**	**20 42 18.6**	**-2.5**
	baz=12,SNR=7.3						
KDU	**Kakadu**	13.01	11	P	**Pn**	**20 42 30.9**	**-2.8**
	baz=13,SNR=6.8						
GIRL	**Giralia**	14.54	278	P	**Pn**	**20 42 52.1**	**-2.5**
	baz=14,SNR=5.6						
PSI	**Prapat**	41.11	309	LR	LR	21 05 51.3	
	comp=Z,91nm,18.2s,baz=216,slow=38						
MKAR	**Makanchi Array**	83.83	329	P	**P**	**20 51 59.1**	**+0.9**
	0.1nm,0.4s,baz=132,slow=6.0,SNR=1.7						
	0.1nm,0.4s						

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*IDC **27** 20:40:24.9±1.0, 38°.68N×142°.19E, h0^{km}, mb3.7/5, mbtmp3.7/10, ML2.9/5, Error ellipse: s-maj=23.2km s-min=16.1km az=113.0*
*JMA **27** 20:40:34.7±0.1, 38°.5N±0°.2×141°.7E±0°.5, h54^{km}, MD3.7/40, MV4.0/40, KINKAZAN REGION*
JMA Felt II J1 at KINKAZAN REGION .
*NIED **27** 20:40:34.7, 38°.54N×141°.72E, h54^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.56; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-2.10; $M_{r\theta}$0.86; $M_{\theta\phi}$-0.20; $M_{\phi r}$1.72; Fault plane solution: $M_0$3.02000×10^{14} NP1: ϕ_s180.00000°, δ26.00000°, λ74.00000°. NP2: ϕ_s18.00000°, δ65.00000°, λ98.00000°.*
ISC 27 20:40:33.6±1.1, **38°.55N**±0°.04×**141°.78E**±0°.09, **h57^{km}**±7^{km}, **n36,** σ1^{s}.**46**/34, **mb3.7**/6, **19D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	0.34	226	*i* P	**Pn**	**20 40 44.2**	**+0.4**
JIKH				S	**Sn**	**20 40 50.7**	**-0.4**
JIKH	**Ishinomakikobu**	0.34	226	A	A	20 40 44.2	
	comp=E,10.0nm,2.4s,comp=E,9.0nm,0.2s						
JIO	**Ouri**	0.35	254	⇓*i*P	**Pn**	**20 40 44.2**	**+0.4**
JIO				⇓S	**Sn**	**20 40 50.7**	**-0.6**
JIO	**Ouri**	0.35	254	A	A	20 40 44.2	
	comp=E,10.0nm,0.4s,comp=E,7.0nm,0.2s						
JKMT	**Kesennumamotoy**	0.35	318	⇓*i*P	**Pn**	**20 40 44.6**	**+0.7**
JKMT				⇓*i*S	**Sn**	**20 40 51.3**	**0.0**
OFUJ	**Ofunato**	0.54	351	*i* P	**Pn**	**20 40 46.7**	**+0.9**
OFUJ				S	**Sn**	**20 40 54.9**	**+0.3**
OFUJ	**Ofunato**	0.54	351	A	A	20 40 46.7	
	comp=E,11nm,0.3s,comp=E,4.0nm,0.5s						
JMK	**Ichinoseki**	0.59	313	⇓*i*P	**Pn**	**20 40 47.3**	**+0.9**
JMK				⇓S	**Sn**	**20 40 55.9**	**+0.2**
JMK	**Ichinoseki**	0.59	313	A	A	20 40 47.3	
	comp=E,21nm,0.2s,comp=E,10.0nm,0.2s						
JOFO	**Osakifurukawao**	0.68	275	A	A	20 40 47.9	
	comp=E,20nm,0.2s,comp=E,13nm,0.3s						
JOU	**Okura**	0.90	258	⇓*i*P	**Pn**	**20 40 50.4**	**+0.3**
JOU				⇓S	**Sn**	**20 41 02.3**	**-0.1**
JOU	**Okura**	0.90	258	A	A	20 40 50.4	
	comp=E,3.0nm,0.9s,comp=E,3.0nm,0.6s						
JOM	**Ohasama**	1.00	338	⇓*i*P	**Pn**	**20 40 52.5**	**+1.0**
JOM				⇓S	**Sn**	**20 41 05.4**	**+0.7**
JOM	**Ohasama**	1.00	338	A	A	20 40 52.5	
	comp=E,5.0nm,0.2s,comp=E,4.0nm,0.3s						
JMM	**Marumori**	1.03	229	⇓*i*P	**Pn**	**20 40 51.9**	**-0.1**
JMM				⇓S	**Sn**	**20 41 04.7**	**-0.9**
JYK	**Kaneyama**	1.17	289	⇓*i*P	**Pn**	**20 40 54.4**	**+0.7**
JRG	**Rokugo**	1.23	314	⇓*i*P	**Pn**	**20 40 55.4**	**+0.8**
JRG				⇓S	**Sn**	**20 41 11.6**	**+1.4**
JFK	**Kawauchi**	1.38	211	⇓*i*P	**Pn**	**20 40 56.9**	**+0.3**
JFK				⇓S	**Sn**	**20 41 13.3**	**-0.6**
JYS	**Shirataka**	1.39	257	⇓*i*P	**Pn**	**20 40 57.4**	**+0.7**
JYS				⇓S	**Sn**	**20 41 14.5**	**+0.5**
MJAR	**Matsushiro Arr**	3.47	236	Pn	**Pn**	**20 41 24.9**	**-0.2**
	0.5nm,0.3s,baz=34,slow=13,SNR=26						
MJAR				Lg	Lg	20 42 23.6	
	0.2nm,0.3s,baz=47,slow=25,SNR=1.8						
	2.6nm,0.3s						
ASAJ	**Asahikawa**	5.59	6	Pn	Pn	20 41 46.7	-7.5
	0.2nm,0.3s,baz=210,slow=20,SNR=2.4						
ASAJ				Sn	**Sn**	**20 42 50.4**	**-6.6**
	0.3nm,0.3s,baz=149,slow=15,SNR=1.6						
ASAJ				Lg	Lg	20 43 10.7	
	0.8nm,0.3s,baz=116,slow=24,SNR=1.9						
	15nm,1.0s						
JHJ	**Hachijo jima 2**	5.66	197	Pn	**Pn**	**20 41 53.6**	**-1.5**
	3.8nm,0.3s,baz=73,slow=20,SNR=1.6						
JHJ				Sn	**Sn**	**20 42 58.9**	**+0.2**
	11nm,0.3s,baz=64,slow=19,SNR=1.4						
	120nm,1.0s						
USRK	**Ussuriysk Ar.**	9.27	311	Pn	**Pn**	**20 42 42.0**	**-2.4**
	0.2nm,0.3s,baz=125,slow=15,SNR=1.5						
	1.3nm,0.6s						
KSRS	**Korea Array**	10.99	269	Pn	**Pn**	**20 43 07.2**	**-0.8**
	0.2nm,0.3s,baz=33,slow=9.8,SNR=2.9						
	0.2nm,0.3s						
SHEM	**Shemya Is, Ala**	26.41	47	P	P	20 45 58.8	-5.7
	26nm,0.7s,baz=300,slow=20,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	28.71	124	T	T	21 16 42.1	
	baz=316,slow=76,SNR=197						
H11N1	**WAKE ISLAND Hy**	28.72	124	T	T	21 16 43.0	
	baz=316,slow=76,SNR=221						
H11N3	**WAKE ISLAND Hy**	28.73	124	T	T	21 16 43.7	
	baz=316,slow=76,SNR=255						
H11S1	**WAKE ISLAND Hy**	29.47	126	T	T	21 17 40.5	
	baz=318,slow=76,SNR=122						
H11S3	**WAKE ISLAND Hy**	29.47	126	T	T	21 17 40.6	
	baz=318,slow=76,SNR=204						
H11S2	**WAKE ISLAND Hy**	29.49	126	T	T	21 17 41.8	
	baz=318,slow=76,SNR=141						
ZALV	**Zalesovo Beam**	41.12	311	P	**P**	**20 48 11.7**	**-0.1**
	0.5nm,0.3s,baz=88,slow=8.2,SNR=3.9						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	43.58	301	P	**P**	**20 48 32.3**	**+0.5**
	0.8nm,0.6s,baz=84,slow=8.7,SNR=11						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	58.60	188	P	**P**	**20 50 24.4**	**-0.2**
	0.8nm,0.7s,baz=4.0,slow=7.0,SNR=7.0						
	0.8nm,0.7s						
ASAR	**Alice Springs**	62.33	188	P	**P**	**20 50 50.9**	**+1.0**
	0.4nm,0.7s,baz=359,slow=5.4,SNR=4.7						
	0.4nm,0.7s						
NOA	**NORSAR Array B**	72.90	337	P	**P**	**20 51 56.8**	**+0.6**
	0.3nm,0.6s,baz=39,slow=6.2,SNR=3.6						
	0.3nm,0.6s						

IDC 27 20:55:05.6±5.5, **28°.66S**×**178°.00W, h0^{km}, mb3.6**/3, **mbtmp3.9**/4, **ML4.9**/1, **Error ellipse: s-maj=164.1km s-min=43.1km az=139.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	15.78	23	Pn	Pn	20 58 47.4	-1.9
	4.6nm,0.3s,baz=197,slow=19,SNR=1.8						
	19nm,0.5s						
STKA	**Stephens Creek**	34.91	255	P	P	21 01 57.4	-1.6
	1.7nm,0.7s,baz=99,slow=7.8,SNR=4.0						
	1.7nm,0.7s						
ASAR	**Alice Springs**	43.23	265	P	P	21 03 08.2	-0.6
	0.1nm,0.4s,baz=106,slow=7.1,SNR=1.5						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	44.06	270	P	P	21 03 16.6	+1.0
	0.4nm,0.4s,baz=110,slow=7.7,SNR=10						
	0.4nm,0.4s						
FINES	**FINESS Array B**	143.52	341	PKP	PKPdf	21 14 42.9	+1.4
	1.1nm,0.8s,baz=62,slow=3.6,SNR=3.9						

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*IDC **27** 21:11:01.5±0.8, 30°.15S×60°.70E, h0^{km}, mb3.8/9, mbtmp3.9/10, ML3.8/1, MS3.5/22, Error ellipse: s-maj=30.1km s-min=21.6km az=71.0*
*NEIC **27** 21:11:03.3±1.0, 30°.1S±0°.1×60°.5E±0°.2, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=25.3km s-min=16.7km az=245.0*
ISC 27 21:11:02.8±0.6, **30°.0S**±0°.1×**60°.4E**±0°.1, **h10^{km}, n57,** σ1^{s}.**92**/31, **mb4.1**/13, **MS3.6**/21, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	9.77	333	Pn	**Pn**	**21 13 21.9**	**-1.7**
VOI	**Vohitsoka**	14.67	300	Pn	**Pn**	**21 14 32.8**	**+2.1**
ABPO	**Ambohimpanom**	16.24	309	Pn	**Pn**	**21 14 51.4**	**+0.1**
ABPO				IAmb	IAmb	21 15 13.7	
	comp=Z,21nm,1.4s						
OPO	**Ambohidratompo**	16.58	310	Pn	**P**	**21 14 58.9**	**+0.7**
	baz=333,slow=13,SNR=2.2						
OPO				Sn	**Sn**	**21 17 52.2**	**-7.7**
	comp=Z,0.1nm,0.3s,baz=209,slow=16,SNR=1.5						
OPO				LR	LR	21 19 24.1	
	comp=Z,36nm,18.9s,baz=344,slow=30						
	comp=Z,17nm,1.3s						
H08S1	**Diego Carcia H**	24.95	29	T	T	21 42 36.6	
	baz=205,slow=76,SNR=56						
H08S2	**Diego Garcia H**	24.96	29	T	T	21 42 37.0	
	baz=205,slow=76,SNR=40						
H08S3	**Diego Garcia H**	24.98	29	T	T	21 42 38.1	
	baz=205,slow=76,SNR=61						
BOSA	**Boshof**	30.64	264	LR	LR	21 27 27.7	
	comp=Z,68nm,18.3s,baz=172,slow=32						
LSZ	**Lusaka**	33.04	289	LR	LR	21 29 43.4	
	comp=Z,104nm,19.0s,baz=136,slow=34						
SUR	**Sutherland**	33.84	256	LR	LR	21 28 46.6	
	comp=Z,103nm,19.3s,baz=123,slow=31						
SUR	**Sutherland**	33.84	256	P	**P**	**21 17 45.6**	**-0.2**
KMBO	**Kilima Mbogo**	36.20	318	LR	LR	21 30 13.7	
	comp=Z,78nm,18.4s,baz=95,slow=32						
MBAR	**Mbarara**	40.66	311	LR	LR	21 33 25.1	
	comp=Z,78nm,19.5s,baz=130,slow=33						
PALK	**Pallekele**	41.87	31	LR	LR	21 32 06.1	
	comp=Z,47nm,20.9s,baz=308,slow=30						
ATD	**Arta Tunnel**	44.64	335	LR	LR	21 33 58.9	
	comp=Z,76nm,20.8s,baz=106,slow=31						
H01W2	**Cape Leeuwin H**	45.13	111	T	T	22 07 36.5	
	baz=260,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	45.13	111	T	T	22 07 42.7	
	baz=260,slow=75,SNR=20						
H01W1	**Cape Leeuwin H**	45.15	111	T	T	22 07 45.9	
	baz=260,slow=75,SNR=21						
XMIS	**Christmas Isla**	46.30	75	P	**P**	**21 19 28.6**	**-0.4**
CASY	**Casey**	47.15	155	P	**P**	**21 19 32.8**	**-2.2**
SNAA	**Sanae**	53.45	201	LR	LR	21 38 41.4	
	comp=Z,73nm,19.5s,baz=84,slow=31						
QSPA	**South Pole Qui**	60.15	180	P	**P**	**21 21 09.5**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=256,slow=1.9,SNR=10						
QSPA				LR	LR	21 44 17.8	
	comp=Z,64nm,19.2s,baz=280,slow=33						
	comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	60.15	180	P	**P**	**21 21 10.5**	**+0.1**
CMAR	**Chiang Mai Arr**	60.81	43	P	**P**	**21 21 15.4**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=227,slow=7.7,SNR=9.6						
	comp=Z,0.7nm,0.3s						
VNDA	**Vanda**	63.36	166	P	**P**	**21 21 31.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=246,slow=3.9,SNR=1.5						
	comp=Z,0.3nm,0.7s						
VNDA	**Vanda**	63.36	166	IAmb	IAmb	21 21 42.1	
	comp=Z,6.4nm,1.5s						
ASAR	**Alice Springs**	64.86	104	P	**P**	**21 21 40.4**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=243,slow=6.1,SNR=1.6						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	66.74	100	P	**P**	**21 21 53.0**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=244,slow=5.6,SNR=1.6						
	comp=Z,0.5nm,0.6s						
GEYT	**Alibeck**	67.62	358	LR	LR	21 49 37.0	
	comp=Z,34nm,18.8s,baz=156,slow=34						
TORD	**Torodi Ar. Bea**	70.97	298	P	**P**	**21 22 22.4**	**+1.5**
	comp=Z,0.7nm,0.9s,baz=117,slow=5.2,SNR=3.5						
	comp=Z,0.7nm,0.9s						
GNI	**Garni**	71.31	347	LR	LR	21 51 51.0	
	comp=Z,46nm,19.7s,baz=178,slow=34						
DBIC	**Dimbokro**	72.38	289	LR	LR	21 53 06.2	
	comp=Z,29nm,18.8s,baz=165,slow=35						
IDI	**Anoyia**	73.07	330	LR	LR	21 52 50.1	
	comp=Z,13nm,22.0s,baz=77,slow=34						
KK31	**Karatay Array**	73.34	8	P	**P**	**21 22 35.9**	**+1.4**
KKAR	**Karatay Array**	73.34	8	P	**P**	**21 22 35.5**	**+1.0**
KKAR	**Karatay Array**	73.34	8	P	**P**	**21 22 35.4**	**+0.9**
KKAR				IAmb	IAmb	21 22 38.4	
	comp=Z,1.4nm,1.0s						
AAK	**Ala-Archa**	73.44	11	LR	LR	21 52 09.6	
	comp=Z,26nm,18.4s,baz=194,slow=34						
BOOM	**Boomskoye usch**	73.54	12	P	**P**	**21 22 36.8**	**+0.9**
BOOM				IAmb	IAmb	21 22 39.7	
	comp=Z,2.7nm,1.2s						
BRTR	**Keskin Array B**	73.72	339	P	**P**	**21 22 38.2**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=171,slow=8.6,SNR=5.1						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	73.72	339	P	**P**	**21 22 37.8**	**+0.8**
KBZ	**Khabaz**	75.12	347	LR	LR	21 55 01.1	
	comp=Z,46nm,19.9s,baz=156,slow=35						
PMSA	**Palmer Station**	76.16	201	LR	LR	21 48 47.8	
	comp=Z,73nm,21.0s,baz=148,slow=30						
MAKZ	**Makanchi**	78.90	15	P	**P**	**21 23 06.6**	**+0.6**
ABKAR	**Akbulak array**	78.91	360	P	**P**	**21 23 07.5**	**+1.5**
ABKAR	**Akbulak array**	78.91	360	P	**P**	**21 23 07.8**	**+1.7**
ABKAR				IAmb	IAmb	21 23 09.2	
	comp=Z,5.8nm,1.3s						
MKAR	**Makanchi Array**	78.96	15	P	**P**	**21 23 07.7**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=173,slow=5.6,SNR=6.0						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	78.96	15	P	**P**	**21 23 07.2**	**+0.8**
AKTO	**Aktyubinsk**	80.12	358	LR	LR	21 57 42.8	
	comp=Z,13nm,19.3s,baz=162,slow=35						
MLR	**Muntele Rosu**	81.42	336	LR	LR	21 57 22.5	
	comp=Z,22nm,19.7s,baz=84,slow=34						
KURK	**Kurchatov**	81.97	12	P	**P**	**21 23 24.5**	**+2.1**
KURK				IAmb	IAmb	21 23 42.2	
	comp=Z,2.1nm,1.1s						
BELG	**Belogornoye**	82.81	352	LR	LR	22 01 33.0	
	comp=Z,29nm,18.5s,baz=301,slow=36						
BURAR	**Bucovina Array**	83.51	337	P	**P**	**21 23 31.1**	**+0.4**
NRCA	**Norcia**	84.52	327	P	**P**	**21 23 35.8**	**-0.2**
NRCA				IAmb	IAmb	21 23 45.2	
	comp=Z,5.2nm,1.4s						
ARU	**Arti**	86.11	359	LR	LR	21 58 21.5	
	comp=Z,24nm,19.7s,baz=166,slow=33						
ZALV	**Zalesovo Beam**	86.24	14	P	**P**	**21 23 44.4**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=201,slow=2.9,SNR=6.0						
	comp=Z,1.1nm,0.7s						
NOA	**NORSAR Array B**	99.15	338	LR	LR	22 09 11.5	
	comp=Z,10nm,20.2s,baz=320,slow=35						
YKA	**Yellowknife Ar**	147.35	356	PKPbc	**PKPbc**	**21 30 47.0**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=353,slow=2.9,SNR=18						

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*IDC **27** 21:12:22.1±1.8, 3°.80S×131°.88E, h0^{km}, mb3.9/2, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=143.1km s-min=20.9km az=74.0*
*NEIC **27** 21:12:26.3±2.5, 3°.86S±0°.04×131°.86E±0°.03, h34^{km}±7^{km}, mb4.1/11, Error ellipse: s-maj=6.5km s-min=3.9km az=205.0*
ISC 27 21:12:25.7±0.6, **3°.89S**±0°.05×**131°.83E**±0°.09, **h35^{km}, n24,** σ2^{s}.**49**/30, **mb4.1**/4, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	1.06	24		**Pn**	**21 12 43.9**	**-0.1**
FAKI				Sn	**Sn**	**21 12 56.1**	**-1.4**
SIJI	**Sorong**	3.06	349	Pn	**Pn**	**21 13 10.2**	**-1.4**
	1.4nm,0.3s,baz=154,slow=3.3,SNR=30						
SIJI				Sn	**Sn**	**21 13 41.7**	**-5.2**
	12nm,0.3s,baz=247,slow=22,SNR=18						
	12nm,0.2s						
MTN	**Manton Dam**	8.92	184		**Pn**	**21 14 34.8**	**+2.7**
MTN				Sn	**Sn**	**21 16 12.1**	**+0.7**
KNRA	**Kununurra**	12.09	194		**Pn**	**21 15 16.5**	**+0.9**
KNRA					**Sn**	**21 17 26.4**	**-2.8**
TOLI2	**Tolitoli**	12.11	294	Pn	**Pn**	**21 15 16.1**	**+0.3**
COEN	**Coen**	15.01	132	Pn	**Pn**	**21 15 55.0**	**-0.4**
COEN				IAmb	IAmb	21 16 25.3	
	comp=Z,5.5nm,1.1s						
WB0	**Warramunga Arr**	15.97	171	Pn	**Pn**	**21 16 07.3**	**-0.6**
WRA	**Warramunga Arr**	16.14	171	Pn	**Pn**	**21 16 10.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=349,slow=13,SNR=12						
WRA				Sn	**Sn**	**21 19 00.9**	**-7.1**
	comp=Z,0.5nm,0.3s,baz=0.2,slow=19,SNR=8.3						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	16.14	171		**Pn**	**21 16 09.6**	**-0.4**
WB2	**Warramunga Arr**	16.14	171	Pn	**Pn**	**21 16 09.4**	**-0.6**
WB2				IAmb	IAmb	21 16 40.4	
	comp=Z,27nm,1.9s						
WR0	**Warramunga Arr**	16.19	171	Pn	**Pn**	**21 16 10.7**	**+0.2**
WR0				IAmb	IAmb	21 16 17.4	
	comp=Z,18nm,1.5s						
ASAR	**Alice Springs**	19.76	174	P	**Pn**	**21 16 56.6**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=351,slow=9.7,SNR=30						
ASAR				S	**S**	**21 20 28.3**	**-5.4**
	comp=Z,0.5nm,0.6s,baz=0.4,slow=28,SNR=3.2						
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	19.76	174	P	**Pn**	**21 16 56.4**	**+1.9**
RABL	**Rabaul**	20.29	92	P	**P**	**21 16 58.9**	**+0.2**
MBWA	**Marble Bar**	20.80	213	Pn	**P**	**21 17 06.4**	**+2.3**
MBWA				IAmb	IAmb	21 17 49.8	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	21.08	212	P	**P**	**21 17 07.6**	**+0.6**
PSA00				IAmb	IAmb	21 17 36.0	
	comp=Z,19nm,1.4s						
CTAO	**Charters Tower**	21.37	140	P	**P**	**21 17 11.6**	**+1.3**
STKA	**Stephens Creek**	29.31	163	P	**P**	**21 18 26.2**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=315,slow=10.0,SNR=4.0						
	comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	29.31	163	P	**P**	**21 18 28.3**	**+3.3**
STKA				IAmb	IAmb	21 19 21.8	
	comp=Z,7.9nm,1.8s						
MSWZ	**Moikau Station**	53.88	140	P	**P**	**21 21 44.6**	**-1.0**
MKAR	**Makanchi Array**	66.68	325	P	**P**	**21 23 14.8**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=108,slow=7.0,SNR=9.5						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	66.68	325	P	**P**	**21 23 14.2**	**+1.2**
MAKZ	**Makanchi**	66.87	325	P	**P**	**21 23 16.2**	**+2.0**
MAKZ				IAmb	IAmb	21 24 08.0	
	comp=Z,6.5nm,1.8s						
ABKAR	**Akbulak array**	81.24	321	P	**P**	**21 24 39.4**	**+1.3**

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*IDC **27** 21:29:59.0±0.9, 38°.75N×110°.30E, h0^{km}, mb3.8/8, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=33.4km s-min=16.6km az=60.0*
ISC 27 21:30:00.4±0.6, **38°.72N**±0°.03×**110°.35E**±0°.03, **h10^{km}, n19,** σ2^{s}.**39**/36, **mb3.8**/8, **1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	1.90	352	*e*Pg	**Pg**	**21 30 35.0**	**-1.8**
BTO				Sg	**Sg**	**21 31 02.3**	**+0.9**
BTO				smax	smax		
	comp=N,1µm,0.5s						
BTO				smax	smax		
	comp=E,1µm,0.5s						
HNS	**HongShan**	3.69	110	⇑Pn	**Pn**	**21 30 59.5**	**+2.1**
HNS				Pg	**Pg**	**21 31 10.5**	**-0.5**
HNS				Sg	**Sg**	**21 31 58.3**	**-0.4**
HNS				smax	smax		
	comp=N,170nm,1.5s						
HNS				smax	smax		
	comp=E,97nm,1.1s						
LYN	**LuoYang**	4.50	157	*e*Pn	**Pn**	**21 31 11.8**	**+3.2**
LYN				P*	**Pb**	**21 31 20.8**	**+1.3**
LYN				Pg	**Pg**	**21 31 24.0**	**-2.6**
LYN				Sn	**Sn**	**21 32 06.5**	**+5.5**
LYN				Sg	**Sg**	**21 32 24.0**	**-0.9**
LYN				smax	smax		
	comp=N,90nm,1.7s						
LYN				smax	smax		
	comp=E,80nm,1.7s						
LYN				LR	LR		
	comp=N,330nm,3.9s						
LYN				LR	LR		
	comp=E,220nm,3.6s						
LYN				LR	LR		
	comp=Z,220nm,9.2s						
BJI	**Beijing**	4.70	72	Pn	**Pn**	**21 31 10.5**	**-0.9**
BJI				Pg	**Pb**	**21 31 23.3**	**+0.4**
BJI				Sn	**Sn**	**21 32 06.5**	**+0.6**
BJI				Sg	**Sb**	**21 32 24.3**	**+4.8**
BJI				smax	smax		
	comp=N,39nm,1.2s						
BJI				smax	smax		
	comp=E,38nm,1.2s						
XAN	**Xi'an**	4.81	194	Pn	**Pn**	**21 31 15.0**	**+2.0**
XAN				P*	**Pb**	**21 31 24.3**	**-0.6**
XAN				Pg	**Pg**	**21 31 29.5**	**-3.1**
XAN				Sn	**Sb**	**21 32 25.8**	**+2.9**
XAN				Sg	**Sg**	**21 32 32.8**	**-2.2**
XAN				smax	smax		
	comp=N,74nm,1.0s						
XAN				smax	smax		
	comp=E,75nm,1.5s						
XAN				LR	LR		
	comp=N,290nm,2.4s						
XAN				LR	LR		
	comp=E,240nm,2.0s						
XAN				LR	LR		
	comp=Z,490nm,2.6s						
LZH	**Lanzhou**	5.81	245	Pg	**Pg**	**21 31 48.5**	**-3.2**
LZH				Sg	**Sg**	**21 33 06.5**	**-0.4**
LZH				smax	smax		
	comp=N,90nm,1.4s						
LZH				smax	smax		

	comp=E,60nm,1.3s						
TIA	Tai'an	5.94	113	Pn	Pn	21 31 24.0	-4.5
TIA				Pg	Pg	21 31 51.3	-2.9
TIA				Sg	Sg	21 33 05.5	-5.7
TIA				smax	smax		
	comp=N,26nm,1.2s						
TIA				smax	smax		
	comp=E,22nm,1.1s						
GTA	Gaotai	8.22	278	*e*P	Pn	21 32 01.0	+1.1
GTA				sP	Pg	21 32 31.0	-6.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	9.55	344	Pn	Pn	21 32 17.4	-0.6
	comp=Z,0.2nm,0.3s,baz=165,slow=14,SNR=8.0						
SONM				Lg	Lg	21 34 54.5	
	comp=Z,0.6nm,0.3s,baz=173,slow=29,SNR=3.9						
	comp=Z,2.8nm,1.0s						
GOMU	GeErMu	12.60	263	P	Pn	21 33 00.3	+0.3
GOMU				pP		21 33 03.5	
GOMU				sP		21 33 07.8	
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,48nm,5.3s						
WMQ	Urumqi	17.75	294	*e*P	P	21 34 08.8	+0.3
MKAR	Makanchi Array	22.04	301	P	P	21 34 55.0	0.0
	comp=Z,4.3nm,0.9s,baz=100,slow=12,SNR=29						
	comp=Z,4.3nm,0.9s						
CMAR	Chiang Mai Arr	22.50	209	P	P	21 34 59.2	-1.0
	comp=Z,3.5nm,1.0s,baz=14,slow=9.0,SNR=18						
	comp=Z,3.5nm,1.0s						
ZALV	Zalesovo Beam	23.11	320	P	P	21 35 05.2	-1.1
	comp=Z,0.7nm,0.7s,baz=122,slow=7.0,SNR=3.8						
	comp=Z,0.7nm,0.7s						
KURBB	Kurchatov Arra	25.36	308	P	P	21 35 28.2	+0.7
	comp=Z,1.7nm,1.0s,baz=107,slow=11,SNR=12						
	comp=Z,1.7nm,1.0s						
BRTR	Keskin Array B	57.64	297	P	P	21 39 50.5	-0.4
	comp=Z,1.4nm,0.9s,baz=88,slow=6.3,SNR=6.7						
	comp=Z,1.4nm,0.9s						
WRA	Warramunga Arr	62.54	154	P	P	21 40 24.7	+0.3
	comp=Z,1.9nm,0.3s,baz=342,slow=6.3,SNR=13						
	comp=Z,1.9nm,0.3s						
ASAR	Alice Springs	65.87	156	P	P	21 40 47.8	+1.5
	comp=Z,1.1nm,0.8s,baz=345,slow=5.8,SNR=10						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	72.86	20	P	P	21 41 28.4	-0.6
	comp=Z,0.4nm,0.7s,baz=325,slow=5.4,SNR=3.9						
	comp=Z,0.4nm,0.7s						

IDC 27 21:44:33.5±7.4**, 12°.01N×145°.55E, h0^{km}, mb3.4**/3**,**
mbtmp3.4/3**, MS3.3**/1**, Error ellipse: s-maj=267.7km**
s-min=33.6km az=82.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	21.34	176	LR	LR	21 57 09.4	
	comp=Z,81nm,19.0s,baz=242,slow=35						
H11S3	WAKE ISLAND Hy	21.38	70	T	T	22 10 54.9	
	baz=261,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	21.39	70	T	T	22 11 14.2	
	baz=261,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	21.39	70	T	T	22 10 52.1	
	baz=261,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	21.89	67	T	T	22 11 54.7	
	baz=258,slow=75,SNR=7.1						
H11N2	WAKE ISLAND Hy	21.90	67	T	T	22 12 20.8	
	baz=258,slow=75,SNR=2.0						
H11N3	WAKE ISLAND Hy	21.91	67	T	T	22 11 58.7	
	baz=258,slow=75,SNR=5.0						
WRA	Warramunga Arr	33.62	199	P	P	21 51 15.5	-0.3
	0.5nm,0.5s,baz=22,slow=9.4,SNR=12						
	0.5nm,0.5s						
ASAR	Alice Springs	37.24	198	P	P	21 51 47.4	+0.3
	0.2nm,0.5s,baz=25,slow=11,SNR=1.7						
	0.2nm,0.5s						
MKAR	Makanchi Array	63.09	317	P	P	21 55 02.9	0.0
	0.3nm,0.6s,baz=94,slow=8.0,SNR=3.5						
	0.3nm,0.6s						

*IDC **27** 22:00:27.8±1.2, 40°.53N×125°.12W, h0^{km}, mb3.9/8, mbtmp3.8/15, ML3.8/6, MS3.6/53, Error ellipse: s-maj=16.6km s-min=12.8km az=46.0*

*NEIC **27** 22:00:27.6, 40°.43N×125°.29W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.08; $M_{\theta\theta}$-2.16; $M_{\phi\phi}$1.08; $M_{r\theta}$2.03; $M_{\theta\phi}$-5.96; $M_{\phi r}$-2.41; Fault plane solution: $M_0$6.99000×10^{15} NP1:ϕ_s190.95000°, δ70.31000°, λ18.99000°. NP2:ϕ_s94.33000°, δ72.16000°, λ159.27000°. Principal axes: T 7.2379, Plg27.0000°, Azm52.0000°; N -0.5183, Plg63.0000°, Azm235.0000°; P -6.7196, Plg1.0000°, Azm143.0000°;*

*NEIC **27** 22:00:28.6±2.0, 40°.48N±0°.04×125°.28W±0°.05, h10^{km}±1^{km} Error ellipse: s-maj=6.8km s-min=5.8km az=221.0*

*NCEDC **27** 22:00:28.5±2.1, 40°.40N±0°.05×125°.38W±0°.07, h18^{km}±5^{km}, Mwr4.5/4, mb4.4/101(NEIC), ML3.9/84(NEIC), Error ellipse: s-maj=8.3km s-min=6.2km az=59.0*

*ANF **27** 22:00:30.9±0.7, 40°.64N×124°.89W, h5^{km}, ML4.0/14, Error ellipse: s-maj=10.5km s-min=2.0km az=81.0*

ISC 27 22:00:28.0±1.8**, 40°.53N**±0°.05×**125°.25W**±0°.06**, h7^{km}**±11^{km}**,**
n372, σ1^{s}31/336**, mb4.3**/43**, MS3.7**/44**, Off coast of**
northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.87	97		Pg	22 00 45.2	+0.6
KMPM				Sg	Sb	22 00 57.4	0.0
KSMM	Slide Mountain	0.89	112		Pg	22 00 44.4	-0.7
JCC	Jacoby Creek,	0.97	73	Pn	Pb	22 00 46.9	-0.2
JCC				Sg	Sg	22 00 59.6	+0.3
JCC				IAML		22 01 00.7	
	comp=N,2µm,0.6s						
JCC				IAML		22 01 00.9	
	comp=E,4µm,0.8s						
KCRM	Chalk Rock	1.10	95		Pb	22 00 48.6	-0.7
KRPM	Rodgers	1.12	56	Pn	Pb	22 00 49.2	-0.6
KRPM				Sg	Sb	22 01 04.0	-0.6
KRPM				IAML		22 01 14.4	
	comp=E,2µm,0.8s						
KHMM	Horse Mountain	1.21	73		Pn	22 00 50.9	-0.5
KHMM					Sb	22 01 06.6	-0.5
KMRM	Mail Ridge	1.22	104		Pn	22 00 50.6	-0.9
KMRM					Sb	22 01 06.7	-0.7
KBSM	Bell Springs	1.41	115		Pn	22 00 52.5	-1.7
KCPM	Cahto Peak	1.53	123		Pn	22 00 53.9	-2.0
KOMM	Orleans Mounta	1.56	61		Pn	22 00 55.6	-0.6
KSXB	Camp Six Broad	1.66	38		Pn	22 00 57.0	-0.6
KSXB				IAML		22 01 18.6	
	comp=E,727nm,0.8s						
KSXB				IAML		22 01 18.7	
	comp=N,712nm,0.8s						
GNAM	Navarro Ridge	1.82	136		Pn	22 00 56.2	-3.6
KBO	Bosley Butte	1.85	24		Pn	22 00 60.0	-0.2
L02F	Cave Junction	2.03	38	P	Pn	22 01 02.3	-0.3
	baz=218						
L02F				S	Sn	22 01 25.6	-2.7
	baz=218						
GASB	Alder Springs	2.13	113		Pn	22 01 02.6	-1.6
YBH	Yreka Blue Hor	2.26	57	Pn	Pn	22 01 05.8	-0.1
	comp=N,26nm,0.3s,baz=267,slow=10.0,SNR=267						
YBH				Sn	Sn	22 01 34.2	0.0
	comp=N,22nm,0.3s,baz=221,slow=14,SNR=5.7						
YBH				LR	LR	22 01 53.5	
	comp=N,612nm,19.1s,baz=140,slow=39						
	comp=N,71nm,0.3s						
YBH	Yreka Blue Hor	2.26	57		Pn	22 01 05.8	-0.1
YBH	Yreka Blue Hor	2.26	57	Pn	Pn	22 01 05.5	-0.5
HOPS	Hopland Field	2.28	132		Pn	22 01 03.0	-2.9
HOPS				IAML		22 01 58.5	
	comp=N,497nm,1.7s						
HOPS				IAML		22 02 11.4	
	comp=E,520nm,1.6s						
LTCM	Tuscan Springs	2.41	97		Pn	22 01 07.2	-0.7
KEBM	Edson Butte	2.44	16		Pn	22 01 08.1	-0.2
KEBM				IAML		22 01 38.7	
	comp=E,424nm,0.6s						
GPMM	Pine Mountain	2.45	133		Pn	22 01 06.6	-1.8
K02D	Willamette Mer	2.47	28	P	Pn	22 01 08.7	0.0
	baz=209,SNR=685						
K02D				S	Sn	22 01 37.4	-1.7
	baz=209						
LHEM	Herd Peak	2.54	63		Pn	22 01 10.5	+0.7
GDXM	Geysers	2.56	131		Pn	22 01 07.5	-2.5
GSGM	Seigler Mounta	2.57	129		Pn	22 01 09.7	-0.3
FTR	Fort Ross	2.58	140		Pn	22 01 06.1	-4.0
GCRM	Castle Rock Sp	2.63	131		Pn	22 01 09.0	-1.9
HUMO	Hull Mountain	2.69	39		Pn	22 01 12.3	+0.5
L04D	Klamath Falls	2.79	52	IAML		22 01 53.6	
	comp=N,398nm,0.9s						
L04D				IAML		22 01 58.5	
	comp=E,480nm,0.9s						
L04D	Klamath Falls	2.79	52	P	Pn	22 01 14.4	+1.3
	baz=232,SNR=645						
J01E	Myrtle Point	2.81	20	IAML		22 01 49.7	
	comp=N,475nm,0.3s						
J01E				IAML		22 01 50.7	
	comp=E,412nm,0.7s						
J01E	Myrtle Point	2.81	20	P	Pn	22 01 13.3	0.0
	baz=201,SNR=14						
J01E				S	Sn	22 01 45.8	-1.6
	baz=201						
DBO	Dodson Butte	2.99	29		Pn	22 01 17.3	+1.4
MCCM	Marconi Confer	3.01	142		Pn	22 01 13.4	-2.6
MCCM				IAML		22 02 33.3	
	comp=E,211nm,2.2s						
ORV	Oroville	3.04	108		Pn	22 01 14.6	-1.9
K04D	Chiloquin, OR	3.35	50	P	Pn	22 01 21.4	+0.4
	baz=232,SNR=107						
I03D	Drain, OR	3.47	23	P	Pn	22 01 22.7	+0.4
	baz=204,SNR=34						
I03D				S	Sn	22 02 02.4	-1.2
	baz=204						
J04D	Umpqua Nationa	3.58	40	P	Pn	22 01 24.9	+0.7
	baz=221,SNR=72						
I02E	Swisshome, OR	3.72	16		Pn	22 01 26.4	+0.6
I02E				IAML		22 02 11.8	
	comp=E,179nm,0.3s						
I02E	Swisshome, OR	3.72	16	P	Pn	22 01 26.1	+0.2
	baz=197,SNR=13						
I02E				S	Sn	22 02 08.5	-1.4
	baz=197						
BEKR	Beckworth	3.80	98	Pn	Pn	22 01 26.9	-0.3
I04A	Tendick Farm,	3.88	32	P	Pn	22 01 29.6	+1.5
	baz=213,SNR=80						
I04A				S	Sn	22 02 12.3	-1.7
	baz=213						
K05A	Summer Lake	3.93	55		Pn	22 01 30.2	+1.2
K05A				IAML		22 03 00.9	
	comp=E,84nm,3.9s						
K05A				IAML		22 03 22.8	
	comp=N,119nm,2.2s						
MOD	Modoc Plateau	3.98	68	Pn	Pn	22 01 29.5	0.0
MOD				IAML		22 02 43.1	
	comp=E,89nm,1.3s						
BUCK	Buck Mountain	4.03	24	Pn	Pn	22 01 31.6	+1.5
BUCK				IAML		22 02 19.3	
	comp=N,142nm,1.8s						
BUCK				IAML		22 02 20.5	
	comp=E,177nm,1.5s						
J05D	Fort Rock, OR	4.07	46	P	Pn	22 01 31.5	+0.7
	baz=228,SNR=156						
MPK	Martis Peak	4.20	105	Pn	Pn	22 01 33.2	+0.5
EMB	Emerald Bay	4.26	110		Pn	22 01 33.7	+0.2
EMB				IAML		22 02 33.2	
	comp=E,141nm,0.8s						
COR	Corvallis	4.30	19	Pn	Pn	22 01 35.2	+1.4
COR				IAML		22 02 29.0	
	comp=E,81nm,0.7s						
COR				IAML		22 02 33.8	
	comp=E,67nm,0.7s						
H04D	Lebanon	4.40	24	IAML		22 02 30.5	
	comp=E,109nm,0.7s						
H04D				IAML		22 02 39.5	
	comp=N,74nm,0.9s						
H04D	Lebanon	4.40	24	P	Pn	22 01 36.1	+1.0
	baz=206,SNR=42						
H04D				S	Sn	22 02 25.2	-1.5
	baz=206						
VCNR	Virginia City	4.48	104	IAML		22 02 34.4	
	comp=N,123nm,1.0s						
VCNR				IAML		22 02 39.1	
	comp=E,128nm,0.9s						
PINE	Pine Mountain	4.57	43	Pn	Pn	22 01 39.6	+2.0
PAHR	Pah Rah Range	4.57	98		Pn	22 01 37.1	-0.6
PAHR				IAML		22 02 45.8	
	comp=N,108nm,2.1s						
PNTR	Pine Nut	4.58	106		Pn	22 01 38.4	+0.5
PNTR				IAML		22 02 41.4	
	comp=E,138nm,0.7s						
H04A	Detroit Lake	4.73	28	Pn	Pn	22 01 41.4	+1.7
H04A				IAML		22 02 39.6	
	comp=N,106nm,0.4s						
H04A				IAML		22 02 40.4	
	comp=E,107nm,0.3s						
I05D	Terrebonne, OR	4.78	36	P	Pn	22 01 41.4	+1.0
	baz=218,SNR=10						
SAO	San Andreas Ge	4.80	140	Pn	Pn	22 01 36.8	-3.9
YERR	Yerington	4.88	107	Pn	Pn	22 01 42.3	+0.3
YERR				IAML		22 02 52.8	
	comp=E,102nm,0.9s						
YERR				IAML		22 02 55.3	
	comp=N,58nm,1.5s						
G03D	McMinnville, O	4.90	17	Pn	Pn	22 01 43.0	+0.9
G03D				IAML		22 02 47.7	
	comp=E,51nm,0.7s						
G03D				IAML		22 02 55.5	
	comp=N,66nm,2.4s						
G03D	McMinnville, O	4.90	17	P	Pn	22 01 43.8	+1.7
	baz=198						
G03D				S	Sn	22 02 37.5	-1.5
	baz=198						
BBGB	Big Mountain B	5.14	139		Pn	22 01 42.6	-3.0
BBGB				IAML		22 02 53.6	
	comp=N,91nm,0.6s						
BBGB				IAML		22 03 00.3	
	comp=E,96nm,0.7s						
WVOR	Wild Horse Val	5.32	67		Pn	22 01 48.0	+0.1
HOOD	Mount Hood Mea	5.47	28		Pn	22 01 52.8	+2.8
G05D	Wamic, OR	5.52	30	P	Pn	22 01 52.1	+1.4
	baz=212,SNR=9.0						
RYN	Ryan	5.53	108		Pn	22 01 51.1	+0.2
I07A	Izee	5.54	48	Pn	Pn	22 01 53.3	+2.3
PMPB	Monarch Peak	5.55	140	Pn	Pn	22 01 48.5	-2.5
MDPB	Devils Postpil	5.61	119	Pn	Pn	22 01 52.6	+0.6
OMMB	Old Mammoth Mi	5.67	119	Pn	Pn	22 01 53.2	+0.2
LHV	Little Huntoon	5.70	111		Pn	22 01 53.0	-0.1
KVN	Kaiserville	5.70	103	Pn	Pn	22 01 52.8	-0.5
MLAC	Mammoth, Mammo	5.77	118	P	Pn	22 01 55.9	+1.6
	baz=301						
NVAR	Mina Array Bea	5.77	109	Pn	Pn	22 01 54.6	+0.4
	comp=E,1.3nm,0.3s,baz=283,slow=15,SNR=26						
NVAR				Sn	Sn	22 03 02.8	+2.0
	comp=E,1.0nm,0.3s,baz=290,slow=26,SNR=3.6						
NVAR				LR	LR	22 04 23.5	
	comp=E,333nm,19.3s,baz=280,slow=41						
	comp=E,2.2nm,0.4s						
NVAR	Mina Array Bea	5.77	109		Pn	22 01 53.6	-0.6
F04A	Amboy	5.78	20		Pn	22 01 55.4	+1.3
F05D	White Salmon	6.03	26		Pn	22 01 59.1	+1.6
F05D	White Salmon	6.03	26	P	Pn	22 01 58.2	+0.7
	baz=208						
BMN	Battle Mountai	6.12	88		Pn	22 01 59.0	0.0
E03A	Lebam	6.14	11	Pn	Pn	22 02 01.5	+2.5
E04D	Cinebar	6.33	17	Pn	Pn	22 02 02.9	+1.3
E04D	Cinebar	6.33	17	S	Sn	22 03 13.2	-1.0
	baz=199						
Q09A	Carvers	6.45	103	Pn	Pn	22 02 03.1	-0.5
F07A	Phinny Hill Vi	6.62	34		Pn	22 02 06.7	+1.1
G08A	Pilot Rock	6.63	42	Pn	Pn	22 02 08.1	+2.2
WISH	Wishkah	6.67	9	Pn	Pn	22 02 08.6	+2.2
LCH	Last Change Ra	6.79	117		Pn	22 02 08.5	+0.4
D05A	Enumclaw	7.06	18	Pn	Pn	22 02 15.6	+3.9
GRAC	Grapevine Rang	7.10	117		Pn	22 02 12.3	0.0
D03D	Eldon	7.17	12	P	Pn	22 02 14.5	+1.3
	baz=193,SNR=20						
HAWA	Hanford	7.18	33		Pn	22 02 16.1	+2.7
E07A	Sunnyside	7.19	31	Pn	Pn	22 02 14.3	+0.9
ISA	Isabella, Lake	7.22	130	Pn	Pn	22 02 13.9	-0.1
ISA	Isabella, Lake	7.22	130	P	Pn	22 02 14.9	+0.8
	baz=314						
ARVC	Arvin	7.41	135	P	Pn	22 02 17.7	+1.1
	baz=318						
E08A	Dider Farm, El	7.46	35		Pn	22 02 19.0	+1.7
LTY	Liberty	7.49	25		Pn	22 02 19.8	+2.1
MFID	Camas Ranch	7.59	65	Pn	Pn	22 02 20.3	+1.2
ELK	Elko	7.62	85	Pn	Pn	22 02 19.9	+0.3
	comp=E,1.8nm,0.7s,baz=296,slow=11,SNR=7.9						
ELK				LR	LR	22 05 47.4	
	comp=E,184nm,20.5s,baz=265,slow=42						
ELK	Elko	7.62	85	Pn	Pn	22 02 20.2	+0.6
FURC	Furnace Creek,	7.73	119	P	Pn	22 02 22.9	+2.1
	baz=304						
R11A	Troy Canyon, C	7.79	103	Pn	Pn	22 02 22.0	+0.1
R11A	Troy Canyon, C	7.79	103	P	Pn	22 02 23.0	+1.1
	baz=288						
LRMC	Laurel Mtn Rad	7.82	128	P	Pn	22 02 23.3	+1.1
	baz=312						
CCAC	Calif City Air	7.85	131		Pn	22 02 22.7	+0.2
TPNV	Topopah Spring	7.89	114	Pn	Pn	22 02 23.5	+0.2
D08A	Wollman Farm,	7.97	33	Pn	Pn	22 02 26.1	+1.9
F10A	Beach Ranch, E	7.99	44	Pn	Pn	22 02 27.8	+3.3
GWY	Greenwater Val	8.02	120	Pn	Pn	22 02 26.9	+1.9
QSM	Queen of Sheba	8.02	122		Pn	22 02 24.7	-0.1
EDW2	Edwards Air Fo	8.05	132	P	Pn	22 02 26.7	+1.2
	baz=316						
PLID	Pearl Lake	8.18	53	Pn	Pn	22 02 30.6	+3.3
CLRS	Cowichan Lake	8.33	5	Pn	Pn	22 02 31.8	+2.7
SHOC	Shoshone, Teco	8.44	120	P	Pn	22 02 32.0	+1.3
	baz=305						
GSC	Goldstone, Bar	8.47	125		Pn	22 02 30.7	-0.5
GSC	Goldstone, Bar	8.47	125	P	Pn	22 02 32.5	+1.3
	baz=310						
PRN	Pahroc Range	8.54	108	Pn	Pn	22 02 32.9	+0.8
HLID	Hailey	8.61	66	Pn	Pn	22 02 34.9	+1.7
HLID	Hailey	8.61	66	P	Pn	22 02 32.8	-0.4
	baz=252						
BFSC	Mount Baldy Ra	8.71	134	P	Pn	22 02 35.6	+1.0
	baz=318						
C09A	Chrisman Ranch	8.82	32	Pn	Pn	22 02 37.9	+2.0
SHPR	Sheep Range	8.87	114	Pn	Pn	22 02 37.6	+0.9
B08A	Colville Reser	8.89	26	Pn	Pn	22 02 38.0	+1.1
TUQ	Turquoise Moun	8.95	122	P	Pn	22 02 39.0	+1.2
	baz=307						
PSUT	Pine Spring	9.03	99	Pn	Pn	22 02 39.6	+0.7
HEC	Hector,Ludlow	9.07	126	P	Pn	22 02 40.5	+1.1
	baz=311						
BGU	Big Grassy Mou	9.29	84	Pn	Pn	22 02 44.0	+1.5
HVU	Hansel Valley	9.49	78		Pn	22 02 46.7	+1.4
CBB	Campbell River	9.50	360	Pn	Pn	22 02 46.9	+1.8
DUG	Dugway, Tooele	9.50	88	Pn	Pn	22 02 46.8	+1.4
GMRC	Granite Mounta	9.52	124	P	Pn	22 02 46.7	+1.1
	baz=309						
BCYI	Bear Canyon	9.54	63		Pn	22 02 48.2	+2.3
NEW	Newport	9.67	34	Pn	Pn	22 02 49.9	+2.4
	comp=E,0.2nm,0.3s,baz=191,slow=14,SNR=3.0						
NEW				LR	LR	22 06 49.5	
	comp=E,402nm,18.2s,baz=227,slow=40						
	comp=E,3.1nm,1.0s						
NEW	Newport	9.67	34		Pn	22 02 49.2	+1.7
BELC	Belle Mtn. Jos	9.84	129	P	Pn	22 02 50.4	+0.4
	baz=314						
PFO	Pinyon Flats O	9.85	132	Pn	Pn	22 02 50.5	+0.5
	comp=E,0.8nm,0.3s,baz=293,slow=13,SNR=3.2						
PFO				LR	LR	22 06 45.0	
	comp=E,265nm,18.7s,baz=237,slow=39						
	comp=E,2.4nm,0.3s						
MCMT	McKenzie Canyo	10.09	61		Pn	22 02 55.8	+2.3
NLU	North Lily Min	10.09	89		Pn	22 02 55.1	+1.6
IRM	Iron Mountain	10.25	125	P	Pn	22 02 56.4	+0.9
	baz=311						
MSU	Marysvale	10.30	97		Pn	22 02 57.4	+1.0
MSO	Missoula	10.33	49		Pn	22 02 59.1	+2.6
MSO	Missoula	10.33	49	P	Pn	22 02 56.0	-0.6
	baz=236						
LLLB	Lillooet	10.35	12	Pn	Pn	22 02 58.1	+1.3
HWUT	Hardware Ranch	10.39	80		Pn	22 02 59.2	+1.6
BC3	Big Chuckawall	10.40	128	P	Pn	22 02 58.0	+0.3
	baz=314						
W13A	Hualapai Mount	10.50	117	Pn	Pn	22 02 58.9	-0.2
JLU	Jordanelle	10.50	85	Pn	Pn	22 03 00.0	+0.8
PKCU	Pink Cliffs	10.53	103	Pn	Pn	22 03 01.1	+1.4
JTMT	Jette	10.68	44		Pn	22 03 03.1	+1.7
LRM	Limekiln Ridge	10.73	56		Pn	22 03 04.4	+2.1
AHID	Auburn Hatcher	10.82	73		Pn	22 03 05.8	+2.3
TMUT	Trail Mountain	10.86	92		Pn	22 03 02.8	-1.3
BLYC	Blythe	10.91	125	Pn	Pn	22 03 04.4	-0.1
U15A	North Rim	10.95	108	Pn	Pn	22 03 06.5	+1.1
Q16A	Castle Valley	10.96	94	Pn	Pn	22 03 06.7	+1.3
QLMT	Earthquake Lak	11.04	63		Pn	22 03 07.4	+0.9
TPAW	Teton Pass	11.04	70		Pn	22 03 08.6	+2.1
REDW	Red Top Meadow	11.09	71		Pn	22 03 08.4	+1.2
BOZ	Bozeman (W)	11.17	59		Pn	22 03 08.8	+0.6
BOZ	Bozeman (W)	11.17	59	P	Pn	22 03 07.6	-0.6
	baz=247						
SNOW	Snow King Moun	11.18	70	Pn	Pn	22 03 11.2	+2.8
P17A	Butcher Ranch,	11.18	91		Pn	22 03 09.1	+0.7
GLA	Glamis	11.20	129	P	Pn	22 03 09.0	+0.5
	baz=314						
YHL	Hebgen Lake	11.22	63		Pn	22 03 10.0	+1.1
MOOW	Moose Ponds	11.24	69	Pn	Pn	22 03 11.5	+2.3
YMR	Madison River	11.31	64	Pn	Pn	22 03 12.8	+2.6
LOHW	Long Hollow	11.31	69		Pn	22 03 11.4	+1.1
YPP	Pitchstone Pla	11.32	66		Pn	22 03 12.2	+1.8
YFT	Old Faithful	11.34	65	Pn	Pn	22 03 13.9	+3.3
FLWY	Flagg Ranch	11.35	67		Pn	22 03 13.6	+3.0
SRU	San Rafael Swe	11.42	92	Pn	Pn	22 03 13.4	+1.8
H17A	Grant Village	11.51	66		Pn	22 03 15.3	+2.4
HRY	Holter Researc	11.52	53	Pn	Pn	22 03 14.7	+1.8
YNR	Norris Junctio	11.52	64	Pn	Pn	22 03 15.9	+2.9
P18A	Preston Nutter	11.54	90		Pn	22 03 15.2	+1.9
LKWY	Lake	11.67	65	Pn	Pn	22 03 17.0	+1.9
WALA	Waterton Lakes	11.72	40	Pn	Pn	22 03 16.0	+0.4
Y14A	Wickenburg	11.77	120		Pn	22 03 16.6	+0.3
BBB	Bella Bella	11.82	351	LR	LR	22 06 47.0	
	comp=E,109nm,20.8s,baz=197,slow=32						
RDMU	Red Mountain	11.93	85		Pn	22 03 19.7	+1.0
BW06	Boulder Array	11.95	74		Pn	22 03 20.7	+1.7
PD31	Pinedale Array	11.95	74	Pn	Pn	22 03 19.3	+0.3
PDAR	Pinedale Array	11.95	74	Pn	Pn	22 03 20.8	+1.8
	comp=E,0.1nm,0.3s,baz=229,slow=11,SNR=12						
PDAR				LR	LR	22 08 42.7	
	comp=E,112nm,19.2s,baz=259,slow=42						
	comp=E,2.7nm,1.1s						
PDAR	Pinedale Array	11.95	74		Pn	22 03 20.4	+1.4
GCMT	Greycliff	12.53	60		Pn	22 03 28.0	+1.3
RLMT	Red Lodge	12.60	63		Pn	22 03 28.9	+1.1
RLMT	Red Lodge	12.60	63	P	Pn	22 03 27.8	+0.1
	baz=254						
O20A	White River Ci	12.99	86		Pn	22 03 33.8	+0.7
O20A	White River Ci	12.99	86	P	Pn	22 03 33.4	+0.3
	baz=277						
214A	Organ Pipe Nat	13.18	127	Pn	Pn	22 03 34.0	-1.6
EGMT	Eagleton	13.38	51	Pn	Pn	22 03 38.5	+0.2
MVCO	Mesa Verde	13.47	99	Pn	Pn	22 03 39.9	+0.2
MVCO	Mesa Verde	13.47	99	P	Pn	22 03 40.0	+0.3
	baz=289						
RWWY	Rawlins	13.66	79	Pn	Pn	22 03 37.8	-4.4
SMCO	Snowmass	14.11	90	Pn	Pn	22 03 48.7	+0.1
K22A	Casper	14.18	75		Pn	22 03 49.6	+0.4
TUC	Tucson	14.23	121	Pn	Pn	22 03 49.4	-0.6
TUC	Tucson	14.23	121	P	Pn	22 03 51.3	+1.3
	baz=309						
S22A	4UR Ranch, Cre	14.57	95	Pn	Pn	22 03 54.2	-0.6
N23A	Red Feather La	14.65	82	Pn	Pn	22 03 55.9	0.0
PHWY	Pilot Hill	14.99	81		Pn	22 03 59.8	-0.7
ISCO	Idaho Springs	15.04	86	Pn	Pn	22 04 00.3	-0.8
ISCO	Idaho Springs	15.04	86	P	Pn	22 04 00.6	-0.5
	baz=279						
EDM	Edmonton	15.05	29	Pn	Pn	22 04 01.8	+0.8
LAO	LASA Array	15.08	60		Pn	22 04 02.0	+0.6
LAO				IAmb	IAmb	22 04 11.4	
	comp=Z,12nm,0.8s						
LAO	LASA Array	15.08	60	P	Pn	22 04 01.1	-0.3
	baz=252						
Q24A	Divide	15.54	89	Pn	Pn	22 04 06.9	-1.0
SDCO	Great Sand Dun	15.57	94		Pn	22 04 08.1	-0.2
SDCO				IAmb	IAmb	22 04 11.9	
	comp=Z,24nm,1.1s						
SDCO	Great Sand Dun	15.57	94	P	Pn	22 04 08.4	+0.1
	baz=286						
319A	Douglas	15.81	120		Pn	22 04 10.2	-1.0
319A				IAmb	IAmb	22 04 15.7	
	comp=Z,26nm,1.0s						
CRAG	Craig	15.83	343	P	Pn	22 04 12.3	+1.2
	baz=158						
ANMO	Albuquerque	15.87	105	Pn	Pn	22 04 11.7	-0.3
	comp=Z,0.1nm,0.3s,baz=303,slow=14,SNR=5.0						
ANMO				LR	LR	22 10 41.3	
	comp=Z,47nm,21.6s,baz=292,slow=39						
	comp=Z,1.2nm,0.7s						
ANMO	Albuquerque	15.87	105		Pn	22 04 11.0	-1.0
ANMO	Albuquerque	15.87	105	P	Pn	22 04 12.8	+0.8
	baz=296						

RSSD	Black Hills	16.09	70	Pn	Pn	22 04 13.2	-1.6
RSSD	Black Hills	16.09	70	P	Pn	22 04 13.0	-1.8
	baz=264						
BNM	Barren Site	16.11	107		Pn	22 04 14.2	-1.0
121A	Cookes Peak, D	16.13	114		Pn	22 04 13.9	-1.4
WRAK	Wrangell Islan	16.57	346	Pn	Pn	22 04 20.9	+0.4
T25A	Trinidad	16.58	95		Pn	22 04 19.6	-1.5
DGMT	Dagmar	16.95	55	Pn	Pn	22 04 25.6	+0.1
DGMT				IAmb	IAmb	22 04 33.1	
	comp=Z,20nm,0.9s						
DGMT	Dagmar	16.95	55	P	Pn	22 04 24.7	-0.9
	baz=250						
OGNE	Ogallala	17.60	81	Pn	Pn	22 04 32.6	-1.1
OGNE				IAmb	IAmb	22 04 48.6	
	comp=Z,21nm,0.8s						
OGNE	Ogallala	17.60	81	P	Pn	22 04 33.0	-0.7
	baz=276						
SIT	Sitka	17.79	342	P	P	22 04 36.7	+0.1
	baz=154						
DLBC	Dease Lake	18.18	352	LR	LR	22 10 13.4	
	comp=Z,112nm,19.6s,baz=178,slow=32						
CBKS	Cedar Bluff	19.70	87	P	P	22 04 58.0	+0.2
CBKS				IAmb	IAmb	22 05 00.0	
	comp=Z,26nm,0.9s						
CBKS	Cedar Bluff	19.70	87	P	P	22 04 57.0	-0.8
	baz=283						
MDND	Maddock	19.73	60	P	P	22 04 58.4	+0.3
SKAG	Skagway	19.98	345	P	Pn	22 05 02.3	-0.1
R32A	Long Quarter,	20.57	87	P	P	22 05 08.1	+0.7
LPIG	La Paz	20.64	138	LR	LR	22 12 38.3	
	comp=Z,170nm,18.8s,baz=330,slow=36						
TX31	Lajitas Ar. Si	20.87	116	P	P	22 05 10.2	-0.5
TX31				IAmb	IAmb	22 05 20.1	
	comp=Z,26nm,1.2s						
TX32	Lajitas Array	20.87	116	P	P	22 05 09.7	-1.0
TXAR	Lajitas Array	20.87	116	P	P	22 05 11.4	+0.7
	comp=Z,2.4nm,0.9s,baz=302,slow=7.2,SNR=17						
TXAR				LR	LR	22 13 40.0	
	comp=Z,92nm,18.1s,baz=302,slow=38						
	comp=Z,2.4nm,0.9s						
TXAR	Lajitas Array	20.87	116	P	P	22 05 10.5	-0.2
WHY	Whitehorse	21.02	347	P	P	22 05 11.7	-0.3
ECSD	EROS Data Cent	21.43	72	P	P	22 05 15.5	-1.0
ECSD				IAmb	IAmb	22 05 21.9	
	comp=Z,13nm,0.9s						
ECSD	EROS Data Cent	21.43	72	P	P	22 05 15.3	-1.3
	baz=271						
HYT	Haines Junctio	21.68	344	P	P	22 05 20.7	+1.5
WMOK	Wichita Mounta	21.70	97	P	P	22 05 19.3	-0.2
WMOK				IAmb	IAmb	22 05 26.7	
	comp=Z,8.5nm,0.8s						
WMOK	Wichita Mounta	21.70	97	P	P	22 05 18.8	-0.7
	baz=293						
PCA	Pinnacle	21.70	339	P	P	22 05 20.0	+0.6
PCA				IAmb	IAmb	22 05 31.6	
	comp=Z,19nm,1.4s						
F33A	5 Mile Ranch,	21.71	66	P	P	22 05 19.1	-0.4
F33A				IAmb	IAmb	22 05 24.1	
	comp=Z,19nm,1.1s						
N31M	Braeburn, Yuko	21.95	346	P	P	22 05 22.2	+0.3
ABTX	Abilene, Hawle	21.98	103	P	P	22 05 21.9	-0.6
ABTX				IAmb	IAmb	22 05 44.7	
	comp=Z,15nm,1.4s						
KSU1	Kansas State U	22.01	84	P	P	22 05 23.1	+0.3
AGMN	Agassiz Nation	22.28	60	P	P	22 05 26.0	+0.3
AGMN	Agassiz Nation	22.28	60	P	P	22 05 24.9	-0.8
	baz=260						
YAH	Yahtse	22.34	338	P	P	22 05 25.1	-1.3
YAH				IAmb	IAmb	22 05 39.1	
	comp=Z,15nm,1.4s						
M31M	Drury Creek, Y	22.39	349	P	P	22 05 27.2	+0.5
N35A	Tabor	22.41	79	P	P	22 05 26.6	-0.5
SNH	Sunshine Point	22.51	337	P	P	22 05 27.7	-0.3
SNH				IAmb	IAmb	22 05 41.2	
	comp=Z,14nm,1.0s						
LOGN	Logan Glacier	22.52	340	P	P	22 05 28.3	+0.1
GRNC	Granite Creek	22.64	339	P	P	22 05 29.9	+0.3
GRNC				IAmb	IAmb	22 05 42.5	
	comp=Z,12nm,1.2s						
ULM	Lac du Bonnet	22.67	55	P	P	22 05 29.8	0.0
	comp=Z,21nm,1.0s,baz=260,slow=11,SNR=15						
ULM				LR	LR	22 14 37.1	
	comp=Z,124nm,21.7s,baz=290,slow=38						
	comp=Z,21nm,1.0s						
ULM	Lac du Bonnet	22.67	55	P	P	22 05 29.9	+0.1
ISLE	Juniper Island	22.70	338	P	P	22 05 30.4	+0.2
ISLE				IAmb	IAmb	22 05 43.0	
	comp=Z,9.4nm,1.2s						
BARN	Barnard Glacie	22.89	339	P	P	22 05 32.5	+0.3
YKA	Yellowknife Ar	22.91	13	P	P	22 05 32.8	+0.7
	comp=Z,2.1nm,1.0s,baz=198,slow=9.4,SNR=8.7						
YKA				LR	LR	22 14 20.3	
	comp=Z,53nm,19.2s,baz=140,slow=36						
	comp=Z,2.1nm,1.0s						
YKA	Yellowknife Ar	22.91	13	P	P	22 05 32.4	+0.2
TUL1	Leonard	23.54	92	P	P	22 05 39.0	+0.2
TUL1				IAmb	IAmb	22 05 40.7	
	comp=Z,6.4nm,0.8s						
F36A	Milaca	23.64	66	P	P	22 05 39.0	-0.7
B35A	Bob, Littlefor	23.70	60	P	P	22 05 39.8	-0.5
I37A	Lemond, Waseca	23.74	71	P	P	22 05 40.6	-0.2
SPMN	Marine on St.	24.14	68	P	P	22 05 44.8	+0.3
N38A	Joes South For	24.22	79	P	P	22 05 45.8	+0.5
N38A				IAmb	IAmb	22 06 06.9	
	comp=Z,18nm,1.2s						
P38A	Dawn	24.22	82	P	P	22 05 44.8	-0.5
P38A				IAmb	IAmb	22 05 49.7	
	comp=Z,7.5nm,1.1s						
K38A	Parkersburg	24.31	74	P	P	22 05 46.8	+0.7
KDAK	Kodiak Island	24.59	324	LR	LR	22 13 11.2	
	comp=Z,152nm,18.2s,baz=178,slow=31						
BCAR	Beaver Creek A	24.62	342	P	P	22 05 48.3	-0.5
L27K	Beaver Creek,	24.63	342	P	P	22 05 48.7	-0.1
HHAR	Hobbs	24.83	90	P	P	22 05 50.4	-0.5
S39A	Bolivar	24.87	86	P	P	22 05 50.2	-0.9
S39A				IAmb	IAmb	22 06 23.5	
	comp=Z,5.9nm,0.9s						
DAWY	Dawson	24.99	345	P	P	22 05 52.5	+0.4
DAWY				IAmb	IAmb	22 06 04.9	
	comp=Z,9.7nm,1.3s						
E38A	The Farm, Brul	25.03	65	P	P	22 05 53.2	+0.7
CHIR	Chirikof Islan	25.11	318	P	P	22 05 51.8	-1.3
EYMN	Ely	25.14	62	P	P	22 05 53.4	-0.1
W39A	Magazine	25.33	92	P	P	22 05 55.1	-0.2
W39A				IAmb	IAmb	22 05 59.0	
	comp=Z,6.5nm,0.8s						
P40A	Paris	25.36	81	P	P	22 05 55.7	+0.1
R40A	Maddies Statio	25.50	84	P	P	22 05 56.5	-0.4
R40A				IAmb	IAmb	22 06 39.1	
	comp=Z,9.4nm,1.4s						
L40A	Anamosa	25.52	75	P	P	22 05 56.5	-0.5
L40A				IAmb	IAmb	22 06 00.2	
	comp=Z,12nm,1.1s						
K27K	Chicken	25.52	343	P	P	22 05 57.8	+1.0
U40A	Yellville	25.63	89	P	P	22 05 57.9	-0.2
U40A				IAmb	IAmb	22 06 01.5	
	comp=Z,8.2nm,1.2s						
MIAR	Mount Ida	25.73	93	P	P	22 05 59.6	+0.6
I40A	Norwalk	25.76	71	P	P	22 05 59.6	+0.4
I40A				IAmb	IAmb	22 06 05.9	
	comp=Z,9.1nm,0.9s						
MGMO	Mountain Grove	25.82	87	P	P	22 05 59.9	0.0
MGMO				IAmb	IAmb	22 06 30.0	
	comp=Z,8.4nm,1.3s						
G40A	Rib Lake	25.98	68	P	P	22 06 01.2	0.0
G40A				IAmb	IAmb	22 06 05.9	
	comp=Z,17nm,1.4s						
I29M	Ogilvie Camp,	25.98	348	P	P	22 06 02.1	+1.2
JFWS	Jewell Farm	26.12	73	P	P	22 06 02.0	-0.5
JFWS				IAmb	IAmb	22 06 05.4	
	comp=Z,19nm,1.4s						
DHY	Denali Highway	26.13	337	P	P	22 06 02.9	+0.4
DHY				IAmb	IAmb	22 06 17.3	
	comp=Z,9.1nm,1.2s						
HKT	Hockley	26.13	105	P	P	22 06 03.3	+0.7
J26L	Joseph Creek	26.26	342	P	P	22 06 02.9	-0.7
CCM	Cathedral Cave	26.34	84		P	22 06 03.7	-0.8
CCM				IAmb	IAmb	22 06 07.1	
	comp=Z,13nm,1.5s						
WHAR	Wooly Hollow	26.43	91	P	P	22 06 05.5	+0.1
WHAR				IAmb	IAmb	22 06 09.2	
	comp=Z,13nm,1.2s						
W41B	Gary Mavity, V	26.51	91	P	P	22 06 06.0	0.0
W41B				IAmb	IAmb	22 06 08.4	
	comp=Z,8.2nm,1.2s						
L42A	Oliver, Polo	26.67	75	P	P	22 06 07.9	+0.4
COWI	Conover	26.70	66	P	P	22 06 08.3	+0.6
COWI				IAmb	IAmb	22 06 09.8	
	comp=Z,7.8nm,1.3s						
J25K	Salcha River,	26.80	341	P	P	22 06 08.4	0.0
FCC	Fort Churchill	26.83	37	P	P	22 06 08.8	+0.2
FCC				IAmb	IAmb	22 06 18.4	
	comp=Z,7.5nm,1.1s						
I42A	Draeger Farm,	26.98	71	P	P	22 06 10.8	+0.5
LCAR	Lake Charles	27.02	88	P	P	22 06 08.6	-2.1
D41A	Chassel	27.09	64	P	P	22 06 11.1	0.0
D41A				IAmb	IAmb	22 06 31.1	
	comp=Z,15nm,0.9s						
ILAR	Eielson Array	27.31	340	P	P	22 06 14.2	+1.2
	comp=Z,0.5nm,0.6s,baz=155,slow=8.6,SNR=5.2						
ILAR				LR	LR	22 15 14.7	
	comp=Z,132nm,21.1s,baz=88,slow=32						
	comp=Z,0.5nm,0.6s						
E43A	Lone Tree Farm	28.18	65	P	P	22 06 21.1	+0.2
E43A				IAmb	IAmb	22 06 26.5	
	comp=Z,8.2nm,1.2s						
INK	Inuvik	28.19	353	LR	LR	22 17 03.6	
	comp=Z,71nm,18.4s,baz=118,slow=35						
MLY	Manley	28.58	338	P	P	22 06 22.6	-1.7
PLAL	Pickwick Lake	29.76	89	P	P	22 06 33.8	-1.3
PLAL				IAmb	IAmb	22 06 38.1	
	comp=Z,6.6nm,1.2s						
IMAR	Indian Mountai	30.14	337	P	P	22 06 38.9	+0.7
TKL	Tuckaleechee C	32.78	85	LR	LR	22 20 31.9	
	comp=Z,82nm,20.8s,baz=292,slow=37						
SADO	Sadowa	33.83	67	LR	LR	22 21 56.3	
	comp=Z,81nm,18.8s,baz=270,slow=38						
SADO	Sadowa	33.83	67	P	P	22 07 11.1	+0.4
SADO				IAmb	IAmb	22 07 14.1	
	comp=Z,5.5nm,0.8s						
J55A	Hilton	35.04	70	P	P	22 07 21.7	+0.4
CMIG	Matias Romero	35.11	123	LR	LR	22 21 09.4	
	comp=Z,91nm,21.4s,baz=226,slow=36						
L56A	Greenwood	35.48	71	P	P	22 07 25.3	+0.1
J56A	Wolcott	35.73	69	P	P	22 07 27.0	-0.1
TRQ	Mont Tremblant	36.77	64	P	P	22 07 36.2	+0.1
RES	Resolute Bay	36.98	13	LR	LR	22 23 14.2	
	comp=Z,44nm,19.9s,baz=116,slow=37						
LMQ	La Malbaie	39.39	61	P	P	22 07 58.3	+0.2
LMQ				IAmb	IAmb	22 08 00.7	
	comp=Z,17nm,1.3s						
FRB	Frobisher Bay	40.01	35	LR	LR	22 25 04.0	
	comp=Z,132nm,19.7s,baz=322,slow=37						
SCHQ	Schefferville	40.63	49	P	P	22 08 09.1	+0.8
	comp=Z,4.0nm,0.9s,baz=268,slow=11,SNR=3.8						
SCHQ				LR	LR	22 24 39.7	
	comp=Z,101nm,19.5s,baz=294,slow=36						
	comp=Z,4.0nm,0.9s						
JTS	Las Juntas de	46.61	119	LR	LR	22 29 38.0	
	comp=Z,46nm,18.3s,baz=26,slow=38						
SFJD	Kangerlussuaq	47.57	31	LR	LR	22 27 30.8	
	comp=Z,73nm,18.0s,baz=244,slow=34						
SUMG	Summit	50.94	23	P	P	22 09 31.6	+1.6
SUMG				IAmb	IAmb	22 09 33.0	
	comp=Z,6.0nm,1.0s						
SUMG	Summit	50.94	23	*i* P	P	22 09 31.0	+1.0
ICESG	Greenland Ices	51.30	27	*i* P	P	22 09 33.2	+0.5
PETK	Petropavlovsk-	51.72	312	P	P	22 09 37.0	+1.3
	comp=Z,2.1nm,0.8s,baz=87,slow=10,SNR=2.3						
	comp=Z,2.1nm,0.8s						
PETK	Petropavlovsk-	51.72	312	P	P	22 09 35.4	-0.3
SJG	San Juan	55.09	96	LR	LR	22 34 37.8	
	comp=Z,44nm,20.7s,baz=272,slow=37						
ROSC	El Rosal	57.80	114	LR	LR	22 38 58.3	
	comp=Z,50nm,18.1s,baz=254,slow=40						
BORG	Borgarnes	59.60	29	LR	LR	22 36 11.2	
	comp=Z,84nm,19.7s,baz=190,slow=36						
JMIC	Jan Mayen	60.06	20	LR	LR	22 36 37.8	
	comp=Z,50nm,18.2s,baz=300,slow=36						
H11N3	WAKE ISLAND Hy	60.79	272	T	T	23 18 12.4	
	baz=53,slow=75,SNR=21						
H11N2	WAKE ISLAND Hy	60.80	272	T	T	23 18 15.7	
	baz=53,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	60.81	272	T	T	23 17 44.2	
	baz=53,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	61.66	271	T	T	23 19 20.7	
	baz=53,slow=75						
H11S2	WAKE ISLAND Hy	61.67	271	T	T	23 19 20.5	
	baz=53,slow=75						
H11S3	WAKE ISLAND Hy	61.68	271	T	T	23 19 23.7	
	baz=53,slow=75						
PPT	Papeete	62.07	206	LR	LR	22 31 11.3	
	comp=Z,38nm,19.6s,baz=356,slow=30						
KLR	Kul'dur	67.89	316	LR	LR	22 39 51.8	
	comp=Z,46nm,18.2s,baz=206,slow=35						
ARCES	ARCESS Array B	68.16	11	LR	LR	22 42 29.6	
	comp=Z,32nm,18.5s,baz=128,slow=37						
AFI	Afiamalu	69.23	229	LR	LR	22 32 39.6	
	comp=Z,74nm,20.9s,baz=133,slow=28						
RAR	Rarotonga	69.32	214	LR	LR	22 32 51.2	
	comp=Z,75nm,20.7s,baz=37,slow=28						
MJAR	Matsushiro Arr	71.71	303	LR	LR	22 40 06.6	
	comp=Z,12nm,18.2s,baz=202,slow=33						
EKA	Eskdalemuir Ar	72.55	30	LR	LR	22 43 59.1	
	comp=Z,80nm,18.1s,baz=354,slow=36						
NOA	NORSAR Array B	72.75	21	P	P	22 11 57.7	+1.2
	comp=Z,0.9nm,0.9s,baz=327,slow=5.8,SNR=3.3						
NOA				LR	LR	22 43 42.3	
	comp=Z,39nm,20.0s,baz=315,slow=36						
	comp=Z,0.9nm,0.9s						
NOA	NORSAR Array B	72.75	21	P	P	22 11 57.7	+1.2
MDP	Montagnes des	73.50	98	LR	LR	22 47 59.2	
	comp=Z,58nm,19.4s,baz=184,slow=39						
HFS	Hagfors	74.17	20	LR	LR	22 44 06.2	
	comp=Z,72nm,20.0s,baz=324,slow=35						
FINES	FINESS Array B	75.74	14	LR	LR	22 46 36.1	
	comp=Z,22nm,18.9s,baz=318,slow=37						
MSVF	Nonsavu	78.30	234	LR	LR	22 40 54.1	
	comp=Z,89nm,18.1s,baz=174,slow=31						
GUMO	Guam	81.22	280	LR	LR	22 39 55.6	
	comp=Z,26nm,21.9s,baz=106,slow=29						
CLL	Collm	81.55	25	*e*P	P	22 12 48.0	+1.9
SIV	San Ignacio	81.83	119	LR	LR	22 50 47.9	
	comp=Z,57nm,18.8s,baz=114,slow=37						
ZALV	Zalesovo Beam	82.40	343	LR	LR	22 52 03.4	
	comp=Z,27nm,18.1s,baz=76,slow=38						
ARU	Arti	83.35	358	LR	LR	22 53 58.3	
	comp=Z,19nm,18.9s,baz=6.5,slow=38						
ESDC	Sonseca Array	83.91	42	P	P	22 12 58.7	+0.1
	comp=Z,0.6nm,0.8s,baz=287,slow=5.2,SNR=4.3						
ESDC				LR	LR	22 46 23.0	
	comp=Z,48nm,22.0s,baz=88,slow=33						
	comp=Z,0.6nm,0.8s						
ESDC	Sonseca Array	83.91	42	P	P	22 12 58.8	+0.1
ESDC	Sonseca Array	83.91	42	IAmb	IAmb	22 13 00.6	
	comp=Z,2.7nm,1.4s						
HHC	Hu-ho-hao-te	83.95	320	*e*P	P	22 12 57.0	-1.9
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,52nm,5.5s						
DAVOX	Davos/Dischmat	84.32	29	LR	LR	22 50 27.1	
	comp=Z,71nm,19.4s,baz=268,slow=36						
VRAC	Vranov	84.42	24	LR	LR	22 51 28.8	
	comp=Z,49nm,18.6s,baz=322,slow=36						
NJ2	Nanjing	86.61	310	*e*P	P	22 13 12.3	+0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DZM	Mont Dzumac	88.88	240	LR	LR	22 47 29.4	
	comp=Z,70nm,18.9s,baz=22,slow=32						
AKTO	Aktyubinsk	89.37	358	LR	LR	22 55 36.5	
	comp=Z,29nm,20.5s,baz=12,slow=37						
MLR	Muntele Rosu	90.56	20	LR	LR	22 54 32.4	
	comp=Z,111nm,20.4s,baz=322,slow=36						
WMQ	Urumqi	90.94	337	*e*P	P	22 13 32.3	-0.3
PMG	Port Moresby	94.21	261	LR	LR	22 48 00.7	
	comp=Z,46nm,21.8s,baz=83,slow=30						
BRTR	Keskin Array B	97.83	16	LR	LR	23 01 00.2	
	comp=Z,28nm,19.0s,baz=354,slow=37						
IDI	Anoyia	99.70	24	LR	LR	23 03 22.8	
	comp=Z,24nm,18.9s,baz=98,slow=38						
PZH	PanZhiHua	100.28	318	P	Pdif	22 14 12.5	-3.0
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,4.1s						

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*NEIC **27** 22:12:33.8±1.8, 18°.0S±0°.1×178°.3W±0°.2, h622^{km}±9^{km}, mb4.4/32, Error ellipse: s-maj=25.6km s-min=16.4km az=132.0*

*IDC **27** 22:12:34.5±1.1, 17°.87S×178°.42W, h628^{km}±11^{km}, mb3.2/12, mbtmp4.2/14, Error ellipse: s-maj=24.1km s-min=14.6km az=148.0*

ISC 27 22:12:32.5±0.6**, 17°.9S**±0°.1×**178°.35W**±0°.09**, h600^{km}, n56, σ1^{s}.60**/59**, mb4.2**/24**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.44	273	P	P	22 13 57.4	+3.1
	13nm,0.6s,baz=104,slow=3.5,SNR=14						
MSVF				S	S	22 15 06.9	+5.9
	1.7nm,0.4s,baz=292,slow=22,SNR=5.6						
LIFNC	LIFOU	13.89	256	P	P	22 15 29.7	-0.6
OUENC	Ouen Island, N	14.60	250	P	P	22 15 36.4	-0.6
DZM	Mont Dzumac	14.87	251	P	P	22 15 39.0	-0.6
	4.4nm,0.6s,baz=82,slow=18,SNR=3.5						
DZM	Mont Dzumac	14.87	251	P	P	22 15 39.2	-0.4
KNTN	Kanton	16.41	24	P	P	22 15 53.8	+0.2
KNTN				IAmb	IAmb	22 15 54.2	
	comp=Z,17nm,0.6s						
KOUNC	Koumac, New Ca	16.60	258	P	P	22 15 57.1	+1.7
KOUNC				IAmb	IAmb	22 16 02.6	
	comp=Z,14nm,0.9s						
OUZ	Omahuta	18.65	201	P	P	22 16 16.6	+2.8
URZ	Urewera	20.64	190	P	P	22 16 33.6	+1.8
SNZO	South Karori	24.05	193	P	P	22 16 59.9	-2.2
BHW	Baring Head	24.11	193	P	P	22 17 01.1	-1.5
PLWZ	Palliser	24.19	192	P	P	22 17 01.4	-2.0
NNZ	Nelson	24.27	195	P	P	22 17 03.5	-0.6
THZ	Tophouse	24.90	196	P	P	22 17 09.8	+0.1
THZ				IAmb	IAmb	22 17 11.9	
	comp=Z,15nm,1.0s						
KHZ	Kahutara	25.37	194	P	P	22 17 15.6	+2.0
LTZ	Lake Taylor	26.02	196	P	P	22 17 20.3	+0.8
LTZ				IAmb	IAmb	22 17 38.1	
	comp=Z,15nm,1.0s						
FOZ	Fox Glacier	27.41	199	P	P	22 17 31.0	-0.6
ODZ	Otahua Downs	28.56	196	P	P	22 17 39.7	-1.8
ODZ				IAmb	IAmb	22 17 52.8	
	comp=Z,16nm,0.9s						
WKZ	Wanaka	28.83	199	P	P	22 17 42.5	-1.5
EIDS	Eidsvold	29.31	250	P	P	22 17 48.4	0.0
MLZ	Mavora Lakes	29.59	200	P	P	22 17 51.0	+0.4
MLZ				IAmb	IAmb	22 18 08.1	
	comp=Z,12nm,1.1s						
CTA	Charters Tower	33.50	261	P	P	22 18 24.1	+0.1
	comp=Z,7.4nm,0.6s,baz=102,slow=10,SNR=12						
	comp=Z,7.4nm,0.6s						
CTAO	Charters Tower	33.50	261	P	P	22 18 24.2	+0.2
CTAO				IAmb	IAmb	22 18 24.8	
	comp=Z,12nm,0.8s						
PMG	Port Moresby	34.52	280	P	P	22 18 33.8	+1.2
	comp=Z,16nm,0.7s,baz=100,slow=5.3,SNR=6.5						
	comp=Z,16nm,0.7s						
PMG	Port Moresby	34.52	280	P	P	22 18 32.7	+0.2
PMG				IAmb	IAmb	22 18 34.6	
	comp=Z,20nm,0.9s						
COEN	Coen	37.16	270	P	P	22 18 55.4	+1.1
TOO	Toolangi	37.20	231	P	P	22 18 54.9	+0.5
STKA	Stephens Creek	38.67	241	P	P	22 19 06.4	+0.1
	comp=Z,2.5nm,0.5s,baz=77,slow=8.7,SNR=8.7						
	comp=Z,2.5nm,0.5s						
STKA	Stephens Creek	38.67	241	P	P	22 19 07.0	+0.7
BBOO	Buckleboo	43.44	241	P	P	22 19 44.1	+0.1
BBOO				IAmb	IAmb	22 19 54.2	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	44.49	260	P	P	22 19 51.9	-0.3
WB0	Warramunga Arr	44.65	260	P	P	22 19 53.1	-0.3
WB0				IAmb	IAmb	22 19 53.4	
	comp=Z,5.5nm,0.6s						
WB2	Warramunga Arr	44.67	260	P	P	22 19 53.0	-0.6
WB2				IAmb	IAmb	22 19 53.7	
	comp=Z,5.8nm,0.6s						
WRA	Warramunga Arr	44.68	260	P	P	22 19 53.1	-0.6
	comp=Z,3.2nm,0.5s,baz=95,slow=7.2,SNR=58						
WRA				S	S	22 25 42.0	-5.9
	comp=Z,0.2nm,0.7s,baz=92,slow=13,SNR=1.3						
	comp=Z,3.2nm,0.5s						
AS31	Alice Springs	44.84	254	P	P	22 19 55.2	+0.3
ASAR	Alice Springs	44.84	254	P	P	22 19 54.7	-0.2
	comp=Z,14nm,0.6s,baz=86,slow=8.7,SNR=179						
ASAR				S	S	22 25 47.0	-3.1
	comp=Z,1.4nm,0.8s,baz=93,slow=16,SNR=12						
	comp=Z,14nm,0.6s						
ASAR	Alice Springs	44.84	254	P	P	22 19 54.9	0.0
MTN	Manton Dam	48.85	268	P	P	22 20 24.3	-0.8
MTN				IAmb	IAmb	22 20 25.3	
	comp=Z,6.4nm,0.8s						
FORT	Forrest	50.05	245	P	P	22 20 32.9	-0.6
FORT				IAmb	IAmb	22 20 41.7	
	comp=Z,24nm,1.1s						
KNRA	Kununurra	50.54	264	P	P	22 20 36.9	-0.4
FAKI	Fak Fak	50.64	281	P	P	22 20 37.6	-0.5
VNDA	Vanda	60.43	185	P	P	22 21 44.9	+0.3
	comp=Z,0.4nm,0.7s,baz=292,slow=9.6,SNR=2.3						
	comp=Z,0.4nm,0.7s						
TOLI2	Tolitoli	62.77	281	P	P	22 22 01.3	+0.3
MJAR	Matsushiro Arr	67.96	323	P	P	22 22 31.2	-1.7
	comp=Z,0.5nm,0.4s,baz=148,slow=6.6,SNR=2.3						
	comp=Z,0.5nm,0.4s						
ADK	Adak	69.53	1	P	P	22 22 41.0	-0.9
ADK				IAmb	IAmb	22 22 53.0	
	comp=Z,20nm,1.1s						
QSPA	South Pole Qui	72.12	180	P	P	22 22 57.5	+0.3
	comp=Z,0.8nm,0.8s,baz=144,slow=19,SNR=1.7						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	79.40	44	P	P	22 23 38.8	+1.0
	comp=Z,0.5nm,0.6s,baz=225,slow=9.2,SNR=6.6						
	comp=Z,0.5nm,0.6s						
NVAR	Mina Array Bea	79.40	44	P	P	22 23 37.5	-0.3
K20K	Telida	83.22	11	P	P	22 23 56.9	+0.5
SCM	Sheep Creek Mo	83.24	14	P	P	22 23 56.8	+0.1
SCM				IAmb	IAmb	22 23 57.6	
	comp=Z,4.3nm,0.7s						
TRF	Thorofare Moun	84.02	12	P	P	22 24 00.2	-0.4
TRF				IAmb	IAmb	22 24 01.5	
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	85.90	13	P	P	22 24 08.4	-1.0
	comp=Z,0.4nm,0.5s,baz=224,slow=5.1,SNR=5.7						
	comp=Z,0.4nm,0.5s						
TXAR	Lajitas Array	85.96	58	P	P	22 24 10.5	-0.1
	comp=Z,0.9nm,0.8s,baz=205,slow=5.5,SNR=6.6						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	87.33	43	P	P	22 24 15.4	-1.5
	comp=Z,0.4nm,0.6s,baz=236,slow=4.0,SNR=6.1						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	144.84	315	PKP	PKPdf	22 31 02.3	-0.2
	comp=Z,0.3nm,0.6s,baz=70,slow=1.7,SNR=2.6						
GERES	GERESS Array B	147.65	345	PKPbc	PKPdf	22 31 08.2	+1.4
	comp=Z,0.1nm,0.3s,baz=35,slow=3.6,SNR=3.7						

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*IDC **27** 22:15:28.7±0.9, 30°.65N×132°.92E, h0^{km}, mb3.6/9, mbtmp3.6/13, ML3.4/3, MS2.6/3, Error ellipse: s-maj=30.6km s-min=16.6km az=75.0*

*JMA **27** 22:15:31.9±0.3, 30°.6N±0°.9×13°3E±°, h76^{km}, MV3.2/34, N PHILIPPINE BASIN*

ISC 27 22:15:30.6±3.5**, 30°.65N**±0°.05×**132°.84E**±0°.06**, h17^{km}**±22^{km}**, n31, σ2^{s}.19**/35**, mb3.7**/9**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	1.60	271	P	Pn	22 15 57.4	-0.8
JTN				*e*S	Sn	22 16 16.5	-2.0
JNAR	Kushima--Naru	1.60	303	P	Pb	22 15 58.4	-1.4
JNKG	Nichinankitago	1.61	309	P	Pb	22 15 58.6	-1.3
JMTN	Minamitane	1.69	262	*e*P	Pn	22 15 58.8	-0.6
JMTN				*e*S	Sn	22 16 19.3	-1.4
JTSR	Tashiro 2	1.73	288	P	Pn	22 15 59.5	-0.4
JTZ	Takazaki	1.95	310	P	Pn	22 16 03.1	+0.1
JTO	Tosashimizu	2.20	359	*e*P	Pn	22 16 05.7	-0.7
JTO				*e*S	Sn	22 16 29.1	-4.2
JSJ	Shimokoshiki	2.87	292	*e*P	Pn	22 16 15.5	-0.1
JNA	Nagahama	2.91	354	*e*P	Pn	22 16 16.5	+0.2
JNA				*e*S	Sn	22 16 47.7	-3.2
JNU	Nakatsue	2.98	326	Pn	Pn	22 16 17.7	+0.6
	7.2nm,0.3s,baz=208,slow=7.7,SNR=19						
JNU				Sn	Sn	22 16 51.9	-0.6
	12nm,0.3s,baz=85,slow=5.9,SNR=4.0						
	16nm,0.4s						
JMN	Monobe	3.19	16	*e*P	Pn	22 16 20.2	+0.1
JMN				*e*S	Sn	22 16 53.7	-4.1
JTNC	Tanabenakahech	3.94	36	*e*P	Pn	22 16 31.1	+0.8
JTNC				*e*S	Sn	22 17 11.8	-4.3
JAMN	Amaminishikomi	4.00	234	*e*S	Sn	22 17 14.0	-3.5

JHT	Toyohira	4.02	355	eP	Pn	22 16 32.1	+0.7
JHT				eS	Sn	22 17 14.3	-3.8
JOW	Kunigami	5.53	228	Pn	Pn	22 16 52.0	-0.2
	3.2nm,0.3s,baz=91,slow=20,SNR=6.1						
JOW				Sn	Sn	22 17 49.7	-5.7
	0.9nm,0.3s,baz=296,slow=29,SNR=1.2						
	6.0nm,0.3s						
JHJ	Hachijo jima 2	6.40	66	LR	LR	22 19 00.6	
	comp=Z,25nm,21.1s,baz=255,slow=33						
MJAR	Matsushiro Arr	7.39	36	Pn	Pn	22 17 17.8	+0.1
	0.8nm,0.5s,baz=231,slow=12,SNR=5.6						
KSRS	Korea Array	7.92	330	Pn	Pn	22 17 25.4	+0.5
	0.3nm,0.3s,baz=148,slow=14,SNR=1.2						
KSRS				LR	LR	22 20 39.7	
	comp=Z,14nm,20.3s,baz=150,slow=39						
	0.3nm,0.3s						
H11N2	WAKE ISLAND Hy	32.56	101	T	T	22 56 16.7	
	baz=296,slow=74,SNR=9.4						
H11N1	WAKE ISLAND Hy	32.57	101	T	T	22 56 17.3	
	baz=296,slow=74,SNR=5.1						
H11N3	WAKE ISLAND Hy	32.58	101	T	T	22 56 18.3	
	baz=296,slow=74,SNR=7.8						
MKAR	Makanchi Array	41.86	307	P	P	22 23 21.2	+1.4
	0.3nm,0.8s,baz=98,slow=7.1,SNR=2.3						
	0.3nm,0.8s						
KURBB	Kurchatov Arra	44.66	313	P	P	22 23 44.7	+2.4
	0.2nm,0.5s,baz=92,slow=8.8,SNR=2.3						
	0.2nm,0.5s						
WRA	Warramunga Arr	50.32	178	P	P	22 24 27.0	+0.4
	0.5nm,0.6s,baz=355,slow=8.5,SNR=7.1						
	0.5nm,0.6s						
ASAR	Alice Springs	54.02	179	P	P	22 24 55.3	+1.3
	0.6nm,0.6s,baz=9.7,slow=11,SNR=9.7						
	0.6nm,0.6s						
STKA	Stephens Creek	62.74	172	P	P	22 25 55.5	+0.7
	2.1nm,0.7s,baz=343,slow=10,SNR=3.3						
	2.1nm,0.7s						
KVAR	Kislovodsk Arr	69.56	310	LR	LR	22 58 06.2	
	comp=Z,33nm,21.0s,baz=128,slow=37						
FINES	FINESS Array B	71.01	331	P	P	22 26 47.3	+0.1
	0.7nm,0.7s,baz=70,slow=6.7,SNR=7.0						
	0.7nm,0.7s						
AKASG	Malin Array Be	74.78	320	P	P	22 27 10.6	+0.9
	0.4nm,0.4s,baz=46,slow=6.6,SNR=2.4						
	0.4nm,0.4s						
BRTR	Keskin Array B	77.49	309	P	P	22 27 26.9	+1.4
	0.4nm,0.7s,baz=113,slow=4.7,SNR=3.8						
	0.4nm,0.7s						
NVAR	Mina Array Bea	84.53	48	P	P	22 28 03.8	+0.6
	0.3nm,0.6s,baz=298,slow=6.2,SNR=3.8						
	0.3nm,0.6s						

IDC 27 22:30:07.2±6.1**, 30°.46S×177°.97W, h0^{km}, mb3.7**/2**,**
mbtmp3.7/2**, Error ellipse: s-maj=246.1km**
s-min=55.1km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.14	267	P	P	22 38 09.0	-0.7
	0.4nm,0.5s,baz=107,slow=7.5,SNR=5.9						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.13	272	P	P	22 38 18.1	+0.3
	0.6nm,0.4s,baz=112,slow=7.7,SNR=13						
	0.6nm,0.4s						
FINES	FINESS Array B	145.21	340	PKPbc	PKPbc	22 49 44.8	-0.9
	0.7nm,0.6s,baz=49,slow=3.3,SNR=9.7						

*NOU **27** 23:22:02.1, 14°.54S×167°.48E, h156^{km}, mb4.1/10,*
Vanuatu Islands
*IDC **27** 23:22:03.1±1.7, 14°.65S×167°.42E, h166^{km}±14^{km},*
mb4.1/16, mbtmp4.5/18, Error ellipse: s-maj=15.5km
s-min=12.9km az=117.0
*NEIC **27** 23:22:04.5±1.7, 14°.76S±0°.02×167°.5E±0°.1, h173^{km}±7^{km},*
mb4.4/57, Error ellipse: s-maj=15.3km s-min=1.7km
az=98.0
ISC 27 23:22:03.7±0.4**, 14°.73S**±0°.05×**167°.39E**±0°.07**, h170**^{km}**,**
n125, σ1^{s}31/135**, mb4.3**/43**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	3.07	166	P	Pn	23 22 53.2	+0.4
RTV	Rentapao	3.20	162	P	Pn	23 22 54.5	+0.1
LIFNC	LIFOU	6.01	181	Pn	Pn	23 23 29.6	-1.1
LIFNC				Sn	Sn	23 24 38.7	-0.5
KOUNC	Koumac, New Ca	6.50	207	Pn	Pn	23 23 37.2	0.0
KOUNC				Sn	Sn	23 24 51.2	+0.5
KOUNC	Koumac, New Ca	6.50	207	P	Pn	23 23 38.1	+0.9
MARNC	Mare, Loyalty	6.74	175		Pn	23 23 40.1	-0.3
MARNC				Sn	Sn	23 24 56.8	+0.3
MARNC	Mare, Loyalty	6.74	175	P	Pn	23 23 40.9	+0.5
YATNC	Mamie plateau,	7.30	184	P	Pn	23 23 48.9	+1.1
DZM	Mont Dzumac	7.35	187	P	Pn	23 23 49.3	+0.7
	33nm,0.3s,baz=87,slow=16,SNR=51						
DZM				S	Sn	23 25 11.7	+0.4
	21nm,0.4s,baz=142,slow=22,SNR=4.3						
DZM	Mont Dzumac	7.35	187		Pn	23 23 49.5	+0.9
ONTNC	Ouen Toro	7.58	187		Pn	23 23 53.2	+1.7
OUENC	Ouen Island, N	7.66	184	Pn	Pn	23 23 55.4	+2.8
PINNC	Pines Island,	7.84	180	Pn	Pn	23 23 56.4	+1.5
MSVF	Nonsavu	10.66	108	P	Pn	23 24 33.7	+1.4
	12nm,1.0s,baz=262,slow=18,SNR=5.3						
MSVF	Nonsavu	10.66	108		Pn	23 24 32.3	+0.1
EIDS	Eidsvold	18.60	233	P	P	23 26 09.1	+1.0
EIDS				IAmb	IAmb	23 26 11.1	
	comp=Z,14nm,0.6s						
PMG	Port Moresby	20.47	283	P	P	23 26 29.1	+0.7
	comp=Z,9.7nm,0.6s,baz=82,slow=6.3,SNR=4.5						
	comp=Z,9.7nm,0.6s						
CTA	Charters Tower	20.85	252	P	P	23 26 33.3	+0.8
	comp=Z,12nm,0.7s,baz=84,slow=12,SNR=16						
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	20.85	252	P	P	23 26 33.3	+0.8
CTAO				IAmb	IAmb	23 26 35.4	
	comp=Z,9.9nm,0.7s						
ARMA	Armidale	21.30	220	P	P	23 26 39.6	+2.3
URZ	Urewera	24.96	162	P	P	23 27 11.4	0.0
BKZ	Black Stump Fm	25.62	163	P	P	23 27 17.2	-0.3
BKZ				IAmb	IAmb	23 27 27.1	
	comp=Z,7.9nm,0.6s						
BFZ	Birch Farm	26.98	165	P	P	23 27 29.1	-0.5
THZ	Tophouse	27.35	171	P	P	23 27 32.1	-0.8
THZ				IAmb	IAmb	23 27 39.5	
	comp=Z,1.6nm,0.3s						
BHW	Baring Head	27.36	168	P	P	23 27 32.5	-0.5
MSWZ	Moikau Station	27.45	167	P	P	23 27 32.3	-1.5
PLWZ	Palliser	27.60	167	P	P	23 27 33.9	-1.2
LTZ	Lake Taylor	28.27	172	P	P	23 27 40.9	-0.1
FOZ	Fox Glacier	28.78	176	P	P	23 27 46.0	+0.6
RPZ	Rata Peaks	29.05	175	P	P	23 27 48.8	+0.8
STKA	Stephens Creek	29.08	230	P	P	23 27 49.5	+1.1
	comp=Z,8.2nm,0.6s,baz=46,slow=8.1,SNR=27						
STKA				PcP	PcP	23 30 52.0	-0.3
	comp=Z,5.2nm,0.7s,baz=66,slow=4.3,SNR=8.7						
	comp=Z,8.2nm,0.6s						
STKA	Stephens Creek	29.08	230	P	P	23 27 49.2	+0.9
MQZ	McQueen's Vall	29.22	172	P	P	23 27 48.7	-0.7
LBZ	Lake Benmore	29.65	176	P	P	23 27 53.3	+0.1
LBZ				IAmb	IAmb	23 27 58.8	
	comp=Z,17nm,1.1s						
TOO	Toolangi	29.92	216	P	P	23 27 56.1	+0.4
TOO				IAmb	IAmb	23 27 57.0	
	comp=Z,7.9nm,0.9s						
WKZ	Wanaka	30.03	178	P	P	23 27 57.5	+0.9
MLZ	Mavora Lakes	30.54	179	P	P	23 28 01.1	0.0
MLZ				IAmb	IAmb	23 28 02.2	
	comp=Z,7.1nm,0.8s						
DCZ	Deep Cove	30.63	180	P	P	23 28 02.3	+0.4
WHZ	Wether Hill Ro	31.06	179	P	P	23 28 05.6	-0.1
WR0	Warramunga Arr	31.75	256	P	P	23 28 11.3	-0.7
WB0	Warramunga Arr	31.87	256	P	P	23 28 12.1	-1.0
WB0				IAmb	IAmb	23 28 14.5	
	comp=Z,3.1nm,0.7s						
WB2	Warramunga Arr	31.93	256	P	P	23 28 12.3	-1.3
WRAB	Tennant Creek	31.93	256	P	P	23 28 13.3	-0.2
WRA	Warramunga Arr	31.94	256	P	P	23 28 12.7	-1.0
	comp=Z,1.3nm,0.5s,baz=84,slow=8.6,SNR=15						
WRA				PcP	PcP	23 30 59.5	-0.5
	comp=Z,0.9nm,0.8s,baz=90,slow=3.0,SNR=3.9						
WRA				S	S	23 33 05.4	-7.1
	comp=Z,0.3nm,0.7s,baz=76,slow=14,SNR=2.2						
	comp=Z,1.3nm,0.5s						
WRA	Warramunga Arr	31.94	256	P	P	23 28 12.5	-1.1
ASAR	Alice Springs	32.78	249	P	P	23 28 20.2	-0.8
	comp=Z,3.7nm,0.4s,baz=79,slow=9.1,SNR=56						
ASAR				PcP	PcP	23 31 01.0	-1.3
	comp=Z,2.0nm,0.7s,baz=84,slow=2.7,SNR=12						
ASAR				S	S	23 33 22.5	-3.0
	comp=Z,0.5nm,0.8s,baz=86,slow=15,SNR=4.3						
ASAR				ScP	ScP	23 34 30.0	-0.5
	comp=Z,0.8nm,1.0s,baz=96,slow=2.5,SNR=4.7						
	comp=Z,3.7nm,0.4s						
ASAR	Alice Springs	32.78	249	P	P	23 28 20.4	-0.6
BBOO	Buckleboo	33.67	232	P	P	23 28 29.3	+0.8
FAKI	Fak Fak	36.59	285	P	P	23 28 55.0	+1.3
FAKI				IAmb	IAmb	23 28 55.7	
	comp=Z,8.5nm,0.8s						
KNRA	Kununurra	37.25	263	P	P	23 28 58.9	-0.4
KNRA				IAmb	IAmb	23 29 14.0	
	comp=Z,12nm,1.1s						
FORT	Forrest	39.39	239	P	P	23 29 17.0	-0.1
FORT				IAmb	IAmb	23 29 17.7	
	comp=Z,11nm,0.7s						
PSA00	Pilbara Seismi	45.55	254	P	P	23 30 07.3	+0.5
PSA00				IAmb	IAmb	23 30 14.9	
	comp=Z,9.3nm,1.0s						
MBWA	Marble Bar	45.66	255	P	P	23 30 07.9	+0.2
MBWA				IAmb	IAmb	23 30 08.3	
	comp=Z,6.5nm,0.7s						
NWAO	Narrogin (SRO)	48.84	239	P	P	23 30 31.9	-0.3
MORW	Morawa	49.37	244	P	P	23 30 35.4	-0.9
MORW				IAmb	IAmb	23 30 39.1	
	comp=Z,7.9nm,0.9s						
JSD	Sado	59.18	333	P	P	23 31 47.9	+1.1
JSD				IAmb	IAmb	23 31 49.4	
	comp=Z,4.8nm,0.7s						
ERM	Erimo	60.73	339	P	P	23 31 58.7	+1.4
VNDA	Vanda	62.86	181	P	P	23 32 11.2	+0.2
	comp=Z,3.6nm,0.5s,baz=355,slow=7.7,SNR=43						
	comp=Z,3.6nm,0.5s						
VNDA	Vanda	62.86	181	P	P	23 32 11.2	+0.2
VNDA				IAmb	IAmb	23 32 13.0	
	comp=Z,4.0nm,0.7s						
SBA	Scott Base	63.13	180	P	P	23 32 14.1	+1.2
CASY	Casey	63.57	202	P	P	23 32 16.1	+0.3
CASY				IAmb	IAmb	23 32 16.5	
	comp=Z,5.9nm,0.6s						
SEHB	SEOHWA	64.22	327	P	P	23 32 22.8	+2.2
SEHB				IAmb	IAmb	23 32 32.8	
	comp=Z,9.8nm,1.0s						
USRK	Ussuriysk Ar.	66.94	333	P	P	23 32 37.9	0.0
	comp=Z,1.6nm,0.6s,baz=193,slow=5.9,SNR=5.0						
	comp=Z,1.6nm,0.6s						
USRK	Ussuriysk Ar.	66.94	333	P	P	23 32 37.6	-0.2
ADK	Adak	67.77	11	P	P	23 32 41.5	-1.4
PEA0B	Petropavlovsk-	68.08	354	P	P	23 32 45.2	+0.4
PEA0B				IAmb	IAmb	23 32 58.1	
	comp=Z,5.4nm,1.0s						
PETK	Petropavlovsk-	68.08	354	P	P	23 32 43.6	-1.1
	comp=Z,8.9nm,0.9s,baz=179,slow=13,SNR=8.7						
	comp=Z,8.9nm,0.9s						
PETK	Petropavlovsk-	68.08	354	P	P	23 32 45.3	+0.6
GSTR	Great Sitkin T	68.08	11	P	P	23 32 45.0	+0.2
NIKH	Nikolski High	70.47	15	P	P	23 32 60.0	+0.5
GSI	Gunungsitoli	70.85	277	P	P	23 33 03.4	+0.7
KMI	Kunming	74.41	302	⇓P	P	23 33 25.3	+1.6
KMI				pP	PcP	23 33 38.3	+0.8
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
CMAR	Chiang Mai Arr	75.06	294	P	P	23 33 27.0	-0.3
	comp=Z,2.0nm,0.7s,baz=130,slow=4.2,SNR=8.2						
	comp=Z,2.0nm,0.7s						
CHTO	Chiang Mai	75.19	294	P	P	23 33 28.7	+0.7
QSPA	South Pole Qui	75.29	180	P	P	23 33 27.8	-0.1
QSPA				IAmb	IAmb	23 33 28.8	
	comp=Z,7.8nm,0.8s						
HHC	Hu-ho-hao-te	75.66	320	eP	P	23 33 33.3	+2.9
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
PZH	PanZhiHua	75.80	303	P	P	23 33 33.8	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
Q19K	Cape Douglas,	79.97	19	P	P	23 33 53.1	-0.6
Q19K				IAmb	IAmb	23 33 53.6	
	comp=Z,7.4nm,0.7s						
CNPM	China Poot	81.22	20	P	P	23 34 00.3	0.0
CNPM				IAmb	IAmb	23 34 13.7	
	comp=Z,6.2nm,1.1s						
MAW	Mawson	81.92	202	P	P	23 34 04.8	+0.8
	comp=Z,3.9nm,0.6s,baz=92,slow=11,SNR=3.9						
	comp=Z,3.9nm,0.6s						
MAW	Mawson	81.92	202	P	P	23 34 04.6	+0.7
L19K	White Mountain	82.20	17	P	P	23 34 06.3	+0.9
ULN	Ulaanbaatar	82.21	324	P	P	23 34 06.6	+0.7
ULN				IAmb	IAmb	23 34 06.9	
	comp=Z,4.1nm,0.8s						
M20K	Styx River	82.46	18	P	P	23 34 06.7	-0.1
SONM	Songino Array	82.57	324	P	P	23 34 08.1	+0.4
	comp=Z,1.9nm,0.6s,baz=143,slow=5.6,SNR=9.4						
	comp=Z,1.9nm,0.6s						
SONM	Songino Array	82.57	324	P	P	23 34 09.4	+1.6
GTA	Gaotai	82.75	314	eP	P	23 34 10.5	+1.6
GTA				pP	pP	23 34 49.5	-0.9
GTA				sP	sP	23 35 14.8	+6.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
K20K	Telida	83.36	16	P	P	23 34 11.9	+0.6
GLI	Glacier Island	83.62	21	P	P	23 34 12.4	-0.3
GLI				IAmb	IAmb	23 34 12.7	
	comp=Z,3.9nm,0.8s						
J20K	Nowinta River	84.00	16	P	P	23 34 15.0	+0.5
J20K				IAmb	IAmb	23 34 15.6	
	comp=Z,4.2nm,0.9s						
TRF	Thorofare Moun	84.51	18	P	P	23 34 16.9	-0.5
TRF				IAmb	IAmb	23 34 17.7	
	comp=Z,5.0nm,0.8s						
BPAW	Bear Paw Mtn.	84.80	17	P	P	23 34 18.5	-0.1
WAX	Waxell Ridge	84.82	22	P	P	23 34 18.5	-0.3
WAX				IAmb	IAmb	23 34 23.7	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	86.50	18	P	P	23 34 25.2	-1.7
	comp=Z,2.9nm,0.8s,baz=235,slow=5.4,SNR=37						
	comp=Z,2.9nm,0.8s						
SCRK	Sand Creek	86.83	19		P	23 34 29.1	+0.4
J25K	Salcha River,	86.84	18	P	P	23 34 28.9	+0.2
J25K				IAmb	IAmb	23 34 29.5	
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	87.19	49	P	P	23 34 30.3	-0.8
	comp=Z,0.9nm,0.8s,baz=222,slow=8.0,SNR=6.0						
	comp=Z,0.9nm,0.8s						
WMQ	Urumqi	92.81	315	eP	P	23 34 58.5	+1.4
SNAA	Sanae	93.55	183	P	P	23 34 58.8	-1.3
VNA3	Neumayer Olymp	94.21	181	P	P	23 35 01.8	-1.2
VNA2	Neumayer--Watz	94.48	182	P	P	23 35 03.2	-1.1
	baz=178,slow=5.0						
MKAR	Makanchi Array	97.29	316	P	Pdif	23 35 17.5	0.0
	comp=Z,2.3nm,0.6s,baz=93,slow=6.4,SNR=37						
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	97.46	324	P	P	23 35 17.1	-0.8
	comp=Z,2.0nm,0.6s,baz=115,slow=3.5,SNR=11						
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	97.46	324		P	23 35 17.4	-0.6
YKA	Yellowknife Ar	97.50	27	P	P	23 35 16.5	-1.4
	comp=Z,0.6nm,0.8s,baz=256,slow=4.2,SNR=4.2						
	comp=Z,0.6nm,0.8s						
MAKZ	Makanchi	97.50	316	P	Pdif	23 35 19.1	+0.7
MAKZ				IAmb	IAmb	23 35 19.3	
	comp=Z,1.7nm,0.9s						
NRIK	Noril'sk	100.12	339	P	Pdif	23 35 29.0	-0.5
	comp=Z,0.5nm,0.3s,baz=83,slow=4.2,SNR=3.8						
ARCES	ARCESS Array B	120.28	345	PKP	PKPdf	23 40 33.3	-0.7
	comp=Z,1.2nm,0.3s,baz=72,slow=2.0,SNR=31						
BOSA	Boshof	123.44	220	PKP	PKPdf	23 40 41.2	-0.4
	comp=Z,1.5nm,0.6s,baz=192,slow=3.1,SNR=6.8						
FINES	FINESS Array B	125.77	338	PKP	PKPdf	23 40 44.2	-0.5
	comp=Z,1.6nm,0.6s,baz=69,slow=2.3,SNR=19						
NB2	NORSAR Subarra	130.66	345	PKPdf	PKiKP	23 40 54.3	-0.7
	comp=Z,1.4nm,1.1s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.66	345	PKP	PKPdf	23 40 53.5	-0.6
	comp=Z,0.6nm,0.8s,baz=33,slow=2.0,SNR=4.4						
NOA				SKPbc	SKPab	23 44 02.1	-0.3
	comp=Z,1.7nm,0.8s,baz=30,slow=3.0,SNR=14						
BRTR	Keskin Array B	132.60	311	PKP	PKiKP	23 40 59.0	-0.7
	comp=Z,0.4nm,0.5s,baz=131,slow=4.6,SNR=4.3						
BRG	Berggiesshubel	138.06	335	ePKP	PKiKP	23 41 11.5	+1.2
BRG				Amp		23 41 12.3	
	comp=Z,3.7nm,1.0s						
RONA	Rosalia, Austr	139.33	330	eP	PKPdf	23 41 09.7	-1.0
	comp=Z,4.3nm,2.0s						
CONA	Conrad Observa	139.38	330	eP	PKPdf	23 41 11.4	+0.5
	comp=Z,1.4nm,0.6s						
GERES	GERESS Array B	139.70	333	PKhKP	PKPpre	23 41 05.2	
	comp=Z,0.1nm,0.3s,baz=38,slow=1.7,SNR=2.7						
ABTA	Abfaltersbach	141.80	332	eP	PKPdf	23 41 15.2	-0.1
	comp=Z,4.9nm,1.2s						
WTTA	Wattenberg	141.80	333	eP	PKPdf	23 41 11.7	-3.7
	comp=Z,5.1nm,1.3s						
MOTA	Moosalm	141.97	334	eP	PKPdf	23 41 11.9	-3.7
	comp=Z,3.4nm,0.9s						
RETA	Reutte	142.01	334	eP	PKPdf	23 41 12.3	-3.3
	comp=Z,4.5nm,1.2s						
FETA	Feichten	142.38	334	eP	PKPdf	23 41 13.2	-3.2
	comp=Z,5.5nm,0.9s,SNR=6.2						
DAVA	Damuels	142.53	335	iP	PKPdf	23 41 14.1	-2.6
	comp=Z,2.3nm,0.6s						
ESDC	Sonseca Array	154.02	345	PKPbc	PKPbc	23 41 43.1	-0.4
	comp=Z,2.6nm,1.4s,baz=260,slow=27,SNR=5.1						
ESDC				PKPab	PKPab	23 41 56.5	-0.9
	comp=Z,1.6nm,0.8s,baz=8.4,slow=4.0,SNR=10.0						
TORD	Torodi Ar. Bea	166.02	265	PKP	PKPdf	23 41 49.2	-0.1
	comp=Z,0.7nm,0.8s,baz=332,slow=1.9,SNR=5.2						
TORD				PKPab	sPKPdf	23 42 50.3	-0.4
	comp=Z,4.0nm,0.9s,baz=108,slow=4.4,SNR=18						

*NEIC **27** 23:24:23.7±2.3, 19°.72S±0°.02×68°.95W±0°.07, h109^{km}±4^{km},*
mb4.5/92, Mwr4.2/26, ML4.5(GUC), Error ellipse:
s-maj=9.3km s-min=3.1km az=81.0
*NEIC **27** 23:24:23.8, 19°.65S×68°.98W, h104^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.22;
$M_{\theta\theta}$-0.69; $M_{\phi\phi}$1.92; $M_{r\theta}$0.90; $M_{\theta\phi}$0.10; $M_{\phi r}$-2.01; Fault
plane solution: $M_0$2.77000×10^{15} NP1:ϕ_s338.52000°,
δ74.47000°, λ-110.24000°. NP2:ϕ_s212.53000°,
δ25.32000°, λ-38.78000°. Principal axes: T 2.9252,
Plg27.0000°, Azm84.0000°; N -0.3337, Plg19.0000°,
Azm344.0000°; P -2.5916, Plg56.0000°, Azm223.0000°;
*IDC **27** 23:24:24.4±0.6, 19°.63S×68°.84W, h117^{km}±4^{km}, mb3.7/9,*
mbtmp4.2/12 Error ellipse: s-maj=16.7km s-min=15.8km
az=61.0
*VAO **27** 23:24:24.9±0.5, 19°.54S×68°.92W, h114^{km}, mb4.6*
*GUC **27** 23:24:25.1±0.6, 19°.67S×69°.08W, h110^{km}±3^{km}, ML4.5*
ISC 27 23:24:23.5±0.4**, 19°.68S**±0°.03×**68°.98W**±0°.05**, h112**^{km}±3^{km}**,**
n218, σ1^{s}06/247**, mb4.5**/52**, 13C-5D, Fault plane solution:**
NP1:ϕ_s150.92943°, δ88.75813°, λ109.11668°. **NP2:**
ϕ_s244.50743°, δ19.15547°, λ3.78713°. **Principal axes:** T
Plg43.1005°, Azm79.4204°; N Plg19.1120°,
Azm330.4990°; P Plg40.7402°, Azm223.1331°;
Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.49	200		Pn	23 24 41.8	+0.8
PB08				Sn	Sn	23 24 55.1	+1.0
PB08	IPOC Station P	0.49	200	⇑iP	Pn	23 24 42.0	+1.0
PB08				iS	Sn	23 24 55.2	+1.2
PB11	IPOC Station P	0.65	263	Pn	Pn	23 24 41.8	0.0
PB11				Sn	Sn	23 24 55.4	-0.2
PB11	IPOC Station P	0.65	263	⇑iP	Pn	23 24 42.0	+0.2
PB11				iS	Sn	23 24 55.5	0.0
HMBC	Humberstone	1.04	235	⇑iP	Pn	23 24 45.4	-0.1
HMBC				iS	Sn	23 25 01.5	-0.5
HMBC				IAML		23 25 03.1	
	comp=E,12µm,0.4s						
PB16	IPOC Station P	1.43	339		Pn	23 24 51.6	+1.4
PB16				Sn	Sn	23 25 11.9	+1.5
PB16	IPOC Station P	1.43	339	⇓iP	Pn	23 24 51.6	+1.4
PB16				iS	Sn	23 25 12.0	+1.6
PB16				IAML		23 25 13.7	
	comp=N,5µm,0.4s						
TA01	Diego Aracena	1.44	232		Pn	23 24 49.6	-0.1
TA01				Sn	Sn	23 25 08.9	-0.6
TA01	Diego Aracena	1.44	232	⇑iP	Pn	23 24 49.6	-0.1
TA01				iS	Sn	23 25 08.6	-0.9
TA01				IAML		23 25 10.6	
	comp=N,5µm,0.2s						
PB01	IPOC Station P	1.44	199		Pn	23 24 50.6	+0.7
PB01	IPOC Station P	1.44	199	⇑iP	Pn	23 24 50.7	+0.9
PB01				iS	Sn	23 25 10.2	+0.4
PB01				IAML		23 25 12.0	
	comp=N,11µm,0.7s						
PATCX	Punta Patache	1.58	224		Pn	23 24 51.6	+0.1
PATCX	Punta Patache	1.58	224	⇑iP	Pn	23 24 51.5	-0.1
PATCX				iS	Sn	23 25 11.8	-1.1
PATCX				IAML		23 25 18.2	
	comp=E,5µm,0.4s						
PB12	IPOC Station P	1.66	309		Pn	23 24 52.2	-0.3
PB12	IPOC Station P	1.66	309	⇑iP	Pn	23 24 52.2	-0.3
PB12				iS	Sn	23 25 12.9	-1.6
PB12				IAML		23 25 19.6	
	comp=E,4µm,0.2s						
AP01	Chacalluta	1.83	315		Pn	23 24 54.8	+0.3
AP01	Chacalluta	1.83	315	⇑iP	Pn	23 24 54.7	+0.2
AP01				iS	Sn	23 25 17.1	-1.0
AP01				IAML		23 25 22.9	
	comp=E,9µm,0.5s						
PB02	IPOC Station P	1.85	208		Pn	23 24 55.1	+0.4
PB02	IPOC Station P	1.85	208	⇑iP	Pn	23 24 55.4	+0.6
PB02				iS	Sn	23 25 18.4	-0.1
PB02				IAML		23 25 29.8	
	comp=E,6µm,0.5s						
PB09	IPOC Station P	2.12	187		Pn	23 24 59.6	+1.3
PB09	IPOC Station P	2.12	187	⇓iP	Pn	23 24 59.6	+1.3
PB09				iS	Sn	23 25 25.6	+0.7
PB09				IAML		23 25 31.3	
	comp=E,3µm,0.6s						
PB07	IPOC Station P	2.21	203		Pn	23 24 59.7	+0.4
PB07	IPOC Station P	2.21	203	iP	Pn	23 24 59.8	+0.4
PB07				iS	Sn	23 25 26.0	-0.9
PB07				IAML		23 25 37.6	
	comp=E,3µm,0.3s						
PB04	IPOC Station P	2.86	202		Pn	23 25 08.2	+0.4
PB04	IPOC Station P	2.86	202	iP	Pn	23 25 08.4	+0.5
PB04				IAML		23 25 52.4	
	comp=N,2µm,0.5s						
LVC	Limon Verde	2.92	179	P	Pn	23 25 10.7	+1.9
	comp=N,234nm,0.4s,baz=8.1,slow=9.4,SNR=182						
LVC				S	Sn	23 25 39.8	-3.8
	comp=N,405nm,0.3s,baz=345,slow=12,SNR=6.4						
LVC	Limon Verde	2.92	179	Pn	Pn	23 25 09.7	+0.9
LVC					Sn	23 25 40.2	-3.5
LVC	Limon Verde	2.92	179	⇓iP	Pn	23 25 10.1	+1.3
LVC	Limon Verde	2.92	179	eP	Pn	23 25 10.7	+1.9
PB06	IPOC Station P	3.06	190		Pn	23 25 11.4	+0.8
AF01	San Pedro de A	3.34	167		Pn	23 25 15.4	+1.1
LPAZ	La Paz	3.47	14	P	Pn	23 25 19.1	+2.7
	comp=N,151nm,0.7s,baz=195,slow=8.5,SNR=557						
LPAZ				S	Sn	23 25 55.7	-1.4
	comp=N,33nm,0.5s,baz=212,slow=5.2,SNR=1.7						
LPAZ	La Paz	3.47	14	Pn	Pn	23 25 18.3	+1.9
PB15	IPOC Station P	3.54	187		Pn	23 25 17.7	+0.7
PB10	IPOC Station P	4.09	201	Pn	Pn	23 25 23.3	-0.8
PB10	IPOC Station P	4.09	201	eP	Pn	23 25 23.3	-0.8
PB10				IAML		23 26 27.7	
	comp=E,418nm,0.1s						
PB14	IPOC Station P	5.10	195	Pn	Pn	23 25 37.2	-0.8
GO02	Mina Guanaco	5.49	186	Pn	Pn	23 25 42.8	-0.4
AC01	Pan de Azucar	6.61	193	Pn	Pn	23 25 55.9	-2.2
AC02	Maricunga	7.12	181	Pn	Pn	23 26 05.1	-0.5
AC06	Mina Casimiro	7.75	189		Pn	23 26 13.3	-0.2
GO03	Copiap	7.96	188	Pn	Pn	23 26 15.8	-0.8
SIV	San Ignacio	8.37	65	P	Pn	23 26 20.3	-1.8
	comp=E,68nm,0.5s,baz=254,slow=11,SNR=440						
AC04	Llanos de Chal	8.70	192	Pn	Pn	23 26 23.4	-3.1
LCO	Las Campanas	9.42	189	Pn	Pn	23 26 33.6	-2.9
ETMB	Extrema	10.16	16	eP	Pn	23 26 45.4	-0.9
PTLB	Pontes e Lacer	10.28	67	eP	Pn	23 26 46.2	-1.7
CO01	Juntas del Tor	10.30	185	Pn	Pn	23 26 47.5	-0.9
GO04	Tololo Observa	10.58	189	Pn	Pn	23 26 49.4	-2.7
VILB	Vilhena	10.75	53	eP	Pn	23 26 52.9	-1.5
NNA	Nana	10.76	314	Pn	Pn	23 26 52.4	-2.1
CO06	Fray Jorge	11.21	192	Pn	Pn	23 27 01.3	+0.9
CO02	Combarbal	11.62	189	Pn	Pn	23 27 05.3	-0.7
SAML	Samuel	12.05	29	Pn	Pn	23 27 09.0	-2.6
CPUP	Villa Florida	12.60	124	P	Pn	23 27 17.9	-0.9
	comp=E,7.8nm,1.0s,baz=299,slow=12,SNR=11						
CPUP	Villa Florida	12.60	124	Pn	Pn	23 27 18.2	-0.5
VA06	Catapilco	13.00	189	P	P	23 27 31.1	+1.1
VA03	San Esteban	13.11	186	P	Pn	23 27 25.5	0.0

SALV	Santo Antonio	13.20	76	*e*P	Pn	23 27 25.5	-1.1
ROC1	El Roble	13.37	187		Pn	23 27 28.4	-0.6
MT02	Curacav	13.66	188		Pn	23 27 31.9	-0.7
MT05	Renca	13.75	186	P	P	23 27 39.7	+1.2
MT03	Universidad Ad	13.83	185	P	P	23 27 40.9	+1.5
VA05	Santo Domingo	14.12	189	Pn	Pn	23 27 36.2	-2.3
LMEL	Las Melosas	14.15	184	P	Pn	23 27 38.8	-0.3
BO04	La Punta	14.33	185	P	P	23 27 46.0	+1.1
BO01	Tunca	14.77	187	P	P	23 27 50.5	+0.7
ITQB	Itaqui	14.99	134	P	P	23 27 54.8	+2.5
CLDB	Colider	15.43	57	*e*P	Pn	23 27 53.9	-1.2
GO05	Huala	15.49	189	Pn	Pn	23 27 54.9	-1.0
TRCB	Terra Rica	15.55	104	P	Pn	23 27 57.5	+0.8
TRCB	Terra Rica	15.55	104	*e*P	Pn	23 27 57.4	+0.8
ML02	Panimavida	16.17	187	P	Pn	23 28 04.2	0.0
PTGB	Pitanga	16.44	111	*e*P	P	23 28 08.9	+0.4
PCMB	Pacaembu	16.69	100	*e*P	P	23 28 11.4	+0.2
ITAB	Concordia	17.18	119	P	Pn	23 28 17.1	+0.4
ITAB				IAmb	IAmb	23 28 19.5	
	comp=Z,31nm,0.6s						
ITAB	Concordia	17.18	119	*e*P	Pn	23 28 17.4	+0.8
BI05	Punta Hualpn	17.40	191		Pn	23 28 19.9	+0.7
BI05				IAmb	IAmb	23 28 21.9	
	comp=Z,41nm,1.1s						
ITRB	Iturama	17.53	93	*e*P	Pn	23 28 21.5	+0.5
CPSB	Cacapava Do Su	17.65	130	*e*P	Pn	23 28 22.6	+0.3
MACA	Manacapuru-AM	18.31	27	*e*P	P	23 28 28.1	-0.8
PLTB	Pedras Altas	18.32	134	P	Pn	23 28 29.9	-0.5
PLTB	Pedras Altas	18.32	134	*e*P	Pn	23 28 30.4	0.0
FRTB	Fartura	18.42	105	*e*P	P	23 28 30.4	+0.1
SNDB	Serra Nova Dou	18.64	68	*e*P	P	23 28 32.8	+0.1
CNLB	Canela	19.06	124	*e*P	P	23 28 38.0	+0.9
BB19B	Bebedouro	19.22	98	*e*P	P	23 28 39.1	+0.1
TIJ01	Guaruva-PR	19.28	111	*e*P	Pn	23 28 41.4	-0.5
TRQA	Tornquist	19.30	163	P	P	23 28 40.1	+0.5
TRQA				IAmb	IAmb	23 28 41.4	
	comp=Z,15nm,0.8s						
IPMB	Ipameri, GO	19.73	89	*e*P	P	23 28 44.3	-0.2
ITTB	Itaituba	19.96	42	*e*P	P	23 28 45.6	-1.3
RCLB	Rio Claro- Sao	20.20	102	*e*P	P	23 28 49.1	-0.5
BDFB	Brasilia	20.37	82	P	P	23 28 51.0	-0.5
	comp=Z,9.1nm,0.6s,baz=267,slow=14,SNR=14						
	comp=Z,9.1nm,0.6s						
BDFB	Brasilia	20.37	82	P	P	23 28 51.4	-0.1
BDFB	Brasilia	20.37	82	*e*P	P	23 28 51.6	0.0
PET01	Itanhaem-SP	20.63	107	*e*P	P	23 28 54.2	0.0
VAO	Valinhos	20.76	103	*e*P	P	23 28 55.0	-0.6
PLCA	Paso Flores	21.03	183	P	P	23 28 59.3	+1.0
	comp=Z,14nm,0.8s,baz=3.9,slow=12,SNR=37						
	comp=Z,14nm,0.8s						
PLCA	Paso Flores	21.03	183	P	P	23 29 00.6	+2.3
PLCA				IAmb	IAmb	23 29 02.5	
	comp=Z,18nm,0.9s						
PLCA	Paso Flores	21.03	183	*e*P	P	23 29 01.6	+3.2
PEXB	Peixe	21.25	72	*e*P	P	23 29 00.1	-0.7
LL04	Puerto Octay	21.36	187	P	P	23 29 02.1	+0.2
LL04				IAmb	IAmb	23 29 04.9	
	comp=Z,14nm,0.9s						
PARB	Paraibuna	22.02	104	*e*P	P	23 29 08.4	-0.7
MALB	Monte Alegre	22.82	41	*e*P	P	23 29 15.3	-1.9
PRPB	Parauapebas	22.96	57	*e*P	P	23 29 16.7	-1.8
SMTB	Santa Maria do	23.32	66	*e*P	P	23 29 20.3	-1.6
BOAV	Boa Vista	23.46	22	*e*P	P	23 29 23.1	0.0
MAN01	Angra dos Reis	23.51	102	*e*P	P	23 29 23.6	0.0
LL02	Futaleuf	23.57	185	P	P	23 29 24.4	+0.5
GO07	Milladeo Hill,	23.70	189	P	P	23 29 26.4	+1.4
JANB	Januaria	23.97	83	*e*P	P	23 29 27.7	-0.2
SDBA	SAO DESIDERIO	24.22	76	*e*P	P	23 29 29.6	-0.5
AY01	Puyuhuapi	24.86	186	P	P	23 29 35.2	-0.2
AY01				IAmb	IAmb	23 29 36.1	
	comp=Z,7.7nm,0.7s						
MCPB	Macapa, AP	25.37	43	*e*P	P	23 29 39.8	-0.6
NAN01	Guarapari, ES	27.36	91	*e*P	P	23 29 58.4	0.0
BAUV	El Baul	28.46	2	P	P	23 30 07.3	-0.8
BAUV				IAmb	IAmb	23 30 08.1	
	comp=Z,9.4nm,0.9s						
GDU01	Guandu, BA	28.75	83	*e*P	P	23 30 10.7	0.0
NBPN	Ponto Novo - B	29.08	77	*e*P	P	23 30 13.8	+0.1
SJCC	San Jacinto, C	30.02	348	P	P	23 30 22.9	+1.0
BIRV	Birongo	30.08	5	P	P	23 30 21.4	-1.1
BIRV				IAmb	IAmb	23 30 29.7	
	comp=Z,13nm,1.0s						
NBPS	Pedro II - PI	30.83	64	*e*P	P	23 30 29.5	+0.3
NBLA	Lagarto - SE	31.25	79	*e*P	P	23 30 31.9	-0.9
TOSP	Speyside	31.89	16	P	P	23 30 37.6	-0.7
MG02	Cerro Sombrero	33.04	180	P	P	23 30 49.8	+1.8
EFI	East Falkland	33.06	168	P	P	23 30 45.5	-2.7
NBAN	Anadia - AL	33.10	77	*e*P	P	23 30 49.5	+0.5
MG03	Isla Dawson	34.12	182	P	P	23 30 58.5	+1.1
DSPA	Despedida	34.22	179	P	P	23 30 58.8	+0.6
RCBR	Riachuelo	34.98	71	P	P	23 31 04.8	-0.5
RCBR				IAmb	IAmb	23 31 16.5	
	comp=Z,10nm,1.0s						
ICMP	Isla Caja de M	37.41	4	P	P	23 31 26.3	+0.5
MLPR	Magueyes Islan	37.46	3	P	P	23 31 26.6	+0.3
MLPR				IAmb	IAmb	23 31 36.9	
	comp=Z,12nm,0.9s						
CRPR	Cabo Rojo, PR	37.50	3	P	P	23 31 26.7	+0.2
OBIP	Obispado Ponce	37.56	4	P	P	23 31 26.1	-0.9
PDPR	Patillas Dam,	37.58	5	P	P	23 31 25.9	-1.3
PDPR				IAmb	IAmb	23 31 26.2	
	comp=Z,9.1nm,0.8s						
CELP	Cerrillos	37.59	4	P	P	23 31 27.3	-0.1
CELP				IAmb	IAmb	23 31 31.5	
	comp=Z,12nm,1.1s						
MTP	Monte Pirata	37.69	5	P	P	23 31 27.0	-1.2
MTP				IAmb	IAmb	23 31 46.2	
	comp=Z,11nm,1.0s						
HUMP	Col San Antoni	37.71	5	P	P	23 31 29.6	+1.2
HUMP				IAmb	IAmb	23 31 47.5	
	comp=Z,9.4nm,0.9s						
SOR	Soroa	44.38	341	P	P	23 32 23.3	+0.3
SOR				IAmb	IAmb	23 32 36.6	
	comp=Z,12nm,1.0s						
ESPZ	Base Esperanza	44.45	172	P	P	23 32 23.2	+0.2
061Z	Ochoppi	46.73	345	P	P	23 32 41.3	-0.1
456A	Hilliard	51.66	346	P	P	23 33 19.2	+0.3
553A	Crawfordville	51.77	343	P	P	23 33 20.3	+0.6
GOGA	Godfrey	54.58	345	P	P	23 33 39.6	-0.6
GOGA				IAmb	IAmb	23 33 48.1	
	comp=Z,3.8nm,1.1s						
JSC	Jenkinsville	54.92	348	P	P	23 33 42.6	-0.1
JSC				IAmb	IAmb	23 33 43.3	
	comp=Z,3.6nm,0.6s						
PAULI	Pauline	55.56	347	P	P	23 33 46.8	-0.4
PAULI				IAmb	IAmb	23 33 47.8	
	comp=Z,4.3nm,0.8s						
KMSC	Kings Mountain	55.77	348	P	P	23 33 47.1	-1.7
KMSC				IAmb	IAmb	23 34 03.9	
	comp=Z,5.8nm,1.1s						
Y49A	Blount Mountai	55.77	342	P	P	23 33 48.0	-0.9
Y49A				IAmb	IAmb	23 34 01.3	
	comp=Z,7.3nm,1.1s						
V55A	Taylorsville	56.43	348	P	P	23 33 53.9	+0.4
V55A				IAmb	IAmb	23 33 54.4	
	comp=Z,4.2nm,0.9s						
W50A	Signal Mountai	56.74	344	P	P	23 33 55.4	-0.4
W50A				IAmb	IAmb	23 34 03.0	
	comp=Z,5.1nm,1.1s						
CPCT	Cooper Cave	56.78	345	P	P	23 33 55.9	0.0
CPCT				IAmb	IAmb	23 33 59.5	
	comp=Z,3.2nm,1.2s						
TKL	Tuckaleechee C	56.80	346	P	P	23 33 55.8	-0.3
TKL				IAmb	IAmb	23 34 00.3	
	comp=Z,4.7nm,1.1s						
SWET	Sewanee	56.92	343	P	P	23 33 56.6	-0.4
SWET				IAmb	IAmb	23 33 56.8	
	comp=Z,3.5nm,0.5s						
V52A	Sevierville	56.93	346	P	P	23 33 57.0	0.0
V52A				IAmb	IAmb	23 34 08.1	
	comp=Z,4.0nm,1.1s						
V51A	Loudon	57.07	345	P	P	23 33 57.9	-0.1
V51A				IAmb	IAmb	23 33 59.9	
	comp=Z,5.1nm,1.1s						
T57A	Hurt	57.20	350	P	P	23 33 59.2	+0.3
T57A				IAmb	IAmb	23 34 03.5	
	comp=Z,2.3nm,0.8s						
CCAR	Cane Creek	57.56	338	P	P	23 33 59.9	-1.5
U49A	Red Boiling Sp	58.10	344	P	P	23 34 04.3	-0.9
U49A				IAmb	IAmb	23 34 05.2	
	comp=Z,2.7nm,0.7s						
WVT	Waverly	58.30	342	P	P	23 34 06.0	-0.6
WVT				IAmb	IAmb	23 34 06.4	
	comp=Z,3.5nm,0.6s						
S54A	Dingess, Beckl	58.34	349	P	P	23 34 06.9	0.0
S54A				IAmb	IAmb	23 34 16.3	
	comp=Z,6.0nm,1.1s						
T50A	Nancy	58.35	345	P	P	23 34 06.9	0.0
SLBS	Sierra La Lagu	58.77	315	P	P	23 34 11.7	+1.5
SLBS				IAmb	IAmb	23 34 13.7	
	comp=Z,6.0nm,1.0s						
MIAR	Mount Ida	58.78	336	P	P	23 34 10.1	+0.1
T47A	Sharon Grove	58.90	343	P	P	23 34 10.6	-0.2
T47A				IAmb	IAmb	23 34 11.1	
	comp=Z,5.4nm,0.8s						
TXAR	Lajitas Array	59.11	325	P	P	23 34 11.1	-1.4
	comp=Z,0.2nm,0.5s,baz=124,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	59.11	325	P	P	23 34 13.0	+0.5
O52A	Adamsville	60.68	349	P	P	23 34 23.0	+0.1
O52A				IAmb	IAmb	23 34 36.3	
	comp=Z,4.6nm,0.9s						
O53A	New Philadelph	60.70	349	P	P	23 34 23.3	+0.3
O53A				IAmb	IAmb	23 34 35.3	
	comp=Z,5.8nm,1.1s						
S39A	Bolivar	61.50	338	P	P	23 34 28.2	-0.2
S39A				IAmb	IAmb	23 34 28.9	
	comp=Z,2.6nm,0.7s						
N49A	Columbus Grove	61.93	347	P	P	23 34 30.9	-0.3
P43A	Skaggs, Pawnee	62.06	342	P	P	23 34 31.7	-0.4
VNA2	Neumayer--Watz	62.38	161	P	P	23 34 35.4	+1.4
P38A	Dawn	63.30	339	P	P	23 34 39.9	-0.5
SNAA	Sanae	64.01	161	P	P	23 34 45.8	+1.0
SNAA	Sanae	64.01	161	P	P	23 34 46.0	+1.2
SNAA				IAmb	IAmb	23 34 47.0	
	comp=Z,5.4nm,0.7s						
K43A	Burlington	64.59	344	P	P	23 34 48.3	-0.5
TROLL	Troll, Antarti	65.73	161	P	P	23 34 56.2	+0.2
I42A	Draeger Farm,	65.85	344	P	P	23 34 57.0	+0.2
I42A				IAmb	IAmb	23 35 00.2	
	comp=Z,4.2nm,0.9s						
H43A	Windswept, Lux	66.11	345	P	P	23 34 57.8	-0.8
H43A				IAmb	IAmb	23 35 03.4	
	comp=Z,6.7nm,0.8s						
G45A	Suttons Bay	66.18	347	P	P	23 35 00.3	+1.3
D62A	Allapoint, All	66.45	360	P	P	23 35 01.2	+0.5
D62A				IAmb	IAmb	23 35 04.0	
	comp=Z,4.7nm,1.1s						
E46A	Sault Ste Mari	67.18	349	P	P	23 35 04.9	-0.5
E46A				IAmb	IAmb	23 35 05.5	
	comp=Z,4.1nm,0.8s						
LIC	Lamto	67.95	75	*e*P	P	23 35 10.6	-0.3
	comp=Z,11nm,0.6s						
TIC	Toumodi	68.13	74	*e*P	P	23 35 11.2	-0.8
	comp=Z,5.4nm,0.3s						
KIC	Kosan Boka	68.27	74	*e*P	P	23 35 12.2	-0.7
	comp=Z,37nm,0.5s						
DBIC	Dimbokro	68.29	74	P	P	23 35 12.5	-0.5
	comp=Z,15nm,0.5s,baz=250,slow=6.1,SNR=32						
DBIC	Dimbokro	68.29	74	P	P	23 35 12.6	-0.3
ISCO	Idaho Springs	68.34	330	P	P	23 35 14.2	+1.0
Q16A	Castle Valley	70.42	326	P	P	23 35 27.6	+1.7
P18A	Preston Nutter	70.47	327	P	P	23 35 28.1	+1.8
QSPA	South Pole Qui	70.50	180	P	P	23 35 27.8	+1.9
RSSD	Black Hills	71.14	334	P	P	23 35 31.2	+1.1
KOWA	Kowa	72.36	67	P	P	23 35 37.7	-0.1
PDAR	Pinedale Array	72.51	330	P	P	23 35 39.0	+0.6
	comp=Z,0.3nm,0.4s,baz=128,slow=9.7,SNR=5.8						
	comp=Z,0.3nm,0.4s						
MDND	Maddock	72.62	339	P	P	23 35 39.3	+0.7
MDND				IAmb	IAmb	23 35 40.1	
	comp=Z,10nm,0.7s						
ULM	Lac du Bonnet	73.57	342	P	P	23 35 43.3	-0.8
NVAR	Mina Array Bea	74.03	322	P	P	23 35 48.1	+0.8
	comp=Z,0.5nm,0.8s,baz=159,slow=7.0,SNR=5.0						
	comp=Z,0.5nm,0.8s						
RLMT	Red Lodge	74.19	332	P	P	23 35 49.5	+1.3
TOA0	Torodi Ar. Sit	76.81	71	P	P	23 36 02.9	-0.6
TOA0				IAmb	IAmb	23 36 04.7	
	comp=Z,3.7nm,0.5s						
TORD	Torodi Ar. Bea	76.81	71	P	P	23 36 02.5	-1.0
	comp=Z,2.2nm,0.3s,baz=254,slow=5.5,SNR=123						
TORD				pP	pP	23 36 32.7	-0.5
	comp=Z,3.9nm,0.8s,baz=252,slow=5.4,SNR=4.9						
	comp=Z,2.2nm,0.3s						
TORD	Torodi Ar. Bea	76.81	71	P	P	23 36 02.9	-0.6
PLID	Pearl Lake	77.36	328	P	P	23 36 07.7	+1.5
F10A	Beach Ranch, E	78.60	328	P	P	23 36 14.3	+1.4
VNDA	Vanda	78.62	190	P	P	23 36 13.1	+0.6
	comp=Z,0.7nm,0.8s,baz=154,slow=7.2,SNR=3.4						
	comp=Z,0.7nm,0.8s						
FCC	Fort Churchill	80.85	347	P	P	23 36 24.9	+0.4
I02E	Swisshome, OR	80.89	323	P	P	23 36 24.4	-0.7
EDM	Edmonton	82.10	335	P	P	23 36 31.2	-0.2
EDM				IAmb	IAmb	23 36 32.2	
	comp=Z,7.2nm,0.6s						
PAB	San Pablo	84.27	45	P	P	23 36 43.8	+0.9
BOSA	Boshof	84.36	118	P	P	23 36 43.8	-0.1
ESDC	Sonseca Array	84.59	45	P	P	23 36 45.4	+0.9
	comp=Z,0.5nm,0.7s,baz=244,slow=5.3,SNR=4.6						
ESDC				pP	pP	23 37 13.9	-0.7
	comp=Z,1.2nm,1.0s,baz=249,slow=6.5,SNR=4.9						
	comp=Z,0.5nm,0.7s						
YKA	Yellowknife Ar	89.46	341	P	P	23 37 08.0	+0.6
	comp=Z,3.3nm,0.6s,baz=132,slow=4.7,SNR=48						
YKA				pP	pP	23 37 38.3	+0.5
	comp=Z,2.5nm,0.7s,baz=136,slow=4.9,SNR=8.7						
YKA				sP	sP	23 37 50.9	+0.9
	comp=Z,1.7nm,0.7s,baz=133,slow=4.9,SNR=4.8						
	comp=Z,3.3nm,0.6s						
ASAR	Alice Springs	131.48	208	PKP	PKPdf	23 43 24.1	+0.4
	comp=Z,0.9nm,0.5s,baz=123,slow=1.6,SNR=14						
ASAR				pPKP	pPKPdf	23 43 54.9	-0.6
	comp=Z,0.2nm,0.3s,baz=102,slow=1.7,SNR=1.8						
WRA	Warramunga Arr	134.47	211	PKP	PKiKP	23 43 30.2	-0.5
	comp=Z,1.2nm,0.4s,baz=152,slow=1.7,SNR=14						
WRA				pPKP	pPKPdf	23 44 01.5	+0.4
	comp=Z,0.3nm,0.6s,baz=141,slow=1.7,SNR=1.5						
WRA				sPKP	sPKPdf	23 44 14.1	+0.9
	comp=Z,0.3nm,0.6s,baz=162,slow=1.8,SNR=1.3						
ZALV	Zalesovo Beam	140.33	24	PKP	PKPdf	23 43 37.8	-1.3
	comp=Z,0.8nm,0.5s,baz=325,slow=1.8,SNR=3.9						
MKAR	Makanchi Array	144.19	34	PKP	PKPdf	23 43 45.9	-0.3
	comp=Z,0.3nm,0.4s,baz=325,slow=2.4,SNR=5.5						
MKAR				pPKP	pPKPdf	23 44 17.4	-0.7
	comp=Z,0.3nm,0.6s,baz=293,slow=1.2,SNR=2.3						
MJAR	Matsushiro Arr	150.87	311	PKPbc	PKPbc	23 44 02.9	-0.4
	comp=Z,0.9nm,0.4s,baz=100,slow=4.2,SNR=5.3						
SONM	Songino Array	151.66	7	PKP	PKPdf	23 43 58.5	-0.1
	comp=Z,0.3nm,0.4s,baz=318,slow=3.9,SNR=1.8						
SONM				PKPbc	PKiKP	23 44 05.9	+0.6
	comp=Z,1.8nm,0.3s,baz=300,slow=1.3,SNR=9.3						
SONM				pPKPbc	pPKPbc	23 44 36.4	-0.3
	comp=Z,1.5nm,0.9s,baz=326,slow=3.0,SNR=3.4						
HHC	Hu-ho-hao-te	158.89	359	*e*P	PKPdf	23 44 10.0	+1.5
PZH	PanZhiHua	169.09	50	PKP	PKPdf	23 44 17.3	-0.9

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*NIED **27** 23:29:13.3, 32°.65N×130°.72E, h13^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.02; M$_{\theta\theta}$1.18; M$_{\phi\phi}$-1.20; M$_{r\theta}$0.01; M$_{\theta\phi}$1.21; M$_{\phi r}$0.29; Fault plane solution: M$_0$1.73000×10^{14} NP1: φ$_s$112.00000°, δ81.00000°, λ-3.00000°. NP2:φ$_s$203.00000°, δ87.00000°, λ-171.00000°.*

JMA 27 23:29:13.3±0.0**, 32°.7N**±0°.1×**130°.7E**±0°.1**, h13^{km}, MV3.7**/20**, SOUTHERN KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.13	141	P	Pg	23 29 16.6	0.0
JIU3				S	Sg	23 29 19.1	+0.1
JTA	Tamana	0.35	334	P	Pg	23 29 20.4	+0.1
JZO	Okuchi	0.52	191	P	Pg	23 29 23.5	0.0
JZO				S	Sg	23 29 30.4	+0.1

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*NEIC **27** 23:32:37.4±1.6, 18°.2S±0°.1×177°.8W±0°.1, h634^{km}±9^{km}, mb4.3/26, Error ellipse: s-maj=22.3km s-min=10.8km az=128.0*

*IDC **27** 23:32:38.2±3.9, 18°.09S×178°.02W, h644^{km}±24^{km}, mb3.4/3, mbtmp4.3/5, Error ellipse: s-maj=116.1km s-min=33.6km az=140.0*

ISC 27 23:32:37.9±0.7**, 18°.1S**±0°.1×**177°.9W**±0°.1**, h650^{km}, n40, σ1^{s}04**/40**, mb4.3**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.85	275	P	P	23 34 05.5	-0.7
	7.5nm,0.5s,baz=146,slow=4.1,SNR=12						
RAO	Raoul Island	11.08	180	P	P	23 35 06.6	-1.3
LIFNC	LIFOU	14.24	257	P	P	23 35 37.5	+0.3
OUENC	Ouen Island, N	14.92	251	P	P	23 35 43.6	+0.2
DZM	Mont Dzumac	15.20	252	P	P	23 35 45.8	-0.3
	2.5nm,0.5s,baz=176,slow=18,SNR=5.7						
DZM	Mont Dzumac	15.20	252	P	P	23 35 46.9	+0.8
DZM				IAmb	IAmb	23 35 52.9	
	comp=Z,10nm,1.1s						
KNTN	Kanton	16.42	22	P	P	23 35 57.2	-0.1
KNTN				IAmb	IAmb	23 36 07.8	
	comp=Z,13nm,1.1s						
BSWZ	Blackbirch Sta	24.54	195	P	P	23 37 07.5	-2.0
THZ	Tophouse	24.83	196	P	P	23 37 12.2	+0.1
THZ				IAmb	IAmb	23 37 29.9	
	comp=Z,12nm,1.0s						
KHZ	Kahutara	25.28	195	P	P	23 37 19.2	+3.2
LTZ	Lake Taylor	25.95	197	P	P	23 37 19.7	-2.2
FOZ	Fox Glacier	27.37	200	P	P	23 37 33.6	-0.5
EIDS	Eidsvold	29.63	250	P	P	23 37 54.2	+0.3
EIDS				IAmb	IAmb	23 37 54.7	
	comp=Z,4.9nm,0.8s						
ARMA	Armidale	30.23	240	P	P	23 37 59.6	+0.4
ARMA				IAmb	IAmb	23 38 00.5	
	comp=Z,3.6nm,0.6s						
CTAO	Charters Tower	33.87	261	P	P	23 38 30.4	+0.6
CTAO				IAmb	IAmb	23 38 47.6	
	comp=Z,9.6nm,1.0s						
CAN	Canberra	33.94	233	P	P	23 38 29.4	-0.8
CAN				IAmb	IAmb	23 38 32.7	
	comp=Z,7.9nm,1.1s						
COEN	Coen	37.57	271	P	P	23 39 01.4	+1.2
COEN				IAmb	IAmb	23 39 02.0	
	comp=Z,9.1nm,0.8s						
STKA	Stephens Creek	38.93	242	P	P	23 39 11.7	+0.8
	comp=Z,2.6nm,0.7s,baz=95,slow=11,SNR=4.1						
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	38.93	242	IAmb	IAmb	23 39 12.6	
	comp=Z,0.9nm,1.1s						
BBOO	Buckleboo	43.71	241	P	P	23 39 48.5	+0.3
BBOO				IAmb	IAmb	23 40 05.1	
	comp=Z,14nm,1.1s						
WR0	Warramunga Arr	44.86	260	P	P	23 39 57.4	+0.2
WB0	Warramunga Arr	45.02	260	P	P	23 39 58.6	+0.2
WB2	Warramunga Arr	45.04	260	P	P	23 39 58.7	+0.1
WB2				IAmb	IAmb	23 39 59.1	
	comp=Z,4.7nm,0.6s						
WRA	Warramunga Arr	45.05	260	P	P	23 39 58.6	-0.1
	comp=Z,2.8nm,0.3s,baz=97,slow=6.9,SNR=64						
WRA				PcP	PcP	23 41 25.2	+0.1
	comp=Z,0.2nm,0.3s,baz=92,slow=3.4,SNR=1.8						
	comp=Z,2.8nm,0.3s						
WRA	Warramunga Arr	45.05	260	P	P	23 39 58.3	-0.4
ASAR	Alice Springs	45.18	254	P	P	23 39 59.9	+0.2
	comp=Z,7.7nm,0.6s,baz=91,slow=7.7,SNR=86						
ASAR				PcP	PcP	23 41 25.8	+0.3
	comp=Z,0.5nm,0.4s,baz=103,slow=3.7,SNR=4.5						
	comp=Z,7.7nm,0.6s						
ASAR	Alice Springs	45.18	254	P	P	23 39 59.5	-0.1
MTN	Manton Dam	49.26	268	P	P	23 40 29.7	-0.4
MTN				IAmb	IAmb	23 40 30.4	
	comp=Z,10nm,1.1s						
FORT	Forrest	50.33	245	P	P	23 40 37.5	-0.2
KNRA	Kununurra	50.93	264	P	P	23 40 43.0	+0.9
KNRA				IAmb	IAmb	23 40 43.3	
	comp=Z,9.2nm,0.9s						
MBWA	Marble Bar	58.47	256	P	P	23 41 34.2	-0.2
QSPA	South Pole Qui	71.93	180	P	P	23 42 58.7	+1.3
AKUT	Akutan	72.72	7	P	P	23 42 59.9	-1.8
SSLB	Suanglung	72.74	303	P	P	23 43 02.5	-0.1
SSLB				IAmb	IAmb	23 43 18.5	
	comp=Z,11nm,1.1s						
KMRM	Mail Ridge	76.88	40	P	P	23 43 25.2	-0.2
KMRM				IAmb	IAmb	23 43 30.0	
	comp=Z,13nm,0.9s						
MPU	Maple Canyon	84.51	45	P	P	23 44 07.2	+2.6
S39A	Bolivar	96.73	53		pP	23 47 15.8	-3.6
BRTR	Keskin Array B	145.26	315	PKPbc	PKPab	23 51 05.8	-0.8
	comp=Z,0.5nm,0.7s,baz=40,slow=2.5,SNR=2.5						
CLL	Collm	145.77	348	*i* PKPbc	PKPab	23 51 07.2	-0.8
GERES	GERESS Array B	147.94	345	PKPbc	PKPbc	23 51 11.7	-0.2
	comp=Z,0.1nm,0.3s,baz=31,slow=5.9,SNR=1.6						

IDC 27 23:48:13.3±12.0**, 22°.75S**×**179°.53W, h608^{km}**±81^{km}**, mb2.8**/4**, mbtmp3.7**/5**, Error ellipse: s-maj=276.9km s-min=29.4km az=143.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.49	335	P	P	23 49 50.8	-0.1
	1.4nm,0.3s,baz=281,slow=21,SNR=4.6						
CTA	Charters Tower	31.92	268	P	P	23 53 50.9	-0.3
	1.5nm,0.5s,baz=90,slow=10,SNR=1.4						
	1.5nm,0.5s						
ASAR	Alice Springs	42.66	259	P	P	23 55 18.4	-0.1
	0.4nm,0.4s,baz=98,slow=7.3,SNR=7.6						
	0.4nm,0.4s						
WRA	Warramunga Arr	42.93	265	P	P	23 55 20.5	0.0
	0.6nm,0.4s,baz=102,slow=8.0,SNR=10						
	0.6nm,0.4s						
ILAR	Eielson Array	90.82	13	P	P	00 00 12.4	-0.1
	0.3nm,0.8s,baz=191,slow=4.3,SNR=4.4						
	0.3nm,0.8s						

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*IDC **28** 00:27:03.7±1.8, 6°.39S×128°.53E, h0^{km}, mb3.6/1, mbtmp3.9/4, ML4.0/3, Error ellipse: s-maj=59.5km s-min=28.7km az=79.0*

*NEIC **28** 00:27:17.1±2.9, 6°.22S±0°.05×129°.9E±0°.1, h157^{km}±9^{km}, mb4.4/9, Error ellipse: s-maj=18.3km s-min=6.9km az=90.0*

ISC 28 00:27:16.2±0.6**, 6°.20S**±0°.05×**129°.83E**±0°.09**, h150^{km}, n33, σ1^{s}77**/39**, mb4.4**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.29	141	Pn	Pn	00 27 54.9	+0.1
SAUI				Sn	Sn	00 28 25.4	+0.8
FAKI	Fak Fak	4.05	37		Pn	00 28 17.3	+0.1
FAKI				Sn	Sn	00 29 03.0	-1.6
FAKI	Fak Fak	4.05	37	P	Pn	00 28 17.0	-0.2
SIJI	Sorong	5.49	15	Pn	Pn	00 28 36.9	+0.7
	2.0nm,0.3s,baz=217,slow=23,SNR=21						
SIJI				Sn	Sn	00 29 34.6	-4.0
	14nm,0.3s,baz=250,slow=23,SNR=18						
	5.1nm,0.3s						
MTN	Manton Dam	6.72	169	Pn	Pn	00 28 53.2	+0.6
MTN				Sn	Sn	00 30 05.7	-2.5
KDU	Kakadu	6.95	158	P	Pn	00 28 55.9	+0.3
KNRA	Kununurra	9.48	186	Pn	Pn	00 29 29.0	-0.3
KNRA				Sn	Sn	00 31 08.9	-5.5
KNRA	Kununurra	9.48	186	P	Pn	00 29 28.5	-0.8
WB0	Warramunga Arr	14.20	162		Pn	00 30 28.7	-1.9
WRAB	Tennant Creek	14.34	163	P	Pn	00 30 32.6	+0.1
WRA	Warramunga Arr	14.35	163	Pn	Pn	00 30 30.6	-1.9
	0.7nm,0.3s,baz=343,slow=14,SNR=19						
WRA				Sn	Sn	00 33 01.7	-10
	0.5nm,0.3s,baz=334,slow=22,SNR=3.5						
	1.1nm,0.4s						
WRA	Warramunga Arr	14.35	163		Pn	00 30 29.5	-3.0
WB2	Warramunga Arr	14.35	163	Pn	Pn	00 30 31.6	-0.9
WR0	Warramunga Arr	14.42	162	Pn	Pn	00 30 31.9	-1.6
COEN	Coen	15.22	121	P	P	00 30 46.3	+1.3
COEN	Coen	15.22	121	P	P	00 30 46.2	+1.2
MYLDM	Lahad Datu	15.99	315		P	00 30 55.1	+1.6
MYLDM				IAmb	IAmb	00 30 56.2	
	comp=Z,4.6nm,0.6s						
QIS	Mount Isa	17.14	147	P	Pn	00 31 08.0	+1.2
ASAR	Alice Springs	17.80	168	P	Pn	00 31 15.5	+0.7
	comp=Z,0.8nm,0.3s,baz=346,slow=11,SNR=51						
ASAR				S	S	00 34 27.0	-3.6
	comp=Z,0.6nm,0.7s,baz=345,slow=24,SNR=3.7						
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	17.80	168		Pn	00 31 15.2	+0.4
PSA00	Pilbara Seismi	18.08	211	P	Pn	00 31 18.1	+0.1
PSA00	Pilbara Seismi	18.08	211	P	Pn	00 31 18.2	+0.1
OOD	Oodnadatta	22.18	166	P	P	00 32 01.0	+0.7
MULG	Mulgathing	24.28	171	P	P	00 32 21.9	+2.2
MORW	Morawa	26.21	208	P	P	00 32 38.7	+1.5
MORW				IAmb	IAmb	00 32 50.5	
	comp=Z,12nm,1.1s						
ARMA	Armidale	31.63	142	P	P	00 33 25.1	-0.2
ARMA				IAmb	IAmb	00 33 25.5	

	comp=Z,6.7nm,1.1s						
TOO	Toolangi	34.33	158	P	P	00 33 48.5	0.0
TOO				IAmb	IAmb	00 34 08.5	
	comp=Z,4.3nm,0.8s						
JMN	Monobe	39.90	5	P	P	00 34 35.6	+0.1
MKAR	Makanchi Array	67.47	327	P	P	00 37 57.6	+1.7
	comp=Z,0.4nm,0.6s,baz=135,slow=7.5,SNR=5.3						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	67.47	327	P	P	00 37 57.5	+1.6
QSPA	South Pole Qui	83.77	180	P	P	00 39 28.2	-0.2
M24K	Tolsona, Glenn	92.62	28	P	P	00 40 11.5	+0.9
N25K	Chitina, Valde	93.30	29	P	P	00 40 13.2	-0.6
N25K				IAmb	IAmb	00 40 16.9	
	comp=Z,5.4nm,0.8s						

IDC 28 00:58:03.1±2.1, 9°.79S×124°.41E, h0^{km}, mb3.5/1, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=210.7km s-min=33.3km az=55.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.92	138	Pn	Pn	01 01 20.8	-1.0
	0.5nm,0.3s,baz=312,slow=14,SNR=12						
WRA				Sn	Sn	01 03 46.5	-11
	0.4nm,0.3s,baz=278,slow=20,SNR=5.6						
	0.6nm,0.4s						
ASAR	Alice Springs	16.51	148	Pn	Pn	01 01 57.2	+0.9
	0.2nm,0.3s,baz=323,slow=12,SNR=12						
ASAR				Sn	Sn	01 04 54.4	-6.0
	0.2nm,0.3s,baz=314,slow=21,SNR=5.0						
	0.6nm,0.5s						
MKAR	Makanchi Array	67.69	330	P	P	01 09 02.2	0.0
	0.3nm,0.5s,baz=129,slow=7.1,SNR=4.2						
	0.3nm,0.5s						

IDC 28 01:28:08.6±4.1, 6°.21S×151°.73E, h59^{km}±30^{km}, mb3.6/4, mbtmp3.9/4, Error ellipse: s-maj=79.3km s-min=17.0km az=116.0

ISC 28 01:28:05.3±1.6, 6°.4S±0°.1×152°.0E±0°.4, h35^{km}, n6, σ1^{s}.09/8, mb3.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.06	1	P	Pn	01 28 37.6	+0.2
	690nm,0.3s,baz=242,slow=2.0,SNR=81						
KRVT				S	Sn	01 29 02.6	+0.8
	449nm,0.3s,baz=103,slow=23,SNR=9.0						
WRA	Warramunga Arr	21.80	230	P	P	01 32 55.1	+0.6
	3.7nm,0.9s,baz=55,slow=9.9,SNR=21						
WRA				PcP	PcP	01 36 54.8	+0.7
	0.6nm,0.6s,baz=50,slow=2.2,SNR=6.1						
	3.7nm,0.9s						
ASAR	Alice Springs	24.45	223	P	P	01 33 22.1	+1.1
	3.4nm,1.0s,baz=55,slow=8.5,SNR=18						
	3.4nm,1.0s						
ZALV	Zalesovo Beam	82.01	327	P	P	01 40 19.9	-1.7
	0.4nm,0.3s,baz=131,slow=8.9,SNR=2.4						
	0.4nm,0.3s						
ILAR	Eielson Array	83.92	22	P	P	01 40 31.4	+0.1
	0.6nm,0.8s,baz=255,slow=5.7,SNR=5.7						
	0.6nm,0.8s						
TORD	Torodi Ar. Bea	149.97	285	PKPbc	PKPbc	01 47 52.5	-0.6
	0.4nm,0.6s,baz=95,slow=1.4,SNR=5.6						

IDC 28 01:36:22.2±5.0, 31°.95S×179°.69E, h389^{km}±48^{km}, mb3.2/2, mbtmp4.1/3, Error ellipse: s-maj=56.9km s-min=30.9km az=28.0

WEL 28 01:36:26.4±1.1, 32°S±15°×17°8E±3°6, h181^{km}±64^{km}, M4.5/7, mB4.3/1, ML4.8/4, MLv4.5/7, Mw(mB)3.4/1, Error ellipse: s-maj=0.1km s-min=0.0km az=111.8

ISC 28 01:36:21.5±0.9, 32°.01S±0°.09×179°.7E±0°.2, h400^{km}, n28, σ3^{s}.08/46, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	38	P	Pn	01 37 26.5	-2.0
GLKZ				S	S	01 38 19.6	-3.0
WMGZ	Waiomatatini S	5.89	190	P	Pn	01 37 57.4	+4.7
WMGZ				S	S	01 39 04.1	-3.1
PKGZ	Pakihiroa	6.01	192	P	Pn	01 37 58.8	+4.7
PKGZ				S	S	01 39 08.0	-1.7
PUZ	Puketiti	6.16	190	P	Pn	01 37 58.8	+3.1
PUZ				S	S	01 39 10.1	-2.5
TWGZ	Tauwhareparae	6.31	192	S	S	01 39 15.8	+0.2
URZ	Urewera	6.58	198	P	P	01 38 02.8	+1.9
	21nm,0.4s,baz=214,slow=3.6,SNR=22						
URZ				S	S	01 39 20.8	-0.2
	20nm,0.3s,baz=224,slow=23,SNR=13						
HIZ	Hauiti	7.59	210	S	S	01 39 37.5	-4.3
BKZ	Black Stump Fm	7.59	199	P	Pn	01 38 12.4	+0.6
BKZ				S	S	01 39 39.3	-2.7
OTVZ	Oturere	7.85	203	P	P	01 38 18.2	+3.0
KWHZ	Kaweka Forest	7.85	199	P	P	01 38 16.4	+1.3
KWHZ				S	S	01 39 46.6	-0.9
WNVZ	Wahianoa	8.02	203	P	P	01 38 18.7	+1.6
BHHZ	Black Hill Sta	8.02	200	P	P	01 38 18.2	+1.2
BHHZ				S	S	01 39 47.7	-3.2
MOVZ	Moawhango	8.04	202	P	P	01 38 19.0	+1.8
MOVZ				S	S	01 39 46.9	-4.5
KAHZ	Kahuranaki	8.09	195	P	P	01 38 20.3	+2.5
KAHZ				S	S	01 39 47.2	-5.2
VRZ	Vera Road	8.15	208	P	P	01 38 19.9	+1.5
PXZ	Pawanui	8.32	195	P	P	01 38 22.2	+2.0
PRHZ	Porangahau	8.60	196	P	P	01 38 25.4	+2.0
PRHZ				S	S	01 40 00.4	-2.6
BFZ	Birch Farm	9.08	197	P	Pn	01 38 30.3	+1.6
BFZ				S	S	01 40 08.0	-5.3
MRZ	Mangatainoka R	9.24	200	P	Pn	01 38 32.2	+1.6
MRZ				S	S	01 40 12.2	-4.4
OGWZ	Otaki Gorge	9.51	201	P	P	01 38 33.8	+0.4
OGWZ				S	S	01 40 19.8	-2.2
MTW	Mount Morrison	9.72	199	P	Pn	01 38 37.4	+1.2
MTW				S	S	01 40 20.7	-5.9
MSWZ	Moikau Station	10.03	199	P	P	01 38 37.7	-1.6
MSWZ				S	S	01 40 26.6	-6.3
TCW	Tory Channel	10.15	204	P	P	01 38 41.3	+0.7
TCW				S	S	01 40 29.9	-5.3
TUWZ	Tuamarina	10.46	204	P	P	01 38 44.8	+0.8
TUWZ				S	S	01 40 37.5	-4.0
ASAR	Alice Springs	41.07	270	P	P	01 43 30.1	+1.8
	0.6nm,0.5s,baz=108,slow=7.2,SNR=15						
	0.6nm,0.5s						
WRA	Warramunga Arr	42.21	275	P	P	01 43 38.7	+1.3
	1.2nm,0.3s,baz=114,slow=7.7,SNR=27						
	1.2nm,0.3s						
FINES	FINESS Array B	145.92	338	PKPbc	PKPab	01 55 14.7	-0.9
	0.5nm,0.5s,baz=56,slow=4.6,SNR=11						
TORD	Torodi Ar. Bea	161.13	186	PKPab	PKPab	01 56 23.1	+2.2
	0.5nm,1.0s,baz=192,slow=3.3,SNR=2.0						

IDC 28 01:57:52.5±0.9, 35°.00N×74°.03E, h0^{km}, mb3.6/10, mbtmp3.7/13, ML3.3/3, Error ellipse: s-maj=27.0km s-min=17.2km az=48.0

ISC 28 01:57:57.5±0.9, 35°.1N±0°.1×74°.2E±0°.1, h34^{km}, n15, σ1^{s}.22/15, mb3.6/9, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.49	2	Pn	Pn	01 59 49.3	+4.8
	0.4nm,0.3s,baz=199,slow=8.4,SNR=2.0						
AAK				Sn	Sn	02 01 09.4	+1.0
	0.2nm,0.3s,baz=105,slow=10,SNR=2.0						
	1.0nm,0.3s						
MKAR	Makanchi Array	13.14	25	Pn	P	02 01 09.1	-2.3
	0.1nm,0.3s,baz=211,slow=13,SNR=4.3						
KURBB	Kurchatov Arra	15.79	10	Pn	Pn	02 01 37.7	+0.5
	baz=200,slow=10,SNR=14						
	1.3nm,0.9s						
AKTO	Aktyubinsk	19.29	327	P	P	02 02 18.8	-0.5
	0.3nm,0.3s,baz=135,slow=9.7,SNR=12						
	2.2nm,0.5s						
ZALV	Zalesovo Beam	20.23	18	P	P	02 02 29.1	-0.5
	2.2nm,0.5s,baz=225,slow=10.0,SNR=11						
	2.2nm,0.5s						
CMAR	Chiang Mai Arr	27.53	121	P	P	02 03 41.3	+0.2
	0.8nm,0.3s,baz=308,slow=12,SNR=8.7						
	0.8nm,0.3s						
BRTR	Keskin Array B	32.33	290	P	P	02 04 23.3	-0.3
	0.1nm,0.4s,baz=94,slow=9.9,SNR=1.6						
	0.1nm,0.4s						
AKASG	Malin Array Be	35.81	310	P	P	02 04 54.8	+1.3
	0.2nm,0.3s,baz=108,slow=7.8,SNR=1.6						
	0.2nm,0.3s						
FINES	FINESS Array B	40.05	326	P	P	02 05 29.9	+0.7
	0.5nm,0.4s,baz=119,slow=10,SNR=7.2						
	0.5nm,0.4s						
ARCES	ARCESS Array B	43.39	337	P	P	02 05 56.2	-0.1
	2.1nm,1.0s,baz=105,slow=8.9,SNR=4.9						
	2.1nm,1.0s						
NB2	NORSAR Subarra	47.02	324	P	P	02 06 25.7	+0.4
	comp=Z,0.6nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	47.02	324	P	P	02 06 25.7	+0.4
	comp=Z,0.4nm,0.6s,baz=92,slow=7.6,SNR=5.1						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	68.31	271	P	P	02 08 53.9	-1.7
	comp=Z,0.4nm,0.7s,baz=44,slow=6.1,SNR=6.7						
	comp=Z,0.4nm,0.7s						
WRA	Warramunga Arr	79.08	124	P	P	02 09 58.3	-0.3
	comp=Z,0.3nm,0.5s,baz=319,slow=5.3,SNR=2.6						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	81.36	127	P	P	02 10 13.1	+2.2
	comp=Z,0.6nm,1.0s,baz=312,slow=5.6,SNR=2.3						
	comp=Z,0.6nm,1.0s						

IDC 28 02:20:27.3±0.8, 45°.49N×153°.78E, h0^{km}, mb3.6/11, mbtmp3.6/13, ML3.0/2, Error ellipse: s-maj=24.6km s-min=19.9km az=115.0

SKHL 28 02:20:31.1±0.6, 45°.20N×153°.60E, h30^{km}±5^{km}, mb4.6/2

ISC 28 02:20:33.9±0.8, 45°.4N±0°.1×153°.46E±0°.08, h50^{km}, n18, σ1^{s}.56/19, mb3.5/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.95	270	*e*P	Pn	02 21 31.8	-0.1
KUR				AMB	AMB	02 21 32.7	
	100nm,0.6s						
KUR				*e*S	Sn	02 22 17.7	+0.8
KUR				A	A	02 22 20.2	
	60nm,0.3s						
KUR				A	A	02 22 20.2	
	80nm,0.3s						
YUK	Yuzh-Kuril'sk	5.58	259	*e*S	Sn	02 22 56.4	-0.6
YUK				A	A	02 22 58.4	
	30nm,0.2s						
YUK				A	A	02 22 58.4	
	30nm,0.2s						
NMR	Nemuro--Hokkai	5.89	253	*e*P	Pn	02 21 56.9	-1.6
NMR				AMB	AMB	02 21 57.2	
	20nm,0.4s						
NMR				*e*S	Sn	02 23 01.4	-3.3
NMR				A	A	02 23 08.2	
	30nm,0.2s						
NMR				A	A	02 23 08.2	
	20nm,0.2s						
AKK	Akkeshi	6.63	252	*e*S	Sn	02 23 20.7	-2.0
PETK	Petropavlovsk-	8.22	18	Pn	Pn	02 22 24.6	-5.9
	0.7nm,0.3s,baz=186,slow=11,SNR=6.4						
	1.9nm,0.4s						
KLR	Kul'dur	15.21	292	Pn	Pn	02 24 06.0	+0.6
	0.1nm,0.3s,baz=302,slow=16,SNR=1.8						
	1.0nm,0.6s						
ILAR	Eielson Array	37.49	37	P	P	02 27 40.5	-1.8
	0.4nm,0.9s,baz=264,slow=9.0,SNR=3.1						
	0.4nm,0.9s						
MKAR	Makanchi Array	47.80	299	P	P	02 29 07.6	+1.4
	0.9nm,0.7s,baz=67,slow=9.8,SNR=7.8						
	0.9nm,0.7s						
NVAR	Mina Array Bea	62.87	62	P	P	02 30 53.3	-1.5
	0.3nm,0.6s,baz=266,slow=6.3,SNR=2.4						
	0.3nm,0.6s						
PDAR	Pinedale Array	65.37	54	P	P	02 31 10.4	-0.8
	0.1nm,0.3s,baz=242,slow=6.9,SNR=2.0						
	0.1nm,0.3s						
FINES	FINESS Array B	65.39	335	P	P	02 31 10.8	+0.1
	1.8nm,0.8s,baz=43,slow=6.3,SNR=13						
	1.8nm,0.8s						
WRA	Warramunga Arr	67.29	200	P	P	02 31 24.5	+1.2
	0.3nm,0.6s,baz=15,slow=7.0,SNR=2.0						
	0.3nm,0.6s						
NOA	NORSAR Array B	69.61	341	P	P	02 31 37.6	+0.2
	0.4nm,0.6s,baz=28,slow=6.4,SNR=3.2						
	0.4nm,0.6s						
ASAR	Alice Springs	70.98	199	P	P	02 31 48.0	+1.9
	0.4nm,0.7s,baz=18,slow=5.0,SNR=5.4						
	0.4nm,0.7s						
AKASG	Malin Array Be	72.83	327	P	P	02 31 58.1	+1.2
	0.2nm,0.3s,baz=38,slow=4.7,SNR=1.5						
	0.2nm,0.3s						
STKA	Stephens Creek	77.64	190	P	P	02 32 26.5	+1.9
	0.7nm,0.3s,baz=199,slow=15,SNR=2.3						
	0.7nm,0.3s						
TXAR	Lajitas Array	77.96	61	P	P	02 32 26.3	-0.6
	0.3nm,0.6s,baz=303,slow=3.1,SNR=5.7						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	116.40	329	PKP	PKPdf	02 39 11.3	-0.9
	0.3nm,1.0s,baz=23,slow=2.3,SNR=1.4						

NIED 28 03:00:24.5, 26°.98N×130°.26E, h50^{km}, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.18; M$_{\theta\theta}$1.48; M$_{\phi\phi}$2.70; M$_{r\theta}$0.72; M$_{\theta\phi}$2.27; M$_{\phi r}$-0.99; Fault plane solution: M$_{0}$4.49000×10^{14} NP1: φ$_{s}$232.00000°, δ45.00000°, λ-68.00000°. NP2: φ$_{s}$23.00000°, δ49.00000°, λ-110.00000°.

JMA 28 03:00:24.5±0.1, 27°.0N±0°.6×130°.3E±0°.7, h50^{km}, MV3.5/19, NEAR MINAMI-DAITOJIMA IS, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.36	349	P	Pn	03 00 48.2	+1.1
JZK				*e*S	Sn	03 01 06.3	+2.3
JKDJ	Kitadaitoujima	1.38	137	P	Pn	03 00 47.8	+0.3
JKDJ				*e*S	Sn	03 01 04.9	+0.4
JTK	Tokunoshima	1.42	305	P	Pn	03 00 48.4	+0.5
JTK				S	Sn	03 01 05.5	+0.1
JMZ	Minamidaito 2	1.44	143	P	Pn	03 00 48.7	+0.5
JMZ				*e*S	Sn	03 01 06.0	+0.1
JAM	Amami Oshima	1.54	338	P	Pn	03 00 50.0	+0.3
JAM				*e*S	Sn	03 01 07.6	-0.9
JOKE	Okinoerabujima	1.55	285	*i* P	Pn	03 00 50.6	+0.8
JOKE				*e*S	Sn	03 01 09.2	+0.4
JAMN	Amaminishikomi	1.59	323	*i* P	Pn	03 00 50.5	+0.3
JAMN				S	Sn	03 01 08.9	-0.7
JYRO	Yoronjima	1.62	272	*i* P	Pn	03 00 51.5	+0.9
JYRO				S	Sn	03 01 10.0	-0.3
JOW	Kunigami	1.78	266	P	Pn	03 00 54.1	+1.2
JOW				*e*S	Sn	03 01 15.3	+1.0
JIH	Iheya	2.05	272	S	Sn	03 01 22.0	+1.1
JNTH	Nagotoyohara	2.05	258	P	Pn	03 00 57.4	+0.8
JNTH				S	Sn	03 01 21.0	0.0
JTAJ	Takarajima	2.36	337	P	Pn	03 01 01.1	+0.3
JTAJ				S	Sn	03 01 26.8	-1.8
JJT3	Tamagusuku3	2.37	250	P	Pn	03 01 02.5	+1.6
JJT3				S	Sn	03 01 30.0	+1.2
JAGN	Aguni-jima	2.73	263	S	Sn	03 01 38.3	+0.8
JYAK	Yakushimahirau	3.26	4	S	Sn	03 01 49.0	-1.7

IDC 28 03:12:36.0±1.4, 14°.73N×79°.32E, h0^{km}, mb3.6/6, mbtmp3.7/7, ML4.0/1, MS2.8/1, Error ellipse: s-maj=62.8km s-min=19.0km az=68.0

NDI 28 03:12:42.1±3.0, 14°.95N×79°.32E, h39^{km}±999^{km}, ML4.0

ISC 28 03:12:36.4±0.7, 14°.94N±0°.05×79°.26E±0°.06, h10^{km}, n24, σ2^{s}.97/31, mb3.8/6, 2C, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HYB	Hyderabad	2.56	345	*e*P	Pn	03 13 18.5	+0.5
HYB				*e*S	Sn	03 13 50.0	+0.8
HYB				IAML		03 14 00.5	
	comp=N,519nm,0.4s						
HYB				IAML		03 14 00.6	
	comp=E,2μm,0.3s						
PCHI	Peechi	5.22	213	*e*P	Pn	03 13 57.7	+3.1
PCHI				*e*S	Sn	03 14 52.3	-2.6
PCHI				AML	AML	03 15 27.1	
	comp=Z,523nm,0.5s						
PCHI				AML	AML	03 15 27.4	
	comp=E,637nm,0.7s						
PCHI				AML	AML	03 15 27.6	
	comp=N,389nm,0.5s						
GOA	Goa	5.28	277	*e*P	Pn	03 13 58.3	+3.0
GOA				*e*x	Sn	03 14 59.0	+2.7
GOA				IAML		03 15 08.8	
	comp=N,154nm,0.3s						
GOA				IAML		03 15 09.1	
	comp=E,191nm,0.4s						
KAD	Karad	5.42	296	⇑*i*x	Pn	03 13 59.1	+1.7
KAD				⇑*i*x	Sn	03 15 00.1	+0.2
KAD	Karad	5.42	296	*i* SN	Sg	03 15 28.1	-2.4
POO	Poona	6.30	305	*e*S	Sn	03 15 18.9	-2.5
POO				*e*x	Sn	03 15 19.0	-2.5
	comp=E,110nm,0.3s						
POO				IAML		03 16 01.3	
	comp=N,539nm,0.8s						
POO				IAML		03 16 04.1	
	comp=Z,308nm,0.0s						
POO	Poona	6.30	305	*e*x	Sg	03 15 53.0	-5.6
TRD	Trivandrum	6.78	200	*e*P	Pn	03 14 20.4	+4.5
TRD				*e*S	Sn	03 15 29.2	-4.0
TRD				IAML		03 16 14.8	
	comp=E,416nm,0.5s						
TRD				IAML		03 16 18.2	
	comp=N,275nm,0.1s						
PALK	Pallekele	7.75	169	Pn	Pn	03 14 28.6	-0.7
	comp=N,2.2nm,0.3s,baz=96,slow=14,SNR=16						
PALK				Sn	Sn	03 15 52.6	-4.6
	comp=N,3.2nm,0.3s,baz=10.0,slow=17,SNR=3.8						
	comp=N,12nm,0.5s						
BHPL	Bhopal	8.44	348	*e*P	Pn	03 14 42.1	+3.2
BHPL				*e*x	Sn	03 16 10.9	-3.4
BHPL				IAML		03 17 00.5	
	comp=N,91nm,0.5s						
BHPL				IAML		03 17 08.8	
	comp=E,146nm,0.2s						
KOLN	Koldanda	13.39	17	*e*P	Pn	03 15 44.9	-1.9
PKI	Pulchoki	13.81	23	*e*P	Pn	03 15 50.6	-2.0
PKIN	Phulchoki	13.81	23	*e*P	Pn	03 15 50.0	-2.6
	comp=E,17nm,0.5s						
GKN	Gorkha	13.93	20	*e*P	Pn	03 15 50.9	-3.2
	comp=E,24nm,0.4s						
DANN	Dangsing	13.98	17	*e*P	Pn	03 15 52.4	-2.6
JIRN	Jiri	14.21	26	*e*P	Pn	03 15 55.6	-2.5
	comp=E,17nm,0.5s						
GUN	Gumba	14.30	24	*e*P	Pn	03 15 56.0	-3.3
CMAR	Chiang Mai Arr	19.17	77	LR	LR	03 23 58.2	
	comp=E,29nm,20.2s,baz=210,slow=36						
MKAR	Makanchi Array	31.86	4	P	P	03 19 04.7	+3.1
	comp=E,0.2nm,0.6s,baz=193,slow=12,SNR=1.7						
	comp=E,0.2nm,0.6s						
ZALV	Zalesovo Beam	39.17	5	P	P	03 20 07.6	+3.3
	comp=E,0.4nm,0.4s,baz=178,slow=9.7,SNR=2.4						
	comp=E,0.4nm,0.4s						
FINES	FINESS Array B	59.80	334	P	P	03 22 44.6	+3.0
	comp=E,0.5nm,0.7s,baz=130,slow=13,SNR=1.5						
	comp=E,0.5nm,0.7s						
ARCES	ARCESS Array B	63.85	342	P	P	03 23 10.6	+1.9
	comp=E,1.5nm,0.9s,baz=106,slow=6.0,SNR=4.3						
	comp=E,1.5nm,0.9s						
WRA	Warramunga Arr	64.30	121	P	P	03 23 12.6	+0.1
	comp=E,0.6nm,0.8s,baz=308,slow=6.2,SNR=7.5						
	comp=E,0.6nm,0.8s						
ASAR	Alice Springs	65.75	125	P	P	03 23 22.0	0.0
	comp=E,0.6nm,0.7s,baz=304,slow=6.0,SNR=6.3						
	comp=E,0.6nm,0.7s						

ATH 28 03:12:39.4, 34°.78N×26°.05E, h45^{km}±3^{km}, ML2.5/4, Error ellipse: s-maj=10.2km s-min=1.9km az=349.0

ISK 28 03:12:41.7, 35°.48N×26°.05E, h10^{km}, ML2.6/15

THE 28 03:12:43.2, 35°.07N×26°.01E, h28^{km}±1^{km}, ML2.0/3, Error ellipse: s-maj=3.7km s-min=0.8km az=169.0

DDA 28 03:12:44.0±0.0, 35°.28N×26°.38E, h5^{km}±33^{km}, ML1.8

ISC 28 03:12:43.1±0.9, 35°.20N±0°.07×26°.01E±0°.03, h30^{km}±7^{km}, n35, σ1^{s}.56/43, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.19	117	P	Pb	03 12 48.8	-0.5
ZKR				S	Sb	03 12 56.2	+2.7
ZKR				AML	AML	03 12 56.7	
	comp=N,1159μm,0.4s						
ZKR				AML	AML	03 12 57.1	
	comp=E,2035μm,0.7s						
ZKR	Zakros	0.19	117	P	Pb	03 12 48.7	-0.6
ZKR				S	Sb	03 12 53.3	-0.3
	comp=E,800nm,0.6s						
ZKR	Zakros	0.19	117	PG	Pb	03 12 49.0	-0.3
ZKR				SG	Sb	03 12 56.3	+2.7
FRMA	Ierapetra Chan	0.29	230	P	Pb	03 12 48.2	-2.3
FRMA				S	Sb	03 12 54.5	-1.0
FRMA				AML	AML	03 12 55.1	
	comp=E,2775μm,0.5s						
FRMA				AML	AML	03 12 55.3	
	comp=N,3420μm,0.5s						
FRMA	Ierapetra Chan	0.29	230	P	Pb	03 12 48.0	-2.5
FRMA				S	Sb	03 12 52.7	-2.8
	comp=N,525nm,0.5s						
NPS	Neapolis	0.33	281	P	Pb	03 12 51.7	+0.6
NPS	Neapolis	0.33	281	P	Pb	03 12 51.6	+0.6
HRKL	Herakleio	0.75	279	PG	Pb	03 12 57.2	-0.4
KSTL	Kastelli Herak	0.77	278	P	Pb	03 12 54.5	-3.5
KSTL				AML	AML	03 13 06.1	
	comp=N,1202μm,0.4s						
KSTL				AML	AML	03 13 06.5	
	comp=E,405μm,0.3s						
KSTL	Kastelli Herak	0.77	278	P	Pb	03 12 53.8	-4.3
IDI	Anoyia	0.92	276	P	Pn	03 12 59.8	-0.2
IDI				AML	AML	03 13 21.8	
	comp=N,190μm,0.5s						
IDI				AML	AML	03 13 22.9	
	comp=E,136μm,0.6s						
IDI	Anoyia	0.92	276	P	Pn	03 12 59.6	-0.4
IDI				S	Sb	03 13 12.0	-0.4
	comp=E,82nm,0.5s						
IDI	Anoyia	0.92	276	PG	Pn	03 13 00.9	+0.9
IDI				SG	Sn	03 13 14.5	+2.3
KARP	Karpathos	1.00	70	P	Pb	03 13 01.2	-0.8
KARP				S	Sn	03 13 17.5	+3.2
KARP	Karpathos	1.00	70	P	Pb	03 13 01.1	-0.9
KARP	Karpathos	1.00	70	PG	Pn	03 12 59.7	-1.5
SANT	Santorini	1.25	339	PG	Pn	03 13 01.6	-2.9
THR6	Thira Island,	1.25	337	P	Pb	03 13 05.6	-0.5
THR5	Thira Island,	1.32	336	P	Pn	03 13 05.8	+0.3
GVD	Gavdhos	1.62	258	PN	Pb	03 13 12.6	+0.3
IMMV	Iera Moni Meta	1.68	279	P	Pn	03 13 11.7	+1.3
IMMV	Iera Moni Meta	1.68	279	PN	Pn	03 13 12.1	+1.7
RODP	Rodopos	1.87	282	PN	Pn	03 13 14.6	+1.5
KNDR	Palaiochora Ch	1.90	272	PN	Pb	03 13 16.2	-0.9
DAT	Datca	1.99	39	PN	Pn	03 13 13.1	-1.6
DAT	Datca	1.99	39	P	Pn	03 13 14.5	-0.3
DAT				*i* AML	AML	03 13 44.0	
	comp=E,12nm,0.6s						
DAT				*i* AML	AML	03 13 45.0	
	comp=E,9.3nm,0.6s						
ARG	Arkhangelos	2.00	59	PN	Pn	03 13 13.9	-0.9
TURN	Turunc	2.40	49	PN	Pn	03 13 19.3	-1.0
TURN	Turunc	2.40	49	P	Pn	03 13 19.4	-0.9
TURN				*i* AML	AML	03 13 51.0	
	comp=E,7.6nm,0.7s						
TURN				*i* AML	AML	03 13 55.0	
	comp=E,5.6nm,0.6s						
YER	Yerkesik	2.67	43	PN	Pn	03 13 23.3	-0.8
DALY	Dalyan (Mula)	2.68	52	PN	Pn	03 13 23.5	-0.7
MULA	Mugla, Merkez-	2.77	42	P	Pn	03 13 26.1	+0.5
MULA				*i* AML	AML	03 14 02.0	
	comp=E,7.4nm,0.6s						
FETY	Fethiye	2.88	59	PN	Pn	03 13 26.3	-0.6
FETY	Fethiye	2.88	59	P	Pn	03 13 26.7	-0.2
FETY				S	Sn	03 13 59.5	-1.0
AKAS	Kas	3.10	70	PN	Pn	03 13 30.5	+0.4

TIR 28 03:13:38.4, 40°.97N×19°.74E, h20^{km}±3^{km}, Md2.9, Ml2.3

PDG 28 03:13:38.3±0.3, 40°.88N×19°.58E, h11^{km}, ML2.6/11, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0

BEO 28 03:13:39.5±0.9, 40°.99N×19°.67E, h3^{km}±3^{km}, ML2.1/6

THE 28 03:13:39.2, 40°.96N×19°.76E, h9^{km}±1^{km}, ML2.1/5, Error ellipse: s-maj=2.0km s-min=0.9km az=293.0

ISC 28 03:13:37.9±1.2, 40°.93N±0°.02×19°.62E±0°.03, h5^{km}±10^{km}, n53, σ1^{s}.23/94, 3C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.46	24	*e*Pg	Pb	03 13 47.9	-0.5
TIR				*e*Sg	Sg	03 13 51.7	-0.9
TIR	Tirane	0.46	24	P	Pb	03 13 48.0	-0.5
TIR				S	Sg	03 13 51.9	-0.7

	220nm,0.6s						
TIR	Tirane	0.46	24	P	Pb	03 13 48.2	-0.3
	baz=13						
TIR				S	Sg	03 13 53.2	+0.6
	baz=13						
TIR				AMP			
	comp=N,0.8nm,0.3s,baz=13						
VLO	Vlora	0.47	191	P	Pb	03 13 49.1	+0.5
VLO	Vlora	0.47	191	P	Pb	03 13 49.1	+0.5
	baz=201						
VLO				S	Sb	03 13 57.7	+1.8
	baz=201						
OHR	Ohrid	0.91	78	*e*Pg	Pg	03 13 54.5	-0.9
OHR				*e*Sg	Sg	03 14 06.8	-0.4
KBN	Korca	0.94	109	P	Pg	03 13 54.5	-1.4
KBN	Korca	0.94	109	P	Pg	03 13 55.3	-0.6
	baz=113						
KBN				S	Sg	03 14 07.5	-0.6
	baz=113						
KBN				AMP			
	comp=N,0.7nm,0.5s,baz=113						
PHP	Peshkopia	0.98	39	P	Pg	03 13 55.7	-0.9
PHP	Peshkopia	0.98	39	P	Pg	03 13 56.0	-0.6
	baz=36						
PHP				S	Sg	03 14 08.7	-0.6
	baz=36						
PHP				AMP			
	comp=N,0.4nm,0.4s,baz=36						
ULC	Ulcinj	1.07	345	⇓*i*Pg	Pg	03 13 58.7	+0.3
ULC				*i* Sg	Sn	03 14 16.3	+1.4
LSK	Leskovik	1.08	136	P	Pg	03 13 58.5	-0.1
LSK				S	Sb	03 14 14.1	+0.5
	comp=N,150nm,0.5s						
LSK	Leskovik	1.08	136	P	Pg	03 13 58.9	+0.3
	baz=141						
LSK				S	Sb	03 14 14.4	+0.8
	baz=141						
SRN	Sarande	1.09	164	P	Pb	03 13 59.8	+0.6
SRN	Sarande	1.09	164	P	Pn	03 14 00.2	+0.4
	baz=169						
SRN				S	Sb	03 14 14.8	+1.0
	baz=169						
SRN				AMP			
	comp=N,0.2nm,0.2s,baz=169						
KEK	Kerkira	1.23	173	P	Pn	03 14 02.4	+0.7
KEK				S	Sn	03 14 19.1	+0.4
	comp=N,72nm,0.2s						
DRME	Dracevica, Mon	1.29	346	⇓*i*Pg	Pn	03 14 03.1	+0.4
DRME				*i* Sg	Sn	03 14 23.9	+3.5
FNA	Florina	1.34	96	P	Pg	03 14 01.8	-1.8
FNA				S	Sg	03 14 20.0	-1.0
	comp=N,130nm,0.4s						
BUM	Brajici-Budva	1.47	339	*e*Pg	Pg	03 14 06.3	+0.2
BUM				*e*Sg	Sn	03 14 28.9	+4.0
BCI	Bajram Curri	1.47	13	P	Pg	03 14 06.7	+0.6
	baz=9.0						
BCI				S	Sb	03 14 24.9	0.0
	baz=9.0						
IGT	Igoumenitsa	1.50	158	P	Pn	03 14 05.8	+0.3
IGT				S	Sb	03 14 25.8	+0.2
	comp=N,68nm,0.5s						
PDG	Podgorica	1.52	350	*e*Pn	Pb	03 14 06.9	+0.4
PDG				*e*Sn	Sg	03 14 27.5	+0.7
TTG	Podgorica	1.52	350	⇑*i*Pg	Pb	03 14 07.0	+0.4
TTG				*e*Sg	Sg	03 14 29.8	+3.0
PVY	Plav	1.68	9	⇑*i*Pn	Pb	03 14 09.6	+0.2
PVY				*i* Sn	Sg	03 14 34.3	+2.4
HCY	Herceg Novi	1.73	331	⇓*i*Pn	Pn	03 14 08.9	+0.2
HCY				*e*Sn	Sg	03 14 34.8	+1.3
NKME	Niksic	1.90	345	⇓*i*Pn	Pn	03 14 12.3	+1.3
NKME				*e*Sn	Sg	03 14 39.0	+0.1
KOME	Kolasin	1.92	358	⇓*i*Pn	Pn	03 14 12.5	+1.1
KOME				*i* Sn	Sg	03 14 39.8	+0.3
IVA	Berane	1.95	6	⇓*i*Pn	Pb	03 14 13.3	-0.7
IVA				*i* Sn	Sg	03 14 40.6	+0.1
TREB	Trebinje	2.02	332	*e*Pn	Pn	03 14 12.8	+0.2
DBRK	Dubrovnik	2.05	328	*e*Pn	Pn	03 14 12.1	-1.0
DBRK				Sn	Sn	03 14 39.1	0.0
BRY	Bratogost	2.13	338	⇓*i*Pn	Pn	03 14 15.4	+1.2
BRY				*i* Sn	Sb	03 14 44.2	+0.4
UPM	Unac-Piva	2.33	347	⇓*i*Pn	Pn	03 14 18.3	+1.2
UPM				*i* Sn	Sb	03 14 49.2	-0.5
SJES	Sjenica	2.34	6	*e*Pn	Pn	03 14 19.1	+1.9
SJES				*e*Sn	Sn	03 14 46.2	-0.3
PLE	Pljevlja	2.40	356	⇑*i*Pn	Pn	03 14 19.3	+1.3
PLE				*i* Sn	Sb	03 14 51.1	-0.6
STON	Ston	2.41	324	*e*Pn	Pn	03 14 17.3	-0.7
STON				Sn	Sn	03 14 47.2	-0.7
PRVS	Prvonek	2.42	49	*e*Pn	Pn	03 14 19.0	+0.8
BARS	Barje	2.50	40	*e*Pn	Pn	03 14 20.9	+1.7
SELS	Selova	2.55	26	*e*Pn	Pn	03 14 21.3	+1.4
BOSS	Bosilegrad	2.65	53	*e*Pn	Pn	03 14 22.1	+0.7
IVAS	Ivanjica	2.67	8	*e*Pn	Pn	03 14 22.3	+0.6
IVAS				*e*Sn	Sn	03 14 54.3	-0.2
LSTV	Lastovo	2.74	313	*e*Pn	Pn	03 14 20.9	-1.6
LSTV				Sn	Sn	03 14 53.3	-2.8
BBLS	Lazići	2.94	357	*e*Pn	Pn	03 14 26.1	+0.8
MAKA	Makarska	3.04	322	*e*Pn	Pn	03 14 26.8	+0.1
MAKA				Sn	Sn	03 15 01.9	-1.6
GRUS	Gruza	3.06	15	*e*Pn	Pn	03 14 27.7	+0.7
RICI	Ricice	3.16	325	*e*Pn	Pn	03 14 28.2	-0.1
RICI				Sn	Sn	03 15 05.4	-0.9
HVAR	Hvar	3.25	315	*e*Pn	Pn	03 14 29.2	-0.5
HVAR				Sn	Sn	03 15 06.0	-2.8
TRUS	Trudelj	3.34	10	*e*Pn	Pn	03 14 31.3	+0.5
ZIRJ	Zirje	4.01	314	*e*Pn	Pn	03 14 39.1	-0.9
ZIRJ				Sn	Sn	03 15 25.8	-1.5
MORI	Morici	4.12	317	*e*Pn	Pn	03 14 41.6	+0.1
MORI				Sn	Sn	03 15 28.4	-1.7
DUGI	Dugi Otok	4.55	314	*e*Pn	Pn	03 14 47.0	-0.4
DUGI				Sn	Sn	03 15 38.5	-2.3
VIRC	Vir	4.75	316	*e*Pn	Pn	03 14 49.1	-1.0
VIRC				Sn	Sn	03 15 43.6	-2.1
NVLJ	Novalja	5.04	318	*e*Pn	Pn	03 14 53.7	-0.3
NVLJ				Sn	Sn	03 15 50.6	-2.0
A250A	Rusevo Krmpots	5.40	322	*e*Pn	Pn	03 14 59.0	0.0
A250A				Sn	Sn	03 15 59.5	-2.2

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*IDC **28** 03:28:10.9±0.7, 26°.96N×130°.27E, h0^{km}, mb3.9/13, mbtmp3.9/17, ML2.9/3, MS3.3/19, Error ellipse: s-maj=22.7km s-min=14.2km az=82.0*

*JMA **28** 03:28:13.6±0.1, 27°.0N±0°.4×130°.3E±0°.4, h55^{km}, MD4.1/21, MV4.2/21, NEAR MINAMI-DAITOJIMA IS*

*NEIC **28** 03:28:13.2±1.9, 27°.03N±0°.08×130°.17E±0°.07, h10^{km}±1^{km}, mb4.4/26, Error ellipse: s-maj=16.1km s-min=3.8km az=144.0*

*NIED **28** 03:28:13.6, 26°.97N×130°.26E, h55^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.72; $M_{\theta\theta}$1.44; $M_{\phi\phi}$1.28; $M_{r\theta}$1.68; $M_{\theta\phi}$1.25; $M_{\phi r}$0.24; Fault plane solution: $M_0$3.15000×10^{15} NP1:ϕ_s33.00000°, δ33.00000°, λ-116.00000°. NP2:ϕ_s243.00000°, δ61.00000°, λ-74.00000°.*

ISC 28 03:28:11.2±3.2**, 27°.00N**±0°.03×**130°.26E**±0°.04**, h4**^{km}±20^{km}**, n84, σ1^s.46**/76**, mb4.3**/25**, MS3.4**/15**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.33	349	P	Pn	03 28 37.2	+0.6
JKDJ	Kitadaitoujima	1.40	138	P	Pn	03 28 36.6	-0.8
JKDJ				*e*S	Sn	03 28 54.3	-2.1
JKDJ	Kitadaitoujima	1.40	138	A	A	03 28 36.6	
	comp=E,6.0nm,4.8s,comp=E,5.0nm,9.5s						
JTK	Tokunoshima	1.40	304	P	Pn	03 28 37.6	+0.1
JTK				*e*S	Sb	03 28 55.0	-1.2
JMZ	Minamidaito 2	1.46	144	P	Pn	03 28 37.9	-0.4
JMZ				*e*S	Sn	03 28 54.9	-2.9
JMZ	Minamidaito 2	1.46	144	A	A	03 28 37.9	
	comp=E,6.0nm,5.5s,comp=E,8.0nm,4.1s						
JAM	Amami Oshima	1.52	338	P	Pn	03 28 39.4	+0.2
JAM				*e*S	Sn	03 28 57.7	-1.7
JOKE	Okinoerabujima	1.55	284	P	Pb	03 28 39.8	-0.6
JOKE				S	Sn	03 28 58.4	-1.6
JAMN	Amaminishikomi	1.57	322	P	Pn	03 28 39.8	+0.1
JAMN				S	Sn	03 28 59.4	-1.1
JYRO	Yoronjima	1.61	271	P	Pn	03 28 40.5	+0.1
JYRO				S	Sn	03 28 59.3	-2.4
JOW	Kunigami	1.78	265	Pn	Pn	03 28 42.9	+0.1
	37nm,0.3s,baz=304,slow=28,SNR=179						
JOW				Sn	Sn	03 29 03.4	-2.4
	168nm,0.3s,baz=2.8,slow=28,SNR=28						
JOW	Kunigami	1.78	265	P	Pn	03 28 42.8	+0.1
JOW				S	Sn	03 29 03.9	-1.9
JOW	Kunigami	1.78	265	A	A	03 28 42.8	
	comp=E,2.0nm,0.9s,comp=E,4.0nm,1.6s						
JIH	Iheya	2.04	271	P	Pn	03 28 46.9	+0.5
JIH				S	Sn	03 29 10.8	-1.5
JNTH	Nagotoyohara	2.06	257	P	Pn	03 28 46.3	-0.2
JNTH				S	Sn	03 29 09.5	-3.1
JTAJ	Takarajima	2.34	337	P	Pn	03 28 50.3	-0.1
JJT3	Tamagusuku3	2.38	249	P	Pn	03 28 51.2	+0.3
JJT3				S	Sn	03 29 19.1	-1.4
JAGN	Aguni-jima	2.73	262	P	Pn	03 28 55.6	-0.1
JKE	Kume jima 2	3.18	259	P	Pn	03 29 01.9	0.0
JKE				S	Sn	03 29 38.2	-2.2
JYAK	Yakushimahirau	3.23	4	P	Pn	03 29 03.1	+0.4
JYAK				S	Sn	03 29 38.5	-3.1
JSU	Suzuyama	4.49	2		Pn	03 29 19.6	-0.4
JNU	Nakatsue	6.12	5	Pn	Pn	03 29 43.4	+1.0
	1.0nm,0.3s,baz=201,slow=12,SNR=3.3						
JNU				Sn	Sn	03 30 46.9	-6.1
	48nm,0.3s,baz=138,slow=0.0,SNR=36						
	17nm,0.9s						
JHJ	Hachijo jima 2	10.26	51	LR	LR	03 34 14.2	
	comp=Z,134nm,18.8s,baz=254,slow=35						
KSRS	Korea Array	10.61	350	Pn	Pn	03 30 46.4	+2.5
	4.5nm,0.8s,baz=168,slow=14,SNR=24						
JCJ	Chichijima	10.63	87	LR	LR	03 34 24.7	
	comp=Z,65nm,18.4s,baz=282,slow=35						
SEHB	SEOHWA	11.36	352	Pn	Pn	03 30 54.2	-0.1
MJAR	Matsushiro Arr	11.67	33	Pn	Pn	03 31 00.1	+1.7
	baz=193,slow=13,SNR=2.0						
	0.6nm,0.6s						
USA0B	Ussuriysk Arra	17.22	4	Pn	Pn	03 32 12.7	+0.2
USRK	Ussuriysk Ar.	17.22	4	P	P	03 32 14.6	+0.4
	0.2nm,0.3s,baz=167,slow=13,SNR=5.0						
	1.3nm,0.6s						
BJT	Baijiatuau	17.48	322	Pn	Pn	03 32 12.6	-3.2
BJT				IAmb	IAmb	03 32 20.5	
	comp=Z,24nm,0.9s						
ENH	Enshi	18.52	285	P	P	03 32 26.9	-1.8
GUMO	Guam	19.10	131	LR	LR	03 38 44.6	
	comp=Z,62nm,18.4s,baz=318,slow=33						
ASAJ	Asahikawa	19.77	27	LR	LR	03 41 02.5	
	comp=Z,64nm,18.0s,baz=64,slow=39						
KLR	Kul'dur	22.22	3	P	P	03 33 08.5	-0.2
	comp=Z,2.0nm,0.7s,baz=173,slow=5.4,SNR=6.7						
	comp=Z,2.0nm,0.7s						
MYLDM	Lahad Datu	24.43	209	P	P	03 33 30.2	-0.8
MYLDM				IAmb	IAmb	03 33 34.5	
	comp=Z,16nm,1.2s						
SONM	Songino Array	27.94	324	LR	LR	03 46 54.3	
	comp=Z,49nm,19.3s,baz=52,slow=40						
PETK	Petropavlovsk-	33.10	31	LR	LR	03 49 17.2	
	comp=Z,40nm,18.6s,baz=205,slow=38						
SEY	Seymchan	38.77	16	LR	LR	03 52 18.4	
	comp=Z,60nm,18.9s,baz=46,slow=37						
PMG	Port Moresby	39.73	153	LR	LR	03 52 03.5	
	comp=Z,26nm,18.8s,baz=244,slow=36						
SHEM	Shemya Is, Ala	41.42	40	LR	LR	03 51 05.2	
	comp=Z,14nm,19.9s,baz=240,slow=33						
MK31	Makanchi Array	42.39	311	P	P	03 36 06.0	-0.7
MKAR	Makanchi Array	42.39	311	P	P	03 36 07.6	+0.9
	comp=Z,0.4nm,0.6s,baz=92,slow=9.6,SNR=4.9						
	comp=Z,0.4nm,0.6s						
KNRA	Kununurra	42.45	182	P	P	03 36 07.2	-0.1
ZAA0	Zalesovo Array	42.75	322	P	P	03 36 10.3	+0.8
ZALV	Zalesovo Beam	42.75	322	P	P	03 36 11.2	+1.7
	comp=Z,0.9nm,0.6s,baz=118,slow=9.5,SNR=4.7						
	comp=Z,0.9nm,0.6s						
KURK	Kurchatov	45.52	316	P	P	03 36 32.8	+1.0
KURBB	Kurchatov Arra	45.56	316	LR	LR	03 56 30.1	
	comp=Z,84nm,20.9s,baz=136,slow=37						
WRAB	Tennant Creek	46.82	175	P	P	03 36 42.8	+0.5
WRA	Warramunga Arr	46.83	175	P	P	03 36 42.4	+0.1
	comp=Z,4.0nm,0.7s,baz=355,slow=8.4,SNR=40						
WRA				PcP	PcP	03 38 14.8	-0.7
	comp=Z,0.5nm,0.8s,baz=354,slow=4.0,SNR=2.2						
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	46.83	175	P	P	03 36 42.9	+0.5
WB2	Warramunga Arr	46.83	175	P	P	03 36 42.8	+0.5
AAK	Ala-Archa	47.53	304	LR	LR	03 57 25.5	
	comp=Z,41nm,18.6s,baz=117,slow=37						
NIL	Nilore	49.13	292	P	P	03 37 01.5	+1.3
PSA00	Pilbara Seismi	49.33	193	P	P	03 37 02.5	+0.9
PSA00				IAmb	IAmb	03 37 04.6	
	comp=Z,8.7nm,1.3s						
KK31	Karatay Array	50.45	305	P	P	03 37 10.6	+0.5
KK31				IAmb	IAmb	03 37 29.4	
	comp=Z,2.9nm,1.2s						
KKAR	Karatay Array	50.45	305	P	P	03 37 10.9	+0.8
KKAR				IAmb	IAmb	03 37 29.4	
	comp=Z,2.9nm,1.2s						
ASAR	Alice Springs	50.49	176	P	P	03 37 10.8	+0.3
	comp=Z,2.5nm,0.8s,baz=6.8,slow=14,SNR=36						
ASAR				PcP	PcP	03 38 27.7	-0.9
	comp=Z,0.8nm,0.9s,baz=11,slow=5.2,SNR=3.1						
	comp=Z,2.5nm,0.8s						
KBL	Kabul	52.45	294	P	P	03 37 25.3	-0.1
ABKAR	Akbulak array	57.45	313	P	P	03 38 01.8	+0.7
ARU	Arti	57.92	322	LR	LR	04 05 37.0	
	comp=Z,57nm,18.9s,baz=104,slow=39						
ARU	Arti	57.92	322	P	P	03 38 05.2	+0.9
ARU				IAmb	IAmb	03 38 09.2	
	comp=Z,3.1nm,0.7s						
AKTO	Aktyubinsk	58.59	314	LR	LR	04 03 59.2	
	comp=Z,38nm,21.4s,baz=101,slow=37						
STKA	Stephens Creek	59.54	169	P	P	03 38 15.9	+0.2
	comp=Z,2.0nm,0.7s,baz=326,slow=15,SNR=2.4						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	59.54	169	IAmb	IAmb	03 38 20.2	
	comp=Z,3.0nm,1.4s						
NEA2	Nenana	61.98	29	IAmb	IAmb	03 38 34.1	
	comp=Z,4.5nm,1.1s						
MDM	Murphy Dome	62.31	28	IAmb	IAmb	03 38 36.5	
	comp=Z,3.1nm,1.0s						
IL31		62.90	29	P	P	03 38 39.5	+1.3
IL31				IAmb	IAmb	03 39 02.1	
	comp=Z,1.3nm,0.8s						
ILAR	Eielson Array	62.90	29	P	P	03 38 37.6	-0.6
	comp=Z,0.2nm,0.7s,baz=251,slow=5.6,SNR=3.3						
	comp=Z,0.2nm,0.7s						
SCRK	Sand Creek	64.25	29	P	P	03 38 48.3	+1.0
SCRK				IAmb	IAmb	03 39 04.2	
	comp=Z,2.2nm,0.9s						
J26L	Joseph Creek	64.35	29	IAmb	IAmb	03 39 07.3	
	comp=Z,2.3nm,0.9s						
BELG	Belogornoye	64.73	318	LR	LR	04 08 02.6	
	comp=Z,48nm,21.0s,baz=179,slow=37						
M26K	Nabesna, AK	64.96	31	IAmb	IAmb	03 38 54.0	
	comp=Z,3.4nm,1.1s						
ARCES	ARCESS Array B	69.95	339	LR	LR	04 12 56.2	
	comp=Z,24nm,20.3s,baz=86,slow=38						
KBZ	Khabaz	70.07	310	P	P	03 39 26.2	+1.8
	comp=Z,2.3nm,0.9s,baz=94,slow=7.8,SNR=2.9						
KBZ				LR	LR	04 13 41.8	
	comp=Z,35nm,18.4s,baz=64,slow=39						
	comp=Z,2.3nm,0.9s						
FINES	FINESS Array B	73.08	331	P	P	03 39 42.8	+0.5
	comp=Z,2.5nm,1.0s,baz=79,slow=7.2,SNR=9.5						
	comp=Z,2.5nm,1.0s						
AKASG	Malin Array Be	76.12	320	LR	LR	04 16 18.0	
	comp=Z,25nm,19.1s,baz=38,slow=38						
BR131	Keskin Array S	77.99	308	P	P	03 40 09.8	-1.2
BRTR	Keskin Array B	77.99	308	P	P	03 40 11.1	0.0
	comp=Z,0.8nm,0.6s,baz=109,slow=6.0,SNR=6.8						
	comp=Z,0.8nm,0.6s						
NB2	NORSAR Subarra	79.42	334	P	P	03 40 17.9	-0.5
	comp=Z,1.4nm,0.9s,baz=47,slow=5.1						
NOA	NORSAR Array B	79.42	334	P	P	03 40 17.6	-0.7
	comp=Z,0.7nm,0.7s,baz=50,slow=5.2,SNR=5.2						
NOA				LR	LR	04 18 22.0	
	comp=Z,8.5nm,18.4s,baz=30,slow=38						
	comp=Z,0.7nm,0.7s						
MLR	Muntele Rosu	80.46	316	P	P	03 40 24.1	-0.3
MLR				IAmb	IAmb	03 40 26.6	
	comp=Z,6.4nm,1.4s						
VRAC	Vranov	83.86	323	LR	LR	04 19 55.1	
	comp=Z,30nm,20.6s,baz=54,slow=37						
NVAR	Mina Array Bea	88.66	47	P	P	03 41 07.8	+1.7
	comp=Z,0.5nm,0.8s,baz=260,slow=5.4,SNR=3.7						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	91.42	40	P	P	03 41 19.9	+0.9
	comp=Z,0.7nm,0.9s,baz=316,slow=4.1,SNR=5.5						
	comp=Z,0.7nm,0.9s						

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*IDC **28** 03:29:59.2±2.2, 37°.35S×73°.22W, h0^{km}, mb3.3/2, mbtmp3.3/3, ML3.7/1, MS3.0/2, Error ellipse: s-maj=103.4km s-min=22.3km az=61.0*

*GUC **28** 03:29:59.8±0.4, 37°.52S×74°.03W, h36^{km}±2^{km}, ML4.2*

*NEIC **28** 03:30:00±0.8, 37°.51S±0°.06×74°.1W±0°.2, h27^{km}±9^{km}, mb4.0/2, ML4.2(GUC), Error ellipse: s-maj=19.5km s-min=7.6km az=100.0*

ISC 28 03:30:01.5±1.3**, 37°.53S**±0°.04×**73°.9W**±0°.1**, h35**^{km}**, n48, σ0^s.77**/48**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	0.92	42	*e*P	Pn	03 30 17.1	-0.7
CCSP				*i* S	Sn	03 30 30.0	+0.1
CCSP				IAML		03 30 32.1	
	comp=E,22µm,0.3s						
BI05	Punta Hualpn	0.95	35		Pn	03 30 18.2	-0.2
BI05	Punta Hualpn	0.95	35	*e*P	Pn	03 30 17.8	-0.6
BI05				*i* S	Sn	03 30 30.8	0.0
BI05				IAML		03 30 33.0	
	comp=E,7µm,0.5s						
LC02	Puerto Saavedr	1.32	163		Pn	03 30 22.5	-0.8
LC02	Puerto Saavedr	1.32	163	*e*P	Pn	03 30 22.6	-0.8
LC02				*i* S	Sn	03 30 40.1	+0.5
LC02				IAML		03 30 49.5	
	comp=N,9µm,0.3s						
LR04	Corral	2.37	172	Pn	Pn	03 30 37.6	-0.2
LR03	Panguipulli	2.42	151	Pn	Pn	03 30 38.6	+0.1
ML02	Panimavida	2.65	49		Pn	03 30 42.1	+0.4
ML02	Panimavida	2.65	49	*i* S	Sn	03 31 14.5	+1.9
GO05	Huala	2.97	33	Pn	Pn	03 30 46.3	+0.2
GO05	Huala	2.97	33	*e*P	Pn	03 30 46.3	+0.2
BO03	Pichilemu	3.40	28	*e*P	Pn	03 30 51.8	-0.3
BO03				*i* S	Sn	03 31 31.6	+0.4
LL04	Puerto Octay	3.56	162	Pn	Pn	03 30 54.7	+0.5
LL04	Puerto Octay	3.56	162	*e*P	Pn	03 30 54.3	+0.1
LL03	Petrohue	3.78	163	Pn	Pn	03 30 57.8	+0.6
BO01	Tunca	3.87	37	Pn	Pn	03 30 58.8	+0.4
BO01	Tunca	3.87	37	*e*P	Pn	03 30 58.2	-0.2
BO01				*i* S	Sn	03 31 43.8	+1.2
LL05	Los Muermos	3.88	176		Pn	03 30 58.7	+0.1
PLCA	Paso Flores	4.11	142	Pn	Pn	03 31 01.7	-0.1
	comp=N,1.1nm,0.3s,baz=321,slow=14,SNR=46						
PLCA				Lg	Lg	03 32 04.9	
	comp=N,4.2nm,0.3s,baz=219,slow=23,SNR=5.3						
	comp=N,3.6nm,0.3s						
PLCA	Paso Flores	4.11	142	Pn	Pn	03 31 02.3	+0.5
MT01	Popeta	4.24	31		Pn	03 31 03.5	0.0
VA05	Santo Domingo	4.28	26		Pn	03 31 03.7	-0.4
BO04	La Punta	4.42	38		Pn	03 31 06.0	-0.1
BO04	La Punta	4.42	38	*e*P	Pn	03 31 06.0	-0.1
BO04				*i* S	Sn	03 31 57.0	+0.6
MT09	Talagante	4.42	33		Pn	03 31 06.2	0.0
MT09	Talagante	4.42	33	*e*P	Pn	03 31 06.0	-0.2
MT09				*i* S	Sn	03 31 56.2	-0.4
LMEL	Las Melosas	4.74	40		Pn	03 31 10.9	+0.4
LMEL	Las Melosas	4.74	40	*e*P	Pn	03 31 11.1	+0.5
MT02	Curacav	4.81	28		Pn	03 31 10.9	-0.6
MT02	Curacav	4.81	28	*e*P	Pn	03 31 10.6	-0.9
MT02				*i* S	Sn	03 32 04.0	-2.0
MT03	Universidad Ad	4.87	35		Pn	03 31 12.3	-0.1
ROC1	El Roble	5.11	28		Pn	03 31 15.8	0.0
FCH	Farellones	5.11	36	*e*P	Pn	03 31 15.6	-0.3
VA06	Catapilco	5.39	24	Pn	Pn	03 31 18.1	-1.3
H03S1	Juan Fernandez	5.50	310	Pn	Pn	03 31 23.3	+2.6
H03S1				T	T	03 37 05.9	
	baz=128						
H03S3	Juan Fernandez	5.52	311	Pn	Pn	03 31 23.5	+2.6
H03S3				T	T	03 37 04.7	
	baz=128						
H03S2	Juan Fernandez	5.52	310	Pn	Pn	03 31 23.2	+2.3
H03S2				T	T	03 37 03.8	
	baz=128						
H03N3	Juan Fernandez	5.79	313	Pn	Pn	03 31 27.5	+2.9
	baz=157,slow=73						
H03N3				T	T	03 37 31.3	
	baz=147,slow=70,SNR=42						
H03N1	Juan Fernandez	5.79	313	Pn	Pn	03 31 27.4	+2.8
	baz=157,slow=73						
H03N1				T	T	03 37 26.4	
	baz=147,slow=70,SNR=12						
H03N2	Juan Fernandez	5.80	313	Pn	Pn	03 31 27.6	+2.8
	baz=157,slow=73						
H03N2				T	T	03 37 31.8	
	baz=147,slow=70,SNR=12						
CO02	Combarbal	6.75	21		Pn	03 31 36.7	-1.4
GO04	Tololo Observa	7.77	20	Pn	Pn	03 31 51.6	-0.7
TRQA	Tornquist	9.43	97	Pn	Pn	03 32 15.8	+1.0
ITAB	Concordia	20.99	67	P	P	03 34 40.9	-0.9
ITAB				IAmb	IAmb	03 34 51.2	
	comp=Z,18nm,1.3s						
NNA	Nana	25.57	353	LR	LR	03 43 00.9	
	comp=Z,18nm,20.5s,baz=154,slow=31						
RPN	Rapa Nui	31.54	279	LR	LR	03 45 38.1	
	comp=Z,59nm,18.6s,baz=214,slow=29						
TXAR	Lajitas Array	72.14	333	P	P	03 41 26.1	+3.7
	comp=Z,0.1nm,0.6s,baz=155,slow=8.8,SNR=1.6						
	comp=Z,0.1nm,0.6s						
TORD	Torodi Ar. Bea	86.80	71	P	P	03 42 42.9	+0.5
	comp=Z,0.4nm,0.9s,baz=218,slow=4.3,SNR=1.7						
	comp=Z,0.4nm,0.9s						

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*DNK **28** 03:37:22.6±2.1, 51°.59N×6°.96E, h0^{km}±93^{km}, ML2.9*

*PRU **28** 03:37:23.3±0.0, 51°.46N×6°.67E, h0^{km}*

*BUG **28** 03:37:23.8±0.0, 51°.59N×6°.89E, h2^{km}±1^{km}, MD3.7/16, ML3.5/17*

BUG Felt V EMS.

*BGS **28** 03:37:23.6±0.8, 51°.60N×7°.03E, h12^{km}±16^{km}, ML3.4*

*BGR **28** 03:37:24.7±0.2, 51°.57N×6°.86E, h1^{km}, ML3.3/31, Error ellipse: s-maj=3.3km s-min=2.2km az=113.0*

*UCC **28** 03:37:24.8, 51°.61N×6°.89E, h10^{km}, ML2.8*

*LDG **28** 03:37:24.9±0.1, 51°.56N×6°.83E, h1^{km}, Md3.5/3, Ml3.5/35, Error ellipse: s-maj=2.1km s-min=1.3km az=143.0, Suspected Mining induced.*

*IDC **28** 03:37:25.6±3.4, 51°.60N×6°.97E, h0^{km}, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=40.8km s-min=13.8km az=69.0*

*BNS **28** 03:37:25.1±0.4, 51°.55N×6°.91E, h2^{km}±5^{km}, ML2.9*

ISC 28 03:37:22.0±0.6**, 51°.58N**±0°.02×**6°.80E**±0°.02**, h0**^{km}**, n209, σ2^s.53**/352**, 3C-37D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.06	44	Pg	Pg	03 37 24.8	+1.7
BZER				Sg	Sg	03 37 26.0	+2.1
LAUG	Laupendahl	0.24	159	⇓*e*Pg	Pg	03 37 29.0	+2.4
BAVN	Auguste-Victor	0.26	51	Pg	Pg	03 37 28.9	+2.0
BULI	Ruhr-Universit	0.31	113	Pg	Pg	03 37 29.9	+2.0
BUG	Bochum--Univer	0.32	115	Pg	Pg	03 37 30.1	+2.0
BUG				Sg	Sg	03 37 33.2	+0.9
BKLB	Ruhr-Universit	0.32	115	Pg	Pg	03 37 30.1	+2.0
BTEZ	Ruhr-Universit	0.32	113	Pg	Pg	03 37 30.1	+1.9
WTSB	Winterswijk	0.39	360	*e*Pg	Pg	03 37 32.1	+2.6
WTSB				*e*Sg	Sg	03 37 38.0	+3.5
ENTS	Ennepetalsperr	0.51	131	⇓*i*Pg	Pg	03 37 33.6	+1.9
ENTS				*e*Sg	Sg	03 37 40.4	+2.1
PLH	Pulheim	0.57	179	*e*Pg	Pg	03 37 35.2	+2.3
PLH				*e*Sg	Sg	03 37 43.0	+2.7
HMES	Hamm, Michael-	0.58	82	Pg	Pg	03 37 34.6	+1.5
HMES				Sg	Sg	03 37 42.8	+2.2
OPLO	Oploo	0.62	271	*e*Pg	Pg	03 37 37.3	+3.4
OPLO				*e*Sn	Sb	03 37 49.7	+4.8
RWB	Wassenberg	0.63	221	*e*Pg	Pg	03 37 36.9	+2.9
RWB				*e*Sg	Sg	03 37 45.7	+3.7
	644nm,0.4s						
BNS	Bensberg	0.66	159	*e*Pg	Pg	03 37 37.2	+2.6
HOBG	Hohbusch	0.68	151	⇓*e*Pg	Pg	03 37 37.2	+2.2
HOBG				*e*Sg	Sg	03 37 46.4	+2.6
	736nm,0.4s						
SORT	Sorpetalsperre	0.77	107	⇓*e*Pg	Pg	03 37 38.0	+1.4
SORT				*e*Sg	Sg	03 37 48.1	+1.6
	336nm,0.6s						
GSH	Grosshau	0.88	198	*e*Pg	Pg	03 37 41.2	+2.3
GSH				*e*Sg	Sg	03 37 53.5	+3.1
	385nm,0.3s						
IBBS	Ibbenbueren So	0.92	39	Pg	Pg	03 37 41.1	+1.5
IBBS				Pn	Pb	03 37 42.4	+1.6
IBBS				Sg	Sg	03 37 53.4	+1.9
IBBS				Sn	Sb	03 37 56.2	+2.7
IBBN	Ibbenburen	0.94	39	Pg	Pg	03 37 41.2	+1.2
IBBN				Pn	Pb	03 37 42.9	+1.8

IBBN				Sg	Sg	03 37 54.2	+2.1
IBBN				Sn	Sb	03 37 57.2	+3.1
IBBE	Ibbenbueren Ea	0.95	40	Pg	Pg	03 37 41.4	+1.3
IBBE				Pn	Pb	03 37 43.0	+1.7
HGN	Heimansgroeve	0.98	214	eP	Pg	03 37 42.8	+2.1
HGN				eS	Sg	03 37 57.0	+3.6
HGN	Heimansgroeve	0.98	214	Pg	Pg	03 37 43.6	+2.8
HGN				Pn	Pn	03 37 45.8	+2.8
HGN				Sg	Sg	03 37 57.1	+3.6
HGN				Sn	Sb	03 37 58.7	+3.4
KLL	Kalltalsperre	0.98	199	ePg	Pg	03 37 43.6	+2.8
DREG	Dreilaegerbach	0.98	202	ePg	Pg	03 37 43.8	+3.0
STB	Steinbach	0.98	179	ePg	Pg	03 37 43.3	+2.5
TDN	Todenfeld	1.01	175	ePg	Pg	03 37 43.4	+2.1
TDN				eSg	Sg	03 37 56.8	+2.5
	309nm,0.2s						
AHRW	Bad Neuenahr-A	1.05	170	Pg	Pg	03 37 44.2	+2.1
AHRW				Sg	Sb	03 37 59.3	+2.0
BEBN	Eben Emael	1.06	223	dP	Pg	03 37 44.8	+2.6
BEBN				dS	Sg	03 37 59.2	+3.3
	comp=N,524nm,0.0s						
KASTN	Kahler Asten	1.08	110	Pg	Pg	03 37 44.0	+1.4
KASTN				Pn	Pb	03 37 44.7	+1.2
KASTN				Sg	Sg	03 37 58.8	+2.2
MEM	Membach	1.09	208	ePg	Pg	03 37 45.0	+2.1
MEM				eSg	Sg	03 38 00.3	+3.3
MEM	Membach	1.09	208	bP	Pg	03 37 44.8	+1.9
MEM				dS	Sg	03 38 00.1	+3.1
	comp=N,539nm,0.0s						
OLFT	Oleftalsperre	1.11	193	ePg	Pg	03 37 45.5	+2.2
OLFT				eSg	Sg	03 38 00.5	+2.8
BMOL	Mol	1.14	252	dP	Pg	03 37 46.8	+3.0
BMOL				dS	Sb	03 38 03.2	+3.4
BLCH	La Chartreuse	1.21	219	dP	Pg	03 37 47.0	+1.9
BLCH				dS	Sg	03 38 03.9	+3.1
	comp=N,270nm,0.0s						
BHE	Schloss Buerre	1.25	169⇓	ePg	Pg	03 37 47.6	+1.7
BHE				eSg	Sg	03 38 04.2	+2.1
	comp=N,325nm,0.7s						
BSTI	Sart Tilman	1.27	219	dP	Pg	03 37 47.6	+1.5
HILG	Hillesheim	1.29	184	ePg	Pg	03 37 48.2	+1.5
KOE	Koeppel	1.29	153	ePg	Pg	03 37 48.0	+1.3
BHOU	Houvegnez	1.33	203	dP	Pg	03 37 49.1	+1.8
BHOU				dS	Sg	03 38 06.7	+2.2
	comp=E,296nm,0.0s						
LOH	Wallersheim-Lo	1.41	187	ePg	Pg	03 37 50.0	+1.1
LOH				eSg	Sg	03 38 08.6	+1.4
	comp=E,267nm,0.3s						
BGG	Burgeitz	1.42	166	ePg	Pn	03 37 49.7	+0.8
BCLA	Clavier	1.50	220	bP	Pn	03 37 51.2	+1.1
BCLA				dS	Sg	03 38 12.0	+2.0
	comp=E,167nm,0.0s						
LKLB	Kalborn	1.54	197	κP	Pn	03 37 51.9	+1.2
LKLB				dS	Sn	03 38 12.4	+1.0
	comp=N,240nm,0.0s						
BGES	Gesves	1.61	223	dP	Pn	03 37 52.6	+0.9
BGES				dS	Sn	03 38 14.5	+1.3
	comp=N,152nm,0.0s						
TNS	Taunus Mts	1.71	142	Pn	Pn	03 37 53.7	+0.6
TNS				Pg	Pb	03 37 55.2	+0.9
UCC	Uccle	1.73	244	eSn	Sn	03 38 16.7	+0.8
UCC	Uccle	1.73	244	dP	Pn	03 37 56.5	+3.3
RCHB	Rochefort	1.74	216	dP	Pn	03 37 55.2	+1.8
RCHB				dS	Sn	03 38 17.7	+1.4
ABH	Alteburg	1.76	164	ePn	Pn	03 37 54.9	+1.1
ABH				eSn	Sn	03 38 17.7	+0.8
BMRD	Maredsous	1.81	226	dP	Pn	03 37 56.0	+1.5
	comp=Z,87nm,0.0s						
BMRD				dS	Sn	03 38 19.7	+1.6
	comp=N,87nm,0.0s						
RIVT	Riveris	1.87	181	ePn	Pn	03 37 56.1	+0.9
BRQR	Ronquire	1.90	240	dP	Pn	03 37 57.8	+2.3
SNF	Seneffe	1.92	237	dP	Pn	03 37 57.2	+1.4
SNF				dS	Sn	03 38 23.7	+3.0
BODE	Bodenheim	1.92	150	ePn	Pn	03 37 57.3	+1.5
BODE				eSg	Sb	03 38 23.8	+1.5
GIVF	Givet	1.94	221	ePn	Pn	03 37 57.2	+1.0
GIVF	Givet	1.94	221	ePg	Pb	03 38 00.5	+2.3
GIVF				eSn	Sn	03 38 20.4	-0.8
GIVF				eSg	Sb	03 38 24.7	+1.8
	comp=N,133nm,0.3s						
BSKQ	Steenkerk	1.95	243	dP	Pn	03 37 57.6	+1.3
RETH	Rethem/Aller,	1.96	53	ePn	Pn	03 37 56.7	+0.3
WLF	Walferdange	1.96	192	Pn	Pb	03 38 00.2	+1.7
WLF				Pg	Pg	03 38 01.7	+2.2
WLF				Sn	Sn	03 38 24.5	+2.8
WLF				eSg	Sb	03 38 24.8	+1.3
WLF	Walferdange	1.96	192	dP	Pn	03 37 59.6	+3.1
WLF				dS	Sn	03 38 23.1	+1.3
GTTG	Gottingen	1.97	90	ePn	Pn	03 37 56.9	+0.3
DOU	Dourbes	2.04	224	eP	Pn	03 37 58.9	+1.4
DOU				eS	Sn	03 38 23.8	+0.1
DOU	Dourbes	2.04	224	bP	Pn	03 37 59.0	+1.4
DOU				dS	Sn	03 38 23.8	+0.1
	comp=N,123nm,0.0s						
UBBA	Unterbreizbach	2.15	109	Pn	Pn	03 37 59.0	0.0
UBBA				Pg	Pb	03 38 02.7	+1.0
UBBA				Sg	Sg	03 38 33.3	+2.3
BBOU	Bougnies	2.16	238	dP	Pn	03 38 01.7	+2.5
CLZ	Clausthal	2.24	82	Pn	Pn	03 38 00.1	-0.2
CLZ				Pg	Pb	03 38 04.3	+1.0
NRDL	Niedersach Rie	2.24	64	Pn	Pn	03 37 59.8	-0.4
NRDL				Pg	Pb	03 38 04.8	+1.6
NRDL				Sg	Sg	03 38 37.6	+3.8
BAIF	Baives	2.24	228	ePn	Pn	03 38 00.7	+0.4
BAIF	Baives	2.24	228	ePg	Pb	03 38 06.0	+2.7
BAIF				eSn	Sn	03 38 27.5	-1.1
BAIF				eSg	Sb	03 38 34.6	+3.0
	comp=N,27nm,0.2s						
HROE	Hohe Rhon--Fla	2.36	115	ePn	Pn	03 38 02.6	+0.7
MILB	Miltenberg	2.36	137	ePn	Pn	03 38 03.1	+1.2
KTD	Kalmit	2.40	160	ePn	Pn	03 38 04.8	+2.2
CHRS	Christianenhau	2.50	88	ePn	Pn	03 38 03.7	-0.3
POSS	Possen	2.55	94	ePn	Pn	03 38 04.9	+0.3
PAGF	Fort de Pagny	3.10	193	ePn	Pn	03 38 12.5	+0.3
PAGF	Fort de Pagny	3.10	193	ePg	Pb	03 38 22.2	+4.2
PAGF				eSn	Sn	03 38 47.7	-2.3
PAGF				eSg	Sg	03 39 01.9	+0.2
	comp=N,45nm,0.5s						
SAVF	Savonnieres en	3.16	201	ePn	Pn	03 38 14.0	+1.1
	baz=29						
SAVF	Savonnieres en	3.16	201	ePg	Pb	03 38 22.5	+3.6
SAVF				eSn	Sn	03 38 49.0	-2.2
SAVF				eSg	Sg	03 39 03.7	+0.4
	comp=N,60nm,0.5s						
MOX	Moxa	3.17	105	Pn	Pn	03 38 14.3	+1.2
MOX				Sg	Sg	03 39 06.4	+2.5
BSEG	Bad Segeberg	3.18	41	Pn	Pn	03 38 13.2	0.0
CDF	Champ du Feu	3.18	174	ePn	Pn	03 38 13.9	+0.5
CDF	Champ du Feu	3.18	174	ePg	Pb	03 38 22.7	+3.3
CDF				eSg	Sb	03 39 03.3	+4.5
	comp=N,39nm,0.5s						
MEZF	Maizieres J'vi	3.28	201	ePn	Pn	03 38 16.0	+1.4
	baz=18						
MEZF	Maizieres J'vi	3.28	201	ePg	Pg	03 38 26.4	+1.6
MEZF				eSg	Sb	03 39 06.1	+4.7
	comp=N,66nm,0.5s						
GRF	Grafenberg Arr	3.39	122	ePn	Pn	03 38 17.4	+1.3
BFO	Black Forest	3.40	163	Pn	Pn	03 38 17.1	+0.9
BFO				Sg	Sb	03 39 09.1	+4.2
PLN	Plauen	3.55	106	ePn	Pn	03 38 19.5	+1.2
SFTF	Sexfontaines	3.56	199	ePn	Pn	03 38 18.7	+0.2
	baz=27						
SFTF	Sexfontaines	3.56	199	ePg	Pb	03 38 30.7	+4.8
SFTF				eSn	Sn	03 38 58.6	-2.7
SFTF				eSg	Sb	03 39 15.7	+6.1
	comp=N,19nm,0.3s						
HAU	Haudompre	3.59	185	ePn	Pn	03 38 19.2	+0.3
HAU	Haudompre	3.59	185	ePg	Pb	03 38 30.5	+4.2
HAU				eSn	Sn	03 38 58.8	-3.1
HAU				eSg	Sb	03 39 16.1	+5.7
	comp=N,46nm,0.4s						
ELMS	Elmsett, Ipswi	3.64	280	eP	Pn	03 38 21.5	+1.9
ELMS				eS	Sn	03 39 03.0	-0.2
ELMS				IAML		03 39 10.6	
	comp=E,59nm,0.4s						
ELMS				IAML		03 39 37.5	
	comp=N,44nm,0.4s						
WERD	Werda	3.66	106	ePn	Pn	03 38 20.9	+1.2
GUNZ	Gunzen	3.70	107	ePn	Pn	03 38 21.6	+1.2
WERN	Wernitzgruen	3.75	108	ePn	Pn	03 38 22.4	+1.3
TANN	Tannenbergstha	3.76	106	ePn	Pn	03 38 22.4	+1.1
HINF	Hinteralfeld	3.77	179	ePn	Pn	03 38 21.6	+0.3
HINF	Hinteralfeld	3.77	179	ePg	Pb	03 38 33.1	+3.8
HINF				eSn	Sn	03 39 03.2	-3.1
HINF				eSg	Sg	03 39 22.7	-0.2
	comp=N,17nm,0.4s						
BERGE	Lenzkirch (DE)	3.82	166	ePn	Pn	03 38 23.1	+1.1
NKC	Novy Kostel	3.82	108	ePN	Pn	03 38 22.9	+0.9
CLL	Collm	3.89	92	ePn	Pn	03 38 25.0	+2.1
CLL				ePg	Pb	03 38 35.0	+3.6
CLL				eSn	Sn	03 39 01.0	-8.3
CLL				eSg	Sg	03 39 25.0	-1.8
	comp=Z,30nm,0.7s						
CLL				ex	x	03 39 31.0	
CLL	Collm	3.89	92	Pn	Pn	03 38 24.3	+1.4
CLL				Pg	Pb	03 38 34.8	+3.4
CLL				Sn	Sn	03 39 10.6	+1.3
CLL				Sg	Sg	03 39 24.7	-2.1
EMING	Emmingen-Lipti	3.92	159	ePn	Pn	03 38 24.6	+1.2
UBR	Ueberruh	4.45	150	Pn	Pn	03 38 32.6	+1.8
UBR				Sn	Sn	03 39 24.4	+1.1
BRG	Berggiesshubel	4.54	96	Pn	Pn	03 38 33.3	+1.4
BRG				Amp		03 38 37.0	
	comp=Z,3.7nm,0.5s						
BRG	Berggiesshubel	4.54	96	Pg	Pg	03 38 52.1	+3.1
BRG				Sg	Sg	03 39 47.3	-0.5
BRG				Amp		03 40 05.7	
	comp=Z,32nm,1.2s						
LOR	Lormes	4.72	205	ePn	Pn	03 38 34.9	+0.5
	baz=32						
LOR	Lormes	4.72	205	ePg	Pb	03 38 51.2	+5.6
LOR				eSn	Sn	03 39 26.8	-3.1
LOR				eSg	Sg	03 39 52.5	-1.1
	comp=Z,43nm,0.6s						
DAVA	Damuels	4.74	154	i Pn	Pn	03 38 37.3	+2.4
	comp=Z,2.0nm,0.2s						
DAVA				i Sn	Sn	03 39 33.5	+2.9
	comp=Z,12nm,0.5s						
DAVA				eSg	Sg	03 40 02.5	+8.3
	comp=Z,15nm,0.6s						
RETA	Reutte	4.84	146	ePn	Pn	03 38 37.5	+1.5
	comp=Z,0.8nm,0.2s						
RETA				i Sn	Sn	03 39 34.7	+1.8
	comp=Z,2.8nm,0.3s						
RETA				eSg	Sg	03 40 04.2	+6.9
	comp=Z,7.8nm,0.6s						
LLD	Lille Linde	4.96	39	eS	Sn	03 39 32.1	-3.6
LLD				IAML		03 39 34.7	
	comp=Z,9.6nm,0.7s						
KHC	Kasperske Hory	4.98	117	ePN	Pn	03 38 40.2	+2.2
KHC				ePG	Pb	03 38 46.5	-3.5
KHC				eSG	Sg	03 40 00.8	-1.1
	comp=Z,32nm,1.4s						
CABF	La Chapelle	4.99	186	ePn	Pn	03 38 39.2	+1.0
CABF	La Chapelle	4.99	186	ePg	Pg	03 38 56.8	-0.8
CABF				eSn	Sn	03 39 34.0	-2.7
CABF				eSg	Sg	03 40 01.8	-0.5
	comp=Z,83nm,0.9s						
SSF	Saint Saulge	5.01	207	ePn	Pn	03 38 38.3	0.0
SSF	Saint Saulge	5.01	207	ePg	Pg	03 38 58.1	+0.2
SSF				eSn	Sn	03 39 33.8	-3.1
SSF				eSg	Sg	03 40 00.3	-2.5
	comp=Z,30nm,0.5s						
PVCC	Panska Ves	5.01	99	ePN	Pn	03 38 40.3	+1.9
MOTA	Moosalm	5.08	145	i Pn	Pn	03 38 40.8	+1.3
	comp=Z,1.7nm,0.3s						
MOTA				eSn	Sn	03 39 41.8	+2.9
	comp=Z,10nm,0.9s						
MUD	Monsted U'grnd	5.08	15	eS	Sn	03 39 36.8	-1.8
MUD				IAML		03 39 45.9	
	comp=Z,9.0nm,0.4s						
MUD	Monsted U'grnd	5.08	15	eS	Sn	03 39 36.8	-1.8
HYF	Humbligny	5.10	214	ePn	Pn	03 38 40.0	+0.4
HYF				eSn	Sn	03 39 36.0	-3.1
HYF				eSg	Sg	03 40 04.2	-1.4
CWF	Charnwood Fore	5.13	286	eP	Pn	03 38 41.2	+1.2
CWF				eS	Sn	03 39 38.5	-1.3
CWF				IAML		03 39 40.6	
	comp=E,10nm,0.3s						
CWF				IAML		03 39 44.1	
	comp=N,14nm,0.4s						
PRU	Pruhonice	5.16	105	ePN	Pn	03 38 41.6	+1.2
PRU				eSG	Sg	03 40 08.8	+1.1
	comp=N,53nm,1.5s						
GERES	GERESS Array B	5.21	119	Pn	Pn	03 38 42.9	+1.8
	comp=N,0.9nm,0.3s,baz=303,slow=13,SNR=20						
GERES				Sn	Sn	03 39 41.5	-0.4
	comp=N,0.8nm,0.3s,baz=322,slow=25,SNR=4.1						
GERES				Lg	Lg	03 40 10.7	
	comp=N,0.6nm,0.3s,baz=312,slow=29,SNR=2.8						
	comp=N,1.2nm,0.3s						
SQTA	Sankt Quirin	5.22	145	i Pn	Pn	03 38 43.0	+1.6
	comp=N,1.6nm,0.2s						
SQTA				i Sn	Sn	03 39 41.8	-0.6
	comp=N,4.7nm,0.4s						
FETA	Feichten	5.23	149	ePn	Pn	03 38 43.5	+1.9
	comp=N,2.4nm,0.5s,SNR=7.3						
FETA				i Sn	Sn	03 39 43.5	+0.8
	comp=N,2.0nm,0.5s						
WATA	Walderalm	5.26	142	ePn	Pn	03 38 43.7	+1.7
	comp=N,1.1nm,0.2s						
AVF	Avril sur Loir	5.30	207	ePn	Pn	03 38 42.8	+0.5
AVF	Avril sur Loir	5.30	207	ePg	Pb	03 39 01.9	+6.5
AVF				eSn	Sn	03 39 40.3	-3.7
AVF				eSg	Sg	03 40 09.5	-2.6
	comp=N,12nm,0.5s						
COP	Copenhagen	5.30	37	eS	Sn	03 39 42.2	-1.9
SMF	Signal de Mont	5.31	203	ePn	Pn	03 38 42.9	+0.5
SMF				eSn	Sn	03 39 41.5	-2.8
SMF				eSg	Sg	03 40 09.4	-2.9
	comp=N,13nm,0.3s						
WTTA	Wattenberg	5.35	142	i Pn	Pn	03 38 45.6	+2.5
	comp=N,2.1nm,0.3s						
WTTA				i Sn	Sn	03 39 51.1	+5.6
	comp=N,2.6nm,0.3s						
LDF	La Druitiere	5.37	239	ePn	Pn	03 38 44.4	+1.2
LDF				eSn	Sn	03 39 41.8	-3.9
LDF				eSg	Sg	03 40 11.4	-2.8
	comp=N,12nm,0.5s						
FLN	La Foliniere	5.46	242	ePn	Pn	03 38 45.8	+1.2
	baz=48						
FLN				eSn	Sn	03 39 44.5	-3.6
FLN				eSg	Sg	03 40 15.9	-1.5
	comp=N,14nm,0.4s						
CKRC	Cesky Krumlov	5.55	117	ePN	Pn	03 38 47.7	+1.8
BGF	Bois d'Agland	5.66	209	ePn	Pn	03 38 48.1	+0.8
BGF				eSn	Sn	03 39 49.0	-3.9
BGF				eSg	Sg	03 40 20.9	-2.7
	comp=N,55nm,0.5s						
LUNU	Lund	5.67	42	i P	Pn	03 38 47.0	-0.3
BJUU	Bjuv	5.82	37	i P	Pn	03 38 49.0	-0.4
BJUU				eS	Sn	03 39 51.2	-5.5
GRR	Gorron	5.88	240	ePn	Pn	03 38 51.0	+0.7
GRR				eSn	Sn	03 39 54.3	-4.1
	comp=N,22nm,0.2s						
GRR				eSg	Sg	03 40 28.9	-1.9
UPC	Upice	5.91	97	ePN	Pn	03 38 51.7	+1.0
CHVC	Chvalec	5.92	96	ePN	Pn	03 38 52.2	+1.4
BSD	Bornholm Skovb	6.01	51	eP	Pn	03 38 50.9	-1.1
BSD				eS	Sn	03 39 55.4	-6.1
OSTC	Ostas	6.02	96	ePN	Pn	03 38 53.9	+1.6
LPL	La Plagne	6.07	180	ePn	Pn	03 38 52.7	-0.4
LPL	La Plagne	6.07	180	eP	Pn	03 38 56.6	+3.5
LPL				eSn	Sn	03 39 59.2	-4.1
	comp=N,1.9nm,0.4s						
LPL				eSg	Sg	03 40 34.1	-2.7
LPG	La Plagne	6.08	180	ePn	Pn	03 38 54.5	+1.1
LPG				eSn	Sn	03 40 00.3	-3.5
LPG				eSg	Sg	03 40 34.6	-2.8
	comp=N,2.5nm,0.5s						
TCF	Toulx Ste Croi	6.10	212	ePn	Pn	03 38 54.1	+0.8
TCF	Toulx Ste Croi	6.10	212	ePg	Pg	03 39 18.1	-0.6
TCF				eSn	Sn	03 40 00.0	-3.8
TCF				eSg	Sg	03 40 35.4	-2.3
	comp=N,11nm,0.5s						
MOA	Molln	6.11	125	i Pn	Pn	03 38 55.6	+2.1
	comp=N,1.8nm,0.4s						
MOA				i Sn	Sn	03 40 05.8	+1.7
	comp=N,2.1nm,0.4s						
MOA				Sg	Sg	03 40 45.6	+7.4
	comp=N,11nm,0.7s						
ABTA	Abfaltersbach	6.11	140	i Pn	Pn	03 38 56.2	+2.6
	comp=N,1.3nm,0.4s						
ABTA				eSn	Sn	03 40 07.3	+3.0
	comp=N,2.1nm,0.5s						
DPC	Dobruska-Polom	6.14	98	ePN	Pn	03 38 54.7	+0.8
DPC				eSG	Sg	03 40 40.8	+1.8
	comp=N,18nm,1.0s						
EDMD	Edmundbyers	6.19	305	eP	Pn	03 38 56.2	+1.6
EDMD				IAML		03 40 07.2	
	comp=N,25nm,0.4s						
EDMD				IAML		03 40 10.3	
	comp=E,26nm,0.7s						
KBA	Koelnbreinsper	6.21	134	i Pn	Pn	03 38 57.7	+2.7
	comp=E,3.3nm,0.3s						
KBA				i Sn	Sn	03 40 08.1	+1.4
	comp=E,1.5nm,0.2s						
JSA	Saint Aubin	6.22	251	eP	Pn	03 38 55.4	+0.5
JSA				IAML		03 40 56.5	
	comp=N,7.3nm,0.6s						
JSA				IAML		03 41 00.6	
	comp=E,4.6nm,0.5s						
KRLC	Kraliky	6.50	99	ePN	Pn	03 39 01.0	+2.1
ONAU	Onsala	6.55	25	i P	Pn	03 38 58.0	-1.4
KRUC	Moravsky	6.64	109	ePN	Pn	03 39 02.4	+1.7
VRAC	Vranov	6.65	106	ePN	Pn	03 39 02.7	+1.8
VRAC				eSG	Sg	03 40 54.4	-1.1
ORIF	Oris-en-Rattie	6.69	186	ePn	Pn	03 39 02.7	+1.1
ORIF	Oris-en-Rattie	6.69	186	eP	Pn	03 39 05.8	+4.2
ORIF				eSn	Sn	03 40 13.7	-4.8
ORIF				eSg	Sg	03 40 52.9	-3.9
	comp=E,4.8nm,0.5s						
MFF	Saint Martin d	6.75	225	ePn	Pn	03 39 02.7	+0.4
MFF				eSn	Sn	03 40 14.9	-4.9
MFF				eSg	Sg	03 40 56.8	-1.9
	comp=E,8.5nm,0.5s						
HOMB	Homborsund	6.78	8	eP	Pn	03 39 01.8	-0.8
HOMB				eS	Sn	03 40 15.8	-4.6
HOMB				IAML		03 40 18.8	
	comp=Z,5.7nm,0.5s						
SNART	Snartemo	6.78	2	eP	Pn	03 39 02.3	-0.3
SNART				eS	Sn	03 40 15.2	-5.2
SNART				IAML		03 40 18.1	
	comp=Z,7.5nm,0.4s						
VIVF	Saint-Julien-l	6.88	193	ePn	Pn	03 39 04.1	+0.1
VIVF				eSg	Sg	03 41 00.6	-2.1
	comp=Z,6.8nm,0.6s						
SGMF	Saint Gilles	6.90	245	ePn	Pn	03 39 04.3	0.0
SGMF				eSn	Sn	03 40 18.4	-5.0
	comp=Z,5.4nm,0.4s						
CONA	Conrad Observa	6.91	118	ePn	Pn	03 39 07.5	+2.9
	comp=Z,0.6nm,0.3s						
CONA				eSn	Sn	03 40 26.1	+2.2
	comp=Z,1.9nm,0.5s						
ESK	Eskdalemuir	7.05	306	eP	Pn	03 39 07.6	+1.2
MORC	Moravsky Berou	7.06	101	ePN	Pn	03 39 08.1	+1.6
ESY	Stoneypath	7.08	312	eP	Pn	03 39 08.1	+1.4
HTL	Hartland	7.11	270	eP	Pn	03 39 08.6	+1.5
HTL				IAML		03 40 31.8	
	comp=E,6.4nm,0.7s						
HTL				IAML		03 40 34.3	
	comp=N,6.6nm,0.4s						
BLEU	Blekinge	7.12	45	i P	Pn	03 39 06.3	-0.9
BLEU				eS	Sn	03 40 23.5	-5.2
ARSA	Arzberg	7.15	124	ePn	Pn	03 39 10.1	+2.3
	comp=N,1.1nm,0.3s						
ARSA				eSg	Sg	03 41 20.2	+8.8
	comp=N,11nm,0.8s						
OBKA	Obir	7.18	132	i Pn	Pn	03 39 11.5	+3.2
	comp=N,0.9nm,0.3s						
OBKA				i Sn	Sn	03 40 31.0	+0.4
	comp=N,1.6nm,0.5s						
RJF	Les Rejaudoux	7.19	211	ePn	Pn	03 39 08.6	+0.2
RJF				eSn	Sn	03 40 25.5	-5.2
RJF				eSg	Sg	03 41 09.5	-3.4
	comp=N,12nm,0.6s						
EBL	Broad Law	7.20	310	eP	Pn	03 39 09.6	+1.2
ROSF	Rostrenen	7.26	247	ePn	Pn	03 39 09.4	+0.1
ROSF				eSn	Sn	03 40 27.0	-5.4
	comp=N,6.9nm,0.5s						
SOKA	Soboth	7.29	129	i Pn	Pn	03 39 12.0	+2.3
	comp=N,0.7nm,0.3s						
SOKA				i Sn	Sn	03 40 35.4	+2.1
	comp=N,0.6nm,0.3s						
CAF	Calviac	7.37	207	ePn	Pn	03 39 11.7	+0.9
CAF				eSn	Sn	03 40 29.4	-5.7
CAF				eSg	Sg	03 41 15.7	-2.8
	comp=N,3.3nm,0.4s						
MAUC	Maruska	7.38	103	ePN	Pn	03 39 12.2	+1.3
QUIF	Quistinic	7.42	244	ePn	Pn	03 39 10.9	-0.6
QUIF				eSn	Sn	03 40 31.7	-4.6
QUIF				eSg	Sg	03 41 17.4	-2.8
	comp=N,5.9nm,0.6s						
ZST	Bratislava	7.46	113	eSG	Sg	03 41 25.1	+3.6
MODS	Modra-Piesok	7.48	111	ePG	Pg	03 39 47.2	+2.1
SMOL	Smolenice	7.50	110	eSG	Sg	03 41 28.6	+6.0
DRUM	Mains of Drumt	7.62	318	eP	Pn	03 39 15.3	+1.1
SMRF	Simiane la Rot	7.65	187	ePn	Pn	03 39 14.2	-0.5
KMY	Karmoy	7.70	354	eP	Pn	03 39 14.4	-0.8
KMY				eS	Sn	03 40 36.0	-7.1
KMY				IAML		03 40 41.9	
	comp=Z,7.7nm,0.3s						
LASF	Ste Croix	7.76	196	ePn	Pn	03 39 17.1	+0.9
LASF				eSg	Sg	03 41 28.5	-2.6
	comp=Z,8.6nm,0.8s						
LFF	La Frestale	7.78	214	ePn	Pn	03 39 16.3	0.0
LFF				eSn	Sn	03 40 40.1	-4.9
LFF				eSg	Sg	03 41 27.0	-4.5
	comp=Z,17nm,0.5s						
BLS5	Blasjo	7.87	359	eP	Pn	03 39 17.1	-0.4
BLS5				eS	Sn	03 40 40.7	-6.5
BLS5				IAML		03 40 46.7	
	comp=Z,3.6nm,1.0s						
STRU	Stroemstad	7.88	17	eP	Pn	03 39 17.4	-0.3
STRU	Stroemstad	7.88	17	eP	Pn	03 39 16.2	-1.4
STRU				eS	Sn	03 40 40.1	-7.3
KONO	Kongsberg	8.24	10	eP	Pn	03 39 22.0	-0.7
KONO				eS	Sn	03 40 48.0	-8.4
KONO				IAML		03 40 50.7	
	comp=Z,1.9nm,0.6s						
OSL	Oslo	8.66	13	eS	Sn	03 41 00.5	-6.2
MTLF	Montolieu	8.80	202	ePn	Pn	03 39 31.2	+0.8
MTLF				eSg	Sg	03 41 59.6	-4.9
	comp=Z,3.0nm,0.5s						
BER	Bergen	8.87	355	eS	Sn	03 41 03.6	-8.0
BER				IAML		03 41 09.1	
	comp=Z,3.1nm,0.2s						
ASK	Askoy	8.97	355	eS	Sn	03 41 05.6	-8.7
ASK				IAML		03 41 09.8	
	comp=Z,5.4nm,0.3s						
SKAR	Skarslia	9.16	5	eS	Sn	03 41 11.2	-7.9
KAC	Achnashellach	9.19	315	eP	Pn	03 39 36.5	+0.8
KPL	Plockton	9.26	313	eP	Pn	03 39 37.6	+0.9
KPL	Plockton	9.26	313	e	Pn	03 39 37.5	+0.9
KPL				e		03 41 19.0	
HFS	Hagfors	9.40	22	Sn	Sn	03 41 18.7	-6.2
	comp=Z,0.4nm,0.3s,baz=182,slow=39,SNR=1.7						
NC602	NORSAR Array S	9.55	14	eP	Pn	03 39 39.0	-1.6
NC602				eS	Sn	03 41 18.5	-10
NC602				IAML		03 41 23.8	
	comp=Z,2.7nm,0.4s						
SUE	Sulen	9.57	354	eP	Pn	03 39 39.7	-1.1
SUE				eS	Sn	03 41 17.9	-11
SUE				IAML		03 41 36.3	
	comp=Z,2.6nm,0.5s						
EPF	Esparros	9.61	210	ePn	Pn	03 39 42.0	+0.5
EPF				eSg	Sn	03 42 24.7	+55
NOA	NORSAR Array B	9.79	13	Pn	Pn	03 39 42.3	-1.7
	baz=201,slow=14,SNR=1.3						
NOA				Sn	Sn	03 41 27.4	-7.2
	baz=178,slow=13,SNR=6.5						
	comp=Z,0.1nm,0.5s						
ETSF	Etsaut	10.02	213	ePn	Pn	03 39 47.3	+0.2
ETSF				eSg	Sn	03 42 37.7	+58
SJPF	Ste Jean	10.06	216	ePn	Pn	03 39 48.2	+0.5
FOO	Floro	10.09	355	eS	Sn	03 41 31.8	-10
FINES	FINESS Array B	14.46	39	Pn	Pn	03 40 46.7	-0.9
	baz=223,slow=13,SNR=1.0						
FINES				Sn	Sn	03 43 21.7	-6.8
	comp=Z,0.1nm,0.3s,baz=232,slow=23,SNR=1.2						
	comp=Z,0.3nm,0.4s						

TAP **28** *03:59:09.6, 24°.05N×122°.43E, h29^{km}±1^{km}, ML2.6, D*

JMA **28** *03:59:10.4±0.1, 24°N±1°×122°.4E±0°.3, h36^{km}, MV1.9/9,*
NW OFF ISHIGAKIJIMA IS

ISC 28 03:59:09.2±1.1**, 24°.01N**±0°.04×**122°.44E**±0°.02**, h25**^{km}±13^{km}**,**
n54, σ0^{s}53/81**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.64	46	P	Pb	03 59 21.6	-0.2
JYNG				S	Sb	03 59 29.5	-0.8
YOJ	Yonaguni jima	0.69	49	*i* P	Pb	03 59 22.3	-0.3
	baz=58						
YOJ				S	Sn	03 59 33.0	-0.3
	baz=58						
YOJ	Yonaguni jima	0.69	49	P	Pb	03 59 22.5	-0.1
YOJ				*e*S	Sb	03 59 31.4	-0.4
EWUT	Wuta	0.74	306	*e*P	Pb	03 59 23.5	0.0
	baz=303						
EWUT				*e*S	Sn	03 59 33.6	-0.9
	baz=303						
ETL	Fush Village	0.76	282	*e*P	Pn	03 59 25.5	+1.3
	baz=264						
ENA	Nanau	0.76	304	*e*P	Pb	03 59 23.8	0.0
	baz=309						
ENA				*e*S	Sn	03 59 34.1	-0.8
	baz=309						
TWD	Chiawan	0.77	276	*e*P	Pb	03 59 23.9	-0.1
	baz=272						
TEYL	Yanliau Villag	0.78	260	*e*P	Pn	03 59 24.5	0.0
	baz=247						
NACB	Ninganchiao	0.79	282	P	Pn	03 59 24.0	-0.6
	baz=265						
NACB				S	Sb	03 59 34.3	-0.2
	baz=265						
TWC	Suao	0.80	318	P	Pn	03 59 24.1	-0.8
	baz=316						
TWC				S	Sb	03 59 34.8	-0.2
	baz=316						
ETM	Tongmen	0.86	267	*e*P	Pn	03 59 25.7	0.0
	baz=254						
TEGC	Jichi Village	0.87	250	*e*P	Pn	03 59 25.7	-0.1
	baz=247						
ETLH	Xiulin Townshi	0.89	283	*e*P	Pn	03 59 26.3	+0.1
	baz=268						
ETLH				*e*S	Sb	03 59 37.9	+0.3
	baz=268						
NDS	Dongshan	0.91	314	*e*P	Pn	03 59 26.1	-0.2
	baz=311						
NDS				*e*S	Sn	03 59 38.4	-0.2
	baz=311						
LATG	Datong	0.98	303	*e*P	Pb	03 59 27.5	-0.1
	baz=300						
LATG				S	Sb	03 59 40.8	+0.6
	baz=300						
TWE	Neicheng	1.00	316	P	Pb	03 59 27.7	-0.1
	baz=314						
NTC	Toucheng	1.01	327	*e*P	Pb	03 59 27.7	-0.3
	baz=325						
NTC				*e*S	Sb	03 59 41.2	+0.4
	baz=325						
ENTT	Nioudou	1.01	309	*e*P	Pb	03 59 28.4	+0.3
	baz=306						
ENTT				*e*S	Sb	03 59 41.1	+0.1
	baz=306						
NDT	Datong Townshi	1.03	305	*e*P	Pb	03 59 28.2	-0.2
	baz=303						
NDT				*e*S	Sb	03 59 42.3	+0.8
	baz=303						
NNSB	Datong	1.05	294	P	Pn	03 59 28.4	0.0
	baz=291						
NNSB				*e*S	Sb	03 59 42.5	+0.4
	baz=291						
HGSD	Ruisui	1.06	241	*e*P	Pn	03 59 28.1	-0.3
	baz=239						
NNS	Nan Shan	1.06	294	*e*P	Pb	03 59 29.1	+0.2
	baz=279						
FUSB	Fushanzhiwuyua	1.08	314	P	Pb	03 59 29.0	-0.2
	baz=312						
FUSB				S	Sb	03 59 43.9	+1.0
	baz=312						
TWB1	Santiao Chiao	1.08	338	*e*P	Pb	03 59 28.7	-0.5
	baz=337						
WHF	Hehuan Shan	1.08	278	*e*P	Pn	03 59 29.4	+0.3
	baz=275						
WHF				S	Sb	03 59 43.5	+0.2
	baz=275						
TIPB	Shuangxi	1.11	330	P	Pb	03 59 29.7	0.0
	baz=329						
TIPB				S	Sb	03 59 43.7	-0.1
	baz=329						
FUSS	Fushou	1.11	283	*e*P	Pb	03 59 29.8	-0.1
	baz=280						
EHY	Hungye	1.14	244	*e*P	Pn	03 59 29.0	-0.4
	baz=241						
NWLT	Wulai	1.15	312	*e*P	Pb	03 59 30.2	-0.2
	baz=310						
NWLT				*e*S	Sb	03 59 45.2	+0.4
	baz=310						
OWD	Renai	1.15	268	*e*P	Pn	03 59 29.9	+0.1
	baz=265						
YHNB	Yeheng	1.17	305	*e*P	Pb	03 59 30.5	-0.3
	baz=290						
YHNB				*e*S	Sb	03 59 47.0	+1.4
	baz=290						
NSK	Sanguang	1.19	304	*e*P	Pb	03 59 30.9	-0.2
	baz=290						
SXI1	Grass Mountain	1.20	335	*e*P	Pn	03 59 30.2	-0.1
	baz=341						
WUSB	Renai	1.21	270	*e*P	Pb	03 59 31.4	0.0
	baz=267						
WUSB				*e*S	Sn	03 59 46.6	+0.5
	baz=267						
YULB	Yu-li	1.21	240	P	Pn	03 59 30.0	-0.5
	baz=227						
YULB				*e*S	Sn	03 59 45.3	-0.7
	baz=227						
VWDT	VWDT	1.21	258	*e*P	Pn	03 59 31.2	+0.8
	baz=255						
VWDT				*e*S	Sn	03 59 46.5	+0.4
	baz=255						
NWF	Wu-fen Shan	1.22	331	*e*P	Pb	03 59 30.8	-0.8
	baz=329						
NWF				*e*S	Sb	03 59 47.7	+0.8
	baz=329						
WFSB	Wu-fen Shan	1.22	331	*e*P	Pn	03 59 30.6	0.0
	baz=329						
IRIF	Iriomote-Funau	1.23	74	P	Pb	03 59 31.9	+0.2
TWF1	Yuli	1.23	238	P	Pn	03 59 30.5	-0.2
	baz=235						
TWF1				*e*S	Sn	03 59 46.4	-0.1
	baz=235						
HATJ	Hateruma jima	1.25	87	S	Sb	03 59 48.6	+0.8
FULB	Fuli	1.32	233	*e*P	Pn	03 59 32.7	+0.7
	baz=231						
NFF	Wufeng Townshi	1.35	298	*e*P	Pb	03 59 33.3	-0.6
	baz=295						
YM01	YM01	1.38	325	*e*P	Pb	03 59 34.2	-0.2
	baz=324						
WHP	Taichung City	1.39	282	*e*P	Pb	03 59 35.3	+0.8
	baz=269						
LIOB	Emei	1.44	296	*e*P	Pb	03 59 34.6	-0.7
	baz=294						
TYC	Yuchr	1.45	266	*e*P	Pb	03 59 35.5	+0.1
	baz=264						
YUS	Yu-Shan	1.45	250	*e*P	Pn	03 59 33.7	-0.5
	baz=247						
JKRS	Kuro-shima	1.46	81	P	Pb	03 59 35.3	-0.3
JKRS				*e*S	Sb	03 59 53.4	-0.3
EDH	Donghe	1.46	225	*e*P	Pn	03 59 33.5	-0.5
	baz=224						
ELDTW	Lidau	1.54	238	*e*P	Pn	03 59 35.5	+0.4
	baz=236						
LDUT	Ludao	1.60	214	*e*P	Pn	03 59 34.2	-1.5
	baz=213						
JIJ	Ishigaki jima	1.60	77	P	Pn	03 59 36.6	+0.8
JIJ				S	Sn	03 59 55.7	0.0
JISG	Ishigakijimahi	1.81	71	P	Pn	03 59 39.8	+1.2
JISG				S	Sn	04 00 00.9	+0.2

UCR ***28*** *04:04:14.3±1.8, 8°.30N×82°.80W, h13^{km}±12^{km}, MW3.6, mb5.2(NEIC)*

UPA ***28*** *04:04:14.4±0.8, 8°.33N×82°.80W, h22^{km}±4^{km}, MW3.8*

ISC 28 04:04:13.2±1.0**, 8°.31N**±0°.05×**82°.78W**±0°.03**, h32**^{km}±6^{km}**, n29, σ0^{s}.81**/48**, 2C-5D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.10	351	⇑*e*P	Pb	04 04 18.6	-0.1
PTPM	Petroterminale	0.15	224	⇑*e*P	Pb	04 04 19.1	-0.1
PTPM				*e*S	Sb	04 04 22.8	-0.3
CCOL	Caracol de Cor	0.22	296	*e*P	Pn	04 04 19.5	-0.8
CCOL				*e*S	Sn	04 04 24.6	-0.1
CDITO	Canoas	0.28	340	*e*P	Pn	04 04 20.4	-0.6
CDITO				*e*S	Sb	04 04 25.5	0.0
BAGA3	Bagala, Chiriq	0.29	58	⇓*e*P	Pn	04 04 21.9	+0.6
BAGA3				*e*S	Sn	04 04 26.9	+0.4
DVD	David	0.34	69	*e*P	Pn	04 04 22.3	+0.4
DVD				*e*S	Sn	04 04 28.6	+0.8
LOCO3	Loma Colorada,	0.37	75	*e*P	Pn	04 04 22.8	+0.5
LOCO3				*e*S	Sn	04 04 28.7	+0.3
CHIR3	Chiriqui UPA,	0.45	79	⇓*e*P	Pn	04 04 23.8	+0.4
CHIR3				*e*S	Sn	04 04 31.2	+0.8
PTAR3	Potrerillos Ar	0.47	36	*e*P	Pn	04 04 24.2	+0.3
PTAR3				*e*S	Sb	04 04 29.9	-0.4
BCO2	Palmira	0.47	31	⇓*e*P	Pn	04 04 24.2	+0.3
BCO2				*e*S	Sn	04 04 31.7	+0.5
MLIR3	Monte Lirio, C	0.48	354	*e*P	Pn	04 04 24.3	+0.3
BRU2	Volcan	0.49	10	*e*P	Pn	04 04 24.1	0.0
BRU2				*e*S	Sn	04 04 32.0	+0.4
BRU2	Volcan	0.49	10	⇓*e*P	Pn	04 04 24.2	+0.1
BRU2				*e*S	Sn	04 04 31.5	-0.1
BC3P	Paso Ancho	0.53	18	*e*P	Pn	04 04 24.7	0.0
BC3P				*e*S	Sn	04 04 33.3	+0.6
EDSV	San Vito	0.54	339	*e*P	Pn	04 04 25.0	+0.1
EDSV				*e*S	Sn	04 04 33.9	+1.0
PIRO	Carate, Puerto	0.56	279	*e*P	Pb	04 04 23.9	-0.8
PIRO	Carate, Puerto	0.56	279	*e*P	Pn	04 04 24.2	-0.8
PIRO				*e*S	Sn	04 04 36.6	+3.4
LNBQ3	Los Naranjos,	0.58	35	*e*P	Pn	04 04 25.4	0.0
LNBQ3				*e*S	Sb	04 04 33.4	+0.1
PSOM3	Paja de Sombre	0.58	50	⇓*e*P	Pn	04 04 25.6	+0.3
PSOM3				*e*S	Sn	04 04 34.1	+0.3
RIOS	Rincon, Osa	0.83	298	*e*P	Pb	04 04 28.0	-1.1
CHGR2	Aguacate	0.88	45	*e*P	Pn	04 04 30.1	+0.7
CHGR2				*e*S	Sn	04 04 42.2	+1.1
EDPN	Palmar Norte	0.93	314	*e*P	Pn	04 04 30.4	+0.3
EDPN				*e*S	Sn	04 04 43.8	+1.4
REME3	Remedios, Chir	0.94	95	*e*P	Pb	04 04 29.1	-1.8
PLAN	Los Planes de	0.96	292	*e*P	Pn	04 04 30.6	+0.1
DRK0	Durika	1.05	334	*e*P	Pb	04 04 32.3	-0.7
DRK0	Durika	1.05	334	*e*P	Pb	04 04 32.4	-0.7
DRK0				*e*S	Sb	04 04 46.5	-0.1
CDM	Cerro de Muert	1.57	322	*e*P	Pb	04 04 41.0	-1.0
LCR2	La Lucha 2	1.87	320	*e*P	Pb	04 04 46.5	-0.3
HDC	Heredia	2.14	322	*e*S	Sb	04 05 17.5	0.0

IDC ***28*** *04:43:27.9±0.4, 7°.37N×35°.88W, h0^{km}, mb4.7/27, mbtmp4.7/28, ML5.0/2, MS4.6/54, Error ellipse: s-maj=13.7km s-min=11.1km az=139.0*

MOS ***28*** *04:43:28.1±0.8, 7°.40N×35°.91W, h10^{km}, mb5.3/63, MS4.6/14, Error ellipse: s-maj=8.8km s-min=4.5km az=50.6*

NEIC ***28*** *04:43:30.9±1.1, 7°.39N±0°.09×35°.93W±0°.08, h10^{km}±1^{km}, mb5.2/579, Error ellipse: s-maj=15.3km s-min=13.3km az=354.0*

GCMT ***28*** *04:43:30.9±0.1, 7°.45N±0°.01×35°.86W±0°.01, h12^{km}, MW5.3/130, Moment Tensor Solution. s103,c172; s130,c255; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.28±.01; $M_{\theta\theta}$0.07±.02; $M_{\phi\phi}$0.20±.01; $M_{r\theta}$0.13±.04; $M_{\theta\phi}$-1.02±.01; $M_{\phi r}$-0.06±.04; Best double couple: $M_0$1.03000×10^{17} NP1:ϕ_s182.00000°, δ83.00000°, λ0.00000°. NP2:ϕ_s92.00000°, δ90.00000°, λ173.00000°. Principal axes: T 1.1730, Plg5.0000°, Azm47.0000°; N -0.2850, Plg83.0000°, Azm272.0000°; P -0.8880, Plg5.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 04:43:29.7±0.2**, 7°.35N**±0°.05×**35°.91W**±0°.05**, h10**^{km}**, n1134, σ1^{s}.14**/950**, mb5.2**/370**, MS4.7**/70**, 218C-210D, Fault plane solution: NP1:**ϕ_s355.06287°**,** δ89.28713°**,** λ-14.76957°. **NP2:**ϕ_s85.25080°**,** δ75.23160°**,** λ-179.26277°. **Principal axes:** T Plg9.8723°, Azm41.1137°**;** N Plg75.2136°, Azm172.3610°**;** P Plg10.8972°, Azm309.1937°**; Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBMO	Morrinhos-CE	11.36	201	*e*P	Pn	04 46 09.7	-2.5
NBPS	Pedro II - PI	12.90	205	*e*P	Pn	04 46 31.1	-2.3
ROSB	Rosrio	13.06	219	*e*P	Pn	04 46 33.0	-2.5
RCBR	Riachuelo	13.09	180	Pn	Pn	04 46 34.5	-1.4
	28nm,0.3s,baz=267,slow=18,SNR=185						
RCBR				Sn	Sn	04 48 49.7	-12
	7.2nm,0.3s,baz=267,slow=18,SNR=4.0						
RCBR				LR	LR	04 50 25.6	
	comp=Z,2µm,18.6s,baz=150,slow=32						
RCBR	Riachuelo	13.09	180	Pn	Pn	04 46 35.0	-0.8
RCBR	Riachuelo	13.09	180	P	Pn	04 46 35.0	-0.8
RCBR	Riachuelo	13.09	180	*e*P	Pn	04 46 35.0	-0.8
NBPB	Pedra_Branca-C	13.32	196	*e*P	Pn	04 46 37.9	-1.1
NBMA	Muriti-CE	14.89	191	*e*P	Pn	04 47 00.6	+0.1
TMAB	Tom-Au,PA,Br	15.52	232	*e*P	Pn	04 47 08.1	-0.8
NBRF	Rio Formoso -	15.94	177	*e*P	Pn	04 47 14.1	-0.1
MDP	Montagnes des	16.78	263	Pn	Pn	04 47 23.3	-1.8
	1.4nm,0.3s,baz=69,slow=16,SNR=15						
MDP				Sn	Sn	04 50 16.7	-15
	0.4nm,0.3s,baz=15,slow=20,SNR=2.0						
MDP				LR	LR	04 52 33.2	
	comp=Z,2µm,21.9s,baz=72,slow=32						
	32nm,1.0s						
NBAN	Anadia - AL	16.91	181	*e*P	P	04 47 27.8	-0.9
MCPB	Macapa, AP	17.83	245	*e*P	Pn	04 47 37.1	-1.0
NBLA	Lagarto - SE	18.31	186	*e*P	P	04 47 45.0	+0.8
NBPN	Ponto Novo - B	18.57	193	*e*P	Pn	04 47 47.6	+0.4
PRPB	Parauapebas	19.30	226	*e*P	P	04 47 55.1	0.0
SMTB	Santa Maria do	19.86	216	*e*P	P	04 48 01.0	-0.3
MBO	M'Bour	19.88	68		P	04 47 60.0	-1.4
MALB	Monte Alegre	20.46	244	*e*P	P	04 48 07.0	-0.7
GDU01	Guandu, BA	21.24	190	*e*P	P	04 48 15.6	-0.6
SDBA	SAO DESIDERIO	21.56	205	*e*P	P	04 48 19.5	-0.2
CMC01	Camacan, BA	22.84	189	*e*P	P	04 48 34.3	+1.1
PEXB	Peixe	22.92	213	*e*P	P	04 48 34.0	-0.1
ITTB	Itaituba	22.95	240	*e*P	P	04 48 33.3	-1.1
JANB	Januaria	23.77	200	*e*P	P	04 48 42.3	-0.4
GUA01	Guaratinga, BA	24.09	189	*e*P	P	04 48 46.0	+0.4
SNDB	Serra Nova Dou	24.54	219	*e*P	P	04 48 50.2	+0.4
BOAV	Boa Vista	25.00	260	*e*P	P	04 48 54.6	+0.6
NAN01	Guarapari, ES	25.37	189	*e*P	P	04 48 58.1	+0.8
H05S1	Guadeloupe/Mar	25.45	288	T	T	05 15 15.3	
	SNR=30						
BDFB	Brasilia	25.79	208	P	P	04 49 01.2	-0.1
	22nm,0.8s,baz=29,slow=9.6,SNR=29						
BDFB				LR	LR	04 58 41.5	
	comp=Z,3µm,18.1s,baz=7.8,slow=35						
	22nm,0.8s						
BDFB	Brasilia	25.79	208	P	P	04 49 00.7	-0.6
BDFB				IAmb	IAmb	04 49 28.9	
	comp=Z,61nm,0.8s						
BDFB	Brasilia	25.79	208	*e*P	P	04 49 01.0	-0.3
FDF	Fort de France	25.82	289	P	P	04 49 01.7	+0.2
FDF				IAmb	IAmb	04 49 04.7	
	comp=Z,97nm,1.1s						
FDF	Fort de France	25.82	289	P	P	04 49 01.7	+0.2
FDF				pmax	pmax		
	comp=Z,97nm,1.1s						
SVN	Savane Anatole	25.86	289	P	P	04 49 02.1	+0.3
H10N3	ASCENSION HYDR	26.14	125	T	T	05 16 18.2	
	baz=304,slow=75,SNR=73						
H05N1	Guadeloupe/Mar	26.15	292	T	T	05 16 14.0	
	SNR=5.7						
H10N2	ASCENSION HYDR	26.15	125	T	T	05 16 18.6	
	baz=304,slow=75,SNR=75						
H10N1	ASCENSION HYDR	26.16	125	T	T	05 16 19.8	
	baz=304,slow=75,SNR=77						
SJMB	Sao Joao De Ma	26.40	191	*e*P	P	04 49 07.2	+0.6
H10S3	ASCENSION HYDR	26.66	127	T	T	05 17 01.1	
	baz=304,slow=74,SNR=53						
H10S2	ASCENSION HYDR	26.68	127	T	T	05 17 02.5	
	baz=276,slow=74,SNR=17						
CLDB	Colider	26.82	228	*e*P	P	04 49 10.5	+0.1
MACA	Manacapuru-AM	26.83	248	*e*P	P	04 49 11.5	+0.8
RIB01	Linhares ES	26.86	189	*e*P	P	04 49 12.4	+1.7
IPMB	Ipameri, GO	27.94	206	*e*P	P	04 49 20.5	0.0
PDRB	Porto dos Gac	27.99	228	*e*P	P	04 49 21.3	+0.3
ALF01	Guarapari-ES	28.19	190	*e*P	P	04 49 23.7	+1.1
CAM01	Campos-RJ	29.53	191	*e*P	P	04 49 35.7	+1.1
DUB01	Friburgo-RJ	29.92	192	*e*P	P	04 49 39.1	+1.0
BIRV	Birongo	30.14	278	P	P	04 49 40.9	+0.7
BIRV				IAmb	IAmb	04 49 43.5	
	comp=Z,42nm,1.2s						
SALV	Santo Antonio	30.29	220	*e*P	P	04 49 41.6	+0.2
STVI	Saint Thomas	30.30	294	P	P	04 49 41.2	-0.3
STVI				IAmb	IAmb	04 49 42.6	
	comp=Z,38nm,0.9s						
VAS01	Vassouras-RJ	30.35	194	*e*P	P	04 49 42.9	+1.0
ITRB	Iturama	30.41	208	*e*P	P	04 49 43.0	+0.5
PMOZ	Porto Moniz, M	30.73	32	*e*LQ	LQ	04 56 09.5	
PMOZ				*e*LR	LR	04 57 22.4	
	comp=Z,1µm,20.0s						
PMOZ	Porto Moniz, M	30.73	32	*i* T	T	05 21 27.9	
FUL	Funchal	30.76	33	*i* T	T	05 21 23.5	
MTP	Monte Pirata	30.77	293	P	P	04 49 45.4	-0.3
MTP				IAmb	IAmb	04 49 47.0	
	comp=Z,37nm,0.9s						
PMAR	Madeira	30.81	32	*i* T	T	05 21 26.4	
DBIC	Dimbokro	30.83	89	P	P	04 49 44.9	-1.4
	comp=Z,8.2nm,0.8s,baz=275,slow=8.9,SNR=6.4						
DBIC				LR	LR	04 59 35.7	
	comp=Z,557nm,18.8s,baz=272,slow=31						
	comp=Z,8.2nm,0.8s						
DBIC	Dimbokro	30.83	89	P	P	04 49 43.9	-2.3
DBIC				IAmb	IAmb	04 49 52.7	
	comp=Z,39nm,1.4s						
BB19B	Bebedouro	30.83	203	*e*P	P	04 49 47.0	+0.8
MAN01	Angra dos Reis	31.04	195	*e*P	P	04 49 50.0	+2.0
HUMP	Col San Antoni	31.05	293	P	P	04 49 48.4	+0.2
HUMP				IAmb	IAmb	04 49 49.6	
	comp=Z,35nm,0.9s						
PDPR	Patillas Dam,	31.18	293	P	P	04 49 48.7	-0.6
PDPR				IAmb	IAmb	04 49 50.5	
	comp=Z,27nm,0.8s						
GCPR	Guaynabo City	31.32	293	P	P	04 49 51.2	+0.8
GCPR				IAmb	IAmb	04 49 54.2	
	comp=Z,20nm,0.8s						
SJG	San Juan	31.32	293	LR	LR	04 59 43.1	
	comp=Z,1µm,21.7s,baz=104,slow=31						
SJG	San Juan	31.32	293	P	P	04 49 50.2	-0.3
SJG				IAmb	IAmb	04 49 51.7	
	comp=Z,32nm,0.8s						
SJG	San Juan	31.32	293	P	P	04 49 50.2	-0.3
SJG				pmax	pmax		
	comp=Z,32nm,0.8s						
SJG	San Juan	31.32	293	*e*P	P	04 49 50.5	0.0
VILB	Vilhena	31.45	230	*e*P	P	04 49 52.5	+0.8
SAML	Samuel	31.63	240	P	P	04 49 54.3	+1.0
SAML				IAmb	IAmb	04 49 55.4	
	comp=Z,28nm,1.1s						
SAML	Samuel	31.63	240	P	P	04 49 54.3	+1.0
SAML				pmax	pmax		
	comp=Z,29nm,1.1s						
RCLB	Rio Claro- Sao	31.70	201	*e*P	P	04 49 54.9	+1.1
CELP	Cerrillos	31.70	293	P	P	04 49 53.6	-0.3
OBIP	Obispado Ponce	31.72	293	P	P	04 49 53.7	-0.3
OBIP				IAmb	IAmb	04 49 55.0	
	comp=Z,36nm,0.8s						
PARB	Paraibuna	31.94	197	*e*P	P	04 49 57.1	+1.2
VAO	Valinhos	32.04	199	*e*P	P	04 49 58.0	+1.2
KOWA	Kowa	32.09	74	P	P	04 49 55.9	-1.4
KOWA				IAmb	IAmb	04 49 57.5	
	comp=Z,27nm,0.8s						
KOWA	Kowa	32.09	74	P	P	04 49 53.4	-3.9
CRPR	Cabo Rojo, PR	32.17	292	IAmb	IAmb	04 49 58.8	
	comp=Z,18nm,0.7s						
PTLB	Pontes e Lacer	32.29	225	*e*P	P	04 49 59.8	+0.8
PCMB	Pacaembu	32.48	207	*e*P	P	04 50 01.7	+1.1
FRTB	Fartura	33.29	203	*e*P	P	04 50 08.8	+1.0
PET01	Itanhaem-SP	33.34	199	*e*P	P	04 50 09.0	+0.9
SIV	San Ignacio	34.03	227	LR	LR	05 03 38.0	
	comp=Z,4µm,18.0s,baz=78,slow=36						
TRCB	Terra Rica	34.13	208	*e*P	P	04 50 16.1	+1.0
TTIG	Tnine Tigouga,	34.57	45	P	P	04 50 22.0	+3.0
ETMB	Extrema	34.66	241	*e*P	P	04 50 20.1	+0.3
OUK	Oukaimeden	35.36	44	P	P	04 50 29.0	+3.0
PTGB	Pitanga	35.54	206	*e*P	P	04 50 28.6	+1.3
URIC	Uribia, Colomb	35.83	280	IAmb	IAmb	04 50 32.6	
	comp=Z,44nm,1.4s						
OUZM	OUZ	35.96	45	P	P	04 50 32.0	+1.1
SRHM	Skhour des Reh	36.09	42	P	P	04 50 33.0	+1.0
PTGC	Puerto Gaitan,	36.16	267	*e*P	P	04 50 34.6	+1.8
SDDR	Presa de Saban	36.25	292	IAmb	IAmb	04 50 35.3	
	comp=Z,37nm,0.9s						
SDDR	Presa de Saban	36.25	292	*e*P	P	04 50 33.5	-0.1
ZGR	Zagora	36.34	48	P	P	04 50 36.0	+1.8
PAMC	Pamplona, Colo	36.48	272	*e*P	P	04 50 37.5	+1.5
TZRR	Tazzarine	36.74	47	P	P	04 50 40.0	+2.5
AVE	Averroes	36.92	42	P	P	04 50 40.5	+1.6
RUSC	La Rusia	36.94	270	*e*P	P	04 50 39.8	-0.2
BARC	Barichara	36.99	271	*e*P	P	04 50 42.0	+1.9
OCAC	Ocana	37.06	274	*e*P	P	04 50 39.7	-0.9
TOA0	Torodi Ar. Sit	37.42	78	P	P	04 50 42.1	-1.4
TORD	Torodi Ar. Bea	37.42	78	P	P	04 50 42.4	-1.1
	comp=Z,19nm,0.8s,baz=271,slow=9.1,SNR=128						
TORD				PcP	PcP	04 53 01.4	-0.9
	comp=Z,1.1nm,0.7s,baz=285,slow=2.7,SNR=0.9						
TORD				LR	LR	05 03 42.7	
	comp=Z,1µm,22.0s,baz=231,slow=32						
	comp=Z,19nm,0.8s						
TORD	Torodi Ar. Bea	37.42	78	P	P	04 50 42.1	-1.4
BRRC	Barranca, Sant	37.49	272	*e*P	P	04 50 38.0	-6.1
ZHG	ZHG	37.52	42	P	P	04 50 46.0	+1.8
CHIC	Chingaza	37.70	268	*e*P	P	04 50 48.3	+2.0
ITAB	Concordia	37.80	204	IAmb	IAmb	04 50 49.9	
	comp=Z,64nm,1.3s						
ITAB	Concordia	37.80	204	*e*P	P	04 50 47.6	+1.2
TER01	Tubaro-SC	37.88	199	*e*P	P	04 50 48.1	+1.0
SPBC	San Pablo de B	37.94	270	*e*P	P	04 50 49.7	+1.7
MACC	Macarena, Meta	38.14	264	*e*P	P	04 50 49.0	-0.6
PTBC	PUERTO BERRIO,	38.26	271	*e*P	P	04 50 51.0	+0.4
ROSC	El Rosal	38.26	269	P	P	04 50 51.7	+0.7
	comp=Z,28nm,0.6s,baz=102,slow=9.1,SNR=11						
ROSC				LR	LR	05 07 03.5	
	comp=Z,1µm,20.1s,baz=102,slow=37						
	comp=Z,28nm,0.6s						
ROSC	El Rosal	38.26	269	IAmb	IAmb	04 51 05.8	
	comp=Z,31nm,0.8s						
ROSC	El Rosal	38.26	269	*e*P	P	04 50 52.9	+1.9
MDT	Midelt	38.54	45	LR	LR	05 05 04.5	
	comp=Z,1µm,20.2s,baz=250,slow=34						
MDT	Midelt	38.54	45	P	P	04 50 54.3	+1.5
MORF	Marmelete	38.77	36	*e*P	P	04 50 55.1	+0.5
MORF				IAmb	IAmb	04 50 56.6	
	comp=Z,93nm,1.3s						
MORF				*e*S	S	04 56 53.3	+1.3
MORF	Marmelete	38.77	36	*e*P	P	04 50 55.2	+0.6
	comp=Z,146nm,1.8s						
MORF	Marmelete	38.77	36	*e*P	P	04 50 55.1	+0.5
MORF				*e*S	S	04 56 53.3	+1.3
LCRM	LCR	38.87	43	P	P	04 50 57.0	+1.4
PRAC	Prado	38.95	267	*e*P	P	04 50 56.5	+0.1
PBDV	Barranco-do-Ve	39.14	36	*e*P	P	04 50 58.8	+1.1
	comp=Z,121nm,1.7s						
CNLB	Canela	39.18	201	*e*P	P	04 50 59.0	+0.9
UREC	San Jos de Ur	39.27	273	*e*P	P	04 51 06.7	+7.6
ORTC	Ortega, Tolima	39.28	267	*e*P	P	04 50 58.8	-0.4
HELC	Santa Helena	39.35	271	*e*P	P	04 51 00.4	+0.3
ANIL	Santa Ana	39.37	268	*e*P	P	04 51 00.1	-0.1
PVAQ	Vaqueiros	39.38	36	*e*P	P	04 51 00.4	+0.8
	comp=Z,79nm,1.8s						
PVAQ				*e*S	S	04 57 05.8	+4.7
PVAQ				*e*LR	LR	05 01 35.4	
	comp=Z,940nm,22.0s						
PVAQ	Vaqueiros	39.38	36	P	P	04 50 59.0	-0.7
MESJ	Messejana	39.38	35	*e*P	P	04 51 00.2	+0.6
MESJ				IAmb	IAmb	04 51 01.1	
	comp=Z,14nm,0.8s						
MESJ				*e*S	S	04 57 02.5	+1.4
MESJ	Messejana	39.38	35	*e*P	P	04 51 00.7	+1.1
	comp=Z,46nm,1.7s						
MESJ	Messejana	39.38	35	*e*PP	PP	04 52 29.8	-0.2
MESJ	Messejana	39.38	35	*i* T	T	05 31 40.5	
MESJ	Messejana	39.38	35	*e*P	P	04 51 00.2	+0.6
MESJ				*e*		04 57 02.5	
CHEFC	Chefchaouen	39.38	41	P	P	04 51 02.0	+2.2
PNCL	Nicolau / Gran	39.39	35	*e*P	P	04 51 00.6	+0.9
	comp=Z,54nm,1.7s						
PNCL	Nicolau / Gran	39.39	35	*i* T	T	05 31 45.5	
CPUP	Villa Florida	39.41	211	P	P	04 50 59.9	-0.1
	comp=Z,11nm,1.0s,baz=20,slow=9.2,SNR=13						
CPUP				PP	PP	04 52 31.8	+1.3
	comp=Z,4.2nm,0.9s,baz=32,slow=11,SNR=3.4						
CPUP				LR	LR	05 07 15.8	
	comp=Z,2µm,19.3s,baz=30,slow=36						
	comp=Z,11nm,1.0s						
CPUP	Villa Florida	39.41	211	P	P	04 51 00.4	+0.5

CPUP	Villa Florida	39.41	211	P	P	04 51 00.4	+0.5
CPUP				pmax	pmax		
	comp=Z,15nm,1.0s						
CPUP	Villa Florida	39.41	211	eP	P	04 51 00.8	+0.8
LIS	Lisbon	39.47	34	eP	P	04 51 03.7	+3.4
	comp=Z,167nm,1.7s						
LPAZ	La Paz	39.60	233	P	P	04 51 03.2	+0.8
	comp=Z,88nm,0.7s,baz=53,slow=6.3,SNR=314						
LPAZ				S	S	04 56 57.3	-8.7
	comp=Z,1.8nm,1.0s,baz=335,slow=19,SNR=2.2						
LPAZ				LR	LR	05 07 12.0	
	comp=Z,1µm,18.3s,baz=54,slow=36						
LPAZ	La Paz	39.60	233⇑	eP	P	04 51 03.7	+1.3
LPAZ	La Paz	39.60	233	eP	P	04 51 03.1	+0.7
CZSB	Cruzeiro do Su	39.62	249	eP	P	04 51 01.6	-0.4
PACT	Alcochete	39.68	34	eP	P	04 51 03.2	+1.1
	comp=Z,265nm,1.6s						
PACT	Alcochete	39.68	34	ePP	PP	04 52 34.3	+1.0
PBEJ	Beja	39.71	36	eP	P	04 51 03.3	+0.9
	comp=Z,41nm,1.7s						
CBOC	Ciudad Bolivar	39.85	270	eP	P	04 51 02.3	-1.8
DBBC	Dabeiba	39.97	272	eP	P	04 51 04.9	-0.1
FLOC	Florencia	40.01	264	eP	P	04 51 13.4	+8.1
AKLM	AKL	40.01	43	P	P	04 51 06.3	+1.3
PLMC	San Jos del P	40.20	269	eP	P	04 51 06.4	-0.5
PMTG	Montargil	40.23	34	eP	P	04 51 07.6	+0.9
	comp=Z,79nm,1.7s						
PSBE	So Bento	40.23	33	eP	P	04 51 07.6	+0.9
	comp=Z,121nm,1.8s						
PESTR	Estremoz	40.45	35	eP	P	04 51 09.2	+0.7
	comp=Z,46nm,1.6s						
PESTR	Estremoz	40.45	35	P	P	04 51 07.9	-0.6
PCAS	Casmilo, Conde	40.78	33	eP	P	04 51 12.1	+0.9
	comp=Z,70nm,2.1s						
JBK	JBK	40.80	44	P	P	04 51 12.4	+0.7
SOTA	Rioblanco	40.87	265	eP	P	04 51 14.4	+1.6
COI	Coimbra	40.93	33	eP	P	04 51 13.6	+1.1
	comp=Z,106nm,1.1s						
COI	Coimbra	40.93	33	P	P	04 51 12.7	+0.2
COI				IAmb	IAmb	04 51 22.8	
	comp=Z,61nm,0.9s						
COI	Coimbra	40.93	33	P	P	04 51 12.7	+0.2
COI				pmax	pmax		
	comp=Z,61nm,1.0s						
PMRV	Marv??o	40.95	34	eP	P	04 51 13.8	+1.2
	comp=Z,107nm,1.5s						
PMRV	Marv??o	40.95	34	eLR	LR	05 02 13.1	
	comp=Z,832nm,22.0s						
CAPC	Capurgana	41.04	275	eP	P	04 51 12.5	-1.3
CPSB	Cacapava Do Su	41.13	203	eP	P	04 51 15.3	+1.2
PCBR	Castelo Branco	41.18	34	eP	P	04 51 15.7	+1.2
	comp=Z,37nm,1.8s						
MTE	Manteigas	41.54	33	eP	P	04 51 16.4	-1.1
	comp=Z,66nm,1.4s						
MTE				eS	S	04 57 35.7	+2.2
MTE				eLQ	LQ	05 00 41.2	
MTE				eLR	LR	05 02 21.0	
	comp=Z,1µm,20.0s						
MTE	Manteigas	41.54	33	P	P	04 51 17.7	+0.1
MTE				IAmb	IAmb	04 51 27.9	
	comp=Z,37nm,1.1s						
PVIS	Viseu	41.57	33	eP	P	04 51 18.6	+0.8
	comp=Z,45nm,1.3s						
GCUF	Volcan Galeras	41.74	264	eP	P	04 51 23.0	+3.0
PB16	IPOC Station P	41.83	232	IAmb	IAmb	04 51 21.2	
	comp=Z,82nm,1.5s						
ITQB	Itaqui	41.85	207	P	P	04 51 20.4	+0.3
ITQB				IAmb	IAmb	04 51 22.5	
	comp=Z,101nm,1.4s						
ITQB	Itaqui	41.85	207	eP	P	04 51 20.7	+0.6
POLO	Lamas de Olo	42.09	32	eP	P	04 51 22.8	+0.7
	comp=Z,21nm,2.2s						
PCAB	Cabril	42.22	31	eP	P	04 51 22.5	-0.5
	comp=Z,66nm,1.3s						
CMBC	Cumbal	42.26	263	eP	P	04 51 24.6	+0.3
PGAV	Gavieira, Arco	42.28	31	eP	P	04 51 24.4	+0.8
	comp=Z,87nm,1.6s						
PGAV	Gavieira, Arco	42.28	31	eLR	LR	05 02 48.7	
	comp=Z,1µm,22.0s						
MVO	Moncorvo	42.35	33	eP	P	04 51 25.0	+0.8
	comp=Z,43nm,1.2s						
MVO				eS	S	04 57 48.1	+2.6
MVO				eLQ	LQ	05 01 10.7	
MVO				eLR	LR	05 02 40.4	
	comp=Z,1µm,18.0s						
PLTB	Pedras Altas	42.40	203	P	P	04 51 26.2	+1.6
PLTB				IAmb	IAmb	04 51 27.4	
	comp=Z,47nm,1.2s						
PLTB	Pedras Altas	42.40	203	eP	P	04 51 25.7	+1.1
PB11	IPOC Station P	42.77	230	IAmb	IAmb	04 51 27.8	
	comp=Z,26nm,0.8s						
PAB	San Pablo	42.77	37	P	P	04 51 27.7	0.0
PAB	San Pablo	42.77	37	P	P	04 51 27.7	0.0
PAB				pmax	pmax		
	comp=Z,46nm,1.5s						
PAB	San Pablo	42.77	37	P	P	04 51 29.2	+1.5
PBRG	Braganca	42.96	32	eP	P	04 51 29.7	+0.6
	comp=Z,60nm,1.9s						
OTAV	Otavalo	43.00	262	P	P	04 51 31.3	+1.0
OTAV	Otavalo	43.00	262	P	P	04 51 31.3	+1.0
OTAV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
OTAV	Otavalo	43.00	262	eP	P	04 51 32.3	+2.0
OTAV	Otavalo	43.00	262	eP	P	04 51 31.0	+0.7
ESDC	Sonseca Array	43.09	37	P	P	04 51 30.4	+0.3
	comp=Z,3.7nm,1.0s,baz=358,slow=8.4,SNR=21						
ESDC				S	S	04 57 48.6	-7.7
	comp=Z,0.2nm,0.6s,baz=272,slow=5.9,SNR=2.1						
ESDC				LR	LR	05 05 42.3	
	comp=Z,1µm,21.0s,baz=224,slow=31						
	comp=Z,3.7nm,1.0s						
AF01	San Pedro de A	43.62	225	IAmb	IAmb	04 51 35.6	
	comp=Z,45nm,1.0s						
TA01	Diego Aracena	43.63	230	IAmb	IAmb	04 51 34.0	
	comp=Z,43nm,0.7s						
PB02	IPOC Station P	43.87	229	IAmb	IAmb	04 51 36.6	
	comp=Z,38nm,0.7s						
LVC	Limon Verde	43.93	226	LR	LR	05 10 37.1	
	comp=Z,1µm,18.1s,baz=62,slow=37						
LVC	Limon Verde	43.93	226	P	P	04 51 36.8	-0.8
LVC				IAmb	IAmb	04 51 37.6	
	comp=Z,38nm,1.4s						
LVC	Limon Verde	43.93	226	P	P	04 51 36.8	-0.8
LVC				pmax	pmax		
	comp=Z,38nm,1.4s						
LVC	Limon Verde	43.93	226	eP	P	04 51 37.0	-0.6
PB07	IPOC Station P	44.10	228	IAmb	IAmb	04 51 38.9	
	comp=Z,24nm,0.7s						
PB06	IPOC Station P	44.47	227	IAmb	IAmb	04 51 44.4	
	comp=Z,28nm,0.9s						
PB04	IPOC Station P	44.66	228	IAmb	IAmb	04 51 44.8	
	comp=Z,36nm,1.1s						
ATAH	Atahualpa	44.74	252	LR	LR	05 11 44.5	
	comp=Z,2µm,18.3s,baz=80,slow=38						
NNA	Nana	45.00	245	LR	LR	05 10 07.0	
	comp=Z,1µm,21.3s,baz=70,slow=36						
NNA	Nana	45.00	245c	eP	P	04 51 45.5	-0.4
NNA				pmax	pmax		
	comp=Z,67nm,2.5s						
DRLN	Deer Lake	45.55	340	P	P	04 51 49.5	-0.2
DRLN				IAmb	IAmb	04 52 11.2	
	comp=Z,25nm,1.0s						
PB10	IPOC Station P	45.68	227	IAmb	IAmb	04 51 51.4	
	comp=Z,26nm,0.9s						
LMN	Caledonia Moun	45.75	332	IAmb	IAmb	04 51 56.4	
	comp=Z,39nm,1.2s						
BRU2	Volcan	46.31	275	P	P	04 51 57.4	+0.9
BRU2	Volcan	46.31	275	eP	P	04 51 52.7	-3.7
BRYW	Bryant College	46.66	323	P	P	04 51 59.2	+0.6
SRBA	San Rafael, Bu	46.96	276	IAmb	IAmb	04 52 15.2	
	comp=Z,42nm,1.4s						
UCCT	U. Connecticut	47.00	323	P	P	04 52 01.6	+0.4
HRV	Adam Dziewonsk	47.03	324	P	P	04 52 01.5	+0.1
HRV				IAmb	IAmb	04 52 03.5	
	comp=Z,26nm,0.8s						
HRV	Adam Dziewonsk	47.03	324	P	P	04 52 01.5	+0.1
HRV				pmax	pmax		
	comp=Z,26nm,0.8s						
HRV	Adam Dziewonsk	47.03	324	P	P	04 52 02.5	+1.0
	baz=128						
WSPT	Westport, CT	47.31	321	IAmb	IAmb	04 52 05.5	
	comp=Z,25nm,0.7s						
CVTR	Volcan Turrial	47.34	277	P	P	04 52 05.4	+0.6
QUA2	Belchertown	47.37	323	IAmb	IAmb	04 52 05.3	
	comp=Z,23nm,0.8s						
CNNC	Cliffs of the	47.42	312	P	P	04 52 05.6	+1.0
	baz=116						
RIMA	Rio Macho	47.45	276	P	P	04 52 06.0	+0.6
K62A	Royalston	47.53	324	IAmb	IAmb	04 52 06.7	
	comp=Z,20nm,1.1s						
PKME	Peaks-Kenny Pk	47.55	328	IAmb	IAmb	04 52 16.1	
	comp=Z,37nm,1.2s						
PAL	Palisades	47.58	321	P	P	04 52 06.5	+0.8
	baz=124,SNR=8.5						
PAL	Palisades	47.58	321	P	P	04 52 06.5	+0.8
	baz=124,SNR=8.5						
Y59A	Loris	47.64	310	P	P	04 52 07.4	+1.2
	baz=114,SNR=5.1						
Y59A				P	P	04 52 07.4	+1.2
	baz=114,SNR=5.1						
L61B	Northampton	47.66	323	IAmb	IAmb	04 52 07.7	
	comp=Z,16nm,0.9s						
L61B	Northampton	47.66	323	P	P	04 52 07.2	+0.9
	baz=127						
FFD	Franklin Falls	47.68	325	IAmb	IAmb	04 52 08.6	
	comp=Z,26nm,0.8s						
I62A	Tamworth	47.76	326	IAmb	IAmb	04 52 08.8	
	comp=Z,23nm,0.9s						
I62A	Tamworth	47.76	326	P	P	04 52 08.4	+1.3
	baz=129,SNR=7.8						
I62A				P	P	04 52 08.4	+1.3
	baz=129,SNR=7.8						
U59A	Littleton	47.84	313	IAmb	IAmb	04 52 09.7	
	comp=Z,25nm,0.8s						
U59A	Littleton	47.84	313	P	P	04 52 08.6	+0.7
	baz=117,SNR=11						
U59A				P	P	04 52 08.6	+0.7
	baz=117,SNR=11						
TRNY	Table Rock, Ra	47.85	321	P	P	04 52 07.6	-0.2
BRNY	Black Rk. Fore	47.87	321	P	P	04 52 09.1	+1.1
	baz=124,SNR=18						
ESPN	Las Esperanzas	47.88	280	IAmb	IAmb	04 52 09.6	
	comp=Z,22nm,1.0s						
TUPA	Temple Univers	47.93	319	P	P	04 52 09.5	+1.1
	baz=122,SNR=8.5						
AC06	Mina Casimiro	47.97	223	IAmb	IAmb	04 52 13.3	
	comp=Z,19nm,0.8s						
GO03	Copiap	48.05	222	IAmb	IAmb	04 52 31.1	
	comp=Z,45nm,1.4s						
ODNJ	Ogdensburg	48.06	321	IAmb	IAmb	04 52 11.3	
	comp=Z,16nm,0.8s						
ODNJ	Ogdensburg	48.06	321	P	P	04 52 10.1	+0.7
	baz=124,SNR=6.0						
WUPA	West Chester U	48.08	319	IAmb	IAmb	04 52 11.4	
	comp=Z,18nm,0.8s						
J61A	Chester	48.13	324	IAmb	IAmb	04 52 11.6	
	comp=Z,15nm,0.8s						
NPNY	Mohonk Preserv	48.14	322	P	P	04 52 10.7	+0.6
	baz=125,SNR=6.2						
G62A	West of Eustis	48.18	327	IAmb	IAmb	04 52 21.5	
	comp=Z,25nm,0.9s						
G62A	West of Eustis	48.18	327	P	P	04 52 11.1	+0.7
	baz=131,SNR=6.0						
G62A				P	P	04 52 11.1	+0.7
	baz=131,SNR=6.0						
HNH	Hanover	48.19	325	IAmb	IAmb	04 52 12.4	
	comp=Z,19nm,0.7s						
LUPA	Lehigh Univers	48.28	320	IAmb	IAmb	04 52 13.2	
	comp=Z,31nm,0.8s						
NHSC	New Hope	48.30	308	P	P	04 52 11.8	+0.4
	baz=112						
LBNH	Lisbon	48.32	326	IAmb	IAmb	04 52 28.0	
	comp=Z,18nm,0.9s						
LBNH	Lisbon	48.32	326	P	P	04 52 12.6	+1.2
	baz=129						
CBN	Corbin Frederi	48.41	316	IAmb	IAmb	04 52 13.8	
	comp=Z,29nm,1.0s						
CBN	Corbin Frederi	48.41	316	P	P	04 52 12.5	+0.4
	baz=119						
TRY	Troy	48.42	323	IAmb	IAmb	04 52 14.2	
	comp=Z,22nm,0.9s						
JTS	Las Juntas de	48.51	277	LR	LR	05 13 03.1	
	comp=Z,178nm,21.5s,baz=172,slow=37						
JTS	Las Juntas de	48.51	277⇑	eP	P	04 52 13.6	+0.2
JTS				pmax	pmax		
	comp=Z,24nm,1.4s						
JSRW	J. Sargeant Re	48.52	315	P	P	04 52 13.2	+0.2
V58A	Windy Hill, Pi	48.56	312	IAmb	IAmb	04 52 15.3	
	comp=Z,34nm,0.9s						
V58A	Windy Hill, Pi	48.56	312	P	P	04 52 14.3	+0.9
	baz=115,SNR=9.8						
V58A				P	P	04 52 14.3	+0.9
	baz=115,SNR=9.8						
MVL	Millersville	48.60	318	IAmb	IAmb	04 52 15.7	
	comp=Z,23nm,0.8s						
SDMD	Soldier's Deli	48.63	317	IAmb	IAmb	04 52 15.7	
	comp=Z,15nm,0.8s						
SDMD	Soldier's Deli	48.63	317	P	P	04 52 14.9	+1.0
	baz=120,SNR=6.7						
R58B	Mineral	48.64	315	IAmb	IAmb	04 52 15.3	
	comp=Z,22nm,0.8s						
R58B	Mineral	48.64	315	P	P	04 52 14.1	+0.1
	baz=118,SNR=10						
R58B				P	P	04 52 14.1	+0.1
	baz=118,SNR=10						
D62A	Allapoint, All	48.67	330	IAmb	IAmb	04 52 16.1	
	comp=Z,34nm,1.1s						
D62A	Allapoint, All	48.67	330	P	P	04 52 15.0	+0.9
	baz=134,SNR=10						
D62A				P	P	04 52 15.0	+0.9
	baz=134,SNR=10						
ACON	Acoyapa	48.73	279	IAmb	IAmb	04 52 16.3	
	comp=Z,23nm,0.9s						
Y57A	Sumter	48.81	309	P	P	04 52 16.5	+1.2
	baz=113,SNR=5.9						
Y57A				P	P	04 52 16.5	+1.2
	baz=113,SNR=5.9						
HCNY	Howe Caverns	48.84	322	P	P	04 52 16.7	+1.3
	baz=125,SNR=9.6						
L59A	Walton	48.94	322	IAmb	IAmb	04 52 18.1	
	comp=Z,23nm,0.8s						
L59A	Walton	48.94	322	P	P	04 52 16.9	+0.6
	baz=124,SNR=9.0						
L59A				P	P	04 52 16.9	+0.6
	baz=124,SNR=9.0						
W57A	Gilead	48.95	311	IAmb	IAmb	04 52 27.3	
	comp=Z,23nm,1.1s						
KSPA	Keystone Colle	49.05	320	P	P	04 52 17.2	+0.1
	baz=123,SNR=14						
BIRD	Birdtown, Kers	49.10	310	P	P	04 52 17.4	-0.2
BIRD				IAmb	IAmb	04 52 19.1	
	comp=Z,26nm,0.7s						
BIRD	Birdtown, Kers	49.10	310	P	P	04 52 18.2	+0.6
	baz=113,SNR=8.3						
LCO	Las Campanas	49.29	221	P	P	04 52 19.2	-0.2
LCO				IAmb	IAmb	04 52 20.2	
	comp=Z,26nm,1.0s						
LCO	Las Campanas	49.29	221	P	P	04 52 19.2	-0.2
LCO				pmax	pmax		
	comp=Z,26nm,1.0s						
S57A	Dark Hollow, R	49.30	314	P	P	04 52 20.0	+0.9
	baz=117,SNR=8.1						
S57A				P	P	04 52 20.0	+0.9
	baz=117,SNR=8.1						
J59A	Piesco	49.34	323	IAmb	IAmb	04 52 21.1	
	comp=Z,26nm,0.9s						
NCB	Newcomb	49.47	324	IAmb	IAmb	04 52 32.1	
	comp=Z,28nm,1.3s						
NCB	Newcomb	49.47	324	P	P	04 52 21.3	+1.0
	baz=126,SNR=6.2						
MATN	Matagalpa	49.48	281	IAmb	IAmb	04 52 22.5	
	comp=Z,19nm,1.1s						
BINY	Binghamton	49.53	321	IAmb	IAmb	04 52 23.0	
	comp=Z,27nm,1.1s						
BINY	Binghamton	49.53	321	P	P	04 52 21.8	+1.0
	baz=123,SNR=7.0						
BINY	Binghamton	49.53	321	P	P	04 52 21.9	+1.1
	baz=123,SNR=7.0						
JSC	Jenkinsville	49.58	309	P	P	04 52 21.5	+0.3
JSC				IAmb	IAmb	04 52 22.6	
	comp=Z,17nm,0.8s						
JSC	Jenkinsville	49.58	309	P	P	04 52 21.5	+0.3
JSC				pmax	pmax		
	comp=Z,17nm,0.8s						
JSC	Jenkinsville	49.58	309	P	P	04 52 22.0	+0.8
	baz=112,SNR=6.1						
FRNY	Flat Rock	49.62	325	IAmb	IAmb	04 52 23.2	
	comp=Z,20nm,1.1s						
FRNY	Flat Rock	49.62	325	P	P	04 52 22.0	+0.6
	baz=127,SNR=8.0						
LMQ	La Malbaie	49.63	330	IAmb	IAmb	04 52 30.8	
	comp=Z,37nm,1.5s						
J58A	Remsen	49.75	323	IAmb	IAmb	04 52 24.6	
	comp=Z,23nm,0.8s						
J58A	Remsen	49.75	323	P	P	04 52 23.5	+1.1
	baz=124,SNR=14						
J58A				P	P	04 52 23.5	+1.1
	baz=124,SNR=14						
ZON	Zonda	49.76	217	P	P	04 52 23.5	+0.8
ZON				IAmb	IAmb	04 52 34.4	
	comp=Z,51nm,1.4s						
ZON	Zonda	49.76	217	P	P	04 52 23.5	+0.8
ZON				pmax	pmax		
	comp=Z,51nm,1.4s						
M57A	Sunshine Farm,	49.80	319	P	P	04 52 23.7	+0.9
	baz=121,SNR=5.9						
M57A				P	P	04 52 23.7	+0.9
	baz=121,SNR=5.9						
SSPA	Standing Stone	49.94	318	P	P	04 52 24.3	+0.4
SSPA	Standing Stone	49.94	318	P	P	04 52 24.3	+0.4
	baz=120,SNR=5.2						
SSPA	Standing Stone	49.94	318	P	P	04 52 24.2	+0.4
	baz=120						
KMSC	Kings Mountain	49.96	310	P	P	04 52 25.0	+0.9
	baz=113						
LONY	Lake Ozonia	50.06	324	P	P	04 52 26.2	+1.5
	baz=126						
BLA	Blacksburg	50.12	313	P	P	04 52 26.5	+1.1
	baz=115,SNR=14						
BLA	Blacksburg	50.12	313	P	P	04 52 26.6	+1.2
	baz=115,SNR=14						
V55A	Taylorsville	50.14	311	IAmb	IAmb	04 52 27.7	
	comp=Z,33nm,1.0s						
V55A	Taylorsville	50.14	311	P	P	04 52 26.8	+1.3
	baz=113,SNR=8.6						
V55A				P	P	04 52 26.8	+1.3
	baz=113,SNR=8.6						
K57A	Scipio Center	50.15	321	P	P	04 52 26.3	+0.8
	baz=123,SNR=10						
PAULI	Pauline	50.20	310	P	P	04 52 26.5	+0.5
WCNY	West Carthage	50.32	323	P	P	04 52 27.2	+0.4
	baz=125,SNR=9.3						
HODGE	Hodges	50.33	309	IAmb	IAmb	04 52 28.4	
	comp=Z,21nm,0.8s						
HODGE	Hodges	50.33	309	P	P	04 52 26.7	-0.2
	baz=111,SNR=10						
R55A	Marlinton	50.36	315	IAmb	IAmb	04 52 39.0	
	comp=Z,25nm,1.1s						
154A	Montrose	50.43	307	IAmb	IAmb	04 52 29.9	
	comp=Z,42nm,1.0s						
TIGA	Tifton	50.45	305	IAmb	IAmb	04 52 30.0	
	comp=Z,32nm,0.9s						
TIGA	Tifton	50.45	305	P	P	04 52 29.1	+1.2
	baz=108						
L56A	Greenwood	50.49	320	IAmb	IAmb	04 52 29.7	
	comp=Z,24nm,0.7s						
L56A	Greenwood	50.49	320	P	P	04 52 28.7	+0.6
	baz=121,SNR=13						
L56A				P	P	04 52 28.7	+0.6
	baz=121,SNR=13						
J56A	Wolcott	50.66	322	IAmb	IAmb	04 52 31.0	
	comp=Z,17nm,0.7s						
J56A	Wolcott	50.66	322	P	P	04 52 30.1	+0.9
	baz=123,SNR=6.4						
J56A				P	P	04 52 30.1	+0.9
	baz=123,SNR=6.4						
LATQ	La Tuque	50.77	328	IAmb	IAmb	04 52 41.3	
	comp=Z,33nm,0.8s						
MCWV	Mont Chateau	50.79	316	P	P	04 52 31.4	+1.1
	baz=117,SNR=5.0						
MCWV	Mont Chateau	50.79	316	P	P	04 52 31.3	+1.0
	baz=117,SNR=5.0						
TGUH	Tegucigalpa,Un	50.82	282	P	P	04 52 31.8	+0.7
TGUH				IAmb	IAmb	04 52 32.8	
	comp=Z,47nm,0.9s						
TGUH	Tegucigalpa,Un	50.82	282	eP	P	04 52 30.7	-0.4
U54A	Nelsons Funny	50.86	312	IAmb	IAmb	04 52 33.1	
	comp=Z,31nm,1.1s						
U54A	Nelsons Funny	50.86	312	P	P	04 52 32.2	+1.2
	baz=113,SNR=6.4						
U54A				P	P	04 52 32.2	+1.2
	baz=113,SNR=6.4						
M55A	Ridgway	50.93	319	P	P	04 52 32.1	+0.7
	baz=120,SNR=10						
M55A				P	P	04 52 32.1	+0.7
	baz=120,SNR=10						
GOGA	Godfrey	50.98	307	P	P	04 52 32.6	+0.7
	baz=110,SNR=6.4						
GOGA	Godfrey	50.98	307	P	P	04 52 32.9	+1.0
	baz=110,SNR=6.4						
TRQ	Mont Tremblant	51.00	326	IAmb	IAmb	04 52 43.0	
	comp=Z,21nm,0.9s						
S54A	Dingess, Beckl	51.01	313	IAmb	IAmb	04 52 33.6	
	comp=Z,21nm,0.8s						
S54A	Dingess, Beckl	51.01	313	P	P	04 52 33.2	+1.1
	baz=115,SNR=5.7						
S54A				P	P	04 52 33.2	+1.1
	baz=115,SNR=5.7						
MMNY	Mt. Morris Dam	51.02	321	IAmb	IAmb	04 52 33.2	
	comp=Z,17nm,0.7s						
BG3	Lake Jocassee	51.12	310	IAmb	IAmb	04 52 35.3	
	comp=Z,36nm,0.9s						
CASEE	Lake Jocassee	51.12	310	P	P	04 52 34.5	+1.5
	baz=111,SNR=13						
Q54A	Coxs Mills	51.17	315	IAmb	IAmb	04 52 35.3	
	comp=Z,22nm,0.8s						
Q54A	Coxs Mills	51.17	315	P	P	04 52 34.5	+1.2
	baz=116,SNR=9.6						
Q54A				P	P	04 52 34.5	+1.2
	baz=116,SNR=9.6						
J55A	Hilton	51.24	321	P	P	04 52 33.7	+0.1
	baz=122,SNR=5.9						
J55A				P	P	04 52 33.7	+0.1
	baz=122,SNR=5.9						
V53A	Saluda	51.27	310	IAmb	IAmb	04 52 36.1	
	comp=Z,22nm,1.1s						
V53A	Saluda	51.27	310	P	P	04 52 34.6	+0.5
	baz=112,SNR=8.9						
V53A				P	P	04 52 34.6	+0.5
	baz=112,SNR=8.9						
TRQA	Tornquist	51.29	206	P	P	04 52 34.8	+0.7
TRQA	Tornquist	51.29	206	P	P	04 52 34.8	+0.7
TRQA				pmax	pmax		
	comp=Z,15nm,1.0s						
TRQA	Tornquist	51.29	206	eP	P	04 52 34.6	+0.5
WVNY	West Valley, N	51.29	320	IAmb	IAmb	04 52 36.1	
	comp=Z,53nm,1.3s						
WVNY	West Valley, N	51.29	320	P	P	04 52 35.1	+0.9
	baz=120,SNR=12						
O54A	Avella	51.39	317	IAmb	IAmb	04 52 36.6	
	comp=Z,18nm,0.8s						
O54A	Avella	51.39	317	P	P	04 52 35.7	+0.8
	baz=117,SNR=8.9						
O54A				P	P	04 52 35.7	+0.8
	baz=117,SNR=8.9						
SSB	Saint Sauveur	51.48	36	IAmb	IAmb	04 52 41.7	
	comp=Z,33nm,1.3s						
352A	Blakely	51.55	305	IAmb	IAmb	04 52 37.9	
	comp=Z,25nm,0.8s						
352A	Blakely	51.55	305	P	P	04 52 37.0	+0.8
	baz=107,SNR=6.0						
Y52A	Lilburn	51.60	308	IAmb	IAmb	04 52 38.7	
	comp=Z,20nm,0.8s						
Y52A	Lilburn	51.60	308	P	P	04 52 37.9	+1.3
	baz=110,SNR=7.9						
Y52A				P	P	04 52 37.9	+1.3
	baz=110,SNR=7.9						
R53A	Hurricane	51.69	314	P	P	04 52 37.6	+0.5
	baz=115,SNR=5.3						
R53A				P	P	04 52 37.6	+0.5
	baz=115,SNR=5.3						
152A	Waverly Hall	51.74	306	P	P	04 52 38.6	+1.0
	baz=108,SNR=6.2						
P53A	Whipple	51.78	315	IAmb	IAmb	04 52 39.6	
	comp=Z,39nm,0.8s						
P53A	Whipple	51.78	315	P	P	04 52 38.3	+0.5
	baz=116,SNR=16						
P53A				P	P	04 52 38.3	+0.5
	baz=116,SNR=16						
DELO	Deloro Mine	51.79	323	P	P	04 52 37.7	-0.1
DELO				IAmb	IAmb	04 52 39.4	
	comp=Z,25nm,1.1s						
CLF	Chambon-Foret	51.86	32	IAmb	IAmb	04 52 48.8	
	comp=Z,38nm,0.9s						
ALLY	Alegheny Colle	51.92	318	IAmb	IAmb	04 52 40.5	
	comp=Z,38nm,0.8s						
ALLY	Alegheny Colle	51.92	318	P	P	04 52 39.6	+0.7
	baz=118,SNR=13						
N53A	Lisbon	51.99	317	P	P	04 52 40.2	+0.9
	baz=117,SNR=16						
N53A				P	P	04 52 40.2	+0.9
	baz=117,SNR=16						

O53A	New Philadelph	51.99	316	P	P	04 52 40.3	+0.9
	baz=117,SNR=18						
TKL	Tuckaleechee C	52.00	310	LR	LR	05 09 56.9	
	comp=Z,279nm,21.7s,baz=120,slow=31						
TKL	Tuckaleechee C	52.00	310	P	P	04 52 39.5	0.0
	baz=111,SNR=7.1						
ERPA	Erie	52.04	319	P	P	04 52 40.0	+0.3
	baz=119,SNR=5.4						
ERPA	Erie	52.04	319	P	P	04 52 40.4	+0.7
	baz=119,SNR=5.4						
VA06	Catapilco	52.06	218	IAmb	IAmb	04 52 40.3	
	comp=Z,45nm,0.9s						
PEL	Peldehue	52.09	217	IAmb	IAmb	04 52 41.1	
	comp=Z,64nm,1.3s						
TZTN	Tazewell	52.15	311	IAmb	IAmb	04 52 42.6	
	comp=Z,52nm,1.4s						
TZTN	Tazewell	52.15	311	P	P	04 52 40.9	+0.3
	baz=112,SNR=8.0						
TZTN	Tazewell	52.15	311	P	P	04 52 41.0	+0.3
	baz=112,SNR=8.0						
ROC1	El Roble	52.17	218	IAmb	IAmb	04 52 47.3	
	comp=Z,31nm,0.7s						
Q52A	Bidwell	52.17	314	P	P	04 52 40.5	-0.2
Q52A				IAmb	IAmb	04 52 42.4	
	comp=Z,38nm,0.8s						
Q52A	Bidwell	52.17	314	P	P	04 52 41.5	+0.8
	baz=115,SNR=11						
Q52A				P	P	04 52 41.5	+0.8
	baz=115,SNR=11						
M53A	WI Miller and	52.17	318	IAmb	IAmb	04 52 42.4	
	comp=Z,35nm,1.2s						
M53A	WI Miller and	52.17	318	P	P	04 52 41.1	+0.4
	baz=118,SNR=6.1						
MT03	Universidad Ad	52.23	217	IAmb	IAmb	04 52 52.0	
	comp=Z,56nm,1.1s						
LMEL	Las Melosas	52.29	216	IAmb	IAmb	04 52 43.3	
	comp=Z,27nm,1.1s						
P52A	Corning	52.36	315	IAmb	IAmb	04 52 43.6	
	comp=Z,36nm,0.8s						
P52A	Corning	52.36	315	P	P	04 52 42.4	+0.3
	baz=115						
O52A	Adamsville	52.36	316	P	P	04 52 43.0	+0.9
	baz=116,SNR=16						
O52A				P	P	04 52 43.0	+0.9
	baz=116,SNR=16						
MT02	Curacav	52.44	218	IAmb	IAmb	04 52 54.0	
	comp=Z,54nm,1.4s						
V51A	Loudon	52.49	310	IAmb	IAmb	04 52 44.9	
	comp=Z,23nm,1.1s						
V51A	Loudon	52.49	310	P	P	04 52 43.8	+0.7
	baz=111,SNR=5.8						
S51A	Beattyville	52.60	312	P	P	04 52 44.9	+1.0
	baz=113,SNR=6.4						
S51A				P	P	04 52 44.9	+1.0
	baz=113,SNR=6.4						
BNI	Bardonecchia	52.61	37	IAmb	IAmb	04 52 54.5	
	comp=Z,33nm,1.4s						
M52A	Chesterland	52.67	318	IAmb	IAmb	04 52 45.7	
	comp=Z,26nm,0.7s						
M52A	Chesterland	52.67	318	P	P	04 52 44.8	+0.4
	baz=117,SNR=11						
M52A				P	P	04 52 44.8	+0.4
	baz=117,SNR=11						
MT09	Talagante	52.71	217	P	P	04 52 44.0	-0.9
250A	Grady	52.79	305	IAmb	IAmb	04 52 58.9	
	comp=Z,26nm,1.1s						
SADO	Sadowa	52.85	322	LR	LR	05 11 46.0	
	comp=Z,479nm,19.6s,baz=133,slow=32						
MT01	Popeta	52.93	217	IAmb	IAmb	04 52 46.8	
	comp=Z,44nm,0.9s						
P51A	Williamsport	52.95	315	P	P	04 52 47.2	+0.8
	baz=114,SNR=15						
P51A				P	P	04 52 47.2	+0.8
	baz=114,SNR=15						
Q51A	Peebles	52.97	314	P	P	04 52 47.6	+1.0
	baz=114,SNR=21						
Q51A				P	P	04 52 47.6	+1.0
	baz=114,SNR=21						
W50A	Signal Mountai	53.02	309	IAmb	IAmb	04 52 49.1	
	comp=Z,31nm,0.9s						
W50A	Signal Mountai	53.02	309	P	P	04 52 48.2	+1.0
	baz=110,SNR=14						
FPAL	Fort Paine	53.04	308	IAmb	IAmb	04 52 49.2	
	comp=Z,24nm,0.8s						
N51A	Ashland	53.08	317	IAmb	IAmb	04 52 49.0	
	comp=Z,31nm,0.8s						
N51A	Ashland	53.08	317	P	P	04 52 47.8	+0.3
	baz=116,SNR=8.4						
N51A				P	P	04 52 47.8	+0.3
	baz=116,SNR=8.4						
BO01	Tunca	53.20	217	IAmb	IAmb	04 52 49.1	
	comp=Z,38nm,1.2s						
ACSO	Alum Creek Sta	53.21	316	P	P	04 52 48.6	+0.3
	baz=115,SNR=19						
ACSO	Alum Creek Sta	53.21	316	P	P	04 52 49.1	+0.7
	baz=115,SNR=19						
T50A	Nancy	53.29	311	IAmb	IAmb	04 52 51.2	
	comp=Z,18nm,0.9s						
R50A	Paris	53.38	313	IAmb	IAmb	04 52 51.9	
	comp=Z,28nm,0.9s						
R50A	Paris	53.38	313	P	P	04 52 50.4	+0.7
	baz=112,SNR=10						
R50A				P	P	04 52 50.4	+0.7
	baz=112,SNR=10						
SCHQ	Schefferville	53.42	338	P	P	04 52 49.4	-0.3
	comp=Z,11nm,0.6s,baz=136,slow=6.2,SNR=33						
SCHQ				LR	LR	05 11 18.2	
	comp=Z,306nm,21.9s,baz=158,slow=31						
	comp=Z,11nm,0.6s						
SCHQ	Schefferville	53.42	338	P	P	04 52 49.6	0.0
SCHQ				IAmb	IAmb	04 53 00.1	
	comp=Z,31nm,1.1s						
SWET	Sewanee	53.50	309	IAmb	IAmb	04 52 52.6	
	comp=Z,39nm,1.2s						
LRAL	Lakeview Retre	53.68	306	IAmb	IAmb	04 52 53.8	
	comp=Z,22nm,0.8s						
LRAL	Lakeview Retre	53.68	306	P	P	04 52 52.3	+0.4
	baz=107,SNR=15						
LRAL	Lakeview Retre	53.68	306	P	P	04 52 52.3	+0.4
	baz=107,SNR=15						
M50A	Fremont	53.75	317	P	P	04 52 52.7	+0.4
	baz=116,SNR=7.5						
M50A				P	P	04 52 52.7	+0.4
	baz=116,SNR=7.5						
U49A	Red Boiling Sp	53.82	310	IAmb	IAmb	04 52 55.0	
	comp=Z,53nm,1.4s						
U49A	Red Boiling Sp	53.82	310	P	P	04 52 53.3	+0.4
	baz=110,SNR=14						
MSSA	Maissana	53.98	39	IAmb	IAmb	04 53 04.1	
	comp=Z,41nm,1.2s						
R49A	Shelbyville	54.00	313	IAmb	IAmb	04 52 56.0	
	comp=Z,28nm,0.8s						
R49A	Shelbyville	54.00	313	P	P	04 52 54.6	+0.4
	baz=112,SNR=11						
R49A				P	P	04 52 54.6	+0.4
	baz=112,SNR=11						
K50A	Casco	54.07	319	IAmb	IAmb	04 52 55.5	
	comp=Z,19nm,0.7s						
CLTN	Cedars of Leba	54.10	310	IAmb	IAmb	04 52 56.7	
	comp=Z,16nm,0.9s						
GO05	Huala	54.12	217	IAmb	IAmb	04 52 56.7	
	comp=Z,19nm,0.9s						
CASP	Castiglione de	54.13	41	P	P	04 52 55.5	+0.4
CASP				IAmb	IAmb	04 52 60.0	
	comp=Z,47nm,1.3s						
O49A	Covington	54.13	315	IAmb	IAmb	04 52 56.5	
	comp=Z,26nm,0.8s						
O49A	Covington	54.13	315	P	P	04 52 55.5	+0.4
	baz=114,SNR=9.1						
O49A				P	P	04 52 55.5	+0.4
	baz=114,SNR=9.1						
X48A	Hartselle	54.13	307	IAmb	IAmb	04 52 56.9	
	comp=Z,18nm,0.8s						
X48A	Hartselle	54.13	307	P	P	04 52 55.7	+0.4
	baz=108,SNR=13						
P49A	Miami Univ. Ec	54.14	314	IAmb	IAmb	04 52 56.8	
	comp=Z,31nm,0.8s						
P49A	Miami Univ. Ec	54.14	314	P	P	04 52 55.5	+0.3
	baz=113,SNR=8.7						
P49A	Miami Univ. Ec	54.14	314	P	P	04 52 55.7	+0.5
	baz=113,SNR=8.7						
N49A	Columbus Grove	54.32	316	IAmb	IAmb	04 52 58.0	
	comp=Z,22nm,0.8s						
N49A	Columbus Grove	54.32	316	P	P	04 52 56.7	+0.2
	baz=114,SNR=8.2						
N49A				P	P	04 52 56.7	+0.2
	baz=114,SNR=8.2						
DOU	Dourbes	54.35	31	*d*P	P	04 52 56.6	+0.1
DOU				*d*pP	sP	04 52 59.1	+0.1
DOU				*d*x	x	04 53 05.1	
V48A	Smith Brothers	54.36	309	IAmb	IAmb	04 52 58.7	
	comp=Z,30nm,0.8s						
V48A	Smith Brothers	54.36	309	P	P	04 52 57.7	+0.8
	baz=109,SNR=23						
VLC	Villacollemand	54.45	40	P	P	04 52 57.6	+0.1
VLC				IAmb	IAmb	04 53 23.6	
	comp=Z,20nm,1.2s						
EKA	Eskdalemuir Ar	54.49	22	LR	LR	05 10 58.8	
	comp=Z,598nm,21.6s,baz=220,slow=30						
VAE	Valguarnera	54.50	49	LR	LR	05 18 01.0	
	comp=Z,1µm,18.3s,baz=286,slow=38						
AAM	Ann Arbor	54.55	318	P	P	04 52 59.2	+1.0
	baz=116,SNR=7.1						
AAM	Ann Arbor	54.55	318	P	P	04 52 59.1	+1.0
	baz=116,SNR=7.1						
BMRD	Maredsous	54.56	31	*d*P	P	04 52 57.6	-0.5
BMRD				*d*x	x	04 53 07.1	
Z47A	Carrollton	54.59	306	IAmb	IAmb	04 53 00.4	
	comp=Z,46nm,1.2s						
Z47A	Carrollton	54.59	306	P	P	04 52 59.2	+0.6
	baz=106,SNR=5.9						
ECH	Echery	54.62	34	IAmb	IAmb	04 53 07.9	
	comp=Z,24nm,1.0s						
P48A	Milroy	54.62	314	IAmb	IAmb	04 52 59.7	
	comp=Z,25nm,0.9s						
P48A	Milroy	54.62	314	P	P	04 52 58.9	+0.2
	baz=112,SNR=9.7						
P48A				P	P	04 52 58.9	+0.2
	baz=112,SNR=9.7						
OSSC	Osservatorio P	54.71	41	IAmb	IAmb	04 53 09.7	
	comp=Z,42nm,1.4s						
RCHB	Rochefort	54.71	31	*d*P	P	04 52 58.7	-0.4
RCHB				*d*pP	sP	04 53 01.8	+0.2
RCHB				*d*x	x	04 53 07.4	
O48B	Farmland	54.74	315	P	P	04 52 59.6	0.0
	baz=113						
I49A	Point Hope	54.74	320	P	P	04 52 58.8	-0.7
	baz=118,SNR=6.2						
I49A				P	P	04 52 58.8	-0.7
	baz=118,SNR=6.2						
BGES	Gesves	54.77	31	*d*P	P	04 52 59.4	-0.3
BGES				*d*x	x	04 53 06.7	
BGES				*d*x	x	04 53 07.9	
WLF	Walferdange	54.90	32	P	P	04 53 00.1	-0.5
WLF	Walferdange	54.90	32	P	P	04 53 00.1	-0.5
WLF				pmax	pmax		
	comp=Z,12nm,0.9s						
WLF	Walferdange	54.90	32	*d*P	P	04 53 00.8	+0.2
BCLA	Clavier	54.91	31	*d*P	P	04 53 00.5	-0.1
BCLA				*d*pP	pP	04 53 03.0	+0.7
BCLA				*d*x	x	04 53 09.0	
BCLA				*d*PcP	PcP	04 54 03.1	+0.6
ZCCA	Zocca	54.91	40	IAmb	IAmb	04 53 13.7	
	comp=Z,29nm,0.9s						
L48A	N Adams	54.92	317	P	P	04 53 01.2	+0.3
	baz=115,SNR=15						
L48A				P	P	04 53 01.2	+0.3
	baz=115,SNR=15						
T47A	Sharon Grove	54.98	310	P	P	04 53 01.9	+0.5
	baz=109,SNR=24						
PLAL	Pickwick Lake	55.10	308	IAmb	IAmb	04 53 03.1	
	comp=Z,20nm,0.8s						
BSTI	Sart Tilman	55.14	31	*d*x	x	04 53 11.0	
BHOU	Houvegnez	55.23	31	*d*x	x	04 53 11.2	
BHOU				*d*PcP	PcP	04 54 03.5	-0.4
WVT	Waverly	55.26	309	P	P	04 53 03.6	+0.2
WVT				IAmb	IAmb	04 53 04.5	
	comp=Z,28nm,0.7s						
WVT	Waverly	55.26	309	P	P	04 53 03.6	+0.2
WVT				pmax	pmax		
	comp=Z,28nm,0.7s						
WVT	Waverly	55.26	309	P	P	04 53 02.7	-0.7
	baz=108,SNR=24						
WVT	Waverly	55.26	309	P	P	04 53 03.6	+0.2
	baz=108						
BLO	Bloomington	55.30	313	IAmb	IAmb	04 53 05.0	
	comp=Z,21nm,0.7s						
BFO	Black Forest	55.33	34	P	P	04 53 04.2	+0.4
BFO				IAmb	IAmb	04 53 13.8	
	comp=Z,31nm,1.2s						
BFO	Black Forest	55.33	34	P	P	04 53 04.2	+0.4
BFO				pmax	pmax		
	comp=Z,31nm,1.2s						
N47A	Urbana	55.36	315	IAmb	IAmb	04 53 05.2	
	comp=Z,49nm,1.5s						
N47A	Urbana	55.36	315	P	P	04 53 03.9	-0.1
	baz=113,SNR=8.4						
N47A				P	P	04 53 03.9	-0.1
	baz=113,SNR=8.4						
MEM	Membach	55.38	31	*d*P	P	04 53 03.5	-0.5
MEM				*d*x	x	04 53 12.8	
DAVOX	Davos/Dischmat	55.42	37	LR	LR	05 14 17.2	
	comp=Z,1µm,19.7s,baz=256,slow=33						
MURB	Monte Urbino	55.43	42	IAmb	IAmb	04 53 25.1	
	comp=Z,28nm,1.1s						
CCIG	Comitan	55.60	285	IAmb	IAmb	04 53 14.9	
	comp=Z,28nm,1.1s						
AQU	L'Aquila	55.63	43	P	P	04 53 06.7	+0.6
AQU				IAmb	IAmb	04 53 25.0	
	comp=Z,18nm,0.9s						
AQU	L'Aquila	55.63	43	P	P	04 53 06.7	+0.6
AQU				pmax	pmax		
	comp=Z,19nm,0.9s						
DAVA	Damuels	55.68	36	*i* P	P	04 53 06.4	0.0
	comp=Z,14nm,0.7s,SNR=9.9						
J47A	Sunmer	55.73	318	IAmb	IAmb	04 53 08.0	
	comp=Z,23nm,0.8s						
J47A	Sunmer	55.73	318	P	P	04 53 06.8	+0.2
	baz=115,SNR=5.2						
J47A				P	P	04 53 06.8	+0.2
	baz=115,SNR=5.2						
TEOL	Teolo	55.82	39	IAmb	IAmb	04 53 08.8	
	comp=Z,16nm,0.6s						
Y45A	Yeager Farm, C	55.95	306	P	P	04 53 08.5	+0.1
Y45A	Yeager Farm, C	55.95	306	P	P	04 53 09.2	+0.8
	baz=106,SNR=5.2						
P46A	Rosedale	55.96	313	P	P	04 53 09.5	+1.1
	baz=111,SNR=11						
W45A	Hickory Valley	56.02	308	P	P	04 53 08.9	0.0
	baz=107,SNR=15						
FETA	Feichten	56.04	37	*i* P	P	04 53 08.7	-0.3
	comp=Z,12nm,1.0s,SNR=12						
CTI	Castel Tesino	56.13	38	IAmb	IAmb	04 53 28.7	
	comp=Z,15nm,0.7s						
SFIN	Lafayette	56.16	314	IAmb	IAmb	04 53 11.2	
	comp=Z,26nm,0.8s						
SFIN	Lafayette	56.16	314	P	P	04 53 10.0	+0.2
	baz=112,SNR=11						
SFIN	Lafayette	56.16	314	P	P	04 53 09.9	+0.2
	baz=112,SNR=11						
L46A	Eue Claire	56.22	316	IAmb	IAmb	04 53 11.4	
	comp=Z,57nm,1.4s						
RETA	Reutte	56.30	36	*e*P	P	04 53 10.5	-0.2
	comp=Z,22nm,1.4s,SNR=11						
344A	Westbrook Farm	56.33	303	P	P	04 53 12.7	+1.5
	baz=103,SNR=7.8						
VBMS	Vicksburg	56.33	304	IAmb	IAmb	04 53 13.2	
	comp=Z,23nm,0.8s						
VBMS	Vicksburg	56.33	304	P	P	04 53 12.3	+1.1
	baz=104						
CUC	Castrocucco	56.41	46	P	P	04 53 10.9	-0.7
MOTA	Moosalm	56.43	37	*i* P	P	04 53 11.3	-0.5
	comp=Z,9.1nm,0.6s,SNR=11						
SQTA	Sankt Quirin	56.43	37	*i* P	P	04 53 11.4	-0.4
	comp=Z,15nm,0.7s,SNR=11						
WATA	Walderalm	56.70	37	*i* P	P	04 53 13.1	-0.6
	comp=Z,9.1nm,0.5s,SNR=5.5						
WTTA	Wattenberg	56.70	37	*i* P	P	04 53 13.4	-0.4
	comp=Z,15nm,0.6s,SNR=11						
SIUC	Southern Illin	56.81	311	IAmb	IAmb	04 53 15.7	
	comp=Z,42nm,1.1s						
S44A	Carbondale	56.83	311	IAmb	IAmb	04 53 15.3	
	comp=Z,22nm,0.7s						
STAL	STALIGIAL	56.88	38	IAmb	IAmb	04 53 24.4	
	comp=Z,55nm,1.4s						
ABTA	Abfaltersbach	56.99	38	*i* P	P	04 53 15.4	-0.3
	comp=Z,28nm,1.5s,SNR=18						
Q44A	Meyer Farm, Va	57.04	312	P	P	04 53 16.1	+0.1
	baz=109,SNR=13						
O44A	Mansfield	57.05	314	P	P	04 53 16.4	+0.2
	baz=110,SNR=14						
143A	Socs Landing,	57.17	304	P	P	04 53 17.8	+0.6
	baz=104,SNR=5.1						
M44A	Midewin, Midew	57.19	315	IAmb	IAmb	04 53 18.1	
	comp=Z,38nm,1.2s						
ROBS	Robic	57.37	39	*i* P	P	04 53 18.3	0.0
SKDS	Skadanscina	57.38	40	⇑*i*P	P	04 53 18.5	+0.1
PLCA	Paso Flores	57.48	211	P	P	04 53 19.0	-0.2
	comp=Z,16nm,1.1s,baz=47,slow=11,SNR=16						
PLCA				LR	LR	05 18 49.4	
	comp=Z,3µm,18.1s,baz=50,slow=37						
	comp=Z,16nm,1.1s						
PLCA	Paso Flores	57.48	211	IAmb	IAmb	04 53 30.8	
	comp=Z,40nm,1.4s						
PLCA	Paso Flores	57.48	211	P	P	04 53 19.0	-0.2
PLCA	Paso Flores	57.48	211	*e*P	P	04 53 19.5	+0.3
MYKA	Terra Mystica	57.62	38	*e*P	P	04 53 20.4	+0.2
	comp=Z,47nm,1.6s,SNR=16						
KBA	Koelnbreinsper	57.65	38	*e*P	P	04 53 20.1	-0.4
	comp=Z,33nm,1.6s,SNR=14						
P43A	Skaggs, Pawnee	57.65	313	IAmb	IAmb	04 53 20.8	
	comp=Z,16nm,0.6s						
P43A	Skaggs, Pawnee	57.65	313	P	P	04 53 20.0	-0.3
	baz=109,SNR=6.1						
GRFO	Grafenberg	57.67	34	P	P	04 53 20.3	0.0
GRFO	Grafenberg	57.67	34	P	P	04 53 20.3	0.0
GRFO				pmax	pmax		
	comp=Z,43nm,1.0s						
CEY	Cerknica	57.72	40	⇑*i*P	P	04 53 21.2	+0.4
HDIL	Hopedale	57.79	314	IAmb	IAmb	04 53 22.1	
	comp=Z,33nm,0.8s						
HDIL	Hopedale	57.79	314	P	P	04 53 21.2	-0.1
	baz=110						
FVM	French Village	57.80	311	IAmb	IAmb	04 53 22.2	
	comp=Z,19nm,0.8s						
FVM	French Village	57.80	311	P	P	04 53 21.3	-0.2
	baz=107,SNR=6.0						
GBAS	Gorenja Brezov	57.82	39	*i* P	P	04 53 22.0	+0.5
K43A	Burlington	57.88	316	P	P	04 53 22.2	+0.3
	baz=112,SNR=5.8						
LJU	Ljubljana	57.92	39	⇑*i*P	P	04 53 22.5	+0.3
BIOA	Bad Ischl, Aus	58.10	37	*e*P	P	04 53 22.8	-0.7
	comp=Z,26nm,1.1s,SNR=15						
OBKA	Obir	58.13	39	*i* P	P	04 53 24.2	+0.4
	comp=Z,53nm,1.8s,SNR=27						
BOJS	Bojanci	58.15	40	*i* P	P	04 53 24.5	+0.7
H43A	Windswept, Lux	58.18	318	P	P	04 53 24.6	+0.6
	baz=113,SNR=8.3						
BORG	Borgarnes	58.23	7	LR	LR	05 12 27.0	
	comp=Z,431nm,21.6s,baz=188,slow=30						
CRES	Cresnjev	58.41	40	⇑*i*P	P	04 53 26.0	+0.4
CCM	Cathedral Cave	58.44	310	P	P	04 53 25.6	-0.4
CCM				IAmb	IAmb	04 53 26.6	
	comp=Z,24nm,0.8s						
CCM	Cathedral Cave	58.44	310	P	P	04 53 25.6	-0.4
CCM				pmax	pmax		
	comp=Z,24nm,0.8s						
CCM	Cathedral Cave	58.44	310	P	P	04 53 25.5	-0.4
	baz=107,SNR=21						
CCM	Cathedral Cave	58.44	310	P	P	04 53 25.5	-0.4
	baz=107						
Z41A	Richland Creek	58.44	305	P	P	04 53 26.4	+0.3
	baz=103						
W41B	Gary Mavity, V	58.45	307	IAmb	IAmb	04 53 26.7	
	comp=Z,20nm,0.9s						
W41B	Gary Mavity, V	58.45	307	P	P	04 53 25.7	-0.4
	baz=104,SNR=12						
W41B	Gary Mavity, V	58.45	307	P	P	04 53 25.6	-0.4
	baz=104,SNR=12						
E43A	Lone Tree Farm	58.46	321	P	P	04 53 25.9	0.0
	baz=115,SNR=24						
SOKA	Soboth	58.51	39	*e*P	P	04 53 26.4	+0.1
	comp=Z,41nm,1.4s,SNR=33						
WHAR	Wooly Hollow	58.51	307	IAmb	IAmb	04 53 38.7	
	comp=Z,32nm,1.2s						
L42A	Oliver, Polo	58.55	315	IAmb	IAmb	04 53 27.6	
	comp=Z,30nm,1.1s						
L42A	Oliver, Polo	58.55	315	P	P	04 53 26.8	+0.2
	baz=110,SNR=7.5						
MOA	Molln	58.55	37	*i* P	P	04 53 26.1	-0.5
	comp=Z,23nm,1.5s,SNR=13						
LL04	Puerto Octay	58.57	212	IAmb	IAmb	04 53 48.9	
	comp=Z,24nm,1.2s						
NKC	Novy Kostel	58.63	34	*e*P	P	04 53 27.8	+0.7
NKC				*e*S	S	05 01 33.4	+2.0
NKC				MLR	MLR		
	comp=Z,600nm,18.0s						
NKC	Novy Kostel	58.63	34	*e*P	P	04 53 27.8	+0.7
NKC				*e*S	S	05 01 33.4	+2.0
NKC				AMS	AMS	05 16 20.0	
	comp=Z,600nm,18.0s						
GERES	GERESS Array B	58.67	36	P	P	04 53 27.1	-0.4
	comp=Z,2.0nm,0.6s,baz=215,slow=6.0,SNR=29						
GERES				LR	LR	05 15 23.7	
	comp=Z,778nm,21.7s,baz=252,slow=33						
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	58.67	36	P	P	04 53 26.9	-0.7
I42A	Draeger Farm,	58.71	317	P	P	04 53 27.5	-0.2
	baz=112,SNR=15						
KHC	Kasperske Hory	58.74	36	IAmb	IAmb	04 53 37.5	
	comp=Z,26nm,1.5s						
KHC	Kasperske Hory	58.74	36	*e*P	P	04 53 27.6	-0.3
KHC				*e*		04 53 35.8	
KHC				*e*S	S	05 01 30.8	-2.1
KHC				MLR	MLR		
	comp=Z,800nm,23.0s						
KHC	Kasperske Hory	58.74	36	*e*P	P	04 53 27.6	-0.3
KHC				*e*x	x	04 53 35.8	
KHC				*e*S	S	05 01 30.8	-2.1
KHC				AMS	AMS	05 13 50.0	
	comp=Z,800nm,23.0s						
X40A	Basin Creek Fa	58.75	306	P	P	04 53 28.1	0.0
	baz=104,SNR=6.8						
X40A				P	P	04 53 28.1	0.0
	baz=104,SNR=6.8						
X40A	Basin Creek Fa	58.75	306	P	P	04 53 28.0	-0.2
	baz=104,SNR=6.8						
SRKY	Kupres RS	58.83	42	*e*P	P	04 53 29.8	+1.1
TSUM	Tsumeb	58.93	118	LR	LR	05 13 08.7	
	comp=Z,961nm,20.7s,baz=297,slow=30						
TSUM	Tsumeb	58.93	118	P	P	04 53 30.6	+0.8
N41A	Harden Midland	58.96	313	P	P	04 53 29.1	-0.4
	baz=109,SNR=6.2						
CKRC	Cesky Krumlov	59.02	36	*e*P	P	04 53 30.0	+0.2
CKRC				*e*S	S	05 01 32.1	-4.4
CKRC				AMS	AMS	05 14 50.0	
	comp=Z,1µm,22.0s						
ARSA	Arzberg	59.05	38	*e*P	P	04 53 29.6	-0.5
	comp=Z,14nm,1.5s,SNR=8.0						
BLY	Banja Luka	59.10	42	⇑*i*P	P	04 53 30.6	+0.2
HCY	Herceg Novi	59.16	45	*e*P	P	04 53 31.2	+0.3
KEK	Kerkira	59.21	48	P	P	04 53 32.0	+0.7
U40A	Yellville	59.22	308	P	P	04 53 30.7	-0.7
	baz=105,SNR=22						
U40A				P	P	04 53 30.7	-0.7
	baz=105,SNR=22						
U40A	Yellville	59.22	308	P	P	04 53 30.8	-0.6
	baz=105,SNR=22						
JFWS	Jewell Farm	59.27	316	P	P	04 53 31.7	0.0
	baz=110,SNR=18						
JFWS	Jewell Farm	59.27	316	P	P	04 53 31.6	-0.1
	baz=110,SNR=18						
R40A	Maddies Statio	59.28	310	IAmb	IAmb	04 53 32.3	
	comp=Z,23nm,0.9s						
R40A	Maddies Statio	59.28	310	P	P	04 53 31.4	-0.5
	baz=106,SNR=21						
BRY	Bratogost	59.34	44	*e*P	P	04 53 32.4	+0.1
MIAR	Mount Ida	59.36	306	IAmb	IAmb	04 53 42.4	
	comp=Z,14nm,0.9s						
MIAR	Mount Ida	59.36	306	P	P	04 53 32.0	-0.4
	baz=103,SNR=10						
MIAR	Mount Ida	59.36	306	P	P	04 53 32.3	-0.1
	baz=103,SNR=10						
FSK	Fiskardo	59.42	49	P	P	04 53 33.7	+1.0
CLL	Collm	59.47	33	⇑*i*P	P	04 53 32.8	0.0
	comp=Z,23nm,1.6s						
CLL				*e*PP	PP	04 55 48.0	+3.9
CLL				*e*S	S	05 01 43.0	+0.8
	comp=N,200nm,29.6s						
CLL				*e*S	S	05 01 43.0	+0.8
	comp=E,300nm,26.9s						
CLL				*e*S	S	05 01 43.0	+0.8
	comp=Z,100nm,22.2s						
CLL				*e*SS	SS	05 05 42.0	+4.7
CLL				*e*SSS	SSS	05 08 16.0	
CLL				Lm	MLR	05 14 00.0	
	comp=Z,700nm,20.9s						
CLL				Lmax		05 14 00.0	
DY2G	Dye2	59.47	355	*i* P	P	04 53 32.8	0.0
DY2G				IAmb	IAmb	04 53 42.0	
	comp=Z,18nm,0.9s						

P40A	Paris	59.47	312	P	P	04 53 32.6	-0.5
	baz=107,SNR=26						
BEHE	Becsehely	59.51	40	⇑*i*P	P	04 53 33.5	+0.2
BEHE	Becsehely	59.51	40	P	P	04 53 32.1	-1.2
DRME	Dracevica, Mon	59.55	45	⇑*i*P	P	04 53 34.6	+1.0
CONA	Conrad Observa	59.55	38	*e*P	P	04 53 33.5	-0.1
	comp=Z,27nm,1.6s,SNR=20						
IGT	Igoumenitsa	59.55	48	P	P	04 53 34.3	+0.6
LKD2	Lefkada island	59.58	49	P	P	04 53 34.4	+0.5
L40A	Anamosa	59.66	315	P	P	04 53 33.9	-0.4
	baz=109,SNR=15						
W39A	Magazine	59.67	307	IAmb	IAmb	04 53 35.7	
	comp=Z,24nm,0.8s						
W39A	Magazine	59.67	307	P	P	04 53 34.8	+0.3
	baz=103,SNR=15						
W39A	Magazine	59.67	307	P	P	04 53 34.9	+0.3
	baz=103,SNR=15						
NATX	Nacogdoches	59.67	302	P	P	04 53 34.0	-0.7
	baz=101,SNR=5.8						
NATX	Nacogdoches	59.67	302	P	P	04 53 34.9	+0.3
	baz=101,SNR=5.8						
PDG	Podgorica	59.68	45	P	P	04 53 34.6	+0.1
PDG				IAmb	IAmb	04 53 45.0	
	comp=Z,18nm,0.9s						
PDG	Podgorica	59.68	45	⇑*i*P	P	04 53 35.2	+0.7
PRU	Pruhonice	59.69	35	*e*P	P	04 53 34.5	+0.1
PRU				*e*S	S	05 01 41.6	-3.5
PRU				MLR	MLR		
	comp=Z,500nm,16.1s						
PRU	Pruhonice	59.69	35	*e*P	P	04 53 34.5	+0.1
PRU				*e*S	S	05 01 41.6	-3.5
PRU				AMS	AMS	05 19 40.0	
	comp=Z,500nm,16.1s						
UPM	Unac-Piva	59.70	44	*e*P	P	04 53 35.4	+0.6
COWI	Conover	59.71	320	IAmb	IAmb	04 53 35.6	
	comp=Z,17nm,0.8s						
RONA	Rosalia, Austr	59.72	38	*i* P	P	04 53 34.7	0.0
	comp=Z,32nm,1.3s,SNR=26						
D41A	Chassel	59.73	321	P	P	04 53 35.0	+0.2
	baz=114,SNR=5.5						
TIR	Tirane	59.76	46	P	P	04 53 35.9	+0.8
TIR				IAmb	IAmb	04 53 49.7	
	comp=Z,34nm,1.1s						
TIR	Tirane	59.76	46	P	P	04 53 35.9	+0.8
TIR				pmax	pmax		
	comp=Z,34nm,1.1s						
BRG	Berggiesshubel	59.77	34	*e*P	P	04 53 35.4	+0.5
BRG				Amp		04 53 40.7	
	comp=Z,45nm,1.8s						
BRG				Amp		05 16 34.0	
	comp=N,0.3nm,17.5s						
BRG				Amp		05 16 41.0	
	comp=Z,0.6nm,15.6s						
BRG				Amp		05 16 45.0	
	comp=E,0.3nm,13.4s						
BRG	Berggiesshubel	59.77	34	*e*P	P	04 53 35.4	+0.5
BRG				pmax	pmax		
	comp=Z,45nm,1.8s						
I40A	Norwalk	59.86	317	IAmb	IAmb	04 53 36.1	
	comp=Z,19nm,0.7s						
I40A	Norwalk	59.86	317	P	P	04 53 35.8	0.0
	baz=111,SNR=11						
SOP	Sopron	59.87	38	P	P	04 53 35.4	-0.3
S39A	Bolivar	59.92	309	P	P	04 53 35.9	-0.4
	baz=105,SNR=33						
TREC	Trest	59.92	36	AMS	AMS	05 15 10.0	
	comp=Z,900nm,20.1s						
LSK	Leskovik	59.93	48	P	P	04 53 37.3	+0.9
LL02	Futaleuf	59.95	210	P	P	04 53 35.5	-0.8
PVCC	Panska Ves	59.96	35	*e*P	P	04 53 37.0	+0.8
PVCC				MLR	MLR		
	comp=Z,500nm,20.5s						
PVCC	Panska Ves	59.96	35	*e*P	P	04 53 37.0	+0.8
PVCC				AMS	AMS	05 13 20.0	
	comp=Z,500nm,20.5s						
G40A	Rib Lake	60.08	319	IAmb	IAmb	04 53 38.3	
	comp=Z,20nm,0.8s						
G40A	Rib Lake	60.08	319	P	P	04 53 37.5	+0.3
	baz=112,SNR=12						
ITM	Ithomi	60.12	51	P	P	04 53 38.3	+0.7
ITM	Ithomi	60.12	51	P	P	04 53 38.4	+0.7
ITM				IAmb	IAmb	04 54 00.0	
	comp=Z,35nm,1.1s						
DRO	Drossia	60.15	50	P	P	04 53 39.3	+1.4
PVO	Paravola	60.19	50	P	P	04 53 39.1	+1.1
KBN	Korca	60.21	47	P	P	04 53 38.9	+0.7
KBN	Korca	60.21	47	IAmb	IAmb	04 54 00.5	
	comp=Z,29nm,1.1s						
KOVH	Kovagotottos	60.21	40	P	P	04 53 37.2	-0.8
EGYH	Egyhazaskeszo	60.24	39	P	P	04 53 37.8	-0.5
BBLS	Lazići	60.27	43	⇑*i*P	P	04 53 39.0	+0.4
MPLH	Magyarpolny	60.27	39	P	P	04 53 38.4	-0.1
KRUC	Moravsky	60.36	37	*e*P	P	04 53 38.5	-0.5
SFJD	Kangerlussuaq	60.41	353	P	P	04 53 39.3	+0.4
	comp=Z,6.1nm,0.8s,baz=166,slow=11,SNR=4.3						
SFJD				LR	LR	05 16 47.1	
	comp=Z,122nm,18.1s,baz=172,slow=33						
	comp=Z,6.1nm,0.8s						
SFJD	Kangerlussuaq	60.41	353	*e*P	P	04 53 35.4	-3.5
ZST	Bratislava	60.42	38	*e*P	P	04 53 39.7	+0.3
ZST				pmax	pmax		
	comp=Z,161nm,1.7s						
ZST	Bratislava	60.42	38	*e*P	P	04 53 39.7	+0.3
LAKA	Lakka	60.43	50	P	P	04 53 40.7	+0.9
KPRO	Kipourio	60.44	48	P	P	04 53 41.0	+1.2
SJES	Sjenica	60.45	44	⇑*i*P	P	04 53 40.4	+0.5
TRIP	Tripoli	60.48	51	P	P	04 53 40.5	+0.4
ANX	Ano Chora	60.48	50	P	P	04 53 41.5	+1.3
KLV	Kalavryta, Ach	60.51	50	P	P	04 53 41.7	+1.3
VRAC	Vranov	60.58	37	LR	LR	05 16 21.5	
	comp=Z,877nm,21.8s,baz=253,slow=33						
VRAC	Vranov	60.58	37	*e*P	P	04 53 40.1	-0.5
P38A	Dawn	60.60	312	IAmb	IAmb	04 53 41.2	
	comp=Z,19nm,0.7s						
P38A	Dawn	60.60	312	P	P	04 53 40.4	-0.4
	baz=106,SNR=10						
MODS	Modra-Piesok	60.60	38	*e*P	P	04 53 40.7	0.0
MODS				pmax	pmax		
	comp=Z,58nm,1.1s						
MODS	Modra-Piesok	60.60	38	*e*P	P	04 53 40.7	0.0
MORH	Mrgy, Hungar	60.61	40	⇑*i*P	P	04 53 40.8	+0.1
MORH	Mrgy, Hungar	60.61	40	P	P	04 53 40.2	-0.5
GUR	Goura	60.63	50	P	P	04 53 42.2	+1.0
FNA	Florina	60.68	47	P	P	04 53 41.7	+0.2
N38A	Joes South For	60.71	313	P	P	04 53 41.1	-0.4
	baz=107,SNR=9.4						
DIVS	Divibare	60.75	43	IAmb	IAmb	04 53 52.4	
	comp=Z,23nm,1.1s						
DIVS	Divibare	60.75	43	⇑*i*P	P	04 53 42.4	+0.5
KTHR	Kythira	60.75	53	P	P	04 53 42.7	+0.8
SMOL	Smolenice	60.75	38	*e*P	P	04 53 41.5	-0.3
SMOL	Smolenice	60.75	38	*e*P	P	04 53 41.4	-0.3
MAKR	Makrakomi, Fth	60.75	49	P	P	04 53 42.8	+0.9
UPC	Upice	60.77	35	*e*P	P	04 53 42.2	+0.4
UPC				MLR	MLR		
	comp=Z,400nm,16.9s						
UPC	Upice	60.77	35	*e*P	P	04 53 42.2	+0.4
UPC				AMS	AMS	05 16 20.0	
	comp=Z,400nm,16.9s						
KTHA	Kythira Island	60.79	53	P	P	04 53 43.3	+1.1
VLI	Veliai	60.80	52	P	P	04 53 43.8	+1.5
CSKK	Cskako	60.80	39	P	P	04 53 42.2	+0.1
THL	Klokotos Trika	60.81	49	P	P	04 53 42.9	+0.6
CHVC	Chvalec	60.83	35	AMS	AMS	05 17 20.0	
	comp=Z,400nm,17.0s						
DPC	Dobruska-Polom	60.88	35	*e*P	P	04 53 42.9	+0.3
DPC				*e*		04 53 51.1	
DPC				*e*S	S	05 01 57.9	-2.6
DPC				MLR	MLR		
	comp=Z,500nm,20.8s						
DPC	Dobruska-Polom	60.88	35	*e*P	P	04 53 42.9	+0.3
DPC				*e*x	x	04 53 51.1	
DPC				*e*S	S	05 01 57.9	-2.6
DPC				AMS	AMS	05 14 20.0	
	comp=Z,500nm,20.8s						
ANKY	Antikythira Is	60.89	53	P	P	04 53 44.2	+1.3
OSTC	Ostas	60.91	35	*e*P	P	04 53 42.9	+0.1
OSTC				*e*x	x	04 53 51.9	
OSTC				*e*S	S	05 02 00.7	-0.1
OSTC				AMS	AMS	05 17 30.0	
	comp=Z,400nm,16.9s						
K38A	Parkersburg	60.93	315	IAmb	IAmb	04 53 43.0	
	comp=Z,23nm,0.8s						
K38A	Parkersburg	60.93	315	P	P	04 53 42.0	-1.0
	baz=108,SNR=9.1						
FRB	Frobisher Bay	60.97	344	LR	LR	05 15 47.9	
	comp=Z,310nm,21.4s,baz=174,slow=32						
FRGS	Fruska Gora	60.99	42	⇑*i*P	P	04 53 43.6	+0.2
SRO	Srobarova	61.01	39	*e*P	P	04 53 44.2	+0.7
SRO				pmax	pmax		
	comp=Z,39nm,0.9s						
SRO	Srobarova	61.01	39	*e*P	P	04 53 44.2	+0.7
SCIA	State Center	61.02	314	IAmb	IAmb	04 53 53.5	
	comp=Z,24nm,1.1s						
SCIA	State Center	61.02	314	P	P	04 53 43.4	-0.3
	baz=108						
KRLC	Kraliky	61.02	36	*e*P	P	04 53 44.1	+0.5
KRLC				*e*S	S	05 02 05.3	+3.0
KRLC				MLR	MLR		
	comp=Z,600nm,24.3s						
KRLC	Kraliky	61.02	36	*e*P	P	04 53 44.1	+0.5
KRLC				*e*S	S	05 02 05.3	+3.0
KRLC				AMS	AMS	05 15 20.0	
	comp=Z,600nm,24.3s						
JAVC	Velka Javorina	61.04	37	*e*P	P	04 53 43.7	0.0
KSP	Ksiaz	61.08	35	*e*P	P	04 53 44.4	+0.5
KRND	KRANIDI	61.12	51	P	P	04 53 44.6	+0.2
LTK	Loutraki	61.13	51	P	P	04 53 44.7	+0.2
AY01	Puyuhuapi	61.25	209	P	P	04 53 45.8	+0.8
AY01				IAmb	IAmb	04 53 54.9	
	comp=Z,16nm,1.2s						
LIT	Litokhoron	61.31	48	P	P	04 53 45.5	-0.2
LIT	Litokhoron	61.31	48	IAmb	IAmb	04 53 55.3	
	comp=Z,20nm,1.0s						
MAUC	Maruska	61.34	37	*e*P	P	04 53 46.2	+0.5
MAUC				AMS	AMS	05 15 50.0	
	comp=Z,1µm,22.2s						
MORC	Moravsky Berou	61.34	36	P	P	04 53 46.1	+0.4
MORC				IAmb	IAmb	04 53 51.0	
	comp=Z,27nm,1.5s						
MORC	Moravsky Berou	61.34	36	P	P	04 53 46.1	+0.4
MORC				pmax	pmax		
	comp=Z,27nm,1.5s						
MORC	Moravsky Berou	61.34	36	*e*P	P	04 53 45.9	+0.1
TUL1	Leonard	61.43	307	P	P	04 53 46.2	-0.4
	baz=102,SNR=17						
TUL1	Leonard	61.43	307	P	P	04 53 46.0	-0.5
	baz=102,SNR=17						
VILL	Villia	61.43	50	P	P	04 53 46.8	+0.2
GRG	Griva	61.48	47	P	P	04 53 46.8	0.0
VYHS	Vyhne	61.60	38	*e*P	P	04 53 47.7	+0.2
VYHS	Vyhne	61.60	38	*e*P	P	04 53 47.7	+0.2
XOR	Xorichti	61.64	49	P	P	04 53 48.1	+0.2
NEO	Neokhori	61.65	49	P	P	04 53 47.9	-0.1
ICESG	Greenland Ices	61.71	358	*e*P	P	04 53 48.6	+0.3
ICESG				IAmb	IAmb	04 53 57.2	
	comp=Z,29nm,1.0s						
OKC	Ostrava-Krasne	61.72	37	AMS	AMS	05 16 10.0	
	comp=Z,700nm,19.3s						
VLY	Voula,Athens	61.73	51	P	P	04 53 48.8	+0.3
SPMN	Marine on St.	61.78	318	P	P	04 53 48.5	-0.3
	baz=110,SNR=21						
SPMN	Marine on St.	61.78	318	P	P	04 53 48.4	-0.4
	baz=110,SNR=21						
TLIG	Tlapa	61.78	286	P	P	04 53 49.4	0.0
TLIG				IAmb	IAmb	04 53 51.2	
	comp=Z,14nm,1.0s						
I37A	Lemond, Waseca	61.80	316	IAmb	IAmb	04 53 49.1	
	comp=Z,22nm,0.8s						
I37B	Waseca	61.80	316	P	P	04 53 48.3	-0.6
	baz=108,SNR=9.2						
KNT	Kendrikon	61.89	47	P	P	04 53 49.9	+0.3
435B	Jarrell	61.98	301	IAmb	IAmb	04 53 50.7	
	comp=Z,17nm,0.8s						
435B	Jarrell	61.98	301	P	P	04 53 50.1	-0.2
	baz=98						
PSZ	Piszkesteto	62.03	39	P	P	04 53 50.6	+0.1
PSZ	Piszkesteto	62.03	39	P	P	04 53 50.6	+0.1
PSZ				pmax	pmax		
	comp=Z,69nm,1.5s						
PSZ	Piszkesteto	62.03	39	P	P	04 53 50.4	-0.1
IDI	Anoyia	62.04	54	LR	LR	05 22 56.4	
	comp=Z,144nm,18.3s,baz=256,slow=38						
IDI	Anoyia	62.04	54	P	P	04 53 51.8	+1.0
WHTX	Lake Whitney,	62.06	302	P	P	04 53 50.3	-0.5
	baz=99,SNR=8.6						
WHTX	Lake Whitney,	62.06	302	P	P	04 53 50.3	-0.5
	baz=99,SNR=8.6						
Z35A	Perchaven, San	62.11	304	P	P	04 53 51.2	0.0
	baz=100,SNR=7.9						
MDVR	Moldovita	62.13	43	⇑P	P	04 53 52.1	+0.9
KYMI	Kymi, Euboea I	62.15	50	P	P	04 53 51.8	+0.5
T35A	Sooner Cattle	62.21	308		P	04 53 50.5	-1.4
T35B	Sooner Cattle	62.21	308	P	P	04 53 51.3	-0.5
	baz=102,SNR=7.0						
LANS	Liptovska Anna	62.24	38	*e*P	P	04 53 52.3	+0.5
LANS	Liptovska Anna	62.24	38	*e*P	P	04 53 52.3	+0.5
KARY	Karystos	62.26	51	P	P	04 53 52.6	+0.5
BZS	Buzias	62.34	42	⇑P	P	04 53 53.3	+0.8
BZS	Buzias	62.34	42	⇑P	P	04 53 53.3	+0.8
OUR	Ouranopolis	62.47	48	P	P	04 53 53.8	+0.4
F36A	Milaca	62.47	318	P	P	04 53 52.2	-1.2
	baz=109,SNR=7.4						
N35A	Tabor	62.48	312	P	P	04 53 52.9	-0.7
	baz=105,SNR=8.0						
VTS	Vitosha	62.54	46	P	P	04 53 54.4	+0.3
VTS	Vitosha	62.54	46	P	P	04 53 54.4	+0.3
VTS				pmax	pmax		
	comp=Z,12nm,1.4s						
VTS	Vitosha	62.54	46	*i* P	P	04 53 54.7	+0.6
SIRR	Siria	62.58	41	⇑P	P	04 53 54.8	+0.7
KOKK	Kokkinochori,	62.61	48	P	P	04 53 54.6	+0.2
MMB	Musomiste	62.61	47	*i* P	P	04 53 55.2	+0.8
HERR	Herculane	62.64	43	⇓P	P	04 53 55.4	+0.9
NVR	Nevrokopi	62.64	47	P	P	04 53 55.4	+0.7
KSU1	Kansas State U	62.77	310	P	P	04 53 54.7	-0.9
	baz=103,SNR=12						
KSU1	Kansas State U	62.77	310	P	P	04 53 54.6	-0.9
	baz=103,SNR=12						
X34A	Smith Ranch, M	62.81	305	IAmb	IAmb	04 53 55.6	
	comp=Z,10nm,0.8s						
NIE	Niedzica	62.84	38	*e*P	P	04 53 57.1	+1.2
OJC	Ojcow	62.85	37	*e*P	P	04 53 56.3	+0.5
OJC	Ojcow	62.85	37	IAmb	IAmb	04 54 06.0	
	comp=Z,27nm,1.2s						
KAVA	Kavala	63.03	48	P	P	04 53 56.9	-0.3
GZR	Gura Zlata	63.04	42	⇑P	P	04 53 57.9	+0.6
GZR	Gura Zlata	63.04	42	⇑P	P	04 53 57.9	+0.6
THAS	Thassos island	63.08	48	P	P	04 53 58.0	+0.5
833A	Chaparral WMA,	63.23	298	P	P	04 53 58.4	-0.3
	baz=96,SNR=6.5						
833A	Chaparral WMA,	63.23	298	P	P	04 53 58.8	+0.1
	baz=96,SNR=6.5						
L34A	Svendsen Farm,	63.30	313	P	P	04 53 58.5	-0.5
	baz=105,SNR=18						
CRVS	Cervenica-Dubn	63.37	38	*e*P	P	04 53 59.8	+0.5
CRVS				pmax	pmax		
	comp=Z,134nm,2.4s						
CRVS	Cervenica-Dubn	63.37	38	*e*P	P	04 53 59.8	+0.5
DRGR		63.44	41	⇑P	P	04 54 00.4	+0.5
DRGR		63.44	41	⇑P	P	04 54 00.4	+0.5
B35A	Bob, Littlefor	63.45	321	P	P	04 53 58.5	-1.3
	baz=110,SNR=14						
PLD	Plovdiv	63.45	46	*i* P	P	04 54 00.7	+0.8
WMOK	Wichita Mounta	63.60	305	P	P	04 53 59.9	-1.2
	baz=100,SNR=6.3						
WMOK	Wichita Mounta	63.60	305	P	P	04 53 60.0	-1.2
	baz=100,SNR=6.3						
SCO	Scoresbysund	63.70	5	P	P	04 54 01.3	+0.3
SCO				IAmb	IAmb	04 54 11.7	
	comp=Z,38nm,1.5s						
SCO	Scoresbysund	63.70	5	P	P	04 54 01.3	+0.3
SCO				pmax	pmax		
	comp=Z,38nm,1.5s						
SCO	Scoresbysund	63.70	5	*e*P	P	04 54 00.6	-0.4
SCO				IAmb	IAmb	04 54 11.4	
	comp=Z,29nm,1.4s						
LOT	Lotru	63.73	43	⇑P	P	04 54 02.7	+0.9
NBO00	NORSAR Array S	63.76	23	IAmb	IAmb	04 54 11.2	
	comp=Z,20nm,0.9s						
UZH	Uzhgorod	63.79	39	*e*P	P	04 54 01.8	-0.2
UZH				*e*		04 54 10.8	
UZH				*e*		04 54 33.4	
RDO	Rodhopi	63.82	48	P	P	04 54 02.8	+0.4
RDO	Rodhopi	63.82	48	IAmb	IAmb	04 54 12.7	
	comp=Z,23nm,1.2s						
JCT	Junction City	63.83	300	IAmb	IAmb	04 54 02.7	
	comp=Z,14nm,0.8s						
JCT	Junction City	63.83	300	P	P	04 54 01.8	-0.9
	baz=97,SNR=9.0						
JCT	Junction City	63.83	300	P	P	04 54 02.2	-0.6
	baz=97,SNR=9.0						
KDZ	Kurdzhali	63.85	47	*i* P	P	04 54 02.6	0.0
KOLS	Kolonicke sedl	63.88	39	*e*P	P	04 54 03.8	+1.1
KOLS	Kolonicke sedl	63.88	39	*e*P	P	04 54 03.8	+1.1
NC602	NORSAR Array S	63.88	24	IAmb	IAmb	04 54 07.2	
	comp=Z,34nm,1.4s						
KARP	Karpathos	63.91	54	P	P	04 54 03.8	+0.6
NB2	NORSAR Subarra	63.93	23	P	P	04 54 02.9	+0.1
	comp=Z,83nm,2.5s,baz=234,slow=6.9						
NB2	NORSAR Subarra	63.93	23	P	P	04 54 02.9	+0.1
	baz=234,slow=6.9						
NOA	NORSAR Array B	63.93	23	P	P	04 54 02.8	-0.1
	comp=Z,3.9nm,0.8s,baz=234,slow=6.6,SNR=12						
NOA				LR	LR	05 17 12.7	
	comp=Z,670nm,21.7s,baz=235,slow=32						
	comp=Z,3.9nm,0.8s						
ECSD	EROS Data Cent	63.94	315	IAmb	IAmb	04 54 03.4	
	comp=Z,16nm,0.8s						
ECSD	EROS Data Cent	63.94	315	P	P	04 54 02.3	-0.9
	baz=106,SNR=28						
ECSD	EROS Data Cent	63.94	315	P	P	04 54 02.5	-0.7
	baz=106,SNR=28						
ABTX	Abilene, Hawle	63.98	303	IAmb	IAmb	04 54 04.0	
	comp=Z,22nm,0.8s						
ABTX	Abilene, Hawle	63.98	303	P	P	04 54 02.8	-0.9
	baz=98,SNR=7.6						
ABTX	Abilene, Hawle	63.98	303	P	P	04 54 03.1	-0.6
	baz=98,SNR=7.6						
U32A	Winter Ranch,	64.07	307	IAmb	IAmb	04 54 05.0	
	comp=Z,33nm,1.2s						
U32A	Winter Ranch,	64.07	307	P	P	04 54 04.1	-0.1
	baz=100,SNR=5.1						
NC303	NORSAR Array S	64.10	23	IAmb	IAmb	04 54 27.2	
	comp=Z,17nm,1.1s						
ALN	Alexandroupoli	64.13	48	P	P	04 54 04.8	+0.3
ALN	Alexandroupoli	64.13	48	P	P	04 54 05.0	+0.6
ALN				IAmb	IAmb	04 54 14.7	
	comp=Z,16nm,1.1s						
ALN	Alexandroupoli	64.13	48	P	P	04 54 05.0	+0.6
ALN				pmax	pmax		
	comp=Z,17nm,1.1s						
R32A	Long Quarter,	64.23	309	P	P	04 54 05.1	-0.1
	baz=102,SNR=19						
F33A	5 Mile Ranch,	64.31	318	IAmb	IAmb	04 54 04.9	
	comp=Z,11nm,0.8s						
F33A	5 Mile Ranch,	64.31	318	P	P	04 54 04.3	-1.3
	baz=107,SNR=12						
HFS	Hagfors	64.43	25	LR	LR	05 18 21.5	
	comp=Z,687nm,20.6s,baz=245,slow=32						
BGNE	Belgrade	64.45	312	P	P	04 54 06.5	-0.1
	baz=103,SNR=12						
BGNE	Belgrade	64.45	312	P	P	04 54 06.5	-0.1
	baz=103,SNR=12						
VOIR		64.58	43	⇓P	P	04 54 08.3	+0.8
VOIR		64.58	43	⇓P	P	04 54 08.3	+0.8
SZH	Strazhica	64.62	45	*i* P	P	04 54 08.2	+0.6
AGMN	Agassiz Nation	64.77	320	P	P	04 54 07.4	-1.1
AGMN				IAmb	IAmb	04 54 17.7	
	comp=Z,18nm,1.1s						
AGMN	Agassiz Nation	64.77	320	P	P	04 54 07.5	-1.1
	baz=108,SNR=11						
AGMN	Agassiz Nation	64.77	320	P	P	04 54 07.5	-1.1
	baz=108,SNR=11						
EDRB	Edirne	64.86	47	P	P	04 54 09.5	+0.3
DOPR	Dopca	64.96	42	⇑P	P	04 54 10.4	+0.6
CBKS	Cedar Bluff	65.09	309	P	P	04 54 10.4	-0.5
	baz=101,SNR=6.6						
CBKS	Cedar Bluff	65.09	309	P	P	04 54 10.8	-0.1
	baz=101,SNR=6.6						
D32A	Dogwood Acres,	65.16	319	IAmb	IAmb	04 54 10.6	
	comp=Z,18nm,0.8s						
SUMG	Summit	65.19	359	P	P	04 54 12.0	+0.7
SUMG				IAmb	IAmb	04 54 24.2	
	comp=Z,31nm,1.1s						
SUMG	Summit	65.19	359	P	P	04 54 12.0	+0.7
SUMG				pmax	pmax		
	comp=Z,31nm,1.1s						
SUMG	Summit	65.19	359	*i* P	P	04 54 11.0	-0.3
SUMG				IAmb	IAmb	04 54 23.5	
	comp=Z,19nm,0.8s						
MLR	Muntele Rosu	65.21	43	⇑P	P	04 54 12.3	+0.7
MLR	Muntele Rosu	65.21	43	LR	LR	05 22 19.0	
	comp=Z,713nm,19.3s,baz=264,slow=36						
MLR	Muntele Rosu	65.21	43	P	P	04 54 11.9	+0.3
MLR	Muntele Rosu	65.21	43	⇑P	P	04 54 12.3	+0.7
LVV	L'vov	65.26	38	*e*P	P	04 54 10.2	-1.4
BUR08	Bucovina Ar. S	65.32	41	IAmb	IAmb	04 54 22.1	
	comp=Z,14nm,1.1s						
BURAR	Bucovina Array	65.32	41	⇓P	P	04 54 12.5	+0.3
BURAR	Bucovina Array	65.32	41	P	P	04 54 12.8	+0.6
BURAR	Bucovina Array	65.32	41	⇓P	P	04 54 12.5	+0.3
ULM	Lac du Bonnet	65.41	322	P	P	04 54 10.7	-2.0
	comp=Z,15nm,0.8s,baz=115,slow=7.4,SNR=15						
ULM				LR	LR	05 17 51.9	
	comp=Z,404nm,21.2s,baz=98,slow=32						
	comp=Z,15nm,0.8s						
ULM	Lac du Bonnet	65.41	322	P	P	04 54 12.2	-0.4
ULM				IAmb	IAmb	04 54 12.3	
	comp=Z,19nm,0.8s						
ULM	Lac du Bonnet	65.41	322	P	P	04 54 12.2	-0.4
ULM				pmax	pmax		
	comp=Z,19nm,0.9s						
COVR	Voineasa-Covas	65.48	43	⇑P	P	04 54 13.5	+0.3
ISR	Istrita	65.52	44	⇑P	P	04 54 13.7	+0.2
ISR	Istrita	65.52	44	⇑P	P	04 54 13.7	+0.2
ZAIG	Zacatecas	65.69	292	IAmb	IAmb	04 54 17.5	
	comp=Z,15nm,1.1s						
BIZ	Bicaz	65.71	42	⇑P	P	04 54 15.4	+0.8
SUSD	Miller	65.75	316	P	P	04 54 14.3	-0.6
	baz=104						
PLOR	Plostina	65.78	43	⇑P	P	04 54 15.8	+0.7
PLOR	Plostina	65.78	43	⇑P	P	04 54 15.8	+0.7
VRI	Vrincioaia	65.83	43	⇑P	P	04 54 15.9	+0.4
VRI	Vrincioaia	65.83	43	⇑P	P	04 54 15.9	+0.4
JMIC	Jan Mayen	65.88	10	LR	LR	05 17 06.3	
	comp=Z,232nm,20.5s,baz=218,slow=31						
TESR	Tescani	65.95	42	⇑P	P	04 54 16.2	0.0
UPP	Uppsala	65.98	26	*e*P	P	04 54 16.7	+0.6
AMTX	Amarillo	65.98	305	IAmb	IAmb	04 54 17.2	
	comp=Z,17nm,0.8s						
AMTX	Amarillo	65.98	305	P	P	04 54 16.7	-0.1
	baz=98,SNR=6.6						
AMTX	Amarillo	65.98	305	P	P	04 54 16.7	-0.1
	baz=98						
SUW	Suwalki	66.22	34	*e*P	P	04 54 17.9	+0.2
SUW	Suwalki	66.22	34	*e*P	P	04 54 18.4	+0.6
GO09	Cerro Castillo	66.26	204	P	P	04 54 19.0	+1.0
PBUR	Paburge	66.33	31	*e*P	P	04 54 19.3	+0.9
HARR	Harsova	66.37	44	⇑P	P	04 54 18.9	0.0
HARR	Harsova	66.37	44	⇑P	P	04 54 18.9	0.0
TIRR	Tirgusor	66.65	45	⇓P	P	04 54 21.1	+0.4
TIRR	Tirgusor	66.65	45	⇓P	P	04 54 21.1	+0.4
TPGR	Topolog	66.74	44	⇑P	P	04 54 21.5	+0.1
MSTX	Muleshoe	66.76	304	IAmb	IAmb	04 54 22.7	
	comp=Z,23nm,1.1s						
MSTX	Muleshoe	66.76	304	P	P	04 54 21.8	0.0
	baz=97,SNR=6.5						
MSTX	Muleshoe	66.76	304	P	P	04 54 21.8	0.0
	baz=97,SNR=6.5						
SUR	Sutherland	66.87	130	LR	LR	05 17 01.0	
	comp=Z,497nm,21.2s,baz=296,slow=30						
MBAR	Mbarara	66.94	94	LR	LR	05 21 12.5	
	comp=Z,214nm,18.7s,baz=270,slow=34						
JURR	Jurilovca	67.04	44	⇓P	P	04 54 23.8	+0.7
MDND	Maddock	67.04	319	P	P	04 54 22.7	-0.5
	baz=105,SNR=9.8						
MDND	Maddock	67.04	319	P	P	04 54 22.9	-0.4
	baz=105,SNR=9.8						
TXAR	Lajitas Array	67.06	299	P	P	04 54 23.5	-0.3
	comp=Z,2.7nm,0.6s,baz=110,slow=6.8,SNR=49						
TXAR				LR	LR	05 21 28.4	
	comp=Z,231nm,21.7s,baz=83,slow=34						
	comp=Z,2.7nm,0.6s						
TXAR	Lajitas Array	67.06	299	P	P	04 54 23.3	-0.4
TX31	Lajitas Ar. Si	67.06	299	IAmb	IAmb	04 54 37.1	
	comp=Z,14nm,0.9s						
TX31	Lajitas Ar. Si	67.06	299	P	P	04 54 23.7	-0.1
	baz=94,SNR=20						
PABE	Paberze	67.19	32	*e*P	P	04 54 24.4	+0.5
BORA	Eskisehir	67.23	50	P	P	04 54 25.0	+0.4
BORA				IAmb	IAmb	04 54 39.1	
	comp=Z,29nm,1.2s						
OGNE	Ogallala	67.23	311	P	P	04 54 24.5	-0.1
	baz=100,SNR=5.2						
OGNE	Ogallala	67.23	311	P	P	04 54 24.4	-0.1

	baz=100,SNR=5.2						
KSCO	Kaye Shedlock'	67.35	309	P	P	04 54 26.0	+0.5
	baz=99						
VSVD	Vaisvydziai	67.35	32	eP	P	04 54 25.4	+0.5
LSZ	Lusaka	67.36	110	LR	LR	05 19 36.8	
	comp=Z,210nm,20.3s,baz=303,slow=32						
LSZ	Lusaka	67.36	110	P	P	04 54 29.0	+3.1
LSZ				IAmb	IAmb	04 54 44.7	
	comp=Z,22nm,1.5s						
LSZ	Lusaka	67.36	110	P	P	04 54 29.0	+3.1
LSZ				pmax	pmax		
	comp=Z,21nm,1.5s						
E28A	Huff	67.45	317	P	P	04 54 25.1	-0.7
	baz=104,SNR=13						
SORM	Soroca	67.49	41 ⇓	P	P	04 54 25.5	-0.5
SORM	Soroca	67.49	41 ⇓	P	P	04 54 25.5	-0.5
MILM	Milestii Mici	67.50	42 ⇓	P	P	04 54 25.6	-0.4
MILM	Milestii Mici	67.50	42 ⇓	P	P	04 54 25.6	-0.4
DBG	Daneborg	67.53	5	i P	P	04 54 27.1	+1.3
DBG				IAmb	IAmb	04 54 35.7	
	comp=Z,25nm,1.5s						
FCC	Fort Churchill	67.60	331	P	P	04 54 25.8	-0.6
FCC				IAmb	IAmb	04 54 36.8	
	comp=Z,23nm,0.9s						
FCC	Fort Churchill	67.60	331	P	P	04 54 25.8	-0.6
FCC				pmax	pmax		
	comp=Z,23nm,0.9s						
USHA	Ushuaia	67.65	200	LR	LR	05 26 31.2	
	comp=Z,571nm,18.0s,baz=72,slow=38						
LBTB	Lobatse	67.92	121	LR	LR	05 19 05.8	
	comp=Z,526nm,18.7s,baz=283,slow=32						
LBTB	Lobatse	67.92	121	P	P	04 54 29.4	+0.2
LBTB				IAmb	IAmb	04 54 34.4	
	comp=Z,21nm,1.2s						
LBTB	Lobatse	67.92	121	P	P	04 54 29.4	+0.2
LBTB				pmax	pmax		
	comp=Z,21nm,1.3s						
MTSE	Matsula	68.33	29	eP	P	04 54 31.2	+0.2
IIGN	Ignalina	68.34	33	eP	P	04 54 32.4	+1.2
T25A	Trinidad	68.47	307	IAmb	IAmb	04 54 34.4	
	comp=Z,20nm,1.0s						
T25A	Trinidad	68.47	307	P	P	04 54 33.3	+0.6
	baz=97,SNR=16						
NACGM	Naroch	68.50	33⇓	eP	P	04 54 33.2	+1.0
	baz=251						
IDID	Didziasalis	68.61	33	eP	P	04 54 33.8	+1.0
HPIG		68.67	296	P	P	04 54 34.0	-0.1
AKASG	Malin Array Be	68.70	38	P	P	04 54 33.2	-0.3
	comp=Z,6.5nm,0.6s,baz=261,slow=5.1,SNR=43						
AKASG				S	S	05 03 28.6	-8.2
	comp=Z,0.1nm,0.3s,baz=227,slow=25,SNR=1.2						
AKASG				LR	LR	05 25 29.1	
	comp=Z,173nm,18.6s,baz=247,slow=37						
	comp=Z,6.5nm,0.6s						
AKASG	Malin Array Be	68.70	38	IAmb	IAmb	04 54 42.8	
	comp=Z,24nm,1.3s						
AKBB	Malin Array Si	68.70	38	IAmb	IAmb	04 54 42.3	
	comp=Z,16nm,0.8s						
AKBB	Malin Array Si	68.70	38c	iP	P	04 54 32.9	-0.6
MNTX	Cornudas Mount	68.72	301	P	P	04 54 33.5	-0.6
	baz=94,SNR=17						
MNTX	Cornudas Mount	68.72	301	P	P	04 54 33.5	-0.6
	baz=94,SNR=17						
BOSA	Boshof	68.90	124	P	P	04 54 35.5	+0.1
	comp=Z,17nm,1.0s,baz=300,slow=6.7,SNR=17						
BOSA				LR	LR	05 18 52.6	
	comp=Z,796nm,20.2s,baz=289,slow=31						
	comp=Z,17nm,1.0s						
BOSA	Boshof	68.90	124	P	P	04 54 35.7	+0.4
BOSA	Boshof	68.90	124	P	P	04 54 35.7	+0.4
BOSA				pmax	pmax		
	comp=Z,30nm,1.0s						
MNK	Minsk	68.98	34	i P	P	04 54 33.9	-1.3
MNK				i		04 54 56.3	
MNK				i		04 57 06.8	
MNK				i PPP	PPP	04 58 42.2	
MNK				i S	S	05 03 37.8	-2.1
MNK				i SS	SS	05 08 01.6	-3.9
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				MLR	MLR		
	comp=E,43nm,22.0s						
MNK				MLR	MLR		
	comp=Z,243nm,18.0s						
MNK				MLR	MLR		
	comp=N,344nm,21.0s						
MNK	Minsk	68.98	34	i P	P	04 54 33.9	-1.3
	comp=E,1.0nm,0.6s						
MNK				i P	P	04 54 33.9	-1.3
	comp=N,9.0nm,0.8s						
MNK				i P	P	04 54 33.9	-1.3
	comp=Z,13nm,0.8s,baz=73						
MNK				i PcP	PcP	04 54 56.3	-3.1
MNK				i PP	PP	04 57 06.9	-0.7
MNK				i PPP	PPP	04 58 42.2	
MNK				i S	S	05 03 37.9	-2.1
MNK				i SS	SS	05 08 01.6	-3.9
MNK				i SSS	SSS	05 11 24.9	
MNK				i LQ	LQ	05 18 04.9	
MNK				i LR	LR	05 23 17.2	
MNK				i LRM	MLR	05 27 23.6	
	comp=E,43nm,22.3s						
MNK				i LRM	MLR	05 27 38.6	
	comp=Z,243nm,17.7s						
MNK				i LRM	MLR	05 27 39.9	
	comp=N,344nm,21.0s						
ANTO	Ankara	69.00	50	P	P	04 54 36.2	+0.4
ANTO				IAmb	IAmb	04 54 42.0	
	comp=Z,23nm,1.3s						
ANTO	Ankara	69.00	50	P	P	04 54 36.2	+0.4
ANTO				pmax	pmax		
	comp=Z,23nm,1.3s						
RSSD	Black Hills	69.25	314	P	P	04 54 37.2	-0.2
RSSD	Black Hills	69.25	314	P	P	04 54 37.2	-0.2
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	69.25	314	P	P	04 54 37.3	0.0
	baz=100,SNR=5.1						
RSSD	Black Hills	69.25	314	P	P	04 54 37.2	-0.2
	baz=100						
SDCO	Great Sand Dun	69.41	307	IAmb	IAmb	04 54 40.1	
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	69.41	307	P	P	04 54 39.0	+0.4
	baz=97,SNR=33						
SDCO	Great Sand Dun	69.41	307	P	P	04 54 39.2	+0.5
	baz=97,SNR=33						
BR131	Keskin Array S	69.63	50	IAmb	IAmb	04 54 45.7	
	comp=Z,14nm,1.1s						
BR131	Keskin Array S	69.63	50c	iP	P	04 54 39.3	-0.4
BRTR	Keskin Array B	69.63	50	P	P	04 54 39.5	-0.2
	comp=Z,3.4nm,0.8s,baz=257,slow=6.2,SNR=20						
BRTR				LR	LR	05 25 11.3	
	comp=Z,602nm,21.9s,baz=248,slow=36						
	comp=Z,3.4nm,0.8s						
BRTR	Keskin Array B	69.63	50c	eP	P	04 54 39.9	+0.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSU	Vasula	69.66	30⇓	eP	P	04 54 41.6	+2.3
VSU				pmax	pmax		
	comp=Z,70nm,1.4s						
ISCO	Idaho Springs	69.75	310	IAmb	IAmb	04 54 51.8	
	comp=Z,14nm,1.1s						
ISCO	Idaho Springs	69.75	310	P	P	04 54 41.2	+0.5
	baz=98,SNR=17						
ISCO	Idaho Springs	69.75	310	P	P	04 54 41.3	+0.6
	baz=98,SNR=17						
EIL	Elat	69.79	61	LR	LR	05 26 32.8	
	comp=Z,1µm,19.5s,baz=265,slow=37						
ANMO	Albuquerque	69.89	304	LR	LR	05 21 21.5	
	comp=Z,934nm,22.0s,baz=102,slow=32						
ANMO	Albuquerque	69.89	304	P	P	04 54 42.0	+0.5
ANMO	Albuquerque	69.89	304	P	P	04 54 42.0	+0.5
ANMO				pmax	pmax		
	comp=Z,14nm,1.4s						
ANMO	Albuquerque	69.89	304	P	P	04 54 41.7	+0.2
	baz=95,SNR=11						
ANMO	Albuquerque	69.89	304	P	P	04 54 41.8	+0.3
	baz=95						
DAG	Danmarks Havn	70.02	4	i P	P	04 54 44.0	+2.8
DAG				IAmb	IAmb	04 54 50.1	
	comp=Z,6.8nm,0.9s						
N23A	Red Feather La	70.14	311	IAmb	IAmb	04 54 44.7	
	comp=Z,15nm,0.9s						
N23A	Red Feather La	70.14	311	P	P	04 54 43.7	+0.7
	baz=98,SNR=11						
DGMT	Dagmar	70.18	319	P	P	04 54 43.5	+0.6
	baz=102,SNR=11						
DGMT	Dagmar	70.18	319	P	P	04 54 43.5	+0.6
	baz=102,SNR=11						
Y22A	Socorro	70.22	303	P	P	04 54 43.8	+0.3
	baz=94,SNR=7.6						
MMAI	Mount Meron Ar	70.38	58	LR	LR	05 27 04.8	
	comp=Z,232nm,21.6s,baz=56,slow=37						
FINES	FINESS Array B	70.41	27	P	P	04 54 43.7	-0.2
	comp=Z,5.6nm,0.7s,baz=242,slow=5.5,SNR=44						
FINES				LR	LR	05 22 52.0	
	comp=Z,772nm,19.8s,baz=241,slow=34						
	comp=Z,5.6nm,0.7s						
FINES	FINESS Array B	70.41	27	P	P	04 54 43.9	0.0
FINES	FINESS Array B	70.41	27	P	P	04 54 43.9	0.0
FIA1	FINESS Array S	70.42	27	IAmb	IAmb	04 54 55.2	
	comp=Z,18nm,0.9s						
S22A	4UR Ranch, Cre	70.46	307	P	P	04 54 45.6	+0.5
	baz=96,SNR=10						
121A	Cookes Peak, D	70.81	302	P	P	04 54 47.9	+0.7
	baz=94,SNR=7.3						
121A	Cookes Peak, D	70.81	302	P	P	04 54 48.3	+1.1
	baz=94,SNR=7.3						
K22A	Casper	70.81	313	P	P	04 54 46.1	-0.9
	baz=98						
LODK	Lodwar	71.01	89	P	P	04 54 49.9	+1.3
LAO	LASA Array	71.20	317	P	P	04 54 50.0	+0.9
	baz=99,SNR=31						
LAO	LASA Array	71.20	317	P	P	04 54 49.8	+0.6
	baz=99,SNR=31						
MVCO	Mesa Verde	71.73	307	P	P	04 54 53.0	+0.3
	baz=95,SNR=7.9						
O20A	White River Ci	71.80	310	P	P	04 54 53.7	+0.7
	baz=96,SNR=30						
X18A	Snowflake	72.73	304	P	P	04 54 59.3	+0.6
X18A				IAmb	IAmb	04 55 00.8	
	comp=Z,22nm,1.1s						
BW06	Boulder Array	73.05	312	P	P	04 55 00.1	-0.3
	baz=96,SNR=21						
PDAR	Pinedale Array	73.05	312	P	P	04 55 00.2	-0.3
	comp=Z,6.7nm,0.6s,baz=105,slow=6.4,SNR=58						
	comp=Z,6.7nm,0.6s						
RLMT	Red Lodge	73.09	315	IAmb	IAmb	04 55 02.2	
	comp=Z,25nm,0.8s						
RLMT	Red Lodge	73.09	315	P	P	04 55 01.2	+0.6
	baz=97,SNR=33						
P18A	Preston Nutter	73.29	309	IAmb	IAmb	04 55 04.0	
	comp=Z,27nm,1.0s						
TUC	Tucson	73.33	301	P	P	04 55 02.0	-0.2
TUC	Tucson	73.33	301	P	P	04 55 02.0	-0.2
TUC				pmax	pmax		
	comp=Z,11nm,0.9s						
TUC	Tucson	73.33	301	P	P	04 55 02.7	+0.5
	baz=92						
ARCES	ARCESS Array B	73.39	19	P	P	04 55 01.2	-0.5
	comp=Z,4.4nm,0.6s,baz=252,slow=6.2,SNR=14						
ARCES				LR	LR	05 23 49.0	
	comp=Z,316nm,19.3s,baz=245,slow=33						
	comp=Z,4.4nm,0.6s						
ARCES	ARCESS Array B	73.39	19	IAmb	IAmb	04 55 13.1	
	comp=Z,27nm,1.4s						
KMBO	Kilima Mbogo	73.46	93	P	P	04 55 02.6	-0.8
	comp=Z,0.7nm,0.4s,baz=237,slow=5.0,SNR=3.3						
KMBO				LR	LR	05 25 38.2	
	comp=Z,95nm,18.1s,baz=268,slow=34						
	comp=Z,0.7nm,0.4s						
KMBO	Kilima Mbogo	73.46	93⇑	eP	P	04 55 04.0	+0.6
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SRU	San Rafael Swe	73.47	309	IAmb	IAmb	04 55 04.8	
	comp=Z,40nm,1.5s						
P17A	Butcher Ranch,	73.66	309	IAmb	IAmb	04 55 05.7	
	comp=Z,15nm,0.8s						
EGMT	Eagleton	73.77	318	IAmb	IAmb	04 55 05.3	
	comp=Z,14nm,0.8s						
EGMT	Eagleton	73.77	318	P	P	04 55 04.4	-0.1
	baz=97						
LKWY	Lake	73.83	314	IAmb	IAmb	04 55 07.6	
	comp=Z,21nm,1.0s						
LOHW	Long Hollow	73.89	313	IAmb	IAmb	04 55 06.8	
	comp=Z,29nm,0.8s						
H17A	Grant Village	73.94	314	IAmb	IAmb	04 55 15.1	
	comp=Z,18nm,1.1s						
H17A	Grant Village	73.94	314	P	P	04 55 07.0	+1.3
	baz=96,SNR=10						
WUAZ	Wupatki	73.94	305	IAmb	IAmb	04 55 08.0	
	comp=Z,21nm,0.8s						
WUAZ	Wupatki	73.94	305	P	P	04 55 07.1	+1.3
	baz=92,SNR=18						
SNOW	Snow King Moun	73.98	313	IAmb	IAmb	04 55 07.6	
	comp=Z,32nm,0.9s						
MOOW	Moose Ponds	74.00	313	IAmb	IAmb	04 55 07.3	
	comp=Z,18nm,0.9s						
OBN	Obninsk	74.01	35	LR	LR	05 25 40.9	
	comp=Z,24nm,19.6s,baz=266,slow=34						
OBN	Obninsk	74.01	35	P	P	04 55 06.3	+0.8
OBN				IAmb	IAmb	04 55 11.3	
	comp=Z,27nm,1.1s						
OBN	Obninsk	74.01	35⇓	eP	P	04 55 05.9	+0.4
OBN				e		04 57 57.9	
OBN				eS	S	05 04 41.8	+3.9
OBN				pmax	pmax		
	comp=Z,55nm,2.0s						
OBN				MLR	MLR		
	comp=Z,274nm,17.0s						
YNR	Norris Junctio	74.04	314	P	P	04 55 06.9	+0.6
REDW	Red Top Meadow	74.05	313	IAmb	IAmb	04 55 07.7	
	comp=Z,31nm,0.9s						
TPAW	Teton Pass	74.13	313	IAmb	IAmb	04 55 08.5	
	comp=Z,49nm,1.2s						
AHID	Auburn Hatcher	74.18	312	IAmb	IAmb	04 55 15.5	
	comp=Z,15nm,0.8s						
JLU	Jordanelle	74.28	310	IAmb	IAmb	04 55 18.9	
	comp=Z,32nm,1.3s						
YHL	Hebgen Lake	74.41	314	IAmb	IAmb	04 55 11.0	
	comp=Z,19nm,0.9s						
HWUT	Hardware Ranch	74.43	311	P	P	04 55 08.1	-0.4
MTPU	Mount Pierson	74.70	307	IAmb	IAmb	04 55 12.6	
	comp=Z,20nm,0.9s						
MOS	Moscow	74.71	34	eP	P	04 55 08.8	-0.8
MOS				pmax	pmax		
	comp=Z,67nm,1.4s						
NOR	Nord	74.73	3	eP	P	04 55 10.9	+1.6
BOZ	Bozeman (W)	74.80	315	P	P	04 55 10.8	+0.2
	baz=95,SNR=20						
PMSA	Palmer Station	74.93	192	eP	P	04 55 13.5	+2.9
VSR	Storozhevoye	74.97	39	eP	P	04 55 11.1	-0.1
VSR				pmax	pmax		
	comp=Z,40nm,1.4s						
LPSR	Galich'ya Gora	75.00	38	eP	P	04 55 11.0	-0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MARD	Mardin	75.01	53	P	P	04 55 12.4	+0.5
MARD				IAmb	IAmb	04 55 18.3	
	comp=Z,17nm,1.0s						
VORD	Divnogorie	75.02	39	eP	P	04 55 11.3	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,1.2s						
214A	Organ Pipe Nat	75.05	301	P	P	04 55 13.1	+1.0
	baz=91,SNR=9.9						
VORR	Voronezh	75.05	39	P	P	04 55 13.1	+1.5
VORR				pmax	pmax		
	comp=Z,52nm,1.8s						
DUG	Dugway, Tooele	75.29	310	P	P	04 55 14.1	+0.6
	baz=93,SNR=17						
APA	Apatity	75.42	22⇓	iP	P	04 55 22.5	+9.0
APA				pmax	pmax		
	comp=Z,23nm,0.8s						
DLMT	Dillon	75.45	315	IAmb	IAmb	04 55 16.4	
	comp=Z,25nm,1.0s						
BGU	Big Grassy Mou	75.49	310	IAmb	IAmb	04 55 16.3	
	comp=Z,22nm,0.9s						
CCUT	Cedar City	75.62	307	IAmb	IAmb	04 55 17.8	
	comp=Z,17nm,0.9s						
LVZ	Lovozero	75.97	22	P	P	04 55 17.9	+1.2
LVZ				IAmb	IAmb	04 55 28.1	
	comp=Z,18nm,0.8s						
LVZ	Lovozero	75.97	22	P	P	04 55 17.9	+1.2
LVZ				pmax	pmax		
	comp=Z,18nm,0.8s						
PSUT	Pine Spring	76.03	308	P	P	04 55 18.2	+0.3
PSUT				IAmb	IAmb	04 55 20.2	
	comp=Z,18nm,1.0s						
PDMCI	Parker Dam,Lak	76.19	303	P	P	04 55 19.4	+0.9
	baz=90						
MSO	Missoula	76.49	316	P	P	04 55 19.8	-0.4
	baz=94,SNR=6.3						
KLMR	Klimovskoe	76.53	29	eP	P	04 55 17.9	-2.0
KLMR				e		04 58 08.1	
KLMR				pmax	pmax		
	comp=Z,74nm,1.0s						
KLMR	Klimovskoe	76.53	29	eP	P	04 55 17.9	-2.0
KLMR				AMP		04 55 31.5	
	comp=Z,74nm,1.0s						
KLMR				ePP	PP	04 58 08.2	-3.6
KLMR				LQ	LQ	05 19 08.2	
KLMR				LQ	LQ	05 19 08.2	
KLMR				LR	LR	05 23 32.9	
VRH	Novokhopyorsk	76.56	39	eP	P	04 55 18.4	-1.9
VRH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WALA	Waterton Lakes	76.62	319	IAmb	IAmb	04 55 31.7	
	comp=Z,23nm,0.9s						
EDM	Edmonton	76.63	323	IAmb	IAmb	04 55 21.9	
	comp=Z,29nm,0.9s						
HLID	Hailey	76.64	313	IAmb	IAmb	04 55 23.0	
	comp=Z,16nm,0.9s						
HLID	Hailey	76.64	313	P	P	04 55 21.9	+0.7
	baz=92,SNR=33						
KIV	Kislovodsk	76.73	47	eP	P	04 55 22.2	+0.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,183nm,18.0s						
KVAR	Kislovodsk Arr	76.74	47	LR	LR	05 32 14.4	
	comp=Z,116nm,18.4s,baz=174,slow=38						
SFX	San Felipe	76.79	300	P	P	04 55 22.5	+0.5
KBZ	Khabaz	76.88	47	P	P	04 55 20.4	-1.8
	comp=Z,1.5nm,0.6s,baz=227,slow=1.5,SNR=3.3						
KBZ				LR	LR	05 32 46.0	
	comp=Z,170nm,18.5s,baz=288,slow=38						
	comp=Z,1.5nm,0.6s						
KBZ	Khabaz	76.88	47c	eP	P	04 55 21.8	-0.4
KARS	Kars	76.91	50	P	P	04 55 23.3	+0.6
KARS	Kars	76.91	50	P	P	04 55 23.3	+0.6
KARS				pmax	pmax		
	comp=Z,97nm,1.3s						
PRN	Pahroc Range	76.96	307	IAmb	IAmb	04 55 25.8	
	comp=Z,19nm,1.0s						
IRM	Iron Mountain	77.02	303	P	P	04 55 24.6	+1.3
	baz=90						
GOF	Gofitskoye	77.04	46⇑	eP	P	04 55 24.0	+0.8
GOF				pmax	pmax		
	comp=Z,38nm,1.5s						
ELK	Elko	77.16	310	IAmb	IAmb	04 55 35.2	
	comp=Z,17nm,1.1s						
BC3	Big Chuckawall	77.28	303	P	P	04 55 25.5	+0.6
	baz=90						
R11A	Troy Canyon, C	77.39	308	P	P	04 55 26.3	+0.8
	baz=91,SNR=19						
GMRC	Granite Mounta	77.44	304	P	P	04 55 26.9	+1.1
	baz=90,SNR=5.8						
S11A	Rachel	77.51	307	IAmb	IAmb	04 55 36.9	
	comp=Z,28nm,1.1s						
ZEI	Tsey	77.58	48	eP	P	04 55 31.8	+5.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ATD	Arta Tunnel	77.60	80	LR	LR	05 30 01.4	
	comp=Z,87nm,18.0s,baz=292,slow=36						
TUQ	Turquoise Moun	77.65	305	P	P	04 55 28.2	+1.2
	baz=90,SNR=8.7						
BELC	Belle Mtn. Jos	77.72	303	P	P	04 55 28.6	+1.2
	baz=89						
IKP	In-Ko-Pah, Jac	77.84	302	P	P	04 55 29.0	+1.0
	baz=89						
PLID	Pearl Lake	77.84	314	P	P	04 55 27.1	-0.9
TPNV	Topopah Spring	77.91	306	P	P	04 55 29.6	+1.2
	baz=90,SNR=14						
SHOC	Shoshone, Teco	77.94	305	P	P	04 55 29.6	+1.2
	baz=90						
HEC	Hector,Ludlow	78.00	304	P	P	04 55 29.8	+0.9
	baz=89,SNR=5.9						
MONP2	Monument Peak	78.10	302	P	P	04 55 30.5	+0.9
	baz=89						
TPFO	Pinon Flats	78.11	303	P	P	04 55 30.7	+1.1
	baz=89						
PFO	Pinyon Flats O	78.11	303	P	P	04 55 30.5	+1.0
	baz=89						
GNI	Garni	78.17	51	LR	LR	05 31 12.7	
	comp=Z,320nm,22.0s,baz=284,slow=37						
GNI	Garni	78.17	51c	iP	P	04 55 30.2	+0.4
GNI				pmax	pmax		
	comp=Z,14nm,1.5s						
YKA	Yellowknife Ar	78.30	332	P	P	04 55 28.7	-1.1
	comp=Z,6.3nm,0.8s,baz=95,slow=5.5,SNR=43						
	comp=Z,6.3nm,0.8s						
GSC	Goldstone, Bar	78.38	304	P	P	04 55 31.8	+0.8
	baz=89						
FURC	Furnace Creek,	78.41	306	P	P	04 55 32.6	+1.6
	baz=89,SNR=6.2						
QSM	Queen of Sheba	78.42	305	IAmb	IAmb	04 55 33.4	
	comp=Z,19nm,1.0s						
BMN	Battle Mountai	78.67	310	IAmb	IAmb	04 55 34.4	
	comp=Z,22nm,0.9s						
TPH	Tonopah	78.68	307	P	P	04 55 33.0	+0.3
TPH	Tonopah	78.68	307	P	P	04 55 33.0	+0.3
TPH				pmax	pmax		
	comp=Z,114nm,1.0s						
NEW	Newport	78.71	318	P	P	04 55 31.4	-1.1
	baz=92,SNR=5.7						
MURC	Murrieta	78.73	303	P	P	04 55 33.2	+0.3
	baz=89						
GRAC	Grapevine Rang	78.81	306	IAmb	IAmb	04 55 35.7	
	comp=Z,18nm,1.0s						
GRAC	Grapevine Rang	78.81	306	P	P	04 55 34.4	+1.2
	baz=89,SNR=5.3						
LRMC	Laurel Mtn Rad	79.09	305	P	P	04 55 35.8	+0.9
	baz=89						
BFSC	Mount Baldy Ra	79.10	303	P	P	04 55 35.3	+0.3
	baz=88						
RAYN	Ar Rayn	79.26	67	P	P	04 55 36.4	+0.4
RAYN	Ar Rayn	79.26	67	P	P	04 55 36.4	+0.4
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
EDW2	Edwards Air Fo	79.36	304	P	P	04 55 37.1	+0.7
	baz=88						
CWC	Cottonwood Cre	79.39	306	P	P	04 55 37.9	+1.3
	baz=89						
NVAR	Mina Array Bea	79.53	308	P	P	04 55 37.9	+0.5
	comp=Z,4.2nm,0.8s,baz=98,slow=6.3,SNR=35						
	comp=Z,4.2nm,0.8s						
NVAR	Mina Array Bea	79.53	308	P	P	04 55 37.5	+0.1
PRGR	Permogore	79.56	29⇑	iP	P	04 55 37.6	+0.9
LHV	Little Huntoon	79.69	307	IAmb	IAmb	04 55 40.2	
	comp=Z,20nm,0.9s						
ISA	Isabella, Lake	79.73	305	P	P	04 55 39.9	+1.5
	baz=88,SNR=8.0						
MAK	Makhachkala	80.23	48	eP	P	04 55 34.9	-5.9
MAK				eS	S	05 05 37.9	-8.3
MAK				pmax	pmax		
	comp=Z,27nm,0.3s						
MAK				MLR	MLR		
	comp=Z,385nm,20.0s						
BELG	Belogornoye	80.28	38c	iP	P	04 55 40.8	0.0
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HAWA	Hanford	80.33	316	P	P	04 55 41.5	+0.3
PNTR	Pine Nut	80.52	308	IAmb	IAmb	04 55 45.0	
	comp=Z,17nm,0.9s						
PKM	Mcpherson Peak	80.85	304	P	P	04 55 45.2	+0.6
	baz=87						
MOD	Modoc Plateau	80.97	311	IAmb	IAmb	04 55 47.4	
	comp=Z,34nm,1.4s						
BEKR	Beckworth	81.08	309	IAmb	IAmb	04 55 47.4	
	comp=Z,16nm,1.0s						
KIRV	Kirov	81.34	32c	eP	P	04 55 46.4	0.0
K05A	Summer Lake	81.38	312	IAmb	IAmb	04 55 49.4	
	comp=Z,30nm,1.4s						
J05D	Fort Rock, OR	81.61	313	P	P	04 55 49.3	+0.9
	baz=88						
I05D	Terrebonne, OR	81.65	314	P	P	04 55 49.6	+1.2
	baz=88						
F05D	White Salmon	81.68	315	IAmb	IAmb	04 55 50.3	
	comp=Z,19nm,1.1s						
F05D	White Salmon	81.68	315	P	P	04 55 49.2	+0.7
	baz=88						
SNAA	Sanae	81.81	170	P	P	04 55 48.8	+0.2
SNAA	Sanae	81.81	170⇓	eP	P	04 55 49.2	+0.6
SNAA				pmax	pmax		
	comp=Z,18nm,2.5s						
L04D	Klamath Falls	82.45	312	P	P	04 55 52.8	0.0

	baz=87						
D03D	**Eldon**	**82.73**	**317**	P	**P**	**04 55 54.0**	**+0.1**
	baz=87						
A36M	**Sachs Harbour**	**82.86**	**342**	IAmb	IAmb	04 56 06.3	
	comp=Z,19nm,0.8s						
A36M	**Sachs Harbour**	**82.86**	**342**	P	**P**	**04 55 54.3**	**+0.2**
	baz=88						
NLWA	**Neilton Lookou**	**83.27**	**317**	IAmb	IAmb	04 55 58.9	
	comp=Z,20nm,1.1s						
KSXB	**Camp Six Broad**	**83.64**	**311**	IAmb	IAmb	04 56 00.9	
	comp=Z,27nm,1.0s						
CBB	**Campbell River**	**84.08**	**320**	IAmb	IAmb	04 56 12.8	
	comp=Z,15nm,0.9s						
BELA	**Belgrano 2**	**85.10**	**180**	P	**P**	**04 56 05.5**	**+0.2**
BELA				IAmb	IAmb	04 56 08.7	
	comp=Z,11nm,1.0s						
DLBC	**Dease Lake**	**85.95**	**328**	IAmb	IAmb	04 56 22.7	
	comp=Z,29nm,1.1s						
DLBC	**Dease Lake**	**85.95**	**328**	P	**P**	**04 56 11.8**	**+1.6**
	baz=83,SNR=10.0						
MMPY	**Sheldon Lake,**	**85.99**	**333**	P	**P**	**04 56 11.0**	**+0.7**
	baz=82,SNR=5.6						
INK	**Inuvik**	**86.04**	**338**	P	**P**	**04 56 09.9**	**-0.4**
	baz=80						
T35M	**Bob Quinn**	**86.26**	**327**	P	**P**	**04 56 13.0**	**+1.4**
	baz=82,SNR=5.4						
ARU	**Arti**	**86.41**	**34**	PP	PP	04 59 29.6	-3.8
	comp=Z,0.7nm,0.3s,baz=290,slow=22,SNR=1.6						
ARU	**Arti**	**86.41**	**34**	P	**P**	**04 56 13.1**	**+0.7**
ARU				IAmb	IAmb	04 56 24.6	
	comp=Z,26nm,1.1s						
ARU	**Arti**	**86.41**	**34***c*	*i*P	**P**	**04 56 13.3**	**+0.9**
ARU						04 59 33.8	
ARU				S	**SKSac**	**05 06 39.4**	**+0.5**
ARU				pmax	pmax		
	comp=Z,20nm,1.4s						
S34M	**Telegraph Cree**	**86.60**	**328**	P	**P**	**04 56 14.8**	**+1.5**
	baz=82,SNR=5.5						
FARO	**Faro, Yukon**	**87.01**	**332**	P	**P**	**04 56 16.1**	**+0.8**
	baz=80,SNR=5.7						
SVE	**Sverdlovsk**	**87.48**	**33**	*e*P	P	04 56 27.5	+10
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
M31M	**Drury Creek, Y**	**87.50**	**332**	P	**P**	**04 56 18.7**	**+1.1**
	baz=79						
ABKAR	**Akbulak array**	**88.30**	**41**	P	**P**	**04 56 22.4**	**+0.7**
GEYT	**Alibeck**	**88.70**	**52**	P	**P**	**04 56 23.1**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=350,slow=5.9,SNR=1.3						
	comp=Z,1.0nm,0.4s						
DAWY	**Dawson**	**89.29**	**335**	P	**P**	**04 56 26.1**	**0.0**
	baz=75						
YUK3	**Moose Creek**	**90.38**	**333**	P	**P**	**04 56 31.2**	**-0.2**
	baz=74						
L27K	**Beaver Creek,**	**90.62**	**334**	P	**P**	**04 56 32.2**	**-0.1**
L27K	**Beaver Creek,**	**90.62**	**334**	P	**P**	**04 56 32.6**	**+0.3**
	baz=72,SNR=5.2						
M27K	**Edge Creek, AK**	**90.85**	**333**	P	**P**	**04 56 33.9**	**+0.4**
	baz=72						
J26L	**Joseph Creek**	**90.90**	**336**	P	**P**	**04 56 33.7**	**+0.1**
	baz=71						
SCRK	**Sand Creek**	**91.25**	**335**	P	**P**	**04 56 35.4**	**+0.1**
	baz=71						
TOLK	**Toolik Lake Re**	**91.58**	**340**	IAmb	IAmb	04 56 49.1	
	comp=Z,12nm,1.4s						
TOLK	**Toolik Lake Re**	**91.58**	**340**	P	**P**	**04 56 36.7**	**0.0**
	baz=65						
J25K	**Salcha River,**	**91.59**	**336**	P	**P**	**04 56 36.9**	**+0.1**
	baz=69						
H24K	**Noodor Dome**	**92.12**	**338**	P	**P**	**04 56 39.0**	**-0.2**
	baz=67						
IL31		**92.14**	**336**	P	**P**	**04 56 39.2**	**0.0**
ILAR	**Eielson Array**	**92.14**	**336**	P	**P**	**04 56 39.1**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=59,slow=3.6,SNR=12						
ILAR				PP	**PP**	**05 00 19.4**	**+0.5**
	comp=Z,1.8nm,1.1s,baz=62,slow=6.3,SNR=6.5						
	comp=Z,1.8nm,1.0s						
COLA	**College**	**92.48**	**337***c*	*e*P	**P**	**04 56 40.7**	**-0.1**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	**Borovoye**	**93.77**	**36**	⇑*e*P	**P**	**04 56 48.5**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**94.32**	**17**	P	**P**	**04 56 49.2**	**0.0**
	comp=Z,2.6nm,0.5s,baz=312,slow=4.2,SNR=2.3						
	comp=Z,2.6nm,0.5s						
NRIK	**Noril'sk**	**94.32**	**17**	P	**P**	**04 56 49.7**	**+0.5**
NRIK	**Noril'sk**	**94.32**	**17**	P	**P**	**04 56 49.7**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURBB	**Kurchatov Arra**	**99.41**	**36**	P	**Pdif**	**04 57 12.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=238,slow=7.3,SNR=2.7						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**99.43**	**36**	P	**Pdif**	**04 57 12.4**	**-0.3**
AAK	**Ala-Archa**	**99.76**	**45**	⇓*e*P	**Pdif**	**04 57 15.2**	**+0.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
ZALV	**Zalesovo Beam**	**101.37**	**31**	PP	**PP**	**05 01 30.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=285,slow=7.3,SNR=1.8						
MKAR	**Makanchi Array**	**103.28**	**38**	Pdiff	**Pdif**	**04 57 29.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=316,slow=4.0,SNR=2.4						
MKAR				PP	**PP**	**05 01 40.1**	**-4.7**
	comp=Z,0.1nm,0.4s,baz=267,slow=5.8,SNR=2.3						
HHC	**Hu-ho-hao-te**	**123.48**	**29**	*e*PKP	**PKPdf**	**05 02 23.3**	**-4.6**
CD2	**Chengdu**	**125.80**	**43**	PKP	**PKPdf**	**05 02 31.3**	**-1.3**
PZH	**PanZhiHua**	**126.91**	**49**	PKP	**PKPdf**	**05 02 34.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**128.62**	**59**	PKP	**PKiKP**	**05 02 38.9**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=293,slow=2.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**128.62**	**59**	*i* PKIKP	**PKiKP**	**05 02 41.2**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WHN	**Wuhan**	**132.75**	**36**	PKP	**PKPdf**	**05 02 41.0**	**-4.7**
KSRS	**Korea Array**	**132.94**	**18**	PKP	**PKPdf**	**05 02 46.4**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=271,slow=18,SNR=2.1						
NJ2	**Nanjing**	**134.01**	**30**	*e*PKP	**PKPdf**	**05 02 48.5**	**+0.5**
MJAR	**Matsushiro Arr**	**136.00**	**7**	PKP	**PKiKP**	**05 02 52.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=352,slow=1.2,SNR=2.4						
KSM	**Kuching**	**145.18**	**77**	PKPbc	**PKPbc**	**05 03 08.6**	**+0.3**
MSVF	**Nonsavu**	**145.34**	**249**	PKPbc	**PKPdf**	**05 03 10.2**	**+1.2**
MSVF	**Nonsavu**	**145.34**	**249**	PKIKP	**PKPdf**	**05 03 10.2**	**+1.2**
ASAR	**Alice Springs**	**161.06**	**150**	PKP	**PKPdf**	**05 03 29.7**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=151,slow=0.4,SNR=3.0						
ASAR				PKPab	**PKPab**	**05 04 13.5**	**-0.7**
	comp=Z,1.8nm,1.1s,baz=214,slow=5.7,SNR=2.8						
ASAR	**Alice Springs**	**161.06**	**150**	PKPdf	**PKPdf**	**05 03 30.2**	**-1.1**
WRA	**Warramunga Arr**	**164.31**	**144**	PKP	**PKPdf**	**05 03 33.3**	**-1.3**
	comp=Z,0.5nm,1.0s,baz=242,slow=1.8,SNR=4.6						
WRA				PKPab	**PKPab**	**05 04 27.9**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=210,slow=3.0,SNR=5.6						
WRA	**Warramunga Arr**	**164.31**	**144**	PKPdf	**PKPdf**	**05 03 34.9**	**+0.3**
WRA					**PKPab**	**05 04 26.9**	**-1.6**
WRA	**Warramunga Arr**	**164.31**	**144**	PKIKP	**PKPdf**	**05 03 34.9**	**+0.3**
WRA						05 04 26.9	

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*IPEC **28** 04:53:41.7±0.4, 49°.83N×18°.53E, h0^{km}, ML1.0/3 Error ellipse: s-maj=2.3km s-min=2.0km az=110.0*

PRU 28 04:53:42.0±0.0**, 49°.83N×18°.48E, h0**^{km}**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.22**	**272**	*e*	Sg	04 53 49.5	+0.6
OKC	**Ostrava-Krasne**	**0.22**	**272**	*e*PG	Pg	04 53 46.5	+0.4
OKC				*e*SG	Sg	04 53 49.5	+0.6
	comp=Z,34nm,0.5s						
OKC	**Ostrava-Krasne**	**0.22**	**272**	*e*P	Pg	04 53 46.5	+0.4
MORC	**Moravsky Berou**	**0.61**	**265**	*e*Pg	Pg	04 53 54.0	+0.3
	baz=85						
MORC				*e*Sg	Sg	04 54 01.8	+0.2
	4.0nm,0.4s,baz=85						
MORC	**Moravsky Berou**	**0.61**	**265**	*e*PG	Pg	04 53 54.1	+0.4
MORC				*e*SG	Sg	04 54 01.9	+0.3
KRLC	**Kraliky**	**1.12**	**283**	*e*PG	Pg	04 54 02.6	-0.9
KRLC				*e*SG	Sg	04 54 17.9	-0.2
	comp=Z,5.6nm,0.5s						
VRAC	**Vranov**	**1.33**	**248**	*e*Pg	Pg	04 54 07.1	-0.5
	baz=67						
VRAC				*e*Sg	Sg	04 54 24.5	-0.3
	2.8nm,0.3s,baz=67						
VRAC	**Vranov**	**1.33**	**248**	*e*PG	Pg	04 54 07.2	-0.4
VRAC				*e*SG	Sg	04 54 24.6	-0.2
DPC	**Dobruska-Polom**	**1.48**	**291**	*e*PG	Pn	04 54 09.1	-0.9
DPC				*e*SG	Sg	04 54 29.2	-0.5
KRUC	**Moravsky**	**1.56**	**241**	*e*Pg	Pn	04 54 10.7	-0.3
	baz=60						
KRUC				*e*Sg	Sn	04 54 31.5	-0.5
	1.3nm,0.2s,baz=60						
KRUC	**Moravsky**	**1.56**	**241**	*e*PG	Pn	04 54 10.7	-0.3
KRUC				*e*SG	Sn	04 54 31.6	-0.4
OSTC	**Ostas**	**1.63**	**297**	*e*SG	Sg	04 54 34.5	+0.3
UPC	**Upice**	**1.73**	**294**	*e*SG	Sb	04 54 36.7	-0.1
CHVC	**Chvalec**	**1.73**	**297**	*e*SG	Sb	04 54 36.8	-0.2
KHC	**Kasperske Hory**	**3.27**	**260**	*e*SG	Sg	04 55 25.0	-2.1

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*TUL **28** 04:59:30.5±1.1, 36°.18N±0°.01×96°.97W±0°.01, h6^{km}±6^{km}, ML3.0, mb_Lg2.6/52(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=195.0*

NEIC 28 04:59:30.7±0.7**, 36°.19N**±0°.01×**96°.98W**±0°.01**, h7**^{km}±6^{km}**, Error ellipse: s-maj=1.9km s-min=1.6km az=195.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.81**	**27**	Pg	Pg	04 59 46.4	0.0
T35A				Sg	Sg	04 59 56.9	0.0
OKCFA	**Oklahoma City**	**0.86**	**207**	Sg	Sg	04 59 58.7	+0.1
OKCSW	**OKLAHOMA CITY**	**0.87**	**206**		Pg	04 59 46.7	-0.7
OKCSW				Sg	Sg	04 59 58.8	+0.1
FNO	**Franklin**	**0.99**	**200**	Pg	Pg	04 59 49.0	-0.8
TUL1	**Leonard**	**1.00**	**106**	Pg	Pg	04 59 49.2	-0.8
U32A	**Winter Ranch,**	**1.65**	**277**		Pn	05 00 00.2	+0.1
X34A	**Smith Ranch, M**	**1.73**	**204**		Pn	05 00 01.8	+0.4
WMOK	**Wichita Mounta**	**2.07**	**226**		Pn	05 00 06.9	+1.0
WMOK				IAmb_Lg		05 00 36.3	
	comp=Z,20nm,0.7s						
X37A	**Clayton**	**2.07**	**140**		Pn	05 00 06.9	+1.0
X37A				IAmb_Lg		05 00 37.1	
	comp=Z,33nm,0.8s						
HHAR	**Hobbs**	**2.46**	**87**		Pn	05 00 11.7	+0.4
R32A	**Long Quarter,**	**2.62**	**329**	Pn	Pn	05 00 15.1	+1.6
W39A	**Magazine**	**2.78**	**110**	Pn	Pn	05 00 15.6	-0.1
W39A				IAmb_Lg		05 01 03.4	
	comp=Z,26nm,0.8s						
Z35A	**Perchaven, San**	**2.86**	**185**	Pn	Pn	05 00 16.4	-0.5
KSU1	**Kansas State U**	**2.92**	**6**	Pn	Pn	05 00 17.2	-0.4
MIAR	**Mount Ida**	**3.23**	**120**	Pn	Pn	05 00 21.2	-0.7
S39A	**Bolivar**	**3.29**	**62**	Pn	Pn	05 00 22.3	-0.4
U40A	**Yellville**	**3.34**	**86**		Pn	05 00 23.2	-0.1
X40A	**Basin Creek Fa**	**3.79**	**115**	Pn	Pn	05 00 30.3	+0.7
X40A				IAmb_Lg		05 01 35.9	
	comp=Z,21nm,1.0s						
WHAR	**Wooly Hollow**	**3.92**	**102**	Pn	Pn	05 00 30.7	-0.6
WHAR				IAmb_Lg		05 01 38.6	
	comp=Z,16nm,1.0s						
FCAR	**Ozark Folk Cen**	**3.94**	**93**	Pn	Pn	05 00 32.4	+0.7
FCAR				IAmb_Lg		05 01 37.5	
	comp=Z,11nm,0.9s						
W41B	**Gary Mavity, V**	**3.98**	**103**	Pn	Pn	05 00 33.4	+1.2
W41B				IAmb_Lg		05 01 38.8	
	comp=Z,10nm,0.9s						
UALR	**University of**	**4.04**	**109**	IAmb_Lg		05 01 46.6	
	comp=Z,14nm,0.9s						
AMTX	**Amarillo**	**4.05**	**253**	Pn	Pn	05 00 33.1	-0.1
ABTX	**Abilene, Hawle**	**4.19**	**213**	Pn	Pn	05 00 34.5	-0.6
WHTX	**Lake Whitney,**	**4.21**	**186**	Pn	Pn	05 00 35.4	0.0
R40A	**Maddies Statio**	**4.30**	**59**	Pn	Pn	05 00 36.5	-0.1
R40A				IAmb_Lg		05 01 46.7	
	comp=Z,9.5nm,0.7s						
P38A	**Dawn**	**4.38**	**37**	Pn	Pn	05 00 37.3	-0.4
CCM	**Cathedral Cave**	**4.95**	**66**	Pn	Pn	05 00 45.4	-0.1
CCM				IAmb_Lg		05 02 04.1	
	comp=Z,12nm,0.9s						
P40A	**Paris**	**5.13**	**48**	Pn	Pn	05 00 47.9	-0.1
P40A				IAmb_Lg		05 02 11.1	
	comp=Z,9.3nm,0.8s						
MSTX	**Muleshoe**	**5.24**	**247**	IAmb_Lg		05 02 22.7	
	comp=Z,8.5nm,1.2s						
BGNE	**Belgrade**	**5.29**	**350**	IAmb_Lg		05 02 23.8	
	comp=Z,10nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.29**	**304**	IAmb_Lg		05 02 25.4	
	comp=Z,10nm,0.7s						
PBMO	**Poplar Bluff**	**5.31**	**82**	IAmb_Lg		05 02 23.5	
	comp=Z,9.9nm,0.9s						
FVM	**French Village**	**5.54**	**69**	IAmb_Lg		05 02 32.0	
	comp=Z,12nm,0.9s						
L34A	**Svendsen Farm,**	**5.79**	**4**	IAmb_Lg		05 02 42.3	
	comp=Z,12nm,0.8s						
S44A	**Carbondale**	**6.36**	**74**	IAmb_Lg		05 02 57.1	
	comp=Z,11nm,0.8s						
SIUC	**Southern Illin**	**6.40**	**74**	IAmb_Lg		05 02 53.5	
	comp=Z,12nm,0.7s						
Q24A	**Divide**	**7.05**	**296**	IAmb_Lg		05 03 10.2	
	comp=Z,5.2nm,0.8s						
L40A	**Anamosa**	**7.37**	**36**	IAmb_Lg		05 03 23.2	
	comp=Z,7.1nm,0.9s						
N23A	**Red Feather La**	**8.45**	**306**	IAmb_Lg		05 04 12.5	
	comp=Z,6.2nm,0.9s						
I40A	**Norwalk**	**9.10**	**30**	IAmb_Lg		05 04 22.9	
	comp=Z,4.3nm,0.7s						

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*IDC **28** 05:09:57.9±2.4, 3°.52N×124°.74E, h0^{km}, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=284.5km s-min=24.9km az=64.0*

*DJA **28** 05:10:32.1±1.0, 3°N±7°×12°5E±°, h333^{km}±9^{km}, M3.9/6, mb3.8/1, mB4.9/1, MLv3.9/6, Mw(mB)4.2/1*

ISC 28 05:10:32.3±1.2**, 3°.0N**±0°.1×**124°.5E**±0°.1**, h350**^{km}**, n9,** σ**1^{s}.68**/10**, mb3.2**/3**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.27**	**55**	P	**Pn**	**05 11 17.9**	**-1.4**
GTOI	**Gorontalo**	**2.74**	**213**	P	**Pn**	**05 11 27.7**	**-1.7**
GTOI				S	**S**	**05 12 13.4**	**-1.9**
MRSI	**Marisa**	**3.54**	**226**	P	**Pn**	**05 11 36.1**	**-0.7**
LBMI	**Labuha**	**4.68**	**140**	P	**Pn**	**05 11 47.2**	**-1.3**
APSI	**Ampana**	**4.78**	**216**	P	**Pn**	**05 11 49.4**	**-0.2**
SANI	**Sanana**	**5.20**	**163**	P	**Pn**	**05 11 53.1**	**-1.1**
SANI				S	S	05 12 53.2	-7.2
WRA	**Warramunga Arr**	**24.73**	**157**	P	**P**	**05 15 25.1**	**+1.7**
	2.2nm,0.3s,baz=336,slow=10.0,SNR=78						
	2.2nm,0.3s						
ASAR	**Alice Springs**	**28.01**	**161**	P	**P**	**05 15 54.6**	**+2.1**
	0.6nm,0.6s,baz=344,slow=7.4,SNR=7.7						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**56.93**	**327**	P	**P**	**05 19 42.6**	**+0.5**
	0.4nm,0.4s,baz=119,slow=8.8,SNR=8.2						
	0.4nm,0.4s						

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*IDC **28** 05:37:46.5±2.9, 47°.79N×152°.91E, h0^{km}, mb3.5/5, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=70.9km s-min=31.7km az=172.0*

ISC 28 05:37:52.4±2.3**, 47°.9N**±0°.3×**152°.9E**±0°.2**, h35**^{km}**, n15,** σ**0^{s}.37**/6**, mb3.4**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.05**	**28**	Pn	**Pn**	**05 39 19.4**	**+0.1**
	1.1nm,0.3s,baz=179,slow=12,SNR=21						
	2.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.29**	**153**	T	T	06 15 00.1	
	baz=340,slow=74,SNR=44						
H11N1	**WAKE ISLAND Hy**	**30.30**	**153**	T	T	06 14 58.8	
	baz=340,slow=74,SNR=62						
H11N3	**WAKE ISLAND Hy**	**30.30**	**153**	T	T	06 15 01.2	
	baz=340,SNR=32						
H11S1	**WAKE ISLAND Hy**	**31.38**	**154**	T	T	06 16 25.8	
	baz=343,slow=76,SNR=122						
H11S3	**WAKE ISLAND Hy**	**31.39**	**154**	T	T	06 16 10.0	
	baz=343,slow=76,SNR=147						
H11S2	**WAKE ISLAND Hy**	**31.40**	**154**	T	T	06 16 24.4	
	baz=343,slow=76,SNR=102						
ILAR	**Eielson Array**	**35.74**	**40**	P	**P**	**05 44 47.5**	**+0.1**
	0.2nm,0.5s,baz=261,slow=5.4,SNR=2.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**46.31**	**296**	P	**P**	**05 46 14.9**	**+0.3**
	0.3nm,0.7s,baz=61,slow=8.5,SNR=4.5						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**62.96**	**334**	P	**P**	**05 48 14.5**	**-0.3**
	1.0nm,0.4s,baz=34,slow=7.5,SNR=15						
	1.0nm,0.4s						
NOA	**NORSAR Array B**	**67.11**	**341**	P	**P**	**05 48 41.5**	**-0.4**
	0.3nm,0.6s,baz=19,slow=6.1,SNR=1.8						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**77.04**	**61**	P	**P**	**05 49 41.9**	**0.0**
	0.1nm,0.4s,baz=292,slow=5.6,SNR=3.7						
	0.1nm,0.4s						
H03N2	**Juan Fernandez**	**138.87**	**89**	T	T	08 30 48.5	
	baz=308,slow=77,SNR=4.9						
H03N1	**Juan Fernandez**	**138.88**	**89**	T	T	08 30 49.8	
	baz=308,slow=77,SNR=6.6						
H03N3	**Juan Fernandez**	**138.88**	**89**	T	T	08 30 54.7	
	baz=308,slow=77,SNR=4.6						

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*BJI **28** 05:38:47.3±0.0, 22°.01S×178°.15W, h400^{km}, mb6.2/81, mB6.8/83*

*NOU **28** 05:38:49.8, 22°.06S×177°.93W, h412^{km}, ML6.6/160, South of Fiji Islands*

*MOS **28** 05:38:50.2±0.9, 21°.87S×178°.28W, h411^{km}, mb6.4/48, MS5.7/4, Error ellipse: s-maj=7.7km s-min=6.3km az=113.1*

*NEIC **28** 05:38:50.5, 22°.01S×178°.22W, h408^{km}, Moment Tensor Solution.   Moment tensor: Scale 10^{19}Nm; M_{rr}-1.60; $M_{\theta\theta}$0.69; $M_{\phi\phi}$0.90; $M_{r\theta}$-1.11; $M_{\theta\phi}$0.40; $M_{\phi r}$-1.39; Fault plane solution: $M_0$2.29000×10^{19} NP1:ϕ_s38.37000°, δ70.81000°, λ-89.65000°.   NP2:ϕ_s217.30000°, δ19.19000°, λ-91.01000°.   Principal axes: T 2.0717, Plg26.0000°, Azm128.0000°; N 0.3816, Plg0.0000°, Azm218.0000°; P -2.4533, Plg64.0000°, Azm309.0000°;*

*NEIC **28** 05:38:50.5±1.9, 21°.97S±0°.08×178°.20W±0°.09, h406^{km}±3^{km}, mb6.5/337, Mwb6.8/80, Mww6.9 Error ellipse: s-maj=11.8km s-min=11.4km az=60.0*

*IDC **28** 05:38:51.8±0.3, 21°.91S×178°.27W, h418^{km}±2^{km}, mb5.9/41, mbtmp6.6/44, Error ellipse: s-maj=5.9km s-min=5.1km az=31.0*

*GCMT **28** 05:38:56.5±0.0, 22°.13S×178°.17W, h418^{km}, MW6.9/171, Moment Tensor Solution.   s171,c491;   s168,c395;   Duration: 7^{s}.0   Moment tensor: Scale 10^{19}Nm; M_{rr}-1.91±.01; $M_{\theta\theta}$0.54±.01; $M_{\phi\phi}$1.37±.01; $M_{r\theta}$-1.64±.01; $M_{\theta\phi}$0.47±.01; $M_{\phi r}$-1.77±.01;   Best double couple: $M_0$2.97000×10^{19} NP1:ϕ_s198.00000°, δ19.00000°, λ-110.00000°.   NP2:ϕ_s39.00000°, δ72.00000°, λ-83.00000°.   Principal axes: T 2.7610, Plg27.0000°, Azm123.0000°; N 0.4150, Plg6.0000°, Azm217.0000°; P -3.1780, Plg62.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **28** 05:38:59, 22°.12S×178°.48W, h410^{km}, Moment Tensor Solution.   Duration: 16^{s}.0   Moment tensor: Scale 10^{19}Nm; M_{rr}-1.94; $M_{\theta\theta}$0.43; $M_{\phi\phi}$1.51; $M_{r\theta}$-1.59; $M_{\theta\phi}$0.43; $M_{\phi r}$-1.77;   Fault plane solution: $M_0$2.99000×10^{19} NP1: ϕ_s191.00000°, δ20.00000°, λ-114.00000°.   NP2: ϕ_s36.00000°, δ72.00000°, λ-81.00000°.   Principal axes: T 2.7665, Plg26.0000°, Azm120.0000°; N 0.4131, Plg8.0000°, Azm214.0000°; P -3.1795, Plg62.0000°, Azm319.0000°;*

ISC 28 05:38:49.9±0.2**, 22°.01S**±0°.02×**178°.21W**±0°.03**, h407**^{km}±1^{km}**, h408**^{km}**:pP-P, n2489,** σ**1^{s}.93**/3208**, mb6.5**/334**, 128C-256D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**3.80**	**351**	P	**P**	**05 40 02.0**	**+1.5**
MSVF	**Nonsavu**	**5.52**	**320**	P	**P**	**05 40 19.4**	**+1.8**
	19µm,0.9s,baz=133,slow=13,SNR=3732						
MSVF	**Nonsavu**	**5.52**	**320**	Pn	**P**	**05 40 19.1**	**+1.5**
MSVF	**Nonsavu**	**5.52**	**320**	P	**P**	**05 40 19.9**	**+2.3**
MSVF	**Nonsavu**	**5.52**	**320**	⇑P	**P**	**05 40 19.3**	**+1.6**
DGTI	**Dogotuki**	**6.00**	**341**	P	**P**	**05 40 24.8**	**+2.1**
RIZ	**Raoul Island**	**7.21**	**178**	P	**P**	**05 40 36.8**	**+0.4**
RIZ				S	S	05 41 47.3	-15
RAO	**Raoul Island**	**7.22**	**178**	P	**P**	**05 40 34.8**	**-1.7**
	4µm,0.2s,baz=131,slow=0.9,SNR=59						
RAO				S	**S**	**05 41 56.8**	**-6.2**
	18µm,0.3s,baz=246,slow=22,SNR=11						
RAO	**Raoul Island**	**7.22**	**178**	P	**P**	**05 40 34.2**	**-2.4**
RAO	**Raoul Island**	**7.22**	**178**	P	**P**	**05 40 34.2**	**-2.4**
RAO	**Raoul Island**	**7.22**	**178**	P	**P**	**05 40 35.0**	**-1.5**
RAO	**Raoul Island**	**7.22**	**178**	⇓P	**P**	**05 40 34.1**	**-2.4**
GLKZ	**Green Lake**	**7.23**	**178**	P	**P**	**05 40 35.6**	**-1.0**
GLKZ				S	S	05 41 46.1	-17
NIUE	**Niue**	**8.29**	**71**		**P**	**05 40 45.6**	**-2.8**
NIUE	**Niue**	**8.29**	**71**	P	**P**	**05 40 46.9**	**-1.6**
NIUE	**Niue**	**8.29**	**71**	⇑P	**P**	**05 40 45.6**	**-2.8**
NIUE				⇓S	**S**	**05 42 20.1**	**-5.3**
AFI	**Afiamalu**	**10.11**	**38**	P	**P**	**05 41 04.9**	**-3.9**
	2µm,0.7s,baz=76,slow=0.9,SNR=125						
AFI				S	S	05 42 50.4	-13
	3µm,0.5s,baz=66,slow=19,SNR=6.6						
AFI	**Afiamalu**	**10.11**	**38**	P	**P**	**05 41 04.3**	**-4.5**
AFI	**Afiamalu**	**10.11**	**38**	P	**P**	**05 41 04.3**	**-4.5**
AFI	**Afiamalu**	**10.11**	**38**	P	**P**	**05 41 04.7**	**-4.1**
AFI	**Afiamalu**	**10.11**	**38**	⇑P	P	05 41 03.7	-5.1
MARNC	**Mare, Loyalty**	**12.80**	**270**	P	**P**	**05 41 40.0**	**+1.7**
MARNC	**Mare, Loyalty**	**12.80**	**270**	P	**P**	**05 41 40.3**	**+2.0**
MARNC	**Mare, Loyalty**	**12.80**	**270**	⇑P	**P**	**05 41 39.8**	**+1.5**
MARNC				⇓S	**S**	**05 44 04.6**	**+7.2**
RTV	**Rentapao**	**13.25**	**286**	P	**P**	**05 41 47.6**	**+4.4**
PINNC	**Pines Island,**	**13.29**	**265**	P	**P**	**05 41 46.5**	**+2.8**
PINNC	**Pines Island,**	**13.29**	**265**	P	**P**	**05 41 46.8**	**+3.2**
DVP	**Devils Point**	**13.49**	**286**	P	**P**	**05 41 49.5**	**+3.7**
LIFNC	**LIFOU**	**13.61**	**272**	P	**P**	**05 41 49.4**	**+2.2**
LIFNC	**LIFOU**	**13.61**	**272**	P	**P**	**05 41 49.1**	**+2.0**
FUNA	**Funafuti**	**13.63**	**349**	P	**P**	**05 41 46.2**	**-1.2**
FUNA	**Funafuti**	**13.63**	**349**	P	**P**	**05 41 47.9**	**+0.4**
FUNA	**Funafuti**	**13.63**	**349**	⇓P	**P**	**05 41 47.1**	**-0.4**
YATNC	**Mamie plateau,**	**13.82**	**267**	P	**P**	**05 41 52.2**	**+2.8**
OUENC	**Ouen Island, N**	**13.85**	**265**	P	**P**	**05 41 53.2**	**+3.4**
OUENC	**Ouen Island, N**	**13.85**	**265**	P	**P**	**05 41 53.2**	**+3.4**
ONTNC	**Ouen Toro**	**14.21**	**266**	P	**P**	**05 41 56.0**	**+2.2**
ONTNC	**Ouen Toro**	**14.21**	**266**	P	**P**	**05 41 57.4**	**+3.7**
ONTNC	**Ouen Toro**	**14.21**	**266**	⇑P	**P**	**05 41 56.2**	**+2.5**
DZM	**Mont Dzumac**	**14.23**	**267**	P	**P**	**05 41 56.6**	**+2.6**
	5µm,1.1s,baz=94,slow=12,SNR=361						
DZM				S	**S**	**05 44 28.4**	**+2.1**
	227nm,0.9s,baz=108,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**14.23**	**267**	P	**P**	**05 41 56.9**	**+2.8**
DZM	**Mont Dzumac**	**14.23**	**267**	P	**P**	**05 41 57.4**	**+3.4**
DZM	**Mont Dzumac**	**14.23**	**267**	⇑P	**P**	**05 41 56.5**	**+2.4**
NFK	**Norfolk Island**	**14.33**	**238**	P	**P**	**05 41 59.4**	**+4.6**
	baz=14,SNR=83						
NFK	**Norfolk Island**	**14.33**	**238**	P	**P**	**05 41 59.6**	**+4.8**
NFK	**Norfolk Island**	**14.33**	**238**	⇑P	**P**	**05 41 58.0**	**+3.2**
NOUC	**Port Laguerre**	**14.36**	**267**	P	**P**	**05 41 58.3**	**+3.0**
OUZ	**Omahuta**	**14.99**	**207**	P	**P**	**05 42 04.2**	**+2.3**
OUZ	**Omahuta**	**14.99**	**207**	P	**P**	**05 42 04.0**	**+2.1**
OUZ	**Omahuta**	**14.99**	**207**	P	**P**	**05 42 04.0**	**+2.1**
OUZ	**Omahuta**	**14.99**	**207**	⇑P	**P**	**05 42 04.1**	**+2.1**
OUZ				⇓S	**ScP**	**05 49 41.0**	**+3.6**
KUZ	**Kuaotunu**	**15.60**	**198**	P	**P**	**05 42 10.0**	**+1.5**
ABAZ	**Army Bay**	**15.75**	**201**	P	**P**	**05 42 12.9**	**+2.8**
MXZ	**Matakaoa Point**	**15.79**	**190**	P	**P**	**05 42 10.4**	**-0.2**
MXZ	**Matakaoa Point**	**15.79**	**190**	P	**P**	**05 42 12.5**	**+2.0**
MXZ				S	**S**	**05 44 48.9**	**-7.7**
WIAZ	**Waiheke Island**	**15.83**	**200**	P	**P**	**05 42 06.4**	**-4.5**
MBAZ	**Motutapu North**	**15.88**	**201**	P	**P**	**05 42 13.3**	**+1.8**
MYRZ	**Mayor Island**	**15.96**	**196**	P	**P**	**05 42 11.2**	**-1.2**
WSRZ	**White Island S**	**15.96**	**193**	P	**P**	**05 42 16.4**	**+4.0**
WSRZ				S	**S**	**05 44 59.6**	**-0.3**
WIZ	**White Island**	**15.97**	**193**	P	**P**	**05 42 13.9**	**+1.4**
WIZ				S	**S**	**05 44 59.6**	**-0.4**
RVAZ	**Riverhead Bore**	**15.99**	**201**	P	**P**	**05 42 14.9**	**+2.2**
HBAZ	**Herne Bay Bore**	**16.01**	**201**	P	**P**	**05 42 15.3**	**+2.5**
WMGZ	**Waiomatatini S**	**16.02**	**190**	P	**P**	**05 42 12.7**	**-0.3**
WMGZ				S	**S**	**05 44 52.5**	**-8.7**
EPAZ	**Eden Park BICE**	**16.03**	**201**	P	**P**	**05 42 15.5**	**+2.4**
ETAZ	**East Tamaki Re**	**16.04**	**200**	P	**P**	**05 42 15.0**	**+1.8**
MKAZ	**Moumakai**	**16.10**	**199**	P	**P**	**05 42 15.0**	**+1.1**
WTAZ	**Waiatarua**	**16.14**	**201**	P	**P**	**05 42 15.6**	**+1.3**
PKGZ	**Pakihiroa**	**16.15**	**191**	P	**P**	**05 42 13.0**	**-1.4**
PKGZ				S	S	05 44 52.5	-11
AWAZ	**Awhitu Peninsu**	**16.23**	**201**	P	**P**	**05 42 16.2**	**+0.9**
RUGZ	**Raukumara Rang**	**16.30**	**192**	P	**P**	**05 42 16.0**	**-0.1**
PUZ	**Puketiti**	**16.30**	**190**	P	**P**	**05 42 14.8**	**-1.2**
TGRZ	**Tauranga**	**16.38**	**196**	P	**P**	**05 42 18.9**	**+2.1**
KOUNC	**Koumac, New Ca**	**16.38**	**272**	P	**P**	**05 42 18.8**	**+1.7**
KOUNC	**Koumac, New Ca**	**16.38**	**272**	P	**P**	**05 42 19.5**	**+2.4**
KOUNC	**Koumac, New Ca**	**16.38**	**272**	⇑P	**P**	**05 42 18.8**	**+1.7**
TWGZ	**Tauwhareparae**	**16.45**	**191**	P	**P**	**05 42 17.7**	**+0.1**
TOZ	**Tahuroa Road**	**16.58**	**198**	P	**P**	**05 42 21.1**	**+2.1**
MWZ	**Matawai**	**16.68**	**192**	P	**P**	**05 42 23.5**	**+3.4**
URZ	**Urewera**	**16.69**	**193**	P	**P**	**05 42 18.4**	**-1.7**
	929nm,0.6s,baz=258,slow=3.1,SNR=79						
URZ				S	**S**	**05 45 07.5**	**-6.6**

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      1µm,0.6s,baz=20,slow=16,SNR=3.6
URZ   Urewera          16.69 193   P      P       05 42 19.2 -0.9
URZ   Urewera          16.69 193   P      P       05 42 19.9 -0.3
URZ                                S      S       05 45 09.8 -4.3
URZ   Urewera          16.69 193   P      P       05 42 18.4 -1.7
CNGZ  Carnagh Statio   16.71 190   P      P       05 42 23.5 +3.1
TKGZ  Te Karaka        16.73 191   P      P       05 42 18.9 -1.6
RAR   Rarotonga        17.16  91   P      P       05 42 25.7 +0.3
      2µm,1.0s,baz=246,slow=7.0,SNR=256
RAR   Rarotonga        17.16  91   P      P       05 42 25.3 -0.1
RAR   Rarotonga        17.16  91   P      P       05 42 25.5 +0.1
RAR   Rarotonga        17.16  91  ⇑P      P       05 42 25.7 +0.3
HIZ   Hauiti           17.50 198   P      P       05 42 30.6 +1.9
HIZ   Hauiti           17.50 198   P      P       05 42 28.7  0.0
BKZ   Black Stump Fm   17.69 194   P      P       05 42 30.1 -0.7
TWVZ  Taurewa          17.86 196   P      P       05 42 34.2 +1.6
TWVZ                               S      S       05 45 39.3 +2.5
WTVZ  West Tongariro   17.86 196   P      P       05 42 33.0 +0.3
NNVZ  North Ngauruho   17.87 196   P      P       05 42 33.0 +0.2
NNVZ                               S      S       05 45 41.4 +4.3
NGZ   Ngauruhoe        17.91 196   P      P       05 42 34.2 +0.9
NGZ                                S      S       05 45 42.5 +4.6
FWVZ  Far West T-bar   18.00 196   P      P       05 42 34.2 -0.1
TRVZ  Turoa            18.04 196   P      P       05 42 35.4 +0.7
WNVZ  Wahianoa         18.06 196   P      P       05 42 35.4 +0.6
MOVZ  Moawhango        18.09 195   P      P       05 42 34.2 -0.9
LREZ  Lake Rotokare    18.51 198   P      P       05 42 41.4 +2.0
LREZ                               S      S       05 45 52.5 +4.3
BFZ   Birch Farm       19.20 193   P      P       05 42 45.6 -0.7
OGWZ  Otaki Gorge      19.57 195   P      P       05 42 50.9 +1.1
SNZO  South Karori     20.15 196   P      P       05 42 54.4 -0.7
SNZO  South Karori     20.15 196   P      P       05 42 54.4 -0.7
SNZO  South Karori     20.15 196  ⇑P      P       05 42 52.2 -2.9
SNZO                              ⇓S      S       05 46 12.4 -2.9
QRZ   Quartz Range     20.33 201   P      P       05 42 56.9 +0.1
QRZ   Quartz Range     20.33 201   P      P       05 42 56.7 -0.1
NNZ   Nelson           20.43 198   P      P       05 42 55.7 -1.9
TUWZ  Tuamarina        20.46 197   P      P       05 42 56.5 -1.4
CMWZ  Cape Campbell    20.69 196   P      P       05 43 00.8 +0.8
BSWZ  Blackbirch Sta   20.75 197   P      P       05 42 59.8 -0.7
THZ   Tophouse         21.07 199   P      P       05 43 04.0 +0.4
KHZ   Kahutara         21.49 197   P      P       05 43 06.1 -1.2
KHZ                                IAmb   IAmb    05 43 15.2
      comp=Z,1µm,0.5s
KHZ   Kahutara         21.49 197   P      P       05 43 06.5 -0.8
KHZ   Kahutara         21.49 197  ⇑P      P       05 43 06.0 -1.2
KHZ                               ⇓S      S       05 46 37.2 +0.3
LTZ   Lake Taylor      22.19 199   P      P       05 43 11.9 -1.9
LTZ                                IAmb   IAmb    05 43 20.5
      comp=Z,2µm,1.2s
LHI   Lord Howe Isla   22.36 240   P      P       05 43 18.9 +3.6
      baz=22,SNR=10
LHI   Lord Howe Isla   22.36 240   P      P       05 43 17.4 +2.1
LHI                                IAmb   IAmb    05 43 21.4
      comp=Z,1µm,0.8s
LHI   Lord Howe Isla   22.36 240   P      P       05 43 18.0 +2.7
LHI   Lord Howe Isla   22.36 240  ⇑P      P       05 43 17.9 +2.5
OXZ   Oxford           22.76 199   P      P       05 43 17.0 -1.8
OXZ                                IAmb   IAmb    05 43 23.8
      comp=Z,1µm,0.7s
MQZ   McQueen's Vall   22.93 197   P      P       05 43 19.6 -0.7
RPZ   Rata Peaks       23.41 200   P      P       05 43 24.8 +0.1
      comp=Z,384nm,0.6s,baz=34,slow=2.9,SNR=83
RPZ                                S      S       05 47 08.9 +1.6
      comp=Z,397nm,1.0s,baz=148,slow=15,SNR=3.1
      comp=Z,384nm,0.6s
RPZ   Rata Peaks       23.41 200   P      P       05 43 26.0 +1.3
RPZ                                IAmb   IAmb    05 43 31.9
      comp=Z,724nm,0.6s
RPZ   Rata Peaks       23.41 200   P      P       05 43 24.6 -0.1
FOZ   Fox Glacier      23.66 202   P      P       05 43 26.6 -0.3
FOZ                                IAmb   IAmb    05 43 32.5
      comp=Z,689nm,0.6s
LBZ   Lake Benmore     24.29 201   P      P       05 43 31.5 -1.1
HNR   Honiara          24.42 297   P      P       05 43 34.7 +0.7
      comp=Z,2µm,0.8s,baz=190,slow=2.1,SNR=22
HNR                                S      S       05 47 23.8 -0.1
      comp=Z,723nm,1.0s,baz=78,slow=20,SNR=2.4
      comp=Z,2µm,0.8s
HNR   Honiara          24.42 297   P      P       05 43 34.0 -0.1
HNR   Honiara          24.42 297   P      P       05 43 35.8 +1.7
HNR   Honiara          24.42 297  ⇓P      P       05 43 33.5 -0.6
ODZ   Otahua Downs     24.73 199   P      P       05 43 36.3 -0.3
ODZ   Otahua Downs     24.73 199   P      P       05 43 35.8 -0.7
ODZ   Otahua Downs     24.73 199  ⇓P      P       05 43 36.0 -0.6
TARA  Tarawa           24.78 338   P      P       05 43 37.5 +0.2
TARA  Tarawa           24.78 338   P      P       05 43 39.0 +1.7
TARA  Tarawa           24.78 338  ⇓P      P       05 43 37.1 -0.1
WKZ   Wanaka           25.07 202   P      P       05 43 38.8 -0.8
MLZ   Mavora Lakes     25.85 202   P      P       05 43 45.8 -0.8
DCZ   Deep Cove        26.29 204   P      P       05 43 50.1 -0.2
WHZ   Wether Hill Ro   26.37 202   P      P       05 43 52.0 +1.0
WHZ                                IAmb   IAmb    05 43 57.1
      comp=Z,1µm,1.1s
PYZ   Puysegur Point   27.06 203   P      P       05 43 58.2 +1.1
PPT   Papeete          27.28  86   P      P       05 44 00.6 +1.2
      comp=Z,1µm,1.1s,baz=322,slow=0.6,SNR=65
PPT                                ScP    ScP     05 50 07.6 -0.6
      comp=Z,128nm,1.1s,baz=118,slow=3.4,SNR=3.5
      comp=Z,1µm,1.1s
PPTF  Pamatai, Papee   27.29  86   P      P       05 44 00.0 +0.4
PPTF                               IAmb   IAmb    05 44 02.1
      comp=Z,3µm,1.3s
PPTF  Pamatai, Papee   27.29  86   P      P       05 43 56.3 -3.3
PPTF  Pamatai, Papee   27.29  86  ⇑P      P       05 44 00.6 +1.0
ARMA  Armidale         28.26 246   P      P       05 44 09.7 +1.5
      baz=28,SNR=274
ARMA  Armidale         28.26 246   P      P       05 44 09.6 +1.5
ARMA  Armidale         28.26 246   P      P       05 44 09.1 +1.0
ARMA  Armidale         28.26 246  ⇓P      P       05 44 09.6 +1.5
EIDS  Eidsvold         28.29 257   P      P       05 44 09.0 +0.7
      baz=28,SNR=438
EIDS  Eidsvold         28.29 257   P      P       05 44 09.2 +0.9
EIDS  Eidsvold         28.29 257   P      P       05 44 09.4 +1.1
EIDS  Eidsvold         28.29 257  ⇓P      P       05 44 09.0 +0.7
NTLH  Newcastle Hard   28.73 241   P      P       05 44 13.8 +1.8
RK1H  Rockhampton Ha   28.88 261   P      P       05 44 15.0 +1.5
MGCD  Mangrove Creek   29.29 241   P      P       05 44 18.9 +2.0
      baz=29,SNR=104
MGCD  Mangrove Creek   29.29 241   P      P       05 44 18.4 +1.5
RIV   Riverview        29.41 240   P      P       05 44 20.2 +2.3
      baz=30,SNR=14
RIV   Riverview        29.41 240  ⇑P      P       05 44 19.7 +1.7
SYDH  Sydney Hard Ro   29.72 240   P      P       05 44 22.5 +1.8
RMQ   Roma             30.40 255   P      P       05 44 28.4 +1.6
      baz=30,SNR=438
RMQ   Roma             30.40 255   P      P       05 44 28.1 +1.3
CNB   Canberra Magne   31.24 238   P      P       05 44 35.6 +1.6
      baz=31,SNR=254
CNB   Canberra Magne   31.24 238   P      P       05 44 36.0 +2.0
XMAS  Kiritimati       31.35  43   P      P       05 44 34.9 -0.2
XMAS                               IAmb   IAmb    05 44 37.1
      comp=Z,2µm,1.1s
XMAS  Kiritimati       31.35  43   P      P       05 44 35.2 +0.1
XMAS  Kiritimati       31.35  43  ⇓P      P       05 44 35.1 +0.1
XMAS  Kiritimati       31.35  43   P      P       05 44 35.2 +0.1
XMAS                               sP     sP      05 46 36.1 +0.5
CAN   Canberra         31.53 238   P      P       05 44 37.4 +1.0
CAN   Canberra         31.53 238   P      P       05 44 37.4 +1.0
CAN                                pmax   pmax
      comp=Z,1µm,1.1s
CAN   Canberra         31.53 238   P      P       05 44 38.3 +1.8
CAN   Canberra         31.53 238  ⇑P      P       05 44 37.5 +1.0
CAN   Canberra         31.53 238   P      P       05 44 37.8 +1.3
CAN                                PP     PP      05 46 00.2 +2.0
CTA   Charters Tower   33.18 267   P      P       05 44 51.9 +1.1
      comp=Z,2µm,0.7s,baz=100,slow=11,SNR=10
CTA                                S      S       05 49 39.2 -1.1
      comp=Z,81nm,1.0s,baz=282,slow=16,SNR=5.6
CTA                                P3KPbc         06 15 59.2
      comp=Z,8.6nm,0.8s,baz=248,slow=5.3,SNR=11
      comp=Z,2µm,0.7s
CTA   Charters Tower   33.18 267   P      P       05 44 51.8 +0.9
CTAO  Charters Tower   33.18 267   P      P       05 44 51.6 +0.8
CTAO                               IAmb   IAmb    05 44 53.8
      comp=Z,2µm,0.8s
CTAO  Charters Tower   33.18 267   P      P       05 44 51.6 +0.8
CTAO                               pmax   pmax
      comp=Z,2µm,0.8s
CTAO  Charters Tower   33.18 267   P      P       05 44 51.7 +0.9
CTAO  Charters Tower   33.18 267  ⇓P      P       05 44 51.4 +0.6
CTAO  Charters Tower   33.18 267   P      P       05 44 51.5 +0.8
CTAO                               pP     pP      05 46 05.6 +1.2
CMSA  Cobar Meteorol   33.47 246   P      P       05 44 53.6 +0.4
      baz=34,SNR=738
CMSA  Cobar Meteorol   33.47 246   P      P       05 44 53.8 +0.7
KWAJ  Kwajalein Atol   33.63 334   P      P       05 44 55.3 +0.7
KWAJ  Kwajalein Atol   33.63 334   P      P       05 44 55.3 +0.7
KWAJ                               pmax   pmax
      comp=Z,7µm,1.0s
KWAJ  Kwajalein Atol   33.63 334   P      P       05 44 56.3 +1.7
KWAJ  Kwajalein Atol   33.63 334  ⇓P      P       05 44 55.0 +0.4
KWAJ  Kwajalein Atol   33.63 334   P      P       05 44 55.0 +0.4
RABL  Rabaul           33.74 297   P      P       05 44 54.2 -1.5
RABL                               IAmb   IAmb    05 45 12.5
      comp=Z,970nm,0.5s
RABL  Rabaul           33.74 297   P      P       05 44 57.3 +1.7
RABL  Rabaul           33.74 297  ⇓P      P       05 44 53.0 -2.6
KRVT  Keravat (AS076   33.79 297   P      P       05 44 56.0 -0.1
      comp=Z,1µm,0.8s,baz=183,slow=1.0,SNR=41
KRVT                               S      S       05 49 48.2 -1.4
      comp=Z,229nm,0.7s,baz=324,slow=19,SNR=1.9
      comp=Z,1µm,0.8s
GLAD  Gladstone        34.17 229   P      P       05 44 59.7 +0.7
QLP   Quilpie          34.45 255   P      P       05 45 02.1 +0.6
      baz=34,SNR=329
QLP   Quilpie          34.45 255   P      P       05 45 02.5 +1.0
QLP   Quilpie          34.45 255  ⇓P      P       05 45 02.1 +0.6
TOO   Toolangi         34.87 235   P      P       05 45 05.5 +0.5
      baz=35,SNR=661
TOO   Toolangi         34.87 235   P      P       05 45 05.7 +0.8
TOO   Toolangi         34.87 235   P      P       05 45 05.7 +0.8
TOO                                pmax   pmax
      comp=Z,668nm,0.7s
TOO   Toolangi         34.87 235   P      P       05 45 06.1 +1.1
TOO   Toolangi         34.87 235  ⇑P      P       05 45 05.5 +0.5
CORO  Coronation Par   34.95 228   P      P       05 45 07.0 +1.5
MOO   Moorlands        35.32 227   P      P       05 45 09.2 +0.5
      baz=36,SNR=59
MOO   Moorlands        35.32 227   P      P       05 45 09.5 +0.8
MTSU  Mount Surprise   35.35 269   P      P       05 45 09.7 +0.5
      baz=35,SNR=1000
MTSU  Mount Surprise   35.35 269   P      P       05 45 10.4 +1.1
TAU   Tasmania Unive   35.43 226   P      P       05 45 10.3 +0.8
TAU   Tasmania Unive   35.43 226   P      P       05 45 10.3 +0.8
TAU                                pmax   pmax
      comp=Z,425nm,0.6s
TAU   Tasmania Unive   35.43 226   P      P       05 45 09.8 +0.3
TAU   Tasmania Unive   35.43 226  ⇑P      P       05 45 09.9 +0.3
TAU   Tasmania Unive   35.43 226   P      P       05 45 10.1 +0.5
TAU                                pP     pP      05 46 25.3 +1.3
PMG   Port Moresby     35.52 285   P      P       05 45 11.3 +0.6
      comp=Z,4µm,1.0s,baz=93,slow=5.4,SNR=276
PMG                                S      S       05 50 15.6 -0.3
      comp=Z,59nm,1.0s,baz=316,slow=23,SNR=6.1
      comp=Z,4µm,1.0s
PMG   Port Moresby     35.52 285   P      P       05 45 11.3 +0.6
PMG   Port Moresby     35.52 285   P      P       05 45 11.7 +1.1
PMG   Port Moresby     35.52 285  ⇓P      P       05 45 10.8 +0.2
PMG   Port Moresby     35.52 285   P      P       05 45 11.2 +0.5
GEXS  Deakin Univers   35.95 235   P      P       05 45 15.2 +1.2
BRAT  Ballarat         36.06 236   P      P       05 45 16.4 +1.5
MCQ   Macquarie Isla   36.73 202   P      P       05 45 21.8 +1.7
      baz=37,SNR=12
MCQ   Macquarie Isla   36.73 202   P      P       05 45 20.9 +0.8
MCQ   Macquarie Isla   36.73 202   P      P       05 45 20.9 +0.8
MCQ                                pmax   pmax
      comp=Z,383nm,1.3s
MCQ   Macquarie Isla   36.73 202   P      P       05 45 20.3 +0.1
MCQ   Macquarie Isla   36.73 202  ⇑P      P       05 45 21.9 +1.8
PATS  Pohnpei          36.76 319   P      P       05 45 22.0 +1.0
      baz=37,SNR=94
PATS  Pohnpei          36.76 319   P      P       05 45 21.8 +0.8
PATS  Pohnpei          36.76 319   P      P       05 45 22.9 +1.9
STKA  Stephens Creek   36.98 246   P      P       05 45 23.8 +1.1
      comp=Z,454nm,0.5s,baz=91,slow=9.3,SNR=214
STKA                               S      S       05 50 35.0 -2.5
      comp=Z,36nm,0.8s,baz=288,slow=19,SNR=4.2
STKA                               PKiKP  PKiKP   05 54 49.4 -0.9
      comp=Z,17nm,0.7s,baz=233,slow=1.5,SNR=3.2
STKA                               P3KPbc         06 15 39.9
      comp=Z,6.1nm,0.7s,baz=284,slow=3.8,SNR=7.1
      comp=Z,454nm,0.5s
STKA  Stephens Creek   36.98 246   P      P       05 45 23.5 +0.8
      baz=37,SNR=183
STKA  Stephens Creek   36.98 246   P      P       05 45 23.4 +0.8
STKA  Stephens Creek   36.98 246   P      P       05 45 23.8 +1.1
ARPS  Mount Arapiles   37.51 238   P      P       05 45 27.4 +0.4
      baz=38,SNR=274
ARPS  Mount Arapiles   37.51 238   P      P       05 45 28.0 +1.0
COEN  Coen             37.51 276   P      P       05 45 28.0 +0.8
      baz=38,SNR=992
COEN  Coen             37.51 276   P      P       05 45 28.2 +0.9
COEN                               IAmb   IAmb    05 45 30.3
      comp=Z,2µm,0.9s
COEN  Coen             37.51 276   P      P       05 45 28.7 +1.4
COEN  Coen             37.51 276  ⇓P      P       05 45 27.9 +0.6
INKA  Innaminka        37.55 253   P      P       05 45 29.2 +1.8
TAOE  Nuku Hiva Isla   38.83  76   P      P       05 45 38.6 +0.4
TAOE  Nuku Hiva Isla   38.83  76   P      P       05 45 38.6 +0.4
TAOE  Nuku Hiva Isla   38.83  76  ⇑P      P       05 45 39.4 +1.2
TAOE  Nuku Hiva Isla   38.83  76   P      P       05 45 39.4 +1.2
TAOE                               PP     PP      05 47 17.8 -0.1
TAOE                               sP     sP      05 47 41.9 +0.7
MANU  Manus Island     38.90 296   P      P       05 45 39.1 +0.3
QIS   Mount Isa        39.25 264   P      P       05 45 41.2 -0.3
      baz=39,SNR=260
QIS   Mount Isa        39.25 264   P      P       05 45 41.0 -0.5
HTT   Hallett          39.37 244   P      P       05 45 42.6 +0.2
      baz=39,SNR=339
HTT   Hallett          39.37 244   P      P       05 45 43.0 +0.6
HTT   Hallett          39.37 244  ⇓P      P       05 45 42.4  0.0
JOHN  Johnston Islan   39.43  13   P      P       05 45 42.5 -0.3
JOHN  Johnston Islan   39.43  13   P      P       05 45 42.3 -0.6
JOHN  Johnston Islan   39.43  13  ⇑P      P       05 45 42.8 -0.1
JOHN  Johnston Islan   39.43  13   P      P       05 45 41.7 -1.1
JOHN                               sP     PcP     05 47 41.1 -0.4
LCRK  Leigh Creek      39.78 248   P      P       05 45 46.3 +0.6
TWOA  Tennyson Woods   39.83 241   P      P       05 45 46.4 +0.4
NAPP  Napperby         39.99 244   P      P       05 45 48.3 +0.9
PTPS  Port Pirie       40.12 244   P      P       05 45 50.0 +1.6
WHYH  Whyalla          40.46 245   P      P       05 45 52.2 +1.1
BBOO  Buckleboo        41.72 245   P      P       05 46 00.9 -0.4
      baz=42,SNR=575
BBOO  Buckleboo        41.72 245   P      P       05 46 01.2 -0.1
BBOO  Buckleboo        41.72 245   P      P       05 46 01.5 +0.2
MMPI  Merauke          42.01 282   P      P       05 46 04.5 +0.7
      comp=Z,56µmcomp=Z,71µmcomp=Z,6µm,0.7s
OOD   Oodnadatta       42.02 252   P      P       05 46 05.0 +1.2
H11S2 WAKE ISLAND Hy   42.87 339   P      P       05 46 10.3  0.0
      baz=185,slow=7.2,SNR=16
H11S3 WAKE ISLAND Hy   42.88 339   P      P       05 46 10.4 +0.1
      baz=185,slow=7.2,SNR=15
H11S1 WAKE ISLAND Hy   42.89 339   P      P       05 46 10.6 +0.1
      baz=185,slow=7.2,SNR=22
MULG  Mulgathing       43.38 249   P      P       05 46 14.5  0.0
WAKE  Wake Island      43.63 339   P      P       05 46 15.9 -0.5
WAKE  Wake Island      43.63 339   P      P       05 46 16.9 +0.5
WAKE  Wake Island      43.63 339  ⇓P      P       05 46 16.3 -0.1
WAKE  Wake Island      43.63 339   P      P       05 46 16.4 -0.1
WAKE                               pP     pP      05 47 34.0 -0.8
H11N3 WAKE ISLAND Hy   43.95 340   P      P       05 46 18.7  0.0
      baz=177,slow=9.8,SNR=78
H11N1 WAKE ISLAND Hy   43.95 340   P      P       05 46 19.1 +0.4
      baz=177,slow=9.8,SNR=76
H11N2 WAKE ISLAND Hy   43.96 340   P      P       05 46 19.3 +0.5
      baz=177,slow=9.8,SNR=100
AS31  Alice Springs    44.00 258   P      P       05 46 20.0 +0.4
ASAR  Alice Springs    44.00 258   P      P       05 46 19.7 +0.2
      comp=Z,1µm,0.9s,baz=90,slow=8.1,SNR=1456
ASAR                               ScP    ScP     05 51 10.6 +1.3
      comp=Z,21nm,0.7s,baz=105,slow=4.8,SNR=1.6
ASAR                               S      S       05 52 19.6 -1.2
      comp=Z,99nm,0.8s,baz=97,slow=16,SNR=12
ASAR                               P3KPbc         06 15 10.6
      comp=Z,1.0nm,0.5s,baz=286,slow=2.8,SNR=6.9
ASAR                               P4KPbc         06 24 06.7
      comp=Z,1.7nm,0.8s,baz=100,slow=4.7,SNR=4.8
      comp=Z,1µm,0.9s
WR0   Warramunga Arr   44.03 264   P      P       05 46 19.0 -0.8
PTCN  Pitcairn Islan   44.04 104   P      P       05 46 21.3 +1.6
PTCN                               IAmb   IAmb    05 46 27.7
      comp=Z,3µm,1.4s
WB2   Warramunga Arr   44.21 264   P      P       05 46 20.4 -0.8
WB2                                IAmb   IAmb    05 46 23.4
      comp=Z,2µm,0.9s
WRAB  Tennant Creek    44.21 264   P      P       05 46 21.1 -0.1
WRAB                               IAmb   IAmb    05 46 23.3
      comp=Z,1µm,1.0s
WRAB  Tennant Creek    44.21 264   P      P       05 46 21.1 -0.1
WRAB                               pmax   pmax
      comp=Z,1µm,1.0s
WRAB  Tennant Creek    44.21 264   P      P       05 46 22.1 +0.9
WRAB  Tennant Creek    44.21 264  ⇑P      P       05 46 20.2 -0.9
WRAB  Tennant Creek    44.21 264   P      P       05 46 20.5 -0.6
WRAB                               pP     pP      05 47 39.4 +0.1
WRA   Warramunga Arr   44.22 264   P      P       05 46 20.9 -0.3
      comp=Z,1µm,0.9s,baz=93,slow=8.1,SNR=1793
WRA                                pP     pwP     05 47 44.1 -0.6
      comp=Z,42nm,0.8s,baz=102,slow=5.3,SNR=0.9
WRA                                ScP    ScP     05 51 09.0 -1.1
      comp=Z,28nm,0.9s,baz=97,slow=3.5,SNR=1.8
WRA                                S      S       05 52 22.0 -1.8
      comp=Z,88nm,0.8s,baz=100,slow=13,SNR=9.1
WRA                                P3KPbc         06 15 10.4
      comp=Z,1.6nm,0.8s,baz=296,slow=2.8,SNR=7.6
WRA                                P4KPbc         06 24 08.8
      comp=Z,2.6nm,1.0s,baz=95,slow=4.0,SNR=12
      comp=Z,1µm,0.9s
WRA   Warramunga Arr   44.22 264   P      P       05 46 20.9 -0.3
GENI  Genyem           44.78 290   P      P       05 46 26.7 +1.0
      comp=Z,68µmcomp=Z,55µmcomp=Z,2µm,0.9s
GENI  Genyem           44.78 290   P      P       05 46 27.7 +2.0
GENI  Genyem           44.78 290  ⇓P      P       05 46 25.6 -0.1
SMPI  Sarmi            46.35 289   P      P       05 46 38.9 +1.1
      comp=Z,39µmcomp=Z,19µmcomp=Z,631nm,1.1s
KHLU  Kahalu`u         46.75  29   P      P       05 46 40.2 -0.5
KHLU                               IAmb   IAmb    05 46 42.4
      comp=Z,1µm,0.9s
HLP   Hilina Pali      46.76  30   P      P       05 46 41.1 +0.3
MWH   Moku‘aweowe      46.79  30   P      P       05 46 41.4 -0.2
MLOA  Mauna Loa Obse   46.84  30   P      P       05 46 41.8 -0.1
HUH   Hualalai         46.85  29   P      P       05 46 41.6 -0.2
PUH   Pauahi           46.87  30   P      P       05 46 42.0 +0.3
PUH                                IAmb   IAmb    05 46 43.4
      comp=Z,2µm,1.4s
MLH   Mauna Loa        46.90  30   P      P       05 46 42.3 +0.3
RSD   Rainshed         46.92  30   P      P       05 46 42.3 +0.2
STCH  Steam Cracks     46.92  30   P      P       05 46 42.2 +0.2
JCUZ  Jacuzzi          46.93  30   P      P       05 46 42.6 +0.5
JCUZ                               IAmb   IAmb    05 46 43.9
      comp=Z,2µm,1.1s
NPOC  North of Pu‘u    46.94  30   P      P       05 46 42.5 +0.3
NPOC                               IAmb   IAmb    05 46 43.9
      comp=Z,2µm,1.2s
HMH   Humu‘ula Sheep   46.95  30   P      P       05 46 42.5 +0.1
HMH                                IAmb   IAmb    05 46 44.5
      comp=Z,3µm,1.1s
POHA  Pohakuloa        47.06  30   P      P       05 46 43.5 +0.3
POHA  Pohakuloa        47.06  30   P      P       05 46 44.2 +0.9
POHA  Pohakuloa        47.06  30  ⇑P      P       05 46 43.0 -0.2
POHA  Pohakuloa        47.06  30   P      P       05 46 43.1 -0.2
POHA                               pP     pwP     05 48 05.7 -0.3
HPAH  Hawaii Prepara   47.22  29   P      P       05 46 44.1 -0.2
HPAH                               IAmb   IAmb    05 46 55.4
      comp=Z,2µm,0.8s
MHA   Mahukona         47.26  29   P      P       05 46 45.4 +0.9
MHA   Mahukona         47.26  29   P      P       05 46 45.4 +0.9
HON   Honolulu         47.37  26   P      P       05 46 45.8 +0.5
HON                                IAmb   IAmb    05 46 47.0
      comp=Z,1µm,1.2s
HON   Honolulu         47.37  26   P      P       05 46 45.8 +0.5
HON                                pmax   pmax
      comp=Z,1µm,1.2s
KIP   Kipapa           47.45  26   P      P       05 46 46.3 +0.3
KIP   Kipapa           47.45  26   P      P       05 46 46.3 +0.3
KIP                                pmax   pmax
      comp=Z,2µm,1.4s
KIP   Kipapa           47.45  26   P      P       05 46 45.0 -0.9
KIP   Kipapa           47.45  26   P      P       05 46 46.1 +0.2
HLK   Haleakala        47.61  28   P      P       05 46 47.3 -0.1
KHLH  Kahului Airpor   47.65  28   P      P       05 46 47.7 +0.2
KHLH                               IAmb   IAmb    05 46 49.6
      comp=Z,2µm,1.1s
OPA   Opana            47.69  26   P      P       05 46 48.0 +0.2
OPA   Opana            47.69  26   P      P       05 46 48.0 +0.2
OPA                                pmax   pmax
      comp=Z,1µm,1.3s
KDU   Kakadu           47.80 273   P      P       05 46 48.1 -0.7
      baz=48,SNR=1000
KDU   Kakadu           47.80 273   P      P       05 46 48.8  0.0
KDU   Kakadu           47.80 273  ⇓P      P       05 46 48.0 -0.9
FORT  Forrest          48.53 248   P      P       05 46 53.6 -0.5
      baz=49,SNR=1000
FORT  Forrest          48.53 248   P      P       05 46 54.1  0.0
FORT  Forrest          48.53 248   P      P       05 46 54.7 +0.6
FORT  Forrest          48.53 248  ⇓P      P       05 46 53.2 -0.9
SRPI  Serui, Papua     48.58 288   P      P       05 46 55.6 +0.9
      comp=Z,35µmcomp=Z,27µmcomp=Z,2µm,0.9s
WRKA  Warakurna        48.88 255   P      P       05 46 56.5 -0.4
      baz=49,SNR=1000
WRKA  Warakurna        48.88 255   P      P       05 46 57.4 +0.5
WRKA  Warakurna        48.88 255  ⇓P      P       05 46 56.5 -0.4
MTN   Manton Dam       49.00 272   P      P       05 46 57.0 -0.8
      baz=49,SNR=623
MTN   Manton Dam       49.00 272   P      P       05 46 57.2 -0.6
MTN                                IAmb   IAmb    05 46 59.7
      comp=Z,1µm,0.7s
MTN   Manton Dam       49.00 272   P      P       05 46 58.0 +0.2
MTN   Manton Dam       49.00 272  ⇓P      P       05 46 56.8 -1.0
BAKI  Biak             49.01 289   P      P       05 46 58.7 +0.8
      comp=Z,68µmcomp=Z,54µmcomp=Z,3µm,1.3s
MIDW  Midway           49.94   1   P      P       05 47 04.4 -0.1
MIDW                               IAmb   IAmb    05 47 07.1
      comp=Z,3µm,1.6s
MIDW  Midway           49.94   1  ⇓P      P       05 47 03.9 -0.5
KMPI  Kaimana, Papua   50.04 284   P      P       05 47 06.3 +0.8
      comp=Z,36µmcomp=Z,26µmcomp=Z,2µm,0.8s
KNRA  Kununurra        50.38 268   P      P       05 47 07.7 -0.3
      baz=50,SNR=1000
KNRA  Kununurra        50.38 268   P      P       05 47 08.3 +0.2
KNRA                               IAmb   IAmb    05 47 10.7
      comp=Z,2µm,0.7s
KNRA  Kununurra        50.38 268   P      P       05 47 08.4 +0.3
SAUI  Saumlaki         50.49 278   P      P       05 47 10.1 +1.1
SAUI  Saumlaki         50.49 278   P      P       05 47 10.0 +1.1
GUMO  Guam             50.62 311   P      P       05 47 10.3 +0.5
      comp=Z,4µm,0.9s,baz=157,slow=3.8
GUMO                               S      S       05 53 53.5 +0.4
      baz=184,slow=19
      comp=Z,4µm,0.9s
GUMO  Guam             50.62 311   P      P       05 47 10.1 +0.3
GUMO  Guam             50.62 311   P      P       05 47 10.9 +1.1
GUMO  Guam             50.62 311  ⇓P      P       05 47 10.3 +0.5
GUMO  Guam             50.62 311   P      P       05 47 10.4 +0.5
FAKI  Fak Fak          51.66 284   P      P       05 47 17.2 -0.3
FAKI                               IAmb   IAmb    05 47 19.2
      comp=Z,1µm,0.9s
FAKI  Fak Fak          51.66 284   P      P       05 47 17.3 -0.3
      comp=Z,60µmcomp=Z,40µmcomp=Z,2µm,1.3s
FAKI  Fak Fak          51.66 284  ⇓P      P       05 47 16.8 -0.8
DRV   Dumont d'Urvil   51.87 200   P      P       05 47 18.7 +0.5
DRV                                pP     pP      05 48 39.8 -0.6
BNDI  Bandanaira       53.12 281   P      P       05 47 29.4 +1.4
BNDI  Bandanaira       53.12 281  ⇓P      P       05 47 27.6 -0.5
SIJI  Sorong           53.45 286   S      S       05 54 31.4 +0.1
      comp=Z,46nm,1.1s,baz=252,slow=21,SNR=18
SWI   Sorong           53.46 286   P      P       05 47 30.9 +0.4
      comp=Z,60µmcomp=Z,73µmcomp=Z,10µm,0.9s
MSAI  Masohi           54.48 282   P      P       05 47 37.8  0.0
      comp=Z,365nmcomp=Z,6µmcomp=Z,741nm,0.7s
I39PW PALAU INFRASON54.82 297      P      P       05 47 41.3 +1.1
      baz=126,slow=8.1,SNR=2.9
AAI   Ambon            55.01 281   P      P       05 47 41.6  0.0
      comp=Z,61µmcomp=Z,50µmcomp=Z,4µm,1.1s
SBA   Scott Base       56.36 184   P      P       05 47 53.7 +3.7
SBA   Scott Base       56.36 184   P      P       05 47 53.7 +3.7
SBA                                pmax   pmax
      comp=Z,681nm,1.1s
SBA   Scott Base       56.36 184   P      P       05 47 53.6 +3.7
SBA                                x      x       05 48 42.7
SBA                                pP     pwP     05 49 16.0 -0.2
SOEI  Soe              56.37 273   P      P       05 47 53.3 +2.1
SOEI  Soe              56.37 273   P      P       05 47 52.6 +1.4
      comp=Z,82µmcomp=Z,98µmcomp=Z,11µm,1.1s
SOEI  Soe              56.37 273   P      P       05 47 53.6 +2.4
SOEI  Soe              56.37 273  ⇓P      P       05 47 52.7 +1.4
VNDA  Vanda            56.40 185   P      P       05 47 52.8 +2.5
      comp=Z,97nm,0.7s,baz=6.7,slow=7.1,SNR=289
VNDA                               S      S       05 55 12.3 +4.0
      comp=Z,8.8nm,0.8s,baz=241,slow=23,SNR=10
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	comp=Z,97nm,0.7s						
VNDA	Vanda	56.40	185	P	P	05 47 52.3	+2.0
VNDA	Vanda	56.40	185	P	P	05 47 52.8	+2.5
VNDA				pP	pwP	05 49 15.5	-1.0
BATI	Baumata	56.77	272	S	S	05 55 16.7	+1.7
	comp=Z,42nm,0.7s,baz=51,slow=21,SNR=8.3						
BATI				PKPPKP		06 17 38.9	
	comp=Z,34nm,0.7s,baz=252,slow=3.2,SNR=5.5						
BATI	Baumata	56.77	272	P	P	05 47 55.6	+1.7
	comp=Z,38µmcomp=Z,34µmcomp=Z,1µm,0.7s						
LBMI	Labuha	56.92	284	P	P	05 47 56.1	+1.2
	comp=Z,41µmcomp=Z,39µmcomp=Z,5µm,1.1s						
PSA00	Pilbara Seismi	57.15	258	P	P	05 47 55.9	-0.6
PSA00				IAmb	IAmb	05 47 58.0	
	comp=Z,2µm,1.0s						
PSA00	Pilbara Seismi	57.15	258	P	P	05 47 55.8	-0.6
PSA00				IAmb	IAmb	05 47 58.0	
	comp=Z,2µm,1.0s						
PSA00	Pilbara Seismi	57.15	258	P	P	05 47 56.2	-0.2
KLBR	Kellerberrin	57.25	246	P	P	05 47 56.6	-0.4
	baz=57,SNR=159						
KLBR	Kellerberrin	57.25	246	P	P	05 47 57.4	+0.4
MBWA	Marble Bar	57.35	258	P	P	05 47 57.4	-0.4
MBWA				IAmb	IAmb	05 47 59.3	
	comp=Z,2µm,0.9s						
MBWA	Marble Bar	57.35	258	P	P	05 47 57.6	-0.2
MBWA	Marble Bar	57.35	258	⇑P	P	05 47 57.1	-0.7
MBWA	Marble Bar	57.35	258	P	P	05 47 57.5	-0.2
MBWA				pP	pP	05 49 21.6	+0.4
NWAO	Narrogin (SRO)	57.53	244	P	P	05 47 58.5	-0.4
NWAO	Narrogin (SRO)	57.53	244	P	P	05 47 58.5	-0.4
NWAO				pmax	pmax		
	comp=Z,452nm,0.9s						
NWAO	Narrogin (SRO)	57.53	244	P	P	05 47 58.8	-0.1
NWAO	Narrogin (SRO)	57.53	244	P	P	05 47 59.1	+0.2
NWAO				x	x	05 48 42.8	
NWAO				pP	pP	05 49 24.1	+1.6
RKGY	Rocky Gully	57.56	242	P	P	05 47 59.2	+0.1
	baz=58,SNR=52						
RKGY	Rocky Gully	57.56	242	P	P	05 48 01.3	+2.2
TNTI	Ternate	57.66	286	P	P	05 48 00.4	+0.4
TNTI	Ternate	57.66	286	P	P	05 48 00.4	+0.4
	comp=Z,32µmcomp=Z,47µmcomp=Z,4µm,1.4s						
TNTI	Ternate	57.66	286	⇓P	P	05 48 00.1	0.0
SANI	Sanana	57.69	282	P	P	05 48 00.2	0.0
	comp=Z,63µmcomp=Z,47µmcomp=Z,3µm,1.3s						
SANI	Sanana	57.69	282	P	P	05 48 00.4	+0.2
SANI	Sanana	57.69	282	⇓P	P	05 47 59.5	-0.7
BLDU	Ballidu	58.27	247	P	P	05 48 03.4	-0.6
	baz=58,SNR=587						
BLDU	Ballidu	58.27	247	P	P	05 48 03.8	-0.2
MUN	Mundaring	58.51	245	P	P	05 48 05.5	-0.1
	baz=58,SNR=142						
MUN	Mundaring	58.51	245	P	P	05 48 06.0	+0.4
MMRI	Maumere	58.63	273	P	P	05 48 05.9	-0.7
MMRI				IAmb	IAmb	05 48 08.4	
	comp=Z,2µm,0.9s						
MMRI	Maumere	58.63	273	P	P	05 48 06.6	-0.1
	comp=Z,56µmcomp=Z,53µmcomp=Z,3µm,0.9s						
MMRI	Maumere	58.63	273	P	P	05 48 07.3	+0.6
MMRI	Maumere	58.63	273	⇓P	P	05 48 06.4	-0.3
MTKN	Mount Kenneth	58.88	245	P	P	05 48 09.2	+1.1
MORW	Morawa	59.09	248	P	P	05 48 09.1	-0.5
	baz=59,SNR=293						
MORW	Morawa	59.09	248	P	P	05 48 09.0	-0.6
MORW	Morawa	59.09	248	P	P	05 48 09.7	+0.1
MORW	Morawa	59.09	248	⇓P	P	05 48 09.2	-0.4
EDFI	Ende, Flores	59.10	273	P	P	05 48 09.6	-0.4
	comp=Z,32µmcomp=Z,25µmcomp=Z,2µm,0.8s						
BBSI	Bau Bau	59.46	277	P	P	05 48 13.8	+1.5
	comp=Z,2µmcomp=Z,220nm,1.0s						
H01W1	Cape Leeuwin H	59.84	242	P	P	05 48 16.1	+1.9
	baz=116,slow=6.7,SNR=32						
H01W2	Cape Leeuwin H	59.86	242	P	P	05 48 16.3	+1.9
	baz=116,slow=6.7,SNR=16						
H01W3	Cape Leeuwin H	59.86	242	P	P	05 48 16.0	+1.7
	baz=116,slow=6.7,SNR=20						
KMSI	Cibinong	60.62	284	P	P	05 48 20.4	+0.4
	comp=Z,1µmcomp=Z,19µmcomp=Z,2µm,1.1s						
SGSI	Sangihe	60.62	288	P	P	05 48 20.3	+0.2
	comp=Z,24µmcomp=Z,3µm,0.8s						
CCD	Concordia, Ant	60.96	195	P	P	05 48 23.0	+1.1
CCD				pP	pP	05 49 46.9	-0.4
LUWI	Luwuk	61.03	282	P	P	05 48 23.0	+0.2
LUWI	Luwuk	61.03	282	P	P	05 48 23.5	+0.7
	comp=Z,61µmcomp=Z,61µmcomp=Z,5µm,1.2s						
LUWI	Luwuk	61.03	282	⇑P	P	05 48 22.5	-0.3
BSSI	Bau Bau, Buton	61.14	275	P	P	05 48 23.4	-0.1
	comp=Z,29µmcomp=Z,22µmcomp=Z,1µm,1.9s						
BKSI	Bulukumba	61.78	276	P	P	05 48 27.0	-0.7
	comp=Z,50µmcomp=Z,28µmcomp=Z,2µm,1.3s						
GIRL	Giralia	61.97	255	P	P	05 48 29.9	+1.0
	baz=62,SNR=201						
GIRL	Giralia	61.97	255	P	P	05 48 29.7	+0.8
GIRL	Giralia	61.97	255	P	P	05 48 29.8	+1.0
GIRL	Giralia	61.97	255	⇓P	P	05 48 29.8	+1.0
JCJ	Chichijima	62.06	320	P	P	05 48 29.6	+0.3
	comp=Z,1µm,0.8s,baz=162,slow=3.3,SNR=45						
	comp=Z,1µm,0.8s						
JCJ	Chichijima	62.06	320	P	P	05 48 28.9	-0.3
JCJ				IAmb	IAmb	05 48 30.5	
	comp=Z,1µm,0.9s						
JCJ	Chichijima	62.06	320	P	P	05 48 29.8	+0.6
JCJ	Chichijima	62.06	320	⇑P	P	05 48 29.0	-0.3
APSI	Ampana	62.11	281	P	P	05 48 30.8	+0.9
	comp=Z,36µmcomp=Z,30µmcomp=Z,2µm,1.4s						
BNSI	Bone	62.14	277	P	P	05 48 30.3	+0.2
	comp=Z,47µmcomp=Z,32µmcomp=Z,2µm,1.6s						
RPN	Rapa Nui	62.16	110	P	P	05 48 33.1	+3.0
	comp=Z,331nm,0.9s,baz=312,slow=5.3,SNR=11						
	comp=Z,331nm,0.9s						
DAV	Davao City (W)	62.18	291	P	P	05 48 31.2	+0.9
	comp=Z,3µm,0.8s,baz=78,slow=3.4,SNR=5.3						
	comp=Z,3µm,0.8s						
DAV	Davao City (W)	62.18	291	P	P	05 48 30.7	+0.4
DAV	Davao City (W)	62.18	291	⇓P	P	05 48 30.1	-0.2
DAV	Davao City (W)	62.18	291	P	P	05 48 30.8	+0.4
KAPI	Kappang	62.24	276	S	S	05 56 24.4	+0.2
	comp=Z,21nm,0.6s,baz=331,slow=20,SNR=6.9						
KAPI				PKPPKP		06 17 30.2	
	comp=Z,18nm,0.9s,baz=216,slow=2.7,SNR=5.2						
KAPI	Kappang	62.24	276	P	P	05 48 30.5	-0.2
KAPI				IAmb	IAmb	05 48 32.1	
	comp=Z,833nm,1.1s						
KAPI	Kappang	62.24	276	P	P	05 48 30.5	-0.2
KAPI				pmax	pmax		
	comp=Z,833nm,1.1s						
KAPI	Kappang	62.24	276	P	P	05 48 31.3	+0.6
KAPI	Kappang	62.24	276	⇓P	P	05 48 30.6	-0.2
KAPI	Kappang	62.24	276	P	P	05 48 30.9	+0.2
KAPI				pP	pP	05 49 56.1	+0.4
KAPI				sP	sP	05 50 38.9	-0.5
MRSI	Marisa	62.42	283	P	P	05 48 31.3	-0.6
	comp=Z,58µmcomp=Z,25µmcomp=Z,1µm,1.5s						
CASY	Casey	62.52	206	P	P	05 48 32.1	+0.3
CASY	Casey	62.52	206	⇑P	P	05 48 31.8	+0.1
CASY	Casey	62.52	206	P	P	05 48 32.0	+0.3
CASY				pP	pP	05 49 58.0	+0.4
SPSI	Sidrap Palu	62.62	277	P	P	05 48 31.9	-1.3
	comp=Z,54µmcomp=Z,21µmcomp=Z,1µm,0.8s						
PLAI	Plampang	62.70	271	P	P	05 48 33.7	0.0
	comp=Z,57µmcomp=Z,65µmcomp=Z,6µm,0.9s						
PLAI	Plampang	62.70	271	P	P	05 48 33.8	0.0
TTSI	Tana Toraja	62.93	278	P	P	05 48 35.1	-0.1
	comp=Z,50µmcomp=Z,18µmcomp=Z,736nm,1.1s						
TOLI2	Tolitoli	63.73	283	P	P	05 48 40.7	+0.2
TOLI2				IAmb	IAmb	05 48 42.1	
	comp=Z,2µm,0.9s						
TOLI2	Tolitoli	63.73	283	P	P	05 48 41.1	+0.6
MPSI	Mapaga	64.21	282	P	P	05 48 43.7	+0.2
	comp=Z,64µmcomp=Z,33µmcomp=Z,3µm,0.9s						
DNP	Denpasar	65.13	270	P	P	05 48 50.2	+0.8
	comp=Z,70µmcomp=Z,91µmcomp=Z,8µm,0.7s						
IGBI	Denpasar	65.14	270	P	P	05 48 50.0	+0.5
	comp=Z,30µmcomp=Z,56µmcomp=Z,6µm,0.9s						
SRBI	Singaraja	65.33	271	P	P	05 48 50.4	-0.3
	comp=Z,53µmcomp=Z,58µmcomp=Z,5µm,0.8s						
JAGI	Jajag, Banyuwa	66.19	270	P	P	05 48 54.8	-1.3
JAGI	Jajag, Banyuwa	66.19	270	P	P	05 48 55.3	-0.8
	comp=Z,49µmcomp=Z,47µmcomp=Z,5µm,0.9s						
JAGI	Jajag, Banyuwa	66.19	270	P	P	05 48 55.5	-0.6
JAGI	Jajag, Banyuwa	66.19	270	⇓P	P	05 48 54.9	-1.2
BKB	Balikpapan	66.31	279	P	P	05 48 58.5	+1.7
BKB				IAmb	IAmb	05 49 00.7	
	comp=Z,1µm,0.8s						
BKB	Balikpapan	66.31	279	P	P	05 48 59.4	+2.6
	comp=Z,65µmcomp=Z,37µmcomp=Z,2µm,1.4s						
BKB	Balikpapan	66.31	279	⇓P	P	05 48 58.8	+2.0
ABJI	Asem Bagus	66.34	271	P	P	05 48 57.3	+0.2
	comp=Z,54µmcomp=Z,53µmcomp=Z,4µm,0.9s						
SMKI	Samarinda	66.35	280	P	P	05 48 59.4	+2.3
	comp=Z,71µmcomp=Z,54µmcomp=Z,4µm,0.9s						
KMMI	Kalianget	66.85	272	P	P	05 48 59.9	-0.3
	comp=Z,52µmcomp=Z,56µmcomp=Z,4µm,1.0s						
GMJI	Gumukmas	66.91	270	P	P	05 49 00.3	-0.3
	comp=Z,36µmcomp=Z,3µm,0.9s						
BLJI	Banyuglugur	66.95	271	P	P	05 49 01.0	+0.1
	comp=Z,28µmcomp=Z,32µmcomp=Z,3µm,0.7s						
BBKI	Banjar Baru	67.35	276	P	P	05 49 04.1	+0.7
	comp=Z,33µmcomp=Z,28µmcomp=Z,2µm,1.1s						
MYLDM	Lahad Datu	67.54	286	P	P	05 49 05.8	+1.3
MYLDM				IAmb	IAmb	05 49 39.8	
	comp=Z,2µm,1.1s						
MYLDM	Lahad Datu	67.54	286	⇓P	P	05 49 06.4	+1.9
JHJ2	Mitsune	67.89	323	P	P	05 49 06.5	+0.3
JHJ2	Mitsune	67.89	323	P	P	05 49 07.0	+0.8
JHJ2	Mitsune	67.89	323	⇓P	P	05 49 06.3	+0.2
JHJ	Hachijo jima 2	67.91	323	P	P	05 49 06.8	+0.5
	comp=Z,3µm,1.1s,baz=188,slow=6.9,SNR=37						
	comp=Z,3µm,1.1s						
QSPA	South Pole Qui	68.07	180	P	P	05 49 09.3	+2.2
	comp=Z,1µm,0.8s,baz=28,slow=1.1,SNR=629						
QSPA				pP	pwP	05 50 38.2	+0.7
	comp=Z,400nm,1.1s,baz=67,slow=3.8,SNR=3.5						
QSPA				S	S	05 57 36.5	+3.5
	comp=Z,50nm,1.1s,baz=64,slow=20,SNR=11						
	comp=Z,1µm,0.8s						
QSPA	South Pole Qui	68.07	180	P	P	05 49 08.5	+1.5
QSPA				IAmb	IAmb	05 49 14.2	
	comp=Z,1µm,0.8s						
QSPA	South Pole Qui	68.07	180	⇑P	P	05 49 08.2	+1.2
QSPA	South Pole Qui	68.07	180	P	P	05 49 08.9	+1.9
QSPA				pP	pP	05 50 34.9	+0.6
MTKI	Muara Teweh, K	68.27	278	P	P	05 49 09.6	+0.6
	comp=Z,30µmcomp=Z,18µmcomp=Z,1µm,0.8s						
GRJI	Gresik	68.28	271	P	P	05 49 10.0	+0.9
	comp=Z,3µmcomp=Z,50µmcomp=Z,7µm,0.9s						
BWJI	Bawean	68.50	272	P	P	05 49 11.6	+1.2
	comp=Z,28µmcomp=Z,14µmcomp=Z,811nm,1.2s						
PWJI	Pagerwojo	68.52	270	P	P	05 49 10.2	-0.3
	comp=Z,38µmcomp=Z,5µm,1.0s						
TBJI	Tambak Boyo	68.90	271	P	P	05 49 14.0	+1.2
	comp=Z,37µmcomp=Z,46µmcomp=Z,3µm,1.4s						
PCJI	Pacitan	69.04	269	P	P	05 49 13.9	+0.2
	comp=Z,45µmcomp=Z,76µmcomp=Z,11µm,0.9s						
SPMM	Sapulut	69.16	284	P	P	05 49 16.0	+1.5
WOJI	Wonogiri, Jawa	69.40	270	P	P	05 49 16.2	+0.3
	comp=Z,30µmcomp=Z,38µmcomp=Z,4µm,1.0s						
TGY	Tagaytay City	69.61	295	P	P	05 49 18.5	+1.3
	comp=Z,5µm,1.0s,baz=196,slow=1.4,SNR=146						
	comp=Z,5µm,1.0s						
UGM	Wanagama	69.75	269	P	P	05 49 17.9	-0.1
UGM	Wanagama	69.75	269	P	P	05 49 18.4	+0.4
	comp=Z,52µmcomp=Z,45µmcomp=Z,4µm,0.9s						
UGM	Wanagama	69.75	269	P	P	05 49 18.6	+0.6
UWJI	Ujung Watu	69.88	271	P	P	05 49 19.5	+0.7
	comp=Z,41µmcomp=Z,4µm,0.9s						
JSG	Sagara	69.95	323	P	P	05 49 20.3	+1.6
YOGI	Yogyakarta	69.99	269	P	P	05 49 20.1	+0.6
	comp=Z,27µmcomp=Z,28µmcomp=Z,3µm,0.9s						
JYT	Yasato	70.01	325	P	P	05 49 19.4	+0.4
JYT				IAmb	IAmb	05 49 21.6	
	comp=Z,2µm,1.2s						
JYT	Yasato	70.01	325	P	P	05 49 20.1	+1.1
JYT	Yasato	70.01	325	⇓P	P	05 49 19.2	+0.3
SMRI	Semarang	70.12	270	P	P	05 49 20.8	+0.4
SMRI	Semarang	70.12	270	P	P	05 49 20.9	+0.6
	comp=Z,62µmcomp=Z,52µmcomp=Z,3µm,1.4s						
SMRI	Semarang	70.12	270	P	P	05 49 21.5	+1.2
SMRI	Semarang	70.12	270	⇓P	P	05 49 20.7	+0.4
JRY	Ryogami san	70.54	324	P	P	05 49 22.4	+0.1
PBKI	Pangkalan Bun	70.57	275	P	P	05 49 24.2	+1.3
	comp=Z,45µmcomp=Z,4µm,1.1s						
JMM	Marumori	70.94	327	P	P	05 49 24.9	+0.4
JMM				IAmb	IAmb	05 49 27.1	
	comp=Z,1µm,1.4s						
JMM	Marumori	70.94	327	⇑P	P	05 49 24.6	+0.1
JOW	Kunigami	70.99	311	P	P	05 49 26.3	+1.2
	comp=Z,1µm,1.0s,baz=143,slow=5.6,SNR=126						
	comp=Z,1µm,1.0s						
JOW	Kunigami	70.99	311	P	P	05 49 25.4	+0.3
JOW				IAmb	IAmb	05 49 28.2	
	comp=Z,2µm,1.1s						
JOW	Kunigami	70.99	311	P	P	05 49 26.5	+1.4
JOW	Kunigami	70.99	311	⇓P	P	05 49 25.9	+0.8
JGF	Kuroka	71.09	323	P	P	05 49 25.7	+0.1
JGF	Kuroka	71.09	323	⇓P	P	05 49 25.0	-0.6
INU	Inuyama	71.10	323	P	P	05 49 25.7	+0.1
INU				IAmb	IAmb	05 49 27.9	
	comp=Z,1µm,1.7s						
INU	Inuyama	71.10	323	P	P	05 49 25.9	+0.4
INU	Inuyama	71.10	323	⇓P	P	05 49 25.3	-0.2
INU	Inuyama	71.10	323	P	P	05 49 26.1	+0.6
INU				sP	sP	05 51 36.5	-0.1
MJAR	Matsushiro Arr	71.31	324	P	P	05 49 26.6	-0.2
	comp=Z,107nm,0.5s,baz=151,slow=6.6,SNR=298						
MJAR				pP	pwP	05 50 58.5	+0.7
	comp=Z,33nm,1.0s,baz=149,slow=5.5,SNR=1.4						
MJAR				PKPPKP	P'P'df	06 17 00.2	-15
	comp=Z,2.9nm,0.8s,baz=341,slow=2.1,SNR=6.5						
MJAR				PKP2ab		06 17 12.7	
	comp=Z,25nm,1.2s,baz=337,slow=1.4,SNR=15						
	comp=Z,107nm,0.5s						
MJAR	Matsushiro Arr	71.31	324	P	P	05 49 26.5	-0.2
MAJO	Matsushiro	71.31	324	P	P	05 49 26.3	-0.5
MAJO				IAmb	IAmb	05 49 28.9	
	comp=Z,1µm,1.4s						
MAJO	Matsushiro	71.31	324	P	P	05 49 26.3	-0.5
MAJO				pmax	pmax		
	comp=Z,1µm,1.5s						
MAJO	Matsushiro	71.31	324	P	P	05 49 27.3	+0.5
MAJO	Matsushiro	71.31	324	⇓P	P	05 49 26.5	-0.3
MAJO	Matsushiro	71.31	324	P	P	05 49 26.9	+0.1
MAJO				pP	pP	05 50 55.9	+0.6
MAJO				sP	sP	05 51 38.2	+0.1
MAT	Matsushiro	71.31	324	P	P	05 49 26.6	-0.2
MJB9	Matsu-Tunnel	71.31	324	P	P	05 49 26.4	-0.4
MJB9				IAmb	IAmb	05 49 28.9	
	comp=Z,1µm,1.4s						
KPJI	Karang Pucung	71.43	269	P	P	05 49 28.0	0.0
	comp=Z,50µmcomp=Z,32µmcomp=Z,3µm,0.9s						
JGN	Niukaw	71.56	323	P	P	05 49 28.1	-0.2
CMJI	Cimerak	71.72	269	P	P	05 49 29.2	-0.5
	comp=Z,27µmcomp=Z,19µmcomp=Z,2µm,0.9s						
JMN	Monobe	71.79	319	P	P	05 49 30.5	+0.8
STKI	Sintang	71.81	278	P	P	05 49 31.3	+1.0
	comp=Z,33µmcomp=Z,29µmcomp=Z,2µm,0.9s						
JWT	Wachi	71.97	321	P	P	05 49 31.0	+0.3
JYA	Atsumi	72.04	326	P	P	05 49 31.6	+0.6
SBUM	Sibu	72.07	280	P	P	05 49 32.0	+0.3
SBUM				IAmb	IAmb	05 49 34.5	
	comp=Z,862nm,1.0s						
SBUM	Sibu	72.07	280	P	P	05 49 33.0	+1.2
SBUM	Sibu	72.07	280	⇓P	P	05 49 31.9	+0.1
JCJI	Jatiwangi	72.34	270	P	P	05 49 33.6	+0.3
	comp=Z,61µmcomp=Z,6µm,0.9s						
JSD	Sado	72.38	325	P	P	05 49 33.6	+0.5
JSD				IAmb	IAmb	05 49 35.7	
	comp=Z,3µm,1.7s						
JSD	Sado	72.38	325	⇓P	P	05 49 33.1	+0.1
JSU	Suzuyama	72.45	316	P	P	05 49 33.7	+0.1
JSU				IAmb	IAmb	05 49 36.2	
	comp=Z,1µm,1.0s						
JSU	Suzuyama	72.45	316	⇓P	P	05 49 33.9	+0.3
JAD	Aida	72.45	320	P	P	05 49 34.2	+0.6
LEM	Lembang	72.82	269	S	S	05 58 29.4	+0.3
	comp=Z,210nm,1.1s,baz=314,slow=22,SNR=15						
ERM	Erimo	73.04	331	P	P	05 49 37.8	+1.1
ERM	Erimo	73.04	331	P	P	05 49 37.8	+1.1
ERM				pmax	pmax		
	comp=Z,240nm,0.9s						
ERM	Erimo	73.04	331	P	P	05 49 37.2	+0.5
ERM	Erimo	73.04	331	⇑P	P	05 49 37.9	+1.2
JTM	Tenmabayashi	73.05	329	P	P	05 49 37.6	+0.8
JTM	Tenmabayashi	73.05	329	⇓P	P	05 49 37.1	+0.3
CNJI	Cibinong	73.11	269	P	P	05 49 37.5	-0.3
	comp=Z,41µmcomp=Z,41µmcomp=Z,5µm,0.9s						
JHS	Saijyo	73.12	320	P	P	05 49 38.7	+1.3
JHS	Saijyo	73.12	320	P	P	05 49 38.0	+0.6
JHS	Saijyo	73.12	320	⇓P	P	05 49 37.8	+0.4
JNU	Nakatsue	73.24	317	P	P	05 49 38.3	+0.1
	comp=Z,929nm,1.2s,baz=102,slow=4.7,SNR=31						
JNU				pP	pwP	05 51 10.6	+0.6
	comp=Z,145nm,0.9s,baz=103,slow=4.4,SNR=3.8						
JNU				S	S	05 58 33.0	+0.2
	comp=Z,4.8nm,0.4s,baz=239,slow=22,SNR=9.4						
	comp=Z,929nm,1.2s						
JNU	Nakatsue	73.24	317	⇓P	P	05 49 38.2	0.0
XMI	Christmas Isla	73.36	265	P	P	05 49 40.2	+0.9
XMI	Christmas Isla	73.36	265	⇓P	P	05 49 40.0	+0.7
XMIS	Christmas Isla	73.38	265	P	P	05 49 39.0	-0.4
XMIS				IAmb	IAmb	05 49 42.4	
	comp=Z,904nm,0.7s						
XMIS	Christmas Isla	73.38	265	P	P	05 49 40.0	+0.6
KSM	Kuching	73.43	279	P	P	05 49 40.2	+0.5
KSM	Kuching	73.43	279	P	P	05 49 41.0	+1.2
KSM	Kuching	73.43	279	P	P	05 49 40.9	+1.2
KSM	Kuching	73.43	279	⇓P	P	05 49 39.9	+0.2
YOJ	Yonaguni jima	73.45	306	P	P	05 49 40.0	+0.5
YOJ	Yonaguni jima	73.45	306	P	P	05 49 40.0	+0.5
YOJ				pmax	pmax		
	comp=Z,2µm,1.2s						
YOJ	Yonaguni jima	73.45	306	P	P	05 49 40.2	+0.7
YOJ	Yonaguni jima	73.45	306	⇓P	P	05 49 39.4	-0.1
YUK	Yuzh-Kuril'sk	73.51	334	*d i*P	P	05 49 40.1	+0.7
YUK				*e*		05 49 53.1	
YUK				*e*		05 52 29.8	
YUK				*i* S	S	05 58 35.7	+0.6
YUK				*e*		05 59 08.0	
YUK				pmax	pmax		
	comp=Z,3µm,1.5s						
YUK				pmax	pmax		
	comp=Z,1µm,1.3s						
YUK				pmax	pmax		
	comp=N,703nm,1.1s						
YUK				pmax	pmax		
	comp=E,471nm,1.0s						
KIWB	Kanaga Island	73.55	1	P	P	05 49 39.0	-0.4
ADK	Adak	73.58	1	P	P	05 49 38.6	-1.0
ADK				IAmb	IAmb	05 49 40.8	
	comp=Z,2µm,1.4s						
ADK	Adak	73.58	1	P	P	05 49 38.7	-1.0
ADK				pmax	pmax		
	comp=Z,2µm,1.4s						
ADK	Adak	73.58	1	P	P	05 49 39.4	-0.2
ADK	Adak	73.58	1	⇓P	P	05 49 38.6	-1.0
KUR	Kuril'sk	73.71	336	*d i*P	P	05 49 40.9	+0.4
KUR				*e*		05 49 53.9	
KUR				*e*		05 52 32.2	
KUR				*e*PPP	PPP	05 54 20.4	
KUR				*e*S	S	05 58 37.6	+0.3
KUR				*e*		05 59 09.8	
KUR				*e*SS	SS	06 03 32.6	+1.0
KUR				*e*SSS	SSS	06 06 56.0	
KUR				pmax	pmax		
	comp=Z,2µm,1.5s						
KUR				pmax	pmax		
	comp=N,777nm,1.6s						
KUR				pmax	pmax		
	comp=E,707nm,1.1s						
KUR				pmax	pmax		
	comp=Z,20µm,6.0s						
KUR				pmax	pmax		
	comp=E,5µm,2.9s						
KUR				pmax	pmax		
	comp=N,6µm,3.1s						
KUR				MLR	MLR		
	comp=Z,3µm,13.0s						
KUR				MLR	MLR		
	comp=E,2µm,15.0s						
KUR				MLR	MLR		
	comp=N,2µm,17.0s						
DBJI	Dramaga	73.72	269	P	P	05 49 41.5	+0.1
	comp=N,47µmcomp=N,49µmcomp=N,4µm,1.0s						
SKJI	Sukabumi	73.75	269	P	P	05 49 41.6	+0.1
	comp=N,25µmcomp=N,3µm,1.0s						
GSTR	Great Sitkin T	73.81	1	P	P	05 49 40.1	-0.9
TNG	Tangerang	73.96	270	P	P	05 49 45.9	+3.2
	comp=N,30µmcomp=N,35µmcomp=N,3µm,1.0s						
TNG				P	P	05 49 43.7	+1.0
	comp=N,47µmcomp=N,55µmcomp=N,4µm,1.0s						
ATKA	Atka Island	73.97	3	P	P	05 49 41.5	-0.4
ATKA	Atka Island	73.97	3	⇓P	P	05 49 40.7	-1.2
TWG	Pinlang	74.03	303	P	P	05 49 41.9	-1.0
TWG				IAmb	IAmb	05 49 50.4	
	comp=Z,846nm,0.6s						
YULB	Yu-li	74.17	304	P	P	05 49 42.5	-1.1
YULB				IAmb	IAmb	05 49 53.6	
	comp=Z,2µm,1.6s						
TPI	Tanjungpandan	74.27	273	P	P	05 49 45.1	+0.6
	comp=Z,16µmcomp=Z,837nm,1.0s						
NACB	Ninganchiao	74.36	305	P	P	05 49 44.5	-0.2
NACB				IAmb	IAmb	05 49 47.0	
	comp=Z,2µm,1.0s						
SBJI	Serang	74.45	270	P	P	05 49 45.8	+0.3
	comp=Z,32µmcomp=Z,3µm,1.1s						
JEW	Eniwo	74.46	330	P	P	05 49 45.5	+0.6
JEW				IAmb	IAmb	05 49 54.3	
	comp=Z,1µm,0.8s						
JEW	Eniwo	74.46	330	⇓P	P	05 49 45.9	+1.0
TPUB	Ta-pu	74.63	303	P	P	05 49 45.4	-1.0
TPUB	Ta-pu	74.63	303	P	P	05 49 47.3	+1.0
SSLB	Suanglung	74.64	304	P	P	05 49 45.1	-1.3
SSLB				IAmb	IAmb	05 49 47.4	
	comp=Z,2µm,1.4s						
SSLB	Suanglung	74.64	304	P	P	05 49 46.5	+0.1
SHEM	Shemya Is, Ala	74.72	355	P	P	05 49 45.6	-0.5
	comp=Z,1µm,1.1s,baz=18,slow=4.5,SNR=37						
	comp=Z,1µm,1.1s						
SMY	Shemya	74.72	355	P	P	05 49 45.9	-0.2
SMY				IAmb	IAmb	05 49 47.2	
	comp=Z,2µm,1.4s						
SMY	Shemya	74.72	355	P	P	05 49 45.9	-0.2
SMY				pmax	pmax		
	comp=Z,2µm,1.4s						
SMY	Shemya	74.72	355	⇓P	P	05 49 45.4	-0.7
YHNB	Yeheng	74.80	305	P	P	05 49 47.3	-0.1
YHNB				IAmb	IAmb	05 49 49.3	
	comp=Z,2µm,1.3s						
YHNB	Yeheng	74.80	305	P	P	05 49 47.8	+0.5
TATO	Taipei	74.88	305	P	P	05 49 47.6	-0.1
JKA	Kamikawa-asahi	74.95	332	P	P	05 49 48.6	+1.0
JKA				IAmb	IAmb	05 49 51.9	
	comp=Z,1µm,1.0s						
JKA	Kamikawa-asahi	74.95	332	⇑P	P	05 49 49.1	+1.5
ASAJ	Asahikawa	74.96	332	P	P	05 49 49.4	+1.7
	comp=Z,561nm,0.8s,baz=214,slow=7.7,SNR=187						
	comp=Z,561nm,0.8s						
JTU	Tsushima	75.08	317	P	P	05 49 48.6	+0.1
JTU				IAmb	IAmb	05 49 49.8	
	comp=Z,1µm,1.8s						
JTU	Tsushima	75.08	317	⇓P	P	05 49 48.7	+0.1
NIKH	Nikolski High	75.10	6	P	P	05 49 47.6	-0.7
NIKH	Nikolski High	75.10	6	P	P	05 49 47.3	-0.9
	baz=189,SNR=120						
NIKH				S	S	05 58 49.8	-2.5
	baz=189						
BLSI	Bandar Lampung	75.55	270	P	P	05 49 51.4	-0.3
	comp=Z,24µmcomp=Z,2µm,1.0s						
SKR	Severo-Kuril’s	75.84	343	*e*P	P	05 49 52.5	+0.1
SKR				*e*		05 51 23.5	
SKR				*e*PPP	PPP	05 52 07.5	
SKR				*e*S	S	05 59 01.9	+1.6
SKR				pmax	pmax		
	comp=Z,7µm,5.6s						
SKR				pmax	pmax		
	comp=Z,464nm,1.2s						
PPBI	Pangkal Pinang	75.89	273	P	P	05 49 54.5	+0.8
	comp=Z,50µmcomp=Z,31µmcomp=Z,1µm,1.1s						
KLI	Kotabumi	76.09	270	P	P	05 49 54.0	-0.8
	comp=Z,43µmcomp=Z,21µmcomp=Z,1µm,1.1s						
KASI	Kota Agung	76.18	270	P	P	05 49 54.6	-0.7
	comp=Z,43µmcomp=Z,27µmcomp=Z,2µm,1.0s						
UNV	Unalaska Valle	76.21	7	P	P	05 49 53.0	-1.5
UNV				IAmb	IAmb	05 49 55.1	
	comp=Z,1µm,1.2s						
UNV	Unalaska Valle	76.21	7	P	P	05 49 53.1	-1.4
	baz=191,SNR=177						
UNV				S	S	05 59 00.9	-3.3
	baz=191						
AKUT	Akutan	76.58	7	P	P	05 49 55.1	-1.3
AKUT	Akutan	76.58	7	⇓P	P	05 49 55.2	-1.3
LWLI	Liwa	76.77	270	P	P	05 49 58.3	-0.4
	comp=Z,28µmcomp=Z,19µmcomp=Z,2µm,0.8s						
MDSI	Maura Dua	76.85	270	P	P	05 49 57.7	-1.3

	comp=Z,26µmcomp=Z,13µmcomp=Z,749nm,0.8s						
PMBI	**Palembang**	**76.87**	**272**	P	**P**	**05 50 00.6**	**+1.5**
	comp=Z,46µmcomp=Z,60µmcomp=Z,2µm,1.2s						
NAWB	**Namwon**	**76.92**	**317**	P	**P**	**05 49 59.3**	**+0.4**
NAWB				IAmb	IAmb	05 50 01.8	
	comp=Z,2µm,1.5s						
KNMB	**Chin-men Tao**	**76.99**	**303**	P	**P**	**05 49 59.9**	**+0.5**
KNMB				IAmb	IAmb	05 50 02.2	
	comp=Z,1µm,1.0s						
QZH	**Quanzhou**	**77.08**	**304**	⇓iP	**P**	**05 50 00.5**	**+0.6**
QZH				pP	**pwP**	**05 51 32.0**	**-1.7**
QZH				sP	**sP**	**05 52 10.5**	**-1.5**
QZH				S	**S**	**05 59 13.8**	**-1.0**
QZH				sS	**sS**	**06 01 56.3**	**+1.3**
QZH				pmax	pmax		
	comp=Z,1µm,1.3s						
QZH				pmax	pmax		
	comp=Z,11µm,5.9s						
YSS	**Yuzh-Sakhalins**	**77.15**	**334**	P	**P**	**05 50 00.4**	**+0.6**
YSS				IAmb	IAmb	05 50 02.2	
	comp=Z,660nm,1.0s						
YSS	**Yuzh-Sakhalins**	**77.15**	**334**	eP	**P**	**05 49 57.7**	**-2.1**
YSS				e		05 50 08.5	
YSS				e*SP	**sP**	**05 52 11.8**	**-0.6**
YSS				e		05 52 59.3	
YSS				eS	**S**	**05 59 08.7**	**-5.9**
YSS				e		05 59 37.8	
YSS				eSS	**SS**	**06 04 28.1**	**+4.8**
YSS				e		06 07 47.3	
YSS				pmax	pmax		
	comp=Z,18µm,6.1s						
YSS				pmax	pmax		
	comp=N,4µm,5.5s						
YSS				smax	smax		
	comp=N,5µm,13.8s						
YSS	**Yuzh-Sakhalins**	**77.15**	**334**	P	**P**	**05 49 59.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**77.15**	**334**	⇓P	**P**	**05 50 00.6**	**+0.7**
H06S1	**SOCORRO T**	**77.22**	**64**	P	**P**	**05 50 03.2**	**+2.4**
	SNR=19						
H06N1	**SOCORRO T-PHAS**	**77.26**	**64**	P	**P**	**05 50 03.7**	**+2.6**
	SNR=8.9						
H06E1	**SOCORRO T-PHAS**	**77.27**	**64**	P	**P**	**05 50 03.5**	**+2.4**
	SNR=36						
SMAI	**San Martin Ant**	**77.28**	**159**	P	**P**	**05 50 01.6**	**+1.3**
SMAI				IAmb	IAmb	05 50 03.9	
	comp=Z,602nm,1.0s						
PET	**Petropavlovsk**	**77.38**	**346**	P	**P**	**05 50 00.4**	**-0.5**
PET	**Petropavlovsk**	**77.38**	**346**κ	iP	**P**	**05 50 00.7**	**-0.2**
PET				e		05 50 10.4	
PET				e*PP	**pwP**	**05 51 33.7**	**+0.4**
PET				e*SP	**sP**	**05 52 14.8**	**+1.1**
PET				e		05 52 59.7	
PET				i S	**S**	**05 59 16.4**	**-0.3**
PET				e		05 59 40.2	
PET				pmax	pmax		
	comp=Z,510nm,1.3s						
PET				pmax	pmax		
	comp=Z,13µm,7.0s						
PET				pmax	pmax		
	comp=Z,15µm,25.7s						
PET	**Petropavlovsk**	**77.38**	**346**	P	**P**	**05 50 01.2**	**+0.3**
PET	**Petropavlovsk**	**77.38**	**346**	⇓P	**P**	**05 50 00.7**	**-0.2**
KSCHJ	**Chungju**	**77.48**	**318**	P	**P**	**05 50 01.5**	**-0.4**
TJN	**Taejon**	**77.55**	**318**	P	**P**	**05 50 02.4**	**+0.2**
TJN	**Taejon**	**77.55**	**318**	P	**P**	**05 50 02.4**	**+0.2**
TJN				pmax	pmax		
	comp=Z,5µm,1.8s						
TJN	**Taejon**	**77.55**	**318**	P	**P**	**05 50 03.6**	**+1.4**
FALS	**False Pass**	**77.59**	**9**	P	**P**	**05 50 01.1**	**-0.9**
FALS				IAmb	IAmb	05 50 04.3	
	comp=Z,736nm,0.8s						
FALS	**False Pass**	**77.59**	**9**	P	**P**	**05 50 00.8**	**-1.2**
	baz=194,SNR=48						
FALS				S	**S**	**05 59 16.1**	**-2.9**
	baz=194						
FALS	**False Pass**	**77.59**	**9**	P	**P**	**05 50 01.5**	**-0.5**
PEA0B	**Petropavlovsk-**	**77.67**	**345**	P	**P**	**05 50 03.0**	**+0.4**
PEA0B				IAmb	IAmb	05 50 04.4	
	comp=Z,1µm,1.2s						
PEA0B	**Petropavlovsk-**	**77.67**	**345**	P	**P**	**05 50 03.0**	**+0.4**
PEA0B				pmax	pmax		
	comp=Z,1µm,1.2s						
PETK	**Petropavlovsk-**	**77.67**	**345**	P	**P**	**05 50 02.3**	**-0.2**
	comp=Z,734nm,1.0s,baz=133,slow=6.5,SNR=224						
PETK				PKiKP	**PKiKP**	**05 55 37.7**	**-0.1**
	comp=Z,16nm,0.8s,baz=146,slow=3.8,SNR=4.9						
PETK				PKKPbc	**PKKPbc**	**06 09 01.9**	**-2.9**
	comp=Z,6.6nm,0.8s,baz=42,slow=2.3,SNR=7.3						
	comp=Z,734nm,1.0s						
KSRS	**Korea Array**	**77.89**	**319**	P	**P**	**05 50 04.8**	**+0.8**
	comp=Z,108nm,0.8s,baz=130,slow=5.2,SNR=254						
KSRS				pP	**pwP**	**05 51 37.4**	**+0.6**
	comp=Z,15nm,0.9s,baz=136,slow=5.4,SNR=1.9						
KSRS				PP	**PP**	**05 53 04.5**	**-2.5**
	comp=Z,17nm,0.9s,baz=144,slow=6.6,SNR=2.2						
KSRS				PKiKP	**PKiKP**	**05 55 38.7**	**+0.1**
	comp=Z,7.6nm,1.0s,baz=170,slow=0.9,SNR=4.8						
KSRS				PKKPbc	**PKKPbc**	**06 09 03.4**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=296,slow=4.2,SNR=4.4						
KSRS				PKPPKP	**P'P'df**	**06 17 00.9**	**-3.1**
	comp=Z,3.6nm,0.9s,baz=301,slow=2.8,SNR=8.2						
	comp=Z,108nm,0.8s						
KSAR	**Wonju Array Be**	**77.90**	**319**	P	**P**	**05 50 05.2**	**+1.0**
KSAR	**Wonju Array Be**	**77.90**	**319**	P	**P**	**05 50 05.2**	**+1.0**
KS19	**Wonju Array Si**	**77.95**	**319**	P	**P**	**05 50 04.7**	**+0.3**
KS19				IAmb	IAmb	05 50 07.5	
	comp=Z,907nm,1.4s						
DSRI	**Dabo**	**77.97**	**274**	P	**P**	**05 50 06.1**	**+1.0**
	comp=Z,32µmcomp=Z,15µmcomp=Z,580nm,1.1s						
BELA	**Belgrano 2**	**78.09**	**173**	P	**P**	**05 50 04.4**	**-0.2**
BELA				IAmb	IAmb	05 50 12.0	
	comp=Z,557nm,0.7s						
CNBA	**Chernabura Isl**	**78.16**	**11**	P	**P**	**05 50 04.9**	**-0.3**
CNBA				IAmb	IAmb	05 50 06.5	
	comp=Z,2µm,1.3s						
CHNA	**Chernabura Isl**	**78.17**	**11**	P	**P**	**05 50 04.3**	**-0.8**
	baz=198,SNR=64						
CHNA				S	**S**	**05 59 23.6**	**-1.5**
	baz=198						
SEHB	**SEOHWA**	**78.21**	**320**	P	**P**	**05 50 06.5**	**+0.6**
TEY	**Ternei**	**78.40**	**329**	⇓iP	**P**	**05 50 07.4**	**+0.7**
TEY				i S	**S**	**05 59 27.5**	**-0.4**
TEY				pmax	pmax		
	comp=E,20nm,2.0s						
TEY				pmax	pmax		
	comp=N,50nm,1.4s						
TEY				pmax	pmax		
	comp=E,400nm,5.8s						
TEY				pmax	pmax		
	comp=N,400nm,6.6s						
TEY				smax	smax		
	comp=E,200nm,12.2s						
TEY				smax	smax		
	comp=N,200nm,15.2s						
SNCC	**San Nicolas Is**	**78.41**	**47**	P	**P**	**05 50 08.6**	**+1.5**
SNCC				IAmb	IAmb	05 50 10.7	
	comp=Z,1µm,1.2s						
SNCC	**San Nicolas Is**	**78.41**	**47**	P	**P**	**05 50 08.5**	**+1.5**
	baz=234,SNR=17						
SNCC				S	**S**	**05 59 35.8**	**+7.1**
	baz=234						
SSE	**Sheshan**	**78.50**	**310**	P	**P**	**05 50 08.5**	**+0.9**
SSE				sP	**sP**	**05 52 23.5**	**+3.4**
SSE				PP	**PP**	**05 53 10.5**	**-1.7**
SSE				S	**S**	**05 59 32.0**	**+2.4**
SSE				pmax	pmax		
	comp=Z,100nm,0.8s						
SSE				pmax	pmax		
	comp=Z,5µm,5.0s						
SDPT	**Sand Point**	**78.52**	**10**	P	**P**	**05 50 05.9**	**-1.2**
SDPT	**Sand Point**	**78.52**	**10**	P	**P**	**05 50 06.1**	**-0.9**
	baz=197,SNR=56						
SDPT				S	**S**	**05 59 26.0**	**-2.6**
	baz=197						
TPRI	**Tanjung Pinang**	**78.54**	**276**	P	**P**	**05 50 09.3**	**+1.1**
	comp=Z,21µmcomp=Z,724nm,0.8s						
INCN	**Inchon**	**78.70**	**318**	P	**P**	**05 50 09.4**	**+0.9**
INCN				IAmb	IAmb	05 50 11.7	
	comp=Z,3µm,1.9s						
INCN	**Inchon**	**78.70**	**318**	P	**P**	**05 50 09.4**	**+0.9**
INCN				pmax	pmax		
	comp=Z,3µm,2.0s						
INCN	**Inchon**	**78.70**	**318**	⇓P	**P**	**05 50 09.0**	**+0.5**
SCZ2	**Santa Cruz Isl**	**78.78**	**46**	P	**P**	**05 50 10.3**	**+1.3**
	baz=234,SNR=70						
SCZ2				S	**S**	**05 59 40.1**	**+7.7**
	baz=234						
SCI2	**San Clemente I**	**78.92**	**48**	P	**P**	**05 50 10.7**	**+0.9**
	baz=234,SNR=48						
SCI2				S	**S**	**05 59 40.7**	**+6.7**
	baz=234						
SBC	**Santa Barbara**	**78.99**	**46**	P	**P**	**05 50 11.7**	**+1.6**
	baz=234,SNR=30						
SBC				S	**S**	**05 59 41.5**	**+7.0**
	baz=234						
UGL	**Uglegorsk**	**79.13**	**335**	⇓iP	**P**	**05 50 11.4**	**+0.9**
UGL				e		05 52 23.2	
UGL				e		05 55 13.7	
UGL				eS	**S**	**05 59 37.3**	**+2.0**
UGL				pmax	pmax		
	comp=E,6µm,4.0s						
UGL				pmax	pmax		
	comp=N,5µm,5.6s						
UGL				pmax	pmax		
	comp=Z,16µm,6.3s						
UGL				pmax	pmax		
	comp=Z,1µm,0.9s						
UGL				smax	smax		
	comp=E,8µm,10.0s						
UGL				smax	smax		
	comp=N,8µm,8.1s						
SPIA	**Saint Paul Isl**	**79.16**	**4**	P	**P**	**05 50 10.6**	**+0.1**
SPIA				IAmb	IAmb	05 50 12.2	
	comp=Z,2µm,1.2s						
SPIA	**Saint Paul Isl**	**79.16**	**4**	P	**P**	**05 50 10.1**	**-0.3**
	baz=188						
SPIA				S	**S**	**05 59 34.6**	**-0.7**
	baz=188						
PKM	**Mcpherson Peak**	**79.19**	**45**	P	**P**	**05 50 12.8**	**+1.4**
	baz=233,SNR=165						
PKM				S	**S**	**05 59 43.2**	**+6.2**
	baz=233						
MCCM	**Marconi Confer**	**79.22**	**41**	P	**P**	**05 50 12.5**	**+1.2**
MCCM	**Marconi Confer**	**79.22**	**41**	⇓P	**P**	**05 50 12.4**	**+1.2**
HKPS	**Hong Kong Po S**	**79.25**	**299**	P	**P**	**05 50 12.2**	**+0.4**
SAO	**San Andreas Ge**	**79.25**	**43**	P	**P**	**05 50 12.6**	**+1.1**
SAO				IAmb	IAmb	05 50 15.0	
	comp=Z,1µm,1.1s						
SAO	**San Andreas Ge**	**79.25**	**43**	P	**P**	**05 50 12.6**	**+1.1**
SAO				pmax	pmax		
	comp=Z,1µm,1.1s						
SAO	**San Andreas Ge**	**79.25**	**43**	⇑P	**P**	**05 50 12.9**	**+1.4**
CIS	**Catalina Islan**	**79.26**	**47**	P	**P**	**05 50 12.3**	**+0.7**
	baz=235,SNR=46						
CIS				S	**S**	**05 59 43.3**	**+5.8**
	baz=235						
SMMC	**Simmler**	**79.32**	**45**	P	**P**	**05 50 13.6**	**+1.6**
	baz=233,SNR=36						
SMMC				S	**S**	**05 59 45.5**	**+7.5**
	baz=233						
PMPB	**Monarch Peak**	**79.33**	**44**	P	**P**	**05 50 13.1**	**+1.1**
PMPB				IAmb	IAmb	05 50 15.0	
	comp=Z,834nm,1.1s						
PAGB	**Antelope Grade**	**79.40**	**45**	P	**P**	**05 50 13.8**	**+1.4**
PAGB				IAmb	IAmb	05 50 17.2	
	comp=Z,3µm,1.7s						
BBGB	**Big Mountain B**	**79.40**	**43**	P	**P**	**05 50 13.5**	**+1.1**
VLA	**Vladivostok**	**79.40**	**325**d	iP	**P**	**05 50 13.0**	**+0.9**
VLA				pmax	pmax		
	comp=Z,642nm,1.1s						
MSHR	**Mys Shultsa**	**79.42**	**324**d	iP	**P**	**05 50 13.8**	**+1.6**
MSHR				pmax	pmax		
	comp=Z,559nm,1.0s						
BCW	**Bitter Crk WRg**	**79.48**	**46**	P	**P**	**05 50 13.6**	**+0.7**
BCW				IAmb	IAmb	05 50 16.6	
	comp=Z,1µm,1.1s						
MYKOM	**Kota Tinggi**	**79.50**	**276**	P	**P**	**05 50 13.0**	**-0.4**
MYKOM				IAmb	IAmb	05 50 16.0	
	comp=Z,2µm,1.4s						
MYKOM	**Kota Tinggi**	**79.50**	**276**	P	**P**	**05 50 15.0**	**+1.7**
FMP	**Fort Macarthur**	**79.52**	**47**	P	**P**	**05 50 13.9**	**+1.0**
	baz=235,SNR=31						
FMP				S	**S**	**05 59 47.0**	**+6.9**
	baz=235						
CCX	**Cicese**	**79.60**	**50**	P	**P**	**05 50 14.4**	**+1.0**
CCX				IAmb	IAmb	05 50 16.9	
	comp=Z,920nm,1.3s						
HJU	**Haeju**	**79.61**	**318**	P	**P**	**05 50 13.4**	**+0.1**
HJU				pP	**pP**	**05 51 43.1**	**-1.0**
HJU				S	S	05 59 26.1	-15
HJU				AmB			
	comp=Z,1µm,1.2s						
HJU				AMS	AMS		
	comp=N,2µm,5.9s						
HJU				AMS	AMS		
	comp=E,2µm,5.7s						
HJU				AMS	AMS		
	comp=Z,3µm,8.8s						
HOPS	**Hopland Field**	**79.64**	**41**	P	**P**	**05 50 13.9**	**+0.4**
GDXM	**Geysers**	**79.69**	**41**	P	**P**	**05 50 15.2**	**+1.3**
GDXM				IAmb	IAmb	05 50 17.6	
	comp=Z,886nm,1.2s						
TJX	**Tijuana**	**79.69**	**49**	P	**P**	**05 50 15.4**	**+1.5**
HHU	**Hamhung**	**79.71**	**321**	P	**P**	**05 50 14.6**	**+0.8**
HHU				pP	**pwP**	**05 51 46.3**	**-0.5**
HHU				S	**S**	**05 59 34.1**	**-7.7**
HHU				AmB			
	comp=Z,3µm,2.2s						
HHU				AMS	AMS		
	comp=N,960nm,2.8s						
HHU				AMS	AMS		
	comp=E,19µm,55.5s						
HHU				AMS	AMS		
	comp=Z,4µm,10.5s						
OSI	**Osito Audit: C**	**79.75**	**46**	P	**P**	**05 50 15.4**	**+1.2**
	baz=234,SNR=33						
OSI				S	**S**	**05 59 49.4**	**+6.7**
	baz=234						
KCPM	**Cahto Peak**	**79.77**	**40**	P	**P**	**05 50 15.3**	**+1.0**
CHGN	**Chignik**	**79.78**	**11**	P	**P**	**05 50 12.7**	**-1.1**
CHGN				IAmb	IAmb	05 50 15.1	
	comp=Z,2µm,1.2s						
CHGN	**Chignik**	**79.78**	**11**	P	**P**	**05 50 13.0**	**-0.7**
	baz=198,SNR=147						
CHGN				S	**S**	**05 59 39.6**	**-2.2**
	baz=198						
DECC	**Green Verdugo**	**79.80**	**47**	P	**P**	**05 50 15.2**	**+0.7**
	baz=234,SNR=28						
DECC				S	**S**	**05 59 48.7**	**+5.6**
	baz=234						
CBX	**Cerro Bola**	**79.85**	**49**	P	**P**	**05 50 15.6**	**+0.6**
PASC	**Pasadena Art C**	**79.86**	**47**	P	**P**	**05 50 15.0**	**+0.3**
PASC				IAmb	IAmb	05 50 17.7	
	comp=Z,639nm,1.0s						
CHIR	**Chirikof Islan**	**79.86**	**13**	P	**P**	**05 50 13.5**	**-0.7**
CHIR	**Chirikof Islan**	**79.86**	**13**	P	**P**	**05 50 14.1**	**-0.1**
	baz=201,SNR=66						
CHIR				S	**S**	**05 59 41.8**	**-0.9**
	baz=201						
109C	**Camp Elliot, M**	**79.87**	**48**	P	**P**	**05 50 15.1**	**+0.3**
109C				IAmb	IAmb	05 50 18.0	
	comp=Z,681nm,1.1s						
109C	**Camp Elliot, M**	**79.87**	**48**	P	**P**	**05 50 15.6**	**+0.8**
	baz=236,SNR=61						
109C				S	**S**	**05 59 50.2**	**+6.4**
	baz=236						
KMPM	**Mount Pierce**	**79.92**	**39**	P	**P**	**05 50 16.1**	**+1.1**
ARVC	**Arvin**	**79.98**	**46**	P	**P**	**05 50 16.4**	**+1.1**
	baz=234,SNR=161						
ARVC				S	**S**	**05 59 51.0**	**+6.2**
	baz=234						
PMSA	**Palmer Station**	**79.99**	**157**	P	**P**	**05 50 16.3**	**+1.4**
	comp=Z,158nm,0.8s,baz=241,slow=4.2,SNR=36						
PMSA				pP	**pwP**	**05 51 49.2**	**+1.0**
	comp=Z,90nm,1.0s,baz=228,slow=5.1,SNR=3.4						
PMSA				S	**S**	**05 59 45.6**	**+1.6**
	comp=Z,12nm,0.9s,baz=55,slow=22,SNR=7.2						
PMSA				PKKPbc	**PKKPbc**	**06 08 56.0**	**-2.3**
	comp=Z,13nm,0.3s,baz=69,slow=1.8,SNR=5.4						
	comp=Z,158nm,0.8s						
PMSA	**Palmer Station**	**79.99**	**157**	P	**P**	**05 50 16.0**	**+1.1**
PMSA	**Palmer Station**	**79.99**	**157**	eP	**P**	**05 50 16.8**	**+1.9**
PMSA	**Palmer Station**	**79.99**	**157**	⇑P	**P**	**05 50 16.3**	**+1.4**
PMSA				⇑p	**pP**	**05 51 44.8**	**-0.9**
KMRM	**Mail Ridge**	**80.04**	**39**	P	**P**	**05 50 17.2**	**+1.6**
BAR	**Barrett**	**80.05**	**49**	P	**P**	**05 50 16.1**	**+0.2**
ELS	**Elsinore Mount**	**80.07**	**48**	P	**P**	**05 50 16.8**	**+0.7**
ELS				IAmb	IAmb	05 50 19.3	
	comp=Z,854nm,1.2s						
MAW	**Mawson**	**80.09**	**200**	P	**P**	**05 50 16.8**	**+1.4**
	comp=Z,369nm,0.9s,baz=122,slow=6.2,SNR=180						
MAW				pP	**pP**	**05 51 49.9**	**+3.2**
	comp=Z,85nm,1.0s,baz=125,slow=8.9,SNR=1.9						
MAW				S	**S**	**05 59 45.5**	**+0.6**
	comp=Z,24nm,1.0s,baz=276,slow=19,SNR=6.1						
MAW				PKKPbc	**PKKPbc**	**06 08 55.6**	**-2.6**
	comp=Z,4.1nm,0.5s,baz=275,slow=4.5,SNR=9.1						
MAW				PKPPKP	**P'P'df**	**06 16 59.4**	**-5.0**
	comp=Z,16nm,1.1s,baz=303,slow=4.2,SNR=6.9						
	comp=Z,369nm,0.9s						
MAW	**Mawson**	**80.09**	**200**	P	**P**	**05 50 16.3**	**+0.9**
	baz=80,SNR=172						
MAW	**Mawson**	**80.09**	**200**	P	**P**	**05 50 16.2**	**+0.9**
RGRI	**Rengat**	**80.09**	**274**	P	**P**	**05 50 18.6**	**+2.1**
	comp=Z,518nm,1.2s						
USA0B	**Ussuriysk Arra**	**80.10**	**326**	P	**P**	**05 50 16.1**	**+0.3**
USA0B				IAmb	IAmb	05 50 18.8	
	comp=Z,746nm,0.9s						
USA0B	**Ussuriysk Arra**	**80.10**	**326**d	iP	**P**	**05 50 16.5**	**+0.7**
USRK	**Ussuriysk Ar.**	**80.10**	**326**	P	**P**	**05 50 16.5**	**+0.7**
	comp=Z,662nm,0.8s,baz=122,slow=4.9,SNR=652						
USRK				pP	**pwP**	**05 51 49.7**	**+0.8**
	comp=Z,47nm,1.1s,baz=113,slow=3.7,SNR=1.1						
USRK				PKKPbc	**PKKPbc**	**06 08 55.0**	**-3.6**
	comp=Z,2.1nm,0.5s,baz=324,slow=4.5,SNR=4.7						
USRK				PKPPKP	**P'P'df**	**06 16 59.3**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=354,slow=1.4,SNR=4.6						
	comp=Z,662nm,0.8s						
USRK	**Ussuriysk Ar.**	**80.10**	**326**	P	**P**	**05 50 16.6**	**+0.9**
MURC	**Murrieta**	**80.20**	**48**	P	**P**	**05 50 17.8**	**+1.2**
	baz=235,SNR=268						
MURC				S	**S**	**05 59 54.0**	**+6.6**
	baz=235						
PYAG	**Pyongyang**	**80.22**	**319**	P	**P**	**05 50 17.3**	**+0.8**
PYAG				pP	**pwP**	**05 51 51.7**	**+2.1**
PYAG				S	**S**	**05 59 39.4**	**-7.7**
PYAG				AmB			
	comp=Z,616nm,1.3s						
PYAG				AMS	AMS		
	comp=N,335nm,2.5s						
PYAG				AMS	AMS		
	comp=E,1µm,8.6s						
PYAG				AMS	AMS		
	comp=Z,547nm,4.1s						
VES	**Vestal, Richgr**	**80.23**	**45**	P	**P**	**05 50 17.5**	**+0.8**
	baz=234,SNR=272						
VES				S	**S**	**05 59 53.3**	**+5.9**
	baz=234						
JCC	**Jacoby Creek,**	**80.23**	**39**	P	**P**	**05 50 17.4**	**+0.8**
JCC				IAmb	IAmb	05 50 20.4	
	comp=Z,2µm,1.3s						
BFSC	**Mount Baldy Ra**	**80.25**	**47**	P	**P**	**05 50 17.5**	**+0.5**
	baz=235,SNR=163						
BFSC				S	**S**	**05 59 53.6**	**+5.6**
	baz=235						
KRJI	**Kerinci**	**80.25**	**272**	P	**P**	**05 50 17.3**	**-0.2**
	comp=Z,47µmcomp=Z,34µmcomp=Z,2µm,1.2s						
VOG	**Valley Oaks Go**	**80.31**	**45**	P	**P**	**05 50 17.8**	**+0.7**
	baz=234,SNR=25						
VOG				S	**S**	**05 59 53.5**	**+5.3**
	baz=234						
TYV	**Tymovskoe**	**80.33**	**336**	eP	**P**	**05 50 18.2**	**+1.4**
TYV				eS	**S**	**05 59 45.7**	**-2.0**
TYV				pmax	pmax		
	comp=Z,828nm,1.0s						
TYV				pmax	pmax		
	comp=Z,9µm,3.1s						
TYV				smax	smax		
	comp=N,27nm,1.3s						
TYV				smax	smax		
	comp=N,1µm,5.1s						
TYV				smax	smax		
	comp=E,200nm,5.1s						
LPIG	**La Paz**	**80.34**	**59**	P	**P**	**05 50 18.7**	**+1.2**
	comp=E,260nm,1.1s,baz=62,slow=3.4,SNR=19						
	comp=E,260nm,1.1s						
MONP2	**Monument Peak**	**80.34**	**49**	P	**P**	**05 50 18.8**	**+1.2**
	baz=236						
MONP2				S	**S**	**05 59 55.8**	**+6.6**
	baz=236						
EDW2	**Edwards Air Fo**	**80.39**	**46**	P	**P**	**05 50 18.7**	**+1.0**
	baz=235,SNR=395						
EDW2				S	**S**	**05 59 54.8**	**+5.5**
	baz=235						
RMX	**La Rumorosa**	**80.42**	**49**	P	**P**	**05 50 18.8**	**+0.8**
RMX				IAmb	IAmb	05 50 21.5	
	comp=Z,915nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**80.43**	**49**	P	**P**	**05 50 19.2**	**+1.3**
	baz=236,SNR=234						
IKP				S	**S**	**05 59 56.0**	**+6.2**
	baz=236						
SLBS	**Sierra La Lagu**	**80.43**	**60**	P	**P**	**05 50 19.0**	**+0.9**
SLBS				IAmb	IAmb	05 50 21.7	
	comp=Z,1µm,1.6s						
SLBS	**Sierra La Lagu**	**80.43**	**60**	⇓P	**P**	**05 50 19.4**	**+1.2**
SRIG	**Santa Rosalia**	**80.44**	**55**	P	**P**	**05 50 18.3**	**+0.4**
SRIG				IAmb	IAmb	05 50 21.1	
	comp=Z,992nm,1.1s						
SRIG	**Santa Rosalia**	**80.44**	**55**	⇓P	**P**	**05 50 19.0**	**+1.1**
SRIG				⇓P	**P**	**05 50 19.0**	**+1.1**
SFX	**San Felipe**	**80.44**	**51**	P	**P**	**05 50 18.5**	**+0.6**
KHMM	**Horse Mountain**	**80.44**	**39**	P	**P**	**05 50 19.0**	**+1.1**
KRPM	**Rodgers**	**80.46**	**38**	P	**P**	**05 50 19.5**	**+1.7**
ISA	**Isabella, Lake**	**80.53**	**45**	P	**P**	**05 50 18.7**	**+0.4**
ISA				IAmb	IAmb	05 50 21.8	
	comp=Z,2µm,1.4s						
ISA	**Isabella, Lake**	**80.53**	**45**	P	**P**	**05 50 18.7**	**+0.4**
ISA				pmax	pmax		
	comp=Z,2µm,1.4s						
ISA	**Isabella, Lake**	**80.53**	**45**	P	**P**	**05 50 19.5**	**+1.2**
	baz=234,SNR=563						
ISA				S	**S**	**05 59 57.3**	**+6.7**
	baz=234						
CCAC	**Calif City Air**	**80.53**	**46**	P	**P**	**05 50 18.6**	**+0.2**
CCAC				IAmb	IAmb	05 50 21.8	
	comp=Z,1µm,1.4s						
YUH	**Yuha Desert**	**80.56**	**49**	P	**P**	**05 50 18.6**	**+0.1**
YUH				IAmb	IAmb	05 50 22.0	
	comp=Z,1µm,1.4s						
NJ2	**Nanjing**	**80.69**	**310**	⇓iP	**P**	**05 50 20.8**	**+1.6**
NJ2				pP	**pwP**	**05 51 54.3**	**+1.6**
NJ2				PP	**PP**	**05 53 30.0**	**-0.1**
NJ2				S	**S**	**05 59 54.8**	**+2.5**
NJ2				SS	**SS**	**06 05 23.0**	**+6.4**
NJ2				pmax	pmax		
	comp=Z,760nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,15µm,9.0s						
PFO	**Pinyon Flats O**	**80.72**	**48**	PKPPKP		06 16 56.1	
	comp=Z,4.0nm,1.0s,baz=69,slow=6.5,SNR=3.6						
PFO	**Pinyon Flats O**	**80.72**	**48**	P	**P**	**05 50 20.3**	**+0.9**
	baz=236,SNR=192						
PFO				S	**S**	**05 59 59.6**	**+6.8**
	baz=236						
TPFO	**Pinon Flats**	**80.72**	**48**	P	**P**	**05 50 20.4**	**+0.9**
	baz=236,SNR=196						
BBRC	**Big Bear Solar**	**80.77**	**47**	P	**P**	**05 50 20.9**	**+1.0**
	baz=235,SNR=43						
BBRC				S	**S**	**05 59 59.9**	**+6.4**
	baz=235						
SWSC	**Sam W. Stewart**	**80.81**	**49**	P	**P**	**05 50 20.9**	**+1.2**
	baz=236,SNR=230						
SWSC				S	**S**	**05 59 59.8**	**+6.4**
	baz=236						
SII	**Sitkinak Islan**	**80.85**	**13**	P	**P**	**05 50 19.4**	**-0.1**
	baz=202,SNR=152						
SII				S	**S**	**05 59 53.1**	**+0.2**
	baz=202						
SII	**Sitkinak Islan**	**80.85**	**13**	P	**P**	**05 50 20.0**	**+0.5**
LRMC	**Laurel Mtn Rad**	**80.95**	**46**	P	**P**	**05 50 21.5**	**+0.9**
	baz=235,SNR=119						
LRMC				S	**S**	**06 00 02.4**	**+7.3**
	baz=235						
RRX	**Edison Barstow**	**81.06**	**47**	P	**P**	**05 50 22.7**	**+1.6**
	baz=235,SNR=6.1						
RRX				S	**S**	**06 00 01.4**	**+5.4**
	baz=235						
CWC	**Cottonwood Cre**	**81.24**	**45**	P	**P**	**05 50 23.1**	**+0.9**
	baz=234						
CWC				S	**S**	**06 00 04.4**	**+6.3**
	baz=234						
BELC	**Belle Mtn. Jos**	**81.25**	**48**	P	**P**	**05 50 23.6**	**+1.3**
	baz=236,SNR=536						
BELC				S	**S**	**06 00 05.1**	**+6.8**
	baz=236						
QIZ	**Qiongzhong**	**81.30**	**295**	P	**P**	**05 50 23.7**	**+1.0**
QIZ				IAmb	IAmb	05 50 24.9	
	comp=Z,1µm,1.8s						

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QIZ   Qiongzhong         81.30 295 P        P        05 50 23.8 +1.2
QIZ                                sP       sP       05 52 39.3 +3.8
QIZ                                S        S        06 00 00.5 +1.5
QIZ                                pmax     pmax
      comp=Z,290nm,1.7s
QIZ                                pmax     pmax
      comp=Z,10µm,4.9s
QIZ   Qiongzhong         81.30 295 P        P        05 50 23.3 +0.7
L02F  Cave Junction      81.34  38 P        P        05 50 24.0 +1.6
      baz=230
L02F                               S        S        06 00 04.8 +6.3
      baz=230
PPSI  Pulau Pagai        81.35 271 P        P        05 50 25.1 +2.0
      comp=Z,53µmcomp=Z,35µmcomp=Z,1µm,0.7s
GSC   Goldstone, Bar     81.43  47 P        P        05 50 24.1 +1.0
      baz=235,SNR=493
GSC                                S        S        06 00 06.5 +6.5
      baz=235
BC3   Big Chuckawall     81.44  49 P        P        05 50 24.7 +1.5
      baz=236,SNR=381
BC3                                S        S        06 00 07.8 +7.7
      baz=236
MLAC  Mammoth, Mammo     81.44  44 P        P        05 50 24.8 +1.5
      baz=234,SNR=142
MLAC                               S        S        06 00 08.4 +8.2
      baz=234
HEC   Hector,Ludlow      81.49  47 P        P        05 50 24.3 +0.9
      baz=236,SNR=251
HEC                                S        S        06 00 05.8 +5.4
      baz=236
TIN   Tinemaha, Big      81.50  44 P        P        05 50 24.8 +1.4
      baz=234,SNR=52
TIN                                S        S        06 00 07.5 +7.0
      baz=234
BKNI  Bangkinang         81.54 274 P        P        05 50 24.4 +0.3
      comp=Z,47µmcomp=Z,26µmcomp=Z,1µm,0.9s
BKNI  Bangkinang         81.54 274 P        P        05 50 25.1 +1.0
BKNI  Bangkinang         81.54 274 ⇓P       P        05 50 23.9 -0.2
GLA   Glamis             81.55  49 P        P        05 50 25.3 +1.6
      baz=237,SNR=448
GLA                                S        S        06 00 08.6 +7.5
      baz=237
YBH   Yreka Blue Hor     81.58  39 PKPPKP            06 16 55.5
      comp=Z,5.5nm,1.0s,baz=79,slow=3.2,SNR=4.6
SUJ   Sinuiju            81.63 319 P        P        05 50 24.0 +0.2
SUJ                                pP       pwP      05 51 56.9 -0.6
SUJ                                S        S        05 59 49.5  -12
SUJ                                AmB
      comp=Z,6µm,3.7s
SUJ                                AMS      AMS
      comp=N,395nm,8.1s
SUJ                                AMS      AMS
      comp=E,505nm,10.3s
SUJ                                AMS      AMS
      comp=Z,125nm,2.5s
MDJ   Mudanjiang         81.64 325 P        P        05 50 25.0 +1.2
MDJ                                IAmb     IAmb     05 50 27.5
      comp=Z,778nm,1.0s
MDJ   Mudanjiang         81.64 325 P        P        05 50 25.0 +1.2
MDJ                                S        S        06 00 01.5 +0.1
MDJ                                SS       SS       06 05 28.8 -1.4
MDJ                                pmax     pmax
      comp=Z,900nm,1.1s
MDJ   Mudanjiang         81.64 325 P        P        05 50 24.4 +0.6
OHAK  Old Harbor         81.65  13 P        P        05 50 23.4 -0.1
      baz=203,SNR=205
OHAK                               S        S        06 00 00.8 -0.1
      baz=203
K02D  Willamette Mer     81.66  37 P        P        05 50 25.5 +1.5
      baz=230,SNR=283
K02D                               S        S        06 00 08.1 +6.2
      baz=230
J01E  Myrtle Point       81.81  37 P        P        05 50 26.2 +1.5
      baz=229,SNR=128
J01E                               S        S        06 00 09.8 +6.6
      baz=229
GMRC  Granite Mounta     81.92  48 P        P        05 50 26.6 +0.9
      baz=236,SNR=385
GMRC                               S        S        06 00 10.5 +5.5
      baz=236
IRM   Iron Mountain      81.93  48 P        P        05 50 27.0 +1.4
      baz=236,SNR=666
IRM                                S        S        06 00 11.5 +6.6
      baz=236
HUMO  Hull Mountain      82.00  38 ⇓P       P        05 50 27.2 +1.4
GRAC  Grapevine Rang     82.03  45 P        P        05 50 27.4 +1.3
      baz=235,SNR=655
GRAC                               S        S        06 00 12.5 +6.7
      baz=235
FURC  Furnace Creek,     82.05  46 P        P        05 50 27.3 +1.2
      baz=235,SNR=254
FURC                               S        S        06 00 12.4 +6.5
      baz=235
TUQ   Turquoise Moun     82.10  47 P        P        05 50 27.7 +1.0
      baz=236,SNR=233
TUQ                                S        S        06 00 13.5 +6.7
      baz=236
L04D  Klamath Falls      82.12  38 P        P        05 50 27.7 +1.1
      baz=231,SNR=489
L04D                               S        S        06 00 11.1 +4.4
      baz=231
SHOC  Shoshone, Teco     82.13  46 P        P        05 50 27.4 +0.8
      baz=236,SNR=191
SHOC                               S        S        06 00 11.4 +4.6
      baz=236
MG04  Isla Riesco        82.23 144 P        P        05 50 28.8 +1.9
MG05  Puerto Natales     82.23 143 P        P        05 50 27.9 +1.0
NVAR  Mina Array Bea     82.25  43 P        P        05 50 28.2 +0.8
      comp=Z,800nm,1.0s,baz=224,slow=8.1,SNR=1322
NVAR                               pP       pwP      05 52 02.6 +0.8
      comp=Z,120nm,1.0s,baz=219,slow=8.0,SNR=6.6
NVAR                               S        S        06 00 07.0 -1.4
      comp=Z,2.8nm,0.9s,baz=247,slow=5.8,SNR=4.1
NVAR                               PKKPbc   PKKPbc   06 08 54.1 +0.5
      comp=Z,12nm,0.7s,baz=96,slow=2.7,SNR=18
NVAR                               PKP2bc            06 16 41.9
      comp=Z,2.4nm,0.9s,baz=120,slow=3.7,SNR=4.8
      comp=Z,800nm,1.0s
NVAR  Mina Array Bea     82.25  43 P        P        05 50 27.4 -0.1
HSIG                     82.28  55 P        P        05 50 28.0 +0.5
HSIG                     82.28  55 ⇓P       P        05 50 28.4 +1.0
HSIG                               ⇓P       P        05 50 28.5 +1.0
KDAK  Kodiak Island      82.32  14 PKPPKP            06 16 53.7
      comp=Z,11nm,1.0s,baz=60,slow=3.3,SNR=3.9
KDAK  Kodiak Island      82.32  14 P        P        05 50 26.6 -0.4
KDAK                               IAmb     IAmb     05 50 29.2
      comp=Z,2µm,1.5s
KDAK  Kodiak Island      82.32  14 P        P        05 50 26.6 -0.4
KDAK                               pmax     pmax
      comp=Z,2µm,1.5s
KDAK  Kodiak Island      82.32  14 P        P        05 50 26.9 -0.1
      baz=204
KDAK                               S        S        06 00 08.5 +0.8
      baz=204
KDAK  Kodiak Island      82.32  14 ⇓P       P        05 50 26.5 -0.4
PAHR  Pah Rah Range      82.33  42 P        P        05 50 28.2 +0.5
PAHR                               IAmb     IAmb     05 50 30.8
      comp=Z,2µm,1.2s
NV11  Mina Array Sit     82.35  43 P        P        05 50 27.9  0.0
NV11                               IAmb     IAmb     05 50 30.9
      comp=Z,2µm,1.2s
MG03  Isla Dawson        82.38 145 P        P        05 50 28.0 +0.3
214A  Organ Pipe Nat     82.41  51 P        P        05 50 29.1 +1.0
214A                               IAmb     IAmb     05 50 32.1
      comp=Z,2µm,1.7s
214A  Organ Pipe Nat     82.41  51 P        P        05 50 29.5 +1.3
      baz=238,SNR=316
214A                               S        S        06 00 14.9 +5.2
      baz=238
P16K  Nushagak River     82.45  10 P        P        05 50 27.1 -0.5
      baz=199
P16K                               S        S        06 00 08.5 -0.4
      baz=199
I02E  Swisshome, OR      82.47  36 P        P        05 50 29.2 +1.2
I02E  Swisshome, OR      82.47  36 P        P        05 50 29.8 +1.7
      baz=229
I02E                               S        S        06 00 15.6 +5.9
      baz=229
I03D  Drain, OR          82.48  37 P        P        05 50 29.3 +1.2
      baz=230,SNR=352
I03D                               S        S        06 00 14.1 +4.2
      baz=230
GO09  Cerro Castillo     82.50 142 P        P        05 50 29.0 +0.7
NEE2  Needles Airpor     82.63  48 P        P        05 50 30.6 +1.5
      baz=237,SNR=53
NEE2                               S        S        06 00 16.4 +4.6
      baz=237
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DL2   Dalian             82.69 317 ⇓iP      P        05 50 29.8 +0.5
DL2                                pP       pwP      05 52 04.5 +1.2
DL2                                sP       sP       05 52 43.3 +0.2
DL2                                PP       PP       05 53 43.5 -2.8
DL2                                S        S        06 00 16.3 +4.1
DL2                                pmax     pmax
      comp=Z,430nm,1.0s
DL2                                pmax     pmax
      comp=Z,9µm,6.4s
K04D  Chiloquin, OR      82.70  38 P        P        05 50 30.6 +1.2
      baz=231,SNR=129
K04D                               S        S        06 00 17.4 +5.0
      baz=231
PDMCI Parker Dam,Lak     82.71  49 P        P        05 50 31.2 +1.6
      baz=237,SNR=236
PDMCI                              S        S        06 00 16.1 +3.5
      baz=237
TPNV  Topopah Spring     82.73  45 P        P        05 50 30.6 +0.8
      baz=236,SNR=906
TPNV                               S        S        06 00 16.1 +2.9
      baz=236
TPNV  Topopah Spring     82.73  45 ⇓P       P        05 50 30.6 +0.8
SISI  Saibi              82.74 272 P        P        05 50 31.6 +1.4
      comp=Z,31µmcomp=Z,15µmcomp=Z,416nm,0.7s
KVN   Kaiserville        82.74  43 P        P        05 50 29.9  0.0
KVN                                IAmb     IAmb     05 50 32.8
      comp=Z,2µm,1.2s
KVN   Kaiserville        82.74  43 P        P        05 50 29.9  0.0
KVN                                pmax     pmax
      comp=Z,2µm,1.2s
GRNR  Gornyy             82.75 333 ⇓iP      P        05 50 31.0 +1.6
GRNR                               eS       S        06 00 10.6 -1.8
GRNR                               pmax     pmax
      comp=N,100nm,1.0s
GRNR                               pmax     pmax
      comp=E,70nm,1.0s
GRNR                               pmax     pmax
      comp=Z,390nm,1.0s
GRNR                               smax     smax
      comp=E,8.0nm,0.9s
GRNR                               MLR      MLR
      comp=E,1µm,13.0s
GRNR                               MLR      MLR
      comp=Z,2µm,15.0s
J04D  Umpqua Nationa     82.88  38 P        P        05 50 31.9 +1.4
      baz=231,SNR=608
J04D                               S        S        06 00 19.5 +5.0
      baz=231
NKL   Nikolayevsk        82.89 336 eP       P        05 50 29.7 -0.3
NKL                                e                 05 52 42.3
NKL                                eS       S        06 00 04.1 -9.4
NKL                                pmax     pmax
      comp=E,3.0nm,0.6s
NKL                                pmax     pmax
      comp=N,1.0nm,1.0s
NKL                                pmax     pmax
      comp=Z,619nm,1.0s
NKL                                smax     smax
      comp=E,3.0nm,1.4s
NKL                                smax     smax
      comp=N,90nm,3.9s
NKL                                MLR      MLR
      comp=Z,2µm,21.0s
O16K  Kokwok River B     82.97  10 P        P        05 50 29.2 -1.0
      baz=199
O16K                               S        S        06 00 12.0 -2.1
      baz=199
USHA  Ushuaia            82.98 147 S        S        06 00 12.4 -2.3
      comp=Z,3.1nm,0.6s,baz=76,slow=19,SNR=7.1
USHA                               PKKPbc   PKKPbc   06 08 50.6 -0.6
      comp=Z,17nm,0.9s,baz=120,slow=3.9,SNR=6.1
I04A  Tendick Farm,      83.06  37 P        P        05 50 32.0 +0.9
      baz=230,SNR=565
I04A                               S        S        06 00 19.5 +3.6
      baz=230
MNSI  Mandailing Nat     83.07 274 P        P        05 50 30.5 -1.4
      comp=Z,44µmcomp=Z,16µmcomp=Z,1µm,0.8s
COR   Corvallis          83.07  36 ⇑P       P        05 50 32.4 +1.3
CNSH  ChangSha           83.08 304 ⇓P       P        05 50 32.3 +0.7
CNSH                               PP       PP       05 53 50.0 +0.3
CNSH                               S        S        06 00 13.5 -3.1
CNSH                               pmax     pmax
      comp=Z,360nm,1.7s
Q20K  Shuyak Island      83.12  13 P        P        05 50 30.9 -0.1
      baz=204,SNR=153
Q20K                               S        S        06 00 15.6  0.0
      baz=204
IPM   Ipoh               83.13 278 P        P        05 50 33.0 +0.8
IPM   Ipoh               83.13 278 P        P        05 50 33.0 +0.8
IPM   Ipoh               83.13 278 ⇓P       P        05 50 32.7 +0.5
IPM                                ⇓P       P        05 50 32.7 +0.5
Q19K  Cape Douglas,      83.15  13 P        P        05 50 31.0 -0.2
Q19K                               IAmb     IAmb     05 50 32.9
      comp=Z,1µm,0.9s
Q19K  Cape Douglas,      83.15  13 P        P        05 50 30.7 -0.5
      baz=203
Q19K                               S        S        06 00 16.1  0.0
      baz=203
WHN   Wuhan              83.18 307 ⇓iP      P        05 50 32.8 +0.8
WHN                                pP       pwP      05 52 06.0 -0.2
WHN                                sP       sP       05 52 47.3 +1.4
WHN                                PP       PP       05 53 51.8 +1.4
WHN                                SKS      S        06 00 13.0 -4.4
WHN                                S        SKKSac   06 00 21.8 +1.9
WHN                                pmax     pmax
      comp=Z,3µm,1.4s
WHN                                pmax     pmax
      comp=Z,25µm,4.8s
P18K  Big Mountain,      83.28  12 P        P        05 50 30.8 -1.1
      baz=201
P18K                               S        S        06 00 16.9 -0.4
      baz=201
H04D  Lebanon            83.34  36 P        P        05 50 33.5 +1.0
H04D  Lebanon            83.34  36 P        P        05 50 33.9 +1.4
      baz=230,SNR=473
H04D                               S        S        06 00 22.9 +4.4
      baz=230
CN2   Changchun          83.37 323 ⇓iP      P        05 50 32.5 -0.2
CN2                                epP      pP       05 52 00.3 -4.1
CN2                                sP       sP       05 52 39.5 -7.0
CN2                                PP       PP       05 53 52.5 +0.7
CN2                                eS       S        06 00 21.5 +2.7
CN2                                SS       SS       06 05 59.3 +3.6
CN2                                pmax     pmax
      comp=Z,720nm,1.2s
CN2                                pmax     pmax
      comp=Z,14µm,6.0s
J05D  Fort Rock, OR      83.41  38 P        P        05 50 34.4 +1.3
      baz=231,SNR=1000
J05D                               S        S        06 00 25.2 +5.7
      baz=231
S11A  Rachel             83.45  45 P        P        05 50 33.3 -0.1
S11A                               IAmb     IAmb     05 50 36.4
      comp=Z,2µm,1.2s
DSPA  Despedida          83.48 146 P        P        05 50 34.0 +0.8
G03D  McMinnville, O     83.50  36 P        P        05 50 33.9 +0.6
G03D  McMinnville, O     83.50  36 P        P        05 50 34.4 +1.2
      baz=230,SNR=206
G03D                               S        S        06 00 24.6 +4.6
      baz=230
MG02  Cerro Sombrero     83.54 145 P        P        05 50 34.6 +1.2
MG02                               IAmb     IAmb     05 50 36.9
      comp=Z,680nm,0.9s
BNX   BinXian            83.54 325 ⇓P       P        05 50 33.3 -0.2
BNX                                pP       pwP      05 52 07.8 +0.3
BNX                                sP       sP       05 52 45.8 -1.6
BNX                                PP       PP       05 53 54.0 +0.9
BNX                                S        S        06 00 15.0 -5.4
BNX                                sS       sS       06 03 06.3 +1.6
BNX                                pmax     pmax
      comp=Z,2µm,0.8s
BNX                                pmax     pmax
      comp=Z,21µm,4.6s
KLR   Kul'dur            83.72 330 P        P        05 50 34.9 +0.6
      comp=Z,342nm,0.9s,baz=106,slow=3.6,SNR=431
KLR                                PP       PP       05 53 51.5 -3.0
      comp=Z,23nm,0.9s,baz=126,slow=8.4,SNR=4.0
KLR                                PKiKP    PKiKP    05 55 47.4  0.0
      comp=Z,16nm,0.8s,baz=218,slow=1.6,SNR=2.8
KLR                                S        S        06 00 15.7 -6.3
      comp=Z,2.0nm,0.8s,baz=22,slow=19,SNR=1.0
KLR                                PKKPbc   PKKPbc   06 08 49.3 -1.3
      comp=Z,21nm,0.7s,baz=320,slow=4.3,SNR=20
      comp=Z,342nm,0.9s
GULI  GuiLin             83.72 300 ⇓iP      P        05 50 34.8 -0.1
GULI                               pP       pP       05 52 07.5 +0.8
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GULI                               sP       sP       05 52 46.0 -2.8
GULI                               PP       PP       05 53 50.0 -5.0
GULI                               S        S        06 00 16.8 -6.3
GULI                               pmax     pmax
      comp=Z,770nm,1.1s
H04A  Detroit Lake       83.75  37 P        P        05 50 34.4 -0.2
PRN   Pahroc Range       83.78  46 P        P        05 50 36.1 +1.0
PRN                                IAmb     IAmb     05 50 38.7
      comp=Z,2µm,1.2s
PRN   Pahroc Range       83.78  46 ⇓P       P        05 50 36.3 +1.2
KULM  Kulim              83.79 278 P        P        05 50 37.0 +1.5
KULM  Kulim              83.79 278 ⇓P       P        05 50 36.1 +0.6
KULM                               ⇓P       PcP      05 50 36.2 -2.4
R11A  Troy Canyon, C     83.95  45 P        P        05 50 36.5 +0.5
      baz=236,SNR=718
R11A                               S        S        06 00 29.6 +4.4
      baz=236
I05D  Terrebonne, OR     84.00  37 P        P        05 50 37.0 +1.1
      baz=231,SNR=671
I05D                               S        S        06 00 29.8 +4.6
      baz=231
TUC   Tucson             84.06  52 P        P        05 50 38.2 +1.6
      baz=239
TUC                                S        S        06 00 25.0 -1.3
      baz=239
TUC   Tucson             84.06  52 ⇓P       P        05 50 38.1 +1.6
TIA   Tai'an             84.15 313 ⇓P       P        05 50 37.3 +0.6
TIA                                pP       pwP      05 52 11.8 +0.7
TIA                                sP       sP       05 52 44.5 -6.3
TIA                                S        S        06 00 20.0 -6.8
TIA                                pmax     pmax
      comp=Z,510nm,1.0s
TIA                                pmax     pmax
      comp=Z,14µm,4.5s
F04D  Rainier, OR        84.19  35 P        P        05 50 38.5 +1.8
      baz=230,SNR=76
F04D                               S        S        06 00 33.0 +6.2
      baz=230
O19K  Port Alsworth      84.20  12 P        P        05 50 36.1 -0.2
O19K  Port Alsworth      84.20  12 P        P        05 50 35.7 -0.7
      baz=202
O19K                               S        S        06 00 25.5 -0.6
      baz=202
HOM   Homer              84.24  13 P        P        05 50 36.6  0.0
      baz=205,SNR=58
HOM                                S        S        06 00 27.5 +0.9
      baz=205
N18K  Kilae Creek        84.36  11 P        P        05 50 36.0 -1.2
N18K  Kilae Creek        84.36  11 P        P        05 50 36.6 -0.6
      baz=201,SNR=140
N18K                               S        S        06 00 28.1 +0.2
      baz=201
WVOR  Wild Horse Val     84.41  40 P        P        05 50 38.2 +0.2
WVOR                               IAmb     IAmb     05 50 41.2
      comp=Z,786nm,1.1s
WVOR  Wild Horse Val     84.41  40 P        P        05 50 38.2 +0.2
WVOR                               pmax     pmax
      comp=Z,786nm,1.1s
WVOR  Wild Horse Val     84.41  40 ⇓P       P        05 50 38.7 +0.7
F04A  Amboy              84.42  35 P        P        05 50 38.6 +0.7
O20K  Slope Mountain     84.42  13 P        P        05 50 36.9 -0.7
      baz=204,SNR=146
O20K                               S        S        06 00 28.6 +0.1
      baz=204
PSI   Prapat             84.43 275 PP       PP       05 53 58.1 -2.9
      comp=Z,100nm,0.9s,baz=172,slow=6.1,SNR=5.6
PSI                                PKKPbc   PKKPbc   06 08 47.9 +1.1
      comp=Z,8.6nm,0.7s,baz=283,slow=2.6,SNR=8.2
BRSE  Bradley Lake S     84.51  14 P        P        05 50 37.7 -0.2
      baz=205,SNR=539
BRSE                               S        S        06 00 29.3 -0.1
      baz=205
HG4B  Hotspring          84.57  27 P        P        05 50 38.6 +0.2
HG4B                               IAmb     IAmb     05 50 41.5
      comp=Z,1µm,1.4s
G05D  Wamic, OR          84.58  36 P        P        05 50 39.8 +1.1
      baz=231,SNR=190
G05D                               S        S        06 00 36.3 +5.6
      baz=231
NLWA  Neilton Lookou     84.59  34 ⇓P       P        05 50 40.0 +1.3
C03A  Quillayute Air     84.60  33 P        P        05 50 39.6 +1.0
319A  Douglas            84.70  53 P        P        05 50 40.8 +1.0
DIB   Dawson Inlet,      84.72  26 P        P        05 50 38.7 -0.4
DIB                                IAmb     IAmb     05 50 41.8
      comp=Z,831nm,1.3s
H02S1 DAWSON INLET T     84.72  26 P        P        05 50 39.3 +0.2
      SNR=1621
HOLB  Holberg            84.73  29 P        P        05 50 39.5 +0.3
E04D  Cinebar            84.73  35 P        P        05 50 39.9 +0.5
E04D  Cinebar            84.73  35 P        P        05 50 40.6 +1.2
      baz=230,SNR=289
E04D                               S        S        06 00 37.3 +5.2
      baz=230
N19K  Bonanza Creek      84.74  11 P        P        05 50 38.1 -1.1
      baz=202,SNR=332
N19K                               S        S        06 00 30.9 -0.8
      baz=202
LCMT  Little Creek M     84.78  47 P        P        05 50 40.2 +0.1
LCMT                               IAmb     IAmb     05 50 43.3
      comp=Z,733nm,1.1s
SVW2  Sparrevohn         84.81  11 P        P        05 50 38.4 -1.1
I07A  Izee               84.89  38 P        P        05 50 40.6 +0.2
I07A                               IAmb     IAmb     05 50 43.8
      comp=Z,1µm,1.2s
F05D  White Salmon       84.91  36 P        P        05 50 40.4 +0.1
F05D                               IAmb     IAmb     05 50 42.7
      comp=Z,762nm,1.2s
F05D  White Salmon       84.91  36 P        P        05 50 41.1 +0.8
      baz=231,SNR=86
F05D                               S        S        06 00 38.8 +5.0
      baz=231
CCUT  Cedar City         84.99  46 P        P        05 50 41.6 +0.5
CCUT                               IAmb     IAmb     05 50 44.0
      comp=Z,470nm,1.0s
D04E  Lakebay            85.03  34 P        P        05 50 42.7 +1.9
      baz=230,SNR=21
D04E                               S        S        06 00 41.6 +6.8
      baz=230
TSI   Tuntungan          85.03 276 P        P        05 50 42.0 +0.4
      comp=Z,40µmcomp=Z,22µmcomp=Z,1µm,1.0s
J08A  Circle Bar Ran     85.05  39 P        P        05 50 41.9 +0.7
J08A                               IAmb     IAmb     05 50 44.4
      comp=Z,2µm,1.4s
D03D  Eldon              85.09  34 P        P        05 50 42.4 +1.3
      baz=230,SNR=230
D03D                               S        S        06 00 40.8 +5.4
      baz=230
U15A  North Rim          85.12  48 P        P        05 50 42.2 +0.4
U15A                               IAmb     IAmb     05 50 45.4
      comp=Z,1µm,1.1s
GSI   Gunungsitoli       85.12 273 P        P        05 50 42.2 +0.1
GSI   Gunungsitoli       85.12 273 P        P        05 50 43.2 +1.1
      comp=Z,61µmcomp=Z,43µmcomp=Z,2µm,0.7s
GSI   Gunungsitoli       85.12 273 P        P        05 50 45.4 +3.3
GSI   Gunungsitoli       85.12 273 ⇓P       P        05 50 43.0 +0.9
SEW   Seward             85.12  14 P        P        05 50 39.4 -1.5
SEW                                IAmb     IAmb     05 50 42.4
      comp=Z,688nm,1.0s
SEW   Seward             85.12  14 P        P        05 50 40.2 -0.7
      baz=206,SNR=154
SEW                                S        S        06 00 34.1 -1.1
      baz=206
COYC  Coyhaique          85.17 137 P        P        05 50 43.7 +2.0
COYC                               IAmb     IAmb     05 50 45.7
      comp=Z,598nm,0.9s
COYC  Coyhaique          85.17 137 ⇑P       P        05 50 44.1 +2.3
MA2   Magadan            85.18 345 P        P        05 50 41.0 -0.3
      comp=Z,290nm,1.0s,baz=148,slow=5.1,SNR=118
MA2                                PP       PP       05 54 02.3 -3.7
      comp=Z,16nm,0.9s,baz=160,slow=10,SNR=4.1
MA2                                PKPPKP   P'P'df   06 16 50.8 +0.7
      comp=Z,6.3nm,0.9s,baz=357,slow=5.6,SNR=3.8
      comp=Z,290nm,1.0s
MA2   Magadan            85.18 345 P        P        05 50 40.1 -1.1
MA2                                IAmb     IAmb     05 50 42.8
      comp=Z,1µm,1.4s
MA2   Magadan            85.18 345 P        P        05 50 41.0 -0.3
MA2   Magadan            85.18 345 P        P        05 50 41.6 +0.3
MA2   Magadan            85.18 345 ⇓P       P        05 50 40.4 -0.9
PSUT  Pine Spring        85.19  45 P        P        05 50 42.3 +0.2
B04A  Port Angeles       85.22  33 P        P        05 50 42.6 +0.9
B04A                               IAmb     IAmb     05 50 45.3
      comp=Z,2µm,1.3s
Q23K  Middleton Isla     85.26  16 P        P        05 50 41.0 -0.6
Q23K  Middleton Isla     85.26  16 P        P        05 50 42.0 +0.4
      baz=209,SNR=30
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Q23K				S	S	06 00 36.8	+0.2
	baz=209						
MID	Middleton Isla	85.26	16	P	P	05 50 41.4	-0.2
MID	Middleton Isla	85.26	16	P	P	05 50 41.4	-0.2
MID				pmax	pmax		
	comp=Z,2µm,1.3s						
WUAZ	Wupatki	85.28	49	P	P	05 50 43.3	+0.8
WUAZ				IAmb	IAmb	05 50 46.0	
	comp=Z,788nm,1.2s						
WUAZ	Wupatki	85.28	49	P	P	05 50 43.8	+1.2
	baz=239,SNR=360						
WUAZ				S	S	06 00 47.3	+9.1
	baz=239						
WUAZ	Wupatki	85.28	49	⇓P	P	05 50 43.6	+1.0
H03S2	Juan Fernandez	85.30	124	P	P	05 50 44.6	+2.3
	SNR=38						
H03S2				T	T	07 24 30.3	
	baz=244						
H03S1	Juan Fernandez	85.31	125	P	P	05 50 44.1	+1.7
	SNR=63						
H03S1				T	T	07 24 30.6	
	baz=244						
H03S3	Juan Fernandez	85.32	124	P	P	05 50 44.0	+1.6
	SNR=55						
H03S3				T	T	07 24 27.4	
	baz=244						
AY01	Puyuhuapi	85.33	136	P	P	05 50 43.3	+0.8
CAPN	Captain Cook N	85.35	13	P	P	05 50 42.7	+0.7
	baz=205,SNR=5.8						
CAPN				S	S	06 00 39.2	+1.9
	baz=205						
O22K	Cooper Landing	85.40	14	P	P	05 50 41.1	-1.2
O22K				IAmb	IAmb	05 50 49.1	
	comp=Z,1µm,1.0s						
O22K	Cooper Landing	85.40	14	P	P	05 50 41.9	-0.4
	baz=206,SNR=44						
O22K				S	S	06 00 37.4	-0.4
	baz=206						
H03N2	Juan Fernandez	85.45	124	P	P	05 50 45.4	+2.4
	baz=176,slow=17,SNR=10						
H03N2				T	T	07 24 18.9	
	baz=259,slow=72,SNR=82						
H03N3	Juan Fernandez	85.45	124	P	P	05 50 44.8	+1.7
	baz=176,slow=17,SNR=8.4						
H03N3				T	T	07 24 36.9	
	baz=259,slow=72,SNR=62						
H03N1	Juan Fernandez	85.47	124	P	P	05 50 44.8	+1.6
	baz=176,slow=17,SNR=8.6						
H03N1				T	T	07 24 24.9	
	baz=259,slow=72,SNR=50						
PGC	Sidney	85.63	33	P	P	05 50 43.7	0.0
GAMB	Gambell	85.65	3	P	P	05 50 43.8	+0.4
	baz=186,SNR=31						
GAMB				S	S	06 00 42.6	+2.5
	baz=186						
GAMB	Gambell	85.65	3	⇓P	P	05 50 43.8	+0.4
KCSI	Kotacane, Aceh	85.77	275	P	P	05 50 44.8	-0.5
	comp=Z,15µmcomp=Z,574nm,0.7s						
M19K	Big River Lodg	85.77	11	P	P	05 50 43.5	-0.6
	baz=202,SNR=251						
M19K				S	S	06 00 40.8	-0.7
	baz=202						
BBB	Bella Bella	85.82	28	⇓P	P	05 50 45.2	+0.8
BBB				⇑P	PcP	05 50 45.5	-1.1
FIS	Fire Island	85.89	13	P	P	05 50 44.5	-0.1
G08A	Pilot Rock	85.93	37	P	P	05 50 45.6	+0.2
RC01	Rabbit Creek A	85.94	13	P	P	05 50 44.1	-0.9
RC01	Rabbit Creek A	85.94	13	P	P	05 50 44.3	-0.6
	baz=206,SNR=396						
RC01				S	S	06 00 42.3	-0.8
	baz=206						
L19K	White Mountain	85.95	11	P	P	05 50 44.2	-0.7
L19K	White Mountain	85.95	11	P	P	05 50 44.7	-0.3
	baz=202,SNR=736						
L19K				S	S	06 00 43.9	+0.7
	baz=202						
M20K	Styx River	85.98	12	P	P	05 50 43.9	-1.4
	baz=203						
M20K				S	S	06 00 42.3	-1.4
	baz=203						
SRIT	Nakonsritamara	86.02	281	P	P	05 50 47.8	+1.4
MTPU	Mount Pierson	86.04	46	P	P	05 50 47.2	+0.8
MTPU				IAmb	IAmb	05 50 49.7	
	comp=Z,600nm,0.9s						
HIN	Hinchinbrook I	86.07	15	P	P	05 50 44.5	-1.1
HIN				IAmb	IAmb	05 50 47.4	
	comp=Z,1µm,1.2s						
LL05	Los Muermos	86.11	133	P	P	05 50 47.4	+1.0
TCRU	Three Creeks R	86.16	46	P	P	05 50 47.2	+0.4
CRAG	Craig	86.17	24	P	P	05 50 47.1	+1.0
	baz=221,SNR=67						
CRAG				S	S	06 00 49.5	+4.1
	baz=221						
W18A	Petrified Fore	86.23	50	P	P	05 50 48.2	+1.0
	baz=240,SNR=217						
W18A				S	S	06 00 55.4	+8.0
	baz=240						
TROLL	Troll, Antarti	86.23	180	P	P	05 50 47.5	+0.9
TROLL	Troll, Antarti	86.23	180	PKKPbc	PKKPbc	06 08 41.8	-2.7
TROLL	Troll, Antarti	86.23	180	pP	pP	05 52 20.5	+1.9
HAWA	Hanford	86.27	36	P	P	05 50 47.7	+0.9
HAWA	Hanford	86.27	36	⇑P	P	05 50 47.8	+0.9
MSU	Marysvale	86.29	46	P	P	05 50 48.0	+0.6
MSU	Marysvale	86.29	46	P	P	05 50 48.1	+0.6
GLI	Glacier Island	86.35	15	P	P	05 50 45.8	-1.1
GLI	Glacier Island	86.35	15	P	P	05 50 46.3	-0.6
	baz=209,SNR=486						
GLI				S	S	06 00 46.5	-0.6
	baz=209						
121A	Cookes Peak, D	86.37	53	P	P	05 50 49.0	+1.1
121A				IAmb	IAmb	05 50 51.9	
	comp=Z,812nm,1.2s						
121A	Cookes Peak, D	86.37	53	P	P	05 50 49.6	+1.6
	baz=241						
121A				S	S	06 00 57.0	+8.1
	baz=241						
121A	Cookes Peak, D	86.37	53	P	P	05 50 49.5	+1.6
	baz=241,SNR=411						
121A				S	S	06 00 58.1	+9.2
	baz=241						
FID	Port Fidalgo	86.38	15	P	P	05 50 46.3	-0.8
EYAK	Cordova Ski Ar	86.38	15	P	P	05 50 46.2	-0.8
EYAK				IAmb	IAmb	05 50 48.9	
	comp=Z,826nm,1.0s						
EYAK	Cordova Ski Ar	86.38	15	P	P	05 50 46.7	-0.4
	baz=210,SNR=214						
EYAK				S	S	06 00 47.3	0.0
	baz=210						
L20K	Farewell, AK	86.40	11	P	P	05 50 46.2	-0.9
	baz=202,SNR=353						
L20K				S	S	06 00 47.4	-0.1
	baz=202						
HNS	HongShan	86.42	313	⇓P	P	05 50 48.5	+0.7
HNS				pP	pwP	05 52 21.8	-0.6
HNS				sP	sP	05 53 02.3	0.0
HNS				SKS	SKSac	06 00 33.8	-0.8
HNS				S	ScS	06 00 56.3	+1.2
HNS				sS	sS	06 03 31.5	-1.8
HNS				pmax	pmax		
	comp=Z,790nm,1.2s						
HNS				pmax	pmax		
	comp=Z,13µm,7.0s						
RUBB	Prince Rupert	86.44	26	P	P	05 50 47.7	+0.3
RUBB				IAmb	IAmb	05 50 52.0	
	comp=Z,1µm,2.0s						
TTA	Tatalina	86.46	10	P	P	05 50 47.1	-0.3
TTA				IAmb	IAmb	05 50 49.7	
	comp=Z,1µm,1.3s						
TTA	Tatalina	86.46	10	P	P	05 50 47.1	-0.3
TTA				pmax	pmax		
	comp=Z,1µm,1.3s						
TTA	Tatalina	86.46	10	P	P	05 50 47.3	-0.2
	baz=200,SNR=625						
TTA				S	S	06 00 50.2	+2.0
	baz=200						
TTA	Tatalina	86.46	10	⇓P	P	05 50 47.2	-0.3
M22K	Willow	86.46	13	P	P	05 50 46.4	-0.9
M22K	Willow	86.46	13	P	P	05 50 46.7	-0.6
	baz=206,SNR=305						
M22K				S	S	06 00 47.0	-0.9
	baz=206						
SUCK	Suckling Hills	86.48	17	P	P	05 50 47.4	-0.2
SUCK				IAmb	IAmb	05 50 52.5	
	comp=Z,2µm,1.8s						
KNK	Knik Glacier	86.51	14	P	P	05 50 47.2	-0.5
	baz=207,SNR=266						
KNK				S	S	06 00 47.4	-1.1
	baz=207						
SNAA	Sanae	86.52	179	P	P	05 50 47.6	-0.3
SNAA	Sanae	86.52	179	PKKPbc	PKKPbc	06 08 40.2	-3.5
SNAA	Sanae	86.52	179	P	P	05 50 48.1	+0.3
	comp=Z,97nm,0.9s,baz=188,slow=5.5,SNR=4.0						
SNAA				pP	pwP	05 52 24.9	+1.4
	comp=Z,87nm,0.9s,baz=157,slow=3.2,SNR=4.8						
SNAA				S	SKSac	06 00 33.8	-0.7
	comp=Z,20nm,1.2s,baz=11,slow=23,SNR=16						
SNAA				PKKPbc	PKKPbc	06 08 40.6	-3.2
	comp=Z,15nm,0.8s,baz=291,slow=1.9,SNR=16						
	comp=Z,97nm,0.9s						
SNAA	Sanae	86.52	179	P	P	05 50 47.9	+0.1
SNAA				IAmb	IAmb	05 52 26.1	
	comp=Z,1µm,1.8s						
SNAA	Sanae	86.52	179	⇑P	P	05 50 47.3	-0.5
PMR	Palmer	86.52	13	P	P	05 50 47.1	-0.5
	baz=207,SNR=902						
PMR				S	S	06 00 47.3	-1.3
	baz=207						
B06A	Marblemount	86.55	34	P	P	05 50 48.2	+0.1
B06A				IAmb	IAmb	05 50 50.7	
	comp=Z,582nm,1.0s						
LYN	LuoYang	86.55	309	⇓*i*P	P	05 50 49.3	+0.8
LYN				pP	pwP	05 52 22.8	-0.6
LYN				sP	sP	05 53 02.0	-1.1
LYN				SKS	SKSac	06 00 32.8	-2.7
LYN				S	SKKSac	06 00 47.3	+2.1
LYN				sS	sS	06 03 35.5	-0.2
LYN				SS	SS	06 06 47.5	+5.0
LYN				pmax	pmax		
	comp=Z,870nm,2.3s						
LYN				pmax	pmax		
	comp=Z,18µm,4.7s						
HMT	Hamilton	86.58	16	P	P	05 50 47.6	-0.5
HMT				IAmb	IAmb	05 50 50.1	
	comp=Z,1µm,1.2s						
SIT	Sitka	86.59	22	P	P	05 50 48.7	+0.6
	baz=219,SNR=46						
SIT				S	S	06 00 51.3	+2.0
	baz=219						
E08A	Dider Farm, El	86.59	36	P	P	05 50 48.5	+0.1
E08A				IAmb	IAmb	05 50 51.6	
	comp=Z,2µm,1.2s						
BMO	Blue Mountains	86.61	39	P	P	05 50 48.4	-0.3
BMO	Blue Mountains	86.61	39	P	P	05 50 48.4	-0.3
BMO				pmax	pmax		
	comp=Z,3µm,1.9s						
PAF	Port-aux-Franc	86.64	218	⇓P	P	05 50 49.6	+0.9
BGLC	Bering Glacier	86.65	17	P	P	05 50 49.2	+0.9
	baz=212,SNR=19						
BGLC				S	S	06 00 52.1	+2.3
	baz=212						
MFID	Camas Ranch	86.66	40	P	P	05 50 48.9	0.0
MFID				IAmb	IAmb	05 50 51.2	
	comp=Z,506nm,1.1s						
VNA3	Neumayer Olymp	86.66	176	P	P	05 50 48.4	0.0
VNA3	Neumayer Olymp	86.66	176	PKKPbc	PKKPbc	06 08 39.6	-3.8
VNA3	Neumayer Olymp	86.66	176	pP	pP	05 52 21.8	+1.2
ENH	Enshi	86.72	304	P	P	05 50 50.6	+1.1
GHO	Glory Hole Cre	86.73	13	P	P	05 50 48.6	-0.2
DUG	Dugway, Tooele	86.76	44	P	P	05 50 49.4	-0.2
DUG	Dugway, Tooele	86.76	44	P	P	05 50 49.4	-0.2
DUG				pmax	pmax		
	comp=Z,387nm,1.3s						
DUG	Dugway, Tooele	86.76	44	P	P	05 50 49.9	+0.3
	baz=238,SNR=177						
BJT	Baijiatuau	86.82	316	P	P	05 50 50.4	+0.8
BJT				IAmb	IAmb	05 50 52.8	
	comp=Z,560nm,1.1s						
BJT	Baijiatuau	86.82	316	P	P	05 50 50.4	+0.8
BJT				pmax	pmax		
	comp=Z,560nm,1.1s						
BJI	Beijing	86.82	316	P	P	05 50 50.0	+0.4
BJI				pP	pwP	05 52 26.5	+1.8
BJI				sP	sP	05 53 04.5	+0.3
BJI				PP	PP	05 54 16.0	-3.5
BJI				SKS	SKSac	06 00 36.0	-0.9
BJI				sS	sS	06 03 36.5	-0.7
BJI				SS	SS	06 06 48.8	+2.6
BJI				pmax	pmax		
	comp=Z,500nm,1.8s						
BJI				pmax	pmax		
	comp=Z,12µm,6.1s						
ANM	Nome	86.86	6	P	P	05 50 49.0	-0.2
	baz=192,SNR=28						
ANM				S	S	06 00 54.8	+3.1
	baz=192						
SML	Sawmill	86.89	14	P	P	05 50 48.9	-0.6
	baz=208,SNR=238						
SML				S	S	06 00 51.9	-0.3
	baz=208						
KIDD	KIDD Seismic O	86.97	54	P	P	05 50 52.1	+1.4
	baz=242						
KIDD				S	S	06 01 00.4	+6.0
	baz=242						
M23K	Glacier View	87.01	14	P	P	05 50 49.5	-0.6
	baz=208,SNR=290						
M23K				S	S	06 00 53.0	-0.4
	baz=208						
CUT	Chulitna	87.02	13	P	P	05 50 49.4	-0.6
CUT	Chulitna	87.02	13	P	P	05 50 49.3	-0.6
	baz=206,SNR=295						
CUT				S	S	06 00 51.0	-2.3
	baz=206						
BMRM	Bremner River	87.03	16	P	P	05 50 49.5	-0.8
BMRM	Bremner River	87.03	16	P	P	05 50 49.9	-0.3
	baz=211,SNR=648						
BMRM				S	S	06 00 53.0	-0.6
	baz=211						
WAX	Waxell Ridge	87.04	17	P	P	05 50 50.4	+0.1
LL04	Puerto Octay	87.05	133	P	P	05 50 52.0	+1.1
LL04				IAmb	IAmb	05 50 54.0	
	comp=Z,815nm,1.8s						
MESA	MESA	87.06	17	P	P	05 50 50.9	+0.4
	baz=213,SNR=355						
MESA				S	S	06 00 55.6	+1.4
	baz=213						
PPLA	Purkeypile	87.09	12	P	P	05 50 48.1	-2.4
PPLA				IAmb	IAmb	05 50 50.8	
	comp=Z,588nm,1.3s						
PPLA	Purkeypile	87.09	12	P	P	05 50 48.5	-2.1
	baz=204,SNR=159						
PPLA				S	S	06 00 50.9	-3.4
	baz=204						
VNA2	Neumayer--Watz	87.09	177	P	P	05 50 50.6	+0.1
	baz=188,slow=5.0						
VNA2	Neumayer--Watz	87.09	177	PKKPbc	PKKPbc	06 08 38.9	-3.4
VNA2	Neumayer--Watz	87.09	177	pP	pP	05 52 25.2	+2.4
NLU	North Lily Min	87.12	45	P	P	05 50 52.1	+0.8
SCM	Sheep Creek Mo	87.14	14	P	P	05 50 50.3	-0.4
	baz=208,SNR=1000						
SCM				S	S	06 00 54.2	-0.4
	baz=208						
YKU2	Yakutat	87.16	19	P	P	05 50 51.3	+0.6
KLU	Klutina	87.16	15	P	P	05 50 50.6	-0.3
	baz=210,SNR=390						
KLU				S	S	06 00 54.6	-0.3
	baz=210						
WRAK	Wrangell Islan	87.17	24	P	P	05 50 51.3	+0.4
WRAK				IAmb	IAmb	05 50 53.9	
	comp=Z,2µm,1.4s						
WRAK	Wrangell Islan	87.17	24	P	P	05 50 51.8	+1.0
	baz=222,SNR=92						
WRAK				S	S	06 00 58.8	+3.9
	baz=222						
LHMI	Lhok Sumawe	87.17	277	P	P	05 50 53.5	+1.6
	comp=Z,52µmcomp=Z,31µmcomp=Z,2µm,0.8s						
LHMI	Lhok Sumawe	87.17	277	P	P	05 50 54.0	+2.1
LHMI	Lhok Sumawe	87.17	277	⇓P	P	05 50 52.8	+0.9
K20K	Telida	87.18	11	P	P	05 50 49.8	-1.0
K20K	Telida	87.18	11	P	P	05 50 50.2	-0.6
	baz=202,SNR=723						
K20K				S	S	06 00 54.9	+0.1
	baz=202						
GYA	Guiyang	87.22	300	⇓*i*P	P	05 50 53.3	+1.3
GYA				pP	pwP	05 52 27.0	0.0
GYA				SKS	SKSac	06 00 39.5	-0.7
GYA				S	S	06 00 58.8	+1.7
GYA				sS	sS	06 03 41.5	-0.2
GYA				pmax	pmax		
	comp=Z,470nm,1.7s						
GYA				pmax	pmax		
	comp=Z,13µm,5.0s						
ISLE	Juniper Island	87.31	17	P	P	05 50 51.2	-0.4
F10A	Beach Ranch, E	87.31	38	⇓P	P	05 50 52.1	+0.2
VNA1	Neumayer--Stat	87.32	177	P	P	05 50 51.6	+0.1
VNA1	Neumayer--Stat	87.32	177	PKKPbc	PKKPbc	06 08 39.2	-2.5
VNA1	Neumayer--Stat	87.32	177	pP	pP	05 52 26.2	+2.3
PNL	Peninsula	87.36	19	P	P	05 50 52.0	+0.2
	baz=216,SNR=201						
PNL				S	S	06 00 58.1	+1.4
	baz=216						
PINM	Pinnacle	87.47	18	P	P	05 50 52.3	0.0
	baz=215,SNR=128						
PINM				S	S	06 00 58.4	+0.6
	baz=215						
N25K	Chitina, Valde	87.58	15	P	P	05 50 52.7	-0.1
	baz=211,SNR=759						
N25K				S	S	06 00 59.0	+0.1
	baz=211						
CAST	Castle Rocks	87.59	11	P	P	05 50 51.1	-1.6
	baz=204,SNR=45						
HLID	Hailey	87.59	41	P	P	05 50 54.3	+0.9
	baz=236,SNR=1000						
HLID				S	S	06 01 07.5	+7.5
	baz=236						
M24K	Tolsona, Glenn	87.64	14	P	P	05 50 53.3	+0.2
	baz=209,SNR=321						
M24K				S	S	06 01 00.2	+0.9
	baz=209						
TNA	Tin City	87.64	4	P	P	05 50 52.6	-0.2
	baz=190,SNR=38						
TNA				S	S	06 01 01.2	+2.2
	baz=190						
TNA	Tin City	87.64	4	⇓P	P	05 50 52.7	-0.2
TNA				⇑P	PcP	05 50 53.0	-1.4
Y22A	Socorro	87.65	52	P	P	05 50 55.1	+1.2
	baz=241,SNR=383						
Y22A				S	S	06 01 05.1	+4.2
	baz=241						
WAT6	Susitna Watana	87.70	14	P	P	05 50 52.7	-0.8
	baz=208,SNR=1000						
WAT6				S	S	06 00 59.1	-1.0
	baz=208						
Y22D	IRIS PASSCAL I	87.75	52	P	P	05 50 55.7	+1.3
	baz=241,SNR=68						
Y22D				S	S	06 01 04.1	+2.4
	baz=241						
Y22D	IRIS PASSCAL I	87.75	52	P	P	05 50 55.8	+1.5
	baz=241,SNR=68						
Y22D				S	S	06 01 12.7	+11
	baz=241						
WAT1	Susitna Watana	87.75	13	P	P	05 50 52.8	-0.8
	baz=207						
WAT1				S	S	06 00 58.9	-1.4
	baz=207						
MNTX	Cornudas Mount	87.78	55	P	P	05 50 55.7	+1.3
	baz=242						
MNTX				S	S	06 01 05.6	+3.8
	baz=242						
MNTX	Cornudas Mount	87.78	55	P	P	05 50 55.5	+1.1
	baz=242,SNR=1000						
MNTX				S	S	06 01 09.6	+7.8
	baz=242						
MCARA	McCarthy VSAT	87.79	16	P	P	05 50 53.8	+0.1
	baz=212,SNR=349						
MCARA				S	S	06 01 00.8	+0.2
	baz=212						
SEY	Seymchan	87.79	347	P	P	05 50 53.3	-0.3
	comp=Z,300nm,0.8s,baz=147,slow=5.2,SNR=425						
SEY				pP	pP	05 52 30.1	+3.3
	comp=Z,34nm,0.7s,baz=155,slow=7.3,SNR=1.8						
SEY				PKPPKP	P'P'df	06 16 42.4	-2.8
	comp=Z,8.6nm,0.8s,baz=269,slow=2.2,SNR=6.2						
	comp=Z,300nm,0.8s						
PAYG	Puerto Ayora	87.82	90	*e*P	P	05 50 56.3	+1.2
PAYG	Puerto Ayora	87.82	90	⇓P	P	05 50 57.7	+2.7
BARN	Barnard Glacie	87.88	17	P	P	05 50 54.4	0.0
CTG	Chitna Glacier	87.88	17	P	P	05 50 54.5	+0.2
	baz=214,SNR=447						
CTG				S	S	06 01 02.9	+1.1
	baz=214						
J20K	Nowinta River	87.93	10	P	P	05 50 53.5	-0.8
J20K				IAmb	IAmb	05 50 56.2	
	comp=Z,1µm,1.5s						
J20K	Nowinta River	87.93	10	P	P	05 50 53.9	-0.3
	baz=202,SNR=731						
J20K				S	S	06 01 02.4	+0.7
	baz=202						
KTH	Kantishna Hill	87.93	12	P	P	05 50 52.4	-2.0
KTH				IAmb	IAmb	05 50 55.0	
	comp=Z,1µm,1.0s						
BESE	Bessie Mountai	87.93	21	P	P	05 50 55.0	+0.5
BESE				IAmb	IAmb	05 50 57.4	
	comp=Z,1µm,1.2s						
TRF	Thorofare Moun	87.96	12	P	P	05 50 52.8	-1.9
TRF	Thorofare Moun	87.96	12	P	P	05 50 53.5	-1.1
	baz=206,SNR=1000						
TRF				S	S	06 01 00.5	-1.9
	baz=206						
CHUM	Lake Minchumin	87.97	11	P	P	05 50 53.3	-1.1
	baz=204,SNR=205						
CHUM				S	S	06 00 59.5	-2.7
	baz=204						
TX31	Lajitas Ar. Si	88.03	57	P	P	05 50 56.1	+0.4
TX31	Lajitas Ar. Si	88.03	57	P	P	05 50 57.2	+1.5
	baz=243,SNR=749						
TX31				S	S	06 01 09.9	+5.4
	baz=243						
TX32	Lajitas Array	88.03	57	P	P	05 50 56.3	+0.6
TX32				IAmb	IAmb	05 50 59.5	
	comp=Z,1µm,1.4s						
TXAR	Lajitas Array	88.03	57	P	P	05 50 56.9	+1.1
	comp=Z,338nm,1.0s,baz=212,slow=4.4,SNR=977						
TXAR				pP	pwP	05 52 32.0	+1.0
	comp=Z,72nm,1.0s,baz=207,slow=5.3,SNR=5.7						
TXAR				PKiKP	PKiKP	05 55 55.5	+0.3
	comp=Z,4.1nm,0.9s,baz=333,slow=1.0,SNR=3.1						
TXAR				S	SKSac	06 00 42.9	-2.0
	comp=Z,2.7nm,1.1s,baz=216,slow=4.5,SNR=1.7						
TXAR				PKKPbc	PKKPbc	06 08 39.4	+0.1
	comp=Z,12nm,0.7s,baz=94,slow=3.4,SNR=20						
TXAR				PKPPKP	P'P'df	06 16 35.0	-11
	comp=Z,2.5nm,0.8s,baz=100,slow=2.9,SNR=3.4						
	comp=Z,338nm,1.0s						
TXAR	Lajitas Array	88.03	57	P	P	05 50 56.3	+0.6
GCSA	Galena City Sc	88.04	9	P	P	05 50 54.7	0.0
	baz=200,SNR=93						
GCSA				S	S	06 01 05.2	+2.5
	baz=200						
PLBC	Pleasant Camp	88.12	20	P	P	05 50 56.0	+0.7
	baz=218,SNR=362						
PLBC				S	S	06 01 06.2	+2.4
	baz=218						
HARP	HAARP	88.13	15	P	P	05 50 55.3	0.0
	baz=210,SNR=178						
HARP				S	S	06 01 04.5	+0.7
	baz=210						
MVCO	Mesa Verde	88.13	49	P	P	05 50 55.6	-0.6
MVCO	Mesa Verde	88.13	49	P	P	05 50 56.6	+0.4
	baz=240,SNR=100						
MVCO				S	S	06 01 12.1	+6.7
	baz=240						
TIY	Taiyuan	88.14	312	⇓*i*P	P	05 50 57.0	+1.0
TIY				sP	sP	05 53 08.8	-2.0
TIY				SKS	SKSac	06 00 43.8	-1.3
TIY				S	S	06 01 05.8	+0.7
TIY				sS	sS	06 03 41.8	-9.3
TIY				pmax	pmax		
	comp=Z,400nm,1.0s						
TIY				pmax	pmax		
	comp=Z,7µm,3.6s						
P18A	Preston Nutter	88.15	46	P	P	05 50 56.4	+0.1
P18A				IAmb	IAmb	05 50 59.3	
	comp=Z,2µm,1.8s						
DHY	Denali Highway	88.22	14	P	P	05 50 55.3	-0.6
	baz=208,SNR=603						
DHY				S	S	06 01 02.9	-2.0
	baz=208						
HWUT	Hardware Ranch	88.31	44	P	P	05 50 56.6	-0.3
BI05	Punta Hualpn	88.35	129	P	P	05 50 57.8	+0.7
T35M	Bob Quinn	88.37	24	P	P	05 50 57.5	+1.0
	baz=224,SNR=197						
T35M				S	S	06 01 11.1	+4.9
	baz=224						
PLCA	Paso Flores	88.38	134	P	P	05 50 58.7	+1.4
	comp=Z,30nm,0.6s,baz=225,slow=5.4,SNR=84						
PLCA				pP	pwP	05 52 33.5	+0.3
	comp=Z,96nm,1.0s,baz=231,slow=5.9,SNR=9.0						
PLCA				PKiKP	PKiKP	05 55 55.9	+0.3

	comp=Z,5.4nm,0.9s,baz=232,slow=4.9,SNR=2.5						
PLCA				PKKPbc	**PKKPbc**	**06 08 37.9**	**-0.3**
	comp=Z,17nm,0.9s,baz=78,slow=2.4,SNR=14						
	comp=Z,30nm,0.6s						
PLCA	**Paso Flores**	**88.38**	**134**	*e*P	**P**	**05 50 59.0**	**+1.7**
PLCA	**Paso Flores**	**88.38**	**134**	⇑P	**P**	**05 50 58.5**	**+1.2**
BPAW	**Bear Paw Mtn.**	**88.41**	**12**	P	**P**	**05 50 54.6**	**-1.9**
BPAW	**Bear Paw Mtn.**	**88.41**	**12**	P	**P**	**05 50 54.8**	**-1.8**
	baz=205,SNR=336						
BPAW				S	**S**	**06 01 02.9**	**-3.5**
	baz=205						
SKAG	**Skagway**	**88.46**	**20**	P	**P**	**05 50 58.1**	**+1.3**
	baz=219,SNR=183						
SKAG				S	**S**	**06 01 10.4**	**+3.6**
	baz=219						
SKAG	**Skagway**	**88.46**	**20**	⇑P	**P**	**05 50 57.9**	**+1.1**
MCK	**McKinley**	**88.48**	**13**	P	**P**	**05 50 56.2**	**-0.8**
	baz=207,SNR=502						
MCK				S	**S**	**06 01 05.2**	**-1.8**
	baz=207						
ANMO	**Albuquerque**	**88.50**	**51**	P	**P**	**05 50 58.2**	**+0.2**
ANMO				IAmb	IAmb	05 51 01.0	
	comp=Z,694nm,1.1s						
ANMO	**Albuquerque**	**88.50**	**51**	*d i*P	**P**	**05 50 58.8**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,556nm,1.1s						
ANMO	**Albuquerque**	**88.50**	**51**	P	**P**	**05 50 58.8**	**+0.9**
	baz=242						
ANMO				S	**S**	**06 01 15.7**	**+6.9**
	baz=242						
ANMO	**Albuquerque**	**88.50**	**51**	P	**P**	**05 50 58.7**	**+0.8**
	baz=242						
ANMO				S	**S**	**06 01 16.9**	**+8.1**
	baz=242						
ANMO	**Albuquerque**	**88.50**	**51**	⇓P	**P**	**05 50 58.7**	**+0.8**
PAX	**Paxson**	**88.56**	**14**	P	**P**	**05 50 56.5**	**-0.9**
	baz=210,SNR=367						
PAX				S	**S**	**06 01 06.9**	**-1.0**
	baz=210						
YUK8	**Steele Glacier**	**88.58**	**17**	P	**P**	**05 50 58.1**	**+0.4**
	baz=215,SNR=875						
YUK8				S	**S**	**06 01 10.1**	**+1.6**
	baz=215						
BCYI	**Bear Canyon**	**88.61**	**41**	P	**P**	**05 50 58.4**	**+0.1**
M26K	**Nabesna, AK**	**88.66**	**16**	P	**P**	**05 50 57.7**	**-0.2**
	baz=212,SNR=1000						
M26K				S	**S**	**06 01 09.9**	**+1.1**
	baz=212						
YUK6	**Outpost Mounta**	**88.70**	**18**	P	**P**	**05 50 58.6**	**+0.3**
	baz=216,SNR=209						
YUK6				S	**S**	**06 01 10.7**	**+1.1**
	baz=216						
NEW	**Newport**	**88.70**	**36**	P	**P**	**05 50 58.4**	**+0.1**
	baz=234,SNR=376						
NEW				S	**S**	**06 01 13.6**	**+3.8**
	baz=234						
S34M	**Telegraph Cree**	**88.72**	**23**	P	**P**	**05 50 59.3**	**+1.2**
	baz=223,SNR=579						
S34M				S	**S**	**06 01 13.2**	**+3.8**
	baz=223						
YUK3	**Moose Creek**	**88.79**	**17**	P	**P**	**05 50 58.7**	**0.0**
	baz=214,SNR=1000						
YUK3				S	**S**	**06 01 11.4**	**+1.0**
	baz=214						
ZEA	**Zeya**	**88.85**	**331**	*e*P	**P**	**05 50 59.1**	**+0.3**
ZEA				*e**SP	**sP**	**05 53 14.1**	**0.0**
ZEA				*e*		05 54 31.5	
ZEA				*e*		05 56 37.5	
ZEA				*e*S	**SKSac**	**06 00 47.6**	**-0.7**
ZEA				*e**SS	pS	06 03 17.6	+10
ZEA				pmax	pmax		
	comp=E,2µm,8.2s						
ZEA				pmax	pmax		
	comp=N,2µm,5.8s						
ZEA				pmax	pmax		
	comp=Z,5µm,7.2s						
ZEA				pmax	pmax		
	comp=E,50nm,0.9s						
ZEA				pmax	pmax		
	comp=N,150nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,340nm,1.0s						
ZEA				pmax	pmax		
	comp=E,700nm,7.4s						
ZEA				pmax	pmax		
	comp=N,700nm,5.9s						
ZEA				pmax	pmax		
	comp=Z,2µm,8.4s						
ZEA				smax	smax		
	comp=E,2µm,8.6s						
ZEA				smax	smax		
	comp=N,4µm,9.7s						
HYT	**Haines Junctio**	**88.86**	**19**	P	**P**	**05 50 58.6**	**-0.3**
HYT				IAmb	IAmb	05 51 01.5	
	comp=Z,624nm,1.1s						
HYT	**Haines Junctio**	**88.86**	**19**	P	**P**	**05 50 59.1**	**+0.2**
	baz=217,SNR=429						
HYT				S	**S**	**06 01 12.1**	**+1.3**
	baz=217						
XAN	**Xi'an**	**88.89**	**307**	P	**P**	**05 51 01.0**	**+1.4**
XAN				pP	pP	05 52 35.5	+2.8
XAN				sP	sP	05 53 10.5	-4.1
XAN				PP	**PP**	**05 54 36.3**	**+0.1**
XAN				SKS	**SKSac**	**06 00 49.0**	**-0.6**
XAN				S	**SKKSac**	**06 01 05.0**	**+2.2**
XAN				pmax	pmax		
	comp=Z,890nm,1.0s						
XAN				pmax	pmax		
	comp=Z,14µm,5.8s						
M27K	**Edge Creek, AK**	**88.91**	**16**	P	**P**	**05 50 59.3**	**+0.2**
	baz=213,SNR=1000						
M27K				S	**S**	**06 01 12.1**	**+0.9**
	baz=213						
XLT	**XiLinHaoTe**	**88.94**	**319**	⇓*i*P	**P**	**05 51 00.0**	**+0.4**
XLT				pP	pwP	05 52 36.0	+0.8
XLT				SKS	**SKSac**	**06 00 47.5**	**-2.1**
XLT				S	**S**	**06 01 13.5**	**+1.3**
XLT				pmax	pmax		
	comp=Z,270nm,1.1s						
XLT				pmax	pmax		
	comp=Z,8µm,5.1s						
YUK4	**Talbot Arm**	**88.94**	**18**	P	**P**	**05 51 00.0**	**+0.6**
	baz=216,SNR=246						
L26K	**Log Cabin Wild**	**89.10**	**15**	P	**P**	**05 50 59.9**	**0.0**
	baz=212,SNR=720						
L26K				S	**S**	**06 01 13.7**	**+0.9**
	baz=212						
K24K	**Donnelly Dome**	**89.21**	**14**	P	**P**	**05 51 00.3**	**-0.1**
	baz=210,SNR=607						
K24K				S	**S**	**06 01 14.0**	**+0.3**
	baz=210						
BVCY	**Beaver Creek**	**89.22**	**16**	P	**P**	**05 51 00.8**	**+0.4**
	baz=214,SNR=487						
BVCY				S	**S**	**06 01 15.8**	**+2.0**
	baz=214						
I21K	**Tanana**	**89.22**	**11**	P	**P**	**05 50 59.6**	**-0.7**
	baz=204,SNR=1000						
I21K				S	**S**	**06 01 12.5**	**-1.2**
	baz=204						
NEA2	**Nenana**	**89.22**	**12**	P	**P**	**05 50 58.9**	**-1.5**
	baz=207,SNR=447						
NEA2				S	**S**	**06 01 10.9**	**-2.8**
	baz=207						
O30N	**Mendenhall**	**89.24**	**19**	P	**P**	**05 51 00.8**	**+0.3**
	baz=218,SNR=481						
O30N				S	**S**	**06 01 16.8**	**+2.6**
	baz=218						
MLY	**Manley**	**89.30**	**11**	P	**P**	**05 50 59.5**	**-1.3**
	baz=205,SNR=1000						
MLY				S	**S**	**06 01 12.2**	**-2.4**
	baz=205						
RIDG	**Independent Ri**	**89.36**	**14**	P	**P**	**05 51 00.7**	**-0.3**
	baz=211,SNR=534						
RIDG				S	**S**	**06 01 15.8**	**+0.6**
	baz=211						
N30M	**Aishikik Lake**	**89.49**	**18**	P	**P**	**05 51 01.8**	**+0.1**
	baz=218,SNR=248						
N30M				S	**S**	**06 01 17.7**	**+1.3**
	baz=218						
HDA	**Harding Lake**	**89.49**	**13**	P	**P**	**05 51 00.9**	**-0.7**
HDA				IAmb	IAmb	05 51 02.4	
	comp=Z,591nm,0.6s						
HDA	**Harding Lake**	**89.49**	**13**	P	**P**	**05 51 00.9**	**-0.7**
	baz=209,SNR=1000						
HDA				S	**S**	**06 01 13.0**	**-3.2**
	baz=209						
HDA				S	**S**	**06 01 13.0**	**-3.2**
	baz=209						
DLBC	**Dease Lake**	**89.51**	**23**	P	**P**	**05 51 01.8**	**-0.1**
DLBC				IAmb	IAmb	05 51 04.9	
	comp=Z,708nm,1.1s						
DLBC	**Dease Lake**	**89.51**	**23**	P	**P**	**05 51 02.4**	**+0.5**
	baz=224,SNR=280						
DLBC				S	**S**	**06 01 21.1**	**+4.4**
	baz=224						
L27K	**Beaver Creek,**	**89.51**	**16**	P	**P**	**05 51 01.8**	**0.0**
	baz=213,SNR=978						
L27K				S	**S**	**06 01 17.8**	**+1.3**
	baz=213						
H21K	**Melozitna Rive**	**89.52**	**10**	P	**P**	**05 51 00.8**	**-0.9**
H21K				IAmb	IAmb	05 51 04.6	
	comp=Z,892nm,1.3s						
H21K	**Melozitna Rive**	**89.52**	**10**	P	**P**	**05 51 01.5**	**-0.2**
	baz=203,SNR=735						
H21K				S	**S**	**06 01 16.8**	**+0.4**
	baz=203						
BCAR	**Beaver Creek A**	**89.52**	**16**	P	**P**	**05 51 01.4**	**-0.4**
CCB	**Clear Creek Bu**	**89.52**	**13**	P	**P**	**05 51 00.2**	**-1.4**
WHY	**Whitehorse**	**89.53**	**20**	P	**P**	**05 51 02.5**	**+0.5**
	baz=220,SNR=403						
WHY				S	**S**	**06 01 20.1**	**+3.2**
	baz=220						
S22A	**4UR Ranch, Cre**	**89.56**	**49**	P	**P**	**05 51 03.1**	**+0.2**
S22A				IAmb	IAmb	05 51 06.2	
	comp=Z,1µm,1.4s						
S22A	**4UR Ranch, Cre**	**89.56**	**49**	P	**P**	**05 51 03.9**	**+0.9**
	baz=241,SNR=637						
S22A				S	**S**	**06 01 26.8**	**+8.2**
	baz=241						
I23K	**Minto, Yukon-K**	**89.67**	**12**	P	**P**	**05 51 00.5**	**-1.8**
I23K				IAmb	IAmb	05 51 03.4	
	comp=Z,947nm,1.4s						
I23K	**Minto, Yukon-K**	**89.67**	**12**	P	**P**	**05 51 01.2**	**-1.2**
	baz=206,SNR=511						
I23K				S	**S**	**06 01 15.2**	**-2.5**
	baz=206						
IMAR	**Indian Mountai**	**89.67**	**10**	P	**P**	**05 51 01.8**	**-0.6**
MSO	**Missoula**	**89.67**	**38**	P	**P**	**05 51 02.7**	**-0.3**
	baz=237,SNR=205						
MSO				S	**S**	**06 01 23.0**	**+4.2**
	baz=237						
REDW	**Red Top Meadow**	**89.68**	**42**	P	**P**	**05 51 03.3**	**+0.1**
TPAW	**Teton Pass**	**89.68**	**42**	P	**P**	**05 51 03.9**	**+0.6**
TPAW				IAmb	IAmb	05 51 06.4	
	comp=Z,1µm,1.2s						
TCOL	**CIGO, UAF Yank**	**89.71**	**12**	P	**P**	**05 51 01.5**	**-1.1**
	baz=208,SNR=396						
TCOL				S	**S**	**06 01 15.4**	**-2.7**
	baz=208						
I53US	**FAIRBANKS INFR**	**89.71**	**12**	P	**P**	**05 51 02.1**	**-0.5**
	baz=215,slow=10.0,SNR=1.9						
COLA	**College**	**89.72**	**12**	P	**P**	**05 51 01.1**	**-1.4**
COLA	**College**	**89.72**	**12**	*d i*P	**P**	**05 51 02.2**	**-0.4**
COLA				pmax	pmax		
	comp=Z,1µm,1.1s						
COLA	**College**	**89.72**	**12**	⇓P	**P**	**05 51 01.3**	**-1.2**
MDM	**Murphy Dome**	**89.72**	**12**	P	**P**	**05 51 01.0**	**-1.6**
MDM				IAmb	IAmb	05 51 03.6	
	comp=Z,1µm,1.0s						
O20A	**White River Ci**	**89.74**	**46**	P	**P**	**05 51 04.1**	**+0.5**
O20A				IAmb	IAmb	05 51 06.4	
	comp=Z,794nm,1.2s						
O20A	**White River Ci**	**89.74**	**46**	P	**P**	**05 51 04.1**	**+0.5**
	baz=240,SNR=340						
O20A				S	**S**	**06 01 26.8**	**+6.8**
	baz=240						
SCRK	**Sand Creek**	**89.76**	**14**	P	**P**	**05 51 02.5**	**-0.5**
SCRK				IAmb	IAmb	05 51 04.4	
	comp=Z,332nm,0.8s						
SCRK	**Sand Creek**	**89.76**	**14**	P	**P**	**05 51 02.7**	**-0.4**
	baz=211,SNR=924						
SCRK				S	**S**	**06 01 19.2**	**+0.3**
	baz=211						
SNOW	**Snow King Moun**	**89.79**	**42**	P	**P**	**05 51 04.4**	**+0.6**
HIA	**Hailar**	**89.80**	**325**	P	**P**	**05 51 03.5**	**+0.1**
HIA	**Hailar**	**89.80**	**325**	P	**P**	**05 51 03.5**	**+0.1**
HIA				pmax	pmax		
	comp=Z,265nm,1.0s						
IL31		**89.82**	**13**	P	**P**	**05 51 02.1**	**-1.0**
IL31				IAmb	IAmb	05 51 04.3	
	comp=Z,777nm,1.1s						
ILAR	**Eielson Array**	**89.82**	**13**	P	**P**	**05 51 02.5**	**-0.6**
	comp=Z,264nm,0.8s,baz=214,slow=5.5,SNR=1259						
ILAR				PKiKP	**PKiKP**	**05 55 56.0**	**-0.9**
	comp=Z,5.6nm,0.5s,baz=264,slow=2.9,SNR=8.8						
ILAR				PKKPbc	**PKKPdf**	**06 08 32.5**	**+0.5**
	comp=Z,5.3nm,0.8s,baz=336,slow=2.3,SNR=9.1						
ILAR				PKPPKP		06 16 38.9	
	comp=Z,7.2nm,1.1s,baz=323,slow=2.6,SNR=9.5						
	comp=Z,264nm,0.8s						
P33M	**Teslin, Yukon**	**89.85**	**21**	P	**P**	**05 51 03.2**	**-0.2**
P33M	**Teslin, Yukon**	**89.85**	**21**	P	**P**	**05 51 03.7**	**+0.2**
	baz=221,SNR=273						
P33M				S	**S**	**06 01 22.3**	**+2.5**
	baz=221						
KMI	**Kunming**	**89.86**	**297**	⇓P	**P**	**05 51 06.5**	**+2.0**
KMI				pP	pP	05 52 38.5	+0.8
KMI				sP	sP	05 53 18.0	-1.5
KMI				PP	**PP**	**05 54 45.3**	**+1.1**
KMI				SKS	**SKSac**	**06 00 56.0**	**0.0**
KMI				S	**S**	**06 01 20.5**	**-1.2**
KMI				SS	**SS**	**06 07 29.3**	**-1.7**
KMI				pmax	pmax		
	comp=Z,430nm,1.7s						
KMI				pmax	pmax		
	comp=Z,9µm,6.9s						
N31M	**Braeburn, Yuko**	**89.90**	**19**	P	**P**	**05 51 03.7**	**+0.1**
N31M				IAmb	IAmb	05 51 06.1	
	comp=Z,1µm,1.1s						
N31M	**Braeburn, Yuko**	**89.90**	**19**	P	**P**	**05 51 03.9**	**+0.4**
	baz=219,SNR=480						
N31M				S	**S**	**06 01 22.1**	**+2.0**
	baz=219						
EFI	**East Falkland**	**89.92**	**147**	*de*P	**P**	**05 51 05.3**	**+1.2**
EFI				pmax	pmax		
	comp=Z,291nm,0.9s						
MOOW	**Moose Ponds**	**89.94**	**42**	P	**P**	**05 51 04.4**	**0.0**
MOOW				IAmb	IAmb	05 51 07.4	
	comp=Z,2µm,1.8s						
J25K	**Salcha River,**	**90.00**	**14**	P	**P**	**05 51 03.4**	**-0.7**
	baz=210,SNR=766						
J25K				S	**S**	**06 01 20.1**	**-0.9**
	baz=210						
POKR	**Poker Plat Res**	**90.01**	**13**	P	**P**	**05 51 02.0**	**-2.0**
POKR				IAmb	IAmb	05 51 05.0	
	comp=Z,987nm,1.2s						
POKR	**Poker Plat Res**	**90.01**	**13**	P	**P**	**05 51 02.9**	**-1.1**
	baz=208,SNR=167						
POKR				S	**S**	**06 01 17.9**	**-3.0**
	baz=208						
SMCO	**Snowmass**	**90.14**	**47**	⇓P	**P**	**05 51 06.3**	**+0.6**
SMCO				⇓P	**PcP**	**05 51 06.4**	**-0.2**
BW06	**Boulder Array**	**90.19**	**43**	P	**P**	**05 51 05.6**	**0.0**
	baz=240,SNR=1000						
BW06				S	**S**	**06 01 29.2**	**+5.1**
	baz=240						
PD31	**Pinedale Array**	**90.19**	**43**	⇓P	**P**	**05 51 05.7**	**+0.1**
PD31				⇓P	**P**	**05 51 05.8**	**+0.1**
PDAR	**Pinedale Array**	**90.19**	**43**	P	**P**	**05 51 06.2**	**+0.5**
	comp=Z,522nm,0.9s,baz=202,slow=3.2,SNR=1439						
PDAR				pP	**pwP**	**05 52 42.4**	**+1.4**
	comp=Z,126nm,1.5s,baz=238,slow=2.9,SNR=1.2						
PDAR				PKiKP	**PKiKP**	**05 55 58.9**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=204,slow=2.0,SNR=0.7						
PDAR				PKKPbc	**PKKPbc**	**06 08 34.2**	**-0.5**
	comp=Z,14nm,0.8s,baz=77,slow=1.8,SNR=3.9						
PDAR				PKPPKP	P'P'df	06 16 27.9	-14
	comp=Z,1.4nm,0.9s,baz=114,slow=4.0,SNR=4.4						
	comp=Z,522nm,0.9s						
H23K	**Yukon River**	**90.24**	**11**	P	**P**	**05 51 03.7**	**-1.4**
	baz=206,SNR=247						
H23K				S	**S**	**06 01 20.6**	**-2.4**
	baz=206						
K27K	**Chicken**	**90.26**	**15**	P	**P**	**05 51 05.5**	**+0.3**
	baz=213						
K27K				S	**S**	**06 01 24.5**	**+1.3**
	baz=213						
HHC	**Hu-ho-hao-te**	**90.26**	**314**	*e*P	**P**	**05 51 07.3**	**+1.4**
HHC				sP	sP	05 53 21.5	+0.6
HHC				SKS	**SKSac**	**06 00 58.3**	**+0.9**
HHC				S	**ScS**	**06 01 26.5**	**-0.6**
HHC				pmax	pmax		
	comp=Z,870nm,1.9s						
HHC				pmax	pmax		
	comp=Z,6µm,6.3s						
J26L	**Joseph Creek**	**90.31**	**14**	P	**P**	**05 51 05.5**	**0.0**
	baz=212,SNR=1000						
J26L				S	**S**	**06 01 24.9**	**+1.1**
	baz=212						
BOZ	**Bozeman (W)**	**90.36**	**40**	P	**P**	**05 51 07.0**	**+0.8**
	baz=238,SNR=1000						
BOZ				S	**S**	**06 01 30.5**	**+5.2**
	baz=238						
H17A	**Grant Village**	**90.38**	**42**	P	**P**	**05 51 08.4**	**+1.9**
	baz=239,SNR=389						
H17A				S	S	06 01 35.5	+10
	baz=239						
CM31	**Chiang Mai Arr**	**90.43**	**290**	P	**P**	**05 51 09.2**	**+2.1**
	SNR=284						
CMAR	**Chiang Mai Arr**	**90.43**	**290**	P	**P**	**05 51 08.8**	**+1.8**
	comp=Z,789nm,0.9s,baz=129,slow=3.2,SNR=827						
CMAR				PP	**PP**	**05 54 49.1**	**+0.6**
	comp=Z,56nm,0.9s,baz=132,slow=6.3,SNR=4.5						
CMAR				PKKPbc	**PKKPbc**	**06 08 32.1**	**-0.5**
	comp=Z,5.1nm,0.8s,baz=274,slow=4.0,SNR=5.9						
CMAR				PKPPKP	**P'P'df**	**06 16 39.8**	**-2.5**
	comp=Z,7.6nm,0.8s,baz=290,slow=4.4,SNR=6.8						
	comp=Z,789nm,0.9s						
M30M	**Minto, Yukon**	**90.46**	**18**	P	**P**	**05 51 06.0**	**-0.1**
	baz=218,SNR=1000						
M30M				S	**S**	**06 01 26.2**	**+1.1**
	baz=218						
SDCO	**Great Sand Dun**	**90.48**	**49**	P	**P**	**05 51 07.7**	**+0.4**
	baz=242						
SDCO				S	**S**	**06 01 27.7**	**+0.7**
	baz=242						
SDCO	**Great Sand Dun**	**90.48**	**49**	P	**P**	**05 51 07.4**	**+0.2**
	baz=242,SNR=654						
SDCO				S	**S**	**06 01 35.1**	**+8.1**
	baz=242						
RDOG	**Red Dog Mine**	**90.50**	**6**	P	**P**	**05 51 02.9**	**-3.3**
	baz=194,SNR=25						
BILL	**Bilibino**	**90.51**	**354**	*c i*P	**P**	**05 51 06.1**	**-0.1**
BILL				*e*		05 54 45.9	
BILL				*e*S	**SKSac**	**06 00 57.7**	**+0.4**
BILL				*e*SS	**SS**	**06 07 36.2**	**-2.0**
BILL				pmax	pmax		
	comp=Z,335nm,1.1s						
H24K	**Noodor Dome**	**90.56**	**12**	P	**P**	**05 51 04.8**	**-1.8**
	baz=208,SNR=126						
H24K				S	**S**	**06 01 23.0**	**-3.0**
	baz=208						
CHTO	**Chiang Mai**	**90.57**	**290**	P	**P**	**05 51 08.7**	**+1.0**
CHTO				IAmb	IAmb	05 51 12.2	
	comp=Z,906nm,0.9s						
CHTO	**Chiang Mai**	**90.57**	**290**	P	**P**	**05 51 08.7**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,906nm,0.9s						
CHTO	**Chiang Mai**	**90.57**	**290**	P	**P**	**05 51 09.9**	**+2.2**
CHTO	**Chiang Mai**	**90.57**	**290**	⇓P	**P**	**05 51 08.8**	**+1.1**
CHTO				⇓P	**PcP**	**05 51 09.1**	**+0.6**
MSTX	**Muleshoe**	**90.76**	**54**	P	**P**	**05 51 08.8**	**+0.4**
	baz=244,SNR=275						
MSTX				S	**S**	**06 01 35.2**	**+5.9**
	baz=244						
MSTX	**Muleshoe**	**90.76**	**54**	P	**P**	**05 51 08.8**	**+0.4**
	baz=244,SNR=275						
MSTX				S	**S**	**06 01 37.0**	**+7.7**
	baz=244						
M31M	**Drury Creek, Y**	**90.87**	**19**	P	**P**	**05 51 07.5**	**-0.6**
	baz=220,SNR=303						
M31M				S	**S**	**06 01 29.5**	**+0.7**
	baz=220						
WALA	**Waterton Lakes**	**90.91**	**36**	⇑P	**P**	**05 51 08.7**	**0.0**
WALA				⇑P	**PcP**	**05 51 09.3**	**-0.1**
BO01	**Tunca**	**90.94**	**128**	P	**P**	**05 51 09.3**	**+0.1**
DAWY	**Dawson**	**90.96**	**16**	P	**P**	**05 51 08.4**	**0.0**
	baz=216,SNR=1000						
DAWY				S	**S**	**06 01 29.9**	**+0.3**
	baz=216						
DAWY	**Dawson**	**90.96**	**16**	⇓P	**P**	**05 51 08.2**	**-0.2**
T25A	**Trinidad**	**90.98**	**50**	P	**P**	**05 51 09.6**	**+0.1**
	baz=243,SNR=281						
T25A				S	**S**	**06 01 37.8**	**+6.5**
	baz=243						
833A	**Chaparral WMA,**	**90.98**	**60**	P	**P**	**05 51 09.8**	**+0.4**
833A				IAmb	IAmb	05 51 12.2	
	comp=Z,850nm,1.2s						
833A	**Chaparral WMA,**	**90.98**	**60**	P	**P**	**05 51 10.0**	**+0.6**
	baz=245,SNR=124						
833A				S	**S**	**06 01 33.7**	**+2.4**
	baz=245						
833A	**Chaparral WMA,**	**90.98**	**60**	P	**P**	**05 51 09.9**	**+0.6**
	baz=245,SNR=124						
833A				S	**S**	**06 01 35.6**	**+4.4**
	baz=245						
MT01	**Popeta**	**91.06**	**127**	P	**P**	**05 51 10.1**	**+0.3**
EGAK	**Eagle**	**91.11**	**15**	P	**P**	**05 51 08.3**	**-0.7**
EGAK	**Eagle**	**91.11**	**15**	P	**P**	**05 51 08.7**	**-0.4**
	baz=214,SNR=975						
EGAK				S	**S**	**06 01 30.8**	**+0.1**
	baz=214						
WTLY	**Watson Lake, Y**	**91.15**	**22**	P	**P**	**05 51 10.3**	**+0.8**
	baz=225,SNR=6.0						
WTLY				S	**S**	**06 01 34.8**	**+3.4**
	baz=225						
BTO	**Baotou**	**91.17**	**314**	*e*P	**P**	**05 51 11.5**	**+1.4**
BTO				SKS	**SKSac**	**06 01 00.5**	**-2.1**
BTO				S	**SKKSac**	**06 01 25.3**	**+5.6**
RWWY	**Rawlins**	**91.18**	**45**	P	**P**	**05 51 10.3**	**0.0**
RWWY				IAmb	IAmb	05 51 12.7	
	comp=Z,1µm,1.2s						
FARO	**Faro, Yukon**	**91.21**	**19**	P	**P**	**05 51 09.4**	**-0.2**
	baz=221,SNR=189						
FARO				S	**S**	**06 01 32.4**	**+0.5**
	baz=221						
PZH	**PanZhiHua**	**91.24**	**298**	P	**P**	**05 51 11.5**	**+0.7**
PZH				pP	**pP**	**05 52 42.8**	**-1.2**
PZH				sP	**sP**	**05 53 25.5**	**-0.3**
PZH				PP	**PP**	**05 54 55.3**	**+0.4**
PZH				SKS	**SKSac**	**06 01 02.0**	**-1.6**
PZH				S	**S**	**06 01 31.0**	**-2.9**
PZH				pmax	pmax		
	comp=Z,390nm,1.0s						
PZH				pmax	pmax		
	comp=Z,8µm,5.5s						
Q24A	**Divide**	**91.29**	**48**	P	**P**	**05 51 11.4**	**+0.5**
	baz=242,SNR=132						
Q24A				S	**S**	**06 01 41.1**	**+6.9**
	baz=242						
ISCO	**Idaho Springs**	**91.36**	**47**	P	**P**	**05 51 11.6**	**+0.4**
	baz=242						
ISCO				S	**S**	**06 01 38.8**	**+4.0**
	baz=242						
ISCO	**Idaho Springs**	**91.36**	**47**	P	**P**	**05 51 11.7**	**+0.4**
	baz=242,SNR=179						
ISCO				S	**S**	**06 01 40.8**	**+6.0**
	baz=242						
COLD	**Coldfoot**	**91.39**	**11**	P	**P**	**05 51 10.2**	**-0.1**
	baz=206,SNR=531						
COLD				S	**S**	**06 01 33.7**	**+0.6**
	baz=206						
CD2	**Chengdu**	**91.44**	**303**	P	**P**	**05 51 12.3**	**+0.8**
CD2				pP	pwP	05 52 46.5	-0.5
CD2				sP	sP	05 53 27.0	+0.5
CD2				PP	**PP**	**05 54 54.0**	**-2.2**
CD2				SKS	**SKSac**	**06 01 02.0**	**-2.3**
CD2				S	**ScS**	**06 01 41.5**	**+4.3**
CD2				SS	**SS**	**06 07 58.5**	**+5.4**
CD2				pmax	pmax		
	comp=Z,190nm,1.0s						
CD2				pmax	pmax		
	comp=Z,8µm,5.9s						
MAYO	**Mayo, Yukon**	**91.52**	**18**	S	**S**	**06 01 35.8**	**+1.4**
	baz=219						
JCT	**Junction City**	**91.55**	**58**	P	**P**	**05 51 12.8**	**+0.8**
	baz=245,SNR=126						
JCT				S	**S**	**06 01 39.1**	**+2.8**
	baz=245						
JCT	**Junction City**	**91.55**	**58**	P	**P**	**05 51 12.2**	**+0.2**
	baz=245,SNR=126						
JCT				S	**S**	**06 01 41.0**	**+4.7**
	baz=245						
JCT	**Junction City**	**91.55**	**58**	⇓P	**P**	**05 51 12.1**	**+0.1**
RLMT	**Red Lodge**	**91.55**	**41**	P	**P**	**05 51 12.8**	**+1.0**
	baz=240,SNR=566						
RLMT				S	**S**	**06 01 42.4**	**+6.4**
	baz=240						
J29M	**Klondike Camp**	**91.57**	**16**	P	**P**	**05 51 12.4**	**+1.1**
	baz=217,SNR=23						

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J29M                                S        S        06 01 36.6 +1.5
      baz=217
N23A  Red Feather La     91.64  46  P        P        05 51 13.1 +0.6
      baz=242,SNR=252
N23A                                S        S        06 01 43.2 +6.1
      baz=242
PEL   Peldehue           91.82 127 ⇓P        P        05 51 14.6 +1.2
LMEL  Las Melosas        91.84 128  P        P        05 51 14.1 +0.5
KVTX  Kingsville         91.88  61  P        P        05 51 14.1 +0.6
      baz=246
KVTX                                S        S        06 01 38.1 -1.1
      baz=246
AMTX  Amarillo           91.97  53  P        P        05 51 13.8  0.0
AMTX                                IAmb     IAmb     05 51 16.2
      comp=Z,331nm,1.0s
AMTX  Amarillo           91.97  53  P        P        05 51 14.3 +0.4
      baz=244
AMTX                                S        S        06 01 40.8 +0.8
      baz=244
AMTX  Amarillo           91.97  53  P        P        05 51 14.2 +0.3
      baz=244
AMTX                                S        S        06 01 46.0 +6.0
      baz=244
K22A  Casper             92.08  44  P        P        05 51 13.9 -0.4
K22A                                IAmb     IAmb     05 51 16.8
      comp=Z,453nm,0.8s
K22A  Casper             92.08  44  P        P        05 51 14.8 +0.4
      baz=242
K22A                                S        S        06 01 44.6 +3.8
      baz=242
K22A  Casper             92.08  44  P        P        05 51 14.7 +0.4
      baz=242,SNR=384
K22A                                S        S        06 01 46.6 +5.9
      baz=242
MMPY  Sheldon Lake,      92.15  20  P        P        05 51 14.3 +0.3
      baz=223,SNR=292
MMPY                                S        S        06 01 42.3 +2.1
      baz=223
PHWY  Pilot Hill         92.16  46  P        P        05 51 14.7 -0.2
I29M  Ogilvie Camp,      92.28  16  P        P        05 51 14.0 -0.5
      baz=216,SNR=218
I29M                                S        S        06 01 40.5 -0.7
      baz=216
TGTN  Hyland Airport     92.34  22  P        P        05 51 15.5 +0.6
      baz=225,SNR=44
TGTN                                S        S        06 01 45.2 +3.3
      baz=225
735A  Kenedy             92.47  60  P        P        05 51 17.8 +1.6
      baz=246,SNR=34
735A                                S        S        06 01 48.5 +4.2
      baz=246
ABTX  Abilene, Hawle     92.56  56  P        P        05 51 17.2 +0.6
      baz=245,SNR=140
ABTX                                S        S        06 01 49.0 +3.9
      baz=245
ABTX  Abilene, Hawle     92.56  56  P        P        05 51 17.0 +0.5
      baz=245,SNR=140
ABTX                                S        S        06 01 50.4 +5.3
      baz=245
BMAR  Burnt Mountain     92.60  12  P        P        05 51 16.2 +0.2
EGMT  Eagleton           92.72  39  P        P        05 51 17.3 +0.3
      baz=240,SNR=160
EGMT                                S        S        06 01 51.2 +5.3
      baz=240
TOLK  Toolik Lake Re     92.77  10  P        P        05 51 16.1 -0.6
TOLK                                IAmb     IAmb     05 51 18.7
      comp=Z,564nm,1.4s
TOLK  Toolik Lake Re     92.77  10  P        P        05 51 16.3 -0.4
      baz=206,SNR=174
TOLK                                S        S        06 01 44.5 -0.8
      baz=206
KSCO  Kaye Shedlock'     93.07  49  S        S        06 01 54.6 +5.1
      baz=244
KSCO  Kaye Shedlock'     93.07  49  P        P        05 51 19.6 +0.7
      baz=244,SNR=170
KSCO                                S        S        06 01 55.3 +5.8
      baz=244
435B  Jarrell            93.42  58  P        P        05 51 21.1 +0.6
      baz=246,SNR=59
435B                                S        S        06 01 56.7 +4.1
      baz=246
435B  Jarrell            93.42  58  P        P        05 51 21.1 +0.6
      baz=246
435B                                S        S        06 01 58.3 +5.7
      baz=246
PBA   Port Blair         93.42 281 i x       P        05 51 20.4 -0.4
PBA                                ex        sP       05 53 32.7 -3.2
YAK   Yakutsk            93.43 338  P        P        05 51 19.6 -0.1
      comp=Z,217nm,0.9s,baz=146,slow=0.1,SNR=60
      comp=Z,217nm,0.9s
YAK   Yakutsk            93.43 338d iP       P        05 51 18.8 -1.0
YAK                                e*PP      pP       05 52 54.6 +1.0
YAK                                e                  05 55 08.4
YAK                                eS        SKSac    06 01 11.4 -2.3
YAK                                e                  06 01 50.2
YAK                                e*SS      sSKSac   06 04 09.3 +0.2
YAK                                eSS       SS       06 08 16.3 -3.7
YAK                                 pmax     pmax
      comp=Z,487nm,1.0s
YAK                                 pmax     pmax
      comp=N,75nm,1.3s
YAK                                 pmax     pmax
      comp=E,45nm,1.1s
YAK                                 pmax     pmax
      comp=Z,3µm,4.8s
YAK                                 pmax     pmax
      comp=N,1µm,4.4s
YAK                                 pmax     pmax
      comp=E,755nm,3.4s
YAK                                 smax     smax
      comp=E,345nm,2.3s
YAK                                 smax     smax
      comp=N,295nm,1.8s
YAK   Yakutsk            93.43 338 ⇓P        P        05 51 18.7 -1.0
YAK                                ⇓P        PcP      05 51 19.4 -0.7
LZH   Lanzhou            93.53 307⇓iP        P        05 51 22.5 +1.4
LZH                                 pP       pwP      05 52 58.8 +2.1
LZH                                 sP       sP       05 53 36.5 +0.2
LZH                                 PP       PP       05 55 14.0 +1.5
LZH                                 SKS      SKSac    06 01 14.5 -1.4
LZH                                 S        ScS      06 01 58.5 +3.8
LZH                                 SS       SS       06 08 27.8 +4.9
LZH                                 pmax     pmax
      comp=N,490nm,1.0s
LZH                                 pmax     pmax
      comp=N,6µm,4.6s
LCO   Las Campanas       93.71 123 ⇓P        P        05 51 23.8 +1.4
LCO                                ⇓P        P        05 51 23.8 +1.4
DGPR  DIGLIPUR           93.81 283  IAmb     IAmb     05 51 25.2
      comp=Z,334nm,1.0s
DGPR                               ex        pP       05 52 56.3 +0.4
WHTX  Lake Whitney,      94.00  57  P        P        05 51 23.6 +0.4
      baz=246,SNR=29
WHTX                                S        S        06 02 01.8 +4.3
      baz=246
WHTX  Lake Whitney,      94.00  57  P        P        05 51 23.3 +0.1
      baz=246,SNR=29
WHTX                                S        S        06 02 02.1 +4.5
      baz=246
WMOK  Wichita Mounta     94.08  54  P        P        05 51 23.0 -0.5
      baz=246,SNR=30
WMOK                                S        S        06 02 02.6 +4.4
      baz=246
WMOK  Wichita Mounta     94.08  54  P        P        05 51 23.0 -0.5
      baz=246,SNR=30
WMOK                                S        S        06 02 03.9 +5.7
      baz=246
WMOK  Wichita Mounta     94.08  54 ⇓P        P        05 51 22.9 -0.5
LAO   LASA Array         94.17  41  P        P        05 51 24.8 +1.1
      baz=242
LAO                                 S        S        06 02 04.3 +5.7
      baz=242
LAO   LASA Array         94.17  41  P        P        05 51 24.9 +1.2
      baz=242,SNR=238
LAO                                 S        S        06 02 06.3 +7.8
      baz=242
A21K  Barrow             94.28   7  P        P        05 51 22.6 -0.9
A21K                                IAmb     IAmb     05 51 25.1
      comp=Z,529nm,1.1s
A21K  Barrow             94.28   7  P        P        05 51 22.9 -0.6
      baz=200
A21K                                S        S        06 01 56.4 -1.9
      baz=200
OGNE  Ogallala           94.32  48  P        P        05 51 24.3 -0.2
OGNE                                IAmb     IAmb     05 51 26.9
      comp=Z,619nm,1.2s
OGNE  Ogallala           94.32  48  P        P        05 51 25.0 +0.4
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      baz=244
OGNE                                S        S        06 02 04.8 +4.7
      baz=244
OGNE  Ogallala           94.32  48  P        P        05 51 24.9 +0.4
      baz=244,SNR=31
OGNE                                S        S        06 02 06.4 +6.3
      baz=244
RSSD  Black Hills        94.37  44  P        P        05 51 24.2 -0.6
RSSD                                IAmb     IAmb     05 51 27.0
      comp=Z,376nm,0.8s
RSSD  Black Hills        94.37  44  P        P        05 51 24.3 -0.6
RSSD                                pmax     pmax
      comp=Z,376nm,0.8s
RSSD  Black Hills        94.37  44  P        P        05 51 25.1 +0.2
      baz=243
RSSD                                S        S        06 02 03.4 +2.6
      baz=243
RSSD  Black Hills        94.37  44  P        P        05 51 24.9 +0.1
      baz=243
RSSD                                S        S        06 02 06.0 +5.3
      baz=243
RSSD  Black Hills        94.37  44 ⇑P        P        05 51 24.7 -0.1
RSSD                               ⇑P        P        05 51 24.9 +0.1
HKT   Hockley            94.49  60d iP       P        05 51 25.7 +0.4
HKT                                i *PP     pP       05 52 59.1 +0.3
HKT                                 pmax     pmax
      comp=Z,413nm,1.7s
HKT   Hockley            94.49  60  P        P        05 51 26.5 +1.2
      baz=247
HKT                                 S        S        06 01 59.8 -1.9
      baz=247
HKT   Hockley            94.49  60 ⇑P        P        05 51 26.7 +1.4
U32A  Winter Ranch,      94.58  53  P        P        05 51 26.0 +0.3
      baz=246,SNR=74
U32A                                S        S        06 02 07.7 +5.2
      baz=246
CIT   Chita              94.61 325 eP        P        05 51 25.4 -0.1
CIT                                e                  05 53 04.2
CIT                                e                  05 55 16.6
CIT                                e                  05 57 27.3
CIT                                e                  06 01 20.3
CIT                                e                  06 04 20.3
CIT                                 pmax     pmax
      comp=Z,583nm,2.8s
Z35A  Perchaven, San     94.68  56  P        P        05 51 26.6 +0.3
      baz=247,SNR=58
Z35A                                S        S        06 02 06.0 +2.5
      baz=247
CBKS  Cedar Bluff        95.03  50  P        P        05 51 28.5 +0.7
      baz=246,SNR=40
CBKS                                S        S        06 02 07.6 +1.3
      baz=246
CBKS  Cedar Bluff        95.03  50  P        P        05 51 28.1 +0.4
      baz=246
CBKS                                S        S        06 02 12.1 +5.8
      baz=246
CBKS  Cedar Bluff        95.03  50 ⇓P        P        05 51 27.9 +0.2
CBKS                               ⇑P        PcP      05 51 29.1 +1.2
WRGLY Wrigley            95.14  22  P        P        05 51 27.7 +0.1
      baz=230
WRGLY                               S        S        06 02 08.0 +2.0
      baz=230
237A  Washetta, Mont     95.29  58  P        P        05 51 29.8 +0.7
      baz=247,SNR=28
237A                                S        S        06 02 13.2 +4.5
      baz=247
OKCFA Oklahoma City      95.35  54  P        P        05 51 30.2 +1.0
      baz=247,SNR=26
OKCFA                               S        S        06 02 12.8 +3.7
      baz=247
R32A  Long Quarter,      95.61  51  P        P        05 51 31.1 +0.8
      baz=246,SNR=59
R32A                                S        S        06 02 16.5 +5.2
      baz=246
INK   Inuvik             95.77  15  PKKPbc   PKKPbc   06 08 19.5 -1.5
      comp=Z,9.2nm,0.6s,baz=23,slow=3.6,SNR=11
INK                                 PKPPKP            06 16 24.3
      comp=Z,3.9nm,0.8s,baz=72,slow=4.6,SNR=4.2
INK   Inuvik             95.77  15  P        P        05 51 29.5 -0.7
      baz=221,SNR=210
INK                                 S        S        06 02 09.5 -1.7
      baz=221
AC02  Maricunga          95.96 122  P        P        05 51 33.9 +1.0
TGUH  Tegucigalpa,Un     96.01  77 eP        P        05 51 31.0 -1.8
TGUH  Tegucigalpa,Un     96.01  77 ⇓P        P        05 51 33.6 +0.9
TGUH                               ⇑P        PcP      05 51 34.1 +1.2
NATX  Nacogdoches        96.10  58  P        P        05 51 33.6 +0.9
      baz=248,SNR=12
NATX                                S        S        06 02 16.2 +0.4
      baz=248
NATX  Nacogdoches        96.10  58  P        P        05 51 33.6 +0.9
      baz=248
NATX                                S        S        06 02 21.5 +5.8
      baz=248
DGMT  Dagmar             96.20  40  P        P        05 51 33.7 +0.9
      baz=244,SNR=113
DGMT                                S        S        06 02 22.8 +6.9
      baz=244
DGMT  Dagmar             96.20  40  P        P        05 51 33.4 +0.6
      baz=244,SNR=113
DGMT                                S        S        06 02 23.8 +7.9
      baz=244
GO02  Mina Guanaco       96.37 120  P        P        05 51 35.8 +1.2
ULN   Ulaanbaatar        96.37 319  P        P        05 51 33.2 -0.5
ULN   Ulaanbaatar        96.37 319d iP       P        05 51 33.6 -0.1
ULN                                 pmax     pmax
      comp=Z,104nm,0.9s
ULN   Ulaanbaatar        96.37 319 ⇓P        P        05 51 33.0 -0.7
ULN                                ⇓P        PcP      05 51 33.8  0.0
Z38A  Mt. Pleasant       96.41  57  P        P        05 51 34.8 +0.8
Z38A  Mt. Pleasant       96.41  57  P        P        05 51 34.8 +0.8
      baz=248,SNR=12
Z38A                                S        S        06 02 20.3 +2.1
      baz=248
X37A  Clayton            96.61  55           P        05 51 34.9 -0.1
X37A                                IAmb     IAmb     05 51 37.4
      comp=Z,415nm,1.9s
X37A  Clayton            96.61  55  P        P        05 51 35.5 +0.6
      baz=248,SNR=14
X37A                                S        S        06 02 23.7 +3.8
      baz=248
T35A  Sooner Cattle      96.63  53           P        05 51 34.6 -0.3
T35A                                IAmb     IAmb     05 51 37.2
      comp=Z,362nm,1.6s
T35B  Sooner Cattle      96.63  53  P        P        05 51 36.0 +1.0
      baz=248,SNR=34
T35B                                S        S        06 02 20.3 +0.3
      baz=248
SONM  Songino Array      96.76 319  P        P        05 51 35.3 -0.1
      comp=Z,42nm,0.9s,baz=122,slow=3.2,SNR=40
SONM                                PP       PP       05 55 25.9  -11
      comp=Z,26nm,1.0s,baz=134,slow=4.8,SNR=4.6
SONM                                S        SKSac    06 01 31.5 -0.8
      comp=Z,2.2nm,0.9s,baz=204,slow=3.2,SNR=1.4
SONM                                PKKPbc   PKKPbc   06 08 16.9 -0.8
      comp=Z,30nm,0.8s,baz=265,slow=3.0,SNR=30
SONM                                PKPPKP            06 16 22.0
      comp=Z,4.2nm,1.0s,baz=7.6,slow=4.5,SNR=4.9
      comp=Z,42nm,0.9s
SONM  Songino Array      96.76 319  P        P        05 51 34.6 -0.8
JTS   Las Juntas de      96.78  82deP        P        05 51 37.1 +0.9
JTS                                i *PP     pP       05 53 10.4 +0.9
JTS                                 pmax     pmax
      comp=Z,130nm,1.9s
JTS   Las Juntas de      96.78  82 eP        P        05 51 35.5 -0.7
TUL1  Leonard            96.78  54           P        05 51 35.6 -0.1
TUL1  Leonard            96.78  54  P        P        05 51 36.5 +0.8
      baz=248,SNR=36
TUL1                                S        S        06 02 25.2 +3.8
      baz=248
TUL1  Leonard            96.78  54  P        P        05 51 35.9 +0.2
      baz=248,SNR=36
TUL1                                S        S        06 02 27.7 +6.4
      baz=248
MATN  Matagalpa          96.83  79  P        P        05 51 35.3 -1.1
BOAB  BOACO BROADBA96.89         79 ⇓P        P        05 51 37.1 +0.5
ACON  Acoyapa            97.17  80  P        Pdif     05 51 38.6 +0.7
BGNE  Belgrade           97.18  48  P        Pdif     05 51 38.3 +0.9
      baz=247,SNR=57
BGNE                                S        S        06 02 30.5 +6.0
      baz=247
BGNE  Belgrade           97.18  48  P        Pdif     05 51 38.4 +1.0
      baz=247,SNR=57
BGNE                                S        S        06 02 31.4 +6.8
      baz=247
K31A  O'Neill            97.24  47  P        Pdif     05 51 38.3 +0.7
      baz=247,SNR=26
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K31A                                S        S        06 02 28.0 +3.0
      baz=247
BOD   Bodaibo            97.30 330 eP        P        05 51 36.1 -1.3
BOD                                 pmax     pmax
      comp=Z,75nm,1.7s
KSU1  Kansas State U     97.39  51  P        Pdif     05 51 38.9 +0.6
      baz=248,SNR=28
KSU1                                S        S        06 02 31.1 +4.8
      baz=248
KSU1  Kansas State U     97.39  51  P        Pdif     05 51 38.6 +0.3
      baz=248,SNR=28
KSU1                                S        S        06 02 32.7 +6.4
      baz=248
KSU1  Kansas State U     97.39  51 ⇓P        Pdif     05 51 38.6 +0.3
KSU1                               ⇓P        PcP      05 51 39.4 +1.1
N33B  J Bar K, Exete     97.41  49  P        Pdif     05 51 39.1 +0.7
      baz=247,SNR=18
N33B                                S        S        06 02 31.2 +4.7
      baz=247
HDC   Heredia            97.44  82 ⇓P        Pdif     05 51 41.2 +1.9
E28A  Huff               97.55  43  P        Pdif     05 51 38.9  0.0
E28A                                IAmb     IAmb     05 51 41.6
      comp=Z,204nm,0.9s
E28A  Huff               97.55  43  P        Pdif     05 51 39.2 +0.3
      baz=246,SNR=46
E28A                                S        S        06 02 30.5 +3.1
      baz=246
GTA   Gaotai             97.77 309 ⇓P        Pdif     05 51 41.0 +0.8
GTA                                 pP       pwP      05 53 17.0 +1.0
GTA                                 sP       sP       05 53 55.0 -0.6
GTA                                 PP       PP       05 55 44.3 -0.6
GTA                                 SKS      SKSac    06 01 36.5 -1.3
GTA                                 S        ScS      06 02 35.0 +5.1
GTA                                 pmax     pmax
      comp=Z,63nm,1.3s
GTA                                 pmax     pmax
      comp=Z,3µm,7.3s
SUSD  Miller             97.82  45  P        Pdif     05 51 40.3 +0.2
      baz=247,SNR=9.5
SUSD  Miller             97.82  45  P        Pdif     05 51 40.3 +0.1
      baz=247,SNR=9.5
342B  Flagon Creek P     97.82  59  P        Pdif     05 51 41.5 +1.1
      baz=249
SRBA  San Rafael, Bu     97.86  83  P        Pdif     05 51 41.4 +0.3
YKA   Yellowknife Ar     97.96  25  P        P        05 51 40.0 -0.2
      comp=Z,28nm,0.6s,baz=238,slow=4.3,SNR=250
YKA                                 pP       pwP      05 53 16.6 -0.5
      comp=Z,5.5nm,0.9s,baz=348,slow=25,SNR=1.9
YKA                                 PP       PP       05 55 44.9 -0.7
      comp=Z,16nm,0.9s,baz=233,slow=7.8,SNR=6.7
YKA                                 PKiKP    PKiKP    05 56 10.9 -0.1
      comp=Z,5.5nm,0.6s,baz=250,slow=1.1,SNR=17
YKA                                 PKKPbc   PKKPbc   06 08 12.4 -2.4
      comp=Z,12nm,0.7s,baz=42,slow=2.4,SNR=11
YKA                                 PKPPKP   P'P'df   06 16 13.7  -13
      comp=Z,1.1nm,0.9s,baz=80,slow=2.3,SNR=4.2
      comp=Z,28nm,0.6s
YKA   Yellowknife Ar     97.96  25  P        P        05 51 39.4 -0.9
MIAR  Mount Ida          97.97  56  P        P        05 51 40.9 -0.1
MIAR  Mount Ida          97.97  56  P        P        05 51 40.9 -0.1
MIAR                                pmax     pmax
      comp=Z,115nm,1.7s
MIAR  Mount Ida          97.97  56  P        Pdif     05 51 41.4 +0.4
      baz=249,SNR=28
MIAR  Mount Ida          97.97  56  P        Pdif     05 51 41.1 +0.1
      baz=249,SNR=28
MIAR  Mount Ida          97.97  56 ⇓P        Pdif     05 51 41.5 +0.5
MIAR                               ⇓P        P        05 51 41.7 +0.7
W39A  Magazine           98.05  55  P        Pdif     05 51 41.9 +0.5
      baz=249,SNR=35
W39A  Magazine           98.05  55  P        Pdif     05 51 41.6 +0.2
      baz=249,SNR=35
LVC   Limon Verde        98.11 118  S        SKSac    06 01 41.0 +0.1
      comp=Z,4.0nm,0.8s,baz=272,slow=23,SNR=5.7
LVC   Limon Verde        98.11 118 eP        Pdif     05 51 45.4 +3.0
Z41A  Richland Creek     98.11  58  P        P        05 51 41.7  0.0
      baz=249
Z41A                                P        P        05 51 41.7  0.0
      baz=249
Z41A  Richland Creek     98.11  58  P        P        05 51 41.6  0.0
      baz=249
HHAR  Hobbs              98.32  54  P        Pdif     05 51 42.4 -0.2
      baz=249
X40A  Basin Creek Fa     98.52  56  P        P        05 51 43.9 +0.4
      baz=249
X40A                                P        P        05 51 43.9 +0.4
      baz=249
X40A  Basin Creek Fa     98.52  56  P        P        05 51 43.7 +0.2
      baz=249
L34A  Svendsen Farm,     98.62  48  P        Pdif     05 51 43.7  0.0
      baz=248,SNR=15
N35A  Tabor              98.73  50  P        P        05 51 44.6 +0.3
      baz=248,SNR=36
MDND  Maddock            98.74  42  P        P        05 51 44.4 +0.3
      baz=247,SNR=21
MDND  Maddock            98.74  42  P        P        05 51 44.4 +0.3
      baz=247,SNR=21
C36M  Paulatuk           98.94  17  P        Pdif     05 51 43.4 -1.0
      baz=230,SNR=41
143A  Socs Landing,      99.02  58  P        Pdif     05 51 46.7 +1.0
      baz=250
ECSD  EROS Data Cent     99.11  47  P        Pdif     05 51 46.3 +0.4
      baz=248,SNR=115
ECSD  EROS Data Cent     99.11  47  P        Pdif     05 51 45.8 -0.1
      baz=248
SHL   Shillong           99.12 294⇓iP        Pdif     05 51 45.9 -0.7
SHL                                 IAmb     IAmb     05 51 50.0
      comp=Z,98nm,0.6s
SHL                                i x       pP       05 53 20.6 +0.3
SHL                                ex        sP       05 53 58.8 -3.0
SHL   Shillong           99.12 294  P        Pdif     05 51 46.6  0.0
      SNR=45
OTAV  Otavalo            99.14  93 eP        Pdif     05 51 47.8 +0.5
OTAV  Otavalo            99.14  93 eP        Pdif     05 51 49.9 +2.5
CCAR  Cane Creek         99.15  57  P        Pdif     05 51 47.0 +0.7
      baz=250
U40A  Yellville          99.16  55  P        Pdif     05 51 46.5 +0.2
      baz=249,SNR=46
U40A                                P        Pdif     05 51 46.5 +0.2
      baz=249,SNR=46
U40A  Yellville          99.16  55  P        Pdif     05 51 46.0 -0.3
      baz=249,SNR=46
W41B  Gary Mavity, V     99.21  56  P        Pdif     05 51 47.0 +0.5
      baz=250,SNR=38
W41B  Gary Mavity, V     99.21  56  P        Pdif     05 51 47.0 +0.5
      baz=250,SNR=38
S39A  Bolivar            99.28  53  P        Pdif     05 51 47.1 +0.3
      baz=249,SNR=43
CACAO El Cacao, Vera     99.50  86 eP        Pdif     05 51 44.9 -3.4
VBMS  Vicksburg          99.56  59  P        Pdif     05 51 49.0 +0.9
      baz=250
VBMS  Vicksburg          99.56  59  P        Pdif     05 51 49.1 +1.0
      baz=250
ZAK   Zakamensk          99.66 320 eP        Pdif     05 51 47.2 -1.1
ZAK                                 pmax     pmax
      comp=Z,33nm,1.2s
P38A  Dawn               99.80  51  P        Pdif     05 51 48.5 -0.6
      baz=250,SNR=6.4
IRK   Irkutsk            99.82 322 eP        Pdif     05 51 47.6 -1.2
IRK                                e                  05 54 06.9
IRK                                e                  06 01 46.1
IRK                                 pmax     pmax
      comp=Z,102nm,3.9s
F33A  5 Mile Ranch,     100.09  45  P        Pdif     05 51 50.3 +0.2
      baz=249,SNR=106
D32B  Dogwood Acres,    100.09  43  P        Pdif     05 51 49.8 -0.4
      baz=249,SNR=9.7
346A  Big Creek Wild    100.12  60  P        Pdif     05 51 51.8 +1.1
      baz=250
TIXI  Tiksi             100.15 345  P        Pdif     05 51 49.0 -0.8
      comp=Z,12nm,0.8s,baz=93,slow=23,SNR=46
TIXI                                pP       pP       05 53 25.0 +0.8
      comp=Z,3.3nm,0.7s,baz=270,slow=20,SNR=1.2
TIXI                                PP       PP       05 55 57.5 -4.3
      comp=Z,66nm,1.1s,baz=270,slow=20,SNR=14
TIXI                                PKiKP    PKiKP    05 56 14.7 -0.1
      comp=Z,16nm,0.6s,baz=355,slow=0.8,SNR=8.7
TIXI  Tiksi             100.15 345  P        Pdif     05 51 49.0 -0.8
R40A  Maddies Statio    100.27  53  P        Pdif     05 51 51.5 +0.3
      baz=250,SNR=52
GOMU  GeErMu            100.34 305  P        Pdif     05 51 52.5 +0.5
GOMU                                PP       PP       05 56 00.5 -4.2
GOMU                                SKS      SKSac    06 01 44.3 -6.8
GOMU                                SS       SS       06 09 57.8 -0.8
A36M  Sachs Harbour     100.38  15  P        Pdif     05 51 50.5 -0.3
      baz=229
N38A  Joes South For    100.41  50  P        Pdif     05 51 51.8 +0.1
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	baz=250,SNR=18						
GCUF	Volcan Galeras	100.53	93	*e*P	Pdif	05 51 54.5	+0.9
SCIA	State Center	100.81	49	P	Pdif	05 51 53.6	+0.2
	baz=250						
SCIA	State Center	100.81	49	P	Pdif	05 51 54.1	+0.6
	baz=250						
P40A	Paris	100.84	52	P	Pdif	05 51 53.7	0.0
	baz=250,SNR=26						
146A	Union	100.86	59	P	Pdif	05 51 54.4	+0.4
	baz=251						
Y45A	Yeager Farm, C	100.88	58	P	Pdif	05 51 54.6	+0.7
	baz=251						
CCM	Cathedral Cave	100.95	53	P	Pdif	05 51 53.6	-0.5
	baz=251,SNR=19						
CCM	Cathedral Cave	100.95	53	P	Pdif	05 51 53.7	-0.5
	baz=251						
LSA	Lhasa	101.11	298	P	Pdif	05 51 55.5	-0.2
LSA	Lhasa	101.11	298	Pdiff	Pdif	05 51 54.0	-1.8
PBMO	Poplar Bluff	101.14	55	P	Pdif	05 51 55.1	+0.1
	baz=251						
OXF	Oxford	101.19	57	P	Pdif	05 51 54.0	-1.4
	baz=251						
OXF	Oxford	101.19	57	P	Pdif	05 51 55.7	+0.3
	baz=251						
AGMN	Agassiz Nation	101.23	42	P	Pdif	05 51 55.2	0.0
	baz=250,SNR=47						
AGMN	Agassiz Nation	101.23	42	P	Pdif	05 51 54.8	-0.4
	baz=250,SNR=47						
CZSB	Cruzeiro do Su	101.31	103	*e*P	Pdif	05 51 58.6	+2.2
UPA	Univ. de Panam	101.31	85	*e*P	Pdif	05 51 58.0	+1.7
K38A	Parkersburg	101.36	49	P	Pdif	05 51 54.8	-1.1
	baz=251,SNR=9.8						
I37B	Waseca	101.39	47	P	Pdif	05 51 56.4	+0.4
	baz=250,SNR=29						
MOY	Mondy	101.48	321	*e*P	Pdif	05 51 55.8	-0.6
MOY				pmax	pmax		
	comp=Z,81nm,2.9s						
FVM	French Village	101.54	54	P	Pdif	05 51 57.0	+0.2
	baz=251,SNR=23						
SOTA	Rioblanco	101.55	92	*e*P	Pdif	05 51 58.0	-0.1
W45A	Hickory Valley	101.57	57	P	Pdif	05 51 57.3	+0.3
	baz=251						
LPAZ	La Paz	101.66	113	P	Pdif	05 52 01.1	+2.5
	comp=Z,16nm,0.8s,baz=246,slow=2.8,SNR=64						
LPAZ				pP	pwP	05 53 35.0	-0.7
	comp=Z,5.1nm,1.0s,baz=251,slow=4.8,SNR=1.8						
LPAZ				PP	PP	05 56 13.2	-1.5
	comp=Z,25nm,1.2s,baz=245,slow=4.0,SNR=7.0						
LPAZ				PKKPbc	PKKPbc	06 08 02.5	-0.8
	comp=Z,15nm,0.9s,baz=35,slow=2.4,SNR=11						
LPAZ				PKPPKP	P'P'df	06 16 21.1	-2.5
	comp=Z,3.0nm,0.9s,baz=61,slow=5.6,SNR=5.6						
LPAZ	La Paz	101.66	113	*e*P	Pdif	05 52 00.8	+2.1
LPAZ	La Paz	101.66	113	*e*P	Pdif	05 52 00.3	+1.6
PCON	Cinco Dias	101.82	92	*e*P	Pdif	05 51 58.4	-0.9
Z47A	Carrollton	101.83	59	P	Pdif	05 51 57.5	-0.7
	baz=251						
SLM	Saint Louis	101.89	53	P	Pdif	05 51 58.3	0.0
	baz=251						
ULM	Lac du Bonnet	101.90	41	P	Pdif	05 51 58.0	-0.1
	comp=Z,31nm,1.1s,baz=255,slow=5.3,SNR=23						
ULM				pP	pwP	05 53 33.7	-1.4
	comp=Z,8.5nm,0.9s,baz=250,slow=6.4,SNR=1.9						
ULM				PP	PP	05 56 06.1	-9.3
	comp=Z,24nm,1.1s,baz=271,slow=9.8,SNR=3.7						
ULM				PKiKP	PKiKP	05 56 17.8	-0.7
	comp=Z,35nm,0.8s,baz=278,slow=3.1,SNR=8.4						
ULM				PKKPbc	PKKPbc	06 08 01.3	-1.8
	comp=Z,3.6nm,0.5s,baz=79,slow=5.4,SNR=3.1						
ULM				PKPPKP	P'P'df	06 16 19.9	+0.6
	comp=Z,8.2nm,0.9s,baz=41,slow=2.4,SNR=7.4						
F36A	Milaca	101.91	45	P	Pdif	05 51 58.8	+0.5
	baz=251,SNR=78						
N41A	Harden Midland	102.09	51	P	Pdif	05 51 59.2	0.0
	baz=251						
SPMN	Marine on St.	102.19	46	P	Pdif	05 51 60.0	+0.4
	baz=251,SNR=28						
SPMN	Marine on St.	102.19	46	P	Pdif	05 51 59.8	+0.3
	baz=251,SNR=28						
FLOC	Florencia	102.23	93	*e*P	Pdif	05 52 00.8	+0.2
L40A	Anamosa	102.26	50	P	Pdif	05 52 00.2	+0.3
	baz=251,SNR=6.9						
S44A	Carbondale	102.32	54	P	Pdif	05 52 00.6	+0.3
	baz=252						
MARP	Paez Belalcaza	102.42	92	*e*P	Pdif	05 52 02.3	+0.6
SLGI	Shiliguri	102.44	294	*i* x	sPdif	05 54 16.9	+0.6
YOTC	Yotoco, Valle	102.48	91	*e*P	Pdif	05 51 58.4	-3.3
T45B	Paducah	102.57	55	P	Pdif	05 52 01.8	+0.4
	baz=252						
B35A	Bob, Littlefor	102.60	43	P	Pdif	05 52 00.8	-0.5
	baz=251						
GARC	Garzon, Huila	102.61	93	*e*P	Pdif	05 52 01.9	-0.6
LRAL	Lakeview Retre	102.63	59	P	Pdif	05 52 01.8	0.0
	baz=252						
LRAL	Lakeview Retre	102.63	59	P	Pdif	05 52 01.7	-0.1
	baz=252						
BWNR	Bhubaneshwar	102.67	287	*e*P	Pdif	05 52 00.7	-1.5
P43A	Skaggs, Pawnee	102.73	52	P	Pdif	05 52 01.1	-1.0
	baz=252,SNR=13						
PLMC	San Jos del P	102.87	90	*e*P	Pdif	05 52 03.5	+0.1
Q44A	Meyer Farm, Va	102.88	53	P	Pdif	05 52 02.5	-0.3
	baz=252						
250A	Grady	102.89	61	P	Pdif	05 52 03.4	+0.4
	baz=252						
451A	Vernon	102.90	62	P	Pdif	05 52 03.5	+0.5
	baz=252						
WVT	Waverly	102.93	56	P	Pdif	05 52 03.3	+0.3
	baz=252						
WVT	Waverly	102.93	56	P	Pdif	05 52 03.4	+0.4
	baz=252						
PALK	Pallekele	102.94	273	Pdiff	Pdif	05 52 04.7	+1.0
	comp=Z,18nm,0.9s,baz=315,slow=2.9,SNR=2.1						
PALK				PKiKP	PKiKP	05 56 21.8	+0.2
	comp=Z,101nm,1.1s,baz=170,slow=1.9,SNR=6.4						
X48A	Hartselle	103.03	58	P	Pdif	05 52 03.4	-0.1
	baz=252						
HDIL	Hopedale	103.17	51	P	Pdif	05 52 03.9	-0.2
	baz=252						
HDIL	Hopedale	103.17	51	P	Pdif	05 52 04.0	0.0
	baz=252						
CAPC	Capurgana	103.20	86	*e*P	Pdif	05 52 05.0	+0.2
JFWS	Jewell Farm	103.21	49	P	Pdif	05 52 03.8	-0.3
	baz=252,SNR=29						
JFWS	Jewell Farm	103.21	49	P	Pdif	05 52 03.9	-0.3
	baz=252						
TAPN	Taplejung	103.24	294	*e*P	Pdif	05 52 05.0	0.0
I40A	Norwalk	103.25	48	P	Pdif	05 52 03.9	-0.4
	baz=252,SNR=15						
L42A	Oliver, Polo	103.34	50	P	Pdif	05 52 04.2	-0.5
	baz=252,SNR=9.0						
Y49A	Blount Mountai	103.35	59	P	Pdif	05 52 04.6	-0.4
	baz=252						
E38A	The Farm, Brul	103.45	45	P	Pdif	05 52 04.8	-0.3
	baz=252,SNR=5.5						
CBOC	Ciudad Bolivar	103.47	89	*e*P	Pdif	05 52 04.5	-1.6
ORTC	Ortega, Tolima	103.47	91	*e*P	Pdif	05 51 59.1	-6.9
ANIL	Santa Ana	103.54	91	*e*P	Pdif	05 52 08.4	+1.8
V48A	Smith Brothers	103.59	57	P	Pdif	05 52 05.8	-0.2
	baz=252						
O44A	Mansfield	103.66	52	P	Pdif	05 52 05.9	-0.3
	baz=253						
NIZA	Niza - Manizal	103.68	90	*e*P	Pdif	05 52 03.6	-3.7
DBBC	Dabeiba	103.69	88	*e*P	Pdif	05 52 10.2	+3.2
BOK	Bokaro	103.70	290	*e*P	Pdif	05 52 06.0	-0.8
PRAC	Prado	103.73	92	*e*P	Pdif	05 52 07.6	+0.4
T47A	Sharon Grove	103.74	56	P	Pdif	05 52 06.8	+0.2
	baz=253						
553A	Crawfordville	103.85	63	P	Pdif	05 52 07.3	+0.1
	baz=252						
ITQB	Itaqui	103.86	130	*e*P	Pdif	05 52 10.1	+2.7
EYMN	Ely	103.89	44	P	Pdif	05 52 06.8	-0.2
	baz=252,SNR=10						
EYMN	Ely	103.89	44	P	Pdif	05 52 06.8	-0.2
	baz=252						
G40A	Rib Lake	103.95	47	P	Pdif	05 52 07.3	-0.1
	baz=253,SNR=7.6						
HELC	Santa Helena	104.03	89	*e*P	Pdif	05 52 06.7	-2.2
RAMN	Ramite	104.06	294	*e*P	Pdif	05 52 09.1	+0.5
	comp=Z,40nm,0.8s						
RAMN	Ramite	104.06	294	*e*P	PKiKP	05 56 23.2	-0.4
	comp=Z,332nm,1.0s						
MACC	Macarena, Meta	104.12	93	*e*P	Pdif	05 52 07.5	-1.4
Z51A	Franklin	104.17	60	P	Pdif	05 52 08.5	-0.1
	baz=253						
M44A	Midewin, Midew	104.33	51	P	Pdif	05 52 09.4	+0.3
	baz=253						
152A	Waverly Hall	104.35	60	P	Pdif	05 52 09.4	0.0
	baz=253						
NORC	Norcasia	104.42	90	*e*P	Pdif	05 52 08.7	-1.5
I42A	Draeger Farm,	104.43	48	P	Pdif	05 52 08.9	-0.6
	baz=253,SNR=7.8						
P46A	Rosedale	104.43	53	P	Pdif	05 52 09.5	-0.1
	baz=253						
RAGD	RAYAGADA	104.43	285	*e*P	Pdif	05 52 09.5	-0.5
UREC	San Jos de Ur	104.58	87	*e*P	Pdif	05 52 09.7	-1.2
W50A	Signal Mountai	104.61	58	P	Pdif	05 52 10.1	-0.5
	baz=253						
JIRN	Jiri	104.62	294	*e*P	Pdif	05 52 12.0	+0.8
U49A	Red Boiling Sp	104.62	56	P	Pdif	05 52 10.2	-0.4
	baz=253						
L44A	Lake County Fo	104.64	50	P	Pdif	05 52 10.2	-0.3
	baz=254						
L44A	Lake County Fo	104.64	50	P	Pdif	05 52 10.0	-0.5
	baz=254						
ROSC	El Rosal	104.67	91	Pdiff	Pdif	05 52 12.5	+0.7
	comp=Z,2.2nm,0.3s,baz=288,slow=12,SNR=1.3						
ROSC				PKiKP	PKiKP	05 56 25.6	+0.3
	comp=Z,6.1nm,0.3s,baz=354,slow=23,SNR=4.2						
ROSC				PKKPbc	PKKPbc	06 07 53.9	-0.1
	comp=Z,33nm,0.9s,baz=137,slow=4.3,SNR=8.0						
PLTB	Pedras Altas	104.70	134	*e*P	Pdif	05 52 14.7	+3.5
SFIN	Lafayette	104.73	52	P	Pdif	05 52 11.0	+0.1
	baz=254						
SFIN	Lafayette	104.73	52	P	Pdif	05 52 11.1	+0.2
	baz=254						
X51A	Calhoun	104.78	58	P	Pdif	05 52 11.2	-0.1
	baz=253						
X51A				P	Pdif	05 52 11.2	-0.1
	baz=253						
COWI	Conover	104.90	46	P	Pdif	05 52 11.8	+0.2
	baz=254						
JHSG	JHARSUGUGA	104.93	288	*e*P	Pdif	05 52 10.6	-1.6
JHSG				*i* x	sPdif	05 54 25.8	-1.7
GUN	Gumba	104.95	294	*e*P	Pdif	05 52 12.9	+0.2
GUN	Gumba	104.95	294	*e*P	PKiKP	05 56 24.2	-1.1
	comp=Z,321nm,1.0s						
CHIC	Chingaza	105.14	91	*e*P	Pdif	05 52 13.4	-0.4
PTBC	PUERTO BERRIO,	105.15	89	*e*P	Pdif	05 52 12.4	-1.0
SPBC	San Pablo de B	105.19	90	*e*P	Pdif	05 52 08.5	-5.2
Y52A	Lilburn	105.22	59	P	Pdif	05 52 13.1	-0.2
	baz=254,SNR=5.8						
Y52A				P	Pdif	05 52 13.1	-0.2
	baz=254,SNR=5.8						
CPUP	Villa Florida	105.25	127	Pdiff	Pdif	05 52 14.0	+0.3
	comp=Z,3.3nm,0.9s,baz=273,slow=2.6,SNR=4.4						
CPUP				PKiKP	PKiKP	05 56 25.8	+0.2
	comp=Z,7.4nm,0.8s,baz=292,slow=2.3,SNR=9.5						
CPUP				PKPPKP	P'P'df	06 16 03.3	-13
	comp=Z,3.2nm,0.8s,baz=66,slow=5.2,SNR=4.4						
CPUP	Villa Florida	105.25	127	*e*P	Pdif	05 52 17.2	+3.5
PKI	Pulchoki	105.25	294	*e*P	Pdif	05 52 14.1	+0.1
	comp=Z,110nm,0.9s						
PKI	Pulchoki	105.25	294	*e*P	PKiKP	05 56 24.8	-1.1
	comp=Z,146nm,0.8s						
PKIN	Phulchoki	105.27	294	*e*P	Pdif	05 52 14.4	+0.4
	comp=Z,105nm,0.9s						
PKIN	Phulchoki	105.27	294	*e*P	PKiKP	05 56 24.7	-1.1
	comp=Z,170nm,0.8s						
H43A	Windswept, Lux	105.38	48	P	Pdif	05 52 13.1	-0.6
	baz=254						
KKN	Kakani	105.43	294	*e*P	PKiKP	05 56 24.9	-1.1
T50A	Nancy	105.49	56	P	Pdif	05 52 13.8	-0.6
	baz=254						
T50A				P	Pdif	05 52 13.8	-0.6
	baz=254						
DMN	Daman	105.52	294	*e*P	Pdif	05 52 16.5	+1.4
	comp=Z,160nm,0.8s						
DMN	Daman	105.52	294	*e*P	PKiKP	05 56 25.6	-0.7
V51A	Loudon	105.53	57	P	Pdif	05 52 14.3	-0.3
	baz=254						
D41A	Chassel	105.54	45	P	Pdif	05 52 14.2	-0.2
	baz=254						
GOGA	Godfrey	105.57	60	P	Pdif	05 52 15.3	+0.5
	baz=254						
GOGA	Godfrey	105.57	60	P	Pdif	05 52 15.1	+0.3
	baz=254						
R49A	Shelbyville	105.58	55	P	Pdif	05 52 14.7	0.0
	baz=254						
R49A				P	Pdif	05 52 14.7	0.0
	baz=254						
CPSB	Cacapava Do Su	105.64	133	*e*P	Pdif	05 52 18.0	+2.7
SJCC	San Jacinto, C	105.65	85	*e*P	Pdif	05 52 18.3	+2.6
W52A	Murphy	105.67	58	P	Pdif	05 52 14.9	-0.4
	baz=254,SNR=5.7						
P48A	Milroy	105.71	53	P	Pdif	05 52 14.5	-0.8
	baz=254						
P48A				P	Pdif	05 52 14.5	-0.8
	baz=254						
L46A	Eue Claire	105.75	51	P	Pdif	05 52 15.4	0.0
	baz=254						
L46A				P	Pdif	05 52 15.4	0.0
	baz=254						
TKL	Tuckaleechee C	105.94	58	P	Pdif	05 52 15.6	-0.9
	baz=254,SNR=5.1						
GKN	Gorkha	106.03	294	*e*P	Pdif	05 52 17.7	+0.5
GKN	Gorkha	106.03	294	*e*P	PKiKP	05 56 25.7	-1.4
	comp=Z,103nm,0.7s						
VJD	Vijayawada	106.10	282	*e*P	Pdif	05 52 17.3	-0.2
VJD				*i* x	sPdif	05 54 35.7	+3.1
O48B	Farmland	106.12	53	P	Pdif	05 52 14.4	-2.7
	baz=255						
O48B	Farmland	106.12	53	P	Pdif	05 52 17.1	-0.1
	baz=255						
V52A	Sevierville	106.13	57	P	Pdif	05 52 16.0	-1.3
	baz=254,SNR=6.0						
RUSC	La Rusia	106.19	90	*e*P	Pdif	05 52 14.1	-4.6
R50A	Paris	106.22	55	P	Pdif	05 52 16.8	-0.8
	baz=254,SNR=5.3						
R50A				P	Pdif	05 52 16.8	-0.8
	baz=254,SNR=5.3						
ETMB	Extrema	106.23	108	*e*P	Pdif	05 52 19.9	+1.7
P49A	Miami Univ. Ec	106.26	54	P	Pdif	05 52 17.6	-0.1
	baz=255						
P49A	Miami Univ. Ec	106.26	54	P	Pdif	05 52 17.5	-0.2
	baz=255						
I45A	Fountain	106.33	49	P	Pdif	05 52 17.8	-0.2
	baz=255						
I45A				P	Pdif	05 52 17.8	-0.2
	baz=255						
TZTN	Tazewell	106.36	57	P	Pdif	05 52 16.7	-1.6
	baz=254						
TZTN	Tazewell	106.36	57	P	Pdif	05 52 18.0	-0.3
	baz=254						
E43A	Lone Tree Farm	106.41	46	P	Pdif	05 52 17.5	-0.7
	baz=255						
BLSP	Bilaspur	106.49	288	*e*P	Pdif	05 52 18.4	-0.8
BLSP				*i* x	sPdif	05 54 34.6	+0.2
VLK	Valmikinagar	106.49	293	*e*P	Pdif	05 52 19.5	+0.4
VLK				*i* x	sPdif	05 54 31.3	-3.0
VAR	Varanasi	106.65	291	*e*P	Pdif	05 52 17.3	-2.5
VAR				*i* x	sPdif	05 54 35.7	+0.7
V53A	Saluda	106.70	58	P	Pdif	05 52 19.6	-0.3
	baz=255						
V53A				P	Pdif	05 52 19.6	-0.3
	baz=255						
O49A	Covington	106.71	53	P	Pdif	05 52 19.2	-0.5
	baz=255						
O49A				P	Pdif	05 52 19.2	-0.5
	baz=255						
HODGE	Hodges	106.76	59	P	Pdif	05 52 20.0	-0.1
	baz=254						
SALM	Salem	106.76	276	*e*P	Pdif	05 52 21.7	+1.2
TRD	Trivandrum	106.84	273	*e*P	Pdif	05 52 22.5	+1.6
TRD				*i* x	sPdif	05 54 37.8	+1.8
DANN	Dangsing	106.87	294	*e*P	Pdif	05 52 22.4	+1.3
	comp=Z,84nm,0.9s						
DANN	Dangsing	106.87	294	*e*P	PKiKP	05 56 28.0	-0.8
	comp=Z,234nm,0.8s						
KOD	Kodaikanal	106.96	274	*e*P	Pdif	05 52 20.6	-1.2
G45A	Suttons Bay	106.98	48	P	Pdif	05 52 20.2	-0.6
	baz=256						
G45A				P	Pdif	05 52 20.2	-0.6
	baz=256						
N49A	Columbus Grove	107.01	52	P	Pdif	05 52 20.3	-0.7
	baz=255						
N49A				P	Pdif	05 52 20.3	-0.7
	baz=255						
HAW	Hawthorne Fire	107.05	60	P	Pdif	05 52 20.6	-0.8
	baz=254,SNR=5.7						
L48A	N Adams	107.08	51	P	Pdif	05 52 21.3	0.0
	baz=256						
L48A				P	Pdif	05 52 21.3	0.0
	baz=256						
J47A	Sunmer	107.12	50	P	Pdif	05 52 21.4	-0.1
	baz=256						
J47A				P	Pdif	05 52 21.4	-0.1
	baz=256						
Q51A	Peebles	107.15	54	P	Pdif	05 52 21.8	0.0
	baz=255						
Q51A				P	Pdif	05 52 21.8	0.0
	baz=255						
PYUN	Piuthan	107.46	294	*e*P	Pdif	05 52 24.8	+1.2
PYUN	Piuthan	107.46	294	*e*P	PKiKP	05 56 28.4	-1.4
	comp=Z,200nm,1.0s						
TAMC	Tame, Arauca	107.59	90	*e*P	Pdif	05 52 23.3	-1.0
U54A	Nelsons Funny	107.69	57	P	Pdif	05 52 22.8	-1.5
	baz=255						
U54A				P	Pdif	05 52 22.8	-1.5
	baz=255						
ALBI	Allahabad	107.70	291	*e*P	Pdif	05 52 23.9	-0.5
ALBI				*i* x	sPdif	05 54 36.8	-2.9
ACSO	Alum Creek Sta	107.72	53	P	Pdif	05 52 23.9	-0.3
	baz=256						
ACSO	Alum Creek Sta	107.72	53	P	Pdif	05 52 24.4	+0.2
	baz=256						
AAM	Ann Arbor	107.73	51	P	Pdif	05 52 24.5	+0.3
	baz=256						
KMSC	Kings Mountain	107.73	59	P	Pdif	05 52 23.7	-0.7
	baz=255						
KMSC	Kings Mountain	107.73	59	P	Pdif	05 52 23.8	-0.6
	baz=255						
WMQ	Urumqi	107.76	311	Pdif	Pdif	05 52 25.3	+0.9
WMQ				PP	PP	05 56 54.8	-3.9
WMQ				AMB	AMB		
	comp=Z,4μm,6.9s						
SIV	San Ignacio	107.77	116	PKiKP	PKiKP	05 56 30.0	-0.5
	comp=Z,6.9nm,0.5s,baz=207,slow=3.5,SNR=20						
SIV				S	SKSac	06 02 24.5	-0.6
	comp=Z,5.0nm,1.0s,baz=340,slow=21,SNR=10						
SIV				PKKPbc	PKKPbc	06 07 43.7	-0.8
	comp=Z,14nm,0.8s,baz=65,slow=6.3,SNR=14						
SIV				PKKPab	PKKPab	06 08 00.9	-0.6
	comp=Z,16nm,0.9s,baz=82,slow=5.1,SNR=7.2						
V55A	Taylorsville	108.00	58	P	Pdif	05 52 24.3	-1.3
	baz=256						
V55A				P	Pdif	05 52 24.3	-1.3
	baz=256						
Y57A	Sumter	108.20	60	P	Pdif	05 52 26.2	-0.3
	baz=255						
Y57A				P	Pdif	05 52 26.2	-0.3
	baz=255						
E46A	Sault Ste Mari	108.21	47	P	Pdif	05 52 25.5	-0.7
	baz=257						
P52A	Corning	108.21	54	P	Pdif	05 52 26.2	-0.2
	baz=256						
HYB	Hyderabad	108.28	282	*i* x	Pdif	05 52 27.2	-0.1
HYB				*e*x	sPdif	05 54 42.5	+0.1
HYBB	Hyderabad (bro	108.28	282	*e*Pdif	Pdif	05 52 27.4	+0.1
HYBB				*e*pPdif	pPdif	05 54 02.8	+1.9
HYBB				*e*sPdif	sPdif	05 54 42.2	-0.2
HYBB				*e*PKiKP	PKiKP	05 56 30.6	-0.8
HYBB				*e*		05 56 55.4	
HYBB				*e*SKSac	SKSac	06 02 25.9	-1.3
HYBB				*e*Sdif	Sdif	06 03 57.8	-0.4
HYBB				*e*sSKSac	sSKSac	06 05 25.4	+1.1
HYBB				*e*		06 06 15.1	
N51A	Ashland	108.34	53	P	Pdif	05 52 27.0	+0.1
	baz=256						
N51A				P	Pdif	05 52 27.0	+0.1
	baz=256						
S54A	Dingess, Beckl	108.40	56	P	Pdif	05 52 26.2	-1.2
	baz=256,SNR=5.3						
S54A				P	Pdif	05 52 26.2	-1.2
	baz=256,SNR=5.3						
BRCI	Bahraich	108.51	293	*e*P	Pdif	05 52 29.5	+1.4
O52A	Adamsville	108.55	54	P	Pdif	05 52 28.2	+0.2
	baz=256						
O52A				P	Pdif	05 52 28.2	+0.2
	baz=256						
P53A	Whipple	108.74	54	P	Pdif	05 52 27.9	-0.8
	baz=257,SNR=7.5						
P53A				P	Pdif	05 52 27.9	-0.8
	baz=257,SNR=7.5						
Y58A	Scranton	108.75	60	P	Pdif	05 52 28.6	-0.3
	baz=256,SNR=5.5						
Y58A				P	Pdif	05 52 28.6	-0.3
	baz=256,SNR=5.5						
BLA	Blacksburg	108.95	57	P	Pdif	05 52 29.9	0.0
	baz=256						
BLA	Blacksburg	108.95	57	P	Pdif	05 52 30.1	+0.3
	baz=256						
Q54A	Coxs Mills	109.04	55	P	Pdif	05 52 30.3	+0.1
	baz=257						
Q54A				P	Pdif	05 52 30.3	+0.1
	baz=257						
O53A	New Philadelph	109.04	53	P	Pdif	05 52 30.0	-0.2
	baz=257						
M52A	Chesterland	109.22	52	P	Pdif	05 52 31.0	+0.1
	baz=257						
M52A				P	Pdif	05 52 31.0	+0.1
	baz=257						
RES	Resolute Bay	109.30	16	PKKPbc	PKKPbc	06 07 40.1	-1.1
	comp=Z,5.0nm,0.5s,baz=127,slow=4.9,SNR=11						
RES				PKKPab	PKKPab	06 07 52.5	+1.8
	comp=Z,31nm,0.9s,baz=70,slow=3.8,SNR=11						
N53A	Lisbon	109.45	53	P	Pdif	05 52 31.7	-0.2
	baz=257						
N53A				P	Pdif	05 52 31.7	-0.2
	baz=257						
SDV	Santo Domingo	109.52	88	S	SKSac	06 02 31.7	-1.1
	comp=Z,59nm,0.5s,baz=278,slow=23,SNR=7.9						
M53A	WI Miller and	109.70	52	P	Pdif	05 52 33.5	+0.4
	baz=258						
T57A	Hurt	109.81	57	P	Pdif	05 52 33.9	+0.3
	baz=257						
T57A				P	Pdif	05 52 33.9	+0.3
	baz=257						
T57A				P	PKiKP	05 56 33.9	+0.2
	baz=257,SNR=7.8						
T57A				P	PKiKP	05 56 33.9	+0.2
	baz=257,SNR=7.8						
MCWV	Mont Chateau	109.94	54	P	Pdif	05 52 33.6	-0.6
	baz=258						
LGTI	Lohaghat	110.14	294	*e*x	Pdif	05 52 35.0	-0.2
LGTI				*i* x	sPdif	05 54 50.1	-0.3
PTH	Pithoragarh	110.19	295	*e*x	Pdif	05 52 35.0	-0.7
ERPA	Erie	110.34	52	P	Pdif	05 52 35.9	0.0
	baz=258						
ERPA	Erie	110.34	52	P	Pdif	05 52 36.2	+0.3
	baz=258						
ZSN	Zaisan	110.46	314	*e*P	Pdif	05 52 34.6	-1.7
ZSN				*i*		05 56 33.6	
ZSN				*i*		05 57 16.0	
ZSN	Zaisan	110.46	314	*e*Pdif	Pdif	05 52 34.6	-1.7
	baz=314						
ZSN				*i* PKiKP	PKiKP	05 56 33.7	-0.9
	baz=314						
ZSN				*i* PP	PP	05 57 16.1	-1.9
	baz=314						
CNNC	Cliffs of the	110.49	59	P	Pdif	05 52 36.9	+0.2
	baz=257						
JHNI	Jhansi	110.59	290	*e*x	Pdif	05 52 35.0	-2.3
U59A	Littleton	110.81	58	P	Pdif	05 52 38.8	+0.8
	baz=257						
U59A				P	Pdif	05 52 38.8	+0.8
	baz=257						
BHPL	Bhopal	110.98	287	*e*x	Pdif	05 52 34.4	-4.8
BHPL				IAmb	IAmb	05 52 45.9	
	comp=Z,12nm,1.0s						
BHPL				*i* x	sPdif	05 54 51.6	-2.8
WVNY	West Valley, N	111.41	52	P	Pdif	05 52 38.3	-2.4
	baz=259						
CBN	Corbin Frederi	111.53	56	P	Pdif	05 52 41.2	+0.1
	baz=258						
ZALV	Zalesovo Beam	111.54	321	Pdiff	Pdif	05 52 40.2	-0.7
	comp=Z,2.1nm,0.7s,baz=96,slow=4.5,SNR=12						
ZALV				PKiKP	PKiKP	05 56 34.8	-1.5
	comp=Z,56nm,0.7s,baz=155,slow=0.9,SNR=50						
ZALV				PP	PP	05 57 20.5	-4.8
	comp=Z,23nm,0.9s,baz=76,slow=6.4,SNR=1.8						
ZALV				PKKPbc	PKKPbc	06 07 32.1	-1.3
	comp=Z,7.3nm,0.8s,baz=258,slow=3.7,SNR=5.6						
ZALV				SKKPbc	SKKPbc	06 10 38.5	-1.2
	comp=Z,3.1nm,0.7s,baz=265,slow=3.6,SNR=2.2						
SSPA	Standing Stone	111.61	54	P	Pdif	05 52 41.2	-0.3
	baz=259						
SSPA	Standing Stone	111.61	54	P	Pdif	05 52 41.6	+0.1
	baz=259						
NRIK	Noril'sk	111.88	338	Pdiff	Pdif	05 52 42.0	0.0
	comp=Z,2.3nm,0.7s,baz=97,slow=2.8,SNR=10						
NRIK				PKiKP	PKiKP	05 56 36.1	-0.4

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       comp=Z,39nm,0.7s,baz=100,slow=3.1,SNR=19
NRIK                                PKKPbc    PKKPbc   06 07 31.5 -1.3
       comp=Z,11nm,0.9s,baz=281,slow=4.5,SNR=4.7
MK31   Makanchi Array   112.08 313d iPKIKP    PKiKP    05 56 36.5 -1.2
MKAR   Makanchi Array   112.08 313   Pdiff     Pdif     05 52 43.7 +0.2
       comp=Z,10nm,0.8s,baz=96,slow=6.1,SNR=29
MKAR                                PKiKP     PKiKP    05 56 37.0 -0.6
       comp=Z,30nm,0.6s,baz=222,slow=0.8,SNR=60
MKAR                                PP        PP       05 57 25.8 -3.6
       comp=Z,34nm,1.0s,baz=79,slow=6.4,SNR=5.4
MKAR                                PKKPbc    PKKPbc   06 07 30.0 -1.4
       comp=Z,12nm,0.8s,baz=285,slow=3.2,SNR=6.3
MKAR                                PKPPKP             06 15 57.6
       comp=Z,4.3nm,1.0s,baz=279,slow=2.7,SNR=8.1
SDDR   Presa de Saban   112.09  78  eP        Pdif     05 52 44.9 +0.7
DDI    Dehra Dun        112.19 295  i x       Pdif     05 52 37.9 -6.5
DDI                                 ex        sPdif    05 55 01.0 +1.3
MAKZ   Makanchi         112.30 313   PKIKP    PKiKP    05 56 36.6 -1.5
NDI    New Delhi        112.52 293  eP        PKiKP    05 56 39.0 -0.1
NDI                                 eS        SKSac    06 02 42.0 -2.0
J56A   Wolcott          112.82  51   P        Pdif     05 52 46.6 -0.2
       baz=261
J56A                                 P        Pdif     05 52 46.6 -0.2
       baz=261
POO    Poona            112.89 282⇑iP         PKiKP    05 56 33.0 -7.1
SMLA   Simla            113.11 296  ex        Pdif     05 52 43.0 -5.4
SMLA                                i x       sPdif    05 55 04.3 +0.6
GEDE   Greenville       113.15  55   P        Pdif     05 52 47.7 -0.6
       baz=260
BINY   Binghamton       113.29  52   P        Pdif     05 52 49.4 +0.4
       baz=261
BINY   Binghamton       113.29  52   P        Pdif     05 52 49.2 +0.2
       baz=261
PDGK   Podgornoye       113.52 309   PKIKP    PKiKP    05 56 39.1 -1.6
SEM    Semipalatinsk    113.90 317  eP        Pdif     05 52 49.7 -2.0
SEM                                 i                  05 56 39.0
SEM    Semipalatinsk    113.90 317  ePdif     Pdif     05 52 49.8 -2.0
       baz=317
SEM                                 ePKiKP    PKiKP    05 56 39.1 -2.2
       baz=317
J58A   Remsen           113.97  51   P        Pdif     05 52 52.4 +0.4
       baz=262
J58A                                 P        Pdif     05 52 52.4 +0.4
       baz=262
KPKS   Kokpek           114.12 309  eP        Pdif     05 52 51.1 -1.6
KPKS                                i                  05 56 40.0
KPKS                                i                  05 57 42.1
KPKS   Kokpek           114.12 309  ePdif     Pdif     05 52 51.2 -1.6
       baz=309
KPKS                                i PKP     PKPdf    05 56 40.0 -1.8
       baz=309
KPKS                                i PP      PP       05 57 42.1 -1.9
       baz=309
SATY   Saty             114.26 309  eP        Pdif     05 52 51.7 -1.7
SATY                                i                  05 56 40.7
SATY                                i                  05 57 43.0
SATY   Saty             114.26 309  ePdif     Pdif     05 52 51.7 -1.7
       baz=308
SATY                                i PKP     PKPdf    05 56 40.7 -1.4
       baz=308
SATY                                i PP      PP       05 57 43.1 -2.0
       baz=308
TDK    Taldyqorghan     114.52 311  ePKIKP    PKPdf    05 56 40.9 -1.5
TDK    Taldyqorghan     114.52 311  ePKP      PKPdf    05 56 41.0 -1.4
       baz=311
BRNY   Black Rk. Fore   114.63  53   P        Pdif     05 52 55.4 +0.5
       baz=262
LONY   Lake Ozonia      114.64  50   P        Pdif     05 52 55.5 +0.6
       baz=263
NCB    Newcomb          114.82  51   P        Pdif     05 52 55.1 -0.7
       baz=263
KURK   Kurchatov        114.96 317            PKPdf    05 56 41.9 -1.1
KURK   Kurchatov        114.96 317   PKIKP    PKPdf    05 56 41.9 -1.1
KURBB  Kurchatov Arra   115.01 317   Pdiff    Pdif     05 52 57.5 +1.1
       comp=Z,1.5nm,0.9s,baz=97,slow=3.3,SNR=0.6
KURBB                                PKP      PKPdf    05 56 41.9 -1.2
       comp=Z,81nm,0.8s,baz=98,slow=2.0,SNR=68
KURBB                                PP       PP       05 57 41.2 -8.6
       comp=Z,31nm,0.9s,baz=100,slow=6.5,SNR=8.2
KURBB                                PKPPKP            06 15 50.9
       comp=Z,2.4nm,1.0s,baz=304,slow=2.1,SNR=5.3
WSPT   Westport, CT     115.10  54            PKPdf    05 56 43.0 -0.6
ACCN   Adirondack Com   115.14  51            PKPdf    05 56 42.9 -0.7
MDOK   Medeo            115.26 309  eP        Pdif     05 52 56.0 -1.9
MDOK                                i                  05 56 42.0
MDOK                                i                  05 57 50.4
MDOK   Medeo            115.26 309  ePdif     Pdif     05 52 56.1 -1.9
       baz=308
MDOK                                i PKP     PKPdf    05 56 42.1 -2.0
       baz=308
MDOK                                i PP      PP       05 57 50.4 -1.6
       baz=308
TNSS   Tian-Shan        115.32 308  ePKIKP    PKPdf    05 56 42.5 -2.0
TNSS                                i                  05 57 50.4
TNSS   Tian-Shan        115.32 308  ePKP      PKPdf    05 56 42.5 -2.0
       baz=308
TNSS                                i PP      PP       05 57 50.4 -2.3
       baz=308
AAA    Alma-Ata         115.36 309  ePKIKP    PKPdf    05 56 43.4 -0.8
AAA    Alma-Ata         115.36 309  ePKP      PKPdf    05 56 43.4 -0.8
       baz=309
FRNY   Flat Rock        115.37  50            PKPdf    05 56 43.0 -1.0
CHKK   Chushkaly        115.39 309  ePKIKP    PKPdf    05 56 42.6 -1.5
CHKK                                e                  05 57 51.1
CHKK   Chushkaly        115.39 309  ePKP      PKPdf    05 56 42.7 -1.5
       baz=309
CHKK                                ePP       PP       05 57 51.2 -1.5
       baz=309
KSH    Kashi            115.58 304   PKP      PKiKP    05 56 45.8 +1.0
KSH                                  PP       PP       05 57 54.0 -0.3
KSH                                  SKKS     SKKSac   06 04 11.3 -1.1
KSH                                  SS       SS       06 13 26.3 +4.2
KSH                                  AMB      AMB
       comp=Z,6µm,6.6s
ULHL   Ulahol           115.74 307   P        PKiKP    05 56 45.4 +0.3
       SNR=8.7
ULHL   Ulahol           115.74 307   P        Pdif     05 53 05.2 +5.1
       SNR=22
TULEG  Thule            115.75  14  i P       PKPdf    05 56 43.2 -0.6
L61B   Northampton      115.75  52   P        Pdif     05 53 00.2 +0.3
       baz=263
KUU    Kurty            115.86 309  eP        Pdif     05 52 59.3 -1.1
KUU                                 e                  05 56 43.8
KUU                                 i                  05 57 55.2
KUU    Kurty            115.86 309  ePdif     Pdif     05 52 59.3 -1.1
       baz=309
KUU                                 ePKP      PKPdf    05 56 43.9 -1.1
       baz=309
KUU                                 i PP      PP       05 57 55.2 -0.7
       baz=309
TKM2   Tokmak 2         116.29 308   P        PKPdf    05 56 45.8 -0.4
       SNR=5.4
TKM2   Tokmak 2         116.29 308   P        Pdif     05 53 06.8 +4.3
       SNR=9.6
TKM2   Tokmak 2         116.29 308   PKIKP    PKPdf    05 56 44.6 -1.5
SJG    San Juan         116.53  80            PKPdf    05 56 45.9 -1.1
SJG    San Juan         116.53  80   PKIKP    PKPdf    05 56 45.9 -1.1
BRYW   Bryant College   116.53  53            PKPdf    05 56 45.7 -0.7
HRV    Adam Dziewonsk   116.58  52   P        Pdif     05 53 04.3 +0.8
       baz=264
KBK    Karagaybulak     116.74 308   P        PKPdf    05 56 46.7 -0.3
       SNR=28
KBK    Karagaybulak     116.74 308   P        Pdif     05 53 09.0 +4.5
       SNR=5.9
NIL    Nilore           116.85 298            PKPdf    05 56 45.2 -2.0
NIL    Nilore           116.85 298   PKIKP    PKPdf    05 56 45.3 -2.0
CHMS   Chumysh          116.92 308   P        PKPdf    05 56 46.5 -0.6
       SNR=30
UCH    Uchtor           117.01 307   P        PKiKP    05 56 48.0 +0.1
       SNR=54
UCH    Uchtor           117.01 307   P        Pdif     05 53 11.4 +5.3
       SNR=18
SGDS   Sogindy          117.05 309  eP        Pdif     05 53 04.4 -1.3
SGDS                                i                  05 56 45.7
SGDS                                i                  05 58 02.0
SGDS   Sogindy          117.05 309  ePdif     Pdif     05 53 04.5 -1.3
       baz=309
SGDS                                i PKP     PKPdf    05 56 45.7 -1.7
       baz=309
SGDS                                i PP      PP       05 58 02.0 -2.2
       baz=309
AAK    Ala-Archa        117.07 308   P        PKPdf    05 56 47.3 -0.3
       SNR=23
AAK    Ala-Archa        117.07 308   P        Pdif     05 53 10.8 +4.8
       SNR=9.5
AAK    Ala-Archa        117.07 308   PKP      PKPdf    05 56 47.1 -0.4
       comp=Z,42nm,0.8s,baz=166,slow=2.6,SNR=34
AAK                                  PP       PP       05 58 01.1 -3.5
       comp=Z,11nm,0.9s,baz=78,slow=9.2,SNR=5.3
AAK                                  PKKPbc   PKKPbc   06 07 14.1 -0.4
       comp=Z,25nm,0.7s,baz=275,slow=2.5,SNR=16
AAK    Ala-Archa        117.07 308c iPKIKP    PKPdf    05 56 47.4 -0.2
AAK                                  pmax     pmax
       comp=Z,91nm,1.3s
AAK    Ala-Archa        117.07 308  i PKPdf   PKPdf    05 56 42.9 -4.7
       SNR=24
USP    Ospenovka        117.12 308   P        PKPdf    05 56 47.3 -0.3
       SNR=7.8
USP    Ospenovka        117.12 308   P        Pdif     05 53 10.7 +4.6
       SNR=7.2
EKS2   Erkin-Say        117.60 308   P        PKPdf    05 56 48.4 -0.1
       SNR=18
EKS2   Erkin-Say        117.60 308   P        Pdif     05 53 12.8 +4.5
       SNR=9.7
BTLS   Baital           117.60 310  eP        Pdif     05 53 07.2 -0.8
BTLS                                i                  05 56 47.0
BTLS                                i                  05 58 06.5
BTLS   Baital           117.60 310  ePdif     Pdif     05 53 07.3 -0.8
       baz=310
BTLS                                i PKP     PKPdf    05 56 47.0 -1.3
       baz=310
BTLS                                i PP      PP       05 58 06.5 -1.4
       baz=310
AML    Almayashu        117.61 307   P        PKiKP    05 56 49.2 +0.2
       SNR=14
AML    Almayashu        117.61 307   P        Pdif     05 53 13.9 +5.2
       SNR=27
AML    Almayashu        117.61 307  i PKPdf   PKPdf    05 56 47.3 -1.7
       SNR=60
VOI    Vohitsoka        118.11 228   P        PKPdf    05 56 43.0 -7.2
       SNR=25
VOI    Vohitsoka        118.11 228   PKP      PKiKP    05 56 50.7 +0.4
VOI    Vohitsoka        118.11 228   PKP      PKiKP    05 56 50.7 +0.4
PKME   Peaks-Kenny Pk   118.44  49   P        Pdif     05 53 13.1 +1.3
       baz=267
BDFB   Brasilia         118.50 123   PKP      PKPdf    05 56 50.7 -0.4
       comp=Z,93nm,0.7s,baz=230,slow=1.6,SNR=112
BDFB                                 PKKPbc   PKKPbc   06 07 09.9 +0.9
       comp=Z,34nm,0.9s,baz=84,slow=1.9,SNR=10
BRZS   Berezniki        118.73 316  i PKIKP   PKPdf    05 56 48.5 -1.8
BRZS   Berezniki        118.73 316  i PKP     PKPdf    05 56 48.6 -1.8
       baz=316
OTUK   Ortayu           118.93 314   PKIKP    PKPdf    05 56 49.3 -1.5
DZA    Taraz            119.41 308  ePKIKP    PKPdf    05 56 50.5 -1.4
DZA    Taraz            119.41 308  ePKP      PKPdf    05 56 50.5 -1.4
       baz=308
NOR    Nord             119.86   3  i P       PKPdf    05 56 51.1 -0.6
SCHQ   Schefferville    119.97  38   PKP      PKPdf    05 56 51.7 -0.8
       comp=Z,97nm,0.8s,baz=304,slow=2.0,SNR=68
SCHQ                                 PKKPbc   PKKPab   06 07 03.5 -0.7
       comp=Z,8.8nm,0.7s,baz=113,slow=1.8,SNR=9.2
OPO    Ambohidratompo   120.01 231   PKP      PKiKP    05 56 54.3 +0.2
       comp=Z,142nm,0.8s,baz=138,slow=1.5,SNR=89
OPO                                  PKKPbc   PKKPbc   06 07 02.4 -1.4
       comp=Z,11nm,0.6s,baz=312,slow=2.8,SNR=9.3
KK31   Karatay Array    120.02 308  i PKIKP   PKPdf    05 56 51.8 -1.3
BRVK   Borovoye         120.16 319c iPKIKP    PKPdf    05 56 52.3 -0.7
BRVK                                 pmax     pmax
       comp=Z,253nm,1.0s
UPNV   Upernavik        120.16  17  i P       PKPdf    05 56 52.0 -0.4
IUG    Iuzhnay          120.33 307  ePKIKP    PKPdf    05 56 52.7 -1.1
IUG    Iuzhnay          120.33 307  ePKP      PKPdf    05 56 52.8 -1.1
       baz=307
H05S1  Guadeloupe/Mar   120.37  86   PKP      PKiKP    05 56 54.7 +0.2
       SNR=17
KBL    Kabul            120.43 298   P        PKPdf    05 56 54.0 -0.4
       SNR=71
BRLS   Borolday         120.51 308  ePKIKP    PKPdf    05 56 53.4 -0.6
BRLS   Borolday         120.51 308  ePKP      PKPdf    05 56 53.4 -0.6
       baz=308
CHM    Chimkent         120.65 307   PKIKP    PKPpre   05 56 46.1
H05N1  Guadeloupe/Mar   120.71  84   PKP      PKPdf    05 56 55.1  0.0
       SNR=52
SBV    Sambava          121.09 238   P        PKPdf    05 56 49.5 -6.4
       SNR=6.5
SBV    Sambava          121.09 238   PKP      PKiKP    05 56 56.6 +0.5
SBV    Sambava          121.09 238   PKP      PKiKP    05 56 56.6 +0.5
MSEY   Mahe Island      121.17 250  i PKiKP   PKiKP    05 56 56.3 -0.1
       SNR=6.0
NUUG   Nuugaatsiaq      121.52  18  i P       PKPdf    05 56 54.5 -0.5
KBS    Kingsbay         122.83 358c iPKIKP    PKiKP    05 56 58.0 +0.3
KBS                                  pmax     pmax
       comp=Z,447nm,1.0s
KBS    Kingsbay         122.83 358   IVmB_BB           05 53 28.4
       comp=Z,2µm,3.5s
KBS                                 ePdif     Pdif     05 53 29.9 -0.8
KBS                                 ePKPdf    PKPdf    05 56 57.4 -0.1
KBS                                 ePP       PP       05 58 42.9 +0.7
KBS                                 ePKSdf    PKSdf    06 00 35.6 +2.1
KBS                                 eSKSdf    SKSdf    06 03 31.3 +1.8
KBS                                 eSS       SS       06 14 51.7 -0.2
SUR    Sutherland       122.94 199   Pdiff    Pdif     05 53 34.6 +2.0
       comp=Z,6.8nm,1.2s,baz=133,slow=4.1,SNR=1.9
SUR                                  PKP      PKiKP    05 56 59.8 +0.2
       comp=Z,448nm,0.8s,baz=155,slow=2.3,SNR=175
SUR                                  pPKP     PP       05 58 42.0 -0.9
       comp=Z,73nm,0.9s,baz=152,slow=5.3,SNR=4.3
SUR                                  PKKPbc   PKKPbc   06 06 52.4 -1.2
       comp=Z,27nm,0.9s,baz=3.2,slow=1.7,SNR=15
ILULI  Ilulissat        123.22  20  i P       PKPdf    05 56 57.6 -0.7
SPA0   Spitsbergen Ar   123.35 356  ePdif     Pdif     05 53 33.2 +0.2
SPA0                                 IVmBBB            05 53 36.0
       comp=Z,979nm,3.7s
SPA0                                ePKPdf    PKPdf    05 56 58.0 -0.4
SPA0                                ePP       PP       05 58 45.6 -0.1
SPA0                                eSS       SS       06 14 59.8 +1.2
SPITS  Spitsbergen Ar   123.35 356   pPKP     pPKPdf   05 58 40.3 +3.3
       comp=Z,85nm,1.0s,baz=312,slow=5.4,SNR=2.8
SPITS                                PKKPbc   PKKPbc   06 06 51.2 -1.0
       comp=Z,32nm,0.9s,baz=159,slow=7.2,SNR=7.7
HOPEN  Hopen            124.22 354  ePdif     Pdif     05 53 37.0 +0.2
HOPEN                               ePKPdf    PKPdf    05 56 59.9 -0.3
HOPEN                               ePP       PP       05 58 50.1 -1.4
HOPEN                               eSS       SS       06 15 10.7 +1.3
DAG    Danmarks Havn    124.25   6  i P       PKPdf    05 56 58.6 -1.6
SFJD   Kangerlussuaq    124.41  22   PKKPbc   PKKPbc   06 06 46.6 -1.2
       comp=Z,17nm,0.8s,baz=78,slow=3.2,SNR=11
SFJD                                 SKKPbc   SKKPbc   06 09 58.0 -1.6
       comp=Z,8.5nm,0.9s,baz=153,slow=2.3,SNR=2.4
SFJD   Kangerlussuaq    124.41  22  i P       PKPdf    05 56 59.8 -0.9
HSPB   Hornsund (broa   124.54 356  ePKPdf    PKPdf    05 57 00.4 -0.3
HSPB                                ePP       PP       05 58 51.3 -2.2
HSPB   Hornsund (broa   124.54 356  ePKPdf    PKPdf    05 57 00.6 -0.1
SUMG   Summit           124.66  14  i P       PKPdf    05 57 01.3 -0.3
MDP    Montagnes des    124.79  99   PKP      PKPdf    05 57 03.2 +0.1
       comp=Z,145nm,0.8s,baz=231,slow=3.0,SNR=16
MDP                                  PKKPbc   PKKPbc   06 06 44.6 -0.4
       comp=Z,21nm,1.0s,baz=80,slow=4.3,SNR=6.6
MDP                                  SKKPbc   SKKPbc   06 09 52.5 -2.1
       comp=Z,4.1nm,0.8s,baz=23,slow=7.7,SNR=1.6
BOSA   Boshof           124.82 205   Pdiff    Pdif     05 53 44.2 +3.3
       comp=Z,0.4nm,0.3s,baz=143,slow=5.1,SNR=1.1
BOSA                                 PKP      PKiKP    05 57 03.5 +0.2
       comp=Z,170nm,0.9s,baz=140,slow=4.0,SNR=103
BOSA                                 PKKPbc   PKKPbc   06 06 44.5 -1.5
       comp=Z,16nm,0.6s,baz=332,slow=4.2,SNR=37
SVE    Sverdlovsk       125.11 325c iPKIKP    PKPdf    05 57 01.7 -0.6
SVE                                  pmax     pmax
       comp=Z,468nm,1.0s
NUUK   Nuuk             125.21  26  i P       PKPdf    05 57 02.4 +0.1
DY2G   Dye2             126.17  22  i P       PKPdf    05 57 03.7 -0.7
ARU    Arti             126.32 325   PKP      PKPdf    05 57 04.5 -0.1
       comp=Z,114nm,0.6s,baz=86,slow=1.0,SNR=24
ARU                                  PKKPbc   PKKPbc   06 06 39.7 -0.3
       comp=Z,1.8nm,0.4s,baz=224,slow=2.2,SNR=3.5
ARU                                  PKKP     PKKPdf   06 07 22.3 -0.7
       comp=Z,3.6nm,0.7s,baz=326,slow=5.3,SNR=4.1
ARU                                  SKKPbc   SKKPbc   06 09 49.2 -3.4
       comp=Z,2.2nm,0.5s,baz=202,slow=6.4,SNR=1.6
ARU    Arti             126.32 325   P        Pdif     05 53 45.8 -0.8
ARU                                 i                  05 57 04.3
ARU                                                    05 59 03.9
ARU                                  PPP      PPP      06 01 48.5
ARU                                                    06 03 31.2
DBG    Daneborg         126.35   7  i P       PKPdf    05 57 03.4 -0.9
BJO1   Bjornoya         126.67 354  ePdif     Pdif     05 53 50.0 +2.2
BJO1                                ePKPdf    PKPdf    05 57 04.2 -0.7
BJO1                                eSKSac    SKSac    06 03 32.6 +1.5
BJO1                                eSS       SS       06 15 42.0 +2.3
ICESG  Greenland Ices   126.69  17  i P       PKPdf    05 57 04.3 -1.1
JLN    Jalan Bani Buh   126.90 282   P        PKPdf    05 57 06.5 -0.4
       SNR=32
AB31   Akbulak array    127.03 316  i PKIKP   PKPdf    05 57 05.1 -1.2
WBK    Wadi Bani Khal   127.39 282   P        PKPdf    05 57 07.4 -0.4
       SNR=7.8
WSAR   Wadi Sarin       127.81 283   P        PKPdf    05 57 08.6  0.0
       SNR=16
LBTB   Lobatse          127.85 208   PKP      PKiKP    05 57 09.2 -0.3
       comp=Z,67nm,0.7s,baz=166,slow=3.4,SNR=46
LBTB                                 PKKPbc   PKKPbc   06 06 33.8
       comp=Z,21nm,1.0s,baz=309,slow=4.5,SNR=9.2
LBTB                                 SKKP     SKKPdf   06 10 13.2 -1.3
       comp=Z,9.8nm,1.1s,baz=330,slow=5.5,SNR=3.6
IVI    Ivigtut          127.95  28  i P       PKPdf    05 57 07.0 -0.7
MHTO   MHTO             127.98 280   P        PKPdf    05 57 08.3 -0.6
       SNR=35
AKTO   Aktyubinsk       128.05 318   PKP      PKPdf    05 57 08.2  0.0
       comp=Z,160nm,1.0s,baz=51,slow=2.2,SNR=4.7
AKTO                                 PKKPbc   PKKPbc   06 06 32.9
       comp=Z,4.8nm,0.8s,baz=267,slow=2.2,SNR=2.3
AKTO                                 SKKPbc   SKKPbc   06 09 43.9 -2.4
       comp=Z,5.3nm,1.0s,baz=250,slow=7.7,SNR=2.1
JMDO   Jabal Madar      128.13 282   P        PKPdf    05 57 08.6 -0.6
       SNR=20
DQM    DQM              128.14 279   P        PKPdf    05 57 09.0 -0.2
       SNR=16
SMDO   Samad            128.31 283   P        PKPdf    05 57 09.0 -0.6
       SNR=34
BIDO   Bidbid           128.32 283   P        PKPdf    05 57 08.9 -0.6
       SNR=25
BSY    Bisya            129.02 282   P        PKPdf    05 57 09.9 -1.0
       SNR=28
HOQ    Hoqain           129.07 283   P        PKPdf    05 57 09.7 -1.3
       SNR=28
ISOG   Isortoq, Green   129.15  21  i P       PKPdf    05 57 08.4 -1.4
NRS    Narsarsuaq       129.16  27  i P       PKPdf    05 57 08.0 -1.9
SOCY   Socotra          129.37 268   P        PKPdf    05 57 11.6 -0.3
       SNR=5.4
GEYT   Alibeck          129.41 302   PKP      PKPdf    05 57 11.3 +0.1
       comp=Z,106nm,0.8s,baz=202,slow=1.6,SNR=49
GEYT                                 PP       PP       05 59 26.1 -0.8
       comp=Z,86nm,1.0s,baz=64,slow=6.9,SNR=12
SHAO   Shalim           129.47 276  i PKPdf   PKPdf    05 57 11.8 -0.1
       SNR=10
SOEG   Soedalen         129.47  15  i P       PKPdf    05 57 09.4 -0.9
SCO    Scoresbysund     129.52  10  i P       PKPdf    05 57 10.3  0.0
ANGG   Ammassalik, Gr   129.53  20  i P       PKPdf    05 57 09.1 -1.4
HAMF   Hammerfest       129.67 351  ePdif     Pdif     05 54 03.0 +1.8
HAMF                                 IVmB_BB           05 54 05.5
       comp=Z,552nm,1.9s
HAMF                                ePKPdf    PKPdf    05 57 07.6 -3.0
HAMF                                ePP       PP       05 59 25.4 -1.7
HAMF                                ePS       PS       06 09 38.0 -5.3
HAMF                                eSS       SS       06 16 18.8 +2.2
ARQ    Araqi            129.74 283   P        PKPdf    05 57 11.1 -1.1
       SNR=26
LVZ    Lovozero         129.78 345cePKIKP     PKPdf    05 57 10.7 -0.3
LVZ                                  pmax     pmax
       comp=Z,607nm,2.5s
SOHO   SOHO             129.86 284  i PKPdf   PKPdf    05 57 11.0 -1.4
       SNR=42
DMTO   DMTO             130.02 275   P        PKPdf    05 57 11.9 -1.0
       SNR=7.0
KIRV   Kirov            130.16 330   PKP      PKPdf    05 57 12.1 +0.2
       comp=Z,334nm,0.6s,baz=91,slow=1.3,SNR=61
UOSS   Minazif          130.28 285  i PKPdf   PKPdf    05 57 11.6 -1.6
       SNR=26
PRGR   Permogore        130.32 334⇑iPKIKP     PKPdf    05 57 11.9 -0.2
HATD   Hatta, Dubai     130.33 284   P        PKPdf    05 57 12.6 -0.7
       SNR=47
HATD   Hatta, Dubai     130.33 284  i PKPdf   PKPdf    05 57 12.0 -1.3
       SNR=39
BANOM  Banah            130.33 286   P        PKPdf    05 57 12.5 -0.8
       SNR=8.6
BANOM  Banah            130.33 286  i PKPdf   PKPdf    05 57 10.6 -2.7
       SNR=9.1
APA    Apatity          130.34 345⇓iPKIKP     PKPdf    05 57 10.0 -2.0
APA                                 i                  05 59 37.0
APA                                  pmax     pmax
       comp=Z,103nm,0.7s
ARA0   ARCESS Array S   130.36 349  ePdif     Pdif     05 54 04.6 +0.3
ARA0                                 IVmBBB            05 54 10.1
       comp=Z,738nm,3.4s
ARA0                                e                  05 57 02.6
ARA0                                ePKPdf    PKPdf    05 57 11.7 -0.3
ARA0                                ePP       sPKPdf   05 59 28.8 -2.5
ARCES  ARCESS Array B   130.36 349   PKhKP    PKPpre   05 56 58.0
       comp=Z,7.1nm,0.8s,baz=13,slow=2.0,SNR=14
ARCES                                PKP      PKPdf    05 57 12.2 +0.2
       comp=Z,202nm,0.6s,baz=11,slow=1.8,SNR=78
ARCES                                SKPbc    SKPbc    05 59 54.6 -1.9
       comp=Z,217nm,1.0s,baz=19,slow=5.1,SNR=17
ARCES                                PKKP     PKKPdf   06 07 13.2 -2.2
       comp=Z,9.2nm,0.7s,baz=187,slow=1.8,SNR=7.7
ARCES                                SKKPbc   SKKPbc   06 09 35.9 -3.3
       comp=Z,3.6nm,0.7s,baz=270,slow=0.6,SNR=3.7
ASHO   Ashiyiah         130.37 284   P        PKPdf    05 57 12.5 -0.9
       SNR=35
ASHO   Ashiyiah         130.37 284  i PKPdf   PKPdf    05 57 12.7 -0.8
       SNR=29
MSFE   Esma-Masafi      130.38 285  i PKPdf   PKPdf    05 57 11.9 -1.6
       SNR=32
MASF   Masafi           130.38 285   P        PKPdf    05 57 12.8 -0.6
       SNR=28
MATP   Matopo           130.41 214   PKhKP    PKPpre   05 56 55.5
       comp=Z,8.7nm,0.8s,baz=154,slow=3.6,SNR=9.7
MATP                                 PKP      PKiKP    05 57 14.5 -0.2
       comp=Z,237nm,0.9s,baz=157,slow=1.8,SNR=76
MATP                                 SKPbc    SKPbc    05 59 57.0 -1.5
       comp=Z,262nm,1.1s,baz=151,slow=4.4,SNR=24
MATP                                 SKKPbc   SKKPbc   06 09 34.0 -0.8
       comp=Z,1.6nm,0.4s,baz=268,slow=3.0,SNR=5.2
SHME   Shamm            130.49 286   P        PKPdf    05 57 12.4 -1.2
       SNR=9.9
SHME   Shamm            130.49 286  i PKPdf   PKPdf    05 57 12.6 -0.9
       SNR=12
ALNE   Al Ain           130.55 283   P        PKPdf    05 57 13.1 -0.7
       SNR=35
ALNE   Al Ain           130.55 283  i PKPdf   PKPdf    05 57 13.2 -0.6
       SNR=21
JMIC   Jan Mayen        130.64   4   PKP      PKPdf    05 57 12.7 +0.2
       baz=282,slow=3.6
JMIC   Jan Mayen        130.64   4  ePdif     Pdif     05 54 06.9 +1.4
JMIC                                ePKPdf    PKiKP    05 57 13.2 -0.2
JMIC                                ePP       sPKPdf   05 59 30.0 -1.4
JMIC                                e         PKSdf    06 00 43.7 -4.8
JMIC                                ePKSdf    PKSdf    06 00 43.7 -4.8
JMIC                                eSS       SS       06 16 31.1 +2.9
RBK    Rabkut           130.66 275   P        PKPdf    05 57 14.0 -0.1
       SNR=21
NAZ    Nazwa, Dubai     130.77 285   P        PKPdf    05 57 13.1 -1.0
       SNR=21
NAZ    Nazwa, Dubai     130.77 285  i PKPdf   PKPdf    05 57 13.5 -0.6
       SNR=18
FAQ    Al Faqa, Dubai   130.80 284   P        PKPdf    05 57 13.5 -0.6
       SNR=13
FAQ    Al Faqa, Dubai   130.80 284  i PKPdf   PKPdf    05 57 12.7 -1.5
       SNR=8.5
UMQ    Umm Al-Quwin     130.85 285   P        PKiKP    05 57 14.8 -0.4
       SNR=5.5
UMQ    Umm Al-Quwin     130.85 285  i PKPdf   PKPdf    05 57 14.2  0.0
       SNR=5.9
DOK    Doka             130.99 276   P        PKPdf    05 57 14.4 -0.2
       SNR=14
ASUD   Al Ashush, Dub   131.02 284   P        PKPdf    05 57 14.4 -0.1
       SNR=12
ASUD   Al Ashush, Dub   131.02 284  i PKPdf   PKPdf    05 57 13.8 -0.8
       SNR=7.3
JETT   Jettan, Norway   131.13 351  ePdif     Pdif     05 54 08.3 +0.6
JETT                                ePKPdf    PKPdf    05 57 12.8 -0.8
JETT                                ePP       sPKPdf   05 59 34.0 +1.2
WHFO   Wadi Hawf        131.16 275   P        PKPdf    05 57 14.5 -0.6
       SNR=19
KTK1   Kautokeino       131.20 350  ePdif     Pdif     05 54 09.0 +0.9
KTK1                                 IVmB_BB           05 54 13.7
       comp=Z,432nm,4.2s
KTK1                               ⇓ePKPdf    PKPdf    05 57 12.7 -1.0
KTK1                                ePP       PP       05 59 36.2 -0.7
KTK1                                eSS       SS       06 16 37.4 +2.1
TRO    Tromso           131.26 352  ePdif     Pdif     05 54 09.4 +1.2
TRO                                  IVmBBB            05 54 13.8
       comp=Z,670nm,4.0s
TRO                                ⇓ePKPdf    PKPdf    05 57 13.0 -0.7
TRO                                 ePP       PP       05 59 36.7 -0.6
TRO                                 eSS       SS       06 16 36.7 +0.9
AJN    Ajban            131.32 284   P        PKPdf    05 57 14.5 -0.7
       SNR=12
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AJN	Ajban	131.32	284	i PKPdf	PKPdf	05 57 14.2	-1.0
	SNR=8.4						
ABTO	Aybut	131.46	274	P	PKPdf	05 57 15.8	+0.1
	SNR=14						
MZR	Muzera	132.44	282	P	PKPdf	05 57 17.6	+0.2
	SNR=32						
MZR	Muzera	132.44	282	i PKPdf	PKPdf	05 57 17.6	+0.2
	SNR=23						
KLMR	Klimovskoe	133.17	336	ePKIKP	PKPdf	05 57 17.0	-0.5
KLMR				e		05 59 45.0	
KLMR				e		06 09 31.8	
KLMR				pmax	pmax		
	comp=Z,514nm,1.3s						
KLMR	Klimovskoe	133.17	336	ePKPdf	PKPdf	05 57 17.1	-0.5
KLMR				AMP		05 57 19.5	
	comp=Z,514nm,1.3s						
KLMR				ePP	PP	05 59 45.0	-4.7
KLMR				eSKPbc	SKPbc	06 00 04.1	-2.6
KLMR				ePKS	PKSdf	06 00 47.6	-5.9
KLMR				ePKS	PKSdf	06 00 47.6	-5.9
KLMR				eSKKPbc	SKKPbc	06 09 31.9	+3.3
JRN	Qarnain Island	133.29	284	P	PKPdf	05 57 18.4	-0.5
	SNR=16						
LOF	Lofoten	133.30	354	ePdif	Pdif	05 54 18.7	+1.4
LOF				IVmB_BB		05 54 21.4	
	comp=Z,675nm,2.3s						
LOF				⇓ePKPdf	PKPdf	05 57 16.7	-0.8
LOF				ePP	PP	05 59 47.3	-2.9
LOF				ePKSdf	PKSdf	06 00 54.2	+0.8
LOF				eSS	SS	06 17 02.7	+2.3
STEI	Steigen	133.32	353	⇓ePKPdf	PKPdf	05 57 17.1	-0.5
STEI				ePKSdf	PP	06 00 48.6	+58
STEI				eSS	SS	06 17 01.7	+1.2
BELG	Belogornoye	133.68	323	PKhKP	PKPpre	05 57 06.7	
	comp=Z,43nm,0.7s,baz=166,slow=3.5,SNR=4.5						
BELG				PKP	PKPdf	05 57 18.6	-0.1
	comp=Z,1µm,1.0s,baz=100,slow=1.1,SNR=37						
BELG				SKPbc	SKPbc	06 00 06.5	-2.1
	comp=Z,249nm,1.0s,baz=138,slow=4.6,SNR=4.5						
BELG				PKKP	PKKPdf	06 07 07.6	-1.1
	comp=Z,37nm,0.7s,baz=295,slow=2.7,SNR=7.3						
BELG				SKKPbc	SKKPbc	06 09 24.6	-1.6
	comp=Z,17nm,0.8s,baz=326,slow=3.6,SNR=2.1						
FAUS	Fauske	133.84	353	ePdif	Pdif	05 54 19.9	+0.2
FAUS				IVmB_BB		05 54 30.5	
	comp=Z,396nm,4.0s						
FAUS				ePKPdf	PKPdf	05 57 17.8	-0.8
FAUS				ePP	PP	05 59 52.6	-0.9
FAUS				eSS	SS	06 17 06.9	+0.1
RCBR	Riachuelo	133.87	122	PKhKP	PKPpre	05 57 11.4	
	comp=Z,35nm,0.9s,baz=339,slow=3.6,SNR=8.1						
RCBR				PKP	PKPdf	05 57 20.8	+0.4
	comp=Z,119nm,0.8s,baz=343,slow=2.0,SNR=18						
RCBR				SKPbc	SKPbc	06 00 09.7	-0.9
	comp=Z,31nm,0.7s,baz=8.9,slow=3.7,SNR=15						
BORG	Borgarnes	134.64	14	PKP	PKPdf	05 57 19.9	-0.3
	baz=309,slow=1.8						
LSZ	Lusaka	134.80	217	PKhKP	PKPpre	05 57 06.5	
	comp=Z,5.5nm,0.5s,baz=153,slow=1.8,SNR=8.2						
LSZ				PKP	PKPdf	05 57 22.7	+0.5
	comp=Z,177nm,0.8s,baz=157,slow=2.2,SNR=39						
LSZ				SKPbc	SKPbc	06 00 11.8	-1.8
	comp=Z,42nm,0.9s,baz=155,slow=4.2,SNR=3.9						
LSZ				PKKP	PKKPdf	06 07 05.5	-0.2
	comp=Z,6.5nm,0.5s,baz=248,slow=1.3,SNR=5.8						
LSZ				SKKPbc	SKKPbc	06 09 16.7	-2.3
	comp=Z,4.5nm,0.8s,baz=14,slow=2.4,SNR=3.9						
KONS	Konsvik	134.93	354	e	PKPpre	05 57 09.1	
KONS				ePKPdf	PKPdf	05 57 20.8	+0.2
MOR8	Moi Rana	135.10	353	ePdif	Pdif	05 54 25.7	+0.2
MOR8				ePKPdf	PKPdf	05 57 19.7	-1.3
MOR8				ePP	PP	06 00 01.2	-0.3
MOR8				ePKSdf	PKSdf	06 00 56.4	-0.5
MOR8				eSP	SP	06 09 42.0	+0.7
MOR8				eSS	SS	06 17 21.0	-0.9
STOK	Stokkvaagen	135.10	354	ePKPdf	PKPdf	05 57 21.0	0.0
TSUM	Tsumeb	136.23	202	PKhKP	PKPpre	05 57 13.4	
	comp=Z,8.8nm,0.8s,baz=146,slow=7.8,SNR=5.3						
TSUM				PKP	PKPdf	05 57 24.7	-0.1
	comp=Z,142nm,1.0s,baz=168,slow=2.7,SNR=24						
TSUM				PP	PP	06 00 10.5	+1.8
	comp=Z,74nm,1.0s,baz=146,slow=8.3,SNR=10						
TSUM				PKKP	PKKPdf	06 07 02.3	-0.6
	comp=Z,9.3nm,1.0s,baz=25,slow=2.0,SNR=4.0						
TSUM				SKKPbc	SKKPbc	06 09 13.6	-0.2
	comp=Z,4.6nm,1.0s,baz=352,slow=7.1,SNR=3.2						
MAK	Makhachkala	136.77	310	eP	Pdif	05 54 31.9	-1.4
MAK				i		05 57 24.7	
MAK				e		05 59 01.2	
MAK				ePPP	PPP	06 03 13.7	
MAK				e		06 04 00.6	
MAK				eSS	SS	06 17 40.1	-3.7
MAK				eSSS	SSS	06 22 55.0	
MAK				pmax	pmax		
	comp=Z,225nm,0.8s						
NSS	Namsos	136.96	354	⇓ePKPdf	PKPdf	05 57 23.9	-0.5
NSS				ePP	PP	06 00 13.8	+0.8
NSS				eSS	SS	06 17 44.0	+0.2
KIBK	Kibwezi	137.10	240	P	PKPpre	05 57 16.0	
	SNR=28						
MOS	Moscow	137.12	331	i PKIKP	PKPdf	05 57 22.8	-2.2
MOS				e		06 00 22.9	
MOS				e		06 12 28.0	
MOS				pmax	pmax		
	comp=Z,4µm,5.1s						
MOS				pmax	pmax		
	comp=Z,367nm,0.9s						
FINES	FINESS Array B	137.15	343	PKhKP	PKPpre	05 57 12.0	
	comp=Z,30nm,0.7s,baz=57,slow=3.7,SNR=98						
FINES				PKP	PKPdf	05 57 24.6	-0.3
	comp=Z,228nm,0.9s,baz=64,slow=3.2,SNR=26						
FINES				PP	PP	06 00 15.3	+0.9
	comp=Z,52nm,1.0s,baz=57,slow=5.1,SNR=2.0						
FINES				SKKPbc	SKKPbc	06 09 09.9	-3.9
	comp=Z,7.8nm,0.7s,baz=177,slow=2.8,SNR=2.6						
PUL	Pulkovo	137.21	339	cePKIKP	PKPdf	05 57 25.8	+0.7
PUL				pmax	pmax		
	comp=Z,567nm,1.0s						
VRH	Novokhopyorsk	137.50	323	ePKIKP	PKPdf	05 57 25.4	-0.5
VRH				pmax	pmax		
	comp=Z,350nm,0.6s						
GROC	Groznyy	137.92	311	ePKIKP	PKPdf	05 57 27.1	+0.2
GROC				e		05 59 08.8	
GROC				e		05 59 49.9	
GROC				e		06 00 19.5	
GROC				e		06 04 00.9	
GROC				pmax	pmax		
	comp=Z,159nm,0.8s						
OBN	Obninsk	137.98	331	PKhKP	PKPpre	05 57 14.8	
	comp=Z,11nm,0.5s,baz=50,slow=2.4,SNR=10						
OBN				PKP	PKPdf	05 57 26.6	0.0
	comp=Z,74nm,0.8s,baz=66,slow=1.7,SNR=8.8						
OBN				PP	PP	06 00 15.2	-4.5
	comp=Z,11nm,0.6s,baz=45,slow=4.8,SNR=5.3						
OBN	Obninsk	137.98	331	cePKIKP	PKPdf	05 57 26.8	+0.2
OBN				e		05 59 00.7	
OBN				i SS	SS	06 17 56.9	+0.3
OBN				pmax	pmax		
	comp=Z,498nm,1.3s						
LPSR	Galich'ya Gora	138.28	326	ePKIKP	PKPdf	05 57 26.2	-1.1
LPSR				e		06 00 17.4	
LPSR				pmax	pmax		
	comp=Z,220nm,1.1s						
TBLU	Trondheim	138.38	354	e	PKPpre	05 57 17.6	
TBLU				⇓ePKPdf	PKPdf	05 57 26.9	-0.3
TBLU				ePP	PP	06 00 18.9	-2.9
TBLU				ePKSdf	PKSdf	06 01 03.3	+0.5
TBLU				eSS	SS	06 17 59.2	-1.3
KMBO	Kilima Mbogo	138.46	241	PKhKP	PKPpre	05 57 19.9	
	comp=Z,26nm,0.8s,baz=62,slow=4.7,SNR=40						
KMBO				PKP	PKPdf	05 57 29.9	+0.8
	comp=Z,116nm,0.9s,baz=53,slow=3.4,SNR=22						
KMBO				SKPbc	SKPbc	06 00 22.9	-1.8
	comp=Z,17nm,1.1s,baz=80,slow=4.0,SNR=3.2						
KMBO	Kilima Mbogo	138.46	241	i PKPdf	PKPpre	05 57 16.4	
	SNR=22						
RAF	Rauma	138.60	345	eP	PKPpre	05 57 18.0	
VORR	Voronezh	138.63	325	PKHKP	PKPpre	05 57 19.1	
VORR				pmax	pmax		
	comp=Z,500nm,1.7s						
VSR	Storozhevoye	138.89	325	ePKIKP	PKPdf	05 57 28.3	-0.1
VSR				pmax	pmax		
	comp=Z,370nm,1.0s						
VORD	Divnogorie	138.95	324	ePKIKP	PKPdf	05 57 28.1	-0.4
VORD				pmax	pmax		
	comp=Z,210nm,0.8s						
GOF	Gofitskoye	139.23	314	⇑ePKHKP	PKPpre	05 57 20.4	
GOF				pmax	pmax		
	comp=Z,144nm,0.8s						
ZEI	Tsey	139.37	311	i PKHKP	PKPpre	05 57 20.7	
ZEI				pmax	pmax		
	comp=Z,116nm,1.0s						
VSU	Vasula	139.40	340	eP	PKPpre	05 57 21.3	
ATD	Arta Tunnel	139.45	262	PKhKP	PKPpre	05 57 24.1	
	comp=Z,32nm,0.8s,baz=102,slow=2.6,SNR=15						
ATD				SKPbc	SKPbc	06 00 26.2	-0.8
	comp=Z,6.8nm,0.3s,baz=108,slow=5.0,SNR=1.8						
ATD	Arta Tunnel	139.45	262	P	PKPdf	05 57 24.6	-6.0
	SNR=29						
ATD	Arta Tunnel	139.45	262	eP	PKPpre	05 57 19.1	
ATD				eS	SKiKP	06 00 29.8	0.0
GNI	Garni	139.46	307	PKhKP	PKPpre	05 57 21.8	
	comp=Z,41nm,0.6s,baz=3.6,slow=4.3,SNR=13						
GNI				PKP	PKPdf	05 57 30.4	+0.4
	comp=Z,205nm,0.9s,baz=147,slow=1.0,SNR=18						
GNI				SKPbc	SKPbc	06 00 24.6	-1.9
	comp=Z,40nm,0.7s,baz=177,slow=2.0,SNR=5.6						
GNI	Garni	139.46	307	PKPdf	PKPpre	05 57 20.8	
DOMB	Dombas	139.68	355	ePdif	Pdif	05 54 47.1	+1.2
DOMB				eSKPdf	SKPbc	06 00 25.8	-0.4
DOMB				eSS	SS	06 18 14.4	-1.4
AKN	Aaknes	139.70	356	e	PKPpre	05 57 21.6	
AKN				ePKPdf	PKPdf	05 57 29.6	0.0
AKN				eSKPdf	SKPdf	06 00 25.2	+0.2
AKN				ePKSdf	PP	06 01 05.8	+36
AAL	Aland	139.76	346	eP	PKPpre	05 57 21.0	
KBZ	Khabaz	139.78	312	PKhKP	PKPpre	05 57 22.6	
	comp=Z,23nm,0.9s,baz=50,slow=1.8,SNR=17						
KBZ				SKPbc	SKPbc	06 00 26.0	-0.9
	comp=Z,44nm,1.0s,baz=89,slow=4.0,SNR=7.1						
KBZ				SKKPbc	SKKPbc	06 09 02.7	+0.1
	comp=Z,7.2nm,0.8s,baz=236,slow=5.1,SNR=8.2						
RAYN	Ar Rayn	139.78	281	i PKPdf	PKPpre	05 57 22.7	
	SNR=38						
KVAR	Kislovodsk Arr	139.84	313	PKhKP	PKPpre	05 57 24.0	
	comp=Z,9.0nm,0.7s,baz=342,slow=13,SNR=3.2						
KIV	Kislovodsk	139.85	313	ePKHKP	PKPpre	05 57 24.2	
KIV				i		05 57 32.4	
KIV				e		06 00 31.4	
KIV				ePPP	PPP	06 03 37.3	
KIV				eSS	SS	06 18 18.5	-1.3
KIV				eSSS	SSS	06 23 38.5	
KIV				pmax	pmax		
	comp=Z,144nm,1.0s						
KIV	Kislovodsk	139.85	313	i PKPdf	PKPpre	05 57 21.2	
	SNR=6.3						
MTSE	Matsula	140.06	342	eP	PKPdf	05 57 23.3	-7.0
FOO	Floro	140.37	358	ePP	PP	06 00 35.1	+1.3
FOO				eSS	SS	06 18 24.8	+1.2
NB2	NORSAR Subarra	140.45	353	PKP	PKPdf	05 57 23.4	-7.6
	comp=Z,30nm,0.6s,baz=16,slow=3.2						
NB2	NORSAR Subarra	140.45	353	PKPab	PKPdf	05 57 23.4	-7.6
	baz=16,slow=3.2						
NOA	NORSAR Array B	140.45	353	PKhKP	PKPpre	05 57 23.8	
	comp=Z,24nm,0.5s,baz=25,slow=5.4,SNR=335						
NOA				SKPbc	SKPbc	06 00 27.1	-1.1
	comp=Z,40nm,1.1s,baz=14,slow=4.4,SNR=5.2						
NOA				SKKPbc	SKKPab	06 09 00.4	-0.1
	comp=Z,53nm,1.2s,baz=192,slow=4.2,SNR=11						
UPP	Uppsala	140.55	347	eP	PKPdf	05 57 24.1	-7.0
NC602	NORSAR Array S	140.70	352	ePdif	Pdif	05 54 50.6	+0.2
NC602				ePKPdf	PKPdf	05 57 24.5	-6.9
NC602				eSKPdf	SKPbc	06 00 28.1	-0.7
NC602				eSS	SS	06 18 30.1	+2.5
HYA	Hoyanger	140.75	357	ePKPdf	PKPdf	05 57 26.0	-5.5
HYA				eSKPdf	SKPbc	06 00 29.1	+0.2
HYA				eSKSdf	SKSdf	06 04 03.4	+1.5
HYA				eSS	SS	06 18 27.5	-0.4
SUE	Sulen	140.93	358	ePP	PP	06 00 34.7	-2.4
SUE				eSS	SS	06 18 31.1	+1.1
HFS	Hagfors	140.99	351	PKhKP	PKPpre	05 57 25.0	
	comp=Z,173nm,0.5s,baz=152,slow=16,SNR=413						
HFS				SKKPbc	SKKPbc	06 08 57.6	-1.3
	comp=Z,3.0nm,0.8s,baz=187,slow=11,SNR=4.2						
SKAR	Skarslia	141.09	355	ePdif	Pdif	05 54 53.1	+0.9
SKAR				⇓ePKPdf	PKPdf	05 57 24.8	-7.4
SKAR				ePP	PP	06 00 39.0	+0.7
SKAR				ePKSdf	PKSdf	06 01 08.8	+1.0
SKAR				eSKSdf	SKSdf	06 04 03.8	+1.1
SKAR				eSS	SS	06 18 32.0	-0.1
SLIT	Slitere, Latvi	141.41	342	eP	PKPdf	05 57 27.0	-5.8
ASK	Askoy	141.48	357	ePKPdf	PKPdf	05 57 25.7	-7.1
BER	Bergen	141.57	357	ePKPdf	PKPdf	05 57 28.2	-4.8
BER				ePP	PP	06 00 39.0	-2.1
BER				ePKSdf	PKSdf	06 01 09.0	+0.6
BER				eSS	SS	06 18 38.9	+1.5
OSL	Oslo	141.58	353	⇓ePKPdf	PKPdf	05 57 26.5	-6.5
LRW	Lerwick	141.85	2	eP	PKPdf	05 57 26.0	-7.4
IDID	Didziasalis	141.88	337	eP	PKPdf	05 57 28.0	-5.7
ISAL	Salakas	141.90	338	eP	PKPdf	05 57 29.1	-4.7
ODD1	Odda	141.97	356	ePKPdf	PKPdf	05 57 29.4	-4.4
KONO	Kongsberg	141.99	354	ePdif	Pdif	05 54 57.7	+1.5
KONO				⇓ePKPdf	PKPdf	05 57 28.1	-5.7
KONO				ePP	PP	06 00 44.2	+0.6
KONO				ePKSdf	PKSdf	06 01 10.6	+1.3
KONO				eSKSdf	SKSdf	06 04 05.0	+1.0
KONO				eSS	SS	06 18 43.4	+1.1
SOC	Sochi	141.99	314	d i PKHKP	PKPpre	05 57 27.6	
SOC				i		05 57 34.9	
SOC				e		05 59 11.1	
SOC				ePPP	PPP	06 03 54.6	
SOC				pmax	pmax		
	comp=Z,63nm,0.8s						
SOC				pmax	pmax		
	comp=Z,126nm,0.7s						
VIKU	Vikbolandet	141.99	347	eP	PKPdf	05 57 28.6	-5.2
IIGN	Ignalina	142.03	337	eP	PKPdf	05 57 29.3	-4.7
MNK	Minsk	142.07	335	i PKHKP	PKPpre	05 57 30.0	
MNK				pmax	pmax		
	comp=Z,477nm,1.3s						
MNK				pmax	pmax		
	comp=E,12nm,1.0s						
MNK				pmax	pmax		
	comp=N,103nm,1.0s						
MNK				MLR	MLR		
	comp=Z,3µm,22.0s						
MNK				MLR	MLR		
	comp=N,1µm,23.0s						
MNK				MLR	MLR		
	comp=E,415nm,23.0s						
MNK	Minsk	142.07	335	i PKP	PKPdf	05 57 30.0	-4.0
	comp=E,12nm,1.0s						
MNK				i PKP	PKPdf	05 57 30.0	-4.0
	comp=N,103nm,1.0s						
MNK				i PKP	PKPdf	05 57 30.0	-4.0
	comp=Z,477nm,1.2s,baz=225						
MNK				i pPKP	pPKPdf	05 59 08.2	-4.8
MNK				i PP	PP	06 00 37.1	-7.3
MNK				i SSS	SSS	06 23 50.3	
MNK				i LR	LR	06 52 09.3	
MNK				i LRM	MLR	07 00 30.5	
	comp=Z,3µm,21.6s						
MNK				i LRM	MLR	07 01 13.2	
	comp=N,1µm,22.8s						
MNK				i LRM	MLR	07 01 25.9	
	comp=E,415nm,22.8s						
NACGM	Naroch	142.18	337	⇓ePKP	PKPdf	05 57 30.7	-3.5
VSVD	Vaisvydziai	142.31	340	eP	PKPdf	05 57 30.0	-4.4
BLS5	Blasjo	142.47	356	ePKPdf	PKPdf	05 57 29.9	-4.8
BLS5				⇑epPKP	pPKPdf	05 59 12.5	-0.9
BLS5				ePP	PP	06 00 45.5	-1.1
BLS5				eSKSdf	SKSdf	06 04 05.8	+0.9
BLS5				eSKSac	SKSac	06 04 13.5	+1.8
BLS5				eSS	SS	06 18 46.7	-1.2
LODK	Lodwar	142.56	245	P	PKPdf	05 57 33.0	-3.2
	SNR=40						
LODK	Lodwar	142.56	245	eP	PKPdf	05 57 29.2	-7.1
LODK				eS	SKiKP	06 00 51.9	+16
PABE	Paberze	142.68	339	eP	PKPdf	05 57 30.8	-4.3
KMY	Karmoy	142.75	357	ePKPdf	PKPdf	05 57 32.2	-2.9
KMY				eSKPdf	SKPbc	06 00 31.8	-2.1
KMY				eSKSdf	SKSdf	06 04 06.5	+1.4
KMY				eSS	SS	06 18 52.8	+1.9
PBUR	Paburge	142.89	341	eP	PKPdf	05 57 31.3	-4.1
ANN	Anapa	142.99	316	i PKHKP	PKPdf	05 57 32.5	-3.5
ANN				pmax	pmax		
	comp=Z,833nm,1.0s						
BIGH	Upper Bighouse	143.32	5	eP	PKPab	05 57 31.8	-1.9
LEWI	Lewis, Hebride	143.36	8	eP	PKPab	05 57 32.2	-1.7
HOMB	Homborsund	143.45	354	ePKPdf	PKPab	05 57 33.6	-0.5
HOMB				ePKSdf	PP	06 01 09.9	+18
HOMB				eSS	SS	06 19 00.8	+1.8
SNART	Snartemo	143.50	355	⇓ePKPdf	PKPab	05 57 34.1	-0.2
LINV	Loch Inver, As	143.55	6	eP	PKPab	05 57 32.5	-2.0
MLA1	Latheron	143.55	5	eP	PKPab	05 57 33.4	-1.2
MBAR	Mbarara	143.91	235	PKP	PKPdf	05 57 38.2	-0.6
	comp=Z,921nm,0.8s,baz=122,slow=4.7,SNR=527						
SUW	Suwalki	144.17	338	ePKPbc	PKPbc	05 57 36.3	-0.6
SUW				ePKPdf	PKPdf	05 57 39.0	+1.2
SUW				epPKPdf	pPKPdf	05 59 15.7	-1.0
SUW	Suwalki	144.17	338	eP	PKPab	05 57 37.2	+0.2
KAC	Achnashellach	144.17	7	eP	PKPbc	05 57 36.0	-0.8
OVD	Ostervraa, Den	144.20	352	i P	PKPbc	05 57 36.7	-0.1
AKASG	Malin Array Be	144.22	330	PKP	PKPbc	05 57 36.3	-0.9
	comp=Z,1µm,0.8s,baz=40,slow=5.0,SNR=1163						
AKASG				SKKPbc	SKKPbc	06 08 43.8	-1.5
	comp=Z,6.2nm,0.7s,baz=230,slow=4.9,SNR=7.7						
MCD	Coleburn Disti	144.28	5	eP	PKPbc	05 57 35.8	-1.3
KPL	Plockton	144.29	7	eP	PKPbc	05 57 35.0	-2.1
MDO	Dochfour	144.32	6	eP	PKPbc	05 57 36.3	-1.0
DEL	Delary	144.44	348	eP	PKPbc	05 57 36.5	-1.1
GOET	G??ttrup	144.59	353	i P	PKPdf	05 57 38.2	-0.1
DRUM	Mains of Drumt	145.00	4	eP	PKPdf	05 57 35.5	-3.6
SIM	Simferopol'	145.00	319	i PKIKP	PKPdf	05 57 38.5	-1.0
SIM				pmax	pmax		
	comp=Z,1µm,0.8s						
MUD	Monsted U'grnd	145.17	353	i P	PKPdf	05 57 39.4	0.0
EDU	Dundee	145.32	5	eP	PKPdf	05 57 39.1	-0.5
INVG	Invergeldie, C	145.35	6	eP	PKPdf	05 57 37.4	-2.4
LAWE	Loch Awe, Argy	145.38	7	eP	PKPdf	05 57 37.8	-1.9
COP	Copenhagen	145.44	349	i P	PKPdf	05 57 40.0	+0.2
BSD	Bornholm Skovb	145.51	347	eP	PKPdf	05 57 39.2	-0.7
BSD	Bornholm Skovb	145.51	347	i P	PKPdf	05 57 40.1	+0.1
LLD	Lille Linde	145.82	349	i P	PKPdf	05 57 40.2	-0.3
PGBU	Glenifferbraes	145.92	6	eP	PKPdf	05 57 38.6	-2.1
EDI	Edinburgh	145.93	5	eP	PKPdf	05 57 37.9	-2.8
ESY	Stoneypath	145.98	4	eP	PKPdf	05 57 39.5	-1.3
EBL	Broad Law	146.09	5	eP	PKPdf	05 57 40.3	-0.7
IDGL	Inch Island, C	146.25	10	eP	PKPdf	05 57 39.0	-2.3
H10N3	ASCENSION HYDR	146.31	150	PKPbc	PKPbc	05 57 44.9	+0.7
	baz=172,slow=3.8,SNR=73						
H10N1	ASCENSION HYDR	146.31	150	PKPbc	PKPbc	05 57 44.6	+0.3
	baz=172,slow=3.8,SNR=22						
H10N2	ASCENSION HYDR	146.33	150	PKPbc	PKPbc	05 57 44.6	+0.3
	baz=172,slow=3.8,SNR=42						
RGN	Rugen	146.36	348		PKPdf	05 57 41.9	+0.5
SORM	Soroca	146.37	327	⇓P	PKPdf	05 57 41.0	-0.7
SORM	Soroca	146.37	327	⇓PKIKP	PKPdf	05 57 41.0	-0.7
BNN	Bunyan	146.42	308		PKPdf	05 57 42.0	-0.3
CLGH	Cloghs, Cushen	146.44	8	eP	PKPdf	05 57 39.2	-2.4
BZK	Bozkurt	146.49	314		PKPdf	05 57 41.4	-0.7
EKA	Eskdalemuir Ar	146.51	5	PKPbc	PKPbc	05 57 43.4	-0.5
	comp=Z,986nm,0.8s,baz=308,slow=1.1,SNR=357						
ESK	Eskdalemuir	146.53	5	eP	PKPdf	05 57 39.6	-2.1
ESK	Eskdalemuir	146.53	5		PKPdf	05 57 41.7	-0.1
ESK	Eskdalemuir	146.53	5	PKIKP	PKPdf	05 57 41.7	-0.1
PURM	Purcari	146.59	324	⇑P	PKPdf	05 57 42.4	+0.3
GKP	Gorka Klasztor	146.63	343	ePKPdf	PKPdf	05 57 42.3	+0.4
GKP				ePKPbc	PKPbc	05 57 44.8	+0.5
GKP				epPKPdf	pPKPab	05 59 23.8	+1.7
GKP				ePP	PP	06 01 09.1	-2.1
GKP	Gorka Klasztor	146.63	343	eP	PKPdf	05 57 42.4	+0.4
NEWG	New Galloway	146.63	6	eP	PKPdf	05 57 40.1	-1.8
BEL	Belsk	146.78	338	ePKPdf	PKPdf	05 57 42.7	+0.5
BEL				ePKPbc	PKPbc	05 57 45.4	+0.6
BEL				epPKPab	pPKPab	05 59 24.6	+1.8
BEL				ePP	PP	06 01 12.2	0.0
GAL1	Galloway	146.83	7	eP	PKPdf	05 57 41.2	-1.0
KIS	Kishinev	146.87	325	ePKP	PKPdf	05 57 41.0	-1.6
	comp=Z,1µm,0.8s						
KIS				epPKP	pPKPab	05 59 24.0	+0.7
KIS				esPKP		06 00 02.0	
KIS	Kishinev	146.87	325	ePP	PP	06 01 03.0	-10
KIS	Kishinev	146.87	325	⇑P	PKPdf	05 57 39.5	-3.0
KIS	Kishinev	146.87	325	ePKHKP	PKPpre	05 57 41.0	
KIS				i		05 57 45.0	
KIS				pmax	pmax		
	comp=Z,7µm,4.7s						
MILM	Milestii Mici	146.92	325	ePKP	PKPdf	05 57 41.5	-1.2
	comp=Z,4µm,1.4s						
MILM				⇑ipPKP	pPKPdf	05 59 19.0	-2.8
MILM				⇑isPKP		06 00 03.0	
MILM	Milestii Mici	146.92	325	ePP	PP	06 01 03.0	-10
MILM	Milestii Mici	146.92	325	⇓P	PKPdf	05 57 42.9	+0.2
MILM	Milestii Mici	146.92	325	ePKHKP	PKPpre	05 57 41.0	
MILM				i		05 57 45.0	
MILM				pmax	pmax		
	comp=Z,4µm,1.4s						
H07N1	FLORES T-PHASE	146.94	50	ePKP	PKPdf	05 57 42.2	-0.8
H07N1	FLORES T-PHASE	146.94	50	PKPbc	PKPbc	05 57 45.3	-0.3
	SNR=46						
H07S1	FLORES T-PHASE	147.00	51	ePKP	PKPdf	05 57 43.0	-0.1
H07S1	FLORES T-PHASE	147.00	51	PKPbc	PKPbc	05 57 44.9	-0.9
	SNR=221						
ILGA	Ilgaz	147.08	313		PKPdf	05 57 43.5	+0.1
EDMD	Edmundbyers	147.10	4	eP	PKPdf	05 57 41.6	-1.1
LVV	L'vov	147.16	333	i PKIKP	PKPdf	05 57 42.8	-0.2
LVV				e		05 59 25.0	
LVV				e		06 01 13.0	
LVV				e		06 04 14.0	
LVV				ePPP	PPP	06 04 47.0	
DRBR	Darabani	147.18	329	⇑P	PKPdf	05 57 42.7	-0.3
ASF	Jabal al Asfar	147.27	296	PKPbc	PKPbc	05 57 46.9	0.0
	comp=Z,583nm,0.9s,baz=95,slow=1.2,SNR=57						
GMM	Mts of Mourne	147.29	8	eP	PKPdf	05 57 41.5	-1.5
IAS	Iasi	147.40	327	⇑P	PKPdf	05 57 44.1	+0.7
IAS	Iasi	147.40	327	⇑PKIKP	PKPdf	05 57 44.1	+0.7
IOMK	Kirk Michael	147.44	7	eP	PKPdf	05 57 42.5	-0.8
ILTH	Belurgan, Co L	147.44	9	eP	PKPdf	05 57 42.3	-0.9
IGLA	Glengowla, Co	147.50	12	eP	PKPdf	05 57 42.1	-1.3
LEOM	Leova	147.51	325	⇑P	PKPdf	05 57 44.2	+0.6
LEOM	Leova	147.51	325	⇑PKIKP	PKPdf	05 57 44.2	+0.6
WIM	Isle of Man	147.54	7	eP	PKPdf	05 57 42.5	-1.0
GDLE	Glaisdale, N Y	147.57	3	eP	PKPdf	05 57 41.5	-2.0
VASR	Vaslui	147.64	326	⇑P	PKPdf	05 57 44.9	+1.0
HWQ	Hawqa	147.65	300	eP	PKPdf	05 57 43.9	-0.6
BR131	Keskin Array S	147.68	310		PKPdf	05 57 43.1	-1.2
BR131	Keskin Array S	147.68	310	P	PKPdf	05 57 43.8	-0.6
	SNR=351						
BRTR	Keskin Array B	147.68	310	PKP	PKPdf	05 57 43.5	-0.8
	comp=Z,342nm,0.9s,baz=120,slow=1.3,SNR=112						
BRTR				PKPbc	PKPbc	05 57 47.2	-0.6
	comp=Z,371nm,0.9s,baz=136,slow=4.1,SNR=136						
BRTR				pPKPbc	pPKPab	05 59 28.4	+1.9
	comp=Z,72nm,1.1s,baz=90,slow=1.2,SNR=2.8						
BRTR				SKKPbc	SKKPbc	06 08 30.4	
	comp=Z,8.4nm,0.9s,baz=204,slow=2.7,SNR=4.6						
BHL	Bhannes	147.97	299	eP	PKPdf	05 57 44.2	-0.8
BIR	Birlad	147.97	325	⇑P	PKPdf	05 57 45.8	+1.4
BIR	Birlad	147.97	325	⇑PKIKP	PKPdf	05 57 45.8	+1.4
HPK	Haverah Park	147.99	4	eP	PKPdf	05 57 42.0	-2.2
VLDR	Vladesti	148.00	324	⇓P	PKPdf	05 57 45.6	+1.1
TLCR		148.00	323	⇑P	PKPdf	05 57 45.4	+0.9
TLCR		148.00	323	⇑PKIKP	PKPdf	05 57 45.4	+0.9
SHBL	Chebaa	148.01	298	eP	PKPdf	05 57 45.0	-0.2
VARL	Varlezi	148.09	325	⇑P	PKPdf	05 57 46.0	+1.4
SCTR	Scanteiesti	148.15	324	⇓P	PKPdf	05 57 45.1	+0.4
TATR	Tatarca	148.17	324	⇑P	PKPdf	05 57 44.3	-0.4
JURR	Jurilovca	148.22	322	⇓P	PKPdf	05 57 45.5	+0.7
GHRR		148.22	325	⇑P	PKPdf	05 57 46.0	+1.1
BUR01	Bucovina Ar. S	148.26	329	⇑P	PKPdf	05 57 46.0	+1.0
WPS	Cemaes, Angles	148.29	7	eP	PKPdf	05 57 43.2	-1.5
BIZ	Bicaz	148.30	328	⇓P	PKPdf	05 57 46.5	+1.6
TESR	Tescani	148.32	326	⇑P	PKPdf	05 57 45.1	+0.1
WME	Myndd Eilian	148.32	7	eP	PKPdf	05 57 44.3	-0.5
SLCR	Slobozia Conac	148.33	324	⇑P	PKPdf	05 57 44.4	-0.6
SCHL	Schela	148.35	324	⇓P	PKPdf	05 57 46.0	+1.0
IZVR	Izvoarele	148.36	324	⇑P	PKPdf	05 57 45.6	+0.6
MMAI	Mount Meron Ar	148.36	298	PKP	PKPdf	05 57 45.2	-0.4
	comp=Z,252nm,0.8s,baz=321,slow=14,SNR=50						
MMAI				PKPbc	PKPbc	05 57 49.1	-0.5
	comp=Z,230nm,0.8s,baz=354,slow=12,SNR=100						
TUDR		148.38	324	⇑P	PKPdf	05 57 46.5	+1.4
CFR	Carcaliu	148.38	323	⇑P	PKPdf	05 57 45.4	+0.3
WLF1	Llynfaes	148.41	7	eP	PKPdf	05 57 43.9	-0.9
TPGR	Topolog	148.42	323	⇑P	PKPdf	05 57 45.4	+0.1
YRC	Rhoscolyn	148.43	7	eP	PKPdf	05 57 43.6	-1.3
PANC	Panciu	148.48	325	⇓P	PKPdf	05 57 46.5	+1.2
OJC	Ojcow	148.48	338	ePKPdf	PKPdf	05 57 44.7	-0.5
OJC				ePKPbc	PKPbc	05 57 49.1	-0.1

OJC				ePKPab	PKPab	05 57 54.4	+0.3
OJC				epPKPab	pPKPab	05 59 29.1	-0.2
LBWR	Ladybower, Pea	148.54	4	eP	PKPdf	05 57 43.4	-1.8
LMK	Market Rasen	148.56	2	eP	PKPdf	05 57 44.3	-0.9
KOLS	Kolonicke sedl	148.58	334	ePKP	PKPdf	05 57 46.1	+0.7
KOLS				e		05 57 51.4	
YLL	Llanberis	148.59	7	eP	PKPdf	05 57 43.5	-1.7
ODBI	Odobesti	148.60	325	⇓P	PKPdf	05 57 47.3	+1.9
TIRR	Tirgusor	148.67	322	⇓P	PKPdf	05 57 45.5	-0.1
TSCT	Constanta Port	148.70	321	⇑P	PKPdf	05 57 44.9	-0.8
VRI	Vrincioaia	148.71	325	⇑P	PKPdf	05 57 47.1	+1.4
PLOR	Plostina	148.76	325	⇑P	PKPdf	05 57 45.6	-0.2
HARR	Harsova	148.80	323	⇓P	PKPdf	05 57 46.8	+1.0
UZH	Uzhgorod	148.81	333	e		06 01 27.0	
UZH				ePKHKP	PKPdf	05 57 46.0	+0.3
UZH				ePPP	PPP	06 04 56.2	
UZH				pmax	pmax		
	comp=Z,180nm,1.2s						
STNC	Stoke	148.82	5	eP	PKPdf	05 57 43.8	-1.8
TLBR	Topalu	148.82	322	⇓P	PKPdf	05 57 46.8	+1.0
MFTR	Murfatlar	148.83	321	⇑P	PKPdf	05 57 46.2	+0.3
GRER		148.89	325	⇑P	PKPbc	05 57 48.9	-1.5
BISRR	Bisoca	148.92	325	⇑P	PKPdf	05 57 47.4	+1.3
CRVS	Cervenica-Dubn	148.93	335	ePKP	PKPdf	05 57 46.3	+0.4
CRVS				e		05 57 51.4	
FOEL	Foel Wylfa	148.93	6	eP	PKPdf	05 57 43.4	-2.4
MANR	Mangalia	148.94	321	⇓P	PKPdf	05 57 47.2	+1.2
CVDA	Cernavoda	148.96	322	⇓P	PKPdf	05 57 47.0	+0.9
NIE	Niedzica	148.96	336	ePKPdf	PKPdf	05 57 46.5	+0.5
NIE				ePKPbc	PKPbc	05 57 50.9	+0.4
NIE				epPKPab	pPKPab	05 59 31.4	+0.1
IWEX	Carrickbyrne,	148.97	10	eP	PKPdf	05 57 43.4	-2.5
COVR	Voineasa-Covas	148.99	326	⇓P	PKPdf	05 57 46.9	+0.7
BMR	Baia Mare	149.01	331	⇑P	PKPdf	05 57 46.1	0.0
OZUR		149.04	327	⇑P	PKPdf	05 57 46.6	+0.4
ARCR	ARCALIA	149.05	329	⇑P	PKPdf	05 57 46.8	+0.6
KSP	Ksiaz	149.06	342	ePKPdf	PKPdf	05 57 46.3	+0.3
KSP				ePKPbc	PKPbc	05 57 50.9	+0.2
KSP				epPKPab	pPKPab	05 59 31.1	-0.6
PCED	Cedros	149.09	51	ePKP	PKPdf	05 57 47.1	+0.6
CALA	Caldeira	149.11	51	ePKP	PKPdf	05 57 48.4	+1.8
HOR	Horta	149.18	51	ePKP	PKPdf	05 57 47.9	+1.3
AMRR	Amara	149.18	323	⇑P	PKPdf	05 57 47.4	+1.0
ICOR	Ion Corvin	149.22	322	⇓P	PKPdf	05 57 47.2	+0.7
NEHR	Nehoiu	149.22	325	⇑P	PKPdf	05 57 47.3	+0.8
CWF	Charnwood Fore	149.23	4	eP	PKPdf	05 57 43.8	-2.4
PSN	Preselentsi	149.26	321	i P	PKPdf	05 57 46.7	+0.1
EIL	Elat	149.27	291	PKP	PKPdf	05 57 46.7	-0.4
	comp=Z,95nm,1.0s,baz=141,slow=3.9,SNR=49						
EIL				PKPbc	PKiKP	05 57 52.3	-0.5
	comp=Z,556nm,0.8s,baz=127,slow=1.3,SNR=77						
ISR	Istrita	149.29	325	⇓P	PKPdf	05 57 47.3	+0.6
PCAN	Candelaria	149.31	51	ePKP	PKPdf	05 57 47.6	+0.7
WACR	West Acre	149.32	1	eP	PKPdf	05 57 45.4	-0.9
DOPR	Dopca	149.33	327	⇑P	PKPdf	05 57 47.2	+0.6
HLM1	Long Mynd	149.33	6	eP	PKPdf	05 57 42.9	-3.6
PICO	Pico	149.34	51	ePKP	PKPdf	05 57 48.4	+1.4
OSTC	Ostas	149.34	342	ePKPDF	PKPdf	05 57 46.8	+0.3
OSTC				⇑ePKP	PKiKP	05 57 52.3	0.0
OSTC				epPKP	pPKPdf	05 59 26.0	+0.3
CHVC	Chvalec	149.36	342	ePKPDF	PKPdf	05 57 46.5	-0.1
CHVC				⇑ePKP	PKiKP	05 57 52.6	+0.2
MLR	Muntele Rosu	149.37	326	⇑P	PKPdf	05 57 47.0	+0.1
MLR	Muntele Rosu	149.37	326	PKP	PKPdf	05 57 46.4	-0.5
	comp=Z,78nm,1.1s,baz=13,slow=2.1,SNR=92						
MLR				PKPbc	PKPbc	05 57 51.8	+0.1
	comp=Z,917nm,1.0s,baz=22,slow=2.8,SNR=122						
TGMR	Targu Mures	149.37	328	⇑P	PKPdf	05 57 48.2	+1.6
OKC	Ostrava-Krasne	149.37	339	ePKPDF	PKPdf	05 57 46.7	+0.1
OKC				⇑ePKP	PKiKP	05 57 51.9	-0.4
OKC				epPKP	pPKPbc	05 59 30.0	+0.3
ROSA	Rosais	149.38	50	ePKP	PKPdf	05 57 47.6	+0.6
SRBC	Serra Branca	149.39	50	ePKP	PKPdf	05 57 47.6	+0.6
UPC	Upice	149.44	342	ePKPDF	PKPdf	05 57 46.9	+0.2
UPC				⇑ePKP	PKiKP	05 57 52.3	-0.2
UPC				ePKPAB	PKPab	05 57 58.3	+0.3
PPNO	Prainha do Nor	149.47	51	ePKP	PKPdf	05 57 47.6	+0.4
LANS	Liptovska Anna	149.49	337	ePKHKP	PKPdf	05 57 47.9	+1.0
LANS	Liptovska Anna	149.49	337	ePKP	PKPdf	05 57 47.9	+1.0
LANS				e		05 57 53.6	
DPC	Dobruska-Polom	149.49	342	ePKHKP	PKPpre	05 57 47.2	
DPC	Dobruska-Polom	149.49	342	ePKPDF	PKPdf	05 57 47.2	+0.4
DPC				⇑ePKP	PKiKP	05 57 52.9	+0.2
DPC				epPKP	pPKPdf	05 59 28.0	+2.0
PMAN	Manadas	149.53	50	ePKP	PKPdf	05 57 47.9	+0.7
RASA	Rasa	149.53	323	⇓P	PKPdf	05 57 47.9	+0.9
LEHL	Lehliu	149.55	323	⇓P	PKPdf	05 57 48.1	+1.1
PID	Ribeirinha	149.58	51	ePKP	PKPdf	05 57 47.6	+0.3
KRLC	Kraliky	149.60	341	ePKIKP	PKPdf	05 57 46.9	-0.1
KRLC	Kraliky	149.60	341	ePKPDF	PKPdf	05 57 46.9	-0.1
KRLC				⇑ePKP	PKiKP	05 57 52.7	-0.2
MORC	Moravsky Berou	149.62	340	ePKP	PKPdf	05 57 46.6	-0.4
MORC				e		05 57 52.7	
MORC				e		06 14 26.0	
MESR	Meseseni	149.65	331	⇓P	PKPdf	05 57 48.3	+1.2
KECS	Kecovo	149.66	335	ePKP	PKPdf	05 57 47.3	+0.2
KECS				e		05 57 53.3	
BRG	Berggiesshubel	149.66	345	i PKIKP	PKPdf	05 57 47.0	0.0
BRG				e		06 20 14.0	
BRG				pmax	pmax		
	comp=Z,360nm,1.4s						
BRG	Berggiesshubel	149.66	345	⇓iPKPf	PKPdf	05 57 47.0	0.0
BRG	Berggiesshubel	149.66	345	Amp		05 57 48.9	
	comp=Z,360nm,1.4s						
BRG	Berggiesshubel	149.66	345	⇑iPKP	PKiKP	05 57 53.3	+0.4
BRG	Berggiesshubel	149.66	345	Amp		05 57 54.2	
	comp=Z,2µm,0.9s						
BRG	Berggiesshubel	149.66	345	pPKP	pPKPdf	05 59 36.6	+10
BRG	Berggiesshubel	149.66	345	Amp		05 59 38.4	
	comp=Z,132nm,1.2s						
BRG	Berggiesshubel	149.66	345	i x	x	05 59 40.5	
BRG	Berggiesshubel	149.66	345	Amp		05 59 41.5	
	comp=Z,297nm,1.2s						
BRG	Berggiesshubel	149.66	345	ex	x	05 59 47.2	
BRG	Berggiesshubel	149.66	345	Amp		05 59 48.1	
	comp=Z,350nm,1.1s						
CBBR	Cluj-Babes-Bol	149.66	330	⇓P	PKPdf	05 57 48.5	+1.4
CJR	Cluj-Napoca	149.68	330	⇓P	PKPdf	05 57 48.2	+1.0
PLAR	PLOIESTI	149.70	325	⇑P	PKPdf	05 57 48.7	+1.4
MDB	Medias	149.71	328	⇑P	PKPdf	05 57 48.2	+0.9
SULR		149.73	324	⇑P	PKPdf	05 57 47.6	+0.3
PVCC	Panska Ves	149.82	344	ePKPDF	PKPdf	05 57 47.8	+0.5
PVCC				⇑ePKP	PKiKP	05 57 53.7	+0.4
PVCC				ePKPAB	PKPab	05 57 59.2	-0.3
MCH1	Michaelchurch	149.83	6	eP	PKPdf	05 57 46.2	-1.0
VOIR		149.87	326	⇓P	PKPdf	05 57 48.9	+1.3
MAUC	Maruska	149.88	339	ePKPDF	PKPdf	05 57 47.5	0.0
MAUC				⇑ePKP	PKiKP	05 57 53.6	+0.1
ELMS	Elmsett, Ipswi	149.96	1	eP	PKPdf	05 57 46.1	-1.3
PRD	Provadia	150.01	321	i P	PKPdf	05 57 47.4	-0.4
MONM	Monmouth	150.01	6	eP	PKPdf	05 57 45.4	-2.1
DRGR		150.03	331	⇓P	PKPdf	05 57 48.7	+0.9
PAGU	Agualva, Azore	150.11	49	ePKP	PKPdf	05 57 48.7	+0.6
ADH	Angra Heroismo	150.12	50	ePKP	PKPdf	05 57 48.1	0.0
STRD	Stroud	150.13	5	eP	PKPdf	05 57 46.1	-1.6
ISK	Istanbul-Kandi	150.17	316	P	PKPdf	05 57 46.6	-1.5
SGRR	Singureni	150.18	324	⇑P	PKPdf	05 57 48.6	+0.6
BORR	Bors	150.22	332	⇓P	PKPdf	05 57 49.5	+1.5
VYHS	Vyhne	150.27	337	ePKIKP	PKPdf	05 57 48.0	-0.1
VYHS	Vyhne	150.27	337	ePKP	PKPdf	05 57 48.0	-0.1
VYHS				e		05 57 54.6	
RAZG	Razgrad	150.30	322	⇑P	PKPdf	05 57 48.1	-0.2
STFAR	Stefanesti-Arg	150.30	326	⇓P	PKPdf	05 57 49.2	+0.9
PRU	Pruhonice	150.32	343	ePKIKP	PKPdf	05 57 47.7	-0.4
PRU				e		05 58 00.1	
PRU	Pruhonice	150.32	343	ePKPDF	PKPdf	05 57 47.7	-0.4
PRU				⇑ePKP	PKiKP	05 57 54.0	-0.3
PRU				ePKPAB	PKPab	05 58 00.1	-1.5
PRU				epPKP	pPKPbc	05 59 32.0	0.0
VRAC	Vranov	150.33	340	PKP	PKPdf	05 57 47.8	-0.4
	comp=Z,35nm,1.0s,baz=44,slow=0.7,SNR=70						
VRAC				PKPbc	PKiKP	05 57 54.1	-0.3
	comp=Z,453nm,0.9s,baz=34,slow=2.0,SNR=103						
VRAC	Vranov	150.33	340	ePKP	PKPdf	05 57 47.7	-0.4
VRAC				e		05 57 54.5	
VRAC				e		06 14 22.2	
KOLL	Kolacno	150.35	337	ePKP	PKPdf	05 57 48.4	+0.2
KOLL				e		05 57 55.1	
JAVC	Velka Javorina	150.37	339	ePKP	PKPdf	05 57 49.1	+0.8
JAVC				e		05 57 55.6	
SWN1	Swindon	150.42	5	eP	PKPdf	05 57 46.0	-2.2
LOT	Lotru	150.51	328	⇓P	PKPdf	05 57 48.6	-0.1
NKC	Novy Kostel	150.61	346	ePKIKP	PKiKP	05 57 55.0	+0.1
NKC				e		05 59 32.0	
NKC	Novy Kostel	150.61	346	⇑ePKP	PKiKP	05 57 55.0	+0.1
NKC				epPKP	pPKPbc	05 59 32.0	-0.7
KRUC	Moravsky	150.61	340	ePKP	PKPdf	05 57 48.0	-0.5
KRUC				e		05 57 54.8	
KRUC				e		06 14 19.7	
DEV	Deva	150.61	329	⇓P	PKPdf	05 57 49.4	+0.8
DEV	Deva	150.61	329	⇓PKIKP	PKPdf	05 57 49.4	+0.8
COPA	Copaceanca	150.65	324	⇑P	PKPdf	05 57 48.7	-0.1
HTL	Hartland	150.66	8	eP	PKPdf	05 57 46.0	-2.5
WOL	Wolverton	150.66	4	eP	PKPdf	05 57 46.1	-2.4
TREC	Trest	150.68	342	ePKIKP	PKPdf	05 57 49.0	+0.3
TREC				e		05 59 30.0	
TREC	Trest	150.68	342	ePKPDF	PKPdf	05 57 49.0	+0.3
TREC				⇑ePKP	PKPbc	05 57 54.6	0.0
TREC				epPKP	pPKPdf	05 59 30.0	+2.1
SMOL	Smolenice	150.75	338	ePKIKP	PKPdf	05 57 49.5	+0.7
SMOL	Smolenice	150.75	338	ePKP	PKPdf	05 57 49.5	+0.7
SMOL				e		05 57 56.1	
SMOL				e		05 58 05.1	
SZH	Strazhica	150.81	322	i P	PKPdf	05 57 47.9	-1.1
ZIMR		150.88	323	⇓P	PKPdf	05 57 50.2	+1.1
ZIMR		150.88	323	⇓PKIKP	PKPdf	05 57 50.2	+1.1
SIRR	Siria	150.90	331	⇓P	PKPdf	05 57 50.2	+1.1
ELSH	Elham, Standar	150.91	1	eP	PKPdf	05 57 47.5	-1.4
MODS	Modra-Piesok	150.92	339	ePKIKP	PKPdf	05 57 49.6	+0.5
MODS	Modra-Piesok	150.92	339	ePKP	PKPdf	05 57 49.6	+0.5
MODS				e		05 57 56.5	
JMB	Yambol	150.93	320	i P	PKPdf	05 57 48.8	-0.4
GZR	Gura Zlata	151.03	329	⇑P	PKPdf	05 57 49.5	+0.1
GZR	Gura Zlata	151.03	329	⇑PKIKP	PKPdf	05 57 49.5	+0.1
SRO	Srobarova	151.03	337	ePKIKP	PKPdf	05 57 49.9	+0.7
SRO	Srobarova	151.03	337	ePKP	PKPdf	05 57 49.9	+0.7
SRO				e		05 57 56.2	
BEBN	Eben Emael	151.10	355	dPKPdf	PKPdf	05 57 48.7	-0.5
BEBN				dPKiKP	PKiKP	05 57 55.6	-0.2
BEBN				dPKPab	PKPab	05 58 04.4	-0.4
ZST	Bratislava	151.13	339	ePKIKP	PKPdf	05 57 49.7	+0.3
ZST	Bratislava	151.13	339	ePKP	PKPdf	05 57 49.7	+0.3
ZST				e		05 57 56.7	
ZST				e		05 58 06.3	
HMNX	Herstmonceux	151.17	2	eP	PKPdf	05 57 48.3	-0.9
VLAD	Vladila	151.18	325	⇑P	PKPdf	05 57 50.0	+0.5
PVL	Pavlikeni	151.18	323	i P	PKPdf	05 57 48.9	-0.7
EDRB	Edirne	151.19	319	P	PKPdf	05 57 48.1	-1.6
MEM	Membach	151.26	354	dPKPdf	PKPdf	05 57 48.8	-0.7
MEM				dPKiKP	PKiKP	05 57 56.3	+0.1
DYA	Yadsworthy	151.27	8	eP	PKPdf	05 57 46.5	-3.0
BSTI	Sart Tilman	151.33	355	dPKPdf	PKPdf	05 57 49.1	-0.5
BSTI				dPKPbc	PKPbc	05 57 55.9	-0.1
BSTI				dPKiKP	PKiKP	05 57 56.6	+0.3
CCA1	Carnmenellis	151.34	9	eP	PKPdf	05 57 46.7	-2.9
SRE	Strehaia	151.34	327	⇓P	PKPdf	05 57 50.8	+1.0
SRE	Strehaia	151.34	327	⇓PKIKP	PKPdf	05 57 50.8	+1.0
KHC	Kasperske Hory	151.36	344	ePKIKP	PKPdf	05 57 49.8	+0.1
KHC				e		05 58 05.5	
KHC	Kasperske Hory	151.36	344	ePKPDF	PKPdf	05 57 49.8	+0.1
KHC				⇑ePKP	PKiKP	05 57 56.6	+0.1
KHC				ePKPAB	PKPab	05 58 05.5	-0.6
KHC				epPKP	pPKPbc	05 59 35.9	+1.3
KHC				ePKS	PKSdf	06 01 27.1	+2.9
BZS	Buzias	151.41	330	⇑P	PKPdf	05 57 50.2	+0.3
CKRC	Cesky Krumlov	151.44	343	ePKPDF	PKPdf	05 57 50.0	+0.1
CKRC				⇑ePKP	PKPbc	05 57 56.5	+0.1
CKRC				ex	x	05 59 24.1	
SNF	Seneffe	151.49	357	dPKPdf	PKPdf	05 57 49.6	-0.2
SNF				dPKiKP	PKiKP	05 57 56.9	+0.3
SNF				dPKPab	PKPab	05 58 05.7	-0.8
TIM	Timisoara	151.50	331	⇑P	PKPdf	05 57 51.0	+1.0
TIM	Timisoara	151.50	331	⇑PKIKP	PKPdf	05 57 51.0	+1.0
BCLA	Clavier	151.51	355	dPKPdf	PKPdf	05 57 49.6	-0.3
BCLA				dPKiKP	PKiKP	05 57 56.7	0.0
BHOU	Houvegnez	151.52	354	dPKPdf	PKPdf	05 57 49.0	-0.9
BHOU				dPKiKP	PKiKP	05 57 57.3	+0.5
BHOU				dPKPab	PKPab	05 58 06.2	-0.4
PSET	Sete Cidades	151.56	50	ePKP	PKPdf	05 57 47.6	-2.8
BGES	Gesves	151.56	356	dPKPdf	PKPdf	05 57 48.9	-1.0
BGES				dPKiKP	PKPbc	05 57 56.4	-0.1
BGES				dPKPab	PKPab	05 58 06.3	-0.5
HERR	Herculane	151.58	328	⇓P	PKPdf	05 57 50.5	+0.3
GERES	GERESS Array B	151.59	343	PKP	PKPdf	05 57 49.9	-0.2
	comp=Z,29nm,0.8s,baz=54,slow=2.3,SNR=259						
GERES				PKPbc	PKPbc	05 57 56.7	-0.1
	comp=Z,585nm,1.0s,baz=29,slow=2.1,SNR=114						
GERES				pPKPbc	pPKPbc	05 59 36.3	+1.1
	comp=Z,35nm,0.9s,baz=48,slow=1.5,SNR=3.1						
PDA	Ponta Delgada	151.63	50	ePKP	PKPdf	05 57 50.0	-0.4
BMRD	Maredsous	151.66	356	dPKPdf	PKPdf	05 57 49.4	-0.6
BMRD				dPKiKP	PKiKP	05 57 57.3	+0.3
BMRD				dPKPab	PKPab	05 58 07.2	0.0
KULA	Kula-Manisa	151.70	312	P	PKPdf	05 57 50.6	0.0
GRON	Grota Negra	151.72	50	ePKP	PKPdf	05 57 50.5	-0.1
CMLA	Cha da Macela	151.72	50	P	PKPdf	05 57 52.9	+2.3
CMLA	Cha da Macela	151.72	50	P	PKiKP	05 57 59.2	+1.5
PCALD	Caldeiras da R	151.74	50	ePKP	PKPdf	05 57 46.3	-4.3
PUNG	Punghina	151.75	327	⇑P	PKPdf	05 57 50.4	0.0
CONA	Conrad Observa	151.78	340	i P	PKPdf	05 57 49.9	-0.5
	comp=Z,112nm,1.1s,SNR=120						
CONA				i P	PKiKP	05 57 57.8	+0.3
	comp=Z,787nm,0.8s						
CONA				i P	PKPab	05 58 09.1	+1.2
	comp=Z,563nm,1.2s						
RCHB	Rochefort	151.78	355	dPKPdf	PKPdf	05 57 49.5	-0.8
RCHB				dPKiKP	PKiKP	05 57 57.5	+0.2
RCHB				dPKPab	PKPab	05 58 07.4	-0.3
BANR	Banloc	151.81	330	⇑P	PKPdf	05 57 51.1	+0.7
RONA	Rosalia, Austr	151.84	339	i P	PKPdf	05 57 49.9	-0.6
	comp=Z,119nm,1.2s,SNR=96						
RONA				i P	PKiKP	05 57 57.8	+0.2
	comp=Z,928nm,0.8s						
RONA				i P	PKPab	05 58 09.0	+0.9
	comp=Z,907nm,1.6s						
DOU	Dourbes	151.88	356	dPKPdf	PKPdf	05 57 49.3	-1.1
DOU				dPKiKP	PKiKP	05 57 57.5	0.0
DOU				dPKPab	PKPab	05 58 07.6	-0.6
DOU				dpPKPdf	pPKPdf	05 59 31.5	+2.2
BART	Pico Bartolome	151.97	50	ePKP	PKPdf	05 57 50.8	-0.3
MDVR	Moldovita	151.99	329	⇑P	PKPdf	05 57 50.8	0.0
KDZ	Kurdzhali	152.11	320	i P	PKPdf	05 57 49.9	-1.2
ALN	Alexandroupoli	152.17	318	P	PKPdf	05 57 48.9	-2.2
ALN	Alexandroupoli	152.17	318		PKPdf	05 57 49.4	-1.7
ALN	Alexandroupoli	152.17	318	PKIKP	PKPdf	05 57 49.4	-1.7
WLF	Walferdange	152.18	354	dPKPdf	PKPdf	05 57 50.8	-0.1
WLF				dPKiKP	PKiKP	05 57 58.8	+0.6
ENEZ	Enez	152.20	318	P	PKPdf	05 57 49.7	-1.5
MORH	Mrgy, Hungar	152.23	334	⇓iP	PKPdf	05 57 50.2	-0.8
PLD	Plovdiv	152.25	322	i P	PKPdf	05 57 50.2	-1.0
PGB	Panagyurishte	152.27	323	i P	PKPdf	05 57 50.2	-1.1
MOA	Molln	152.34	342	i P	PKPdf	05 57 50.1	-1.1
	comp=Z,76nm,1.0s,SNR=79						
MOA				i P	PKiKP	05 57 58.5	-0.1
	comp=Z,282nm,1.0s						
MOA				i P	PKPab	05 58 10.9	+0.6
	comp=Z,513nm,1.3s						
RDO	Rodhopi	152.34	319	P	PKPdf	05 57 49.8	-1.6
PSMN	Pico do Norte,	152.38	51	ePKP	PKPdf	05 57 50.8	-0.8
ARSA	Arzberg	152.48	340	eP	PKPdf	05 57 50.3	-1.2
	comp=Z,136nm,2.1s,SNR=49						
ARSA				i P	PKPbc	05 57 58.5	-0.3
	comp=Z,146nm,0.8s						
ARSA				i P	PKPab	05 58 11.2	+0.4
	comp=Z,314nm,1.0s						
RZN	Rozhen	152.50	321	i P	PKPdf	05 57 50.2	-1.7
FRGS	Fruska Gora	152.58	332	⇓iP	PKPdf	05 57 50.8	-0.9
YER	Yerkesik	152.59	309	P	PKPdf	05 57 50.5	-1.5
EZN	Ezine	152.60	316	P	PKPdf	05 57 50.0	-1.8
BIOA	Bad Ischl, Aus	152.66	342	i P	PKPdf	05 57 50.6	-1.1
	comp=Z,108nm,1.1s,SNR=47						
BIOA				i P	PKPbc	05 57 58.9	-0.3
	comp=Z,399nm,1.2s						
BIOA				i P	PKPab	05 58 11.9	+0.3
	comp=Z,833nm,1.3s						
JVM	Valle D.L. Mar	152.66	6	eP	PKPdf	05 57 50.9	-0.7
JQE	Queens East	152.69	5	eP	PKPdf	05 57 50.9	-0.7
JSA	Saint Aubin	152.69	6	eP	PKPdf	05 57 49.8	-1.8
BEHE	Becsehely	152.73	337	⇓iP	PKPdf	05 57 51.1	-0.7
SMTH	Samothraki Isl	152.74	318	P	PKPdf	05 57 49.9	-2.1
VTS	Vitosha	152.74	324	i P	PKPdf	05 57 51.8	-0.3
BLCB	Balcova	152.87	313	P	PKPdf	05 57 50.5	-1.7
PRK	Paraskevi	152.95	315	P	PKPdf	05 57 52.0	-0.3
KAVA	Kavala	153.05	320	P	PKPdf	05 57 50.4	-2.0
ARG	Arkhangelos	153.09	308	P	PKPdf	05 57 52.0	-0.7
ARG	Arkhangelos	153.09	308		PKPdf	05 57 51.9	-0.7
ARG	Arkhangelos	153.09	308	PKIKP	PKPdf	05 57 51.9	-0.7
BLJ	Bijeljina	153.12	332	eP	PKPbc	05 57 58.9	-1.2
MMB	Musomiste	153.14	322	i P	PKPdf	05 57 51.0	-1.6
SOKA	Soboth	153.15	340	i P	PKPdf	05 57 51.2	-1.3
	comp=Z,155nm,1.3s,SNR=121						
SOKA				i P	PKPbc	05 57 60.0	-0.3
	comp=Z,384nm,1.1s						
SOKA				i P	PKPab	05 58 13.4	-0.3
	comp=Z,356nm,1.1s						
PERS	Pernice	153.16	339	i PKPdf	PKPdf	05 57 51.2	-1.3
PERS				i PKPbc	PKPbc	05 58 00.0	-0.3
PERS				ePP	PP	06 01 49.9	+1.2
PERS				e		06 04 03.9	
PERS				e		06 05 16.8	
PERS				e		06 20 47.6	
PERS				e		06 23 33.0	
THAS	Thassos island	153.16	319	P	PKPdf	05 57 50.4	-2.2
TEKS	Tekeris	153.18	331	⇓iP	PKPdf	05 57 51.1	-1.4
NVR	Nevrokopi	153.21	321	P	PKPdf	05 57 50.7	-2.0
SIGR	SIGRI	153.24	315	P	PKPdf	05 57 50.8	-1.9
DAT	Datca	153.27	309	P	PKPdf	05 57 51.0	-2.0
LIA	Limnos Island	153.29	317	P	PKPdf	05 57 50.7	-2.1
KBA	Koelnbreinsper	153.30	342	i P	PKPdf	05 57 51.4	-1.5
	comp=Z,121nm,1.2s,SNR=85						
KBA				i P	PKPbc	05 58 00.1	-0.6
	comp=Z,306nm,0.9s						
KBA				eP	PKPab	05 58 13.9	-0.6
	comp=Z,193nm,0.8s						
BODT	Bodrum	153.31	310	P	PKPdf	05 57 51.7	-1.3
DIVS	Divibare	153.32	330	⇓iP	PKPdf	05 57 51.9	-0.9
KKB	Krupnik	153.32	323	i P	PKPdf	05 57 51.7	-1.1
SMG	Samos	153.34	312	P	PKPdf	05 57 51.6	-1.4
OBKA	Obir	153.45	340	i P	PKPdf	05 57 51.8	-1.1
	comp=Z,107nm,1.9s,SNR=40						
OBKA				eP	PKPbc	05 58 00.5	-0.5
	comp=Z,143nm,1.0s						
OBKA				i P	PKPab	05 58 14.3	-0.8
	comp=Z,142nm,0.8s						
KOKK	Kokkinochori,	153.47	320	P	PKPdf	05 57 50.6	-2.4
SRS	Serrai	153.52	321	P	PKPdf	05 57 50.5	-2.6
WATA	Walderalm	153.53	345	i P	PKPdf	05 57 52.0	-1.1
	comp=Z,160nm,1.0s,SNR=60						
WATA				i P	PKPbc	05 58 01.1	0.0
	comp=Z,666nm,1.3s						
WATA				i P	PKPab	05 58 15.4	0.0
	comp=Z,594nm,1.4s						
CHOS	Chios island	153.54	314	P	PKPdf	05 57 51.2	-2.1
RETA	Reutte	153.57	346	eP	PKPdf	05 57 52.2	-0.9
	comp=Z,87nm,1.0s,SNR=52						
RETA				i P	PKPbc	05 58 01.1	-0.1
	comp=Z,320nm,1.1s						
RETA				i P	PKPab	05 58 15.6	+0.1
	comp=Z,236nm,0.7s						
WTTA	Wattenberg	153.58	345	i P	PKPdf	05 57 52.3	-0.9
	comp=Z,235nm,1.0s,SNR=98						
WTTA				i P	PKiKP	05 58 01.5	+0.1
	comp=Z,1µm,1.3s						
WTTA				i P	PKPab	05 58 16.1	+0.4
	comp=Z,1µm,1.6s						
NIS1	Nisyros Isl.	153.62	309	P	PKPdf	05 57 52.0	-1.4
MYKA	Terra Mystica	153.62	341	i P	PKPdf	05 57 51.8	-1.3
	comp=Z,155nm,1.7s,SNR=37						
MYKA				i P	PKPbc	05 58 00.7	-0.6
	comp=Z,251nm,1.1s						
MYKA				i P	PKPab	05 58 15.2	-0.6
	comp=Z,516nm,1.4s						
MOTA	Moosalm	153.63	346	i P	PKPdf	05 57 52.1	-1.1
	comp=Z,221nm,0.9s,SNR=144						
MOTA				i P	PKPbc	05 58 01.3	-0.1
	comp=Z,536nm,1.0s						
MOTA				i P	PKPab	05 58 15.2	-0.7
	comp=Z,542nm,1.4s						
KOSK	Kos Island	153.69	310	P	PKPdf	05 57 51.6	-1.8
SQTA	Sankt Quirin	153.72	345	i P	PKPdf	05 57 52.4	-0.9
	comp=Z,210nm,0.9s,SNR=109						
SQTA				i P	PKiKP	05 58 01.6	0.0
	comp=Z,526nm,1.1s						
SQTA				i P	PKPab	05 58 16.1	-0.1
	comp=Z,347nm,1.5s						
CRES	Cresnjev	153.75	338	⇓iP	PKPdf	05 57 52.3	-1.0
BBLS	Lazići	153.77	330	⇓iP	PKPdf	05 57 52.6	-0.9
OUR	Ouranopolis	153.77	319	P	PKPdf	05 57 51.3	-2.1
ABTA	Abfaltersbach	153.83	343	eP	PKPdf	05 57 52.0	-1.5
	comp=Z,364nm,1.0s,SNR=310						
ABTA				i P	PKPbc	05 58 01.2	-0.5
	comp=Z,436nm,0.7s						
ABTA				i P	PKPab	05 58 15.7	-1.0
	comp=Z,557nm,1.3s						
SOH	Sokhos	153.84	321	P	PKPdf	05 57 50.9	-2.7
LJU	Ljubljana	153.87	340	⇓iP	PKPdf	05 57 52.7	-0.7
LJU	Ljubljana	153.87	340	ePKPdf	PKPdf	05 57 52.8	-0.7
LJU				ePKPbc	PKiKP	05 58 01.8	0.0
LJU				i PKPab	PKPab	05 58 16.6	-0.2
LJU				e		05 59 31.2	
LJU				i		06 00 32.8	
LJU				ePP	PP	06 01 52.8	+0.3
LJU				e		06 07 22.8	
KNT	Kendrikon	153.89	322	P	PKPdf	05 57 51.5	-2.1
DAVA	Damuels	153.95	347	i P	PKPdf	05 57 52.7	-1.0
	comp=Z,132nm,1.0s,SNR=75						
DAVA				i P	PKiKP	05 58 02.3	+0.2
	comp=Z,434nm,1.1s						
DAVA				i P	PKPab	05 58 16.9	-0.3
	comp=Z,409nm,1.3s						
SJES	Sjenica	153.96	329	⇓iP	PKPdf	05 57 52.9	-0.9
RUDO	Rudo	153.98	330	⇓iP	PKPdf	05 57 53.0	-0.7
ROBS	Robic	154.01	341	i PKPdf	PKPdf	05 57 52.2	-1.4
ROBS				ePKPab	PKPab	05 58 16.5	-0.8
FETA	Feichten	154.02	346	eP	PKPdf	05 57 52.9	-0.9
	comp=Z,302nm,0.9s,SNR=328						
FETA				i P	PKiKP	05 58 02.5	+0.3
	comp=Z,334nm,1.0s						
FETA				i P	PKPab	05 58 16.8	-0.7
	comp=Z,215nm,1.2s						
BLY	Banja Luka	154.02	334	⇓iP	PKPdf	05 57 52.9	-0.8
PLG	Polygyros	154.07	320	P	PKPdf	05 57 51.6	-2.3
KARP	Karpathos	154.08	307	P	PKPdf	05 57 53.2	-0.9
VOJS	Vojsko	154.09	340	ePKPdf	PKPdf	05 57 52.7	-1.1
HORT	Hortiatis	154.14	321	P	PKPdf	05 57 51.4	-2.7
CEY	Cerknica	154.17	339	⇓iP	PKPdf	05 57 52.8	-1.1
PLE	Pljevlja	154.19	330	ePKP	PKPdf	05 57 53.0	-1.1
THE	Thessaloniki	154.19	321	P	PKPdf	05 57 51.4	-2.6
PAIG	Paliouri	154.20	319	P	PKPdf	05 57 51.7	-2.4
SKY	Skiros Island	154.27	316	P	PKPdf	05 57 52.2	-2.0
IVA	Berane	154.29	328	ePKP	PKPdf	05 57 53.0	-1.2
GRG	Griva	154.31	322	P	PKPdf	05 57 52.2	-2.1
MGRS	Mrkonjic Grad	154.33	334	eP	PKPdf	05 57 53.7	-0.5
DAVOX	Davos/Dischmat	154.43	347	PKP	PKPdf	05 57 54.4	-0.1
	comp=Z,118nm,0.9s,baz=14,slow=0.7,SNR=210						
DAVOX				PKPbc	PKiKP	05 58 03.0	-0.2
	comp=Z,170nm,0.6s,baz=347,slow=2.2,SNR=29						
PVY	Plav	154.47	328	ePKP	PKPdf	05 57 53.6	-0.9
SKDS	Skadanscina	154.48	340	⇓iP	PKPdf	05 57 53.1	-1.2
KOME	Kolasin	154.49	329	ePKP	PKPdf	05 57 53.6	-0.9
UPM	Unac-Piva	154.51	330	⇓iP	PKPdf	05 57 53.3	-1.4
UPM	Unac-Piva	154.51	330	ePKP	PKPdf	05 57 52.9	-1.8
APE	Apeiranthos	154.56	311	P	PKPdf	05 57 52.4	-2.3
SRKY	Kupres RS	154.59	334	eP	PKPdf	05 57 54.0	-0.6
KYMI	Kymi, Euboea I	154.70	316	P	PKPdf	05 57 52.9	-1.9
NKY	Niksic	154.77	329	ePKP	PKPdf	05 57 54.0	-0.9
KARY	Karystos	154.81	314	P	PKPdf	05 57 52.7	-2.3
LIT	Litokhoron	154.81	320	P	PKPdf	05 57 53.0	-2.0
NKME	Niksic	154.82	329	ePKP	PKPdf	05 57 53.5	-1.4
KTI	Kastanea	154.84	321	P	PKPdf	05 57 54.3	-0.8
XOR	Xorichti	154.84	318	P	PKPdf	05 57 52.7	-2.3
NEO	Neokhori	154.86	318	P	PKPdf	05 57 52.8	-2.3
PHP	Peshkopia	154.88	326	P	PKPdf	05 57 53.5	-1.5
BRY	Bratogost	154.91	330	⇓iP	PKPdf	05 57 53.6	-1.6
BRY	Bratogost	154.91	330	ePKP	PKPdf	05 57 53.5	-1.6
THR8	Santorini-Mono	154.92	310	P	PKPdf	05 57 53.6	-1.6
PDG	Podgorica	154.94	328	⇓iP	PKPdf	05 57 53.7	-1.2
TTG	Podgorica	154.94	328	ePKP	PKPdf	05 57 53.8	-1.2
THT2	Imerovigli	154.95	310	P	PKPdf	05 57 53.2	-2.0
SANT	Santorini	154.95	310	P	PKPdf	05 57 53.2	-2.1
ZKR	Zakros	154.96	307	P	PKPdf	05 57 54.1	-1.2
THR3	Thira Island,	154.98	310	P	PKPdf	05 57 53.9	-1.3
SAP3	Santorini-Thir	155.00	310	P	PKPdf	05 57 53.4	-1.9
FNA	Florina	155.00	323	P	PKPdf	05 57 53.4	-1.8
THR5	Thira Island,	155.01	310	P	PKPdf	05 57 54.1	-1.2

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THR9  Santorini-Faro   155.03 310  P       PKPdf  05 57 54.1 -1.2
KZN   Kozani           155.10 322  P       PKPdf  05 57 53.3 -2.1
DION  Dionisos Attik   155.12 315  P       PKPdf  05 57 53.1 -2.3
TREB  Trebinje         155.15 330 eP       PKPdf  05 57 54.4 -0.9
DRME  Dracevica, Mon   155.15 328⇓iP       PKPdf  05 57 54.3 -1.0
DRME  Dracevica, Mon   155.15 328 ePKP     PKPdf  05 57 53.9 -1.4
PTL   Penteli          155.18 315  P       PKPdf  05 57 53.5 -2.0
BUM   Brajici-Budva    155.21 329 ePKP     PKPdf  05 57 54.4 -1.1
ATHU  Athens Univers   155.28 315  P       PKPdf  05 57 53.0 -2.6
HCY   Herceg Novi      155.29 329⇓iP       PKPdf  05 57 54.2 -1.3
HCY   Herceg Novi      155.29 329 ePKP     PKPdf  05 57 54.0 -1.5
ULC   Ulcinj           155.29 328 ePKP     PKPdf  05 57 54.1 -1.4
SENIN Lac Senin/Sane   155.29 351          PKPdf  05 57 55.1 -0.6
SENIN                              PKPab   PKPab  05 58 22.6 -0.5
ATH   Athens Observa   155.32 315  P       PKPdf  05 57 53.1 -2.5
VLY   Voula,Athens     155.33 315  P       PKPdf  05 57 53.1 -2.6
TEOL  Teolo            155.34 343          PKPdf  05 57 54.7 -0.7
TEOL                               PKPab   PKPab  05 58 22.9 -0.2
NPS   Neapolis         155.35 308  P       PKPdf  05 57 54.7 -1.1
ATAL  Atalanti         155.35 317  P       PKPdf  05 57 53.5 -2.2
FRMA  Ierapetra Chan   155.37 307  P       PKPdf  05 57 54.8 -1.0
SALO  Salr             155.39 345          PKPdf  05 57 54.1 -1.5
SALO                               PKPab   PKPab  05 58 23.0 -0.3
LKR   Lokris           155.39 317  P       PKPdf  05 57 52.3 -3.4
TIR   Tirane           155.43 326  P       PKPdf  05 57 54.7 -1.0
THL   Klokotos Trika   155.43 320  P       PKPdf  05 57 53.4 -2.4
NEST  Nestorio         155.44 323  P       PKPdf  05 57 54.7 -1.2
KBN   Korca            155.44 323  P       PKPdf  05 57 54.5 -1.4
VILL  Villia           155.47 316  P       PKPdf  05 57 53.2 -2.7
PENT  Pentalofos       155.53 322  P       PKPdf  05 57 54.8 -1.2
MHLO  Agia Marina, M   155.54 312  P       PKPdf  05 57 54.1 -1.9
KPRO  Kipourio         155.56 322  P       PKPdf  05 57 54.3 -1.7
MAKR  Makrakomi, Fth   155.71 319  P       PKPdf  05 57 54.6 -1.6
KSTL  Kastelli Herak   155.73 308  P       PKPdf  05 57 56.2 -0.1
LTK   Loutraki         155.78 316  P       PKPdf  05 57 54.0 -2.3
IDI   Anoyia           155.87 308  PKP     PKPdf  05 57 56.2 -0.3
      comp=Z,262nm,1.0s,baz=129,slow=3.1,SNR=74
IDI   Anoyia           155.87 308  P       PKPdf  05 57 55.3 -1.3
LSK   Leskovik         155.87 323  P       PKPdf  05 57 55.5 -0.9
EPID  Epidavros        155.91 315  P       PKPdf  05 57 54.0 -2.5
THAL  Thalero          155.96 316  P       PKPdf  05 57 54.6 -1.9
KRND  KRANIDI          156.02 314  P       PKPdf  05 57 53.9 -2.7
TMBK  Timbaki Herakl   156.05 308  P       PKPdf  05 57 56.2 -0.5
JAN   Janina           156.06 322  P       PKPdf  05 57 54.6 -2.0
ANX   Ano Chora        156.10 318  P       PKPdf  05 57 55.9 -0.9
PRNS  Prines Rethymn   156.11 309  P       PKPab  05 58 36.9 +10
EFP   Efpalio          156.21 318  P       PKPdf  05 57 56.1 -0.7
GUR   Goura            156.23 316  P       PKPdf  05 57 55.2 -1.8
VLO   Vlora            156.25 325  P       PKPdf  05 57 56.2 -0.6
LAKA  Lakka            156.28 318  P       PKPdf  05 57 55.7 -1.3
KLV   Kalavryta, Ach   156.29 317  P       PKPdf  05 57 54.9 -2.1
PVO   Paravola         156.33 319  P       PKPdf  05 57 56.3 -0.7
SRN   Sarande          156.39 323  P       PKPdf  05 57 55.6 -1.4
IGT   Igoumenitsa      156.44 322  P       PKPdf  05 57 55.5 -1.6
IMMV  Iera Moni Meta   156.44 310  P       PKPdf  05 57 56.0 -1.2
VLI   Veliai           156.53 313  P       PKPdf  05 57 55.1 -2.2
KEK   Kerkira          156.62 323  P       PKPdf  05 57 55.9 -1.4
DRO   Drossia          156.62 317  P       PKPdf  05 57 56.7 -0.7
GVD   Gavdhos          156.66 308  P       PKPdf  05 57 56.0 -1.5
KTHA  Kythira Island   156.69 312  P       PKPdf  05 57 55.9 -1.6
RLS   Riolos of Patr   156.71 318  P       PKPdf  05 57 56.4 -1.1
TSLK  Tsoukalades, L   156.72 320  P       PKPdf  05 57 56.6 -0.9
ANKY  Antikythira Is   156.72 311  P       PKPdf  05 57 56.6 -1.0
KTHR  Kythira          156.72 312  P       PKPdf  05 57 56.4 -1.2
LKD2  Lefkada island   156.74 320  P       PKPdf  05 57 56.4 -1.1
KNDR  Palaiochora Ch   156.76 309  P       PKPdf  05 57 56.6 -1.0
NYDR  Nydri-Lefkada    156.76 320  P       PKPdf  05 58 08.8 +11
EVGI  Lefkada island   156.85 320  P       PKPdf  05 57 56.3 -1.3
ITM   Ithomi           156.94 315  P       PKPdf  05 57 56.1 -1.7
FSK   Fiskardo         157.01 320  P       PKPdf  05 57 57.0 -0.8
VLS   Valsamata        157.17 319  P       PKPdf  05 57 56.4 -1.7
PSDA  Pessada-Kefalo   157.22 319  P       PKPdf  05 57 56.7 -1.4
KEF4  Livadi, Kephal   157.22 319  P       PKPdf  05 57 56.6 -1.5
PYL   PYLOS            157.22 315  P       PKPdf  05 57 56.3 -1.9
DMLN  Damoulianata-K   157.26 320  P       PKPdf  05 57 56.9 -1.3
KEF3  Kipouria, Keph   157.30 319  P       PKPdf  05 57 56.8 -1.4
PGAV  Gavieira, Arco   158.38  21 ePKPdf   PKPdf  05 57 59.5 -0.1
PGAV  Gavieira, Arco   158.38  21 ePKPab   PKPab  05 58 36.4  0.0
PGAV                              i LQ     LQ     05 59 41.4
PGAV  Gavieira, Arco   158.38  21 ePP      PP     06 02 16.9 -0.5
PCAB  Cabril           158.69  21 ePKPdf   PKPdf  05 58 00.2 +0.4
PCAB  Cabril           158.69  21 ePKPab   PKPab  05 58 38.3 +0.6
PCAB                              i LQ     LQ     05 59 43.0
PCAB  Cabril           158.69  21 ePP      PP     06 02 18.1 -0.9
PBRG  Braganca         159.00  18 ePKPdf   PKPdf  05 58 00.0 -0.2
PBRG  Braganca         159.00  18 ePKPab   PKPab  05 58 39.3 +0.2
PBRG                              i LQ     LQ     05 59 44.0
PBRG  Braganca         159.00  18 ePP      PP     06 02 20.5 -0.1
PTO   Porto            159.00  22 ePKPdf   PKPdf  05 58 01.7 +1.6
PTO   Porto            159.00  22 ePKPab   PKPab  05 58 39.7 +0.7
POLO  Lamas de Olo     159.07  21 ePKPdf   PKPdf  05 58 00.2 -0.2
POLO  Lamas de Olo     159.07  21 ePKPab   PKPab  05 58 39.8 +0.4
POLO                              i LQ     LQ     05 59 41.1
POLO  Lamas de Olo     159.07  21 ePP      PP     06 02 20.7 -0.4
PVRL  Vila Real        159.18  21 ePKPdf   PKPdf  05 58 00.7 +0.3
PVRL  Vila Real        159.18  21 ePKPab   PKPab  05 58 40.6 +0.7
PVRL  Vila Real        159.18  21 ePP      PP     06 02 21.2 -0.5
MVO   Moncorvo         159.50  19 ePKPdf   PKPdf  05 58 01.1 +0.3
MVO   Moncorvo         159.50  19 ePKPab   PKPab  05 58 41.7 +0.4
MVO                               i LQ     LQ     05 59 42.1
MVO   Moncorvo         159.50  19 ePP      PP     06 02 22.7 -0.7
PVIS  Viseu            159.62  22 ePKPdf   PKPdf  05 58 00.9 -0.1
PVIS  Viseu            159.62  22 ePKPab   PKPab  05 58 42.3 +0.5
PVIS                              i LQ     LQ     05 59 43.2
PVIS  Viseu            159.62  22 ePP      PP     06 02 23.3 -0.8
COI   Coimbra          159.89  23 ePKPdf   PKPdf  05 58 01.6 +0.4
COI   Coimbra          159.89  23 ePKPab   PKPab  05 58 43.5 +0.6
COI                               i LQ     LQ     05 59 43.6
COI   Coimbra          159.89  23 ePP      PP     06 02 24.7 -0.8
PCAS  Casmilo, Conde   160.00  24 ePKPdf   PKPdf  05 58 01.0 -0.4
PCAS  Casmilo, Conde   160.00  24 ePKPab   PKPab  05 58 43.6 +0.2
PCAS                              i LQ     LQ     05 59 44.5
PCAS  Casmilo, Conde   160.00  24 ePP      PP     06 02 25.6 -0.5
MTE   Manteigas        160.03  21 ePKPdf   PKPdf  05 58 01.3 -0.2
MTE   Manteigas        160.03  21 ePKPab   PKPab  05 58 43.7 +0.1
MTE                               i LQ     LQ     05 59 40.6
MTE   Manteigas        160.03  21 ePP      PP     06 02 24.3 -2.0
PMOZ  Porto Moniz, M   160.03  53 ePKPdf   PKPdf  05 58 02.5 +0.8
PMOZ  Porto Moniz, M   160.03  53 ePKPab   PKPab  05 58 44.6 +0.6
PMOZ                              i LQ     LQ     05 59 43.1
PMOZ  Porto Moniz, M   160.03  53 ePP      PP     06 02 30.2 +2.7
PMOZ  Porto Moniz, M   160.03  53  P       PKPdf  05 58 03.9 +2.2
PMAR  Madeira          160.28  53 ePKPdf   PKPdf  05 58 03.0 +0.9
PMAR  Madeira          160.28  53 ePKPab   PKPab  05 58 46.0 +0.7
PMAR                              i LQ     LQ     05 59 45.3
PMAR  Madeira          160.28  53 ePP      PP     06 02 31.9 +3.0
FUL   Funchal          160.34  53 ePKPdf   PKPdf  05 58 03.6 +1.7
FUL   Funchal          160.34  53 ePKPab   PKPab  05 58 46.1 +0.9
FUL                               i LQ     LQ     05 59 44.6
FUL   Funchal          160.34  53 ePP      PP     06 02 29.5 +0.5
PSBE  So Bento         160.35  25 ePKPdf   PKPdf  05 58 01.6 -0.2
PSBE  So Bento         160.35  25 ePKPab   PKPab  05 58 45.4 +0.4
PSBE                              i LQ     LQ     05 59 42.7
PSBE  So Bento         160.35  25 ePP      PP     06 02 27.9 -0.1
PMPST Porto Santo, M   160.54  52 ePKPdf   PKPdf  05 58 03.2 +1.0
PMPST Porto Santo, M   160.54  52 ePKPab   PKPab  05 58 46.8 +0.7
PMPST                             i LQ     LQ     05 59 43.7
PMPST Porto Santo, M   160.54  52 ePP      PP     06 02 33.5 +3.5
PCBR  Castelo Branco   160.55  22 ePKPdf   PKPdf  05 58 02.5 +0.6
PCBR  Castelo Branco   160.55  22 ePKPab   PKPab  05 58 46.1 +0.3
PCBR                              i LQ     LQ     05 59 41.9
PCBR  Castelo Branco   160.55  22 ePP      PP     06 02 28.2 -0.8
PMAFR Mafra            160.63  27 ePKPdf   PKPdf  05 58 02.3 +0.2
PMAFR Mafra            160.63  27 ePKPab   PKPab  05 58 46.4 +0.2
PMAFR                             i LQ     LQ     05 59 44.0
PMAFR Mafra            160.63  27 ePP      PP     06 02 29.1 -0.5
PMST  Lisbon--Monsan   160.85  27 ePKPdf   PKPdf  05 58 02.7 +0.4
PMST  Lisbon--Monsan   160.85  27 ePKPab   PKPab  05 58 47.5 +0.3
PMST                              i LQ     LQ     05 59 42.2
PMST  Lisbon--Monsan   160.85  27 ePP      PP     06 02 30.7  0.0
EKNA  AfricaArray -    160.88 204 eP       PKPdf  05 58 04.3 +1.1
LIS   Lisbon           160.88  27 ePKPdf   PKPdf  05 58 03.1 +0.8
LIS                               ePKPab   PKPab  05 58 48.4 +1.1
LIS                               eSS      SS     06 22 12.3 +2.7
LIS   Lisbon           160.88  27 ePKPdf   PKPdf  05 58 03.2 +0.9
LIS   Lisbon           160.88  27 ePKPab   PKPab  05 58 48.0 +0.7
LIS                               i LQ     LQ     05 59 44.1
LIS   Lisbon           160.88  27 ePP      PP     06 02 30.9  0.0
PMRV  Marv??o          160.95  22 ePKPdf   PKPdf  05 58 02.5 +0.1
PMRV  Marv??o          160.95  22 ePKPab   PKPab  05 58 47.5 -0.1
PMRV                              i LQ     LQ     05 59 44.0
PMRV  Marv??o          160.95  22 ePP      PP     06 02 30.0 -1.1
PMTG  Montargil        160.96  25 ePKPdf   PKPdf  05 58 02.5 +0.1
PMTG  Montargil        160.96  25 ePKPab   PKPab  05 58 47.4 -0.2
PMTG                              i LQ     LQ     05 59 43.5
PMTG  Montargil        160.96  25 ePP      PP     06 02 30.4 -0.8
PACT  Alcochete        160.97  26 ePKPdf   PKPdf  05 58 03.3 +0.9
PACT  Alcochete        160.97  26 ePKPab   PKPab  05 58 48.2 +0.5
PACT  Alcochete        160.97  26 ePP      PP     06 02 31.1 -0.2
VAE   Valguarnera      161.12 328  PKP     PKPdf  05 58 02.9 +0.2
      comp=Z,14nm,0.5s,baz=34,slow=2.9,SNR=11
UCM   Universidad Co   161.26  12  PKP     PKPdf  05 58 03.0 +0.2
PESTR Estremoz         161.37  23 ePKPdf   PKPdf  05 58 02.5 -0.4
PESTR Estremoz         161.37  23 ePKPab   PKPab  05 58 49.3 -0.2
PESTR                             i LQ     LQ     05 59 46.7
PESTR Estremoz         161.37  23 ePP      PP     06 02 32.7 -0.7
PESTR Estremoz         161.37  23  P       PKPdf  05 58 03.6 +0.7
PESTR Estremoz         161.37  23  P       PKPab  05 58 49.8 +0.4
EVO   Evora            161.50  25  PKP     PKPdf  05 58 01.6 -1.4
PNCL  Nicolau / Gran   161.65  27 ePKPdf   PKPdf  05 58 03.4 +0.3
PNCL  Nicolau / Gran   161.65  27 ePKPab   PKPab  05 58 50.8 +0.1
PNCL                              i LQ     LQ     05 59 45.6
PNCL  Nicolau / Gran   161.65  27 ePP      PP     06 02 34.4 -0.6
ESDC  Sonseca Array    161.72  14  PKP     PKPdf  05 58 03.2  0.0
      comp=Z,52nm,1.1s,baz=348,slow=3.0,SNR=213
ESDC                               PKPab   PKPab  05 58 51.2 +0.2
      comp=Z,167nm,1.1s,baz=341,slow=4.6,SNR=33
ESDC                               PP      PP     06 02 34.4 -0.7
      comp=Z,31nm,1.1s,baz=337,slow=4.9,SNR=7.0
PAB   San Pablo        161.75  15  P       PKPdf  05 58 04.3 +1.0
PBEJ  Beja             162.00  25 ePKPdf   PKPdf  05 58 04.4 +0.9
PBEJ  Beja             162.00  25 ePKPab   PKPab  05 58 52.8 +0.6
PBEJ                              i LQ     LQ     05 59 45.0
PBEJ  Beja             162.00  25 ePP      PP     06 02 36.5 -0.3
MESJ  Messejana        162.01  26 ePKPdf   PKPdf  05 58 04.2 +0.7
MESJ                              ePKPab   PKPab  05 58 52.8 +0.5
MESJ                              eSS      SS     06 22 24.0 +2.7
MESJ  Messejana        162.01  26 ePKPdf   PKPdf  05 58 04.4 +0.9
MESJ  Messejana        162.01  26 ePKPab   PKPab  05 58 52.4 +0.1
MESJ                              i LQ     LQ     05 59 44.6
MESJ  Messejana        162.01  26 ePP      PP     06 02 36.5 -0.4
MAHO  Mahon            162.04 354  PKP     PKPdf  05 58 01.9 -1.5
PTEO  Sao Teotonio     162.05  28 ePKPdf   PKPdf  05 58 04.1 +0.5
PTEO  Sao Teotonio     162.05  28 ePKPab   PKPab  05 58 53.0 +0.5
PTEO                              i LQ     LQ     05 59 45.9
PTEO  Sao Teotonio     162.05  28 ePP      PP     06 02 36.8 -0.3
PBAR  Barrancos        162.18  23 ePKPdf   PKPdf  05 58 04.4 +0.7
PBAR  Barrancos        162.18  23 ePKPab   PKPab  05 58 53.5 +0.5
MORF  Marmelete        162.28  28 ePKPdf   PKPdf  05 58 04.6 +0.7
MORF                              ePKPab   PKPab  05 58 54.4 +0.8
MORF                              eSS      SS     06 22 26.8 +2.5
MORF  Marmelete        162.28  28 ePKPdf   PKPdf  05 58 04.3 +0.4
MORF  Marmelete        162.28  28 ePKPab   PKPab  05 58 53.9 +0.3
MORF                              i LQ     LQ     05 59 43.8
MORF  Marmelete        162.28  28 ePP      PP     06 02 37.0 -1.4
PFVI  Vila Bisbo       162.34  29 ePKPdf   PKPdf  05 58 04.7 +0.8
PFVI  Vila Bisbo       162.34  29 ePKPab   PKPab  05 58 54.0 +0.2
PFVI                              i LQ     LQ     05 59 47.3
PFVI  Vila Bisbo       162.34  29 ePP      PP     06 02 38.4 -0.3
PFVI  Vila Bisbo       162.34  29  P       PKPdf  05 58 05.4 +1.5
PVAQ  Vaqueiros        162.59  26 ePKPdf   PKPdf  05 58 04.5 +0.4
PVAQ  Vaqueiros        162.59  26 ePKPab   PKPab  05 58 54.7 -0.2
PVAQ                              i LQ     LQ     05 59 48.7
PVAQ  Vaqueiros        162.59  26 ePP      PP     06 02 39.7 -0.2
PVAQ  Vaqueiros        162.59  26  P       PKPdf  05 58 05.4 +1.3
PVAQ  Vaqueiros        162.59  26  P       PKPab  05 58 55.6 +0.8
PBDV  Barranco-do-Ve   162.64  27 ePKPdf   PKPdf  05 58 05.0 +0.8
PBDV  Barranco-do-Ve   162.64  27 ePKPab   PKPab  05 58 55.6 +0.5
PBDV                              i LQ     LQ     05 59 45.4
PBDV  Barranco-do-Ve   162.64  27 ePP      PP     06 02 40.3 +0.1
LIC   Lamto            162.98 156 eP       PKPdf  05 58 05.3 +0.1
      comp=Z,922nm,1.3s
KIC   Kosan Boka       163.21 157 ePKIKP   PKPdf  05 58 05.0 -0.4
      comp=Z,706nm,0.9s
TIC   Toumodi          163.37 156 ePKIKP   PKPdf  05 58 05.1 -0.5
      comp=Z,794nm,0.9s
DBIC  Dimbokro         163.46 156  PKP     PKPdf  05 58 05.5 -0.2
      comp=Z,264nm,0.7s,baz=181,slow=1.0,SNR=191
DBIC                               PKPab   PKPab  05 59 00.1 +1.0
      comp=Z,61nm,0.8s,baz=177,slow=4.3,SNR=6.0
DBIC                               PP      PP     06 02 46.2 +2.0
      comp=Z,20nm,0.8s,baz=191,slow=6.6,SNR=2.2
SFS   San Fernando     164.00  24  PKP     PKPdf  05 58 06.8 +1.3
SFS   San Fernando     164.00  24  P       PKPdf  05 58 07.7 +2.2
CART  Cartagena        164.29   8  PKP     PKPdf  05 58 04.2 -1.4
CMAH  Djebel Manchou   164.63 343  P       PKPdf  05 58 05.4 -0.7
CEU   Ceuta            164.81  23  PKP     PKPdf  05 58 05.8 -0.4
ABSA  Djebel Ababsia   164.95 342  P       PKPdf  05 58 06.2 -0.2
SMIR  Smir Dam         165.00  23  P       PKPdf  05 58 08.0 +1.6
SMIR  Smir Dam         165.00  23  P       PKPab  05 59 08.0 +2.5
CKFL  Kef-Lekhel       165.03 344  P       PKPdf  05 58 06.4 -0.1
DFRA  Djebel Bou Aff   165.08 347  P       PKPdf  05 58 07.2 +0.6
ABA   Alger-Bouzarea   165.22 356  P       PKPdf  05 58 08.5 +2.0
CTEI  Djebel Teioual   165.43 345  P       PKPdf  05 58 06.6 -0.3
SET   Setif            165.51 348  P       PKPdf  05 58 10.0 +3.1
CHEFC Chefchaouen      165.53  24  P       PKPdf  05 58 08.3 +1.3
ADJB  Djebel Djouab    165.83 355  P       PKPdf  05 58 08.0 +0.8
PVLZ  Peæn de          165.84  21  PKP     PKPdf  05 58 04.1 -3.0
AKET  Djebel Ketaf     165.89 353  P       PKPdf  05 58 08.0 +0.7
PALE  Palemas          165.91  20  P       PKPdf  05 58 08.0 +0.8
OKGL  Djebel Kef Gue   165.98   4  P       PKPdf  05 58 11.0 +3.8
EANR  'Ain N'Sour      166.09   2  P       PKPdf  05 58 08.6 +1.3
WMELI Melilla          166.10  16  PKP     PKPdf  05 58 04.9 -2.3
AVE   Averroes         166.12  34  PKP     PKPdf  05 58 05.7 -1.7
AVE   Averroes         166.12  34  P       PKPdf  05 58 08.4 +1.0
AVE   Averroes         166.12  34  P       PKPab  05 59 11.6 +1.1
USTO  Oran             166.17   8  P       PKPdf  05 58 09.0 +1.7
GOG   Mont Gurugu      166.18  17  P       PKPdf  05 58 09.0 +1.5
CHAS  Isla Isabel II   166.36  15  PKP     PKPdf  05 58 06.1 -1.4
ZHG   ZHG              166.38  31  P       PKPdf  05 58 09.0 +1.3
ZHG   ZHG              166.38  31  P       PKPab  05 59 13.0 +1.2
OJBR  Djebel Berber    166.41   5  P       PKPdf  05 58 08.0 +0.4
CGR   Cap Guir         166.47  48  P       PKPdf  05 58 10.0 +2.3
SRHM  Skhour des Reh   166.49  37  P       PKPdf  05 58 09.0 +1.2
SRHM  Skhour des Reh   166.49  37  P       PKPab  05 59 14.0 +1.7
OLHC  Oulhaca          166.51  11  P       PKPdf  05 58 09.4 +1.7
OJGS  Djebel Guires    166.52   4  P       PKPdf  05 58 08.0 +0.3
OTSS  Djebel Tessala   166.58   9  P       PKPdf  05 58 12.0 +4.2
AKLM  AKL              166.59  21  P       PKPdf  05 58 09.0 +1.2
ODJA  Bouhanifia       166.62   7  P       PKPdf  05 58 12.0 +4.3
TAF   Taforalt         166.72  15  P       PKPdf  05 58 10.0 +2.1
LCRM  LCR              166.97  25  P       PKPdf  05 58 10.0 +1.8
LCRM  LCR              166.97  25  P       PKPab  05 59 16.0 +1.5
SFNM  Sidi Ifni        166.99  53  P       PKPdf  05 58 10.0 +1.9
JBK   JBK              167.13  16  P       PKPdf  05 58 10.0 +1.6
OUK   Oukaimeden       167.41  41  P       PKPdf  05 58 10.0 +1.1
OUK   Oukaimeden       167.41  41  P       PKPab  05 59 18.0 +1.1
TTIG  Tnine Tigouga,   167.49  45  P       PKPdf  05 58 10.0 +1.3
MDT   Midelt           167.83  26  PKP     PKPdf  05 58 09.3 +0.5
      comp=Z,144nm,1.0s,baz=204,slow=0.2,SNR=183
MDT                                PKPab   PKPab  05 59 18.4 +0.2
      comp=Z,181nm,1.0s,baz=333,slow=4.2,SNR=16
MDT                                PP      PP     06 03 07.2 +0.2
      comp=Z,35nm,1.1s,baz=40,slow=4.1,SNR=4.8
MDT   Midelt           167.83  26  P       PKPdf  05 58 09.8 +1.0
OUZM  OUZ              168.29  39  P       PKPdf  05 58 10.2 +1.0
TDRA  Tendrara         168.50  16  P       PKPdf  05 58 11.0 +1.6
GOLM  Goulmima         168.62  30  P       PKPdf  05 58 11.0 +1.6
GOLM  Goulmima         168.62  30  P       PKPab  05 59 24.0 +2.1
TZRR  Tazzarine        169.05  35  P       PKPdf  05 58 11.0 +1.4
TZRR  Tazzarine        169.05  35  P       PKPab  05 59 25.1 +1.3
ZGR   Zagora           169.53  38  P       PKPdf  05 58 11.0 +1.0
KOWA  Kowa             170.72 143  P       PKPdf  05 58 10.8  0.0
TOA0  Torodi Ar. Sit   171.19 179  P       PKPdf  05 58 10.2 -0.9
      SNR=94
TORD  Torodi Ar. Bea   171.19 179  PKP     PKPdf  05 58 10.4 -0.7
      comp=Z,243nm,0.9s,baz=328,slow=0.6,SNR=692
TORD                               PKPab   PKPab  05 59 34.0 +0.8
      comp=Z,325nm,0.9s,baz=174,slow=3.9,SNR=32
TORD                               pPKPab  pPKPab 06 01 11.3 +4.5
      comp=Z,80nm,1.0s,baz=187,slow=3.5,SNR=5.9
TORD                               PP      PP     06 03 24.4 +1.4
      comp=Z,52nm,0.9s,baz=191,slow=4.2,SNR=6.5
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*IDC **28** 05:51:57.3±0.4, 13.°61N×120.°89E, h138km±3km, mb4.5/29, mbtmp4.9/29, MS5.4/2, Error ellipse: s-maj=13.2km s-min=8.3km az=70.0*

*MAN **28** 05:51:58.2, 13.°63N×120.°63E, h117km, mb4.8, ML3.7, MS3.6, Hypocentre not reviewed by the ISC*

*NEIC **28** 05:52:02.1±1.6, 13.°61N±0.°08×120.°8E±0.°1, h175km±5km, mb4.9/35, Error ellipse: s-maj=15.4km s-min=10.0km az=59.0*

ISC 28 05:51:57.8±0.6**, 13.°60N**±0.°03×**120.°71E**±0.°04**, h139**km±5km**, n118,** σ1.°54/132**, mb4.9**/50**, 32C-19D, Fault plane solution: NP1:**φs274.65628°**,** δ31.49041°**,** λ53.21825°. **NP2:**φs135.89781°**,** δ65.26851°**,** λ110.14243°. **Principal axes:** T Plg64.0007°, Azm79.6408°; N Plg18.2263°, Azm307.1737°; P Plg17.8869°, Azm211.0731°; **Fault plane solution: NP1:**φs134.80116°**,** δ51.83153°**,** λ56.46511°. **NP2:**φs1.80391°**,** δ49.05500°**,** λ125.10060°. **Principal axes:** T Plg64.2062°, Azm340.9383°; N Plg25.7427°, Azm157.0737°; P Plg1.5137°, Azm247.8038°; **Mindoro**

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Code  Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op       ISC      h  m  s    ISC
PGP   Puerto Galera     0.26 112⇑iP       Pn       05 52 15.7 -1.2
PGP                             i S       Sn       05 52 27.8 -3.6
LUBP  Lubang            0.47 287⇑iP       Pn       05 52 16.8 -0.9
TGY   Tagaytay City     0.55  24  P       Pn       05 52 18.0 -0.2
      24µm,0.3s,baz=209,slow=2.0,SNR=197
TGY                               S       Sn       05 52 33.9 +0.1
      14µm,0.5s,baz=51,slow=22,SNR=8.5
TGY   Tagaytay City     0.55  24⇑iP       Pn       05 52 18.0 -0.2
TGY                             i S       Sn       05 52 23.5  -10
MACP  Maragondon, Ca    0.66   1⇑eP       Pn       05 52 17.8 -1.1
MACP                             eS       Sn       05 52 33.2 -1.7
BOAC  Boac              1.11  97⇓eP       Pn       05 52 22.8 +0.3
BOAC                             eS       Sn       05 52 41.8 +0.4
SJMP  San Jose          1.20 160⇓eP       Pn       05 52 23.2 -0.3
SJMP                             eS       Sn       05 52 42.5 -0.5
GQP   Guinayangan       1.72  80⇓eP       Pn       05 52 29.6 +0.6
GQP                             i S       Sn       05 52 56.9 +4.2
PCPH  Palayan           1.99  11⇓iP       Pn       05 52 31.3 -0.8
PCPH                             eS       Sn       05 52 58.3 -0.2
JCNP  Jose Panganiba    2.05  70⇑eP       Pn       05 52 33.3 +0.5
JCNP                             eS       Sn       05 53 00.9 +1.2
BALP  Baler             2.29  21⇑eP       Pn       05 52 36.5 +0.8
BALP                             eS       Sn       05 53 07.4 +2.4
SCZP  Santa Cruz        2.30 340⇑eP       Pn       05 52 35.3 -0.6
SCZP                             eS       Sn       05 53 03.3 -1.9
SMPP  San Manuel, Pa    2.54 359⇑eP       Pn       05 52 38.4 -0.5
ENPP  El Nido           2.69 208⇑eP       Pn       05 52 41.8 +1.0
ENPP                             eS       Sn       05 53 15.3 +1.4
RCP   Roxas             2.84 135⇑eP       Pn       05 52 44.0 +1.3
BOLP  Bolinao           2.87 345⇑eP       Pn       05 52 43.1  0.0
BOLP                             eS       Sn       05 53 16.8 -1.3
PVCP  Virac             3.35  90⇓eP       Pn       05 52 50.6 +1.3
SAMP  Sagada Mountai    3.47   3⇑eP       Pn       05 52 51.9 +1.1
CAUP  Cauayan           3.50  18⇑eP       Pn       05 52 52.5 +1.4
PPR   Puerto Princes    4.26 207⇓iP       Pn       05 53 03.2 +1.9
APYP  Conner            4.27   7⇓eP       Pn       05 53 02.6 +1.2
APYP                             eS       Sn       05 53 58.9 +8.1
MYLDM Lahad Datu        8.64 195  Pn      Pn       05 54 03.9 +3.9
QIZ   Qiongzhong       11.74 299  Pn      Pn       05 54 44.1 +3.0
TOLI2 Tolitoli         12.41 180  Pn      Pn       05 54 52.6 +2.8
SBUM  Sibu             13.90 218  P       P        05 55 15.5 +2.9
KAPI  Kappang          18.52 183  P       Pn       05 56 06.1 +0.7
      94nm,0.6s,baz=340,slow=3.0,SNR=24
KAPI  Kappang          18.52 183  P       Pn       05 56 06.3 +0.8
FAKI  Fak Fak          20.01 144  P       P        05 56 20.5 +0.7
KULM  Kulim            21.42 249  P       P        05 56 37.5 +2.4
KULM                              IAmb    IAmb     05 56 38.7
      comp=Z,31nm,0.7s
CMAR  Chiang Mai Arr   21.46 286  P       P        05 56 37.5 +2.1
      comp=Z,31nm,0.7s,baz=97,slow=8.0,SNR=14
CMAR                              PcP     PcP      06 00 32.9 -0.2
      comp=Z,3.4nm,0.9s,baz=68,slow=0.7,SNR=4.3
      comp=Z,31nm,0.7s
JAGI  Jajag, Banyuwa   22.87 197  P       P        05 56 51.2 +1.7
BATI  Baumata          23.83 173  P       P        05 56 58.1 -0.2
      comp=Z,298nm,0.5s,baz=334,slow=0.8,SNR=24
PSI   Prapat           24.05 245  P       P        05 57 02.2 +1.7
      comp=Z,72nm,0.8s,baz=48,slow=6.8,SNR=13
      comp=Z,72nm,0.8s
JHS   Saijyo           24.08  26  P       P        05 57 00.1 -0.3
JHS                               IAmb    IAmb     05 57 11.1
      comp=Z,21nm,0.9s
RPSI  Rantau Prapat    24.10 245  P       P        05 57 02.2 +1.4
GSI   Gunungsitoli     25.95 244  P       P        05 57 18.0 +0.5
TAPN  Taplejung        33.68 299 eP       P        05 58 27.1 +1.0
      comp=Z,113nm,0.8s
RAMN  Ramite           34.52 298 eP       P        05 58 34.3 +1.1
      comp=Z,151nm,0.7s
JIRN  Jiri             35.06 299 eP       P        05 58 39.2 +1.1
      comp=Z,171nm,0.4s
GUN   Gumba            35.40 299 eP       P        05 58 42.0 +1.1
      comp=Z,139nm,0.5s
PKI   Pulchoki         35.71 298 eP       P        05 58 43.9 +0.4
      comp=Z,74nm,0.5s
PKIN  Phulchoki        35.72 298 eP       P        05 58 44.0 +0.4
      comp=Z,77nm,0.5s
WRA   Warramunga Arr   35.93 158  P       P        05 58 43.3 -1.7
      comp=Z,9.1nm,0.6s,baz=330,slow=10,SNR=24
      comp=Z,9.1nm,0.6s
DMN   Daman            35.98 298 eP       P        05 58 46.3 +0.6
SONM  Songino Array    36.16 344  P       P        05 58 47.0 +0.1
      comp=Z,7.6nm,0.6s,baz=163,slow=9.5,SNR=12
      comp=Z,7.6nm,0.6s
SONM  Songino Array    36.16 344  IAmb    IAmb     05 59 16.1
      comp=Z,27nm,1.4s
GKN   Gorkha           36.48 299 eP       P        05 58 50.2 +0.3
KLR   Kul'dur          36.68  12  P       P        05 58 50.6 -0.4
      comp=Z,7.9nm,0.7s,baz=218,slow=8.0,SNR=8.1
KLR                               PcP     PcP      06 01 10.3 -0.5
      comp=Z,6.3nm,0.8s,baz=198,slow=3.7,SNR=9.4
      comp=Z,7.9nm,0.7s
DANN  Dangsing         37.32 299 eP       P        05 58 57.2  0.0
PYUN  Piuthan          37.91 298 eP       P        05 59 02.8 +0.7
ASAR  Alice Springs    39.22 161  P       P        05 59 11.7 -1.1
      comp=Z,7.8nm,0.8s,baz=336,slow=7.2,SNR=16
ASAR                              PcP     PcP      06 01 18.4 -0.8
      comp=Z,3.5nm,0.8s,baz=340,slow=2.9,SNR=5.6
      comp=Z,7.8nm,0.8s
ASAR  Alice Springs    39.22 161  P       P        05 59 11.4 -1.4
HYBB  Hyderabad (bro   40.74 281 eP       P        05 59 26.4 +0.9
HYBB                             eScP     ScP      06 04 55.3 -5.8
HYBB                             eS       S        06 05 24.2 -1.7
CTAO  Charters Tower   41.86 143  P       P        05 59 34.3 -0.1
CTAO                              IAmb    IAmb     05 59 35.9
      comp=Z,27nm,1.1s
MORW  Morawa           42.66 186  P       P        05 59 39.4 -1.3
FORT  Forrest          44.68 171  P       P        05 59 56.0 -0.9
FORT                              IAmb    IAmb     05 59 58.1
      comp=Z,54nm,0.8s
FORT                              PcP     PcP      06 01 36.9 -0.1
MK31  Makanchi Array   46.12 324  P       P        06 00 08.9 +0.7
MK31                              IAmb    IAmb     06 00 10.0
      comp=Z,23nm,0.8s
MKAR  Makanchi Array   46.12 324  P       P        06 00 09.0 +0.9
      comp=Z,16nm,0.7s,baz=114,slow=8.2,SNR=20
      comp=Z,16nm,0.7s
MKAR  Makanchi Array   46.12 324  P       P        06 00 08.7 +0.6
MAKZ  Makanchi         46.31 324  P       P        06 00 10.1 +0.5
MAKZ                              IAmb    IAmb     06 00 10.9
      comp=Z,20nm,0.7s
NWAO  Narrogin (SRO)   46.38 184  P       P        06 00 09.3 -0.9
NWAO                              IAmb    IAmb     06 00 37.2
      comp=Z,110nm,1.3s
BOOM  Boomskoye usch   48.10 316  P       P        06 00 24.6 +0.9
BOOM                              IAmb    IAmb     06 00 27.2
      comp=Z,46nm,1.4s
BBOO  Buckleboo        48.42 163  P       P        06 00 24.3 -1.8
BBOO                              IAmb    IAmb     06 00 24.9
      comp=Z,42nm,1.3s
BBOO                              PcP     PcP      06 01 49.4 -0.8
EIDS  Eidsvold         48.75 143  P       P        06 00 27.5 -1.2
YAK   Yakutsk          48.79   6  LR      LR       06 23 44.0
      comp=Z,3µm,19.7s,baz=67,slow=39
PEA0B Petropavlovsk-   49.11  29  P       P        06 00 31.4 +0.3
PEA0B                             IAmb    IAmb     06 00 33.7
      comp=Z,52nm,1.4s
PETK  Petropavlovsk-   49.11  29  P       P        06 00 31.2 +0.2
      comp=Z,4.1nm,0.8s,baz=209,slow=2.2,SNR=6.3
PETK                              PcP     PcP      06 01 51.1 -1.4
      comp=Z,3.2nm,0.8s,baz=213,slow=5.0,SNR=4.2
      comp=Z,4.1nm,0.8s
PETK  Petropavlovsk-   49.11  29  P       P        06 00 31.2 +0.2
PETK                              PcP     PcP      06 01 52.1 -0.4
AAK   Ala-Archa        49.14 315  P       P        06 00 32.4 +0.7
      comp=Z,6.7nm,0.4s,baz=157,slow=8.5,SNR=5.0
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	comp=Z,6.7nm,0.4s						
AAK	Ala-Archa	49.14	315	IAmb	IAmb	06 00 34.3	
	comp=Z,26nm,1.1s						
ZALV	Zalesovo Beam	49.15	333	P	P	06 00 31.2	-0.2
	comp=Z,23nm,0.6s,baz=118,slow=6.9,SNR=20						
	comp=Z,23nm,0.6s						
STKA	Stephens Creek	49.45	156	P	P	06 00 32.5	-1.4
	comp=Z,5.0nm,0.6s,baz=331,slow=9.7,SNR=6.6						
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	50.28	326	P	P	06 00 40.5	+0.6
	comp=Z,28nm,0.8s,baz=134,slow=4.0,SNR=44						
	comp=Z,28nm,0.8s						
KURK	Kurchatov	50.28	326	P	P	06 00 40.5	+0.6
KURK	Kurchatov	50.28	326	IAmb	IAmb	06 00 41.5	
	comp=Z,87nm,0.7s						
GAR	Garm	50.99	309	P	P	06 00 46.5	+0.8
KK31	Karatay Array	52.05	314	P	P	06 00 53.4	+0.1
KK31				IAmb	IAmb	06 00 54.7	
	comp=Z,12nm,0.7s						
KKAR	Karatay Array	52.05	314	P	P	06 00 54.0	+0.6
BRVK	Borovoye	55.93	326	P	P	06 01 22.1	+0.8
BRVK				IAmb	IAmb	06 01 22.7	
	comp=Z,33nm,1.1s						
DZM	Mont Dzumac	57.16	128	P	P	06 01 30.1	-0.4
	comp=Z,10nm,0.9s,baz=1.9,slow=11,SNR=9.1						
	comp=Z,10nm,0.9s						
DZM	Mont Dzumac	57.16	128	IAmb	IAmb	06 01 33.6	
	comp=Z,33nm,1.4s						
TIXI	Tiksi	58.23	3	P	P	06 01 36.1	-1.1
	comp=Z,25nm,0.7s,baz=83,slow=21,SNR=12						
	comp=Z,25nm,0.7s						
TIXI	Tiksi	58.23	3	IAmb	IAmb	06 01 37.0	
	comp=Z,25nm,0.8s						
WSAR	Wadi Sarin	59.30	289	P	P	06 01 45.5	+0.1
	comp=Z,19nm,0.7s,baz=142,slow=4.6,SNR=6.6						
	comp=Z,19nm,0.7s						
NRIK	Noril'sk	59.51	347	P	P	06 01 45.7	-0.3
	comp=Z,11nm,0.6s,baz=100,slow=6.1,SNR=5.3						
NRIK				PcP	PcP	06 02 31.9	-0.2
	comp=Z,3.7nm,0.4s,baz=128,slow=4.9,SNR=4.1						
	comp=Z,11nm,0.6s						
NRIK	Noril'sk	59.51	347	IAmb	IAmb	06 01 46.2	
	comp=Z,14nm,0.8s						
GEYT	Alibeck	60.20	306	P	P	06 01 51.7	+0.3
	comp=Z,20nm,0.7s,baz=166,slow=7.2,SNR=3.6						
	comp=Z,20nm,0.7s						
ABKAR	Akbulak array	60.81	319	P	P	06 01 55.2	-0.1
ARU	Arti	63.47	327	P	P	06 02 12.5	-0.4
	comp=Z,5.2nm,0.5s,baz=112,slow=9.8,SNR=4.7						
	comp=Z,5.2nm,0.5s						
SOCY	Socotra	64.87	277	P	P	06 02 21.9	-0.9
BELG	Belogornoye	69.02	321	P	P	06 02 48.1	-0.1
	comp=Z,46nm,0.7s,baz=155,slow=9.7,SNR=1.9						
	comp=Z,46nm,0.7s						
RAYN	Ar Rayn	71.30	290	P	P	06 03 03.4	+0.6
RPZ	Rata Peaks	73.20	144	P	P	06 03 12.2	-1.3
	comp=Z,9.1nm,0.5s,baz=344,slow=3.0,SNR=6.4						
	comp=Z,9.1nm,0.5s						
RPZ	Rata Peaks	73.20	144	IAmb	IAmb	06 03 24.1	
	comp=Z,39nm,1.2s						
ATD	Arta Tunnel	75.71	279	P	P	06 03 29.7	+0.9
	comp=Z,12nm,0.6s,baz=81,slow=6.8,SNR=4.8						
	comp=Z,12nm,0.6s						
ILAR	Eielson Array	78.84	26	P	P	06 03 43.6	-1.6
	comp=Z,2.0nm,0.7s,baz=283,slow=4.3,SNR=5.5						
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	79.18	339	P	P	06 03 45.8	-1.2
	comp=Z,4.3nm,0.5s,baz=83,slow=6.7,SNR=12						
	comp=Z,4.3nm,0.5s						
OPO	Ambohidratompo	79.18	248	P	P	06 03 48.7	+0.6
	comp=Z,9.6nm,0.7s,baz=55,slow=5.3,SNR=11						
	comp=Z,9.6nm,0.7s						
SPITS	Spitsbergen Ar	79.69	348	P	P	06 03 49.1	-0.5
	comp=Z,4.8nm,0.4s,baz=94,slow=8.4,SNR=17						
	comp=Z,4.8nm,0.4s						
CASY	Casey	80.01	184	P	P	06 03 50.0	-1.2
CASY				IAmb	IAmb	06 03 51.0	
	comp=Z,12nm,0.7s						
M26K	Nabesna, AK	80.96	28	P	P	06 03 57.6	+0.9
VRDI	Verde Repeater	80.99	29	P	P	06 03 57.4	+0.4
EGAK	Eagle	81.25	25	P	P	06 03 58.4	+0.3
INK	Inuvik	83.19	21	P	P	06 04 07.2	-0.8
	comp=Z,11nm,0.9s,baz=285,slow=5.3,SNR=5.4						
	comp=Z,11nm,0.9s						
KMBO	Kilima Mbogo	83.90	267	P	P	06 04 14.1	+1.0
	comp=Z,8.0nm,0.9s,baz=52,slow=10,SNR=4.0						
	comp=Z,8.0nm,0.9s						
NB2	NORSAR Subarra	87.35	333	P	P	06 04 27.2	-1.8
	comp=Z,4.9nm,0.7s,baz=66,slow=4.6						
NB2	NORSAR Subarra	87.35	333	P	P	06 04 27.2	-1.8
	baz=66,slow=4.6						
NOA	NORSAR Array B	87.35	333	P	P	06 04 27.6	-1.4
	comp=Z,4.3nm,0.8s,baz=67,slow=4.7,SNR=4.9						
	comp=Z,4.3nm,0.8s						
YKA	Yellowknife Ar	92.86	22	P	P	06 04 53.4	-1.2
	comp=Z,3.8nm,0.6s,baz=308,slow=4.5,SNR=21						
	comp=Z,3.8nm,0.6s						
LSZ	Lusaka	95.88	256	LR	LR	06 46 37.7	
	comp=Z,2µm,20.2s,baz=126,slow=34						
ANGG	Ammassalik, Gr	99.36	351	*i* P	PKiKP	06 09 56.4	+3.6
ANGG				IAmb	IAmb	06 10 13.3	
	comp=Z,274nm,2.4s						
TORD	Torodi Ar. Bea	113.99	291	PKP	PKiKP	06 10 20.5	-0.8
	comp=Z,4.2nm,1.0s,baz=92,slow=2.8,SNR=8.3						
TXAR	Lajitas Array	119.54	45	PKP	PKPdf	06 10 31.7	-0.2
	comp=Z,1.9nm,0.5s,baz=209,slow=0.7,SNR=13						
SJG	San Juan	147.77	12	PKPbc	PKPbc	06 11 26.5	-0.7
	comp=Z,10nm,0.5s,baz=247,slow=8.5,SNR=3.3						
PLCA	Paso Flores	151.23	162	PKPbc	PKPbc	06 11 35.1	-0.1
	comp=Z,2.3nm,0.4s,baz=215,slow=1.5,SNR=22						
RCBR	Riachuelo	155.70	286	PKPab	PKPab	06 12 02.9	-0.3
	comp=Z,5.4nm,0.8s,baz=233,slow=3.2,SNR=4.2						
CPUP	Villa Florida	167.20	188	PKPab	PKPab	06 12 51.8	-0.9
	comp=Z,3.3nm,0.7s,baz=156,slow=2.3,SNR=6.2						
BDFB	Brasilia	168.90	258	PKPab	PKPab	06 13 01.5	+0.4
	comp=Z,5.6nm,0.7s,baz=116,slow=5.0,SNR=5.4						

NEIC ***28*** *06:03:04.5±0.4, 18°.01N±0°.01×67°.18W±0°.03, h18^{km}±1^{km}*
Error ellipse: s-maj=4.6km s-min=1.4km az=71.0
RSPR 28 06:03:05.2, 18°.00N×67°.17W, h15^{km}±1^{km}, MD2.7/10, **12C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.06	87	⇑*e*P	Pg	06 03 07.9	-0.1
CRPR	Cabo Rojo, PR	0.06	87	*e*S	Sg	06 03 10.2	+0.3
CRPR	Cabo Rojo, PR	0.06	87		Pg	06 03 07.9	-0.1
CRPR	Cabo Rojo, PR	0.06	87		Sg	06 03 10.2	+0.3
CRPR	Cabo Rojo, PR	0.06	87	IAML		06 03 08.2	
	comp=N,79nm,0.2s						
MLPR	Magueyes Islan	0.13	105	⇑*e*P	Pg	06 03 08.5	-0.3
MLPR	Magueyes Islan	0.13	105	*e*S	Sg	06 03 11.5	+0.3
MLPR	Magueyes Islan	0.13	105		Pg	06 03 08.5	-0.3
MLPR					Sg	06 03 11.5	+0.3
LSP	Las Mesas	0.19	26	⇑*e*P	Pg	06 03 09.5	-0.2
LSP	Las Mesas	0.19	26	*e*S	Sb	06 03 13.6	-0.4
PRSN	Puerto Rico Se	0.21	8	Pg	Pg	06 03 09.9	-0.2
GBPR	Guanica, Bosqu	0.28	96	⇑*e*P	Pg	06 03 11.1	-0.1
GBPR	Guanica, Bosqu	0.28	96	*e*S	Sg	06 03 15.8	+0.5
AGPR	Aguadilla, PR	0.47	7	⇑*e*P	Pg	06 03 13.9	-0.6
AGPR	Aguadilla, PR	0.47	7	*e*S	Sg	06 03 20.4	-0.4
AGPR	Aguadilla, PR	0.47	7		Sg	06 03 20.4	-0.4
AGPR	Aguadilla, PR	0.47	7	Pg	Pg	06 03 13.7	-0.8
AGPR	Aguadilla, PR	0.47	7	IAML		06 03 20.9	
	comp=E,286nm,0.7s						
AGPR				IAML		06 03 21.1	
	comp=N,122nm,0.4s						
IDE	Isla Desecheo	0.48	323	⇑*e*P	Pg	06 03 13.6	-1.1
IDE	Isla Desecheo	0.48	323	*e*S	Sg	06 03 21.6	+0.4
AOPR	Arecibo Observ	0.53	49	⇓*e*P	Pg	06 03 14.7	-0.9
AOPR	Arecibo Observ	0.53	49	*e*S	Sg	06 03 22.1	-0.6
AOPR	Arecibo Observ	0.53	49		Pg	06 03 14.7	-0.9
AOPR					Sg	06 03 22.1	-0.6
OBIP	Obispado Ponce	0.54	86	⇑*e*P	Pg	06 03 15.4	-0.5
OBIP	Obispado Ponce	0.54	86	*e*S	Sg	06 03 22.9	-0.3
OBIP	Obispado Ponce	0.54	86		Pg	06 03 15.4	-0.5
OBIP					Sg	06 03 22.9	-0.3
OBIP	Obispado Ponce	0.54	86	IAML		06 03 23.2	
	comp=N,78nm,0.2s						
CELP	Cerrillos	0.57	83	⇑*e*P	Pg	06 03 15.7	-0.7
CELP	Cerrillos	0.57	83	*e*S	Sg	06 03 23.7	-0.4
CELP	Cerrillos	0.57	83		Pg	06 03 15.7	-0.7
CELP					Sg	06 03 23.7	-0.4
CELP	Cerrillos	0.57	83	IAML		06 03 24.2	
	comp=N,73nm,0.3s						
EMPR	Esperanza - Ma	0.77	52	⇓*e*P	Pg	06 03 19.4	-0.9
EMPR	Esperanza - Ma	0.77	52	*e*S	Sg	06 03 30.5	+0.1
EMPR	Esperanza - Ma	0.77	52		Pg	06 03 19.4	-0.9
EMPR					Sg	06 03 30.5	+0.1
EMPR	Esperanza - Ma	0.77	52	IAML		06 03 30.7	
	comp=N,78nm,0.3s						
EMPR				IAML		06 03 31.8	
	comp=E,92nm,0.9s						
IGPR	InterUniversit	1.02	92	⇑*e*P	Pb	06 03 23.3	-1.2
IGPR	InterUniversit	1.02	92	*e*S	Sb	06 03 37.1	-0.6
HUMP	Col San Antoni	1.27	84	⇑*e*P	Pn	06 03 26.9	-1.4
HUMP	Col San Antoni	1.27	84		Pn	06 03 26.9	-1.4
MTP	Monte Pirata	1.55	86	⇑*e*P	Pn	06 03 32.0	-0.2
MTP	Monte Pirata	1.55	86		Pn	06 03 32.0	-0.2
MTP	Monte Pirata	1.55	86	IAML		06 04 21.0	
	comp=E,32nm,3.4s						
CUPR	Culebra, Puert	1.82	80	⇑*e*P	Pb	06 03 37.2	-1.1
CUPR	Culebra, Puert	1.82	80		Pb	06 03 37.2	-1.1
CUPR	Culebra, Puert	1.82	80	IAML		06 04 23.3	
	comp=E,11nm,1.1s						

UPA ***28*** *06:05:19.9±0.8, 8°.29N×82°.68W, h42^{km}±3^{km}, MW4.0*
UCR ***28*** *06:05:20.0±1.5, 8°.26N×82°.69W, h42^{km}±7^{km}, MW3.5*
ISC 28 06:05:19.9±1.6, **8°.28N**±0°.06×**82°.68W**±0°.04, **h41**^{km}±9^{km}, **n24, σ0^{s}.64**/40, **7D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.17	318	⇓*e*P	Pn	06 05 26.7	-0.4
PTPM	Petroterminale	0.21	249	*e*P	Pn	06 05 27.3	-0.1
PTPM				*e*S	Sn	06 05 33.0	+0.3
BAGA3	Bagala, Chiriq	0.24	39	*e*P	Pn	06 05 27.8	+0.1
DVD	David	0.27	56	⇓*e*P	Pn	06 05 28.0	0.0
DVD				*e*S	Sn	06 05 34.4	+0.8
LOCO3	Loma Colorada,	0.29	63	⇓*e*P	Pn	06 05 28.2	0.0
LOCO3				*e*S	Sn	06 05 33.1	-0.8
CDITO	Canoas	0.35	327	*e*P	Pn	06 05 28.2	-0.6
CDITO				*e*S	Sn	06 05 33.8	-1.3
CHIR3	Chiriqui UPA,	0.36	72	⇓*e*P	Pn	06 05 28.9	-0.1
PTAR3	Potrerillos Ar	0.45	24	*e*P	Pn	06 05 30.0	-0.2
BCO2	Palmira	0.46	19	*e*P	Pn	06 05 30.2	-0.1
BCO2				*e*S	Sn	06 05 38.4	+0.7
BRU2	Volcan	0.51	359	*e*P	Pn	06 05 30.8	-0.2
BRU2				*e*S	Sn	06 05 39.1	+0.3
MLIR3	Monte Lirio, C	0.53	344	*e*P	Pn	06 05 31.1	-0.1
MLIR3				*e*S	Sn	06 05 40.0	+0.9
PSOM3	Paja de Sombre	0.54	41	⇓*e*P	Pn	06 05 30.8	-0.4
PSOM3				*e*S	Sn	06 05 39.4	+0.2
BC3P	Paso Ancho	0.54	7	⇓*e*P	Pn	06 05 31.0	-0.4
BC3P				*e*S	Sn	06 05 39.5	0.0
LNBQ3	Los Naranjos,	0.56	25	⇓*e*P	Pn	06 05 31.2	-0.5
LNBQ3				*e*S	Sn	06 05 40.0	+0.1
EDSV	San Vito	0.61	332	*e*P	Pn	06 05 32.0	-0.3
EDSV				*e*S	Sn	06 05 42.9	+1.8
PIRO	Carate, Puerto	0.66	281	*e*P	Pn	06 05 31.8	-1.0
PIRO				*e*S	Sn	06 05 42.6	+0.4
PIRO	Carate, Puerto	0.66	281	*e*P	Pn	06 05 31.9	-1.0
PIRO				*e*S	Sn	06 05 42.8	+0.7
REME3	Remedios, Chir	0.84	94	*e*P	Pn	06 05 35.5	+0.2
CHGR2	Aguacate	0.84	39	*e*S	Sn	06 05 46.4	-0.1
EDPN	Palmar Norte	1.03	311	*e*P	Pn	06 05 37.5	-0.4
EDPN				*e*S	Sn	06 05 51.4	+0.4
EDBA	Buenos Aires	1.06	326	*e*P	Pn	06 05 38.5	+0.2
DRK0	Durika	1.13	330	*e*P	Pn	06 05 39.1	-0.3
DRK0				*e*S	Sn	06 05 54.4	+0.6
CNI2	El Empalme, Bo	1.16	10	*e*P	Pn	06 05 38.5	-1.1
CNI2				*e*S	Sn	06 05 53.7	-0.5
LCR2	La Lucha 2	1.96	318	*e*P	Pn	06 05 51.5	+0.7

DJA 28 06:09:12.9±0.4, **1°S**±4°×**13°3E**±°, **h10**^{km}, **M4.1**/6, **mb5.0**/2, **MLv3.6**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.66	263	P	Pn	06 09 42.1	0.0
FAKI	Fak Fak	2.34	196	P	Pn	06 09 51.7	+0.2
FAKI				S	Sn	06 10 21.0	+0.7
KMPI	Kaimana, Papua	3.08	165	P	Pn	06 10 01.8	+0.1
SMPI	Sarmi	5.95	103	P	Pn	06 10 41.3	+0.2
SANI	Sanana	7.06	259	P	Pn	06 10 56.1	-0.2
	0.1nm10nm,0.7s						

IDC 28 06:18:53.0±12.0, **21°.52S**×**179°.46W**, **h627**^{km}±97^{km}, **mb3.0**/4, **mbtmp4.1**/5, **Error ellipse: s-maj=275.2km s-min=111.3km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.44	328	P	P	06 20 23.5	-0.2
	12nm,0.4s,baz=240,slow=20,SNR=27						
CTA	Charters Tower	32.05	266	P	P	06 24 31.1	+0.3
	2.0nm,0.5s,baz=101,slow=11,SNR=5.2						
	2.0nm,0.5s						
STKA	Stephens Creek	36.12	245	P	P	06 25 04.3	-0.2
	2.1nm,0.6s,baz=112,slow=11,SNR=3.6						
	2.1nm,0.6s						
ASAR	Alice Springs	42.96	258	P	P	06 25 59.2	0.0
	1.6nm,0.5s,baz=98,slow=8.0,SNR=15						
	1.6nm,0.5s						
WRA	Warramunga Arr	43.12	263	P	P	06 26 00.3	-0.1
	0.6nm,0.4s,baz=97,slow=8.3,SNR=9.7						
	0.6nm,0.4s						

IDC ***28*** *06:21:30.3±1.9, 6°.08S×129°.63E, h0^{km}, mb3.5/1, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=74.3km s-min=28.3km az=82.0*
ISC 28 06:21:30.5±1.1, **5°.47S**±0°.07×**131°.7E**±0°.1, **h10**^{km}, **n11, σ2^{s}.57**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.00	298	P	Pg	06 22 11.7	+2.8
FAKI	Fak Fak	2.60	13	P	Pg	06 22 30.5	+10
SIJI	Sorong	4.59	355	Pn	Pb	06 22 52.9	+1.7
	8.0nm,0.3s,baz=167,slow=18,SNR=20						
SIJI				Sn	Sb	06 23 44.8	-1.8
	5.2nm,0.3s,baz=174,slow=21,SNR=14						
	17nm,0.3s						
KDU	Kakadu	7.21	174	P	Pn	06 23 19.4	+3.3
MTN	Manton Dam	7.34	184	P	Pn	06 23 20.3	+2.4
LUWI	Luwuk	9.92	296	P	Pn	06 23 52.3	-0.9
	75nm,0.4s						
KNRA	Kununurra	10.54	196	P	Pn	06 23 58.5	-3.2
	11nm,0.6s						
WRAB	Tennant Creek	14.61	170	P	Pn	06 24 57.9	+0.5
WRA	Warramunga Arr	14.61	170	Pn	Pn	06 24 56.3	-1.2
	0.3nm,0.3s,baz=345,slow=13,SNR=20						
WRA				Sn	Sn	06 27 27.0	-13
	0.4nm,0.3s,baz=333,slow=23,SNR=7.3						
	0.3nm,0.5s						
ASAR	Alice Springs	18.21	173	P	Pn	06 25 42.2	-1.5
	0.2nm,0.3s,baz=352,slow=12,SNR=16						
	1.1nm,0.5s						
MKAR	Makanchi Array	67.89	326	P	P	06 32 26.7	-2.7
	0.3nm,0.5s,baz=122,slow=7.8,SNR=1.4						
	0.3nm,0.5s						

TEH ***28*** *06:30:49.0, 40°.89N×51°.81E, h5^{km}, ML4.3*
IDC ***28*** *06:30:52.5±3.6, 40°.65N×51°.68E, h21^{km}±23^{km}, mb3.9/10, mbtmp4.1/19, ML2.9/5, Error ellipse: s-maj=21.5km s-min=12.6km az=175.0*
AZER ***28*** *06:30:56.6±0.1, 40°.55N×51°.72E, h59^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.7km az=329.0*
NNC ***28*** *06:31:02.2±1.8, 41°.25N×52°.61E, h23^{km}±21^{km}, mb4.0, Error ellipse: s-maj=19.2km s-min=7.1km az=64.0*
ISC 28 06:30:53.2±1.4, **40°.90N**±0°.04×**51°.89E**±0°.04, **h23**^{km}±11^{km}, **n101, σ2^{s}.16**/132, **mb4.0**/10, **6C-5D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.40	250	Sn	Sn	06 31 34.3	-0.8
NDR	Nardaran	1.48	258	Pg	Pb	06 31 22.8	+2.9
NDR				Sn	Sn	06 31 35.3	-1.5
GOBA	Gobu	1.71	254	Sn	Sn	06 31 40.3	-2.4
SIZA	Siyzn	2.27	276	Pn	Pb	06 31 33.4	-0.1
	SNR=37						
SIZA				Sn	Sb	06 32 02.9	+1.8
ALIB	Äli-Bayra	2.39	248	Pg	Pb	06 31 34.5	-1.0
ALIB				Sg	Sb	06 32 06.1	+1.6
PQL	Pirkuli	2.50	269	Pn	Pb	06 31 35.6	-1.9
	SNR=10						
PQL				Sn	Sb	06 32 05.5	-2.3
QUBA	Quba, Azerbaij	2.60	281	Pn	Pb	06 31 37.2	-1.9
	SNR=3.0						
QUBA				Sn	Sb	06 32 08.7	-2.0
QSAR	Qusar	2.80	284	Pn	Pb	06 31 40.4	-2.1
	SNR=12						
QSAR				Sn	Sb	06 32 13.5	-2.9
IML	Ismayilli	2.81	269	Pn	Pn	06 31 39.1	+2.4
	SNR=4.2						
IML				Sn	Sn	06 32 12.6	+2.6
XNQ	Khinaliq	2.85	277	Pn	Pn	06 31 40.1	+2.7
	SNR=18						
XNQ				Sn	Sn	06 32 13.4	+2.4
QBL	Gabala	3.07	272	Sn	Sn	06 32 17.7	+1.4
GLBA	Clilabad	3.15	239	Pn	Pn	06 31 42.3	+1.0
	SNR=25						
GLBA				Sn	Sn	06 32 16.4	-1.7
LKRN	Lenkeran, Azer	3.24	229	Pn	Pn	06 31 42.9	+0.4
LKRN				Sn	Sn	06 32 16.8	-3.6
ASTR	Astara	3.34	227	Pn	Pn	06 31 43.5	-0.4
	SNR=14						
ASTR				Sn	Sn	06 32 18.5	-4.3
YRD	Yardimli	3.43	236	Pn	Pn	06 31 45.2	-0.2
	SNR=38						
YRD				Sn	Sn	06 32 21.3	-4.1
BLQ	Beylaqan	3.51	252	Pn	Pn	06 31 47.5	+1.2
BLQ				Sn	Sn	06 32 25.1	-2.0
LRK	Lerik	3.54	232	Pn	Pn	06 31 46.5	-0.4
	SNR=16						
LRK				Sn	Sn	06 32 23.9	-4.1
SEKA	Sheki	3.56	277	Pn	Pn	06 31 49.6	+2.5
	SNR=7.7						
SEKA				Sn	Sn	06 32 30.0	+1.6
BRDA	Brd	3.64	262	Pn	Pn	06 31 50.1	+2.0
BRDA				Sn	Sn	06 32 32.2	+2.0
GRMI	Germi	3.71	237	*e*Pn	Pn	06 31 49.2	0.0
AGDM	Agdam	3.73	259	Sn	Sn	06 32 31.9	-0.5
QRD	Qoradiz	3.78	249	Pn	Pn	06 31 50.8	+0.8
QRD				Sn	Sn	06 32 31.8	-1.9
ZKTA	Zakatala	4.04	282	Pn	Pn	06 31 56.9	+3.4
ZKTA				Sn	Sn	06 32 42.9	+2.8
GANJ	Ganja	4.23	268	Pn	Pn	06 31 56.8	+0.5
	SNR=4.7						
GANJ				Sn	Sn	06 32 43.0	-2.0
ISRB	Sarab	4.48	228	*e*Pn	Pn	06 32 00.3	+0.4
ISRB				*e*		06 32 52.0	
	comp=Z,2µm,0.4s						
JIR1	Jirandeh	4.49	202	*e*Pn	Pn	06 31 57.7	-2.2
IHRS	Heris	4.54	237	*e*Pn	Pn	06 32 01.6	+0.9
IHRS				*e*		06 32 53.7	
	comp=Z,4µm,0.3s						
IMND	Minoodasht	4.55	142	*e*Pn	Pn	06 32 01.5	+0.9
IMND				*e*		06 32 54.0	
	comp=Z,842nm,0.2s						
MRVT	Maraveh tapeh	4.59	133	*e*Pn	Pn	06 32 02.8	+1.6
IGLO	Ghaloghah	4.64	160	*e*Pn	Pn	06 32 01.8	-0.3
IGLO				*e*		06 33 05.2	
	comp=Z,4µm,0.4s						
GDB	GEDABAY	4.66	270	Pn	Pn	06 32 03.3	+1.1
	SNR=12						
GDB				Sn	Sn	06 32 52.8	-2.8
IPRN	Peran	4.66	175	*e*Pn	Pn	06 32 01.8	-0.4
ZNJK	Zanjan	4.90	212	*e*Pn	Pn	06 32 04.2	-1.5
QZX	Qazax, Azerbai	4.93	274	Pn	Pn	06 32 07.3	+1.4
	SNR=7.0						
QZX				Sn	Sn	06 33 00.5	-1.8
ORD	Ordubad	4.94	248	Pn	Pn	06 32 07.3	+1.3
	SNR=11						
ORD				Sn	Sn	06 33 00.2	-2.2
CHTH	Charan	5.01	187	*e*Pn	Pn	06 32 07.1	-0.1
IBST	Bostanabad	5.02	232	*e*Pn	Pn	06 32 07.5	+0.3
IHSH	Hashtrud	5.08	227	*e*Pn	Pn	06 32 07.9	-0.2
SBZ	Shahbuz	5.08	255	Pn	Pn	06 32 08.0	+0.1
	SNR=3.0						
SBZ				Sn	Sn	06 33 05.5	-0.4
ITBZ	Tabriz	5.17	241	*e*Pn	Pn	06 32 09.4	+0.1
NAX	Nakhchivan	5.20	253	Sn	Sn	06 33 08.9	0.0
ISHM	Shahmirzad	5.20	167	*e*Pn	Pn	06 32 09.8	0.0
IFIR	Firoozkooh	5.29	172	*e*Pn	Pn	06 32 11.8	+0.8
IMHD	Mahdasht	5.29	191	*e*Pn	Pn	06 32 11.7	+0.8
IMHD				*e*		06 32 12.2	
	comp=Z,3µm,0.3s						
IDMV	Damavand	5.31	179	*e*Pn	Pn	06 32 12.1	+0.8
BJRD	Bojnurd	5.34	125	*e*Pn	Pn	06 32 13.9	+2.3
IHSB	Hasanabad	5.47	185	*e*Pn	Pn	06 32 14.0	+0.7
ISHB	Shabestar	5.50	244	*e*Pn	Pn	06 32 13.6	-0.3
ILAS	Lasjerd	5.57	171	*e*Pn	Pn	06 32 15.7	+0.9
ILAS				*e*		06 33 20.0	
	comp=Z,1µm,0.4s						
IAZR	Azarshahr	5.59	237	*e*Pn	Pn	06 32 15.9	+0.7
IAZR				*e*		06 33 05.0	
	comp=Z,1µm,0.0s						
IANJ	Anjilo	5.65	163	*e*Pn	Pn	06 32 17.2	+1.3
IANJ				*e*		06 33 21.9	
	comp=Z,1µm,0.6s						
GEYT	Alibeck	5.66	120	Pn	Pn	06 32 17.1	+1.2
	comp=Z,2.6nm,0.3s,baz=308,slow=13,SNR=19						
GEYT				Sn	Sn	06 33 17.9	-2.3
	comp=Z,2.9nm,0.3s,baz=296,slow=21,SNR=1.7						
	comp=Z,4.5nm,0.3s						
IRAZ	Razeghan	5.70	196	*e*Pn	Pn	06 32 16.3	-0.2
IRAZ				*e*		06 33 21.8	
	comp=Z,2µm,0.8s						
SHRO	Shahrood	5.87	145	*e*Pn	Pn	06 32 19.9	+1.0
IVRN	Varamin	5.89	181	*e*Pn	Pn	06 32 20.0	+0.9
IVRN				*e*		06 32 27.1	
	comp=Z,1µm,0.4s						
IQOM	Qom	6.08	186	*e*Pn	Pn	06 32 22.0	+0.2
IQOM				*e*		06 32 29.2	
	comp=Z,938nm,0.2s						
ISFR	Sfrayin	6.12	127	*e*Pn	Pn	06 32 24.6	+2.2
ISFR				*e*		06 33 36.1	
	comp=Z,1µm,0.5s						
IEMG	Emamgholi	6.30	121	*e*Pn	Pn	06 32 26.7	+1.8
IEMG				*e*		06 33 40.5	
	comp=N,2µm,0.3s						
SBZV	Sabzevar	6.35	133	*e*Pn	Pn	06 32 27.7	+2.2
GHVR	GHOM	6.42	184	*e*Pn	Pn	06 32 27.3	+0.9
ASAO	Ashtian	6.51	194	*e*Pn	Pn	06 32 28.2	+0.5
ISFB	Sefidab	6.54	177	*e*Pn	Pn	06 32 28.9	+0.9
IAKL	Akhelmad	6.87	126	*e*Pn	Pn	06 32 34.3	+1.6
KRSH	Karshahi	6.92	178	*e*Pn	Pn	06 32 33.5	+0.2
KBZ	Khabaz	7.24	296	Pn	Pn	06 32 37.4	0.0
	comp=N,0.1nm,0.3s,baz=122,slow=13,SNR=1.7						
KBZ				Sn	Sn	06 33 55.8	-3.1
	comp=N,0.8nm,0.3s,baz=238,slow=9.5,SNR=1.9						
	comp=N,0.6nm,0.4s						
KVAR	Kislovodsk Arr	7.45	297	Sn	Sn	06 34 01.9	-2.5
	baz=174,slow=9.2						
IKLH	Kolahrood	7.57	182	*e*Pn	Pn	06 32 43.7	+1.4
IMYA	Miami	7.88	123	*e*Pn	Pn	06 32 47.7	+1.3
IZEF	Zefreh	7.99	177	*e*Pn	Pn	06 32 48.6	+0.5
NASN	Na'in	8.12	174	*e*Pn	Pn	06 32 50.4	+0.5
TABS	Tabas	8.35	148	*e*Pn	Pn	06 32 54.6	+1.8
YZKH	Yazd	8.76	165	*e*Pn	Pn	06 32 58.9	+0.4
IRAM	Ramesheh	9.08	177	*e*Pn	Pn	06 33 04.5	+1.5
AB31	Akbulak array	10.11	32	*e*Pn	Pn	06 33 17.0	+0.2
AB31	Akbulak array	10.11	32	⇓Pn	Pn	06 33 17.6	+0.8
	comp=N,0.6nm,0.3s,baz=209,slow=13,SNR=83						
AB31				⇑Sn	Sn	06 35 05.5	-3.9
	comp=N,13nm,0.4s,baz=211,slow=15,SNR=9.7						
AKTO	Aktyubinsk	10.46	22	Pn	Pn	06 33 22.6	+1.1
	comp=N,8.3nm,0.3s,baz=220,slow=7.1,SNR=42						
AKTO				Sn	Sn	06 35 13.1	-4.8
	comp=N,18nm,0.3s,baz=52,slow=20,SNR=23						
AKTO	Aktyubinsk	10.46	22	⇓Pn	Pn	06 33 23.0	+1.4
	comp=N,7.4nm,0.5s						
AKTO				⇓Sn	Sn	06 35 14.4	-3.5
	comp=N,72nm,0.5s						
BELG	Belogornoye	11.87	347	Pn	Pn	06 33 42.0	+1.3
	comp=N,14nm,0.6s,baz=23,slow=1.4,SNR=5.7						
BELG				Sn	Sn	06 35 46.0	-6.3
	comp=N,8.4nm,0.3s,baz=159,slow=23,SNR=21						
BRTR	Keskin Array B	13.98	271	Pn	Pn	06 34 13.2	+3.3
	comp=N,0.1nm,0.3s,baz=101,slow=2.5,SNR=10						
	comp=N,2.2nm,0.9s						
KK31	Karatay Array	14.03	75	⇓P	Pn	06 34 11.0	+0.6
	comp=N,0.9nm,0.4s,baz=311,slow=11,SNR=6.8						
KK31				⇓S	Sn	06 36 39.3	-6.0
	comp=N,2.9nm,0.4s,baz=279,slow=24,SNR=7.2						
ARU	Arti	16.15	13	Pn	Pn	06 34 37.3	-1.1
	baz=102,slow=23,SNR=1.4						

ARU				Sn	Sn	06 37 27.6	-9.0
	baz=317,slow=23,SNR=13						
	comp=N,1.3nm,0.3s						
OTUK	Ortayu	16.29	56	⇑P	Pn	06 34 41.6	+1.3
	comp=N,5.2nm,0.9s						
AAK	Ala-Archa	16.95	77	P	P	06 34 50.8	+0.1
	comp=N,0.3nm,0.3s,baz=245,slow=13,SNR=2.3						
	comp=N,1.7nm,0.4s						
BRVK	Borovoye	17.42	40	⇑P	Pn	06 34 55.2	+0.7
	comp=N,6.8nm,1.0s						
TKM2	Tokmak 2	17.75	76	⇑P	P	06 35 00.1	+0.5
	comp=N,8.9nm,1.1s						
KIRV	Kirov	17.78	356	P	P	06 35 01.1	+1.7
	comp=N,16nm,0.6s,baz=161,slow=1.8,SNR=5.9						
AKASG	Malin Array Be	18.53	310	P	P	06 35 07.6	-0.2
	comp=N,1.6nm,0.4s,baz=116,slow=10,SNR=12						
KURBB	Kurchatov Arra	20.88	53	P	Pn	06 35 35.9	-0.1
	comp=N,4.7nm,0.7s,baz=254,slow=11,SNR=30						
	comp=N,4.7nm,0.7s						
KURK	Kurchatov	20.96	53	⇑P	P	06 35 36.2	+1.9
	comp=N,7.2nm,0.6s						
KLMR	Klimovskoe	21.38	343	eP	P	06 35 35.6	-3.2
KLMR				AMP		06 35 51.9	
	comp=Z,8.0nm,0.8s						
MK31	Makanchi Array	22.62	65	⇑P	P	06 35 54.3	+2.1
	comp=Z,1.6nm,0.7s,baz=262,slow=10,SNR=9.8						
MKAR	Makanchi Array	22.62	65	P	P	06 35 54.4	+2.1
	comp=Z,1.4nm,0.6s,baz=259,slow=9.9,SNR=12						
MKAR				S	S	06 40 04.8	+6.1
	comp=Z,0.5nm,0.5s,baz=261,slow=24,SNR=5.7						
	comp=Z,1.4nm,0.6s						
ZALV	Zalesovo Beam	25.56	48	P	P	06 36 21.9	+1.9
	comp=Z,5.2nm,0.4s,baz=265,slow=11,SNR=20						
	comp=Z,5.2nm,0.4s						
FINES	FINESS Array B	25.86	331	P	P	06 36 23.3	+0.6
	comp=Z,1.2nm,0.3s,baz=124,slow=10,SNR=22						
	comp=Z,1.2nm,0.3s						
NB2	NORSAR Subarra	31.84	323	P	P	06 37 15.7	-0.3
	comp=Z,0.1nm,0.3s,baz=106,slow=9.3						
NOA	NORSAR Array B	31.84	323	P	P	06 37 16.1	+0.1
	comp=Z,0.2nm,0.4s,baz=119,slow=8.3,SNR=3.4						
	comp=Z,0.2nm,0.4s						
ARCES	ARCESS Array B	31.86	343	P	P	06 37 17.1	+1.1
	comp=Z,1.0nm,0.6s,baz=134,slow=6.9,SNR=5.3						
	comp=Z,1.0nm,0.6s						
SPITS	Spitsbergen Ar	40.06	349	P	P	06 38 27.8	+1.8
	comp=Z,12nm,1.1s,baz=122,slow=10,SNR=7.3						
	comp=Z,12nm,1.1s						
KSRS	Korea Array	57.28	67	P	P	06 40 39.5	+0.6
	comp=Z,0.7nm,0.4s,baz=284,slow=8.3,SNR=4.5						
	comp=Z,0.7nm,0.4s						
YKA	Yellowknife Ar	76.39	354	P	P	06 42 40.0	-0.1
	comp=Z,0.4nm,0.5s,baz=6.3,slow=5.8,SNR=4.6						
	comp=Z,0.4nm,0.5s						
WRA	Warramunga Arr	97.32	110	P	P	06 44 23.2	-1.3
	comp=Z,0.4nm,0.7s,baz=318,slow=4.3,SNR=3.3						
	comp=Z,0.4nm,0.7s						

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*IDC **28** 06:32:12.9±1.6, 7°.14S×128°.46E, h0km, mb3.8/2, mbtmp3.9/4, ML4.0/2, MS4.3/1, Error ellipse: s-maj=59.3km s-min=25.2km az=77.0*

ISC 28 06:32:23.3±1.8, 7°.12S±0°.09×131°.1E±0°.5, h10km, n7, σ0.s95/7, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.21	1	Pn	Pn	06 33 54.9	-0.2
	baz=205,slow=12						
SIJI				Sn	Sn	06 34 57.2	-9.0
	3.5nm,0.3s,baz=250,slow=19,SNR=4.2						
SIJI				LR	LR	06 36 36.0	
	comp=Z,2µm,18.7s,baz=194,slow=38						
WRA	Warramunga Arr	13.12	167	Pn	Pn	06 35 31.2	+1.3
	0.5nm,0.3s,baz=335,slow=13,SNR=28						
WRA				Sn	Sn	06 37 54.8	-1.3
	1.0nm,0.3s,baz=335,slow=22,SNR=8.2						
	0.9nm,0.3s						
ASAR	Alice Springs	16.67	171	P	Pn	06 36 16.9	-0.2
	0.9nm,0.3s,baz=343,slow=9.9,SNR=64						
ASAR				S	Sn	06 39 22.4	-0.1
	0.4nm,0.4s,baz=230,slow=18,SNR=5.5						
	1.7nm,0.4s						
STKA	Stephens Creek	26.50	160	P	P	06 38 00.7	-0.2
	0.6nm,0.3s,baz=322,slow=12,SNR=3.3						
	0.6nm,0.3s						
DZM	Mont Dzumac	37.14	117	P	P	06 39 34.7	+0.1
YATNC	Mamie plateau,	37.53	117	P	P	06 39 34.1	-3.8
MKAR	Makanchi Array	68.94	326	P	P	06 43 10.8	-18
	0.2nm,0.3s,baz=114,slow=8.8,SNR=2.2						
	0.2nm,0.3s						

DJA 28 06:48:00.5±0.4, 4°N±5°×12°6E±°, h33km±7km, M4.1/7, mb4.3/1, MLv4.0/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.81	246	P	Pb	06 48 16.2	0.0
SGSI				S	Sb	06 48 27.5	+0.6
GTOI	Gorontalo	4.68	224	P	Pn	06 49 08.9	0.0
SANI	Sanana	6.04	183	P	Pn	06 49 27.4	-0.1

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*DJA **28** 06:51:27.1±0.4, 9°S±4°×11°8E±°, h116km±5km, M4.5/14, mb5.0/2, mB5.0/1, MLv4.3/14, Mw(mB)4.3/1*

*IDC **28** 06:51:31.3±3.0, 8°.35S×118°.81E, h172km±27km, mb3.3/5, mbtmp3.8/7, Error ellipse: s-maj=45.2km s-min=10.5km az=57.0*

ISC 28 06:51:27.3±0.7, 8°.65S±0°.06×118°.32E±0°.05, h152km, n31, σ2.s01/35, mb3.6/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.57	252	P	Pn	06 51 46.8	-2.4
PLAI				S	Sn	06 52 01.3	-4.6
PLAI	Plampang	0.57	252	P	Pn	06 51 46.9	-2.3
WBSI	Waikabubak, Su	1.44	133	P	Pn	06 51 54.2	-2.3
WSI	Waingapu	2.20	118	P	Pn	06 52 02.6	-2.2
BASI	Baing, Sumba	2.71	125	P	Pn	06 52 09.6	-1.6
SRBI	Singaraja	3.13	280	P	Pn	06 52 15.2	-1.2
IGBI	Denpasar	3.15	267	P	Pn	06 52 16.0	-0.6
BSSI	Bau Bau, Buton	3.29	41	P	Pn	06 52 16.9	-1.6
EDFI	Ende, Flores	3.33	92	P	Pn	06 52 17.3	-1.8
BKSI	Bulukumba	3.76	28	P	Pn	06 52 23.7	-0.8
MMRI	Maumere	3.87	90	P	Pn	06 52 24.5	-1.4
MMRI	Maumere	3.87	90	P	Pn	06 52 24.6	-1.4
KAPI	Kappang	3.88	22	P	Pn	06 52 25.3	-0.8
	26nm,0.5s,baz=194,slow=8.3,SNR=17						
KAPI				S	Sn	06 53 07.6	-4.3
	14nm,0.5s,baz=270,slow=23,SNR=6.7						
KAPI	Kappang	3.88	22	P	Pn	06 52 25.4	-0.8
JAGI	Jajag, Banyuwa	4.13	272	P	Pn	06 52 27.9	-1.4
JAGI	Jajag, Banyuwa	4.13	272	P	Pn	06 52 28.1	-1.2
GMJI	Gumukmas	4.84	274	P	Pn	06 52 38.0	-0.7
BATI	Baumata	5.49	107	P	Pn	06 52 46.4	-1.0
	183nm,0.4s,baz=278,slow=9.7,SNR=16						
BATI				S	Sn	06 53 46.8	-3.0
	67nm,0.4s,baz=180,slow=20,SNR=2.1						
BATI	Baumata	5.49	107	P	Pn	06 52 46.3	-1.0
	0.6nm2µm126nm,0.6s						
SOEI	Soe	5.97	101	P	Pn	06 52 52.4	-1.4
SOEI	Soe	5.97	101	P	Pn	06 52 52.3	-1.5
KNRA	Kununurra	12.36	125	P	Pn	06 54 16.6	-1.7
MTN	Manton Dam	13.26	109	P	Pn	06 54 27.4	-2.4
KDU	Kakadu	14.47	107	P	Pn	06 54 43.3	-1.8
WRA	Warramunga Arr	19.13	128	P	P	06 55 39.4	+0.5
	0.7nm,0.3s,baz=302,slow=13,SNR=28						
ASAR	Alice Springs	21.11	137	P	P	06 56 01.3	+1.2
	1.2nm,0.5s,baz=315,slow=9.7,SNR=4.9						
ASAR				S	S	06 59 46.6	+0.2
	1.2nm,0.9s,baz=315,slow=19,SNR=6.5						
	1.2nm,0.5s						
STKA	Stephens Creek	31.64	140	P	P	06 57 38.2	+2.0
	0.6nm,0.3s,baz=340,slow=12,SNR=3.1						
	0.6nm,0.3s						
MKAR	Makanchi Array	63.84	333	P	P	07 01 44.6	+1.1
	0.3nm,0.3s,baz=149,slow=6.5,SNR=3.7						
	0.3nm,0.3s						
ZALV	Zalesovo Beam	68.48	339	P	P	07 02 14.4	+1.5
	0.5nm,0.4s,baz=147,slow=8.1,SNR=2.1						
	0.5nm,0.4s						
VNDA	Vanda	72.43	171	P	P	07 02 39.9	+3.4
	0.5nm,0.4s,baz=310,slow=7.8,SNR=10						
	0.5nm,0.4s						
TORD	Torodi Ar. Bea	117.74	280	PKP	PKiKP	07 09 57.8	+1.3
	0.5nm,0.5s,baz=74,slow=1.2,SNR=3.6						

NDI 28 07:12:31.9±1.9, 14°.94N×79°.41E, h11km±12km, ML4.1, Southern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJD	Vijayawada	1.97	37	eP	Pn	07 13 05.6	+0.3
VJD				eS	Sn	07 13 29.8	-0.2
HYB	Hyderabad	2.59	342	eP	Pn	07 13 13.2	-0.7
HYB				IAML		07 13 53.9	
	comp=E,1µm,0.5s						
HYB				IAML		07 13 54.3	
	comp=N,469nm,0.2s						
SALM	Salem	3.48	200	eP	Pn	07 13 26.0	0.0
SALM				eS	Sn	07 14 06.8	-0.4
KOD	Kodaikanal	5.05	202	eP	Pn	07 13 47.1	-0.8
KOD				eS	Sn	07 14 43.5	-2.9
PCHI	Peechi	5.30	215	eP	Pn	07 13 51.5	+0.4
PCHI				eS	Sn	07 14 48.0	-4.3
PCHI				AML	AML	07 15 19.7	
	comp=E,426nm,0.6s						
PCHI				AML	AML	07 15 20.0	
	comp=N,334nm,0.5s						
PCHI				AML	AML	07 15 21.0	
	comp=Z,344nm,0.5s						
GOA	Goa	5.42	277	ex	Pn	07 13 57.1	+4.5
GOA				eS	Sn	07 14 50.7	-4.3
BOM	Bombay	7.43	303	eS	Sn	07 15 39.1	-5.6
BLSP	Bilaspur	7.60	19	eS	Sn	07 15 42.0	-7.0
BHPL	Bhopal	8.47	348	eP	Pn	07 14 35.4	+0.8
BHPL				eS	Sn	07 16 04.2	-6.0
BHPL				IAML		07 16 57.9	
	comp=N,145nm,0.7s						
BHPL				IAML		07 16 58.5	
	comp=E,373nm,0.2s						

IDC 28 07:21:36.1±4.4, 2°.61S×140°.05E, h0km, mb3.4/2, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=166.2km s-min=31.0km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.11	198	P	Pn	07 25 48.5	-0.8
	0.3nm,0.3s,baz=20,slow=13,SNR=16						
	1.3nm,0.6s						
ASAR	Alice Springs	21.77	195	P	P	07 26 30.4	+0.7
	1.4nm,0.7s,baz=26,slow=10,SNR=13						
	1.4nm,0.7s						
MKAR	Makanchi Array	70.53	322	P	P	07 32 52.8	-0.2
	0.1nm,0.4s,baz=110,slow=7.8,SNR=2.3						
	0.1nm,0.4s						

IDC 28 07:28:24.4±4.2, 29°.51S×178°.14W, h0km, mb3.4/2, mbtmp3.7/3, ML4.0/1, Error ellipse: s-maj=83.1km s-min=53.2km az=88.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	9.58	203	Pn	Pn	07 30 43.6	0.0
	1.5nm,0.3s,baz=69,slow=8.6,SNR=10						
	11nm,0.7s						
ASAR	Alice Springs	43.05	266	P	P	07 36 25.9	-0.3
	0.2nm,0.5s,baz=103,slow=7.0,SNR=2.0						
	0.2nm,0.5s						
WRA	Warramunga Arr	43.95	271	P	P	07 36 33.5	0.0
	0.3nm,0.4s,baz=112,slow=7.8,SNR=14						
	0.3nm,0.4s						
FINES	FINESS Array B	144.27	340	PKP	PKPdf	07 48 01.0	-0.7
	1.0nm,0.8s,baz=46,slow=5.5,SNR=3.9						

IDC 28 07:31:16.3±5.0, 29°.80S×178°.12W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=237.2km s-min=79.4km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.04	266	P	P	07 39 17.3	-0.8
	0.3nm,0.5s,baz=102,slow=7.1,SNR=2.5						
	0.3nm,0.5s						
WRA	Warramunga Arr	43.98	272	P	P	07 39 25.9	+0.3
	0.4nm,0.4s,baz=112,slow=7.8,SNR=11						
	0.4nm,0.4s						
FINES	FINESS Array B	144.55	340	PKP	PKPdf	07 50 53.4	-0.7
	1.0nm,0.7s,baz=72,slow=4.5,SNR=2.1						

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*NSSP **28** 07:32:13.2, 38°.70N×43°.23E, h10km, Ms3.3*

*ISK **28** 07:32:15.2, 38°.74N×43°.18E, h5km, ML3.5/15*

*DDA **28** 07:32:16.6±0.0, 38°.76N×43°.19E, h7km±2km, ML3.1*

ISC 28 07:32:17.1±0.9, 38°.75N±0°.02×43°.17E±0°.02, h14km±7km, n37, σ1.s05/59, 3C-7D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.23	133	PG	Pg	07 32 22.6	+0.3
VANB				SG	Sg	07 32 27.2	+1.4
TVAN	Van	0.29	141	P	Pg	07 32 22.5	-0.9
TVAN				S	Sg	07 32 27.7	+0.1
ERCV	ERCIS-VAN	0.30	26	PG	Pg	07 32 22.8	-0.7
ERCV				SG	Sg	07 32 27.9	+0.1
ADCV	BITLIS_Adilcev	0.35	279	P	Pg	07 32 24.4	0.0
ADCV				S	Sb	07 32 30.1	-0.7
ADCV				i AML	AML	07 32 31.0	
	comp=N,2µm,0.2s						
ADCV				i AML	AML	07 32 31.0	
	comp=E,2µm,0.2s						
GEVA	Gevas	0.45	191	P	Pg	07 32 25.0	-1.2
GEVA				S	Sb	07 32 33.1	-0.5
GEVA				i AML	AML	07 32 36.0	
	comp=N,3µm,0.5s						
GEVA				i AML	AML	07 32 38.0	
	comp=E,2µm,0.7s						
AKDM	Akdamar-Van	0.45	200	PG	Pg	07 32 24.8	-1.4
AKDM				SG	Sg	07 32 32.2	-0.1
MLAZ	Malazgirt-MUS	0.62	309	PG	Pg	07 32 29.0	-0.4
OZAP	Van, Ozalp-Mer	0.65	98	P	Pg	07 32 29.5	-0.4
OZAP				S	Sn	07 32 42.0	-0.3
OZAP				i AML	AML	07 32 45.0	
	comp=E,805nm,0.7s						
OZAP				i AML	AML	07 32 48.0	
	comp=N,874nm,0.7s						
CLDR	Caldiran	0.70	56	PG	Pg	07 32 29.5	-1.3
CLDR	Caldiran	0.70	56	P	Pg	07 32 29.5	-1.3
CLDR				S	Sg	07 32 39.9	-0.2
CLDR				i AML	AML	07 32 41.0	
	comp=N,3µm,0.3s						
CLDR				i AML	AML	07 32 43.0	
	comp=E,3µm,0.4s						
AGRB	Hanur-Agry	0.83	350	PG	Pg	07 32 32.3	-1.1
DYDN	Diyadin	0.89	27	P	Pg	07 32 32.8	-1.6
DYDN				S	Sb	07 32 46.3	+0.2
DYDN				i AML	AML	07 32 51.0	
	comp=E,840nm,0.6s						
DYDN				i AML	AML	07 32 52.0	
	comp=N,1µm,0.6s						
GURO	Guroymak-BITLI	0.92	258	PG	Pg	07 32 33.5	-1.4
PERV	Siirt/Pervari-	0.95	212	P	Pg	07 32 34.0	-1.5
PERV				S	Sn	07 32 49.5	0.0
PERV				i AML	AML	07 32 50.0	
	comp=E,2µm,0.4s						
PERV				i AML	AML	07 32 52.0	
	comp=N,1µm,0.5s						
KOTA	Agri, Merkez-K	1.05	1	P	Pg	07 32 36.0	-1.4
KOTA				i AML	AML	07 32 56.0	
	comp=E,499nm,0.5s						
KOTA				i AML	AML	07 32 56.0	
	comp=N,609nm,0.8s						
EATA	Eleskirt	1.23	335	P	Pb	07 32 39.6	-0.7
EATA				S	Sn	07 32 57.3	+0.6
EATA				i AML	AML	07 32 58.0	
	comp=N,925nm,0.6s						
EATA				i AML	AML	07 33 04.0	
	comp=E,529nm,0.6s						
HAKT	HAKKARI	1.27	160	P	Pn	07 32 39.0	-1.6
HAKT				S	Sn	07 32 59.1	+1.6
HAKT				i AML	AML	07 33 01.0	
	comp=E,450nm,0.5s						
HAKT				i AML	AML	07 33 04.0	
	comp=N,379nm,0.7s						
MUSM	Mu-Merkez	1.30	269	P	Pn	07 32 40.9	-0.1
MUSM				S	Sg	07 32 58.2	-0.9
MUSM				i AML	AML	07 33 00.0	
	comp=E,121nm,0.3s						
MUSM				i AML	AML	07 33 01.0	
	comp=N,122nm,0.8s						
IGDI	IGDIR	1.32	32	P	Pn	07 32 40.8	-0.3
IGDI				S	Sg	07 33 02.0	+2.3
IGDI				i AML	AML	07 33 03.0	
	comp=E,250nm,0.7s						
IGDI				i AML	AML	07 33 05.0	
	comp=N,260nm,0.8s						
VRTB	Varto-Mus	1.40	287	PN	Pg	07 32 43.9	-0.2
VNNZ	Vanand	1.44	20	⇓iP	Pb	07 32 43.5	-0.3
VNNZ				⇓iS	Sg	07 33 03.7	+0.1
CUKT	Cukurca	1.54	167	PN	Pn	07 32 44.2	-0.1
CUKT	Cukurca	1.54	167	P	Pn	07 32 44.7	+0.4
CUKT				S	Sg	07 33 09.8	+2.9
CUKT				i AML	AML	07 33 10.0	
	comp=N,686nm,0.6s						
CUKT				i AML	AML	07 33 12.0	
	comp=E,649nm,0.6s						
METS	Metsamor	1.56	26	⇓iP	Pb	07 32 45.7	-0.1
METS				⇑iS	Sg	07 33 07.7	+0.2
KOPR	Koprukoy-ERZUR	1.60	321	PN	Pn	07 32 45.3	+0.1
SVAN	Silvan-Diyarba	1.66	249	PN	Pb	07 32 46.8	-0.7
SVAN	Silvan-Diyarba	1.66	249	P	Pb	07 32 47.6	0.0
SVAN				S	Sg	07 33 10.9	+0.3
SVAN				i AML	AML	07 33 11.0	
	comp=N,153nm,0.7s						
SVAN				i AML	AML	07 33 11.0	
	comp=E,112nm,0.6s						
NRKZ	NAREK	1.70	42	⇓iP	Pn	07 32 47.1	+0.7
NRKZ				⇓iS	Sg	07 33 10.8	-1.0
BTMN	Batman	1.73	241	P	Pb	07 32 48.6	0.0
BTMN				i AML	AML	07 33 13.0	
	comp=E,613nm,0.7s						
BTMN				S	Sg	07 33 13.1	+0.4
BTMN				i AML	AML	07 33 15.0	
	comp=N,474nm,0.6s						
GNI	Garni	1.85	41	⇓iP	Pg	07 32 52.1	-0.5
GNI				⇓iS	Sg	07 33 19.3	+2.6
GNI	Garni	1.85	41	PN	Pb	07 32 49.9	-0.9
KARS	Kars	1.87	358	PN	Pn	07 32 50.0	+1.1
BNGB	Bingl	1.96	278	PN	Pn	07 32 51.2	+1.2
KAPZ	Kaputan	1.96	37	⇑iP	Pn	07 32 50.8	+0.7
KAPZ				⇑iS	Sb	07 33 17.5	+0.4
YEDI	Yedisu-Bingol	2.16	289	PN	Pn	07 32 54.1	+1.3
MAZI	Mazidag	2.51	240	PN	Pn	07 32 58.8	+1.2
DYBB	Diyarbakir	2.51	252	PN	Pn	07 32 58.8	+1.2

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*KRNET **28** 07:47:08.5±0.1, 39°.82N×75°.52E, mb3.4*

*SOME **28** 07:47:09.7, 39°.92N×75°.50E, h10km*

*NNC **28** 07:47:11.6±0.9, 39°.98N×75°.43E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=7.8km s-min=4.6km az=159.0*

ISC 28 07:47:04.3±1.3, 39°.77N±0°.05×75°.45E±0°.03, h10km, n58, σ1.s07/91, 22C-21D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	2.18	291	⇑iP	Pg	07 47 48.1	+2.0
	baz=89						
OHH				⇑iS	Sg	07 48 17.3	+2.9
	baz=89						
ARLS	Aral	2.26	338	⇑iP	Pg	07 47 48.5	+0.8
	baz=36						
ARLS				⇑iS	Sg	07 48 17.7	+0.7
	baz=36						
ULHL	Ulahol	2.55	13	P	Pg	07 47 52.7	-0.5
	SNR=5.9						
ULHL	Ulahol	2.55	13	⇓iP	Pg	07 47 52.3	-0.9
	baz=12						
ULHL				⇓eS	Sg	07 48 24.2	-2.0
	baz=12						
UCH	Uchtor	2.56	344	P	Pg	07 47 53.0	-0.5
	SNR=24						
UCH	Uchtor	2.56	344	⇑iP	Pg	07 47 52.6	-0.8
	baz=43						
UCH				⇑iS	Sg	07 48 24.7	-1.9
	baz=43						
TARG	Taragay, Kyrgy	2.65	42	⇑iP	Pb	07 47 53.2	+1.0
	baz=41						
TARG				⇑iS	Sb	07 48 25.7	+0.7
	baz=41						
KDJ	Kajisay	2.70	28	⇓iP	Pb	07 47 54.1	+1.2
	baz=28						
KDJ				⇓iS	Sb	07 48 27.5	+1.4
	baz=28						
AML	Almayashu	2.71	331	P	Pg	07 47 55.0	-1.4
	SNR=21						
BOOM	Boomskoye usch	2.75	8	⇑iP	Pb	07 47 55.1	+1.5
	baz=7.0						
BOOM				⇑iS	Sb	07 48 29.0	+1.6
	baz=7.0						
DRK	Karamyk	2.83	265	⇑iP	Pg	07 47 57.9	-0.8
	baz=65						
DRK				⇑iS	Sg	07 48 33.6	-1.8
	baz=65						
KBK	Karagaybulak	2.91	353	P	Pg	07 47 58.4	-1.8
	SNR=14						
KBK	Karagaybulak	2.91	353	⇓eP	Pb	07 47 57.5	+1.0
	baz=52						
KBK				⇓iS	Sb	07 48 33.0	+0.8
	baz=52						
AAK	Ala-Archa	2.96	346	P	Pb	07 47 58.8	+1.6
	SNR=7.0						
AAK	Ala-Archa	2.96	346	⇓iP	Pb	07 47 58.0	+0.8
	baz=45						
AAK				⇓iS	Sb	07 48 33.9	+0.4
	baz=45						
TKM2	Tokmak 2	3.15	2	P	Pb	07 48 01.1	+0.5
	SNR=18						
TKM2	Tokmak 2	3.15	2	⇑Pn	Pb	07 48 00.6	+0.1
	11nm,0.9s						
TKM2				⇓Lg	Lg	07 48 46.5	
	65nm,0.7s						
TKM2	Tokmak 2	3.15	2	⇓eP	Pb	07 48 00.7	+0.1
	baz=1.0						
TKM2				⇓eS	Sb	07 48 38.8	-0.4
	baz=1.0						
EKS2	Erkin-Say	3.16	337	⇓iP	Pb	07 48 00.8	+0.2
	baz=36						
EKS2				⇓iS	Sb	07 48 39.3	+0.1
	baz=36						
CHMS	Chumysh	3.27	351	P	Pb	07 48 02.8	+0.2
	SNR=6.9						
CHMS	Chumysh	3.27	351	⇓Pn	Pb	07 48 02.1	-0.4
	11nm,0.5s						
CHMS				⇑Lg	Lg	07 48 49.7	
	30nm,0.8s						
CHMS	Chumysh	3.27	351	⇑eP	Pb	07 48 02.3	-0.2
	baz=50						
CHMS				⇑eS	Sb	07 48 41.6	-0.8
	baz=50						
KST	Kastek	3.30	7	eP	Pg	07 48 08.7	+1.2
	9.0nm,0.3s						
KST				eS	Sg	07 48 51.3	+1.1
	110nm,0.8s						
KST	Kastek	3.30	7	Pg	Pg	07 48 08.7	+1.2
	11nm,0.4s						
KST				Lg	Lg	07 48 51.9	
	110nm,0.8s						
ARK	Arkit	3.34	309	⇑iP	Pb	07 48 04.2	+0.5
	baz=7.0						
ARK				⇑iS	Sb	07 48 44.4	0.0
	baz=7.0						
MRKS	Merke	3.42	331	eP	Pg	07 48 09.3	-0.5
	11nm,0.7s						
MRKS				eS	Sg	07 48 51.8	-2.3
	27nm,0.5s						
MRKS	Merke	3.42	331	Pg	Pg	07 48 09.3	-0.5
	11nm,0.7s						
MRKS				Lg	Lg	07 48 52.7	
	27nm,0.5s						
MTBS	Maitube	3.44	12	eP	Pg	07 48 11.3	+1.0
	9.1nm,0.4s						
MTBS				eS	Sg	07 48 55.5	+0.7
	19nm,0.4s						
MTBS	Maitube	3.44	12	Pg	Pg	07 48 10.7	+0.5
	9.8nm,0.6s						
MTBS				Lg	Lg	07 48 55.5	
	19nm,0.4s						
ANVS	Anan'yevo	3.44	28	⇓iP	Pb	07 48 04.6	-1.0
	baz=28						
ANVS				⇓iS	Sb	07 48 45.1	-2.5
	baz=28						
TNSS	Tian-Shan	3.46	19	eP	Pg	07 48 11.7	+1.1
	8.1nm,0.5s						
TNSS				eS	Sg	07 48 56.1	+0.7

	10nm,0.6s						
TNSS	**Tian-Shan**	**3.46**	**19**	Pg	**Pg**	**07 48 11.0**	**+0.4**
	8.1nm,0.5s						
TNSS				Lg	Lg	07 48 55.7	
	10nm,0.6s						
USP	**Ospenovka**	**3.57**	**349**	P	**Sg**	**07 49 00.2**	**+1.2**
	SNR=6.4						
BTK	**Batken**	**3.58**	**276**	⇓iP	**Pb**	**07 48 07.6**	**-0.1**
	baz=75						
BTK				⇓iS	**Sb**	**07 48 51.1**	**-0.1**
	baz=75						
MDOK	**Medeo**	**3.60**	**19**	eP	**Pg**	**07 48 13.2**	**-0.1**
	4.9nm,0.4s						
MDOK				eS	**Sg**	**07 48 58.9**	**-1.1**
	29nm,0.7s						
MDOK	**Medeo**	**3.60**	**19**	Pn	**Pb**	**07 48 07.0**	**-1.2**
	3.6nm,0.5s						
MDOK				⇑Lg	Lg	07 48 59.5	
	34nm,0.8s						
MDOK	**Medeo**	**3.60**	**19**	Pg	**Pg**	**07 48 12.3**	**-1.0**
	4.7nm,0.5s						
MDOK				Lg	Lg	07 48 58.0	
	29nm,0.7s						
TRKS	**Terek-Say**	**3.72**	**300**	⇑iP	**Pb**	**07 48 08.7**	**-1.6**
	baz=98						
TRKS				⇑iS	**Sb**	**07 48 53.4**	**-2.1**
	baz=98						
SGDS	**Sogindy**	**3.73**	**351**	eP	**Pg**	**07 48 16.5**	**+0.6**
	5.4nm,0.6s						
SGDS				eS	**Sg**	**07 49 04.1**	**-0.1**
	25nm,0.7s						
SATY	**Saty**	**3.97**	**33**	eP	**Pg**	**07 48 21.4**	**+1.0**
	3.9nm,0.3s						
SATY				eS	**Sg**	**07 49 12.7**	**+0.9**
	15nm,0.7s						
SATY	**Saty**	**3.97**	**33**	Pg	**Pg**	**07 48 20.8**	**+0.4**
SATY				Lg	Lg	07 49 12.5	
KTBS	**Karatobe**	**4.05**	**13**	eP	**Pg**	**07 48 21.6**	**-0.2**
	6.7nm,0.4s						
KTBS				eS	**Sg**	**07 49 13.4**	**-0.9**
	36nm,0.5s						
KTBS	**Karatobe**	**4.05**	**13**	Pg	**Pg**	**07 48 21.4**	**-0.5**
	6.7nm,0.4s						
KTBS				Lg	Lg	07 49 13.9	
	36nm,0.5s						
ZHN	**Zhinishke**	**4.07**	**32**	eP	**Pg**	**07 48 23.5**	**+1.2**
	2.7nm,0.1s						
ZHN				eS	**Sg**	**07 49 16.2**	**+1.2**
	14nm,0.2s						
KUU	**Kurty**	**4.18**	**9**	eP	**Pg**	**07 48 24.2**	**-0.2**
	1.4nm,0.1s						
KUU				eS	**Sg**	**07 49 18.0**	**-0.4**
	44nm,0.8s						
KUU	**Kurty**	**4.18**	**9**	Pg	**Pg**	**07 48 24.2**	**-0.2**
	1.4nm,0.1s						
KUU				Lg	Lg	07 49 18.0	
	44nm,0.8s						
KURS	**Kuram**	**4.24**	**28**	eP	**Pg**	**07 48 24.6**	**-1.0**
	5.1nm,0.5s						
KURS				eS	**Sg**	**07 49 18.8**	**-1.7**
	10nm,1.1s						
KURS	**Kuram**	**4.24**	**28**	Pg	**Pg**	**07 48 24.6**	**-1.0**
	5.1nm,0.5s						
KURS				Lg	Lg	07 49 18.8	
	10nm,1.1s						
UZB	**Uzynbulak**	**4.31**	**37**	eP	**Pg**	**07 48 26.6**	**-0.4**
	3.0nm,0.4s						
UZB				eS	**Sg**	**07 49 22.1**	**-0.8**
	6.7nm,0.5s						
UZB	**Uzynbulak**	**4.31**	**37**	Pg	**Pg**	**07 48 26.6**	**-0.4**
	3.0nm,0.4s						
UZB				Lg	Lg	07 49 22.1	
	6.7nm,0.5s						
KPKS	**Kokpek**	**4.42**	**32**	eP	**Pg**	**07 48 28.3**	**-0.7**
	1.5nm,0.2s						
KPKS				eS	**Sg**	**07 49 25.4**	**-0.9**
	29nm,0.7s						
PDGK	**Podgornoye**	**4.67**	**39**	⇑Pg	**Pg**	**07 48 34.5**	**+0.6**
	4.5nm,0.7s						
PDGK				⇓Lg	Lg	07 49 35.6	
	16nm,0.8s						
IUG	**Iuzhnay**	**4.74**	**302**	eP	**Pg**	**07 48 36.1**	**+0.9**
	209nm,0.6s						
IUG				eS	**Sg**	**07 49 38.3**	**+1.7**
	27nm,0.5s						
IUG	**Iuzhnay**	**4.74**	**302**	Pg	**Pg**	**07 48 36.1**	**+0.9**
IUG				Lg	Lg	07 49 38.3	
KK31	**Karatay Array**	**4.99**	**314**	Pn	Pn	07 48 24.2	+4.9
	0.3nm,0.3s,baz=126,slow=12,SNR=14						
KK31				⇓Pg	**Pg**	**07 48 38.9**	**-1.0**
	1.1nm,0.5s,baz=132,slow=16,SNR=8.0						
KK31				⇓Lg	Lg	07 49 44.6	
	6.0nm,0.8s,baz=140,slow=30,SNR=5.2						
BRLS	**Borolday**	**5.33**	**309**	eP	**Pg**	**07 48 46.6**	**+0.1**
	2.9nm,0.2s						
BRLS				eS	**Sg**	**07 49 56.3**	**+0.7**
	5.4nm,1.1s						
BRLS	**Borolday**	**5.33**	**309**	Pg	**Pg**	**07 48 46.6**	**+0.1**
BRLS				Lg	Lg	07 49 56.4	
DJR	**Jarkent**	**5.59**	**34**	eP	**Pg**	**07 48 51.4**	**+0.1**
	1.2nm,0.2s						
DJR				eS	**Sg**	**07 50 04.1**	**+0.4**
	3.5nm,0.6s						

TRN 28 07:52:19.9, 10°.18N×62°.24W, h15^{km}, MD3.8, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	**Pointe-a-Pierr**	**0.79**	**80**	eP	Pb	07 52 35.6	+0.4
TPP				eS	Sb	07 52 46.7	+1.0
TRN	**Trinidad (W)**	**0.94**	**60**	eP	Pn	07 52 38.6	0.0
TRN				eS	Sb	07 52 50.2	-0.1
GRFF	**Grenada Fort F**	**1.92**	**15**	eP	Pn	07 52 52.7	+0.7
GRFF				eS	Sn	07 53 15.9	0.0
TOSP	**Speyside**	**2.01**	**56**	eP	Pn	07 52 52.6	-0.6
TOSP				eS	Sn	07 53 19.3	+1.2
GRGR	**Grenville**	**2.02**	**16**	eP	Pn	07 52 53.3	-0.2
GRGR				eS	Sn	07 53 17.7	-0.8
GCMP	**Grenada, Carri**	**2.43**	**19**	eP	Pn	07 52 58.9	-0.1
GCMP				eS	Sn	07 53 27.9	-0.5
SVOC	**Richmond Hill,**	**3.12**	**19**	eP	Pn	07 53 09.7	+1.2
SVV	**Soufriere Volc**	**3.27**	**18**	eP	Pn	07 53 11.7	+1.0
MCLT	**Moule a Chique**	**3.73**	**20**	eP	Pn	07 53 18.0	+1.0
MCLT				eS	Sn	07 54 00.5	-0.2
SLB	**Belfond**	**3.81**	**18**	eP	Pn	07 53 18.5	+0.4
SLBI	**Saint Lucia, B**	**4.01**	**18**	eP	Pn	07 53 20.9	+0.1
SLBI	**Saint Lucia, B**	**4.01**	**18**	eS	Sn	07 54 07.4	-0.2
MPOM	**Morne Pois Mar**	**4.45**	**18**	eP	Pn	07 53 28.0	+1.2
BIM	**Bigot**	**4.46**	**15**	eP	Pn	07 53 27.9	+0.9
BIM	**Bigot**	**4.46**	**15**	eS	Sn	07 54 17.5	-1.1
TRMF	**Trois Ilets**	**4.48**	**15**	eP	Pn	07 53 28.5	+1.2
ZAM	**Aeronautique**	**4.52**	**15**	eP	Pn	07 53 29.1	+1.3
ZAM	**Aeronautique**	**4.52**	**15**	eS	Sn	07 54 18.7	-1.5
LPMF	**Morne Lapointe**	**4.54**	**16**	eP	Pn	07 53 29.5	+1.4
LPMF	**Morne Lapointe**	**4.54**	**16**	eS	Sn	07 54 19.7	-1.0
MVM	**Montagne Vaucl**	**4.54**	**17**	eP	Pn	07 53 29.4	+1.3
FDF	**Fort de France**	**4.65**	**13**	eP	Pn	07 53 30.7	+1.1
PML	**Morne Lenard**	**4.69**	**13**	eP	Pn	07 53 31.3	+1.1
GBMF	**Grand Be**	**4.71**	**13**	eP	Pn	07 53 31.5	+1.1
PCM	**Pelee Case Pet**	**4.71**	**12**	eP	Pn	07 53 31.6	+1.1
BAMF	**Morne Balai**	**4.73**	**13**	eP	Pn	07 53 31.9	+1.2
SVN	**Savane Anatole**	**4.75**	**13**	eP	Pn	07 53 32.2	+1.2
BAUV	**El Baul**	**5.85**	**258**	eP	Pn	07 53 46.3	+0.2
BAUV	**El Baul**	**5.85**	**258**	eS	Sn	07 54 51.2	-1.9

NOU 28 08:00:02.4, 17°.29S×168°.39E, h4^{km}, MLv4.3/15, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.47**	**204**	P	Pg	08 00 11.4	-0.1
RTV	**Rentapao**	**0.50**	**176**	P	Pg	08 00 12.9	+0.8
LIFNC	**LIFOU**	**3.63**	**197**	P	Pn	08 00 59.7	+0.2
YATNC	**Mamie plateau,**	**4.95**	**196**	P	Pn	08 01 18.0	+0.4
KOUNC	**Koumac, New Ca**	**5.06**	**229**	P	Pn	08 01 20.2	+1.1
DZM	**Mont Dzumac**	**5.10**	**201**	P	Pn	08 01 18.6	-1.1
NOUC	**Port Laguerre**	**5.17**	**202**	P	Pn	08 01 20.1	-0.6
OUENC	**Ouen Island, N**	**5.31**	**196**	P	Pn	08 01 22.8	+0.3

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*JMA **28** 08:01:26.2±0.2, 31°.0N±0°.4×129°.1E±0°.9, h18^{km}±2^{km}, MV3.9/31, SW OFF KYUSHU*

*IDC **28** 08:01:35.1±2.0, 31°.83N×131°.33E, h121^{km}±24^{km}, mb3.0/4, mbtmp3.3/6, Error ellipse: s-maj=47.3km s-min=23.0km az=59.0*

ISC 28 08:01:26.3±0.9**, 30°.98N**±0°.05×**129°.15E**±0°.06**, h6^{km}, n16, σ1^s.17**/16**, mb3.3**/4**, 1D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.85**	**35**	eP	**Pg**	**08 01 41.6**	**-1.0**
JSJ				eS	**Sg**	**08 01 53.1**	**-0.6**
JKC	**Kuchinoerabu**	**1.04**	**119**	P	**Pb**	**08 01 47.3**	**+0.7**
JSU	**Suzuyama**	**1.24**	**64**	⇓eP	**Pn**	**08 01 49.5**	**-0.7**
JNN	**Nakanoshima**	**1.29**	**151**	eP	**Pn**	**08 01 50.4**	**-0.5**
JYAK	**Yakushimahirau**	**1.39**	**122**	eP	**Pn**	**08 01 51.6**	**-0.6**
JYAK				eS	**Sn**	**08 02 10.1**	**-0.7**
JTN	**Tanegashima 3**	**1.61**	**101**	eP	**Pn**	**08 01 55.1**	**-0.1**
JMTN	**Minamitane**	**1.62**	**110**	eP	**Pn**	**08 01 55.4**	**+0.1**
JFU	**Fukue jima 2**	**1.71**	**349**	eP	**Pn**	**08 01 54.6**	**-2.0**
JTAJ	**Takarajima**	**1.82**	**178**	eP	**Pb**	**08 01 58.6**	**-1.3**
JNU	**Nakatsue**	**2.60**	**34**	P	Pn	08 02 01.1	-7.8
	4.2nm,0.3s,baz=317,slow=2.1,SNR=1.8						
JNU				S	Sn	08 02 09.2	-32
	24nm,0.3s,baz=287,slow=20,SNR=8.0						
KSRS	**Korea Array**	**6.54**	**351**	P	**Pn**	**08 03 04.2**	**+1.1**
	0.6nm,0.4s,baz=174,slow=12,SNR=8.0						
MJAR	**Matsushiro Arr**	**9.36**	**51**	P	Pn	08 03 20.5	-21
	0.5nm,0.3s,baz=231,slow=15,SNR=3.2						
SONM	**Songino Array**	**24.20**	**321**	P	**P**	**08 06 46.2**	**+2.5**
	0.4nm,0.4s,baz=134,slow=8.3,SNR=3.9						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**50.87**	**174**	P	**P**	**08 10 28.0**	**-0.1**
	0.2nm,0.7s,baz=359,slow=8.1,SNR=2.1						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**54.52**	**175**	P	**P**	**08 10 56.2**	**+1.1**
	0.1nm,0.4s,baz=3.1,slow=13,SNR=5.4						
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**74.79**	**307**	P	**P**	**08 13 07.8**	**+0.2**
	0.5nm,0.6s,baz=60,slow=6.8,SNR=2.3						
	0.5nm,0.6s						

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*GCG **28** 08:10:59.7±0.4, 14°.82N×92°.36W, h80^{km}±5^{km}, MD3.6*

*MEX **28** 08:11:00.3±0.9, 14°.74N×92°.20W, h98^{km}±7^{km}, MD3.9*

ISC 28 08:11:01.5±1.6**, 14°.87N**±0°.10×**92°.30W**±0°.07**, h86^{km}**±8^{km}**, n12, σ1^s.15**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.05**	**41**	iP	**Pn**	**08 11 13.2**	**-0.4**
THIG				eS	**Sn**	**08 11 23.7**	**+1.1**
PATR	**El Naranjo**	**0.25**	**14**	iP	**Pn**	**08 11 13.7**	**-0.9**
PATR				eS	**Sn**	**08 11 24.2**	**0.0**
CHUJ	**Union Juarez**	**0.29**	**40**	iP	**Pn**	**08 11 14.0**	**-0.7**
CHUJ				eS	**Sn**	**08 11 24.9**	**+0.4**
PAVE	**Pavencul**	**0.34**	**20**	iP	**Pn**	**08 11 14.3**	**-0.7**
PAVE				eS	**Sn**	**08 11 25.7**	**+0.7**
STG3	**Santiaguito 3,**	**0.72**	**103**	eP	**Pn**	**08 11 17.1**	**-1.0**
STG3				eS	**Sn**	**08 11 30.1**	**-0.3**
PCIG		**1.22**	**313**	eP	**Pn**	**08 11 23.6**	**+0.2**
PCIG				eS	**Sn**	**08 11 42.1**	**+2.1**
CCIG	**Comitan**	**1.41**	**6**	iP	**Pn**	**08 11 26.5**	**+0.4**
CCIG				eS	**Sn**	**08 11 46.1**	**+1.5**
FUG	**Fuego 3**	**1.47**	**106**	eP	**Pn**	**08 11 25.8**	**-1.0**
FUG				eS	**Sn**	**08 11 46.6**	**+0.6**
PCG	**Pacaya**	**1.71**	**106**	eP	**Pn**	**08 11 29.3**	**-0.7**
PCG				eS	**Sn**	**08 11 54.4**	**+2.9**
TGIG		**2.06**	**337**	eP	**Pn**	**08 11 33.3**	**-1.1**
TGIG				iS	**Sn**	**08 11 58.5**	**-0.9**
UXUV	**UXUV**	**3.01**	**324**	eP	**Pn**	**08 11 46.8**	**-0.3**
UXUV				eS	**Sn**	**08 12 20.7**	**-1.5**
CMIG	**Matias Romero**	**3.33**	**312**	eP	**Pn**	**08 11 51.3**	**-0.1**
CMIG				eS	**Sn**	**08 12 30.4**	**+0.5**

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*KRNET **28** 08:19:18.8±0.1, 39°.59N×75°.45E, mb3.2*

*SOME **28** 08:19:23.0, 39°.92N×75°.48E, h10^{km}*

*NNC **28** 08:19:24.2±1.0, 39°.94N×75°.40E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.8km s-min=5.6km az=152.0*

ISC 28 08:19:22.8±1.4**, 39°.69N**±0°.06×**75°.39E**±0°.04**, h10^{km}, n50, σ1^s.75**/78**, 28C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**2.17**	**294**	⇑iP	**Pn**	**08 19 59.3**	**+0.3**
	baz=95						
OHH				⇑iS	**Sn**	**08 20 27.8**	**+1.8**
	baz=95						
ARLS	**Aral**	**2.32**	**340**	⇑iP	**Pn**	**08 20 01.5**	**+0.3**
	baz=40						
ARLS				⇑iS	**Sn**	**08 20 31.8**	**+1.9**
	baz=40						
UCH	**Uchtor**	**2.62**	**346**	P	**Pn**	**08 20 06.1**	**+0.4**
	SNR=19						
UCH	**Uchtor**	**2.62**	**346**	⇓iP	**Pn**	**08 20 05.9**	**+0.2**
	baz=45						
UCH				⇓iS	**Sn**	**08 20 40.5**	**+2.7**
	baz=45						
ULHL	**Ulahol**	**2.64**	**14**	P	**Pn**	**08 20 07.8**	**+2.2**
	SNR=30						
ULHL	**Ulahol**	**2.64**	**14**	⇑iP	**Pn**	**08 20 05.4**	**-0.2**
	baz=13						
ULHL				⇑iS	**Sn**	**08 20 39.8**	**+2.0**
	baz=13						
TARG	**Taragay, Kyrgy**	**2.74**	**41**	⇑eP	**Pn**	**08 20 06.5**	**-0.8**
	baz=39						
TARG				⇑eS	**Sn**	**08 20 41.6**	**+0.9**
	baz=39						
AML	**Almayashu**	**2.76**	**333**	P	**Pn**	**08 20 07.9**	**+0.4**
	SNR=10.0						
DRK	**Karamyk**	**2.78**	**267**	⇓iP	**Pn**	**08 20 07.4**	**-0.3**
	baz=69						
DRK				⇓iS	**Sn**	**08 20 42.7**	**+1.2**
	baz=69						
KDJ	**Kajisay**	**2.79**	**28**	⇑iP	**Pn**	**08 20 07.4**	**-0.3**
	baz=27						
KDJ				⇑eS	**Sn**	**08 20 42.9**	**+1.3**
	baz=27						
BOOM	**Boomskoye usch**	**2.83**	**8**	⇑iP	**Pn**	**08 20 08.2**	**-0.1**
	baz=7.0						
BOOM				⇑eS	**Sn**	**08 20 44.7**	**+2.2**
	baz=7.0						
KBK	**Karagaybulak**	**2.99**	**354**	P	**Sg**	**08 20 53.5**	**-5.2**
	SNR=6.6						
KBK	**Karagaybulak**	**2.99**	**354**	⇑eP	**Pn**	**08 20 10.8**	**+0.4**
	baz=53						
KBK				⇑iS	**Sn**	**08 20 48.5**	**+2.2**
	baz=53						
AAK	**Ala-Archa**	**3.02**	**347**	P	**Pn**	**08 20 12.2**	**+1.3**
	SNR=10.0						
AAK	**Ala-Archa**	**3.02**	**347**	⇓eP	**Pn**	**08 20 11.3**	**+0.4**
	baz=47						
AAK				⇓eS	**Sn**	**08 20 49.6**	**+2.3**
	baz=47						
EKS2	**Erkin-Say**	**3.21**	**338**	⇓iP	**Pn**	**08 20 13.9**	**+0.5**
	baz=38						
EKS2				⇓iS	**Sn**	**08 20 54.4**	**+2.6**
	baz=38						
TKM2	**Tokmak 2**	**3.23**	**3**	P	**Pn**	**08 20 14.4**	**+0.5**
	SNR=8.2						
TKM2	**Tokmak 2**	**3.23**	**3**	⇑Pn	**Pn**	**08 20 14.0**	**+0.2**
	2.3nm,0.3s						
TKM2				⇑Lg	Lg	08 20 59.5	
	32nm,0.7s						
TKM2	**Tokmak 2**	**3.23**	**3**	⇑eP	**Pn**	**08 20 14.0**	**+0.2**
	baz=2.0						
TKM2				⇑eS	**Sn**	**08 20 54.6**	**+2.1**
	baz=2.0						
CHMS	**Chumysh**	**3.34**	**352**	⇓Pn	**Pn**	**08 20 15.1**	**-0.1**
	4.4nm,0.5s						
CHMS				⇑Lg	Lg	08 21 03.0	
	14nm,0.7s						
ARK	**Arkit**	**3.35**	**310**	⇑iP	**Pn**	**08 20 15.0**	**-0.3**
	baz=11						
ARK				⇑iS	**Sn**	**08 20 57.7**	**+2.4**
	baz=11						
KST	**Kastek**	**3.38**	**7**	eP	**Pb**	**08 20 22.2**	**-0.7**
	6.3nm,0.3s						
KST				eS	**Sb**	**08 21 05.1**	**+1.0**
	59nm,0.8s						
KST	**Kastek**	**3.38**	**7**	Pg	**Pb**	**08 20 21.5**	**-1.4**
	7.4nm,0.4s						
KST				Lg	Lg	08 21 04.6	
	59nm,0.8s						
MRKS	**Merke**	**3.46**	**333**	eP	**Pb**	**08 20 23.4**	**-0.9**
	2.4nm,0.2s						
MRKS				eS	**Sb**	**08 21 07.1**	**+0.6**
	14nm,0.5s						
MRKS	**Merke**	**3.46**	**333**	Pg	**Pb**	**08 20 22.5**	**-1.8**
	5.6nm,0.8s						
MRKS				Lg	Lg	08 21 06.2	
	14nm,0.5s						
MTBS	**Maitube**	**3.53**	**12**	eP	**Pb**	**08 20 24.4**	**-0.9**
	4.9nm,0.2s						
MTBS				eS	**Sb**	**08 21 08.4**	**+0.1**
	18nm,0.3s						
MTBS	**Maitube**	**3.53**	**12**	Pg	**Pb**	**08 20 24.1**	**-1.3**
	4.6nm,0.3s						
MTBS				Lg	Lg	08 21 08.6	
	18nm,0.3s						
ANVS	**Anan'yevo**	**3.54**	**28**	⇑iP	**Pn**	**08 20 17.9**	**-0.1**
	baz=27						
ANVS				⇑iS	**Sn**	**08 21 01.0**	**+1.0**
	baz=27						
BTK	**Batken**	**3.54**	**277**	⇑iP	**Pn**	**08 20 17.6**	**-0.3**
	baz=79						
BTK				⇑iS	**Sn**	**08 21 00.6**	**+0.8**
	baz=79						
TNSS	**Tian-Shan**	**3.55**	**19**	eP	**Pb**	**08 20 24.9**	**-1.0**
	6.4nm,0.4s						
TNSS				eS	**Sb**	**08 21 09.2**	**+0.1**
	6.8nm,0.6s						
TNSS	**Tian-Shan**	**3.55**	**19**	Pg	**Pb**	**08 20 24.6**	**-1.3**
	6.4nm,0.4s						
TNSS				Lg	Lg	08 21 09.2	
	6.8nm,0.6s						
USP	**Ospenovka**	**3.64**	**350**	P	**Sg**	**08 21 12.7**	**-7.0**
	SNR=5.6						
MDOK	**Medeo**	**3.69**	**19**	eP	**Pb**	**08 20 27.1**	**-1.0**
	3.8nm,0.4s						
MDOK				eS	**Sb**	**08 21 13.1**	**+0.1**
	15nm,0.6s						
MDOK	**Medeo**	**3.69**	**19**	⇓Pn	**Pn**	**08 20 19.8**	**-0.2**
	2.6nm,0.6s						
MDOK				Lg	Lg	08 21 13.4	
	13nm,0.6s						
MDOK	**Medeo**	**3.69**	**19**	Pg	**Pb**	**08 20 26.8**	**-1.4**
	4.1nm,0.4s						
MDOK				Lg	Lg	08 21 13.3	
	15nm,0.6s						
TRKS	**Terek-Say**	**3.72**	**301**	⇑iP	**Pn**	**08 20 20.5**	**0.0**
	baz=1.0						
TRKS				⇑iS	**Sn**	**08 21 04.3**	**-0.2**
	baz=1.0						
SATY	**Saty**	**4.06**	**33**	eP	**Pb**	**08 20 34.8**	**+0.3**
	2.0nm,0.2s						
SATY				eS	**Sb**	**08 21 26.5**	**+2.8**
	4.8nm,0.4s						
KTBS	**Karatobe**	**4.14**	**13**	eP	**Pb**	**08 20 35.3**	**-0.4**
	4.6nm,0.5s						
KTBS				eS	**Sb**	**08 21 27.2**	**+1.4**
	28nm,0.4s						
KTBS	**Karatobe**	**4.14**	**13**	Pg	**Pb**	**08 20 34.8**	**-0.9**
	3.3nm,0.3s						
KTBS				Lg	Lg	08 21 27.5	
	28nm,0.4s						
KUU	**Kurty**	**4.26**	**9**	eP	**Pb**	**08 20 37.6**	**-0.3**
	1.3nm,0.2s						
KUU				eS	**Sb**	**08 21 31.2**	**+1.8**
	22nm,0.7s						
KUU	**Kurty**	**4.26**	**9**	Pg	**Pb**	**08 20 37.0**	**-0.8**
	1.4nm,0.3s						
KUU				Lg	Lg	08 21 31.1	
	22nm,0.7s						
CHKK	**Chushkaly**	**4.33**	**15**	eP	**Pb**	**08 20 39.0**	**-0.1**
	3.6nm,0.4s						
CHKK				eS	**Sb**	**08 21 33.2**	**+1.8**
	15nm,0.4s						
UZB	**Uzynbulak**	**4.41**	**37**	eP	**Pb**	**08 20 40.4**	**+0.1**
	2.5nm,0.2s						
UZB				eS	**Sb**	**08 21 36.4**	**+2.8**
	3.9nm,0.5s						
UZB	**Uzynbulak**	**4.41**	**37**	Pg	**Pb**	**08 20 40.4**	**+0.1**
	2.5nm,0.2s						
UZB				Lg	Lg	08 21 36.4	
	3.9nm,0.5s						
KPKS	**Kokpek**	**4.51**	**32**	eP	**Pb**	**08 20 41.7**	**-0.4**
	1.3nm,0.1s						
KPKS				eS	**Sb**	**08 21 38.4**	**+1.8**
	17nm,0.2s						
PDGK	**Podgornoye**	**4.77**	**39**	Pg	**Pb**	**08 20 45.8**	**-0.6**
PDGK				Lg	Lg	08 21 45.8	
PDGK	**Podgornoye**	**4.77**	**39**	⇓Lg	Lg	08 21 50.6	
	6.4nm,0.7s						
KK31	**Karatay Array**	**5.01**	**315**	⇓Pn	**Pn**	**08 20 36.9**	**-1.2**
	0.2nm,0.3s,baz=127,slow=13,SNR=4.5						
KK31				⇑Pg	**Pb**	**08 20 51.6**	**+1.0**
	0.7nm,0.5s,baz=133,slow=16,SNR=5.8						
KK31				⇓Lg	Lg	08 21 58.9	
	0.7nm,0.4s,baz=138,slow=28,SNR=4.2						
BTLS	**Baital**	**5.44**	**350**	eP	**Pb**	**08 20 59.5**	**+1.6**
	1.0nm,0.3s						
BTLS				eS	**Sb**	**08 22 09.1**	**+5.8**
	5.4nm,0.6s						
BTLS	**Baital**	**5.44**	**350**	Pg	**Pb**	**08 20 59.5**	**+1.6**
BTLS				Lg	Lg	08 22 09.1	

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*SEA **28** 08:29:32.8±2.4, 48°.20N±0°.02×122°.19W±0°.03, h22^{km}±6^{km}, ML2.5/80, ML2.1/10(NEIC), Error ellipse: s-maj=3.0km s-min=2.4km az=131.0*

NEIC 28 08:29:31.4±1.6**, 48°.22N**±0°.02×**122°.20W**±0°.03**, h24^{km}**±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.8km az=46.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMW	**Cultus Mountai**	**0.21**	**15**		Pb	08 29 37.7	+0.5
EVCC	**Everett Colleg**	**0.21**	**181**		Pb	08 29 37.8	+0.7
EVCC					Sb	08 29 42.3	+1.4
SVOH	**Skagit Valley**	**0.30**	**283**		Pb	08 29 39.2	+0.9
SVOH					Sb	08 29 44.1	+1.1
BEVT	**Boeing Everett**	**0.31**	**189**		Pb	08 29 39.1	+0.7
BEVT					Sb	08 29 44.4	+1.3
EVGW	**Everett Gatewa**	**0.37**	**175**		Pb	08 29 40.1	+0.7
EVGW					Sn	08 29 46.3	-1.4
MBPA	**Monroe Substat**	**0.39**	**147**		Pb	08 29 39.8	+0.1
MBPA					Sb	08 29 45.0	-0.2
BRKS	**Brookside Elem**	**0.47**	**187**		Pn	08 29 42.1	-0.6
BRKS					Sn	08 29 49.8	-0.5
NIHS	**Ingelmoor High**	**0.48**	**182**		Pn	08 29 42.6	-0.2
NIHS					Sn	08 29 51.0	+0.5
EARN	**East Ridge Ele**	**0.49**	**168**		Pb	08 29 42.2	+0.7
EARN					Sn	08 29 50.2	-0.6
FINN	**Finn Hill Juni**	**0.50**	**183**		Pn	08 29 43.0	-0.1
FINN					Sn	08 29 51.2	+0.2
HTW	**Haystack Looko**	**0.51**	**145**		Pb	08 29 41.8	0.0
RPW	**Rockport**	**0.51**	**63**		Pb	08 29 42.5	+0.7
NOWS	**NOAA--Sand Poi**	**0.54**	**184**		Pn	08 29 43.5	-0.1
KINR	**Kitsap County**	**0.56**	**213**		Sn	08 29 52.0	-0.4
B06A	**Marblemount**	**0.56**	**58**		Pn	08 29 43.3	-0.6
B06A					Sb	08 29 51.3	+1.1
B06A	**Marblemount**	**0.56**	**58**	IAML		08 29 52.4	
	comp=E,198nm,0.2s						
MARYW	**Marymoor Park**	**0.56**	**175**		Pn	08 29 43.8	-0.2
LAWT	**Lawton Element**	**0.58**	**193**		Pn	08 29 44.2	0.0
LAWT					Sn	08 29 52.3	-0.7
ALCT	**Alcott Element**	**0.58**	**169**		Pn	08 29 44.1	-0.2
SQM	**Sequim**	**0.59**	**256**		Pn	08 29 43.8	-0.5
SQM					Sn	08 29 52.4	-0.7
MBW	**Mount Baker**	**0.60**	**19**		Pn	08 29 44.4	-0.2
MCW	**Mount Constitu**	**0.62**	**318**		Pn	08 29 44.3	-0.5
C05A	**Tolt Reservoir**	**0.63**	**147**		Pb	08 29 43.7	-0.1
C05A					Sb	08 29 52.1	-0.1
TTW	**Tolt Reservoir**	**0.63**	**147**		Pb	08 29 43.9	+0.2
TTW					Sb	08 29 51.7	-0.5
B013	**Quilcene**	**0.63**	**230**		Pb	08 29 43.7	0.0
B013					Sb	08 29 52.5	+0.4
UWFH	**University of**	**0.63**	**301**		Pn	08 29 44.8	-0.1
UWFH					Sn	08 29 54.4	+0.2
ALKI	**Alki Wastewate**	**0.66**	**193**		Pn	08 29 45.5	+0.1
SP2	**Seward Park 2**	**0.67**	**183**		Pn	08 29 45.2	-0.1
SP2					Sn	08 29 55.7	+0.6
GPW	**Glacier Peak**	**0.72**	**98**		Pb	08 29 45.8	+0.4
C04A	**Brinnon**	**0.72**	**226**		Pb	08 29 45.2	-0.1
C04A					Sb	08 29 55.1	+0.2
ELW	**Echo Lake**	**0.76**	**163**		Pb	08 29 46.2	+0.2
ELW					Sn	08 29 57.0	-0.4
VGZ	**Gonzales**	**0.78**	**285**		Pb	08 29 46.4	+0.1
VGZ					Sb	08 29 57.0	+0.7
GNW	**Green Mountain**	**0.78**	**213**		Pb	08 29 46.1	-0.3
GNW					Sb	08 29 56.4	-0.1

GMW	Gold Mountain	0.78	211		Pb	08 29 46.1	-0.3
VDB	Vedder Mountai	0.81	4		Pn	08 29 47.8	+0.5
HDW	Hoodsport	0.81	225		Pb	08 29 46.7	-0.2
HDW					Sb	08 29 57.5	0.0
VVHS	Vashon High Sc	0.82	192		Pb	08 29 47.2	+0.2
RATT	Rattlesnake La	0.84	161		Pb	08 29 47.2	-0.1
RATT					Sn	08 29 58.8	-0.6
SNB	Saturna Island	0.85	311		Pn	08 29 48.4	+0.4
CDMR	Cedar Moraine	0.85	160		Pb	08 29 47.7	+0.2
B04A	Port Angeles	0.89	260	IAML		08 30 00.7	
	comp=N,70nm,0.6s						
B04A				IAML		08 30 05.7	
	comp=E,69nm,0.2s						
B04A	Port Angeles	0.89	260		Pb	08 29 48.3	+0.1
B04A					Sb	08 30 00.1	+0.5
RAW	Raver	0.90	168		Pn	08 29 48.6	0.0
RAW					Sn	08 30 00.9	0.0
D03D	Eldon	0.91	221		Pb	08 29 48.1	-0.5
D03D					Sb	08 30 00.2	0.0
PGC	Sidney	0.94	298		Pn	08 29 49.4	+0.3
WRW	Wenatchee Ridg	0.96	112		Pn	08 29 49.8	+0.3
D05A	Enumclaw	1.04	172		Pb	08 29 51.0	+0.2
D05A					Sn	08 30 05.3	+0.9
D05A	Enumclaw	1.04	172	IAML		08 30 09.8	
	comp=N,37nm,0.4s						
GSM	Grass Mountain	1.06	165		Pn	08 29 50.8	-0.1
B941	Kapowsin	1.24	181		Pn	08 29 53.3	+0.1
NLWA	Neilton Lookou	1.40	234		Pb	08 29 57.4	+0.5
NLWA				IAML		08 30 21.1	
	comp=N,21nm,0.8s						
LTY	Liberty	1.41	133		Pb	08 29 56.8	-0.3
LTY				IAML		08 30 16.7	
	comp=E,38nm,0.5s						
JORV	Jorden Valley	6.37	144		Pn	08 31 06.5	+2.6

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*TUL **28** 08:44:02±0.6, 35°.667N±0°.010×97°.41W±0°.02, h7^{km}±3^{km}, ML2.7, mb_Lg2.2/19(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=110.0*

NEIC 28 08:44:02.6±0.6**, 35°.673N**±0°.010×**97°.41W**±0°.01**, h5**^{km}±3^{km}**, Error ellipse: s-maj=1.6km s-min=1.4km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.09	186		Pg	08 44 04.3	-0.2
OK009				Sg	Sg	08 44 06.2	+0.3
OK005	Luther M Schoo	0.18	96	Pg	Pg	08 44 06.0	-0.1
OK005				Sg	Sg	08 44 09.1	+0.5
OKCFA	Oklahoma City	0.26	187	Pg	Pg	08 44 07.4	-0.3
OKCFA				Sg	Sg	08 44 11.3	+0.2
OKCSW	OKLAHOMA CITY	0.27	185		Pg	08 44 07.4	-0.4
OKCSW				Sg	Sg	08 44 11.4	+0.1
FNO	Franklin	0.41	179	Pg	Pg	08 44 10.2	-0.4
FNO				Sg	Sg	08 44 16.1	+0.1
X34A	Smith Ranch, M	1.12	198	Pg	Pg	08 44 23.2	-0.9
X34A				Sg	Sg	08 44 39.1	+0.4
TUL1	Leonard	1.34	79		Pn	08 44 25.8	-2.2
T35A	Sooner Cattle	1.44	30		Pn	08 44 28.0	-1.4
T35A				IAmb_Lg		08 44 48.6	
	comp=Z,11nm,1.0s						
WMOK	Wichita Mounta	1.46	231		Pn	08 44 28.0	-1.7
U32A	Winter Ranch,	1.47	299		Pn	08 44 28.6	-1.3
X37A	Clayton	1.99	122	Pn	Pn	08 44 37.2	+0.3
X37A				IAmb_Lg		08 45 07.9	
	comp=Z,9.2nm,0.9s						
MIAR	Mount Ida	3.34	109	Pn	Pn	08 44 55.8	+0.3
KSU1	Kansas State U	3.48	10	IAmb_Lg		08 45 58.8	
	comp=Z,5.3nm,0.8s						
AMTX	Amarillo	3.58	259	IAmb_Lg		08 46 05.6	
	comp=Z,4.3nm,1.0s						
CBKS	Cedar Bluff	3.64	330	Pn	Pn	08 44 59.3	-0.5
CBKS				IAmb_Lg		08 46 02.6	
	comp=Z,6.9nm,0.8s						
WHTX	Lake Whitney,	3.67	181	Pn	Pn	08 44 59.5	-0.6
U40A	Yellville	3.76	78	Pn	Pn	08 45 00.6	-0.7
U40A				IAmb_Lg		08 45 59.3	
	comp=Z,5.5nm,1.1s						
S39A	Bolivar	3.85	57	Pn	Pn	08 45 02.6	0.0
UALR	University of	4.24	101	IAmb_Lg		08 46 24.1	
	comp=Z,7.2nm,1.1s						
W41B	Gary Mavity, V	4.25	95	Pn	Pn	08 45 07.3	-0.6
W41B				IAmb_Lg		08 46 25.9	
	comp=Z,4.0nm,0.8s						
FCAR	Ozark Folk Cen	4.30	86	IAmb_Lg		08 46 19.1	
	comp=Z,4.3nm,0.9s						
R40A	Maddies Statio	4.88	56	Pn	Pn	08 45 16.3	-0.3
R40A				IAmb_Lg		08 46 45.0	
	comp=Z,4.2nm,0.8s						
P38A	Dawn	5.00	37	Pn	Pn	08 45 18.5	+0.1

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*KRSC **28** 08:51:41.8±1.3, 53°.06N×160°.81E, h40^{km}±14^{km}, ML4.2*

*MOS **28** 08:51:43.4±0.6, 53°.01N×160°.79E, h39^{km}, mb3.7/1, Error ellipse: s-maj=7.4km s-min=5.2km az=86.7*

*IDC **28** 08:51:48.6±2.3, 53°.27N×160°.37E, h83^{km}±22^{km}, mb3.1/8, mbtmp3.4/8, Error ellipse: s-maj=29.4km s-min=20.2km az=148.0*

ISC 28 08:51:43.8±0.9**, 53°.07N**±0°.04×**160°.77E**±0°.04**, h39**^{km}±2^{km}**, n89, σ1^{s}39**/123**, mb3.5**/8**, 1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.45	274	PN	Pn	08 51 53.5	-0.2
SPN				S	Sn	08 52 00.1	-0.7
SPN	Mys Shipunski	0.45	274	*e*P	Pn	08 51 53.5	-0.2
SPN				*e*S	Sn	08 52 00.1	-0.7
NLC	Nalytchevo	0.86	277	PN	Pn	08 51 58.9	-0.5
NLC				S	Sn	08 52 09.8	-1.0
NLC	Nalytchevo	0.86	277	*e*P	Pn	08 51 58.9	-0.5
NLC				*e*S	Sn	08 52 09.8	-1.0
SDLR	Sedlovina	1.15	281	PN	Pn	08 52 03.4	-0.1
SDLR				S	Sn	08 52 17.9	-0.2
SDLR	Sedlovina	1.15	281	*e*P	Pn	08 52 03.4	-0.1
SDLR				*e*S	Sn	08 52 17.9	-0.2
UGLR	Uglovaya	1.18	278	PN	Pn	08 52 04.0	+0.1
UGLR				S	Sn	08 52 18.9	+0.1
UGLR	Uglovaya	1.18	278	*e*P	Pn	08 52 04.0	+0.1
UGLR				*e*S	Sn	08 52 18.9	+0.1
SMAR	Somma	1.20	280	PN	Pn	08 52 03.9	-0.4
SMAR				S	Sn	08 52 18.7	-0.7
SMAR	Somma	1.20	280	*e*P	Pn	08 52 03.9	-0.4
SMAR				*e*S	Sn	08 52 18.7	-0.7
DALK	Dalny	1.22	269	PN	Pn	08 52 04.0	-0.3
DALK	Dalny	1.22	269	*e*P	Pn	08 52 04.0	-0.3
AVH	Avacha	1.24	280	PN	Pn	08 52 04.8	+0.1
AVH				S	Sn	08 52 20.5	+0.4
AVH	Avacha	1.24	280	*e*P	Pn	08 52 04.8	+0.1
AVH				*e*S	Sn	08 52 20.5	+0.4
KRER	Koryakskii	1.24	282	PN	Pn	08 52 05.0	+0.2
KRER				S	Sn	08 52 20.4	+0.1
KRER	Koryakskii	1.24	282	*e*P	Pn	08 52 05.0	+0.2
KRER				*e*S	Sn	08 52 20.4	+0.1
KII	Karymskiy	1.25	322	PN	Pn	08 52 04.5	-0.3
KII	Karymskiy	1.25	322	*e*P	Pn	08 52 04.5	-0.3
PET	Petropavlovsk	1.28	269	PN	Pn	08 52 04.9	-0.2
PET				S	Sn	08 52 20.0	-1.0
PET	Petropavlovsk	1.28	269	*e*P	Pn	08 52 04.9	-0.2
PET				*e*S	Sn	08 52 20.0	-1.0
KOK	Koryaka	1.30	281	PN	Pn	08 52 05.5	-0.1
KOK	Koryaka	1.30	281	*e*P	Pn	08 52 05.5	-0.1
KRX	Arik	1.31	284	PN	Pn	08 52 05.5	-0.2
KRX				S	Sn	08 52 21.1	-0.8
KRX	Arik	1.31	284	*e*P	Pn	08 52 05.5	-0.2
KRX				*e*S	Sn	08 52 21.1	-0.8
RUS	Russkaya	1.51	246	PN	Pn	08 52 08.4	+0.1
RUS				S	Sn	08 52 26.7	0.0
RUS	Russkaya	1.51	246	*e*P	Pn	08 52 08.4	+0.1
RUS				*e*S	Sn	08 52 26.7	0.0
MKZ	Mys Kozlova	1.60	21	PN	Pn	08 52 09.7	+0.2
MKZ				S	Sn	08 52 28.4	-0.5
MKZ	Mys Kozlova	1.60	21	*e*P	Pn	08 52 09.7	+0.2
MKZ				*e*S	Sn	08 52 28.4	-0.5
KRMR	Karymshinskiy	1.61	263	PN	Pn	08 52 09.8	+0.1
KRMR				S	Sn	08 52 29.3	+0.1
KRMR	Karymshinskiy	1.61	263	*e*P	Pn	08 52 09.8	+0.1
KRMR				*e*S	Sn	08 52 29.3	+0.1
MTVR	Mutnovka	1.68	251	PN	Pn	08 52 11.2	+0.5
MTVR				S	Sn	08 52 31.9	+0.9
MTVR	Mutnovka	1.68	251	*e*P	Pn	08 52 11.2	+0.5
MTVR				*e*S	Sn	08 52 31.9	+0.9
GRL	Gorelyy	1.71	254	PN	Pn	08 52 12.0	+0.7
GRL				S	Sn	08 52 32.9	+0.9
GRL	Gorelyy	1.71	254	*e*P	Pn	08 52 12.0	+0.7
GRL				*e*S	Sn	08 52 32.9	+0.9
GNL	Ganaly	1.81	292	PN	Pn	08 52 13.1	+0.6
GNL				S	Sn	08 52 35.2	+1.0
GNL	Ganaly	1.81	292	*e*P	Pn	08 52 13.1	+0.6
GNL				*e*S	Sn	08 52 35.2	+1.0
PEA0B	Petropavlovsk-	1.85	272	*c i*PN	Pn	08 52 13.7	+0.7
PETK	Petropavlovsk-	1.85	272	P	Pn	08 52 13.7	+0.6
	75nm,0.4s,baz=89,slow=20,SNR=203						
PETK				S	Sn	08 52 36.2	+1.1
	92nm,0.5s,baz=77,slow=33,SNR=19						
ASAK	Asacha	1.87	250	PN	Pn	08 52 14.5	+1.1
ASAK				S	Sn	08 52 37.8	+2.0
ASAK	Asacha	1.87	250	*e*P	Pn	08 52 14.5	+1.1
ASAK				*e*S	Sn	08 52 37.8	+2.0
KDTR	Khodutka, Kamc	2.07	234	PN	Pn	08 52 16.6	+0.6
KDTR				S	Sn	08 52 40.5	-0.1
KDTR	Khodutka, Kamc	2.07	234	*e*P	Pn	08 52 16.6	+0.6
KDTR				*e*S	Sn	08 52 40.5	-0.1
TUMD	Tumrok D	2.15	354	*e*P	Pn	08 52 17.9	+0.7
TUMD				*e*S	Sn	08 52 42.8	+0.2
APC	Apacha	2.19	268	PN	Pn	08 52 19.5	+1.9
APC				S	Sn	08 52 46.4	+3.0
APC	Apacha	2.19	268	*e*P	Pn	08 52 19.5	+1.9
APC				*e*S	Sn	08 52 46.4	+3.0
TUMR	Tumrok	2.25	351	PN	Pn	08 52 17.9	-0.7
TUMR	Tumrok	2.25	351	*e*P	Pn	08 52 20.1	+1.5
MIPR	Malaya Ipel'ka	2.57	254	PN	Pn	08 52 24.9	+2.1
MIPR	Malaya Ipel'ka	2.57	254	*e*P	Pn	08 52 24.9	+2.1
KMNR	Kamenistaya	2.71	354	PN	Pn	08 52 27.1	+2.2
KMNR	Kamenistaya	2.71	354	*e*P	Pn	08 52 27.1	+2.2
BZGR	Bezymyannyi-Gr	2.88	359	PN	Pn	08 52 29.3	+2.1
BZGR	Bezymyannyi-Gr	2.88	359	*e*P	Pn	08 52 29.3	+2.1
KIRR	Kirishev	2.90	355	PN	Pn	08 52 30.2	+2.6
KIRR	Kirishev	2.90	355	*e*P	Pn	08 52 30.2	+2.6
BZWR	Bezymyannyi-We	2.91	357	PN	Pn	08 52 30.5	+2.8
BZWR	Bezymyannyi-We	2.91	357	*e*P	Pn	08 52 30.5	+2.8
PAU	Pauzhetka	2.91	238	PN	Pn	08 52 30.9	+3.3
PAU	Pauzhetka	2.91	238	*e*P	Pn	08 52 30.9	+3.3
ESO	Esso	3.11	338	PN	Pn	08 52 32.2	+1.9
ESO	Esso	3.11	338	*e*P	Pn	08 52 32.2	+1.9
KRSR	Krestovskiy	3.16	358	PN	Pn	08 52 32.9	+1.8
KRSR	Krestovskiy	3.16	358	*e*P	Pn	08 52 32.9	+1.8
KLY	Klyuchi	3.25	359	PN	Pn	08 52 34.7	+2.5
KLY	Klyuchi	3.25	359	*e*P	Pn	08 52 34.7	+2.5
KBTR	Krutoberegovo	3.37	20	PN	Pn	08 52 34.4	+0.6
KBTR	Krutoberegovo	3.37	20	*e*P	Pn	08 52 34.4	+0.6
KBG	Krutoberegovo	3.39	19	PN	Pn	08 52 37.0	+2.9
KBG	Krutoberegovo	3.39	19	*e*P	Pn	08 52 37.0	+2.9
BDR	Baidarnaya	3.52	4	PN	Pn	08 52 38.8	+2.8
BDR	Baidarnaya	3.52	4	*e*P	Pn	08 52 38.8	+2.8
SMKR	Semkarok	3.55	6	PN	Pn	08 52 38.8	+2.4
SMKR	Semkarok	3.55	6	*e*P	Pn	08 52 38.8	+2.4
SRKR	Sorokina	3.60	4	PN	Pn	08 52 40.0	+2.9
SRKR	Sorokina	3.60	4	*e*P	Pn	08 52 40.0	+2.9
BKI	Bering	3.74	53	PN	Pn	08 52 40.0	+1.1
BKI	Bering	3.74	53	*e*P	Pn	08 52 40.0	+1.1
BKI				*e*S	Sn	08 53 18.4	-3.1
SKR	Severo-Kuril's	3.74	232	*e*PN	Pn	08 52 30.0	-9.0
SKR				pmax	pmax		
	comp=Z,56nm,0.9s						
ILAR	Eielson Array	28.55	45	P	P	08 57 36.0	+0.6
	comp=Z,0.2nm,0.7s,baz=242,slow=8.9,SNR=4.4						
	comp=Z,0.2nm,0.7s						
ILAR	Eielson Array	28.55	45	*e*P	P	08 57 37.2	+1.8
MKAR	Makanchi Array	48.53	296	P	P	09 00 20.6	-2.2
	comp=Z,0.2nm,0.4s,baz=54,slow=7.3,SNR=2.7						
	comp=Z,0.2nm,0.4s						
PDAR	Pinedale Array	57.18	61	P	P	09 01 28.2	+1.4
	comp=Z,0.2nm,0.4s,baz=316,slow=5.0,SNR=2.5						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	60.30	337	P	P	09 01 46.2	-1.7
	comp=Z,0.3nm,0.4s,baz=40,slow=9.1,SNR=3.8						
	comp=Z,0.3nm,0.4s						
FINES	FINESS Array B	60.30	337	*i* P	P	09 01 46.5	-1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	63.68	344	P	P	09 02 08.0	-2.7
	comp=Z,0.2nm,0.4s,baz=29,slow=4.8,SNR=1.9						
	comp=Z,0.2nm,0.4s						
NOA	NORSAR Array B	63.68	344	P	P	09 02 08.0	-2.7
TXAR	Lajitas Array	70.27	67	P	P	09 02 54.3	+1.2
	comp=Z,0.5nm,0.5s,baz=294,slow=4.8,SNR=12						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	76.23	206	P	P	09 03 27.6	-0.4
	comp=Z,0.2nm,0.8s,baz=18,slow=6.1,SNR=1.3						
	comp=Z,0.2nm,0.8s						
ASAR	Alice Springs	79.90	205	P	P	09 03 48.8	+0.4
	comp=Z,0.2nm,0.5s,baz=16,slow=5.5,SNR=4.8						
	comp=Z,0.2nm,0.5s						

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*JMA **28** 08:57:09.7±0.1, 26°.9N±0°.6×130°.3E±0°.7, h48^{km}, MV3.2/23, NEAR MINAMI-DAITOJIMA IS*

*IDC **28** 08:57:10.5±1.9, 26°.39N×129°.91E, h0^{km}, mb3.3/2, mbtmp3.4/3, ML3.1/1, MS3.7/2, Error ellipse: s-maj=42.1km s-min=21.4km az=48.0*

ISC 28 08:57:09.5±2.0**, 26°.97N**±0°.04×**130°.30E**±0°.04**, h28**^{km}±18^{km}**, n24, σ0^{s}85**/36**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKDJ	Kitadaitoujima	1.35	138	*e*P	Pn	08 57 32.6	+0.1
JKDJ				*e*S	Sn	08 57 49.0	-0.5
JZK	Kikaishima	1.37	348	*e*P	Pb	08 57 34.4	-0.1
JMZ	Minamidaito 2	1.41	144	*e*P	Pn	08 57 33.1	-0.2
JMZ				*e*S	Sn	08 57 49.8	-1.1
JTK	Tokunoshima	1.45	304	*e*P	Pn	08 57 34.1	+0.3
JTK				*e*S	Sn	08 57 51.6	-0.3
JAM	Amami Oshima	1.56	337	*e*P	Pn	08 57 35.9	+0.6
JAM				*e*S	Sn	08 57 53.5	-1.1
JOKE	Okinoerabujima	1.59	285	*e*P	Pn	08 57 36.2	+0.5
JOKE				*e*S	Sn	08 57 55.2	-0.1
JAMN	Amaminishikomi	1.61	322	*e*P	Pn	08 57 36.3	+0.3
JAMN				*e*S	Sn	08 57 54.8	-1.1
JYRO	Yoronjima	1.65	272	*e*P	Pn	08 57 36.7	+0.2
JYRO				*e*S	Sn	08 57 55.3	-1.5
JOW	Kunigami	1.81	266	Pn	Pn	08 57 39.2	+0.4
	18nm,0.3s,baz=102,slow=15,SNR=8.9						
JOW				Sn	Sn	08 58 00.3	-0.6
	25nm,0.3s,baz=88,slow=29,SNR=14						
JOW	Kunigami	1.81	266	*e*P	Pn	08 57 39.2	+0.4
JOW				*e*S	Sn	08 58 00.1	-0.7
JIH	Iheya	2.08	272	*e*P	Pn	08 57 43.0	+0.5
JIH				*e*S	Sn	08 58 07.3	-0.2
JNTH	Nagotoyohara	2.09	258	*e*P	Pn	08 57 42.3	-0.2
JNTH				*e*S	Sn	08 58 05.7	-1.8
JTAJ	Takarajima	2.38	336	*e*P	Pn	08 57 46.5	0.0
JTAJ				*e*S	Sn	08 58 14.0	-0.9
JJT3	Tamagusuku3	2.40	250	*e*P	Pn	08 57 47.0	+0.1
JJT3				*e*S	Sn	08 58 14.6	-0.8
JAGN	Aguni-jima	2.76	263	*e*P	Pn	08 57 52.4	+0.6
JAGN				*e*S	Sn	08 58 22.9	-1.3
JKE	Kume jima 2	3.21	259	*e*P	Pn	08 57 58.2	+0.2
JKE				*e*S	Sn	08 58 33.8	-1.5
JYAK	Yakushimahirau	3.26	3	*e*S	Sn	08 58 35.3	-1.3
JMTN	Minamitane	3.46	9	*e*S	Sn	08 58 40.6	-0.8
JTN	Tanegashima 3	3.72	9	*e*S	Sn	08 58 47.0	-0.9
KSRS	Korea Array	10.64	350	Pn	Pn	08 59 51.8	+12
	0.1nm,0.3s,baz=131,slow=16,SNR=3.7						
	1.4nm,0.8s						
ASAJ	Asahikawa	19.78	27	LR	LR	09 10 11.1	
	comp=Z,178nm,19.3s,baz=169,slow=38						
MA2	Magadan	35.52	18	LR	LR	09 18 43.3	
	comp=Z,165nm,20.9s,baz=166,slow=36						
WRA	Warramunga Arr	46.80	175	P	P	09 05 37.2	+0.5
	0.3nm,0.7s,baz=354,slow=8.5,SNR=5.4						
	0.3nm,0.7s						
ASAR	Alice Springs	50.46	176	P	P	09 06 06.2	+1.4
	0.3nm,0.6s,baz=6.3,slow=15,SNR=4.6						
	0.3nm,0.6s						

JMA 28 09:00:36.6±0.5**, 36°N**±2°×**14°1E**±°**, h45**^{km}**, MV0.6**/6**, E OFF IBARAKI PREF, Near east coast of eastern Honshu**

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*MOS **28** 09:01:15.6±1.0, 33°.68N×139°.56E, h63^{km}, mb5.2/28, Error ellipse: s-maj=19.6km s-min=7.7km az=116.7*

*BJI **28** 09:01:23.8±0.0, 33°.88N×140°.00E, h165^{km}, mb4.4/50, mB4.8/30*

*NIED **28** 09:01:26.9, 33°.79N×139°.69E, h143^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.91; M$_{\theta\theta}$-2.45; M$_{\phi\phi}$1.54; M$_{r\theta}$-1.81; M$_{\theta\phi}$-2.13; M$_{\phi r}$-3.05; Fault plane solution: M$_0$4.63000×10^{16} NP1: φ$_s$110.00000°, δ38.00000°, λ169.00000°. NP2: φ$_s$209.00000°, δ83.00000°, λ53.00000°.*

*NEIC **28** 09:01:26.4±1.6, 33°.76N±0°.06×139°.74E±0°.10, h150^{km}±5^{km}, mb4.6/186 Error ellipse: s-maj=11.5km s-min=8.6km az=88.0*

*IDC **28** 09:01:26.6±0.3, 33°.71N×139°.51E, h147^{km}±3^{km}, mb4.2/26, mbtmp4.6/28, MS3.6/4, Error ellipse: s-maj=11.5km s-min=8.1km az=89.0*

*JMA **28** 09:01:26.9±0.1, 33°.8N±0°.3×139°.7E±0°.6, h143^{km}, MD4.9/35, MW5.1/35, NEAR MIYAKEJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKEJIMA ISLAND .

ISC 28 09:01:26.2±0.3**, 33°.72N**±0°.03×**139°.66E**±0°.04**, h145**^{km}±2^{km}**, h145**^{km}**:pP-P, n583, σ1^{s}79**/520**, mb4.6**/164**, 6C-24D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMKN	Mikurajimanish	0.18	341	*i* P	Pn	09 01 46.4	+0.5
JMKN				S	Sn	09 02 01.1	+0.3
JMKN	Mikurajimanish	0.18	341	A	A	09 01 46.4	
	comp=E,150nm,1.2s,comp=E,74nm,1.0s						
JHJ	Hachijo jima 2	0.60	170	P	Pn	09 01 48.7	+1.1
	5µm,0.3s,baz=336,slow=22,SNR=874						
JHJ				S	Sn	09 02 06.3	+2.5
	10µm,0.3s,baz=0.7,slow=22,SNR=59						
JHJ2	Mitsune	0.62	168	Pn	Pn	09 01 48.5	+0.9
JHJ2				Sn	Sn	09 02 05.5	+1.6
JHJ2	Mitsune	0.62	168	P	Pn	09 01 48.9	+1.2
JHJ2	Mitsune	0.62	168	⇓P	Pn	09 01 48.7	+1.0
JHJ2				⇓*e*S	Sn	09 02 05.3	+1.4
JHJ2	Mitsune	0.62	168	A	A	09 01 48.7	
	comp=E,63nm,4.1s,comp=E,91nm,0.8s						
JKO	Kozu shima	0.64	317	P	Pn	09 01 48.2	+0.4
JKO	Kozu shima	0.64	317	A	A	09 01 48.2	
	comp=E,101nm,3.1s,comp=E,81nm,3.2s						
JHCJ	Hachijojimakas	0.65	170	⇓P	Pn	09 01 48.8	+0.9
JHCJ				⇓*e*S	Sn	09 02 05.8	+1.5
JHCJ	Hachijojimakas	0.65	170	A	A	09 01 48.8	
	comp=E,55nm,2.7s,comp=E,81nm,2.7s						
JNIO	Niijimaoohara	0.71	333	P	Pn	09 01 48.8	+0.6
JNIO	Niijimaoohara	0.71	333	A	A	09 01 48.8	
	comp=E,106nm,2.3s,comp=E,84nm,1.7s						
JSKK	Shikinejimakit	0.72	329	P	Pn	09 01 48.8	+0.5
JSKK				*e*S	Sn	09 02 05.4	+0.3
JSKK	Shikinejimakit	0.72	329	A	A	09 01 48.8	
	comp=E,68nm,1.5s,comp=E,67nm,1.9s						
JTHY	Toshimahigashi	0.86	339	A	A	09 01 49.6	
	comp=E,58nm,3.4s,comp=E,87nm,3.8s						
JIM2	Oshima 3	1.02	349	P	Pn	09 01 51.0	+0.3
JIM2				*e*S	Sn	09 02 09.1	-0.3
JIM2	Oshima 3	1.02	349	A	A	09 01 51.0	
	comp=E,46nm,1.8s,comp=E,79nm,3.2s						
JIZS	Izushimoda	1.19	327	P	Pn	09 01 52.6	+0.4
JIZS				S	Sn	09 02 12.1	0.0
JIZS	Izushimoda	1.19	327	A	A	09 01 52.6	
	comp=E,44nm,1.3s,comp=E,64nm,2.1s						
JAOM	Aogashimamukai	1.25	176	⇓P	Pn	09 01 54.5	+1.6
JAOM	Aogashimamukai	1.25	176	A	A	09 01 54.5	
	comp=E,42nm,5.7s,comp=E,49nm,2.3s						
BSO3	Boso 3	1.29	33	P	Pn	09 01 53.8	+0.9
BSO3				X		09 02 13.6	
TATJ	Tateyama 2	1.32	8	A	A	09 01 53.6	
	comp=E,113nm,0.6s,comp=E,63nm,0.5s						
JHTM	Izuhatsuma	1.35	337	A	A	09 01 54.1	
	comp=E,113nm,1.1s,comp=E,252nm,1.7s						
BSO1	Boso 1	1.44	49	P	Pn	09 01 55.0	+1.0
JYO	Yokosk	1.50	0	A	A	09 01 55.5	
	comp=E,30nm,2.7s,comp=E,50nm,4.3s						
JKUC	kamogawauchiur	1.50	17	A	A	09 01 55.5	
	comp=E,20nm,8.7s,comp=E,23nm,2.9s						
JSG	Sagara	1.55	308	A	A	09 01 56.6	
	comp=E,31nm,4.0s,comp=E,74nm,2.9s						
TK02	Tokai 2	1.60	279	P	Pn	09 01 57.2	+1.0
JOD2	Odawara 2	1.61	343	⇓P	Pn	09 01 56.8	+0.2
JOD2				⇓*e*S	Sn	09 02 19.7	-0.3
JOD2	Odawara 2	1.61	343	A	A	09 01 56.8	
	comp=E,16nm,4.1s,comp=E,34nm,4.8s						
TK04	Tokai 4	1.63	295	P	Pn	09 01 57.5	+0.9
TK04				S	Sn	09 02 20.9	+1.0
JFNN	Fujinakano	1.68	332	⇓P	Pn	09 01 58.0	+0.7
JFNN				⇓*e*S	Sn	09 02 21.4	+0.2
JFNN	Fujinakano	1.68	332	A	A	09 01 58.0	
	comp=E,40nm,3.3s,comp=E,60nm,4.1s						
JKKS	Kakegawashinom	1.73	307	A	A	09 01 58.5	
	comp=E,38nm,2.9s,comp=E,81nm,1.9s						
JCN	Nagara	1.75	15	A	A	09 01 58.2	
	comp=E,34nm,2.6s,comp=E,41nm,3.0s						
SHZ3	Shizuoka 3	1.80	319	P	Pn	09 01 59.5	+0.8
SHZ3				*e*S	Sn	09 02 24.0	+0.2
SHZ3	Shizuoka 3	1.80	319	A	A	09 01 59.5	
	comp=E,14nm,3.3s,comp=E,71nm,1.8s						
JSGW	Sagamiharawaka	1.92	349	A	A	09 02 00.2	
	comp=E,19nm,3.0s,comp=E,23nm,3.2s						
TOK	Tokyo	1.97	2	A	A	09 02 00.7	
	comp=E,57nm,2.0s,comp=E,47nm,0.7s						
HMMJ	Hamamatsu 2	1.97	306	A	A	09 02 01.4	
	comp=E,11nm,3.1s,comp=E,28nm,2.3s						
JYN	Shimob	2.00	333	⇓P	Pn	09 02 01.6	+0.6
JYN	Shimob	2.00	333	A	A	09 02 01.6	
	comp=E,26nm,8.4s,comp=E,32nm,3.8s						
JSSY	Shinshiroyabe	2.15	304	A	A	09 02 03.5	
	comp=E,11nm,2.0s,comp=E,21nm,1.9s						
JHU	Hanno	2.15	352	A	A	09 02 03.0	
	comp=E,15nm,3.5s,comp=E,16nm,2.6s						
JNY	Yasuok	2.21	318	A	A	09 02 04.1	
	comp=E,14nm,2.7s,comp=E,31nm,2.9s						
CHOJ	Chosi	2.21	26	A	A	09 02 03.6	
	comp=E,11nm,4.4s,comp=E,8.0nm,3.8s						
JAA	Atsumi	2.28	294	A	A	09 02 05.3	
	comp=E,6.0nm,2.8s,comp=E,19nm,2.3s						
JIHU	Itakohorinouch	2.35	17	A	A	09 02 05.3	
	comp=E,25nm,4.1s,comp=E,28nm,5.4s						
JRY	Ryogami san	2.38	345	A	A	09 02 05.9	
	comp=E,15nm,1.5s,comp=E,13nm,1.8s						
JNT	Takato	2.49	330	A	A	09 02 07.5	
	comp=E,25nm,4.7s,comp=E,25nm,4.0s						
JAO	Obara	2.52	309	A	A	09 02 08.1	
	comp=E,14nm,3.0s,comp=E,23nm,2.0s						
JYT	Yasato	2.54	10	Pn	Pn	09 02 06.2	-1.4
JYT	Yasato	2.54	10	A	A	09 02 07.8	
	comp=E,17nm,0.5s,comp=E,12nm,0.6s						
JIE	Ise	2.54	286	A	A	09 02 08.8	
	comp=E,9.0nm,3.2s,comp=E,14nm,3.0s						
JGF	Kuroka	2.67	315	Pn	Pn	09 02 09.7	+0.5
JGF	Kuroka	2.67	315	A	A	09 02 09.9	
	comp=E,7.0nm,1.7s,comp=E,21nm,2.8s						
JAG	Ashikaga	2.71	356	A	A	09 02 09.9	
	comp=E,7.0nm,2.3s,comp=E,11nm,0.7s						
INU	Inuyama	2.72	307	Pn	Pn	09 02 10.4	+0.6
INU	Inuyama	2.72	307	P	Pn	09 02 10.5	+0.6
JHYU	Hitachinakayam	2.72	16	A	A	09 02 10.0	
	comp=E,14nm,2.6s,comp=E,11nm,1.3s						
JICN	Ichinomiyachia	2.81	305	A	A	09 02 11.9	
	comp=E,30nm,2.7s,comp=E,31nm,3.0s						
JKN2	Miekihoku	2.86	281	A	A	09 02 12.9	
	comp=E,6.0nm,1.6s,comp=E,20nm,2.2s						
TSUJ	Tsu 2	2.86	291	A	A	09 02 12.8	
	comp=E,11nm,3.2s,comp=E,23nm,2.0s						
JGK	Kuni	2.96	344	A	A	09 02 13.3	
	comp=E,12nm,4.4s,comp=E,14nm,4.6s						
JNG	Nsakai	2.97	335	A	A	09 02 13.5	
	comp=E,11nm,2.8s,comp=E,8.0nm,3.4s						
JHO	Hitachi	2.98	14	A	A	09 02 13.3	
	comp=E,8.0nm,2.5s,comp=E,6.0nm,5.9s						
JMMH	Miemihama	3.03	273	A	A	09 02 15.2	
	comp=E,6.0nm,2.8s,comp=E,12nm,2.6s						
JEG	Eigenji	3.05	299	A	A	09 02 15.1	
	comp=E,16nm,5.8s,comp=E,11nm,3.2s						
JYTA	Yamagatataniai	3.05	309	A	A	09 02 14.9	
	comp=E,12nm,1.8s,comp=E,13nm,3.5s						
MJAR	Matsushiro Arr	3.06	337	P	Pn	09 02 13.5	-0.6
	113nm,0.4s,baz=155,slow=12,SNR=270						
MJAR				S	Sn	09 02 48.6	-2.6
	121nm,0.6s,baz=73,slow=25,SNR=4.9						
MJAR	Matsushiro Arr	3.06	337	Pn	Pn	09 02 13.1	-1.0
MAJO	Matsushiro	3.06	337	Pn	Pn	09 02 13.9	-0.2
MAJO	Matsushiro	3.06	337	P	Pn	09 02 14.0	-0.2
JKT	Katashina	3.06	354	A	A	09 02 14.5	

	comp=E,9.0nm,0.4s,comp=E,9.0nm,0.4s						
MJB9	**Matsu-Tunnel**	**3.06**	**337**		**Pn**	**09 02 14.0**	**-0.2**
JGN	**Niukaw**	**3.16**	**323**	A	A	09 02 16.1	
	comp=E,6.0nm,4.1s,comp=E,10.0nm,4.8s						
JNTK	**Naratenkawa**	**3.19**	**281**	A	A	09 02 17.1	
	comp=E,8.0nm,4.7s,comp=E,13nm,3.1s						
JSB	**Shiboa**	**3.25**	**4**	A	A	09 02 16.9	
	comp=E,11nm,3.1s,comp=E,10.0nm,3.8s						
JWKM	**Wakayamakushim**	**3.27**	**266**	A	A	09 02 18.4	
	comp=E,8.0nm,3.6s,comp=E,16nm,2.7s						
JTNC	**Tanabenakahech**	**3.38**	**273**	A	A	09 02 19.7	
	comp=E,11nm,1.6s,comp=E,11nm,3.0s						
JWY	**Kouya**	**3.42**	**280**	A	A	09 02 20.2	
	comp=E,8.0nm,9.7s,comp=E,11nm,3.1s						
JHE	**Heguri**	**3.43**	**287**	A	A	09 02 20.2	
	comp=E,6.0nm,7.0s,comp=E,12nm,3.1s						
JFFD	**Fukushimafurud**	**3.44**	**12**	A	A	09 02 19.3	
	comp=E,9.0nm,0.5s,comp=E,9.0nm,2.1s						
JTT	**Ttatey**	**3.46**	**327**	A	A	09 02 19.9	
	comp=E,12nm,4.6s,comp=E,19nm,5.9s						
ONAJ	**Iwakimizuishiy**	**3.50**	**15**	A	A	09 02 20.1	
	comp=E,29nm,0.3s,comp=E,11nm,0.2s						
JFM	**Mihama**	**3.53**	**302**	A	A	09 02 21.3	
	comp=E,7.0nm,2.0s,comp=E,6.0nm,4.4s						
JWM	**Minabe**	**3.59**	**273**	A	A	09 02 22.5	
	comp=E,9.0nm,1.5s,comp=E,14nm,2.8s						
JJN	**Nakama**	**3.59**	**340**	A	A	09 02 21.6	
	comp=E,9.0nm,6.8s,comp=E,8.0nm,4.4s						
JKG	**Kaga**	**3.74**	**314**	A	A	09 02 23.9	
	comp=E,7.0nm,3.1s,comp=E,11nm,2.1s						
JMIK	**Miki**	**3.97**	**287**	A	A	09 02 27.3	
	comp=E,9.0nm,5.3s,comp=E,14nm,2.7s						
JJH	**Hakui**	**3.97**	**324**	A	A	09 02 26.8	
	comp=E,6.0nm,6.0s,comp=E,9.0nm,3.1s						
JAWN	**Awajishima-nag**	**4.02**	**282**	A	A	09 02 28.1	
	comp=E,5.0nm,8.8s,comp=E,15nm,3.0s						
JNS	**Sasagawa**	**4.10**	**356**	A	A	09 02 28.1	
	comp=E,5.0nm,2.3s,comp=E,6.0nm,1.7s						
JMST	**Minamisoumatoc**	**4.12**	**14**	A	A	09 02 28.3	
	comp=E,15nm,2.0s,comp=E,10.0nm,1.5s						
JKY	**Yasaka**	**4.21**	**298**	A	A	09 02 30.4	
	comp=E,7.0nm,2.2s,comp=E,12nm,2.7s						
JMM	**Marumori**	**4.24**	**12**		**Pn**	**09 02 28.6**	**-0.8**
JMM	**Marumori**	**4.24**	**12**	A	A	09 02 29.9	
	comp=E,12nm,1.8s,comp=E,7.0nm,0.5s						
JSD	**Sado**	**4.46**	**346**	Pn	**Pn**	**09 02 31.0**	**-1.3**
JYS	**Shirataka**	**4.51**	**4**	A	A	09 02 33.5	
	comp=E,10.0nm,1.7s,comp=E,7.0nm,4.6s						
JKSM	**Kasumi**	**4.52**	**296**	A	A	09 02 34.6	
	comp=E,5.0nm,3.1s,comp=E,5.0nm,2.4s						
JOU	**Okura**	**4.71**	**10**	A	A	09 02 36.2	
	comp=E,9.0nm,3.1s,comp=E,8.0nm,2.1s						
JJS	**Sakaide**	**4.80**	**279**	A	A	09 02 38.6	
	comp=E,2.0nm,4.1s,comp=E,8.0nm,3.6s						
JKR	**Kurayoshi**	**5.10**	**291**	A	A	09 02 42.4	
	comp=E,8.0nm,3.0s,comp=E,11nm,3.8s						
JYK	**Kaneyama**	**5.22**	**6**	A	A	09 02 43.0	
	comp=E,6.0nm,2.4s,comp=E,4.0nm,3.3s						
JHS	**Saijyo**	**5.56**	**285**		**Pn**	**09 02 48.1**	**+1.1**
JNTW	**Noshirotokiwa**	**6.55**	**3**	A	A	09 03 00.9	
	comp=E,9.0nm,2.4s,comp=E,10.0nm,3.5s						
JCJ	**Chichijima**	**6.95**	**161**	P	**Pn**	**09 03 02.5**	**-3.2**
	129nm,0.3s,baz=16,slow=18,SNR=126						
JCJ				S	**Sn**	**09 04 17.2**	**-6.2**
	407nm,0.3s,baz=284,slow=23,SNR=9.0						
JCJ				LR	LR	09 05 47.4	
	comp=Z,448nm,21.6s,baz=46,slow=37						
JCJ	**Chichijima**	**6.95**	**161**	P	**Pn**	**09 03 03.7**	**-1.9**
	207nm,0.6s						
JTM	**Tenmabayashi**	**7.14**	**9**		**Pn**	**09 03 06.8**	**-1.3**
JNU	**Nakatsue**	**7.37**	**268**	P	**Pn**	**09 03 11.8**	**+0.6**
	61nm,0.6s,baz=92,slow=5.9,SNR=16						
JNU	**Nakatsue**	**7.37**	**268**		**Pn**	**09 03 12.5**	**+1.3**
JSU	**Suzuyama**	**8.07**	**257**		**Pn**	**09 03 20.9**	**+0.3**
JTU	**Tsushima**	**8.55**	**278**		**Pn**	**09 03 25.9**	**-1.0**
ERM	**Erimo**	**8.73**	**17**		**Pn**	**09 03 27.3**	**-2.0**
ERM	**Erimo**	**8.73**	**17**	P	**Pn**	**09 03 27.3**	**-2.0**
	182nm,0.8s						
JEW	**Eniwo**	**9.21**	**8**		**Pn**	**09 03 33.1**	**-2.6**
KSCHJ	**Chungju**	**10.06**	**292**		**Pn**	**09 03 47.7**	**+0.7**
NAWB	**Namwon**	**10.26**	**283**		**Pn**	**09 03 50.1**	**+0.5**
KSRS	**Korea Array**	**10.26**	**295**	P	**Pn**	**09 03 51.7**	**+2.0**
	34nm,0.9s,baz=109,slow=14,SNR=83						
KSRS				LR	LR	09 07 36.7	
	comp=Z,352nm,18.1s,baz=100,slow=36						
KSAR	**Wonju Array Be**	**10.29**	**295**	Pn	**Pn**	**09 03 50.8**	**+0.8**
SEHB	**SEOHWA**	**10.30**	**299**		**Pn**	**09 03 50.8**	**+0.6**
KS19	**Wonju Array Si**	**10.32**	**295**		**Pn**	**09 03 50.8**	**+0.3**
TJN	**Taejon**	**10.43**	**288**		**Pn**	**09 03 52.7**	**+0.8**
TJN	**Taejon**	**10.43**	**288**	P	**Pn**	**09 03 53.7**	**+1.8**
	360nm,1.3s						
ASAJ	**Asahikawa**	**10.63**	**12**	P	**Pn**	**09 03 50.2**	**-4.3**
	24nm,0.3s,baz=230,slow=9.8,SNR=32						
ASAJ				S	**Sn**	**09 05 44.1**	**-7.8**
	115nm,0.7s,baz=74,slow=16,SNR=10						
JKA	**Kamikawa-asahi**	**10.63**	**12**		**Pn**	**09 03 50.5**	**-4.1**
JMZ	**Minamidaito 2**	**10.75**	**225**	Pn	**Pn**	**09 03 54.3**	**-2.0**
INCN	**Inchon**	**11.25**	**293**		**Pn**	**09 04 03.2**	**+0.4**
INCN	**Inchon**	**11.25**	**293**	P	**Pn**	**09 04 05.6**	**+2.8**
	45nm,0.6s						
JOW	**Kunigami**	**11.99**	**238**	Pn	**Pn**	**09 04 12.7**	**+0.2**
USA0B	**Ussuriysk Arra**	**12.04**	**333**		**Pn**	**09 04 12.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**12.04**	**333**	P	Pn	09 04 06.2	-6.9
	1.2nm,0.6s,baz=142,slow=12,SNR=2.3						
MDJ	**Mudanjiang**	**13.38**	**327**	Pn	**Pn**	**09 04 29.6**	**-0.8**
MDJ	**Mudanjiang**	**13.38**	**327**	P	**Pn**	**09 04 30.0**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,310nm,9.4s						
MDJ				LR	LR		
	comp=N,630nm,15.7s						
MDJ				LR	LR		
	comp=E,670nm,14.4s						
MDJ				LR	LR		
	comp=Z,1µm,14.8s						
YSS	**Yuzh-Sakhalins**	**13.43**	**9**		**Pn**	**09 04 27.7**	**-3.1**
YSS	**Yuzh-Sakhalins**	**13.43**	**9**	P	**Pn**	**09 04 28.4**	**-2.5**
	79nm,0.5s						
CN2	**Changchun**	**14.96**	**316**	*e*P	**Pn**	**09 04 47.3**	**-2.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s						
CN2				LR	LR		
	comp=E,600nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
BNX	**BinXian**	**15.24**	**326**	⇓P	**Pn**	**09 04 53.0**	**-0.7**
BNX				pmax	pmax		
	comp=Z,56nm,1.5s						
KLR	**Kul'dur**	**16.58**	**342**	P	**P**	**09 05 06.0**	**-4.0**
	9.1nm,0.4s,baz=146,slow=10,SNR=34						
KLR				LR	LR	09 10 50.9	
	comp=Z,172nm,21.1s,baz=99,slow=34						
YOJ	**Yonaguni jima**	**17.21**	**242**	P	**P**	**09 05 16.1**	**-1.1**
NJ2	**Nanjing**	**17.56**	**270**	*e*P	**Pn**	**09 05 24.0**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,19nm,1.3s						
NJ2				LR	LR		
	comp=N,710nm,23.7s						
NJ2				LR	LR		
	comp=E,570nm,17.1s						
NJ2				LR	LR		
	comp=Z,600nm,18.5s						
NACB	**Ninganchiao**	**18.43**	**244**	P	**P**	**09 05 29.4**	**-1.1**
TIA	**Tai'an**	**18.64**	**284**	⇑P	**Pn**	**09 05 36.0**	**+1.3**
TIA				S	**S**	**09 08 55.0**	**-2.4**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,120nm,3.5s						
TIA				LR	LR		
	comp=N,210nm,8.4s						
TIA				LR	LR		
	comp=E,410nm,10.7s						
TIA				LR	LR		
	comp=Z,550nm,10.6s						
SSLB	**Suanglung**	**19.13**	**244**	P	**P**	**09 05 37.5**	**-0.7**
SSLB				IAmb	IAmb	09 05 42.9	
	comp=Z,41nm,1.5s						
GUMO	**Guam**	**20.59**	**165**	P	**P**	**09 05 49.7**	**-4.2**
	comp=Z,12nm,0.3s,baz=128,slow=18,SNR=1.4						
GUMO	**Guam**	**20.59**	**165**	P	**P**	**09 05 51.8**	**-2.1**
HNS	**HongShan**	**20.61**	**287**	⇑P	Pn	09 05 57.5	-0.4
HNS				S	**S**	**09 09 40.3**	**+3.8**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HNS				LR	LR		
	comp=Z,510nm,15.1s						
HNS				LR	LR		
	comp=Z,280nm,16.1s						
XLT	**XiLinHaoTe**	**20.94**	**306**	*e*P	Pn	09 06 01.5	-0.4
XLT				sP	sP	09 06 53.0	+11
XLT				S	**S**	**09 09 42.0**	**-0.7**
XLT				pmax	pmax		
	comp=Z,14nm,0.9s						
XLT				pmax	pmax		
	comp=Z,88nm,3.6s						
XLT				LR	LR		
	comp=Z,490nm,14.9s						
XLT				LR	LR		
	comp=Z,430nm,16.5s						
HIA	**Hailar**	**21.44**	**322**	P	**P**	**09 05 59.9**	**-3.0**
HIA				IAmb	IAmb	09 06 05.4	
	comp=Z,30nm,0.8s						
WHN	**Wuhan**	**21.65**	**269**	⇑P	**P**	**09 06 08.8**	**+3.6**
TIY	**Taiyuan**	**22.43**	**288**	*e*P	**P**	**09 06 12.3**	**-0.8**
TIY				pP	**pP**	**09 06 46.0**	**+6.5**
TIY				S	**S**	**09 10 06.8**	**-1.9**
TIY				SS	**SnSn**	**09 11 03.8**	**+9.4**
TIY				pmax	pmax		
	comp=Z,140nm,4.3s						
PETK	**Petropavlovsk-**	**23.27**	**28**	P	**P**	**09 06 18.4**	**-2.3**
	comp=Z,1.6nm,0.7s,baz=206,slow=6.3,SNR=2.4						
PETK	**Petropavlovsk-**	**23.27**	**28**	P	**P**	**09 06 20.2**	**-0.5**
HHC	**Hu-ho-hao-te**	**23.40**	**296**	*e*P	**P**	**09 06 21.5**	**-0.6**
HHC				pP	pP	09 06 54.0	+4.1
HHC				S	**S**	**09 10 25.5**	**+1.2**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
HHC				LR	LR		
	comp=Z,540nm,13.7s						
HHC				LR	LR		
	comp=Z,580nm,12.8s						
HHC				LR	LR		
	comp=Z,960nm,14.1s						
BTO	**Baotou**	**24.53**	**295**	*e*P	**P**	**09 06 32.8**	**+0.5**
BTO				S	**S**	**09 10 43.5**	**+1.1**
BTO				LR	LR		
	comp=Z,2µm,15.4s						
BTO				LR	LR		
	comp=Z,2µm,14.2s						
ENH	**Enshi**	**25.78**	**271**	P	**P**	**09 06 41.8**	**-1.9**
MA2	**Magadan**	**26.89**	**13**	P	**P**	**09 06 53.1**	**-0.2**
	comp=Z,8.6nm,0.6s,baz=207,slow=8.6,SNR=9.8						
	comp=Z,8.6nm,0.6s						
MA2	**Magadan**	**26.89**	**13**	P	**P**	**09 06 51.8**	**-1.5**
MA2				IAmb	IAmb	09 07 27.3	
	comp=Z,18nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.93**	**113**	T	T	09 36 16.2	
	baz=306,slow=75,SNR=64						
H11N1	**WAKE ISLAND Hy**	**27.93**	**113**	T	T	09 36 18.8	
	baz=306,slow=75,SNR=61						
H11N3	**WAKE ISLAND Hy**	**27.95**	**113**	T	T	09 36 19.6	
	baz=306,slow=75,SNR=74						
ULN	**Ulaanbaatar**	**28.21**	**310**	P	**P**	**09 07 05.2**	**-0.1**
ULN				IAmb	IAmb	09 07 07.2	
	comp=Z,21nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**28.50**	**115**	T	T	09 37 02.2	
	baz=307,slow=74						
H11S1	**WAKE ISLAND Hy**	**28.50**	**115**	T	T	09 37 11.6	
	baz=307						
H11S2	**WAKE ISLAND Hy**	**28.52**	**115**	T	T	09 37 07.8	
	baz=307,slow=74						
SONM	**Songino Array**	**28.62**	**310**	P	**P**	**09 07 07.9**	**-1.1**
	comp=Z,4.2nm,0.5s,baz=117,slow=8.1,SNR=24						
SONM				PcP	**PcP**	**09 10 16.9**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=113,slow=3.4,SNR=2.0						
SONM				ScP	**ScP**	**09 13 42.5**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=102,slow=3.5,SNR=6.1						
	comp=Z,4.2nm,0.5s						
SONM	**Songino Array**	**28.62**	**310**	P	**P**	**09 07 08.9**	**-0.1**
YAK	**Yakutsk**	**29.04**	**350**	P	**P**	**09 07 11.4**	**-0.9**
	comp=Z,10.0nm,0.4s,baz=163,slow=3.4,SNR=4.3						
	comp=Z,10.0nm,0.4s						
LZH	**Lanzhou**	**29.37**	**285**	*e*P	**P**	**09 07 15.3**	**-0.5**
LZH				pP	pP	09 07 46.0	+0.5
LZH				sP	sP	09 08 07.5	+5.8
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				LR	LR		
	comp=Z,410nm,13.6s						
LZH				LR	LR		
	comp=Z,260nm,13.6s						
LZH				LR	LR		
	comp=Z,540nm,15.2s						
SEY	**Seymchan**	**30.32**	**12**	P	**P**	**09 07 24.0**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=227,slow=13,SNR=8.5						
	comp=Z,1.5nm,0.5s						
CD2	**Chengdu**	**30.38**	**275**	*e*P	**P**	**09 07 24.0**	**-0.6**
GTA	**Gaotai**	**32.31**	**292**	*e*P	**P**	**09 07 39.3**	**-2.3**
GTA				pP	pwP	09 08 17.5	+1.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,68nm,6.2s						
GTA				LR	LR		
	comp=Z,280nm,16.4s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,190nm,17.5s						
PZH	**PanZhiHua**	**33.44**	**268**	P	**P**	**09 07 53.0**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
ADK	**Adak**	**36.16**	**46**	P	**P**	**09 08 15.5**	**+1.2**
GOMU	**GeErMu**	**36.59**	**287**	P	**P**	**09 08 16.8**	**-2.0**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,52nm,4.6s						
BILL	**Bilibino**	**37.60**	**16**	P	**P**	**09 08 26.2**	**-0.2**
TIXI	**Tiksi**	**38.43**	**355**	P	**P**	**09 08 32.9**	**-0.3**
	comp=Z,7.0nm,0.3s,baz=91,slow=23,SNR=23						
	comp=Z,7.0nm,0.3s						
TIXI	**Tiksi**	**38.43**	**355**	P	**P**	**09 08 32.9**	**-0.3**
TIXI				IAmb	IAmb	09 08 34.7	
	comp=Z,8.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.33**	**258**	P	**P**	**09 08 40.5**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=158,slow=11,SNR=2.7						
	comp=Z,1.2nm,0.3s						
NIKH	**Nikolski High**	**41.07**	**46**	P	**P**	**09 08 57.2**	**+2.0**
WMQ	**Urumqi**	**41.16**	**300**	*e*P	**P**	**09 08 57.3**	**+1.1**
ZAA0	**Zalesovo Array**	**43.17**	**315**	P	**P**	**09 09 11.0**	**-1.3**
ZAA0				IAmb	IAmb	09 09 13.8	
	comp=Z,24nm,1.1s						
ZALV	**Zalesovo Beam**	**43.17**	**315**	P	**P**	**09 09 11.2**	**-1.1**
	comp=Z,6.9nm,0.3s,baz=100,slow=9.4,SNR=27						
ZALV				PcP	**PcP**	**09 10 59.1**	**0.0**
	comp=Z,2.5nm,0.4s,baz=113,slow=2.5,SNR=3.9						
	comp=Z,6.9nm,0.3s						
ZALV	**Zalesovo Beam**	**43.17**	**315**	P	**P**	**09 09 11.1**	**-1.2**
MK31	**Makanchi Array**	**44.75**	**305**	P	**P**	**09 09 24.6**	**-0.5**
MKAR	**Makanchi Array**	**44.75**	**305**	P	**P**	**09 09 24.4**	**-0.7**
	comp=Z,4.1nm,0.4s,baz=87,slow=10,SNR=52						
MKAR				ScP	**ScP**	**09 14 42.1**	**-1.3**
	comp=Z,2.5nm,0.8s,baz=88,slow=4.6,SNR=8.3						
	comp=Z,4.1nm,0.4s						
MAKZ	**Makanchi**	**44.96**	**305**	P	**P**	**09 09 25.9**	**-0.8**
MAKZ				IAmb	IAmb	09 09 27.8	
	comp=Z,10nm,0.9s						
NRIK	**Noril'sk**	**45.71**	**337**	P	**P**	**09 09 32.1**	**-0.2**
	comp=Z,12nm,0.3s,baz=107,slow=8.3,SNR=28						
	comp=Z,12nm,0.3s						
NRIK	**Noril'sk**	**45.71**	**337**	P	**P**	**09 09 32.1**	**-0.2**
SDPT	**Sand Point**	**46.17**	**43**	P	**P**	**09 09 36.7**	**+0.7**
CHNA	**Chernabura Isl**	**46.66**	**44**	P	**P**	**09 09 40.9**	**+1.1**
	baz=269						
KURK	**Kurchatov**	**46.92**	**310**	P	**P**	**09 09 41.3**	**-0.6**
KURBB	**Kurchatov Arra**	**46.98**	**310**	LR	LR	09 31 15.5	
	comp=Z,123nm,21.7s,baz=348,slow=38						
COEN	**Coen**	**47.53**	**175**	P	**P**	**09 09 47.8**	**+0.8**
COEN				IAmb	IAmb	09 09 49.2	
	comp=Z,8.6nm,0.7s						
O16K	**Kokwok River B**	**47.69**	**37**	P	**P**	**09 09 48.4**	**+0.6**
	baz=266						
TARG	**Taragay, Kyrgy**	**48.65**	**298**	P	**P**	**09 09 54.5**	**-1.4**
TARG				IAmb	IAmb	09 10 01.8	
	comp=Z,5.8nm,0.4s						
N18K	**Kilae Creek**	**48.86**	**36**	P	**P**	**09 09 59.4**	**+2.6**
	baz=267						
CHIR	**Chirikof Islan**	**48.93**	**43**	P	**P**	**09 09 59.2**	**+2.0**
TTA	**Tatalina**	**48.97**	**33**	P	**P**	**09 09 59.3**	**+1.7**
	baz=265						
SII	**Sitkinak Islan**	**49.71**	**42**	P	**P**	**09 10 04.6**	**+1.4**
K20K	**Telida**	**49.88**	**33**	P	**P**	**09 10 07.4**	**+3.0**
K20K				IAmb	IAmb	09 10 07.6	
	comp=Z,6.4nm,0.7s						
K20K	**Telida**	**49.88**	**33**	P	**P**	**09 10 07.0**	**+2.6**
	baz=266,SNR=10.0						
J20K	**Nowinta River**	**49.90**	**32**	P	**P**	**09 10 07.2**	**+2.6**
J20K	**Nowinta River**	**49.90**	**32**	P	**P**	**09 10 07.0**	**+2.4**
	baz=265,SNR=11						
L20K	**Farewell, AK**	**49.91**	**34**	P	**P**	**09 10 07.1**	**+2.4**
	baz=267,SNR=6.3						
Q19K	**Cape Douglas,**	**49.95**	**38**	P	**P**	**09 10 05.8**	**+0.8**
	baz=270						
OHAK	**Old Harbor**	**50.18**	**41**	P	**P**	**09 10 07.8**	**+1.1**
	baz=272						
KNRA	**Kununurra**	**50.21**	**194**	P	**P**	**09 10 06.1**	**-1.2**
IMAR	**Indian Mountai**	**50.23**	**29**	P	**P**	**09 10 09.3**	**+2.2**
M20K	**Styx River**	**50.24**	**35**	P	**P**	**09 10 10.0**	**+2.8**
	baz=268						
KSH	**Kashi**	**50.51**	**296**	P	**P**	**09 10 13.3**	**+3.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KDAK	**Kodiak Island**	**50.54**	**40**	P	**P**	**09 10 09.8**	**+0.4**
	comp=Z,9.3nm,0.7s,baz=280,slow=5.5,SNR=22						
	comp=Z,9.3nm,0.7s						
KDAK	**Kodiak Island**	**50.54**	**40**	P	**P**	**09 10 10.7**	**+1.3**
KDAK	**Kodiak Island**	**50.54**	**40**	P	**P**	**09 10 10.6**	**+1.2**
	baz=272						
H21K	**Melozitna Rive**	**50.59**	**30**	IAmb	IAmb	09 10 14.0	
	comp=Z,14nm,1.4s						
H21K	**Melozitna Rive**	**50.59**	**30**	P	**P**	**09 10 12.1**	**+2.3**
	baz=265,SNR=10.0						
H21K				S	**S**	**09 17 16.6**	**+3.8**
	baz=265						
Q20K	**Shuyak Island**	**50.61**	**39**	P	**P**	**09 10 10.9**	**+0.9**
	baz=272						
CHUM	**Lake Minchumin**	**50.69**	**32**	P	**P**	**09 10 13.1**	**+2.6**
	baz=267						
CHUM				S	**S**	**09 17 18.6**	**+4.5**
	baz=267						
PPLA	**Purkeypile**	**50.71**	**33**	IAmb	IAmb	09 10 19.2	
	comp=Z,32nm,1.8s						
PPLA	**Purkeypile**	**50.71**	**33**	P	**P**	**09 10 13.1**	**+2.2**
	baz=268						
AAK	**Ala-Archa**	**50.86**	**300**	P	**P**	**09 10 12.5**	**+0.1**
I21K	**Tanana**	**50.90**	**30**	P	**P**	**09 10 14.7**	**+2.6**
	baz=267,SNR=5.5						
I21K				S	**S**	**09 17 20.8**	**+3.8**
	baz=267						
KTH	**Kantishna Hill**	**51.30**	**32**	IAmb	IAmb	09 10 18.5	
	comp=Z,18nm,1.6s						
MLY	**Manley**	**51.42**	**31**	IAmb	IAmb	09 10 20.3	
	comp=Z,13nm,1.6s						
MLY	**Manley**	**51.42**	**31**	P	**P**	**09 10 18.3**	**+2.3**
	baz=268,SNR=8.6						
MLY				S	**S**	**09 17 28.7**	**+4.4**
	baz=268						
BRSE	**Bradley Lake S**	**51.42**	**37**	P	**P**	**09 10 18.1**	**+2.0**
	baz=272						
TRF	**Thorofare Moun**	**51.58**	**33**	P	**P**	**09 10 20.8**	**+3.4**
	baz=270						
BRVK	**Borovoye**	**51.85**	**314**	P	**P**	**09 10 18.7**	**-0.6**
BRVK				IAmb	IAmb	09 10 21.3	
	comp=Z,8.2nm,0.6s						
RC01	**Rabbit Creek A**	**51.87**	**36**	P	**P**	**09 10 20.8**	**+1.4**
	baz=272						
RC01				S	**S**	**09 17 30.3**	**-0.2**
	baz=272						
H23K	**Yukon River**	**51.95**	**30**	IAmb	IAmb	09 10 23.9	
	comp=Z,13nm,1.4s						
H23K	**Yukon River**	**51.95**	**30**	P	**P**	**09 10 22.3**	**+2.5**
	baz=268,SNR=7.3						
H23K				S	**S**	**09 17 37.1**	**+5.6**
	baz=268						
I23K	**Minto, Yukon-K**	**52.01**	**30**	P	**P**	**09 10 22.5**	**+2.2**
	baz=269						
SEW	**Seward**	**52.05**	**37**	P	**P**	**09 10 21.9**	**+1.2**
	baz=273,SNR=5.8						
TOLK	**Toolik Lake Re**	**52.07**	**26**	IAmb	IAmb	09 10 29.0	
	comp=Z,10nm,1.3s						
TOLK	**Toolik Lake Re**	**52.07**	**26**	P	**P**	**09 10 22.7**	**+1.9**
	baz=266,SNR=5.6						
NEA2	**Nenana**	**52.12**	**31**	P	**P**	**09 10 23.1**	**+1.9**
	baz=270,SNR=11						
NEA2				S	**S**	**09 17 37.1**	**+3.2**
	baz=270						
PMR	**Palmer**	**52.15**	**35**	IAmb	IAmb	09 10 23.6	
	comp=Z,18nm,1.4s						
PMR	**Palmer**	**52.15**	**35**	P	**P**	**09 10 22.5**	**+1.2**
	baz=272,SNR=7.0						
MCK	**McKinley**	**52.19**	**32**	IAmb	IAmb	09 10 24.5	
	comp=Z,22nm,1.6s						
MCK	**McKinley**	**52.19**	**32**	P	**P**	**09 10 23.1**	**+1.4**
	baz=270						
RND	**Reindeer**	**52.23**	**33**	IAmb	IAmb	09 10 23.7	
	comp=Z,6.7nm,0.8s						
KNK	**Knik Glacier**	**52.48**	**35**	P	**P**	**09 10 25.5**	**+1.7**
	baz=273,SNR=5.1						
MDM	**Murphy Dome**	**52.48**	**31**	IAmb	IAmb	09 10 26.5	
	comp=Z,6.6nm,0.8s						
SML	**Sawmill**	**52.52**	**35**	IAmb	IAmb	09 11 01.9	
	comp=Z,8.8nm,0.9s						
SML	**Sawmill**	**52.52**	**35**	P	**P**	**09 10 25.6**	**+1.4**
	baz=273						
SML				S	**S**	**09 17 40.4**	**+1.0**
	baz=273						
H24K	**Noodor Dome**	**52.63**	**30**	IAmb	IAmb	09 10 28.7	
	comp=Z,11nm,1.6s						
H24K	**Noodor Dome**	**52.63**	**30**	P	**P**	**09 10 27.3**	**+2.3**
	baz=270,SNR=7.9						
H24K				S	**S**	**09 17 45.7**	**+4.9**
	baz=270						
TCOL	**CIGO, UAF Yank**	**52.64**	**31**	S	**S**	**09 17 43.2**	**+2.4**
	baz=271						
WAT6	**Susitna Watana**	**52.76**	**34**	P	**P**	**09 10 27.6**	**+1.5**
	baz=272,SNR=7.1						
WAT6				S	**S**	**09 17 44.1**	**+1.2**
	baz=272						
POKR	**Poker Plat Res**	**52.82**	**31**	P	**P**	**09 10 28.5**	**+2.2**
	baz=271						
POKR				S	**S**	**09 17 46.9**	**+3.5**
	baz=271						
DHY	**Denali Highway**	**52.91**	**33**	P	**P**	**09 10 29.1**	**+2.0**
	baz=272						
DHY				S	**S**	**09 17 45.8**	**+0.9**
	baz=272						
SCM	**Sheep Creek Mo**	**52.99**	**35**	IAmb	IAmb	09 10 29.9	
	comp=Z,9.0nm,0.7s						
SCM	**Sheep Creek Mo**	**52.99**	**35**	P	**P**	**09 10 29.1**	**+1.4**
	baz=273						
HDA	**Harding Lake**	**53.05**	**31**	IAmb	IAmb	09 10 29.9	
	comp=Z,15nm,1.5s						
HDA	**Harding Lake**	**53.05**	**31**	P	**P**	**09 10 28.9**	**+0.9**
	baz=272						
ILAR	**Eielson Array**	**53.06**	**31**	P	**P**	**09 10 28.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=261,slow=6.4,SNR=11						
ILAR				pP	**pwP**	**09 11 02.6**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=274,slow=5.9,SNR=3.2						
	comp=Z,1.2nm,0.6s						
GLI	**Glacier Island**	**53.17**	**36**	P	**P**	**09 10 29.6**	**+0.7**
	baz=274						
GLI				S	**S**	**09 17 50.4**	**+2.3**
	baz=274						
WB0	**Warramunga Arr**	**53.42**	**186**	P	**P**	**09 10 29.0**	**-2.2**
FID	**Port Fidalgo**	**53.48**	**36**	IAmb	IAmb	09 10 33.1	
	comp=Z,8.4nm,0.6s						
M24K	**Tolsona, Glenn**	**53.52**	**34**	P	**P**	**09 10 33.3**	**+1.8**
	baz=274						
K24K	**Donnelly Dome**	**53.59**	**32**	P	**P**	**09 10 33.4**	**+1.4**
	baz=273						
WRAB	**Tennant Creek**	**53.59**	**186**	P	**P**	**09 10 30.4**	**-2.0**
WRAB				IAmb	IAmb	09 10 34.0	
	comp=Z,12nm,1.1s						
KK31	**Karatay Array**	**53.60**	**302**	P	**P**	**09 10 31.7**	**-0.7**
KK31				IAmb	IAmb	09 10 34.7	
	comp=Z,20nm,1.4s						
KKAR	**Karatay Array**	**53.60**	**302**	P	**P**	**09 10 31.7**	**-0.7**
KKAR				IAmb	IAmb	09 10 34.7	
	comp=Z,20nm,1.4s						
WB2	**Warramunga Arr**	**53.60**	**186**	P	**P**	**09 10 30.9**	**-1.6**
WB2				IAmb	IAmb	09 11 40.9	

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       comp=Z,9.6nm,0.8s
WR0    Warramunga Arr   53.60 186     P      P      09 10 31.4 -1.0
WR0                                   IAmb   IAmb   09 10 32.6
       comp=Z,9.7nm,0.9s
WRA    Warramunga Arr   53.60 186     P      P      09 10 31.5 -1.0
       comp=Z,7.2nm,0.3s,baz=1.6,slow=7.7,SNR=225
       comp=Z,7.2nm,0.3s
WRA    Warramunga Arr   53.60 186     P      P      09 10 31.0 -1.5
KLU    Klutina          53.69  35     P      P      09 10 34.7 +1.9
       baz=275
KLU                                   S      S      09 17 57.6 +2.3
       baz=275
J25K   Salcha River,    53.72  31     P      P      09 10 34.1 +1.2
       baz=273
PAX    Paxson           53.78  33     P      P      09 10 34.8 +1.3
       baz=274
PAX                                   S      S      09 17 57.0 +0.5
       baz=274
DIV    Divide           53.79  35     IAmb   IAmb   09 10 36.7
       comp=Z,7.0nm,0.6s
EYAK   Cordova Ski Ar   53.86  36     IAmb   IAmb   09 10 36.4
       comp=Z,6.6nm,0.6s
EYAK   Cordova Ski Ar   53.86  36     P      P      09 10 35.9 +2.1
       baz=276,SNR=7.1
EYAK                                  S      S      09 18 00.3 +3.0
       baz=276
BMAR   Burnt Mountain   53.92  28     P      P      09 10 37.3 +3.0
HARP   HAARP            53.97  34     P      P      09 10 37.0 +2.3
       baz=275
RIDG   Independent Ri   54.00  32     P      P      09 10 36.0 +1.0
       baz=274
RIDG                                  S      S      09 18 00.3 +0.9
       baz=274
N25K   Chitina, Valde   54.31  35     S      S      09 18 07.4 +3.8
       baz=276
DOT    Dot Lake         54.36  32     IAmb   IAmb   09 10 39.3
       comp=Z,13nm,1.6s
SCRK   Sand Creek       54.37  32     IAmb   IAmb   09 10 40.2
       comp=Z,14nm,1.5s
SCRK   Sand Creek       54.37  32     P      P      09 10 38.8 +1.1
       baz=275,SNR=6.8
SCRK                                  S      S      09 18 04.2 -0.2
       baz=275
BMRM   Bremner River    54.37  36     IAmb   IAmb   09 11 17.1
       comp=Z,10nm,1.0s
BMRM   Bremner River    54.37  36     P      P      09 10 39.6 +1.9
       baz=276,SNR=5.0
BMRM                                  S      S      09 18 08.0 +3.6
       baz=276
MENT   Mentasta         54.58  33     IAmb   IAmb   09 10 42.0
       comp=Z,5.6nm,0.8s
L26K   Log Cabin Wild   54.74  33     IAmb   IAmb   09 10 43.1
       comp=Z,5.7nm,0.8s
L26K   Log Cabin Wild   54.74  33     P      P      09 10 42.7 +2.4
       baz=276,SNR=8.5
L26K                                  S      S      09 18 13.2 +4.0
       baz=276
GAR    Garm             54.87 297     P      P      09 10 40.8 -1.0
M26K   Nabesna, AK      54.97  34     IAmb   IAmb   09 10 45.5
       comp=Z,19nm,1.7s
M26K   Nabesna, AK      54.97  34     P      P      09 10 44.2 +2.2
       baz=277,SNR=6.2
M26K                                  S      S      09 18 16.8 +4.4
       baz=277
MCARA  McCarthy VSAT    55.08  35     P      P      09 10 45.1 +2.4
       baz=277
MCARA                                 S      S      09 18 16.3 +2.5
       baz=277
K27K   Chicken          55.20  32     P      P      09 10 45.5 +2.0
       baz=276
K27K                                  S      S      09 18 18.7 +3.4
       baz=276
WAX    Waxell Ridge     55.29  36     IAmb   IAmb   09 10 47.0
       comp=Z,8.4nm,0.6s
L27K   Beaver Creek,    55.42  33     IAmb   IAmb   09 10 48.8
       comp=Z,16nm,1.6s
L27K   Beaver Creek,    55.42  33     P      P      09 10 47.2 +2.0
       baz=277,SNR=10
L27K                                  S      S      09 18 22.4 +4.0
       baz=277
M27K   Edge Creek, AK   55.49  34     IAmb   IAmb   09 10 48.5
       comp=Z,5.2nm,0.7s
M27K   Edge Creek, AK   55.49  34     P      P      09 10 47.8 +1.9
       baz=278,SNR=7.5
EGAK   Eagle            55.51  31     IAmb   IAmb   09 10 48.2
       comp=Z,22nm,1.9s
EGAK   Eagle            55.51  31     P      P      09 10 46.7 +1.0
       baz=277
BARN   Barnard Glacie   55.78  35     IAmb   IAmb   09 10 50.5
       comp=Z,4.5nm,0.6s
GRNC   Granite Creek    55.79  36     IAmb   IAmb   09 10 50.3
       comp=Z,7.0nm,0.7s
CHGR   Chuyangaron      55.84 297     P      P      09 10 47.6 -1.1
CHGR   Chuyangaron      55.84 297     P      P      09 10 47.6 -1.1
CHGR                                  pmax   pmax
       comp=Z,38nm,0.5s
CTG    Chitna Glacier   55.95  35     P      P      09 10 51.0 +1.8
       baz=279
BVCY   Beaver Creek     55.95  34     P      P      09 10 51.3 +2.3
       baz=278
CTGM   Chitina Glacie   55.95  35     P      P      09 10 51.4 +2.2
CTGM                                  IAmb   IAmb   09 10 51.5
       comp=Z,5.0nm,0.7s
YUK3   Moose Creek      56.24  34     P      P      09 10 53.0 +1.8
       baz=279,SNR=6.5
DAWY   Dawson           56.36  31     P      P      09 10 51.0 -0.9
DAWY   Dawson           56.36  31     P      P      09 10 53.4 +1.4
       baz=279
I29M   Ogilvie Camp,    56.63  30     IAmb   IAmb   09 10 57.0
       comp=Z,7.1nm,1.2s
I29M   Ogilvie Camp,    56.63  30     P      P      09 10 55.7 +2.0
       baz=279
SVE    Sverdlovsk       56.72 320    eP      P      09 10 54.7 +0.3
SVE                                   pmax   pmax
       comp=Z,49nm,1.7s
EPYK   Eagle Plains     57.11  28     P      P      09 10 59.3 +2.1
       baz=279
PNL    Peninsula        57.13  37     P      P      09 10 59.6 +2.3
       baz=282
YUK4   Talbot Arm       57.17  35     P      P      09 11 00.3 +2.5
       baz=281,SNR=6.4
KBL    Kabul            57.30 292     P      P      09 10 58.1 -1.0
KBL                                   IAmb   IAmb   09 11 48.6
       comp=Z,3.9nm,0.6s
KBL    Kabul            57.30 292     P      P      09 10 58.2 -1.0
KBL                                   pmax   pmax
       comp=Z,4.0nm,0.6s
ASAR   Alice Springs    57.33 186     P      P      09 10 58.4 -0.7
       comp=Z,3.3nm,0.7s,baz=23,slow=10,SNR=60
ASAR                                  pP     pP     09 11 34.9 +2.1
       comp=Z,2.5nm,0.5s,baz=2.6,slow=6.3,SNR=4.3
       comp=Z,3.3nm,0.7s
ASAR   Alice Springs    57.33 186     P      P      09 10 58.3 -0.8
YUK6   Outpost Mounta   57.38  35     P      P      09 11 02.1 +2.7
       baz=282,SNR=9.6
M30M   Minto, Yukon     57.78  33     P      P      09 11 04.2 +2.3
       baz=282,SNR=5.7
HYT    Haines Junctio   57.82  35     P      P      09 11 04.6 +2.3
       baz=282
N30M   Aishikik Lake    57.88  34     P      P      09 11 05.2 +2.6
       baz=282
ARU    Arti             57.92 320     P      P      09 11 02.0 -0.9
ARU    Arti             57.92 320d  iP      P      09 11 02.4 -0.5
ARU                                                 09 11 52.1
ARU                                                 09 13 11.5
ARU                                   S      S      09 18 52.1 +0.8
ARU                                   SS     SS     09 22 43.4 -0.6
ARU                                   pmax   pmax
       comp=Z,51nm,1.6s
INK    Inuvik           57.98  26     P      P      09 11 03.9 +0.9
       comp=Z,1.9nm,0.5s,baz=271,slow=6.0,SNR=13
       comp=Z,1.9nm,0.5s
INK    Inuvik           57.98  26     P      P      09 11 04.3 +1.2
INK    Inuvik           57.98  26     P      P      09 11 04.3 +1.2
INK                                   pmax   pmax
       comp=Z,3.0nm,1.0s
INK    Inuvik           57.98  26     P      P      09 11 04.0 +0.9
       baz=281
N31M   Braeburn, Yuko   58.49  34     IAmb   IAmb   09 11 10.7
       comp=Z,15nm,1.4s
N31M   Braeburn, Yuko   58.49  34     P      P      09 11 09.3 +2.5
       baz=283
O30N   Mendenhall       58.51  35     P      P      09 11 09.3 +2.3
       baz=283
PLBC   Pleasant Camp    58.69  36     P      P      09 11 10.6 +2.5
       baz=284,SNR=13
M31M   Drury Creek, Y   58.96  33     IAmb   IAmb   09 11 12.6
       comp=Z,3.3nm,0.7s
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M31M   Drury Creek, Y   58.96  33     P      P      09 11 12.1 +2.1
       baz=284,SNR=6.8
AB31   Akbulak array    59.01 311   i P      P      09 11 09.7 -0.9
ABKAR  Akbulak array    59.01 311     P      P      09 11 10.2 -0.3
ABKAR  Akbulak array    59.01 311     P      P      09 11 10.1 -0.5
WHY    Whitehorse       59.11  35     P      P      09 11 13.0 +1.8
       baz=284,SNR=6.2
WHY                                   S      S      09 19 11.9 +5.1
       baz=284
SKAG   Skagway          59.20  36     P      P      09 11 14.4 +2.8
       baz=285
FARO   Faro, Yukon      59.42  33     P      P      09 11 15.1 +1.8
       baz=285,SNR=7.5
EIDS   Eidsvold         59.76 168     P      P      09 11 17.0 +1.2
A36M   Sachs Harbour    59.86  21     IAmb   IAmb   09 11 26.0
       comp=Z,7.1nm,0.8s
A36M   Sachs Harbour    59.86  21     P      P      09 11 17.9 +1.9
       baz=286
A36M                                  S      S      09 19 19.2 +3.4
       baz=286
P33M   Teslin, Yukon    60.22  35     P      P      09 11 16.4 -2.3
P33M                                  IAmb   IAmb   09 11 22.3
       comp=Z,19nm,1.7s
P33M   Teslin, Yukon    60.22  35     P      P      09 11 20.1 +1.4
       baz=286,SNR=5.9
P33M                                  S      S      09 19 25.8 +4.9
       baz=286
MMPY   Sheldon Lake,    60.26  32     P      P      09 11 21.0 +2.1
       baz=286
MMPY                                  S      S      09 19 26.3 +5.0
       baz=286
C36M   Paulatuk         61.03  24     P      P      09 11 23.8 -0.2
C36M   Paulatuk         61.03  24     P      P      09 11 25.3 +1.3
       baz=289,SNR=7.6
C36M                                  S      S      09 19 32.2 +1.4
       baz=289
KIRV   Kirov            62.04 324d  iP      P      09 11 30.8 -0.1
T35M   Bob Quinn        62.51  38     P      P      09 11 36.9 +2.8
       baz=290
DIB    Dawson Inlet,    62.61  43     P      P      09 11 36.0 +1.2
DIB                                   IAmb   IAmb   09 13 36.3
       comp=Z,12nm,1.2s
PRGR   Permogore        62.78 328    eP      P      09 11 34.0 -1.7
SPA0   Spitsbergen Ar   63.49 349    eP      P      09 11 40.8 +0.5
HG4B   Hotspring        63.66  43     P      P      09 11 40.5 -1.3
EUNU   Eureka           63.67   8     P      P      09 11 41.4 -0.1
LVZ    Lovozero         64.55 336     P      P      09 11 47.4 +0.1
LVZ    Lovozero         64.55 336     P      P      09 11 47.4 +0.1
LVZ                                   pmax   pmax
       comp=Z,43nm,1.5s
FORT   Forrest          65.08 191     P      P      09 11 50.9 -0.2
BELG   Belogornoye      65.26 318d  iP      P      09 11 51.5 -0.6
BELG                                  pmax   pmax
       comp=Z,9.0nm,1.1s
STKA   Stephens Creek   65.27 178     P      P      09 11 52.3  0.0
       comp=Z,4.8nm,0.5s,baz=343,slow=7.1,SNR=16
       comp=Z,4.8nm,0.5s
STKA   Stephens Creek   65.27 178     P      P      09 11 52.4 +0.1
STKA   Stephens Creek   65.27 178     P      P      09 11 52.4 +0.1
STKA                                  pmax   pmax
       comp=Z,7.0nm,1.7s
KLMR   Klimovskoe       65.80 328    eP      P      09 11 54.2 -1.2
KLMR                                  pmax   pmax
       comp=Z,14nm,0.6s
KLMR   Klimovskoe       65.80 328    eP      P      09 11 54.3 -1.2
KLMR                                  AMP           09 11 56.9
       comp=Z,14nm,0.6s
RES    Resolute Bay     66.16  14     P      P      09 11 58.8 +1.3
RES                                   IAmb   IAmb   09 12 00.1
       comp=Z,8.1nm,0.9s
RES    Resolute Bay     66.16  14     P      P      09 11 58.8 +1.3
RES                                   pmax   pmax
       comp=Z,8.0nm,1.0s
BBOO   Buckleboo        66.26 183     P      P      09 11 58.9 +0.2
ARA0   ARCESS Array S   66.59 340    eP      P      09 12 01.2 +0.8
ARCES  ARCESS Array B   66.59 340     P      P      09 12 00.7 +0.3
       comp=Z,2.9nm,0.5s,baz=60,slow=7.9,SNR=34
       comp=Z,2.9nm,0.5s
ARCES  ARCESS Array B   66.59 340     P      P      09 12 01.3 +0.9
ARCES  ARCESS Array B   66.59 340     P      P      09 12 01.3 +0.9
ARCES                                 pmax   pmax
       comp=Z,46nm,1.9s
YKA    Yellowknife Ar   67.39  29     P      P      09 12 06.2 +0.6
       comp=Z,0.8nm,0.5s,baz=301,slow=6.3,SNR=12
YKA                                   pP     pwP    09 12 42.3 +0.2
       comp=Z,1.8nm,0.9s,baz=296,slow=6.1,SNR=4.8
       comp=Z,0.8nm,0.5s
YKA    Yellowknife Ar   67.39  29     P      P      09 12 05.5  0.0
KTK1   Kautokeino       67.56 340    eP      P      09 12 07.4 +0.9
JETT   Jettan, Norway   68.03 341    eP      P      09 12 10.3 +0.8
TRO    Tromso           68.38 341    eP      P      09 12 12.1 +0.6
DAG    Danmarks Havn    68.94 355   i P      P      09 12 15.0  0.0
DAG                                   IAmb   IAmb   09 12 16.9
       comp=Z,4.3nm,0.8s
MOS    Moscow           69.06 324    eP      P      09 12 13.8 -2.2
MOS                                  eS      S      09 21 05.0 -4.2
MOS                                   pmax   pmax
       comp=Z,45nm,0.8s
VRH    Novokhopyorsk    69.08 318    eP      P      09 12 15.2 -1.0
VRH                                   pmax   pmax
       comp=Z,20nm,0.5s
NWAO   Narrogin (SRO)   69.57 200     P      P      09 12 18.3 -1.0
NWAO   Narrogin (SRO)   69.57 200     P      P      09 12 18.3 -1.0
NWAO                                  pmax   pmax
       comp=Z,102nm,1.6s
OBN    Obninsk          69.89 323⇑   eP      P      09 12 21.0 -0.1
OBN                                   pmax   pmax
       comp=Z,49nm,1.6s
LPSR   Galich'ya Gora   69.93 320    eP      P      09 12 20.5 -0.9
LPSR                                  pmax   pmax
       comp=Z,30nm,1.3s
VORR   Voronezh         70.24 319    eP      P      09 12 25.2 +1.9
VORR                                  pmax   pmax
       comp=Z,80nm,0.5s
D03D   Eldon            70.42  46     P      P      09 12 27.1 +2.6
       baz=299
VSR    Storozhevoye     70.48 319    eP      P      09 12 24.0 -0.8
VSR                                   pmax   pmax
       comp=Z,10.0nm,0.6s
STEI   Steigen          70.52 341    eP      P      09 12 25.0 +0.3
LOF    Lofoten          70.84 341    eP      P      09 12 26.7 +0.1
FAUS   Fauske           70.88 340    eP      P      09 12 27.6 +0.7
FIA1   FINESS Array S   71.08 332     P      P      09 12 28.4 +0.2
FINES  FINESS Array B   71.08 332     P      P      09 12 28.2  0.0
       comp=Z,15nm,0.4s,baz=78,slow=5.2,SNR=207
       comp=Z,15nm,0.4s
FINES  FINESS Array B   71.08 332     P      P      09 12 28.4 +0.2
FINES  FINESS Array B   71.08 332     P      P      09 12 28.4 +0.2
DBG    Daneborg         71.42 354    eP      P      09 12 30.8 +0.7
UOSS   Minazif          71.46 288     P      P      09 12 31.1 -0.1
UOSS                                  IAmb   IAmb   09 12 48.0
       comp=Z,9.5nm,1.2s
MOR8   Moi Rana         71.97 340    eP      P      09 12 32.9 -0.6
KBZ    Khabaz           71.98 311     P      P      09 12 33.7 -0.2
       comp=Z,6.5nm,1.0s,baz=62,slow=8.8,SNR=17
       comp=Z,6.5nm,1.0s
KBZ    Khabaz           71.98 311d  iP      P      09 12 34.0 +0.1
KBZ                                   pmax   pmax
       comp=Z,18nm,1.3s
LTY    Liberty          71.99  45     P      P      09 12 36.0 +1.9
LTY                                   IAmb   IAmb   09 12 36.1
       comp=Z,21nm,1.6s
KIV    Kislovodsk       72.00 311    eP      P      09 12 34.5 +0.3
KIV                                   pmax   pmax
       comp=Z,15nm,1.1s
KONS   Konsvik          72.11 340    eP      P      09 12 34.4 +0.1
B08A   Colville Reser   72.21  43     IAmb   IAmb   09 12 37.5
       comp=Z,5.5nm,0.7s
H04A   Detroit Lake     72.37  48     IAmb   IAmb   09 13 46.9
       comp=Z,22nm,1.7s
GNI    Garni            72.54 307⇑   eP      P      09 12 38.1 +0.5
GNI                                   pmax   pmax
       comp=Z,9.0nm,0.4s
VSU    Vasula           72.58 330d  iP      P      09 12 37.4 +0.2
VSU                                   pmax   pmax
       comp=Z,50nm,0.7s
VSU    Vasula           72.58 330    eP      P      09 12 37.5 +0.3
I04A   Tendick Farm,    72.67  49     P      P      09 12 39.0 +0.8
       baz=300
RAF    Rauma            72.98 333    eP      P      09 12 39.7 +0.2
I05D   Terrebonne, OR   73.06  48     P      P      09 12 42.2 +1.7
       baz=301
C09A   Chrisman Ranch   73.10  44     P      P      09 12 41.2 +0.6
C09A                                  IAmb   IAmb   09 12 42.8
       comp=Z,7.6nm,0.7s
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D08A   Wollman Farm,    73.12  44     P      P      09 12 41.3 +0.6
D08A                                  IAmb   IAmb   09 12 42.9
       comp=Z,6.1nm,0.7s
J04D   Umpqua Nationa   73.14  49     P      P      09 12 43.6 +2.4
       baz=300
NEW    Newport          73.52  43     P      P      09 12 44.9 +1.9
       baz=302
PINE   Pine Mountain    73.59  48     P      P      09 12 46.1 +2.4
PINE                                  IAmb   IAmb   09 12 46.9
       comp=Z,8.9nm,0.8s
MTSE   Matsula          73.64 331    eP      P      09 12 44.0 +0.6
J05D   Fort Rock, OR    73.67  49     P      P      09 12 46.4 +2.3
       baz=301
NSS    Namsos           73.87 339    eP      P      09 12 45.1 +0.4
SUMG   Summit           73.99 359     P      P      09 12 46.0 +0.2
SUMG                                  IAmb   IAmb   09 13 25.4
       comp=Z,26nm,1.8s
SUMG   Summit           73.99 359     P      P      09 12 46.0 +0.2
SUMG                                  pmax   pmax
       comp=Z,26nm,1.8s
SUMG   Summit           73.99 359    eP      P      09 12 47.4 +1.7
SUMG                                  IAmb   IAmb   09 12 48.5
       comp=Z,4.4nm,0.6s
K05A   Summer Lake      74.17  49     P      P      09 12 48.9 +1.8
K05A                                  IAmb   IAmb   09 12 50.2
       comp=Z,26nm,1.7s
MNK    Minsk            74.43 326   i P      P      09 12 45.3 -2.8
MNK                                 i               09 12 56.0
MNK                                 i               09 15 31.9
MNK                                 i PPP    PPP    09 17 17.2
MNK                                 i S      S      09 22 08.4 -2.3
MNK                                 i               09 22 50.2
MNK                                 i *SS    sS     09 23 10.6 -1.8
MNK                                 i SS     SS     09 26 59.6 +0.5
MNK                                 i SSS    SSS    09 30 17.1
MNK                                   pmax   pmax
       comp=Z,8.0nm,0.8s
MNK                                   pmax   pmax
       comp=E,1.0nm,1.0s
MNK                                   pmax   pmax
       comp=N,17nm,0.8s
MNK                                   MLR    MLR
       comp=Z,197nm,23.0s
MNK                                   MLR    MLR
       comp=N,151nm,19.0s
MNK                                   MLR    MLR
       comp=E,23nm,21.0s
MNK    Minsk            74.43 326   i P      P      09 12 45.4 -2.8
       comp=E,1.0nm,1.0s
MNK                                 i P      P      09 12 45.4 -2.8
       comp=N,17nm,0.8s
MNK                                 i P      P      09 12 45.4 -2.8
       comp=Z,8.0nm,0.8s,baz=233
MNK                                 i pP     pP     09 13 23.9 +0.4
MNK                                 i sP     sP     09 13 38.9 -0.2
MNK                                 i PP     PP     09 15 31.9 -3.9
MNK                                 i PPP    PPP    09 17 17.2
MNK                                 i S      S      09 22 08.5 -2.3
MNK                                 i sS     sS     09 23 10.6 -1.8
MNK                                 i SS     SS     09 26 59.6 +0.5
MNK                                 i SSS    SSS    09 30 17.2
MNK                                 i LRM    MLR    09 49 04.2
       comp=Z,197nm,23.2s
MNK                                 i LRM    MLR    09 49 37.8
       comp=N,151nm,18.9s
MNK                                 i LRM    MLR    09 49 50.6
       comp=E,23nm,20.6s
IDID   Didziasalis      74.47 327    eP      P      09 12 48.6 +0.3
ISAL   Salakas          74.59 327    eP      P      09 12 49.4 +0.4
IIGN   Ignalina         74.68 327    eP      P      09 12 50.1 +0.5
NACGM  Naroch           74.70 327⇑   eP      P      09 12 50.4 +0.7
       baz=54
SLIT   Slitere, Latvi   74.95 330    eP      P      09 12 51.6 +0.5
MOD    Modoc Plateau    74.98  50     IAmb   IAmb   09 12 54.2
       comp=Z,19nm,1.7s
SCO    Scoresbysund     75.25 354    eP      P      09 12 54.1 +1.5
SCO                                   IAmb   IAmb   09 13 00.1
       comp=Z,27nm,1.9s
UPP    Uppsala          75.29 334    eP      P      09 12 53.0 +0.1
VSVD   Vaisvydziai      75.31 328    eP      P      09 12 53.0 -0.1
TBLU   Trondheim        75.33 339    eP      P      09 12 52.3 -0.8
JTMT   Jette            75.39  42     P      P      09 12 54.9 +0.9
JTMT                                  IAmb   IAmb   09 12 56.4
       comp=Z,7.4nm,0.7s
PABE   Paberze          75.59 328     P      P      09 12 54.8 +0.1
PABE   Paberze          75.59 328    eP      P      09 12 54.6 -0.1
WVOR   Wild Horse Val   75.74  48     P      P      09 12 54.9 -1.2
WVOR                                  IAmb   IAmb   09 12 59.5
       comp=Z,15nm,1.6s
WVOR   Wild Horse Val   75.74  48     P      P      09 12 54.9 -1.2
WVOR                                  pmax   pmax
       comp=Z,15nm,1.6s
PLID   Pearl Lake       75.89  45     IAmb   IAmb   09 12 59.4
       comp=Z,13nm,1.6s
AKASG  Malin Array Be   76.03 322     P      P      09 12 57.0 -0.3
       comp=Z,11nm,0.4s,baz=50,slow=6.0,SNR=41
       comp=Z,11nm,0.4s
AKASG  Malin Array Be   76.03 322     P      P      09 12 56.9 -0.4
AKBB   Malin Array Si   76.03 322     P      P      09 12 55.7 -1.7
AKBB   Malin Array Si   76.03 322d  iP      P      09 12 57.0 -0.4
AKBB                                  pmax   pmax
       comp=Z,11nm,0.4s
NC405  NORSAR Array S   76.46 337     P      P      09 12 58.4 -1.3
NC303  NORSAR Array S   76.49 337     P      P      09 12 59.3 -0.4
NC303                                 IAmb   IAmb   09 13 02.2
       comp=Z,23nm,1.4s
VIKU   Vikbolandet      76.58 333    eP      P      09 13 00.3  0.0
DOMB   Dombas           76.60 338    eP      P      09 13 00.3 -0.1
NC204  NORSAR Array S   76.65 337     P      P      09 13 00.4 -0.4
NB2    NORSAR Subarra   76.68 337     P      P      09 13 00.7 -0.2
       comp=Z,70nm,2.0s,baz=41,slow=5.6
NB2    NORSAR Subarra   76.68 337     P      P      09 13 00.7 -0.2
       baz=41,slow=5.6
NOA    NORSAR Array B   76.68 337     P      P      09 13 00.9  0.0
       comp=Z,3.6nm,0.6s,baz=43,slow=5.7,SNR=37
NOA                                   pP     pP     09 13 36.4 -0.1
       comp=Z,2.7nm,0.8s,baz=41,slow=5.7,SNR=3.7
       comp=Z,3.6nm,0.6s
NC602  NORSAR Array S   76.80 337    eP      P      09 13 00.9 -0.6
MFID   Camas Ranch      76.92  46     IAmb   IAmb   09 13 06.0
       comp=Z,11nm,1.4s
HRY    Holter Researc   77.36  42     P      P      09 13 03.1 -1.9
ICESG  Greenland Ices   77.50 360    eP      P      09 13 06.9 +1.2
ICESG                                 IAmb   IAmb   09 13 08.5
       comp=Z,6.2nm,0.7s
FCC    Fort Churchill   77.60  25     P      P      09 13 05.4 -0.6
FCC    Fort Churchill   77.60  25     P      P      09 13 05.4 -0.6
FCC                                   pmax   pmax
       comp=Z,4.0nm,1.0s
OSL    Oslo             77.66 336    eP      P      09 13 06.5 +0.2
HLID   Hailey           77.69  46     P      P      09 13 08.5 +1.4
       baz=305
EGMT   Eagleton         77.71  40     P      P      09 13 08.3 +1.3
       baz=307
SKAR   Skarslia         77.88 338    eP      P      09 13 08.2 +0.6
BOZ    Bozeman (W)      78.13  43     P      P      09 13 10.8 +1.4
       baz=306,SNR=6.1
NVAR   Mina Array Bea   78.14  52     P      P      09 13 10.9 +1.2
       comp=Z,2.4nm,0.6s,baz=296,slow=5.2,SNR=28
NVAR                                  pP     pP     09 13 45.7 +0.5
       comp=Z,1.9nm,0.8s,baz=296,slow=4.5,SNR=2.5
       comp=Z,2.4nm,0.6s
KONO   Kongsberg        78.26 337    eP      P      09 13 09.5 -0.1
ASK    Askoy            79.00 339    eP      P      09 13 14.0 +0.4
ODD1   Odda             79.01 338    eP      P      09 13 15.1 +1.3
BER    Bergen           79.03 339    eP      P      09 13 15.2 +1.4
H17A   Grant Village    79.44  43     P      P      09 13 20.4 +3.6
       baz=307,SNR=6.1
BLS5   Blasjo           79.45 338    eP      P      09 13 15.2 -0.9
MOOW   Moose Ponds      79.74  44     IAmb   IAmb   09 13 22.8
       comp=Z,16nm,2.0s
RLMT   Red Lodge        79.74  42     IAmb   IAmb   09 13 21.4
       comp=Z,18nm,1.7s
RLMT   Red Lodge        79.74  42     P      P      09 13 20.0 +1.7
       baz=308,SNR=5.4
TPAW   Teton Pass       79.77  44     IAmb   IAmb   09 13 22.1
       comp=Z,15nm,1.7s
R11A   Troy Canyon, C   79.95  51     IAmb   IAmb   09 13 22.5
       comp=Z,22nm,1.9s
R11A   Troy Canyon, C   79.95  51     P      P      09 13 21.1 +1.6
       baz=305,SNR=7.6
BR131  Keskin Array S   79.96 311     P      P      09 13 18.6 -0.9
BR131  Keskin Array S   79.96 311d  eP      P      09 13 19.4 -0.1
BRTR   Keskin Array B   79.96 311     P      P      09 13 19.4 -0.1
       comp=Z,1.6nm,0.5s,baz=123,slow=6.1,SNR=11
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       comp=Z,1.6nm,0.5s
BRTR  Keskin Array B     79.96 311  P        P       09 13 18.6 -0.9
BRTR  Keskin Array B     79.96 311  i P      P       09 13 20.0 +0.5
BRTR                                pmax     pmax
       comp=Z,2.0nm,0.6s
KMY   Karmoy             79.99 338  eP       P       09 13 19.6 +0.6
DY2G  Dye2               80.02   2  eP       P       09 13 20.7 +1.4
DY2G                                IAmb     IAmb    09 13 23.7
       comp=Z,6.1nm,0.6s
FURC  Furnace Creek,     80.19  53  P        P       09 13 22.0 +1.5
       baz=305,SNR=6.5
TPNV  Topopah Spring     80.32  52  IAmb     IAmb    09 13 23.5
       comp=Z,6.0nm,0.7s
TPNV  Topopah Spring     80.32  52  P        P       09 13 23.0 +1.6
       baz=305,SNR=8.7
EDW2  Edwards Air Fo     80.33  55  P        P       09 13 23.2 +1.8
       baz=304
LAO   LASA Array         80.42  40  P        P       09 13 23.4 +1.6
       baz=310
QSM   Queen of Sheba     80.47  53  IAmb     IAmb    09 13 24.8
       comp=Z,21nm,1.4s
HWUT  Hardware Ranch     80.54  46  IAmb     IAmb    09 13 25.8
       comp=Z,29nm,1.9s
RAYN  Ar Rayn            80.57 292  P        P       09 13 22.3 -0.6
RAYN  Ar Rayn            80.57 292  P        P       09 13 22.3 -0.6
RAYN                                pmax     pmax
       comp=Z,9.0nm,1.2s
DUG   Dugway, Tooele     80.62  48  IAmb     IAmb    09 13 26.1
       comp=Z,12nm,1.4s
DUG   Dugway, Tooele     80.62  48  P        P       09 13 25.0 +2.0
       baz=306,SNR=7.7
KOLS  Kolonicke sedl     80.65 324  eP       P       09 13 24.0 +1.2
KOLS                                pmax     pmax
       comp=Z,11nm,1.4s
KOLS  Kolonicke sedl     80.65 324  eP       P       09 13 24.0 +1.2
GSC   Goldstone, Bar     80.89  54  P        P       09 13 26.0 +1.6
       baz=305
BFSC  Mount Baldy Ra     80.92  55  P        P       09 13 26.4 +1.8
       baz=305
MLR   Muntele Rosu       80.97 319  IAmb     IAmb    09 13 27.9
       comp=Z,10nm,1.3s
BW06  Boulder Array      81.02  44  P        P       09 13 26.3 +1.1
       baz=308
PDAR  Pinedale Array     81.02  44  P        P       09 13 25.9 +0.7
       comp=Z,0.8nm,0.6s,baz=252,slow=1.8,SNR=14
PDAR                                pP       pP      09 14 00.8  0.0
       comp=Z,0.5nm,0.6s,baz=255,slow=3.5,SNR=2.2
       comp=Z,0.8nm,0.6s
CRVS  Cervenica-Dubn     81.07 324  eP       P       09 13 26.3 +1.3
CRVS                                pmax     pmax
       comp=Z,79nm,2.3s
CRVS  Cervenica-Dubn     81.07 324  eP       P       09 13 26.3 +1.3
TUQ   Turquoise Moun     81.40  53  P        P       09 13 28.7 +1.5
       baz=305
HEC   Hector,Ludlow      81.48  54  P        P       09 13 29.0 +1.5
       baz=305
LANS  Liptovska Anna     81.86 325  eP       P       09 13 31.0 +1.7
LANS                                pmax     pmax
       comp=Z,5.0nm,0.7s
LANS  Liptovska Anna     81.86 325  eP       P       09 13 31.0 +1.7
GMRC  Granite Mounta     81.95  54  P        P       09 13 31.7 +1.6
       baz=306
PFO   Pinyon Flats O     82.09  55  P        P       09 13 31.8 +1.0
       baz=305
BELC  Belle Mtn. Jos     82.18  54  P        P       09 13 32.2 +0.9
       baz=306
MORC  Moravsky Berou     82.33 326  P        P       09 13 31.7  0.0
MORC                                IAmb     IAmb    09 13 34.6
       comp=Z,14nm,1.4s
MORC  Moravsky Berou     82.33 326  P        P       09 13 31.7  0.0
MORC                                pmax     pmax
       comp=Z,14nm,1.4s
MORC  Moravsky Berou     82.33 326  eP       P       09 13 32.0 +0.3
RDMU  Red Mountain       82.37  46  IAmb     IAmb    09 13 35.3
       comp=Z,9.1nm,0.6s
KRLC  Kraliky            82.47 327  eP       P       09 13 33.1 +0.7
KRLC  Kraliky            82.47 327  eP       P       09 13 33.1 +0.7
DPC   Dobruska-Polom     82.48 327  eP       P       09 13 33.0 +0.5
DPC   Dobruska-Polom     82.48 327  eP       P       09 13 33.0 +0.5
PSZ   Piszkesteto        82.50 324  IAmb     IAmb    09 13 35.6
       comp=Z,14nm,1.1s
VYHS  Vyhne              82.62 325  eP       P       09 13 34.1 +0.9
VYHS                                pmax     pmax
       comp=Z,11nm,1.5s
VYHS  Vyhne              82.62 325  eP       P       09 13 34.1 +0.9
SRU   San Rafael Swe     82.69  48  IAmb     IAmb    09 13 36.0
       comp=Z,8.7nm,0.7s
K22A  Casper             82.84  43  IAmb     IAmb    09 13 37.2
       comp=Z,12nm,1.5s
K22A  Casper             82.84  43  P        P       09 13 35.6 +1.0
       baz=310
JAVC  Velka Javorina     82.92 326  eP       P       09 13 36.6 +1.9
VRAC  Vranov             83.10 326  eP       P       09 13 36.2 +0.6
BRG   Berggiesshubel     83.16 329  eP       P       09 13 36.5 +0.6
BRG                                 Amp              09 13 38.5
       comp=Z,11nm,1.4s
BRG                                 PP       PP      09 16 48.6 +0.3
BRG                                 Amp              09 16 51.4
       comp=Z,26nm,1.9s
BRG   Berggiesshubel     83.16 329  eP       P       09 13 36.4 +0.6
BRG                                                  09 16 48.5
BRG                                 pmax     pmax
       comp=Z,11nm,1.4s
BRG                                 pmax     pmax
       comp=Z,26nm,1.9s
CLL   Collm              83.24 330  IAmb     IAmb    09 13 39.0
       comp=Z,7.8nm,0.9s
CLL   Collm              83.24 330  i P      P       09 13 36.0 -0.2
       comp=Z,13nm,1.3s
CLL                                 epP      pP      09 14 12.0 -0.4
CLL                                 ePP      PP      09 16 48.0 -0.9
       comp=Z,25nm,1.7s
CLL                                 eS       S       09 23 45.0 +0.7
CLL                                 eSS      SS      09 29 18.0 +7.1
CLL                                 eSSS     SSS     09 32 30.0
CLL                                 esSSS            09 33 54.0
SMOL  Smolenice          83.28 326  eP       P       09 13 36.8 +0.3
SMOL                                pmax     pmax
       comp=Z,9.0nm,1.2s
SMOL  Smolenice          83.28 326  eP       P       09 13 36.8 +0.3
KRUC  Moravsky           83.37 326  eP       P       09 13 37.2 +0.2
O20A  White River Ci     83.43  46  IAmb     IAmb    09 13 40.2
       comp=Z,19nm,1.6s
O20A  White River Ci     83.43  46  P        P       09 13 38.9 +1.2
       baz=309
MODS  Modra-Piesok       83.45 325  eP       P       09 13 38.1 +0.7
MODS                                pmax     pmax
       comp=Z,38nm,1.3s
MODS  Modra-Piesok       83.45 325  eP       P       09 13 38.1 +0.7
PRU   Pruhonice          83.54 328  eP       P       09 13 38.6 +0.8
PRU   Pruhonice          83.54 328  eP       P       09 13 38.6 +0.8
ZST   Bratislava         83.66 325  eP       P       09 13 39.2 +0.8
ZST                                 pmax     pmax
       comp=Z,50nm,1.5s
ZST   Bratislava         83.66 325  eP       P       09 13 39.2 +0.8
N23A  Red Feather La     84.30  44  IAmb     IAmb    09 13 45.4
       comp=Z,22nm,1.6s
N23A  Red Feather La     84.30  44  P        P       09 13 43.9 +1.7
       baz=310
RONA  Rosalia, Austr     84.39 325  eP       P       09 13 43.2 +0.9
       comp=Z,16nm,1.3s,SNR=8.4
CONA  Conrad Observa     84.43 326  i P      P       09 13 43.3 +0.8
       comp=Z,20nm,1.4s,SNR=13
CKRC  Cesky Krumlov      84.50 327  eP       P       09 13 43.2 +0.5
KHC   Kasperske Hory     84.60 328  IAmb     IAmb    09 13 45.7
       comp=Z,6.4nm,0.8s
KHC   Kasperske Hory     84.60 328d iP       P       09 13 43.4 +0.2
KHC                                 pmax     pmax
       comp=Z,27nm,1.4s
KHC   Kasperske Hory     84.60 328  eP       P       09 13 43.3 +0.1
GEC2  GERESS Array S     84.75 328  IAmb     IAmb    09 13 46.1
       comp=Z,8.1nm,1.2s
GERES GERESS Array B     84.75 328  P        P       09 13 43.9 -0.3
       comp=Z,4.0nm,0.7s,baz=47,slow=6.4,SNR=28
       comp=Z,4.0nm,0.7s
GERES GERESS Array B     84.75 328  P        P       09 13 43.7 -0.4
ARSA  Arzberg            85.08 326  i P      P       09 13 45.5 -0.1
       comp=Z,4.1nm,0.7s
ISCO  Idaho Springs      85.20  45  P        P       09 13 48.4 +1.6
       baz=311
GRA1  Grafenberg Arr     85.20 329  IAmb     IAmb    09 13 49.0
       comp=Z,12nm,1.0s
GRFO  Grafenberg         85.20 329  P        P       09 13 46.0 -0.2
GRFO                                IAmb     IAmb    09 13 49.0
       comp=Z,14nm,1.1s
GRFO  Grafenberg         85.20 329  P        P       09 13 46.0 -0.2
GRFO                                pmax     pmax
       comp=Z,14nm,1.1s
MOA   Molln              85.23 327  i P      P       09 13 47.0 +0.6
       comp=Z,2.7nm,0.6s
BIOA  Bad Ischl, Aus     85.63 327  i P      P       09 13 49.0 +0.5
       comp=Z,4.5nm,0.6s
SOKA  Soboth             85.72 325  eP       P       09 13 49.5 +0.5
       comp=Z,16nm,1.3s,SNR=9.8
S22A  4UR Ranch, Cre     85.80  47  P        P       09 13 51.4 +1.6
       baz=310
OBKA  Obir               86.08 326  i P      P       09 13 52.4 +1.7
       comp=Z,2.1nm,0.6s
KBA   Koelnbreinsper     86.22 327  i P      P       09 13 52.2 +0.7
       comp=Z,1.9nm,0.6s
SDCO  Great Sand Dun     86.60  46  P        P       09 13 55.4 +1.7
       baz=311
MEM   Membach            86.60 332  dPcP     P       09 13 53.5 +0.4
ABTA  Abfaltersbach      86.85 327  i P      P       09 13 53.9 -0.6
       comp=Z,1.9nm,0.5s
WTTA  Wattenberg         86.86 327  eP       P       09 13 55.3 +0.7
       comp=Z,1.8nm,0.5s
RETA  Reutte             87.07 328  i P      P       09 13 55.8 +0.3
       comp=Z,3.5nm,0.6s
SQTA  Sankt Quirin       87.08 328  i P      P       09 13 56.0 +0.4
       comp=Z,2.4nm,0.4s
STAL  STALIGIAL          87.12 326  IAmb     IAmb    09 13 55.8
       comp=Z,5.5nm,0.5s
BGES  Gesves             87.14 333  dPcP     P       09 13 56.1 +0.4
RCHB  Rochefort          87.27 333  dPcP     P       09 13 56.2  0.0
BMRD  Maredsous          87.32 333  dPcP     P       09 13 56.9 +0.4
SNF   Seneffe            87.34 333  dPcP     PcP     09 13 57.7 -0.8
DAVA  Damuels            87.61 328  eP       P       09 13 58.3 +0.1
       comp=Z,3.0nm,0.6s
CTI   Castel Tesino      87.77 327  IAmb     IAmb    09 13 59.5
       comp=Z,4.3nm,0.6s
TXAR  Lajitas Array      93.29  51  P        P       09 14 26.3 +1.4
       comp=Z,2.5nm,0.7s,baz=294,slow=2.5,SNR=30
TXAR                                pP       pP      09 15 03.4 +1.9
       comp=Z,1.2nm,0.9s,baz=305,slow=4.4,SNR=2.4
       comp=Z,2.5nm,0.7s
KMBO  Kilima Mbogo      100.95 276  i P      Pdif    09 15 01.7 +1.9
KMBO                                pmax     pmax
       comp=Z,1.0nm,0.3s
TORD  Torodi Ar. Bea    118.57 312  PKP      PKPdf   09 19 56.6 -0.9
       comp=Z,1.1nm,0.5s,baz=66,slow=1.9,SNR=13
BOSA  Boshof            124.47 256  PKP      PKiKP   09 20 08.6 -0.2
       comp=Z,3.0nm,0.9s,baz=240,slow=1.6,SNR=5.4
DBIC  Dimbokro          127.62 313  PKP      PKPdf   09 20 14.6 -0.2
       comp=Z,1.3nm,0.3s,baz=53,slow=5.0,SNR=4.7
LPAZ  La Paz            149.56  62  PKPbc    PKiKP   09 21 00.8  0.0
       comp=Z,3.9nm,0.7s,baz=358,slow=3.1,SNR=14
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CNRM ***28*** *09:04:40.1, 35°.63N×3°.81W, h1^{km}, ml3.0*
IGIL ***28*** *09:04:41.6, 35°.46N×3°.78W, h0^{km}, ML2.5*
SFS ***28*** *09:04:42.0, 35°.46N×3°.77W, h11^{km}, ML2.9, ALBORAN SUR*
INMG ***28*** *09:04:42.1±1.3, 35°.45N×3°.77W, h14^{km}±4^{km}, ML2.4, Error ellipse: s-maj=3.0km s-min=2.9km az=15.0*
MDD ***28*** *09:04:42.1±0.3, 35°.46N×3°.78W, h11^{km}, mb_Lg2.9/23, Error ellipse: s-maj=3.1km s-min=2.0km az=172.0*
ISC 28 09:04:40.8±1.0**, 35°.50N**±0°.02×**3°.80W**±0°.02**, h13**^{km}±9^{km}**, n67,** σ**1ˢ25**/119**, 2C, Strait of Gibraltar**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC     h  m  s    ISC
PALE  Palemas             0.30 202  P        Pb      09 04 48.0 -0.2
PALE  Palemas             0.30 202  P        Pb      09 04 47.9 -0.2
PALE                                S        Sb      09 04 52.7 -0.2
PVLZ  Peæn de             0.52 232  P        Pb      09 04 52.0 +0.2
PVLZ                                S        Sb      09 04 58.6 -0.7
GOG   Mont Gurugu         0.71 112  P        Pb      09 04 55.0 -0.2
GOG                                 S        Sn      09 05 08.0 +0.3
GOG   Mont Gurugu         0.71 112  P        Pg      09 04 54.1 -0.6
GOG                                 S        Sb      09 05 04.5 -0.5
WMELI Melilla             0.72 104  P        Pg      09 04 54.1 -0.6
WMELI                               S        Sg      09 05 02.9 -1.3
EMEL  Melilla             0.72 106  Pg       Pg      09 04 54.4 -0.3
EMEL                                Sg       Sg      09 05 03.9 -0.3
EALB  Alboran             0.77  55  Pg       Pb      09 04 56.1 +0.1
EALB                                Sg       Sb      09 05 06.6 +0.2
EALB                                i Vmb_Lg         09 05 08.8
AKLM  AKL                 0.99 183  P        Pb      09 04 60.0 +0.2
AKLM  AKL                 0.99 183  P        Pg      09 04 59.1 -0.7
AKLM                                S        Sn      09 05 15.0 +0.7
CHAS  Isla Isabel II      1.17 105  P        Pb      09 05 02.0 -0.8
CHAS                                S        Sb      09 05 16.4 -1.4
SMIR  Smir Dam            1.30 279  P        Pn      09 05 03.1 -1.6
SMIR                                S        Sb      09 05 19.5 -2.2
CHEFC Chefchaouen         1.32 253  P        Pg      09 05 06.0 -0.1
CHEFC Chefchaouen         1.32 253  P        Pb      09 05 05.5 +0.1
CHEFC                               S        Sb      09 05 22.2 -0.1
EMIJ  Mijas               1.32 324  Pn       Pn      09 05 05.4 +0.3
EMIJ                                Sg       Sg      09 05 24.9 +1.4
EMIJ                                i Vmb_Lg         09 05 27.4
TAF   Taforalt            1.33 121  P        Pn      09 05 05.2 +0.1
TAF                                 S        Sg      09 05 24.2 +0.6
CEU   Ceuta               1.34 288  P        Pn      09 05 04.6 -0.7
CEU                                 S        Sb      09 05 18.6 -4.3
ECEU  Ceuta               1.34 288  Pn       Pn      09 05 04.9 -0.4
ECEU                                Sn       Sb      09 05 21.7 -1.3
ECEU                                i Vmb_Lg         09 05 21.8
EMAL  Malaga-Limoner      1.36 338  P        Pn      09 05 05.7 +0.2
EMAL                                S        Sn      09 05 22.6 -0.9
ELGU  Los Guajares,       1.38   6  Pn       Pn      09 05 05.4 -0.4
ELGU                                Sg       Sg      09 05 24.9 -0.2
ELGU                                i Vmb_Lg         09 05 28.0
JBK   JBK                 1.54 138  P        Pg      09 05 10.1 -0.3
JBK   JBK                 1.54 138  P        Pn      09 05 07.8 -0.5
JBK                                 S        Sn      09 05 28.4 +0.2
EBER  Berja               1.58  28  Pn       Pn      09 05 08.6 -0.1
EBER                                Sg       Sg      09 05 32.1 +0.4
EBER                                i Vmb_Lg         09 05 32.8
EGOR  Sierra Gorda,       1.63 351  Pn       Pn      09 05 09.9 +0.6
EGOR                                Sg       Sg      09 05 34.8 +1.6
EGOR                                i Vmb_Lg         09 05 38.4
EJIF  Jimena Fronter      1.65 306  Pn       Pn      09 05 10.2 +0.6
EJIF                                Sn       Sn      09 05 27.6 -3.1
EQUE  Quentar             1.73  10  Pn       Pn      09 05 11.4 +0.7
EQUE                                Sn       Sn      09 05 33.2 +0.5
EQUE                                i Vmb_Lg         09 05 35.6
ENIJ  Nijar               1.96  41  Pn       Pn      09 05 13.9 +0.1
ENIJ                                Sn       Sn      09 05 37.5 -0.8
ENIJ                                i Vmb_Lg         09 05 37.8
LCRM  LCR                 2.00 206  P        Pg      09 05 19.0 -0.3
EQES  Quesada             2.38  14  Pn       Pb      09 05 21.9 -1.7
EQES                                Sn       Sn      09 05 49.2 +0.5
EQES                                i Vmb_Lg         09 05 53.8
EADA  Adamuz              2.74 347  Pn       Pn      09 05 25.7 +1.2
EADA                                Sn       Sn      09 05 58.2 +0.7
EADA                                i Vmb_Lg         09 06 07.0
MD31  MD31                2.74 197  P        Pn      09 05 25.6 +1.0
MD31                                S        Sn      09 05 59.9 +2.2
MDT   Midelt              2.76 194  P        Pn      09 05 26.7 +1.8
MDT   Midelt              2.76 194  P        Pn      09 05 26.7 +1.8
MDT                                 S        Sn      09 05 59.6 +1.5
ECAB  El Cabril           2.88 334  Pn       Pn      09 05 27.7 +1.2
ECAB                                Sn       Sn      09 06 01.3 +0.2
ECAB                                i Vmb_Lg         09 06 18.5
ZHG   ZHG                 3.11 230  P        Pn      09 05 30.4 +0.7
EMUR  La Murta            3.12  41  Pn       Pn      09 05 30.7 +1.0
EMUR                                Sn       Sn      09 06 06.3 -0.6
EMUR                                i Vmb_Lg         09 06 08.0
EMIN  Mina Concepcio      3.23 315  Pn       Pn      09 05 32.3 +1.0
EMIN                                Sn       Sn      09 06 08.7 -1.0
EMIN                                i Vmb_Lg         09 06 11.8
EGRO  El Granado          3.59 306  Pn       Pn      09 05 37.3 +1.1
EGRO                                Sn       Sn      09 06 17.9 -0.7
EGRO                                i Vmb_Lg         09 06 33.8
ETOB  Tobarra             3.62  29  Pn       Pn      09 05 38.5 +1.8
ETOB                                Sn       Sn      09 06 18.6 -0.8
ETOB                                i Vmb_Lg         09 06 21.7
PVAQ  Vaqueiros           3.69 302  ePn      Pn      09 05 38.1 +0.6
PVAQ                                eSn      Sn      09 06 20.8  0.0
PVAQ                                A        A       09 06 22.0
       9.8nm,0.4s
PBAR  Barrancos           3.73 317  ePn      Pn      09 05 39.3 +1.2
PBAR                                eSn      Sn      09 06 21.7 -0.1
PBAR                                A        A       09 06 25.4
       3.0nm,0.4s
PBDV  Barranco-do-Ve      3.76 299  ePn      Pn      09 05 39.3 +0.7
PBDV                                eSn      Sn      09 06 21.9 -0.8
PBDV                                A        A       09 06 24.0
       6.6nm,0.2s
PCVE  Castro Verde        4.02 303  ePn      Pn      09 05 42.9 +0.8
PCVE                                eSn      Sn      09 06 28.7 -0.4
PCVE                                A        A       09 06 34.5
       4.2nm,0.3s
PAB   San Pablo           4.07 354  Pn       Pn      09 05 43.9 +1.1
PAB                                 i Vmb_Lg         09 06 26.6
PAB                                 Sn       Sn      09 06 28.8 -1.5
PBEJ  Beja                4.12 309  ePn      Pn      09 05 45.3 +1.7
PBEJ                                eSn      Sn      09 06 32.8 +1.1
EBAD  Badajoz             4.14 323  Pn       Pn      09 05 45.5 +1.7
EBAD                                Sn       Sn      09 06 31.1 -1.0
EBAD                                i Vmb_Lg         09 06 36.9
ESDC  Sonseca Array       4.17 358  Pn       Pn      09 05 45.1 +0.8
ESDC                                Sn       Sn      09 06 31.3 -1.7
ESDC                                i Vmb_Lg         09 06 43.4
MESJ  Messejana           4.25 305  eP       Pn      09 05 46.1 +0.8
MESJ                                eS       Sn      09 06 33.5 -1.2
MESJ                                IAML             09 06 40.2
       comp=N,8.5nm,0.3s
MESJ  Messejana           4.25 305  ePn      Pn      09 05 46.2 +0.9
MESJ                                eSn      Sn      09 06 34.4 -0.4
MESJ                                A        A       09 06 40.7
       comp=N,5.1nm,0.9s
MORF  Marmelete           4.31 296  eP       Pn      09 05 46.9 +0.8
MORF  Marmelete           4.31 296  ePn      Pn      09 05 46.5 +0.4
MORF                                eSn      Sn      09 06 35.4 -0.9
MORF                                A        A       09 06 42.7
       comp=N,4.9nm,0.2s
PFVI  Vila Bisbo          4.37 293  ePn      Pn      09 05 47.6 +0.6
PFVI                                eSn      Sn      09 06 36.7 -1.1
PTEO  Sao Teotonio        4.46 299  ePn      Pn      09 05 49.2 +1.1
PTEO                                eSn      Sn      09 06 39.3 -0.6
PTEO                                A        A       09 06 45.8
       comp=N,8.7nm,0.4s
PESTR Estremoz            4.52 319  ePn      Pn      09 05 50.9 +1.9
PESTR                               eSn      Sn      09 06 42.5 +1.0
PESTR                               A        A       09 06 48.8
       comp=N,2.3nm,0.5s
EVO   Evora               4.53 313  P        Pn      09 05 50.0 +0.9
EVO                                 S        Sn      09 06 39.2 -2.5
PNCL  Nicolau / Gran      4.60 306⇑ ePn      Pn      09 05 51.0 +0.9
PNCL                                eSn      Sn      09 06 43.6 +0.1
PNCL                                A        A       09 06 49.2
       comp=N,3.5nm,0.8s
PMTG  Montargil           5.01 317  ePn      Pn      09 05 57.5 +1.7
PMTG                                eSn      Sn      09 06 54.2 +0.6
PMTG                                A        A       09 06 54.7
       comp=N,3.0nm,0.7s
PACT  Alcochete           5.18 311⇑ ePn      Pn      09 05 59.9 +1.9
PACT                                eSn      Sn      09 06 58.6 +1.0
PCBR  Castelo Branco      5.22 327  ePn      Pn      09 06 00.4 +1.8
EIBI  Ibiza               5.41  48  Pn       Pn      09 06 02.0 +0.8
EIBI                                i Vmb_Lg         09 07 01.9
ETOR  Torete              5.49  14  Pn       Pn      09 06 03.2 +0.8
ETOR                                Pg       Pb      09 06 19.9 +3.3
ETOR                                Sn       Sn      09 07 02.4 -3.0
ETOR                                i Vmb_Lg         09 07 33.5
PSBE  So Bento            5.64 317  ePn      Pn      09 06 06.2 +1.8
MVO   Moncorvo            6.20 337  ePn      Pn      09 06 14.3 +2.2
PVRL  Vila Real           6.54 333  ePn      Pn      09 06 18.7 +2.0
POLO  Lamas de Olo        6.65 333  ePn      Pn      09 06 20.6 +2.3
PBRG  Braganca            6.70 341  ePn      Pn      09 06 21.7 +2.7
ETOS  Mallorca            6.76  49  Pn       Pn      09 06 20.3 +0.5
ETOS                                i Vmb_Lg         09 08 16.0
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NEIC ***28*** *09:10:32.6±1.3, 36°.55N±0°.05×140°.57E±0°.09, h50^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=11.3km s-min=5.4km az=115.0*
JMA ***28*** *09:10:33.1±0.1, 36°.6N±0°.2×140°.5E±0°.4, h48^{km}, MD4.1/40, MV4.1/40, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
IDC ***28*** *09:10:35.5±2.1, 36°.61N×140°.35E, h72^{km}±20^{km}, mb3.6/13, mbtmp3.9/15, Error ellipse: s-maj=19.6km s-min=16.7km az=43.0*
ISC 28 09:10:32.8±0.7**, 36°.59N**±0°.03×**140°.51E**±0°.04**, h48**^{km}±6^{km}**, n80,** σ**1ˢ04**/72**, mb3.9**/18**, 8D, Near east coast of eastern Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC     h  m  s    ISC
JHO   Hitachi             0.05  66  ⇓P       Pn      09 10 40.5 +0.2
JHO                                 ⇓S       Sn      09 10 45.4 -0.3
JHO   Hitachi             0.05  66  A        A       09 10 40.5
       comp=E,41nm,0.2s,comp=E,16nm,0.2s
JHYU  Hitachinakayam      0.26 166  i P      Pn      09 10 41.8 +0.4
JHYU                                S        Sn      09 10 47.9 +0.5
JHYU  Hitachinakayam      0.26 166  A        A       09 10 41.8
       comp=E,95nm,0.6s,comp=E,110nm,0.3s
JYT   Yasato              0.44 215           Pn      09 10 43.3  0.0
JYT                                 Sn       Sn      09 10 50.4 -0.4
JYT   Yasato              0.44 215  ⇓P       Pn      09 10 43.4 +0.1
JYT                                 ⇓S       Sn      09 10 50.5 -0.2
JYT   Yasato              0.44 215  A        A       09 10 43.4
       comp=E,39nm,0.4s,comp=E,44nm,0.4s
JFFD  Fukushimafurud      0.50   5  A        A       09 10 44.2
       comp=E,3.0nm,0.3s,comp=E,8.0nm,0.9s
ONAJ  Iwakimizuishiy      0.56  24  P        Pn      09 10 45.0 +0.2
ONAJ                                S        Sn      09 10 53.3 -0.1
ONAJ  Iwakimizuishiy      0.56  24  A        A       09 10 45.0
       comp=E,31nm,0.3s,comp=E,25nm,0.2s
JSB   Shiboa              0.61 309  A        A       09 10 45.3
       comp=E,10.0nm,0.4s,comp=E,18nm,0.7s
JIHU  Itakohorinouch      0.62 179  A        A       09 10 45.8
       comp=E,36nm,0.5s,comp=E,20nm,0.4s
JFK   Kawauchi            0.83  20  ⇓P       Pn      09 10 48.3 +0.1
JFK                                 ⇓S       Sn      09 10 59.2 -0.3
JFK   Kawauchi            0.83  20  A        A       09 10 48.3
       comp=E,9.0nm,1.0s,comp=E,9.0nm,1.1s
JAG   Ashikaga            0.87 259  ⇓P       Pn      09 10 48.9 +0.2
JAG                                 ⇓S       Sn      09 11 00.1 -0.3
JAG   Ashikaga            0.87 259  A        A       09 10 48.9
       comp=E,6.0nm,0.6s,comp=E,10.0nm,0.4s
JFT   Otama               0.94 351  P        Pn      09 10 49.9 +0.2
JFT                                 S        Sn      09 11 02.2 +0.1
JSMT  Sammumatsuo         0.95 183  A        A       09 10 50.2
       comp=E,20nm,4.3s,comp=E,11nm,0.6s
JKT   Katashina           1.03 280  P        Pn      09 10 51.2 +0.2
JKT                                 S        Sn      09 11 04.7 +0.3
JKT   Katashina           1.03 280  A        A       09 10 51.2
       comp=E,11nm,0.2s,comp=E,12nm,0.4s
JFY   Yanaizu             1.04 322  P        Pn      09 10 51.3 +0.3
JFY                                 S        Sn      09 11 05.1 +0.5
TOK   Tokyo               1.09 214  A        A       09 10 52.1
       comp=E,9.0nm,0.5s,comp=E,23nm,0.8s
JMST  Minamisoumatoc      1.17  15  A        A       09 10 53.5
       comp=E,13nm,0.6s,comp=E,6.0nm,0.5s
JMM   Marumori            1.29  10           Pn      09 10 54.9 +0.4
JMM   Marumori            1.29  10  P        Pn      09 10 54.8 +0.4
JMM                                 S        Sn      09 11 11.1 +0.5
JMM   Marumori            1.29  10  A        A       09 10 54.8
       comp=E,4.0nm,0.4s,comp=E,7.0nm,0.5s
JUON  Uonuma              1.32 298  P        Pn      09 10 55.4 +0.5
JUON                                S        Sn      09 11 12.1 +0.8
JGK   Kuni                1.51 269  A        A       09 10 57.9
       comp=E,3.0nm,0.8s,comp=E,5.0nm,0.6s
JOU   Okura               1.78   4  A        A       09 11 02.2
       comp=E,2.0nm,0.6s,comp=E,3.0nm,0.8s
MJAR  Matsushiro Arr      1.85 269  P        Pn      09 11 02.0 -0.2
       44nm,0.3s,baz=90,slow=16,SNR=206
MJAR                                S        Sn      09 11 24.4 -0.1
       133nm,0.6s,baz=89,slow=27,SNR=11
MJAR  Matsushiro Arr      1.85 269           Pn      09 11 02.6 +0.4
MAJO  Matsushiro          1.86 269           Pn      09 11 03.5 +1.3
MJB9  Matsu-Tunnel        1.86 269           Pn      09 11 03.5 +1.2
JSD   Sado                2.30 309           Pn      09 11 08.2  0.0
JGF   Kuroka              2.74 250           Pn      09 11 16.4 +2.1
INU   Inuyama             3.09 247           Pn      09 11 18.0 -1.1
JHJ   Hachijo jima 2      3.51 190  P        Pn      09 11 27.1 +2.2
       29nm,0.3s,baz=68,slow=19,SNR=1.4
JHJ                                 S        Sn      09 12 06.4 +1.2
       64nm,0.3s,baz=256,slow=19,SNR=1.4
JHJ2  Mitsune             3.52 190  Pn       Pn      09 11 24.6 -0.4
JTM   Tenmabayashi        4.21   6  Pn       Pn      09 11 36.7 +2.2
ERM   Erimo               5.79  20  Pn       Pn      09 11 55.3 -0.8
JHS   Saijyo              6.22 257           Pn      09 12 04.7 +2.7
USRK  Ussuriysk Ar.      10.00 322  P        Pn      09 12 55.0 +1.3
       4.6nm,0.6s,baz=106,slow=15,SNR=1.9
USRK  Ussuriysk Ar.      10.00 322           Pn      09 12 53.4 -0.3
KSRS  Korea Array        10.11 279  P        Pn      09 12 59.4 +4.2
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	2.4nm,0.6s,baz=94,slow=14,SNR=12						
ULN	Ulaanbaatar	27.01	305	P	P	09 16 09.9	-0.4
ULN				IAmb	IAmb	09 16 24.6	
	comp=Z,2.0nm,0.7s						
H11N2	WAKE ISLAND Hy	28.55	119	T	T	09 46 13.6	
	baz=313,slow=75						
H11N1	WAKE ISLAND Hy	28.56	119	T	T	09 46 22.9	
	baz=313,slow=75						
H11N3	WAKE ISLAND Hy	28.57	119	T	T	09 46 21.8	
	baz=313,slow=75						
H11S1	WAKE ISLAND Hy	29.24	121	T	T	09 47 13.3	
	baz=314,slow=75						
H11S3	WAKE ISLAND Hy	29.24	121	T	T	09 47 15.0	
	baz=314,slow=75						
H11S2	WAKE ISLAND Hy	29.25	121	T	T	09 47 14.7	
	baz=314,slow=75						
QIZ	Qiongzhong	32.09	245	P	P	09 16 54.0	-1.3
ZAA0	Zalesovo Array	41.68	313	P	P	09 18 13.9	-2.5
ZAA0				IAmb	IAmb	09 18 17.1	
	comp=Z,4.7nm,0.7s						
ZALV	Zalesovo Beam	41.68	313	P	P	09 18 15.7	-0.8
	comp=Z,6.3nm,0.6s,baz=93,slow=7.3,SNR=20						
	comp=Z,6.3nm,0.6s						
ZALV	Zalesovo Beam	41.68	313	P	P	09 18 14.1	-2.4
MK31	Makanchi Array	43.74	302	P	P	09 18 33.0	-0.3
MKAR	Makanchi Array	43.74	302	P	P	09 18 32.3	-1.0
	comp=Z,1.5nm,0.7s,baz=89,slow=10.0,SNR=12						
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	43.74	302	P	P	09 18 32.9	-0.4
MAKZ	Makanchi	43.95	302	P	P	09 18 34.6	-0.4
KURK	Kurchatov	45.64	308	P	P	09 18 47.9	-0.4
KURK				IAmb	IAmb	09 18 48.4	
	comp=Z,7.0nm,0.7s						
KDAK	Kodiak Island	47.91	42	P	P	09 19 06.6	+0.6
	comp=Z,4.1nm,0.7s,baz=249,slow=2.9,SNR=6.1						
	comp=Z,4.1nm,0.7s						
KDAK	Kodiak Island	47.91	42	P	P	09 19 06.5	+0.6
ILAR	Eielson Array	50.26	32	P	P	09 19 24.4	+0.6
	comp=Z,0.7nm,0.6s,baz=277,slow=6.1,SNR=8.9						
	comp=Z,0.7nm,0.6s						
CHGR	Chuyangaron	55.20	295	P	P	09 20 00.0	-0.8
ARU	Arti	56.21	319	P	P	09 20 07.3	-0.4
ARU				IAmb	IAmb	09 20 07.9	
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	56.53	187	P	P	09 20 10.0	-0.3
	comp=Z,0.4nm,0.6s,baz=0.7,slow=7.4,SNR=4.0						
	comp=Z,0.4nm,0.6s						
WRA	Warramunga Arr	56.53	187	P	P	09 20 09.8	-0.5
ABKAR	Akbulak array	57.67	310	P	P	09 20 17.7	-0.4
ABKAR				IAmb	IAmb	09 20 17.9	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	60.26	187	P	P	09 20 37.1	+0.9
	comp=Z,0.2nm,0.6s,baz=23,slow=7.5,SNR=1.9						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	60.26	187	P	P	09 20 35.7	-0.5
ARCES	ARCESS Array B	64.16	339	P	P	09 21 02.1	+0.3
	comp=Z,1.2nm,0.8s,baz=46,slow=7.8,SNR=1.0						
	comp=Z,1.2nm,0.8s						
ARCES	ARCESS Array B	64.16	339	P	P	09 21 01.8	+0.1
ARCES				IAmb	IAmb	09 21 24.8	
	comp=Z,8.1nm,1.1s						
FINES	FINESS Array B	68.87	332	P	P	09 21 30.9	-1.0
	comp=Z,1.2nm,0.8s,baz=32,slow=8.2,SNR=4.8						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	68.87	332	P	P	09 21 31.9	0.0
AKASG	Malin Array Be	74.20	322	P	P	09 22 03.5	-0.8
	comp=Z,0.6nm,0.5s,baz=48,slow=7.8,SNR=2.1						
	comp=Z,0.6nm,0.5s						
NB2	NORSAR Subarra	74.31	337	P	P	09 22 04.5	-0.3
	comp=Z,1.7nm,0.9s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.31	337	P	P	09 22 04.4	-0.3
	comp=Z,0.8nm,0.8s,baz=39,slow=5.8,SNR=4.8						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	75.83	53	P	P	09 22 15.3	+1.1
	comp=Z,0.8nm,0.8s,baz=297,slow=4.6,SNR=6.8						
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	78.49	45	P	P	09 22 29.6	+0.5
	comp=Z,0.3nm,0.6s,baz=298,slow=3.2,SNR=3.6						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	90.96	52	P	P	09 23 32.7	+0.7
	comp=Z,0.3nm,0.5s,baz=295,slow=2.9,SNR=8.7						
	comp=Z,0.3nm,0.5s						

BJI ***28*** *09:39:03.8±0.0, 27°.53N×85°.15E, h8^{km}, mb4.6/42, mB4.5/18, Ms3.9/28, Ms7 3.8/26*
IDC ***28*** *09:39:08.8±0.5, 27°.87N×85°.46E, h0^{km}, mb4.4/35, mbtmp4.4/38, ML4.4/3, MS3.5/2, Error ellipse: s-maj=13.7km s-min=11.1km az=19.0*
MOS ***28*** *09:39:09.2±1.1, 27°.89N×85°.33E, h15^{km}, mb4.9/34, Error ellipse: s-maj=7.3km s-min=4.3km az=116.7*
NEIC ***28*** *09:39:10.8±1.7, 28°.01N±0°.04×85°.42E±0°.08, h10^{km}±1^{km}, mb4.6/107, Error ellipse: s-maj=11.9km s-min=6.2km az=110.0*
DMN ***28*** *09:39:11.2±0.1, 27°.94N×85°.50E, h10^{km}, Ml4.8/2, Error ellipse: s-maj=2.1km s-min=1.0km az=12.0*
NDI ***28*** *09:39:12.2±3.8, 27°.90N×85°.51E, h10^{km}, ML4.2, mb4.6(NEIC)*
ISC 28 09:39:11.2±0.7, **27°.87N**±0°.03×**85°.48E**±0°.02, **h18**^{km}±2^{km}, **n323**, σ1^{s}**65**/346, **mb4.6**/103, **18C-20D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.3	0.0
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.5	+0.3
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.6	+0.3
KKN				*e*Sg	Sg	09 39 19.6	-0.1
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.6	+0.3
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.6	+0.3
KKN	Kakani	0.19	246	*e*Pg	Pg	09 39 16.7	+0.4
KKN				*e*Sg	Sg	09 39 20.3	+0.6
	11µm,0.2s						
KKN				*e*Sg	Sg	09 39 20.3	+0.6
	36µm,0.2s						
KKN				*e*Sg	Sg	09 39 20.5	+0.8
	45µm,0.2s						
PKIN	Phulchoki	0.30	194	*e*Pg	Pn	09 39 18.8	-2.2
PKIN				*e*Sg	Sb	09 39 24.0	+1.3
	109µm,0.5s						
PKIN	Phulchoki	0.30	194	*e*Pg	Pn	09 39 18.9	-2.1
PKIN				*e*Sg	Sb	09 39 23.9	+1.3
PKI	Pulchoki	0.30	192	*e*Pg	Pn	09 39 19.0	-2.1
PKI				*e*Sg	Sb	09 39 24.1	+1.3
	63µm,0.4s						
PKI	Pulchoki	0.30	192	*e*Pg	Pn	09 39 19.0	-2.1
PKI				*e*Sg	Sb	09 39 24.2	+1.4
GUN	Gumba	0.36	83	*e*Pg	Pb	09 39 18.6	-0.7
GUN				*e*Sg	Sb	09 39 22.9	-1.7
	57µm,0.2s						
GUN	Gumba	0.36	83	*e*Pg	Pb	09 39 18.6	-0.7
GUN				*e*Sg	Sb	09 39 22.9	-1.7
DMN	Daman	0.42	232	*e*Pg	Pn	09 39 20.9	-1.7
DMN				*e*Sg	Sb	09 39 27.7	+1.2
	24µm,0.4s						
DMN	Daman	0.42	232	*e*Pg	Pn	09 39 20.8	-1.8
DMN				*e*Sg	Sb	09 39 27.7	+1.2
	26µm,0.5s						
JIRN	Jiri	0.66	108	*e*Pg	Pn	09 39 24.4	-1.6
JIRN				*e*Sg	Sb	09 39 32.7	-0.6
	13µm,0.3s						
JIRN	Jiri	0.66	108	*e*Pg	Pn	09 39 24.4	-1.6
JIRN				*e*Sg	Sb	09 39 32.8	-0.6
	26µm,0.3s						
GKN	Gorkha	0.76	280	*e*Pg	Pn	09 39 26.3	-0.9
GKN				*e*Sg	Sb	09 39 36.0	0.0
	2µm,0.3s						
GKN	Gorkha	0.76	280	*e*Pg	Pn	09 39 26.2	-0.9
GKN				*e*Sg	Sn	09 39 36.7	-1.5
	6µm,0.4s						
RAMN	Ramite	1.35	132	*e*Pg	Pg	09 39 36.4	-1.0
RAMN				*e*Sg	Sg	09 39 54.9	-0.2
	4µm,0.4s						
RAMN	Ramite	1.35	132	*e*Pg	Pg	09 39 36.3	-1.1
RAMN				*e*Sg	Sg	09 39 54.9	-0.2
	13µm,0.3s						
VLK	Valmikinagar	1.53	249	*e*P	Pg	09 39 40.3	-0.5
VLK				*e*S	Sg	09 40 01.6	+0.8
DANN	Dangsing	1.59	288	*e*Pg	Pg	09 39 40.7	-1.3
DANN				*e*Sg	Sg	09 40 02.1	-0.7
	822nm,0.3s						
DANN	Dangsing	1.59	288	*e*Pg	Pg	09 39 40.9	-1.1
DANN				*e*Sg	Sg	09 40 02.2	-0.6
	3µm,0.3s						
KOLN	Koldanda	1.67	267	*e*Pg	Pg	09 39 42.5	-0.9
KOLN				*e*Sg	Sg	09 40 05.0	-0.1
KOLN	Koldanda	1.67	267	*e*Pg	Pg	09 39 42.3	-1.1
KOLN	Koldanda	1.67	267	*e*Pg	Pg	09 39 42.4	-0.9
KOLN	Koldanda	1.67	267	*e*Pg	Pg	09 39 42.6	-0.9
KOLN				*e*Sg	Sg	09 40 04.8	-0.3
	1µm,0.3s						
KOLN				*e*Sg	Sg	09 40 04.9	-0.1
	7µm,0.3s						
KOLN				*e*Sg	Sg	09 40 05.1	-0.1
	5µm,0.4s						
ODAN	Odare	1.97	120	*e*Pg	Pg	09 39 47.3	-1.9
ODAN				*e*Sg	Sg	09 40 14.3	-0.6
ODAN				*e*Sg	Sb	09 40 14.4	+3.3
ODAN				*e*Sg	Sn	09 40 14.9	+6.5
ODAN	Odare	1.97	120	*e*Pg	Pg	09 39 47.4	-1.8
ODAN	Odare	1.97	120	*e*Pg	Pg	09 39 47.4	-1.8
ODAN	Odare	1.97	120	*e*Pg	Pg	09 39 47.5	-1.8
ODAN				*e*Sg	Sg	09 40 13.3	-1.6
	5µm,0.4s						
ODAN				*e*Sg	Sb	09 40 13.4	+2.3
	4µm,0.4s						
ODAN				*e*Sg	Sn	09 40 13.7	+5.3
	4µm,0.3s						
PYUN	Piuthan	2.21	277	*e*Pg	Pg	09 39 53.3	-0.5
PYUN				*e*Sg	Sg	09 40 20.9	-1.6
PYUN	Piuthan	2.21	277	*e*Pg	Pg	09 39 53.2	-0.5
PYUN				*e*Sg	Sg	09 40 20.9	-1.6
	6µm,0.5s						
VAR	Varanasi	3.38	221	*e*P	Pg	09 40 14.3	-1.7
VAR				*e*S	Sb	09 40 48.9	-2.4
BOK	Bokaro	4.07	175	*e*P	Pn	09 40 15.0	+2.3
BOK				*i* x	Pg	09 40 25.2	-4.1
LGTI	Lohaghat	4.86	290	*e*P	Pn	09 40 27.9	+4.5
PTH	Pithoragarh	4.92	291	*e*P	Pn	09 40 27.0	+2.7
LSA	Lhasa	5.30	69	Pn	Pn	09 40 33.1	+3.2
LSA	Lhasa	5.30	69	P	Pn	09 40 33.1	+3.2
LSA	Lhasa	5.30	69	Pn	Pn	09 40 33.5	+3.6
LSA				LR	LR		
	comp=N,1µm,9.6s						
LSA				LR	LR		
	comp=E,540nm,8.6s						
LSA				LR	LR		
	comp=Z,380nm,8.7s						
SHL	Shillong	6.17	110	Pn	Pn	09 40 42.7	+1.1
SHL	Shillong	6.17	110	P	Pn	09 40 42.7	+1.1
SHL	Shillong	6.17	110	*e*P	Pn	09 40 43.0	+1.4
SHL				*e*S	Sn	09 41 49.5	-2.3
JBP	Jabalpur	6.82	228	*e*x	Pn	09 40 52.5	+2.1
JBP				*e*x	Pn	09 40 52.5	+2.1
JBP				*e*P	Pn	09 40 52.5	+2.1
JBP				*e*P	Pn	09 40 52.5	+2.1
JBP				*e*S	Sn	09 42 08.8	+1.2
JBP				*e*S	Sn	09 42 09.2	+1.6
DDI	Dehra Dun	6.94	292	*e*P	Pn	09 40 54.9	+2.9
NDI	New Delhi	7.33	278	*e*P	Pn	09 40 52.0	-5.4
NDI				*e*S	Sn	09 42 24.0	+3.8
SMLA	Simla	7.94	296	*e*P	Pn	09 41 06.7	+1.0
SMLA				*e*S	Sn	09 42 32.4	-2.7
SMLA				IAML		09 42 36.3	
	comp=N,130nm,0.5s						
SMLA				IAML		09 42 39.5	
	comp=E,176nm,0.5s						
BHPL	Bhopal	8.61	239	*e*P	Pn	09 41 13.9	-1.1
BHPL				*e*S	Sn	09 42 45.6	-6.0
BHK	Bhakra	8.64	296	*e*x	Pn	09 41 13.0	-2.4
AJM	Ajmer	9.75	264	⇓*i*P	Pn	09 41 30.0	-0.6
AJM				*i* S	Sn	09 43 12.0	-7.7
GOMU	GeErMu	11.47	41	P	Pn	09 41 58.8	+4.4
GOMU				pP		09 42 01.8	
GOMU				sP		09 42 06.0	
GOMU				S	Sn	09 44 06.5	+4.2
GOMU				pmax	pmax		
	comp=E,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=E,39nm,5.0s						
GOMU				LR	LR		
	comp=E,230nm,11.1s						
GOMU				LR	LR		
	comp=E,200nm,11.0s						
GOMU				LR	LR		
	comp=E,290nm,10.8s						
CHCP	Chirah Chowk	11.98	302	P	Pn	09 41 59.7	-1.4
NIL	Nilore	11.99	302	Pn	Pn	09 41 58.7	-2.5
NIL	Nilore	11.99	302	P	Pn	09 41 58.7	-2.5
HYBB	Hyderabad (bro	12.21	213	*e*P	Pn	09 42 02.1	-2.2
HYBB				*e*		09 44 15.9	
HYB	Hyderabad	12.21	213	*e*P	Pn	09 42 01.1	-3.2
HYB				IAmb	IAmb	09 42 18.7	
	comp=Z,13nm,0.7s						
THW	Thamme Wali	12.84	296	P	Pn	09 42 09.8	-3.0
CEP	Cherat	13.08	300	P	Pn	09 42 13.4	-2.8
KSH	Kashi	14.04	328	P	Pn	09 42 25.8	-3.6
KSH				S	Sn	09 44 56.3	-8.5
KSH				pmax	pmax		
	comp=Z,26nm,0.8s						
POO	Poona	14.16	231	*e*P	Pn	09 42 25.0	-6.0
	comp=Z,30nm,0.2s						
POO				*e*S	Sn	09 44 58.0	-10
PZH	PanZhiHua	14.54	92	P	Pn	09 42 34.8	-1.4
PZH				S	Sn	09 45 18.5	+1.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.5s						
PZH				LR	LR		
	comp=Z,300nm,16.1s						
PZH				LR	LR		
	comp=Z,600nm,15.1s						
PZH				LR	LR		
	comp=Z,700nm,16.6s						
TARG	Taragay, Kyrgy	15.19	338	Pn	Pn	09 42 43.4	-1.7
TARG				IAmb	IAmb	09 42 52.7	
	comp=Z,66nm,1.4s						
TARG	Taragay, Kyrgy	15.19	338	P	Pn	09 42 43.4	-1.7
TARG				pmax	pmax		
	comp=Z,66nm,1.4s						
CHTO	Chiang Mai	15.29	123		Pn	09 42 46.6	+0.4
CHTO	Chiang Mai	15.29	123	P	Pn	09 42 46.6	+0.4
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CM31	Chiang Mai Arr	15.51	124	Pn	Pn	09 42 48.4	-0.7
CMAR	Chiang Mai Arr	15.51	124	Pn	Pn	09 42 47.8	-1.3
	comp=Z,0.5nm,0.3s,baz=302,slow=14,SNR=10						
CMAR				LR	LR	09 50 45.4	
	comp=Z,94nm,18.1s,baz=195,slow=45						
	comp=Z,1.3nm,0.3s						
CMAR	Chiang Mai Arr	15.51	124		Pn	09 42 48.3	-0.9
CMAR	Chiang Mai Arr	15.51	124	P	Pn	09 42 48.3	-0.9
KBL	Kabul	15.55	299	Pn	Pn	09 42 46.1	-3.6
KBL	Kabul	15.55	299	P	Pn	09 42 46.1	-3.6
KBL				pmax	pmax		
	comp=Z,71nm,1.1s						
PRZ	Przheval'sk	15.68	340	Pn	Pn	09 42 50.2	-1.1
PRZ				IAmb	IAmb	09 43 00.7	
	comp=Z,25nm,1.0s						
PRZ	Przheval'sk	15.68	340	P	Pn	09 42 50.2	-1.1
PRZ				pmax	pmax		
	comp=Z,25nm,1.0s						
KMI	Kunming	15.69	96	⇑P	P	09 42 54.5	-1.1
KMI				pP	pP	09 42 57.0	-4.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KDJ	Kajisay	15.76	337		Pn	09 42 51.3	-1.0
KDJ	Kajisay	15.76	337	P	Pn	09 42 51.3	-1.0
KDJ				pmax	pmax		
	comp=Z,23nm,1.2s						
WMQ	Urumqi	16.02	6	*e*P	P	09 42 57.8	-1.2
WMQ				PP	PnPn	09 43 06.0	+1.6
WMQ				LR	LR		
	comp=Z,390nm,11.5s						
WMQ				LR	LR		
	comp=Z,130nm,17.1s						
BOOM	Boomskoye usch	16.52	334		Pn	09 43 00.3	-1.9
BOOM	Boomskoye usch	16.52	334	P	Pn	09 43 00.3	-1.9
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA	Gaotai	16.56	42	*e*P	P	09 43 05.8	+0.7
GTA				pmax	pmax		
	comp=Z,51nm,0.8s						
GTA				pmax	pmax		
	comp=Z,71nm,5.5s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
GTA				LR	LR		
	comp=Z,170nm,15.3s						
GTA				LR	LR		
	comp=Z,240nm,16.0s						
GAR	Garm	16.81	315	P	Pn	09 43 03.2	-2.6
GAR				IAmb	IAmb	09 43 09.2	
	comp=Z,55nm,0.9s						
BTK	Batken	17.17	319	P	Pn	09 43 06.4	-3.8
BTK				IAmb	IAmb	09 43 13.7	
	comp=Z,45nm,0.8s						
BTK	Batken	17.17	319	P	Pn	09 43 06.4	-3.8
BTK				pmax	pmax		
	comp=Z,45nm,0.9s						
AAK	Ala-Archa	17.23	332	P	Pn	09 43 09.8	-1.2
	comp=Z,0.3nm,0.3s,baz=194,slow=15,SNR=2.6						
AAK				S	Sn	09 46 20.8	-1.5
	comp=Z,0.9nm,0.2s,baz=234,slow=18,SNR=1.6						
AAK				LR	LR	09 50 34.5	
	comp=Z,307nm,19.0s,baz=58,slow=40						
	comp=Z,9.9nm,0.8s						
AAK	Ala-Archa	17.23	332		Pn	09 43 09.8	-1.2
AAK	Ala-Archa	17.23	332	⇓*i*P	P	09 43 11.3	-1.2
AAK				pmax	pmax		
	comp=Z,24nm,1.7s						
CHGR	Chuyangaron	17.35	312		Pn	09 43 06.9	-5.6
CHGR	Chuyangaron	17.35	312	P	Pn	09 43 06.9	-5.6
CHGR				pmax	pmax		
	comp=Z,102nm,0.8s						
LZH	Lanzhou	17.58	58	*e*P	P	09 43 16.8	+0.3
LZH				pP	sP	09 43 20.5	-4.1
LZH				sP	pP	09 43 23.3	+1.0
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				LR	LR		
	comp=Z,230nm,16.4s						
LZH				LR	LR		
	comp=Z,150nm,17.1s						
LZH				LR	LR		
	comp=Z,180nm,16.0s						
TAS	Tashkent	18.87	320	P	P	09 43 29.0	-1.4
TAS	Tashkent	18.87	320	P	P	09 43 29.0	-1.4
TAS				pmax	pmax		
	comp=Z,196nm,0.2s						
GYA	Guiyang	18.90	89	⇓P	Pn	09 43 33.3	+1.6
GYA				S	Sn	09 46 59.5	-3.4
GYA				pmax	pmax		
	comp=Z,27nm,0.8s						
GYA				LR	LR		
	comp=Z,340nm,14.9s						
MK31	Makanchi Array	19.06	353	P	Pn	09 43 32.7	-0.5
MK31	Makanchi Array	19.06	353	*d i*P	Pn	09 43 33.2	-0.1
MKAR	Makanchi Array	19.06	353	P	Pn	09 43 33.2	0.0
	comp=Z,3.4nm,0.3s,baz=171,slow=12,SNR=203						
	comp=Z,18nm,0.6s						
MKAR	Makanchi Array	19.06	353		Pn	09 43 32.6	-0.7
MAKZ	Makanchi	19.11	353		Pn	09 43 33.2	-0.6
MAKZ				IAmb	IAmb	09 43 35.4	
	comp=Z,28nm,0.7s						
MAKZ	Makanchi	19.11	353	P	Pn	09 43 33.3	-0.6
MAKZ				pmax	pmax		
	comp=Z,28nm,0.7s						
PCHI	Peechi	19.27	208	*e*P	Pn	09 43 36.0	0.0
PCHI				*e*S	S	09 47 15.7	+3.2
KK31	Karatay Array	19.44	325	P	P	09 43 35.4	-1.2
KK31	Karatay Array	19.44	325	P	P	09 43 35.4	-1.2
KK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	19.44	325	P	P	09 43 35.3	-1.3
KKAR	Karatay Array	19.44	325	P	P	09 43 35.4	-1.2
KKAR				IAmb	IAmb	09 43 36.6	
	comp=Z,6.9nm,0.8s						
KKAR	Karatay Array	19.44	325	P	P	09 43 35.4	-1.2
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HRA	Herat	20.90	294		Pn	09 43 53.1	-2.3
PALK	Pallekele	20.98	193	P	P	09 44 01.0	+7.4
	comp=Z,8.3nm,0.4s,baz=104,slow=12,SNR=6.4						
ENH	Enshi	21.11	78	P	P	09 43 54.9	-0.1
ENH				IAmb	IAmb	09 44 03.3	
	comp=Z,28nm,0.9s						
KURBB	Kurchatov Arra	23.33	349	P	P	09 44 19.1	+0.9
	comp=Z,13nm,0.7s,baz=172,slow=10.0,SNR=54						
	comp=Z,13nm,0.7s						
KURK	Kurchatov	23.40	349	P	P	09 44 17.7	-1.2
KURK				IAmb	IAmb	09 44 21.0	
	comp=Z,24nm,0.8s						
KURK	Kurchatov	23.40	349	*d i*P	P	09 44 19.8	+0.9
KURK				pmax	pmax		
	comp=Z,29nm,0.8s						
BTO	Baotou	23.85	51	*e*P	P	09 44 24.5	+1.0
WSAR	Wadi Sarin	24.64	265	P	P	09 44 32.6	+1.8
	comp=Z,4.1nm,0.6s,baz=97,slow=5.3,SNR=4.3						
	comp=Z,4.1nm,0.6s						
WSAR	Wadi Sarin	24.64	265	P	P	09 44 32.6	+1.8
GEYT	Alibeck	24.99	301	P	P	09 44 35.1	+1.1
	comp=Z,2.4nm,0.4s,baz=76,slow=13,SNR=4.0						
	comp=Z,2.4nm,0.4s						
GEYT	Alibeck	24.99	301	P	P	09 44 31.8	-2.1
GYA0B	ALIBECK ARRAY	24.99	301	P	P	09 44 32.0	-1.9
GYA0B				IAmb	IAmb	09 44 48.3	
	comp=Z,10nm,1.0s						
HHC	Hu-ho-hao-te	25.02	52	*e*P	P	09 44 36.0	+1.8
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,3.9s						
HHC				LR	LR		
	comp=Z,320nm,12.4s						
HHC				LR	LR		
	comp=Z,260nm,15.9s						
HHC				LR	LR		
	comp=Z,500nm,19.6s						
SONM	Songino Array	25.74	34	P	P	09 44 42.5	+1.7
	comp=Z,19nm,0.6s,baz=219,slow=10,SNR=69						
SONM				PcP	PcP	09 48 11.0	+0.6
	comp=Z,0.4nm,0.4s,baz=222,slow=3.9,SNR=2.4						
	comp=Z,19nm,0.6s						
SONM	Songino Array	25.74	34	P	P	09 44 40.5	-0.2
ZAA0	Zalesovo Array	26.06	359	P	P	09 44 42.2	-1.2
ZAA0				IAmb	IAmb	09 44 45.4	
	comp=Z,20nm,0.8s						
ZALV	Zalesovo Beam	26.06	359	P	P	09 44 44.4	+1.0
	comp=Z,18nm,0.6s,baz=184,slow=9.4,SNR=64						
	comp=Z,18nm,0.6s						
ZALV	Zalesovo Beam	26.06	359	P	P	09 44 43.8	+0.4
ULN	Ulaanbaatar	26.08	34	P	P	09 44 43.9	0.0
ULN	Ulaanbaatar	26.08	34	*c i*P	P	09 44 45.5	+1.6
ULN				pmax	pmax		
	comp=Z,43nm,1.0s						
ZAK	Zakamensk	26.25	26	*e*P	P	09 44 46.6	+1.3
ZAK				pmax	pmax		
	comp=Z,16nm,1.3s						
HNS	HongShan	26.30	61	⇑P	P	09 44 47.5	+1.8
HNS				pmax	pmax		
	comp=Z,20nm,0.9s						
MOY	Mondy	26.48	22	*e*P	P	09 44 49.7	+2.3
BRVK	Borovoye	27.57	340	P	P	09 44 54.7	-2.3
BRVK	Borovoye	27.57	340	P	P	09 44 54.7	-2.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BJT	Baijiatuau	28.05	56	P	P	09 45 02.0	+0.5
BJT				IAmb	IAmb	09 45 17.8	
	comp=Z,14nm,1.1s						
BJT	Baijiatuau	28.05	56	P	P	09 45 02.0	+0.5
BJT				pmax	pmax		
	comp=Z,14nm,1.1s						
ABKAR	Akbulak array	28.99	324	P	P	09 45 09.4	-0.3
ABKAR				IAmb	IAmb	09 45 11.6	
	comp=Z,7.9nm,0.6s						
NJ2	Nanjing	29.15	74	*e*P	P	09 45 08.5	-2.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MNSI	Mandailing Nat	30.12	151	P	P	09 45 16.5	-3.5
SVE	Sverdlovsk	33.89	336	*e*P	P	09 45 53.4	+0.7
SVE				pmax	pmax		
	comp=Z,13nm,0.8s						
ARU	Arti	34.39	334	P	P	09 45 56.6	-0.5
ARU				IAmb	IAmb	09 45 58.9	
	comp=Z,8.8nm,0.8s						
ARU	Arti	34.39	334	*d i*P	P	09 45 57.6	+0.5
ARU						09 47 06.9	
ARU				S	S	09 51 26.1	+2.2
ARU				SS	SnSn	09 53 34.5	+0.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2	Changchun	35.71	53	*e*P	P	09 46 03.5	-5.1
CN2				pmax	pmax		

	comp=Z,10.0nm,0.6s						
BOD	Bodaibo	35.99	26	eP	P	09 46 11.7	+0.9
BOD				pmax	pmax		
	comp=Z,15nm,0.9s						
RAYN	Ar Rayn	36.17	272	P	P	09 46 11.5	-1.4
RAYN				IAmb	IAmb	09 46 19.0	
	comp=Z,8.6nm,1.5s						
RAYN	Ar Rayn	36.17	272	P	P	09 46 11.5	-1.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZEI	Tsey	36.66	305	eP	P	09 46 18.3	+1.3
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSAR	Wonju Array Be	36.70	64	P	P	09 46 17.5	+0.4
KSAR	Wonju Array Be	36.70	64	P	P	09 46 17.5	+0.4
KSRS	Korea Array	36.73	64	P	P	09 46 17.1	-0.2
	comp=Z,1.1nm,0.5s,baz=279,slow=8.4,SNR=7.2						
	comp=Z,1.1nm,0.5s						
KSCHJ	Chungju	36.75	65	P	P	09 46 17.5	-0.1
KSCHJ				IAmb	IAmb	09 46 58.5	
	comp=Z,13nm,1.5s						
BELG	Belogornoye	37.27	322	P	P	09 46 21.9	+0.1
	comp=Z,5.2nm,0.6s,baz=129,slow=2.2,SNR=3.8						
	comp=Z,5.2nm,0.6s						
KBZ	Khabaz	37.55	306	P	P	09 46 24.9	+0.7
	comp=Z,3.6nm,0.9s,baz=156,slow=7.4,SNR=9.5						
	comp=Z,3.6nm,0.9s						
KBZ	Khabaz	37.55	306	⇓iP	P	09 46 25.7	+1.5
KIV	Kislovodsk	37.74	307	eP	P	09 46 25.5	-0.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIRV	Kirov	39.56	331	⇑eP	P	09 46 41.9	+1.0
USA0B	Ussuriysk Arra	40.42	54	P	P	09 46 47.9	-0.5
USA0B				IAmb	IAmb	09 46 49.8	
	comp=Z,16nm,1.5s						
USA0B	Ussuriysk Arra	40.42	54	⇓eP	P	09 46 49.4	+1.1
USRK	Ussuriysk Ar.	40.42	54	P	P	09 46 48.5	+0.2
	comp=Z,2.0nm,0.5s,baz=262,slow=5.0,SNR=3.7						
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	40.42	54	P	P	09 46 48.5	+0.2
KLR	Kul'dur	41.21	46	P	P	09 46 55.5	+0.8
	comp=Z,3.9nm,0.6s,baz=271,slow=10,SNR=17						
	comp=Z,3.9nm,0.6s						
KLR	Kul'dur	41.21	46	deP	P	09 46 55.8	+1.0
KLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NRIK	Noril'sk	41.52	1	P	P	09 46 57.8	+0.8
	comp=Z,14nm,0.6s,baz=170,slow=6.2,SNR=23						
	comp=Z,14nm,0.6s						
NRIK	Noril'sk	41.52	1	P	P	09 46 56.9	-0.1
NRIK				IAmb	IAmb	09 46 59.4	
	comp=Z,22nm,0.9s						
NRIK	Noril'sk	41.52	1	c iP	P	09 46 58.4	+1.4
NRIK				pmax	pmax		
	comp=Z,25nm,0.9s						
VORR	Voronezh	41.85	318	eP	P	09 46 59.6	-0.3
VORR				pmax	pmax		
	comp=Z,70nm,0.4s						
PRGR	Permogore	42.85	333	eP	P	09 47 06.0	-2.0
MOS	Moscow	43.99	323	eP	P	09 47 15.7	-1.5
BR131	Keskin Array S	44.12	299	⇑eP	P	09 47 19.2	+0.4
BRTR	Keskin Array B	44.12	299	P	P	09 47 19.6	+0.8
	comp=Z,3.2nm,1.1s,baz=107,slow=6.6,SNR=7.5						
	comp=Z,3.2nm,1.1s						
BRTR	Keskin Array B	44.12	299	i P	P	09 47 20.5	+1.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	44.37	322	P	P	09 47 20.4	+0.2
OBN	Obninsk	44.37	322	d iP	P	09 47 21.0	+0.8
OBN				pmax	pmax		
	comp=Z,35nm,1.7s						
YAK	Yakutsk	44.82	28	⇓eP	P	09 47 25.1	+1.3
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
JSD	Sado	44.91	63	P	P	09 47 24.3	-0.6
JSD				IAmb	IAmb	09 47 25.3	
	comp=Z,4.9nm,0.8s						
MAJO	Matsushiro	44.97	65	⇓eP	P	09 47 28.4	+3.0
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MJAR	Matsushiro Arr	44.97	65	P	P	09 47 25.6	+0.2
	comp=Z,1.0nm,0.6s,baz=277,slow=8.6,SNR=5.1						
	comp=Z,1.0nm,0.6s						
MJAR	Matsushiro Arr	44.97	65	P	P	09 47 25.0	-0.5
KLMR	Klimovskoe	45.03	330	eP	P	09 47 23.5	-1.9
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KLMR	Klimovskoe	45.03	330	eP	P	09 47 23.6	-1.9
KLMR				AMP		09 47 27.6	
	comp=Z,8.0nm,0.7s						
AKASG	Malin Array Be	47.81	314	P	P	09 47 46.9	-0.6
	comp=Z,0.5nm,0.4s,baz=73,slow=7.9,SNR=13						
	comp=Z,0.5nm,0.4s						
AKBB	Malin Array Si	47.81	314	IAmb	IAmb	09 47 48.9	
	comp=Z,5.9nm,0.7s						
AKBB	Malin Array Si	47.81	314	⇑eP	P	09 47 47.2	-0.3
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VRI	Vrincioaia	49.19	308	⇑P	P	09 47 59.9	+1.7
PLOR	Plostina	49.24	308	⇑P	P	09 47 59.1	+0.4
MLR	Muntele Rosu	49.74	307	⇓P	P	09 48 04.7	+2.2
MLR	Muntele Rosu	49.74	307	P	P	09 48 04.1	+1.5
	comp=Z,8.9nm,0.8s,baz=123,slow=1.4,SNR=16						
	comp=Z,8.9nm,0.8s						
MLR	Muntele Rosu	49.74	307	P	P	09 48 03.0	+0.4
NACGM	Naroch	49.81	320	eP	P	09 48 02.1	-0.7
	baz=98						
TIXI	Tiksi	49.84	17	P	P	09 48 03.4	+0.7
	comp=Z,7.3nm,0.7s,baz=270,slow=23,SNR=23						
	comp=Z,7.3nm,0.7s						
TIXI	Tiksi	49.84	17	P	P	09 48 03.1	+0.4
TIXI				IAmb	IAmb	09 48 04.3	
	comp=Z,8.8nm,0.7s						
LVZ	Lovozero	50.06	338	P	P	09 48 04.5	0.0
LVZ	Lovozero	50.06	338	ceP	P	09 48 04.7	+0.2
LVZ				pmax	pmax		
	comp=Z,16nm,0.8s						
IIGN	Ignalina	50.20	320	eP	P	09 48 06.0	+0.3
BURAR	Bucovina Array	50.24	310	⇓P	P	09 48 05.0	-1.3
BURAR	Bucovina Array	50.24	310	P	P	09 48 05.9	-0.4
BUR08	Bucovina Ar. S	50.26	310	IAmb	IAmb	09 48 08.0	
	comp=Z,5.0nm,1.2s						
VSU	Vasula	50.43	324	c iP	P	09 48 07.8	+0.4
VSU				pmax	pmax		
	comp=Z,43nm,0.8s						
VSU	Vasula	50.43	324	eP	P	09 48 08.1	+0.8
FIA1	FINESS Array S	51.37	328	P	P	09 48 13.8	-0.6
FINES	FINESS Array B	51.37	328	P	P	09 48 14.9	+0.5
	comp=Z,14nm,0.5s,baz=106,slow=8.1,SNR=121						
	comp=Z,14nm,0.5s						
FINES	FINESS Array B	51.37	328	P	P	09 48 14.5	+0.1
IDI	Anoyia	51.46	294	P	P	09 48 16.0	+0.4
	comp=Z,2.9nm,0.6s,baz=29,slow=10,SNR=2.0						
	comp=Z,2.9nm,0.6s						
IDI	Anoyia	51.46	294	P	P	09 48 14.4	-1.2
IDI				IAmb	IAmb	09 48 14.9	
	comp=Z,9.6nm,1.1s						
PABE	Paberze	51.49	320	P	P	09 48 13.9	-1.5
PABE	Paberze	51.49	320	eP	P	09 48 16.0	+0.6
DRGR		51.96	309	⇓P	P	09 48 20.1	+0.9
MTSE	Matsula	51.98	324	eP	P	09 48 19.6	+0.6
KEV	Kevo	53.34	338	P	P	09 48 29.4	+0.5
KEV	Kevo	53.34	338	P	P	09 48 29.4	+0.5
KEV				pmax	pmax		
	comp=Z,31nm,0.6s						
RAF	Rauma	53.34	327	eP	P	09 48 29.3	+0.3
ARA0	ARCESS Array S	53.77	338	⇑iP	P	09 48 33.1	+1.0
ARCES	ARCESS Array B	53.77	338	P	P	09 48 32.8	+0.7
	comp=Z,30nm,0.7s,baz=83,slow=6.9,SNR=134						
	comp=Z,30nm,0.7s						
ARCES	ARCESS Array B	53.77	338	P	P	09 48 32.8	+0.7
PSZ	Piszkesteto	53.83	311	P	P	09 48 34.1	+1.2
MA2	Magadan	53.94	35	⇓eP	P	09 48 34.3	+0.8
MA2				pmax	pmax		
	comp=Z,18nm,1.2s						
KTK1	Kautokeino	54.39	337	⇑iP	P	09 48 37.2	+0.6
KMBO	Kilima Mbogo	54.51	246	P	P	09 48 39.3	+0.8
	comp=Z,1.0nm,0.3s,baz=52,slow=19,SNR=1.6						
	comp=Z,1.0nm,0.3s						
PDG	Podgorica	54.77	304	P	P	09 48 38.0	-1.8
PDG				IAmb	IAmb	09 48 45.8	
	comp=Z,7.3nm,1.1s						
MORH	Mrgy, Hungar	54.80	309	P	P	09 48 40.5	+0.6
SEY	Seymchan	55.08	31	d iP	P	09 48 43.3	+1.6
SEY				pmax	pmax		
	comp=Z,15nm,2.5s						
KOVH	Kovagotottos	55.19	309	P	P	09 48 42.8	0.0
UPP	Uppsala	55.26	325	eP	P	09 48 43.4	+0.4
JETT	Jettan, Norway	55.49	337	⇑iP	P	09 48 45.6	+0.9
VIKU	Vikbolandet	55.67	324	eP	P	09 48 46.6	+0.6
TRO	Tromso	56.02	337	eP	P	09 48 48.9	+0.6
HOPEN	Hopen	56.33	346	eP	P	09 48 50.8	+0.3
FAUS	Fauske	56.98	334	eP	P	09 48 55.6	+0.3
STEI	Steigen	57.07	335	eP	P	09 48 56.2	+0.4
MOR8	Moi Rana	57.20	333	eP	P	09 48 56.2	-0.7
HFS	Hagfors	57.24	326	P	P	09 48 57.0	-0.2
	comp=Z,3.8nm,0.4s,baz=31,slow=17,SNR=33						
	comp=Z,3.8nm,0.4s						
HFS	Hagfors	57.24	326	P	P	09 48 57.0	-0.2
BRG	Berggiesshubel	57.49	315	eP	P	09 49 00.1	+0.9
BRG				Amp		09 49 02.1	
	comp=Z,4.7nm,1.0s						
BRG	Berggiesshubel	57.49	315	eP	P	09 49 00.0	+0.9
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VNDS	Vrh nad Dolski	57.53	309	i P	P	09 49 00.2	+0.7
CUC	Castrocucco	57.72	302	P	P	09 49 00.4	-0.6
CUC				IAmb	IAmb	09 49 03.0	
	comp=Z,9.4nm,0.9s						
PETK	Petropavlovsk-	57.73	43	PKP2ab		10 19 07.3	
	comp=Z,30nm,1.1s,baz=264,slow=39,SNR=6.9						
LOF	Lofoten	57.73	335	eP	P	09 49 00.3	-0.2
KONS	Konsvik	57.75	333	eP	P	09 49 01.1	+0.4
STOK	Stokkvaagen	57.78	333	eP	P	09 49 00.7	-0.2
GERES	GERESS Array B	57.86	312	P	P	09 49 01.9	-0.1
	comp=Z,1.2nm,0.6s,baz=98,slow=8.2,SNR=8.4						
	comp=Z,1.2nm,0.6s						
GERES	GERESS Array B	57.86	312	P	P	09 49 01.8	-0.1
KHC	Kasperske Hory	57.91	313	⇑eP	P	09 49 02.4	+0.2
KHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JAVS	Javornik	58.00	309	i P	P	09 49 03.1	+0.2
CLL	Collm	58.04	315	eP	P	09 49 03.0	0.0
VOJS	Vojsko	58.11	309	i P	P	09 49 03.8	+0.1
NSS	Namsos	58.13	331	eP	P	09 49 03.2	-0.1
NC602	NORSAR Array S	58.31	326	eP	P	09 49 04.4	-0.3
NB2	NORSAR Subarra	58.46	327	P	P	09 49 05.2	-0.6
	comp=Z,6.4nm,0.7s,baz=87,slow=7.4						
NB2	NORSAR Subarra	58.46	327	P	P	09 49 05.2	-0.6
	baz=87,slow=7.4						
NOA	NORSAR Array B	58.46	327	P	P	09 49 05.5	-0.3
	comp=Z,4.8nm,0.6s,baz=88,slow=7.0,SNR=30						
	comp=Z,4.8nm,0.6s						
SPA0	Spitsbergen Ar	58.66	347	⇑iP	P	09 49 07.8	+0.8
OSL	Oslo	58.74	325	eP	P	09 49 07.7	0.0
TBLU	Trondheim	58.88	329	eP	P	09 49 07.9	-0.7
STAL	STALIGIAL	58.88	309	IAmb	IAmb	09 49 10.0	
	comp=Z,6.9nm,0.9s						
KONO	Kongsberg	59.32	325	⇓iP	P	09 49 12.2	+0.5
KONO				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KONO	Kongsberg	59.32	325	⇑iP	P	09 49 11.8	+0.1
DOMB	Dombas	59.46	328	eP	P	09 49 12.3	-0.4
CTI	Castel Tesino	59.64	309	IAmb	IAmb	09 49 15.0	
	comp=Z,3.9nm,0.8s						
KBS	Kingsbay	59.69	348	eP	P	09 49 14.3	+0.3
SKAR	Skarslia	59.90	326	eP	P	09 49 15.6	-0.2
MOL	Molde	60.14	329	eP	P	09 49 17.6	+0.3
SNART	Snartemo	60.66	324	eP	P	09 49 21.9	+1.0
DAVOX	Davos/Dischmat	60.72	310	P	P	09 49 21.6	-0.2
	comp=Z,2.6nm,0.8s,baz=93,slow=9.7,SNR=4.4						
	comp=Z,2.6nm,0.8s						
ODD1	Odda	60.80	326	eP	P	09 49 22.8	+0.9
BLS5	Blasjo	60.93	325	eP	P	09 49 23.2	+0.4
BILL	Bilibino	61.04	25	P	P	09 49 24.1	+0.7
BILL				IAmb	IAmb	09 49 26.1	
	comp=Z,9.5nm,1.1s						
BILL	Bilibino	61.04	25	⇑iP	P	09 49 25.3	+1.9
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BER	Bergen	61.39	326	eP	P	09 49 25.8	0.0
MSSA	Maissana	61.45	308	P	P	09 49 26.1	-0.6
MSSA				IAmb	IAmb	09 49 27.3	
	comp=Z,8.4nm,0.9s						
ECH	Echery	62.25	312	P	P	09 49 31.5	-0.5
ECH				IAmb	IAmb	09 49 38.0	
	comp=Z,2.9nm,1.0s						
ECH	Echery	62.25	312	P	P	09 49 31.5	-0.5
ECH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SENIN	Lac Senin/Sane	62.55	310	P	P	09 49 33.9	-0.3
BNI	Bardonecchia	63.26	309	P	P	09 49 37.8	-1.1
BNI				IAmb	IAmb	09 49 45.0	
	comp=Z,7.6nm,1.1s						
BNI	Bardonecchia	63.26	309	P	P	09 49 37.8	-1.1
BNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SSB	Saint Sauveur	64.67	310	P	P	09 49 47.5	-0.6
SSB				IAmb	IAmb	09 49 49.0	
	comp=Z,5.1nm,0.8s						
SSB	Saint Sauveur	64.67	310	P	P	09 49 47.5	-0.6
SSB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAG	Danmarks Havn	66.25	346	i P	P	09 49 57.0	-0.6
EKA	Eskdalemuir Ar	66.82	322	P	P	09 50 01.4	-0.2
	comp=Z,5.9nm,0.8s,baz=87,slow=7.1,SNR=21						
	comp=Z,5.9nm,0.8s						
EKA	Eskdalemuir Ar	66.82	322	P	P	09 50 01.4	-0.2
WB0	Warramunga Arr	66.94	130	P	P	09 50 04.1	+1.2
WRA	Warramunga Arr	67.03	130	P	P	09 50 04.4	+1.0
	comp=Z,2.2nm,0.6s,baz=322,slow=6.4,SNR=49						
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	67.03	130	P	P	09 50 04.3	+0.9
WRA	Warramunga Arr	67.03	130	i P	P	09 50 04.8	+1.4
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRAB	Tennant Creek	67.03	130	P	P	09 50 03.9	+0.5
WRAB				IAmb	IAmb	09 50 29.1	
	comp=Z,4.7nm,0.7s						
WRAB	Tennant Creek	67.03	130	⇓eP	P	09 50 05.0	+1.6
WRAB				pmax	pmax		
	comp=Z,18nm,2.4s						
WB2	Warramunga Arr	67.04	130	P	P	09 50 04.6	+1.1
WB2				IAmb	IAmb	09 50 14.8	
	comp=Z,5.1nm,0.7s						
WR0	Warramunga Arr	67.18	130	P	P	09 50 05.4	+1.0
WR0				IAmb	IAmb	09 50 13.0	
	comp=Z,9.2nm,1.4s						
ASAR	Alice Springs	69.33	133	P	P	09 50 19.1	+1.3
	comp=Z,1.5nm,0.4s,baz=314,slow=6.2,SNR=41						
	comp=Z,1.5nm,0.4s						
EUNU	Eureka	72.21	359	P	P	09 50 36.1	+1.5
EUNU				IAmb	IAmb	09 50 37.0	
	comp=Z,7.4nm,0.8s						
ESDC	Sonseca Array	72.40	306	P	P	09 50 36.5	+0.1
	comp=Z,3.0nm,0.9s,baz=56,slow=6.2,SNR=21						
	comp=Z,3.0nm,0.9s						
ESDC	Sonseca Array	72.40	306	IAmb	IAmb	09 50 37.9	
	comp=Z,3.6nm,1.0s						
SUMG	Summit	72.87	345	P	P	09 50 39.1	0.0
SUMG	Summit	72.87	345	P	P	09 50 39.1	0.0
SUMG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SUMG	Summit	72.87	345	i P	P	09 50 39.0	-0.1
ICESG	Greenland Ices	75.46	342	eP	P	09 50 55.2	+1.1
TOLK	Toolik Lake Re	75.71	18	IAmb	IAmb	09 50 57.5	
	comp=Z,4.7nm,0.7s						
H21K	Melozitna Rive	76.69	21	IAmb	IAmb	09 51 11.6	
	comp=Z,8.2nm,1.4s						
J20K	Nowinta River	77.17	23	IAmb	IAmb	09 51 13.5	
	comp=Z,3.2nm,1.0s						
K20K	Telida	77.71	23	IAmb	IAmb	09 51 09.8	
	comp=Z,4.4nm,0.9s						
MLY	Manley	77.75	21	IAmb	IAmb	09 51 09.3	
	comp=Z,3.0nm,0.9s						
BMAR	Burnt Mountain	77.90	18	P	P	09 51 09.4	+1.8
LBTB	Lobatse	78.03	233	P	P	09 51 09.7	+0.7
	comp=Z,3.6nm,0.7s,baz=26,slow=8.3,SNR=2.9						
	comp=Z,3.6nm,0.7s						
H24K	Noodor Dome	78.09	20	P	P	09 51 09.9	+1.2
H24K				IAmb	IAmb	09 51 18.2	
	comp=Z,3.0nm,0.9s						
I23K	Minto, Yukon-K	78.11	21	IAmb	IAmb	09 51 12.1	
	comp=Z,2.8nm,0.8s						
CAST	Castle Rocks	78.36	23	IAmb	IAmb	09 51 13.0	
	comp=Z,8.2nm,0.9s						
TORD	Torodi Ar. Bea	78.55	279	P	P	09 51 11.8	-0.3
	comp=Z,2.6nm,0.6s,baz=64,slow=4.8,SNR=28						
	comp=Z,2.6nm,0.6s						
TORD	Torodi Ar. Bea	78.55	279	P	P	09 51 11.7	-0.3
TORD				IAmb	IAmb	09 51 12.7	
	comp=Z,2.5nm,0.8s						
NEA2	Nenana	78.58	21	IAmb	IAmb	09 51 13.4	
	comp=Z,5.1nm,0.8s						
MDM	Murphy Dome	78.59	20	IAmb	IAmb	09 51 21.3	
	comp=Z,11nm,1.4s						
COLA	College	78.77	20	⇓iP	P	09 51 12.8	+0.5
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	79.14	20	P	P	09 51 14.4	0.0
	comp=Z,1.0nm,0.6s,baz=308,slow=4.6,SNR=19						
ILAR				PP	PP	09 54 11.4	-1.7
	comp=Z,0.9nm,1.0s,baz=308,slow=8.6,SNR=5.1						
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	79.89	134	P	P	09 51 19.3	+0.4
	comp=Z,1.0nm,0.6s,baz=325,slow=9.6,SNR=3.1						
	comp=Z,1.0nm,0.6s						
J26L	Joseph Creek	80.33	19	IAmb	IAmb	09 51 29.8	
	comp=Z,2.6nm,0.7s						
RIDG	Independent Ri	80.50	20	P	P	09 51 22.1	+0.2
BOSA	Boshof	80.50	231	P	P	09 51 23.0	+0.5
	comp=Z,2.8nm,0.9s,baz=93,slow=7.7,SNR=4.2						
	comp=Z,2.8nm,0.9s						
BOSA	Boshof	80.50	231	P	P	09 51 22.1	-0.4
BOSA				IAmb	IAmb	09 51 28.8	
	comp=Z,8.5nm,1.2s						
BOSA	Boshof	80.50	231	P	P	09 51 23.0	+0.5
SCRK	Sand Creek	80.59	20	IAmb	IAmb	09 51 31.4	
	comp=Z,3.4nm,0.8s						
PMR	Palmer	80.61	23	IAmb	IAmb	09 51 24.4	
	comp=Z,4.7nm,1.0s						
EPYK	Eagle Plains	80.72	16	IAmb	IAmb	09 51 24.2	
	comp=Z,2.9nm,0.7s						
SML	Sawmill	80.74	23	IAmb	IAmb	09 51 25.4	
	comp=Z,9.8nm,0.9s						
N31M	Braeburn, Yuko	84.92	19	IAmb	IAmb	09 51 47.7	
	comp=Z,6.2nm,0.8s						
HYT	Haines Junctio	84.95	20	IAmb	IAmb	09 51 48.9	
	comp=Z,3.0nm,0.8s						
DBIC	Dimbokro	87.22	276	P	P	09 51 57.5	+0.4
	comp=Z,4.9nm,0.8s,baz=103,slow=3.6,SNR=3.6						
	comp=Z,4.9nm,0.8s						
YKA	Yellowknife Ar	88.52	9	P	P	09 52 02.5	+0.1
	comp=Z,1.2nm,0.7s,baz=344,slow=4.5,SNR=8.1						
	comp=Z,1.2nm,0.7s						
YKA	Yellowknife Ar	88.52	9	i P	P	09 52 02.9	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	122.45	9	PKP	PKiKP	09 58 07.6	+1.4
	comp=Z,0.2nm,0.7s,baz=304,slow=0.3,SNR=2.5						

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*IPEC **28** 09:43:43.7±0.2, 49°.82N×18°.52E, h1^{km}±1^{km}, ML1.1/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*

PRU 28 09:43:45.1±0.0**, 49°.84N×18°.43E, h0^{km}, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.18	269	ePG	Pg	09 43 48.5	-0.1
OKC				eSG	Sg	09 43 51.3	+0.3
	comp=Z,34nm,0.5s						
MORC	Moravsky Berou	0.58	264	ePg	Pg	09 43 55.9	-0.3
	baz=86						
MORC				eSg	Sg	09 44 03.4	-0.3
	4.1nm,0.3s,baz=86						
MORC	Moravsky Berou	0.58	264	ePG	Pg	09 43 56.0	-0.2
MORC				eSG	Sg	09 44 03.5	-0.2
MAUC	Maruska	0.62	220	ePG	Pg	09 43 55.9	-1.0
MAUC				eSG	Sg	09 44 05.3	+0.5
LANS	Liptovska Anna	0.97	135	ePG	Pg	09 44 03.0	-0.6
LANS				eSG	Sb	09 44 19.2	+1.1
LANS				eLG	Lg	09 44 21.2	
KRLC	Kraliky	1.09	283	ePG	Pg	09 44 03.8	-2.2
KRLC				eSG	Sg	09 44 19.1	-1.0
	comp=Z,4.0nm,0.6s						
VRAC	Vranov	1.31	247	ePg	Pg	09 44 08.8	-1.4
	baz=67						
VRAC				eSg	Sg	09 44 26.3	-0.8
	2.6nm,0.4s,baz=67						
VRAC	Vranov	1.31	247	ePG	Pg	09 44 08.9	-1.3
VRAC				eSG	Sg	09 44 26.4	-0.7
VYHS	Vyhne	1.37	169	ePG	Pg	09 44 10.5	-0.9
DPC	Dobruska-Polom	1.45	291	ePG	Pn	09 44 11.1	-1.5
DPC				eSG	Sg	09 44 31.0	-0.7
	comp=Z,1.6nm,0.3s						
KRUC	Moravsky	1.54	240	ePg	Pn	09 44 12.5	-1.3
	baz=60						
KRUC				eSg	Sn	09 44 33.3	-1.2
	1.5nm,0.3s,baz=60						
KRUC	Moravsky	1.54	240	ePG	Pn	09 44 12.5	-1.3
KRUC				eSG	Sn	09 44 33.3	-1.2
OSTC	Ostas	1.59	298	ePG	Pn	09 44 13.7	-0.9
OSTC				eSG	Sn	09 44 35.8	-0.1
KHC	Kasperske Hory	3.24	259	eSG	Sg	09 45 27.8	-1.4

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*MOS **28** 09:46:58.1±0.8, 56°.23S×26°.88W, h75^{km}, mb6.9/13, MS6.9/22, Error ellipse: s-maj=14.3km s-min=8.4km az=103.4*

*BJI **28** 09:46:58.3±0.0, 56°.15S×27°.15W, h70^{km}, mB6.8/56, Ms7.1/67, Ms7 7.0/65*

*NEIC **28** 09:46:59.8±1.8, 56°.24S±0°.08×26°.94W±0°.08, h78^{km}±1^{km}, mb6.7/268, Mwc7.2/101, Mww7.2, Error ellipse: s-maj=13.8km s-min=6.7km az=160.0*

*IDC **28** 09:47:02.1±0.9, 56°.15S×26°.76W, h101^{km}±7^{km}, mb6.1/31, mbtmp6.4/32, MS6.6/39, Error ellipse: s-maj=8.0km s-min=6.0km az=9.0*

*GCMT **28** 09:47:07.8±0.1, 56°.24S×26°.50W, h69^{km}, MW7.2/175, Moment Tensor Solution. s175,c465; s170,c859; Duration: 9^{s}5 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-4.43±.03; M$_{\theta\theta}$5.71±.02; M$_{\phi\phi}$-1.28±.02; M$_{r\theta}$-4.17±.04; M$_{\theta\phi}$2.53±.01; M$_{\phi r}$2.34±.03; Best double couple: M$_0$7.49700×10^{19} NP1:φ$_s$223.00000°,δ38.00000°, λ-142.00000°. NP2:φ$_s$101.00000°,δ68.00000°, λ-58.00000°. Principal axes: T 7.5170, Plg17.0000°, Azm168.0000°; N -0.0420, Plg29.0000°, Azm268.0000°; P -7.4760, Plg55.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **28** 09:47:07, 55°.96S×26°.50W, h70^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-4.43; M$_{\theta\theta}$5.91; M$_{\phi\phi}$-1.48; M$_{r\theta}$-4.68; M$_{\theta\phi}$3.01; M$_{\phi r}$2.50; Fault plane solution: M$_0$8.10000×10^{19} NP1: φ$_s$219.00000°,δ39.00000°,λ-145.00000°. NP2: φ$_s$101.00000°,δ69.00000°,λ-56.00000°. Principal axes: T 8.1280, Plg18.0000°, Azm167.0000°; N -0.0590, Plg31.0000°, Azm268.0000°; P -8.0691, Plg53.0000°, Azm52.0000°;*

*NEIC **28** 09:47:17.5, 56°.11S×27°.04W, h75^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$-4.52; M$_{\theta\theta}$6.34; M$_{\phi\phi}$-1.82; M$_{r\theta}$-3.68; M$_{\theta\phi}$2.64; M$_{\phi r}$2.48; Fault plane solution: M$_0$7.66000×10^{19} NP1:φ$_s$222.52000°, δ41.94000°,λ-143.32000°. NP2:φ$_s$103.54000°, δ66.47000°,λ-54.22000°. Principal axes: T 7.8352, Plg14.0000°, Azm168.0000°; N -0.3589, Plg32.0000°, Azm267.0000°; P -7.4764, Plg54.0000°, Azm58.0000°;*

ISC 28 09:47:00.6±0.2**, 56°.27S**±0°.03×**26°.96W**±0°.03**, h90**^{km}±1^{km}**, h89**^{km}**:pP-P, n2309, σ1^{s}92**/2684**, mb6.7**/225**, 111C-362D, Fault plane solution: NP1:**φ$_s$82.85911°**,**δ63.19342°**,** λ-92.35675°. **NP2:**φ$_s$268.07346°**,**δ26.90234°**,** λ-85.34733°. **Principal axes:** T Plg18.1612°**,** Azm174.6127°**;** N Plg2.1034°**,** Azm83.9224°**;** P Plg71.7089°**,** Azm347.5431°**; South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.79	286	Pn	Pn	09 48 24.7	+0.8
HOPE	Hope Point	5.79	286	P	Pn	09 48 24.7	+0.8
HOPE	Hope Point	5.79	286	eP	Pn	09 48 27.7	+3.8
HOPE	Hope Point	5.79	286	⇑P	Pn	09 48 24.5	+0.6
ORCD	Orcadas	10.31	237	Pn	Pn	09 49 27.5	+2.2
VNA1	Neumayer--Stat	16.55	158	P	P	09 50 47.8	0.0
VNA1	Neumayer--Stat	16.55	158	ScP	ScP	09 58 59.1	+1.3
ESPZ	Base Esperanza	16.57	232		Pn	09 50 44.2	-2.7
ESPZ				IAmb	IAmb	09 51 06.8	
	comp=Z,12μm,1.6s						
VNA3	Neumayer Olymp	16.74	160	P	P	09 50 49.6	-0.4
VNA3	Neumayer Olymp	16.74	160	ScP	ScP	09 58 58.1	-0.2

VNA2	Neumayer--Watz	16.94	158	P	P	09 50 52.1	-0.1
	baz=316,slow=14						
VNA2	Neumayer--Watz	16.94	158	ScP	ScP	09 58 58.7	-0.1
SNAA	Sanae	18.49	156	P	P	09 51 09.6	+0.4
SNAA	Sanae	18.49	156	ScP	ScP	09 59 02.8	+0.8
SNAA	Sanae	18.49	156	⇑iP	P	09 51 07.2	-2.0
SNAA	Sanae	18.49	156	P	P	09 51 09.3	+0.1
	comp=Z,2µm,0.9s,baz=309,slow=9.6,SNR=865						
SNAA				S	S	09 54 30.9	-4.0
	comp=Z,481nm,0.8s,baz=354,slow=18,SNR=3.5						
SNAA				LR	LR	09 56 56.9	
	comp=Z,385µm,21.2s,baz=320,slow=32						
SNAA				ScP	ScP	09 59 02.4	+0.3
	comp=Z,227nm,1.0s,baz=232,slow=4.6,SNR=8.7						
SNAA				ScS	ScS	10 02 43.2	+0.5
	comp=Z,30nm,0.9s,baz=174,slow=21,SNR=11						
SNAA	Sanae	18.49	156	P	P	09 51 09.1	-0.1
SNAA	Sanae	18.49	156	⇑P	P	09 51 08.5	-0.7
SNAA				⇓S	ScP	09 59 04.9	+2.8
EFI	East Falkland	18.77	271		Pn	09 51 13.3	-0.4
EFI	East Falkland	18.77	271	P	Pn	09 51 13.3	-0.4
EFI				pmax	pmax		
	comp=Z,3µm,1.0s						
EFI	East Falkland	18.77	271	eP	Pn	09 51 13.3	-0.4
EFI	East Falkland	18.77	271	⇑P	Pn	09 51 13.4	-0.3
PMSA	Palmer Station	19.85	230	P	Pn	09 51 26.6	+0.2
	comp=Z,1µm,0.8s,baz=79,slow=9.0,SNR=293						
PMSA				S	Sn	09 55 07.3	-1.8
	comp=Z,241nm,1.1s,baz=150,slow=20,SNR=1.9						
PMSA				ScP	ScP	09 59 04.6	-0.4
	comp=Z,308nm,0.8s,baz=78,slow=2.2,SNR=12						
	comp=Z,1µm,0.8s						
PMSA	Palmer Station	19.85	230	P	Pn	09 51 27.2	+0.9
PMSA				IAmb	IAmb	09 51 39.1	
	comp=Z,5µm,1.1s						
PMSA	Palmer Station	19.85	230	eP	Pn	09 51 27.2	+0.9
PMSA	Palmer Station	19.85	230	⇑P	Pn	09 51 27.0	+0.7
PMSA				⇓S	ScP	09 59 05.1	0.0
TROLL	Troll, Antarti	20.00	153	P	P	09 51 25.8	+0.2
TROLL	Troll, Antarti	20.00	153	ScP	ScP	09 59 04.4	-1.2
H09W1	TRISTAN DA CUN	21.56	33	P	P	09 51 42.9	+0.4
	SNR=53						
H09N1	TRISTAN DA CUN	21.59	33	P	P	09 51 44.1	+1.3
	SNR=74						
TRIS	Tristan da Cun	21.59	33	P	P	09 51 43.0	+0.2
TRIS				IAmb	IAmb	09 51 51.7	
	comp=Z,3µm,1.1s						
TRIS	Tristan da Cun	21.59	33	⇑P	P	09 51 43.2	+0.4
SMAI	San Martin Ant	21.68	221	P	P	09 51 45.8	+2.2
BELA	Belgrano 2	21.87	184	P	P	09 51 44.8	-0.7
MG01	Puerto William	22.78	256	P	P	09 51 56.2	+1.0
MG01	Puerto William	22.78	256	⇓iP	P	09 51 56.3	+1.0
MG01				IAmb	IAmb	09 52 23.7	
	comp=Z,3µm,1.1s						
MG01				i S	S	09 55 53.3	-3.8
USHA	Ushuaia	23.25	256	P	P	09 51 60.0	+0.2
	comp=Z,220nm,0.9s,baz=98,slow=11,SNR=34						
USHA				S	S	09 56 08.1	+3.5
	comp=Z,69nm,0.9s,baz=352,slow=12,SNR=1.5						
USHA				ScP	ScP	09 59 12.6	-1.2
	comp=Z,63nm,0.8s,baz=119,slow=2.7,SNR=3.5						
USHA				LR	LR	09 59 28.3	
	comp=Z,126µm,19.0s,baz=98,slow=32						
USHA				ScS	ScS	10 02 59.7	0.0
	comp=Z,40nm,1.2s,baz=142,slow=22,SNR=7.2						
	comp=Z,220nm,0.9s						
USHA	Ushuaia	23.25	256	eP	P	09 52 00.2	+0.4
USHA				i S	S	09 56 03.1	-1.5
DSPA	Despedida	23.49	258	P	P	09 52 02.1	+0.1
MG02	Cerro Sombrero	24.49	260	P	P	09 52 11.3	+0.4
MG02	Cerro Sombrero	24.49	260	⇓iP	P	09 52 09.6	-1.3
MG02				IAmb	IAmb	09 52 34.7	
	comp=Z,6µm,1.3s						
MG02				eS	S	09 56 21.5	-3.0
MG03	Isla Dawson	24.73	257	P	P	09 52 14.3	+1.2
MG03	Isla Dawson	24.73	257	⇑iP	P	09 52 14.4	+1.2
MG03				i S	S	09 56 26.2	-2.1
GO10	Punta Arenas	25.33	258	P	P	09 52 19.2	+0.6
GO10				IAmb	IAmb	09 53 04.3	
	comp=Z,4µm,1.3s						
GO10	Punta Arenas	25.33	258	⇓P	P	09 52 19.2	+0.6
MG04	Isla Riesco	25.74	259	P	P	09 52 23.1	+0.8
MG04				IAmb	IAmb	09 53 06.4	
	comp=Z,2µm,1.0s						
MG04	Isla Riesco	25.74	259	⇑iP	P	09 52 24.1	+1.8
MG04				IAmb	IAmb	09 52 47.1	
	comp=Z,1µm,1.0s						
MG04				i S	S	09 56 44.5	+0.1
MG05	Puerto Natales	26.78	260	IAmb	IAmb	09 53 02.7	
	comp=Z,5µm,1.6s						
MG05	Puerto Natales	26.78	260	⇓iP	P	09 52 30.8	-0.9
MG05				IAmb	IAmb	09 52 57.7	
	comp=Z,1µm,1.0s						
MG05				i S	S	09 56 57.5	-3.4
GO09	Cerro Castillo	26.89	261	P	P	09 52 31.8	-0.9
GO09				IAmb	IAmb	09 53 26.3	
	comp=Z,6µm,1.6s						
GO09	Cerro Castillo	26.89	261	⇓iP	P	09 52 32.1	-0.6
GO09				IAmb	IAmb	09 52 56.5	
	comp=Z,1µm,1.1s						
TRQA	Tornquist	29.52	293	P	P	09 52 56.8	+0.5
TRQA	Tornquist	29.52	293	P	P	09 52 56.8	+0.5
TRQA				pmax	pmax		
	comp=Z,611nm,0.9s						
TRQA	Tornquist	29.52	293	⇓iP	P	09 52 56.5	+0.2
COYC	Coyhaique	29.86	272	P	P	09 52 58.5	-0.6
COYC	Coyhaique	29.86	272	⇓iP	P	09 52 59.8	+0.6
COYC				IAmb	IAmb	09 53 11.6	
	comp=Z,596nm,0.9s						
COYC	Coyhaique	29.86	272	⇑P	P	09 52 59.8	+0.6
COYC				⇓S	ScP	09 59 35.5	+1.9
COYC	Coyhaique	29.86	272	P	P	09 53 00.1	+1.0
COYC				x	x	09 53 10.5	
COYC				pP	pP	09 53 16.5	-2.3
COYC				sP	pwP	09 53 25.3	+3.4
COYC				ScP	ScP	09 59 31.9	-1.7
AY02	Valle Explorad	29.94	269	eP	P	09 52 59.4	-0.3
LPA	La Plata	30.01	302	i P	P	09 53 01.5	+1.0
LPA				pP	pP	09 53 19.6	-0.9
LPA				sP	sP	09 53 26.7	-4.0
LPA				PP	PnPn	09 54 00.9	-0.1
LPA				PPP	PPP	09 54 11.0	
LPA				pPP		09 54 26.6	
LPA				PCP	PcP	09 55 57.3	-3.1
LPA				S	S	09 58 01.8	+10
LPA				sS	sS	09 58 44.2	+18
LPA				SS	SnSn	09 59 26.4	-6.5
LPA				SSS	SSS	09 59 46.5	
LPA				SCS	ScS	10 03 31.8	+2.1
LPA				PKIKP	PKiKP	10 03 40.6	+8.4
LPA				SKIKP		10 06 53.4	
LPA				PKIKS		10 07 01.8	
LPA				SKIKS		10 10 28.0	
PLTB	Pedras Altas	30.74	312	P	P	09 53 08.0	+1.0
PLTB	Pedras Altas	30.74	312	eP	P	09 53 08.1	+1.1
AY01	Puyuhuapi	30.89	273	P	P	09 53 08.1	-0.1
AY01	Puyuhuapi	30.89	273	⇓iP	P	09 53 08.0	-0.1
AY01				IAmb	IAmb	09 53 20.3	
	comp=Z,770nm,0.9s						
CNLB	Canela	31.82	318	eP	P	09 53 17.8	+1.2
CPSB	Cacapava Do Su	31.86	313	eP	P	09 53 18.0	+1.2
TER01	Tubaro-SC	31.90	321	eP	P	09 53 18.6	+1.3
LL01	San Ignacio de	32.08	276	P	P	09 53 17.7	-0.9
LL01	San Ignacio de	32.08	276	⇓iP	P	09 53 16.6	-2.1
PLCA	Paso Flores	32.16	280	P	P	09 53 19.3	-0.2
	comp=Z,66nm,0.8s,baz=138,slow=7.7,SNR=142						
PLCA				ScP	ScP	09 59 40.0	-1.4
	comp=Z,124nm,0.8s,baz=84,slow=1.8,SNR=12						
PLCA				LR	LR	10 05 48.4	
	comp=Z,149µm,21.6s,baz=128,slow=35						
	comp=Z,66nm,0.8s						
PLCA	Paso Flores	32.16	280	P	P	09 53 17.7	-1.9
PLCA	Paso Flores	32.16	280	⇓iP	P	09 53 18.4	-1.2
PLCA	Paso Flores	32.16	280	eP	P	09 53 18.7	-0.9
PLCA	Paso Flores	32.16	280	⇓P	P	09 53 18.3	-1.2
PLCA				⇓S	ScP	09 59 40.5	-1.0
PLCA	Paso Flores	32.16	280	P	P	09 53 18.8	-0.8
PLCA				x	x	09 53 28.7	
PLCA				pP	pP	09 53 35.8	-3.6
PLCA				ScP	ScP	09 59 39.6	-1.8
GO07	Milladeo Hill,	32.29	274	⇓iP	P	09 53 17.6	-2.9
LL07	Hotel Espejo d	32.37	275	P	P	09 53 18.5	-2.7
LL07				IAmb	IAmb	09 54 30.4	
	comp=Z,1µm,1.4s						
LL07	Hotel Espejo d	32.37	275	⇓iP	P	09 53 18.5	-2.7
LL03	Petrohue	32.91	278	P	P	09 53 24.2	-1.8
LL03	Petrohue	32.91	278	⇓iP	P	09 53 24.0	-1.9
LL04	Puerto Octay	33.06	278	⇓iP	P	09 53 25.4	-1.9
LL05	Los Muermos	33.32	276	P	P	09 53 27.5	-2.0
LL05	Los Muermos	33.32	276	eP	P	09 53 26.5	-3.0
ITQB	Itaqui	33.83	309	P	P	09 53 34.1	+0.1
ITQB				IAmb	IAmb	09 54 11.2	
	comp=Z,1µm,1.1s						
ITQB	Itaqui	33.83	309	eP	P	09 53 34.5	+0.5
LR03	Panguipulli	33.91	280	P	P	09 53 32.9	-1.7
LR03	Panguipulli	33.91	280	⇓iP	P	09 53 33.0	-1.7
QSPA	South Pole Qui	33.98	180	P	P	09 53 36.6	+1.4
	comp=Z,2µm,1.1s,baz=202,slow=3.7,SNR=995						
QSPA				LR	LR	10 06 51.9	
	comp=Z,389µm,21.1s,baz=190,slow=35						
	comp=Z,2µm,1.1s						
QSPA	South Pole Qui	33.98	180	P	P	09 53 36.1	+0.9
QSPA	South Pole Qui	33.98	180	P	P	09 53 36.6	+1.4
QSPA				sP	sP	09 54 06.0	+0.5
ITAB	Concordia	34.17	318	IAmb	IAmb	09 53 40.2	
	comp=Z,2µm,1.3s						
ITAB	Concordia	34.17	318	eP	P	09 53 38.3	+1.3
LR02	Universidad Au	34.29	279	eP	P	09 53 37.8	-0.2
LR04	Corral	34.34	279	P	P	09 53 37.3	-1.0
LR04				IAmb	IAmb	09 54 07.8	
	comp=Z,2µm,1.7s						
LR04	Corral	34.34	279	⇓iP	P	09 53 37.3	-1.0
TIJ01	Guaruva-PR	34.81	323	eP	P	09 53 39.6	-3.1
LC02	Puerto Saavedr	35.08	280	P	P	09 53 44.0	-0.7
LC02	Puerto Saavedr	35.08	280	⇓iP	P	09 53 44.5	-0.2
PET01	Itanhaem-SP	35.22	327	eP	P	09 53 47.0	+1.0
PARB	Paraibuna	35.63	330	eP	P	09 53 50.9	+1.2
MAN01	Angra dos Reis	35.64	332	eP	P	09 53 50.9	+1.2
DUB01	Friburgo-RJ	36.00	335	eP	P	09 53 53.7	+0.9
VAS01	Vassouras-RJ	36.06	333	eP	P	09 53 54.4	+1.1
CAM01	Campos-RJ	36.08	336	eP	P	09 53 54.3	+0.9
VAO	Valinhos	36.34	328	eP	P	09 53 57.0	+1.3
PTGB	Pitanga	36.43	319	eP	P	09 53 57.0	+0.5
BI05	Punta Hualpn	36.45	283	P	P	09 53 55.8	-0.7
BI05				IAmb	IAmb	09 54 07.9	
	comp=Z,618nm,0.9s						
BI05	Punta Hualpn	36.45	283	i P	P	09 53 55.4	-1.1
FRTB	Fartura	36.83	324	eP	P	09 54 01.0	+1.1
CPUP	Villa Florida	37.05	311	P	P	09 54 01.9	+0.4
	comp=Z,517nm,0.9s,baz=149,slow=7.1,SNR=556						
CPUP				ScP	ScP	09 59 57.7	-1.3
	comp=Z,83nm,1.0s,baz=297,slow=0.9,SNR=4.8						
CPUP				LR	LR	10 08 04.5	
	comp=Z,84µm,21.7s,baz=152,slow=34						
	comp=Z,517nm,0.9s						
CPUP	Villa Florida	37.05	311	P	P	09 54 01.7	+0.1
CPUP				IAmb	IAmb	09 54 36.4	
	comp=Z,1µm,1.1s						
CPUP	Villa Florida	37.05	311	P	P	09 54 02.0	+0.4
CPUP	Villa Florida	37.05	311	⇓iP	P	09 54 01.8	+0.1
CPUP	Villa Florida	37.05	311	⇓P	P	09 54 01.5	-0.1
CPUP	Villa Florida	37.05	311	P	P	09 54 02.0	+0.4
CPUP				ScP	ScP	09 59 59.4	+0.4
ALF01	Guarapari-ES	37.05	338	eP	P	09 54 02.1	+0.5
RCLB	Rio Claro- Sao	37.06	327	eP	P	09 54 03.7	+1.9
GO05	Huala	37.06	286	⇓iP	P	09 54 00.3	-1.4
BO01	Tunca	37.08	287	⇓iP	P	09 54 00.1	-1.7
BO04	La Punta	37.13	288	⇓iP	P	09 54 01.0	-1.3
MT03	Universidad Ad	37.46	289	⇓iP	P	09 54 04.4	-0.8
MT03				IAmb	IAmb	09 54 31.6	
	comp=Z,530nm,1.0s						
BO03	Pichilemu	37.47	286	⇓iP	P	09 54 04.2	-0.8
FCH	Farellones	37.48	289	⇓iP	P	09 54 04.7	-0.9
MT09	Talagante	37.50	288	IAmb	IAmb	09 54 16.5	
	comp=Z,428nm,0.6s						
MT09	Talagante	37.50	288	⇓iP	P	09 54 04.1	-1.4
MT05	Renca	37.66	289	IAmb	IAmb	09 55 14.9	
	comp=Z,1µm,1.2s						
MT05	Renca	37.66	289	⇓iP	P	09 54 06.1	-0.8
MT05				IAmb	IAmb	09 54 19.4	
	comp=Z,446nm,0.9s						
PEL	Peldehue	37.83	289	IAmb	IAmb	09 54 10.6	
	comp=Z,789nm,0.9s						
PEL	Peldehue	37.83	289	⇓iP	P	09 54 07.7	-0.5
PEL	Peldehue	37.83	289	⇓P	P	09 54 07.6	-0.6
PEL	Peldehue	37.83	289	P	P	09 54 08.1	-0.2
VA05	Santo Domingo	37.92	287	IAmb	IAmb	09 54 20.4	
	comp=Z,1µm,0.8s						
MT02	Curacav	37.98	288	IAmb	IAmb	09 54 47.1	
	comp=Z,716nm,0.9s						
MT02	Curacav	37.98	288	⇓iP	P	09 54 08.5	-0.9
MT02				IAmb	IAmb	09 54 21.2	
	comp=Z,494nm,0.7s						
ZON	Zonda	38.03	293	IAmb	IAmb	09 54 18.9	
	comp=Z,579nm,0.7s						
VA03	San Esteban	38.05	290	IAmb	IAmb	09 54 42.0	
	comp=Z,1µm,1.0s						
VA03	San Esteban	38.05	290	⇓iP	P	09 54 09.9	-0.3
RTLL	Cerro Villicun	38.10	293	⇓iP	P	09 54 09.7	-0.9
ROC1	El Roble	38.13	289	IAmb	IAmb	09 54 57.9	
	comp=Z,764nm,0.7s						
ROCH	El Roble	38.13	289	⇓iP	P	09 54 10.6	-0.3
ROCH				⇓iP	P	09 54 10.7	-0.3
ROCH				IAmb	IAmb	09 54 23.0	
	comp=Z,957nm,1.0s						
RIB01	Linhares ES	38.25	339	eP	P	09 54 12.8	+1.0
ELIM	Elim	38.31	76	⇓iP	P	09 54 11.7	-0.6
ELIM				IAmb	IAmb	09 54 13.6	
	comp=Z,10µm,2.4s						
TRCB	Terra Rica	38.40	320	P	P	09 54 13.7	+0.6
TRCB				IAmb	IAmb	09 54 15.4	
	comp=Z,2µm,1.1s						
TRCB	Terra Rica	38.40	320	eP	P	09 54 14.1	+1.0
VA01	Torpederas	38.43	288	IAmb	IAmb	09 54 54.8	
	comp=Z,750nm,1.1s						
VA01	Torpederas	38.43	288	⇓iP	P	09 54 13.1	-0.1
VA06	Catapilco	38.60	289	IAmb	IAmb	09 55 07.2	
	comp=Z,1µm,1.1s						
VA06	Catapilco	38.60	289	⇓iP	P	09 54 14.1	-0.5
BB19B	Bebedouro	38.63	327	eP	P	09 54 15.6	+0.6
SJMB	Sao Joao De Ma	39.00	338	eP	P	09 54 18.2	+0.1
CER	Ceres	39.01	74	⇓iP	P	09 54 17.7	-0.4
CER				IAmb	IAmb	09 54 23.4	
	comp=Z,4µm,2.4s						
PCMB	Pacaembu	39.01	323	eP	P	09 54 18.5	+0.3
CO02	Combarbal	39.51	291	IAmb	IAmb	09 55 03.8	
	comp=Z,726nm,0.7s						
CO02	Combarbal	39.51	291	⇓iP	P	09 54 22.2	-0.2
CO02				IAmb	IAmb	09 54 32.8	
	comp=Z,757nm,1.1s						
NAN01	Guarapari, ES	39.63	340	eP	P	09 54 23.5	+0.2
MATJ	Matjiesfontein	39.77	75	⇓iP	P	09 54 24.3	-0.2
MATJ				IAmb	IAmb	09 54 25.8	
	comp=Z,8µm,2.4s						
MAW	Mawson	39.90	143	P	P	09 54 25.8	+0.8
	comp=Z,2µm,1.0s,baz=233,slow=8.2,SNR=362						
MAW				ScP	ScP	10 00 09.0	-0.2
	comp=Z,150nm,1.1s,baz=232,slow=4.4,SNR=4.1						
MAW				LR	LR	10 08 23.8	
	comp=Z,249µm,21.9s,baz=255,slow=32						
	comp=Z,2µm,1.0s						
MAW	Mawson	39.90	143	P	P	09 54 25.4	+0.4
	baz=40,SNR=740						
MAW	Mawson	39.90	143	P	P	09 54 25.3	+0.3
MAW	Mawson	39.90	143	⇑P	P	09 54 25.3	+0.3
CO01	Juntas del Tor	40.02	293	P	P	09 54 27.9	+1.1
CO01				IAmb	IAmb	09 55 00.5	
	comp=Z,930nm,1.1s						
CO01	Juntas del Tor	40.02	293	⇓iP	P	09 54 27.7	+1.0
CO01				IAmb	IAmb	09 54 51.4	
	comp=Z,706nm,1.0s						
GO04	Tololo Observa	40.22	292	P	P	09 54 28.2	-0.2
GO04				IAmb	IAmb	09 55 17.9	
	comp=Z,712nm,0.9s						
GO04	Tololo Observa	40.22	292	⇓iP	P	09 54 27.8	-0.6
CO06	Fray Jorge	40.26	290	P	P	09 54 28.1	-0.4
CO06	Fray Jorge	40.26	290	⇓iP	P	09 54 27.7	-0.8
CO06				IAmb	IAmb	09 54 50.2	
	comp=Z,243nm,1.0s						
ITRB	Iturama	40.48	325	eP	P	09 54 31.5	+1.1
ITRB				epP	pP	09 54 51.9	+0.8
SUR	Sutherland	40.58	74	P	P	09 54 31.0	-0.3
	comp=Z,408nm,0.8s,baz=218,slow=7.1,SNR=126						
SUR				S	S	10 00 32.9	-1.1
	comp=Z,31nm,1.0s,baz=219,slow=17,SNR=1.6						
SUR				LR	LR	10 08 11.0	
	comp=Z,159µm,18.8s,baz=218,slow=31						
	comp=Z,408nm,0.8s						
SUR	Sutherland	40.58	74	P	P	09 54 30.9	-0.3
SUR				IAmb	IAmb	09 54 37.9	
	comp=Z,783nm,0.9s						
SUR	Sutherland	40.58	74	P	P	09 54 31.4	+0.1
SUR	Sutherland	40.58	74	⇓P	P	09 54 31.2	-0.1
SUR	Sutherland	40.58	74	P	P	09 54 31.4	+0.1
SUR				ScP	ScP	10 00 12.4	-0.4
CO05	La Serena	40.66	292	IAmb	IAmb	09 55 08.8	
	comp=Z,899nm,0.8s						
CO05	La Serena	40.66	292	⇓iP	P	09 54 31.0	-0.7
CO05				IAmb	IAmb	09 54 43.5	
	comp=Z,802nm,0.9s						
CVNA	Calvinia	40.71	73	⇓iP	P	09 54 31.5	-0.8
CVNA				IAmb	IAmb	09 54 41.9	
	comp=Z,1µm,1.0s						
GUA01	Guaratinga, BA	40.80	341	eP	P	09 54 33.4	+0.4
KOMG	Komaggas	40.84	69	eP	P	09 54 32.3	-1.0
KOMG				IAmb	IAmb	09 54 34.8	
	comp=Z,2650µm,7.9s						
LCO	Las Campanas	41.11	293	P	P	09 54 35.1	-0.7
LCO				IAmb	IAmb	09 54 47.7	
	comp=Z,862nm,0.8s						
LCO	Las Campanas	41.11	293	P	P	09 54 35.1	-0.7
LCO				pmax	pmax		
	comp=Z,862nm,0.9s						
LCO	Las Campanas	41.11	293	⇓P	P	09 54 35.4	-0.4
LCO	Las Campanas	41.11	293	P	P	09 54 35.8	+0.1
LCO				x	x	09 54 46.3	
LCO				pP	pP	09 54 51.5	-4.8
LCO				ScP	ScP	10 00 12.4	-2.6
ROSN	Rosenhof	41.29	80	eP	P	09 54 34.8	-2.1
ROSN				IAmb	IAmb	09 54 53.6	
	comp=Z,682nm,1.2s						
GRAN	Grantham	41.37	76	⇓iP	P	09 54 36.4	-1.3
GRAN				IAmb	IAmb	09 54 42.3	
	comp=Z,381nm,0.8s						
IPMB	Ipameri, GO	41.45	329	eP	P	09 54 39.4	+1.1
H03S1	Juan Fernandez	41.73	280	P	P	09 54 41.0	+0.9
	SNR=26						
H03S3	Juan Fernandez	41.74	280	P	P	09 54 42.0	+1.7
	SNR=22						
H03S2	Juan Fernandez	41.74	280	P	P	09 54 41.8	+1.5
CMC01	Camacan, BA	41.94	342	eP	P	09 54 42.7	+0.4
AC04	Llanos de Chal	41.95	293	⇓iP	P	09 54 42.5	+0.2
AC04				IAmb	IAmb	09 54 44.0	
	comp=Z,5µm,1.3s						
GO03	Copiap	42.02	295	IAmb	IAmb	09 54 45.0	
	comp=Z,2µm,0.8s						
GO03	Copiap	42.02	295	⇓iP	P	09 54 42.9	-0.1
GO03	Copiap	42.02	295	⇓P	P	09 54 42.9	-0.1
H03N3	Juan Fernandez	42.03	280	P	P	09 54 44.3	+1.6
	baz=150,slow=21,SNR=53						
H03N1	Juan Fernandez	42.03	280	P	P	09 54 43.9	+1.3
	baz=150,slow=21,SNR=42						
H03N2	Juan Fernandez	42.05	280	P	P	09 54 44.3	+1.6
	baz=150,slow=21,SNR=55						
AC02	Maricunga	42.09	297	⇓iP	P	09 54 45.0	+1.0
AC02				IAmb	IAmb	09 54 46.7	
	comp=Z,5µm,1.0s						
AC06	Mina Casimiro	42.27	295	IAmb	IAmb	09 54 46.6	
	comp=Z,2µm,0.9s						
AC06	Mina Casimiro	42.27	295	⇓iP	P	09 54 44.9	-0.1
SOE	Somerset East	42.90	79	eP	P	09 54 49.0	-1.1
SOE				IAmb	IAmb	09 54 51.2	
	comp=Z,3µm,2.2s						
JANB	Januaria	43.22	335	eP	P	09 54 53.0	+0.3
AUGR	Augrabies	43.30	70	eP	P	09 54 52.1	-1.1
AUGR				IAmb	IAmb	09 54 54.7	
	comp=Z,2µm,1.5s						
SHEL	Horse Pasture	43.36	30	P	P	09 54 53.6	-0.3
SHEL	Horse Pasture	43.36	30	P	P	09 54 53.6	-0.3
SHEL				pmax	pmax		
	comp=Z,5µm,0.9s						
SHEL	Horse Pasture	43.36	30	⇓P	P	09 54 54.2	+0.4
SHEL	Horse Pasture	43.36	30	P	P	09 54 54.4	+0.5
AC01	Pan de Azucar	43.39	295	IAmb	IAmb	09 54 55.8	
	comp=Z,2µm,1.1s						
AC01	Pan de Azucar	43.39	295	⇓iP	P	09 54 53.6	-0.4
AC01				IAmb	IAmb	09 55 17.7	
	comp=Z,928nm,1.1s						
KEIM	Keimoes	43.54	71	⇓iP	P	09 54 54.6	-0.6
KEIM				IAmb	IAmb	09 54 56.6	
	comp=Z,2µm,1.4s						
GDU01	Guandu, BA	43.56	342	eP	P	09 54 54.5	-0.9
BDFB	Brasilia	43.61	330	P	P	09 54 57.1	+1.2
	comp=Z,457nm,0.9s,baz=158,slow=8.3,SNR=343						
BDFB				S	S	10 01 19.8	+1.0
	comp=Z,28nm,0.7s,baz=254,slow=23,SNR=1.7						
BDFB				LR	LR	10 10 29.5	
	comp=Z,103µm,21.9s,baz=153,slow=32						
	comp=Z,457nm,0.9s						
BDFB	Brasilia	43.61	330	P	P	09 54 57.0	+1.0
BDFB	Brasilia	43.61	330	eP	P	09 54 57.2	+1.2
GO02	Mina Guanaco	43.70	297	⇓iP	P	09 54 57.3	+0.4
UPI	Upington	43.96	71	⇓iP	P	09 54 56.4	-2.3
UPI				IAmb	IAmb	09 55 10.5	
	comp=Z,501nm,1.0s						
HVD	Gariep Dam	44.48	77	⇓iP	P	09 55 01.7	-1.2
HVD				IAmb	IAmb	09 55 11.1	
	comp=Z,793nm,1.1s						
PB14	IPOC Station P	44.55	297	IAmb	IAmb	09 55 04.9	
	comp=Z,1µm,0.9s						
PB14	IPOC Station P	44.55	297	⇓iP	P	09 55 03.3	-0.4
AF01	San Pedro de A	44.88	301	⇓iP	P	09 55 08.3	+2.0
AF01				IAmb	IAmb	09 55 09.8	
	comp=Z,7µm,0.8s						
PB15	IPOC Station P	45.28	299	IAmb	IAmb	09 55 17.7	
	comp=Z,2µm,0.8s						
PB15	IPOC Station P	45.28	299	⇓iP	P	09 55 10.2	+0.8
LVC	Limon Verde	45.52	300	P	P	09 55 12.8	+1.4
	comp=Z,2µm,0.7s,baz=153,slow=5.6,SNR=1696						
LVC				LR	LR	10 13 42.2	
	comp=Z,18µm,21.8s,baz=156,slow=35						
	comp=Z,2µm,0.7s						
LVC	Limon Verde	45.52	300	P	P	09 55 12.8	+1.4
LVC	Limon Verde	45.52	300	⇓iP	P	09 55 12.5	+1.0
LVC	Limon Verde	45.52	300	eP	P	09 55 12.4	+1.0
LVC	Limon Verde	45.52	300	⇓P	P	09 55 12.3	+0.9
LVC	Limon Verde	45.52	300	P	P	09 55 12.8	+1.4
LVC				pP	pP	09 55 30.4	-2.1
LVC				ScP	ScP	10 00 32.5	-0.5
PB10	IPOC Station P	45.56	298	IAmb	IAmb	09 55 13.3	
	comp=Z,2µm,0.9s						
PB10	IPOC Station P	45.56	298	⇓iP	P	09 55 11.6	+0.3
PB10				IAmb	IAmb	09 55 13.0	
	comp=Z,2µm,0.9s						
PB06	IPOC Station P	45.76	299	⇓iP	P	09 55 13.7	+0.6
PB06				IAmb	IAmb	09 55 15.4	
	comp=Z,2µm,0.8s						
SALV	Santo Antonio	45.84	320	eP	P	09 55 13.7	+0.2
SBA	Scott Base	45.87	184	P	P	09 55 14.4	+1.4
SBA				IAmb	IAmb	09 55 19.0	
	comp=Z,2µm,1.2s						
SBA	Scott Base	45.87	184	P	P	09 55 14.5	+1.4
SBA				pmax	pmax		
	comp=Z,2µm,1.3s						
SBA	Scott Base	45.87	184	P	P	09 55 15.4	+2.3
SBA				sP	sP	09 55 43.0	-1.0
SBA				ScP	ScP	10 00 34.1	+0.9
BOSA	Boshof	45.90	75	⇓iP	P	09 55 13.0	-1.1
BOSA				IAmb	IAmb	09 55 21.4	
	comp=Z,1µm,1.4s						
BOSA	Boshof	45.90	75	P	P	09 55 12.8	-1.3
	comp=Z,268nm,0.8s,baz=212,slow=8.1,SNR=155						
BOSA				S	S	10 01 48.5	-3.2
	comp=Z,25nm,1.1s,baz=101,slow=16,SNR=1.4						
BOSA				LR	LR	10 11 26.8	
	comp=Z,162µm,19.1s,baz=222,slow=32						
	comp=Z,268nm,0.8s						
BOSA	Boshof	45.90	75	P	P	09 55 12.8	-1.3
BOSA				IAmb	IAmb	09 55 22.5	
	comp=Z,761nm,1.0s						
BOSA	Boshof	45.90	75	i P	P	09 55 13.8	-0.3
BOSA	Boshof	45.90	75	i P	P	09 55 13.8	-0.3
BOSA	Boshof	45.90	75	⇑P	P	09 55 12.1	-2.0
BOSA	Boshof	45.90	75	⇓P	P	09 55 13.0	-1.1
SDBA	SAO DESIDERIO	45.91	335	eP	P	09 55 14.6	+0.4
NBLA	Lagarto - SE	45.95	345	eP	P	09 55 14.3	-0.1
PB04	IPOC Station P	46.35	299	⇓iP	P	09 55 18.1	+0.3
PB04				IAmb	IAmb	09 55 20.2	
	comp=Z,5µm,1.1s						
VNDA	Vanda	46.36	183	P	P	09 55 18.1	+1.1
	comp=Z,1µm,0.7s,baz=189,slow=6.2,SNR=1000						
VNDA				S	S	10 01 56.4	-0.7

	comp=Z,22nm,0.9s,baz=108,slow=20,SNR=1.0						
VNDA				LR	LR	10 13 35.5	
	comp=Z,92µm,21.9s,baz=170,slow=34						
	comp=Z,1µm,0.7s						
VNDA	**Vanda**	**46.36**	**183**	P	**P**	**09 55 18.2**	**+1.3**
VNDA				IAmb	IAmb	09 55 22.4	
	comp=Z,1µm,0.8s						
VNDA	**Vanda**	**46.36**	**183**	P	**P**	**09 55 18.2**	**+1.3**
VNDA				pmax	pmax		
	comp=Z,1µm,0.8s						
VNDA	**Vanda**	**46.36**	**183**	P	**P**	**09 55 18.7**	**+1.8**
VNDA				ScP	**ScP**	**10 00 35.8**	**+0.6**
PB09	**IPOC Station P**	**46.37**	**300**	⇓*i*P	**P**	**09 55 19.3**	**+1.4**
NBPN	**Ponto Novo - B**	**46.48**	**342**	*e*P	**P**	**09 55 18.3**	**-0.3**
KSTD	**Kokstad**	**46.56**	**81**	⇓*i*P	**P**	**09 55 18.9**	**-0.4**
KSTD				IAmb	IAmb	09 55 21.1	
	comp=Z,3µm,2.2s						
PB07	**IPOC Station P**	**46.74**	**300**	⇓*i*P	**P**	**09 55 21.4**	**+0.7**
NBAN	**Anadia - AL**	**47.05**	**347**	*e*P	**P**	**09 55 22.7**	**-0.3**
PEXB	**Peixe**	**47.06**	**331**	*e*P	**P**	**09 55 24.0**	**+0.9**
SWZ	**Schweizer**	**47.07**	**74**	*e*P	**P**	**09 55 21.9**	**-1.4**
SWZ				IAmb	IAmb	09 55 34.6	
	comp=Z,709nm,0.9s						
PB02	**IPOC Station P**	**47.09**	**300**	⇓*i*P	**P**	**09 55 24.5**	**+1.1**
PB02				IAmb	IAmb	09 55 25.8	
	comp=Z,4µm,1.0s						
PB01	**IPOC Station P**	**47.13**	**301**	⇓*i*P	**P**	**09 55 24.6**	**+0.9**
PB01				IAmb	IAmb	09 55 26.2	
	comp=Z,3µm,0.7s						
CCD	**Concordia, Ant**	**47.44**	**170**	P	**P**	**09 55 26.6**	**+0.7**
CCD				sP	**sP**	**09 55 55.7**	**-1.3**
CCD				ScP	**ScP**	**10 00 40.4**	**0.0**
SNKL	**Senekal, Frees**	**47.53**	**77**	⇓*i*P	**P**	**09 55 25.2**	**-1.7**
SNKL				IAmb	IAmb	09 55 26.7	
	comp=Z,6µm,2.3s						
PTLB	**Pontes e Lacer**	**47.54**	**316**	*e*P	**P**	**09 55 26.9**	**+0.1**
CRZF	**Crozet Islands**	**47.61**	**113**	P	**P**	**09 55 27.3**	**+0.3**
PATCX	**Punta Patache**	**47.64**	**300**	⇓*i*P	**P**	**09 55 28.4**	**+0.8**
PATCX				IAmb	IAmb	09 55 30.3	
	comp=Z,3µm,0.9s						
PB08	**IPOC Station P**	**47.74**	**302**	⇓*i*P	**P**	**09 55 30.4**	**+1.6**
SIV	**San Ignacio**	**47.82**	**313**	P	**P**	**09 55 29.0**	**0.0**
	comp=Z,115nm,0.6s,baz=152,slow=7.1,SNR=585						
SIV				ScP	**ScP**	**10 00 41.9**	**-0.4**
	comp=Z,116nm,0.8s,baz=174,slow=3.5,SNR=6.9						
SIV				LR	LR	10 14 56.9	
	comp=Z,45µm,21.7s,baz=168,slow=35						
	comp=Z,115nm,0.6s						
TA01	**Diego Aracena**	**47.87**	**300**	IAmb	IAmb	09 55 31.6	
	comp=Z,2µm,1.1s						
TA01	**Diego Aracena**	**47.87**	**300**	⇓*i*P	**P**	**09 55 30.0**	**+0.7**
NBRF	**Rio Formoso -**	**47.90**	**349**	*e*P	**P**	**09 55 29.5**	**-0.1**
SNDB	**Serra Nova Dou**	**48.05**	**327**	*e*P	**P**	**09 55 31.8**	**+1.0**
PB11	**IPOC Station P**	**48.31**	**301**	⇓*i*P	**P**	**09 55 33.4**	**+0.5**
PRYS	**Parys**	**48.37**	**76**	⇓*i*P	**P**	**09 55 31.6**	**-1.7**
PRYS				IAmb	IAmb	09 55 44.6	
	comp=Z,723nm,0.9s						
WDLM	**Western Deep L**	**48.80**	**76**	*e*P	**P**	**09 55 35.0**	**-1.7**
WDLM				IAmb	IAmb	09 55 48.1	
	comp=Z,335nm,0.8s						
LBTB	**Lobatse**	**48.95**	**73**	⇓*i*P	**P**	**09 55 36.5**	**-1.2**
LBTB				IAmb	IAmb	09 55 38.5	
	comp=Z,10µm,2.5s						
LBTB	**Lobatse**	**48.95**	**73**	P	**P**	**09 55 36.5**	**-1.2**
	comp=Z,320nm,0.7s,baz=213,slow=8.6,SNR=219						
LBTB				S	**S**	**10 02 32.5**	**-2.5**
	comp=Z,19nm,1.0s,baz=69,slow=22,SNR=1.6						
LBTB				LR	LR	10 13 25.3	
	comp=Z,95µm,18.3s,baz=212,slow=32						
	comp=Z,320nm,0.7s						
LBTB	**Lobatse**	**48.95**	**73**	IAmb	IAmb	09 55 49.7	
	comp=Z,748nm,0.9s						
LBTB	**Lobatse**	**48.95**	**73**	*i* P	**P**	**09 55 37.7**	**-0.1**
LBTB	**Lobatse**	**48.95**	**73**	*i* P	**P**	**09 55 37.7**	**-0.1**
LBTB	**Lobatse**	**48.95**	**73**	⇓P	**P**	**09 55 36.3**	**-1.4**
KSR	**Koster**	**48.98**	**75**	⇓*i*P	**P**	**09 55 36.5**	**-1.5**
KSR				IAmb	IAmb	09 55 49.6	
	comp=Z,494nm,0.9s						
ASCN	**Ascension**	**49.22**	**17**	P	**P**	**09 55 39.5**	**-0.2**
H10N1	**ASCENSION HYDR**	**49.29**	**16**	P	**P**	**09 55 41.0**	**+1.1**
	baz=190,slow=11,SNR=48						
H10N3	**ASCENSION HYDR**	**49.29**	**16**	P	**P**	**09 55 40.8**	**+0.9**
	baz=190,slow=11,SNR=40						
H10N2	**ASCENSION HYDR**	**49.31**	**16**	P	**P**	**09 55 41.1**	**+1.1**
	baz=190,slow=11,SNR=61						
HRAO	**HartRAO**	**49.37**	**75**	⇓*i*P	**P**	**09 55 38.9**	**-2.1**
HRAO				IAmb	IAmb	09 55 52.5	
	comp=Z,703nm,1.0s						
PB16	**IPOC Station P**	**49.46**	**302**	IAmb	IAmb	09 55 59.4	
	comp=Z,586nm,1.0s						
PB16	**IPOC Station P**	**49.46**	**302**	⇓*i*P	**P**	**09 55 43.4**	**+1.2**
PB12	**IPOC Station P**	**49.61**	**301**	⇓*i*P	**P**	**09 55 43.1**	**+0.3**
NBMA	**Muriti-CE**	**49.66**	**345**	*e*P	**P**	**09 55 43.2**	**+0.2**
TSUM	**Tsumeb**	**49.68**	**60**	⇓*i*P	**P**	**09 55 42.1**	**-1.2**
TSUM				IAmb	IAmb	09 55 44.1	
	comp=Z,20µm,1.7s						
TSUM	**Tsumeb**	**49.68**	**60**	P	**P**	**09 55 42.5**	**-0.8**
	comp=Z,400nm,1.0s,baz=209,slow=7.4,SNR=214						
TSUM				S	**S**	**10 02 43.4**	**-1.9**
	comp=Z,9.0nm,0.9s,baz=186,slow=11,SNR=1.2						
TSUM				LR	LR	10 13 49.8	
	comp=Z,57µm,18.5s,baz=223,slow=32						
	comp=Z,400nm,1.0s						
TSUM	**Tsumeb**	**49.68**	**60**	P	**P**	**09 55 42.5**	**-0.8**
TSUM	**Tsumeb**	**49.68**	**60**	*i* P	**P**	**09 55 43.0**	**-0.3**
TSUM	**Tsumeb**	**49.68**	**60**	*i* P	**P**	**09 55 43.0**	**-0.3**
TSUM	**Tsumeb**	**49.68**	**60**	⇓P	**P**	**09 55 42.3**	**-1.0**
TSUM	**Tsumeb**	**49.68**	**60**	P	**P**	**09 55 42.7**	**-0.7**
TSUM				sP	**pwP**	**09 56 08.5**	**-1.6**
SLR	**Silverton**	**49.82**	**76**	⇓*i*P	**P**	**09 55 42.0**	**-2.4**
SLR				IAmb	IAmb	09 55 44.6	
	comp=Z,5µm,2.3s						
AP01	**Chacalluta**	**49.83**	**301**	⇓*i*P	**P**	**09 55 45.0**	**+0.7**
AP01				IAmb	IAmb	09 55 58.6	
	comp=Z,2µm,0.9s						
SMTB	**Santa Maria do**	**49.98**	**333**	*e*P	**P**	**09 55 46.2**	**+0.7**
PDRB	**Porto dos Gac**	**50.17**	**321**	*e*P	**P**	**09 55 46.8**	**-0.1**
VILB	**Vilhena**	**50.23**	**316**	*e*P	**P**	**09 55 47.1**	**-0.3**
POGA	**Pongola**	**50.41**	**80**	⇓*i*P	**P**	**09 55 47.9**	**-0.8**
POGA				IAmb	IAmb	09 55 49.5	
	comp=Z,5µm,2.4s						
CLDB	**Colider**	**50.53**	**322**	*e*P	**P**	**09 55 49.1**	**-0.6**
CRLN	**Carolina, Mapu**	**50.55**	**78**	⇓*i*P	**P**	**09 55 48.3**	**-1.7**
CRLN				IAmb	IAmb	09 55 49.3	
	comp=Z,2µm,2.3s						
LPAZ	**La Paz**	**50.60**	**305**	P	**P**	**09 55 51.8**	**+1.0**
	comp=Z,987nm,0.8s,baz=148,slow=6.3,SNR=1916						
LPAZ				ScP	**ScP**	**10 00 54.1**	**-0.8**
	comp=Z,93nm,0.9s,baz=133,slow=8.0,SNR=3.8						
LPAZ				S	**S**	**10 02 59.9**	**+0.8**
	comp=Z,177nm,1.1s,baz=227,slow=22,SNR=8.7						
LPAZ				LR	LR	10 17 05.3	
	comp=Z,27µm,21.8s,baz=141,slow=36						
LPAZ				PKPPKP	**P'P'df**	**10 26 36.0**	**-0.1**
	comp=Z,6.7nm,1.0s,baz=10.0,slow=9.0,SNR=5.1						
LPAZ				PKP2bc		10 26 52.5	
	comp=Z,11nm,1.2s,baz=349,slow=5.0,SNR=5.3						
	comp=Z,987nm,0.8s						
LPAZ	**La Paz**	**50.60**	**305**	⇓*i*P	**P**	**09 55 51.8**	**+0.9**
LPAZ	**La Paz**	**50.60**	**305**	*e*P	**P**	**09 55 52.0**	**+1.0**
LPAZ	**La Paz**	**50.60**	**305**	P	**P**	**09 55 51.9**	**+1.0**
LPAZ				ScP	**ScP**	**10 00 54.5**	**-0.5**
RCBR	**Riachuelo**	**50.80**	**348**	P	**P**	**09 55 51.7**	**0.0**
	comp=Z,92nm,0.6s,baz=316,slow=8.4,SNR=37						
RCBR				S	**S**	**10 02 58.0**	**-2.7**
	comp=Z,26nm,1.1s,baz=119,slow=20,SNR=1.4						
RCBR				LR	LR	10 13 21.9	
	comp=Z,33µm,21.1s,baz=306,slow=31						
	comp=Z,92nm,0.6s						
RCBR	**Riachuelo**	**50.80**	**348**	P	**P**	**09 55 51.6**	**0.0**
RCBR				IAmb	IAmb	09 57 11.4	
	comp=Z,1µm,1.8s						
RCBR	**Riachuelo**	**50.80**	**348**	*e*P	**P**	**09 55 51.2**	**-0.4**
RCBR	**Riachuelo**	**50.80**	**348**	⇓P	**P**	**09 55 51.6**	**0.0**
RCBR	**Riachuelo**	**50.80**	**348**	P	**P**	**09 55 51.7**	**0.0**
HAGI	**HAGI**	**51.10**	**79**	*e*P	**P**	**09 55 52.0**	**-2.0**
HAGI				IAmb	IAmb	09 55 54.7	
	comp=Z,8µm,2.5s						
MMAL	**MMAL**	**51.16**	**79**	*e*P	**P**	**09 55 52.9**	**-1.5**
MMAL				IAmb	IAmb	09 55 55.2	
	comp=Z,7µm,2.4s						
MAGG	**Maguga Dam**	**51.17**	**79**	*e*P	**P**	**09 55 53.3**	**-1.1**
MAGG				IAmb	IAmb	09 55 56.5	
	comp=Z,794nm,1.0s						
CNG	**Changalane**	**51.51**	**80**	⇓*i*P	**P**	**09 55 56.0**	**-0.9**
CNG				IAmb	IAmb	09 55 58.8	
	comp=Z,626nm,1.8s						
NBPB	**Pedra_Branca-C**	**51.57**	**344**	*e*P	**P**	**09 55 57.8**	**+0.4**
NBPS	**Pedro II - PI**	**53.00**	**342**	*e*P	**P**	**09 56 08.0**	**-0.1**
PRPB	**Parauapebas**	**53.14**	**331**	*e*P	**P**	**09 56 09.6**	**+0.5**
MOPA	**Mopani**	**53.28**	**77**	⇓*i*P	**P**	**09 56 09.7**	**-0.4**
MOPA				IAmb	IAmb	09 56 12.5	
	comp=Z,782nm,1.1s						
MOPA	**Mopani**	**53.28**	**77**	*i* P	**P**	**09 56 10.1**	**+0.1**
MOPA	**Mopani**	**53.28**	**77**	*i* P	**P**	**09 56 10.1**	**+0.1**
CASY	**Casey**	**53.66**	**160**	P	**P**	**09 56 13.3**	**+1.1**
CASY				IAmb	IAmb	09 56 15.4	
	comp=Z,1µm,1.3s						
CASY	**Casey**	**53.66**	**160**	⇑P	**P**	**09 56 12.5**	**+0.3**
CASY	**Casey**	**53.66**	**160**	P	**P**	**09 56 13.4**	**+1.2**
CASY				ScP	**ScP**	**10 01 08.2**	**+1.5**
NBMO	**Morrinhos-CE**	**53.83**	**344**	*e*P	**P**	**09 56 13.9**	**-0.2**
MATP	**Matopo**	**54.23**	**72**	⇓*i*P	**P**	**09 56 14.9**	**-2.2**
MATP				IAmb	IAmb	09 56 16.5	
	comp=Z,98µm,1.9s						
MATP	**Matopo**	**54.23**	**72**	LR	LR	10 16 17.5	
	comp=Z,78µm,19.5s,baz=204,slow=32						
MATP	**Matopo**	**54.23**	**72**	*i* P	**P**	**09 56 16.3**	**-0.8**
MATP	**Matopo**	**54.23**	**72**	*i* P	**P**	**09 56 16.3**	**-0.8**
PAF	**Port-aux-Franc**	**54.39**	**127**	P	**P**	**09 56 18.7**	**+1.0**
PAF				IAmb	IAmb	09 56 33.9	
	comp=Z,2µm,1.2s						
PAF	**Port-aux-Franc**	**54.39**	**127**	P	**P**	**09 56 18.7**	**+1.0**
PAF				pmax	pmax		
	comp=Z,2µm,1.2s						
PAF	**Port-aux-Franc**	**54.39**	**127**	⇓P	**P**	**09 56 20.1**	**+2.3**
PAF	**Port-aux-Franc**	**54.39**	**127**	P	**P**	**09 56 19.7**	**+2.0**
PAF				x	x	09 56 32.0	
PAF				pP	**pP**	**09 56 35.9**	**-2.8**
PAF				sP	**pwP**	**09 56 44.0**	**+1.1**
BLWY	**Bulawayo**	**54.52**	**72**	⇓*i*P	**P**	**09 56 16.4**	**-2.9**
BLWY				IAmb	IAmb	09 56 21.5	
	comp=Z,5µm,1.2s						
BLWY	**Bulawayo**	**54.52**	**72**	*i* P	**P**	**09 56 18.5**	**-0.7**
BLWY	**Bulawayo**	**54.52**	**72**	*i* P	**P**	**09 56 18.5**	**-0.7**
ROSB	**Rosrio**	**54.97**	**339**	*e*P	**P**	**09 56 22.5**	**+0.2**
SAML	**Samuel**	**55.04**	**315**	P	**P**	**09 56 22.9**	**+0.1**
SAML	**Samuel**	**55.04**	**315**	P	**P**	**09 56 22.9**	**+0.1**
SAML				pmax	pmax		
	comp=Z,430nm,1.0s						
SAML	**Samuel**	**55.04**	**315**	P	**P**	**09 56 23.1**	**+0.2**
SAML				sP	**sP**	**09 56 52.8**	**-1.7**
ETMB	**Extrema**	**55.50**	**311**	*e*P	**P**	**09 56 26.4**	**+0.2**
TMAB	**Tom-Au,PA,Br**	**56.35**	**334**	*e*P	**P**	**09 56 33.1**	**+0.9**
ITTB	**Itaituba**	**56.60**	**325**	*e*P	**P**	**09 56 34.0**	**0.0**
DRV	**Dumont d'Urvil**	**57.00**	**174**	P	**P**	**09 56 36.6**	**+0.5**
DRV				sP	**sP**	**09 57 04.9**	**-2.9**
LSZ	**Lusaka**	**58.33**	**69**	P	**P**	**09 56 45.4**	**-0.9**
	comp=Z,939nm,1.1s,baz=212,slow=7.8,SNR=291						
	comp=Z,939nm,1.1s						
LSZ	**Lusaka**	**58.33**	**69**	P	**P**	**09 56 45.4**	**-0.9**
LSZ	**Lusaka**	**58.33**	**69**	*i* P	**P**	**09 56 45.5**	**-0.9**
LSZ	**Lusaka**	**58.33**	**69**	*i* P	**P**	**09 56 45.5**	**-0.9**
LSZ	**Lusaka**	**58.33**	**69**	P	**P**	**09 56 45.4**	**-0.9**
NNA	**Nana**	**58.46**	**299**	P	**P**	**09 56 47.9**	**+0.7**
	comp=Z,1µm,0.9s,baz=182,slow=6.7,SNR=341						
NNA				PKP2bc		10 26 36.0	
	comp=Z,14nm,0.9s,baz=291,slow=1.5,SNR=4.9						
	comp=Z,1µm,0.9s						
NNA	**Nana**	**58.46**	**299**	P	**P**	**09 56 47.5**	**+0.4**
NNA	**Nana**	**58.46**	**299**	⇓P	**P**	**09 56 47.6**	**+0.5**
NNA	**Nana**	**58.46**	**299**	P	**P**	**09 56 48.2**	**+1.1**
MALB	**Monte Alegre**	**58.52**	**327**	*e*P	**P**	**09 56 48.3**	**+0.9**
MCPB	**Macapa, AP**	**59.31**	**330**	*e*P	**P**	**09 56 53.8**	**+0.9**
MACA	**Manacapuru-AM**	**59.41**	**320**	*e*P	**P**	**09 56 52.9**	**-0.7**
CZSB	**Cruzeiro do Su**	**60.21**	**305**	*e*P	**P**	**09 56 57.3**	**-1.8**
VOI	**Vohitsoka**	**63.08**	**89**	P	**P**	**09 57 19.1**	**+0.6**
VOI	**Vohitsoka**	**63.08**	**89**	P	**P**	**09 57 19.1**	**+0.6**
	SNR=51						
VOI	**Vohitsoka**	**63.08**	**89**	P	**P**	**09 57 20.0**	**+1.5**
VOI	**Vohitsoka**	**63.08**	**89**	⇓P	**P**	**09 57 18.9**	**+0.5**
ATAH	**Atahualpa**	**63.41**	**300**	P	**P**	**09 57 23.4**	**+2.4**
	comp=Z,1µm,1.0s,baz=150,slow=4.8,SNR=470						
ATAH				S	**S**	**10 05 50.9**	**+3.7**
	comp=Z,9.6nm,0.9s,baz=46,slow=22,SNR=2.0						
ATAH				PKPPKP	**P'P'df**	**10 26 13.4**	**-3.3**
	comp=Z,14nm,1.0s,baz=151,slow=4.8,SNR=9.1						
ATAH				LR	LR	10 26 16.8	
	comp=Z,30µm,21.6s,baz=138,slow=37						
	comp=Z,1µm,1.0s						
RPN	**Rapa Nui**	**63.74**	**260**	P	**P**	**09 57 23.3**	**+0.6**
	comp=Z,158nm,0.6s,baz=324,slow=5.3,SNR=6.9						
RPN				S	**S**	**10 05 48.1**	**-2.1**
	comp=Z,34nm,0.3s,baz=203,slow=7.7,SNR=1.4						
RPN				LR	LR	10 22 36.8	
	comp=Z,19µm,18.4s,baz=138,slow=33						
	comp=Z,158nm,0.6s						
RPN	**Rapa Nui**	**63.74**	**260**	P	**P**	**09 57 23.0**	**+0.3**
RPN				IAmb	IAmb	09 57 54.7	
	comp=Z,2µm,1.6s						
VA02	**Isla de Pascua**	**63.77**	**260**	IAmb	IAmb	09 57 54.8	
	comp=Z,1µm,1.6s						
BOAV	**Boa Vista**	**64.53**	**322**	*e*P	**P**	**09 57 27.4**	**-0.4**
MDP	**Montagnes des**	**64.69**	**331**	P	**P**	**09 57 28.9**	**+0.1**
	comp=Z,649nm,0.9s,baz=170,slow=6.9,SNR=241						
MDP				S	**S**	**10 06 00.0**	**-2.0**
	comp=Z,13nm,1.2s,baz=354,slow=18,SNR=1.3						
MDP				LR	LR	10 23 03.5	
	comp=Z,46µm,21.8s,baz=147,slow=33						
MDP				PKPPKP	**P'P'df**	**10 26 11.6**	**-0.9**
	comp=Z,9.3nm,1.2s,baz=8.1,slow=7.1,SNR=1.1						
	comp=Z,649nm,0.9s						
MPGF	**Montagnes des**	**64.70**	**331**	⇓P	**P**	**09 57 28.6**	**-0.3**
MPGF	**Montagnes des**	**64.70**	**331**	P	**P**	**09 57 29.2**	**+0.3**
MPGF				sP	**sP**	**09 57 59.0**	**-1.7**
LIC	**Lamto**	**64.84**	**24**	*e*P	**P**	**09 57 28.4**	**-1.4**
	comp=Z,2µm,0.7s						
KIC	**Kosan Boka**	**65.04**	**24**	*e*P	**P**	**09 57 28.9**	**-2.2**
	comp=Z,878nm,0.8s						
TIC	**Toumodi**	**65.25**	**24**	*e*P	**P**	**09 57 30.4**	**-2.1**
	comp=Z,1µm,0.9s						
DBIC	**Dimbokro**	**65.31**	**24**	⇓*i*P	**P**	**09 57 32.5**	**-0.3**
DBIC				IAmb	IAmb	09 57 33.4	
	comp=Z,904nm,0.8s						
DBIC	**Dimbokro**	**65.31**	**24**	P	**P**	**09 57 32.2**	**-0.7**
	comp=Z,736nm,0.7s,baz=196,slow=6.8,SNR=524						
DBIC				S	**S**	**10 06 06.3**	**-3.2**
	comp=Z,11nm,0.9s,baz=59,slow=6.5,SNR=1.3						
DBIC				LR	LR	10 20 21.9	
	comp=Z,106µm,19.7s,baz=194,slow=31						
DBIC				PKPPKP	**P'P'df**	**10 26 12.8**	**+1.5**
	comp=Z,6.7nm,0.8s,baz=18,slow=1.3,SNR=6.8						
	comp=Z,736nm,0.7s						
DBIC	**Dimbokro**	**65.31**	**24**	P	**P**	**09 57 32.5**	**-0.3**
DBIC				IAmb	IAmb	09 57 34.1	
	comp=Z,1µm,1.1s						
DBIC	**Dimbokro**	**65.31**	**24**	⇓P	**P**	**09 57 32.2**	**-0.7**
DBIC	**Dimbokro**	**65.31**	**24**	P	**P**	**09 57 32.6**	**-0.2**
DBIC				sP	**sP**	**09 58 05.0**	**+1.1**
ABPO	**Ambohimpanom**	**65.63**	**88**	P	**P**	**09 57 36.0**	**+0.8**
ABPO				IAmb	IAmb	09 58 05.6	
	comp=Z,2µm,1.7s						
ABPO	**Ambohimpanom**	**65.63**	**88**	P	**P**	**09 57 36.0**	**+0.8**
ABPO				pmax	pmax		
	comp=Z,2µm,1.7s						
ABPO	**Ambohimpanom**	**65.63**	**88**	⇓P	**P**	**09 57 36.0**	**+0.8**
ABPO	**Ambohimpanom**	**65.63**	**88**	P	**P**	**09 57 36.2**	**+1.0**
ABPO				sP	**pwP**	**09 58 04.3**	**+2.2**
OPO	**Ambohidratompo**	**65.97**	**88**	LR	LR	10 21 38.4	
	comp=Z,55µm,19.0s,baz=342,slow=32						
AIS	**Amsterdam Isla**	**66.70**	**123**	⇑P	**P**	**09 57 44.3**	**+2.7**
AIS	**Amsterdam Isla**	**66.70**	**123**	P	**P**	**09 57 43.9**	**+2.3**
AIS				pP	**pP**	**09 58 04.7**	**+1.6**
EKNA	**AfricaArray -**	**67.19**	**40**	⇓*i*P	**P**	**09 57 45.9**	**+0.9**
RER	**Riviere de l'E**	**68.66**	**96**	IAmb	IAmb	09 58 24.2	
	comp=Z,1µm,1.0s						
RER	**Riviere de l'E**	**68.66**	**96**	P	**P**	**09 57 55.8**	**+1.5**
	SNR=14						
RER	**Riviere de l'E**	**68.66**	**96**	⇓P	**P**	**09 57 55.3**	**+1.1**
RER	**Riviere de l'E**	**68.66**	**96**	P	**P**	**09 57 55.3**	**+1.1**
MCQ	**Macquarie Isla**	**69.49**	**184**	P	**P**	**09 58 00.3**	**+1.5**
	baz=69,SNR=21						
MCQ	**Macquarie Isla**	**69.49**	**184**	IAmb	IAmb	09 58 34.4	
	comp=Z,2µm,1.6s						
MCQ	**Macquarie Isla**	**69.49**	**184**	⇑P	**P**	**09 57 59.5**	**+0.8**
MACC	**Macarena, Meta**	**69.50**	**309**	*e*P	**P**	**09 57 59.6**	**+0.2**
MACC	**Macarena, Meta**	**69.50**	**309**	*e*P	**P**	**09 57 59.2**	**-0.2**
FLOC	**Florencia**	**69.79**	**307**	*e*P	**P**	**09 58 00.9**	**-0.2**
CFLOR	**Florencia**	**69.80**	**307**	*e*P	**P**	**09 58 00.4**	**-0.8**
OTAV	**Otavalo**	**69.88**	**304**	P	**P**	**09 58 03.1**	**+0.9**
OTAV				IAmb	IAmb	09 58 21.2	
	comp=Z,1µm,0.9s						
OTAV	**Otavalo**	**69.88**	**304**	P	**P**	**09 58 03.1**	**+0.9**
OTAV				pmax	pmax		
	comp=Z,1µm,1.0s						
OTAV	**Otavalo**	**69.88**	**304**	*e*P	**P**	**09 58 03.9**	**+1.6**
OTAV	**Otavalo**	**69.88**	**304**	*e*P	**P**	**09 58 03.3**	**+1.0**
OTAV	**Otavalo**	**69.88**	**304**	⇓P	**P**	**09 58 02.9**	**+0.7**
OTAV	**Otavalo**	**69.88**	**304**	P	**P**	**09 58 03.6**	**+1.4**
OTAV				pP	**PcP**	**09 58 20.5**	**-3.7**
CPAS2	**Pasto**	**70.19**	**305**	*e*P	**P**	**09 58 04.5**	**+0.5**
CMBC	**Cumbal**	**70.21**	**304**	*e*P	**P**	**09 58 06.8**	**+2.5**
GCUF	**Volcan Galeras**	**70.24**	**305**	*e*P	**P**	**09 58 05.6**	**+1.1**
CCUFI	**Cufio, Nario**	**70.24**	**305**	*e*P	**P**	**09 58 04.1**	**-0.4**
GARC	**Garzon, Huila**	**70.26**	**307**	*e*P	**P**	**09 58 04.4**	**+0.1**
CRUC	**La Cruz**	**70.36**	**306**	*e*P	**P**	**09 58 06.1**	**+1.1**
PTGC	**Puerto Gaitan,**	**70.61**	**311**	*e*P	**P**	**09 58 05.0**	**-1.1**
BETC	**Betania**	**70.68**	**308**	*e*P	**P**	**09 58 07.4**	**+0.7**
SOTA	**Rioblanco**	**70.71**	**306**	*e*P	**P**	**09 58 08.7**	**+1.4**
PCON	**Cinco Dias**	**70.79**	**307**	*e*P	**P**	**09 58 07.9**	**0.0**
MBO	**M'Bour**	**70.89**	**10**	P	**P**	**09 58 08.9**	**+1.2**
SACV	**Santiago Islan**	**71.02**	**3**	P	**P**	**09 58 08.3**	**-0.2**
SACV				IAmb	IAmb	09 58 12.2	
	comp=Z,2µm,1.9s						
MARP	**Paez Belalcaza**	**71.05**	**307**	*e*P	**P**	**09 58 10.2**	**+1.1**
CGR1C	**Isla Gorgona,**	**71.29**	**307**	*e*P	P	09 58 15.9	+5.7
PRAC	**Prado**	**71.36**	**309**	*e*P	**P**	**09 58 11.4**	**+0.7**
CTUM2	**Tumaco**	**71.40**	**304**	*e*P	**P**	**09 58 12.7**	**+1.7**
TUMC	**Tumaco**	**71.40**	**304**	*e*P	**P**	**09 58 11.7**	**+0.8**
SBV	**Sambava**	**71.63**	**87**	P	**P**	**09 58 14.3**	**+2.0**
	SNR=89						
SBV	**Sambava**	**71.63**	**87**	P	**P**	**09 58 14.7**	**+2.4**
SBV	**Sambava**	**71.63**	**87**	⇓P	**P**	**09 58 13.7**	**+1.4**
CHIC	**Chingaza**	**71.68**	**310**	*e*P	**P**	**09 58 13.1**	**0.0**
ORTC	**Ortega, Tolima**	**71.69**	**308**	*e*P	**P**	**09 58 12.0**	**-0.7**
ROSC	**El Rosal**	**72.12**	**310**	P	**P**	**09 58 16.3**	**+0.6**
	comp=Z,255nm,0.9s,baz=156,slow=3.1,SNR=114						
ROSC				S	**S**	**10 07 31.1**	**+0.2**
	comp=Z,110nm,1.2s,baz=226,slow=23,SNR=10						
ROSC				PKPPKP	**P'P'df**	**10 26 02.9**	**+1.4**
	comp=Z,6.4nm,0.4s,baz=286,slow=4.9,SNR=3.6						
ROSC				LR	LR	10 31 51.9	
	comp=Z,22µm,19.9s,baz=158,slow=37						
	comp=Z,255nm,0.9s						
ROSC	**El Rosal**	**72.12**	**310**	P	**P**	**09 58 16.0**	**+0.4**
ROSC	**El Rosal**	**72.12**	**310**	*e*P	**P**	**09 58 15.5**	**-0.2**
CROSA	**EL ROSAL, CUND**	**72.12**	**310**	*e*P	**P**	**09 58 15.9**	**+0.2**
MBAR	**Mbarara**	**72.14**	**63**	P	**P**	**09 58 15.3**	**-0.3**
	comp=Z,471nm,1.1s,baz=175,slow=4.3,SNR=168						
	comp=Z,471nm,1.1s						
MBAR	**Mbarara**	**72.14**	**63**	P	**P**	**09 58 17.2**	**+1.7**
MBAR				IAmb	IAmb	09 58 21.7	
	comp=Z,2µm,1.4s						
MBAR	**Mbarara**	**72.14**	**63**	*d i*P	**P**	**09 58 17.3**	**+1.7**
MBAR				pmax	pmax		
	comp=Z,1µm,1.4s						
MBAR				MLR	MLR		
	comp=Z,65µm,15.0s						
MBAR	**Mbarara**	**72.14**	**63**	P	**P**	**09 58 18.5**	**+2.9**
MBAR	**Mbarara**	**72.14**	**63**	*e*P	**P**	**09 58 14.1**	**-1.5**
MBAR				*e*S	**S**	**10 07 25.4**	**-5.4**
MBAR	**Mbarara**	**72.14**	**63**	⇓P	**P**	**09 58 17.1**	**+1.6**
GR1C	**Gorgona, Isla**	**72.19**	**305**	*e*P	**P**	**09 58 16.1**	**+0.4**
YOTC	**Yotoco, Valle**	**72.24**	**307**	⇓*e*P	**P**	**09 58 15.5**	**-0.6**
YOTC	**Yotoco, Valle**	**72.24**	**307**	*e*P	**P**	**09 58 15.5**	**-0.6**
ANIL	**Santa Ana**	**72.28**	**308**	*e*P	**P**	**09 58 15.5**	**-1.0**
TAMC	**Tame, Arauca**	**72.49**	**313**	*e*P	**P**	**09 58 16.7**	**-0.7**
TAMC	**Tame, Arauca**	**72.49**	**313**	*e*P	**P**	**09 58 17.4**	**-0.1**
RUSC	**La Rusia**	**72.54**	**311**	*e*P	**P**	**09 58 17.8**	**-0.5**
MALC	**Bahia Malaga**	**72.70**	**306**	*e*P	**P**	**09 58 18.9**	**+0.3**
SPBC	**San Pablo de B**	**72.74**	**310**	*e*P	**P**	**09 58 17.4**	**-1.6**
TOSP	**Speyside**	**72.88**	**325**	P	**P**	**09 58 19.7**	**+0.1**
NORC	**Norcasia**	**73.00**	**309**	*e*P	**P**	**09 58 19.5**	**-1.0**
CNOCA	**NORCASIA, CALD**	**73.01**	**309**	*e*P	**P**	**09 58 18.8**	**-1.8**
PLMC	**San Jos del P**	**73.03**	**308**	*e*P	**P**	**09 58 19.5**	**-1.2**
KOWA	**Kowa**	**73.07**	**23**	P	**P**	**09 58 20.8**	**+0.1**
KOWA				IAmb	IAmb	09 58 24.5	
	comp=Z,2µm,1.4s						
KOWA	**Kowa**	**73.07**	**23**	P	**P**	**09 58 21.0**	**+0.3**
KOWA	**Kowa**	**73.07**	**23**	⇓P	**P**	**09 58 20.5**	**-0.2**
TOA0	**Torodi Ar. Sit**	**73.18**	**29**	P	**P**	**09 58 20.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**73.18**	**29**	P	**P**	**09 58 21.0**	**-0.4**
	comp=Z,1µm,0.7s,baz=201,slow=6.1,SNR=1926						
TORD				LR	LR	10 24 23.5	
	comp=Z,41µm,21.8s,baz=194,slow=31						
	comp=Z,1µm,0.7s						
TORD	**Torodi Ar. Bea**	**73.18**	**29**	P	**P**	**09 58 21.2**	**-0.2**
BARC	**Barichara**	**73.21**	**311**	*e*P	**P**	**09 58 19.6**	**-2.4**
BAUV	**El Baul**	**73.30**	**317**	IAmb	IAmb	09 58 55.5	
	comp=Z,2µm,1.1s						
PIZC	**Pizarro, Choco**	**73.56**	**307**	*e*P	**P**	**09 58 24.8**	**+1.0**
PAMC	**Pamplona, Colo**	**73.68**	**312**	*e*P	**P**	**09 58 24.8**	**-0.2**
PTBC	**PUERTO BERRIO,**	**73.70**	**310**	*e*P	**P**	**09 58 22.4**	**-2.1**
CBOC	**Ciudad Bolivar**	**73.77**	**309**	*e*P	**P**	**09 58 24.1**	**-1.1**
HELC	**Santa Helena**	**73.85**	**309**	*e*P	**P**	**09 58 24.2**	**-1.7**
BRRC	**Barranca, Sant**	**73.90**	**311**	*e*P	**P**	**09 58 22.8**	**-2.8**
GRGR	**Grenville**	**74.02**	**325**	⇑P	**P**	**09 58 26.9**	**+0.6**
SDV	**Santo Domingo**	**74.25**	**315**	P	**P**	**09 58 27.4**	**-0.6**
	comp=Z,246nm,0.6s,baz=158,slow=4.6,SNR=45						
SDV				S	**S**	**10 07 54.5**	**-0.1**
	comp=Z,36nm,0.4s,baz=273,slow=20,SNR=10						
SDV				LR	LR	10 30 37.5	
	comp=Z,80µm,21.7s,baz=163,slow=35						
	comp=Z,246nm,0.6s						
SDV	**Santo Domingo**	**74.25**	**315**	P	**P**	**09 58 28.0**	**+0.1**
SDV				IAmb	IAmb	09 59 05.1	
	comp=Z,2µm,1.5s						
SDV	**Santo Domingo**	**74.25**	**315**	*e*P	**P**	**09 58 29.0**	**+1.1**
SDV	**Santo Domingo**	**74.25**	**315**	*e*P	**P**	**09 58 27.2**	**-0.7**
KIBK	**Kibwezi**	**74.39**	**70**	IAmb	IAmb	09 58 35.9	
	comp=Z,1µm,1.4s						
KIBK	**Kibwezi**	**74.39**	**70**	P	**P**	**09 58 31.8**	**+3.1**
	SNR=245						
SOLC	**Bahia Solano**	**74.70**	**307**	*e*P	**P**	**09 58 30.2**	**-0.2**
SOLC	**Bahia Solano**	**74.70**	**307**	*e*P	**P**	**09 58 32.0**	**+1.7**
DBBC	**Dabeiba**	**74.88**	**309**	*e*P	**P**	**09 58 31.7**	**+0.2**
PAYG	**Puerto Ayora**	**74.92**	**292**	P	**P**	**09 58 32.8**	**+1.1**
PAYG	**Puerto Ayora**	**74.92**	**292**	*e*P	**P**	**09 58 32.9**	**+1.1**
PAYG	**Puerto Ayora**	**74.92**	**292**	⇓P	**P**	**09 58 32.8**	**+1.1**
KMBO	**Kilima Mbogo**	**75.00**	**69**	P	**P**	**09 58 34.9**	**+2.4**
	comp=Z,229nm,1.1s,baz=206,slow=6.1,SNR=106						
KMBO				S	**S**	**10 07 58.7**	**-4.5**
	comp=Z,1.0nm,0.3s,baz=300,slow=20,SNR=1.2						
KMBO				PKPPKP	**P'P'df**	**10 25 55.4**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=165,slow=3.8,SNR=5.2						
KMBO				LR	LR	10 30 28.9	
	comp=Z,40µm,18.0s,baz=194,slow=35						
KMBO	**Kilima Mbogo**	**75.00**	**69**	P	**P**	**09 58 34.9**	**+2.4**
KMBO	**Kilima Mbogo**	**75.00**	**69**	*d i*P	**P**	**09 58 35.4**	**+2.9**
KMBO	**Kilima Mbogo**	**75.00**	**69**	P	**P**	**09 58 35.9**	**+3.4**
KMBO				P	**P**	**09 58 35.9**	**+3.4**
KMBO	**Kilima Mbogo**	**75.00**	**69**	*e*P	**P**	**09 58 33.6**	**+1.2**
KMBO				*e*S	**S**	**10 08 04.3**	**+1.1**
KMBO	**Kilima Mbogo**	**75.00**	**69**	*i* P	**P**	**09 58 35.3**	**+2.9**
	SNR=157						
KMBO	**Kilima Mbogo**	**75.00**	**69**	⇓P	**P**	**09 58 35.3**	**+2.8**
UREC	**San Jos de Ur**	**75.25**	**310**	*e*P	**P**	**09 58 32.0**	**-1.5**
MCLT	**Moule a Chique**	**75.27**	**326**	IAmb	IAmb	09 59 12.4	
	comp=Z,2µm,1.2s						
PTAC	**Punta Ardita,**	**75.70**	**307**	*e*P	**P**	**09 58 37.0**	**+0.9**
H05S1	**Guadeloupe/Mar**	**75.92**	**326**	P	**P**	**09 58 39.1**	**+2.0**
MPOM	**Morne Pois Mar**	**75.94**	**326**	IAmb	IAmb	09 58 40.2	
	comp=Z,3µm,2.0s						
LL1C	**La Loma 1 Cana**	**76.03**	**312**	*e*P	**P**	**09 58 37.0**	**-0.9**
BIM	**Bigot**	**76.08**	**326**	IAmb	IAmb	09 59 17.0	
	comp=Z,1µm,1.1s						
LL6C	**La Loma 6 Bece**	**76.08**	**313**	*e*P	**P**	**09 58 35.8**	**-2.4**
ILAM	**Ilet Lapin Mar**	**76.26**	**326**	IAmb	IAmb	09 59 24.1	
	comp=Z,2µm,1.5s						
LL5C	**La Loma 5 El P**	**76.28**	**312**	*e*P	**P**	**09 58 38.7**	**-0.6**
FDF	**Fort de France**	**76.30**	**326**	⇓P	**P**	**09 58 40.5**	**+1.1**
LCBC	**Los crdobas,**	**76.59**	**310**	*e*P	**P**	**09 58 42.2**	**+1.1**
ARGC	**Ariguani, Magd**	**76.60**	**312**	*e*P	**P**	**09 58 41.2**	**0.0**
DLPL	**La Plaine**	**76.90**	**326**	IAmb	IAmb	09 59 34.2	
	comp=Z,685nm,0.8s						
SJCC	**San Jacinto, C**	**77.02**	**311**	IAmb	IAmb	09 59 31.4	
	comp=Z,2µm,1.3s						
SJCC	**San Jacinto, C**	**77.02**	**311**	*e*P	**P**	**09 58 44.0**	**+0.5**
CRJC	**Cerrejon, Guaj**	**77.09**	**314**	*e*P	**P**	**09 58 41.6**	**-2.4**
URIC	**Uribia, Colomb**	**77.35**	**315**	*e*P	**P**	**09 58 43.3**	**-2.0**
URIC	**Uribia, Colomb**	**77.35**	**315**	*e*P	**P**	**09 58 42.2**	**-3.2**
AZU	**Azuero**	**77.38**	**305**	*e*P	**P**	**09 58 46.0**	**+0.5**

WHZ	Wether Hill Ro	77.44	191	IAmb	IAmb	09 59 16.6	
	comp=Z,967nm,1.2s						
GDSD	La Dsirade Is	77.76	327	IAmb	IAmb	09 59 22.5	
	comp=Z,2µm,1.4s						
H05N1	Guadeloupe/Mar	77.77	327	P	P	09 58 49.3	+1.7
SMRC	Santa Marta, M	77.77	312	*e*P	P	09 58 47.8	+0.2
LODK	Lodwar	77.91	65	P	P	09 58 51.7	+3.1
	SNR=200						
LODK	Lodwar	77.91	65	*e*P	P	09 58 46.1	-2.5
LODK				*e*S	S	10 08 30.9	-3.7
MLZ	Mavora Lakes	77.94	191	IAmb	IAmb	09 59 19.5	
	comp=Z,1µm,1.1s						
DCZ	Deep Cove	77.94	190	IAmb	IAmb	09 59 21.1	
	comp=Z,778nm,1.1s						
ODZ	Otahua Downs	77.98	193	⇑P	P	09 58 49.0	+0.5
PNME	Penonome	78.01	306	*e*P	P	09 58 48.0	-1.1
UPA	Univ. de Panam	78.09	307	*e*P	P	09 58 48.9	-0.6
WKZ	Wanaka	78.38	192	IAmb	IAmb	09 59 24.3	
	comp=Z,1µm,1.1s						
BCIP	Isla Barro Col	78.40	307	P	P	09 58 51.2	+0.1
BCIP				IAmb	IAmb	09 59 39.9	
	comp=Z,983nm,1.3s						
BCIP	Isla Barro Col	78.40	307	P	P	09 58 51.2	+0.1
BCIP				pmax	pmax		
	comp=Z,983nm,1.3s						
BCIP	Isla Barro Col	78.40	307	*e*P	P	09 58 51.4	+0.2
BCIP	Isla Barro Col	78.40	307	⇓P	P	09 58 51.5	+0.4
LBZ	Lake Benmore	78.68	192	IAmb	IAmb	09 59 24.5	
	comp=Z,1µm,1.4s						
MQZ	McQueen's Vall	79.03	194	IAmb	IAmb	09 59 25.3	
	comp=Z,1µm,1.5s						
RPZ	Rata Peaks	79.23	193	S	S	10 08 45.9	-2.0
	comp=Z,28nm,1.4s,baz=197,slow=19,SNR=1.1						
RPZ				LR	LR	10 31 41.6	
	comp=Z,42µm,20.1s,baz=174,slow=34						
RPZ	Rata Peaks	79.23	193	IAmb	IAmb	09 59 29.2	
	comp=Z,1µm,1.1s						
ANWB	Willy Bob	79.26	326	IAmb	IAmb	09 59 34.2	
	comp=Z,2µm,1.4s						
ANWB	Willy Bob	79.26	326	⇓P	P	09 58 55.8	+0.1
PIRO	Carate, Puerto	79.33	303	*e*P	P	09 58 57.3	+1.0
BRU2	Volcan	79.37	304	IAmb	IAmb	09 59 37.0	
	comp=Z,1µm,1.2s						
BRU2	Volcan	79.37	304	*e*P	P	09 58 57.5	+0.8
SEUS	St. Eustatius	79.47	325	IAmb	IAmb	09 59 37.5	
	comp=Z,2µm,1.1s						
EDSV	San Vito	79.52	304	*e*P	P	09 58 59.8	+2.3
RIOS	Rincon, Osa	79.67	303	IAmb	IAmb	09 59 15.3	
	comp=Z,1µm,1.0s						
LTZ	Lake Taylor	79.99	194	IAmb	IAmb	09 59 34.4	
	comp=Z,1µm,1.2s						
SMRT	St. Maarten	80.03	325	IAmb	IAmb	09 59 33.9	
	comp=Z,2µm,1.6s						
RGM0	Gandoca	80.03	304	IAmb	IAmb	09 59 40.1	
	comp=Z,2µm,1.4s						
SRBA	San Rafael, Bu	80.06	303	P	P	09 59 01.2	+0.8
SRBA	San Rafael, Bu	80.06	303	*e*P	P	09 59 00.7	+0.3
KHZ	Kahutara	80.17	195	P	P	09 59 00.1	-0.4
KHZ	Kahutara	80.17	195	⇑P	P	09 59 00.6	0.0
CDVI	St. Croix	80.29	324	IAmb	IAmb	09 59 40.6	
	comp=Z,1µm,1.1s						
EDDO	Dominical	80.32	303	*e*P	P	09 59 03.1	+1.5
PEZE	Perez Zeledon,	80.34	303	IAmb	IAmb	09 59 41.5	
	comp=Z,3µm,2.0s						
PEZE	Perez Zeledon,	80.34	303	*e*P	P	09 59 03.1	+1.2
CDM	Cerro de Muert	80.53	303	*e*P	P	09 59 04.5	+1.2
CMWZ	Cape Campbell	80.72	196	P	P	09 59 05.5	+2.0
PLWZ	Palliser	80.73	197	P	P	09 59 04.7	+1.1
RIMA	Rio Macho	80.77	303	IAmb	IAmb	09 59 07.2	
	comp=Z,1µm,1.8s						
RIMA	Rio Macho	80.77	303	*e*P	P	09 59 05.0	+0.8
BSWZ	Blackbirch Sta	80.81	196	P	P	09 59 04.9	+0.9
LCR2	La Lucha 2	80.81	303	*e*P	P	09 59 04.9	+0.4
TRWZ	Traveller	80.83	197	P	P	09 59 03.8	-0.4
BATAN	Batan	80.83	304	IAmb	IAmb	09 59 57.5	
	comp=Z,2µm,1.4s						
MTP	Monte Pirata	80.88	323	IAmb	IAmb	09 59 42.6	
	comp=Z,1µm,1.4s						
MSWZ	Moikau Station	80.88	197	P	P	09 59 06.4	+2.0
PAWZ	Paruwai Farm	80.89	197	P	P	09 59 06.8	+2.3
THZ	Tophouse	80.90	195	IAmb	IAmb	09 59 38.0	
	comp=Z,2µm,1.6s						
THZ	Tophouse	80.90	195	P	P	09 59 05.3	+0.7
BHW	Baring Head	80.95	196	P	P	09 59 05.7	+1.0
PDPR	Patillas Dam,	80.96	323	IAmb	IAmb	09 59 56.5	
	comp=Z,2µm,1.9s						
CUPR	Culebra, Puert	80.98	323	P	P	09 59 05.2	+0.2
ICMP	Isla Caja de M	81.01	322	IAmb	IAmb	09 59 06.6	
	comp=Z,1µm,1.6s						
HUMP	Col San Antoni	81.02	323	IAmb	IAmb	09 59 40.5	
	comp=Z,1µm,1.3s						
JACO	JACO, Garabito	81.05	302	*e*P	P	09 59 06.1	+0.6
DSZ	Denniston Nort	81.07	194	P	P	09 59 04.5	-0.9
SNZO	South Karori	81.07	196	P	P	09 59 06.2	+0.9
SNZO				IAmb	IAmb	09 59 10.6	
	comp=Z,781nm,0.9s						
SNZO	South Karori	81.07	196	⇓P	P	09 59 07.0	+1.6
TUWZ	Tuamarina	81.07	196	P	P	09 59 06.5	+1.1
TAU	Tasmania Unive	81.08	176	P	P	09 59 05.2	-0.2
TAU				IAmb	IAmb	09 59 21.7	
	comp=Z,1µm,0.8s						
TAU	Tasmania Unive	81.08	176	P	P	09 59 05.2	-0.2
TAU				pmax	pmax		
	comp=Z,1µm,0.9s						
TAU	Tasmania Unive	81.08	176	⇑P	P	09 59 05.6	+0.3
TMWZ	Te Maipa	81.08	197	P	P	09 59 07.3	+1.8
HDC	Heredia	81.09	303	IAmb	IAmb	09 59 46.1	
	comp=Z,2µm,1.3s						
HDC	Heredia	81.09	303	*e*P	P	09 59 07.4	+1.5
HDC	Heredia	81.09	303	⇓P	P	09 59 07.2	+1.3
SJG	San Juan	81.09	323	P	P	09 59 04.8	-0.7
	comp=Z,146nm,0.8s,baz=133,slow=3.9,SNR=36						
SJG				S	S	10 09 05.2	-2.5
	comp=Z,9.8nm,0.8s,baz=252,slow=20,SNR=1.5						
SJG				LR	LR	10 35 53.7	
	comp=Z,17µm,21.9s,baz=146,slow=36						
	comp=Z,146nm,0.8s						
SJG	San Juan	81.09	323	P	P	09 59 04.7	-0.9
SJG				IAmb	IAmb	09 59 43.2	
	comp=Z,1µm,1.6s						
SJG	San Juan	81.09	323	*e*P	P	09 59 04.3	-1.2
SJG	San Juan	81.09	323	⇑P	P	09 59 04.7	-0.9
MTW	Mount Morrison	81.09	197	P	P	09 59 08.3	+2.8
CBYP	Canovanas	81.14	323	IAmb	IAmb	09 59 41.1	
	comp=Z,2µm,1.5s						
OBIP	Obispado Ponce	81.18	322	IAmb	IAmb	09 59 40.8	
	comp=Z,2µm,1.9s						
CAW	Cannon Point	81.21	197	P	P	09 59 06.7	+0.6
TCW	Tory Channel	81.24	196	P	P	09 59 06.6	+0.4
GCPR	Guaynabo City	81.25	323	IAmb	IAmb	09 59 42.2	
	comp=Z,1µm,1.4s						
LAFE	Finca La Fe, P	81.29	302	*e*P	P	09 59 07.2	+0.5
SRA1	San Ramn	81.33	303	*e*P	P	09 59 08.5	+1.4
HOWZ	Holdsworth Sta	81.35	197	P	P	09 59 07.3	+0.4
NNZ	Nelson	81.37	195	IAmb	IAmb	09 59 40.4	
	comp=Z,2µm,1.5s						
NNZ	Nelson	81.37	195	P	P	09 59 07.7	+0.8
KIW	Kapiti Island	81.48	197	P	P	09 59 10.1	+2.5
OGWZ	Otaki Gorge	81.48	197	P	P	09 59 10.0	+2.4
MOO	Moorlands	81.54	176	P	P	09 59 08.7	+0.9
	baz=81,SNR=16						
MRZ	Mangatainoka R	81.57	197	P	P	09 59 09.6	+1.6
TKNZ	Takaka Hill	81.61	195	P	P	09 59 08.1	-0.2
INDI	Punta indio, G	81.62	302	*e*P	P	09 59 09.3	+0.8
DUWZ	D'Urville Isla	81.69	196	P	P	09 59 09.4	+0.7
JTS	Las Juntas de	81.73	303	P	P	09 59 10.1	+0.9
	comp=Z,417nm,1.1s,baz=143,slow=2.0,SNR=120						
JTS				S	S	10 09 12.8	-1.8
	comp=Z,14nm,1.1s,baz=43,slow=20,SNR=12						
JTS				LR	LR	10 38 38.8	
	comp=Z,8µm,20.6s,baz=218,slow=38						
	comp=Z,417nm,1.1s						
JTS	Las Juntas de	81.73	303	P	P	09 59 10.0	+0.9
JTS				IAmb	IAmb	09 59 49.0	
	comp=Z,3µm,1.6s						
JTS	Las Juntas de	81.73	303	*e*P	P	09 59 10.1	+0.9
JTS	Las Juntas de	81.73	303	*e*P	P	09 59 10.3	+1.2
JTS	Las Juntas de	81.73	303	⇓P	P	09 59 10.0	+0.8
FORC	Fortuna	81.76	303	*i* P	P	09 59 09.6	+0.4
CASO	Castillo	81.76	303	⇓*i*P	P	09 59 10.2	+0.8
PRHZ	Porangahau	81.77	198	P	P	09 59 10.9	+1.8
CEDE	Laguna Cedeo	81.79	303	⇓*i*P	P	09 59 10.7	+1.2
POWZ	Post Office Ro	81.80	197	P	P	09 59 13.0	+3.8
DUNO	Dulce Nombre,	81.81	302	IAmb	IAmb	09 59 48.3	
	comp=Z,896nm,1.1s						
QRZ	Quartz Range	81.87	195	IAmb	IAmb	09 59 40.9	
	comp=Z,2µm,1.8s						
QRZ	Quartz Range	81.87	195	P	P	09 59 09.2	-0.4
SAJU	San Juanillo,	81.90	302	*e*P	P	09 59 10.1	+0.1
MSEY	Mahe Island	81.94	86	P	P	09 59 10.3	-0.1
MSEY	Mahe Island	81.94	86	P	P	09 59 10.3	-0.1
MSEY				pmax	pmax		
	comp=Z,566nm,1.2s						
MSEY	Mahe Island	81.94	86	P	P	09 59 11.1	+0.7
MSEY	Mahe Island	81.94	86	*i* P	P	09 59 10.4	0.0
	SNR=8.6						
MSEY	Mahe Island	81.94	86	⇓P	P	09 59 10.8	+0.4
PXZ	Pawanui	81.96	198	P	P	09 59 12.6	+2.5
GUAI	GUAI	81.98	302	*i* P	P	09 59 11.4	+1.1
WPHZ	Waipukurau	82.00	198	P	P	09 59 12.9	+2.5
ORTG	Ortega, Santa	82.04	302	IAmb	IAmb	09 59 50.5	
	comp=Z,3µm,1.7s						
TSZ	Takapari Road	82.09	198	P	P	09 59 13.8	+3.0
PTEN	Parque Tenorio	82.12	303	*i* P	P	09 59 12.2	+1.0
CUI	Cuipilapa	82.16	303	*i* P	P	09 59 11.2	-0.2
COLC	Colonia	82.18	302	*i* P	P	09 59 11.2	-0.3
KAHZ	Kahuranaki	82.19	198	P	P	09 59 13.9	+2.5
HORNC	Hornillas	82.21	303	*i* P	P	09 59 12.2	+0.5
GUAB	Guayabo de Bag	82.23	302	*i* P	P	09 59 12.0	+0.2
LIM1	Limonal	82.23	302	⇓*i*P	P	09 59 11.7	-0.1
VMAR	Armenia, Volca	82.27	303	*e*P	P	09 59 12.1	+0.2
GPS2	Hotel Rincn d	82.33	302	*e*P	P	09 59 12.0	-0.3
LAPC	Finca la Perla	82.38	302	⇓*i*P	P	09 59 12.2	-0.3
BUEV	Buena Vista	82.39	302	⇓*i*P	P	09 59 13.0	+0.3
GBS3	Finca Las Img	82.40	302	*i* P	P	09 59 12.2	-0.4
GB1A	Borinquen Arri	82.41	302	*i* P	P	09 59 13.0	+0.3
HZTE	Horizontes, Gu	82.41	302	*e*P	P	09 59 13.2	+0.5
BUAI	Buenos Aires	82.42	302	⇓*i*P	P	09 59 12.5	-0.3
CORO	Coronation Par	82.52	176	P	P	09 59 14.9	+1.9
WAZ	Wanganui	82.55	197	P	P	09 59 15.4	+2.3
MCHZ	McNeill Hill	82.56	198	P	P	09 59 18.3	+5.0
BHHZ	Black Hill Sta	82.63	198	P	P	09 59 17.2	+3.5
ARHZ	Aropaoanui	82.69	199	P	P	09 59 18.8	+4.9
SDD	Santo Domingo	82.74	319	IAmb	IAmb	09 59 49.1	
	comp=Z,3µm,1.8s						
MOVZ	Moawhango	82.76	198	P	P	09 59 14.8	+0.5
KNZ	Kokohu	82.80	199	P	P	09 59 11.8	-2.6
PRVC	Isla de Provid	82.80	307	*e*P	P	09 59 15.3	+0.7
WNVZ	Wahianoa	82.86	197	P	P	09 59 13.3	-1.7
BKZ	Black Stump Fm	82.87	198	P	P	09 59 16.1	+1.2
TRVZ	Turoa	82.90	197	P	P	09 59 16.2	+0.9
WHVZ	Whangaehu Hut	82.91	197	P	P	09 59 15.9	+0.6
LREZ	Lake Rotokare	82.93	197	P	P	09 59 16.3	+1.2
FWVZ	Far West T-bar	82.94	197	P	P	09 59 17.0	+1.5
PKVZ	Pokaka	82.94	197	P	P	09 59 17.3	+2.0
RAHZ	Arahi	83.01	199	P	P	09 59 17.4	+1.8
NGZ	Ngauruhoe	83.01	197	P	P	09 59 18.7	+2.9
OTVZ	Oturere	83.01	198	P	P	09 59 16.7	+1.0
GLAD	Gladstone	83.02	176	P	P	09 59 16.6	+1.0
ETVZ	East Tongariro	83.03	198	P	P	09 59 16.5	+0.7
NNVZ	North Ngauruho	83.05	198	P	P	09 59 17.8	+1.8
TMVZ	Te Maari	83.05	198	P	P	09 59 14.6	-1.4
WTVZ	West Tongariro	83.07	197	P	P	09 59 17.9	+1.8
NTVZ	North Tongarir	83.07	198	P	P	09 59 17.1	+1.1
KRVZ	Karewarewa	83.08	198	P	P	09 59 17.8	+1.7
ESPN	Las Esperanzas	83.10	304	IAmb	IAmb	09 59 17.6	
	comp=Z,595nm,0.8s						
TWVZ	Taurewa	83.14	197	P	P	09 59 16.6	+0.2
NEZ	North Egmont	83.16	196	P	P	09 59 17.1	+0.6
KATZ	Kakaramea	83.19	198	P	P	09 59 18.3	+1.6
VRZ	Vera Road	83.20	197	P	P	09 59 13.9	-2.7
NBEZ	Newall Road No	83.20	196	P	P	09 59 14.6	-1.9
DREZ	Durham Road	83.23	196	P	P	09 59 17.5	+0.8
PKE	Pukeiti	83.25	196	P	P	09 59 19.3	+2.4
RATZ	Rangitukua	83.28	198	P	P	09 59 18.2	+1.1
ACON	Acoyapa	83.30	303	IAmb	IAmb	09 59 33.3	
	comp=Z,1µm,0.8s						
ALRZ	Allen Road	83.48	198	P	P	09 59 22.7	+4.7
WPRZ	Whakapapatarin	83.56	198	P	P	09 59 21.9	+3.5
URZ	Urewera	83.64	199	S	S	10 09 28.4	-5.1
	comp=Z,28nm,1.0s,baz=17,slow=23,SNR=5.7						
URZ				LR	LR	10 32 12.1	
	comp=Z,50µm,21.5s,baz=164,slow=32						
URZ	Urewera	83.64	199	IAmb	IAmb	10 00 12.0	
	comp=Z,2µm,2.0s						
URZ	Urewera	83.64	199	⇑P	P	09 59 19.3	+0.5
KUTZ	Kaahu Road	83.64	198	P	P	09 59 20.2	+1.3
SDDR	Presa de Saban	83.72	318	*e*P	P	09 59 19.7	+0.4
SDDR	Presa de Saban	83.72	318	⇓P	P	09 59 19.2	-0.1
HIZ	Hauiti	83.78	197	IAmb	IAmb	09 59 57.9	
	comp=Z,529nm,0.7s						
HIZ	Hauiti	83.78	197	P	P	09 59 19.1	-0.5
TLZ	Tolley Road	83.85	198	P	P	09 59 22.4	+2.5
SC01	Santiago de lo	83.92	319	IAmb	IAmb	09 59 52.8	
	comp=Z,1µm,1.0s						
BOAB	BOACO BROADBAN	83.95	303	⇓P	P	09 59 20.1	-0.4
FURI	Furi	84.27	65	*e*P	P	09 59 25.4	+2.8
RKGY	Rocky Gully	84.42	151	P	P	09 59 24.0	+1.2
	baz=84,SNR=6.4						
AAE	Adis Abeba	84.43	65	*e*P	P	09 59 25.6	+2.2
AAE	Adis Abeba	84.43	65	*e*P	P	09 59 20.7	-2.7
AAE				*e*S	S	10 09 40.0	-2.5
MACI	Morro de la Ar	84.65	9	P	P	09 59 25.2	+1.2
MACI				IAmb	IAmb	10 00 02.6	
	comp=Z,648nm,1.2s						
CRIN	San Cristobal	84.82	302	IAmb	IAmb	10 00 03.4	
	comp=Z,616nm,0.8s						
CMJ	Castle Mountai	84.93	314	*i* P	P	09 59 27.3	+1.9
HOJ	Hope	84.96	313	*i* P	P	09 59 27.7	+2.1
GWJ	Greenwich	85.02	313	*i* P	P	09 59 27.8	+1.8
STH	Stony Hill	85.05	313	*i* P	P	09 59 28.1	+2.0
MTDJ	Mount Denham	85.48	313	P	P	09 59 29.2	+1.0
MTDJ				IAmb	IAmb	10 00 05.4	
	comp=Z,1µm,1.4s						
MTDJ	Mount Denham	85.48	313	*e*P	P	09 59 29.8	+1.5
MTDJ	Mount Denham	85.48	313	⇑P	P	09 59 29.6	+1.3
GEXS	Deakin Univers	85.60	173	P	P	09 59 30.9	+2.2
GRTK	Grand Turk	85.98	319	P	P	09 59 31.0	+0.5
GRTK				IAmb	IAmb	10 00 27.4	
	comp=Z,1µm,1.4s						
GRTK	Grand Turk	85.98	319	⇑P	P	09 59 31.5	+1.0
MLBS	Spotswood, Mel	86.01	174	P	P	09 59 32.8	+2.1
GTBY	Guantanamo Bay	86.04	315	⇓P	P	09 59 31.4	+0.5
NWAO	Narrogin (SRO)	86.08	150	P	P	09 59 31.2	+0.1
NWAO				IAmb	IAmb	09 59 41.8	
	comp=Z,1µm,1.8s						
NWAO	Narrogin (SRO)	86.08	150	P	P	09 59 31.2	+0.1
NWAO				pmax	pmax		
	comp=Z,1µm,1.8s						
NWAO	Narrogin (SRO)	86.08	150	P	P	09 59 33.7	+2.6
NWAO	Narrogin (SRO)	86.08	150	P	P	09 59 31.7	+0.6
TGUH	Tegucigalpa,Un	86.11	302	IAmb	IAmb	10 00 22.6	
	comp=Z,2µm,1.6s						
TGUH	Tegucigalpa,Un	86.11	302	*e*P	P	09 59 32.1	+0.6
TGUH	Tegucigalpa,Un	86.11	302	*e*P	P	09 59 31.1	-0.4
TGUH	Tegucigalpa,Un	86.11	302	*e*S	pP	09 59 53.7	-1.2
TGUH	Tegucigalpa,Un	86.11	302	⇓P	P	09 59 31.6	+0.1
TGUH	Tegucigalpa,Un	86.11	302	*e*P	P	09 59 31.1	-0.4
BRAT	Ballarat	86.23	173	P	P	09 59 33.3	+1.6
TOO	Toolangi	86.31	174	P	P	09 59 33.3	+1.1
	baz=86,SNR=45						
TOO	Toolangi	86.31	174	P	P	09 59 32.7	+0.5
TOO	Toolangi	86.31	174	P	P	09 59 32.7	+0.5
TOO				pmax	pmax		
	comp=Z,427nm,1.1s						
TOO	Toolangi	86.31	174	⇑P	P	09 59 32.4	+0.2
SFNM	Sidi Ifni	86.45	15	P	P	09 59 35.0	+2.3
COEG	Centro de Oper	86.49	301	*e*P	P	09 59 33.6	+0.3
COEG	Centro de Oper	86.49	301	*e*P	P	09 59 33.6	+0.3
DESE	Dese	86.65	64	*e*P	P	09 59 38.5	+4.1
MUN	Mundaring	86.68	149	P	P	09 59 34.4	+0.3
	baz=87,SNR=42						
SNET	Serv Nac Est T	86.72	300	P	P	09 59 34.5	+0.1
SNET				IAmb	IAmb	10 00 14.9	
	comp=Z,1µm,1.1s						
ARPS	Mount Arapiles	86.84	171	P	P	09 59 35.6	+0.8
	baz=87,SNR=54						
CEDA	San Andres	86.90	300	*e*P	P	09 59 34.5	-0.8
CEDA	San Andres	86.90	300	*e*S	pP	09 59 54.3	-4.4
CEDA	San Andres	86.90	300	*e*P	P	09 59 34.5	-0.8
CEVE	Cerro Verde	87.03	300	*e*P	P	09 59 36.7	+0.5
CEVE	Cerro Verde	87.03	300	*e*P	P	09 59 36.7	+0.5
SBLS	San Blas	87.04	300	*e*P	P	09 59 35.8	-0.4
SBLS	San Blas	87.04	300	*e*P	P	09 59 35.8	-0.4
TBI	Tubuai	87.04	231	*e*P	P	09 59 36.7	+0.7
	comp=Z,27µm,25.9s						
TBI	Tubuai	87.04	231	*e*SKSac	SKSac	10 10 00.2	+5.2
	comp=Z,77µm,40.0s						
TBI				*e*S	S	10 10 05.7	-1.8
	comp=Z,27µm,25.9s						
TBI	Tubuai	87.04	231	*e*LR	LR	10 27 09.3	
	comp=Z,279µm,32.2s,baz=154						
SNJE	San Jose	87.06	300	*e*P	P	09 59 35.2	-1.0
SNJE	San Jose	87.06	300	*e*P	P	09 59 35.2	-1.0
RTR	El Retiro	87.10	300	*e*P	P	09 59 36.4	0.0
RTR	El Retiro	87.10	300	*e*P	P	09 59 36.4	0.0
NUBE	Las Nubes	87.17	300	*e*P	P	09 59 36.6	-0.1
NUBE	Las Nubes	87.17	300	*e*P	P	09 59 36.6	-0.1
OUZ	Omahuta	87.20	197	IAmb	IAmb	10 00 20.1	
	comp=Z,699nm,1.1s						
OUZ	Omahuta	87.20	197	⇓P	P	09 59 37.6	+1.0
KLBR	Kellerberrin	87.48	150	P	P	09 59 38.3	+0.3
	baz=87,SNR=54						
CGR	Cap Guir	87.77	15	P	P	09 59 42.0	+3.0
TTIG	Tnine Tigouga,	87.90	16	P	P	09 59 43.0	+3.2
ZGR	Zagora	87.94	18	P	P	09 59 42.0	+2.0
PCG	Pacaya	87.99	300	*e*S	sP	10 00 18.2	+4.5
PCG	Pacaya	87.99	300	*e*P	P	09 59 43.0	+2.3
NBG	Las Nubes	88.03	300	*e*S	sP	10 00 18.8	+4.8
NBG	Las Nubes	88.03	300	*e*P	P	09 59 43.0	+2.1
BLDU	Ballidu	88.11	149	P	P	09 59 41.1	+0.1
	baz=88,SNR=63						
MRL	Marmol	88.14	301	*e*P	P	09 59 42.9	+1.5
FUG	Fuego 3	88.15	300	*e*S	sP	10 00 18.5	+4.1
FUG	Fuego 3	88.15	300	*e*P	P	09 59 43.0	+1.6
TWOA	Tennyson Woods	88.23	168	P	P	09 59 43.4	+1.9
OUZM	OUZ	88.52	17	P	P	09 59 45.0	+2.3
TZRR	Tazzarine	88.60	18	P	P	09 59 45.2	+2.2
ATD	Arta Tunnel	88.63	67	S	SKSac	10 10 05.1	+0.5
	comp=Z,3.2nm,0.2s,baz=90,slow=20,SNR=1.5						
ATD				LR	LR	10 37 57.7	
	comp=Z,45µm,18.6s,baz=200,slow=34						
ATD	Arta Tunnel	88.63	67	IAmb	IAmb	09 59 50.7	
	comp=Z,1µm,1.4s						
ATD	Arta Tunnel	88.63	67	P	P	09 59 47.4	+3.8
	SNR=73						
ATD	Arta Tunnel	88.63	67	*e*P	P	09 59 45.7	+2.2
ATD	Arta Tunnel	88.63	67	*e*P	P	09 59 42.0	-1.6
ATD				*e*S	S	10 10 06.5	-16
ATD	Arta Tunnel	88.63	67	⇑P	P	09 59 46.3	+2.7
OUK	Oukaimeden	88.63	16	P	P	09 59 46.0	+2.5
CAN	Canberra	88.71	177	P	P	09 59 43.8	0.0
CAN				IAmb	IAmb	09 59 50.4	
	comp=Z,529nm,1.2s						
CAN	Canberra	88.71	177	P	P	09 59 43.8	0.0
CAN				pmax	pmax		
	comp=Z,529nm,1.2s						
CAN	Canberra	88.71	177	⇑P	P	09 59 44.5	+0.7
CNB	Canberra Magne	88.72	177	P	P	09 59 45.6	+1.7
	baz=89,SNR=40						
CNB	Canberra Magne	88.72	177	P	P	09 59 45.6	+1.7
STG3	Santiaguito 3,	88.73	299	*e*S	sP	10 00 22.4	+5.3
STG3	Santiaguito 3,	88.73	299	*e*P	P	09 59 46.1	+2.0
EAH	EAH	88.81	15	P	P	09 59 47.0	+3.1
H08S1	Diego Carcia H	88.91	102	P	P	09 59 45.3	+0.7
	baz=325,slow=5.7,SNR=36						
H08S2	Diego Garcia H	88.92	102	P	P	09 59 46.0	+1.3
	baz=325,slow=5.7,SNR=38						
H08S3	Diego Garcia H	88.93	102	P	P	09 59 45.8	+1.1
	baz=325,slow=5.7,SNR=29						
FUL	Funchal	88.98	8	*e*P	P	09 59 46.1	+1.5
FUL				*i* LQ	LQ	10 00 18.7	
PMAR	Madeira	89.05	8	*e*P	P	09 59 47.0	+1.8
PMAR				*i* LQ	LQ	10 00 18.3	
PMAR	Madeira	89.05	8	*e*PP	PP	10 03 19.3	+2.5
DGAR	Diego Garcia	89.09	102	P	P	09 59 47.6	+1.8
DGAR	Diego Garcia	89.09	102	P	P	09 59 47.6	+1.8
DGAR				pmax	pmax		
	comp=Z,2µm,1.4s						
PMOZ	Porto Moniz, M	89.13	8	*e*P	P	09 59 47.5	+2.0
PMOZ				*i* LQ	LQ	10 00 20.2	
PMOZ	Porto Moniz, M	89.13	8	*e*PP	PP	10 03 19.4	+2.1
PMOZ				*e*SKS	SKSac	10 10 17.8	+11
PMOZ	Porto Moniz, M	89.13	8	*e*LR	LR	10 27 32.4	
	comp=Z,30µm,22.0s						
PMOZ	Porto Moniz, M	89.13	8	P	P	09 59 48.2	+2.7
MORW	Morawa	89.37	148	P	P	09 59 47.3	+0.4
	baz=89,SNR=33						
MORW	Morawa	89.37	148	P	P	09 59 47.5	+0.5
MORW	Morawa	89.37	148	⇑P	P	09 59 47.4	+0.5
PMPST	Porto Santo, M	89.45	9	*e*P	P	09 59 48.4	+1.5
PMPST				*i* LQ	LQ	10 00 21.1	
PMPST	Porto Santo, M	89.45	9	*e*PP	PP	10 03 22.5	+2.7
ARF	Arif	89.48	19	P	P	09 59 50.0	+2.8
GOLM	Goulmima	89.61	19	P	P	09 59 51.0	+3.2
HTT	Hallett	89.85	168	P	P	09 59 47.7	-1.4
	baz=90,SNR=5.5						
HTT	Hallett	89.85	168	P	P	09 59 50.2	+1.0
HTT	Hallett	89.85	168	⇓P	P	09 59 50.1	+0.9
SRHM	Skhour des Reh	89.87	16	P	P	09 59 51.0	+2.1
NAPP	Napperby	90.00	168	P	P	09 59 51.0	+1.2
WHYH	Whyalla	90.08	167	P	P	09 59 50.8	+0.6
BBOO	Buckleboo	90.10	166	P	P	09 59 50.8	+0.5
	baz=90,SNR=46						
BBOO	Buckleboo	90.10	166	P	P	09 59 50.5	+0.2
BBOO				IAmb	IAmb	10 00 17.4	
	comp=Z,324nm,0.9s						
BBOO	Buckleboo	90.10	166	P	P	09 59 51.0	+0.7
RIV	Riverview	90.25	178	P	P	09 59 52.8	+1.9
	baz=90,SNR=29						
RIV	Riverview	90.25	178	⇑P	P	09 59 52.2	+1.3
SYDH	Sydney Hard Ro	90.31	178	P	P	09 59 52.8	+1.6
CCIG	Comitan	90.36	299	P	P	09 59 51.7	0.0
CCIG				IAmb	IAmb	10 00 31.0	
	comp=Z,343nm,1.0s						
CCIG	Comitan	90.36	299	⇓P	P	09 59 51.5	-0.2
FORT	Forrest	90.73	159	P	P	09 59 54.1	+0.9
	baz=91,SNR=46						
FORT	Forrest	90.73	159	P	P	09 59 54.4	+1.2
FORT	Forrest	90.73	159	⇑P	P	09 59 53.8	+0.5
MDT	Midelt	90.75	19	P	P	09 59 55.5	+2.5
	comp=Z,562nm,1.1s,baz=229,slow=3.6,SNR=264						
MDT				LR	LR	10 36 17.7	
	comp=Z,62µm,20.9s,baz=190,slow=33						
MDT	Midelt	90.75	19	P	P	09 59 56.0	+2.9
AVE	Averroes	90.75	16	P	P	09 59 53.0	+0.1
AVE				S	SKSac	10 10 16.8	+0.9
AVE	Averroes	90.75	16	P	P	09 59 55.4	+2.5
AVE	Averroes	90.75	16	⇓P	P	09 59 54.5	+1.6
MGCD	Mangrove Creek	90.86	178	P	P	09 59 55.8	+2.0
	baz=91,SNR=27						
MGCD	Mangrove Creek	90.86	178	P	P	09 59 55.8	+2.0
ZHG	ZHG	91.02	17	P	P	09 59 56.0	+1.7
NTLS	Newcastle Soft	91.15	179	P	P	09 59 58.2	+3.1
NTLH	Newcastle Hard	91.18	179	P	P	09 59 58.4	+3.1
MEH	Mehetia	91.22	235	*e*P	P	09 59 55.7	0.0
	comp=Z,114nm,1.3s						
RAO	Raoul Island	91.30	205	LR	LR	10 35 38.4	
	comp=Z,24µm,21.9s,baz=154,slow=32						
TDRA	Tendrara	91.46	21	P	P	09 59 60.0	+3.5
LCRM	LCR	91.56	18	P	P	09 59 60.0	+3.1
STKA	Stephens Creek	91.67	170	P	P	10 00 00.4	+2.9
	comp=Z,114nm,0.8s,baz=164,slow=6.1,SNR=25						
STKA				S	SKSac	10 10 19.0	-3.0
	comp=Z,6.9nm,0.9s,baz=288,slow=23,SNR=11						
STKA				PKKPbc	PKKPbc	10 17 13.8	+0.4
	comp=Z,9.3nm,0.9s,baz=114,slow=12,SNR=6.6						
STKA				PKPPKP	P'P'df	10 25 16.3	-12
	comp=Z,2.2nm,0.9s,baz=264,slow=5.7,SNR=2.9						
STKA				LR	LR	10 39 33.5	
	comp=Z,71µm,20.9s,baz=184,slow=34						
STKA	Stephens Creek	91.67	170	P	P	09 59 58.5	+0.9
	baz=92,SNR=35						
STKA	Stephens Creek	91.67	170	P	P	09 59 58.1	+0.6
STKA	Stephens Creek	91.67	170	P	P	09 59 58.1	+0.6
STKA				pmax	pmax		
	comp=Z,172nm,1.6s						
STKA	Stephens Creek	91.67	170	P	P	09 59 59.1	+1.5
TIAR	Tiarei	92.08	234	*e*P	P	09 59 59.8	+0.1
	comp=Z,103nm,1.6s						
PAE	Paea	92.09	233	*e*P	P	10 00 02.5	+2.8
PPT2	Papeete2	92.15	234	*e*P	P	10 00 00.6	+0.5
	comp=Z,195nm,1.3s						
PPT2	Papeete2	92.15	234	*e*PP	PP	10 03 35.8	-4.8
PPT2	Papeete2	92.15	234	*e*PP	PP	10 03 50.8	+10
PPT2				*e*SKSac	SKSac	10 10 29.6	+4.4
PPT2				*e*SP	SPn	10 12 12.6	+6.2
PPT2	Papeete2	92.15	234	*e*LR	LR	10 29 19.6	
	comp=Z,461µm,33.0s,baz=154						
PPT	Papeete	92.17	234	LR	LR	10 36 00.0	
	comp=Z,26µm,18.3s,baz=160,slow=32						

MULG	Mulgathing	92.29	164	P	P	10 00 01.1	+0.6
CMSA	Cobar Meteorol	92.32	174	P	P	10 00 01.5	+0.9
	baz=92,SNR=91						
CMSA	Cobar Meteorol	92.32	174	P	P	10 00 02.2	+1.6
CMIG	Matias Romero	92.40	297	P	P	10 00 01.5	+0.6
	comp=Z,147nm,0.8s,baz=132,slow=2.9,SNR=170						
CMIG				LR	LR	10 36 28.0	
	comp=Z,10µm,20.2s,baz=136,slow=32						
	comp=Z,147nm,0.8s						
LHI	Lord Howe Isla	92.41	185	IAmb	IAmb	10 00 38.0	
	comp=Z,242nm,0.9s						
AKLM	AKL	92.54	19	P	P	10 00 04.2	+3.0
JBK	JBK	92.61	20	P	P	10 00 04.0	+2.2
LCRK	Leigh Creek	92.71	167	P	P	10 00 03.6	+1.2
CHEFC	Chefchaouen	92.86	18	P	P	10 00 06.0	+3.2
PSMA	Santa Maria	92.91	1	eP	P	10 00 04.8	+2.0
	comp=Z,812nm,2.6s						
PSMN	Pico do Norte,	92.92	2	eP	P	10 00 04.8	+1.9
	comp=Z,876nm,1.6s						
TAF	Taforalt	93.10	20	P	P	10 00 07.0	+3.1
PVLZ	Peæn de	93.10	18	P	P	10 00 03.3	-0.4
PVLZ				S	SKSac	10 10 27.8	-1.2
RAR	Rarotonga	93.17	223	LR	LR	10 37 12.1	
	comp=Z,16µm,18.7s,baz=175,slow=32						
RAR	Rarotonga	93.17	223	P	P	10 00 16.1	+12
	comp=Z,139nm,0.5s						
PALE	Palemas	93.21	19	P	P	10 00 07.0	+2.7
VAH	Vaihoa	93.32	236	eP	P	10 00 05.3	-0.1
SMIR	Smir Dam	93.42	17	P	P	10 00 08.0	+2.8
CHAS	Isla Isabel II	93.46	20	P	P	10 00 07.1	+1.7
CHAS				S	SKSac	10 10 31.2	+0.2
WMELI	Melilla	93.49	19	P	P	10 00 05.8	+0.2
WMELI				S	SKSac	10 10 31.9	+0.8
CEU	Ceuta	93.63	17	P	P	10 00 06.9	+0.8
CEU				S	SKSac	10 10 33.0	+1.2
PMOR	Pomariorio Ree	93.65	236	eP	P	10 00 05.3	-1.6
	comp=Z,210nm,1.3s						
ARMA	Armidale	93.65	179	P	P	10 00 08.7	+1.8
	baz=94,SNR=3.6						
ARMA	Armidale	93.65	179	IAmb	IAmb	10 00 57.4	
	comp=Z,271nm,1.3s						
ARMA	Armidale	93.65	179	P	P	10 00 08.1	+1.2
ARMA	Armidale	93.65	179	⇑P	P	10 00 08.4	+1.6
PDA	Ponta Delgada	93.66	1	eP	P	10 00 08.1	+1.9
	comp=Z,382nm,2.0s						
CMLA	Cha da Macela	93.67	1	eP	P	10 00 08.4	+2.1
	comp=Z,540nm,2.3s						
CMLA	Cha da Macela	93.67	1	P	P	10 00 07.8	+1.5
CMLA				IAmb	IAmb	10 00 11.2	
	comp=Z,302nm,1.0s						
CMLA	Cha da Macela	93.67	1	P	P	10 00 07.8	+1.5
CMLA				pmax	pmax		
	comp=Z,302nm,1.0s						
CMLA	Cha da Macela	93.67	1	P	P	10 00 09.6	+3.2
CMLA	Cha da Macela	93.67	1	⇓P	P	10 00 08.6	+2.2
CMLA				⇓s	sP	10 00 42.5	+3.7
GRON	Grota Negra	93.68	1	eP	P	10 00 08.1	+1.7
	comp=Z,961nm,1.6s						
061Z	Ochoppi	93.68	313	P	P	10 00 07.3	+0.7
	baz=153						
061Z				S	S	10 11 07.1	-0.8
	baz=153						
BART	Pico Bartolome	93.69	1	eP	P	10 00 09.3	+2.8
	comp=Z,3µm,1.6s						
PCALD	Caldeiras da R	93.71	1	eP	P	10 00 08.5	+2.0
	comp=Z,722nm,2.3s						
PSET	Sete Cidades	93.73	1	eP	P	10 00 07.4	+0.8
	comp=Z,491nm,0.9s						
OTSS	Djebel Tessala	93.87	21	P	P	10 00 10.3	+2.9
BBSR	BB Station	93.95	329	P	P	10 00 08.3	+0.7
BBSR				IAmb	IAmb	10 00 56.3	
	comp=Z,278nm,1.4s						
BBSR	BB Station	93.95	329	P	P	10 00 07.9	+0.2
	baz=160,SNR=6.5						
BBSR				S	S	10 11 12.4	+2.5
	baz=160						
BBSR	BB Station	93.95	329	⇓P	P	10 00 07.7	+0.1
SFS	San Fernando	94.05	17	P	P	10 00 08.9	+0.9
SFS				S	SKSac	10 10 38.1	+4.0
SFS	San Fernando	94.05	17	P	P	10 00 09.4	+1.4
SFS	San Fernando	94.05	17	P	P	10 00 09.4	+1.4
SFS				pmax	pmax		
	comp=Z,3µm,1.4s						
SFS	San Fernando	94.05	17	P	P	10 00 11.7	+3.7
ODJA	Bouhanifia	94.05	22	P	P	10 00 11.6	+3.4
TATN	Tataouine	94.07	31	⇓P	P	10 00 10.5	+2.1
PFVI	Vila Bisbo	94.31	14	eP	P	10 00 10.4	+1.2
PFVI				i LQ	LQ	10 00 43.0	
PFVI	Vila Bisbo	94.31	14	ePP	PP	10 03 58.9	+0.9
PFVI	Vila Bisbo	94.31	14	P	P	10 00 11.6	+2.4
PID	Ribeirinha	94.35	359	eP	P	10 00 11.5	+2.1
	comp=Z,464nm,2.0s						
PCAN	Candelaria	94.37	359	eP	P	10 00 11.9	+2.4
	comp=Z,448nm,0.7s						
PPNO	Prainha do Nor	94.38	359	eP	P	10 00 11.7	+2.1
	comp=Z,466nm,0.7s						
PICO	Pico	94.41	359	eP	P	10 00 11.8	+2.0
	comp=Z,661nm,1.3s						
HOR	Horta	94.44	359	eP	P	10 00 09.5	-0.3
	comp=Z,303nm,1.6s						
CALA	Caldeira	94.49	359	eP	P	10 00 12.0	+1.8
	comp=Z,570nm,2.3s						
060A	Indiantown	94.50	314	P	P	10 00 11.0	+0.6
	baz=153						
060A				S	S	10 11 16.2	+1.2
	baz=153						
MORF	Marmelete	94.50	15	eP	P	10 00 10.1	-0.1
MORF				eSKSac	SKSac	10 10 39.4	+2.7
MORF				IAMs_20	IAMs_20	10 31 51.4	
	comp=Z,208µm,34.9s						
MORF	Marmelete	94.50	15	eP	P	10 00 11.0	+0.8
MORF				i LQ	LQ	10 00 44.0	
MORF	Marmelete	94.50	15	ePP	PP	10 04 00.0	+0.4
MORF	Marmelete	94.50	15	eP	P	10 00 10.1	-0.1
MORF				e		10 10 39.4	
MORF	Marmelete	94.50	15	⇓P	P	10 00 11.3	+1.1
PMAN	Manadas	94.54	359	eP	P	10 00 12.4	+2.2
	comp=Z,398nm,1.6s						
PCED	Cedros	94.54	359	eP	P	10 00 12.4	+2.1
	comp=Z,528nm,1.3s						
PBDV	Barranco-do-Ve	94.54	15	eP	P	10 00 12.2	+1.8
PBDV				i LQ	LQ	10 00 44.5	
PBDV	Barranco-do-Ve	94.54	15	ePP	PP	10 03 58.3	-1.6
ADH	Angra Heroismo	94.56	360	eP	P	10 00 11.6	+1.3
	comp=Z,200nm,1.3s						
ROSA	Rosais	94.63	359	eP	P	10 00 11.6	+0.9
	comp=Z,506nm,2.3s						
EMAL	Malaga-Limoner	94.63	18	P	P	10 00 10.6	-0.2
EMAL				S	SKSac	10 10 32.0	-5.2
TLIG	Tlapa	94.64	295	IAmb	IAmb	10 00 14.2	
	comp=Z,262nm,1.0s						
TLIG	Tlapa	94.64	295	⇓P	P	10 00 12.3	+0.9
TLIG				⇓P	PcP	10 00 12.6	+0.9
PAGU	Agualva, Azore	94.67	360	eP	P	10 00 13.0	+2.1
	comp=Z,338nm,2.3s						
PTEO	Sao Teotonio	94.73	14	eP	P	10 00 12.6	+1.5
PTEO				i LQ	LQ	10 00 44.5	
PTEO	Sao Teotonio	94.73	14	ePP	PP	10 04 01.0	-0.3
PVAQ	Vaqueiros	94.73	15	eP	P	10 00 12.8	+1.6
PVAQ				i LQ	LQ	10 00 44.9	
PVAQ	Vaqueiros	94.73	15	ePP	PP	10 04 00.2	-1.1
PVAQ				eSKS	SKSac	10 10 39.7	+1.9
PVAQ	Vaqueiros	94.73	15	eLR	LR	10 31 12.8	
	comp=Z,63µm,24.0s						
PVAQ	Vaqueiros	94.73	15	IAmb	IAmb	10 00 24.7	
	comp=Z,581nm,1.4s						
PVAQ	Vaqueiros	94.73	15	P	P	10 00 13.7	+2.5
PVAQ	Vaqueiros	94.73	15	⇑P	P	10 00 12.7	+1.5
PVAQ				⇓s	sP	10 00 47.0	+3.4
GIRL	Giralia	94.82	144	P	P	10 00 16.4	+4.2
	baz=95,SNR=3.9						
GIRL	Giralia	94.82	144	P	P	10 00 14.2	+2.0
OKGL	Djebel Kef Gue	94.90	22	P	P	10 00 23.1	+11
EANR	'Ain N'Sour	94.91	23	P	P	10 00 15.0	+2.9
PCVE	Castro Verde	94.91	15	eP	P	10 00 13.4	+1.4
PCVE				i LQ	LQ	10 00 45.8	
PCVE	Castro Verde	94.91	15	ePP	PP	10 04 04.0	+1.3
SRBC	Serra Branca	94.94	359	eP	P	10 00 14.2	+2.1
	comp=Z,469nm,1.3s						
OOD	Oodnadatta	94.98	165	P	P	10 00 13.6	+0.7
SOCY	Socotra	95.06	76	P	P	10 00 15.1	+1.7
SOCY	Socotra	95.06	76	P	P	10 00 18.0	+4.7
	SNR=5.0						
SOCY	Socotra	95.06	76	⇓P	P	10 00 15.2	+1.8
MESJ	Messejana	95.09	15	eP	P	10 00 12.7	-0.1
MESJ				ePP	PP	10 04 03.8	-0.3
MESJ				eSKSac	SKSac	10 10 42.5	+2.8
MESJ				IAMs_20	IAMs_20	10 32 26.1	
	comp=Z,212µm,42.7s						
MESJ	Messejana	95.09	15	eP	P	10 00 14.6	+1.8
MESJ				i LQ	LQ	10 00 46.7	
MESJ	Messejana	95.09	15	eP	P	10 00 12.7	-0.1
MESJ				e		10 04 03.7	
MESJ				e		10 10 42.4	
MESJ	Messejana	95.09	15	⇓P	P	10 00 14.5	+1.7
MESJ				⇓P	PcP	10 00 14.8	+1.7
TAOE	Nuku Hiva Isla	95.17	246	ePP	PP	10 04 08.9	+4.5
TAOE				eSP	SP	10 12 40.2	+1.3
TAOE	Nuku Hiva Isla	95.17	246	eLR	LR	10 30 42.4	
	comp=Z,57µm,28.9s						
PNCL	Nicolau / Gran	95.31	15	eP	P	10 00 15.5	+1.7
PNCL				i LQ	LQ	10 00 47.8	
PNCL	Nicolau / Gran	95.31	15	ePP	PP	10 04 08.2	+2.4
PBEJ	Beja	95.32	15	eP	P	10 00 15.3	+1.4
PBEJ				i LQ	LQ	10 03 58.9	
EBNR	Beni Rached	95.33	23	P	P	10 00 26.4	+12
H07S1	FLORES T-PHASE	95.35	357	eP	P	10 00 15.8	+1.8
EMHD	Djebel Mahouad	95.56	24	P	P	10 00 22.0	+6.8
PBAR	Barrancos	95.59	16	eP	P	10 00 16.6	+1.5
PBAR				i LQ	LQ	10 00 49.0	
PBAR	Barrancos	95.59	16	ePP	PP	10 04 05.8	-2.2
AKET	Djebel Ketaf	95.63	25	P	P	10 00 19.3	+3.8
ADJB	Djebel Djouab	95.63	24	P	P	10 00 17.5	+2.0
H07N1	FLORES T-PHASE	95.66	357	eP	P	10 00 13.7	-1.7
INKA	Innaminka	95.67	169	P	P	10 00 17.8	+1.8
EVO	Evora	95.80	15	P	P	10 00 16.0	0.0
EVO				S	SKSac	10 10 44.9	+1.5
EVO	Evora	95.80	15	eP	P	10 00 17.3	+1.3
EVO				i LQ	LQ	10 00 49.6	
EVO	Evora	95.80	15	ePP	PP	10 04 09.1	-0.5
LIS	Lisbon	95.82	14	eP	P	10 00 16.0	-0.2
LIS				ePP	PP	10 04 09.4	-0.3
LIS				eSKSac	SKSac	10 10 46.3	+2.8
LIS				IAMs_20	IAMs_20	10 32 04.6	
	comp=Z,213µm,40.3s						
LIS	Lisbon	95.82	14	eP	P	10 00 15.9	-0.2
LIS				e		10 04 09.3	
LIS				e		10 10 46.3	
PMST	Lisbon--Monsan	95.84	14	eP	P	10 00 17.8	+1.6
PMST				i LQ	LQ	10 00 50.0	
PMST	Lisbon--Monsan	95.84	14	ePP	PP	10 04 09.2	-0.6
DWPF	Disney Wildern	95.89	314	P	P	10 00 17.2	+0.5
DWPF				IAmb	IAmb	10 00 56.1	
	comp=Z,371nm,1.2s						
DWPF	Disney Wildern	95.89	314	P	P	10 00 16.4	-0.3
	baz=153						
DWPF				S	S	10 11 23.7	-3.3
	baz=153						
DWPF	Disney Wildern	95.89	314	P	P	10 00 17.5	+0.9
	baz=153						
DWPF	Disney Wildern	95.89	314	⇑P	P	10 00 17.6	+0.9
PACT	Alcochete	95.92	14	eP	P	10 00 18.5	+2.0
PACT				i LQ	LQ	10 00 50.3	
PACT	Alcochete	95.92	14	ePP	PP	10 04 07.2	-3.2
CKHR	Kef el Ahmar	95.99	26	P	P	10 00 21.5	+4.4
PMAFR	Mafra	96.04	14	eP	P	10 00 18.6	+1.5
PMAFR				i LQ	LQ	10 00 51.0	
PMAFR	Mafra	96.04	14	ePP	PP	10 04 10.1	-1.3
CART	Cartagena	96.06	20	P	P	10 00 17.8	+0.5
CART				S	SKSac	10 10 44.7	-0.1
ABA	Alger-Bouzarea	96.15	24	P	P	10 00 21.4	+3.7
PESTR	Estremoz	96.19	15	eP	P	10 00 19.4	+1.6
PESTR				i LQ	LQ	10 00 52.1	
PESTR	Estremoz	96.19	15	ePP	PP	10 04 12.4	-0.2
PESTR	Estremoz	96.19	15	IAmb	IAmb	10 00 31.5	
	comp=Z,443nm,1.8s						
PESTR	Estremoz	96.19	15	P	P	10 00 19.7	+1.9
PESTR	Estremoz	96.19	15	⇓P	P	10 00 19.3	+1.6
CTEI	Djebel Teioual	96.25	27	P	P	10 00 18.9	+0.6
PMTG	Montargil	96.30	15	eP	P	10 00 19.9	+1.6
PMTG				i LQ	LQ	10 00 52.1	
PMTG	Montargil	96.30	15	ePP	PP	10 04 14.3	+0.9
WRKA	Warakurna	96.34	158	P	P	10 00 19.5	+0.3
	baz=96,SNR=155						
WRKA	Warakurna	96.34	158	P	P	10 00 19.6	+0.5
WRKA	Warakurna	96.34	158	⇑P	P	10 00 19.4	+0.3
CASM	Ain Smara	96.46	27	P	P	10 00 25.0	+5.8
DFRA	Djebel Bou Aff	96.58	26	P	P	10 00 21.5	+1.7
CKFL	Kef-Lekhel	96.65	27	P	P	10 00 20.9	+0.8
PSBE	So Bento	96.65	14	eP	P	10 00 20.8	+0.9
PSBE				i LQ	LQ	10 00 53.5	
PSBE	So Bento	96.65	14	ePP	PP	10 04 15.7	-0.5
CMAH	Djebel Manchou	97.04	27	P	Pdif	10 00 23.4	+1.5
CAEH	'Ain El Ouahch	97.04	27	P	Pdif	10 00 23.1	+1.3
QLP	Quilpie	97.14	172	P	Pdif	10 00 23.8	+1.0
	baz=97,SNR=54						
QLP	Quilpie	97.14	172	P	Pdif	10 00 24.0	+1.2
QLP	Quilpie	97.14	172	⇑P	Pdif	10 00 23.4	+0.6
QLP				⇓P	PcP	10 00 23.8	+1.0
PCBR	Castelo Branco	97.16	15	eP	Pdif	10 00 23.0	+0.8
PCBR				i LQ	LQ	10 00 53.9	
PCBR	Castelo Branco	97.16	15	ePP	PP	10 04 19.0	-1.0
PCAS	Casmilo, Conde	97.22	14	eP	Pdif	10 00 22.9	+0.4
PCAS				i LQ	LQ	10 00 55.6	
PCAS	Casmilo, Conde	97.22	14	ePP	PP	10 04 21.3	+0.8
PAB	San Pablo	97.36	17	P	Pdif	10 00 24.3	+1.0
PAB	San Pablo	97.36	17	P	Pdif	10 00 24.3	+1.1
PAB				pmax	pmax		
	comp=Z,121nm,1.3s						
PAB	San Pablo	97.36	17	P	Pdif	10 00 24.9	+1.7
PAB	San Pablo	97.36	17	⇑P	Pdif	10 00 24.4	+1.1
COI	Coimbra	97.39	14	eP	Pdif	10 00 23.8	+0.6
COI				i LQ	LQ	10 00 54.2	
COI	Coimbra	97.39	14	ePP	PP	10 04 20.8	-1.0
COCO	West Island	97.43	125	P	P	10 00 23.4	-0.7
COCO				IAmb	IAmb	10 00 35.4	
	comp=Z,261nm,1.0s						
COCO	West Island	97.43	125	P	P	10 00 23.4	-0.7
COCO				pmax	pmax		
	comp=Z,261nm,1.0s						
656A	Willston	97.45	313	P	Pdif	10 00 23.9	+0.1
	baz=152						
RMQ	Roma	97.50	176	P	Pdif	10 00 25.8	+1.4
	baz=97,SNR=75						
RMQ	Roma	97.50	176	P	Pdif	10 00 26.2	+1.8
PSA00	Pilbara Seismi	97.54	149	P	Pdif	10 00 24.6	-0.1
PSA00	Pilbara Seismi	97.54	149	P	Pdif	10 00 25.3	+0.7
ESDC	Sonseca Array	97.55	18	P	Pdif	10 00 25.2	+1.1
	comp=Z,30nm,0.9s,baz=187,slow=4.2,SNR=112						
ESDC				PKKP	PKKPdf	10 17 01.9	-0.6
	comp=Z,2.0nm,0.7s,baz=1.8,slow=3.2,SNR=5.7						
ESDC				LR	LR	10 39 44.2	
	comp=Z,46µm,21.9s,baz=199,slow=32						
	comp=Z,30nm,0.9s						
MTE	Manteigas	97.70	15	eP	Pdif	10 00 25.5	+0.8
MTE				i LQ	LQ	10 00 58.1	
MTE	Manteigas	97.70	15	ePP	PP	10 04 24.6	+0.3
MTE				eSKS	SKSac	10 10 56.3	+3.0
MTE	Manteigas	97.70	15	eLR	LR	10 32 16.5	
	comp=Z,62µm,22.0s						
MTE	Manteigas	97.70	15	P	Pdif	10 00 25.7	+1.0
MTE	Manteigas	97.70	15	⇓P	Pdif	10 00 25.6	+0.8
MOIG	Morelia	97.75	294	P	Pdif	10 00 26.0	+0.3
MBWA	Marble Bar	97.90	149	P	Pdif	10 00 26.6	+0.4
MBWA	Marble Bar	97.90	149	P	Pdif	10 00 29.9	+3.7
MBWA	Marble Bar	97.90	149	P	Pdif	10 00 27.4	+1.2
MBWA	Marble Bar	97.90	149	⇓P	Pdif	10 00 26.6	+0.4
PVIS	Viseu	97.96	15	eP	Pdif	10 00 26.5	+0.7
PVIS				i LQ	LQ	10 00 58.5	
PVIS	Viseu	97.96	15	ePP	PP	10 04 24.8	-1.4
UCM	Universidad Co	98.29	18	P	Pdif	10 00 27.4	+0.1
UCM				S	SKSac	10 10 57.0	+0.7
456A	Hilliard	98.44	314	P	Pdif	10 00 29.2	+1.0
	baz=153						
MVO	Moncorvo	98.52	15	eP	Pdif	10 00 29.5	+1.1
MVO				i LQ	LQ	10 01 02.1	
MVO	Moncorvo	98.52	15	ePP	PP	10 04 33.1	+2.5
MVO				eSKS	SKSac	10 11 00.8	+3.3
MVO	Moncorvo	98.52	15	eLR	LR	10 32 46.7	
	comp=Z,47µm,24.0s						
PVRL	Vila Real	98.53	15	ePP	PP	10 04 29.5	-1.1
POLO	Lamas de Olo	98.62	14	eP	Pdif	10 00 29.5	+0.7
POLO				i LQ	LQ	10 01 02.3	
POLO	Lamas de Olo	98.62	14	ePP	PP	10 04 31.3	0.0
EIDS	Eidsvold	98.67	178	P	Pdif	10 00 30.1	+0.5
	baz=99,SNR=18						
EIDS	Eidsvold	98.67	178	⇓P	Pdif	10 00 30.2	+0.6
ASAR	Alice Springs	98.74	162	P	Pdif	10 00 30.1	0.0
	comp=Z,54nm,0.7s,baz=188,slow=3.9,SNR=74						
ASAR				PP	PP	10 04 29.6	-1.6
	comp=Z,191nm,1.2s,baz=186,slow=6.6,SNR=8.6						
ASAR				PKKP	PKKPdf	10 16 57.0	+0.2
	comp=Z,17nm,0.8s,baz=4.7,slow=2.6,SNR=11						
ASAR				PKPPKP		10 25 05.0	
	comp=Z,1.9nm,0.9s,baz=37,slow=2.1,SNR=4.6						
	comp=Z,54nm,0.7s						
ASAR	Alice Springs	98.74	162	P	P	10 00 29.8	-0.2
PCAB	Cabril	98.92	14	eP	P	10 00 30.5	+0.4
PCAB				i LQ	LQ	10 01 02.5	
PCAB	Cabril	98.92	14	ePP	PP	10 04 31.9	-1.6
553A	Crawfordville	98.94	312	P	Pdif	10 00 30.3	-0.1
553A				IAmb	IAmb	10 01 10.0	
	comp=Z,226nm,1.2s						
553A	Crawfordville	98.94	312	P	P	10 00 30.9	+0.5
	baz=152						
ABTO	Aybut	98.97	72	P	P	10 00 33.9	+2.9
	SNR=7.0						
PGAV	Gavieira, Arco	99.14	14	eP	Pdif	10 00 31.6	+0.5
PGAV				i LQ	LQ	10 01 05.7	
PGAV	Gavieira, Arco	99.14	14	ePP	PP	10 04 34.1	-1.2
PGAV				eSKS	SKSac	10 11 02.7	+2.1
PGAV	Gavieira, Arco	99.14	14	eLR	LR	10 32 44.7	
	comp=Z,51µm,26.0s						
257A	Skidaway Islan	99.15	316	P	Pdif	10 00 32.4	+1.1
	baz=153						
PBRG	Braganca	99.19	15	eP	Pdif	10 00 32.6	+1.3
PBRG				i LQ	LQ	10 01 05.7	
PBRG	Braganca	99.19	15	ePP	PP	10 04 35.4	-0.2
MAHO	Mahon	99.39	24	P	Pdif	10 00 33.0	+0.9
MAHO				S	SKSac	10 11 01.4	-0.2
RBK	Rabkut	99.58	73	P	Pdif	10 00 37.4	+3.8
	SNR=6.0						
255A	Hazlehurst	99.68	315	P	Pdif	10 00 32.8	-0.8
	baz=152						
WHFO	Wadi Hawf	99.69	72	P	Pdif	10 00 37.2	+3.1
	SNR=7.1						
TIGA	Tifton	99.70	314	P	Pdif	10 00 33.5	-0.2
	baz=152						
TIGA	Tifton	99.70	314	P	Pdif	10 00 34.3	+0.6
	baz=152						
VAE	Valguarnera	99.78	32	PP	PP	10 04 37.5	-2.6
	comp=Z,24nm,0.9s,baz=186,slow=8.9,SNR=5.1						
VAE				S	SKSac	10 11 06.6	+2.7
	comp=Z,5.5nm,0.3s,baz=196,slow=12,SNR=1.3						
VAE				LR	LR	10 41 14.9	
	comp=Z,38µm,20.0s,baz=168,slow=33						
NHSC	New Hope	99.83	317	P	Pdif	10 00 35.0	+0.8
	baz=153						
NHSC	New Hope	99.83	317	P	Pdif	10 00 35.4	+1.1
	baz=153						
451A	Vernon	99.86	312	P	Pdif	10 00 35.2	+0.7
	baz=151						
Y60A	Bolivia	99.90	319	P	Pdif	10 00 36.0	+1.4
	baz=154						
Y60A				P	Pdif	10 00 36.0	+1.4
	baz=154						
RAYN	Ar Rayn	100.08	63	P	Pdif	10 00 39.3	+3.6
RAYN	Ar Rayn	100.08	63	i Pdiff	Pdif	10 00 37.3	+1.6
	SNR=52						
Y59A	Loris	100.13	318	P	Pdif	10 00 36.7	+1.2
	baz=154						
Y59A				P	Pdif	10 00 36.7	+1.2
	baz=154						
VSL	Villasalto	100.25	28	⇓P	Pdif	10 00 36.6	+0.6
352A	Blakely	100.28	313	P	Pdif	10 00 36.3	0.0
	baz=151,SNR=12						
Y58A	Scranton	100.35	318	P	Pdif	10 00 38.0	+1.4
	baz=153						
Y58A				P	Pdif	10 00 38.0	+1.4
	baz=153						
EIL	Elat	100.38	51	P	Pdif	10 00 37.8	+0.9
	comp=Z,5.2nm,0.9s,baz=180,slow=6.1,SNR=2.8						
EIL				S	SKSac	10 11 07.8	+0.7
	comp=Z,4.9nm,0.9s,baz=206,slow=13,SNR=1.7						
EIL	Elat	100.38	51	⇓P	Pdif	10 00 38.6	+1.8
DOK	Doka	100.45	72	P	Pdif	10 00 41.7	+4.3
	SNR=5.3						
PINNC	Pines Island,	100.49	194	P	Pdif	10 00 42.0	+4.3
154A	Montrose	100.53	315	P	Pdif	10 00 37.7	+0.3
	baz=152						
GVD	Gavdhos	100.57	41	P	Pdif	10 00 37.8	+0.3
GVDS	Gavdos	100.58	41	P	Pdif	10 00 37.5	-0.1
HAW	Hawthorne Fire	100.61	316	P	Pdif	10 00 39.0	+1.2
	baz=152						
RK1H	Rockhampton Ha	100.63	178	P	Pdif	10 00 41.3	+3.0
Y57A	Sumter	100.72	317	P	Pdif	10 00 39.2	+1.0
	baz=153						
Y57A				P	Pdif	10 00 39.2	+1.0
	baz=153						
OUENC	Ouen Island, N	100.76	193	P	Pdif	10 00 42.7	+3.8
SHAO	Shalim	100.76	74	Pdiff	Pdif	10 00 38.8	0.0
KNDR	Palaiochora Ch	100.78	40	P	Pdif	10 00 39.0	+0.6
X58A	Rowland	100.80	318	P	Pdif	10 00 39.5	+0.9
	baz=153						
X58A				P	Pdif	10 00 39.5	+0.9
	baz=153						
CNNC	Cliffs of the	100.89	320	P	Pdif	10 00 39.9	+1.0
	baz=154						
CNNC	Cliffs of the	100.89	320	P	Pdif	10 00 40.0	+1.1
	baz=154						
BRAL	Brewton	100.89	311	P	Pdif	10 00 39.1	+0.1
	baz=151						
BRAL	Brewton	100.89	311	P	Pdif	10 00 39.4	+0.4
	baz=151						
V61A	Roper	100.91	321	P	Pdif	10 00 39.9	+0.9
	baz=154						
V61A				P	Pdif	10 00 39.9	+0.9
	baz=154						
ONTNC	Ouen Toro	100.92	193	P	Pdif	10 00 43.4	+3.8
ZAIG	Zacatecas	101.03	294	⇓P	Pdif	10 00 41.6	+1.4
IMMV	Iera Moni Meta	101.09	40	P	Pdif	10 00 40.8	+1.0
YATNC	Mamie plateau,	101.11	193	P	Pdif	10 00 45.6	+5.1
NOUC	Port Laguerre	101.14	193	P	Pdif	10 00 44.4	+3.8
DZM	Mont Dzumac	101.15	193	eP	Pdif	10 00 43.6	+2.8
	comp=Z,186nm,1.4s						
DZM	Mont Dzumac	101.15	193	eLR	LR	10 33 25.2	
	comp=Z,190µm,33.0s						
DZM	Mont Dzumac	101.15	193	P	Pdif	10 00 41.0	+0.3
	baz=148,slow=19						
DZM				S	SKSac	10 11 11.7	-0.2
	comp=Z,2.9nm,0.8s,baz=322,slow=20,SNR=5.6						
DZM				PKKP	PKKPbc	10 16 49.9	+1.8
	comp=Z,8.9nm,1.0s,baz=94,slow=19,SNR=3.7						
DZM	Mont Dzumac	101.15	193	⇑P	Pdif	10 00 42.5	+1.8
ANKY	Antikythira Is	101.21	40	P	Pdif	10 00 41.6	+1.2
152A	Waverly Hall	101.23	313	P	Pdif	10 00 40.2	-0.3
	baz=151,SNR=7.4						
250A	Grady	101.27	312	P	Pdif	10 00 40.2	-0.5
	baz=151,SNR=13						
IDI	Anoyia	101.27	41	P	Pdif	10 00 42.9	+2.1
	comp=Z,10nm,0.9s,baz=200,slow=7.8,SNR=6.7						
IDI				PP	PP	10 04 48.1	-3.4
	comp=Z,33nm,0.9s,baz=220,slow=11,SNR=7.6						
IDI	Anoyia	101.27	41	P	Pdif	10 00 41.5	+0.8
IDI	Anoyia	101.27	41	⇑P	Pdif	10 00 41.7	+1.0
JSC	Jenkinsville	101.29	317	P	Pdif	10 00 41.4	+0.6
	baz=153,SNR=6.8						
BIRD	Birdtown, Kers	101.31	317	P	Pdif	10 00 41.7	+0.9
	baz=153,SNR=6.3						
GOGA	Godfrey	101.38	315	P	Pdif	10 00 41.3	+0.1
	baz=152,SNR=5.6						
GOGA	Godfrey	101.38	315	P	Pdif	10 00 41.4	+0.3
	baz=152						
KTHR	Kythira	101.46	39	P	Pdif	10 00 42.6	+1.1
KTHA	Kythira Island	101.48	39	P	Pdif	10 00 42.7	+1.1
NPS	Neapolis	101.51	42	P	Pdif	10 00 43.0	+1.3
PYL	PYLOS	101.59	38	P	Pdif	10 00 42.3	+0.3
ZKR	Zakros	101.60	42	P	Pdif	10 00 43.7	+1.6
HODGE	Hodges	101.63	316	P	Pdif	10 00 42.9	+0.6
	baz=152,SNR=10						
V58A	Windy Hill, Pi	101.83	319	P	Pdif	10 00 43.6	+0.5
	baz=153						
V58A				P	Pdif	10 00 43.6	+0.5
	baz=153						
U59A	Littleton	101.85	320	P	Pdif	10 00 43.8	+0.6
	baz=154,SNR=6.5						
U59A				P	Pdif	10 00 43.8	+0.6
	baz=154,SNR=6.5						
VLI	Veliai	101.85	39	P	Pdif	10 00 43.4	+0.2
ITM	Ithomi	101.91	38	P	Pdif	10 00 44.2	+0.7
ITM	Ithomi	101.91	38	⇓P	Pdif	10 00 44.3	+0.9
PAULI	Pauline	101.97	317	P	Pdif	10 00 44.9	+1.1

	baz=152,SNR=5.6						
Z51A	Franklin	101.98	313	P	Pdif	10 00 43.5	-0.3
	baz=151						
Y52A	Lilburn	102.01	314	P	Pdif	10 00 44.3	+0.3
	baz=152						
Y52A				P	Pdif	10 00 44.3	+0.3
	baz=152						
TIP	Timpagrande	102.05	33	⇓P	Pdif	10 00 44.6	+0.5
KMSC	Kings Mountain	102.08	317	P	Pdif	10 00 45.1	+0.9
	baz=152,SNR=6.2						
KMSC	Kings Mountain	102.08	317	P	Pdif	10 00 45.0	+0.9
	baz=152						
346A	Big Creek Wild	102.11	309	P	Pdif	10 00 44.8	+0.3
	baz=150						
T60A	Surry	102.18	321	P	Pdif	10 00 45.4	+0.8
	baz=154						
T60A				P	Pdif	10 00 45.4	+0.8
	baz=154						
S61A	Accomac	102.30	322	P	Pdif	10 00 45.5	+0.3
	baz=155						
S61A				P	Pdif	10 00 45.5	+0.3
	baz=155						
KEF3	Kipouria, Keph	102.31	36	P	Pdif	10 00 44.9	-0.2
T59A	Double "B" Far	102.32	321	P	Pdif	10 00 45.8	+0.5
	baz=154						
T59A				P	Pdif	10 00 45.8	+0.5
	baz=154						
LIFNC	LIFOU	102.32	194	P	Pdif	10 00 49.9	+4.0
KARP	Karpathos	102.34	43	⇓P	Pdif	10 00 46.8	+1.3
TRIP	Tripoli	102.34	38	P	Pdif	10 00 46.0	+0.5
VLS	Valsamata	102.36	37	P	Pdif	10 00 45.7	+0.3
KEF4	Livadi, Kephal	102.38	36	P	Pdif	10 00 45.9	+0.4
WRA	Warramunga Arr	102.46	162	P	Pdif	10 00 46.8	+0.3
	comp=Z,21nm,0.9s,baz=197,slow=4.1,SNR=46						
WRA				PP	PP	10 04 57.6	-1.6
	comp=Z,51nm,1.0s,baz=191,slow=6.2,SNR=7.0						
WRA				PKKP	PKKPbc	10 16 45.8	+1.6
	comp=Z,22nm,0.8s,baz=354,slow=2.8,SNR=60						
WRA				PKPPKP		10 24 52.7	
	comp=Z,2.5nm,1.0s,baz=10.0,slow=1.7,SNR=5.6						
WRAB	Tennant Creek	102.47	162	⇓eP	Pdif	10 00 47.5	+0.9
WRAB				MLR	MLR		
	comp=Z,91µm,20.0s						
WRAB	Tennant Creek	102.47	162	⇓P	Pdif	10 00 46.9	+0.3
WRAB				⇑P	Pdif	10 00 47.7	+1.1
WRAB				⇓P	Pdif	10 00 50.1	+3.5
LRAL	Lakeview Retre	102.49	312	P	Pdif	10 00 46.5	+0.4
	baz=150,SNR=5.6						
LRAL	Lakeview Retre	102.49	312	P	Pdif	10 00 46.3	+0.2
	baz=150						
KRND	KRANIDI	102.52	39	P	Pdif	10 00 46.5	+0.4
DRO	Drossia	102.53	37	P	Pdif	10 00 47.8	+1.6
RLS	Riolos of Patr	102.55	37	P	Pdif	10 00 47.7	+1.5
CASEE	Lake Jocassee	102.56	316	P	Pdif	10 00 46.5	+0.1
	baz=152						
FSK	Fiskardo	102.61	36	P	Pdif	10 00 47.4	+0.9
QIS	Mount Isa	102.64	167	P	Pdif	10 00 49.5	+2.2
V55A	Taylorsville	102.66	317	P	Pdif	10 00 47.6	+0.8
	baz=152						
V55A				P	Pdif	10 00 47.6	+0.8
	baz=152						
KVTX	Kingsville	102.70	301	P	Pdif	10 00 49.0	+1.8
	baz=147						
EPID	Epidavros	102.72	39	P	Pdif	10 00 47.1	+0.1
344A	Westbrook Farm	102.72	308	P	Pdif	10 00 48.5	+1.3
	baz=149						
GUR	Goura	102.74	38	P	Pdif	10 00 47.6	+0.4
KLV	Kalavryta, Ach	102.77	38	P	Pdif	10 00 48.1	+0.8
R61A	Willards	102.78	323	P	Pdif	10 00 47.8	+0.6
	baz=155						
R61A				P	Pdif	10 00 47.8	+0.6
	baz=155						
U56A	King	102.78	318	P	Pdif	10 00 48.4	+1.1
	baz=153						
U56A				P	Pdif	10 00 48.4	+1.1
	baz=153						
LAKA	Lakka	102.89	38	P	Pdif	10 00 49.0	+1.2
KOUNC	Koumac, New Ca	102.89	191	P	Pdif	10 00 52.1	+3.7
KOUNC	Koumac, New Ca	102.89	191	⇑P	Pdif	10 00 51.4	+3.0
THAL	Thalero	102.94	38	P	Pdif	10 00 48.3	+0.3
LKD2	Lefkada island	102.94	36	P	Pdif	10 00 48.5	+0.5
X51A	Calhoun	102.94	314	P	Pdif	10 00 47.8	-0.3
	baz=151						
X51A				P	Pdif	10 00 47.8	-0.3
	baz=151						
T57A	Hurt	102.95	319	P	Pdif	10 00 47.9	-0.1
	baz=153						
T57A				P	Pdif	10 00 47.9	-0.1
	baz=153						
Y49A	Blount Mountai	102.96	313	P	Pdif	10 00 48.1	-0.1
	baz=150						
146A	Union	103.01	310	P	Pdif	10 00 48.9	+0.5
	baz=150						
EFP	Efpalio	103.03	37	P	Pdif	10 00 49.9	+1.5
LTK	Loutraki	103.03	38	P	Pdif	10 00 48.7	+0.3
W52A	Murphy	103.04	315	P	Pdif	10 00 48.0	-0.5
	baz=151						
PVO	Paravola	103.07	37	P	Pdif	10 00 49.7	+1.1
Z47A	Carrollton	103.08	311	P	Pdif	10 00 48.4	-0.3
	baz=150,SNR=6.1						
V53A	Saluda	103.11	316	P	Pdif	10 00 48.1	-0.8
	baz=152						
V53A				P	Pdif	10 00 48.1	-0.8
	baz=152						
VLY	Voula,Athens	103.16	39	P	Pdif	10 00 49.4	+0.4
ANX	Ano Chora	103.18	37	P	Pdif	10 00 51.0	+1.8
ATH	Athens Observa	103.24	39	P	Pdif	10 00 50.0	+0.7
ATHU	Athens Univers	103.26	39	P	Pdif	10 00 49.9	+0.5
MIDE	Milford	103.27	323	P	Pdif	10 00 50.5	+1.1
	baz=155						
VILL	Villia	103.28	39	P	Pdif	10 00 50.3	+0.8
VBMS	Vicksburg	103.28	309	P	Pdif	10 00 50.6	+1.0
	baz=149						
VBMS	Vicksburg	103.28	309	P	Pdif	10 00 50.4	+0.7
	baz=149						
ARG	Arkhangelos	103.30	43	P	Pdif	10 00 51.1	+1.5
ARG	Arkhangelos	103.30	43	⇓P	Pdif	10 00 50.7	+1.0
R58B	Mineral	103.32	321	P	Pdif	10 00 50.3	+0.7
	baz=154						
R58B				P	Pdif	10 00 50.3	+0.7
	baz=154						
342B	Flagon Creek P	103.36	307	P	Pdif	10 00 51.5	+1.5
	baz=149						
CBN	Corbin Frederi	103.36	321	P	Pdif	10 00 51.1	+1.3
	baz=154						
CBN	Corbin Frederi	103.36	321	P	Pdif	10 00 50.7	+0.9
	baz=154						
PTL	Penteli	103.36	39	P	Pdif	10 00 50.6	+0.7
ASF	Jabal al Asfar	103.38	51	Pdiff	Pdif	10 00 51.8	+1.6
	comp=Z,14nm,1.1s,baz=171,slow=2.5,SNR=4.3						
DION	Dionisos Attik	103.42	39	P	Pdif	10 00 51.0	+0.9
EVR	Evrytania	103.44	37	P	Pdif	10 00 51.8	+1.5
MMAI	Mount Meron Ar	103.45	50	Pdiff	Pdif	10 00 49.6	-0.9
	comp=Z,4.6nm,0.9s,baz=340,slow=38,SNR=2.7						
MMAI				PP	PP	10 05 07.4	-0.5
	comp=Z,8.1nm,0.9s,baz=30,slow=12,SNR=2.6						
TKL	Tuckaleechee C	103.47	316	Pdiff	Pdif	10 00 50.4	0.0
	comp=Z,3.5nm,0.9s,baz=42,slow=3.9,SNR=5.9						
TKL				PKiKP	PP	10 05 03.1	-4.8
	comp=Z,13nm,0.8s,baz=149,slow=7.3,SNR=5.3						
TKL				PP	PKiKP	10 05 08.4	-0.3
	comp=Z,37nm,1.0s,baz=161,slow=7.0,SNR=8.1						
TKL	Tuckaleechee C	103.47	316	P	Pdif	10 00 50.3	-0.1
	baz=151						
U54A	Nelsons Funny	103.48	317	P	Pdif	10 00 51.2	+0.7
	baz=152						
U54A				P	Pdif	10 00 51.2	+0.7
	baz=152						
KEK	Kerkira	103.50	35	P	Pdif	10 00 50.9	+0.5
KEK	Kerkira	103.50	35	⇓P	Pdif	10 00 51.0	+0.6
IGT	Igoumenitsa	103.50	36	P	Pdif	10 00 51.0	+0.5
S57A	Dark Hollow, R	103.52	320	P	Pdif	10 00 51.7	+1.1
	baz=153						
S57A				P	Pdif	10 00 51.7	+1.1
	baz=153						
DAT	Datca	103.54	42	P	Pdif	10 00 51.4	+0.5
V52A	Sevierville	103.56	316	P	Pdif	10 00 50.8	0.0
	baz=151						
BLA	Blacksburg	103.56	319	P	Pdif	10 00 50.9	0.0
	baz=153						
BLA	Blacksburg	103.56	319	P	Pdif	10 00 51.5	+0.6
	baz=153						
LKR	Lokris	103.60	38	P	Pdif	10 00 50.3	-0.6
MRVN	Minervino Murg	103.61	32	⇓P	Pdif	10 00 50.2	-0.7
MAKR	Makrakomi, Fth	103.63	37	P	Pdif	10 00 51.8	+0.7
ATAL	Atalanti	103.65	38	P	Pdif	10 00 51.4	+0.3
W50A	Signal Mountai	103.68	314	P	Pdif	10 00 51.6	+0.2
	baz=151						
SRN	Sarande	103.71	35	P	Pdif	10 00 51.5	+0.2
MZR	Muzera	103.72	69	P	Pdif	10 00 56.0	+4.1
	SNR=16						
MZR	Muzera	103.72	69	i Pdiff	Pdif	10 00 51.7	-0.2
	SNR=12						
CTA	Charters Tower	103.73	173	Pdiff	Pdif	10 00 53.9	+1.7
	comp=Z,16nm,1.0s,baz=166,slow=7.8,SNR=12						
CTAO	Charters Tower	103.73	173	⇑P	Pdif	10 00 53.7	+1.5
X48A	Hartselle	103.73	312	P	Pdif	10 00 51.4	-0.2
	baz=150,SNR=7.7						
HKT	Hockley	103.75	304	d iP	Pdif	10 00 52.6	+0.9
HKT				MLR	MLR		
	comp=Z,36µm,24.0s						
HKT	Hockley	103.75	304	P	Pdif	10 00 52.5	+0.9
	baz=148						
JAN	Janina	103.79	36	P	Pdif	10 00 52.3	+0.5
V51A	Loudon	103.82	315	P	Pdif	10 00 51.6	-0.4
	baz=151						
KYMI	Kymi, Euboea I	103.97	39	P	Pdif	10 00 53.1	+0.5
833A	Chaparral WMA,	104.08	300	P	Pdif	10 00 53.4	+0.1
	baz=147,SNR=10						
833A	Chaparral WMA,	104.08	300	P	Pdif	10 00 53.9	+0.6
	baz=147						
143A	Socs Landing,	104.08	308	P	Pdif	10 00 52.6	-0.6
	baz=149						
THL	Klokotos Trika	104.09	37	P	Pdif	10 00 53.7	+0.7
SMG	Samos	104.13	41	P	Pdif	10 00 53.8	+0.5
LSK	Leskovik	104.15	36	P	Pdif	10 00 54.4	+1.0
TZTN	Tazewell	104.16	316	P	Pdif	10 00 53.8	+0.3
	baz=151						
TZTN	Tazewell	104.16	316	P	Pdif	10 00 53.7	+0.3
	baz=151						
YER	Yerkesik	104.17	43	P	Pdif	10 00 54.5	+1.0
MGAB	Montegabbione	104.17	29	⇑P	Pdif	10 00 53.9	+0.6
GEDE	Greenville	104.21	323	P	Pdif	10 00 53.8	+0.3
	baz=154						
KPRO	Kipourio	104.22	36	P	Pdif	10 00 54.8	+1.0
SDMD	Soldier’s Deli	104.25	322	P	Pdif	10 00 53.9	+0.1
	baz=154						
CSS	Mathiatis	104.26	47	⇓P	Pdif	10 00 55.7	+1.7
NEO	Neokhori	104.27	38	P	Pdif	10 00 54.2	+0.3
Y45A	Yeager Farm, C	104.27	310	P	Pdif	10 00 54.1	0.0
	baz=149						
XOR	Xorichti	104.31	38	P	Pdif	10 00 54.8	+0.7
SKY	Skiros Island	104.35	39	P	Pdif	10 00 55.0	+0.8
PENT	Pentalofos	104.37	36	P	Pdif	10 00 55.8	+1.4
TUPA	Temple Univers	104.38	324	P	Pdif	10 00 54.7	+0.4
	baz=155						
R55A	Marlinton	104.40	319	P	Pdif	10 00 55.6	+1.0
	baz=153						
R55A				P	Pdif	10 00 55.6	+1.0
	baz=153						
PANJ	Princeton	104.41	324	P	Pdif	10 00 55.0	+0.5
	baz=155						
S54A	Dingess, Beckl	104.41	318	P	Pdif	10 00 54.5	-0.1
	baz=152						
S54A				P	Pdif	10 00 54.5	-0.1
	baz=152						
MHTO	MHTO	104.44	74	P	Pdif	10 01 00.5	+5.4
	SNR=6.8						
CHOS	Chios island	104.45	40	P	Pdif	10 00 55.7	+0.9
ELL	Elmali	104.45	44	⇓P	Pdif	10 00 57.1	+2.2
M63A	Gales Ferry	104.50	327	P	Pdif	10 00 55.0	+0.2
	baz=156						
M63A				P	Pdif	10 00 55.0	+0.2
	baz=156						
N62A	Caumsett State	104.52	325	P	Pdif	10 00 55.0	+0.1
	baz=155						
N62A				P	Pdif	10 00 55.0	+0.1
	baz=155						
FOR	Fordham	104.59	325	P	Pdif	10 00 55.4	+0.2
	baz=155						
L64A	Middleborough	104.62	328	P	Pdif	10 00 56.2	+0.9
	baz=156						
L64A				P	Pdif	10 00 56.2	+0.9
	baz=156						
BRNJ	Basking Ridge	104.64	325	P	Pdif	10 00 56.0	+0.5
	baz=155						
SAKB	Bahrain	104.65	65	P	Pdif	10 01 00.2	+4.3
KZN	Kozani	104.68	36	P	Pdif	10 00 56.3	+0.5
P57A	Homestead Farm	104.72	322	P	PKiKP	10 05 16.3	+5.5
	baz=153						
P57A				P	PKiKP	10 05 16.3	+5.5
	baz=153						
PAL	Palisades	104.72	325	P	Pdif	10 00 56.0	+0.1
	baz=155						
PAL	Palisades	104.72	325	Pdiff	Pdif	10 00 56.1	+0.3
	baz=155						
LIT	Litokhoron	104.73	37	P	Pdif	10 00 55.9	0.0
NATX	Nacogdoches	104.73	305	P	Pdif	10 00 56.8	+0.6
	baz=148						
NATX	Nacogdoches	104.73	305	P	Pdif	10 00 56.6	+0.5
	baz=148						
Q56A	Snyder Ridge,	104.74	320	P	Pdif	10 00 56.8	+0.8
	baz=153						
Q56A				P	Pdif	10 00 56.8	+0.8
	baz=153						
V48A	Smith Brothers	104.76	313	P	PKiKP	10 05 14.5	+3.4
	baz=150						
OXF	Oxford	104.77	311	P	Pdif	10 00 55.3	-0.9
	baz=149						
OXF	Oxford	104.77	311	Pdiff	Pdif	10 00 55.5	-0.7
	baz=149						
BLCB	Balcova	104.81	41	P	Pdif	10 00 57.2	+0.9
BNI	Bardonecchia	104.84	24	⇑P	Pdif	10 00 58.1	+1.6
KHOR	Al-Khor Airpor	104.85	66	P	Pdif	10 01 00.7	+4.0
FNA	Florina	104.98	36	P	Pdif	10 00 57.5	+0.4
PAIG	Paliouri	104.98	38	P	Pdif	10 00 57.5	+0.5
TIR	Tirane	105.00	35	P	Pdif	10 00 58.5	+1.4
U49A	Red Boiling Sp	105.01	314	P	Pdif	10 00 56.9	-0.3
	baz=150						
ODNJ	Ogdensburg	105.02	325	P	Pdif	10 00 57.2	+0.1
	baz=155						
T50A	Nancy	105.08	315	P	Pdif	10 00 57.8	+0.3
	baz=151						
T50A				P	Pdif	10 00 57.8	+0.3
	baz=151						
SIGR	SIGRI	105.11	40	P	Pdif	10 00 58.4	+0.8
R53A	Hurricane	105.12	318	P	Pdif	10 00 58.4	+0.7
	baz=152						
R53A				P	Pdif	10 00 58.4	+0.7
	baz=152						
BRNY	Black Rk. Fore	105.13	325	P	Pdif	10 00 57.7	+0.1
	baz=155						
S51A	Beattyville	105.13	317	P	Pdif	10 00 57.9	+0.1
	baz=151						
S51A				P	Pdif	10 00 57.9	+0.1
	baz=151						
Z41A	Richland Creek	105.17	308	P	Pdif	10 00 57.9	-0.1
	baz=148						
Z41A				P	Pdif	10 00 57.9	-0.1
	baz=148						
Z41A	Richland Creek	105.17	308	Pdiff	Pdif	10 00 58.6	+0.5
	baz=148						
WES	Weston	105.18	328	P	Pdif	10 00 56.4	-1.4
	baz=156						
BOB	Bobbio (Coli)	105.23	26	⇓P	Pdif	10 00 58.9	+0.8
W45A	Hickory Valley	105.23	311	P	Pdif	10 00 57.8	-0.4
	baz=149						
435B	Jarrell	105.27	303	P	Pdif	10 00 59.2	+0.6
	baz=147						
435B	Jarrell	105.27	303	Pdiff	Pdif	10 00 59.3	+0.8
	baz=147						
CCAR	Cane Creek	105.28	309	P	Pdif	10 00 58.0	-0.5
	baz=148						
Q54A	Coxs Mills	105.28	319	P	Pdif	10 00 58.6	+0.2
	baz=152						
Q54A				P	Pdif	10 00 58.6	+0.2
	baz=152						
PRK	Paraskevi	105.29	40	P	Pdif	10 01 00.1	+1.7
PLG	Polygyros	105.30	38	P	Pdif	10 00 59.3	+0.8
HRV	Adam Dziewonsk	105.36	327	P	Pdif	10 00 58.9	+0.2
	baz=156						
HRV	Adam Dziewonsk	105.36	327	Pdiff	Pdif	10 00 59.2	+0.6
	baz=156						
THE	Thessaloniki	105.37	37	P	Pdif	10 00 58.9	+0.2
HORT	Hortiatis	105.38	37	P	Pdif	10 00 59.1	+0.2
QUA2	Belchertown	105.39	327	P	Pdif	10 00 58.8	0.0
	baz=156						
OUR	Ouranopolis	105.45	38	P	Pdif	10 01 00.0	+0.9
237A	Washetta, Mont	105.46	305	P	Pdif	10 01 00.2	+0.8
	baz=147						
GRG	Griva	105.47	37	P	Pdif	10 00 59.7	+0.5
LIA	Limnos Island	105.48	39	P	Pdif	10 00 59.6	+0.4
NPNY	Mohonk Preserv	105.48	325	P	Pdif	10 00 59.1	-0.1
	baz=155						
PHP	Peshkopia	105.49	35	P	Pdif	10 01 00.4	+1.1
KNRA	Kununurra	105.49	156	P	Pdif	10 01 02.1	+2.1
N58A	Sunbury	105.49	323	P	Pdif	10 00 58.6	-0.7
	baz=154						
N58A				P	Pdif	10 00 58.6	-0.7
	baz=154						
WVT	Waverly	105.50	313	P	Pdif	10 00 58.8	-0.7
	baz=150						
WVT	Waverly	105.50	313	Pdiff	Pdif	10 00 58.7	-0.7
	baz=150						
WVT	Waverly	105.50	313	⇓P	Pdif	10 00 58.9	-0.5
KULA	Kula-Manisa	105.52	42	P	Pdif	10 01 01.1	+1.5
MCWV	Mont Chateau	105.52	320	P	Pdif	10 00 59.4	-0.1
	baz=153						
MCWV	Mont Chateau	105.52	320	Pdiff	Pdif	10 00 59.7	+0.2
	baz=153						
MTSU	Mount Surprise	105.53	171	P	Pdif	10 01 04.1	+3.9
ISP	Isparta	105.62	44	d iP	Pdif	10 01 00.4	+0.3
SOH	Sokhos	105.67	37	P	Pdif	10 01 01.1	+1.0
UNH	University of	105.69	328	P	Pdif	10 00 58.9	-1.2
	baz=156						
SSPA	Standing Stone	105.71	322	P	Pdif	10 00 57.9	-2.4
	baz=153						
SSPA	Standing Stone	105.71	322	Pdiff	Pdif	10 01 00.1	-0.1
	baz=153						
K62A	Royalston	105.71	327	P	Pdif	10 01 00.8	+0.6
	baz=156						
K62A				P	Pdif	10 01 00.8	+0.6
	baz=156						
ALNE	Al Ain	105.77	70	i Pdiff	Pdif	10 01 02.0	+1.0
	SNR=12						
AJN	Ajban	105.78	70	Pdiff	Pdif	10 01 01.5	+0.5
Q52A	Bidwell	105.79	318	P	Pdif	10 01 00.1	-0.5
	baz=152						
Q52A				P	Pdif	10 01 00.1	-0.5
	baz=152						
EZN	Ezine	105.82	40	P	Pdif	10 01 01.1	+0.4
KNT	Kendrikon	105.82	37	P	Pdif	10 01 01.9	+1.2
KSPA	Keystone Colle	105.82	324	P	Pdif	10 01 00.6	-0.1
	baz=154						
KOKK	Kokkinochori,	105.89	38	P	Pdif	10 01 00.9	-0.1
P53A	Whipple	105.93	319	P	Pdif	10 00 59.9	-1.4
	baz=152						
P53A				P	Pdif	10 00 59.9	-1.4
	baz=152						
THAS	Thassos island	105.94	38	P	Pdif	10 01 01.5	+0.2
T47A	Sharon Grove	105.95	314	P	Pdif	10 01 00.4	-1.0
	baz=150						
R50A	Paris	105.97	316	P	Pdif	10 01 01.5	0.0
	baz=151						
R50A				P	Pdif	10 01 01.5	0.0
	baz=151						
ASUD	Al Ashush, Dub	106.01	70	Pdiff	Pdif	10 01 02.7	+0.7
SRS	Serrai	106.01	37	P	Pdif	10 01 02.1	+0.5
JCT	Junction City	106.06	301	P	Pdif	10 01 02.3	+0.1
	baz=146						
JCT	Junction City	106.06	301	Pdiff	Pdif	10 01 02.6	+0.4
	baz=146						
JCT	Junction City	106.06	301	⇓P	Pdif	10 01 02.6	+0.4
M57A	Sunshine Farm,	106.08	323	P	Pdif	10 01 00.9	-0.9
	baz=154						
M57A				P	Pdif	10 01 00.9	-0.9
	baz=154						
PCHI	Peechi	106.08	95	eP	PKiKP	10 05 04.6	-10
PCHI				ex	SKSac	10 11 32.4	-2.0
SMTH	Samothraki Isl	106.11	39	P	Pdif	10 01 02.2	+0.2
Z38A	Mt. Pleasant	106.14	306	P	Pdif	10 01 03.1	+0.7
	baz=148						
L59A	Walton	106.16	325	P	Pdif	10 01 02.0	-0.3
	baz=154						
L59A				P	Pdif	10 01 02.0	-0.3
	baz=154						
LNXT	Lenox	106.17	312	P	Pdif	10 01 01.9	-0.5
	baz=149						
O54A	Avella	106.18	320	P	Pdif	10 01 02.0	-0.4
	baz=152						
O54A				P	Pdif	10 01 02.0	-0.4
	baz=152						
HBAR	Harrisburg	106.19	310	P	Pdif	10 01 02.1	-0.4
	baz=149						
TRY	Troy	106.21	326	P	Pdif	10 01 02.6	+0.2
	baz=155						
WHTX	Lake Whitney,	106.22	303	P	Pdif	10 01 01.9	-0.8
	baz=147						
WHTX	Lake Whitney,	106.22	303	Pdiff	Pdif	10 01 03.0	+0.3
	baz=147						
EMMW	East Machias	106.22	331	P	Pdif	10 01 02.3	0.0
	baz=158						
KAVA	Kavala	106.22	38	P	Pdif	10 01 02.8	+0.3
X40A	Basin Creek Fa	106.22	308	P	Pdif	10 01 01.9	-0.8
	baz=148						
X40A				P	Pdif	10 01 01.9	-0.8
	baz=148						
X40A	Basin Creek Fa	106.22	308	Pdiff	Pdif	10 01 02.2	-0.5
	baz=148						
SOHO	SOHO	106.24	71	i Pdiff	Pdif	10 01 03.2	+0.1
	SNR=19						
FAQ	Al Faqa, Dubai	106.25	70	i Pdiff	Pdif	10 01 02.5	-0.5
	SNR=8.9						
Q51A	Peebles	106.25	317	P	Pdif	10 01 03.0	+0.3
	baz=151						
Q51A				P	Pdif	10 01 03.0	+0.3
	baz=151						
FFD	Franklin Falls	106.27	328	P	Pdif	10 01 03.4	+0.8
	baz=156						
R49A	Shelbyville	106.31	316	P	Pdif	10 01 03.1	+0.1
	baz=150						
R49A				P	Pdif	10 01 03.1	+0.1
	baz=150						
NVR	Nevrokopi	106.31	37	P	Pdif	10 01 03.4	+0.4
P52A	Corning	106.33	319	Pdiff	Pdif	10 01 03.1	+0.1
	baz=152						
HCNY	Howe Caverns	106.41	326	P	Pdif	10 01 02.3	-1.0
	baz=155						
J61A	Chester	106.43	327	P	Pdif	10 01 02.6	-0.8
	baz=156						
J61A				P	Pdif	10 01 02.6	-0.8
	baz=156						
ASHO	Ashiyiah	106.44	70	i Pdiff	Pdif	10 01 02.0	-2.0
	SNR=18						
BINY	Binghamton	106.47	324	P	Pdif	10 01 03.5	-0.1
	baz=154						
BINY	Binghamton	106.47	324	Pdiff	Pdif	10 01 03.8	+0.2
	baz=154						
NAZ	Nazwa, Dubai	106.48	70	i Pdiff	Pdif	10 01 04.5	+0.4
	SNR=12						
MMB	Musomiste	106.48	37	i P	Pdif	10 01 04.8	+1.1
I63A	Otisfield	106.49	329	P	Pdif	10 01 04.2	+0.6
	baz=156						
I63A				P	Pdif	10 01 04.2	+0.6
	baz=156						
KKB	Krupnik	106.51	37	i P	Pdif	10 01 04.8	+1.0
O53A	New Philadelph	106.54	320	Pdiff	Pdif	10 01 04.2	+0.3
	baz=152						
P51A	Williamsport	106.54	318	P	Pdif	10 01 04.1	+0.2
	baz=151						
P51A				P	Pdif	10 01 04.1	+0.2
	baz=151						
I62A	Tamworth	106.55	328	P	Pdif	10 01 04.2	+0.3
	baz=156						
I62A				P	Pdif	10 01 04.2	+0.3
	baz=156						
W41B	Gary Mavity, V	106.55	309	P	Pdif	10 01 03.0	-1.1
	baz=148						
W41B	Gary Mavity, V	106.55	309	Pdiff	Pdif	10 01 04.1	0.0
	baz=148						
HATD	Hatta, Dubai	106.59	70	i Pdiff	Pdif	10 01 05.2	+0.6
	SNR=15						
MIAR	Mount Ida	106.60	308	P	Pdif	10 01 04.1	-0.3
	baz=148						
MIAR	Mount Ida	106.60	308	Pdiff	Pdif	10 01 04.3	-0.1
	baz=148						
MIAR	Mount Ida	106.60	308	⇑P	Pdif	10 01 03.4	-1.0
T45B	Paducah	106.60	313	P	Pdif	10 01 03.5	-0.8
	baz=149						
WSAR	Wadi Sarin	106.63	73	PP	PP	10 05 30.9	-0.5
	comp=Z,25nm,1.1s,baz=246,slow=6.3,SNR=3.7						
O52A	Adamsville	106.65	319	P	Pdif	10 01 04.8	+0.4
	baz=152						
O52A				P	Pdif	10 01 04.8	+0.4
	baz=152						
ALN	Alexandroupoli	106.67	39	P	Pdif	10 01 04.9	+0.4
G65A	Princeton	106.70	331	P	Pdif	10 01 04.5	0.0
	baz=158						
G65A				P	Pdif	10 01 04.5	0.0

	baz=158						
RDO	Rodhopi	106.71	39	P	Pdif	10 01 05.2	+0.6
RDO	Rodhopi	106.71	39	⇑P	Pdif	10 01 11.8	+7.1
RDO	Rodhopi	106.71	39	⇓P	Pdif	10 01 05.4	+0.7
UOSS	Minazif	106.73	70	i Pdiff	Pdif	10 01 03.5	-1.7
	SNR=10						
M55A	Ridgway	106.75	322	P	Pdif	10 01 04.2	-0.7
	baz=153						
M55A				P	Pdif	10 01 04.2	-0.7
	baz=153						
CLF	Chambon-Foret	106.76	20	⇓P	Pdif	10 01 06.2	+1.5
TUE	Stuetta	106.80	25	⇑P	Pdif	10 01 04.6	-0.6
ACCN	Adirondack Com	106.80	326	P	Pdif	10 01 05.0	0.0
	baz=155						
N53A	Lisbon	106.89	320	P	Pdif	10 01 05.7	+0.1
	baz=152						
N53A				P	Pdif	10 01 05.7	+0.1
	baz=152						
RZN	Rozhen	106.91	38	i P	Pdif	10 01 06.3	+0.5
L56A	Greenwood	106.94	323	P	Pdif	10 01 05.4	-0.3
	baz=153						
L56A				P	Pdif	10 01 05.4	-0.3
	baz=153						
TX31	Lajitas Ar. Si	107.00	297	P	Pdif	10 01 06.7	+0.3
	baz=146						
TXAR	Lajitas Array	107.00	297	Pdiff	Pdif	10 01 07.4	+1.0
	comp=Z,7.9nm,1.0s,baz=138,slow=7.9,SNR=34						
TXAR				PKiKP	PKiKP	10 05 15.3	-0.2
	comp=Z,6.9nm,0.9s,baz=150,slow=2.5,SNR=7.1						
TXAR				PKKPbc	PKKPbc	10 16 25.7	-5.6
	comp=Z,2.5nm,1.0s,baz=23,slow=5.6,SNR=3.9						
TXAR				PKKPab	PKKPab	10 16 46.0	+0.2
	comp=Z,7.1nm,0.8s,baz=1.7,slow=0.5,SNR=7.7						
MSFE	Esma-Masafi	107.04	70	Pdiff	Pdif	10 01 04.5	-2.1
LBNH	Lisbon	107.05	328	P	Pdif	10 01 06.7	+0.6
	baz=156						
LBNH	Lisbon	107.05	328	Pdiff	Pdif	10 01 06.7	+0.6
	baz=156						
JSA	Saint Aubin	107.10	17	⇓P	Pdif	10 01 07.5	+1.3
KDZ	Kurdzhali	107.11	38	i P	Pdif	10 01 06.8	+0.3
MCVT	Middlebury Col	107.11	327	P	Pdif	10 01 05.6	-0.8
	baz=155						
K57A	Scipio Center	107.12	324	P	Pdif	10 01 04.7	-1.7
	baz=154						
SKDS	Skadanscina	107.12	29	i Pdiff	Pdif	10 01 07.6	+1.1
SKDS				esPdiff	sPdif	10 01 41.5	+2.6
H62A	Milan	107.13	329	P	Pdif	10 01 07.3	+0.8
	baz=156						
H62A				P	Pdif	10 01 07.3	+0.8
	baz=156						
J59A	Piesco	107.14	326	P	Pdif	10 01 04.9	-1.7
	baz=154						
J59A				P	Pdif	10 01 04.9	-1.7
	baz=154						
ACSO	Alum Creek Sta	107.17	318	P	Pdif	10 01 06.4	-0.3
	baz=151						
ACSO	Alum Creek Sta	107.17	318	Pdiff	Pdif	10 01 06.7	0.0
	baz=151						
P49A	Miami Univ. Ec	107.21	317	P	Pdif	10 01 06.4	-0.6
	baz=150						
P49A	Miami Univ. Ec	107.21	317	Pdiff	Pdif	10 01 07.1	+0.1
	baz=150						
DAVOX	Davos/Dischmat	107.22	26	PKiKP	PKiKP	10 05 15.5	+0.1
	comp=Z,7.9nm,0.6s,baz=262,slow=11,SNR=6.3						
PKME	Peaks-Kenny Pk	107.23	330	P	Pdif	10 01 06.5	-0.4
	baz=157						
PKME	Peaks-Kenny Pk	107.23	330	Pdiff	Pdif	10 01 06.3	-0.6
	baz=157						
VTS	Vitosha	107.23	36	i P	Pdif	10 01 08.1	+0.9
VTS	Vitosha	107.23	36	⇓P	Pdif	10 01 08.3	+1.1
W39A	Magazine	107.24	308	P	Pdif	10 01 07.7	+0.6
	baz=148						
W39A	Magazine	107.24	308	Pdiff	Pdif	10 01 07.5	+0.3
	baz=148						
Z35A	Perchaven, San	107.24	304	P	Pdif	10 01 07.3	+0.1
	baz=147						
PLD	Plovdiv	107.27	38	i P	Pdif	10 01 07.8	+0.7
J58A	Remsen	107.29	325	P	Pdif	10 01 07.2	-0.1
	baz=154						
J58A				P	Pdif	10 01 07.2	-0.1
	baz=154						
GBRS	Gornja Briga	107.33	29	i Pdiff	Pdif	10 01 08.7	+1.4
GBRS				esPdiff	sPdif	10 01 42.6	+2.8
GBRS				ePP	PP	10 05 34.4	-1.9
VT1	Waterbury	107.38	327	P	Pdif	10 01 07.6	0.0
	baz=155						
ALLY	Alegheny Colle	107.39	321	P	Pdif	10 01 07.7	0.0
	baz=152						
M53A	WI Miller and	107.39	321	Pdiff	Pdif	10 01 07.9	+0.2
	baz=152						
P48A	Milroy	107.42	316	P	Pdif	10 01 07.7	-0.2
	baz=150						
P48A				P	Pdif	10 01 07.7	-0.2
	baz=150						
S44A	Carbondale	107.43	313	P	Pdif	10 01 06.7	-1.2
	baz=149						
X37A	Clayton	107.43	306	P	Pdif	10 01 05.2	-2.8
	baz=147						
NCB	Newcomb	107.51	326	P	Pdif	10 01 07.0	-1.2
	baz=155						
DIVS	Divibare	107.53	34	⇓P	Pdif	10 01 09.6	+1.2
DIVS				⇑P	Pdif	10 01 10.3	+2.0
F64A	Sherman	107.53	331	P	Pdif	10 01 07.5	-0.7
	baz=157						
F64A				P	Pdif	10 01 07.5	-0.7
	baz=157						
WVNY	West Valley, N	107.53	322	P	Pdif	10 01 08.2	-0.1
	baz=153						
G62A	West of Eustis	107.54	329	P	Pdif	10 01 08.3	0.0
	baz=156						
G62A				P	Pdif	10 01 08.3	0.0
	baz=156						
N51A	Ashland	107.55	319	P	Pdif	10 01 07.9	-0.5
	baz=151						
N51A				P	Pdif	10 01 07.9	-0.5
	baz=151						
BANOM	Banah	107.57	70	i Pdiff	Pdif	10 01 08.6	-0.4
	SNR=5.5						
F63A	Nahmakanta, Br	107.58	330	P	Pdif	10 01 09.0	+0.5
	baz=157						
F63A				P	Pdif	10 01 09.0	+0.5
	baz=157						
SHME	Shamm	107.59	70	Pdiff	Pdif	10 01 07.4	-1.6
GBAS	Gorenja Brezov	107.60	29	i Pdiff	Pdif	10 01 09.9	+1.3
GBAS				esPdiff	sPdif	10 01 44.0	+3.1
O49A	Covington	107.64	317	P	Pdif	10 01 08.2	-0.7
	baz=150						
O49A				P	Pdif	10 01 08.2	-0.7
	baz=150						
FETA	Feichten	107.65	26	eP	Pdif	10 01 10.0	+1.1
	comp=Z,21nm,1.1s						
FETA				eP	PP	10 05 27.3	-12
	comp=Z,120nm,1.2s						
DAVA	Damuels	107.69	25	eP	Pdif	10 01 10.5	+1.4
	comp=Z,32nm,1.0s						
DAVA				eP	PP	10 05 27.7	-11
	comp=Z,150nm,1.3s						
DAVA				eP	PKKPdf	10 16 47.2	+3.4
	comp=Z,26nm,1.1s						
J56A	Wolcott	107.72	324	P	Pdif	10 01 08.2	-0.9
	baz=153						
J56A				P	Pdif	10 01 08.2	-0.9
	baz=153						
LJU	Ljubljana	107.72	29	i Pdiff	Pdif	10 01 10.6	+1.5
LJU				esPdiff	sPdif	10 01 44.1	+2.6
LJU				ePP	PP	10 05 37.1	-2.1
LJU				e		10 06 12.1	
LJU				eSKSac	SKSac	10 11 41.2	+1.2
LJU				i		10 14 45.3	
LJU				e		10 31 26.7	
LJU				e		10 32 52.0	
LJU				e		10 38 15.6	
M52A	Chesterland	107.72	320	P	Pdif	10 01 09.4	+0.3
	baz=152						
M52A				P	Pdif	10 01 09.4	+0.3
	baz=152						
PTCC	Patocco-Chiusa	107.74	28	⇑P	Pdif	10 01 10.2	+0.9
EDRB	Edirne	107.75	39	P	Pdif	10 01 08.7	-0.6
ERPA	Erie	107.75	321	P	Pdif	10 01 08.6	-0.6
	baz=152						
ERPA	Erie	107.75	321	Pdiff	Pdif	10 01 09.4	+0.1
	baz=152						
ABTX	Abilene, Hawle	107.77	302	P	Pdif	10 01 09.9	+0.3
	baz=146						
ABTX	Abilene, Hawle	107.77	302	Pdiff	Pdif	10 01 09.9	+0.3
	baz=146						
CRES	Cresnjev	107.78	30	i Pdiff	Pdif	10 01 10.7	+1.4
U40A	Yellville	107.81	309	P	Pdif	10 01 09.2	-0.5
	baz=148						
U40A				P	Pdif	10 01 09.2	-0.5
	baz=148						
U40A	Yellville	107.81	309	Pdiff	Pdif	10 01 09.3	-0.4
	baz=148						
ABTA	Abfaltersbach	107.84	27	i P	Pdif	10 01 11.7	+2.0
	comp=Z,23nm,1.1s						
ABTA				eP	PP	10 05 31.1	-9.0
	comp=Z,94nm,1.6s						
ABTA				eP	PKKPdf	10 16 42.6	-0.8
	comp=Z,19nm,1.3s						
ISK	Istanbul-Kandi	107.90	41	P	Pdif	10 01 09.9	0.0
ECH	Echery	107.94	23	⇓P	Pdif	10 01 11.1	+1.1
SQTA	Sankt Quirin	107.95	26	eP	Pdif	10 01 11.5	+1.3
	comp=Z,26nm,1.1s						
SQTA				eP	PP	10 05 28.1	-13
	comp=Z,115nm,1.1s						
WCNY	West Carthage	107.97	325	P	Pdif	10 01 10.2	0.0
	baz=154						
F62A	Pittston Farm,	108.00	330	P	Pdif	10 01 09.8	-0.5
	baz=156						
F62A				P	Pdif	10 01 09.8	-0.5
	baz=156						
O48B	Farmland	108.01	317	P	Pdif	10 01 09.8	-0.6
	baz=150						
O48B	Farmland	108.01	317	Pdiff	Pdif	10 01 10.1	-0.3
	baz=150						
MYKA	Terra Mystica	108.03	28	eP	Pdif	10 01 12.6	+2.1
	comp=Z,22nm,1.3s						
MYKA				eP	PP	10 05 30.0	-11
	comp=Z,87nm,1.2s						
J55A	Hilton	108.03	323	P	Pdif	10 01 09.7	-0.8
	baz=153						
J55A				P	Pdif	10 01 09.7	-0.8
	baz=153						
MOTA	Moosalm	108.05	26	eP	Pdif	10 01 13.9	+3.2
	comp=Z,19nm,0.8s						
MOTA				eP	PP	10 05 29.8	-12
	comp=Z,80nm,1.3s						
E63A	Oxbow	108.06	331	P	Pdif	10 01 08.9	-1.6
	baz=157						
E63A				P	Pdif	10 01 08.9	-1.6
	baz=157						
FRNY	Flat Rock	108.09	327	P	Pdif	10 01 09.8	-0.9
	baz=155						
RETA	Reutte	108.09	26	eP	Pdif	10 01 12.2	+1.4
	comp=Z,16nm,1.1s						
RETA				eP	PP	10 05 29.9	-12
	comp=Z,61nm,1.2s						
WTTA	Wattenberg	108.10	27	eP	Pdif	10 01 12.4	+1.5
	comp=Z,58nm,1.4s						
WTTA				i P	PP	10 05 28.8	-13
	comp=Z,119nm,1.5s						
WTTA				i P	PKKPdf	10 16 45.2	+2.1
	comp=Z,33nm,1.5s						
WATA	Walderalm	108.15	26	eP	Pdif	10 01 12.7	+1.6
	comp=Z,33nm,1.0s						
WATA				eP	PKKPdf	10 16 45.0	+2.1
	comp=Z,36nm,1.4s						
OBKA	Obir	108.16	29	eP	Pdif	10 01 13.1	+2.0
	comp=Z,25nm,1.4s						
OBKA				eP	PP	10 05 31.0	-11
	comp=Z,84nm,1.3s						
FVM	French Village	108.16	312	P	Pdif	10 01 10.2	-1.0
	baz=148						
LONY	Lake Ozonia	108.20	326	Pdiff	Pdif	10 01 11.4	+0.2
	baz=154						
M50A	Fremont	108.21	319	P	Pdif	10 01 10.9	-0.5
	baz=151						
M50A				P	Pdif	10 01 10.9	-0.5
	baz=151						
N49A	Columbus Grove	108.22	318	P	Pdif	10 01 09.9	-1.5
	baz=150						
N49A				P	Pdif	10 01 09.9	-1.5
	baz=150						
HHAR	Hobbs	108.22	308	P	Pdif	10 01 11.1	-0.5
	baz=147						
JMB	Yambol	108.24	39	i P	Pdif	10 01 12.1	+0.7
P46A	Rosedale	108.25	315	P	Pdif	10 01 11.0	-0.5
	baz=149						
J54A	Appleton	108.31	323	P	Pdif	10 01 11.6	-0.2
	baz=153						
J54A				P	Pdif	10 01 11.6	-0.2
	baz=153						
Q44A	Meyer Farm, Va	108.36	313	P	Pdif	10 01 11.6	-0.5
	baz=149						
KBA	Koelnbreinsper	108.36	28	eP	Pdif	10 01 15.5	+3.4
	comp=Z,20nm,1.1s						
BMNY	Brushton-Moira	108.38	326	P	Pdif	10 01 11.6	-0.4
	baz=154						
SOKA	Soboth	108.44	29	eP	Pdif	10 01 12.8	+0.4
	comp=Z,18nm,1.1s						
SOKA				eP	PP	10 05 34.7	-10
	comp=Z,114nm,1.4s						
SOKA				eP	PKKPdf	10 16 43.2	+1.0
	comp=Z,22nm,1.1s						
BR131	Keskin Array S	108.49	45	d iP	Pdif	10 01 14.1	+1.3
BRTR	Keskin Array B	108.49	45	Pdiff	Pdif	10 01 15.6	+2.8
	comp=Z,24nm,1.2s,baz=188,slow=4.6,SNR=19						
BRTR				PKiKP	PKiKP	10 05 17.8	-0.3
	comp=Z,9.5nm,1.1s,baz=207,slow=5.6,SNR=4.9						
CCM	Cathedral Cave	108.56	311	P	Pdif	10 01 12.2	-0.8
	baz=148						
CCM	Cathedral Cave	108.56	311	Pdiff	Pdif	10 01 12.9	-0.1
	baz=148						
CCM	Cathedral Cave	108.56	311	⇓P	Pdif	10 01 12.9	-0.1
SLM	Saint Louis	108.64	312	P	Pdif	10 01 13.2	-0.1
	baz=148						
MDVR	Moldovita	108.68	34	⇑P	Pdif	10 01 15.2	+1.8
TUL1	Leonard	108.72	307	P	Pdif	10 01 13.6	-0.2
	baz=147						
TUL1	Leonard	108.72	307	Pdiff	Pdif	10 01 13.6	-0.2
	baz=147						
N47A	Urbana	108.75	317	P	Pdif	10 01 13.2	-0.5
	baz=150						
N47A				P	Pdif	10 01 13.2	-0.5
	baz=150						
D62A	Allapoint, All	108.84	331	P	Pdif	10 01 11.1	-2.9
	baz=157						
D62A				P	Pdif	10 01 11.1	-2.9
	baz=157						
SFIN	Lafayette	108.86	316	P	Pdif	10 01 13.8	-0.4
	baz=149						
SFIN	Lafayette	108.86	316	Pdiff	Pdif	10 01 13.9	-0.4
	baz=149						
HERR	Herculane	108.99	35	⇑P	Pdif	10 01 16.5	+1.8
HERR	Herculane	108.99	35	⇓P	PKiKP	10 05 17.0	-1.6
BIOA	Bad Ischl, Aus	109.01	28	eP	Pdif	10 01 17.3	+2.5
BIOA				eP	PP	10 05 38.9	-10
BIOA				eP	PKKPdf	10 16 42.7	+1.6
OKCFA	Oklahoma City	109.06	305	P	Pdif	10 01 15.4	0.0
	baz=146						
WLF	Walferdange	109.10	22	dPdif	Pdif	10 01 16.8	+1.7
ARSA	Arzberg	109.10	29	eP	Pdif	10 01 17.5	+2.3
	comp=Z,12nm,1.2s						
ARSA				eP	PP	10 05 40.7	-8.5
	comp=Z,90nm,1.6s						
WMOK	Wichita Mounta	109.11	304	P	Pdif	10 01 15.8	+0.2
	baz=146						
WMOK	Wichita Mounta	109.11	304	Pdiff	Pdif	10 01 16.1	+0.6
	baz=146						
WMOK	Wichita Mounta	109.11	304	⇓P	Pdif	10 01 16.1	+0.6
S39A	Bolivar	109.14	310	P	Pdif	10 01 14.9	-0.7
	baz=147						
PRD	Provadia	109.17	39	i P	Pdif	10 01 16.3	+0.8
RAZG	Razgrad	109.18	38	⇓P	PKiKP	10 05 19.2	+0.2
DOU	Dourbes	109.19	21	dPdif	Pdif	10 01 14.8	-0.6
DOU				dx	x	10 01 45.7	
DOU				dPP	PP	10 05 48.8	-1.0
R40A	Maddies Statio	109.19	311	P	Pdif	10 01 15.1	-0.6
	baz=148						
L48A	N Adams	109.20	318	P	Pdif	10 01 15.2	-0.5
	baz=150						
L48A				P	Pdif	10 01 15.2	-0.5
	baz=150						
P43A	Skaggs, Pawnee	109.20	313	P	Pdif	10 01 16.0	+0.3
	baz=148						
O44A	Mansfield	109.21	314	P	Pdif	10 01 15.7	-0.1
	baz=149						
AAM	Ann Arbor	109.22	319	P	Pdif	10 01 15.6	-0.2
	baz=150						
AAM	Ann Arbor	109.22	319	Pdiff	Pdif	10 01 15.5	-0.3
	baz=150						
COPA	Copaceanca	109.24	37	⇓P	PKiKP	10 05 33.2	+14
K50A	Casco	109.26	320	P	Pdif	10 01 15.1	-0.9
	baz=151						
K50A				P	Pdif	10 01 15.1	-0.9
	baz=151						
MOA	Molln	109.32	28	eP	Pdif	10 01 19.7	+3.6
	comp=Z,34nm,1.4s						
MOA				eP	PP	10 05 46.0	-4.7
	comp=Z,99nm,1.3s						
MOA				eP	PKKPdf	10 16 41.5	+0.9
	comp=Z,25nm,1.3s						
RCHB	Rochefort	109.37	21	dPdif	Pdif	10 01 17.6	+1.4
BZS	Buzias	109.40	34	⇓P	Pdif	10 01 20.4	+3.9
BZS	Buzias	109.40	34	⇓P	Pdif	10 01 20.4	+3.9
BATI	Baumata	109.42	149	PKiKP	PKiKP	10 05 19.6	-0.9
	comp=Z,9.5nm,0.3s,baz=270,slow=1.0,SNR=1.5						
BATI				PP	PP	10 05 51.4	+0.6
	comp=Z,30nm,0.4s,baz=97,slow=4.5,SNR=5.1						
BMRD	Maredsous	109.42	21	dPdif	Pdif	10 01 18.1	+1.6
BMRD				dx	x	10 01 29.3	
BMRD				dPP	sPKiKP	10 05 54.0	+1.6
HUMR	Humele	109.51	37	⇑P	PKiKP	10 05 19.8	+0.2
SNF	Seneffe	109.52	21	dPdif	Pdif	10 01 18.3	+1.4
SNF				dPP	PP	10 05 54.4	+2.3
BGES	Gesves	109.56	21	dPdif	Pdif	10 01 19.6	+2.5
BGES				dPKiKP	PKiKP	10 05 23.5	+4.0
BGES				dsPKiKP	PP	10 05 50.1	-2.3
BGES				dPP	PP	10 05 54.9	+2.5
GZR	Gura Zlata	109.56	35	⇑P	Pdif	10 01 19.6	+2.2
GZR	Gura Zlata	109.56	35	⇑P	PKiKP	10 05 18.4	-1.3
GZR	Gura Zlata	109.56	35	⇑P	Pdif	10 01 19.6	+2.2
BCLA	Clavier	109.64	21	dPdif	Pdif	10 01 22.4	+4.9
BCLA				dPP	sPKiKP	10 05 55.1	+2.3
BHOU	Houvegnez	109.72	22	dPdif	Pdif	10 01 19.7	+1.8
BHOU				dx	x	10 01 49.5	
BHOU				dsPKiKP	sPKiKP	10 05 51.1	-1.9
BHOU				dPP	PP	10 05 55.4	+1.7
RONA	Rosalia, Austr	109.72	29	eP	Pdif	10 01 18.8	+0.8
RONA				i P	PP	10 05 45.6	-8.1
RONA				eP	PKKPdf	10 16 38.2	-1.6
MNTX	Cornudas Mount	109.78	297	P	Pdif	10 01 16.4	-2.2
	baz=145						
MNTX	Cornudas Mount	109.78	297	Pdiff	Pdif	10 01 17.9	-0.8
	baz=145						
SADO	Sadowa	109.80	323	Pdiff	Pdif	10 01 18.7	+0.4
	comp=Z,3.4nm,0.7s,baz=165,slow=3.2,SNR=4.2						
SADO				PKiKP	PKiKP	10 05 19.2	-0.9
	comp=Z,11nm,0.8s,baz=169,slow=1.7,SNR=4.1						
SADO				PP	sPKiKP	10 05 53.0	-0.5
	comp=Z,31nm,0.9s,baz=170,slow=5.0,SNR=7.5						
CONA	Conrad Observa	109.81	29	eP	Pdif	10 01 20.4	+2.0
	comp=Z,17nm,1.6s						
CONA				eP	PKKPdf	10 16 36.1	-3.5
	comp=Z,22nm,1.5s						
BSTI	Sart Tilman	109.85	21	dPdif	Pdif	10 01 19.9	+1.6
BSTI				dPP	PP	10 05 58.5	+4.0
PSN	Preselentsi	109.87	39	i P	Pdif	10 01 20.1	+1.5
HDIL	Hopedale	109.88	314	P	Pdif	10 01 18.9	+0.2
	baz=148						
HDIL	Hopedale	109.88	314	Pdiff	Pdif	10 01 19.0	+0.2
	baz=148						
T35B	Sooner Cattle	109.88	307	P	Pdif	10 01 18.8	-0.2
	baz=146						
LOT	Lotru	109.93	35	⇓P	Pdif	10 01 21.5	+2.5
L46A	Eue Claire	109.96	317	P	Pdif	10 01 18.4	-0.7
	baz=149						
L46A				P	Pdif	10 01 18.4	-0.7
	baz=149						
MEM	Membach	109.96	22	dPdif	Pdif	10 01 20.4	+1.5
MEM				dPKiKP	PKiKP	10 05 26.8	+6.6
MEM				dsPKiKP	PP	10 05 49.6	-5.7
MEM				dPP	PP	10 05 58.7	+3.4
SIRR	Siria	109.99	34	⇑P	Pdif	10 01 22.1	+2.9
SIRR	Siria	109.99	34	⇑P	PKiKP	10 05 19.5	-0.9
BEBN	Eben Emael	110.07	21	dPP	PP	10 05 54.5	-1.5
GERES	GERESS Array B	110.09	27	Pdiff	Pdif	10 01 20.3	+0.7
	comp=Z,0.3nm,0.4s,baz=161,slow=41,SNR=2.0						
GERES				PKiKP	PKiKP	10 05 20.3	-0.4
	comp=Z,8.3nm,0.7s,baz=197,slow=4.1,SNR=9.9						
GERES				PKKPab	PKKPab	10 16 28.4	-2.1
	comp=Z,1.6nm,0.7s,baz=19,slow=4.2,SNR=2.9						
M44A	Midewin, Midew	110.10	315	P	Pdif	10 01 19.6	-0.1
	baz=149						
P40A	Paris	110.14	312	P	Pdif	10 01 19.2	-0.8
	baz=148						
CKRC	Cesky Krumlov	110.22	28	ePDIFF	Pdif	10 01 22.2	+2.1
CKRC				eSP	SP	10 15 26.6	+10
CKRC				AMS	AMS	10 45 10.0	
	comp=Z,56µm,24.4s						
HLM1	Long Mynd	110.22	15	eP	PKiKP	10 05 20.4	-0.3
KHC	Kasperske Hory	110.32	27	eP	Pdif	10 01 21.3	+0.7
KHC				e		10 05 56.9	
KHC				eSP	SP	10 15 22.9	+5.7
KHC				e		10 16 32.6	
KHC				MLR	MLR		
	comp=Z,58µm,23.8s						
KHC	Kasperske Hory	110.32	27	ePDIFF	Pdif	10 01 21.3	+0.7
KHC				ex	x	10 01 29.5	
KHC				ePP	PP	10 05 56.9	-1.1
KHC				eSP	SP	10 15 22.9	+5.7
KHC				ePKKP	PKKPab	10 16 32.6	+3.3
KHC				AMS	AMS	10 44 30.0	
	comp=Z,58µm,23.8s						
VOIR		110.34	36	⇑P	Pdif	10 01 24.5	+3.7
VOIR		110.34	36	⇑P	Pdif	10 01 24.5	+3.7
I49A	Point Hope	110.35	320	P	Pdif	10 01 19.2	-1.5
	baz=151						
I49A				P	Pdif	10 01 19.2	-1.5
	baz=151						
MSTX	Muleshoe	110.36	301	P	Pdif	10 01 21.0	-0.3
	baz=145						
MSTX	Muleshoe	110.36	301	Pdiff	Pdif	10 01 21.6	+0.3
	baz=145						
SRO	Srobarova	110.39	31	ePP	PP	10 05 56.2	-2.2
ZST	Bratislava	110.40	30	ePP	PP	10 05 56.6	-1.9
ZST				e		10 15 26.2	
ZST				eSS	SS	10 21 50.4	+31
J47A	Sunmer	110.46	319	P	Pdif	10 01 19.7	-1.6
	baz=150						
J47A				P	Pdif	10 01 19.7	-1.6
	baz=150						
U32A	Winter Ranch,	110.56	305	P	Pdif	10 01 22.4	+0.4
	baz=146						
AMTX	Amarillo	110.58	302	P	Pdif	10 01 22.9	+0.7
	baz=145						
AMTX	Amarillo	110.58	302	Pdiff	Pdif	10 01 22.9	+0.7
	baz=145						
MODS	Modra-Piesok	110.61	30	eP	Pdif	10 01 31.2	+9.3
MODS				e		10 05 56.1	
MODS				e		10 12 00.7	
MODS				e		10 15 16.2	
MODS				eSS	SS	10 21 50.0	+28
MODS	Modra-Piesok	110.61	30	ePDIFF	Pdif	10 01 31.2	+9.3
MODS				e		10 04 54.2	
MODS				ePP	PP	10 05 56.1	-4.0
TIRR	Tirgusor	110.63	39	⇓P	Pdif	10 01 27.7	+5.7
TIRR	Tirgusor	110.63	39	⇑P	PKiKP	10 05 21.8	+0.2
TIRR	Tirgusor	110.63	39	⇑PKIKP	PKiKP	10 05 21.8	+0.2
TIRR	Tirgusor	110.63	39	⇓P	Pdif	10 01 22.8	+0.8
N41A	Harden Midland	110.64	313	P	Pdif	10 01 22.0	-0.2
	baz=148						
HARR	Harsova	110.66	39	⇑P	Pdif	10 01 27.6	+5.5
HARR	Harsova	110.66	39	⇑P	PKiKP	10 05 22.2	+0.5
HARR	Harsova	110.66	39	⇑PKIKP	PKiKP	10 05 22.2	+0.5
MLR	Muntele Rosu	110.68	37	⇑P	Pdif	10 01 25.0	+2.5
MLR	Muntele Rosu	110.68	37	⇑P	PKiKP	10 05 19.8	-2.2
MLR	Muntele Rosu	110.68	37	Pdiff	Pdif	10 01 23.7	+1.3
	comp=Z,8.7nm,1.0s,baz=197,slow=1.6,SNR=12						
MLR				PKiKP	PKiKP	10 05 21.8	-0.1
	comp=Z,25nm,1.1s,baz=210,slow=5.5,SNR=4.5						
L44A	Lake County Fo	110.72	316	P	Pdif	10 01 22.6	+0.2
	baz=149						
L44A	Lake County Fo	110.72	316	Pdiff	Pdif	10 01 22.8	+0.3
	baz=149						
NEHR	Nehoiu	110.75	37	⇑P	PKiKP	10 05 15.1	-6.8
SMOL	Smolenice	110.78	30	ePP	PP	10 05 56.3	-5.0
DRGR		110.79	34	⇓P	Pdif	10 01 24.5	+1.7
DRGR		110.79	34	⇑P	PKiKP	10 05 19.1	-2.9
DRGR		110.79	34	⇑PKIKP	PKiKP	10 05 19.1	-2.9
P38A	Dawn	110.84	311	P	Pdif	10 01 22.6	-0.5
	baz=147						
DOPR	Dopca	110.92	36	⇓P	Pdif	10 01 25.2	+1.9
DOPR	Dopca	110.92	36	⇓P	PKiKP	10 05 19.9	-2.3
TREC	Trest	110.97	28	eP	Pdif	10 01 24.5	+1.1
TREC				MLR	MLR		
	comp=Z,36µm,17.3s						
TREC	Trest	110.97	28	ePDIFF	Pdif	10 01 24.5	+1.1

TREC				AMS	AMS	10 52 10.0	
	comp=Z,36µm,17.3s						
TPGR	Topolog	110.97	39	⇓P	Pdif	10 01 29.5	+6.0
TPGR	Topolog	110.97	39	⇑P	PKiKP	10 05 11.2	-11
KRUC	Moravsky	111.00	29	*e*PDIFF	Pdif	10 01 24.1	+0.6
KRUC				*e*pPKIKP		10 05 50.1	
KRUC				*e*SKS	SKSac	10 11 47.0	-6.6
KRUC				*e*SP	SP	10 15 33.1	+10
CJR	Cluj-Napoca	111.00	35	⇑P	PKiKP	10 05 24.8	+2.5
CJR	Cluj-Napoca	111.00	35	⇑PKIKP	PKiKP	10 05 24.8	+2.5
JURR	Jurilovca	111.06	39	⇑P	Pdif	10 01 33.3	+9.5
JURR	Jurilovca	111.06	39	⇑P	PKiKP	10 05 35.0	+13
NKC	Novy Kostel	111.06	26	*e*P	Pdif	10 01 24.9	+1.1
NKC				MLR	MLR		
	comp=Z,43µm,22.6s						
NKC	Novy Kostel	111.06	26	*e*PDIFF	Pdif	10 01 24.9	+1.1
NKC				AMS	AMS	10 47 00.0	
	comp=Z,43µm,22.6s						
COVR	Voineasa-Covas	111.08	37	⇓P	Pdif	10 01 28.4	+4.4
COVR	Voineasa-Covas	111.08	37	⇓P	PKiKP	10 05 21.8	-0.7
KOLL	Kolacno	111.11	30	*e*PP	PP	10 05 58.2	-5.4
CFR	Carcaliu	111.16	38	⇑P	Pdif	10 01 29.5	+5.2
CFR	Carcaliu	111.16	38	⇑P	Pdif	10 01 29.5	+5.2
VYHS	Vyhne	111.16	31	*e*P	Pdif	10 01 31.7	+7.4
VYHS				*e*		10 05 22.7	
VYHS	Vyhne	111.16	31	*e*PDIFF	Pdif	10 01 31.7	+7.4
VYHS	Vyhne	111.16	31	*e*	PKiKP	10 05 22.7	+0.1
VYHS	Vyhne	111.16	31	*e*PP	PP	10 05 56.8	-7.2
JAVC	Velka Javorina	111.16	30	*e*PDIFF	Pdif	10 01 26.0	+1.7
OZUR		111.16	36	⇑P	Pdif	10 01 28.1	+3.7
OZUR		111.16	36	⇑P	PKiKP	10 05 21.6	-1.1
POO	Poona	111.19	88	*e*P	PKiKP	10 05 10.0	-14
PLOR	Plostina	111.24	37	⇓P	Pdif	10 01 30.7	+6.0
PLOR	Plostina	111.24	37	⇓P	Pdif	10 01 30.7	+6.0
L42A	Oliver, Polo	111.26	315	P	Pdif	10 01 24.8	-0.1
	baz=148						
VRAC	Vranov	111.27	29	PKiKP	PKiKP	10 05 23.4	+0.7
	comp=Z,8.6nm,0.9s,baz=209,slow=6.4,SNR=6.3						
VRAC				PKKPab	PKKPab	10 16 26.1	+0.9
	comp=Z,6.6nm,0.7s,baz=352,slow=7.2,SNR=4.9						
VRAC	Vranov	111.27	29	*e*PDIFF	Pdif	10 01 25.2	+0.4
VRAC				*e*pPDIFF		10 01 50.4	
VRAC				*e*pPKIKP		10 05 51.1	
VRAC				*e*SKS	SKSac	10 11 46.8	-8.0
VRAC				*e*SP	SP	10 15 30.2	+4.3
VRI	Vrincioaia	111.28	37	⇑P	Pdif	10 01 28.8	+3.9
VRI	Vrincioaia	111.28	37	⇑P	Pdif	10 01 28.8	+3.9
K43A	Burlington	111.33	316	P	Pdif	10 01 24.7	-0.5
	baz=148						
PRU	Pruhonice	111.36	27	*e*P	Pdif	10 01 26.6	+1.5
PRU				MLR	MLR		
	comp=Z,76µm,24.0s						
PRU	Pruhonice	111.36	27	*e*PDIFF	Pdif	10 01 26.6	+1.5
PRU				AMS	AMS	10 45 40.0	
	comp=Z,76µm,24.0s						
ARCR	ARCALIA	111.57	35	⇑P	PKiKP	10 05 24.0	+0.6
121A	Cookes Peak, D	111.65	296	Pdiff	Pdif	10 01 26.4	-0.7
	baz=144						
MAUC	Maruska	111.66	30	*e*PDIFF	Pdif	10 01 28.3	+1.8
MAUC				AMS	AMS	10 47 50.0	
	comp=Z,75µm,23.0s						
I45A	Fountain	111.67	318	P	Pdif	10 01 25.5	-1.2
	baz=149						
I45A				P	Pdif	10 01 25.5	-1.2
	baz=149						
N38A	Joes South For	111.69	312	P	Pdif	10 01 25.8	-1.0
	baz=147						
KSU1	Kansas State U	111.73	308	P	Pdif	10 01 27.1	0.0
	baz=146						
KSU1	Kansas State U	111.73	308	Pdiff	Pdif	10 01 27.1	0.0
	baz=146						
KSU1	Kansas State U	111.73	308	⇓P	Pdif	10 01 27.3	+0.2
TESR	Tescani	111.81	37	⇓P	Pdif	10 01 32.8	+5.6
TESR	Tescani	111.81	37	⇑P	PKiKP	10 05 22.3	-1.6
PVCC	Panska Ves	111.86	27	*e*P	Pdif	10 01 28.6	+1.3
PVCC				MLR	MLR		
	comp=Z,75µm,24.1s						
PVCC	Panska Ves	111.86	27	*e*PDIFF	Pdif	10 01 28.6	+1.3
PVCC				AMS	AMS	10 46 10.0	
	comp=Z,75µm,24.1s						
IBBN	Ibbenburen	111.93	22	⇑P	Pdif	10 01 29.5	+1.9
L40A	Anamosa	111.93	314	P	Pdif	10 01 26.3	-1.6
	baz=147						
LANS	Liptovska Anna	111.93	31	*e*PKIKP	PKiKP	10 05 30.5	+6.5
LANS	Liptovska Anna	111.93	31	*e*	PKiKP	10 05 30.5	+6.5
MORC	Moravsky Berou	111.96	29	*e*PDIFF	Pdif	10 01 28.8	+0.9
MORC				*e*pPKIKP		10 05 59.3	
MORC				*e*SKS	SKSac	10 11 56.2	-1.4
MORC				*e*SP	SP	10 15 37.6	+5.4
MORC	Moravsky Berou	111.96	29	⇑P	Pdif	10 01 29.2	+1.3
MORC				⇓P	pPdif	10 01 38.2	-13
BIZ	Bicaz	112.01	36	⇓P	Pdif	10 01 31.4	+3.3
BIZ	Bicaz	112.01	36	⇑P	PKiKP	10 05 23.5	-0.8
BRG	Berggiesshubel	112.02	27	Amp		10 17 37.5	
	comp=Z,46nm,1.6s						
BRG	Berggiesshubel	112.02	27	*e*P	Pdif	10 01 30.6	+2.6
BRG				*e*		10 12 01.0	
BRG				*e*		10 15 44.0	
BRG				SS	SS	10 22 04.0	+23
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRG	Berggiesshubel	112.02	27	⇓*e*Piff		10 01 30.6	
BRG	Berggiesshubel	112.02	27	Amp		10 01 44.0	
	comp=Z,6.9nm,1.2s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 01 59.5	
BRG	Berggiesshubel	112.02	27	Amp		10 02 03.4	
	comp=Z,9.2nm,1.0s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 04 56.2	
BRG	Berggiesshubel	112.02	27	Amp		10 05 11.1	
	comp=Z,47nm,1.6s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 05 37.0	
BRG	Berggiesshubel	112.02	27	Amp		10 05 45.6	
	comp=Z,68nm,1.4s						
BRG	Berggiesshubel	112.02	27	PP	PP	10 05 59.6	-10
BRG	Berggiesshubel	112.02	27	Amp		10 06 04.3	
	comp=Z,113nm,1.5s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 06 28.6	
BRG	Berggiesshubel	112.02	27	Amp		10 06 29.7	
	comp=Z,135nm,1.6s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 15 44.0	
BRG	Berggiesshubel	112.02	27	PKKP		10 16 27.7	
BRG	Berggiesshubel	112.02	27	Amp		10 16 29.7	
	comp=Z,27nm,1.3s						
BRG	Berggiesshubel	112.02	27	*e*x	x	10 17 35.5	
KRLC	Kraliky	112.02	29	*e*P	Pdif	10 01 30.8	+2.7
KRLC				MLR	MLR		
	comp=Z,23µm,22.2s						
KRLC	Kraliky	112.02	29	*e*PDIFF	Pdif	10 01 30.8	+2.7
KRLC				AMS	AMS	10 48 10.0	
	comp=Z,23µm,22.2s						
R32A	Long Quarter,	112.11	306	P	Pdif	10 01 28.1	-0.7
	baz=145						
DPC	Dobruska-Polom	112.15	28	*e*P	Pdif	10 01 30.7	+2.0
DPC				MLR	MLR		
	comp=Z,33µm,19.0s						
DPC	Dobruska-Polom	112.15	28	*e*PDIFF	Pdif	10 01 30.7	+2.0
DPC				AMS	AMS	10 49 50.0	
	comp=Z,33µm,19.0s						
OKC	Ostrava-Krasne	112.18	30	*e*P	Pdif	10 01 30.0	+1.2
OKC				MLR	MLR		
	comp=Z,58µm,25.6s						
OKC	Ostrava-Krasne	112.18	30	*e*PDIFF	Pdif	10 01 30.0	+1.2
OKC				AMS	AMS	10 45 30.0	
	comp=Z,58µm,25.6s						
CLL	Collm	112.19	26	*e*Pdif	Pdif	10 01 30.0	+1.2
CLL				*i* x	x	10 01 39.2	
	comp=Z,16nm,1.3s						
CLL				*e*(sPdif)		10 02 09.0	
CLL				*e*x	x	10 04 56.0	
CLL				*i* PKiKP	PKiKP	10 05 24.3	-0.1
	comp=Z,28nm,1.1s						
CLL				*e*(pPKiKP)		10 05 44.0	
CLL				*e*x	x	10 06 03.0	
	comp=Z,352nm,2.2s						
CLL				*i* PP	PP	10 06 09.8	-1.5
	comp=Z,73nm,1.2s						
CLL				*e*pPP		10 06 33.0	
CLL				*e*sPP		10 06 45.0	
CLL				*e*PPP	PPP	10 08 29.0	
CLL				*e*sPPP		10 09 06.0	
CLL				*e*pSKPdf		10 09 23.0	
CLL				*e*SKSac	SKSac	10 12 00.0	+1.7
CLL				*e*SKKSac	SKKSac	10 13 00.0	-3.4
CLL				*e*Sdif	Sdif	10 13 48.0	+5.6
CLL				*e*x	x	10 14 49.0	
CLL				*e*PS	PKKPbc	10 15 48.0	-27
CLL				*e*(pPS)		10 15 56.0	
CLL				*e*sPS		10 16 12.0	
CLL				*i* PKKPab	PKKPab	10 16 25.8	+4.8
	comp=Z,32nm,1.2s						
CLL				*e*PKKPdf	PKKPdf	10 16 35.0	-0.1
CLL				*e*pPKKPbc		10 16 41.0	
CLL				*e*pPKKPab		10 16 52.0	
CLL				*e*sPKKPab		10 16 56.0	
CLL				*e*(SKKPbc)		10 19 46.0	
CLL				*e*SS	SS	10 21 49.0	+6.0
CLL				*e*sSS		10 22 21.0	
CLL				*e*SSS	SSS	10 26 00.0	
CLL				*e*x	x	10 26 51.0	
CLL				*e*x	x	10 27 36.0	
CLL				*e*x	x	10 27 48.0	
CLL				*e*x	x	10 30 36.0	
UPC	Upice	112.21	28	*e*P	Pdif	10 01 30.1	+1.2
UPC	Upice	112.21	28	*e*PDIFF	Pdif	10 01 30.1	+1.2
JFWS	Jewell Farm	112.26	315	P	Pdif	10 01 29.2	-0.2
	baz=148						
JFWS	Jewell Farm	112.26	315	Pdiff	Pdif	10 01 29.6	+0.3
	baz=148						
CLGH	Cloghs, Cushen	112.29	13	*e*P	PKiKP	10 05 23.0	-1.4
CRVS	Cervenica-Dubn	112.29	32	*e*P	Pdif	10 01 36.3	+7.0
CRVS				*e*		10 12 02.4	
CRVS				*e*		10 15 37.3	
CRVS				*e*SS	SS	10 22 07.0	+22
CRVS	Cervenica-Dubn	112.29	32	*e*PDIFF	Pdif	10 01 36.3	+7.0
CRVS				*e*PP	PP	10 06 07.5	-4.6
UZH	Uzhgorod	112.30	33	*e*P	Pdif	10 01 32.6	+3.3
UZH				*e*		10 06 15.4	
UZH				*e*PPP	PPP	10 08 35.0	
UZH				*e*		10 12 32.6	
UZH				*e*PS	PKKPbc	10 15 45.0	-30
UZH				*e*SS	SS	10 21 47.2	+2.7
CHVC	Chvalec	112.30	28	*e*PDIFF	Pdif	10 01 31.7	+2.4
CHVC				*e*PKKP	PKKPab	10 16 23.9	+3.3
OSTC	Ostas	112.31	28	*e*PDIFF	Pdif	10 01 31.3	+1.9
OSTC				*e*SP	SP	10 15 51.3	+16
BUR01	Bucovina Ar. S	112.31	35	⇑P	Pdif	10 01 37.0	+7.5
BURAR	Bucovina Array	112.31	35	⇓P	PKiKP	10 05 24.3	-0.6
BURAR	Bucovina Array	112.31	35	⇓PKIKP	PKiKP	10 05 24.3	-0.6
G45A	Suttons Bay	112.32	319	P	Pdif	10 01 28.8	-0.7
	baz=149						
G45A				P	Pdif	10 01 28.8	-0.7
	baz=149						
Y22A	Socorro	112.37	298	P	Pdif	10 01 31.5	+1.2
	baz=144						
NIE	Niedzica	112.41	31	*e*Pdif	Pdif	10 01 31.5	+1.7
NIE				*e*PP	PP	10 06 11.3	-1.7
NIE				*e*SKSac	SKSac	10 12 01.6	+2.2
NIE				*e*L	L	10 47 09.9	
	comp=Z,30µm,27.1s						
I42A	Draeger Farm,	112.56	316	P	Pdif	10 01 30.0	-0.6
	baz=148						
KOLS	Kolonicke sedl	112.56	33	*e*	PKiKP	10 05 27.9	+2.7
KOLS				*e*PP	PP	10 06 11.0	-3.0
KSP	Ksiaz	112.59	28	*e*Pdif	Pdif	10 01 32.5	+2.0
KSP				*e*PKiKP	PKiKP	10 05 24.2	-1.0
KSP				*e*PP	PP	10 06 16.1	+1.9
KSP				*e*SKSac	SKSac	10 12 04.7	+4.7
KSP				*e*PS	PKKPbc	10 16 06.9	-6.9
KSP				*e*SS	SS	10 22 24.1	+36
KSP				*e*L	L	10 46 28.8	
	comp=Z,49µm,26.2s						
SCIA	State Center	112.61	312	P	Pdif	10 01 31.3	+0.4
	baz=146						
SCIA	State Center	112.61	312	Pdiff	Pdif	10 01 31.4	+0.4
	baz=146						
H43A	Windswept, Lux	112.62	317	P	Pdif	10 01 30.5	-0.4
	baz=148						
FLTG	Flechtingen	112.72	24	⇑P	Pdif	10 01 32.5	+1.5
N35A	Tabor	112.77	310	P	Pdif	10 01 31.7	+0.1
	baz=146						
CBKS	Cedar Bluff	112.89	306	P	Pdif	10 01 31.9	-0.4
	baz=145						
CBKS	Cedar Bluff	112.89	306	Pdiff	Pdif	10 01 32.4	+0.1
	baz=145						
CBKS	Cedar Bluff	112.89	306	⇓P	Pdif	10 01 33.3	+1.0
ESK	Eskdalemuir	112.90	14	*e*P	PKiKP	10 05 24.2	-1.4
MILM	Milestii Mici	112.90	38	⇓*i*P	Pdif	10 01 32.0	0.0
	comp=Z,1µm,7.4s						
MILM	Milestii Mici	112.90	38	*e*PKP	PKiKP	10 05 27.0	+1.1
MILM				*e*pPKP	PKiKP	10 05 27.0	+1.1
MILM	Milestii Mici	112.90	38	*e*PP	PP	10 06 10.0	-6.4
MILM	Milestii Mici	112.90	38	*e*SKS	SKSac	10 11 54.0	-7.3
MILM	Milestii Mici	112.90	38	*e*PS	PS	10 15 47.0	-4.3
MILM				*e*L	L	10 40 20.0	
	comp=Z,26µm,40.0s						
MILM				LRM	MLR	10 51 01.0	
	comp=Z,15µm,23.5s						
MILM	Milestii Mici	112.90	38	⇓P	PKiKP	10 05 24.7	-1.2
MILM	Milestii Mici	112.90	38	*i* P	Pdif	10 01 32.0	0.0
MILM				*e*		10 05 27.0	
MILM				*e*PPP	PPP	10 08 38.0	
MILM				*e*PS	PKKPbc	10 15 47.0	-26
MILM				pmax	pmax		
	comp=Z,1µm,7.4s						
MILM	Milestii Mici	112.90	38	*e*PPP	PPP	10 08 38.0	
HYB	Hyderabad	112.92	93	*e*pPKPdf	PKiKP	10 05 26.7	-0.2
HYB				IAmb	IAmb	10 05 28.9	
	comp=Z,82nm,1.4s						
HYBB	Hyderabad (bro	112.92	93	*e*Pdif	Pdif	10 01 33.6	+0.6
HYBB				*e*PKiKP	PKiKP	10 05 25.7	-1.2
HYBB				*e*PP	PP	10 06 15.1	-1.6
HYBB				*e*SKSac	SKSac	10 12 00.7	-2.2
HYBB				*e*SP	SP	10 15 44.1	+1.9
ANMO	Albuquerque	112.93	299	Pdiff	Pdif	10 01 30.9	-1.9
	comp=Z,1.6nm,0.8s,baz=167,slow=6.6,SNR=7.0						
ANMO				PKiKP	PKiKP	10 05 26.5	-0.2
	comp=Z,5.6nm,0.9s,baz=125,slow=5.8,SNR=4.8						
ANMO				PP	PP	10 06 16.5	-0.6
	comp=Z,38nm,1.0s,baz=150,slow=7.0,SNR=8.6						
ANMO	Albuquerque	112.93	299	Pdiff	Pdif	10 01 33.0	+0.2
	baz=144						
E46A	Sault Ste Mari	112.97	321	P	Pdif	10 01 31.7	-0.7
	baz=149						
KIS	Kishinev	112.97	38	⇓*i*P	Pdif	10 01 32.0	-0.4
	comp=Z,520nm,7.7s						
KIS	Kishinev	112.97	38	*i* PP	PP	10 06 10.0	-6.9
KIS	Kishinev	112.97	38	*e*SKS	SKSac	10 12 00.0	-1.6
KIS	Kishinev	112.97	38	*e*PS	PS	10 15 47.0	-4.9
KIS				*e*L	L	10 40 58.0	
	comp=Z,7µm,32.0s						
KIS				LRM	MLR	10 51 06.0	
	comp=Z,10µm,24.0s						
KIS	Kishinev	112.97	38	*d* *i*P	Pdif	10 01 32.0	-0.4
KIS				*e*		10 05 26.0	
KIS				*e*PPP	PPP	10 08 37.0	
KIS				*e*		10 12 00.0	
KIS				*e*PS	PKKPbc	10 15 47.0	-25
KIS				pmax	pmax		
	comp=Z,520nm,7.7s						
KIS	Kishinev	112.97	38	*e*PPP	PPP	10 08 37.0	
OJC	Ojcow	112.99	31	*e*Pdif	Pdif	10 01 33.4	+1.0
OJC				*e*PKiKP	PKiKP	10 05 27.8	+1.8
OJC				*e*PP	PP	10 06 14.5	-2.5
OJC				*e*SKSac	SKSac	10 12 07.2	+5.6
OJC				*e*PS	PS	10 15 53.2	+1.2
OJC				*e*L	L	10 45 31.0	
	comp=Z,52µm,29.6s						
TUC	Tucson	112.99	294	Pdiff	Pdif	10 01 33.1	+0.1
	baz=143						
K38A	Parkersburg	113.05	313	P	Pdif	10 01 33.0	+0.2
	baz=146						
KAPI	Kappang	113.11	144	PKiKP	PKiKP	10 05 27.2	-0.3
	comp=Z,24nm,1.1s,baz=115,slow=16,SNR=2.3						
KAPI				PP	PP	10 06 16.0	-1.3
	comp=Z,30nm,0.8s,baz=145,slow=18,SNR=4.1						
KAPI				PKKPbc	PKKPbc	10 16 12.7	+1.8
	comp=Z,13nm,0.8s,baz=68,slow=12,SNR=8.0						
KAPI				PKKPab	PKKPab	10 16 21.8	-1.4
	comp=Z,18nm,0.7s,baz=76,slow=5.1,SNR=6.9						
SIM	Simferopol'	113.13	43	*i* PKIKP	PKiKP	10 05 25.5	-0.9
SIM				pmax	pmax		
	comp=Z,79nm,1.2s						
I40A	Norwalk	113.23	315	P	Pdif	10 01 33.9	+0.3
	baz=147						
EBL	Broad Law	113.36	14	*e*P	PKiKP	10 05 26.5	0.0
N33B	J Bar K, Exete	113.45	309	P	Pdif	10 01 34.6	-0.1
	baz=145						
RUE	Ruedersdorf	113.46	26	⇓P	Pdif	10 01 36.2	+1.9
EDI	Edinburgh	113.49	14	*e*P	PKiKP	10 05 26.5	-0.2
GNI	Garni	113.50	53	PKiKP	PKiKP	10 05 28.5	+1.0
	comp=Z,14nm,0.3s,baz=185,slow=3.6,SNR=4.6						
GNI				PP	PP	10 06 17.5	-3.5
	comp=Z,113nm,1.1s,baz=224,slow=2.5,SNR=5.8						
GNI	Garni	113.50	53	⇓P	Pdif	10 01 37.3	+2.2
LAWE	Loch Awe, Argy	113.53	13	*e*P	PKiKP	10 05 26.1	-0.7
ESY	Stoneypath	113.56	15	*e*P	PKiKP	10 05 27.0	+0.2
EAB	Aberfoyle	113.59	14	*e*P	PKiKP	10 05 26.9	0.0
T25A	Trinidad	113.70	302	Pdiff	Pdif	10 01 37.2	+1.0
	baz=144						
214A	Organ Pipe Nat	113.75	292	Pdiff	Pdif	10 01 37.2	+0.9
	baz=143						
SORM	Soroca	113.80	37	⇑P	Pdif	10 01 43.8	+7.8
SORM	Soroca	113.80	37	⇓P	PKiKP	10 05 26.9	-0.6
SORM	Soroca	113.80	37	⇓PKIKP	PKiKP	10 05 26.9	-0.6
LVV	L'vov	113.88	33	*e*P	Pdif	10 01 38.4	+2.1
LVV				*e*		10 06 22.8	
LVV				*e*		10 12 03.6	
LVV				*e*		10 15 47.5	
LVV				MLR	MLR		
	comp=E,23µm,22.0s						
LVV				MLR	MLR		
	comp=N,29µm,23.0s						
LVV				MLR	MLR		
	comp=Z,29µm,23.0s						
E43A	Lone Tree Farm	113.95	319	P	Pdif	10 01 34.8	-1.9
	baz=148						
L34A	Svendsen Farm,	113.99	310	P	Pdif	10 01 37.2	+0.1
	baz=145						
EDU	Dundee	114.12	14	*e*P	PKPdf	10 05 27.9	0.0
SOC	Sochi	114.18	47	*i* PKIKP	PKPdf	10 05 28.4	0.0
SOC				*e*		10 05 55.6	
SOC				*e*		10 06 24.7	
SOC				*e*		10 12 02.8	
SOC				*i* PS	PS	10 16 05.6	+2.5
SOC				*e*SS	SS	10 22 06.6	-3.0
SOC				pmax	pmax		
	comp=Z,54nm,1.2s						
G40A	Rib Lake	114.22	316	P	Pdif	10 01 37.4	-0.6
	baz=147						
ANN	Anapa	114.28	45	*i* PKIKP	PKPdf	10 05 28.2	-0.4
ANN				*e*		10 05 56.6	
ANN				*e*		10 12 06.2	
ANN				*e*SP	SP	10 15 55.3	+1.6
ANN				*e*PS	PKKPbc	10 16 09.2	+1.4
ANN				pmax	pmax		
	comp=Z,131nm,1.2s						
ANN				MLR	MLR		
	comp=Z,12µm,19.0s						
ANN				MLR	MLR		
	comp=N,29µm,22.0s						
BGNE	Belgrade	114.30	309	P	Pdif	10 01 38.9	+0.4
	baz=145						
BGNE	Belgrade	114.30	309	Pdiff	Pdif	10 01 38.6	+0.1
	baz=145						
KSCO	Kaye Shedlock'	114.37	304	Pdiff	Pdif	10 01 39.9	+0.9
	baz=144						
PMG	Port Moresby	114.39	174	PKiKP	PKiKP	10 05 28.2	-1.6
	comp=N,12nm,0.7s,baz=154,slow=13,SNR=2.3						
PMG				PKKPbc	PKKPbc	10 16 07.9	+1.1
	comp=N,40nm,0.9s,baz=307,slow=5.1,SNR=7.8						
COWI	Conover	114.51	317	P	Pdif	10 01 39.8	+0.5
	baz=147						
KPL	Plockton	114.55	13	*e*P	PKPdf	10 05 28.6	0.0
W18A	Petrified Fore	114.69	296	Pdiff	Pdif	10 01 41.2	+0.6
	baz=143						
SDCO	Great Sand Dun	114.71	301	Pdiff	Pdif	10 01 41.4	+0.7
	baz=143,SNR=6.1						
BEL	Belsk	114.71	30	*e*Pdif	Pdif	10 01 42.2	+2.3
BEL				*e*PKiKP	PKiKP	10 05 29.8	+0.7
BEL				*e*PP	PP	10 06 27.1	-2.0
BEL				*e*SKSac	SKSac	10 12 11.5	+3.4
BEL				*e*PS	PKKPab	10 16 09.4	-0.6
BEL				*e*L	L	10 47 13.7	
	comp=N,82µm,26.7s						
KAC	Achnashellach	114.75	13	*e*P	PKPdf	10 05 27.3	-1.8
GKP	Gorka Klasztor	115.04	28	*e*Pdif	Pdif	10 01 43.2	+1.8
GKP				*e*PKiKP	PKiKP	10 05 29.9	+0.2
GKP				*e*PP	PP	10 06 29.6	-1.8
GKP				*e*PS	PS	10 16 13.2	+2.5
GKP				*e*SS	SS	10 22 31.7	+11
GKP				*e*L	L	10 46 16.5	
	comp=N,60µm,28.9s						
GKP	Gorka Klasztor	115.04	28	*e*P	PKiKP	10 05 30.1	+0.3
MCD	Coleburn Disti	115.09	14	*e*P	PKPdf	10 05 28.0	-1.7
D41A	Chassel	115.10	318	P	Pdif	10 01 42.2	+0.4
	baz=147						
LEWI	Lewis, Hebride	115.20	12	*e*P	PKPdf	10 05 28.8	-1.1
SPMN	Marine on St.	115.20	315	Pdiff	Pdif	10 01 42.2	-0.2
	baz=146						
ZEI	Tsey	115.28	50	*e*PKIKP	PKPdf	10 05 30.1	-0.8
ZEI				pmax	pmax		
	comp=Z,32nm,1.2s						
S22A	4UR Ranch, Cre	115.35	300	Pdiff	Pdif	10 01 46.7	+3.1
	baz=143						
S22A				PKP	PKiKP	10 05 31.6	+0.2
	baz=143						
LINV	Loch Inver, As	115.39	13	*e*P	PKPdf	10 05 29.8	-0.5
SCHQ	Schefferville	115.41	336	PKP	PKPdf	10 05 28.6	-1.9
	comp=Z,48nm,0.9s,baz=90,slow=1.1,SNR=21						
SCHQ				PKKPab	PKKPab	10 16 09.4	+2.6
	comp=Z,6.2nm,0.8s,baz=280,slow=7.9,SNR=7.0						
Q24A	Divide	115.51	302	Pdiff	Pdif	10 01 45.0	+0.7
	baz=143						
Q24A				PKP	PKPdf	10 05 31.3	-0.3
	baz=143						
ECSD	EROS Data Cent	115.53	311	P	Pdif	10 01 44.2	+0.3
	baz=145						
ECSD	EROS Data Cent	115.53	311	Pdiff	Pdif	10 01 44.2	+0.3
	baz=145						
ECSD				PKP	PKPdf	10 05 30.3	-0.8
	baz=145						
KBZ	Khabaz	115.62	49	PKP	PKPdf	10 05 30.1	-1.1
	comp=Z,18nm,0.8s,baz=120,slow=0.9,SNR=12						
KBZ				PP	PP	10 06 34.9	-0.7
	comp=Z,33nm,0.9s,baz=315,slow=4.4,SNR=4.2						
KBZ	Khabaz	115.62	49	*d* *i*P	Pdif	10 01 45.0	+0.8
KBZ				*i*		10 05 31.6	
OGNE	Ogallala	115.65	306	PKP	PKiKP	10 05 31.6	0.0
	baz=143						
GLA	Glamis	115.66	291	Pdiff	Pdif	10 01 43.9	-0.9
	baz=142						
GLA				PKP	PKiKP	10 05 31.9	+0.2
	baz=142						
KIV	Kislovodsk	115.72	49		PKPdf	10 05 30.9	-0.7
KIV	Kislovodsk	115.72	49	*i* P	Pdif	10 01 44.4	-0.4
KIV				*i*		10 05 31.6	
KIV				*e*		10 06 35.9	
KIV				*e*		10 12 12.3	
KIV				*e*PS	PKKPdf	10 16 18.5	-10
KIV				*e*SS	SS	10 22 32.0	+2.0
KIV				pmax	pmax		
	comp=Z,73nm,1.1s						
KIV	Kislovodsk	115.72	49	PKPdf	PKPdf	10 05 30.3	-1.3
KVAR	Kislovodsk Arr	115.72	49	PKP	PKPdf	10 05 29.8	-1.8
	comp=Z,8.8nm,0.5s,baz=107,slow=17,SNR=3.0						
LLD	Lille Linde	115.72	24	*i* P	PKPdf	10 05 30.8	-0.2
MVCO	Mesa Verde	115.73	299	Pdiff	Pdif	10 01 46.2	+1.0
	baz=142						
MVCO				PKP	PKPdf	10 05 31.8	-0.2
	baz=142						
WUAZ	Wupatki	115.83	296	Pdiff	Pdif	10 01 46.4	+0.8
	baz=142						
WUAZ				PKP	PKiKP	10 05 32.4	+0.2
	baz=142						
IKP	In-Ko-Pah, Jac	116.01	290	Pdiff	Pdif	10 01 47.5	+1.1
	baz=142						
IKP				PKP	PKiKP	10 05 32.6	+0.1
	baz=142						
SWSC	Sam W. Stewart	116.08	291	PKP	PKiKP	10 05 32.6	+0.2
	baz=142						
COP	Copenhagen	116.09	24	*i* P	PKiKP	10 05 31.9	+0.2
COP				IAMs_20	IAMs_20	10 44 28.5	
	comp=Z,241µm,32.8s						
MUD	Monsted U'grnd	116.11	21	*i* P	PKPdf	10 05 31.4	-0.3
MUD				IAMs_20	IAMs_20	10 42 41.3	
	comp=Z,173µm,42.4s						
BSD	Bornholm Skovb	116.14	25	*i* P	PKPdf	10 05 30.6	-1.2
BSD				IAMs_20	IAMs_20	10 43 19.7	
	comp=Z,131µm,43.2s						
PDMCI	Parker Dam,Lak	116.28	293	PKP	PKiKP	10 05 32.9	+0.1
	baz=142						

AKASG	Malin Array Be	116.30	36	PKP	PKPdf	10 05 31.3	-1.0
	comp=Z,17nm,0.7s,baz=251,slow=1.2,SNR=26						
AKASG				PP	PP	10 06 37.5	-2.8
	comp=Z,26nm,0.9s,baz=225,slow=6.1,SNR=6.6						
AKASG				PKKP	PKKPdf	10 16 28.8	+1.6
	comp=Z,2.7nm,0.6s,baz=33,slow=4.6,SNR=4.6						
AKBB	Malin Array Si	116.30	36	d iP	Pdif	10 01 47.4	+0.4
AKBB				MLR	MLR		
	comp=Z,22µm,21.0s						
MONP2	Monument Peak	116.37	290	Pdiff	Pdif	10 01 50.6	+2.5
	baz=142						
MONP2				PKP	PKiKP	10 05 33.4	+0.1
	baz=142						
ISCO	Idaho Springs	116.39	303		PKiKP	10 05 33.5	+0.2
ISCO	Idaho Springs	116.39	303	PKIKP	PKiKP	10 05 33.5	+0.2
ISCO	Idaho Springs	116.39	303	P	Pdif	10 01 48.8	+0.6
	baz=142						
ISCO	Idaho Springs	116.39	303	Pdiff	Pdif	10 01 48.6	+0.4
	baz=142						
ISCO				PKP	PKPdf	10 05 33.1	-0.2
	baz=142						
GROC	Groznyy	116.44	51	eP	Pdif	10 01 56.3	+8.4
GROC				i		10 05 32.5	
GROC				e		10 05 52.4	
GROC				e		10 06 00.8	
GROC				e		10 06 38.8	
GROC				e		10 09 11.0	
GROC				e		10 12 15.9	
GROC				pmax	pmax		
	comp=Z,37nm,0.5s						
BC3	Big Chuckawall	116.46	291	Pdiff	Pdif	10 01 51.0	+2.6
	baz=142						
BC3				PKP	PKiKP	10 05 33.5	+0.1
	baz=142						
GOET	G??ttrup	116.66	21	iP	PKiKP	10 05 35.1	+2.4
IRM	Iron Mountain	116.69	292	Pdiff	Pdif	10 01 50.2	+0.8
	baz=142						
IRM				PKP	PKiKP	10 05 34.3	+0.6
	baz=142						
109C	Camp Elliot, M	116.72	290	Pdiff	Pdif	10 01 52.6	+3.2
	baz=141						
109C				PKP	PKiKP	10 05 34.3	+0.5
	baz=141						
GOF	Gofitskoye	116.76	48	⇑ePKIKP	PKPdf	10 05 33.4	0.0
GOF				pmax	pmax		
	comp=Z,69nm,0.9s						
EYMN	Ely	116.94	317	P	Pdif	10 01 49.8	-0.2
	baz=146						
EYMN	Ely	116.94	317	Pdiff	Pdif	10 01 50.3	+0.2
	baz=146						
EYMN				PKP	PKPdf	10 05 32.7	-1.0
	baz=146						
BHPL	Bhopal	116.95	88	eP	PKPdf	10 05 34.1	-0.4
BHPL				IAmb	IAmb	10 05 36.5	
	comp=Z,51nm,1.2s						
BHPL				ix	PP	10 06 46.0	+0.9
PFO	Pinyon Flats O	116.95	291	PKP	PKPdf	10 05 34.2	-0.1
	comp=Z,20nm,1.0s,baz=163,slow=1.9,SNR=12						
PFO	Pinyon Flats O	116.95	291		PKPdf	10 05 34.4	+0.1
PFO	Pinyon Flats O	116.95	291	PKIKP	PKPdf	10 05 34.4	+0.1
PFO	Pinyon Flats O	116.95	291	Pdiff	Pdif	10 01 52.0	+1.4
	baz=141						
PFO				PKP	PKiKP	10 05 34.8	+0.4
	baz=141						
MAK	Makhachkala	116.99	53	eP	Pdif	10 01 52.5	+2.2
MAK				i		10 05 35.2	
MAK				e		10 05 55.7	
MAK				e		10 06 42.9	
MAK				e		10 12 16.8	
MAK				ePS	PKKPdf	10 16 26.6	+1.1
MAK				eSS	SS	10 22 49.8	+3.4
MAK				eSSS	SSS	10 27 14.4	
MAK				pmax	pmax		
	comp=Z,301nm,1.8s						
BELC	Belle Mtn. Jos	117.01	291	PKP	PKiKP	10 05 35.1	+0.7
	baz=141						
SUSD	Miller	117.10	310	P	Pdif	10 01 51.6	+0.7
	baz=144						
SUSD	Miller	117.10	310	Pdiff	Pdif	10 01 51.1	+0.2
	baz=144						
SUSD				PKP	PKPdf	10 05 33.7	-0.4
	baz=144						
F33A	5 Mile Ranch,	117.11	313	P	Pdif	10 01 51.1	+0.3
	baz=144						
OVD	Ostervraa, Den	117.12	22	iP	PKPdf	10 05 33.6	0.0
OVD				IAMs_20	IAMs_20	10 43 13.9	
	comp=Z,173µm,42.4s						
DEL	Delary	117.14	24	eP	PKiKP	10 05 33.9	+0.2
SBUM	Sibu	117.20	133		PKPdf	10 05 35.0	-0.2
DGPR	DIGLIPUR	117.31	108	eP	PKPdf	10 05 31.8	-3.5
SUW	Suwalki	117.32	31	ePKiKP	PKPdf	10 05 33.0	-1.2
SUW				ePP	PP	10 06 44.1	-3.2
SUW				ePS	PKKPdf	10 16 34.4	+9.0
SUW				eSS	SS	10 23 19.4	+29
SUW				eL	L	10 46 49.8	
	comp=Z,47µm,30.7s						
SUW	Suwalki	117.32	31	eP	PKPdf	10 05 33.4	-0.7
MURC	Murrieta	117.32	290	Pdiff	Pdif	10 01 53.2	+1.1
	baz=141						
MURC				PKP	PKiKP	10 05 35.2	+0.3
	baz=141						
N23A	Red Feather La	117.41	303	Pdiff	Pdif	10 01 54.0	+1.4
	baz=142						
N23A				PKP	PKPdf	10 05 35.0	-0.2
	baz=142						
GMRC	Granite Mounta	117.44	292	Pdiff	Pdif	10 01 52.1	-0.6
	baz=141						
GMRC				PKP	PKiKP	10 05 35.8	+0.5
	baz=141						
SNART	Snartemo	117.49	20	ePdif	Pdif	10 01 47.8	-4.4
SNART				ePKPdf	PKiKP	10 05 34.7	+0.4
SNART				eSP	SP	10 16 22.3	-0.1
HOMB	Homborsund	117.67	20	ePdif	Pdif	10 01 55.5	+2.6
HOMB				ePKPdf	PKPdf	10 05 34.6	0.0
HOMB				ePP	PP	10 06 49.7	0.0
HOMB				eSKPdf	SKiKP	10 09 04.1	+2.3
HOMB				eSKSac	SKSac	10 12 21.3	+2.4
HOMB				ePS	PKKPdf	10 16 35.0	+10
HOMB				eSS	SS	10 22 55.1	+0.4
BBRC	Big Bear Solar	117.69	291	Pdiff	Pdif	10 01 55.3	+1.2
	baz=141						
BBRC				PKP	PKiKP	10 05 36.6	+0.7
	baz=141						
CIS	Catalina Islan	117.81	289	PKP	PKiKP	10 05 36.3	+0.4
	baz=141						
HEC	Hector,Ludlow	117.83	292	Pdiff	Pdif	10 01 55.8	+1.4
	baz=141						
HEC				PKP	PKiKP	10 05 36.3	+0.4
	baz=141						
LRW	Lerwick	117.85	14	eP	PKPdf	10 05 34.8	-0.1
O20A	White River Ci	117.90	301	Pdiff	Pdif	10 01 55.4	+0.7
	baz=142						
O20A				PKP	PKPdf	10 05 35.8	-0.2
	baz=142						
AJM	Ajmer	117.95	84	⇑iP	PKPdf	10 05 36.0	-0.3
AJM	Ajmer	117.95	84	eP	PKPdf	10 05 35.5	-0.8
KMY	Karmoy	117.96	18	ePKPdf	PKPdf	10 05 34.6	-0.5
KMY				ePS	PKKPdf	10 16 39.1	+15
FMP	Fort Macarthur	117.99	289	Pdiff	Pdif	10 01 57.9	+2.9
	baz=141						
FMP				PKP	PKiKP	10 05 36.8	+0.7
	baz=141						
GEYT	Alibeck	118.05	63	PKP	PKPdf	10 05 35.8	-0.3
	comp=Z,13nm,0.7s,baz=291,slow=12,SNR=5.8						
GEYT				PP	PP	10 06 51.0	-1.8
	comp=Z,28nm,1.1s,baz=224,slow=8.0,SNR=3.8						
BFSC	Mount Baldy Ra	118.06	290	Pdiff	Pdif	10 01 55.6	+0.1
	baz=141						
BFSC				PKP	PKiKP	10 05 36.5	+0.1
	baz=141						
TUQ	Turquoise Moun	118.08	292	Pdiff	Pdif	10 01 56.6	+0.9
	baz=141						
TUQ				PKP	PKiKP	10 05 37.0	+0.6
	baz=141						
RRX	Edison Barstow	118.21	291	Pdiff	Pdif	10 01 56.3	+0.3
	baz=141						
RRX				PKP	PKiKP	10 05 37.4	+0.8
	baz=141						
SNCC	San Nicolas Is	118.28	288	PKP	PKiKP	10 05 37.4	+0.6
	baz=141						
BLS5	Blasjo	118.37	19	ePdif	Pdif	10 01 56.9	+0.8
BLS5				ePKPdf	PKPdf	10 05 34.6	-1.5
BLS5				eSKSac	SKSac	10 12 25.4	+3.9
BLS5				ePS	PS	10 16 44.7	+3.8
BLS5				eSS	SS	10 23 04.1	+0.3
DECC	Green Verdugo	118.43	290	Pdiff	Pdif	10 01 53.7	-3.4
	baz=141						
DECC				PKP	PKiKP	10 05 37.4	+0.4
	baz=141						
GSC	Goldstone, Bar	118.44	292	Pdiff	Pdif	10 01 58.4	+1.3
	baz=141						
GSC				PKP	PKiKP	10 05 37.7	+0.6
	baz=141						
SHOC	Shoshone, Teco	118.62	292	Pdiff	Pdif	10 01 58.8	+1.0
	baz=141						
SHOC				PKP	PKiKP	10 05 37.8	+0.4
	baz=141						
EDW2	Edwards Air Fo	118.73	290	Pdiff	Pdif	10 01 59.3	+0.9
	baz=141						
EDW2				PKP	PKiKP	10 05 38.1	+0.5
	baz=141						
PBUR	Paburge	118.74	29	eP	PKiKP	10 05 37.2	+0.4
PABE	Paberze	118.85	30	eP	PKPdf	10 05 37.0	0.0
ODD1	Odda	118.86	19	ePKPdf	PKiKP	10 05 37.6	+0.5
OSI	Osito Audit: C	118.91	290	Pdiff	Pdif	10 01 58.1	-1.1
	baz=140						
OSI				PKP	PKiKP	10 05 38.5	+0.5
	baz=140						
SCZ2	Santa Cruz Isl	118.91	289	PKP	PKiKP	10 05 38.6	+0.6
	baz=141						
AGMN	Agassiz Nation	118.92	315	Pdiff	Pdif	10 01 58.4	-0.4
	baz=144						
AGMN				PKP	PKPdf	10 05 36.4	-1.0
	baz=144						
LRMC	Laurel Mtn Rad	119.03	291	Pdiff	Pdif	10 02 00.3	+0.5
	baz=140						
LRMC				PKP	PKiKP	10 05 38.9	+0.5
	baz=140						
K22A	Casper	119.06	304	Pdiff	Pdif	10 02 01.0	+1.2
	baz=141						
K22A				PKP	PKPdf	10 05 37.1	-1.0
	baz=141						
RSSD	Black Hills	119.07	307		PKPdf	10 05 37.7	-0.5
RSSD	Black Hills	119.07	307	PKIKP	PKPdf	10 05 37.7	-0.5
RSSD	Black Hills	119.07	307	Pdiff	Pdif	10 02 01.2	+1.3
	baz=142						
RSSD				PKP	PKPdf	10 05 37.5	-0.7
	baz=142						
BER	Bergen	119.08	18	ePdif	Pdif	10 01 59.9	+0.8
BER				ePP	PP	10 06 59.4	-0.1
BER				ePKSdf	PKSdf	10 09 15.8	+2.3
BER				eSKSac	SKSac	10 12 26.8	+3.0
BER				ePS	PKKPdf	10 16 49.6	+27
BER				eSS	SS	10 23 14.8	+1.9
MNK	Minsk	119.13	33	iPKIKP	PKPdf	10 05 37.6	0.0
MNK				i		10 06 03.8	
MNK				i		10 12 22.3	
MNK				iPS	PS	10 16 53.2	+5.5
MNK				iSS	SS	10 23 14.9	+1.2
MNK				i		10 23 27.1	
MNK				iSSS	SSS	10 27 45.1	
MNK				pmax	pmax		
	comp=Z,146nm,1.0s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,39nm,1.3s						
MNK				MLR	MLR		
	comp=N,15µm,20.0s						
MNK				MLR	MLR		
	comp=Z,47µm,26.0s						
MNK				MLR	MLR		
	comp=E,4µm,19.0s						
MNK	Minsk	119.13	33	iPKP	PKPdf	10 05 37.6	0.0
	comp=E,6.0nm,1.1s						
MNK				iPKP	PKPdf	10 05 37.6	0.0
	comp=N,39nm,1.3s						
MNK				iPKP	PKPdf	10 05 37.6	0.0
	comp=Z,146nm,1.0s,baz=32						
MNK				ipPKP	pPKPdf	10 06 03.9	+2.1
MNK				iPP	PP	10 06 54.4	-5.5
MNK				iSKP	SKPdf	10 09 02.7	-1.9
MNK				iPKS		10 09 12.0	
MNK				iPPP	PPP	10 09 27.4	
MNK				iSKS	SKSac	10 12 22.3	-2.0
MNK				iSP	SP	10 16 31.1	-6.2
MNK				iPS	PS	10 16 53.3	+5.5
MNK				iSS	SS	10 23 15.0	+1.3
MNK				iSSS	SSS	10 27 45.1	
MNK				iLQ	LQ	10 44 08.1	
MNK				iLR	LR	10 49 16.3	
MNK				iLRM	MLR	10 55 07.5	
	comp=N,15µm,19.7s						
MNK				iLRM	MLR	10 55 10.2	
	comp=Z,47µm,25.6s						
MNK				iLRM	MLR	10 55 12.1	
	comp=E,4µm,19.0s						
NACGM	Naroch	119.14	32	iPKP	PKPdf	10 05 37.5	-0.1
ASK	Askoy	119.15	18	ePdif	Pdif	10 02 00.2	+0.8
ASK				ePKPdf	PKiKP	10 05 38.0	+0.5
ASK				ePP	PP	10 06 57.4	-2.6
ASK				ePP	PP	10 06 59.6	-0.3
ASK				eSKSac	SKSac	10 12 25.2	+1.2
ASK				⇑e		10 13 19.9	
ASK				eSP	SP	10 16 39.7	+2.5
ASK				eSS	SS	10 23 16.1	+2.3
KONO	Kongsberg	119.17	20		PKPdf	10 05 37.4	-0.1
KONO	Kongsberg	119.17	20	PKIKP	PKPdf	10 05 37.4	-0.1
KONO	Kongsberg	119.17	20	ePdif	Pdif	10 02 01.6	+2.1
KONO				IVmB_BB		10 02 37.4	
	comp=Z,804nm,11.5s						
KONO				ePKPdf	PKPdf	10 05 36.3	-1.2
KONO				eSKSac	SKSac	10 12 22.0	-2.2
KONO				ePS	PKKPdf	10 16 49.9	+28
KONO				eSS	SS	10 23 15.1	+1.0
KONO				IVMs_BB	IVMs_BB	10 45 27.2	
	comp=Z,22µm,37.2s						
VSVD	Vaisvydziai	119.25	30	eP	PKiKP	10 05 38.3	+0.5
BWNR	Bhubaneshwar	119.27	97	eP	PKPdf	10 05 38.3	-0.6
SBC	Santa Barbara	119.30	289	PKP	PKiKP	10 05 39.7	+1.0
	baz=140						
JHNI	Jhansi	119.32	87	eP	PKPdf	10 05 38.5	-0.5
ARVC	Arvin	119.36	290	Pdiff	Pdif	10 02 03.0	+1.9
	baz=140						
ARVC				PKP	PKiKP	10 05 39.5	+0.7
	baz=140						
IIGN	Ignalina	119.36	32	eP	PKiKP	10 05 38.5	+0.4
FURC	Furnace Creek,	119.36	292	Pdiff	Pdif	10 02 01.5	+0.5
	baz=140						
FURC				PKP	PKiKP	10 05 39.7	+1.0
	baz=140						
TPNV	Topopah Spring	119.42	293	Pdiff	Pdif	10 02 04.3	+2.8
	baz=140						
TPNV				PKP	PKiKP	10 05 39.6	+0.5
	baz=140						
IDID	Didziasalis	119.48	32	eP	PKiKP	10 05 38.5	+0.2
ISAL	Salakas	119.52	31	eP	PKiKP	10 05 38.5	+0.1
ISA	Isabella, Lake	119.58	291	Pdiff	Pdif	10 02 04.4	+2.2
	baz=140						
ISA				PKP	PKiKP	10 05 39.9	+0.6
	baz=140						
SUE	Sulen	119.62	17	ePdif	Pdif	10 02 01.1	-0.4
SUE				ePKPdf	PKPdf	10 05 38.2	-0.1
SUE				ePP	PP	10 07 01.6	-1.5
SUE				ePP	PP	10 07 02.1	-1.1
SUE				ePS	PS	10 16 54.4	+2.5
SUE				eSS	SS	10 23 23.4	+3.6
KRVT	Keravat (AS076	119.63	179	PKP	PKPdf	10 05 39.5	-0.5
	comp=Z,46nm,0.9s,baz=269,slow=2.4,SNR=6.3						
VIKU	Vikbolandet	119.63	25	eP	PKPdf	10 05 38.3	-0.1
OSL	Oslo	119.65	21	ePKPdf	PKPdf	10 05 37.8	-0.6
PKM	Mcpherson Peak	119.69	289	PKP	PKiKP	10 05 40.8	+1.1
	baz=140						
SKAR	Skarslia	119.88	19	ePdif	Pdif	10 02 04.5	+1.7
SKAR				ePKPdf	PKPdf	10 05 38.5	-0.4
SKAR				ePP	PP	10 07 02.1	-3.0
SKAR				ePS	PKKPdf	10 16 57.6	+37
SKAR				eSS	SS	10 23 23.6	+0.2
HYA	Hoyanger	119.96	18	ePKPdf	PKiKP	10 05 39.5	+0.4
HYA				ePKSdf	PKSdf	10 09 17.7	+2.5
HYA				eSKSdf	SKSdf	10 12 44.5	+2.5
CWC	Cottonwood Cre	119.97	291	Pdiff	Pdif	10 02 07.2	+3.2
	baz=140						
CWC				PKP	PKiKP	10 05 40.7	+0.5
	baz=140						
GRAC	Grapevine Rang	120.03	292	Pdiff	Pdif	10 02 06.3	+2.2
	baz=140						
GRAC				PKP	PKiKP	10 05 40.7	+0.6
	baz=140						
VORD	Divnogorie	120.06	42	ePKIKP	PKPdf	10 05 38.0	-1.5
VORD				pmax	pmax		
	comp=Z,230nm,0.6s						
MDND	Maddock	120.08	312	Pdiff	Pdif	10 02 04.6	+0.6
	baz=142						
MDND				PKP	PKPdf	10 05 38.9	-0.8
	baz=142						
SMMC	Simmler	120.11	289	PKP	PKiKP	10 05 41.7	+1.3
	baz=140						
R11A	Troy Canyon, C	120.15	295	Pdiff	Pdif	10 02 04.2	-0.5
	baz=140						
R11A				PKP	PKiKP	10 05 41.1	+0.6
	baz=140						
DUG	Dugway, Tooele	120.17	298	Pdiff	Pdif	10 02 06.0	+1.2
	baz=140						
DUG				PKP	PKiKP	10 05 40.9	+0.5
	baz=140						
FOO	Floro	120.18	17	⇓ePdif	Pdif	10 02 06.2	+2.2
FOO				ePKPdf	PKPdf	10 05 38.9	-0.5
FOO				ePKSdf	PKSdf	10 09 17.1	+1.5
FOO				eSKSac	SKSac	10 12 29.1	+1.5
FOO				ePS	PKKPdf	10 16 58.4	+38
FOO				eSS	SS	10 23 30.6	+3.6
VSR	Storozhevoye	120.21	42	iPKIKP	PKPdf	10 05 38.7	-1.1
VSR				e		10 07 10.0	
VSR				pmax	pmax		
	comp=Z,110nm,1.2s						
SLIT	Slitere, Latvi	120.24	28	eP	PKPdf	10 05 39.0	-0.6
SIJI	Sorong	120.37	155	PKP	PKPdf	10 05 40.7	-0.7
	comp=Z,19nm,0.6s,baz=6.6,slow=8.7,SNR=8.5						
SIJI				PP	PP	10 07 07.4	-0.4
	comp=Z,19nm,0.6s,baz=254,slow=3.2,SNR=3.6						
SIJI				PKKPbc	PKKPbc	10 15 46.7	+1.1
	comp=Z,13nm,0.8s,baz=11,slow=7.1,SNR=5.8						
ULM	Lac du Bonnet	120.49	316	PKP	PKPdf	10 05 39.0	-1.3
	comp=Z,54nm,0.7s,baz=152,slow=0.6,SNR=31						
ULM				PP	PP	10 07 08.4	-1.0
	comp=Z,61nm,0.9s,baz=137,slow=6.1,SNR=4.5						
ULM				PKKPab	PKKPbc	10 15 49.0	+3.2
	comp=Z,8.6nm,0.7s,baz=352,slow=5.2,SNR=3.8						
ULM	Lac du Bonnet	120.49	316		PKPdf	10 05 39.8	-0.6
ULM	Lac du Bonnet	120.49	316	PKIKP	PKPdf	10 05 39.8	-0.6
TIN	Tinemaha, Big	120.52	292	PKP	PKiKP	10 05 42.0	+0.8
	baz=140						
NC602	NORSAR Array S	120.55	21	ePdif	Pdif	10 02 07.3	+1.5
NC602				ePKPdf	PKPdf	10 05 39.9	-0.3
NC602				eSP	SP	10 16 51.8	+2.1
NC602				eSS	SS	10 23 32.1	+0.3
BW06	Boulder Array	120.56	302	Pdiff	Pdif	10 02 06.7	+0.1
	baz=140						
BW06				PKP	PKPdf	10 05 40.3	-0.8
	baz=140						
PDAR	Pinedale Array	120.56	302	PKP	PKPdf	10 05 39.4	-1.7
	comp=Z,12nm,0.6s,baz=107,slow=5.1,SNR=28						
PDAR				PKKPab	PKKPab	10 15 47.1	+1.1
	comp=Z,3.0nm,0.6s,baz=68,slow=0.7,SNR=10						
VORR	Voronezh	120.60	41	P	Pdif	10 02 06.0	-0.1
VORR				e		10 05 40.6	
VORR				pmax	pmax		
	comp=Z,157nm,1.2s						
SONA	Sohna	120.68	84	eP	PKPdf	10 05 40.8	-0.6
BORG	Borgarnes	120.77	3	PKP	PKiKP	10 05 40.8	+0.3
	comp=Z,85nm,1.0s,baz=228,slow=4.4,SNR=5.9						
BORG	Borgarnes	120.77	3		PKiKP	10 05 42.1	+1.6
BORG	Borgarnes	120.77	3	PKIKP	PKiKP	10 05 42.1	+1.6
NB2	NORSAR Subarra	120.77	20	PKPdf	PKiKP	10 05 40.8	+0.1
	comp=Z,242nm,1.4s,baz=204,slow=1.9						
NB2	NORSAR Subarra	120.77	20	PKPdf	PKiKP	10 05 40.8	+0.1
	baz=204,slow=1.9						
NOA	NORSAR Array B	120.77	20	PKP	PKPdf	10 05 40.1	-0.6
	comp=Z,40nm,0.9s,baz=204,slow=1.9,SNR=114						
NOA				PKKPbc	PKKPbc	10 15 47.5	+2.5
	comp=Z,10nm,0.9s,baz=27,slow=4.0,SNR=16						
NOA				PKKP	PKKPdf	10 16 18.1	-0.9
	comp=Z,17nm,1.0s,baz=25,slow=2.9,SNR=5.1						
NOA				SKKPbc	SKKPbc	10 19 25.1	-1.9
	comp=Z,5.5nm,0.9s,baz=31,slow=2.7,SNR=5.1						
NOA				SKKP	SKKPdf	10 19 43.9	-2.4
	comp=Z,7.5nm,1.1s,baz=48,slow=4.7,SNR=3.3						
NB201	NORSAR Array S	120.79	21		PKiKP	10 05 41.2	+0.4
AYAN	Aya Nagar	120.88	84	eP	PKPdf	10 05 41.1	-0.7
SPMM	Sapulut	120.95	136	P	PKPdf	10 05 42.0	-0.5
ALBI	Allahabad	121.02	90	eP	PKPdf	10 05 41.6	-0.6
AKN	Aaknes	121.05	18	ePdif	Pdif	10 02 08.4	+0.5
AKN				ePKPdf	PKPdf	10 05 41.0	-0.1
AKN				ePP	PP	10 07 12.4	-0.5
AKN				eSS	SS	10 23 39.1	+0.9
UPP	Uppsala	121.06	24	eP	PKPdf	10 05 40.3	-0.8
NDI	New Delhi	121.09	84	eP	PKiKP	10 05 42.5	+0.1
KBL	Kabul	121.11	73		PKPdf	10 05 42.4	0.0
KBL	Kabul	121.11	73	PKIKP	PKPdf	10 05 42.4	0.0
VRH	Novokhopyorsk	121.17	43	iPKIKP	PKPdf	10 05 41.0	-0.6
VRH				e		10 07 16.7	
VRH				e		10 12 26.8	
VRH				pmax	pmax		
	comp=Z,200nm,1.0s						
LPSR	Galich'ya Gora	121.24	41	iPKIKP	PKPdf	10 05 41.0	-0.7
LPSR				e		10 07 17.6	
LPSR				e		10 12 29.7	
LPSR				pmax	pmax		
	comp=Z,130nm,1.1s						
MLAC	Mammoth, Mammo	121.27	292	Pdiff	Pdif	10 02 10.3	+0.5
	baz=139						
DOMB	Dombas	121.29	19	ePdif	Pdif	10 02 10.5	+1.4
DOMB				ePKPdf	PKPdf	10 05 41.1	-0.5
DOMB				ePKSdf	PKSdf	10 09 19.7	+1.8
DOMB				ePS	PKKPdf	10 17 10.9	+53
DOMB				eSS	SS	10 23 41.6	+0.3
MOL	Molde	121.51	18	ePdif	Pdif	10 02 11.7	+1.8
MOL				ePKPdf	PKPdf	10 05 42.0	+0.1
MOL				eSKPdf	SKiKP	10 09 11.0	+1.7
MOL				eSKSac	SKSac	10 12 34.6	+2.4
MOL				ePS	PKKPdf	10 17 12.6	+55
MOL				eSS	SS	10 23 49.2	+5.2
MTSE	Matsula	121.59	28	eP	PKiKP	10 05 42.4	+0.1
NVAR	Mina Array Bea	121.60	293	PKP	PKiKP	10 05 44.1	+0.7
	comp=Z,20nm,0.6s,baz=139,slow=2.4,SNR=63						
NVAR				PKKPbc	PKKPab	10 15 44.5	+2.4
	comp=Z,6.2nm,0.8s,baz=268,slow=3.9,SNR=6.9						
NVAR				PKKP	PKKPdf	10 16 11.8	-5.0
	comp=Z,16nm,0.8s,baz=276,slow=3.4,SNR=6.7						
NVAR				SKKPbc	SKKPbc	10 19 18.4	-3.9
	comp=Z,3.3nm,0.8s,baz=300,slow=6.1,SNR=2.1						
NUUK	Nuuk	121.62	348	iP	PKPdf	10 05 40.4	-1.7
NUUK				IAMs_20	IAMs_20	10 43 45.7	
	comp=Z,128µm,39.4s						
ELK	Elko	121.79	297	PKP	PKiKP	10 05 44.4	+0.7
	comp=Z,34nm,0.8s,baz=196,slow=1.3,SNR=35						
ELK				PKKP	PKKPdf	10 16 11.7	-4.9
	comp=Z,13nm,1.0s,baz=12,slow=4.8,SNR=5.5						
ANGG	Ammassalik, Gr	121.83	355	iP	PKPdf	10 05 42.4	-0.1
ANGG				IAMs_20	IAMs_20	10 43 35.5	
	comp=Z,79µm,30.7s						
AAL	Aland	121.90	25	eP	PKPdf	10 05 42.1	-0.6
LAO	LASA Array	122.03	307	Pdiff	Pdif	10 02 13.4	+0.7
	baz=140						
LAO				PKP	PKPdf	10 05 43.6	0.0
	baz=140						
BOK	Bokaro	122.10	95	eP	PKPdf	10 05 44.1	-0.3
BOK				IAmb	IAmb	10 05 46.7	
	comp=Z,129nm,1.8s						
BOK				ix	x	10 07 16.1	
VSU	Vasula	122.17	30	deP	Pdif	10 02 13.8	+0.9
VSU	Vasula	122.17	30	eP	PKPdf	10 05 43.4	+0.1
RLMT	Red Lodge	122.22	304	Pdiff	Pdif	10 02 14.6	+0.7
	baz=139						
RLMT				PKP	PKPdf	10 05 44.2	0.0
	baz=139						
H17A	Grant Village	122.28	303	Pdiff	Pdif	10 02 13.9	-0.3
	baz=139						
H17A				PKP	PKiKP	10 05 45.1	+0.5
	baz=139						
OBN	Obninsk	122.44	38	PKP	PKPdf	10 05 43.3	-0.6
	comp=Z,25nm,0.6s,baz=190,slow=0.8,SNR=35						
OBN	Obninsk	122.44	38		PKiKP	10 05 44.0	-0.1
OBN	Obninsk	122.44	38	⇑eP	Pdif	10 02 16.9	+2.7
OBN				i		10 05 43.5	
OBN				e		10 06 12.4	
OBN				iSS	SS	10 24 27.2	+31
OBN				pmax	pmax		
	comp=Z,143nm,0.9s						
OBN				MLR	MLR		
	comp=Z,15µm,20.0s						
DGMT	Dagmar	122.50	310	Pdiff	Pdif	10 02 15.8	+1.0
	baz=140						

DGMT				PKP	PKPdf	10 05 44.3	-0.1
	baz=140						
TBLU	**Trondheim**	122.62	19	*e*PKPdf	PKiKP	10 05 44.4	+0.1
TBLU				*e*PP	PP	10 07 25.1	+1.5
TBLU				*e*SKSac	SKSac	10 12 38.6	+2.7
TBLU				*e*SP	SP	10 17 14.9	+6.9
NIL	**Nilore**	122.70	77		PKPdf	10 05 43.4	-1.9
NIL	**Nilore**	122.70	77	PKIKP	PKPdf	10 05 43.4	-1.9
BHK	**Bhakra**	122.74	81	*e*P	PKiKP	10 05 45.7	+0.1
DDI	**Dehra Dun**	122.81	84	*e*P	PKiKP	10 05 46.4	+0.6
DDI				*i* x	PP	10 07 25.0	-0.4
JMU	**Jammu**	122.90	79	*e*P	PKiKP	10 05 46.5	+0.7
YHL	**Hebgen Lake**	122.91	303		PKiKP	10 05 46.5	+0.6
SMLA	**Simla**	122.94	82	*e*P	PKiKP	10 05 46.0	+0.1
SMLA				IAmb	IAmb	10 05 48.1	
	comp=Z,121nm,1.0s						
SMLA				*i* x	PP	10 07 28.3	+2.2
RAF	**Rauma**	123.07	26	*e*P	PKPdf	10 05 44.7	-0.3
THN	**Thein Dam**	123.13	80	*e*P	PKPdf	10 05 46.0	-0.1
DY2G	**Dye2**	123.28	351	*i* P	PKPdf	10 05 45.0	-0.6
DY2G				IAMs_20	IAMs_20	10 45 15.6	
	comp=Z,96µm,28.9s						
MOS	**Moscow**	123.30	38	*e*P	Pdif	10 02 14.4	-3.6
MOS				*i*		10 05 43.8	
MOS				*e*		10 06 13.4	
MOS				*e*		10 12 34.5	
MOS				*e*PS	PS	10 17 25.6	+0.8
MOS				pmax	pmax		
	comp=Z,600nm,1.8s						
MOS				pmax	pmax		
	comp=Z,231nm,1.0s						
LGTI	**Lohaghat**	123.36	86	*e*P	PKPdf	10 05 46.1	-0.5
PTH	**Pithoragarh**	123.42	86	*e*P	PKPdf	10 05 45.5	-1.4
HLID	**Hailey**	123.50	299	Pdiff	Pdif	10 02 21.4	+1.9
	baz=138						
HLID				PKP	PKiKP	10 05 47.0	+0.1
	baz=138						
BOZ	**Bozeman (W)**	123.68	303	Pdiff	Pdif	10 02 19.8	-0.4
	baz=138						
BOZ				PKP	PKiKP	10 05 47.3	+0.1
	baz=138						
PYUN	**Piuthan**	123.85	89	*e*P	PKPdf	10 05 45.8	-2.1
	comp=Z,254nm,1.0s						
FRB	**Frobisher Bay**	123.90	339	PKP	PKPdf	10 05 46.2	-0.2
	comp=Z,159nm,0.8s,baz=140,slow=3.6,SNR=85						
KOLN	**Koldanda**	123.94	90	*e*P	PKPdf	10 05 45.6	-2.4
NSS	**Namsos**	124.10	19	*e*Pdif	Pdif	10 02 23.4	+2.0
NSS				*e*PKPdf	PKPdf	10 05 46.5	-0.3
NSS				*e*PKSdf	PKSdf	10 09 26.0	+3.1
NSS				*e*SKSac	SKSac	10 12 42.9	+2.4
NSS				*e*SP	SP	10 17 21.7	+0.6
NSS				*e*SS	SS	10 24 18.7	+2.0
SOEG	**Soedalen**	124.20	358	*i* P	PKiKP	10 05 47.4	+0.1
SFJD	**Kangerlussuaq**	124.21	349	PKP	PKPdf	10 05 46.4	-0.6
	comp=Z,192nm,0.9s,baz=168,slow=1.7,SNR=45						
SFJD	**Kangerlussuaq**	124.21	349	*i* P	PKPdf	10 05 46.4	-0.6
SFJD				IAMs_20	IAMs_20	10 44 59.3	
	comp=Z,130µm,36.3s						
PUL	**Pulkovo**	124.28	31	⇑*i*PKIKP	PKiKP	10 05 47.9	+0.3
PUL				pmax	pmax		
	comp=Z,167nm,0.5s						
BELG	**Belogornoye**	124.40	46	PKP	PKPdf	10 05 47.2	-0.6
	comp=Z,309nm,0.9s,baz=359,slow=0.2,SNR=40						
DANN	**Dangsing**	124.47	90	*e*P	PKPdf	10 05 47.5	-1.7
	comp=Z,440nm,1.0s						
FINES	**FINESS Array B**	124.52	28	PKP	PKPdf	10 05 47.0	-0.7
	comp=Z,111nm,0.6s,baz=186,slow=0.6,SNR=198						
FINES				PKKPbc	PKKPbc	10 15 30.9	+0.5
	comp=Z,5.7nm,0.8s,baz=36,slow=5.5,SNR=3.0						
FINES				SKKPbc	SKKPbc	10 19 12.7	-1.5
	comp=Z,3.2nm,0.6s,baz=78,slow=2.0,SNR=6.3						
EGMT	**Eagleton**	124.62	306	Pdiff	Pdif	10 02 26.4	+2.2
	baz=138						
EGMT				PKP	PKPdf	10 05 48.6	+0.1
	baz=138						
DMN	**Daman**	124.65	91	*e*P	PKPdf	10 05 47.9	-1.6
	comp=Z,749nm,1.4s						
GKN	**Gorkha**	124.70	91	*e*P	PKPdf	10 05 47.7	-1.7
	comp=Z,1µm,1.5s						
PKIN	**Phulchoki**	124.79	92	*e*P	PKPdf	10 05 48.3	-1.5
	comp=Z,799nm,1.5s						
PKI	**Pulchoki**	124.79	92	*e*P	PKPdf	10 05 48.3	-1.5
	comp=Z,599nm,1.4s						
CMAR	**Chiang Mai Arr**	124.87	110	PKP	PKPdf	10 05 49.6	-0.2
	comp=Z,45nm,0.9s,baz=234,slow=3.4,SNR=40						
CMAR				PKKPbc	PKKPbc	10 15 28.6	+0.2
	comp=Z,2.8nm,0.5s,baz=23,slow=3.4,SNR=6.4						
CMAR				PKKP	PKKPdf	10 16 08.6	-0.9
	comp=Z,2.4nm,0.7s,baz=5.7,slow=2.7,SNR=4.6						
CMAR				SKKPbc	SKKPbc	10 19 07.4	-1.3
	comp=Z,6.4nm,0.9s,baz=9.7,slow=4.2,SNR=2.6						
KKN	**Kakani**	124.89	91	*e*P	PKPdf	10 05 48.0	-1.9
RAMN	**Ramite**	124.97	93	*e*P	PKPdf	10 05 48.4	-1.7
	comp=Z,830nm,1.3s						
CHTO	**Chiang Mai**	125.17	110		PKPdf	10 05 49.7	-0.7
CHTO	**Chiang Mai**	125.17	110	PKIKP	PKPdf	10 05 49.7	-0.7
JIRN	**Jiri**	125.30	92	*e*P	PKPdf	10 05 49.6	-1.3
	comp=Z,261nm,0.8s						
GUN	**Gumba**	125.32	92	*e*P	PKPdf	10 05 49.9	-1.0
	comp=Z,2µm,1.8s						
ODAN	**Odare**	125.34	94	*e*P	PKPdf	10 05 48.9	-1.9
	comp=Z,151nm,1.7s						
ICESG	**Greenland Ices**	125.39	354	*i* P	PKPdf	10 05 49.2	-0.5
ICESG				IAMs_20	IAMs_20	10 45 30.1	
	comp=Z,53µm,29.5s						
MSO	**Missoula**	125.67	302	Pdiff	Pdif	10 02 29.9	+0.8
	baz=137						
MSO				PKP	PKPdf	10 05 50.6	0.0
	baz=137						
STOK	**Stokkvaagen**	125.92	19	*e*PKPdf	PKiKP	10 05 50.9	+0.2
MOR8	**Moi Rana**	126.04	19	*e*Pdif	Pdif	10 02 34.0	+4.0
MOR8				*e*PKPdf	PKPdf	10 05 50.8	+0.2
MOR8				*e*PKSdf	PKSdf	10 09 28.9	+2.2
MOR8				*e*SKSac	SKSac	10 12 49.5	+2.8
MOR8				*e*PS	PS	10 17 52.3	+3.5
MOR8				*e*SS	SS	10 24 49.4	+8.2
KONS	**Konsvik**	126.09	19	*e*PKPdf	PKiKP	10 05 50.9	-0.1
K05A	**Summer Lake**	126.10	295		PKiKP	10 05 52.3	+0.2
YBH	**Yreka Blue Hor**	126.31	292	PKP	PKPdf	10 05 52.1	+0.1
	comp=Z,35nm,0.9s,baz=36,slow=1.1,SNR=49						
ILULI	**Ilulissat**	126.40	350	*i* P	PKPdf	10 05 50.4	-0.8
ILULI				IAMs_20	IAMs_20	10 46 59.4	
	comp=Z,104µm,31.0s						
L04D	**Klamath Falls**	126.45	293	PKP	PKPdf	10 05 52.3	0.0
	baz=136						
K04D	**Chiloquin, OR**	126.47	294	Pdiff	Pdif	10 02 33.6	+0.9
	baz=136						
K04D				PKP	PKiKP	10 05 52.7	-0.1
	baz=136						
SCO	**Scoresbysund**	126.50	2	*i* P	PKiKP	10 05 51.8	+0.1
SCO				IAMs_20	IAMs_20	10 45 43.3	
	comp=Z,58µm,34.1s						
J05D	**Fort Rock, OR**	126.68	295	Pdiff	Pdif	10 02 34.1	+0.5
	baz=136						
J05D				PKP	PKiKP	10 05 53.1	-0.1
	baz=136						
SHL	**Shillong**	126.82	99	*e*P	PKPdf	10 05 53.7	+0.2
SHL				IAmb	IAmb	10 06 03.4	
	comp=Z,125nm,1.0s						
SHL				*i* x	PP	10 07 50.6	-1.6
PINE	**Pine Mountain**	126.89	295		PKiKP	10 05 54.1	+0.4
L02F	**Cave Junction**	127.03	292	PKP	PKiKP	10 05 53.8	+0.1
	baz=136						
J04D	**Umpqua Nationa**	127.09	294	PKP	PKiKP	10 05 54.1	0.0
	baz=136						
IUG	**Iuzhnay**	127.25	68	*d* *i*PKIKP	PKPdf	10 05 53.5	-0.3
IUG				*i*		10 07 54.1	
IUG	**Iuzhnay**	127.25	68	⇓*i*PKP	PKPdf	10 05 53.6	-0.3
	baz=68						
IUG				*i* PP	PP	10 07 54.1	-0.9
	baz=68						
FAUS	**Fauske**	127.27	19	*e*Pdif	Pdif	10 02 38.5	+3.0
FAUS				⇓*e*PKPdf	PKPdf	10 05 52.7	-0.1
FAUS				*e*PP	PP	10 07 56.0	+1.4
FAUS				*e*SP	SP	10 17 50.1	+1.3
FAUS				*e*SS	SS	10 24 55.4	-1.0
AKTO	**Aktyubinsk**	127.36	53	PKP	PKPdf	10 05 53.3	-0.2
	comp=Z,133nm,0.9s,baz=187,slow=2.3,SNR=107						
AKTO				SKKPbc	SKKPbc	10 19 01.1	-2.3
	comp=Z,6.9nm,0.6s,baz=59,slow=5.1,SNR=5.4						
AB31	**Akbulak array**	127.39	55	*i* PKIKP	PKPdf	10 05 53.4	-0.2
I05D	**Terrebonne, OR**	127.49	296	PKP	PKiKP	10 05 54.9	+0.2
	baz=136						
K02D	**Willamette Mer**	127.50	293	PKP	PKiKP	10 05 54.8	+0.1
	baz=136						
LOF	**Lofoten**	127.63	18	*e*Pdif	Pdif	10 02 40.6	+3.6
LOF				⇓*e*PKPdf	PKPdf	10 05 53.2	-0.3
LOF				*e*PP	PP	10 07 57.4	+0.5
LOF				*e*SKSdf	SKSdf	10 12 58.7	+2.5
LOF				*e*SP	SP	10 17 54.1	+2.2
LOF				*e*SS	SS	10 25 03.2	+2.4
LOF				IVMs_BB	IVMs_BB	10 49 24.0	
	comp=Z,15µm,27.8s						
JMIC	**Jan Mayen**	127.63	8	*e*Pdif	Pdif	10 02 37.9	+0.9
JMIC				⇓*e*PKPdf	PKiKP	10 05 54.9	+0.9
JMIC				*e*SS	SS	10 25 02.7	+1.9
I04A	**Tendick Farm,**	127.64	294	PKP	PKPdf	10 05 54.3	-0.1
	baz=136						
STEI	**Steigen**	127.75	19	*e*Pdif	Pdif	10 02 40.0	+2.4
STEI				⇓*e*PKPdf	PKPdf	10 05 53.5	-0.2
STEI				*e*PP	PP	10 07 59.1	+1.5
STEI				*e*SP	SP	10 17 56.3	+3.4
STEI				*e*SS	SS	10 25 05.1	+2.8
BRLS	**Borolday**	127.79	67	*e*PKIKP	PKPdf	10 05 53.4	-1.2
BRLS	**Borolday**	127.79	67	*e*PKP	PKPdf	10 05 53.5	-1.2
	baz=67						
E08A	**Dider Farm, El**	127.89	299		PKiKP	10 05 55.0	-0.2
KLMR	**Klimovskoe**	127.93	35	*e*PKIKP	PKPdf	10 05 53.9	-0.3
KLMR				*e*		10 07 55.8	
KLMR				*e*SS	SS	10 25 06.8	+2.0
KLMR				pmax	pmax		
	comp=Z,733nm,1.3s						
KLMR	**Klimovskoe**	127.93	35	*e*PKPdf	PKPdf	10 05 54.0	-0.3
KLMR				AMP		10 05 58.5	
	comp=Z,733nm,1.3s						
KLMR				*e*PP	PP	10 07 55.8	-3.2
KLMR				*e*SKKSac	SKKSac	10 14 36.6	-10
KLMR				*e*SKKSac	SKKSac	10 14 36.6	-10
KLMR				*e*SS	SS	10 25 06.8	+2.0
KLMR				*e*SS	SS	10 25 06.8	+2.0
KLMR				*e*SSS	SSS	10 29 42.9	
KLMR				*e*SSS	SSS	10 29 42.9	
KLMR				LQ	LQ	10 49 35.5	
KLMR				LQ	LQ	10 49 35.5	
KLMR				LR	LR	10 52 16.7	
KLMR				AMP		10 53 07.9	
	comp=Z,36µm,23.7s						
J01E	**Myrtle Point**	127.97	293	PKP	PKPdf	10 05 55.0	+0.1
	baz=135						
I03D	**Drain, OR**	128.05	294	PKP	PKPdf	10 05 55.3	+0.2
	baz=135						
G05D	**Wamic, OR**	128.12	296	PKP	PKiKP	10 05 55.8	-0.1
	baz=135						
H04A	**Detroit Lake**	128.16	295		PKPdf	10 05 55.6	+0.3
KK31	**Karatay Array**	128.19	68	*i* PKIKP	PKPdf	10 05 54.1	-1.3
KKAR	**Karatay Array**	128.19	68		PKiKP	10 05 56.0	-0.1
KKAR	**Karatay Array**	128.19	68	PKIKP	PKiKP	10 05 56.0	-0.1
NEW	**Newport**	128.21	302	PKP	PKPdf	10 05 55.3	0.0
	comp=Z,16nm,0.8s,baz=123,slow=2.8,SNR=33						
NEW	**Newport**	128.21	302	Pdiff	Pdif	10 02 40.8	+0.6
	baz=135						
NEW				PKP	PKPdf	10 05 54.3	-1.0
	baz=135						
H04D	**Lebanon**	128.32	295	PKP	PKiKP	10 05 56.0	-0.2
	baz=135						
DZA	**Taraz**	128.46	68	*e*PKIKP	PKPdf	10 05 55.3	-0.7
DZA	**Taraz**	128.46	68	*e*PKP	PKPdf	10 05 55.3	-0.7
	baz=68						
KSH	**Kashi**	128.50	74	PKP	PKPdf	10 05 56.0	-0.3
KSH				sPKP		10 06 27.8	
KSH				PP	PP	10 07 59.3	-4.0
KSH				SKS	SKSdf	10 13 00.5	+0.9
KSH				SKKS	SKKSac	10 14 47.8	-3.3
KSH				SS	SS	10 25 12.0	-0.8
KSH				AMB	AMB		
	comp=Z,10µm,6.8s						
KSH				LR	LR		
	comp=Z,22µm,24.7s						
KSH				LR	LR		
	comp=Z,22µm,22.0s						
KSH				LR	LR		
	comp=Z,82µm,29.5s						
I02E	**Swisshome, OR**	128.59	294	PKP	PKPdf	10 05 56.3	+0.2
	baz=135						
F05D	**White Salmon**	128.64	297	PKP	PKiKP	10 05 56.6	-0.2
	baz=135						
COR	**Corvallis**	128.65	295		PKiKP	10 05 57.2	+0.3
COR	**Corvallis**	128.65	295	PKIKP	PKiKP	10 05 57.2	+0.3
SUMG	**Summit**	128.80	356	*i* P	PKiKP	10 05 56.6	-0.2
SUMG				IAMs_20	IAMs_20	10 48 51.9	
	comp=Z,38µm,37.3s						
NUUG	**Nuugaatsiaq**	128.85	350	*i* P	PKPdf	10 05 55.5	-0.2
NUUG				IAMs_20	IAMs_20	10 47 08.8	
	comp=Z,78µm,36.8s						
G03D	**McMinnville, O**	129.07	295	PKP	PKiKP	10 05 57.7	0.0
	baz=134						
AML	**Almayashu**	129.16	71	P	PKiKP	10 05 58.5	0.0
	SNR=5.5						
AML	**Almayashu**	129.16	71	*i* PKPdf	PKPdf	10 05 58.0	+0.2
	SNR=54						
F04D	**Rainier, OR**	129.55	296	PKP	PKiKP	10 05 59.2	+0.6
	baz=134						
EKS2	**Erkin-Say**	129.57	70	P	PKPdf	10 05 58.3	+0.1
	SNR=59						
LSA	**Lhasa**	129.63	95		PKiKP	10 05 59.8	-0.1
LSA	**Lhasa**	129.63	95	PKIKP	PKiKP	10 05 59.8	-0.1
LSA	**Lhasa**	129.63	95	PKP	PKPdf	10 05 59.5	+0.3
LSA				LR	LR		
	comp=Z,19µm,19.9s						
LSA				LR	LR		
	comp=Z,7µm,34.9s						
LSA				LR	LR		
	comp=Z,20µm,19.2s						
LSA	**Lhasa**	129.63	95	PKiKP	PKiKP	10 06 00.6	+0.6
KIRV	**Kirov**	129.65	41	PKP	PKPdf	10 05 57.2	-0.4
	comp=Z,179nm,0.8s,baz=219,slow=0.9,SNR=75						
UCH	**Uchtor**	129.65	71	P	PKiKP	10 05 59.8	+0.2
	SNR=64						
E04D	**Cinebar**	129.66	297	PKP	PKPdf	10 05 58.4	+0.3
	baz=134						
TRO	**Tromso**	129.90	19	*e*Pdif	Pdif	10 02 50.5	+3.5
TRO				⇓*e*PKPdf	PKPdf	10 05 57.2	-0.5
TRO				*e*PP	PP	10 08 11.5	-0.1
TRO				*e*SKPdf	SKiKP	10 09 25.9	-0.1
TRO				*e*SKSdf	SKSdf	10 13 02.7	+2.4
TRO				*e*SP	SKKPbc	10 18 13.2	-43
TRO				*e*SS	SS	10 25 31.0	+2.3
AAK	**Ala-Archa**	129.93	71	P	PKiKP	10 05 59.9	+0.1
	SNR=43						
AAK	**Ala-Archa**	129.93	71	PKP	PKPdf	10 05 59.0	0.0
	comp=Z,199nm,1.1s,baz=211,slow=2.7,SNR=70						
AAK	**Ala-Archa**	129.93	71		PKPdf	10 05 58.4	-0.5
AAK	**Ala-Archa**	129.93	71	PKIKP	PKPdf	10 05 59.0	0.0
AAK	**Ala-Archa**	129.93	71	*i* PKPdf	PKPdf	10 05 58.7	-0.3
	SNR=58						
JETT	**Jettan, Norway**	130.11	20	⇓*e*PKPdf	PKPdf	10 05 57.9	-0.3
JETT				*e*SKSdf	SKSdf	10 13 03.4	+2.5
KBK	**Karagaybulak**	130.18	71	P	PKiKP	10 06 00.2	0.0
	SNR=32						
D04E	**Lakebay**	130.19	297	PKP	PKiKP	10 06 00.4	+0.5
	baz=133						
KTK1	**Kautokeino**	130.20	21	*e*Pdif	Pdif	10 02 50.9	+2.4
KTK1				⇓*e*PKPdf	PKPdf	10 05 57.9	-0.5
KTK1				*e*SKPdf	SKiKP	10 09 26.9	+0.2
KTK1				*e*SKSac	SKSdf	10 13 00.5	-0.5
KTK1				*e*SP	SKKPbc	10 18 15.8	-39
KTK1				*e*SS	SS	10 25 34.2	+1.6
CHMS	**Chumysh**	130.32	70	P	PKPdf	10 05 59.8	+0.3
	SNR=24						
UPNV	**Upernavik**	130.33	349	*i* P	PKPdf	10 05 58.2	-0.3
UPNV				IAMs_20	IAMs_20	10 49 08.9	
	comp=Z,101µm,30.6s						
DBG	**Daneborg**	130.37	2	*i* P	PKPdf	10 05 58.7	+0.2
DBG				IAMs_20	IAMs_20	10 47 53.4	
	comp=Z,87µm,32.2s						
USP	**Ospenovka**	130.37	70	P	PKPdf	10 06 00.0	+0.4
	SNR=40						
PRGR	**Permogore**	130.50	37	⇓*i*PKIKP	PKPdf	10 05 59.0	-0.1
PRGR				*e*		10 06 30.9	
PRGR				*e*		10 08 15.3	
SGDS	**Sogindy**	130.57	70	*d* *i*PKIKP	PKPdf	10 05 59.2	-0.8
SGDS	**Sogindy**	130.57	70	⇓*i*PKP	PKPdf	10 05 59.2	-0.8
	baz=70						
ULHL	**Ulahol**	130.58	72	P	PKiKP	10 06 01.0	-0.1
	SNR=11						
D03D	**Eldon**	130.59	297	Pdiff	Pdif	10 02 52.3	+1.6
	baz=133						
D03D				PKP	PKiKP	10 06 00.9	+0.2
	baz=133						
TKM2	**Tokmak 2**	130.71	71	P	PKPdf	10 06 00.6	+0.1
	SNR=32						
QIZ	**Qiongzhong**	130.83	121		PKiKP	10 06 01.9	-0.2
QIZ	**Qiongzhong**	130.83	121	Pdif	Pdif	10 03 01.0	+8.5
QIZ				PKP	PKPdf	10 05 58.0	-3.1
QIZ				PP	PP	10 08 17.5	-0.4
QIZ	**Qiongzhong**	130.83	121	SS	SS	10 25 41.3	+0.8
QIZ				AMB	AMB		
	comp=Z,3µm,5.6s						
QIZ				LR	LR		
	comp=N,29µm,20.1s						
QIZ				LR	LR		
	comp=E,12µm,19.1s						
QIZ				LR	LR		
	comp=Z,41µm,19.4s						
KDJ	**Kajisay**	131.00	73		PKPdf	10 06 00.7	-0.3
KDJ	**Kajisay**	131.00	73	PKIKP	PKPdf	10 06 00.7	-0.3
ARA0	**ARCESS Array S**	131.10	22	⇓*e*PKPdf	PKPdf	10 05 59.6	-0.5
ARCES	**ARCESS Array B**	131.10	22	PKP	PKPdf	10 05 58.9	-1.2
	comp=Z,185nm,0.9s,baz=218,slow=1.4,SNR=52						
ARCES				PP	PP	10 08 17.9	-1.6
	comp=Z,96nm,0.9s,baz=203,slow=6.6,SNR=4.9						
ARCES				SKKPbc	SKKPbc	10 18 49.2	-2.2
	comp=Z,11nm,0.9s,baz=15,slow=3.7,SNR=4.3						
APA	**Apatity**	131.34	26	⇓*i*PKIKP	PKPdf	10 05 59.7	-0.9
APA				*i*		10 08 21.0	
APA				*i*		10 12 57.0	
APA				pmax	pmax		
	comp=Z,88nm,0.8s						
BTLS	**Baital**	131.36	68	*d* *i*PKIKP	PKPdf	10 06 00.8	-0.5
BTLS	**Baital**	131.36	68	⇓*i*PKP	PKPdf	10 06 00.9	-0.5
	baz=68						
TNSS	**Tian-Shan**	131.51	72	*i* PKIKP	PKPdf	10 06 01.6	-0.6
TNSS	**Tian-Shan**	131.51	72	*i* PKP	PKPdf	10 06 01.6	-0.6
	baz=72						
AAA	**Alma-Ata**	131.61	72	*e*PKIKP	PKPdf	10 06 01.4	-0.6
AAA	**Alma-Ata**	131.61	72	*e*PKP	PKPdf	10 06 01.5	-0.6
	baz=72						
HAMF	**Hammerfest**	131.64	20	*e*Pdif	Pdif	10 02 56.2	+1.4
HAMF				*e*PKPdf	PKPdf	10 06 01.4	+0.4
HAMF				*e*PP	PP	10 08 23.0	+0.1
HAMF				*e*SKPdf	SKiKP	10 09 29.4	-0.2
HAMF				*e*SKSdf	SKSdf	10 13 05.9	+2.5
HAMF				*e*SP	SKKPbc	10 18 27.9	-22
HAMF				*e*SS	SS	10 25 51.0	+1.0
MDOK	**Medeo**	131.65	72	*i* PKIKP	PKPdf	10 06 01.1	-1.0
MDOK				*i*		10 08 22.6	
MDOK	**Medeo**	131.65	72	*i* PKP	PKPdf	10 06 01.1	-1.0
	baz=72						
MDOK				*i* PP	PP	10 08 22.7	-1.0
	baz=72						
MDOK				LR	LR	10 55 19.6	
	comp=Z,20µm,24.7s,baz=72						
ARU	**Arti**	131.75	48	PKP	PKPdf	10 06 00.2	-1.5
	comp=Z,70nm,0.9s,baz=223,slow=2.1,SNR=29						
ARU	**Arti**	131.75	48	P	Pdif	10 02 58.1	+2.5
ARU				*i*		10 06 01.2	
ARU						10 13 02.9	
ARU						10 18 33.4	
ARU				MLR	MLR		
	comp=Z,54µm,23.0s						
KUU	**Kurty**	131.77	71	*d* *i*PKIKP	PKPdf	10 06 01.1	-1.1
KUU				*i*		10 08 22.9	
KUU	**Kurty**	131.77	71	⇓*i*PKP	PKPdf	10 06 01.2	-1.1
	baz=71						
KUU				*i* PP	PP	10 08 23.0	-1.4
	baz=71						
KUU				LR	LR	10 56 39.6	
	comp=Z,15µm,20.2s,baz=71						
LVZ	**Lovozero**	131.90	27	*d* *i*PKIKP	PKPdf	10 06 00.2	-1.5
CHKK	**Chushkaly**	132.09	71	*i* PKIKP	PKPdf	10 06 01.7	-1.1
CHKK	**Chushkaly**	132.09	71	*i* PKP	PKPdf	10 06 01.7	-1.1
	baz=71						
SATY	**Saty**	132.30	73	*d* *i*PKIKP	PKPdf	10 06 02.6	-0.7
SATY				*i*		10 08 26.4	
SATY	**Saty**	132.30	73	⇓*i*PKP	PKPdf	10 06 02.7	-0.7
	baz=73						
SATY				*i* PP	PP	10 08 26.4	-1.4
	baz=73						
KMI	**Kunming**	132.34	109	⇓PKP	PKPdf	10 06 03.5	-0.6
KMI				sPKP		10 06 34.8	
KMI				SKKS		10 15 13.0	
KMI				AMB	AMB		
	comp=Z,5µm,6.1s						
KMI				LR	LR		
	comp=Z,15µm,18.9s						
KMI				LR	LR		
	comp=Z,11µm,18.1s						
KMI				LR	LR		
	comp=Z,24µm,18.9s						
ZHN	**Zhinishke**	132.39	73	*e*PKIKP	PKPdf	10 06 02.6	-0.9
ZHN	**Zhinishke**	132.39	73	*e*PKP	PKPdf	10 06 02.6	-0.9
	baz=73						
OTUK	**Ortayu**	132.65	64	PKIKP	PKPdf	10 06 02.3	-1.4
KPKS	**Kokpek**	132.72	73	*d* *i*PKIKP	PKPdf	10 06 03.2	-0.9
KPKS	**Kokpek**	132.72	73	⇓*i*PKP	PKPdf	10 06 03.3	-0.9
	baz=73						
SVE	**Sverdlovsk**	132.88	49	*c* *i*PKIKP	PKPdf	10 06 03.9	+0.1
SVE				*e*		10 26 03.3	
SVE				pmax	pmax		
	comp=Z,1µm,1.8s						
SVE				MLR	MLR		
	comp=Z,24µm,22.0s						
DAG	**Danmarks Havn**	132.88	3	*i* P	PKPdf	10 06 02.0	-1.3
DAG				IAMs_20	IAMs_20	10 49 20.7	
	comp=Z,96µm,31.8s						
PZH	**PanZhiHua**	132.92	107	PKP	PKPdf	10 06 04.5	-0.6
PZH				sPKP		10 06 36.0	
PZH				PP	PP	10 08 40.0	+8.3
PZH				PKS		10 09 42.3	
PZH				SKS	SKSdf	10 13 10.5	+2.3
PZH				SKKS	SKKSac	10 15 14.5	-4.3
PZH				AMB	AMB		
	comp=Z,5µm,7.1s						
PZH				LR	LR		
	comp=Z,14µm,20.0s						
PZH				LR	LR		
	comp=Z,18µm,21.0s						
PZH				LR	LR		
	comp=Z,36µm,28.4s						
SHLS	**Shalkode**	132.93	73	*e*PKIKP	PKPdf	10 06 01.7	-2.8
SHLS	**Shalkode**	132.93	73	*e*PKP	PKPdf	10 06 01.7	-2.8
	baz=74						
PDGK	**Podgornoye**	133.06	73	PKIKP	PKPdf	10 06 03.5	-1.3
TDK	**Taldyqorghan**	133.61	71	*d* *i*PKIKP	PKPdf	10 06 04.6	-1.0
TDK				MLR	MLR		
	comp=Z,17µm,22.0s						
TDK	**Taldyqorghan**	133.61	71	⇓*i*PKP	PKPdf	10 06 04.6	-1.0
	baz=71						
TDK				LR	LR	10 57 36.0	
	comp=Z,17µm,21.7s,baz=71						
BRZS	**Berezniki**	133.96	62	*d* *i*PKIKP	PKPdf	10 06 05.4	-0.7
BRZS	**Berezniki**	133.96	62	⇓*i*PKP	PKPdf	10 06 05.5	-0.7
	baz=62						
BJO1	**Bjornoya**	134.03	16	*e*Pdif	Pdif	10 03 06.4	+1.0
BJO1				*e*PKPdf	PKPdf	10 06 05.1	-0.4
BJO1				*e*PP	PP	10 08 41.8	+3.7
BJO1				*e*SP	SP	10 18 48.7	+1.8
TULEG	**Thule**	135.19	347	*i* P	PKPdf	10 06 07.0	-0.6
GYA	**Guiyang**	135.47	112	Pdif	Pdif	10 03 21.0	+7.9
GYA				⇑PKP	PKPdf	10 06 09.8	0.0
GYA				sPKP		10 06 37.3	
GYA				PP	PP	10 08 46.5	-1.3
GYA	**Guiyang**	135.47	112	⇑PKP	PKPdf	10 06 09.8	0.0
GYA				sPKP		10 06 37.3	
GYA				SKKS		10 15 39.5	
GYA				SS	SS	10 26 39.5	+2.3
GYA				AMB	AMB		
	comp=Z,5µm,8.1s						
GYA				LR	LR		
	comp=Z,17µm,18.9s						
GYA				LR	LR		
	comp=Z,10µm,19.1s						
GYA				LR	LR		
	comp=Z,34µm,22.7s						
HSPB	**Hornsund (broa**	135.66	13	*e*PKPdf	PKPdf	10 06 09.1	+0.6
HSPB				*e*PS	PS	10 19 25.3	+14
HSPB				*e*L	L	10 53 42.2	
	comp=Z,39µm,28.8s						
HSPB	**Hornsund (broa**	135.66	13	⇓*e*PKPdf	PKPdf	10 06 08.4	0.0
BBB	**Bella Bella**	136.09	299	PKPdf	PKPdf	10 06 10.6	+0.7
GULI	**GuiLin**	136.38	117	PKP	PKPdf	10 06 09.5	-1.9
GULI				LR	LR		
	comp=Z,13µm,22.8s						

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GULI                                    LR       LR
      comp=Z,8µm,21.7s
GULI                                    LR       LR
      comp=Z,21µm,23.9s
YKA   Yellowknife Ar     136.42 318     PKhKP    PKPpre    10 05 56.8
      comp=Z,9.9nm,0.8s,baz=133,slow=3.2,SNR=20
YKA                                     PKP      PKPdf     10 06 09.9  -0.3
      comp=Z,32nm,0.5s,baz=121,slow=2.6,SNR=42
YKA                                     PP       PP        10 08 53.0  -0.4
      comp=Z,39nm,0.8s,baz=121,slow=6.7,SNR=5.5
YKA                                     SKPbc    SKPbc     10 09 32.3  -1.8
      comp=Z,192nm,1.0s,baz=124,slow=2.1,SNR=6.6
GOMU  GeErMu             136.52  92     PKP      PKPpre    10 06 02.3
GOMU                                    PP       PP        10 08 48.3  -6.6
GOMU  GeErMu             136.52  92     SS       SS        10 26 54.5  +4.0
GOMU                                    AMB      AMB
      comp=Z,3µm,6.5s
GOMU                                    LR       LR
      comp=N,8µm,20.0s
GOMU                                    LR       LR
      comp=E,7µm,20.2s
GOMU                                    LR       LR
      comp=Z,9µm,20.0s
HOPEN Hopen              136.55  16   ePdif      Pdif      10 03 18.2  +1.6
HOPEN                                ⇓ePKPdf     PKPdf     10 06 07.0  -3.1
HOPEN                                 ePP        PP        10 08 53.1  -0.9
MAKZ  Makanchi           136.68  71              PKPdf     10 06 10.6  -0.7
MAKZ  Makanchi           136.68  71     PKIKP    PKPdf     10 06 10.6  -0.7
SPB2  Spitsbergen Ar     136.75  12     PKPdf    PKiKP     10 06 11.6  -0.8
SPA0  Spitsbergen Ar     136.75  12   ePKPdf     PKPdf     10 06 10.8  +0.2
SPA0                                  ePP        PP        10 08 56.0  +0.7
SPA0                                  ePKSdf     PKSdf     10 09 49.8  +3.6
SPA0                                  eSKSdf     SKSdf     10 13 14.8  +2.5
SPA0                                  eSP        SP        10 19 12.3  +2.4
MK31  Makanchi Array     136.84  71d iPKIKP      PKPdf     10 06 10.8  -0.8
MKAR  Makanchi Array     136.84  71     PKhKP    PKPpre    10 06 00.9
      comp=Z,10nm,0.8s,baz=227,slow=1.2,SNR=23
MKAR                                    PKP      PKPdf     10 06 10.3  -1.3
      comp=Z,30nm,0.8s,baz=219,slow=2.9,SNR=20
MKAR                                    SKKPbc   SKKPbc    10 18 28.4  +0.1
      comp=Z,6.0nm,0.8s,baz=52,slow=5.2,SNR=5.6
KBS   Kingsbay           136.91  10              PKPdf     10 06 11.0  +0.2
KBS   Kingsbay           136.91  10     PKIKP    PKPdf     10 06 11.0  +0.2
KBS   Kingsbay           136.91  10   i P        PKPdf     10 06 10.4  -0.3
KBS   Kingsbay           136.91  10   ePdif      Pdif      10 03 22.1  +4.0
KBS                                  ⇓ePKPdf     PKPdf     10 06 09.7  -1.0
KBS                                   ePP        PP        10 08 58.5  +2.3
KBS                                   eSP        SP        10 19 12.2  +1.0
GUMO  Guam               136.95 168     SKPbc    SKPbc     10 09 36.0  -1.3
      comp=Z,283nm,0.9s,baz=213,slow=2.0,SNR=8.0
GUMO  Guam               136.95 168              PKPdf     10 06 11.5  -1.2
GUMO  Guam               136.95 168     PKIKP    PKPdf     10 06 11.5  -1.2
KURBB Kurchatov Arra     137.28  65     PKhKP    PKPpre    10 06 02.5
      comp=Z,5.8nm,0.6s,baz=237,slow=3.0,SNR=15
KURBB                                   PKP      PKPdf     10 06 12.0  -0.2
      comp=Z,50nm,0.8s,baz=232,slow=2.3,SNR=32
KURBB                                   PP       PP        10 08 58.9  -0.2
      comp=Z,51nm,1.1s,baz=258,slow=6.5,SNR=4.4
KURBB                                   SKPbc    SKPbc     10 09 36.1  -1.0
      comp=Z,36nm,0.9s,baz=229,slow=3.5,SNR=5.8
KURBB                                   SKKPbc   SKKPbc    10 18 24.7  -2.1
      comp=Z,12nm,0.7s,baz=52,slow=3.4,SNR=13
KURK  Kurchatov          137.38  65     PKIKP    PKPdf     10 06 12.0  -0.4
CD2   Chengdu            137.48 105     Pdif     Pdif      10 03 24.0  +2.1
CD2                                     sPKP               10 06 41.0
CD2                                     SKS      SKSdf     10 13 12.5  -3.3
CD2                                     SKKS     SKKSac    10 15 49.5  +3.6
CD2                                     AMB      AMB
      comp=Z,11µm,12.3s
CD2                                     LR       LR
      comp=Z,2µm,21.6s
CD2                                     LR       LR
      comp=Z,15µm,19.6s
CD2                                     LR       LR
      comp=Z,27µm,24.0s
NOR   Nord               137.75   2   i P        PKPdf     10 06 01.3   -11
NOR                                     IAMs_20  IAMs_20   10 52 51.2
      comp=Z,91µm,28.3s
WMQ   Urumqi             137.83  78     PKP      PKPdf     10 06 13.5  -0.1
WMQ                                     sPKP               10 06 42.8
WMQ                                     PP       PP        10 09 06.5  +3.9
WMQ                                     PKS                10 09 48.3
WMQ                                     SS       SS        10 27 10.3  +4.9
WMQ                                     AMB      AMB
      comp=Z,4µm,6.9s
WMQ                                     LR       LR
      comp=Z,26µm,23.3s
WMQ                                     LR       LR
      comp=Z,16µm,23.3s
WMQ                                     LR       LR
      comp=Z,54µm,28.3s
SEM   Semipalatinsk      138.02  66d iPKIKP      PKPdf     10 06 13.0  -0.9
SEM   Semipalatinsk      138.02  66⇓iPKP         PKPdf     10 06 13.1  -0.9
      baz=66
SEM                                     LR       LR        11 02 18.3
      comp=Z,13µm,22.9s,baz=66
ZSN   Zaisan             138.62  72d iPKIKP      PKPdf     10 06 14.3  -0.5
ZSN   Zaisan             138.62  72⇓iPKP         PKPdf     10 06 14.3  -0.5
      baz=72
T35M  Bob Quinn          139.88 304     PKP      PKPpre    10 06 07.2
      baz=123
CNSH  ChangSha           140.05 118  ⇓PKP        PKPdf     10 06 07.0   -11
CNSH                                    PP       PP        10 09 14.8  -1.2
CRAG  Craig              140.41 301     PKP      PKPpre    10 06 08.0
      baz=123
DLBC  Dease Lake         140.55 306     Pdiff    Pdif      10 03 32.1  -2.7
      baz=121
DLBC                                    PKP      PKPpre    10 06 08.7
      baz=121
WRAK  Wrangell Islan     140.55 303     Pdiff    Pdif      10 03 36.0  +1.2
      baz=122
WRAK                                    PKP      PKPpre    10 06 08.8
      baz=122
S34M  Telegraph Cree     140.78 305     Pdiff    Pdif      10 03 39.3  +3.5
      baz=121
S34M                                    PKP      PKPpre    10 06 09.5
      baz=121
TGTN  Hyland Airport     141.34 311     Pdiff    Pdif      10 03 40.0  +1.8
      baz=119
TGTN                                    PKP      PKPpre    10 06 12.3
      baz=119
LZH   Lanzhou            141.44 100⇓iPKP         PKPpre    10 06 10.8
LZH                                     sPKP               10 06 51.5
LZH                                     PP       PP        10 09 18.3  -6.6
LZH                                     SKS      SKSdf     10 13 15.0  -7.3
LZH                                     SKKS     SKKSac    10 16 06.0  -3.3
GTA   Gaotai             141.59  93  ⇑PKP        PKPdf     10 06 13.8  -6.9
GTA                                     sPKP               10 06 50.0
GTA                                     PP       PP        10 09 26.0  +0.2
GTA                                     PKS      PKSdf     10 09 56.0  -0.5
GTA                                     SKKS               10 16 10.0
SIT   Sitka              142.29 302     PKP      PKPdf     10 06 15.9  -5.1
      baz=120
ZALV  Zalesovo Beam      142.35  64     PKhKP    PKPpre    10 06 16.1
      comp=Z,18nm,0.4s,baz=237,slow=3.6,SNR=54
ZALV                                    PKP      PKPdf     10 06 20.5  -0.8
      comp=Z,31nm,0.5s,baz=248,slow=4.0,SNR=13
ZALV                                    PP       PP        10 09 30.6  +0.5
      comp=Z,64nm,1.1s,baz=234,slow=5.0,SNR=3.7
ZALV                                    SKPbc    SKPbc     10 09 47.6  -3.1
      comp=Z,75nm,1.1s,baz=266,slow=4.3,SNR=2.8
ZALV                                    SKKPbc   SKKPbc    10 18 05.5  -1.5
      comp=Z,28nm,1.0s,baz=46,slow=4.3,SNR=5.8
XAN   Xi'an              142.66 108⇑iPKP         PKPdf     10 06 18.0  -4.6
XAN                                     pPKP     pPKPdf    10 06 50.0  +3.3
XAN                                     PP       PP        10 09 29.8  -2.3
XAN                                     SKKS               10 16 10.8
P33M  Teslin, Yukon      142.67 308     Pdiff    Pdif      10 03 43.5  -0.7
      baz=118
P33M                                    PKP      PKPdf     10 06 16.4  -5.4
      baz=118
WHN   Wuhan              142.69 117  ⇑PKP        PKPdf     10 06 18.0  -4.7
WHN                                     sPKP               10 06 52.0
WHN                                     PP       PP        10 09 32.5  +0.4
WHN                                     PKS      PKSdf     10 09 51.5  -7.0
MMPY  Sheldon Lake,      143.09 312     Pdiff    Pdif      10 03 47.5  +1.4
      baz=116
MMPY                                    PKP      PKPab     10 06 17.7  -0.4
      baz=116
C36M  Paulatuk           143.17 324     PKP      PKPab     10 06 16.8  -1.4
      baz=112
SKAG  Skagway            143.45 306     PKP      PKPbc     10 06 20.5  -0.2
      baz=117
WHY   Whitehorse         143.78 308     PKP      PKPab     10 06 21.1  +0.1
      baz=116
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FARO  Faro, Yukon        143.80 310     PKP      PKPbc     10 06 21.5  -0.2
      baz=115
PLBC  Pleasant Camp      143.92 305     PKP      PKPbc     10 06 22.3  +0.3
      baz=117
M31M  Drury Creek, Y     144.23 310     PKP      PKPab     10 06 22.8  +0.2
      baz=114
O30N  Mendenhall         144.37 307     PKP      PKPab     10 06 22.3  -0.9
      baz=115
A36M  Sachs Harbour      144.46 328              PKPab     10 06 22.8  -0.3
A36M  Sachs Harbour      144.46 328     PKP      PKPab     10 06 23.1   0.0
      baz=108
N31M  Braeburn, Yuko     144.53 308     PKP      PKPab     10 06 22.5  -1.2
      baz=114
LYN   LuoYang            144.92 111  ⇓PKPbc      PKPbc     10 06 24.8  -1.1
LYN                                     PKPab    PKPdf     10 06 26.5   0.0
LYN                                     SKKS               10 16 26.3
LYN                                     SS       SS        10 28 29.8  +2.4
LYN                                     AMB      AMB
      comp=Z,7µm,9.8s
LYN                                     LR       LR
      comp=Z,14µm,18.1s
LYN                                     LR       LR
      comp=Z,21µm,19.0s
LYN                                     LR       LR
      comp=Z,34µm,24.0s
MIDW  Midway             144.93 229              PKPbc     10 06 25.9  -0.2
HYT   Haines Junctio     145.02 307     PKP      PKPbc     10 06 24.0  -1.6
      baz=114
N30M  Aishikik Lake      145.10 308     PKP      PKPbc     10 06 24.5  -1.2
      baz=114
PNL   Peninsula          145.40 304     PKP      PKPdf     10 06 25.1  -1.4
      baz=115
M30M  Minto, Yukon       145.41 310     PKP      PKPdf     10 06 24.7  -1.8
      baz=112
YUK6  Outpost Mounta     145.45 307     PKP      PKPdf     10 06 25.4  -1.5
      baz=114
JOW   Kunigami           145.62 138     PKPbc    PKPab     10 06 29.3  +0.5
      comp=Z,222nm,0.9s,baz=228,slow=5.4,SNR=0.7
YUK4  Talbot Arm         145.74 307     PKP      PKPdf     10 06 25.8  -1.5
      baz=113
PINM  Pinnacle           145.97 305     PKP      PKPdf     10 06 26.0  -1.6
      baz=114
INK   Inuvik             146.05 320     PKP      PKPdf     10 06 24.6  -2.7
      baz=107
NJ2   Nanjing            146.12 121   i PKPbc    PKPbc     10 06 29.8  +0.1
NJ2                                     PKPab    PKiKP     10 06 37.5  +4.6
NJ2                                     sPKP               10 07 01.5
NJ2                                     PP       PP        10 09 56.0  +3.5
NJ2                                     PKS                10 10 03.5
NJ2                                     SKKS               10 16 34.5
NJ2                                     SS       SS        10 28 49.3  +8.5
NJ2                                     AMB      AMB
      comp=Z,8µm,11.6s
NJ2                                     LR       LR
      comp=Z,11µm,18.6s
NJ2                                     LR       LR
      comp=Z,14µm,19.2s
NJ2                                     LR       LR
      comp=Z,28µm,19.1s
YUK8  Steele Glacier     146.21 307     PKP      PKPdf     10 06 26.5  -1.7
      baz=112
SSE   Sheshan            146.41 125     PKPbc    PKPdf     10 06 29.5  +0.4
SSE                                     PP       PP        10 09 54.0  -0.2
SSE                                     SS       SS        10 28 49.3  +5.3
SSE                                     AMB      AMB
      comp=Z,1µm,5.2s
SSE                                     LR       LR
      comp=Z,4µm,19.7s
SSE                                     LR       LR
      comp=Z,7µm,19.8s
LOGN  Logan Glacier      146.60 306              PKPdf     10 06 27.4  -1.4
LOGN                                    PKPbc    PKPbc     10 06 30.9  +0.5
EPYK  Eagle Plains       146.67 316     PKP      PKPdf     10 06 25.9  -2.6
      baz=107
J29M  Klondike Camp      146.67 313     PKP      PKPdf     10 06 26.6  -2.0
      baz=109
YUK3  Moose Creek        146.71 307     PKP      PKPdf     10 06 26.5  -2.4
      baz=111
MESA  MESA               146.78 304     PKP      PKPdf     10 06 27.1  -2.0
      baz=113
CTG   Chitna Glacier     146.80 306     PKP      PKPdf     10 06 26.8  -2.2
      baz=112
BARN  Barnard Glacie     146.98 306              PKPdf     10 06 27.9  -1.5
I29M  Ogilvie Camp,      146.99 314     PKP      PKPdf     10 06 26.4  -2.7
      baz=107
DAWY  Dawson             147.03 312     PKP      PKPdf     10 06 26.8  -2.4
      baz=109
BVCY  Beaver Creek       147.11 308     PKP      PKPdf     10 06 27.4  -2.0
      baz=110
TIY   Taiyuan            147.29 107⇓iPKPbc       PKPdf     10 06 29.5  -1.0
TIY                                     AMB      AMB
      comp=Z,10µm,8.8s
TIY                                     LR       LR
      comp=Z,15µm,19.2s
TIY                                     LR       LR
      comp=Z,13µm,20.6s
TIY                                     LR       LR
      comp=Z,24µm,30.9s
BGLC  Bering Glacier     147.38 304     PKP      PKPdf     10 06 28.2  -1.6
      baz=112
M27K  Edge Creek, AK     147.54 308     PKP      PKPdf     10 06 27.9  -2.4
      baz=110
MCARA McCarthy VSAT      147.71 306     PKP      PKPdf     10 06 28.5  -1.8
      baz=110
L27K  Beaver Creek,      147.74 309     PKP      PKPdf     10 06 28.1  -2.3
      baz=108
HMT   Hamilton           147.91 304              PKPdf     10 06 29.1  -1.6
HMT                                     PKPbc    PKPbc     10 06 34.6  +0.7
EGAK  Eagle              147.98 313     PKP      PKPdf     10 06 27.9  -2.8
      baz=106
M26K  Nabesna, AK        148.04 308     PKP      PKPdf     10 06 28.6  -2.4
      baz=109
BTO   Baotou             148.06 101     PKPbc    PKPdf     10 06 31.0  -0.7
BTO                                     LR       LR
      comp=Z,78µm,22.3s
BTO                                     LR       LR
      comp=Z,43µm,21.1s
K27K  Chicken            148.14 311     PKP      PKPdf     10 06 29.0  -2.0
      baz=107
HNS   HongShan           148.26 110  ⇓PKPbc      PKPdf     10 06 31.3  -0.7
HNS                                     pPKP     pPKPdf    10 06 56.0  -0.1
HNS                                   ePP        PP        10 10 12.8  +7.6
HNS                                     SKKS               10 16 45.5
HNS                                     AMB      AMB
      comp=Z,6µm,10.6s
HNS                                     LR       LR
      comp=Z,16µm,20.4s
HNS                                     LR       LR
      comp=Z,7µm,22.6s
HNS                                     LR       LR
      comp=Z,16µm,20.3s
BMRM  Bremner River      148.29 305     PKP      PKPdf     10 06 29.0  -2.4
      baz=110
L26K  Log Cabin Wild     148.39 309     PKP      PKPdf     10 06 29.1  -2.3
      baz=108
N25K  Chitina, Valde     148.50 306     PKP      PKPdf     10 06 29.7  -2.1
      baz=109
Q23K  Middleton Isla     148.56 301     PKP      PKPdf     10 06 29.0  -2.7
      baz=111
TIA   Tai'an             148.60 114     PKPbc    PKPdf     10 06 31.5  -1.1
TIA                                     SS       SS        10 29 13.3  +4.3
TIA                                     AMB      AMB
      comp=Z,12µm,12.9s
TIA                                     LR       LR
      comp=Z,13µm,21.1s
TIA                                     LR       LR
      comp=Z,13µm,21.1s
TIA                                     LR       LR
      comp=Z,27µm,23.5s
EYAK  Cordova Ski Ar     148.68 304     PKP      PKPdf     10 06 29.6  -2.3
      baz=110
J26L  Joseph Creek       148.90 311     PKP      PKPdf     10 06 29.7  -2.6
      baz=105
SCRK  Sand Creek         148.94 310     PKP      PKPdf     10 06 29.8  -2.7
      baz=106
HARP  HAARP              149.00 307     PKP      PKPdf     10 06 29.6  -2.8
      baz=107
KLU   Klutina            149.06 305     PKP      PKPdf     10 06 30.2  -2.5
      baz=108
HHC   Hu-ho-hao-te       149.08 102   ePKPbc     PKPdf     10 06 33.0  -0.4
HHC                                     PP       PP        10 10 18.0  +7.8
HHC                                     SS       SS        10 29 20.3  +5.5
HHC                                     AMB      AMB
      comp=Z,31µm,9.6s
HHC                                     LR       LR
      comp=Z,32µm,21.8s
HHC                                     LR       LR
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      comp=Z,44µm,22.4s
HHC                                     LR       LR
      comp=Z,66µm,21.6s
NRIK  Noril'sk           149.10  39     PKP      PKPdf     10 06 29.6  -2.8
      comp=Z,31nm,1.1s,baz=276,slow=2.0,SNR=24
NRIK                                    PKPbc    PKPbc     10 06 36.6  -0.1
      comp=Z,376nm,0.9s,baz=233,slow=0.9,SNR=126
RIDG  Independent Ri     149.24 310     PKP      PKPdf     10 06 30.2  -2.6
      baz=105
PAX   Paxson             149.30 308     PKP      PKPdf     10 06 30.0  -3.0
      baz=106
M24K  Tolsona, Glenn     149.37 306     PKP      PKPdf     10 06 30.9  -2.2
      baz=107
GLI   Glacier Island     149.41 304     PKP      PKPdf     10 06 30.3  -2.9
      baz=108
MOY   Mondy              149.66  76   ePKIKP     PKPdf     10 06 32.9  -1.1
MOY                                     pmax     pmax
      comp=Z,2µm,1.8s
K24K  Donnelly Dome      149.66 310     PKP      PKPdf     10 06 30.3  -3.2
      baz=105
J25K  Salcha River,      149.68 311     PKP      PKPdf     10 06 30.4  -3.1
      baz=104
SCM   Sheep Creek Mo     149.81 306     PKP      PKPdf     10 06 31.0  -2.8
      baz=107
JCJ   Chichijima         149.82 160     PKPbc    PKPbc     10 06 39.6  -0.1
      comp=Z,189nm,0.5s,baz=104,slow=3.0,SNR=16
JCJ   Chichijima         149.82 160              PKPdf     10 06 33.1  -1.7
M23K  Glacier View       149.98 305     PKP      PKPdf     10 06 31.0  -3.0
      baz=107
DHY   Denali Highway     150.17 308     PKP      PKPdf     10 06 31.7  -2.8
      baz=105
WAT6  Susitna Watana     150.20 307     PKP      PKPdf     10 06 31.6  -2.9
      baz=105
KNK   Knik Glacier       150.20 304     PKP      PKPdf     10 06 31.6  -2.8
      baz=107
SML   Sawmill            150.26 305     PKP      PKPdf     10 06 31.5  -3.1
      baz=106
ZAK   Zakamensk          150.26  80   ePKIKP     PKPdf     10 06 34.2  -0.7
ZAK                                     pmax     pmax
      comp=Z,2µm,1.7s
SEW   Seward             150.27 302     PKP      PKPdf     10 06 31.0  -3.5
      baz=108
HDA   Harding Lake       150.30 311     PKP      PKPdf     10 06 31.0  -3.4
      baz=103
ILAR  Eielson Array      150.35 311     PKPbc    PKiKP     10 06 40.6  +0.1
      comp=Z,663nm,0.8s,baz=145,slow=3.4,SNR=228
ILAR  Eielson Array      150.35 311              PKiKP     10 06 40.7  +0.1
ILAR                                    PKPab    PKPab     10 06 49.9  +3.2
O22K  Cooper Landing     150.52 302     PKP      PKPdf     10 06 32.0  -2.9
      baz=108
PMR   Palmer             150.56 305     PKP      PKPdf     10 06 31.9  -2.9
      baz=106
SONM  Songino Array      150.62  87     PKP      PKPdf     10 06 34.6  -1.0
      comp=Z,31nm,1.1s,baz=211,slow=3.0,SNR=89
SONM                                    PKPbc    PKPbc     10 06 41.2  +0.1
      comp=Z,440nm,1.0s,baz=223,slow=3.1,SNR=184
SONM                                    PKPab    PKPab     10 06 48.3  -0.1
      comp=Z,613nm,1.0s,baz=224,slow=2.5,SNR=18
SONM  Songino Array      150.62  87              PKPdf     10 06 34.6  -1.0
SONM                                    PKPbc    PKPbc     10 06 41.5  +0.3
SONM                                    PKPab    PKPab     10 06 50.2  +1.8
WAT1  Susitna Watana     150.63 307     PKP      PKPdf     10 06 31.7  -3.4
      baz=104
JSU   Suzuyama           150.64 138              PKPdf     10 06 35.1  -1.0
JSU                                     PKPbc    PKPbc     10 06 41.5  -0.1
POKR  Poker Plat Res     150.65 312     PKP      PKPdf     10 06 31.3  -3.6
      baz=101
RC01  Rabbit Creek A     150.70 303     PKP      PKPdf     10 06 32.3  -2.9
      baz=106
BRSE  Bradley Lake S     150.77 300     PKP      PKPdf     10 06 31.8  -3.6
      baz=108
COLA  College            150.78 311d iPKIKP      PKPdf     10 06 31.1  -4.0
TCOL  CIGO, UAF Yank     150.78 311     PKP      PKPdf     10 06 31.1  -4.1
      baz=101
H24K  Noodor Dome        150.96 313     PKP      PKPdf     10 06 32.3  -3.2
      baz=100
BJT   Baijiatuau         150.97 108              PKPdf     10 06 36.5  +0.3
BJT                                     PKPbc    PKiKP     10 06 43.0  +0.3
BJT   Baijiatuau         150.97 108     PKIKP    PKPdf     10 06 36.5  +0.3
BJI   Beijing            150.98 108     PKPbc    PKPdf     10 06 34.5  -1.7
BJI                                     PP       PP        10 10 20.3  -0.6
BJI                                     SS       SS        10 29 34.5  -1.1
BJI                                     AMB      AMB
      comp=Z,5µm,11.4s
BJI                                     LR       LR
      comp=Z,10µm,22.2s
BJI                                     LR       LR
      comp=Z,12µm,22.2s
BJI                                     LR       LR
      comp=Z,20µm,23.8s
ULN   Ulaanbaatar        151.00  87              PKPdf     10 06 35.4  -0.9
ULN   Ulaanbaatar        151.00  87     PKIKP    PKPdf     10 06 35.4  -0.9
MCK   McKinley           151.00 309     PKP      PKPdf     10 06 32.2  -3.3
      baz=102
KDAK  Kodiak Island      151.03 296              PKPdf     10 06 32.6  -3.1
KDAK                                    PKPbc    PKiKP     10 06 42.2  +0.1
KDAK  Kodiak Island      151.03 296     PKIKP    PKPdf     10 06 32.6  -3.1
KDAK  Kodiak Island      151.03 296     PKP      PKPdf     10 06 32.5  -3.2
      baz=110
M22K  Willow             151.06 305     PKP      PKPdf     10 06 32.6  -3.1
      baz=105
OHAK  Old Harbor         151.18 295     PKP      PKPdf     10 06 32.5  -3.5
      baz=111
HOM   Homer              151.18 300     PKP      PKPdf     10 06 33.0  -2.9
      baz=108
Q20K  Shuyak Island      151.21 298     PKP      PKPdf     10 06 32.5  -3.4
      baz=109
NEA2  Nenana             151.24 311     PKP      PKPdf     10 06 31.7  -4.1
      baz=101
CUT   Chulitna           151.29 306     PKP      PKPdf     10 06 32.9  -3.1
      baz=104
SII   Sitkinak Islan     151.40 293     PKP      PKPdf     10 06 33.5  -2.8
      baz=112
I23K  Minto, Yukon-K     151.46 312     PKP      PKPdf     10 06 32.2  -3.9
      baz=100
TRF   Thorofare Moun     151.54 308     PKP      PKPdf     10 06 33.0  -3.5
      baz=102
H23K  Yukon River        151.64 313     PKP      PKPdf     10 06 33.2  -3.3
      baz=98
IRK   Irkutsk            151.71  77   ePKIKP     PKPdf     10 06 36.3  -0.7
IRK                                     pmax     pmax
      comp=Z,1µm,2.2s
O20K  Slope Mountain     151.78 301     PKP      PKPdf     10 06 32.9  -4.0
      baz=106
CHIR  Chirikof Islan     151.86 291     PKP      PKPdf     10 06 34.5  -2.6
      baz=112
TOLK  Toolik Lake Re     151.93 319     PKP      PKPdf     10 06 34.1  -2.8
      baz=93
Q19K  Cape Douglas,      151.93 298     PKP      PKPdf     10 06 33.6  -3.5
      baz=108
BPAW  Bear Paw Mtn.      151.97 309     PKP      PKPdf     10 06 33.2  -3.8
      baz=100
MLY   Manley             152.02 311     PKP      PKPdf     10 06 33.0  -4.1
      baz=99
COLD  Coldfoot           152.06 316     PKP      PKPdf     10 06 34.3  -2.7
      baz=95
JNU   Nakatsue           152.25 137     PKP      PKPdf     10 06 36.9  -1.6
      comp=Z,6.5nm,0.3s,baz=170,slow=0.7,SNR=6.2
JNU                                     PKPbc    PKPbc     10 06 44.9  -0.4
      comp=Z,66nm,0.7s,baz=98,slow=1.8,SNR=16
PPLA  Purkeypile         152.27 306     PKP      PKPdf     10 06 33.9  -3.8
      baz=102
CAST  Castle Rocks       152.32 308     PKP      PKPdf     10 06 33.2  -4.3
      baz=101
M20K  Styx River         152.48 304     PKP      PKPdf     10 06 33.7  -4.2
      baz=103
CHUM  Lake Minchumin     152.51 309     PKP      PKPdf     10 06 33.8  -4.0
      baz=100
I21K  Tanana             152.56 311     PKP      PKPdf     10 06 34.1  -3.7
      baz=97
O19K  Port Alsworth      152.63 300     PKP      PKPdf     10 06 33.7  -4.3
      baz=105
P18K  Big Mountain,      152.85 298     PKP      PKPdf     10 06 34.0  -4.5
      baz=106
N19K  Bonanza Creek      152.86 302     PKP      PKPdf     10 06 32.6  -6.0
      baz=104
L20K  Farewell, AK       152.95 305     PKP      PKPdf     10 06 33.8  -4.7
      baz=101
DL2   Dalian             152.95 117⇓iPKPbc       PKPdf     10 06 38.3  -0.9
DL2                                     PP       PP        10 10 34.8  +2.8
DL2                                     SS       SS        10 29 57.5  +0.5
DL2                                     AMB      AMB
      comp=Z,6µm,8.3s
DL2                                     LR       LR
      comp=Z,9µm,24.0s
DL2                                     LR       LR
      comp=Z,11µm,27.0s
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DL2				LR	LR		
	comp=Z,25µm,31.4s						
H21K	Melozitna Rive	152.96	312	PKP	PKPdf	10 06 34.1	-4.3
	baz=96						
M19K	Big River Lodg	153.07	304	PKP	PKPdf	10 06 34.3	-4.4
	baz=102						
K20K	Telida	153.19	307	PKP	PKPdf	10 06 34.5	-4.4
	baz=99						
L19K	White Mountain	153.34	304	PKP	PKPdf	10 06 34.9	-4.2
	baz=101						
J20K	Nowinta River	153.35	309	PKP	PKPdf	10 06 35.1	-3.9
	baz=98						
CHGN	Chignik	153.49	291	PKP	PKPdf	10 06 35.3	-4.1
	baz=110						
N18K	Kilae Creek	153.50	301	PKP	PKPdf	10 06 34.9	-4.5
	baz=103						
CHNA	Chernabura Isl	153.57	287	PKP	PKPdf	10 06 36.0	-3.6
	baz=113						
XLT	XiLinHaoTe	153.60	102	*i* PKPbc	PKPdf	10 06 39.3	-0.8
XLT				PKPab	PKPab	10 07 01.0	0.0
XLT				PP	PP	10 10 36.0	0.0
XLT				SKKS		10 17 16.5	
XLT				AMB	AMB		
	comp=Z,5µm,5.7s						
XLT				LR	LR		
	comp=Z,16µm,23.4s						
XLT				LR	LR		
	comp=Z,23µm,24.7s						
TTA	Tatalina	154.00	306	PKP	PKPdf	10 06 36.0	-4.1
	baz=99						
A21K	Barrow	154.21	325	PKP	PKPdf	10 06 36.6	-3.4
	baz=81						
INCN	Inchon	154.21	126		PKPdf	10 06 40.0	-1.1
INCN	Inchon	154.21	126	PKIKP	PKPdf	10 06 40.0	-1.1
SDPT	Sand Point	154.24	288	PKP	PKPdf	10 06 36.3	-4.1
	baz=111						
GCSA	Galena City Sc	154.59	310	PKP	PKPdf	10 06 36.8	-3.9
	baz=94						
KSRS	Korea Array	154.76	128	PKP	PKPdf	10 06 41.5	-0.4
	comp=Z,4.4nm,0.9s,baz=214,slow=1.2,SNR=41						
KSRS				PKPab	PKPab	10 07 05.7	-0.2
	comp=Z,39nm,0.8s,baz=222,slow=2.6,SNR=8.8						
PYAG	Pyongyang	155.07	122	PKPbc	PKPdf	10 06 40.8	-1.4
PYAG				PP	PP	10 10 47.0	+3.1
PYAG				AmB			
	comp=Z,16nm,0.3s						
PYAG				AMS	AMS		
	comp=N,2µm,5.3s						
PYAG				AMS	AMS		
	comp=E,4µm,8.3s						
PYAG				AMS	AMS		
	comp=Z,3µm,7.3s						
JHJ	Hachijo jima 2	155.10	153	PKPab	PKPab	10 06 59.6	-7.8
	comp=Z,229nm,0.9s,baz=200,slow=15,SNR=3.5						
SUJ	Sinuiju	155.29	119	PKPbc	PKPdf	10 06 40.9	-1.5
SUJ				PP	PP	10 10 47.1	+2.0
SUJ				AmB			
	comp=Z,193nm,1.3s						
SUJ				AMS	AMS		
	comp=N,7µm,3.9s						
SUJ				AMS	AMS		
	comp=E,6µm,3.6s						
SUJ				AMS	AMS		
	comp=Z,6µm,3.5s						
FALS	False Pass	155.63	285	PKP	PKPdf	10 06 38.2	-4.2
	baz=111						
HHU	Hamhung	156.60	124	PKPbc	PKPdf	10 06 42.8	-1.4
HHU				PP	PP	10 10 56.3	+4.0
HHU				AMS	AMS		
	comp=N,5µm,3.2s						
HHU				AMS	AMS		
	comp=E,5µm,3.1s						
HHU				AMS	AMS		
	comp=Z,6µm,3.7s						
CIT	Chita	156.72	84	*e*PKIKP	PKPdf	10 06 43.4	-0.7
CIT				*e*		10 10 53.0	
CIT				*e*		10 13 45.2	
RDOG	Red Dog Mine	156.89	318	PKP	PKPpre	10 06 36.1	
	baz=81						
UNV	Unalaska Valle	156.93	281	PKP	PKPdf	10 06 39.9	-4.3
	baz=112						
MJAR	Matsushiro Arr	157.87	147	PKP	PKPdf	10 06 45.3	-0.7
	comp=Z,12nm,1.1s,baz=172,slow=2.3,SNR=34						
MJAR				PKPab	PKPab	10 07 19.3	0.0
	comp=Z,12nm,0.9s,baz=221,slow=34,SNR=6.6						
MJAR				PP	PP	10 10 59.2	+0.1
	comp=Z,28nm,1.1s,baz=176,slow=5.9,SNR=4.2						
MJAR	Matsushiro Arr	157.87	147		PKPdf	10 06 46.1	+0.1
MAJO	Matsushiro	157.87	147		PKPdf	10 06 45.2	-0.8
MAJO	Matsushiro	157.87	147	PKIKP	PKPdf	10 06 45.2	-0.8
MJB9	Matsu-Tunnel	157.87	147		PKPdf	10 06 45.2	-0.8
NIKH	Nikolski High	157.88	278		PKPdf	10 06 42.1	-3.3
NIKH	Nikolski High	157.88	278	PKP	PKPdf	10 06 41.4	-4.0
	baz=114						
JYT	Yasato	158.15	151		PKPdf	10 06 45.4	-0.8
ANM	Nome	158.24	309	PKP	PKPdf	10 06 40.7	-4.7
	baz=87						
CN2	Changchun	158.50	114	*e*PKP	PKPdf	10 06 45.3	-1.2
CN2				PP	PP	10 11 05.0	+2.1
CN2				SKKS		10 17 41.3	
CN2				SS	SS	10 30 56.5	-0.5
CN2				AMB	AMB		
	comp=Z,5µm,5.0s						
CN2				LR	LR		
	comp=Z,18µm,24.0s						
CN2				LR	LR		
	comp=Z,17µm,24.0s						
CN2				LR	LR		
	comp=Z,16µm,21.0s						
BOD	Bodaibo	158.91	69	*e*PKIKP	PKPdf	10 06 44.2	-2.3
BOD				pmax	pmax		
	comp=Z,210nm,2.1s						
TNA	Tin City	159.22	312	PKP	PKPdf	10 06 41.5	-5.1
	baz=82						
JSD	Sado	159.26	145		PKPdf	10 06 46.7	-0.9
SPIA	Saint Paul Isl	159.98	288	PKPdf	PKPdf	10 06 44.5	-3.2
SPIA					PKPab	10 07 29.2	+1.2
SPIA	Saint Paul Isl	159.98	288	PKP	PKPdf	10 06 43.6	-4.1
	baz=103						
BNX	BinXian	160.85	113	PKP	PKPdf	10 06 46.8	-2.3
BNX				SS	SS	10 31 20.5	-1.2
BNX				AMB	AMB		
	comp=Z,4µm,9.4s						
BNX				LR	LR		
	comp=Z,29µm,18.2s						
BNX				LR	LR		
	comp=Z,25µm,19.8s						
BNX				LR	LR		
	comp=Z,84µm,26.8s						
GAMB	Gambell	161.07	308	PKP	PKPdf	10 06 43.3	-5.3
	baz=83						
MDJ	Mudanjiang	161.16	118	PKP	PKPdf	10 06 48.5	-0.9
MDJ				PP	PP	10 11 22.3	+5.0
MDJ				SS	SS	10 31 26.3	+1.4
MDJ				LR	LR		
	comp=Z,22µm,18.2s						
MDJ				LR	LR		
	comp=Z,6µm,16.4s						
MDJ				LR	LR		
	comp=Z,35µm,24.0s						
TIXI	Tiksi	161.51	24	PP	PP	10 11 18.1	-0.5
	comp=Z,116nm,1.2s,baz=273,slow=22,SNR=8.9						
USA0B	Ussuriysk Arra	162.00	123		PKPdf	10 06 48.8	-1.5
USA0B	Ussuriysk Arra	162.00	123	PKIKP	PKPdf	10 06 48.8	-1.5
USRK	Ussuriysk Ar.	162.00	123	PKP	PKPdf	10 06 49.5	-0.8
	comp=Z,7.2nm,0.9s,baz=232,slow=2.2,SNR=20						
USRK				PKPab	PKPab	10 07 38.5	+1.4
	comp=Z,34nm,0.9s,baz=241,slow=2.0,SNR=9.8						
USRK				PP	PP	10 11 21.5	-0.1
	comp=Z,15nm,1.1s,baz=222,slow=5.8,SNR=2.9						
USRK	Ussuriysk Ar.	162.00	123		PKPdf	10 06 48.6	-1.7
ERM	Erimo	164.37	152		PKPdf	10 06 53.0	+0.4
ERM	Erimo	164.37	152	PKIKP	PKPdf	10 06 53.0	+0.4
JEW	Eniwo	164.63	146		PKPdf	10 06 52.2	-0.6
TEY	Ternei	164.72	130⇓	*e*PKIKP	PKPdf	10 06 52.3	-0.5
TEY				*e*		10 07 20.2	
TEY				*e*		10 07 48.7	
TEY				*e*		10 15 31.1	
TEY				pmax	pmax		
	comp=Z,20nm,2.4s						
ZEA	Zeya	165.02	89	*e*PKIKP	PKPdf	10 06 51.3	-1.5
ZEA				*e*		10 15 35.9	
ZEA				*e*		10 32 06.5	
ZEA				pmax	pmax		
	comp=E,30nm,1.1s						
ZEA				pmax	pmax		
	comp=N,70nm,1.9s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.5s						
ZEA				pmax	pmax		
	comp=E,700nm,4.2s						
ZEA				pmax	pmax		
	comp=N,900nm,5.4s						
ZEA				pmax	pmax		
	comp=Z,6µm,9.2s						
KLR	Kul'dur	165.35	110	PKP	PKPdf	10 06 52.2	-1.1
	baz=248,slow=1.1						
KLR				PKPab	PKPab	10 07 53.1	+1.3
	comp=Z,254nm,1.3s,baz=267,slow=6.3,SNR=4.7						
KLR				PP	PP	10 11 38.8	-0.6
	comp=Z,32nm,1.1s,baz=253,slow=9.0,SNR=3.7						
ASAJ	Asahikawa	166.14	147	PKP	PKPdf	10 06 53.8	-0.2
	comp=Z,12nm,0.7s,baz=250,slow=7.0,SNR=12						
ASAJ				PP	PP	10 11 39.7	-3.4
	comp=Z,36nm,1.1s,baz=120,slow=8.1,SNR=3.0						
BILL	Bilibino	166.71	338*c*	*i*PKIKP	PKPdf	10 06 48.9	-4.9
BILL				*i*		10 11 45.7	
BILL				pmax	pmax		
	comp=Z,89nm,1.1s						
YAK	Yakutsk	166.75	55		PKPdf	10 06 51.2	-2.8
YAK					PKPab	10 07 58.2	+0.6
YAK	Yakutsk	166.75	55*d*	*i*PKIKP	PKPdf	10 06 50.9	-3.0
YAK				*e*		10 11 42.9	
YAK				*e*PPP	PPP	10 15 43.8	
YAK				*e*SS	SS	10 32 24.7	+2.6
YAK				pmax	pmax		
	comp=Z,272nm,1.2s						
YAK				pmax	pmax		
	comp=N,125nm,1.6s						
YAK				pmax	pmax		
	comp=E,154nm,1.3s						
YAK				pmax	pmax		
	comp=Z,24µm,8.8s						
YAK				pmax	pmax		
	comp=N,2µm,5.1s						
YAK				pmax	pmax		
	comp=E,2µm,5.8s						
YUK	Yuzh-Kuril'sk	166.93	157*c*	*i*PKIKP	PKPdf	10 06 52.9	-1.7
YUK				*e*		10 11 48.6	
YUK				*e*SS	SS	10 32 19.8	-3.3
YUK				pmax	pmax		
	comp=Z,246nm,1.1s						
YUK				pmax	pmax		
	comp=E,525nm,1.2s						
YUK				pmax	pmax		
	comp=N,164nm,1.1s						
YUK				pmax	pmax		
	comp=Z,2µm,3.5s						
SHEM	Shemya Is, Ala	167.27	263	PKPab	PKPab	10 08 00.0	-0.1
	comp=Z,112nm,0.8s,baz=292,slow=4.9,SNR=2.7						
KUR	Kuril'sk	168.48	161*d*	*i*PKIKP	PKPdf	10 06 54.9	-0.8
KUR				*i*		10 07 22.0	
KUR				*e*		10 11 57.5	
KUR				*e*SS	SS	10 32 46.5	+7.9
GRNR	Gornyy	168.69	112⇓	*i*PKIKP	PKPdf	10 06 54.8	-0.9
GRNR				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS	Yuzh-Sakhalins	168.71	141		PKPdf	10 06 55.5	-0.3
YSS	Yuzh-Sakhalins	168.71	141κ	*i*PKIKP	PKPdf	10 06 55.3	-0.5
YSS				*e*		10 11 55.7	
YSS				*e*SS	SS	10 32 41.7	+0.4
YSS				pmax	pmax		
	comp=Z,5µm,7.3s						
YSS				pmax	pmax		
	comp=Z,120nm,1.4s						
UGL	Uglegorsk	170.20	133	*e*PKIKP	PKPdf	10 06 57.3	+0.7
UGL				*e*		10 12 07.2	
UGL				*e*SS	SS	10 33 01.5	+5.1
UGL				pmax	pmax		
	comp=Z,360nm,1.9s						
UGL				pmax	pmax		
	comp=Z,10µm,4.5s						
UGL				pmax	pmax		
	comp=E,8µm,9.0s						
UGL				pmax	pmax		
	comp=Z,18µm,9.0s						
NKL	Nikolayevsk	172.19	108	*e*PKIKP	PKPdf	10 06 53.9	-3.6
NKL				*e*		10 12 11.8	
NKL				*e*SSS	SSS	10 40 06.3	
SEY	Seymchan	173.30	3	PKPab	PKPab	10 08 25.9	-0.6
	baz=359,slow=6.8						
SEY				PP	PP	10 12 19.6	+0.8
	comp=Z,14nm,1.0s,baz=137,slow=1.0,SNR=7.6						
SKR	Severo-Kuril's	174.11	199	*i* PKIKP	PKPdf	10 06 54.6	-3.7
SKR				pmax	pmax		
	comp=Z,6µm,12.1s						
PET	Petropavlovsk	175.40	227		PKPdf	10 06 56.7	-1.9
PET	Petropavlovsk	175.40	227	*i* PKIKP	PKPdf	10 06 56.9	-1.7
PET				*e*		10 12 36.7	
PET				*e*		10 13 59.0	
PET				*e*SPP	SPP	10 26 54.5	
PET				*e*SS	SS	10 33 51.7	+4.8
PET				pmax	pmax		
	comp=Z,43µm,26.0s						
PEA0B	Petropavlovsk-	175.84	222		PKPdf	10 06 57.4	-1.4
PEA0B	Petropavlovsk-	175.84	222	PKIKP	PKPdf	10 06 57.4	-1.4
PETK	Petropavlovsk-	175.84	222	PKP	PKPdf	10 06 57.7	-1.1
	comp=Z,28nm,0.8s,baz=154,slow=4.1,SNR=28						
PETK				PKPab	PKPab	10 08 39.4	+1.3
	comp=Z,24nm,0.9s,baz=112,slow=7.4,SNR=6.0						
PETK				PP	PP	10 12 31.6	+0.2
	comp=Z,12nm,1.1s,baz=145,slow=5.3,SNR=1.6						
PETK	Petropavlovsk-	175.84	222		PKPdf	10 06 57.1	-1.7
MA2	Magadan	176.47	19	PP	PP	10 12 34.9	+0.9
	comp=Z,66nm,1.2s,baz=324,slow=7.2,SNR=6.0						
MA2	Magadan	176.47	19		PKPdf	10 06 56.3	-2.4
MA2					PKPab	10 08 40.8	+0.1
MA2	Magadan	176.47	19	PKIKP	PKPdf	10 06 56.3	-2.4
MA2						10 08 40.8	

THE ***28*** *10:00:20.8, 39°.24N×22°.97E, h15^{km}±4^{km}, ML2.4/2 Error ellipse: s-maj=4.7km s-min=0.5km az=20.0*

ATH 28 10:00:21.0, 39°.27N×22°.91E, h8^{km}±3^{km}, ML2.0/4, Error ellipse: s-maj=3.9km s-min=0.9km az=41.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XOR	Xorichti	0.24	66	P	Pg	10 00 25.7	-0.1
XOR				S	Sg	10 00 29.5	+0.4
XOR				AML	AML	10 00 29.8	
	comp=N,3276µm,0.3s						
XOR				AML	AML	10 00 30.1	
	comp=E,1228µm,0.1s						
XOR	Xorichti	0.24	66	P	Pg	10 00 25.7	-0.1
XOR				S	Sg	10 00 29.1	0.0
NEO	Neokhori	0.25	81	P	Pg	10 00 25.8	-0.1
NEO				S	Sg	10 00 29.5	+0.2
NEO				AML	AML	10 00 30.4	
	comp=E,2819µm,0.2s						
NEO				AML	AML	10 00 30.5	
	comp=N,4015µm,0.3s						
NEO	Neokhori	0.25	81	P	Pg	10 00 25.6	-0.4
NEO				S	Sg	10 00 29.1	-0.2
	comp=N,2µm,0.2s						
ATAL	Atalanti	0.58	171	P	Pg	10 00 31.8	-0.4
ATAL				S	Sg	10 00 40.5	+0.7
ATAL				AML	AML	10 00 41.8	
	comp=E,169µm,0.2s						
ATAL				AML	AML	10 00 42.7	
	comp=N,165µm,0.2s						
ATAL	Atalanti	0.58	171	P	Pg	10 00 31.6	-0.6
LKR	Lokris	0.62	173	P	Pg	10 00 31.9	-1.0
LKR				S	Sg	10 00 40.9	-0.2
LKR				AML	AML	10 00 40.9	
	comp=E,191µm,0.3s						
LKR				AML	AML	10 00 43.2	
	comp=N,207µm,0.2s						
LKR	Lokris	0.62	173	P	Pg	10 00 31.7	-1.2
MAKR	Makrakomi, Fth	0.65	247	P	Pg	10 00 33.7	+0.1
MAKR	Makrakomi, Fth	0.65	247	P	Pg	10 00 33.7	+0.1
MAKR				S	Sb	10 00 44.3	+0.4
	comp=N,335nm,0.4s						
THL	Klokotos Trika	0.75	294	P	Pg	10 00 34.9	-0.5
PAIG	Paliouri	0.89	42	P	Pg	10 00 37.8	-0.3
LIT	Litokhoron	0.89	339	P	Pg	10 00 37.8	-0.4
ANX	Ano Chora	1.02	229	P	Pg	10 00 40.2	-0.4
VIL2	Platees	1.09	165	P	Pg	10 00 41.7	-0.2
LTK	Loutraki	1.24	178	P	Pn	10 00 43.9	-0.8
LTK				S	Sg	10 01 01.2	+0.2
KARY	Karystos	1.72	135	P	Pn	10 00 51.6	+0.4
KBN	Korca	2.12	310	P	Pn	10 00 56.8	0.0

TEH ***28*** *10:02:40.3, 40°.48N×51°.74E, h10^{km}, ML4.2*

AZER ***28*** *10:02:42.2±0.3, 40°.56N×51°.77E, h50^{km}±23^{km}, Error ellipse: s-maj=5.5km s-min=4.1km az=251.0*

ISC 28 10:02:41.5±2.1**, 40°.62N**±0°.05×**51°.70E**±0°.05**, h11**^{km}±13^{km}**, n56, σ1^{s}.11**/78**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.20	260	S	Sg	10 03 20.2	+0.1
NDR	Nardaran	1.30	269	Sn	Sg	10 03 24.2	+0.7
GOBA	Gobu	1.52	262	Sn	Sb	10 03 28.8	0.0
ATGJ	Altiaghaj	2.11	277	Pn	Pn	10 03 17.4	+0.5
ATGJ				Sg	Sg	10 03 48.4	-1.0
ALIB	Äli-Bayra	2.16	253	Pg	Pb	10 03 21.1	+0.5
ALIB				Sg	Sg	10 03 52.2	+1.2
SIZA	Siyzn	2.17	283	Pn	Pb	10 03 19.7	-1.1
	SNR=6.3						
SIZA				Sn	Sb	10 03 47.5	-0.3
PQL	Pirkuli	2.37	275	Pn	Pn	10 03 20.5	+0.1
PQL				Sn	Sn	10 03 51.5	+2.0
QUBA	Quba, Azerbaij	2.54	288	Pn	Pn	10 03 23.9	+1.2
QUBA				Sn	Sn	10 03 54.8	+1.3
IML	Ismayilli	2.68	275	Pn	Pn	10 03 24.1	-0.5
IML				Sn	Sn	10 03 57.8	+0.7
QSAR	Qusar	2.75	290	Pn	Pn	10 03 26.3	+0.8
	SNR=12						
QSAR				Sn	Sn	10 03 59.6	+0.8
XNQ	Khinaliq	2.75	283	Pn	Pn	10 03 26.4	+0.6
	SNR=7.7						
XNQ				Sn	Sn	10 03 59.4	+0.3
GLBA	Clilabad	2.89	243	Pn	Pn	10 03 28.4	+0.9
	SNR=16						
GLBA				Sn	Sn	10 04 03.0	+0.9
QBL	Gabala	2.95	278	Pn	Pn	10 03 28.8	+0.5
QBL				Sn	Sn	10 04 04.8	+1.0
LKRN	Lenkeran, Azer	2.95	231	Pn	Pn	10 03 27.7	-0.5
LKRN				Sn	Sn	10 04 02.6	-1.0
ASTR	Astara	3.05	228	Pn	Pn	10 03 29.2	-0.3
	SNR=8.6						
ASTR				Sn	Sn	10 04 04.7	-1.3
ZRD	Zardab	3.08	265	Pn	Pn	10 03 30.9	+0.8
ZRD				Sn	Sn	10 04 08.8	+1.9
YRD	Yardimli	3.16	239	Pn	Pn	10 03 31.3	-0.1
	SNR=32						
YRD				Sn	Sn	10 04 07.6	-1.6
LRK	Lerik	3.26	234	Pn	Pn	10 03 32.9	+0.2
	SNR=3.6						
LRK				Sn	Sn	10 04 09.8	-1.7
BLQ	Beylaqan	3.30	256	Sn	Sn	10 04 11.0	-1.2
GRMI	Germi	3.45	240	*e*Pn	Pn	10 03 35.4	+0.2
SEKA	Sheki	3.46	281	Pn	Pn	10 03 35.7	+0.4
	SNR=3.2						
SEKA				Sn	Sn	10 04 15.7	-0.7
BRDA	Brd	3.47	266	Pn	Pn	10 03 36.2	+0.9
BRDA				Sn	Sn	10 04 18.1	+1.7
MNGR	Mingechevir, A	3.51	274	Sn	Sn	10 04 18.1	+0.6
AGDM	Agdam	3.54	263	Pn	Pn	10 03 36.4	-0.1
AGDM				Sn	Sn	10 04 19.0	+0.6
QRD	Qoradiz	3.56	252	Pn	Pn	10 03 37.1	+0.5
QRD				Sn	Sn	10 04 18.5	0.0
ZKTA	Zakatala	3.97	287	Pn	Pn	10 03 43.0	+0.7
ZKTA				Sn	Sn	10 04 28.0	-0.8
GANJ	Ganja	4.09	272	Pn	Pn	10 03 43.5	-0.5
GANJ				Sn	Sn	10 04 29.7	-2.2
JIR1	Jirandeh	4.18	201	*e*Pn	Pn	10 03 44.2	-1.1
ISRB	Sarab	4.19	230	*e*Pn	Pn	10 03 46.2	+0.6
ISRB				*e*		10 04 39.6	
	comp=Z,2µm,0.2s						
QALM	Alamut, Qazvin	4.26	192	*e*Pn	Pn	10 03 45.3	-1.2
QALM				*e*		10 04 34.2	
	comp=Z,2µm,0.3s						
IHRS	Heris	4.27	239	*e*Pn	Pn	10 03 47.4	+0.7
IHRS				*e*		10 04 39.5	
	comp=N,7µm,0.3s						
IGZV	Ghazvin	4.38	196	*e*Pn	Pn	10 03 47.8	-0.4
IGZV				*e*		10 04 38.5	
	comp=Z,3µm,0.3s						
IPRN	Peran	4.40	173	*e*Pn	Pn	10 03 47.5	-0.8
IPRN				*e*		10 04 41.3	
	comp=Z,5µm,0.2s						
IGLO	Ghaloghah	4.44	157	*e*Pn	Pn	10 03 47.8	-1.1
IGLO				*e*		10 04 40.7	
	comp=Z,3µm,0.2s						
MRVT	Maraveh tapeh	4.51	129	*e*Pn	Pn	10 03 49.0	-0.9
GDB	GEDABAY	4.52	273	Pn	Pn	10 03 49.2	-0.8
	SNR=14						
GDB				Sn	Sn	10 04 40.0	-2.7
ZNJK	Zanjan	4.59	212	*e*Pn	Pn	10 03 50.2	-0.9
ORD	Ordubad	4.71	251	Pn	Pn	10 03 53.5	+0.9
ORD				Sn	Sn	10 04 46.8	-0.4
CHTH	Charan	4.72	186	*e*Pn	Pn	10 03 53.3	+0.4
QZX	Qazax, Azerbai	4.82	277	Pn	Pn	10 03 53.2	-0.9
QZX				Sn	Sn	10 04 47.9	-1.9
SBZ	Shahbuz	4.88	257	Sn	Sn	10 04 51.4	+0.1
ISHM	Shahmirzad	4.97	165	*e*Pn	Pn	10 03 55.9	-0.4
ISHM				*e*		10 04 56.7	
	comp=Z,4µm,0.2s						
NAX	Nakhchivan	4.99	255	Sn	Sn	10 04 54.6	+0.6
IMHD	Mahdasht	4.99	190	*e*Pn	Pn	10 03 57.7	+1.2
IMHD				*e*		10 04 59.6	
	comp=Z,1µm,0.2s						
IFIR	Firoozkooh	5.04	170	*e*Pn	Pn	10 03 56.2	-1.0
IFIR				*e*		10 04 59.1	
	comp=N,2µm,0.2s						
IDMV	Damavand	5.04	177	*e*Pn	Pn	10 03 57.6	+0.3
IDMV				*e*		10 04 59.8	
	comp=Z,2µm,0.4s						
BJRD	Bojnurd	5.31	121	*e*Pn	Pn	10 04 00.2	-0.6
ILAS	Lasjerd	5.32	169	*e*	Sn	10 05 07.4	+4.9
	comp=Z,818nm,0.2s						
IRAZ	Razeghan	5.39	196	*e*Pn	Pn	10 04 02.1	+0.1
IRAZ				*e*		10 05 08.0	
	comp=Z,2µm,0.7s						
IANJ	Anjilo	5.43	161	*e*Pn	Pn	10 04 02.8	+0.2
IANJ				*e*		10 05 10.5	
	comp=Z,755nm,0.5s						
SHRO	Shahrood	5.73	142	*e*Pn	Pn	10 04 06.3	-0.3
IQOM	Qom	5.79	185	*e*Pn	Pn	10 04 08.0	+0.5
ASAO	Ashtian	6.20	193	*e*Pn	Pn	10 04 12.9	-0.3
IAKL	Akhelmad	6.83	124	*e*		10 06 49.0	
	comp=Z,3µm,1.4s						
KHMZ	Khomeyn	7.01	192	*e*Pn	Pn	10 04 24.3	+0.1
AFRZ	Afriz	9.26	139	*e*		10 06 35.6	
	comp=Z,13µm,5.5s						

VIE 28 10:14:16.7±0.3**, 46°.61N×12°.24E, h3**^{km}**, ml1.1**/3**, Error ellipse: s-maj=2.6km s-min=1.3km az=157.0 10 km NE of Cortina d'Ampezzo, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTA	Abfaltersbach	0.24	53	*i* Pg	Pg	10 14 21.6	+0.2
	3.6nm,0.1s						
ABTA				*i* Sg	Sg	10 14 24.6	+0.1
	2.4nm,0.1s						

JMA ***28*** *10:18:42.4±0.2, 24°.3N±0°.8×121°.9E±0°.7, h56^{km}±2^{km}, MV2.4/9, TAIWAN REGION*

TAP ***28*** *10:18:43.0, 24°.41N×121°.96E, h28^{km}, ML3.1, C*

ISC 28 10:18:43.4±0.9**, 24°.41N**±0°.02×**121°.94E**±0°.02**, h28**^{km}±5^{km}**, n42, σ0^{s}.56**/80**, 11C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.15	284⇑	*i*P	Pn	10 18 48.6	-1.2
	baz=282						
EWUT				*i* S	Sn	10 18 52.7	0.0
	baz=282						
ENA	Nanau	0.18	276⇑	*i*P	Pn	10 18 49.0	-1.3
	baz=275						
ENA				*e*S	Sb	10 18 53.6	+0.4
	baz=275						
TWC	Suao	0.22	338⇑	*i*P	Pb	10 18 49.4	-0.3
	baz=335						
TWC				S	Sb	10 18 53.5	-0.3
	baz=335						
NDS	Dongshan	0.30	318⇑	*i*P	Pb	10 18 50.7	0.0
	baz=315						
NDS				*i* S	Sb	10 18 55.9	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	baz=315						
ETL	Fush Village	0.38	229	*e*P	Pb	10 18 52.1	+0.2
	baz=231						
ETL				*e*S	Sn	10 18 59.9	+0.5
	baz=231						
NACB	Ninganchiao	0.39	233	*e*P	Pb	10 18 52.0	0.0
	baz=235						
NACB				*e*S	Sn	10 18 59.7	+0.1
	baz=235						
ILA	Ilan	0.40	334	*e*P	Pb	10 18 52.6	+0.5
	baz=332						
ILA				*e*S	Sn	10 18 59.0	-0.7
	baz=332						
LATG	Datong	0.40	289	⇑*i*P	Pb	10 18 52.4	+0.1
	baz=287						
LATG				*e*S	Sn	10 18 59.1	-0.8
	baz=287						
TWE	Neicheng	0.40	321	⇑*i*P	Pb	10 18 52.2	+0.1
	baz=320						
TWE				*i* S	Sb	10 18 58.6	+0.5
	baz=320						
ENTT	Nioudou	0.41	304	⇑*i*P	Pb	10 18 52.5	+0.2
	baz=303						
ENTT				*e*S	Sb	10 18 58.6	+0.2
	baz=303						
NDT	Datong Townshi	0.43	297	⇑*e*P	Pn	10 18 53.1	-0.7
	baz=295						
NDT				*e*S	Sn	10 18 60.0	-0.8
	baz=295						
EGS		0.43	359	*e*P	Pb	10 18 53.1	+0.4
	baz=358						
EGS				*e*S	Sb	10 18 59.5	+0.4
	baz=358						
TWD	Chiawan	0.45	224	*e*P	Pb	10 18 52.9	-0.1
	baz=225						
TWD				*e*S	Sn	10 19 01.4	+0.3
	baz=225						
NTC	Toucheng	0.46	347	*e*P	Pb	10 18 53.0	0.0
	baz=345						
NTC				*e*S	Sb	10 18 59.8	+0.2
	baz=345						
ETLH	Xiulin Townshi	0.46	244	⇓*e*P	Pb	10 18 53.3	0.0
	baz=245						
ETLH				*e*S	Sn	10 19 01.6	0.0
	baz=245						
FUSB	Fushanzhiwuyua	0.47	318	⇑*e*P	Pb	10 18 53.6	+0.2
	baz=316						
FUSB				*e*S	Sn	10 19 00.8	-1.0
	baz=316						
NNSB	Datong	0.51	272	*e*P	Pn	10 18 54.2	-0.6
	baz=272						
NNSB				*e*S	Sn	10 19 02.3	-0.4
	baz=272						
NNS	Nan Shan	0.52	274	*e*P	Pn	10 18 54.4	-0.6
	baz=273						
NNS				*e*S	Sn	10 19 02.2	-0.8
	baz=273						
NWLT	Wulai	0.54	313	*e*P	Pb	10 18 54.5	+0.1
	baz=311						
NWLT				*e*S	Sn	10 19 02.5	-1.0
	baz=311						
TIPB	Shuangxi	0.57	350	*e*P	Pb	10 18 55.0	+0.1
	baz=348						
TIPB				*e*S	Sb	10 19 03.0	+0.2
	baz=348						
YHNB	Yeheng	0.58	297	⇑P	Pn	10 18 55.3	-0.4
	baz=296						
YHNB				*e*S	Sn	10 19 03.8	-0.5
	baz=296						
NSK	Sanguang	0.59	297	⇑P	Pn	10 18 55.5	-0.5
	baz=296						
NSK				*e*S	Sn	10 19 04.0	-0.8
	baz=296						
TWB1	Santiao Chiao	0.60	4	*e*P	Pb	10 18 55.6	+0.2
	baz=3.0						
TWB1				*e*S	Sb	10 19 03.9	+0.4
	baz=3.0						
TEYL	Yanliau Villag	0.62	210	*e*P	Pb	10 18 56.0	+0.2
	baz=213						
TEYL				*e*S	Sb	10 19 04.6	+0.4
	baz=213						
FUSS	Fushou	0.66	256	*e*P	Pn	10 18 57.0	0.0
	baz=256						
FUSS				*e*S	Sn	10 19 06.9	+0.4
	baz=256						
TWA	Mucha	0.66	330	*e*P	Pn	10 18 57.4	+0.6
	baz=329						
NHDH	Xindian Distri	0.67	326	*e*P	Pn	10 18 57.3	+0.3
	baz=324						
NHDH				*e*S	Sn	10 19 06.3	-0.2
	baz=324						
WHF	Hehuan Shan	0.67	247	*e*P	Pb	10 18 56.9	+0.1
	baz=247						
WHF				*e*S	Sn	10 19 07.1	0.0
	baz=247						
WFSB	Wu-fen Shan	0.68	348	*e*P	Pb	10 18 57.2	+0.5
	baz=346						
WFSB				*e*S	Sn	10 19 06.5	-0.2
	baz=346						
ESL	Shilin	0.75	218	*e*P	Pn	10 18 57.2	-0.9
	baz=219						
CHGB	Renai	0.78	244	*e*P	Pb	10 18 59.0	+0.4
	baz=244						
NFF	Wufeng Townshi	0.78	287	*e*P	Pb	10 18 59.6	+1.1
	baz=286						
NFF				*e*S	Sn	10 19 10.2	+0.8
	baz=286						
YM01	YM01	0.81	335	*e*P	Pb	10 18 59.7	+0.8
	baz=334						
YM01				*e*S	Sb	10 19 10.8	+1.3
	baz=334						
OWD	Renai	0.83	237	*e*P	Pn	10 18 59.0	-0.3
	baz=238						
OWD				*e*S	Sb	10 19 10.6	+0.3
	baz=238						
WUSB	Renai	0.86	241	*e*P	Pb	10 18 59.7	-0.1
	baz=242						
WUSB				*e*S	Sb	10 19 12.5	+1.5
	baz=242						
EGFH	Guangfu	0.87	213	*e*P	Pn	10 18 59.1	-0.6
	baz=213						
JYNG	Yonagunijimaku	0.92	87	P	Pn	10 18 59.8	-0.5
JYNG				S	Sn	10 19 12.2	-0.5
YOJ	Yonaguni jima	0.98	87	P	Pn	10 19 00.7	-0.5
YOJ				S	Sn	10 19 13.8	-0.3
IRIF	Iriomote-Funau	1.63	92	P	Pn	10 19 09.9	-0.3
IRIF				S	Sn	10 19 30.0	-0.3
JKRS	Kuro-shima	1.90	95	P	Pn	10 19 13.7	-0.2
JKRS				S	Sn	10 19 36.8	0.0
JIJ	Ishigaki jima	2.01	91	P	Pn	10 19 15.0	-0.4
JIJ				S	Sn	10 19 38.6	-1.0
JISG	Ishigakijimahi	2.17	85	P	Pn	10 19 17.5	-0.1
JISG				S	Sn	10 19 43.9	+0.4

*IDC **28** 10:39:13.5±1.1, 13°.29N×50°.79E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=35.7km s-min=27.2km az=19.0*

ISC 28 10:39:15.3±1.2**, 13°.3N**±0°.2×**50°.8E**±0°.2**, h12km, n8,** σ**0s.56**/8**, mb3.9**/7**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	41.21	339	P	P	10 47 00.0	+0.1
	0.2nm,0.3s,baz=147,slow=7.5,SNR=1.9						
	0.2nm,0.3s						
MKAR	Makanchi Array	42.57	32	P	P	10 47 11.9	+0.8
	0.4nm,0.5s,baz=217,slow=7.9,SNR=5.0						
	0.4nm,0.5s						
TORD	Torodi Ar. Bea	47.71	276	P	P	10 47 52.9	+0.4
	0.7nm,0.7s,baz=89,slow=7.0,SNR=4.1						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	48.60	26	P	P	10 47 58.1	-0.6
	1.3nm,0.6s,baz=241,slow=7.8,SNR=5.5						
	1.3nm,0.6s						
ESDC	Sonseca Array	54.60	309	P	P	10 48 43.4	-0.6
	0.5nm,0.6s,baz=99,slow=6.9,SNR=4.6						
	0.5nm,0.6s						
WRA	Warramunga Arr	88.56	111	P	P	10 52 08.5	-0.2
	0.8nm,1.0s,baz=303,slow=3.7,SNR=9.6						
	0.8nm,1.0s						
ASAR	Alice Springs	89.11	114	P	P	10 52 11.2	-0.1
	0.9nm,1.0s,baz=282,slow=4.8,SNR=6.1						
	0.9nm,1.0s						
NVAR	Mina Array Bea	127.53	349	PKP	PKiKP	10 58 21.9	+0.2
	0.1nm,0.4s,baz=5.7,slow=0.9,SNR=4.1						

NOU 28 10:57:06.0, 16°.70S×167°.62E, h17km, MLv3.7/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.16	152	P	Pb	10 57 27.6	+0.1
KOUNC	Koumac, New Ca	4.97	219	P	Pn	10 58 19.8	0.0
YATNC	Mamie plateau,	5.38	187	P	Pn	10 58 24.9	-0.6
DZM	Mont Dzumac	5.46	192	P	Pn	10 58 26.4	-0.3

HEL 28 11:09:36.5±0.3**, 67°.56N×30°.34E, h0km, ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	Varrio	0.34	305	PG	Pg	11 09 43.2	+0.2
VRF				SG	Sg	11 09 47.8	+0.4
OLKF	Oulanka, Finla	1.29	197	PB	Pb	11 10 01.7	0.0
SGF	Sodankyl	1.47	267	PN	Pn	11 10 04.1	-0.2
SGF				SN	Sn	11 10 24.9	+0.7
KU6	Riekki	1.55	187	PG	Pn	11 10 04.6	-0.7
KU6				MSG		11 10 22.9	
	comp=Z,4.1nm,0.2s						
MSF	Maaselka	1.73	198	PG	Pn	11 10 07.9	+0.1
MSF				SG	Sn	11 10 30.4	-0.2
RNF	Rovaniemi	1.94	243	PG	Pn	11 10 11.5	+0.8
	baz=62						
RNF				SG	Sb	11 10 37.9	+0.5
KLF	Kolari	2.48	266	SG	Sb	11 10 52.6	-0.4
KEV	Kevo	2.52	333	MSG		11 10 51.1	
	comp=Z,4.2nm,0.2s						
KEV				SG	Sb	11 10 53.0	-1.2
HEF	Hetta	2.66	292	MSG		11 10 54.8	
	comp=Z,5.3nm,0.2s						
HEF				SG	Sb	11 10 57.3	-0.8
TOF	Tornio	2.80	241	MSG		11 10 58.9	
	comp=Z,2.7nm,0.2s						
TOF				SG	Sb	11 11 02.1	0.0
PAJU	Pajala	2.85	263	SG	Sb	11 11 03.9	+0.2
LANU	Lannavaara	3.21	283	SG	Sb	11 11 13.9	0.0
ERTU	Ertsjaerv	3.35	256	SN	Sn	11 11 11.8	+1.4
JOF	Joensuu	4.67	175	SN	Sn	11 11 39.5	-3.5

KOLA 28 11:09:53.2, 66°.12N×30°.18E, h0km, ML2.1, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	Lovozero	2.51	42	S	Sb	11 11 12.0	+1.6
TERR	Teriberka	3.62	29	P	Pn	11 10 48.0	-2.4
TERR				S	Sn	11 11 31.5	-2.4
PRVG	Vayda Guba	3.72	11	P	Pn	11 10 45.4	-6.5
PRVG				S	Sn	11 11 30.2	-6.1
ARCES	ARCESS Array B	3.86	335	P	Pn	11 10 56.5	+2.7
ARCES				S	Sn	11 11 40.8	+1.0

*NEIC **28** 11:15:29.5±1.0, 23°.5S±0°.1×176°.9W±0°.1, h189km±6km, mb4.1/14, Error ellipse: s-maj=19.8km s-min=13.6km az=132.0*

*IDC **28** 11:15:32.5±19.0, 23°.28S×177°.25W, h200km±132km, mb3.4/4, mbtmp4.0/5, Error ellipse: s-maj=208.7km s-min=24.3km az=140.0*

ISC 28 11:15:27.4±0.7**, 23°.5S**±0°.1×**176°.9W**±0°.1**, h167km, n29,** σ**1s.14**/30**, mb4.0**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.46	320	P	Pn	11 17 13.3	-0.4
	5.5nm,0.5s,baz=171,slow=9.2,SNR=13						
MSVF	Nonsavu	7.46	320		Pn	11 17 13.1	-0.6
NIUE	Niue	7.86	57	Pn	Pn	11 17 19.8	+0.8
PINNC	Pines Island,	14.44	271		P	11 18 50.2	+3.8
CTA	Charters Tower	34.33	268	P	P	11 21 58.2	-0.1
	2.3nm,0.3s,baz=97,slow=10,SNR=18						
	2.3nm,0.3s						
CTAO	Charters Tower	34.33	268	P	P	11 21 57.8	-0.5
CTAO				IAmb	IAmb	11 22 12.6	
	comp=Z,7.4nm,1.4s						
STKA	Stephens Creek	37.50	248	P	P	11 22 24.9	-0.3
COEN	Coen	38.88	277	P	P	11 22 37.2	+0.3
COEN				IAmb	IAmb	11 22 56.3	
	comp=Z,3.0nm,1.0s						
BBOO	Buckleboo	42.21	247	P	P	11 23 04.4	+0.4
BBOO				IAmb	IAmb	11 23 33.1	
	comp=Z,14nm,1.2s						
ASAR	Alice Springs	44.90	260	P	P	11 23 25.4	-0.3
	comp=Z,0.6nm,0.3s,baz=94,slow=7.3,SNR=18						
ASAR				PcP	PcP	11 25 04.2	-0.2
	comp=Z,0.1nm,0.4s,baz=110,slow=4.0,SNR=1.9						
	comp=Z,0.6nm,0.3s						
ASAR	Alice Springs	44.90	260	P	P	11 23 25.1	-0.6
WR0	Warramunga Arr	45.09	265	P	P	11 23 25.7	-1.4
WB2	Warramunga Arr	45.26	265	P	P	11 23 27.6	-1.0
WB2				IAmb	IAmb	11 23 27.8	
	comp=Z,5.8nm,1.1s						
WB0	Warramunga Arr	45.27	265	P	P	11 23 27.8	-0.8
WB0				IAmb	IAmb	11 23 38.4	
	comp=Z,9.2nm,1.4s						
WRA	Warramunga Arr	45.27	265	P	P	11 23 27.4	-1.3
	comp=Z,1.0nm,0.6s,baz=96,slow=8.0,SNR=72						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	45.27	265	P	P	11 23 27.6	-1.0
FORT	Forrest	49.10	249	P	P	11 23 57.7	-0.4
KNRA	Kununurra	51.54	268	P	P	11 24 15.9	-0.7
KNRA				IAmb	IAmb	11 24 26.9	
	comp=Z,7.0nm,1.1s						
VNDA	Vanda	55.01	186	P	P	11 24 40.5	-0.5
PSA00	Pilbara Seismi	58.03	258	P	P	11 25 01.4	-1.8
PSA00				IAmb	IAmb	11 25 02.0	
	comp=Z,2.3nm,0.9s						
CASY	Casey	61.69	206	P	P	11 25 28.3	+0.9
QSPA	South Pole Qui	66.56	180	P	P	11 25 59.5	+0.2
QSPA				IAmb	IAmb	11 26 20.7	
	comp=Z,5.1nm,1.4s						
ADK	Adak	75.08	0	P	P	11 26 49.7	-0.8
ILAR	Eielson Array	91.03	12	P	P	11 28 13.2	+1.0
	comp=Z,0.2nm,0.6s,baz=217,slow=5.8,SNR=7.7						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	132.07	350	PKP	PKiKP	11 34 21.2	-0.3
	comp=Z,3.8nm,0.9s,baz=32,slow=5.3,SNR=3.6						
AKASG	Malin Array Be	146.14	330	PKPbc	PKPdf	11 34 46.2	-0.3
	comp=Z,2.0nm,0.6s,baz=40,slow=4.8,SNR=5.2						
AKASG	Malin Array Be	146.14	330		PKPdf	11 34 44.6	-1.9
BRTR	Keskin Array B	149.58	309	PKPbc	PKPbc	11 34 56.8	-0.7
	comp=Z,1.0nm,0.6s,baz=135,slow=4.7,SNR=5.4						
CLL	Collm	151.23	347	*i* PKPbc	PKiKP	11 35 02.0	+0.8
	comp=Z,5.0nm,0.9s						

*IDC **28** 11:16:01.3±1.4, 45°.14S×166°.96E, h0km, mb3.3/2, mbtmp3.5/3, ML4.3/1, Error ellipse: s-maj=53.0km s-min=26.2km az=174.0*

*WEL **28** 11:16:02.2±1.0, 45°S±4°×16°7E±°, h10km±4km, M4.1/15, ML4.3/16, MLv4.1/15, Error ellipse: s-maj=0.0km s-min=0.0km az=116.2*

ISC 28 11:16:01.1±1.8**, 45°.08S**±0°.04×**166°.86E**±0°.06**, h0km**±12km**, n48,** σ**0s.78**/48**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.44	152	P	Pb	11 16 12.3	+0.5
DCZ				S	Sb	11 16 18.8	-0.1
MSZ	Milford Sound	0.86	63	P	Pg	11 16 18.3	+0.7
MSZ				S	Sb	11 16 30.9	+0.1
MLZ	Mavora Lakes	0.94	109	P	Pn	11 16 20.4	-1.1
MLZ				S	Sb	11 16 32.5	-0.7
PYZ	Puysegur Point	1.10	186	P	Pg	11 16 22.4	+0.2
PYZ				S	Sb	11 16 36.9	-0.9
WHZ	Wether Hill Ro	1.12	137	P	Pn	11 16 23.2	-0.8
WKZ	Wanaka	1.55	82	P	Pg	11 16 30.8	0.0
JCZ	Jackson Bay	1.70	55	P	Pn	11 16 31.5	-0.6
EAZ	Earnscleugh	1.74	96	P	Pb	11 16 33.3	-0.6
APZ	The Paps	1.93	156	P	Pb	11 16 35.7	-1.4
TUZ	Tuapeka	2.14	115	P	Pn	11 16 38.7	+0.8
SYZ	Scrubby Hill	2.16	133	P	Pn	11 16 38.5	+0.2
LBZ	Lake Benmore	2.47	75	P	Pn	11 16 43.2	+0.7
FOZ	Fox Glacier	2.62	55	P	Pn	11 16 43.6	-1.1
ODZ	Otahua Downs	2.68	91	P	Pn	11 16 45.5	0.0
HHSZ	Highcliff Hill	2.75	108	P	Pn	11 16 47.0	+0.6
HHSZ				S	Sn	11 17 19.6	-0.8
TMZ	Timaru	3.04	78	P	Pn	11 16 50.3	0.0
GCSZ	Gaunt Creek Bo	3.05	56	P	Pn	11 16 49.4	-1.2
ARCZ	Arundel	3.29	71	P	Pn	11 16 53.9	+0.1
RPZ	Rata Peaks	3.30	67	Pn	Pn	11 16 54.0	0.0
	35nm,0.3s,baz=227,slow=6.8,SNR=113						
RPZ				Sn	Sn	11 17 34.3	+0.3
	24nm,0.3s,baz=24,slow=24,SNR=9.6						
	100nm,0.4s						
RPZ	Rata Peaks	3.30	67	P	Pn	11 16 54.1	+0.1
WVZ	Waitaha Valley	3.44	56	P	Pn	11 16 54.5	-1.3
WACZ	Wakanui South	3.74	74	P	Pn	11 16 60.0	0.0
RACZ	Rakaia	4.02	72	P	Pn	11 17 04.1	+0.3
OXZ	Oxford	4.12	67	P	Pn	11 17 04.2	-1.0
MQZ	McQueen’s Vall	4.37	74	P	Pn	11 17 08.4	-0.3
LTZ	Lake Taylor	4.53	62	P	Pn	11 17 10.7	-0.2
AMCZ	Amberley	4.58	68	P	Pn	11 17 12.0	+0.4
OKCZ	Okains Bay	4.64	75	P	Pn	11 17 12.9	+0.4
DSZ	Denniston Nort	4.91	49	P	Pn	11 17 14.5	-1.5
GVZ	Greta Valley S	4.93	67	P	Pn	11 17 16.5	+0.1
THZ	Tophouse	5.51	55	P	Pn	11 17 23.9	-0.5
KHZ	Kahutara	5.52	64	P	Pn	11 17 25.4	+1.0
MRNZ	Matariki Terra	5.66	52	P	Pn	11 17 25.6	-0.8
QRZ	Quartz Range	5.95	46	P	Pn	11 17 29.0	-1.3
TKNZ	Takaka Hill	6.02	50	P	Pn	11 17 30.4	-1.1
NNZ	Nelson	6.13	53	P	Pn	11 17 32.2	-0.7
TUWZ	Tuamarina	6.33	57	P	Pn	11 17 36.7	+1.2
DUWZ	D’Urville Isla	6.71	53	P	Pn	11 17 41.3	+0.4
ASAR	Alice Springs	34.23	298	P	P	11 22 50.0	+1.5
	0.4nm,1.0s,baz=132,slow=7.3,SNR=1.8						
	0.4nm,1.0s						
WRA	Warramunga Arr	36.74	302	P	P	11 23 11.0	+0.9
	0.4nm,0.8s,baz=138,slow=7.9,SNR=5.0						
	0.4nm,0.8s						
H01W1	Cape Leeuwin H	40.99	265	T	T	12 07 22.0	
	baz=121,slow=75,SNR=106						
H01W2	Cape Leeuwin H	41.01	265	T	T	12 07 22.8	
	baz=121,slow=75,SNR=73						
H01W3	Cape Leeuwin H	41.01	265	T	T	12 07 23.2	
	baz=121,slow=75,SNR=116						
H08S2	Diego Garcia H	87.72	262	T	T	13 05 41.4	
	baz=136,slow=76,SNR=119						
H08S1	Diego Carcia H	87.73	262	T	T	13 05 36.3	
	baz=136,slow=76,SNR=70						
H08S3	Diego Garcia H	87.74	262	T	T	13 05 43.2	
	baz=136,slow=76,SNR=107						
TORD	Torodi Ar. Bea	145.76	206	PKPbc	PKPdf	11 35 41.7	-0.1
	1.2nm,0.6s,baz=148,slow=2.1,SNR=12						
FINES	FINESS Array B	151.96	320	PKPbc	PKPbc	11 35 56.6	-0.2
	2.0nm,0.6s,baz=96,slow=3.1,SNR=14						

IDC 28 11:32:52.2±7.8**, 32°.01S×179°.63E, h420km**±94km**, mb2.7**/2**, mbtmp3.8**/3**, Error ellipse: s-maj=103.5km s-min=40.0km az=8.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.57	198	P	P	11 34 32.6	+0.9
	22nm,0.3s,baz=88,slow=13,SNR=30						
URZ				S	S	11 35 51.6	-1.0
	13nm,0.5s,baz=32,slow=23,SNR=12						
ASAR	Alice Springs	41.04	270	P	P	11 39 57.7	+0.4
	0.3nm,0.6s,baz=115,slow=7.2,SNR=2.0						
	0.3nm,0.6s						
WRA	Warramunga Arr	42.18	275	P	P	11 40 05.9	-0.4
	0.6nm,0.5s,baz=113,slow=7.7,SNR=20						
	0.6nm,0.5s						
FINES	FINESS Array B	145.90	338	PKPbc	PKPdf	11 51 41.8	+0.7
	1.1nm,0.5s,baz=61,slow=3.4,SNR=10.0						

*NEIC **28** 11:35:27.9±1.3, 19°.56N±0°.05×65°.93W±0°.04, h26km±11km, Error ellipse: s-maj=7.7km s-min=4.1km az=217.0*

*RSPR **28** 11:35:29.6, 19°.52N×65°.92W, h63km±11km, MD3.7/15*

*OSPL **28** 11:35:33.8±2.8, 19°.37N×66°.04W, h31km±162km, ML3.2*

ISC 28 11:35:30.2±1.5**, 19°.49N**±0°.07×**65°.97W**±0°.04**, h35km, n74,** σ**1s.20**/80**, 12C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	1.14	208	⇑*e*P	Pn	11 35 49.0	-0.6
EMPR	Esperanza - Ma	1.14	208	*e*S	Sn	11 36 05.7	+1.7
EMPR	Esperanza - Ma	1.14	208		Pn	11 35 49.0	-0.6
EMPR					Sn	11 36 05.7	+1.7
EMPR	Esperanza - Ma	1.14	208	IAML		11 36 09.3	
	comp=N,2μm,0.8s						
GCPR	Guaynabo City	1.18	185	⇓*e*P	Pn	11 35 49.2	-1.0
GCPR	Guaynabo City	1.18	185	*e*S	Sn	11 36 05.4	+0.4
GCPR	Guaynabo City	1.18	185		Pn	11 35 49.2	-1.0
GCPR					Sn	11 36 05.4	+0.4
GCPR	Guaynabo City	1.18	185	IAML		11 36 09.3	
	comp=E,1μm,0.6s						
CBYP	Canovanas	1.21	175	⇓*e*P	Pn	11 35 49.2	-1.6
CBYP	Canovanas	1.21	175		Pn	11 35 49.2	-1.6
CBYP	Canovanas	1.21	175	IAML		11 36 12.6	
	comp=N,1μm,0.2s						
CBYP				IAML		11 36 15.0	
	comp=E,1μm,0.2s						
CUPR	Culebra, Puert	1.34	151	⇑*e*P	Pn	11 35 51.0	-1.4
CUPR	Culebra, Puert	1.34	151	*e*S	Sn	11 36 08.5	-0.5
CUPR	Culebra, Puert	1.34	151		Pn	11 35 51.0	-1.4
CUPR					Sn	11 36 08.5	-0.5
CUPR	Culebra, Puert	1.34	151	IAML		11 36 18.7	
	comp=E,456nm,0.7s						
HUMP	Col San Antoni	1.34	175	⇑*e*P	Pn	11 35 51.0	-1.4
HUMP	Col San Antoni	1.34	175	*e*S	Sn	11 36 09.4	+0.3
HUMP	Col San Antoni	1.34	175		Pn	11 35 51.0	-1.4
HUMP					Sn	11 36 09.4	+0.3
AOPR	Arecibo Observ	1.36	213	⇓*e*P	Pn	11 35 51.9	-0.9
AOPR	Arecibo Observ	1.36	213	*e*S	Sn	11 36 09.8	+0.3
AOPR	Arecibo Observ	1.36	213		Pn	11 35 51.9	-0.9
AOPR					Sn	11 36 09.8	+0.3
SJG	San Juan	1.38	187		Pn	11 35 52.3	-0.6
SJG				IAML		11 36 11.8	
	comp=E,1μm,0.8s						
SJG				IAML		11 36 12.9	
	comp=E,907nm,0.6s						
MTP	Monte Pirata	1.44	164	Pn	Pn	11 35 52.6	-1.2
MTP				IAML		11 36 16.3	
	comp=E,411nm,0.5s						
PDPR	Patillas Dam,	1.46	182		Pn	11 35 53.5	-0.6
PDPR				IAML		11 36 13.6	
	comp=E,696nm,1.0s						
STVI	Saint Thomas	1.48	140	⇑*e*P	Pn	11 35 53.7	-0.6
STVI	Saint Thomas	1.48	140	*e*S	Sn	11 36 13.5	+1.0
STVI	Saint Thomas	1.48	140		Pn	11 35 53.7	-0.6
STVI					Sn	11 36 13.5	+1.0
STVI	Saint Thomas	1.48	140	IAML		11 36 18.0	
	comp=N,514nm,0.6s						
AGPR	Aguadilla, PR	1.48	227	⇑*e*P	Pn	11 35 54.3	-0.2
AGPR	Aguadilla, PR	1.48	227	*e*S	Sn	11 36 12.7	+0.1
AGPR	Aguadilla, PR	1.48	227		Pn	11 35 54.3	-0.2
AGPR					Sn	11 36 12.7	+0.1
AGPR	Aguadilla, PR	1.48	227	*i* P	Pn	11 35 53.9	-0.6
AGPR				*e*S	Sn	11 36 09.1	-3.5
AGPR				IAML		11 36 28.8	
	comp=Z,221nm,1.1s						
CELP	Cerrillos	1.52	203	⇑*e*P	Pn	11 35 54.5	-0.4
CELP	Cerrillos	1.52	203	*e*S	Sn	11 36 13.3	-0.2
CELP	Cerrillos	1.52	203		Pn	11 35 54.5	-0.4
CELP					Sn	11 36 13.3	-0.2
CELP	Cerrillos	1.52	203	IAML		11 36 21.3	
	comp=N,334nm,0.8s						
IGPR	InterUniversit	1.52	185	⇓*e*P	Pn	11 35 54.2	-0.7
IGPR	InterUniversit	1.52	185	*e*S	Sn	11 36 14.4	+0.9
IGPR	InterUniversit	1.52	185		Sn	11 36 14.4	+0.9
OBIP	Obispado Ponce	1.56	203	⇑*e*P	Pn	11 35 55.1	-0.3
OBIP	Obispado Ponce	1.56	203	*e*S	Sn	11 36 15.2	+0.8
OBIP	Obispado Ponce	1.56	203		Pn	11 35 55.1	-0.3
OBIP					Sn	11 36 15.2	+0.8
OBIP	Obispado Ponce	1.56	203	IAML		11 36 26.6	
	comp=N,337nm,0.8s						
SJVI	Gifft Hill Sch	1.61	135	⇑*e*P	Pn	11 35 55.3	-0.8
SJVI	Gifft Hill Sch	1.61	135	*e*S	Sn	11 36 17.0	+1.3
SJVI	Gifft Hill Sch	1.61	135		Pn	11 35 55.3	-0.8
SJVI					Sn	11 36 17.0	+1.3
ICMP	Isla Caja de M	1.68	199		Pn	11 35 57.3	+0.2
ICMP				IAML		11 36 33.7	
	comp=E,425nm,0.7s						
LSP	Las Mesas	1.68	219	⇓*e*P	Pn	11 35 57.1	0.0
PRSN	Puerto Rico Se	1.69	222		Pn	11 35 56.9	-0.3
GBPR	Guanica, Bosqu	1.73	210	⇓*e*P	Pn	11 35 58.0	+0.2
GBPR	Guanica, Bosqu	1.73	210	*e*S	Sn	11 36 19.5	+0.7
IDE	Isla Desecheo	1.80	233	⇑*e*P	Pn	11 35 59.1	+0.3
IDE	Isla Desecheo	1.80	233	*e*S	Sn	11 36 21.2	+0.9

MLPR	Magueyes Islan	1.82	214	⇓*e*P	Pn	11 35 58.9	-0.2
MLPR	Magueyes Islan	1.82	214	*e*S	Sn	11 36 20.5	-0.4
MLPR	Magueyes Islan	1.82	214		Pn	11 35 58.9	-0.2
MLPR					Sn	11 36 20.5	-0.4
CRPR	Cabo Rojo, PR	1.83	217	⇑*e*P	Pn	11 35 59.2	+0.1
CRPR	Cabo Rojo, PR	1.83	217	*e*S	Sn	11 36 21.2	+0.2
CRPR	Cabo Rojo, PR	1.83	217		Pn	11 35 59.2	+0.1
CRPR					Sn	11 36 21.2	+0.2
CRPR	Cabo Rojo, PR	1.83	217	IAML		11 36 33.6	
	comp=N,277nm,0.7s						
CRPR	Cabo Rojo, PR	1.83	217	*i* P	Pn	11 35 58.9	-0.2
CRPR				IAML		11 36 25.1	
	comp=Z,169nm,0.6s						
CDVI	St. Croix	2.07	146		Pn	11 36 03.3	+0.9
DR12	Loma Pena Alta	3.30	258	⇑*e*P	Pn	11 36 19.7	+0.2
DR12	Loma Pena Alta	3.30	258		Pn	11 36 19.1	-0.4
BANI	BANI	4.30	256	⇑*e*P	Pn	11 36 36.9	+3.7
BANI	BANI	4.30	256	Pn	Pn	11 36 34.0	+0.7
BANI	BANI	4.30	256	*i* P	Pn	11 36 35.6	+2.4
BANI				IAML		11 37 37.0	
	comp=Z,39nm,1.0s						
SDDR	Presa de Saban	5.05	265		Pn	11 36 45.0	+1.5
SDDR				IAML		11 37 54.5	
	comp=Z,50nm,0.7s						
SDDR				IAML		11 37 57.1	
	comp=Z,55nm,0.7s						
SDDR	Presa de Saban	5.05	265	*i* P	Pn	11 36 45.1	+1.5
SDDR				IAML		11 37 49.9	
	comp=Z,25nm,1.1s						
LOBA2	Hotel Casa Bon	5.05	255	*i* P	Pn	11 36 44.4	+0.9
LOBA2				*e*S	Sn	11 37 35.2	-5.5
GRTK	Grand Turk	5.25	293	Pn	Pn	11 36 46.0	-0.2
GRTK	Grand Turk	5.25	293	*i* P	Pn	11 36 45.3	-0.9
GRTK				IAML		11 37 51.4	
	comp=Z,52nm,1.1s						
LONE2	Loma La Sidra	5.29	261	*i* P	Pn	11 36 47.4	+0.5
BIRV	Birongo	8.96	182	Pn	Pn	11 37 36.8	-0.5

*IDC **28** 11:42:16.7±2.7, 36°.46N×71°.24E, h205^{km}±24^{km}, mb3.5/12, mbtmp4.1/18, Error ellipse: s-maj=19.2km s-min=13.9km az=8.0*

*NEIC **28** 11:42:19.5±1.4, 36°.69N±0°.07×71°.18E±0°.10, h222^{km}±4^{km}, mb4.1/35, Error ellipse: s-maj=12.1km s-min=9.0km az=56.0*

*NNC **28** 11:42:22.7±1.8, 37°.04N×71°.24E, h218^{km}±20^{km}, mb3.1, mpv4.2, Error ellipse: s-maj=16.8km s-min=9.7km az=19.0*

ISC 28 11:42:17.5±0.5**, 36°.70N**±0°.05×**71°.24E**±0°.06**, h200^{km}, n104,** σ**1^{s}.57**/112**, mb4.0**/26**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.80	220	Pn	Pn	11 43 08.0	+3.0
DRK	Karamyk	2.81	9		Pn	11 43 08.6	+3.5
BTK	Batken	3.37	354	Pn	Pn	11 43 15.7	+4.2
NIL	Nilore	3.46	151		Pn	11 43 15.5	+2.7
KSH	Kashi	4.67	52	Pn	Pn	11 43 26.5	-1.3
KSH				Sn	Sn	11 44 16.3	-6.9
KSH				pmax	pmax		
	comp=Z,230nm,0.5s						
KSH				smax	smax		
	comp=N,110nm,0.6s						
KSH				smax	smax		
	comp=E,73nm,0.7s						
TAS	Tashkent	4.86	342	Pn	Pn	11 43 30.4	+0.3
THN	Thein Dam	5.64	138	*e*P	Pn	11 43 43.0	+3.0
THN				*e*S	Sn	11 44 46.5	+1.2
AML	Almayashu	5.75	19	P	Pn	11 43 43.8	+2.1
	SNR=159						
UCH	Uchtor	6.07	24	P	Pn	11 43 48.3	+2.3
	SNR=144						
EKS2	Erkin-Say	6.26	17	P	Pn	11 43 50.7	+2.5
	SNR=16						
KK31	Karatay Array	6.42	355	Pn	Pn	11 43 51.7	+1.6
KK31	Karatay Array	6.42	355	P	Pn	11 43 51.6	+1.5
	comp=E,4.1nm,0.5s,baz=178,slow=12,SNR=36						
KK31				S	Sn	11 45 01.7	-1.8
	comp=E,18nm,0.4s,baz=177,slow=18,SNR=22						
KKAR	Karatay Array	6.42	355	Pn	Pn	11 43 51.7	+1.6
KKAR	Karatay Array	6.42	355		Pn	11 43 51.9	+1.8
AAK	Ala-Archa	6.44	22	P	Pn	11 43 52.6	+2.2
	SNR=19						
AAK	Ala-Archa	6.44	22	P	Pn	11 43 52.9	+2.4
	comp=E,12nm,0.3s,baz=203,slow=6.5,SNR=36						
AAK				S	Sn	11 44 58.7	-5.5
	comp=E,13nm,0.5s,baz=186,slow=14,SNR=5.7						
AAK	Ala-Archa	6.44	22	Pn	Pn	11 43 52.7	+2.2
KBK	Karagaybulak	6.60	25	P	Pn	11 43 55.8	+3.2
	SNR=11						
FRU1	Bishkek	6.63	22	Pn	Pn	11 43 56.6	+3.6
ULHL	Ulahol	6.75	33	P	Pn	11 43 56.7	+2.1
	SNR=15						
BHK	Bhakra	6.80	139	*e*P	Pn	11 43 57.0	+1.8
BHK				*e*S	Sn	11 45 11.8	-0.8
BOOM	Boomskoye usch	6.82	31	Pn	Pn	11 43 57.7	+2.2
CHMS	Chumysh	6.84	22	P	Pn	11 43 58.1	+2.5
	SNR=5.1						
CHMS	Chumysh	6.84	22	⇓P	Pn	11 43 57.3	+1.6
	comp=E,6.8nm,0.6s						
CHMS				⇑S	Sn	11 45 12.3	-1.2
	comp=E,17nm,0.7s						
USP	Ospenovka	7.02	20	P	Pn	11 43 59.9	+2.0
	SNR=5.3						
TKM2	Tokmak 2	7.06	27	P	Pn	11 44 00.8	+2.2
	SNR=71						
TKM2	Tokmak 2	7.06	27	⇓P	Pn	11 44 00.4	+1.8
	comp=E,38nm,0.6s						
TKM2				⇑S	Sn	11 45 18.5	-0.4
	comp=E,39nm,0.9s						
KDJ	Kajisay	7.11	38	Pn	Pn	11 44 01.1	+1.9
TARG	Taragay, Kyrgy	7.15	43		Pn	11 44 01.5	+1.4
SMLA	Simla	7.43	137	*e*P	Pn	11 44 05.3	+2.0
SMLA				*e*S	Sn	11 45 25.6	-1.8
SMLA				IAML		11 45 28.5	
	comp=E,116nm,0.3s						
SMLA				IAML		11 45 29.0	
	comp=N,107nm,0.4s						
HRA	Herat	7.69	255		Pn	11 44 08.4	+1.6
MDOK	Medeo	7.84	33	P	Pn	11 44 10.3	+1.5
	comp=N,14nm,0.8s						
PRZ	Przheval'sk	7.99	42	Pn	Pn	11 44 12.9	+2.2
PDGK	Podgornoye	9.15	41	⇓P	Pn	11 44 26.5	+0.7
	comp=N,6.4nm,0.7s						
GEYT	Alibeck	10.52	281	P	Pn	11 44 42.9	-0.6
	comp=N,1.4nm,0.4s,baz=84,slow=15,SNR=1.9						
GEYT	Alibeck	10.52	281	Pn	Pn	11 44 43.2	-0.3
MAKZ	Makanchi	12.88	35	Pn	Pn	11 45 14.1	+0.8
MAKZ	Makanchi	12.88	35	⇓P	Pn	11 45 13.5	+0.1
	comp=N,3.3nm,0.7s						
MK31	Makanchi Array	13.02	36	Pn	Pn	11 45 16.6	+1.5
MK31	Makanchi Array	13.02	36	P	Pn	11 45 16.6	+1.5
	comp=N,0.3nm,0.3s,baz=216,slow=14,SNR=7.4						
MKAR	Makanchi Array	13.02	36	P	Pn	11 45 16.8	+1.7
	comp=N,1.1nm,0.6s,baz=218,slow=13,SNR=7.3						
MKAR	Makanchi Array	13.02	36	Pn	Pn	11 45 16.6	+1.5
KURBB	Kurchatov Arra	14.87	18	P	P	11 45 39.7	+1.0
	comp=N,0.8nm,0.3s,baz=208,slow=11,SNR=5.2						
KURK	Kurchatov	14.98	18		Pn	11 45 40.3	+1.1
AB31	Akbulak array	15.00	330	P	Pn	11 45 38.8	-0.7
	comp=N,1.6nm,0.5s,baz=136,slow=14,SNR=67						
AB31				S	S	11 48 25.0	-1.0
	comp=N,0.5nm,0.4s,baz=145,slow=25,SNR=2.5						
ABKAR	Akbulak array	15.00	330	P	Pn	11 45 39.1	-0.4
BRVK	Borovoye	16.37	358	P	Pn	11 45 57.3	+1.3
BRVK				IAmb	IAmb	11 45 59.0	
	comp=Z,6.5nm,0.5s						
BRVK	Borovoye	16.37	358	⇑P	Pn	11 45 56.8	+0.8
	comp=Z,3.6nm,0.5s						
AKTO	Aktyubinsk	16.70	329	P	Pn	11 46 00.5	+0.4
	comp=Z,6.5nm,0.3s,baz=135,slow=11,SNR=30						
AKTO	Aktyubinsk	16.70	329	⇑P	Pn	11 46 00.1	+0.1
	comp=Z,11nm,0.8s						
ZAA0	Zalesovo Array	19.65	24	P	P	11 46 31.3	+0.5
ZAA0				IAmb	IAmb	11 46 32.3	
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	19.65	24	P	P	11 46 31.6	+0.7
	comp=Z,4.3nm,0.3s,baz=209,slow=11,SNR=14						
ZALV	Zalesovo Beam	19.65	24	P	P	11 46 31.5	+0.6
ARU	Arti	21.50	341	P	P	11 46 51.0	+0.5
	comp=Z,1.4nm,0.4s,baz=167,slow=12,SNR=3.8						
	comp=Z,1.4nm,0.4s						
ARU	Arti	21.50	341	P	P	11 46 51.0	+0.5
ARU				IAmb	IAmb	11 46 53.6	
	comp=Z,10.0nm,1.3s						
BELG	Belogornoye	22.85	321	P	P	11 47 04.0	+0.7
	comp=Z,6.8nm,0.5s,baz=269,slow=7.3,SNR=5.6						
	comp=Z,6.8nm,0.5s						
AKASG	Malin Array Be	32.97	309	P	P	11 48 33.5	+0.3
	comp=Z,1.1nm,0.5s,baz=106,slow=9.2,SNR=6.7						
	comp=Z,1.1nm,0.5s						
AKASG	Malin Array Be	32.97	309	P	P	11 48 33.4	+0.2
BJT	Baijiatuau	35.10	71	P	P	11 48 52.1	+0.4
LVZ	Lovozero	37.34	338	P	P	11 49 10.4	+0.1
FIA1	FINESS Array S	37.42	326	P	P	11 49 10.8	-0.2
FINES	FINESS Array B	37.42	326	P	P	11 49 11.7	+0.7
	comp=Z,2.2nm,0.4s,baz=122,slow=9.9,SNR=33						
	comp=Z,2.2nm,0.4s						
FINES	FINESS Array B	37.42	326	P	P	11 49 10.8	-0.2
KEV	Kevo	40.69	338	P	P	11 49 37.7	-0.2
ARCES	ARCESS Array B	41.03	337	P	P	11 49 41.6	+0.9
	comp=Z,4.0nm,0.5s,baz=115,slow=8.4,SNR=37						
	comp=Z,4.0nm,0.5s						
ARCES	ARCESS Array B	41.03	337	P	P	11 49 41.3	+0.6
ARCES				IAmb	IAmb	11 49 43.7	
	comp=Z,15nm,1.2s						
NC405	NORSAR Array S	44.10	323	P	P	11 50 05.7	+0.1
NC303	NORSAR Array S	44.28	323	P	P	11 50 07.3	+0.4
NC303				IAmb	IAmb	11 50 08.3	
	comp=Z,10nm,1.0s						
NB2	NORSAR Subarra	44.34	323	P	P	11 50 07.4	0.0
	comp=Z,2.7nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.34	323	P	P	11 50 07.4	0.0
	comp=Z,2.5nm,0.4s,baz=96,slow=7.7,SNR=28						
	comp=Z,2.5nm,0.4s						
KONO	Kongsberg	45.05	321	P	P	11 50 13.2	+0.1
KONO				IAmb	IAmb	11 50 16.9	
	comp=Z,12nm,1.5s						
TIXI	Tiksi	45.52	22	P	P	11 50 16.6	+0.1
TIXI				IAmb	IAmb	11 50 17.7	
	comp=Z,2.5nm,0.4s						
ESDC	Sonseca Array	57.53	298	P	P	11 51 45.7	-0.4
	comp=Z,0.5nm,0.6s,baz=51,slow=7.4,SNR=4.2						
	comp=Z,0.5nm,0.6s						
TOA0	Torodi Ar. Sit	65.91	269	P	P	11 52 40.4	-1.9
TORD	Torodi Ar. Bea	65.91	269	P	P	11 52 40.4	-1.9
	comp=Z,0.5nm,0.4s,baz=49,slow=5.9,SNR=15						
	comp=Z,0.5nm,0.4s						
TORD	Torodi Ar. Bea	65.91	269	P	P	11 52 40.8	-1.5
TORD				IAmb	IAmb	11 52 46.5	
	comp=Z,4.1nm,1.5s						
TOLK	Toolik Lake Re	70.68	15	P	P	11 53 11.6	+0.5
TOLK				IAmb	IAmb	11 53 12.1	
	comp=Z,2.9nm,0.6s						
A36M	Sachs Harbour	70.99	5	P	P	11 53 12.8	0.0
IMAR	Indian Mountai	71.92	18	P	P	11 53 18.4	-0.1
BMAR	Burnt Mountain	72.70	14	P	P	11 53 24.2	+1.1
H23K	Yukon River	73.04	16	P	P	11 53 25.6	+0.5
H23K				IAmb	IAmb	11 53 26.9	
	comp=Z,2.3nm,0.8s						
J20K	Nowinta River	73.28	19	P	P	11 53 27.4	+1.0
J20K				IAmb	IAmb	11 53 27.9	
	comp=Z,1.6nm,0.6s						
INK	Inuvik	73.67	9	P	P	11 53 29.1	+0.4
INK				IAmb	IAmb	11 53 30.1	
	comp=Z,3.1nm,0.6s						
K20K	Telida	73.96	19	P	P	11 53 31.0	+0.5
K20K				IAmb	IAmb	11 53 46.6	
	comp=Z,5.8nm,1.4s						
ILAR	Eielson Array	74.53	16	P	P	11 53 33.2	-0.5
	comp=Z,0.7nm,0.9s,baz=321,slow=5.4,SNR=9.9						
	comp=Z,0.7nm,0.9s						
ILAR	Eielson Array	74.53	16	P	P	11 53 32.5	-1.2
PPLA	Purkeypile	74.83	19	P	P	11 53 35.6	-0.1
PPLA				IAmb	IAmb	11 54 02.8	
	comp=Z,9.4nm,1.5s						
KNRA	Kununurra	75.17	123	P	P	11 53 37.3	-0.7
KNRA				IAmb	IAmb	11 53 37.5	
	comp=Z,6.5nm,1.1s						
RND	Reindeer	75.25	17	P	P	11 53 36.8	-1.1
RND				IAmb	IAmb	11 54 03.2	
	comp=Z,2.4nm,1.0s						
J26L	Joseph Creek	75.48	15	P	P	11 53 38.8	-0.5
J26L				IAmb	IAmb	11 53 40.2	
	comp=Z,2.2nm,0.8s						
EGAK	Eagle	75.70	14	P	P	11 53 41.1	+0.7
SCRK	Sand Creek	75.85	15	P	P	11 53 41.3	-0.1
DAWY	Dawson	76.68	13	P	P	11 53 45.8	-0.2
BCAR	Beaver Creek A	77.12	15	P	P	11 53 48.9	+0.4
KDAK	Kodiak Island	78.94	22	P	P	11 53 58.2	-0.2
N31M	Braeburn, Yuko	79.72	13	P	P	11 54 02.6	-0.1
N31M				IAmb	IAmb	11 54 21.1	
	comp=Z,4.6nm,1.3s						
HYT	Haines Junctio	80.01	14	P	P	11 54 04.4	0.0
HYT				IAmb	IAmb	11 54 06.1	
	comp=Z,3.0nm,1.1s						
YKA	Yellowknife Ar	81.03	3	P	P	11 54 09.8	+0.2
	comp=Z,1.7nm,0.4s,baz=352,slow=5.4,SNR=33						
	comp=Z,1.7nm,0.4s						
YKA	Yellowknife Ar	81.03	3	P	P	11 54 09.2	-0.5
WRA	Warramunga Arr	81.94	122	P	P	11 54 13.2	-1.8
	comp=Z,0.2nm,0.4s,baz=325,slow=4.9,SNR=11						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	81.94	122	P	P	11 54 13.1	-1.8
WB2	Warramunga Arr	81.94	122	P	P	11 54 13.6	-1.4
ASAR	Alice Springs	84.21	125	P	P	11 54 25.0	-1.6
	comp=Z,0.4nm,0.6s,baz=310,slow=4.9,SNR=11						
	comp=Z,0.4nm,0.6s						
ASAR	Alice Springs	84.21	125	P	P	11 54 24.7	-1.9

*IDC **28** 12:06:18.8±0.9, 30°.96S×177°.69W, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=28.4km s-min=21.6km az=102.0*

*NEIC **28** 12:06:24.4±1.6, 31°.06S±0°.04×177°.6W±0°.2, h35^{km}±2^{km}, mb4.5/16, Error ellipse: s-maj=26.6km s-min=5.1km az=98.0*

ISC 28 12:06:24.0±0.7**, 31°.10S**±0°.07×**177°.8W**±0°.1**, h35^{km}, n36,** σ**1^{s}.62**/39**, mb4.4**/13**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.84	357	Pn	Pn	12 06 49.6	-3.5
	71nm,0.3s,baz=83,slow=19,SNR=2.6						
RAO				Sn	Sn	12 07 14.9	-0.3
	144nm,0.3s,baz=271,slow=23,SNR=5.2						
RAO	Raoul Island	1.84	357		Pn	12 06 51.0	-2.2
URZ	Urewera	8.27	209	Pn	Pn	12 08 17.2	-4.2
	0.5nm,0.3s,baz=26,slow=6.4,SNR=2.1						
URZ				Sn	Sn	12 09 49.6	-4.0
	2.1nm,0.3s,baz=60,slow=23,SNR=7.0						
BKZ	Black Stump Fm	9.29	208	Pn	Pn	12 08 34.6	-1.0
TUWZ	Tuamarina	12.26	210	Pn	Pn	12 09 15.3	-0.7
RPZ	Rata Peaks	15.37	212	Pn	Pn	12 09 54.5	-3.7
	0.4nm,0.3s,baz=45,slow=13,SNR=2.2						
WHZ	Wether Hill Ro	18.46	213	P	P	12 10 35.0	-1.6
CTAO	Charters Tower	34.06	280	P	P	12 13 08.4	+3.1
CTAO				IAmb	IAmb	12 13 08.9	
	comp=Z,4.6nm,0.7s						
STKA	Stephens Creek	34.47	258	P	P	12 13 09.5	+0.9
	comp=Z,1.0nm,0.5s,baz=110,slow=12,SNR=4.3						
	comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	34.47	258	P	P	12 13 10.2	+1.5
BBOO	Buckleboo	38.93	255	P	P	12 13 47.1	+0.5
ASAR	Alice Springs	43.23	268	P	P	12 14 23.5	+1.4
	comp=Z,1.8nm,0.5s,baz=106,slow=7.6,SNR=35						
ASAR				PcP	PcP	12 16 11.2	+0.2
	comp=Z,0.4nm,0.5s,baz=118,slow=4.3,SNR=2.6						
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	43.23	268	P	P	12 14 23.1	+1.0
WR0	Warramunga Arr	44.10	273	P	P	12 14 29.9	+0.8
WR0				IAmb	IAmb	12 14 32.2	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	44.27	273	P	P	12 14 31.6	+1.1
WRAB	Tennant Creek	44.27	273	P	P	12 14 31.9	+1.4
WRAB				IAmb	IAmb	12 14 37.4	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	44.28	273	P	P	12 14 31.9	+1.3
	comp=Z,2.4nm,0.4s,baz=112,slow=7.7,SNR=65						
WRA				PcP	PcP	12 16 14.6	0.0
	comp=Z,0.3nm,0.7s,baz=117,slow=3.7,SNR=1.3						
	comp=Z,2.4nm,0.4s						
WRA	Warramunga Arr	44.28	273	P	P	12 14 31.3	+0.8
WB0	Warramunga Arr	44.30	273	P	P	12 14 31.5	+0.8
WB0				IAmb	IAmb	12 14 48.3	
	comp=Z,5.1nm,0.8s						
VNDA	Vanda	47.42	186	P	P	12 14 55.3	+0.8
MTN	Manton Dam	50.24	279	P	P	12 15 17.3	+0.3
KNRA	Kununurra	50.91	275	P	P	12 15 23.8	+1.7
KNRA				IAmb	IAmb	12 15 27.3	
	comp=Z,5.2nm,0.9s						
CASY	Casey	54.60	208	P	P	12 15 49.8	+1.2
CASY				IAmb	IAmb	12 16 02.5	
	comp=Z,5.2nm,0.9s						
QSPA	South Pole Qui	59.01	180	P	P	12 16 21.7	+1.5
	comp=Z,2.0nm,0.9s,baz=69,slow=4.0,SNR=4.7						
	comp=Z,2.0nm,0.9s						
QSPA	South Pole Qui	59.01	180	P	P	12 16 21.6	+1.5
BELA	Belgrano 2	69.08	172	P	P	12 17 26.9	+1.0
BELA				IAmb	IAmb	12 17 28.5	
	comp=Z,6.3nm,1.4s						
SNAA	Sanae	77.46	178	P	P	12 18 14.5	-0.9
SNAA				IAmb	IAmb	12 18 19.6	
	comp=Z,6.1nm,1.5s						
NVAR	Mina Array Bea	88.65	43	P	P	12 19 15.1	+1.4
	comp=Z,0.6nm,0.8s,baz=224,slow=10,SNR=5.2						
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	118.33	310	PKP	PKPdf	12 25 06.1	-1.4
	comp=Z,0.5nm,0.8s,baz=143,slow=0.7,SNR=2.4						
FINES	FINESS Array B	145.85	340	PKPbc	PKPbc	12 25 58.9	+0.1
	comp=Z,3.5nm,0.6s,baz=54,slow=3.8,SNR=29						
FINES	FINESS Array B	145.85	340		PKPab	12 25 59.1	-0.3
NB2	NORSAR Subarra	149.46	351	PKP	PKPbc	12 26 08.6	-0.2
	comp=Z,0.3nm,0.5s,baz=18,slow=2.6						
NOA	NORSAR Array B	149.46	351	PKPbc	PKPbc	12 26 07.8	-1.0
	comp=Z,0.6nm,0.7s,baz=14,slow=4.2,SNR=3.8						
AKASG	Malin Array Be	151.94	322	PKPbc	PKPbc	12 26 12.9	-2.1
	comp=Z,1.0nm,0.6s,baz=54,slow=2.9,SNR=1.9						
BRTR	Keskin Array B	153.06	297	PKPbc	PKPbc	12 26 17.6	-0.5
	comp=Z,0.7nm,0.6s,baz=142,slow=6.3,SNR=4.1						
TORD	Torodi Ar. Bea	162.13	178	PKPab	PKPab	12 27 09.4	+0.6
	comp=Z,0.4nm,0.6s,baz=167,slow=3.1,SNR=2.4						

*NEIC **28** 12:10:52.4±2.0, 19°.9S±0°.1×177°.8W±0°.1, h509^{km}±11^{km}, mb4.1/17, Error ellipse: s-maj=20.7km s-min=17.7km az=139.0*

*IDC **28** 12:10:55.4±2.3, 19°.76S×178°.08W, h532^{km}±24^{km}, mb2.9/4, mbtmp3.9/7, Error ellipse: s-maj=35.7km s-min=24.3km az=145.0*

ISC 28 12:10:52.0±0.6**, 19°.7S**±0°.1×**178°.0W**±0°.1**, h500^{km}, n33,** σ**1^{s}.32**/31**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.23	296	P	P	12 12 17.8	+5.3
	2.8nm,0.5s,baz=113,slow=21,SNR=5.2						
MSVF	Nonsavu	4.23	296	P	P	12 12 18.0	+5.5
NIUE	Niue	7.61	87	P	P	12 12 41.2	-3.2
AFI	Afiamalu	8.24	47	P	P	12 12 51.0	0.0
	8.8nm,0.4s,baz=38,slow=22,SNR=1.3						
AFI				S	S	12 14 24.7	-3.9
	37nm,0.9s,baz=107,slow=20,SNR=5.2						
AFI	Afiamalu	8.24	47	P	P	12 12 53.1	+2.0
MARNC	Mare, Loyalty	13.24	260	P	P	12 13 45.4	+1.7
PINNC	Pines Island,	13.92	255	P	P	12 13 51.5	+0.6
LIFNC	LIFOU	13.93	263	P	P	12 13 51.3	+0.3
DZM	Mont Dzumac	14.77	258	P	P	12 14 00.9	+1.0
	1.9nm,0.8s,baz=117,slow=16,SNR=1.3						
URZ	Urewera	19.02	192	P	P	12 14 42.3	+0.8
	5.6nm,0.3s,baz=270,slow=5.7,SNR=6.1						
ODZ	Otahua Downs	27.02	198	P	P	12 15 51.2	-1.9
EIDS	Eidsvold	29.11	253	P	P	12 16 11.4	-0.3
EIDS				IAmb	IAmb	12 16 21.1	
	comp=Z,17nm,1.4s						
CTAO	Charters Tower	33.61	263	P	P	12 16 51.2	+0.7
CTAO				IAmb	IAmb	12 16 52.3	
	comp=Z,6.9nm,1.1s						
COEN	Coen	37.57	273	P	P	12 17 23.6	+0.1
COEN				IAmb	IAmb	12 17 31.5	
	comp=Z,7.4nm,1.5s						
BBOO	Buckleboo	42.95	243	P	P	12 18 04.9	-1.5
WR0	Warramunga Arr	44.56	261	P	P	12 18 19.2	+0.1
WB0	Warramunga Arr	44.73	261	P	P	12 18 20.2	-0.1
WB0				IAmb	IAmb	12 18 22.6	
	comp=Z,10nm,1.5s						
WB2	Warramunga Arr	44.74	261	P	P	12 18 20.6	+0.1
WB2				IAmb	IAmb	12 18 21.3	
	comp=Z,5.4nm,1.5s						
ASAR	Alice Springs	44.74	256	P	P	12 18 20.6	+0.1
	comp=Z,3.2nm,0.7s,baz=94,slow=7.8,SNR=28						
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	44.74	256	P	P	12 18 20.1	-0.5
WRA	Warramunga Arr	44.75	261	P	P	12 18 20.7	+0.1
	comp=Z,0.9nm,0.6s,baz=97,slow=7.1,SNR=28						
	comp=Z,0.9nm,0.6s						
WRA	Warramunga Arr	44.75	261	P	P	12 18 21.3	+0.7
KNRA	Kununurra	50.75	266	P	P	12 19 04.9	-0.7
KNRA				IAmb	IAmb	12 19 19.6	
	comp=Z,14nm,1.4s						
PSA00	Pilbara Seismi	57.89	256	P	P	12 19 54.4	-1.6
PSA00				IAmb	IAmb	12 20 16.1	
	comp=Z,7.1nm,1.1s						
VNDA	Vanda	58.74	185	P	P	12 20 02.6	+1.8
MORW	Morawa	60.18	247	P	P	12 20 09.4	-1.8
ADK	Adak	71.25	1	P	P	12 21 20.4	+0.5
TXAR	Lajitas Array	86.58	57	P	P	12 22 43.1	+0.9
	comp=Z,0.3nm,0.7s,baz=231,slow=5.7,SNR=3.6						
	comp=Z,0.3nm,0.7s						
CCB	Clear Creek Bu	87.20	13	P	P	12 22 44.8	+0.7
CCB				IAmb	IAmb	12 22 51.9	
	comp=Z,2.7nm,1.5s						
IMAR	Indian Mountai	87.33	10		P	12 22 46.1	+1.4
ILAR	Eielson Array	87.50	13	P	P	12 22 46.5	+1.0
	comp=Z,0.1nm,0.4s,baz=211,slow=6.2,SNR=3.2						
	comp=Z,0.1nm,0.4s						
DAWY	Dawson	88.65	16	P	P	12 22 52.5	+1.5
SNAA	Sanae	88.84	178	P	P	12 22 51.1	-0.9
SNAA				IAmb	IAmb	12 22 59.0	
	comp=Z,6.4nm,1.4s						

*IDC **28** 12:27:59.0±1.1, 56°.11S×25°.65W, h0^{km}, mb4.3/7, mbtmp4.3/7, Error ellipse: s-maj=28.7km s-min=25.1km az=82.0*

*NEIC **28** 12:28:01.0±1.2, 56°.2S±0°.1×25°.93W±0°.08, h10^{km}±1^{km}, mb4.5/22, Error ellipse: s-maj=23.8km s-min=5.0km az=14.0*

ISC 28 12:28:00.8±0.8**, 56°.2S**±0°.1×**25°.9W**±0°.1**, h10^{km}, n34,** σ**0^{s}.89**/33**, mb4.5**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.33	283	Pn	Pn	12 29 34.0	0.0
VNA1	Neumayer--Stat	16.43	159	P	Pn	12 31 51.3	+0.3
VNA3	Neumayer Olymp	16.66	162	P	Pn	12 31 54.0	+0.1
VNA2	Neumayer--Watz	16.83	159	P	Pn	12 31 55.9	-0.2
	baz=326,slow=14						
SNAA	Sanae	18.36	157	P	P	12 32 17.3	+2.2
SNAA	Sanae	18.36	157	P	P	12 32 16.8	+1.6
PMSA	Palmer Station	20.37	229	P	Pn	12 32 38.8	-0.3
	17nm,0.9s,baz=77,slow=8.0,SNR=2.9						
	17nm,0.9s						
PMSA	Palmer Station	20.37	229	P	P	12 32 37.2	+0.2
PMSA				IAmb	IAmb	12 32 43.6	
	comp=Z,15nm,0.8s						
BELA	Belgrano 2	22.02	185	P	P	12 32 53.3	-1.6
BELA				IAmb	IAmb	12 33 02.7	
	comp=Z,18nm,1.2s						
DSPA	Despedida	24.08	257	P	P	12 33 15.8	-0.2
TRQA	Tornquist	30.02	292	P	P	12 34 09.2	-0.4
TRQA				IAmb	IAmb	12 34 38.3	
	comp=Z,8.9nm,1.2s						
PLCA	Paso Flores	32.72	279	P	P	12 34 32.5	-0.9
	comp=Z,1.4nm,0.8s,baz=137,slow=15,SNR=4.0						
	comp=Z,1.4nm,0.8s						
PLCA	Paso Flores	32.72	279	P	P	12 34 32.3	-1.0
PLCA				IAmb	IAmb	12 34 32.4	
	comp=Z,6.0nm,1.2s						
QSPA	South Pole Qui	34.09	180	P	P	12 34 45.1	-0.1
QSPA				IAmb	IAmb	12 34 45.9	
	comp=Z,5.8nm,0.7s						
CPUP	Villa Florida	37.42	310	P	P	12 35 13.5	-0.3
	comp=Z,1.2nm,0.4s,baz=146,slow=6.4,SNR=5.4						
	comp=Z,1.2nm,0.4s						
MT09	Talagante	38.02	287	P	P	12 35 18.1	-1.0
MT02	Curacav	38.50	287	P	P	12 35 22.3	-0.6
MT02				IAmb	IAmb	12 35 22.9	
	comp=Z,7.5nm,0.6s						
ROC1	El Roble	38.65	288	P	P	12 35 24.2	-0.2
ROC1				IAmb	IAmb	12 35 28.1	
	comp=Z,10nm,0.6s						
CO02	Combarbal	40.02	289	P	P	12 35 35.9	+0.1
CO02				IAmb	IAmb	12 35 54.6	

	comp=Z,17nm,1.3s						
LCO	Las Campanas	41.60	292	P	P	12 35 49.0	-0.1
LCO				IAmb	IAmb	12 35 49.5	
	comp=Z,9.4nm,0.8s						
AC04	Llanos de Chal	42.45	292	P	P	12 35 56.1	+0.5
LVC	Limon Verde	45.97	299	P	P	12 36 25.7	+1.4
	comp=Z,6.5nm,0.4s,baz=134,slow=3.8,SNR=14						
	comp=Z,6.5nm,0.4s						
LVC	Limon Verde	45.97	299	P	P	12 36 25.8	+1.4
VNDA	Vanda	46.50	182	P	P	12 36 27.4	0.0
	comp=Z,1.6nm,0.8s,baz=204,slow=7.7,SNR=14						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	46.50	182	P	P	12 36 27.6	+0.2
LPAZ	La Paz	51.02	304	P	P	12 37 04.8	+1.2
	comp=Z,2.2nm,0.4s,baz=140,slow=5.6,SNR=16						
	comp=Z,2.2nm,0.4s						
LPAZ	La Paz	51.02	304	P	P	12 37 04.5	+0.9
LPAZ				IAmb	IAmb	12 37 09.1	
	comp=Z,5.1nm,0.8s						
TOA0	Torodi Ar. Sit	72.81	28	P	P	12 39 29.0	-0.3
TOA0				IAmb	IAmb	12 39 46.6	
	comp=Z,7.1nm,1.4s						
TORD	Torodi Ar. Bea	72.81	28	P	P	12 39 28.4	-0.9
	comp=Z,2.0nm,0.5s,baz=200,slow=6.4,SNR=32						
	comp=Z,2.0nm,0.5s						
TORD	Torodi Ar. Bea	72.81	28	P	P	12 39 28.5	-0.8
BAUV	El Baul	73.62	316	P	P	12 39 35.0	+0.9
NWAO	Narrogin (SRO)	85.88	150	P	P	12 40 39.4	-1.2
ILAR	Eielson Array	150.72	311	PKPbc	PKPbc	12 47 51.4	-0.2
	comp=Z,2.1nm,0.8s,baz=140,slow=4.1,SNR=20						
ILAR	Eielson Array	150.72	311		PKPbc	12 47 51.6	0.0

*IDC **28** 12:41:13.3±4.1, 30°.65S×177°.73W, h0^{km}, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=142.0km s-min=49.3km az=154.0*

*NEIC **28** 12:41:23.7±1.2, 30°.3S±0°.2×178°.2W±0°.1, h54^{km}±9^{km}, mb4.2/9, Error ellipse: s-maj=26.4km s-min=11.0km az=163.0*

ISC 28 12:41:21.0±1.7**, 30°.4S**±0°.2×**178°.1W**±0°.2**, h35^{km}, n18, σ1^{s}26**/16**, mb4.2**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.18	8	Sn	Sn	12 42 08.3	+13
	52nm,0.3s,baz=272,slow=23,SNR=1.9						
OUZ	Omahuta	8.46	233	Pn	Pn	12 43 21.3	+0.3
URZ	Urewera	8.76	205	Sn	Sn	12 44 45.1	-17
	0.9nm,0.3s,baz=181,slow=18,SNR=2.2						
ODZ	Otahua Downs	17.07	208		Pn	12 45 14.4	-2.3
CTA	Charters Tower	33.70	279	P	P	12 48 00.8	+1.8
	1.5nm,0.6s,baz=97,slow=10,SNR=5.5						
	1.5nm,0.6s						
CTAO	Charters Tower	33.70	279	P	P	12 47 59.0	-0.1
CTAO				IAmb	IAmb	12 48 19.0	
	comp=Z,9.5nm,1.5s						
STKA	Stephens Creek	34.38	257	P	P	12 48 05.3	+0.6
	comp=Z,1.0nm,0.5s,baz=180,slow=3.0,SNR=3.8						
	comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	34.38	257	P	P	12 48 05.6	+0.8
ASAR	Alice Springs	43.01	267	P	P	12 49 16.1	-1.2
	comp=Z,0.5nm,0.6s,baz=106,slow=7.3,SNR=9.7						
	comp=Z,0.5nm,0.6s						
WR0	Warramunga Arr	43.82	272	P	P	12 49 23.8	0.0
WR0				IAmb	IAmb	12 49 41.9	
	comp=Z,2.7nm,1.1s						
WB2	Warramunga Arr	43.99	272	P	P	12 49 24.9	-0.3
WB2				IAmb	IAmb	12 49 38.2	
	comp=Z,5.9nm,1.1s						
WRAB	Tennant Creek	43.99	272	P	P	12 49 24.0	-1.2
WRAB				IAmb	IAmb	12 49 40.5	
	comp=Z,2.7nm,0.5s						
WRA	Warramunga Arr	44.00	272	P	P	12 49 25.1	-0.2
	comp=Z,1.0nm,0.4s,baz=113,slow=7.6,SNR=40						
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	44.00	272	P	P	12 49 24.8	-0.5
WB0	Warramunga Arr	44.02	272	P	P	12 49 24.8	-0.7
WB0				IAmb	IAmb	12 49 26.1	
	comp=Z,6.9nm,1.4s						
QSPA	South Pole Qui	59.69	180	P	P	12 51 23.5	+1.7
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	13 00 51.9	-1.6
	comp=Z,0.7nm,0.5s,baz=68,slow=3.0,SNR=9.4						
FINES	FINESS Array B	145.13	340		PKPbc	13 00 52.4	-1.1

IDC 28 12:54:35.2±2.7**, 30°.84S**×**177°.62W, h0^{km}, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=58.4km s-min=27.6km az=108.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.61	351	Pn	Pn	12 55 03.9	-0.9
	33nm,0.3s,baz=73,slow=19,SNR=2.5						
RAO				Sn	Sg	12 55 28.7	+1.8
	55nm,0.3s,baz=90,slow=20,SNR=2.2						
CTA	Charters Tower	34.20	280	P	P	13 01 22.9	+0.2
	1.8nm,1.1s,baz=108,slow=14,SNR=1.5						
	1.8nm,1.1s						
ASAR	Alice Springs	43.42	267	P	P	13 02 39.8	-0.2
	0.4nm,0.5s,baz=107,slow=7.3,SNR=8.7						
ASAR				PcP	PcP	13 04 27.8	-0.7
	0.3nm,0.9s,baz=109,slow=4.8,SNR=2.2						
	0.4nm,0.5s						
WRA	Warramunga Arr	44.45	272	P	P	13 02 48.0	-0.3
	0.7nm,0.5s,baz=113,slow=7.6,SNR=22						
	0.7nm,0.5s						
FINES	FINESS Array B	145.67	340	PKPbc	PKPdf	13 14 14.9	0.0
	0.8nm,0.5s,baz=35,slow=5.1,SNR=6.1						

IDC 28 13:15:08.4±1.5**, 2°.39N**×**128°.10E, h0^{km}, mb3.6**/5**, mbtmp3.6**/5**, Error ellipse: s-maj=122.8km s-min=19.2km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.02	165	P	P	13 20 15.6	+0.3
	0.4nm,0.3s,baz=344,slow=11,SNR=22						
	0.4nm,0.3s						
ASAR	Alice Springs	26.51	168	P	P	13 20 47.4	-0.4
	0.5nm,0.6s,baz=356,slow=7.9,SNR=11						
	0.5nm,0.6s						
SONM	Songino Array	49.00	341	P	P	13 23 56.8	-0.3
	0.2nm,0.3s,baz=158,slow=12,SNR=1.8						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.43	325	P	P	13 25 13.6	+0.6
	0.5nm,0.4s,baz=114,slow=8.1,SNR=11						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	63.60	327	P	P	13 25 40.6	-0.4
	0.8nm,0.4s,baz=129,slow=6.0,SNR=8.2						
	0.8nm,0.4s						

*UCR **28** 13:35:50.4±0.8, 10°.37N×84°.71W, h97^{km}±3^{km}, MW3.7*

*INET **28** 13:35:51.1±1.1, 10°.46N×84°.62W, h3^{km}±5^{km}, MW2.6*

ISC 28 13:35:50.4±2.0**, 10°.38N**±0°.05×**84°.73W**±0°.05**, h99^{km}**±15^{km}**, n24, σ0^{s}32**/31**, 4C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEDE	Laguna Cedeo	0.10	13	i P	Pn	13 36 04.3	-0.1
SRA1	San Ramn	0.38	141	eP	Pn	13 36 05.1	-0.4
CUI	Cuipilapa	0.51	302	⇑iP	Pn	13 36 06.2	0.0
CUI				i S	Sn	13 36 18.2	+0.2
COLC	Colonia	0.55	301	⇑iP	Pn	13 36 06.5	0.0
COLC				i S	Sn	13 36 18.5	0.0
HORNC	Hornillas	0.55	306	⇑iP	Pn	13 36 06.5	-0.1
VMAR	Armenia, Volca	0.57	318	eP	Pn	13 36 06.8	0.0
LAFE	Finca La Fe, P	0.60	197	eP	Pn	13 36 06.5	-0.4
GPS2	Hotel Rincn d	0.71	301	⇑eP	Pn	13 36 08.0	0.0
JACO	JACO, Garabito	0.72	175	eP	Pn	13 36 07.5	-0.5
ORTG	Ortega, Santa	0.72	268	eP	Pn	13 36 08.1	+0.1
GUAI	GUAI	0.78	262	i P	Pn	13 36 08.7	+0.2
GB1A	Borinquen Arri	0.79	303	i P	Pn	13 36 08.8	+0.2
DUNO	Dulce Nombre,	0.81	248	eP	Pn	13 36 08.5	-0.3
DUNO				eS	Sn	13 36 23.2	+0.6
HZTE	Horizontes, Gu	0.91	291	eP	Pn	13 36 10.1	+0.3
HZTE	Horizontes, Gu	0.91	291	eP	Pn	13 36 10.1	+0.3
HZTE				eS	Sn	13 36 24.6	+0.2
INDI	Punta indio, G	0.92	236	eP	Pn	13 36 09.4	-0.5
LCR2	La Lucha 2	0.96	132	eP	Pn	13 36 10.3	-0.2
SAJU	San Juanillo,	1.02	252	eP	Pn	13 36 10.2	-0.7
RIMA	Rio Macho	1.05	126	eP	Pn	13 36 11.4	-0.1
RIMA	Rio Macho	1.05	126	eP	Pn	13 36 11.4	-0.1
RIMA				eS	Sn	13 36 27.4	0.0
CDM	Cerro de Muert	1.26	131	eP	Pn	13 36 14.4	+0.2
PEZE	Perez Zeledon,	1.44	134	eP	Pn	13 36 16.4	+0.5
PEZE				eS	Sn	13 36 35.5	+0.3
ACON	Acoyapa	1.63	345	eP	Pn	13 36 18.1	-0.2
ESPN	Las Esperanzas	1.85	13	eP	Pn	13 36 20.6	-0.4
ESPN				eS	Sn	13 36 44.1	-0.2

*NEIC **28** 13:37:58.9±1.0, 51°.6N±0°.1×174°.0W±0°.1, h40^{km}±69^{km}, Error ellipse: s-maj=21.6km s-min=9.1km az=170.0*

*AEIC **28** 13:37:59±1.2, 51°.8N±0°.1×174°.15W±0°.05, h61^{km}±9^{km}, ML2.9, Error ellipse: s-maj=20.4km s-min=2.9km az=187.0*

*IDC **28** 13:38:04.1±2.0, 53°.31N×175°.32W, h0^{km}, mb3.6/7, mbtmp3.6/10, ML3.8/2, Error ellipse: s-maj=59.1km s-min=18.4km az=170.0*

ISC 28 13:37:58.4±1.1**, 51°.6N**±0°.1×**174°.00W**±0°.07**, h35^{km}, n24, σ1^{s}30**/23**, mb3.7**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.59	348		Pn	13 38 11.2	+0.9
KOKL	Mount Kliuchef	0.71	350		Pn	13 38 13.4	+1.4
GSMY	Great Sitkin M	1.35	289		Pn	13 38 21.1	+0.4
GSTR	Great Sitkin T	1.36	291		Pn	13 38 21.5	+0.5
GSCK	Great Sitkin C	1.40	287		Pn	13 38 21.9	+0.4
GSTD	Great Sitkin T	1.40	289		Pn	13 38 21.7	+0.2
ADK	Adak	1.69	280		Pn	13 38 25.5	+0.1
KIWB	Kanaga Island	1.98	278		Pn	13 38 29.8	+0.5
KIKV	Kanaga Island	1.99	279		Pn	13 38 30.4	+0.8
KICM	Kanaga Island	2.01	280		Pn	13 38 30.8	+1.0
KIMD	Kanaga Island	2.02	275		Pn	13 38 30.9	+0.9
TAFP	Tanaga Falls P	2.49	278		Pn	13 38 37.8	+1.3
TASE	Tanaga Southea	2.52	276		Pn	13 38 38.2	+1.3
NIKH	Nikolski High	3.43	65	Pn	Pn	13 38 49.8	+0.4
KDAK	Kodiak Island	13.79	55	Pn	P	13 41 19.1	-0.1
	1.0nm,0.3s,baz=286,slow=7.5,SNR=20						
	1.8nm,0.3s						
PETK	Petropavlovsk-	17.31	286	Pn	Pn	13 41 53.3	-3.7
	2.6nm,1.0s,baz=89,slow=14,SNR=1.9						
ILAR	Eielson Array	19.21	36	P	P	13 42 18.7	-0.4
	0.2nm,0.3s,baz=236,slow=9.7,SNR=13						
	0.4nm,0.5s						
KLR	Kul'dur	33.98	288	P	P	13 44 37.5	-0.8
	0.6nm,0.5s,baz=73,slow=9.8,SNR=4.0						
	0.6nm,0.5s						
KSRS	Korea Array	42.63	274	P	P	13 45 53.9	+2.8
	0.8nm,0.9s,baz=57,slow=9.2,SNR=5.1						
	0.8nm,0.9s						
PDAR	Pinedale Array	43.36	75	P	P	13 46 11.0	+14
	0.4nm,0.5s,baz=303,slow=3.1,SNR=5.7						
	0.4nm,0.5s						
SONM	Songino Array	49.19	299	P	P	13 46 43.8	+0.9
	0.4nm,0.5s,baz=51,slow=5.7,SNR=2.9						
	0.4nm,0.5s						
MKAR	Makanchi Array	62.19	311	P	P	13 48 15.8	-0.2
	0.2nm,0.3s,baz=52,slow=3.8,SNR=2.7						
	0.2nm,0.3s						
FINES	FINESS Array B	66.15	350	P	P	13 48 40.9	-0.8
	1.3nm,0.8s,baz=10,slow=12,SNR=4.2						
	1.3nm,0.8s						
NOA	NORSAR Array B	67.61	357	P	P	13 48 50.2	-0.8
	0.2nm,0.6s,baz=2.5,slow=6.2,SNR=1.5						
	0.2nm,0.6s						

*IDC **28** 13:40:24.1±2.8, 26°.99N×130°.16E, h0^{km}, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=287.5km s-min=26.5km az=75.0*

*JMA **28** 13:40:27.2±0.1, 26°.9N±0°.5×130°.2E±0°.5, h52^{km}, MV3.8/23, NEAR MINAMI-DAITOJIMA IS*

ISC 28 13:40:24.1±1.5**, 26°.90N**±0°.03×**130°.25E**±0°.04**, h5^{km}**±11^{km}**, n23, σ1^{s}40**/38**, mb3.6**/4**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKDJ	Kitadaitoujima	1.34	135	i P	Pg	13 40 49.7	0.0
JKDJ				eS	Sg	13 41 06.6	-0.4
JMZ	Minamidaito 2	1.39	141	P	Pn	13 40 50.5	+0.4
JMZ				eS	Sg	13 41 07.2	-1.6
JZK	Kikaishima	1.43	350	eP	Pn	13 40 52.7	+2.0
JZK				S	Sg	13 41 10.4	+0.4
JTK	Tokunoshima	1.45	308	P	Pn	13 40 51.7	+0.7
JTK				S	Sg	13 41 09.9	-0.9
JOKE	Okinoerabujima	1.56	287	P	Pn	13 40 53.2	+0.7
JOKE				S	Sn	13 41 11.5	-1.7
JAM	Amami Oshima	1.61	339	P	Pn	13 40 54.0	+0.8
JAM				S	Sn	13 41 12.7	-1.6
JYRO	Yoronjima	1.61	275	i P	Pn	13 40 53.6	+0.4
JYRO				S	Sn	13 41 12.9	-1.3
JAMN	Amaminishikomi	1.64	325	P	Pn	13 40 54.1	+0.5
JAMN				S	Sn	13 41 13.0	-2.1
JOW	Kunigami	1.76	268	Sn	Sn	13 41 16.8	-1.4
	baz=112,slow=19						
JOW	Kunigami	1.76	268	P	Pn	13 40 55.9	+0.6
JOW				S	Sn	13 41 16.8	-1.4
JNTH	Nagotoyohara	2.03	260	P	Pn	13 40 59.1	+0.2
JNTH				S	Sn	13 41 22.8	-1.8
JIH	Iheya	2.04	274	P	Pn	13 41 00.1	+1.0
JIH				S	Sn	13 41 24.3	-0.6
JJT3	Tamagusuku3	2.33	252	P	Pn	13 41 03.9	+0.7
JJT3				S	Sn	13 41 31.2	-1.0
JTAJ	Takarajima	2.42	338	eP	Pn	13 41 05.1	+0.7
JTAJ				S	Sn	13 41 32.3	-2.1
JAGN	Aguni-jima	2.71	264	P	Pn	13 41 09.0	+0.8
JAGN				S	Sn	13 41 39.1	-2.3
JNN	Nakanoshima	2.95	354	S	Sn	13 41 46.3	-1.0
JKE	Kume jima 2	3.15	260	P	Pn	13 41 15.1	+0.7
JKE				S	Sn	13 41 50.7	-1.6
JYAK	Yakushimahirau	3.33	4	eS	Sn	13 41 54.1	-2.7
JMTN	Minamitane	3.53	9	S	Sn	13 41 58.9	-2.8
WRA	Warramunga Arr	46.74	175	P	P	13 48 55.2	+0.9
	0.4nm,0.7s,baz=354,slow=8.4,SNR=4.8						
	0.4nm,0.7s						
ASAR	Alice Springs	50.40	176	P	P	13 49 24.5	+2.0
	0.3nm,0.5s,baz=8.3,slow=14,SNR=8.9						
	0.3nm,0.5s						
FINES	FINESS Array B	73.16	331	P	P	13 51 55.9	+0.4
	0.6nm,0.7s,baz=67,slow=11,SNR=3.4						
	0.6nm,0.7s						
NOA	NORSAR Array B	79.50	334	P	P	13 52 31.8	+0.2
	0.5nm,0.7s,baz=51,slow=5.8,SNR=3.7						
	0.5nm,0.7s						

NEIC 28 13:52:50.2±0.8**, 35°.672N**±0°.010×**97°.40W**±0°.01**, h6^{km}**±2^{km}**, ML2.0**/32**, Error ellipse: s-maj=1.5km s-min=1.1km az=208.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCSW	OKLAHOMA CITY	0.27	187	Pg	Pg	13 52 55.1	-0.4
OKCSW				Sg	Sg	13 52 59.1	0.0
FNO	Franklin	0.41	180	Pg	Pg	13 52 57.6	-0.7
FNO				Sg	Sg	13 53 03.8	+0.1
X34A	Smith Ranch, M	1.13	199	Pg	Pg	13 53 11.0	-0.8
X34A				IAML		13 53 27.6	
	comp=N,40nm,0.2s						
X34A				IAML		13 53 27.8	
	comp=E,31nm,0.4s						
TUL1	Leonard	1.33	79		Pn	13 53 13.4	-1.9
TUL1				IAML		13 53 33.0	
	comp=N,32nm,0.1s						
TUL1				IAML		13 53 33.1	
	comp=E,28nm,0.3s						
T35A	Sooner Cattle	1.43	30		Pn	13 53 15.7	-1.1
WMOK	Wichita Mounta	1.47	231		Pn	13 53 15.9	-1.3
U32A	Winter Ranch,	1.48	299		Pn	13 53 16.6	-0.9
X37A	Clayton	1.98	122	Pn	Pn	13 53 24.3	0.0
HHAR	Hobbs	2.87	77	Pn	Pn	13 53 38.0	+1.5

*IDC **28** 13:53:46.2±1.0, 36°.61N×26°.40E, h0^{km}, mb3.6/6, mbtmp3.5/10, ML3.5/4, Error ellipse: s-maj=22.9km s-min=11.5km az=135.0*

*DDA **28** 13:53:47.1±0.0, 36°.63N×26°.39E, h7^{km}±6^{km}, ML3.1*

*ISK **28** 13:53:48.3, 36°.66N×26°.46E, h14^{km}, ML3.4/22*

*ATH **28** 13:53:48.1, 36°.68N×26°.50E, h39^{km}±6^{km}, ML3.5/15, Error ellipse: s-maj=7.0km s-min=1.3km az=51.0*

*THE **28** 13:53:49.2, 36°.69N×26°.50E, h16^{km}±1^{km}, ML3.4/10, Error ellipse: s-maj=2.0km s-min=0.6km az=101.0*

ISC 28 13:53:48.5±1.0**, 36°.64N**±0°.02×**26°.46E**±0°.02**, h20^{km}**±4^{km}**, n96, σ1^{s}15**/130**, mb3.5**/6**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	Kos Island	0.43	75	P	Pg	13 53 57.0	-0.5
KOSK				AML	AML	13 54 05.8	
	comp=N,22764µm,0.4s						
KOSK				AML	AML	13 54 09.9	
	comp=E,26656µm,0.6s						
KOSK	Kos Island	0.43	75	P	Pg	13 53 57.0	-0.5
KOSK				S	Sg	13 54 02.8	-0.8
	comp=E,4µm,0.5s						
KOSK	Kos Island	0.43	75	PG	Pb	13 53 57.5	-0.1
KOSK				SG	Sb	13 54 03.7	0.0
NISR	Nisiros	0.54	93	P	Pg	13 53 58.9	-0.6
NISR				S	Sb	13 54 06.5	-0.2
NISR				AML	AML	13 54 10.6	
	comp=N,6181µm,0.3s						
NISR				AML	AML	13 54 12.9	
	comp=E,11089µm,0.4s						
NISR	Nisiros	0.54	93	P	Pb	13 53 59.2	-0.1
NIS1	Nisyros Isl.	0.58	94	P	Pb	13 53 60.0	-0.1
NIS1				AML	AML	13 54 12.6	
	comp=N,9588µm,0.4s						
NIS1				AML	AML	13 54 13.8	
	comp=E,10087µm,0.5s						
NIS1	Nisyros Isl.	0.58	94	P	Pb	13 54 00.0	-0.1
NIS1				S	Sb	13 54 07.8	-0.1
	comp=E,5µm,0.4s						
NIS1	Nisyros Isl.	0.58	94	PG	Pb	13 53 59.9	-0.1
NIS1				SG	Sb	13 54 08.9	+1.0
BODT	Bodrum	0.80	58	P	Pg	13 54 03.2	-1.1
BODT				S	Sb	13 54 14.4	+0.1
BODT	Bodrum	0.80	58	PG	Pb	13 54 03.8	-0.1
BODT				SG	Sn	13 54 15.6	-0.6
THR8	Santorini-Mono	0.82	254	P	Pb	13 54 04.6	+0.5
THR8	Santorini-Mono	0.82	254	P	Pb	13 54 04.6	+0.5
SANT	Santorini	0.85	252	P	Pb	13 54 05.1	+0.5
SANT				S	Sn	13 54 17.9	+0.6
SANT				AML	AML	13 54 21.0	
	comp=N,3331µm,0.3s						
SANT				AML	AML	13 54 22.1	
	comp=E,7133µm,0.4s						
SANT	Santorini	0.85	252	P	Pb	13 54 05.1	+0.5
SANT				S	Sn	13 54 18.0	+0.7
	comp=E,3µm,0.6s						
SANT	Santorini	0.85	252	PG	Pn	13 54 05.5	+0.1
SANT				SG	Sn	13 54 17.7	+0.4
APE	Apeiranthos	0.85	300	P	Pn	13 54 05.9	+0.3
APE				S	Sb	13 54 16.3	+0.5
APE				AML	AML	13 54 18.8	
	comp=N,8802µm,0.5s						
APE				AML	AML	13 54 20.0	
	comp=E,7702µm,0.3s						
APE	Apeiranthos	0.85	300	P	Pn	13 54 05.7	+0.2
APE				S	Sn	13 54 17.7	+0.2
	comp=E,4µm,0.4s						
APE	Apeiranthos	0.85	300	PG	Pb	13 54 04.9	+0.2
APE				SG	Sn	13 54 17.6	+0.1
CMBO	Columbo, Santo	0.86	259	P	Pn	13 54 05.6	+0.1
CMBO				S	Sn	13 54 18.3	+0.7
	comp=E,5µm,0.4s						
THR3	Thira Island,	0.88	255	P	Pn	13 54 06.5	+0.7
THR3	Thira Island,	0.88	255	P	Pn	13 54 06.1	+0.3
SNT5	Nea Kammeni, S	0.89	255	P	Pn	13 54 06.6	+0.7
SAP4	Santorini-Oia	0.89	259	P	Pn	13 54 06.0	+0.2
BDRM	Kayabasi	0.90	62	P	Pb	13 54 05.0	-0.4
BDRM				S	Sb	13 54 17.8	+0.8
BDRM				i AML	AML	13 54 20.0	
	comp=E,892nm,0.4s						
BDRM				i AML	AML	13 54 27.0	
	comp=E,651nm,0.7s						
THR6	Thira Island,	0.90	252	P	Pn	13 54 06.4	+0.3
DAT	Datca	0.91	84	P	Pg	13 54 05.8	-0.5
DAT	Datca	0.91	84	PG	Pn	13 54 06.1	-0.2
DAT	Datca	0.91	84	P	Pn	13 54 06.1	-0.2
DAT				S	Sn	13 54 20.4	+1.6
DAT				i AML	AML	13 54 24.0	
	comp=E,338nm,0.7s						
DAT				i AML	AML	13 54 25.0	
	comp=E,294nm,0.4s						
SAP3	Santorini-Thir	0.92	257	P	Pn	13 54 06.7	+0.4
SAP3	Santorini-Thir	0.92	257	P	Pn	13 54 06.7	+0.4
THR9	Santorini-Faro	0.93	252	P	Pn	13 54 07.2	+0.7
THR9	Santorini-Faro	0.93	252	P	Pn	13 54 07.0	+0.5
DDIM	Aydin, Didim	1.03	38	P	Pb	13 54 07.2	-0.4
DDIM				S	Sn	13 54 24.5	+2.9
DDIM				i AML	AML	13 54 28.0	
	comp=E,2µm,0.7s						
DDIM				i AML	AML	13 54 32.0	
	comp=E,1µm,1.0s						
SMG	Samos	1.11	16	P	Pb	13 54 08.5	-0.5
SMG				S	Sb	13 54 21.5	-1.5
SMG				AML	AML	13 54 29.8	
	comp=E,4040µm,0.7s						
SMG				AML	AML	13 54 31.4	
	comp=N,2570µm,0.3s						
SMG	Samos	1.11	16	P	Pb	13 54 08.2	-0.8
SMG				S	Sb	13 54 21.0	-2.0
	comp=N,2µm,0.5s						
GCAM	G?zelcaml?	1.22	30	PN	Pg	13 54 11.7	-0.6
GCAM	G?zelcaml?	1.22	30	P	Pg	13 54 11.5	-0.8
GCAM				S	Sb	13 54 25.7	-0.7
GCAM				i AML	AML	13 54 32.0	
	comp=N,619nm,0.4s						
GCAM				i AML	AML	13 54 32.0	
	comp=N,699nm,0.6s						
KARP	Karpathos	1.23	152	P	Pb	13 54 11.4	+0.2
KARP				S	Sg	13 54 28.3	-0.3
KARP				AML	AML	13 54 34.1	
	comp=E,4055µm,0.3s						
KARP				AML	AML	13 54 35.8	
	comp=N,3687µm,0.5s						
KARP	Karpathos	1.23	152	P	Pb	13 54 11.3	+0.2
KARP	Karpathos	1.23	152	PN	Pb	13 54 11.4	+0.2
MLSB	Milas	1.24	58	PN	Pb	13 54 11.3	0.0
TNSA	Tinos	1.37	311	P	Pn	13 54 12.6	+0.1
TNSA				AML	AML	13 54 34.3	
	comp=E,1664µm,0.4s						
TNSA				AML	AML	13 54 35.5	
	comp=N,1754µm,0.3s						
ARG	Arkhangelos	1.41	107	P	Pn	13 54 13.7	+0.6
ARG				AML	AML	13 54 37.7	
	comp=N,871µm,0.4s						
ARG				AML	AML	13 54 45.5	
	comp=E,1308µm,0.5s						
ARG	Arkhangelos	1.41	107	P	Pn	13 54 13.8	+0.6
ARG	Arkhangelos	1.41	107	PN	Pn	13 54 13.8	+0.6
TURN	Turunc	1.44	84	PN	Pb	13 54 14.6	-0.1
TURN	Turunc	1.44	84	P	Pb	13 54 14.5	-0.3
DGB	zmir	1.45	14	P	Pn	13 54 13.9	+0.3
DGB				S	Sg	13 54 35.7	+0.4
DGB				i AML	AML	13 54 38.0	
	comp=E,289nm,0.6s						
DGB				i AML	AML	13 54 40.0	
	comp=E,291nm,0.8s						
AYDN	Tasoluk	1.52	48	P	Pb	13 54 15.9	-0.3
AYDN				S	Sg	13 54 39.4	+1.5
AYDN				i AML	AML	13 54 44.0	
	comp=E,226nm,0.8s						
AYDN				i AML	AML	13 54 44.0	
	comp=E,230nm,0.5s						
NPS	Neapolis	1.54	207	P	Pn	13 54 15.6	+0.7
NPS				S	Sb	13 54 36.2	+0.8
NPS	Neapolis	1.54	207	P	Pn	13 54 15.6	+0.7
NPS				S	Sn	13 54 35.3	+1.0
ZKR	Zakros	1.54	187	P	Pb	13 54 16.0	-0.3
ZKR				S	Sg	13 54 37.6	-0.7
ZKR				AML	AML	13 54 41.3	
	comp=N,1576µm,0.4s						
ZKR				AML	AML	13 54 42.0	
	comp=E,2321µm,0.5s						
ZKR	Zakros	1.54	187	P	Pn	13 54 15.8	+0.9
ZKR				S	Sb	13 54 35.8	+0.4
	comp=E,1µm,0.8s						
ZKR	Zakros	1.54	187	PN	Pb	13 54 16.2	-0.2
YER	Yerkesik	1.54	71	P	Pb	13 54 15.8	-0.7
YER	Yerkesik	1.54	71	PN	Pb	13 54 16.1	-0.4
ZEYE	Izmir, Urla-Ze	1.59	1	P	Pb	13 54 16.8	-0.5
MULA	Mugla, Merkez-	1.61	67	P	Pg	13 54 18.9	-0.8
MULA				S	Sg	13 54 41.1	+0.4
MULA				i AML	AML	13 54 55.0	
	comp=E,156nm,0.6s						
MHLO	Agia Marina, M	1.65	272	P	Pn	13 54 17.0	+0.6
MHLO				AML	AML	13 54 46.7	
	comp=E,2793µm,0.5s						

MHLO				AML	AML	13 54 47.9	
	comp=N,2916µm,0.8s						
URLA	Izmir	1.72	4	PN	Pb	13 54 18.8	-0.6
URLA	Izmir	1.72	4	P	Pg	13 54 20.3	-1.3
URLA				*i* AML	AML	13 54 45.0	
	comp=N,729nm,0.8s						
URLA				S	Sg	13 54 45.3	+1.3
URLA				*i* AML	AML	13 54 47.0	
	comp=N,699nm,0.8s						
HRKL	Herakleio	1.72	220	P	Pn	13 54 18.5	+1.1
HRKL				S	Sb	13 54 41.0	+0.3
FRMA	Ierapetra Chan	1.73	200	P	Pn	13 54 18.4	+1.0
FRMA				AML	AML	13 54 48.2	
	comp=N,2249µm,0.4s						
FRMA				AML	AML	13 54 48.4	
	comp=E,3135µm,0.4s						
FRMA	Ierapetra Chan	1.73	200	P	Pn	13 54 18.4	+1.0
FRMA				S	Sn	13 54 39.0	+0.1
	comp=E,455nm,0.4s						
AYDB	Zeytinkoy-Aydi	1.73	41	PN	Pb	13 54 18.9	-0.9
CHOS	Chios island	1.77	350	P	Pn	13 54 17.8	-0.3
CHOS	Chios island	1.77	350	PN	Pn	13 54 18.3	+0.2
DALY	Dalyan (Mula)	1.77	84	PN	Pb	13 54 19.7	-0.7
BLCB	Balcova	1.80	15	PN	Pn	13 54 19.0	+0.5
IDI	Anoyia	1.85	224	Pg	Pn	13 54 20.2	+0.9
	comp=E,6.6nm,0.3s,baz=15,slow=7.4,SNR=34						
IDI				Lg	Lg	13 54 42.2	
	comp=E,20nm,0.3s,baz=81,slow=15,SNR=7.6						
IDI	Anoyia	1.85	224	P	Pn	13 54 20.2	+0.9
IDI				AML	AML	13 54 52.9	
	comp=E,1450µm,0.5s						
IDI				AML	AML	13 54 53.2	
	comp=N,1251µm,0.3s						
IDI	Anoyia	1.85	224	P	Pn	13 54 20.0	+0.7
IDI				S	Sn	13 54 41.5	-0.7
	comp=N,678nm,0.4s						
FETY	Fethiye	2.11	89	PN	Pn	13 54 24.4	+1.6
KARY	Karystos	2.12	311	P	Pn	13 54 23.4	+0.5
CAME	Cameli-Denizli	2.31	82	PN	Pn	13 54 27.1	+1.5
IMMV	Iera Moni Meta	2.33	240	P	Pb	13 54 28.1	-1.7
IMMV				AML	AML	13 55 08.6	
	comp=E,947µm,0.9s						
IMMV				AML	AML	13 55 18.4	
	comp=N,722µm,0.7s						
VLY	Voula,Athens	2.44	300	P	Pn	13 54 28.5	+1.2
VLY				S	Sg	13 55 04.5	-2.6
	comp=N,820nm,0.5s						
DKL	Dikili	2.45	8	PN	Pn	13 54 28.7	+1.3
KULA	Kula-Manisa	2.56	43	PN	Pn	13 54 30.9	+1.9
AKAS	Kas	2.57	98	PN	Pn	13 54 30.9	+1.7
GVD	Gavdhos	2.64	228	P	Pb	13 54 33.5	-1.6
GVD				AML	AML	13 55 13.4	
	comp=E,592µm,0.5s						
GVD				AML	AML	13 55 20.5	
	comp=N,643µm,0.4s						
ANKY	Antikythira Is	2.66	254	P	Pn	13 54 31.7	+1.4
KTHA	Kythira Island	2.76	263	P	Pn	13 54 33.4	+1.7
KTHR	Kythira	2.81	263	P	Pn	13 54 34.2	+1.9
VLI	Veliai	2.83	273	P	Pn	13 54 34.0	+1.4
VILL	Villia	2.93	302	P	Pn	13 54 35.5	+1.5
BRTR	Keskin Array B	6.44	59	Pn	Pn	13 55 25.4	+3.0
	comp=N,0.2nm,0.3s,baz=243,slow=13,SNR=4.7						
	comp=N,0.7nm,0.5s						
EIL	Elat	9.95	132	Pn	Pn	13 56 09.3	-1.1
	comp=N,0.9nm,0.3s,baz=230,slow=2.8,SNR=8.6						
EIL				Sn	Sn	13 57 54.0	-7.5
	comp=N,0.4nm,0.3s,baz=75,slow=17,SNR=1.5						
	comp=N,2.2nm,0.4s						
KBZ	Khabaz	14.41	56	Pn	P	13 57 16.9	-1.1
	comp=N,0.2nm,0.3s,baz=247,slow=10,SNR=1.4						
	comp=N,0.5nm,0.4s						
GERES	GERESS Array B	15.35	327	Pn	Pn	13 57 25.8	+1.8
	comp=N,0.2nm,0.3s,baz=124,slow=18,SNR=1.9						
	comp=N,0.1nm,0.3s						
ESDC	Sonseca Array	24.05	287	P	P	13 59 02.7	+0.3
	comp=N,0.8nm,0.8s,baz=83,slow=9.3,SNR=7.7						
	comp=N,0.8nm,0.8s						
FINES	FINESS Array B	24.82	360	P	P	13 59 09.8	+0.7
	comp=N,1.4nm,0.8s,baz=188,slow=8.4,SNR=2.0						
	comp=N,1.4nm,0.8s						
EKA	Eskdalemuir Ar	27.47	322	P	P	13 59 33.1	-0.1
	comp=N,0.4nm,0.5s,baz=120,slow=9.8,SNR=3.9						
	comp=N,0.4nm,0.5s						
TORD	Torodi Ar. Bea	32.25	230	P	P	14 00 17.2	+1.4
	comp=N,0.5nm,0.7s,baz=29,slow=8.5,SNR=3.8						
	comp=N,0.5nm,0.7s						
MKAR	Makanchi Array	42.09	58	P	P	14 01 39.7	+0.6
	comp=N,0.3nm,0.5s,baz=275,slow=8.0,SNR=3.5						
	comp=N,0.3nm,0.5s						
ZALV	Zalesovo Beam	43.22	47	P	P	14 01 49.4	+1.2
	comp=N,0.6nm,0.4s,baz=269,slow=9.6,SNR=2.8						
	comp=N,0.6nm,0.4s						

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*TUL **28** 13:55:52.4±1.2,35°.662N±0°.009×97°.39W±0°.01,h7km±4km, ML2.5,mb_Lg2.3/12(NEIC),Error ellipse: s-maj=1.6km s-min=1.3km az=97.0*

NEIC 28 13:55:52.5±0.9**,35°.68N**±0°.01×**97°.395W**±0°.007**,h5**km±1km**, Error ellipse: s-maj=2.9km s-min=1.8km az=253.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.10	193		Pg	13 55 54.8	+0.1
OK009				Sg	Sg	13 55 56.5	+0.4
OK005	Luther M Schoo	0.17	99	Sg	Sg	13 55 59.1	+1.0
OKCFA	Oklahoma City	0.27	190	Pg	Pg	13 55 57.8	+0.1
OKCFA				Sg	Sg	13 56 01.7	+0.4
OKCSW	OKLAHOMA CITY	0.28	187	Pg	Pg	13 55 58.0	0.0
FNO	Franklin	0.42	181	Pg	Pg	13 56 00.6	-0.1
X34A	Smith Ranch, M	1.14	199	Pg	Pg	13 56 13.9	-0.4
TUL1	Leonard	1.32	80	Pn	Pn	13 56 16.2	-1.5
T35A	Sooner Cattle	1.42	30	Pn	Pn	13 56 18.6	-0.5
WMOK	Wichita Mounta	1.47	231		Pn	13 56 18.8	-1.0
U32A	Winter Ranch,	1.48	299	Pn	Pn	13 56 18.8	-1.1
X37A	Clayton	1.98	123	Pn	Pn	13 56 26.8	0.0
X37A				IAmb_Lg		13 56 57.0	
	comp=Z,10nm,1.0s						
W39A	Magazine	2.99	98	IAmb_Lg		13 57 34.0	
	comp=Z,5.5nm,0.7s						
X40A	Basin Creek Fa	3.92	106	IAmb_Lg		13 58 02.6	
	comp=Z,9.5nm,1.0s						
PBMO	Poplar Bluff	5.74	77	IAmb_Lg		13 58 58.9	
	comp=Z,5.8nm,0.8s						
143A	Socs Landing,	5.79	119	IAmb_Lg		13 58 53.8	
	comp=Z,5.2nm,0.8s						

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*SNET **28** 13:57:09.0±0.7,13°.74N×90°.83W,h68km±17km,ML3.1*
*GCG **28** 13:57:11.1±0.7,14°.06N×90°.87W,h75km±8km,MD3.6*

ISC 28 13:57:08.4±2.2**,13°.8N**±0°.1×**90°.88W**±0°.09**,h73**km**,n8, σ0ˢ.55**/15**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.69	23	*e*P	Pn	13 57 23.8	+0.2
FUG	Fuego 3	0.69	3	*e*P	Pn	13 57 23.7	0.0
FUG				*e*S	Sn	13 57 34.2	-0.7
NBG	Las Nubes	0.98	32	*e*P	Pn	13 57 27.6	+0.5
NBG				*e*S	Sn	13 57 40.8	-0.1
NUBE	Las Nubes	1.08	82	*e*P	Pn	13 57 27.9	-0.3
NUBE				*e*S	Sn	13 57 42.5	-0.5
NUBE				IAML		13 57 44.4	
	comp=Z,181nm,0.3s						
SLOZ	Alcaldia de Sa	1.10	76	*e*P	Pn	13 57 28.0	-0.3
SLOZ				*e*S	Sn	13 57 43.6	+0.4
SLOZ				IAML		13 57 46.8	
	comp=Z,148nm,0.4s						
STG3	Santiaguito 3,	1.16	325	*e*P	Pn	13 57 29.9	+0.6
STG3				*e*S	Sn	13 57 44.0	-0.8
CEVE	Cerro Verde	1.22	86	*e*P	Pn	13 57 30.3	+0.2
CEVE				*e*S	Sn	13 57 47.2	+0.9
CEVE				IAML		13 57 49.7	
	comp=Z,997nm,0.2s						
JAYA	Jayaque - finc	1.40	94	*e*P	Pn	13 57 32.4	+0.2
JAYA				*e*S	Sn	13 57 49.5	-0.6
JAYA				IAML		13 57 56.3	
	comp=Z,728nm,0.2s						

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*IDC **28** 14:05:47.1±2.6,31°.17S×177°.49W,h0km,mb3.9/3, mbtmp4.0/4,ML3.4/1,Error ellipse: s-maj=60.8km s-min=30.0km az=114.0*

ISC 28 14:05:50.1±2.5**,31°.2S**±0°.1×**177°.6W**±0°.4**,h27**km**,n6, σ2ˢ.08**/9**,mb3.8**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.95	351	Pn	Pn	14 06 20.6	-0.8
	32nm,0.3s,baz=94,slow=20,SNR=1.4						
RAO				Sn	Sn	14 06 42.4	-2.6
	70nm,0.3s,baz=59,slow=22,SNR=2.4						
URZ	Urewera	8.31	210	Pn	Pn	14 07 47.6	-1.2
	0.4nm,0.3s,baz=167,slow=9.9,SNR=3.1						
URZ				Sn	Sn	14 09 19.0	-2.8
	0.5nm,0.3s,baz=194,slow=4.5,SNR=3.2						
	26nm,1.0s						
STKA	Stephens Creek	34.68	258	P	P	14 12 39.2	+1.7
	0.5nm,0.4s,baz=129,slow=6.5,SNR=1.6						
	0.5nm,0.4s						
ASAR	Alice Springs	43.45	268	P	P	14 13 52.7	+1.6
	0.7nm,0.5s,baz=106,slow=7.6,SNR=16						
ASAR				PcP	PcP	14 15 40.0	+0.9
	0.1nm,0.4s,baz=116,slow=4.2,SNR=1.4						
	0.7nm,0.5s						
WRA	Warramunga Arr	44.51	273	P	P	14 14 01.2	+1.6
	1.1nm,0.4s,baz=113,slow=7.6,SNR=41						
	1.1nm,0.4s						
FINES	FINESS Array B	146.01	340	PKPbc	PKPab	14 25 27.9	+0.7
	1.0nm,0.4s,baz=46,slow=2.0,SNR=12						

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*DDA **28** 14:07:09.6±0.0,40°.02N×37°.89E,h20km,ML3.0*
*ISK **28** 14:07:09.6,40°.05N×37°.89E,h7km,ML3.5/20*

ISC 28 14:07:10.6±0.9**,40°.04N**±0°.02×**37°.90E**±0°.02**,h9**km±8km**, n51,σ0ˢ.83**/75**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUZAR	Zara_SIVAS	0.18	213	P	Pg	14 07 14.6	+0.2
CUZAR				S	Sg	14 07 17.8	+0.7
CUZAR				*i* AML	AML	14 07 18.0	
	comp=E,2µm,0.3s						
CUZAR				*i* AML	AML	14 07 18.0	
	comp=N,2µm,0.2s						
SUSE	Susehri	0.29	54	P	Pg	14 07 16.6	0.0
SUSE				*i* AML	AML	14 07 21.0	
	comp=N,8µm,0.2s						
SUSE				S	Sg	14 07 21.7	+1.2
SUSE				*i* AML	AML	14 07 22.0	
	comp=E,7µm,0.3s						
RSDY	Resadiye-TOKAT	0.56	310	PG	Pg	14 07 20.9	-0.7
RSDY				SG	Sg	14 07 29.4	+0.4
REFA	Refahiye_ERZN	0.68	101	P	Pg	14 07 22.7	-1.1
REFA				S	Sg	14 07 32.5	-0.2
REFA				*i* AML	AML	14 07 33.0	
	comp=N,930nm,0.2s						
SVSK	Karacayir	0.70	261	PG	Pg	14 07 22.9	-1.2
SVSK				SG	Sg	14 07 33.8	+0.5
ALUC	Giresun/Alucra	0.74	65	P	Pg	14 07 24.2	-0.7
ALUC				S	Sg	14 07 34.9	+0.4
ALUC				*i* AML	AML	14 07 35.0	
	comp=N,1µm,0.4s						
ALUC				*i* AML	AML	14 07 35.0	
	comp=E,1µm,0.2s						
ILIC	ilic-Erzincan	0.78	138	PG	Pg	14 07 25.2	-0.5
ILIC				SG	Sb	14 07 36.7	-0.5
CUKAN	kangal_SIVAS	0.79	205	P	Pg	14 07 25.1	-0.8
CUKAN				*i* AML	AML	14 07 37.0	
	comp=E,1µm,0.5s						
CUKAN				S	Sb	14 07 37.4	-0.1
CUKAN				*i* AML	AML	14 07 38.0	
	comp=N,1µm,0.3s						
ARPR	Arapgir-MALATY	1.00	160	PG	Pb	14 07 29.4	-0.8
ARPR				SG	Sn	14 07 44.2	-1.1
KELT	Kelkit	1.05	83	P	Pg	14 07 28.9	-1.9
KELT				*i* AML	AML	14 07 44.0	
	comp=E,208nm,0.3s						
KELT				*i* AML	AML	14 07 50.0	
	comp=N,266nm,0.5s						
ERBA	Erbaa	1.08	307	P	Pg	14 07 30.3	-1.2
ERBA				S	Sg	14 07 45.4	-0.1
ERBA				*i* AML	AML	14 07 46.0	
	comp=N,141nm,0.3s						
ERBA				*i* AML	AML	14 07 49.0	
	comp=E,142nm,0.4s						
ESPY	Espiye-Giresun	1.08	36	PG	Pg	14 07 30.1	-1.4
HEKM	Malatya_Hekimh	1.16	178	P	Pg	14 07 31.9	-0.9
HEKM				S	Sn	14 07 50.2	+1.0
HEKM				*i* AML	AML	14 07 52.0	
	comp=N,686nm,0.4s						
HEKM				*i* AML	AML	14 07 58.0	
	comp=E,400nm,0.6s						
CUAYA	Sivas-Altinyay	1.17	229	P	Pg	14 07 32.0	-1.2
CUAYA				S	Sn	14 07 50.5	+1.0
CUAYA				*i* AML	AML	14 07 53.0	
	comp=E,368nm,0.5s						
CUAYA				*i* AML	AML	14 07 54.0	
	comp=N,446nm,0.8s						
CUSAR	Sarkisla-SIVAS	1.42	245	P	Pn	14 07 35.7	-0.9
CUSAR				S	Sn	14 07 55.8	+0.3
CUSAR				*i* AML	AML	14 08 02.0	
	comp=N,390nm,0.5s						
EUZM	Uzumlu	1.43	103	P	Pn	14 07 36.2	-0.6
EUZM				S	Sn	14 07 58.4	+2.6
EUZM				*i* AML	AML	14 08 01.0	
	comp=E,243nm,0.5s						
EUZM				*i* AML	AML	14 08 01.0	
	comp=N,168nm,0.5s						
ERZN	Erzincan	1.48	107	PN	Pn	14 07 37.5	0.0
DARE	Darende-Malaty	1.50	192	PN	Pn	14 07 37.6	-0.2
TNCL	Tunceli-Merkez	1.57	125	P	Pn	14 07 39.0	+0.2
TNCL				S	Sg	14 08 00.9	-0.3
TNCL				*i* AML	AML	14 08 01.0	
	comp=E,504nm,0.7s						
TNCL				*i* AML	AML	14 08 02.0	
	comp=N,578nm,0.7s						
MACK	Trabzon	1.69	57	P	Pn	14 07 41.2	+0.8
MACK				S	Sn	14 08 04.0	+1.8
HACI	Hacifakili, Ak	1.70	259	P	Pn	14 07 40.4	-0.2
HACI				S	Sb	14 08 03.8	+0.2
HACI				*i* AML	AML	14 08 06.0	
	comp=E,171nm,0.5s						
HACI				*i* AML	AML	14 08 12.0	
	comp=N,153nm,0.5s						
KTUT	Trabzon	1.71	56	PN	Pn	14 07 40.6	0.0
AKCD	Akcadag	1.74	179	P	Pb	14 07 42.1	-0.6
AKCD				S	Sg	14 08 08.3	+1.8
AKCD				*i* AML	AML	14 08 09.0	
	comp=N,449nm,0.5s						
AKCD				*i* AML	AML	14 08 13.0	
	comp=E,271nm,0.4s						
BAYT	Aydıntepe-Bayb	1.76	78	PN	Pn	14 07 41.4	0.0
MALT	Malatya	1.77	166	PN	Pn	14 07 41.8	+0.3
ELBS	KAHRAMANMARAS	1.81	199	P	Pb	14 07 43.0	-0.9
ELBS				S	Sg	14 08 09.8	+1.1
ELBS				*i* AML	AML	14 08 12.0	
	comp=E,268nm,0.5s						
BAYB	BAYBURT	1.82	82	P	Pn	14 07 42.5	+0.2
BAYB				S	Sn	14 08 06.4	+0.7
BAYB				*i* AML	AML	14 08 12.0	
	comp=E,129nm,0.5s						
BAYB				*i* AML	AML	14 08 16.0	
	comp=N,151nm,0.3s						
CKRK	Yozgat, Cekere	1.84	272	P	Pn	14 07 43.0	+0.5
CKRK				S	Sb	14 08 08.1	+0.5
CKRK				*i* AML	AML	14 08 11.0	
	comp=N,246nm,0.9s						
CKRK				*i* AML	AML	14 08 16.0	
	comp=E,182nm,0.5s						
BNN	Bunyan	1.98	234	PN	Pn	14 07 44.4	0.0
SVRC	Sivrice-ELAZID	1.98	146	PN	Pn	14 07 44.9	+0.4
SARI	SarD1z-Kayseri	1.99	216	PN	Pn	14 07 44.7	+0.1
KOVA	Elazig, Kovanc	1.99	131	P	Pb	14 07 46.5	-0.6
KOVA				S	Sg	14 08 15.2	+0.5
KOVA				*i* AML	AML	14 08 18.0	
	comp=N,55nm,0.6s						
KOVA				*i* AML	AML	14 08 18.0	
	comp=E,81nm,0.8s						
KOPT	Kop Dagi	2.00	90	P	Pn	14 07 44.5	-0.3
KOPT				*i* AML	AML	14 08 25.0	
	comp=N,92nm,1.0s						
KOPT				*i* AML	AML	14 08 28.0	
	comp=E,109nm,1.0s						
YOZ	Yozgat	2.02	260	PN	Pn	14 07 45.1	+0.1
YEDI	Yedisu-Bingol	2.13	105	PN	Pn	14 07 46.7	+0.2
SIRC	Yozgat	2.23	253	P	Pn	14 07 48.3	+0.4
SIRC				S	Sg	14 08 21.3	-1.1
SIRC				*i* AML	AML	14 08 25.0	
	comp=E,94nm,0.6s						
SIRC				*i* AML	AML	14 08 29.0	
	comp=N,90nm,0.3s						
COAL	Corum-Alaca	2.24	277	P	Pn	14 07 48.7	+0.7
COAL				S	Sg	14 08 23.4	+0.7
COAL				*i* AML	AML	14 08 25.0	
	comp=E,105nm,0.6s						
COAL				*i* AML	AML	14 08 27.0	
	comp=N,73nm,0.5s						
BNGB	Bingl	2.39	115	PN	Pn	14 07 50.5	+0.4
CHAY	Cayeli-Rize	2.40	63	PN	Pn	14 07 50.6	+0.6
CHOM	Cayeli-Rize	2.43	63	PN	Pn	14 07 50.6	+0.1
KOZK	Kozakli-Nevseh	2.48	252	PN	Pn	14 07 51.6	+0.3
CORM	Corum	2.51	274	PN	Pn	14 07 51.9	+0.2
KMRS	Kahramanmaras	2.64	197	PN	Pn	14 07 53.8	+0.3
KOZT	Kozan	3.02	213	PN	Pn	14 07 59.9	+1.3
CMRD	Camardi-Nigde	3.28	225	PN	Pn	14 08 03.1	+0.8
BRTR	Keskin Array B	3.29	266	PN	Pn	14 08 03.1	+0.7
KAMT	Kaman	3.29	260	PN	Pn	14 08 03.5	+1.0
GULA	Gulagac	3.31	240	PN	Pn	14 08 03.5	+0.8
YAYX	Yaylak	3.34	252	PN	Pn	14 08 03.8	+0.6
SERE	Sereflikochisa	3.52	253	PN	Pn	14 08 06.2	+0.6
AFSR	Afar-Bala (An	3.77	263	PN	Pn	14 08 09.9	+0.9

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*IDC **28** 14:14:57.3±2.1,5°.64N×124°.93E,h145km±22km,mb3.4/4, mbtmp4.0/5,Error ellipse: s-maj=57.0km s-min=18.4km az=78.0*
*DJA **28** 14:14:59.3±0.5,6°N±4°×12°6E±°,h171km±5km,M4.2/10, mB4.8/4,mb4.1/10,MLv4.3/10,Mw(mB)4.1/4*
*MAN **28** 14:15:00.2,6°.04N×126°.07E,h155km,mb4.7,ML3.5, MS3.4,Hypocentre not reviewed by the ISC*

ISC 28 14:14:59.5±0.7**,5°.97N**±0°.05×**125°.81E**±0°.09**,h175**km±7km**, n32,σ1ˢ.46**/42**,mb3.7**/4**,5C-3D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.17	322	⇓*e*P	Pn	14 15 22.0	-0.7
DDMP				*e*S	Sn	14 15 39.9	-0.7
GSPH	General Santos	0.87	277	⇑*e*P	Pn	14 15 25.1	-0.8
GSPH				*i* S	Sn	14 15 44.9	-1.3
MATI	Mati	1.06	24	⇑*e*P	Pn	14 15 27.2	0.0
MATI				*e*S	Sn	14 15 50.0	+1.4
DAV	Davao City (W)	1.11	348	P	Pn	14 15 28.2	+0.6
	116nm,0.3s,baz=79,slow=3.4,SNR=7.1						
DAV				S	Sn	14 15 49.9	+0.5
	300nm,0.3s,baz=113,slow=21,SNR=9.3						
KCP	Kidapawan	1.25	325	⇓*i*P	Pn	14 15 29.2	+0.4
KCP				*i* S	Sn	14 15 52.8	+1.2
BIPH	Bislig	2.26	14	⇑*i*P	Pn	14 15 38.4	-0.7
BIPH				*i* S	Sn	14 16 07.8	-2.2
SGSI	Sangihe	2.29	187	P	Pn	14 15 39.6	+0.1
SGSI				S	Sn	14 16 10.4	-0.2
BUTP	Butuan	2.98	356	⇓*e*P	Pn	14 15 51.4	+3.7
PAGZ	Pagadian	3.05	308	⇑*e*P	Pn	14 15 49.2	+0.8
GLSP	General Luna,	3.80	5	⇑*e*P	Pn	14 15 58.3	+0.4
GLSP				*e*S	Sn	14 16 41.4	-2.2
TNTI	Ternate	5.39	163	P	Pn	14 16 18.4	-0.1
	0.3nm898nm43nm,0.6s						
KMSI	Cibinong	5.67	199	P	Pn	14 16 23.1	+1.0
	0.2nm60nm,0.5s						
GTOI	Gorontalo	6.00	208	P	Pn	14 16 26.6	+0.2
	0.0nm13nm,1.3s						
MRSI	Marisa	6.69	215	P	Pn	14 16 36.4	+0.8
	0.1nm17nm,0.5s						
LBMI	Labuha	6.78	166	P	Pn	14 16 37.5	+0.7
TOLI2	Tolitoli	6.97	226	P	Pn	14 16 40.6	+1.4
LUWI	Luwuk	7.60	204	P	Pn	14 16 47.6	0.0
	0.2nm2µm32nm,1.0s						
SANI	Sanana	7.97	179	P	Pn	14 16 49.7	-2.7
	0.4nm2µm35nm,0.5s						
SANI	Sanana	7.97	179	P	Pn	14 16 49.8	-2.7
MPSI	Mapaga	8.14	227	P	Pn	14 16 55.8	+1.1
	4.5nm,1.0s						
BKB	Balikpapan	11.44	231	P	Pn	14 17 37.9	-0.1
	45nm,0.8s						
SPSI	Sidrap Palu	11.57	212	P	Pn	14 17 41.0	+1.4
	3.4nm,0.4s						
BNSI	Bone	11.78	209	P	Pn	14 17 42.7	+0.4
BATI	Baumata	16.22	188	P	P	14 18 33.1	-4.4
	7.4nm,0.4s,baz=274,slow=22,SNR=2.2						
BATI				S	S	14 21 26.1	-11
	5.3nm,0.5s,baz=354,slow=16,SNR=1.4						
MTN	Manton Dam	19.43	164	P	P	14 19 13.9	+1.3
KDU	Kakadu	19.68	160	P	P	14 19 16.6	+1.2
KNRA	Kununurra	21.71	172	P	P	14 19 38.0	+1.1
COEN	Coen	26.25	139	P	P	14 20 19.0	+0.4
WRA	Warramunga Arr	27.09	162	P	P	14 20 25.8	-0.3
	0.4nm,0.5s,baz=333,slow=11,SNR=23						
WRA				PcP	PcP	14 23 42.8	+0.1
	0.3nm,0.9s,baz=360,slow=2.1,SNR=1.2						
	0.4nm,0.5s						
ASAR	Alice Springs	30.50	165	P	P	14 20 56.8	+0.5
	1.2nm,0.4s,baz=342,slow=7.2,SNR=43						
ASAR				PcP	PcP	14 23 51.7	+0.5
	0.3nm,0.4s,baz=349,slow=2.7,SNR=6.6						
	1.2nm,0.4s						
STKA	Stephens Creek	40.54	159	P	P	14 22 22.6	+0.9
	2.1nm,0.5s,baz=331,slow=7.6,SNR=5.5						
	2.1nm,0.5s						
MKAR	Makanchi Array	55.20	325	P	P	14 24 13.9	-0.3
	0.2nm,0.5s,baz=105,slow=9.1,SNR=2.1						
	0.2nm,0.5s						

IDC 28 14:23:15.4±2.3**,17°.84S**×**178°.91W,h551**km±18km**, mb3.1**/3**,mbtmp3.9**/4**,Error ellipse: s-maj=39.3km s-min=35.3km az=83.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.90	272	P	P	14 24 30.0	0.0
	12nm,0.6s,baz=38,slow=2.9,SNR=11						
URZ	Urewera	20.64	189	P	P	14 27 16.9	-0.2
	44nm,1.2s,baz=18,slow=14,SNR=2.6						
	44nm,1.2s						
WRA	Warramunga Arr	44.18	260	P	P	14 30 35.1	-0.9
	0.1nm,0.2s,baz=95,slow=7.9,SNR=10						
	0.1nm,0.2s						
ASAR	Alice Springs	44.35	254	P	P	14 30 37.9	+0.5
	0.7nm,0.3s,baz=89,slow=7.9,SNR=36						
	0.7nm,0.3s						
GERES	GERESS Array B	147.42	344	PKPbc	PKPbc	14 41 57.0	-0.7
	0.4nm,0.5s,baz=31,slow=2.3,SNR=4.6						

IDC 28 14:28:58.7±3.2**,7°.14S**×**154°.78E,h0**km**,mb3.2**/2**, mbtmp3.3**/3**,ML3.2**/1**,Error ellipse: s-maj=63.0km s-min=34.4km az=81.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.93	316	Pn	Pn	14 30 01.6	+1.2
	1.7nm,0.3s,baz=162,slow=10.0,SNR=1.7						
KRVT				Sn	Sn	14 30 46.3	-0.9
	3.7nm,0.3s,baz=351,slow=17,SNR=2.7						
	16nm,0.7s						
WRA	Warramunga Arr	23.56	235	P	P	14 34 10.8	-0.4
	0.9nm,0.9s,baz=59,slow=9.4,SNR=7.0						
	0.9nm,0.9s						
ASAR	Alice Springs	25.92	228	P	P	14 34 32.8	-0.1
	0.3nm,0.8s,baz=61,slow=9.3,SNR=6.1						
	0.3nm,0.8s						
TORD	Torodi Ar. Bea	152.86	285	PKPbc	PKiKP	14 48 59.1	-0.1
	0.5nm,0.8s,baz=83,slow=0.5,SNR=1.7						

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*DJA **28** 14:36:57.4±1.2,4°N±7°×12°3E±°,h566km±17km,M4.2/14, mb4.4/7,mB5.0/5,MLv4.2/14,Mw(mB)4.3/5*
*NEIC **28** 14:36:57.1±1.1,4°.1N±0°.1×122°.9E±0°.2,h573km±10km, mb4.0/19,Error ellipse: s-maj=26.6km s-min=16.0km az=49.0*
*IDC **28** 14:36:57.5±1.3,3°.99N×122°.89E,h587km±15km,mb3.0/8, mbtmp4.1/10,Error ellipse: s-maj=46.6km s-min=8.7km az=63.0*

ISC 28 14:36:56.4±0.5**,4°.02N**±0°.09×**122°.8E**±0°.1**,h573**km**,n49, σ0ˢ.94**/56**,mb3.9**/17**,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.70	97	P	P	14 38 12.5	+0.8
GTOI	Gorontalo	3.37	177	P	P	14 38 14.9	-0.8
TOLI2	Tolitoli	3.55	216	P	P	14 38 16.7	-0.2
KMSI	Cibinong	3.61	162	P	P	14 38 17.5	+0.2

MRSI	**Marisa**	3.64	194	P	P	14 38 16.6	-0.9
MYLDM	**Lahad Datu**	4.48	285	P	P	14 38 24.8	+1.3
MPSI	**Mapaga**	4.70	219	P	P	14 38 24.6	-0.7
LUWI	**Luwuk**	5.03	181	P	P	14 38 28.4	+0.4
LUWI	**Luwuk**	5.03	181	P	P	14 38 28.0	0.0
APSI	**Ampana**	5.04	194	P	P	14 38 28.7	+0.6
TNTI	**Ternate**	5.55	125	P	P	14 38 32.5	+0.1
TNTI	**Ternate**	5.55	125	P	P	14 38 32.6	+0.2
	0.2nm57nm,1.1s						
LBMI	**Labuha**	6.56	135	P	P	14 38 41.1	-0.3
	0.2nm621nm35nm,0.6s						
SANI	**Sanana**	6.80	152	P	P	14 38 42.2	-1.3
	0.2nm764nm15nm,0.5s						
SMKI	**Samarinda**	7.17	232	P	P	14 38 47.7	+0.7
SIJI	**Sorong**	9.72	120	P	P	14 39 12.4	+0.4
	1.7nm,0.3s,baz=316,slow=23,SNR=2.5						
FAKI	**Fak Fak**	11.66	126	P	P	14 39 31.4	-0.3
BATI	**Baumata**	14.16	177	P	P	14 39 57.4	+0.1
	12nm,0.4s,baz=175,slow=1.1,SNR=4.4						
MTN	**Manton Dam**	18.67	154	P	P	14 40 39.4	0.0
MTN				IAmb	IAmb	14 40 44.3	
	comp=Z,5.2nm,1.1s						
KNRA	**Kununurra**	20.43	163	P	P	14 40 56.1	+0.7
KNRA				IAmb	IAmb	14 40 57.2	
	comp=Z,3.5nm,0.8s						
WB0	**Warramunga Arr**	26.23	155	P	P	14 41 47.0	+0.1
WB0				IAmb	IAmb	14 41 47.7	
	comp=Z,5.5nm,1.1s						
WRAB	**Tennant Creek**	26.36	155	P	P	14 41 48.0	-0.1
WRAB				IAmb	IAmb	14 41 48.8	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	26.36	155	P	P	14 41 48.2	+0.1
	comp=Z,2.0nm,0.4s,baz=335,slow=9.7,SNR=68						
WRA				S	S	14 45 38.0	-3.8
	comp=Z,0.4nm,0.8s,baz=334,slow=16,SNR=3.1						
WRA				ScP	ScP	14 47 40.0	-0.7
	comp=Z,0.4nm,0.6s,baz=342,slow=3.0,SNR=10						
	comp=Z,2.0nm,0.4s						
WRA	**Warramunga Arr**	26.36	155	P	P	14 41 47.1	-1.0
WB2	**Warramunga Arr**	26.36	155	P	P	14 41 48.2	+0.1
WR0	**Warramunga Arr**	26.46	155	P	P	14 41 48.9	-0.1
WR0				IAmb	IAmb	14 41 49.4	
	comp=Z,1.9nm,0.6s						
COEN	**Coen**	26.94	132	P	P	14 41 54.2	+0.9
COEN				IAmb	IAmb	14 41 57.3	
	comp=Z,3.7nm,1.1s						
CMAR	**Chiang Mai Arr**	27.42	303	P	P	14 41 58.1	+0.6
	comp=Z,0.4nm,0.3s,baz=133,slow=7.9,SNR=5.1						
	comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	29.56	159	P	P	14 42 16.9	+0.9
	comp=Z,1.4nm,0.3s,baz=338,slow=7.5,SNR=90						
ASAR				PcP	PcP	14 45 02.7	+0.2
	comp=Z,0.1nm,0.4s,baz=348,slow=2.5,SNR=2.2						
ASAR				S	S	14 46 30.4	-1.1
	comp=Z,0.5nm,0.7s,baz=329,slow=13,SNR=12						
ASAR				ScP	ScP	14 47 49.6	-1.1
	comp=Z,0.6nm,0.6s,baz=343,slow=2.9,SNR=15						
	comp=Z,1.4nm,0.3s						
ASAR	**Alice Springs**	29.56	159	P	P	14 42 16.4	+0.4
CTAO	**Charters Tower**	33.21	137	P	P	14 42 48.3	+1.2
CTAO				IAmb	IAmb	14 42 58.4	
	comp=Z,3.0nm,1.1s						
FORT	**Forrest**	34.96	172	P	P	14 43 02.2	+0.7
BBOO	**Buckleboo**	38.72	162	P	P	14 43 33.2	+0.9
STKA	**Stephens Creek**	39.91	155	P	P	14 43 42.0	+0.1
	comp=Z,1.1nm,0.3s,baz=332,slow=11,SNR=5.8						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	39.91	155	P	P	14 43 42.8	+0.9
EIDS	**Eidsvold**	40.06	138	P	P	14 43 44.0	+0.8
EIDS				IAmb	IAmb	14 43 54.7	
	comp=Z,2.8nm,0.9s						
PALK	**Pallekele**	42.05	276	P	P	14 43 59.2	+0.1
SONM	**Songino Array**	45.88	345	P	P	14 44 28.9	+0.6
	comp=Z,0.7nm,0.6s,baz=157,slow=8.7,SNR=4.9						
	comp=Z,0.7nm,0.6s						
CAN	**Canberra**	46.20	150	P	P	14 44 33.0	+2.2
TOO	**Toolangi**	46.43	155	P	P	14 44 32.4	-0.1
TOO				IAmb	IAmb	14 44 49.3	
	comp=Z,5.1nm,0.9s						
MK31	**Makanchi Array**	55.15	327	P	P	14 45 36.0	+0.4
MKAR	**Makanchi Array**	55.15	327	P	P	14 45 36.1	+0.5
	comp=Z,1.5nm,0.3s,baz=124,slow=7.5,SNR=27						
MKAR				PcP	PcP	14 46 27.9	-0.1
	comp=Z,0.6nm,0.6s,baz=121,slow=4.8,SNR=5.0						
MKAR				ScP	ScP	14 49 30.3	-1.9
	comp=Z,0.2nm,0.6s,baz=113,slow=3.7,SNR=1.8						
	comp=Z,1.5nm,0.3s						
MKAR	**Makanchi Array**	55.15	327	P	P	14 45 35.9	+0.3
MAKZ	**Makanchi**	55.33	327	P	P	14 45 37.2	+0.4
MAKZ				IAmb	IAmb	14 45 37.6	
	comp=Z,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	58.62	335	P	P	14 45 58.4	-0.7
	comp=Z,0.5nm,0.5s,baz=130,slow=5.8,SNR=2.4						
	comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	59.45	329	P	P	14 46 04.7	0.0
KURK				IAmb	IAmb	14 46 05.3	
	comp=Z,3.9nm,0.5s						
J20K	**Nowinta River**	83.35	26	P	P	14 48 23.1	-0.5
VNDA	**Vanda**	84.23	172	P	P	14 48 27.4	-0.3
FINES	**FINESS Array B**	89.73	332	P	P	14 48 52.1	-1.9
	comp=Z,0.8nm,0.7s,baz=72,slow=3.0,SNR=3.7						
	comp=Z,0.8nm,0.7s						

*SFS **28** 14:46:31.0, 37°.90N×3°.20W, h12^{km}, ML3.0, PEAL DE BECERRO (JAEN)*

*MDD **28** 14:46:32.0±0.8, 37°.91N×3°.22W, h12^{km}±1^{km}, mb_Lg3.0/8, Error ellipse: s-maj=3.6km s-min=2.9km az=155.0*

*INMG **28** 14:46:32.4±1.9, 37°.87N×3°.21W, h18^{km}±5^{km}, ML2.6, Error ellipse: s-maj=3.3km s-min=2.6km az=74.0*

*LDG **28** 14:46:32.2±0.2, 37°.86N×3°.33W, h10^{km}, Ml2.7/5, Error ellipse: s-maj=3.9km s-min=2.8km az=108.0*

*CNRM **28** 14:46:34.9, 37°.67N×2°.93W, h95^{km}, ml3.0*

ISC 28 14:46:30.6±1.1**, 37°.92N**±0°.02×**3°.29W**±0°.02**, h14**^{km}±9^{km}**, n42, σ1^{s}.70**/71**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUE	**Quentar**	0.72	190	Pg	Pg	14 46 44.4	-0.3
EQUE				Sg	Sb	14 46 54.2	-0.6
EGOR	**Sierra Gorda,**	1.04	219	Pg	Pn	14 46 51.4	+0.5
EGOR				Sg	Sn	14 47 06.9	+1.6
EGOR				*i* Vmb_Lg		14 47 09.7	
EADA	**Adamuz**	1.05	284	Pg	Pn	14 46 52.2	+1.3
EADA				Sg	Sn	14 47 05.1	-0.4
EADA				*i* Vmb_Lg		14 47 11.0	
ELGU	**Los Guajares,**	1.08	195	Pg	Pn	14 46 51.4	0.0
ELGU				Sg	Sb	14 47 05.1	-0.1
ELGU				*i* Vmb_Lg		14 47 13.7	
ENIJ	**Nijar**	1.27	137	Pg	Pg	14 46 55.6	+0.5
ENIJ				Sg	Sb	14 47 10.7	0.0
ENIJ				*i* Vmb_Lg		14 47 12.7	
EMAL	**Malaga-Limoner**	1.47	219	P	Pg	14 46 59.8	+1.0
EMAL				S	Sg	14 47 20.1	+2.1
EMUR	**La Murta**	1.62	92	Pg	Pn	14 47 00.4	+1.6
EMUR				Sg	Sn	14 47 19.6	+0.1
EMUR				*i* Vmb_Lg		14 47 23.6	
ECAB	**El Cabril**	1.69	276	Pg	Pg	14 47 03.2	+0.1
ECAB				Sg	Sg	14 47 25.8	+0.6
ECAB				*i* Vmb_Lg		14 47 27.5	
PAB	**San Pablo**	1.83	333	Pg	Pg	14 47 06.0	+0.3
PAB				Sg	Sb	14 47 28.1	+1.4
PAB				*i* Vmb_Lg		14 47 31.1	
ESDC	**Sonseca Array**	1.83	343	Pg	Pg	14 47 06.5	+0.7
ESDC				Sg	Sg	14 47 30.0	+0.4
ESDC				*i* Vmb_Lg		14 47 33.2	
CART	**Cartagena**	1.84	100	P	Pn	14 47 03.9	+2.1
CART				S	Sn	14 47 25.4	+0.6
CART	**Cartagena**	1.84	100	P	Pn	14 47 02.2	+0.5
CART				S	Sn	14 47 20.6	-4.3
LIJA	**Lijar**	1.97	240	P	Pg	14 47 08.8	+0.4
LIJA				S	Sg	14 47 37.5	+3.7
UCM	**Universidad Co**	2.39	1	P	Pg	14 47 17.3	+0.9
UCM				S	Sg	14 47 46.8	-0.6
GOG	**Mont Gurugu**	2.70	175	P	Pn	14 47 12.9	-0.7
GOG				S	Sn	14 47 44.2	-2.0
PBAR	**Barrancos**	2.98	276	*e*Pg	Pg	14 47 26.6	-1.0
PBAR				*e*Sg	Sg	14 48 05.3	-0.9
PBAR				A	A	14 48 13.4	
	14nm,0.4s						
PESTR	**Estremoz**	3.51	287	*e*Pg	Pg	14 47 37.1	-0.8
PESTR				*e*Sg	Sg	14 48 22.8	-0.6
PESTR				A	A	14 48 28.0	
	13nm,0.5s						
PESTR	**Estremoz**	3.51	287	P	Pg	14 47 34.8	-3.1
PESTR				S	Sb	14 48 17.3	+2.1
PVAQ	**Vaqueiros**	3.56	263	*e*Pn	Pn	14 47 26.1	+0.7
PVAQ				*e*Sn	Sn	14 48 06.7	-0.5
PVAQ				*e*Sg	Sg	14 48 23.4	-1.4
PVAQ				A	A	14 48 28.5	
	11nm,0.4s						
PVAQ	**Vaqueiros**	3.56	263	P	Pn	14 47 27.3	+2.0
PVAQ				S	Sb	14 48 15.7	-0.5
PBEJ	**Beja**	3.62	273	*e*Sg	Sg	14 48 26.4	-0.5
PBEJ				A	A	14 48 28.3	
	7.0nm,0.5s						
PBDV	**Barranco-do-Ve**	3.75	261	*e*Sg	Sg	14 48 29.7	-1.4
PBDV				A	A	14 48 37.1	
	11nm,0.5s						
EVO	**Evora**	3.77	281	P	Pg	14 47 40.1	-2.7
EVO				S	Sg	14 48 29.5	-2.3
EVO	**Evora**	3.77	281	*e*Sg	Sg	14 48 30.2	-1.6
EVO				A	A	14 48 34.8	
	11nm,0.6s						
PCVE	**Castro Verde**	3.78	267	*e*Pn	Pn	14 47 29.8	+1.4
PCBR	**Castelo Branco**	3.79	302	*e*Pn	Pn	14 47 31.2	+2.5
PCBR				*e*Sn	Sn	14 48 14.9	+1.8
PCBR				A	A	14 48 38.9	
	8.2nm,0.5s						
MESJ	**Messejana**	3.91	270	*e*Sg	Sg	14 48 33.8	-2.2
MESJ				A	A	14 48 37.6	
	9.0nm,0.6s						
PMTG	**Montargil**	4.04	288	*e*Sn	Sn	14 48 19.6	+0.4
PMTG				*e*Sg	Sg	14 48 39.6	-0.8
PMTG				A	A	14 48 46.6	
	14nm,0.4s						
MTE	**Manteigas**	4.14	308	*e*Sg	Sg	14 48 41.8	-1.6
MTE				A	A	14 48 55.5	
	13nm,0.7s						
PNCL	**Nicolau / Gran**	4.15	274	*e*Sg	Sg	14 48 41.2	-2.5
PNCL				A	A	14 48 44.5	
	6.2nm,0.7s						
MORF	**Marmelete**	4.30	264	*e*Sg	Sg	14 48 47.9	-0.9
MORF				A	A	14 48 50.7	
	3.4nm,0.2s						
MVO	**Moncorvo**	4.35	319	*e*Sg	Sg	14 48 47.6	-2.6
MVO				A	A	14 48 54.5	
	8.7nm,0.5s						
PCAS	**Casmilo, Conde**	4.59	299	*e*Sg	Sg	14 48 56.5	-1.4
PCAS				A	A	14 49 05.1	
	11nm,0.8s						
PBRG	**Braganca**	4.71	327	*e*Sg	Sg	14 48 58.7	-3.0
PBRG				A	A	14 49 13.2	
	5.5nm,0.8s						
POLO	**Lamas de Olo**	4.90	316	*e*Sg	Sg	14 49 05.6	-2.4
POLO				A	A	14 49 15.6	
	2.6nm,0.5s						
PCAB	**Cabril**	5.26	318	*e*Sg	Sg	14 49 16.9	-2.6
PCAB				A	A	14 49 26.8	
	10nm,0.7s						
ETSF	**Etsaut**	5.39	22	*e*Pn	Pn	14 47 53.5	+2.8
ETSF				*e*Sg	Sg	14 49 24.0	+0.3
	2.4nm,0.4s						
SJPF	**Ste Jean**	5.42	16	*e*Pn	Pn	14 47 54.2	+3.1
SJPF	**Ste Jean**	5.42	16	*e*Pg	Pg	14 48 14.4	0.0
SJPF				*e*Sg	Sg	14 49 24.7	+0.1
	2.3nm,0.4s						
EPF	**Esparros**	5.81	27	*e*Pn	Pn	14 47 58.8	+2.4
EPF				*e*Sg	Sg	14 49 36.4	-0.6
	2.1nm,0.4s						
MTLF	**Montolieu**	6.84	36	*e*Pn	Pn	14 48 10.9	+0.3
MTLF	**Montolieu**	6.84	36	*e*Pg	Pg	14 48 38.9	-2.7
MTLF				*e*Sn	Sn	14 49 26.1	-2.2
MTLF				*e*Sg	Sg	14 50 09.1	-1.1
	1.0nm,0.3s						

*NNC **28** 14:53:54.9±2.0, 39°.98N×73°.92E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=16.0km s-min=7.7km az=168.0*

*IDC **28** 14:53:54.4±36.0, 39°.81N×73°.52E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=848.4km s-min=66.6km az=100.0*

*KRNET **28** 14:53:55.9±0.1, 39°.90N×73°.95E, h30^{km}, mb3.5*

*SOME **28** 14:53:55.1, 40°.02N×74°.00E, h15^{km}*

ISC 28 14:53:53.3±1.6**, 39°.94N**±0°.05×**74°.03E**±0°.03**, h2**^{km}±10^{km}**, n62, σ1^{s}.74**/94**, mb3.4**/3**, 34C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	1.12	302	⇑*i*P	Pn	14 54 16.6	+0.5
	baz=5.0						
OHH				⇑*i*S	Sn	14 54 30.8	-1.3
	baz=5.0						
DRK	**Karamyk**	1.78	256	⇓*i*P	Pn	14 54 26.4	+1.1
	baz=57						
DRK				⇓*i*S	Sn	14 54 48.3	-0.4
	baz=57						
ARLS	**Aral**	1.93	7	⇑*i*P	Pb	14 54 29.9	+0.5
	baz=8.0						
ARLS				⇑*i*S	Sg	14 54 54.9	-0.6
	baz=8.0						
AML	**Almayashu**	2.21	354	P	Pb	14 54 34.7	+0.6
	SNR=59						
UCH	**Uchtor**	2.32	9	P	Pb	14 54 36.3	+0.2
	SNR=25						
UCH	**Uchtor**	2.32	9	⇑*e*P	Pb	14 54 35.5	-0.6
	baz=10.0						
UCH				⇑*i*S	Sb	14 55 04.2	-1.2
	baz=10.0						
ARK	**Arkit**	2.43	321	⇑*i*P	Pb	14 54 36.1	-1.7
	baz=22						
ARK				⇑*i*S	Sb	14 55 05.6	-2.7
	baz=22						
BTK	**Batken**	2.47	274	⇑*i*P	Pn	14 54 35.8	+1.2
	baz=75						
BTK				⇑*i*S	Sn	14 55 05.1	-0.3
	baz=75						
TRKS	**Terek-Say**	2.71	307	⇑*i*P	Pn	14 54 38.9	+0.9
	baz=7.0						
TRKS				⇑*i*S	Sn	14 55 10.2	-1.3
	baz=7.0						
AAK	**Ala-Archa**	2.72	7	P	Pg	14 54 45.2	-0.2
	SNR=6.2						
AAK	**Ala-Archa**	2.72	7	⇓*i*P	Pb	14 54 40.8	-2.0
	baz=8.0						
AAK				⇓*i*S	Sb	14 55 13.7	-3.0
	baz=8.0						
EKS2	**Erkin-Say**	2.73	356	P	Pb	14 54 42.7	-0.2
	SNR=7.0						
EKS2	**Erkin-Say**	2.73	356	⇓*e*P	Pb	14 54 40.8	-2.1
	baz=57						
EKS2				⇓*i*S	Sb	14 55 13.4	-3.5
	baz=57						
KBK	**Karagaybulak**	2.80	14	P	Pb	14 54 44.8	+0.6
	SNR=8.1						
KBK	**Karagaybulak**	2.80	14	⇑*e*P	Pb	14 54 41.9	-2.3
	baz=15						
KBK				⇑*i*S	Sb	14 55 15.9	-3.2
	baz=15						
ULHL	**Ulahol**	2.85	35	P	Pb	14 54 47.0	+1.9
	SNR=21						
ULHL	**Ulahol**	2.85	35	⇑*i*P	Pb	14 54 42.8	-2.2
	baz=36						
ULHL				⇑*e*S	Sb	14 55 17.4	-3.0
	baz=36						
MRKS	**Merke**	2.87	348	*e*P	Pg	14 54 50.1	+1.8
	36nm,0.5s						
MRKS				*e*S	Sg	14 55 30.4	+5.0
	119nm,0.5s						
MRKS	**Merke**	2.87	348	Pg	Pg	14 54 47.2	-1.0
	36nm,0.5s						
MRKS				Lg	Lg	14 55 31.5	
	119nm,0.5s						
CHMS	**Chumysh**	3.11	10	P	Pg	14 54 51.8	-1.0
	SNR=7.6						
CHMS	**Chumysh**	3.11	10	⇑Pg	Pb	14 54 51.0	+1.7
	17nm,0.7s						
CHMS				⇑Lg	Lg	14 55 33.2	
	46nm,0.6s						
CHMS	**Chumysh**	3.11	10	⇑*e*P	Pn	14 54 46.0	+2.6
	baz=11						
CHMS				⇑*i*S	Sb	14 55 23.2	-4.5
	baz=11						
TKM2	**Tokmak 2**	3.21	21	P	Pb	14 54 53.0	+1.9
	SNR=9.2						
TKM2	**Tokmak 2**	3.21	21	⇑Pn	Pb	14 54 48.8	-2.3
	21nm,1.0s						
TKM2				⇓Lg	Lg	14 55 39.2	
	71nm,0.5s						
TKM2	**Tokmak 2**	3.21	21	⇑*i*P	Pn	14 54 47.5	+2.6
	baz=22						
TKM2				⇑*i*S	Sn	14 55 25.8	+2.0
	baz=22						
USP	**Ospenovka**	3.34	6	P	Pg	14 54 55.7	-1.7
	SNR=29						
USP	**Ospenovka**	3.34	6	⇓*i*P	Pn	14 54 49.2	+2.5
	baz=7.0						
USP				⇓*i*S	Sn	14 55 28.8	+1.8
	baz=7.0						
KST	**Kastek**	3.43	24	*e*P	Pg	14 54 59.1	+0.2
	6.8nm,0.6s						
KST				*e*S	Sg	14 55 45.0	+1.6
	230nm,1.2s						
KST	**Kastek**	3.43	24	Pg	Pb	14 54 55.0	+0.2
	6.1nm,0.5s						
KST				Lg	Lg	14 55 44.9	
	230nm,1.2s						
SGDS	**Sogindy**	3.54	7	*e*P	Pg	14 55 01.1	-0.1
	18nm,0.5s						
SGDS				*e*S	Sg	14 55 48.2	+1.2
	69nm,0.7s						
MTBS	**Maitube**	3.66	29	*e*P	Pg	14 55 03.3	-0.2
	8.7nm,0.6s						
MTBS				*e*S	Sg	14 55 52.4	+1.4
	64nm,0.5s						
MTBS	**Maitube**	3.66	29	Pg	Pb	14 54 59.3	+0.5
	6.1nm,0.4s						
MTBS				Lg	Lg	14 55 52.4	
	64nm,0.5s						
IUG	**Iuzhnay**	3.74	307	*e*P	Pg	14 55 03.9	-1.1
	546nm,0.6s						
IUG				*e*S	Sg	14 55 53.1	-0.3
	121nm,1.3s						
IUG	**Iuzhnay**	3.74	307	Pg	Pb	14 55 02.6	+2.4
	515nm,0.6s						
IUG				Lg	Lg	14 55 58.0	
	121nm,1.3s						
TNSS	**Tian-Shan**	3.79	34	*e*P	Pg	14 55 06.4	+0.3
	9.5nm,0.6s						
TNSS				*e*S	Sg	14 55 57.5	+2.3
	55nm,0.9s						
AAA	**Alma-Ata**	3.92	33	*e*P	Pg	14 55 08.3	-0.2
	18nm,0.3s						
AAA				*e*S	Sg	14 56 01.5	+2.3
	256nm,0.6s						
MDOK	**Medeo**	3.94	34	*e*P	Pg	14 55 07.7	-1.1
	8.7nm,0.5s						
MDOK				*e*S	Sg	14 56 00.1	+0.2
	57nm,0.8s						
MDOK	**Medeo**	3.94	34	⇑Pg	Pg	14 55 08.7	0.0
	8.7nm,0.5s						
MDOK				⇑Lg	Lg	14 56 01.4	
	68nm,0.6s						
MDOK	**Medeo**	3.94	34	Pg	Pb	14 55 04.0	+0.4
	9.8nm,0.4s						
MDOK				Lg	Lg	14 56 00.1	
	57nm,0.8s						
KNDC	**Almaty**	3.95	33	⇓Pg	Pg	14 55 08.4	-0.5
	45nm,0.6s						
KNDC				⇑Lg	Lg	14 56 02.1	
	594nm,0.7s						
KRBS	**Karabastau**	3.95	18	*e*P	Pg	14 55 07.3	-1.7
	8.4nm,0.3s						
KRBS				*e*S	Sg	14 55 59.9	-0.3
	77nm,1.1s						
KRBS	**Karabastau**	3.95	18	Pg	Pb	14 55 04.8	+1.0
	8.4nm,0.3s						
KRBS				Lg	Lg	14 56 01.2	
	77nm,1.1s						
KK31	**Karatay Array**	4.12	321	⇑Pn	Pn	14 54 57.8	+0.5
	0.5nm,0.3s,baz=17,slow=40,SNR=9.1						
KK31				⇑Pg	Pb	14 55 07.5	+1.0
	2.6nm,0.3s,baz=138,slow=14,SNR=16						
KK31				⇑Sn	Sn	14 55 46.6	+0.6
	6.0nm,0.5s,baz=135,slow=29,SNR=6.5						
KK31				⇓Lg	Lg	14 56 01.5	
	15nm,0.5s,baz=135,slow=29,SNR=6.5						
KTBS	**Karatobe**	4.26	27	*e*P	Pg	14 55 13.4	-1.5
	4.9nm,0.5s						
KTBS				*e*S	Sg	14 56 10.2	0.0
	155nm,0.8s						
KTBS	**Karatobe**	4.26	27	Pg	Pb	14 55 10.4	+1.4
	5.9nm,0.7s						
KTBS				Lg	Lg	14 56 10.8	
	155nm,0.8s						
KUU	**Kurty**	4.31	23	*e*P	Pg	14 55 15.0	-0.9
	10nm,0.5s						
KUU				*e*S	Sg	14 56 12.1	+0.3
	49nm,0.9s						
KUU	**Kurty**	4.31	23	Pg	Pb	14 55 11.2	+1.3
	10nm,0.5s						
KUU				Lg	Lg	14 56 12.1	
	49nm,0.9s						
BRLS	**Borolday**	4.41	316	*e*P	Pb	14 55 14.7	+3.2
	6.0nm,0.5s						
BRLS				*e*S	Sg	14 56 12.4	-2.5
	31nm,0.4s						
CHKK	**Chushkaly**	4.49	28	*e*P	Pg	14 55 18.4	-1.0
	2.9nm,0.5s						
CHKK				*e*S	Sg	14 56 17.8	+0.2
	83nm,0.5s						
SATY	**Saty**	4.53	45	*e*P	Pg	14 55 18.9	-1.2
	15nm,0.6s						
SATY				*e*S	Sg	14 56 19.1	+0.3
	52nm,1.1s						
UZB	**Uzynbulak**	4.93	48	*e*P	Pg	14 55 25.6	-2.2
	14nm,0.6s						
UZB				*e*S	Sg	14 56 30.2	-1.5
	15nm,0.5s						
KPKS	**Kokpek**	4.96	43	*e*P	Pg	14 55 25.8	-2.5
	12nm,0.3s						
KPKS				*e*S	Sg	14 56 30.7	-1.8
	36nm,0.6s						
BTLS	**Baital**	5.10	0	*e*P	Pg	14 55 29.7	-1.3
	4.6nm,0.6s						
BTLS				*e*S	Sg	14 56 37.8	+0.7
	28nm,0.7s						
BTLS	**Baital**	5.10	0	Pg	Pg	14 55 28.0	-3.0
	3.2nm,0.8s						
BTLS				Lg	Lg	14 56 41.6	
	28nm,0.7s						
OTUK	**Ortayu**	8.39	352	⇑Lg	Lg	14 58 18.4	
	14nm,0.7s						
MK31	**Makanchi Array**	9.12	39	Pn	Pn	14 56 08.5	+2.6
	0.1nm,0.2s,baz=201,slow=14,SNR=4.6						
KURBB	**Kurchatov Arra**	11.14	15	⇑Lg	Lg	14 59 47.9	
	14nm,0.8s						
AB31	**Akbulak array**	13.67	318	⇑Pn	Pn	14 57 09.1	+1.0
	0.4nm,0.5s,baz=128,slow=13,SNR=12						
AB31				⇑Sn	Sn	14 59 40.3	-0.2
	0.4nm,0.5s,baz=128,slow=13,SNR=3.6						
AKTO	**Aktyubinsk**	15.38	318	⇑Pn	Pn	14 57 32.5	+1.3
	2.9nm,1.4s						
FINES	**FINESS Array B**	36.08	323	P	P	15 00 55.4	-0.7
	0.3nm,0.5s,baz=119,slow=12,SNR=4.4						
	0.3nm,0.5s						
NOA	**NORSAR Array B**	43.15	321	P	P	15 01 56.0	+0.9
	0.3nm,0.6s,baz=90,slow=7.7,SNR=3.4						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	68.17	269	P	P	15 04 54.2	-1.2
	0.2nm,0.5s,baz=43,slow=6.5,SNR=2.1						
	0.2nm,0.5s						

*JMA **28** 15:03:35.9±0.1, 24°.0N±0°.7×121°.6E±0°.8, h22^{km}, MV3.1/11, TAIWAN REGION*

*TAP **28** 15:03:37.4, 24°.20N×121°.76E, h11^{km}, ML3.6, B*

ISC 28 15:03:36.6±0.8**, 24°.20N**±0°.01×**121°.83E**±0°.02**, h13**^{km}±5^{km}**, n118, σ1^{s}.00**/206**, 17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	0.14	323	*i* P	Pg	15 03 40.6	+0.4
	baz=355						
EHP				*i* S	Sg	15 03 42.9	+0.3
	baz=355						
ETL	**Fush Village**	0.20	259	⇓*i*P	Pg	15 03 40.8	-0.2
	baz=253						
ETL				*i* S	Sg	15 03 43.4	-0.6
	baz=253						
NACB	**Ninganchiao**	0.22	264	⇓*i*P	Pg	15 03 41.0	-0.4
	baz=254						
NACB				*i* S	Sg	15 03 43.5	-1.1
	baz=254						
ENA	**Nanau**	0.25	340	⇓*i*P	Pg	15 03 42.4	+0.6
	baz=357						
ENA				*i* S	Sg	15 03 46.0	+0.6

	baz=357						
TWD	Chiawan baz=238	0.25	242	iP	Pg	15 03 41.5	-0.3
TWD	baz=238			iS	Sg	15 03 44.8	-0.6
EWUT	Wuta baz=4.0	0.25	348	⇓iP	Pg	15 03 42.8	+0.9
EWUT	baz=4.0			iS	Sg	15 03 46.5	+0.9
HWA	Hwalien baz=222	0.30	224	iP	Pb	15 03 43.9	0.0
HWA	baz=222			eS	Sb	15 03 48.8	+0.1
ETLH	Xiulin Townshi baz=273	0.32	272	iP	Pg	15 03 42.8	-0.4
ETLH	baz=273			S	Sg	15 03 47.1	-0.6
TWC	Suao baz=5.0	0.41	2	⇓iP	Pb	15 03 45.9	+0.1
TWC	baz=5.0			eS	Sb	15 03 50.6	-1.4
LATG	Datong baz=328	0.44	320	⇓iP	Pb	15 03 45.6	-0.7
LATG	baz=328			S	Sb	15 03 51.5	-1.3
NDS	Dongshan baz=355	0.45	346	⇓iP	Pb	15 03 46.4	0.0
NDS	baz=355			S	Sb	15 03 53.1	+0.1
NNSB	Datong baz=304	0.47	299	⇓iP	Pb	15 03 46.0	-0.8
NNSB	baz=304			iS	Sg	15 03 51.8	-0.5
NNS	Nan Shan baz=305	0.48	300	⇓iP	Pb	15 03 46.2	-0.8
NNS	baz=305			iS	Sg	15 03 52.3	-0.5
ENTT	Nioudou baz=339	0.51	331	⇓iP	Pb	15 03 47.2	-0.2
ENTT	baz=339			iS	Sb	15 03 54.1	-0.5
WHF	Hehuan Shan baz=264	0.52	265	⇓iP	Pg	15 03 46.6	-0.3
WHF	baz=264			iS	Sg	15 03 52.8	-1.2
ESL	Shilin baz=228	0.53	224	iP	Pg	15 03 46.7	-0.2
ESL	baz=228			eS	Sg	15 03 53.5	-0.5
FUSS	Fushou baz=277	0.54	276	P	Pb	15 03 47.2	-0.9
FUSS	baz=277			eS	Sg	15 03 53.5	-1.1
TWE	Neicheng baz=352	0.54	344	⇓iP	Pb	15 03 48.2	+0.2
TWE	baz=352			eS	Sb	15 03 55.2	-0.5
ILA	Ilan baz=354	0.57	352	P	Pn	15 03 49.1	-1.3
ILA	baz=354			eS	Sb	15 03 56.7	+0.2
FUSB	Fushanzhiwuyua baz=344	0.60	338	⇓iP	Pb	15 03 49.3	+0.2
FUSB	baz=344			S	Sb	15 03 56.9	-0.7
CHGB	Renai baz=250	0.62	257	⇓iP	Pb	15 03 48.5	-0.8
CHGB	baz=250			iS	Sg	15 03 55.3	-1.6
TDCB	Techi baz=276	0.62	275	⇓iP	Pb	15 03 48.7	-0.7
TDCB	baz=276			S	Sg	15 03 55.9	-1.1
YHNB	Yeheng baz=323	0.63	319	⇓iP	Pb	15 03 49.4	-0.1
YHNB	baz=323			eS	Sb	15 03 57.5	-0.8
EGFH	Guangfu baz=218	0.64	215	iP	Pb	15 03 49.4	-0.3
EGFH	baz=218			eS	Sb	15 03 58.5	-0.1
NSK	Sanguang baz=323	0.65	318	⇓iP	Pb	15 03 49.6	-0.2
NSK	baz=323			eS	Sb	15 03 57.9	-0.8
OWD	Renai baz=247	0.65	248	P	Pg	15 03 48.8	-0.4
OWD	baz=247			eS	Sg	15 03 56.6	-1.2
EGS	baz=21	0.65	8	eP	Pn	15 03 50.3	-1.3
NWLT	Wulai baz=345	0.65	333	P	Pb	15 03 50.0	+0.1
NWLT	baz=345			S	Sb	15 03 58.3	-0.6
NTC	Toucheng baz=5.0	0.66	360	eP	Pn	15 03 50.4	-1.2
NTC	baz=5.0			eS	Sn	15 03 59.8	-2.0
WUSB	Renai baz=244	0.69	253	iP	Pb	15 03 49.7	-0.8
WUSB	baz=244			S	Sg	15 03 58.5	-0.5
TIPB	Shuangxi baz=4.0	0.77	359	iP	Pn	15 03 52.7	-0.5
TIPB	baz=4.0			eS	Sb	15 04 02.4	0.0
VWDT	VWDT baz=233	0.77	235	P	Pb	15 03 51.4	-0.5
VWDT	baz=233			eS	Sg	15 04 01.2	-0.5
NFF	Wufeng Townshi baz=307	0.78	304	P	Pn	15 03 52.3	-1.1
NFF	baz=307			eS	Sb	15 04 01.9	-0.8
HGSD	Ruisui baz=193	0.80	208	eP	Pb	15 03 52.3	0.0
HGSD	baz=193			eS	Sn	15 04 05.8	+0.6
TWA	Mucha baz=349	0.81	344	P	Pn	15 03 53.4	-0.4
TWA	baz=349			eS	Sb	15 04 04.0	+0.5
NHDH	Xindian Distri baz=344	0.81	340	eP	Pb	15 03 52.3	-0.3
NHDH	baz=344			eS	Sb	15 04 03.6	+0.1
WHP	Taichung City baz=277	0.81	276	eP	Pb	15 03 52.5	-0.2
WHP	baz=277			eS	Sg	15 04 02.7	-0.4
TWB1	Santiao Chiao baz=14	0.82	10	eP	Pn	15 03 53.5	-0.3
TWB1	baz=14			eS	Sn	15 04 05.0	-0.9
EHY	Hungye baz=223	0.83	214	eP	Pg	15 03 52.2	-0.5
WCS	Beigang Elemen baz=253	0.85	261	eP	Pb	15 03 53.1	-0.2
WCS	baz=253			eS	Sg	15 04 03.7	-0.6
LIOB	Emei baz=304	0.87	301	P	Pn	15 03 54.0	-0.5
LIOB	baz=304			S	Sb	15 04 05.3	+0.2
NSTT	Nanjuang baz=302	0.87	300	P	Pn	15 03 53.9	-0.7
NSTT	baz=302			eS	Sb	15 04 04.9	-0.3
SXI1	Grass Mountain baz=13	0.90	2	P	Pn	15 03 55.2	+0.3
SXI1	baz=13			eS	Sn	15 04 07.2	-0.7
SSLB	Suanglung baz=251	0.90	243	P	Pb	15 03 53.6	-0.5
SSLB	baz=251			eS	Sg	15 04 04.4	-1.4
SMLT	Sun Moon Lake baz=249	0.91	250	P	Pb	15 03 54.2	-0.1
SMLT	baz=249			eS	Sg	15 04 05.5	-0.6
YULB	Yu-li baz=220	0.94	212	eP	Pg	15 03 53.9	-0.8
NCUH	Zhongli baz=326	0.97	323	eP	Pn	15 03 56.4	+0.5
NCUH	baz=326			eS	Sn	15 04 10.4	+0.8
NCU	National Centr baz=326	0.97	323	P	Pn	15 03 56.4	+0.5
NCU	baz=326			eS	Sn	15 04 10.4	+0.8
SBCB	Hsinchu baz=310	0.97	308	iP	Pn	15 03 56.8	+0.8
SBCB	baz=310			eS	Sn	15 04 09.3	-0.4
YM01	YM01 baz=349	0.98	346	P	Pn	15 03 56.6	+0.5
YM01	baz=349			eS	Sn	15 04 09.5	-0.3
TWS1	Kuangyinshan baz=349	0.98	337	eP	Pn	15 03 57.0	+1.0
TWS1	baz=349			eS	Sn	15 04 09.9	+0.1
TWQ1	Liyutan baz=280	0.98	279	P	Pn	15 03 56.5	+0.4
TWQ1	baz=280			eS	Sb	15 04 08.1	-0.2
HSN	Hsinchu baz=303	0.99	308	eP	Pn	15 03 55.9	-0.3
HSN	baz=303			eS	Sn	15 04 10.6	+0.5
NMLH	Miaoli baz=291	1.01	290	P	Pn	15 03 57.1	+0.7
NMLH	baz=291			eS	Sb	15 04 09.7	+0.5
NTST	Danshui baz=351	1.03	340	eP	Pn	15 03 57.3	+0.6
NTST	baz=351			eS	Sn	15 04 12.9	+2.0
ANP	Anpu baz=348	1.03	344	eP	Pn	15 03 57.4	+0.6
JYNG	Yonagunijimaku	1.04	76	P	Pn	15 03 58.6	+1.7
JYNG				S	Sn	15 04 15.6	+4.2
TCU	Taichung baz=268	1.06	268	P	Pn	15 03 58.2	+1.1
TCU	baz=268			eS	Sn	15 04 12.6	+0.8
WJS	Zhushan baz=245	1.08	250	P	Pn	15 03 57.9	+0.5
WJS	baz=245			eS	Sn	15 04 13.2	+0.9
TWY	Chenhua baz=352	1.10	349	eP	Pn	15 03 59.1	+1.4
WNT	Mingjian baz=249	1.10	253	P	Pn	15 03 58.5	+0.8
WNT	baz=249			eS	Sn	15 04 13.9	+1.2
WDJ	Dajia District baz=288	1.10	278	eP	Pn	15 03 58.7	+1.0
WDJ	baz=288			eS	Sn	15 04 13.8	+1.0
YOJ	Yonaguni jima baz=67	1.11	76	P	Pn	15 03 59.6	+1.8
YOJ	baz=67			eS	Sn	15 04 16.1	+3.1
YOJ	Yonaguni jima	1.11	76	P	Pn	15 03 59.5	+1.8
YOJ				eS	Sn	15 04 16.0	+3.1
FULB	Fuli baz=221	1.11	207	P	Pg	15 03 57.5	-0.5
FULB	baz=221			eS	Sb	15 04 13.3	+1.3
ALS	Alishan baz=234	1.16	234	eP	Pn	15 03 58.9	0.0
WCHH	Zhanghua baz=265	1.17	265	eP	Pn	15 04 00.4	+1.7
WCHH	baz=265			eS	Sn	15 04 17.0	+2.5
CHN5	Tsauling baz=241	1.21	241	eP	Pn	15 04 00.3	+0.9
CHN5	baz=241			eS	Sn	15 04 18.2	+2.5
ELDTW	Lidau baz=204	1.25	217	eP	Pg	15 03 58.5	-2.2
ELDTW	baz=204			eS	Sg	15 04 15.6	-1.4
WDLH	Douliu baz=248	1.29	247	eP	Pg	15 04 00.9	-0.5
EDH	Donghe baz=202	1.31	202	eP	Pn	15 03 59.1	-1.5
WRL	Guolierlin Hig baz=259	1.36	258	eP	Pb	15 04 01.6	-0.4
WRL	baz=259			eS	Sn	15 04 21.2	+2.0
STYH	Taoyuan baz=225	1.41	224	eP	Pb	15 04 02.6	-0.2
STYH	baz=225			eS	Sg	15 04 22.2	+0.2
CHN2	Minshiung baz=243	1.41	242	eP	Pg	15 04 03.9	+0.2
CHN2	baz=243			eS	Sg	15 04 24.1	+2.1
WTK	Tuku baz=250	1.42	249	eP	Pb	15 04 02.8	-0.1
WTK	baz=250			eS	Sg	15 04 22.3	+0.1
TPUB	Ta-pu baz=220	1.42	231	eP	Pb	15 04 02.9	0.0
TPUB	baz=220			eS	Sg	15 04 22.6	+0.3
LONT	Longtian baz=208	1.44	207	eP	Pn	15 04 00.9	-1.5
LONT	baz=208			eS	Sg	15 04 22.7	-0.2
PCYT	Pengchaiyu baz=10.0	1.44	9	eP	Pg	15 04 03.4	-0.9
PCYT	baz=10.0			eS	Sg	15 04 24.5	+1.4
WTP	Ta-pu baz=231	1.46	230	eP	Pb	15 04 03.6	-0.1
WTP	baz=231			eS	Sg	15 04 25.5	+1.7
CHY	Chiayi baz=243	1.47	242	eP	Pb	15 04 03.8	+0.1
CHY	baz=243			eS	Sg	15 04 23.8	0.0
TWG	Pinlang baz=208	1.54	207	eP	Pn	15 04 02.1	-1.7
TWGBT	Beinan baz=208	1.54	207	eP	Pn	15 04 02.0	-1.7
TWK	Hsinying baz=235	1.54	233	eP	Pb	15 04 05.1	0.0
TWK	baz=235			eS	Sg	15 04 26.8	+0.5
LDUT	Ludao baz=179	1.55	193	eP	Pn	15 04 03.0	-0.9
CHN1	Nanshi baz=222	1.56	230	eP	Pb	15 04 05.3	-0.1
CHN1	baz=222			eS	Sg	15 04 28.1	+1.2
SNST	Tainan City baz=233	1.56	232	eP	Pb	15 04 05.5	+0.1
SNST	baz=233			eS	Sg	15 04 26.6	-0.4
WSF	Szhu baz=261	1.58	250	eP	Pn	15 04 04.6	+0.4
WSF	baz=261			eS	Sg	15 04 27.3	-0.1
SGST	Jiashian baz=227	1.59	226	eP	Pb	15 04 05.9	0.0
SGST	baz=227			eS	Sg	15 04 27.4	-0.6
WSL	Shuilin Townsh baz=247	1.62	246	P	Pb	15 04 06.2	-0.1
WSL	baz=247			eS	Sg	15 04 28.5	-0.1
ICHU	Yijhu baz=243	1.65	240	eP	Pb	15 04 06.7	-0.2
ICHU	baz=243			eS	Sg	15 04 30.3	+0.6
IRIF	Iriomote-Funau	1.74	85	eP	Pb	15 04 07.7	-0.6
IRIF				eS	Sg	15 04 31.4	-1.1
ECL	Taimali baz=194	1.79	207	eP	Pn	15 04 06.9	-0.2
SCST	Cishan baz=226	1.79	224	eP	Pb	15 04 09.2	-0.1
SHHT	Tainan City baz=232	1.80	230	eP	Pb	15 04 08.7	-0.6
HATJ	Hateruma jima	1.81	94	eS	Sg	15 04 33.5	-1.2
SSD	Sandimen baz=232	1.82	218	eP	Pb	15 04 08.8	-0.9
TSMG	Majia baz=231	1.84	217	eP	Pb	15 04 09.4	-0.7
TSMG	baz=231			eS	Sb	15 04 33.7	+0.6
TWM1	Shoushan baz=224	1.88	224	eP	Pb	15 04 11.2	+0.4
MASBT	Mashibuluo baz=216	1.93	215	eP	Pn	15 04 09.0	0.0
MASBT	baz=216			eS	Sb	15 04 36.0	+0.5
JKRS	Kuro-shima	1.99	88	P	Pb	15 04 12.3	-0.3
JKRS				eS	Sg	15 04 38.7	-1.8
EAST	Anshuo baz=196	2.02	207	eP	Pn	15 04 10.9	+0.5
SSPT	Xinbi baz=207	2.06	215	eP	Pn	15 04 12.3	+1.4
JIJ	Ishigaki jima	2.11	85	P	Pb	15 04 13.3	-1.5
JIJ				eS	Sb	15 04 40.2	-0.7
SCZT	Fangliau baz=196	2.13	212	eP	Pn	15 04 13.3	+1.4
PNG	Penghu baz=258	2.18	254	eP	Pn	15 04 13.7	+1.1
PNG	baz=258			eS	Sn	15 04 40.2	+0.8
PHUB	P'eng-hu baz=256	2.18	252	eP	Pb	15 04 14.4	-1.5
PHUB	baz=256			eS	Sn	15 04 39.8	+0.4
SLIU	Shizi baz=209	2.19	206	eP	Pn	15 04 12.9	+0.2
WDGT	Dungji baz=250	2.20	245	eP	Pn	15 04 13.5	+0.7
WDGT	baz=250			eS	Sn	15 04 41.4	+1.5
JISG	Ishigakijimahi	2.29	80	P	Pb	15 04 15.7	-2.1
JISG				eS	Sb	15 04 44.7	-1.4
VWUC	VWUC baz=279	2.31	291	eP	Pn	15 04 13.7	-0.7
MATB	Ma-tsu baz=320	2.59	319	eP	Pn	15 04 18.2	0.0
PTMZ	Houxiangcun baz=291	2.61	289	eP	Pn	15 04 18.1	-0.3
JTJ	Tarama	2.65	80	S	Sb	15 04 55.8	-0.6
XPSS	Dashiqiu baz=332	3.10	332	eP	Pn	15 04 27.6	+2.4
KNM	Kinmen baz=276	3.11	275	eP	Pn	15 04 27.4	+2.0
KNMB	Chin-men Tao baz=277	3.15	276	eP	Pn	15 04 25.7	-0.2
AXDP	Jialang baz=283	3.59	282	eP	Pn	15 04 31.6	-0.3
SXFK	Yanhouchang baz=300	4.38	301	eP	Pn	15 04 43.0	+0.1

*IDC **28** 15:15:36.6±1.1, 43°.35N×146°.42E, h0^{km}, mb3.5/8, mbtmp3.5/10, ML4.0/1, Error ellipse: s-maj=26.5km s-min=21.3km az=79.0*

*JMA **28** 15:15:45.9±0.1, 43°.2N±0°.5×145°.8E±0°.7, h51^{km}, MV3.9/40, OFF NEMURO PENINSULA*

JMA Felt I J1 at OFF NEMURO PENINSULA .

*SKHL **28** 15:15:46.4±0.4, 43°.20N×145°.80E, h42^{km}±3^{km}, mb4.9/4*

ISC 28 15:15:45.1±0.9**, 43°.14N**±0°.06×**145°.82E**±0°.05**, h50**^{km}±6^{km}**, n34,** σ**1**^{s}**29**/40**, mb3.4**/8**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.23	346	eP	Pn	15 15 54.1	+0.5
NEM2				eS	Sn	15 15 59.8	+0.1
NMR	Nemuro--Hokkai	0.24	343	iP	Pn	15 15 54.3	+0.6
NMR				iS	Sn	15 15 59.8	0.0
JKHN	Kushirohamanak	0.49	263	eP	Pn	15 15 56.8	+0.6
JKHN				eS	Sn	15 16 04.7	+0.6
GLVR	Golovnino	0.64	340	iP	Pn	15 15 58.1	+0.1
GLVR	730nm,0.2s			AMB	AMB	15 15 58.9	
GLVR				iS	Sn	15 16 07.1	-0.2
GLVR	15μm,0.5s			A	A	15 16 08.0	
GLVR	14μm,0.5s			A	A	15 16 08.0	
AKK	Akkeshi	0.73	260	iP	Pn	15 15 59.4	+0.2
AKK				iS	Sn	15 16 09.0	-0.4
JAK	Akkeshi	0.84	260	eP	Pn	15 16 00.7	+0.1
JAK				eS	Sn	15 16 11.6	-0.3
JNSB	Nemuroshibetsu	0.87	317	eP	Pn	15 16 01.0	0.0
JNSB				eS	Sn	15 16 12.3	-0.4
YUK	Yuzh-Kuril'sk	0.89	2	eP	Pn	15 16 01.4	+0.1
YUK	1μm,0.2s			AMB	AMB	15 16 02.6	
YUK				eS	Sn	15 16 12.8	-0.5
YUK	11μm,0.5s			A	A	15 16 14.2	
YUK	4μm,0.5s			A	A	15 16 14.2	
JNK	Nakash	0.92	299	eP	Pn	15 16 01.4	-0.3
JNK				eS	Sn	15 16 12.3	-1.5
JRA	Rausu	0.94	328	eP	Pn	15 16 02.3	+0.3
JRA				eS	Sn	15 16 14.2	-0.3
SHO	Shikotan	1.03	45	iP	Pn	15 16 03.4	+0.2
SHO	130nm,0.2s			AMB	AMB	15 16 05.0	
SHO				eS	Sn	15 16 16.1	-0.5
SHO	950nm,0.2s			A	A	15 16 18.8	
SHO	780nm,0.2s			A	A	15 16 18.8	
JOB	Onbets	1.48	261	eP	Pn	15 16 09.6	+0.4
JOB				eS	Sn	15 16 27.0	-0.3
JAR	Ashorobuto	1.51	277	eP	Pn	15 16 10.1	+0.4
JAR				eS	Sn	15 16 28.1	-0.1
JTKR	Abashiri--Toko	1.62	301	eP	Pn	15 16 12.0	+0.8
JTKR				eS	Sn	15 16 31.1	+0.3
ASAJ	Asahikawa 16nm,0.3s,baz=113,slow=9.2,SNR=74	2.54	294	Pn	Pn	15 16 25.4	+1.7
ASAJ	11nm,0.3s,baz=339,slow=31,SNR=11 45nm,0.4s			Sn	Sn	15 16 58.8	+5.5
KUR	Kuril'sk	2.56	34	eP	Pn	15 16 26.0	+2.0
KUR	70nm,0.3s			AMB	AMB	15 16 34.2	
KUR				eS	Sn	15 16 55.6	+1.7
KUR	330nm,0.5s			A	A	15 17 05.5	
KUR	240nm,0.5s			A	A	15 17 05.5	
MJAR	Matsushiro Arr 0.6nm,0.6s,baz=58,slow=4.6,SNR=4.6	8.81	224	Pn	Pn	15 17 51.1	+1.2
SONM	Songino Array 0.6nm,0.4s,baz=88,slow=7.4,SNR=3.7 0.6nm,0.4s	27.82	294	P	P	15 21 30.7	+1.1
H11N2	WAKE ISLAND Hy baz=328,slow=75,SNR=919	29.30	136	T	T	15 52 37.0	
H11N1	WAKE ISLAND Hy baz=328,slow=75,SNR=551	29.32	136	T	T	15 52 37.8	
H11N3	WAKE ISLAND Hy baz=328,slow=75,SNR=522	29.32	136	T	T	15 52 40.1	
H11S1	WAKE ISLAND Hy baz=329,slow=76,SNR=898	30.24	138	T	T	15 53 49.6	
H11S3	WAKE ISLAND Hy baz=329,slow=76,SNR=697	30.24	138	T	T	15 53 50.0	
H11S2	WAKE ISLAND Hy baz=329,slow=76,SNR=550	30.26	138	T	T	15 53 50.9	
ILAR	Eielson Array 0.1nm,0.5s,baz=283,slow=8.2,SNR=1.3 0.1nm,0.5s	42.55	36	P	P	15 23 30.3	-5.1
MKAR	Makanchi Array 0.3nm,0.6s,baz=82,slow=11,SNR=5.0 0.3nm,0.6s	44.01	298	P	P	15 23 47.3	-0.2
WRA	Warramunga Arr 0.2nm,0.8s,baz=10.0,slow=7.3,SNR=1.6 0.2nm,0.8s	63.65	192	P	P	15 26 09.4	-1.6
FINES	FINESS Array B 1.4nm,0.8s,baz=95,slow=6.5,SNR=6.5 1.4nm,0.8s	64.97	333	P	P	15 26 16.9	-2.3
ASAR	Alice Springs 0.4nm,0.7s,baz=4.0,slow=4.9,SNR=11 0.4nm,0.7s	67.38	192	P	P	15 26 36.6	+1.6
NOA	NORSAR Array B 0.2nm,0.5s,baz=32,slow=6.4,SNR=2.3 0.2nm,0.5s	69.81	338	P	P	15 26 49.0	-0.8
AKASG	Malin Array Be 0.2nm,0.3s,baz=39,slow=6.0,SNR=1.7 0.2nm,0.3s	71.49	323	P	P	15 26 59.7	-0.5
H03N2	Juan Fernandez baz=302,slow=77,SNR=7.2	143.93	90	T	T	18 16 16.2	
H03N3	Juan Fernandez baz=302,slow=77,SNR=10	143.95	90	T	T	18 16 20.1	
H03N1	Juan Fernandez baz=302,slow=77,SNR=6.9	143.95	90	T	T	18 16 10.2	

*NEIC **28** 15:30:26.8±2.6, 32°.41S±0°.07×122°.35E±0°.06, h10km±5km, Error ellipse: s-maj=11.3km s-min=4.9km az=212.0*

*NOU **28** 15:30:26.4, 32°.43S×122°.43E, h0km, mb5.1/37, Western Australia*

*AUST **28** 15:30:26.8±1.1, 32°.32S×122°.28E, h0km, Error ellipse: s-maj=18.1km s-min=9.6km az=169.0*

*IDC **28** 15:30:27.4±0.7, 32°.55S×122°.92E, h0km, mb4.3/10, mbtmp4.4/13, ML4.6/3, MS4.1/24, Error ellipse: s-maj=31.7km s-min=16.3km az=92.0*

*CUPWA **28** 15:30:28.1±8.9, 32°.67S×122°.35E, h1km±75km, ML5.0, Region: WESTERN AUSTRALIA Hypocentre not reviewed by the ISC*

ISC 28 15:30:27.4±0.4**, 32°.38S**±0°.05×**122°.47E**±0°.04**, h10km, n158, σ2.57**/156**, mb4.8**/35**, MS4.2**/24**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUKUL	Kulin High Sch	3.66	264	P		15 31 24.0	
KLBR	Kellerberrin	4.08	280	P	Pn	15 31 29.3	-0.7
	baz=3.9,SNR=182						
KLBR				S	Sn	15 32 14.3	-3.5
	baz=3.9						
KLBR	Kellerberrin	4.08	280	P	Pn	15 31 29.4	-0.5
KLBR	Kellerberrin	4.08	280	P		15 31 29.3	
KLBR				S		15 32 14.3	
GNOW	Gnowangerup	4.11	248	P		15 31 26.8	
NWAO	Narrogin (SRO)	4.45	262	Pn	Pn	15 31 34.1	-0.8
AUALB	St Joseph's Co	4.62	234	P	Pn	15 31 36.4	-0.8
	baz=4.5						
PING	Pingelly	4.63	267	P		15 31 36.4	
PING				S		15 32 26.7	
FORT	Forrest	5.03	73	P	Pn	15 31 44.6	+1.7
	baz=5.2,SNR=49						
FORT				S	Sn	15 32 43.4	+2.2
	baz=5.2						
FORT	Forrest	5.03	73	Pn	Pn	15 31 45.1	+2.1
FORT	Forrest	5.03	73	P	Pn	15 31 45.4	+2.4
FORT	Forrest	5.03	73	P		15 31 44.6	
FORT	Forrest	5.03	73	S		15 32 43.4	
RKGY	Rocky Gully	5.10	243	P	Pn	15 31 43.4	-0.4
	baz=5.0,SNR=148						
RKGY				S	Sn	15 32 38.7	-4.0
	baz=5.0						
RKGY	Rocky Gully	5.10	243	P	Pn	15 31 43.6	-0.2
RKGY	Rocky Gully	5.10	243	P		15 31 43.4	
RKGY				S		15 32 38.7	
BLDU	Ballidu	5.23	288	P	Pn	15 31 43.8	-1.8
	baz=5.0,SNR=94						
BLDU				S	Sn	15 32 42.0	-4.0
	baz=5.0						
BLDU	Ballidu	5.23	288	P	Pn	15 31 44.7	-0.9
BLDU	Ballidu	5.23	288	P		15 31 43.8	
BLDU				S		15 32 42.0	
MUN	Mundaring	5.32	273	P	Pn	15 31 45.4	-1.5
	baz=5.1,SNR=45						
MUN				S	Sn	15 32 43.5	-4.9
	baz=5.1						
MUN	Mundaring	5.32	273	P	Pn	15 31 46.2	-0.8
MUN	Mundaring	5.32	273	P		15 31 45.4	
MUN	Mundaring	5.32	273	S		15 32 43.4	
AUMAZ	Mazenod Senior	5.46	272	P	Pn	15 31 47.5	-1.3
	baz=5.3						
AUMAZ				S	Sn	15 32 46.8	-5.0
	baz=5.3						
MTKN	Mount Kenneth	5.70	273	P	Pn	15 31 51.4	-0.7
MORW	Morawa	6.45	299	P	Pn	15 32 01.7	-0.7
	baz=6.3,SNR=55						
MORW				S	Sn	15 33 11.2	-4.9
	baz=6.3						
MORW	Morawa	6.45	299	Pn	Pn	15 32 02.3	-0.1
MORW	Morawa	6.45	299	P	Pn	15 32 02.3	-0.1
MORW	Morawa	6.45	299	P		15 32 01.7	
MORW	Morawa	6.45	299	S		15 33 11.2	
WRKA	Warakurna	8.93	36	P	Pn	15 32 39.7	+3.2
	baz=9.0,SNR=75						
WRKA				S	Sn	15 34 18.9	+1.6
	baz=9.0						
WRKA	Warakurna	8.93	36	P	Pn	15 32 39.4	+2.9
MULG	Mulgathing	10.13	81	P	Pn	15 32 52.9	0.0
	baz=10,SNR=39						
MULG				S	Sn	15 34 42.2	-4.4
	baz=10						
MULG	Mulgathing	10.13	81	P	Pn	15 32 53.8	+0.8
PSA00	Pilbara Seismi	11.02	347		Pn	15 33 03.9	-1.2
PSA00	Pilbara Seismi	11.02	347	Pn	Pn	15 33 04.6	-0.6
PSA00	Pilbara Seismi	11.02	347	P	Pn	15 33 05.0	-0.2
AUCAS	Cummins Area S	11.24	103	P	Pn	15 33 10.8	+2.7
	baz=11						
MBWA	Marble Bar	11.44	347	Pn	Pn	15 33 10.0	-1.0
MBWA	Marble Bar	11.44	347	P	Pn	15 33 10.3	-0.7
BBOO	Buckleboo	11.47	96	P	Pn	15 33 10.5	-0.8
	baz=12,SNR=32						
BBOO				S	Sn	15 35 17.3	-2.2
	baz=12						
BBOO	Buckleboo	11.47	96	Pn	Pn	15 33 09.6	-1.7
BBOO	Buckleboo	11.47	96	P	Pn	15 33 11.6	+0.3
GIRL	Giralia	12.14	321	P	Pn	15 33 20.0	-0.5
	baz=12						
GIRL				S	Sn	15 35 27.7	-8.3
	baz=12						
GIRL	Giralia	12.14	321	Pn	Pn	15 33 17.6	-2.9
GIRL	Giralia	12.14	321	P	Pn	15 33 20.7	+0.2
OOD	Oodnadatta	12.32	72	P	Pn	15 33 21.5	-1.4
	baz=12,SNR=76						
OOD				S	Sn	15 35 33.0	-7.4
	baz=12						
OOD	Oodnadatta	12.32	72	P	Pn	15 33 22.1	-0.9
AUKAR	St Luke's Coll	12.64	335	P	Pn	15 33 25.8	-1.5
	baz=12						
AUKAR				S	Sn	15 35 36.9	-11
	baz=12						
WHYH	Whyalla	12.74	97	P	Pn	15 33 27.3	-1.3
	57nm,0.7s						
NAPP	Napperby	13.22	98	P	Pn	15 33 34.2	-1.0
	59nm,0.6s						
ASAR	Alice Springs	13.31	52	Pn	Pn	15 33 35.1	-1.4
	3.9nm,0.3s,baz=228,slow=11,SNR=222						
ASAR				Sn	Sn	15 35 56.4	-8.3
	14nm,0.3s,baz=230,slow=22,SNR=16						
ASAR				Lg	Lg	15 37 17.7	
	8.1nm,0.3s,baz=225,slow=26,SNR=4.0						
	59nm,0.9s						
ASAR	Alice Springs	13.31	52	Pn	Pn	15 33 35.8	-0.7
AS31	Alice Springs	13.31	52	Pn	Pn	15 33 36.7	+0.2
LCRK	Leigh Creek	13.59	86	P	Pn	15 33 38.2	-2.1
	baz=14,SNR=24						
LCRK				S	Sn	15 36 04.2	-7.2
	baz=14						
LCRK	Leigh Creek	13.59	86	P	Pn	15 33 38.7	-1.5
TWOA	Tennyson Woods	13.67	106	P	Pn	15 33 41.5	+0.2
	28nm,0.8s						
HTT	Hallett	13.87	99	P	Pn	15 33 42.3	-1.7
	baz=14,SNR=6.9						
HTT				S	Sn	15 36 12.3	-5.9
	baz=14						
HTT	Hallett	13.87	99	P	Pn	15 33 42.3	-1.7
STKA	Stephens Creek	16.21	93	Pn	Pn	15 34 10.9	-4.4
	0.7nm,0.3s,baz=274,slow=11,SNR=16						
STKA				Sn	Sn	15 37 02.1	-13
	2.0nm,0.3s,baz=264,slow=8.0,SNR=3.2						
STKA				Lg	Lg	15 38 43.7	
	4.6nm,0.3s,baz=311,slow=23,SNR=1.5						
STKA				LR	LR	15 40 32.3	
	comp=Z,2µm,19.3s,baz=244,slow=38						
	4.4nm,0.5s						
STKA	Stephens Creek	16.21	93	P	Pn	15 34 13.7	-1.7
	baz=16,SNR=9.4						
STKA	Stephens Creek	16.21	93	Pn	Pn	15 34 13.9	-1.4
STKA	Stephens Creek	16.21	93	P	Pn	15 34 14.8	-0.5
WRA	Warramunga Arr	16.32	44	Pn	Pn	15 34 15.0	-1.9
	4.6nm,0.3s,baz=220,slow=13,SNR=228						
WRA				Sn	Sn	15 37 09.6	-8.5
	8.0nm,0.3s,baz=222,slow=22,SNR=14						
WRA				Lg	Lg	15 38 55.2	
	baz=217,slow=28						
	24nm,0.9s						
WRA	Warramunga Arr	16.32	44		Pn	15 34 15.0	-1.9
WB2	Warramunga Arr	16.33	44	Pn	Pn	15 34 14.9	-2.0
WB2				IAmb	IAmb	15 34 36.1	
	comp=Z,44nm,0.6s						
WRAB	Tennant Creek	16.34	44		Pn	15 34 16.1	-0.9
WRAB				IAmb	IAmb	15 34 38.9	
	comp=Z,48nm,0.6s						
WRAB	Tennant Creek	16.34	44	P	Pn	15 34 15.4	-1.6
WR0	Warramunga Arr	16.43	44	Pn	Pn	15 34 16.6	-1.5
INKA	Innaminka	16.48	78	P	Pn	15 34 15.7	-3.1
	baz=17,SNR=15						
INKA				S	Sn	15 37 14.5	-7.3
	baz=17						
INKA	Innaminka	16.48	78	P	Pn	15 34 17.5	-1.3
WB0	Warramunga Arr	16.49	43	Pn	Pn	15 34 17.6	-1.4
ARPS	Mount Arapiles	16.54	111	P	Pn	15 34 18.2	-1.2
	baz=17,SNR=8.6						
ARPS	Mount Arapiles	16.54	111	P	P	15 34 20.5	-1.5
KNRA	Kununurra	17.59	20	P	Pn	15 34 31.1	-1.7
	baz=18,SNR=45						
KNRA	Kununurra	17.59	20	P	Pn	15 34 31.5	-1.3
KNRA				IAmb	IAmb	15 34 49.3	
	comp=Z,58nm,0.7s						
KNRA	Kununurra	17.59	20	P	Pn	15 34 31.8	-0.9
QIS	Mount Isa	19.31	57	P	P	15 34 51.3	-1.5
	baz=19,SNR=45						
QIS	Mount Isa	19.31	57	P	P	15 34 52.7	0.0
TOO	Toolangi	19.55	112	P	Pn	15 34 56.1	-0.4
	baz=20,SNR=4.8						
TOO	Toolangi	19.55	112	P	Pn	15 34 55.7	-0.8
TOO				IAmb	IAmb	15 35 05.6	
	comp=Z,49nm,1.2s						
TOO	Toolangi	19.55	112	P	P	15 34 55.1	-0.1
CMSA	Cobar Meteorol	19.72	94	P	Pn	15 34 58.2	-0.4
	baz=20						
CMSA	Cobar Meteorol	19.72	94	P	Pn	15 34 58.8	+0.2
QLP	Quilpie	19.80	79	P	Pn	15 34 59.2	-0.3
	baz=20,SNR=21						
QLP	Quilpie	19.80	79	P	Pn	15 35 00.4	+0.9
MTN	Manton Dam	21.01	24	P	P	15 35 13.4	+2.2
	baz=21,SNR=95						
MTN	Manton Dam	21.01	24	P	P	15 35 13.4	+2.2
MTN	Manton Dam	21.01	24	P	P	15 35 13.8	+2.6
KDU	Kakadu	21.65	27	P	P	15 35 20.5	+2.4
	baz=22,SNR=15						
KDU	Kakadu	21.65	27	P	P	15 35 21.0	+2.9
MOO	Moorlands	21.98	124	P	P	15 35 22.3	+0.8
BATI	Baumata	22.10	3	P	P	15 35 26.9	+3.9
	comp=Z,37nm,0.6s,baz=186,slow=4.0,SNR=12						
BATI				S	S	15 39 27.2	+0.6
	comp=Z,29nm,0.8s,baz=146,slow=22,SNR=2.4						
BATI				LR	LR	15 45 50.4	
	comp=Z,961nm,18.4s,baz=215,slow=42						
	comp=Z,37nm,0.6s						
BATI	Baumata	22.10	3	P	P	15 35 26.1	+3.2
	comp=Z,752nmcomp=Z,63nm,1.5s						
TAU	Tasmania Unive	22.23	125	P	P	15 35 26.3	+2.1
SOEI	Soe	22.58	5	P	P	15 35 27.1	-1.1
SOEI	Soe	22.58	5	P	P	15 35 33.0	+4.8
WBSI	Waikabubak, Su	22.81	352	P	P	15 35 30.7	+0.1
	comp=Z,51nm,0.9s						
EDFI	Ende, Flores	23.53	358	P	P	15 35 39.6	+1.6
	comp=Z,10nm,1.0s						
RMQ	Roma	23.61	82	P	P	15 35 40.6	+2.0
	baz=24,SNR=34						
RMQ	Roma	23.61	82	P	P	15 35 40.2	+1.6
MMRI	Maumere	23.63	359	P	P	15 35 37.3	-1.5
MMRI	Maumere	23.63	359	P	P	15 35 40.1	+1.2
	comp=Z,2µmcomp=Z,33nm,0.9s						
PLAI	Plampang	23.84	348	P	P	15 35 40.7	-0.2
	comp=Z,47nm,2.0s						
MTSU	Mount Surprise	24.26	59	P	P	15 35 48.0	+3.2
CTA	Charters Tower	24.54	66	P	P	15 35 49.1	+1.8
	comp=Z,29nm,0.8s,baz=221,slow=9.4,SNR=42						
CTA				S	S	15 40 11.3	+3.3
	comp=Z,7.1nm,0.8s,baz=245,slow=14,SNR=2.0						
CTA				Lg	Lg	15 43 22.6	
	comp=Z,0.3nm,0.3s,baz=330,slow=18,SNR=1.8						
CTA				LR	LR	15 46 15.5	
	comp=Z,1µm,20.3s,baz=234,slow=39						
CTA	Charters Tower	24.54	66	P	P	15 35 49.7	+2.3
CTAO	Charters Tower	24.54	66	P	P	15 35 49.0	+1.6
ARMA	Armidale	24.94	93	P	P	15 35 52.4	+1.4
ARMA				IAmb	IAmb	15 35 56.1	
	comp=Z,33nm,1.1s						
JAGI	Jajag, Banyuwa	25.02	340	P	P	15 35 52.5	+0.8
	comp=Z,59nm,1.0s						
GMJI	Gumukmas	25.41	339	P	P	15 35 56.5	+1.3
	comp=Z,28nm,1.4s						
SAUI	Saumlaki	25.63	21	P	P	15 35 58.3	+1.1
	comp=Z,8µmcomp=Z,79nm,1.2s						
EIDS	Eidsvold	25.96	82	P	P	15 36 00.7	+0.5
EIDS				IAmb	IAmb	15 36 25.2	
	comp=Z,22nm,1.0s						
EIDS	Eidsvold	25.96	82	P	P	15 36 02.9	+2.7
	comp=Z,30nm,1.2s						
PWJI	Pagerwojo	26.19	335	P	P	15 36 02.7	+0.4
	comp=Z,28nm,1.7s						
PCJI	Pacitan	26.25	334	P	P	15 36 02.1	-0.8
	comp=Z,34nm,1.0s						
COEN	Coen	26.35	51	P	P	15 36 04.5	+0.7
COEN				IAmb	IAmb	15 36 34.2	
	comp=Z,13nm,0.8s						
COEN	Coen	26.35	51	P	P	15 36 06.7	+2.9
KAPI	Kappang	27.35	354	P	P	15 36 15.9	+3.1
	comp=Z,4.2nm,0.3s,baz=162,slow=4.5,SNR=4.5						
KAPI				LR	LR	15 47 00.3	
	comp=Z,305nm,19.9s,baz=170,slow=36						
	comp=Z,4.2nm,0.3s						
SPSI	Sidrap Palu	28.39	354	P	P	15 36 24.4	+2.4
LEM	Lembang	28.95	328	LR	LR	15 48 05.1	
	comp=Z,506nm,19.2s,baz=164,slow=36						
SANI	Sanana	30.36	7	P	P	15 36 45.1	+5.6
TOLI2	Tolitoli	33.35	357	P	P	15 37 04.8	-1.1
TOLI2				IAmb	IAmb	15 37 09.0	
	comp=Z,14nm,0.9s						
CASY	Casey	34.68	188	P	P	15 37 14.8	-2.0
KSM	Kuching	35.59	339	P	P	15 37 23.5	-1.7
KSM				IAmb	IAmb	15 37 32.3	
	comp=Z,9.7nm,0.8s						
KOUNC	Koumac, New Ca	39.02	83	P	P	15 37 53.4	-1.0
KRVT	Keravat (AS076	39.31	51	LR	LR	15 53 31.3	
	comp=Z,129nm,22.0s,baz=7.6,slow=35						
DAV	Davao City (W)	39.34	5	LR	LR	15 56 39.4	
	comp=Z,182nm,18.9s,baz=168,slow=40						
DZM	Mont Dzumac	40.19	86	LR	LR	15 54 08.1	
	comp=Z,290nm,19.9s,baz=246,slow=36						
HNR	Honiara	41.47	65	LR	LR	15 55 14.7	
	comp=Z,420nm,18.4s,baz=208,slow=36						
BKZ	Black Stump Fm	43.81	115	P	P	15 38 32.4	-1.1
BKZ				IAmb	IAmb	15 38 56.0	
	comp=Z,26nm,1.2s						
URZ	Urewera	44.43	113	LR	LR	15 57 02.5	
	comp=Z,270nm,18.2s,baz=211,slow=36						
VNDA	Vanda	48.51	169	P	P	15 39 09.7	-0.2
	comp=Z,5.5nm,1.0s,baz=309,slow=7.3,SNR=21						
VNDA				LR	LR	15 57 42.3	
	comp=Z,145nm,18.1s,baz=299,slow=34						
	comp=Z,5.5nm,1.0s						
VNDA	Vanda	48.51	169	P	P	15 39 09.8	-0.2
VNDA				IAmb	IAmb	15 39 10.8	
	comp=Z,7.1nm,1.1s						
MAW	Mawson	48.97	206	P	P	15 39 13.8	+0.2
SBA	Scott Base	49.52	169	P	P	15 39 18.7	+1.0
SBA				IAmb	IAmb	15 39 19.4	
	comp=Z,11nm,1.1s						
MSVF	Nonsavu	51.89	88	LR	LR	16 00 14.5	
	comp=Z,196nm,20.4s,baz=204,slow=35						
CMAR	Chiang Mai Arr	55.35	333	P	P	15 40 04.9	+3.3
	comp=Z,0.3nm,0.4s,baz=165,slow=7.5,SNR=1.6						
CMAR				LR	LR	16 06 06.7	
	comp=Z,191nm,18.9s,baz=160,slow=38						
	comp=Z,0.3nm,0.4s						
PALK	Pallekele	56.01	307	LR	LR	16 00 15.0	
	comp=Z,237nm,20.5s,baz=248,slow=32						
QSPA	South Pole Qui	57.72	180	P	P	15 40 18.3	+0.2
	comp=Z,7.1nm,0.8s,baz=349,slow=1.9,SNR=37						
QSPA				LR	LR	16 03 17.6	
	comp=Z,323nm,18.4s,baz=334,slow=34						
	comp=Z,7.1nm,0.8s						
QSPA	South Pole Qui	57.72	180	P	P	15 40 18.0	-0.2
QSPA				IAmb	IAmb	15 40 18.8	
	comp=Z,8.2nm,0.8s						
PZH	PanZhiHua	61.80	339	P	P	15 40 49.5	+2.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.1s						
NJ2	Nanjing	64.18	357	*e*P	P	15 41 06.8	+4.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
XAN	Xi'an	67.29	348	P	P	15 41 28.0	+5.7
XAN				pP	sP	15 41 31.5	+4.6
XAN				sP	pP	15 41 35.3	+10
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BELA	Belgrano 2	69.13	185	P	P	15 41 31.6	-1.7
SNAA	Sanae	69.46	196	P	P	15 41 35.3	-0.2
SNAA	Sanae	69.46	196	LR	LR	16 09 05.9	
	comp=Z,57nm,20.1s,baz=225,slow=33						
KSRS	Korea Array	69.67	5	P	P	15 41 39.5	+2.6
	comp=Z,1.9nm,0.8s,baz=186,slow=7.8,SNR=13						
	comp=Z,1.9nm,0.8s						
MJAR	Matsushiro Arr	70.13	13	P	P	15 41 42.0	+2.1
	comp=Z,1.1nm,0.5s,baz=177,slow=7.4,SNR=4.9						
	comp=Z,1.1nm,0.5s						
LZH	Lanzhou	70.31	344	*e*P	P	15 41 50.0	+8.8
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
VNA2	Neumayer--Watz	71.03	195	P	P	15 41 44.0	-1.0
	baz=126,slow=5.0						
VNA3	Neumayer Olymp	71.29	195	P	P	15 41 44.1	-2.5
HHC	Hu-ho-hao-te	73.56	351	*e*P	P	15 42 04.0	+3.5
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,91nm,5.3s						
GTA	Gaotai	74.46	342	*e*P	P	15 42 10.3	+4.4
GTA				pP	PcP	15 42 16.8	-3.6
GTA				sP	sP	15 42 20.5	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,50nm,7.3s						
GTA				LR	LR		
	comp=Z,91nm,18.5s						
GTA				LR	LR		
	comp=Z,110nm,20.7s						
GTA				LR	LR		
	comp=Z,96nm,21.1s						
CN2	Changchun	75.87	2	*e*P	P	15 42 17.8	+4.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BOSA	Boshof	80.76	242	P	P	15 42 44.8	+3.3
	comp=Z,1.2nm,0.7s,baz=108,slow=7.0,SNR=3.7						
BOSA				LR	LR	16 11 19.3	
	comp=Z,233nm,20.5s,baz=141,slow=30						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	81.15	349	P	P	15 42 46.2	+3.3
	comp=Z,1.3nm,0.7s,baz=170,slow=5.7,SNR=9.6						
SONM				LR	LR	16 22 47.0	
	comp=Z,55nm,18.2s,baz=136,slow=39						
	comp=Z,1.3nm,0.7s						
WMQ	Urumqi	82.23	335	*e*P	P	15 42 51.5	+2.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
WSAR	Wadi Sarin	82.30	304	LR	LR	16 15 41.0	
	comp=Z,64nm,18.8s,baz=184,slow=33						
LBTB	Lobatse	82.40	245	LR	LR	16 11 33.4	
	comp=Z,170nm,20.8s,baz=150,slow=30						
PMSA	Palmer Station	83.03	177	LR	LR	16 18 48.2	
	comp=Z,108nm,18.2s,baz=170,slow=35						
MKAR	Makanchi Array	86.74	334	P	P	15 43 13.3	+1.9
	comp=Z,0.8nm,0.6s,baz=144,slow=6.6,SNR=11						
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	86.74	334	P	P	15 43 10.4	-1.0
KURBB	Kurchatov Arra	91.31	334	LR	LR	16 28 57.7	
	comp=Z,52nm,19.7s,baz=136,slow=38						
TSUM	Tsumeb	91.78	246	LR	LR	16 17 50.4	
	comp=Z,179nm,21.1s,baz=135,slow=31						
GEYT	Alibeck	92.10	314	LR	LR	16 25 13.9	
	comp=Z,46nm,19.4s,baz=76,slow=36						
FINES	FINESS Array B	120.84	326	PKP	PKiKP	15 49 22.1	+3.0
	comp=Z,0.6nm,0.6s,baz=64,slow=3.2,SNR=1.6						
TORD	Torodi Ar. Bea	122.83	265	PKP	PKiKP	15 49 26.4	+1.8
	comp=Z,0.4nm,0.5s,baz=87,slow=1.4,SNR=4.7						
TXAR	Lajitas Array	140.51	82	PKhKP	PKPpre	15 49 52.7	
	comp=Z,0.4nm,0.5s,baz=198,slow=6.3,SNR=6.5						
ULM	Lac du Bonnet	146.59	46	PKPbc	PKPab	15 50 09.7	-0.1
	comp=Z,3.2nm,0.7s,baz=248,slow=5.6,SNR=3.0						

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*MAN **28** 15:44:44.0, 14°.27N×120°.36E, h126km, mb4.2, ML3.1, MS2.8, Hypocentre not reviewed by the ISC*

ISC 28 15:44:44.4±1.7**, 14°.27N**±0°.04×**120°.38E**±0°.08**, h133km**±13km**, n11, σ1.06**/18**, 7C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACP	Maragondon, Ca	0.32	91⇑	*e*P	Pn	15 45 03.0	0.0
MACP				*e*S	Sn	15 45 17.7	+0.7
LUBP	Lubang	0.55	194⇑	*e*P	Pn	15 45 04.6	+0.5
PGP	Puerto Galera	0.94	144⇓	*e*P	Pn	15 45 06.4	-0.7
PGP				*i* S	Sn	15 45 24.2	-0.1
PCPH	Palayan	1.46	28⇑	*e*P	Pn	15 45 11.7	-0.6
BOAC	Boac	1.63	119⇓	*e*P	Pn	15 45 14.6	+0.4
BOAC				*e*S	Sn	15 45 38.0	+1.1
BALP	Baler	1.86	38⇑	*e*P	Pn	15 45 18.5	+1.6
SMPP	San Manuel, Pa	1.89	9⇑	*e*P	Pn	15 45 16.8	-0.5
SMPP				*e*S	Sn	15 45 43.0	+0.5
SJMP	San Jose	1.93	158⇓	*e*P	Pn	15 45 17.4	-0.3
SJMP				*e*S	Sn	15 45 41.0	-2.2
BOLP	Bolinao	2.15	348⇑	*e*P	Pn	15 45 20.9	+0.5
BOLP				*e*S	Sn	15 45 46.1	-1.9
JCNP	Jose Panganiba	2.24	89⇓	*e*P	Pn	15 45 21.3	-0.2
ENPP	El Nido	3.18	197⇑	*e*P	Pn	15 45 34.3	+0.8
ENPP				*e*S	Sn	15 46 11.9	+0.4

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*IDC **28** 15:49:22.2±3.5, 24°.68N×95°.30E, h146km±35km, mb3.3/10, mbtmp3.7/11, MS3.6/3, Error ellipse: s-maj=40.5km s-min=15.1km az=58.0*

ISC 28 15:49:22.4±0.8**, 24°.7N**±0°.2×**95°.3E**±0°.2**, h150km, n14, σ0.57**/11**, mb3.6**/10**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.04	151	P	Pn	15 51 02.9	-0.2
	1.0nm,0.7s,baz=318,slow=12,SNR=3.9						
MKAR	Makanchi Array	24.41	338	P	P	15 54 27.5	+0.6
	1.6nm,0.6s,baz=145,slow=9.6,SNR=20						
	1.6nm,0.6s						
SONM	Songino Array	24.75	18	P	P	15 54 29.3	-0.7
	0.3nm,0.4s,baz=186,slow=12,SNR=2.1						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	28.98	338	P	P	15 55 07.8	0.0
	0.9nm,0.2s,baz=156,slow=8.3,SNR=1.3						
	0.9nm,0.2s						
AKTO	Aktyubinsk	38.56	322	P	P	15 56 30.4	0.0
	0.5nm,0.3s,baz=105,slow=12,SNR=2.6						
	0.5nm,0.3s						
NRIK	Noril'sk	44.94	356	LR	LR	16 16 28.2	
	comp=Z,40nm,20.1s,baz=226,slow=36						
KVAR	Kislovodsk Arr	46.68	308	LR	LR	16 22 38.6	
	comp=Z,170nm,21.0s,baz=274,slow=43						
BRTR	Keskin Array B	53.33	302	P	P	15 58 26.6	+0.3
	0.4nm,0.5s,baz=69,slow=7.0,SNR=2.0						
	0.4nm,0.5s						
EIL	Elat	53.41	290	LR	LR	16 26 10.3	
	comp=Z,55nm,18.5s,baz=96,slow=41						
WRA	Warramunga Arr	58.39	136	P	P	15 59 03.3	+1.0
	0.2nm,0.6s,baz=323,slow=7.3,SNR=4.6						
	0.2nm,0.6s						
FINES	FINESS Array B	58.74	328	P	P	15 59 04.0	-0.2
	0.3nm,0.3s,baz=98,slow=8.6,SNR=1.7						
	0.3nm,0.3s						
ARCES	ARCESS Array B	60.07	338	P	P	15 59 13.7	+0.5
	2.4nm,0.8s,baz=105,slow=5.9,SNR=2.2						
	2.4nm,0.8s						
ASAR	Alice Springs	60.90	139	P	P	15 59 19.4	-0.1
	0.5nm,1.1s,baz=320,slow=6.6,SNR=4.8						
	0.5nm,1.1s						
TORD	Torodi Ar. Bea	87.82	283	P	P	16 01 54.6	-0.7
	0.3nm,0.6s,baz=61,slow=3.2,SNR=2.2						
	0.3nm,0.6s						

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*MAN **28** 15:55:22.9, 9°.91N×124°.02E, h1km, mb4.3, ML3.1, MS2.8, Hypocentre not reviewed by the ISC*

ISC 28 15:55:23.9±1.2**, 9°.92N**±0°.04×**124°.01E**±0°.04**, h7km**±10km**, n8, σ0.86**/15**, 1C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.27	213	*e*P	Pg	15 55 28.8	-0.4
TBP				*i* S	Sg	15 55 33.4	+0.5
LLP	Lapu-Lapu	0.40	353⇓	*i*P	Pg	15 55 31.6	0.0
LLP				*i* S	Sg	15 55 37.9	+1.1
MSLP	Maasin	0.86	76⇓	*e*P	Pg	15 55 39.8	-0.7
SNPH	Sibulan	0.96	233⇓	*i*P	Pg	15 55 41.3	-1.0
SNPH				*i* S	Sg	15 55 56.2	+1.4

CNOP	Candoni, Negro	1.36	266⇓	eP	Pg	15 55 48.9	-1.1
CNOP				eS	Sg	15 56 07.7	+0.2
GUIM	Jordan	1.57	297⇑	eP	Pn	15 55 51.5	-0.6
GUIM				eS	Sn	15 56 13.0	+0.4
GLSP	General Luna,	2.09	94⇓	eP	Pn	15 55 58.9	-0.4
GLSP				eS	Sn	15 56 25.6	0.0
PAGZ	Pagadian	2.15	197⇓	eP	Pn	15 56 00.5	+0.3
PAGZ				eS	Sn	15 56 28.2	+1.0

INET ***28*** *16:18:16.3±0.7, 11°.33N×85°.69W, h181km±6km, MW3.3*

IDC ***28*** *16:18:16.6±1.0, 11°.46N×85°.22W, h172km±34km, mb3.2/3, mbtmp3.6/3, Error ellipse: s-maj=63.4km s-min=45.5km az=7.0*

ISC 28 16:18:16.5±0.9**, 11°.32N**±0°.08×**85°.7W**±0°.1**, h181**km**, n22,** σ**1ˢ.08**/25**, mb3.3**/3**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.24	6	eP	Pn	16 18 40.3	-0.4
HZTE	Horizontes, Gu	0.61	175	eP	Pn	16 18 41.8	-0.2
ACON	Acoyapa	0.79	36	eP	Pn	16 18 42.9	-0.1
BOAB	BOACO BROADBAN	1.12	359	eP	Pn	16 18 45.3	0.0
HUEN		1.13	333	eP	Pn	16 18 45.3	-0.1
JTS	Las Juntas de	1.23	146	P	Pn	16 18 46.1	-0.2
	131nm,0.3s,baz=179,slow=22,SNR=190						
JTS				S	Sn	16 19 07.0	-2.3
	302nm,0.3s,baz=28,slow=16,SNR=44						
JTS	Las Juntas de	1.23	146	eP	Pn	16 18 46.1	-0.2
DUNO	Dulce Nombre,	1.25	173	eP	Pn	16 18 46.1	-0.2
COPN	Copaltepe	1.25	313	eP	Pn	16 18 45.3	-1.1
MOMN	Momotombo	1.39	321	eP	Pn	16 18 47.2	-0.4
CNGN	Cerro Negro	1.55	319	eP	Pn	16 18 48.8	-0.4
CNGN				eS	Sn	16 19 14.1	-0.4
MATN	Matagalpa	1.62	351	eP	Pn	16 18 49.0	-0.9
LAFE	Finca La Fe, P	1.67	154	eP	Pn	16 18 50.3	-0.1
TELN	Telica	1.72	318	eP	Pn	16 18 50.6	-0.2
CRIN	San Cristobal	1.93	315	eP	Pn	16 18 52.7	-0.4
CRIN				eS	Sn	16 19 20.6	-0.8
CDM	Cerro de Muert	2.56	133	eP	Pn	16 19 01.5	+1.0
CNCH	Conchagua	2.88	313	eP	Pn	16 19 03.7	-0.2
TXAR	Lajitas Array	24.56	319	P	P	16 23 23.3	+3.4
	0.6nm,0.7s,baz=141,slow=9.8,SNR=8.2						
	0.6nm,0.7s						
NVAR	Mina Array Bea	39.71	318	P	P	16 25 32.7	+1.2
	0.5nm,0.7s,baz=148,slow=7.4,SNR=4.1						
	0.5nm,0.7s						
SCHQ	Schefferville	45.88	15	P	P	16 26 19.4	-1.2
	2.1nm,0.7s,baz=220,slow=8.1,SNR=4.0						
	2.1nm,0.7s						
ASAR	Alice Springs	140.46	247	PKP	PKiKP	16 37 26.6	-1.0
	0.2nm,0.4s,baz=89,slow=1.7,SNR=9.5						
WRA	Warramunga Arr	140.63	252	PKP	PKiKP	16 37 27.4	-0.6
	0.3nm,0.5s,baz=91,slow=2.7,SNR=6.6						

IDC ***28*** *16:18:42.8±1.2, 32°.81N×130°.69E, h0km, mb3.3/4, mbtmp3.2/6, ML2.7/1, Error ellipse: s-maj=26.0km s-min=8.0km az=118.0*

JMA ***28*** *16:18:45.0±0.0, 32°.88N±0°.09×130°.8E±0°.1, h13km, MV3.3/20, NW KUMAMOTO PREF*

JMA Felt III J1 at NW KUMAMOTO PREF .

ISC 28 16:18:44.6±0.7**, 32°.83N**±0°.04×**130°.80E**±0°.06**, h10**km**, n12,** σ**0ˢ.85**/17**, mb3.3**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	Tamana	0.26	301	iP	Pg	16 18 50.4	+0.6
JTA				eS	Sg	16 18 54.1	+0.8
JIU3	Izumi3	0.28	177	iP	Pb	16 18 51.7	-0.1
JIU3				eS	Sb	16 18 56.7	+0.1
JNU	Nakatsue	0.30	14	Pg	Pg	16 18 49.8	-0.8
	888nm,0.3s,baz=211,slow=6.2,SNR=2697						
JNU				Lg	Lg	16 18 53.7	
	4μm,0.3s,baz=202,slow=7.6,SNR=90						
JNU	Nakatsue	0.30	14	iP	Pg	16 18 50.6	0.0
JNU				eS	Sg	16 18 54.3	-0.3
JTZ	Takazaki	0.96	165	iP	Pb	16 19 04.0	+0.7
JTZ				S	Sn	16 19 17.5	-0.4
KSRS	Korea Array	5.17	334	Pn	Pn	16 20 02.0	-0.1
	0.4nm,0.5s,baz=150,slow=14,SNR=1.5						
KSRS				Pg	Pb	16 20 15.5	+0.3
	0.2nm,0.3s,baz=151,slow=16,SNR=4.5						
KSRS				Lg	Lg	16 21 23.3	
	0.7nm,0.3s,baz=152,slow=30,SNR=6.3						
MJAR	Matsushiro Arr	7.14	57	Pn	Pn	16 20 31.4	+2.3
	0.1nm,0.3s,baz=242,slow=13,SNR=13						
	1.8nm,0.4s						
KLR	Kul'dur	16.40	2	Pn	P	16 22 37.8	+0.2
	0.1nm,0.3s,baz=184,slow=8.5,SNR=5.1						
SONM	Songino Array	23.75	316	P	P	16 23 56.9	-0.2
	0.2nm,0.4s,baz=105,slow=11,SNR=2.0						
	0.2nm,0.4s						
WRA	Warramunga Arr	52.59	176	P	P	16 27 57.5	-1.0
	0.4nm,1.0s,baz=350,slow=7.7,SNR=2.5						
	0.4nm,1.0s						
ASAR	Alice Springs	56.26	177	P	P	16 28 24.6	-0.7
	0.2nm,0.7s,baz=1.4,slow=5.7,SNR=1.8						
	0.2nm,0.7s						
AKASG	Malin Array Be	72.00	319	P	P	16 30 07.5	-0.8
	0.4nm,0.4s,baz=52,slow=7.2,SNR=2.4						
	0.4nm,0.4s						

IDC ***28*** *16:34:45.1±2.2, 6°.58S×131°.06E, h83km±20km, mb3.7/7, mbtmp4.1/10, Error ellipse: s-maj=26.5km s-min=14.6km az=78.0*

DJA ***28*** *16:34:47.4±0.3, 7°S±3°×13°1E±°, h108km±9km, M4.4/13, mB5.0/6, mb4.3/13, MLv4.5/12, Mw(mB)4.3/6*

NEIC ***28*** *16:34:49.2±1.8, 7°.1S±0°.1×131°.0E±0°.1, h137km±5km, mb4.1/5, Error ellipse: s-maj=21.2km s-min=15.0km az=209.0*

ISC 28 16:34:45.6±0.5**, 6°.73S**±0°.05×**130°.94E**±0°.06**, h100**km**, n47,** σ**2ˢ.43**/49**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.29	164		Pn	16 35 12.0	+2.6
SAUI	Saumlaki	1.29	164	P	Pn	16 35 12.0	+2.6
SAUI				S	Sn	16 35 32.2	+4.8
MSAI	Masohi	3.91	329	P	Pn	16 35 45.6	+2.0
AAI	Ambon	4.08	318	P	Pn	16 35 47.2	+1.4
AAI				S	Sn	16 36 33.8	+1.2
KMPI	Kaimana, Papua	4.11	42	P	Pn	16 35 46.5	+0.3
SIJI	Sorong	5.83	3	P	Pn	16 36 08.5	-1.2
	22nm,0.3s,baz=20,slow=23,SNR=52						
SIJI				S	Sn	16 37 09.9	-5.3
	21nm,0.3s,baz=119,slow=22,SNR=11						
MTN	Manton Dam	6.08	178		Pn	16 36 12.6	-0.4
SANI	Sanana	6.78	313	P	Pn	16 36 24.0	+1.5
	0.0nm12nm,0.9s						
LBMI	Labuha	6.96	330	P	Pn	16 36 26.5	+1.6
	0.1nm14nm,1.2s						
SRPI	Serui, Papua	7.16	48	P	Pn	16 36 29.8	+2.2
SOEI	Soe	7.26	245		Pn	16 36 30.6	+1.4
SOEI	Soe	7.26	245	P	Pn	16 36 30.8	+1.7
	0.5nm993nm81nm,0.8s						
BAKI	Biak	7.54	43	P	Pn	16 36 35.7	+2.9
	72nm,0.8s						
BATI	Baumata	7.99	244	P	Pn	16 36 40.6	+1.6
	31nm,0.4s,baz=137,slow=3.6,SNR=16						
BATI				S	Sn	16 38 05.5	-2.2
	74nm,0.5s,baz=47,slow=14,SNR=10.0						
BATI	Baumata	7.99	244	P	Pn	16 36 40.7	+1.8
	0.2nm27nm,0.6s						
WAMI	Wamena	8.24	70	P	Pn	16 36 47.6	+5.3
TNTI	Ternate	8.26	334	P	Pn	16 36 44.4	+1.7
	6.6nm,0.5s						
BBSI	Bau Bau	8.41	278	P	Pn	16 36 46.7	+1.9
	95nm1.4nm,0.9s						
MMRI	Maumere	8.83	257	P	Pn	16 36 51.5	+1.0
	12nm,0.5s						
SMPI	Sarmi	9.06	59	P	Pn	16 36 55.6	+2.0
	5.8nm,1.2s						
KNRA	Kununurra	9.14	193	Pn	Pn	16 36 54.1	-0.6
BASI	Baing, Sumba	10.82	251	P	Pn	16 37 19.2	+1.7
TOLI2	Tolitoli	12.79	307	P	P	16 37 52.4	+1.5
WB0	Warramunga Arr	13.39	166	Pn	Pn	16 37 47.2	-4.4
WRAB	Tennant Creek	13.54	166		Pn	16 37 48.8	-4.7
WRA	Warramunga Arr	13.54	166	P	Pn	16 37 48.4	-5.2
	5.8nm,0.5s,baz=350,slow=13,SNR=42						
WRA				S	Sn	16 40 11.1	-12
	11nm,0.6s,baz=348,slow=22,SNR=9.4						
WRA	Warramunga Arr	13.54	166		Pn	16 37 48.9	-4.7
WB2	Warramunga Arr	13.55	166	Pn	Pn	16 37 49.2	-4.5
WR0	Warramunga Arr	13.61	165		Pn	16 37 51.0	-3.5
COEN	Coen	14.01	122	Pn	Pn	16 37 58.5	-1.2
ASAR	Alice Springs	17.08	171	P	P	16 38 37.1	-1.4
	3.8nm,0.4s,baz=20,slow=13,SNR=147						
ASAR				S	Sn	16 41 36.0	-12
	2.8nm,0.6s,baz=356,slow=24,SNR=6.3						
ASAR	Alice Springs	17.08	171		Pn	16 38 34.6	-3.7
MBWA	Marble Bar	17.99	216	P	P	16 38 45.4	-3.0
MBWA				IAmb	IAmb	16 39 02.5	
	comp=Z,5.3nm,1.0s						
PSA00	Pilbara Seismi	18.24	215	P	P	16 38 49.5	-1.7
PSA00				IAmb	IAmb	16 39 07.8	
	comp=Z,8.0nm,0.9s						
CTA	Charters Tower	19.93	133	P	Pn	16 39 10.8	-1.4
	comp=Z,2.8nm,0.7s,baz=295,slow=11,SNR=7.2						
CTAO	Charters Tower	19.93	133	P	P	16 39 07.6	-2.0
STKA	Stephens Creek	26.93	160	P	P	16 40 19.5	+2.0
	comp=Z,0.9nm,0.3s,baz=328,slow=10,SNR=4.1						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	40.28	309	P	P	16 42 13.9	+0.7
	comp=Z,0.9nm,0.4s,baz=135,slow=7.6,SNR=5.6						
	comp=Z,0.9nm,0.4s						
KSRS	Korea Array	44.04	357	P	P	16 42 44.5	+1.1
	comp=Z,0.4nm,0.4s,baz=163,slow=8.7,SNR=4.4						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	58.49	341	P	P	16 44 33.1	+1.7
	comp=Z,1.2nm,0.7s,baz=167,slow=6.0,SNR=8.4						
	comp=Z,1.2nm,0.7s						
MK31	Makanchi Array	68.52	326	P	P	16 45 38.9	+1.6
MK31				IAmb	IAmb	16 45 39.5	
	comp=Z,4.5nm,0.5s						
MKAR	Makanchi Array	68.52	326	P	P	16 45 38.6	+1.3
	comp=Z,7.0nm,0.5s,baz=114,slow=8.4,SNR=119						
	comp=Z,7.0nm,0.5s						
MAKZ	Makanchi	68.70	326	P	P	16 45 39.6	+1.2
ZALV	Zalesovo Beam	71.76	333	P	P	16 45 57.3	+0.4
	comp=Z,1.4nm,0.6s,baz=133,slow=4.0,SNR=8.9						
	comp=Z,1.4nm,0.6s						
ILAR	Eielson Array	92.70	25	P	P	16 47 45.0	-1.1
	comp=Z,0.2nm,0.6s,baz=250,slow=5.3,SNR=2.5						
	comp=Z,0.2nm,0.6s						
TORD	Torodi Ar. Bea	129.67	281	PKP	PKPdf	16 53 44.7	+0.6
	comp=Z,0.4nm,0.6s,baz=96,slow=2.3,SNR=2.8						
LPAZ	La Paz	150.35	141	PKPbc	PKiKP	16 54 28.6	+0.8
	comp=Z,2.1nm,0.7s,baz=155,slow=2.0,SNR=7.2						

AUST ***28*** *16:38:42.6±0.8, 32°.30S×122°.39E, h0km, Error ellipse: s-maj=16.0km s-min=7.2km az=169.0*

BJI ***28*** *16:38:42.8±0.0, 32°.89S×122°.29E, h12km, mb4.7/34, mB4.9/18, Ms4.6/10, Ms7 4.4/9*

NEIC ***28*** *16:38:43.9±2.4, 32°.31S±0°.08×122°.50E±0°.07, h11km±4km, Error ellipse: s-maj=12.6km s-min=7.9km az=205.0*

NOU ***28*** *16:38:43.8, 32°.42S×122°.43E, h10km, mb5.1/20, Western Australia*

IDC ***28*** *16:38:44.0±0.7, 32°.56S×122°.74E, h0km, mb4.4/14, mbtmp4.5/17, ML5.0/3, MS4.1/25, Error ellipse: s-maj=28.4km s-min=15.7km az=92.0*

CUPWA ***28*** *16:38:46.7±6.6, 32°.57S×122°.38E, h7km±61km, ML5.1, Region: WESTERN AUSTRALIA Hypocentre not reviewed by the ISC*

ISC 28 16:38:44.9±0.4**, 32°.45S**±0°.05×**122°.42E**±0°.04**, h10**km**, n167,** σ**2ˢ.58**/159**, mb4.9**/67**, MS4.1**/28**, 3C-1D, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUKUL	Kulin High Sch	3.61	265	P		16 39 40.8	
GNOW	Gnowangerup	4.05	248	P		16 39 43.6	
KLBR	Kellerberrin	4.05	281	P	Pn	16 39 46.2	-0.8
	baz=4.0,SNR=306						
KLBR				S	Sn	16 40 31.7	-2.8
	baz=4.0						
KLBR	Kellerberrin	4.05	281	P	Pn	16 39 45.7	-1.3
KLBR	Kellerberrin	4.05	281	P		16 39 46.2	
KLBR				S		16 40 31.8	
BENC	Bencubbin	4.22	292	P		16 39 49.6	
QUAI	Quairading	4.28	275	P		16 39 49.8	
QUAI	Quairading	4.28	275	SG		16 40 55.0	
NWAO	Narrogin (SRO)	4.40	262	Pn	Pn	16 39 51.0	-0.7
NWAO	Narrogin (SRO)	4.40	262	P	Pn	16 39 50.5	-1.2
AUALB	St Joseph's Co	4.54	235	P	Pn	16 39 53.8	+0.2
	baz=4.6						
PING	Pingelly	4.59	268	S		16 40 45.5	
MECK	Meckering	4.67	279	P		16 39 54.8	
RKGY	Rocky Gully	5.03	243	P	Pn	16 39 60.0	-0.4
	baz=5.1,SNR=247						
RKGY				S	Sn	16 40 56.3	-2.2
	baz=5.1						
RKGY	Rocky Gully	5.03	243	P	Pn	16 40 00.5	+0.1
RKGY	Rocky Gully	5.03	243	P		16 39 60.0	
FORT	Forrest	5.09	72	P	Pn	16 40 01.7	+0.5
	baz=5.1,SNR=33						
FORT				S	Sn	16 41 00.7	+0.5
	baz=5.1						
FORT	Forrest	5.09	72		Pn	16 39 59.0	-2.3
FORT	Forrest	5.09	72	P		16 40 01.7	
BLDU	Ballidu	5.21	289	P	Pn	16 40 00.7	-2.2
	baz=5.1,SNR=128						
BLDU	Ballidu	5.21	289	P	Pn	16 40 00.7	-2.2
BLDU	Ballidu	5.21	289	P		16 40 00.7	
MUN	Mundaring	5.29	273	P	Pn	16 40 02.1	-1.8
	baz=5.2,SNR=72						
MUN				S	Sn	16 41 00.3	-4.6
	baz=5.2						
MUN	Mundaring	5.29	273	P	Pn	16 40 02.5	-1.4
MUN	Mundaring	5.29	273	P		16 40 02.1	
AUMAZ	Mazenod Senior	5.42	273	P	Pn	16 40 04.4	-1.4
	baz=5.4						
AUMAZ				S	Sn	16 41 03.2	-5.1
	baz=5.4						
MORW	Morawa	6.44	300	P	Pn	16 40 18.2	-1.7
	baz=6.3,SNR=189						
MORW				S	Sn	16 41 29.6	-3.9
	baz=6.3						
MORW	Morawa	6.44	300	Pn	Pn	16 40 19.4	-0.4
MORW	Morawa	6.44	300	P		16 40 18.2	
MORW				S		16 41 28.5	
WRKA	Warakurna	9.01	36	P	Pn	16 40 56.7	+1.6
	baz=8.9,SNR=44						
WRKA				S	Sn	16 42 35.0	-1.7
	baz=8.9						
MULG	Mulgathing	10.18	81	P	Pn	16 41 10.3	-0.9
	baz=10,SNR=32						
MULG				S	Sn	16 43 01.7	-3.8
	baz=10						
MULG	Mulgathing	10.18	81	P	Pn	16 41 10.6	-0.6
PSA00	Pilbara Seismi	11.08	347		Pn	16 41 20.9	-2.4
PSA00	Pilbara Seismi	11.08	347	Pn	Pn	16 41 21.0	-2.4
PSA00	Pilbara Seismi	11.08	347	P	Pn	16 41 22.0	-1.4
MBWA	Marble Bar	11.50	347	Pn	Pn	16 41 26.2	-3.0
MBWA	Marble Bar	11.50	347	P	Pn	16 41 27.9	-1.3
BBOO	Buckleboo	11.51	95	P	Pn	16 41 27.3	-2.0
	baz=12,SNR=28						
BBOO	Buckleboo	11.51	95	Pn	Pn	16 41 27.5	-1.8
BBOO	Buckleboo	11.51	95	P	Pn	16 41 28.9	-0.4
GIRL	Giralia	12.17	321	P	Pn	16 41 37.1	-1.2
	baz=12,SNR=6.7						
GIRL	Giralia	12.17	321	Pn	Pn	16 41 35.7	-2.6
GIRL	Giralia	12.17	321	P	Pn	16 41 38.1	-0.2
OOD	Oodnadatta	12.39	71	P	Pn	16 41 39.0	-2.4
	baz=12,SNR=72						
OOD	Oodnadatta	12.39	71	P	Pn	16 41 39.6	-1.7
WHYH	Whyalla	12.78	97	P	Pn	16 41 44.8	-1.8
NAPP	Napperby	13.25	97	P	Pn	16 41 51.6	-1.5
ASAR	Alice Springs	13.39	52	Pn	Pn	16 41 52.0	-3.0
	7.7nm,0.3s,baz=226,slow=11,SNR=29						
ASAR				Sn	Sn	16 44 12.7	-11
	11nm,0.3s,baz=230,slow=23,SNR=12						
ASAR				Lg	Lg	16 45 33.8	
	10nm,0.3s,baz=225,slow=21,SNR=4.6						
	23nm,0.5s						
ASAR	Alice Springs	13.39	52	Pn	Pn	16 41 53.1	-1.9
LCRK	Leigh Creek	13.63	86	P	Pn	16 41 55.3	-3.0
	baz=14,SNR=15						
LCRK	Leigh Creek	13.63	86	P	Pn	16 41 56.9	-1.5
TWOA	Tennyson Woods	13.69	105	P	Pn	16 41 58.8	-0.3
HTT	Hallett	13.90	98	P	Pn	16 41 59.4	-2.5
	baz=14,SNR=6.5						
HTT	Hallett	13.90	98	P	Pn	16 41 59.7	-2.3
STKA	Stephens Creek	16.25	93	Pn	Pn	16 42 30.1	-3.2
	2.0nm,0.3s,baz=281,slow=12,SNR=12						
STKA				Sn	Sn	16 45 19.8	-14
	4.9nm,0.3s,baz=92,slow=6.1,SNR=4.8						
STKA				Lg	Lg	16 46 58.9	
	4.7nm,0.3s,baz=130,slow=23,SNR=1.5						
STKA				LR	LR	16 48 50.1	
	comp=Z,2μm,19.1s,baz=243,slow=38						
	6.2nm,0.3s						
STKA	Stephens Creek	16.25	93	P	Pn	16 42 31.3	-2.0
	baz=16,SNR=12						
STKA	Stephens Creek	16.25	93	Pn	Pn	16 42 30.4	-2.9
STKA	Stephens Creek	16.25	93	P	Pn	16 42 31.8	-1.5
WRA	Warramunga Arr	16.40	43	Pn	Pn	16 42 32.3	-3.0
	8.4nm,0.3s,baz=214,slow=12,SNR=13						
WRA				Sn	Sn	16 45 26.2	-11
	6.5nm,0.3s,baz=223,slow=21,SNR=15						
WRA				Lg	Lg	16 47 14.6	
	baz=214,slow=26						
	12nm,0.4s						
WRA	Warramunga Arr	16.40	43	Pn	Pn	16 42 32.9	-2.4
WB2	Warramunga Arr	16.41	44	P	Pn	16 42 32.7	-2.8
	baz=16						
WB2	Warramunga Arr	16.41	44	Pn	Pn	16 42 32.6	-2.8
WB2				IAmb	IAmb	16 42 39.9	
	comp=Z,44nm,0.6s						
WRAB	Tennant Creek	16.42	43	Pn	Pn	16 42 32.0	-3.5
WRAB	Tennant Creek	16.42	43	P	Pn	16 42 33.7	-1.8
WR0	Warramunga Arr	16.51	44		Pn	16 42 34.7	-2.0
WR0				IAmb	IAmb	16 42 59.7	
	comp=Z,43nm,0.7s						
INKA	Innaminka	16.54	78	P	Pn	16 42 33.5	-3.5
	baz=16,SNR=17						
ARPS	Mount Arapiles	16.55	110	P	Pn	16 42 36.3	-0.8
	baz=17,SNR=6.7						
ARPS	Mount Arapiles	16.55	110	P	Pn	16 42 36.9	-0.2
WB0	Warramunga Arr	16.57	43	Pn	Pn	16 42 32.7	-4.8
WB0				IAmb	IAmb	16 42 44.5	
	comp=Z,46nm,0.6s						
KNRA	Kununurra	17.67	21	P	Pn	16 42 48.8	-2.3
	baz=18,SNR=20						
KNRA	Kununurra	17.67	21	Pn	Pn	16 42 46.5	-4.7
KNRA				IAmb	IAmb	16 42 49.7	
	comp=Z,76nm,0.9s						
KNRA	Kununurra	17.67	21	P	Pn	16 42 49.6	-1.6
TOO	Toolangi	19.56	112	P	P	16 43 09.0	-3.9
QLP	Quilpie	19.85	79	P	Pn	16 43 17.4	-0.3
	baz=20,SNR=9.6						
MTN	Manton Dam	21.09	24	P	P	16 43 30.9	+1.4
	baz=21,SNR=42						
MTN	Manton Dam	21.09	24	P	P	16 43 26.1	-3.5
KDU	Kakadu	21.73	27	P	P	16 43 37.5	+1.1
	baz=22,SNR=15						
BATI	Baumata	22.17	3	P	P	16 43 43.9	+2.7
	comp=Z,52nm,0.8s,baz=150,slow=2.4,SNR=20						
BATI				S	S	16 47 39.8	-5.7
	comp=Z,23nm,0.7s,baz=121,slow=18,SNR=1.8						
BATI				LR	LR	16 54 07.7	
	comp=Z,709nm,18.4s,baz=209,slow=42						
	comp=Z,52nm,0.8s						
BATI	Baumata	22.17	3	P	P	16 43 45.6	+4.4
	comp=Z,1μmcomp=Z,84nm,1.1s						
BASI	Baing, Sumba	22.19	355	P	P	16 43 44.0	+2.6
	comp=Z,1μmcomp=Z,48nm,0.7s						
TAU	Tasmania Unive	22.23	125	P	P	16 43 42.7	+1.1
TAU				IAmb	IAmb	16 43 47.6	
	comp=Z,84nm,1.4s						
CAN	Canberra	22.23	105	P	P	16 43 40.6	-1.1
CAN				IAmb	IAmb	16 43 59.1	
	comp=Z,44nm,1.5s						
SOEI	Soe	22.65	5	P	P	16 43 39.6	-6.9
SOEI	Soe	22.65	5	P	P	16 43 50.1	+3.6
	comp=Z,1μmcomp=Z,111nm,0.8s						
WSI	Waingapu	22.76	355	P	P	16 43 50.2	+2.8
	comp=Z,10μm,0.9s						
WBSI	Waikabubak, Su	22.87	352	P	P	16 43 50.9	+2.2
	comp=Z,69nm,1.1s						
EDFI	Ende, Flores	23.60	358	P	P	16 43 57.8	+1.7
	comp=Z,26nm,1.3s						
RMQ	Roma	23.66	82	P	P	16 43 57.7	+1.1
	baz=24,SNR=9.6						
MMRI	Maumere	23.70	360	P	P	16 43 53.2	-3.8
MMRI				IAmb	IAmb	16 44 12.2	
	comp=Z,53nm,0.9s						
MMRI	Maumere	23.70	360	P	P	16 43 58.6	+1.6
	comp=Z,74nm,1.3s						
PLAI	Plampang	23.90	349	P	P	16 44 03.3	+4.4
	comp=Z,29nm,0.8s						
CTA	Charters Tower	24.60	66	P	P	16 44 06.8	+1.3
	comp=Z,17nm,0.9s,baz=226,slow=11,SNR=8.7						
CTA				S	S	16 48 29.9	+3.3
	comp=Z,5.8nm,0.8s,baz=253,slow=12,SNR=1.9						
CTA				Lg	Lg	16 51 45.9	
	comp=Z,0.3nm,0.3s,baz=226,slow=18,SNR=1.9						
CTA				LR	LR	16 54 22.7	
	comp=Z,1μm,18.6s,baz=234,slow=38						
CTAO	Charters Tower	24.60	66	P	P	16 44 04.0	-1.4
CTAO				IAmb	IAmb	16 44 11.4	
	comp=Z,47nm,1.2s						
ARMA	Armidale	24.97	93	P	P	16 44 06.7	-2.2
ARMA				IAmb	IAmb	16 44 16.1	
	comp=Z,74nm,1.5s						
JAGI	Jajag, Banyuwa	25.07	340	P	P	16 44 11.4	+1.8
SRBI	Singaraja	25.15	343	P	P	16 44 13.1	+2.7
	comp=Z,52nm,0.9s						
GMJI	Gumukmas	25.46	339	P	P	16 44 15.3	+2.1
	comp=Z,44nm,1.2s						
SAUI	Saumlaki	25.71	21	P	P	16 44 10.2	-5.3
SAUI	Saumlaki	25.71	21	P	P	16 44 18.3	+2.9
	comp=Z,76nm,0.8s						
BLJI	Banyuglugur	25.92	340	P	P	16 44 19.8	+2.5
	comp=Z,30nm,0.6s						
EIDS	Eidsvold	26.01	82	P	P	16 44 19.0	+0.8
	baz=26,SNR=3.9						
EIDS	Eidsvold	26.01	82	P	P	16 44 14.9	-3.3
EIDS				IAmb	IAmb	16 44 43.1	
	comp=Z,28nm,1.2s						
PWJI	Pagerwojo	26.23	336	P	P	16 44 22.8	+2.6
	comp=Z,31nm,1.0s						
KMMI	Kalianget	26.47	341	P	P	16 44 25.2	+2.9
	comp=Z,28nm,1.3s						
UGM	Wanagama	26.80	333	P	P	16 44 27.6	+2.2
	comp=Z,130nm,1.3s						
BBSI	Bau Bau	26.83	0	P	P	16 44 30.1	+4.6
	comp=Z,56nmcomp=Z,3.6nm,1.2s						
YOGI	Yogyakarta	26.98	333	P	P	16 44 30.1	+3.2
	comp=Z,162nm,1.6s						
GRJI	Gresik	27.04	338	P	P	16 44 30.1	+2.6
	comp=Z,48nm,0.9s						
BKSI	Bulukumba	27.08	355	P	P	16 44 30.4	+2.6
	comp=Z,20nm,1.2s						
TBJI	Tambak Boyo	27.34	337	P	P	16 44 32.0	+1.9
	comp=Z,106nm,1.2s						
KAPI	Kappang	27.41	354	P	P	16 44 31.1	+0.3
	comp=Z,12nm,0.7s,baz=187,slow=8.6,SNR=7.1						
KAPI				LR	LR	16 55 18.4	
	comp=Z,302nm,20.6s,baz=174,slow=36						
	comp=Z,12nm,0.7s						
SPSI	Sidrap Palu	28.45	354	P	P	16 44 42.6	+2.5
	comp=Z,848nmcomp=Z,81nm,1.2s						
CNJI	Cibinong	28.78	327	P	P	16 44 45.8	+2.8
	comp=Z,76nm,1.1s						
LEM	Lembang	28.98	328	P	P	16 44 46.4	+1.3
	comp=Z,19nm,0.9s,baz=186,slow=23,SNR=4.2						
LEM				LR	LR	16 56 22.3	
	comp=Z,566nm,19.4s,baz=160,slow=36						
	comp=Z,19nm,0.9s						
AAI	Ambon	29.12	12	P	P	16 44 49.7	+3.6
	comp=Z,50nm,1.1s						
DBJI	Dramaga	29.62	327	P	P	16 44 53.0	+2.5
	comp=Z,6μmcomp=Z,15nm,0.5s						
BBKI	Banjar Baru	29.70	345	P	P	16 44 54.6	+3.4
SANI	Sanana	30.43	7	P	P	16 44 59.1	+1.5
	comp=Z,22nm,1.1s						
LUWI	Luwuk	31.25	1	P	P	16 44 59.1	-5.7
LUWI	Luwuk	31.25	1	P	P	16 45 09.1	+4.3
	comp=Z,2μmcomp=Z,43nm,1.2s						
PBKI	Pangkalan Bun	31.27	339	P	P	16 45 07.2	+2.2
	comp=Z,1μmcomp=Z,73nm,0.6s						
APSI	Ampana	31.38	359	P	P	16 45 09.7	+3.7
	comp=Z,14nm,1.4s						
BKB	Balikpapan	31.46	349	P	P	16 45 03.3	-3.4
LBMI	Labuha	32.01	10	P	P	16 45 14.9	+3.4
	comp=Z,18nm,1.1s						
PMG	Port Moresby	32.39	50	LR	LR	16 58 22.9	
	comp=Z,557nm,20.9s,baz=168,slow=37						
SIJI	Sorong	32.50	17	P	P	16 45 16.9	+0.9
	comp=Z,5.7nm,0.6s,baz=174,slow=6.6,SNR=6.7						
SIJI				LR	LR	16 59 47.9	
	comp=Z,269nm,20.5s,baz=191,slow=39						

	comp=Z,5.7nm,0.6s						
MPSI	Mapaga	32.70	355	P	P	16 45 20.0	+2.4
	comp=Z,453nmcomp=Z,44nm,1.0s						
MRSI	Marisa	32.76	359	P	P	16 45 19.8	+1.7
	comp=Z,540nmcomp=Z,58nm,1.0s						
KMSI	Cibinong	32.88	3	P	P	16 45 22.5	+3.3
	comp=Z,798nmcomp=Z,79nm,1.4s						
GTOI	Gorontalo	32.91	1	P	P	16 45 22.7	+3.2
	comp=Z,17nm,1.1s						
TNTI	Ternate	33.38	9	P	P	16 45 27.7	+4.2
	comp=Z,628nmcomp=Z,9.9nm,0.7s						
TOLI2	Tolitoli	33.42	357	P	P	16 45 22.1	-1.7
STKI	Sintang	33.95	340	P	P	16 45 32.4	+3.8
	comp=Z,22nm,0.9s						
KSM	Kuching	35.64	339	P	P	16 45 40.6	-2.5
KSM				IAmb	IAmb	16 45 46.7	
	comp=Z,17nm,1.0s						
RPZ	Rata Peaks	39.39	121	P	P	16 46 13.2	-1.5
RPZ				IAmb	IAmb	16 46 38.5	
	comp=Z,21nm,1.0s						
KRVT	Keravat (AS076	39.39	51	LR	LR	17 01 57.3	
	comp=Z,294nm,19.0s,baz=1.6,slow=36						
DAV	Davao City (W)	39.42	5	LR	LR	17 05 06.3	
	comp=Z,172nm,18.7s,baz=148,slow=40						
DZM	Mont Dzumac	40.23	86	LR	LR	17 02 34.6	
	comp=Z,323nm,19.9s,baz=252,slow=36						
PSI	Prapat	41.54	323	LR	LR	17 05 02.3	
	comp=Z,231nm,19.1s,baz=158,slow=38						
URZ	Urewera	44.44	113	LR	LR	17 05 19.5	
	comp=Z,323nm,18.1s,baz=211,slow=36						
VNDA	Vanda	48.45	169	P	P	16 47 26.6	-0.4
	comp=Z,2.1nm,0.9s,baz=314,slow=9.1,SNR=11						
VNDA				LR	LR	17 04 41.1	
	comp=Z,139nm,20.0s,baz=344,slow=32						
	comp=Z,2.1nm,0.9s						
VNDA	Vanda	48.45	169	P	P	16 47 25.8	-1.2
SBA	Scott Base	49.46	169	P	P	16 47 34.0	-0.7
GUMO	Guam	50.57	29	LR	LR	17 11 33.9	
	comp=Z,77nm,18.0s,baz=199,slow=39						
RAO	Raoul Island	50.74	103	LR	LR	17 08 17.9	
	comp=Z,199nm,18.9s,baz=216,slow=35						
MSVF	Nonsavu	51.94	88	LR	LR	17 10 07.4	
	comp=Z,173nm,18.5s,baz=213,slow=36						
CMAR	Chiang Mai Arr	55.39	333	P	P	16 48 21.3	+1.9
	comp=Z,0.5nm,0.4s,baz=176,slow=7.4,SNR=6.4						
CMAR				LR	LR	17 14 14.6	
	comp=Z,196nm,19.2s,baz=140,slow=38						
	comp=Z,0.5nm,0.4s						
CHTO	Chiang Mai	55.71	333	P	P	16 48 17.4	-4.3
CHTO				IAmb	IAmb	16 48 25.4	
	comp=Z,12nm,1.4s						
PALK	Pallekele	56.02	307	LR	LR	17 08 52.3	
	comp=Z,254nm,20.0s,baz=249,slow=32						
QSPA	South Pole Qui	57.65	180	P	P	16 48 34.8	-0.4
	comp=Z,6.1nm,0.9s,baz=354,slow=5.8,SNR=8.7						
QSPA				LR	LR	17 11 43.6	
	comp=Z,285nm,18.5s,baz=240,slow=34						
	comp=Z,6.1nm,0.9s						
QSPA	South Pole Qui	57.65	180	P	P	16 48 35.2	0.0
QSPA				IAmb	IAmb	16 48 39.3	
	comp=Z,26nm,1.4s						
KMI	Kunming	60.25	339	⇑P	P	16 48 57.0	+3.3
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				LR	LR		
	comp=Z,190nm,22.5s						
KMI				LR	LR		
	comp=Z,290nm,18.9s						
KMI				LR	LR		
	comp=Z,210nm,23.1s						
GYA	Guiyang	60.48	344	⇑P	P	16 48 58.3	+3.2
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
PZH	PanZhiHua	61.85	339	P	P	16 49 07.8	+3.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,50nm,3.6s						
NJ2	Nanjing	64.25	357	eP	P	16 49 25.0	+5.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JHJ	Hachijo jima 2	67.25	16	LR	LR	17 18 47.4	
	comp=Z,63nm,19.7s,baz=106,slow=36						
XAN	Xi'an	67.35	348	⇑iP	P	16 49 42.0	+1.9
XAN				pP	sP	16 49 47.0	+2.3
XAN				sP	pP	16 49 49.8	+6.3
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SNAA	Sanae	69.38	196	P	P	16 49 52.6	+0.1
KSRS	Korea Array	69.74	5	P	P	16 49 56.9	+2.0
	comp=Z,3.1nm,0.8s,baz=186,slow=8.8,SNR=17						
	comp=Z,3.1nm,0.8s						
MJAR	Matsushiro Arr	70.21	13	P	P	16 49 58.9	+1.0
	comp=Z,2.4nm,0.7s,baz=176,slow=6.4,SNR=3.1						
	comp=Z,2.4nm,0.7s						
LZH	Lanzhou	70.37	344	eP	P	16 50 03.3	+4.3
LZH				sP	sP	16 50 09.0	+5.4
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				LR	LR		
	comp=Z,140nm,15.9s						
LZH				LR	LR		
	comp=Z,150nm,17.9s						
VNA3	Neumayer Olymp	71.22	195	P	P	16 50 00.7	-3.0
GOMU	GeErMu	73.02	337	P	P	16 50 11.5	-3.8
GOMU				pP	pP	16 50 15.0	-3.6
GOMU				sP	sP	16 50 19.0	-0.9
GOMU				S	S	16 59 37.0	-5.6
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,27nm,3.7s						
GOMU				LR	LR		
	comp=N,78nm,14.7s						
GOMU				LR	LR		
	comp=E,47nm,14.3s						
GOMU				LR	LR		
	comp=Z,110nm,14.3s						
HHC	Hu-ho-hao-te	73.62	351	eP	P	16 50 19.0	+0.6
HHC				pmax	pmax		
	comp=Z,35nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
GTA	Gaotai	74.52	342	⇓P	P	16 50 26.8	+3.1
GTA				pP	sP	16 50 30.0	+1.7
GTA				sP	PcP	16 50 34.5	-3.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,79nm,5.5s						
GTA				LR	LR		
	comp=Z,74nm,18.2s						
GTA				LR	LR		
	comp=Z,96nm,18.5s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
CN2	Changchun	75.94	2	eP	P	16 50 36.3	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	76.78	7	P	P	16 50 38.4	+2.0
	comp=Z,1.2nm,0.6s,baz=199,slow=4.9,SNR=7.3						
	comp=Z,1.2nm,0.6s						
ASAJ	Asahikawa	78.40	15	LR	LR	17 27 17.8	
	comp=Z,38nm,20.2s,baz=176,slow=37						
PPT	Papeete	79.15	104	LR	LR	17 22 40.6	
	comp=Z,43nm,19.8s,baz=248,slow=33						
BOSA	Boshof	80.69	242	P	P	16 51 00.8	+2.1
	comp=Z,0.7nm,0.5s,baz=152,slow=5.3,SNR=4.5						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	81.21	349	P	P	16 51 03.0	+2.3
	comp=Z,1.9nm,0.7s,baz=168,slow=5.4,SNR=10						
SONM				LR	LR	17 30 45.8	
	comp=Z,90nm,19.1s,baz=158,slow=38						
	comp=Z,1.9nm,0.7s						
WMQ	Urumqi	82.27	335	eP	P	16 51 07.5	+1.2
MKAR	Makanchi Array	86.78	334	P	P	16 51 30.4	+1.4
	comp=Z,1.6nm,0.7s,baz=141,slow=6.9,SNR=21						
MKAR				LR	LR	17 33 02.6	
	comp=Z,40nm,19.9s,baz=144,slow=38						
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	86.78	334	P	P	16 51 26.0	-3.0
PETK	Petropavlovsk-	90.57	20	P	P	16 51 47.7	+0.9
	comp=Z,1.8nm,0.8s,baz=177,slow=2.9,SNR=1.8						
	comp=Z,1.8nm,0.8s						
KURBB	Kurchatov Arra	91.35	334	LR	LR	17 37 43.2	
	comp=Z,64nm,19.3s,baz=144,slow=39						
KURK	Kurchatov	91.39	334	P	P	16 51 49.9	-0.8
KURK				IAmb	IAmb	16 51 55.7	
	comp=Z,7.3nm,1.2s						
FINES	FINESS Array B	120.88	326	PKP	PKiKP	16 57 37.4	+0.6
	comp=Z,1.2nm,0.8s,baz=155,slow=4.6,SNR=4.4						
TORD	Torodi Ar. Bea	122.78	265	PKP	PKiKP	16 57 43.1	+1.1
	comp=Z,0.5nm,0.7s,baz=50,slow=1.3,SNR=3.5						
ULM	Lac du Bonnet	146.66	46	PKPbc	PKPdf	16 58 24.8	-0.1
	comp=Z,1.8nm,0.6s,baz=308,slow=4.6,SNR=2.3						

IDC ***28*** *16:42:03.8±1.1, 11°.81N×85°.59W, h157km±23km, mb3.4/5, mbtmp3.8/6, MS3.4/1, Error ellipse: s-maj=42.4km s-min=24.4km az=36.0*

INET ***28*** *16:42:05.1±1.0, 11°.56N×85°.92W, h168km±6km, MW3.5*

UCR ***28*** *16:42:05.3±1.3, 11°.54N×85°.91W, h165km±6km, MW4.0, mb4.4(NEIC)*

NEIC ***28*** *16:42:05.4±1.6, 11°.54N±0°.07×85°.92W±0°.06, h171km±8km, mb4.4/17, Error ellipse: s-maj=12.0km s-min=5.6km az=221.0*

ISC 28 16:42:04.3±0.7**, 11°.55N**±0°.05×**85°.96W**±0°.05**, h170**km±5km**, n89, σ0ˢ.94**/100**, mb4.3**/11**, 3C, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CONN	Concepcion	0.33	88	eP	Pn	16 42 28.0	+0.7
MGAN	Managua	0.65	335	eP	Pn	16 42 29.4	+0.8
APYN	Apoyeque	0.78	331	eP	Pn	16 42 29.4	0.0
HUEN		0.81	345	eP	Pn	16 42 30.6	+1.0
ACON	Acoyapa	0.87	62		Pn	16 42 30.6	+0.6
ACON	Acoyapa	0.87	62	eP	Pn	16 42 30.7	+0.6
ACON	Acoyapa	0.87	62	eP	Pn	16 42 30.6	+0.6
ACON				eS	Sn	16 42 49.8	0.0
COPN	Copaltepe	0.88	315	eP	Pn	16 42 29.6	-0.5
HZTE	Horizontes, Gu	0.91	157	Pn	Pn	16 42 30.9	+0.5
HZTE	Horizontes, Gu	0.91	157	eP	Pn	16 42 30.9	+0.5
HZTE	Horizontes, Gu	0.91	157	eP	Pn	16 42 31.0	+0.7
BOAB	BOACO BROADBAN	0.94	18		Pn	16 42 30.9	+0.4
BOAB	BOACO BROADBAN	0.94	18	eP	Pn	16 42 31.1	+0.6
BOAB				eS	Sn	16 42 50.8	0.0
GPS2	Hotel Rincn d	1.00	143	⇑iP	Pn	16 42 31.5	+0.5
GPS2				eP		16 42 31.6	
GPS2				iS	Sn	16 42 52.9	+1.2
MOMN	Momotombo	1.02	326	eP	Pn	16 42 31.7	+0.5
GUAB	Guayabo de Bag	1.11	139	iP	Pn	16 42 32.5	+0.5
GUAB				iS	Sn	16 42 53.0	-0.2
VMAR	Armenia, Volca	1.11	132	eP	Pn	16 42 32.4	+0.5
HORNC	Hornillas	1.14	137	eP	Pn	16 42 32.9	+0.7
HORNC				iS	Sn	16 42 54.5	+0.8
COLC	Colonia	1.15	140	⇑iP	Pn	16 42 32.9	+0.5
COLC				eP		16 42 32.9	
CNGN	Cerro Negro	1.19	323		Pn	16 42 33.3	+0.7
CNGN	Cerro Negro	1.19	323	eP	Pn	16 42 33.3	+0.7
CNGN	Cerro Negro	1.19	323	eP	Pn	16 42 33.2	+0.6
CNGN				eS	Sn	16 42 56.4	+2.0
CUI	Cuipilapa	1.19	139	iP	Pn	16 42 33.3	+0.7
ORTG	Ortega, Santa	1.28	157	Pn	Pn	16 42 33.8	+0.2
ORTG	Ortega, Santa	1.28	157	eP	Pn	16 42 34.1	+0.6
ORTG	Ortega, Santa	1.28	157	eP	Pn	16 42 34.1	+0.6
PLVR	Palo Verde	1.34	153	eP	Pn	16 42 34.4	+0.2
TELN	Telica	1.35	321	eP	Pn	16 42 34.9	+0.8
GUAI	GUAI	1.35	161	⇑iP	Pn	16 42 34.6	+0.6
MATN	Matagalpa	1.37	1		Pn	16 42 34.4	+0.1
MATN	Matagalpa	1.37	1	eP	Pn	16 42 34.6	+0.3
MATN	Matagalpa	1.37	1	eP	Pn	16 42 34.4	+0.1
SAJU	San Juanillo,	1.50	171	eP	Pn	16 42 35.7	+0.2
NICO	Nicoya	1.50	160	eP	Pn	16 42 36.0	+0.5
DUNO	Dulce Nombre,	1.54	163		Pn	16 42 36.3	+0.5
DUNO	Dulce Nombre,	1.54	163	eP	Pn	16 42 36.3	+0.5
DUNO	Dulce Nombre,	1.54	163	eP	Pn	16 42 36.3	+0.5
CRIN	San Cristobal	1.56	317	Pn	Pn	16 42 36.7	+0.6
CRIN	San Cristobal	1.56	317	eP	Pn	16 42 36.9	+0.8
CRIN				eS	Sn	16 43 02.5	+1.8
JTS	Las Juntas de	1.60	142	P	Pn	16 42 36.6	+0.2
	119nm,0.3s,baz=24,slow=12,SNR=124						
JTS				S	Sn	16 42 59.6	-1.7
	232nm,0.4s,baz=339,slow=20,SNR=14						
JTS	Las Juntas de	1.60	142	eP	Pn	16 42 36.7	+0.2
JTS	Las Juntas de	1.60	142	eP	Pn	16 42 36.6	+0.2
JTS				eS	Sn	16 43 00.4	-0.9
CEDE	Laguna Cedeo	1.63	131	eP	Pn	16 42 38.0	+1.2
INDI	Punta indio, G	1.74	165	eP	Pn	16 42 38.1	+0.2
ESPN	Las Esperanzas	1.75	68	Pn	Pn	16 42 38.1	+0.2
ESPN	Las Esperanzas	1.75	68	eP	Pn	16 42 38.5	+0.6
ESPN	Las Esperanzas	1.75	68	eP	Pn	16 42 38.4	+0.5
ESPN				eS	Sn	16 43 04.1	+0.2
LAFE	Finca La Fe, P	2.02	149	eP	Pn	16 42 41.2	+0.3
LAFE	Finca La Fe, P	2.02	149	eP	Pn	16 42 41.2	+0.3
SRA1	San Ramn	2.06	135	eP	Pn	16 42 43.0	+1.5
JACO	JACO, Garabito	2.27	146		Pn	16 42 44.5	+0.6
JACO	JACO, Garabito	2.27	146	eP	Pn	16 42 44.5	+0.6
RIMA	Rio Macho	2.72	131		Pn	16 42 50.2	+0.9
RIMA	Rio Macho	2.72	131	eP	Pn	16 42 50.1	+0.7
CDM	Cerro de Muert	2.94	132	eP	Pn	16 42 53.8	+1.6
PEZE	Perez Zeledon,	3.11	134		Pn	16 42 55.3	+1.3
SRBA	San Rafael, Bu	3.44	132		Pn	16 42 59.1	+0.9
SRBA	San Rafael, Bu	3.44	132	eP	Pn	16 42 59.3	+1.1
DRK0	Durika	3.51	130		Pn	16 43 00.4	+1.3
RIOS	Rincon, Osa	3.72	139	Pn	Pn	16 43 02.3	+0.8
PIRO	Carate, Puerto	4.06	140	eP	Pn	16 43 07.6	+1.7
BCIP	Isla Barro Col	6.47	111	Pn	Pn	16 43 38.4	+0.8
CMIG	Matias Romero	10.25	304	P	Pn	16 44 27.8	+0.4
	2.0nm,0.3s,baz=168,slow=8.0,SNR=6.2						
CMIG				S	Sn	16 46 17.4	-3.8
	1.0nm,0.3s,baz=23,slow=18,SNR=1.9						
URIC	Uribia, Colomb	13.68	88	Pn	Pn	16 45 10.2	-1.4
BIRV	Birongo	19.36	91	P	P	16 46 17.2	+0.1
BIRV				IAmb	IAmb	16 47 02.7	
	comp=Z,18nm,1.2s						
LRAL	Lakeview Retre	21.40	358	P	P	16 46 40.8	+2.0
LRAL				IAmb	IAmb	16 46 43.1	
	comp=Z,16nm,1.5s						
GOGA	Godfrey	21.88	6	P	P	16 46 44.9	+1.2
GOGA				IAmb	IAmb	16 47 39.8	
	comp=Z,16nm,1.4s						
Y49A	Blount Mountai	22.20	359	P	P	16 46 47.9	+0.9
Y49A				IAmb	IAmb	16 46 49.4	
	comp=Z,7.2nm,0.7s						
HODGE	Hodges	22.82	8	P	P	16 46 54.2	+1.5
HODGE				IAmb	IAmb	16 46 54.6	
	comp=Z,6.8nm,0.5s						
SWET	Sewanee	23.56	0	P	P	16 47 00.3	+0.9
CPCT	Cooper Cave	23.82	3	P	P	16 47 02.2	+0.4
TX31	Lajitas Ar. Si	24.19	320	P	P	16 47 05.9	+0.5
TX31				IAmb	IAmb	16 47 09.4	
	comp=Z,8.0nm,0.8s						
TX32	Lajitas Array	24.19	320	P	P	16 47 06.1	+0.8
TXAR	Lajitas Array	24.19	320	P	P	16 47 06.6	+1.3
	comp=Z,2.2nm,0.6s,baz=133,slow=8.7,SNR=27						
	comp=Z,2.2nm,0.6s						
TXAR	Lajitas Array	24.19	320	P	P	16 47 06.0	+0.6
WHAR	Wooly Hollow	24.32	347	P	P	16 47 06.7	+0.4
LCAR	Lake Charles	24.86	350	P	P	16 47 10.4	-0.8
V58A	Windy Hill, Pi	24.92	13	P	P	16 47 12.0	+0.3
V58A				IAmb	IAmb	16 47 21.4	
	comp=Z,25nm,1.6s						
Q51A	Peebles	27.46	4	P	P	16 47 35.3	+0.8
O53A	New Philadelph	28.89	8	P	P	16 47 47.5	+0.3
HDIL	Hopedale	29.04	355		pP	16 48 29.0	+5.0
N49A	Columbus Grove	29.29	3	P	P	16 47 50.2	-0.6
PDAR	Pinedale Array	37.25	331	P	P	16 49 00.3	+0.4
	comp=Z,0.3nm,0.6s,baz=124,slow=8.1,SNR=2.6						
	comp=Z,0.3nm,0.6s						
LATQ	La Tuque	37.40	15	P	P	16 48 59.6	-1.1
NVAR	Mina Array Bea	39.33	318	P	P	16 49 18.8	+1.4
	comp=Z,0.9nm,0.5s,baz=134,slow=7.6,SNR=10						
NVAR				PcP	PcP	16 51 23.5	+1.0
	comp=Z,0.4nm,0.6s,baz=109,slow=3.6,SNR=4.1						
	comp=Z,0.9nm,0.5s						
SCHQ	Schefferville	45.73	15	P	P	16 50 06.2	-2.2
	comp=Z,2.9nm,0.4s,baz=216,slow=5.9,SNR=12						
SCHQ				LR	LR	17 12 17.5	
	comp=Z,42nm,18.1s,baz=42,slow=40						
	comp=Z,2.9nm,0.4s						
ILAR	Eielson Array	67.42	336	P	P	16 52 40.5	-0.8
	comp=Z,0.3nm,0.7s,baz=100,slow=4.7,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ASAR	Alice Springs	140.28	247	PKhKP	PKPpre	17 01 06.8	
	comp=Z,0.1nm,0.4s,baz=106,slow=3.0,SNR=1.5						
ASAR				PKP	PKPdf	17 01 14.5	+0.6
	comp=Z,0.3nm,0.9s,baz=76,slow=1.7,SNR=6.8						
WRA	Warramunga Arr	140.41	253	PKhKP	PKPpre	17 01 08.0	
	comp=Z,0.5nm,0.9s,baz=91,slow=3.2,SNR=6.2						
WRA				PKP	PKPdf	17 01 14.9	+0.7
	comp=Z,0.7nm,0.6s,baz=93,slow=2.8,SNR=11						

IDC ***28*** *16:53:48.1±0.7, 55°.79S×25°.45W, h0km, mb4.2/12, mbtmp4.2/13, ML3.6/1, Error ellipse: s-maj=21.5km s-min=16.6km az=54.0*

NEIC ***28*** *16:53:49.0±2.4, 55°.9S±0°.1×25°.4W±0°.2, h10km±1km, mb4.6/25, Error ellipse: s-maj=23.6km s-min=17.6km az=31.0*

ISC 28 16:53:49.1±0.6**, 55°.81S**±0°.09×**25°.48W**±0°.09**, h10**km**, n48, σ0ˢ.91**/47**, mb4.5**/20**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.51	279	Pn	Pn	16 55 25.7	+1.0
VNA1	Neumayer--Stat	16.68	160	P	P	16 57 44.3	-0.5
VNA3	Neumayer Olymp	16.91	162	P	P	16 57 46.6	-0.9
VNA2	Neumayer--Watz	17.07	160	P	Pn	16 57 46.9	-0.6
	baz=322,slow=13						
SNAA	Sanae	18.58	158	P	Pn	16 58 07.4	+1.2
SNAA	Sanae	18.58	158	P	Pn	16 58 07.2	+1.0
	0.2nm,0.3s,baz=321,slow=19,SNR=3.1						
	3.3nm,0.6s						
SNAA	Sanae	18.58	158	P	Pn	16 58 06.7	+0.5
TROLL	Troll, Antarti	20.04	155	P	Pn	16 58 27.4	+3.6
PMSA	Palmer Station	20.78	229	P	P	16 58 30.2	+0.3
	17nm,0.9s,baz=7.8,slow=21,SNR=3.1						
	17nm,0.9s						
PMSA	Palmer Station	20.78	229	P	P	16 58 30.0	+0.1
PMSA				IAmb	IAmb	16 58 34.5	
	comp=Z,22nm,0.9s						
BELA	Belgrano 2	22.39	185	P	P	16 58 46.2	-0.9
BELA				IAmb	IAmb	16 59 15.1	
	comp=Z,17nm,0.8s						
SMAI	San Martin Ant	22.57	220	P	P	16 58 48.6	-0.5
USHA	Ushuaia	24.17	254	P	P	16 59 05.8	+0.7
	comp=Z,8.8nm,1.1s,baz=11,slow=7.4,SNR=3.1						
	comp=Z,8.8nm,1.1s						
DSPA	Despedida	24.40	256	P	P	16 59 05.7	-1.5
GO09	Cerro Castillo	27.78	260	P	P	16 59 35.7	-2.2
GO09				IAmb	IAmb	17 00 00.4	
	comp=Z,24nm,1.2s						
TRQA	Tornquist	30.12	291	P	P	16 59 59.6	+0.9
TRQA				IAmb	IAmb	17 00 03.4	
	comp=Z,5.6nm,0.8s						
PLTB	Pedras Altas	31.07	309	P	P	17 00 06.6	-0.6
LL04	Puerto Octay	33.83	276	P	P	17 00 30.6	-0.6
LL04				IAmb	IAmb	17 00 35.9	
	comp=Z,6.6nm,1.1s						
QSPA	South Pole Qui	34.44	180	P	P	17 00 37.2	+0.7
	comp=Z,4.0nm,0.6s,baz=1.5,slow=0.5,SNR=25						
	comp=Z,4.0nm,0.6s						
QSPA	South Pole Qui	34.44	180	P	P	17 00 37.6	+1.1
QSPA				IAmb	IAmb	17 00 60.0	
	comp=Z,12nm,1.1s						
CPUP	Villa Florida	37.39	309	P	P	17 01 01.8	-0.1
	comp=Z,2.7nm,0.7s,baz=169,slow=8.0,SNR=5.4						
	comp=Z,2.7nm,0.7s						
CPUP	Villa Florida	37.39	309	P	P	17 01 00.1	-1.8
MT02	Curacav	38.63	286	P	P	17 01 11.1	-1.3
MAW	Mawson	39.77	143	P	P	17 01 20.8	-0.7
	comp=Z,1.2nm,0.3s,baz=279,slow=22,SNR=2.6						
	comp=Z,1.2nm,0.3s						
MAW	Mawson	39.77	143	P	P	17 01 20.4	-1.1
CO01	Juntas del Tor	40.62	291		P	17 01 30.3	+1.0
CO01				IAmb	IAmb	17 01 53.0	
	comp=Z,9.3nm,0.9s						
LCO	Las Campanas	41.71	291		P	17 01 37.1	-1.1
LCO				IAmb	IAmb	17 01 39.4	
	comp=Z,9.3nm,1.0s						
AC04	Llanos de Chal	42.55	291		P	17 01 44.1	-0.7
AC04				IAmb	IAmb	17 01 49.4	
	comp=Z,22nm,1.0s						
AC02	Maricunga	42.64	294	P	P	17 01 46.6	+0.5
AC02				IAmb	IAmb	17 01 49.7	
	comp=Z,17nm,1.1s						
AC01	Pan de Azucar	43.96	293	P	P	17 01 56.9	+0.7
GO02	Mina Guanaco	44.24	295		P	17 01 59.9	+1.0
GO02				IAmb	IAmb	17 02 01.8	
	comp=Z,13nm,0.9s						
LVC	Limon Verde	46.02	298	P	P	17 02 12.9	-0.1
	comp=Z,5.8nm,0.9s,baz=117,slow=8.4,SNR=3.7						
	comp=Z,5.8nm,0.9s						
LVC	Limon Verde	46.02	298		P	17 02 12.1	-0.9
LVC				IAmb	IAmb	17 02 32.1	
	comp=Z,9.3nm,0.9s						
VNDA	Vanda	46.85	182	P	P	17 02 19.7	+1.2
	comp=Z,1.3nm,0.8s,baz=179,slow=6.8,SNR=5.6						
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	46.85	182	P	P	17 02 19.9	+1.4
PB07	IPOC Station P	47.25	298	P	P	17 02 22.4	-0.1
LBTB	Lobatse	48.02	72	P	P	17 02 27.9	-0.5
	comp=Z,2.6nm,0.8s,baz=257,slow=4.0,SNR=4.7						
	comp=Z,2.6nm,0.8s						
SIV	San Ignacio	48.12	311	P	P	17 02 29.8	+0.7
	comp=Z,0.8nm,0.7s,baz=144,slow=5.8,SNR=4.0						
	comp=Z,0.8nm,0.7s						
PB11	IPOC Station P	48.79	299	P	P	17 02 34.4	0.0
LPAZ	La Paz	51.03	303	P	P	17 02 52.8	+0.8
	comp=Z,4.8nm,0.7s,baz=205,slow=8.2,SNR=17						
	comp=Z,4.8nm,0.7s						
LPAZ	La Paz	51.03	303	P	P	17 02 52.9	+0.9
LPAZ				IAmb	IAmb	17 02 57.9	
	comp=Z,5.1nm,0.7s						
TORD	Torodi Ar. Bea	72.38	28	P	P	17 05 15.8	+0.7
	comp=Z,1.3nm,0.6s,baz=204,slow=6.4,SNR=7.3						
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	72.38	28	P	P	17 05 14.9	-0.2
ASAR	Alice Springs	98.92	161	P	P	17 07 29.3	-0.4
	comp=Z,0.3nm,0.8s,baz=189,slow=5.3,SNR=2.1						
	comp=Z,0.3nm,0.8s						
CMAR	Chiang Mai Arr	124.24	109	PKP	PKiKP	17 12 49.0	+0.8
	comp=Z,0.3nm,0.7s,baz=225,slow=3.6,SNR=2.1						
KURBB	Kurchatov Arra	136.34	64	PKP	PKPdf	17 13 10.5	+0.7
	comp=Z,0.1nm,0.3s,baz=235,slow=1.3,SNR=1.6						
SONM	Songino Array	149.75	85	PKPbc	PKiKP	17 13 39.2	-0.1
	comp=Z,1.0nm,0.8s,baz=204,slow=3.3,SNR=6.8						
ILAR	Eielson Array	150.67	312	PKPbc	PKPbc	17 13 40.1	+0.3
	comp=Z,1.8nm,1.0s,baz=113,slow=1.8,SNR=14						

DDA ***28*** *16:59:14.8±0.0, 35°.87N×29°.68E, h18km±1km, MW3.9*

THE ***28*** *16:59:15.9, 35°.95N×29°.92E, h0km±4km, ML3.6/1, Error ellipse: s-maj=14.4km s-min=1.3km az=120.0*

ISK ***28*** *16:59:16.4, 36°.10N×29°.68E, h5km, ML3.8/25*

NIC ***28*** *16:59:16.5±0.0, 36°.16N×29°.71E, h1km±1km, Ml3.6/5*

GII ***28*** *16:59:18.1±0.0, 35°.92N×29°.74E, h5km, Mm3.7/2*

IDC ***28*** *16:59:21.7±1.5, 35°.97N×29°.67E, h51km±16km, mb3.5/12, mbtmp3.7/18, ML3.6/6, MS2.9/1, Error ellipse: s-maj=17.3km s-min=9.9km az=155.0*

ISC 28 16:59:16.0±1.2**, 35°.98N**±0°.02×**29°.72E**±0°.02**, h2**km±8km**, n149, σ1ˢ.49**/191**, mb3.6**/11**, 9C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	Kastellorizon	0.20	328	⇑P	Pg	16 59 19.0	-1.0
KSL				S	Sg	16 59 20.6	-2.0
KSL				AML	AML	16 59 20.9	
	241nm,0.4s						
KSL				AML	AML	16 59 20.9	
	241nm,0.4s						
KSL				AML	AML	16 59 21.2	
	420nm,0.3s						
KSL				AML	AML	16 59 21.2	
	420nm,0.3s						
AKAS	Kas	0.27	340	PG	Pg	16 59 20.1	-1.1
AKAS				SG	Sg	16 59 22.7	-2.1
AKAS	Kas	0.27	340	P	Pg	16 59 20.2	-1.1
AKAS				S	Sg	16 59 22.7	-2.1
DEMR	Demre-Antalya	0.30	30	PG	Pg	16 59 22.0	+0.2
DEMR				SG	Sg	16 59 26.1	+0.4
AKUM	Antalya-Kumluc	0.61	55	P	Pg	16 59 28.4	+0.7
AKUM				S	Sn	16 59 41.8	-0.4
ELL	Elmali	0.79	11	PG	Pg	16 59 29.5	-1.6
ELL	Elmali	0.79	11	P	Pg	16 59 29.4	-1.7
FETY	Fethiye	0.83	322	PG	Pg	16 59 31.5	-0.5
FETY				SG	Sg	16 59 42.5	-0.3
FETY	Fethiye	0.83	322	P	Pg	16 59 31.8	-0.2
FETY				S	Sb	16 59 46.1	+1.1
CAME	Cameli-Denizli	1.02	341	PG	Pg	16 59 34.6	-1.0
KORT	Korkueli	1.14	26	PG	Pg	16 59 37.7	-0.2
KORT	Korkueli	1.14	26	P	Pg	16 59 36.0	-1.9

KORT				S	**Sn**	**16 59 57.9**	**+2.4**
CAEL	**Denizli, Camel**	**1.19**	**344**	P	**Pg**	**16 59 38.2**	**-0.6**
CAEL				S	**Sn**	**16 59 57.3**	**+0.6**
ANTB	**Antalya**	**1.19**	**39**	PN	**Pg**	**16 59 39.0**	**+0.2**
DALY	**Dalyan (Mula)**	**1.20**	**315**	PN	**Pg**	**16 59 38.6**	**-0.4**
GOLH	**Golhisar**	**1.27**	**354**	P	**Pg**	**16 59 39.3**	**-1.0**
GOLH				S	**Sn**	**16 59 59.9**	**+1.5**
ARG	**Arkhangelos**	**1.31**	**281**	P	**Pn**	**16 59 41.2**	**-0.1**
ARG				S	**Sn**	**17 00 03.3**	**+3.9**
	2µm,0.9s						
ARG	**Arkhangelos**	**1.31**	**281**	PN	**Pg**	**16 59 41.8**	**+0.7**
ARG	**Arkhangelos**	**1.31**	**281**	P	**Pb**	**16 59 41.6**	**+0.2**
ARG				S	**Sn**	**17 00 02.0**	**+2.5**
TURN	**Turunc**	**1.43**	**304**	PN	**Pn**	**16 59 42.5**	**-0.5**
TURN	**Turunc**	**1.43**	**304**	P	**Pn**	**16 59 43.0**	**+0.1**
TURN				S	**Sn**	**17 00 02.5**	**+0.1**
BUCA	**Burdur, Bucak-**	**1.51**	**26**	P	**Pb**	**16 59 44.8**	**+0.1**
BUCA				S	**Sg**	**17 00 10.1**	**+5.6**
TAVA	**DENIZLI_Tavas**	**1.62**	**337**	P	**Pn**	**16 59 45.9**	**+0.2**
TAVA				S	**Sb**	**17 00 07.9**	**+0.2**
YER	**Yerkesik**	**1.64**	**315**	P	**Pn**	**16 59 46.4**	**+0.5**
YER				S	**Sg**	**17 00 09.1**	**+0.6**
YER	**Yerkesik**	**1.64**	**315**	PN	**Pn**	**16 59 45.9**	**0.0**
BCK	**Bucak**	**1.64**	**25**	PN	**Pn**	**16 59 46.3**	**+0.4**
MULA	**Mugla, Merkez-**	**1.70**	**319**	P	**Pb**	**16 59 48.1**	**+0.1**
MULA				S	**Sb**	**17 00 10.2**	**+0.2**
BRDR	**BURDUR-Merkez**	**1.74**	**9**	P	**Pb**	**16 59 49.3**	**+0.6**
BRDR				S	**Sg**	**17 00 13.1**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.82**	**34**	PN	**Pn**	**16 59 49.0**	**+0.6**
DAT	**Datca**	**1.88**	**294**	P	**Pn**	**16 59 49.5**	**+0.1**
DAT	**Datca**	**1.88**	**294**	PN	**Pn**	**16 59 49.8**	**+0.5**
DAT	**Datca**	**1.88**	**294**	P	**Pn**	**16 59 49.4**	**+0.1**
DAT				S	**Sg**	**17 00 18.5**	**+2.0**
ISP	**Isparta**	**1.95**	**19**	PN	**Pn**	**16 59 50.6**	**+0.3**
BASM	**Basmaki-Afyon**	**1.96**	**8**	PN	**Pn**	**16 59 50.2**	**-0.1**
MLSB	**Milas**	**2.04**	**311**	PN	**Pn**	**16 59 52.2**	**+0.8**
GAZI	**Gazipasa**	**2.12**	**82**	PN	**Pn**	**16 59 52.9**	**+0.4**
GAZI	**Gazipasa**	**2.12**	**82**	P	**Pn**	**16 59 53.6**	**+1.1**
GAZI				S	**Sb**	**17 00 21.5**	**-0.4**
KARP	**Karpathos**	**2.12**	**259**	P	**Pb**	**16 59 54.1**	**-1.1**
KARP	**Karpathos**	**2.12**	**259**	PN	**Pn**	**16 59 53.9**	**+1.4**
KARP	**Karpathos**	**2.12**	**259**	P	**Pb**	**16 59 54.1**	**-1.1**
KARP				S	**Sb**	**17 00 22.7**	**+0.6**
KARP				AML	AML	17 00 45.7	
	1.0nm,0.9s						
KARP				AML	AML	17 00 45.7	
	1.0nm,0.9s						
KARP				AML	AML	17 00 48.9	
	1.2nm,1.1s						
KARP				AML	AML	17 00 48.9	
	1.2nm,1.1s						
BDRM	**Kayabasi**	**2.13**	**301**	P	**Pb**	**16 59 54.2**	**-1.1**
BDRM				S	**Sn**	**17 00 20.9**	**+1.2**
NIS1	**Nisyros Isl.**	**2.15**	**288**	PN	**Pn**	**16 59 53.6**	**+0.8**
BAGO	**Egridir - ISPA**	**2.19**	**23**	P	**Pb**	**16 59 55.9**	**-0.4**
BAGO				S	**Sg**	**17 00 27.8**	**+1.6**
SEDI	**Konya, Seydise**	**2.20**	**47**	P	**Pb**	**16 59 57.2**	**+0.6**
SEDI				S	**Sg**	**17 00 28.8**	**+2.1**
BODT	**Bodrum**	**2.22**	**300**	P	**Pn**	**16 59 53.9**	**0.0**
BODT	**Bodrum**	**2.22**	**300**	PN	**Pn**	**16 59 54.2**	**+0.3**
SEYD	**Seydisehir-KON**	**2.22**	**49**	PN	**Pn**	**16 59 55.1**	**+1.1**
AYDN	**Tasoluk**	**2.24**	**319**	P	**Pn**	**16 59 55.8**	**+1.6**
AYDN				S	**Sb**	**17 00 26.1**	**+0.8**
KZIL	**AFYON_Kizioren**	**2.30**	**8**	P	**Pn**	**16 59 55.9**	**+0.8**
KZIL				S	**Sb**	**17 00 26.0**	**-1.3**
AKMS	**Akamas**	**2.34**	**113**	P	**Pb**	**16 59 57.6**	**-1.3**
AKMS				AML	AML	17 00 28.4	
	1.3nm,1.0s						
AKMS				AML	AML	17 00 31.0	
	0.9nm,0.9s						
KOSK	**Kos Island**	**2.34**	**290**	PN	**Pn**	**16 59 56.6**	**+1.1**
AFYN	**Afyon-Dinar-K**	**2.38**	**15**	P	Pg	17 00 06.5	+5.0
PASA	**Karahalli, USA**	**2.38**	**356**	P	**Pn**	**16 59 56.3**	**+0.2**
PASA				S	**Sb**	**17 00 28.1**	**-1.2**
HDMB	**Hadim**	**2.44**	**65**	PN	**Pn**	**16 59 58.8**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**2.45**	**324**	PN	**Pn**	**16 59 57.6**	**+0.5**
DDIM	**Aydin, Didim**	**2.48**	**307**	P	**Pb**	**17 00 01.3**	**+0.1**
DDIM				S	**Sg**	**17 00 37.6**	**+2.0**
ALFC	**Alefka**	**2.49**	**108**	P	**Pn**	**16 59 59.1**	**+1.6**
ALFC				AML	AML	17 00 34.1	
	0.6nm,0.7s						
ALFC				AML	AML	17 00 34.5	
	0.7nm,0.8s						
YVAC	**Isparta, Yalva**	**2.59**	**28**	P	**Pn**	**17 00 01.1**	**+2.0**
YVAC				S	**Sb**	**17 00 35.6**	**-0.1**
NATA	**Nata**	**2.62**	**116**	P	**Pn**	**17 00 01.6**	**+2.2**
GCAM	**G?zelcaml?**	**2.63**	**312**	PN	**Pn**	**17 00 00.4**	**+0.9**
GCAM	**G?zelcaml?**	**2.63**	**312**	P	**Pn**	**16 59 59.5**	**0.0**
GCAM				S	**Sn**	**17 00 28.6**	**-3.5**
DOGA	**KONYA_Doganhis**	**2.64**	**36**	P	**Pb**	**17 00 02.9**	**-1.2**
DOGA				S	**Sb**	**17 00 36.9**	**0.0**
SHUT	**Suhut-Afyon**	**2.66**	**14**	PN	**Pn**	**17 00 00.5**	**+0.5**
ERMK	**Ermenek**	**2.66**	**75**	P	**Pb**	**17 00 03.3**	**-1.2**
KULA	**Kula-Manisa**	**2.67**	**342**	P	**Pn**	**17 00 00.0**	**-0.1**
KULA				S	**Sn**	**17 00 34.5**	**+1.4**
KULA	**Kula-Manisa**	**2.67**	**342**	PN	**Pn**	**16 59 59.8**	**-0.3**
KMER	**Konya-Meram**	**2.78**	**49**	P	**Pb**	**17 00 05.2**	**-1.3**
OSC1	**CSNet OBS 1**	**2.78**	**152**	S	**Sb**	**17 00 42.2**	**+1.2**
USAK	**Uak-Merkez**	**2.79**	**349**	P	**Pn**	**17 00 01.7**	**0.0**
USAK				S	**Sn**	**17 00 35.8**	**-0.2**
SZAC	**Souni**	**2.86**	**114**	P	**Pn**	**17 00 04.7**	**+2.0**
SZAC				AML	AML	17 00 48.8	
	0.6nm,0.8s						
SZAC				AML	AML	17 00 51.8	
	0.5nm,0.5s						
KKBE	**Karaman, Kazim**	**2.87**	**63**	P	**Pb**	**17 00 06.3**	**-1.8**
SMG	**Samos**	**2.89**	**308**	P	**Pn**	**17 00 02.9**	**-0.1**
KONT	**Konya--Tatoy**	**2.89**	**46**	P	**Pb**	**17 00 06.6**	**-1.7**
ZKR	**Zakros**	**2.98**	**254**	S	**Sn**	**17 00 42.7**	**+2.0**
DGB	**zmir**	**3.07**	**313**	P	**Pn**	**17 00 05.7**	**+0.1**
GULN	**MERSIN_Gulnar**	**3.11**	**85**	P	**Pn**	**17 00 08.0**	**+2.0**
GDZ	**Gediz**	**3.11**	**357**	P	**Pn**	**17 00 06.4**	**+0.1**
CSS	**Mathiatis**	**3.12**	**108**	P	**Pn**	**17 00 07.3**	**+1.1**
ASGA	**Asgata**	**3.12**	**111**	P	**Pn**	**17 00 07.7**	**+1.5**
DEMI	**Demirci**	**3.16**	**346**	P	**Pn**	**17 00 05.9**	**-1.0**
KDHN	**Kadinhani**	**3.18**	**36**	P	**Pn**	**17 00 09.4**	**+2.3**
AKHS	**Akhisar**	**3.27**	**333**	P	**Pn**	**17 00 08.2**	**-0.1**
MVOU	**Mavrovouni**	**3.33**	**106**	P	**Pn**	**17 00 10.6**	**+1.4**
ANDZ	**Kutahya, Merke**	**3.53**	**2**	P	**Pn**	**17 00 12.5**	**+0.6**
OSC2	**CSNet OBS 4**	**3.58**	**143**	S	**Sb**	**17 01 01.6**	**-2.3**
ZEDA	**zmir-Bergama**	**3.65**	**326**	P	**Pn**	**17 00 14.9**	**+1.4**
SGAZ	**Eskisehir, Sey**	**3.66**	**14**	P	**Pn**	**17 00 14.0**	**+0.4**
STEP	**BALIKESIR_Sava**	**3.75**	**336**	P	**Pn**	**17 00 14.8**	**-0.1**
DURS	**Dursunbey**	**3.75**	**345**	P	**Pn**	**17 00 14.8**	**-0.2**
KERG	**Konya-Eregli**	**3.82**	**67**	P	**Pn**	**17 00 18.9**	**+2.9**
AUBOZ	**BOZOYUK**	**3.94**	**4**	P	**Pn**	**17 00 17.9**	**+0.4**
BORA	**Eskisehir**	**3.94**	**8**	P	**Pn**	**17 00 18.0**	**+0.5**
IDI	**Anoyia**	**3.99**	**262**	P	**Pn**	**17 00 19.4**	**+1.1**
	4.3nm,0.3s,baz=99,slow=19,SNR=34						
IDI				S	**Sn**	**17 01 05.6**	**-0.1**
	22nm,0.8s,baz=101,slow=22,SNR=3.1						
IDI				LR	LR	17 02 23.0	
	comp=Z,144nm,20.0s,baz=61,slow=46 19nm,0.4s						
IDI	**Anoyia**	**3.99**	**262**	P	**Pn**	**17 00 18.9**	**+0.6**
KKUL	**Konya-Kulu**	**4.08**	**38**	P	**Pn**	**17 00 22.8**	**+3.3**
BUHA	**Balikesir, Bur**	**4.09**	**330**	P	**Pn**	**17 00 20.5**	**+0.9**
GULE	**Gulek**	**4.27**	**71**	P	**Pb**	**17 00 27.6**	**-4.4**
BAYC	**CANAKKALE_Bayr**	**4.52**	**327**	P	**Pn**	**17 00 26.3**	**+0.8**
KOCA	**Canakkale, Ayv**	**4.52**	**322**	P	**Pn**	**17 00 26.2**	**+0.7**
KIRS	**Kirsehir-Merke**	**4.59**	**45**	P	**Pn**	**17 00 28.4**	**+1.9**
IMMV	**Iera Moni Meta**	**4.70**	**265**	P	**Pn**	**17 00 29.0**	**+1.1**
KIBS	**BOLU**	**4.74**	**20**	P	**Pn**	**17 00 31.0**	**+2.4**
BRTR	**Keskin Array B**	**4.86**	**38**	P	**Pn**	**17 00 32.1**	**+1.8**
	1.8nm,0.3s,baz=209,slow=15,SNR=57						
BRTR				S	**Sn**	**17 01 30.1**	**+2.9**
	109nm,1.0s,baz=211,slow=24,SNR=41 6.7nm,0.4s						
KTHA	**Kythira Island**	**5.40**	**275**	P	**Pn**	**17 00 38.9**	**+1.4**
VLI	**Veliai**	**5.52**	**280**	P	**Pn**	**17 00 40.8**	**+1.6**
MMA0B	**Mount Meron ar**	**5.55**	**121**	Pn	**Pn**	**17 00 40.8**	**+1.2**
MMAI	**Mount Meron Ar**	**5.55**	**121**	P	**Pn**	**17 00 37.1**	**-2.5**
	1.4nm,0.3s,baz=310,slow=38,SNR=3.5						
MMAI				S	**Sn**	**17 01 43.3**	**-0.7**
	1.2nm,0.3s,baz=236,slow=23,SNR=1.5						
GEM	**Giv'at Ha'Em**	**5.63**	**118**	Pn	**Pn**	**17 00 41.9**	**+1.2**
NATI	**Neve Ativ**	**5.65**	**117**	Pn	**Pn**	**17 00 42.1**	**+1.1**
NATI				Sn	**Sn**	**17 01 48.0**	**+1.5**
KSHT	**Keshet**	**5.85**	**119**	Pn	**Pn**	**17 00 45.8**	**+2.0**
HMDT	**Nahal Hemdat**	**6.08**	**126**	Pn	**Pn**	**17 00 48.9**	**+2.0**
KZIT	**Kziot**	**6.39**	**141**	Pn	**Pn**	**17 00 52.3**	**+1.1**
DSI	**Dead Sea**	**6.44**	**131**	Pn	**Pn**	**17 00 53.6**	**+1.7**
ASF	**Jabal al Asfar**	**7.06**	**120**	P	**Pn**	**17 01 02.6**	**+2.1**
	0.8nm,0.3s,baz=317,slow=11,SNR=3.3						
ASF				S	**Sn**	**17 02 19.4**	**-1.9**
	1.3nm,0.3s,baz=179,slow=14,SNR=1.1 2.4nm,0.3s						
PRNI	**Paran**	**7.15**	**140**	Pn	**Pn**	**17 01 03.1**	**+1.5**
PRNI				Sn	**Sn**	**17 02 23.3**	**-0.1**
HRFI	**Mount Harif**	**7.42**	**141**	Pn	**Pn**	**17 01 06.4**	**+1.1**
HRFI				Sn	**Sn**	**17 02 31.3**	**+1.2**
MBRI	**Mt Berech**	**7.55**	**143**	Pn	**Pn**	**17 01 08.8**	**+1.6**
MBRI				Sn	**Sn**	**17 02 34.9**	**+1.4**
EIL	**Elat**	**7.68**	**144**	P	**Pn**	**17 01 10.8**	**+2.0**
	0.8nm,0.3s,baz=244,slow=2.6,SNR=9.3						
EIL				S	**Sn**	**17 02 32.6**	**-3.8**
	7.5nm,0.7s,baz=123,slow=12,SNR=2.0 4.0nm,0.5s						
EIL	**Elat**	**7.68**	**144**	Pn	**Pn**	**17 01 10.4**	**+1.6**
RAZG	**Razgrad**	**7.97**	**343**	P	**Pn**	**17 01 14.8**	**+1.9**
TIRR	**Tirgusor**	**8.53**	**354**	⇑P	**Pn**	**17 01 22.9**	**+2.4**
HARR	**Harsova**	**8.81**	**352**	P	**Pn**	**17 01 26.3**	**+2.0**
TPGR	**Topolog**	**8.93**	**354**	P	**Pn**	**17 01 28.9**	**+3.0**
CFR	**Carcaliu**	**9.27**	**353**	⇑P	**Pn**	**17 01 32.4**	**+1.8**
MLR	**Muntele Rosu**	**9.93**	**344**	⇑P	**Pn**	**17 01 41.6**	**+1.9**
MLR	**Muntele Rosu**	**9.93**	**344**	P	**Pn**	**17 01 40.7**	**+1.0**
	0.2nm,0.3s,baz=217,slow=13,SNR=4.1 0.8nm,0.3s						
VOIR		**10.09**	**341**	⇓P	**Pn**	**17 01 43.2**	**+1.2**
PLOR	**Plostina**	**10.13**	**348**	⇑P	**Pn**	**17 01 45.3**	**+2.8**
VRI	**Vrincioaia**	**10.13**	**348**	⇑P	**Pn**	**17 01 44.4**	**+1.9**
DOPR	**Dopca**	**10.50**	**343**	⇓P	**Pn**	**17 01 49.8**	**+2.3**
OZUR		**10.54**	**345**	⇑P	**Pn**	**17 01 49.9**	**+1.9**
GZR	**Gura Zlata**	**10.78**	**333**	P	**Pn**	**17 01 52.3**	**+0.9**
BZS	**Buzias**	**11.41**	**330**	P	**Pn**	**17 02 02.0**	**+2.0**
DRGR		**12.01**	**336**	⇑P	**Pn**	**17 02 10.1**	**+1.9**
BURAR	**Bucovina Array**	**12.10**	**345**	⇑P	**Pn**	**17 02 11.7**	**+2.2**
GERES	**GERESS Array B**	**17.42**	**323**	P	**P**	**17 03 22.2**	**+0.7**
	0.1nm,0.3s,baz=123,slow=16,SNR=6.3 0.5nm,0.6s						
CLL	**Collm**	**19.45**	**327**	*e*P	**Pn**	**17 03 45.0**	**+0.1**
	comp=Z,5.0nm,1.5s						
CLL				*e*PP	**PnPn**	**17 03 57.0**	**-0.9**
CLL				*e*PPP	PPP	17 04 07.0	
BELG	**Belogornoye**	**20.75**	**32**	P	**P**	**17 03 59.0**	**+1.2**
	comp=Z,6.6nm,0.7s,baz=249,slow=8.6,SNR=4.0 comp=Z,6.6nm,0.7s						
AKTO	**Aktyubinsk**	**24.99**	**46**	P	**P**	**17 04 40.4**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=228,slow=8.5,SNR=5.2 comp=Z,1.9nm,0.7s						
FINES	**FINESS Array B**	**25.59**	**356**	P	**P**	**17 04 45.2**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=177,slow=6.7,SNR=5.5 comp=Z,1.5nm,0.8s						
HFS	**Hagfors**	**26.29**	**342**	P	**P**	**17 04 50.9**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=170,slow=18,SNR=4.2 comp=Z,0.3nm,0.3s						
ESDC	**Sonseca Array**	**26.77**	**288**	P	**P**	**17 04 56.9**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=77,slow=9.5,SNR=5.0 comp=Z,1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**33.93**	**235**	P	**P**	**17 06 00.4**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=28,slow=8.5,SNR=8.2 comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**40.21**	**58**	P	**P**	**17 06 53.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=283,slow=5.9,SNR=6.3 comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**41.75**	**47**	P	**P**	**17 07 06.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=258,slow=7.1,SNR=1.4 comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**56.07**	**52**	P	**P**	**17 08 55.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=282,slow=6.9,SNR=2.1 comp=Z,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**62.80**	**86**	P	**P**	**17 09 42.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=305,slow=9.5,SNR=4.7 comp=Z,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**77.76**	**344**	P	**P**	**17 11 13.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=30,slow=3.8,SNR=1.5 comp=Z,0.4nm,0.7s						
MJAR	**Matsushiro Arr**	**81.98**	**50**	P	**P**	**17 11 36.0**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=302,slow=4.8,SNR=2.3 comp=Z,0.6nm,0.7s						

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*IDC **28** 17:04:33.8±1.2, 22°.94S×66°.43W, h217^{km}±14^{km}, mb2.9/2, mbtmp3.8/7, Error ellipse: s-maj=22.5km s-min=16.5km az=126.0*

*GUC **28** 17:04:34.6±0.7, 23°.02S×66°.65W, h242^{km}±9^{km}, ML4.4*

*NEIC **28** 17:04:35.5±2.4, 23°.03S±0°.07×66°.69W±0°.06, h230^{km}±10^{km}, mb4.2/4, ML3.7(SJA), Error ellipse: s-maj=10.3km s-min=8.1km az=208.0*

ISC 28 17:04:34.2±0.8**, 22°.98S**±0°.04×**66°.64W**±0°.07**, h239**^{km}±9^{km}**, n52,** σ**1^{s}.30**/81**, 10C-3D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.42**	**271**		**Pn**	**17 05 12.5**	**+1.2**
SLA	**San Lorenzo**	**2.02**	**149**	⇓*i*P	**Pn**	**17 05 16.1**	**0.0**
LVC	**Limon Verde**	**2.13**	**279**	P	**Pn**	**17 05 18.4**	**+0.9**
	103nm,0.5s,baz=97,slow=5.4,SNR=123						
LVC				S	**S**	**17 05 51.0**	**-0.2**
	46nm,0.5s,baz=261,slow=22,SNR=23						
LVC	**Limon Verde**	**2.13**	**279**	Pn	**Pn**	**17 05 18.3**	**+0.9**
LVC				Sn	**S**	**17 05 50.6**	**-0.6**
LVC	**Limon Verde**	**2.13**	**279**	⇑*i*P	**Pn**	**17 05 18.4**	**+0.9**
LVC				*i* S	**S**	**17 05 50.9**	**-0.4**
PB15	**IPOC Station P**	**2.62**	**264**		**Pn**	**17 05 22.9**	**+0.8**
PB15				Sn	**S**	**17 05 59.2**	**-0.6**
PB15	**IPOC Station P**	**2.62**	**264**	⇑*i*P	**Pn**	**17 05 23.1**	**+1.0**
PB15				*i* S	**S**	**17 05 59.6**	**-0.2**
PB09	**IPOC Station P**	**2.68**	**295**		**Pn**	**17 05 24.2**	**+1.4**
PB09				Sn	**S**	**17 06 00.2**	**-0.8**
PB09	**IPOC Station P**	**2.68**	**295**	⇑*i*P	**Pn**	**17 05 24.4**	**+1.6**
PB09				*i* S	**S**	**17 06 00.8**	**-0.1**
PB09				IAML		17 06 03.1	
	comp=N,201nm,0.6s						
PB06	**IPOC Station P**	**2.72**	**275**		**Pn**	**17 05 23.9**	**+0.7**
PB06				Sn	**S**	**17 06 00.6**	**-1.1**
PB06	**IPOC Station P**	**2.72**	**275**	⇑*i*P	**Pn**	**17 05 24.0**	**+0.9**
PB06				*i* S	**S**	**17 06 01.1**	**-0.6**
PB06				IAML		17 06 02.0	
	comp=N,342nm,0.5s						
PB07	**IPOC Station P**	**3.25**	**292**		**Pn**	**17 05 29.4**	**+0.3**
PB07				Sn	**S**	**17 06 10.4**	**-1.9**
PB07	**IPOC Station P**	**3.25**	**292**	⇑*i*P	**Pn**	**17 05 30.0**	**+0.9**
PB07				*i* S	**S**	**17 06 10.8**	**-1.5**
PB01	**IPOC Station P**	**3.27**	**306**		**Pn**	**17 05 29.9**	**+0.7**
PB01				Sn	**S**	**17 06 10.6**	**-1.9**
PB01	**IPOC Station P**	**3.27**	**306**	⇑*i*P	**Pn**	**17 05 30.1**	**+0.9**
PB01				*i* S	**S**	**17 06 12.3**	**-0.2**
PB04	**IPOC Station P**	**3.31**	**280**	Pn	**Pn**	**17 05 30.1**	**+0.4**
PB04				Sn	**S**	**17 06 11.3**	**-2.0**
PB04	**IPOC Station P**	**3.31**	**280**	⇑*i*P	**Pn**	**17 05 30.5**	**+0.8**
PB04				*i* S	**S**	**17 06 12.2**	**-1.2**
PB02	**IPOC Station P**	**3.44**	**298**		**Pn**	**17 05 31.5**	**+0.3**
PB02				Sn	**S**	**17 06 13.8**	**-2.3**
PB02	**IPOC Station P**	**3.44**	**298**	⇑*i*P	**Pn**	**17 05 31.7**	**+0.6**
PB02				IAML		17 06 15.4	
	comp=E,365nm,0.4s						
PB02				IAML		17 06 15.5	
	comp=N,508nm,0.3s						
PB02				IAML		17 06 20.5	
	comp=E,382nm,0.2s						
GO02	**Mina Guanaco**	**3.47**	**231**	Pn	**Pn**	**17 05 31.8**	**+0.2**
GO02				Sn	**S**	**17 06 15.8**	**-1.1**
GO02	**Mina Guanaco**	**3.47**	**231**	⇑*i*P	**Pn**	**17 05 32.1**	**+0.5**
GO02				*i* S	**S**	**17 06 16.7**	**-0.1**
PB10	**IPOC Station P**	**3.64**	**261**	Pn	**Pn**	**17 05 33.8**	**+0.5**
PB10				Sn	**S**	**17 06 17.5**	**-2.5**
PB10	**IPOC Station P**	**3.64**	**261**	⇑*i*P	**Pn**	**17 05 33.9**	**+0.6**
PB10				*i* S	**S**	**17 06 17.9**	**-2.1**
PB08	**IPOC Station P**	**3.67**	**320**		**Pn**	**17 05 35.3**	**+1.3**
PB08				Sn	**S**	**17 06 20.7**	**-0.5**
PB08	**IPOC Station P**	**3.67**	**320**	⇓*i*P	**Pn**	**17 05 35.8**	**+1.7**
PB08				*i* S	**S**	**17 06 21.4**	**+0.2**
PB14	**IPOC Station P**	**3.82**	**244**	Pn	**Pn**	**17 05 35.9**	**+0.1**
PB14				Sn	**S**	**17 06 22.2**	**-2.1**
PATCX	**Punta Patache**	**3.91**	**303**	Pn	**Pn**	**17 05 36.8**	**+0.2**
PATCX				Sn	**S**	**17 06 23.6**	**-2.2**
PATCX	**Punta Patache**	**3.91**	**303**	*e*P	**Pn**	**17 05 36.7**	**+0.2**
PATCX				*i* S	**S**	**17 06 23.8**	**-2.0**
HMBC	**Humberstone**	**4.04**	**311**	⇓*i*P	**Pn**	**17 05 38.7**	**+0.4**
HMBC				*i* S	**S**	**17 06 26.7**	**-2.2**
TA01	**Diego Aracena**	**4.07**	**305**	Pn	**Pn**	**17 05 38.6**	**+0.1**
TA01				Sn	**S**	**17 06 26.1**	**-3.1**
TA01	**Diego Aracena**	**4.07**	**305**	*e*P	**Pn**	**17 05 38.7**	**+0.2**
PB11	**IPOC Station P**	**4.26**	**318**		**Pn**	**17 05 40.9**	**0.0**
PB11				Sn	**S**	**17 06 31.3**	**-2.3**
AC02	**Maricunga**	**4.46**	**210**	Pn	**Pn**	**17 05 43.8**	**+0.2**
AC01	**Pan de Azucar**	**4.79**	**228**	Pn	**Pn**	**17 05 46.3**	**-0.8**
PB16	**IPOC Station P**	**5.34**	**329**	Pn	**Pn**	**17 05 55.8**	**+1.3**
AC06	**Mina Casimiro**	**5.51**	**217**		**Pn**	**17 05 54.8**	**-1.2**
PB12	**IPOC Station P**	**5.54**	**321**	Pn	**Pn**	**17 05 55.8**	**-0.8**
GO03	**Copiap**	**5.63**	**215**	Pn	**Pn**	**17 05 56.4**	**-1.1**
AP01	**Chacalluta**	**5.75**	**322**	Pn	**Pn**	**17 05 59.1**	**+0.1**
AC04	**Llanos de Chal**	**6.57**	**217**	Pn	**Pn**	**17 06 07.0**	**-2.3**
LPAZ	**La Paz**	**6.80**	**348**	P	**Pn**	**17 06 13.9**	**+1.0**
	comp=E,4.1nm,0.4s,baz=154,slow=4.7,SNR=21						
LPAZ				S	**S**	**17 07 28.1**	**-3.6**
	comp=E,0.7nm,0.5s,baz=266,slow=12,SNR=0.8						
LPAZ	**La Paz**	**6.80**	**348**		**Pn**	**17 06 13.3**	**+0.4**
LCO	**Las Campanas**	**7.03**	**210**	Pn	**Pn**	**17 06 13.8**	**-1.7**
SIV	**San Ignacio**	**8.71**	**38**	P	**Pn**	**17 06 34.9**	**-1.7**
	comp=E,1.5nm,0.5s,baz=216,slow=8.4,SNR=9.9						
PLCA	**Paso Flores**	**18.01**	**190**	P	**P**	**17 08 28.7**	**+1.1**
	comp=E,1.4nm,0.7s,baz=355,slow=9.4,SNR=4.0						
LL04	**Puerto Octay**	**18.53**	**194**	P	**P**	**17 08 33.6**	**+0.5**
LL04				IAmb	IAmb	17 08 34.3	
	comp=Z,5.2nm,0.6s						
BDFB	**Brasilia**	**19.02**	**71**	P	**P**	**17 08 37.9**	**-0.9**
	comp=Z,7.9nm,0.8s,baz=241,slow=11,SNR=11						
BDFB	**Brasilia**	**19.02**	**71**	P	**P**	**17 08 39.0**	**+0.2**
BDFB				IAmb	IAmb	17 08 40.0	
	comp=Z,7.5nm,0.8s						
GO08	**Villa O'Higgin**	**25.87**	**189**	P	**P**	**17 09 43.2**	**-0.8**
TXAR	**Lajitas Array**	**63.05**	**324**	P	**P**	**17 14 38.5**	**+2.2**
	comp=Z,0.1nm,0.4s,baz=133,slow=9.2,SNR=1.8 comp=Z,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**75.89**	**69**	P	**P**	**17 15 54.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=253,slow=5.4,SNR=9.0 comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**145.53**	**39**	PKPbc	**PKPab**	**17 23 46.5**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=293,slow=4.1,SNR=7.9						

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*IDC **28** 17:12:20.1±0.7, 55°.53S×26°.31W, h0^{km}, mb4.3/9, mbtmp4.3/10, ML3.8/1, MS4.3/25, Error ellipse: s-maj=21.7km s-min=18.0km az=73.0*

*NEIC **28** 17:12:23.7±1.8, 55°.6S±0°.1×26°.4W±0°.2, h22^{km}±5^{km}, mb4.7/48, Error ellipse: s-maj=18.7km s-min=14.8km az=196.0*

ISC 28 17:12:25.3±0.6**, 55°.58S**±0°.09×**26°.41W**±0°.09**, h38**^{km}**, n88,** σ**0^{s}.94**/65**, mb4.7**/23**, MS4.5**/24**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.95**	**278**	Pn	**Pn**	**17 13 49.0**	**-1.8**
VNA1	**Neumayer--Stat**	**17.08**	**159**	P	**Pn**	**17 16 16.4**	**-4.3**
VNA3	**Neumayer Olymp**	**17.30**	**162**	P	**Pn**	**17 16 24.0**	**+0.5**
VNA2	**Neumayer--Watz**	**17.47**	**159**	P	**P**	**17 16 27.0**	**+0.5**
	baz=321,slow=14						
SNAA	**Sanae**	**19.00**	**157**	P	**P**	**17 16 43.8**	**+0.5**
SNAA	**Sanae**	**19.00**	**157**	P	**P**	**17 16 43.7**	**+0.3**
	0.3nm,0.3s,baz=274,slow=6.0,SNR=15						
SNAA				LR	LR	17 24 08.3	
	comp=Z,655nm,19.1s,baz=350,slow=37 2.3nm,0.6s						
SNAA	**Sanae**	**19.00**	**157**		**P**	**17 16 43.3**	**-0.1**
TROLL	**Troll, Antarti**	**20.48**	**155**	P	**P**	**17 16 59.9**	**+0.4**
PMSA	**Palmer Station**	**20.54**	**228**	P	**P**	**17 17 01.4**	**+1.3**
	17nm,0.5s,baz=62,slow=5.0,SNR=14 17nm,0.5s						
PMSA	**Palmer Station**	**20.54**	**228**	P	**P**	**17 17 01.2**	**+1.1**
PMSA				IAmb	IAmb	17 17 10.5	
	comp=Z,45nm,1.3s						
SMAI	**San Martin Ant**	**22.41**	**220**	P	**P**	**17 17 21.2**	**+1.1**
BELA	**Belgrano 2**	**22.58**	**185**	P	**P**	**17 17 21.1**	**-0.8**
DSPA	**Despedida**	**23.94**	**256**	P	**P**	**17 17 35.4**	**-0.1**
MG02	**Cerro Sombrero**	**24.92**	**258**	P	**P**	**17 17 43.9**	**-0.6**
MG04	**Isla Riesco**	**26.19**	**257**	P	**P**	**17 17 55.6**	**-0.4**
GO09	**Cerro Castillo**	**27.31**	**260**	P	**P**	**17 18 05.1**	**-1.0**
GO08	**Villa O'Higgin**	**28.82**	**265**	P	**P**	**17 18 19.1**	**-0.4**
GO08				IAmb	IAmb	17 18 49.5	
	comp=Z,16nm,1.2s						
TRQA	**Tornquist**	**29.55**	**291**	P	**P**	**17 18 26.8**	**+0.6**
TRQA				IAmb	IAmb	17 18 27.6	
	comp=Z,20nm,1.6s						
PLCA	**Paso Flores**	**32.36**	**279**	P	**P**	**17 18 52.1**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=191,slow=13,SNR=2.6 comp=Z,1.6nm,0.9s						
PLCA	**Paso Flores**	**32.36**	**279**	IAmb	IAmb	17 19 30.9	
	comp=Z,18nm,1.6s						
QSPA	**South Pole Qui**	**34.67**	**180**	P	**P**	**17 19 11.1**	**+0.1**
	comp=Z,8.0nm,0.6s,baz=181,slow=2.3,SNR=92 comp=Z,8.0nm,0.6s						
QSPA	**South Pole Qui**	**34.67**	**180**	P	**P**	**17 19 11.3**	**+0.4**
QSPA				IAmb	IAmb	17 19 15.5	
	comp=Z,8.8nm,0.8s						
CPUP	**Villa Florida**	**36.84**	**310**	P	**P**	**17 19 28.6**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=145,slow=8.6,SNR=4.9 comp=Z,1.2nm,0.5s						
CPUP	**Villa Florida**	**36.84**	**310**	P	**P**	**17 19 29.1**	**-0.5**
CPUP				IAmb	IAmb	17 20 12.6	
	comp=Z,14nm,1.4s						
MT09	**Talagante**	**37.59**	**287**	P	**P**	**17 19 35.0**	**-1.2**
MT09				IAmb	IAmb	17 19 39.4	
	comp=Z,15nm,1.5s						
PEL	**Peldehue**	**37.91**	**288**	P	**P**	**17 19 38.1**	**-0.6**
PEL				IAmb	IAmb	17 19 52.5	
	comp=Z,9.1nm,0.7s						
MT02	**Curacav**	**38.06**	**287**	P	**P**	**17 19 39.9**	**-0.1**
ZON	**Zonda**	**38.06**	**291**	P	**P**	**17 19 38.9**	**-1.1**
VA03	**San Esteban**	**38.12**	**288**	P	**P**	**17 19 40.6**	**+0.1**
ROC1	**El Roble**	**38.21**	**287**	P	**P**	**17 19 43.8**	**+2.2**
ROC1				IAmb	IAmb	17 19 56.5	
	comp=Z,6.5nm,0.6s						
VA06	**Catapilco**	**38.68**	**288**	P	**P**	**17 19 45.4**	**+0.2**
VA06				IAmb	IAmb	17 19 59.0	
	comp=Z,16nm,1.2s						
CO02	**Combarbal**	**39.57**	**289**	P	**P**	**17 19 53.7**	**+0.9**
CO02				IAmb	IAmb	17 20 22.4	
	comp=Z,39nm,1.6s						
CO01	**Juntas del Tor**	**40.05**	**291**	P	**P**	**17 19 57.8**	**+0.9**
SUR	**Sutherland**	**40.09**	**75**	LR	LR	17 33 29.4	
	comp=Z,783nm,18.5s,baz=214,slow=32						
LCO	**Las Campanas**	**41.13**	**292**	P	**P**	**17 20 06.4**	**+0.5**
AC04	**Llanos de Chal**	**41.97**	**292**	P	**P**	**17 20 12.5**	**+0.1**
GO03	**Copiap**	**42.02**	**293**	P	**P**	**17 20 12.7**	**-0.3**
GO03				IAmb	IAmb	17 20 28.2	
	comp=Z,21nm,1.4s						
AC02	**Maricunga**	**42.07**	**295**	P	**P**	**17 20 13.7**	**-0.1**
AC02				IAmb	IAmb	17 20 16.2	
	comp=Z,16nm,1.2s						
BDFB	**Brasilia**	**43.18**	**329**	LR	LR	17 37 19.7	
	comp=Z,641nm,18.4s,baz=136,slow=35						
AC01	**Pan de Azucar**	**43.38**	**294**	P	**P**	**17 20 24.4**	**+0.5**
AC01				IAmb	IAmb	17 20 47.7	
	comp=Z,21nm,1.2s						
GO02	**Mina Guanaco**	**43.67**	**296**	P	**P**	**17 20 27.2**	**+0.6**
BOSA	**Boshof**	**45.43**	**76**	P	**P**	**17 20 40.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=232,slow=4.4,SNR=6.2						
BOSA				LR	LR	17 36 35.5	
	comp=Z,1µm,18.9s,baz=206,slow=32 comp=Z,0.9nm,0.5s						
BOSA	**Boshof**	**45.43**	**76**	P	**P**	**17 20 40.0**	**-0.3**
LVC	**Limon Verde**	**45.45**	**299**	P	**P**	**17 20 41.5**	**+0.6**
LVC				IAmb	IAmb	17 21 08.0	
	comp=Z,13nm,1.1s						
PB09	**IPOC Station P**	**46.30**	**299**	P	**P**	**17 20 48.4**	**+1.1**
SBA	**Scott Base**	**46.58**	**184**	P	**P**	**17 20 49.4**	**+0.7**
SBA				IAmb	IAmb	17 21 17.7	
	comp=Z,9.1nm,1.1s						
PB07	**IPOC Station P**	**46.68**	**298**	P	**P**	**17 20 51.0**	**+0.7**
PB02	**IPOC Station P**	**47.02**	**299**	P	**P**	**17 20 53.9**	**+0.9**
PB01	**IPOC Station P**	**47.05**	**299**	P	**P**	**17 20 52.9**	**-0.3**
PB01				IAmb	IAmb	17 20 54.5	
	comp=Z,8.3nm,0.8s						
VNDA	**Vanda**	**47.07**	**182**	P	**P**	**17 20 52.5**	**0.0**
	comp=Z,3.4nm,0.7s,baz=193,slow=6.1,SNR=27 comp=Z,3.4nm,0.7s						
VNDA	**Vanda**	**47.07**	**182**	P	**P**	**17 20 53.2**	**+0.7**
VNDA				IAmb	IAmb	17 20 57.8	
	comp=Z,5.7nm,0.9s						
PATCX	**Punta Patache**	**47.57**	**299**	P	**P**	**17 20 58.3**	**+1.1**
PB11	**IPOC Station P**	**48.22**	**300**	P	**P**	**17 21 02.8**	**+0.5**
PB11				IAmb	IAmb	17 21 04.1	
	comp=Z,12nm,1.1s						
LBTB	**Lobatse**	**48.45**	**73**	LR	LR	17 39 22.3	
	comp=Z,136nm,18.3s,baz=216,slow=34						
TSUM	**Tsumeb**	**49.07**	**60**	LR	LR	17 38 53.2	
	comp=Z,349nm,18.3s,baz=220,slow=32						

PB16	**IPOC Station P**	**49.37**	**301**	P	**P**	**17 21 11.4**	**-0.2**
PB16				IAmb	IAmb	17 21 25.1	
	comp=Z,12nm,1.6s						
LPAZ	**La Paz**	**50.47**	**304**	P	**P**	**17 21 20.7**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=133,slow=5.8,SNR=17						
LPAZ				LR	LR	17 42 44.9	
	comp=Z,131nm,21.6s,baz=180,slow=36						
	comp=Z,3.7nm,0.7s						
LPAZ	**La Paz**	**50.47**	**304**	P	**P**	**17 21 20.6**	**+0.6**
LPAZ				IAmb	IAmb	17 21 34.0	
	comp=Z,18nm,1.4s						
MATP	**Matopo**	**53.72**	**72**	LR	LR	17 42 32.1	
	comp=Z,385nm,18.6s,baz=61,slow=34						
SAML	**Samuel**	**54.79**	**314**	P	**P**	**17 21 50.0**	**-1.2**
LSZ	**Lusaka**	**57.79**	**68**	LR	LR	17 44 31.4	
	comp=Z,591nm,18.2s,baz=190,slow=34						
NNA	**Nana**	**58.41**	**298**	LR	LR	17 49 30.0	
	comp=Z,84nm,18.9s,baz=151,slow=38						
ATAH	**Atahualpa**	**63.34**	**299**	LR	LR	17 53 22.5	
	comp=Z,188nm,18.7s,baz=137,slow=39						
DBIC	**Dimbokro**	**64.55**	**24**	LR	LR	17 45 20.5	
	comp=Z,481nm,19.1s,baz=154,slow=31						
OPO	**Ambohidratompo**	**65.63**	**87**	LR	LR	17 47 17.4	
	comp=Z,355nm,18.8s,baz=346,slow=32						
OTAV	**Otavalo**	**69.76**	**303**	P	**P**	**17 23 33.3**	**+1.3**
OTAV				IAmb	IAmb	17 23 35.6	
	comp=Z,12nm,1.6s						
MBAR	**Mbarara**	**71.54**	**62**	LR	LR	17 52 23.6	
	comp=Z,180nm,18.3s,baz=173,slow=34						
ROSC	**El Rosal**	**71.92**	**309**	LR	LR	17 57 20.4	
	comp=Z,236nm,19.5s,baz=72,slow=38						
TOA0	**Torodi Ar. Sit**	**72.43**	**29**	P	**P**	**17 23 47.4**	**0.0**
TORD	**Torodi Ar. Bea**	**72.43**	**29**	P	**P**	**17 23 47.8**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=202,slow=6.5,SNR=17						
	comp=Z,3.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.43**	**29**	P	**P**	**17 23 47.4**	**0.0**
KMBO	**Kilima Mbogo**	**74.46**	**68**	LR	LR	17 54 28.7	
	comp=Z,318nm,18.9s,baz=95,slow=34						
RPZ	**Rata Peaks**	**79.98**	**193**	LR	LR	17 57 59.2	
	comp=Z,178nm,18.2s,baz=185,slow=34						
JTS	**Las Juntas de**	**81.63**	**302**	LR	LR	18 03 52.6	
	comp=Z,97nm,19.7s,baz=234,slow=38						
URZ	**Urewera**	**84.39**	**198**	LR	LR	18 00 23.1	
	comp=Z,114nm,18.2s,baz=211,slow=34						
ATD	**Arta Tunnel**	**88.07**	**67**	LR	LR	18 05 08.9	
	comp=Z,167nm,18.1s,baz=140,slow=36						
MDT	**Midelt**	**90.00**	**18**	LR	LR	18 01 23.6	
	comp=Z,313nm,18.3s,baz=158,slow=33						
PPT	**Papeete**	**92.83**	**233**	LR	LR	18 00 22.8	
	comp=Z,73nm,18.2s,baz=166,slow=31						
RAR	**Rarotonga**	**93.88**	**223**	LR	LR	18 05 48.8	
	comp=Z,58nm,18.1s,baz=182,slow=34						
ESDC	**Sonseca Array**	**96.80**	**17**	LR	LR	18 06 09.1	
	comp=Z,157nm,18.7s,baz=184,slow=33						
ASAR	**Alice Springs**	**99.31**	**162**	P	**Pdif**	**17 26 04.2**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=186,slow=4.6,SNR=5.1						
	comp=Z,0.4nm,0.8s						
EIL	**Elat**	**99.70**	**51**	LR	LR	18 07 39.0	
	comp=Z,194nm,19.7s,baz=240,slow=33						
PZH	**PanZhiHua**	**132.82**	**106**	PKP	**PKiKP**	**17 31 38.0**	**+0.8**
INK	**Inuvik**	**145.72**	**321**	PKPbc	**PKPbc**	**17 31 58.5**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=57,slow=5.4,SNR=5.2						
INK	**Inuvik**	**145.72**	**321**	PKPdf	**PKPab**	**17 31 59.2**	**+0.3**
ILAR	**Eielson Array**	**150.13**	**312**	PKPbc	**PKPbc**	**17 32 10.7**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=127,slow=1.6,SNR=32						
ILAR	**Eielson Array**	**150.13**	**312**		**PKPbc**	**17 32 10.0**	**-0.4**
SONM	**Songino Array**	**150.25**	**85**	PKPbc	**PKPbc**	**17 32 11.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=217,slow=4.5,SNR=8.3						

*MAN **28** 17:13:24.0, 9°.92N×124°.04E, h6^{km}, mb4.1, ML2.9, MS2.6, Hypocentre not reviewed by the ISC*

ISC 28 17:13:24.8±1.3**, 9°.92N**±0°.04×**124°.02E**±0°.05**, h7**^{km}±11^{km}**, n6, σ0ˢ.82**/11**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.28**	**215**	⇓*e*P	**Pg**	**17 13 29.8**	**-0.5**
TBP				*i* S	**Sg**	**17 13 34.3**	**+0.3**
LLP	**Lapu-Lapu**	**0.40**	**352**	⇓*i*P	**Pg**	**17 13 32.5**	**-0.1**
LLP				*i* S	**Sg**	**17 13 38.7**	**+0.9**
MSLP	**Maasin**	**0.85**	**75**	⇑*e*P	**Pg**	**17 13 40.6**	**-0.6**
SNPH	**Sibulan**	**0.97**	**234**	*i* P	**Pg**	**17 13 42.6**	**-0.8**
SNPH				*i* S	**Sg**	**17 13 57.1**	**+1.2**
GUIM	**Jordan**	**1.58**	**297**	⇓*e*P	**Pn**	**17 13 52.5**	**-0.7**
GUIM				*e*S	**Sn**	**17 14 13.9**	**+0.1**
PAGZ	**Pagadian**	**2.15**	**197**	⇑*e*P	**Pn**	**17 14 01.2**	**+0.1**
PAGZ				*e*S	**Sn**	**17 14 29.0**	**+0.8**

*IDC **28** 17:52:39.2±0.9, 4°.44S×135°.23E, h0^{km}, mb3.7/6, mbtmp4.0/12, ML4.1/5, MS3.7/1, Error ellipse: s-maj=35.3km s-min=17.1km az=67.0*

*NEIC **28** 17:52:41.8±2.0, 4°.40S±0°.06×135°.4E±0°.1, h19^{km}±6^{km}, mb4.1/14, Error ellipse: s-maj=15.2km s-min=7.8km az=78.0*

*DJA **28** 17:52:43.4±0.7, 4°S±2°×13°5E±°, h12^{km}±6^{km}, M4.2/13, mB4.8/5, mb4.5/13, MLv4.2/10, Mw(mB)4.1/5*

ISC 28 17:52:41.5±0.5**, 4°.55S**±0°.05×**135°.24E**±0°.06**, h16**^{km}**, n56, σ2ˢ.09**/59**, mb4.0**/9**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.77**	**300**	P	**Pn**	**17 53 12.6**	**+1.1**
KMPI				S	**Sn**	**17 53 33.9**	**+0.2**
SRPI	**Serui, Papua**	**2.84**	**21**	P	**Pn**	**17 53 25.1**	**-1.2**
SRPI				S	**Sn**	**17 53 56.2**	**-4.0**
FAKI	**Fak Fak**	**3.40**	**298**	Pn	**Pn**	**17 53 34.1**	**+0.2**
FAKI	**Fak Fak**	**3.40**	**298**	P	**Pn**	**17 53 34.1**	**+0.2**
BAKI	**Biak**	**3.45**	**15**	P	**Pn**	**17 53 32.9**	**-1.7**
SMPI	**Sarmi**	**4.30**	**54**	P	**Pn**	**17 53 46.5**	**+0.3**
SAUI	**Saumlaki**	**5.19**	**229**	Pn	**Pn**	**17 53 57.5**	**-1.1**
SAUI	**Saumlaki**	**5.19**	**229**	P	Pn	17 54 04.1	+5.5
	0.5nm76nm,0.7s						
SIJI	**Sorong**	**5.40**	**313**	Pn	**Pn**	**17 54 01.0**	**-0.4**
	4.7nm,0.3s,baz=93,slow=1.5,SNR=162						
SIJI				Sn	**Sn**	**17 54 57.7**	**-5.6**
	3.6nm,0.3s,baz=230,slow=23,SNR=2.3						
	11nm,0.3s						
MSAI	**Masohi**	**6.41**	**281**	P	**Pn**	**17 54 17.2**	**+1.9**
	0.0nm6.9nm,0.6s						
MMPI	**Merauke**	**6.42**	**128**	P	**Pn**	**17 54 19.2**	**+3.8**
	1.6nm159nm,0.5s						
AAI	**Ambon**	**7.08**	**277**	P	**Pn**	**17 54 27.1**	**+2.5**
	0.1nm761nm23nm,1.4s						
LBMI	**Labuha**	**8.65**	**296**	P	**Pn**	**17 54 46.9**	**+0.7**
	7.1nm,1.5s						
MTN	**Manton Dam**	**9.19**	**206**	Pn	**Pn**	**17 54 55.9**	**+2.5**
SANI	**Sanana**	**9.57**	**285**	P	**Pn**	**17 55 00.4**	**+1.7**
	7.1nm,0.7s						
SOEI	**Soe**	**12.05**	**244**		**Pn**	**17 55 33.3**	**+0.5**
SOEI	**Soe**	**12.05**	**244**	P	**P**	**17 55 45.5**	**-0.2**
COEN	**Coen**	**12.19**	**141**	Pn	**Pn**	**17 55 33.3**	**-1.3**
KNRA	**Kununurra**	**12.76**	**209**	Pn	**Pn**	**17 55 43.0**	**+0.6**
PMG	**Port Moresby**	**12.77**	**113**	Pn	**Pn**	**17 55 44.1**	**+1.5**
	5.5nm,0.5s,baz=315,slow=1.8,SNR=5.2						
PMG	**Port Moresby**	**12.77**	**113**	Pn	**Pn**	**17 55 40.4**	**-2.1**
BATI	**Baumata**	**12.78**	**243**	Pn	**Pn**	**17 55 42.9**	**+0.2**
	2.3nm,0.3s,baz=242,slow=4.5,SNR=4.4						
	6.8nm,0.4s						
BATI	**Baumata**	**12.78**	**243**	P	**Pn**	**17 55 47.1**	**+4.4**
	12nm,0.8s						
LUWI	**Luwuk**	**12.93**	**285**	P	**Pn**	**17 55 46.2**	**+1.4**
	29nm,0.6s						
APSI	**Ampana**	**14.05**	**285**	P	**Pn**	**17 56 01.1**	**+1.1**
	395nm25nm,0.9s						
WB0	**Warramunga Arr**	**15.15**	**183**	Pn	**Pn**	**17 56 13.7**	**-1.3**
WB0				IAmb	IAmb	17 56 30.4	
	comp=Z,8.0nm,0.8s						
WRAB	**Tennant Creek**	**15.31**	**183**		**Pn**	**17 56 16.1**	**-1.0**
WRAB				IAmb	IAmb	17 56 29.8	
	comp=Z,13nm,0.5s						
WB2	**Warramunga Arr**	**15.32**	**183**		**Pn**	**17 56 15.9**	**-1.4**
WRA	**Warramunga Arr**	**15.32**	**183**	Pn	**Pn**	**17 56 16.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=6.1,slow=13,SNR=16						
WRA				Sn	**Sn**	**17 58 59.4**	**-7.5**
	comp=Z,0.9nm,0.3s,baz=4.4,slow=23,SNR=7.5						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**15.32**	**183**		**Pn**	**17 56 16.6**	**-0.6**
WR0	**Warramunga Arr**	**15.33**	**182**		**Pn**	**17 56 16.4**	**-1.0**
WR0				IAmb	IAmb	17 56 28.7	
	comp=Z,6.9nm,0.7s						
CTA	**Charters Tower**	**18.80**	**146**	P	**Pn**	**17 57 02.3**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=327,slow=10.0,SNR=14						
	comp=Z,4.2nm,0.6s						
CTAO	**Charters Tower**	**18.80**	**146**		**Pn**	**17 57 02.3**	**+1.3**
CTAO				IAmb	IAmb	17 57 08.1	
	comp=Z,12nm,1.3s						
ASAR	**Alice Springs**	**19.05**	**184**	P	**Pn**	**17 57 04.6**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=5.5,slow=11,SNR=38						
ASAR				S	**Sn**	**18 00 32.3**	**-4.8**
	comp=Z,2.1nm,0.9s,baz=15,slow=24,SNR=5.3						
	comp=Z,6.5nm,0.6s						
ASAR	**Alice Springs**	**19.05**	**184**		**Pn**	**17 57 04.1**	**+0.1**
STKA	**Stephens Creek**	**27.83**	**168**	P	**P**	**17 58 31.7**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=327,slow=9.8,SNR=3.5						
	comp=Z,0.9nm,0.3s						
STKA	**Stephens Creek**	**27.83**	**168**	P	**P**	**17 58 29.8**	**-0.4**
STKA				IAmb	IAmb	17 59 09.1	
	comp=Z,4.4nm,1.6s						
BBOO	**Buckleboo**	**28.12**	**179**	P	**P**	**17 58 32.8**	**-0.1**
TNG	**Tangerang**	**28.52**	**265**	P	**P**	**17 58 34.4**	**-2.2**
CAN	**Canberra**	**33.16**	**159**	P	**P**	**17 59 18.8**	**+1.5**
MSVF	**Nonsavu**	**43.87**	**111**	LR	LR	18 18 56.2	
	comp=Z,88nm,18.3s,baz=163,slow=36						
PZH	**PanZhiHua**	**44.77**	**315**	P	**P**	**18 00 57.0**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,1µm,5.0s						
HHC	**Hu-ho-hao-te**	**50.12**	**337**	*e*P	**P**	**18 01 37.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
KHZ	**Kahutara**	**50.78**	**144**	P	**P**	**18 01 40.9**	**-0.1**
SONM	**Songino Array**	**57.99**	**337**	P	**P**	**18 02 33.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=145,slow=8.8,SNR=4.2						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**57.99**	**337**	P	**P**	**18 02 32.5**	**-1.0**
CASY	**Casey**	**63.99**	**191**	P	**P**	**18 03 15.8**	**+1.9**
WMQ	**Urumqi**	**64.36**	**324**	*e*P	**P**	**18 03 18.8**	**+2.0**
MK31	**Makanchi Array**	**69.18**	**324**	P	**P**	**18 03 45.0**	**-2.4**
MK31				IAmb	IAmb	18 03 53.2	
	comp=Z,1.7nm,1.3s						
MKAR	**Makanchi Array**	**69.18**	**324**	P	**P**	**18 03 47.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=112,slow=8.5,SNR=5.6						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**69.18**	**324**	P	**P**	**18 03 46.7**	**-0.7**
ZALV	**Zalesovo Beam**	**71.83**	**331**	P	**P**	**18 04 02.5**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=122,slow=4.7,SNR=2.6						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**74.29**	**174**	P	**P**	**18 04 18.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=305,slow=9.6,SNR=1.5						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**74.29**	**174**	P	**P**	**18 04 18.2**	**+0.7**
KKAR	**Karatay Array**	**75.05**	**317**	P	**P**	**18 04 23.3**	**+0.6**
ILAR	**Eielson Array**	**88.94**	**25**	P	**P**	**18 05 34.0**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=272,slow=2.3,SNR=1.5						
	comp=Z,0.2nm,0.7s						

*GUC **28** 18:00:47.9±0.6, 19°.47S×70°.62W, h36^{km}±3^{km}, ML3.6*

*IDC **28** 18:00:54.1±3.9, 19°.63S×70°.14W, h86^{km}±27^{km}, mb3.5/1, mbtmp3.7/4, MS2.7/1, Error ellipse: s-maj=60.7km s-min=16.7km az=95.0*

ISC 28 18:00:47.0±1.6**, 19°.49S**±0°.03×**70°.7W**±0°.1**, h36**^{km}±3^{km}**, n31, σ1ˢ.03**/36**, 1C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.94**	**23**	⇓*i*P	**Pn**	**18 01 03.3**	**-0.6**
PB12				*i* S	**Sn**	**18 01 15.3**	**-0.9**
PB12				IAML		18 01 18.5	
	comp=N,3µm,0.2s						
PB11	**IPOC Station P**	**1.04**	**105**	⇓*i*P	**Pn**	**18 01 04.4**	**-0.8**
PB11				*i* S	**Sn**	**18 01 17.3**	**-1.4**
PB11				IAML		18 01 20.4	
	comp=N,4µm,0.3s						
HMBC	**Humberstone**	**1.11**	**135**	⇓*i*P	**Pn**	**18 01 05.7**	**-0.5**
HMBC				*i* S	**Sn**	**18 01 19.7**	**-0.7**
HMBC				IAML		18 01 22.8	
	comp=E,3µm,0.6s						
AP01	**Chacalluta**	**1.17**	**18**	⇓*i*P	**Pn**	**18 01 06.9**	**+0.1**
AP01				*i* S	**Sn**	**18 01 22.2**	**+0.7**
AP01				IAML		18 01 26.4	
	comp=N,5µm,0.4s						
TA01	**Diego Aracena**	**1.19**	**155**	*i* P	**Pn**	**18 01 07.4**	**+0.3**
TA01				*i* S	**Sn**	**18 01 22.0**	**0.0**
TA01				IAML		18 01 24.5	
	comp=E,1µm,0.4s						
PATCX	**Punta Patache**	**1.43**	**158**	*e*P	**Pn**	**18 01 10.9**	**+0.3**
PATCX				*i* S	**Sn**	**18 01 28.3**	**+0.1**
PATCX				*i* S	**Sn**	**18 01 28.7**	**+0.5**
PATCX				IAML		18 01 33.9	
	comp=E,749nm,0.7s						
PB08	**IPOC Station P**	**1.61**	**114**	⇓*i*P	**Pn**	**18 01 13.8**	**+0.5**
PB08				*i* S	**Sn**	**18 01 33.5**	**+0.4**
PB08				IAML		18 01 40.4	
	comp=N,1µm,0.3s						
PB16	**IPOC Station P**	**1.62**	**45**	⇓*i*P	**Pn**	**18 01 14.5**	**+0.9**
PB16				*i* S	**Sn**	**18 01 34.8**	**+1.3**
PB16				IAML		18 01 35.2	
	comp=N,2µm,0.3s						
PB01	**IPOC Station P**	**1.94**	**143**	*i* P	**Pn**	**18 01 17.9**	**+0.4**
PB01				IAML		18 01 46.6	
	comp=E,632nm,0.4s						
PB02	**IPOC Station P**	**1.98**	**157**	*e*P	**Pn**	**18 01 18.9**	**+0.7**
PB02				*i* S	**Sn**	**18 01 41.6**	**-0.2**
PB02				IAML		18 01 51.4	
	comp=E,1µm,0.5s						
PB07	**IPOC Station P**	**2.36**	**161**	*e*P	**Pn**	**18 01 23.9**	**+0.4**
PB07				*i* S	**Sn**	**18 01 50.8**	**-0.6**
PB07				IAML		18 02 01.2	
	comp=E,424nm,0.7s						
PB09	**IPOC Station P**	**2.69**	**149**	*e*P	**Pn**	**18 01 29.0**	**+1.1**
PB09				*i* S	**Sn**	**18 02 01.1**	**+1.8**
PB09				IAML		18 02 11.7	
	comp=E,464nm,0.3s						
PB04	**IPOC Station P**	**2.88**	**169**	*e*P	**Pn**	**18 01 30.8**	**+0.1**
PB04				*i* S	**Sn**	**18 02 00.9**	**-3.3**
PB04				IAML		18 02 24.4	
	comp=N,292nm,0.8s						
PB06	**IPOC Station P**	**3.38**	**162**	*e*P	**Pn**	**18 01 37.4**	**0.0**
PB06				IAML		18 02 33.9	
	comp=N,146nm,0.6s						
LVC	**Limon Verde**	**3.54**	**152**	P	**Pn**	**18 01 41.0**	**+1.1**
	comp=N,12nm,0.3s,baz=19,slow=7.4,SNR=21						
LVC				S	**Sn**	**18 02 20.3**	**-0.4**
	comp=N,33nm,0.3s,baz=87,slow=17,SNR=5.9						
LVC	**Limon Verde**	**3.54**	**152**	⇑*e*P	**Pn**	**18 01 41.2**	**+1.4**
LVC				*e*S	**Sn**	**18 02 22.3**	**+1.6**
PB15	**IPOC Station P**	**3.88**	**163**	*e*P	**Pn**	**18 01 44.9**	**+0.5**
LPAZ	**La Paz**	**4.02**	**38**	P	Pn	18 01 52.0	+5.3
	comp=N,5.1nm,0.3s,baz=245,slow=5.7,SNR=21						
LPAZ				LR	LR	18 03 34.2	
	comp=N,103nm,20.1s,baz=238,slow=42						
SIV	**San Ignacio**	**9.83**	**71**	P	**Pn**	**18 03 05.8**	**-0.1**
	comp=N,2.2nm,0.5s,baz=248,slow=11,SNR=12						
H03N1	**Juan Fernandez**	**15.71**	**206**	T	T	18 20 48.9	
	baz=32,slow=72,SNR=91						
H03N2	**Juan Fernandez**	**15.71**	**206**	T	T	18 20 48.5	
	baz=32,slow=72,SNR=76						
H03N3	**Juan Fernandez**	**15.72**	**206**	T	T	18 20 47.6	
	baz=32,slow=72,SNR=62						
TORD	**Torodi Ar. Bea**	**78.31**	**71**	P	**P**	**18 12 42.6**	**-1.4**
	comp=N,0.5nm,0.5s,baz=249,slow=4.9,SNR=5.7						
	comp=N,0.5nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**125.91**	**279**	T	T	20 38 45.5	
	baz=101,slow=74,SNR=65						
H11S1	**WAKE ISLAND Hy**	**125.92**	**279**	T	T	20 38 52.4	
	baz=101,slow=74,SNR=49						
H11S3	**WAKE ISLAND Hy**	**125.93**	**279**	T	T	20 38 50.7	
	baz=101,slow=74,SNR=44						
H11N3	**WAKE ISLAND Hy**	**125.95**	**281**	T	T	20 38 56.0	
	baz=100,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**125.96**	**281**	T	T	20 38 56.2	
	baz=100,slow=74,SNR=16						
H11N1	**WAKE ISLAND Hy**	**125.96**	**281**	T	T	20 38 54.6	
	baz=100,slow=74,SNR=11						
ASAR	**Alice Springs**	**130.84**	**210**	PKP	**PKPdf**	**18 19 56.0**	**+0.7**
	comp=N,0.2nm,0.6s,baz=130,slow=1.7,SNR=5.1						
MKAR	**Makanchi Array**	**144.94**	**33**	PKP	**PKPdf**	**18 20 21.4**	**+1.0**
	comp=N,0.4nm,0.6s,baz=316,slow=3.3,SNR=4.4						

NNC 28 18:03:41.6±4.2**, 36°.65N**×**70°.79E, h120**^{km}±66^{km}**, mb3.0, mpv3.6, 3C-1D, Error ellipse: s-maj=33.6km s-min=26.0km az=24.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.45**	**358**	P	Pn	18 05 15.0	+1.0
	2.4nm,0.3s,baz=181,slow=13,SNR=65						
KK31				S	Sn	18 06 26.8	+0.6
	2.9nm,0.5s,baz=185,slow=17,SNR=12						
TKM2	**Tokmak 2**	**7.27**	**29**	⇑P	Pn	18 05 23.9	-1.4
	1.2nm,0.5s						
TKM2				⇓S	Sn	18 06 47.4	+1.0
	2.7nm,0.8s						
AB31	**Akbulak array**	**14.87**	**331**	⇑P	Pn	18 07 06.2	+0.7
	0.7nm,0.5s,baz=148,slow=12,SNR=16						
AB31				S	Sn	18 09 47.9	-1.9
	0.6nm,0.5s,baz=156,slow=22,SNR=4.3						
AKTO	**Aktyubinsk**	**16.57**	**330**	⇑P	P	18 07 26.8	-0.2
	1.2nm,0.6s						

NOU 28 18:22:33.2, 15°.58S×**167°.52E, h81**^{km}**, MLv4.1**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.23**	**163**	P	Pn	18 23 08.6	+0.4
KOUNC	**Koumac, New Ca**	**5.82**	**211**	P	Pn	18 23 57.7	+0.7
DZM	**Mont Dzumac**	**6.54**	**189**	P	Pn	18 24 06.2	-0.6
NOUC	**Port Laguerre**	**6.59**	**190**	P	Pn	18 24 06.6	-0.9
OUENC	**Ouen Island, N**	**6.83**	**185**	P	Pn	18 24 10.9	+0.1

IDC 28 18:23:11.7±35.0**, 34°.63S**×**72°.75E, h0**^{km}**, mb3.5**/4**, mbtmp3.5**/4**, Error ellipse: s-maj=1169.0km s-min=45.5km az=41.0, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**53.80**	**96**	P	P	18 32 36.1	-0.3
	0.5nm,0.9s,baz=245,slow=5.9,SNR=3.2						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**55.88**	**92**	P	P	18 32 51.6	0.0
	0.4nm,0.9s,baz=244,slow=4.7,SNR=2.0						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**81.51**	**7**	P	P	18 35 30.4	-0.3
	0.4nm,0.7s,baz=188,slow=5.9,SNR=4.7						
	0.4nm,0.7s						
SONM	**Songino Array**	**87.45**	**22**	P	P	18 36 01.4	+0.5
	0.5nm,0.8s,baz=194,slow=5.3,SNR=3.3						
	0.5nm,0.8s						

*IDC **28** 19:10:33.5±0.5, 40°.92N×68°.12E, h0^{km}, mb4.3/23, mbtmp4.2/32, ML3.4/9, MS3.4/19, Error ellipse: s-maj=11.6km s-min=7.3km az=172.0*

*BJI **28** 19:10:34.7±0.0, 40°.97N×68°.37E, h5^{km}, mb4.4/31, mB4.6/21, ML4.1/3, Ms3.8/13, Ms7 3.5/12*

*MOS **28** 19:10:34.6±1.1, 41°.09N×68°.15E, h14^{km}, mb4.7/21, Error ellipse: s-maj=4.7km s-min=4.6km az=26.5*

*ISU **28** 19:10:34, 41°.23N×67°.85E, h15^{km}*

*NNC **28** 19:10:35.6±0.9, 41°.14N×68°.03E, h7^{km}±5^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=9.5km s-min=4.9km az=157.0*

*NEIC **28** 19:10:36.1±1.4, 41°.11N±0°.06×68°.12E±0°.05, h11^{km}±4^{km}, mb4.6/72, Error ellipse: s-maj=8.6km s-min=5.2km az=164.0*

*SOME **28** 19:10:36.5, 41°.13N×68°.18E, h0^{km}, MS3.7*

ISC 28 19:10:34.9±0.7**, 41°.10N**±0°.03×**68°.15E**±0°.02**, h8**^{km}±4^{km}**, n456, σ1ˢ.72**/490**, mb4.5**/98**, MS3.6**/20**, 31C-42D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NZBK	**Nazarbek**	**0.74**	**80**	P	**Pg**	**19 10 49.2**	**+0.1**
NZBK				S	**Sb**	**19 11 01.1**	**+0.8**
KUMR	**Kumaryk**	**0.87**	**83**	P	**Pb**	**19 10 52.0**	**-0.3**
KUMR				S	**Sb**	**19 11 04.6**	**+0.4**
TAS	**Tashkent**	**0.89**	**75**		**Pg**	**19 10 52.1**	**+0.1**
TAS				Sg	**Sn**	**19 11 05.9**	**-1.1**
TAS	**Tashkent**	**0.89**	**75**	PG	**Pg**	**19 10 52.1**	**+0.1**
TAS						19 11 05.9	
TAS	**Tashkent**	**0.89**	**75**	P	**Pg**	**19 10 52.0**	**0.0**
TAS				S	**Sn**	**19 11 06.6**	**-0.4**
CHRV	**Charvak**	**1.46**	**68**	P	**Pg**	**19 11 03.4**	**+0.5**
CHRV				S	**Sg**	**19 11 25.9**	**+4.1**
CHMG	**Chimgan**	**1.47**	**72**	P	**Pg**	**19 11 05.2**	**+2.1**
CHMG				S	**Sg**	**19 11 25.7**	**+3.5**
CHM	**Chimkent**	**1.63**	**41**	*e*PN	**Pg**	**19 11 06.6**	**+0.4**
CHM				*i* S	**Sg**	**19 11 29.9**	**+2.6**
CHM	**Chimkent**	**1.63**	**41**	*e*P	**Pg**	**19 11 06.8**	**+0.7**
	4.6nm,0.1s						
CHM				*e*S	**Sg**	**19 11 29.4**	**+2.1**
	6µm,0.6s						
CHM	**Chimkent**	**1.63**	**41**	*e*P	**Pg**	**19 11 06.6**	**+0.4**
	baz=43						
CHM				*i* S	**Sg**	**19 11 29.9**	**+2.6**
	baz=43						
SAM	**Samarkand**	**1.68**	**212**	P	**Pg**	**19 11 07.0**	**-0.1**
SAM				S	**Sg**	**19 11 29.0**	**+0.2**
IUG	**Iuzhnay**	**1.75**	**53**	*c i*PN	**Pb**	**19 11 07.5**	**+0.1**
IUG	**Iuzhnay**	**1.75**	**53**	*e*P	**Pb**	**19 11 07.5**	**+0.1**
	12µm,0.4s						
IUG				*e*S	**Sg**	**19 11 30.6**	**-0.7**
	3µm,0.6s						
IUG	**Iuzhnay**	**1.75**	**53**	⇑*i*Pg	**Pb**	**19 11 07.6**	**+0.1**
	baz=56						
IUG	**Iuzhnay**	**1.75**	**53**	P	**Pb**	**19 11 07.6**	**+0.1**
	12µm,0.4s						
IUG				S	**Sg**	**19 11 30.6**	**-0.7**
	3µm,0.6s						
AGL	**Agalyk**	**1.86**	**212**	P	**Pb**	**19 11 09.0**	**-0.1**
AGL				S	**Sb**	**19 11 32.7**	**+0.2**
CHDK	**Chadak**	**1.97**	**93**	P	**Pb**	**19 11 10.8**	**-0.3**
CHDK				S	**Sg**	**19 11 38.5**	**+0.2**
KTAB	**Kitab**	**2.19**	**207**	P	**Pg**	**19 11 15.8**	**-1.1**
KTAB				S	**Sg**	**19 11 44.4**	**-0.9**
MINT	**Mingtut**	**2.24**	**106**	P	**Pb**	**19 11 15.9**	**+0.3**
BTK	**Batken**	**2.28**	**116**		**Pn**	**19 11 13.6**	**+0.6**
BTK	**Batken**	**2.28**	**116**	PN	**Pn**	**19 11 13.6**	**+0.6**
BTK	**Batken**	**2.28**	**116**	P	**Pb**	**19 11 15.1**	**-1.3**
BRLS	**Borolday**	**2.30**	**33**	*e*PN	**Pn**	**19 11 10.8**	**-2.3**
BRLS	**Borolday**	**2.30**	**33**	*e*P	**Pn**	**19 11 13.1**	**-0.1**
	30nm,0.5s						
BRLS				*e*S	**Sn**	**19 11 38.8**	**-3.0**
	788nm,0.6s						
BRLS	**Borolday**	**2.30**	**33**	*e*Pn	**Pn**	**19 11 10.9**	**-2.3**
	baz=34						
BRLS				*e*Pg	**Pb**	**19 11 13.4**	**-3.2**
	baz=34						
BRLS	**Borolday**	**2.30**	**33**	P	**Pn**	**19 11 13.1**	**-0.1**
	30nm,0.5s						
BRLS				S	**Sn**	**19 11 38.8**	**-3.0**
	788nm,0.6s						
NAM	**Namangan**	**2.66**	**91**	P	**Pg**	**19 11 24.5**	**-1.3**
KK31	**Karatay Array**	**2.66**	**41**		**Pn**	**19 11 19.0**	**+0.8**
KK31	**Karatay Array**	**2.66**	**41**	PN	**Pn**	**19 11 19.0**	**+0.8**
KK31	**Karatay Array**	**2.66**	**41**	⇑Pn	**Pn**	**19 11 19.3**	**+1.1**
	13nm,0.5s,baz=224,slow=16,SNR=1162						
KK31				⇓Pg	**Pg**	**19 11 24.8**	**-1.1**
	184nm,0.7s,baz=221,slow=18,SNR=11						
KK31				Lg	Lg	19 12 00.5	
	276nm,0.4s,baz=231,slow=29,SNR=19						
KKAR	**Karatay Array**	**2.66**	**41**		**Pn**	**19 11 18.8**	**+0.7**
KKAR	**Karatay Array**	**2.66**	**41**		**Pn**	**19 11 19.0**	**+0.8**
KKAR	**Karatay Array**	**2.66**	**41**	PN	**Pn**	**19 11 18.8**	**+0.7**
CHMI	**Chimion**	**2.70**	**107**	P	**Pb**	**19 11 24.5**	**+1.1**
FRG	**Fergana**	**2.85**	**104**	P	**Pg**	**19 11 28.0**	**-1.6**
ARK	**Arkit**	**2.95**	**75**	P	**Pn**	**19 11 24.2**	**+2.0**
ARK				S	**Sb**	**19 12 01.6**	**-2.5**
DZA	**Taraz**	**2.97**	**52**	*e*PN	**Pg**	**19 11 30.6**	**-1.2**
DZA	**Taraz**	**2.97**	**52**	*e*P	**Pg**	**19 11 30.9**	**-0.9**
	226nm,0.4s						
DZA				*e*S	**Sg**	**19 12 09.9**	**-0.4**
	832nm,0.4s						
DZA	**Taraz**	**2.97**	**52**	*e*Pg	**Pg**	**19 11 30.6**	**-1.2**
	baz=53						
DZA	**Taraz**	**2.97**	**52**	Pg	**Pg**	**19 11 30.9**	**-0.9**
	226nm,0.4s						
DZA				Lg	Lg	19 12 09.9	
	832nm,0.4s						
BUXR	**Bukhara**	**3.21**	**246**	P	**Pg**	**19 11 37.6**	**+1.3**
DRK	**Karamyk**	**3.23**	**119**		**Pn**	**19 11 27.6**	**+1.4**
OHH	**Osh**	**3.56**	**98**	P	**Pg**	**19 11 41.1**	**-2.1**
MRKS	**Merke**	**4.13**	**65**	*e*P	**Pg**	**19 11 54.6**	**+0.6**
	102nm,0.9s						
MRKS				*e*S	**Sg**	**19 12 50.4**	**+3.0**

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       374nm,0.7s
MRKS   Merke              4.13  65   Pg      Pg      19 11 54.6 +0.6
       102nm,0.9s
MRKS                                 Lg      Lg      19 12 50.4
       374nm,0.7s
AML    Almayashu          4.28  74   P       Pn      19 11 41.9 +1.2
       SNR=14
EKS2   Erkin-Say          4.48  68   P       Pn      19 11 45.6 +2.3
       SNR=27
UCH    Uchtor             4.90  75   P       Pn      19 11 50.5 +1.3
       SNR=12
AAK    Ala-Archa          4.98  70   P       Pn      19 11 52.3 +2.2
       SNR=21
AAK    Ala-Archa          4.98  70   Pn      Pn      19 11 52.0 +1.9
       3.2nm,0.3s,baz=250,slow=8.2,SNR=42
AAK                                  Sn      Sn      19 12 52.8 +4.8
       9.8nm,0.3s,baz=321,slow=13,SNR=4.0
AAK                                  Lg      Lg      19 13 12.3
       12nm,0.3s,baz=40,slow=19,SNR=8.0
AAK                                  LR      LR      19 14 01.2
       comp=Z,190nm,18.4s,baz=242,slow=41
       15nm,0.5s
AAK    Ala-Archa          4.98  70   Pn      Pn      19 11 51.5 +1.4
FRU1   Bishkek            5.12  68   Pn      Pn      19 11 52.9 +0.9
FRU1   Bishkek            5.12  68   PN      Pn      19 11 52.9 +0.9
USP    Ospenovka          5.19  63   P       Pn      19 11 54.5 +1.6
       SNR=15
CHMS   Chumysh            5.27  67   P       Pn      19 11 55.9 +1.9
       SNR=8.1
CHMS   Chumysh            5.27  67  ⇓Pn      Pn      19 11 55.2 +1.3
       9.0nm,0.5s
CHMS                                ⇓Pg      Pg      19 12 12.3  -3.4
       25nm,0.8s
CHMS                                ⇓Lg      Lg      19 13 22.4
       195nm,1.1s
KBK    Karagaybulak       5.31  71   P       Pn      19 11 57.2 +2.5
       SNR=34
SGDS   Sogindy            5.35  62  i PN     Pn      19 11 55.7 +0.6
SGDS                                e                19 12 12.2
SGDS   Sogindy            5.35  62  i Pn     Pn      19 11 55.7 +0.6
       baz=63
SGDS                                ePg      Pb      19 12 12.3 +3.6
       baz=63
TKM2   Tokmak 2           5.84  69   P       Pn      19 12 03.0 +1.1
       SNR=15
TKM2   Tokmak 2           5.84  69  ⇓Pn      Pn      19 12 02.8 +0.9
       20nm,1.2s
TKM2                                ⇑Pg      Pg      19 12 23.2  -3.5
       13nm,0.5s
TKM2                                ⇓Lg      Lg      19 13 40.3
       206nm,0.8s
BTLS   Baital             5.84  46  i PN     Pn      19 12 03.2 +1.4
BTLS   Baital             5.84  46  eP       Pg      19 12 24.8  -1.9
       14nm,0.5s
BTLS                                eS       Sg      19 13 42.6 +0.2
       20nm,0.5s
BTLS   Baital             5.84  46  i Pn     Pn      19 12 03.2 +1.4
       baz=46
BTLS                                eLg      Lg      19 13 42.0
       baz=46
BTLS   Baital             5.84  46   Pg      Pg      19 12 24.8  -1.9
       14nm,0.5s
BTLS                                 Lg      Lg      19 13 42.6
       20nm,0.5s
BOOM   Boomskoye usch     5.99  74   Pn      Pn      19 12 05.7 +1.7
BOOM   Boomskoye usch     5.99  74   PN      Pn      19 12 05.7 +1.7
KST    Kastek             6.13  69  eP       Pg      19 12 29.7  -2.5
       27nm,0.9s
KST                                 eS       Sg      19 13 51.3  -0.4
       208nm,0.6s
KST    Kastek             6.13  69   Pg      Pg      19 12 29.7  -2.5
       27nm,0.9s
KST                                  Lg      Lg      19 13 51.3
       208nm,0.6s
KRBS   Karabastau         6.14  63  eP       Pg      19 12 28.0  -4.5
       12nm,0.5s
KRBS                                eS       Sg      19 13 48.2  -3.9
       82nm,0.6s
KRBS   Karabastau         6.14  63   Pg      Pg      19 12 28.0  -4.5
       12nm,0.5s
KRBS                                 Lg      Lg      19 13 48.2
       82nm,0.6s
KSH    Kashi              6.18 102   Pn      Pn      19 12 05.0  -1.7
KSH                                  Sn      Sn      19 13 16.3  -1.4
KSH                                  smax    smax
       comp=N,180nm,0.9s
KSH                                  smax    smax
       comp=E,150nm,1.0s
MTBS   Maitube            6.48  69  eP       Pg      19 12 35.1  -3.9
       18nm,0.7s
MTBS                                eS       Sg      19 13 59.9  -3.1
       78nm,1.0s
MTBS   Maitube            6.48  69   Pg      Pg      19 12 35.1  -3.9
       18nm,0.7s
MTBS                                 Lg      Lg      19 13 59.9
       78nm,1.0s
KBL    Kabul              6.59 174   Pn      Pn      19 12 14.1 +1.8
KBL    Kabul              6.59 174   PN      Pn      19 12 14.1 +1.8
KUU    Kurty              6.66  63  eP       Pg      19 12 39.1  -3.4
       13nm,0.7s
KUU                                 eS       Sg      19 14 08.7   0.0
       77nm,0.8s
KUU    Kurty              6.66  63  i Pg     Pb      19 12 36.6 +5.6
       baz=63
KUU                                 i Lg     Lg      19 14 06.7
       baz=63
KUU    Kurty              6.66  63   Pg      Pg      19 12 39.1  -3.4
       13nm,0.7s
KUU                                  Lg      Lg      19 14 08.7
       77nm,0.8s
TNSS   Tian-Shan          6.83  71  ePN      Pn      19 12 17.6 +1.9
TNSS                                i                19 12 39.6
TNSS   Tian-Shan          6.83  71  eP       Pg      19 12 42.4  -3.2
       13nm,0.5s
TNSS                                eS       Sg      19 14 12.2  -1.8
       33nm,0.7s
TNSS   Tian-Shan          6.83  71  ePn      Pn      19 12 17.6 +1.9
       baz=72
TNSS                                i Pg     Pb      19 12 39.7 +5.7
       baz=72
TNSS                                i Lg     Lg      19 14 11.1
       baz=72
TNSS   Tian-Shan          6.83  71   Pg      Pg      19 12 42.4  -3.2
       13nm,0.5s
TNSS                                 Lg      Lg      19 14 12.2
       33nm,0.7s
KTBS   Karatobe           6.83  65  eP       Pg      19 12 40.9  -4.8
       6.8nm,0.5s
KTBS                                eS       Sg      19 14 11.1  -3.1
       131nm,0.6s
KTBS   Karatobe           6.83  65   Pg      Pg      19 12 40.9  -4.8
       6.8nm,0.5s
KTBS                                 Lg      Lg      19 14 11.1
       131nm,0.6s
AAA    Alma-Ata           6.84  69  ePg      Pg      19 12 41.0  -5.0
       baz=70
AAA                                 eLg      Lg      19 14 11.7
       baz=70
KDJ    Kajisay            6.84  78           Pn      19 12 16.7 +0.9
KDJ    Kajisay            6.84  78   PN      Pn      19 12 16.7 +0.9
KNDC   Almaty             6.88  69  ⇑Pg      Pg      19 12 42.3  -4.3
       56nm,0.7s
KNDC                                ⇓Lg      Lg      19 14 15.6
       352nm,0.9s
MDOK   Medeo              6.93  70  ePN      Pn      19 12 18.1 +1.2
MDOK                                e                19 12 42.3
MDOK   Medeo              6.93  70  eP       Pg      19 12 44.2  -3.3
       31nm,1.1s
MDOK                                eS       Sg      19 14 15.3  -1.9
       78nm,1.0s
MDOK   Medeo              6.93  70  ePn      Pn      19 12 18.1 +1.2
       baz=71
MDOK                                ePg      Pg      19 12 42.3  -5.2
       baz=71
MDOK                                eLg      Lg      19 14 16.9
       baz=71
MDOK   Medeo              6.93  70  ⇓Pn      Pn      19 12 18.0 +1.2
       12nm,0.8s
MDOK                                ⇑Pg      Pg      19 12 43.7  -3.8
       41nm,0.9s
MDOK                                ⇑Lg      Lg      19 14 16.0
       140nm,1.1s
MDOK   Medeo              6.93  70   Pg      Pg      19 12 44.2  -3.3
       31nm,1.1s
MDOK                                 Lg      Lg      19 14 15.3
       78nm,1.0s
CHKK   Chushkaly          7.09  64  eP*      Pg      19 12 45.2  -5.4
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CHKK   Chushkaly          7.09  64  ePg      Pg      19 12 45.2  -5.4
       baz=65
CHKK                                eLg      Lg      19 14 20.4
       baz=65
TARG   Taragay, Kyrgy     7.29  82           Pn      19 12 23.1 +1.2
TARG   Taragay, Kyrgy     7.29  82   P       Pn      19 12 23.2 +1.2
OTUK   Ortayu             7.74  21  ⇑Pn      Pn      19 12 28.3 +0.4
       11nm,0.6s
OTUK                                ⇑Sn      Sn      19 13 57.3 +1.6
       34nm,0.6s
OTUK                                ⇑Lg      Lg      19 14 40.8
       140nm,1.2s
KURS   Kuram              7.80  69  eP       Pg      19 12 59.0  -5.2
       9.7nm,1.0s
KURS                                eS       Sg      19 14 40.9  -4.3
       57nm,1.5s
KURS   Kuram              7.80  69   Pg      Pg      19 12 59.0  -5.2
       9.7nm,1.0s
KURS                                 Lg      Lg      19 14 40.9
       57nm,1.5s
CEP    Cherat             7.85 156   P       Pn      19 12 31.6 +2.0
SATY   Saty               7.88  72  eP       Pg      19 13 03.7  -1.9
       18nm,0.7s
SATY                                eS       Sg      19 14 48.8 +1.2
       58nm,0.8s
SATY   Saty               7.88  72  ePg      Pg      19 12 59.2  -6.4
       baz=73
SATY                                eLg      Lg      19 14 45.7
       baz=73
SATY   Saty               7.88  72   Pg      Pg      19 13 03.7  -1.9
       18nm,0.7s
SATY                                 Lg      Lg      19 14 48.8
       58nm,0.8s
ZHN    Zhinishke          7.92  71  eP       Pn      19 12 30.9 +0.5
ZHN    Zhinishke          7.92  71  ePn      Pn      19 12 30.9 +0.5
       baz=72
ZHN                                 eLg      Lg      19 14 44.4
       baz=72
KPKS   Kokpek             8.16  70  eP       Pg      19 13 05.1  -6.0
       13nm,1.0s
KPKS                                eS       Sg      19 14 51.0  -5.7
       70nm,1.0s
KPKS   Kokpek             8.16  70  ePg      Pg      19 13 07.2  -3.9
       baz=70
KPKS                                i Lg     Lg      19 14 51.7
       baz=70
HRA    Herat              8.17 217   Pn      Pn      19 12 33.9  -0.1
UZB    Uzynbulak          8.34  72  ePg      Pb      19 13 05.8 +6.3
       baz=73
UZB                                 eLg      Lg      19 14 57.0
       baz=73
GEYT   Alibeck            8.38 251   Pn      Pn      19 12 35.0  -1.6
       1.0nm,0.3s,baz=94,slow=15,SNR=12
GEYT                                 Sn      Sn      19 14 07.0  -4.4
       2.9nm,0.3s,baz=71,slow=19,SNR=1.9
GEYT                                 LR      LR      19 16 31.0
       comp=Z,116nm,18.1s,baz=74,slow=43
       4.9nm,0.4s
GEYT   Alibeck            8.38 251           Pn      19 12 35.4  -1.2
GYA0B  ALIBECK ARRAY      8.38 251   Pn      Pn      19 12 35.6  -1.1
GYA0B  ALIBECK ARRAY      8.38 251  ⇑Pn      Pn      19 12 35.3  -1.4
GYA0B                               ⇓Sn      Sn      19 14 12.7 +1.2
GYA0B                               ⇑Lg      Lg      19 15 00.9
TDK    Taldyqorghan       8.46  59  eP       Pn      19 12 39.3 +1.6
TDK    Taldyqorghan       8.46  59  ePn      Pn      19 12 39.3 +1.6
       baz=60
TDK                                 ePg      Pg      19 13 09.6  -7.1
       baz=60
TDK                                 eLg      Lg      19 15 02.5
       baz=60
NIL    Nilore             8.47 150   Pn      Pn      19 12 38.0 +0.1
NIL    Nilore             8.47 150   P       Pn      19 12 38.0 +0.1
PDGK   Podgornoye         8.71  71   Pg      Pg      19 13 15.7  -5.8
       4.6nm,1.0s
PDGK                                 Lg      Lg      19 15 09.4
       17nm,0.5s
PDGK   Podgornoye         8.71  71  ⇑Pg      Pg      19 13 15.1  -6.4
       22nm,1.0s
PDGK                                ⇑Lg      Lg      19 15 14.8
       56nm,0.9s
THW    Thamme Wali        8.77 160   P       Pn      19 12 43.0 +0.9
DJR    Jarkent            9.16  65  eP       Pg      19 13 24.7
       5.8nm,0.7s
DJR                                 eS       Sg      19 15 24.9
       39nm,1.3s
BRZS   Berezniki          9.43  18  eP       Pn      19 12 50.8  -0.2
BRZS                                e                19 14 36.8
BRZS   Berezniki          9.43  18  ePn      Pn      19 12 50.8  -0.2
       baz=18
BRZS                                eSn      Sn      19 14 36.8  -0.4
       baz=18
AB31   Akbulak array     10.00 327  ⇑Pn      Pn      19 12 58.0  -0.8
       3.7nm,0.4s,baz=144,slow=13,SNR=173
AB31                                 Sn      Sn      19 14 47.9  -3.2
       32nm,0.6s,baz=149,slow=23,SNR=20
ABKAR  Akbulak array     10.00 327   Pn      Pn      19 12 58.3  -0.5
ABKAR  Akbulak array     10.00 327   Pn      Pn      19 12 58.1  -0.6
MAKZ   Makanchi          11.48  56           Pn      19 13 18.1  -1.0
MAKZ   Makanchi          11.48  56   P       Pn      19 13 18.1  -1.0
MAKZ   Makanchi          11.48  56  ⇓Pn      Pn      19 13 18.5  -0.6
       4.7nm,1.1s
MAKZ                                ⇓Lg      Lg      19 16 40.6
       27nm,1.1s
MK31   Makanchi Array    11.67  56   Pn      Pn      19 13 21.0  -0.7
MK31   Makanchi Array    11.67  56deP        Pn      19 13 21.3  -0.4
MK31   Makanchi Array    11.67  56  ⇓Pn      Pn      19 13 21.2  -0.5
       3.5nm,0.7s,baz=243,slow=12,SNR=37
MK31                                ⇑Lg      Lg      19 16 46.2
       19nm,0.8s,baz=255,slow=24,SNR=4.1
MKAR   Makanchi Array    11.67  56   Pn      Pn      19 13 21.9 +0.2
       0.6nm,0.3s,baz=245,slow=14,SNR=33
MKAR                                 Sn      Sn      19 15 29.1  -3.1
       baz=251,slow=16
MKAR                                 Lg      Lg      19 16 35.6
       0.4nm,0.3s,baz=255,slow=23,SNR=3.5
       3.1nm,0.7s
MKAR   Makanchi Array    11.67  56   Pn      Pn      19 13 21.1  -0.6
AKTO   Aktyubinsk        11.70 326   Pn      Pn      19 13 22.4 +0.3
       0.5nm,0.3s,baz=137,slow=14,SNR=24
AKTO                                 Sn      Sn      19 15 25.6  -7.2
       0.9nm,0.3s,baz=72,slow=18,SNR=6.9
AKTO                                 Lg      Lg      19 16 44.8
       baz=47,slow=20
AKTO                                 LR      LR      19 18 19.4
       comp=Z,239nm,18.6s,baz=127,slow=39
       8.7nm,0.8s
AKTO   Aktyubinsk        11.70 326  ⇓Pn      Pn      19 13 21.3  -0.8
       14nm,0.9s
AKTO                                ⇑Sn      Sn      19 15 31.5  -1.4
       27nm,0.7s
AKTO                                ⇓Lg      Lg      19 16 46.7
       47nm,1.1s
KURBB  Kurchatov Arra    11.95  34   Pn      Pn      19 13 23.9  -1.5
       0.1nm,0.3s,baz=225,slow=13,SNR=11
KURBB                                Sn      Sn      19 15 33.3  -5.5
       0.1nm,0.3s,baz=217,slow=30,SNR=4.2
KURBB                                Lg      Lg      19 16 52.9
       0.2nm,0.3s,baz=55,slow=16,SNR=6.5
       0.5nm,0.4s
BRVK   Borovoye          12.05   6           Pn      19 13 25.0  -1.9
BRVK   Borovoye          12.05   6   P       Pn      19 13 25.0  -1.9
BRVK   Borovoye          12.05   6  ⇓Pn      Pn      19 13 25.0  -1.9
       11nm,0.9s
BRVK                                ⇓Lg      Lg      19 16 58.1
       58nm,1.2s
KURK   Kurchatov         12.05  34           Pn      19 13 26.2  -0.7
KURK   Kurchatov         12.05  34   P       Pn      19 13 24.0  -2.9
KURK   Kurchatov         12.05  34  ⇑Lg      Lg      19 16 58.4
       118nm,1.4s
SEM    Semipalatinsk     12.55  38  ePg      Pg      19 14 23.4
       baz=38
SEM                                 eLg      Lg      19 17 13.5
       baz=38
ZSN    Zaisan            13.54  56  ePg      Pg      19 14 42.5
       baz=57
ZSN                                 eLg      Lg      19 17 43.9
       baz=57
WMQ    Urumqi            14.68  73  eP       P       19 14 08.3  -0.9
MAK    Makhachkala       15.45 284  eP       Pn      19 14 09.5  -3.6
MAK                                 eS       Sn      19 16 58.3  -6.1
MAK                                  pmax    pmax
       comp=Z,68nm,0.9s
MAK                                  MLR     MLR
       comp=Z,223nm,16.0s
SVE    Sverdlovsk        16.48 345  eP       Pn      19 14 23.7  -2.5
SVE                                 eS       Sn      19 17 24.3  -4.9
SVE                                  MLR     MLR
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       comp=Z,440nm,12.0s
ARU    Arti              16.56 341   Pn      Pn      19 14 25.6  -1.7
       baz=160,slow=10,SNR=15
ARU                                  Sn      Sn      19 17 19.3   -12
       baz=113,slow=22,SNR=2.7
ARU                                  Lg      Lg      19 19 26.0
       baz=33,slow=21
ARU                                  LR      LR      19 21 26.8
       comp=Z,378nm,19.4s,baz=139,slow=39
       comp=Z,3.5nm,0.7s
ARU    Arti              16.56 341   Pn      Pn      19 14 25.1  -2.3
ARU    Arti              16.56 341d iP       Pn      19 14 25.5  -1.9
ARU                                  S       Sn      19 17 29.7  -1.6
ARU                                  pmax    pmax
       comp=Z,10.0nm,0.8s
ARU                                  MLR     MLR
       comp=Z,428nm,14.0s
GROC   Groznyy           16.70 285  eP       P       19 14 30.5  -1.1
GROC                                eS       Sn      19 17 37.8 +2.9
GROC                                 pmax    pmax
       comp=Z,22nm,0.6s
ZAA0   Zalesovo Array    17.03  35           Pn      19 14 32.9  -0.4
ZALV   Zalesovo Beam     17.03  35   P       Pn      19 14 33.3 +0.1
       comp=Z,0.5nm,0.3s,baz=223,slow=11,SNR=17
       comp=Z,3.7nm,0.5s
ZALV   Zalesovo Beam     17.03  35           Pn      19 14 32.8  -0.4
ZALV   Zalesovo Beam     17.03  35  i P      P       19 14 36.0 +0.9
ZALV                                 pmax    pmax
       comp=Z,4.0nm,0.5s
PYUN   Piuthan           17.78 132  eP       Pn      19 14 38.2  -4.8
       comp=Z,14nm,0.6s
GNI    Garni             17.79 275   LR      LR      19 22 43.1
       comp=Z,42nm,18.0s,baz=92,slow=41
GNI    Garni             17.79 275   P       Pn      19 14 43.4 +0.4
GNI    Garni             17.79 275ceP        P       19 14 43.9 +0.1
BELG   Belogornoye       17.97 316   P       Pn      19 14 43.3  -1.6
       comp=Z,16nm,0.8s,baz=223,slow=3.2,SNR=9.8
BELG                                 LR      LR      19 23 28.6
       comp=Z,27nm,21.8s,baz=196,slow=43
BELG   Belogornoye       17.97 316⇓eP        Pn      19 14 43.4  -1.5
BELG                                 pmax    pmax
       comp=Z,4.0nm,1.1s
DANN   Dangsing          18.03 130  eP       Pn      19 14 42.2  -4.0
ZEI    Tsey              18.11 283  eP       Pn      19 14 46.9   0.0
ZEI                                  pmax    pmax
       comp=Z,5.0nm,1.0s
GOF    Gofitskoye        18.74 291⇑eP        P       19 14 53.3  -0.7
GOF                                  pmax    pmax
       comp=Z,37nm,1.3s
GKN    Gorkha            18.80 129  eP       P       19 14 51.4  -3.6
       comp=Z,8.6nm,0.5s
KBZ    Khabaz            18.81 286   P       P       19 14 53.5  -1.3
       comp=Z,0.2nm,0.3s,baz=127,slow=9.3,SNR=29
KBZ                                  LR      LR      19 24 15.0
       comp=Z,105nm,18.6s,baz=65,slow=44
       comp=Z,14nm,0.9s
KBZ    Khabaz            18.81 286deP        P       19 14 54.4  -0.4
KBZ                                  pmax    pmax
       comp=Z,15nm,0.9s
KVAR   Kislovodsk Arr    18.95 287   P       P       19 14 56.2  -0.4
       baz=274,slow=22
       comp=Z,4.4nm,0.7s
KIV    Kislovodsk        18.96 287   P       P       19 14 55.9  -0.7
KIV                                  IAmb    IAmb    19 14 59.8
       comp=Z,26nm,0.8s
KIV    Kislovodsk        18.96 287  eP       P       19 14 56.8 +0.2
KIV                                  pmax    pmax
       comp=Z,32nm,1.0s
KIV                                  MLR     MLR
       comp=Z,35nm,14.0s
PKIN   Phulchoki         19.57 128  eP       P       19 15 01.5  -2.0
PKI    Pulchoki          19.58 128  eP       P       19 15 02.1  -1.6
GUN    Gumba             19.61 127  eP       P       19 15 02.5  -1.6
JIRN   Jiri              19.98 127  eP       P       19 15 07.0  -1.2
GURO   Guroymak-BITLI    20.20 271   P       P       19 15 10.2   0.0
RAMN   Ramite            20.75 127  eP       P       19 15 15.7  -0.7
       comp=Z,73nm,0.7s
VRH    Novokhopyorsk     20.80 308  eP       P       19 15 16.6 +0.1
VRH                                  pmax    pmax
       comp=Z,10.0nm,0.8s
KOPT   Kop Dagi          21.01 276           P       19 15 20.2 +1.0
KOPT                                 IAmb    IAmb    19 15 27.8
       comp=Z,18nm,1.0s
KIRV   Kirov             21.14 332   P       P       19 15 20.6 +0.6
       comp=Z,18nm,0.7s,baz=330,slow=7.9,SNR=6.2
KIRV                                 LR      LR      19 23 48.9
       comp=Z,93nm,19.6s,baz=125,slow=37
       comp=Z,18nm,0.7s
KIRV   Kirov             21.14 332⇑eP        P       19 15 21.7 +1.7
ODAN   Odare             21.30 126  eP       P       19 15 22.8 +0.5
GOMU   GeErMu            21.36  95   P       P       19 15 23.5 +0.5
GOMU                                 pP      sP      19 15 26.8 +0.6
GOMU                                 sP      pP      19 15 31.0 +5.8
GOMU                                 pmax    pmax
       comp=Z,3.0nm,0.8s
GOMU                                 pmax    pmax
       comp=Z,36nm,7.5s
MARD   Mardin            21.51 269   P       P       19 15 24.1  -0.3
MARD                                 IAmb    IAmb    19 15 30.3
       comp=Z,12nm,0.9s
LSA    Lhasa             21.86 114   P       P       19 15 27.8  -0.8
LSA    Lhasa             21.86 114   P       P       19 15 27.8  -0.8
LSA                                  pmax    pmax
       comp=Z,6.0nm,0.7s
VORD   Divnogorie        22.20 306  eP       P       19 15 31.8 +0.3
VORD                                 pmax    pmax
       comp=Z,20nm,0.9s
VSR    Storozhevoye      22.34 307  eP       P       19 15 32.6  -0.4
VSR                                  pmax    pmax
       comp=Z,30nm,1.0s
VORR   Voronezh          22.45 308  eP       P       19 15 37.6 +3.5
VORR                                 pmax    pmax
       comp=Z,19nm,1.3s
LPSR   Galich'ya Gora    22.89 310  eP       P       19 15 39.5 +0.7
LPSR                                 pmax    pmax
       comp=Z,70nm,0.8s
GTA    Gaotai            24.16  84  ⇓P       P       19 15 53.0 +1.3
GTA                                  sP      sP      19 16 04.3 +9.3
GTA                                  pmax    pmax
       comp=Z,2.0nm,0.9s
GTA                                  pmax    pmax
       comp=Z,23nm,5.8s
GTA                                  LR      LR
       comp=Z,110nm,16.0s
GTA                                  LR      LR
       comp=Z,89nm,16.4s
GTA                                  LR      LR
       comp=Z,130nm,16.0s
PRGR   Permogore         24.67 334  eP       P       19 15 57.7 +1.8
MOS    Moscow            24.73 317  eP       P       19 15 55.0  -1.5
SHL    Shillong          25.05 121   P       P       19 15 59.2  -0.7
SHL                                  IAmb    IAmb    19 16 01.6
       comp=Z,13nm,1.1s
SHL    Shillong          25.05 121   P       P       19 15 59.2  -0.7
SHL                                  pmax    pmax
       comp=Z,13nm,1.1s
OBN    Obninsk           25.06 315   P       P       19 16 00.2 +0.7
       comp=Z,1.7nm,0.4s,baz=91,slow=20,SNR=8.2
       comp=Z,1.7nm,0.4s
OBN    Obninsk           25.06 315   P       P       19 15 59.2  -0.2
OBN                                  IAmb    IAmb    19 16 02.4
       comp=Z,21nm,1.0s
OBN    Obninsk           25.06 315⇑eP        P       19 16 00.9 +1.5
OBN                                 i                19 16 08.4
OBN                                 e                19 16 33.4
OBN                                  pmax    pmax
       comp=Z,28nm,1.3s
OBN                                  MLR     MLR
       comp=Z,51nm,15.0s
SIM    Simferopol'       25.07 290  eP       P       19 16 00.4 +0.7
SIM                                  S       S       19 20 22.0  -2.2
SIM                                  pmax    pmax
       comp=Z,31nm,0.9s
RAYN   Ar Rayn           25.83 234   P       P       19 16 07.3 +0.4
RAYN   Ar Rayn           25.83 234   P       P       19 16 07.3 +0.4
RAYN                                 pmax    pmax
       comp=Z,5.0nm,1.0s
ZAK    Zakamensk         26.00  57  eP       P       19 16 10.1 +1.8
ZAK                                  pmax    pmax
       comp=Z,7.0nm,1.2s
BR131  Keskin Array S    26.21 278   P       P       19 16 10.9 +0.6
BR131                                IAmb    IAmb    19 16 13.4
       comp=Z,8.9nm,1.0s
BR131  Keskin Array S    26.21 278d iP       P       19 16 11.8 +1.5
BRTR   Keskin Array B    26.21 278   P       P       19 16 10.5 +0.2
       comp=Z,4.8nm,0.9s,baz=80,slow=7.2,SNR=16
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	comp=Z,4.8nm,0.9s						
BRTR	**Keskin Array B**	**26.21**	**278**	P	**P**	**19 16 10.8**	**+0.5**
BRTR	**Keskin Array B**	**26.21**	**278**	*i* P	**P**	**19 16 12.0**	**+1.7**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLMR	**Klimovskoe**	**26.39**	**328**	*e*P	**P**	**19 16 10.8**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	**Klimovskoe**	**26.39**	**328**	*e*P	**P**	**19 16 10.8**	**-0.7**
KLMR				AMP		19 16 16.7	
	comp=Z,14nm,1.0s						
ANTO	**Ankara**	**26.81**	**279**	P	**P**	**19 16 16.3**	**+0.7**
ANTO				IAmb	IAmb	19 16 19.4	
	comp=Z,16nm,1.1s						
ANTO	**Ankara**	**26.81**	**279**	P	**P**	**19 16 16.3**	**+0.7**
ANTO				pmax	pmax		
	comp=Z,16nm,1.2s						
MDUB	**Mudurnu**	**27.86**	**281**	P	**P**	**19 16 25.4**	**+0.4**
SONM	**Songino Array**	**27.89**	**63**	P	**P**	**19 16 26.5**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=283,slow=8.8,SNR=7.1						
	comp=Z,1.2nm,0.9s						
SONM	**Songino Array**	**27.89**	**63**	P	**P**	**19 16 25.8**	**+0.5**
LZH	**Lanzhou**	**28.21**	**88**	*e*P	**P**	**19 16 25.5**	**-2.8**
LZH				pP	pP	19 16 30.5	-0.2
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,98nm,10.8s						
LZH				LR	LR		
	comp=Z,160nm,11.7s						
LZH				LR	LR		
	comp=Z,160nm,11.9s						
ULN	**Ulaanbaatar**	**28.34**	**63**	P	**P**	**19 16 29.8**	**+0.5**
ULN	**Ulaanbaatar**	**28.34**	**63**	*d i*P	**P**	**19 16 31.0**	**+1.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**28.44**	**303**	P	**P**	**19 16 30.7**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=71,slow=8.5,SNR=13						
AKASG				LR	LR	19 30 45.9	
	comp=Z,98nm,18.5s,baz=38,slow=42						
	comp=Z,2.2nm,0.7s						
AKASG	**Malin Array Be**	**28.44**	**303**	P	**P**	**19 16 30.6**	**+0.7**
AKBB	**Malin Array Si**	**28.44**	**303**	P	**P**	**19 16 30.2**	**+0.2**
AKBB				IAmb	IAmb	19 16 33.1	
	comp=Z,6.3nm,0.8s						
AKBB	**Malin Array Si**	**28.44**	**303**	*d i*P	**P**	**19 16 30.9**	**+0.9**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SORM	**Soroca**	**28.93**	**298**	⇑P	**P**	**19 16 33.9**	**-0.5**
SORM	**Soroca**	**28.93**	**298**	⇑P	**P**	**19 16 33.9**	**-0.5**
TPGR	**Topolog**	**29.11**	**291**	⇓P	**P**	**19 16 37.5**	**+1.5**
CFR	**Carcaliu**	**29.27**	**292**	⇓P	**P**	**19 16 38.9**	**+1.5**
CFR	**Carcaliu**	**29.27**	**292**	⇓P	**P**	**19 16 38.9**	**+1.5**
HARR	**Harsova**	**29.47**	**291**	⇓P	**P**	**19 16 41.6**	**+2.4**
HARR	**Harsova**	**29.47**	**291**	⇓P	**P**	**19 16 41.6**	**+2.4**
NRIK	**Noril'sk**	**30.09**	**14**	⇓*e*P	**P**	**19 16 46.3**	**+1.9**
NRIK				pmax	pmax		
	comp=Z,6.0nm,2.3s						
VRI	**Vrincioaia**	**30.18**	**293**	⇑P	**P**	**19 16 48.3**	**+2.8**
VRI	**Vrincioaia**	**30.18**	**293**	⇑P	**P**	**19 16 48.3**	**+2.8**
PLOR	**Plostina**	**30.24**	**293**	⇓P	**P**	**19 16 48.7**	**+2.7**
PLOR	**Plostina**	**30.24**	**293**	⇓P	**P**	**19 16 48.7**	**+2.7**
NACGM	**Naroch**	**30.44**	**311**	⇓*e*P	**P**	**19 16 48.9**	**+1.2**
	baz=99						
BIZ	**Bicaz**	**30.51**	**295**	⇓P	**P**	**19 16 50.1**	**+1.7**
MLR	**Muntele Rosu**	**30.77**	**293**	⇓P	**P**	**19 16 54.0**	**+3.1**
MLR	**Muntele Rosu**	**30.77**	**293**	LR	LR	19 31 20.7	
	comp=Z,47nm,21.0s,baz=107,slow=40						
MLR	**Muntele Rosu**	**30.77**	**293**	P	**P**	**19 16 52.2**	**+1.3**
MLR				IAmb	IAmb	19 16 55.0	
	comp=Z,12nm,0.9s						
MLR	**Muntele Rosu**	**30.77**	**293**	⇓P	**P**	**19 16 54.0**	**+3.1**
BURAR	**Bucovina Array**	**31.06**	**297**	⇓P	**P**	**19 16 55.0**	**+1.6**
BURAR	**Bucovina Array**	**31.06**	**297**	P	**P**	**19 16 54.4**	**+0.9**
BURAR	**Bucovina Array**	**31.06**	**297**	⇓P	**P**	**19 16 55.0**	**+1.6**
BUR08	**Bucovina Ar. S**	**31.07**	**297**	P	**P**	**19 16 54.5**	**+1.0**
VSU	**Vasula**	**31.24**	**318**	*c i*P	**P**	**19 16 55.4**	**+0.7**
VSU				pmax	pmax		
	comp=Z,38nm,0.9s						
PZH	**PanZhiHua**	**31.26**	**107**	P	**P**	**19 16 56.0**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,5.3s						
PABE	**Paberze**	**32.12**	**312**	P	**P**	**19 17 03.0**	**+0.5**
LOT	**Lotru**	**32.29**	**293**	⇑P	**P**	**19 17 06.4**	**+2.2**
FIA1	**FINESS Array S**	**32.45**	**323**	P	**P**	**19 17 05.6**	**+0.4**
FIA1				IAmb	IAmb	19 17 07.2	
	comp=Z,7.9nm,1.1s						
FINES	**FINESS Array B**	**32.45**	**323**	P	**P**	**19 17 06.3**	**+1.0**
	comp=Z,5.8nm,1.0s,baz=118,slow=7.9,SNR=13						
FINES				LR	LR	19 30 54.0	
	comp=Z,155nm,18.8s,baz=72,slow=38						
	comp=Z,5.8nm,1.0s						
FINES	**FINESS Array B**	**32.45**	**323**	P	**P**	**19 17 06.0**	**+0.8**
FINES	**FINESS Array B**	**32.45**	**323**	*i* P	**P**	**19 17 06.5**	**+1.2**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**32.53**	**76**	*e*P	**P**	**19 17 07.5**	**+1.1**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,94nm,6.5s						
KOLS	**Kolonicke sedl**	**32.94**	**299**	*e*P	**P**	**19 17 12.3**	**+2.6**
KOLS	**Kolonicke sedl**	**32.94**	**299**	*e*P	**P**	**19 17 12.3**	**+2.6**
VTS	**Vitosha**	**33.19**	**288**	P	**P**	**19 17 12.8**	**+0.6**
VTS				IAmb	IAmb	19 17 15.7	
	comp=Z,5.6nm,0.9s						
VTS	**Vitosha**	**33.19**	**288**	P	**P**	**19 17 12.8**	**+0.6**
VTS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDVR	**Moldovita**	**33.84**	**292**	⇑P	**P**	**19 17 20.1**	**+2.4**
OJC	**Ojcow**	**34.46**	**302**	P	**P**	**19 17 23.1**	**+0.1**
OJC				IAmb	IAmb	19 17 24.7	
	comp=Z,5.2nm,1.0s						
OJC	**Ojcow**	**34.46**	**302**	P	**P**	**19 17 23.1**	**+0.1**
OJC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**34.69**	**121**	P	**P**	**19 17 24.7**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=312,slow=9.0,SNR=7.8						
CMAR				PcP	**PcP**	**19 19 59.1**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=306,slow=4.5,SNR=7.3						
	comp=Z,1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**34.69**	**121**	P	**P**	**19 17 25.0**	**-0.2**
FNA	**Florina**	**35.00**	**285**	P	**P**	**19 17 28.6**	**+0.8**
FNA	**Florina**	**35.00**	**285**	P	**P**	**19 17 28.6**	**+0.8**
FNA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DIVS	**Divibare**	**35.18**	**291**	P	**P**	**19 17 30.0**	**+0.7**
DIVS				IAmb	IAmb	19 17 32.4	
	comp=Z,10nm,1.0s						
MORH	**Mrgy, Hungar**	**35.71**	**295**	P	**P**	**19 17 34.9**	**+1.2**
MORC	**Moravsky Berou**	**35.95**	**301**	*e*P	**P**	**19 17 37.2**	**+1.4**
JAVC	**Velka Javorina**	**35.97**	**300**	*e*PKP	**P**	**19 17 38.4**	**+2.4**
ARCES	**ARCESS Array B**	**36.05**	**336**	P	**P**	**19 17 37.0**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=104,slow=8.9,SNR=6.9						
ARCES				LR	LR	19 33 21.9	
	comp=Z,167nm,19.4s,baz=160,slow=38						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**36.05**	**336**	P	**P**	**19 17 37.0**	**+0.6**
PDG	**Podgorica**	**36.09**	**289**	P	**P**	**19 17 37.9**	**+0.8**
PDG				IAmb	IAmb	19 17 40.1	
	comp=Z,12nm,1.0s						
MODS	**Modra-Piesok**	**36.29**	**299**	*e*P	**P**	**19 17 37.9**	**-0.8**
MODS	**Modra-Piesok**	**36.29**	**299**	*e*P	**P**	**19 17 37.9**	**-0.8**
VRAC	**Vranov**	**36.62**	**301**	*e*P	**P**	**19 17 44.0**	**+2.5**
DPC	**Dobruska-Polom**	**36.67**	**303**	*e*P	**P**	**19 17 43.9**	**+1.9**
DPC				MLR	MLR		
	comp=Z,100nm,21.2s						
DPC	**Dobruska-Polom**	**36.67**	**303**	*e*P	**P**	**19 17 43.9**	**+1.9**
DPC				AMS	AMS	19 34 10.0	
	comp=Z,100nm,21.2s						
OSTC	**Ostas**	**36.72**	**303**	AMS	AMS	19 34 20.0	
	comp=Z,100nm,11.4s						
KRUC	**Moravsky**	**36.78**	**300**	*e*P	**P**	**19 17 44.5**	**+1.6**
CHVC	**Chvalec**	**36.82**	**303**	*e*P	**P**	**19 17 44.9**	**+1.7**
RONA	**Rosalia, Austr**	**37.04**	**298**	*e*P	**P**	**19 17 46.6**	**+1.4**
CONA	**Conrad Observa**	**37.29**	**299**	*e*P	**P**	**19 17 48.9**	**+1.5**
	comp=Z,7.0nm,1.0s						
ARSA	**Arzberg**	**37.63**	**298**	*i* P	**P**	**19 17 51.3**	**+1.1**
	comp=Z,3.8nm,1.0s						
PRU	**Pruhonice**	**37.85**	**302**	AMS	AMS	19 36 00.0	
	comp=Z,100nm,14.8s						
SOKA	**Soboth**	**38.07**	**297**	*i* P	**P**	**19 17 55.6**	**+1.6**
	comp=Z,5.7nm,1.4s						
HFS	**Hagfors**	**38.11**	**319**	LR	LR	19 33 53.7	
	comp=Z,43nm,18.1s,baz=73,slow=37						
BRG	**Berggiesshubel**	**38.12**	**304**	*e*P	**P**	**19 17 55.8**	**+1.6**
BRG				Amp		19 17 57.2	
	comp=Z,3.9nm,0.9s						
BRG	**Berggiesshubel**	**38.12**	**304**	*e*P	**P**	**19 17 55.8**	**+1.6**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CKRC	**Cesky Krumlov**	**38.17**	**300**	*e*P	**P**	**19 17 56.8**	**+2.1**
GEC2	**GERESS Array S**	**38.56**	**300**	P	**P**	**19 17 58.8**	**+0.7**
GERES	**GERESS Array B**	**38.56**	**300**	P	**P**	**19 17 59.2**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=70,slow=9.1,SNR=15						
GERES				PcP	**PcP**	**19 20 10.6**	**0.0**
	comp=Z,0.5nm,0.6s,baz=94,slow=9.5,SNR=3.6						
	comp=Z,1.9nm,0.9s						
GERES	**GERESS Array B**	**38.56**	**300**	P	**P**	**19 17 59.0**	**+0.9**
KHC	**Kasperske Hory**	**38.60**	**301**	P	**P**	**19 17 59.3**	**+1.0**
KHC	**Kasperske Hory**	**38.60**	**301**	*e*P	**P**	**19 18 00.0**	**+1.7**
KHC				MLR	MLR		
	comp=Z,100nm,20.6s						
KHC	**Kasperske Hory**	**38.60**	**301**	*e*P	**P**	**19 18 00.0**	**+1.7**
KHC				AMS	AMS	19 35 40.0	
	comp=Z,100nm,20.6s						
CLL	**Collm**	**38.66**	**304**	*i* P	**P**	**19 18 00.0**	**+1.3**
	comp=Z,3.0nm,1.0s						
CLL				*e*PP	**PnPn**	**19 19 30.0**	**+1.0**
CLL				Lm	MLR	19 36 00.0	
	comp=Z,100nm,20.7s						
KBA	**Koelnbreinsper**	**39.13**	**298**	*i* P	**P**	**19 18 04.1**	**+1.1**
	comp=Z,4.9nm,1.0s						
CUC	**Castrocucco**	**39.29**	**286**	P	**P**	**19 18 06.0**	**+1.8**
CUC				IAmb	IAmb	19 18 07.7	
	comp=Z,8.3nm,1.0s						
NC303	**NORSAR Array S**	**39.34**	**320**	P	**P**	**19 18 04.8**	**+0.6**
NC303				IAmb	IAmb	19 18 06.2	
	comp=Z,11nm,1.1s						
NB2	**NORSAR Subarra**	**39.40**	**320**	P	**P**	**19 18 05.6**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=94,slow=8.6						
NOA	**NORSAR Array B**	**39.40**	**320**	P	**P**	**19 18 05.5**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=94,slow=8.4,SNR=7.8						
NOA				LR	LR	19 35 01.4	
	comp=Z,88nm,18.4s,baz=110,slow=37						
	comp=Z,1.8nm,0.8s						
WTTA	**Wattenberg**	**40.23**	**298**	*e*P	**P**	**19 18 13.3**	**+1.2**
	comp=Z,7.1nm,1.0s						
WATA	**Walderalm**	**40.25**	**299**	*e*P	**P**	**19 18 13.3**	**+1.1**
	comp=Z,3.8nm,0.5s						
NRCA	**Norcia**	**40.34**	**291**	P	**P**	**19 18 13.6**	**+0.6**
SQTA	**Sankt Quirin**	**40.52**	**298**	*i* P	**P**	**19 18 14.5**	**0.0**
	comp=Z,2.6nm,0.7s						
MOTA	**Moosalm**	**40.56**	**299**	*i* P	**P**	**19 18 15.1**	**+0.3**
	comp=Z,3.6nm,0.9s						
MURB	**Monte Urbino**	**40.63**	**292**	P	**P**	**19 18 15.8**	**+0.4**
MURB				IAmb	IAmb	19 18 19.3	
	comp=Z,25nm,1.4s						
TEOL	**Teolo**	**40.65**	**296**	P	**P**	**19 18 15.9**	**+0.5**
TEOL				IAmb	IAmb	19 18 17.7	
	comp=Z,14nm,0.9s						
FETA	**Feichten**	**40.88**	**298**	*e*P	**P**	**19 18 17.6**	**+0.1**
	comp=Z,3.6nm,1.0s						
NJ2	**Nanjing**	**41.21**	**86**	*e*P	**P**	**19 18 21.8**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DAVA	**Damuels**	**41.39**	**299**	*i* P	**P**	**19 18 21.4**	**-0.2**
	comp=Z,7.5nm,1.1s						
OSSC	**Osservatorio P**	**41.45**	**293**	P	**P**	**19 18 22.5**	**+0.5**
OSSC				IAmb	IAmb	19 18 23.9	
	comp=Z,8.3nm,1.2s						
YAK	**Yakutsk**	**41.64**	**39**	P	**P**	**19 18 23.6**	**+0.3**
YAK	**Yakutsk**	**41.64**	**39**	*e*P	**P**	**19 18 23.3**	**0.0**
YAK				*e**PP	**sP**	**19 18 27.3**	**+0.6**
YAK				*e*		19 19 59.5	
YAK				*e*S	**S**	**19 24 39.7**	**+0.1**
YAK				*e**SS	sS	19 24 51.3	+7.7
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,27nm,3.0s						
YAK				pmax	pmax		
	comp=N,30nm,2.5s						
YAK				pmax	pmax		
	comp=E,43nm,3.4s						
YAK				smax	smax		
	comp=E,14nm,3.2s						
YAK				smax	smax		
	comp=N,32nm,2.5s						
BFO	**Black Forest**	**42.16**	**301**	P	**P**	**19 18 28.4**	**+0.6**
BFO	**Black Forest**	**42.16**	**301**	P	**P**	**19 18 28.4**	**+0.6**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TIXI	**Tiksi**	**42.42**	**24**	P	**P**	**19 18 30.2**	**+0.7**
TIXI				IAmb	IAmb	19 18 31.8	
	comp=Z,9.9nm,1.0s						
TIXI	**Tiksi**	**42.42**	**24**	*ce*P	**P**	**19 18 30.2**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**42.51**	**346**	P	**P**	**19 18 31.0**	**+0.8**
SPITS				pmax	pmax		
	comp=Z,53nm,1.5s						
BNI	**Bardonecchia**	**44.13**	**297**	P	**P**	**19 18 44.2**	**+0.3**
BNI				IAmb	IAmb	19 18 46.7	
	comp=Z,6.5nm,1.0s						
BNI	**Bardonecchia**	**44.13**	**297**	P	**P**	**19 18 44.2**	**+0.3**
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLR	**Kul'dur**	**44.37**	**57**	⇓*e*P	**P**	**19 18 46.5**	**+0.9**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSAR	**Wonju Array Be**	**45.60**	**74**	P	**P**	**19 18 56.1**	**+0.6**
KSAR	**Wonju Array Be**	**45.60**	**74**	P	**P**	**19 18 56.1**	**+0.6**
KSRS	**Korea Array**	**45.63**	**74**	P	**P**	**19 18 55.8**	**+0.1**
	comp=Z,1.6nm,1.0s,baz=297,slow=5.9,SNR=6.6						
KSRS				LR	LR	19 41 33.7	
	comp=Z,22nm,19.5s,baz=185,slow=41						
	comp=Z,1.6nm,1.0s						
EKA	**Eskdalemuir Ar**	**47.48**	**313**	LR	LR	19 43 15.7	
	comp=Z,44nm,18.5s,baz=144,slow=41						
NOR	**Nord**	**48.87**	**349**	*i* P	**P**	**19 19 20.9**	**+0.5**
NOR				IAmb	IAmb	19 19 22.6	
	comp=Z,5.7nm,1.1s						
DAG	**Danmarks Havn**	**49.69**	**342**	*i* P	**P**	**19 19 27.0**	**+0.3**
DAG				IAmb	IAmb	19 19 29.1	
	comp=Z,11nm,1.0s						
DBG	**Daneborg**	**50.51**	**339**	*i* P	**P**	**19 19 33.7**	**+0.7**
DBG				IAmb	IAmb	19 19 35.9	
	comp=Z,3.4nm,1.1s						
MAJO	**Matsushiro**	**53.43**	**70**	⇓*e*P	**P**	**19 19 54.5**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**53.43**	**70**	P	**P**	**19 19 55.5**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=293,slow=8.9,SNR=12						
	comp=Z,3.3nm,1.0s						
MJAR	**Matsushiro Arr**	**53.43**	**70**	P	**P**	**19 19 55.7**	**+0.3**
MJAR	**Matsushiro Arr**	**53.43**	**70**	P	**P**	**19 19 55.7**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ESDC	**Sonseca Array**	**53.45**	**294**	P	**P**	**19 19 55.3**	**-0.2**
	comp=Z,2.5nm,1.0s,baz=60,slow=7.6,SNR=10						
	comp=Z,2.5nm,1.0s						
BILL	**Bilibino**	**55.48**	**27**	P	**P**	**19 20 10.8**	**+1.1**
BILL				IAmb	IAmb	19 20 12.3	
	comp=Z,3.5nm,0.9s						
BILL	**Bilibino**	**55.48**	**27**	*c i*P	**P**	**19 20 11.3**	**+1.5**
BILL				*e*		19 20 19.2	
BILL				*i*		19 22 15.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SOEG	**Soedalen**	**55.89**	**334**	*i* P	**P**	**19 20 13.8**	**+1.1**
SOEG				IAmb	IAmb	19 20 15.6	
	comp=Z,23nm,1.3s						
DY2G	**Dye2**	**61.68**	**335**	*i* P	**P**	**19 20 53.1**	**-0.1**
DY2G				IAmb	IAmb	19 20 55.8	
	comp=Z,12nm,1.1s						
TOA0	**Torodi Ar. Sit**	**63.76**	**265**	P	**P**	**19 21 07.0**	**-0.6**
TOA0				IAmb	IAmb	19 21 32.5	
	comp=Z,6.8nm,1.5s						
TORD	**Torodi Ar. Bea**	**63.76**	**265**	P	**P**	**19 21 06.6**	**-1.0**
	comp=Z,2.6nm,0.9s,baz=35,slow=6.6,SNR=13						
	comp=Z,2.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**63.76**	**265**	P	**P**	**19 21 06.6**	**-1.0**
TORD				IAmb	IAmb	19 21 08.2	
	comp=Z,2.7nm,0.9s						
RES	**Resolute Bay**	**63.95**	**355**	LR	LR	19 52 04.3	
	comp=Z,32nm,18.4s,baz=98,slow=39						
TNTI	**Ternate**	**66.70**	**111**	P	**P**	**19 21 26.3**	**-0.3**
A36M	**Sachs Harbour**	**66.82**	**4**	P	**P**	**19 21 27.5**	**+1.0**
	baz=349						
TOLK	**Toolik Lake Re**	**67.02**	**14**	P	**P**	**19 21 29.6**	**+1.6**
TOLK	**Toolik Lake Re**	**67.02**	**14**	P	**P**	**19 21 29.7**	**+1.6**
	baz=330						
LSZ	**Lusaka**	**67.20**	**222**	P	**P**	**19 21 28.8**	**-1.0**
	comp=Z,1.1nm,0.2s,baz=45,slow=6.0,SNR=6.4						
	comp=Z,1.1nm,0.2s						
KOWA	**Kowa**	**67.23**	**270**	P	**P**	**19 21 29.3**	**-0.7**
COLD	**Coldfoot**	**68.13**	**15**	P	**P**	**19 21 36.1**	**+1.2**
COLD	**Coldfoot**	**68.13**	**15**	P	**P**	**19 21 36.6**	**+1.7**
	baz=330,SNR=8.8						
IMAR	**Indian Mountai**	**68.45**	**17**	P	**P**	**19 21 37.5**	**+0.5**
H21K	**Melozitna Rive**	**68.94**	**17**	P	**P**	**19 21 40.8**	**+0.8**
H21K				IAmb	IAmb	19 21 42.8	
	comp=Z,6.9nm,1.2s						
H21K	**Melozitna Rive**	**68.94**	**17**	P	**P**	**19 21 41.3**	**+1.2**
	baz=328,SNR=8.4						
BMAR	**Burnt Mountain**	**68.98**	**13**	P	**P**	**19 21 42.3**	**+2.0**
H23K	**Yukon River**	**69.48**	**16**	P	**P**	**19 21 45.3**	**+1.9**
	baz=330,SNR=5.8						
C36M	**Paulatuk**	**69.50**	**5**	P	**P**	**19 21 43.8**	**+0.4**
	baz=350,SNR=5.7						
I21K	**Tanana**	**69.53**	**17**	P	**P**	**19 21 45.5**	**+1.9**
	baz=329						
INK	**Inuvik**	**69.71**	**8**	P	**P**	**19 21 46.1**	**+1.4**
INK	**Inuvik**	**69.71**	**8**	P	**P**	**19 21 46.1**	**+1.4**
INK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INK	**Inuvik**	**69.71**	**8**	P	**P**	**19 21 46.5**	**+1.8**
	baz=343,SNR=8.3						
H24K	**Noodor Dome**	**69.80**	**15**	P	**P**	**19 21 47.3**	**+1.9**
	baz=332						
J20K	**Nowinta River**	**69.89**	**18**	P	**P**	**19 21 47.1**	**+1.2**
J20K				IAmb	IAmb	19 21 48.3	
	comp=Z,5.1nm,0.9s						
J20K	**Nowinta River**	**69.89**	**18**	P	**P**	**19 21 47.3**	**+1.4**
	baz=327,SNR=6.8						
MLY	**Manley**	**69.92**	**16**	P	**P**	**19 21 47.7**	**+1.6**
	baz=330,SNR=8.2						
I23K	**Minto, Yukon-K**	**70.11**	**16**	P	**P**	**19 21 49.1**	**+1.9**
	baz=331,SNR=6.1						
TTA	**Tatalina**	**70.47**	**20**	P	**P**	**19 21 50.8**	**+1.2**
	baz=326						
POKR	**Poker Plat Res**	**70.53**	**15**	P	**P**	**19 21 51.0**	**+1.1**
POKR	**Poker Plat Res**	**70.53**	**15**	P	**P**	**19 21 52.0**	**+2.2**
	baz=332,SNR=5.3						
K20K	**Telida**	**70.60**	**19**	P	**P**	**19 21 51.5**	**+1.2**
	baz=328,SNR=6.3						
SIJI	**Sorong**	**70.62**	**109**	P	**P**	**19 21 51.0**	**-0.1**
	comp=Z,4.0nm,0.6s,baz=348,slow=12,SNR=4.2						
	comp=Z,4.0nm,0.6s						
NEA2	**Nenana**	**70.66**	**16**	P	**P**	**19 21 51.4**	**+0.8**
NEA2	**Nenana**	**70.66**	**16**	P	**P**	**19 21 52.1**	**+1.5**
	baz=331,SNR=6.4						
COLA	**College**	**70.66**	**15**	*d i*P	**P**	**19 21 52.5**	**+1.9**
COLA				pmax	pmax		
	comp=Z,14nm,1.2s						
BPAW	**Bear Paw Mtn.**	**70.68**	**17**	P	**P**	**19 21 51.7**	**+0.9**
	baz=330						
CCB	**Clear Creek Bu**	**70.87**	**16**	P	**P**	**19 21 52.3**	**+0.4**
CCB				IAmb	IAmb	19 21 54.4	
	comp=Z,5.3nm,1.2s						
IL31		**70.94**	**15**	P	**P**	**19 21 53.0**	**+0.7**
IL31				IAmb	IAmb	19 21 54.6	
	comp=Z,5.9nm,1.1s						
ILAR	**Eielson Array**	**70.94**	**15**	P	**P**	**19 21 53.4**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=323,slow=4.6,SNR=40						
	comp=Z,3.3nm,0.9s						
ILAR	**Eielson Array**	**70.94**	**15**	P	**P**	**19 21 52.8**	**+0.5**
HDA	**Harding Lake**	**71.25**	**15**	P	**P**	**19 21 54.0**	**-0.2**
	baz=333						
J25K	**Salcha River,**	**71.38**	**15**	P	**P**	**19 21 55.7**	**+0.7**
J25K				IAmb	IAmb	19 21 57.4	
	comp=Z,4.9nm,1.0s						
J25K	**Salcha River,**	**71.38**	**15**	P	**P**	**19 21 55.8**	**+0.7**
	baz=334,SNR=6.3						
L20K	**Farewell, AK**	**71.39**	**19**	P	**P**	**19 21 56.5**	**+1.3**
	baz=328						
L19K	**White Mountain**	**71.39**	**20**	P	**P**	**19 21 56.5**	**+1.3**
	baz=327,SNR=6.0						
M19K	**Big River Lodg**	**71.75**	**20**	P	**P**	**19 21 59.1**	**+1.8**
	baz=328						
J26L	**Joseph Creek**	**71.82**	**14**	P	**P**	**19 21 59.2**	**+1.5**
	baz=335,SNR=13						
I29M	**Ogilvie Camp,**	**71.89**	**11**	P	**P**	**19 21 58.9**	**+0.8**
I29M	**Ogilvie Camp,**	**71.89**	**11**	P	**P**	**19 21 59.2**	**+1.2**
	baz=339,SNR=14						
EGAK	**Eagle**	**71.98**	**13**	P	**P**	**19 21 59.7**	**+1.1**
	baz=337,SNR=6.5						
K24K	**Donnelly Dome**	**72.03**	**15**	P	**P**	**19 21 59.3**	**+0.3**
	baz=334,SNR=11						
SCRK	**Sand Creek**	**72.22**	**14**	P	**P**	**19 22 01.3**	**+1.1**
SCRK				IAmb	IAmb	19 22 02.6	
	comp=Z,5.7nm,0.9s						
SCRK	**Sand Creek**	**72.22**	**14**	P	**P**	**19 22 01.9**	**+1.7**
	baz=335,SNR=12						
RIDG	**Independent Ri**	**72.27**	**15**	P	**P**	**19 22 01.2**	**+0.8**
	baz=334,SNR=6.2						
DHY	**Denali Highway**	**72.36**	**16**	P	**P**	**19 22 01.8**	**+0.7**
	baz=333						
K27K	**Chicken**	**72.51**	**13**	P	**P**	**19 22 03.1**	**+1.3**
K27K				IAmb	IAmb	19 22 05.0	
	comp=Z,7.9nm,1.1s						
K27K	**Chicken**	**72.51**	**13**	P	**P**	**19 22 03.5**	**+1.7**
	baz=336						
N19K	**Bonanza Creek**	**72.64**	**20**	P	**P**	**19 22 04.6**	**+1.9**
	baz=328						
O16K	**Kokwok River B**	**72.66**	**23**	P	**P**	**19 22 04.7**	**+2.0**
	baz=325						
PAX	**Paxson**	**72.84**	**15**	P	**P**	**19 22 04.7**	**+0.8**
PAX				IAmb	IAmb	19 22 06.2	
	comp=Z,7.3nm,1.1s						
PAX	**Paxson**	**72.84**	**15**	P	**P**	**19 22 04.7**	**+0.8**
PAX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PAX	**Paxson**	**72.84**	**15**	P	**P**	**19 22 04.8**	**+0.9**
	baz=334,SNR=7.4						
DAWY	**Dawson**	**72.93**	**12**	P	**P**	**19 22 05.3**	**+1.0**
SML	**Sawmill**	**73.28**	**17**	P	**P**	**19 22 07.3**	**+0.9**
	baz=332						
PMR	**Palmer**	**73.29**	**18**	P	**P**	**19 22 07.5**	**+1.1**
	baz=332						
HARP	**HAARP**	**73.42**	**15**	P	**P**	**19 22 09.2**	**+1.9**
	baz=334						
M23K	**Glacier View**	**73.42**	**17**	P	**P**	**19 22 08.4**	**+1.1**
	baz=332						
L27K	**Beaver Creek,**	**73.45**	**14**	P	**P**	**19 22 09.2**	**+1.8**
	baz=337,SNR=6.2						
BCAR	**Beaver Creek A**	**73.45**	**14**	P	**P**	**19 22 08.8**	**+1.3**
SCM	**Sheep Creek Mo**	**73.47**	**17**	P	**P**	**19 22 08.7**	**+1.0**
	baz=333						
M24K	**Tolsona, Glenn**	**73.48**	**16**	P	**P**	**19 22 10.1**	**+2.5**
	baz=334						
RC01	**Rabbit Creek A**	**73.59**	**18**	P	**P**	**19 22 09.3**	**+1.0**
	baz=331						
KNK	**Knik Glacier**	**73.60**	**17**	P	**P**	**19 22 09.4**	**+1.1**
KNK	**Knik Glacier**	**73.60**	**17**	P	**P**	**19 22 10.2**	**+1.9**
	baz=332,SNR=5.2						
KLU	**Klutina**	**74.08**	**16**	P	**P**	**19 22 12.9**	**+1.7**
	baz=334						
M27K	**Edge Creek, AK**	**74.09**	**14**	P	**P**	**19 22 12.8**	**+1.4**
M27K				IAmb	IAmb	19 22 14.8	
	comp=Z,8.0nm,1.1s						
M27K	**Edge Creek, AK**	**74.09**	**14**	P	**P**	**19 22 13.2**	**+1.8**
	baz=337,SNR=11						
M30M	**Minto, Yukon**	**74.74**	**12**	P	**P**	**19 22 16.6**	**+1.6**
	baz=341						
BMRM	**Bremner River**	**74.83**	**16**	P	**P**	**19 22 17.0**	**+1.5**
BMRM	**Bremner River**	**74.83**	**16**	P	**P**	**19 22 17.5**	**+1.9**
	baz=335,SNR=6.4						
M31M	**Drury Creek, Y**	**75.45**	**11**	P	**P**	**19 22 20.5**	**+1.5**
M31M				IAmb	IAmb	19 22 21.6	
	comp=Z,6.8nm,1.0s						
M31M	**Drury Creek, Y**	**75.45**	**11**	P	**P**	**19 22 20.7**	**+1.7**
	baz=343,SNR=6.6						
MMPY	**Sheldon Lake,**	**75.45**	**9**	P	**P**	**19 22 21.5**	**+2.4**
	baz=345						
FARO	**Faro, Yukon**	**75.57**	**10**	P	**P**	**19 22 21.0**	**+1.3**
	baz=343						
YUK4	**Talbot Arm**	**75.60**	**13**	P	**P**	**19 22 21.4**	**+1.2**
	baz=340						
N30M	**Aishikik Lake**	**75.75**	**12**	P	**P**	**19 22 22.7**	**+1.9**
	baz=341						

N31M	Braeburn, Yuko	75.93	12	P	P	19 22 23.5	+1.7
	baz=342						
YUK6	Outpost Mounta	76.03	13	P	P	19 22 24.5	+1.8
	baz=340						
HYT	Haines Junctio	76.28	13	P	P	19 22 26.1	+2.1
	baz=340						
O30N	Mendenhall	76.56	12	P	P	19 22 27.1	+1.6
	baz=341,SNR=5.3						
YKA	Yellowknife Ar	76.73	1	P	P	19 22 27.3	+1.0
	comp=Z,5.9nm,0.9s,baz=356,slow=6.0,SNR=14						
	comp=Z,5.9nm,0.9s						
WHY	Whitehorse	76.86	11	P	P	19 22 27.9	+0.8
	baz=342						
SCHQ	Schefferville	76.99	335	P	P	19 22 29.1	+1.1
	comp=Z,3.5nm,0.8s,baz=37,slow=13,SNR=5.2						
	comp=Z,3.5nm,0.8s						
P33M	Teslin, Yukon	77.58	11	P	P	19 22 32.4	+1.1
	baz=344						
PLBC	Pleasant Camp	77.77	13	P	P	19 22 33.7	+1.6
	baz=341,SNR=5.4						
FCC	Fort Churchill	79.41	351	P	P	19 22 42.3	+1.1
FCC				IAmb	IAmb	19 22 43.7	
	comp=Z,3.8nm,0.8s						
FCC	Fort Churchill	79.41	351	P	P	19 22 42.3	+1.1
FCC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
S34M	Telegraph Cree	80.04	10	P	P	19 22 47.1	+2.5
	baz=345						
T35M	Bob Quinn	81.06	10	P	P	19 22 52.7	+2.5
	baz=346						
EDM	Edmonton	86.04	1	P	P	19 23 17.0	+1.1
EDM	Edmonton	86.04	1	P	P	19 23 17.0	+1.1
EDM				pmax	pmax		
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	86.18	120		P	19 23 15.9	-1.0
WB0				IAmb	IAmb	19 23 17.2	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	86.27	120	P	P	19 23 17.1	-0.3
	comp=Z,6.7nm,1.0s,baz=327,slow=5.0,SNR=22						
	comp=Z,6.7nm,1.0s						
WRA	Warramunga Arr	86.27	120	*i* P	P	19 23 17.1	-0.3
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRAB	Tennant Creek	86.27	120⇓	*i* P	P	19 23 17.1	-0.3
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WB2	Warramunga Arr	86.28	120	P	P	19 23 16.9	-0.5
ULM	Lac du Bonnet	87.95	350	P	P	19 23 25.1	-0.1
	comp=Z,1.7nm,0.4s,baz=324,slow=7.1,SNR=3.6						
	comp=Z,1.7nm,0.4s						
KRVT	Keravat (AS076	88.19	97	LR	LR	20 04 10.8	
	comp=Z,64nm,20.4s,baz=237,slow=36						
ASAR	Alice Springs	88.67	123	P	P	19 23 28.4	-0.5
	comp=Z,1.6nm,0.8s,baz=316,slow=4.7,SNR=23						
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	88.67	123	P	P	19 23 28.6	-0.3
ASAR	Alice Springs	88.67	123	P	P	19 23 28.6	-0.3
AGMN	Agassiz Nation	89.86	349	P	P	19 23 34.9	+0.7
AGMN	Agassiz Nation	89.86	349	P	P	19 23 35.2	+1.0
	baz=12						
BOZ	Bozeman (W)	93.69	360	P	P	19 23 53.9	+1.8
	baz=0.2						
ECSD	EROS Data Cent	94.44	349	P	P	19 23 56.7	+1.2
	baz=12						
PDAR	Pinedale Array	96.49	358	P	P	19 24 06.2	+1.1
	comp=Z,0.3nm,0.5s,baz=18,slow=5.2,SNR=4.6						
	comp=Z,0.3nm,0.5s						
TKL	Tuckaleechee C	99.38	337	LR	LR	20 08 49.1	
	comp=Z,26nm,20.2s,baz=74,slow=35						
PLCA	Paso Flores	149.00	257	PKPbc	PKPbc	19 30 22.5	-0.8
	comp=Z,3.0nm,1.0s,baz=95,slow=5.9,SNR=3.9						

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*IDC **28** 19:16:13.1±0.6, 43°.74S×41°.43E, h0^{km}, mb4.0/12, mbtmp4.0/14, ML3.5/2, MS3.8/34, Error ellipse: s-maj=26.9km s-min=14.8km az=52.0*

*NEIC **28** 19:16:15.1±1.1, 43°.85S±0°.09×41°.2E±0°.2, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=24.4km s-min=15.8km az=275.0*

ISC 28 19:16:14.6±0.5**, 43°.79S**±0°.09×**41°.3E**±0°.1**, h10^{km}, n65,** σ**0^s.61**/35**, mb4.3**/18**, MS3.8**/32**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	19.68	298	P	Pn	19 20 45.0	-0.4
	0.1nm,0.3s,baz=143,slow=13,SNR=3.1						
SUR				LR	LR	19 27 09.5	
	comp=Z,330nm,18.6s,baz=132,slow=33						
	5.5nm,1.0s						
SUR	Sutherland	19.68	298	P	P	19 20 42.0	-2.0
BOSA	Boshof	19.87	314	P	P	19 20 46.2	+0.3
	0.1nm,0.3s,baz=142,slow=12,SNR=6.6						
BOSA				LR	LR	19 27 01.8	
	comp=Z,492nm,20.2s,baz=170,slow=33						
	7.8nm,1.2s						
BOSA	Boshof	19.87	314	P	P	19 20 45.9	-0.1
VOI	Vohitsoka	22.30	14	P	P	19 21 11.7	-0.5
VOI				IAmb	IAmb	19 21 16.6	
	comp=Z,13nm,0.9s						
LBTB	Lobatse	22.70	320	P	P	19 21 16.2	-0.3
	comp=Z,5.2nm,1.0s,baz=147,slow=9.4,SNR=5.4						
LBTB				LR	LR	19 28 47.8	
	comp=Z,410nm,19.5s,baz=122,slow=33						
	comp=Z,5.2nm,1.0s						
LBTB	Lobatse	22.70	320	P	P	19 21 16.6	+0.1
LBTB				IAmb	IAmb	19 21 25.4	
	comp=Z,12nm,1.2s						
ABPO	Ambohimpanom	25.20	13	P	P	19 21 40.7	+0.2
ABPO				IAmb	IAmb	19 21 54.9	
	comp=Z,10nm,1.1s						
OPO	Ambohidratompo	25.63	13	LR	LR	19 30 04.4	
	comp=Z,462nm,20.1s,baz=356,slow=32						
MATP	Matopo	25.63	331	P	P	19 21 43.4	-1.0
	comp=Z,4.9nm,1.2s,baz=147,slow=14,SNR=4.5						
	comp=Z,4.9nm,1.2s						
MAW	Mawson	26.49	162	LR	LR	19 29 39.9	
	comp=Z,260nm,22.0s,baz=343,slow=30						
LSZ	Lusaka	30.54	334	P	P	19 22 28.0	-0.2
	comp=Z,1.1nm,0.2s,baz=168,slow=8.4,SNR=5.7						
LSZ				LR	LR	19 33 25.2	
	comp=Z,153nm,18.6s,baz=140,slow=34						
	comp=Z,1.1nm,0.2s						
LSZ	Lusaka	30.54	334	P	P	19 22 28.4	+0.1
LSZ				IAmb	IAmb	19 22 30.7	
	comp=Z,6.2nm,1.1s						
TSUM	Tsumeb	31.56	313	LR	LR	19 33 56.1	
	comp=Z,205nm,20.8s,baz=138,slow=34						
SNAA	Sanae	35.05	203	P	P	19 23 07.9	+0.7
	comp=Z,2.2nm,0.9s,baz=44,slow=6.0,SNR=4.5						
SNAA				LR	LR	19 36 00.7	
	comp=Z,102nm,18.0s,baz=20,slow=34						
	comp=Z,2.2nm,0.9s						
SNAA	Sanae	35.05	203	P	P	19 23 07.5	+0.3
SNAA				IAmb	IAmb	19 23 10.6	
	comp=Z,7.9nm,1.2s						
KMBO	Kilima Mbogo	42.63	354	LR	LR	19 39 39.2	
	comp=Z,222nm,19.8s,baz=96,slow=33						
MBAR	Mbarara	44.02	345	LR	LR	19 40 58.9	
	comp=Z,142nm,20.9s,baz=153,slow=34						
QSPA	South Pole Qui	46.42	180	P	P	19 24 40.6	-0.6
	comp=Z,2.9nm,1.1s,baz=257,slow=11,SNR=4.1						
QSPA				LR	LR	19 42 27.9	
	comp=Z,205nm,20.1s,baz=269,slow=34						
	comp=Z,2.9nm,1.1s						
QSPA	South Pole Qui	46.42	180	P	P	19 24 40.8	-0.3
QSPA				IAmb	IAmb	19 24 41.3	
	comp=Z,7.6nm,1.2s						
VNDA	Vanda	53.63	167	P	P	19 25 35.5	0.0
	comp=Z,0.3nm,0.6s,baz=280,slow=8.5,SNR=1.5						
VNDA				LR	LR	19 47 32.4	
	comp=Z,76nm,18.1s,baz=247,slow=35						
	comp=Z,0.3nm,0.6s						
VNDA	Vanda	53.63	167	P	P	19 25 36.0	+0.5
H01W2	Cape Leeuwin H	55.36	107	T	T	20 25 55.6	
	baz=238,slow=75,SNR=177						
H01W3	Cape Leeuwin H	55.37	107	T	T	20 25 56.3	
	baz=238,slow=75,SNR=152						
H01W1	Cape Leeuwin H	55.38	107	T	T	20 25 54.8	
	baz=238,slow=75,SNR=156						
PMSA	Palmer Station	57.25	209	LR	LR	19 47 03.6	
	comp=Z,72nm,19.1s,baz=152,slow=32						
DBIC	Dimbokro	65.24	308	LR	LR	19 51 14.2	
	comp=Z,98nm,21.6s,baz=154,slow=32						
TOA0	Torodi Ar. Sit	67.19	318	P	P	19 27 09.2	+0.3
TORD	Torodi Ar. Bea	67.19	318	P	P	19 27 09.8	+0.9
	comp=Z,2.1nm,0.8s,baz=155,slow=5.8,SNR=13						
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	67.19	318	P	P	19 27 09.7	+0.9
TORD				IAmb	IAmb	19 27 12.6	
	comp=Z,3.5nm,0.9s						
LEM	Lembang	68.27	78	LR	LR	19 52 02.0	
	comp=Z,58nm,20.8s,baz=230,slow=32						
WSAR	Wadi Sarin	68.57	17	LR	LR	19 52 18.3	
	comp=Z,97nm,19.7s,baz=202,slow=32						
BBOO	Buckleboo	71.26	118	P	P	19 27 34.3	+0.2
TRQA	Tornquist	73.02	233	P	P	19 27 44.2	-0.3
TRQA				IAmb	IAmb	19 27 52.2	
	comp=Z,3.6nm,1.0s						
STKA	Stephens Creek	75.39	120	P	P	19 27 58.9	+0.4
	comp=Z,6.6nm,0.7s,baz=200,slow=3.5,SNR=17						
	comp=Z,6.6nm,0.7s						
STKA	Stephens Creek	75.39	120	P	P	19 27 58.9	+0.4
ASAR	Alice Springs	75.82	109	P	P	19 28 00.4	-0.7
	comp=Z,0.6nm,0.8s,baz=213,slow=5.4,SNR=6.8						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	75.82	109	P	P	19 28 01.5	+0.4
PLCA	Paso Flores	75.91	227	LR	LR	19 55 05.9	
	comp=Z,74nm,21.3s,baz=192,slow=31						
MMAI	Mount Meron Ar	76.62	355	LR	LR	20 01 14.2	
	comp=Z,49nm,19.0s,baz=24,slow=35						
CPUP	Villa Florida	78.07	245	P	P	19 28 14.3	+0.7
	comp=Z,1.2nm,0.6s,baz=107,slow=0.6,SNR=3.6						
	comp=Z,1.2nm,0.6s						
KAPI	Kappang	78.22	86	LR	LR	19 57 06.3	
	comp=Z,42nm,20.4s,baz=181,slow=31						
WRA	Warramunga Arr	78.60	107	P	P	19 28 16.4	-0.4
	comp=Z,0.8nm,0.9s,baz=222,slow=4.7,SNR=6.6						
	comp=Z,0.8nm,0.9s						
WB2	Warramunga Arr	78.61	107	P	P	19 28 16.5	-0.3
WB2				IAmb	IAmb	19 28 41.0	
	comp=Z,6.9nm,1.2s						
WB0	Warramunga Arr	78.76	107	P	P	19 28 17.2	-0.4
WB0				IAmb	IAmb	19 28 45.5	
	comp=Z,3.7nm,1.3s						
IDI	Anoyia	80.11	346	LR	LR	20 04 50.4	
	comp=Z,44nm,18.8s,baz=118,slow=36						
CMAR	Chiang Mai Arr	81.32	54	LR	LR	19 58 57.4	
	comp=Z,33nm,19.0s,baz=250,slow=32						
GEYT	Alibeck	82.76	13	LR	LR	20 02 50.2	
	comp=Z,27nm,20.6s,baz=170,slow=34						
BRTR	Keskin Array B	83.42	354	LR	LR	20 04 37.7	
	comp=Z,22nm,21.7s,baz=163,slow=35						
CO01	Juntas del Tor	83.47	234	P	P	19 28 43.0	+0.2
GNI	Garni	83.61	3	LR	LR	20 07 40.2	
	comp=Z,32nm,18.2s,baz=153,slow=37						
VAE	Valguarnera	84.49	339	LR	LR	20 07 58.5	
	comp=Z,191nm,18.7s,baz=146,slow=37						
LSA	Lhasa	86.20	42	P	P	19 28 56.8	+0.3
CTA	Charters Tower	86.58	115	LR	LR	20 02 04.8	
	comp=Z,75nm,18.7s,baz=256,slow=32						
CTAO	Charters Tower	86.58	115	P	P	19 28 57.4	-0.8
CTAO				IAmb	IAmb	19 29 15.0	
	comp=Z,4.5nm,1.1s						
MDT	Midelt	86.99	323	LR	LR	20 08 24.6	
	comp=Z,120nm,18.7s,baz=160,slow=36						
KBZ	Khabaz	87.14	1	LR	LR	20 07 40.0	
	comp=Z,37nm,19.7s,baz=154,slow=35						
LVC	Limon Verde	88.14	240	LR	LR	20 03 12.1	
	comp=Z,41nm,20.9s,baz=297,slow=32						
ESDC	Sonseca Array	92.58	327	LR	LR	20 12 03.9	
	comp=Z,52nm,18.0s,baz=154,slow=36						
DAVOX	Davos/Dischmat	94.37	339	LR	LR	20 14 59.4	
	comp=Z,39nm,19.6s,baz=87,slow=37						
AKTO	Aktyubinsk	94.97	11	LR	LR	20 13 03.6	
	comp=Z,19nm,21.2s,baz=183,slow=36						
VRAC	Vranov	95.20	344	LR	LR	20 15 47.1	
	comp=Z,38nm,19.8s,baz=154,slow=38						
MDP	Montagnes des	96.34	271	LR	LR	20 06 10.2	
	comp=Z,44nm,19.5s,baz=49,slow=31						
MKAR	Makanchi Array	97.21	27	P	P	19 29 46.9	0.0
	comp=Z,0.1nm,0.4s,baz=191,slow=2.9,SNR=1.8						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	148.63	254	PKPbc	PKiKP	19 36 03.0	-0.5
	comp=Z,2.8nm,0.9s,baz=137,slow=5.2,SNR=19						

IDC 28 19:52:47.7±2.7**, 18°.34S**×**176°.91W, h0^{km}, mb3.6**/3**, mbtmp3.6**/3**, Error ellipse: s-maj=282.7km s-min=34.9km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.96	260	P	P	20 01 13.1	+0.2
	0.2nm,0.3s,baz=96,slow=7.7,SNR=5.4						
	0.2nm,0.3s						
ASAR	Alice Springs	46.05	255	P	P	20 01 13.2	-0.4
	0.6nm,0.5s,baz=94,slow=7.6,SNR=16						
	0.6nm,0.5s						
TXAR	Lajitas Array	85.03	57	P	P	20 05 25.6	0.0
	0.3nm,0.8s,baz=211,slow=3.2,SNR=3.5						
	0.3nm,0.8s						

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*IDC **28** 20:03:33.0±7.0, 19°.83S×169°.52E, h0^{km}, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=290.8km s-min=55.3km az=147.0*

*NEIC **28** 20:03:40.0±2.7, 20°.98S±0°.04×170°.0E±0°.1, h80^{km}±11^{km}, mb4.4/6, Error ellipse: s-maj=16.1km s-min=4.4km az=71.0*

*NOU **28** 20:03:42.1, 21°.08S×169°.85E, h21^{km}, MLv4.5/14, Southeast of Loyalty Islands*

ISC 28 20:03:41.9±0.9**, 21°.11S**±0°.07×**169°.86E**±0°.08**, h90^{km}, n28,** σ**1^s.10**/31**, mb4.3**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.75	257		Pn	20 04 10.9	+0.2
MARNC				Sn	Sn	20 04 32.3	-0.5
MARNC	Mare, Loyalty	1.75	257	P	Pn	20 04 11.0	+0.2
LIFNC	LIFOU	2.47	277		Pn	20 04 19.5	-0.8
LIFNC				Sn	Sn	20 04 47.6	-2.1
LIFNC	LIFOU	2.47	277	P	Pn	20 04 20.0	-0.3
PINNC	Pines Island,	2.70	236		Pn	20 04 24.0	+0.7
PINNC				Sn	Sn	20 04 55.0	-0.2
PINNC	Pines Island,	2.70	236	P	Pn	20 04 24.3	+1.0
YATNC	Mamie plateau,	2.92	251	P	Pn	20 04 26.2	-0.1
OUENC	Ouen Island, N	3.10	245		Pn	20 04 29.7	+1.1
OUENC	Ouen Island, N	3.10	245	P	Pn	20 04 30.1	+1.4
DZM	Mont Dzumac	3.32	253		Pn	20 04 32.7	+0.9
DZM	Mont Dzumac	3.32	253	P	Pn	20 04 33.2	+1.4
ONTNC	Ouen Toro	3.39	249		Pn	20 04 33.4	+0.9
ONTNC	Ouen Toro	3.39	249	P	Pn	20 04 34.1	+1.5
NOUC	Port Laguerre	3.46	253	P	Pn	20 04 35.0	+1.5
RTV	Rentapao	3.56	337	P	Pn	20 04 35.5	+0.5
DVP	Devils Point	3.72	335	P	Pn	20 04 38.7	+1.6
KOUNC	Koumac, New Ca	5.24	275		Pn	20 04 59.6	+1.8
KOUNC	Koumac, New Ca	5.24	275	P	Pn	20 05 00.0	+2.2
ARMA	Armidale	18.84	237	P	Pn	20 07 56.4	+0.1
BKZ	Black Stump Fm	18.88	164	P	P	20 07 55.2	+0.1
BKZ				IAmb	IAmb	20 07 58.5	
	comp=Z,24nm,1.3s						
WRA	Warramunga Arr	33.25	266	P	P	20 10 10.7	-0.1
	comp=Z,0.4nm,0.9s,baz=94,slow=8.3,SNR=1.9						
	comp=Z,0.4nm,0.9s						
ASAR	Alice Springs	33.29	259	P	P	20 10 11.8	+0.7
	comp=Z,0.8nm,0.7s,baz=80,slow=8.6,SNR=8.8						
	comp=Z,0.8nm,0.7s						
MTN	Manton Dam	37.86	276	P	P	20 10 50.5	+0.3
MTN				IAmb	IAmb	20 10 56.1	
	comp=Z,9.0nm,1.2s						
SBA	Scott Base	56.81	181	P	P	20 13 17.3	+0.9
QSPA	South Pole Qui	68.96	180	P	P	20 14 36.9	-0.4
BELA	Belgrano 2	80.20	175	P	P	20 15 40.5	-1.4
BELA				IAmb	IAmb	20 15 41.5	
	comp=Z,3.5nm,0.8s						
SNAA	Sanae	87.33	182	P	P	20 16 17.3	-1.1
SNAA				IAmb	IAmb	20 16 34.8	
	comp=Z,3.1nm,1.1s						
GERES	GERESS Array B	146.40	331	PKPbc	PKPdf	20 23 11.3	+0.2
	comp=Z,0.4nm,0.5s,baz=47,slow=4.3,SNR=5.9						

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*IDC **28** 20:08:31.5±1.5, 37°.48N×142°.17E, h0^{km}, mb3.3/4, mbtmp3.4/7, ML3.2/3, MS2.2/1, Error ellipse: s-maj=31.6km s-min=22.6km az=117.0*

*JMA **28** 20:08:34.8±0.1, 37°.6N±0°.3×141°.9E±0°.5, h27^{km}±1^{km}, MV3.7/39, E OFF FUKUSHIMA PREF*

ISC 28 20:08:33.3±1.9**, 37°.58N**±0°.04×**141°.88E**±0°.07**, h12^{km}**±10^{km}**, n30,** σ**1^s.10**/33**, mb3.2**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.80	336	*i* P	Pg	20 08 49.1	+0.3
JIKH				*e*S	Sg	20 08 59.3	0.0
JMST	Minamisoumatoc	0.80	281	*i* P	Pb	20 08 49.3	+0.2
JMST				S	Sb	20 08 59.4	-0.5
JFK	Kawauchi	0.83	256	*i* P	Pn	20 08 50.0	-0.8
JFK				S	Sb	20 09 01.1	+0.3
JMM	Marumori	0.91	289	*i* P	Pb	20 08 51.0	0.0
JMM				*e*S	Sg	20 09 02.6	-0.2
JIO	Ouri	0.97	334	*i* P	Pb	20 08 51.8	-0.3
ONAJ	Iwakimizuishiy	0.99	242	*i* P	Pn	20 08 52.4	-0.6
ONAJ				S	Sb	20 09 05.2	-0.1
JFT	Otama	1.23	268	*i* P	Pg	20 08 56.8	-0.2
JFT				S	Sn	20 09 12.1	-0.7
JOU	Okura	1.24	310	*i* P	Pn	20 08 56.6	+0.1
JOU				S	Sb	20 09 12.2	-0.4
JKMT	Kesennumamotoy	1.27	345	P	Pn	20 08 56.3	-0.5
JKMT				*e*S	Sb	20 09 11.9	-1.6
JMK	Ichinoseki	1.47	339	P	Pn	20 08 59.7	+0.1
JYS	Shirataka	1.57	295	P	Pb	20 09 01.9	-0.4
JYS				S	Sb	20 09 21.9	-0.3
JFY	Yanaizu	1.74	265	P	Pb	20 09 04.4	-0.8
JFY				*e*S	Sb	20 09 25.8	-1.2
JYK	Kaneyama	1.80	319	P	Pn	20 09 04.3	+0.2
MJAR	Matsushiro Arr	3.12	252	Pn	Pn	20 09 24.6	+2.3
	0.5nm,0.3s,baz=76,slow=15,SNR=40						
MJAR				Sn	Sb	20 10 04.0	-2.5
	0.5nm,0.3s,baz=83,slow=31,SNR=5.6						
	3.1nm,0.3s						
JHJ	Hachijo jima 2	4.77	202	Pn	Pn	20 09 46.0	+1.0
	14nm,0.3s,baz=16,slow=16,SNR=11						
JHJ				Sn	Sn	20 10 38.8	-1.3
	8.0nm,0.3s,baz=94,slow=23,SNR=1.7						
	24nm,0.3s						
ASAJ	Asahikawa	6.55	5	Pn	Pn	20 10 10.6	+1.1
	0.4nm,0.3s,baz=199,slow=10,SNR=5.7						
ASAJ				Sn	Sn	20 11 22.6	-1.5
	0.1nm,0.3s,baz=255,slow=20,SNR=1.8						
	7.3nm,1.0s						
KSRS	Korea Array	11.09	274	LR	LR	20 15 01.0	
	comp=Z,13nm,21.5s,baz=255,slow=34						
SONM	Songino Array	27.80	303	P	P	20 14 23.7	+1.5
	0.3nm,0.6s,baz=107,slow=9.2,SNR=2.4						
	0.3nm,0.6s						
H11N2	WAKE ISLAND Hy	28.11	122	T	T	20 43 52.5	
	baz=315,slow=75,SNR=195						
H11N1	WAKE ISLAND Hy	28.12	122	T	T	20 43 58.6	
	baz=315,slow=75,SNR=172						
H11N3	WAKE ISLAND Hy	28.13	122	T	T	20 43 54.4	
	baz=315,slow=75,SNR=180						
H11S1	WAKE ISLAND Hy	28.85	124	T	T	20 44 47.9	
	baz=316,slow=76,SNR=211						
H11S3	WAKE ISLAND Hy	28.85	124	T	T	20 44 48.0	
	baz=316,slow=76,SNR=202						
H11S2	WAKE ISLAND Hy	28.86	124	T	T	20 44 49.2	
	baz=316,slow=76,SNR=214						
MKAR	Makanchi Array	44.15	302	P	P	20 16 44.2	+2.5
	0.2nm,0.5s,baz=93,slow=7.2,SNR=4.2						
	0.2nm,0.5s						
ILAR	Eielson Array	48.84	33	P	P	20 17 17.8	-0.3
	0.2nm,0.7s,baz=269,slow=5.4,SNR=2.7						
	0.2nm,0.7s						
WRA	Warramunga Arr	57.65	188	P	P	20 18 22.5	-0.9
	0.2nm,0.5s,baz=4.6,slow=7.4,SNR=2.0						
	0.2nm,0.5s						
H03N2	Juan Fernandez	146.71	95	T	T	23 12 11.4	
	baz=292,slow=75,SNR=8.3						
H03N3	Juan Fernandez	146.72	95	T	T	23 12 17.9	
	baz=292,slow=75,SNR=7.3						
H03N1	Juan Fernandez	146.72	95	T	T	23 12 14.5	
	baz=292,slow=75,SNR=9.8						

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*IDC **28** 20:11:06.9±1.1, 23°.03S×170°.02E, h0^{km}, mb3.8/10, mbtmp3.7/11, ML3.5/1, MS3.6/2, Error ellipse: s-maj=33.6km s-min=24.5km az=159.0*

*NEIC **28** 20:11:08.3±1.6, 22°.95S±0°.09×170°.0E±0°.1, h10^{km}±2^{km}, mb4.3/11, Error ellipse: s-maj=18.2km s-min=13.8km az=125.0*

*NOU **28** 20:11:14.1, 22°.66S×169°.52E, h0^{km}, MLv3.8/9, Southeast of Loyalty Islands*

ISC 28 20:11:10.9±0.7**, 23°.05S**±0°.10×**169°.93E**±0°.08**, h25^{km}, n64,** σ**1^s.72**/72**, mb3.9**/15**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.34	280		Pn	20 11 47.4	-0.3
PINNC	Pines Island,	2.34	280	P	Pn	20 11 48.5	+0.8
MARNC	Mare, Loyalty	2.35	311		Pn	20 11 46.4	-1.6
MARNC	Mare, Loyalty	2.35	311	P	Pn	20 11 46.3	-1.6
OUENC	Ouen Island, N	2.92	282		Pn	20 11 54.7	-1.2
OUENC	Ouen Island, N	2.92	282	P	Pn	20 11 55.3	-0.5
YATNC	Mamie plateau,	2.98	289	P	Pn	20 11 56.0	-0.6
ONTNC	Ouen Toro	3.30	282		Pn	20 12 00.1	-0.9
ONTNC	Ouen Toro	3.30	282	P	Pn	20 12 00.7	-0.3
DZM	Mont Dzumac	3.37	286	Pn	Pn	20 12 01.6	-0.5
	4.7nm,0.3s,baz=311,slow=22,SNR=143						
DZM				Sn	Sn	20 12 41.6	+0.2
	6.7nm,0.3s,baz=341,slow=23,SNR=6.7						
	9.1nm,0.3s						
DZM	Mont Dzumac	3.37	286		Pn	20 12 01.4	-0.7
DZM	Mont Dzumac	3.37	286	P	Pn	20 12 01.5	-0.5
LIFNC	LIFOU	3.37	312		Pn	20 12 00.5	-1.5
NOUC	Port Laguerre	3.49	285	P	Pn	20 12 03.1	-0.5
RTV	Rentapao	5.42	345	P	Pn	20 12 31.3	+1.2
KOUNC	Koumac, New Ca	5.81	294	Pn	Pn	20 12 35.4	-0.1
CTA	Charters Tower	22.21	273	P	P	20 16 07.0	+1.3
	1.6nm,0.6s,baz=122,slow=12,SNR=2.2						
	1.6nm,0.6s						
CTAO	Charters Tower	22.21	273		P	20 16 06.7	+1.0
STKA	Stephens Creek	26.58	245	P	P	20 16 48.2	+1.1
	0.7nm,0.5s,baz=67,slow=15,SNR=1.6						
STKA				LR	LR	20 27 14.2	
	comp=Z,88nm,18.4s,baz=208,slow=36						
	0.7nm,0.5s						
COEN	Coen	26.90	285		P	20 16 50.5	+0.3
COEN				IAmb	IAmb	20 16 52.1	
	comp=Z,5.6nm,0.9s						
BBOO	Buckleboo	31.36	244	P	P	20 17 30.2	+0.6
ASAR	Alice Springs	33.03	262	P	P	20 17 44.3	-0.2
	comp=Z,1.6nm,0.7s,baz=81,slow=8.9,SNR=17						
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	33.03	262	P	P	20 17 44.0	-0.5
WRA	Warramunga Arr	33.21	268	P	P	20 17 45.0	-1.1
	comp=Z,0.2nm,0.5s,baz=97,slow=8.6,SNR=5.7						
	comp=Z,0.2nm,0.5s						
WRA	Warramunga Arr	33.21	268	P	P	20 17 44.6	-1.5
KNRA	Kununurra	39.43	273	P	P	20 18 38.3	-0.8
KNRA				IAmb	IAmb	20 18 39.8	
	comp=Z,8.0nm,1.1s						
PSA00	Pilbara Seismi	46.18	262	P	P	20 19 33.3	-0.6
PSA00				IAmb	IAmb	20 19 53.9	
	comp=Z,1.9nm,1.0s						
MBWA	Marble Bar	46.37	262	P	P	20 19 35.2	-0.2
MBWA				IAmb	IAmb	20 19 36.3	
	comp=Z,5.6nm,0.8s						
VNDA	Vanda	54.66	182	P	P	20 20 37.5	+0.3
	comp=Z,0.5nm,0.7s,baz=360,slow=11,SNR=2.2						
	comp=Z,0.5nm,0.7s						
VNDA	Vanda	54.66	182	P	P	20 20 37.1	-0.1
VNDA				IAmb	IAmb	20 20 49.1	
	comp=Z,3.5nm,1.4s						
SBA	Scott Base	54.88	181	P	P	20 20 39.5	+0.7
SBA				IAmb	IAmb	20 20 41.1	
	comp=Z,4.7nm,1.0s						
QSPA	South Pole Qui	67.02	180	P	P	20 22 01.3	-0.4
KSRS	Korea Array	72.01	326	P	P	20 22 33.5	+1.0
	comp=Z,0.8nm,0.8s,baz=147,slow=6.0,SNR=4.5						
	comp=Z,0.8nm,0.8s						
CMAR	Chiang Mai Arr	80.66	295	P	P	20 23 23.6	+1.4
	comp=Z,1.2nm,0.9s,baz=135,slow=4.0,SNR=7.4						
	comp=Z,1.2nm,0.9s						
CMAR	Chiang Mai Arr	80.66	295	P	P	20 23 22.6	+0.4
KDAK	Kodiak Island	86.40	19	LR	LR	20 58 02.2	
	comp=Z,37nm,19.5s,baz=220,slow=33						
SONM	Songino Array	90.64	323	P	P	20 24 11.5	+0.3
	comp=Z,0.7nm,0.9s,baz=160,slow=4.7,SNR=5.3						
	comp=Z,0.7nm,0.9s						
SONM	Songino Array	90.64	323	P	P	20 24 10.8	-0.4
SONM				IAmb	IAmb	20 24 21.3	
	comp=Z,1.8nm,1.1s						
NVAR	Mina Array Bea	90.83	48	P	P	20 24 12.0	-0.5
	comp=Z,0.2nm,0.5s,baz=231,slow=8.0,SNR=2.4						
	comp=Z,0.2nm,0.5s						

ILAR	Eielson Array	93.66	17	P	P	20 24 23.2	-1.5
	comp=Z,0.3nm,0.8s,baz=244,slow=5.9,SNR=2.8						
	comp=Z,0.3nm,0.8s						
MORC	Moravsky Berou	145.65	328	*e*PKP	PKPab	20 30 48.0	+0.4
OSTC	Ostas	145.75	330	*e*PKP	PKiKP	20 30 48.6	-2.6
OSTC				*e*x	x	20 30 57.1	
MAUC	Maruska	145.77	327	*e*PKP	PKiKP	20 30 48.7	-2.6
MAUC				*e*x	x	20 30 57.8	
KRLC	Kraliky	145.81	329	*e*PKP	PKPab	20 30 48.5	+0.3
KRLC				*e*x	x	20 30 57.4	
DPC	Dobruska-Polom	145.85	330	*e*PKP	PKiKP	20 30 48.7	-2.7
DPC				*e*x	x	20 30 57.6	
VRAC	Vranov	146.42	328	*e*PKP	PKPab	20 30 50.0	-0.5
VRAC				*e*		20 30 58.1	
CLL	Collm	146.62	333	*e*PKPbc	PKiKP	20 30 51.0	-1.9
CLL				*i* pPKiKP	pPKiKP	20 30 58.8	-1.2
	comp=Z,5.0nm,1.1s						
CLL				*e*x	x	20 31 05.0	
KRUC	Moravsky	146.68	328	*e*PKP	PKPab	20 30 51.0	-0.5
KRUC				*e*		20 30 59.8	
PRU	Pruhonice	146.92	331	*e*PKP	PKiKP	20 30 51.8	-1.8
PRU				*e*x	x	20 31 00.5	
RONA	Rosalia, Austr	147.62	326	*i* P	PKiKP	20 30 54.0	-1.2
RONA				*i* P	PKPab	20 31 03.0	+7.7
CONA	Conrad Observa	147.70	327	*i* P	PKiKP	20 30 54.2	-1.2
	comp=Z,4.8nm,1.5s						
CONA				*i* P	PKPab	20 31 03.4	+7.7
	comp=Z,1.2nm,0.7s						
CKRC	Cesky Krumlov	147.85	329	*e*PKP	PKiKP	20 30 54.0	-1.6
CKRC				*e*x	x	20 31 03.1	
KHC	Kasperske Hory	147.97	330	*e*PKP	PKiKP	20 30 54.6	-1.2
KHC				*e*x	x	20 31 03.2	
GERES	GERESS Array B	148.12	330	PKPbc	PKiKP	20 30 54.2	-2.0
	comp=Z,1.1nm,0.8s,baz=60,slow=3.2,SNR=11						
MOA	Molln	148.54	328	*i* P	PKPab	20 31 04.9	+5.9
	comp=Z,2.6nm,0.9s						
SOKA	Soboth	148.94	326	*e*P	PKiKP	20 30 56.7	-1.3
	comp=Z,2.6nm,1.1s						
SOKA				*i* P	PKPab	20 31 05.8	+5.1
	comp=Z,3.6nm,1.2s						
OBKA	Obir	149.31	326	*i* P	PKPab	20 31 06.4	+4.2
	comp=Z,5.1nm,1.3s						
KBA	Koelnbreinsper	149.53	328	*i* P	PKiKP	20 30 57.6	-1.7
	comp=Z,2.3nm,0.6s						
ABTA	Abfaltersbach	150.17	328	*i* P	PKiKP	20 30 59.3	-1.2
	comp=Z,2.1nm,0.7s						
ABTA				*i* P	PKPab	20 31 08.3	+2.5
	comp=Z,2.9nm,0.8s						
WATA	Walderalm	150.19	330	*i* P	PKiKP	20 30 59.8	-0.8
	comp=Z,4.6nm,1.2s						
WATA				*i* P	PKPab	20 31 08.9	+3.1
	comp=Z,4.8nm,0.9s						
WTTA	Wattenberg	150.22	330	*i* P	PKiKP	20 31 00.1	-0.6
	comp=Z,7.0nm,1.2s						
WTTA				*i* P	PKPab	20 31 09.3	+3.3
	comp=Z,8.9nm,1.2s						
MOTA	Moosalm	150.41	330	*i* P	PKiKP	20 31 00.3	-0.8
	comp=Z,4.9nm,0.8s						
MOTA				*i* P	PKPab	20 31 09.4	+2.6
	comp=Z,8.0nm,0.8s						
SQTA	Sankt Quirin	150.45	330	*i* P	PKiKP	20 31 00.7	-0.4
	comp=Z,3.6nm,0.7s						
SQTA				*i* P	PKPab	20 31 09.7	+2.8
	comp=Z,6.3nm,0.8s						
FETA	Feichten	150.82	330	*i* P	PKiKP	20 31 01.7	-0.2
	comp=Z,3.3nm,0.8s						
FETA				*i* P	PKPab	20 31 10.8	+2.3
	comp=Z,5.4nm,0.9s						

NOU ***28*** *20:16:02.4, 19°.63S×177°.85W, h480km, mb4.5/26, Fiji Islands Region*

IDC ***28*** *20:16:04.4±1.2, 19°.30S×177°.52W, h562km±14km, mb3.6/20, mbtmp4.5/23, Error ellipse: s-maj=12.3km s-min=10.7km az=124.0*

NEIC ***28*** *20:16:04.4±2.1, 19°.35S±0°.10×177°.5W±0°.1, h560km±1km, mb4.4/73, Error ellipse: s-maj=15.3km s-min=14.0km az=106.0*

ISC 28 20:16:03.1±0.3**, 19°.35S**±0°.05×**177°.47W**±0°.06**, h550**km**,**
n258, σ0ˢ99/267**, mb4.4**/55**, 8C-34D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.55	290	P	P	20 17 32.7	+3.4
	45nm,0.5s,baz=173,slow=3.0,SNR=87						
MSVF				S	S	20 18 44.5	+4.9
	10nm,0.8s,baz=172,slow=23,SNR=0.6						
MSVF	Nonsavu	4.55	290	P	P	20 17 32.4	+3.0
NIUE	Niue	7.13	89	P	P	20 17 53.7	+1.4
AFI	Afiamalu	7.68	46	P	P	20 17 58.0	+0.2
	131nm,0.7s,baz=233,slow=10,SNR=26						
AFI				S	S	20 19 27.9	-3.9
	34nm,0.4s,baz=258,slow=20,SNR=3.0						
AFI	Afiamalu	7.68	46	P	P	20 17 57.7	-0.2
RAO	Raoul Island	9.87	182	P	P	20 18 19.0	-0.5
	151nm,0.3s,baz=37,slow=20,SNR=1.8						
RAO				S	S	20 20 11.1	-0.5
	172nm,0.5s,baz=88,slow=23,SNR=1.5						
RAO	Raoul Island	9.87	182	P	P	20 18 19.1	-0.3
FUNA	Funafuti	11.24	343	P	P	20 18 34.9	+1.0
MARNC	Mare, Loyalty	13.76	259	P	P	20 18 56.9	-2.9
LIFNC	LIFOU	14.44	262	P	P	20 19 04.5	-2.3
YATNC	Mamie plateau,	14.88	257	P	P	20 19 05.8	-5.6
OUENC	Ouen Island, N	14.98	256	P	P	20 19 06.6	-5.8
DZM	Mont Dzumac	15.30	257	P	P	20 19 11.7	-4.0
NOUC	Port Laguerre	15.43	257	P	P	20 19 13.6	-3.4
RAR	Rarotonga	16.70	99	P	P	20 19 28.3	-0.8
	21nm,0.8s,baz=238,slow=8.0,SNR=4.1						
RAR	Rarotonga	16.70	99	P	P	20 19 29.8	+0.6
KOUNC	Koumac, New Ca	17.20	263	P	P	20 19 34.8	+1.1
KOUNC	Koumac, New Ca	17.20	263	P	P	20 19 31.5	-2.2
KNTN	Kanton	17.41	20	P	P	20 19 34.8	-0.9
KNTN				IAmb	IAmb	20 19 41.4	
	comp=Z,28nm,1.2s						
URZ	Urewera	19.42	193	P	P	20 19 53.3	-0.5
	comp=Z,11nm,0.4s,baz=222,slow=0.8,SNR=7.5						
URZ	Urewera	19.42	193	P	P	20 19 52.7	-1.0
URZ	Urewera	19.42	193	P	P	20 19 53.0	-0.7
BKZ	Black Stump Fm	20.43	194	P	P	20 20 01.1	-1.8
SNZO	South Karori	22.89	195	P	P	20 20 24.1	-0.7
QRZ	Quartz Range	23.05	200	P	P	20 20 27.2	+0.8
KHZ	Kahutara	24.22	196	P	P	20 20 36.0	-0.7
RPZ	Rata Peaks	26.13	199	P	P	20 20 54.6	+0.9
	comp=Z,7.7nm,0.6s,baz=100,slow=24,SNR=1.7						
	comp=Z,7.7nm,0.6s						
WHZ	Wether Hill Ro	29.08	201	P	P	20 21 20.5	+1.1
EIDS	Eidsvold	29.65	253	P	P	20 21 24.3	-0.4
EIDS				IAmb	IAmb	20 21 28.1	
	comp=Z,8.6nm,1.1s						
ARMA	Armidale	30.03	242	P	P	20 21 28.3	+0.4
ARMA				IAmb	IAmb	20 21 29.0	
	comp=Z,31nm,1.4s						
CAN	Canberra	33.57	235	P	P	20 21 58.2	+0.2
CTA	Charters Tower	34.12	263	P	P	20 22 02.9	+0.2
	comp=Z,14nm,0.5s,baz=90,slow=9.6,SNR=47						
CTA				PcP	PcP	20 24 23.6	-0.5
	comp=Z,1.8nm,0.6s,baz=122,slow=1.7,SNR=2.0						
	comp=Z,14nm,0.5s						
CTA	Charters Tower	34.12	263	P	P	20 22 03.1	+0.4
CTAO	Charters Tower	34.12	263	P	P	20 22 02.9	+0.2
CTAO				IAmb	IAmb	20 22 03.7	
	comp=Z,14nm,0.7s						
CTAO	Charters Tower	34.12	263	P	P	20 22 03.0	+0.2
CMSA	Cobar Meteorol	35.25	243	P	P	20 22 12.2	+0.2
QLP	Quilpie	35.89	251	P	P	20 22 17.4	0.0
TOO	Toolangi	36.98	233	P	P	20 22 26.5	+0.3
TAU	Tasmania Unive	37.80	224	P	P	20 22 32.9	+0.2
TAU	Tasmania Unive	37.80	224	P	P	20 22 32.9	+0.2
COEN	Coen	38.03	272	P	P	20 22 35.2	+0.1
COEN				IAmb	IAmb	20 22 36.2	
	comp=Z,9.3nm,0.6s						
STKA	Stephens Creek	38.75	243	P	P	20 22 41.3	+0.7
	comp=Z,7.1nm,0.5s,baz=96,slow=11,SNR=22						
	comp=Z,7.1nm,0.5s						
STKA	Stephens Creek	38.75	243	P	P	20 22 40.9	+0.3
STKA	Stephens Creek	38.75	243	P	P	20 22 41.1	+0.4
INKA	Innaminka	39.06	250	P	P	20 22 44.3	+1.1
ARPS	Mount Arapiles	39.54	235	P	P	20 22 47.2	+0.2
QIS	Mount Isa	40.29	261	P	P	20 22 52.9	-0.3
HTT	Hallett	41.21	241	P	P	20 23 00.7	+0.3
LCRK	Leigh Creek	41.46	246	P	P	20 23 02.6	+0.3
TWOA	Tennyson Woods	41.75	239	P	P	20 23 04.6	0.0
NAPP	Napperby	41.82	242	P	P	20 23 05.9	+0.8
BBOO	Buckleboo	43.51	242	P	P	20 23 18.3	-0.1
BBOO	Buckleboo	43.51	242	P	P	20 23 18.4	0.0
OOD	Oodnadatta	43.54	250	P	P	20 23 19.5	+0.8
MULG	Mulgathing	45.03	246	P	P	20 23 30.0	-0.2
WR0	Warramunga Arr	45.08	261	P	P	20 23 29.7	-1.0
WR0				IAmb	IAmb	20 23 31.7	
	comp=Z,6.1nm,0.9s						
WB2	Warramunga Arr	45.26	261	P	P	20 23 31.1	-0.9
WB2				IAmb	IAmb	20 23 32.8	
	comp=Z,8.5nm,0.9s						
WRA	Warramunga Arr	45.27	261	P	P	20 23 31.4	-0.8
	comp=Z,4.3nm,0.3s,baz=98,slow=8.1,SNR=74						
WRA				PcP	PcP	20 25 00.3	-0.1
	comp=Z,2.1nm,0.5s,baz=97,slow=3.5,SNR=8.8						
WRA				S	S	20 29 33.2	+0.4
	comp=Z,0.9nm,0.9s,baz=98,slow=14,SNR=4.6						
	comp=Z,4.3nm,0.3s						
WRA	Warramunga Arr	45.27	261	P	P	20 23 31.1	-1.1
WRA				PcP	PcP	20 25 00.5	+0.1
ASAR	Alice Springs	45.28	256	P	P	20 23 32.0	-0.2
	comp=Z,9.4nm,0.5s,baz=85,slow=8.1,SNR=193						
ASAR				PcP	PcP	20 25 00.0	-0.4
	comp=Z,4.8nm,0.6s,baz=102,slow=4.0,SNR=15						
ASAR				S	S	20 29 29.9	-3.0
	comp=Z,3.5nm,0.8s,baz=92,slow=15,SNR=26						
	comp=Z,9.4nm,0.5s						
MTN	Manton Dam	49.67	269	P	P	20 24 04.4	-0.7
MTN				IAmb	IAmb	20 24 05.0	
	comp=Z,12nm,0.8s						
FORT	Forrest	50.22	246	P	P	20 24 08.4	-0.6
KNRA	Kununurra	51.25	265	P	P	20 24 16.1	-0.5
KNRA				IAmb	IAmb	20 24 17.1	
	comp=Z,16nm,0.8s						
SIJI	Sorong	53.44	284	P	P	20 24 32.0	-0.4
	comp=Z,16nm,0.6s,baz=46,slow=9.1,SNR=11						
	comp=Z,16nm,0.6s						
SOEI	Soe	56.98	271	P	P	20 24 58.0	+0.8
BATI	Baumata	57.42	270	P	P	20 25 00.9	+0.9
	comp=Z,14nm,0.5s,baz=175,slow=1.6,SNR=5.4						
	comp=Z,14nm,0.5s						
TNTI	Ternate	57.67	284	P	P	20 25 00.5	-1.2
TNTI				IAmb	IAmb	20 25 02.4	
	comp=Z,16nm,1.0s						
PSA00	Pilbara Seismi	58.42	256	P	P	20 25 06.1	-0.7
PSA00				IAmb	IAmb	20 25 06.9	
	comp=Z,28nm,0.7s						
PSA00	Pilbara Seismi	58.42	256	P	P	20 25 05.7	-1.0
PSA00				IAmb	IAmb	20 25 07.0	
	comp=Z,9.6nm,0.7s						
MBWA	Marble Bar	58.60	257	P	P	20 25 07.2	-0.8
MBWA				IAmb	IAmb	20 25 08.0	
	comp=Z,15nm,0.6s						
SBA	Scott Base	59.04	184	P	P	20 25 12.2	+2.3
SBA				IAmb	IAmb	20 25 13.6	
	comp=Z,12nm,1.0s						
VNDA	Vanda	59.09	185	P	P	20 25 12.0	+1.8
	comp=Z,2.7nm,0.7s,baz=2.2,slow=7.2,SNR=25						
	comp=Z,2.7nm,0.7s						
VNDA	Vanda	59.09	185	P	P	20 25 11.9	+1.6
MMRI	Maumere	59.22	271	P	P	20 25 11.2	-0.9
MMRI				IAmb	IAmb	20 25 12.3	
	comp=Z,22nm,1.0s						
NWAO	Narrogin (SRO)	59.34	243	P	P	20 25 12.2	-0.5
NWAO				IAmb	IAmb	20 25 22.8	
	comp=Z,21nm,1.1s						
MORW	Morawa	60.73	247	P	P	20 25 21.0	-1.0
MORW				IAmb	IAmb	20 25 22.2	
	comp=Z,7.7nm,0.7s						
LUWI	Luwuk	61.23	280	P	P	20 25 25.2	-0.2
LUWI				IAmb	IAmb	20 25 41.9	
	comp=Z,20nm,1.0s						
GIRL	Giralia	63.35	254	P	P	20 25 39.1	0.0
TOLI2	Tolitoli	63.87	281	P	P	20 25 42.1	-0.5
CASY	Casey	65.21	205	P	P	20 25 50.0	-0.1
CASY				IAmb	IAmb	20 25 51.6	
	comp=Z,11nm,0.8s						
JAGI	Jajag, Banyuwa	66.90	269	P	P	20 26 00.3	-1.2
MYLDM	Lahad Datu	67.53	284	P	P	20 26 06.9	+1.5
MYLDM				IAmb	IAmb	20 26 31.9	
	comp=Z,11nm,1.2s						
MJAR	Matsushiro Arr	69.59	323	P	P	20 26 17.3	0.0
	comp=Z,0.4nm,0.6s,baz=119,slow=19,SNR=2.1						
	comp=Z,0.4nm,0.6s						
UGM	Wanagama	70.50	268	P	P	20 26 22.5	-0.8
QSPA	South Pole Qui	70.71	180	P	P	20 26 24.7	+1.0
	comp=Z,15nm,0.8s,baz=20,slow=0.5,SNR=70						
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	70.71	180	P	P	20 26 24.7	+1.0
QSPA				IAmb	IAmb	20 26 25.7	
	comp=Z,15nm,0.8s						
LEM	Lembang	73.57	268	P	P	20 26 41.6	+0.4
	comp=Z,43nm,0.7s,baz=35,slow=5.6,SNR=11						
KSM	Kuching	73.76	277	P	P	20 26 42.2	+0.1
KSM				IAmb	IAmb	20 26 43.3	
	comp=Z,12nm,0.9s						
SSLB	Suanglung	73.77	303	P	P	20 26 40.9	-1.1
SSLB				IAmb	IAmb	20 26 44.9	
	comp=Z,10nm,1.1s						
TPUB	Ta-pu	73.78	302	P	P	20 26 40.6	-1.4
TPUB				IAmb	IAmb	20 26 41.7	
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	75.30	345	P	P	20 26 50.1	+0.2
	comp=Z,0.8nm,0.5s,baz=142,slow=7.3,SNR=1.4						
	comp=Z,0.8nm,0.5s						
PETK	Petropavlovsk-	75.30	345	P	P	20 26 49.8	-0.1
PNTR	Pine Nut	79.40	42	P	P	20 27 14.0	+1.3
HUMO	Hull Mountain	79.48	38	P	P	20 27 13.7	+0.9
SMAI	San Martin Ant	79.49	159	P	P	20 27 13.5	+1.1
SMAI				IAmb	IAmb	20 27 14.8	
	comp=Z,24nm,1.0s						
YERR	Yerington	79.56	42	P	P	20 27 14.0	+0.5
NVAR	Mina Array Bea	79.85	43	P	P	20 27 16.2	+1.2
	comp=Z,1.4nm,0.8s,baz=224,slow=8.4,SNR=10.0						
	comp=Z,1.4nm,0.8s						
NVAR	Mina Array Bea	79.85	43	P	P	20 27 15.6	+0.5
BELA	Belgrano 2	80.63	173	P	P	20 27 18.1	-0.1
BELA				IAmb	IAmb	20 27 19.2	
	comp=Z,7.2nm,0.8s						
I07A	Izee	82.38	38	P	P	20 27 29.1	+1.2
X16A	Lo Mia Camp, P	82.42	50	P	P	20 27 29.6	+1.3
319A	Douglas	82.56	53	P	P	20 27 29.7	+0.6
319A				IAmb	IAmb	20 27 32.1	
	comp=Z,9.8nm,1.0s						
MAW	Mawson	82.81	200	P	P	20 27 29.8	+0.3
	comp=Z,4.6nm,0.6s,baz=131,slow=8.3,SNR=8.9						
	comp=Z,4.6nm,0.6s						
MAW	Mawson	82.81	200	P	P	20 27 29.8	+0.3
U15A	North Rim	82.82	48	P	P	20 27 30.8	+0.4
ELK	Elko	83.10	43	P	P	20 27 31.8	+0.1
L19K	White Mountain	83.22	10	P	P	20 27 31.8	+0.3
IPM	Ipoh	83.49	277	P	P	20 27 33.9	-0.1
GHO	Glory Hole Cre	84.00	13	P	P	20 27 34.9	-0.6
GHO				IAmb	IAmb	20 27 35.9	
	comp=Z,7.1nm,0.6s						
KULM	Kulim	84.11	278	P	P	20 27 37.0	0.0
SCM	Sheep Creek Mo	84.40	14	P	P	20 27 37.0	-0.4
SCM				IAmb	IAmb	20 27 38.4	
	comp=Z,5.1nm,0.8s						
TRF	Thorofare Moun	85.23	12	P	P	20 27 40.7	-0.9
TRF				IAmb	IAmb	20 27 41.4	
	comp=Z,3.7nm,0.7s						
MG02	Cerro Sombrero	85.29	145	P	P	20 27 42.0	0.0
SRU	San Rafael Swe	85.37	46	P	P	20 27 43.6	+0.8
SEY	Seymchan	85.38	347	P	P	20 27 41.8	-0.2
	comp=Z,2.8nm,0.8s,baz=140,slow=7.9,SNR=8.7						
	comp=Z,2.8nm,0.8s						
RND	Reindeer	85.47	12	P	P	20 27 42.3	-0.3
RND				IAmb	IAmb	20 27 43.1	
	comp=Z,4.9nm,0.8s						
MNTX	Cornudas Mount	85.68	54	P	P	20 27 45.5	+1.2
TX31	Lajitas Ar. Si	86.01	57	P	P	20 27 47.1	+1.1
TX31				IAmb	IAmb	20 27 48.3	
	comp=Z,7.6nm,0.8s						
TXAR	Lajitas Array	86.02	57	P	P	20 27 47.5	+1.5
	comp=Z,2.0nm,0.7s,baz=218,slow=6.8,SNR=27						
	comp=Z,2.0nm,0.7s						
TXAR	Lajitas Array	86.02	57	P	P	20 27 47.3	+1.3
MCMT	McKenzie Canyo	86.76	40	P	P	20 27 50.3	+1.0
HDA	Harding Lake	86.76	13	P	P	20 27 47.8	-0.8
HDA				IAmb	IAmb	20 27 48.8	
	comp=Z,2.9nm,0.6s						
IMAR	Indian Mountai	86.95	9	P	P	20 27 49.1	-0.3
IL31		87.09	13	P	P	20 27 49.2	-0.8
ILAR	Eielson Array	87.09	13	P	P	20 27 49.4	-0.7
	comp=Z,0.9nm,0.7s,baz=232,slow=5.0,SNR=9.8						
	comp=Z,0.9nm,0.7s						
J25K	Salcha River,	87.27	13	P	P	20 27 50.8	-0.2
M30M	Minto, Yukon	87.73	18	P	P	20 27 53.5	+0.3
PDAR	Pinedale Array	87.78	43	P	P	20 27 53.8	-0.5
	comp=Z,0.8nm,0.7s,baz=204,slow=3.5,SNR=8.9						
	comp=Z,0.8nm,0.7s						
PDAR	Pinedale Array	87.78	43	P	P	20 27 54.0	-0.2
BOZ	Bozeman (W)	87.89	40	P	P	20 27 54.6	0.0
BOZ				IAmb	IAmb	20 27 56.6	
	comp=Z,3.0nm,0.9s						
TROLL	Troll, Antarti	88.87	180	P	P	20 27 58.8	+0.1
HHC	Hu-ho-hao-te	88.92	314	*e*P	P	20 28 00.3	+0.9
HHC				pmax	pmax		
	comp=Z,33nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.8s						
SNAA	Sanae	89.14	178	P	P	20 27 59.6	-0.2
SNAA	Sanae	89.14	178	P	P	20 27 59.4	-0.5
SNAA				IAmb	IAmb	20 28 00.4	
	comp=Z,9.2nm,1.0s						
VNA3	Neumayer Olymp	89.25	176	P	P	20 28 00.3	0.0
PLCA	Paso Flores	89.69	133	P	P	20 28 02.5	-0.6
	comp=Z,0.9nm,0.6s,baz=240,slow=7.4,SNR=4.4						
	comp=Z,0.9nm,0.6s						
PLCA	Paso Flores	89.69	133	P	P	20 28 03.0	-0.1
PLCA				IAmb	IAmb	20 28 08.3	
	comp=Z,4.1nm,1.1s						
VNA2	Neumayer--Watz	89.70	177	P	P	20 28 02.6	+0.3
	baz=181,slow=4.0						
BMAR	Burnt Mountain	89.87	12	P	P	20 28 03.2	+0.2
VNA1	Neumayer--Stat	89.92	176	P	P	20 28 03.6	+0.3
CMAR	Chiang Mai Arr	90.21	289	P	P	20 28 06.0	+0.3
	comp=Z,2.9nm,0.8s,baz=118,slow=2.6,SNR=22						
	comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	90.21	289	P	P	20 28 06.3	+0.6
CHTO	Chiang Mai	90.33	290	P	P	20 28 06.3	+0.1
CHTO				IAmb	IAmb	20 28 07.8	
	comp=Z,4.8nm,0.8s						
PZH	PanZhiHua	90.62	298	P	P	20 28 09.0	+1.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,4.8s						
SONM	Songino Array	95.22	319	P	P	20 28 27.8	-0.4
	comp=Z,0.3nm,0.5s,baz=134,slow=4.1,SNR=2.9						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	110.78	314	Pdiff	Pdif	20 29 39.1	+1.8
	comp=Z,0.1nm,0.6s,baz=76,slow=6.4,SNR=2.0						
KK31	Karatay Array	118.92	309		PKPdf	20 33 48.4	-1.1
KKAR	Karatay Array	118.92	309		PKPdf	20 33 48.3	-1.2
KKAR	Karatay Array	118.92	309		PKPdf	20 33 48.4	-1.1
ARU	Arti	124.54	326	PKPdf	PKPdf	20 33 58.9	-0.9
BOSA	Boshof	127.50	205	PKP	PKPdf	20 34 06.7	+0.1
	comp=Z,2.8nm,0.8s,baz=150,slow=0.8,SNR=8.5						
BOSA	Boshof	127.50	205		PKPdf	20 34 06.5	-0.1
ARCES	ARCESS Array B	127.89	350	PKP	PKPdf	20 34 05.0	-0.8
	comp=Z,1.8nm,0.4s,baz=21,slow=1.3,SNR=30						
FINES	FINESS Array B	134.81	344	PKP	PKPdf	20 34 17.7	-1.4
	comp=Z,1.3nm,0.6s,baz=49,slow=4.2,SNR=9.2						
FINES	FINESS Array B	134.81	344		PKPdf	20 34 19.1	0.0
NB2	NORSAR Subarra	137.90	354	PKP	PKPpre	20 34 17.4	
	comp=Z,0.7nm,0.5s,baz=12,slow=4.0						
NOA	NORSAR Array B	137.90	354	PKhKP	PKPpre	20 34 17.3	
	comp=Z,0.7nm,0.7s,baz=17,slow=2.4,SNR=4.2						
NOA				PKP	PKPdf	20 34 24.5	-0.4
	comp=Z,1.0nm,0.8s,baz=17,slow=4.5,SNR=4.1						
AKASG	Malin Array Be	142.25	332	PKhKP	PKPpre	20 34 28.4	
	comp=Z,1.4nm,0.3s,baz=40,slow=4.2,SNR=12						
SORM	Soroca	144.48	330	⇓P	PKPdf	20 34 36.1	-0.8
MILM	Milestii Mici	145.10	328	⇓P	PKPdf	20 34 38.1	+0.1
VASR	Vaslui	145.80	328	⇓P	PKPbc	20 34 40.9	0.0
VLDR	Vladesti	146.21	327	⇓P	PKPbc	20 34 42.1	0.0
OJC	Ojcow	146.27	340		PKPbc	20 34 41.5	-0.6
BURAR	Bucovina Array	146.30	332	⇓P	PKPbc	20 34 42.7	+0.2
SCTR	Scanteiesti	146.37	327	⇑P	PKPbc	20 34 42.4	-0.2
GHRR		146.40	328	⇓P	PKPbc	20 34 43.4	+0.7
BIZ	Bicaz	146.40	330	⇓P	PKPbc	20 34 43.1	+0.5
BR131	Keskin Array S	146.43	314		PKPbc	20 34 42.4	-0.7
BRTR	Keskin Array B	146.43	314	PKPbc	PKPbc	20 34 42.5	-0.7
	comp=Z,5.0nm,0.6s,baz=140,slow=4.8,SNR=26						
BRTR	Keskin Array B	146.43	314		PKPbc	20 34 42.1	-1.0
TESR	Tescani	146.45	329	⇓P	PKPdf	20 34 41.3	+0.9
KOLS	Kolonicke sedl	146.48	336	*e*PKP	PKPbc	20 34 42.9	+0.1
IZVR	Izvoarele	146.57	327	⇓P	PKPbc	20 34 41.9	-1.2
CFR	Carcaliu	146.63	326	⇑P	PKPbc	20 34 42.7	-0.5
PANC	Panciu	146.66	328	⇑P	PKPbc	20 34 43.7	+0.4
TPGR	Topolog	146.69	326	⇓P	PKPbc	20 34 43.5	-0.1
CRVS	Cervenica-Dubn	146.81	337	*e*PKP	PKPbc	20 34 43.8	+0.1
VRI	Vrincioaia	146.87	328	⇓P	PKPbc	20 34 43.3	-0.6
VRI				⇓P	PKPbc	20 34 43.4	-0.6
PLOR	Plostina	146.92	328	⇓P	PKPbc	20 34 43.6	-0.6
TIRR	Tirgusor	146.96	325	⇓P	PKPbc	20 34 43.0	-1.2
OSTC	Ostas	147.02	344	*e*PKP	PKPbc	20 34 45.0	+0.8
CHVC	Chvalec	147.03	344	*e*PKP	PKPbc	20 34 44.2	-0.1
CLL	Collm	147.06	348	⇓*i*PKPbc	PKPbc	20 34 44.1	-0.1
	comp=Z,13nm,0.6s						
CLL				*i* PKiKP	PKPab	20 34 46.8	-0.8
	comp=Z,7.0nm,1.0s						
CLL				*e*pPKPbc	pPKPab	20 36 54.0	+3.6
HARR	Harsova	147.06	326	⇓P	PKPbc	20 34 43.7	-0.8
TLBR	Topalu	147.10	325	⇑P	PKPbc	20 34 44.1	-0.5
UPC	Upice	147.12	344	*e*PKP	PKPbc	20 34 44.7	+0.2
OKC	Ostrava-Krasne	147.12	341	*e*PKP	PKPbc	20 34 44.1	-0.4
COVR	Voineasa-Covas	147.14	329	⇑P	PKPdf	20 34 42.9	+1.3
OZUR		147.16	330	⇓P	PKPbc	20 34 44.4	-0.3
DPC	Dobruska-Polom	147.18	344	*e*PKP	PKPbc	20 34 44.8	+0.1
DPC				*e*x	x	20 34 48.4	
BRG	Berggiesshubel	147.27	347	*e*PKP	PKPbc	20 34 45.1	+0.2
BRG				Amp		20 34 46.7	
	comp=Z,6.0nm,0.7s						
MANR	Mangalia	147.28	324	⇓P	PKPbc	20 34 45.0	-0.1
LANS	Liptovska Anna	147.30	339	*e*PKP	PKiKP	20 34 45.9	-0.8
KRLC	Kraliky	147.31	343	*e*PKP	PKPbc	20 34 45.2	+0.2
MORC	Moravsky Berou	147.35	342	*e*PKP	PKPbc	20 34 45.3	+0.1
NEHR	Nehoiu	147.40	328	⇓P	PKPbc	20 34 45.0	-0.4
DOPR	Dopca	147.45	330	⇓P	PKPbc	20 34 45.4	-0.1
PVCC	Panska Ves	147.45	346	*e*PKP	PKPbc	20 34 45.8	+0.5
ISR	Istrita	147.49	328	⇓P	PKPbc	20 34 44.0	-1.6
MLR	Muntele Rosu	147.52	329	⇓P	PKPbc	20 34 45.0	-0.8
MLR	Muntele Rosu	147.52	329		PKPbc	20 34 45.0	-0.8
MAUC	Maruska	147.64	341	*e*PKP	PKPbc	20 34 46.3	+0.4
SECR		147.79	328	⇑P	PKPbc	20 34 46.2	-0.1
PRU	Pruhonice	147.96	345	*e*PKP	PKPbc	20 34 46.6	0.0
VOIR		148.00	329	⇑P	PKPbc	20 34 46.6	-0.4
VRAC	Vranov	148.05	343	*e*PKP	PKPbc	20 34 46.8	-0.1
VYHS	Vyhne	148.08	339	*e*PKP	PKPbc	20 34 47.3	+0.3
JAVC	Velka Javorina	148.13	341	*e*PKP	PKiKP	20 34 48.4	-0.1
KOLL	Kolacno	148.15	340	*e*PKP	PKiKP	20 34 47.8	-0.6
NKC	Novy Kostel	148.19	348	*e*PKP	PKPbc	20 34 47.2	0.0
PSZ	Piszkesteto	148.20	338		PKPbc	20 34 46.5	-0.9
KRUC	Moravsky	148.33	343	*e*PKP	PKPbc	20 34 47.4	-0.2
SMOL	Smolenice	148.51	341	*e*PKP	PKiKP	20 34 48.9	-0.3
RAZG	Razgrad	148.58	325	⇑P	PKPbc	20 34 47.9	-0.5
MODS	Modra-Piesok	148.68	341	*e*PKP	PKPbc	20 34 48.8	+0.3
MEM	Membach	148.69	356	*d*PKPbc	PKPbc	20 34 48.0	-0.4
BTNL	Ternell	148.70	356	*d*PKPbc	PKPbc	20 34 48.1	-0.4
BSTI	Sart Tilman	148.74	356	*d*PKPbc	PKPbc	20 34 48.2	-0.3
SIRR	Siria	148.88	334	⇓P	PKPbc	20 34 49.0	0.0
BHOU	Houvegnez	148.94	356	*d*PKPbc	PKPbc	20 34 48.3	-0.8
KHC	Kasperske Hory	148.99	346	*e*PKP	PKPbc	20 34 49.4	+0.1
BMRD	Maredsous	149.07	357	*d*PKPbc	PKPbc	20 34 49.1	-0.2
GZR	Gura Zlata	149.09	332	⇓P	PKPbc	20 34 49.1	-0.5
CKRC	Cesky Krumlov	149.10	345	*e*PKP	PKPbc	20 34 49.3	-0.2
RCHB	Rochefort	149.19	357	*d*PKPbc	PKPbc	20 34 49.5	-0.2
GERES	GERESS Array B	149.23	346	PKPbc	PKPbc	20 34 49.6	-0.4
	comp=Z,5.0nm,0.7s,baz=64,slow=6.1,SNR=29						
DOU	Dourbes	149.28	357	*d*PKPbc	PKPbc	20 34 49.8	-0.1
BZS	Buzias	149.42	333	⇓P	PKPbc	20 34 49.9	-0.5
CONA	Conrad Observa	149.50	342	*i* P	PKPbc	20 34 50.6	0.0
	comp=Z,9.6nm,0.7s,SNR=11						
RONA	Rosalia, Austr	149.58	341	*i* P	PKPbc	20 34 50.8	0.0
	SNR=12						
WLF	Walferdange	149.62	355	*d*PKiKP	PKiKP	20 34 51.1	-0.3
HERR	Herculane	149.64	331	⇓P	PKPbc	20 34 50.3	-0.6
MOA	Molln	150.01	344	*i* P	PKPbc	20 34 51.3	-0.5
	comp=Z,3.3nm,0.6s						
ARSA	Arzberg	150.22	342	*i* P	PKPbc	20 34 51.2	-1.0
	comp=Z,2.8nm,0.9s						
BIOA	Bad Ischl, Aus	150.32	345	*i* P	PKPbc	20 34 51.7	-0.8
ALN	Alexandroupoli	150.59	322		PKPbc	20 34 52.0	-1.2
BFO	Black Forest	150.71	352		PKPbc	20 34 52.7	-0.6
RDO	Rodhopi	150.72	323		PKPbc	20 34 52.7	-0.8
SOKA	Soboth	150.88	342	*i* P	PKPbc	20 34 52.9	-1.0
	comp=Z,9.5nm,1.1s,SNR=8.5						
PERS	Pernice	150.89	342	*i* PKPbc	PKPbc	20 34 52.8	-1.0

VTS	**Vitosha**	**150.95**	**328**		**PKPbc**	**20 34 53.8**	**-0.4**
KBA	**Koelnbreinsper**	**150.96**	**345**	*i* P	**PKPbc**	**20 34 53.0**	**-1.1**
	comp=Z,8.1nm,0.6s,SNR=6.8						
WATA	**Walderalm**	**151.13**	**347**	*i* P	**PKPbc**	**20 34 53.8**	**-0.7**
	comp=Z,7.0nm,0.5s,SNR=8.6						
RETA	**Reutte**	**151.14**	**348**	*i* P	**PKPbc**	**20 34 54.0**	**-0.5**
	comp=Z,3.0nm,0.5s						
OBKA	**Obir**	**151.17**	**343**	*i* P	**PKPbc**	**20 34 53.4**	**-1.1**
	comp=Z,2.8nm,0.6s						
WTTA	**Wattenberg**	**151.18**	**347**	*i* P	**PKPbc**	**20 34 54.2**	**-0.5**
	comp=Z,14nm,0.5s,SNR=10						
MOTA	**Moosalm**	**151.21**	**348**	*i* P	**PKPbc**	**20 34 54.0**	**-0.7**
	comp=Z,8.6nm,0.9s,SNR=5.1						
MYKA	**Terra Mystica**	**151.30**	**344**	*i* P	**PKPbc**	**20 34 53.5**	**-1.3**
	comp=Z,7.7nm,0.6s						
SQTA	**Sankt Quirin**	**151.31**	**348**	*i* P	**PKPbc**	**20 34 54.3**	**-0.5**
	comp=Z,8.6nm,0.6s,SNR=6.0						
DIVS	**Divibare**	**151.33**	**333**		**PKPbc**	**20 34 54.2**	**-0.8**
LEGS	**Legarje**	**151.45**	**341**	*i* PKPbc	**PKPbc**	**20 34 54.4**	**-0.6**
ABTA	**Abfaltersbach**	**151.47**	**346**	*i* P	**PKPbc**	**20 34 54.1**	**-1.1**
	comp=Z,12nm,0.5s,SNR=10						
DAVA	**Damuels**	**151.50**	**349**	*i* P	**PKPbc**	**20 34 54.8**	**-0.5**
	comp=Z,6.0nm,0.7s						
CRES	**Cresnjev**	**151.52**	**341**	*i* PKPbc	**PKPbc**	**20 34 54.6**	**-0.6**
FETA	**Feichten**	**151.60**	**348**	*i* P	**PKPbc**	**20 34 55.1**	**-0.4**
	comp=Z,5.5nm,0.6s,SNR=5.3						
CRNS	**Crni Vrh**	**151.64**	**343**	*i* PKPbc	**PKPbc**	**20 34 54.7**	**-0.9**
FNA	**Florina**	**153.24**	**327**		**PKPbc**	**20 34 58.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**173.78**	**172**	PKP	**PKPdf**	**20 35 09.2**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=282,slow=0.7,SNR=8.2						
TORD				PKPab	**PKPab**	**20 36 44.5**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=255,slow=0.4,SNR=3.6						

IDC ***28*** *20:28:07.8±1.2, 35°.58N×135°.89E, h346^{km}±19^{km}, mb3.0/4, mbtmp3.7/9, Error ellipse: s-maj=31.1km s-min=15.9km az=57.0*

JMA ***28*** *20:28:08.4±0.1, 35°.7N±0°.9×135°.8E±0°.9, h345^{km}±1^{km}, MV3.2/31, E PART OF WAKASA BAY*

ISC 28 20:28:08.4±0.8**, 35°.69N**±0°.09×**135°.66E**±0°.08**, h344**^{km}±7^{km}**,**
n18, σ1^{s}.18/26**, mb3.3**/4**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	**Mihama**	**0.31**	**121**	P	**Pn**	**20 28 52.0**	**+0.3**
JFM				S	**S**	**20 29 26.0**	**-0.3**
JWT	**Wachi**	**0.45**	**208**	P	**Pn**	**20 28 52.2**	**+0.2**
JWT				S	**S**	**20 29 26.1**	**-0.7**
JKY	**Yasaka**	**0.46**	**263**	P	**Pn**	**20 28 52.4**	**+0.5**
JKY				S	**S**	**20 29 26.8**	**0.0**
JKG	**Kaga**	**0.80**	**43**	P	**Pn**	**20 28 52.8**	**+0.2**
JKG				S	**S**	**20 29 27.5**	**-0.7**
JKSM	**Kasumi**	**0.82**	**263**	P	**Pn**	**20 28 53.3**	**+0.5**
JKSM				S	**S**	**20 29 28.6**	**+0.2**
JYTA	**Yamagatataniai**	**0.88**	**96**	P	**Pn**	**20 28 53.0**	**0.0**
JYTA				S	**S**	**20 29 28.1**	**-0.7**
JWY	**Kouya**	**1.47**	**182**	P	**Pn**	**20 28 55.9**	**-0.1**
JWY				S	**S**	**20 29 33.2**	**-0.8**
MJAR	**Matsushiro Arr**	**2.23**	**67**	P	**Pn**	**20 29 00.0**	**-0.8**
	4.5nm,0.4s,baz=260,slow=3.8,SNR=42						
MJAR				S	**S**	**20 29 43.1**	**+0.2**
	2.8nm,0.9s,baz=252,slow=12,SNR=5.0						
JHJ	**Hachijo jima 2**	**4.26**	**126**	P	**Pn**	**20 29 22.3**	**+2.5**
	15nm,0.3s,baz=245,slow=14,SNR=1.5						
JHJ				S	**S**	**20 30 20.0**	**+2.6**
	20nm,0.3s,baz=253,slow=19,SNR=5.6						
KSRS	**Korea Array**	**6.47**	**288**	P	**Pn**	**20 29 46.2**	**+1.9**
	2.1nm,0.8s,baz=105,slow=12,SNR=8.5						
USRK	**Ussuriysk Ar.**	**8.96**	**343**	P	**Pn**	**20 30 14.8**	**+1.2**
	5.1nm,0.7s,baz=171,slow=12,SNR=6.2						
ASAJ	**Asahikawa**	**9.96**	**30**	P	**Pn**	**20 30 24.4**	**-1.3**
	2.4nm,0.4s,baz=220,slow=16,SNR=16						
JCJ	**Chichijima**	**10.21**	**145**	P	Pn	20 30 22.6	-6.4
	36nm,0.8s,baz=284,slow=16,SNR=2.0						
JCJ				S	S	20 32 06.0	-18
	32nm,0.6s,baz=271,slow=20,SNR=2.1						
KLR	**Kul'dur**	**13.84**	**349**	P	**Pn**	**20 31 11.8**	**+0.2**
	1.1nm,0.4s,baz=172,slow=9.9,SNR=5.0						
SONM	**Songino Array**	**24.82**	**308**	P	**P**	**20 33 01.8**	**+1.4**
	0.8nm,0.5s,baz=116,slow=9.7,SNR=9.4						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**40.91**	**303**	P	**P**	**20 35 18.9**	**+0.7**
	0.5nm,0.5s,baz=87,slow=10,SNR=7.6						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**55.34**	**182**	P	**P**	**20 37 05.9**	**-1.7**
	0.6nm,0.4s,baz=353,slow=7.6,SNR=9.0						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**59.05**	**182**	P	**P**	**20 37 31.8**	**-1.5**
	0.3nm,0.3s,baz=0.2,slow=6.5,SNR=4.0						
	0.3nm,0.3s						

NEIC ***28*** *20:36:03.9±0.9, 17°.9N±0°.1×68°.57W±0°.02, h44^{km}±59^{km}, Error ellipse: s-maj=14.9km s-min=3.0km az=176.0*

RSPR ***28*** *20:36:04.2, 17°.83N×68°.60W, h35^{km}±14^{km}, MD3.4/13*

ISC 28 20:36:03.9±1.6**, 17°.9N**±0°.1×**68°.56W**±0°.04**, h35**^{km}**, n55,**
σ0^{s}.86/60**, 12C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**1.14**	**65**	⇑*e*P	**Pn**	**20 36 24.2**	**+0.8**
IDE	**Isla Desecheo**	**1.14**	**65**	*e*S	**Sn**	**20 36 38.2**	**+0.4**
DR12	**Loma Pena Alta**	**1.18**	**319**	⇑*i*P	**Pn**	**20 36 23.2**	**-0.8**
DR12				*e*S	**Sn**	**20 36 38.2**	**-0.6**
DR12	**Loma Pena Alta**	**1.18**	**319**		**Pn**	**20 36 23.2**	**-0.8**
DR12				Sn	**Sn**	**20 36 38.2**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.38**	**86**	⇑*e*P	**Pn**	**20 36 26.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.38**	**86**	*e*S	**Sn**	**20 36 44.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.38**	**86**		**Pn**	**20 36 26.9**	**+0.2**
CRPR					**Sn**	**20 36 44.4**	**+0.5**
LSP	**Las Mesas**	**1.43**	**79**	⇑*e*P	**Pn**	**20 36 27.5**	**+0.1**
LSP	**Las Mesas**	**1.43**	**79**	*e*S	**Sn**	**20 36 46.1**	**+1.1**
MLPR	**Magueyes Islan**	**1.44**	**87**	⇑*e*P	**Pn**	**20 36 27.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.44**	**87**	*e*S	**Sn**	**20 36 45.1**	**-0.2**
MLPR	**Magueyes Islan**	**1.44**	**87**		**Pn**	**20 36 27.3**	**-0.3**
MLPR					**Sn**	**20 36 45.3**	**0.0**
AGPR	**Aguadilla, PR**	**1.49**	**68**	⇑*e*P	**Pn**	**20 36 28.6**	**+0.4**
AGPR	**Aguadilla, PR**	**1.49**	**68**	*e*S	**Sn**	**20 36 47.2**	**+0.8**
AGPR	**Aguadilla, PR**	**1.49**	**68**		**Pn**	**20 36 29.0**	**+0.9**
AGPR	**Aguadilla, PR**	**1.49**	**68**		**Sn**	**20 36 47.2**	**+0.8**
AOPR	**Arecibo Observ**	**1.77**	**75**	⇓*e*P	**Pn**	**20 36 31.9**	**-0.2**
AOPR	**Arecibo Observ**	**1.77**	**75**	*e*S	**Sn**	**20 36 53.3**	**-0.2**
AOPR	**Arecibo Observ**	**1.77**	**75**		**Pn**	**20 36 31.9**	**-0.2**
AOPR					**Sn**	**20 36 53.3**	**-0.2**
AOPR	**Arecibo Observ**	**1.77**	**75**	IAML		20 37 00.0	
	comp=N,267nm,0.2s						
BANI	**BANI**	**1.78**	**286**	Pn	**Pn**	**20 36 32.9**	**+0.6**
OBIP	**Obispado Ponce**	**1.86**	**85**	⇑*e*P	**Pn**	**20 36 33.5**	**+0.2**
OBIP	**Obispado Ponce**	**1.86**	**85**	*e*S	**Sn**	**20 36 55.9**	**+0.2**
OBIP	**Obispado Ponce**	**1.86**	**85**		**Pn**	**20 36 33.5**	**+0.2**
OBIP					**Sn**	**20 36 55.9**	**+0.2**
CELP	**Cerrillos**	**1.89**	**85**	⇓*e*P	**Pn**	**20 36 33.5**	**-0.2**
CELP	**Cerrillos**	**1.89**	**85**	*e*S	**Sn**	**20 36 56.5**	**+0.1**
CELP	**Cerrillos**	**1.89**	**85**		**Pn**	**20 36 33.5**	**-0.2**
CELP					**Sn**	**20 36 56.5**	**+0.1**
CELP	**Cerrillos**	**1.89**	**85**	IAML		20 36 57.8	
	comp=E,97nm,0.3s						
CELP				IAML		20 36 58.1	
	comp=N,76nm,0.6s						
EMPR	**Esperanza - Ma**	**2.01**	**73**	⇑*e*P	**Pn**	**20 36 35.7**	**+0.3**
EMPR	**Esperanza - Ma**	**2.01**	**73**	*e*S	**Sn**	**20 37 00.6**	**+1.3**
EMPR	**Esperanza - Ma**	**2.01**	**73**		**Pn**	**20 36 35.7**	**+0.3**
EMPR					**Sn**	**20 37 00.6**	**+1.3**
IGPR	**InterUniversit**	**2.33**	**88**	⇑*e*P	**Pn**	**20 36 38.7**	**-1.1**
IGPR	**InterUniversit**	**2.33**	**88**	*e*S	**Sn**	**20 37 06.6**	**-0.7**
IGPR	**InterUniversit**	**2.33**	**88**		**Sn**	**20 37 06.6**	**-0.7**
PDPR	**Patillas Dam,**	**2.42**	**87**	Pn	**Pn**	**20 36 40.8**	**-0.2**
HUMP	**Col San Antoni**	**2.59**	**84**	⇑*e*P	**Pn**	**20 36 43.5**	**+0.2**
HUMP	**Col San Antoni**	**2.59**	**84**	*e*S	**Sn**	**20 37 13.9**	**+0.3**
HUMP	**Col San Antoni**	**2.59**	**84**		**Sn**	**20 37 13.9**	**+0.3**
HUMP	**Col San Antoni**	**2.59**	**84**		**Pn**	**20 36 43.2**	**-0.2**
CBYP	**Canovanas**	**2.60**	**81**	⇑*e*P	**Pn**	**20 36 42.9**	**-0.6**
CBYP	**Canovanas**	**2.60**	**81**	*e*S	**Sn**	**20 37 13.2**	**-0.6**
CBYP	**Canovanas**	**2.60**	**81**		**Pn**	**20 36 42.9**	**-0.6**
CBYP					**Sn**	**20 37 13.2**	**-0.6**
CBYP	**Canovanas**	**2.60**	**81**	IAML		20 37 18.1	
	comp=E,138nm,0.2s						
SDDR	**Presa de Saban**	**2.80**	**293**	Pn	**Pn**	**20 36 47.9**	**+1.5**
SDDR				IAML		20 37 27.7	
	comp=E,22nm,0.7s						
SDDR				IAML		20 37 34.0	
	comp=E,22nm,0.8s						
MTP	**Monte Pirata**	**2.87**	**86**	⇑*e*P	**Pn**	**20 36 49.1**	**+1.9**
MTP	**Monte Pirata**	**2.87**	**86**	*e*S	**Sn**	**20 37 21.0**	**+0.5**
MTP	**Monte Pirata**	**2.87**	**86**		**Pn**	**20 36 46.7**	**-0.5**
MTP	**Monte Pirata**	**2.87**	**86**		**Sn**	**20 37 21.0**	**+0.5**
MTP	**Monte Pirata**	**2.87**	**86**	IAML		20 37 26.0	
	comp=E,27nm,0.3s						
CUPR	**Culebra, Puert**	**3.14**	**82**	*e*S	**Sn**	**20 37 25.1**	**-2.2**
CUPR	**Culebra, Puert**	**3.14**	**82**		**Sn**	**20 37 25.1**	**-2.2**
STVI	**Saint Thomas**	**3.46**	**82**	*e*S	**Sn**	**20 37 32.7**	**-2.3**
STVI	**Saint Thomas**	**3.46**	**82**		**Sn**	**20 37 32.7**	**-2.3**
SJVI	**Gifft Hill Sch**	**3.63**	**83**	⇑*e*P	**Pn**	**20 36 58.0**	**+0.4**
SJVI	**Gifft Hill Sch**	**3.63**	**83**		**Pn**	**20 36 58.0**	**+0.4**

IDC ***28*** *20:54:03.5±1.9, 55°.10N×111°.45E, h0^{km}, mb3.4/2, mbtmp3.5/6, ML2.9/3, Error ellipse: s-maj=27.9km s-min=21.8km az=136.0*

MOS ***28*** *20:54:04.7±1.1, 55°.00N×111°.43E, h6^{km}, mb3.5/1, Error ellipse: s-maj=13.0km s-min=7.3km az=70.4*

BYKL ***28*** *20:54:06.5±0.1, 54°.98N×111°.48E, h21^{km}±2^{km}*

ISC 28 20:54:04.8±0.8**, 54°.96N**±0°.02×**111°.45E**±0°.02**, h13**^{km}±6^{km}**,**
n56, σ2^{s}.56/100**, 9C-5D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.19**	**242**	⇓*i*Pg	**Pg**	**20 54 11.6**	**+2.6**
YLYR				*e*Sg	**Sg**	**20 54 15.5**	**+3.5**
YLYR				Pmax			
	3µm,0.2s						
YLYR				Smax			
	23µm,0.2s						
YLYR	**Ulyunkhan**	**0.19**	**242**	⇓*i*PG	**Pg**	**20 54 11.7**	**+2.7**
YLYR				*e*		20 54 14.7	
YLYR				pmax	pmax		
	comp=Z,4µm,0.1s						
YLYR				smax	smax		
	comp=E,6µm,0.1s						
KMO	**Kumora**	**0.94**	**351**	⇑*i*Pg	**Pn**	**20 54 23.0**	**-0.6**
KMO				*e*Pb	**Pb**	**20 54 26.1**	**+3.2**
KMO				*e*Sg	**Sb**	**20 54 35.4**	**+0.2**
KMO				max			
	comp=E,285nm,0.4s						
KMO				Smax			
	comp=E,3µm,0.8s						
KMO	**Kumora**	**0.94**	**351**	⇑*i*PG	**Pn**	**20 54 23.0**	**-0.6**
KMO				*e*		20 54 33.4	
KMO				pmax	pmax		
	comp=Z,236nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.6s						
YOA	**Uoyan**	**1.18**	**7**	⇑*i*Pg	**Pn**	**20 54 27.6**	**+0.6**
YOA				*e*Pb	**Pg**	**20 54 29.4**	**+1.9**
YOA				*e*Sg	**Sn**	**20 54 44.0**	**+1.0**
YOA				*e*		20 54 47.8	
YOA	**Uoyan**	**1.18**	**7**	⇓*i*PG	**Pn**	**20 54 27.6**	**+0.6**
YOA				*e*		20 54 44.1	
YOA				pmax	pmax		
	comp=Z,501nm,0.2s						
YOA				smax	smax		
	comp=E,6µm,0.4s						
UKT	**Uakit**	**1.35**	**66**	⇑*i*Pg	**Pg**	**20 54 30.4**	**-0.4**
UKT				*e*Pb	**Pb**	**20 54 31.5**	**+1.5**
UKT				*e*Sg	**Sg**	**20 54 48.3**	**-0.1**
UKT				*e*Sb	**Sn**	**20 54 50.9**	**+3.6**
UKT				max			
	comp=E,172nm,0.3s						
UKT				max			
	comp=E,2µm,0.6s						
UKT	**Uakit**	**1.35**	**66**	*e*PG	**Pg**	**20 54 30.6**	**-0.2**
UKT				*e*		20 54 48.6	
UKT				smax	smax		
	comp=N,707nm,0.3s						
NIZ	**Nizh Angarsk**	**1.36**	**308**	⇑*i*Pg	**Pg**	**20 54 30.7**	**-0.2**
NIZ				*e*Sg	**Sg**	**20 54 48.9**	**+0.3**
NIZ				Pmax			
	comp=N,157nm,0.4s						
NIZ				Smax			
	comp=N,602nm,0.2s						
NIZ	**Nizh Angarsk**	**1.36**	**308**	⇑*i*PG	**Pg**	**20 54 30.7**	**-0.2**
NIZ				*e*		20 54 48.8	
NIZ				pmax	pmax		
	comp=Z,161nm,0.2s						
NIZ				smax	smax		
	comp=E,607nm,0.2s						
SYVR	**Suvo**	**1.56**	**214**	*e*Pn	**Pb**	**20 54 34.2**	**+0.7**
SYVR				*e*Pg	**Pg**	**20 54 35.0**	**+0.3**
SYVR				*e*Sg	**Sg**	**20 54 57.3**	**+2.4**
SYVR				Pmax			
	comp=E,67nm,0.5s						
SYVR				Smax			
	comp=E,626nm,0.5s						
SYVR	**Suvo**	**1.56**	**214**	*e*PG	**Pg**	**20 54 34.9**	**+0.3**
SYVR				*e*		20 54 57.0	
SYVR				pmax	pmax		
	comp=Z,80nm,0.3s						
SYVR				smax	smax		
	comp=N,638nm,0.4s						
SVKR	**Severomuysk**	**1.67**	**45**	*e*Pg	**Pg**	**20 54 36.6**	**-0.1**
SVKR				*e*Sg	**Sg**	**20 54 59.2**	**+0.9**
SVKR				Pmax			
	comp=N,1µm,0.5s						
SVKR				Smax			
	comp=N,3µm,0.6s						
SVKR	**Severomuysk**	**1.67**	**45**	*e*PG	**Pg**	**20 54 36.6**	**-0.1**
SVKR				*e*		20 54 58.8	
SVKR				pmax	pmax		
	comp=Z,1µm,0.5s						
SVKR				smax	smax		
	comp=E,3µm,0.6s						
MXMB	**Maximikha**	**2.33**	**224**	*e*Pn	**Pn**	**20 54 44.9**	**+2.1**
MXMB				*e*Pg	**Pg**	**20 54 48.5**	**-0.9**
MXMB				*e*Sg	**Sg**	**20 55 20.3**	**+0.7**
OGRR	**Ongureny**	**2.62**	**241**	⇑*i*	**Pb**	**20 54 51.0**	**-0.5**
OGRR				*e*		20 54 52.3	
OGRR				*e*Pg	**Pg**	**20 54 55.0**	**+0.1**
OGRR				*e*Sg	**Sg**	**20 55 29.2**	**+0.4**
OGRR				Pmax			
	comp=E,37nm,0.5s						
OGRR				Smax			
	comp=E,197nm,0.4s						
OGRR	**Ongureny**	**2.62**	**241**	*e*PN	**Pb**	**20 54 51.0**	**-0.5**
OGRR				*e*		20 54 55.1	
OGRR				*e*		20 55 28.1	
OGRR				pmax	pmax		
	comp=Z,48nm,0.3s						
OGRR				smax	smax		
	comp=N,200nm,0.5s						
NLYR	**Nelyaty**	**2.85**	**56**	⇓*i*Pn	**Pn**	**20 54 51.4**	**+1.5**
NLYR				*e*Pg	**Pb**	**20 54 56.8**	**+1.3**
NLYR				*e*Sn	**Sn**	**20 55 24.7**	**+0.6**
NLYR				*e*Sg	**Sg**	**20 55 34.0**	**-2.3**
NLYR				Pmax			
	comp=N,29nm,0.3s						
NLYR				Smax			
	comp=N,363nm,1.2s						
KELR	**Kotokel**	**2.98**	**223**	*e*Pg	**Pb**	**20 54 59.7**	**+2.1**
KELR				*e*Sg	**Sg**	**20 55 39.6**	**-0.7**
BOD	**Bodaibo**	**3.19**	**25**	*e*Pn	**Pn**	**20 54 55.6**	**+0.9**
BOD				*e*Pg	**Pg**	**20 55 03.3**	**-2.6**
BOD				*e*		20 55 34.6	
BOD				*e*Sg	**Sg**	**20 55 44.0**	**-3.3**
BOD				Pmax			
	comp=N,72nm,0.9s						
BOD				Smax			
	comp=N,184nm,0.9s						
BOD	**Bodaibo**	**3.19**	**25**	*e*PN	**Pn**	**20 54 55.5**	**+0.9**
BOD				*e*		20 55 03.4	
BOD				*e*		20 55 42.1	
BOD				pmax	pmax		
	comp=Z,55nm,0.3s						
BOD				smax	smax		
	comp=E,185nm,0.3s						
CIT	**Chita**	**3.20**	**156**	*e*Sg	**Sg**	**20 55 45.4**	**-2.2**
CIT				Smax			
	comp=E,547nm,0.5s						
CIT	**Chita**	**3.20**	**156**	*e*PN	**Pb**	**20 54 59.3**	**-2.2**
CIT				*e*		20 55 04.9	
CIT				*e*S	**Sn**	**20 55 37.0**	**+4.1**
CIT				*e*		20 55 45.1	
CIT				pmax	pmax		
	comp=Z,34nm,0.7s						
CIT				smax	smax		
	comp=E,547nm,0.8s						
ZRHB	**Zarechye**	**3.51**	**228**	*e*Pg	**Pg**	**20 55 10.8**	**-1.2**
ZRHB				*e*Sg	**Sg**	**20 55 57.1**	**-0.3**
ZRHB				Pmax			
	comp=E,101nm,1.2s						
ZRHB				Smax			
	comp=E,501nm,0.9s						
TRG	**Tyrgan**	**3.74**	**236**	*e*Pn	**Pn**	**20 55 04.8**	**+2.6**
TRG				*e*Pg	**Pg**	**20 55 14.2**	**-2.2**
TRG				*e*Sg	**Sg**	**20 56 02.5**	**-2.3**
TRG				Pmax			
	comp=E,11nm,0.4s						
TRG				Smax			
	comp=E,133nm,0.7s						
TRG	**Tyrgan**	**3.74**	**236**	*e*PN	**Pn**	**20 55 04.3**	**+2.1**
TRG				*e*		20 55 12.8	
TRG				*e*S	**Sn**	**20 55 46.8**	**+0.7**
TRG				*e*		20 56 00.2	
TRG				pmax	pmax		
	comp=Z,11nm,0.4s						
TRG				smax	smax		
	comp=N,132nm,0.4s						
UUDB	**Ulan-Yde**	**3.84**	**218**	*e*Pn	**Pn**	**20 55 06.2**	**+2.6**
UUDB				*e*Pg	**Pg**	**20 55 15.8**	**-2.5**
UUDB				*e*Sg	**Sg**	**20 56 06.7**	**-1.3**
UUDB				Pmax			
	comp=N,33nm,1.0s						
UUDB				Smax			
	comp=N,214nm,0.9s						
FFNB	**Fofonovo**	**4.04**	**226**	*e*Pg	**Pg**	**20 55 20.1**	**-2.1**
FFNB				*e*Sg	**Sg**	**20 56 13.2**	**-1.3**
CRS	**Chara**	**4.30**	**60**	*e*Pn	**Pn**	**20 55 11.2**	**+1.4**
CRS				*e*Pg	**Pb**	**20 55 23.0**	**+2.9**
CRS				*e*Sg	**Sg**	**20 56 19.5**	**-3.1**
CRS				Pmax			
	comp=N,27nm,1.1s						
CRS				Smax			
	comp=N,218nm,1.7s						
CRS	**Chara**	**4.30**	**60**	*e*PN	**Pn**	**20 55 11.7**	**+1.9**
CRS				*e*		20 55 22.3	
CRS				*e*		20 56 18.5	
CRS				pmax	pmax		
	comp=Z,27nm,0.7s						
CRS				smax	smax		
	comp=E,182nm,0.8s						
VTMR	**Vitim**	**4.53**	**7**	*e*Pn	**Pn**	**20 55 13.3**	**+0.4**
VTMR				*e*Pg	**Pg**	**20 55 27.7**	**-3.7**
VTMR				*e*Sg	**Sg**	**20 56 26.3**	**-3.7**
BGT	**Bolshoye Golou**	**4.64**	**233**	*e*Sg	**Sg**	**20 56 30.8**	**-2.9**
BGT				Smax			
	comp=E,96nm,1.1s						
TUP	**Tupik**	**4.96**	**93**	⇑*i*Pn	**Pn**	**20 55 20.2**	**+1.2**
TUP				*e*Pg	**Pb**	**20 55 35.1**	**+3.6**
TUP				*e*Sg	**Sg**	**20 56 40.4**	**-3.5**
TUP				Pmax			
	comp=E,18nm,0.8s						
TUP				Smax			
	comp=E,327nm,1.1s						
TUP	**Tupik**	**4.96**	**93**	⇑*i*PN	**Pn**	**20 55 20.2**	**+1.2**
TUP				*e*		20 55 34.9	
TUP				*e*		20 56 41.0	
TUP				pmax	pmax		
	comp=Z,18nm,0.5s						
TUP				smax	smax		
	comp=N,325nm,1.1s						
LSTR	**Listvyanka**	**5.03**	**235**	*e*Pg	**Pb**	**20 55 36.4**	**+3.9**
LSTR				*e*Sg	**Sg**	**20 56 42.4**	**-3.6**
LSTR				Pmax			
	comp=N,3.0nm,0.6s						
LSTR				Smax			
	comp=N,132nm,1.7s						
KHNR	**Khani**	**5.18**	**64**	*e*Sg	**Sg**	**20 56 46.2**	**-4.7**
IVK	**Ivanovka**	**5.27**	**236**	*e*Pn	**Pn**	**20 55 25.9**	**+2.8**
IVK				*e*Pg	**Pg**	**20 55 41.5**	**-4.1**
IVK				*e*Sg	**Sg**	**20 56 49.3**	**-4.5**
IVK				Pmax			
	comp=N,2.0nm,0.2s						
IVK				Smax			
	comp=N,80nm,1.6s						
KPC	**Khapcheranga**	**5.30**	**173**	*e*Pg	**Pb**	**20 55 41.7**	**+4.5**
KPC				*e*Sg	**Sg**	**20 56 50.5**	**-4.2**
KPC				Pmax			
	comp=N,5.0nm,0.5s						
KPC				Smax			
	comp=N,175nm,1.2s						
TLY	**Talaya**	**5.72**	**238**	*e*Pn	**Pn**	**20 55 31.5**	**+2.2**
TLY				*e*Pg	**Pg**	**20 55 50.0**	**-4.2**
TLY				*e*Sg	**Sg**	**20 57 03.6**	**-4.5**
TLY				Pmax			
	comp=N,5.0nm,0.8s						
TLY				Smax			
	comp=N,45nm,0.7s						
YKLR	**Yuktali**	**5.99**	**70**	*e*Pn	**Pn**	**20 55 33.2**	**+0.2**
YKLR				*e*Pg	Pb	20 55 53.7	+4.9
YKLR				*e*Sn	**Sn**	**20 56 40.6**	**-0.7**
YKLR				*e*Sg	**Sg**	**20 57 11.3**	**-5.4**
ARS	**Arshan**	**6.20**	**244**	*e*Pg	**Pg**	**20 55 59.3**	**-4.0**
ARS				*e*Sg	**Sg**	**20 57 19.1**	**-4.3**
ARS				Pmax			
	comp=N,15nm,0.8s						
ARS				Smax			
	comp=N,279nm,0.9s						
ZAK	**Zakamensk**	**6.76**	**231**	*e*Pg	Pg	20 56 09.4	-4.7
ZAK				*e*Sg	**Sg**	**20 57 37.1**	**-4.5**
ZAK				Pmax			
	comp=N,1.0nm,0.2s						
ZAK				Smax			
	comp=N,42nm,1.2s						
MOY	**Mondy**	**7.08**	**246**	*e*Pn	**Pn**	**20 55 50.6**	**+2.5**
MOY				*e*		20 57 09.8	
MOY				*e*Sg	**Sg**	**20 57 46.1**	**-5.7**
MOY				max			
	comp=N,4.0nm,0.6s						
MOY				Smax			
	comp=N,68nm,1.4s						
MOY	**Mondy**	**7.08**	**246**	*e*PN	**Pn**	**20 55 50.9**	**+2.8**
MOY				*e*		20 56 13.0	
MOY				*e*		20 57 42.7	
MOY				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MOY				smax	smax		
	comp=E,68nm,1.5s						
ORL	**Orlik**	**7.32**	**255**	⇓*i*Pn	**Pn**	**20 55 53.9**	**+2.6**
ORL				*e*Sg	**Sg**	**20 57 53.7**	**-5.7**
ORL				max			
	comp=E,12nm,1.2s						
ORL				Smax			
	comp=E,52nm,1.4s						
ORL	**Orlik**	**7.32**	**255**	*e*PN	**Pn**	**20 55 53.8**	**+2.5**
ORL				*e*		20 56 17.3	
ORL				*e*S	**Sn**	**20 57 14.7**	**+0.5**
ORL				*e*		20 57 52.1	
ORL				pmax	pmax		
	comp=Z,14nm,1.0s						
ORL				smax	smax		
	comp=N,53nm,1.4s						
IENR	**Iengra**	**7.70**	**75**	*e*Sg	Sg	20 58 05.1	-6.6
CLNS	**Chul'man**	**7.79**	**71**	*e*Sg	Sg	20 58 07.7	-6.7
SONM	**Songino Array**	**7.80**	**206**	Pn	**Pn**	**20 56 01.1**	**+3.1**
	comp=N,0.2nm,0.3s,baz=25,slow=13,SNR=4.4						
SONM				Lg	Lg	20 58 12.8	
	comp=N,1.6nm,0.3s,baz=18,slow=29,SNR=22						
	comp=N,0.5nm,0.3s						
KNGR	**Kungurtug, Tuv**	**9.50**	**248**	*e*Sg	Sn	20 59 00.7	+53
KLR	**Kul'dur**	**13.71**	**106**	Pn	**Pn**	**20 57 20.1**	**+1.4**
	comp=N,0.1nm,0.3s,baz=141,slow=2.3,SNR=1.9						
KLR				Lg	Lg	21 01 18.7	
	comp=N,0.1nm,0.3s,baz=247,slow=12,SNR=8.1						
	comp=N,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**15.49**	**277**	Pn	**Pn**	**20 57 43.0**	**+0.4**
	comp=N,0.1nm,0.3s,baz=70,slow=9.7,SNR=4.6						
	comp=N,1.3nm,0.9s						
TIXI	**Tiksi**	**18.34**	**18**	P	**Pn**	**20 58 16.9**	**-1.5**
	comp=N,0.6nm,0.4s,baz=102,slow=18,SNR=8.6						
TIXI				Lg	Lg	21 03 39.2	
	baz=90,slow=23						
MKAR	**Makanchi Array**	**20.01**	**258**	P	**P**	**20 58 38.1**	**+1.1**
	comp=N,0.2nm,0.6s,baz=58,slow=8.9,SNR=2.8						
	comp=N,0.2nm,0.6s						
KURK	**Kurchatov**	**20.17**	**271**	P	Pn	20 58 39.9	-0.6
KURBB	**Kurchatov Arra**	**20.26**	**271**	P	**P**	**20 58 39.9**	**+0.3**
	comp=N,3.7nm,0.2s,baz=71,slow=12,SNR=1.8						
	comp=N,3.7nm,0.2s						

IDC ***28*** *21:00:08.9±1.0, 37°.62N×23°.51E, h0^{km}, mb3.5/8,*

mbtmp3.5/11, ML3.2/3, MS2.7/1, Error ellipse: s-maj=19.5km s-min=17.8km az=72.0

*DDA **28** 21:00:09.7±0.0, 37°.74N×23°.73E, h6km±5km, MW3.6*

*ISK **28** 21:00:10.1, 37°.69N×23°.53E, h4km, ML3.6/10*

*NEIC **28** 21:00:10.9±1.7, 37°.59N±0°.04×23°.61E±0°.06, h10km±2km, Error ellipse: s-maj=8.1km s-min=5.7km az=119.0*

*THE **28** 21:00:10.9, 37°.57N×23°.56E, h1km±2km, ML3.6/16, Error ellipse: s-maj=2.1km s-min=0.7km az=110.0*

*ATH **28** 21:00:11.0, 37°.57N×23°.58E, h16km±1km, ML3.5/17, Error ellipse: s-maj=1.5km s-min=0.7km az=122.0*

ISC 28 21:00:11.2±0.8, **37°.58N**±0°.02×**23°.54E**±0°.01, **h15**km±6km, **n151**, σ**1ˢ.18**/197, **mb3.7**/12, **2C-1D, Southern Greece**

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Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
YDRA  Hydra              0.24 195   P      Pg       21 00 16.1  -0.4
YDRA                                S      Sg       21 00 20.5  +0.3
VLY   Voula,Athens       0.33  37   P      Pg       21 00 17.8  -0.4
VLY                                 S      Sb       21 00 23.1  -0.9
VLY                                 AML    AML      21 00 24.9
      comp=N,10049µm,0.4s
VLY                                 AML    AML      21 00 25.8
      comp=E,10276µm,0.2s
VLY   Voula,Athens       0.33  37   P      Pg       21 00 17.9  -0.2
VLY                                 S      Sb       21 00 23.2  -0.8
      comp=E,6µm,0.4s
EPID  Epidavros          0.34 275   P      Pg       21 00 18.1  -0.1
EPID                                S      Sb       21 00 24.3  +0.2
EPID  Epidavros          0.34 275   P      Pg       21 00 18.1  -0.1
EPID                                S      Sb       21 00 24.0  -0.1
      comp=E,27µm,0.5s
KRND  KRANIDI            0.37 237   P      Pg       21 00 18.2  -0.5
KRND                                S      Sg       21 00 24.2  +0.3
KRND                                AML    AML      21 00 25.2
      comp=E,56788µm,0.3s
KRND                                AML    AML      21 00 26.2
      comp=N,46576µm,0.3s
KRND  KRANIDI            0.37 237   P      Pg       21 00 18.4  -0.4
KRND                                S      Sg       21 00 24.5  +0.6
      comp=N,26µm,0.3s
ATH   Athens Observa     0.41  20   P      Pg       21 00 19.4  -0.1
ATH                                 S      Sb       21 00 25.3  -0.9
ATH                                 AML    AML      21 00 27.9
      comp=E,16787µm,0.3s
ATH                                 AML    AML      21 00 31.7
      comp=N,13151µm,0.7s
ATH   Athens Observa     0.41  20   P      Pb       21 00 19.6  -0.5
ATH                                 S      Sb       21 00 25.3  -0.9
      comp=N,8µm,0.2s
ATHU  Athens Univers     0.43  27   P      Pg       21 00 19.5  -0.3
ATHU                                S      Sg       21 00 25.7   0.0
ATHU                                AML    AML      21 00 27.3
      comp=E,2093µm,0.2s
ATHU                                AML    AML      21 00 30.4
      comp=N,2048µm,0.2s
ATHU  Athens Univers     0.43  27   P      Pg       21 00 19.6  -0.2
ATHU                                S      Sb       21 00 26.0  -0.7
      comp=N,2µm,0.4s
PTL   Penteli            0.53  29   P      Pg       21 00 20.9  -0.8
PTL                                 S      Sg       21 00 28.7  -0.2
PTL   Penteli            0.53  29   P      Pg       21 00 21.0  -0.8
PTL                                 S      Sb       21 00 29.0  -0.7
DION  Dionisos Attik     0.58  32   P      Pg       21 00 22.3  -0.4
DION                                AML    AML      21 00 33.2
      comp=E,5147µm,0.3s
DION                                AML    AML      21 00 37.1
      comp=N,5555µm,0.3s
DION  Dionisos Attik     0.58  32   P      Pg       21 00 22.3  -0.4
VILL  Villia             0.61 343   P      Pb       21 00 23.2  -0.3
VILL                                S      Sb       21 00 32.1  +0.2
      comp=N,9µm,0.9s
LTK   Loutraki           0.63 314   P      Pg       21 00 23.6   0.0
VIL2  Platees            0.66 341   P      Pg       21 00 23.0  -1.2
VIL2                                S      Sg       21 00 32.0  -1.0
VIL2                                AML    AML      21 00 34.1
      comp=N,12520µm,0.4s
VIL2                                AML    AML      21 00 35.5
      comp=E,17273µm,0.6s
THAL  Thalero            0.83 303   P      Pb       21 00 27.3  +0.1
THAL                                AML    AML      21 00 44.9
      comp=E,7913µm,0.4s
THAL                                AML    AML      21 00 50.4
      comp=N,10136µm,0.5s
THAL  Thalero            0.83 303   P      Pb       21 00 27.6  +0.3
KARY  Karystos           0.84  58   P      Pg       21 00 26.9  -0.6
KARY  Karystos           0.84  58   P      Pg       21 00 26.9  -0.6
KARY                                S      Sb       21 00 39.4  +0.9
VLI   Veliai             0.99 209   P      Pb       21 00 28.5  -1.5
VLI                                 AML    AML      21 00 47.4
      comp=E,6754µm,0.8s
VLI                                 AML    AML      21 00 49.5
      comp=N,10142µm,0.7s
VLI   Veliai             0.99 209   P      Pb       21 00 28.7  -1.3
VLI                                 S      Sb       21 00 42.4  -0.4
      comp=N,4µm,1.2s
TRIP  Tripoli            1.01 267   P      Pb       21 00 29.3  -1.2
TRIP                                S      Sb       21 00 43.9  +0.3
TRIP                                AML    AML      21 00 46.8
      comp=E,6721µm,0.6s
TRIP                                AML    AML      21 00 50.6
      comp=N,6635µm,0.6s
TRIP  Tripoli            1.01 267   P      Pb       21 00 29.2  -1.2
TRIP                                S      Sg       21 00 44.2  +0.2
      comp=N,3µm,0.6s
GUR   Goura              1.01 291   P      Pb       21 00 29.8  -0.7
MHLO  Agia Marina, M     1.13 142   P      Pb       21 00 32.4  +0.1
MHLO  Agia Marina, M     1.13 142   P      Pb       21 00 32.1  -0.2
MHLO                                S      Sn       21 00 48.4  +0.8
      comp=N,4µm,0.5s
KYMI  Kymi, Euboea I     1.14  23   P      Pb       21 00 32.3  -0.2
KYMI                                AML    AML      21 00 51.4
      comp=N,8099µm,0.4s
KYMI                                AML    AML      21 00 53.6
      comp=E,4960µm,0.5s
KYMI  Kymi, Euboea I     1.14  23   P      Pn       21 00 32.6  +0.1
KYMI                                S      Sg       21 00 47.3  -0.7
      comp=E,3µm,0.6s
LKR   Lokris             1.15 338   P      Pb       21 00 31.7  -1.0
LKR                                 AML    AML      21 00 50.8
      comp=N,4991µm,0.4s
LKR                                 AML    AML      21 00 53.0
      comp=E,3522µm,0.2s
LKR   Lokris             1.15 338   P      Pb       21 00 31.6  -1.1
LKR                                 S      Sg       21 00 48.0  -0.3
      comp=E,2µm,0.3s
ATAL  Atalanti           1.18 340   P      Pn       21 00 33.3  +0.2
ATAL                                AML    AML      21 00 56.1
      comp=E,3452µm,0.6s
ATAL                                AML    AML      21 00 56.3
      comp=N,3945µm,1.0s
ATAL  Atalanti           1.18 340   P      Pn       21 00 33.3  +0.2
ATAL                                S      Sn       21 00 49.9  +1.0
      comp=N,2µm,1.4s
KLV   Kalavryta, Ach     1.19 293   P      Pn       21 00 33.4  +0.1
KLV                                 AML    AML      21 00 58.6
      comp=E,2010µm,0.6s
KLV                                 AML    AML      21 01 00.5
      comp=N,1369µm,0.4s
KLV   Kalavryta, Ach     1.19 293   P      Pn       21 00 33.2  -0.2
TNSA  Tinos              1.29  91   P      Pn       21 00 34.7  +0.1
ITM   Ithomi             1.35 253   P      Pb       21 00 36.2  +0.1
ITM                                 AML    AML      21 00 58.0
      comp=E,2393µm,0.5s
ITM                                 AML    AML      21 01 01.7
      comp=N,2086µm,0.7s
ITM   Ithomi             1.35 253   P      Pn       21 00 36.1  +0.7
ITM   Ithomi             1.35 253   PN     Pb       21 00 36.5  +0.4
ITM                                 SN     Sg       21 00 56.4  +1.7
ITM   Ithomi             1.35 253   Pn     Pb       21 00 36.2  +0.1
KTHA  Kythira Island     1.38 196   P      Pn       21 00 35.6  -0.3
KTHA                                AML    AML      21 00 58.0
      comp=N,2798µm,0.4s
KTHA                                AML    AML      21 01 00.6
      comp=E,4765µm,0.7s
KTHA  Kythira Island     1.38 196   P      Pn       21 00 35.6  -0.3
KTHR  Kythira            1.39 198   P      Pn       21 00 35.5  -0.5
KTHR                                S      Sn       21 00 54.8  +0.7
      comp=E,2µm,0.5s
LAKA  Lakka              1.40 298   P      Pb       21 00 36.9  -0.1
LAKA                                AML    AML      21 01 05.0
      comp=E,1066µm,1.1s
LAKA                                AML    AML      21 01 07.3
      comp=N,1124µm,0.7s
LAKA  Lakka              1.40 298   P      Pn       21 00 36.7  +0.5
LAKA                                S      Sg       21 00 56.3  -0.1
      comp=N,2µm,0.9s
DRO   Drossia            1.50 285   P      Pb       21 00 38.7   0.0
DRO                                 S      Sg       21 01 00.7  +1.2
      comp=N,1µm,0.9s
SKY   Skiros Island      1.52  31   P      Pn       21 00 37.5  -0.3
SKY   Skiros Island      1.52  31   P      Pn       21 00 37.3  -0.4
EFP   Efpalio            1.54 304   P      Pb       21 00 39.7  +0.3
EFP   Efpalio            1.54 304   P      Pb       21 00 39.0  -0.4
PYL   PYLOS              1.59 245   P      Pb       21 00 40.5  +0.2
ANX   Ano Chora          1.63 309   P      Pb       21 00 40.5  -0.4
ANX   Ano Chora          1.63 309   P      Pn       21 00 39.8  +0.4
APE   Apeiranthos        1.67 107   PN     Pb       21 00 41.7  +0.1
APE                                 SN     Sg       21 01 04.2  -0.7
APE   Apeiranthos        1.67 107   P      Pg       21 00 43.3  +0.1
RLS   Riolos of Patr     1.71 287   P      Pb       21 00 42.0  -0.3
RLS                                 S      Sg       21 01 06.9  +0.6
      comp=N,558nm,1.1s
ANKY  Antikythira Is     1.73 187   P      Pn       21 00 40.5  -0.1
ANKY                                AML    AML      21 01 14.1
      comp=E,2478µm,0.5s
ANKY                                AML    AML      21 01 14.4
      comp=N,1919µm,1.0s
NEO   Neokhori           1.74 352   P      Pn       21 00 41.4  +0.6
XOR   Xorichti           1.80 351   P      Pn       21 00 41.8  +0.1
MAKR  Makrakomi, Fth     1.81 323   P      Pb       21 00 43.4  -0.6
MAKR  Makrakomi, Fth     1.81 323   P      Pb       21 00 43.2  -0.8
THR5  Thira Island,      1.86 128   P      Pn       21 00 42.6  +0.2
PVO   Paravola           1.90 304   P      Pb       21 00 45.1  -0.3
SANT  Santorini          1.96 128   PN     Pb       21 00 46.8  +0.3
SANT                                SN     Sg       21 01 12.7  -1.4
SANT  Santorini          1.96 128          Pn       21 00 43.2  -0.6
SANT  Santorini          1.96 128   P      Pb       21 00 45.9  -0.6
CHOS  Chios island       2.14  67   P      Pn       21 00 46.4   0.0
CHOS  Chios island       2.14  67   PN     Pn       21 00 47.0  +0.6
IMMV  Iera Moni Meta     2.15 170   PN     Pb       21 00 49.1  -0.7
THL   Klokotos Trika     2.31 329   P      Pn       21 00 49.5  +0.8
PAIG  Paliouri           2.34   3   P      Pn       21 00 49.5  +0.4
KNDR  Palaiochora Ch     2.35 177   PN     Pb       21 00 52.3  -0.9
KNDR                                SN     Sb       21 01 22.7  +0.8
ZEYE  Izmir, Urla-Ze     2.43  74   P      Pn       21 00 49.7  -0.6
ZEYE                                S      Sb       21 01 25.9  +1.6
ZEYE                              i AML    AML      21 01 31.0
      comp=N,119nm,0.6s
ZEYE                              i AML    AML      21 01 35.0
      comp=N,238nm,0.8s
ZEYE                              i AML    AML      21 01 41.0
      comp=N,61nm,0.7s
URLA  Izmir              2.54  71   P      Pn       21 00 52.3  +0.5
URLA                                S      Sg       21 01 31.0  -1.7
URLA                              i AML    AML      21 01 33.0
      comp=N,445nm,1.1s
URLA                              i AML    AML      21 01 33.0
      comp=N,311nm,0.7s
URLA                              i AML    AML      21 01 35.0
      comp=N,129nm,0.8s
IDI   Anoyia             2.54 154   Pn     Pn       21 00 51.9  +0.1
      comp=N,1.2nm,0.3s,baz=265,slow=9.1,SNR=21
IDI                                 Sn     Sb       21 01 26.1  -1.4
      comp=N,8.6nm,0.3s,baz=270,slow=22,SNR=6.9
      comp=N,5.9nm,0.3s
IDI   Anoyia             2.54 154   PN     Pn       21 00 53.9  +2.1
HRKL  Herakleio          2.59 151   PN     Pb       21 00 55.9  -1.4
LIT   Litokhoron         2.64 342   Pn     Pn       21 00 53.8  +0.6
LIT   Litokhoron         2.64 342   P      Pn       21 00 54.2  +0.9
LIT                                 S      Sg       21 01 33.6  -2.6
LIT                               i AML    AML      21 01 43.0
      comp=N,92nm,1.3s
LIT                               i AML    AML      21 01 44.0
      comp=N,73nm,0.6s
LIT                               i AML    AML      21 01 47.0
      comp=N,57nm,1.3s
DGB   zmir               2.69  79   P      Pn       21 00 53.7  -0.1
DGB                               i AML    AML      21 01 47.0
      comp=N,28nm,1.4s
DGB                               i AML    AML      21 01 47.0
      comp=N,48nm,0.8s
DGB                               i AML    AML      21 01 48.0
      comp=N,45nm,1.1s
OUR   Ouranopolis        2.77   7   P      Pn       21 00 55.0  +0.1
OUR   Ouranopolis        2.77   7   PN     Pn       21 00 55.3  +0.4
GVD   Gavdhos            2.77 171   PN     Pb       21 00 58.2  -2.2
GVD                                 SN     Sb       21 01 33.1  -1.1
KOCA  Canakkale, Ayv     2.79  46   P      Pg       21 01 03.0  -1.8
KOCA                                S      Sg       21 01 47.2  +6.2
GCAM  G?zelcaml?         2.93  87   P      Pn       21 00 59.1  +1.9
GCAM                              i AML    AML      21 01 51.0
      comp=N,98nm,0.7s
GCAM                              i AML    AML      21 01 56.0
      comp=N,42nm,1.4s
GCAM                              i AML    AML      21 01 56.0
      comp=N,66nm,0.7s
BOZC  Bozcaada           2.99  40   P      Pn       21 00 57.4  -0.6
BOZC                                S      Sg       21 01 44.8  -2.5
BOZC                              i AML    AML      21 01 55.0
      comp=N,38nm,0.8s
BOZC                              i AML    AML      21 02 00.0
      comp=N,34nm,1.3s
BOZC                              i AML    AML      21 02 14.0
      comp=N,20nm,1.1s
AYVA  Ayvalik            3.01  54   P      Pb       21 01 04.7  +0.2
HORT  Hortiatis          3.03 354   PN     Pn       21 00 58.6   0.0
DKL   Dikili             3.03  60   P      Pb       21 01 06.8  +2.0
DKL                                 S      Sg       21 01 53.3  +4.7
BODT  Bodrum             3.05  99   P      Pn       21 00 58.8   0.0
BODT                              i AML    AML      21 01 52.0
      comp=N,96nm,0.9s
BODT                              i AML    AML      21 02 00.0
      comp=N,76nm,1.0s
BODT                              i AML    AML      21 02 01.0
      comp=N,56nm,0.8s
ZEDA  zmir-Bergama       3.11  63   P      Pg       21 01 10.3  -0.4
BAYC  CANAKKALE_Bayr     3.19  47   P      Pn       21 01 00.6  -0.1
BAYC                                S      Sg       21 01 56.5  +2.8
BAYC                              i AML    AML      21 02 00.0
      comp=N,19nm,0.8s
BAYC                              i AML    AML      21 02 06.0
      comp=N,15nm,0.7s
BAYC                              i AML    AML      21 02 13.0
      comp=N,18nm,1.3s
GOKA  anakkale-Gk        3.19  35   P      Pn       21 01 02.5  +1.8
GOKA                                S      Sg       21 01 56.7  +3.0
GOKA                              i AML    AML      21 02 01.0
      comp=N,42nm,0.7s
GOKA                              i AML    AML      21 02 10.0
      comp=N,69nm,0.6s
GOKA                              i AML    AML      21 02 51.0
      comp=N,0.3nm,1.5s
BUHA  Balikesir, Bur     3.37  54   P      Pb       21 01 11.8  +1.3
BUHA                                S      Sg       21 01 58.7  -0.7
AYDN  Tasoluk            3.44  87   P      Pn       21 01 04.7  +0.4
AYDN                              i AML    AML      21 02 02.0
      comp=N,35nm,1.1s
AYDN                              i AML    AML      21 02 07.0
      comp=N,21nm,1.0s
AYDN                              i AML    AML      21 02 20.0
      comp=N,29nm,0.8s
KARP  Karpathos          3.55 124   Pn     Pn       21 01 06.5  +0.7
FNA   Florina            3.61 333          Pn       21 01 06.9  +0.3
FNA   Florina            3.61 333   P      Pn       21 01 09.0  +2.4
FNA                                 S      Sb       21 01 56.2  -2.1
FNA                               i AML    AML      21 01 58.0
      comp=N,18nm,0.8s
FNA                               i AML    AML      21 01 59.0
      comp=N,26nm,0.5s
FNA                               i AML    AML      21 02 22.0
      comp=N,20nm,1.1s
KEK   Kerkira            3.62 307          Pn       21 01 08.6  +2.0
CAVK  Edirne/Enez-Ca     3.71  33   P      Pb       21 01 18.5  +2.0
CAVK                                S      Sg       21 02 07.8  -2.6
KBN   Korca              3.71 326          Pn       21 01 09.4  +1.4
STEP  BALIKESIR_Sava     3.73  60   P      Pg       21 01 22.0  -0.7
ALN   Alexandroupoli     3.84  30   Pn     Pn       21 01 08.7  -0.9
ALN   Alexandroupoli     3.84  30   P      Pn       21 01 08.8  -0.8
ALN                                 S      Sg       21 02 10.7  -3.7
ALN                               i AML    AML      21 02 24.0
      comp=N,19nm,0.8s
ALN                               i AML    AML      21 02 30.0
      comp=N,13nm,0.9s
ALN                               i AML    AML      21 02 33.0
      comp=N,13nm,2.2s
ERIK  Erikli-Kesan       3.85  36   P      Pn       21 01 09.2  -0.6
ERIK                                S      Sg       21 02 15.0  +0.1
ERIK                              i AML    AML      21 02 21.0
      comp=N,28nm,1.0s
ERIK                              i AML    AML      21 02 22.0
      comp=N,32nm,0.8s
ERIK                              i AML    AML      21 02 29.0
      comp=N,13nm,0.9s
RDO   Rodhopi            3.88  23          Pn       21 01 09.8  -0.4
MMB   Musomiste          4.00   2  eP      Pn       21 01 12.0   0.0
KESN  Edirne-Kesan       4.05  36   P      Pn       21 01 12.5  -0.4
KESN                              i AML    AML      21 02 36.0
      comp=N,17nm,0.8s
KESN                              i AML    AML      21 02 38.0
      comp=N,14nm,1.1s
KESN                              i AML    AML      21 02 38.0
      comp=N,20nm,1.0s
KRBG  Karabiga-Canak     4.05  45   P      Pn       21 01 12.8  +0.2
KRBG                              i AML    AML      21 02 31.0
      comp=N,16nm,0.8s
KRBG                              i AML    AML      21 02 45.0
      comp=N,20nm,0.8s
KRBG                              i AML    AML      21 02 59.0
      comp=N,13nm,1.4s
SART  Tekirdag           4.20  41   P      Pn       21 01 14.4  -0.2
SART                              i AML    AML      21 02 41.0
      comp=N,15nm,0.7s
SART                              i AML    AML      21 02 48.0
      comp=N,20nm,0.8s
SART                              i AML    AML      21 02 56.0
      comp=N,14nm,1.1s
KKB   Krupnik            4.29 355  eP      Pn       21 01 17.1  +1.2
KDZ   Kurdzhali          4.31  19  eP      Pn       21 01 15.5  -0.7
SCTE  Santa Cesarea      4.68 304   Pn     Pn       21 01 21.6  +0.5
VTS   Vitosha            5.03 357   Pn     Pn       21 01 27.7  +1.4
VTS   Vitosha            5.03 357  eP      Pn       21 01 28.4  +2.2
AKAS  Kas                5.04 104   Pn     Pn       21 01 26.4  +0.1
TIP   Timpagrande        5.56 289          Pn       21 01 32.6  -0.8
PDG   Podgorica          5.85 327   Pn     Pn       21 01 38.2  +0.9
CUC   Castrocucco        6.50 294   Pn     Pn       21 01 48.0  +1.8
DIVS  Divibare           7.04 339   Pn     Pn       21 01 54.7  +0.9
SGRT  San Giovanni R     7.31 307   Pn     Pn       21 01 59.0  +1.5
RAFF  Raffo Rosso        7.32 270   Pn     Pn       21 01 58.3  +0.9
PAOL  Paolisi            7.76 299   Pn     Pn       21 02 05.1  +1.5
TIRR  Tirgusor           7.79  27   Pn     Pn       21 02 02.9  -1.0
HARR  Harsova            7.83  24  ⇑P      Pn       21 02 04.5   0.0
VOIR                     7.93   8  ⇑P      Pn       21 02 03.1  -2.7
MLR   Muntele Rosu       8.10  12   Pn     Pn       21 02 08.1  -0.3
      comp=N,0.1nm,0.3s,baz=155,slow=24,SNR=3.0
      comp=N,3.3nm,0.9s
MLR   Muntele Rosu       8.10  12          Pn       21 02 09.1  +0.8
BRTR  Keskin Array B     8.19  72   Pn     Pn       21 02 05.8  -3.7
      baz=256,slow=16,SNR=2.8
BRTR                                LR     LR       21 05 31.3
      comp=N,52nm,21.9s,baz=252,slow=39
CFR   Carcaliu           8.33  23  ⇓P      Pn       21 02 10.9  -0.4
NRCA  Norcia             9.54 307          Pn       21 02 29.7  +1.7
GERES GERESS Array B    13.33 331   Pn     Pn       21 03 21.5  +1.6
      comp=N,0.1nm,0.3s,baz=148,slow=14,SNR=1.6
      comp=N,0.2nm,0.7s
ESBB  Sonseca Array     21.56 284   P      P        21 05 00.1  +0.1
ESBB                                IAmb   IAmb     21 05 09.0
      comp=Z,8.8nm,1.4s
ESDC  Sonseca Array     21.56 284   P      P        21 04 59.0  -1.1
      comp=Z,0.5nm,0.7s,baz=78,slow=9.7,SNR=9.7
      comp=Z,0.5nm,0.7s
PAB   San Pablo         21.86 284   P      P        21 05 04.3  +1.0
PAB                                 IAmb   IAmb     21 05 23.8
      comp=Z,14nm,1.4s
FINES FINESS Array B    23.94   3   P      P        21 05 23.9  -0.3
      comp=Z,1.0nm,0.7s,baz=184,slow=11,SNR=2.3
      comp=Z,1.0nm,0.7s
FINES FINESS Array B    23.94   3   P      P        21 05 24.0  -0.3
NC602 NORSAR Array S    24.39 346   P      P        21 05 27.2  -1.3
EKA   Eskdalemuir Ar    25.32 323   P      P        21 05 36.7  -0.3
      comp=Z,0.9nm,0.8s,baz=115,slow=12,SNR=8.3
      comp=Z,0.9nm,0.8s
ESK   Eskdalemuir       25.33 323   P      P        21 05 37.8  +0.7
ESK                                 IAmb   IAmb     21 05 43.5
      comp=Z,4.7nm,1.1s
TORD  Torodi Ar. Bea    31.18 224   P      P        21 06 29.8  +0.1
      comp=Z,0.5nm,0.6s,baz=34,slow=9.6,SNR=4.1
      comp=Z,0.5nm,0.6s
KURBB Kurchatov Arra    40.66  53   P      P        21 07 50.6  +0.1
      comp=Z,1.7nm,0.9s,baz=280,slow=8.8,SNR=9.2
      comp=Z,1.7nm,0.9s
MK31  Makanchi Array    43.58  58   P      P        21 08 13.7  -0.8
MKAR  Makanchi Array    43.58  58   P      P        21 08 14.8  +0.4
      comp=Z,0.5nm,0.5s,baz=276,slow=7.4,SNR=7.8
      comp=Z,0.5nm,0.5s
MKAR  Makanchi Array    43.58  58   P      P        21 08 13.6  -0.8
ZAA0  Zalesovo Array    44.31  48   P      P        21 08 19.3  -0.8
ZAA0                                IAmb   IAmb     21 08 24.2
      comp=Z,2.5nm,0.9s
ZALV  Zalesovo Beam     44.31  48   P      P        21 08 20.2   0.0
      comp=Z,2.2nm,0.8s,baz=280,slow=8.4,SNR=9.2
      comp=Z,2.2nm,0.8s
ZALV  Zalesovo Beam     44.31  48   P      P        21 08 19.4  -0.7
SONM  Songino Array     58.98  51   P      P        21 10 09.8  -0.3
      comp=Z,0.1nm,0.4s,baz=307,slow=5.2,SNR=2.0
      comp=Z,0.1nm,0.4s
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*IDC **28** 21:02:11.3±2.6, 39°.14N×142°.50E, h0km, mb3.3/2, mbtmp3.2/4, ML2.4/2, MS2.5/1, Error ellipse: s-maj=59.5km s-min=28.2km az=129.0*

*JMA **28** 21:02:14.6±0.1, 39°.0N±0°.3×142°.4E±0°.7, h29km±1km, MV3.2/39, E OFF IWATE PREF*

ISC 28 21:02:14.0±1.8, **39°.04N**±0°.05×**142°.38E**±0°.08, **h24**km±13km, **n22**, σ**0ˢ.84**/26, **8D, Near east coast of eastern Honshu**

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Code  Station Name         Δ°  AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
OFUJ  Ofunato            0.56 275 ⇓iP      Pn       21 02 26.0  -0.4
OFUJ                               ⇓S      Sn       21 02 33.8  -1.2
MIYJ  Miyakonagasawa     0.69 321 ⇓iP      Pn       21 02 27.6  -0.7
MIYJ                               ⇓S      Sn       21 02 36.9  -1.4
JKMT  Kesennumamotoy     0.74 253  i P     Pn       21 02 28.6  -0.3
JKMT                                S      Sn       21 02 38.3  -1.1
JMK   Ichinoseki         0.91 265 ⇓iP      Pb       21 02 31.4  +0.3
JMK                                ⇓S      Sn       21 02 43.3  -0.3
JOM   Ohasama            0.95 298 ⇓iP      Pb       21 02 32.2  +0.4
JOM                                ⇓S      Sn       21 02 44.8  +0.2
JTH   Tanohata           0.99 336   P      Pb       21 02 32.4  -0.1
JTH                                 S      Sb       21 02 45.7  +0.7
JIO   Ouri               0.99 235  i P     Pb       21 02 31.9  -0.6
JIO                                 S      Sb       21 02 44.1  -1.1
JKZ   Kuzumaki           1.25 320  i P     Pb       21 02 36.9  -0.1
JKZ                                 S      Sb       21 02 52.8  +0.2
JRG   Rokugo             1.41 285  i P     Pb       21 02 39.8  +0.2
JRG                                eS      Sb       21 02 57.6  +0.6
JANG  Nango              1.49 334   P      Pb       21 02 40.6  -0.5
JANG                                S      Sb       21 02 59.8  +0.2
JOU   Okura              1.50 244  i P     Pb       21 02 40.5  -0.7
MJAR  Matsushiro Arr     4.14 234   Pn     Pn       21 03 18.0  +2.3
      0.1nm,0.3s,baz=33,slow=13,SNR=20
      1.8nm,0.6s
ASAJ  Asahikawa          5.08   2   Pn     Pn       21 03 28.0  -0.6
      0.2nm,0.3s,baz=226,slow=16,SNR=1.3
ASAJ                                Sn     Sn       21 04 26.9  +0.5
      baz=131,slow=20,SNR=1.3
      5.2nm,1.0s
KSRS  Korea Array       11.48 267   LR     LR       21 08 53.2
      comp=Z,22nm,18.6s,baz=45,slow=35
H11N2 WAKE ISLAND Hy    28.60 125   T      T        21 38 29.6
      baz=317,slow=75,SNR=35
H11N1 WAKE ISLAND Hy    28.61 125   T      T        21 38 32.6
      baz=317,slow=75,SNR=29
H11N3 WAKE ISLAND Hy    28.61 125   T      T        21 38 29.6
      baz=317,slow=75,SNR=36
H11S1 WAKE ISLAND Hy    29.38 127   T      T        21 39 32.9
      baz=318,slow=76,SNR=5.3
H11S3 WAKE ISLAND Hy    29.38 127   T      T        21 39 32.5
      baz=318,slow=76,SNR=6.2
H11S2 WAKE ISLAND Hy    29.40 127   T      T        21 39 28.8
      baz=318,slow=76,SNR=5.2
MKAR  Makanchi Array    43.73 301   P      P        21 10 18.0  +0.7
      0.2nm,0.6s,baz=69,slow=7.1,SNR=2.4
      0.2nm,0.6s
ILAR  Eielson Array     47.40  33   P      P        21 10 45.8  -0.2
      0.3nm,0.6s,baz=260,slow=6.2,SNR=4.5
      0.3nm,0.6s
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*BJI **28** 21:03:20.8±0.0, 8°.91S×126°.74E, h41km, mb4.7/49, mB4.9/28, Ms4.3/16, Ms7 4.0/15*

*IDC **28** 21:03:21.2±3.9, 8°.76S×126°.60E, h22km±24km, mb4.4/25,*

mbtmp4.5/28, ML3.9/3, MS3.9/31, Error ellipse: s-maj=15.6km s-min=10.8km az=84.0

*NEIC **28** 21:03:23.0±1.6, 8°.84S±0°.06×126°.64E±0°.06, h34km±4km, mb4.9/88, Error ellipse: s-maj=8.8km s-min=8.1km az=177.0*

*DJA **28** 21:03:24.8±0.7, 9°S±2°×12°7E±°, h30km±6km, M4.5/53, mb4.9/53, mB5.1/28, MLv4.8/20, Mw(mB)4.4/28, MwMwp5.0/2, Mwp5.3/2*

ISC 28 21:03:22.7±0.3**, 8°.85S**±0°.04×**126°.66E**±0°.04**, h35km, n271, σ1s.42**/234**, mb4.9**/76**, MS4.0**/32**, 5C, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.52	249	Pn	Pn	21 04 02.1	+0.8
SOEI	Soe	2.52	249	P	Pn	21 04 02.3	+1.0
SOEI				S	Sn	21 04 30.8	-0.1
SOEI	Soe	2.52	249	P	Pn	21 04 02.7	+1.4
BATI	Baumata	3.24	245	Pn	Pn	21 04 12.2	+1.1
	92nm,0.3s,baz=130,slow=4.0,SNR=56						
BATI				Sn	Sn	21 04 48.6	0.0
	62nm,0.3s,baz=96,slow=9.2,SNR=3.6						
	281nm,0.4s						
BATI	Baumata	3.24	245	P	Pn	21 04 12.3	+1.2
BATI				S	Sn	21 04 48.9	+0.4
MMRI	Maumere	4.37	273	Pn	Pn	21 04 27.4	+0.8
MMRI	Maumere	4.37	273	P	Pn	21 04 28.0	+1.4
MMRI	Maumere	4.37	273	P	Pn	21 04 28.6	+2.0
SAUI	Saumlaki	4.68	80	Pn	Pn	21 04 31.1	+0.3
SAUI	Saumlaki	4.68	80	P	Pn	21 04 34.5	+3.7
SAUI				S	Sn	21 05 27.7	+3.8
EDFI	Ende, Flores	4.91	271	P	Pn	21 04 37.5	+3.4
BBSI	Bau Bau	5.25	309	P	Pn	21 04 43.1	+4.3
	0.3nm737nm62nm,0.9s						
AAI	Ambon	5.36	17	P	Pn	21 04 44.9	+4.7
	0.6nm2μm143nm,0.7s						
BNDI	Bandanaira	5.38	37	P	Pn	21 04 44.5	+4.0
MSAI	Masohi	5.92	23	P	Pn	21 04 53.5	+5.6
	0.1nm279nm25nm,0.8s						
MTN	Manton Dam	5.92	132	P	Pn	21 04 47.5	-0.4
	baz=5.8,SNR=190						
MTN	Manton Dam	5.92	132	Pn	Pn	21 04 47.7	-0.3
MTN	Manton Dam	5.92	132	P	Pn	21 04 49.1	+1.2
BASI	Baing, Sumba	6.15	257	P	Pn	21 04 52.9	+1.9
	0.7nm2μm218nm,1.0s						
BSSI	Bau Bau, Buton	6.68	293	P	Pn	21 05 02.9	+4.6
	0.3nm974nm100nm,0.8s						
SANI	Sanana	6.79	354	P	Pn	21 05 05.4	+5.5
	0.3nm1μm98nm,0.7s						
SANI	Sanana	6.79	354	P	Pn	21 05 05.3	+5.4
KDU	Kakadu	6.87	124	P	Pn	21 04 59.9	-1.0
	baz=6.8,SNR=55						
KDU	Kakadu	6.87	124	P	Pn	21 05 00.0	-0.9
KNRA	Kununurra	7.09	163	P	Pn	21 05 02.4	-1.6
	baz=6.9,SNR=134						
KNRA	Kununurra	7.09	163	Pn	Pn	21 05 02.9	-1.1
KNRA	Kununurra	7.09	163	P	Pn	21 05 03.0	-0.9
WBSI	Waikabubak, Su	7.21	263	P	Pn	21 05 09.0	+3.3
	0.5nm131nm,1.1s						
BKSI	Bulukumba	7.37	298	P	Pn	21 05 11.2	+3.4
	0.3nm809nm95nm,1.1s						
KAPI	Kappang	7.84	299	Pn	Pn	21 05 13.9	-0.4
	1.0nm,0.3s,baz=65,slow=16,SNR=2.6						
KAPI				LR	LR	21 08 36.3	
	comp=Z,1μm,19.2s,baz=109,slow=41						
	3.5nm,0.2s						
KAPI	Kappang	7.84	299		Pn	21 05 15.7	+1.4
KAPI	Kappang	7.84	299	P	Pn	21 05 17.7	+3.4
BNSI	Bone	7.87	304	P	Pn	21 05 19.6	+5.0
	0.6nm2μm169nm,1.5s						
FAKI	Fak Fak	8.11	44	Pn	Pn	21 05 19.1	+1.2
FAKI	Fak Fak	8.11	44	P	Pn	21 05 23.4	+5.5
	1μm109nm,0.8s						
LBMI	Labuha	8.21	6	P	Pn	21 05 26.7	+7.4
	1μm130nm,1.0s						
SPSI	Sidrap Palu	8.39	305	P	Pn	21 05 27.9	+6.1
	805nm72nm,1.0s						
LUWI	Luwuk	8.67	333		Pn	21 05 26.1	+0.4
LUWI	Luwuk	8.67	333	P	Pn	21 05 31.2	+5.5
	2μm7μm142nm,1.0s						
PLAI	Plampang	8.77	269	P	Pn	21 05 31.7	+4.6
	0.4nm126nm,0.8s						
PLAI	Plampang	8.77	269	P	Pn	21 05 29.6	+2.5
TTSI	Tana Toraja	8.92	310	P	Pn	21 05 34.0	+4.9
	1μm72nm,1.1s						
SIJI	Sorong	9.16	30	Pn	Pn	21 05 32.0	-0.5
	0.2nm,0.3s,baz=165,slow=22,SNR=2.7						
SIJI				Sn	Sn	21 07 13.8	-0.7
	0.3nm,0.3s,baz=266,slow=22,SNR=2.4						
	11nm,0.8s						
APSI	Ampana	9.33	327	P	Pn	21 05 42.4	+7.6
	939nm93nm,0.9s						
TNTI	Ternate	9.59	4	Pn	Pn	21 05 39.4	+1.1
TNTI	Ternate	9.59	4	P	Pn	21 05 46.2	+7.9
	44nm,1.0s						
KMSI	Cibinong	9.74	344	P	Pn	21 05 45.6	+5.3
	117nm,0.8s						
GTOI	Gorontalo	10.10	339	P	Pn	21 05 53.5	+8.2
	314nm27nm,0.9s						
MRSI	Marisa	10.39	333	P	Pn	21 05 54.9	+5.6
	459nm37nm,1.0s						
MPSI	Mapaga	11.34	323	P	Pn	21 06 09.9	+7.6
	528nm36nm,0.8s						
TOLI2	Tolitoli	11.50	329	P	Pn	21 06 09.9	+5.4
BAKI	Biak	12.10	52	P	Pn	21 06 13.7	+1.0
JAGI	Jajag, Banyuwa	12.37	271	Pn	Pn	21 06 14.8	-1.6
JAGI	Jajag, Banyuwa	12.37	271	P	Pn	21 06 19.0	+2.6
SGSI	Sangihe	12.51	355	P	P	21 06 24.6	-4.9
	56nm,0.8s						
BBKI	Banjar Baru	12.91	294	P	P	21 06 42.6	+8.7
WAMI	Wamena	12.96	68	P	P	21 06 42.5	+8.0
WRA	Warramunga Arr	13.29	147	Pn	Pn	21 06 23.7	-5.3
	8.8nm,0.3s,baz=320,slow=14,SNR=257						
WRA				Sn	Sn	21 08 46.1	-10
	11nm,0.3s,baz=317,slow=24,SNR=24						
WRA				LR	LR	21 12 13.4	
	comp=Z,791nm,20.5s,baz=10.0,slow=40						
SMPI	Sarmi	13.80	61	P	P	21 06 41.0	-2.8
	28nm,1.0s						
MBWA	Marble Bar	13.94	208	Pn	Pn	21 06 33.2	-4.5
PSA00	Pilbara Seismi	14.24	207	Pn	Pn	21 06 37.1	-4.8
PSA00	Pilbara Seismi	14.24	207		Pn	21 06 37.4	-4.6
PCJI	Pacitan	15.32	271	P	Pn	21 06 57.8	+1.4
	58nm,1.4s						
UGM	Wanagama	15.99	272	Pn	Pn	21 07 05.1	0.0
UGM	Wanagama	15.99	272	P	P	21 07 08.2	-0.1
MYLDM	Lahad Datu	16.14	329	P	P	21 07 09.3	-0.6
WRKA	Warakurna	16.17	175	P	Pn	21 07 03.7	-3.7
	baz=16,SNR=16						
ASAR	Alice Springs	16.28	156	Pn	Pn	21 07 04.1	-4.7
	5.3nm,0.3s,baz=320,slow=10,SNR=213						
ASAR				Sn	Sn	21 09 56.1	-12
	3.2nm,0.3s,baz=318,slow=18,SNR=6.8						
COEN	Coen	16.97	109	P	Pn	21 07 14.1	-3.4
	baz=17,SNR=22						
COEN	Coen	16.97	109	Pn	Pn	21 07 13.9	-3.5
COEN				IAmb	IAmb	21 07 15.4	
	comp=Z,94nm,0.7s						
QIS	Mount Isa	17.08	134	P	Pn	21 07 14.6	-4.3
	baz=17,SNR=20						
GIRL	Giralia	18.17	220		Pn	21 07 31.0	-1.3
GIRL	Giralia	18.17	220	P	P	21 07 32.7	+0.4
KSM	Kuching	19.25	301	P	P	21 07 44.8	+0.5
MTSU	Mount Surprise	19.48	120	P	P	21 07 45.7	-1.1
	baz=19,SNR=153						
MTSU	Mount Surprise	19.48	120	P	Pn	21 07 48.3	+0.1
CBJI	Citeko	19.78	276	P	P	21 07 50.7	+0.7
	comp=Z,57nm,1.0s						
TPI	Tanjungpandan	19.84	287	P	Pn	21 07 53.3	+0.8
	comp=Z,542nmcomp=Z,12nm,1.4s						
DBJI	Dramaga	19.86	275	P	Pn	21 07 54.0	+1.3
	comp=Z,2μmcomp=Z,18nm,0.5s						
PMG	Port Moresby	20.25	93	P	Pn	21 07 57.4	+0.1
	comp=Z,73nm,0.9s,baz=304,slow=3.7,SNR=22						
PMG				LR	LR	21 17 44.7	
	comp=Z,584nm,18.4s,baz=247,slow=42						
	comp=Z,73nm,0.9s						
PMG	Port Moresby	20.25	93		Pn	21 07 56.4	-1.0
OOD	Oodnadatta	20.68	157	P	P	21 08 00.4	+0.7
XMIS	Christmas Isla	20.77	264	P	P	21 07 59.8	-1.1
MANU	Manus Island	21.69	73	P	P	21 08 10.9	+0.2
FORT	Forrest	21.85	177	P	P	21 08 11.7	-0.6
FORT	Forrest	21.85	177	P	P	21 08 12.8	+0.5
CTA	Charters Tower	21.99	123	P	P	21 08 15.6	+1.7
	comp=Z,23nm,0.8s,baz=300,slow=12,SNR=32						
CTA				LR	LR	21 18 48.3	
	comp=Z,545nm,19.0s,baz=290,slow=42						
	comp=Z,23nm,0.8s						
CTA	Charters Tower	21.99	123	P	P	21 08 15.6	+1.7
CTAO	Charters Tower	21.99	123	P	P	21 08 14.2	+0.3
CTAO				IAmb	IAmb	21 08 18.8	
	comp=Z,28nm,0.8s						
CTAO	Charters Tower	21.99	123	P	P	21 08 15.6	+1.7
MULG	Mulgathing	22.42	163	P	P	21 08 19.6	+1.2
MORW	Morawa	22.45	205	P	P	21 08 17.8	-0.9
MORW				IAmb	IAmb	21 08 37.7	
	comp=Z,62nm,1.4s						
MORW	Morawa	22.45	205	P	P	21 08 19.0	+0.3
INKA	Innaminka	23.02	147	P	P	21 08 25.7	+1.0
DSRI	Dabo	23.51	290	P	P	21 08 31.6	+1.9
	comp=Z,7.0nm,1.2s						
BLDU	Ballidu	23.56	202	P	P	21 08 29.7	-0.3
LCRK	Leigh Creek	24.05	155	P	P	21 08 35.6	+1.0
KLBR	Kellerberrin	24.09	199	P	P	21 08 35.6	+0.6
QLP	Quilpie	24.26	139	P	P	21 08 37.9	+1.3
BBOO	Buckleboo	25.38	161	P	P	21 08 47.0	+0.3
BBOO	Buckleboo	25.38	161	P	P	21 08 47.5	+0.8
NWAO	Narrogin (SRO)	25.49	199	P	P	21 08 47.2	-0.6
NWAO				IAmb	IAmb	21 09 01.4	
	comp=Z,58nm,1.2s						
NWAO	Narrogin (SRO)	25.49	199	P	P	21 08 48.3	+0.6
NAPP	Napperby	26.44	158	P	P	21 08 57.1	+0.8
STKA	Stephens Creek	26.79	151	P	P	21 09 00.2	+0.7
	comp=Z,20nm,0.9s,baz=319,slow=9.4,SNR=30						
STKA				LR	LR	21 20 57.2	
	comp=Z,474nm,18.7s,baz=315,slow=39						
	comp=Z,20nm,0.9s						
STKA	Stephens Creek	26.79	151	P	P	21 08 59.4	0.0
STKA	Stephens Creek	26.79	151	P	P	21 08 59.7	+0.2
HTT	Hallett	26.95	157	P	P	21 09 02.2	+1.2
RK1H	Rockhampton Ha	27.02	125	P	P	21 09 02.2	+0.6
RMQ	Roma	27.32	133	P	P	21 09 05.8	+1.4
EIDS	Eidsvold	28.46	128	P	P	21 09 13.8	-0.7
CMSA	Cobar Meteorol	28.69	145	P	P	21 09 17.6	+1.1
KULM	Kulim	29.49	298	P	P	21 09 23.4	-0.4
KULM				IAmb	IAmb	21 10 09.6	
	comp=Z,59nm,1.7s						
ARMA	Armidale	31.69	136	P	P	21 09 44.7	+1.4
ARMA				IAmb	IAmb	21 09 58.0	
	comp=Z,46nm,1.5s						
ARMA	Armidale	31.69	136	P	P	21 09 45.4	+2.2
TPUB	Ta-pu	32.49	350	P	P	21 09 49.3	-0.8
TPUB				IAmb	IAmb	21 10 15.5	
	comp=Z,33nm,1.1s						
HNR	Honiara	32.87	94	LR	LR	21 24 45.4	
	comp=Z,196nm,18.5s,baz=259,slow=39						
TOO	Toolangi	33.28	152	P	P	21 09 58.4	+1.4
TOO				IAmb	IAmb	21 10 00.4	
	comp=Z,19nm,0.9s						
TOO	Toolangi	33.28	152	P	P	21 09 58.8	+1.9
CAN	Canberra	33.34	146		P	21 09 57.7	+0.2
YHNB	Yeheng	33.72	351	P	P	21 09 59.5	-1.4
SLVN	Son La	37.41	324	P	P	21 10 32.1	-0.5
CM31	Chiang Mai Arr	38.53	315	P	P	21 10 41.6	-0.5
CMAR	Chiang Mai Arr	38.53	315	P	P	21 10 42.0	-0.1
	comp=Z,3.9nm,0.8s,baz=140,slow=6.8,SNR=30						
CMAR				PcP	PcP	21 12 55.5	+1.0
	comp=Z,1.0nm,0.8s,baz=163,slow=3.2,SNR=3.4						
CMAR				ScP	ScP	21 16 41.5	+1.4
	comp=Z,0.2nm,0.4s,baz=164,slow=1.9,SNR=4.6						
CMAR				LR	LR	21 28 06.2	
	comp=Z,174nm,21.3s,baz=135,slow=39						
	comp=Z,3.9nm,0.8s						
CMAR	Chiang Mai Arr	38.53	315	P	P	21 10 41.5	-0.5
CHTO	Chiang Mai	38.77	315	P	P	21 10 43.5	-0.6
JCJ	Chichijima	38.78	22	LR	LR	21 24 35.8	
	comp=Z,65nm,21.6s,baz=344,slow=33						
CNSH	ChangSha	39.14	341	⇑P	P	21 10 55.8	+8.8
CNSH				S	S	21 17 00.8	+16
CNSH				pmax	pmax		
	comp=Z,14nm,0.9s						
CNSH				LR	LR		
	comp=N,150nm,16.5s						
CNSH				LR	LR		
	comp=E,120nm,10.8s						
GYA	Guiyang	40.11	332	⇑*i*P	P	21 10 56.0	+0.7
GYA				pmax	pmax		
	comp=E,17nm,0.9s						
NOUC	Port Laguerre	40.28	114	P	P	21 10 57.9	+1.2
JSU	Suzuyama	40.29	5	P	P	21 10 56.5	-0.1
JSU				IAmb	IAmb	21 11 05.2	
	comp=Z,27nm,0.9s						
DZM	Mont Dzumac	40.40	114	LR	LR	21 29 08.6	
	comp=Z,273nm,19.1s,baz=342,slow=38						
DZM	Mont Dzumac	40.40	114	P	P	21 10 57.3	-0.6
DZM				IAmb	IAmb	21 10 59.4	
	comp=Z,16nm,1.1s						
DZM	Mont Dzumac	40.40	114	P	P	21 10 59.4	+1.6
YATNC	Mamie plateau,	40.80	114	P	P	21 11 03.2	+2.1
OUENC	Ouen Island, N	40.84	114	P	P	21 11 01.8	+0.5
OUENC				IAmb	IAmb	21 11 18.1	
	comp=Z,20nm,1.1s						
LIFNC	LIFOU	40.87	112	P	P	21 11 02.2	+0.6
WHN	Wuhan	40.91	344	⇑P	P	21 11 03.0	+1.3
WHN				pP	pP	21 11 08.5	-3.6
KMI	Kunming	41.03	326	⇑P	P	21 11 04.5	+1.4
KMI				pP	pP	21 11 09.8	-3.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	Nanjing	41.35	350	*e*P	P	21 11 11.5	+6.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MARNC	Mare, Loyalty	41.73	112	P	P	21 11 09.1	+0.5
JNU	Nakatsue	41.93	5	P	P	21 11 09.4	-0.7
	comp=Z,2.5nm,0.6s,baz=256,slow=10.0,SNR=1.5						
	comp=Z,2.5nm,0.6s						
JNU	Nakatsue	41.93	5	P	P	21 11 11.1	+1.0
JNU				IAmb	IAmb	21 11 18.5	
	comp=Z,15nm,0.8s						
ENH	Enshi	42.26	338	P	P	21 11 12.7	-0.1
PZH	PanZhiHua	42.67	326	P	P	21 11 15.8	-0.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,4.1s						
JHS	Saijyo	44.04	8	P	P	21 11 26.8	-0.4
JHS				IAmb	IAmb	21 11 36.9	
	comp=Z,21nm,1.0s						
NAWB	Namwon	44.04	1	P	P	21 11 26.5	-0.6
NAWB				IAmb	IAmb	21 11 38.6	
	comp=Z,31nm,1.2s						
TJN	Taejon	44.99	1	P	P	21 11 34.1	-0.6
CD2	Chengdu	45.23	332	P	P	21 11 37.8	+1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KSCHJ	Chungju	45.50	1	P	P	21 11 38.4	-0.3
KSCHJ				IAmb	IAmb	21 11 47.3	
	comp=Z,17nm,0.8s						
KSAR	Wonju Array Be	46.07	1	P	P	21 11 43.1	-0.1
KSRS	Korea Array	46.08	1	P	P	21 11 43.0	-0.2
	comp=Z,2.4nm,0.6s,baz=180,slow=9.7,SNR=16						
KSRS				LR	LR	21 30 33.2	
	comp=Z,53nm,21.5s,baz=200,slow=36						
	comp=Z,2.4nm,0.6s						
INCN	Inchon	46.09	360	P	P	21 11 43.3	-0.1
INCN				IAmb	IAmb	21 11 51.9	
	comp=Z,21nm,1.1s						
KS19	Wonju Array Si	46.12	1	P	P	21 11 43.6	-0.1
KS19				IAmb	IAmb	21 11 52.1	
	comp=Z,10nm,0.8s						
MAJO	Matsushiro	46.44	13	P	P	21 11 46.0	-0.2
MAJO				IAmb	IAmb	21 11 55.2	
	comp=Z,10nm,0.9s						
MJAR	Matsushiro Arr	46.44	13	P	P	21 11 45.0	-1.2
	comp=Z,2.8nm,0.9s,baz=185,slow=9.1,SNR=9.2						
MJAR				LR	LR	21 29 49.9	
	comp=Z,91nm,21.6s,baz=195,slow=34						
	comp=Z,2.8nm,0.9s						
MJAR	Matsushiro Arr	46.44	13	P	P	21 11 45.7	-0.5
MJB9	Matsu-Tunnel	46.45	13	P	P	21 11 45.9	-0.3
MJB9				IAmb	IAmb	21 11 55.2	
	comp=Z,9.9nm,0.9s						
SEHB	SEOHWA	46.90	2	P	P	21 11 50.0	+0.3
SEHB				IAmb	IAmb	21 11 59.6	
	comp=Z,17nm,0.9s						
SHL	Shillong	48.12	316	P	P	21 11 58.6	-1.1
SHL				IAmb	IAmb	21 12 08.2	
	comp=Z,12nm,1.1s						
JMM	Marumori	48.32	15	P	P	21 12 00.4	-0.3
JMM				IAmb	IAmb	21 12 12.0	
	comp=Z,18nm,1.1s						
PALK	Pallekele	48.52	288	LR	LR	21 34 18.8	
	comp=Z,209nm,18.6s,baz=218,slow=38						
LZH	Lanzhou	49.59	336	*e*P	P	21 12 11.5	+0.8
LZH				sP	sP	21 12 28.5	+3.0
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				LR	LR		
	comp=Z,120nm,16.7s						
LZH				LR	LR		
	comp=Z,160nm,17.1s						
LZH				LR	LR		
	comp=Z,110nm,17.8s						
LSA	Lhasa	51.35	320	P	P	21 12 23.8	-0.7
HHC	Hu-ho-hao-te	51.38	345	*e*P	P	21 12 25.5	+1.4
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,94nm,5.2s						
BTO	Baotou	51.55	344	*e*P	P	21 12 32.5	+7.1
QRZ	Quartz Range	51.56	136	P	P	21 12 25.3	-0.1
RPZ	Rata Peaks	51.88	140	LR	LR	21 36 09.8	
	comp=Z,290nm,18.1s,baz=296,slow=38						
RPZ	Rata Peaks	51.88	140	P	P	21 12 28.9	+1.2
ODAN	Odare	52.06	314	*e*P	P	21 12 29.7	+0.1
RAMN	Ramite	52.68	314	*e*P	P	21 12 33.4	-0.8
	comp=Z,44nm,0.6s						
TUWZ	Tuamarina	52.78	136	P	P	21 12 34.9	+0.5
USRK	Ussuriysk Ar.	53.02	5	P	P	21 12 36.0	-0.1
	comp=Z,4.2nm,0.8s,baz=188,slow=7.7,SNR=7.5						
	comp=Z,4.2nm,0.8s						
USRK	Ussuriysk Ar.	53.02	5	P	P	21 12 36.5	+0.4
JIRN	Jiri	53.40	314	*e*P	P	21 12 39.8	+0.2
	comp=Z,27nm,0.8s						
BKZ	Black Stump Fm	53.73	133	P	P	21 12 42.4	+0.9
GUN	Gumba	53.77	314	*e*P	P	21 12 42.0	-0.3
	comp=Z,64nm,0.9s						
URZ	Urewera	53.87	131	LR	LR	21 36 38.6	
	comp=Z,157nm,19.9s,baz=211,slow=37						
PKI	Pulchoki	53.90	314	*e*P	P	21 12 42.4	-0.9
	comp=Z,12nm,0.5s						
GOMU	GeErMu	53.90	328	P	P	21 12 47.3	+4.1
GOMU				pP	pP	21 12 51.5	-2.3
GOMU				sP	sP	21 12 55.0	-3.0
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,53nm,4.2s						
PKIN	Phulchoki	53.91	314	*e*P	P	21 12 42.6	-0.7
	comp=Z,11nm,0.4s						
GTA	Gaotai	54.10	334	⇑P	P	21 12 43.3	-0.9
GTA				pmax	pmax		
	comp=Z,47nm,4.7s						
GTA				LR	LR		
	comp=Z,67nm,15.3s						
GTA				LR	LR		
	comp=Z,98nm,15.3s						
GTA				LR	LR		
	comp=Z,120nm,17.4s						
DMN	Daman	54.14	313	*e*P	P	21 12 44.8	-0.1
ASAJ	Asahikawa	54.67	14	P	P	21 12 47.4	-0.7
	comp=Z,2.4nm,0.5s,baz=229,slow=33,SNR=1.6						
	comp=Z,2.4nm,0.5s						
GKN	Gorkha	54.70	314	*e*P	P	21 12 48.2	-0.7
	comp=Z,20nm,0.6s						
KOLN	Koldanda	55.32	313	*e*P	P	21 12 53.3	-0.1
DANN	Dangsing	55.54	313	*e*P	P	21 12 55.0	-0.1
	comp=Z,40nm,0.7s						
PYUN	Piuthan	55.95	313	*e*P	P	21 12 57.4	-0.5
	comp=Z,48nm,0.8s						
CASY	Casey	58.41	188	P	P	21 13 14.7	+0.3
CASY				IAmb	IAmb	21 13 16.4	
	comp=Z,8.0nm,0.9s						
ULN	Ulaanbaatar	59.08	345	P	P	21 13 19.0	-0.6
SONM	Songino Array	59.23	344	P	P	21 13 20.9	+0.4
	comp=Z,2.1nm,0.7s,baz=158,slow=8.0,SNR=21						
	comp=Z,2.1nm,0.7s						
SONM	Songino Array	59.23	344	P	P	21 13 19.7	-0.8
SONM				IAmb	IAmb	21 13 29.1	
	comp=Z,15nm,1.1s						
AFI	Afiamalu	60.43	101	LR	LR	21 38 15.1	
	comp=Z,59nm,21.1s,baz=175,slow=35						
WMQ	Urumqi	63.21	329	*e*P	P	21 13 50.5	+3.0
NIL	Nilore	65.98	313	P	P	21 14 04.4	-1.3
NIL				IAmb	IAmb	21 14 25.4	
	comp=Z,6.1nm,0.8s						
PEA0B	Petropavlovsk-	67.14	20	P	P	21 14 13.4	+0.6
PETK	Petropavlovsk-	67.14	20	P	P	21 14 12.9	+0.2
	comp=Z,7.4nm,0.6s,baz=190,slow=4.1,SNR=16						
	comp=Z,7.4nm,0.6s						
KSH	Kashi	67.20	320	P	P	21 14 12.0	-1.6
KSH				pP	pP	21 14 25.0	+0.6
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TARG	Taragay, Kyrgy	67.33	322	P	P	21 14 13.7	-1.1
MK31	Makanchi Array	68.02	329	P	P	21 14 18.3	-0.1
MK31				IAmb	IAmb	21 14 26.8	
	comp=Z,6.4nm,0.9s						
MKAR	Makanchi Array	68.02	329	P	P	21 14 17.9	-0.5
	comp=Z,2.7nm,0.5s,baz=126,slow=7.2,SNR=60						
MKAR				LR	LR	21 47 44.6	
	comp=Z,50nm,18.9s,baz=134,slow=39						
	comp=Z,2.7nm,0.5s						
MAKZ	Makanchi	68.19	329	P	P	21 14 19.0	-0.5
BOOM	Boomskoye usch	68.91	322	P	P	21 14 24.3	+0.1
KBL	Kabul	69.47	312	P	P	21 14 27.3	-0.7
AAK	Ala-Archa	69.87	322	P	P	21 14 29.4	-0.9
DRK	Karamyk	69.91	318	P	P	21 14 29.8	-1.0
YAK	Yakutsk	70.71	2	LR	LR	21 47 60.0	
	comp=Z,30nm,19.8s,baz=271,slow=38						
YAK	Yakutsk	70.71	2	P	P	21 14 34.1	-0.6
MA2	Magadan	70.89	13	P	P	21 14 35.6	-0.3
	comp=Z,11nm,0.9s,baz=177,slow=7.6,SNR=4.4						
MA2				LR	LR	21 50 17.4	
	comp=Z,15nm,18.0s,baz=24,slow=40						
	comp=Z,11nm,0.9s						
MA2	Magadan	70.89	13	P	P	21 14 35.6	-0.3
VNDA	Vanda	71.04	172	P	P	21 14 36.0	-0.6
	comp=Z,1.6nm,0.7s,baz=319,slow=6.9,SNR=10						
VNDA				LR	LR	21 45 47.2	
	comp=Z,167nm,18.4s,baz=328,slow=36						
	comp=Z,1.6nm,0.7s						
VNDA	Vanda	71.04	172	P	P	21 14 37.3	+0.7
VNDA				IAmb	IAmb	21 14 39.4	
	comp=Z,12nm,1.6s						
RAR	Rarotonga	71.59	109	LR	LR	21 47 02.6	
	comp=Z,38nm,18.5s,baz=210,slow=37						
ZAA0	Zalesovo Array	71.83	335	P	P	21 14 40.4	-1.2
ZAA0				IAmb	IAmb	21 14 49.6	
	comp=Z,13nm,0.9s						
ZALV	Zalesovo Beam	71.83	335	P	P	21 14 40.4	-1.2
	comp=Z,5.3nm,0.5s,baz=139,slow=5.4,SNR=25						
	comp=Z,5.3nm,0.5s						
SBA	Scott Base	71.97	172	P	P	21 14 42.8	+0.6
MAW	Mawson	72.03	201	P	P	21 14 43.6	+0.9
	comp=Z,2.6nm,0.5s,baz=76,slow=4.6,SNR=9.4						
MAW				LR	LR	21 43 27.2	
	comp=Z,133nm,20.0s,baz=40,slow=33						
	comp=Z,2.6nm,0.5s						
MAW	Mawson	72.03	201	P	P	21 14 43.6	+0.9
KURK	Kurchatov	72.42	330	P	P	21 14 44.9	-0.3
KKAR	Karatay Array	72.59	320	P	P	21 14 46.7	+0.1
KKAR	Karatay Array	72.59	320	P	P	21 14 46.9	+0.4
KKAR				IAmb	IAmb	21 14 58.3	
	comp=Z,5.7nm,1.4s						
SHEM	Shemya Is, Ala	73.44	28	LR	LR	21 41 23.3	
	comp=Z,61nm,21.9s,baz=204,slow=31						
SEY	Seymchan	74.26	12	P	P	21 14 55.7	-0.1
	comp=Z,7.9nm,0.6s,baz=213,slow=4.9,SNR=28						
	comp=Z,7.9nm,0.6s						
HRA	Herat	74.51	309	P	P	21 14 57.2	-1.0
SOCY	Socotra	75.18	285	P	P	21 15 01.5	-0.8
GSTR	Great Sitkin T	77.93	32	P	P	21 15 17.6	+0.6
BRVK	Borovoye	77.97	329	P	P	21 15 16.3	-0.9
BRVK				IAmb	IAmb	21 15 25.7	
	comp=Z,16nm,1.1s						
TIXI	Tiksi	80.34	1	P	P	21 15 28.7	-1.1
	comp=Z,2.9nm,0.6s,baz=90,slow=24,SNR=24						
	comp=Z,2.9nm,0.6s						
TIXI	Tiksi	80.34	1	P	P	21 15 28.7	-1.1
QSPA	South Pole Qui	81.14	180	P	P	21 15 35.7	+1.2
	comp=Z,9.1nm,1.0s,baz=318,slow=1.9,SNR=15						
QSPA				LR	LR	21 51 54.6	
	comp=Z,83nm,18.5s,baz=338,slow=36						
	comp=Z,9.1nm,1.0s						
QSPA	South Pole Qui	81.14	180	P	P	21 15 34.9	+0.5
QSPA				IAmb	IAmb	21 15 36.6	

	comp=Z,15nm,1.1s						
PPT	Papeete	81.48	106	LR	LR	21 47 07.0	
	comp=Z,89nm,18.8s,baz=188,slow=32						
ABKAR	Akbulak array	81.92	323	P	P	21 15 38.0	-0.6
ABKAR	Akbulak array	81.92	323	P	P	21 15 38.3	-0.4
ABKAR				IAmb	IAmb	21 15 47.5	
	comp=Z,8.2nm,1.3s						
NRIK	Noril'sk	82.57	347	P	P	21 15 41.2	-0.4
	comp=Z,4.4nm,0.7s,baz=158,slow=5.1,SNR=6.8						
	comp=Z,4.4nm,0.7s						
NRIK	Noril'sk	82.57	347	P	P	21 15 41.5	-0.2
NRIK				IAmb	IAmb	21 15 49.6	
	comp=Z,20nm,1.5s						
AKTO	Aktyubinsk	83.53	323	P	P	21 15 46.6	-0.4
	comp=Z,2.8nm,0.7s,baz=109,slow=4.8,SNR=9.1						
	comp=Z,2.8nm,0.7s						
RAYN	Ar Rayn	85.48	295	P	P	21 15 56.7	-0.8
RAYN				IAmb	IAmb	21 16 07.0	
	comp=Z,15nm,1.4s						
ARU	Arti	85.54	329	P	P	21 15 56.4	-0.7
ARU				IAmb	IAmb	21 16 06.5	
	comp=Z,18nm,1.6s						
KMBO	Kilima Mbogo	89.24	269	P	P	21 16 17.4	+1.3
	comp=Z,0.8nm,0.3s,baz=39,slow=7.7,SNR=3.5						
	comp=Z,0.8nm,0.3s						
KMBO	Kilima Mbogo	89.24	269	P	P	21 16 16.4	+0.3
KMBO				IAmb	IAmb	21 16 28.7	
	comp=Z,7.3nm,1.3s						
TROLL	Troll, Antarti	91.55	195	P	P	21 16 27.6	+2.0
KBZ	Khabaz	91.57	314	LR	LR	22 05 59.3	
	comp=Z,19nm,18.6s,baz=102,slow=41						
TTA	Tatalina	92.11	27	P	P	21 16 28.1	-0.1
TTA				IAmb	IAmb	21 16 29.0	
	comp=Z,12nm,1.6s						
BELA	Belgrano 2	92.78	184	P	P	21 16 31.7	+0.7
BELA				IAmb	IAmb	21 16 33.0	
	comp=Z,7.0nm,1.0s						
SNAA	Sanae	93.08	194	P	P	21 16 34.4	+1.8
SNAA	Sanae	93.08	194	P	P	21 16 32.4	-0.2
	comp=Z,2.2nm,0.7s,baz=170,slow=6.9,SNR=12						
SNAA				LR	LR	21 57 26.7	
	comp=Z,116nm,19.1s,baz=88,slow=35						
	comp=Z,2.2nm,0.7s						
SNAA	Sanae	93.08	194	P	P	21 16 34.0	+1.4
SNAA				IAmb	IAmb	21 17 35.9	
	comp=Z,11nm,1.4s						
TRF	Thorofare Moun	94.75	27	P	P	21 16 42.3	+1.8
TRF				IAmb	IAmb	21 16 49.3	
	comp=Z,7.0nm,0.8s						
SML	Sawmill	95.38	28	P	P	21 16 42.0	-1.3
SML				IAmb	IAmb	21 16 51.4	
	comp=Z,8.6nm,1.1s						
RND	Reindeer	95.39	27	P	P	21 16 42.0	-1.2
RND				IAmb	IAmb	21 16 43.2	
	comp=Z,9.4nm,1.3s						
I23K	Minto, Yukon-K	95.44	25	P	P	21 16 42.1	-1.2
I23K				IAmb	IAmb	21 16 43.9	
	comp=Z,9.4nm,1.4s						
H23K	Yukon River	95.47	24	P	P	21 16 43.2	-0.3
H23K				IAmb	IAmb	21 16 45.4	
	comp=Z,7.1nm,1.4s						
BOSA	Boshof	95.67	240	P	P	21 16 44.7	-0.8
	comp=Z,1.8nm,1.0s,baz=78,slow=3.6,SNR=3.9						
BOSA				LR	LR	21 53 32.4	
	comp=Z,71nm,21.4s,baz=144,slow=32						
	comp=Z,1.8nm,1.0s						
BOSA	Boshof	95.67	240	P	P	21 16 44.5	-0.9
BOSA				IAmb	IAmb	21 20 24.2	
	comp=Z,9.1nm,1.4s						
MBAR	Mbarara	95.75	268	LR	LR	21 59 46.9	
	comp=Z,48nm,18.1s,baz=110,slow=35						
LBTB	Lobatse	96.18	244	LR	LR	21 54 54.9	
	comp=Z,76nm,21.8s,baz=86,slow=32						
ILAR	Eielson Array	96.43	25	P	P	21 16 45.9	-1.9
	comp=Z,0.3nm,0.7s,baz=285,slow=7.2,SNR=2.8						
ILAR				LR	LR	21 56 18.9	
	comp=Z,19nm,20.1s,baz=282,slow=33						
	comp=Z,0.3nm,0.7s						
BMRM	Bremner River	97.06	29	P	P	21 16 50.2	-0.7
BMAR	Burnt Mountain	97.63	23	P	P	21 16 53.3	0.0
SUR	Sutherland	98.44	235	LR	LR	21 57 48.2	
	comp=Z,46nm,18.1s,baz=128,slow=33						
NVAR	Mina Array Bea	115.03	52	PKP	PKiKP	21 22 00.3	-0.4
	comp=Z,0.8nm,0.7s,baz=241,slow=2.3,SNR=6.7						
PDAR	Pinedale Array	120.54	45	PKP	PKiKP	21 22 12.2	+0.9
	comp=Z,1.1nm,0.8s,baz=215,slow=1.8,SNR=11						
TORD	Torodi Ar. Bea	125.89	280	PKP	PKiKP	21 22 22.7	+0.3
	comp=Z,2.3nm,0.6s,baz=82,slow=2.0,SNR=15						
PLCA	Paso Flores	128.17	163	PKP	PKiKP	21 22 27.4	+1.0
	comp=Z,2.4nm,0.9s,baz=123,slow=2.1,SNR=3.9						
TXAR	Lajitas Array	128.72	59	PKP	PKiKP	21 22 28.1	+0.3
	comp=Z,0.7nm,0.7s,baz=222,slow=2.3,SNR=8.8						
CPUP	Villa Florida	144.81	174	PKP	PKPdf	21 22 56.6	-0.1
	comp=Z,9.5nm,0.6s,baz=194,slow=2.3,SNR=22						
CPUP	Villa Florida	144.81	174	PKPdf	PKPbc	21 22 56.2	+0.5
LPAZ	La Paz	151.05	150	PKPbc	PKiKP	21 23 15.8	+1.4
	comp=Z,11nm,0.9s,baz=130,slow=2.1,SNR=32						
LPAZ	La Paz	151.05	150		PKiKP	21 23 14.2	-0.1
ROSC	El Rosal	158.80	99	PKPab	PKPab	21 23 56.0	+1.7
	comp=Z,6.2nm,0.4s,baz=216,slow=20,SNR=4.1						

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*IDC **28** 21:05:13.2±0.9, 56°.00S×25°.30W, h0^{km}, mb4.1/5, mbtmp4.0/6, ML3.4/1, MS4.1/1, Error ellipse: s-maj=38.8km s-min=20.6km az=72.0*
*NEIC **28** 21:05:14.9±1.1, 56°.06S±0°.09×25°.6W±0°.3, h10^{km}±2^{km}, mb4.3/17, Error ellipse: s-maj=30.8km s-min=5.8km az=63.0*
ISC 28 21:05:14.6±0.8**, 56°.0S**±0°.1×**25°.6W**±0°.2**, h10^{km}, n25, σ0^{s}89**/25**, mb4.3**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	18.40	157	P	Pn	21 09 30.8	+1.2
	0.1nm,0.3s,baz=230,slow=17,SNR=2.4						
	1.7nm,0.7s						
SNAA	Sanae	18.40	157	P	Pn	21 09 30.5	+1.0
BELA	Belgrano 2	22.17	185	P	P	21 10 08.9	-1.3
BELA				IAmb	IAmb	21 10 11.9	
	comp=Z,6.8nm,0.8s						
DSPA	Despedida	24.28	257	P	P	21 10 30.7	-1.1
MG02	Cerro Sombrero	25.28	259	P	P	21 10 40.7	-0.1
TRQA	Tornquist	30.14	291	P	P	21 11 24.4	-0.1
QSPA	South Pole Qui	34.22	180	P	P	21 11 59.9	-0.2
	comp=Z,3.9nm,0.8s,baz=181,slow=0.5,SNR=30						
	comp=Z,3.9nm,0.8s						
QSPA	South Pole Qui	34.22	180	P	P	21 12 00.1	0.0
QSPA				IAmb	IAmb	21 12 03.0	
	comp=Z,4.6nm,0.8s						
CPUP	Villa Florida	37.48	309	P	P	21 12 28.9	+0.7
	comp=Z,0.9nm,0.5s,baz=190,slow=11,SNR=2.8						
	comp=Z,0.9nm,0.5s						
CPUP	Villa Florida	37.48	309	P	P	21 12 28.5	+0.3
BO04	La Punta	37.79	286	P	P	21 12 30.5	-0.3
BO04				IAmb	IAmb	21 12 33.0	
	comp=Z,5.0nm,1.2s						
MT09	Talagante	38.16	286	P	P	21 12 33.1	-1.0
MT09				IAmb	IAmb	21 12 33.5	
	comp=Z,2.9nm,0.5s						
MT02	Curacav	38.63	287	P	P	21 12 37.4	-0.5
MT02				IAmb	IAmb	21 12 38.0	
	comp=Z,4.0nm,0.5s						
ZON	Zonda	38.66	291	P	P	21 12 37.8	-0.4
ZON				IAmb	IAmb	21 12 39.1	
	comp=Z,5.2nm,0.7s						
ROC1	El Roble	38.78	287	P	P	21 12 39.3	-0.2
ROC1				IAmb	IAmb	21 12 40.0	
	comp=Z,4.6nm,0.6s						
BOSA	Boshof	45.10	74	LR	LR	21 29 43.4	
	comp=Z,186nm,18.2s,baz=192,slow=33						
VNDA	Vanda	46.63	182	P	P	21 13 42.7	+0.4
	comp=Z,0.7nm,0.6s,baz=181,slow=8.0,SNR=7.5						
	comp=Z,0.7nm,0.6s						
VNDA	Vanda	46.63	182	P	P	21 13 43.2	+0.9
VNDA				IAmb	IAmb	21 13 52.0	
	comp=Z,2.9nm,1.3s						
LPAZ	La Paz	51.10	303	P	P	21 14 19.5	+1.5
	comp=Z,3.3nm,0.7s,baz=150,slow=6.5,SNR=18						
	comp=Z,3.3nm,0.7s						
LPAZ	La Paz	51.10	303	P	P	21 14 19.5	+1.5
LPAZ				IAmb	IAmb	21 14 20.5	
	comp=Z,3.4nm,0.7s						
TOA0	Torodi Ar. Sit	72.61	28	P	P	21 16 41.9	-0.1
TORD	Torodi Ar. Bea	72.61	28	P	P	21 16 41.6	-0.4
	comp=Z,1.2nm,0.8s,baz=202,slow=5.9,SNR=5.9						
	comp=Z,1.2nm,0.8s						
TORD	Torodi Ar. Bea	72.61	28	P	P	21 16 41.6	-0.4
SONM	Songino Array	149.84	85	PKPbc	PKPbc	21 25 03.5	-0.5
	comp=Z,0.3nm,0.6s,baz=218,slow=2.4,SNR=4.0						
ILAR	Eielson Array	150.77	311	PKP	PKPdf	21 24 58.1	-1.9
	comp=Z,0.3nm,0.8s,baz=108,slow=2.9,SNR=2.3						
ILAR				PKPbc	pPKPbc	21 25 06.2	-0.4
	comp=Z,1.2nm,1.0s,baz=118,slow=1.8,SNR=8.1						

IDC 28 21:11:37.9±2.2**, 8°.77S×126°.97E, h0^{km}, mb3.3**/1**, mbtmp3.6**/4**, ML3.6**/3**, Error ellipse: s-maj=49.7km s-min=34.7km az=59.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.56	246	Pn	Pn	21 12 34.4	-0.1
	6.0nm,0.3s,baz=72,slow=3.7,SNR=7.2						
BATI				Sn	Sn	21 13 15.1	-2.2
	8.9nm,0.3s,baz=84,slow=19,SNR=5.1						
	9.9nm,0.3s						
WRA	Warramunga Arr	13.20	148	Pn	Pn	21 14 45.4	-1.5
	0.3nm,0.3s,baz=322,slow=14,SNR=2.1						
WRA				Sn	Sn	21 17 06.6	-7.9
	0.4nm,0.3s,baz=320,slow=25,SNR=8.4						
	1.7nm,0.5s						
ASAR	Alice Springs	16.24	157	Pn	P	21 15 29.2	-1.6
	0.2nm,0.3s,baz=333,slow=11,SNR=2.2						
ASAR				Sn	Sn	21 18 19.3	-9.2
	0.2nm,0.3s,baz=326,slow=25,SNR=3.0						
	0.8nm,0.7s						
MKAR	Makanchi Array	68.11	329	P	P	21 22 39.7	0.0
	0.3nm,0.8s,baz=138,slow=7.0,SNR=2.3						
	0.3nm,0.8s						

TAP 28 21:22:45.3, 23°.19N×120°.79E, h5^{km}, ML1.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYH	Taoyuan	0.02	216	P	Pg	21 22 46.7	+0.4
	baz=224						
STYH				S	Sg	21 22 47.7	+0.8
	baz=224						
STYT	Tauyuan	0.04	231	P	Pg	21 22 46.8	+0.3
	baz=219						
STYT				i S	Sg	21 22 47.5	+0.2
	baz=219						
WTP	Ta-pu	0.17	290	P	Pg	21 22 49.6	+0.9
	baz=290						
WTP				eS	Sg	21 22 52.4	+1.3
	baz=290						
TPUB	Ta-pu	0.18	308	eP	Pg	21 22 49.9	+0.9
	baz=307						
TPUB				eS	Sg	21 22 53.4	+1.9
	baz=307						
ELDTW	Lidau	0.21	89	eP	Pg	21 22 50.5	+1.0
	baz=89						
SGST	Jiashian	0.21	241	P	Pg	21 22 50.5	+1.0
	baz=239						
SGST				S	Sg	21 22 54.4	+2.0
	baz=239						
CHN1	Nanshi	0.24	270	eP	Pg	21 22 50.9	+0.9
	baz=269						
SNST	Tainan City	0.27	277	eP	Pb	21 22 51.7	-1.0
	baz=277						
TWK	Hsinying	0.29	286	eP	Pg	21 22 51.6	+0.7
	baz=286						
TWK				eS	Sb	21 22 56.8	-1.3
	baz=286						
ALS	Alishan	0.32	3	eP	Pb	21 22 52.9	-0.8
	baz=4.0						
ALS				eS	Sb	21 22 58.0	-1.4
	baz=4.0						
YUS	Yu-Shan	0.34	27	eS	Sb	21 22 59.1	-0.9
	baz=27						
CHN3	Shinhua	0.40	254	eP	Pb	21 22 54.6	-0.3
	baz=254						

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*LDG **28** 21:38:35.4±0.1, 49°.68N×2°.97E, h3^{km}, Md2.3/2, Ml2.4/33, Error ellipse: s-maj=1.5km s-min=1.0km az=149.0*
*UCC **28** 21:38:36.7±0.7, 49°.76N×3°.03E, h14^{km}±1^{km}, ML1.5*
*STR **28** 21:38:36.5±0.6, 50°N±4°×°±°, h14^{km}±5^{km}, MLv2.0/6, preliminary*
ISC 28 21:38:34.7±1.0**, 49°.68N**±0°.02×**2°.96E**±0°.02**, h13^{km}**±9^{km}**, n65, σ1^{s}76**/123**, 1C-21D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAIF	Baives	0.89	64	ePg	Pg	21 38 52.3	+0.4
BAIF				eSg	Sg	21 39 03.2	-0.4
	34nm,0.3s						
BBOU	Bougnies	0.95	41	dP	Pg	21 38 53.6	+0.5
MENF	Mencas	1.03	330	Sg	Sg	21 39 07.3	-0.6
MENF	Mencas	1.03	330	Pg	Pg	21 38 54.8	+0.3
DOU	Dourbes	1.14	68	bP	Pb	21 38 56.3	+0.1
DOU				dS	Sb	21 39 10.5	-0.3
	comp=N,21nm,0.1s						
DOU	Dourbes	1.14	68	Pg	Pb	21 38 56.3	+0.1
DOU				Sg	Sb	21 39 10.6	-0.3
SNF	Seneffe	1.19	45	dP	Pb	21 38 57.1	0.0
BSKQ	Steenkerk	1.21	36	dP	Pn	21 38 57.1	-0.2
BSKQ				dS	Sb	21 39 12.6	-0.3
	comp=E,4.9nm,0.1s						
BRQR	Ronquire	1.24	41	dP	Pn	21 38 58.0	+0.3
GIVF	Givet	1.28	70	ePg	Pn	21 38 58.8	+0.6
GIVF				eSg	Sb	21 39 14.9	0.0
	comp=E,36nm,0.4s						
BMRD	Maredsous	1.32	61	dP	Pn	21 38 58.9	+0.1
BMRD				dS	Sb	21 39 15.8	-0.4
	comp=E,16nm,0.4s						
RCHB	Rochefort	1.54	71	dP	Pn	21 39 02.3	+0.5
RCHB				dS	Sn	21 39 21.9	+0.2
RCHB	Rochefort	1.54	71	Pn	Pn	21 39 02.0	+0.2
RCHB	Rochefort	1.54	71	Sn	Sn	21 39 21.3	-0.4
BGES	Gesves	1.54	62	dP	Pn	21 39 02.3	+0.5
BGES				dS	Sn	21 39 21.6	-0.2
	comp=N,7.4nm,0.1s						
BCLA	Clavier	1.68	63	dP	Pn	21 39 04.6	+0.9
BCLA				dS	Sn	21 39 24.4	-0.7
	comp=N,4.5nm,0.1s						
SAVF	Savonnieres en	1.77	126	ePn	Pn	21 39 04.9	-0.1
SAVF	Savonnieres en	1.77	126	ePg	Pb	21 39 08.3	+1.3
	baz=304						
SAVF				eSg	Sb	21 39 30.6	+1.5
	comp=N,2.0nm,0.2s,baz=306						
MEZF	Maizieres J'vi	1.81	130	ePn	Pn	21 39 06.2	+0.7
	baz=312						
MEZF	Maizieres J'vi	1.81	130	ePg	Pb	21 39 09.0	+1.4
	baz=314						
MEZF				eSn	Sn	21 39 27.8	-0.4
	comp=N,1.8nm,0.2s						
MEZF				eSg	Sb	21 39 31.6	+1.5
	comp=N,6.1nm,0.3s						
SFTF	Sexfontaines	2.01	136	ePn	Pn	21 39 08.5	+0.2
	baz=312						
SFTF	Sexfontaines	2.01	136	ePg	Pg	21 39 13.1	-0.1
	baz=314						
SFTF				eSn	Sn	21 39 32.8	-0.4
	comp=N,1.6nm,0.2s						
SFTF				eSg	Sg	21 39 38.6	-0.6
	comp=N,6.2nm,0.2s						
WLF	Walferdange	2.07	89	dP	Pb	21 39 12.5	+0.4
WLF				dS	Sn	21 39 32.0	-2.8
WLF	Walferdange	2.07	89	Sn	Sn	21 39 36.2	+1.4
WLF	Walferdange	2.07	89	Pn	Pn	21 39 08.7	-0.4
PAGF	Fort de Pagny	2.13	121	ePn	Pn	21 39 10.3	+0.3
	baz=302						
PAGF	Fort de Pagny	2.13	121	ePg	Pg	21 39 15.6	0.0
	baz=303						
PAGF				eSn	Sn	21 39 36.4	+0.1
	baz=300						
PAGF				eSg	Sg	21 39 43.3	+0.1
	comp=N,1.0nm,0.1s,baz=291						
MEM	Membach	2.17	63	dP	Pb	21 39 13.2	-0.6
MEM				dS	Sn	21 39 35.7	-1.5
	comp=N,1.4nm,0.1s						
BTNL	Ternell	2.23	65	dP	Pn	21 39 13.2	+1.8
BTNL				dS	Sn	21 39 37.4	-1.4
LDF	La Druitiere	2.30	243	ePg	Pn	21 39 12.5	+0.3
LDF				eSn	Sn	21 39 38.8	-1.5
LDF				eSg	Sb	21 39 46.0	+1.8
	comp=N,4.0nm,0.3s						
HYF	Humbligny	2.42	185	ePg	Pb	21 39 18.6	+0.6
HYF				eSg	Sb	21 39 51.0	+3.3
FLN	La Foliniere	2.44	249	ePn	Pn	21 39 14.2	+0.1
FLN	La Foliniere	2.44	249	ePg	Pb	21 39 20.2	+1.9
	baz=72						
FLN				eSn	Sn	21 39 42.0	-1.8
FLN				eSg	Sb	21 39 50.5	+2.3
	comp=N,7.4nm,0.3s,baz=69						
LOR	Lormes	2.48	166	ePn	Pn	21 39 15.2	+0.4
LOR	Lormes	2.48	166	ePg	Pb	21 39 21.1	+2.0
	baz=346						
LOR				eSg	Sb	21 39 52.3	+2.8
	comp=N,4.3nm,0.2s,baz=350						
LOR	Lormes	2.48	166	Pn	Pn	21 39 16.2	+1.5
SSF	Saint Saulge	2.64	172	ePn	Pn	21 39 17.2	+0.3
SSF	Saint Saulge	2.64	172	ePg	Pg	21 39 24.6	-0.7
SSF				eSg	Sg	21 39 58.0	-1.4
	comp=N,4.1nm,0.4s						
HAU	Haudompre	2.79	125	ePn	Pn	21 39 19.6	+0.6
HAU	Haudompre	2.79	125	ePg	Pb	21 39 26.3	+1.9
HAU				eSn	Sn	21 39 51.0	-1.6
HAU				eSg	Sg	21 40 02.3	-2.0
	comp=N,3.0nm,0.2s						
GRR	Gorron	2.83	244	ePn	Pn	21 39 19.3	-0.2
GRR	Gorron	2.83	244	ePg	Pb	21 39 27.7	+2.8
GRR				eSn	Sn	21 39 51.6	-1.7
GRR				eSg	Sb	21 40 02.7	+3.3
	comp=N,4.0nm,0.2s						
AVF	Avril sur Loir	2.90	175	ePn	Pn	21 39 21.2	+0.7
AVF	Avril sur Loir	2.90	175	ePg	Pg	21 39 29.7	-0.5
AVF				eSn	Sn	21 39 54.8	-0.3
AVF				eSg	Sg	21 40 05.8	-1.9
	comp=N,1.2nm,0.2s						
SMF	Signal de Mont	3.09	169	ePn	Pn	21 39 23.3	+0.2
SMF	Signal de Mont	3.09	169	ePg	Pb	21 39 32.4	+3.0
SMF				eSn	Sn	21 39 54.8	-5.1
SMF				eSg	Sg	21 40 12.4	-1.4
	comp=N,2.6nm,0.2s						
CDF	Champ du Feu	3.11	112	ePn	Pn	21 39 22.9	-0.5
CDF	Champ du Feu	3.11	112	ePg	Pg	21 39 33.7	-0.5
CDF				eSn	Sn	21 39 58.3	-2.1
	comp=N,1.3nm,0.3s						
CDF				eSg	Sb	21 40 11.5	+3.9
	comp=N,1.0nm,0.4s						
BGF	Bois d'Agland	3.12	181	ePg	Pg	21 39 33.9	-0.5
BGF				eSn	Sn	21 40 00.0	-0.6
BGF				eSg	Sg	21 40 13.7	-1.1
	comp=N,5.2nm,0.3s						
HINF	Hinteralfeld	3.17	124	ePn	Pn	21 39 25.0	+0.7
HINF				eSn	Sn	21 40 00.3	-1.8
	comp=N,1.7nm,0.3s						
HINF				eSg	Sb	21 40 13.5	+4.0
RENF	Rennes	3.41	245	Pn	Pn	21 39 29.2	+1.7
RENF				Sn	Sn	21 40 12.8	+5.0
TCF	Toulx Ste Croi	3.43	189	ePn	Pn	21 39 26.9	-0.9
TCF	Toulx Ste Croi	3.43	189	ePg	Pg	21 39 39.9	-0.4
TCF				eSn	Sn	21 40 06.8	-1.4
TCF				eSg	Sg	21 40 23.0	-1.7
	comp=N,1.2nm,0.2s						
CABF	La Chapelle	3.71	145	ePn	Pn	21 39 31.8	+0.1
CABF	La Chapelle	3.71	145	ePg	Pb	21 39 43.5	+3.4
CABF				eSg	Sg	21 40 31.9	-1.9
	comp=N,1.2nm,0.2s						
MFF	Saint Martin d	3.71	215	ePn	Pn	21 39 31.5	-0.2
MFF	Saint Martin d	3.71	215	ePg	Pg	21 39 44.1	-1.7
MFF				eSn	Sn	21 40 12.9	-2.3
MFF				eSg	Sg	21 40 31.8	-2.0
	comp=N,1.3nm,0.3s						
SGMF	Saint Gilles	3.91	251	ePn	Pn	21 39 35.4	+1.1
SGMF				eSn	Sn	21 40 17.2	-2.8
SGMF				eSg	Sg	21 40 37.9	-2.1
	comp=N,1.2nm,0.3s						
ROSF	Rostrenen	4.32	254	ePn	Pn	21 39 40.3	+0.3
ROSF				eSn	Sn	21 40 28.3	-1.9
ROSF				eSg	Sg	21 40 51.4	-1.9
	comp=N,3.6nm,0.6s						
QUIF	Quistinic	4.42	249	ePn	Pn	21 39 42.0	+0.7
QUIF				eSn	Sn	21 40 29.2	-3.4
QUIF				eSg	Sg	21 40 54.6	-1.8
	comp=N,4.2nm,0.6s						
RJF	Les Rejaudoux	4.48	193	ePn	Pn	21 39 42.2	-0.1
RJF				eSn	Sn	21 40 28.7	-5.5
RJF				eSg	Sg	21 40 55.0	-3.5
	comp=N,0.7nm,0.3s						
CAF	Calviac	4.79	188	ePn	Pn	21 39 46.3	-0.2
CAF				eSn	Sn	21 40 38.7	-3.2
CAF				eSg	Sg	21 41 06.1	-2.3
	comp=N,1.0nm,0.4s						
LPG	La Plagne	4.90	147	ePn	Pn	21 39 49.2	+0.9
VIVF	Saint-Julien-l	4.96	166	ePn	Pn	21 39 49.2	+0.4
VIVF				eSn	Sn	21 40 42.3	-3.7
	comp=N,0.9nm,0.3s						
VIVF				eSg	Sg	21 41 10.8	-3.0
	comp=N,0.9nm,0.2s						
LFF	La Frestale	4.97	199	ePn	Pn	21 39 48.7	-0.3

IDC 28 21:56:02.0±1.7**, 3°.90S×144°.36E, h0^{km}, mb3.5**/3**, mbtmp3.6**/4**, ML3.8**/1**, Error ellipse: s-maj=69.6km s-min=26.3km az=109.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.70	211	P	P	22 00 21.9	-0.2
	0.3nm,0.3s,baz=30,slow=11,SNR=23						
	1.6nm,0.8s						
ASAR	Alice Springs	22.09	206	P	P	22 00 58.8	-0.3
	0.8nm,0.7s,baz=32,slow=11,SNR=12						
	0.8nm,0.7s						
MKAR	Makanchi Array	74.22	321	P	P	22 07 41.9	+1.0
	0.3nm,0.4s,baz=103,slow=7.1,SNR=4.8						
	0.3nm,0.4s						
ILAR	Eielson Array	84.61	24	P	P	22 08 36.2	-0.8
	0.5nm,0.6s,baz=261,slow=4.6,SNR=5.9						
	0.5nm,0.6s						

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*INET **28** 22:14:48.3±0.9, 9°.56N×84°.84W, h8^{km}±4^{km}, MW3.3*
*UCR **28** 22:14:49.0±1.6, 9°.59N×84°.90W, h16^{km}±6^{km}, MW4.0*
ISC 28 22:14:48.0±1.2**, 9°.55N**±0°.05×**84°.90W**±0°.03**, h18^{km}**±7^{km}**, n37, σ0^{s}62**/52**, 2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAFE	Finca La Fe, P	0.26	358	eP	Pg	22 14 54.0	+0.1
LAFE	Finca La Fe, P	0.26	358	eP	Pg	22 14 54.0	+0.1
LAFE				eS	Sg	22 14 58.2	+0.3
JACO	JACO, Garabito	0.26	64	eP	Pb	22 14 54.4	+0.1
INDI	Punta indio, G	0.67	298	eP	Pg	22 15 01.3	0.0
SRA1	San Ramn	0.68	38	eP	Pg	22 15 00.8	-0.6
JTS	Las Juntas de	0.74	356	eP	Pg	22 15 01.7	-0.9
DUNO	Dulce Nombre,	0.79	312	eP	Pg	22 15 02.9	-0.5
HDC	Heredia	0.90	60	eP	Pg	22 15 05.1	-0.5
HDC3	Heredia 3	0.90	60	eP	Pg	22 15 05.1	-0.6
HDC3				eS	Sb	22 15 17.7	+0.7
LCR2	La Lucha 2	0.90	78	eP	Pg	22 15 04.9	-0.8
GUAI	GUAI	0.94	320	⇑iP	Pg	22 15 05.4	-0.9
GUAI				i S	Sg	22 15 19.1	+0.4
FORC	Fortuna	0.94	14	eP	Pg	22 15 05.5	-0.8
FORC				eS	Sn	22 15 20.4	+1.0
SAJU	San Juanillo,	0.95	303	eP	Pg	22 15 05.9	-0.7
CEDE	Laguna Cedeo	0.95	12	eP	Pg	22 15 05.9	-0.7
RIMA	Rio Macho	1.05	78	eP	Pg	22 15 07.2	-1.2
RIMA	Rio Macho	1.05	78	eP	Pg	22 15 07.1	-1.2
RIMA				eS	Sb	22 15 21.9	+0.7
EDDO	Dominical	1.06	106	eP	Pb	22 15 08.1	+0.1
CDM	Cerro de Muert	1.12	90	eP	Pb	22 15 09.1	-0.1
CDM	Cerro de Muert	1.12	90	eP	Pb	22 15 09.1	-0.1
CDM				eS	Sn	22 15 24.9	+0.3
CUI	Cuipilapa	1.13	347	eP	Pb	22 15 08.6	-0.6
CUI				i S	Sb	22 15 23.5	-0.1
COLC	Colonia	1.15	345	eP	Pb	22 15 08.8	-0.7
COLC				eS	Sb	22 15 23.9	-0.1
PTEN	Parque Tenorio	1.16	356	eP	Pb	22 15 09.3	-0.4
HORNC	Hornillas	1.19	347	i P	Pb	22 15 09.4	-0.7
HORNC				eS	Sb	22 15 24.6	-0.6
LIM1	Limonal	1.19	343	eP	Pb	22 15 09.5	-0.7
LIM1				eS	Sb	22 15 25.7	+0.4
GUAB	Guayabo de Bag	1.20	344	eP	Pb	22 15 09.4	-0.8
GUAB				eS	Sb	22 15 26.5	+1.0
GPS2	Hotel Rincn d	1.28	340	i P	Pn	22 15 11.0	-0.1
GPS2				eS	Sb	22 15 27.6	-0.2
LAPC	Finca la Perla	1.32	337	eP	Pn	22 15 11.5	-0.2
LAPC				eS	Sb	22 15 28.5	-0.5
BUEV	Buena Vista	1.34	338	eP	Pn	22 15 11.9	0.0

GBS3	Finca Las Img	1.34	336	*e*P	Pn	22 15 11.9	-0.1
HZTE	Horizontes, Gu	1.34	330	*e*P	Pn	22 15 12.4	+0.4
HZTE	Horizontes, Gu	1.34	330	*e*P	Pn	22 15 12.3	+0.4
HZTE				*e*S	Sn	22 15 30.9	+1.4
GB1A	Borinquen Arri	1.35	339	*i* P	Pn	22 15 12.1	-0.1
BUAI	Buenos Aires	1.39	342	⇑*i*P	Pn	22 15 12.7	+0.1
BUAI				*e*S	Sn	22 15 31.3	+0.8
EDPN	Palmar Norte	1.54	112	*e*P	Pn	22 15 14.6	-0.1
SRBA	San Rafael, Bu	1.55	102	*e*P	Pn	22 15 15.5	+0.6
RIOS	Rincon, Osa	1.61	121	*e*P	Pn	22 15 15.2	-0.4
EDBA	Buenos Aires	1.65	103	*e*P	Pn	22 15 16.0	-0.2

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*JMA **28** 22:27:08.3±0.2, 34°.4N±0°.6×140°.2E±0°.8, h63^{km}±2^{km}, MV2.6/37, FAR S OFF BOSO PENINSULA*

*IDC **28** 22:27:09.2±4.3, 34°.45N×140°.21E, h93^{km}±40^{km}, mb2.9/2, mbtmp3.2/3, Error ellipse: s-maj=69.4km s-min=35.8km az=63.0*

ISC 28 22:27:07.8±1.1**, 34°.42N**±0°.04×**140°.23E**±0°.06**, h75**^{km}±8^{km}**, n20, σ0ˢ.70**/28**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.45	31	*i* P	Pn	22 27 20.2	-0.1
BSO4	Boso 4	0.58	9	P	Pn	22 27 21.9	+0.2
BSO1	Boso 1	0.66	69	*i* P	Pn	22 27 22.0	0.0
TATJ	Tateyama 2	0.67	336	P	Pn	22 27 23.1	+0.3
TATJ				*e*S	Sn	22 27 35.1	+1.3
JIM2	Oshima 3	0.72	295	P	Pn	22 27 22.9	-0.5
JIM2				S	Sn	22 27 34.1	-0.8
JMKN	Mikurajimanish	0.74	226	P	Pn	22 27 23.5	-0.1
JMKN				*e*S	Sn	22 27 35.0	-0.2
JTHY	Toshimahigashi	0.79	278	P	Pn	22 27 24.3	+0.3
JTHY				*e*S	Sn	22 27 36.8	+0.8
JKO	Kozu shima	0.93	256	P	Pn	22 27 26.1	+0.4
JKO				S	Sn	22 27 39.8	+0.7
KTJ3	Kamata3	1.09	299	P	Pn	22 27 27.1	-0.5
KTJ3				S	Sn	22 27 41.2	-1.2
JIZS	Izushimoda	1.16	285	P	Pn	22 27 28.6	+0.1
JIZS				S	Sn	22 27 44.0	+0.1
JOD2	Odawara 2	1.26	312	P	Pn	22 27 29.7	-0.2
JOD2				S	Sn	22 27 46.2	-0.2
JHJ2	Mitsune	1.35	195	P	Pn	22 27 31.3	+0.4
JHJ2				S	Sn	22 27 49.4	+1.1
JFNN	Fujinakano	1.49	302	P	Pn	22 27 33.5	+0.7
JYN	Shimob	1.75	308	P	Pn	22 27 36.9	+0.6
JYN				S	Sn	22 27 59.1	+1.1
MJAR	Matsushiro Arr	2.69	323	P	Pn	22 27 49.4	+0.6
	7.5nm,0.5s,baz=149,slow=11,SNR=46						
MJAR				S	Sn	22 28 21.5	+1.2
	4.5nm,0.4s,baz=139,slow=24,SNR=3.0						
H11N2	WAKE ISLAND Hy	27.78	115	T	T	23 01 55.1	
	baz=307,slow=75,SNR=4.3						
H11N1	WAKE ISLAND Hy	27.79	115	T	T	23 01 56.3	
	baz=307,slow=75,SNR=3.6						
H11N3	WAKE ISLAND Hy	27.80	115	T	T	23 01 55.1	
	baz=307,slow=75,SNR=4.2						
MKAR	Makanchi Array	44.74	304	P	P	22 35 12.8	-0.8
	0.2nm,0.7s,baz=98,slow=11,SNR=2.5						
	0.2nm,0.7s						
WRA	Warramunga Arr	54.35	187	P	P	22 36 26.6	-0.2
	0.2nm,0.7s,baz=0.6,slow=7.5,SNR=1.4						
	0.2nm,0.7s						

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*IDC **28** 22:39:23.1±0.9, 55°.28S×27°.25W, h0^{km}, mb4.0/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=28.6km s-min=20.3km az=94.0*

*NEIC **28** 22:39:24.8±1.1, 55°.31S±0°.07×27°.4W±0°.2, h10^{km}±1^{km}, mb4.2/13, Error ellipse: s-maj=20.4km s-min=6.7km az=237.0*

ISC 28 22:39:24.3±0.6**, 55°.3S**±0°.1×**27°.4W**±0°.1**, h10**^{km}**, n25, σ0ˢ.58**/25**, mb4.2**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.36	277	Pn	Pn	22 40 43.5	-0.8
SNAA	Sanae	19.49	157	P	P	22 43 51.5	+0.3
	0.2nm,0.3s,baz=292,slow=12,SNR=12						
	0.8nm,0.5s						
SNAA	Sanae	19.49	157	P	P	22 43 51.3	+0.1
BELA	Belgrano 2	22.84	184	P	P	22 44 25.9	-1.2
MG02	Cerro Sombrero	24.44	258	P	P	22 44 43.1	+0.2
QSPA	South Pole Qui	34.97	180	P	P	22 46 16.0	-0.3
	1.3nm,0.4s,baz=278,slow=1.1,SNR=16						
	1.3nm,0.4s						
QSPA	South Pole Qui	34.97	180	P	P	22 46 17.0	+0.6
QSPA				IAmb	IAmb	22 46 18.6	
	comp=Z,2.2nm,0.7s						
MT02	Curacav	37.44	288	P	P	22 46 37.7	+0.1
MT02				IAmb	IAmb	22 46 50.1	
	comp=Z,4.9nm,1.0s						
MAW	Mawson	40.84	144	P	P	22 47 05.5	0.0
	comp=Z,0.6nm,0.4s,baz=246,slow=10.0,SNR=1.3						
	comp=Z,0.6nm,0.4s						
BOSA	Boshof	45.89	77	P	P	22 47 47.2	+0.3
	comp=Z,1.7nm,0.7s,baz=224,slow=7.0,SNR=7.3						
	comp=Z,1.7nm,0.7s						
BOSA	Boshof	45.89	77	P	P	22 47 47.1	+0.1
BOSA				IAmb	IAmb	22 48 02.9	
	comp=Z,2.9nm,1.1s						
PB01	IPOC Station P	46.42	300	P	P	22 47 51.7	+0.5
SBA	Scott Base	46.84	184	P	P	22 47 54.8	+1.1
SBA				IAmb	IAmb	22 48 06.6	
	comp=Z,5.8nm,1.4s						
VNDA	Vanda	47.34	183	P	P	22 47 58.0	+0.4
	comp=Z,0.8nm,0.7s,baz=182,slow=4.6,SNR=6.2						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	47.34	183	P	P	22 47 57.8	+0.2
VNDA				IAmb	IAmb	22 48 12.0	
	comp=Z,1.5nm,0.7s						
LBTB	Lobatse	48.90	74	P	P	22 48 09.2	-1.1
	comp=Z,1.4nm,0.6s,baz=224,slow=8.1,SNR=4.9						
	comp=Z,1.4nm,0.6s						
LBTB	Lobatse	48.90	74	P	P	22 48 09.8	-0.6
LBTB				IAmb	IAmb	22 48 10.6	
	comp=Z,2.4nm,0.9s						
LPAZ	La Paz	49.84	305	P	P	22 48 19.2	+1.0
	comp=Z,0.4nm,0.5s,baz=188,slow=7.1,SNR=2.0						
	comp=Z,0.4nm,0.5s						
LPAZ	La Paz	49.84	305	P	P	22 48 18.7	+0.5
TOA0	Torodi Ar. Sit	72.44	30	P	P	22 50 50.6	-0.1
TORD	Torodi Ar. Bea	72.44	30	P	P	22 50 50.7	0.0
	comp=Z,2.2nm,0.6s,baz=202,slow=6.5,SNR=20						
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	72.44	30	P	P	22 50 50.6	0.0
TORD				IAmb	IAmb	22 50 51.2	
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	149.52	313	PKPbc	PKPbc	22 59 12.3	0.0
	comp=Z,0.8nm,0.7s,baz=111,slow=1.9,SNR=6.6						
SONM	Songino Array	150.78	85	PKPbc	PKiKP	22 59 16.4	-0.3
	comp=Z,0.7nm,0.8s,baz=207,slow=3.9,SNR=5.1						
SONM	Songino Array	150.78	85		PKPbc	22 59 16.1	0.0

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*IDC **28** 23:02:47.4±2.6, 14°.09S×167°.08E, h0^{km}, mb3.6/3, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=57.7km s-min=44.6km az=105.0*

*NOU **28** 23:03:00.0, 14°.61S×167°.03E, h69^{km}, MLv4.7/13, Vanuatu Islands*

ISC 28 23:02:57.9±1.7**, 14°.5S**±0°.1×**167°.0E**±0°.2**, h67**^{km}**, n14, σ1ˢ.38**/15**, mb3.3**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	3.40	160	P	Pn	23 03 49.9	+1.3
RTV	Rentapao	3.55	157	P	Pn	23 03 52.3	+1.7
KOUNC	Koumac, New Ca	6.52	203	P	Pn	23 04 33.3	+2.1
MARNC	Mare, Loyalty	7.00	172	P	Pn	23 04 38.4	+0.6
YATNC	Mamie plateau,	7.50	180	P	Pn	23 04 44.3	-0.4
DZM	Mont Dzumac	7.53	184	Pn	Pn	23 04 44.3	-0.8
	2.5nm,0.3s,baz=329,slow=15,SNR=17						
DZM				Sn	Sn	23 06 07.2	-1.9
	1.0nm,0.3s,baz=306,slow=19,SNR=1.5						
	4.5nm,0.4s						
DZM	Mont Dzumac	7.53	184	P	Pn	23 04 44.8	-0.3
NOUC	Port Laguerre	7.57	185	P	Pn	23 04 45.9	+0.3
ONTNC	Ouen Toro	7.76	183	P	Pn	23 04 49.7	+1.5
OUENC	Ouen Island, N	7.86	181	P	Pn	23 04 51.1	+1.6
STKA	Stephens Creek	28.90	229	P	P	23 08 51.5	+0.8
	1.4nm,0.4s,baz=55,slow=10,SNR=7.3						
	1.4nm,0.4s						
WRA	Warramunga Arr	31.58	256	P	P	23 09 14.3	-0.2
	0.4nm,0.8s,baz=86,slow=9.7,SNR=2.4						
	0.4nm,0.8s						
ASAR	Alice Springs	32.47	249	P	P	23 09 21.8	-0.4
	0.2nm,0.4s,baz=74,slow=9.1,SNR=5.4						
	0.2nm,0.4s						
ARCES	ARCESS Array B	119.97	345	PKP	PKPdf	23 21 38.5	-1.8
	1.9nm,0.9s,baz=33,slow=2.9,SNR=3.6						

IDC 28 23:15:28.4±1.8**, 1°.16N**×**124°.97E, h0**^{km}**, mb3.7**/3**, mbtmp3.7**/3**, Error ellipse: s-maj=194.1km s-min=23.9km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.90	157	P	P	23 20 33.2	-0.8
	1.1nm,0.5s,baz=335,slow=11,SNR=18						
	1.1nm,0.5s						
ASAR	Alice Springs	26.16	161	P	P	23 21 05.3	+0.6
	0.4nm,0.3s,baz=342,slow=9.2,SNR=7.7						
	0.4nm,0.3s						
MKAR	Makanchi Array	58.69	327	P	P	23 25 27.8	-0.1
	0.3nm,0.3s,baz=121,slow=7.1,SNR=9.7						
	0.3nm,0.3s						

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*GUC **28** 23:19:16.0±0.7, 21°.25S×68°.62W, h125^{km}±4^{km}, ML3.4*

*IDC **28** 23:19:19.7±9.0, 21°.07S×67°.93W, h132^{km}±73^{km}, mb3.5/1, mbtmp3.8/2, MS3.2/1, Error ellipse: s-maj=102.9km s-min=77.1km az=83.0*

ISC 28 23:19:15.8±1.0**, 21°.25S**±0°.03×**68°.72W**±0°.09**, h131**^{km}±8^{km}**, n22, σ0ˢ.78**/35**, 8C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.73	222	⇑*i*P	Pn	23 19 36.8	+0.1
PB09				*i* S	Sn	23 19 52.5	-0.2
PB09				IAML		23 19 53.9	
	comp=E,753nm,0.3s						
PB01	IPOC Station P	0.74	286	⇓*i*P	Pn	23 19 36.2	-0.5
PB01				*i* S	Sn	23 19 52.1	-0.4
PB01				IAML		23 19 53.7	
	comp=E,2μm,0.4s						
PB02	IPOC Station P	1.10	266	⇑*i*P	Pn	23 19 40.1	+0.3
PB02				*i* S	Sn	23 19 58.3	+0.2
PB02				IAML		23 19 60.0	
	comp=E,2μm,0.4s						
PB08	IPOC Station P	1.17	340	⇑*i*P	Pn	23 19 41.0	+0.1
PB08				*i* S	Sn	23 19 59.7	-0.2
PB08				IAML		23 20 02.6	
	comp=E,530nm,0.3s						
PB07	IPOC Station P	1.19	246	⇑*i*P	Pn	23 19 40.9	+0.1
PB07				*i* S	Sn	23 20 00.0	+0.2
PB07				IAML		23 20 02.8	
	comp=N,1μm,0.4s						
LVC	Limon Verde	1.37	187	⇑*i*P	Pn	23 19 42.8	-0.1
LVC				*i* S	Sn	23 20 03.3	-0.3
TA01	Diego Aracena	1.52	296	*e*P	Pn	23 19 44.6	+0.3
TA01				*i* S	Sn	23 20 05.9	0.0
TA01				IAML		23 20 07.9	
	comp=E,542nm,0.4s						
PB06	IPOC Station P	1.65	208	⇑*i*P	Pn	23 19 46.1	+0.2
PB06				*i* S	Sn	23 20 09.0	+0.1
PB06				IAML		23 20 10.0	
	comp=E,402nm,0.4s						
PB04	IPOC Station P	1.71	231	*e*P	Pn	23 19 46.9	+0.3
PB04				*i* S	Sn	23 20 09.8	-0.3
PB04				IAML		23 20 17.3	
	comp=N,326nm,0.4s						
PB11	IPOC Station P	1.72	329	⇑*i*P	Pn	23 19 46.4	-0.2
PB11				*i* S	Sn	23 20 09.7	-0.5
PB11				IAML		23 20 11.3	
	comp=E,430nm,0.1s						
AF01	San Pedro de A	1.77	164	*e*P	Pn	23 19 46.9	-0.5
AF01				IAML		23 20 27.9	
	comp=E,191nm,0.4s						
PB15	IPOC Station P	2.07	199	*e*P	Pn	23 19 51.2	+0.2
PB15				*i* S	Sn	23 20 18.0	+0.1
PB10	IPOC Station P	2.82	217	*e*P	Pn	23 20 00.1	-0.1
PB10				IAML		23 20 49.0	
	comp=N,49nm,0.3s						
PB16	IPOC Station P	2.99	345	⇑*i*P	Pn	23 20 03.3	+0.4
PB16				*i* S	Sn	23 20 39.2	+0.1
PB16				IAML		23 20 42.4	
	comp=N,45nm,0.4s						
PB12	IPOC Station P	3.02	330	*e*P	Pn	23 20 01.6	-1.3
PB12				*i* S	Sn	23 20 37.1	-2.1
PB12				IAML		23 20 47.5	
	comp=E,104nm,0.4s						
PB14	IPOC Station P	3.71	204	*e*P	Pn	23 20 11.7	-0.3
GO02	Mina Guanaco	3.98	191	*e*P	Pn	23 20 14.8	-0.8
LPAZ	La Paz	4.96	7	P	Pn	23 20 30.2	+1.2
	comp=E,6.2nm,0.4s,baz=183,slow=7.2,SNR=61						
LPAZ				S	Sn	23 21 25.6	-0.3
	comp=E,1.0nm,0.5s,baz=174,slow=23,SNR=1.0						
AC01	Pan de Azucar	5.17	199	*e*P	Pn	23 20 29.1	-2.2
CMIG	Matias Romero	45.93	324	LR	LR	23 44 43.7	
	comp=E,29nm,21.7s,baz=126,slow=33						
TORD	Torodi Ar. Bea	77.10	70	P	P	23 30 54.9	-0.3
	comp=E,0.7nm,0.6s,baz=247,slow=5.0,SNR=5.8						
	comp=E,0.7nm,0.6s						
MKAR	Makanchi Array	145.32	36	PKP	PKPdf	23 38 40.0	+1.9
	comp=E,0.5nm,0.7s,baz=307,slow=3.0,SNR=4.8						

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*NEIC **28** 23:30:39.9±1.7, 28°.65S±0°.02×71°.7W±0°.1, h42^{km}±24^{km}, mb4.1/1, ML3.9(GUC), Error ellipse: s-maj=14.5km s-min=1.2km az=102.0*

*GUC **28** 23:30:40.6±0.8, 28°.69S×71°.43W, h64^{km}±3^{km}, ML3.9*

ISC 28 23:30:38.9±1.2**, 28°.63S**±0°.03×**71°.70W**±0°.08**, h47**^{km}±20^{km}**, n51, σ1ˢ.06**/74**, 3C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.69	52		Pn	23 30 53.6	+1.2
AC04				Sn	Sn	23 31 02.3	0.0
AC04	Llanos de Chal	0.69	52	⇑*i*P	Pn	23 30 53.6	+1.2
AC04				*i* S	Sn	23 31 02.5	+0.3
AC04				IAML		23 31 03.0	
	comp=E,7μm,0.1s						
LCO	Las Campanas	0.95	114		Pn	23 30 56.1	0.0
LCO				Sn	Sn	23 31 07.1	-1.6
LCO	Las Campanas	0.95	114	*e*P	Pn	23 30 55.4	-0.7
LCO				*i* S	Sn	23 31 07.2	-1.6
CO05	La Serena	1.34	163		Pn	23 31 02.4	+1.1
CO05				Sn	Sn	23 31 18.0	+0.1
CO05	La Serena	1.34	163	⇓*i*P	Pn	23 31 02.3	+1.1
CO05				*i* S	Sn	23 31 18.3	+0.4
CO05				IAML		23 31 19.9	
	comp=E,4μm,0.2s						
GO03	Copiap	1.65	52	Pn	Pn	23 31 06.3	+0.8
GO03				Sn	Sn	23 31 25.0	-0.7
GO03	Copiap	1.65	52	⇓*i*P	Pn	23 31 06.3	+0.8
GO03				*i* S	Sn	23 31 25.0	-0.7
GO03				IAML		23 31 25.7	
	comp=N,2μm,0.2s						
GO04	Tololo Observa	1.72	153	Pn	Pn	23 31 07.5	+0.8
GO04				Sn	Sn	23 31 26.8	-0.8
GO04	Tololo Observa	1.72	153	⇓*i*P	Pn	23 31 07.4	+0.8
GO04				*i* S	Sn	23 31 27.2	-0.4
GO04				IAML		23 31 31.7	
	comp=N,5μm,0.4s						
AC06	Mina Casimiro	1.74	43		Pn	23 31 08.2	+1.6
AC06				Sn	Sn	23 31 28.1	+0.5
AC06	Mina Casimiro	1.74	43	⇑*i*P	Pn	23 31 08.2	+1.6
AC06				*i* S	Sn	23 31 27.9	+0.3
CO01	Juntas del Tor	1.94	134		Pn	23 31 10.8	+1.2
CO01				Sn	Sn	23 31 32.5	-0.4
CO01	Juntas del Tor	1.94	134	*i* P	Pn	23 31 10.9	+1.2
CO01				*i* S	Sn	23 31 33.0	+0.1
CO01				IAML		23 31 34.5	
	comp=N,2μm,0.2s						
CO06	Fray Jorge	2.04	178		Pn	23 31 11.7	+1.1
CO06	Fray Jorge	2.04	178	*e*P	Pn	23 31 11.8	+1.1
CO06				*i* S	Sn	23 31 34.8	-0.1
CO03	El Pedregal	2.37	159		Pn	23 31 16.4	+1.0
CO02	Combarbal	2.63	167		Pn	23 31 20.0	+1.0
CO02	Combarbal	2.63	167	⇓*i*P	Pn	23 31 20.0	+1.0
CO02				*i* S	Sn	23 31 49.5	-0.3
AC01	Pan de Azucar	2.66	22	Pn	Pn	23 31 20.0	+0.7
AC01	Pan de Azucar	2.66	22	⇓*i*P	Pn	23 31 20.0	+0.7
AC01				*i* S	Sn	23 31 49.0	-1.3
AC02	Maricunga	2.90	52	Pn	Pn	23 31 24.5	+1.6
AC02	Maricunga	2.90	52	⇑*i*P	Pn	23 31 24.5	+1.6
AC02				*i* S	Sn	23 31 57.4	+0.6
ZON	Zonda	3.91	139		Pn	23 31 39.6	+3.1
VA06	Catapilco	3.93	175		Pn	23 31 37.5	+0.8
VA06	Catapilco	3.93	175	*e*P	Pn	23 31 37.7	+1.0
GO02	Mina Guanaco	3.93	29	Pn	Pn	23 31 38.1	+1.0
GO02	Mina Guanaco	3.93	29	*e*P	Pn	23 31 37.9	+0.9
GO02				*i* S	Sn	23 32 22.1	0.0
PB14	IPOC Station P	4.15	16	Pn	Pn	23 31 40.0	0.0
PB14	IPOC Station P	4.15	16	*e*P	Pn	23 31 40.1	0.0
PB14				*i* S	Sn	23 32 25.3	-2.2
VA03	San Esteban	4.24	167		Pn	23 31 42.6	+1.6
VA03	San Esteban	4.24	167	*e*P	Pn	23 31 42.6	+1.6
VA03				*i* S	Sn	23 32 28.9	-0.3
ROCH	El Roble	4.37	172	*e*P	Pn	23 31 43.9	+1.1
ROCH				*e*P	Pn	23 31 44.0	+1.1
ROCH				*i* S	Sn	23 32 32.1	-0.5
ROC1	El Roble	4.37	172		Pn	23 31 43.8	+0.8
PEL	Peldehue	4.58	169		Pn	23 31 46.7	+1.0
MT02	Curacav	4.64	174		Pn	23 31 47.0	+0.6
MT05	Renca	4.82	170	Pn	Pn	23 31 50.3	+1.4
MT03	Universidad Ad	4.95	168	Pn	Pn	23 31 52.7	+1.9
VA05	Santo Domingo	5.01	179	Pn	Pn	23 31 52.0	+0.6
MT09	Talagante	5.17	173		Pn	23 31 54.8	+1.0
PB10	IPOC Station P	5.20	12	Pn	Pn	23 31 54.4	+0.2
LMEL	Las Melosas	5.36	167		Pn	23 31 57.7	+1.3
BO04	La Punta	5.42	170	Pn	Pn	23 31 58.3	+1.1
PB15	IPOC Station P	5.76	21		Pn	23 32 02.9	+0.9
GO05	Huala	6.36	182	Pn	Pn	23 32 09.4	-0.7
PB04	IPOC Station P	6.42	13	Pn	Pn	23 32 10.1	-1.0
LVC	Limon Verde	6.50	23	Pn	Pn	23 32 12.6	+0.3
PB02	IPOC Station P	7.46	13	Pn	Pn	23 32 24.9	-0.3
PB01	IPOC Station P	7.82	15	Pn	Pn	23 32 30.0	-0.1
TRQA	Tornquist	12.42	142	Pn	Pn	23 33 31.7	-1.2
ITAB	Concordia	17.35	90		P	23 34 38.2	-0.2
ITAB				IAmb	IAmb	23 34 53.1	
	comp=Z,21nm,1.4s						

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*CNRM **28** 23:54:49.0, 36°.48N×3°.77E, h0^{km}, ml5.7*

*BJI **28** 23:54:51.0±0.0, 36°.40N×3°.50E, h10^{km}, mb5.0/55, mB5.4/37, Ms5.3/48, Ms7 4.9/44*

*IDC **28** 23:54:51.2±0.4, 36°.46N×3°.47E, h0^{km}, mb4.6/48, mbtmp4.6/57, ML4.6/7, MS4.9/85, Error ellipse: s-maj=10.2km s-min=9.2km az=131.0*

*MDD **28** 23:54:51.6±0.4, 36°.24N×3°.59E, h0^{km}±3^{km}, Mb5.6/45, M_mb5.2/35, Error ellipse: s-maj=3.1km s-min=1.5km az=153.0*

*MOS **28** 23:54:51.8±1.2, 36°.45N×3°.62E, h13^{km}, mb5.2/80, MS4.6/38, Error ellipse: s-maj=7.4km s-min=4.6km az=59.6*

*GCMT **28** 23:54:52.4±0.1, 36°.22N±0°.01×3°.47E±0°.01, h12^{km}, MW5.3/133, Moment Tensor Solution. s76,c121; s133,c248; Duration: 1ˢ.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.98±.02; $M_{\theta\theta}$-0.08±.02; $M_{\phi\phi}$-0.89±.01; $M_{r\theta}$0.10±.05; $M_{\theta\phi}$-0.76±.01; $M_{\phi r}$0.11±.04; Best double couple: $M_0$1.17100×10^{17} NP1:ϕ_s208.00000°,δ42.00000°, λ86.00000°. NP2:ϕ_s33.00000°,δ49.00000°,λ93.00000°. Principal axes: T 0.9860, Plg86.0000°, Azm336.0000°; N 0.3710, Plg2.0000°, Azm211.0000°; P -1.3560, Plg3.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MED_RC **28** 23:54:53.0±0.2, 36°.27N×3°.41E, h10^{km}, MW5.3/35, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s35,c55; Duration: 1ˢ.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.97±.02; $M_{\theta\theta}$-0.12±.02; $M_{\phi\phi}$-0.85±.01; $M_{r\theta}$-0.21±.07; $M_{\theta\phi}$-0.74±.01; $M_{\phi r}$-0.30±.05; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s213.00000°,δ54.00000°, λ92.00000°. NP2:ϕ_s30.00000°,δ36.00000°,λ87.00000°. Principal axes: T 1.0300, Plg81.0000°, Azm132.0000°; N 0.3300, Plg2.0000°, Azm32.0000°; P -1.3600, Plg9.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **28** 23:54:53.4±1.4, 36°.43N±0°.07×3°.52E±0°.07, h11^{km}±3^{km}, mb5.1/275, Ms_20 5.2/321, Mww5.4 Error ellipse: s-maj=10.0km s-min=8.2km az=168.0*

*LDG **28** 23:54:54.4±0.4, 36°.22N×3°.22E, h30^{km}, Ml4.4/45, Error ellipse: s-maj=7.7km s-min=3.5km az=146.0*

*CRAAG **28** 23:54:54.9, 36°.38N×3°.44E, Ml5.3*

*IGIL **28** 23:54:55.0, 36°.38N×3°.53E, h10^{km}*

*NEIC **28** 23:54:58, 36°.31N×3°.38E, h12^{km}, Moment Tensor Solution. Duration: 10ˢ.0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.17; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.85; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.66; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.38000×10^{17} NP1: ϕ_s49.00000°,δ35.00000°,λ114.00000°. NP2: ϕ_s200.00000°,δ58.00000°,λ74.00000°. Principal axes: T 1.3534, Plg72.0000°, Azm70.0000°; N 0.0434, Plg14.0000°, Azm208.0000°; P -1.3968, Plg12.0000°, Azm301.0000°;*

ISC 28 23:54:52.6±0.6**, 36°.46N**±0°.03×**3°.56E**±0°.03**, h7**^{km}±3^{km}**, n1620, σ1ˢ.70**/1588**, mb5.1**/247**, MS5.1**/277**, 151C-84D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SET	Setif	1.51	99	P	Pg	23 55 22.0	+0.5
EBNR	Beni Rached	1.65	265	P	Pn	23 55 18.0	-3.9
ECHA	Ech Chlef	1.80	261	P	Pn	23 55 20.0	-3.9
EANR	'Ain N'Sour	2.05	256	P	Pn	23 55 22.0	-5.5
OKGL	Djebel Kef Gue	2.40	261	P	Pn	23 55 30.0	-2.2
OJBR	Djebel Berber	2.75	252	P	Pn	23 55 35.0	-2.1
EIBI	Ibiza	3.11	326	P	Pn	23 55 42.9	+0.9
EIBI				⇑*i*Vmb_V		23 55 46.0	
	26μm,SNR=52						
EIBI				S	Sn	23 56 17.5	-1.8
ODJA	Bouhanifia	3.22	251	P	Pn	23 55 43.0	-0.5
ETOS	Mallorca	3.35	350	P	Pn	23 55 46.2	+0.8
ETOS				⇑*i*Vmb_V		23 55 48.4	
	20μm,SNR=62						
ETOS				S	Sn	23 56 25.7	+0.3
USTO	Oran	3.41	259	P	Pb	23 55 51.0	-2.2
MAHO	Mahon	3.47	9	P	Pn	23 55 46.6	-0.4
MAHO				S	Sn	23 56 25.6	-2.8
MAHO	Mahon	3.47	9	⇑P	Pn	23 55 46.1	-0.8
OTSS	Djebel Tessala	3.73	253	P	Pn	23 55 53.0	+2.4
ETRV	Los Montesinos	3.78	296	P	Pn	23 55 50.5	-0.7
ETRV				⇑*i*Vmb_V		23 55 54.8	
	3μm,SNR=8.1						
ETRV				S	Sn	23 56 33.6	-2.4
CART	Cartagena	3.82	288	P	Pn	23 55 50.6	-1.1
CART				S	Sn	23 56 30.8	-6.0
CART	Cartagena	3.82	288	Pn	Pn	23 55 50.6	-1.1
CART	Cartagena	3.82	288	P	Pn	23 55 50.6	-1.1
CART	Cartagena	3.82	288	⇓P	Pn	23 55 47.8	-4.0
AFON	Font Roja	3.93	305	P	Pn	23 55 53.1	-0.3
AFON				⇑*i*Vmb_V		23 56 01.2	
	4μm,SNR=13						
AFON				S	Sn	23 56 40.2	+0.4
EMUR	La Murta	4.08	291	P	Pn	23 55 54.8	-0.5
EMUR				⇑*i*Vmb_V		23 56 00.4	
	5μm,SNR=26						
EMUR				S	Sn	23 56 41.3	-1.9
ECOL	Islas Columbre	4.11	327	P	Pn	23 55 55.8	+0.1
ECOL				S	Sn	23 56 41.8	-2.2
TLOR	Lorca, Murcia	4.36	287	P	Pn	23 55 59.0	-0.3
TLOR				S	Sn	23 56 49.0	-1.4
EZAR	Zarzadilla de	4.43	290	P	Pn	23 55 59.6	-0.6
EZAR				S	Sn	23 56 51.2	-0.9
TAMR	Tamra	4.49	81	⇑P	Pn	23 56 00.7	-0.3
ETOB	Tobarra	4.61	300	P	Pn	23 56 02.9	+0.2
ETOB				⇑*i*Vmb_V		23 56 08.3	
	8μm,SNR=38						
ETOB				S	Sn	23 56 55.7	-0.8
ENIJ	Nijar	4.66	278	P	Pn	23 56 01.5	-1.9
ENIJ				⇑*i*Vmb_V		23 56 05.7	
	2μm,SNR=12						
ENIJ				S	Sn	23 56 54.9	-2.8
ECHE	Chera	4.75	313	P	Pn	23 56 05.4	+0.8
ECHE				⇑*i*Vmb_V		23 56 08.1	
	11μm,SNR=54						
ECHE				S	Sn	23 57 00.1	+0.2
EMOS	Mosqueruela	5.02	322	P	Pn	23 56 09.3	+0.8
EMOS				⇑*i*Vmb_V		23 56 13.8	
	6μm,SNR=32						
EMOS				S	Sn	23 57 03.5	-3.3

CHAS	Isla Isabel II	5.03	257	P	Pn	23 56 07.5	-0.9
CHAS				S	Sn	23 56 56.9	-10
TAF	Taforalt	5.13	253	P	Pn	23 56 09.1	-0.9
ERTA	Horta de San J	5.15	332	P	Pn	23 56 11.2	+1.1
ERTA				⇑iVmb_V		23 56 16.6	
	2µm,SNR=12						
ERTA				S	Sn	23 57 06.5	-3.2
EBER	Berja	5.20	277	P	Pn	23 56 08.9	-2.0
EBER				⇑iVmb_V		23 56 14.4	
	2µm,SNR=7.6						
EBER				S	Sn	23 57 08.5	-2.8
EPOB	Poblet	5.25	339	P	Pn	23 56 12.3	+0.8
EPOB				⇑iVmb_V		23 56 14.8	
	2µm,SNR=12						
EPOB				S	Sn	23 57 08.7	-3.6
EALB	Alboran	5.36	266	P	Pn	23 56 11.8	-1.0
EALB				⇑iVmb_V		23 56 20.5	
	3µm,SNR=1.7						
EALB				S	Sn	23 57 11.2	-3.6
WMELI	Melilla	5.41	260	P	Pn	23 56 13.1	-0.5
WMELI				S	Sn	23 57 09.7	-6.3
EMEL	Melilla	5.42	260	P	Pn	23 56 12.5	-1.2
EMEL				S	Sn	23 57 11.6	-4.7
JBK	JBK	5.43	249	P	Pn	23 56 16.0	+1.8
JBK	JBK	5.43	249	P	Pn	23 56 13.4	-0.8
EQES	Quesada	5.46	286	P	Pn	23 56 15.7	+1.2
EQES				⇑iVmb_V		23 56 18.3	
	8µm,SNR=96						
EQES				S	Sn	23 57 18.0	+0.4
GOG	Mont Gurugu	5.47	259	P	Pn	23 56 13.3	-1.2
VSL	Villasalto	5.50	55	Pn	Pn	23 56 14.8	-0.1
VSL	Villasalto	5.50	55	P	Pn	23 56 15.4	+0.5
VSL				S	Sn	23 57 17.5	-0.9
VSL	Villasalto	5.50	55	⇑P	Pn	23 56 15.0	+0.1
EQUE	Quentar	5.66	280	P	Pn	23 56 17.5	+0.3
EQUE				⇑iVmb_V		23 56 23.6	
	2µm,SNR=17						
EQUE				S	Sn	23 57 19.3	-3.3
EMIR	Miracle	5.67	344	P	Pn	23 56 19.5	+2.2
EMIR				⇑iVmb_V		23 56 21.5	
	16µm,SNR=64						
EMIR				S	Sn	23 57 21.5	-1.1
TDRA	Tendrara	5.73	235	P	Pn	23 56 17.7	-0.5
ELGU	Los Guajares,	5.79	276	P	Pn	23 56 17.6	-1.4
ELGU				⇑iVmb_V		23 56 23.5	
	2µm,SNR=6.7						
ELGU				S	Sn	23 57 21.7	-3.9
FIGM	Figuig	5.88	224	P	Pn	23 56 17.6	-2.6
EJON	La Jonquera	6.00	355	P	Pn	23 56 23.6	+1.8
EJON				⇑iVmb_V		23 56 27.8	
	6µm,SNR=21						
EJON				S	Sn	23 57 31.5	+0.8
ESAC	San Caprasio	6.12	330	P	Pn	23 56 25.1	+1.7
ESAC				⇑iVmb_V		23 56 27.9	
	4µm,SNR=17						
ESAC				S	Sn	23 57 34.8	+1.2
ETOR	Torete	6.18	316	P	Pn	23 56 26.8	+2.4
ETOR				⇑iVmb_V		23 56 29.4	
	5µm,SNR=44						
ETOR				S	Sn	23 57 34.5	-0.8
EGOR	Sierra Gorda,	6.19	278	P	Pn	23 56 24.9	+0.5
EGOR				⇑iVmb_V		23 56 31.4	
	3µm,SNR=23						
EGOR				S	Sn	23 57 32.6	-2.9
PALE	Palemas	6.22	261	P	Pn	23 56 24.5	-0.2
AKLM	AKL	6.36	254	P	Pn	23 56 26.1	-0.7
EMAL	Malaga-Limoner	6.43	275	P	Pn	23 56 26.8	-0.8
EMAL				S	Sn	23 57 34.3	-7.0
PVLZ	Peæn de	6.51	261	P	Pn	23 56 30.1	+1.3
UCM	Universidad Co	6.58	308	P	Pn	23 56 30.2	+0.4
EADA	Adamuz	6.71	287	P	Pn	23 56 30.0	-1.4
EADA				⇑iVmb_V		23 56 36.7	
	672nm,SNR=11						
EADA				S	Sn	23 57 45.8	-2.2
EMIJ	Mijas	6.71	273	P	Pn	23 56 28.2	-3.3
EMIJ				⇑iVmb_V		23 56 34.4	
	786nm,SNR=9.6						
EMIJ				S	Sn	23 57 41.4	-6.9
ECHI	Chisagues Biel	6.72	338	P	Pn	23 56 33.2	+1.5
ECHI				⇑iVmb_V		23 56 39.3	
	762nm,SNR=12						
ECHI				S	Sn	23 57 47.2	-1.3
ESBB	Sonseca Array	6.75	301		Pn	23 56 31.3	-0.7
ESDC	Sonseca Array	6.75	301	Pn	Pn	23 56 31.4	-0.6
	17nm,0.3s,baz=111,slow=12,SNR=209						
ESDC				Sn	Sn	23 57 48.4	-0.7
	baz=112,slow=24						
	112nm,0.6s						
ESDC	Sonseca Array	6.75	301	Pn	Pn	23 56 30.9	-1.1
ESDC	Sonseca Array	6.75	301	P	Pn	23 56 31.3	-0.7
ESDC				⇑iVmb_V		23 56 34.4	
	2µm,SNR=25						
ESDC				S	Sn	23 57 46.4	-2.7
TATN	Tataouine	6.93	122	⇑P	Pn	23 56 30.4	-4.2
MTLF	Montolieu	6.95	352	ePn	Pn	23 56 35.6	+0.9
MTLF				eSn	Sn	23 57 51.2	-2.8
	19nm,0.3s						
PAB	San Pablo	6.96	299	Pn	Pn	23 56 34.4	-0.6
PAB	San Pablo	6.96	299	P	Pn	23 56 34.4	-0.6
PAB	San Pablo	6.96	299	P	Pn	23 56 34.4	-0.6
PAB				⇑iVmb_V		23 56 39.4	
	2µm,SNR=25						
PAB				S	Sn	23 57 52.9	-1.6
PAB	San Pablo	6.96	299	P	Pn	23 56 34.5	-0.5
PAB	San Pablo	6.96	299	⇑P	Pn	23 56 34.1	-0.9
EPF	Esparros	7.01	340	ePn	Pn	23 56 36.2	+0.5
EPF				eSn	Sn	23 57 51.1	-4.6
	82nm,0.3s						
ETSF	Etsaut	7.17	335	ePn	Pn	23 56 37.8	-0.1
ETSF				eSn	Sn	23 57 55.4	-4.2
	68nm,0.5s						
LIJA	Lijar	7.22	276	P	Pn	23 56 40.5	+2.0
LIJA				S	Sn	23 58 02.0	+1.2
LMR	La Mourre	7.23	17	ePn	Pn	23 56 39.2	+0.6
LMR				eSn	Sn	23 57 57.9	-3.0
	48nm,0.3s						
CEU	Ceuta	7.25	268	P	Pn	23 56 40.5	+1.7
CEU				S	Sn	23 57 52.9	-8.5
ECEU	Ceuta	7.25	268	P	Pn	23 56 39.1	+0.2
ECEU				⇑iVmb_V		23 56 44.0	
	365nm,SNR=1.0						
ECEU				S	Sn	23 57 56.1	-5.3
EJIF	Jimena Fronter	7.28	273	P	Pn	23 56 38.0	-1.3
EJIF				S	Sn	23 57 55.8	-6.3
SMIR	Smir Dam	7.28	267	P	Pn	23 56 37.0	-2.4
SMIR	Smir Dam	7.28	267	P	Pn	23 56 38.0	-1.4
ECAB	El Cabril	7.34	285	P	Pn	23 56 38.6	-1.6
ECAB				⇑iVmb_V		23 56 42.1	
	578nm,SNR=8.3						
ECAB				S	Sn	23 58 00.0	-3.7
GUD	Guadarrama	7.34	307	P	Pn	23 56 40.4	+0.1
GUD				⇑iVmb_V		23 56 43.5	
	2µm,SNR=43						
GUD				S	Sn	23 58 02.2	-1.7
CHEFC	Chefchaouen	7.36	262	P	Pn	23 56 40.4	-0.1
PGF	Pioggiola	7.39	33	ePn	Pn	23 56 41.4	+0.5
PGF				eSn	Sn	23 58 02.6	-2.4
	126nm,0.5s						
LCRM	LCR	7.44	251	P	Pn	23 56 41.6	0.0
EORO	Oroz-Betelu	7.44	331	P	Pn	23 56 43.6	+2.1
EORO				⇑iVmb_V		23 56 51.1	
	3µm,SNR=42						
EORO				S	Sn	23 58 03.7	-2.5
EARA	Aranguren	7.45	329	P	Pn	23 56 42.8	+1.2
EARA				⇑iVmb_V		23 56 46.7	
	2µm,SNR=14						
EARA				S	Sn	23 58 03.8	-2.5
SJPF	Ste Jean	7.60	332	ePn	Pn	23 56 45.7	+2.1
SJPF				eSn	Sn	23 58 04.5	-5.4
	197nm,0.4s						
LASF	Ste Croix	7.61	2	ePn	Pn	23 56 45.0	+1.2
LASF				eSn	Sn	23 58 07.5	-2.8
	194nm,0.4s						
MDT	Midelt	7.65	244	Pn	Pn	23 56 43.3	-1.2
	5.0nm,0.3s,baz=84,slow=16,SNR=79						
MDT				Lg	Lg	23 58 49.1	
	11nm,0.3s,baz=116,slow=4.5,SNR=3.5						
MDT				LR	LR	23 59 48.5	
	comp=Z,10µm,21.5s,baz=64,slow=39						
	68nm,0.5s						
MDT	Midelt	7.65	244	P	Pn	23 56 44.6	+0.1
MDT	Midelt	7.65	244	P	Pn	23 56 43.5	-0.9
SMRF	Simiane la Rot	7.66	11	ePn	Pn	23 56 46.2	+1.6
SMRF				eSn	Sn	23 58 09.7	-1.9
	171nm,0.9s						
MD31	MD31	7.73	245	P	Pn	23 56 45.9	+0.3
EALK	Alkurruntz	7.79	332	P	Pn	23 56 48.2	+1.8
EALK				⇑iVmb_V		23 56 52.5	
	6µm,SNR=20						
CLTB	Caltabellotta	7.80	79	Pn	Pn	23 56 47.0	+0.5
CLTB	Caltabellotta	7.80	79	P	Pn	23 56 46.4	-0.1
CLTB				S	Sn	23 58 11.4	-3.8
CLTB	Caltabellotta	7.80	79	⇓P	Pn	23 56 47.8	+1.2
SBF	Sospel	7.96	21	ePn	Pn	23 56 48.2	-0.6
SBF				eSn	Sn	23 58 14.7	-4.4
	157nm,0.7s						
EMIN	Mina Concepcio	8.28	282	P	Pn	23 56 51.8	-1.2
EMIN				⇑iVmb_V		23 56 54.8	
	941nm,SNR=10						
EMIN				S	Sn	23 58 22.3	-4.5
EPLA	Plasencia	8.39	298	P	Pn	23 56 55.0	+0.4
EPLA				⇑iVmb_V		23 57 03.0	
	605nm,SNR=7.9						
EPLA				S	Sn	23 58 25.8	-3.7
VIVF	Saint-Julien-l	8.43	5	ePn	Pn	23 56 56.6	+1.5
VIVF				eSn	Sn	23 58 26.9	-3.6
	159nm,0.6s						
CASP	Castiglione de	8.47	39	Pn	Pn	23 56 56.0	+0.5
GOLM	Goulmima	8.51	239	P	Pn	23 56 57.9	+1.6
CAF	Calviac	8.53	353	ePn	Pn	23 56 58.2	+1.7
MBDF	Montbardon	8.61	15	ePn	Pn	23 56 59.1	+1.4
MBDF				eSn	Sn	23 58 32.5	-2.6
	16nm,0.3s						
PBAR	Barrancos	8.62	285	eP	Pn	23 56 57.1	-0.5
	94nm,1.0s						
ORIF	Oris-en-Rattie	8.63	11	ePn	Pn	23 56 59.7	+1.8
ORIF				eSn	Sn	23 58 32.9	-2.6
	17nm,0.4s						
ELAN	Lanestosa	8.64	324	P	Pn	23 56 59.3	+1.4
ELAN				⇑iVmb_V		23 57 06.4	
	5µm,SNR=64						
ELAN				S	Sn	23 58 31.6	-4.0
RAFF	Raffo Rosso	8.69	82	Pn	Pn	23 56 60.0	+1.3
EBAD	Badajoz	8.70	288	P	Pn	23 56 57.6	-1.1
EBAD				⇑iVmb_V		23 57 03.7	
	1µm,SNR=11						
LFF	La Frestale	8.74	347	ePn	Pn	23 57 00.7	+1.5
LFF				eSn	Sn	23 58 33.1	-4.8
	72nm,0.3s						
VAE	Valguarnera	8.74	80	Pn	Pn	23 57 00.7	+1.2
	3.0nm,0.5s,baz=309,slow=14,SNR=3.0						
VAE				LR	LR	00 00 58.2	
	comp=Z,4µm,18.1s,baz=294,slow=42						
SSB	Saint Sauveur	8.84	5		Pn	23 57 01.8	+1.0
SSB	Saint Sauveur	8.84	5	P	Pn	23 57 01.8	+1.0
SSB	Saint Sauveur	8.84	5	⇑P	Pn	23 57 02.1	+1.4
LATE	Laterza	8.85	43		Pn	23 57 01.8	+1.0
ZHG	ZHG	8.90	253	P	Pn	23 57 04.2	+2.7
EGRO	El Granado	8.90	280	P	Pn	23 57 00.4	-1.1
EGRO				⇑iVmb_V		23 57 05.9	
	2µm,SNR=15						
EGRO				S	Sn	23 58 36.1	-5.9
BNI	Bardonecchia	8.90	14	Pn	Pn	23 57 03.6	+1.9
BNI	Bardonecchia	8.90	14	P	Pn	23 57 03.6	+1.9
BNI	Bardonecchia	8.90	14	P	Pn	23 57 04.1	+2.4
BNI				S	Sn	23 58 43.0	+0.8
BNI	Bardonecchia	8.90	14	⇓P	Pn	23 57 03.7	+2.0
RJF	Les Rejaudoux	8.97	351	ePn	Pn	23 57 03.7	+1.2
RJF				eSn	Sn	23 58 39.6	-4.1
	32nm,0.5s						
MSSA	Maissana	9.06	28		Pn	23 57 04.2	+0.3
PVAQ	Vaqueiros	9.08	279	eP	Pn	23 57 02.6	-1.4
	291nm,1.3s						
PVAQ				eLR	LR	23 59 23.6	
	17µm,18.0s						
PVAQ	Vaqueiros	9.08	279	Pn	Pn	23 57 02.6	-1.4
PVAQ	Vaqueiros	9.08	279	P	Pn	23 57 02.7	-1.3
PVAQ	Vaqueiros	9.08	279	⇑P	Pn	23 57 02.4	-1.6
PMRV	Marv??o	9.14	292	eP	Pn	23 57 05.1	+0.2
	354nm,2.0s						
PMRV				eLR	LR	23 59 15.5	
	14µm,18.0s						
PESTR	Estremoz	9.16	289	eP	Pn	23 57 04.2	-0.9
	206nm,1.3s						
PESTR	Estremoz	9.16	289	Pn	Pn	23 57 03.4	-1.7
PESTR	Estremoz	9.16	289	P	Pn	23 57 06.9	+1.7
PESTR	Estremoz	9.16	289	P	Pn	23 57 04.1	-1.1
PESTR	Estremoz	9.16	289	⇑P	Pn	23 57 03.6	-1.5
OSSC	Osservatorio P	9.19	38		Pn	23 57 06.8	+1.2
MGAB	Montegabbione	9.21	43	⇑P	Pn	23 57 07.0	+1.1
MONC	Moncucco Torin	9.22	20	⇓P	Pn	23 57 07.7	+1.8
PBDV	Barranco-do-Ve	9.24	278	eP	Pn	23 57 05.4	-0.9
	393nm,1.2s						
PBEJ	Beja	9.24	283	eP	Pn	23 57 05.2	-1.1
	196nm,1.6s						
VLC	Villacollemand	9.29	32		Pn	23 57 08.1	+1.3
VLC	Villacollemand	9.29	32	P	Pn	23 57 07.8	+1.0
VLC				S	Sn	23 58 46.5	-5.0
VLC	Villacollemand	9.29	32	⇑P	Pn	23 57 07.0	+0.2
PCBR	Castelo Branco	9.32	295	eP	Pn	23 57 08.4	+1.1
	491nm,1.2s						
LPG	La Plagne	9.34	14	ePn	Pn	23 57 09.9	+2.0
LPG				eSn	Sn	23 58 48.5	-4.8
	27nm,0.5s						
LPL	La Plagne	9.36	14	ePn	Pn	23 57 10.8	+2.8
LPL				eSn	Sn	23 58 50.6	-2.9
	55nm,0.6s						
BOB	Bobbio (Coli)	9.42	27	⇑P	Pn	23 57 12.7	+4.0
EVO	Evora	9.43	286	P	Pn	23 57 08.7	-0.1
EVO				S	Sn	23 58 50.6	-4.4
EVO	Evora	9.43	286	eP	Pn	23 57 08.1	-0.6
	216nm,1.2s						
TZRR	Tazzarine	9.48	236	S	Sn	23 58 36.0	-21
TZRR	Tazzarine	9.48	236	P	Pn	23 57 10.5	+0.9
MVO	Moncorvo	9.50	303	eP	Pn	23 57 10.1	+0.2
	320nm,0.8s						
MVO				eLR	LR	23 59 29.9	
	20µm,18.0s						
MESJ	Messejana	9.51	282	eP	Pn	23 57 07.5	-2.3
MESJ				IAMs_20	IAMs_20	00 00 41.6	
	comp=E,15µm,16.1s						
MESJ	Messejana	9.51	282	eP	Pn	23 57 08.9	-0.9
	comp=E,386nm,1.4s						
MESJ	Messejana	9.51	282	eP	Pn	23 57 07.5	-2.3
MESJ	Messejana	9.51	282	⇑P	Pn	23 57 08.4	-1.5
AVE	Averroes	9.55	254	P	Pn	23 57 10.5	0.0
AVE	Averroes	9.55	254	P	Pn	23 57 11.7	+1.2
AVE	Averroes	9.55	254	⇑P	Pn	23 57 10.4	0.0
MTE	Manteigas	9.56	298	eP	Pn	23 57 10.9	+0.3
	comp=E,141nm,1.3s						
MTE				eLR	LR	23 59 39.0	
	comp=E,21µm,16.0s						
MTE	Manteigas	9.56	298	Pn	Pn	23 57 10.4	-0.2
MTE	Manteigas	9.56	298	⇑P	Pn	23 57 11.1	+0.5
EARI	Arriondas	9.59	318	P	Pn	23 57 13.0	+2.0
EARI				⇑iVmb_V		23 57 15.4	
	comp=E,7µm,SNR=104						
EARI				S	Sn	23 58 56.0	-3.1
PBRG	Braganca	9.62	307	eP	Pn	23 57 11.7	+0.3
	comp=E,170nm,1.0s						
AQU	L'Aquila	9.62	49	Pn	Pn	23 57 12.9	+1.4
AQU	L'Aquila	9.62	49	P	Pn	23 57 12.9	+1.4
AQU	L'Aquila	9.62	49	P	Pn	23 57 13.0	+1.5
AQU	L'Aquila	9.62	49	⇓P	Pn	23 57 15.0	+3.6
MURB	Monte Urbino	9.67	43		Pn	23 57 13.7	+1.6
ECAL	Calabor	9.68	308	P	Pn	23 57 12.6	+0.3
ECAL				⇑iVmb_V		23 57 14.8	
	comp=E,4µm,SNR=38						
ECAL				S	Sn	23 58 56.2	-5.2
PMTG	Montargil	9.69	289	eP	Pn	23 57 11.3	-1.0
	comp=E,122nm,1.6s						
ZCCA	Zocca	9.70	33	Pn	Pn	23 57 14.9	+2.5
NRCA	Norcia	9.73	46		Pn	23 57 14.3	+1.3
PAOL	Paolisi	9.73	59		Pn	23 57 13.1	+0.1
PRMA	PARMA	9.75	30	Pn	Pn	23 57 15.1	+2.0
PNCL	Nicolau / Gran	9.77	283	eP	Pn	23 57 12.7	-0.8
	comp=E,212nm,1.4s						
MORF	Marmelete	9.82	279	eP	Pn	23 57 11.4	-2.8
MORF				IAMs_20	IAMs_20	00 00 59.7	
	comp=Z,18µm,18.8s						
MORF	Marmelete	9.82	279	eP	Pn	23 57 13.0	-1.2
	comp=Z,282nm,1.4s						
MORF	Marmelete	9.82	279	eP	Pn	23 57 11.4	-2.8
MORF	Marmelete	9.82	279	⇓P	Pn	23 57 12.9	-1.3
TCF	Toulx Ste Croi	9.87	355	ePn	Pn	23 57 15.1	+0.3
TCF				eSn	Sn	23 59 01.4	-4.5
	comp=Z,11nm,0.5s						
PTEO	Sao Teotonio	9.89	280	eP	Pn	23 57 14.7	-0.3
	comp=Z,272nm,1.4s						
PVIS	Viseu	9.92	299	eP	Pn	23 57 16.1	+0.5
	comp=Z,148nm,1.0s						
ZGR	Zagora	9.95	233	P	Pn	23 57 20.0	+4.0
ZGR	Zagora	9.95	233	P	Pn	23 57 15.9	-0.1
PFVI	Vila Bisbo	9.96	278	eP	Pn	23 57 14.8	-1.2
	comp=Z,327nm,1.1s						
PFVI	Vila Bisbo	9.96	278		Pn	23 57 14.3	-1.7
PFVI	Vila Bisbo	9.96	278	P	Pn	23 57 16.7	+0.6
CEL	Celeste	9.98	76	Pn	Pn	23 57 18.8	+2.4
PVRL	Vila Real	10.02	302	eP	Pn	23 57 16.9	0.0
	comp=Z,211nm,0.7s						
PACT	Alcochete	10.10	287	eP	Pn	23 57 17.5	-0.4
	comp=Z,734nm,1.4s						
BGF	Bois d'Agland	10.10	357	ePn	Pn	23 57 19.1	+1.1
BGF				eSn	Sn	23 59 07.9	-3.6
	comp=Z,46nm,0.5s						
POLO	Lamas de Olo	10.11	302	eP	Pn	23 57 18.3	+0.1
	comp=Z,110nm,0.7s						
COI	Coimbra	10.12	295	eP	Pn	23 57 19.6	+1.4
	comp=Z,306nm,0.8s						
COI	Coimbra	10.12	295	Pn	Pn	23 57 18.5	+0.2
COI	Coimbra	10.12	295	P	Pn	23 57 18.5	+0.2
COI	Coimbra	10.12	295	⇑P	Pn	23 57 19.4	+1.2
PCAS	Casmilo, Conde	10.14	294	eP	Pn	23 57 19.4	+0.9
	comp=Z,212nm,2.2s						
SMF	Signal de Mont	10.18	1	ePn	Pn	23 57 20.1	+1.1
SMF				eSn	Sn	23 59 09.5	-3.9
	comp=Z,25nm,0.4s						
PSBE	So Bento	10.22	291	eP	Pn	23 57 19.9	+0.3
	comp=Z,215nm,1.7s						
OUZM	OUZ	10.22	240	P	Pn	23 57 21.4	+1.6
SRHM	Skhour des Reh	10.26	251	P	Pn	23 57 25.0	+4.7
CUC	Castrocucco	10.27	66	Pn	Pn	23 57 20.4	+0.1
SENIN	Lac Senin/Sane	10.28	15		Pn	23 57 22.5	+1.9
CABF	La Chapelle	10.32	10	ePn	Pn	23 57 22.5	+1.5
CABF				eSn	Sn	23 59 12.5	-4.4
	comp=Z,34nm,0.6s						
AVF	Avril sur Loir	10.32	359	ePn	Pn	23 57 22.2	+1.2
AVF				eSn	Sn	23 59 12.4	-4.5
	comp=Z,16nm,0.6s						
PMST	Lisbon--Monsan	10.36	286	eP	Pn	23 57 22.1	+0.5
	comp=Z,302nm,1.2s						
PCAB	Cabril	10.42	304	eP	Pn	23 57 22.6	+0.3
	comp=Z,115nm,0.8s						
PMAFR	Mafra	10.48	288	eP	Pn	23 57 23.3	+0.2
	comp=Z,240nm,1.0s						
MFF	Saint Martin d	10.51	346	ePn	Pn	23 57 24.3	+0.8
MFF				eSn	Sn	23 59 14.0	-7.3
	comp=Z,13nm,0.4s						
SALO	Salr	10.55	28		Pn	23 57 25.2	+1.1
SALO	Salr	10.55	28	⇑P	Pn	23 57 28.2	+4.1
PTO	Porto	10.58	300	eP	Pn	23 57 24.5	0.0
	comp=Z,148nm,1.2s						
SSF	Saint Saulge	10.59	360	ePn	Pn	23 57 26.5	+1.8
SSF				eSn	Sn	23 59 19.3	-4.2
	comp=Z,23nm,0.7s						
PGAV	Gavieira, Arco	10.69	305	eP	Pn	23 57 27.0	+0.8
	comp=Z,130nm,1.2s						
PGAV				eLR	LR	23 59 59.5	
	comp=Z,19µm,18.0s						
TIP	Timpagrande	10.79	71		Pn	23 57 29.2	+1.7
TEOL	Teolo	10.80	32	Pn	Pn	23 57 29.6	+2.2
LOR	Lormes	10.80	1	ePn	Pn	23 57 28.9	+1.3
	baz=183						
LOR	Lormes	10.80	1	eP	Pn	23 57 34.5	+6.9
	baz=180						
LOR				eSn	Sn	23 59 25.0	-3.7
	comp=Z,12nm,0.5s						
HYF	Humbligny	10.82	357	ePn	Pn	23 57 29.9	+2.1
HYF				eSn	Sn	23 59 24.1	-5.0
SGRT	San Giovanni R	10.84	57	Pn	Pn	23 57 30.0	+1.8
OUK	Oukaimeden	10.85	244	P	Pn	23 57 28.2	-0.3
MRVN	Minervino Murg	10.88	61	⇑P	Pn	23 57 29.4	+0.7
TUE	Stuetta	10.90	22		Pn	23 57 31.0	+1.9
TUE	Stuetta	10.90	22	⇑P	Pn	23 57 31.4	+2.3
DAVOX	Davos/Dischmat	11.34	23	Pn	Pn	23 57 33.8	-1.3
	comp=Z,2.4nm,0.4s,baz=198,slow=20,SNR=4.4						
DAVOX				LR	LR	00 01 49.3	
	comp=Z,3µm,19.2s,baz=214,slow=37						
CTI	Castel Tesino	11.34	30		Pn	23 57 36.8	+1.8
CTI	Castel Tesino	11.34	30	P	Pn	23 57 36.8	+1.8
CLF	Chambon-Foret	11.60	356	Pn	Pn	23 57 40.9	+2.5
CLF	Chambon-Foret	11.60	356	⇓P	Pn	23 57 41.6	+3.3
HINF	Hinteralfeld	11.61	11	ePn	Pn	23 57 39.0	+0.4
HINF				eSn	Sn	23 59 44.3	-4.1
	comp=Z,12nm,0.4s						
TTIG	Tnine Tigouga,	11.62	243	P	Pn	23 57 39.1	+0.1
HAU	Haudompre	11.72	9	ePn	Pn	23 57 40.3	+0.2
HAU				eSn	Sn	23 59 46.8	-4.3
	comp=Z,8.2nm,0.4s						
SFTF	Sexfontaines	11.79	5	ePn	Pn	23 57 42.7	+1.7
	baz=185						
SFTF				eSn	Sn	23 59 47.8	-5.0
	comp=Z,11nm,0.4s						
DAVA	Damuels	11.79	22	Pn	Pn	23 57 45.5	+4.2
	comp=Z,39nm,1.0s,SNR=14						
DAVA	Damuels	11.79	22	⇓P	Pn	23 57 44.4	+3.1
FETA	Feichten	11.82	25	ePn	Pn	23 57 46.5	+4.8
	comp=Z,53nm,1.1s,SNR=34						
EAH	EAH	11.91	250	P	Pn	23 57 42.3	-0.4
STAL	STALIGIAL	11.95	32	Pn	Pn	23 57 45.9	+2.6
TRI	Trieste	12.02	37		Pn	23 57 45.3	+1.2
TRI	Trieste	12.02	37	P	Pn	23 57 45.3	+1.2
ECH	Echery	12.04	12		Pn	23 57 44.8	+0.2
ECH	Echery	12.04	12	P	Pn	23 57 44.8	+0.2
ECH	Echery	12.04	12	⇑P	Pn	23 57 44.8	+0.2
MEZF	Maizieres J'vi	12.08	5	ePn	Pn	23 57 46.3	+1.2
	baz=182						
MEZF				eSn	Sn	23 59 57.5	-2.5
	comp=Z,10nm,0.5s						
SQTA	Sankt Quirin	12.16	26	ePn	Pn	23 57 51.1	+4.9
	comp=Z,129nm,1.3s,SNR=47						
PAGF	Fort de Pagny	12.19	7	ePn	Pn	23 57 48.5	+2.0
	baz=185						
PAGF				eSn	Sn	23 59 58.4	-4.2
	comp=Z,8.1nm,0.4s						
SAVF	Savonnieres en	12.20	5	ePn	Pn	23 57 48.5	+1.8
	baz=185						
SAVF				eSn	Sn	23 59 58.8	-4.1
	comp=Z,14nm,0.6s						
MOTA	Moosalm	12.23	25	ePn	Pn	23 57 52.4	+5.1
	comp=Z,77nm,0.9s,SNR=64						
RETA	Reutte	12.24	24	Pn	Pn	23 57 53.0	+5.6
	comp=Z,61nm,1.4s,SNR=34						
CDF	Champ du Feu	12.25	12	ePn	Pn	23 57 47.7	+0.2
CDF				eSn	Sn	23 59 58.4	-5.9
	comp=Z,3.7nm,0.5s						
ABTA	Abfaltersbach	12.26	30	ePn	Pn	23 57 51.3	+3.7
	comp=Z,41nm,0.8s,SNR=32						
PTCC	Patocco-Chiusa	12.35	33	⇑P	Pn	23 57 50.8	+2.1
WTTA	Wattenberg	12.35	27	Pn	Pn	23 57 52.7	+3.9
	comp=Z,26nm,0.8s,SNR=17						
GRR	Gorron	12.36	346	ePn	Pn	23 57 48.8	0.0
GRR				eSn	Sn	23 59 58.0	-8.6
	comp=Z,1.8nm,0.3s						
CEY	Cerknica	12.36	38	eP	Pn	23 57 50.1	+1.2
BFO	Black Forest	12.37	15		Pn	23 57 49.1	+0.1
BFO	Black Forest	12.37	15	P	Pn	23 57 49.1	+0.1
BFO	Black Forest	12.37	15	⇓P	Pn	23 57 48.4	-0.6
WATA	Walderalm	12.39	26	ePn	Pn	23 57 53.1	+3.7
	comp=Z,58nm,1.1s,SNR=43						
LDF	La Druitiere	12.42	349	ePn	Pn	23 57 49.3	-0.4
LDF				eSn	Sn	00 00 01.5	-6.8
	comp=Z,6.4nm,0.5s						
QUIF	Quistinic	12.48	339	ePn	Pn	23 57 50.5	0.0
CRNS	Crni Vrh	12.52	37	eP	Pn	23 57 52.1	+0.9
SGMF	Saint Gilles	12.62	341	ePn	Pn	23 57 52.8	+0.5
SGMF				eSn	Sn	00 00 04.5	-8.5
	comp=Z,342nm,1.6s						
LJU	Ljubljana	12.63	37	eP	Pn	23 57 54.1	+1.6
FLN	La Foliniere	12.65	348	ePn	Pn	23 57 53.3	+0.6
	baz=168						
FLN				eSn	Sn	00 00 05.5	-8.2
	comp=Z,8.6nm,0.4s						
MYKA	Terra Mystica	12.65	33	ePn	Pn	23 57 57.9	+5.1
	comp=Z,61nm,1.3s,SNR=17						
SRKY	Kupres RS	12.86	50	eP	Pn	23 57 59.6	+3.8
KBA	Koelnbreinsper	12.87	31	ePn	Pn	23 57 59.2	+3.3
	comp=Z,49nm,1.1s,SNR=30						
KBA	Koelnbreinsper	12.87	31	⇑P	Pn	23 57 58.8	+2.9
ROSF	Rostrenen	12.89	339	ePn	Pn	23 57 56.0	-0.1
ROSF				eSn	Sn	00 00 11.7	-8.0
	comp=Z,6.7nm,0.3s						

CRES	Cresnjev	12.95	40	eP	Pn	23 57 58.1	+1.2
OBKA	Obir	12.97	36	Pn	Pn	23 58 00.7	+3.3
	comp=Z,34nm,1.1s,SNR=22						
STU	Stuttgart	12.98	17		Pn	23 57 57.2	-0.1
STU	Stuttgart	12.98	17	P	Pn	23 57 57.2	-0.1
HCY	Herceg Novi	12.99	58	eP	Pn	23 57 54.9	-2.6
MGRS	Mrkonjic Grad	13.00	48	eP	Pn	23 58 01.4	+3.8
TREB	Trebinje	13.00	57	eP	Pn	23 57 58.4	+0.8
VLO	Vlora	13.11	67	Pn	Pn	23 58 00.4	+1.3
VLO	Vlora	13.11	67	P	Pn	23 58 00.4	+1.3
GOLS	Golise	13.15	40	eP	Pn	23 58 02.5	+2.7
KEK	Kerkira	13.20	71		Pn	23 58 01.3	+0.9
BRY	Bratogost	13.20	56	eP	Pn	23 58 00.3	-0.2
BLY	Banja Luka	13.24	47	eP	Pn	23 58 04.0	+3.1
BLY	Banja Luka	13.24	47	⇑P	Pn	23 58 03.5	+2.7
SOKA	Soboth	13.32	36	ePn	Pn	23 58 04.9	+2.8
	comp=Z,38nm,1.1s,SNR=31						
WLF	Walferdange	13.33	7		Pn	23 58 03.3	+1.2
WLF	Walferdange	13.33	7	P	Pn	23 58 03.3	+1.2
WLF	Walferdange	13.33	7	dP	Pn	23 58 04.1	+2.0
	comp=Z,62nm,1.0s						
WLF	Walferdange	13.33	7	⇑P	Pn	23 58 04.5	+2.5
PERS	Pernice	13.34	37	eP	Pn	23 58 04.6	+2.4
JQE	Queens East	13.37	344	eP	Pn	23 58 02.9	+0.2
DRME	Dracevica, Mon	13.37	60	eP	Pn	23 58 04.2	+1.5
JSA	Saint Aubin	13.39	344	eP	Pn	23 58 03.5	+0.6
JSA				IAmb	IAmb	23 58 08.9	
	comp=Z,40nm,0.8s						
JSA				IAMs_20	IAMs_20	00 03 51.4	
	comp=Z,24µm,10.8s						
BIOA	Bad Ischl, Aus	13.47	30	ePn	Pn	23 58 08.5	+4.4
	SNR=20						
PDG	Podgorica	13.51	59	Pn	Pn	23 58 05.8	+1.3
PDG	Podgorica	13.51	59	eP	Pn	23 58 06.7	+2.2
TIR	Tirane	13.60	64		Pn	23 58 06.4	+0.6
TIR	Tirane	13.60	64	P	Pn	23 58 06.4	+0.6
BAIF	Baives	13.60	2	ePn	Pn	23 58 07.0	+1.2
BAIF				eSn	Sn	00 00 31.4	-5.6
	comp=Z,2.3nm,0.4s						
DOU	Dourbes	13.65	3	dP	Pn	23 58 08.9	+2.5
	comp=Z,100nm,0.7s						
GIVF	Givet	13.67	3	ePn	Pn	23 58 08.2	+1.5
GIVF				eSn	Sn	00 00 33.1	-5.5
	comp=Z,6.4nm,0.5s						
RCHB	Rochefort	13.74	5	dP	Pn	23 58 09.9	+2.3
	comp=Z,94nm,0.8s						
MOA	Molln	13.86	31	ePn	Pn	23 58 13.0	+3.7
	comp=Z,59nm,2.1s,SNR=21						
BMRD	Maredsous	13.86	3	dP	Pn	23 58 11.2	+1.8
	comp=Z,65nm,0.9s						
BGES	Gesves	13.96	4	dP	Pn	23 58 12.9	+2.2
	comp=Z,129nm,0.6s						
ARSA	Arzberg	13.97	36	ePn	Pn	23 58 13.4	+2.6
	comp=Z,32nm,1.0s,SNR=51						
ARSA	Arzberg	13.97	36	⇑P	Pn	23 58 12.2	+1.4
BHOU	Houvegnez	14.00	6	dP	Pn	23 58 14.3	+3.1
	comp=Z,41nm,0.9s						
BCLA	Clavier	14.01	5	dP	Pn	23 58 14.6	+3.3
RUDO	Rudo	14.05	55	eP	Pn	23 58 09.5	-2.5
SNF	Seneffe	14.05	2	dP	Pn	23 58 14.8	+2.9
	comp=Z,289nm,0.8s						
BEHE	Becsehely	14.06	41	eP	Pn	23 58 13.5	+1.5
BEHE	Becsehely	14.06	41	P	Pn	23 58 14.6	+2.5
KBN	Korca	14.11	68	Pn	Pn	23 58 14.8	+2.0
KBN	Korca	14.11	68	P	Pn	23 58 14.8	+2.0
BBLS	Lazići	14.18	54	eP	Pn	23 58 15.7	+1.9
BSTI	Sart Tilman	14.19	5	dP	Pn	23 58 16.8	+2.9
	comp=Z,19nm,0.6s						
BTNL	Ternell	14.24	7	dP	Pn	23 58 16.3	+1.7
	comp=Z,43nm,0.8s						
MEM	Membach	14.25	6	dP	Pn	23 58 16.7	+2.0
	comp=Z,62nm,0.8s						
MEM				dP	P	23 58 16.9	-5.1
	comp=Z,68nm,0.7s						
SJES	Sjenica	14.31	57	eP	Pn	23 58 16.8	+1.2
GRFO	Grafenberg	14.35	20		Pn	23 58 16.0	0.0
GRFO	Grafenberg	14.35	20	P	Pn	23 58 16.0	0.0
GRA1	Grafenberg Arr	14.35	20		Pn	23 58 16.1	+0.1
GRF	Grafenberg Arr	14.35	20	P	Pn	23 58 16.1	+0.1
BEBN	Eben Emael	14.41	5	dP	Pn	23 58 19.8	+3.0
	comp=Z,73nm,0.4s						
GEC2	GERESS Array S	14.43	28		Pn	23 58 17.2	-0.1
GERES	GERESS Array B	14.43	28	Pn	Pn	23 58 18.5	+1.2
	comp=Z,0.4nm,0.3s,baz=145,slow=4.9,SNR=158						
GERES				LR	LR	00 03 51.1	
	comp=Z,1µm,21.9s,baz=225,slow=37						
	comp=Z,29nm,1.0s						
GERES	GERESS Array B	14.43	28	Pn	Pn	23 58 17.6	+0.3
KOVH	Kovagotottos	14.54	44	P	Pn	23 58 20.7	+2.0
FNA	Florina	14.58	67		Pn	23 58 20.1	+0.9
FNA	Florina	14.58	67	P	Pn	23 58 20.1	+0.9
FNA	Florina	14.58	67	⇑P	Pn	23 58 21.4	+2.2
CONA	Conrad Observa	14.62	35	ePn	Pn	23 58 22.1	+2.3
	comp=Z,47nm,1.0s,SNR=33						
KHC	Kasperske Hory	14.62	27	Pn	Pn	23 58 20.4	+0.6
KHC	Kasperske Hory	14.62	27	eP	Pn	23 58 21.5	+1.7
KHC				MLR	MLR		
	comp=Z,3µm,10.6s						
KHC	Kasperske Hory	14.62	27	eP	Pn	23 58 21.5	+1.7
KHC				AMS	AMS	00 06 00.0	
	comp=Z,3µm,10.6s						
KHC	Kasperske Hory	14.62	27	⇓P	Pn	23 58 21.1	+1.3
CKRC	Cesky Krumlov	14.65	29	eP	Pn	23 58 22.2	+2.1
CKRC				AMS	AMS	00 06 30.0	
	comp=Z,2µm,11.4s						
RONA	Rosalia, Austr	14.66	36	ePn	Pn	23 58 22.7	+2.4
	SNR=62						
DIVS	Divibare	14.66	54		Pn	23 58 20.6	+0.2
DIVS	Divibare	14.66	54	eP	Pn	23 58 20.2	-0.2
DIVS	Divibare	14.66	54	⇑P	Pn	23 58 21.5	+1.1
ITM	Ithomi	14.73	82		Pn	23 58 21.7	+0.3
ITM	Ithomi	14.73	82	⇑P	Pn	23 58 22.7	+1.4
SOP	Sopron	14.77	37	P	Pn	23 58 24.0	+2.2
TANT	Tantan	14.84	241	P	Pn	23 58 20.8	-2.0
MPLH	Magyarpolny	14.91	40	P	Pn	23 58 25.2	+1.5
MORH	Mrgy, Hungar	14.92	45	eP	Pn	23 58 26.2	+2.4
MORH	Mrgy, Hungar	14.92	45	P	Pn	23 58 25.4	+1.6
TIH	Tihany	14.92	41	P	P	23 58 26.9	-2.6
EGYH	Egyhazaskeszo	14.97	39	P	Pn	23 58 26.2	+1.7
FRGS	Fruska Gora	15.04	50	eP	Pn	23 58 26.0	+0.5
NKC	Novy Kostel	15.19	22	eP	Pn	23 58 29.5	+2.1
NKC				MLR	MLR		
	comp=Z,3µm,10.8s						
NKC	Novy Kostel	15.19	22	eP	Pn	23 58 29.5	+2.1
NKC				AMS	AMS	00 06 50.0	
	comp=Z,3µm,10.8s						
LIT	Litokhoron	15.30	71		Pn	23 58 29.2	+0.3
LIT	Litokhoron	15.30	71	P	Pn	23 58 29.2	+0.3
LIT				pmax	pmax		
	comp=Z,104nm,1.6s						
LIT	Litokhoron	15.30	71	⇑P	Pn	23 58 30.0	+1.1
ZST	Bratislava	15.39	36	eP	Pn	23 58 32.4	+2.3
CSKK	Cskako	15.41	40	P	P	23 58 33.1	-1.9
TREC	Trest	15.50	30	eP	Pn	23 58 33.4	+2.0
TREC				MLR	MLR		
	comp=Z,3µm,11.9s						
TREC	Trest	15.50	30	eP	Pn	23 58 33.4	+2.0
TREC				AMS	AMS	00 06 30.0	
	comp=Z,3µm,11.9s						
SWN1	Swindon	15.53	347	eP	Pn	23 58 33.4	+1.6
SWN1				IAmb	IAmb	23 58 35.0	
	comp=Z,104nm,0.7s						
SWN1				IAMs_20	IAMs_20	00 05 15.2	
	comp=Z,13µm,10.8s						
MODS	Modra-Piesok	15.60	36	eP	P	23 58 35.5	-1.6
MODS				pmax	pmax		
	comp=Z,270nm,1.4s						
HTL	Hartland	15.63	341	eP	Pn	23 58 33.2	+0.1
HTL				IAMs_20	IAMs_20	00 05 07.2	
	comp=Z,16µm,11.6s						
PRU	Pruhonice	15.69	27	eP	Pn	23 58 35.1	+1.2
PRU				MLR	MLR		
	comp=Z,4µm,9.9s						
PRU	Pruhonice	15.69	27	eP	Pn	23 58 35.1	+1.2
PRU				AMS	AMS	00 07 10.0	
	comp=Z,4µm,9.9s						
KRUC	Moravsky	15.70	33	ePN	Pn	23 58 35.7	+1.6
SRO	Srobarova	15.73	39	eP	P	23 58 37.9	-0.6
SRO				pmax	pmax		
	comp=Z,128nm,1.6s						
SRO	Srobarova	15.73	39	eP	P	23 58 37.9	-0.6
SMOL	Smolenice	15.77	36	eP	P	23 58 38.2	-0.8
SMOL				pmax	pmax		
	comp=Z,36nm,1.3s						
SMOL	Smolenice	15.77	36	eP	P	23 58 38.2	-0.8
STRD	Stroud	15.85	347	eP	Pn	23 58 36.9	+0.9
STRD				IAmb	IAmb	23 58 39.2	
	comp=Z,200nm,0.9s						
STRD				IAMs_20	IAMs_20	00 05 25.2	
	comp=Z,14µm,11.5s						
BUD	Budapest	15.89	41	P	P	23 58 39.5	-0.8
VRAC	Vranov	15.97	32	Pn	Pn	23 58 39.1	+1.5
	comp=Z,0.2nm,0.3s,baz=224,slow=13,SNR=13						
VRAC				LR	LR	00 04 38.6	
	comp=Z,1µm,19.6s,baz=212,slow=37						
	comp=Z,22nm,1.0s						
VRAC	Vranov	15.97	32	ePN	Pn	23 58 39.3	+1.7
MONM	Monmouth	16.03	346	eP	Pn	23 58 38.6	+0.4
MONM				IAmb	IAmb	23 58 40.3	
	comp=Z,72nm,0.7s						
MONM				IAMs_20	IAMs_20	00 05 30.1	
	comp=Z,10µm,11.7s						
KKB	Krupnik	16.07	64	eP	P	23 58 43.1	+0.8
MDVR	Moldovita	16.07	53	⇑P	P	23 58 42.8	+0.4
IBBN	Ibbenburen	16.12	9	⇑P	P	23 58 42.9	+0.1
JAVC	Velka Javorina	16.13	35	ePN	P	23 58 42.9	-0.1
PVCC	Panska Ves	16.14	26	eP	Pn	23 58 41.4	+1.6
PVCC				MLR	MLR		
	comp=Z,4µm,13.4s						
PVCC	Panska Ves	16.14	26	eP	Pn	23 58 41.4	+1.6
PVCC				AMS	AMS	00 05 40.0	
	comp=Z,4µm,13.4s						
MCH1	Michaelchurch	16.22	345	eP	Pn	23 58 42.0	+1.3
MCH1				IAMs_20	IAMs_20	00 05 42.1	
	comp=Z,12µm,11.2s						
MCH1	Michaelchurch	16.22	345	⇑P	Pn	23 58 41.4	+0.7
BRG	Berggiesshubel	16.22	24	eP	P	23 58 43.0	-1.0
BRG				Amp		23 58 50.2	
	comp=Z,28nm,1.2s						
BRG				ex	x	23 58 57.3	
BRG				Amp		23 59 02.3	
	comp=Z,41nm,1.4s						
BRG				Amp		00 05 20.0	
	comp=Z,3.7nm,14.8s						
BRG				Amp		00 05 25.0	
	comp=N,7.0nm,13.0s						
BRG				Amp		00 05 26.0	
	comp=E,3.8nm,13.2s						
BRG	Berggiesshubel	16.22	24	eP	P	23 58 42.9	-1.0
BRG				pmax	pmax		
	comp=Z,28nm,1.2s						
BRG				pmax	pmax		
	comp=Z,41nm,1.4s						
BRG				MLR	MLR		
	comp=Z,4µm,14.8s						
BRG				MLR	MLR		
	comp=N,7µm,13.0s						
BRG				MLR	MLR		
	comp=E,4µm,13.2s						
KOLL	Kolacno	16.28	37	eP	P	23 58 45.5	+0.8
CLL	Collm	16.31	22	Pn	Pn	23 58 42.2	+0.3
CLL	Collm	16.31	22	P	Pn	23 58 42.2	+0.3
CLL				pmax	pmax		
	comp=Z,43nm,0.9s						
CLL	Collm	16.31	22	eP	P	23 58 44.0	-0.9
	comp=Z,20nm,1.1s						
CLL				i sP	pP	23 58 47.1	+0.1
	comp=Z,63nm,1.1s						
CLL				ePP	PnPn	23 58 54.0	+3.3
CLL				ex	x	23 59 04.0	
CLL				eS	S	00 01 51.0	-4.7
CLL				L	L	00 04 00.0	
	comp=Z,2µm,20.9s						
CLL				Lmax		00 07 00.0	
VTS	Vitosha	16.36	62		Pn	23 58 43.3	+0.5
VTS	Vitosha	16.36	62	P	Pn	23 58 43.3	+0.5
VTS				pmax	pmax		
	comp=Z,66nm,1.4s						
VTS	Vitosha	16.36	62	eP	P	23 58 45.4	-0.3
VTS	Vitosha	16.36	62	⇑P	Pn	23 58 43.9	+1.1
BZS	Buzias	16.38	50	⇑P	P	23 58 46.7	+1.0
VYHS	Vyhne	16.44	38	eP	P	23 58 45.9	-0.5
VYHS				pmax	pmax		
	comp=Z,72nm,1.6s						
VYHS	Vyhne	16.44	38	eP	P	23 58 45.9	-0.5
BSZH	Besenyszg	16.46	44	P	P	23 58 46.6	0.0
MMB	Musomiste	16.48	66	eP	P	23 58 47.2	+0.3
MAUC	Maruska	16.56	34	eP	P	23 58 48.4	+0.6
MAUC				AMS	AMS	00 06 50.0	
	comp=Z,5µm,13.6s						
HERR	Herculane	16.57	54	⇓P	P	23 58 48.6	+0.8
PSZ	Piszkesteto	16.62	41	Pn	Pn	23 58 47.0	+1.1
PSZ	Piszkesteto	16.62	41	P	Pn	23 58 47.1	+1.1
PSZ				pmax	pmax		
	comp=Z,60nm,1.0s						
PSZ	Piszkesteto	16.62	41	P	P	23 58 48.0	-0.5
PSZ	Piszkesteto	16.62	41	⇑P	P	23 58 48.1	-0.4
KRLC	Kraliky	16.63	31	eP	P	23 58 49.0	+0.4
KRLC				MLR	MLR		
	comp=Z,2µm,10.5s						
KRLC	Kraliky	16.63	31	eP	P	23 58 49.0	+0.4
KRLC				AMS	AMS	00 07 30.0	
	comp=Z,2µm,10.5s						
DPC	Dobruska-Polom	16.66	30	eP	P	23 58 48.1	-0.8
DPC				MLR	MLR		
	comp=Z,2µm,12.4s						
DPC	Dobruska-Polom	16.66	30	eP	P	23 58 48.1	-0.8
DPC				AMS	AMS	00 06 40.0	
	comp=Z,2µm,12.4s						
UPC	Upice	16.66	29	eP	P	23 58 48.1	-0.7
UPC				MLR	MLR		
	comp=Z,2µm,13.0s						
UPC	Upice	16.66	29	eP	P	23 58 48.1	-0.7
UPC				AMS	AMS	00 06 20.0	
	comp=Z,2µm,13.0s						
HLM1	Long Mynd	16.69	346	eP	Pn	23 58 47.3	+0.6
HLM1				IAmb	IAmb	23 58 50.2	
	comp=Z,73nm,0.9s						
HLM1				IAMs_20	IAMs_20	00 05 58.7	
	comp=Z,11µm,11.1s						
PMPST	Porto Santo, M	16.69	264	eP	Pn	23 58 47.6	+0.7
	comp=Z,356nm,1.8s						
SIRR	Siria	16.72	49	⇓P	P	23 58 51.2	+1.7
MORC	Moravsky Berou	16.73	33		Pn	23 58 48.5	+1.1
MORC	Moravsky Berou	16.73	33	P	Pn	23 58 48.5	+1.1
MORC				pmax	pmax		
	comp=Z,182nm,1.6s						
MORC	Moravsky Berou	16.73	33	ePN	P	23 58 49.1	-0.6
MORC	Moravsky Berou	16.73	33	⇑P	P	23 58 49.4	-0.3
CHVC	Chvalec	16.74	29	eP	Pn	23 58 48.4	+0.9
CHVC				AMS	AMS	00 06 20.0	
	comp=Z,3µm,11.8s						
FLTG	Flechtingen	16.77	17	⇑P	P	23 58 50.2	+0.2
OSTC	Ostas	16.78	29	eP	P	23 58 49.6	-0.6
OSTC				AMS	AMS	00 06 20.0	
	comp=Z,2µm,11.4s						
BAIL	Bailesti	16.86	57	⇓P	P	23 58 52.5	+1.4
SRE	Strehaia	17.00	55	⇑P	P	23 58 54.6	+2.0
PGB	Panagyurishte	17.01	63	eP	P	23 58 54.7	+1.9
GZR	Gura Zlata	17.01	52	⇑P	P	23 58 54.4	+1.6
KSP	Ksiaz	17.04	28	eP	P	23 58 52.5	-0.5
KSP				eL	L	00 06 52.9	
	comp=Z,3µm,13.4s						
KSP	Ksiaz	17.04	28	⇑P	P	23 58 52.6	-0.5
OKC	Ostrava-Krasne	17.05	34	eP	P	23 58 53.9	+0.8
OKC				MLR	MLR		
	comp=Z,2µm,12.1s						
OKC	Ostrava-Krasne	17.05	34	eP	P	23 58 53.9	+0.8
OKC				AMS	AMS	00 07 30.0	
	comp=Z,2µm,12.1s						
STNC	Stoke	17.11	348	eP	P	23 58 54.1	+0.3
STNC				IAmb	IAmb	23 58 56.8	
	comp=Z,297nm,1.2s						
STNC				IAMs_20	IAMs_20	00 06 20.6	
	comp=Z,12µm,10.7s						
LLW	Llanuwychllyn	17.16	345	eP	P	23 58 54.6	+0.3
LANS	Liptovska Anna	17.19	38	eP	P	23 58 57.2	+2.5
LANS				pmax	pmax		
	comp=Z,41nm,1.2s						
LANS	Liptovska Anna	17.19	38	eP	P	23 58 57.2	+2.5
BORR	Bors	17.21	46	⇓P	P	23 58 57.5	+2.6
RZN	Rozhen	17.22	66	eP	P	23 58 57.0	+1.7
PMAR	Madeira	17.26	264	eP	P	23 58 59.1	+3.3
	comp=Z,718nm,1.7s						
FUL	Funchal	17.27	263	eP	P	23 58 56.1	+0.5
	comp=Z,572nm,1.8s						
KECS	Kecovo	17.28	41	eP	P	23 58 58.6	+2.9
KECS	Kecovo	17.28	41	eP	P	23 58 58.6	+2.9
PLD	Plovdiv	17.30	65	eP	P	23 58 57.8	+1.9
DEV	Deva	17.30	51	⇑P	P	23 58 57.8	+1.9
IDI	Anoyia	17.33	88	P	P	23 58 56.6	+0.3
	comp=Z,2.8nm,0.3s,baz=297,slow=17,SNR=22						
IDI				PcP	PcP	00 03 37.4	+0.2
	comp=Z,4.6nm,0.7s,baz=296,slow=5.3,SNR=2.6						
	comp=Z,42nm,0.9s						
IDI	Anoyia	17.33	88	P	Pn	23 58 55.5	+0.5
IDI				IAmb	IAmb	23 59 23.8	
	comp=Z,180nm,1.3s						
IDI	Anoyia	17.33	88	⇓P	P	23 58 56.8	+0.4
LBWR	Ladybower, Pea	17.34	349	eP	P	23 58 56.8	+0.5
LBWR				IAMs_20	IAMs_20	00 07 17.7	
	comp=Z,6µm,11.4s						
LTVH	Ltavrtes, Hu	17.43	46	P	P	23 58 59.7	+2.3
PMOZ	Porto Moniz, M	17.46	264	eP	P	23 58 59.9	+2.0
	comp=Z,350nm,1.7s						
PMOZ				eLR	LR	00 03 50.0	
	comp=Z,5µm,16.0s						
PMOZ	Porto Moniz, M	17.46	264		Pn	23 58 55.8	-0.8
IWEX	Carrickbyrne,	17.51	339	eP	P	23 58 59.9	+1.8
IWEX				IAMs_20	IAMs_20	00 06 51.8	
	comp=Z,16µm,11.0s						
YLL	Llanberis	17.54	344	eP	P	23 58 59.6	+1.1
VLAD	Vladila	17.58	58	⇑P	P	23 59 00.6	+1.6
DRGR		17.61	48	⇑P	P	23 59 01.6	+2.2
SANT	Santorini	17.63	84	Pn	Pn	23 58 57.9	-0.7
SANT				IAmb	IAmb	23 59 20.0	
	comp=Z,220nm,1.5s						
LOT	Lotru	17.67	53	⇓P	P	23 59 02.2	+2.1
WLF1	Llynfaes	17.73	344	eP	P	23 59 01.5	+1.0
WLF1				IAmb	IAmb	23 59 03.9	
	comp=Z,588nm,2.0s						
WLF1				IAMs_20	IAMs_20	00 06 42.8	
	comp=Z,31µm,10.7s						
YRC	Rhoscolyn	17.73	344	eP	P	23 59 03.0	+2.4
KDZ	Kurdzhali	17.73	66	eP	P	23 59 01.9	+1.1
RDO	Rodhopi	17.75	68	P	Pn	23 58 59.9	-0.1
NIE	Niedzica	17.78	38	eP	P	23 59 04.3	+3.1
NIE				eL	L	00 07 00.3	
	comp=Z,1µm,17.2s						
WME	Myndd Eilian	17.81	344	eP	P	23 59 03.3	+1.9
WPS	Cemaes, Angles	17.85	344	eP	P	23 59 04.0	+2.0
WPS				IAMs_20	IAMs_20	00 06 46.8	
	comp=Z,17µm,10.6s						
HPK	Haverah Park	17.86	350	eP	P	23 59 04.5	+2.4
HPK				IAMs_20	IAMs_20	00 07 19.4	
	comp=Z,7µm,10.1s						
MESR	Meseseni	17.92	47	⇑P	P	23 59 05.3	+2.5
CRVS	Cervenica-Dubn	18.05	41	eP	P	23 59 06.8	+2.6
CRVS				pmax	pmax		
	comp=Z,235nm,1.4s						
OJC	Ojcow	18.07	35	eP	P	23 59 06.2	+1.8
OJC				eL	L	00 08 41.8	
	comp=Z,2µm,15.6s						
OJC	Ojcow	18.07	35	P	Pn	23 59 04.2	+0.2
OJC	Ojcow	18.07	35	P	Pn	23 59 04.2	+0.2
OJC				pmax	pmax		
	comp=Z,96nm,1.3s						
OJC	Ojcow	18.07	35	⇑P	P	23 59 06.3	+1.9
ALN	Alexandroupoli	18.09	69	P	Pn	23 59 04.5	+0.2
ALN	Alexandroupoli	18.09	69	P	Pn	23 59 04.5	+0.2
ALN				pmax	pmax		
	comp=Z,146nm,1.4s						
CJR	Cluj-Napoca	18.11	49	⇑P	P	23 59 07.5	+2.6
HUMR	Humele	18.14	57	⇓P	P	23 59 06.8	+1.6
ZIMR		18.14	60	⇓P	P	23 59 06.7	+1.5
COPA	Copaceanca	18.18	58	⇑P	P	23 59 07.4	+1.8
STFAR	Stefanesti-Arg	18.24	56	⇓P	P	23 59 07.7	+1.4
VAL	Valentia	18.32	332	⇓P	P	23 59 10.8	+3.7
UZH	Uzhgorod	18.34	43	eP	P	23 59 11.3	+4.0
UZH				eS	Sn	00 02 34.3	+2.2
UZH				MLR	MLR		
	comp=N,700nm,13.0s						
UZH				MLR	MLR		
	comp=E,600nm,13.0s						
UZH				MLR	MLR		
	comp=Z,500nm,13.0s						
KOLS	Kolonicke sedl	18.50	42	eP	Pn	23 59 12.2	+2.9
KOLS	Kolonicke sedl	18.50	42	eP	Pn	23 59 12.2	+2.9
VOIR		18.50	54	⇑P	Pn	23 59 11.3	+1.9
BMR	Baia Mare	18.51	47	⇑P	Pn	23 59 11.8	+2.5
WIM	Isle of Man	18.59	345	eP	Pn	23 59 12.4	+2.1
IOMK	Kirk Michael	18.67	345	eP	Pn	23 59 13.3	+2.0
IOMK				IAmb	IAmb	23 59 17.1	
	comp=Z,265nm,1.2s						
IOMK				IAMs_20	IAMs_20	00 07 09.2	
	comp=Z,21µm,11.6s						
SGRR	Singureni	18.73	59	⇑P	Pn	23 59 12.7	+0.7
JMB	Yambol	18.73	64	eP	Pn	23 59 13.6	+1.5
DOPR	Dopca	18.92	53	⇓P	Pn	23 59 15.6	+1.2
RAZG	Razgrad	18.92	61	⇑P	Pn	23 59 14.8	+0.4
SECR		19.04	56	⇑P	Pn	23 59 16.6	+0.8
SULR		19.05	57	⇑P	Pn	23 59 16.9	+1.0
MLR	Muntele Rosu	19.11	55	⇑P	Pn	23 59 17.5	+0.7
MLR	Muntele Rosu	19.11	55	P	Pn	23 59 17.9	+1.1
	comp=Z,0.6nm,0.3s,baz=251,slow=4.1,SNR=54						
MLR				PcP	PcP	00 03 41.1	+0.9
	comp=Z,3.9nm,0.9s,baz=299,slow=10,SNR=2.1						
MLR				LR	LR	00 07 31.9	
	comp=Z,3µm,18.5s,baz=248,slow=40						
	comp=Z,78nm,1.1s						
MLR	Muntele Rosu	19.11	55	P	Pn	23 59 16.6	-0.2
MLR				IAmb	IAmb	23 59 21.0	
	comp=Z,147nm,1.3s						
KARP	Karpathos	19.11	86	P	P	23 59 14.8	-1.2
KARP				IAmb	IAmb	23 59 26.6	
	comp=Z,124nm,0.8s						
KARP	Karpathos	19.11	86	⇑P	Pn	23 59 17.4	+0.6
IGLA	Glengowla, Co	19.22	336	eP	Pn	23 59 19.3	+1.4
IGLA				IAMs_20	IAMs_20	00 07 41.6	
	comp=Z,17µm,13.4s						
OZUR		19.22	53	⇑P	Pn	23 59 18.8	+0.7
NEHR	Nehoiu	19.32	55	⇑P	Pn	23 59 20.2	+1.0
GKP	Gorka Klasztor	19.34	25	eP	Pn	23 59 22.4	+3.0
GKP				eL	L	00 09 03.0	
	comp=Z,3µm,13.8s						
GKP	Gorka Klasztor	19.34	25	eP	Pn	23 59 20.1	+0.7
LEHL	Lehliu	19.38	58	⇑P	Pn	23 59 20.4	+0.5
ISR	Istrita	19.38	56	⇓P	Pn	23 59 20.8	+0.8
COVR	Voineasa-Covas	19.40	54	⇓P	Pn	23 59 20.5	+0.2
NEWG	New Galloway	19.41	346	eP	Pn	23 59 21.1	+1.0
NEWG				IAmb	IAmb	23 59 24.6	
	comp=Z,150nm,1.3s						
NEWG				IAMs_20	IAMs_20	00 07 48.0	
	comp=Z,12µm,11.9s						
ESK	Eskdalemuir	19.42	348	P	Pn	23 59 21.2	+0.9
ESK				IAmb	IAmb	23 59 33.3	
	comp=Z,246nm,1.8s						
ESK	Eskdalemuir	19.42	348	P	Pn	23 59 21.2	+0.9
ESK				pmax	pmax		
	comp=Z,246nm,1.8s						
ESK	Eskdalemuir	19.42	348	⇑P	Pn	23 59 21.9	+1.6
EKA	Eskdalemuir Ar	19.43	348	P	P	23 59 19.7	+0.5
	baz=163,slow=13						
EKA				LR	LR	00 06 16.4	
	comp=Z,3µm,18.7s,baz=166,slow=35						
	comp=Z,12nm,0.9s						
PRD	Provadia	19.47	62	eP	Pn	23 59 22.6	+1.6
BURAR	Bucovina Array	19.50	48	⇑P	Pn	23 59 22.7	+1.3
BURAR	Bucovina Array	19.50	48	P	Pn	23 59 21.3	-0.2
BUR08	Bucovina Ar. S	19.50	48	P	Pn	23 59 21.3	-0.2
BUR08				IAmb	IAmb	23 59 38.0	
	comp=Z,293nm,1.8s						
RASA	Rasa	19.54	59	⇓P	Pn	23 59 22.2	+0.5
PGOR	Pogoanele	19.62	57	⇓P	Pn	23 59 23.3	+0.6
BISRR	Bisoca	19.63	55	⇑P	Pn	23 59 22.7	-0.3
BEL	Belsk	19.65	33	eP	Pn	23 59 24.4	+1.4
BEL				eL	L	00 08 37.4	
	comp=Z,2µm,14.7s						
PLOR	Plostina	19.70	54	⇓P	P	23 59 22.9	+0.6
VRI	Vrincioaia	19.75	54	⇓P	Pn	23 59 23.8	-0.6
GRER		19.75	56	⇑P	Pn	23 59 24.5	+0.1
BIZ	Bicaz	19.76	51	⇓P	Pn	23 59 24.9	+0.4
AMRR	Amara	19.77	58	⇑P	Pn	23 59 24.5	0.0
ARG	Arkhangelos	19.78	83	P	P	23 59 22.7	-0.6
ARG	Arkhangelos	19.78	83	P	P	23 59 22.7	-0.6
ARG				pmax	pmax		
	comp=Z,69nm,0.9s						
ARG	Arkhangelos	19.78	83	⇓P	Pn	23 59 24.5	-0.3
LLD	Lille Linde	19.78	15	eP	Pn	23 59 26.3	+1.7
LLD				IAmb	IAmb	23 59 31.9	
	comp=Z,99nm,1.1s						
ODBI	Odobesti	19.93	55	⇑P	Pn	23 59 26.8	+0.3

TESR	**Tescani**	**19.93**	**53**	⇑P	**Pn**	**23 59 26.2**	**-0.4**
LVV	**L'vov**	**19.95**	**42**	*e*P	**Pn**	**23 59 27.6**	**+0.9**
LVV				*e*S	**S**	**00 03 08.4**	**-1.1**
LVV				pmax	pmax		
	comp=Z,200nm,1.2s						
LVV				MLR	MLR		
	comp=E,1µm,12.0s						
LVV				MLR	MLR		
	comp=N,2µm,13.0s						
LVV				MLR	MLR		
	comp=Z,2µm,12.0s						
ICOR	**Ion Corvin**	**19.96**	**60**	⇓P	**Pn**	**23 59 26.7**	**-0.1**
PANC	**Panciu**	**20.03**	**55**	⇓P	Pn	23 59 27.9	+0.2
IDGL	**Inch Island, C**	**20.11**	**341**	*e*P	Pn	23 59 29.1	+0.6
IDGL				IAMs_20	IAMs_20	00 08 19.5	
	comp=Z,15µm,11.4s						
PGBU	**Glenifferbraes**	**20.11**	**347**	*e*P	Pn	23 59 29.6	+1.1
PGBU				IAmb	IAmb	23 59 33.4	
	comp=Z,290nm,1.6s						
PGBU				IAMs_20	IAMs_20	00 08 17.9	
	comp=Z,12µm,10.9s						
PSN	**Preselentsi**	**20.13**	**61**	*e*P	**P**	**23 59 27.8**	**+0.8**
COP	**Copenhagen**	**20.16**	**15**	*i* P	Pn	23 59 29.2	+0.2
COP				IAmb	IAmb	23 59 44.2	
	comp=Z,100nm,0.9s						
HARR	**Harsova**	**20.20**	**58**	⇓P	**P**	**23 59 28.2**	**+0.4**
BSD	**Bornholm Skovb**	**20.22**	**19**	*e*P	Pn	23 59 30.6	+0.9
BSD				IAmb	IAmb	23 59 32.2	
	comp=Z,24nm,1.0s						
TLBR	**Topalu**	**20.24**	**59**	⇓P	**P**	**23 59 29.1**	**+0.9**
GHRR		**20.27**	**54**	⇓P	Pn	23 59 29.5	-0.9
TUDR		**20.29**	**56**	⇓P	Pn	23 59 29.7	-1.0
LUNU	**Lund**	**20.33**	**16**	*i* P	Pn	23 59 30.4	-0.6
IZVR	**Izvoarele**	**20.34**	**56**	⇓P	**P**	**23 59 29.6**	**+0.4**
MUD	**Monsted U'grnd**	**20.36**	**9**	*i* P	Pn	23 59 30.4	-1.0
MUD				IAmb	IAmb	23 59 35.5	
	comp=Z,78nm,0.9s						
MUD	**Monsted U'grnd**	**20.36**	**9**	⇑P	Pn	23 59 30.9	-0.4
MFTR	**Murfatlar**	**20.41**	**60**	⇑P	Pn	23 59 31.1	-1.0
MANR	**Mangalia**	**20.45**	**61**	⇓P	**P**	**23 59 30.7**	**+0.3**
TIRR	**Tirgusor**	**20.47**	**59**	⇓P	**P**	**23 59 30.7**	**-0.1**
TIRR	**Tirgusor**	**20.47**	**59**	P	**P**	**23 59 30.4**	**-0.3**
TIRR				IAmb	IAmb	23 59 46.5	
	comp=Z,112nm,1.1s						
TIRR	**Tirgusor**	**20.47**	**59**	P	**P**	**23 59 30.4**	**-0.3**
TIRR				pmax	pmax		
	comp=Z,112nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,2µm,21.0s						
TIRR	**Tirgusor**	**20.47**	**59**	⇑P	**P**	**23 59 30.5**	**-0.3**
CFR	**Carcaliu**	**20.48**	**57**	⇓P	**P**	**23 59 30.8**	**+0.1**
BIR	**Birlad**	**20.48**	**54**	⇑P	Pn	23 59 32.3	-0.6
VARL	**Varlezi**	**20.50**	**55**	⇑P	**P**	**23 59 31.8**	**+0.8**
SCTR	**Scanteiesti**	**20.53**	**56**	⇑P	**P**	**23 59 32.0**	**+0.7**
TATR	**Tatarca**	**20.54**	**56**	⇑P	**P**	**23 59 32.3**	**+0.9**
TPGR	**Topolog**	**20.58**	**58**	⇓P	**P**	**23 59 32.5**	**+0.6**
DRBR	**Darabani**	**20.60**	**48**	⇑P	Pn	23 59 33.8	-0.6
INVG	**Invergeldie, C**	**20.62**	**348**	*e*P	Pn	23 59 33.6	-0.9
INVG				IAMs_20	IAMs_20	00 08 36.3	
	comp=Z,12µm,11.1s						
VLDR	**Vladesti**	**20.64**	**55**	⇑P	**P**	**23 59 33.2**	**+0.7**
BJUU	**Bjuv**	**20.64**	**15**	*i* P	Pn	23 59 34.6	-0.1
LAWE	**Loch Awe, Argy**	**20.71**	**346**	*e*P	Pn	23 59 34.6	-0.9
LAWE				IAMs_20	IAMs_20	00 08 29.6	
	comp=Z,9µm,12.2s						
VASR	**Vaslui**	**20.72**	**53**	⇓P	Pn	23 59 34.7	-1.0
IAS	**Iasi**	**20.77**	**51**	⇑P	Pn	23 59 35.5	-0.8
JURR	**Jurilovca**	**20.87**	**59**	⇓P	**P**	**23 59 34.8**	**-0.2**
GOET	**G??ttrup**	**20.93**	**9**	*i* P	Pn	23 59 38.2	+0.1
GOET				IAmb	IAmb	23 59 39.7	
	comp=Z,169nm,1.5s						
TLCR		**20.94**	**58**	⇓P	**P**	**23 59 36.0**	**+0.2**
LEOM	**Leova**	**20.95**	**54**	⇑P	**P**	**23 59 36.5**	**+0.6**
AKAS	**Kas**	**20.96**	**83**	P	**P**	**23 59 36.1**	**-0.2**
AKAS				IAmb	IAmb	23 59 47.5	
	comp=Z,116nm,1.3s						
ELL	**Elmali**	**21.14**	**81**	P	**P**	**23 59 37.5**	**-0.6**
ELL	**Elmali**	**21.14**	**81**	P	**P**	**23 59 37.5**	**-0.6**
ELL				pmax	pmax		
	comp=Z,143nm,1.0s						
ELL	**Elmali**	**21.14**	**81**	⇓P	**P**	**23 59 40.0**	**+1.8**
DEL	**Delary**	**21.19**	**16**	*e*P	**P**	**23 59 40.3**	**+1.9**
DEL	**Delary**	**21.19**	**16**	*i* P	**P**	**23 59 40.6**	**+2.2**
OVD	**Ostervraa, Den**	**21.33**	**10**	*i* P	**P**	**23 59 41.8**	**+1.9**
OVD				IAmb	IAmb	23 59 48.0	
	comp=Z,144nm,1.1s						
BORA	**Eskisehir**	**21.39**	**73**	P	**P**	**23 59 41.2**	**+0.4**
MILM	**Milestii Mici**	**21.47**	**53**	*e*P	**P**	**23 59 41.0**	**-0.5**
	comp=Z,190nm,1.0s						
MILM	**Milestii Mici**	**21.47**	**53**	*e*PP	P	00 00 00.0	+19
MILM	**Milestii Mici**	**21.47**	**53**	*e*PPP	PPP	00 00 28.0	
MILM				*i* S	**S**	**00 03 37.0**	**-2.7**
	comp=Z,1µm,8.4s						
MILM				*e*L	L	00 08 03.0	
MILM				LRM	MLR	00 09 20.0	
	comp=Z,1µm,14.0s						
MILM	**Milestii Mici**	**21.47**	**53**	⇓P	**P**	**23 59 42.5**	**+1.0**
MILM	**Milestii Mici**	**21.47**	**53**	*e*P	**P**	**23 59 41.0**	**-0.5**
MILM				*e*		23 59 46.0	
MILM				*e*		00 00 00.0	
MILM				*e*S	**S**	**00 03 37.0**	**-2.7**
MILM				pmax	pmax		
	comp=Z,200nm,1.0s						
MILM				smax	smax		
	comp=N,1µm,8.4s						
MILM				MLR	MLR		
	comp=N,1µm,14.0s						
MILM				MLR	MLR		
	comp=E,1µm,14.0s						
MILM				MLR	MLR		
	comp=Z,1µm,14.0s						
KIS	**Kishinev**	**21.50**	**53**	⇑*i*P	**P**	**23 59 41.0**	**-0.8**
	comp=Z,180nm,1.2s						
KIS				*e*S	**S**	**00 03 37.0**	**-3.3**
	comp=Z,630nm,8.5s						
KIS				*e*L	L	00 08 04.0	
KIS				LRM	MLR	00 09 44.0	
	comp=Z,600nm,13.0s						
KIS	**Kishinev**	**21.50**	**53**	⇑P	**P**	**23 59 43.8**	**+2.0**
KIS	**Kishinev**	**21.50**	**53***c*	*i*P	**P**	**23 59 41.0**	**-0.8**
KIS				*e*S	**S**	**00 03 37.0**	**-3.3**
KIS				pmax	pmax		
	comp=Z,180nm,1.2s						
KIS				smax	smax		
	comp=N,630nm,8.5s						
KIS				MLR	MLR		
	comp=E,600nm,13.0s						
KIS				MLR	MLR		
	comp=Z,500nm,13.0s						
BLEU	**Blekinge**	**21.51**	**19**	*i* P	**P**	**23 59 43.6**	**+1.8**
ISP	**Isparta**	**21.51**	**78**	P	**P**	**23 59 43.5**	**+1.3**
ISP				IAmb	IAmb	00 00 08.4	
	comp=Z,163nm,1.6s						
ISP	**Isparta**	**21.51**	**78**	P	**P**	**23 59 43.5**	**+1.3**
ISP				pmax	pmax		
	comp=Z,163nm,1.6s						
MCD	**Coleburn Disti**	**21.61**	**350**	*e*P	**P**	**23 59 44.0**	**+1.1**
SORM	**Soroca**	**21.63**	**50**	⇓P	**P**	**23 59 44.2**	**+1.0**
ONAU	**Onsala**	**21.68**	**12**	*i* P	**P**	**23 59 45.4**	**+1.8**
KPL	**Plockton**	**21.77**	**346**	*e*P	**P**	**23 59 47.5**	**+2.8**
KPL				IAmb	IAmb	23 59 49.7	
	comp=Z,68nm,1.4s						
KPL				IAMs_20	IAMs_20	00 08 15.0	
	comp=Z,7µm,15.5s						
KAC	**Achnashellach**	**21.86**	**347**	*e*P	**P**	**23 59 46.9**	**+1.3**
MDUB	**Mudurnu**	**21.97**	**71**	P	**P**	**23 59 46.4**	**-0.6**
MDUB	**Mudurnu**	**21.97**	**71**	⇑P	**P**	**23 59 48.5**	**+1.5**
SNART	**Snartemo**	**22.02**	**5**	*i* P	**P**	**23 59 48.9**	**+1.7**
SNART	**Snartemo**	**22.02**	**5**	*e*P	**P**	**23 59 48.6**	**+1.3**
HOMB	**Homborsund**	**22.06**	**7**	*i* P	**P**	**23 59 48.9**	**+1.2**
HOMB	**Homborsund**	**22.06**	**7**	*e*P	**P**	**23 59 48.2**	**+0.5**
SUW	**Suwalki**	**22.21**	**32**	*e*P	**P**	**23 59 48.9**	**-0.4**
SUW				*e*L	L	00 10 32.5	
	comp=Z,2µm,14.2s						
SUW	**Suwalki**	**22.21**	**32**	P	**P**	**23 59 48.6**	**-0.7**
SUW	**Suwalki**	**22.21**	**32**	P	**P**	**23 59 48.6**	**-0.7**
SUW				pmax	pmax		
	comp=Z,231nm,1.0s						
SUW				MLR	MLR		
	comp=Z,700nm,21.0s						
SUW	**Suwalki**	**22.21**	**32**	*e*P	**P**	**23 59 50.2**	**+0.8**
SUW	**Suwalki**	**22.21**	**32**	⇑P	**P**	**23 59 49.0**	**-0.4**
TJOU	**Tjoern**	**22.23**	**11**	*i* P	**P**	**23 59 50.7**	**+1.2**
LEWI	**Lewis, Hebride**	**22.77**	**346**	*e*P	**P**	**23 59 56.3**	**+1.1**
LEWI				IAmb	IAmb	23 59 58.3	
	comp=Z,78nm,1.2s						
LEWI				IAMs_20	IAMs_20	00 08 53.5	
	comp=Z,6µm,16.5s						
KMY	**Karmoy**	**22.79**	**2**	*e*P	**P**	**23 59 55.5**	**0.0**
KOWA	**Kowa**	**22.90**	**199**	P	**P**	**23 59 54.7**	**-2.2**
KOWA				IAmb	IAmb	00 00 41.6	
	comp=Z,92nm,1.2s						
KOWA	**Kowa**	**22.90**	**199**	P	**P**	**23 59 56.6**	**-0.4**
KOWA	**Kowa**	**22.90**	**199**	⇓P	**P**	**23 59 56.2**	**-0.8**
BLS5	**Blasjo**	**23.05**	**4**	*e*P	**P**	**23 59 59.3**	**+1.0**
BR231	**Keskin MP Arra**	**23.18**	**73**	P	**P**	**00 00 00.0**	**+0.2**
ANTO	**Ankara**	**23.19**	**73**	P	**P**	**23 59 59.7**	**-0.2**
ANTO	**Ankara**	**23.19**	**73**	P	**P**	**23 59 59.7**	**-0.2**
ANTO				pmax	pmax		
	comp=Z,35nm,1.3s						
ANTO				MLR	MLR		
	comp=Z,800nm,21.0s						
PBUR	**Paburge**	**23.19**	**27**	*e*P	**P**	**00 00 00.2**	**+0.5**
AKASG	**Malin Array Be**	**23.26**	**44**	P	**P**	**23 59 58.8**	**-1.6**
	comp=Z,35nm,1.0s,baz=245,slow=9.4,SNR=54						
AKASG				PcP	**PcP**	**00 03 47.4**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=268,slow=2.6,SNR=5.2						
AKASG				LR	LR	00 10 04.4	
	comp=Z,2µm,19.5s,baz=233,slow=39						
	comp=Z,35nm,1.0s						
AKASG	**Malin Array Be**	**23.26**	**44**	P	**P**	**23 59 58.6**	**-1.8**
AKBB	**Malin Array Si**	**23.26**	**44**	P	**P**	**23 59 58.7**	**-1.7**
AKBB				IAmb	IAmb	00 00 14.8	
	comp=Z,54nm,0.9s						
AKBB	**Malin Array Si**	**23.26**	**44***c*	*i*P	**P**	**23 59 59.1**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,60nm,0.9s						
TOA0	**Torodi Ar. Sit**	**23.27**	**185**	P	**P**	**23 59 58.4**	**-2.4**
TOA0	**Torodi Ar. Sit**	**23.27**	**185**	P	**P**	**23 59 59.2**	**-1.7**
	SNR=16						
TOA0				S	**S**	**00 04 08.1**	**-5.4**
TORD	**Torodi Ar. Bea**	**23.27**	**185**	P	**P**	**23 59 58.9**	**-2.0**
	comp=Z,25nm,0.7s,baz=359,slow=9.5,SNR=123						
TORD				PcP	**PcP**	**00 03 48.0**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=319,slow=2.1,SNR=4.4						
TORD				Lg	Lg	00 07 13.2	
	comp=Z,0.1nm,0.3s,baz=4.1,slow=22,SNR=2.2						
TORD				LR	LR	00 08 24.5	
	comp=Z,3µm,18.5s,baz=3.5,slow=35						
	comp=Z,25nm,0.7s						
TORD	**Torodi Ar. Bea**	**23.27**	**185**	P	**P**	**23 59 58.3**	**-2.5**
TORD				IAmb	IAmb	00 00 10.8	
	comp=Z,69nm,1.1s						
KONO	**Kongsberg**	**23.53**	**8**	P	**P**	**00 00 02.7**	**-0.4**
KONO				IAmb	IAmb	00 00 27.3	
	comp=Z,122nm,1.4s						
KONO	**Kongsberg**	**23.53**	**8***c*	*i*P	**P**	**00 00 04.3**	**+1.3**
KONO				pmax	pmax		
	comp=Z,112nm,1.7s						
KONO	**Kongsberg**	**23.53**	**8**	*e*P	**P**	**00 00 03.8**	**+0.8**
KONO	**Kongsberg**	**23.53**	**8**	⇑P	**P**	**00 00 03.7**	**+0.6**
PABE	**Paberze**	**23.59**	**30**	P	**P**	**00 00 03.0**	**-0.6**
PABE	**Paberze**	**23.59**	**30**	*e*P	**P**	**00 00 04.1**	**+0.5**
BR131	**Keskin Array S**	**23.84**	**73**	P	**P**	**00 00 05.4**	**-1.1**
BR131	**Keskin Array S**	**23.84**	**73***d*	*i*P	**P**	**00 00 08.1**	**+1.6**
BR131	**Keskin Array S**	**23.84**	**73**	P	**P**	**00 00 09.2**	**+2.7**
	SNR=7.0						
BRTR	**Keskin Array B**	**23.84**	**73**	P	**P**	**00 00 06.2**	**-0.2**
	comp=Z,5.2nm,0.6s,baz=248,slow=6.5,SNR=18						
BRTR				PcP	**PcP**	**00 03 50.0**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=206,slow=1.1,SNR=4.6						
	comp=Z,5.2nm,0.6s						
BRTR	**Keskin Array B**	**23.84**	**73**	P	**P**	**00 00 05.6**	**-0.9**
BRTR					**PcP**	**00 03 49.1**	**-0.5**
LRW	**Lerwick**	**23.89**	**354**	*e*P	**P**	**00 00 06.3**	**-0.1**
LRW				IAMs_20	IAMs_20	00 11 19.1	
	comp=Z,4µm,13.1s						
LRW	**Lerwick**	**23.89**	**354**	⇑P	**P**	**00 00 06.9**	**+0.4**
VSVD	**Vaisvydziai**	**23.91**	**29**	*e*P	**P**	**00 00 07.2**	**+0.4**
OSL	**Oslo**	**23.94**	**9**	*e*P	**P**	**00 00 07.7**	**+0.7**
BER	**Bergen**	**23.97**	**2**	*e*P	**P**	**00 00 07.7**	**+0.5**
ASK	**Askoy**	**24.06**	**2**	*e*P	**P**	**00 00 08.9**	**+0.7**
CSS	**Mathiatis**	**24.18**	**85**	P	**P**	**00 00 10.2**	**+0.6**
CSS				IAmb	IAmb	00 00 53.2	
	comp=Z,68nm,1.1s						
CSS	**Mathiatis**	**24.18**	**85**	⇓P	**P**	**00 00 10.9**	**+1.4**
IIGN	**Ignalina**	**24.41**	**32**	*e*P	**P**	**00 00 12.9**	**+1.5**
SKAR	**Skarslia**	**24.43**	**6**	*e*P	**P**	**00 00 12.5**	**+0.9**
ISAL	**Salakas**	**24.52**	**32**	*e*P	**P**	**00 00 13.3**	**+0.9**
SIM	**Simferopol'**	**24.55**	**60**	*e*P	**P**	**00 00 12.6**	**-0.2**
SIM				S	**S**	**00 04 33.0**	**-0.7**
SIM				pmax	pmax		
	comp=Z,59nm,1.0s						
SLIT	**Slitere, Latvi**	**24.56**	**25**	*e*P	**P**	**00 00 12.2**	**-0.6**
HFS	**Hagfors**	**24.57**	**12**	P	**P**	**00 00 12.3**	**-0.5**
	comp=Z,5.6nm,0.6s,baz=158,slow=29,SNR=42						
HFS				LR	LR	00 10 02.1	
	comp=Z,2µm,18.0s,baz=203,slow=37						
	comp=Z,5.6nm,0.6s						
IDID	**Didziasalis**	**24.61**	**33**	*e*P	**P**	**00 00 14.5**	**+1.2**
MNK	**Minsk**	**24.62**	**35**	*i* P	**P**	**00 00 11.8**	**-1.5**
MNK				*i*		00 00 43.7	
MNK				*i*		00 03 48.2	
MNK				*i* S	**S**	**00 04 33.5**	**-1.1**
MNK				*i* SS	**SnSn**	**00 05 22.5**	**+2.9**
MNK				pmax	pmax		
	comp=Z,79nm,1.0s						
MNK				pmax	pmax		
	comp=E,13nm,1.3s						
MNK				pmax	pmax		
	comp=N,58nm,1.2s						
MNK				MLR	MLR		
	comp=N,1µm,17.0s						
MNK				MLR	MLR		
	comp=E,57nm,12.0s						
MNK				MLR	MLR		
	comp=Z,845nm,16.0s						
SUE	**Sulen**	**24.63**	**1**	*e*P	**P**	**00 00 14.2**	**+0.9**
NC602	**NORSAR Array S**	**24.82**	**9**	P	**P**	**00 00 14.2**	**-0.9**
NC602	**NORSAR Array S**	**24.82**	**9**	*e*P	**P**	**00 00 15.6**	**+0.5**
NAO01	**NORSAR Array S**	**24.85**	**9**	P	**P**	**00 00 14.6**	**-0.7**
NBO00	**NORSAR Array S**	**25.02**	**8**	P	**P**	**00 00 16.2**	**-0.6**
NB2	**NORSAR Subarra**	**25.08**	**9**	P	**P**	**00 00 17.2**	**-0.2**
	comp=Z,346nm,5.0s,baz=191,slow=9.3						
NB2	**NORSAR Subarra**	**25.08**	**9**	P	**P**	**00 00 17.2**	**-0.2**
	baz=191,slow=9.3						
NOA	**NORSAR Array B**	**25.08**	**9**	P	**P**	**00 00 17.4**	**0.0**
	comp=Z,5.4nm,0.8s,baz=195,slow=9.8,SNR=18						
NOA				PcP	**PcP**	**00 03 51.4**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=177,slow=1.7,SNR=6.3						
NOA				LR	LR	00 10 27.6	
	comp=Z,1µm,18.1s,baz=200,slow=37						
	comp=Z,5.4nm,0.8s						
NB201	**NORSAR Array S**	**25.10**	**9**	P	**P**	**00 00 16.8**	**-0.8**
UPP	**Uppsala**	**25.11**	**17**	*e*P	**P**	**00 00 18.3**	**+0.7**
BNN	**Bunyan**	**25.60**	**75**	⇑P	**P**	**00 00 23.6**	**+1.1**
DOMB	**Dombas**	**25.84**	**6**	*e*P	**P**	**00 00 25.0**	**+0.7**
MTSE	**Matsula**	**25.92**	**24**	*e*P	**P**	**00 00 26.6**	**+1.6**
AAL	**Aland**	**25.98**	**19**	*e*P	**P**	**00 00 26.1**	**+0.6**
TOKA	**Tokat**	**26.00**	**71**	P	**P**	**00 00 26.0**	**-0.1**
TOKA				IAmb	IAmb	00 00 31.8	
	comp=Z,33nm,0.7s						
MOL	**Molde**	**26.25**	**4**	*e*P	**P**	**00 00 29.0**	**+1.0**
MMAI	**Mount Meron Ar**	**26.33**	**88**	P	**P**	**00 00 29.2**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=254,slow=8.0,SNR=2.2						
	comp=Z,2.9nm,0.8s						
VSU	**Vasula**	**26.76**	**27***c*	*i*P	**P**	**00 00 32.5**	**0.0**
VSU	**Vasula**	**26.76**	**27**	*e*P	**P**	**00 00 33.0**	**+0.4**
VSU	**Vasula**	**26.76**	**27**	⇑P	**P**	**00 00 32.6**	**0.0**
GHAJ	**Ghor Haditha**	**26.99**	**92**	P	**P**	**00 00 34.9**	**-0.1**
GHAJ				IAmb	IAmb	00 01 07.0	
	comp=Z,36nm,0.8s						
EIL	**Elat**	**27.09**	**95**	P	**P**	**00 00 35.7**	**-0.1**
	comp=Z,6.3nm,1.0s,baz=253,slow=19,SNR=1.9						
	comp=Z,6.3nm,1.0s						
RAF	**Rauma**	**27.16**	**19**	*e*P	**P**	**00 00 35.5**	**-0.7**
ASF	**Jabal al Asfar**	**27.78**	**89**	P	**P**	**00 00 43.5**	**+1.2**
	comp=Z,2.7nm,0.8s,baz=301,slow=14,SNR=6.3						
ASF				LR	LR	00 15 00.1	
	comp=Z,596nm,19.4s,baz=283,slow=43						
	comp=Z,2.7nm,0.8s						
SOC	**Sochi**	**28.42**	**64**	*e*P	**P**	**00 00 45.2**	**-2.5**
SOC				*e*PPP	PPP	00 01 42.4	
SOC				*e*S	**S**	**00 05 32.8**	**-2.2**
SOC				*e*SS	**SnSn**	**00 06 53.0**	**+0.3**
SOC				*e*SSS	SSS	00 07 09.7	
NSS	**Namsos**	**28.56**	**8**	*e*P	**P**	**00 00 49.6**	**+1.0**
FINES	**FINESS Array B**	**28.75**	**22**	P	**P**	**00 00 50.2**	**-0.2**
	comp=Z,6.2nm,0.7s,baz=216,slow=8.7,SNR=22						
FINES				LR	LR	00 12 01.0	
	comp=Z,569nm,20.3s,baz=226,slow=36						
	comp=Z,6.2nm,0.7s						
FINES	**FINESS Array B**	**28.75**	**22**	P	**P**	**00 00 50.0**	**-0.4**
FIA1	**FINESS Array S**	**28.75**	**22**	P	**P**	**00 00 50.1**	**-0.3**
FIA1				IAmb	IAmb	00 00 52.4	
	comp=Z,38nm,1.4s						
KOPT	**Kop Dagi**	**29.09**	**72**	P	**P**	**00 00 54.4**	**+0.3**
OBN	**Obninsk**	**29.23**	**40**	P	**P**	**00 00 54.2**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=254,slow=9.3,SNR=4.2						
OBN				LR	LR	00 13 05.5	
	comp=Z,246nm,19.3s,baz=222,slow=37						
	comp=Z,1.7nm,0.4s						
OBN	**Obninsk**	**29.23**	**40**	P	**P**	**00 00 53.8**	**-0.9**
OBN				IAmb	IAmb	00 01 58.7	
	comp=Z,39nm,1.2s						
OBN	**Obninsk**	**29.23**	**40**	⇑*e*P	**P**	**00 00 54.1**	**-0.6**
OBN				*e*		00 01 45.8	
OBN				*e*S	**S**	**00 05 39.6**	**-7.7**
OBN				pmax	pmax		
	comp=Z,15nm,0.8s						
OBN				MLR	MLR		
	comp=Z,983nm,14.0s						
VSR	**Storozhevoye**	**29.28**	**48**	*e*P	**P**	**00 00 54.5**	**-0.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSR				MLR	MLR		
	comp=Z,1µm,13.0s						
VORD	**Divnogorie**	**29.29**	**49**	*e*P	**P**	**00 00 54.8**	**-0.5**
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VORR	**Voronezh**	**29.43**	**48**	*e*P	**P**	**00 00 55.4**	**-1.2**
VORR				pmax	pmax		
	comp=Z,25nm,1.5s						
VORR				MLR	MLR		
	comp=Z,2µm,18.0s						
LPSR	**Galich'ya Gora**	**29.56**	**46**	*e*P	**P**	**00 00 58.2**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,1µm,16.0s						
MARD	**Mardin**	**29.66**	**77**	P	**P**	**00 00 58.2**	**-0.7**
MARD				IAmb	IAmb	00 01 54.6	
	comp=Z,15nm,0.3s						
MOS	**Moscow**	**30.04**	**39**	*e*P	**P**	**00 01 01.6**	**-0.3**
MOS				*e*		00 01 57.7	
MOS				*e*		00 04 04.7	
MOS				*e*S	**S**	**00 05 55.6**	**-4.5**
MOS				*e*SS	**SnSn**	**00 07 31.0**	**-0.8**
MOS				pmax	pmax		
	comp=Z,35nm,1.2s						
MOS				MLR	MLR		
	comp=Z,2µm,14.0s						
STOK	**Stokkvaagen**	**30.42**	**8**	*e*P	**P**	**00 01 06.3**	**+1.2**
MOR8	**Moi Rana**	**30.43**	**9**	*e*P	**P**	**00 01 06.3**	**+1.1**
GURO	**Guroymak-BITLI**	**30.45**	**74**	P	**P**	**00 01 05.8**	**-0.1**
KIV	**Kislovodsk**	**30.58**	**64**	P	**P**	**00 01 06.9**	**-0.1**
KIV	**Kislovodsk**	**30.58**	**64**	*e*P	**P**	**00 01 07.5**	**+0.6**
KIV				*e*S	**S**	**00 06 10.0**	**+0.9**
KIV				*e*SS	**ScP**	**00 07 47.4**	**-0.9**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,328nm,15.0s						
KIV	**Kislovodsk**	**30.58**	**64**	P	**P**	**00 01 07.6**	**+0.7**
KIV	**Kislovodsk**	**30.58**	**64**	P	**P**	**00 01 05.1**	**-1.9**
KONS	**Konsvik**	**30.59**	**8**	*e*P	**P**	**00 01 07.4**	**+0.8**
DBIC	**Dimbokro**	**30.64**	**197**	P	**P**	**00 01 06.9**	**-0.6**
	comp=Z,6.0nm,0.7s,baz=28,slow=9.0,SNR=7.2						
DBIC				LR	LR	00 13 41.6	
	comp=Z,2µm,18.3s,baz=26,slow=37						
	comp=Z,6.0nm,0.7s						
DBIC	**Dimbokro**	**30.64**	**197**	P	**P**	**00 01 05.5**	**-2.0**
DBIC				IAmb	IAmb	00 02 14.5	
	comp=Z,30nm,1.1s						
DBIC	**Dimbokro**	**30.64**	**197**	⇓P	**P**	**00 01 08.5**	**+1.0**
TIC	**Toumodi**	**30.70**	**197**	*e*P	**P**	**00 01 10.2**	**+2.1**
	comp=Z,137nm,1.3s						
KBZ	**Khabaz**	**30.73**	**64**	P	**P**	**00 01 08.2**	**0.0**
	comp=Z,3.1nm,0.9s,baz=259,slow=4.3,SNR=5.2						
KBZ				PcP	**PcP**	**00 04 06.5**	**+0.8**
	comp=Z,4.6nm,0.8s,baz=254,slow=5.1,SNR=3.6						
	comp=Z,3.1nm,0.9s						
VRH	**Novokhopyorsk**	**30.83**	**49**	*e*P	**P**	**00 01 07.6**	**-1.3**
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
VRH				MLR	MLR		
	comp=Z,820nm,15.0s						
GOF	**Gofitskoye**	**30.86**	**61**	⇑*e*P	**P**	**00 01 09.0**	**-0.3**
GOF				pmax	pmax		
	comp=Z,27nm,0.6s						
KIC	**Kosan Boka**	**30.91**	**196**	*e*P	**P**	**00 01 08.1**	**-1.8**
	comp=Z,23nm,0.8s						
KARS	**Kars**	**31.01**	**70**	P	**P**	**00 01 10.8**	**0.0**
KARS	**Kars**	**31.01**	**70**	P	**P**	**00 01 10.8**	**0.0**
KARS				pmax	pmax		
	comp=Z,93nm,1.4s						
LIC	**Lamto**	**31.11**	**197**	*e*P	**P**	**00 01 09.3**	**-2.3**
	comp=Z,40nm,0.9s						
ZEI	**Tsey**	**31.48**	**66**	*e*P	**P**	**00 01 16.4**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FAUS	**Fauske**	**31.68**	**9**	*e*P	**P**	**00 01 16.6**	**+0.3**
BORG	**Borgarnes**	**31.98**	**340**	LR	LR	00 13 44.6	
	comp=Z,3µm,18.3s,baz=157,slow=36						
BORG	**Borgarnes**	**31.98**	**340**	IAMs_20	IAMs_20	00 13 33.8	
	comp=Z,3µm,18.0s						
STEI	**Steigen**	**32.20**	**8**	*e*P	**P**	**00 01 21.8**	**+1.0**
LOF	**Lofoten**	**32.22**	**7**	*e*P	**P**	**00 01 21.5**	**+0.6**
GNI	**Garni**	**32.32**	**71**	P	**P**	**00 01 22.2**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=248,slow=16,SNR=2.4						
GNI				PcP	**PcP**	**00 04 11.2**	**+0.9**
	comp=Z,7.6nm,0.9s,baz=299,slow=19,SNR=3.5						
	comp=Z,3.1nm,0.9s						
GNI	**Garni**	**32.32**	**71**	P	**P**	**00 01 22.1**	**-0.2**
GNI	**Garni**	**32.32**	**71**	P	**P**	**00 01 24.0**	**+1.6**
GNI	**Garni**	**32.32**	**71**	P	**P**	**00 01 22.0**	**-0.4**
SACV	**Santiago Islan**	**32.32**	**236**	IAMs_20	IAMs_20	00 14 25.2	
	comp=Z,4µm,18.0s						
KLMR	**Klimovskoe**	**33.34**	**32**	*e*P	**P**	**00 01 29.3**	**-1.6**
KLMR				*e*S	**S**	**00 06 51.2**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,76nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,1µm,13.0s						
KLMR	**Klimovskoe**	**33.34**	**32**	*e*P	**P**	**00 01 29.3**	**-1.6**
KLMR				AMP		00 01 44.5	
	comp=Z,76nm,1.2s						
KLMR				*e*S	**S**	**00 06 51.2**	**-0.4**
KLMR				*e*S	**S**	**00 06 51.2**	**-0.4**
KLMR				LQ	LQ	00 12 31.1	
KLMR				LQ	LQ	00 12 31.1	
KLMR				LR	LR	00 13 17.1	
KLMR				AMP		00 17 11.1	
	comp=Z,1µm,12.9s						
MAK	**Makhachkala**	**34.12**	**65**	*e*P	P	00 01 32.9	-4.9
MAK				*e*		00 02 48.2	
MAK				*e*S	**S**	**00 06 55.5**	**-8.5**
MAK				*e*SS	**SnSn**	**00 09 11.8**	**+0.6**
MAK				pmax	pmax		
	comp=Z,71nm,0.8s						
MAK				MLR	MLR		
	comp=Z,454nm,11.0s						
TRO	**Tromso**	**34.27**	**9**	*e*P	**P**	**00 01 38.6**	**-0.2**
KTK1	**Kautokeino**	**34.37**	**12**	*e*P	**P**	**00 01 39.7**	**0.0**
JETT	**Jettan, Norway**	**34.41**	**10**	*e*P	**P**	**00 01 40.5**	**+0.5**
BELG	**Belogornoye**	**34.66**	**49**	P	**P**	**00 01 41.8**	**-0.6**
	comp=Z,30nm,1.0s,baz=65,slow=10,SNR=8.2						
BELG				LR	LR	00 16 51.8	
	comp=Z,694nm,20.2s,baz=261,slow=38						
	comp=Z,30nm,1.0s						
BELG	**Belogornoye**	**34.66**	**49***c*	*i*P	**P**	**00 01 41.9**	**-0.5**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
JMIC	**Jan Mayen**	**35.17**	**353**	LR	LR	00 15 47.6	
	comp=Z,839nm,18.2s,baz=162,slow=36						
ARA0	**ARCESS Array S**	**35.23**	**13**	*e*P	**P**	**00 01 46.6**	**-0.5**
ARCES	**ARCESS Array B**	**35.23**	**13**	P	**P**	**00 01 46.8**	**-0.3**
	comp=Z,10nm,0.6s,baz=201,slow=7.1,SNR=52						
ARCES				PcP	**PcP**	**00 04 16.8**	**-0.9**
	comp=Z,3.7nm,0.7s,baz=188,slow=2.5,SNR=5.1						
ARCES				LR	LR	00 18 08.5	
	comp=Z,1µm,18.2s,baz=217,slow=40						
	comp=Z,10nm,0.6s						
ARCES	**ARCESS Array B**	**35.23**	**13**	P	**P**	**00 01 46.6**	**-0.5**

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ARCES                               IAmb     IAmb     00 01 49.8
      comp=Z,76nm,1.6s
APA   Apatity           35.44  19 ⇓iP        P        00 01 55.3 +6.4
APA                                 MLR      MLR
      comp=Z,1µm,11.0s
KEV   Kevo              35.70  14   P        P        00 01 50.7 -0.4
KEV   Kevo              35.70  14   P        P        00 01 50.7 -0.4
KEV                                 pmax     pmax
      comp=Z,125nm,1.7s
KEV                                 MLR      MLR
      comp=Z,900nm,18.0s
KEV   Kevo              35.70  14  ⇑P        P        00 01 51.0 -0.1
HAMF  Hammerfest        35.88  11  eP        P        00 01 52.9 +0.2
LVZ   Lovozero          36.01  19   P        P        00 01 53.6 -0.3
LVZ                                 IAmb     IAmb     00 01 56.3
      comp=Z,37nm,1.3s
LVZ   Lovozero          36.01  19 ⇑eP        P        00 01 54.9 +1.0
LVZ                                 pmax     pmax
      comp=Z,39nm,1.5s
PRGR  Permogore         36.33  33 ⇑iP        P        00 02 01.1 +4.5
SCO   Scoresbysund      36.70 346   P        P        00 01 59.6 -0.1
SCO   Scoresbysund      36.70 346   P        P        00 01 59.6 -0.1
SCO                                 pmax     pmax
      comp=Z,11nm,1.2s
KIRV  Kirov             37.05  39   P        P        00 02 02.3 -0.5
      comp=Z,14nm,0.8s,baz=276,slow=6.7,SNR=7.9
KIRV                                LR       LR       00 17 15.9
      comp=Z,585nm,19.8s,baz=256,slow=36
      comp=Z,14nm,0.8s
KIRV  Kirov             37.05  39 ceP        P        00 02 02.7 -0.1
RAYN  Ar Rayn           38.26  98   P        P        00 02 12.8 -0.7
RAYN  Ar Rayn           38.26  98   P        P        00 02 12.8 -0.7
RAYN                                pmax     pmax
      comp=Z,9.0nm,0.9s
RAYN                                MLR      MLR
      comp=Z,2µm,20.0s
RAYN  Ar Rayn           38.26  98   P        P        00 02 14.5 +1.0
RAYN  Ar Rayn           38.26  98 i P        P        00 02 14.5 +1.0
      SNR=14
RAYN  Ar Rayn           38.26  98  ⇓P        P        00 02 14.4 +0.8
DBG   Daneborg          39.63 350  eP        P        00 02 25.6 +1.2
DBG                               i P        pP       00 02 26.9 +0.1
DBG                                 IAmb     IAmb     00 02 41.8
      comp=Z,15nm,1.3s
DBG   Daneborg          39.63 350  ⇓P        P        00 02 27.3 +2.9
ICESG Greenland Ices    40.25 338  eP        P        00 02 29.6 -0.5
ICESG                               IAmb     IAmb     00 03 02.6
      comp=Z,13nm,0.8s
ICESG Greenland Ices    40.25 338  ⇑P        P        00 02 31.2 +1.2
AKTO  Aktyubinsk        41.01  52   P        P        00 02 35.3 -0.8
      comp=Z,2.5nm,0.6s,baz=268,slow=9.2,SNR=10
AKTO                                LR       LR       00 21 52.9
      comp=Z,635nm,18.1s,baz=285,slow=40
      comp=Z,2.5nm,0.6s
SAKB  Bahrain           41.16  91   P        P        00 02 38.8 +1.2
DY2G  Dye2              41.35 332  eP        P        00 02 39.9 +1.0
DY2G                                IAmb     IAmb     00 03 10.2
      comp=Z,256nm,2.2s
DY2G  Dye2              41.35 332  ⇑P        P        00 02 40.0 +1.0
ARU   Arti              41.51  43   LR       LR       00 21 02.4
      comp=Z,938nm,19.0s,baz=260,slow=38
ARU   Arti              41.51  43   P        P        00 02 39.7 -0.4
ARU   Arti              41.51  43c iP        P        00 02 39.4 -0.7
ARU                                                   00 04 18.9
ARU                                 PPP      PPP      00 04 44.1
ARU                                 S        S        00 08 56.2 +0.5
ARU                                 SS       SS       00 11 55.0 -4.8
ARU                                 pmax     pmax
      comp=Z,33nm,1.1s
ARU                                 MLR      MLR
      comp=Z,978nm,15.0s
ARU   Arti              41.51  43  ⇑P        P        00 02 39.5 -0.7
SHMA  Al-Shehemyia      41.56  91   P        P        00 02 41.2 +0.4
DAG   Danmarks Havn     41.61 352 i P        P        00 02 42.5 +1.8
DAG                                 IAmb     IAmb     00 02 57.2
      comp=Z,16nm,1.3s
DAG   Danmarks Havn     41.61 352  ⇓P        P        00 02 41.6 +1.0
SUMG  Summit            41.87 342   P        P        00 02 43.0 -0.3
SUMG                                IAmb     IAmb     00 02 52.8
      comp=Z,25nm,0.8s
SUMG  Summit            41.87 342   P        P        00 02 43.0 -0.3
SUMG  Summit            41.87 342 i P        P        00 02 44.5 +1.2
SUMG                                IAmb     IAmb     00 02 52.5
      comp=Z,28nm,0.9s
SUMG  Summit            41.87 342  ⇓P        P        00 02 44.2 +0.9
SMRA  Abu-Samra         41.95  93   P        P        00 02 44.5 +0.4
FURI  Furi              42.06 122   P        P        00 02 45.0 -0.4
FURI                                IAmb     IAmb     00 03 09.2
      comp=Z,56nm,1.4s
FURI  Furi              42.06 122   IAMs_20  IAMs_20  00 21 00.8
      comp=Z,3µm,20.0s
KHOR  Al-Khor Airpor    42.10  91   P        P        00 02 46.5 +1.2
SPA0  Spitsbergen Ar    42.18   4  eP        P        00 02 46.8 +1.4
SPITS Spitsbergen Ar    42.18   4   P        P        00 02 45.7 +0.4
      comp=Z,9.5nm,0.9s,baz=222,slow=1.9,SNR=2.8
SPITS                               LR       LR       00 22 10.1
      comp=Z,881nm,18.1s,baz=163,slow=39
      comp=Z,9.5nm,0.9s
SPITS Spitsbergen Ar    42.18   4   P        P        00 02 46.4 +1.1
SPITS                               pmax     pmax
      comp=Z,66nm,1.4s
TRNA  Turayna           42.27  92   P        P        00 02 47.8 +1.2
ABKAR Akbulak array     42.32  54   P        P        00 02 45.8 -1.0
ABKAR Akbulak array     42.32  54   P        P        00 02 46.1 -0.7
ABKAR                               IAmb     IAmb     00 02 59.2
      comp=Z,5.6nm,0.9s
ABKAR Akbulak array     42.32  54  ⇑P        P        00 02 46.5 -0.3
SVE   Sverdlovsk        42.68  43  eP        P        00 02 49.8 +0.1
SVE                                 pmax     pmax
      comp=Z,38nm,1.4s
SVE                                 MLR      MLR
      comp=Z,1µm,14.0s
GEYT  Alibeck           42.96  71   P        P        00 02 52.6 +0.4
      comp=Z,2.2nm,0.5s,baz=318,slow=12,SNR=5.5
GEYT                                LR       LR       00 25 07.6
      comp=Z,196nm,18.4s,baz=296,slow=42
      comp=Z,2.2nm,0.5s
GEYT  Alibeck           42.96  71   P        P        00 02 51.2 -1.0
GYA0B ALIBECK ARRAY     42.96  71   P        P        00 02 51.5 -0.7
SLWR  Sila              42.96  93   P        P        00 02 53.6 +1.3
SLWR                                S        S        00 09 17.6 -0.3
SFJD  Kangerlussuaq     43.16 332   LR       LR       00 18 27.9
      comp=Z,2µm,21.2s,baz=113,slow=33
SFJD  Kangerlussuaq     43.16 332   P        P        00 02 52.6 -0.7
SFJD                                IAmb     IAmb     00 03 24.2
      comp=Z,57nm,1.6s
SFJD  Kangerlussuaq     43.16 332   IAMs_20  IAMs_20  00 18 16.0
      comp=Z,2µm,20.0s
SFJD  Kangerlussuaq     43.16 332   P        P        00 02 52.6 -0.7
SFJD                                pmax     pmax
      comp=Z,57nm,1.6s
ATD   Arta Tunnel       43.19 115   LR       LR       00 22 58.5
      comp=Z,3µm,18.2s,baz=324,slow=39
ATD   Arta Tunnel       43.19 115   P        P        00 02 54.2 -0.2
ATD                                 IAMs_20  IAMs_20  00 23 08.0
      comp=Z,3µm,20.0s
ATD   Arta Tunnel       43.19 115   P        P        00 02 57.6 +3.3
JRN   Qarnain Island    43.49  91   P        P        00 02 57.0 +0.4
GHWR  Ruwais            43.97  92   P        P        00 03 01.1 +0.6
LODK  Lodwar            44.03 131   P        P        00 03 00.5 -0.5
LODK  Lodwar            44.03 131   P        P        00 03 03.4 +2.3
MBAR  Mbarara           44.69 139   P        P        00 03 07.2 +0.7
      comp=Z,5.7nm,0.6s,baz=322,slow=11,SNR=9.7
MBAR                                LR       LR       00 22 27.3
      comp=Z,5µm,19.1s,baz=314,slow=37
      comp=Z,5.7nm,0.6s
MBAR  Mbarara           44.69 139   P        P        00 03 06.0 -0.4
MBAR  Mbarara           44.69 139   P        P        00 03 08.6 +2.1
MBAR  Mbarara           44.69 139  ⇓P        P        00 03 09.0 +2.6
MZWR  Madinat Zayed     44.87  92   P        P        00 03 07.6 -0.1
MZR   Muzera            44.91  93   P        P        00 03 07.7 -0.3
MZR   Muzera            44.91  93 i P        P        00 03 08.0 -0.1
      SNR=25
AJN   Ajban             45.39  90   P        P        00 03 12.3 +0.5
UMQ   Umm Al-Quwin      45.49  89   P        P        00 03 13.2 +0.6
ASUD  Al Ashush, Dub    45.64  90   P        P        00 03 14.0 +0.3
      SNR=9.5
ASUD  Al Ashush, Dub    45.64  90 i P        P        00 03 14.0 +0.3
      SNR=14
SHME  Shamm             45.65  88   P        P        00 03 13.5 -0.3
      SNR=13
SHME  Shamm             45.65  88 i P        P        00 03 13.1 -0.7
      SNR=26
NAZ   Nazwa, Dubai      45.74  89   P        P        00 03 14.8 +0.3
      SNR=16
NAZ   Nazwa, Dubai      45.74  89 i P        P        00 03 14.6  0.0
      SNR=27
FAQ   Al Faqa, Dubai    45.79  90   P        P        00 03 14.9 -0.1
      SNR=8.1
FAQ   Al Faqa, Dubai    45.79  90 i P        P        00 03 14.7 -0.3
      SNR=18
BANOM Banah             45.83  88   P        P        00 03 15.5 +0.1
      SNR=6.2
BANOM Banah             45.83  88 i P        P        00 03 15.1 -0.3
      SNR=11
NOR   Nord              45.85 356  eP        P        00 03 17.4 +2.6
NOR                                 IAmb     IAmb     00 03 23.1
      comp=Z,5.1nm,0.7s
MASF  Masafi            45.96  89   P        P        00 03 16.2 -0.2
      SNR=8.5
MASF                                S        S        00 09 59.9 -1.7
MSFE  Esma-Masafi       45.97  89 i P        P        00 03 16.1 -0.4
      SNR=15
HATD  Hatta, Dubai      46.19  89   P        P        00 03 18.0 -0.2
      SNR=16
HATD                                S        S        00 10 02.3 -2.5
HATD  Hatta, Dubai      46.19  89 i P        P        00 03 17.8 -0.3
      SNR=28
UOSS  Minazif           46.19  89   P        P        00 03 17.3 -0.9
UOSS  Minazif           46.19  89 i P        P        00 03 17.7 -0.6
      SNR=19
UOSS  Minazif           46.19  89  ⇑P        P        00 03 17.6 -0.6
ASHO  Ashiyiah          46.20  89   P        P        00 03 17.9 -0.4
      SNR=12
ASHO  Ashiyiah          46.20  89 i P        P        00 03 17.8 -0.5
      SNR=22
ALNE  Al Ain            46.24  90   P        P        00 03 18.8 +0.2
      SNR=13
ALNE  Al Ain            46.24  90 i P        P        00 03 18.8 +0.2
      SNR=13
UMZA  Um Al Zommool     46.41  92   P        P        00 03 19.9 +0.1
UMZA                                S        S        00 10 06.4 -1.6
ARQ   Araqi             47.20  91   P        P        00 03 26.3 +0.2
      SNR=9.4
ARQ                                 S        S        00 10 21.0 +1.6
HRA   Herat             47.22  74   P        P        00 03 26.3 -0.1
HRA                                 IAmb     IAmb     00 03 46.1
      comp=Z,18nm,1.1s
DOK   Doka              47.67  98   P        P        00 03 29.3 -0.5
ABTO  Aybut             47.70 100   P        P        00 03 30.3 +0.3
HOQ   Hoqain            47.72  90   P        P        00 03 30.7 +0.5
      SNR=12
WHFO  Wadi Hawf         47.77  99   P        P        00 03 30.4 -0.2
BSY   Bisya             48.03  91   P        P        00 03 32.6  0.0
      SNR=10
RBK   Rabkut            48.34  99   P        P        00 03 35.4 +0.4
BRVK  Borovoye          48.39  48   P        P        00 03 34.8 -0.1
BRVK                                IAmb     IAmb     00 04 32.3
      comp=Z,23nm,1.2s
BRVK  Borovoye          48.39  48d iP        P        00 03 35.7 +0.8
BRVK                                pmax     pmax
      comp=Z,27nm,1.7s
BRVK  Borovoye          48.39  48   P        P        00 03 35.1 +0.2
BRVK  Borovoye          48.39  48  ⇑P        P        00 03 35.1 +0.2
BRVK                               ⇓P        pP       00 03 35.4 -2.0
BIDO  Bidbid            48.41  90   P        P        00 03 35.4 -0.1
      SNR=9.6
SMDO  Samad             48.57  90   P        P        00 03 36.9 +0.1
      SNR=10
GBN   Guysborough       48.75 302   P        P        00 03 36.8 -1.0
KMBO  Kilima Mbogo      48.77 132   P        P        00 03 39.5 +1.0
      comp=Z,3.9nm,0.9s,baz=338,slow=6.6,SNR=8.0
KMBO                                LR       LR       00 26 02.9
      comp=Z,3µm,18.1s,baz=316,slow=38
      comp=Z,3.9nm,0.9s
KMBO  Kilima Mbogo      48.77 132   P        P        00 03 38.5  0.0
KMBO  Kilima Mbogo      48.77 132   IAMs_20  IAMs_20  00 25 50.7
      comp=Z,3µm,18.0s
KMBO  Kilima Mbogo      48.77 132   P        P        00 03 39.8 +1.3
KMBO  Kilima Mbogo      48.77 132  ⇓P        P        00 03 41.4 +2.8
DMTO  DMTO              48.82  98   P        P        00 03 40.4 +1.8
JMDO  Jabal Madar       48.95  91   P        P        00 03 40.0 +0.4
      SNR=7.7
WSAR  Wadi Sarin        48.95  90   P        P        00 03 39.9 +0.2
      comp=Z,27nm,0.9s,baz=301,slow=6.9,SNR=9.7
WSAR                                LR       LR       00 30 00.7
      comp=Z,2µm,18.4s,baz=300,slow=43
      comp=Z,27nm,0.9s
WSAR  Wadi Sarin        48.95  90   P        P        00 03 39.7 +0.1
SHAO  Shalim            49.19  97   P        P        00 03 42.1 +0.6
MHTO  MHTO              49.52  93   P        P        00 03 44.1 +0.1
      SNR=14
WBK   Wadi Bani Khal    49.53  90   P        P        00 03 44.8 +0.7
      SNR=5.4
FRB   Frobisher Bay     50.20 327   LR       LR       00 22 07.1
      comp=Z,2µm,20.3s,baz=90,slow=33
KIBK  Kibwezi           50.21 133   IAMs_20  IAMs_20  00 26 42.2
      comp=Z,3µm,20.0s
SCHQ  Schefferville     50.27 315   P        P        00 03 48.6 -0.7
      comp=Z,12nm,0.9s,baz=78,slow=7.0,SNR=17
SCHQ                                LR       LR       00 22 03.9
      comp=Z,2µm,19.9s,baz=91,slow=32
      comp=Z,12nm,0.9s
SCHQ  Schefferville     50.27 315   P        P        00 03 48.1 -1.2
SCHQ                                IAmb     IAmb     00 03 58.2
      comp=Z,17nm,0.8s
SCHQ  Schefferville     50.27 315  ⇑P        P        00 03 48.6 -0.7
KK31  Karatay Array     50.65  61   P        P        00 03 50.7 -1.7
KK31  Karatay Array     50.65  61   P        P        00 03 50.7 -1.7
KK31                                pmax     pmax
      comp=Z,7.0nm,1.1s
KKAR  Karatay Array     50.65  61   P        P        00 03 51.3 -1.1
KKAR  Karatay Array     50.65  61   P        P        00 03 51.3 -1.1
KKAR  Karatay Array     50.65  61  ⇑P        P        00 03 52.2 -0.2
TULEG Thule             50.77 343   IAMs_20  IAMs_20  00 25 40.4
      comp=Z,2µm,18.0s
LMN   Caledonia Moun    50.88 303   P        P        00 03 52.8 -1.3
LMN                                 IAmb     IAmb     00 04 01.7
      comp=Z,52nm,1.3s
SOCY  Socotra           51.23 105   IAMs_20  IAMs_20  00 25 27.6
      comp=Z,2µm,20.0s
SOCY  Socotra           51.23 105   P        P        00 03 58.4 +1.4
BATG  Bathurst New B    51.35 305   P        P        00 03 56.6 -0.9
BTK   Batken            51.79  64   P        P        00 04 00.2 -0.9
BTK   Batken            51.79  64   P        P        00 04 00.2 -0.9
BTK                                 pmax     pmax
      comp=Z,13nm,1.3s
KBL   Kabul             52.40  71   P        P        00 04 04.5 -1.3
KBL   Kabul             52.40  71   P        P        00 04 04.5 -1.3
KBL                                 pmax     pmax
      comp=Z,11nm,1.1s
DRK   Karamyk           52.70  65   P        P        00 04 07.8 -0.2
PQI   Presque Isle      52.81 305   P        P        00 04 07.4 -1.0
PQI                                 IAmb     IAmb     00 04 16.8
      comp=Z,30nm,0.9s
PQI                                 IAMs_20  IAMs_20  00 25 29.4
      comp=Z,2µm,18.0s
G65A  Princeton         52.93 303   P        P        00 04 08.4 -0.8
G65A                                IAmb     IAmb     00 04 19.8
      comp=Z,30nm,0.9s
G65A  Princeton         52.93 303   P        P        00 04 06.9 -2.3
      baz=73
G65A                                P        P        00 04 06.9 -2.3
      baz=73
AML   Almayashu         53.19  61   P        P        00 04 12.9 +1.2
D62A  Allapoint, All    53.37 306   P        P        00 04 11.8 -0.7
D62A  Allapoint, All    53.37 306   P        P        00 04 12.0 -0.5
      baz=74,SNR=11
D62A                                P        P        00 04 12.0 -0.5
      baz=74,SNR=11
AAK   Ala-Archa         53.58  60   P        P        00 04 14.2 -0.1
AAK   Ala-Archa         53.58  60 ⇓iP        P        00 04 14.7 +0.3
AAK                                 pmax     pmax
      comp=Z,10.0nm,1.7s
AAK   Ala-Archa         53.58  60   P        P        00 04 14.8 +0.3
AAK   Ala-Archa         53.58  60   P        P        00 04 14.7 +0.3
FRU1  Bishkek           53.62  60   P        P        00 04 13.9 -0.6
FRU1                                IAmb     IAmb     00 04 16.9
      comp=Z,32nm,1.2s
FRU1  Bishkek           53.62  60   P        P        00 04 13.9 -0.6
FRU1                                pmax     pmax
      comp=Z,32nm,1.2s
KURBB Kurchatov Arra    53.89  50   LR       LR       00 28 36.3
      comp=Z,681nm,19.1s,baz=274,slow=38
KURK  Kurchatov         53.92  49   P        P        00 04 15.8 -0.8
KURK                                IAmb     IAmb     00 04 34.3
      comp=Z,23nm,1.0s
KURK  Kurchatov         53.92  49c iP        P        00 04 16.1 -0.4
KURK                                pmax     pmax
      comp=Z,34nm,1.7s
KURK  Kurchatov         53.92  49   P        P        00 04 15.9 -0.6
PKME  Peaks-Kenny Pk    54.07 304   P        P        00 04 17.3 -0.4
PKME                                IAMs_20  IAMs_20  00 26 25.8
      comp=Z,3µm,18.0s
PKME  Peaks-Kenny Pk    54.07 304   P        P        00 04 16.8 -0.9
      baz=72
F62A  Pittston Farm,    54.33 304   P        P        00 04 18.9 -0.7
      baz=72
F62A                                P        P        00 04 18.9 -0.7
      baz=72
NRIK  Noril'sk          54.33  26   P        P        00 04 20.6 +1.4
      comp=Z,12nm,1.0s,baz=254,slow=5.1,SNR=13
      comp=Z,12nm,1.0s
NRIK  Noril'sk          54.33  26   P        P        00 04 20.2 +1.0
NRIK                                IAmb     IAmb     00 04 23.0
      comp=Z,46nm,1.5s
EUNU  Eureka            54.36 348   P        P        00 04 19.6 +0.2
EUNU                                IAmb     IAmb     00 04 28.4
      comp=Z,15nm,0.9s
BOOM  Boomskoye usch    54.64  60   P        P        00 04 21.9 -0.2
BOOM  Boomskoye usch    54.64  60   P        P        00 04 21.9 -0.2
BOOM                                pmax     pmax
      comp=Z,6.0nm,0.9s
G62A  West of Eustis    54.92 304   P        P        00 04 23.9  0.0
      baz=71,SNR=8.7
G62A                                P        P        00 04 23.9  0.0
      baz=71,SNR=8.7
I63A  Otisfield         55.33 303   P        P        00 04 26.7 -0.2
      baz=70
I63A                                P        P        00 04 26.7 -0.2
      baz=70
BBSR  BB Station        55.39 287   IAMs_20  IAMs_20  00 23 50.0
      comp=Z,2µm,20.0s
H62A  Milan             55.55 303   P        P        00 04 28.0 -0.4
H62A                                IAmb     IAmb     00 04 37.4
      comp=Z,17nm,0.8s
KDJ   Kajisay           55.63  60   P        P        00 04 28.9 -0.3
KDJ   Kajisay           55.63  60   P        P        00 04 28.9 -0.3
KDJ                                 pmax     pmax
      comp=Z,18nm,1.3s
KSH   Kashi             55.71  63   P        P        00 04 29.8  0.0
KSH                                 PcP      PcP      00 05 30.5 +1.4
KSH                                 pmax     pmax
      comp=Z,16nm,1.3s
KSH                                 LR       LR
      comp=Z,530nm,17.5s
KSH                                 LR       LR
      comp=Z,280nm,14.4s
KSH                                 LR       LR
      comp=Z,290nm,15.5s
NIL   Nilore            55.96  71   P        P        00 04 30.8 -0.8
NIL                                 IAmb     IAmb     00 04 49.5
      comp=Z,29nm,1.1s
NIL   Nilore            55.96  71   P        P        00 04 30.8 -0.8
NIL                                 pmax     pmax
      comp=Z,29nm,1.1s
NIL   Nilore            55.96  71   P        P        00 04 31.0 -0.6
RCBR  Riachuelo         55.98 230   IAMs_20  IAMs_20  00 26 45.2
      comp=Z,2µm,18.0s
RCBR  Riachuelo         55.98 230  eP        P        00 04 32.1 +0.3
LBNH  Lisbon            56.18 303   P        P        00 04 32.6 -0.3
LBNH                                IAmb     IAmb     00 04 49.5
      comp=Z,25nm,0.9s
LBNH                                IAMs_20  IAMs_20  00 25 37.6
      comp=Z,3µm,20.0s
LBNH  Lisbon            56.18 303   P        P        00 04 32.6 -0.3
LBNH                                pmax     pmax
      comp=Z,25nm,1.0s
LBNH  Lisbon            56.18 303   P        P        00 04 33.1 +0.2
      baz=70,SNR=8.9
LBNH  Lisbon            56.18 303   P        P        00 04 32.9  0.0
      baz=70
TARG  Taragay, Kyrgy    56.21  60   P        P        00 04 34.3 +0.6
TARG                                IAmb     IAmb     00 04 36.9
      comp=Z,27nm,1.2s
TARG  Taragay, Kyrgy    56.21  60   P        P        00 04 34.3 +0.6
TARG                                pmax     pmax
      comp=Z,27nm,1.2s
PRZ   Przheval'sk       56.35  59   P        P        00 04 34.5 +0.1
PRZ                                 IAmb     IAmb     00 05 37.6
      comp=Z,23nm,0.9s
PRZ   Przheval'sk       56.35  59   P        P        00 04 34.5 +0.1
PRZ                                 pmax     pmax
      comp=Z,23nm,0.9s
WES   Weston            56.41 301   P        P        00 04 33.6 -1.0
WES                                 IAmb     IAmb     00 04 40.3
      comp=Z,31nm,1.0s
WES                                 IAMs_20  IAMs_20  00 26 24.9
      comp=Z,1µm,20.0s
WES   Weston            56.41 301   P        P        00 04 33.6 -1.0
WES                                 pmax     pmax
      comp=Z,31nm,1.0s
LSZ   Lusaka            56.47 151   LR       LR       00 30 38.4
      comp=Z,5µm,19.9s,baz=344,slow=38
LSZ   Lusaka            56.47 151   P        P        00 04 35.0 -0.3
LSZ   Lusaka            56.47 151   P        P        00 04 35.1 -0.3
LSZ                                 pmax     pmax
      comp=Z,10.0nm,1.0s
LSZ                                 MLR      MLR
      comp=Z,6µm,19.0s
HRV   Adam Dziewonsk    56.53 301   IAMs_20  IAMs_20  00 26 18.0
      comp=Z,2µm,20.0s
ZAA0  Zalesovo Array    56.66  44   P        P        00 04 35.9 -0.3
ZALV  Zalesovo Beam     56.66  44   P        P        00 04 36.0 -0.2
      comp=Z,4.6nm,0.7s,baz=294,slow=7.0,SNR=18
ZALV                                LR       LR       00 30 07.2
      comp=Z,611nm,18.9s,baz=292,slow=37
      comp=Z,4.6nm,0.7s
ZALV  Zalesovo Beam     56.66  44   P        P        00 04 35.6 -0.5
ZALV  Zalesovo Beam     56.66  44 i P        P        00 04 36.0 -0.2
ZALV                                pmax     pmax
      comp=Z,5.0nm,0.7s
VT1   Waterbury         56.70 303   IAMs_20  IAMs_20  00 27 22.6
      comp=Z,2µm,18.0s
NBMO  Morrinhos-CE      56.71 235  eP        P        00 04 37.4 +0.3
BRYW  Bryant College    56.73 300   IAMs_20  IAMs_20  00 27 56.3
      comp=Z,1µm,18.0s
MNTQ  Montreal, Queb    56.88 305   P        P        00 04 37.0 -0.9
TSUM  Tsumeb            56.93 164   LR       LR       00 28 42.2
      comp=Z,2µm,20.9s,baz=338,slow=36
TSUM  Tsumeb            56.93 164   P        P        00 04 38.6  0.0
MCVT  Middlebury Col    57.00 303   P        P        00 04 38.0 -0.8
      baz=69,SNR=5.7
FRNY  Flat Rock         57.09 304   P        P        00 04 38.5 -0.9
      baz=69
QUA2  Belchertown       57.17 301   IAMs_20  IAMs_20  00 26 56.7
      comp=Z,2µm,20.0s
MAKZ  Makanchi          57.23  53   P        P        00 04 40.0 -0.4
MAKZ  Makanchi          57.23  53   P        P        00 04 40.0 -0.4
MAKZ                                pmax     pmax
      comp=Z,13nm,1.2s
MAKZ                                MLR      MLR
      comp=Z,600nm,20.0s
RES   Resolute Bay      57.39 342   LR       LR       00 27 41.7
      comp=Z,1µm,20.3s,baz=68,slow=34
MK31  Makanchi Array    57.44  53   P        P        00 04 41.4 -0.5
MK31  Makanchi Array    57.44  53   P        P        00 04 41.4 -0.5
MK31                                pmax     pmax
      comp=Z,6.0nm,0.9s
MKAR  Makanchi Array    57.44  53   P        P        00 04 41.4 -0.5
      comp=Z,3.9nm,0.5s,baz=286,slow=5.9,SNR=47
MKAR                                PcP      PcP      00 05 36.0 +0.3
      comp=Z,6.0nm,0.7s,baz=279,slow=3.3,SNR=4.8
MKAR                                LR       LR       00 31 16.0
      comp=Z,615nm,18.3s,baz=291,slow=38
MKAR                                PKP2bc            00 34 42.2
      comp=Z,1.4nm,1.0s,baz=94,slow=4.9,SNR=5.6
      comp=Z,3.9nm,0.5s
NBRF  Rio Formoso -     57.76 227  eP        P        00 04 42.1 -2.3
LONY  Lake Ozonia       57.83 304   P        P        00 04 44.5 -0.1
LONY                                IAmb     IAmb     00 05 00.7
      comp=Z,15nm,0.9s
LONY  Lake Ozonia       57.83 304   P        P        00 04 45.4 +0.8
      baz=69
YLE   Yale              57.93 300   IAMs_20  IAMs_20  00 26 52.6
      comp=Z,1µm,20.0s
NBPB  Pedra_Branca-C    58.08 233  eP        P        00 04 45.7 -1.0
NBPS  Pedro II - PI     58.45 236  eP        P        00 04 49.2 -0.2
PAL   Palisades         58.73 300   IAMs_20  IAMs_20  00 27 26.0
      comp=Z,1µm,21.0s
PAL   Palisades         58.73 300   P        P        00 04 50.8 -0.1
      baz=67
FOR   Fordham           58.77 300   P        P        00 04 49.8 -1.3
      baz=67
WCNY  West Carthage     58.78 304   P        P        00 04 50.3 -0.9
      baz=68
NBMA  Muriti-CE         58.95 231  eP        P        00 04 51.8 -1.0
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ROSB	**Rosrio**	**59.18 239**	*e*P	**P**	**00 04 55.7 +1.4**
NBAN	**Anadia - AL**	**59.23 227**	*e*P	**P**	**00 04 54.1 -0.5**
BINY	**Binghamton**	**59.69 302**	P	**P**	**00 04 57.5 -0.1**
BINY			IAmb	IAmb	00 05 04.0
	comp=Z,12nm,0.9s				
BINY			IAMs_20	IAMs_20	00 29 44.5
	comp=Z,2µm,18.0s				
BINY	**Binghamton**	**59.69 302**	P	**P**	**00 04 57.9 +0.3**
	baz=67				
DELO	**Deloro Mine**	**59.88 305**	P	**P**	**00 04 58.8 -0.1**
DELO			IAmb	IAmb	00 05 20.5
	comp=Z,19nm,1.1s				
MDP	**Montagnes des**	**60.07 253**	LR	LR	00 27 42.7
	comp=Z,2µm,19.8s,baz=56,slow=33				
ABD	**La Joyeuse, An**	**60.46 269**	IAMs_20	IAMs_20	00 26 21.6
	comp=Z,1µm,21.0s				
J55A	**Hilton**	**60.50 304**	P	**P**	**00 05 02.9 -0.3**
J55A			IAmb	IAmb	00 05 09.5
	comp=Z,29nm,1.2s				
SADO	**Sadowa**	**60.77 306**	LR	LR	00 28 41.9
	comp=Z,3µm,20.1s,baz=78,slow=33				
SADO	**Sadowa**	**60.77 306**	P	**P**	**00 05 04.4 -0.6**
GDHS	**Morne Mazeau,**	**60.79 269**	IAMs_20	IAMs_20	00 27 34.4
	comp=Z,1µm,20.0s				
MVL	**Millersville**	**60.84 300**	P	**P**	**00 05 05.5 +0.1**
NBLA	**Lagarto - SE**	**61.17 228**	*e*P	**P**	**00 05 07.7 -0.3**
MATP	**Matopo**	**61.29 153**	LR	LR	00 31 40.9
	comp=Z,1µm,19.9s,baz=349,slow=36				
TMAB	**Tom-Au,PA,Br**	**61.61 243**	*e*P	**P**	**00 05 12.4 +1.4**
SSPA	**Standing Stone**	**61.63 301**	P	**P**	**00 05 10.6 -0.4**
SSPA			IAmb	IAmb	00 05 20.1
	comp=Z,19nm,0.8s				
SSPA	**Standing Stone**	**61.63 301**	IAMs_20	IAMs_20	00 29 26.0
	comp=Z,1µm,19.0s				
SSPA	**Standing Stone**	**61.63 301**	P	**P**	**00 05 11.0 +0.1**
	baz=65,SNR=8.0				
SSPA	**Standing Stone**	**61.63 301**	P	**P**	**00 05 10.5 -0.4**
	baz=65				
M55A	**Ridgway**	**61.88 302**	P	**P**	**00 05 13.0 +0.4**
	baz=65,SNR=7.3				
M55A			P	**P**	**00 05 13.0 +0.4**
	baz=65,SNR=7.3				
WMQ	**Urumqi**	**62.10 55**	*e*P	**P**	**00 05 15.5 +1.4**
WMQ			sP	sP	00 05 24.8 +7.2
WMQ			S	**S**	**00 13 42.0 +2.6**
WMQ			pmax	pmax	
	comp=Z,22nm,0.9s				
WMQ			pmax	pmax	
	comp=Z,210nm,4.1s				
WMQ			LR	LR	
	comp=Z,1µm,15.5s				
WMQ			LR	LR	
	comp=Z,560nm,15.1s				
CBN	**Corbin Frederi**	**62.32 299**	IAMs_20	IAMs_20	00 32 04.2
	comp=Z,1µm,19.0s				
ERPA	**Erie**	**62.44 303**	P	**P**	**00 05 16.3 +0.1**
ERPA			IAMs_20	IAMs_20	00 28 36.1
	comp=Z,3µm,22.0s				
ERPA	**Erie**	**62.44 303**	P	**P**	**00 05 16.4 +0.2**
	baz=65				
NBPN	**Ponto Novo - B**	**62.52 230**	*e*P	**P**	**00 05 17.8 +0.7**
ALLY	**Alegheny Colle**	**62.74 303**	P	**P**	**00 05 19.0 +0.6**
MCPB	**Macapa, AP**	**63.16 248**	*e*P	**P**	**00 05 23.2 +1.8**
M53A	**WI Miller and**	**63.19 303**	P	**P**	**00 05 21.0 -0.4**
M53A			IAmb	IAmb	00 05 30.4
	comp=Z,19nm,0.9s				
M53A			IAMs_20	IAMs_20	00 30 25.2
	comp=Z,2µm,20.0s				
M53A	**WI Miller and**	**63.19 303**	P	**P**	**00 05 22.3 +1.0**
	baz=64				
FCC	**Fort Churchill**	**63.31 325**	P	**P**	**00 05 21.3 -0.5**
FCC			IAmb	IAmb	00 05 23.6
	comp=Z,27nm,1.3s				
FCC	**Fort Churchill**	**63.31 325**	P	**P**	**00 05 21.3 -0.5**
FCC			pmax	pmax	
	comp=Z,27nm,1.3s				
SJG	**San Juan**	**63.34 273**	LR	LR	00 27 28.8
	comp=Z,577nm,21.8s,baz=78,slow=31				
MSEY	**Mahe Island**	**63.40 119**	IAMs_20	IAMs_20	00 31 52.6
	comp=Z,1µm,21.0s				
E46A	**Sault Ste Mari**	**63.41 309**	P	**P**	**00 05 21.8 -0.9**
MCWV	**Mont Chateau**	**63.41 301**	P	**P**	**00 05 22.3 -0.5**
MCWV			IAmb	IAmb	00 05 27.6
	comp=Z,19nm,0.8s				
MCWV			IAMs_20	IAMs_20	00 30 12.0
	comp=Z,2µm,20.0s				
MCWV	**Mont Chateau**	**63.41 301**	P	**P**	**00 05 23.4 +0.6**
	baz=64				
CNNC	**Cliffs of the**	**64.03 296**	IAMs_20	IAMs_20	00 29 47.4
	comp=Z,2µm,20.0s				
O53A	**New Philadelph**	**64.09 302**	IAMs_20	IAMs_20	00 31 58.9
	comp=Z,2µm,19.0s				
GDU01	**Guandu, BA**	**64.39 227**	*e*P	**P**	**00 05 29.8 +0.4**
Q54A	**Coxs Mills**	**64.40 301**	P	**P**	**00 05 28.7 -0.6**
O52A	**Adamsville**	**64.57 302**	P	**P**	**00 05 30.7 +0.3**
LBTB	**Lobatse**	**64.58 158**	P	**P**	**00 05 30.6 +0.1**
	comp=Z,2.5nm,0.8s,baz=335,slow=11,SNR=3.1				
LBTB			LR	LR	00 33 29.9
	comp=Z,2µm,20.0s,baz=337,slow=36				
	comp=Z,2.5nm,0.8s				
LBTB	**Lobatse**	**64.58 158**	P	**P**	**00 05 30.1 -0.5**
LBTB			IAmb	IAmb	00 06 08.9
	comp=Z,11nm,1.1s				
BLA	**Blacksburg**	**64.93 299**	IAMs_20	IAMs_20	00 31 58.2
	comp=Z,1µm,19.0s				
P52A	**Corning**	**65.00 302**	P	**P**	**00 05 32.5 -0.6**
P52A	**Corning**	**65.00 302**	P	**P**	**00 05 34.1 +0.9**
	baz=62				
ACSO	**Alum Creek Sta**	**65.30 303**	P	**P**	**00 05 34.1 -1.0**
ACSO	**Alum Creek Sta**	**65.30 303**	P	**P**	**00 05 34.9 -0.3**
	baz=62				
PRPB	**Parauapebas**	**65.48 241**	*e*P	**P**	**00 05 38.8 +2.2**
GRTK	**Grand Turk**	**65.55 279**	IAMs_20	IAMs_20	00 29 29.3
	comp=Z,1µm,19.0s				
TIXI	**Tiksi**	**65.57 16**	P	**P**	**00 05 36.9 +0.6**
	comp=Z,8.2nm,0.6s,baz=269,slow=23,SNR=22				
TIXI			LR	LR	00 35 46.9
	comp=Z,366nm,20.3s,baz=0.0,slow=37				
	comp=Z,8.2nm,0.6s				
TIXI	**Tiksi**	**65.57 16**	P	**P**	**00 05 36.4 +0.1**
TIXI	**Tiksi**	**65.57 16***c*	*i*P	**P**	**00 05 37.0 +0.7**
TIXI			pmax	pmax	
	comp=Z,35nm,1.7s				
CMC01	**Camacan, BA**	**65.65 226**	*e*P	**P**	**00 05 39.3 +1.8**
MALB	**Monte Alegre**	**65.79 248**	*e*P	**P**	**00 05 40.9 +2.3**
SMTB	**Santa Maria do**	**65.85 238**	*e*P	**P**	**00 05 40.8 +1.8**
PYUN	**Piuthan**	**65.93 72**	*e*P	**P**	**00 05 39.4 -0.3**
	comp=Z,108nm,0.8s				
A36M	**Sachs Harbour**	**66.10 345**	P	**P**	**00 05 40.3 +0.5**
A36M			IAMs_20	IAMs_20	00 35 45.3
	comp=Z,1µm,18.0s				
A36M	**Sachs Harbour**	**66.10 345**	P	**P**	**00 05 40.3 +0.5**
	baz=43,SNR=5.9				
O49A	**Covington**	**66.23 303**	P	**P**	**00 05 39.9 -1.2**
	baz=62				
O49A			P	**P**	**00 05 39.9 -1.2**
	baz=62				
DANN	**Dangsing**	**66.39 71**	*e*P	**P**	**00 05 42.3 -0.5**
	comp=Z,103nm,1.0s				
COWI	**Conover**	**66.51 311**	P	**P**	**00 05 42.0 -1.0**
COWI			IAmb	IAmb	00 06 18.8
	comp=Z,29nm,1.3s				
COWI			IAMs_20	IAMs_20	00 31 10.8
	comp=Z,2µm,20.0s				
COWI	**Conover**	**66.51 311**	P	**P**	**00 05 41.9 -1.0**
	baz=61				
MOY	**Mondy**	**66.55 42**	*e*P	**P**	**00 05 44.5 +1.4**
MOY			pmax	pmax	
	comp=Z,25nm,2.5s				
KOLN	**Koldanda**	**66.56 72**	*e*P	**P**	**00 05 43.0 -0.7**
SDBA	**SAO DESIDERIO**	**66.68 233**	*e*P	**P**	**00 05 43.8 -0.5**
NHSC	**New Hope**	**66.70 295**	IAMs_20	IAMs_20	00 30 42.4
	comp=Z,2µm,19.0s				
GUA01	**Guaratinga, BA**	**66.79 226**	*e*P	**P**	**00 05 45.1 +0.2**
S51A	**Beattyville**	**66.95 300**	P	**P**	**00 05 44.9 -0.9**
SDDR	**Presa de Saban**	**67.00 277**	IAMs_20	IAMs_20	00 29 40.8
	comp=Z,2µm,20.0s				
EYMN	**Ely**	**67.03 313**	P	**P**	**00 05 44.7 -1.5**
EYMN	**Ely**	**67.03 313**	IAMs_20	IAMs_20	00 32 11.4
	comp=Z,1µm,19.0s				
EYMN	**Ely**	**67.03 313**	P	**P**	**00 05 45.3 -0.8**
	baz=61,SNR=6.9				
EYMN	**Ely**	**67.03 313**	P	**P**	**00 05 45.1 -1.0**
	baz=61				
GKN	**Gorkha**	**67.24 71**	*e*P	**P**	**00 05 47.6 -0.4**
TZTN	**Tazewell**	**67.45 299**	IAMs_20	IAMs_20	00 34 06.9
	comp=Z,1µm,19.0s				
E38A	**The Farm, Brul**	**67.73 312**	P	**P**	**00 05 49.5 -1.0**
	baz=60,SNR=5.3				
C36M	**Paulatuk**	**67.75 342**	P	**P**	**00 05 50.7 +0.4**
C36M			IAmb	IAmb	00 06 06.4
	comp=Z,22nm,1.3s				
C36M			IAMs_20	IAMs_20	00 34 08.1
	comp=Z,1µm,19.0s				
C36M	**Paulatuk**	**67.75 342**	P	**P**	**00 05 51.1 +0.8**
	baz=44,SNR=6.0				
DMN	**Daman**	**67.79 71**	*e*P	**P**	**00 05 51.4 -0.2**
KKN	**Kakani**	**67.83 71**	*e*P	**P**	**00 05 51.3 -0.5**
BOSA	**Boshof**	**67.87 159**	P	**P**	**00 05 51.3 -0.4**
	comp=Z,1.7nm,0.8s,baz=7.5,slow=4.8,SNR=4.5				
BOSA			LR	LR	00 35 05.0
	comp=Z,2µm,19.1s,baz=348,slow=36				
	comp=Z,1.7nm,0.8s				
BOSA	**Boshof**	**67.87 159**	P	**P**	**00 05 50.2 -1.4**
BOAV	**Boa Vista**	**67.88 256**	*e*P	**P**	**00 05 54.4 +2.4**
IRK	**Irkutsk**	**68.01 41**	*e*P	**P**	**00 05 52.0 -0.2**
IRK			pmax	pmax	
	comp=Z,63nm,2.1s				
PKIN	**Phulchoki**	**68.03 71**	*e*P	**P**	**00 05 52.6 -0.5**
TKL	**Tuckaleechee C**	**68.04 299**	LR	LR	00 35 32.7
	comp=Z,2µm,18.0s,baz=69,slow=36				
TKL	**Tuckaleechee C**	**68.04 299**	P	**P**	**00 05 52.4 -0.4**
TKL	**Tuckaleechee C**	**68.04 299**	P	**P**	**00 05 52.4 -0.4**
TKL			pmax	pmax	
	comp=Z,61nm,1.7s				
PKI	**Pulchoki**	**68.05 71**	*e*P	**P**	**00 05 53.1 -0.2**
	comp=Z,82nm,1.1s				
B35A	**Bob, Littlefor**	**68.12 315**	P	**P**	**00 05 52.3 -0.7**
	baz=60,SNR=8.1				
GUN	**Gumba**	**68.23 71**	*e*P	**P**	**00 05 54.1 -0.4**
	comp=Z,184nm,1.3s				
JANB	**Januaria**	**68.30 230**	*e*P	**P**	**00 05 56.1 +1.5**
ULM	**Lac du Bonnet**	**68.36 317**	P	**P**	**00 05 53.3 -1.2**
	comp=Z,18nm,0.7s,baz=59,slow=6.1,SNR=18				
ULM			LR	LR	00 32 54.9
	comp=Z,2µm,18.4s,baz=69,slow=33				
	comp=Z,18nm,0.7s				
ULM	**Lac du Bonnet**	**68.36 317**	P	**P**	**00 05 53.5 -0.9**
ULM	**Lac du Bonnet**	**68.36 317**	P	**P**	**00 05 53.5 -0.9**
ULM			pmax	pmax	
	comp=Z,21nm,0.8s				
ZAK	**Zakamensk**	**68.44 43**	*e*P	**P**	**00 05 56.3 +1.2**
ZAK			pmax	pmax	
	comp=Z,26nm,1.6s				
I40A	**Norwalk**	**68.51 309**	P	**P**	**00 05 54.5 -1.1**
I40A			IAmb	IAmb	00 06 07.3
	comp=Z,11nm,0.9s				
OPO	**Ambohidratompo**	**68.52 135**	LR	LR	00 36 40.4
	comp=Z,739nm,19.0s,baz=162,slow=37				
ITTB	**Itaituba**	**68.55 247**	*e*P	**P**	**00 05 59.7 +3.6**
JIRN	**Jiri**	**68.59 71**	*e*P	**P**	**00 05 56.8 0.0**
PEXB	**Peixe**	**68.68 236**	*e*P	**P**	**00 05 58.6 +1.7**
JFWS	**Jewell Farm**	**68.77 308**	IAMs_20	IAMs_20	00 34 15.7
	comp=Z,1µm,18.0s				
ABPO	**Ambohimpanom**	**68.90 136**	IAMs_20	IAMs_20	00 38 26.0
	comp=Z,2µm,18.0s				
GOGA	**Godfrey**	**68.94 296**	IAMs_20	IAMs_20	00 34 36.7
	comp=Z,2µm,19.0s				
U49A	**Red Boiling Sp**	**69.02 300**	P	**P**	**00 05 58.2 -0.7**
U49A			IAmb	IAmb	00 06 02.5
	comp=Z,9.8nm,0.9s				
SPMN	**Marine on St.**	**69.18 311**	P	**P**	**00 05 58.3 -1.3**
SPMN			IAmb	IAmb	00 06 08.0
	comp=Z,11nm,0.8s				
SPMN	**Marine on St.**	**69.18 311**	P	**P**	**00 05 58.7 -0.9**
	baz=59				
SJMB	**Sao Joao De Ma**	**69.26 226**	*e*P	**P**	**00 06 01.5 +1.2**
F36A	**Milaca**	**69.28 312**	P	**P**	**00 05 59.1 -1.2**
	baz=59,SNR=6.3				
RIB01	**Linhares ES**	**69.30 224**	*e*P	**P**	**00 06 01.3 +0.7**
HDIL	**Hopedale**	**69.35 306**	IAMs_20	IAMs_20	00 33 34.1
	comp=Z,2µm,20.0s				
AGMN	**Agassiz Nation**	**69.37 315**	P	**P**	**00 05 59.9 -1.0**
AGMN	**Agassiz Nation**	**69.37 315**	P	**P**	**00 06 00.2 -0.7**
	baz=58,SNR=10				
AGMN	**Agassiz Nation**	**69.37 315**	P	**P**	**00 06 00.2 -0.7**
	baz=58				
BOD	**Bodaibo**	**69.56 32**	*e*P	**P**	**00 06 01.3 -0.5**
BOD			pmax	pmax	
	comp=Z,38nm,1.9s				
YKA	**Yellowknife Ar**	**69.67 334**	P	**P**	**00 06 02.2 -0.1**
	comp=Z,11nm,0.7s,baz=53,slow=6.2,SNR=23				
	comp=Z,11nm,0.7s				
YKA	**Yellowknife Ar**	**69.67 334**	P	**P**	**00 06 02.0 -0.4**
T47A	**Sharon Grove**	**69.70 301**	P	**P**	**00 06 01.9 -1.1**
	baz=59,SNR=8.1				
FPAL	**Fort Paine**	**69.91 298**	P	**P**	**00 06 03.6 -0.8**
FPAL			IAmb	IAmb	00 07 45.8
	comp=Z,40nm,1.7s				
ODAN	**Odare**	**69.92 71**	*e*P	**P**	**00 06 03.9 -1.0**
	comp=Z,11nm,1.3s				
BAUV	**El Baul**	**69.95 266**	P	**P**	**00 06 03.8 -1.1**
BAUV			IAmb	IAmb	00 06 27.4
	comp=Z,23nm,1.1s				
DWPF	**Disney Wildern**	**70.15 291**	IAMs_20	IAMs_20	00 34 39.9
	comp=Z,1µm,19.0s				
SUR	**Sutherland**	**70.36 165**	LR	LR	00 36 13.2
	comp=Z,1µm,19.4s,baz=338,slow=35				
SUR	**Sutherland**	**70.36 165**	P	**P**	**00 06 07.0 -0.1**
SUR			IAMs_20	IAMs_20	00 36 05.1
	comp=Z,2µm,20.0s				
GOMU	**GeErMu**	**70.51 59**	P	**P**	**00 06 10.5 +2.0**
GOMU			pP	sP	00 06 13.5 +1.5
GOMU			sP	pP	00 06 18.0 +6.9
GOMU			S	**S**	**00 15 24.8 +2.4**
GOMU			pmax	pmax	
	comp=Z,4.0nm,0.6s				
GOMU			pmax	pmax	
	comp=Z,99nm,5.6s				
GOMU			LR	LR	
	comp=Z,190nm,15.4s				
GOMU			LR	LR	
	comp=Z,160nm,15.0s				
ALF01	**Guarapari-ES**	**70.52 224**	*e*P	**P**	**00 06 09.7 +1.6**
SNDB	**Serra Nova Dou**	**70.60 238**	*e*P	**P**	**00 06 10.5 +1.8**
D32A	**Dogwood Acres,**	**70.65 315**	P	**P**	**00 06 07.6 -1.1**
D32A			IAmb	IAmb	00 06 16.0
	comp=Z,21nm,0.9s				
INK	**Inuvik**	**70.75 344**	LR	LR	00 38 45.1
	comp=Z,1µm,18.9s,baz=35,slow=37				
INK	**Inuvik**	**70.75 344**	P	**P**	**00 06 08.2 -0.6**
INK			IAmb	IAmb	00 06 38.8
	comp=Z,29nm,1.7s				
INK	**Inuvik**	**70.75 344**	P	**P**	**00 06 08.3 -0.6**
INK			pmax	pmax	
	comp=Z,29nm,1.7s				
INK	**Inuvik**	**70.75 344**	P	**P**	**00 06 09.0 +0.1**
	baz=36				
SIUC	**Southern Illin**	**70.76 303**	P	**P**	**00 06 08.4 -1.1**
SIUC			IAmb	IAmb	00 06 25.8
	comp=Z,20nm,1.1s				
F33A	**5 Mile Ranch,**	**70.93 313**	P	**P**	**00 06 09.2 -1.2**
	baz=57,SNR=6.7				
BDFB	**Brasilia**	**71.08 233**	P	**P**	**00 06 11.4 -0.4**
	comp=Z,13nm,0.8s,baz=63,slow=6.2,SNR=9.7				
BDFB			LR	LR	00 35 15.8
	comp=Z,1µm,19.3s,baz=39,slow=34				
	comp=Z,13nm,0.8s				
BDFB	**Brasilia**	**71.08 233**	P	**P**	**00 06 11.1 -0.7**
BDFB			IAmb	IAmb	00 06 15.6
	comp=Z,16nm,0.9s				
BDFB	**Brasilia**	**71.08 233**	*e*P	**P**	**00 06 13.6 +1.9**
SCIA	**State Center**	**71.17 308**	IAMs_20	IAMs_20	00 37 11.2
	comp=Z,1µm,19.0s				
LSA	**Lhasa**	**71.27 67**	P	**P**	**00 06 13.0 -0.3**
LSA			IAmb	IAmb	00 06 16.0
	comp=Z,44nm,1.7s				
LSA	**Lhasa**	**71.27 67**	P	**P**	**00 06 13.0 -0.3**
LSA			pmax	pmax	
	comp=Z,44nm,1.7s				
LSA			MLR	MLR	
	comp=Z,200nm,21.0s				
LSA	**Lhasa**	**71.27 67**	P	**P**	**00 06 13.8 +0.5**
PLAL	**Pickwick Lake**	**71.41 300**	P	**P**	**00 06 13.1 -0.4**
PLAL			IAmb	IAmb	00 06 19.4
	comp=Z,22nm,1.0s				
PLAL			IAMs_20	IAMs_20	00 34 51.8
	comp=Z,2µm,21.0s				
MACA	**Manacapuru-AM**	**71.50 252**	*e*P	P	00 06 19.1 +4.9
SONM	**Songino Array**	**71.54 44**	P	**P**	**00 06 14.7 +0.5**
	comp=Z,6.9nm,1.0s,baz=297,slow=6.0,SNR=37				
SONM			LR	LR	00 40 02.9
	comp=Z,753nm,19.1s,baz=306,slow=38				
	comp=Z,6.9nm,1.0s				
SONM	**Songino Array**	**71.54 44**	P	**P**	**00 06 14.6 +0.4**
SONM			IAmb	IAmb	00 06 32.4
	comp=Z,21nm,1.3s				
LRAL	**Lakeview Retre**	**71.67 298**	P	**P**	**00 06 14.6 -0.5**
LRAL			IAmb	IAmb	00 06 26.5
	comp=Z,42nm,1.7s				
LRAL			IAMs_20	IAMs_20	00 34 56.8
	comp=Z,1µm,20.0s				
LRAL	**Lakeview Retre**	**71.67 298**	P	**P**	**00 06 15.0 -0.1**
	baz=58				
ULN	**Ulaanbaatar**	**71.89 44**	P	**P**	**00 06 16.4 0.0**
ULN			IAmb	IAmb	00 06 34.6
	comp=Z,26nm,1.6s				
ULN	**Ulaanbaatar**	**71.89 44**	IAMs_20	IAMs_20	00 40 02.3
	comp=Z,775nm,18.0s				
ULN	**Ulaanbaatar**	**71.89 44***c*	*i*P	**P**	**00 06 16.7 +0.3**
ULN			pmax	pmax	
	comp=Z,17nm,1.7s				
ULN	**Ulaanbaatar**	**71.89 44**	P	**P**	**00 06 17.3 +0.9**
CCM	**Cathedral Cave**	**71.95 304**	P	**P**	**00 06 16.2 -0.5**
CCM			IAmb	IAmb	00 06 32.7
	comp=Z,15nm,1.1s				
CCM	**Cathedral Cave**	**71.95 304**	IAMs_20	IAMs_20	00 34 41.8
	comp=Z,2µm,22.0s				
CCM	**Cathedral Cave**	**71.95 304**	P	**P**	**00 06 16.2 -0.5**
CCM			pmax	pmax	
	comp=Z,15nm,1.1s				
CCM	**Cathedral Cave**	**71.95 304**	P	**P**	**00 06 15.1 -1.6**
	baz=58,SNR=6.1				
CCM	**Cathedral Cave**	**71.95 304**	P	**P**	**00 06 16.4 -0.3**
	baz=58				
CAM01	**Campos-RJ**	**72.00 224**	*e*P	**P**	**00 06 18.2 +1.2**
SDV	**Santo Domingo**	**72.07 268**	LR	LR	00 34 02.3
	comp=Z,608nm,21.7s,baz=64,slow=33				
SDV	**Santo Domingo**	**72.07 268**	P	**P**	**00 06 17.6 -0.4**
SDV			IAmb	IAmb	00 06 28.9
	comp=Z,14nm,0.7s				
PBMO	**Poplar Bluff**	**72.08 303**	P	**P**	**00 06 16.0 -1.5**
	baz=58				
GTA	**Gaotai**	**72.18 54**	⇓P	**P**	**00 06 19.0 +0.8**
GTA			pP	sP	00 06 26.0 +4.2
GTA			sP	PcP	00 06 29.5 -7.0
GTA			S	**S**	**00 15 45.0 +3.9**
GTA			pmax	pmax	
	comp=Z,7.0nm,1.0s				
GTA			pmax	pmax	
	comp=Z,170nm,5.5s				
GTA			LR	LR	
	comp=Z,410nm,18.5s				
GTA			LR	LR	
	comp=Z,320nm,18.5s				
GTA			LR	LR	
	comp=Z,330nm,21.1s				
ECSD	**EROS Data Cent**	**72.28 311**	P	**P**	**00 06 17.5 -1.1**
ECSD	**EROS Data Cent**	**72.28 311**	P	**P**	**00 06 17.5 -1.1**
	baz=56,SNR=14				
ECSD	**EROS Data Cent**	**72.28 311**	P	**P**	**00 06 17.6 -1.1**
	baz=56				
R40A	**Maddies Statio**	**72.50 305**	P	**P**	**00 06 18.8 -1.2**
	baz=57,SNR=6.6				
OXF	**Oxford**	**72.59 300**	IAMs_20	IAMs_20	00 35 36.0
	comp=Z,2µm,20.0s				
P38A	**Dawn**	**72.60 307**	P	**P**	**00 06 20.2 -0.4**
P38A			IAmb	IAmb	00 06 50.7
	comp=Z,31nm,1.4s				
P38A	**Dawn**	**72.60 307**	P	**P**	**00 06 19.3 -1.3**
	baz=57				
DUB01	**Friburgo-RJ**	**72.61 224**	*e*P	**P**	**00 06 22.1 +1.3**
YAK	**Yakutsk**	**72.68 24**	P	**P**	**00 06 20.1 -0.4**
	comp=Z,5.7nm,0.4s,baz=215,slow=1.9,SNR=1.7				
	comp=Z,5.7nm,0.4s				
YAK	**Yakutsk**	**72.68 24**	P	**P**	**00 06 20.1 -0.4**
YAK	**Yakutsk**	**72.68 24**⇓	*e*P	**P**	**00 06 20.2 -0.4**
YAK			pmax	pmax	
	comp=Z,42nm,1.5s				
BRAL	**Brewton**	**72.70 296**	IAMs_20	IAMs_20	00 36 22.1
	comp=Z,2µm,20.0s				
IPMB	**Ipameri, GO**	**72.95 231**	*e*P	**P**	**00 06 25.0 +2.2**
LCAR	**Lake Charles**	**72.95 302**	P	**P**	**00 06 22.2 -0.5**
LCAR			IAmb	IAmb	00 06 38.8
	comp=Z,17nm,1.2s				
CLDB	**Colider**	**72.98 242**	*e*P	**P**	**00 06 27.0 +3.9**
EPYK	**Eagle Plains**	**73.05 344**	P	**P**	**00 06 22.6 -0.2**
EPYK			IAMs_20	IAMs_20	00 38 36.0
	comp=Z,1µm,19.0s				
EPYK	**Eagle Plains**	**73.05 344**	P	**P**	**00 06 23.1 +0.3**
	baz=33				
E28A	**Huff**	**73.06 316**	P	**P**	**00 06 22.8 -0.4**
	baz=55,SNR=8.0				
SUSD	**Miller**	**73.28 313**	P	**P**	**00 06 24.1 -0.5**
	baz=55				
TOLK	**Toolik Lake Re**	**73.31 350**	P	**P**	**00 06 24.8 +0.4**
TOLK			IAmb	IAmb	00 06 39.4
	comp=Z,16nm,0.9s				
TOLK			IAMs_20	IAMs_20	00 41 08.0
	comp=Z,999nm,20.0s				
TOLK	**Toolik Lake Re**	**73.31 350**	P	**P**	**00 06 25.6 +1.3**
	baz=22,SNR=14				
VAS01	**Vassouras-RJ**	**73.37 225**	*e*P	**P**	**00 06 26.8 +1.6**
S39A	**Bolivar**	**73.53 305**	P	**P**	**00 06 25.0 -1.1**
	baz=56,SNR=5.6				
BMAR	**Burnt Mountain**	**73.65 348**	P	**P**	**00 06 27.0 +0.7**
FCAR	**Ozark Folk Cen**	**73.71 303**	P	**P**	**00 06 26.7 -0.5**
FCAR			IAmb	IAmb	00 06 43.6
	comp=Z,23nm,1.4s				
U40A	**Yellville**	**73.95 303**	P	**P**	**00 06 28.3 -0.2**
U40A			IAmb	IAmb	00 06 45.2
	comp=Z,20nm,1.1s				
U40A	**Yellville**	**73.95 303**	P	**P**	**00 06 28.4 -0.2**
	baz=56				
SHL	**Shillong**	**74.02 70**	P	**P**	**00 06 28.5 -0.9**
SHL	**Shillong**	**74.02 70**	P	**P**	**00 06 28.5 -0.9**
SHL			pmax	pmax	
	comp=Z,63nm,1.1s				
SHL	**Shillong**	**74.02 70**	P	**P**	**00 06 28.9 -0.5**
	SNR=18				
MAN01	**Angra dos Reis**	**74.13 225**	*e*P	**P**	**00 06 31.2 +1.5**
PDRB	**Porto dos Gac**	**74.15 242**	*e*P	**P**	**00 06 31.6 +1.6**
W41B	**Gary Mavity, V**	**74.19 302**	P	**P**	**00 06 29.9 -0.1**
	baz=56				
I29M	**Ogilvie Camp,**	**74.25 344**	IAMs_20	IAMs_20	00 39 21.8
	comp=Z,1µm,19.0s				
I29M	**Ogilvie Camp,**	**74.25 344**	P	**P**	**00 06 30.4 +0.5**
	baz=31,SNR=20				
HHAR	**Hobbs**	**74.72 304**	P	**P**	**00 06 31.5 -1.6**
COLD	**Coldfoot**	**74.72 350**	P	**P**	**00 06 33.2 +0.6**
COLD			IAmb	IAmb	00 06 47.7
	comp=Z,14nm,0.9s				
COLD	**Coldfoot**	**74.72 350**	P	**P**	**00 06 33.8 +1.2**
	baz=22,SNR=5.6				
MMPY	**Sheldon Lake,**	**74.82 340**	P	**P**	**00 06 35.2 +2.0**
	baz=36,SNR=14				
KSU1	**Kansas State U**	**74.88 307**	P	**P**	**00 06 33.7 -0.3**
KSU1			IAmb	IAmb	00 06 53.9
	comp=Z,21nm,1.1s				
KSU1	**Kansas State U**	**74.88 307**	IAMs_20	IAMs_20	00 38 22.3
	comp=Z,2µm,18.0s				
KSU1	**Kansas State U**	**74.88 307**	P	**P**	**00 06 33.7 -0.3**
	baz=55				
X40A	**Basin Creek Fa**	**74.97 302**	P	**P**	**00 06 33.2 -1.4**
X40A	**Basin Creek Fa**	**74.97 302**	P	**P**	**00 06 32.9 -1.6**
	baz=56				
BILL	**Bilibino**	**75.01 7**	P	**P**	**00 06 34.4 +0.2**
BILL			IAmb	IAmb	00 06 43.7
	comp=Z,34nm,1.6s				
BILL	**Bilibino**	**75.01 7**⇑	*e*P	**P**	**00 06 35.1 +0.9**
BILL			*e*		00 06 52.1
BILL			*e*S	**S**	**00 16 18.4 +6.5**
BILL			pmax	pmax	
	comp=Z,20nm,1.7s				
J29M	**Klondike Camp**	**75.02 344**	IAMs_20	IAMs_20	00 38 13.9
	comp=Z,1µm,20.0s				
SJCC	**San Jacinto, C**	**75.16 271**	P	**P**	**00 06 35.8 -0.2**
SJCC			IAmb	IAmb	00 06 43.4
	comp=Z,30nm,1.1s				
W39A	**Magazine**	**75.22 303**	P	**P**	**00 06 35.2 -0.8**
	baz=56,SNR=7.3				
W39A	**Magazine**	**75.22 303**	P	**P**	**00 06 34.9 -1.0**
	baz=56,SNR=7.3				
EDM	**Edmonton**	**75.32 326**	P	**P**	**00 06 36.2 -0.1**
EDM	**Edmonton**	**75.32 326**	P	**P**	**00 06 36.2 -0.1**
EDM			pmax	pmax	
	comp=Z,40nm,0.9s				
EGAK	**Eagle**	**75.37 345**	P	**P**	**00 06 37.0 +0.7**

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EGAK                                IAmb      IAmb      00 07 05.7
       comp=Z,29nm,1.6s
EGAK                                IAMs_20   IAMs_20   00 41 09.2
       comp=Z,949nm,20.0s
EGAK   Eagle             75.37 345  P         P         00 06 37.2 +0.9
       baz=29
PALK   Pallekele         75.38  92  LR        LR        00 41 49.5
       comp=Z,884nm,20.7s,baz=37,slow=37
PALK   Pallekele         75.38  92  IAMs_20   IAMs_20   00 41 27.9
       comp=Z,1µm,19.0s
MIAR   Mount Ida         75.44 302  P         P         00 06 36.5  -0.8
MIAR   Mount Ida         75.44 302  P         P         00 06 36.5  -0.8
MIAR   Mount Ida         75.44 302  P         P         00 06 36.6  -0.7
       baz=56
MIAR   Mount Ida         75.44 302  P         P         00 06 36.4  -0.8
       baz=56
PARB   Paraibuna         75.45 226 eP         P         00 06 39.6 +2.2
BB19B  Bebedouro         75.45 230 eP         P         00 06 38.3 +0.9
ITRB   Iturama           75.58 232 eP         P         00 06 37.4  -0.7
DAWY   Dawson            75.61 344  P         P         00 06 38.4 +0.6
DAWY                                IAmb      IAmb      00 07 07.4
       comp=Z,36nm,1.5s
DAWY   Dawson            75.61 344  P         P         00 06 38.7 +0.9
       baz=30,SNR=9.7
H24K   Noodor Dome       75.65 348  P         P         00 06 38.6 +0.6
H24K                                IAMs_20   IAMs_20   00 43 06.8
       comp=Z,749nm,19.0s
H24K   Noodor Dome       75.65 348  P         P         00 06 38.9 +0.9
       baz=24,SNR=9.5
FARO   Faro, Yukon       75.70 341  P         P         00 06 40.2 +1.9
       baz=35,SNR=10
RCLB   Rio Claro- Sao    75.87 228 eP         P         00 06 40.9 +1.1
H23K   Yukon River       75.93 349  IAMs_20   IAMs_20   00 43 03.1
       comp=Z,1µm,19.0s
H23K   Yukon River       75.93 349  P         P         00 06 41.1 +1.5
       baz=22,SNR=14
M31M   Drury Creek, Y    76.00 341  P         P         00 06 40.7 +0.7
M31M                                IAmb      IAmb      00 07 11.7
       comp=Z,34nm,1.5s
M31M                                IAMs_20   IAMs_20   00 39 01.9
       comp=Z,1µm,20.0s
M31M   Drury Creek, Y    76.00 341  P         P         00 06 41.8 +1.8
       baz=34,SNR=11
LAO    LASA Array        76.03 318  P         P         00 06 40.5   0.0
LAO    LASA Array        76.03 318  P         P         00 06 41.0 +0.5
       baz=51,SNR=7.3
LAO    LASA Array        76.03 318  P         P         00 06 41.1 +0.5
       baz=51
J26L   Joseph Creek      76.09 346  IAMs_20   IAMs_20   00 40 42.4
       comp=Z,851nm,21.0s
J26L   Joseph Creek      76.09 346  P         P         00 06 41.6 +1.0
       baz=27,SNR=12
TUL1   Leonard           76.16 304  IAMs_20   IAMs_20   00 38 50.5
       comp=Z,1µm,19.0s
TUL1   Leonard           76.16 304  P         P         00 06 41.6 +0.2
       baz=55
K27K   Chicken           76.22 345  IAMs_20   IAMs_20   00 41 34.7
       comp=Z,936nm,19.0s
K27K   Chicken           76.22 345  P         P         00 06 43.0 +1.9
       baz=28
POKR   Poker Plat Res    76.24 348  P         P         00 06 42.1 +0.8
POKR                                IAmb      IAmb      00 06 56.7
       comp=Z,21nm,0.9s
POKR                                IAMs_20   IAMs_20   00 40 57.3
       comp=Z,1µm,21.0s
POKR   Poker Plat Res    76.24 348  P         P         00 06 42.9 +1.6
       baz=24
M30M   Minto, Yukon      76.29 342  IAMs_20   IAMs_20   00 40 34.6
       comp=Z,908nm,19.0s
M30M   Minto, Yukon      76.29 342  P         P         00 06 44.6 +3.0
       baz=32,SNR=10
J25K   Salcha River,     76.34 347  P         P         00 06 43.1 +1.2
       baz=25
SALV   Santo Antonio     76.38 238 eP         P         00 06 45.6 +2.8
IMAR   Indian Mountai    76.38 351  P         P         00 06 43.0 +0.9
RSSD   Black Hills       76.41 315  P         P         00 06 42.5  -0.4
RSSD                                IAmb      IAmb      00 06 44.9
       comp=Z,30nm,1.6s
RSSD   Black Hills       76.41 315  P         P         00 06 42.5  -0.4
RSSD                                pmax      pmax
       comp=Z,30nm,1.6s
RSSD   Black Hills       76.41 315  P         P         00 06 42.0  -1.0
       baz=52,SNR=9.6
RSSD   Black Hills       76.41 315  P         P         00 06 43.0 +0.1
       baz=52
IL31                     76.47 347  P         P         00 06 43.7 +1.2
ILAR   Eielson Array     76.47 347  P         P         00 06 42.9 +0.3
       comp=Z,3.2nm,1.1s,baz=10,slow=4.8,SNR=22
ILAR                                LR        LR        00 42 46.6
       comp=Z,552nm,20.1s,baz=28,slow=38
       comp=Z,3.2nm,1.1s
ILAR   Eielson Array     76.47 347  P         P         00 06 43.2 +0.6
ILAR   Eielson Array     76.47 347  P         P         00 06 43.2 +0.6
MDM    Murphy Dome       76.52 348  IAMs_20   IAMs_20   00 41 17.7
       comp=Z,811nm,21.0s
I23K   Minto, Yukon-K    76.53 349  P         P         00 06 43.8 +0.9
I23K                                IAMs_20   IAMs_20   00 43 43.0
       comp=Z,1µm,20.0s
I23K   Minto, Yukon-K    76.53 349  P         P         00 06 44.1 +1.2
       baz=22
COLA   College           76.54 348  IAMs_20   IAMs_20   00 40 56.2
       comp=Z,881nm,21.0s
COLA   College           76.54 348⇓eP         P         00 06 44.2 +1.3
COLA                                pmax      pmax
       comp=Z,11nm,1.5s
TCOL   CIGO, UAF Yank    76.54 348  IAMs_20   IAMs_20   00 40 56.2
       comp=Z,940nm,21.0s
H21K   Melozitna Rive    76.56 350  P         P         00 06 44.8 +1.6
       baz=19,SNR=15
R32A   Long Quarter,     76.61 308  P         P         00 06 43.2  -0.7
       baz=54,SNR=9.5
SCRK   Sand Creek        76.65 346  P         P         00 06 44.5 +0.7
SCRK                                IAMs_20   IAMs_20   00 41 07.1
       comp=Z,875nm,19.0s
SCRK   Sand Creek        76.65 346  P         P         00 06 44.8 +1.1
       baz=26,SNR=12
UREC   San Jos de Ur     76.68 270 eP         P         00 06 42.1  -2.5
LZH    Lanzhou           76.68  55 eP         P         00 06 45.0 +0.5
LZH                                 sP        PcP       00 06 53.8  -2.2
LZH                                 S         S         00 16 29.5  -2.3
LZH                                 sS        sS        00 16 37.8 +1.7
LZH                                 SS        SS        00 21 32.5 +6.0
LZH                                 pmax      pmax
       comp=Z,15nm,1.0s
LZH                                 pmax      pmax
       comp=Z,250nm,4.9s
LZH                                 LR        LR
       comp=Z,500nm,13.0s
LZH                                 LR        LR
       comp=Z,330nm,14.1s
LZH                                 LR        LR
       comp=Z,550nm,15.5s
HDA    Harding Lake      76.81 347  IAMs_20   IAMs_20   00 40 04.3
       comp=Z,951nm,22.0s
HDA    Harding Lake      76.81 347  P         P         00 06 45.2 +0.6
       baz=24,SNR=17
MLY    Manley            76.86 349  IAMs_20   IAMs_20   00 43 21.6
       comp=Z,900nm,20.0s
MLY    Manley            76.86 349  P         P         00 06 45.5 +0.7
       baz=21,SNR=8.1
I21K   Tanana            76.90 350  IAMs_20   IAMs_20   00 44 03.7
       comp=Z,771nm,20.0s
I21K   Tanana            76.90 350  P         P         00 06 46.8 +1.8
       baz=20,SNR=5.6
WRH    Wood River Hil    76.95 348  P         P         00 06 45.5 +0.2
WRH                                 IAmb      IAmb      00 07 02.8
       comp=Z,14nm,0.9s
WRH                                 IAMs_20   IAMs_20   00 41 07.0
       comp=Z,1µm,21.0s
DOT    Dot Lake          76.96 346  P         P         00 06 46.2 +0.8
DOT                                 IAmb      IAmb      00 07 00.9
       comp=Z,14nm,0.9s
N31M   Braeburn, Yuko    76.96 341  IAMs_20   IAMs_20   00 40 03.3
       comp=Z,1µm,20.0s
N31M   Braeburn, Yuko    76.96 341  P         P         00 06 47.1 +1.6
       baz=33
NEA2   Nenana            77.00 348  IAMs_20   IAMs_20   00 44 58.4
       comp=Z,782nm,19.0s
NEA2   Nenana            77.00 348  P         P         00 06 46.2 +0.6
       baz=22,SNR=6.5
BCAR   Beaver Creek A    77.01 345  P         P         00 06 46.7 +0.9
L27K   Beaver Creek,     77.02 345  IAMs_20   IAMs_20   00 41 18.0
       comp=Z,796nm,20.0s
L27K   Beaver Creek,     77.02 345  P         P         00 06 47.2 +1.4
       baz=28
CBKS   Cedar Bluff       77.03 309  P         P         00 06 45.4  -0.8
CBKS   Cedar Bluff       77.03 309  P         P         00 06 45.4  -0.8
CBKS                                pmax      pmax
       comp=Z,34nm,0.9s
CBKS   Cedar Bluff       77.03 309  P         P         00 06 45.5  -0.8
       baz=54
RIDG   Independent Ri    77.03 346  IAMs_20   IAMs_20   00 41 21.1
       comp=Z,864nm,20.0s
RIDG   Independent Ri    77.03 346  P         P         00 06 47.4 +1.6
       baz=26,SNR=14
EGMT   Eagleton          77.03 321  P         P         00 06 46.2   0.0
EGMT   Eagleton          77.03 321  P         P         00 06 46.6 +0.4
       baz=49
SAML   Samuel            77.11 249  P         P         00 06 46.5  -0.4
SAML   Samuel            77.11 249  P         P         00 06 46.5  -0.4
SAML                                pmax      pmax
       comp=Z,9.0nm,1.4s
PET01  Itanhaem-SP       77.14 227 eP         P         00 06 49.6 +2.8
K24K   Donnelly Dome     77.15 347  P         P         00 06 47.5 +1.0
       baz=25
P33M   Teslin, Yukon     77.22 339  P         P         00 06 47.3 +0.3
P33M                                IAMs_20   IAMs_20   00 39 55.2
       comp=Z,2µm,20.0s
P33M   Teslin, Yukon     77.22 339  P         P         00 06 47.9 +0.9
       baz=35,SNR=10
N30M   Aishikik Lake     77.31 342  P         P         00 06 49.3 +1.8
       baz=32,SNR=11
L26K   Log Cabin Wild    77.37 345  P         P         00 06 48.4 +0.6
L26K   Log Cabin Wild    77.37 345  P         P         00 06 49.3 +1.5
       baz=27
ROSC   El Rosal          77.39 267  LR        LR        00 37 35.0
       comp=Z,989nm,21.5s,baz=42,slow=33
NORC   Norcasia          77.41 268 eP         P         00 06 46.2  -2.6
WHY    Whitehorse        77.42 340  P         P         00 06 48.5 +0.3
WHY                                 IAmb      IAmb      00 07 02.5
       comp=Z,24nm,1.3s
WHY    Whitehorse        77.42 340  P         P         00 06 49.5 +1.3
       baz=33,SNR=6.6
VILB   Vilhena           77.54 244 eP         P         00 06 52.1 +2.7
PCMB   Pacaembu          77.55 231 eP         P         00 06 51.5 +2.3
HIA    Hailar            77.64  37  P         P         00 06 49.6 +0.1
HIA                                 IAmb      IAmb      00 06 59.2
       comp=Z,24nm,1.2s
HIA    Hailar            77.64  37  P         P         00 06 49.6 +0.1
HIA                                 pmax      pmax
       comp=Z,24nm,1.2s
HIA                                 MLR       MLR
       comp=Z,700nm,19.0s
O30N   Mendenhall        77.64 341  P         P         00 06 50.4 +1.1
       baz=32,SNR=5.7
DBBC   Dabeiba           77.65 270 eP         P         00 06 51.1 +0.9
M27K   Edge Creek, AK    77.66 344  P         P         00 06 50.1 +0.6
M27K                                IAmb      IAmb      00 07 23.7
       comp=Z,33nm,1.4s
M27K                                IAMs_20   IAMs_20   00 39 57.8
       comp=Z,814nm,20.0s
M27K   Edge Creek, AK    77.66 344  P         P         00 06 51.1 +1.6
       baz=28,SNR=7.5
BPAW   Bear Paw Mtn.     77.77 349  P         P         00 06 50.8 +0.8
BPAW                                IAMs_20   IAMs_20   00 44 30.7
       comp=Z,958nm,18.0s
BPAW   Bear Paw Mtn.     77.77 349  P         P         00 06 51.0 +1.1
       baz=21
MCK    McKinley          77.78 348  IAMs_20   IAMs_20   00 41 32.9
       comp=Z,1µm,21.0s
MCK    McKinley          77.78 348  P         P         00 06 51.1 +1.1
       baz=22
YUK4   Talbot Arm        77.80 342  P         P         00 06 51.0 +0.6
       baz=30
DLBC   Dease Lake        77.83 337  LR        LR        00 40 45.3
       comp=Z,1µm,18.2s,baz=84,slow=35
DLBC   Dease Lake        77.83 337  P         P         00 06 51.7 +1.3
DLBC   Dease Lake        77.83 337  P         P         00 06 52.6 +2.2
       baz=37,SNR=11
SEY    Seymchan          77.84  14  P         P         00 06 50.1  -0.2
       comp=Z,2.9nm,0.6s,baz=331,slow=5.4,SNR=9.3
SEY                                 LR        LR        00 46 42.5
       comp=Z,364nm,18.3s,baz=354,slow=40
       comp=Z,2.9nm,0.6s
SEY    Seymchan          77.84  14⇓eP         P         00 06 51.5 +1.2
SEY                                 pmax      pmax
       comp=Z,5.0nm,0.6s
YUK3   Moose Creek       77.85 343  P         P         00 06 51.8 +1.1
       baz=29,SNR=5.9
M26K   Nabesna, AK       77.86 345  P         P         00 06 51.5 +0.9
       baz=27,SNR=7.9
ZEA    Zeya              77.86  30 eP         P         00 06 52.8 +2.2
ZEA                                 pmax      pmax
       comp=Z,10.0nm,1.3s
ZEA                                 MLR       MLR
       comp=Z,300nm,18.0s
BTO    Baotou            77.90  48 eP         P         00 06 52.3 +1.1
HYT    Haines Junctio    77.96 342  P         P         00 06 52.2 +1.0
HYT    Haines Junctio    77.96 342  P         P         00 06 52.7 +1.4
       baz=31,SNR=8.0
RND    Reindeer          78.06 348  IAMs_20   IAMs_20   00 41 29.6
       comp=Z,1µm,22.0s
YUK6   Outpost Mounta    78.08 342  P         P         00 06 53.5 +1.5
       baz=30,SNR=15
DHY    Denali Highway    78.11 347  P         P         00 06 53.1 +1.1
       baz=24,SNR=13
YUK8   Steele Glacier    78.12 343  P         P         00 06 53.8 +1.6
       baz=30
J20K   Nowinta River     78.16 350  P         P         00 06 53.1 +1.0
       baz=18,SNR=6.0
TRF    Thorofare Moun    78.27 348  P         P         00 06 52.8  -0.1
TRF                                 IAmb      IAmb      00 07 27.4
       comp=Z,24nm,1.3s
TRF                                 IAMs_20   IAMs_20   00 42 00.8
       comp=Z,928nm,21.0s
TRF    Thorofare Moun    78.27 348  P         P         00 06 53.0 +0.2
       baz=21,SNR=9.7
KTH    Kantishna Hill    78.27 349  P         P         00 06 52.7  -0.1
KTH                                 IAmb      IAmb      00 06 59.8
       comp=Z,12nm,0.8s
KTH                                 IAMs_20   IAMs_20   00 44 26.0
       comp=Z,935nm,18.0s
WALA   Waterton Lakes    78.40 323  P         P         00 06 53.7  -0.2
WALA                                IAmb      IAmb      00 07 07.7
       comp=Z,38nm,1.4s
GCMT   Greycliff         78.45 319  P         P         00 06 54.3 +0.1
CAST   Castle Rocks      78.58 349  IAMs_20   IAMs_20   00 44 55.1
       comp=Z,900nm,19.0s
S34M   Telegraph Cree    78.60 337  P         P         00 06 56.2 +1.6
       baz=36
WAT6   Susitna Watana    78.63 347  P         P         00 06 55.9 +1.0
       baz=23,SNR=8.6
HHC    Hu-ho-hao-te      78.67  47 eP         P         00 06 55.3  -0.2
HHC                                 S         S         00 16 56.5 +3.5
HHC                                 pmax      pmax
       comp=Z,30nm,1.0s
HHC                                 pmax      pmax
       comp=Z,320nm,4.5s
HHC                                 LR        LR
       comp=Z,950nm,15.9s
HHC                                 LR        LR
       comp=Z,2µm,16.9s
RLMT   Red Lodge         78.67 318  P         P         00 06 55.5   0.0
RLMT                                IAmb      IAmb      00 07 12.3
       comp=Z,22nm,1.2s
RLMT   Red Lodge         78.67 318  P         P         00 06 56.0 +0.4
       baz=49,SNR=11
ORTC   Ortega, Tolima    78.69 266⇑eP         P         00 06 55.0  -0.8
KSCO   Kaye Shedlock’    78.71 310  P         P         00 06 55.0  -0.7
KSCO                                IAmb      IAmb      00 07 03.6
       comp=Z,26nm,1.1s
K22A   Casper            78.74 315  P         P         00 06 55.4  -0.5
       baz=50,SNR=11
K22A   Casper            78.74 315  P         P         00 06 55.4  -0.5
       baz=50,SNR=11
BARN   Barnard Glacie    78.76 344  IAMs_20   IAMs_20   00 40 31.9
       comp=Z,1µm,21.0s
CTGM   Chitina Glacie    78.77 343  IAMs_20   IAMs_20   00 42 07.2
       comp=Z,1µm,20.0s
MCARA  McCarthy VSAT     78.78 344  P         P         00 06 56.0 +0.5
MCARA                               IAmb      IAmb      00 07 19.6
       comp=Z,18nm,1.1s
MCARA                               IAMs_20   IAMs_20   00 40 35.3
       comp=Z,801nm,20.0s
LOGN   Logan Glacier     78.82 343  IAMs_20   IAMs_20   00 42 09.4
       comp=Z,928nm,20.0s
WMOK   Wichita Mounta    78.83 305  P         P         00 06 55.7  -0.7
WMOK   Wichita Mounta    78.83 305  P         P         00 06 55.7  -0.7
WMOK                                pmax      pmax
       comp=Z,15nm,1.2s
WMOK   Wichita Mounta    78.83 305  P         P         00 06 55.3  -1.0
       baz=53
WMOK   Wichita Mounta    78.83 305  P         P         00 06 55.7  -0.7
       baz=53
K20K   Telida            78.93 350  P         P         00 06 57.0 +0.6
K20K                                IAmb      IAmb      00 07 11.5
       comp=Z,23nm,1.0s
K20K                                IAMs_20   IAMs_20   00 44 57.3
       comp=Z,697nm,19.0s
K20K   Telida            78.93 350  P         P         00 06 57.1 +0.7
       baz=18,SNR=21
PLMC   San Jos del P     78.94 268 eP         P         00 06 51.0  -6.2
TIJ01  Guaruva-PR        78.94 227 eP         P         00 06 58.9 +1.9
GRNC   Granite Creek     79.07 343  IAMs_20   IAMs_20   00 40 54.2
       comp=Z,1µm,20.0s
PPLA   Purkeypile        79.09 349  P         P         00 06 57.0  -0.4
PPLA                                IAmb      IAmb      00 07 19.3
       comp=Z,30nm,1.4s
PPLA   Purkeypile        79.09 349  P         P         00 06 57.4   0.0
       baz=20
TABL   Table Mountain    79.19 343  IAMs_20   IAMs_20   00 43 27.3
       comp=Z,1µm,18.0s
CUT    Chulitna          79.24 348  IAMs_20   IAMs_20   00 42 17.5
       comp=Z,976nm,22.0s
SCM    Sheep Creek Mo    79.24 346  P         P         00 06 59.8 +1.6
       baz=24,SNR=8.3
BCPM   Bancas Point      79.25 342  IAMs_20   IAMs_20   00 41 01.0
       comp=Z,1µm,19.0s
JIS    Juneau Island     79.28 339  IAMs_20   IAMs_20   00 40 33.7
       comp=Z,1µm,21.0s
PINM   Pinnacle          79.28 342  P         P         00 07 00.3 +1.9
       baz=29
TRCB   Terra Rica        79.28 231  P         P         00 06 58.7  -0.1
TRCB   Terra Rica        79.28 231 eP         P         00 07 01.7 +2.9
KLU    Klutina           79.28 346  P         P         00 06 58.2  -0.2
KLU                                 IAmb      IAmb      00 07 24.1
       comp=Z,25nm,1.4s
KLU    Klutina           79.28 346  P         P         00 06 58.8 +0.4
       baz=25
TGL    Tana Glacier      79.29 344  P         P         00 06 59.2 +0.6
TGL                                 IAmb      IAmb      00 07 22.3
       comp=Z,17nm,0.9s
TGL                                 IAMs_20   IAMs_20   00 41 01.1
       comp=Z,1µm,21.0s
XLT    XiLinHaoTe        79.30  43 eP         P         00 07 02.3 +3.4
XLT                                 pP        PcP       00 07 06.3  -0.8
XLT                                 sP        sP        00 07 10.5 +8.1
XLT                                 S         S         00 17 06.8 +7.2
XLT                                 SS        SS        00 22 03.3  -2.0
XLT                                 pmax      pmax
       comp=Z,28nm,0.9s
XLT                                 LR        LR
       comp=Z,810nm,14.8s
XLT                                 LR        LR
       comp=Z,510nm,19.4s
ISLE   Juniper Island    79.32 344  IAMs_20   IAMs_20   00 40 50.8
       comp=Z,1µm,21.0s
YAH    Yahtse            79.40 343  IAMs_20   IAMs_20   00 42 37.9
       comp=Z,1µm,20.0s
PNL    Peninsula         79.44 342  P         P         00 07 00.2 +0.9
       baz=30
SML    Sawmill           79.45 347  IAMs_20   IAMs_20   00 42 50.3
       comp=Z,750nm,20.0s
SML    Sawmill           79.45 347  P         P         00 06 59.6 +0.2
       baz=23
BMRM   Bremner River     79.49 345  P         P         00 07 01.4 +1.9
       baz=26,SNR=8.8
N23A   Red Feather La    79.52 313  P         P         00 07 00.3  -0.1
N23A                                IAmb      IAmb      00 07 08.8
       comp=Z,20nm,1.0s
N23A   Red Feather La    79.52 313  P         P         00 07 00.6 +0.2
       baz=50,SNR=11
YOTC   Yotoco, Valle     79.53 267 eP         P         00 06 59.4  -1.1
WAX    Waxell Ridge      79.57 344  IAMs_20   IAMs_20   00 41 10.5
       comp=Z,1µm,20.0s
TTA    Tatalina          79.60 351  P         P         00 07 01.2 +1.1
       baz=17
BOZ    Bozeman (W)       79.61 320  P         P         00 07 00.8 +0.2
BOZ                                 IAmb      IAmb      00 07 03.5
       comp=Z,49nm,1.6s
BOZ    Bozeman (W)       79.61 320  P         P         00 07 00.8 +0.2
BOZ                                 pmax      pmax
       comp=Z,49nm,1.6s
BOZ    Bozeman (W)       79.61 320  P         P         00 07 01.0 +0.5
       baz=48,SNR=33
MESA   MESA              79.61 343  IAMs_20   IAMs_20   00 42 45.4
       comp=Z,1µm,20.0s
CD2    Chengdu           79.64  59  P         P         00 07 00.5  -0.4
CD2                                 pmax      pmax
       comp=Z,40nm,0.6s
HKT    Hockley           79.65 299deP         P         00 07 01.7 +0.9
HKT                                 pmax      pmax
       comp=Z,18nm,1.4s
L20K   Farewell, AK      79.74 350  P         P         00 07 01.8 +0.9
       baz=18
RWWY   Rawlins           79.75 315  P         P         00 07 00.7  -0.9
PMR    Palmer            79.80 347  P         P         00 07 01.5 +0.5
       baz=22
SNH    Sunshine Point    79.81 344  IAMs_20   IAMs_20   00 41 16.7
       comp=Z,1µm,21.0s
M22K   Willow            79.82 348  IAMs_20   IAMs_20   00 44 08.0
       comp=Z,780nm,21.0s
KNK    Knik Glacier      79.84 347  IAMs_20   IAMs_20   00 43 02.5
       comp=Z,890nm,20.0s
KNK    Knik Glacier      79.84 347  P         P         00 07 02.4 +1.0
       baz=23
H17A   Grant Village     79.85 318  P         P         00 07 04.1 +2.0
       baz=48
YHL    Hebgen Lake       79.87 319  P         P         00 07 02.5 +0.3
YHL                                 IAmb      IAmb      00 07 05.4
       comp=Z,20nm,1.1s
LRM    Limekiln Ridge    79.88 320  P         P         00 07 02.4 +0.2
MSO    Missoula          79.95 322  P         P         00 07 01.9  -0.5
MSO    Missoula          79.95 322  P         P         00 07 02.2  -0.2
       baz=46,SNR=8.8
HMT    Hamilton          79.99 344  IAMs_20   IAMs_20   00 41 25.4
       comp=Z,963nm,20.0s
ISCO   Idaho Springs     80.02 312  P         P         00 07 02.9  -0.2
ISCO                                IAMs_20   IAMs_20   00 40 10.3
       comp=Z,1µm,19.0s
ISCO   Idaho Springs     80.02 312  P         P         00 07 02.9  -0.2
ISCO                                pmax      pmax
       comp=Z,16nm,1.0s
ISCO   Idaho Springs     80.02 312  P         P         00 07 03.1   0.0
       baz=51,SNR=17
ISCO   Idaho Springs     80.02 312  P         P         00 07 03.4 +0.3
       baz=51,SNR=17
GLI    Glacier Island    80.08 346  P         P         00 07 03.4 +0.8
       baz=24
SUCK   Suckling Hills    80.12 344  IAMs_20   IAMs_20   00 41 37.8
       comp=Z,1µm,20.0s
L19K   White Mountain    80.16 350  P         P         00 07 04.5 +1.4
       baz=18
M20K   Styx River        80.19 349  IAMs_20   IAMs_20   00 45 47.8
       comp=Z,808nm,18.0s
M20K   Styx River        80.19 349  P         P         00 07 04.7 +1.3
       baz=19
SIV    San Ignacio       80.20 242  LR        LR        00 41 34.1
       comp=Z,1µm,18.9s,baz=81,slow=35
WRAK   Wrangell Islan    80.20 337  IAMs_20   IAMs_20   00 43 05.2
       comp=Z,797nm,18.0s
Q24A   Divide            80.27 311  P         P         00 07 04.3  -0.2
       baz=51
PTGB   Pitanga           80.33 230 eP         P         00 07 07.1 +2.5
M19K   Big River Lodg    80.36 350  P         P         00 07 05.2 +1.0
       baz=18
MOOW   Moose Ponds       80.37 318  IAMs_20   IAMs_20   00 39 34.3
       comp=Z,2µm,20.0s
PD31   Pinedale Array    80.37 317  P         P         00 07 03.9  -1.0
PD31                                IAmb      IAmb      00 07 20.6
       comp=Z,28nm,1.3s
PDAR   Pinedale Array    80.37 317  P         P         00 07 04.2  -0.6
       comp=Z,4.0nm,0.7s,baz=59,slow=5.7,SNR=47
PDAR                                LR        LR        00 39 44.3
       comp=Z,2µm,20.2s,baz=40,slow=34
       comp=Z,4.0nm,0.7s
PDAR   Pinedale Array    80.37 317  P         P         00 07 03.8  -1.1
435B   Jarrell           80.37 301  P         P         00 07 04.7  -0.1
       baz=53
BW06   Boulder Array     80.37 317  P         P         00 07 04.2  -0.6
       baz=49,SNR=24
HIN    Hinchinbrook I    80.40 345  IAMs_20   IAMs_20   00 42 43.3
       comp=Z,685nm,19.0s
NEW    Newport           80.48 324  LR        LR        00 40 29.9
       comp=Z,878nm,18.6s,baz=48,slow=34
NEW    Newport           80.48 324  P         P         00 07 04.7  -0.4
NEW                                 IAmb      IAmb      00 07 19.1
       comp=Z,36nm,1.6s
NEW    Newport           80.48 324  P         P         00 07 04.7  -0.4
NEW                                 pmax      pmax
       comp=Z,36nm,1.7s
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NEW	**Newport**	**80.48**	**324**	P	**P**	**00 07 05.2**	**+0.1**
	baz=45,SNR=9.0						
MA2	**Magadan**	**80.54**	**16**	P	**P**	**00 07 05.0**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=0.0,slow=17,SNR=2.3						
MA2				LR	LR	00 45 27.9	
	comp=Z,224nm,18.9s,baz=333,slow=38						
	comp=Z,6.6nm,0.8s						
MA2	**Magadan**	**80.54**	**16**	⇓*e*P	**P**	**00 07 05.7**	**+0.6**
MA2				pmax	pmax		
	comp=Z,48nm,1.2s						
PCON	**Cinco Dias**	**80.54**	**266**	*e*P	**P**	**00 07 07.7**	**+1.1**
ABTX	**Abilene, Hawle**	**80.67**	**304**	P	**P**	**00 07 05.6**	**-0.8**
ABTX	**Abilene, Hawle**	**80.67**	**304**	P	**P**	**00 07 06.3**	**-0.1**
	baz=53						
PZH	**PanZhiHua**	**80.80**	**64**	P	**P**	**00 07 07.3**	**0.0**
PZH				S	**S**	**00 17 14.5**	**-1.6**
PZH				pmax	pmax		
	comp=Z,30nm,1.0s						
PZH				pmax	pmax		
	comp=Z,140nm,3.6s						
PZH				LR	LR		
	comp=Z,590nm,19.8s						
PZH				LR	LR		
	comp=Z,740nm,17.5s						
PZH				LR	LR		
	comp=Z,640nm,18.4s						
LLLB	**Lillooet**	**80.90**	**328**	P	**P**	**00 07 07.5**	**+0.2**
LLLB				IAmb	IAmb	00 08 58.6	
	comp=Z,16nm,0.6s						
CAPN	**Captain Cook N**	**80.92**	**348**	IAMs_20	IAMs_20	00 42 02.1	
	comp=Z,1µm,22.0s						
O22K	**Cooper Landing**	**80.94**	**347**	IAMs_20	IAMs_20	00 43 46.6	
	comp=Z,784nm,21.0s						
T25A	**Trinidad**	**80.97**	**310**	P	**P**	**00 07 08.2**	**0.0**
T25A	**Trinidad**	**80.97**	**310**	P	**P**	**00 07 09.0**	**+0.8**
	baz=51						
ECR	**Eagle Creek**	**81.18**	**318**	P	**P**	**00 07 09.4**	**+0.2**
AHID	**Auburn Hatcher**	**81.22**	**317**	P	**P**	**00 07 09.1**	**-0.3**
AHID				IAmb	IAmb	00 07 17.6	
	comp=Z,17nm,1.1s						
SMCO	**Snowmass**	**81.23**	**313**	IAMs_20	IAMs_20	00 40 31.2	
	comp=Z,1µm,19.0s						
XAN	**Xi'an**	**81.24**	**54**	P	**P**	**00 07 10.0**	**+0.6**
XAN				pP	PcP	00 07 17.5	+1.8
XAN				sP	sP	00 07 23.0	+10
XAN				S	**S**	**00 17 23.3**	**+3.1**
XAN				pmax	pmax		
	comp=Z,28nm,1.1s						
XAN				pmax	pmax		
	comp=Z,230nm,3.8s						
XAN				LR	LR		
	comp=Z,400nm,13.7s						
XAN				LR	LR		
	comp=Z,520nm,13.0s						
XAN				LR	LR		
	comp=Z,490nm,17.9s						
SDCO	**Great Sand Dun**	**81.26**	**311**	P	**P**	**00 07 09.1**	**-0.7**
SDCO	**Great Sand Dun**	**81.26**	**311**	P	**P**	**00 07 09.8**	**0.0**
	baz=50,SNR=12						
SDCO	**Great Sand Dun**	**81.26**	**311**	P	**P**	**00 07 09.8**	**0.0**
	baz=50,SNR=12						
O20A	**White River Ci**	**81.35**	**314**	P	**P**	**00 07 10.2**	**0.0**
	baz=49,SNR=7.9						
C09A	**Chrisman Ranch**	**81.36**	**325**	P	**P**	**00 07 09.3**	**-0.4**
N19K	**Bonanza Creek**	**81.42**	**349**	IAMs_20	IAMs_20	00 46 45.1	
	comp=Z,942nm,19.0s						
N18K	**Kilae Creek**	**81.75**	**350**	P	**P**	**00 07 12.3**	**+0.7**
N18K				IAmb	IAmb	00 07 18.9	
	comp=Z,30nm,1.4s						
N18K				IAMs_20	IAMs_20	00 46 05.9	
	comp=Z,698nm,18.0s						
N18K	**Kilae Creek**	**81.75**	**350**	P	P	00 07 17.9	+6.3
	baz=17						
BJI	**Beijing**	**81.89**	**46**	P	**P**	**00 07 13.5**	**+0.9**
BJI				S	**S**	**00 17 30.5**	**+4.0**
BJI				pmax	pmax		
	comp=Z,15nm,1.0s						
BJI				pmax	pmax		
	comp=Z,160nm,4.2s						
BJI				LR	LR		
	comp=Z,420nm,15.5s						
BJI				LR	LR		
	comp=Z,410nm,16.6s						
BJI				LR	LR		
	comp=Z,880nm,15.2s						
BJT	**Baijiatuau**	**81.90**	**46**	P	**P**	**00 07 13.0**	**+0.3**
BJT				IAmb	IAmb	00 07 27.5	
	comp=Z,20nm,1.1s						
BJT	**Baijiatuau**	**81.90**	**46**	P	**P**	**00 07 13.0**	**+0.3**
BJT				pmax	pmax		
	comp=Z,20nm,1.1s						
BJT				MLR	MLR		
	comp=Z,500nm,21.0s						
MSTX	**Muleshoe**	**81.91**	**306**	P	**P**	**00 07 12.8**	**-0.3**
MSTX	**Muleshoe**	**81.91**	**306**	P	**P**	**00 07 12.9**	**-0.2**
	baz=51						
O19K	**Port Alsworth**	**81.98**	**349**	IAMs_20	IAMs_20	00 46 34.1	
	comp=Z,833nm,20.0s						
O19K	**Port Alsworth**	**81.98**	**349**	P	**P**	**00 07 13.9**	**+1.2**
	baz=18						
HOM	**Homer**	**82.06**	**348**	IAMs_20	IAMs_20	00 42 49.1	
	comp=Z,792nm,22.0s						
S22A	**4UR Ranch, Cre**	**82.06**	**311**	P	**P**	**00 07 14.6**	**+0.5**
	baz=50,SNR=12						
JCT	**Junction City**	**82.08**	**302**	P	**P**	**00 07 13.5**	**-0.4**
JCT				IAmb	IAmb	00 07 20.8	
	comp=Z,17nm,0.9s						
JCT	**Junction City**	**82.08**	**302**	P	**P**	**00 07 13.5**	**-0.4**
JCT				pmax	pmax		
	comp=Z,17nm,1.0s						
JCT	**Junction City**	**82.08**	**302**	P	**P**	**00 07 14.2**	**+0.3**
	baz=52						
BOAB	**BOACO BROADBAN**	**82.10**	**280**	P	**P**	**00 07 14.0**	**-0.2**
CNPM	**China Poot**	**82.11**	**347**	IAMs_20	IAMs_20	00 44 26.5	
	comp=Z,777nm,22.0s						
BBB	**Bella Bella**	**82.17**	**332**	LR	LR	00 41 57.1	
	comp=Z,763nm,20.5s,baz=32,slow=34						
ITAB	**Concordia**	**82.23**	**228**	P	**P**	**00 07 15.4**	**+1.0**
HWUT	**Hardware Ranch**	**82.26**	**317**	P	**P**	**00 07 14.2**	**-0.7**
HWUT				IAmb	IAmb	00 07 22.2	
	comp=Z,47nm,1.8s						
KMI	**Kunming**	**82.34**	**65**	⇑P	**P**	**00 07 16.8**	**+1.2**
KMI				sP	PcP	00 07 27.3	+6.4
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				LR	LR		
	comp=Z,250nm,18.5s						
KMI				LR	LR		
	comp=Z,190nm,12.4s						
KMI				LR	LR		
	comp=Z,250nm,19.3s						
HLID	**Hailey**	**82.45**	**320**	P	**P**	**00 07 16.5**	**+0.7**
HLID	**Hailey**	**82.45**	**320**	P	**P**	**00 07 17.1**	**+1.2**
	baz=46,SNR=19						
TGUH	**Tegucigalpa,Un**	**82.45**	**282**	P	**P**	**00 07 15.5**	**-0.7**
TGUH				IAmb	IAmb	00 07 23.3	
	comp=Z,30nm,1.2s						
TGUH				IAMs_20	IAMs_20	00 39 48.9	
	comp=Z,1µm,20.0s						
HNS	**HongShan**	**82.75**	**48**	⇑P	**P**	**00 07 18.0**	**+0.8**
HNS				S	**S**	**00 17 39.0**	**+3.5**
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
HNS				pmax	pmax		
	comp=Z,220nm,6.2s						
HNS				LR	LR		
	comp=Z,380nm,14.1s						
HNS				LR	LR		
	comp=Z,550nm,15.4s						
HNS				LR	LR		
	comp=Z,460nm,20.8s						
JTS	**Las Juntas de**	**82.78**	**277**	LR	LR	00 38 08.0	
	comp=Z,679nm,21.8s,baz=64,slow=31						
JTS	**Las Juntas de**	**82.78**	**277**	IAMs_20	IAMs_20	00 43 46.0	
	comp=Z,795nm,18.0s						
P18K	**Big Mountain,**	**82.89**	**349**	IAMs_20	IAMs_20	00 47 21.0	
	comp=Z,649nm,19.0s						
HAWA	**Hanford**	**82.97**	**324**	P	**P**	**00 07 18.1**	**-0.1**
HAWA				IAmb	IAmb	00 07 20.6	
	comp=Z,31nm,1.6s						
HAWA				IAMs_20	IAMs_20	00 42 55.7	
	comp=Z,1µm,18.0s						
BMO	**Blue Mountains**	**83.01**	**322**	P	**P**	**00 07 17.9**	**-0.7**
BMO				IAMs_20	IAMs_20	00 40 56.9	
	comp=Z,1µm,21.0s						
BMO	**Blue Mountains**	**83.01**	**322**	P	**P**	**00 07 17.9**	**-0.7**
BMO				pmax	pmax		
	comp=Z,89nm,1.7s						
CNLB	**Canela**	**83.02**	**226**	*e*P	**P**	**00 07 21.4**	**+2.8**
Q19K	**Cape Douglas,**	**83.08**	**348**	IAMs_20	IAMs_20	00 44 19.2	
	comp=Z,871nm,21.0s						
Q19K	**Cape Douglas,**	**83.08**	**348**	P	**P**	**00 07 20.9**	**+2.3**
	baz=18						
O16K	**Kokwok River B**	**83.10**	**351**	P	**P**	**00 07 21.1**	**+2.5**
	baz=15						
KLR	**Kul'dur**	**83.10**	**31**	P	**P**	**00 07 18.5**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=309,slow=8.1,SNR=6.9						
KLR				LR	LR	00 47 10.5	
	comp=Z,651nm,19.3s,baz=313,slow=38						
	comp=Z,1.9nm,0.7s						
KLR	**Kul'dur**	**83.10**	**31**	⇓*i*P	**P**	**00 07 18.9**	**+0.1**
KLR				pmax	pmax		
	comp=Z,13nm,2.1s						
LYN	**LuoYang**	**83.20**	**52**	*e*P	**P**	**00 07 20.5**	**+0.9**
LYN				S	**S**	**00 17 40.0**	**-0.2**
LYN				SS	**SS**	**00 23 10.0**	**+6.3**
LYN				pmax	pmax		
	comp=Z,20nm,1.4s						
LYN				LR	LR		
	comp=Z,450nm,11.8s						
LYN				LR	LR		
	comp=Z,530nm,14.2s						
LYN				LR	LR		
	comp=Z,440nm,15.9s						
CHTO	**Chiang Mai**	**83.22**	**72**	P	**P**	**00 07 19.4**	**-0.5**
CHTO				IAmb	IAmb	00 07 24.7	
	comp=Z,17nm,1.1s						
CHTO	**Chiang Mai**	**83.22**	**72**	P	**P**	**00 07 19.5**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,17nm,1.2s						
SRU	**San Rafael Swe**	**83.35**	**314**	P	**P**	**00 07 19.9**	**-0.7**
SRU	**San Rafael Swe**	**83.35**	**314**	P	**P**	**00 07 19.9**	**-0.7**
SRU				pmax	pmax		
	comp=Z,23nm,0.9s						
MVCO	**Mesa Verde**	**83.42**	**312**	P	**P**	**00 07 21.1**	**0.0**
MVCO	**Mesa Verde**	**83.42**	**312**	P	**P**	**00 07 21.5**	**+0.4**
	baz=49,SNR=20						
OTAV	**Otavalo**	**83.43**	**265**	P	**P**	**00 07 21.1**	**-0.5**
OTAV				IAmb	IAmb	00 07 29.2	
	comp=Z,15nm,1.2s						
OTAV	**Otavalo**	**83.43**	**265**	P	**P**	**00 07 21.1**	**-0.5**
OTAV				pmax	pmax		
	comp=Z,15nm,1.3s						
OTAV	**Otavalo**	**83.43**	**265**	*e*P	P	00 07 29.0	+7.3
CM31	**Chiang Mai Arr**	**83.43**	**72**	P	**P**	**00 07 21.1**	**+0.1**
CM31				IAmb	IAmb	00 07 34.2	
	comp=Z,23nm,1.1s						
CMAR	**Chiang Mai Arr**	**83.43**	**72**	P	**P**	**00 07 21.3**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=306,slow=7.3,SNR=26						
CMAR				LR	LR	00 50 20.7	
	comp=Z,149nm,20.4s,baz=300,slow=40						
	comp=Z,2.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**83.43**	**72**	P	**P**	**00 07 20.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**83.43**	**72**	*i* P	**P**	**00 07 21.6**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
F07A	**Phinny Hill Vi**	**83.52**	**324**	P	**P**	**00 07 21.8**	**+0.7**
P16K	**Nushagak River**	**83.63**	**351**	P	**P**	**00 07 24.6**	**+3.3**
	baz=15						
ANMO	**Albuquerque**	**83.64**	**309**	LR	LR	00 43 47.1	
	comp=Z,1µm,18.2s,baz=50,slow=35						
ANMO	**Albuquerque**	**83.64**	**309**	P	**P**	**00 07 21.8**	**-0.3**
ANMO	**Albuquerque**	**83.64**	**309**	⇑*e*P	**P**	**00 07 22.3**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANMO	**Albuquerque**	**83.64**	**309**	P	**P**	**00 07 21.1**	**-1.1**
	baz=50,SNR=6.8						
ANMO	**Albuquerque**	**83.64**	**309**	P	**P**	**00 07 21.5**	**-0.6**
	baz=50						
CZSB	**Cruzeiro do Su**	**83.65**	**256**	*e*P	P	00 07 27.4	+5.2
D03D	**Eldon**	**83.74**	**327**	P	**P**	**00 07 24.0**	**+1.8**
	baz=40						
BNX	**BinXian**	**83.80**	**36**	⇓P	**P**	**00 07 22.5**	**0.0**
BNX				pP	**sP**	**00 07 26.3**	**+0.2**
BNX				sP	**PcP**	**00 07 27.8**	**+1.2**
BNX				S	**S**	**00 17 41.5**	**-4.4**
BNX				pmax	pmax		
	comp=Z,72nm,0.9s						
BNX				pmax	pmax		
	comp=Z,320nm,6.3s						
BNX				LR	LR		
	comp=Z,1µm,10.7s						
BNX				LR	LR		
	comp=Z,2µm,14.0s						
DUG	**Dugway, Tooele**	**83.91**	**316**	P	**P**	**00 07 23.1**	**-0.3**
DUG				IAmb	IAmb	00 07 31.0	
	comp=Z,11nm,1.0s						
DUG				IAMs_20	IAMs_20	00 41 50.0	
	comp=Z,1µm,20.0s						
DUG	**Dugway, Tooele**	**83.91**	**316**	P	**P**	**00 07 23.1**	**-0.3**
DUG				pmax	pmax		
	comp=Z,11nm,1.0s						
DUG	**Dugway, Tooele**	**83.91**	**316**	P	**P**	**00 07 24.1**	**+0.7**
	baz=46,SNR=13						
ENH	**Enshi**	**83.95**	**57**	P	**P**	**00 07 23.8**	**+0.2**
KDAK	**Kodiak Island**	**83.99**	**347**	P	**P**	**00 07 23.2**	**0.0**
	comp=Z,9.4nm,0.8s,baz=66,slow=9.4,SNR=8.0						
KDAK				LR	LR	00 46 32.4	
	comp=Z,733nm,21.9s,baz=51,slow=37						
	comp=Z,9.4nm,0.8s						
KDAK	**Kodiak Island**	**83.99**	**347**	P	**P**	**00 07 24.0**	**+0.8**
KDAK	**Kodiak Island**	**83.99**	**347**	IAMs_20	IAMs_20	00 45 36.2	
	comp=Z,1µm,22.0s						
KDAK	**Kodiak Island**	**83.99**	**347**	P	**P**	**00 07 24.0**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,38nm,1.3s						
KDAK				MLR	MLR		
	comp=Z,1µm,22.0s						
KDAK	**Kodiak Island**	**83.99**	**347**	P	**P**	**00 07 24.8**	**+1.5**
	baz=19						
SLOR	**San Lorenzo -**	**84.04**	**265**	P	**P**	**00 07 24.4**	**-0.3**
NLWA	**Neilton Lookou**	**84.19**	**327**	IAMs_20	IAMs_20	00 42 15.9	
	comp=Z,1µm,20.0s						
SNET	**Serv Nac Est T**	**84.21**	**283**	IAMs_20	IAMs_20	00 43 30.4	
	comp=Z,851nm,20.0s						
F05D	**White Salmon**	**84.25**	**325**	IAMs_20	IAMs_20	00 43 40.5	
	comp=Z,1µm,18.0s						
E04D	**Cinebar**	**84.25**	**326**	IAMs_20	IAMs_20	00 42 31.5	
	comp=Z,1µm,20.0s						
CN2	**Changchun**	**84.28**	**38**	*e*P	**P**	**00 07 26.3**	**+1.3**
CN2				S	S	00 17 41.5	-9.2
CN2				LR	LR		
	comp=Z,580nm,16.0s						
CN2				LR	LR		
	comp=Z,640nm,16.0s						
CN2				LR	LR		
	comp=Z,880nm,17.0s						
GYA	**Guiyang**	**84.36**	**61**	⇓*i*P	**P**	**00 07 26.5**	**+0.7**
GYA				sP	PcP	00 07 35.8	+6.2
GYA				PP	**PP**	**00 10 36.8**	**-3.5**
GYA				S	**S**	**00 17 51.0**	**-1.4**
GYA				pmax	pmax		
	comp=Z,34nm,1.0s						
GYA				LR	LR		
	comp=Z,470nm,19.4s						
CRNM	**Carthage**	**84.46**	**308**	P	**P**	**00 07 26.5**	**+0.2**
Y22D	**IRIS PASSCAL I**	**84.50**	**309**	P	**P**	**00 07 26.9**	**+0.4**
Y22D	**IRIS PASSCAL I**	**84.50**	**309**	P	**P**	**00 07 28.3**	**+1.8**
	baz=49						
Y22A	**Socorro**	**84.62**	**309**	P	**P**	**00 07 26.4**	**-0.7**
	baz=49,SNR=9.1						
PORT	**Chimborazo Vol**	**84.69**	**264**	P	**P**	**00 07 27.8**	**-0.4**
CPUP	**Villa Florida**	**84.78**	**232**	P	**P**	**00 07 27.4**	**-0.2**
	comp=Z,22nm,0.9s,baz=57,slow=5.2,SNR=21						
CPUP				LR	LR	00 43 52.7	
	comp=Z,1µm,19.8s,baz=46,slow=35						
	comp=Z,22nm,0.9s						
CPUP	**Villa Florida**	**84.78**	**232**	P	**P**	**00 07 27.2**	**-0.4**
CPUP	**Villa Florida**	**84.78**	**232**	*e*P	**P**	**00 07 30.9**	**+3.4**
ELK	**Elko**	**84.86**	**318**	LR	LR	00 42 59.4	
	comp=Z,2µm,19.0s,baz=54,slow=34						
ELK	**Elko**	**84.86**	**318**	P	**P**	**00 07 28.7**	**+0.4**
ELK				IAmb	IAmb	00 07 45.7	
	comp=Z,20nm,1.1s						
ELK	**Elko**	**84.86**	**318**	P	**P**	**00 07 28.7**	**+0.4**
ELK				pmax	pmax		
	comp=Z,20nm,1.1s						
TIA	**Tai'an**	**84.99**	**48**	⇑P	**P**	**00 07 29.3**	**+0.6**
TIA				pmax	pmax		
	comp=Z,16nm,1.0s						
TIA				pmax	pmax		
	comp=Z,160nm,4.7s						
TIA				LR	LR		
	comp=Z,440nm,14.5s						
TIA				LR	LR		
	comp=Z,520nm,14.3s						
TIA				LR	LR		
	comp=Z,440nm,17.5s						
MNTX	**Cornudas Mount**	**85.05**	**306**	P	**P**	**00 07 28.6**	**-0.5**
MNTX				IAmb	IAmb	00 07 36.3	
	comp=Z,9.3nm,0.9s						
MNTX	**Cornudas Mount**	**85.05**	**306**	P	**P**	**00 07 27.9**	**-1.2**
	baz=50,SNR=16						
MNTX	**Cornudas Mount**	**85.05**	**306**	P	**P**	**00 07 28.9**	**-0.2**
	baz=50						
CPSB	**Cacapava Do Su**	**85.33**	**227**	*e*P	**P**	**00 07 31.7**	**+1.4**
I05D	**Terrebonne, OR**	**85.35**	**324**	P	**P**	**00 07 32.6**	**+2.2**
	baz=42						
TXAR	**Lajitas Array**	**85.42**	**303**	P	**P**	**00 07 31.1**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=76,slow=6.6,SNR=30						
TXAR				LR	LR	00 43 17.7	
	comp=Z,2µm,21.9s,baz=48,slow=34						
	comp=Z,2.8nm,0.7s						
TXAR	**Lajitas Array**	**85.42**	**303**	P	**P**	**00 07 30.8**	**-0.3**
TX31	**Lajitas Ar. Si**	**85.42**	**303**	P	**P**	**00 07 31.2**	**+0.1**
	baz=50,SNR=20						
TX32	**Lajitas Array**	**85.42**	**303**	P	**P**	**00 07 30.9**	**-0.2**
TX32				IAmb	IAmb	00 07 37.3	
	comp=Z,9.5nm,0.9s						
WVOR	**Wild Horse Val**	**85.42**	**321**	P	**P**	**00 07 31.1**	**+0.2**
WVOR				IAmb	IAmb	00 07 53.6	
	comp=Z,23nm,1.2s						
WVOR				IAMs_20	IAMs_20	00 42 34.8	
	comp=Z,1µm,21.0s						
WVOR	**Wild Horse Val**	**85.42**	**321**	P	**P**	**00 07 31.1**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,23nm,1.3s						
SII	**Sitkinak Islan**	**85.43**	**348**	IAMs_20	IAMs_20	00 46 44.3	
	comp=Z,1µm,22.0s						
LPAZ	**La Paz**	**85.51**	**246**	P	**P**	**00 07 31.4**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=18,slow=4.5,SNR=15						
LPAZ				LR	LR	00 45 38.6	
	comp=Z,542nm,18.5s,baz=52,slow=36						
	comp=Z,4.7nm,0.7s						
LPAZ	**La Paz**	**85.51**	**246**	P	**P**	**00 07 30.9**	**-1.4**
LPAZ				IAmb	IAmb	00 07 37.4	
	comp=Z,14nm,1.0s						
PINE	**Pine Mountain**	**85.56**	**323**	P	**P**	**00 07 32.1**	**+0.3**
PINE				IAmb	IAmb	00 07 52.5	
	comp=Z,22nm,1.2s						
G03D	**McMinnville, O**	**85.58**	**325**	IAMs_20	IAMs_20	00 44 51.9	
	comp=Z,962nm,18.0s						
MDJ	**Mudanjiang**	**85.67**	**35**	IAMs_20	IAMs_20	00 48 54.3	
	comp=Z,726nm,19.0s						
H04D	**Lebanon**	**85.86**	**325**	IAMs_20	IAMs_20	00 44 31.4	
	comp=Z,1µm,19.0s						
121A	**Cookes Peak, D**	**86.05**	**308**	P	**P**	**00 07 34.3**	**-0.1**
121A				IAmb	IAmb	00 07 43.1	
	comp=Z,20nm,1.0s						
121A	**Cookes Peak, D**	**86.05**	**308**	P	**P**	**00 07 34.2**	**-0.1**
	baz=49,SNR=13						
121A	**Cookes Peak, D**	**86.05**	**308**	P	**P**	**00 07 35.3**	**+1.0**
	baz=49						
COR	**Corvallis**	**86.08**	**325**	IAMs_20	IAMs_20	00 44 14.1	
	comp=Z,911nm,18.0s						
X18A	**Snowflake**	**86.08**	**311**	P	**P**	**00 07 32.8**	**-1.6**
J05D	**Fort Rock, OR**	**86.08**	**323**	P	**P**	**00 07 35.4**	**+1.2**
	baz=42						
BMN	**Battle Mountai**	**86.14**	**319**	P	**P**	**00 07 34.5**	**-0.1**
BMN				IAmb	IAmb	00 08 30.2	
	comp=Z,32nm,1.8s						
BMN	**Battle Mountai**	**86.14**	**319**	P	**P**	**00 07 34.5**	**-0.1**
BMN				pmax	pmax		
	comp=Z,33nm,1.8s						
WUAZ	**Wupatki**	**86.28**	**312**	P	**P**	**00 07 35.6**	**+0.2**
WUAZ				IAmb	IAmb	00 07 44.1	
	comp=Z,18nm,1.1s						
WUAZ				IAMs_20	IAMs_20	00 44 58.8	
	comp=Z,752nm,19.0s						
WUAZ	**Wupatki**	**86.28**	**312**	P	**P**	**00 07 36.2**	**+0.8**
	baz=47						
J04D	**Umpqua Nationa**	**86.54**	**324**	IAMs_20	IAMs_20	00 42 42.2	
	comp=Z,1µm,22.0s						
MOD	**Modoc Plateau**	**86.65**	**322**	IAMs_20	IAMs_20	00 44 31.4	
	comp=Z,1µm,20.0s						
ITQB	**Itaqui**	**86.71**	**229**	P	**P**	**00 07 38.0**	**+0.9**
ITQB	**Itaqui**	**86.71**	**229**	*e*P	**P**	**00 07 40.3**	**+3.2**
R11A	**Troy Canyon, C**	**86.74**	**317**	P	**P**	**00 07 38.3**	**+0.6**
	baz=45						
USRK	**Ussuriysk Ar.**	**87.09**	**34**	P	**P**	**00 07 38.0**	**-1.0**
	comp=Z,2.8nm,0.6s,baz=304,slow=4.9,SNR=5.6						
USRK				LR	LR	00 49 42.2	
	comp=Z,452nm,19.2s,baz=318,slow=38						
	comp=Z,2.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**87.09**	**34**	P	**P**	**00 07 38.0**	**-1.0**
L04D	**Klamath Falls**	**87.41**	**323**	IAMs_20	IAMs_20	00 43 53.2	
	comp=Z,1µm,20.0s						
HUMO	**Hull Mountain**	**87.42**	**324**	IAMs_20	IAMs_20	00 43 20.7	
	comp=Z,864nm,22.0s						
J01E	**Myrtle Point**	**87.46**	**324**	IAMs_20	IAMs_20	00 43 49.6	
	comp=Z,759nm,21.0s						
CNSH	**ChangSha**	**87.60**	**56**	⇓P	**P**	**00 07 42.5**	**+0.8**
CNSH				S	S	00 18 12.8	-11
CNSH				pmax	pmax		
	comp=Z,39nm,1.0s						
CNSH				LR	LR		
	comp=Z,310nm,16.7s						
CNSH				LR	LR		
	comp=Z,450nm,17.1s						
CNSH				LR	LR		
	comp=Z,210nm,12.9s						
KVN	**Kaiserville**	**87.61**	**318**	P	**P**	**00 07 42.0**	**+0.2**
KVN	**Kaiserville**	**87.61**	**318**	P	**P**	**00 07 42.0**	**+0.2**
KVN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ATAH	**Atahualpa**	**87.77**	**260**	LR	LR	00 44 59.9	
	comp=Z,508nm,20.5s,baz=35,slow=34						
PB16	**IPOC Station P**	**87.82**	**245**	P	**P**	**00 07 42.4**	**-1.1**
CNBA	**Chernabura Isl**	**87.94**	**350**	IAMs_20	IAMs_20	00 49 27.2	
	comp=Z,795nm,19.0s						
YBH	**Yreka Blue Hor**	**87.97**	**323**	LR	LR	00 44 22.5	
	comp=Z,1µm,20.9s,baz=34,slow=34						
YBH	**Yreka Blue Hor**	**87.97**	**323**	IAMs_20	IAMs_20	00 44 11.2	
	comp=Z,1µm,20.0s						
PETK	**Petropavlovsk-**	**88.01**	**15**	LR	LR	00 51 54.5	
	comp=Z,201nm,18.7s,baz=343,slow=39						
TUC	**Tucson**	**88.09**	**309**	P	**P**	**00 07 43.6**	**-0.5**
TUC				IAmb	IAmb	00 07 52.6	
	comp=Z,9.2nm,1.1s						
TUC	**Tucson**	**88.09**	**309**	P	**P**	**00 07 43.6**	**-0.5**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TUC	**Tucson**	**88.09**	**309**	P	**P**	**00 07 44.6**	**+0.5**
	baz=47						
TPNV	**Topopah Spring**	**88.10**	**316**	IAMs_20	IAMs_20	00 44 25.0	
	comp=Z,1µm,20.0s						
TPNV	**Topopah Spring**	**88.10**	**316**	P	**P**	**00 07 45.8**	**+1.6**
	baz=44						
NVAR	**Mina Array Bea**	**88.17**	**318**	P	**P**	**00 07 44.0**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=48,slow=1.8,SNR=7.5						
NVAR				LR	LR	00 44 44.3	
	comp=Z,2µm,19.9s,baz=38,slow=34						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**88.17**	**318**	P	**P**	**00 07 45.8**	**+1.3**
PB08	**IPOC Station P**	**88.71**	**244**	P	**P**	**00 07 46.5**	**-0.8**
PB08				IAmb	IAmb	00 07 56.0	
	comp=Z,8.6nm,1.0s						
FURC	**Furnace Creek,**	**88.79**	**316**	P	**P**	**00 07 48.3**	**+1.1**
	baz=44						
ZAIG	**Zacatecas**	**88.80**	**298**	P	**P**	**00 07 47.0**	**-0.9**
PB11	**IPOC Station P**	**88.83**	**244**	P	**P**	**00 07 46.3**	**-1.4**
NJ2	**Nanjing**	**88.85**	**50**	*e*P	**P**	**00 07 47.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
SHOC	**Shoshone, Teco**	**88.87**	**315**	P	**P**	**00 07 48.5**	**+0.9**
	baz=44						
TUQ	**Turquoise Moun**	**89.00**	**315**	P	**P**	**00 07 49.1**	**+0.7**
	baz=44						
YSS	**Yuzh-Sakhalins**	**89.25**	**27**	*e*P	**P**	**00 07 44.8**	**-4.4**
YSS				pmax	pmax		
	comp=Z,200nm,4.8s						
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
GMRC	**Granite Mounta**	**89.31**	**314**	P	**P**	**00 07 50.3**	**+0.4**
	baz=45						
JCC	**Jacoby Creek,**	**89.31**	**323**	IAMs_20	IAMs_20	00 44 42.6	
	comp=Z,1µm,22.0s						

IRM	Iron Mountain	89.45	313	P	P	00 07 51.0	+0.6
	baz=45						
NNA	Nana	89.46	255	LR	LR	00 47 30.7	
	comp=Z,208nm,19.0s,baz=20,slow=35						
CWC	Cottonwood Cre	89.49	317	P	P	00 07 52.5	+1.8
	baz=43						
PB01	IPOC Station P	89.52	243	P	P	00 07 49.6	-1.2
PB01				IAmb	IAmb	00 07 54.3	
	comp=Z,15nm,1.1s						
214A	Organ Pipe Nat	89.58	310	P	P	00 07 50.5	-0.5
214A	Organ Pipe Nat	89.58	310	P	P	00 07 51.0	-0.1
	baz=46						
GSC	Goldstone, Bar	89.60	315	P	P	00 07 52.0	+0.8
	baz=44						
HEC	Hector,Ludlow	89.66	315	P	P	00 07 51.7	+0.2
	baz=44						
PB09	IPOC Station P	89.82	243	P	P	00 07 52.8	+0.5
PB09				IAmb	IAmb	00 07 56.7	
	comp=Z,13nm,0.8s						
LRMC	Laurel Mtn Rad	89.96	316	P	P	00 07 53.0	+0.1
	baz=44						
BC3	Big Chuckawall	89.99	313	P	P	00 07 53.4	+0.3
	baz=45						
PB02	IPOC Station P	89.99	243	P	P	00 07 52.4	-0.7
GLA	Glamis	90.04	312	P	P	00 07 54.9	+1.7
	baz=45						
BELC	Belle Mtn. Jos	90.06	314	P	P	00 07 55.4	+2.0
	baz=44						
LVC	Limon Verde	90.10	242	LR	LR	00 49 42.2	
	comp=Z,609nm,18.5s,baz=52,slow=36						
LVC	Limon Verde	90.10	242	P	P	00 07 53.3	-0.6
LVC				IAmb	IAmb	00 07 58.1	
	comp=Z,11nm,0.7s						
LVC	Limon Verde	90.10	242	P	P	00 07 53.3	-0.6
LVC				pmax	pmax		
	comp=Z,11nm,0.7s						
LVC	Limon Verde	90.10	242	*e*P	P	00 07 58.8	+5.0
KSAR	Wonju Array Be	90.21	41	P	P	00 07 53.3	-0.5
KSAR	Wonju Array Be	90.21	41	P	P	00 07 53.3	-0.5
KSRS	Korea Array	90.22	41	P	P	00 07 53.2	-0.7
	comp=Z,4.0nm,1.2s,baz=327,slow=4.4,SNR=8.3						
	comp=Z,4.0nm,1.2s						
HOPS	Hopland Field	90.23	321	IAMs_20	IAMs_20	00 45 44.1	
	comp=Z,1µm,20.0s						
ISA	Isabella, Lake	90.27	316	P	P	00 07 54.4	+0.1
ISA				IAmb	IAmb	00 07 59.2	
	comp=Z,9.9nm,1.0s						
ISA	Isabella, Lake	90.27	316	P	P	00 07 54.4	+0.1
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISA	Isabella, Lake	90.27	316	P	P	00 07 55.4	+1.1
	baz=43						
EDW2	Edwards Air Fo	90.57	316	P	P	00 07 57.5	+1.8
	baz=43						
PFO	Pinyon Flats O	90.61	314	LR	LR	00 47 54.4	
	comp=Z,326nm,19.8s,baz=54,slow=35						
PFO	Pinyon Flats O	90.61	314	P	P	00 07 56.0	+0.1
PFO				IAmb	IAmb	00 08 04.5	
	comp=Z,17nm,1.2s						
PFO				IAMs_20	IAMs_20	00 50 33.3	
	comp=Z,579nm,19.0s						
PFO	Pinyon Flats O	90.61	314	P	P	00 07 56.0	+0.1
PFO				pmax	pmax		
	comp=Z,17nm,1.2s						
PFO				MLR	MLR		
	comp=Z,600nm,19.0s						
PFO	Pinyon Flats O	90.61	314	P	P	00 07 56.7	+0.8
	baz=44						
BFSC	Mount Baldy Ra	90.85	315	P	P	00 07 58.9	+1.8
	baz=44						
QIZ	Qiongzhong	91.26	65	P	P	00 07 58.8	-0.3
QIZ				S	S	00 19 01.3	+3.0
QIZ				LR	LR		
	comp=Z,240nm,14.7s						
QIZ				LR	LR		
	comp=Z,310nm,15.7s						
QIZ				LR	LR		
	comp=Z,250nm,15.9s						
109C	Camp Elliot, M	91.50	314	IAMs_20	IAMs_20	00 47 10.0	
	comp=Z,841nm,21.0s						
ASAJ	Asahikawa	91.61	28	LR	LR	00 52 30.7	
	comp=Z,433nm,18.9s,baz=4.0,slow=38						
KULM	Kulim	92.57	82	IAMs_20	IAMs_20	00 53 51.2	
	comp=Z,726nm,20.0s						
PSI	Prapat	92.67	85	LR	LR	00 54 55.3	
	comp=Z,667nm,19.0s,baz=274,slow=39						
LPIG	La Paz	93.31	303	LR	LR	00 47 56.7	
	comp=Z,1µm,22.0s,baz=38,slow=34						
CO01	Juntas del Tor	95.58	237	P	P	00 08 18.4	-0.5
CO01				IAmb	IAmb	00 08 23.5	
	comp=Z,5.6nm,0.8s						
TRQA	Tornquist	95.72	226	*e*P	P	00 08 23.2	+4.2
MAJO	Matsushiro	96.05	35	⇓*e*P	P	00 08 20.7	-0.1
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MJAR	Matsushiro Arr	96.06	35	P	P	00 08 20.1	-0.8
	comp=Z,1.2nm,0.8s,baz=308,slow=6.2,SNR=4.6						
MJAR				LR	LR	00 54 26.9	
	comp=Z,222nm,19.7s,baz=334,slow=37						
	comp=Z,1.2nm,0.8s						
GO04	Tololo Observa	96.18	237	P	P	00 08 20.6	-0.9
CO02	Combarbal	96.96	236	P	P	00 08 24.1	-0.8
MYKOM	Kota Tinggi	97.21	82	IAMs_20	IAMs_20	00 55 40.1	
	comp=Z,1µm,20.0s						
JOW	Kunigami	98.31	48	LR	LR	00 55 14.1	
	comp=Z,274nm,22.0s,baz=298,slow=37						
JHJ	Hachijo jima 2	99.60	36	LR	LR	00 56 37.3	
	comp=Z,220nm,20.9s,baz=320,slow=37						
PMBI	Palembang	100.75	86	IAMs_20	IAMs_20	00 56 14.2	
	comp=Z,843nm,20.0s						
KSM	Kuching	102.54	79	IAMs_20	IAMs_20	01 00 27.2	
	comp=Z,536nm,19.0s						
EFI	East Falkland	102.97	214	IAMs_20	IAMs_20	01 00 57.6	
	comp=Z,852nm,19.0s						
KAPI	Kappang	113.94	78	IAMs_20	IAMs_20	01 07 05.5	
	comp=Z,458nm,20.0s						
PSA00	Pilbara Seismi	123.27	93		PKPdf	00 13 49.5	-1.0
QSPA	South Pole Qui	126.33	180	PKP	PKPdf	00 13 54.7	-0.3
	comp=Z,6.0nm,0.6s,baz=290,slow=1.7,SNR=39						
WRA	Warramunga Arr	134.10	83	PKP	PKPdf	00 14 10.8	-0.4
	comp=Z,4.2nm,0.9s,baz=317,slow=1.6,SNR=23						
WRA	Warramunga Arr	134.10	83		PKPdf	00 14 09.8	-1.4
WB2	Warramunga Arr	134.11	83		PKPdf	00 14 10.0	-1.2
ASAR	Alice Springs	135.62	88	PKhKP	PKPpre	00 14 07.6	
	comp=Z,0.7nm,0.9s,baz=328,slow=2.6,SNR=6.1						
ASAR				PKP	PKPdf	00 14 13.6	-0.4
	comp=Z,4.0nm,0.7s,baz=311,slow=1.2,SNR=21						
ASAR	Alice Springs	135.62	88	PKPdf	PKPdf	00 14 13.2	-0.7
VNDA	Vanda	137.77	173	PKhKP	PKPpre	00 14 08.8	
	comp=Z,0.3nm,0.6s,baz=236,slow=3.6,SNR=3.0						
VNDA	Vanda	137.77	173		PKiKP	00 14 17.8	-0.5
VNDA	Vanda	137.77	173	PKIKP	PKiKP	00 14 17.8	-0.5
CTAO	Charters Tower	143.58	74	PKPdf	PKPbc	00 14 26.5	+0.7
CTAO	Charters Tower	143.58	74	PKIKP	PKPbc	00 14 26.5	+0.7
STKA	Stephens Creek	145.18	95	PKPbc	PKPbc	00 14 30.2	-0.3
	comp=Z,26nm,1.0s,baz=327,slow=6.2,SNR=20						
STKA	Stephens Creek	145.18	95		PKPbc	00 14 29.8	-0.8
EIDS	Eidsvold	150.15	77		PKPbc	00 14 44.1	-0.3

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*NEIC **28** 23:59:16.6±2.4, 56°.1S±0°.1×26°.3W±0°.2, h35^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=19.4km s-min=16.9km az=237.0*

*IDC **28** 23:59:22.5±0.8, 56°.19S×26°.47W, h90^{km}±6^{km}, mb4.1/7, mbtmp4.4/7, MS5.0/1, Error ellipse: s-maj=30.3km s-min=18.4km az=98.0*

ISC 28 23:59:16.7±0.6, 56°.22S±0°.08×26°.23W±0°.10, h35^{km}, n29, σ2^{s}.33/31, mb4.5/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.18	284	Pn	Pn	00 00 45.0	-0.2
ORCD	Orcadas	10.68	237	Pn	Pn	00 01 48.5	+1.7
VNA1	Neumayer--Stat	16.44	159	P	P	00 03 10.5	+3.8
VNA3	Neumayer Olymp	16.66	161	P	P	00 03 11.5	+2.4
VNA3				S	Sn	00 06 01.9	-8.7
VNA2	Neumayer--Watz	16.84	158	P	P	00 03 13.5	+2.4
	baz=318,slow=13						
VNA2				S	Sn	00 06 06.5	-8.4
SNAA	Sanae	18.37	157	P	Pn	00 03 30.2	+2.0
SNAA				S	Sn	00 06 44.6	-7.5
SNAA	Sanae	18.37	157	P	Pn	00 03 30.0	+1.7
SNAA				IAmb	IAmb	00 03 39.6	
	comp=Z,12nm,0.6s						
TROLL	Troll, Antarti	19.86	154	P	Pn	00 03 48.3	+2.2
TROLL				S	S	00 07 22.3	-3.5
BELA	Belgrano 2	21.95	185	P	P	00 04 05.9	-0.8
BELA				IAmb	IAmb	00 04 07.2	
	comp=Z,11nm,0.8s						
DSPA	Despedida	23.89	258	P	P	00 04 27.2	+0.5
QSPA	South Pole Qui	34.03	180	P	P	00 05 57.5	+0.5
	comp=Z,3.2nm,0.6s,baz=222,slow=0.5,SNR=22						
	comp=Z,3.2nm,0.6s						
QSPA	South Pole Qui	34.03	180	P	P	00 05 57.5	+0.5
QSPA				IAmb	IAmb	00 06 00.9	
	comp=Z,4.9nm,0.7s						
MT02	Curacav	38.35	288	P	P	00 06 32.1	-1.9
MT02				IAmb	IAmb	00 06 37.9	
	comp=Z,9.4nm,1.4s						
BOSA	Boshof	45.49	75	P	P	00 07 32.8	+0.3
	comp=Z,1.5nm,0.6s,baz=243,slow=6.8,SNR=1.4						
	comp=Z,1.5nm,0.6s						
BOSA	Boshof	45.49	75	P	P	00 07 33.2	+0.6
VNDA	Vanda	46.43	182	P	P	00 07 39.6	+0.4
	comp=Z,4.2nm,0.7s,baz=189,slow=7.9,SNR=35						
	comp=Z,4.2nm,0.7s						
VNDA	Vanda	46.43	182	P	P	00 07 39.9	+0.7
VNDA				IAmb	IAmb	00 07 42.2	
	comp=Z,4.4nm,0.7s						
RCBR	Riachuelo	50.84	348	LR	LR	00 26 37.2	
	comp=Z,1µm,18.6s,baz=183,slow=32						
LPAZ	La Paz	50.91	304	P	P	00 08 13.9	-1.1
	comp=Z,3.3nm,0.8s,baz=160,slow=2.0,SNR=1.5						
	comp=Z,3.3nm,0.8s						
LPAZ	La Paz	50.91	304	P	P	00 08 14.1	-0.9
DBIC	Dimbokro	65.10	24	P	P	00 09 52.5	-1.1
	comp=Z,22nm,1.1s,baz=252,slow=3.2,SNR=2.3						
	comp=Z,22nm,1.1s						
TORD	Torodi Ar. Bea	72.94	29	P	P	00 10 43.1	+0.9
	comp=Z,4.5nm,0.9s,baz=198,slow=6.3,SNR=7.2						
TORD				pP	PcP	00 11 06.9	+7.9
	comp=Z,1.4nm,0.4s,baz=202,slow=6.3,SNR=1.9						
	comp=Z,4.5nm,0.9s						
ASAR	Alice Springs	98.67	162	P	Pdif	00 12 53.5	+1.4
	comp=Z,0.5nm,0.8s,baz=205,slow=3.8,SNR=4.5						
	comp=Z,0.5nm,0.8s						
SONM	Songino Array	150.21	86	PKPbc	PKPbc	00 19 01.8	-1.2
	comp=Z,0.4nm,0.6s,baz=238,slow=4.0,SNR=3.2						
SONM				pPKPbc	sPKPab	00 19 25.9	+3.5
	comp=Z,0.4nm,0.6s,baz=199,slow=2.3,SNR=2.3						
SONM	Songino Array	150.21	86		PKPbc	00 19 02.0	-1.0
ILAR	Eielson Array	150.63	311	PKPbc	PKPbc	00 19 01.6	-1.7
	comp=Z,1.1nm,0.9s,baz=129,slow=1.4,SNR=5.3						
ILAR				pPKPbc	sPKPab	00 19 26.4	+2.8
	comp=Z,1.1nm,0.9s,baz=157,slow=2.5,SNR=4.1						
ILAR	Eielson Array	150.63	311		PKPbc	00 19 01.7	-1.6
KDAK	Kodiak Island	151.37	296	PKPbc	PKPbc	00 19 03.7	-1.4
	comp=Z,2.1nm,0.8s,baz=160,slow=12,SNR=1.6						
KDAK	Kodiak Island	151.37	296		PKPbc	00 19 03.6	-1.6

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*IDC **29** 00:00:01.4±1.2, 36°.41N×3°.66E, h0^{km}, mb3.8/6, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=29.4km s-min=24.9km az=124.0*

*CRAAG **29** 00:00:01.3, 36°.36N×3°.51E, Ml3.6*

*CNRM **29** 00:00:02.6, 36°.43N×3°.61E, h76^{km}*

*NEIC **29** 00:00:02.2±0.9, 36°.32N±0°.06×3°.6E±0°.1, h10^{km}±1^{km}, mb4.5/5, Error ellipse: s-maj=14.5km s-min=10.3km az=68.0*

*MDD **29** 00:00:03.0±0.5, 36°.32N×3°.46E, h1^{km}±6^{km}, Mb4.7/19, M_mb4.1/24, Error ellipse: s-maj=9.1km s-min=2.5km az=144.0*

*LDG **29** 00:00:05.6, 36°.23N×3°.11E, h30^{km}*

ISC 29 00:00:04.2±0.7, 36°.48N±0°.05×3°.45E±0°.05, h18^{km}, n116, σ1^{s}.81/151, mb3.9/9, 15C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	Boumerdes	0.27	5	P	Pg	00 00 10.6	+0.4
ADJB	Djebel Djouab	0.32	182	P	Pg	00 00 06.4	-4.8
ABA	Alger-Bouzarea	0.46	314	P	Pg	00 00 13.6	0.0
AKET	Djebel Ketaf	0.56	141	P	Pg	00 00 11.2	-4.1
EBNR	Beni Rached	1.56	264	P	Pg	00 00 35.0	+0.7
SET	Setif	1.60	100	P	Pn	00 00 35.0	+3.4
ECHA	Ech Chlef	1.72	259	P	Pg	00 00 40.0	+2.8
EANR	'Ain N'Sour	1.98	255	P	Pg	00 00 45.0	+2.9
EIBI	Ibiza	3.04	327	P	Pn	00 00 52.6	+1.3
EIBI				⇑*i*Vmb_V		00 00 54.0	
	1µm,SNR=0.6						
EIBI				S	Sn	00 01 27.9	+0.6
ETOS	Mallorca	3.32	351	P	Pn	00 00 55.9	+0.6
ETOS				⇑*i*Vmb_V		00 00 56.9	
	668nm,SNR=0.4						
ETOS				S	Sn	00 01 33.9	-0.3
ETRV	Los Montesinos	3.70	296	P	Pn	00 00 59.7	-0.6
ETRV				S	Sn	00 01 43.7	+0.2
CART	Cartagena	3.73	289	Pn	Pn	00 01 00.8	0.0
CART	Cartagena	3.73	289	P	Pn	00 00 59.4	-1.4
AFON	Font Roja	3.85	306	P	Pn	00 01 03.1	+0.5
AFON				⇑*i*Vmb_V		00 01 09.8	
	2µm,SNR=1.3						
AFON				S	Sn	00 01 45.6	-1.8
EMUR	La Murta	3.99	291	P	Pn	00 01 04.9	+0.4
EMUR				⇑*i*Vmb_V		00 01 07.3	
	604nm,SNR=0.5						
EMUR				S	Sn	00 01 49.9	-0.9
ECOL	Islas Columbre	4.05	328	P	Pn	00 01 06.4	+1.2
ECOL				S	Sn	00 01 52.1	0.0
EZAR	Zarzadilla de	4.34	290	P	Pn	00 01 09.8	+0.4
EZAR				S	Sn	00 01 58.5	-1.0
ETOB	Tobarra	4.52	300	P	Pn	00 01 12.8	+1.0
ETOB				⇑*i*Vmb_V		00 01 14.0	
	472nm,SNR=0.3						
ETOB				S	Sn	00 02 03.1	-0.9
ENIJ	Nijar	4.57	278	P	Pn	00 01 11.1	-1.3
ENIJ				⇑*i*Vmb_V		00 01 12.1	
	258nm,SNR=0.2						
ENIJ				S	Sn	00 02 03.0	-2.1
ECHE	Chera	4.67	313	P	Pn	00 01 15.4	+1.6
ECHE				⇑*i*Vmb_V		00 01 17.5	
	890nm,SNR=0.8						
ECHE				S	Sn	00 02 07.2	-0.3
EMOS	Mosqueruela	4.95	323	P	Pn	00 01 18.9	+1.1
EMOS				⇑*i*Vmb_V		00 01 21.5	
	365nm,SNR=0.3						
EMOS				S	Sn	00 02 13.9	-0.7
TAF	Taforalt	5.06	253	P	Pn	00 01 18.1	-1.1
ERTA	Horta de San J	5.09	332	P	Pn	00 01 20.5	+0.9
ERTA				S	Sn	00 02 15.7	-2.2
EBER	Berja	5.12	277	P	Pn	00 01 20.1	+0.1
EBER				S	Sn	00 02 16.9	-1.8
EPOB	Poblet	5.20	340	P	Pn	00 01 22.4	+1.3
EPOB				⇑*i*Vmb_V		00 01 30.8	
	179nm,SNR=0.5						
EPOB				S	Sn	00 02 19.2	-1.6
JBK	JBK	5.36	248	P	Pn	00 01 22.0	-1.5
EQES	Quesada	5.38	286	P	Pn	00 01 25.6	+2.0
EQES				S	Sn	00 02 23.6	-1.5
EQUE	Quentar	5.58	279	P	Pn	00 01 26.5	+0.2
EQUE				S	Sn	00 02 27.9	-2.0
EMIR	Miracle	5.63	345	P	Pn	00 01 30.0	+3.0
EMIR				⇑*i*Vmb_V		00 01 30.3	
	2µm,SNR=2.6						
EMIR				S	Sn	00 02 30.0	-1.2
TDRA	Tendrara	5.67	234	P	Pn	00 01 26.4	-1.3
ELGU	Los Guajares,	5.70	276	P	Pn	00 01 27.8	-0.2
ELGU				⇑*i*Vmb_V		00 01 31.5	
	557nm,SNR=0.8						
ELGU				S	Sn	00 02 31.2	-1.9
FIGM	Figuig	5.83	223	P	Pn	00 01 28.2	-1.7
EJON	La Jonquera	5.97	356	P	Pn	00 01 33.0	+1.3
EJON				⇑*i*Vmb_V		00 01 39.5	
	454nm,SNR=1.1						
EJON				S	Sn	00 02 38.9	-0.8
EGOR	Sierra Gorda,	6.10	278	P	Pn	00 01 33.1	-0.5
EGOR				S	Sn	00 02 41.3	-1.7
ETOR	Torete	6.11	317	P	Pn	00 01 36.3	+2.7
ETOR				S	Sn	00 02 43.4	+0.3
AKLM	AKL	6.28	254	P	Pn	00 01 36.3	+0.3
EADA	Adamuz	6.62	287	P	Pn	00 01 40.9	+0.3
EADA				S	Sn	00 02 53.3	-2.2
EMIJ	Mijas	6.62	273	P	Pn	00 01 37.8	-2.8
EMIJ				⇑*i*Vmb_V		00 01 43.1	
	334nm,SNR=0.7						
EMIJ				S	Sn	00 02 51.9	-3.8
ESBB	Sonseca Array	6.66	301	Pn	Pn	00 01 41.6	+0.4
ESDC	Sonseca Array	6.66	301	Pn	Pn	00 01 43.6	+2.4
	1.0nm,0.3s,baz=110,slow=13,SNR=9.4						
ESDC				Sn	Sn	00 02 55.4	-1.2
	0.2nm,0.3s,baz=116,slow=26,SNR=1.6						
	5.8nm,0.5s						
ESDC	Sonseca Array	6.66	301	P	Pn	00 01 41.3	+0.1
ESDC				S	Sn	00 02 55.0	-1.6
PAB	San Pablo	6.88	299	Pn	Pn	00 01 44.2	0.0
PAB	San Pablo	6.88	299	P	Pn	00 01 44.4	+0.3
PAB				S	Sn	00 03 00.4	-1.6
MTLF	Montolieu	6.92	352	*e*Pn	Pn	00 01 46.9	+2.3
MTLF				*e*Sn	Sn	00 03 02.9	+0.1
	2.0nm,0.3s						
EPF	Esparros	6.96	341	*e*Pn	Pn	00 01 48.1	+2.8
EPF				*e*Sn	Sn	00 03 02.2	-1.9
	4.6nm,0.4s						
ETSF	Etsaut	7.12	335	*e*Pn	Pn	00 01 49.4	+2.0
ETSF				*e*Sn	Sn	00 03 07.5	-0.3
	7.2nm,0.7s						
LMR	La Mourre	7.23	18	*e*Pn	Pn	00 01 49.1	+0.2
ECAB	El Cabril	7.25	285	P	Pn	00 01 49.3	+0.1
ECAB				S	Sn	00 03 09.1	-2.0
GUD	Guadarrama	7.26	307	P	Pn	00 01 50.4	+0.9
GUD				S	Sn	00 03 10.5	-1.0
EORO	Oroz-Betelu	7.38	332	P	Pn	00 01 52.2	+1.2
EORO				S	Sn	00 03 13.8	-0.5
PGF	Pioggiola	7.42	34	*e*Pn	Pn	00 01 52.3	+0.7
SJPF	Ste Jean	7.54	333	*e*Pg	Pn	00 01 55.5	+2.4
SJPF				*e*Sn	Sn	00 03 15.5	-2.6
	6.1nm,0.4s						
MDT	Midelt	7.58	243	Pn	Pn	00 01 55.3	+1.4
	106nm,1.2s,baz=147,slow=23,SNR=0.8						
LASF	Ste Croix	7.59	2	*e*Pn	Pn	00 01 55.0	+1.1
LASF				*e*Sn	Sn	00 03 15.9	-3.5
	35nm,0.8s						
SMRF	Simiane la Rot	7.66	12	*e*Pn	Pn	00 01 57.0	+2.2
SBF	Sospel	7.98	21	*e*Pn	Pn	00 01 59.5	+0.3
VIVF	Saint-Julien-l	8.42	6	*e*Pn	Pn	00 02 07.0	+1.8
CAF	Calviac	8.50	353	*e*Pn	Pn	00 02 08.7	+2.3
CASP	Castiglione de	8.51	40	Pn	Pn	00 02 05.8	-0.6
ELAN	Lanestosa	8.57	324	P	Pn	00 02 09.6	+2.2
ELAN				S	Sn	00 03 43.8	+0.2
MBDF	Montbardon	8.61	16	*e*Pn	Pn	00 02 09.9	+1.9
ORIF	Oris-en-Rattie	8.63	12	*e*Pn	Pn	00 02 11.2	+3.1
LFF	La Frestale	8.70	347	*e*Pn	Pn	00 02 11.0	+2.0
ZHG	ZHG	8.82	253	P	Pn	00 02 10.1	-0.8
SSB	Saint Sauveur	8.83	5	Pn	Pn	00 02 12.5	+1.7
BNI	Bardonecchia	8.90	15	P	Pn	00 02 14.0	+2.0
RJF	Les Rejaudoux	8.93	351	*e*Pn	Pn	00 02 15.0	+2.7
PVAQ	Vaqueiros	8.99	279	Pn	Pn	00 02 13.6	+0.5
OSSC	Osservatorio P	9.23	38	Pn	Pn	00 02 15.7	-0.6
LPG	La Plagne	9.34	14	*e*Pn	Pn	00 02 20.5	+2.3
LPL	La Plagne	9.36	14	*e*Pn	Pn	00 02 21.3	+3.0
EARI	Arriondas	9.52	318	P	Pn	00 02 22.6	+2.3
EARI				⇑*i*Vmb_V		00 02 24.9	
	561nm,SNR=1.2						
ECAL	Calabor	9.60	308	P	Pn	00 02 22.3	+0.8
ECAL				⇑*i*Vmb_V		00 02 25.8	
	213nm,SNR=0.4						
TCF	Toulx Ste Croi	9.84	355	*e*Pn	Pn	00 02 26.2	+1.5
BGF	Bois d'Agland	10.08	358	*e*Pn	Pn	00 02 30.3	+2.4
SMF	Signal de Mont	10.16	2	*e*Pn	Pn	00 02 30.7	+1.6
SMF				*e*Sn	Sn	00 04 20.7	-1.8
	2.0nm,0.5s						
SENIN	Lac Senin/Sane	10.28	15	Pn	Pn	00 02 31.5	+0.5
AVF	Avril sur Loir	10.30	360	*e*Pn	Pn	00 02 32.6	+1.6
CABF	La Chapelle	10.31	10	*e*Pn	Pn	00 02 33.5	+2.3
MFF	Saint Martin d	10.46	346	*e*Pn	Pn	00 02 34.6	+1.4
MFF				*e*Sn	Sn	00 04 25.5	-4.4
	0.5nm,0.2s						
SSF	Saint Saulge	10.57	0	*e*Pn	Pn	00 02 37.0	+2.3
LOR	Lormes	10.78	1	*e*Pn	Pn	00 02 40.0	+2.4
	baz=185						
LOR	Lormes	10.78	1	*e*P	Pn	00 02 46.0	+8.4
	baz=181						
HYF	Humbligny	10.79	357	*e*Pn	Pn	00 02 41.1	+3.3
HINF	Hinteralfeld	11.60	11	*e*Pn	Pn	00 02 50.0	+1.2
HAU	Haudompre	11.71	10	*e*Pn	Pn	00 02 51.5	+1.2
SFTF	Sexfontaines	11.77	5	*e*Pn	Pn	00 02 53.4	+2.3
	baz=185						
ECH	Echery	12.04	12	Pn	Pn	00 02 55.6	+0.8
MEZF	Maizieres J'vi	12.07	5	*e*Pn	Pn	00 02 57.7	+2.5
	baz=187						
PAGF	Fort de Pagny	12.18	7	*e*Pn	Pn	00 02 59.1	+2.4
	baz=188						
SAVF	Savonnieres en	12.19	5	*e*Pn	Pn	00 02 59.5	+2.7
	baz=187						
CDF	Champ du Feu	12.25	12	*e*Pn	Pn	00 02 59.1	+1.4
GRR	Gorron	12.31	346	*e*Pn	Pn	00 02 59.9	+1.4
LDF	La Druitiere	12.38	349	*e*Pn	Pn	00 03 00.2	+0.7
QUIF	Quistinic	12.43	339	*e*Pn	Pn	00 03 02.2	+2.1
QUIF				*e*Sn	Sn	00 05 12.9	-5.1
	1.1nm,0.5s						
SGMF	Saint Gilles	12.57	341	*e*Pn	Pn	00 03 03.6	+1.6
SGMF				*e*Sn	Sn	00 05 14.7	-6.7
	0.6nm,0.3s						
ROSF	Rostrenen	12.84	339	*e*Pn	Pn	00 03 06.9	+1.2
ROSF				*e*Sn	Sn	00 05 22.8	-5.2
	1.1nm,0.3s						
BAIF	Baives	13.58	2	*e*Pn	Pn	00 03 18.4	+2.6
GEC2	GERESS Array S	14.46	28	Pn	Pn	00 03 29.2	+1.3
GERES	GERESS Array B	14.46	28	Pn	Pn	00 03 32.4	+4.6
	0.2nm,0.3s,baz=198,slow=9.0,SNR=5.1						
GERES	GERESS Array B	14.46	28	Pn	Pn	00 03 30.7	+2.9
DIVS	Divibare	14.72	54	Pn	Pn	00 03 30.2	-1.2
EKA	Eskdalemuir Ar	19.39	349	P	Pn	00 04 31.8	+1.7
	baz=164,slow=12						
	0.8nm,0.7s						
TORD	Torodi Ar. Bea	23.29	184	P	P	00 05 10.6	-0.4
	2.3nm,0.7s,baz=2.4,slow=11,SNR=1.5						
	2.3nm,0.7s						
PABE	Paberze	23.61	30	P	P	00 05 13.4	-0.4
PABE				IAmb	IAmb	00 05 18.6	
	comp=Z,15nm,1.0s						
FINES	FINESS Array B	28.76	23	P	P	00 06 01.1	+0.7
ARCES	ARCESS Array B	35.23	13	P	P	00 06 56.9	-0.2
	comp=Z,0.9nm,0.6s,baz=210,slow=7.0,SNR=1.3						
	comp=Z,0.9nm,0.6s						
ARCES	ARCESS Array B	35.23	13	P	P	00 06 56.9	-0.2
SUMG	Summit	41.82	342	P	P	00 07 53.6	+0.7
SCHQ	Schefferville	50.20	315	P	P	00 08 58.6	0.0
SCHQ				IAmb	IAmb	00 08 59.5	
	comp=Z,6.8nm,1.1s						
ZALV	Zalesovo Beam	56.70	44	P	P	00 09 46.1	-0.2
	comp=Z,0.7nm,0.8s,baz=284,slow=5.6,SNR=1.5						
	comp=Z,0.7nm,0.8s						
TSUM	Tsumeb	56.97	164	P	P	00 09 46.3	-2.4
TSUM				IAmb	IAmb	00 10 13.6	
	comp=Z,5.6nm,1.4s						
MKAR	Makanchi Array	57.50	53	P	P	00 09 51.4	-0.8
	comp=Z,0.5nm,0.7s,baz=302,slow=5.2,SNR=2.4						
MKAR				PcP	PcP	00 10 45.9	+0.3
	comp=Z,0.6nm,0.7s,baz=276,slow=5.5,SNR=2.7						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	57.50	53	P	P	00 09 51.1	-1.1
YKA	Yellowknife Ar	69.62	334	P	P	00 11 12.2	+0.3
	comp=Z,0.9nm,0.6s,baz=50,slow=5.9,SNR=3.2						
	comp=Z,0.9nm,0.6s						
PDAR	Pinedale Array	80.30	317	P	P	00 12 14.9	+0.6
	comp=Z,0.4nm,0.6s,baz=67,slow=5.0,SNR=3.5						
	comp=Z,0.4nm,0.6s						

MDD 29 00:05:00.0±0.9, 36°.56N×3°.18E, h10^{km}, Mb4.0/6, M_mb3.3/6, 5C, Error ellipse: s-maj=8.8km s-min=4.4km az=142.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETOS	Mallorca	3.22	355	P	Pn	00 05 49.1	-1.6
ETOS				⇑*i*Vmb_V		00 05 53.5	
	209nm,SNR=0.6						
ETOS				S	Sn	00 06 25.4	-3.7
EMUR	La Murta	3.75	291	P	Pn	00 05 56.5	-1.5
EMUR				⇑*i*Vmb_V		00 06 00.6	
	170nm,SNR=0.6						
EMUR				S	Sn	00 06 36.9	-5.4
EZAR	Zarzadilla de	4.11	290	P	Pn	00 06 02.1	-0.8
ETOB	Tobarra	4.29	300	P	Pn	00 06 05.0	-0.5
ETOB				⇑*i*Vmb_V		00 06 10.8	
	52nm,SNR=0.2						
ETOB				S	Sn	00 06 49.7	-5.9
ECHE	Chera	4.46	314	P	Pn	00 06 07.3	-0.4
ECHE				⇑*i*Vmb_V		00 06 11.2	
	147nm,SNR=0.6						
EMOS	Mosqueruela	4.76	324	P	Pn	00 06 11.3	-0.6

EMOS				S	Sn	00 07 03.7	-3.5
EQES	**Quesada**	5.14	286	P	Pn	00 06 16.8	-0.3
EQES				S	Sn	00 07 10.2	-6.4
VSL	**Villasalto**	5.71	57	P	Pn	00 06 21.9	-2.9
VSL				S	Sn	00 07 22.8	-7.6
EJON	**La Jonquera**	5.89	358	P	Pn	00 06 26.2	-1.1
EJON				⇑*i*Vmb_V		00 06 29.6	
	147nm,SNR=0.5						

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*AUST **29** 00:13:27.1±1.3, 25°.67S×129°.88E, h0^{km}, Error ellipse: s-maj=17.0km s-min=11.1km az=31.0*

*IDC **29** 00:13:28.6±4.7, 25°.53S×130°.09E, h0^{km}, mbtmp3.3/3, ML3.1/3, Error ellipse: s-maj=37.2km s-min=26.6km az=83.0*

ISC 29 00:13:28.0±1.1**, 25°.61S**±0°.06×**129°.95E**±0°.05**, h10^{km}, n11, σ1^{s}.78**/19**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	**Warakurna**	1.60	291	P	Pn	00 13 56.1	-0.3
	baz=1.6						
WRKA				S	Sn	00 14 17.8	+0.6
	baz=1.6						
ASAR	**Alice Springs**	4.09	63	Pn	Pn	00 14 31.6	+0.9
	0.3nm,0.3s,baz=237,slow=12,SNR=17						
ASAR				Pg	Pb	00 14 41.6	+1.5
	0.8nm,0.3s,baz=242,slow=16,SNR=19						
ASAR				Sn	Sn	00 15 18.1	-0.5
	0.9nm,0.3s,baz=241,slow=23,SNR=7.9						
ASAR				Lg	Lg	00 15 32.5	
	1.2nm,0.3s,baz=242,slow=26,SNR=6.6						
	0.8nm,0.3s						
FORT	**Forrest**	5.41	198	P	Pn	00 14 51.0	+2.2
	baz=5.4						
FORT				S	Sn	00 15 50.8	-0.3
	baz=5.4						
OOD	**Oodnadatta**	5.58	114	P	Pn	00 14 52.4	+1.3
	baz=5.6						
OOD				S	Sn	00 15 58.8	+3.6
	baz=5.6						
MULG	**Mulgathing**	5.90	143	P	Pn	00 14 55.3	-0.3
	baz=5.9						
MULG				S	Sn	00 16 03.6	+0.4
	baz=5.9						
WRA	**Warramunga Arr**	6.95	37	Pn	Pn	00 15 10.4	+0.5
	0.2nm,0.3s,baz=216,slow=14,SNR=12						
WRA				Sn	Sn	00 16 28.9	-0.2
	0.3nm,0.3s,baz=216,slow=23,SNR=4.7						
WRA				Lg	Lg	00 17 03.6	
	0.6nm,0.3s,baz=214,slow=29,SNR=6.7						
	0.7nm,0.8s						
WB2	**Warramunga Arr**	6.95	37	P	Pn	00 15 11.1	+1.1
	baz=7.1						
WB2				S	Sn	00 16 27.7	-1.5
	baz=7.1						
LCRK	**Leigh Creek**	8.75	125	P	Pn	00 15 35.0	+0.4
	baz=8.8						
BBOO	**Buckleboo**	8.94	145	P	Pn	00 15 36.2	-1.0
	baz=8.9						
BBOO				S	Sn	00 17 13.5	-4.5
	baz=8.9						
STKA	**Stephens Creek**	11.97	124	Pn	Pn	00 16 17.6	-1.2
	0.2nm,0.3s,baz=310,slow=7.9,SNR=1.6						
	5.2nm,1.0s						
KLBR	**Kellerberrin**	12.25	238	P	Pn	00 16 20.0	-2.6
	baz=12						
KLBR				S	Sn	00 18 29.7	-10
	baz=12						

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*GCG **29** 00:20:01.1±3.2, 14°.36N×94°.11W, h7^{km}±999^{km}, MD4.4*

*IDC **29** 00:20:10.6±1.5, 14°.48N×92°.58W, h0^{km}, mb4.1/11, mbtmp4.1/13, ML4.1/2, Error ellipse: s-maj=49.5km s-min=24.0km az=40.0*

*MEX **29** 00:20:15.4±1.6, 14°.47N×93°.22W, h70^{km}, MD4.5*

*NEIC **29** 00:20:18.3±2.3, 14°.58N±0°.06×93°.04W±0°.05, h35^{km}±2^{km}, mb4.3/50, Md4.5/40(MEX), Error ellipse: s-maj=10.5km s-min=8.8km az=194.0*

ISC 29 00:20:15.3±1.5**, 14°.46N**±0°.06×**93°.14W**±0°.04**, h29^{km}**±10^{km}**, n125, σ1^{s}.73**/152**, mb4.2**/33**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.96	62		Pn	00 20 32.5	-0.4
THIG					Sb	00 20 46.0	+0.3
THIG		0.96	62	*i*P	Pn	00 20 32.5	-0.4
THIG				*i*S	Sb	00 20 46.0	+0.3
PATR	**El Naranjo**	1.09	53	*i*P	Pn	00 20 33.6	-1.4
PATR				*e*S	Sb	00 20 49.8	0.0
CHUJ	**Union Juarez**	1.18	58	*i*P	Pn	00 20 35.8	-0.4
CHUJ				*e*S	Sn	00 20 51.4	-0.1
PAVE	**Pavencul**	1.18	52	*i*P	Pn	00 20 35.7	-0.4
PAVE				*e*S	Sb	00 20 52.1	-0.3
PCIG		1.24	357		Pn	00 20 36.1	-0.6
PCIG					Sn	00 20 50.5	-1.9
PCIG		1.24	357	*i*P	Pn	00 20 36.1	-0.6
PCIG				*i*S	Sn	00 20 50.5	-1.9
STG3	**Santiaguito 3,**	1.54	81	*e*P	Pn	00 20 41.2	+0.1
CCIG	**Comitan**	2.05	28	Pn	Pb	00 20 50.4	-1.7
CCIG	**Comitan**	2.05	28	*i*P	Pb	00 20 50.6	-1.5
CCIG				*e*S	Sn	00 21 10.9	-1.9
FUG	**Fuego 3**	2.23	90	*e*P	Pn	00 20 51.2	+0.7
TGBT	**Tuxtla Gutierr**	2.30	1		Pn	00 20 52.4	+1.1
TGBT					Sn	00 21 17.4	-1.3
TGBT	**Tuxtla Gutierr**	2.30	1	*e*P	Pn	00 20 52.4	+1.1
TGBT				*e*S	Sn	00 21 17.4	-1.3
TGIG		2.30	1		Pn	00 20 53.3	+1.9
TGIG					Sn	00 21 18.5	-0.4
TGIG		2.30	1	*i*P	Pn	00 20 53.3	+1.9
TGIG				*e*S	Sn	00 21 18.5	-0.4
PCG	**Pacaya**	2.46	91	*e*P	Pn	00 20 55.5	+1.7
NBG	**Las Nubes**	2.71	87	*e*P	Pn	00 20 59.6	+2.3
UXUV	**UXUV**	3.00	341	*i*P	Pn	00 21 03.1	+2.1
UXUV				*e*S	Sn	00 21 36.2	+0.3
CMIG	**Matias Romero**	3.10	328	Pn	Pn	00 21 03.0	+0.6
	16nm,0.3s,baz=157,slow=12,SNR=140						
CMIG				Sn	Sn	00 21 39.5	+0.9
	59nm,0.3s,baz=17,slow=18,SNR=12						
	41nm,0.3s						
CMIG	**Matias Romero**	3.10	328		Pn	00 21 02.9	+0.5
CMIG					Sn	00 21 39.1	+0.5
CMIG	**Matias Romero**	3.10	328	*e*P	Pn	00 21 02.9	+0.5
CMIG				*e*S	Sn	00 21 39.1	+0.5
MRL	**Marmol**	3.40	79	*e*P	Pn	00 21 08.4	+1.7
TUIG	**Tuzandepetl**	3.76	341		Pn	00 21 09.2	-2.1
TUIG					Sn	00 21 56.9	+2.2
TUIG	**Tuzandepetl**	3.76	341	*e*P	Pn	00 21 09.2	-2.1
TUIG				*e*S	Sn	00 21 56.9	+2.2
SNET	**Serv Nac Est T**	3.87	101	Pn	Pn	00 21 13.6	+0.5
NEUV	**Arroyo Zacate**	4.12	322	*e*P	Pn	00 21 17.1	+0.7
NEUV				*e*S	Sn	00 22 02.1	-1.5
PEIG	**Puerto Escondi**	4.16	292	*e*P	Pn	00 21 16.8	-0.1
PEIG				*e*S	Sn	00 21 59.0	-5.6
VHO	**Vista Hermosa**	4.32	307	*e*P	Pn	00 21 19.1	-0.2
VHO				*e*S	Sn	00 22 05.3	-3.5
YOIG	**Yosondua**	4.86	300	*e*P	Pn	00 21 24.9	-2.0
YOIG				*e*S	Sn	00 22 21.6	-0.7
PNIG	**Pinotepa**	5.17	292		Pn	00 21 31.7	+0.8
PNIG	**Pinotepa**	5.17	292	*e*P	Pn	00 21 31.7	+0.8
PNIG				*e*S	Sn	00 22 24.9	-4.8
TOIG	**Toxpalan**	5.22	314	*e*P	Pn	00 21 28.7	-2.8
TOIG				*e*S	Sn	00 22 25.2	-5.7
HLIG	**Huajuapan de L**	5.59	307	*e*P	Pn	00 21 38.7	+1.9
HLIG				*e*S	Sn	00 22 37.8	-2.4
TGUH	**Tegucigalpa,Un**	5.71	93	Pn	Pn	00 21 38.6	+0.2
FTIG	**Fresnillo de T**	5.89	306	*e*P	Pn	00 21 43.2	+2.4
FTIG				*e*S	Sn	00 22 46.3	-1.2
JAUV	**Jalcomulco**	6.00	325	*e*P	Pn	00 21 41.7	-0.7
JAUV				*e*S	Sn	00 22 44.3	-5.9
TLIG	**Tlapa**	6.06	301	Pn	Pn	00 21 47.4	+4.3
CRIN	**San Cristobal**	6.18	106		Pn	00 21 45.8	+1.0
CNGN	**Cerro Negro**	6.57	107	Pn	Pn	00 21 51.1	+1.0
MATN	**Matagalpa**	7.18	101	Pn	Pn	00 21 58.5	-0.1
BOAB	**BOACO BROADBAN**	7.54	104	Pn	Pn	00 22 03.1	-0.3
HZTE	**Horizontes, Gu**	8.26	116	Pn	Pn	00 22 14.7	+1.5
ORTG	**Ortega, Santa**	8.54	118	Pn	Pn	00 22 18.8	+1.5
DUNO	**Dulce Nombre,**	8.65	119	Pn	Pn	00 22 20.4	+1.7
JTS	**Las Juntas de**	9.01	116	Pn	Pn	00 22 21.3	-2.3
	0.3nm,0.3s,baz=27,slow=24,SNR=2.0						
JTS				Sn	Sn	00 23 52.0	-12
	baz=28,slow=20						
JTS				Lg	Lg	00 24 34.5	
	0.2nm,0.3s,baz=69,slow=20,SNR=2.9						
JTS	**Las Juntas de**	9.01	116	Pn	Pn	00 22 26.2	+2.5
MOIG	**Morelia**	9.28	305	Pn	Pn	00 22 30.9	+3.5
JACO	**JACO, Garabito**	9.57	119	Pn	Pn	00 22 32.3	+1.0
RIMA	**Rio Macho**	10.20	116		Pn	00 22 41.7	+1.6
SRBA	**San Rafael, Bu**	10.89	117	Pn	Pn	00 22 51.0	+1.5
DRK0	**Durika**	10.98	117	Pn	Pn	00 22 51.5	+0.8
SOR	**Soroa**	12.68	48	Pn	Pn	00 23 12.3	-1.5
833A	**Chaparral WMA,**	14.96	338		Pn	00 23 46.9	+2.0
MTDJ	**Mount Denham**	15.44	74	Pn	Pn	00 23 51.9	+0.5
061Z	**Ochoppi**	16.13	43	Pn	Pn	00 23 59.4	-0.7
TXAR	**Lajitas Array**	17.71	328	P	P	00 24 22.7	+2.0
	0.2nm,0.3s,baz=146,slow=12,SNR=22						
	2.3nm,0.9s						
TXAR	**Lajitas Array**	17.71	328		P	00 24 21.7	+0.9
TX31	**Lajitas Ar. Si**	17.71	328	P	P	00 24 21.5	+0.8
TX31				IAmb	IAmb	00 24 28.2	
	comp=Z,22nm,1.0s						
ABTX	**Abilene, Hawle**	19.02	343		Pn	00 24 36.3	+0.4
MIAR	**Mount Ida**	20.00	359	P	P	00 24 45.8	+0.1
MIAR				IAmb	IAmb	00 24 53.5	
	comp=Z,19nm,1.0s						
MNTX	**Cornudas Mount**	20.49	329	P	Pn	00 24 52.8	-0.5
X48A	**Hartselle**	20.65	14	P	P	00 24 53.8	+1.0
GOGA	**Godfrey**	20.81	23	P	P	00 24 54.5	0.0
GOGA				IAmb	IAmb	00 25 14.7	
	comp=Z,8.7nm,1.1s						
WMOK	**Wichita Mounta**	20.82	347	P	P	00 24 55.6	+1.0
FNO	**Franklin**	21.06	350	P	P	00 24 58.9	+1.7
FPAL	**Fort Paine**	21.12	17	P	P	00 24 58.3	+0.4
FPAL				IAmb	IAmb	00 25 05.8	
	comp=Z,16nm,1.1s						
FCAR	**Ozark Folk Cen**	21.36	2	P	P	00 25 01.4	+1.1
SWET	**Sewanee**	21.66	16	P	P	00 25 04.8	+1.1
AMTX	**Amarillo**	21.74	341	P	P	00 25 04.1	-0.4
U40A	**Yellville**	21.80	1	P	P	00 25 04.7	-0.4
U40A				IAmb	IAmb	00 25 18.1	
	comp=Z,12nm,1.4s						
WVT	**Waverly**	22.09	11	P	P	00 25 09.4	+1.1
121A	**Cookes Peak, D**	22.40	326	P	P	00 25 12.9	+1.1
121A				IAmb	IAmb	00 25 23.0	
	comp=Z,12nm,0.9s						
319A	**Douglas**	22.41	321	P	P	00 25 13.7	+1.9
319A				IAmb	IAmb	00 25 23.3	
	comp=Z,7.9nm,1.0s						
CRNM	**Carthage**	22.98	330	P	P	00 25 19.3	+1.4
CCM	**Cathedral Cave**	23.56	4	P	P	00 25 22.5	-0.9
ANMO	**Albuquerque**	23.66	332	P	P	00 25 26.8	+2.1
	comp=Z,2.6nm,0.7s,baz=160,slow=12,SNR=12						
	comp=Z,2.6nm,0.7s						
ANMO	**Albuquerque**	23.66	332	P	P	00 25 24.5	-0.1
R40A	**Maddies Statio**	23.75	2	P	P	00 25 24.1	-1.0
R40A				IAmb	IAmb	00 25 26.2	
	comp=Z,3.5nm,0.6s						
TUC	**Tucson**	23.97	321		P	00 25 29.4	+1.8
TUC				IAmb	IAmb	00 25 32.1	
	comp=Z,4.5nm,0.8s						
T25A	**Trinidad**	24.71	338	P	P	00 25 36.9	+2.5
T25A				IAmb	IAmb	00 25 40.0	
	comp=Z,9.6nm,0.9s						
BAUV	**El Baul**	25.17	100	P	P	00 25 36.5	-2.0
BAUV				IAmb	IAmb	00 25 37.2	
	comp=Z,9.6nm,0.7s						
SDCO	**Great Sand Dun**	25.66	337	P	P	00 25 44.0	+1.0
SDCO				IAmb	IAmb	00 25 46.5	
	comp=Z,7.8nm,1.4s						
S22A	**4UR Ranch, Cre**	26.18	335	P	P	00 25 48.9	+1.1
MVCO	**Mesa Verde**	26.46	332	P	P	00 25 51.2	+0.9
ECSD	**EROS Data Cent**	29.32	355	P	P	00 26 14.8	-0.7
ECSD				IAmb	IAmb	00 26 18.3	
	comp=Z,2.7nm,0.7s						
PDAR	**Pinedale Array**	31.55	337	P	P	00 26 37.0	+1.6
	comp=Z,0.5nm,0.5s,baz=131,slow=9.7,SNR=6.5						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	31.55	337	P	P	00 26 37.4	+2.0
AHID	**Auburn Hatcher**	32.16	335	P	P	00 26 42.6	+1.8
AHID				IAmb	IAmb	00 26 47.2	
	comp=Z,3.7nm,0.7s						
NV11	**Mina Array Sit**	32.53	322	P	P	00 26 46.5	+2.5
NV11				IAmb	IAmb	00 26 48.5	
	comp=Z,4.0nm,0.8s						
REDW	**Red Top Meadow**	32.56	336	P	P	00 26 46.0	+1.7
NVAR	**Mina Array Bea**	32.62	322	P	P	00 26 48.3	+3.4
	comp=Z,3.6nm,0.7s,baz=135,slow=8.7,SNR=29						
NVAR				PcP	PcP	00 29 32.3	+1.5
	comp=Z,0.9nm,0.7s,baz=122,slow=3.3,SNR=5.8						
	comp=Z,3.6nm,0.7s						
NVAR	**Mina Array Bea**	32.62	322	P	P	00 26 46.9	+2.0
MOOW	**Moose Ponds**	32.84	336	P	P	00 26 48.2	+1.4
MOOW				IAmb	IAmb	00 26 55.6	
	comp=Z,2.3nm,0.8s						
RLMT	**Red Lodge**	33.48	339	P	P	00 26 53.9	+1.7
RLMT				IAmb	IAmb	00 26 56.2	
	comp=Z,2.2nm,0.6s						
YHL	**Hebgen Lake**	33.94	337	P	P	00 26 58.0	+1.6
YHL				IAmb	IAmb	00 27 00.5	
	comp=Z,2.7nm,0.9s						
MCMT	**McKenzie Canyo**	34.58	335	P	P	00 27 04.5	+2.6
LRM	**Limekiln Ridge**	35.24	336	P	P	00 27 09.3	+1.7
ULM	**Lac du Bonnet**	35.76	357	P	P	00 27 10.4	-1.3
	comp=Z,2.1nm,0.6s,baz=165,slow=9.7,SNR=3.1						
	comp=Z,2.1nm,0.6s						
J08A	**Circle Bar Ran**	36.06	328	P	P	00 27 16.6	+2.1
F10A	**Beach Ranch, E**	37.38	332	P	P	00 27 27.5	+1.8
F10A				IAmb	IAmb	00 27 30.4	
	comp=Z,5.6nm,0.8s						
BATG	**Bathurst New B**	39.73	29	P	P	00 27 44.0	-1.3
EDM	**Edmonton**	41.85	342	P	P	00 28 03.7	+1.0
EDM				IAmb	IAmb	00 28 04.4	
	comp=Z,5.8nm,0.6s						
FCC	**Fort Churchill**	44.23	359	P	P	00 28 21.3	-0.4
FCC				IAmb	IAmb	00 28 46.3	
	comp=Z,4.9nm,1.4s						
YKA	**Yellowknife Ar**	50.33	347	P	P	00 29 09.7	+0.5
	comp=Z,4.6nm,0.7s,baz=151,slow=7.5,SNR=15						
	comp=Z,4.6nm,0.7s						
BCAR	**Beaver Creek A**	59.17	337	P	P	00 30 15.1	+1.7
L27K	**Beaver Creek,**	59.19	337	P	P	00 30 15.0	+1.5
L27K				IAmb	IAmb	00 30 16.1	
	comp=Z,2.1nm,0.9s						
INK	**Inuvik**	59.69	344	P	P	00 30 17.8	+1.1
	comp=Z,4.4nm,0.6s,baz=110,slow=8.6,SNR=9.2						
	comp=Z,4.4nm,0.6s						
INK	**Inuvik**	59.69	344	P	P	00 30 17.8	+1.1
IL31		61.98	337	P	P	00 30 33.5	+1.1
IL31				IAmb	IAmb	00 30 34.9	
	comp=Z,2.7nm,0.7s						
ILAR	**Eielson Array**	61.98	337	P	P	00 30 33.5	+1.0
	comp=Z,1.8nm,0.9s,baz=142,slow=4.5,SNR=19						
	comp=Z,1.8nm,0.9s						
BMAR	**Burnt Mountain**	62.48	340	P	P	00 30 37.1	+1.3
BPAW	**Bear Paw Mtn.**	63.30	335	P	P	00 30 42.3	+1.0
BPAW				IAmb	IAmb	00 30 42.5	
	comp=Z,2.9nm,0.7s						
K20K	**Telida**	64.29	334	P	P	00 30 48.7	+0.8
IMAR	**Indian Mountai**	65.10	337	P	P	00 30 53.5	+0.4
EUNU	**Eureka**	65.69	1	P	P	00 30 57.1	+0.3
ESDC	**Sonseca Array**	80.30	52	P	P	00 32 21.3	-2.6
	comp=Z,0.7nm,0.8s,baz=287,slow=6.4,SNR=5.7						
	comp=Z,0.7nm,0.8s						
NOA	**NORSAR Array B**	84.27	28	P	P	00 32 43.4	-0.9
	comp=Z,0.5nm,0.7s,baz=286,slow=5.2,SNR=3.9						
	comp=Z,0.5nm,0.7s						
KOWA	**Kowa**	85.64	76	P	P	00 32 51.5	-0.5
KOWA				IAmb	IAmb	00 32 52.1	
	comp=Z,3.7nm,1.3s						
DBIC	**Dimbokro**	86.71	84	P	P	00 32 56.6	-0.7
TIXI	**Tiksi**	89.58	348	P	P	00 33 09.1	-0.7
	comp=Z,1.7nm,0.6s,baz=270,slow=23,SNR=10						
	comp=Z,1.7nm,0.6s						
TIXI	**Tiksi**	89.58	348	P	P	00 33 09.6	-0.2
TORD	**Torodi Ar. Bea**	91.35	76	P	P	00 33 16.9	-2.3
	comp=Z,0.5nm,0.9s,baz=290,slow=5.7,SNR=4.1						
	comp=Z,0.5nm,0.9s						
WRA	**Warramunga Arr**	134.43	256	PKP	PKPdf	00 39 31.1	-0.5
	comp=Z,0.5nm,0.6s,baz=84,slow=1.9,SNR=8.9						
ASAR	**Alice Springs**	134.77	251	PKP	PKPdf	00 39 32.2	0.0
	comp=Z,0.3nm,0.7s,baz=85,slow=1.0,SNR=2.8						
CMAR	**Chiang Mai Arr**	145.19	340	PKPbc	PKPbc	00 39 50.7	0.0
	comp=Z,2.5nm,0.8s,baz=335,slow=3.7,SNR=11						

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*MOS **29** 00:24:40.8±1.0, 41°.12N×140°.14E, h164^{km}, mb4.3/28, Error ellipse: s-maj=6.7km s-min=5.5km az=77.7*

*NIED **29** 00:24:41.8, 41°.08N×140°.13E, h156^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.68; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-0.92; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.27; $M_{\phi r}$-1.38; Fault plane solution: $M_0$1.75000×10^{15} NP1:ϕ_s41.00000°, δ23.00000°, λ148.00000°. NP2:ϕ_s161.00000°, δ78.00000°, λ70.00000°.*

*IDC **29** 00:24:41.1±0.9, 41°.09N×140°.08E, h153^{km}±8^{km}, mb3.7/23, mbtmp4.1/27 Error ellipse: s-maj=12.2km s-min=7.8km az=124.0*

*JMA **29** 00:24:41.8±0.1, 41°.1N±0°.3×140°.1E±0°.7, h156^{km}, MV3.6/39, W OFF AOMORI PREF*

*NEIC **29** 00:24:42.8±2.0, 41°.07N±0°.06×140°.1E±0°.1, h167^{km}±5^{km}, mb4.3/76, Error ellipse: s-maj=11.7km s-min=7.4km az=112.0*

ISC 29 00:24:41.6±0.5**, 41°.07N**±0°.03×**140°.15E**±0°.04**, h160^{km}**±4^{km}**, n342, σ1^{s}.30**/379**, mb4.3**/85**, 7C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSI2	**Shiura 2**	0.20	94	*i*P	Pn	00 25 02.9	-0.1
JSI2				S	Sn	00 25 18.9	-0.5
JHHS	**Hirosakihyakuz**	0.45	159	S	Sn	00 25 21.2	+0.4
JOMM	**Oshimamatsumae**	0.47	346	*i*P	Pn	00 25 03.7	-0.1
JOMM				S	Sn	00 25 19.9	-1.1
JIW	**Iwasaki**	0.49	193	*i*P	Pn	00 25 04.0	-0.1
JIW				S	Sn	00 25 21.1	-0.1
JSR	**Shiriuchi**	0.50	23	P	Pn	00 25 03.7	-0.3
JSR				S	Sn	00 25 20.3	-1.0
JOT	**Ohata**	0.74	65	*i*P	Pn	00 25 05.3	-0.1
JOT				S	Sn	00 25 23.6	-0.1
JTM	**Tenmabayashi**	0.75	112	Pn	Pn	00 25 05.4	0.0
JTM				Sn	Sn	00 25 23.2	-0.5
JTM	**Tenmabayashi**	0.75	112	*i*P	Pn	00 25 05.5	0.0
JTM				S	Sn	00 25 23.2	-0.5
JAH	**Hinai**	0.95	157	*i*P	Pn	00 25 07.0	0.0
JAH				S	Sn	00 25 26.2	-0.1
JKB	**Kayabe**	1.05	39	*i*P	Pn	00 25 07.7	0.0
JYM2	**Yakumo 2**	1.06	9	*i*P	Pn	00 25 07.8	0.0
JYM2				*e*S	Sn	00 25 27.4	-0.6
JOSM	**Okushiri--Mats**	1.13	334	*i*P	Pn	00 25 08.0	-0.3
JOSM				S	Sn	00 25 28.0	-1.0
JANG	**Nango**	1.25	123	*i*P	Pn	00 25 09.0	-0.5
JANG				S	Sn	00 25 30.3	-0.5
JHST	**Hiyamasetana**	1.37	351	S	Sn	00 25 32.5	-0.4
JOM	**Ohasama**	1.82	151	*i*P	Pn	00 25 15.1	-0.2
JOM				S	Sn	00 25 40.8	-0.5
JEW	**Eniwo**	2.02	28		Pn	00 25 17.9	+0.5
JEW				Sn	Sn	00 25 46.6	+1.4
JEW	**Eniwo**	2.02	28	P	Pn	00 25 18.3	+0.8
JEW				S	Sn	00 25 47.2	+2.0
JYK	**Kaneyama**	2.16	176	*i*P	Pn	00 25 19.1	-0.1
JYK				S	Sn	00 25 47.9	-0.2
JMK	**Ichinoseki**	2.27	158	*i*P	Pn	00 25 19.9	-0.5
JMK				*e*S	Sn	00 25 50.1	-0.3
JNBK	**Urakawa-nobuka**	2.29	57	*i*P	Pn	00 25 21.2	+0.5
JNBK				*e*S	Sn	00 25 51.4	+0.5
ERM	**Erimo**	2.44	66		Pn	00 25 22.6	+0.2
ERM				Sn	Sn	00 25 52.3	-1.8
ERM	**Erimo**	2.44	66	P	Pn	00 25 22.6	+0.2
ERM						00 25 52.3	
JMM	**Marumori**	3.24	171		Pn	00 25 31.6	-0.7
JMM				Sn	Sn	00 26 10.6	-1.1
JSD	**Sado**	3.36	206	Pn	Pn	00 25 34.5	+0.5
ASAJ	**Asahikawa**	3.54	30	P	Pn	00 25 36.3	+0.2
	77nm,0.4s,baz=230,slow=9.8,SNR=194						
ASAJ				S	Sn	00 26 16.6	-2.0
	129nm,0.7s,baz=274,slow=31,SNR=11						
JKA	**Kamikawa-asahi**	3.54	30	Pn	Pn	00 25 36.3	+0.2
JKA				Sn	Sn	00 26 16.4	-2.1
NMR	**Nemuro--Hokkai**	4.73	59	*e*P	Pn	00 25 49.0	-2.6
NMR				*e*S	Sn	00 26 41.1	-5.2
MJB9	**Matsu-Tunnel**	4.77	199		Pn	00 25 53.2	+1.1
MAJO	**Matsushiro**	4.77	199	Pn	Pn	00 25 52.8	+0.7
MAJO	**Matsushiro**	4.77	199	*de*P	Pn	00 25 53.1	+0.9
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s						
MJAR	**Matsushiro Arr**	4.77	199	P	Pn	00 25 52.1	-0.1
	comp=Z,4.2nm,0.4s,baz=7.4,slow=14,SNR=22						
MJAR				S	Sn	00 26 46.8	-0.5
	comp=Z,1.9nm,0.4s,baz=119,slow=23,SNR=0.9						
MJAR	**Matsushiro Arr**	4.77	199	Pn	Pn	00 25 52.2	+0.1
GLVR	**Golovnino**	4.78	54	*e*P	Pn	00 25 51.9	-0.3
GLVR				*e*S	Sn	00 26 44.4	-3.0
GLVR				smax	smax		
	comp=E,824nm,0.4s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
RUSJ	**Misakicho**	4.83	49	*e*P	Pn	00 25 52.7	-0.1
RUSJ				*e*S	Sn	00 26 49.6	+1.1
YUK	**Yuzh-Kuril'sk**	5.15	53	*e*P	Pn	00 25 57.0	-0.1
YUK				*e*S	Sn	00 26 52.5	-3.6
YUK				pmax	pmax		
	comp=Z,322nm,0.4s						
YUK				pmax	pmax		
	comp=N,269nm,0.5s						
YUK				smax	smax		
	comp=E,193nm,0.3s						
YUK				smax	smax		
	comp=N,2µm,0.5s						
SHO	**Shikotan**	5.67	58	*e*P	Pn	00 26 01.4	-2.6
SHO				*e*S	Sn	00 27 01.7	-6.8
SHO				pmax	pmax		
	comp=Z,83nm,0.5s						
SHO				pmax	pmax		
	comp=E,49nm,0.6s						
SHO				pmax	pmax		
	comp=N,20nm,0.4s						
SHO				smax	smax		
	comp=N,421nm,0.3s						
SHO				smax	smax		
	comp=E,686nm,0.3s						
JGF	**Kuroka**	5.89	203	Pn	Pn	00 26 08.0	+1.1
YSS	**Yuzh-Sakhalins**	6.17	17	Pn	Pn	00 26 10.4	-0.1
YSS	**Yuzh-Sakhalins**	6.17	17	*e*P	Pn	00 26 10.5	-0.1
YSS				*e*S	Sn	00 27 18.1	-2.2
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax	smax		
	comp=N,40nm,0.8s						
INU	**Inuyama**	6.22	204	Pn	Pn	00 26 11.8	+0.5
VLA	**Vladivostok**	6.48	291	*de*P	Pn	00 26 14.7	0.0
VLA				pmax	pmax		
	comp=Z,84nm,1.4s						
USA0B	**Ussuriysk Arra**	6.78	300		Pn	00 26 18.9	+0.3
USA0B	**Ussuriysk Arra**	6.78	300	*d i*P	Pn	00 26 19.6	+0.9
USRK	**Ussuriysk Ar.**	6.78	300	P	Pn	00 26 19.1	+0.4
	comp=Z,18nm,0.5s,baz=105,slow=14,SNR=32						
USRK	**Ussuriysk Ar.**	6.78	300	Pn	Pn	00 26 19.2	+0.5
USRK	**Ussuriysk Ar.**	6.78	300	P	Pn	00 26 19.2	+0.5
KUR	**Kuril'sk**	7.01	51	P	Pn	00 26 21.6	0.0
KUR				S	Sn	00 27 37.4	-2.9
KUR				smax	smax		
	comp=E,104nm,0.4s						
KUR				smax	smax		
	comp=N,47nm,0.5s						
JHS	**Saijyo**	8.22	225		Pn	00 26 36.6	-1.2
MDJ	**Mudanjiang**	8.53	298	Pn	Pn	00 26 42.0	+0.2
MDJ	**Mudanjiang**	8.53	298	P	Pn	00 26 43.0	+1.1
MDJ				pmax	pmax		
	comp=Z,52nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.5s						
SEHB	**SEOHWA**	9.59	257	Pn	Pn	00 26 54.9	-1.1
TYV	**Tymovskoe**	9.95	9	*e*P	Pn	00 27 00.9	+0.4
TYV				*e*S	Sn	00 28 51.8	+1.1
TYV				pmax	pmax		
	comp=Z,29nm,0.6s						
TYV				pmax	pmax		
	comp=Z,200nm,2.5s						
TYV				smax	smax		
	comp=N,15nm,0.8s						
TYV				smax	smax		
	comp=N,200nm,3.0s						
TYV				smax	smax		
	comp=E,300nm,3.0s						
KLR	**Kul'dur**	10.08	327	P	Pn	00 27 04.1	+1.7
	comp=E,0.8nm,0.5s,baz=153,slow=14,SNR=2.4						
KSRS	**Korea Array**	10.15	253	P	Pn	00 27 04.0	+0.7
	comp=E,5.3nm,0.8s,baz=68,slow=13,SNR=30						
KSRS	**Korea Array**	10.15	253	P	Pn	00 27 04.0	+0.7
KS19	**Wonju Array Si**	10.17	253		Pn	00 27 03.6	0.0
KSAR	**Wonju Array Be**	10.18	253	Pn	Pn	00 27 03.4	-0.4

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KSAR Wonju Array Be 10.18 253  P         Pn         00 27 03.4 -0.4
TJN  Taejon         11.03 249            Pn         00 27 15.4 +0.5
TJN  Taejon         11.03 249⇑eP         Pn         00 27 16.8 +1.9
JSU  Suzuyama       12.33 222  Pn        Pn         00 27 32.1 +0.3
SKR  Severo-Kuril's 14.67  44 eP         P          00 28 03.7 +0.5
SKR                            pmax      pmax
     comp=Z,42nm,0.8s
SKR                            pmax      pmax
     comp=Z,400nm,3.8s
ZEA  Zeya           15.36 330 eP         Pn         00 28 09.0 -0.7
ZEA                            pmax      pmax
     comp=Z,10.0nm,1.1s
PET  Petropavlovsk  17.31  40ceP         P          00 28 31.4 -0.9
PET                            pmax      pmax
     comp=Z,37nm,1.3s
XLT  XiLinHaoTe     17.96 287 eP         Pn         00 28 40.8 -0.5
XLT                            sP        sP         00 29 23.5 -2.2
XLT                            pmax      pmax
     comp=Z,7.0nm,1.0s
XLT                            pmax      pmax
     comp=Z,69nm,4.3s
BJT  Baijiatuau     18.25 275  P         P          00 28 40.9 -1.8
BJT  Baijiatuau     18.25 275  P         P          00 28 40.9 -1.8
BJT                            pmax      pmax
     comp=Z,4.0nm,0.6s
NJ2  Nanjing        19.30 249 eP         P          00 28 54.8 +0.7
NJ2                            pmax      pmax
     comp=Z,8.0nm,0.5s
MA2  Magadan        19.68  16  P         Pn         00 29 01.2 +0.1
     comp=Z,8.2nm,0.5s,baz=194,slow=13,SNR=5.6
MA2  Magadan        19.68  16  P         Pn         00 29 00.8 -0.4
MA2                            IAmb      IAmb       00 29 10.6
     comp=Z,12nm,1.0s
MA2  Magadan        19.68  16  P         Pn         00 29 00.8 -0.4
MA2                            pmax      pmax
     comp=Z,12nm,1.0s
HHC  Hu-ho-hao-te   21.56 279 eP         P          00 29 17.8 -0.6
HHC                            pmax      pmax
     comp=Z,27nm,1.0s
HHC                            LR        LR
     comp=N,1µm,14.6s
HHC                            LR        LR
     comp=E,950nm,14.3s
HHC                            LR        LR
     comp=Z,2µm,14.9s
YHNB Yeheng         22.64 230  P         P          00 29 27.3 -1.9
YHNB                           IAmb      IAmb       00 29 31.8
     comp=Z,12nm,0.8s
SEY  Seymchan       23.07  14  P         P          00 29 32.0 -0.6
     comp=Z,6.1nm,0.7s,baz=205,slow=8.1,SNR=19
     comp=Z,6.1nm,0.7s
SEY  Seymchan       23.07  14⇑eP         P          00 29 32.3 -0.4
BOD  Bodaibo        23.64 324 eP         P          00 29 36.6 -1.3
BOD                            pmax      pmax
     comp=Z,9.0nm,0.9s
ULN  Ulaanbaatar    24.45 297⇓eP         P          00 29 45.7 +0.2
ULN                            pmax      pmax
     comp=Z,4.0nm,1.7s
SONM Songino Array  24.89 297  P         P          00 29 48.4 -1.1
     comp=Z,0.7nm,0.4s,baz=100,slow=8.5,SNR=7.5
SONM                           ScP       ScP        00 36 43.3 -1.3
     comp=Z,0.1nm,0.3s,baz=101,slow=2.9,SNR=4.2
     comp=Z,0.7nm,0.4s
SONM Songino Array  24.89 297  P         P          00 29 48.6 -0.9
ENH  Enshi          27.01 256  P         P          00 30 08.6 -0.1
ZAK  Zakamensk      27.13 303 eP         P          00 30 04.0 -5.6
ZAK                            pmax      pmax
     comp=Z,4.0nm,1.3s
TIXI Tiksi          31.17 353  P         P          00 30 43.4 -1.5
     comp=Z,1.3nm,0.3s,baz=90,slow=23,SNR=9.1
     comp=Z,1.3nm,0.3s
TIXI Tiksi          31.17 353  P         P          00 30 43.1 -1.7
TIXI Tiksi          31.17 353⇑iP         P          00 30 43.9 -1.0
TIXI                           pmax      pmax
     comp=Z,6.0nm,2.8s
GSTR Great Sitkin T 31.59  55  P         P          00 30 49.1 +0.3
PZH  PanZhiHua      34.78 257  PKP                  00 39 38.5
PZH  PanZhiHua      34.78 257  P         P          00 31 17.0 +0.1
PZH                            PKP                  00 39 38.5
PZH                            pmax      pmax
     comp=Z,10.0nm,0.6s
PZH                            pmax      pmax
     comp=Z,90nm,6.4s
GOMU GeErMu         35.44 277  P         P          00 31 21.3 -1.5
GOMU                           S         S          00 36 34.0  -12
GOMU                           pmax      pmax
     comp=Z,2.0nm,0.5s
GOMU                           pmax      pmax
     comp=Z,78nm,6.0s
GOMU                           LR        LR
     comp=N,180nm,18.6s
GOMU                           LR        LR
     comp=E,210nm,18.6s
GOMU                           LR        LR
     comp=Z,130nm,18.0s
TNA  Tin City       37.90  32  P         P          00 31 42.5 -0.2
TNA                            IAmb      IAmb       00 31 44.5
     comp=Z,10nm,1.2s
WMQ  Urumqi         38.27 292 eP         P          00 31 47.8 +1.5
ZAA0 Zalesovo Array 38.55 309  P         P          00 31 47.9 -0.4
ZALV Zalesovo Beam  38.55 309  P         P          00 31 47.5 -0.8
     comp=Z,3.7nm,0.6s,baz=89,slow=8.2,SNR=18
ZALV                           PcP       PcP        00 33 57.4  0.0
     comp=Z,1.5nm,0.5s,baz=113,slow=2.5,SNR=5.4
ZALV                           ScP       ScP        00 37 29.4 -0.9
     comp=Z,0.7nm,0.4s,baz=90,slow=4.4,SNR=5.7
     comp=Z,3.7nm,0.6s
ZALV Zalesovo Beam  38.55 309  P         P          00 31 47.8 -0.5
MK31 Makanchi Array 41.25 298  P         P          00 32 10.4 -0.3
MK31 Makanchi Array 41.25 298  P         P          00 32 10.4 -0.3
MK31                           pmax      pmax
     comp=Z,11nm,0.7s
MKAR Makanchi Array 41.25 298  P         P          00 32 10.4 -0.3
     comp=Z,11nm,0.7s,baz=84,slow=9.8,SNR=118
MKAR                           ScP       ScP        00 37 40.0 -1.0
     comp=Z,0.6nm,0.7s,baz=63,slow=4.7,SNR=5.5
     comp=Z,11nm,0.7s
MKAR Makanchi Array 41.25 298  P         P          00 32 10.2 -0.5
MKAR                                     ScP        00 37 39.8 -1.2
CNBA Chernabura Isl 41.34  50  P         P          00 32 11.1 -0.2
MAKZ Makanchi       41.45 298  P         P          00 32 12.1 -0.3
MAKZ Makanchi       41.45 298  P         P          00 32 12.1 -0.3
MAKZ                           pmax      pmax
     comp=Z,14nm,0.9s
CHTO Chiang Mai     41.53 250  P         P          00 32 13.7 +0.4
CHTO Chiang Mai     41.53 250  P         P          00 32 13.7 +0.4
CHTO                           pmax      pmax
     comp=Z,9.0nm,0.6s
CMAR Chiang Mai Arr 41.77 250  P         P          00 32 15.7 +0.4
     comp=Z,2.2nm,0.5s,baz=45,slow=7.0,SNR=11
     comp=Z,2.2nm,0.5s
CMAR Chiang Mai Arr 41.77 250  P         P          00 32 15.0 -0.2
CMAR Chiang Mai Arr 41.77 250 iP         P          00 32 16.0 +0.8
CMAR                           pmax      pmax
     comp=Z,2.0nm,0.5s
O16K Kokwok River B 41.80  42  P         P          00 32 16.4 +1.4
     baz=272
P16K Nushagak River 41.88  43  P         P          00 32 17.4 +1.9
     baz=273
TTA  Tatalina       42.73  37  P         P          00 32 24.0 +1.4
TTA  Tatalina       42.73  37  P         P          00 32 24.0 +1.4
TTA                            pmax      pmax
     comp=Z,5.0nm,1.0s
TTA  Tatalina       42.73  37  P         P          00 32 24.5 +1.9
     baz=270
KURK Kurchatov      42.75 305  P         P          00 32 22.4 -0.4
KURK Kurchatov      42.75 305  P         P          00 32 22.4 -0.4
KURK                           pmax      pmax
     comp=Z,15nm,0.9s
N18K Kilae Creek    42.85  41  P         P          00 32 24.9 +1.4
N18K                           IAmb      IAmb       00 32 26.8
     comp=Z,9.1nm,0.9s
N18K Kilae Creek    42.85  41  P         P          00 32 26.0 +2.5
     baz=273,SNR=9.0
SVW2 Sparrevohn     42.98  40  P         P          00 32 26.1 +1.6
SVW2                           IAmb      IAmb       00 32 27.6
     comp=Z,9.2nm,1.0s
P18K Big Mountain,  43.27  42  P         P          00 32 28.3 +1.4
P18K Big Mountain,  43.27  42  P         P          00 32 28.1 +1.2
     baz=275
L19K White Mountain 43.29  38  P         P          00 32 28.9 +1.9
     baz=272
CHIR Chirikof Islan 43.46  48  P         P          00 32 29.4 +1.0
     baz=278
M19K Big River Lodg 43.52  39  P         P          00 32 31.0 +2.2
     baz=273
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N19K Bonanza Creek  43.53  40  P         P          00 32 31.3 +2.3
     baz=274
J20K Nowinta River  43.56  35  P         P          00 32 30.7 +1.6
J20K Nowinta River  43.56  35  P         P          00 32 31.1 +2.0
     baz=271,SNR=19
K20K Telida         43.61  37  P         P          00 32 31.1 +1.6
K20K                           IAmb      IAmb       00 32 32.4
     comp=Z,7.4nm,0.9s
K20K Telida         43.61  37  P         P          00 32 31.5 +2.0
     baz=272,SNR=7.1
L20K Farewell, AK   43.73  38  P         P          00 32 32.2 +1.7
     baz=273
IMAR Indian Mountai 43.74  33  P         P          00 32 31.5 +1.0
H21K Melozitna Rive 44.12  33  P         P          00 32 34.9 +1.3
     baz=270,SNR=6.3
PDGK Podgornoye     44.13 294  P         P          00 32 32.9 -1.2
Q19K Cape Douglas,  44.13  43  P         P          00 32 34.5 +0.8
     baz=276
RSO  Redoubt South  44.41  41  P         P          00 32 37.9 +1.7
I21K Tanana         44.47  34  P         P          00 32 38.3 +1.9
     baz=272
PPLA Purkeypile     44.48  37  P         P          00 32 38.9 +2.2
     baz=274
OHAK Old Harbor     44.54  45  P         P          00 32 37.6 +0.7
     baz=278
KDAK Kodiak Island  44.83  44  P         P          00 32 40.0 +0.7
     baz=278
BPAW Bear Paw Mtn.  44.95  35  P         P          00 32 41.4 +1.3
BPAW Bear Paw Mtn.  44.95  35  P         P          00 32 41.9 +1.7
     baz=274
MLY  Manley         45.01  34  P         P          00 32 42.4 +1.7
MLY                            IAmb      IAmb       00 32 43.4
     comp=Z,8.2nm,0.8s
MLY  Manley         45.01  34  P         P          00 32 42.7 +2.1
     baz=273,SNR=13
KTH  Kantishna Hill 45.01  36  P         P          00 32 42.5 +1.7
KTH                            IAmb      IAmb       00 32 43.6
     comp=Z,12nm,0.9s
COLD Coldfoot       45.15  31  P         P          00 32 43.0 +1.3
     baz=271
PRZ  Przheval'sk    45.16 293  P         P          00 32 42.0 -0.3
PRZ                            IAmb      IAmb       00 32 43.8
     comp=Z,15nm,1.2s
PRZ  Przheval'sk    45.16 293  P         P          00 32 42.0 -0.3
PRZ                            pmax      pmax
     comp=Z,15nm,1.2s
TRF  Thorofare Moun 45.30  36  P         P          00 32 44.4 +1.2
     baz=275
TOLK Toolik Lake Re 45.38  29  P         P          00 32 44.1 +0.6
     baz=270
H23K Yukon River    45.47  33  P         P          00 32 46.3 +2.1
     baz=273,SNR=18
I23K Minto, Yukon-K 45.58  34  P         P          00 32 46.7 +1.6
     baz=274,SNR=7.2
NEA2 Nenana         45.75  35  P         P          00 32 48.1 +1.7
     baz=275,SNR=23
JIRN Jiri           45.83 271 eP         P          00 32 48.0  0.0
TARG Taragay, Kyrgy 45.84 292  P         P          00 32 48.0  0.0
TARG Taragay, Kyrgy 45.84 292  P         P          00 32 48.0  0.0
TARG                           pmax      pmax
     comp=Z,12nm,0.7s
MDOK Medeo          45.86 295  P         P          00 32 47.7 -0.1
MCK  McKinley       45.88  36  P         P          00 32 48.8 +1.3
     baz=276
RAMN Ramite         45.90 270 eP         P          00 32 48.3 -0.1
GUN  Gumba          45.94 271 eP         P          00 32 48.7 -0.1
     comp=Z,122nm,0.5s
PMR  Palmer         46.04  39  P         P          00 32 49.7 +1.0
     baz=278
MDM  Murphy Dome    46.07  34  P         P          00 32 50.5 +1.5
MDM                            IAmb      IAmb       00 32 51.5
     comp=Z,11nm,0.7s
GHO  Glory Hole Cre 46.11  39  P         P          00 32 50.6 +1.2
GHO                            IAmb      IAmb       00 32 51.4
     comp=Z,15nm,1.0s
KDJ  Kajisay        46.13 293  P         P          00 32 50.0  0.0
KDJ                            IAmb      IAmb       00 32 50.6
     comp=Z,4.9nm,0.6s
KDJ  Kajisay        46.13 293  P         P          00 32 50.0  0.0
KDJ                            pmax      pmax
     comp=Z,5.0nm,0.6s
H24K Noodor Dome    46.15  33  P         P          00 32 51.5 +1.9
H24K                           IAmb      IAmb       00 32 52.6
     comp=Z,12nm,0.8s
H24K Noodor Dome    46.15  33  P         P          00 32 51.8 +2.2
     baz=274,SNR=17
WRH  Wood River Hil 46.18  35  P         P          00 32 51.1 +1.3
COLA College        46.24  34ceP         P          00 32 51.9 +1.7
CCB  Clear Creek Bu 46.28  35  P         P          00 32 51.8 +1.2
SML  Sawmill        46.38  38  P         P          00 32 52.9 +1.4
     baz=278
POKR Poker Plat Res 46.40  34  P         P          00 32 53.4 +1.9
POKR Poker Plat Res 46.40  34  P         P          00 32 53.6 +2.1
     baz=276,SNR=6.9
KKN  Kakani         46.45 271 eP         P          00 32 52.6 -0.1
PKI  Pulchoki       46.47 271 eP         P          00 32 52.7 -0.2
PKIN Phulchoki      46.48 271 eP         P          00 32 52.6 -0.3
     comp=Z,14nm,0.4s
WAT6 Susitna Watana 46.55  37  P         P          00 32 53.8 +0.9
     baz=278
DHY  Denali Highway 46.66  37  P         P          00 32 54.6 +0.9
DHY                            IAmb      IAmb       00 32 55.6
     comp=Z,6.6nm,0.8s
DHY  Denali Highway 46.66  37  P         P          00 32 54.9 +1.2
     baz=278,SNR=8.1
IL31                46.66  34  P         P          00 32 54.3 +0.8
IL31                           IAmb      IAmb       00 32 56.5
     comp=Z,9.0nm,0.8s
ILAR Eielson Array  46.66  34  P         P          00 32 54.4 +0.8
     comp=Z,5.8nm,0.7s,baz=271,slow=5.7,SNR=50
     comp=Z,5.8nm,0.7s
DMN  Daman          46.68 271 eP         P          00 32 54.5  0.0
HDA  Harding Lake   46.68  35  P         P          00 32 54.3 +0.7
     baz=277,SNR=14
GKN  Gorkha         46.83 272 eP         P          00 32 55.6 +0.1
     comp=Z,40nm,0.5s
SCM  Sheep Creek Mo 46.85  38  P         P          00 32 56.4 +1.2
     baz=279
BOOM Boomskoye usch 46.86 294  P         P          00 32 56.3 +0.7
BOOM Boomskoye usch 46.86 294  P         P          00 32 56.3 +0.7
BOOM                           pmax      pmax
     comp=Z,12nm,0.7s
TKM2 Tokmak 2       46.95 295  P         P          00 32 56.7 +0.4
     SNR=48
TKM2 Tokmak 2       46.95 295 iP         P          00 32 56.6 +0.3
TKM2                           pmax      pmax
     comp=Z,22nm,0.6s
GLI  Glacier Island 47.12  40  P         P          00 32 57.8 +0.7
     baz=280
BRVK Borovoye       47.24 309  P         P          00 32 57.9 -0.3
BRVK Borovoye       47.24 309⇓eP         P          00 32 58.4 +0.2
BRVK                           pmax      pmax
     comp=Z,1.0nm,0.5s
K24K Donnelly Dome  47.27  36  P         P          00 32 58.9 +0.6
     baz=278
DANN Dangsing       47.31 273 eP         P          00 32 59.7 +0.3
BMAR Burnt Mountain 47.31  31  P         P          00 33 00.6 +2.0
J25K Salcha River,  47.33  34  P         P          00 32 58.4 -0.4
     baz=278
OTUK Ortayu         47.34 303  P         P          00 32 58.2 -0.9
KBK  Karagaybulak   47.49 295  P         P          00 33 00.8 +0.4
     SNR=31
PAX  Paxson         47.53  37  P         P          00 33 01.6 +1.3
     baz=279
KLU  Klutina        47.57  39  P         P          00 33 01.9 +1.2
     baz=280
USP  Ospenovka      47.57 296  P         P          00 33 00.9  0.0
     SNR=12
FRU1 Bishkek        47.65 295  P         P          00 33 01.7 +0.1
FRU1 Bishkek        47.65 295  P         P          00 33 01.7 +0.1
FRU1                           pmax      pmax
     comp=Z,14nm,0.5s
RIDG Independent Ri 47.69  36  P         P          00 33 02.0 +0.5
RIDG                           IAmb      IAmb       00 33 04.1
     comp=Z,4.7nm,0.6s
RIDG Independent Ri 47.69  36  P         P          00 33 02.2 +0.7
     baz=279,SNR=7.1
KOLN Koldanda       47.73 272 eP         P          00 33 02.5 -0.1
HARP HAARP          47.77  37  P         P          00 33 04.1 +2.0
     baz=280
AAK  Ala-Archa      47.80 295  P         P          00 33 03.1 +0.2
     SNR=6.0
AAK  Ala-Archa      47.80 295  P         P          00 33 02.9  0.0
AAK                            IAmb      IAmb       00 33 03.8
     comp=Z,7.8nm,0.9s
AAK  Ala-Archa      47.80 295deP         P          00 33 03.1 +0.2
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AAK                            pmax      pmax
     comp=Z,4.0nm,0.7s
EYAK Cordova Ski Ar 47.83  40  P         P          00 33 04.5 +1.9
     baz=281
KSH  Kashi          47.97 290  P         P          00 33 08.8 +4.6
KSH                            pmax      pmax
     comp=Z,8.0nm,0.6s
PYUN Piuthan        48.02 273 eP         P          00 33 04.9 +0.1
     comp=Z,36nm,0.3s
SCRK Sand Creek     48.02  35  P         P          00 33 04.8 +0.6
SCRK Sand Creek     48.02  35  P         P          00 33 05.1 +0.9
     baz=280,SNR=40
J26L Joseph Creek   48.12  34  P         P          00 33 05.0 +0.1
     baz=279
N25K Chitina, Valde 48.17  38  P         P          00 33 07.0 +1.7
     baz=281
EKS2 Erkin-Say      48.29 295  P         P          00 33 06.3 -0.2
     SNR=5.3
BMRM Bremner River  48.30  39  P         P          00 33 07.5 +1.2
BMRM                           IAmb      IAmb       00 33 08.7
     comp=Z,9.0nm,1.0s
BMRM Bremner River  48.30  39  P         P          00 33 07.9 +1.7
     baz=282
AML  Almayashu      48.54 295  P         P          00 33 09.5 +0.7
     SNR=8.9
M26K Nabesna, AK    48.76  37  P         P          00 33 11.8 +2.0
     baz=282,SNR=6.3
K27K Chicken        48.84  35  P         P          00 33 11.8 +1.5
K27K                           IAmb      IAmb       00 33 12.9
     comp=Z,7.0nm,1.0s
K27K Chicken        48.84  35  P         P          00 33 12.0 +1.7
     baz=281
EGAK Eagle          49.09  34  P         P          00 33 13.0 +0.8
     baz=281
L27K Beaver Creek,  49.15  36  P         P          00 33 14.4 +1.7
L27K                           IAmb      IAmb       00 33 15.6
     comp=Z,7.8nm,1.0s
L27K Beaver Creek,  49.15  36  P         P          00 33 14.8 +2.1
     baz=282,SNR=13
BCAR Beaver Creek A 49.16  36  P         P          00 33 14.8 +2.0
M27K Edge Creek, AK 49.27  37  P         P          00 33 15.6 +1.8
M27K                           IAmb      IAmb       00 33 16.6
     comp=Z,6.8nm,1.1s
M27K Edge Creek, AK 49.27  37  P         P          00 33 15.7 +1.9
     baz=283,SNR=10
ISLE Juniper Island 49.46  39  P         P          00 33 16.5 +1.3
ISLE                           IAmb      IAmb       00 33 17.5
     comp=Z,9.5nm,1.0s
BVCY Beaver Creek   49.72  37  P         P          00 33 19.1 +2.0
     baz=283
CTG  Chitna Glacier 49.85  39  P         P          00 33 19.7 +1.6
     baz=284
YUK3 Moose Creek    50.06  38  P         P          00 33 20.9 +1.1
     baz=284
KK31 Karatay Array  50.34 297  P         P          00 33 22.2 +0.2
KK31 Karatay Array  50.34 297  P         P          00 33 22.2 +0.2
KK31                           pmax      pmax
     comp=Z,3.0nm,0.7s
KKAR Karatay Array  50.34 297  P         P          00 33 22.3 +0.3
KKAR Karatay Array  50.34 297  P         P          00 33 22.3 +0.3
EPYK Eagle Plains   50.55  31  P         P          00 33 25.0 +1.8
EPYK Eagle Plains   50.55  31  P         P          00 33 25.1 +1.9
     baz=284,SNR=16
YUK4 Talbot Arm     51.01  38  P         P          00 33 28.6 +1.7
     baz=286
YUK6 Outpost Mounta 51.26  38  P         P          00 33 30.9 +2.1
     baz=287
INK  Inuvik         51.27  28  P         P          00 33 29.4 +0.9
     comp=Z,4.6nm,0.5s,baz=297,slow=8.6,SNR=11
     comp=Z,4.6nm,0.5s
INK  Inuvik         51.27  28  P         P          00 33 29.6 +1.1
INK                            IAmb      IAmb       00 33 30.5
     comp=Z,5.1nm,0.7s
INK  Inuvik         51.27  28  P         P          00 33 29.6 +1.1
INK                            pmax      pmax
     comp=Z,5.0nm,0.7s
INK  Inuvik         51.27  28  P         P          00 33 29.8 +1.3
     baz=285,SNR=7.3
M30M Minto, Yukon   51.51  36  P         P          00 33 32.7 +2.3
     baz=286,SNR=5.1
HYT  Haines Junctio 51.69  38  P         P          00 33 33.9 +1.9
HYT                            IAmb      IAmb       00 33 35.4
     comp=Z,10nm,1.0s
HYT  Haines Junctio 51.69  38  P         P          00 33 34.4 +2.5
     baz=287,SNR=8.2
N31M Braeburn, Yuko 52.29  37  P         P          00 33 38.6 +2.5
     baz=288
NIL  Nilore         52.53 285  P         P          00 33 38.0 -0.3
NIL  Nilore         52.53 285  P         P          00 33 38.0 -0.3
NIL                            pmax      pmax
     comp=Z,17nm,0.8s
PLBC Pleasant Camp  52.66  40  P         P          00 33 41.3 +2.4
     baz=289
M31M Drury Creek, Y 52.69  36  P         P          00 33 40.9 +1.8
     baz=289
ARU  Arti           52.73 316c iP        P          00 33 39.6 +0.2
ARU                            S         S          00 40 55.8 +1.2
ARU                            SS        SS         00 44 32.4 -2.4
ARU                            pmax      pmax
     comp=Z,5.0nm,1.4s
A36M Sachs Harbour  52.91  23  P         P          00 33 41.5 +1.1
A36M Sachs Harbour  52.91  23  P         P          00 33 42.4 +1.9
     baz=289
WHY  Whitehorse     52.97  38  P         P          00 33 43.4 +2.1
     baz=289
FARO Faro, Yukon    53.14  36  P         P          00 33 44.3 +1.9
     baz=289
MMPY Sheldon Lake,  53.92  35  P         P          00 33 50.0 +1.9
     baz=291
P33M Teslin, Yukon  54.08  38  P         P          00 33 51.6 +2.2
     baz=291
C36M Paulatuk       54.20  26  P         P          00 33 50.7 +0.7
C36M                           IAmb      IAmb       00 33 51.7
     comp=Z,4.3nm,0.9s
C36M Paulatuk       54.20  26  P         P          00 33 50.9 +0.9
     baz=292,SNR=5.1
AB31 Akbulak array  54.64 308 iP         P          00 33 53.0 -0.5
ABKAR Akbulak array 54.64 308  P         P          00 33 53.5  0.0
ABKAR Akbulak array 54.64 308  P         P          00 33 53.3 -0.1
ABKAR                          IAmb      IAmb       00 33 54.9
     comp=Z,4.7nm,0.5s
KBL  Kabul          55.15 288  P         P          00 33 56.7 -0.9
KBL  Kabul          55.15 288  P         P          00 33 56.7 -0.9
KBL                            pmax      pmax
     comp=Z,3.0nm,0.7s
AKTO Aktyubinsk     55.30 310  P         P          00 33 57.9 -0.3
DLBC Dease Lake     56.09  39  P         P          00 34 05.1 +1.3
DLBC                           IAmb      IAmb       00 34 07.4
     comp=Z,8.8nm,1.4s
EUNU Eureka         56.35   9  P         P          00 34 05.6 +0.3
EUNU                           IAmb      IAmb       00 34 06.4
     comp=Z,2.8nm,0.7s
T35M Bob Quinn      56.59  41  P         P          00 34 10.4 +3.1
     baz=295
KNRA Kununurra      57.44 193  P         P          00 34 13.9 +0.3
RES  Resolute Bay   58.95  15  P         P          00 34 23.4 +0.1
RES                            IAmb      IAmb       00 34 46.0
     comp=Z,5.8nm,0.9s
RES  Resolute Bay   58.95  15  P         P          00 34 23.4 +0.1
RES                            pmax      pmax
     comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 59.88 338 P         P          00 34 29.2 -0.7
     comp=Z,2.7nm,1.0s,baz=39,slow=7.9,SNR=4.1
     comp=Z,2.7nm,1.0s
HRA  Herat          60.07 291  P         P          00 34 31.4 -0.6
HRA                            IAmb      IAmb       00 34 32.8
     comp=Z,2.4nm,0.5s
WB0  Warramunga Arr 60.76 186  P         P          00 34 36.0 -0.4
WB0                            IAmb      IAmb       00 35 00.9
     comp=Z,4.4nm,1.1s
YKA  Yellowknife Ar 60.83  31  P         P          00 34 36.9 +0.5
     comp=Z,1.0nm,0.6s,baz=303,slow=6.7,SNR=6.5
     comp=Z,1.0nm,0.6s
YKA  Yellowknife Ar 60.83  31  P         P          00 34 36.3 -0.1
WRA  Warramunga Arr 60.94 186  P         P          00 34 36.8 -0.8
     comp=Z,0.5nm,0.4s,baz=2.0,slow=7.3,SNR=14
     comp=Z,0.5nm,0.4s
WRA  Warramunga Arr 60.94 186  P         P          00 34 36.8 -0.8
WRA  Warramunga Arr 60.94 186 iP         P          00 34 39.4 +1.8
WRA                            pmax      pmax
     comp=Z,1.0nm,0.4s
DAG  Danmarks Havn  61.67 355 iP         P          00 34 41.0 -0.8
ASAR Alice Springs  64.67 186  P         P          00 35 01.9 -0.3
     comp=Z,0.1nm,0.3s,baz=7.7,slow=7.6,SNR=1.7
ASAR                           PcP       PcP        00 35 33.6 -0.9
     comp=Z,0.4nm,0.5s,baz=3.1,slow=4.3,SNR=5.5
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             comp=Z,0.1nm,0.3s
FIA1   FINESS Array S    64.80 331   P      P       00 35 02.2 -0.4
FINES  FINESS Array B    64.80 331   P      P       00 35 02.5 -0.2
             comp=Z,1.6nm,0.5s,baz=37,slow=9.0,SNR=18
             comp=Z,1.6nm,0.5s
FINES  FINESS Array B    64.80 331   P      P       00 35 02.3 -0.3
SUMG   Summit            66.65 360   P      P       00 35 15.6 +0.8
SUMG                                 IAmb   IAmb    00 35 16.0
             comp=Z,3.9nm,0.6s
SUMG   Summit            66.65 360   P      P       00 35 15.6 +0.8
SUMG                                 pmax   pmax
             comp=Z,4.0nm,0.6s
SUMG   Summit            66.65 360 i P      P       00 35 15.0 +0.2
KIV    Kislovodsk        67.56 309 eP       P       00 35 22.8 +2.2
KIV                                  pmax   pmax
             comp=Z,4.0nm,1.0s
NEW    Newport           67.94  45   P      P       00 35 24.2 +1.3
             baz=307
PINE   Pine Mountain     68.50  50   P      P       00 35 28.6 +2.0
PINE                                 IAmb   IAmb    00 35 29.4
             comp=Z,7.3nm,0.8s
NC405  NORSAR Array S    69.89 336   P      P       00 35 34.4 -0.2
NB2    NORSAR Subarra    70.09 336   P      P       00 35 35.6 -0.3
             comp=Z,2.0nm,0.8s,baz=36,slow=6.5
NOA    NORSAR Array B    70.09 336   P      P       00 35 35.7 -0.3
             comp=Z,0.8nm,0.5s,baz=39,slow=6.2,SNR=7.8
             comp=Z,0.8nm,0.5s
MSO    Missoula          70.52  44   P      P       00 35 39.0 +0.2
             baz=310
AKASG  Malin Array Be    70.53 321   P      P       00 35 40.1 +1.4
             comp=Z,0.3nm,0.3s,baz=43,slow=6.9,SNR=4.1
             comp=Z,0.3nm,0.3s
AKBB   Malin Array Si    70.53 321⇑eP       P       00 35 41.9 +3.2
AKBB                                 pmax   pmax
             comp=Z,4.0nm,1.3s
FCC    Fort Churchill    70.83  27   P      P       00 35 40.5 +0.2
FCC    Fort Churchill    70.83  27   P      P       00 35 40.5 +0.2
FCC                                  pmax   pmax
             comp=Z,5.0nm,1.1s
EGMT   Eagleton          71.90  42   P      P       00 35 48.3 +1.2
             baz=312
HLID   Hailey            72.35  47   P      P       00 35 51.1 +1.1
             baz=310
BOZ    Bozeman (W)       72.54  44   P      P       00 35 52.2 +1.2
             baz=311
NVAR   Mina Array Bea    73.36  53   P      P       00 35 57.3 +1.2
             comp=Z,1.9nm,0.7s,baz=300,slow=5.3,SNR=18
             comp=Z,1.9nm,0.7s
NVAR   Mina Array Bea    73.36  53   P      P       00 35 56.9 +0.8
RLMT   Red Lodge         74.09  44   P      P       00 36 01.0 +0.8
             baz=313
BUR08  Bucovina Ar. S    74.55 320   P      P       00 36 02.8 +0.1
BURAR  Bucovina Array    74.56 320   P      P       00 36 03.4 +0.6
GRAC   Grapevine Rang    74.85  54   P      P       00 36 06.4 +1.9
             baz=310
R11A   Troy Canyon, C    75.05  52   P      P       00 36 07.1 +1.3
             baz=311
DUG    Dugway, Tooele    75.46  49   P      P       00 36 09.3 +1.3
             baz=312
BRTR   Keskin Array B    75.47 310   P      P       00 36 09.9 +1.8
             comp=Z,0.4nm,0.5s,baz=118,slow=4.9,SNR=2.6
             comp=Z,0.4nm,0.5s
BRTR   Keskin Array B    75.47 310   P      P       00 36 08.9 +0.8
FURC   Furnace Creek,    75.50  54   P      P       00 36 09.9 +1.8
             baz=311
BW06   Boulder Array     75.54  46   P      P       00 36 09.5 +0.9
             baz=313
PDAR   Pinedale Array    75.54  46   P      P       00 36 09.3 +0.8
             comp=Z,1.5nm,0.4s,baz=280,slow=0.8,SNR=22
             comp=Z,1.5nm,0.4s
PDAR   Pinedale Array    75.54  46   P      P       00 36 09.2 +0.6
TPNV   Topopah Spring    75.56  54   P      P       00 36 09.5 +0.7
TPNV                                 IAmb   IAmb    00 36 11.0
             comp=Z,4.3nm,0.8s
TPNV   Topopah Spring    75.56  54   P      P       00 36 09.5 +0.7
TPNV                                 pmax   pmax
             comp=Z,4.0nm,0.8s
TPNV   Topopah Spring    75.56  54   P      P       00 36 09.3 +0.5
             baz=311
ULM    Lac du Bonnet     76.67  33   P      P       00 36 14.5  0.0
             comp=Z,2.0nm,0.5s,baz=306,slow=6.1,SNR=2.6
             comp=Z,2.0nm,0.5s
RSSD   Black Hills       77.47  42   P      P       00 36 19.9 +0.5
             baz=316
GERES  GERESS Array B    78.78 327   P      P       00 36 26.2 -0.1
             comp=Z,0.2nm,0.4s,baz=30,slow=8.0,SNR=2.7
             comp=Z,0.2nm,0.4s
N23A   Red Feather La    78.78  45   P      P       00 36 28.0 +1.3
             baz=315
ISCO   Idaho Springs     79.74  46   P      P       00 36 33.2 +1.2
             baz=316
EYMN   Ely               80.27  32   P      P       00 36 34.2 -0.1
EYMN                                 IAmb   IAmb    00 36 36.9
             comp=Z,8.9nm,1.4s
EYMN   Ely               80.27  32   P      P       00 36 34.4 +0.1
             baz=323
S22A   4UR Ranch, Cre    80.53  48   P      P       00 36 37.9 +1.7
             baz=315
ECSD   EROS Data Cent    81.34  38   P      P       00 36 40.1  0.0
ECSD   EROS Data Cent    81.34  38   P      P       00 36 40.3 +0.2
             baz=320
SCHQ   Schefferville     81.72  15   P      P       00 36 42.1 +0.3
             comp=Z,0.6nm,0.4s,baz=306,slow=8.7,SNR=1.7
             comp=Z,0.6nm,0.4s
SCHQ   Schefferville     81.72  15   P      P       00 36 42.1 +0.3
T25A   Trinidad          82.30  47   P      P       00 36 46.5 +1.0
             baz=317
ANMO   Albuquerque       82.73  49   P      P       00 36 49.5 +1.9
             comp=Z,0.9nm,0.6s,baz=319,slow=9.8,SNR=3.8
             comp=Z,0.9nm,0.6s
ANMO   Albuquerque       82.73  49⇓eP       P       00 36 49.6 +1.9
ANMO                                 pmax   pmax
             comp=Z,2.0nm,1.3s
ANMO   Albuquerque       82.73  49   P      P       00 36 49.4 +1.7
             baz=316
MNTX   Cornudas Mount    85.68  51   P      P       00 37 03.3 +0.9
             baz=316
TRQ    Mont Tremblant    87.74  23   P      P       00 37 13.4 +1.2
TRQ                                  IAmb   IAmb    00 37 34.1
             comp=Z,5.2nm,1.2s
CCM    Cathedral Cave    88.32  38   P      P       00 37 15.4 +0.4
             baz=324
TX31   Lajitas Ar. Si    88.41  52   P      P       00 37 16.3 +0.6
TX31                                 IAmb   IAmb    00 37 17.1
             comp=Z,4.1nm,0.8s
TXAR   Lajitas Array     88.41  52   P      P       00 37 16.6 +0.9
             comp=Z,0.8nm,0.6s,baz=299,slow=3.6,SNR=12
             comp=Z,0.8nm,0.6s
TXAR   Lajitas Array     88.41  52   P      P       00 37 16.4 +0.7
U40A   Yellville         88.91  40   P      P       00 37 18.3 +0.5
             baz=323
MIAR   Mount Ida         89.99  42   P      P       00 37 23.6 +0.7
             baz=323
LPAZ   La Paz           145.27  53   PKPbc  PKPab   00 44 01.6  0.0
             comp=Z,1.6nm,0.5s,baz=22,slow=3.3,SNR=14
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*SKHL **29** 00:35:14.7±0.2, 44°.20N×146°.90E, h127km±2km, mb4.9/4, msha5.6/3*

*JMA **29** 00:35:14.8±0.3, 44°N±1°×14°7E±°, h130km±3km, MV3.6/32, NEAR KUNASHIRI ISLAND*

ISC 29 00:35:13.8±2.3**, 44°.13N**±0°.08×**147°.01E**±0°.10**, h133**km±14km**, n20, σ0s.71**/32**, Kuril Islands**

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Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                     Op     ISC         h  m  s   ISC
SHO    Shikotan           0.29 206 i P      Pn      00 35 32.6 +0.4
SHO                                  AMB    AMB     00 35 33.1
             470nm,0.4s
SHO                                i S      Sn      00 35 46.0 -0.1
SHO                                  A      A       00 35 46.3
             2µm,0.3s
SHO                                  A      A       00 35 46.3
             2µm,0.3s
YUK    Yuzh-Kuril'sk      0.83 264 eP       Pn      00 35 35.5 +0.1
YUK                                  AMB    AMB     00 35 36.3
             210nm,0.4s
YUK                                  AMB    AMB     00 35 36.3
             260nm,0.4s
YUK                                  AMB    AMB     00 35 36.3
             2µm,0.4s
YUK                                eS       Sn      00 35 51.2 -0.6
YUK                                  A      A       00 35 52.5
             790nm,0.2s
YUK                                  A      A       00 35 52.5
             650nm,0.2s
GLVR   Golovnino          1.14 250 eP       Pn      00 35 38.7 +0.5
GLVR                                 AMB    AMB     00 35 39.3
             660nm,0.4s
GLVR                               erx      rx      00 35 48.7
NEM2   Nemuro 2           1.19 230   P      Pn      00 35 39.2 +0.4
NEM2                               eS       Sn      00 35 57.2 -0.5
NMR    Nemuro--Hokkai     1.20 231 i P      Pn      00 35 39.2 +0.4
NMR                                i S      Sn      00 35 57.4 -0.4
KUR    Kuril'sk           1.26  29 eP       Pn      00 35 39.8 +0.4
KUR                                i S      Sn      00 35 58.5 -0.5
KUR                                  A      A       00 36 08.8
             390nm,0.2s
KUR                                  A      A       00 36 08.8
             190nm,0.2s
JRA    Rausu              1.37 263   P      Pn      00 35 41.0 +0.4
JNSB   Nemuroshibetsu     1.49 257 eP       Pn      00 35 42.7 +0.8
JKHN   Kushirohamanak     1.70 233 eP       Pn      00 35 44.9 +0.6
JNK    Nakash             1.74 253 eP       Pn      00 35 45.4 +0.6
AKK    Akkeshi            1.93 235 eP       Pn      00 35 47.3 +0.3
AKK                                eS       Sn      00 36 12.0 -0.4
JAK    Akkeshi            2.03 237 eP       Pn      00 35 48.5 +0.4
JAK                                eS       Sn      00 36 14.4 -0.1
JTKR   Abashiri--Toko     2.24 267 eP       Pn      00 35 51.1 +0.3
JTKR                               eS       Sn      00 36 18.5 -0.7
JAR    Ashorobuto         2.49 252 eP       Pn      00 35 55.2 +1.2
JAR                                eS       Sn      00 36 25.7 +0.9
JOB    Onbets             2.61 243 eP       Pn      00 35 56.5 +1.0
JOB                                eS       Sn      00 36 27.4 -0.2
JMP    Maruseppu          2.63 269 eP       Pn      00 35 56.1 +0.3
JCH    Churui             3.06 242 eP       Pn      00 36 01.6 +0.4
JCH                                eS       Sn      00 36 36.9 -0.9
JKK2   Kamakawa 2         3.08 267 eP       Pn      00 36 02.4 +0.8
JNBK   Urakawa-nobuka     3.62 241 eP       Pn      00 36 08.3 -0.2
JNBK                               eS       Sn      00 36 48.8 -2.1
YSS    Yuzh-Sakhalins     4.11 315 eP       Pn      00 36 15.1 +0.2
YSS                                  AMB    AMB     00 36 16.1
             10.0nm,0.3s
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*IDC **29** 00:43:03.9±0.8, 16°.62S×167°.45E, h0km, mb4.5/19, mbtmp4.5/21, ML4.3/2, MS4.0/33, Error ellipse: s-maj=22.1km s-min=16.1km az=116.0*

*BJI **29** 00:43:05.3±0.0, 16°.74S×167°.67E, h19km, mb4.9/20, mB5.3/12, Ms4.6/3, Ms7 4.4/3*

*NOU **29** 00:43:05.0, 16°.57S×167°.61E, h16km, MLv5.1/15, Vanuatu Islands*

*NEIC **29** 00:43:06.6±2.2, 16°.79S±0°.07×167°.40E±0°.05, h10km±1km, mb4.8/31, Error ellipse: s-maj=12.4km s-min=7.3km az=345.0*

ISC 29 00:43:07.3±0.4**, 16°.71S**±0°.05×**167°.44E**±0°.06**, h20**km**, n156, σ1s.24**/128**, mb4.8**/44**, MS4.0**/33**, 2C, Vanuatu Islands**

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Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                     Op     ISC         h  m  s   ISC
DVP    Devils Point       1.24 145   P      Pn      00 43 28.3 -1.1
RTV    Rentapao           1.43 139   P      Pn      00 43 30.3 -1.8
LIFNC  LIFOU              4.05 183          Pn      00 44 05.8 -2.4
LIFNC  LIFOU              4.05 183   P      Pn      00 44 07.9 -0.3
MARNC  Mare, Loyalty      4.78 173          Pn      00 44 15.8 -2.4
KOUNC  Koumac, New Ca     4.86 218   Pn     Pn      00 44 19.1 -0.2
KOUNC  Koumac, New Ca     4.86 218   P      Pn      00 44 20.6 +1.4
YATNC  Mamie plateau,     5.35 185   P      Pn      00 44 24.9 -1.1
DZM    Mont Dzumac        5.42 190 ePn      Pn      00 44 27.7 +0.6
             356nm,24.4s
DZM                                eSn      Sn      00 45 28.6 -0.3
DZM    Mont Dzumac        5.42 190   Pn     Pn      00 44 27.1  0.0
             15nm,0.3s,baz=47,slow=17,SNR=92
DZM                                  Sn     Sn      00 45 31.0 +2.0
             8.9nm,0.3s,baz=106,slow=21,SNR=3.3
             34nm,0.3s
DZM    Mont Dzumac        5.42 190          Pn      00 44 25.9 -1.1
DZM    Mont Dzumac        5.42 190   P      Pn      00 44 27.1  0.0
NOUC   Port Laguerre      5.47 191   P      Pn      00 44 28.3 +0.6
ONTNC  Ouen Toro          5.65 189          Pn      00 44 30.2 +0.1
ONTNC  Ouen Toro          5.65 189   P      Pn      00 44 31.0 +0.9
OUENC  Ouen Island, N     5.71 186          Pn      00 44 31.2 +0.2
OUENC  Ouen Island, N     5.71 186   P      Pn      00 44 31.7 +0.7
PINNC  Pines Island,      5.88 180          Pn      00 44 33.4 +0.1
MSVF   Nonsavu           10.19  97   Pn     Pn      00 45 36.4 +3.9
             0.1nm,0.3s,baz=266,slow=18,SNR=5.2
MSVF                                 LR     LR      00 48 37.8
             comp=Z,2µm,18.2s,baz=258,slow=33
MSVF   Nonsavu           10.19  97   Pn     Pn      00 45 35.0 +2.4
HNR    Honiara           10.27 314   Pn     Pn      00 45 35.3 +1.6
             17nm,0.3s,baz=85,slow=2.5,SNR=5.3
HNR                                  Sn     Sn      00 47 26.0 -2.3
             19nm,0.3s,baz=359,slow=23,SNR=8.0
HNR                                  LR     LR      00 49 11.6
             comp=Z,176nm,21.1s,baz=161,slow=36
HNR    Honiara           10.27 314          Pn      00 45 34.5 +0.9
EIDS   Eidsvold          17.52 238   P      P       00 47 12.1 +0.6
             baz=17,SNR=4.5
EIDS   Eidsvold          17.52 238   P      Pn      00 47 10.7 +0.2
KRVT   Keravat (AS076    19.51 307   P      P       00 47 34.3 +0.9
             0.5nm,0.3s,baz=133,slow=19,SNR=5.3
             40nm,0.9s
ARMA   Armidale          19.88 224   P      P       00 47 38.9 +1.5
             baz=20,SNR=6.5
ARMA   Armidale          19.88 224   Pn     P       00 47 39.0 +1.6
ARMA                                 IAmb   IAmb    00 47 46.4
             comp=Z,28nm,1.0s
RMQ    Roma              19.89 238   P      P       00 47 39.1 +1.6
             baz=20,SNR=9.3
AFI    Afiamalu          20.23  85   LR     LR      00 53 38.9
             comp=Z,418nm,19.9s,baz=240,slow=31
CTA    Charters Tower    20.38 257   P      P       00 47 44.6 +1.6
             comp=Z,22nm,0.8s,baz=82,slow=11,SNR=28
CTA                                  LR     LR      00 54 57.9
             comp=Z,557nm,18.4s,baz=87,slow=35
             comp=Z,22nm,0.8s
CTAO   Charters Tower    20.38 257          P       00 47 44.3 +1.3
CTAO                                 IAmb   IAmb    00 47 46.1
             comp=Z,26nm,0.8s
PMG    Port Moresby      21.04 288   LR     LR      00 55 11.7
             comp=Z,768nm,18.3s,baz=120,slow=35
MTSU   Mount Surprise    22.11 263   P      P       00 48 03.6 +2.0
             baz=22,SNR=10
URZ    Urewera           23.09 160   LR     LR      00 56 20.0
             comp=Z,431nm,19.9s,baz=32,slow=34
URZ    Urewera           23.09 160   P      P       00 48 13.1 +1.3
URZ                                  IAmb   IAmb    00 48 32.0
             comp=Z,62nm,1.2s
COEN   Coen              23.56 273   P      P       00 48 16.8 +0.2
QLP    Quilpie           23.67 242   P      P       00 48 18.6 +1.0
             baz=24,SNR=7.2
BKZ    Black Stump Fm    23.73 162   P      P       00 48 18.9 +0.7
BKZ                                  IAmb   IAmb    00 48 40.3
             comp=Z,46nm,1.3s
CNB    Canberra Magne    24.57 218   P      P       00 48 27.4 +1.4
             baz=24,SNR=4.9
CMSA   Cobar Meteorol    24.67 229   P      P       00 48 27.9 +1.1
             baz=25,SNR=11
CAN    Canberra          24.79 218   P      P       00 48 27.7 -0.3
CAN                                  IAmb   IAmb    00 48 47.6
             comp=Z,54nm,1.4s
QIS    Mount Isa         26.64 257   P      P       00 48 46.2 +1.3
             baz=26,SNR=8.4
RPZ    Rata Peaks        27.10 174   LR     LR      00 59 25.1
             comp=Z,552nm,18.4s,baz=348,slow=36
STKA   Stephens Creek    27.89 232   P      P       00 48 56.9 +1.0
             comp=Z,41nm,0.8s,baz=57,slow=7.6,SNR=63
             comp=Z,41nm,0.8s
STKA   Stephens Creek    27.89 232   P      P       00 48 57.0 +1.0
             baz=28,SNR=45
STKA   Stephens Creek    27.89 232   P      P       00 48 56.4 +0.4
STKA                                 IAmb   IAmb    00 48 57.9
             comp=Z,10nm,0.8s
HTT    Hallett           30.59 232   P      P       00 49 20.7 +0.7
             baz=30,SNR=8.5
WR0    Warramunga Arr    31.37 259   P      P       00 49 25.3 -1.7
WB0    Warramunga Arr    31.51 259   P      P       00 49 27.0 -1.2
WB0                                  IAmb   IAmb    00 49 29.2
             comp=Z,5.7nm,0.8s
WRA    Warramunga Arr    31.56 259   P      P       00 49 28.4 -0.3
             comp=Z,3.3nm,0.8s,baz=89,slow=8.3,SNR=27
WRA                                  LR     LR      01 01 08.4
             comp=Z,381nm,21.8s,baz=188,slow=34
             comp=Z,3.3nm,0.8s
WRA    Warramunga Arr    31.56 259   P      P       00 49 27.4 -1.3
ASAR   Alice Springs     32.18 252   P      P       00 49 33.7 -0.4
             comp=Z,35nm,0.8s,baz=78,slow=8.6,SNR=331
             comp=Z,35nm,0.8s
BBOO   Buckleboo         32.54 235   P      P       00 49 37.9 +0.8
             baz=32,SNR=7.0
BBOO   Buckleboo         32.54 235   P      P       00 49 37.0 -0.1
KNRA   Kununurra         37.12 266   P      P       00 50 15.8 -1.0
             baz=37,SNR=6.2
KNRA   Kununurra         37.12 266   P      P       00 50 15.6 -1.2
KNRA                                 IAmb   IAmb    00 50 16.7
             comp=Z,18nm,0.8s
FAKI   Fak Fak           37.19 288   P      P       00 50 16.5 -1.0
FAKI                                 IAmb   IAmb    00 50 17.8
             comp=Z,24nm,1.0s
WRKA   Warakurna         37.40 251   P      P       00 50 18.6 -0.6
             baz=37,SNR=17
GUMO   Guam              37.46 322   LR     LR      01 04 33.2
             comp=Z,142nm,20.3s,baz=90,slow=34
FORT   Forrest           38.47 241   P      P       00 50 28.2 +0.2
             baz=38,SNR=23
FORT   Forrest           38.47 241   P      P       00 50 28.2 +0.2
SIJI   Sorong            38.94 290   P      P       00 50 31.6 -0.6
             comp=Z,11nm,0.8s,baz=99,slow=7.4,SNR=12
SIJI                                 LR     LR      01 06 25.4
             comp=Z,270nm,21.3s,baz=38,slow=36
             comp=Z,11nm,0.8s
MSAI   Masohi            40.08 285   P      P       00 50 40.4 -1.3
             comp=Z,626nmcomp=Z,6.4nm,0.5s
TBI    Tubuai            40.91 106 eLR      LR      01 02 20.2
             comp=Z,237nm,25.5s
PPT2   Papeete2          41.02  98 eLR      LR      01 02 41.3
             comp=Z,235nm,25.0s
LBMI   Labuha            42.45 288   P      P       00 50 59.5 -1.7
             comp=Z,1µmcomp=Z,32nm,1.3s
SOEI   Soe               42.52 274   P      P       00 51 01.4 -0.6
             comp=Z,14nm,0.9s
BATI   Baumata           42.99 273   P      P       00 51 05.5 -0.2
             comp=Z,12nm,0.5s,baz=76,slow=6.1,SNR=4.7
             comp=Z,12nm,0.5s
BATI   Baumata           42.99 273   P      P       00 51 05.3 -0.4
             comp=Z,15nm,0.8s
SANI   Sanana            43.29 285   P      P       00 51 09.2 +1.2
MBWA   Marble Bar        45.22 257   P      P       00 51 23.2 -0.2
MBWA                                 IAmb   IAmb    00 51 25.5
             comp=Z,12nm,1.2s
EDFI   Ende, Flores      45.24 274   P      P       00 51 21.2 -2.6
             comp=Z,6.0nm,1.2s
DAV    Davao City (W)    47.67 296   LR     LR      01 09 32.8
             comp=Z,273nm,21.7s,baz=202,slow=33
NWAO   Narrogin (SRO)    47.90 241   P      P       00 51 42.9 -1.5
BNSI   Bone              47.98 279   P      P       00 51 44.2 -1.0
             comp=Z,26nm,1.1s
KAPI   Kappang           48.13 278   P      P       00 51 45.6 -0.7
             comp=Z,17nm,0.7s,baz=88,slow=5.3,SNR=9.4
             comp=Z,17nm,0.7s
KAPI   Kappang           48.13 278   P      P       00 51 45.7 -0.6
MORW   Morawa            48.59 246   P      P       00 51 49.2 -0.5
MORW                                 IAmb   IAmb    00 52 02.6
             comp=Z,24nm,1.4s
TOLI2  Tolitoli          49.30 286   P      P       00 51 54.2 -1.2
TOLI2                                IAmb   IAmb    00 51 55.1
             comp=Z,17nm,1.3s
MPSI   Mapaga            49.82 285   P      P       00 51 58.8 -0.5
             comp=Z,29nm,0.9s
MYLDM  Lahad Datu        53.04 290   P      P       00 52 24.3 +0.9
MYLDM                                IAmb   IAmb    00 52 43.2
             comp=Z,9.5nm,1.0s
KSM    Kuching           59.16 282   P      P       00 53 05.5 -1.7
KSM                                  IAmb   IAmb    00 53 18.5
             comp=Z,12nm,1.0s
LEM    Lembang           59.20 272   P      P       00 53 07.4 -0.3
             comp=Z,32nm,0.7s,baz=205,slow=24,SNR=4.9
             comp=Z,32nm,0.7s
JGF    Kuroka            59.32 332   P      P       00 53 09.5 +1.5
JGF                                  IAmb   IAmb    00 53 15.6
             comp=Z,5.4nm,0.8s
MJAR   Matsushiro Arr    59.73 333   P      P       00 53 08.8 -1.9
             comp=Z,2.0nm,0.9s,baz=163,slow=8.8,SNR=7.4
             comp=Z,2.0nm,0.9s
MJAR   Matsushiro Arr    59.73 333   P      P       00 53 11.1 +0.4
VNDA   Vanda             60.90 181   P      P       00 53 17.6 -0.6
             comp=Z,1.1nm,0.8s,baz=18,slow=7.0,SNR=4.3
             comp=Z,1.1nm,0.8s
VNDA   Vanda             60.90 181   P      P       00 53 17.6 -0.6
SBA    Scott Base        61.17 180   P      P       00 53 20.2 +0.2
SBA                                  IAmb   IAmb    00 53 26.1
             comp=Z,9.0nm,0.9s
CASY   Casey             61.77 203   P      P       00 53 23.8 -0.4
CASY                                 IAmb   IAmb    00 53 24.5
             comp=Z,9.3nm,0.8s
ASAJ   Asahikawa         64.65 340   LR     LR      01 18 56.5
             comp=Z,66nm,19.3s,baz=84,slow=33
KSRS   Korea Array       65.46 326   P      P       00 53 48.3 -0.6
             comp=Z,0.5nm,0.4s,baz=137,slow=8.3,SNR=4.3
             comp=Z,0.5nm,0.4s
KSAR   Wonju Array Be    65.47 326   P      P       00 53 49.9 +0.9
NJ2    Nanjing           67.21 316   P      P       00 54 01.3 +1.1
USRK   Ussuriysk Ar.     68.72 333   P      P       00 54 09.3 -0.2
             comp=Z,7.8nm,1.1s,baz=116,slow=4.4,SNR=4.8
             comp=Z,7.8nm,1.1s
USRK   Ussuriysk Ar.     68.72 333   P      P       00 54 10.4 +0.9
SHEM   Shemya Is, Ala    69.39   4   LR     LR      01 19 11.3
             comp=Z,121nm,20.7s,baz=132,slow=31
PETK   Petropavlovsk-    70.03 354   P      P       00 54 16.9 -0.5
             comp=Z,2.7nm,1.0s,baz=142,slow=5.4,SNR=1.7
PETK                                 LR     LR      01 20 32.9
             comp=Z,104nm,19.9s,baz=220,slow=32
             comp=Z,2.7nm,1.0s
BNX    BinXian           71.95 332 ⇑P       P       00 54 30.0 +0.8
BNX                                  pmax   pmax
             comp=Z,14nm,0.7s
BNX                                  pmax   pmax
             comp=Z,340nm,9.0s
KLR    Kul'dur           72.88 336   P      P       00 54 34.4 -0.3
             comp=Z,2.3nm,0.8s,baz=124,slow=8.2,SNR=5.8
             comp=Z,2.3nm,0.8s
QSPA   South Pole Qui    73.33 180   P      P       00 54 37.1 -0.3
KMI    Kunming           75.49 302 ⇑P       P       00 54 52.5 +1.7
KMI                                  pmax   pmax
             comp=Z,8.0nm,1.0s
CMAR   Chiang Mai Arr    75.91 294   P      P       00 54 51.8 -1.3
             comp=Z,1.0nm,0.4s,baz=124,slow=4.2,SNR=6.3
CMAR                                 LR     LR      01 29 03.8
             comp=Z,29nm,19.1s,baz=60,slow=36
             comp=Z,1.0nm,0.4s
CMAR   Chiang Mai Arr    75.91 294   P      P       00 54 51.9 -1.1
PZH    PanZhiHua         76.90 303   P      P       00 55 01.3 +2.6
PZH                                  pmax   pmax
             comp=Z,10.0nm,0.5s
HHC    Hu-ho-hao-te      77.19 320 eP       P       00 55 02.8 +2.8
HHC                                  pmax   pmax
             comp=Z,45nm,0.9s
MA2    Magadan           77.22 351   LR     LR      01 23 24.1
             comp=Z,75nm,20.8s,baz=135,slow=31
SEY    Seymchan          80.25 353   LR     LR      01 27 38.8
             comp=Z,87nm,19.4s,baz=154,slow=33
KDAK   Kodiak Island     81.25  20   LR     LR      01 25 15.9
             comp=Z,128nm,20.7s,baz=205,slow=31
YAK    Yakutsk           83.96 343   LR     LR      01 32 18.3
             comp=Z,57nm,18.7s,baz=102,slow=35
GTA    Gaotai            84.15 314 eP       P       00 55 36.8 -0.5
GTA                                  pP     sP      00 55 46.5 +1.4
GTA                                  sP     pP      00 55 50.0 +7.0
GTA                                  pmax   pmax
             comp=Z,4.0nm,0.9s
SONM   Songino Array     84.18 324   P      P       00 55 36.8 -0.4
             comp=Z,2.9nm,0.9s,baz=142,slow=5.0,SNR=14
             comp=Z,2.9nm,0.9s
SONM   Songino Array     84.18 324   P      P       00 55 38.4 +1.2
BELA   Belgrano 2        84.75 175   P      P       00 55 38.1 -1.5
KNK    Knik Glacier      85.38  20   P      P       00 55 42.7 -0.1
YBH    Yreka Blue Hor    86.69  45   LR     LR      01 24 59.9
             comp=Z,61nm,21.8s,baz=18,slow=29
PFO    Pinyon Flats O    88.01  54   LR     LR      01 28 47.0
             comp=Z,160nm,18.6s,baz=262,slow=31
BBB    Bella Bella       88.31  34   LR     LR      01 31 10.2
             comp=Z,49nm,18.1s,baz=198,slow=33
ILAR   Eielson Array     88.35  18   P      P       00 55 55.2 -2.0
             comp=Z,0.3nm,0.6s,baz=239,slow=4.9,SNR=2.2
ILAR                                 LR     LR      01 33 18.4
             comp=Z,88nm,18.1s,baz=230,slow=34
             comp=Z,0.3nm,0.6s
NVAR   Mina Array Bea    88.43  49   P      P       00 55 59.4 +0.9
             comp=Z,0.1nm,0.3s,baz=237,slow=8.2,SNR=2.3
NVAR                                 LR     LR      01 30 22.8
             comp=Z,101nm,19.1s,baz=104,slow=32
             comp=Z,0.1nm,0.3s
PALK   Pallekele         88.96 278   LR     LR      01 38 09.8
             comp=Z,42nm,18.3s,baz=248,slow=37
LPIG   La Paz            89.88  65   LR     LR      01 30 40.7
             comp=Z,108nm,18.1s,baz=215,slow=32
DLBC   Dease Lake        90.60  28   LR     LR      01 32 43.7
             comp=Z,64nm,18.2s,baz=194,slow=33
```

TROLL	Troll, Antarti	90.92	185	P	P	00 56 08.7	-0.8
ELK	Elko	91.48	48	LR	LR	01 33 52.3	
	comp=Z,58nm,18.0s,baz=284,slow=33						
SNAA	Sanae	91.59	183	P	P	00 56 11.2	-1.3
VNA3	Neumayer Olymp	92.25	181	P	P	00 56 14.0	-1.5
VNA2	Neumayer--Watz	92.52	182	P	P	00 56 16.1	-0.6
	baz=149,slow=2.0						
VNA1	Neumayer--Stat	92.82	181	P	P	00 56 16.9	-1.2
WMQ	Urumqi	94.22	314	*e*P	P	00 56 27.5	+2.4
WMQ				pP	pP	00 56 30.5	-0.3
WMQ				sP	sP	00 56 34.3	+1.4
WMQ				pmax	pmax		
	comp=Z,16nm,0.6s						
INK	Inuvik	94.70	19	LR	LR	01 33 56.8	
	comp=Z,100nm,20.2s,baz=234,slow=32						
PDAR	Pinedale Array	96.16	47	LR	LR	01 36 18.2	
	comp=Z,50nm,18.1s,baz=160,slow=33						
ANMO	Albuquerque	96.28	56	LR	LR	01 34 58.5	
	comp=Z,64nm,18.3s,baz=286,slow=32						
TXAR	Lajitas Array	97.07	62	LR	LR	01 33 45.5	
	comp=Z,51nm,18.9s,baz=172,slow=31						
MKAR	Makanchi Array	98.74	316	P	P	00 56 43.4	-2.1
	comp=Z,0.3nm,0.8s,baz=95,slow=6.2,SNR=3.9						
	comp=Z,0.3nm,0.8s						
MKAR	Makanchi Array	98.74	316	P	P	00 56 43.8	-1.6
YKA	Yellowknife Ar	99.22	27	LR	LR	01 37 27.4	
	comp=Z,56nm,18.6s,baz=308,slow=33						
ARCES	ARCESS Array B	122.19	345	PKP	PKPdf	01 02 00.5	+0.4
	comp=Z,1.9nm,0.6s,baz=23,slow=2.9,SNR=11						
ARCES	ARCESS Array B	122.19	345		PKPdf	01 02 00.3	+0.2
FINES	FINESS Array B	127.61	338	PKP	PKiKP	01 02 12.1	+0.9
	comp=Z,1.8nm,1.0s,baz=233,slow=0.7,SNR=4.8						
AKASG	Malin Array Be	132.45	325	PKP	PKPdf	01 02 21.1	+0.9
	comp=Z,0.6nm,0.4s,baz=49,slow=2.8,SNR=2.1						
AKASG	Malin Array Be	132.45	325		PKPdf	01 02 19.3	-0.8
NOA	NORSAR Array B	132.56	345	PKP	PKPdf	01 02 19.1	-1.0
	comp=Z,0.2nm,0.6s,baz=32,slow=1.9,SNR=1.5						
BRTR	Keskin Array B	133.90	309	PKP	PKPdf	01 02 23.8	+0.3
	comp=Z,0.5nm,0.7s,baz=117,slow=0.6,SNR=2.6						
CONA	Conrad Observa	141.10	329	*e*P	PKiKP	01 02 40.2	+1.1
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	141.46	332	PKhKP	PKPpre	01 02 32.7	
	comp=Z,0.6nm,0.7s,baz=79,slow=2.9,SNR=7.2						
WATA	Walderalm	143.54	332	*e*P	PKPab	01 02 38.1	+0.9
	comp=Z,1.3nm,0.6s						
ABTA	Abfaltersbach	143.55	331	*e*P	PKPab	01 02 35.9	-1.3
	comp=Z,6.4nm,0.7s,SNR=5.9						
WTTA	Wattenberg	143.57	332	*e*P	PKPab	01 02 36.4	-1.0
	comp=Z,4.5nm,0.8s						
MOTA	Moosalm	143.74	333	*e*P	PKPab	01 02 36.7	-1.3
	comp=Z,4.2nm,0.8s,SNR=5.6						
RETA	Reutte	143.78	333	*e*P	PKPab	01 02 36.9	-1.1
	comp=Z,4.1nm,1.2s						
SQTA	Sankt Quirin	143.79	332	*e*P	PKPab	01 02 37.0	-1.2
	comp=Z,6.7nm,0.7s						
FETA	Feichten	144.16	332	*e*P	PKPab	01 02 38.5	-1.1
	comp=Z,6.2nm,0.7s,SNR=6.4						
DAVA	Damuels	144.32	334	*e*P	PKPab	01 02 38.9	-1.2
	comp=Z,7.5nm,0.8s						
TORD	Torodi Ar. Bea	165.78	258	PKP	PKPdf	01 03 12.7	+1.1
	comp=Z,0.3nm,0.8s,baz=149,slow=1.1,SNR=1.6						
TORD				PKPab	PKPab	01 04 09.6	-1.5
	comp=Z,0.6nm,0.7s,baz=99,slow=3.8,SNR=3.6						
TORD	Torodi Ar. Bea	165.78	258		PKPdf	01 03 10.9	-0.8
TORD					PKPab	01 04 09.3	-1.8

IDC ***29*** *00:54:18.3±2.0, 16°.57S×167°.74E, h0^{km}, mb4.3/6, mbtmp4.4/8, ML4.6/2, MS3.3/3, Error ellipse: s-maj=44.0km s-min=28.7km az=108.0*

NEIC ***29*** *00:54:20.8±1.7, 16°.57S±0°.09×167°.7E±0°.1, h10^{km}±2^{km}, mb4.6/15, Error ellipse: s-maj=23.5km s-min=14.4km az=68.0*

NOU ***29*** *00:54:21.6, 16°.57S×167°.58E, h13^{km}, MLv4.8/17, Vanuatu Islands*

ISC 29 00:54:22.1±0.8**, 16°.58S**±0°.08×**167°.6E**±0°.1**, h20**^{km}**, n44,** σ**0^{s}.87**/44**, mb4.6**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.26	155	P	Pb	00 54 45.0	-0.2
RTV	Rentapao	1.43	148	P	Pb	00 54 47.7	-0.3
LIFNC	LIFOU	4.20	185		Pn	00 55 24.0	-0.9
LIFNC	LIFOU	4.20	185	P	Pn	00 55 25.6	+0.7
MARNC	Mare, Loyalty	4.89	176	Pn	Pn	00 55 33.8	-0.8
MARNC	Mare, Loyalty	4.89	176	P	Pn	00 55 33.9	-0.7
KOUNC	Koumac, New Ca	5.07	218	Pn	Pn	00 55 37.0	+0.1
KOUNC	Koumac, New Ca	5.07	218	P	Pn	00 55 37.2	+0.3
YATNC	Mamie plateau,	5.50	187	P	Pn	00 55 41.9	-1.0
DZM	Mont Dzumac	5.58	191	Pn	Pn	00 55 43.7	-0.4
	8.9nm,0.3s,baz=317,slow=3.6,SNR=96						
DZM				Sn	Sn	00 56 45.6	-2.1
	11nm,0.3s,baz=312,slow=23,SNR=11						
DZM				LR	LR	00 57 32.3	
	comp=Z,315nm,20.4s,baz=68,slow=35						
	16nm,0.3s						
DZM	Mont Dzumac	5.58	191	Pn	Pn	00 55 44.0	-0.1
DZM	Mont Dzumac	5.58	191	P	Pn	00 55 43.7	-0.4
NOUC	Port Laguerre	5.64	193	P	Pn	00 55 44.9	+0.1
ONTNC	Ouen Toro	5.81	191	Pn	Pn	00 55 47.1	0.0
ONTNC	Ouen Toro	5.81	191	P	Pn	00 55 47.5	+0.4
OUENC	Ouen Island, N	5.86	187	Pn	Pn	00 55 48.0	+0.2
OUENC	Ouen Island, N	5.86	187	P	Pn	00 55 48.8	+1.0
PINNC	Pines Island,	6.01	182		Pn	00 55 50.7	+0.8
MSVF	Nonsavu	10.03	98	LR	LR	00 59 23.9	
	comp=Z,166nm,19.9s,baz=222,slow=31						
HNR	Honiara	10.31	313	Pn	Pn	00 56 49.0	0.0
	9.2nm,0.3s,baz=76,slow=6.8,SNR=2.2						
HNR				Sn	Sn	00 58 42.3	-1.8
	9.9nm,0.3s,baz=25,slow=0.7,SNR=1.8						
HNR				LR	LR	01 00 14.8	
	comp=Z,157nm,21.0s,baz=222,slow=34						
	36nm,0.4s						
HNR	Honiara	10.31	313		Pn	00 56 49.8	+0.7
EIDS	Eidsvold	17.74	238		P	00 58 29.5	+0.8
ARMA	Armidale	20.09	224	P	Pn	00 58 56.8	+0.2
ARMA				IAmb	IAmb	00 59 05.4	
	comp=Z,26nm,1.4s						
CTA	Charters Tower	20.59	257	P	P	00 59 01.6	+1.6
	comp=Z,8.2nm,0.7s,baz=82,slow=11,SNR=11						
	comp=Z,8.2nm,0.7s						
CTAO	Charters Tower	20.59	257	P	P	00 59 01.5	+1.6
CTAO				IAmb	IAmb	00 59 02.7	
	comp=Z,8.6nm,0.8s						
STKA	Stephens Creek	28.11	232	P	P	01 00 13.2	+0.5
	comp=Z,14nm,0.8s,baz=62,slow=8.2,SNR=23						
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	28.11	232	P	P	01 00 13.4	+0.7
WB0	Warramunga Arr	31.71	259	P	P	01 00 43.9	-0.9
WB0				IAmb	IAmb	01 00 54.1	
	comp=Z,7.8nm,1.2s						
WRA	Warramunga Arr	31.76	259	P	P	01 00 44.0	-1.2
	comp=Z,1.4nm,0.8s,baz=89,slow=8.8,SNR=12						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	31.76	259	P	P	01 00 44.0	-1.2
ASAR	Alice Springs	32.38	252	P	P	01 00 50.5	-0.3
	comp=Z,15nm,0.7s,baz=79,slow=8.6,SNR=140						
	comp=Z,15nm,0.7s						
BBOO	Buckleboo	32.76	235	P	P	01 00 54.2	+0.3
KNRA	Kununurra	37.31	266	P	P	01 01 32.3	-0.9
KNRA				IAmb	IAmb	01 01 38.8	
	comp=Z,29nm,1.4s						
FORT	Forrest	38.69	241	P	P	01 01 44.2	-0.5
MORW	Morawa	48.80	246	P	P	01 03 06.3	+0.1
SBA	Scott Base	61.30	180	P	P	01 04 37.3	+1.6
SBA				IAmb	IAmb	01 04 51.7	
	comp=Z,3.1nm,1.1s						
CASY	Casey	61.96	203	P	P	01 04 40.6	+0.4
CASY				IAmb	IAmb	01 05 05.3	
	comp=Z,9.8nm,1.4s						
QSPA	South Pole Qui	73.46	180	P	P	01 05 53.6	+0.6
QSPA				IAmb	IAmb	01 05 54.9	
	comp=Z,4.2nm,0.8s						
CMAR	Chiang Mai Arr	76.02	294	P	P	01 06 09.2	+0.8
	comp=Z,0.8nm,0.3s,baz=129,slow=5.0,SNR=5.2						
	comp=Z,0.8nm,0.3s						
CMAR	Chiang Mai Arr	76.02	294	P	P	01 06 08.4	0.0
SONM	Songino Array	84.18	324	P	P	01 06 52.2	+0.2
	comp=Z,0.2nm,0.4s,baz=106,slow=5.1,SNR=1.8						
	comp=Z,0.2nm,0.4s						
SHL	Shillong	84.75	298	P	P	01 06 54.6	-0.9
SHL				IAmb	IAmb	01 06 56.2	
	comp=Z,6.9nm,0.9s						
BELA	Belgrano 2	84.86	175	P	P	01 06 54.6	-0.4
BELA				IAmb	IAmb	01 06 55.5	
	comp=Z,5.3nm,0.9s						
ARCES	ARCESS Array B	122.12	345	PKP	PKPdf	01 13 13.7	-1.1
	comp=Z,2.8nm,0.9s,baz=72,slow=2.9,SNR=5.8						

IDC 29 01:28:44.5±2.6**, 5°.51N**×**126°.95E, h0**^{km}**, mb3.4**/3**, mbtmp3.4**/3**, Error ellipse: s-maj=204.3km s-min=28.0km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.32	164	P	P	01 34 20.9	-1.3
	0.3nm,0.3s,baz=344,slow=9.5,SNR=8.9						
	0.3nm,0.3s						
ASAR	Alice Springs	29.78	167	P	P	01 34 54.9	+1.7
	0.1nm,0.5s,baz=345,slow=12,SNR=1.8						
	0.1nm,0.5s						
MKAR	Makanchi Array	56.23	324	P	P	01 38 26.6	-0.1
	0.2nm,0.3s,baz=128,slow=8.1,SNR=4.5						
	0.2nm,0.3s						

CRAAG ***29*** *01:41:30.1, 36°.35N×3°.36E, Ml3.0*

MDD ***29*** *01:41:32.1±0.9, 36°.26N×3°.43E, h10^{km}±9^{km}, Mb4.0/8, M_mb3.4/6, Error ellipse: s-maj=11.1km s-min=4.0km az=160.0*

CNRM ***29*** *01:41:51.7, 35°.45N×2°.04E, h80^{km}, ml3.4*

ISC 29 01:41:31.4±1.4**, 36°.31N**±0°.05×**3°.43E**±0°.05**, h19**^{km}±6^{km}**, n18,** σ**1^{s}.48**/26**, 6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.15	177	P	Pg	01 41 35.2	-0.8
ABMS	Boumerdes	0.44	6	P	Pg	01 41 40.2	-0.3
AKET	Djebel Ketaf	0.45	126	P	Pg	01 41 40.7	-0.1
ABA	Alger-Bouzarea	0.58	327	P	Pg	01 41 42.6	-0.5
EIBI	Ibiza	3.17	329	P	Pn	01 42 21.8	+1.5
EIBI				⇑*i*Vmb_V		01 42 24.0	
	602nm,SNR=0.9						
EIBI				S	Sn	01 42 57.4	-0.2
ETOS	Mallorca	3.48	352	P	Pn	01 42 25.0	+0.4
ETOS				⇑*i*Vmb_V		01 42 25.6	
	157nm,SNR=0.4						
ETOS				S	Sn	01 43 04.7	-0.6
ECOL	Islas Columbre	4.18	330	P	Pn	01 42 35.3	+1.2
ECOL				S	Sn	01 43 22.4	0.0
EZAR	Zarzadilla de	4.38	292	P	Pn	01 42 38.6	+1.6
EZAR				S	Sn	01 43 25.6	-2.0
ETOB	Tobarra	4.59	302	P	Pn	01 42 40.7	+0.8
ETOB				⇑*i*Vmb_V		01 42 42.3	
	158nm,SNR=0.8						
ETOB				S	Sn	01 43 31.1	-1.6
ECHE	Chera	4.77	315	P	Pn	01 42 44.3	+2.0
ECHE				⇑*i*Vmb_V		01 42 46.1	
	157nm,SNR=0.7						
TAF	Taforalt	4.99	254	P	Pn	01 42 46.1	+0.7
EMOS	Mosqueruela	5.08	324	P	Pn	01 42 48.1	+1.5
EMOS				⇑*i*Vmb_V		01 42 49.8	
	213nm,SNR=1.2						
EMOS				S	Sn	01 43 42.9	-1.8
JBK	JBK	5.28	250	P	Pn	01 42 51.9	+2.5
TDRA	Tendrara	5.55	236	P	Pn	01 42 54.8	+1.5
VSL	Villasalto	5.68	54	P	Pn	01 42 55.3	+0.6
VSL				S	Sn	01 43 57.6	-1.8
EJON	La Jonquera	6.14	356	P	Pn	01 43 02.6	+1.5
EJON				⇑*i*Vmb_V		01 43 03.6	
	74nm,SNR=0.2						
EJON				S	Sn	01 44 09.3	-1.6
AKLM	AKL	6.22	255	P	Pn	01 43 04.7	+2.4
MD31	MD31	7.57	245	P	Pn	01 43 20.3	-0.6

TUL ***29*** *01:47:13.9±0.7, 36°.84N±0°.01×98°.24W±0°.02, h6^{km}±5^{km}, ML2.6, mb_Lg2.0/12(NEIC), Error ellipse: s-maj=2.3km s-min=1.3km az=113.0*

NEIC 29 01:47:14.1±0.7**, 36°.84N**±0°.01×**98°.26W**±0°.02**, h8**^{km}±1^{km}**, Error ellipse: s-maj=2.8km s-min=1.5km az=132.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.75	233	Pg	Pg	01 47 27.9	-0.7
U32A				Sg	Sg	01 47 38.8	+0.4
T35A	Sooner Cattle	1.40	86	Pn	Pn	01 47 39.3	-0.6
R32A	Long Quarter,	1.62	347		Pn	01 47 43.1	+0.1
FNO	Franklin	1.72	156	Pn	Pn	01 47 44.4	+0.1
WMOK	Wichita Mounta	2.14	192	Pn	Pn	01 47 50.5	+0.4
TUL1	Leonard	2.19	114	Pn	Pn	01 47 51.6	+0.8
TUL1				IAmb_Lg		01 48 24.3	
	comp=Z,7.5nm,0.7s						
X34A	Smith Ranch, M	2.26	171	Pn	Pn	01 47 52.0	+0.4
CBKS	Cedar Bluff	2.30	330	IAmb_Lg		01 48 28.9	
	comp=Z,6.7nm,0.7s						
KSU1	Kansas State U	2.61	29	IAmb_Lg		01 48 42.0	
	comp=Z,6.2nm,0.7s						
AMTX	Amarillo	3.40	236	IAmb_Lg		01 49 07.9	
	comp=Z,5.5nm,1.0s						
HHAR	Hobbs	3.52	98	IAmb_Lg		01 49 12.3	
	comp=Z,3.2nm,0.7s						
S39A	Bolivar	4.03	76	Pn	Pn	01 48 14.9	-1.1
S39A				IAmb_Lg		01 49 18.7	
	comp=Z,1.9nm,1.1s						

IDC ***29*** *01:53:03.6±2.6, 25°.63S×177°.27W, h136^{km}±23^{km}, mb3.9/6, mbtmp4.5/9, Error ellipse: s-maj=25.5km s-min=20.7km az=57.0*

NEIC ***29*** *01:53:05.3±2.4, 25°.92S±0°.09×177°.3W±0°.1, h147^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=16.5km s-min=13.1km az=87.0*

ISC 29 01:53:06.6±0.6**, 25°.96S**±0°.07×**177°.3W**±0°.1**, h161**^{km}**, n43,** σ**1^{s}.09**/39**, mb4.3**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.33	189	P	Pn	01 53 58.4	-0.1
	226nm,0.3s,baz=184,slow=23,SNR=5.3						
RAO				S	Sn	01 54 39.2	+0.4
	727nm,0.3s,baz=266,slow=21,SNR=8.0						
RAO	Raoul Island	3.33	189		Pn	01 53 57.6	-0.9
MSVF	Nonsavu	9.24	331	P	Pn	01 55 18.7	+2.1
	19nm,0.9s,baz=143,slow=15,SNR=13						
MSVF	Nonsavu	9.24	331		Pn	01 55 18.1	+1.5
NIUE	Niue	9.67	46	Pn	Pn	01 55 21.2	-0.9
AFI	Afiamalu	13.06	25	P	Pn	01 56 00.0	-6.3
	22nm,0.4s,baz=337,slow=2.2,SNR=7.2						
AFI				S	Sn	01 58 12.3	-19
	41nm,0.9s,baz=253,slow=17,SNR=3.4						
AFI	Afiamalu	13.06	25	Pn	Pn	01 56 01.8	-4.5
URZ	Urewera	13.14	200	P	P	01 56 10.3	-0.9
	9.9nm,0.3s,baz=263,slow=4.5,SNR=17						
URZ				S	Sn	01 58 20.7	-12
	8.4nm,0.4s,baz=206,slow=22,SNR=8.8						
DZM	Mont Dzumac	15.33	281	P	P	01 56 36.2	+0.3
	4.3nm,0.9s,baz=309,slow=22,SNR=10						
DZM	Mont Dzumac	15.33	281	IAmb	IAmb	01 56 43.9	
	comp=Z,20nm,1.4s						
KHZ	Kahutara	18.06	202	P	P	01 57 03.1	-2.4
KHZ				IAmb	IAmb	01 57 11.5	
	comp=Z,36nm,1.5s						
EIDS	Eidsvold	28.45	264	P	P	01 58 47.1	+0.6
EIDS				IAmb	IAmb	01 59 07.1	
	comp=Z,4.5nm,1.0s						
CTA	Charters Tower	33.95	272	P	P	01 59 35.7	+0.9
	comp=Z,4.5nm,0.5s,baz=108,slow=10.0,SNR=10						
	comp=Z,4.5nm,0.5s						
CTAO	Charters Tower	33.95	272	P	P	01 59 34.2	-0.6
CTAO				IAmb	IAmb	01 59 37.6	
	comp=Z,5.5nm,0.7s						
STKA	Stephens Creek	36.29	251	P	P	01 59 54.5	-0.1
	comp=Z,1.5nm,0.5s,baz=94,slow=12,SNR=6.9						
	comp=Z,1.5nm,0.5s						
PMG	Port Moresby	37.47	290	P	P	02 00 03.0	-1.7
BBOO	Buckleboo	40.94	249	P	P	02 00 32.1	-1.3
ASAR	Alice Springs	44.13	262	P	P	02 00 58.8	-0.6
	comp=Z,1.3nm,0.4s,baz=94,slow=7.0,SNR=36						
	comp=Z,1.3nm,0.4s						
WR0	Warramunga Arr	44.53	267	P	P	02 01 01.9	-0.6
WR0				IAmb	IAmb	02 01 03.9	
	comp=Z,4.5nm,0.5s						
WB2	Warramunga Arr	44.71	267	P	P	02 01 03.8	-0.1
WB2				IAmb	IAmb	02 01 05.1	
	comp=Z,6.1nm,0.5s						
WRA	Warramunga Arr	44.72	267	P	P	02 01 03.9	-0.2
	comp=Z,4.5nm,0.4s,baz=104,slow=7.5,SNR=62						
	comp=Z,4.5nm,0.4s						
WRA	Warramunga Arr	44.72	267	P	P	02 01 03.5	-0.5
FORT	Forrest	47.91	251	P	P	02 01 28.6	-0.1
KNRA	Kununurra	51.12	270	P	P	02 01 52.7	-0.5
SBA	Scott Base	52.50	184	P	P	02 02 01.4	-1.1
SBA				IAmb	IAmb	02 02 06.5	
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	52.56	186	P	P	02 02 05.3	+2.4
	comp=Z,1.1nm,0.6s,baz=14,slow=7.4,SNR=8.9						
	comp=Z,1.1nm,0.6s						
VNDA	Vanda	52.56	186	IAmb	IAmb	02 02 07.7	
	comp=Z,1.3nm,0.7s						
CASY	Casey	59.35	207	P	P	02 02 51.6	+0.2
CASY				IAmb	IAmb	02 02 51.7	
	comp=Z,5.0nm,0.7s						
QSPA	South Pole Qui	64.14	180	P	P	02 03 25.2	+1.6
QSPA				IAmb	IAmb	02 03 26.0	
	comp=Z,5.2nm,0.8s						
BELA	Belgrano 2	74.09	172	P	P	02 04 24.8	+0.4
MAW	Mawson	76.67	200	P	P	02 04 40.7	+1.4
	comp=Z,3.3nm,0.5s,baz=137,slow=7.3,SNR=14						
	comp=Z,3.3nm,0.5s						
MAW	Mawson	76.67	200	IAmb	IAmb	02 04 41.4	
	comp=Z,0.8nm,0.6s						
TROLL	Troll, Antarti	82.30	180	P	P	02 05 10.6	+0.7
SNAA	Sanae	82.56	178	P	P	02 05 11.5	+0.3
VNA3	Neumayer Olymp	82.68	176	P	P	02 05 12.0	+0.3
VNA2	Neumayer--Watz	83.13	177	P	P	02 05 14.7	+0.8
	baz=174,slow=3.0						
FINES	FINESS Array B	141.15	342	PKP	PKPdf	02 12 15.9	-1.3
	comp=Z,0.8nm,0.8s,baz=72,slow=4.8,SNR=3.6						
NB2	NORSAR Subarra	144.45	353	PKP	PKPab	02 12 22.2	+0.4
	comp=Z,0.4nm,0.6s,baz=8.4,slow=3.4						
NOA	NORSAR Array B	144.45	353	PKP	PKPab	02 12 21.2	-0.6
	comp=Z,1.2nm,0.8s,baz=7.8,slow=2.3,SNR=4.5						
GURO	Guroymak-BITLI	144.69	301		PKPab	02 12 22.8	-0.8
BRTR	Keskin Array B	150.75	306	PKPbc	PKPbc	02 12 40.4	+0.3
	comp=Z,0.5nm,0.8s,baz=71,slow=6.2,SNR=2.0						
TORD	Torodi Ar. Bea	167.22	176	PKPab	PKPab	02 13 59.8	+0.6
	comp=Z,0.4nm,0.6s,baz=180,slow=3.4,SNR=5.0						
TORD	Torodi Ar. Bea	167.22	176	PKPdf	PKPdf	02 12 51.9	-2.0

CNRM ***29*** *01:54:17.7, 36°.54N×5°.97E, h0^{km}*

CRAAG ***29*** *01:54:44.4, 36°.35N×3°.43E, Ml3.5*

IDC ***29*** *01:54:44.5±2.2, 36°.29N×3°.48E, h0^{km}, mb3.3/1, mbtmp3.2/4, ML3.3/3, MS2.5/1, Error ellipse: s-maj=40.6km s-min=29.4km az=101.0*

SFS ***29*** *01:54:47.0, 36°.22N×3°.56W, ML3.6, BOUIRA(ARGELIA)*

MDD ***29*** *01:54:47.7±0.5, 36°.35N×3°.46E, h10^{km}, Mb4.1/26, M_mb3.4/22, Error ellipse: s-maj=4.1km s-min=2.4km az=148.0*

LDG ***29*** *01:54:49.8±0.7, 36°.31N×3°.08E, h30^{km}, Ml3.1/12, Error ellipse: s-maj=15.5km s-min=6.5km az=156.0*

ISC 29 01:54:46.1±0.8**, 36°.36N**±0°.04×**3°.46E**±0°.05**, h18**^{km}**, n85,** σ**2^{s}.32**/120**, 22C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.20	186	P	Pb	01 54 49.7	-1.3
ABMS	Boumerdes	0.39	2	P	Pb	01 54 54.6	0.0
AKET	Djebel Ketaf	0.46	132	P	Pg	01 54 55.2	-0.3
ABA	Alger-Bouzarea	0.56	322	P	Pg	01 54 56.9	-0.4
EIBI	Ibiza	3.15	328	P	Pn	01 55 36.4	+1.6
EIBI				⇑*i*Vmb_V		01 55 39.8	
	991nm,SNR=1.1						
EIBI				S	Sn	01 56 09.5	-2.5
ETOS	Mallorca	3.44	352	P	Pn	01 55 39.2	+0.3
ETOS				⇑*i*Vmb_V		01 55 40.6	
	301nm,SNR=0.7						
ETOS				S	Sn	01 56 18.0	-1.2
MAHO	Mahon	3.59	10	P	Pn	01 55 41.3	+0.5
MAHO				S	Sn	01 56 23.2	+0.4
ETRV	Los Montesinos	3.76	297	P	Pn	01 55 44.7	+1.5
ETRV				⇑*i*Vmb_V		01 55 50.5	
	83nm,SNR=0.4						
ETRV				S	Sn	01 56 26.5	-0.4
CART	Cartagena	3.78	290	P	Pn	01 55 44.1	+0.7
CART				S	Sn	01 56 28.5	+1.0
CART	Cartagena	3.78	290	P	Pn	01 55 43.0	-0.4
EMUR	La Murta	4.04	293	P	Pn	01 55 47.9	+0.8
EMUR				⇑*i*Vmb_V		01 55 52.8	
	260nm,SNR=1.2						
EMUR				S	Sn	01 56 34.1	+0.1
ECOL	Islas Columbre	4.16	329	P	Pn	01 55 49.7	+1.0
ECOL				S	Sn	01 56 35.3	-1.5
EZAR	Zarzadilla de	4.39	292	P	Pn	01 55 53.0	+1.0
EZAR				S	Sn	01 56 42.6	-0.1
ETOB	Tobarra	4.59	301	P	Pn	01 55 56.5	+1.8
ETOB				⇑*i*Vmb_V		01 55 59.6	
	184nm,SNR=1.0						
ETOB				S	Sn	01 56 47.1	-0.5
ENIJ	Nijar	4.60	279	P	Pn	01 55 55.0	+0.3
ENIJ				⇑*i*Vmb_V		01 56 03.0	
	55nm,SNR=0.3						
ENIJ				S	Sn	01 56 46.3	-1.4
ECHE	Chera	4.76	314	P	Pn	01 55 58.7	+1.7
ECHE				⇑*i*Vmb_V		01 56 02.6	
	238nm,SNR=1.4						
TAF	Taforalt	5.03	254	P	Pn	01 56 02.3	+1.5
EMOS	Mosqueruela	5.06	323	P	Pn	01 56 02.5	+1.3
EMOS				⇑*i*Vmb_V		01 56 07.1	
	232nm,SNR=1.2						
EMOS				S	Sn	01 56 57.1	-2.1
EBER	Berja	5.14	278	P	Pn	01 56 01.7	-0.6
EBER				⇑*i*Vmb_V		01 56 09.5	
	211nm,SNR=1.1						
EBER				S	Sn	01 56 57.5	-3.8
ERTA	Horta de San J	5.20	333	P	Pn	01 56 05.7	+2.7
ERTA				⇑*i*Vmb_V		01 56 10.6	
	36nm,SNR=0.1						
ERTA				S	Sn	01 57 00.1	-2.5
EPOB	Poblet	5.32	340	P	Pn	01 56 06.0	+1.2
EPOB				⇑*i*Vmb_V		01 56 09.6	
	70nm,SNR=0.3						
EPOB				S	Sn	01 57 02.9	-2.8
JBK	JBK	5.33	249	P	Pn	01 56 05.6	+0.7
GOG	Mont Gurugu	5.37	260	P	Pn	01 56 07.5	+2.0
EQES	Quesada	5.42	287	P	Pn	01 56 08.2	+2.1
EQES				⇑*i*Vmb_V		01 56 12.3	
	106nm,SNR=1.0						
EQES				S	Sn	01 57 06.5	-1.6
TDRA	Tendrara	5.60	235	P	Pn	01 56 09.0	+0.3
VSL	Villasalto	5.63	54	P	Pn	01 56 08.8	-0.1
VSL				S	Sn	01 57 07.1	-6.0
ELGU	Los Guajares,	5.72	277	P	Pn	01 56 10.8	+0.5
ELGU				⇑*i*Vmb_V		01 56 16.6	
	129nm,SNR=0.7						
ELGU				S	Sn	01 57 10.7	-4.9
EMIR	Miracle	5.75	345	P	Pn	01 56 13.3	+2.7
EMIR				S	Sn	01 57 14.7	-1.5
EJON	La Jonquera	6.10	356	P	Pn	01 56 16.3	+0.9
EJON				⇑*i*Vmb_V		01 56 21.0	
	251nm,SNR=0.7						
EJON				S	Sn	01 57 21.0	-3.7
ESAC	San Caprasio	6.17	331	P	Pn	01 56 18.0	+1.7
ESAC				⇑*i*Vmb_V		01 56 24.8	
	438nm,SNR=1.6						
ETOR	Torete	6.21	318	P	Pn	01 56 18.5	+1.6
ETOR				⇑*i*Vmb_V		01 56 24.7	
	99nm,SNR=0.9						
ETOR				S	Sn	01 57 24.0	-3.5
AKLM	AKL	6.26	255	P	Pn	01 56 19.6	+2.0
EADA	Adamuz	6.66	288	P	Pn	01 56 23.5	+0.4
EADA				⇑*i*Vmb_V		01 56 27.8	
	45nm,SNR=0.8						
EADA				S	Sn	01 57 33.8	-4.8
ESDC	Sonseca Array	6.73	302	Pn	Pn	01 56 24.4	+0.3
	0.2nm,0.3s,baz=114,slow=13,SNR=11						
ESDC				LR	LR	01 58 08.5	
	comp=Z,39nm,20.7s,baz=158,slow=30						
	0.7nm,0.4s						
ESDC	Sonseca Array	6.73	302	P	Pn	01 56 25.3	+1.2
ESDC				⇑*i*Vmb_V		01 56 31.0	
	47nm,SNR=0.8						
ESDC				S	Sn	01 57 36.9	-3.4
PAB	San Pablo	6.94	300	P	Pn	01 56 27.8	+0.8
PAB				⇑*i*Vmb_V		01 56 34.9	
	101nm,SNR=1.8						
MTLF	Montolieu	7.04	353	*e*Pn	Pn	01 56 30.3	+2.0
MTLF				*e*Sn	Sn	01 57 44.3	-3.5
	1.2nm,0.4s						

EPF	Esparros	7.09	341	*e*Pn	Pn	01 56 31.5	+2.6
EPF				*e*Sn	Sn	01 57 44.5	-4.5
	3.9nm,0.5s						
ETSF	Etsaut	7.23	336	*e*Pn	Pn	01 56 32.4	+1.5
ETSF				*e*Sn	Sn	01 57 48.9	-3.7
	1.3nm,0.3s						
ECAB	El Cabril	7.29	286	P	Pn	01 56 31.6	-0.2
ECAB				S	Sn	01 57 51.0	-3.0
GUD	Guadarrama	7.35	308	P	Pn	01 56 33.8	+1.2
GUD				⇑*i*Vmb_V		01 56 37.3	
	17nm,SNR=0.5						
LMR	La Mourre	7.35	18	*e*Pn	Pn	01 56 33.1	+0.6
LMR				*e*Sn	Sn	01 57 50.4	-5.0
	1.0nm,0.2s						
EORO	Oroz-Betelu	7.49	332	P	Pn	01 56 36.3	+1.8
EORO				⇑*i*Vmb_V		01 56 40.8	
	92nm,SNR=1.1						
EORO				S	Sn	01 57 54.6	-4.5
PGF	Pioggiola	7.52	33	*e*Pn	Pn	01 56 35.8	+0.9
PGF				*e*Sn	Sn	01 57 55.3	-4.5
	2.6nm,0.3s						
MDT	Midelt	7.53	244	Pn	Pn	01 56 36.7	+1.6
	0.2nm,0.3s,baz=198,slow=6.8,SNR=7.9						
	0.7nm,0.4s						
MDT	Midelt	7.53	244	P	Pn	01 56 36.1	+0.9
MD31	MD31	7.62	245	P	Pn	01 56 38.3	+2.0
SJPF	Ste Jean	7.65	333	*e*Pn	Pn	01 56 39.1	+2.4
SJPF				*e*Sn	Sn	01 57 59.2	-3.7
	6.8nm,0.4s						
LASF	Ste Croix	7.72	2	*e*Pn	Pn	01 56 38.6	+1.1
LASF				*e*Sn	Sn	01 58 01.2	-3.3
	2.2nm,0.3s						
SMRF	Simiane la Rot	7.78	11	*e*Pn	Pn	01 56 40.1	+1.7
SMRF				*e*Sn	Sn	01 58 03.7	-2.4
	0.1nm,0.1s						
SBF	Sospel	8.09	21	*e*Pn	Pn	01 56 42.8	+0.1
SBF				*e*Sn	Sn	01 58 08.9	-4.8
	1.7nm,0.2s						
VIVF	Saint-Julien-l	8.54	6	*e*Pn	Pn	01 56 51.3	+2.5
VIVF				*e*Sn	Sn	01 58 21.2	-3.5
	1.1nm,0.3s						
CAF	Calviac	8.63	353	*e*Pn	Pn	01 56 53.2	+3.2
ELAN	Lanestosa	8.68	324	P	Pn	01 56 53.4	+2.7
ELAN				⇑*i*Vmb_V		01 56 56.2	
	64nm,SNR=0.8						
ELAN				S	Sn	01 58 25.3	-2.8
ORIF	Oris-en-Rattie	8.75	11	*e*Pn	Pn	01 56 53.1	+1.4
ZHG	ZHG	8.79	254	P	Pn	01 56 53.8	+1.4
LFF	La Frestale	8.82	347	*e*Pn	Pn	01 56 55.0	+2.4
RJF	Les Rejaudoux	9.06	351	*e*Pn	Pn	01 56 57.9	+2.0
LPG	La Plagne	9.46	14	*e*Pn	Pn	01 57 04.3	+2.6
LPL	La Plagne	9.48	14	*e*Pn	Pn	01 57 05.3	+3.4
TCF	Toulx Ste Croi	9.97	355	*e*Pn	Pn	01 57 10.1	+1.7
BGF	Bois d'Agland	10.20	358	*e*Pn	Pn	01 57 14.0	+2.4
SMF	Signal de Mont	10.28	1	*e*Pn	Pn	01 57 14.9	+2.2
AVF	Avril sur Loir	10.43	360	*e*Pn	Pn	01 57 16.8	+2.2
CABF	La Chapelle	10.43	10	*e*Pn	Pn	01 57 16.8	+2.0
MFF	Saint Martin d	10.59	346	*e*Pn	Pn	01 57 18.3	+1.5
SSF	Saint Saulge	10.70	0	*e*Pn	Pn	01 57 20.5	+2.2
SSF				*e*Sn	Sn	01 59 14.0	-3.6
	0.3nm,0.3s						
LOR	Lormes	10.91	1	*e*Pn	Pn	01 57 23.1	+1.9
LOR	Lormes	10.91	1	*e*P	Pn	01 57 28.8	+7.5
	baz=175						
HYF	Humbligny	10.92	357	*e*Pn	Pn	01 57 24.2	+2.8
HINF	Hinteralfeld	11.72	11	*e*Pn	Pn	01 57 32.6	+0.2
HAU	Haudompre	11.83	9	*e*Pn	Pn	01 57 34.2	+0.3
SFTF	Sexfontaines	11.90	5	*e*Pn	Pn	01 57 37.3	+2.5
	baz=185						
MEZF	Maizieres J'vi	12.19	5	*e*Pn	Pn	01 57 40.6	+1.8
	baz=184						
SAVF	Savonnieres en	12.31	5	*e*Pn	Pn	01 57 42.6	+2.2
	baz=186						
CDF	Champ du Feu	12.37	12	*e*Pn	Pn	01 57 41.5	+0.2
GRR	Gorron	12.44	347	*e*Pn	Pn	01 57 40.1	-2.0
LDF	La Druitiere	12.51	349	*e*Pn	Pn	01 57 42.9	-0.2
QUIF	Quistinic	12.55	339	*e*Pn	Pn	01 57 44.5	+0.9
SGMF	Saint Gilles	12.69	341	*e*Pn	Pn	01 57 46.4	+0.8
ROSF	Rostrenen	12.96	340	*e*Pn	Pn	01 57 50.4	+1.1
BAIF	Baives	13.71	2	*e*Pn	Pn	01 58 01.8	+2.4
GERES	GERESS Array B	14.56	28	Pn	Pn	01 58 12.6	+1.4
	0.1nm,0.3s,baz=210,slow=14,SNR=5.2						
	0.4nm,0.7s						
EKA	Eskdalemuir Ar	19.51	349	P	Pn	01 59 19.2	+5.7
	0.5nm,0.7s,baz=167,slow=14,SNR=3.5						
TORD	Torodi Ar. Bea	23.16	184	P	P	01 59 51.6	0.0
	0.6nm,0.6s,baz=1.4,slow=10,SNR=7.0						
	0.6nm,0.6s						

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*NIED **29** 01:55:09.6, 34°.26N×135°.61E, h63^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.73; M$_{\theta\theta}$4.95; M$_{\phi\phi}$-6.68; M$_{r\theta}$2.77; M$_{\theta\phi}$-1.10; M$_{\phi r}$-1.83; Fault plane solution: M$_0$6.94000×10^{14} NP1:ϕ_s47.00000°, δ60.00000°, λ165.00000°. NP2:ϕ_s144.00000°, δ77.00000°, λ31.00000°.*

*JMA **29** 01:55:09.6±0.1, 34°.3N±0°.3×135°.6E±0°.4, h63^{km}±1^{km}, MV3.6/32, NE WAKAYAMA PREF*

JMA Felt I J1 at NE WAKAYAMA PREF .

*IDC **29** 01:55:09.6±1.8, 34°.27N×135°.61E, h64^{km}±17^{km}, mb3.3/8, mbtmp3.7/13, MS2.4/1, Error ellipse: s-maj=22.2km s-min=15.5km az=17.0*

ISC 29 01:55:09.5±0.7**, 34°.25N**±0°.05×**135°.62E**±0°.04**, h63**^{km}±6^{km}**, n30,** σ**0^{s}55**/36**, mb3.5**/8**, 12D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWY	Kouya	0.03	212	P	Pn	01 55 19.1	+0.2
JWY				S	Sn	01 55 25.6	-0.1
JNTK	Naratenkawa	0.22	84	⇓*i*P	Pn	01 55 19.6	+0.1
JNTK				⇓*i*S	Sn	01 55 26.6	-0.2
JHE	Heguri	0.41	8	P	Pn	01 55 20.8	-0.1
JHE				S	Sn	01 55 28.7	-0.4
JTNC	Tanabenakahech	0.43	180	P	Pn	01 55 20.9	-0.2
JTNC				S	Sn	01 55 29.0	-0.4
JWM	Minabe	0.45	209	P	Pn	01 55 21.1	-0.2
JWM				S	Sn	01 55 29.2	-0.6
JKN2	Miekihoku	0.55	91	⇓P	Pn	01 55 22.2	+0.1
JKN2				⇓*e*S	Sn	01 55 31.3	-0.1
JAWN	Awajishima-nag	0.64	292	⇓P	Pn	01 55 23.1	-0.1
JAWN				⇓S	Sn	01 55 33.0	-0.2
TSUJ	Tsu 2	0.81	55	⇓P	Pn	01 55 25.2	-0.1
TSUJ				⇓S	Sn	01 55 36.2	-0.6
JIE	Ise	0.92	81	⇓P	Pn	01 55 26.7	+0.1
JIE				⇓*e*S	Sn	01 55 39.5	+0.3
JKS	Kasai	0.97	319	⇓P	Pn	01 55 27.1	-0.2
JKS				⇓S	Sn	01 55 39.7	-0.7
JWT	Wachi	1.05	350	P	Pn	01 55 28.0	-0.3
JWT				*e*S	Sn	01 55 41.7	-0.6
MJAR	Matsushiro Arr	3.12	42	P	Pn	01 55 55.9	-0.3
	6.3nm,0.5s,baz=231,slow=14,SNR=33						
MJAR				LR	LR	01 57 27.0	
	comp=Z,68nm,20.6s,baz=307,slow=44						
JHJ	Hachijo jima 2	3.65	107	P	Pn	01 56 03.6	+0.1
	57nm,0.3s,baz=23,slow=22,SNR=8.2						
JNU	Nakatsue	4.11	255	P	Pn	01 56 09.8	0.0
	47nm,0.5s,baz=69,slow=2.8,SNR=38						
KSRS	Korea Array	7.02	299	P	Pn	01 56 51.2	+1.7
	12nm,0.5s,baz=118,slow=14,SNR=57						
KSRS				S	Sn	01 58 07.7	-0.1
	3.2nm,0.5s,baz=115,slow=24,SNR=7.1						
KLR	Kul'dur	15.24	350	P	Pn	01 58 42.2	+1.4
	1.2nm,0.4s,baz=189,slow=8.6,SNR=6.1						
SONM	Songino Array	25.70	311	P	P	02 00 34.0	+0.2
	0.8nm,0.8s,baz=98,slow=10,SNR=5.0						
	0.8nm,0.8s						
H11N2	WAKE ISLAND Hy	31.25	109	T	T	02 34 05.4	
	baz=303,slow=74,SNR=19						
H11N1	WAKE ISLAND Hy	31.26	110	T	T	02 34 00.8	
	baz=303,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	31.27	109	T	T	02 34 01.7	
	baz=303,slow=74,SNR=16						
H11S3	WAKE ISLAND Hy	31.79	112	T	T	02 34 45.0	
	baz=304,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	31.80	112	T	T	02 34 44.7	
	baz=304,slow=75,SNR=45						
H11S2	WAKE ISLAND Hy	31.81	112	T	T	02 34 43.1	
	baz=304,slow=75,SNR=24						
MKAR	Makanchi Array	41.67	304	P	P	02 02 52.0	+0.2
	0.2nm,0.4s,baz=95,slow=10,SNR=3.1						
	0.2nm,0.4s						
WRA	Warramunga Arr	53.90	181	P	P	02 04 26.4	-0.1
	0.2nm,0.4s,baz=354,slow=7.9,SNR=4.7						
	0.2nm,0.4s						
ILAR	Eielson Array	54.34	31	P	P	02 04 28.9	-0.4
	0.4nm,0.7s,baz=270,slow=10.0,SNR=5.2						
	0.4nm,0.7s						
ARCES	ARCESS Array B	64.90	339	P	P	02 05 40.9	-0.9
	2.2nm,0.9s,baz=49,slow=9.7,SNR=4.4						
	2.2nm,0.9s						
FINES	FINESS Array B	69.01	331	P	P	02 06 07.6	-0.3
	0.5nm,0.4s,baz=61,slow=6.9,SNR=13						
	0.5nm,0.4s						
NOA	NORSAR Array B	74.84	335	P	P	02 06 42.3	-0.6
	0.3nm,0.6s,baz=33,slow=5.9,SNR=1.5						
	0.3nm,0.6s						
NVAR	Mina Array Bea	80.41	50	P	P	02 07 15.6	+0.9
	0.4nm,0.7s,baz=332,slow=7.1,SNR=4.2						
	0.4nm,0.7s						

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*MOS **29** 02:14:35.6±1.0, 31°.45N×104°.48E, h9^{km}, mb4.4/17, Error ellipse: s-maj=9.3km s-min=6.9km az=116.5*

*IDC **29** 02:14:36.3±0.6, 31°.46N×104°.40E, h0^{km}, mb4.1/17, mbtmp4.1/19, ML3.7/2, MS3.8/32, Error ellipse: s-maj=22.7km s-min=13.1km az=52.0*

*NEIC **29** 02:14:37.9±1.2, 31°.52N±0°.10×104°.46E±0°.09, h10^{km}±1^{km}, mb4.3/37, Error ellipse: s-maj=16.8km s-min=12.3km az=179.0*

*BJI **29** 02:14:38.5±0.0, 31°.46N×104°.30E, h10^{km}, mb4.1/23, mB4.5/14, ML4.4/24, Ms4.4/42, Ms7 4.2/35*

ISC 29 02:14:37.5±0.3**, 31°.49N**±0°.03×**104°.40E**±0°.03**, h9**^{km}**, n141,** σ**2^{s}02**/139**, mb4.2**/42**, MS3.8**/35**, 7C-5D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.80	224	Pg	Pg	02 14 52.8	0.0
CD2				Sg	Sb	02 15 04.0	-0.4
CD2				smax	smax		
	comp=E,21μm,0.5s						
ENH	Enshi	4.54	104	Pn	Pn	02 15 48.1	+1.6
XAN	Xi'an	4.58	55	Pn	Pn	02 15 48.5	+1.5
XAN				Pg	Pg	02 16 05.5	+0.2
XAN				Sn	Sn	02 16 41.3	+0.9
XAN				Sg	Sg	02 17 04.5	-0.1
XAN				smax	smax		
	comp=N,770nm,0.8s						
XAN				smax	smax		
	comp=E,710nm,0.7s						
XAN				LR	LR		
	comp=E,4μm,6.9s						
XAN				LR	LR		
	comp=Z,3μm,7.9s						
LZH	Lanzhou	4.61	354	Pn	Pn	02 15 50.5	+3.0
LZH				Pg	Pg	02 16 05.5	-0.3
LZH				Sn	Sn	02 16 43.0	+1.8
LZH				Sg	Sg	02 17 01.3	-4.2
LZH				smax	smax		
	comp=N,190nm,1.5s						
LZH				smax	smax		
	comp=E,240nm,1.5s						
LZH				LR	LR		
	comp=E,7μm,7.0s						
LZH				LR	LR		
	comp=Z,8μm,7.6s						
GYA	Guiyang	5.39	158	⇑Pn	Pn	02 15 59.5	+1.2
GYA				Sn	Sn	02 17 05.5	+4.9
GYA				Sg	Sg	02 17 28.8	-1.9
GYA				smax	smax		
	comp=N,960nm,1.1s						
GYA				smax	smax		
	comp=E,2μm,1.1s						
GYA				LR	LR		
	comp=N,6μm,4.7s						
GYA				LR	LR		
	comp=Z,6μm,5.4s						
PZH	PanZhiHua	5.49	206	Pn	Pn	02 16 01.3	+1.8
PZH				Pg	Pg	02 16 19.5	-3.1
PZH				Sg	Sg	02 17 32.3	-1.4
PZH				smax	smax		
	comp=N,580nm,1.0s						
PZH				smax	smax		
	comp=E,660nm,1.0s						
PZH				LR	LR		
	comp=N,3μm,9.0s						
PZH				LR	LR		
	comp=Z,3μm,9.6s						
KMI	Kunming	6.51	193	⇑Pn	Pn	02 16 14.3	+0.6
KMI				Sn	Sn	02 17 26.8	-1.4
KMI				smax	smax		
	comp=N,200nm,1.2s						
KMI				smax	smax		
	comp=E,190nm,1.5s						
KMI				LR	LR		
	comp=N,2μm,9.5s						
KMI				LR	LR		
	comp=E,3μm,12.7s						
KMI				LR	LR		
	comp=Z,3μm,8.7s						
LYN	LuoYang	7.43	64	*e*Pn	Pn	02 16 26.5	+0.3
LYN				LR	LR		
	comp=N,1μm,7.1s						
LYN				LR	LR		
	comp=E,1μm,9.7s						
LYN				LR	LR		
	comp=Z,1μm,9.2s						
GULI	GuiLin	8.11	138	*e*P	Pn	02 16 35.3	-0.2
GULI				S	Sn	02 18 04.0	-3.3
GULI				LR	LR		
	comp=N,3μm,10.3s						
GULI				LR	LR		
	comp=E,2μm,10.8s						
GULI				LR	LR		
	comp=Z,4μm,12.5s						
CNSH	ChangSha	8.11	112	⇓P	Pn	02 16 36.5	+1.0
CNSH				S	Sn	02 18 07.0	-0.3
CNSH				smax	smax		
	comp=N,100nm,1.8s						
CNSH				smax	smax		
	comp=E,120nm,1.7s						
CNSH				LR	LR		
	comp=N,1μm,7.7s						
WHN	Wuhan	8.60	94	⇓P	Pn	02 16 45.0	+2.9
WHN				LR	LR		
	comp=N,4μm,6.4s						
WHN				LR	LR		
	comp=E,6μm,7.3s						
WHN				LR	LR		
	comp=Z,7μm,8.1s						
GOMU	GeErMu	9.25	303	P	Pn	02 16 52.5	+1.1
GOMU				pP		02 16 55.8	
GOMU				sP		02 16 59.8	
GOMU				S	Sn	02 18 37.5	+1.8
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,92nm,8.6s						
GOMU				LR	LR		
	comp=E,1μm,7.2s						
GOMU				LR	LR		
	comp=Z,1μm,8.0s						
BTO	Baotou	10.17	25	*e*P	Pn	02 17 07.0	+3.3
BTO				S	Sn	02 19 05.0	+7.1
BTO				LR	LR		
	comp=N,6μm,9.9s						
BTO				LR	LR		
	comp=E,5μm,9.6s						
HNS	HongShan	10.35	53	*e*P	Pn	02 17 12.3	+6.2
HNS				S	Sn	02 19 18.8	+17
HNS				LR	LR		
	comp=N,1μm,11.1s						
HNS				LR	LR		
	comp=E,970nm,11.6s						
HNS				LR	LR		
	comp=Z,720nm,12.0s						
HHC	Hu-ho-hao-te	10.98	30	*e*P	Pn	02 17 16.5	+1.6
HHC				S	Sn	02 19 20.3	+2.3
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
HHC				LR	LR		
	comp=N,2μm,8.3s						
HHC				LR	LR		
	comp=E,3μm,8.6s						
HHC				LR	LR		
	comp=Z,2μm,9.2s						
TIA	Tai'an	11.58	63	⇑P	Pn	02 17 28.0	+5.0
TIA				S	Sn	02 19 46.8	+14
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,85nm,4.2s						
TIA				LR	LR		
	comp=N,390nm,8.7s						
TIA				LR	LR		
	comp=E,330nm,8.8s						
TIA				LR	LR		
	comp=Z,360nm,12.0s						
NJ2	Nanjing	12.32	84	*e*P	Pn	02 17 33.5	+0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				LR	LR		
	comp=N,1μm,10.9s						
NJ2				LR	LR		
	comp=Z,1μm,11.3s						
SHL	Shillong	12.48	245	Pn	Pn	02 17 33.3	-2.2
SHL	Shillong	12.48	245	P	Pn	02 17 33.3	-2.2
QIZ	Qiongzhong	13.35	157	P	Pn	02 17 50.8	+3.6
QIZ				S	Sn	02 20 22.0	+6.2
QIZ				LR	LR		
	comp=N,1μm,10.0s						
QIZ				LR	LR		
	comp=E,1μm,8.8s						
QIZ				LR	LR		
	comp=Z,2μm,10.3s						
CHTO	Chiang Mai	13.55	203	Pn	Pn	02 17 50.7	+0.7
CHTO	Chiang Mai	13.55	203	P	Pn	02 17 50.7	+0.7
CM31	Chiang Mai Arr	13.88	202	Pn	Pn	02 17 53.1	-1.4
CMAR	Chiang Mai Arr	13.88	202	Pn	Pn	02 17 55.4	+0.9
	0.3nm,0.3s,baz=10.0,slow=12,SNR=15						
CMAR				LR	LR	02 23 55.9	
	comp=Z,346nm,19.6s,baz=255,slow=40						
	1.8nm,0.3s						
CMAR	Chiang Mai Arr	13.88	202		Pn	02 17 55.2	+0.7
SONM	Songino Array	16.39	5	Pn	Pn	02 18 29.2	+1.3
	0.1nm,0.3s,baz=186,slow=12,SNR=6.5						
SONM				LR	LR	02 25 32.3	
	comp=Z,704nm,18.9s,baz=180,slow=40						
	1.6nm,0.9s						
SONM	Songino Array	16.39	5	Pn	Pn	02 18 24.3	-3.6
ULN	Ulaanbaatar	16.48	6	Pn	Pn	02 18 25.0	-4.0
ULN	Ulaanbaatar	16.48	6	P	Pn	02 18 25.0	-4.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SSLB	Suanglung	16.55	114	Pn	Pn	02 18 28.4	-1.4
SSLB				IAmb	IAmb	02 18 35.9	
	comp=Z,36nm,1.3s						
WMQ	Urumqi	18.02	318	*e*P	P	02 18 50.5	+1.8
WMQ				sP	sP	02 18 58.3	+5.6
WMQ				pmax	pmax		
	comp=Z,24nm,0.8s						
WMQ				LR	LR		
	comp=Z,1μm,8.1s						
WMQ				LR	LR		
	comp=Z,380nm,14.1s						
ZAK	Zakamensk	18.89	358	*e*P	Pn	02 19 03.2	+4.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NAWB	Namwon	19.58	72	P	P	02 19 05.4	-0.4
NAWB				IAmb	IAmb	02 19 27.0	
	comp=Z,9.1nm,1.0s						
TJN	Taejon	19.66	69		P	02 19 04.7	-1.9
TJN	Taejon	19.66	69	P	P	02 19 04.7	-1.9
TJN				pmax	pmax		
	comp=Z,34nm,0.7s						
KSCHJ	Chungju	20.21	68	P	P	02 19 10.2	-2.5
KSCHJ				IAmb	IAmb	02 19 19.5	
	comp=Z,20nm,0.8s						
KS19	Wonju Array Si	20.23	66	P	P	02 19 11.7	-1.2
KS19				IAmb	IAmb	02 19 19.4	
	comp=Z,10.0nm,0.7s						
KSAR	Wonju Array Be	20.23	67	P	P	02 19 12.3	-0.6
KSAR	Wonju Array Be	20.23	67	P	P	02 19 12.3	-0.6
KSRS	Korea Array	20.27	67	P	Pn	02 19 14.3	-0.9
	comp=Z,13nm,0.7s,baz=258,slow=10,SNR=43						
KSRS				LR	LR	02 26 21.3	
	comp=Z,96nm,21.9s,baz=245,slow=35						
	comp=Z,13nm,0.7s						
CN2	Changchun	20.64	48	*e*P	P	02 19 13.3	-4.0
CN2				*e*PP	PnPn	02 19 34.3	-0.7
CN2				*e*S	S	02 22 58.3	-10
CN2				*e*sS	sS	02 23 04.5	-7.9
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=N,330nm,16.0s						
CN2				LR	LR		
	comp=E,230nm,16.0s						
CN2				LR	LR		
	comp=Z,220nm,17.0s						
SEHB	SEOHWA	20.68	64	P	P	02 19 16.6	-1.2
SEHB				IAmb	IAmb	02 19 24.5	
	comp=Z,8.7nm,0.6s						
HIA	Hailar	21.19	29	⇑*e*P	P	02 19 24.8	+1.6
HIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	Makanchi Array	22.85	318	P	P	02 19 41.3	+0.2
MK31				IAmb	IAmb	02 19 57.3	
	comp=Z,5.4nm,0.9s						
MK31	Makanchi Array	22.85	318	⇑*e*P	P	02 19 42.0	+1.0
MKAR	Makanchi Array	22.85	318	P	P	02 19 42.2	+1.2
	comp=Z,2.4nm,0.5s,baz=120,slow=12,SNR=21						
MKAR				LR	LR	02 29 12.6	
	comp=Z,142nm,19.8s,baz=128,slow=38						
	comp=Z,2.4nm,0.5s						
MKAR	Makanchi Array	22.85	318	P	P	02 19 42.1	+1.0
MAKZ	Makanchi	23.04	318	P	P	02 19 43.5	+0.5
MAKZ				IAmb	IAmb	02 19 52.3	
	comp=Z,8.4nm,1.2s						
MAKZ	Makanchi	23.04	318	P	P	02 19 43.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SRIT	Nakonsritamara	23.21	192	P	P	02 19 44.6	-0.3
PRZ	Przheval'sk	23.40	305	P	P	02 19 47.5	+0.7
PRZ	Przheval'sk	23.40	305	P	P	02 19 47.5	+0.7
PRZ				pmax	pmax		
	comp=Z,15nm,0.3s						
TARG	Taragay, Kyrgy	23.58	303	P	P	02 19 47.9	-1.0
TARG				IAmb	IAmb	02 20 09.2	
	comp=Z,5.5nm,1.0s						
TARG	Taragay, Kyrgy	23.58	303	P	P	02 19 47.9	-1.0
TARG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KDJ	Kajisay	24.14	304	P	P	02 19 53.5	-0.5
KDJ				IAmb	IAmb	02 20 10.9	
	comp=Z,4.6nm,0.8s						
KDJ	Kajisay	24.14	304	P	P	02 19 53.5	-0.5
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH	Kashi	24.41	297	P	P	02 20 05.0	+8.5
KSH				LR	LR		
	comp=Z,930nm,16.2s						
KSH				LR	LR		
	comp=Z,950nm,15.8s						
KSH				LR	LR		
	comp=Z,530nm,13.4s						
USRK	Ussuriysk Ar.	25.08	52	LR	LR	02 31 44.8	
	comp=Z,59nm,20.8s,baz=252,slow=41						
BOOM	Boomskoye usch	25.13	304	P	P	02 20 03.1	+0.1
BOOM				IAmb	IAmb	02 20 21.4	
	comp=Z,3.9nm,0.9s						
BOOM	Boomskoye usch	25.13	304	P	P	02 20 03.1	+0.1
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	26.20	304	LR	LR	02 32 23.9	
	comp=Z,503nm,19.8s,baz=109,slow=41						
AAK	Ala-Archa	26.20	304	P	P	02 20 12.6	0.0
AAK	Ala-Archa	26.20	304	P	P	02 20 12.6	0.0
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAA0	Zalesovo Array	26.48	334	P	P	02 20 14.4	-0.5
ZAA0				IAmb	IAmb	02 20 28.3	
	comp=Z,9.2nm,1.1s						
ZALV	Zalesovo Beam	26.48	334	P	P	02 20 16.0	+1.1
	comp=Z,4.5nm,0.5s,baz=130,slow=10,SNR=24						
ZALV				LR	LR	02 31 17.8	
	comp=Z,248nm,19.4s,baz=129,slow=38						
	comp=Z,4.5nm,0.5s						
ZALV	Zalesovo Beam	26.48	334	P	P	02 20 14.1	-0.8
ZALV	Zalesovo Beam	26.48	334	*i* P	P	02 20 16.0	+1.1
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						

KURBB	Kurchatov Arra	27.08	322	P	P	02 20 21.4	+1.0
	comp=Z,1.4nm,0.7s,baz=129,slow=9.1,SNR=14						
KURBB				PcP	PcP	02 23 41.1	0.0
	comp=Z,0.7nm,0.5s,baz=129,slow=1.6,SNR=3.9						
KURBB				LR	LR	02 31 55.8	
	comp=Z,449nm,19.1s,baz=90,slow=38						
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	27.09	323	P	P	02 20 19.6	-0.8
KURK				IAmb	IAmb	02 20 35.8	
	comp=Z,8.0nm,1.2s						
KURK	Kurchatov	27.09	323	P	P	02 20 21.4	+1.0
KURK						02 23 41.2	
KLR	Kul'dur	27.14	41	P	P	02 20 22.2	+1.4
	comp=Z,0.9nm,0.7s,baz=98,slow=7.1,SNR=2.4						
	comp=Z,0.9nm,0.7s						
ZEA	Zeya	27.65	30	*e*P	P	02 20 27.5	+2.1
ZEA				*e*		02 26 39.6	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,200nm,10.0s						
MAJO	Matsushiro	28.38	71⇓	*e*P	P	02 20 31.5	-0.7
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MJAR	Matsushiro Arr	28.39	71	P	P	02 20 32.1	-0.1
	comp=Z,0.9nm,0.7s,baz=282,slow=9.4,SNR=4.1						
MJAR				LR	LR	02 33 31.1	
	comp=Z,86nm,19.0s,baz=220,slow=40						
	comp=Z,0.9nm,0.7s						
MJAR	Matsushiro Arr	28.39	71	IAmb	IAmb	02 20 34.7	
	comp=Z,2.4nm,1.4s						
BTK	Batken	28.42	297	P	P	02 20 31.1	-1.4
BTK				IAmb	IAmb	02 20 42.5	
	comp=Z,5.5nm,1.4s						
BTK	Batken	28.42	297	P	P	02 20 31.1	-1.4
BTK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
PSI	Prapat	29.00	191	LR	LR	02 33 57.4	
	comp=Z,269nm,18.6s,baz=334,slow=40						
KK31	Karatay Array	29.15	303	P	P	02 20 38.1	-0.8
KK31	Karatay Array	29.15	303	P	P	02 20 38.1	-0.8
KK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KKAR	Karatay Array	29.15	303	P	P	02 20 38.9	-0.1
KKAR	Karatay Array	29.15	303	P	P	02 20 38.9	-0.1
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBL	Kabul	29.71	285	P	P	02 20 45.3	+1.1
KBL	Kabul	29.71	285	P	P	02 20 45.3	+1.1
KBL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
JHJ	Hachijo jima 2	29.87	77	LR	LR	02 34 09.0	
	comp=Z,186nm,18.1s,baz=247,slow=39						
DAV	Davao City (W)	31.34	136	LR	LR	02 35 17.3	
	comp=Z,187nm,19.2s,baz=338,slow=40						
JCJ	Chichijima	33.14	88	LR	LR	02 34 35.1	
	comp=Z,96nm,20.4s,baz=274,slow=36						
HRA	Herat	35.31	286	P	P	02 21 33.3	+0.1
HRA				IAmb	IAmb	02 21 52.7	
	comp=Z,6.1nm,1.4s						
ABKAR	Akbulak array	37.60	311	P	P	02 21 52.4	0.0
AKTO	Aktyubinsk	39.06	313	LR	LR	02 39 36.4	
	comp=Z,86nm,20.4s,baz=105,slow=38						
KAPI	Kappang	39.15	155	LR	LR	02 39 38.8	
	comp=Z,45nm,18.4s,baz=272,slow=38						
ARU	Arti	40.28	322	P	P	02 22 15.8	+1.1
	comp=Z,0.9nm,0.5s,baz=133,slow=12,SNR=5.5						
ARU				LR	LR	02 40 58.0	
	comp=Z,94nm,18.9s,baz=104,slow=39						
	comp=Z,0.9nm,0.5s						
ARU	Arti	40.28	322	P	P	02 22 14.2	-0.5
ARU				IAmb	IAmb	02 22 23.1	
	comp=Z,4.1nm,0.8s						
ARU	Arti	40.28	322*c*	*i*P	P	02 22 15.6	+0.9
ARU				S	S	02 28 25.4	+3.4
ARU				SS	SS	02 31 20.2	+0.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,84nm,12.0s						
SIJI	Sorong	41.05	137	LR	LR	02 41 44.5	
	comp=Z,63nm,18.3s,baz=266,slow=40						
GUMO	Guam	41.13	106	LR	LR	02 38 45.1	
	comp=Z,60nm,20.0s,baz=242,slow=35						
TIXI	Tiksi	42.33	11⇑	*e*P	P	02 22 30.0	-1.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SEY	Seymchan	43.63	30	LR	LR	02 43 03.9	
	comp=Z,92nm,18.2s,baz=315,slow=39						
BELG	Belogornoye	45.76	314	LR	LR	02 43 29.4	
	comp=Z,231nm,20.8s,baz=137,slow=38						
MAK	Makhachkala	45.93	301	*e*P	P	02 22 56.6	-4.0
MAK				*e*S	S	02 29 39.6	-5.6
MAK				pmax	pmax		
	comp=Z,89nm,0.9s						
MAK				MLR	MLR		
	comp=Z,181nm,16.0s						
KIV	Kislovodsk	49.31	303	P	P	02 23 27.4	+0.4
KIV				IAmb	IAmb	02 23 33.4	
	comp=Z,7.1nm,1.2s						
KIV	Kislovodsk	49.31	303	*e*P	P	02 23 29.6	+2.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,91nm,17.0s						
KLMR	Klimovskoe	50.89	325	*e*P	P	02 23 40.1	+1.6
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	Klimovskoe	50.89	325	*e*P	P	02 23 40.2	+1.7
KLMR				AMP		02 23 51.2	
	comp=Z,7.0nm,1.1s						
RAYN	Ar Rayn	52.31	277	P	P	02 23 50.6	+0.8
RAYN				IAmb	IAmb	02 24 01.5	
	comp=Z,5.2nm,1.4s						
RAYN	Ar Rayn	52.31	277	P	P	02 23 50.6	+0.8
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
OBN	Obninsk	52.36	318	LR	LR	02 47 20.4	
	comp=Z,64nm,21.2s,baz=18,slow=38						
KNRA	Kununurra	52.41	150	P	P	02 23 49.6	-0.8
ARCES	ARCESS Array B	57.01	336	P	P	02 24 23.4	+0.2
	comp=Z,1.0nm,0.6s,baz=81,slow=7.7,SNR=8.7						
ARCES				LR	LR	02 49 02.3	
	comp=Z,59nm,19.9s,baz=111,slow=36						
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	57.01	336	IAmb	IAmb	02 24 30.2	
	comp=Z,12nm,1.4s						
AKASG	Malin Array Be	57.30	313	P	P	02 24 25.3	-0.2
	comp=Z,0.5nm,0.4s,baz=63,slow=7.2,SNR=2.8						
AKASG				LR	LR	02 50 23.3	
	comp=Z,230nm,19.0s,baz=46,slow=38						
	comp=Z,0.5nm,0.4s						
AKBB	Malin Array Si	57.30	313	P	P	02 24 25.9	+0.4
AKBB				IAmb	IAmb	02 24 40.7	
	comp=Z,11nm,1.5s						
AKBB	Malin Array Si	57.30	313	P	P	02 24 25.9	+0.4
AKBB				pmax	pmax		
	comp=Z,11nm,1.5s						
FINES	FINESS Array B	57.39	326	P	P	02 24 25.6	-0.3
	comp=Z,1.7nm,0.6s,baz=98,slow=8.6,SNR=15						
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	57.39	326	P	P	02 24 26.8	+0.9
FINES	FINESS Array B	57.39	326	P	P	02 24 26.8	+0.9
PMG	Port Moresby	57.69	128	LR	LR	02 49 55.0	
	comp=Z,61nm,18.6s,baz=188,slow=37						
WB0	Warramunga Arr	58.53	146	P	P	02 24 33.9	-0.5
WRAB	Tennant Creek	58.65	147	*de*P	P	02 24 35.9	+0.6
WRAB				pmax	pmax		
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	58.66	147	P	P	02 24 35.3	0.0
	comp=Z,5.9nm,0.7s,baz=316,slow=12,SNR=189						
	comp=Z,5.9nm,0.7s						
WB2	Warramunga Arr	58.66	147	P	P	02 24 35.1	-0.3
SPITS	Spitsbergen Ar	59.02	346	LR	LR	02 54 26.4	
	comp=Z,123nm,18.3s,baz=2.0,slow=40						
ASAR	Alice Springs	61.69	149	P	P	02 24 56.4	+0.2
	comp=Z,2.4nm,0.3s,baz=334,slow=6.7,SNR=57						
	comp=Z,2.4nm,0.3s						
ASAR	Alice Springs	61.69	149	P	P	02 24 56.1	0.0
NB2	NORSAR Subarra	64.47	327	P	P	02 25 13.1	-1.1
	comp=Z,1.1nm,0.5s,baz=75,slow=6.9						
NOA	NORSAR Array B	64.47	327	P	P	02 25 13.6	-0.5
	comp=Z,1.6nm,0.7s,baz=76,slow=5.1,SNR=11						
NOA				LR	LR	02 55 13.4	
	comp=Z,115nm,18.9s,baz=0.0,slow=38						
	comp=Z,1.6nm,0.7s						
CTAO	Charters Tower	65.13	136	P	P	02 25 18.3	-0.6
CTAO	Charters Tower	65.13	136	P	P	02 25 18.3	-0.6
CTAO				pmax	pmax		
	comp=Z,14nm,1.5s						
VRAC	Vranov	65.52	314	LR	LR	02 55 29.8	
	comp=Z,270nm,19.1s,baz=59,slow=37						
IMAR	Indian Mountai	66.27	26	P	P	02 25 25.3	-0.4
GERES	GERESS Array B	67.45	314	P	P	02 25 34.0	+0.4
	comp=Z,0.3nm,0.5s,baz=88,slow=8.1,SNR=2.2						
	comp=Z,0.3nm,0.5s						
JMIC	Jan Mayen	67.53	341	LR	LR	02 58 54.3	
	comp=Z,78nm,18.4s,baz=56,slow=39						
ILAR	Eielson Array	69.38	26	P	P	02 25 45.0	-0.3
	comp=Z,0.2nm,0.5s,baz=301,slow=4.6,SNR=4.2						
	comp=Z,0.2nm,0.5s						
ILAR	Eielson Array	69.38	26	P	P	02 25 45.0	-0.3
HDA	Harding Lake	69.54	26	P	P	02 25 46.3	0.0
HDA				IAmb	IAmb	02 26 00.9	
	comp=Z,1.3nm,0.8s						
DAVOX	Davos/Dischmat	70.65	313	LR	LR	02 59 04.8	
	comp=Z,290nm,18.9s,baz=44,slow=38						
STKA	Stephens Creek	72.20	147	P	P	02 26 02.9	+0.1
	comp=Z,2.3nm,0.6s,baz=321,slow=8.8,SNR=6.0						
	comp=Z,2.3nm,0.6s						
KEST	Kesra	76.05	303	LR	LR	03 07 59.9	
	comp=Z,57nm,19.1s,baz=309,slow=42						
MBAR	Mbarara	76.41	261⇓	*e*P	P	02 26 29.1	+1.1
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	81.25	17	P	P	02 26 53.3	-0.3
	comp=Z,1.3nm,0.6s,baz=331,slow=5.3,SNR=3.6						
YKA				LR	LR	03 07 20.1	
	comp=Z,35nm,19.2s,baz=306,slow=39						
	comp=Z,1.3nm,0.6s						
MDT	Midelt	87.36	307	LR	LR	03 11 41.6	
	comp=Z,110nm,18.7s,baz=127,slow=39						

KRSC 29 02:15:00.2±3.1**, 48°.04N**×**157°.14E, h20**^{km}±64^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.73	346	S	Sn	02 16 15.8	+0.5
PAU	Pauzhetka	3.44	357	S	Sn	02 16 35.3	+2.5
KDTR	Khodutka, Kamc	3.83	9	S	Sb	02 16 47.9	-4.9
ASAK	Asacha	4.38	6	P	Pn	02 16 08.4	+2.7
RUS	Russkaya	4.49	11	S	Sn	02 17 04.7	+6.0
MTVR	Mutnovka	4.50	8	S	Sn	02 17 05.4	+6.2
GRL	Gorelyy	4.56	7	S	Sb	02 17 07.5	-6.6
AVH	Avacha	5.33	10	P	Pn	02 16 23.9	+5.2
MKZ	Mys Kozlova	7.13	22	P	Pn	02 16 48.1	+4.8

*CRAAG **29** 02:15:47.8, 36°.36N×3°.36E, Ml2.9*

*MDD **29** 02:15:50.0±0.9, 36°.37N×3°.39E, h6^{km}±9^{km}, Mb3.9/9, M_mb3.2/7, Error ellipse: s-maj=11.1km s-min=3.7km az=157.0*

ISC 29 02:15:48.2±1.1**, 36°.33N**±0°.06×**3°.42E**±0°.05**, h18**^{km}**, n12, σ1**^{s}**.69**/18**, 6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.17	174	P	Pg	02 15 52.2	-0.6
ABMS	Boumerdes	0.42	7	P	Pb	02 15 56.9	-0.3
AKET	Djebel Ketaf	0.47	127	P	Pg	02 15 57.4	-0.4
ABA	Alger-Bouzarea	0.56	327	P	Pg	02 15 59.2	-0.2
ETOS	Mallorca	3.47	352	P	Pn	02 16 42.7	+1.4
ETOS				⇑*i*Vmb_V		02 16 45.2	
	151nm,SNR=0.4						
ETOS				S	Sn	02 17 20.7	-1.2
EMUR	La Murta	4.02	293	P	Pn	02 16 50.3	+1.4
EMUR				⇑*i*Vmb_V		02 16 55.0	
	105nm,SNR=0.8						
EZAR	Zarzadilla de	4.37	292	P	Pn	02 16 55.3	+1.6
EZAR				S	Sn	02 17 42.3	-1.9
ETOB	Tobarra	4.57	302	P	Pn	02 16 58.5	+2.0
ETOB				⇑*i*Vmb_V		02 16 59.4	
	84nm,SNR=0.4						
ETOB				S	Sn	02 17 48.4	-0.8
EMOS	Mosqueruela	5.06	324	P	Pn	02 17 04.9	+1.7
EMOS				⇑*i*Vmb_V		02 17 08.8	
	213nm,SNR=1.0						
EMOS				S	Sn	02 17 58.3	-2.9
EQES	Quesada	5.39	288	P	Pn	02 17 10.6	+2.8
EQES				⇑*i*Vmb_V		02 17 12.9	
	32nm,SNR=0.3						
EQES				S	Sn	02 18 07.5	-1.9
VSL	Villasalto	5.68	54	P	Pn	02 17 12.1	+0.5
VSL				S	Sn	02 18 16.1	-0.2
EJON	La Jonquera	6.13	356	P	Pn	02 17 19.5	+1.7
EJON				⇑*i*Vmb_V		02 17 22.5	
	52nm,SNR=0.1						

*IDC **29** 02:23:18.5±2.9, 37°.49S×178°.75E, h0^{km}, mb3.4/1, mbtmp3.4/1, MS3.3/1, Error ellipse: s-maj=99.9km s-min=28.2km az=141.0*

*WEL **29** 02:23:22.4±0.8, 38°S±5°×17°9E±°, h27^{km}±5^{km}, M3.6/35, ML3.9/35, MLv3.6/35, Error ellipse: s-maj=0.0km s-min=0.0km az=96.2*

ISC 29 02:23:19.3±2.2**, 38°.13S**±0°.05×**179°.16E**±0°.09**, h24**^{km}±13^{km}**, n110, σ0**^{s}**.87**/119**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	0.66	298	P	Pn	02 23 33.7	+0.5
PUZ	Puketiti	0.71	274	P	Pn	02 23 34.3	+0.4
PUZ				S	Sn	02 23 43.1	-1.0
CNGZ	Carnagh Statio	0.83	244	P	Pn	02 23 37.1	+1.7
MXZ	Matakaoa Point	0.88	310	P	Pn	02 23 36.7	+0.5
MXZ				S	Sn	02 23 47.8	-0.4
PKGZ	Pakihiroa	0.89	286	P	Pn	02 23 36.5	+0.2
PKGZ				S	Sb	02 23 46.9	-0.6
TWGZ	Tauwhareparae	0.93	267	P	Pn	02 23 37.6	+0.6
TWGZ				S	Sn	02 23 49.0	-0.5
TKGZ	Te Karaka	1.07	253	P	Pb	02 23 39.6	+0.4
TKGZ				S	Sb	02 23 52.7	-0.1
HAZ	Te Kaha	1.15	289	P	Pn	02 23 39.9	0.0
RUGZ	Raukumara Rang	1.18	278	P	Pn	02 23 40.4	-0.1
RIGZ	Rimuhau	1.24	242	P	Pb	02 23 42.3	+0.3
RIGZ				S	Sn	02 23 57.4	+0.3
MWZ	Matawai	1.30	260	P	Pn	02 23 42.2	+0.2
MWZ				S	Sn	02 23 57.9	-0.7
MHGZ	Mahia Peninsul	1.41	223	P	Pb	02 23 45.0	0.0
RAGZ	Rawiri	1.42	255	P	Pb	02 23 44.8	-0.4
KNZ	Kokohu	1.46	232	P	Pn	02 23 45.1	+0.9
SNGZ	Shannon Statio	1.57	245	P	Pn	02 23 46.6	+0.9
SNGZ				S	Sn	02 24 04.7	-0.6
URZ	Urewera	1.62	265	Pn	Pn	02 23 47.4	+1.1
	97nm,0.3s,baz=260,slow=4.5,SNR=410						
URZ				LR	LR	02 24 03.7	
	comp=Z,113nm,18.3s,baz=212,slow=30						
URZ				Sn	Sn	02 24 06.2	-0.2
	93nm,0.3s,baz=228,slow=23,SNR=27						
URZ	Urewera	1.62	265	P	Pn	02 23 47.0	+0.7
URZ				S	Sn	02 24 05.8	-0.6
WIZ	White Island	1.67	291	P	Pn	02 23 47.6	+0.5
WHRZ	Whale Island	1.75	278	P	Pn	02 23 48.7	+0.5
WHRZ				S	Sn	02 24 08.8	-0.9
RTZ	Ruatahuna	1.78	254	P	Pn	02 23 49.8	+1.2
RTZ				S	Sn	02 24 09.8	-0.7
RAHZ	Arahi	1.80	244	P	Pn	02 23 49.9	+0.9
RAHZ				S	Sn	02 24 10.7	-0.4
EDRZ	Edgecumbe	1.91	270	P	Pn	02 23 51.1	+0.7
MUGZ	Murupara	1.91	259	P	Pn	02 23 51.2	+0.8
MTHZ	Maungataniwha	1.96	248	P	Pn	02 23 51.8	+0.8
MTHZ				S	Sn	02 24 13.8	-1.0
MARZ	Manawahe	1.96	273	P	Pn	02 23 51.5	+0.3
ARHZ	Aropaoanui	2.03	236	P	Pn	02 23 53.0	+0.9
NMHZ	Naumai	2.08	242	P	Pn	02 23 53.9	+1.1
RRRZ	Republican Roa	2.09	263	P	Pn	02 23 53.6	+0.7
TARZ	Mount Tarawera	2.09	266	P	Pn	02 23 53.7	+0.8
MKRZ	Makatiti	2.12	269	P	Pn	02 23 54.1	+0.7
LIRZ	Lichensteins R	2.19	272	P	Pn	02 23 54.6	+0.4
OMRZ	Omania	2.20	270	P	Pn	02 23 54.6	+0.3
PRRZ	Plateau Road	2.21	260	P	Pn	02 23 55.1	+0.7
HLRZ	Highlands Stat	2.21	266	P	Pn	02 23 55.2	+0.7
CKHZ	Cape Kidnapper	2.23	226	P	Pn	02 23 55.4	+0.7
ALRZ	Allen Road	2.25	258	P	Pn	02 23 55.8	+0.7
MRHZ	Matea Rd	2.26	251	P	Pn	02 23 56.0	+0.8
HRRZ	Handcock Road	2.28	263	P	Pn	02 23 56.1	+0.7
HSRZ	Hossack Road	2.30	265	P	Pn	02 23 56.6	+0.8
KARZ	Kaharoa	2.30	272	P	Pn	02 23 55.9	+0.1
TGRZ	Tauranga	2.33	279	P	Pn	02 23 55.8	-0.3
MCHZ	McNeill Hill	2.33	235	P	Pn	02 23 57.1	+1.0
BKZ	Black Stump Fm	2.33	243	P	Pn	02 23 57.0	+0.9
UTU	Utuhina	2.34	268	P	Pn	02 23 57.9	+1.7
NGRZ	Ngongotaha	2.34	270	P	Pn	02 23 57.1	+0.8
WPRZ	Whakapapatarin	2.39	260	P	Pn	02 23 57.8	+0.8
KAHZ	Kahuranaki	2.43	226	P	Pn	02 23 58.1	+0.5
KWHZ	Kaweka Forest	2.50	238	P	Pn	02 23 59.2	+0.7
KMRZ	Kaimai	2.56	275	P	Pn	02 23 58.8	-0.5
PXZ	Pawanui	2.61	223	P	Pn	02 23 59.7	-0.2
KUTZ	Kaahu Road	2.65	261	P	Pn	02 24 01.2	+0.7
KRHZ	Kereru	2.65	234	P	Pn	02 24 00.7	+0.2
RITZ	Rihia Road	2.72	251	P	Pn	02 24 02.4	+0.8
BHHZ	Black Hill Sta	2.77	240	P	Pn	02 24 02.7	+0.5
WPHZ	Waipukurau	2.86	227	P	Pn	02 24 03.5	+0.1
TMVZ	Te Maari	2.88	249	P	Pn	02 24 04.6	+0.8
ETVZ	East Tongariro	2.88	249	P	Pn	02 24 04.3	+0.5
NTVZ	North Tongarir	2.89	249	P	Pn	02 24 04.7	+0.8
PRHZ	Porangahau	2.90	222	P	Pn	02 24 03.3	-0.6
PNHZ	Pukenui	2.91	231	P	Pn	02 24 04.0	-0.1
KRVZ	Karewarewa	2.92	250	P	Pn	02 24 04.8	+0.5
TOZ	Tahuroa Road	2.92	277	P	Pn	02 24 04.0	-0.2
NNVZ	North Ngauruho	2.95	249	P	Pn	02 24 05.7	+0.9
SNVZ	South Ngauruho	2.95	248	P	Pn	02 24 05.4	+0.6
MOVZ	Moawhango	2.95	243	P	Pn	02 24 05.1	+0.4
WTVZ	West Tongariro	2.96	250	P	Pn	02 24 05.6	+0.7
NGZ	Ngauruhoe	2.97	248	P	Pn	02 24 05.6	+0.5
WHVZ	Whangaehu Hut	3.02	246	P	Pn	02 24 06.5	+0.7
WNVZ	Wahianoa	3.03	246	P	Pn	02 24 06.5	+0.6
TRVZ	Turoa	3.05	246	P	Pn	02 24 06.7	+0.3
TWVZ	Taurewa	3.06	251	P	Pn	02 24 06.7	+0.4
KUZ	Kuaotunu	3.06	296	P	Pn	02 24 05.6	-0.6
ANWZ	Angora Road	3.12	221	P	Pn	02 24 07.3	+0.3
MTVZ	Mangateitei	3.14	245	P	Pn	02 24 08.1	+0.7
TSZ	Takapari Road	3.15	231	P	Pn	02 24 06.8	-0.6
DVHZ	Dannevirke	3.17	226	P	Pn	02 24 07.4	-0.4
MKAZ	Moumakai	3.33	287	P	Pn	02 24 09.8	-0.1
BFZ	Birch Farm	3.40	221	P	Pn	02 24 10.1	-0.8
HIZ	Hauiti	3.40	262	P	Pn	02 24 12.1	+1.2
PRWZ	Pori Road	3.46	225	P	Pn	02 24 11.4	-0.2
POWZ	Post Office Ro	3.47	228	P	Pn	02 24 11.5	-0.2
GRZ	Great Barrier	3.50	301	P	Pn	02 24 12.4	+0.2
ETAZ	East Tamaki Re	3.56	288	P	Pn	02 24 13.5	+0.5
VRZ	Vera Road	3.58	253	P	Pn	02 24 14.3	+1.0
WAZ	Wanganui	3.63	242	P	Pn	02 24 15.3	+1.3
MBAZ	Motutapu North	3.65	291	P	Pn	02 24 14.8	+0.5
TIWZ	Tintock	3.66	223	P	Pn	02 24 14.1	-0.4
EPAZ	Eden Park BICE	3.73	288	P	Pn	02 24 16.2	+0.9
AWAZ	Awhitu Peninsu	3.74	285	P	Pn	02 24 16.1	+0.6
HBAZ	Herne Bay Bore	3.75	289	P	Pn	02 24 16.5	+1.0
MRZ	Mangatainoka R	3.75	227	P	Pn	02 24 14.8	-0.9
WTAZ	Waiatarua	3.83	287	P	Pn	02 24 17.7	+0.9
RVAZ	Riverhead Bore	3.89	289	P	Pn	02 24 18.4	+0.8
OGWZ	Otaki Gorge	4.09	228	P	Pn	02 24 19.0	-1.2
NEZ	North Egmont	4.12	252	P	Pn	02 24 22.9	+2.1
PKE	Pukeiti	4.18	254	P	Pn	02 24 24.1	+2.4
KHEZ	Kahui Hut	4.19	252	P	Pn	02 24 23.7	+2.0
KIW	Kapiti Island	4.27	229	P	Pn	02 24 21.5	-1.3
WCZ	Waipu Caves	4.43	298	P	Pn	02 24 25.5	+0.6
DUWZ	D'Urville Isla	4.85	235	P	Pn	02 24 29.6	-1.2
OUZ	Omahuta	5.33	301	P	Pn	02 24 38.5	+1.2
CTZ	Chatham Island	6.45	152	P	Pn	02 24 56.6	+3.9
AMCZ	Amberley	7.06	222	P	Pn	02 25 08.7	+7.6
STKA	Stephens Creek	31.24	270	LR	LR	02 41 14.1	
	comp=Z,55nm,18.7s,baz=208,slow=35						
WRA	Warramunga Arr	42.71	282	P	P	02 31 14.0	-0.6
	0.4nm,0.7s,baz=123,slow=7.9,SNR=5.3						
	0.4nm,0.7s						
H03N3	Juan Fernandez	78.39	123	T	T	04 01 33.2	
	baz=234,slow=72,SNR=9.4						
H03N2	Juan Fernandez	78.39	123	T	T	04 01 31.0	
	baz=234,slow=72,SNR=9.0						
H03N1	Juan Fernandez	78.41	123	T	T	04 01 38.2	
	baz=234,slow=72,SNR=9.5						
ARCES	ARCESS Array B	145.50	344	PKP	PKPab	02 42 55.3	+0.7
	2.1nm,1.1s,baz=53,slow=3.5,SNR=5.0						
FINES	FINESS Array B	151.30	333	PKPbc	PKiKP	02 43 10.8	+0.5
	0.4nm,0.6s,baz=81,slow=4.4,SNR=3.7						

IDC 29 02:30:04.2±6.2**, 30°.23S**×**177°.95W, h0**^{km}**, mb3.5**/2**, mbtmp3.5**/2**, Error ellipse: s-maj=246.1km s-min=57.3km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.16	267	P	P	02 38 06.7	-0.2
	0.3nm,0.5s,baz=96,slow=7.1,SNR=3.1						
	0.3nm,0.5s						
WRA	Warramunga Arr	44.13	272	P	P	02 38 14.3	-0.4
	0.5nm,0.4s,baz=112,slow=7.5,SNR=16						
	0.5nm,0.4s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	02 49 41.3	-0.7
	0.9nm,0.7s,baz=23,slow=6.2,SNR=5.8						

*CRAAG **29** 02:30:41.3, 36°.35N×3°.48E, Ml3.0*

*MDD **29** 02:30:43.3±0.9, 36°.22N×3°.58E, h19^{km}±10^{km}, Mb3.9/9, M_mb3.2/7, Error ellipse: s-maj=9.8km s-min=4.0km az=156.0*

ISC 29 02:30:41.6±1.3**, 36°.26N**±0°.06×**3°.57E**±0°.05**, h27**^{km}±11^{km}**, n12, σ1**^{s}**.93**/18**, 6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.15	226	P	Pb	02 30 46.6	-0.4
AKET	Djebel Ketaf	0.33	130	P	Pn	02 30 51.8	+0.9
ABMS	Boumerdes	0.49	352	P	Pb	02 30 51.1	-0.7
ABA	Alger-Bouzarea	0.69	322	P	Pb	02 30 53.7	-1.4
ETOS	Mallorca	3.55	351	P	Pn	02 31 36.2	+1.2
ETOS				⇑*i*Vmb_V		02 31 40.2	
	69nm,SNR=0.2						
ETOS				S	Sn	02 32 14.9	-1.3
EZAR	Zarzadilla de	4.51	293	P	Pn	02 31 49.3	+1.1
ETOB	Tobarra	4.71	302	P	Pn	02 31 53.0	+2.0
ETOB				⇑*i*Vmb_V		02 31 57.6	
	70nm,SNR=0.5						
ETOB				S	Sn	02 32 44.7	-0.2
ECHE	Chera	4.89	314	P	Pn	02 31 56.5	+3.0
ECHE				⇑*i*Vmb_V		02 31 59.4	
	207nm,SNR=1.1						
EMOS	Mosqueruela	5.18	323	P	Pn	02 31 59.0	+1.4
EMOS				⇑*i*Vmb_V		02 32 02.5	
	276nm,SNR=1.1						
EMOS				S	Sn	02 32 54.3	-2.3
EQES	Quesada	5.53	288	P	Pn	02 32 03.1	+0.8
EQES				⇑*i*Vmb_V		02 32 08.1	
	18nm,SNR=0.2						
EQES				S	Sn	02 33 03.8	-1.3
VSL	Villasalto	5.62	53	P	Pn	02 32 05.9	+2.5
VSL				S	Sn	02 33 05.1	-2.0
EJON	La Jonquera	6.20	355	P	Pn	02 32 14.5	+3.1
EJON				⇑*i*Vmb_V		02 32 15.4	
	266nm,SNR=0.5						
EJON				S	Sn	02 33 20.2	-1.3

MDD 29 02:33:51.3±1.4**, 36°.39N**×**3°.47E, h16**^{km}±12^{km}**, Mb3.8**/4**, M_mb3.1**/4**, 4C, Error ellipse: s-maj=11.1km s-min=5.1km az=154.0, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETOS	Mallorca	3.41	351	P	Pn	02 34 42.4	-1.5
ETOS				⇑*i*Vmb_V		02 34 45.1	
	121nm,SNR=0.4						
ETOS				S	Sn	02 35 19.7	-4.3
ETOB	Tobarra	4.58	301	P	Pn	02 34 59.7	-0.2
ETOB				⇑*i*Vmb_V		02 35 00.3	
	94nm,SNR=0.5						
ETOB				S	Sn	02 35 48.3	-4.6
EQES	Quesada	5.41	287	P	Pn	02 35 10.9	-0.6
EQES				⇑*i*Vmb_V		02 35 13.6	
	22nm,SNR=0.2						
VSL	Villasalto	5.61	55	P	Pn	02 35 12.2	-1.8
VSL				S	Sn	02 36 13.6	-4.5
EJON	La Jonquera	6.07	356	P	Pn	02 35 20.2	-0.2
EJON				⇑*i*Vmb_V		02 35 22.5	
	169nm,SNR=0.5						
EJON				S	Sn	02 36 24.9	-4.5

*IDC **29** 02:39:02.1±1.6, 15°.46S×178°.24W, h422^{km}±22^{km}, mb3.3/6, mbtmp4.2/8, Error ellipse: s-maj=58.3km s-min=16.2km az=151.0*

ISC 29 02:39:01.6±0.9**, 15°.1S**±0°.2×**178°.4W**±0°.1**, h400**^{km}**, n10,** σ**1^{s}.05**/9**, mb3.6**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.35**	**232**	P	**Pn**	**02 40 18.4**	**+1.3**
	182nm,0.8s,baz=193,slow=21,SNR=157						
AFI	**Afiamalu**	**6.48**	**81**	P	**Pn**	**02 40 39.5**	**-0.1**
	22nm,0.6s,baz=49,slow=17,SNR=4.1						
WRA	**Warramunga Arr**	**45.26**	**257**	P	**P**	**02 46 40.1**	**-1.5**
	0.4nm,0.5s,baz=95,slow=7.3,SNR=10						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**45.67**	**252**	P	**P**	**02 46 43.2**	**-1.5**
	8.9nm,0.4s,baz=85,slow=8.5,SNR=138						
	8.9nm,0.4s						
MJAR	**Matsushiro Arr**	**65.68**	**323**	P	**P**	**02 49 05.4**	**+0.6**
	0.6nm,0.5s,baz=130,slow=8.0,SNR=2.6						
	0.6nm,0.5s						
NVAR	**Mina Array Bea**	**77.36**	**44**	P	**P**	**02 50 13.8**	**-0.2**
	0.4nm,0.6s,baz=228,slow=9.3,SNR=5.4						
	0.4nm,0.6s						
SEY	**Seymchan**	**81.03**	**347**	P	**P**	**02 50 33.0**	**+0.3**
	1.3nm,0.5s,baz=141,slow=7.2,SNR=5.0						
	1.3nm,0.5s						
ILAR	**Eielson Array**	**83.12**	**13**	P	**P**	**02 50 43.5**	**0.0**
	1.0nm,0.6s,baz=236,slow=6.0,SNR=17						
	1.0nm,0.6s						
BRTR	**Keskin Array B**	**142.77**	**318**	PKP		02 57 45.8	
	0.5nm,0.7s,baz=90,slow=1.2,SNR=3.5						
GERES	**GERESS Array B**	**144.88**	**346**	PKPbc	**PKPdf**	**02 57 52.0**	**+0.1**
	0.3nm,0.5s,baz=29,slow=3.0,SNR=4.7						

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*IDC **29** 02:39:42.2±0.6, 1°.52N×66°.81E, h0^{km}, mb4.1/15, mbtmp4.1/15, MS3.8/13, Error ellipse: s-maj=20.1km s-min=15.6km az=133.0*

*NEIC **29** 02:39:45.4±2.7, 1°.55N±0°.09×66°.89E±0°.09, h10^{km}±1^{km}, mb4.5/22, Error ellipse: s-maj=18.5km s-min=10.6km az=226.0*

ISC 29 02:39:44.2±0.6**, 1°.5N**±0°.1×**66°.87E**±0°.09**, h13**^{km}**, n66,** σ**1^{s}.01**/49**, mb4.4**/22**, MS3.7**/12**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**6.20**	**99**	Pn	**Pn**	**02 41 14.1**	**-1.4**
PALK	**Pallekele**	**14.94**	**67**	LR	LR	02 47 58.8	
	comp=Z,441nm,18.3s,baz=339,slow=33						
OPO	**Ambohidratompo**	**27.77**	**223**	LR	LR	02 53 45.0	
	comp=Z,149nm,20.6s,baz=200,slow=30						
PSI	**Prapat**	**32.05**	**87**	LR	LR	02 58 11.4	
	comp=Z,167nm,19.8s,baz=240,slow=34						
SHL	**Shillong**	**33.99**	**43**	P	**P**	**02 46 27.6**	**-0.5**
SHL				IAmb	IAmb	02 46 31.3	
	comp=Z,12nm,1.3s						
CMAR	**Chiang Mai Arr**	**35.70**	**60**	P	**P**	**02 46 44.7**	**+1.9**
	comp=Z,1.6nm,0.3s,baz=249,slow=11,SNR=6.7						
CMAR				LR	LR	03 00 52.9	
	comp=Z,75nm,19.4s,baz=245,slow=36						
	comp=Z,1.6nm,0.3s						
CHTO	**Chiang Mai**	**35.85**	**59**	P	**P**	**02 46 45.5**	**+1.4**
CHTO				IAmb	IAmb	02 46 48.2	
	comp=Z,7.6nm,1.1s						
LSA	**Lhasa**	**36.35**	**37**	P	**P**	**02 46 48.6**	**-0.1**
LSA				IAmb	IAmb	02 46 53.6	
	comp=Z,21nm,1.5s						
LEM	**Lembang**	**41.49**	**102**	LR	LR	03 01 52.1	
	comp=Z,122nm,20.7s,baz=130,slow=32						
AAK	**Ala-Archa**	**41.56**	**8**	P	**P**	**02 47 32.5**	**+0.7**
KKAR	**Karatay Array**	**41.59**	**4**	P	**P**	**02 47 31.2**	**-0.7**
BOOM	**Boomskoye usch**	**41.65**	**10**	P	**P**	**02 47 32.5**	**-0.1**
LSZ	**Lusaka**	**41.71**	**245**	P	**P**	**02 47 34.0**	**+0.6**
	comp=Z,1.2nm,0.2s,baz=107,slow=4.9,SNR=4.7						
	comp=Z,1.2nm,0.2s						
LSZ	**Lusaka**	**41.71**	**245**	P	**P**	**02 47 34.8**	**+1.4**
LSZ				IAmb	IAmb	02 47 35.9	
	comp=Z,6.7nm,1.2s						
MATP	**Matopo**	**43.43**	**238**	P	**P**	**02 47 47.7**	**+0.4**
	comp=Z,4.4nm,1.0s,baz=45,slow=8.6,SNR=5.0						
	comp=Z,4.4nm,1.0s						
MAKZ	**Makanchi**	**47.05**	**14**	P	**P**	**02 48 14.9**	**-0.7**
MAKZ				IAmb	IAmb	02 48 17.1	
	comp=Z,6.3nm,1.4s						
MK31	**Makanchi Array**	**47.11**	**14**	P	**P**	**02 48 15.9**	**-0.2**
MKAR	**Makanchi Array**	**47.11**	**14**	P	**P**	**02 48 16.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=196,slow=8.6,SNR=5.3						
	comp=Z,0.6nm,0.8s						
KBZ	**Khabaz**	**47.19**	**336**	P	**P**	**02 48 17.1**	**+0.5**
	comp=Z,3.0nm,1.0s,baz=267,slow=5.3,SNR=3.6						
	comp=Z,3.0nm,1.0s						
LBTB	**Lobatse**	**47.86**	**234**	P	**P**	**02 48 21.0**	**-1.3**
	comp=Z,5.3nm,1.1s,baz=79,slow=9.0,SNR=5.2						
	comp=Z,5.3nm,1.1s						
LBTB	**Lobatse**	**47.86**	**234**	P	**P**	**02 48 21.9**	**-0.5**
BR131	**Keskin Array S**	**48.62**	**326**	P	**P**	**02 48 27.0**	**-1.1**
BR131				IAmb	IAmb	02 48 29.8	
	comp=Z,10nm,1.4s						
BRTR	**Keskin Array B**	**48.62**	**326**	P	**P**	**02 48 28.4**	**+0.3**
	comp=Z,2.0nm,1.2s,baz=114,slow=11,SNR=4.5						
	comp=Z,2.0nm,1.2s						
AKTO	**Aktyubinsk**	**49.37**	**353**	P	**P**	**02 48 32.4**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=143,slow=11,SNR=4.5						
	comp=Z,2.6nm,0.9s						
BOSA	**Boshof**	**49.83**	**230**	P	**P**	**02 48 37.9**	**+0.4**
	comp=Z,7.9nm,1.2s,baz=50,slow=9.2,SNR=6.5						
	comp=Z,7.9nm,1.2s						
BOSA	**Boshof**	**49.83**	**230**	P	**P**	**02 48 38.7**	**+1.2**
BOSA				IAmb	IAmb	02 48 40.6	
	comp=Z,12nm,1.3s						
KURBB	**Kurchatov Arra**	**49.97**	**10**	P	**P**	**02 48 37.4**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=204,slow=8.4,SNR=4.8						
	comp=Z,1.2nm,1.0s						
KURK	**Kurchatov**	**50.08**	**10**	P	**P**	**02 48 37.4**	**-1.4**
KURK	**Kurchatov**	**50.08**	**10**	IAmb	IAmb	02 48 39.2	
	comp=Z,2.2nm,1.1s						
ALN	**Alexandroupoli**	**53.85**	**322**	P	**P**	**02 49 06.5**	**-0.6**
ALN				IAmb	IAmb	02 49 08.9	
	comp=Z,4.8nm,1.0s						
RDO	**Rodhopi**	**54.30**	**322**	P	**P**	**02 49 10.8**	**+0.4**
RDO				IAmb	IAmb	02 49 12.0	
	comp=Z,5.2nm,1.1s						
ZAA0	**Zalesovo Array**	**54.37**	**13**	P	**P**	**02 49 09.6**	**-1.0**
ZAA0				IAmb	IAmb	02 49 11.1	
	comp=Z,3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**54.37**	**13**	P	**P**	**02 49 08.7**	**-1.9**
	comp=Z,1.8nm,0.5s,baz=222,slow=6.0,SNR=11						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**54.37**	**13**	P	**P**	**02 49 09.9**	**-0.7**
SUR	**Sutherland**	**55.01**	**228**	LR	LR	03 09 30.8	
	comp=Z,220nm,21.6s,baz=100,slow=32						
H01W3	**Cape Leeuwin H**	**57.09**	**134**	T	T	03 51 14.4	
	baz=300,slow=75,SNR=36						
H01W2	**Cape Leeuwin H**	**57.10**	**134**	T	T	03 51 17.8	
	baz=300,slow=75,SNR=33						
H01W1	**Cape Leeuwin H**	**57.11**	**134**	T	T	03 51 15.7	
	baz=300,slow=75,SNR=40						
SONM	**Songino Array**	**57.43**	**31**	P	**P**	**02 49 33.6**	**+0.7**
	comp=Z,3.3nm,1.1s,baz=228,slow=6.2,SNR=14						
SONM				LR	LR	03 14 29.9	
	comp=Z,175nm,20.5s,baz=182,slow=36						
	comp=Z,3.3nm,1.1s						
SONM	**Songino Array**	**57.43**	**31**	P	**P**	**02 49 34.6**	**+1.7**
SONM				IAmb	IAmb	02 49 37.9	
	comp=Z,4.4nm,1.2s						
ZCCA	**Zocca**	**65.18**	**319**	P	**P**	**02 50 25.9**	**+0.5**
KSAR	**Wonju Array Be**	**66.36**	**49**	P	**P**	**02 50 32.4**	**-0.7**
KS19	**Wonju Array Si**	**66.37**	**49**	P	**P**	**02 50 33.7**	**+0.6**
KSRS	**Korea Array**	**66.39**	**49**	LR	LR	03 21 01.9	
	comp=Z,27nm,21.7s,baz=235,slow=37						
WRA	**Warramunga Arr**	**69.40**	**112**	P	**P**	**02 50 53.0**	**+0.5**
	comp=Z,2.5nm,1.0s,baz=289,slow=5.9,SNR=11						
	comp=Z,2.5nm,1.0s						
ASAR	**Alice Springs**	**69.66**	**116**	P	**P**	**02 50 54.3**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=277,slow=5.7,SNR=10						
	comp=Z,1.5nm,0.9s						
LVZ	**Lovozero**	**69.91**	**348**	P	**P**	**02 50 57.3**	**+2.5**
KLR	**Kul'dur**	**72.70**	**38**	LR	LR	03 23 52.5	
	comp=Z,55nm,18.6s,baz=244,slow=36						
MJAR	**Matsushiro Arr**	**74.18**	**52**	LR	LR	03 26 35.0	
	comp=Z,37nm,19.0s,baz=248,slow=38						
ESDC	**Sonseca Array**	**74.37**	**311**	P	**P**	**02 51 20.6**	**-1.5**
	comp=Z,1.7nm,1.1s,baz=83,slow=4.3,SNR=4.5						
	comp=Z,1.7nm,1.1s						
ESDC	**Sonseca Array**	**74.37**	**311**	IAmb	IAmb	02 51 22.5	
	comp=Z,2.3nm,1.2s						
JMIC	**Jan Mayen**	**83.88**	**341**	LR	LR	03 30 48.8	
	comp=Z,24nm,19.4s,baz=217,slow=37						
SNAA	**Sanae**	**85.09**	**197**	LR	LR	03 24 18.8	
	comp=Z,42nm,18.8s,baz=34,slow=31						
PEA0B	**Petropavlovsk-**	**89.34**	**37**	P	**P**	**02 52 41.0**	**+0.5**
VNDA	**Vanda**	**92.50**	**167**	LR	LR	03 27 20.8	
	comp=Z,59nm,18.2s,baz=278,slow=31						
BNM	**Barren Site**	**144.05**	**351**	PKPdf	PKPbc	02 59 18.6	+0.1
X18A	**Snowflake**	**144.07**	**356**	PKPdf	**PKPdf**	**02 59 19.7**	**-0.9**
CRNM	**Carthage**	**144.26**	**351**	PKPdf	**PKPdf**	**02 59 19.8**	**-1.2**
Y14A	**Wickenburg**	**144.79**	**360**	PKPdf	**PKPdf**	**02 59 21.2**	**-0.5**
BLYC	**Blythe**	**144.95**	**2**	PKPdf	**PKPdf**	**02 59 22.0**	**+0.1**
OTAV	**Otavalo**	**145.29**	**273**	PKPbc	**PKPdf**	**02 59 23.7**	**+0.1**
JCT	**Junction City**	**145.79**	**339**	PKPbc	**PKPab**	**02 59 23.8**	**-0.5**
MNTX	**Cornudas Mount**	**146.21**	**348**	PKPbc	**PKPbc**	**02 59 24.8**	**-0.3**
TUC	**Tucson**	**146.34**	**356**	PKPbc	**PKPab**	**02 59 26.5**	**+0.2**
TXAR	**Lajitas Array**	**148.07**	**344**	PKPbc	**PKPbc**	**02 59 28.9**	**-1.6**
	comp=Z,4.2nm,1.0s,baz=48,slow=1.9,SNR=16						
TXAR	**Lajitas Array**	**148.07**	**344**		**PKPbc**	**02 59 29.4**	**-1.1**

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*IDC **29** 02:40:58.0±0.9, 13°.15N×50°.61E, h0^{km}, mb4.0/20, mbtmp4.1/21, ML4.9/1, MS3.7/12, Error ellipse: s-maj=21.7km s-min=17.2km az=13.0*

*NEIC **29** 02:41:00.1±1.8, 13°.08N±0°.04×50°.71E±0°.07, h10^{km}±1^{km}, mb4.2/27, Error ellipse: s-maj=12.4km s-min=6.6km az=105.0*

ISC 29 02:40:60.0±0.6**, 13°.12N**±0°.09×**50°.68E**±0°.07**, h15**^{km}**, n86,** σ**0^{s}.95**/67**, mb4.2**/39**, MS4.1**/23**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	**Socotra**	**3.36**	**106**		**Pn**	**02 41 50.2**	**-1.9**
ATD	**Arta Tunnel**	**7.82**	**259**	Pn	**Pn**	**02 42 53.8**	**+0.5**
	16nm,0.3s,baz=202,slow=21,SNR=21						
	27nm,0.3s						
ATD	**Arta Tunnel**	**7.82**	**259**		**Pn**	**02 42 53.4**	**0.0**
RAYN	**Ar Rayn**	**11.45**	**335**	Pn	**Pn**	**02 43 42.7**	**-0.4**
WSAR	**Wadi Sarin**	**12.58**	**36**	LR	LR	02 48 36.2	
	comp=Z,276nm,18.9s,baz=210,slow=36						
UOSS	**Minazif**	**12.86**	**23**	Pn	**Pn**	**02 44 01.6**	**-0.8**
LODK	**Lodwar**	**17.95**	**239**		**Pn**	**02 45 08.7**	**-0.6**
KIBK	**Kibwezi**	**19.83**	**220**	P	**P**	**02 45 31.0**	**+0.5**
KIBK				IAmb	IAmb	02 45 42.4	
	comp=Z,21nm,1.6s						
GEYT	**Alibeck**	**25.58**	**14**	P	**P**	**02 46 30.2**	**+1.7**
	comp=Z,4.6nm,0.8s,baz=206,slow=16,SNR=6.1						
GEYT				LR	LR	02 58 30.5	
	comp=Z,348nm,18.8s,baz=172,slow=41						
	comp=Z,4.6nm,0.8s						
GEYT	**Alibeck**	**25.58**	**14**	IAmb	IAmb	02 46 37.4	
	comp=Z,4.8nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**25.58**	**14**	P	**P**	**02 46 29.5**	**+1.0**
GYA0B				IAmb	IAmb	02 46 37.3	
	comp=Z,7.9nm,0.8s						
GURO	**Guroymak-BITLI**	**26.46**	**345**	P	**P**	**02 46 37.3**	**+0.6**
KBL	**Kabul**	**27.05**	**35**	P	**P**	**02 46 42.0**	**-0.2**
KBL				IAmb	IAmb	02 46 53.6	
	comp=Z,9.2nm,1.0s						
GNI	**Garni**	**27.42**	**350**	P	**P**	**02 46 47.0**	**+1.6**
	comp=Z,4.6nm,0.5s,baz=117,slow=6.8,SNR=4.3						
GNI				LR	LR	02 59 17.3	
	comp=Z,222nm,20.5s,baz=160,slow=40						
	comp=Z,4.6nm,0.5s						
GNI	**Garni**	**27.42**	**350**	P	**P**	**02 46 46.2**	**+0.9**
GNI				IAmb	IAmb	02 46 51.7	
	comp=Z,7.8nm,0.9s						
KARS	**Kars**	**28.20**	**348**	P	**P**	**02 46 53.0**	**+0.8**
BRTR	**Keskin Array B**	**30.46**	**334**	LR	LR	03 00 11.6	
	comp=Z,106nm,19.3s,baz=149,slow=38						
ANTO	**Ankara**	**30.95**	**333**	P	**P**	**02 47 17.0**	**+0.4**
KBZ	**Khabaz**	**31.22**	**349**	P	**P**	**02 47 19.2**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=151,slow=9.3,SNR=6.2						
	comp=Z,2.7nm,0.8s						
KK31	**Karatay Array**	**34.43**	**26**	P	**P**	**02 47 47.9**	**+1.0**
KK31				IAmb	IAmb	02 47 50.1	
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**34.43**	**26**	P	**P**	**02 47 47.9**	**+1.0**
ABKAR	**Akbulak array**	**36.83**	**10**	P	**P**	**02 48 07.7**	**+0.3**
ABKAR				IAmb	IAmb	02 48 09.1	
	comp=Z,4.3nm,1.1s						
AKTO	**Aktyubinsk**	**37.69**	**8**	P	**P**	**02 48 15.0**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=204,slow=7.3,SNR=7.4						
AKTO				LR	LR	03 06 57.7	
	comp=Z,88nm,18.8s,baz=172,slow=41						
	comp=Z,2.4nm,0.9s						
MLR	**Muntele Rosu**	**38.48**	**332**	LR	LR	03 06 22.0	
	comp=Z,96nm,19.1s,baz=94,slow=40						
BURAR	**Bucovina Array**	**40.43**	**333**	P	**P**	**02 48 39.1**	**+1.3**
DIVS	**Divibare**	**40.53**	**326**	P	**P**	**02 48 40.5**	**+1.8**
DIVS				IAmb	IAmb	02 48 43.8	
	comp=Z,5.4nm,1.4s						
AKASG	**Malin Array Be**	**41.35**	**339**	P	**P**	**02 48 44.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=149,slow=7.4,SNR=9.0						
	comp=Z,0.9nm,0.6s						
AKASG	**Malin Array Be**	**41.35**	**339**	IAmb	IAmb	02 48 51.0	
	comp=Z,2.2nm,1.1s						
MAKZ	**Makanchi**	**42.63**	**32**	P	**P**	**02 48 55.7**	**-0.1**
MAKZ				IAmb	IAmb	02 48 57.6	
	comp=Z,2.3nm,0.8s						
MK31	**Makanchi Array**	**42.78**	**32**	P	**P**	**02 48 57.3**	**+0.3**
MK31				IAmb	IAmb	02 48 59.3	
	comp=Z,3.5nm,1.1s						
MKAR	**Makanchi Array**	**42.78**	**32**	P	**P**	**02 48 56.8**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=223,slow=9.0,SNR=11						
	comp=Z,0.9nm,0.5s						
BRVK	**Borovoye**	**42.79**	**17**	P	**P**	**02 48 57.9**	**+0.9**
ARU	**Arti**	**43.64**	**6**	P	**P**	**02 49 04.1**	**+0.4**
	comp=Z,0.5nm,0.2s,baz=310,slow=5.8,SNR=3.8						
ARU				LR	LR	03 10 23.2	
	comp=Z,49nm,19.6s,baz=170,slow=40						
	comp=Z,0.5nm,0.2s						
KURBB	**Kurchatov Arra**	**43.73**	**25**	P	**P**	**02 49 04.8**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=224,slow=8.2,SNR=11						
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**43.84**	**25**	P	**P**	**02 49 06.6**	**+1.1**
KURK				IAmb	IAmb	02 49 07.5	
	comp=Z,2.6nm,0.8s						
RONA	**Rosalia, Austr**	**44.81**	**327**	*e*P	**P**	**02 49 13.2**	**-0.2**
ARSA	**Arzberg**	**44.95**	**326**	*e*P	**P**	**02 49 15.1**	**+0.7**
	comp=Z,2.4nm,1.0s						
OBKA	**Obir**	**45.04**	**325**	*e*P	**P**	**02 49 15.7**	**+0.4**
	comp=Z,3.1nm,1.0s						
MAUC	**Maruska**	**45.11**	**330**	AMS	AMS	02 54 40.0	
	comp=Z,600nm,21.2s						
CONA	**Conrad Observa**	**45.18**	**327**	*e*P	**P**	**02 49 15.9**	**-0.4**
	comp=Z,2.0nm,0.8s						
OKC	**Ostrava-Krasne**	**45.27**	**331**	AMS	AMS	02 54 10.0	
	comp=Z,300nm,15.6s						
KIRV	**Kirov**	**45.38**	**359**	LR	LR	03 12 59.7	
	comp=Z,74nm,18.2s,baz=269,slow=42						
MOA	**Molln**	**45.99**	**326**	*e*P	**P**	**02 49 22.9**	**+0.3**
	comp=Z,3.2nm,1.2s						
KBA	**Koelnbreinsper**	**46.04**	**325**	*e*P	**P**	**02 49 24.0**	**+0.7**
	comp=Z,1.0nm,0.5s						
KRLC	**Kraliky**	**46.09**	**330**	AMS	AMS	02 54 50.0	
	comp=Z,300nm,18.6s						
TREC	**Trest**	**46.23**	**328**	AMS	AMS	02 55 30.0	
	comp=Z,300nm,20.0s						
BIOA	**Bad Ischl, Aus**	**46.23**	**326**	*e*P	**P**	**02 49 26.7**	**+2.0**
DPC	**Dobruska-Polom**	**46.49**	**330**	*e*P	**P**	**02 49 26.3**	**-0.3**
DPC				AMS	AMS	02 54 50.0	
	comp=Z,400nm,14.2s						
CKRC	**Cesky Krumlov**	**46.55**	**327**	*e*P	**P**	**02 49 28.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**46.64**	**77**	P	**P**	**02 49 28.6**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=268,slow=9.0,SNR=2.3						
	comp=Z,0.8nm,0.3s						
OSTC	**Ostas**	**46.68**	**330**	*e*P	**P**	**02 49 27.6**	**-0.5**
OSTC				AMS	AMS	02 54 50.0	
	comp=Z,400nm,23.3s						
UPC	**Upice**	**46.74**	**330**	AMS	AMS	02 55 00.0	
	comp=Z,400nm,21.2s						
CHVC	**Chvalec**	**46.78**	**330**	*e*P	**P**	**02 49 28.2**	**-0.6**
CHVC				AMS	AMS	02 55 00.0	
	comp=Z,300nm,17.2s						
GERES	**GERESS Array B**	**46.88**	**327**	P	**P**	**02 49 29.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=155,slow=9.9,SNR=5.6						
	comp=Z,0.5nm,0.7s						
WTTA	**Wattenberg**	**47.12**	**324**	*e*P	**P**	**02 49 31.2**	**-0.5**
	comp=Z,2.9nm,0.7s						
KHC	**Kasperske Hory**	**47.12**	**327**	AMS	AMS	02 56 10.0	
	comp=Z,400nm,16.1s						
PRU	**Pruhonice**	**47.14**	**329**	AMS	AMS	02 55 30.0	
	comp=Z,400nm,19.1s						
WATA	**Walderalm**	**47.19**	**324**	*e*P	**P**	**02 49 31.1**	**-1.2**
	comp=Z,2.6nm,1.0s						
MOTA	**Moosalm**	**47.46**	**324**	*e*P	**P**	**02 49 33.2**	**-1.2**
	comp=Z,2.9nm,1.0s						
PVCC	**Panska Ves**	**47.47**	**329**	AMS	AMS	02 55 30.0	
	comp=Z,200nm,18.3s						
TOA0	**Torodi Ar. Sit**	**47.64**	**276**	P	**P**	**02 49 36.9**	**+0.9**
TORD	**Torodi Ar. Bea**	**47.64**	**276**	P	**P**	**02 49 35.7**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=86,slow=7.7,SNR=10						
	comp=Z,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**47.64**	**276**	IAmb	IAmb	02 49 44.1	
	comp=Z,2.1nm,0.9s						
RETA	**Reutte**	**47.73**	**324**	*e*P	**P**	**02 49 35.3**	**-1.1**
	comp=Z,1.8nm,0.7s						
DAVA	**Damuels**	**48.14**	**323**	*e*P	**P**	**02 49 39.6**	**-0.1**
	comp=Z,4.1nm,0.9s						
KLMR	**Klimovskoe**	**48.35**	**353**	*e*P	**P**	**02 49 38.4**	**-2.4**
KLMR				AMP		02 49 41.6	
	comp=Z,10.0nm,1.1s						
NKC	**Novy Kostel**	**48.36**	**328**	AMS	AMS	02 56 30.0	
	comp=Z,200nm,18.6s						
ZAA0	**Zalesovo Array**	**48.81**	**26**	P	**P**	**02 49 44.3**	**-0.2**
ZAA0				IAmb	IAmb	02 49 45.2	
	comp=Z,2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**48.81**	**26**	P	**P**	**02 49 43.0**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=239,slow=6.6,SNR=5.5						
	comp=Z,2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**48.81**	**26**	P	**P**	**02 49 43.5**	**-1.0**
FINES	**FINESS Array B**	**51.43**	**345**	P	**P**	**02 50 03.4**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=161,slow=12,SNR=5.0						
FINES				LR	LR	03 13 13.0	
	comp=Z,50nm,20.5s,baz=96,slow=38						
	comp=Z,1.3nm,0.7s						
ESDC	**Sonseca Array**	**54.65**	**309**	P	**P**	**02 50 26.9**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=95,slow=6.7,SNR=8.4						
	comp=Z,1.5nm,0.8s						
NB2	**NORSAR Subarra**	**55.73**	**338**	P	**P**	**02 50 34.8**	**-1.0**
	comp=Z,4.1nm,1.2s,baz=133,slow=7.4						
NOA	**NORSAR Array B**	**55.73**	**338**	P	**P**	**02 50 35.3**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=127,slow=7.8,SNR=4.5						
NOA				LR	LR	03 17 46.6	
	comp=Z,38nm,19.2s,baz=110,slow=40						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**57.56**	**41**	P	**P**	**02 50 50.5**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=242,slow=8.0,SNR=2.7						
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**58.58**	**350**	LR	LR	03 18 50.7	
	comp=Z,68nm,20.0s,baz=111,slow=39						
SPITS	**Spitsbergen Ar**	**67.25**	**353**	LR	LR	03 25 12.0	
	comp=Z,42nm,19.5s,baz=113,slow=40						
KSRS	**Korea Array**	**72.07**	**55**	P	**P**	**02 52 23.6**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=264,slow=6.5,SNR=4.1						
	comp=Z,0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**80.35**	**55**	P	**P**	**02 53 12.4**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=260,slow=3.6,SNR=4.2						
	comp=Z,0.9nm,0.8s						
MJAR	**Matsushiro Arr**	**80.35**	**55**	IAmb	IAmb	02 53 12.9	
	comp=Z,1.6nm,1.0s						
WRA	**Warramunga Arr**	**88.58**	**111**	P	**P**	**02 53 53.9**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=302,slow=3.5,SNR=18						
	comp=Z,3.1nm,0.9s						
WRA	**Warramunga Arr**	**88.58**	**111**	P	**P**	**02 53 54.0**	**+1.0**
WB2	**Warramunga Arr**	**88.59**	**111**	P	**P**	**02 53 52.8**	**-0.2**
ASAR	**Alice Springs**	**89.12**	**114**	P	**P**	**02 53 56.4**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=293,slow=4.6,SNR=16						
	comp=Z,2.3nm,0.9s						
ASAR	**Alice Springs**	**89.12**	**114**	P	**P**	**02 53 56.1**	**+0.6**
NVAR	**Mina Array Bea**	**127.69**	**349**	PKhKP	PKPpre	03 00 00.1	
	comp=Z,0.3nm,0.5s,baz=73,slow=3.1,SNR=1.6						
NVAR				PKP	**PKiKP**	**03 00 06.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=47,slow=2.7,SNR=3.7						

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*TUL **29** 02:47:19.2±1.2, 36°.08N±0°.01×97°.31W±0°.02, h6^{km}±7^{km}, ML3.5, mb_Lg3.3/108(NEIC), Error ellipse: s-maj=1.8km s-min=1.8km az=210.0*

*ANF **29** 02:47:19.4±0.3, 36°.09N×97°.29W, h6^{km}, ML4.0/14, Error ellipse: s-maj=3.0km s-min=2.5km az=114.0*

*NEIC **29** 02:47:19.4±0.9, 36°.10N±0°.01×97°.31W±0°.02, h4^{km}±4^{km}, Error ellipse: s-maj=2.0km s-min=1.9km az=48.0*

ISC 29 02:47:18.9±1.2**, 36°.09N**±0°.02×**97°.30W**±0°.02**, h3**^{km}±9^{km}**, n129,** σ**1^{s}.21**/138**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.68**	**191**	Pg	**Pg**	**02 47 32.2**	**+0.2**
OKCFA				IAmb_Lg		02 47 41.4	
	comp=Z,355nm,0.9s						
OKCFA				Sg	**Sg**	**02 47 41.8**	**+0.9**
OKCFA	**Oklahoma City**	**0.68**	**191**	P	**Pg**	**02 47 32.2**	**+0.2**
	baz=9.8,SNR=64						
OKCFA				S	**Sg**	**02 47 42.0**	**+1.2**
	baz=9.8						
OKCSW	**OKLAHOMA CITY**	**0.69**	**190**		**Pg**	**02 47 32.4**	**+0.2**
FNO	**Franklin**	**0.83**	**186**	Pg	**Pg**	**02 47 34.9**	**0.0**
FNO				IAmb_Lg		02 47 45.8	
	comp=Z,268nm,0.9s						
FNO				Sg	**Sb**	**02 47 48.1**	**+0.4**
T35A	**Sooner Cattle**	**1.04**	**37**		**Pg**	**02 47 39.1**	**+0.2**
T35A				Sg	**Sg**	**02 47 52.8**	**+0.4**
T35B	**Sooner Cattle**	**1.04**	**37**	P	**Pg**	**02 47 39.1**	**+0.2**
	baz=218,SNR=262						
T35B				S	**Sg**	**02 47 52.8**	**+0.3**
	baz=218						
TUL1	**Leonard**	**1.23**	**98**	Pg	**Pg**	**02 47 41.9**	**-0.7**
TUL1				IAmb_Lg		02 48 01.5	
	comp=Z,172nm,1.2s						
TUL1	**Leonard**	**1.23**	**98**	P	**Pg**	**02 47 41.9**	**-0.7**
	baz=278,SNR=86						
TUL1				S	**Sg**	**02 47 59.1**	**+0.5**
	baz=278						
TUL1	**Leonard**	**1.23**	**98**	P	**Pg**	**02 47 41.8**	**-0.7**
	baz=278,SNR=36						
TUL1				S	**Sg**	**02 47 58.6**	**0.0**
	baz=278						
U32A	**Winter Ranch,**	**1.41**	**282**	Pn	**Pn**	**02 47 44.9**	**-0.7**
U32A	**Winter Ranch,**	**1.41**	**282**	P	**Pn**	**02 47 44.9**	**-0.7**
	baz=102,SNR=52						
X34A	**Smith Ranch, M**	**1.54**	**197**	Pn	**Pn**	**02 47 47.7**	**+0.3**
WMOK	**Wichita Mounta**	**1.81**	**222**		**Pn**	**02 47 51.4**	**+0.3**
WMOK	**Wichita Mounta**	**1.81**	**222**	P	**Pn**	**02 47 51.4**	**+0.3**
	baz=41,SNR=358						
WMOK	**Wichita Mounta**	**1.81**	**222**	P	**Pn**	**02 47 51.4**	**+0.3**
	baz=41,SNR=209						
WMOK				S	**Sb**	**02 48 15.8**	**-0.1**
	baz=41						
X37A	**Clayton**	**2.17**	**133**	Pn	**Pn**	**02 47 57.0**	**+0.9**
X37A	**Clayton**	**2.17**	**133**	Sb	**Sg**	**02 48 28.5**	**-0.2**
	baz=314						
R32A	**Long Quarter,**	**2.59**	**335**		**Pn**	**02 48 01.7**	**-0.1**
R32A				IAmb_Lg		02 48 39.4	
	comp=Z,94nm,0.9s						
R32A	**Long Quarter,**	**2.59**	**335**	S	**Sn**	**02 48 34.5**	**+0.6**
	baz=154						
HHAR	**Hobbs**	**2.72**	**85**	Pn	**Pn**	**02 48 04.3**	**+0.7**
HHAR	**Hobbs**	**2.72**	**85**	Sb	**Sg**	**02 48 44.9**	**-1.6**
	baz=267						
Z35A	**Perchaven, San**	**2.75**	**179**	S	**Sn**	**02 48 39.2**	**+1.5**
	baz=359						
W39A	**Magazine**	**3.00**	**106**		**Pn**	**02 48 07.9**	**+0.5**
W39A				IAmb_Lg		02 49 00.2	
	comp=Z,70nm,0.9s						
W39A	**Magazine**	**3.00**	**106**	P	**Pn**	**02 48 08.3**	**+0.9**
	baz=288,SNR=7.7						
W39A				S	**Sn**	**02 48 45.0**	**+1.2**
	baz=288						
KSU1	**Kansas State U**	**3.06**	**10**	Pn	**Pn**	**02 48 08.6**	**+0.3**
KSU1				IAmb_Lg		02 49 03.3	
	comp=Z,130nm,0.9s						
KSU1	**Kansas State U**	**3.06**	**10**	P	**Pn**	**02 48 08.5**	**+0.3**
	baz=191,SNR=48						
CBKS	**Cedar Bluff**	**3.34**	**325**		**Pn**	**02 48 12.1**	**-0.1**
CBKS				IAmb_Lg		02 49 12.2	
	comp=Z,78nm,1.0s						
CBKS	**Cedar Bluff**	**3.34**	**325**	P	**Pn**	**02 48 12.9**	**+0.7**
	baz=144,SNR=10.0						
CBKS	**Cedar Bluff**	**3.34**	**325**	P	**Pn**	**02 48 12.8**	**+0.7**
	baz=144						
Z38A	**Mt. Pleasant**	**3.40**	**145**	Pn	**Pn**	**02 48 12.7**	**-0.3**
Z38A				IAmb_Lg		02 49 16.5	
	comp=Z,131nm,0.8s						
MIAR	**Mount Ida**	**3.41**	**116**	Pn	**Pn**	**02 48 13.5**	**+0.5**
MIAR	**Mount Ida**	**3.41**	**116**	P	**Pn**	**02 48 14.2**	**+1.1**
	baz=298,SNR=38						
MIAR	**Mount Ida**	**3.41**	**116**	P	**Pn**	**02 48 14.1**	**+1.1**
	baz=298,SNR=12						
MIAR				S	**Sn**	**02 48 55.4**	**+1.4**
	baz=298						

S39A	Bolivar	3.57	62		Pn	02 48 15.5	+0.3
S39A				IAmb_Lg		02 49 21.8	
	comp=Z,78nm,1.0s						
S39A	Bolivar	3.57	62	P	Pn	02 48 16.0	+0.7
	baz=244,SNR=26						
U40A	Yellville	3.60	84	Pn	Pn	02 48 15.8	0.0
U40A				IAmb_Lg		02 49 16.5	
	comp=Z,95nm,0.8s						
U40A	Yellville	3.60	84	P	Pn	02 48 15.8	0.0
	baz=267,SNR=7.8						
AMTX	Amarillo	3.77	253	Pn	Pn	02 48 18.3	+0.2
AMTX				IAmb_Lg		02 49 27.0	
	comp=Z,113nm,0.7s						
AMTX	Amarillo	3.77	253	P	Pb	02 48 25.8	-0.5
	baz=70						
AMTX	Amarillo	3.77	253	Pn	Pn	02 48 19.1	+0.9
	baz=70						
AMTX				Pb	Pb	02 48 25.8	-0.5
	baz=70						
AMTX				Sn	Sn	02 49 03.8	+0.7
	baz=70						
AMTX				Sb	Sg	02 49 16.7	-3.4
	baz=70						
ABTX	Abilene, Hawle	3.96	210	Pn	Pn	02 48 22.5	+1.8
ABTX				IAmb_Lg		02 49 28.4	
	comp=Z,55nm,0.9s						
ABTX	Abilene, Hawle	3.96	210	Pb	Pb	02 48 28.4	-1.1
	baz=28,SNR=13						
ABTX				S	Sn	02 49 07.8	+0.1
	baz=28						
X40A	Basin Creek Fa	3.98	112		Pn	02 48 21.4	+0.5
X40A	Basin Creek Fa	3.98	112	P	Pn	02 48 22.2	+1.2
	baz=295,SNR=15						
X40A				P	Pn	02 48 22.2	+1.2
	baz=295,SNR=15						
X40A	Basin Creek Fa	3.98	112	P	Pn	02 48 22.1	+1.1
	baz=295,SNR=6.4						
X40A				Sb	Sg	02 49 23.6	-3.4
	baz=295						
WHTX	Lake Whitney,	4.09	182	Pn	Pn	02 48 21.9	-0.4
WHTX	Lake Whitney,	4.09	182	P	Pn	02 48 23.1	+0.7
	baz=1.7						
WHTX				Sb	Sb	02 49 24.3	+2.9
	baz=1.7						
WHAR	Wooly Hollow	4.16	100	Pn	Pn	02 48 23.2	-0.1
WHAR				IAmb_Lg		02 49 39.6	
	comp=Z,82nm,0.7s						
MGMO	Mountain Grove	4.18	74		Pn	02 48 24.6	+0.9
MGMO				IAmb_Lg		02 49 35.3	
	comp=Z,94nm,0.7s						
WLAR	White Oak Lake	4.19	124		Pn	02 48 24.3	+0.5
FCAR	Ozark Folk Cen	4.20	91		Pn	02 48 23.8	-0.1
FCAR				IAmb_Lg		02 49 38.0	
	comp=Z,72nm,1.1s						
W41B	Gary Mavity, V	4.21	101		Pn	02 48 24.6	+0.5
W41B				IAmb_Lg		02 49 42.9	
	comp=Z,46nm,0.9s						
W41B	Gary Mavity, V	4.21	101	P	Pn	02 48 24.5	+0.5
	baz=284						
W41B				S	Sn	02 49 13.3	-0.5
	baz=284						
W41B				Sb	Sb	02 49 30.0	+5.0
	baz=284						
UALR	University of	4.25	106	Pn	Pn	02 48 24.3	-0.3
237A	Washetta, Mont	4.26	163		Pn	02 48 23.8	-0.9
237A	Washetta, Mont	4.26	163	P	Pn	02 48 24.5	-0.2
	baz=344,SNR=5.8						
R40A	Maddies Statio	4.58	60		Pn	02 48 28.6	-0.5
R40A				IAmb_Lg		02 49 48.6	
	comp=Z,53nm,0.8s						
P38A	Dawn	4.62	39		Pn	02 48 29.9	+0.2
P38A				IAmb_Lg		02 49 55.7	
	comp=Z,58nm,0.7s						
N33A	J Bar K, Exete	4.65	359	Pn	Pn	02 48 29.0	-1.1
N33A				IAmb_Lg		02 49 59.2	
	comp=Z,60nm,0.7s						
Z41A	Richland Creek	4.66	126	Pn	Pn	02 48 29.4	-0.8
Z41A	Richland Creek	4.66	126	S	Sn	02 49 23.3	-1.4
	baz=309						
N35A	Tabor	4.94	15		Pn	02 48 33.7	-0.4
MSTX	Muleshoe	4.96	246	Pn	Pn	02 48 33.9	-0.6
MSTX	Muleshoe	4.96	246	P	Pn	02 48 35.1	+0.5
	baz=63						
MSTX				S	Sn	02 49 34.2	+1.6
	baz=63						
LCAR	Lake Charles	4.98	88	Pn	Pn	02 48 34.0	-0.6
LCAR				IAmb_Lg		02 50 03.5	
	comp=Z,48nm,0.8s						
CCAR	Cane Creek	5.03	114	IAmb_Lg		02 50 08.2	
	comp=Z,46nm,0.9s						
KSCO	Kaye Shedlock'	5.14	306	Pn	Pn	02 48 37.1	+0.1
KSCO				IAmb_Lg		02 50 08.0	
	comp=Z,42nm,0.7s						
KSCO	Kaye Shedlock'	5.14	306	P	Pn	02 48 37.3	+0.3
	baz=123,SNR=21						
KSCO	Kaye Shedlock'	5.14	306	P	Pn	02 48 37.3	+0.3
	baz=123						
CCM	Cathedral Cave	5.22	66	Pn	Pn	02 48 38.1	+0.1
CCM				IAmb_Lg		02 50 05.3	
	comp=Z,70nm,0.8s						
CCM	Cathedral Cave	5.22	66	P	Pn	02 48 39.2	+1.2
	baz=250						
435B	Jarrell	5.29	183	Pn	Pn	02 48 38.3	-0.7
435B				IAmb_Lg		02 50 21.4	
	comp=Z,58nm,0.9s						
435B	Jarrell	5.29	183	P	Pn	02 48 39.6	+0.6
	baz=2.4						
435B				S	Sn	02 49 39.3	-1.3
	baz=2.4						
BGNE	Belgrade	5.36	353	Pn	Pn	02 48 39.3	-0.5
BGNE				IAmb_Lg		02 50 14.2	
	comp=Z,54nm,0.8s						
BGNE	Belgrade	5.36	353	P	Pn	02 48 39.1	-0.7
	baz=173						
BGNE				S	Sn	02 49 39.6	-2.5
	baz=173						
P40A	Paris	5.39	49	Pn	Pn	02 48 39.5	-0.8
P40A				IAmb_Lg		02 50 15.5	
	comp=Z,55nm,0.8s						
N38A	Joes South For	5.68	33		Pn	02 48 43.9	-0.3
N38A				IAmb_Lg		02 50 26.6	
	comp=Z,90nm,0.8s						
FVM	French Village	5.81	69	Pn	Pn	02 48 46.4	+0.3
FVM				IAmb_Lg		02 50 27.9	
	comp=Z,73nm,0.9s						
T25A	Trinidad	5.82	282		Pn	02 48 46.3	-0.1
T25A	Trinidad	5.82	282	P	Pn	02 48 46.3	-0.1
	baz=98,SNR=7.8						
T25A				Sb	Sb	02 50 18.4	+7.0
	baz=98						
L34A	Svendsen Farm,	5.92	7	Pn	Pn	02 48 46.8	-0.7
143A	Socs Landing,	5.93	123	Pn	Pn	02 48 47.4	-0.3
JCT	Junction City	5.97	201	Pn	Pn	02 48 47.8	-0.6
JCT				IAmb_Lg		02 50 43.1	
	comp=Z,50nm,0.7s						
PEBM	Pemiscott Bayo	6.02	88	IAmb_Lg		02 50 42.7	
	comp=Z,65nm,0.7s						
OGNE	Ogallala	6.11	324	Pn	Pn	02 48 49.3	-0.9
OGNE				IAmb_Lg		02 50 42.3	
	comp=Z,36nm,0.7s						
OGNE	Ogallala	6.11	324	P	Pn	02 48 51.2	+1.0
	baz=141						
SLM	Saint Louis	6.17	64	IAmb_Lg		02 50 35.8	
	comp=Z,73nm,0.8s						
HALT	Halls	6.46	89	IAmb_Lg		02 50 50.2	
	comp=Z,70nm,0.9s						
SCIA	State Center	6.62	27		Pn	02 48 56.9	-0.4
SCIA				IAmb_Lg		02 50 54.5	
	comp=Z,71nm,0.8s						
SCIA	State Center	6.62	27	P	Pn	02 48 58.4	+1.1
	baz=210						
SCIA				S	Sn	02 50 10.8	-2.4
	baz=210						
OXF	Oxford	6.64	101	Pn	Pn	02 48 57.4	-0.1
OXF				IAmb_Lg		02 50 57.8	
	comp=Z,48nm,1.2s						
OXF	Oxford	6.64	101	P	Pn	02 48 57.4	0.0
	baz=286						
S44A	Carbondale	6.64	74	Pn	Pn	02 48 57.9	+0.4
W45A	Hickory Valley	6.67	96	Pn	Pn	02 48 57.0	-0.9
W45A				IAmb_Lg		02 51 04.8	
	comp=Z,59nm,0.9s						
SDCO	Great Sand Dun	6.78	287		Pn	02 48 59.5	-0.1
SDCO	Great Sand Dun	6.78	287	P	Pn	02 49 01.0	+1.4
	baz=102,SNR=16						
Q24A	Divide	6.87	297	Pn	Pn	02 48 60.0	-0.9
Q24A	Divide	6.87	297	P	Pn	02 49 01.0	+0.1
	baz=112						
P43A	Skaggs, Pawnee	7.10	58	Pn	Pn	02 49 04.1	+0.3
Q44A	Meyer Farm, Va	7.16	64	Pn	Pn	02 49 04.6	+0.1
K38A	Parkersburg	7.43	27	IAmb_Lg		02 51 21.1	
	comp=Z,55nm,0.9s						
ISCO	Idaho Springs	7.54	302	Pn	Pn	02 49 08.9	-1.2
ISCO	Idaho Springs	7.54	302	P	Pn	02 49 10.1	0.0
	baz=117,SNR=6.7						
ANMO	Albuquerque	7.55	264	Pn	Pn	02 49 11.1	+0.9
PLAL	Pickwick Lake	7.60	96	IAmb_Lg		02 51 23.2	
	comp=Z,22nm,0.8s						
L40A	Anamosa	7.61	37	Pn	Pn	02 49 11.2	+0.5
L40A				IAmb_Lg		02 51 43.0	
	comp=Z,43nm,0.8s						
ECSD	EROS Data Cent	7.66	4	Pn	Pn	02 49 10.1	-1.3
ECSD	EROS Data Cent	7.66	4	P	Pn	02 49 10.2	-1.3
	baz=184						
ECSD				S	Sn	02 50 35.0	-3.7
	baz=184						
WVT	Waverly	7.67	87	Pn	Pn	02 49 12.2	+0.7
WVT				IAmb_Lg		02 51 29.6	
	comp=Z,25nm,0.9s						
833A	Chaparral WMA,	7.94	193	IAmb_Lg		02 51 44.3	
	comp=Z,26nm,0.9s						
MNTX	Cornudas Mount	8.02	239	Pn	Pn	02 49 16.7	+0.3
O44A	Mansfield	8.06	57	Pn	Pn	02 49 16.9	0.0
O44A				IAmb_Lg		02 51 32.8	
	comp=Z,50nm,0.8s						
Y22D	IRIS PASSCAL I	8.14	259	IAmb_Lg		02 51 52.1	
	comp=Z,38nm,0.8s						
PHWY	Pilot Hill	8.23	312		Pn	02 49 18.4	-1.2
SMCO	Snowmass	8.27	295	Pn	Pn	02 49 20.0	-0.2
N23A	Red Feather La	8.30	308	IAmb_Lg		02 51 46.5	
	comp=Z,20nm,0.7s						
L42A	Oliver, Polo	8.37	43	IAmb_Lg		02 51 53.0	
	comp=Z,40nm,0.9s						
SUSD	Miller	8.44	352	IAmb_Lg		02 52 02.7	
	comp=Z,27nm,0.7s						
I37A	Lemond, Waseca	8.46	19		Pn	02 49 21.7	-0.8
I37A				IAmb_Lg		02 52 07.7	
	comp=Z,44nm,1.1s						
TX31	Lajitas Ar. Si	8.61	220	Pn	Pn	02 49 24.6	0.0
TX32	Lajitas Array	8.61	220	Pn	Pn	02 49 24.6	0.0
JFWS	Jewell Farm	8.72	36	IAmb_Lg		02 51 53.9	
	comp=Z,36nm,0.7s						
P46A	Rosedale	8.72	63	Pn	Pn	02 49 25.3	-0.7
I40A	Norwalk	9.33	31	IAmb_Lg		02 52 27.8	
	comp=Z,23nm,0.9s						
RSSD	Black Hills	9.54	329	P	Pn	02 49 37.1	-0.2
	baz=145						
K22A	Casper	9.69	315	IAmb_Lg		02 52 38.4	
	comp=Z,21nm,1.0s						
SPMN	Marine on St.	9.74	19	IAmb_Lg		02 52 36.2	
	comp=Z,26nm,1.1s						
SPMN	Marine on St.	9.74	19	P	Pn	02 49 40.4	+0.4
	baz=202						
F33A	5 Mile Ranch,	9.77	4	IAmb_Lg		02 52 25.9	
	comp=Z,16nm,1.0s						

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*TUL **29** 02:52:42.1±1.1, 36°.08N±0°.01×97°.31W±0°.01, h5^{km}±7^{km}, ML2.7, mb_Lg2.6/35(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=163.0*

NEIC 29 02:52:42.3±0.7**, 36°.09N**±0°.01×**97°.33W**±0°.01**, h7**^{km}±6^{km}**, Error ellipse: s-maj=1.9km s-min=1.6km az=173.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.68	189	Pg	Pg	02 52 55.1	-0.2
OKCSW	OKLAHOMA CITY	0.69	188		Pg	02 52 55.3	-0.2
FNO	Franklin	0.83	184	Pg	Pg	02 52 57.8	-0.5
FNO				Sg	Sg	02 53 09.0	-0.1
T35A	Sooner Cattle	1.05	38		Pg	02 53 02.1	-0.4
TUL1	Leonard	1.26	98	Pg	Pn	02 53 04.2	-2.1
U32A	Winter Ranch,	1.38	283	Pn	Pn	02 53 07.2	-0.9
X34A	Smith Ranch, M	1.54	196	Pn	Pn	02 53 10.5	+0.3
WMOK	Wichita Mounta	1.80	222	Pn	Pn	02 53 13.8	0.0
WMOK				IAmb_Lg		02 53 42.8	
	comp=Z,62nm,0.8s						
X37A	Clayton	2.19	133	Pn	Pn	02 53 19.4	+0.3
R32A	Long Quarter,	2.58	335	Pn	Pn	02 53 24.4	-0.1
HHAR	Hobbs	2.75	85	Pn	Pn	02 53 26.8	0.0
W39A	Magazine	3.02	106	Pn	Pn	02 53 30.8	+0.3
KSU1	Kansas State U	3.06	11	Pn	Pn	02 53 31.0	-0.1
KSU1				IAmb_Lg		02 54 26.2	
	comp=Z,20nm,0.9s						
Z38A	Mt. Pleasant	3.42	145	Pn	Pn	02 53 35.5	-0.5
Z38A				IAmb_Lg		02 54 40.0	
	comp=Z,18nm,0.9s						
MIAR	Mount Ida	3.43	116	Pn	Pn	02 53 36.5	+0.3
S39A	Bolivar	3.59	62	Pn	Pn	02 53 38.1	-0.2
S39A				IAmb_Lg		02 54 38.7	
	comp=Z,11nm,0.9s						
U40A	Yellville	3.63	84	Pn	Pn	02 53 39.5	+0.6
AMTX	Amarillo	3.75	253	Pn	Pn	02 53 41.8	+1.1
AMTX				IAmb_Lg		02 54 46.2	
	comp=Z,15nm,0.7s						
ABTX	Abilene, Hawle	3.95	210	Pn	Pn	02 53 44.2	+0.8
ABTX				IAmb_Lg		02 54 55.4	
	comp=Z,12nm,1.2s						
X40A	Basin Creek Fa	4.01	112	Pn	Pn	02 53 44.4	+0.3
MGMO	Mountain Grove	4.21	74	IAmb_Lg		02 54 54.6	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	4.22	91	IAmb_Lg		02 55 04.8	
	comp=Z,10.0nm,1.0s						
R40A	Maddies Statio	4.60	60	IAmb_Lg		02 55 06.3	
	comp=Z,16nm,0.9s						
P38A	Dawn	4.63	39	IAmb_Lg		02 55 15.4	
	comp=Z,8.6nm,0.7s						
CCM	Cathedral Cave	5.25	66	IAmb_Lg		02 55 29.9	
	comp=Z,9.4nm,0.9s						
P40A	Paris	5.41	49	IAmb_Lg		02 55 48.7	
	comp=Z,7.5nm,0.7s						
PBMO	Poplar Bluff	5.60	81	IAmb_Lg		02 55 43.0	
	comp=Z,12nm,0.8s						
FVM	French Village	5.84	69	IAmb_Lg		02 55 55.1	
	comp=Z,14nm,1.2s						
JCT	Junction City	5.97	201	IAmb_Lg		02 55 58.7	
	comp=Z,7.5nm,0.8s						
SCIA	State Center	6.63	28	IAmb_Lg		02 56 16.4	
	comp=Z,11nm,0.7s						
S44A	Carbondale	6.66	74	IAmb_Lg		02 56 18.2	
	comp=Z,13nm,0.9s						

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*IDC **29** 02:57:07.3±0.9, 31°.03S×177°.76W, h0^{km}, mb4.2/6, mbtmp4.2/6, MS3.8/15, Error ellipse: s-maj=28.5km s-min=21.5km az=117.0*

*NEIC **29** 02:57:14.1±1.6, 30°.98S±0°.08×177°.82W±0°.03, h35^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=14.1km s-min=3.0km az=341.0*

ISC 29 02:57:14.3±0.6**, 30°.96S**±0°.07×**178°.1W**±0°.1**, h46**^{km}**, n60, σ1^{s}.44**/48**, mb4.5**/14**, MS3.9**/13**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.71	4	Pn	Pn	02 57 39.2	-2.4
	68nm,0.3s,baz=90,slow=20,SNR=4.9						
RAO				Sn	Sn	02 58 03.2	+0.9
	268nm,0.3s,baz=74,slow=23,SNR=4.6						
RAO				LR	LR	02 58 22.4	
	comp=Z,753nm,21.2s,baz=173,slow=42						
RAO	Raoul Island	1.71	4		Pn	02 57 39.8	-1.8
URZ	Urewera	8.29	207	Pn	Pn	02 59 04.5	-7.4
	0.8nm,0.3s,baz=279,slow=5.1,SNR=6.6						
URZ				Sn	Sn	03 00 39.7	-4.4
	5.3nm,0.3s,baz=50,slow=22,SNR=7.1						
URZ	Urewera	8.29	207	Pn	Pn	02 59 08.2	-3.7
TUWZ	Tuamarina	12.27	209	Pn	Pn	03 00 02.2	-4.1
MSVF	Nonsavu	13.64	344	LR	LR	03 04 58.0	
	comp=Z,538nm,18.7s,baz=179,slow=34						
PINNC	Pines Island,	15.37	299	Pn	Pn	03 00 46.4	-1.8
PINNC				IAmb	IAmb	03 01 15.5	
	comp=Z,76nm,1.5s						
OUENC	Ouen Island, N	15.94	299	Pn	Pn	03 00 54.1	-1.3
OUENC				IAmb	IAmb	03 01 05.9	
	comp=Z,55nm,1.3s						
DZM	Mont Dzumac	16.44	299	Pn	Pn	03 00 58.3	-3.6
	comp=Z,1.9nm,0.3s,baz=315,slow=14,SNR=46						
DZM				LR	LR	03 06 22.5	
	comp=Z,543nm,19.9s,baz=190,slow=33						
DZM	Mont Dzumac	16.44	299		Pn	03 01 00.4	-1.5
LIFNC	LIFOU	16.65	304	Pn	Pn	03 01 03.5	-0.9
LIFNC				IAmb	IAmb	03 01 32.9	
	comp=Z,55nm,1.3s						
PPT	Papeete	29.09	69	LR	LR	03 11 31.0	
	comp=Z,70nm,21.7s,baz=287,slow=30						
CTA	Charters Tower	33.84	280	P	P	03 03 53.9	+1.5
	comp=Z,5.6nm,0.8s,baz=86,slow=12,SNR=4.2						
CTA				LR	LR	03 16 40.4	
	comp=Z,193nm,18.0s,baz=93,slow=34						
	comp=Z,5.6nm,0.8s						
CTAO	Charters Tower	33.84	280	P	P	03 03 54.7	+2.3
STKA	Stephens Creek	34.30	258	P	P	03 03 58.0	+1.6
	comp=Z,0.8nm,0.3s,baz=85,slow=11,SNR=4.4						
STKA				LR	LR	03 16 54.2	
	comp=Z,234nm,18.0s,baz=77,slow=34						
	comp=Z,0.8nm,0.3s						
STKA	Stephens Creek	34.30	258	IAmb	IAmb	03 04 06.1	
	comp=Z,3.4nm,1.4s						
BBOO	Buckleboo	38.77	255	P	P	03 04 35.6	+1.2
ASAR	Alice Springs	43.03	268	P	P	03 05 11.3	+1.7
	comp=Z,1.4nm,0.5s,baz=105,slow=7.5,SNR=22						
	comp=Z,1.4nm,0.5s						
WR0	Warramunga Arr	43.89	273	P	P	03 05 17.2	+0.7
WB2	Warramunga Arr	44.06	273	P	P	03 05 19.1	+1.2
WB2				IAmb	IAmb	03 05 32.4	
	comp=Z,12nm,1.2s						
WRAB	Tennant Creek	44.06	273	P	P	03 05 19.5	+1.6
WRAB				IAmb	IAmb	03 05 28.6	
	comp=Z,6.8nm,0.8s						
WRA	Warramunga Arr	44.07	273	P	P	03 05 18.7	+0.7
	comp=Z,2.4nm,0.4s,baz=112,slow=7.6,SNR=99						
WRA				LR	LR	03 23 21.4	
	comp=Z,204nm,18.1s,baz=80,slow=36						
	comp=Z,2.4nm,0.4s						
CASY	Casey	54.62	208	P	P	03 06 38.5	+0.8
CASY				IAmb	IAmb	03 06 51.1	
	comp=Z,8.9nm,1.1s						
SIJI	Sorong	56.49	292	LR	LR	03 31 08.8	
	comp=Z,59nm,19.2s,baz=146,slow=36						
BATI	Baumata	57.67	278	LR	LR	03 32 02.2	
	comp=Z,158nm,18.4s,baz=152,slow=36						
QSPA	South Pole Qui	59.15	180	P	P	03 07 11.0	+0.9
RPN	Rapa Nui	59.34	105	LR	LR	03 26 49.2	
	comp=Z,48nm,20.6s,baz=186,slow=30						
KAPI	Kappang	63.66	281	LR	LR	03 37 43.3	
	comp=Z,66nm,18.0s,baz=299,slow=38						
MAW	Mawson	71.76	201	P	P	03 08 31.2	-0.1
	comp=Z,1.1nm,0.8s,baz=135,slow=7.1,SNR=1.8						
	comp=Z,1.1nm,0.8s						
PMSA	Palmer Station	71.77	156	LR	LR	03 33 09.2	
	comp=Z,62nm,19.3s,baz=134,slow=30						
JHJ	Hachijo jima 2	75.17	324	LR	LR	03 34 33.5	
	comp=Z,42nm,21.1s,baz=103,slow=30						
ISA	Isabella, Lake	86.73	45	P	P	03 09 53.6	+0.2
ISA				IAmb	IAmb	03 09 54.5	
	comp=Z,4.8nm,1.3s						
NVAR	Mina Array Bea	88.69	43	P	P	03 10 03.0	+0.1
	comp=Z,0.9nm,0.8s,baz=213,slow=8.1,SNR=4.2						
	comp=Z,0.9nm,0.8s						
NVAR	Mina Array Bea	88.69	43	P	P	03 10 02.0	-0.9
KVN	Kaiserville	89.22	42	P	P	03 10 04.2	-1.1
KVN				IAmb	IAmb	03 10 05.0	
	comp=Z,3.8nm,1.5s						
PRN	Pahroc Range	89.96	45	P	P	03 10 09.2	+0.5
PRN				IAmb	IAmb	03 10 10.9	
	comp=Z,5.8nm,1.4s						
X16A	Lo Mia Camp, P	90.36	49	P	P	03 10 11.3	+0.6
X16A				IAmb	IAmb	03 10 12.2	
	comp=Z,2.3nm,1.0s						
U15A	North Rim	91.05	47	P	P	03 10 14.6	+0.5
U15A				IAmb	IAmb	03 10 15.4	
	comp=Z,4.2nm,1.1s						
NNA	Nana	93.32	106	LR	LR	03 44 45.8	
	comp=Z,31nm,19.1s,baz=165,slow=31						
BBB	Bella Bella	93.62	28	LR	LR	03 48 25.5	
	comp=Z,27nm,18.6s,baz=214,slow=33						
PMR	Palmer	95.17	13	P	P	03 10 31.3	-0.7
PDAR	Pinedale Array	96.58	44	LR	LR	03 51 02.3	
	comp=Z,52nm,18.1s,baz=273,slow=34						
MKAR	Makanchi Array	118.09	310	PKP	PKPdf	03 15 55.2	-0.7
	comp=Z,0.1nm,0.4s,baz=126,slow=2.0,SNR=2.4						
KURBB	Kurchatov Arra	121.44	313	PKP	PKPdf	03 16 01.9	-0.2
	comp=Z,0.4nm,0.6s,baz=92,slow=1.7,SNR=2.3						
GNI	Garni	144.28	297	PKPdf	PKPdf	03 16 44.8	-0.5
KBZ	Khabaz	145.38	303	PKPbc	PKPab	03 16 47.9	+0.9
	comp=Z,3.5nm,1.1s,baz=190,slow=17,SNR=4.7						
KARS	Kars	145.53	298	PKPbc	PKPab	03 16 48.5	+0.6
OBN	Obninsk	145.60	325		PKPbc	03 16 46.8	-0.4
FIA1	FINESS Array S	145.65	340		PKPab	03 16 47.4	-0.1
FINES	FINESS Array B	145.66	340	PKPbc	PKPbc	03 16 46.5	-0.6
	comp=Z,2.8nm,0.5s,baz=49,slow=3.1,SNR=27						
FINES	FINESS Array B	145.66	340		PKPbc	03 16 46.7	-0.4
GURO	Guroymak-BITLI	146.41	294	PKPbc	PKPab	03 16 50.8	-0.5
MARD	Mardin	147.40	292	PKPbc	PKPbc	03 16 53.3	+0.1
NB2	NORSAR Subarra	149.30	351	PKP	PKPbc	03 16 56.9	-0.4
	comp=Z,0.4nm,0.6s,baz=12,slow=2.5						
NOA	NORSAR Array B	149.30	351	PKPbc	PKPbc	03 16 57.2	-0.1
	comp=Z,0.8nm,0.8s,baz=13,slow=4.1,SNR=4.2						
AKASG	Malin Array Be	151.71	322	PKPbc	PKiKP	03 17 03.5	-0.2
	comp=Z,0.8nm,0.5s,baz=43,slow=3.0,SNR=9.4						
BRTR	Keskin Array B	152.82	297	PKPbc	PKiKP	03 17 06.4	-0.1
	comp=Z,0.9nm,0.6s,baz=140,slow=5.6,SNR=6.1						
CLL	Collm	158.08	341	*i* PKPdf	PKPdf	03 17 09.3	+3.7
	comp=Z,5.0nm,1.5s						
CLL				*i* PKPab	PKPab	03 17 38.4	-0.9
	comp=Z,4.0nm,1.2s						
TORD	Torodi Ar. Bea	162.27	179	PKPab	PKPab	03 17 57.5	-0.9
	comp=Z,0.5nm,0.6s,baz=162,slow=3.4,SNR=3.0						
TORD	Torodi Ar. Bea	162.27	179	PKPdf	PKPdf	03 17 11.1	-0.3

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*WEL **29** 03:02:00, 45°.22S×166°.96E, h20^{km}, ML4.6, Mw4.0, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}0.90; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.37; $M_{\phi r}$-0.86; Fault plane solution: $M_0$1.25000×10^{15} NP1: ϕ_s44.00000°, δ28.00000°, λ126.00000°. NP2: ϕ_s185.00000°, δ67.00000°, λ73.00000°. Principal axes: T -117.7000, Plg64.0000°, Azm67.0000°; N -14.3900, Plg16.0000°, Azm191.0000°; P 132.0900, Plg20.0000°, Azm288.0000°;*

*IDC **29** 03:02:47.5±1.3, 45°.19S×166°.94E, h0^{km}, mb3.4/1, mbtmp4.0/2, ML4.9/1, MS3.5/1 Error ellipse: s-maj=55.5km s-min=27.8km az=168.0*

*WEL **29** 03:02:50.0±0.8, 45°S±4°×16°7E±°, h14^{km}±4^{km}, M4.6/24, ML4.7/24, MLv4.6/24, Error ellipse: s-maj=0.0km s-min=0.0km az=108.6*

ISC 29 03:02:48.8±1.8**, 45°.18S**±0°.05×**166°.95E**±0°.06**, h8**^{km}±12^{km}**, n68, σ1^{s}.35**/72**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.32	153	P	Pb	03 02 57.9	+1.1
DCZ				S	Sb	03 03 02.5	+0.3
MLZ	Mavora Lakes	0.84	103	P	Pb	03 03 06.2	+0.4
MLZ				S	Sb	03 03 17.1	-0.2
MSZ	Milford Sound	0.86	54	P	Pb	03 03 05.9	-0.1
MSZ				S	Sn	03 03 20.5	+0.5
WHZ	Wether Hill Ro	1.00	136	P	Pb	03 03 08.4	0.0
WHZ				S	Sb	03 03 21.2	-0.5
PYZ	Puysegur Point	1.00	191	P	Pg	03 03 07.7	-0.4
WKZ	Wanaka	1.51	77	P	Pg	03 03 17.4	-0.4
WKZ				S	Sb	03 03 36.4	-0.1
EAZ	Earnscleugh	1.67	93	P	Pb	03 03 19.2	-0.6
EAZ				S	Sn	03 03 39.5	-0.4
JCZ	Jackson Bay	1.71	50	P	Pn	03 03 19.7	+0.5
APZ	The Paps	1.80	157	P	Pn	03 03 20.5	+0.3
TUZ	Tuapeka	2.04	113	P	Pn	03 03 23.7	+0.3
SYZ	Scrubby Hill	2.04	132	P	Pn	03 03 23.7	+0.1
LBZ	Lake Benmore	2.44	72	P	Pn	03 03 29.3	+0.4
ODZ	Otahua Downs	2.62	88	P	Pn	03 03 31.4	0.0
FOZ	Fox Glacier	2.63	52	P	Pn	03 03 31.3	-0.3
HHSZ	Highcliff Hill	2.66	107	P	Pn	03 03 32.5	+0.5
TMZ	Timaru	3.00	76	P	Pn	03 03 36.4	-0.3
GCSZ	Gaunt Creek Bo	3.06	54	P	Pn	03 03 37.5	0.0
ARCZ	Arundel	3.26	69	P	Pn	03 03 40.0	-0.3
RPZ	Rata Peaks	3.28	65	Pn	Pn	03 03 41.2	+0.6
	114nm,0.3s,baz=227,slow=6.5,SNR=218						
RPZ				Sn	Sn	03 04 20.0	+0.2
	108nm,0.3s,baz=349,slow=20,SNR=12						
RPZ				LR	LR	03 05 13.3	
	comp=Z,780nm,19.4s,baz=228,slow=44						
	510nm,0.5s						
RPZ	Rata Peaks	3.28	65	P	Pn	03 03 41.4	+0.8
WVZ	Waitaha Valley	3.44	54	P	Pn	03 03 42.6	-0.2
WACZ	Wakanui South	3.71	72	P	Pn	03 03 46.8	+0.4

RACZ	Rakaia	3.99	70	P	Pn	03 03 50.7	+0.5
OXZ	Oxford	4.10	65	P	Pn	03 03 51.5	-0.3
MQZ	McQueen's Vall	4.34	72	P	Pn	03 03 55.0	-0.1
AKCZ	Akaroa Harbour	4.46	75	P	Pn	03 03 57.5	+0.7
LTZ	Lake Taylor	4.53	60	P	Pn	03 03 57.7	0.0
AMCZ	Amberley	4.56	66	P	Pn	03 03 58.3	+0.2
OKCZ	Okains Bay	4.61	74	P	Pn	03 03 59.2	+0.4
GVZ	Greta Valley S	4.91	65	P	Pn	03 04 02.7	-0.3
DSZ	Denniston Nort	4.93	48	P	Pn	03 04 02.9	-0.3
KHZ	Kahutara	5.51	62	P	Pn	03 04 11.5	+0.4
THZ	Tophouse	5.52	54	P	Pn	03 04 11.6	+0.2
MRNZ	Matariki Terra	5.68	50	P	Pn	03 04 13.8	+0.3
QRZ	Quartz Range	5.97	45	P	Pn	03 04 17.1	-0.4
TKNZ	Takaka Hill	6.04	49	P	Pn	03 04 18.7	+0.1
BSWZ	Blackbirch Sta	6.12	58	P	Pn	03 04 24.1	+4.6
NNZ	Nelson	6.14	52	P	Pn	03 04 21.0	+1.2
TUWZ	Tuamarina	6.33	56	P	Pn	03 04 24.7	+2.3
TCW	Tory Channel	6.66	56	P	Pn	03 04 29.7	+2.7
DUWZ	D'Urville Isla	6.73	52	P	Pn	03 04 29.8	+1.8
CAW	Cannon Point	7.20	58	P	Pn	03 04 34.2	-0.1
OGWZ	Otaki Gorge	7.44	57	P	Pn	03 04 44.2	+6.6
HOWZ	Holdsworth Sta	7.59	59	P	Pn	03 04 45.2	+5.4
KHEZ	Kahui Hut	7.88	44	P	Pn	03 04 44.3	+0.5
NEZ	North Egmont	7.93	44	P	Pn	03 04 45.6	+1.0
PKE	Pukeiti	7.94	44	P	Pn	03 04 45.3	+0.7
WAZ	Wanganui	8.04	50	P	Pn	03 04 47.8	+1.9
VRZ	Vera Road	8.38	46	P	Pn	03 04 52.0	+1.4
WNVZ	Wahianoa	8.68	51	P	Pn	03 04 58.4	+3.6
MOVZ	Moawhango	8.71	52	P	Pn	03 05 01.0	+5.9
TWVZ	Taurewa	8.77	49	P	Pn	03 04 58.2	+2.1
NGZ	Ngauruhoe	8.79	50	P	Pn	03 04 59.6	+3.3
BHHZ	Black Hill Sta	8.82	53	P	Pn	03 05 00.1	+3.4
WTVZ	West Tongariro	8.82	50	P	Pn	03 04 59.0	+2.2
NNVZ	North Ngauruho	8.82	50	P	Pn	03 04 59.3	+2.5
OTVZ	Oturere	8.83	50	P	Pn	03 04 55.3	-1.6
ETVZ	East Tongariro	8.87	50	P	Pn	03 05 00.6	+3.1
HIZ	Hauiti	8.89	44	P	Pn	03 04 58.3	+0.7
TOZ	Tahuroa Road	9.82	44	P	Pn	03 05 11.1	+0.7
AWAZ	Awhitu Peninsu	9.97	38	P	Pn	03 05 13.9	+1.6
MKAZ	Moumakai	10.16	40	P	Pn	03 05 16.6	+1.6
RIGZ	Rimuhau	10.32	55	P	Pn	03 05 17.2	-0.1
WRA	Warramunga Arr	36.85	302	P	P	03 09 57.6	-0.1
	0.6nm,1.0s,baz=139,slow=7.9,SNR=5.7						
	0.6nm,1.0s						
BRTR	Keskin Array B	145.51	278	PKPbc	PKPdf	03 22 27.2	-0.2
	0.3nm,0.5s,baz=96,slow=4.3,SNR=1.6						
TORD	Torodi Ar. Bea	145.69	206	PKPbc	PKPdf	03 22 27.6	-0.6
	1.2nm,0.5s,baz=133,slow=2.3,SNR=16						
ARCES	ARCESS Array B	148.91	335	PKPbc	PKPbc	03 22 35.3	-0.6
	1.2nm,0.9s,baz=70,slow=5.3,SNR=4.1						
FINES	FINESS Array B	152.08	320	PKPbc	PKPbc	03 22 42.8	-0.8
	0.6nm,0.6s,baz=90,slow=4.2,SNR=7.7						

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*GUC **29** 03:12:07.9±0.6, 21°.53S×68°.75W, h118^{km}±3^{km}, ML3.6*

*IDC **29** 03:12:08.1±1.1, 21°.60S×68°.58W, h119^{km}±17^{km}, mb3.4/2, mbtmp3.8/3, Error ellipse: s-maj=43.5km s-min=24.8km az=97.0*

ISC 29 03:12:06.7±0.9**, 21°.53S**±0°.03×**68°.86W**±0°.07**, h131**^{km}±7^{km}**,** **n20,** σ**0^{s}.89**/36**, 7C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.45	234	⇑*i*P	Pn	03 12 26.1	+0.3
PB09				*e*S	Sn	03 12 39.6	-0.6
PB09				IAML		03 12 40.7	
	comp=N,740nm,0.3s						
PB01	IPOC Station P	0.76	309	⇑*i*P	Pn	03 12 27.8	0.0
PB01				*i* S	Sn	03 12 43.0	-0.7
PB01				IAML		03 12 43.5	
	comp=N,4µm,0.2s						
PB07	IPOC Station P	0.98	258	⇑*i*P	Pn	03 12 30.4	+0.7
PB07				*e*S	Sn	03 12 47.5	+0.4
PB07				IAML		03 12 49.4	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	0.99	282	⇑*i*P	Pn	03 12 30.4	+0.6
PB02				*e*S	Sn	03 12 47.4	+0.2
PB02				IAML		03 12 48.5	
	comp=N,4µm,0.2s						
LVC	Limon Verde	1.07	183	P	Pn	03 12 30.9	+0.1
	comp=N,49nm,0.3s,baz=2.9,slow=10,SNR=205						
LVC				S	Sn	03 12 48.4	-0.8
	comp=N,255nm,0.3s,baz=270,slow=20,SNR=33						
LVC				LR	LR	03 12 53.9	
	comp=N,43nm,21.0s,baz=18,slow=44						
LVC	Limon Verde	1.07	183	⇑*i*P	Pn	03 12 30.8	0.0
LVC				*e*S	Sn	03 12 48.1	-1.0
PB06	IPOC Station P	1.34	209	⇑*i*P	Pn	03 12 34.2	+0.8
PB06				*e*S	Sn	03 12 54.1	+0.4
PB06				IAML		03 12 55.3	
	comp=N,2µm,0.1s						
PB08	IPOC Station P	1.41	349	⇓*i*P	Pn	03 12 34.9	+0.6
PB08				*e*S	Sn	03 12 55.0	-0.3
PB08				IAML		03 12 57.0	
	comp=E,518nm,0.5s						
PB04	IPOC Station P	1.44	236	⇑*i*P	Pn	03 12 35.2	+0.8
PB04				*e*S	Sn	03 12 55.6	+0.1
PB04				IAML		03 12 57.9	
	comp=N,649nm,0.1s						
AF01	San Pedro de A	1.55	156	⇓*e*P	Pn	03 12 36.4	+0.7
AF01				*e*S	Sn	03 12 56.6	-1.2
AF01				IAML		03 13 14.6	
	comp=E,662nm,0.7s						
TA01	Diego Aracena	1.57	308	⇓*i*P	Pn	03 12 36.1	+0.5
TA01				*e*S	Sn	03 12 57.6	-0.1
TA01				IAML		03 12 59.8	
	comp=E,897nm,0.2s						
PB15	IPOC Station P	1.76	199	*e*P	Pn	03 12 39.0	+0.8
PB15				*e*S	Sn	03 13 02.7	+0.5
PB11	IPOC Station P	1.91	337	⇓*i*P	Pn	03 12 40.0	+0.1
PB11				*e*S	Sn	03 13 04.9	-0.3
PB11				IAML		03 13 06.4	
	comp=E,656nm,0.2s						
PB10	IPOC Station P	2.52	218	*e*P	Pn	03 12 47.9	+0.6
PB10				*e*S	Sn	03 13 16.3	-2.1
PB12	IPOC Station P	3.21	334	⇓*e*P	Pn	03 12 55.4	-0.9
PB12				*e*S	Sn	03 13 32.6	-2.0
GO02	Mina Guanaco	3.68	190	*e*P	Pn	03 13 03.0	+0.5
GO02				*e*S	Sn	03 13 44.5	-1.2
LPAZ	La Paz	5.26	8	P	Pn	03 13 25.9	+2.0
	comp=E,4.4nm,0.4s,baz=188,slow=4.9,SNR=51						
BDFB	Brasilia	20.59	77	P	P	03 16 35.5	-0.2
	comp=E,1.7nm,0.5s,baz=241,slow=7.5,SNR=6.4						
	comp=E,1.7nm,0.5s						
TORD	Torodi Ar. Bea	77.32	70	P	P	03 23 48.1	+0.7
	comp=E,0.5nm,0.5s,baz=252,slow=5.3,SNR=7.8						
	comp=E,0.5nm,0.5s						
MKAR	Makanchi Array	145.63	36	PKPbc	PKiKP	03 31 32.9	-0.8
	comp=E,0.1nm,0.3s,baz=335,slow=4.3,SNR=4.2						

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*IDC **29** 03:27:19.3±1.2, 9°.10N×80°.27W, h32^{km}±7^{km}, mb3.1/3, mbtmp3.5/5, ML3.0/2, MS2.3/1, Error ellipse: s-maj=50.1km s-min=21.9km az=22.0*

*UPA **29** 03:27:20.4±1.4, 9°.47N×80°.20W, h19^{km}±12^{km}, MW3.6*

ISC 29 03:27:19.3±0.8**, 9°.43N**±0°.05×**80°.24W**±0°.04**, h26**^{km}±5^{km}**,** **n30,** σ**0^{s}.93**/54**, mb3.4**/3**, 9C-2D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SABA3	Sabanitas, Col	0.44	100	⇑*i*P	Pb	03 27 28.7	0.0
SABA3				*e*S	Sb	03 27 36.0	+0.9
BCIP	Isla Barro Col	0.48	123	⇓*i*P	Pn	03 27 29.8	-0.7
BCIP				*e*S	Sn	03 27 36.2	-1.8
BCIP	Isla Barro Col	0.48	123	⇑*i*P	Pn	03 27 29.7	-0.7
BCIP				*e*S	Sn	03 27 37.0	-1.0
FRIJ	El Hiral	0.55	112	⇑*i*P	Pb	03 27 30.6	+0.2
ZANG	Zanguenga, Cho	0.60	142	⇑*i*P	Pn	03 27 31.9	-0.2
ZANG				*e*S	Sn	03 27 41.2	+0.2
GAMB1	Gamboa	0.61	120	⇓*i*P	Pn	03 27 32.2	-0.1
GAMB1				*e*S	Sn	03 27 40.8	-0.5
CHOR3	La Chorrera	0.71	138	⇑*i*P	Pn	03 27 33.6	0.0
CHOR3				*e*S	Sn	03 27 44.0	+0.3
CORZ	Corozal	0.80	124	*e*P	Pn	03 27 34.5	-0.4
CORZ				*e*S	Sn	03 27 45.8	0.0
VTON	El Valle, Cocl	0.82	171	⇑*i*P	Pn	03 27 35.5	+0.2
VTON				*e*S	Sn	03 27 47.4	+0.8
UPA	Univ. de Panam	0.83	122	⇑*i*P	Pn	03 27 35.0	-0.3
UPA				*e*S	Sn	03 27 45.9	-0.8
FLAM	Flamenco Islan	0.87	126	*e*P	Pn	03 27 35.9	+0.1
FLAM				*e*S	Sn	03 27 47.5	-0.1
TABO3	Taboga, Panama	0.93	133	⇑*i*P	Pn	03 27 36.6	-0.1
TABO3				*e*S	Sn	03 27 49.7	+0.6
PNME	Penonome	0.94	185	⇑*i*P	Pn	03 27 37.6	+0.8
PNME				*e*S	Sn	03 27 49.9	+0.5
CHPO	Chepo, Panama	1.14	103	*e*P	Pn	03 27 39.5	-0.1
CHPO				*e*S	Sn	03 27 54.0	-0.4
STIA3	Santiago, Vera	1.50	209	*e*P	Pb	03 27 47.2	+0.6
AZU	Azuero	1.63	181	*e*P	Pb	03 27 47.3	-1.4
AZU				*e*S	Sb	03 28 08.5	-0.3
AZU	Azuero	1.63	181	*e*P	Pb	03 27 47.3	-1.4
AZU				*e*S	Sb	03 28 08.6	-0.2
GMAL	Guarumal, Vera	1.92	211	*e*P	Pb	03 27 53.7	-0.1
GMAL				*e*S	Sb	03 28 17.5	+0.2
GMAL	Guarumal, Vera	1.92	211	*e*P	Pb	03 27 52.8	-1.0
GMAL				*e*S	Sb	03 28 14.8	-2.5
CACAO	El Cacao, Vera	2.16	196	*e*P	Pb	03 27 57.9	+0.1
CACAO	El Cacao, Vera	2.16	196	*e*P	Pb	03 27 57.3	-0.5
CACAO				*e*S	Sb	03 28 26.9	+2.7
CAPC	Capurgana	2.96	105	*e*P	Pn	03 28 05.0	+0.3
JTS	Las Juntas de	4.72	281	Pn	Pn	03 28 29.2	+0.3
	2.2nm,0.3s,baz=166,slow=23,SNR=19						
JTS				Sn	Sn	03 29 23.8	+1.1
	0.9nm,0.3s,baz=6.7,slow=17,SNR=2.9						
JTS				LR	LR	03 30 24.4	
	comp=Z,35nm,19.4s,baz=76,slow=39						
	7.2nm,0.4s						
UREC	San Jos de Ur	4.95	109	*e*P	Pn	03 28 34.0	+2.0
UREC				*e*S	Sn	03 29 30.4	+1.9
SDV	Santo Domingo	9.51	92	Pn	Pn	03 29 35.8	+1.0
	0.4nm,0.3s,baz=299,slow=5.9,SNR=7.1						
	1.4nm,0.4s						
PDAR	Pinedale Array	41.96	327	P	P	03 35 08.6	+0.3
	0.3nm,0.5s,baz=128,slow=9.6,SNR=4.3						
PDAR				pP	sP	03 35 19.2	-0.1
	0.2nm,0.4s,baz=137,slow=11,SNR=2.8						
	0.3nm,0.5s						
NVAR	Mina Array Bea	44.69	316	P	P	03 35 31.8	+1.3
	0.1nm,0.3s,baz=99,slow=10,SNR=1.9						
NVAR				pP	sP	03 35 41.5	0.0
	0.3nm,0.6s,baz=134,slow=7.8,SNR=3.2						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	80.12	78	P	P	03 39 26.9	-0.9
	0.5nm,1.0s,baz=286,slow=4.4,SNR=5.0						
	0.5nm,1.0s						
ASAR	Alice Springs	144.45	242	PKP	PKPab	03 46 52.1	-0.3
	0.8nm,0.6s,baz=120,slow=3.7,SNR=13						
ASAR				pPKP	pPKPdf	03 47 01.9	-1.0
	1.1nm,0.7s,baz=122,slow=3.8,SNR=8.2						
WRA	Warramunga Arr	145.02	249	PKP	PKPab	03 46 54.4	-0.3
	0.6nm,0.6s,baz=98,slow=3.2,SNR=8.9						
WRA				pPKP	pPKPdf	03 47 04.3	+0.4
	0.7nm,0.6s,baz=97,slow=3.3,SNR=5.3						

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*IDC **29** 03:45:54.5±1.1, 39°.44N×51°.93E, h0^{km}, mb3.4/8, mbtmp3.5/14, ML3.1/5, Error ellipse: s-maj=21.2km s-min=14.8km az=174.0*

*TEH **29** 03:45:55.5, 39°.47N×52°.01E, h10^{km}, ML3.7*

*AZER **29** 03:45:58.5±0.3, 39°.37N×52°.03E, h43^{km}±4^{km}, Error ellipse: s-maj=6.7km s-min=4.5km az=271.0*

ISC 29 03:45:59.8±1.0**, 39°.41N**±0°.04×**51°.99E**±0°.04**, h44**^{km}±13^{km}**,** **n90,** σ**1^{s}.60**/119**, mb3.4**/8**, 3C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	Nardaran	1.94	308	Pg	Pn	03 46 34.0	+3.8
NDR				Sn	Sn	03 46 55.3	+2.0
GOBA	Gobu	2.00	300	Pn	Pn	03 46 32.3	+1.1
GOBA				Sn	Sn	03 46 57.5	+2.5
ALIB	Äli-Bayra	2.37	284	Pg	Pn	03 46 39.9	+3.8
ALIB				Sg	Sn	03 47 13.2	+9.2
LKRN	Lenkeran, Azer	2.59	255	Pn	Pn	03 46 39.8	+0.5
LKRN				Sn	Sn	03 47 09.6	0.0
GBS	Qobustan	2.60	297	Pn	Pn	03 46 42.2	+2.8
ASTR	Astara	2.63	252	Pn	Pn	03 46 40.0	+0.2
	SNR=5.5						
ASTR				Sn	Sn	03 47 10.7	+0.2
ATGJ	Altiaghaj	2.75	303	Pn	Pn	03 46 42.2	+0.6
ATGJ				Sn	Sn	03 47 15.8	+2.1
SAAT	Saatly	2.79	280	Pn	Pn	03 46 43.5	+1.5
SAAT				Sn	Sn	03 47 17.8	+3.4
GLBA	Clilabad	2.79	268	Pn	Pn	03 46 43.1	+1.1
	SNR=10						
GLBA				Sn	Sn	03 47 15.2	+0.7
SIZA	Siyzn	2.90	306	Pn	Pn	03 46 44.7	+1.2
SIZA				Sn	Sn	03 47 20.6	+3.5
LRK	Lerik	2.94	256	Pn	Pn	03 46 44.5	+0.2
	SNR=10						
LRK				Sn	Sn	03 47 17.5	-1.0
PQL	Pirkuli	2.95	299	Pn	Pn	03 46 45.3	+1.0
PQL				Sn	Sn	03 47 21.0	+2.4
YRD	Yardimli	2.96	262	Pn	Pn	03 46 44.9	+0.5
	SNR=56						
YRD				Sn	Sn	03 47 17.9	-0.9
KDMR	Kurdemir	3.08	290	Pn	Pn	03 46 47.0	+1.0
KDMR				Sn	Sn	03 47 23.8	+2.2
QALM	Alamut, Qazvin	3.15	200	*e*Pn	Pn	03 46 46.8	-0.4
QALM				*e*		03 47 30.4	
	comp=Z,2µm,0.3s						
IPRN	Peran	3.17	175	*e*Pn	Pn	03 46 47.8	+0.4
IPRN				*e*		03 47 29.5	
	comp=Z,4µm,0.3s						
IML	Ismayilli	3.23	297	Pn	Pn	03 46 48.9	+0.8
	SNR=3.7						
IML				Sn	Sn	03 47 27.4	+2.0
GRMI	Germi	3.24	261	*e*Pn	Pn	03 46 48.8	+0.5
GRMI				*e*		03 47 27.8	
	comp=N,608nm,0.2s						
IGLO	Ghaloghah	3.24	153	*e*Pn	Pn	03 46 49.2	+0.8
IGLO				*e*		03 47 30.5	
	comp=Z,3µm,0.3s						
QUBA	Quba, Azerbaij	3.31	307	Pn	Pn	03 46 49.9	+0.8
QUBA				Sn	Sn	03 47 28.1	+0.9
ZRD	Zardab	3.43	286	Pn	Pn	03 46 52.2	+1.5
ZRD				Sn	Sn	03 47 32.2	+2.1
XNQ	Khinaliq	3.43	302	Pn	Pn	03 46 51.9	+0.9
	SNR=4.4						
XNQ				Sn	Sn	03 47 31.4	+0.9
BLQ	Beylaqan	3.44	277	Pn	Pn	03 46 51.2	+0.3
BLQ				Sn	Sn	03 47 29.6	-0.8
QBL	Gabala	3.53	297	Sn	Sn	03 47 33.8	+1.0
QSAR	Qusar	3.54	308	Pn	Pn	03 46 53.5	+1.2
	SNR=7.5						
QSAR				Sn	Sn	03 47 33.9	+1.0
CHTH	Charan	3.56	191	*e*Pn	Pn	03 46 53.9	+1.1
QRD	Qoradiz	3.62	272	Pn	Pn	03 46 53.2	-0.1
QRD				Sn	Sn	03 47 34.5	-0.3
MRVT	Maraveh tapeh	3.66	117	*e*Pn	Pn	03 46 53.9	-0.1
MRVT				*e*		03 46 57.8	
	comp=Z,167nm,0.2s						
ISRB	Sarab	3.74	246	*e*Pn	Pn	03 46 56.1	+0.9
ISRB				*e*		03 47 42.6	
	comp=N,3µm,0.2s						
ISHM	Shahmirzad	3.74	164	*e*Pn	Pn	03 46 56.4	+1.1
ISHM				*e*		03 47 44.7	
	comp=Z,4µm,0.3s						
ZNJK	Zanjan	3.78	225	*e*Pn	Pn	03 46 56.0	+0.2
BRDA	Brd	3.80	285	Pn	Pn	03 46 57.1	+1.2
BRDA				Sn	Sn	03 47 41.5	+2.2
IFIR	Firoozkooh	3.81	171	*e*Pn	Pn	03 46 57.9	+1.7
IDMV	Damavand	3.82	179	*e*Pn	Pn	03 46 58.5	+2.1
IDMV				*e*		03 47 46.1	
	comp=Z,1µm,0.5s						
AGDM	Agdam	3.83	282	Sn	Sn	03 47 41.1	+1.1
IMHD	Mahdasht	3.86	196	*e*Pn	Pn	03 46 58.4	+1.6
IHSB	Hasanabad	4.00	188	*e*Pn	Pn	03 47 01.4	+2.7
MNGR	Mingechevir, A	4.00	292	Pn	Pn	03 46 59.2	+0.6
MNGR				Sn	Sn	03 47 45.3	+1.0
IHRS	Heris	4.01	256	*e*Pn	Pn	03 46 59.6	+0.6
IHRS				*e*		03 47 06.0	
	comp=Z,1µm,0.2s						
SEKA	Sheki	4.08	298	Pn	Pn	03 47 00.5	+0.8
	SNR=8.5						
SEKA				Sn	Sn	03 47 46.9	+0.6
QABG	Abgarm-Qazvin	4.16	208	*e*Pn	Pn	03 47 00.9	-0.1
IANJ	Anjilo	4.22	158	*e*Pn	Pn	03 47 04.2	+2.3
IHSH	Hashtrud	4.27	242	*e*Pn	Pn	03 47 03.5	+0.9
IHSH				*e*		03 47 56.3	
	comp=Z,1µm,0.3s						
IRAZ	Razeghan	4.32	203	*e*Pn	Pn	03 47 04.6	+1.4
IRAZ				*e*		03 47 59.5	
	comp=Z,611nm,0.5s						
IBST	Bostanabad	4.34	249	*e*		03 47 08.9	
	comp=Z,169nm,0.2s						
IBST				*e*Pn	Pn	03 47 04.5	+1.0
IVRN	Varamin	4.41	183	*e*Pn	Pn	03 47 06.1	+1.8
IVRN				*e*		03 48 03.6	
	comp=Z,463nm,0.3s						
GANJ	Ganja	4.52	288	Pn	Pn	03 47 05.3	-0.5
	SNR=5.7						
GANJ				Sn	Sn	03 47 55.8	-1.4
BJRD	Bojnurd	4.58	110	*e*Pn	Pn	03 47 06.9	+0.3
IQOM	Qom	4.61	189	*e*Pn	Pn	03 47 08.4	+1.1
ZKTA	Zakatala	4.66	300	Pn	Pn	03 47 09.4	+1.7
ZKTA				Sn	Sn	03 48 00.4	-0.1
SHRO	Shahrood	4.67	136	*e*Pn	Pn	03 47 08.8	+0.9
ORD	Ordubad	4.69	266	Pn	Pn	03 47 08.6	+0.5
	SNR=5.0						
ORD				Sn	Sn	03 47 59.8	-1.4
GHVR	GHOM	4.95	187	*e*Pn	Pn	03 47 13.1	+1.4
GDB	GEDABAY	4.96	287	Pn	Pn	03 47 12.5	+0.6
	SNR=11						
GDB				Sn	Sn	03 48 05.7	-2.4
SBZ	Shahbuz	4.99	272	Pn	Pn	03 47 13.9	+1.7
	SNR=11						
SBZ				Sn	Sn	03 48 08.9	+0.2
GEYT	Alibeck	5.02	105	Pn	Pn	03 47 12.2	-0.4
	comp=Z,2.6nm,0.3s,baz=278,slow=13,SNR=21						
GEYT				Sn	Sn	03 48 06.9	-2.4
	comp=Z,0.9nm,0.3s,baz=341,slow=22,SNR=2.0						
	comp=Z,4.0nm,0.3s						
NAX	Nakhchivan	5.04	269	Pn	Pn	03 47 13.8	+0.8
	SNR=2.8						
NAX				Sn	Sn	03 48 10.2	+0.1
ISFB	Sefidab	5.05	178	*e*Pn	Pn	03 47 14.5	+1.4
ISFB				*e*		03 48 30.6	
	comp=Z,133nm,0.5s						
ASAO	Ashtian	5.10	199	*e*Pn	Pn	03 47 14.7	+0.8
ISFR	Sfrayin	5.28	115	*e*Pn	Pn	03 47 17.4	+0.9
ISFR				*e*		03 47 33.8	
	comp=Z,427nm,0.4s						
QZX	Qazax, Azerbai	5.33	290	Pn	Pn	03 47 16.7	-0.1
QZX				Sn	Sn	03 48 16.6	-0.3
SBZV	Sabzevar	5.37	122	*e*Pn	Pn	03 47 18.6	+1.0
IEMG	Emamgholi	5.60	109	*e*Pn	Pn	03 47 21.4	+0.6
IEMG				*e*		03 48 29.9	
	comp=N,1µm,0.3s						
MAKU	Maku	5.66	272	*e*Pn	Pn	03 47 22.4	+0.8
IAKL	Akhelmad	6.03	116	*e*Pn	Pn	03 47 27.5	+0.7
IAKL				*e*		03 47 32.3	
	comp=Z,149nm,0.3s						
IPAY	Payeh	6.27	116	*e*Pn	Pn	03 47 30.1	+0.1
IKRD	Kardeh	6.49	112	*e*Pn	Pn	03 47 33.6	+0.6
IKRD				*e*		03 47 38.1	
	comp=Z,139nm,0.1s						
TNSJ	Nastanj	6.58	144	*e*Pn	Pn	03 47 35.2	+1.1
NASN	Na'in	6.63	174	*e*Pn	Pn	03 47 36.5	+1.5
TABS	Tabas	7.07	143	*e*Pn	Pn	03 47 41.5	+0.6
YZKH	Yazd	7.31	162	*e*Pn	Pn	03 47 45.9	+1.7
TPRV	Parvadeh(Tabas	7.41	148	*e*Pn	Pn	03 47 47.0	+1.5
KBZ	Khabaz	8.07	305	Pn	Pn	03 47 53.5	-0.9
	comp=Z,0.1nm,0.3s,baz=135,slow=17,SNR=1.2						
KBZ				Sn	Sn	03 49 18.4	-5.8
	comp=Z,0.1nm,0.3s,baz=135,slow=19,SNR=1.2						
	comp=Z,0.3nm,0.3s						
AFRZ	Afriz	8.22	134	*e*Pn	Pn	03 47 58.5	+1.8
KVAR	Kislovodsk Arr	8.31	306	Sn	Sn	03 49 24.5	-5.8
	baz=135,slow=20						
AB31	Akbulak array	11.37	27	⇑Pn	Pn	03 48 37.5	-2.0
	comp=Z,1.0nm,0.6s,baz=199,slow=12,SNR=11						
AB31				⇓Sn	Sn	03 50 32.9	-12
	comp=Z,1.2nm,0.4s,baz=209,slow=24,SNR=6.4						
AKTO	Aktyubinsk	11.82	19	Pn	Pn	03 48 42.0	-3.7
	comp=Z,0.3nm,0.3s,baz=214,slow=11,SNR=5.3						
AKTO				Sn	Sn	03 50 44.2	-12
	comp=Z,0.9nm,0.3s,baz=75,slow=23,SNR=11						
	comp=Z,0.7nm,0.3s						
AKTO	Aktyubinsk	11.82	19	⇑Pn	Pn	03 48 39.5	-6.2
	comp=Z,1.7nm,0.6s						
AKTO				⇑Sn	Sn	03 50 44.7	-11
	comp=Z,7.3nm,0.7s						
WSAR	Wadi Sarin	17.08	159	P	Pn	03 49 55.8	+0.4
	comp=Z,0.5nm,0.3s,baz=355,slow=15,SNR=5.1						
	comp=Z,1.2nm,0.2s						
ARU	Arti	17.58	12	P	Pn	03 50 00.9	-0.5
	baz=128,slow=18,SNR=3.5						
	comp=Z,0.5nm,0.2s						
AKASG	Malin Array Be	19.57	313	P	P	03 50 23.5	-0.3
	comp=Z,0.7nm,0.5s,baz=119,slow=10,SNR=4.6						
MLR	Muntele Rosu	20.11	296	P	Pn	03 50 32.7	+0.6
	comp=Z,0.9nm,0.4s,baz=1.5,slow=12,SNR=5.6						
KURBB	Kurchatov Arra	21.74	50	P	P	03 50 46.4	-0.8
	comp=Z,0.4nm,0.5s,baz=251,slow=11,SNR=3.9						
	comp=Z,0.4nm,0.5s						
IDI	Anoyia	21.90	268	P	P	03 50 50.4	+1.1
	comp=Z,1.5nm,0.4s,baz=79,slow=9.8,SNR=5.7						
	comp=Z,1.5nm,0.4s						
MKAR	Makanchi Array	23.22	62	P	P	03 51 03.0	+0.1
	comp=Z,0.6nm,0.6s,baz=251,slow=7.6,SNR=6.1						
	comp=Z,0.6nm,0.6s						
FINES	FINESS Array B	27.21	333	P	P	03 51 38.8	-0.4
	comp=Z,0.9nm,0.6s,baz=141,slow=12,SNR=9.9						
	comp=Z,0.9nm,0.6s						
NOA	NORSAR Array B	33.08	324	P	P	03 52 30.9	-0.3
	comp=Z,0.5nm,0.7s,baz=114,slow=8.3,SNR=3.7						
	comp=Z,0.5nm,0.7s						
ESDC	Sonseca Array	42.54	289	P	P	03 53 51.6	+0.4
	comp=Z,0.3nm,0.5s,baz=63,slow=8.0,SNR=6.3						
	comp=Z,0.3nm,0.5s						
TORD	Torodi Ar. Bea	51.32	254	P	P	03 54 59.7	-0.2
	comp=Z,0.1nm,0.4s,baz=45,slow=7.2,SNR=6.2						
	comp=Z,0.1nm,0.4s						
KSRS	Korea Array	57.81	66	P	P	03 55 47.5	+0.8
	comp=Z,0.7nm,0.6s,baz=287,slow=6.0,SNR=2.5						
	comp=Z,0.7nm,0.6s						

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*IDC **29** 03:52:47.2±4.0, 36°.45N×70°.99E, h219^{km}±36^{km}, mb3.2/5, mbtmp3.9/10, Error ellipse: s-maj=31.0km s-min=24.5km az=173.0*

*NNC **29** 03:52:55.9±2.9, 37°.13N×70°.97E, h261^{km}±26^{km}, mb2.7, mpv3.9, Error ellipse: s-maj=28.3km s-min=16.3km az=2.0*

ISC 29 03:52:45.8±1.2**, 36°.4N**±0°.1×**70°.9E**±0°.1**, h200**^{km}**, n23,** σ**1^{s}.91**/26**, mb3.4**/5**, 2C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.09	20	P	Pn	03 54 17.6	+3.0
	SNR=102						
UCH	Uchtor	6.43	25	P	Pn	03 54 21.6	+2.5
	SNR=80						
KK31	Karatay Array	6.68	358	P	Pn	03 54 24.4	+2.6
	5.3nm,0.4s,baz=172,slow=12,SNR=72						
KK31				⇓S	Sn	03 55 34.2	-3.8
	4.6nm,0.4s,baz=184,slow=21,SNR=13						
AAK	Ala-Archa	6.80	23	P	Pn	03 54 26.1	+2.6
	SNR=12						
AAK	Ala-Archa	6.80	23	P	Pn	03 54 26.1	+2.6
	12nm,0.3s,baz=178,slow=7.1,SNR=15						
AAK				S	Sn	03 55 40.2	-0.8
	12nm,0.7s,baz=331,slow=22,SNR=27						
KBK	Karagaybulak	6.96	25	P	Pn	03 54 28.6	+2.9
	SNR=7.5						
ULHL	Ulahol	7.13	34	P	Pn	03 54 30.1	+2.1
	SNR=10						
TKM2	Tokmak 2	7.43	28	P	Pn	03 54 34.0	+2.3
	SNR=9.3						
TKM2	Tokmak 2	7.43	28	⇓P	Pn	03 54 33.8	+2.1
	6.2nm,0.7s						
TKM2				⇑S	Sn	03 55 54.3	-1.6
	9.1nm,0.9s						
MK31	Makanchi Array	13.40	36	P	Pn	03 55 48.1	0.0
	1.6nm,0.5s,baz=222,slow=13,SNR=25						
MKAR	Makanchi Array	13.40	36	P	Pn	03 55 48.7	+0.6
	1.1nm,0.4s,baz=212,slow=11,SNR=17						
AB31	Akbulak array	15.11	331	P	Pn	03 56 10.7	+1.5
	0.2nm,0.3s,baz=343,slow=17,SNR=8.7						
KURBB	Kurchatov Arra	15.22	19	P	Pn	03 56 10.2	-0.3
	2.3nm,0.9s,baz=209,slow=11,SNR=11						
KURBB	Kurchatov Arra	15.22	19	⇓P	Pn	03 56 09.3	-1.2
	3.3nm,0.8s						
KURK	Kurchatov	15.33	19	⇑P	Pn	03 56 11.1	-0.7
	2.8nm,0.7s						
AKTO	Aktyubinsk	16.81	330	P	P	03 56 29.2	+0.8
	1.8nm,0.3s,baz=156,slow=8.9,SNR=6.2						
AKTO	Aktyubinsk	16.81	330	⇓P	P	03 56 28.5	0.0
	1.5nm,0.5s						
ZALV	Zalesovo Beam	20.02	25	P	P	03 57 02.2	-0.9
	3.6nm,0.4s,baz=214,slow=11,SNR=12						
FINES	FINESS Array B	37.50	326	P	P	03 59 39.8	-0.2
	1.0nm,0.9s,baz=143,slow=14,SNR=3.5						

	1.0nm,0.9s						
ARCES	ARCESS Array B	41.19	338	P	P	04 00 10.7	+0.3
	2.4nm,0.9s,baz=114,slow=8.1,SNR=5.4						
	2.4nm,0.9s						
TORD	Torodi Ar. Bea	65.64	269	P	P	04 03 08.2	-0.6
	0.5nm,0.6s,baz=46,slow=6.1,SNR=13						
	0.5nm,0.6s						
YKA	Yellowknife Ar	81.32	3	P	P	04 04 38.8	-0.6
	0.5nm,0.6s,baz=321,slow=6.7,SNR=3.6						
	0.5nm,0.6s						
WRA	Warramunga Arr	82.02	122	P	P	04 04 43.1	-0.7
	0.4nm,1.0s,baz=317,slow=4.7,SNR=2.0						
	0.4nm,1.0s						

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*GUC **29** 04:04:02.2±0.7, 21°.28S×67°.38W, h213km±7km, ML3.8*

*SCB **29** 04:04:03.5±2.3, 21°.30S×67°.32W, h160km±31km, ML3.5/10, MW3.3, Error ellipse: s-maj=8.0km s-min=7.9km az=0.0*

*IDC **29** 04:04:10.6±3.9, 20°.45S×66°.82W, h252km±23km, mb3.2/1, mbtmp3.6/4, Error ellipse: s-maj=82.2km s-min=24.3km az=55.0*

ISC 29 04:04:01.4±0.9**, 21°.29S**±0°.04×**67°.28W**±0°.05**, h196**km±9km**, n34, σ1ˢ.33**/51**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.54	89	P	Pn	04 04 35.8	+0.2
MOCB				S	Sn	04 04 58.9	-3.1
MOCB				IAML		04 05 01.8	
	223nm,0.4s						
YJA	Yavi	1.87	119	P	Pn	04 04 39.5	+0.8
PB09	IPOC Station P	1.89	254	eP	Pn	04 04 39.6	+0.9
PB09				iS	Sn	04 05 08.5	+0.9
PB09				IAML		04 05 10.9	
	comp=N,146nm,0.3s						
PB09	IPOC Station P	1.89	254	P	Pn	04 04 40.0	+1.3
PB09				IAML		04 05 11.4	
	comp=N,104nm,0.6s						
LVC	Limon Verde	2.00	229	eP	Pn	04 04 40.8	+0.8
LVC				iS	Sn	04 05 10.8	+0.7
LVC	Limon Verde	2.00	229	P	Pn	04 04 41.0	+1.0
PB01	IPOC Station P	2.07	276	eP	Pn	04 04 40.9	+0.4
PB01				iS	Sn	04 05 10.4	-0.4
PB01				IAML		04 05 12.0	
	comp=N,216nm,0.4s						
PB01	IPOC Station P	2.07	276	P	Pn	04 04 41.1	+0.6
PB01				IAML		04 05 12.7	
	comp=N,94nm,0.2s						
PB08	IPOC Station P	2.09	303	eP	Pn	04 04 41.6	+0.6
PB08				iS	Sn	04 05 12.1	+0.4
PB08	IPOC Station P	2.09	303	P	Pn	04 04 42.0	+1.0
PB02	IPOC Station P	2.44	269	eP	Pn	04 04 44.7	+0.2
PB02				iS	Sn	04 05 17.0	-1.0
PB02				IAML		04 05 18.4	
	comp=N,609nm,0.3s						
PB02	IPOC Station P	2.44	269	P	Pn	04 04 45.0	+0.5
PB02				IAML		04 05 18.1	
	comp=N,476nm,0.4s						
PB07	IPOC Station P	2.46	259	eP	Pn	04 04 44.9	0.0
PB07				iS	Sn	04 05 17.8	-0.8
PB07				IAML		04 05 19.0	
	comp=N,478nm,0.5s						
PB07	IPOC Station P	2.46	259	P	Pn	04 04 45.5	+0.7
PB07				IAML		04 05 19.7	
	comp=N,204nm,0.3s						
PB06	IPOC Station P	2.55	236	eP	Pn	04 04 46.4	+0.6
PB06				iS	Sn	04 05 20.6	+0.2
PB06				IAML		04 05 22.3	
	comp=E,239nm,0.5s						
PB06	IPOC Station P	2.55	236	P	Pn	04 04 46.6	+0.8
PB06				IAML		04 05 22.6	
	comp=E,109nm,0.2s						
PB11	IPOC Station P	2.69	304	eP	Pn	04 04 47.4	-0.1
PB11				iS	Sn	04 05 22.1	-1.2
PB11				IAML		04 05 24.8	
	comp=E,259nm,0.2s						
PB11	IPOC Station P	2.69	304	P	Pn	04 04 47.6	+0.1
PB11				IAML		04 05 26.0	
	comp=E,90nm,0.2s						
PB15	IPOC Station P	2.78	226	eP	Pn	04 04 49.5	+1.0
PB15				iS	Sn	04 05 25.9	+0.6
PB15	IPOC Station P	2.78	226	P	Pn	04 04 49.6	+1.0
PB15				IAML		04 05 28.5	
	comp=E,436nm,0.2s						
TA01	Diego Aracena	2.80	284	eP	Pn	04 04 48.1	-0.4
TA01				iS	Sn	04 05 23.1	-2.1
TA01				IAML		04 05 24.6	
	comp=E,127nm,0.2s						
PB04	IPOC Station P	2.86	248	eP	Pn	04 04 49.9	+0.5
PB04				iS	Sn	04 05 25.6	-1.2
PB04				IAML		04 05 29.1	
	comp=E,192nm,0.2s						
PB04	IPOC Station P	2.86	248	P	Pn	04 04 49.9	+0.5
PB04				S	Sn	04 05 23.3	-3.5
PB04				IAML		04 05 27.8	
	comp=E,178nm,0.2s						
PB16	IPOC Station P	3.61	324	eP	Pn	04 04 59.8	+0.9
PB16				iS	Sn	04 05 44.4	+0.6
PB16	IPOC Station P	3.61	324	P	Pn	04 05 00.0	+1.1
PB10	IPOC Station P	3.75	233	eP	Pn	04 04 59.7	-0.2
PB10				iS	Sn	04 05 43.6	-2.3
PB10	IPOC Station P	3.75	233	P	Pn	04 05 00.4	+0.5
PB10				S	Sn	04 05 42.0	-3.9
PB10				IAML		04 05 46.4	
	comp=E,41nm,0.3s						
BBOE	La Paz, Chanca	4.50	351	P	Pn	04 05 11.1	+1.1
BBOD	La Paz, Gloria	4.79	345	P	Pn	04 05 14.8	+1.1
LPAZ	La Paz	5.04	351	P	Pn	04 05 17.4	+0.6
	comp=E,3.1nm,0.4s,baz=162,slow=6.7,SNR=33						
LPAZ				S	Sn	04 06 14.4	-1.8
	comp=E,4.4nm,0.7s,baz=276,slow=22,SNR=6.0						
LPAZ	La Paz	5.04	351	P	Pn	04 05 17.5	+0.6
CPUP	Villa Florida	10.40	121	P	P	04 06 36.0	+2.5
	comp=E,0.7nm,0.4s,baz=320,slow=7.9,SNR=4.8						
BDFB	Brasilia	19.11	76	P	P	04 08 08.2	-1.7
	comp=E,1.0nm,0.5s,baz=254,slow=7.4,SNR=3.0						
TORD	Torodi Ar. Bea	75.86	70	P	P	04 15 26.0	-0.7
	comp=E,0.4nm,0.4s,baz=251,slow=5.5,SNR=10.0						
	comp=E,0.4nm,0.4s						

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*CNRM **29** 04:09:05.7, 36°.53N×4°.43E, h0km*

*IDC **29** 04:09:15.8±1.3, 36°.31N×3°.73E, h0km, mb3.5/3, mbtmp3.5/7, ML3.6/4, MS3.0/4, Error ellipse: s-maj=31.4km s-min=20.8km az=121.0*

*CRAAG **29** 04:09:16.3, 36°.36N×3°.41E, Ml3.5*

*SFS **29** 04:09:18.0, 36°.28N×3°.53W, ML3.6, BOUIRA(ARGELIA)*

*MDD **29** 04:09:18.7±0.5, 36°.28N×3°.53E, h15km±4km, Mb4.2/33, M_mb3.6/27, Error ellipse: s-maj=4.8km s-min=1.9km az=154.0*

*LDG **29** 04:09:22.5±0.4, 36°.44N×3°.04E, h30km, Ml3.2/12, Error ellipse: s-maj=9.3km s-min=4.1km az=157.0*

ISC 29 04:09:18.0±0.7**, 36°.42N**±0°.04×**3°.45E**±0°.03**, h18**km**, n131, σ2ˢ.35**/157**, mb3.5**/3**, 28C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.26	182	P	Pg	04 09 21.6	-2.4
ABMS	Boumerdes	0.33	5	P	Pb	04 09 25.7	+0.3
ABA	Alger-Bouzarea	0.51	319	P	Pg	04 09 28.3	+0.1
AKET	Djebel Ketaf	0.51	136	P	Pg	04 09 26.6	-1.7
SET	Setif	1.59	97	P	Pg	04 09 56.0	+7.3
DFRA	Djebel Bou Aff	1.96	86	P	Pn	04 09 52.0	+1.5
OKGL	Djebel Kef Gue	2.30	261	P	Pb	04 10 00.0	+1.1
OJGS	Djebel Guires	2.37	248	P	Pn	04 09 57.0	+0.9
CASM	Ain Smara	2.46	93	P	Pg	04 10 06.4	+1.2
CKFL	Kef-Lekhel	2.64	89	P	Pb	04 10 06.7	+1.9
OJBR	Djebel Berber	2.65	253	P	Pb	04 10 06.0	+1.1
EIBI	Ibiza	3.09	328	P	Pn	04 10 07.4	+1.5
EIBI				⇑iVmb_V		04 10 10.0	
	1μm,SNR=1.7						
EIBI				S	Sn	04 10 42.8	+0.4
ODJA	Bouhanifia	3.12	251	P	Pb	04 10 12.0	-0.9
CMAH	Djebel Manchou	3.21	85	P	Pn	04 10 08.5	+1.0
ETOS	Mallorca	3.38	352	P	Pn	04 10 12.0	+2.1
ETOS				⇑iVmb_V		04 10 13.7	
	719nm,SNR=2.2						
ETOS				S	Sn	04 10 50.9	+1.3
MAHO	Mahon	3.53	10	P	Pn	04 10 12.2	+0.3
MAHO				S	Sn	04 10 53.8	+0.7
ETRV	Los Montesinos	3.72	297	P	Pn	04 10 15.4	+0.9
ETRV				⇑iVmb_V		04 10 16.8	
	223nm,SNR=0.9						
ETRV				S	Sn	04 10 57.3	-0.5
CART	Cartagena	3.75	289	P	Pn	04 10 17.0	+2.1
CART				S	Sn	04 10 58.6	+0.1
CART	Cartagena	3.75	289	P	Pn	04 10 14.7	-0.1
AFON	Font Roja	3.88	306	P	Pn	04 10 17.5	+0.7
AFON				⇑iVmb_V		04 10 19.4	
	513nm,SNR=1.7						
AFON				S	Sn	04 11 04.2	+2.1
EMUR	La Murta	4.01	292	P	Pn	04 10 19.8	+1.4
EMUR				⇑iVmb_V		04 10 22.1	
	132nm,SNR=0.9						
EMUR				S	Sn	04 11 04.4	-0.6
ECOL	Islas Columbre	4.10	329	P	Pn	04 10 20.2	+0.5
ECOL				S	Sn	04 11 07.8	+0.6
EZAR	Zarzadilla de	4.36	291	P	Pn	04 10 24.4	+1.0
EZAR				S	Sn	04 11 13.8	+0.1
ETOB	Tobarra	4.55	301	P	Pn	04 10 27.2	+1.2
ETOB				⇑iVmb_V		04 10 30.6	
	284nm,SNR=2.0						
ETOB				S	Sn	04 11 17.4	-1.0
ENIJ	Nijar	4.58	279	P	Pn	04 10 26.7	+0.4
ENIJ				⇑iVmb_V		04 10 29.2	
	104nm,SNR=0.8						
ENIJ				S	Sn	04 11 16.7	-2.3
ECHE	Chera	4.71	314	P	Pn	04 10 30.1	+1.9
ECHE				⇑iVmb_V		04 10 31.1	
	211nm,SNR=1.0						
EMOS	Mosqueruela	5.00	323	P	Pn	04 10 34.0	+1.7
EMOS				⇑iVmb_V		04 10 35.8	
	313nm,SNR=1.6						
EMOS				S	Sn	04 11 27.9	-1.7
TAF	Taforalt	5.04	253	P	Pn	04 10 32.8	+0.1
EBER	Berja	5.12	277	P	Pn	04 10 35.0	+1.2
EBER				⇑iVmb_V		04 10 38.6	
	194nm,SNR=1.3						
EBER				S	Sn	04 11 31.0	-1.6
ERTA	Horta de San J	5.14	333	P	Pn	04 10 36.4	+2.3
ERTA				⇑iVmb_V		04 10 39.5	
	157nm,SNR=0.7						
ERTA				S	Sn	04 11 32.0	-1.1
EPOB	Poblet	5.26	340	P	Pn	04 10 36.4	+0.6
EPOB				⇑iVmb_V		04 10 40.2	
	65nm,SNR=0.4						
EPOB				S	Sn	04 11 34.8	-1.1
JBK	JBK	5.33	249	P	Pn	04 10 37.7	+0.8
GOG	Mont Gurugu	5.37	259	P	Pn	04 10 36.7	-0.5
EQES	Quesada	5.39	287	P	Pn	04 10 38.2	+0.6
EQES				⇑iVmb_V		04 10 44.6	
	149nm,SNR=1.7						
EQES				S	Sn	04 11 37.8	-1.4
EQUE	Quentar	5.58	280	P	Pn	04 10 40.1	-0.1
EQUE				⇑iVmb_V		04 10 43.5	
	72nm,SNR=0.9						
EQUE				S	Sn	04 11 43.4	-0.5
VSL	Villasalto	5.60	55	P	Pn	04 10 41.1	+0.7
VSL				S	Sn	04 11 40.8	-3.5
TDRA	Tendrara	5.63	235	P	Pn	04 10 40.9	0.0
EMIR	Miracle	5.69	345	P	Pn	04 10 43.9	+2.3
EMIR				⇑iVmb_V		04 10 45.4	
	730nm,SNR=3.2						
EMIR				S	Sn	04 11 45.3	-1.2
ELGU	Los Guajares,	5.71	277	P	Pn	04 10 42.7	+0.8
ELGU				⇑iVmb_V		04 10 45.5	
	127nm,SNR=0.9						
ELGU				S	Sn	04 11 44.5	-2.5
EJON	La Jonquera	6.04	356	P	Pn	04 10 47.6	+1.2
EJON				⇑iVmb_V		04 10 50.5	
	337nm,SNR=1.1						
EJON				S	Sn	04 11 54.3	-0.7
EGOR	Sierra Gorda,	6.11	279	P	Pn	04 10 49.8	+2.4
EGOR				S	Sn	04 11 55.5	-1.4
ESAC	San Caprasio	6.11	331	P	Pn	04 10 50.0	+2.6
ESAC				⇑iVmb_V		04 10 53.2	
	325nm,SNR=0.9						
ESAC				S	Sn	04 11 57.0	+0.2
ETOR	Torete	6.15	317	P	Pn	04 10 50.8	+2.8
ETOR				⇑iVmb_V		04 10 57.0	
	108nm,SNR=1.2						
ETOR				S	Sn	04 11 57.2	-0.7
AKLM	AKL	6.26	254	P	Pn	04 10 51.1	+1.6
UCM	Universidad Co	6.53	308	P	Pn	04 10 55.5	+2.3
EMIJ	Mijas	6.62	274	P	Pn	04 10 54.2	-0.2
EMIJ				⇑iVmb_V		04 10 55.4	
	43nm,SNR=0.7						
EMIJ				S	Sn	04 12 06.5	-3.0
EADA	Adamuz	6.63	288	P	Pn	04 10 55.6	+1.0
EADA				⇑iVmb_V		04 10 58.3	
	26nm,SNR=0.4						
EADA				S	Sn	04 12 09.1	-0.6
ESDC	Sonseca Array	6.69	301	Pn	Pn	04 10 56.8	+1.4
	0.7nm,0.3s,baz=114,slow=13,SNR=33						
	4.7nm,0.6s						
ESDC	Sonseca Array	6.69	301	P	Pn	04 10 56.3	+0.9
ESDC				⇑iVmb_V		04 10 60.0	
	74nm,SNR=1.2						
ESDC				S	Sn	04 12 10.7	-0.5
PAB	San Pablo	6.90	299	P	Pn	04 10 59.1	+0.8
PAB				⇑iVmb_V		04 11 01.8	
	89nm,SNR=1.3						
PAB				S	Sn	04 12 14.8	-1.6
MTLF	Montolieu	6.98	353	ePn	Pn	04 11 00.2	+0.9
MTLF	Montolieu	6.98	353	eP	Pn	04 11 04.6	+5.3
MTLF				eSn	Sn	04 12 14.4	-3.7
	1.4nm,0.3s						
EPF	Esparros	7.02	341	ePn	Pn	04 10 59.9	0.0
EPF	Esparros	7.02	341	eP	Pn	04 11 04.7	+4.8
EPF				eSn	Sn	04 12 15.3	-4.0
	8.4nm,0.6s						
ETSF	Etsaut	7.17	336	eP	Pn	04 11 05.0	+3.0
ETSF				eSn	Sn	04 12 15.7	-7.3
	4.4nm,0.6s						
ECAB	El Cabril	7.26	286	P	Pn	04 11 05.4	+2.2
ECAB				⇑iVmb_V		04 11 10.2	
	39nm,SNR=0.7						
ECAB				S	Sn	04 12 23.3	-1.9
LMR	La Mourre	7.30	18	ePn	Pn	04 11 04.3	+0.7
LMR				eSn	Sn	04 12 23.1	-2.8
	3.7nm,0.4s						
GUD	Guadarrama	7.30	308	P	Pn	04 11 04.9	+1.1
GUD				⇑iVmb_V		04 11 08.9	
	61nm,SNR=1.2						
GUD				S	Sn	04 12 24.3	-1.9
EORO	Oroz-Betelu	7.43	332	P	Pn	04 11 08.3	+2.8
EORO				S	Sn	04 12 28.0	-1.4
PGF	Pioggiola	7.47	33	ePn	Pn	04 11 07.1	+0.9
PGF				eSn	Sn	04 12 26.3	-4.2
	4.7nm,0.4s						
MDT	Midelt	7.55	244	Pn	Pn	04 11 09.4	+2.2
	0.3nm,0.3s,baz=96,slow=22,SNR=13						
MDT				Lg	Lg	04 13 15.8	
	0.4nm,0.3s,baz=342,slow=20,SNR=3.0						
MDT				LR	LR	04 14 20.1	
	comp=Z,75nm,21.0s,baz=82,slow=40						
	1.4nm,0.4s						
MDT	Midelt	7.55	244	P	Pn	04 11 09.9	+2.6
SJPF	Ste Jean	7.59	333	eP	Pn	04 11 10.8	+3.1
SJPF				eSn	Sn	04 12 26.9	-6.3
	12nm,0.6s						
MD31	MD31	7.63	245	P	Pn	04 11 10.1	+1.7
LASF	Ste Croix	7.66	2	ePn	Pn	04 11 10.3	+1.7
LASF				eSn	Sn	04 12 29.0	-5.8
	12nm,0.7s						
SMRF	Simiane la Rot	7.72	12	ePn	Pn	04 11 11.8	+2.3
SMRF	Simiane la Rot	7.72	12	eP	Pn	04 11 16.2	+6.7
SMRF				eSn	Sn	04 12 33.5	-3.0
	0.5nm,0.3s						
SBF	Sospel	8.04	21	ePn	Pn	04 11 13.8	-0.1
SBF	Sospel	8.04	21	eP	Pn	04 11 22.5	+8.6
SBF				eSn	Sn	04 12 41.9	-2.4
	2.1nm,0.2s						
VIVF	Saint-Julien-l	8.48	6	ePn	Pn	04 11 21.6	+1.7
VIVF				eSn	Sn	04 12 46.8	-8.3
	1.6nm,0.4s						
CAF	Calviac	8.56	353	eP	Pn	04 11 25.5	+4.5
ELAN	Lanestosa	8.62	324	P	Pn	04 11 23.7	+1.9
ELAN				⇑iVmb_V		04 11 26.3	
	128nm,SNR=1.8						
ELAN				S	Sn	04 12 56.5	-2.1
MBDF	Montbardon	8.68	16	ePn	Pn	04 11 25.3	+2.6
MBDF	Montbardon	8.68	16	eP	Pn	04 11 31.2	+8.5
ORIF	Oris-en-Rattie	8.69	12	ePn	Pn	04 11 25.8	+3.0
ORIF	Oris-en-Rattie	8.69	12	eP	Pn	04 11 30.7	+7.9
LFF	La Frestale	8.76	347	ePn	Pn	04 11 24.5	+0.9
ZHG	ZHG	8.80	253	P	Pn	04 11 27.0	+2.7
BNI	Bardonecchia	8.96	15	P	Pn	04 11 28.8	+2.1
PVAQ	Vaqueiros	9.00	280	eP	Pn	04 11 29.2	+2.2
PVAQ				eLR	LR	04 14 09.3	
	70nm,20.0s						
RJF	Les Rejaudoux	9.00	351	ePn	Pn	04 11 28.0	+1.1
RJF	Les Rejaudoux	9.00	351	eP	Pn	04 11 31.8	+4.9
PMRV	Marv??o	9.07	293	eP	Pn	04 11 33.1	+5.0
PCBR	Castelo Branco	9.26	295	eP	Pn	04 11 34.2	+3.6
LPG	La Plagne	9.41	14	ePn	Pn	04 11 36.2	+3.4
LPL	La Plagne	9.42	14	ePn	Pn	04 11 36.4	+3.4
MVO	Moncorvo	9.45	303	eP	Pn	04 11 37.5	+4.3
MVO				eLR	LR	04 14 32.7	
	65nm,18.0s						
MTE	Manteigas	9.50	298	eP	Pn	04 11 41.1	+7.2
MTE				eLR	LR	04 14 02.6	
	91nm,16.0s						
EARI	Arriondas	9.56	319	P	Pn	04 11 38.4	+3.6
EARI				⇑iVmb_V		04 11 40.1	
	195nm,SNR=2.8						
EARI				S	Sn	04 13 19.2	-2.6
PBRG	Braganca	9.57	307	eP	Pn	04 11 38.8	+4.0
ECAL	Calabor	9.64	308	P	Pn	04 11 38.2	+2.4
ECAL				⇑iVmb_V		04 11 40.9	
	153nm,SNR=1.5						
PNCL	Nicolau / Gran	9.70	284	eP	Pn	04 11 41.7	+5.2
TCF	Toulx Ste Croi	9.90	355	ePn	Pn	04 11 41.8	+2.4
PVRL	Vila Real	9.96	303	eP	Pn	04 11 44.0	+3.7
COI	Coimbra	10.06	296	eP	Pn	04 11 44.7	+3.2
BGF	Bois d'Agland	10.14	358	ePn	Pn	04 11 44.5	+1.9
SMF	Signal de Mont	10.22	2	ePn	Pn	04 11 45.7	+2.0
AVF	Avril sur Loir	10.36	360	ePn	Pn	04 11 47.6	+1.9
CABF	La Chapelle	10.37	10	ePn	Pn	04 11 48.5	+2.6
MFF	Saint Martin d	10.52	346	ePn	Pn	04 11 49.6	+1.8
MFF	Saint Martin d	10.52	346	eP	Pn	04 11 54.1	+6.3
SSF	Saint Saulge	10.63	0	ePn	Pn	04 11 51.1	+1.7
PGAV	Gavieira, Arco	10.64	305	eLR	LR	04 15 18.0	
	58nm,16.0s						
LOR	Lormes	10.85	1	ePn	Pn	04 11 54.4	+2.1
	baz=182						
LOR	Lormes	10.85	1	eP	Pn	04 11 59.4	+7.1
	baz=178						
DAVOX	Davos/Dischmat	11.41	23	LR	LR	04 16 04.6	
	comp=Z,28nm,21.2s,baz=274,slow=36						
HINF	Hinteralfeld	11.66	11	ePn	Pn	04 12 04.5	+1.0
HAU	Haudompre	11.78	10	ePn	Pn	04 12 06.6	+1.6
SFTF	Sexfontaines	11.84	5	ePn	Pn	04 12 07.6	+1.8
	baz=185						
MEZF	Maizieres J'vi	12.13	5	eP	P	04 12 16.7	-5.8
PAGF	Fort de Pagny	12.24	7	ePn	Pn	04 12 14.0	+2.6
	baz=189						
SAVF	Savonnieres en	12.25	5	ePn	Pn	04 12 13.7	+2.2
	baz=185						
CDF	Champ du Feu	12.31	12	ePn	Pn	04 12 13.8	+1.4
GRR	Gorron	12.37	346	ePn	Pn	04 12 13.6	+0.5
LDF	La Druitiere	12.45	349	ePn	Pn	04 12 15.2	+1.1
LDF	La Druitiere	12.45	349	eP	Pn	04 12 19.7	+5.6
QUIF	Quistinic	12.48	339	ePn	Pn	04 12 16.0	+1.3
SGMF	Saint Gilles	12.63	341	ePn	Pn	04 12 16.8	+0.2
SGMF	Saint Gilles	12.63	341	eP	Pn	04 12 20.8	+4.2
ROSF	Rostrenen	12.90	340	ePn	Pn	04 12 20.5	+0.2
BAIF	Baives	13.64	2	eP	Pn	04 12 33.9	+3.4
GIVF	Givet	13.71	4	eP	P	04 12 37.0	-3.0
GERES	GERESS Array B	14.51	28	Pn	Pn	04 12 43.5	+1.0
	0.1nm,0.3s,baz=208,slow=13,SNR=14						
	1.2nm,0.9s						
KHC	Kasperske Hory	14.70	27	eP	Pn	04 12 47.3	+2.3
CKRC	Cesky Krumlov	14.73	29	eP	Pn	04 12 48.3	+3.0
CLL	Collm	16.38	22	ePP	Pn	04 13 01.0	-5.8
CLL				ex	x	04 13 13.0	
EKA	Eskdalemuir Ar	19.45	349	P	Pn	04 13 47.4	+2.7
	baz=155,slow=14						
	0.6nm,0.7s						
TORD	Torodi Ar. Bea	23.23	184	P	P	04 14 24.1	-0.1
	1.2nm,0.6s,baz=357,slow=10,SNR=22						
	1.2nm,0.6s						
AKASG	Malin Array Be	23.35	44	P	P	04 14 23.7	-1.5
	1.0nm,0.7s,baz=246,slow=11,SNR=3.2						
AKASG				LR	LR	04 25 00.4	
	comp=Z,34nm,18.6s,baz=20,slow=41						
	1.0nm,0.7s						
LSZ	Lusaka	56.48	151	LR	LR	04 44 02.9	
	comp=Z,74nm,19.3s,baz=128,slow=37						
MKAR	Makanchi Array	57.54	53	P	P	04 19 05.8	-0.5
	0.2nm,0.5s,baz=277,slow=8.6,SNR=3.5						
	0.2nm,0.5s						

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*IDC **29** 04:21:20.0±1.2, 35°.71N×138°.64E, h128km±10km, mb3.3/2, mbtmp3.7/2, Error ellipse: s-maj=27.5km s-min=20.9km az=145.0*

*JMA **29** 04:21:20.2±0.1, 35°.8N±0°.5×139°.1E±0°.6, h125km±1km, MV3.1/40, TOKYO PREF*

JMA Felt I J1 at TOKYO PREF .

ISC 29 04:21:19.8±1.0**, 35°.84N**±0°.05×**139°.06E**±0°.06**, h128**km±6km**, n15, σ0ˢ.66**/26**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	Hanno	0.18	87	iP	Pn	04 21 37.6	+0.3
JHU				S	Sn	04 21 50.6	+0.2
JRY	Ryogami san	0.22	323	iP	Pn	04 21 37.9	+0.5
JRY				S	Sn	04 21 51.3	+0.5
JSGW	Sagamiharawaka	0.27	154	iP	Pn	04 21 37.6	+0.1
JSGW				S	Sn	04 21 50.5	-0.3
JYN	Shimob	0.55	231	iP	Pn	04 21 38.9	0.0
JYN				eS	Sn	04 21 53.6	+0.3
JOD2	Odawara 2	0.58	178	iP	Pn	04 21 39.1	0.0
JOD2				S	Sn	04 21 53.4	-0.2
JAG	Ashikaga	0.66	28	iP	Pn	04 21 39.7	+0.1
JAG				S	Sn	04 21 54.1	-0.6
JFNN	Fujinakano	0.72	206	P	Pn	04 21 40.9	+0.9
JFNN				S	Sn	04 21 56.3	+1.0
MJAR	Matsushiro Arr	0.98	316	P	Pn	04 21 41.2	-1.1
	43nm,0.4s,baz=158,slow=9.4,SNR=225						
MJAR				S	Sn	04 21 58.8	-0.6
	27nm,0.4s,baz=159,slow=25,SNR=16						
MAT	Matsushiro	0.98	316	iP	Pn	04 21 42.5	+0.2
MAT				S	Sn	04 21 59.3	-0.2
JYTA	Yamagatataniai	1.91	263	P	Pn	04 21 53.3	+0.9
JYTA				S	Sn	04 22 18.5	+1.0
JFT	Otama	1.96	31	iP	Pn	04 21 54.1	+1.0
JFT				eS	Sn	04 22 19.5	+0.8
BSO1	Boso 1	1.96	127	P	Pn	04 21 52.9	+0.3
JNS	Sasagawa	1.98	6	P	Pn	04 21 54.2	+0.8
WRA	Warramunga Arr	55.66	185	P	P	04 30 41.8	-0.9
	0.6nm,0.6s,baz=1.0,slow=7.6,SNR=9.0						
	0.6nm,0.6s						
FINES	FINESS Array B	68.97	332	P	P	04 32 10.7	-0.1
	0.3nm,0.4s,baz=66,slow=7.8,SNR=8.0						
	0.3nm,0.4s						

TRN 29 04:37:36.6, 12°.80N×59°.13W, h24km, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSP	Saint Philip	0.44	314	eP	Pn	04 37 46.9	-0.5
BBSP				eS	Sn	04 37 54.9	+0.3
BBGH	Gun Hill	0.54	309	eP	Pn	04 37 48.9	+0.1
BBGH				eS	Sn	04 37 58.9	+1.8
MCLT	Moule a Chique	1.98	297	eP	Pn	04 38 09.8	+1.2
SVV	Soufriere Volc	2.10	284	eP	Pn	04 38 11.1	+0.9
SLBI	Saint Lucia, B	2.17	304	eP	Pn	04 38 12.8	+1.6
MPOM	Morne Pois Mar	2.34	314	eP	Pn	04 38 15.8	+2.1
MVM	Montagne Vaucl	2.45	316	eP	Pn	04 38 10.3	-4.8
MVM				eS	Sn	04 38 17.7	-27
LPMF	Morne Lapointe	2.51	315	eP	Pn	04 38 11.1	-4.9
LPMF				eS	Sn	04 38 18.7	-27
TRMF	Trois Ilets	2.54	313	eP	Pn	04 38 10.7	-5.7
TRMF				eS	Sn	04 38 19.3	-27
BIM	Bigot	2.54	312	eP	Pn	04 38 17.6	+1.2
ZAM	Aeronautique	2.55	314	eP	Pn	04 38 11.4	-5.1
ZAM				eS	Sn	04 38 19.5	-27
GBMF	Grand Be	2.80	315	eP	Pn	04 38 14.8	-5.3
BAMF	Morne Balai	2.80	316	eP	Pn	04 38 14.6	-5.4
PML	Morne Lenard	2.80	315	eP	Pn	04 38 14.8	-5.2
CXM	Morne La Croix	2.81	316	eP	Pn	04 38 15.1	-5.2
PCM	Pelee Case Pet	2.84	315	eP	Pn	04 38 15.0	-5.6
DSLB	Salisbury	3.44	320	eP	Pn	04 38 30.5	+1.8
MAGL	Barre de l'ile	3.76	327	eP	Pn	04 38 34.8	+1.6
ANBD	Bethesda, Anti	4.93	329	eP	Pn	04 38 51.7	+2.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANBD	Bethesda, Anti	4.93	329	eS	Sn	04 39 45.1	-0.5

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*JMA **29** 05:00:14.6±0.1, 24°.1N±0°.5×121°.5E±0°.5, h36km, MV3.2/9, TAIWAN REGION*
*TAP **29** 05:00:17.3, 24°.32N×121°.75E, h14km, ML3.6, C*
ISC 29 05:00:16.9±0.8**, 24°.32N**±0°.01×**121°.84E**±0°.02**, h14**km±5km**, n119, σ1ˢ09**/204**, 10C-24D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village baz=199	0.09	265	⇑iP	Pg	05 00 19.9	0.0
EHP	baz=199			iS	Sg	05 00 21.6	-0.3
EWUT	Wuta baz=10.0	0.14	336	⇑iP	Pg	05 00 21.0	+0.5
EWUT	baz=10.0			iS	Sg	05 00 23.4	+0.4
ENA	Nanau baz=358	0.14	321	⇑iP	Pg	05 00 20.7	+0.1
ENA	baz=358			iS	Sg	05 00 22.8	-0.2
ETL	Fush Village baz=217	0.25	231	eP	Pg	05 00 21.9	-0.4
ETL	baz=217			S	Sg	05 00 25.1	-0.9
NACB	Ninganchiao baz=220	0.27	237	⇓iP	Pg	05 00 21.8	-0.7
NACB	baz=220			iS	Sg	05 00 25.2	-1.1
TWC	Suao baz=13	0.29	2	⇓iP	Pb	05 00 23.9	-0.1
TWC	baz=13			iS	Sb	05 00 27.9	-0.8
TWD	Chiawan baz=210	0.32	223	⇓iP	Pg	05 00 23.0	-0.6
TWD	baz=210			eS	Sg	05 00 27.2	-0.8
NDS	Dongshan baz=358	0.33	340	⇓iP	Pb	05 00 24.3	-0.4
NDS	baz=358			iS	Sb	05 00 29.0	-0.9
ETLH	Xiulin Townshi baz=246	0.34	251	⇓iP	Pg	05 00 23.2	-0.7
ETLH	baz=246			iS	Sg	05 00 27.5	-1.2
LATG	Datong baz=317	0.36	307	⇑iP	Pg	05 00 24.0	-0.2
LATG	baz=317			eS	Sg	05 00 28.4	-0.8
HWA	Hwalien baz=201	0.40	212	eP	Pg	05 00 25.2	+0.3
HWA	baz=201			eS	Sg	05 00 31.3	+0.9
ENTT	Nioudou baz=333	0.41	322	⇑iP	Pg	05 00 25.2	+0.1
ENTT	baz=333			iS	Sg	05 00 30.2	-0.4
NNSB	Datong baz=289	0.43	285	⇓iP	Pg	05 00 25.1	-0.4
NNSB	baz=289			iS	Sg	05 00 29.7	-1.7
TWE	Neicheng baz=351	0.43	339	⇓iP	Pb	05 00 25.9	-0.4
TWE	baz=351			S	Sg	05 00 30.9	-0.5
NNS	Nan Shan baz=290	0.44	286	⇓iP	Pg	05 00 25.3	-0.5
NNS	baz=290			iS	Sg	05 00 30.2	-1.5
ILA	Ilan baz=354	0.45	349	P	Pb	05 00 26.7	0.0
ILA	baz=354			S	Sb	05 00 33.7	+0.4
FUSB	Fushanzhiwuyua baz=333	0.50	333	P	Pb	05 00 27.0	-0.5
FUSB	baz=333			iS	Sg	05 00 33.1	-0.3
EGS	baz=23	0.53	9	eP	Pb	05 00 28.6	+0.5
EGS	baz=23			eS	Sb	05 00 35.8	+0.3
NTC	Toucheng baz=7.0	0.54	359	iP	Pb	05 00 28.1	+0.1
NTC	baz=7.0			eS	Sb	05 00 35.0	-0.6
FUSS	Fushou baz=262	0.55	263	⇓iP	Pg	05 00 27.2	-0.5
FUSS	baz=262			iS	Sg	05 00 33.7	-1.4
YHNB	Yeheng baz=316	0.55	310	⇑iP	Pg	05 00 27.4	-0.3
YHNB	baz=316			S	Sg	05 00 33.9	-1.2
NWLT	Wulai baz=334	0.55	326	⇑eP	Pb	05 00 28.0	-0.4
NWLT	baz=334			eS	Sg	05 00 34.0	-1.1
WHF	Hehuan Shan baz=249	0.55	252	⇓iP	Pg	05 00 27.1	-0.7
WHF	baz=249			iS	Sg	05 00 33.5	-1.8
NSK	Sanguang baz=315	0.57	309	⇑P	Pg	05 00 27.6	-0.4
NSK	baz=315			S	Sg	05 00 34.6	-1.0
TWT	Tachien baz=263	0.61	264	⇓iP	Pg	05 00 28.6	-0.2
TWT	baz=263			S	Sg	05 00 35.1	-1.9
ESL	Shilin baz=218	0.62	217	⇓iP	Pg	05 00 28.2	-0.9
ESL	baz=218			eS	Sg	05 00 35.9	-1.5
TDCB	Techi baz=264	0.62	264	⇓iP	Pg	05 00 28.6	-0.5
TDCB	baz=264			iS	Sg	05 00 35.5	-1.9
TIPB	Shuangxi baz=6.0	0.65	359	⇓iP	Pb	05 00 30.3	+0.2
TIPB	baz=6.0			iS	Sb	05 00 38.4	-0.6
CHGB	Renai baz=245	0.66	247	⇓iP	Pg	05 00 29.2	-0.6
CHGB	baz=245			iS	Sg	05 00 36.6	-2.0
TWA	Mucha baz=347	0.70	341	eP	Pb	05 00 30.9	0.0
TWA	baz=347			eS	Sb	05 00 39.8	-0.6
TWB1	Santiao Chiao baz=18	0.70	11	⇓iP	Pb	05 00 31.3	+0.4
TWB1	baz=18			iS	Sb	05 00 40.2	-0.2
NHDH	Xindian Distri baz=342	0.70	336	eP	Pn	05 00 32.0	-0.4
NHDH	baz=342			eS	Sg	05 00 39.6	-0.3
OWD	Renai baz=229	0.71	239	⇓iP	Pg	05 00 29.9	-0.8
OWD	baz=229			eS	Sg	05 00 38.0	-2.1
NFF	Wufeng Townshi baz=306	0.73	296	⇑P	Pg	05 00 30.8	-0.3
NFF	baz=306			eS	Sg	05 00 39.4	-1.3
WUSB	Renai baz=234	0.73	244	⇓iP	Pg	05 00 30.6	-0.6
WUSB	baz=234			eS	Sg	05 00 39.2	-1.8
EGFH	Guangfu baz=212	0.75	210	⇓P	Pg	05 00 31.0	-0.4
EGFH	baz=212			eS	Sg	05 00 40.9	-0.4
NWF	Wu-fen Shan baz=354	0.75	356	⇓P	Pn	05 00 32.4	-0.8
NWF	baz=354			S	Sb	05 00 41.6	-0.4
SXI1	Grass Mountain baz=14	0.77	2	⇓iP	Pn	05 00 32.8	-0.7
SXI1	baz=14			iS	Sb	05 00 42.5	-0.2
TAP	Taipei baz=343	0.78	337	eP	Pn	05 00 33.2	-0.3
TAP	baz=343			eS	Sb	05 00 42.9	+0.1
WHP	Taichung City baz=267	0.82	267	eP	Pg	05 00 32.4	-0.4
WHP	baz=267			S	Sg	05 00 42.0	-1.5
LIOB	Emei baz=296	0.82	294	eP	Pg	05 00 32.7	-0.1
LIOB	baz=296			eS	Sg	05 00 42.8	-0.7
NSTT	Nanjuang baz=295	0.82	292	eP	Pg	05 00 32.4	-0.5
NSTT	baz=295			eS	Sg	05 00 42.2	-1.5
VWDT	VWDT baz=218	0.85	229	⇓iP	Pg	05 00 32.3	-1.0
VWDT	baz=218			eS	Sg	05 00 43.9	-0.6
YM01	YM01 baz=349	0.86	344	eP	Pn	05 00 34.2	-0.4
TWS1	Kuangyinshan baz=339	0.87	334	P	Pn	05 00 34.7	0.0
TWS1	baz=339			S	Sb	05 00 46.2	+0.9
NCU	National Centr baz=316	0.88	318	eP	Pg	05 00 33.7	-0.3
NCU	baz=316			eS	Sb	05 00 47.4	+1.8
NCUH	Zhongli baz=316	0.88	318	eP	Pb	05 00 34.4	+0.4
NCUH	baz=316			eS	Sb	05 00 46.2	+0.6
WCS	Beigang Elemen baz=252	0.89	253	P	Pg	05 00 33.5	-0.6
WCS	baz=252			eS	Sg	05 00 43.7	-1.9
HGSD	Ruisui baz=215	0.91	205	P	Pg	05 00 34.3	-0.1
SBCB	Hsinchu baz=304	0.91	301	eP	Pn	05 00 35.7	+0.4
ANP	Anpu baz=347	0.91	342	eP	Pn	05 00 35.3	-0.1
ANP	baz=347			eS	Sb	05 00 46.4	-0.2
NTST	Danshui baz=349	0.92	337	eP	Pn	05 00 35.8	+0.4
NTST	baz=349			eS	Sn	05 00 48.1	-0.3
EHY	Hungye baz=218	0.94	210	eP	Pg	05 00 33.3	-1.7
EHY	baz=218			eS	Sg	05 00 46.9	-0.3
SMLT	Sun Moon Lake baz=233	0.96	243	⇑iP	Pg	05 00 34.8	-0.7
SMLT	baz=233			eS	Sg	05 00 47.0	-1.1
SSLB	Suanglung baz=235	0.97	237	⇓iP	Pg	05 00 34.3	-1.3
SSLB	baz=235			eS	Sg	05 00 45.7	-2.5
TWY	Chenhua baz=346	0.98	347	eP	Pn	05 00 36.8	+0.5
TWY	baz=346			eS	Sn	05 00 51.1	+1.2
NMLH	Miaoli baz=293	0.98	283	P	Pb	05 00 36.1	+0.5
NMLH	baz=293			S	Sg	05 00 48.0	-0.6
NSY	Sanyi baz=277	0.99	276	iP	Pb	05 00 36.2	+0.4
NSY	baz=277			eS	Sg	05 00 49.0	0.0
JYNG	Yonagunijimaku	1.02	82	P	Pn	05 00 37.5	+0.8
JYNG				S	Sn	05 00 55.3	+4.5
YULB	Yu-li baz=214	1.05	208	eP	Pg	05 00 35.9	-1.2
YULB	baz=214			eS	Sg	05 00 49.2	-1.6
TCU	Taichung baz=261	1.08	261	eP	Pn	05 00 38.5	+0.9
TCU	baz=261			eS	Sb	05 00 52.7	+1.5
YOJ	Yonaguni jima baz=70	1.08	82	P	Pn	05 00 38.6	+1.0
YOJ	baz=70			eS	Sn	05 00 56.5	+4.1
YOJ	Yonaguni jima	1.08	82	P	Pn	05 00 38.8	+1.2
YOJ				eS	Sn	05 00 57.1	+4.7
WDJ	Dajia District baz=272	1.09	272	P	Pn	05 00 38.5	+0.7
WDJ	baz=272			eS	Sg	05 00 52.6	+0.3
WJS	Zhushan baz=238	1.13	244	eP	Pg	05 00 38.5	-0.2
WJS	baz=238			eS	Sn	05 00 54.8	+1.2
WNT	Mingjian baz=243	1.14	248	eP	Pg	05 00 38.9	-0.1
WNT	baz=243			eS	Sn	05 00 55.4	+1.4
YUS	Yu-Shan baz=211	1.16	225	P	Pg	05 00 38.3	-1.0
YUS	baz=211			eS	Sg	05 00 53.4	-1.1
WCHH	Zhanghua baz=259	1.19	259	eP	Pn	05 00 40.2	+1.0
WCHH	baz=259			eS	Sn	05 00 57.0	+1.8
FULB	Fuli baz=217	1.22	204	eP	Pn	05 00 39.8	+0.2
FULB	baz=217			eS	Sb	05 00 56.6	+1.2
ALS	Alishan baz=213	1.24	230	⇓eP	Pg	05 00 39.8	-1.0
ALS	baz=213			eS	Sg	05 00 55.2	-1.9
CHN5	Tsauling baz=226	1.28	236	eP	Pb	05 00 41.4	+0.5
CHN5	baz=226			eS	Sg	05 00 58.9	+0.6
PCYT	Pengchaiyu baz=13	1.32	9	eP	Pg	05 00 41.3	-1.1
WDLH	Douliu baz=255	1.34	243	eP	Pb	05 00 42.3	+0.4
WDLH	baz=255			eS	Sn	05 01 00.6	+1.6
ELDTW	Lidau baz=211	1.35	214	eP	Pn	05 00 41.3	-0.2
WRL	Guolierlin Hig baz=253	1.40	253	eP	Pn	05 00 42.6	+0.6
WRL	baz=253			eS	Sn	05 01 01.8	+1.5
EDH	Donghe baz=186	1.43	200	eP	Pn	05 00 41.1	-1.3
EDH	baz=186			eS	Sn	05 00 59.2	-1.7
WTK	Tuku baz=255	1.47	245	P	Pn	05 00 44.0	+1.1
WTK	baz=255			eS	Sg	05 01 04.4	+0.2
CHN2	Minshiung baz=237	1.47	238	eP	Pg	05 00 45.0	-0.2
CHN2	baz=237			eS	Sg	05 01 04.6	+0.2
STYH	Taoyuan baz=210	1.50	221	eP	Pn	05 00 43.2	-0.2
STYH	baz=210			eS	Sn	05 01 04.0	+1.2
TPUB	Ta-pu baz=215	1.50	228	P	Pn	05 00 44.5	+1.1
TPUB	baz=215			eS	Sg	05 01 05.8	+0.5
CHY	Chiayi baz=237	1.53	238	eP	Pb	05 00 45.7	+0.7
CHY	baz=237			eS	Sg	05 01 06.8	+0.5
LONT	Longtian baz=188	1.55	205	eP	Pb	05 00 46.0	+0.7
WTP	Ta-pu baz=210	1.55	227	eP	Pb	05 00 45.6	+0.2
TWK	Hsinying baz=214	1.62	230	eP	Pb	05 00 47.1	+0.5
TWK	baz=214			eS	Sg	05 01 09.6	+0.5
SNST	Tainan City baz=214	1.65	229	eP	Pb	05 00 47.4	+0.4
SNST	baz=214			eS	Sb	05 01 09.6	+1.9
CHN1	Nanshi baz=212	1.65	227	eP	Pb	05 00 47.4	+0.3
CHN1	baz=212			eS	Sg	05 01 10.4	+0.4
TWG	Pinlang baz=190	1.65	205	eP	Pn	05 00 46.5	+1.1
TWGBT	Beinan baz=190	1.65	205	eP	Pn	05 00 44.0	-1.5
LDUT	Ludao baz=181	1.67	192	eP	Pn	05 00 44.0	-1.8
LDUT	baz=181			eS	Sn	05 01 04.7	-2.4
WSL	Shuilin Townsh baz=252	1.67	242	eP	Pb	05 00 47.6	+0.1
WSL	baz=252			eS	Sn	05 01 08.0	+0.9
SGST	Jiashian baz=210	1.69	223	eP	Pb	05 00 47.7	0.0
ICHU	Yijhu baz=235	1.72	237	eP	Pn	05 00 47.8	+1.4
IRIF	Iriomote-Funau	1.73	89	P	Pb	05 00 48.0	-0.3
CHN8	Yiju baz=219	1.78	237	eP	Pn	05 00 47.7	+0.5
SHHT	Tainan City baz=225	1.88	227	eP	Pg	05 00 52.7	-0.2
SCST	Cishan baz=219	1.89	221	eP	Pb	05 00 50.6	-0.5
ECL	Taimali baz=193	1.90	206	eP	Pb	05 00 51.1	-0.2
SSD	Sandimen baz=215	1.92	216	eP	Pb	05 00 51.0	-0.7
SSD	baz=215			eS	Sb	05 01 16.3	+0.8
TSMG	Majia baz=213	1.94	215	eP	Pn	05 00 50.2	+0.7
TWM1	Shoushan baz=219	1.98	221	eP	Pg	05 00 55.0	+0.2
JKRS	Kuro-shima	1.98	92	P	Pb	05 00 52.1	-0.6
JKRS				eS	Sg	05 01 18.4	-2.2
MASBT	Mashibuluo baz=202	2.03	213	eP	Pn	05 00 50.5	-0.2
JIJ	Ishigaki jima	2.10	88	P	Pb	05 00 53.3	-1.5
JIJ				eS	Sb	05 01 20.3	-0.4
EAST	Anshuo baz=195	2.13	206	eP	Pn	05 00 52.9	+0.8
SSPT	Xinbi baz=211	2.17	213	eP	Pg	05 00 57.6	-0.8
PNG	Penghu baz=250	2.22	251	eP	Pn	05 00 52.4	-0.9
PHUB	P'eng-hu baz=249	2.22	249	eP	Pn	05 00 51.9	-1.5
SCZT	Fangliau baz=208	2.24	210	eP	Pn	05 00 55.6	+2.0
WDGT	Dungji baz=241	2.26	243	eP	Pn	05 00 54.5	+0.7
JISG	Ishigakijimahi	2.27	83	P	Pb	05 00 55.2	-2.4
JISG				S	Sb	05 01 25.7	+0.2
VWUC	VWUC baz=288	2.28	288	eP	Pn	05 00 53.2	-0.9
SLIU	Shizi baz=195	2.30	205	eP	Pn	05 00 54.7	+0.3
PTMZ	Houxiangcun baz=287	2.58	287	eP	Pn	05 00 57.2	-1.0
LYJJ	Jianjiangzhen baz=321	2.91	320	eP	Pn	05 01 02.1	-0.7
KNM	Kinmen baz=272	3.11	273	eP	Pn	05 01 06.4	+0.9
KNMB	Chin-men Tao baz=273	3.15	273	eP	Pn	05 01 05.0	-1.1
AXDP	Jialang baz=280	3.57	280	eP	Pn	05 01 11.5	-0.4
ZPLA	Ao Xicun baz=264	3.76	265	eP	Pn	05 01 14.0	-0.4
SXFK	Yanhouchang baz=299	4.32	300	eP	Pn	05 01 21.5	-0.8

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*IDC **29** 05:10:46.7±0.5, 20°.55N×120°.48E, h0km, mb4.1/22, mbtmp4.1/23, ML3.5/1, MS3.5/18, Error ellipse: s-maj=22.6km s-min=11.5km az=65.0*
*MAN **29** 05:10:48.4, 20°.60N×120°.51E, h33km, mb4.9, ML3.9, MS3.9, Hypocentre not reviewed by the ISC*
*NEIC **29** 05:10:48.8±1.8, 20°.61N±0°.06×120°.43E±0°.05, h10km±1km, mb4.4/57, Error ellipse: s-maj=11.0km s-min=6.2km az=153.0*
ISC 29 05:10:50.3±0.4**, 20°.49N**±0°.03×**120°.39E**±0°.05**, h26**km**, n145, σ1ˢ47**/134**, mb4.4**/56**, MS3.5**/21**, 7C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang	2.40	15		Pn	05 11 26.6	-1.3
SIPP	Brgy, Tapao	2.56	179	⇓iP	Pn	05 11 30.3	+0.2
SIPP				iS	Sb	05 12 10.8	+4.3
SGCP	Gonzaga	2.73	145	⇑eP	Pn	05 11 31.7	-0.7
SGCP				eS	Sn	05 12 03.9	-0.7
APYP	Conner	2.74	163	⇑eP	Pn	05 11 32.3	-0.3
APYP				eS	Sn	05 12 06.3	+1.4
TPUB	Ta-pu	2.80	5		Pn	05 11 32.3	-1.2
YULB	Yu-li	3.00	16		Pn	05 11 35.8	-0.5
SSLB	Suanglung	3.32	9	Pn	Pn	05 11 40.1	-0.5
SAMP	Sagada Mountai	3.43	172	⇑eP	Pn	05 11 42.1	0.0
SAMP				eS	Sn	05 12 23.1	+1.2
CAUP	Cauayan	3.78	159	⇑eP	Pn	05 11 49.5	+2.6
CAUP				eS	Sb	05 12 38.7	-3.1
NACB	Ninganchiao	3.83	17		Pn	05 11 47.3	-0.2
BOLP	Bolinao	4.12	186	⇓eP	Pn	05 11 52.1	+0.6
YHNB	Yeheng	4.25	12		Pn	05 11 53.7	+0.2
SMPP	San Manuel, Pa	4.33	176	⇑eP	Pn	05 11 54.2	-0.2
SMPP				eS	Sn	05 12 35.5	-8.6
KNMB	Chin-men Tao	4.36	335	Pn	Pn	05 11 53.4	-1.4
YOJ	Yonaguni jima	4.63	31	Pn	Pn	05 11 58.2	-0.4
HKPS	Hong Kong Po S	6.09	288	Pn	Pn	05 12 16.8	-1.8
TGY	Tagaytay City 58nm,0.3s,baz=88,slow=2.3,SNR=5.8	6.38	175	Pn	Pn	05 12 30.1	+7.5
LQP	Lukban	6.44	170	⇑eP	Pn	05 12 27.8	+4.1
QIZ	Qiongzhong	10.04	263	P	Pn	05 13 11.8	-1.0
QIZ				S	Sn	05 15 03.3	-1.4
QIZ	comp=N,620nm,10.4s			LR	LR		
QIZ	comp=E,750nm,11.2s			LR	LR		
QIZ	comp=Z,840nm,9.8s			LR	LR		
NJ2	Nanjing	11.59	354	eP	Pn	05 13 35.3	+1.2
NJ2	comp=Z,13nm,0.5s			pmax	pmax		
NJ2	comp=N,1µm,15.2s			LR	LR		
NJ2	comp=E,820nm,16.2s			LR	LR		
NJ2	comp=Z,1µm,19.6s			LR	LR		
DAV	Davao City (W) comp=Z,129nm,18.4s,baz=348,slow=43	14.26	159	LR	LR	05 21 07.1	
JTU	Tsushima	16.09	28		Pn	05 14 35.3	+0.7
XAN	Xi'an	16.89	325	P	P	05 14 47.8	+1.0
XAN				pP	pP	05 14 53.0	+0.2
XAN				sP	sP	05 14 56.5	+0.7
XAN	comp=Z,8.0nm,0.8s			pmax	pmax		
HNS	HongShan	17.56	345	⇑P	P	05 14 56.0	+2.0
HNS	comp=Z,11nm,1.3s			pmax	pmax		
HNS	comp=N,130nm,12.7s			LR	LR		
HNS	comp=E,380nm,14.0s			LR	LR		
HNS	comp=Z,240nm,13.1s			LR	LR		
KSAR	Wonju Array Be	18.10	20	P	Pn	05 14 59.8	-0.1
PZH	PanZhiHua	18.11	293	P	P	05 15 01.0	+0.6
PZH				S	Sn	05 18 21.0	-0.7
PZH	comp=Z,10.0nm,0.5s			pmax	pmax		
PZH	comp=Z,90nm,5.1s			pmax	pmax		
PZH	comp=N,520nm,11.7s			LR	LR		
PZH	comp=E,310nm,12.9s			LR	LR		
PZH	comp=Z,510nm,12.9s			LR	LR		
KSRS	Korea Array 0.1nm,0.3s,baz=198,slow=11,SNR=13 2.0nm,0.7s	18.13	20	P	Pn	05 14 59.4	-0.8
KS19	Wonju Array Si	18.15	19		Pn	05 14 59.5	-1.0
TOLI2	Tolitoli	19.27	179	P	P	05 15 12.7	-0.3

SBUM	Sibu	19.63	205		P	05 15 16.5	-0.4
SBUM				IAmb	IAmb	05 15 18.9	
	comp=Z,15nm,1.1s						
BJT	Baijiatuau	19.79	350	P	P	05 15 18.6	-0.1
GTOI	Gorontalo	19.90	172	P	P	05 15 19.2	-0.8
	comp=Z,9.2nm,0.8s						
MRSI	Marisa	19.95	175	P	P	05 15 19.9	-0.6
	comp=Z,18nm,1.2s						
MPSI	Mapaga	20.04	181	P	P	05 15 20.2	-1.3
	comp=Z,749nmcomp=Z,8.3nm,0.9s						
CHTO	Chiang Mai	20.27	269	P	P	05 15 23.8	-0.2
CMAR	Chiang Mai Arr	20.32	268	P	Pn	05 15 26.1	-0.6
	comp=Z,1.7nm,0.4s,baz=81,slow=9.4,SNR=7.7						
CMAR				LR	LR	05 23 31.6	
	comp=Z,200nm,18.8s,baz=80,slow=38						
	comp=Z,1.7nm,0.4s						
CMAR	Chiang Mai Arr	20.32	268	P	P	05 15 24.7	+0.1
INU	Inuyama	20.81	41	P	P	05 15 28.8	-0.9
INU				IAmb	IAmb	05 15 46.1	
	comp=Z,12nm,0.8s						
JCJ	Chichijima	20.98	68	LR	LR	05 21 47.5	
	comp=Z,85nm,21.4s,baz=133,slow=32						
JCJ	Chichijima	20.98	68	P	P	05 15 30.5	-1.2
JGF	Kuroka	21.18	41	P	P	05 15 32.9	-0.9
JGF				IAmb	IAmb	05 15 42.2	
	comp=Z,13nm,1.0s						
LZH	Lanzhou	21.25	320	*e*P	P	05 15 36.0	+1.4
LZH				sP	pwP	05 15 47.0	+1.7
LZH				S	Sn	05 19 35.0	-2.3
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,150nm,5.4s						
LZH				LR	LR		
	comp=Z,360nm,11.4s						
LZH				LR	LR		
	comp=Z,340nm,11.4s						
LZH				LR	LR		
	comp=Z,370nm,10.3s						
JHJ	Hachijo jima 2	21.35	50	LR	LR	05 22 35.7	
	comp=Z,64nm,21.9s,baz=257,slow=33						
LUWI	Luwuk	21.53	173	P	P	05 15 36.1	-1.4
LUWI	Luwuk	21.53	173	P	P	05 15 35.8	-1.8
	comp=Z,2µmcomp=Z,77nm,1.1s						
HHC	Hu-ho-hao-te	21.64	342	*e*P	P	05 15 38.3	-0.4
HHC				S	S	05 19 38.3	+1.1
HHC				pmax	pmax		
	comp=Z,38nm,0.8s						
HHC				pmax	pmax		
	comp=Z,98nm,4.4s						
HHC				LR	LR		
	comp=Z,630nm,11.1s						
HHC				LR	LR		
	comp=Z,400nm,10.8s						
HHC				LR	LR		
	comp=Z,500nm,10.8s						
MAJO	Matsushiro	22.32	40	P	P	05 15 44.9	-1.0
MJAR	Matsushiro Arr	22.32	40	P	P	05 15 45.7	-0.2
	comp=Z,5.3nm,1.1s,baz=221,slow=8.8,SNR=13						
	comp=Z,5.3nm,1.1s						
MJAR	Matsushiro Arr	22.32	40	P	P	05 15 45.3	-0.6
MJB9	Matsu-Tunnel	22.32	40	P	P	05 15 44.8	-1.2
SANI	Sanana	23.07	166	P	P	05 15 50.5	-3.4
	comp=Z,26nm,0.9s						
JSD	Sado	23.35	38	P	P	05 15 56.3	-0.3
JSD				IAmb	IAmb	05 16 06.5	
	comp=Z,7.7nm,0.8s						
XLT	XiLinHaoTe	23.61	352	*e*P	P	05 15 59.8	+0.6
XLT				pP	pP	05 16 04.5	-1.3
XLT				sP	sP	05 16 06.3	-2.4
XLT				pmax	pmax		
	comp=Z,16nm,0.9s						
XLT				pmax	pmax		
	comp=Z,69nm,5.6s						
SIJI	Sorong	23.75	152	P	P	05 16 01.3	+0.6
	comp=Z,12nm,0.6s,baz=343,slow=8.6,SNR=11						
	comp=Z,12nm,0.6s						
GUMO	Guam	24.37	102	LR	LR	05 23 24.8	
	comp=Z,80nm,21.9s,baz=254,slow=31						
KAPI	Kappang	25.36	181	P	P	05 16 18.1	+2.7
	comp=Z,4.1nm,0.6s,baz=333,slow=16,SNR=3.8						
	comp=Z,4.1nm,0.6s						
KAPI	Kappang	25.36	181	P	P	05 16 16.3	+1.0
GTA	Gaotai	25.84	321	*e*P	P	05 16 21.0	+1.2
GTA				pP	pP	05 16 26.0	-0.4
GTA				sP	sP	05 16 29.0	0.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,23nm,4.0s						
GTA				LR	LR		
	comp=Z,120nm,14.2s						
GTA				LR	LR		
	comp=Z,220nm,14.9s						
GTA				LR	LR		
	comp=Z,210nm,14.5s						
FAKI	Fak Fak	26.02	152	P	P	05 16 22.2	+0.8
SHL	Shillong	26.69	286	P	P	05 16 27.2	-0.4
SHL				IAmb	IAmb	05 16 44.2	
	comp=Z,9.6nm,1.1s						
GOMU	GeErMu	27.30	310	P	P	05 16 34.8	+1.6
GOMU				pP	pP	05 16 38.0	-1.7
GOMU				sP	sP	05 16 42.3	-0.2
GOMU				S	S	05 21 13.8	+2.3
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,40nm,3.7s						
GOMU				LR	LR		
	comp=Z,130nm,14.3s						
GOMU				LR	LR		
	comp=Z,120nm,14.3s						
GOMU				LR	LR		
	comp=Z,150nm,14.0s						
MNSI	Mandailing Nat	28.23	229	P	P	05 16 42.5	+1.2
MMRI	Maumere	29.00	176	P	P	05 16 44.1	-4.0
MMRI	Maumere	29.00	176	P	P	05 16 43.2	-4.9
	comp=Z,14µmcomp=Z,97nm,0.4s						
EDFI	Ende, Flores	29.09	177	P	P	05 16 48.5	-0.5
	comp=Z,10.0nm,1.3s						
GSI	Gunungsitoli	29.33	232	P	P	05 16 49.0	-2.1
ULN	Ulaanbaatar	29.36	342	P	P	05 16 51.2	0.0
SONM	Songino Array	29.53	341	P	P	05 16 53.1	+0.4
	comp=Z,1.4nm,0.8s,baz=151,slow=9.5,SNR=4.7						
	comp=Z,1.4nm,0.8s						
SONM	Songino Array	29.53	341	P	P	05 16 52.2	-0.5
ASAJ	Asahikawa	29.94	33	LR	LR	05 28 48.4	
	comp=Z,130nm,20.6s,baz=164,slow=36						
KLR	Kul'dur	30.08	15	LR	LR	05 30 18.6	
	comp=Z,51nm,21.3s,baz=156,slow=39						
WMQ	Urumqi	35.79	318	*e*P	P	05 17 49.5	+2.1
KNRA	Kununurra	36.88	166	P	P	05 17 55.4	-1.4
MK31	Makanchi Array	40.56	319	P	P	05 18 27.9	+0.4
MKAR	Makanchi Array	40.56	319	P	P	05 18 28.2	+0.8
	comp=Z,1.2nm,0.5s,baz=118,slow=9.2,SNR=16						
MKAR				PcP	PcP	05 20 28.7	-0.8
	comp=Z,0.6nm,0.7s,baz=105,slow=4.9,SNR=2.4						
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	40.56	319	P	P	05 18 27.6	+0.1
MAKZ	Makanchi	40.75	319	P	P	05 18 28.3	-0.8
COEN	Coen	40.91	145	P	P	05 18 29.3	-1.4
COEN				IAmb	IAmb	05 18 39.8	
	comp=Z,10nm,1.2s						
WB0	Warramunga Arr	42.30	160	P	P	05 18 40.8	-1.1
WRAB	Tennant Creek	42.44	160	P	P	05 18 42.0	-1.1
WRA	Warramunga Arr	42.45	160	P	P	05 18 42.7	-0.5
	comp=Z,6.7nm,0.9s,baz=343,slow=8.9,SNR=30						
	comp=Z,6.7nm,0.9s						
WRA	Warramunga Arr	42.45	160	P	P	05 18 41.5	-1.7
WB2	Warramunga Arr	42.45	160	P	P	05 18 41.4	-1.8
WR0	Warramunga Arr	42.52	160	P	P	05 18 43.1	-0.7
WR0				IAmb	IAmb	05 18 53.6	
	comp=Z,7.9nm,0.6s						
ZAA0	Zalesovo Array	42.99	330	P	P	05 18 46.4	-0.8
ZAA0				IAmb	IAmb	05 18 48.2	
	comp=Z,6.7nm,0.8s						
ZALV	Zalesovo Beam	42.99	330	P	P	05 18 47.4	+0.1
	comp=Z,5.5nm,0.7s,baz=111,slow=7.6,SNR=21						
	comp=Z,5.5nm,0.7s						
ZALV	Zalesovo Beam	42.99	330	P	P	05 18 46.5	-0.7
PETK	Petropavlovsk-	43.35	32	LR	LR	05 37 17.6	
	comp=Z,48nm,20.1s,baz=217,slow=37						
H11N1	WAKE ISLAND Hy	43.56	83	T	T	06 05 31.7	
	baz=281,slow=74,SNR=4.4						
H11N2	WAKE ISLAND Hy	43.56	83	T	T	06 05 31.7	
	baz=281						
H11N3	WAKE ISLAND Hy	43.58	83	T	T	06 05 33.9	
	baz=281,slow=74,SNR=4.4						
H11S3	WAKE ISLAND Hy	43.58	84	T	T	06 05 25.6	
	baz=281,slow=74,SNR=7.1						
H11S1	WAKE ISLAND Hy	43.59	84	T	T	06 05 27.4	
	baz=281,slow=74,SNR=5.5						
H11S2	WAKE ISLAND Hy	43.60	84	T	T	06 05 26.9	
	baz=281,slow=74,SNR=5.6						
AAK	Ala-Archa	44.24	311	P	P	05 18 58.5	+0.8
	comp=Z,1.2nm,0.3s,baz=222,slow=1.7,SNR=3.6						
AAK				LR	LR	05 37 50.5	
	comp=Z,72nm,20.4s,baz=139,slow=37						
	comp=Z,1.2nm,0.3s						
AAK	Ala-Archa	44.24	311	P	P	05 18 58.1	+0.3
KURK	Kurchatov	44.51	323	P	P	05 18 58.1	-1.4
KURK				IAmb	IAmb	05 19 01.2	
	comp=Z,4.6nm,0.9s						
MA2	Magadan	44.67	21	LR	LR	05 40 39.8	
	comp=Z,44nm,18.4s,baz=296,slow=40						
ASAR	Alice Springs	45.83	163	P	P	05 19 10.2	-0.1
	comp=Z,4.9nm,0.9s,baz=335,slow=7.0,SNR=32						
	comp=Z,4.9nm,0.9s						
KK31	Karatay Array	47.20	310	P	P	05 19 21.4	+0.5
KK31				IAmb	IAmb	05 19 32.0	
	comp=Z,4.5nm,1.1s						
KKAR	Karatay Array	47.20	310	P	P	05 19 21.0	+0.1
KKAR				IAmb	IAmb	05 19 32.0	
	comp=Z,4.5nm,1.1s						
CTA	Charters Tower	47.62	146	P	P	05 19 25.2	+0.8
	comp=Z,6.6nm,0.9s,baz=330,slow=10,SNR=6.0						
	comp=Z,6.6nm,0.9s						
CTAO	Charters Tower	47.62	146	P	P	05 19 24.7	+0.3
BRVK	Borovoye	50.18	323	P	P	05 19 43.9	+0.3
BRVK				IAmb	IAmb	05 19 45.4	
	comp=Z,5.3nm,1.2s						
SHEM	Shemya Is, Ala	52.14	38	LR	LR	05 44 12.1	
	comp=Z,22nm,19.1s,baz=143,slow=38						
NRIK	Noril'sk	52.77	346	P	P	05 20 02.3	-0.4
NRIK				IAmb	IAmb	05 20 19.8	
	comp=Z,3.6nm,0.7s						
BBOO	Buckleboo	55.08	164	P	P	05 20 20.2	+0.2
BILL	Bilibino	55.39	19	P	P	05 20 22.0	+0.1
BILL				IAmb	IAmb	05 20 34.7	
	comp=Z,5.6nm,1.1s						
ABKAR	Akbulak array	55.53	316	P	P	05 20 22.9	-0.3
ABKAR	Akbulak array	55.53	316	P	P	05 20 23.1	-0.1
ABKAR				IAmb	IAmb	05 20 34.0	
	comp=Z,4.9nm,1.2s						
STKA	Stephens Creek	55.90	158	P	P	05 20 26.5	+0.5
	comp=Z,2.3nm,0.6s,baz=343,slow=13,SNR=4.0						
	comp=Z,2.3nm,0.6s						
AKTO	Aktyubinsk	56.94	317	P	P	05 20 34.0	+0.8
	comp=Z,1.9nm,0.8s,baz=77,slow=7.5,SNR=4.7						
AKTO				LR	LR	05 44 47.4	
	comp=Z,32nm,18.4s,baz=138,slow=36						
	comp=Z,1.9nm,0.8s						
ARU	Arti	57.64	325	P	P	05 20 38.1	0.0
	comp=Z,0.9nm,0.4s,baz=310,slow=4.4,SNR=5.6						
ARU				LR	LR	05 48 07.3	
	comp=Z,61nm,18.0s,baz=146,slow=39						
	comp=Z,0.9nm,0.4s						
ARU	Arti	57.64	325	IAmb	IAmb	05 20 39.0	
	comp=Z,3.1nm,0.6s						
DZM	Mont Dzumac	61.74	131	LR	LR	05 44 59.6	
	comp=Z,52nm,18.7s,baz=328,slow=33						
BELG	Belogornoye	63.56	319	P	P	05 21 19.6	+1.1
	comp=Z,6.2nm,0.8s,baz=180,slow=9.1,SNR=2.1						
	comp=Z,6.2nm,0.8s						
KBZ	Khabaz	67.24	310	P	P	05 21 43.4	+1.0
	comp=Z,3.3nm,1.0s,baz=91,slow=6.0,SNR=5.2						
KBZ				LR	LR	05 54 01.3	
	comp=Z,44nm,19.1s,baz=81,slow=39						
	comp=Z,3.3nm,1.0s						
KLMR	Klimovskoe	67.89	329	*e*P	P	05 21 43.5	-2.8
KLMR				AMP		05 21 46.8	
	comp=Z,9.0nm,1.3s						
MSVF	Nonsavu	68.12	120	LR	LR	05 46 33.8	
	comp=Z,47nm,21.8s,baz=309,slow=32						
TTA	Tatalina	69.06	29	P	P	05 21 54.7	+1.0
TTA				IAmb	IAmb	05 21 57.8	
	comp=Z,5.6nm,1.5s						
SVW2	Sparrevohn	69.42	31	P	P	05 21 57.0	+1.2
SVW2				IAmb	IAmb	05 22 05.7	
	comp=Z,4.5nm,1.3s						
M19K	Big River Lodg	69.91	30	P	P	05 21 58.8	-0.1
M19K				IAmb	IAmb	05 22 18.8	
	comp=Z,6.2nm,1.2s						
H21K	Melozitna Rive	70.22	26	P	P	05 22 00.9	+0.2
H21K				IAmb	IAmb	05 22 08.6	
	comp=Z,3.8nm,1.0s						
MLY	Manley	71.16	27	P	P	05 22 05.5	-1.0
MLY				IAmb	IAmb	05 22 10.2	
	comp=Z,4.5nm,1.1s						
H23K	Yukon River	71.54	26	P	P	05 22 10.8	+2.1
H23K				IAmb	IAmb	05 22 11.0	
	comp=Z,4.0nm,0.8s						
MCK	McKinley	72.14	28	P	P	05 22 10.7	-1.6
H24K	Noodor Dome	72.21	26	P	P	05 22 12.2	-0.6
H24K				IAmb	IAmb	05 22 38.2	
	comp=Z,3.8nm,1.1s						
RND	Reindeer	72.23	28	P	P	05 22 12.7	-0.2
ILAR	Eielson Array	72.82	27	P	P	05 22 16.9	+0.5
	comp=Z,0.6nm,0.8s,baz=289,slow=5.0,SNR=7.9						
	comp=Z,0.6nm,0.8s						
BMAR	Burnt Mountain	73.18	24	P	P	05 22 20.3	+1.8
FINES	FINESS Array B	74.25	330	P	P	05 22 26.6	+1.8
	comp=Z,1.2nm,0.8s,baz=93,slow=5.6,SNR=3.9						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	74.25	330	P	P	05 22 25.1	+0.3
AKASG	Malin Array Be	75.14	319	P	P	05 22 29.7	-0.5
	comp=Z,0.3nm,0.4s,baz=57,slow=6.2,SNR=4.4						
	comp=Z,0.3nm,0.4s						
EGAK	Eagle	75.20	26	P	P	05 22 31.0	+0.8
EGAK				IAmb	IAmb	05 22 35.0	
	comp=Z,3.3nm,0.9s						
L27K	Beaver Creek,	75.40	28	P	P	05 22 32.5	+1.0
L27K				IAmb	IAmb	05 22 33.5	
	comp=Z,3.8nm,0.8s						
BCAR	Beaver Creek A	75.42	28	P	P	05 22 32.3	+0.6
M27K	Edge Creek, AK	75.58	29	P	P	05 22 32.9	+0.2
M27K				IAmb	IAmb	05 22 34.1	
	comp=Z,2.9nm,0.9s						
DAWY	Dawson	76.14	26	P	P	05 22 36.8	+1.0
DAWY				IAmb	IAmb	05 22 37.0	
	comp=Z,3.9nm,0.8s						
INK	Inuvik	76.91	22	LR	LR	06 01 06.2	
	comp=Z,18nm,19.3s,baz=11,slow=39						
INK	Inuvik	76.91	22	P	P	05 22 40.6	+0.7
INK				IAmb	IAmb	05 22 50.5	
	comp=Z,3.1nm,0.9s						
HYT	Haines Junctio	78.05	29	P	P	05 22 46.5	-0.1
HYT				IAmb	IAmb	05 22 48.5	
	comp=Z,5.1nm,1.0s						
NOA	NORSAR Array B	81.13	332	P	P	05 23 02.5	-0.7
	comp=Z,0.7nm,0.9s,baz=71,slow=5.5,SNR=3.1						
NOA				LR	LR	06 02 02.1	
	comp=Z,30nm,18.1s,baz=45,slow=38						
	comp=Z,0.7nm,0.9s						
GERES	GERESS Array B	85.21	321	P	P	05 23 25.1	+0.5
	comp=Z,0.2nm,0.3s,baz=57,slow=4.9,SNR=4.4						
	comp=Z,0.2nm,0.3s						
GERES	GERESS Array B	85.21	321	P	P	05 23 24.4	-0.3
YKA	Yellowknife Ar	86.64	22	P	P	05 23 30.8	-0.5
	comp=Z,1.7nm,0.8s,baz=324,slow=5.6,SNR=3.9						
	comp=Z,1.7nm,0.8s						

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*IDC **29** 05:22:08.3±0.8, 34°.90N×142°.19E, h0^{km}, mb4.1/17, mbtmp4.1/22, ML3.4/4, MS3.4/4, Error ellipse: s-maj=20.3km s-min=14.9km az=92.0*

*JMA **29** 05:22:10.0±0.3, 35°.0N±0°.8×14°2E±°, h39^{km}, MV4.1/39, FAR E OFF CENTRAL HONSHU*

*NEIC **29** 05:22:09.7±1.3, 35°.03N±0°.05×142°.30E±0°.10, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=13.9km s-min=8.4km az=111.0*

*NIED **29** 05:22:10.0, 34°.98N×142°.33E, h39^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.12; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$1.17; $M_{r\theta}$-0.42; $M_{\theta\phi}$0.18; $M_{\phi r}$-0.14; Fault plane solution: $M_0$1.24000×10^{15} NP1: ϕ_s171.00000°, δ43.00000°, λ-117.00000°. NP2: ϕ_s26.00000°, δ53.00000°, λ-67.00000°.*

*MOS **29** 05:22:11.4±1.5, 35°.15N×142°.19E, h27^{km}, mb4.6/15 Error ellipse: s-maj=12.5km s-min=6.1km az=118.3*

ISC 29 05:22:11.0±1.2**, 35°.02N**±0°.05×**142°.18E**±0°.05**, h17**^{km}±7^{km}**,**

n122, σ1§46/136**, mb4.4**/43**, 8C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.06	250	*i* P	Pb	05 22 30.1	-0.4
BSO1				S	Sn	05 22 44.9	+0.4
BSO2	Boso 2	1.21	257	S	Sn	05 22 49.9	+1.4
CHOJ	Chosi	1.28	302	P	Pn	05 22 34.0	+0.1
CHOJ				*e*S	Sb	05 22 50.9	+0.2
BSO3	Boso 3	1.39	261	P	Pn	05 22 35.5	+0.1
BSO3				S	Sb	05 22 54.2	+0.6
BSO4	Boso 4	1.51	269	P	Pn	05 22 37.7	+0.5
BSO4				*e*S	Sb	05 22 58.1	+0.7
KTR	Katsuura	1.54	275	*e*P	Pb	05 22 38.1	-0.8
KTR				*e*S	Sb	05 22 58.3	+0.2
JSMT	Sammumatsuo	1.55	294	P	Pb	05 22 38.6	-0.5
JSMT				*e*S	Sg	05 22 59.3	-1.6
JKUC	kamogawauchiur	1.63	275	P	Pn	05 22 39.2	+0.4
JKUC				S	Sn	05 22 59.6	+0.2
JIHU	Itakohorinouch	1.65	305	*e*P	Pb	05 22 39.8	-1.0
JYT	Yasato	2.02	307		Pn	05 22 43.9	-0.3
JIM2	Oshima 3	2.28	263	P	Pn	05 22 46.9	-1.0
JMKN	Mikurajimanish	2.42	243	P	Pn	05 22 48.7	-1.0
JMKN				S	Sn	05 23 16.2	-2.7
JOD2	Odawara 2	2.55	276	P	Pn	05 22 51.2	-0.3
JOD2				*e*S	Sn	05 23 20.7	-1.3
JFK	Kawauchi	2.57	336	P	Pn	05 22 50.8	-1.0
JFK				*e*S	Sn	05 23 19.3	-3.3
JAG	Ashikaga	2.62	303	P	Pn	05 22 52.9	+0.4
JIZS	Izushimoda	2.73	265	P	Pn	05 22 53.6	-0.4
JIZS				*e*S	Sn	05 23 25.2	-1.5
JHJ2	Mitsune	2.74	227	Pn	Pn	05 22 53.6	-0.4
JHJ	Hachijo jima 2	2.75	227	Pn	Pn	05 22 52.8	-1.5
	25nm,0.3s,baz=306,slow=23,SNR=26						
JHJ				Sn	Sn	05 23 22.9	-4.1
	120nm,0.3s,baz=227,slow=23,SNR=8.2						
	74nm,0.3s						
JMM	Marumori	3.05	339		Pn	05 22 57.2	-1.1
MJAR	Matsushiro Arr	3.57	296	Pn	Pn	05 23 05.4	-0.1
	1.3nm,0.3s,baz=100,slow=15,SNR=84						
MJAR				LR	LR	05 24 51.0	
	comp=Z,277nm,18.5s,baz=199,slow=45						
	6.9nm,0.4s						
MAJO	Matsushiro	3.57	296		Pn	05 23 06.4	+0.8
MAJO	Matsushiro	3.57	296	P	Pn	05 23 06.4	+0.8
MJB9	Matsu-Tunnel	3.57	296		Pn	05 23 06.5	+0.9
INU	Inuyama	4.24	276	Pn	Pn	05 23 15.2	+0.4
JSD	Sado	4.36	315	Pn	Pn	05 23 17.1	+0.7
JTM	Tenmabayashi	5.82	352	Pn	Pn	05 23 36.0	-0.4
ERM	Erimo	7.02	6	Pn	Pn	05 23 50.8	-2.1
ERM	Erimo	7.02	6	P	Pn	05 23 50.8	-2.1
JHS	Saijyo	7.44	272	Pn	Pn	05 23 59.3	+0.6
JEW	Eniwo	7.83	356	Pn	Pn	05 24 03.3	-0.6
JCJ	Chichijima	7.90	180	Pn	Pn	05 24 01.9	-3.2
	5.5nm,0.3s,baz=282,slow=24,SNR=9.8						
JCJ				Sn	Sn	05 25 24.4	-10
	10nm,0.3s,baz=295,slow=22,SNR=4.5						
	14nm,0.3s						
JCJ	Chichijima	7.90	180	Pn	Pn	05 24 04.0	-1.0
ASAJ	Asahikawa	9.09	2	Pn	Pn	05 24 19.1	-2.2
	4.6nm,0.3s,baz=216,slow=8.3,SNR=29						
ASAJ	Asahikawa	9.09	2	P	Pn	05 24 19.3	-1.9
JKA	Kamikawa-asahi	9.09	2	Pn	Pn	05 24 19.3	-2.0
SHO	Shikotan	9.54	21	*e*P	Pn	05 24 35.8	+8.4
KSRS	Korea Array	11.77	286	Pn	Pn	05 24 59.4	+1.4
	1.0nm,0.7s,baz=100,slow=13,SNR=4.9						
KSRS				LR	LR	05 29 42.7	
	comp=Z,115nm,18.3s,baz=95,slow=38						
YSS	Yuzh-Sakhalins	11.93	2	*e*P	Pn	05 24 58.2	-1.9
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
USRK	Ussuriysk Ar.	12.06	322	Pn	Pn	05 25 02.9	+0.9
	comp=Z,0.5nm,0.3s,baz=145,slow=11,SNR=5.9						
	comp=Z,2.1nm,0.5s						
USRK	Ussuriysk Ar.	12.06	322		Pn	05 25 02.3	+0.3
NAWB	Namwon	12.10	276	Pn	Pn	05 25 01.6	-1.0
KLR	Kul'dur	16.14	335	Pn	Pn	05 25 54.5	-2.4
	comp=Z,0.1nm,0.3s,baz=147,slow=14,SNR=3.7						
NJ2	Nanjing	19.66	268	*e*P	P	05 26 36.8	-2.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZEA	Zeya	21.46	335	*e*P	P	05 26 59.1	+0.9
ZEA				*e*		05 27 15.2	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
XLT	XiLinHaoTe	21.94	302	*e*P	P	05 27 05.0	+1.3
XLT				pP	pwP	05 27 10.0	-5.7
XLT				sP	sP	05 27 12.5	+4.9
XLT				pmax	pmax		
	comp=Z,12nm,1.1s						
XLT				pmax	pmax		
	comp=Z,120nm,6.4s						
HHC	Hu-ho-hao-te	24.76	293	*e*P	P	05 27 31.8	0.0
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,7.0s						
MA2	Magadan	25.20	10	P	P	05 27 37.4	+2.0
	comp=Z,7.6nm,0.7s,baz=159,slow=16,SNR=4.6						
	comp=Z,7.6nm,0.7s						
MA2	Magadan	25.20	10	P	P	05 27 34.4	-1.0
MA2				IAmb	IAmb	05 27 57.1	
	comp=Z,19nm,1.1s						
ENH	Enshi	27.86	269	P	P	05 27 58.4	-1.4
ENH				IAmb	IAmb	05 28 02.8	
	comp=Z,8.2nm,0.8s						
SEY	Seymchan	28.65	10	P	P	05 28 08.4	+2.1
	comp=Z,1.1nm,0.6s,baz=197,slow=7.4,SNR=4.7						
	comp=Z,1.1nm,0.6s						
ULN	Ulaanbaatar	29.03	307	*ce*P	P	05 28 12.1	+2.0
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SONM	Songino Array	29.45	307	P	P	05 28 15.7	+1.8
	comp=Z,3.6nm,0.7s,baz=108,slow=9.4,SNR=17						
	comp=Z,3.6nm,0.7s						
SONM	Songino Array	29.45	307	P	P	05 28 13.3	-0.5
SONM				IAmb	IAmb	05 28 16.4	
	comp=Z,3.9nm,0.9s						
BOD	Bodaibo	29.57	329	*e*P	P	05 28 17.9	+3.4
BOD				pmax	pmax		
	comp=Z,11nm,1.8s						
LZH	Lanzhou	31.08	283	⇑P	P	05 28 29.8	+1.4
LZH				pP	sP	05 28 34.0	+1.5
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
ZAK	Zakamensk	32.03	311	*e*P	P	05 28 35.0	-1.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
GTA	Gaotai	33.80	290	*e*P	P	05 28 51.0	-1.1
GTA				sP	pwP	05 29 05.8	+0.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PZH	PanZhiHua	35.58	268	P	P	05 29 11.3	+3.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	Tiksi	37.36	353	*ce*P	P	05 29 23.0	+0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.5s						
GOMU	GeErMu	38.23	286	P	P	05 29 31.5	+1.1
GOMU				pP	sP	05 29 34.5	0.0
GOMU				sP	pwP	05 29 38.5	-5.4
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CMAR	Chiang Mai Arr	41.64	258	P	P	05 29 58.1	-0.4
	comp=Z,2.0nm,0.6s,baz=52,slow=7.1,SNR=12						
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	41.64	258	P	P	05 29 58.6	+0.1
CMAR	Chiang Mai Arr	41.64	258	P	P	05 29 58.6	+0.1
WMQ	Urumqi	42.33	299	*e*P	P	05 30 07.3	+3.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
ZAA0	Zalesovo Array	43.74	314	P	P	05 30 15.2	+0.1
ZALV	Zalesovo Beam	43.74	314	P	P	05 30 15.6	+0.5
	comp=Z,1.4nm,0.5s,baz=95,slow=7.2,SNR=7.7						
ZALV				PcP	PcP	05 32 00.4	-1.3
	comp=Z,0.5nm,0.3s,baz=100,slow=1.6,SNR=2.0						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	43.74	314	P	P	05 30 15.3	+0.2
MK31	Makanchi Array	45.73	304	P	P	05 30 31.6	+0.4
MK31	Makanchi Array	45.73	304	*d i*P	P	05 30 31.7	+0.5

MKAR	Makanchi Array	45.73	304	P	P	05 30 31.9	+0.7
	comp=Z,2.2nm,0.8s,baz=89,slow=10,SNR=25						
MKAR				PcP	PcP	05 32 08.6	-0.2
	comp=Z,0.4nm,0.6s,baz=67,slow=5.2,SNR=2.1						
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	45.73	304	P	P	05 30 30.9	-0.3
MAKZ	Makanchi	45.95	304	P	P	05 30 33.1	+0.3
MAKZ				IAmb	IAmb	05 30 34.4	
	comp=Z,3.2nm,0.9s						
MAKZ	Makanchi	45.95	304	P	P	05 30 33.1	+0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	47.68	310	P	P	05 30 45.5	-0.8
KURK				IAmb	IAmb	05 30 47.3	
	comp=Z,6.5nm,0.8s						
KURK	Kurchatov	47.68	310	P	P	05 30 47.2	+1.0
KURBB	Kurchatov Arra	47.74	310	P	P	05 30 47.2	+0.5
	comp=Z,5.0nm,0.7s,baz=86,slow=7.7,SNR=47						
	comp=Z,5.0nm,0.7s						
TARG	Taragay, Kyrgy	49.87	298	P	P	05 31 04.0	+0.2
TARG				IAmb	IAmb	05 31 06.0	
	comp=Z,4.1nm,0.7s						
TARG	Taragay, Kyrgy	49.87	298	P	P	05 31 04.0	+0.2
TARG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ILAR	Eielson Array	50.87	31	P	P	05 31 11.2	+0.7
	comp=Z,0.6nm,0.8s,baz=271,slow=6.2,SNR=7.5						
	comp=Z,0.6nm,0.8s						
ILAR	Eielson Array	50.87	31	P	P	05 31 10.0	-0.5
GLI	Glacier Island	50.89	37	P	P	05 31 08.3	-2.3
BOOM	Boomskoye usch	51.02	299	P	P	05 31 12.1	-0.1
BOOM				IAmb	IAmb	05 31 14.5	
	comp=Z,5.9nm,1.4s						
BOOM	Boomskoye usch	51.02	299	P	P	05 31 12.1	-0.1
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.5s						
AAK	Ala-Archa	52.01	300	*ce*P	P	05 31 21.0	+1.4
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BRVK	Borovoye	52.45	314	*ce*P	P	05 31 23.8	+1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KK31	Karatay Array	54.69	302	P	P	05 31 39.7	+0.6
KK31				IAmb	IAmb	05 31 40.8	
	comp=Z,5.3nm,0.9s						
KK31	Karatay Array	54.69	302	P	P	05 31 39.7	+0.6
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	54.69	302	P	P	05 31 39.7	+0.6
KKAR	Karatay Array	54.69	302	P	P	05 31 39.3	+0.2
KKAR				IAmb	IAmb	05 31 40.8	
	comp=Z,5.3nm,0.9s						
KKAR	Karatay Array	54.69	302	P	P	05 31 39.7	+0.6
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	55.17	189	P	P	05 31 42.1	-0.5
	comp=Z,1.0nm,0.6s,baz=4.9,slow=7.5,SNR=22						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	55.17	189	P	P	05 31 41.1	-1.5
WRA	Warramunga Arr	55.17	189	*ce*P	P	05 31 42.0	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARU	Arti	58.28	320	P	P	05 32 04.8	+0.3
	comp=Z,1.2nm,0.5s,baz=90,slow=1.0,SNR=4.9						
	comp=Z,1.2nm,0.5s						
ARU	Arti	58.28	320	*di*P	P	05 32 04.7	+0.3
ARU				*PP	pwP	05 32 17.6	-0.1
ARU						05 34 11.1	
ARU				S	S	05 40 03.9	-1.7
ARU				SS	SS	05 43 50.9	-6.1
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	58.89	189	P	P	05 32 09.3	+0.3
	comp=Z,0.3nm,0.6s,baz=7.5,slow=7.4,SNR=4.2						
	comp=Z,0.3nm,0.6s						
ABKAR	Akbulak array	59.72	311	P	P	05 32 14.2	-0.3
AKTO	Aktyubinsk	60.49	313	P	P	05 32 20.2	+0.5
	comp=Z,1.9nm,0.6s,baz=74,slow=13,SNR=4.7						
	comp=Z,1.9nm,0.6s						
KIRV	Kirov	62.23	324	*ce*P	P	05 32 32.7	+1.4
ARCES	ARCESS Array B	66.09	340	LR	LR	06 04 10.0	
	comp=Z,28nm,21.8s,baz=115,slow=38						
VORR	Voronezh	70.59	320	*e*P	P	05 33 28.1	+3.1
VORR				pmax	pmax		
	comp=Z,70nm,0.4s						
FINES	FINESS Array B	70.88	333	P	P	05 33 27.4	+0.8
	comp=Z,1.9nm,0.5s,baz=57,slow=5.6,SNR=22						
	comp=Z,1.9nm,0.5s						
NVAR	Mina Array Bea	75.69	53	P	P	05 34 00.2	+4.5
	comp=Z,0.2nm,0.5s,baz=262,slow=4.5,SNR=2.6						
AKASG	Malin Array Be	76.27	323	P	P	05 33 59.1	+0.7
	comp=Z,2.5nm,0.5s,baz=46,slow=6.4,SNR=21						
	comp=Z,2.5nm,0.5s						
AKASG	Malin Array Be	76.27	323	P	P	05 33 58.6	+0.1
AKASG				IAmb	IAmb	05 34 00.1	
	comp=Z,3.2nm,1.2s						
AKBB	Malin Array Si	76.27	323	P	P	05 33 57.5	-1.0
AKBB				IAmb	IAmb	05 33 59.7	
	comp=Z,5.2nm,0.7s						
AKBB	Malin Array Si	76.27	323	*ce*P	P	05 33 59.5	+1.1
NB2	NORSAR Subarra	76.28	338	P	P	05 33 59.2	+0.8
	comp=Z,1.4nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	76.28	338	P	P	05 33 59.4	+1.0
	comp=Z,3.2nm,0.8s,baz=39,slow=5.8,SNR=16						
	comp=Z,3.2nm,0.8s						
URZ	Urewera	79.78	153	LR	LR	06 04 24.8	
	comp=Z,51nm,19.5s,baz=211,slow=32						
BURAR	Bucovina Array	80.28	322	P	P	05 34 20.7	-0.1
BRTR	Keskin Array B	80.65	312	P	P	05 34 24.2	+1.2
	comp=Z,0.8nm,0.7s,baz=88,slow=3.9,SNR=5.1						
	comp=Z,0.8nm,0.7s						
CLL	Collm	83.15	331	*i* P	P	05 34 35.0	-0.8
VTS	Vitosha	84.71	320	P	P	05 34 44.1	-0.1
VTS	Vitosha	84.71	320	P	P	05 34 44.1	-0.1
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GERES	GERESS Array B	84.75	329	P	P	05 34 43.9	-0.2
	comp=Z,0.7nm,0.8s,baz=59,slow=6.4,SNR=7.1						
	comp=Z,0.7nm,0.8s						
GERES	GERESS Array B	84.75	329	P	P	05 34 43.6	-0.5
GRA1	Grafenberg Arr	85.12	331	P	P	05 34 44.7	-1.2
GRF	Grafenberg Arr	85.12	331	P	P	05 34 44.7	-1.2
GRF				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RCHB	Rochefort	87.04	334	*d*P	P	05 34 54.0	-1.3
LPAZ	La Paz	147.11	63	PKPbc	PKPbc	05 41 53.5	-0.7
	comp=Z,0.8nm,0.7s,baz=258,slow=6.5,SNR=4.8						
LPAZ	La Paz	147.11	63		PKPdf	05 41 49.7	-2.4

MDD **29** *05:23:05.7±0.7, 35°.98N×3°.79E, h0^{km}, Mb4.9/17, M_mb4.4/17, Error ellipse: s-maj=6.3km s-min=3.3km az=144.0*

SFS **29** *05:23:05.0, 35°.95N×3°.80W, ML4.9, BOUIRA(ARGELIA)*

CNRM **29** *05:23:06.8, 36°.33N×3°.99E, h16^{km}*

IDC **29** *05:23:09.1±0.6, 36°.35N×3°.53E, h0^{km}, mb4.1/21, mbtmp4.1/28, ML3.9/7, MS3.3/12, Error ellipse: s-maj=16.2km s-min=13.2km az=133.0*

MED_RC **29** *05:23:10.0±0.4, 36°.25N×3°.52E, h10^{km}, MW4.2/13, Moment Tensor Solution.Mantle waves: s13,c14; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.29±.17; M$_{\theta\theta}$-0.04±.18; M$_{\phi\phi}$-1.25±.12; M$_{r\theta}$-1.50±.46; M$_{\theta\phi}$-1.22±.09; M$_{\phi r}$-0.10±.30; Best double couple: M$_0$2.31000×10^{15} NP1:φ$_s$244.00000°, δ68.00000°, λ126.00000°. NP2:φ$_s$1.00000°, δ41.00000°, λ34.00000°. Principal axes: T 2.3700, Plg53.0000°, Azm197.0000°; N -0.1100, Plg33.0000°, Azm49.0000°; P -2.2600, Plg16.0000°, Azm309.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

MOS **29** *05:23:10.1±1.4, 36°.33N×3°.42E, h16^{km}, mb4.6/20 Error ellipse: s-maj=10.3km s-min=4.0km az=65.8*

NEIC **29** *05:23:10.5±2.2, 36°.24N±0°.08×3°.50E±0°.07, h10^{km}±1^{km}, mb4.2/26, Error ellipse: s-maj=13.2km s-min=9.4km az=195.0*

CRAAG **29** *05:23:10.2, 36°.35N×3°.37E, Ml4.0*

LDG **29** *05:23:12.7±0.3, 36°.26N×3°.59E, h10^{km}, Ml3.9/31, Error ellipse: s-maj=6.8km s-min=3.5km az=148.0*

ISC 29 05:23:11.7±0.4, **36°.40N**±0°.04×**3°.49E**±0°.03, **h18**^{km}, **n335**, σ**2**^{s}**05**/386, **mb4.3**/44, **MS3.4**/10, **27C-21D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.24	190	P	Pg	05 23 14.6	-2.8
ABMS	Boumerdes	0.35	358	P	Pb	05 23 19.8	+0.3
AKET	Djebel Ketaf	0.47	138	P	Pg	05 23 19.7	-1.6
ABA	Alger-Bouzarea	0.55	318	P	Pg	05 23 21.9	-0.8
SET	Setif	1.55	97	P	Pg	05 23 45.0	+3.4
DFRA	Djebel Bou Aff	1.93	85	P	Pn	05 23 44.0	+0.3
CASM	Ain Smara	2.42	92	P	Pn	05 23 51.3	+0.8
CKFL	Kef-Lekhel	2.60	89	P	Pn	05 23 53.0	0.0
EIBI	Ibiza	3.13	328	Pn	Pn	05 24 00.1	-0.1
EIBI				⇑*i*Vmb_V		05 24 04.0	
	4μm,SNR=7.2						
EIBI				Sn	Sn	05 24 36.1	-1.0
CMAH	Djebel Manchou	3.17	85	P	Pn	05 24 00.9	+0.1
ABSA	Djebel Ababsia	3.22	91	P	Pn	05 24 03.4	+1.9
ETOS	Mallorca	3.41	351	Pn	Pn	05 24 04.8	+0.9
ETOS				⇑*i*Vmb_V		05 24 07.6	
	2μm,SNR=6.3						
ETOS				Sn	Sn	05 24 41.9	-2.0
MAHO	Mahon	3.55	10	P	Pn	05 24 04.8	-1.0
MAHO				S	Sn	05 24 45.0	-2.3
CART	Cartagena	3.79	290	P	Pn	05 24 09.3	+0.2
CART				S	Sn	05 24 52.8	-0.4
CART	Cartagena	3.79	290	Pn	Pn	05 24 09.0	-0.2
CART	Cartagena	3.79	290	P	Pn	05 24 09.4	+0.2
EMUR	La Murta	4.05	292	Pn	Pn	05 24 13.3	+0.5
EMUR				⇑*i*Vmb_V		05 24 17.5	
	886nm,SNR=6.5						
EMUR				Sn	Sn	05 25 01.5	+1.8
ECOL	Islas Columbre	4.14	329	Pn	Pn	05 24 13.9	-0.1
EZAR	Zarzadilla de	4.40	291	Pn	Pn	05 24 18.1	+0.4
EZAR				Sn	Sn	05 25 11.6	+3.1
ETOB	Tobarra	4.59	301	Pn	Pn	05 24 21.8	+1.5
ETOB				⇑*i*Vmb_V		05 24 23.8	
	1μm,SNR=7.5						
ETOB				Sn	Sn	05 25 16.9	+3.7
ENIJ	Nijar	4.62	279	Pn	Pn	05 24 20.2	-0.4
ENIJ				⇑*i*Vmb_V		05 24 23.6	
	455nm,SNR=2.7						
ENIJ				Sn	Sn	05 25 15.3	+1.6
KEST	Kesra	4.79	96	Pn	Pn	05 24 22.5	-0.5
CHAS	Isla Isabel II	4.96	258	P	Pn	05 24 26.9	+1.5
CHAS				S	Sn	05 25 16.4	-5.9
EMOS	Mosqueruela	5.04	323	Pn	Pn	05 24 28.2	+1.6
EMOS				⇑*i*Vmb_V		05 24 31.0	
	994nm,SNR=4.4						
EMOS				Sn	Sn	05 25 26.4	+2.0
TAF	Taforalt	5.06	254	P	Pn	05 24 27.0	+0.2
EBER	Berja	5.16	277	Pn	Pn	05 24 26.6	-1.6
EBER				⇑*i*Vmb_V		05 24 35.2	
	387nm,SNR=2.4						
EBER				Sn	Sn	05 25 27.5	+0.2
EPOB	Poblet	5.30	340	Pn	Pn	05 24 29.2	-0.7
EPOB				⇑*i*Vmb_V		05 24 37.8	
	403nm,SNR=2.5						
EPOB				Sn	Sn	05 25 31.2	+0.6
JBK	JBK	5.36	249	P	Pn	05 24 32.0	+1.0
GOG	Mont Gurugu	5.40	259	P	Pn	05 24 32.0	+0.5
EQES	Quesada	5.43	287	Pn	Pn	05 24 32.9	+1.1
EQES				⇑*i*Vmb_V		05 24 38.0	
	993nm,SNR=14						
EQES				Sn	Sn	05 25 37.0	+3.1
VSL	Villasalto	5.59	55	Pn	Pn	05 24 34.1	+0.2
VSL				Sn	Sn	05 25 36.0	-1.7
TDRA	Tendrara	5.64	235	P	Pn	05 24 36.0	+1.1
EMIR	Miracle	5.72	345	Pn	Pn	05 24 37.7	+1.9
EMIR				Sn	Sn	05 25 42.9	+1.9
ELGU	Los Guajares,	5.74	277	Pn	Pn	05 24 36.1	0.0
ELGU				⇑*i*Vmb_V		05 24 39.0	
	437nm,SNR=2.4						
ELGU				Sn	Sn	05 25 41.8	+0.2
EJON	La Jonquera	6.06	356	Pn	Pn	05 24 42.5	+2.0
EJON				Sn	Sn	05 25 52.4	+3.0
ETOR	Torete	6.19	317	Pn	Pn	05 24 44.6	+2.3
ETOR				⇑*i*Vmb_V		05 24 54.5	
	528nm,SNR=4.2						
ETOR				Sn	Sn	05 25 56.6	+3.9
AKLM	AKL	6.29	255	P	Pn	05 24 44.2	+0.5
EMAL	Malaga-Limoner	6.38	276	P	Pn	05 24 48.2	+3.4
EMAL				S	Sn	05 25 54.1	-3.1
UCM	Universidad Co	6.58	308	P	Pn	05 24 49.0	+1.5
EMIJ	Mijas	6.66	274	Pn	Pn	05 24 46.7	-2.0
EMIJ				Sn	Sn	05 26 03.0	-1.2
EADA	Adamuz	6.67	288	Pn	Pn	05 24 49.4	+0.5
ESBB	Sonseca Array	6.73	301		Pn	05 24 49.9	+0.2
ESDC	Sonseca Array	6.73	301	Pn	Pn	05 24 49.7	0.0
	2.0nm,0.3s,baz=115,slow=13,SNR=38						
	15nm,0.6s						
PAB	San Pablo	6.95	299	Pn	Pn	05 24 52.6	0.0
PAB	San Pablo	6.95	299	P	Pn	05 24 52.6	0.0
PAB	San Pablo	6.95	299	Pn	Pn	05 24 52.5	0.0
PAB				⇑*i*Vmb_V		05 25 01.0	
	246nm,SNR=3.9						
PAB				Sn	Sn	05 26 15.2	+4.0
PAB	San Pablo	6.95	299	P	Pn	05 24 52.8	+0.2
MTLF	Montolieu	7.01	352	*e*Pn	Pn	05 24 55.3	+1.9
MTLF				*e*Sn	Sn	05 26 10.7	-1.9
	23nm,0.6s						
EPF	Esparros	7.06	341	*e*Pn	Pn	05 24 56.6	+2.5
EPF				*e*Sn	Sn	05 26 12.4	-1.5
	40nm,0.6s						
ETSF	Etsaut	7.21	336	*e*Pn	Pn	05 24 58.2	+2.0
ETSF				*e*Sn	Sn	05 26 15.6	-2.0
	9.3nm,0.4s						
LMR	La Mourre	7.31	18	*e*Pn	Pn	05 24 57.5	0.0
LMR				*e*Sn	Sn	05 26 16.0	-3.9
	11nm,0.3s						
GUD	Guadarrama	7.34	308	Pn	Pn	05 24 58.9	+0.8
GUD				⇑*i*Vmb_V		05 25 02.1	
	234nm,SNR=5.4						
PGF	Pioggiola	7.47	33	*e*Pn	Pn	05 25 00.3	+0.4
PGF				*e*Sn	Sn	05 26 20.0	-4.2
	23nm,0.4s						
MDT	Midelt	7.57	244	Pn	Pn	05 25 01.4	+0.1
	0.8nm,0.3s,baz=102,slow=23,SNR=28						
MDT				LR	LR	05 27 29.5	
	comp=Z,44nm,20.1s,baz=76,slow=34						
	6.2nm,0.6s						
MDT	Midelt	7.57	244	P	Pn	05 25 01.4	+0.2
SJPF	Ste Jean	7.63	333	*e*Pn	Pn	05 25 04.0	+2.1
SJPF				*e*Sn	Sn	05 26 26.5	-1.4
	14nm,0.4s						
LASF	Ste Croix	7.68	2	*e*Pn	Pn	05 25 03.3	+0.7
LASF				*e*Sn	Sn	05 26 26.3	-2.8
	87nm,0.7s						
SMRF	Simiane la Rot	7.74	11	*e*Pn	Pn	05 25 04.5	+1.1
SMRF				*e*Sn	Sn	05 26 27.5	-3.1
	10.0nm,0.6s						
CLTB	Caltabellotta	7.87	78	Pn	Pn	05 25 05.6	+0.2
SBF	Sospel	8.05	21	*e*Pn	Pn	05 25 08.0	+0.3
SBF				*e*Sn	Sn	05 26 34.0	-4.2
	32nm,0.5s						
VIVF	Saint-Julien-l	8.50	6	*e*Pn	Pn	05 25 15.1	+1.2
VIVF				*e*Sn	Sn	05 26 43.6	-5.7
	32nm,0.8s						
CASP	Castiglione de	8.55	39	Pn	Pn	05 25 14.4	-0.2
PBAR	Barrancos	8.58	285	*e*P	Pn	05 25 13.5	-1.5
	42nm,1.1s						
CAF	Calviac	8.59	353	*e*Pn	Pn	05 25 17.1	+2.0
CAF				*e*Sn	Sn	05 26 49.5	-2.1
	11nm,0.7s						
MBDF	Montbardon	8.69	16	*e*Pn	Pn	05 25 18.0	+1.4
MBDF				*e*Sn	Sn	05 26 51.3	-2.8
	13nm,0.6s						
ORIF	Oris-en-Rattie	8.71	11	*e*Pn	Pn	05 25 18.6	+1.8
ORIF				*e*Sn	Sn	05 26 52.2	-2.3
	4.0nm,0.5s						
RAFF	Raffo Rosso	8.76	81	Pn	Pn	05 25 18.1	+0.7
LFF	La Frestale	8.79	347	*e*Pn	Pn	05 25 19.7	+1.9
LFF				*e*Sn	Sn	05 26 53.8	-2.5
	30nm,0.7s						
SSB	Saint Sauveur	8.91	5	Pn	Pn	05 25 21.1	+1.6
SSB	Saint Sauveur	8.91	5	P	Pn	05 25 21.1	+1.6
BNI	Bardonecchia	8.98	15	Pn	Pn	05 25 22.7	+2.2
BNI	Bardonecchia	8.98	15	P	Pn	05 25 22.7	+2.2
RJF	Les Rejaudoux	9.03	351	*e*Pn	Pn	05 25 23.5	+2.4
RJF				*e*Sn	Sn	05 27 00.1	-2.1
	7.9nm,0.7s						
PVAQ	Vaqueiros	9.04	280	*e*P	Pn	05 25 21.2	0.0
	42nm,0.9s						
PVAQ				*e*LR	LR	05 27 47.2	
	162nm,20.0s						
PVAQ	Vaqueiros	9.04	280	Pn	Pn	05 25 21.0	-0.2
PVAQ	Vaqueiros	9.04	280	P	Pn	05 25 22.4	+1.1
PMRV	Marv??o	9.12	293	*e*P	Pn	05 25 23.8	+1.4
	42nm,1.4s						
PMRV				*e*LR	LR	05 28 26.3	
	117nm,18.0s						
PESTR	Estremoz	9.13	289	*e*P	Pn	05 25 22.9	+0.3
	19nm,0.9s						
PESTR	Estremoz	9.13	289	Pn	Pn	05 25 22.7	+0.2
MSSA	Maissana	9.15	28	Pn	Pn	05 25 23.8	+1.0
PBDV	Barranco-do-Ve	9.20	279	*e*P	Pn	05 25 25.3	+1.8
PBEJ	Beja	9.21	284	*e*P	Pn	05 25 25.9	+2.3
OSSC	Osservatorio P	9.28	38		Pn	05 25 25.2	+0.7
PCBR	Castelo Branco	9.30	295	*e*P	Pn	05 25 26.8	+1.9
	34nm,1.5s						
VLC	Villacollemand	9.37	32		Pn	05 25 27.1	+1.3
EVO	Evora	9.39	287	P	Pn	05 25 24.1	-2.0
EVO	Evora	9.39	287	*e*P	Pn	05 25 30.9	+4.8
LPG	La Plagne	9.42	14	*e*Pn	Pn	05 25 28.3	+1.6
LPG				*e*Sn	Sn	05 27 09.5	-2.8
	10.0nm,0.7s						
LPL	La Plagne	9.44	14	*e*Pn	Pn	05 25 29.0	+2.1
LPL				*e*Sn	Sn	05 27 09.4	-3.2
	12nm,0.6s						
MESJ	Messejana	9.47	282	*e*P	Pn	05 25 28.7	+1.6
MVO	Moncorvo	9.49	303	*e*P	Pn	05 25 29.1	+1.5
	46nm,0.8s						
MVO				*e*LR	LR	05 27 58.2	
	204nm,16.0s						
MTE	Manteigas	9.54	298	*e*P	Pn	05 25 27.4	-0.8
MTE				*e*LR	LR	05 28 02.1	
	207nm,16.0s						
PBRG	Braganca	9.61	307	*e*P	Pn	05 25 30.1	+0.9
PNCL	Nicolau / Gran	9.74	284	*e*P	Pn	05 25 32.6	+1.8
MURB	Monte Urbino	9.76	43	Pn	Pn	05 25 32.8	+1.7
ZCCA	Zocca	9.78	33		Pn	05 25 33.4	+1.9
PAOL	Paolisi	9.81	59	Pn	Pn	05 25 31.1	-0.8
NRCA	Norcia	9.82	46		Pn	05 25 33.3	+1.3
PVIS	Viseu	9.90	299	*e*P	Pn	05 25 35.8	+2.6
	42nm,1.6s						
TCF	Toulx Ste Croi	9.93	355	*e*Pn	Pn	05 25 35.7	+2.2
TCF				*e*Sn	Sn	05 27 20.3	-4.2
	13nm,0.9s						
PVRL	Vila Real	10.01	303	*e*P	Pn	05 25 35.5	+0.9
COI	Coimbra	10.10	296	*e*P	Pn	05 25 39.3	+3.5
	67nm,1.3s						
COI	Coimbra	10.10	296	Pn	Pn	05 25 35.5	-0.3
COI	Coimbra	10.10	296	P	Pn	05 25 35.5	-0.3
POLO	Lamas de Olo	10.10	303	*e*P	Pn	05 25 37.0	+1.1
	23nm,1.5s						
PCAS	Casmilo, Conde	10.12	295	*e*P	Pn	05 25 37.0	+1.0
BGF	Bois d'Agland	10.16	357	*e*Pn	Pn	05 25 39.1	+2.4
SMF	Signal de Mont	10.24	1	*e*Pn	Pn	05 25 39.1	+1.3
SMF				*e*Sn	Sn	05 27 27.4	-4.7
	14nm,0.7s						
SENIN	Lac Senin/Sane	10.36	15	Pn	Pn	05 25 41.8	+2.3
AVF	Avril sur Loir	10.39	359	*e*Pn	Pn	05 25 41.9	+2.2
AVF				*e*Sn	Sn	05 27 31.3	-4.3
	6.6nm,0.7s						
CABF	La Chapelle	10.39	10	*e*Pn	Pn	05 25 41.9	+2.1
MFF	Saint Martin d	10.55	346	*e*Pn	Pn	05 25 43.6	+1.6
MFF				*e*Sn	Sn	05 27 34.8	-4.9
	7.2nm,0.6s						
SSF	Saint Saulge	10.66	0	*e*Pn	Pn	05 25 45.1	+1.7
SSF				*e*Sn	Sn	05 27 37.5	-4.7
	5.3nm,0.6s						
PGAV	Gavieira, Arco	10.69	305	*e*P	Pn	05 25 46.5	+2.6
PGAV				*e*LR	LR	05 28 32.3	
	188nm,16.0s						
LOR	Lormes	10.87	1	*e*Pn	Pn	05 25 48.3	+2.0
	baz=180						
LOR	Lormes	10.87	1	*e*P	Pn	05 25 54.2	+7.9
LOR				*e*Sn	Sn	05 27 42.8	-4.6
	6.6nm,0.7s						
HYF	Humbligny	10.88	357	*e*Pn	Pn	05 25 48.9	+2.4
TUE	Stuetta	10.98	22	Pn	Pn	05 25 49.9	+1.8
DAVOX	Davos/Dischmat	11.42	23	Pn	Pn	05 25 55.9	+1.9
	0.2nm,0.3s,baz=186,slow=18,SNR=2.1						
DAVOX				LR	LR	05 30 05.5	
	comp=Z,75nm,18.4s,baz=263,slow=36						
	1.1nm,0.6s						
CTI	Castel Tesino	11.43	30	Pn	Pn	05 25 56.6	+2.6
CTI	Castel Tesino	11.43	30	P	Pn	05 25 56.6	+2.6
HINF	Hinteralfeld	11.68	11	*e*Pn	Pn	05 25 56.8	-0.7
HAU	Haudompre	11.79	9	*e*Pn	Pn	05 25 59.0	0.0
HAU				*e*Sn	Sn	05 28 04.8	-5.3
	1.9nm,0.3s						
SFTF	Sexfontaines	11.86	5	*e*Pn	Pn	05 26 00.7	+0.9
	baz=184						
DAVA	Damuels	11.87	22	*e*P	Pn	05 26 03.5	+3.3
	5.3nm,1.2s						
FETA	Feichten	11.91	25	*e*P	Pn	05 26 05.8	+5.2
	4.2nm,0.8s						
ECH	Echery	12.12	12		Pn	05 26 03.7	+0.3
ECH	Echery	12.12	12	P	Pn	05 26 03.7	+0.3
MEZF	Maizieres J'vi	12.15	5	*e*Pn	Pn	05 26 04.5	+0.7
	baz=184						
MEZF				*e*Sn	Sn	05 28 12.9	-5.9
	2.2nm,0.3s						
SQTA	Sankt Quirin	12.24	26	*e*P	Pn	05 26 09.9	+4.6
	5.9nm,0.9s						
PAGF	Fort de Pagny	12.26	7	*e*Pn	Pn	05 26 06.5	+1.1
	baz=186						
SAVF	Savonnieres en	12.27	5	*e*Pn	Pn	05 26 07.5	+2.0
	baz=184						
MOTA	Moosalm	12.32	25	*e*P	Pn	05 26 09.6	+3.4
	7.4nm,1.0s						
RETA	Reutte	12.33	24	*e*P	Pn	05 26 11.0	+4.7
	6.3nm,1.3s						
CDF	Champ du Feu	12.33	12	*e*Pn	Pn	05 26 07.0	+0.7
ABTA	Abfaltersbach	12.34	30	*e*P	Pn	05 26 09.5	+3.0
	3.9nm,0.9s						
GRR	Gorron	12.41	346	*e*Pn	Pn	05 26 08.8	+1.5
GRR				*e*Sn	Sn	05 28 20.1	-4.9
	3.0nm,0.5s						
WTTA	Wattenberg	12.43	27	*e*P	Pn	05 26 12.5	+4.7
	2.0nm,0.6s						
BFO	Black Forest	12.45	15	Pn	Pn	05 26 07.9	0.0
BFO	Black Forest	12.45	15	P	Pn	05 26 07.9	0.0
WATA	Walderalm	12.47	26	*e*P	Pn	05 26 10.9	+2.5
	3.8nm,0.6s						
LDF	La Druitiere	12.48	349	*e*Pn	Pn	05 26 10.6	+2.3
QUIF	Quistinic	12.52	339	*e*Pn	Pn	05 26 10.1	+1.2
SGMF	Saint Gilles	12.66	341	*e*Pn	Pn	05 26 12.2	+1.4
FLN	La Foliniere	12.70	348	*e*Pn	Pn	05 26 12.6	+1.3
	baz=169						
FLN	La Foliniere	12.70	348	*e*P	P	05 26 17.4	-5.1
FLN				*e*Sn	Sn	05 28 27.1	-5.0
	2.5nm,0.5s						
ROSF	Rostrenen	12.93	339	*e*Pn	Pn	05 26 15.1	+0.6
ROSF				*e*Sn	Sn	05 28 31.7	-6.1
	6.5nm,0.6s						
KBA	Koelnbreinsper	12.95	31	*e*P	Pn	05 26 18.2	+3.2
	5.2nm,1.1s						
OBKA	Obir	13.06	36	*e*P	Pn	05 26 20.7	+4.4
	5.6nm,1.2s						
WLF	Walferdange	13.40	7	Pn	Pn	05 26 22.2	+1.3
WLF	Walferdange	13.40	7	P	Pn	05 26 22.2	+1.3
SOKA	Soboth	13.41	36	*e*P	Pn	05 26 24.2	+3.1
	4.5nm,1.0s						
BAIF	Baives	13.67	2	*e*Pn	Pn	05 26 26.6	+2.1
DOU	Dourbes	13.72	3	*d*P	Pn	05 26 27.8	+2.6
GIVF	Givet	13.73	4	*e*Pn	Pn	05 26 26.8	+1.4
GIVF	Givet	13.73	4	*e*P	P	05 26 31.2	-2.8
RCHB	Rochefort	13.81	5	*d*P	Pn	05 26 30.1	+3.6
	comp=Z,13nm,0.9s						
BMRD	Maredsous	13.93	3	*d*Pn	Pn	05 26 29.5	+1.4
MOA	Molln	13.94	32	*e*P	Pn	05 26 32.1	+3.7
	comp=Z,3.1nm,0.8s						
BGES	Gesves	14.03	4	*d*P	Pn	05 26 32.0	+2.5
	comp=Z,16nm,0.8s						
ARSA	Arzberg	14.06	36	*e*P	Pn	05 26 32.4	+2.5
	comp=Z,7.7nm,1.1s,SNR=9.0						
BCLA	Clavier	14.08	5	*d*P	P	05 26 34.2	-3.5
SNF	Seneffe	14.12	2	*d*P	Pn	05 26 33.9	+3.2
	comp=Z,31nm,0.8s						
GEC2	GERESS Array S	14.52	28		Pn	05 26 38.8	+2.6
GERES	GERESS Array B	14.52	28	Pn	Pn	05 26 37.5	+1.3
	comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=34						
GERES				LR	LR	05 32 31.4	
	comp=Z,66nm,21.0s,baz=260,slow=39						
	comp=Z,3.7nm,0.9s						
GERES	GERESS Array B	14.52	28	Pn	Pn	05 26 38.8	+2.6
GERES	GERESS Array B	14.52	28	P	Pn	05 26 38.8	+2.6
CONA	Conrad Observa	14.71	35	*e*P	Pn	05 26 41.1	+2.3

	comp=Z,8.3nm,1.1s,SNR=9.5						
KHC	Kasperske Hory	14.71	27	Pn	Pn	05 26 39.6	+0.8
KHC	Kasperske Hory	14.71	27	eP	Pn	05 26 39.9	+1.1
KHC				MLR	MLR		
	comp=Z,100nm,9.7s						
KHC	Kasperske Hory	14.71	27	eP	Pn	05 26 39.9	+1.1
KHC				AMS	AMS	05 34 20.0	
	comp=Z,100nm,9.7s						
CKRC	Cesky Krumlov	14.73	29	eP	Pn	05 26 40.9	+1.8
RONA	Rosalia, Austr	14.74	36	eP	Pn	05 26 41.7	+2.4
	SNR=9.7						
ITM	Ithomi	14.80	81		Pn	05 26 41.6	+1.5
SOP	Sopron	14.86	37	P	Pn	05 26 43.0	+2.3
MPLH	Magyarpolny	15.00	40	P	P	05 26 46.6	-1.4
NKC	Novy Kostel	15.27	22	AMS	AMS	05 32 00.0	
	comp=Z,100nm,15.5s						
TREC	Trest	15.58	30	AMS	AMS	05 34 30.0	
	comp=Z,100nm,10.6s						
MODS	Modra-Piesok	15.69	36	eP	P	05 26 54.8	-0.9
MODS	Modra-Piesok	15.69	36	eP	P	05 26 54.8	-0.9
PRU	Pruhonice	15.77	27	AMS	AMS	05 32 20.0	
	comp=Z,100nm,18.4s						
KRUC	Moravsky	15.79	33	eP	P	05 26 57.7	+1.0
VRAC	Vranov	16.06	32	Pn	P	05 26 58.9	-0.9
	comp=Z,0.1nm,0.3s,baz=224,slow=12,SNR=4.8						
VRAC				LR	LR	05 33 38.5	
	comp=Z,43nm,18.1s,baz=225,slow=39						
	comp=Z,2.4nm,0.6s						
VRAC	Vranov	16.06	32	eP	P	05 27 00.8	+1.0
JAVC	Velka Javorina	16.21	35	eP	P	05 27 02.1	+0.5
PVCC	Panska Ves	16.23	26	AMS	AMS	05 33 50.0	
	comp=Z,100nm,14.1s						
KOLL	Kolacno	16.37	37	eP	P	05 27 04.0	+0.8
CLL	Collm	16.39	22		P	05 27 02.9	-0.5
CLL	Collm	16.39	22	P	P	05 27 02.9	-0.5
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL	Collm	16.39	22	eP	P	05 27 03.0	-0.4
CLL				epP	pP	05 27 05.0	-3.5
CLL				esP	sP	05 27 08.0	-3.0
BZS	Buzias	16.46	50	⇑P	P	05 27 06.2	+1.9
VYHS	Vyhne	16.53	38	eP	P	05 27 05.8	+0.8
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	Vyhne	16.53	38	eP	P	05 27 05.8	+0.8
MAUC	Maruska	16.65	34	eP	P	05 27 06.5	+0.2
MAUC				AMS	AMS	05 33 50.0	
	comp=Z,200nm,19.6s						
PSZ	Piszkesteto	16.71	41		Pn	05 27 05.3	+0.5
PSZ	Piszkesteto	16.71	41	P	Pn	05 27 05.4	+0.5
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PSZ	Piszkesteto	16.71	41	P	P	05 27 09.0	+1.9
KRLC	Kraliky	16.72	31	AMS	AMS	05 33 30.0	
	comp=Z,100nm,15.7s						
DPC	Dobruska-Polom	16.74	30	eP	P	05 27 07.1	-0.3
DPC				MLR	MLR		
	comp=Z,100nm,12.6s						
DPC	Dobruska-Polom	16.74	30	eP	P	05 27 07.1	-0.3
DPC				AMS	AMS	05 34 40.0	
	comp=Z,100nm,12.6s						
UPC	Upice	16.75	29	eP	P	05 27 08.8	+1.4
UPC				MLR	MLR		
	comp=Z,100nm,11.7s						
UPC	Upice	16.75	29	eP	P	05 27 08.8	+1.4
UPC				AMS	AMS	05 34 20.0	
	comp=Z,100nm,11.7s						
MORC	Moravsky Berou	16.82	33	Pn	Pn	05 27 06.4	+0.2
MORC	Moravsky Berou	16.82	33	P	Pn	05 27 06.4	+0.2
MORC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MORC	Moravsky Berou	16.82	33	eP	P	05 27 09.4	+1.2
CHVC	Chvalec	16.83	29	eP	P	05 27 09.7	+1.4
OSTC	Ostas	16.86	29	eP	P	05 27 09.4	+0.7
OSTC				AMS	AMS	05 34 50.0	
	comp=Z,100nm,11.3s						
GZR	Gura Zlata	17.09	52	⇓P	P	05 27 13.2	+1.8
OKC	Ostrava-Krasne	17.13	34	eP	P	05 27 12.9	+1.3
OKC				MLR	MLR		
	comp=Z,100nm,18.4s						
OKC	Ostrava-Krasne	17.13	34	eP	P	05 27 12.9	+1.3
OKC				AMS	AMS	05 34 50.0	
	comp=Z,100nm,18.4s						
LANS	Liptovska Anna	17.27	37	eP	P	05 27 15.9	+2.6
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	Liptovska Anna	17.27	37	eP	P	05 27 15.9	+2.6
IDI	Anoyia	17.39	87	P	P	05 27 14.4	-0.2
	comp=Z,0.5nm,0.3s,baz=298,slow=12,SNR=12						
	comp=Z,10.0nm,0.9s						
IDI	Anoyia	17.39	87		Pn	05 27 12.0	-1.4
IDI				IAmb	IAmb	05 27 18.5	
	comp=Z,12nm,0.9s						
DRGR		17.69	48	⇓P	P	05 27 20.2	+2.3
RDO	Rodhopi	17.82	68	P	Pn	05 27 18.4	-0.3
CRVS	Cervenica-Dubn	18.14	41	eP	P	05 27 27.4	+4.6
CRVS				pmax	pmax		
	comp=Z,20nm,1.2s						
CRVS	Cervenica-Dubn	18.14	41	eP	P	05 27 27.4	+4.6
OJC	Ojcow	18.16	35	P	Pn	05 27 22.9	+0.1
OJC	Ojcow	18.16	35	P	Pn	05 27 22.9	+0.1
OJC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ALN	Alexandroupoli	18.17	69		Pn	05 27 22.2	-0.7
ALN	Alexandroupoli	18.17	69	P	Pn	05 27 22.2	-0.7
ALN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
UZH	Uzhgorod	18.42	43d	iP	Pn	05 27 29.3	+3.3
VOIR		18.58	54	⇑P	Pn	05 27 29.8	+1.7
KOLS	Kolonicke sedl	18.59	42	eP	Pn	05 27 31.9	+3.9
KOLS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KOLS	Kolonicke sedl	18.59	42	eP	Pn	05 27 31.9	+3.9
DOPR	Dopca	19.00	53	⇑P	Pn	05 27 34.2	+1.1
KARP	Karpathos	19.17	86	P	P	05 27 34.2	0.0
MLR	Muntele Rosu	19.19	55	⇑P	Pn	05 27 36.2	+0.7
MLR	Muntele Rosu	19.19	55	P	Pn	05 27 35.8	+0.3
	comp=Z,0.2nm,0.3s,baz=176,slow=3.9,SNR=16						
	comp=Z,27nm,1.2s						
MLR	Muntele Rosu	19.19	55	P	P	05 27 35.0	+0.5
MLR				IAmb	IAmb	05 27 39.9	
	comp=Z,25nm,1.2s						
OZUR		19.31	53	⇓P	Pn	05 27 37.3	+0.5
ISR	Istrita	19.46	56	⇑P	Pn	05 27 39.7	+1.0
EKA	Eskdalemuir Ar	19.48	349	P	Pn	05 27 41.1	+2.4
	comp=Z,1.8nm,0.6s,baz=156,slow=13,SNR=9.6						
BURAR	Bucovina Array	19.59	48	⇓P	Pn	05 27 41.6	+1.5
BURAR	Bucovina Array	19.59	48	P	Pn	05 27 40.5	+0.4
BURAR				IAmb	IAmb	05 27 43.8	
	comp=Z,4.6nm,0.9s						
BUR08	Bucovina Ar. S	19.59	48	P	Pn	05 27 40.1	-0.1
BUR08				IAmb	IAmb	05 27 43.4	
	comp=Z,7.8nm,1.1s						
PLOR	Plostina	19.78	54	⇓P	Pn	05 27 42.2	-0.3
VRI	Vrincioaia	19.84	54	⇑P	Pn	05 27 43.1	+0.1
BIZ	Bicaz	19.84	51	⇑P	Pn	05 27 43.6	+0.5
CFR	Carcaliu	20.56	57	⇑P	P	05 27 49.1	-0.1
TPGR	Topolog	20.66	58	⇓P	P	05 27 50.8	+0.4
ELL	Elmali	21.20	81	P	P	05 27 57.1	+0.7
ELL				IAmb	IAmb	05 28 00.5	
	comp=Z,20nm,0.8s						
ELL	Elmali	21.20	81	P	P	05 27 57.1	+0.7
ELL				pmax	pmax		
	comp=Z,20nm,0.8s						
MILM	Milestii Mici	21.55	53	eP	P	05 28 00.0	0.0
	comp=Z,40nm,1.4s						
MILM	Milestii Mici	21.55	53	⇓P	P	05 28 01.5	+1.5
MILM	Milestii Mici	21.55	53	eP	P	05 28 00.0	0.0
MILM				pmax	pmax		
	comp=Z,40nm,1.4s						
SORM	Soroca	21.72	50	⇑P	P	05 28 02.2	+0.6
SUW	Suwalki	22.29	32	P	P	05 28 07.7	-0.1
SUW	Suwalki	22.29	32	P	P	05 28 07.7	-0.1
SUW				pmax	pmax		
	comp=Z,48nm,1.1s						
TOA0	Torodi Ar. Sit	23.20	184	P	P	05 28 15.1	-2.6
TOA0				IAmb	IAmb	05 28 19.6	
	comp=Z,9.2nm,0.9s						
TORD	Torodi Ar. Bea	23.20	184	P	P	05 28 16.9	-0.8
	comp=Z,7.7nm,0.9s,baz=0.8,slow=11,SNR=34						
	comp=Z,7.7nm,0.9s						
TORD	Torodi Ar. Bea	23.20	184	P	P	05 28 15.5	-2.1
TORD				IAmb	IAmb	05 28 19.6	
	comp=Z,5.7nm,0.9s						
AKASG	Malin Array Be	23.34	44	P	P	05 28 17.7	-1.1
	comp=Z,3.3nm,0.6s,baz=244,slow=9.7,SNR=12						
AKASG				LR	LR	05 38 29.5	
	comp=Z,42nm,18.5s,baz=194,slow=39						
	comp=Z,3.3nm,0.6s						
AKBB	Malin Array Si	23.34	44	P	P	05 28 16.9	-1.9
AKBB				IAmb	IAmb	05 28 20.0	
	comp=Z,8.3nm,1.0s						
AKBB	Malin Array Si	23.34	44c	iP	P	05 28 17.2	-1.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PABE	Paberze	23.67	30	P	P	05 28 22.2	+0.2
BRTR	Keskin Array B	23.91	73	P	P	05 28 23.6	-1.1
	comp=Z,0.5nm,0.6s,baz=254,slow=4.6,SNR=4.1						
	comp=Z,0.5nm,0.6s						
BRTR	Keskin Array B	23.91	73	P	P	05 28 24.0	-0.6
BRTR	Keskin Array B	23.91	73	eP	P	05 28 24.1	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NACGM	Naroch	24.45	33⇓	eP	P	05 28 30.1	+0.8
	baz=230						
HFS	Hagfors	24.65	12	P	P	05 28 31.5	+0.5
	comp=Z,1.0nm,0.5s,baz=324,slow=9.2,SNR=5.7						
HFS				LR	LR	05 39 09.5	
	comp=Z,36nm,18.2s,baz=59,slow=39						
	comp=Z,1.0nm,0.5s						
MNK	Minsk	24.70	35	i P	P	05 28 29.0	-2.6
MNK				i PPP	PPP	05 29 08.2	
MNK				i S	S	05 32 51.7	-0.7
MNK				i SSS	SSS	05 33 52.2	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,20nm,1.0s						
MNK				pmax	pmax		
	comp=Z,11nm,0.8s						
MNK				MLR	MLR		
	comp=Z,40nm,13.0s						
MNK				MLR	MLR		
	comp=N,56nm,17.0s						
MNK				MLR	MLR		
	comp=E,4.0nm,10.0s						
MNK	Minsk	24.70	35	i P	P	05 28 29.0	-2.6
	comp=E,2.0nm,0.8s						
MNK				i P	P	05 28 29.0	-2.6
	comp=N,20nm,1.0s						
MNK				i P	P	05 28 29.0	-2.6
	comp=Z,11nm,0.8s,baz=233						
MNK				i PP	PnPn	05 29 00.1	-3.3
MNK				i PPP	PPP	05 29 08.3	
MNK				i S	S	05 32 51.7	-0.7
MNK				i SS	SnSn	05 33 39.1	+0.2
MNK				i SSS	SSS	05 33 52.3	
MNK				i LQ	LQ	05 36 12.1	
MNK				i LR	LR	05 38 04.8	
MNK				i LRM	MLR	05 38 57.1	
	comp=Z,40nm,12.6s						
MNK				i LRM	MLR	05 39 05.1	
	comp=N,56nm,17.4s						
MNK				i LRM	MLR	05 39 19.3	
	comp=E,4.0nm,10.5s						
NOA	NORSAR Array B	25.15	9	P	P	05 28 35.6	0.0
	comp=E,0.8nm,0.9s,baz=207,slow=11,SNR=4.4						
	comp=E,0.8nm,0.9s						
NOA	NORSAR Array B	25.15	9	eP	P	05 28 37.0	+1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VSU	Vasula	26.84	27⇓	eP	P	05 28 50.3	-0.5
VSU				pmax	pmax		
	comp=Z,44nm,0.9s						
ANN	Anapa	26.95	61	eP	P	05 28 47.7	-4.3
ANN				e*PP	pP	05 28 52.0	-5.6
ANN				ePPP	PPP	05 29 37.6	
ANN				e		05 32 12.5	
ANN				eS	S	05 33 23.7	-4.5
ANN				pmax	pmax		
	comp=Z,33nm,1.5s						
FINES	FINESS Array B	28.83	23	P	P	05 29 08.7	+0.1
	comp=Z,1.9nm,0.8s,baz=243,slow=8.4,SNR=5.9						
	comp=Z,1.9nm,0.8s						
FINES	FINESS Array B	28.83	23	P	P	05 29 10.2	+1.6
FINES	FINESS Array B	28.83	23	P	P	05 29 10.2	+1.6
KBZ	Khabaz	30.81	64⇑	eP	P	05 29 28.8	+2.5
KBZ				pmax	pmax		
	comp=Z,6.0nm,2.0s						
BORG	Borgarnes	32.03	340	LR	LR	05 42 01.5	
	comp=Z,40nm,18.1s,baz=147,slow=35						
GNI	Garni	32.39	71⇓	eP	P	05 29 41.2	+0.7
GNI				pmax	pmax		
	comp=Z,13nm,2.0s						
KLMR	Klimovskoe	33.43	32	eP	P	05 29 46.1	-3.0
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	Klimovskoe	33.43	32	eP	P	05 29 46.1	-3.0
KLMR				AMP		05 29 51.1	
	comp=Z,7.0nm,0.9s						
BELG	Belogornoye	34.74	48⇓	eP	P	05 30 01.0	+0.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARCES	ARCESS Array B	35.30	13	P	P	05 30 05.2	0.0
	comp=Z,2.7nm,0.8s,baz=212,slow=7.9,SNR=11						
	comp=Z,2.7nm,0.8s						
ARU	Arti	41.59	43	P	P	05 30 57.9	-0.4
	comp=Z,2.4nm,0.8s,baz=288,slow=6.5,SNR=7.5						
	comp=Z,2.4nm,0.8s						
ARU	Arti	41.59	43	P	P	05 30 57.5	-0.8
ARU				IAmb	IAmb	05 31 00.7	
	comp=Z,6.5nm,0.9s						
ARU	Arti	41.59	43c	iP	P	05 30 57.9	-0.4
ARU						05 32 33.7	
ARU						05 32 52.6	
ARU				S	S	05 37 14.0	+0.6
ARU				SS	SS	05 40 14.5	-3.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SUMG	Summit	41.92	342	P	P	05 31 02.9	+1.7
SUMG				IAmb	IAmb	05 31 06.8	
	comp=Z,9.5nm,1.4s						
SUMG	Summit	41.92	342	P	P	05 31 02.9	+1.7
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SFJD	Kangerlussuaq	43.19	332	LR	LR	05 46 44.2	
	comp=Z,42nm,20.5s,baz=114,slow=33						
UOSS	Minazif	46.25	89	P	P	05 31 36.0	-0.1
KMBO	Kilima Mbogo	48.77	132	LR	LR	05 54 10.2	
	comp=Z,78nm,18.3s,baz=107,slow=38						
FRB	Frobisher Bay	50.22	327	LR	LR	05 51 54.7	
	comp=Z,34nm,18.4s,baz=120,slow=34						
SCHQ	Schefferville	50.28	315	P	P	05 32 07.6	+0.8
	comp=Z,1.7nm,0.6s,baz=123,slow=5.0,SNR=5.4						
	comp=Z,1.7nm,0.6s						
SCHQ	Schefferville	50.28	315	P	P	05 32 07.2	+0.4
SCHQ				IAmb	IAmb	05 32 13.3	
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	53.66	60⇑	eP	P	05 32 32.5	+0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	53.98	50	P	P	05 32 34.2	-0.1
	comp=Z,1.5nm,0.8s,baz=291,slow=8.1,SNR=6.0						
KURBB				PcP	PcP	05 33 40.1	+0.7
	comp=Z,1.0nm,0.7s,baz=285,slow=4.3,SNR=6.1						
	comp=Z,1.5nm,0.8s						
KURK	Kurchatov	54.01	49	P	P	05 32 35.0	+0.4
KURK				IAmb	IAmb	05 32 46.1	
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	54.01	49	P	P	05 32 34.3	-0.2
KURK						05 33 40.1	
NRIK	Noril'sk	54.41	26⇓	eP	P	05 32 39.2	+2.0
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
G62A	West of Eustis	54.91	304	P	P	05 32 42.4	+1.1
KSH	Kashi	55.79	63	P	P	05 32 44.5	-3.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LBNH	Lisbon	56.17	303	P	P	05 32 50.7	+0.4
LBNH	Lisbon	56.17	303	P	P	05 32 50.7	+0.4
LBNH				pmax	pmax		
	comp=Z,13nm,1.4s						
ZALV	Zalesovo Beam	56.74	44	P	P	05 32 53.8	-0.4
	comp=Z,1.3nm,0.6s,baz=286,slow=8.2,SNR=3.8						
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	56.74	44	P	P	05 32 53.2	-0.9
ZALV	Zalesovo Beam	56.74	44	eP	P	05 32 54.5	+0.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	57.52	53	P	P	05 33 00.4	+0.5
MK31				IAmb	IAmb	05 33 01.0	
	comp=Z,1.1nm,0.8s						
MK31	Makanchi Array	57.52	53	P	P	05 33 00.4	+0.5
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	57.52	53	P	P	05 33 00.0	+0.1
	comp=Z,0.9nm,0.5s,baz=286,slow=6.2,SNR=9.4						
MKAR				PcP	PcP	05 33 52.9	-0.4
	comp=Z,1.2nm,0.7s,baz=298,slow=3.1,SNR=4.3						
	comp=Z,0.9nm,0.5s						
MKAR	Makanchi Array	57.52	53	P	P	05 33 00.4	+0.5
MKAR	Makanchi Array	57.52	53	P	P	05 33 00.4	+0.5
WMQ	Urumqi	62.19	55	eP	P	05 33 35.0	+3.0
LBTB	Lobatse	64.55	158	LR	LR	06 05 45.0	
	comp=Z,60nm,18.6s,baz=58,slow=40						
TIXI	Tiksi	65.64	16⇓	iP	P	05 33 55.7	+1.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	67.83	159	P	P	05 34 09.2	+0.5
	comp=Z,2.3nm,1.0s,baz=345,slow=12,SNR=3.1						
BOSA				LR	LR	06 04 58.3	
	comp=Z,92nm,18.8s,baz=22,slow=37						
	comp=Z,2.3nm,1.0s						
BOSA	Boshof	67.83	159	P	P	05 34 06.7	-2.1
BOSA				IAmb	IAmb	05 34 09.5	
	comp=Z,4.5nm,1.1s						
ULM	Lac du Bonnet	68.37	317	P	P	05 34 11.8	-0.1
	comp=Z,4.0nm,0.8s,baz=43,slow=5.9,SNR=4.6						
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	69.71	334	P	P	05 34 21.2	+1.2
	comp=Z,3.2nm,0.8s,baz=53,slow=6.4,SNR=6.4						
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	71.63	44	P	P	05 34 32.2	+0.1
	comp=Z,1.1nm,0.6s,baz=305,slow=10,SNR=6.0						
	comp=Z,1.1nm,0.6s						
SONM	Songino Array	71.63	44	eP	P	05 34 33.2	+1.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ULN	Ulaanbaatar	71.98	44⇑	eP	P	05 34 35.3	+1.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL	Bilibino	75.08	7⇓	eP	P	05 34 54.5	+2.5
BILL				e		05 35 09.1	
BILL				eS	SKSac	05 44 56.6	-3.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,26nm,20.0s						
ILAR	Eielson Array	76.52	347	P	P	05 35 01.8	+1.6
	comp=Z,0.8nm,1.0s,baz=9.8,slow=7.6,SNR=6.9						
	comp=Z,0.8nm,1.0s						
ILAR	Eielson Array	76.52	347	P	P	05 35 01.3	+1.1
ILAR	Eielson Array	76.52	347	eP	P	05 35 02.7	+2.5
HHC	Hu-ho-hao-te	78.75	47	eP	P	05 35 11.5	-1.8
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,76nm,7.1s						
PDAR	Pinedale Array	80.38	317	P	P	05 35 22.4	+0.1
	comp=Z,0.9nm,0.3s,baz=23,slow=4.9,SNR=4.1						
	comp=Z,0.9nm,0.3s						
PZH	PanZhiHua	80.88	64	P	P	05 35 26.3	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,5.7s						
CMAR	Chiang Mai Arr	83.50	72	P	P	05 35 39.2	+0.4
	comp=Z,1.1nm,0.3s,baz=296,slow=6.7,SNR=5.9						
	comp=Z,1.1nm,0.3s						
CMAR	Chiang Mai Arr	83.50	72	eP	P	05 35 40.1	+1.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CPUP	Villa Florida	84.70	232	P	P	05 35 44.6	+0.1
	comp=Z,7.0nm,1.0s,baz=80,slow=5.3,SNR=7.2						
	comp=Z,7.0nm,1.0s						
TXAR	Lajitas Array	85.41	303	P	P	05 35 49.4	+0.9
	comp=Z,0.6nm,0.8s,baz=78,slow=6.5,SNR=7.3						
	comp=Z,0.6nm,0.8s						
WRA	Warramunga Arr	134.17	83	PKP	PKiKP	05 42 29.4	-0.6
	comp=Z,1.5nm,1.0s,baz=313,slow=2.0,SNR=10						
WRA	Warramunga Arr	134.17	83		PKPdf	05 42 29.0	+0.4
ASAR	Alice Springs	135.68	88	PKP	PKPdf	05 42 31.9	+0.6
	comp=Z,1.1nm,0.7s,baz=306,slow=1.0,SNR=8.2						
ASAR	Alice Springs	135.68	88		PKPdf	05 42 30.8	-0.6
ASAR	Alice Springs	135.68	88	PKIKP	PKPdf	05 42 32.0	+0.6
STKA	Stephens Creek	145.23	95	PKPbc	PKPab	05 42 48.1	0.0
	comp=Z,4.4nm,0.8s,baz=299,slow=3.6,SNR=7.3						
STKA	Stephens Creek	145.23	95		PKPdf	05 42 48.9	+0.6
STKA	Stephens Creek	145.23	95	PKIKP	PKPdf	05 42 48.9	+0.6

TIF ***29*** *05:44:55.8, 43.°14N×46.°26E, h99^{km}±2^{km}*
IDC ***29*** *05:44:55.3±2.2, 43.°05N×46.°31E, h79^{km}±24^{km}, mb3.0/6, mbtmp3.5/8, MS2.8/1, Error ellipse: s-maj=31.1km s-min=16.2km az=2.0*
AZER ***29*** *05:44:56.6±0.2, 42.°99N×46.°20E, h38^{km}±10^{km}, Error ellipse: s-maj=21.2km s-min=3.3km az=338.0*
NORS ***29*** *05:44:57.3±0.0, 43.°03N×46.°22E, h86^{km}±3^{km}, MPVA4.6*
DRS ***29*** *05:44:57.7±0.0, 43.°40N×45.°75E, h32^{km}*
MOS ***29*** *05:44:57.1±0.0, 43.°14N×46.°27E, h80^{km}±1^{km}, MPVA4.5*
DDA ***29*** *05:45:10.8±0.0, 42.°04N×45.°28E, h31^{km}±5^{km}, ML3.0*
ISC 29 05:44:56.1±0.7**, 43.°13N**±0.°03×**46.°29E**±0.°02**, h90**^{km}±4^{km}**,**
n159, σ2.^{s}17/301**, mb3.3**/6**, 4C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	Vedeno	0.21	216	eP	Pn	05 45 10.0	+0.7
DVE				eS	Sn	05 45 19.5	+0.5
DVE	Vedeno	0.21	216	ePg	Pn	05 45 10.0	+0.7
DVE				eSg	Sn	05 45 19.5	+0.5
DLMR	Dylym	0.25	103	eP	Pn	05 45 10.0	+0.6
DLMR				eS	Sn	05 45 19.5	+0.3
DLMR				eS	Sn	05 45 20.5	+1.3
DLMR				pmax	pmax		
	comp=Z,1μm,0.4s						
DLMR				smax	smax		
	comp=E,17μm,0.3s						
DLMR	Dylym	0.25	103	ePg	Pn	05 45 10.0	+0.6
DLMR				eSg	Sn	05 45 19.6	+0.3
GROC	Groznyy	0.37	282d	iP	Pn	05 45 11.7	+1.7
GROC				eS	Sn	05 45 20.9	+0.6
GROC				pmax	pmax		
	comp=Z,1μm,0.6s						
GROC				smax	smax		
	comp=Z,594nm,0.6s						
GROC	Groznyy	0.37	282	ePg	Pn	05 45 11.5	+1.6
GROC				eSg	Sn	05 45 20.5	+0.2
DBC	Dubki	0.41	105	eP	Pn	05 45 10.9	+0.6
DBC				eS	Sn	05 45 21.6	+0.8
DBC				eS	Sn	05 45 23.0	+2.2
DBC				pmax	pmax		
	comp=Z,934nm,0.2s						
DBC				smax	smax		
	comp=N,3μm,0.3s						
DBC				smax	smax		
	comp=E,4μm,0.6s						
DBC				smax	smax		
	comp=E,3μm,0.4s						
DBC	Dubki	0.41	105	ePg	Pn	05 45 10.9	+0.6
DBC				eSg	Sn	05 45 21.0	+0.2
BTLR	Botlikh	0.46	187	eP	Pn	05 45 12.1	+1.4
BTLR				eS	Sn	05 45 21.8	+0.3
BTLR				eS	Sn	05 45 22.8	+1.3
BTLR				pmax	pmax		
	comp=Z,323nm,0.8s						
BTLR				smax	smax		
	comp=E,4μm,0.3s						
BTLR				smax	smax		
	comp=N,2μm,0.2s						
BTLR				smax	smax		
	comp=E,1μm,0.6s						
BTLR	Botlikh	0.46	187	ePg	Pn	05 45 12.1	+1.4
BTLR				eSg	Sn	05 45 21.9	+0.3
KRNR	Karanay	0.54	123	eP	Pn	05 45 12.2	+0.9
KRNR				eS	Sn	05 45 23.3	+0.6
KRNR				eS	Sn	05 45 24.3	+1.6
KRNR				pmax	pmax		
	comp=Z,509nm,0.6s						
KRNR				smax	smax		
	comp=N,1μm,0.3s						
KRNR				smax	smax		
	comp=E,1μm,0.2s						
KRNR				smax	smax		
	comp=E,1μm,0.2s						
KRNR	Karanay	0.54	123	ePg	Pn	05 45 12.0	+0.7

KRNR				*e*Sg	**Sn**	**05 45 22.8**	**+0.2**
UNCR	**Uncukul**	**0.55**	**138**	*e*P	**Pn**	**05 45 12.2**	**+0.8**
UNCR				*e*S	**Sn**	**05 45 23.3**	**+0.6**
UNCR				*e*S	**Sn**	**05 45 24.3**	**+1.6**
UNCR				pmax	pmax		
	comp=Z,319nm,0.2s						
UNCR				smax	smax		
	comp=N,2µm,0.7s						
UNCR				smax	smax		
	comp=E,1µm,0.4s						
UNCR				smax	smax		
	comp=N,2µm,0.7s						
UNCR	**Uncukul**	**0.55**	**138**	*e*Pg	**Pn**	**05 45 11.9**	**+0.5**
UNCR				*e*Sg	**Sn**	**05 45 22.7**	**0.0**
XNZR	**Khunzakh**	**0.66**	**152**	*e*P	**Pn**	**05 45 13.6**	**+1.2**
XNZR				*e*S	**Sn**	**05 45 25.8**	**+1.3**
XNZR				*e*S	**Sn**	**05 45 27.0**	**+2.4**
XNZR				pmax	pmax		
	comp=Z,691nm,0.4s						
XNZR				smax	smax		
	comp=E,2µm,0.2s						
XNZR				smax	smax		
	comp=N,3µm,0.6s						
XNZR				smax	smax		
	comp=N,2µm,0.6s						
XNZR	**Khunzakh**	**0.66**	**152**	*e*Pg	**Pn**	**05 45 13.6**	**+1.2**
XNZR				*e*Sg	**Sn**	**05 45 25.9**	**+1.3**
BUJR	**Buynaksk**	**0.67**	**116**	*e*P	**Pn**	**05 45 14.0**	**+1.6**
BUJR				*e*S	**Sn**	**05 45 26.0**	**+1.6**
BUJR				*e*S	**Sn**	**05 45 27.4**	**+2.9**
BUJR				pmax	pmax		
	comp=Z,770nm,0.6s						
BUJR				smax	smax		
	comp=E,2µm,0.3s						
BUJR				smax	smax		
	comp=N,3µm,0.3s						
BUJR				smax	smax		
	comp=N,3µm,0.3s						
BUJR	**Buynaksk**	**0.67**	**116**	*e*Pg	**Pn**	**05 45 14.0**	**+1.6**
BUJR				*e*Sg	**Sn**	**05 45 26.1**	**+1.6**
ARKR	**Arakani**	**0.73**	**135**	*e*P	**Pn**	**05 45 14.2**	**+1.2**
ARKR				*e*S	**Sn**	**05 45 27.6**	**+1.9**
ARKR				*e*S	**Sn**	**05 45 28.5**	**+2.8**
ARKR				pmax	pmax		
	comp=Z,832nm,0.3s						
ARKR				smax	smax		
	comp=N,3µm,0.4s						
ARKR				smax	smax		
	comp=E,3µm,0.3s						
ARKR				smax	smax		
	comp=E,2µm,0.2s						
ARKR	**Arakani**	**0.73**	**135**	*e*Pg	**Pn**	**05 45 14.2**	**+1.2**
ARKR				*e*Sg	**Sn**	**05 45 27.6**	**+1.9**
KANR	**Karaman**	**0.88**	**85**	*e*P	**Pn**	**05 45 16.8**	**+2.4**
KANR				*e*S	**Sn**	**05 45 31.2**	**+3.1**
KANR				*e*S	**Sn**	**05 45 32.3**	**+4.2**
KANR				pmax	pmax		
	comp=Z,577nm,0.4s						
KANR				smax	smax		
	comp=E,1µm,0.5s						
KANR				smax	smax		
	comp=N,1µm,0.3s						
KANR				smax	smax		
	comp=N,1µm,0.2s						
KANR	**Karaman**	**0.88**	**85**	*e*Pg	**Pn**	**05 45 16.4**	**+2.0**
KANR				*e*Sg	**Sn**	**05 45 31.3**	**+3.1**
GNBR	**Gunib**	**0.89**	**146**	*e*P	**Pn**	**05 45 16.3**	**+1.7**
GNBR				*e*S	**Sn**	**05 45 31.5**	**+3.0**
GNBR	**Gunib**	**0.89**	**146**	*e*Pg	**Pn**	**05 45 16.1**	**+1.5**
GNBR				*e*Sg	**Sn**	**05 45 31.5**	**+3.0**
MAK	**Makhachkala**	**0.90**	**100**	*e*P	**Pn**	**05 45 16.5**	**+1.8**
MAK				*e*S	**Sn**	**05 45 31.0**	**+2.4**
MAK				*e*S	**Sn**	**05 45 31.4**	**+2.8**
MAK				pmax	pmax		
	comp=Z,402nm,0.4s						
MAK				smax	smax		
	comp=E,2µm,0.3s						
MAK				smax	smax		
	comp=N,1µm,0.4s						
MAK				smax	smax		
	comp=E,1µm,0.4s						
MAK	**Makhachkala**	**0.90**	**100**	*e*Pg	**Pn**	**05 45 16.5**	**+1.8**
MAK				*e*Sg	**Sn**	**05 45 31.1**	**+2.4**
KMGR	**Komgaron**	**1.05**	**267**	*i* P	**Pn**	**05 45 18.8**	**+2.4**
KMGR				*e*S	**Sn**	**05 45 33.6**	**+1.9**
KMGR	**Komgaron**	**1.05**	**267**	*i* Pg	**Pn**	**05 45 18.8**	**+2.4**
KMGR				*e*Sg	**Sn**	**05 45 33.6**	**+1.9**
KMKR	**Kumukh**	**1.16**	**149**	*e*P	**Pn**	**05 45 20.1**	**+2.2**
KMKR				*e*S	**Sn**	**05 45 36.6**	**+2.4**
KMKR				*e*S	**Sn**	**05 45 37.3**	**+3.1**
KMKR				pmax	pmax		
	comp=Z,203nm,0.2s						
KMKR				smax	smax		
	comp=E,3µm,0.2s						
KMKR				smax	smax		
	comp=N,3µm,0.2s						
KMKR				smax	smax		
	comp=E,3µm,0.2s						
KMKR	**Kumukh**	**1.16**	**149**	*e*Pg	**Pn**	**05 45 19.6**	**+1.7**
KMKR				*e*Sg	**Sn**	**05 45 36.0**	**+1.8**
VLKR	**Vladikavkaz**	**1.19**	**267**	*e*P	**Pn**	**05 45 20.1**	**+2.0**
SGKR	**Sergokala**	**1.21**	**123**	*e*P	**Pn**	**05 45 20.7**	**+2.4**
SGKR				*e*S	**Sn**	**05 45 37.5**	**+2.6**
SGKR				*e*S	**Sn**	**05 45 39.0**	**+4.1**
SGKR				pmax	pmax		
	comp=Z,4.0nm,0.1s						
SGKR				smax	smax		
	comp=N,1µm,0.4s						
SGKR				smax	smax		
	comp=E,1µm,0.4s						
SGKR				smax	smax		
	comp=E,994nm,0.5s						
SGKR	**Sergokala**	**1.21**	**123**	*e*Pg	**Pn**	**05 45 20.7**	**+2.4**
SGKR				*e*Sg	**Sn**	**05 45 37.5**	**+2.6**
TRKR	**Terskaya**	**1.28**	**298**	*i* P	**Pn**	**05 45 21.4**	**+2.2**
TRKR				*e*S	**Sn**	**05 45 40.1**	**+3.5**
TRKR	**Terskaya**	**1.28**	**298**	*i* Pg	**Pn**	**05 45 21.4**	**+2.2**
TRKR				*e*Sg	**Sn**	**05 45 40.1**	**+3.5**
LGD	**Lagodekhi**	**1.29**	**182**	P	**Pn**	**05 45 20.7**	**+1.3**
LGD				S	**Sn**	**05 45 38.5**	**+1.7**
LGD	**Lagodekhi**	**1.29**	**182**	*e*P	**Pn**	**05 45 20.6**	**+1.3**
LGD				*e*S	**Sn**	**05 45 38.4**	**+1.7**
BTKR	**Batakoyurt**	**1.30**	**282**	*i* P	**Pn**	**05 45 21.2**	**+1.7**
BTKR				*e*S	**Sn**	**05 45 40.4**	**+3.3**
BTKR	**Batakoyurt**	**1.30**	**282**	*i* Pg	**Pn**	**05 45 21.2**	**+1.7**
BTKR				*e*Sg	**Sn**	**05 45 40.4**	**+3.3**
PNSH	**Pansheti**	**1.33**	**249**	P	**Pn**	**05 45 20.9**	**+0.9**
PNSH				S	**Sn**	**05 45 38.7**	**+0.9**
PNSH	**Pansheti**	**1.33**	**249**	*e*P	**Pn**	**05 45 20.8**	**+0.9**
PNSH				*e*S	**Sn**	**05 45 38.7**	**+0.9**
URKR	**Urkarakh**	**1.38**	**134**	*e*P	**Pn**	**05 45 22.6**	**+2.1**
URKR				*e*S	**Sn**	**05 45 41.3**	**+2.5**
URKR				*e*S	**Sn**	**05 45 43.1**	**+4.3**
URKR				pmax	pmax		
	comp=Z,138nm,0.3s						
URKR				smax	smax		
	comp=N,1µm,0.3s						
URKR				smax	smax		
	comp=E,949nm,0.3s						
URKR				smax	smax		
	comp=N,1µm,0.6s						
URKR	**Urkarakh**	**1.38**	**134**	*e*Pg	**Pn**	**05 45 22.6**	**+2.1**
URKR				*e*Sg	**Sn**	**05 45 41.4**	**+2.5**
GUDG	**Gudauri**	**1.49**	**244**	P	**Pn**	**05 45 23.8**	**+1.7**
GUDG				S	**Sn**	**05 45 43.5**	**+1.9**
GUDG	**Gudauri**	**1.49**	**244**	*e*P	**Pn**	**05 45 23.7**	**+1.7**
GUDG				*e*S	**Sn**	**05 45 43.4**	**+1.9**
LACR	**Lac**	**1.50**	**259**	*i* P	**Pn**	**05 45 22.9**	**+1.0**
LACR				*e*S	**Sn**	**05 45 42.1**	**+0.6**
LACR	**Lac**	**1.50**	**259**	*i* Pg	**Pn**	**05 45 22.9**	**+1.0**
LACR				*e*Sg	**Sn**	**05 45 42.1**	**+0.6**
ZKTA	**Zakatala**	**1.51**	**171**	P	**Pn**	**05 45 22.9**	**+0.9**
	SNR=13						
ZKTA				S	**Sn**	**05 45 42.7**	**+1.2**
KORR	**Kora**	**1.63**	**269**	*e*P	**Pn**	**05 45 25.5**	**+1.9**
KORR				*e*S	**Sn**	**05 45 46.9**	**+2.5**
KORR	**Kora**	**1.63**	**269**	*e*Pg	**Pn**	**05 45 25.5**	**+1.9**
KORR				*e*Sg	**Sn**	**05 45 46.9**	**+2.5**
STDR	**Stavd-Durt**	**1.65**	**279**	*i* P	**Pn**	**05 45 25.9**	**+2.1**
STDR				*e*S	**Sn**	**05 45 47.8**	**+3.0**
STDR	**Stavd-Durt**	**1.65**	**279**	*i* Pg	**Pn**	**05 45 25.9**	**+2.1**
STDR				*e*Sg	**Sn**	**05 45 47.8**	**+3.0**
DDFL	**Dedoflistskaro**	**1.68**	**184**	P	**Pn**	**05 45 27.4**	**+3.1**
DDFL	**Dedoflistskaro**	**1.68**	**184**	*e*P	**Pn**	**05 45 27.4**	**+3.1**
DDFL	**Dedoflistskaro**	**1.68**	**184**	P	**Pn**	**05 45 26.7**	**+2.4**
DDFL				S	**Sn**	**05 45 51.6**	**+6.0**
DDFL				*i* AML	AML	05 46 04.0	
	comp=N,457nm,0.9s						
LSNR	**Lesken**	**1.81**	**276**	*i* P	**Pn**	**05 45 27.8**	**+1.9**
LSNR				*e*S	**Sn**	**05 45 50.5**	**+2.0**
LSNR	**Lesken**	**1.81**	**276**	*i* Pg	**Pn**	**05 45 27.8**	**+1.9**
LSNR				*e*Sg	**Sn**	**05 45 50.5**	**+2.0**
BTNK	**Botanikuri**	**1.82**	**218**	P	**Pn**	**05 45 21.9**	**-4.0**
DRN	**Derbent**	**1.86**	**125**	*e*P	**Pn**	**05 45 28.9**	**+2.5**
DRN				*e*S	**Sn**	**05 45 52.6**	**+3.1**
DRN				*e*S	**Sn**	**05 45 52.8**	**+3.3**
DRN				pmax	pmax		
	comp=Z,159nm,0.2s						
DRN				smax	smax		
	comp=E,1µm,0.2s						
DRN				smax	smax		
	comp=N,1µm,0.3s						
DRN				smax	smax		
	comp=N,951nm,0.3s						
DRN	**Derbent**	**1.86**	**125**	*e*Pg	**Pn**	**05 45 28.9**	**+2.5**
DRN				*e*Sg	**Sn**	**05 45 52.7**	**+3.1**
AKT	**Akhty**	**1.96**	**147**	*e*P	**Pn**	**05 45 29.9**	**+2.0**
AKT				*e*S	**Sn**	**05 45 54.2**	**+2.1**
AKT				*e*S	**Sn**	**05 45 55.1**	**+3.0**
AKT				pmax	pmax		
	comp=Z,127nm,0.2s						
AKT				smax	smax		
	comp=N,702nm,0.4s						
AKT				smax	smax		
	comp=E,788nm,0.3s						
AKT				smax	smax		
	comp=E,640nm,0.3s						
AKT	**Akhty**	**1.96**	**147**	*e*Pg	**Pn**	**05 45 29.9**	**+2.0**
AKT				*e*Sg	**Sn**	**05 45 54.2**	**+2.1**
DIGR	**Digorskoe uzhe**	**2.00**	**264***d*	*i*P	**Pn**	**05 45 29.4**	**+0.8**
DIGR	**Digorskoe uzhe**	**2.00**	**264**	*e*Pg	**Pn**	**05 45 29.4**	**+0.8**
DIGR				*e*Sg	**Sn**	**05 45 52.8**	**-0.4**
NCK	**Nalchik**	**2.00**	**282**	*e*P	**Pn**	**05 45 30.1**	**+1.7**
NCK				*e*S	**Sn**	**05 45 54.4**	**+1.4**
NCK	**Nalchik**	**2.00**	**282**	*e*Pg	**Pn**	**05 45 30.1**	**+1.7**
NCK				*e*Sg	**Sn**	**05 45 54.4**	**+1.4**
SEKA	**Sheki**	**2.03**	**160**	P	**Pn**	**05 45 29.6**	**+0.8**
	SNR=30						
SEKA				S	**Sn**	**05 45 53.6**	**-0.1**
KSMR	**Kasumkent**	**2.04**	**138**	*e*P	**Pn**	**05 45 30.7**	**+1.7**
KSMR				*e*S	**Sn**	**05 45 57.1**	**+3.2**
KSMR	**Kasumkent**	**2.04**	**138**	*e*Pg	**Pn**	**05 45 30.7**	**+1.7**
KSMR				*e*Sg	**Sn**	**05 45 57.1**	**+3.2**
ONI	**Oni**	**2.16**	**257**	P	**Pn**	**05 45 33.5**	**+3.0**
ONI	**Oni**	**2.16**	**257**	*e*P	**Pn**	**05 45 33.1**	**+2.7**
ONI				*e*S	**Sn**	**05 45 58.2**	**+1.5**
ONI	**Oni**	**2.16**	**257**	*e*Pg	**Pn**	**05 45 33.1**	**+2.7**
ONI				*e*Sg	**Sn**	**05 45 58.1**	**+1.5**
QSAR	**Qusar**	**2.17**	**137**	P	**Pn**	**05 45 33.1**	**+2.5**
	SNR=24						
QSAR				S	**Sn**	**05 45 59.1**	**+2.0**
QZX	**Qazax, Azerbai**	**2.18**	**199**	P	**Pn**	**05 45 31.1**	**+0.4**
	SNR=6.2						
QZX				S	**Sn**	**05 45 57.1**	**0.0**
KBTC	**Kuba-Taba**	**2.21**	**289**	*e*P	**Pn**	**05 45 32.6**	**+1.4**
KBTC				*e*S	**Sn**	**05 45 59.0**	**+1.1**
KBTC	**Kuba-Taba**	**2.21**	**289**	*e*Pg	**Pn**	**05 45 32.6**	**+1.4**
KBTC				*e*Sg	**Sn**	**05 45 59.0**	**+1.1**
KZRT	**Kazreti**	**2.24**	**220**	P	**Pn**	**05 45 33.3**	**+1.8**
TRLG	**Trialeti**	**2.27**	**226**	P	**Pn**	**05 45 33.1**	**+1.1**
TRLG				S	**Sn**	**05 46 01.1**	**+1.6**
TRLG	**Trialeti**	**2.27**	**226**	*e*P	**Pn**	**05 45 33.1**	**+1.1**
TRLG				*e*S	**Sn**	**05 46 01.1**	**+1.6**
BRNG	**Burnasheti**	**2.37**	**231**	P	**Pn**	**05 45 35.1**	**+1.8**
DMNI	**Dmanisi**	**2.38**	**222**	P	**Pn**	**05 45 34.0**	**+0.5**
DMNI				S	**Sn**	**05 46 01.5**	**-0.6**
DMNI	**Dmanisi**	**2.38**	**222**	*e*P	**Pn**	**05 45 34.0**	**+0.5**
DMNI				*e*S	**Sn**	**05 46 01.4**	**-0.6**
XNQ	**Khinaliq**	**2.39**	**144**	P	**Pn**	**05 45 35.3**	**+1.6**
	SNR=38						
XNQ				S	**Sn**	**05 46 04.1**	**+1.8**
QUBA	**Quba, Azerbaij**	**2.41**	**137**	P	**Pn**	**05 45 35.2**	**+1.4**
	SNR=4.5						
QUBA				S	**Sn**	**05 46 04.6**	**+2.0**
MNGR	**Mingechevir, A**	**2.42**	**166**	P	**Pn**	**05 45 33.8**	**-0.1**
MNGR				S	**Sn**	**05 46 04.4**	**+1.5**
GDB	**GEDABAY**	**2.44**	**190**	P	**Pn**	**05 45 34.3**	**0.0**
	SNR=26						
GDB				S	**Sn**	**05 46 01.8**	**-1.7**
QBL	**Gabala**	**2.46**	**152**	P	**Pn**	**05 45 35.2**	**+0.7**
QBL				S	**Sn**	**05 46 05.2**	**+1.3**
BKRG	**Bakuriani**	**2.46**	**237**	P	**Pn**	**05 45 36.2**	**+1.6**
BKRG	**Bakuriani**	**2.46**	**237**	*e*P	**Pn**	**05 45 36.2**	**+1.6**
GANJ	**Ganja**	**2.48**	**180**	P	**Pn**	**05 45 34.8**	**+0.1**
	SNR=9.4						
GANJ				S	**Sn**	**05 46 03.1**	**-1.1**
PYA1	**Pyatigorsk**	**2.50**	**293***d*	*i*P	**Pn**	**05 45 36.2**	**+1.2**
PYA1				*i* S	**Sn**	**05 46 04.1**	**-0.8**
PYA1				pmax	pmax		
	comp=Z,15nm,0.2s						
PYA1				smax	smax		
	comp=Z,43nm,0.1s						
KBZ	**Khabaz**	**2.55**	**285**	P	**Pn**	**05 45 36.5**	**+1.0**
	comp=Z,81nm,0.2s,baz=151,slow=1.9,SNR=874						
KBZ				S	**Sn**	**05 46 03.7**	**-2.1**
	comp=Z,95nm,0.3s,baz=298,slow=19,SNR=17						
KBZ	**Khabaz**	**2.55**	**285**	*e*Pn	**Pn**	**05 45 36.3**	**+0.8**
KBZ				*e*Sn	**Sn**	**05 46 04.7**	**-1.1**
BEYR	**Belyy Ugol+**	**2.68**	**291**	*e*P	**Pn**	**05 45 38.4**	**+1.0**
BEYR				*e*S	**Sn**	**05 46 08.1**	**-0.9**
BEYR	**Belyy Ugol+**	**2.68**	**291**	*e*Pn	**Pn**	**05 45 38.4**	**+1.0**
BEYR				*e*Sn	**Sn**	**05 46 08.1**	**-0.9**
SHA1	**Shidzhatmaz**	**2.72**	**284**	⇑*i*P	**Pn**	**05 45 39.1**	**+1.0**
SHA1				*e*S	**Sn**	**05 46 09.4**	**-0.9**
SHA1	**Shidzhatmaz**	**2.72**	**284**	*e*Pn	**Pn**	**05 45 39.0**	**+0.9**
SHA1				*e*Sn	**Sn**	**05 46 09.3**	**-0.9**
IML	**Ismayilli**	**2.72**	**148**	P	**Pn**	**05 45 39.6**	**+1.6**
IML				S	**Sn**	**05 46 11.1**	**+0.9**
KIV0	**Kislovodsk Arr**	**2.75**	**289**	*e*Pn	**Pn**	**05 45 39.1**	**+0.8**
KIV0				*e*Sn	**Sn**	**05 46 09.5**	**-1.2**
KIV	**Kislovodsk**	**2.75**	**289**	*i* P	**Pn**	**05 45 39.5**	**+1.1**
KIV				*e*S	**Sn**	**05 46 09.5**	**-1.3**
KIV	**Kislovodsk**	**2.75**	**289**	*i* Pn	**Pn**	**05 45 39.5**	**+1.1**
KIV				*e*Sn	**Sn**	**05 46 09.5**	**-1.3**
SIZA	**Siyzn**	**2.82**	**136**	P	**Pn**	**05 45 41.1**	**+1.8**
	SNR=6.1						
SIZA				S	**Sn**	**05 46 14.7**	**+2.1**
PQL	**Pirkuli**	**2.90**	**143**	P	**Pn**	**05 45 41.5**	**+1.1**
	SNR=4.3						
PQL				S	**Sn**	**05 46 17.1**	**+2.7**
ABS	**Abastumani**	**2.92**	**243**	P	**Pn**	**05 45 43.0**	**+2.2**
ABS	**Abastumani**	**2.92**	**243**	*e*P	**Pn**	**05 45 42.9**	**+2.2**
BRDA	**Brd**	**2.94**	**167**	P	**Pn**	**05 45 42.0**	**+1.3**
BRDA				S	**Sn**	**05 46 16.1**	**+1.0**
ALER	**Alexandrovskoy**	**2.94**	**305**	⇓*e*P	**Pn**	**05 45 42.6**	**+1.8**
ALER				*e*S	**Sn**	**05 46 16.2**	**+0.9**
ALER	**Alexandrovskoy**	**2.94**	**305**	*e*Pn	**Pn**	**05 45 42.6**	**+1.8**
ALER				*e*Sn	**Sn**	**05 46 16.2**	**+0.9**
ATGJ	**Altiaghaj**	**3.00**	**138**	P	**Pn**	**05 45 43.1**	**+1.3**
ATGJ				S	**Sn**	**05 46 18.3**	**+1.5**
ZRD	**Zardab**	**3.03**	**159**	P	**Pn**	**05 45 43.2**	**+1.2**
ZRD				S	**Sn**	**05 46 18.6**	**+1.2**
GOF	**Gofitskoye**	**3.04**	**311**	*e*P	**Pn**	**05 45 43.7**	**+1.6**
GOF				*e*S	**Sn**	**05 46 18.5**	**+0.9**
GOF	**Gofitskoye**	**3.04**	**311**	*e*Pn	**Pn**	**05 45 43.7**	**+1.6**
GOF				*e*Sn	**Sn**	**05 46 18.5**	**+0.9**
AGDM	**Agdam**	**3.08**	**168**	P	**Pn**	**05 45 43.6**	**+0.9**
	SNR=9.8						
AGDM				S	**Sn**	**05 46 20.0**	**+1.4**
KDMR	**Kurdemir**	**3.09**	**152**	S	**Sn**	**05 46 19.5**	**+0.6**
GNI	**Garni**	**3.19**	**202**	P	**Pn**	**05 45 45.2**	**+0.8**
	comp=Z,12nm,0.6s,baz=258,slow=5.4,SNR=4.0						
GNI				S	Sn	05 46 10.9	-11
	comp=Z,14nm,0.5s,baz=62,slow=3.3,SNR=5.6						
GNI	**Garni**	**3.19**	**202**	*e*P	**Pn**	**05 45 47.1**	**+2.7**
GNI				*e*S	**Sn**	**05 46 25.1**	**+3.5**
GNI	**Garni**	**3.19**	**202**	*e*Pn	**Pn**	**05 45 47.1**	**+2.7**
GNI				*e*Sn	**Sn**	**05 46 25.1**	**+3.5**
NVNR	**Nevinnomyssk**	**3.47**	**297**	*e*P	**Pn**	**05 45 49.6**	**+1.7**
NVNR				*e*S	**Sn**	**05 46 27.6**	**-0.3**
NVNR	**Nevinnomyssk**	**3.47**	**297**	*e*Pn	**Pn**	**05 45 49.6**	**+1.7**
NVNR				*e*Sn	**Sn**	**05 46 27.6**	**-0.3**
BLQ	**Beylaqan**	**3.53**	**164**	P	**Pn**	**05 45 50.0**	**+1.2**
BLQ				S	**Sn**	**05 46 29.9**	**+0.4**
ARXR	**Arkhyz**	**3.69**	**279**	*e*P	**Pn**	**05 45 52.3**	**+1.3**
ARXR				*e*S	**Sn**	**05 46 34.9**	**+1.4**
ARXR	**Arkhyz**	**3.69**	**279**	*e*Pn	**Pn**	**05 45 52.3**	**+1.3**
ARXR				*e*Sn	**Sn**	**05 46 34.9**	**+1.4**
GOBA	**Gobu**	**3.75**	**135**	S	**Sn**	**05 46 36.7**	**+2.0**
ALIB	**Äli-Bayra**	**3.76**	**146**	P	**Pn**	**05 45 52.8**	**+0.9**
ALIB				S	**Sn**	**05 46 37.1**	**+2.0**
SBZ	**Shahbuz**	**3.77**	**189**	P	**Pn**	**05 45 53.1**	**+1.0**
SBZ				S	**Sn**	**05 46 35.8**	**+0.3**
DAGI	**Agillar**	**3.85**	**239**	P	**Pn**	**05 45 55.2**	**+2.0**
AHMR	**Akhmetovskaya**	**3.95**	**287**	*e*P	**Pn**	**05 45 56.6**	**+2.1**
AHMR	**Akhmetovskaya**	**3.95**	**287**	*e*Pn	**Pn**	**05 45 56.6**	**+2.1**
AHMR				*e*Sn	**Sn**	**05 46 40.0**	**+0.3**
DBAD	**Bademkaya**	**4.02**	**240**	P	**Pn**	**05 45 57.5**	**+2.0**
KOTA	**Agri, Merkez-K**	**4.05**	**216**	P	**Pn**	**05 45 58.6**	**+2.6**
DDEM	**Demirkent**	**4.05**	**238**	P	**Pn**	**05 45 58.2**	**+2.3**
GLBA	**Clilabad**	**4.19**	**157**	P	**Pn**	**05 45 58.6**	**+0.8**
	SNR=3.4						
GLBA				S	**Sn**	**05 46 44.4**	**-1.1**
ORD	**Ordubad**	**4.20**	**183**	P	**Pn**	**05 45 58.0**	**+0.1**
ORD				S	**Sn**	**05 46 46.7**	**+0.8**
RPOR	**Krasnaya Polya**	**4.43**	**280**	*e*P	**Pn**	**05 46 04.7**	**+3.7**
RPOR				*e*S	**Sn**	**05 46 55.9**	**+4.5**
RPOR	**Krasnaya Polya**	**4.43**	**280**	*e*Pn	**Pn**	**05 46 04.7**	**+3.7**
YRD	**Yardimli**	**4.46**	**160**	P	**Pn**	**05 46 01.7**	**+0.2**
	SNR=3.6						
YRD				S	**Sn**	**05 46 48.4**	**-3.9**
VSLR	**Vesyoloye**	**4.58**	**276**	*i* P	**Pn**	**05 46 06.6**	**+3.5**
VSLR				*e*S	**Sn**	**05 46 59.2**	**+4.1**
VSLR	**Vesyoloye**	**4.58**	**276**	*i* Pn	**Pn**	**05 46 06.6**	**+3.5**
LRK	**Lerik**	**4.74**	**160**	P	**Pn**	**05 46 05.8**	**+0.4**
	SNR=10						
LRK				S	**Sn**	**05 46 57.1**	**-2.1**
ERBR	**Yeremizino-Bor**	**4.90**	**304**	*e*P	**Pn**	**05 46 11.6**	**+4.2**
ERBR				*e*S	**Sn**	**05 47 01.9**	**-0.8**
ERBR	**Yeremizino-Bor**	**4.90**	**304**	*e*Pn	**Pn**	**05 46 11.6**	**+4.2**
ERBR				*e*Sn	**Sn**	**05 47 01.9**	**-0.8**
ASTR	**Astara**	**4.94**	**157**	P	**Pn**	**05 46 08.6**	**+0.7**
	SNR=5.5						
ASTR				S	**Sn**	**05 47 03.3**	**-0.4**
LZRR	**Lazarevskoye**	**5.09**	**282**	*e*P	**Pn**	**05 46 14.1**	**+4.2**
LZRR				*e*S	**Sn**	**05 47 14.6**	**+7.2**
LZRR	**Lazarevskoye**	**5.09**	**282**	*e*Pn	**Pn**	**05 46 14.1**	**+4.2**
GOYR	**Goytkh**	**5.14**	**285**	*e*P	**Pn**	**05 46 15.0**	**+4.4**
GOYR				*e*S	**Sn**	**05 47 13.2**	**+4.6**
ANN	**Anapa**	**6.61**	**288**	*e*P	**Pn**	**05 46 29.1**	**-1.5**
ANN				*e*S	**Sn**	**05 47 41.7**	**-2.7**
ANN				pmax	pmax		
	comp=Z,39nm,1.2s						
GEYT	**Alibeck**	**10.38**	**116**	P	**Pn**	**05 47 19.3**	**-2.8**
	comp=Z,2.8nm,0.3s,baz=303,slow=14,SNR=9.4						
GEYT				S	**Sn**	**05 49 08.1**	**-8.5**
	comp=Z,2.1nm,0.5s,baz=256,slow=27,SNR=2.1						
AKTO	**Aktyubinsk**	**10.86**	**44**	P	**Pn**	**05 47 26.8**	**-1.7**
	comp=Z,3.2nm,0.6s,baz=225,slow=12,SNR=11						
AKTO				S	Sn	05 49 19.1	-8.7
	comp=Z,2.8nm,0.4s,baz=71,slow=19,SNR=7.0						
AKTO	**Aktyubinsk**	**10.86**	**44**	⇑P	**Pn**	**05 47 26.7**	**-1.7**
	comp=Z,2.8nm,0.6s						
AKTO				⇑S	**Sn**	**05 49 19.9**	**-8.0**
	comp=Z,3.9nm,0.5s						
AB31	**Akbulak array**	**11.27**	**52**	P	**Pn**	**05 47 32.9**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=242,slow=12,SNR=40						
AB31				⇑S	**Sn**	**05 49 31.2**	**-6.5**
	comp=Z,1.0nm,0.2s,baz=248,slow=24,SNR=6.6						
MLR	**Muntele Rosu**	**14.76**	**286**	LR	LR	05 56 23.0	
	comp=Z,36nm,19.1s,baz=191,slow=46						
FINES	**FINESS Array B**	**21.95**	**334**	P	**P**	**05 49 42.7**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=134,slow=14,SNR=6.2						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**23.14**	**60**	P	**P**	**05 49 55.5**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=270,slow=12,SNR=9.6						
KURBB				pP	**pP**	**05 50 15.6**	**+2.8**
	comp=Z,1.6nm,0.6s,baz=273,slow=12,SNR=9.9						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**23.21**	**60**	P	**P**	**05 49 55.5**	**+0.5**
GERES	**GERESS Array B**	**23.24**	**296**	P	**P**	**05 49 56.5**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=98,slow=9.7,SNR=6.6						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**25.59**	**69**	P	**P**	**05 50 18.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=265,slow=7.6,SNR=6.8						
MKAR				pP	**pP**	**05 50 38.2**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=269,slow=9.9,SNR=5.1						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**25.59**	**69**	P	**P**	**05 50 18.0**	**+1.2**
NOA	**NORSAR Array B**	**27.55**	**323**	P	**P**	**05 50 33.8**	**-0.4**
	comp=Z,0.4nm,1.0s,baz=119,slow=8.6,SNR=3.5						
	comp=Z,0.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**48.56**	**246**	P	**P**	**05 53 30.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=47,slow=7.8,SNR=2.2						
	comp=Z,0.2nm,0.5s						

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*INET **29** 05:57:52.1±0.6, 10°.98N×85°.20W, h214km±8km, MW3.4*

*UCR **29** 05:57:53.4±1.3, 10°.97N×85°.21W, h202km±3km, MW3.9*

ISC 29 05:57:54.1±2.0, **11°.00N**±0°.07×**85°.24W**±0°.08,
h200km±11km, **n55**, σ**0s.57**/60, **12C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.15**	**215**	*e*P	**Pn**	**05 58 20.1**	**-0.3**
BUAI				*e*S	**S**	**05 58 41.4**	**+0.6**
VMAR	**Armenia, Volca**	**0.22**	**147**	*e*P	**Pn**	**05 58 20.0**	**-0.5**
BUEV	**Buena Vista**	**0.26**	**219**	*e*P	**Pn**	**05 58 20.0**	**-0.7**
GPS2	**Hotel Rincn d**	**0.27**	**203**	*i* P	**Pn**	**05 58 20.2**	**-0.5**
GPS2				*i* S	**S**	**05 58 41.9**	**+0.6**
GUAB	**Guayabo de Bag**	**0.29**	**177**	*i* P	**Pn**	**05 58 20.3**	**-0.4**
GUAB				*i* S	**S**	**05 58 42.0**	**+0.7**
HORNC	**Hornillas**	**0.29**	**167**	*i* P	**Pn**	**05 58 20.5**	**-0.3**
HORNC				*i* S	**S**	**05 58 41.7**	**+0.3**
LAPC	**Finca la Perla**	**0.30**	**219**	*e*P	**Pn**	**05 58 19.7**	**-0.9**
GBS3	**Finca Las Img**	**0.30**	**224**	*e*P	**Pn**	**05 58 19.8**	**-0.9**
LIM1	**Limonal**	**0.30**	**181**	⇑*e*P	**Pn**	**05 58 20.1**	**-0.6**
COLC	**Colonia**	**0.33**	**173**	*i* P	**Pn**	**05 58 20.4**	**-0.4**
COLC				*i* S	**S**	**05 58 42.3**	**+0.8**
CUI	**Cuipilapa**	**0.35**	**167**	⇑*i*P	**Pn**	**05 58 20.4**	**-0.4**
PTEN	**Parque Tenorio**	**0.38**	**138**	⇑*i*P	**Pn**	**05 58 20.8**	**-0.2**
HZTE	**Horizontes, Gu**	**0.45**	**231**	*e*P	**Pn**	**05 58 20.5**	**-0.6**
PLVR	**Palo Verde**	**0.66**	**189**	⇑*e*P	**Pn**	**05 58 21.8**	**-0.4**
ORTG	**Ortega, Santa**	**0.67**	**198**	*e*P	**Pn**	**05 58 21.6**	**-0.4**
ORTG	**Ortega, Santa**	**0.67**	**198**	*e*P	**Pn**	**05 58 21.6**	**-0.4**
CONN	**Concepcion**	**0.68**	**326**	*e*P	**Pn**	**05 58 21.9**	**-0.1**
CEDE	**Laguna Cedeo**	**0.74**	**134**	⇑*i*P	**Pn**	**05 58 22.3**	**-0.1**
CASO	**Castillo**	**0.75**	**138**	⇑*e*P	**Pn**	**05 58 22.3**	**-0.2**
JTS	**Las Juntas de**	**0.76**	**158**	*e*P	**Pn**	**05 58 21.5**	**-1.0**
JTS	**Las Juntas de**	**0.76**	**158**	*e*P	**Pn**	**05 58 21.8**	**-0.7**
GUAI	**GUAI**	**0.77**	**200**	⇑*i*P	**Pn**	**05 58 22.1**	**-0.4**
FORC	**Fortuna**	**0.77**	**133**	⇑*i*P	**Pn**	**05 58 22.4**	**-0.1**
NICO	**Nicoya**	**0.88**	**193**	⇑*e*P	**Pn**	**05 58 22.6**	**-0.6**
DUNO	**Dulce Nombre,**	**0.95**	**195**	⇑*i*P	**Pn**	**05 58 22.8**	**-0.7**
DUNO	**Dulce Nombre,**	**0.95**	**195**	*e*P	**Pn**	**05 58 22.9**	**-0.7**
ACON	**Acoyapa**	**0.96**	**4**	⇓*i*P	**Pn**	**05 58 23.5**	**-0.2**
ACON	**Acoyapa**	**0.96**	**4**	*e*P	**Pn**	**05 58 23.2**	**-0.4**
INDI	**Punta indio, G**	**1.15**	**193**	*e*P	**Pn**	**05 58 24.3**	**-0.7**
SRA1	**San Ramn**	**1.18**	**140**	*e*P	**Pn**	**05 58 24.7**	**-0.7**
LAFE	**Finca La Fe, P**	**1.23**	**164**	*e*P	**Pn**	**05 58 24.8**	**-0.8**
LAFE	**Finca La Fe, P**	**1.23**	**164**	*e*P	**Pn**	**05 58 24.7**	**-0.8**
JACO	**JACO, Garabito**	**1.45**	**157**	*e*P	**Pn**	**05 58 26.8**	**-0.6**
RIFO	**Rio Frio, Sara**	**1.47**	**117**	⇑*i*P	**Pn**	**05 58 26.9**	**-0.6**
HDC	**Heredia**	**1.49**	**132**	*e*P	**Pn**	**05 58 27.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**1.50**	**344**	*e*P	**Pn**	**05 58 27.4**	**-0.4**
ESPN	**Las Esperanzas**	**1.51**	**38**	*e*P	**Pn**	**05 58 27.2**	**-0.6**
OCM	**Ochomogo**	**1.67**	**131**	*e*P	**Pn**	**05 58 28.7**	**-0.9**
LCR2	**La Lucha 2**	**1.75**	**136**	⇑*e*P	**Pn**	**05 58 29.8**	**-0.6**
RAFA	**San Farael, Vo**	**1.75**	**126**	*e*P	**Pn**	**05 58 30.2**	**-0.3**
COPN	**Copaltepe**	**1.77**	**312**	*e*P	**Pn**	**05 58 29.5**	**-0.8**
RIMA	**Rio Macho**	**1.83**	**132**	*e*P	**Pn**	**05 58 30.7**	**-0.5**
RIMA	**Rio Macho**	**1.83**	**132**	*e*P	**Pn**	**05 58 30.6**	**-0.5**
MATN	**Matagalpa**	**2.03**	**341**	*e*P	**Pn**	**05 58 32.0**	**-1.1**
CDM	**Cerro de Muert**	**2.05**	**134**	*e*P	**Pn**	**05 58 33.3**	**-0.3**
CDM	**Cerro de Muert**	**2.05**	**134**	*e*P	**Pn**	**05 58 33.4**	**-0.3**
CNGN	**Cerro Negro**	**2.06**	**316**	*e*P	**Pn**	**05 58 33.4**	**0.0**
EDDO	**Dominical**	**2.20**	**142**	*e*P	**Pn**	**05 58 35.4**	**+0.7**
CRIN	**San Cristobal**	**2.45**	**314**	⇓*e*P	**Pn**	**05 58 37.4**	**0.0**
CRIN	**San Cristobal**	**2.45**	**314**	*e*P	**Pn**	**05 58 37.4**	**0.0**
SRBA	**San Rafael, Bu**	**2.55**	**133**	*e*P	**Pn**	**05 58 38.3**	**-0.4**
DRK0	**Durika**	**2.62**	**131**	*e*P	**Pn**	**05 58 39.1**	**-0.4**
EDBA	**Buenos Aires**	**2.66**	**133**	*e*P	**Pn**	**05 58 39.5**	**-0.4**
PLAN	**Los Planes de**	**2.78**	**146**	*e*P	**Pn**	**05 58 41.5**	**+0.3**
CNCH	**Conchagua**	**3.40**	**312**	*e*P	**Pn**	**05 58 48.4**	**-0.2**

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*MOS **29** 05:58:36.6±1.0, 10°.66N×41°.02W, h12km, mb5.0/50,* *MS4.0/8, Error ellipse: s-maj=8.8km s-min=6.3km az=49.4*

IDC ***29*** *05:58:36.8±0.4, 10°.73N×41°.02W, h0^{km}, mb4.5/24, mbtmp4.5/25, ML3.1/1, MS4.1/74, Error ellipse: s-maj=14.0km s-min=11.3km az=141.0*

NEIC ***29*** *05:58:38.9±1.3, 10°.61N±0°.09×40°.99W±0°.09, h10^{km}±1^{km}, mb5.0/445, Error ellipse: s-maj=16.2km s-min=14.3km az=155.0*

GCMT ***29*** *05:58:39.9±0.2, 10°.74N±0°.01×40°.92W±0°.01, h18^{km}±1^{km}, MW5.0/112, Moment Tensor Solution. s40,c45; s112,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.98±.12; $M_{\theta\theta}$0.27±.11; $M_{\phi\phi}$0.71±.10; $M_{r\theta}$-0.45±.24; $M_{\theta\phi}$-3.33±.09; $M_{\phi r}$0.64±.23; Best double couple: $M_0$3.40200×10^{16} NP1:ϕ_s271.00000°, δ81.00000°, λ176.00000°. NP2:ϕ_s2.00000°, δ86.00000°, λ9.00000°. Principal axes: T 3.9500, Plg9.0000°, Azm227.0000°; N -1.0960, Plg80.0000°, Azm25.0000°; P -2.8530, Plg3.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 05:58:39.6±0.3, **10°.66N**±0°.04×**41°.02W**±0°.05, **h17**^{km}, **n813**, σ**1^s.27**/627, **mb4.9**/275, **MS4.1**/86, **54C-47D, Fault plane solution: NP1:**ϕ_s347.30151°, δ87.76791°, λ-2.54860°. **NP2:**ϕ_s77.40084°, δ87.45334°, λ-177.76570°. **Principal axes:** T Plg0.2222°, Azm32.3577°; N Plg86.6126°, Azm126.1151°; P Plg3.3801°, Azm302.3446°; **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	Montagnes des	12.76	245	Pn	Pn	06 01 39.7	-0.7
	88nm,0.3s,baz=60,slow=14,SNR=341						
MDP				LR	LR	06 05 41.2	
	comp=Z,1μm,21.3s,baz=68,slow=33						
ROSB	Rosrio	13.81	193	*e*P	Pn	06 01 55.0	+0.2
TMAB	Tom-Au,PA,Br	14.73	209	*e*P	Pn	06 02 07.1	-0.3
NBPS	Pedro II - PI	14.96	182	*e*P	Pn	06 02 10.2	-0.4
MCPB	Macapa, AP	15.50	226	*e*P	Pn	06 02 15.8	-1.8
NBPB	Pedra_Branca-C	16.16	175	*e*P	P	06 02 28.8	-0.5
RCBR	Riachuelo	17.15	162	P	Pn	06 02 38.4	-0.3
	0.1nm,0.3s,baz=94,slow=19,SNR=2.0						
RCBR				LR	LR	06 07 31.3	
	comp=Z,465nm,20.1s,baz=128,slow=31						
	11nm,0.9s						
RCBR	Riachuelo	17.15	162		Pn	06 02 38.7	0.0
RCBR	Riachuelo	17.15	162	P	Pn	06 02 38.7	0.0
RCBR				pmax	pmax		
	comp=Z,126nm,1.9s						
RCBR	Riachuelo	17.15	162	*e*P	Pn	06 02 39.8	+1.1
NBMA	Muriti-CE	18.04	173	*e*P	P	06 02 50.7	+0.5
MALB	Monte Alegre	18.11	227	*e*P	Pn	06 02 49.9	-0.8
PRPB	Parauapebas	18.87	208	*e*P	P	06 03 00.1	+0.8
H05S1	Guadeloupe/Mar	19.70	283	T	T	06 23 16.0	
	SNR=53						
MPOM	Morne Pois Mar	19.72	283	P	P	06 03 07.5	-1.1
MPOM				IAmb	IAmb	06 03 23.5	
	comp=Z,58nm,0.8s						
BIM	Bigot	19.94	283	P	P	06 03 11.3	+0.3
BIM				IAmb	IAmb	06 03 20.3	
	comp=Z,66nm,0.7s						
FDF	Fort de France	20.05	284	P	P	06 03 12.2	0.0
FDF				IAmb	IAmb	06 03 23.3	
	comp=Z,57nm,0.7s						
FDF	Fort de France	20.05	284	P	P	06 03 12.2	0.0
FDF				pmax	pmax		
	comp=Z,57nm,0.7s						
SVN	Savane Anatole	20.08	284	P	P	06 03 12.9	+0.4
NBRF	Rio Formoso -	20.09	163	*e*P	Pn	06 03 14.1	-0.3
H05N1	Guadeloupe/Mar	20.27	288	T	T	06 23 54.6	
	SNR=26						
GDSD	La Dsirade Is	20.28	288		P	06 03 15.3	+0.7
GDSD				IAmb	IAmb	06 03 17.7	
	comp=Z,68nm,1.2s						
SMTB	Santa Maria do	20.46	199	*e*P	P	06 03 17.2	+0.6
TDBA	Terre de Bas,	20.71	287	P	P	06 03 18.8	-0.6
CBE	Ff, Capester	20.73	287	P	P	06 03 19.8	+0.2
CBE				IAmb	IAmb	06 03 32.7	
	comp=Z,67nm,0.7s						
NBAN	Anadia - AL	20.74	167	*e*P	P	06 03 21.0	+1.4
ITTB	Itaituba	20.91	225	*e*P	P	06 03 21.4	-0.1
GDHS	Morne Mazeau,	20.92	288	P	P	06 03 22.3	+0.6
GDHS				IAmb	IAmb	06 03 29.1	
	comp=Z,46nm,0.8s						
BOAV	Boa Vista	21.02	248	*e*P	P	06 03 22.5	-0.3
NBPN	Ponto Novo - B	21.38	178	*e*P	P	06 03 27.7	+1.2
NBLA	Lagarto - SE	21.75	171	*e*P	P	06 03 31.0	+0.6
SMRT	St. Maarten	22.58	292	P	P	06 03 39.2	-0.2
SMRT				IAmb	IAmb	06 03 42.7	
	comp=Z,43nm,0.8s						
SDBA	SAO DESIDERIO	23.24	190	*e*P	P	06 03 46.1	-0.2
PEXB	Peixe	23.74	198	*e*P	P	06 03 51.9	+0.7
MBO	M'Bour	23.78	79	P	P	06 03 49.9	-1.7
MACA	Manacapuru-AM	23.91	236	*e*P	P	06 03 53.0	+0.1
CDVI	St. Croix	24.06	290	P	P	06 03 54.4	+0.2
GDU01	Guandu, BA	24.26	177	*e*P	P	06 03 55.9	-0.2
STVI	Saint Thomas	24.38	291	P	P	06 03 57.6	+0.4
STVI				IAmb	IAmb	06 04 01.2	
	comp=Z,65nm,1.2s						
SNDB	Serra Nova Dou	24.69	205	*e*P	P	06 04 00.3	+0.3
MTP	Monte Pirata	24.87	290	P	P	06 04 01.1	-0.5
MTP				IAmb	IAmb	06 04 04.4	
	comp=Z,26nm,0.7s						
CBYP	Canovanas	25.19	290	P	P	06 04 05.2	+0.5
CBYP				IAmb	IAmb	06 04 49.5	
	comp=Z,65nm,1.8s						
GCPR	Guaynabo City	25.41	290	P	P	06 04 06.7	+0.2
GCPR				IAmb	IAmb	06 04 08.8	
	comp=Z,77nm,1.8s						
SJG	San Juan	25.42	290	P	P	06 04 06.2	-0.4
	comp=Z,16nm,0.6s,baz=107,slow=9.0,SNR=12						
SJG				LR	LR	06 12 12.5	
	comp=Z,294nm,21.3s,baz=100,slow=32						
	comp=Z,16nm,0.6s						
SJG	San Juan	25.42	290	P	P	06 04 06.7	+0.1
SJG				IAmb	IAmb	06 04 31.0	
	comp=Z,27nm,1.1s						
SJG	San Juan	25.42	290	P	P	06 04 06.7	+0.1
SJG				pmax	pmax		
	comp=Z,27nm,1.2s						
ICMP	Isla Caja de M	25.72	289	P	P	06 04 08.6	-0.7
JANB	Januaria	25.75	187	*e*P	P	06 04 11.2	+1.5
CELP	Cerrillos	25.81	290	P	P	06 04 09.3	-0.9
OBIP	Obispado Ponce	25.83	289	P	P	06 04 09.7	-0.6
CMC01	Camacan, BA	25.89	177	*e*P	P	06 04 12.2	+1.3
CLDB	Colider	25.95	215	*e*P	P	06 04 12.0	+0.6
AOPR	Arecibo Observ	26.03	290	P	P	06 04 11.5	-0.8
MLPR	Magueyes Islan	26.22	289	P	P	06 04 13.0	-0.9
MLPR				IAmb	IAmb	06 04 18.3	
	comp=Z,38nm,0.8s						
CRPR	Cabo Rojo, PR	26.29	289	P	P	06 04 13.9	-0.6
CRPR				IAmb	IAmb	06 04 20.0	
	comp=Z,34nm,0.7s						
BAUV	El Baul	26.68	269	P	P	06 04 18.1	0.0
BDFB	Brasilia	27.03	195	P	P	06 04 21.2	-0.1
	comp=Z,4.0nm,0.9s,baz=8.2,slow=9.2,SNR=5.4						
BDFB				LR	LR	06 14 18.3	
	comp=Z,870nm,20.8s,baz=356,slow=35						
	comp=Z,4.0nm,0.9s						
BDFB	Brasilia	27.03	195	P	P	06 04 21.4	+0.1
BDFB				IAmb	IAmb	06 04 31.0	
	comp=Z,40nm,1.4s						
BDFB	Brasilia	27.03	195	P	P	06 04 21.4	+0.1
BDFB				pmax	pmax		
	comp=Z,40nm,1.4s						
BDFB	Brasilia	27.03	195	*e*P	P	06 04 21.6	+0.3
PDRB	Porto dos Gac	27.07	216	*e*P	P	06 04 21.8	+0.2
GUA01	Guaratinga, BA	27.09	177	*e*P	P	06 04 21.8	+0.1
NAN01	Guarapari, ES	28.33	178	*e*P	P	06 04 33.5	+0.7
SDV	Santo Domingo	29.23	269	LR	LR	06 16 54.8	
	comp=Z,161nm,19.6s,baz=50,slow=38						
SDV	Santo Domingo	29.23	269	P	P	06 04 40.2	-0.9
IPMB	Ipameri, GO	29.33	194	*e*P	P	06 04 41.9	+0.1
SAML	Samuel	29.42	229	P	P	06 04 42.8	+0.3
SAML	Samuel	29.42	229	P	P	06 04 42.8	+0.3
SAML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SALV	Santo Antonio	30.12	209	*e*P	P	06 04 49.0	+0.3
VILB	Vilhena	30.21	220	*e*P	P	06 04 50.4	+0.9
SDDR	Presa de Saban	30.37	289	P	P	06 04 49.0	-2.0
SDDR				IAmb	IAmb	06 05 14.0	
	comp=Z,19nm,1.1s						
ALF01	Guarapari-ES	31.08	179	*e*P	P	06 04 59.2	+2.1
PMOZ	Porto Moniz, M	31.10	41	*e*LQ	LQ	06 11 50.3	
PMOZ				*e*LR	LR	06 12 46.0	
	comp=Z,266nm,20.0s						
PTLB	Pontes e Lacer	31.54	215	*e*P	P	06 05 02.5	+1.3
ITRB	Iturama	31.54	197	*e*P	P	06 05 02.2	+1.0
OCAC	Ocana	31.94	269	P	P	06 05 03.8	-1.3
RUSC	La Rusia	32.06	264	*e*P	P	06 05 06.5	0.0
H10N3	ASCENSION HYDR	32.16	124	T	T	06 39 02.1	
	baz=304,slow=75,SNR=528						
H10N2	ASCENSION HYDR	32.17	124	T	T	06 39 02.4	
	baz=304,slow=75,SNR=555						
H10N1	ASCENSION HYDR	32.18	124	T	T	06 39 03.6	
	baz=304,slow=75,SNR=596						
ETMB	Extrema	32.27	232	*e*P	P	06 05 07.9	+0.1
ASCN	Ascension	32.33	124	P	P	06 05 06.0	-2.3
GUVC	San Jose del G	32.38	258	*e*P	P	06 05 05.0	-3.8
H10S3	ASCENSION HYDR	32.67	126	T	T	06 39 38.3	
	baz=304,slow=74,SNR=387						
H10S2	ASCENSION HYDR	32.69	126	T	T	06 39 39.6	
	baz=276,slow=74,SNR=54						
SIV	San Ignacio	33.09	217	LR	LR	06 18 44.7	
	comp=Z,514nm,18.2s,baz=78,slow=36						
ROSC	El Rosal	33.48	263	P	P	06 05 19.4	+0.7
	comp=Z,8.9nm,0.6s,baz=152,slow=9.4,SNR=5.9						
ROSC				LR	LR	06 19 00.0	
	comp=Z,432nm,18.9s,baz=47,slow=36						
	comp=Z,8.9nm,0.6s						
ROSC	El Rosal	33.48	263	P	P	06 05 18.4	-0.4
ROSC				IAmb	IAmb	06 05 29.1	
	comp=Z,14nm,0.9s						
ROSC	El Rosal	33.48	263	P	P	06 05 18.4	-0.4
ROSC				pmax	pmax		
	comp=Z,14nm,0.9s						
RCLB	Rio Claro- Sao	33.48	191	*e*P	P	06 05 19.0	+0.7
PCMB	Pacaembu	33.60	197	*e*P	P	06 05 19.8	+0.5
MACC	Macarena, Meta	33.66	258	*e*P	P	06 05 20.8	+0.7
VAO	Valinhos	33.95	190	*e*P	P	06 05 23.1	+0.8
PRAC	Prado	34.27	261	*e*P	P	06 05 25.1	-0.3
ORTC	Ortega, Tolima	34.58	261	*e*P	P	06 05 26.3	-1.7
CBOC	Ciudad Bolivar	34.94	265	*e*P	P	06 05 29.8	-1.4
TRCB	Terra Rica	35.14	199	P	P	06 05 32.4	-0.2
TRCB				IAmb	IAmb	06 05 42.0	
	comp=Z,26nm,0.7s						
TRCB	Terra Rica	35.14	199	*e*P	P	06 05 33.6	+1.0
PLMC	San Jos del P	35.38	263	*e*P	P	06 05 32.9	-2.0
DBIC	Dimbokro	35.96	93	P	P	06 05 39.4	-0.4
	comp=Z,14nm,0.8s,baz=290,slow=8.4,SNR=9.5						
DBIC				LR	LR	06 18 10.2	
	comp=Z,78nm,21.4s,baz=278,slow=33						
	comp=Z,14nm,0.8s						
DBIC	Dimbokro	35.96	93	P	P	06 05 38.5	-1.3
DBIC				IAmb	IAmb	06 05 48.8	
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	35.96	93	P	P	06 05 38.5	-1.3
DBIC				pmax	pmax		
	comp=Z,20nm,0.8s						
TTIG	Tnine Tigouga,	36.15	52	P	P	06 05 43.0	+1.5
KOWA	Kowa	36.29	80	P	P	06 05 41.5	-1.1
KOWA				IAmb	IAmb	06 05 44.8	
	comp=Z,16nm,1.0s						
KOWA	Kowa	36.29	80	P	P	06 05 42.2	-0.4
CZSB	Cruzeiro do Su	36.44	241	*e*P	P	06 05 43.4	-0.5
GCUF	Volcan Galeras	37.28	258	*e*P	P	06 05 46.3	-5.3
OUZM	OUZ	37.61	52	P	P	06 05 54.1	+0.2
LPAZ	La Paz	37.90	225	P	P	06 05 57.5	+0.5
	comp=Z,17nm,0.8s,baz=37,slow=8.2,SNR=77						
LPAZ				LR	LR	06 21 45.2	
	comp=Z,564nm,20.9s,baz=50,slow=37						
	comp=Z,17nm,0.8s						
LPAZ	La Paz	37.90	225	P	P	06 05 55.7	-1.2
LPAZ				IAmb	IAmb	06 05 58.5	
	comp=Z,18nm,0.8s						
LPAZ	La Paz	37.90	225	P	P	06 05 55.7	-1.2
LPAZ				pmax	pmax		
	comp=Z,19nm,0.8s						
LPAZ	La Paz	37.90	225	*e*P	P	06 05 57.6	+0.7
TZRR	Tazzarine	38.49	53	P	P	06 06 02.0	+0.7
OTAV	Otavalo	38.62	257	P	P	06 06 01.5	-1.4
OTAV				IAmb	IAmb	06 06 05.7	
	comp=Z,47nm,1.9s						
OTAV	Otavalo	38.62	257	P	P	06 06 01.5	-1.4
OTAV				pmax	pmax		
	comp=Z,47nm,1.9s						
OTAV	Otavalo	38.62	257	*e*P	P	06 06 04.3	+1.4
LCCY	Blossom Villag	38.67	288	P	P	06 06 02.9	+0.1
GBN	Guysborough	38.83	337	P	P	06 06 03.9	+0.2
PBDV	Barranco-do-Ve	39.83	43	*e*P	P	06 06 13.6	+1.3
PNCL	Nicolau / Gran	39.92	41	*e*P	P	06 06 13.9	+0.9
	comp=Z,53nm,1.4s						
MESJ	Messejana	39.97	42	*e*P	P	06 06 13.8	+0.4
MESJ				IAmb	IAmb	06 06 14.9	
	comp=Z,14nm,0.7s						
MESJ				*e*S	S	06 12 20.4	+2.2
MESJ	Messejana	39.97	42	*e*P	P	06 06 14.1	+0.7
MESJ	Messejana	39.97	42	*e*P	P	06 06 13.8	+0.4
MESJ				*e*S	S	06 12 20.3	+2.2
PCVE	Castro Verde	39.98	42	*e*P	P	06 06 14.1	+0.7
CPUP	Villa Florida	40.04	203	P	P	06 06 14.1	+0.1
	comp=Z,2.9nm,0.6s,baz=33,slow=7.3,SNR=12						
CPUP				LR	LR	06 22 44.3	
	comp=Z,584nm,19.2s,baz=25,slow=36						
	comp=Z,2.9nm,0.6s						
CPUP	Villa Florida	40.04	203	*e*P	P	06 06 14.3	+0.3
PVAQ	Vaqueiros	40.06	43	*e*S	S	06 12 21.8	+2.2
PVAQ				*e*LR	LR	06 16 54.4	
	comp=Z,518nm,22.0s						
MDT	Midelt	40.08	51	LR	LR	06 19 22.9	
	comp=Z,273nm,20.8s,baz=254,slow=31						
MDT	Midelt	40.08	51	P	P	06 06 15.0	+0.5
PB16	IPOC Station P	40.25	225	P	P	06 06 15.1	-1.5
LCRM	LCR	40.26	50	P	P	06 06 17.0	+0.9
PBEJ	Beja	40.31	42	*e*P	P	06 06 16.7	+0.5
EVO	Evora	40.49	41	*e*P	P	06 06 17.6	-0.1
	comp=Z,33nm,1.2s						
CHEFC	Chefchaouen	40.55	47	P	P	06 06 20.0	+1.6
PSBE	So Bento	40.56	39	*e*P	P	06 06 19.5	+1.2
PMTG	Montargil	40.66	40	*e*P	P	06 06 19.3	+0.2
	comp=Z,22nm,1.1s						
DRLN	Deer Lake	40.85	343	P	P	06 06 20.6	+0.1
DRLN				IAmb	IAmb	06 06 42.0	
	comp=Z,28nm,1.1s						
PBAR	Barrancos	40.93	42	*e*P	P	06 06 22.1	+0.7
	comp=Z,31nm,1.5s						
PESTR	Estremoz	40.96	41	*e*P	P	06 06 22.0	+0.4
PB12	IPOC Station P	41.01	225	P	P	06 06 20.4	-1.9
BRYW	Bryant College	41.04	325	P	P	06 06 22.4	+0.2
BRYW				IAmb	IAmb	06 06 24.9	
	comp=Z,48nm,1.5s						
PCAS	Casmilo, Conde	41.07	39	*e*P	P	06 06 23.2	+0.7
ATAH	Atahualpa	41.19	246	LR	LR	06 23 30.6	
	comp=Z,185nm,18.4s,baz=83,slow=36						
COI	Coimbra	41.21	39	*e*P	P	06 06 25.8	+2.2
	comp=Z,83nm,1.3s						
WES	Weston	41.22	325	P	P	06 06 24.3	+0.7
WES				IAmb	IAmb	06 06 54.1	
	comp=Z,39nm,1.5s						
WES	Weston	41.22	325	P	P	06 06 24.3	+0.7
WES				pmax	pmax		
	comp=Z,39nm,1.5s						
G65A	Princeton	41.27	331	P	P	06 06 24.7	+0.7
UCCT	U. Connecticut	41.35	324	P	P	06 06 24.7	0.0
UCCT				IAmb	IAmb	06 06 34.1	
	comp=Z,15nm,0.7s						
AKLM	AKL	41.36	49	P	P	06 06 26.0	+0.9
PMRV	Marv??o	41.40	40	*e*P	P	06 06 25.9	+0.7
	comp=Z,40nm,1.6s						
PMRV	Marv??o	41.40	40	*e*LR	LR	06 17 28.2	
	comp=Z,314nm,22.0s						
PCBR	Castelo Branco	41.58	40	*e*P	P	06 06 27.0	+0.4
	comp=Z,30nm,2.2s						
QUA2	Belchertown	41.73	325	P	P	06 06 28.7	+0.8
QUA2				IAmb	IAmb	06 06 50.4	
	comp=Z,47nm,1.6s						
WVL	Waterville	41.83	329	P	P	06 06 29.0	+0.5
PVIS	Viseu	41.83	39	*e*P	P	06 06 28.8	0.0
SOR	Soroa	41.84	292	P	P	06 06 28.4	-0.6
SOR				IAmb	IAmb	06 06 32.2	
	comp=Z,21nm,1.0s						
SOR	Soroa	41.84	292	P	P	06 06 28.4	-0.6
SOR				pmax	pmax		
	comp=Z,21nm,1.0s						
TOA0	Torodi Ar. Sit	41.84	82	P	P	06 06 28.2	-0.9
TOA0				IAmb	IAmb	06 06 31.4	
	comp=Z,21nm,0.9s						
TORD	Torodi Ar. Bea	41.84	82	P	P	06 06 28.4	-0.7
	comp=Z,17nm,0.8s,baz=278,slow=8.5,SNR=51						
	comp=Z,17nm,0.8s						
TORD	Torodi Ar. Bea	41.84	82	P	P	06 06 28.4	-0.7
MTE	Manteigas	41.86	39	*e*P	P	06 06 29.9	+0.9
	comp=Z,43nm,1.3s						
MTE				*e*S	S	06 12 52.3	+5.9
MTE				*e*LQ	LQ	06 16 12.4	
MTE				*e*LR	LR	06 17 43.4	
	comp=Z,325nm,22.0s						
NNA	Nana	42.10	239	LR	LR	06 23 45.1	
	comp=Z,389nm,20.5s,baz=60,slow=36						
F64A	Sherman	42.13	331	P	P	06 06 31.3	+0.3
F64A				IAmb	IAmb	06 07 07.7	
	comp=Z,78nm,2.0s						
PB01	IPOC Station P	42.13	222	P	P	06 06 30.8	-0.6
PB01				IAmb	IAmb	06 06 42.6	
	comp=Z,46nm,2.0s						
TRNY	Table Rock, Ra	42.13	322	P	P	06 06 31.4	+0.2
PKME	Peaks-Kenny Pk	42.14	330	P	P	06 06 31.5	+0.3
PKME				IAmb	IAmb	06 06 40.8	
	comp=Z,35nm,1.2s						
PKME	Peaks-Kenny Pk	42.14	330	P	P	06 06 30.7	-0.4
	baz=136						
RIMA	Rio Macho	42.15	273	P	P	06 06 30.2	-1.6
BATG	Bathurst New B	42.19	335	P	P	06 06 31.4	0.0
BATG				IAmb	IAmb	06 06 40.9	
	comp=Z,21nm,0.9s						
TA01	Diego Aracena	42.25	223	P	P	06 06 30.3	-2.0
TA01				IAmb	IAmb	06 06 48.6	
	comp=Z,28nm,1.1s						
JBK	JBK	42.26	50	P	P	06 06 33.0	+0.4
PVRL	Vila Real	42.27	38	*e*P	P	06 06 32.4	0.0
PGAV	Gavieira, Arco	42.36	37	*e*LR	LR	06 17 56.9	
	comp=Z,431nm,20.0s						
ESPN	Las Esperanzas	42.41	276	P	P	06 06 33.6	-0.2
LUPA	Lehigh Univers	42.52	321	P	P	06 06 34.3	0.0
LUPA				IAmb	IAmb	06 06 43.6	
	comp=Z,79nm,2.0s						
J61A	Chester	42.53	326	P	P	06 06 34.5	+0.2
J61A				IAmb	IAmb	06 06 40.5	
	comp=Z,51nm,1.7s						
PQI	Presque Isle	42.58	332	P	P	06 06 34.1	-0.6
PQI				IAmb	IAmb	06 06 42.1	
	comp=Z,89nm,1.8s						
PB02	IPOC Station P	42.59	222	P	P	06 06 35.2	-0.1
V58A	Windy Hill, Pi	42.62	312	P	P	06 06 35.7	+0.6
MVO	Moncorvo	42.63	39	*e*P	P	06 06 35.2	-0.1
	comp=Z,25nm,1.6s						
MVO	Moncorvo	42.63	39	*e*LQ	LQ	06 16 50.0	
MVO				*e*LR	LR	06 18 03.4	
	comp=Z,328nm,20.0s						
MVL	Millersville	42.80	319	P	P	06 06 36.2	-0.5
ITQB	Itaqui	42.82	200	*e*P	P	06 06 38.0	+1.2
LVC	Limon Verde	42.89	219	LR	LR	06 26 38.7	
	comp=Z,141nm,18.3s,baz=22,slow=39						
656A	Willston	42.93	302	P	P	06 06 38.4	+0.6
JTS	Las Juntas de	43.17	274	LR	LR	06 26 52.7	
	comp=Z,46nm,19.4s,baz=154,slow=39						
PAB	San Pablo	43.44	42	P	P	06 06 41.7	-0.2
PAB	San Pablo	43.44	42	P	P	06 06 41.7	-0.2
PAB				pmax	pmax		
	comp=Z,11nm,1.0s						
ORTG	Ortega, Santa	43.66	274	P	P	06 06 43.0	-1.0
ORTG				IAmb	IAmb	06 07 47.0	
	comp=Z,43nm,1.6s						
J59A	Piesco	43.71	324	P	P	06 06 44.1	+0.2
ESDC	Sonseca Array	43.76	42	P	P	06 06 44.2	-0.3
	comp=Z,4.9nm,0.9s,baz=241,slow=8.1,SNR=23						
ESDC				PcP	PcP	06 08 32.5	+1.4
	comp=Z,1.6nm,1.0s,baz=256,slow=3.2,SNR=4.1						
	comp=Z,4.9nm,0.9s						
ESDC	Sonseca Array	43.76	42	P	P	06 06 44.0	-0.5
KMSC	Kings Mountain	43.98	310	P	P	06 06 46.7	+0.5
KMSC	Kings Mountain	43.98	310	P	P	06 06 46.8	+0.5
	baz=114						
FRNY	Flat Rock	44.07	327	P	P	06 06 47.3	+0.6
	baz=131						
J58A	Remsen	44.09	324	IAmb	IAmb	06 06 51.1	
	comp=Z,40nm,1.6s						
J58A	Remsen	44.09	324	P	P	06 06 48.1	+1.1
	baz=127,SNR=5.5						
J58A				P	P	06 06 48.1	+1.1
	baz=127,SNR=5.5						
BLA	Blacksburg	44.19	313	P	P	06 06 50.3	+2.4
	baz=117						
TIGA	Tifton	44.43	304	P	P	06 06 50.7	+0.8
	baz=108						
GOGA	Godfrey	44.97	307	P	P	06 06 54.8	+0.6
	baz=110						
S54A	Dingess, Beckl	45.08	314	IAmb	IAmb	06 06 58.5	
	comp=Z,15nm,0.8s						
BG3	Lake Jocassee	45.13	309	IAmb	IAmb	06 06 59.9	
	comp=Z,23nm,0.8s						
CASEE	Lake Jocassee	45.13	309	P	P	06 06 56.6	+1.2
	baz=112,SNR=5.0						
GO02	Mina Guanaco	45.20	218	P	P	06 06 55.7	-0.7
GO02				IAmb	IAmb	06 06 56.6	
	comp=Z,23nm,0.9s						
TGUH	Tegucigalpa,Un	45.25	279	P	P	06 07 00.4	+3.6
TGUH				IAmb	IAmb	06 07 07.4	
	comp=Z,25nm,0.9s						
LATQ	La Tuque	45.35	330	IAmb	IAmb	06 07 06.6	
	comp=Z,17nm,0.8s						
TRQ	Mont Tremblant	45.48	327	IAmb	IAmb	06 07 07.1	
	comp=Z,10nm,0.8s						
Y52A	Lilburn	45.60	307	IAmb	IAmb	06 07 08.8	
	comp=Z,18nm,1.0s						
Y52A	Lilburn	45.60	307	P	P	06 06 60.0	+0.8
	baz=110						
Y52A				P	P	06 06 60.0	+0.8
	baz=110						
152A	Waverly Hall	45.72	306	IAmb	IAmb	06 07 03.9	
	comp=Z,12nm,0.8s						
152A	Waverly Hall	45.72	306	P	P	06 07 01.0	+0.8
	baz=109						
P53A	Whipple	45.90	316	IAmb	IAmb	06 07 10.9	
	comp=Z,13nm,0.9s						
TKL	Tuckaleechee C	46.02	310	LR	LR	06 22 20.6	
	comp=Z,359nm,21.9s,baz=120,slow=31						
TKL	Tuckaleechee C	46.02	310	IAmb	IAmb	06 07 05.4	
	comp=Z,18nm,1.0s						
ALLY	Alegheny Colle	46.12	319	P	P	06 07 03.6	+0.5
	baz=121,SNR=5.5						
O53A	New Philadelph	46.13	317	IAmb	IAmb	06 07 06.4	
	comp=Z,12nm,0.8s						
O53A	New Philadelph	46.13	317	P	P	06 07 03.7	+0.4
	baz=118						
N53A	Lisbon	46.15	318	IAmb	IAmb	06 07 06.7	
	comp=Z,14nm,0.7s						
N53A	Lisbon	46.15	318	P	P	06 07 03.8	+0.4
	baz=119						
N53A				P	P	06 07 03.8	+0.4
	baz=119						
TZTN	Tazewell	46.19	311	IAmb	IAmb	06 07 08.3	
	comp=Z,18nm,0.9s						
TZTN	Tazewell	46.19	311	P	P	06 07 04.5	+0.8
	baz=113						
Q52A	Bidwell	46.27	315	IAmb	IAmb	06 07 07.8	
	comp=Z,18nm,1.1s						
M53A	WI Miller and	46.36	318	P	P	06 07 05.4	+0.4
	baz=120						
P52A	Corning	46.48	316	IAmb	IAmb	06 07 08.8	
	comp=Z,14nm,0.8s						
P52A	Corning	46.48	316	P	P	06 07 06.1	+0.2
	baz=117						
S51A	Beattyville	46.65	312	IAmb	IAmb	06 07 10.7	
	comp=Z,12nm,0.8s						
W50A	Signal Mountai	47.02	309	P	P	06 07 11.1	+0.7
	baz=110,SNR=7.7						
Q51A	Peebles	47.05	314	IAmb	IAmb	06 07 19.6	
	comp=Z,15nm,0.9s						
SADO	Sadowa	47.17	323	LR	LR	06 24 49.3	
	comp=Z,105nm,18.0s,baz=148,slow=33						
BRAL	Brewton	47.19	303	P	P	06 07 12.5	+0.9
	baz=105						
T50A	Nancy	47.33	311	IAmb	IAmb	06 07 16.1	
	comp=Z,12nm,0.9s						
T50A	Nancy	47.33	311	P	P	06 07 13.3	+0.6
	baz=112						
T50A				P	P	06 07 13.3	+0.6
	baz=112						
ACSO	Alum Creek Sta	47.33	316	P	P	06 07 12.2	-0.4
ACSO				IAmb	IAmb	06 07 16.2	
	comp=Z,20nm,1.1s						
ACSO	Alum Creek Sta	47.33	316	P	P	06 07 13.1	+0.5
	baz=117						
ACSO	Alum Creek Sta	47.33	316	P	P	06 07 12.9	+0.3

	baz=117						
R50A	Paris	47.44	313	IAmb	IAmb	06 07 23.0	
	comp=Z,33nm,1.5s						
LRAL	Lakeview Retre	47.66	305	IAmb	IAmb	06 07 25.5	
	comp=Z,17nm,1.1s						
LRAL	Lakeview Retre	47.66	305	P	P	06 07 15.5	+0.2
	baz=107						
LRAL	Lakeview Retre	47.66	305	P	P	06 07 15.8	+0.5
	baz=107						
U49A	Red Boiling Sp	47.84	310	IAmb	IAmb	06 07 20.6	
	comp=Z,20nm,1.2s						
U49A	Red Boiling Sp	47.84	310	P	P	06 07 17.0	+0.3
	baz=111						
R49A	Shelbyville	48.06	313	IAmb	IAmb	06 07 28.1	
	comp=Z,21nm,0.9s						
R49A	Shelbyville	48.06	313	P	P	06 07 19.0	+0.7
	baz=113						
R49A				P	P	06 07 19.0	+0.7
	baz=113						
CLTN	Cedars of Leba	48.11	309	IAmb	IAmb	06 07 28.6	
	comp=Z,22nm,1.3s						
X48A	Hartselle	48.12	307	IAmb	IAmb	06 07 22.3	
	comp=Z,14nm,0.8s						
X48A	Hartselle	48.12	307	P	P	06 07 19.6	+0.7
	baz=108,SNR=7.0						
P49A	Miami Univ. Ec	48.23	314	IAmb	IAmb	06 07 23.1	
	comp=Z,19nm,1.1s						
P49A	Miami Univ. Ec	48.23	314	P	P	06 07 19.6	0.0
	baz=114,SNR=5.1						
P49A	Miami Univ. Ec	48.23	314	P	P	06 07 21.7	+2.1
	baz=114,SNR=5.1						
V48A	Smith Brothers	48.37	309	P	P	06 07 21.5	+0.8
	baz=110,SNR=14						
N49A	Columbus Grove	48.45	316	IAmb	IAmb	06 07 30.4	
	comp=Z,12nm,0.9s						
SCHQ	Schefferville	48.56	340	P	P	06 07 21.9	-0.1
	comp=Z,5.3nm,0.6s,baz=168,slow=5.7,SNR=14						
SCHQ				LR	LR	06 24 58.1	
	comp=Z,196nm,19.6s,baz=127,slow=33						
	comp=Z,5.3nm,0.6s						
SCHQ	Schefferville	48.56	340	P	P	06 07 20.1	-1.9
SCHQ				IAmb	IAmb	06 07 31.0	
	comp=Z,17nm,0.8s						
P48A	Milroy	48.70	314	IAmb	IAmb	06 07 32.1	
	comp=Z,15nm,0.9s						
P48A	Milroy	48.70	314	P	P	06 07 23.1	-0.2
	baz=114						
P48A				P	P	06 07 23.1	-0.2
	baz=114						
AAM	Ann Arbor	48.72	318	IAmb	IAmb	06 07 35.0	
	comp=Z,15nm,0.8s						
AAM	Ann Arbor	48.72	318	P	P	06 07 24.1	+0.7
	baz=118						
O48B	Farmland	48.84	315	P	P	06 07 23.8	-0.5
	baz=115						
T47A	Sharon Grove	49.01	310	IAmb	IAmb	06 07 35.3	
	comp=Z,24nm,1.0s						
T47A	Sharon Grove	49.01	310	P	P	06 07 26.4	+0.8
	baz=110,SNR=6.3						
L48A	N Adams	49.08	317	IAmb	IAmb	06 07 34.8	
	comp=Z,18nm,0.8s						
PLAL	Pickwick Lake	49.10	307	IAmb	IAmb	06 07 29.4	
	comp=Z,17nm,1.1s						
146A	Union	49.22	304	P	P	06 07 28.3	+1.0
	baz=105,SNR=11						
346A	Big Creek Wild	49.24	302	P	P	06 07 28.3	+0.8
	baz=104						
WVT	Waverly	49.27	309	P	P	06 07 27.8	+0.1
WVT				IAmb	IAmb	06 07 30.5	
	comp=Z,16nm,0.8s						
WVT	Waverly	49.27	309	P	P	06 07 27.8	+0.1
WVT				pmax	pmax		
	comp=Z,15nm,0.8s						
WVT	Waverly	49.27	309	P	P	06 07 27.8	+0.1
	baz=109,SNR=9.7						
WVT	Waverly	49.27	309	P	P	06 07 27.6	0.0
	baz=109						
BLO	Bloomington	49.37	313	IAmb	IAmb	06 07 31.5	
	comp=Z,8.3nm,0.8s						
N47A	Urbana	49.47	315	IAmb	IAmb	06 07 38.0	
	comp=Z,12nm,0.8s						
ZON	Zonda	49.63	211	IAmb	IAmb	06 07 31.6	
	comp=Z,24nm,1.4s						
J47A	Sunmer	49.92	319	IAmb	IAmb	06 07 41.1	
	comp=Z,15nm,0.8s						
CCIG	Comitan	49.92	282	IAmb	IAmb	06 07 41.8	
	comp=Z,35nm,1.2s						
Y45A	Yeager Farm, C	49.94	305	P	P	06 07 33.1	+0.3
	baz=106						
OXF	Oxford	50.01	306	P	P	06 07 32.8	-0.5
	baz=106,SNR=8.9						
OXF	Oxford	50.01	306	P	P	06 07 32.8	-0.5
	baz=106,SNR=8.9						
P46A	Rosedale	50.03	313	IAmb	IAmb	06 07 42.5	
	comp=Z,15nm,0.8s						
P46A	Rosedale	50.03	313	P	P	06 07 33.9	+0.5
	baz=112						
SFIN	Lafayette	50.25	314	IAmb	IAmb	06 07 37.9	
	comp=Z,37nm,1.4s						
SFIN	Lafayette	50.25	314	P	P	06 07 35.4	+0.4
	baz=113						
344A	Westbrook Farm	50.31	302	P	P	06 07 36.7	+1.1
	baz=103						
NRS	Narsarsuaq	50.52	357	*e*P	P	06 07 40.0	+3.3
NRS				IAmb	IAmb	06 07 44.7	
	comp=Z,11nm,0.8s						
S44A	Carbondale	50.86	310	IAmb	IAmb	06 07 43.2	
	comp=Z,30nm,1.0s						
S44A	Carbondale	50.86	310	P	P	06 07 40.2	+0.5
	baz=109						
O44A	Mansfield	51.13	314	IAmb	IAmb	06 07 45.0	
	comp=Z,23nm,0.9s						
O44A	Mansfield	51.13	314	P	P	06 07 41.7	0.0
	baz=112						
143A	Socs Landing,	51.15	303	P	P	06 07 42.7	+0.7
	baz=104,SNR=13						
PBMO	Poplar Bluff	51.46	309	IAmb	IAmb	06 07 46.1	
	comp=Z,8.8nm,0.6s						
342A	Flagon Creek P	51.62	302	IAmb	IAmb	06 07 50.8	
	comp=Z,35nm,1.4s						
FVM	French Village	51.83	310	IAmb	IAmb	06 07 49.5	
	comp=Z,17nm,0.8s						
FVM	French Village	51.83	310	P	P	06 07 46.9	-0.1
	baz=108,SNR=6.3						
HDIL	Hopedale	51.87	314	IAmb	IAmb	06 07 56.1	
	comp=Z,23nm,0.9s						
HDIL	Hopedale	51.87	314	P	P	06 07 47.3	+0.1
	baz=111						
HDIL	Hopedale	51.87	314	P	P	06 07 47.2	-0.1
	baz=111						
KEST	Kesra	51.91	53	LR	LR	06 28 43.5	
	comp=Z,306nm,20.3s,baz=224,slow=35						
SSB	Saint Sauveur	51.98	40	P	P	06 07 48.0	-0.1
SSB	Saint Sauveur	51.98	40	P	P	06 07 48.0	-0.1
SSB				pmax	pmax		
	comp=Z,12nm,1.0s						
K43A	Burlington	52.02	317	P	P	06 07 48.2	-0.1
K43A				IAmb	IAmb	06 07 50.8	
	comp=Z,14nm,0.7s						
UALR	University of	52.41	306	IAmb	IAmb	06 07 54.4	
	comp=Z,25nm,0.9s						
Z41A	Richland Creek	52.42	304	IAmb	IAmb	06 07 57.2	
	comp=Z,20nm,1.2s						
Z41A	Richland Creek	52.42	304	P	P	06 07 54.2	+2.7
	baz=103						
W41B	Gary Mavity, V	52.43	306	P	P	06 07 51.1	-0.5
	baz=105,SNR=18						
W41B	Gary Mavity, V	52.43	306	P	P	06 07 51.2	-0.3
	baz=105,SNR=18						
CCM	Cathedral Cave	52.46	310	P	P	06 07 51.1	-0.6
CCM				IAmb	IAmb	06 07 54.5	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	52.46	310	P	P	06 07 51.1	-0.6
CCM				pmax	pmax		
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	52.46	310	P	P	06 07 51.2	-0.6
	baz=108,SNR=13						
CCM	Cathedral Cave	52.46	310	P	P	06 07 51.2	-0.5
	baz=108						
WHAR	Wooly Hollow	52.50	306	P	P	06 07 51.5	-0.5
WHAR				IAmb	IAmb	06 07 54.3	
	comp=Z,22nm,0.8s						
FCAR	Ozark Folk Cen	52.52	307	IAmb	IAmb	06 07 53.9	
	comp=Z,14nm,0.6s						
BO04	La Punta	52.55	211	IAmb	IAmb	06 07 52.1	
	comp=Z,11nm,0.8s						
MT09	Talagante	52.58	212	IAmb	IAmb	06 07 52.0	
	comp=Z,9.5nm,0.7s						
L42A	Oliver, Polo	52.66	315	IAmb	IAmb	06 08 02.1	
	comp=Z,19nm,1.0s						
L42A	Oliver, Polo	52.66	315	P	P	06 07 52.2	-0.9
	baz=112						
X40A	Basin Creek Fa	52.73	305	P	P	06 07 53.9	+0.1
	baz=104,SNR=6.0						
X40A				P	P	06 07 53.9	+0.1
	baz=104,SNR=6.0						
X40A	Basin Creek Fa	52.73	305	P	P	06 07 53.9	+0.1
	baz=104,SNR=6.0						
MGMO	Mountain Grove	52.98	309	IAmb	IAmb	06 07 59.2	
	comp=Z,13nm,0.7s						
U40A	Yellville	53.22	308	IAmb	IAmb	06 08 06.6	
	comp=Z,26nm,0.9s						
U40A	Yellville	53.22	308	P	P	06 07 56.5	-0.9
	baz=105,SNR=25						
U40A				P	P	06 07 56.5	-0.9
	baz=105,SNR=25						
U40A	Yellville	53.22	308	P	P	06 07 56.5	-0.9
	baz=105,SNR=25						
BNI	Bardonecchia	53.24	41	P	P	06 07 58.2	+0.7
BNI	Bardonecchia	53.24	41	P	P	06 07 58.2	+0.7
BNI				pmax	pmax		
	comp=Z,11nm,1.1s						
R40A	Maddies Statio	53.30	310	IAmb	IAmb	06 08 00.0	
	comp=Z,17nm,0.7s						
R40A	Maddies Statio	53.30	310	P	P	06 07 57.5	-0.5
	baz=107,SNR=16						
MIAR	Mount Ida	53.34	305	P	P	06 07 57.5	-0.7
	baz=104,SNR=5.1						
MIAR	Mount Ida	53.34	305	P	P	06 07 57.8	-0.4
	baz=104,SNR=5.1						
JFWS	Jewell Farm	53.40	316	IAmb	IAmb	06 08 07.3	
	comp=Z,17nm,0.8s						
JFWS	Jewell Farm	53.40	316	P	P	06 07 57.8	-0.7
	baz=112						
JFWS	Jewell Farm	53.40	316	P	P	06 07 58.1	-0.5
	baz=112						
P40A	Paris	53.51	312	P	P	06 07 58.9	-0.5
	baz=108,SNR=15						
ESK	Eskdalemuir	53.52	26	P	P	06 07 58.8	-0.3
ESK				IAmb	IAmb	06 08 01.4	
	comp=Z,11nm,0.8s						
ESK	Eskdalemuir	53.52	26	P	P	06 07 58.8	-0.3
ESK				pmax	pmax		
	comp=Z,11nm,0.8s						
EKA	Eskdalemuir Ar	53.55	26	LR	LR	06 26 44.0	
	comp=Z,185nm,20.5s,baz=206,slow=32						
NATX	Nacogdoches	53.65	302	P	P	06 07 59.8	-0.8
	baz=101						
NATX	Nacogdoches	53.65	302	P	P	06 08 00.6	0.0
	baz=101						
W39A	Magazine	53.66	306	P	P	06 08 00.6	0.0
	baz=104,SNR=17						
W39A	Magazine	53.66	306	P	P	06 08 00.8	+0.3
	baz=104,SNR=17						
L40A	Anamosa	53.76	315	IAmb	IAmb	06 08 10.7	
	comp=Z,18nm,0.8s						
L40A	Anamosa	53.76	315	P	P	06 08 00.8	-0.4
	baz=111,SNR=6.3						
S39A	Bolivar	53.93	309	P	P	06 08 01.8	-0.7
	baz=106,SNR=24						
NUUK	Nuuk	53.98	354	*i* P	P	06 08 07.0	+4.7
NUUK				IAmb	IAmb	06 08 15.4	
	comp=Z,20nm,1.2s						
I40A	Norwalk	54.02	317	IAmb	IAmb	06 08 05.5	
	comp=Z,14nm,1.1s						
HHAR	Hobbs	54.05	307	P	P	06 08 01.9	-1.6
	baz=104						
HKT	Hockley	54.34	299	P	P	06 08 05.0	-0.6
HKT				IAmb	IAmb	06 08 14.2	
	comp=Z,15nm,1.4s						
HKT	Hockley	54.34	299	⇓*e*P	P	06 08 05.6	0.0
HKT				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ML02	Panimavida	54.36	210	IAmb	IAmb	06 08 06.0	
	comp=Z,23nm,0.9s						
P38A	Dawn	54.64	311	P	P	06 08 07.0	-0.6
P38A				IAmb	IAmb	06 08 16.3	
	comp=Z,25nm,1.0s						
P38A	Dawn	54.64	311	P	P	06 08 07.1	-0.6
	baz=107,SNR=12						
237A	Washetta, Mont	54.66	302	P	P	06 08 06.3	-1.6
	baz=100,SNR=6.3						
RCHB	Rochefort	54.70	35	*d*P	P	06 08 07.1	-0.8
	comp=Z,7.2nm,0.9s						
X37A	Clayton	54.80	305	IAmb	IAmb	06 08 39.3	
	comp=Z,25nm,1.6s						
BCLA	Clavier	54.87	34	*d*P	P	06 08 09.2	+0.1
	comp=Z,4.6nm,1.1s						
ANGG	Ammassalik, Gr	54.94	2	*i* P	P	06 08 07.6	-1.7
ANGG				IAmb	IAmb	06 08 11.5	
	comp=Z,9.4nm,0.8s						
K38A	Parkersburg	55.04	315	P	P	06 08 09.6	-0.9
K38A				IAmb	IAmb	06 08 18.5	
	comp=Z,15nm,0.8s						
BSTI	Sart Tilman	55.10	34	*d*P	P	06 08 12.3	+1.6
	comp=Z,2.0nm,1.0s						
MEM	Membach	55.35	35	*d*P	P	06 08 07.9	-4.7
	comp=Z,9.2nm,1.0s						
TUL1	Leonard	55.42	306	P	P	06 08 12.9	-0.5
	baz=103,SNR=16						
TUL1	Leonard	55.42	306	P	P	06 08 12.8	-0.5
	baz=103,SNR=16						
BFO	Black Forest	55.66	38	P	P	06 08 14.1	-0.8
BFO				IAmb	IAmb	06 08 17.1	
	comp=Z,15nm,1.2s						
BFO	Black Forest	55.66	38	P	P	06 08 14.1	-0.8
BFO				pmax	pmax		
	comp=Z,15nm,1.2s						
OSSC	Osservatorio P	55.69	44	P	P	06 08 15.1	-0.1
BORG	Borgarnes	55.74	10	LR	LR	06 25 50.3	
	comp=Z,166nm,21.7s,baz=195,slow=29						
DY2G	Dye2	55.86	357	*i* P	P	06 08 15.8	-0.5
I37A	Lemond, Waseca	55.93	316	IAmb	IAmb	06 08 25.3	
	comp=Z,11nm,0.8s						
SPMN	Marine on St.	55.96	318	IAmb	IAmb	06 08 19.2	
	comp=Z,14nm,0.6s						
SPMN	Marine on St.	55.96	318	P	P	06 08 16.7	-0.4
	baz=111,SNR=11						
SPMN	Marine on St.	55.96	318	P	P	06 08 16.6	-0.5
	baz=111,SNR=11						
435B	Jarrell	55.96	300	P	P	06 08 17.2	-0.2
	baz=98						
435B	Jarrell	55.96	300	P	P	06 08 17.0	-0.4
	baz=98						
DAVOX	Davos/Dischmat	55.98	40	LR	LR	06 30 12.8	
	comp=Z,356nm,19.1s,baz=264,slow=34						
TLIG	Tlapa	56.06	284	IAmb	IAmb	06 08 28.4	
	comp=Z,11nm,0.9s						
DAVA	Damuels	56.18	39	*e*P	P	06 08 18.4	-0.4
	comp=Z,11nm,1.0s						
T35A	Sooner Cattle	56.20	307	IAmb	IAmb	06 08 27.4	
	comp=Z,18nm,0.8s						
VAE	Valguarnera	56.29	52	LR	LR	06 30 44.9	
	comp=Z,118nm,20.0s,baz=292,slow=34						
FRB	Frobisher Bay	56.48	346	LR	LR	06 29 30.5	
	comp=Z,194nm,20.0s,baz=173,slow=33						
FNO	Franklin	56.56	305	IAmb	IAmb	06 08 32.0	
	comp=Z,9.6nm,0.8s						
FETA	Feichten	56.61	40	*e*P	P	06 08 21.2	-0.7
	comp=Z,1.8nm,0.5s						
OKCFA	Oklahoma City	56.63	305	IAmb	IAmb	06 08 24.1	
	comp=Z,18nm,0.8s						
SFJD	Kangerlussuaq	56.64	356	LR	LR	06 27 01.6	
	comp=Z,48nm,21.5s,baz=174,slow=30						
SFJD	Kangerlussuaq	56.64	356	*i* P	P	06 08 27.4	+5.9
NRCA	Norcia	56.77	45	IAmb	IAmb	06 08 47.7	
	comp=Z,12nm,1.0s						
KSU1	Kansas State U	56.79	310	P	P	06 08 21.5	-1.6
	baz=104						
KSU1	Kansas State U	56.79	310	P	P	06 08 21.8	-1.3
	baz=104						
RETA	Reutte	56.81	40	*e*P	P	06 08 22.7	-0.6
	comp=Z,9.9nm,1.1s						
CTI	Castel Tesino	56.84	41	IAmb	IAmb	06 08 31.8	
	comp=Z,14nm,0.7s						
MOTA	Moosalm	56.97	40	*e*P	P	06 08 23.5	-1.0
	comp=Z,10nm,1.1s						
SQTA	Sankt Quirin	56.99	40	*e*P	P	06 08 23.7	-0.9
	comp=Z,5.5nm,0.6s						
833A	Chaparral WMA,	57.24	297	P	P	06 08 26.2	-0.3
	baz=96,SNR=5.5						
833A	Chaparral WMA,	57.24	297	P	P	06 08 26.4	-0.1
	baz=96,SNR=5.5						
WATA	Walderalm	57.27	40	*e*P	P	06 08 24.7	-1.8
	comp=Z,2.8nm,0.6s						
WTTA	Wattenberg	57.28	40	*e*P	P	06 08 26.2	-0.4
	comp=Z,4.7nm,0.6s						
L34A	Svendsen Farm,	57.37	313	P	P	06 08 26.4	-0.9
	baz=106,SNR=6.1						
WMOK	Wichita Mounta	57.58	304	IAmb	IAmb	06 08 30.8	
	comp=Z,19nm,0.9s						
WMOK	Wichita Mounta	57.58	304	P	P	06 08 27.6	-1.2
	baz=100,SNR=18						
WMOK	Wichita Mounta	57.58	304	P	P	06 08 27.6	-1.2
	baz=100,SNR=18						
ABTA	Abfaltersbach	57.65	41	*e*P	P	06 08 28.3	-0.8
	comp=Z,7.0nm,1.0s,SNR=8.3						
B35A	Bob, Littlefor	57.72	321	P	P	06 08 27.8	-1.7
	baz=112						
JCT	Junction City	57.82	299	IAmb	IAmb	06 08 32.9	
	comp=Z,18nm,0.8s						
JCT	Junction City	57.82	299	P	P	06 08 28.8	-1.8
	baz=97,SNR=6.0						
JCT	Junction City	57.82	299	P	P	06 08 30.1	-0.5
	baz=97,SNR=6.0						
CUC	Castrocucco	57.95	49	IAmb	IAmb	06 08 39.0	
	comp=Z,15nm,0.9s						
PLCA	Paso Flores	57.96	206	P	P	06 08 30.9	-0.4
	comp=Z,8.4nm,0.8s,baz=32,slow=7.4,SNR=24						
PLCA				LR	LR	06 34 47.6	
	comp=Z,211nm,18.4s,baz=32,slow=37						
	comp=Z,8.4nm,0.8s						
PLCA	Paso Flores	57.96	206	P	P	06 08 30.9	-0.4
PLCA				IAmb	IAmb	06 08 31.8	
	comp=Z,11nm,0.8s						
PLCA	Paso Flores	57.96	206	P	P	06 08 30.9	-0.4
PLCA				pmax	pmax		
	comp=Z,11nm,0.9s						
PLCA	Paso Flores	57.96	206	*e*P	P	06 08 31.0	-0.3
ABTX	Abilene, Hawle	57.96	302	P	P	06 08 30.7	-0.9
	baz=98						
ECSD	EROS Data Cent	58.05	315	P	P	06 08 30.4	-1.5
	baz=107,SNR=5.5						
ECSD	EROS Data Cent	58.05	315	P	P	06 08 31.5	-0.5
	baz=107,SNR=5.5						
R32A	Long Quarter,	58.24	309	P	P	06 08 33.0	-0.4
	baz=102,SNR=14						
KBA	Koelnbreinsper	58.30	41	*e*P	P	06 08 32.9	-0.9
	comp=Z,8.5nm,0.6s,SNR=6.9						
MYKA	Terra Mystica	58.34	41	*e*P	P	06 08 33.5	-0.5
	comp=Z,4.2nm,0.4s,SNR=7.2						
ICESG	Greenland Ices	58.38	1	*i* P	P	06 08 32.2	-2.1
ICESG				IAmb	IAmb	06 08 43.4	
	comp=Z,12nm,0.9s						
BGNE	Belgrade	58.51	312	P	P	06 08 34.4	-0.8
	baz=105						
BGNE	Belgrade	58.51	312	P	P	06 08 34.5	-0.7
	baz=105						
BIOA	Bad Ischl, Aus	58.70	40	*e*P	P	06 08 35.3	-1.1
OBKA	Obir	58.89	42	*e*P	P	06 08 37.3	-0.5
	comp=Z,17nm,0.9s,SNR=6.5						
NKC	Novy Kostel	58.90	37	AMS	AMS	06 28 50.0	
	comp=Z,300nm,31.8s						
AGMN	Agassiz Nation	59.02	320	IAmb	IAmb	06 08 40.8	
	comp=Z,15nm,1.5s						
AGMN	Agassiz Nation	59.02	320	P	P	06 08 37.1	-1.5
	baz=110						
AGMN	Agassiz Nation	59.02	320	P	P	06 08 37.1	-1.5
	baz=110						
CBKS	Cedar Bluff	59.10	309	P	P	06 08 39.1	-0.3
	baz=102,SNR=15						
CBKS	Cedar Bluff	59.10	309	P	P	06 08 39.0	-0.4
	baz=102,SNR=15						
GEC2	GERESS Array S	59.14	39	P	P	06 08 38.9	-0.7
GERES	GERESS Array B	59.14	39	P	P	06 08 38.6	-0.9
	comp=Z,1.3nm,0.7s,baz=227,slow=5.3,SNR=13						
GERES				LR	LR	06 31 24.4	
	comp=Z,128nm,20.3s,baz=274,slow=33						
	comp=Z,1.3nm,0.7s						
GERES	GERESS Array B	59.14	39	P	P	06 08 38.2	-1.4
GERES	GERESS Array B	59.14	39	P	P	06 08 38.2	-1.4
MOA	Molln	59.15	40	*e*P	P	06 08 38.6	-0.9
	comp=Z,5.6nm,1.4s						
KHC	Kasperske Hory	59.17	39	*e*P	P	06 08 38.1	-1.6
KHC				*e*S	S	06 16 39.1	-7.5
KHC				MLR	MLR		
	comp=Z,200nm,23.0s						
KHC	Kasperske Hory	59.17	39	*e*P	P	06 08 38.1	-1.6
KHC				*e*S	S	06 16 39.1	-7.5
KHC				AMS	AMS	06 27 30.0	
	comp=Z,200nm,23.0s						
SOKA	Soboth	59.26	42	*e*P	P	06 08 39.5	-0.9
	comp=Z,4.4nm,1.0s						
D32A	Dogwood Acres,	59.36	319	P	P	06 08 39.5	-1.5
CKRC	Cesky Krumlov	59.51	39	*e*S	S	06 16 48.1	-2.8
CLL	Collm	59.64	36	*e*P	P	06 08 42.0	-0.8
	comp=Z,7.0nm,1.2s						
CLL				*e*S	S	06 16 56.0	+3.5
CLL				*e*SSS	SSS	06 23 30.0	
CLL				LmH		06 33 00.0	
	comp=N,200nm,19.2s						
CLL				LmH		06 33 00.0	
	comp=E,200nm,19.7s						
ULM	Lac du Bonnet	59.73	323	P	P	06 08 41.9	-1.5
	comp=E,4.4nm,0.6s,baz=107,slow=7.2,SNR=7.2						
ULM				LR	LR	06 30 14.3	
	comp=E,102nm,20.9s,baz=131,slow=32						
	comp=E,4.4nm,0.6s						
ULM	Lac du Bonnet	59.73	323	P	P	06 08 42.0	-1.5
ULM				IAmb	IAmb	06 08 52.2	
	comp=Z,11nm,0.8s						
ULM	Lac du Bonnet	59.73	323	P	P	06 08 42.0	-1.5
ULM				pmax	pmax		
	comp=Z,11nm,0.9s						
ARSA	Arzberg	59.76	41	*e*P	P	06 08 42.5	-1.3
	comp=Z,2.1nm,0.6s						
ZAIG	Zacatecas	59.80	290	IAmb	IAmb	06 08 55.2	
	comp=Z,9.4nm,1.0s						
SUSD	Miller	59.87	315	P	P	06 08 43.7	-0.9
	baz=106						
SUSD	Miller	59.87	315	P	P	06 08 43.8	-0.7
	baz=106						
AMTX	Amarillo	59.96	304	P	P	06 08 44.8	-0.7
	baz=98,SNR=5.5						
AMTX	Amarillo	59.96	304	P	P	06 08 44.9	-0.6
	baz=98						
PRU	Pruhonice	60.06	38	*e*P	P	06 08 46.6	+0.9
PRU				*e*S	S	06 16 55.4	-2.5
PRU				MLR	MLR		
	comp=Z,100nm,14.1s						
PRU	Pruhonice	60.06	38	*e*P	P	06 08 46.6	+0.9
PRU				*e*S	S	06 16 55.4	-2.5
PRU				AMS	AMS	06 29 20.0	
	comp=Z,100nm,14.1s						
CONA	Conrad Observa	60.19	40	*e*P	P	06 08 46.2	-0.6
	comp=Z,5.4nm,0.9s,SNR=5.1						
PVCC	Panska Ves	60.27	37	AMS	AMS	06 29 50.0	
	comp=Z,200nm,23.4s						
RONA	Rosalia, Austr	60.40	41	*e*P	P	06 08 47.6	-0.6
	SNR=9.0						
TREC	Trest	60.40	39	AMS	AMS	06 34 00.0	
	comp=Z,100nm,21.8s						
SOP	Sopron	60.56	41	P	P	06 08 49.4	+0.2
MSTX	Muleshoe	60.73	303	IAmb	IAmb	06 08 53.0	
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	60.73	303	P	P	06 08 50.5	-0.3
	baz=97						
KRUC	Moravsky	60.89	39	*e*P	P	06 08 50.6	-0.8
MPLH	Magyarpolny	61.05	42	P	P	06 08 52.2	-0.3
TXAR	Lajitas Array	61.06	298	P	P	06 08 52.5	-0.6
	comp=Z,4.3nm,0.6s,baz=102,slow=7.0,SNR=45						
	comp=Z,4.3nm,0.6s						
TX31	Lajitas Ar. Si	61.06	298	P	P	06 08 52.9	-0.2
	baz=94,SNR=25						
TX32	Lajitas Array	61.06	298	IAmb	IAmb	06 08 55.5	
	comp=Z,5.5nm,0.7s						
ZST	Bratislava	61.06	40	*e*P	P	06 08 54.1	+1.5
ZST				pmax	pmax		
	comp=Z,36nm,1.3s						
ZST	Bratislava	61.06	40	*e*P	P	06 08 54.1	+1.5
VRAC	Vranov	61.09	39	LR	LR	06 32 25.1	
	comp=Z,126nm,20.5s,baz=252,slow=33						
VRAC	Vranov	61.09	39	*e*P	P	06 08 52.1	-0.7
KOVH	Kovagotottos	61.12	43	P	P	06 08 52.7	-0.3
UPC	Upice	61.12	38	*e*P	P	06 08 54.2	+1.2
UPC				MLR	MLR		
	comp=Z,100nm,19.1s						
UPC	Upice	61.12	38	*e*P	P	06 08 54.2	+1.2
UPC				AMS	AMS	06 35 00.0	
	comp=Z,100nm,19.1s						
CHVC	Chvalec	61.18	38	*e*P	P	06 08 52.3	-1.1
CHVC				AMS	AMS	06 30 20.0	
	comp=Z,100nm,17.4s						

MODS	Modra-Piesok	61.23	40	eP	P	06 08 52.6	-1.2
MODS				pmax	pmax		
	comp=Z,17nm,1.2s						
MODS	Modra-Piesok	61.23	40	eP	P	06 08 52.6	-1.2
MDND	Maddock	61.25	319	P	P	06 08 52.8	-1.2
	baz=107						
MDND	Maddock	61.25	319	P	P	06 08 52.8	-1.2
	baz=107						
DPC	Dobruska-Polom	61.26	38	eP	P	06 08 52.9	-1.1
DPC				MLR	MLR		
	comp=Z,100nm,25.1s						
DPC	Dobruska-Polom	61.26	38	eP	P	06 08 52.9	-1.1
DPC				AMS	AMS	06 28 40.0	
	comp=Z,100nm,25.1s						
OGNE	Ogallala	61.26	311	P	P	06 08 52.8	-1.4
	baz=101						
OGNE	Ogallala	61.26	311	P	P	06 08 53.4	-0.8
	baz=101						
OSTC	Ostas	61.26	38	eP	P	06 08 53.1	-0.9
OSTC				AMS	AMS	06 30 20.0	
	comp=Z,200nm,22.8s						
KSCO	Kaye Shedlock'	61.36	309	P	P	06 08 55.3	+0.4
	baz=100,SNR=5.9						
KSCO	Kaye Shedlock'	61.36	309	P	P	06 08 55.5	+0.5
	baz=100,SNR=5.9						
KRLC	Kraliky	61.45	38	AMS	AMS	06 30 20.0	
	comp=Z,100nm,21.1s						
MORH	Mrgy, Hungar	61.52	43	P	P	06 08 55.2	-0.6
CSKK	Cskako	61.57	42	P	P	06 08 58.3	+2.2
E28A	Huff	61.61	317	IAmb	IAmb	06 09 04.7	
	comp=Z,16nm,1.0s						
E28A	Huff	61.61	317	P	P	06 08 55.1	-1.3
	baz=105						
SRO	Srobarova	61.73	41	eP	P	06 08 57.0	-0.1
SRO				pmax	pmax		
	comp=Z,16nm,1.1s						
SRO	Srobarova	61.73	41	eP	P	06 08 57.0	-0.1
MORC	Moravsky Berou	61.82	39	P	P	06 08 57.2	-0.6
MORC				IAmb	IAmb	06 09 00.4	
	comp=Z,12nm,1.5s						
MORC	Moravsky Berou	61.82	39	P	P	06 08 57.2	-0.6
MORC				pmax	pmax		
	comp=Z,12nm,1.5s						
MORC	Moravsky Berou	61.82	39	eP	P	06 08 59.1	+1.3
AY01	Puyuhuapi	61.86	205	P	P	06 08 56.9	-1.0
AY01				IAmb	IAmb	06 09 14.0	
	comp=Z,16nm,1.1s						
MAUC	Maruska	61.87	39	AMS	AMS	06 29 20.0	
	comp=Z,200nm,20.2s						
SUMG	Summit	61.90	1	P	P	06 08 59.5	+1.1
SUMG				IAmb	IAmb	06 09 07.8	
	comp=Z,12nm,0.9s						
SUMG	Summit	61.90	1	P	P	06 08 59.5	+1.1
SUMG				pmax	pmax		
	comp=Z,12nm,0.9s						
SUMG	Summit	61.90	1	i P	P	06 09 00.0	+1.7
SUMG				IAmb	IAmb	06 09 12.8	
	comp=Z,11nm,0.9s						
DIVS	Divibare	61.93	46	IAmb	IAmb	06 09 01.7	
	comp=Z,7.8nm,0.8s						
PYL	PYLOS	61.94	54	P	P	06 08 58.4	-0.4
ITM	Ithomi	62.12	54	P	P	06 09 00.2	+0.2
ITM	Ithomi	62.12	54	P	P	06 09 00.2	+0.2
OKC	Ostrava-Krasne	62.21	39	AMS	AMS	06 36 20.0	
	comp=Z,100nm,11.2s						
FCC	Fort Churchill	62.31	332	P	P	06 09 00.1	-0.7
FCC				IAmb	IAmb	06 09 10.1	
	comp=Z,9.2nm,0.7s						
FCC	Fort Churchill	62.31	332	P	P	06 09 00.1	-0.7
FCC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KLV	Kalavryta, Ach	62.42	53	P	P	06 09 02.6	+0.5
T25A	Trinidad	62.46	306	IAmb	IAmb	06 09 12.2	
	comp=Z,15nm,0.9s						
T25A	Trinidad	62.46	306	P	P	06 09 02.8	+0.2
	baz=98,SNR=14						
MNTX	Cornudas Mount	62.70	300	IAmb	IAmb	06 09 12.7	
	comp=Z,8.9nm,0.9s						
MNTX	Cornudas Mount	62.70	300	P	P	06 09 03.7	-0.3
	baz=94,SNR=18						
MNTX	Cornudas Mount	62.70	300	P	P	06 09 03.6	-0.3
	baz=94,SNR=18						
HPIG		62.70	295	IAmb	IAmb	06 09 13.6	
	comp=Z,12nm,1.3s						
UPNV	Upernavik	62.74	355	i P	P	06 09 05.7	+2.3
UPNV				IAmb	IAmb	06 09 11.7	
	comp=Z,12nm,0.8s						
PSZ	Piszkesteto	62.78	41	IAmb	IAmb	06 09 12.4	
	comp=Z,7.9nm,1.0s						
PSZ	Piszkesteto	62.78	41	P	P	06 09 04.0	-0.4
KTHR	Kythira	62.86	55	P	P	06 09 05.3	+0.3
VLI	Veliai	62.86	54	P	P	06 09 05.7	+0.7
KTHA	Kythira Island	62.91	55	P	P	06 09 05.9	+0.6
LIT	Litokhoron	62.99	50	IAmb	IAmb	06 09 07.9	
	comp=Z,8.5nm,1.1s						
NB2	NORSAR Subarra	63.03	26	P	P	06 09 05.4	-0.3
	comp=Z,0.7nm,0.7s,baz=248,slow=9.3						
NOA	NORSAR Array B	63.03	26	P	P	06 09 05.2	-0.5
	comp=Z,1.8nm,0.8s,baz=242,slow=6.9,SNR=6.9						
NOA				LR	LR	06 31 15.3	
	comp=Z,151nm,21.5s,baz=240,slow=31						
	comp=Z,1.8nm,0.8s						
KRND	KRANIDI	63.12	54	P	P	06 09 06.4	-0.2
ATAL	Atalanti	63.19	52	P	P	06 09 06.9	-0.2
Q24A	Divide	63.29	308	IAmb	IAmb	06 09 11.3	
	comp=Z,9.1nm,0.7s						
Q24A	Divide	63.29	308	P	P	06 09 08.3	+0.2
	baz=98						
RSSD	Black Hills	63.34	314	P	P	06 09 08.0	-0.3
RSSD	Black Hills	63.34	314	P	P	06 09 08.0	-0.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SDCO	Great Sand Dun	63.40	307	P	P	06 09 09.2	+0.3
	baz=97,SNR=51						
SDCO	Great Sand Dun	63.40	307	P	P	06 09 09.2	+0.3
	baz=97,SNR=51						
XOR	Xorichti	63.41	51	P	P	06 09 08.1	-0.5
SIRR	Siria	63.56	44	⇑P	P	06 09 10.3	+0.9
JMIC	Jan Mayen	63.56	11	LR	LR	06 30 58.8	
	comp=Z,69nm,18.7s,baz=240,slow=31						
HFS	Hagfors	63.69	27	LR	LR	06 31 24.5	
	comp=Z,81nm,21.6s,baz=244,slow=31						
PLG	Polygyros	63.76	50	P	P	06 09 10.7	-0.2
ISCO	Idaho Springs	63.76	309	IAmb	IAmb	06 09 21.0	
	comp=Z,13nm,0.9s						
ISCO	Idaho Springs	63.76	309	P	P	06 09 11.6	+0.4
	baz=98,SNR=22						
ISCO	Idaho Springs	63.76	309	P	P	06 09 11.7	+0.4
	baz=98,SNR=22						
HERR	Herculane	63.79	45	⇑P	P	06 09 11.5	+0.5
ANMO	Albuquerque	63.87	304	LR	LR	06 33 40.0	
	comp=Z,292nm,21.6s,baz=96,slow=33						
ANMO	Albuquerque	63.87	304	P	P	06 09 11.9	0.0
ANMO	Albuquerque	63.87	304	⇓eP	P	06 09 14.2	+2.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ANMO	Albuquerque	63.87	304	P	P	06 09 12.5	+0.6
	baz=95						
VTS	Vitosha	63.95	48	P	P	06 09 11.9	-0.4
VTS	Vitosha	63.95	48	P	P	06 09 11.9	-0.4
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CRVS	Cervenica-Dubn	64.04	41	eP	P	06 09 14.6	+2.0
CRVS				pmax	pmax		
	comp=Z,23nm,1.6s						
CRVS	Cervenica-Dubn	64.04	41	eP	P	06 09 14.6	+2.0
GZR	Gura Zlata	64.14	45	⇓P	P	06 09 13.4	+0.1
GZR	Gura Zlata	64.14	45	⇓P	P	06 09 13.4	+0.1
N23A	Red Feather La	64.17	310	IAmb	IAmb	06 09 23.4	
	comp=Z,17nm,1.2s						
N23A	Red Feather La	64.17	310	P	P	06 09 15.0	+1.1
	baz=98						
Y22A	Socorro	64.20	303	P	P	06 09 14.5	+0.4
	baz=94,SNR=5.7						
IDI	Anoyia	64.29	56	LR	LR	06 38 19.1	
	comp=Z,91nm,19.6s,baz=283,slow=37						
IDI	Anoyia	64.29	56	P	P	06 09 15.0	+0.5
DRGR		64.38	43	⇑P	P	06 09 15.1	+0.2
DRGR		64.38	43	⇑P	P	06 09 15.1	+0.2
DGMT	Dagmar	64.38	319	P	P	06 09 14.6	-0.2
	baz=103						
S22A	4UR Ranch, Cre	64.45	307	IAmb	IAmb	06 09 26.2	
	comp=Z,11nm,0.8s						
S22A	4UR Ranch, Cre	64.45	307	P	P	06 09 16.2	+0.4
	baz=96,SNR=15						
UZH	Uzhgorod	64.51	41	eP	P	06 09 17.0	+1.4
UZH				e		06 09 23.0	
UZH				i		06 09 45.4	
DBG	Daneborg	64.73	6	eP	P	06 09 16.1	-0.4
DBG				IAmb	IAmb	06 09 19.2	
	comp=Z,4.2nm,0.8s						
121A	Cookes Peak, D	64.79	301	IAmb	IAmb	06 09 28.8	
	comp=Z,11nm,0.8s						
K22A	Casper	64.86	312	P	P	06 09 17.1	-1.2
	baz=99						
TSUM	Tsumeb	64.92	117	LR	LR	06 30 50.0	
	comp=Z,96nm,20.5s,baz=327,slow=30						
TSUM	Tsumeb	64.92	117	P	P	06 09 18.2	-0.7
TSUM				IAmb	IAmb	06 09 22.9	
	comp=Z,9.3nm,0.8s						
LAO	LASA Array	65.35	317	IAmb	IAmb	06 09 30.4	
	comp=Z,9.5nm,1.0s						
LAO	LASA Array	65.35	317	P	P	06 09 20.9	-0.3
	baz=101						
LAO	LASA Array	65.35	317	P	P	06 09 20.9	-0.3
	baz=101						
RDO	Rodhopi	65.44	50	P	P	06 09 22.0	+0.3
ARCR	ARCALIA	65.54	43	⇑P	P	06 09 22.1	-0.3
MVCO	Mesa Verde	65.72	306	IAmb	IAmb	06 09 34.3	
	comp=Z,8.0nm,0.8s						
MVCO	Mesa Verde	65.72	306	P	P	06 09 24.2	+0.3
	baz=95						
VOIR		65.72	45	⇑P	P	06 09 23.8	+0.1
VOIR		65.72	45	⇑P	P	06 09 23.8	+0.1
ALN	Alexandroupoli	65.79	50	P	P	06 09 24.0	0.0
ALN	Alexandroupoli	65.79	50	IAmb	IAmb	06 09 27.0	
	comp=Z,14nm,1.0s						
PV15	Paradox Valley	65.81	307	IAmb	IAmb	06 09 34.6	
	comp=Z,12nm,0.9s						
O20A	White River Ci	65.81	309	IAmb	IAmb	06 09 33.8	
	comp=Z,12nm,0.8s						
O20A	White River Ci	65.81	309	P	P	06 09 24.7	+0.2
	baz=97,SNR=6.5						
319A	Douglas	66.01	300	IAmb	IAmb	06 09 35.7	
	comp=Z,13nm,1.0s						
PV13	Radium Mtn., P	66.06	307	IAmb	IAmb	06 09 36.3	
	comp=Z,15nm,0.9s						
BUR08	Bucovina Ar. S	66.21	43	IAmb	IAmb	06 09 29.8	
	comp=Z,18nm,2.0s						
BURAR	Bucovina Array	66.22	43	⇑P	P	06 09 26.5	-0.3
BURAR	Bucovina Array	66.22	43	P	P	06 09 26.6	-0.3
BURAR	Bucovina Array	66.22	43	⇑P	P	06 09 26.5	-0.3
OZUR		66.34	44	⇑P	P	06 09 28.0	+0.4
MLR	Muntele Rosu	66.35	45	⇑P	P	06 09 27.8	0.0
MLR	Muntele Rosu	66.35	45	LR	LR	06 36 03.0	
	comp=Z,156nm,20.5s,baz=280,slow=34						
MLR	Muntele Rosu	66.35	45	P	P	06 09 27.9	+0.1
MLR	Muntele Rosu	66.35	45	P	P	06 09 27.9	+0.1
MLR				pmax	pmax		
	comp=Z,19nm,1.0s						
EDRB	Edirne	66.42	49	P	P	06 09 28.0	-0.1
W18A	Petrified Fore	66.56	304	IAmb	IAmb	06 09 38.8	
	comp=Z,21nm,1.4s						
W18A	Petrified Fore	66.56	304	P	P	06 09 30.5	+1.1
	baz=93						
COVR	Voineasa-Covas	66.59	45	⇑P	P	06 09 29.8	+0.7
BIZ	Bicaz	66.70	43	⇑P	P	06 09 30.1	+0.3
X18A	Snowflake	66.70	303	IAmb	IAmb	06 09 40.1	
	comp=Z,8.0nm,0.9s						
RDMU	Red Mountain	66.87	310	IAmb	IAmb	06 09 40.2	
	comp=Z,13nm,0.9s						
PLOR	Plostina	66.90	45	⇑P	P	06 09 31.9	+0.8
PLOR	Plostina	66.90	45	⇑P	P	06 09 31.9	+0.8
LPIG	La Paz	66.90	292	LR	LR	06 40 06.6	
	comp=Z,36nm,19.4s,baz=34,slow=37						
VRI	Vrincioaia	66.95	45	⇑P	P	06 09 30.6	-0.8
VRI	Vrincioaia	66.95	45	⇑P	P	06 09 30.6	-0.8
PDAR	Pinedale Array	67.10	312	P	P	06 09 31.6	-1.1
	comp=Z,0.7nm,0.5s,baz=102,slow=6.4,SNR=9.2						
PDAR				LR	LR	06 35 29.1	
	comp=Z,242nm,21.8s,baz=123,slow=33						
	comp=Z,0.7nm,0.5s						
DAG	Danmarks Havn	67.16	5	i P	P	06 09 31.0	-1.2
DAG				IAmb	IAmb	06 09 40.5	
	comp=Z,5.8nm,1.0s						
P18A	Preston Nutter	67.29	308	IAmb	IAmb	06 09 43.5	
	comp=Z,27nm,1.7s						
TUC	Tucson	67.31	301	P	P	06 09 34.1	0.0
TUC				IAmb	IAmb	06 09 43.5	
	comp=Z,5.7nm,0.8s						
TUC	Tucson	67.31	301	P	P	06 09 34.1	0.0
TUC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TUC	Tucson	67.31	301	P	P	06 09 34.1	0.0
	baz=92						
SRU	San Rafael Swe	67.47	308	P	P	06 09 34.3	-0.8
SRU				IAmb	IAmb	06 09 54.7	
	comp=Z,7.6nm,0.9s						
SRU	San Rafael Swe	67.47	308	P	P	06 09 34.3	-0.8
SRU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ICOR	Ion Corvin	67.47	47	⇓P	P	06 09 34.3	-0.4
P17A	Butcher Ranch,	67.66	308	IAmb	IAmb	06 09 45.5	
	comp=Z,8.2nm,0.8s						
WUAZ	Wupatki	67.92	304	P	P	06 09 38.7	+0.8
	baz=93,SNR=20						
X16A	Lo Mia Camp, P	67.93	303	IAmb	IAmb	06 09 48.2	
	comp=Z,8.2nm,0.9s						
EGMT	Eagleton	67.94	318	IAmb	IAmb	06 09 40.1	
	comp=Z,9.6nm,0.7s						
EGMT	Eagleton	67.94	318	P	P	06 09 37.4	-0.3
	baz=99,SNR=12						
TIRR	Tirgusor	67.95	46	⇑P	P	06 09 38.1	+0.4
TIRR	Tirgusor	67.95	46	⇑P	P	06 09 38.1	+0.4
LOHW	Long Hollow	67.95	313	IAmb	IAmb	06 09 46.3	
	comp=Z,14nm,1.7s						
TPGR	Topolog	68.00	46	⇑P	P	06 09 38.0	-0.1
TMUT	Trail Mountain	68.01	308	IAmb	IAmb	06 09 47.4	
	comp=Z,5.5nm,0.7s						
H17A	Grant Village	68.02	314	P	P	06 09 39.1	+0.5
	baz=97						
FLWY	Flagg Ranch	68.07	313	IAmb	IAmb	06 09 52.3	
	comp=Z,7.4nm,0.8s						
TPAW	Teton Pass	68.19	313	IAmb	IAmb	06 09 48.6	
	comp=Z,8.9nm,0.9s						
YMR	Madison River	68.33	314	IAmb	IAmb	06 09 50.3	
	comp=Z,13nm,1.1s						
SORM	Soroca	68.39	42	⇑P	P	06 09 38.7	-1.7
SORM	Soroca	68.39	42	⇑P	P	06 09 38.7	-1.7
MPU	Maple Canyon	68.39	309	IAmb	IAmb	06 09 49.6	
	comp=Z,15nm,1.7s						
HWUT	Hardware Ranch	68.46	311	IAmb	IAmb	06 09 50.5	
	comp=Z,11nm,0.9s						
YHL	Hebgen Lake	68.50	314	IAmb	IAmb	06 09 51.7	
	comp=Z,8.3nm,1.0s						
NACGM	Naroch	68.63	35	⇓eP	P	06 09 41.5	-0.2
	baz=258						
MTPU	Mount Pierson	68.69	307	IAmb	IAmb	06 09 52.8	
	comp=Z,9.6nm,0.9s						
U15A	North Rim	68.70	305	IAmb	IAmb	06 09 53.2	
	comp=Z,8.3nm,0.9s						
NLU	North Lily Min	68.72	309	P	P	06 09 42.4	-0.5
PKCU	Pink Cliffs	68.76	306	IAmb	IAmb	06 09 52.5	
	comp=Z,32nm,1.8s						
BOZ	Bozeman (W)	68.90	315	IAmb	IAmb	06 09 52.3	
	comp=Z,20nm,1.9s						
BOZ	Bozeman (W)	68.90	315	P	P	06 09 43.6	-0.3
	baz=96,SNR=10						
TCRU	Three Creeks R	68.93	307	IAmb	IAmb	06 09 54.4	
	comp=Z,11nm,0.8s						
214A	Organ Pipe Nat	69.03	300	P	P	06 09 45.3	+0.5
	baz=90						
MNK	Minsk	69.17	36	i P	P	06 09 43.6	-1.5
MNK				i		06 12 14.3	
MNK				i PPP	PPP	06 13 56.7	
MNK				i S	S	06 18 50.0	-0.2
MNK				i SS	SS	06 23 18.7	+2.3
MNK				pmax	pmax		
	comp=Z,13nm,1.0s						
MNK				pmax	pmax		
	comp=N,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,37nm,24.0s						
MNK				MLR	MLR		
	comp=N,131nm,22.0s						
MNK				MLR	MLR		
	comp=Z,160nm,14.0s						
MNK	Minsk	69.17	36	i P	P	06 09 43.6	-1.5
	comp=E,1.0nm,0.7s						
MNK				i P	P	06 09 43.6	-1.5
	comp=N,9.0nm,1.0s						
MNK				i P	P	06 09 43.6	-1.5
	comp=Z,13nm,1.0s,baz=259						
MNK				i PP	PP	06 12 14.4	-3.6
MNK				i PPP	PPP	06 13 56.8	
MNK				i S	S	06 18 50.0	-0.2
MNK				i SS	SS	06 23 18.7	+2.3
MNK				i SSS	SSS	06 26 32.0	
MNK				i LQ	LQ	06 33 18.3	
MNK				i LR	LR	06 35 45.2	
MNK				i LRM	MLR	06 39 58.2	
	comp=E,37nm,24.3s						
MNK				i LRM	MLR	06 40 03.4	
	comp=N,131nm,21.7s						
MNK				i LRM	MLR	06 40 11.0	
	comp=Z,160nm,14.1s						
USHA	Ushuaia	69.20	197	LR	LR	06 41 10.8	
	comp=Z,200nm,18.4s,baz=150,slow=37						
DUG	Dugway, Tooele	69.31	309	P	P	06 09 46.6	+0.1
	baz=94						
AKASG	Malin Array Be	69.33	40	P	P	06 09 45.2	-1.0
	comp=Z,4.3nm,0.7s,baz=263,slow=5.6,SNR=19						
AKASG				LR	LR	06 38 35.7	
	comp=Z,164nm,19.3s,baz=248,slow=35						
	comp=Z,4.3nm,0.7s						
AKASG	Malin Array Be	69.33	40	IAmb	IAmb	06 09 48.0	
	comp=Z,16nm,1.7s						
AKBB	Malin Array Si	69.33	40	IAmb	IAmb	06 09 48.1	
	comp=Z,14nm,1.1s						
AKBB	Malin Array Si	69.33	40	c iP	P	06 09 46.4	+0.2
AKBB				pmax	pmax		
	comp=Z,13nm,1.1s						
DLMT	Dillon	69.55	314	IAmb	IAmb	06 09 57.8	
	comp=Z,12nm,1.0s						
FINES	FINESS Array B	69.82	28	P	P	06 09 48.4	-0.6
	comp=Z,4.1nm,0.6s,baz=264,slow=6.4,SNR=23						
FINES				LR	LR	06 37 46.8	
	comp=Z,98nm,18.8s,baz=251,slow=34						
	comp=Z,4.1nm,0.6s						
FIA1	FINESS Array S	69.83	28	P	P	06 09 49.4	+0.3
FIA1				IAmb	IAmb	06 09 52.1	
	comp=Z,6.3nm,0.7s						
W13A	Hualapai Mount	69.96	303	IAmb	IAmb	06 10 01.0	
	comp=Z,6.4nm,0.8s						
PSUT	Pine Spring	70.03	307	IAmb	IAmb	06 10 01.1	
	comp=Z,8.4nm,0.9s						
PDMCI	Parker Dam,Lak	70.16	303	P	P	06 09 52.3	+0.6
	baz=90						
BLYC	Blythe	70.48	302	IAmb	IAmb	06 10 03.7	
	comp=Z,9.5nm,0.8s						
RES	Resolute Bay	70.66	347	LR	LR	06 38 58.3	
	comp=Z,110nm,18.6s,baz=80,slow=34						
HLID	Hailey	70.71	312	IAmb	IAmb	06 10 04.5	
	comp=Z,7.0nm,0.8s						
HLID	Hailey	70.71	312	P	P	06 09 55.1	0.0
	baz=94,SNR=16						
EDM	Edmonton	70.96	323	P	P	06 09 55.7	-0.6
EDM				IAmb	IAmb	06 10 00.1	
	comp=Z,13nm,0.9s						
EDM	Edmonton	70.96	323	P	P	06 09 55.7	-0.6
EDM				pmax	pmax		
	comp=Z,13nm,0.9s						
IRM	Iron Mountain	70.99	302	P	P	06 09 58.8	+2.0
	baz=90						
ELK	Elko	71.18	309	LR	LR	06 38 11.8	
	comp=Z,203nm,20.7s,baz=99,slow=33						
ELK	Elko	71.18	309	IAmb	IAmb	06 10 07.6	
	comp=Z,10nm,0.9s						
BC3	Big Chuckawall	71.25	302	P	P	06 10 00.6	+2.1
	baz=90						
R11A	Troy Canyon, C	71.38	307	P	P	06 09 59.5	+0.2
	baz=91,SNR=6.6						
GMRC	Granite Mounta	71.42	303	P	P	06 09 59.6	+0.1
	baz=90,SNR=5.5						
BR131	Keskin Array S	71.49	52	P	P	06 09 59.4	-0.5
BR131				IAmb	IAmb	06 10 03.9	
	comp=Z,12nm,0.9s						
BR131	Keskin Array S	71.49	52	⇓eP	P	06 10 00.0	+0.1
BRTR	Keskin Array B	71.49	52	P	P	06 10 00.3	+0.5
	comp=Z,6.4nm,0.9s,baz=234,slow=5.9,SNR=20						
BRTR				LR	LR	06 41 06.1	
	comp=Z,76nm,21.1s,baz=267,slow=36						
	comp=Z,6.4nm,0.9s						
BRTR	Keskin Array B	71.49	52	i P	P	06 09 59.7	-0.2
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SWSC	Sam W. Stewart	71.55	301	P	P	06 10 02.3	+2.2
	baz=89						
BELC	Belle Mtn. Jos	71.70	302	P	P	06 10 01.9	+0.7
	baz=89						
MFID	Camas Ranch	71.73	312	P	P	06 10 01.2	+0.1
MFID				IAmb	IAmb	06 10 10.6	
	comp=Z,9.1nm,0.9s						
NOR	Nord	71.73	4	i P	P	06 09 58.6	-1.8
NOR				IAmb	IAmb	06 10 08.8	
	comp=Z,3.9nm,0.9s						
IKP	In-Ko-Pah, Jac	71.82	301	P	P	06 10 03.1	+1.2
	baz=89						
TPNV	Topopah Spring	71.89	305	P	P	06 10 02.9	+0.5
	baz=90						
SHOC	Shoshone, Teco	71.92	304	P	P	06 10 05.0	+2.6
	baz=90						
ARCES	ARCESS Array B	71.96	20	P	P	06 10 00.9	-1.0
	comp=Z,3.0nm,0.7s,baz=237,slow=3.8,SNR=10						
ARCES				LR	LR	06 35 50.8	
	comp=Z,118nm,20.7s,baz=227,slow=31						
	comp=Z,3.0nm,0.7s						
HEC	Hector,Ludlow	71.97	303	P	P	06 10 05.9	+3.1
	baz=90						
MONP2	Monument Peak	72.08	301	P	P	06 10 06.6	+3.0
	baz=89,SNR=8.1						
PFO	Pinyon Flats O	72.09	302	LR	LR	06 40 31.4	
	comp=Z,82nm,19.1s,baz=108,slow=35						
PFO	Pinyon Flats O	72.09	302	P	P	06 10 06.9	+3.3
PFO	Pinyon Flats O	72.09	302	P	P	06 10 06.9	+3.3
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MBAR	Mbarara	72.20	94	LR	LR	06 40 50.2	
	comp=Z,55nm,18.2s,baz=146,slow=35						
BAR	Barrett	72.29	301	IAmb	IAmb	06 10 14.8	
	comp=Z,10nm,0.8s						
GSC	Goldstone, Bar	72.35	304	P	P	06 10 05.1	0.0
	baz=89						
QSM	Queen of Sheba	72.40	304	IAmb	IAmb	06 10 15.2	
	comp=Z,8.9nm,0.8s						
EUNU	Eureka	72.49	353	P	P	06 10 05.5	+0.5
EUNU				IAmb	IAmb	06 10 15.1	
	comp=Z,12nm,1.1s						
EIL	Elat	72.67	62	LR	LR	06 41 45.3	
	comp=Z,200nm,21.1s,baz=280,slow=36						
BMN	Battle Mountai	72.68	309	IAmb	IAmb	06 10 16.6	
	comp=Z,8.7nm,0.8s						
GRAC	Grapevine Rang	72.79	305	IAmb	IAmb	06 10 17.2	
	comp=Z,15nm,1.4s						
GRAC	Grapevine Rang	72.79	305	P	P	06 10 07.4	-0.2
	baz=90						
SUR	Sutherland	72.86	129	LR	LR	06 34 20.9	
	comp=Z,106nm,19.1s,baz=331,slow=29						
NEW	Newport	72.87	317	LR	LR	06 39 54.3	
	comp=Z,155nm,19.6s,baz=96,slow=34						
NEW	Newport	72.87	317	P	P	06 10 07.3	-0.6
	baz=93						
MMAI	Mount Meron Ar	72.94	59	LR	LR	06 42 42.2	
	comp=Z,82nm,21.7s,baz=76,slow=36						
YKA	Yellowknife Ar	73.04	332	P	P	06 10 07.8	-0.6
	comp=Z,3.1nm,0.8s,baz=102,slow=6.0,SNR=5.7						
YKA				LR	LR	06 39 29.5	
	comp=Z,100nm,19.4s,baz=322,slow=34						
	comp=Z,3.1nm,0.8s						
YKA	Yellowknife Ar	73.04	332	ceP	P	06 10 08.8	+0.3
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LRMC	Laurel Mtn Rad	73.07	304	P	P	06 10 09.5	+0.1
	baz=89						
BFSC	Mount Baldy Ra	73.08	303	P	P	06 10 08.9	-0.6
	baz=88						
SPITS	Spitsbergen Ar	73.20	10	LR	LR	06 35 11.4	
	comp=Z,77nm,18.7s,baz=211,slow=30						
LSZ	Lusaka	73.22	110	P	P	06 10 09.8	-0.8
LSZ	Lusaka	73.22	110	P	P	06 10 09.8	-0.8
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EDW2	Edwards Air Fo	73.33	303	P	P	06 10 13.1	+2.3
	baz=88						
KVN	Kaiserville	73.36	308	IAmb	IAmb	06 10 20.3	
	comp=Z,10.0nm,0.9s						
CWC	Cottonwood Cre	73.37	305	P	P	06 10 14.0	+2.8
	baz=89						

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NV11  Mina Array Sit     73.40 307   IAmb     IAmb     06 10 30.2
      comp=Z,18nm,1.9s
NVAR  Mina Array Bea     73.52 307   P        P        06 10 12.3 +0.2
      comp=Z,0.8nm,0.7s,baz=86,slow=6.2,SNR=8.9
NVAR                                 LR       LR       06 42 05.3
      comp=Z,97nm,18.6s,baz=118,slow=36
      comp=Z,0.8nm,0.7s
LHV   Little Huntoon     73.68 307   IAmb     IAmb     06 10 22.8
      comp=Z,9.5nm,1.0s
ISA   Isabella, Lake     73.71 304   P        P        06 10 16.3 +3.2
      baz=88
LBTB  Lobatse            73.94 120   LR       LR       06 36 37.6
      comp=Z,121nm,20.4s,baz=284,slow=31
LBTB  Lobatse            73.94 120   P        P        06 10 14.1  -0.5
LBTB  Lobatse            73.94 120   P        P        06 10 14.1  -0.5
LBTB                                 pmax     pmax
      comp=Z,6.0nm,0.7s
G08A  Pilot Rock         74.03 314   P        P        06 10 13.8  -1.0
OBN   Obninsk            74.23  36   LR       LR       06 41 27.8
      comp=Z,28nm,19.1s,baz=206,slow=35
OBN   Obninsk            74.23  36⇑eP       P        06 10 17.6 +2.0
OBN                                 e                  06 10 31.0
OBN                                 e                  06 12 57.7
OBN                                  pmax     pmax
      comp=Z,9.0nm,1.1s
BOSA  Boshof             74.92 124   P        P        06 10 20.2  -0.1
      comp=Z,6.1nm,0.9s,baz=275,slow=5.7,SNR=7.2
BOSA                                 LR       LR       06 35 49.2
      comp=Z,137nm,22.0s,baz=322,slow=30
      comp=Z,6.1nm,0.9s
BOSA  Boshof             74.92 124   P        P        06 10 19.6  -0.6
BOSA                                 IAmb     IAmb     06 10 30.0
      comp=Z,16nm,1.2s
BOSA  Boshof             74.92 124   P        P        06 10 19.6  -0.6
BOSA                                 pmax     pmax
      comp=Z,15nm,1.3s
MOD   Modoc Plateau      75.00 311   IAmb     IAmb     06 10 30.6
      comp=Z,11nm,1.0s
VORR  Voronezh           75.66  39  eP        P        06 10 24.0   0.0
VORR                                 pmax     pmax
      comp=Z,50nm,0.5s
I05D  Terrebonne, OR     75.72 313   P        P        06 10 25.1 +0.5
      baz=89
KLMR  Klimovskoe         76.16  30  eP        P        06 10 24.8  -1.8
KLMR                                e                  06 13 15.5
KLMR                                 pmax     pmax
      comp=Z,11nm,0.8s
KLMR  Klimovskoe         76.16  30  eP        P        06 10 24.8  -1.8
KLMR                                 AMP               06 10 34.9
      comp=Z,11nm,0.8s
KLMR                                ePP       PP       06 13 15.5  -1.9
I04A  Tendick Farm,      76.51 313   P        P        06 10 30.3 +1.3
      baz=88
YBH   Yreka Blue Hor     76.81 310   LR       LR       06 41 36.1
      comp=Z,141nm,21.3s,baz=82,slow=34
PMSA  Palmer Station     77.19 190  eP        P        06 10 32.4 +0.2
A36M  Sachs Harbour      78.15 342   P        P        06 10 37.9 +0.4
      baz=92
KIV   Kislovodsk         78.18  47  eP        P        06 10 40.2 +1.8
KIV                                  pmax     pmax
      comp=Z,8.0nm,1.0s
KIV                                  MLR      MLR
      comp=Z,40nm,18.0s
KBZ   Khabaz             78.34  47   P        P        06 10 39.4 +0.2
      comp=Z,5.7nm,0.8s,baz=327,slow=4.5,SNR=11
KBZ                                  LR       LR       06 45 00.6
      comp=Z,32nm,20.7s,baz=282,slow=36
      comp=Z,5.7nm,0.8s
KBZ   Khabaz             78.34  47⇓iP       P        06 10 40.0 +0.8
KBZ                                  pmax     pmax
      comp=Z,6.0nm,0.9s
KMBO  Kilima Mbogo       78.69  93   LR       LR       06 43 51.5
      comp=Z,65nm,19.6s,baz=264,slow=34
PRGR  Permogore          79.11  29  eP        P        06 10 43.5 +0.4
BBB   Bella Bella        79.89 321   LR       LR       06 45 20.8
      comp=Z,98nm,18.9s,baz=72,slow=35
GNI   Garni              80.00  51   LR       LR       06 47 51.1
      comp=Z,35nm,18.8s,baz=234,slow=37
GNI   Garni              80.00  51⇑eP       P        06 10 51.1 +2.5
GNI                                  pmax     pmax
      comp=Z,11nm,1.1s
DLBC  Dease Lake         80.49 328   LR       LR       06 42 40.9
      comp=Z,79nm,21.3s,baz=98,slow=33
DLBC  Dease Lake         80.49 328   P        P        06 10 50.9 +0.2
      baz=85
T35M  Bob Quinn          80.73 326   P        P        06 10 52.9 +0.9
      baz=85
BELG  Belogornoye        80.83  38   LR       LR       06 43 31.7
      comp=Z,235nm,21.9s,baz=312,slow=33
BELG  Belogornoye        80.83  38⇓eP       P        06 10 52.8 +0.3
BELG                                 pmax     pmax
      comp=Z,2.0nm,1.0s
INK   Inuvik             81.11 338   LR       LR       06 43 30.7
      comp=Z,172nm,21.8s,baz=95,slow=33
INK   Inuvik             81.11 338   IAmb     IAmb     06 11 04.0
      comp=Z,11nm,0.9s
INK   Inuvik             81.11 338   P        P        06 10 54.9 +1.2
      baz=84
S34M  Telegraph Cree     81.12 327   P        P        06 10 55.7 +1.7
      baz=84
KIRV  Kirov              81.22  32   LR       LR       06 46 15.7
      comp=Z,188nm,18.3s,baz=256,slow=35
KIRV  Kirov              81.22  32⇓eP       P        06 10 54.3  -0.2
P33M  Teslin, Yukon      81.73 330   P        P        06 10 58.9 +1.6
      baz=83
ATD   Arta Tunnel        81.99  80   LR       LR       06 49 07.2
      comp=Z,123nm,18.0s,baz=327,slow=37
M31M  Drury Creek, Y     82.23 332   P        P        06 11 02.2 +2.4
      baz=82
EPYK  Eagle Plains       82.60 336   P        P        06 11 02.8 +1.1
      baz=80
N31M  Braeburn, Yuko     82.99 331   P        P        06 11 07.4 +3.6
      baz=81
O30N  Mendenhall         83.25 331   P        P        06 11 07.6 +2.4
      baz=80
M30M  Minto, Yukon       83.28 332   P        P        06 11 06.5 +1.2
      baz=80
I29M  Ogilvie Camp,      83.42 335   P        P        06 11 07.6 +1.7
      baz=79
N30M  Aishikik Lake      83.61 331   P        P        06 11 09.0 +2.0
      baz=80
HYT   Haines Junctio     83.93 331   P        P        06 11 10.0 +1.2
      baz=79
DAWY  Dawson             84.14 334   P        P        06 11 11.7 +2.0
      baz=78
YUK6  Outpost Mounta     84.32 331   P        P        06 11 12.6 +1.8
      baz=78
YUK4  Talbot Arm         84.37 331   P        P        06 11 12.4 +1.3
      baz=78
VNA3  Neumayer Olymp     84.39 170   P        P        06 11 11.2 +0.6
VNA2  Neumayer--Watz     84.52 169   P        P        06 11 11.7 +0.4
      baz=313,slow=4.3
YUK3  Moose Creek        85.12 332   P        P        06 11 17.7 +2.8
      baz=77
K27K  Chicken            85.30 334   P        P        06 11 17.8 +2.4
      baz=75
L27K  Beaver Creek,      85.43 333   IAmb     IAmb     06 11 26.6
      comp=Z,10nm,0.8s
L27K  Beaver Creek,      85.43 333   P        P        06 11 16.5 +0.3
      baz=76,SNR=6.5
M27K  Edge Creek, AK     85.63 333   IAmb     IAmb     06 11 28.5
      comp=Z,12nm,0.9s
M27K  Edge Creek, AK     85.63 333   P        P        06 11 18.6 +1.3
      baz=76
J26L  Joseph Creek       85.80 335   IAmb     IAmb     06 11 28.1
      comp=Z,14nm,0.8s
J26L  Joseph Creek       85.80 335   P        P        06 11 19.3 +1.2
      baz=74,SNR=7.8
BARN  Barnard Glacie     85.86 331   IAmb     IAmb     06 11 28.6
      comp=Z,8.8nm,0.8s
SNAA  Sanae              85.98 169   P        P        06 11 18.9 +0.3
SNAA  Sanae              85.98 169⇑eP       P        06 11 18.5  -0.1
SNAA                                 pmax     pmax
      comp=Z,18nm,2.6s
L26K  Log Cabin Wild     86.11 333   IAmb     IAmb     06 11 29.8
      comp=Z,6.8nm,0.8s
L26K  Log Cabin Wild     86.11 333   P        P        06 11 21.3 +1.7
      baz=74,SNR=5.9
SCRK  Sand Creek         86.12 334   IAmb     IAmb     06 11 29.4
      comp=Z,8.1nm,0.9s
SCRK  Sand Creek         86.12 334   P        P        06 11 21.5 +1.7
      baz=74,SNR=6.0
M26K  Nabesna, AK        86.12 333   P        P        06 11 23.5 +3.8
      baz=74
MCARA McCarthy VSAT      86.41 332   P        P        06 11 22.3 +1.3
      baz=74
ARU   Arti               86.45  33   LR       LR       06 48 30.4
      comp=Z,178nm,19.4s,baz=292,slow=35
ARU   Arti               86.45  33d iP      P        06 11 23.2 +1.9
ARU                                                    06 14 42.3
ARU                                  S        S        06 21 49.4  -7.3
ARU                                  SS       SS       06 27 38.9 +2.5
ARU                                  pmax     pmax
      comp=Z,5.0nm,1.1s
J25K  Salcha River,      86.52 335   IAmb     IAmb     06 11 31.8
      comp=Z,12nm,0.8s
J25K  Salcha River,      86.52 335   P        P        06 11 22.0 +0.4
      baz=72,SNR=7.0
RIDG  Independent Ri     86.56 334   P        P        06 11 23.4 +1.6
      baz=73
TOLK  Toolik Lake Re     86.77 340   P        P        06 11 23.6 +0.9
      baz=69,SNR=7.6
K24K  Donnelly Dome      86.93 335   P        P        06 11 26.2 +2.6
      baz=72,SNR=6.1
PAX   Paxson             87.06 334   IAmb     IAmb     06 11 34.6
      comp=Z,13nm,0.8s
PAX   Paxson             87.06 334   P        P        06 11 26.4 +2.1
      baz=72,SNR=7.6
N25K  Chitina, Valde     87.07 332   P        P        06 11 25.6 +1.2
      baz=73
ILAR  Eielson Array      87.09 336   P        P        06 11 24.6 +0.3
      comp=Z,3.1nm,0.8s,baz=67,slow=4.4,SNR=16
ILAR                                 LR       LR       06 47 22.2
      comp=Z,76nm,21.7s,baz=74,slow=34
      comp=Z,3.1nm,0.8s
HARP  HAARP              87.09 333   P        P        06 11 26.9 +2.6
      baz=73,SNR=5.1
H24K  Noodor Dome        87.13 337   IAmb     IAmb     06 11 35.4
      comp=Z,9.3nm,0.9s
H24K  Noodor Dome        87.13 337   P        P        06 11 26.7 +2.2
      baz=70,SNR=7.3
HDA   Harding Lake       87.23 335   IAmb     IAmb     06 11 35.5
      comp=Z,7.4nm,0.9s
HDA   Harding Lake       87.23 335   P        P        06 11 26.9 +1.9
      baz=71
BMRM  Bremner River      87.26 332   P        P        06 11 26.9 +1.7
      baz=73
TROLL Troll, Antarti     87.32 168   P        P        06 11 24.0  -1.3
COLA  College            87.44 336⇑eP       P        06 11 27.8 +1.9
COLA                                 pmax     pmax
      comp=Z,8.0nm,0.8s
AKTO  Aktyubinsk         87.57  39   LR       LR       06 48 19.7
      comp=Z,148nm,21.1s,baz=289,slow=34
H23K  Yukon River        87.78 337   IAmb     IAmb     06 11 38.0
      comp=Z,7.4nm,0.8s
H23K  Yukon River        87.78 337   P        P        06 11 29.8 +2.2
      baz=69
DHY   Denali Highway     87.85 334   IAmb     IAmb     06 11 38.7
      comp=Z,5.5nm,0.9s
DHY   Denali Highway     87.85 334   P        P        06 11 31.6 +3.4
      baz=71
WAT6  Susitna Watana     88.17 334   P        P        06 11 30.8 +1.1
      baz=70
BELA  Belgrano 2         88.46 179   P        P        06 11 30.8 +0.3
MLY   Manley             88.53 336   P        P        06 11 32.6 +1.4
      baz=68
I21K  Tanana             88.96 337   P        P        06 11 34.6 +1.4
      baz=67
BPAW  Bear Paw Mtn.      88.99 336   P        P        06 11 34.7 +1.3
      baz=68,SNR=5.6
H21K  Melozitna Rive     89.08 337   P        P        06 11 33.8 +0.1
H21K                                 IAmb     IAmb     06 11 44.2
      comp=Z,6.8nm,1.1s
H21K  Melozitna Rive     89.08 337   P        P        06 11 33.7  -0.1
      baz=66
GEYT  Alibeck            90.63  51   LR       LR       06 55 38.2
      comp=Z,28nm,18.4s,baz=170,slow=38
UOSS  Minazif            92.02  64   P        P        06 11 50.9 +2.6
KDAK  Kodiak Island      92.20 330   LR       LR       06 50 52.3
      comp=Z,50nm,19.4s,baz=101,slow=34
WSAR  Wadi Sarin         94.56  65   LR       LR       06 57 37.4
      comp=Z,141nm,18.2s,baz=303,slow=38
TIXI  Tiksi              97.60   3⇑eP       P        06 12 11.6  -1.2
TIXI                                 pmax     pmax
      comp=Z,1.0nm,1.4s
KURBB Kurchatov Arra     99.62  34   LR       LR       06 56 00.6
      comp=Z,160nm,20.3s,baz=233,slow=35
MKAR  Makanchi Array    103.74  36   PKKPbc   PKKPbc   06 28 51.5  +18
      comp=Z,0.5nm,0.7s,baz=96,slow=4.7,SNR=4.7
LZH   Lanzhou           122.92  34  ⇑PKP      PKiKP    06 17 39.8 +3.8
LZH                                  sPKP              06 17 52.5
CD2   Chengdu           126.61  38   PKP      PKPdf    06 17 42.0  -0.8
PZH   PanZhiHua         128.30  44   PKP      PKPdf    06 17 45.5  -0.7
CMAR  Chiang Mai Arr    131.04  54   PKP      PKiKP    06 17 52.0  -0.4
      comp=Z,1.4nm,0.6s,baz=286,slow=3.5,SNR=6.1
DZM   Mont Dzumac       151.36 243   PKPbc    PKiKP    06 18 34.0 +0.1
      comp=Z,14nm,0.8s,baz=201,slow=5.4,SNR=7.5
ASAR  Alice Springs     166.19 160   PKP      PKPdf    06 18 47.6 +2.8
      comp=Z,0.4nm,0.7s,baz=174,slow=3.5,SNR=3.3
ASAR                                 PKPab    PKPab    06 19 46.0 +0.7
      comp=Z,1.1nm,0.9s,baz=192,slow=5.0,SNR=7.2
WRA   Warramunga Arr    169.74 155   PKP      PKPdf    06 18 47.9 +0.6
      comp=Z,0.6nm,0.9s,baz=204,slow=4.4,SNR=3.1
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*IDC **29** 06:18:05.9±2.6, 10°.40S×161°.37E, h86^{km}±21^{km}, mb3.4/6, mbtmp3.8/7 Error ellipse: s-maj=29.1km s-min=25.1km az=108.0*

ISC 29 06:17:58.9±0.9**, 10°.8S**±0°.1×**161°.8E**±0°.1**, h35^{km}, n8, σ1^{s}71**/9**, mb3.7**/6**, Bougainville-Solomon Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time     Res
                                     Op       ISC      h  m  s    ISC
HNR   Honiara             2.24 306   P        Pn       06 18 33.9 +0.3
      339nm,0.3s,baz=212,slow=4.9,SNR=16
HNR                                  S        Sn       06 19 01.4 +1.4
      919nm,0.4s,baz=177,slow=12,SNR=4.1
DZM   Mont Dzumac        12.10 159   P        P        06 21 01.6 +0.4
      2.1nm,0.3s,baz=25,slow=9.8,SNR=30
WRA   Warramunga Arr     27.96 248   P        P        06 23 47.1 +0.7
      0.3nm,0.4s,baz=75,slow=8.7,SNR=10
      0.3nm,0.4s
ASAR  Alice Springs      29.49 241   P        P        06 23 59.9  -0.2
      0.2nm,0.4s,baz=64,slow=10,SNR=2.1
      0.2nm,0.4s
SONM  Songino Array      76.18 325   P        P        06 29 42.4  -1.2
      1.2nm,0.6s,baz=146,slow=5.8,SNR=5.4
      1.2nm,0.6s
ILAR  Eielson Array      84.52  20   P        P        06 30 26.9  -1.0
      0.3nm,0.6s,baz=247,slow=5.0,SNR=6.1
      0.3nm,0.6s
NVAR  Mina Array Bea     88.84  51   P        P        06 30 52.6 +2.8
      0.3nm,0.7s,baz=237,slow=8.6,SNR=4.0
      0.3nm,0.7s
MKAR  Makanchi Array     90.67 317   P        P        06 30 55.9  -2.2
      0.5nm,0.6s,baz=100,slow=6.2,SNR=6.2
      0.5nm,0.6s
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*SCB **29** 06:34:03.7±1.1, 20°.64S×63°.28W, h605^{km}±18^{km}, ML4.8/5, MW4.2, Error ellipse: s-maj=8.4km s-min=5.9km az=0.0*
*VAO **29** 06:34:13.9±0.2, 20°.53S×63°.22W, h563^{km}, mb4.4*
*NEIC **29** 06:34:13.9±1.4, 20°.51S±0°.09×63°.3W±0°.1, h566^{km}±6^{km}, mb4.3/206, Error ellipse: s-maj=15.2km s-min=13.2km az=79.0*
*IDC **29** 06:34:14.2±0.8, 20°.52S×63°.17W, h566^{km}±9^{km}, mb3.7/11, mbtmp4.7/18, Error ellipse: s-maj=12.9km s-min=11.8km az=10.0*

ISC 29 06:34:13.7±0.4**, 20°.52S**±0°.05×**63°.25W**±0°.05**, h564^{km}, n361, σ1^{s}01**/300**, mb4.3**/101**, 1C, Southern Bolivia**

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Code  Station Name        Δ°   AZ°   Phase ID            Time     Res
                                     Op       ISC      h  m  s    ISC
MOCB  Mochara             2.35 251   P        P        06 35 24.7  -2.2
MOCB                                 IAML              06 36 39.9
      116nm,0.8s
YJA   Yavi                2.68 232   P        P        06 35 26.4  -2.2
SIV   San Ignacio         4.95  25   P        P        06 35 45.3 +1.1
      58nm,0.4s,baz=200,slow=7.7,SNR=348
SIV                                  S        S        06 36 58.3 +0.4
      10nm,0.8s,baz=110,slow=18,SNR=6.3
SIV   San Ignacio         4.95  25   P        P        06 35 44.7 +0.5
AF01  San Pedro de A      5.19 241   P        P        06 35 46.8 +0.5
PB08  IPOC Station P      5.56 273   P        P        06 35 49.9 +0.3
PB08                                 S        S        06 37 05.6  -2.2
PB08  IPOC Station P      5.56 273   P        P        06 35 49.1  -0.5
LVC   Limon Verde         5.67 247   P        P        06 35 50.7 +0.2
      46nm,0.3s,baz=61,slow=5.8,SNR=171
LVC                                  S        S        06 37 06.9  -2.7
      63nm,0.5s,baz=259,slow=22,SNR=35
LVC   Limon Verde         5.67 247   P        P        06 35 50.5  -0.1
LVC                                  S        S        06 37 07.6  -1.9
LVC   Limon Verde         5.67 247   P        P        06 35 50.4  -0.1
LVC   Limon Verde         5.67 247  eP        P        06 35 50.3  -0.1
LVC                                 eS        S        06 37 07.8  -1.7
PB09  IPOC Station P      5.74 256   P        P        06 35 51.5 +0.6
PB09                                 S        S        06 37 08.9  -1.4
PB09  IPOC Station P      5.74 256   P        P        06 35 51.2 +0.3
BBOE  La Paz, Chanca      5.81 309   P        P        06 35 52.4 +0.3
PB01  IPOC Station P      5.86 264   P        P        06 35 51.6  -0.3
PB01  IPOC Station P      5.86 264   P        P        06 35 51.7  -0.3
PB11  IPOC Station P      6.07 276   P        P        06 35 53.0  -0.8
PB11  IPOC Station P      6.07 276   P        P        06 35 53.7  -0.2
LPAZ  La Paz              6.26 311   P        P        06 35 56.6 +0.4
      89nm,0.4s,baz=95,slow=4.8,SNR=987
LPAZ                                 S        S        06 37 17.8  -1.9
      59nm,0.5s,baz=256,slow=21,SNR=18
LPAZ  La Paz              6.26 311   P        P        06 35 56.2 +0.1
LPAZ  La Paz              6.26 311   P        P        06 35 57.0 +0.8
LPAZ  La Paz              6.26 311  eP        P        06 35 56.6 +0.4
LPAZ                                eS        S        06 37 17.1  -2.6
PB02  IPOC Station P      6.27 261   P        P        06 35 55.3  -0.3
PB02  IPOC Station P      6.27 261   P        P        06 35 55.7 +0.1
PB02                                 IAML              06 37 29.2
      73nm,0.7s
PB06  IPOC Station P      6.28 249   P        P        06 35 55.6  -0.1
PB06  IPOC Station P      6.28 249   P        P        06 35 56.1 +0.4
PB16  IPOC Station P      6.29 289   P        P        06 35 57.0 +0.5
PB16  IPOC Station P      6.29 289   P        P        06 35 57.2 +0.8
PB07  IPOC Station P      6.32 258   P        P        06 35 55.8  -0.3
PB07  IPOC Station P      6.32 258   P        P        06 35 56.1   0.0
PB07                                 IAML              06 37 31.5
      90nm,0.5s
PB15  IPOC Station P      6.37 244   P        P        06 35 57.0 +0.4
PB15  IPOC Station P      6.37 244   P        P        06 35 56.9 +0.3
PB15                                 S        S        06 37 20.5  -0.3
PB15                                 IAML              06 37 23.8
      68nm,0.4s
BBOD  La Paz, Gloria      6.38 306   P        P        06 35 58.3 +1.2
PTLB  Pontes e Lacer      6.38  38  eP        P        06 35 57.5 +0.9
PTLB                                eS        S        06 37 20.6 +0.1
TA01  Diego Aracena       6.50 268   P        P        06 35 56.3  -1.3
PB04  IPOC Station P      6.68 253   P        P        06 35 59.0  -0.5
PB04  IPOC Station P      6.68 253   P        P        06 35 59.4  -0.1
PB04                                 IAML              06 37 33.7
      118nm,0.5s
PB12  IPOC Station P      6.94 285   P        P        06 36 01.1  -0.8
AQDB  Aquidauana          7.07  91  eP        P        06 36 03.5 +0.5
AQDB                                eS        S        06 37 32.6 +0.2
PB10  IPOC Station P      7.41 245   P        P        06 36 05.2  -0.9
PB10  IPOC Station P      7.41 245   P        P        06 36 06.2 +0.1
GO02  Mina Guanaco        7.46 230   P        P        06 36 06.1  -0.8
PB14  IPOC Station P      7.78 237   P        P        06 36 09.7  -0.4
CPUP  Villa Florida       7.94 138   P        P        06 36 11.6 +0.4
      36nm,0.5s,baz=326,slow=9.1,SNR=143
CPUP  Villa Florida       7.94 138   P        P        06 36 10.9  -0.2
CPUP  Villa Florida       7.94 138   P        P        06 36 11.9 +0.7
CPUP  Villa Florida       7.94 138  eP        P        06 36 11.6 +0.4
VILB  Vilhena             8.07  22  eP        P        06 36 13.1 +0.4
VILB                                eS        S        06 37 50.2 +0.1
AC02  Maricunga           8.28 219   P        P        06 36 15.6 +0.4
PP1B  Ponte de Pedra      8.43  71  eP        P        06 36 16.7 +0.5
SALV  Santo Antonio       8.52  59  eP        P        06 36 17.6 +0.5
AC01  Pan de Azucar       8.78 229   P        P        06 36 19.6   0.0
MCR1  Marechal Candi      9.38 116  eP        P        06 36 26.5 +0.9
AC06  Mina Casimiro       9.41 222   P        P        06 36 25.7  -0.2
NBRS  Nobres              9.42  50  eP        P        06 36 26.5 +0.3
GO03  Copiap              9.51 221   P        P        06 36 26.9   0.0
C2SB  Chapadao do Su      9.96  82  eP        P        06 36 33.0 +1.5
TRCB  Terra Rica         10.13 105   P        P        06 36 33.4 +0.2
TRCB  Terra Rica         10.13 105  eP        P        06 36 33.9 +0.7
AC04  Llanos de Chal     10.46 221   P        P        06 36 36.2  -0.3
LCO   Las Campanas       10.83 217   P        P        06 36 40.9 +0.3
PDRB  Porto dos Gac      10.84  36  eP        P        06 36 40.4  -0.2
ITQB  Itaqui             10.91 148   P        P        06 36 40.7  -0.3
ITQB  Itaqui             10.91 148  eP        P        06 36 40.8  -0.3
ETMB  Extrema            11.02 345  eP        P        06 36 43.0 +0.7
PTGB  Pitanga            11.14 114  eP        P        06 36 43.9 +0.3
DVLD  Doverlandia        11.19  72  eP        P        06 36 43.7  -0.5
PCMB  Pacaembu           11.24  98  eP        P        06 36 44.7 +0.1
CO01  Juntas del Tor     11.27 212   P        P        06 36 46.3 +1.3
SAML  Samuel             11.50   0   P        P        06 36 47.6 +0.3
GO04  Tololo Observa     11.79 214   P        P        06 36 50.4 +0.1
CO05  La Serena          11.83 216   P        P        06 36 50.0  -0.4
ARAG  Araguaiana, MT     11.87  68  eP        P        06 36 49.4  -1.7
CLDB  Colider            11.97  38  eP        P        06 36 51.6  -0.5
CLDB                                eS        S        06 39 00.9  -1.6
ZON   Zonda              12.02 203   P        P        06 36 52.7 +0.2
ITRB  Iturama            12.13  88  eP        P        06 36 53.8   0.0
ITAB  Concordia          12.17 125   P        P        06 36 53.2  -0.8
ITAB  Concordia          12.17 125  eP        P        06 36 53.4  -0.6
CO03  El Pedregal        12.27 212   P        P        06 36 55.1   0.0
CPSB  Cacapava Do Su     13.24 140  eP        P        06 37 04.3  -0.7
BB19B Bebedouro          13.78  95  eP        P        06 37 09.8  -0.9
PLTB  Pedras Altas       14.15 144   P        P        06 37 12.7  -1.6
PLTB  Pedras Altas       14.15 144  eP        P        06 37 12.7  -1.6
CNLB  Canela             14.24 130  eP        P        06 37 13.6  -1.8
SNDB  Serra Nova Dou     14.27  55  eP        P        06 37 14.9  -0.8
IPMB  Ipameri, GO        14.42  82  eP        P        06 37 16.2  -1.1
MT03  Universidad Ad     14.45 205   P        P        06 37 17.6 +0.2
MT05  Renca              14.45 206   P        P        06 37 17.2  -0.2
BDFB  Brasilia           15.27  74   P        P        06 37 25.1  -0.7
      14nm,0.5s,baz=246,slow=9.8,SNR=37
BDFB  Brasilia           15.27  74   P        P        06 37 25.2  -0.7
BDFB                                 IAmb     IAmb     06 37 28.0
      comp=Z,16nm,0.9s
BDFB  Brasilia           15.27  74  eP        P        06 37 25.1  -0.7
VAO   Valinhos           15.33 102  eP        P        06 37 25.3  -1.0
NNA   Nana               15.56 301   P        P        06 37 28.9 +0.3
      comp=Z,24nm,0.7s,baz=137,slow=8.3,SNR=14
NNA   Nana               15.56 301   P        P        06 37 29.2 +0.5
GO05  Huala              16.34 206   P        P        06 37 35.6  -0.2
GO05                                 IAmb     IAmb     06 37 36.6
      comp=Z,14nm,0.8s
PEXB  Peixe              16.59  62  eP        P        06 37 38.3  -0.1
MACA  Manacapuru-AM      17.43   9  eP        P        06 37 46.0 +0.1
TBTG  Tabatinga, AM      17.48 337  eP        P        06 37 46.5 +0.2
TRQA  Tornquist          17.52 177   P        P        06 37 46.4   0.0
TRQA                                 IAmb     IAmb     06 37 46.8
      comp=Z,6.5nm,0.8s
TRQA  Tornquist          17.52 177  eP        P        06 37 46.2  -0.2
ITTB  Itaituba           17.64  25  eP        P        06 37 48.1 +0.3
JANB  Januaria           18.82  76  eP        P        06 37 58.9 +0.2
SMTB  Santa Maria do     19.05  55  eP        P        06 38 01.3 +0.6
PRPB  Parauapebas        19.32  44  eP        P        06 38 03.0  -0.2
SDBA  SAO DESIDERIO      19.34  68  eP        P        06 38 03.9 +0.6
ATAH  Atahualpa          19.80 310   P        P        06 38 10.4 +2.4
      comp=Z,8.5nm,0.6s,baz=24,slow=23,SNR=6.1
MALB  Monte Alegre       20.52  26  eP        P        06 38 14.0   0.0
PLCA  Paso Flores        21.09 196   P        P        06 38 19.3 +0.3
      comp=Z,1.6nm,0.5s,baz=14,slow=10,SNR=14
      comp=Z,1.6nm,0.5s
PLCA  Paso Flores        21.09 196   P        P        06 38 19.0 +0.1
PLCA                                 IAmb     IAmb     06 39 07.7
      comp=Z,26nm,2.0s
PLCA  Paso Flores        21.09 196  eP        P        06 38 19.2 +0.3
LL04  Puerto Octay       21.78 199   P        P        06 38 24.5  -0.5
NAN01 Guarapari, ES      22.00  87  eP        P        06 38 27.5 +0.3
GUA01 Guaratinga, BA     22.56  84  eP        P        06 38 32.9 +0.6
MCPB  Macapa, AP         22.83  30  eP        P        06 38 34.3  -0.3
BOAV  Boa Vista          22.93   7  eP        P        06 38 35.7 +0.1
TMAB  Tom-Au,PA,Br       23.32  41  eP        P        06 38 40.2 +1.2
GDU01 Guandu, BA         23.59  77  eP        P        06 38 41.3  -0.2
NBPN  Ponto Novo - B     24.15  70  eP        P        06 38 46.4  -0.1
OTAV  Otavalo            25.43 322   P        P        06 38 57.2  -1.0
OTAV                                 IAmb     IAmb     06 39 11.6
      comp=Z,3.5nm,0.8s
OTAV  Otavalo            25.43 322  eP        P        06 38 59.1 +0.8
GARC  Garzon, Huila      25.56 331  eP        P        06 38 58.0  -1.2
ROSB  Rosrio             25.58  49  eP        P        06 38 58.8  -0.3
GCUF  Volcan Galeras     25.64 326  eP        P        06 39 01.0 +0.8
NBLA  Lagarto - SE       26.23  73  eP        P        06 39 04.4  -0.4
NBPS  Pedro II - PI      26.58  56  eP        P        06 39 08.1 +0.2
NBMA  Muriti-CE          27.06  65  eP        P        06 39 12.7 +0.5
NBPB  Pedra_Branca-C     27.38  60  eP        P        06 39 15.5 +0.6
ROSC  El Rosal           27.45 335   P        P        06 39 16.4 +0.6
      comp=Z,17nm,0.5s,baz=20,slow=12,SNR=11
      comp=Z,17nm,0.5s
ROSC  El Rosal           27.45 335   P        P        06 39 16.5 +0.6
ROSC  El Rosal           27.45 335  eP        P        06 39 15.8   0.0
MDP   Montagnes des      27.51  23   P        P        06 39 16.1 +0.2
      comp=Z,10.0nm,0.7s,baz=189,slow=10,SNR=18
      comp=Z,10.0nm,0.7s
RUSC  La Rusia           27.97 339  eP        P        06 39 19.1  -1.5
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SPBC San Pablo de B    28.10 337 eP    P      06 39 19.6 -1.6
NBAN Anadia - AL       28.14  71 eP    P      06 39 21.3 -0.2
NORC Norcasia          28.32 335 eP    P      06 39 21.0 -2.1
PLMC San Jos del P     28.32 332⇑eP    P      06 39 21.4 -1.7
NBMO Morrinhos-CE      28.35  56 eP    P      06 39 22.9 -0.4
BARC Barichara         28.65 339 eP    P      06 39 24.6 -1.6
NBCA Caruaru-PE        29.01  69 eP    P      06 39 29.3 +0.1
PTBC PUERTO BERRIO,    29.06 337 eP    P      06 39 25.1 -4.4
CBOC Ciudad Bolivar    29.06 333 eP    P      06 39 27.7 -2.0
PAMC Pamplona, Colo    29.20 340 eP    P      06 39 29.7 -1.5
BRRC Barranca, Sant    29.32 338 eP    P      06 39 27.8 -3.8
BAUV El Baul           29.65 350  P    P      06 39 34.1 -0.5
SDV  Santo Domingo     30.11 345 eP    P      06 39 37.7 -1.0
OCAC Ocana             30.24 340  P    P      06 39 36.8 -3.0
OCAC                              IAmb IAmb   06 39 39.2
     comp=Z,2.4nm,0.5s
OCAC Ocana             30.24 340 eP    P      06 39 36.0 -3.8
RCBR Riachuelo         30.29  65  P    P      06 39 40.1  0.0
     comp=Z,21nm,0.9s,baz=23,slow=9.8,SNR=7.2
     comp=Z,21nm,0.9s
RCBR Riachuelo         30.29  65  P    P      06 39 38.5 -1.7
BIRV Birongo           30.94 354  P    P      06 39 45.2 -0.4
MG05 Puerto Natales    31.93 191  P    P      06 39 54.9 +1.3
ARGC Ariguani, Magd    32.06 339 eP    P      06 39 51.6 -3.6
BCIP Isla Barro Col    33.71 329  P    P      06 40 08.6 -0.5
SLBI Saint Lucia, B    34.40   4 eP    P      06 40 15.9 +1.2
SLBI                             eS    P      06 40 20.7 +5.9
MPOM Morne Pois Mar    34.82   4 eP    P      06 40 18.0 -0.3
MVM  Montagne Vaucl    34.93   4 eP    P      06 40 18.9 -0.4
LPMF Morne Lapointe    34.94   4 eP    P      06 40 18.8 -0.5
BAMF Morne Balai       35.17   4 eP    P      06 40 21.1 -0.3
JTS  Las Juntas de     37.32 323  P    P      06 40 40.6 +1.6
ORTG Ortega, Santa     37.67 323  P    P      06 40 43.5 +1.6
MLPR Magueyes Islan    38.43 354  P    P      06 40 46.8 -1.1
OBIP Obispado Ponce    38.46 355  P    P      06 40 47.1 -1.1
CRPR Cabo Rojo, PR     38.47 354  P    P      06 40 47.0 -1.2
TLIG Tlapa             51.31 315  P    P      06 42 27.1 +0.4
TLIG                              IAmb IAmb   06 42 28.3
     comp=Z,6.1nm,0.8s
352A Blakely           55.73 338  P    P      06 42 57.1 -0.5
Y60A Bolivia           56.06 345  P    P      06 42 59.2 -0.6
BRAL Brewton           56.24 335  P    P      06 43 00.8 -0.3
     baz=153
GOGA Godfrey           56.99 340  P    P      06 43 05.2 -1.1
     baz=157
LRAL Lakeview Retre    57.88 336  P    P      06 43 11.3 -1.0
LRAL Lakeview Retre    57.88 336  P    P      06 43 11.1 -1.2
     baz=154
KMSC Kings Mountain    57.95 343  P    P      06 43 12.6 -0.2
     baz=160
Y49A Blount Mountai    58.41 337  IAmb IAmb   06 43 15.2
     comp=Z,12nm,0.7s
V55A Taylorsville      58.59 343  IAmb IAmb   06 43 17.8
     comp=Z,21nm,1.1s
X48A Hartselle         59.17 337  IAmb IAmb   06 43 20.9
     comp=Z,13nm,0.9s
HKT  Hockley           59.18 327  P    P      06 43 21.5 +0.5
143A Socs Landing,     59.37 332  IAmb IAmb   06 43 23.3
     comp=Z,14nm,0.8s
U54A Nelsons Funny     59.38 343  IAmb IAmb   06 43 22.9
     comp=Z,16nm,0.8s
Y45A Yeager Farm, C    59.60 335  IAmb IAmb   06 43 23.9
     comp=Z,22nm,0.8s
833A Chaparral WMA,    59.81 323  P    P      06 43 25.7 +0.4
     baz=140,SNR=8.9
NATX Nacogdoches       60.07 329  P    P      06 43 26.9 -0.1
NATX                              IAmb IAmb   06 43 28.3
     comp=Z,16nm,0.6s
NATX Nacogdoches       60.07 329  P    P      06 43 27.7 +0.7
     baz=146
OXF  Oxford            60.12 335  P    P      06 43 25.8 -1.4
OXF                               IAmb IAmb   06 43 26.8
     comp=Z,12nm,0.8s
CLTN Cedars of Leba    60.39 339  P    P      06 43 28.3 -0.7
CLTN                              IAmb IAmb   06 43 28.5
     comp=Z,6.7nm,0.6s
435B Jarrell           60.75 326  IAmb IAmb   06 43 32.4
     comp=Z,7.1nm,0.7s
435B Jarrell           60.75 326  P    P      06 43 32.2 +0.7
     baz=143
WVT  Waverly           60.95 337  P    P      06 43 31.2 -1.5
WVT                               IAmb IAmb   06 43 31.5
     comp=Z,9.0nm,0.6s
WVT  Waverly           60.95 337  P    P      06 43 31.1 -1.5
     baz=154
WLAR White Oak Lake    60.96 332  P    P      06 43 32.9 +0.1
WLAR                              IAmb IAmb   06 43 33.5
     comp=Z,9.7nm,0.7s
SNAA Sanae             61.51 162  P    P      06 43 36.3 +0.3
SNAA                              IAmb IAmb   06 45 29.3
     comp=Z,29nm,2.0s
WHTX Lake Whitney,     61.64 327  IAmb IAmb   06 43 38.0
     comp=Z,13nm,0.8s
WHTX Lake Whitney,     61.64 327  P    P      06 43 37.1 -0.2
     baz=143
JCT  Junction City     61.69 324  IAmb IAmb   06 43 38.4
     comp=Z,8.7nm,0.8s
JCT  Junction City     61.69 324  P    P      06 43 37.7  0.0
     baz=141
MCWV Mont Chateau      61.84 346  P    P      06 43 38.4 -0.1
     baz=162
MIAR Mount Ida         61.89 332  P    P      06 43 37.8 -1.0
     baz=148
P53A Whipple           62.05 344  IAmb IAmb   06 43 40.5
     comp=Z,12nm,0.8s
N58A Sunbury           62.31 348  IAmb IAmb   06 43 42.9
     comp=Z,10nm,0.8s
SSPA Standing Stone    62.34 347  P    P      06 43 41.9 +0.2
     baz=164
P52A Corning           62.38 344  P    P      06 43 41.3 -0.7
     baz=160
PBMO Poplar Bluff      62.50 336  IAmb IAmb   06 43 42.5
     comp=Z,12nm,0.8s
W39A Magazine          62.53 332  IAmb IAmb   06 43 43.3
     comp=Z,6.1nm,0.6s
W39A Magazine          62.53 332  P    P      06 43 42.7 -0.2
     baz=148
O53A New Philadelph    62.73 345  P    P      06 43 43.8 -0.3
     baz=161
P49A Miami Univ. Ec    63.02 341  P    P      06 43 44.8 -1.2
     baz=157
U40A Yellville         63.11 333  IAmb IAmb   06 43 46.5
     comp=Z,7.0nm,0.8s
U40A Yellville         63.11 333  P    P      06 43 45.9 -0.8
     baz=149,SNR=7.2
ACSO Alum Creek Sta    63.17 343  IAmb IAmb   06 43 47.1
     comp=Z,17nm,1.0s
ACSO Alum Creek Sta    63.17 343  P    P      06 43 46.4 -0.6
     baz=159
M55A Ridgway           63.33 347  IAmb IAmb   06 43 48.8
     comp=Z,16nm,1.0s
DBIC Dimbokro          63.40  71  P    P      06 43 49.0 -0.1
     comp=Z,2.9nm,0.3s,baz=251,slow=3.1,SNR=24
     comp=Z,2.9nm,0.3s
DBIC Dimbokro          63.40  71  P    P      06 43 48.9 -0.1
DBIC                              IAmb IAmb   06 44 40.7
     comp=Z,29nm,1.5s
BINY Binghamton        63.50 349  IAmb IAmb   06 43 50.2
     comp=Z,11nm,1.0s
BINY Binghamton        63.50 349  P    P      06 43 49.4 +0.3
     baz=167
HHAR Hobbs             63.51 333  IAmb IAmb   06 43 49.0
     comp=Z,8.0nm,0.8s
FVM  French Village    63.55 336  IAmb IAmb   06 43 49.0
     comp=Z,16nm,1.4s
MGMO Mountain Grove    63.55 334  IAmb IAmb   06 43 49.4
     comp=Z,11nm,0.9s
M53A WI Miller and     63.73 345  IAmb IAmb   06 43 51.1
     comp=Z,16nm,0.8s
M53A WI Miller and     63.73 345  P    P      06 43 50.3 -0.2
     baz=162,SNR=6.4
L56A Greenwood         63.73 348  IAmb IAmb   06 43 51.9
     comp=Z,14nm,1.1s
ALLY Alegheny Colle    63.80 346  IAmb IAmb   06 43 51.7
     comp=Z,14nm,0.9s
O48B Farmland          63.81 341  P    P      06 43 49.9 -1.2
     baz=157
CCM  Cathedral Cave    63.93 336  P    P      06 43 50.6 -1.3
CCM                               IAmb IAmb   06 43 50.9
     comp=Z,6.8nm,0.6s
CCM  Cathedral Cave    63.93 336  P    P      06 43 50.5 -1.4
     baz=151
TUL1 Leonard           64.02 331  IAmb IAmb   06 43 52.9
     comp=Z,8.6nm,0.8s
TUL1 Leonard           64.02 331  P    P      06 43 52.1 -0.4
     baz=146,SNR=5.7
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N49A Columbus Grove    64.15 342  IAmb IAmb   06 43 53.0
     comp=Z,11nm,0.8s
WVNY West Valley, N    64.19 347  IAmb IAmb   06 43 54.0
     comp=Z,8.8nm,0.7s
ERPA Erie              64.21 346  P    P      06 43 53.7 +0.1
     baz=163,SNR=10
S39A Bolivar           64.45 334  IAmb IAmb   06 43 55.2
     comp=Z,10nm,0.7s
J59A Piesco            64.50 351  IAmb IAmb   06 43 56.4
     comp=Z,9.5nm,0.8s
SFIN Lafayette         64.53 340  P    P      06 43 54.1 -1.5
     baz=155
R40A Maddies Statio    64.53 335  IAmb IAmb   06 43 54.9
     comp=Z,5.5nm,0.8s
P43A Skaggs, Pawnee    64.68 338  IAmb IAmb   06 43 55.7
     comp=Z,8.4nm,0.7s
L48A N Adams           65.16 343  IAmb IAmb   06 43 59.1
     comp=Z,10nm,0.8s
HDIL Hopedale          65.42 338  P    P      06 43 59.7 -1.5
     baz=153
P40A Paris             65.52 336  IAmb IAmb   06 44 01.3
     comp=Z,7.9nm,1.1s
MNTX Cornudas Mount    65.78 321  P    P      06 44 03.4 -0.3
     baz=136,SNR=5.3
MSTX Muleshoe          65.98 325  P    P      06 44 04.7 -0.3
     baz=139,SNR=7.6
AMTX Amarillo          66.09 326  P    P      06 44 05.4 -0.3
     baz=140
KSU1 Kansas State U    67.03 332  IAmb IAmb   06 44 11.1
     comp=Z,7.4nm,0.8s
KSU1 Kansas State U    67.03 332  P    P      06 44 10.4 -0.8
     baz=146
TRQ  Mont Tremblant    67.21 352  P    P      06 44 11.9 -0.4
TRQ                               IAmb IAmb   06 44 12.5
     comp=Z,7.3nm,1.0s
R32A Long Quarter,     67.42 330  IAmb IAmb   06 44 14.3
     comp=Z,10nm,0.9s
D62A Allapoint, All    67.48 356  P    P      06 44 13.7 -0.1
D62A                              IAmb IAmb   06 44 14.8
     comp=Z,9.8nm,1.1s
121A Cookes Peak, D    67.80 320  P    P      06 44 17.5 +1.1
     baz=135
JFWS Jewell Farm       67.84 339  P    P      06 44 15.5 -0.6
     baz=153,SNR=5.9
319A Douglas           67.91 318  IAmb IAmb   06 44 19.4
     comp=Z,9.7nm,0.6s
SCIA State Center      68.02 336  P    P      06 44 16.3 -0.9
     baz=150
CBKS Cedar Bluff       68.21 330  IAmb IAmb   06 44 19.5
     comp=Z,12nm,0.7s
CBKS Cedar Bluff       68.21 330  P    P      06 44 18.7 +0.1
     baz=143
K38A Parkersburg       68.49 337  IAmb IAmb   06 44 19.9
     comp=Z,12nm,0.9s
ANMO Albuquerque       68.74 323  P    P      06 44 22.8 +0.8
ANMO Albuquerque       68.74 323  P    P      06 44 22.6 +0.6
     baz=137
T25A Trinidad          69.24 326  P    P      06 44 25.7 +0.7
     baz=139
E46A Sault Ste Mari    69.25 345  P    P      06 44 23.4 -1.1
E46A                              IAmb IAmb   06 45 24.6
     comp=Z,11nm,1.3s
L34A Svendsen Farm,    69.31 334  P    P      06 44 23.9 -1.2
TUC  Tucson            69.48 318  P    P      06 44 27.4 +1.0
TUC  Tucson            69.48 318  P    P      06 44 27.4 +1.0
     baz=132
BGNE Belgrade          69.59 333  P    P      06 44 26.6 -0.1
BGNE Belgrade          69.59 333  P    P      06 44 26.4 -0.3
     baz=145
DRLN Deer Lake         69.64   4  P    P      06 44 26.6 -0.2
QSPA South Pole Qui    69.67 180  P    P      06 44 27.6 +0.5
QSPA                              IAmb IAmb   06 46 54.0
     comp=Z,16nm,1.6s
KSCO Kaye Shedlock'    69.75 328  P    P      06 44 27.6 -0.3
KSCO                              IAmb IAmb   06 44 29.1
     comp=Z,7.6nm,0.7s
KSCO Kaye Shedlock'    69.75 328  P    P      06 44 28.7 +0.8
     baz=141
I37A Lemond, Waseca    69.91 337  P    P      06 44 27.8 -0.8
E43A Lone Tree Farm    69.96 343  P    P      06 44 27.7 -1.1
E43A                              IAmb IAmb   06 44 28.8
     comp=Z,6.6nm,0.9s
SDCO Great Sand Dun    70.27 326  P    P      06 44 30.9 -0.3
SDCO Great Sand Dun    70.27 326  P    P      06 44 32.0 +0.9
     baz=138,SNR=8.9
214A Organ Pipe Nat    70.53 317  IAmb IAmb   06 44 34.8
     comp=Z,6.6nm,0.9s
214A Organ Pipe Nat    70.53 317  P    P      06 44 34.0 +1.5
     baz=131
SPMN Marine on St.     70.75 338  IAmb IAmb   06 44 33.0
     comp=Z,6.3nm,0.6s
SPMN Marine on St.     70.75 338  P    P      06 44 32.3 -1.2
     baz=151
ECSD EROS Data Cent    70.89 335  IAmb IAmb   06 44 34.9
     comp=Z,6.2nm,1.0s
ECSD EROS Data Cent    70.89 335  P    P      06 44 33.5 -0.8
     baz=147,SNR=7.8
OGNE Ogallala          70.97 330  P    P      06 44 35.4 +0.5
     baz=142
S22A 4UR Ranch, Cre    70.98 325  P    P      06 44 36.0 +0.7
     baz=137
MVCO Mesa Verde        71.52 323  IAmb IAmb   06 44 40.4
     comp=Z,9.7nm,1.2s
MVCO Mesa Verde        71.52 323  P    P      06 44 39.5 +1.1
     baz=136,SNR=5.2
F36A Milaca            71.55 338  IAmb IAmb   06 44 37.9
     comp=Z,5.1nm,0.8s
ISCO Idaho Springs     71.86 327  P    P      06 44 40.6 +0.2
ISCO Idaho Springs     71.86 327  P    P      06 44 41.4 +0.9
     baz=138,SNR=7.0
Y14A Wickenburg        71.95 318  P    P      06 44 41.1 +0.2
WUAZ Wupatki           72.01 320  P    P      06 44 42.9 +1.7
     baz=133
TOA0 Torodi Ar. Sit    72.06  68  P    P      06 44 41.2 -0.6
TOA0                              IAmb IAmb   06 44 42.0
     comp=Z,6.8nm,0.5s
TORD Torodi Ar. Bea    72.06  68  P    P      06 44 41.5 -0.3
     comp=Z,3.3nm,0.3s,baz=254,slow=5.7,SNR=59
     comp=Z,3.3nm,0.3s
TORD Torodi Ar. Bea    72.06  68  P    P      06 44 41.5 -0.3
TORD                              IAmb IAmb   06 44 42.4
     comp=Z,6.8nm,0.9s
SMCO Snowmass          72.11 326  IAmb IAmb   06 44 44.1
     comp=Z,9.9nm,1.2s
PV15 Paradox Valley    72.31 324  IAmb IAmb   06 44 45.4
     comp=Z,6.7nm,0.9s
N23A Red Feather La    72.84 327  P    P      06 44 46.2 +0.2
     baz=138
U15A North Rim         73.17 320  IAmb IAmb   06 44 50.7
     comp=Z,5.3nm,0.8s
BC3  Big Chuckawall    73.33 317  P    P      06 44 50.1 +1.3
     baz=130
IRM  Iron Mountain     73.45 317  P    P      06 44 50.8 +1.4
     baz=130
O20A White River Ci    73.47 326  IAmb IAmb   06 44 51.5
     comp=Z,9.5nm,0.8s
O20A White River Ci    73.47 326  P    P      06 44 50.8 +1.2
     baz=136,SNR=10.0
MONP2 Monument Peak    73.48 315  P    P      06 44 51.0 +1.2
     baz=129
B35A Bob, Littlefor    73.79 339  IAmb IAmb   06 44 50.8
     comp=Z,6.8nm,0.5s
BELC Belle Mtn. Jos    73.89 317  P    P      06 44 53.5 +1.4
     baz=129
SRU  San Rafael Swe    73.99 324  IAmb IAmb   06 44 54.3
     comp=Z,8.7nm,0.6s
RWWY Rawlins           74.07 327  IAmb IAmb   06 44 55.3
     comp=Z,8.9nm,1.0s
GMRC Granite Mounta    74.17 317  P    P      06 44 55.3 +1.7
     baz=130,SNR=9.4
P18A Preston Nutter    74.19 324  IAmb IAmb   06 44 55.9
     comp=Z,10nm,0.7s
MTPU Mount Pierson     74.20 322  IAmb IAmb   06 44 56.0
     comp=Z,4.8nm,0.8s
P17A Butcher Ranch,    74.36 324  IAmb IAmb   06 44 56.5
     comp=Z,8.5nm,0.9s
RSSD Black Hills       74.37 331  P    P      06 44 54.7 +0.1
     baz=141
MURC Murrieta          74.42 316  P    P      06 44 56.4 +1.5
     baz=128
K22A Casper            74.44 328  P    P      06 44 55.5 +0.5
     baz=138
AGMN Agassiz Nation    74.46 338  IAmb IAmb   06 44 55.0
     comp=Z,6.1nm,0.8s
AGMN Agassiz Nation    74.46 338  P    P      06 44 54.4 -0.4
     baz=148,SNR=7.2
RDMU Red Mountain      74.49 325  IAmb IAmb   06 44 57.0
     comp=Z,9.3nm,0.7s
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SCHQ Schefferville     75.10 358  P    P      06 44 57.9 -0.2
     comp=Z,5.2nm,0.7s,baz=201,slow=4.7,SNR=18
     comp=Z,5.2nm,0.7s
GSC  Goldstone, Bar    75.23 317  P    P      06 45 00.9 +1.4
     baz=129
MDND Maddock           75.47 336  P    P      06 45 00.7 +0.3
     baz=145,SNR=16
PSUT Pine Spring       75.50 321  IAmb IAmb   06 45 03.4
     comp=Z,6.2nm,0.8s
JLU  Jordanelle        75.53 324  IAmb IAmb   06 45 03.2
     comp=Z,6.5nm,0.7s
EDW2 Edwards Air Fo    75.73 316  P    P      06 45 03.0 +0.7
     baz=128
LRMC Laurel Mtn Rad    75.90 317  P    P      06 45 04.3 +1.1
     baz=128
CCAC Calif City Air    75.91 316  IAmb IAmb   06 45 05.4
     comp=Z,8.4nm,0.8s
TPNV Topopah Spring    75.92 319  P    P      06 45 05.2 +1.9
     baz=130,SNR=5.7
FURC Furnace Creek,    75.99 318  P    P      06 45 05.4 +1.9
     baz=129
DUG  Dugway, Tooele    76.01 323  P    P      06 45 05.2 +1.4
     baz=133,SNR=5.5
BW06 Boulder Array     76.05 327  P    P      06 45 04.2 +0.2
     baz=136
PDAR Pinedale Array    76.05 327  P    P      06 45 04.2 +0.2
     comp=Z,2.3nm,0.6s,baz=126,slow=8.4,SNR=28
     comp=Z,2.3nm,0.6s
ULM  Lac du Bonnet     76.13 339  P    P      06 45 03.5 -0.5
     comp=Z,5.1nm,0.5s,baz=145,slow=4.8,SNR=8.7
     comp=Z,5.1nm,0.5s
ULM  Lac du Bonnet     76.13 339  IAmb IAmb   06 45 04.0
     comp=Z,5.9nm,0.7s
HWUT Hardware Ranch    76.29 325  IAmb IAmb   06 45 06.6
     comp=Z,5.6nm,0.6s
R11A Troy Canyon, C    76.41 320  P    P      06 45 07.6 +1.6
     baz=130,SNR=8.8
ISA  Isabella, Lake    76.52 317  P    P      06 45 08.0 +1.5
     baz=128
GRAC Grapevine Rang    76.64 318  P    P      06 45 08.6 +1.4
     baz=129
AHID Auburn Hatcher    76.85 326  IAmb IAmb   06 45 09.9
     comp=Z,7.2nm,0.8s
PKM  Mcpherson Peak    76.93 315  P    P      06 45 10.0 +1.1
     baz=127
VES  Vestal, Richgr    77.02 316  P    P      06 45 10.7 +1.5
     baz=127
TPH  Tonopah           77.23 319  IAmb IAmb   06 45 12.7
     comp=Z,19nm,1.0s
LAO  LASA Array        77.33 331  P    P      06 45 10.8 +0.1
     baz=139
FLWY Flagg Ranch       77.57 327  IAmb IAmb   06 45 14.2
     comp=Z,6.3nm,0.8s
RLMT Red Lodge         77.60 329  IAmb IAmb   06 45 13.3
     comp=Z,5.2nm,0.6s
RLMT Red Lodge         77.60 329  P    P      06 45 13.1 +0.7
     baz=136,SNR=7.9
H17A Grant Village     77.73 327  P    P      06 45 14.2 +1.0
     baz=135
OMMB Old Mammoth Mi    78.05 318  P    P      06 45 15.3 +0.3
NVAR Mina Array Bea    78.11 319  P    P      06 45 16.4 +1.1
     comp=Z,1.2nm,0.6s,baz=139,slow=5.2,SNR=16
     comp=Z,1.2nm,0.6s
YMR  Madison River     78.12 327  IAmb IAmb   06 45 17.4
     comp=Z,5.4nm,0.8s
LHV  Little Huntoon    78.13 319  IAmb IAmb   06 45 18.1
     comp=Z,24nm,1.9s
KVN  Kaiserville       78.37 319  IAmb IAmb   06 45 18.4
     comp=Z,5.3nm,0.7s
YERR Yerington         79.03 319  IAmb IAmb   06 45 22.5
     comp=Z,5.7nm,0.8s
BOZ  Bozeman (W)       79.11 328  P    P      06 45 20.6 +0.3
     baz=135
HLID Hailey            79.16 325  IAmb IAmb   06 45 23.0
     comp=Z,7.7nm,0.8s
HLID Hailey            79.16 325  P    P      06 45 22.2 +1.5
     baz=132,SNR=15
PNTR Pine Nut          79.32 319  IAmb IAmb   06 45 24.2
     comp=Z,9.3nm,0.8s
EGMT Eagleton          79.93 330  IAmb IAmb   06 45 25.4
     comp=Z,9.2nm,1.1s
EGMT Eagleton          79.93 330  P    P      06 45 24.6 +0.1
     baz=136
PLID Pearl Lake        81.03 325  P    P      06 45 31.3 +0.9
MSO  Missoula          81.12 327  P    P      06 45 30.7  0.0
     baz=133
J08A Circle Bar Ran    81.28 323  IAmb IAmb   06 45 34.5
     comp=Z,7.8nm,0.8s
BMO  Blue Mountains    81.58 324  IAmb IAmb   06 45 35.2
     comp=Z,15nm,1.9s
PINE Pine Mountain     82.96 322  IAmb IAmb   06 45 42.6
     comp=Z,4.9nm,0.8s
I05D Terrebonne, OR    83.52 322  P    P      06 45 44.3 +1.4
     baz=127
EDM  Edmonton          85.23 332  IAmb IAmb   06 45 51.2
     comp=Z,6.8nm,0.5s
YKA  Yellowknife Ar    92.11 339  P    P      06 46 22.8  0.0
     comp=Z,2.0nm,0.5s,baz=126,slow=4.8,SNR=10
     comp=Z,2.0nm,0.5s
WRA  Warramunga Arr   136.26 204  PKP  PKPdf  06 52 32.9 +0.5
     comp=Z,0.4nm,0.9s,baz=151,slow=1.5,SNR=4.9
KLR  Kul'dur          148.94 341  PKPbc PKPbc 06 52 58.3  0.0
     comp=Z,1.6nm,0.5s,baz=88,slow=3.6,SNR=8.2
SONM Songino Array    151.49  15  PKPbc PKiKP 06 53 05.1 +0.3
     comp=Z,1.9nm,0.4s,baz=305,slow=1.4,SNR=10
KSRS Korea Array      160.53 332  PKPab PKPab 06 53 55.1 +0.5
     comp=Z,1.1nm,0.7s,baz=17,slow=4.9,SNR=5.6
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*IDC **29** 06:40:17.0±2.4, 27°.04N×127°.02E, h137km±98km, mb3.6/4, mbtmp3.9/6, ML3.7/2, Error ellipse: s-maj=156.7km s-min=37.4km az=103.0*

*JMA **29** 06:40:18.8±0.3, 27°N±2°×12°7E±°, h123km±4km, MV3.7/19, NW OFF OKINAWAJIMA IS*

ISC 29 06:40:18.2±0.9**, 27°.3N**±0°.1×**127°.06E**±0°.09**, h133**km±14km**,**
n23, $\sigma 0^{s}.90$/35**, mb3.8**/4**, Ryukyu Islands**

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Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                    Op    ISC      h  m  s      ISC
JAGN  Aguni-jima        0.70 166  i P    Pn     06 40 39.0 +0.1
JAGN                                S    Sn     06 40 54.1 -0.4
JIH   Iheya             0.84 106  i P    Pn     06 40 40.6 +0.6
JIH                                 S    Sn     06 40 56.3 -0.1
JKE   Kume jima 2       0.97 195  i P    Pn     06 40 41.0 -0.1
JKE                                 S    Sn     06 40 58.3 -0.2
JNTH  Nagotoyohara      1.14 131  i P    Pn     06 40 43.3 +0.6
JNTH                                S    Sn     06 41 01.2 -0.1
JOW   Kunigami          1.17 112    P    Pn     06 40 43.5 +0.5
      430nm,0.3s,baz=145,slow=22,SNR=176
JOW                                 S    Sn     06 41 00.5 -1.3
      678nm,0.2s,baz=125,slow=19,SNR=9.5
JOW   Kunigami          1.17 112  i P    Pn     06 40 43.4 +0.5
JOW                                 S    Sn     06 41 00.9 -0.9
JYRO  Yoronjima         1.27 101  i P    Pn     06 40 44.4 +0.5
JYRO                                S    Sn     06 41 02.6 -0.9
JJT3  Tamagusuku3       1.30 150  i P    Pn     06 40 45.5 +1.1
JJT3                               eS    Sn     06 41 04.8 +0.6
JOKE  Okinoerabujima    1.35  86    P    Pn     06 40 45.4 +0.5
JOKE                                S    Sn     06 41 04.3 -0.8
JTK   Tokunoshima       1.76  73    P    Pn     06 40 49.8 +0.4
JTK                                 S    Sn     06 41 12.2 -1.1
JAMN  Amaminishikomi    2.11  62  i P    Pn     06 40 53.7 +0.1
JAMN                                S    Sn     06 41 19.8 -1.0
JAM   Amami Oshima      2.52  63    P    Pn     06 40 58.9 +0.1
JAM                                 S    Sn     06 41 29.2 -0.8
JTAJ  Takarajima        2.66  45    P    Pn     06 41 01.2 +0.6
JZK   Kikaishima        2.78  67   eP    Pn     06 41 02.7 +0.6
JOGS  Gusukube          2.91 211    P    Pn     06 41 03.3 -0.4
JMJ2  Miyako jima3      2.96 212    P    Pn     06 41 04.0 -0.5
JIRB  Irabujima         2.97 215    P    Pn     06 41 03.5 -1.0
JNU   Nakatsue          6.70  29    P    Pn     06 41 54.6 +0.4
      2.7nm,0.3s,baz=224,slow=5.8,SNR=11
      7.0nm,0.3s
KSRS  Korea Array      10.18   4    P    Pn     06 42 43.1 +2.4
      0.1nm,0.3s,baz=182,slow=15,SNR=4.9
      0.5nm,0.5s
SONM  Songino Array    26.11 327    P    P      06 45 41.3 +1.5
      2.9nm,0.4s,baz=139,slow=10,SNR=13
      2.9nm,0.4s
MKAR  Makanchi Array   40.06 311    P    P      06 47 39.2 -1.2
      1.2nm,0.7s,baz=100,slow=9.7,SNR=18
      1.2nm,0.7s
ZALV  Zalesovo Beam    40.79 323    P    P      06 47 44.8 -1.4
      1.0nm,0.5s,baz=106,slow=11,SNR=4.0
      1.0nm,0.5s
KURBB Kurchatov Arra   43.38 316    P    P      06 48 06.2 -1.0
      0.7nm,0.4s,baz=103,slow=8.8,SNR=7.4
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0.7nm,0.4s

DJA 29 06:40:26.3±1.8**,3˚S**±15˚×**13˚6E**±1˚3**,h28**^{km}±4^{km}**,M4.1**/5**,mb4.5**/1**,mB5.2**/2**,MLv3.9**/5**,Mw(mB)4.5**/2**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	2.06	260	P	Pn	06 40 59.7	+0.6
KMPI				S	Sn	06 41 24.6	+0.6
FAKI	Fak Fak	3.50	276	P	Pn	06 41 18.1	-0.9
SWI	Sorong	5.08	298	P	Pn	06 41 41.1	+0.4

WEL ***29*** *06:45:00,43˚.51S×172˚.75E,h4^{km},ML3.7,Mw3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}0.18; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-1.65; $M_{r\theta}$0.83; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.41; Fault plane solution: $M_0$1.84000×10^{14} NP1: ϕ_s142.00000°,δ61.00000°,λ8.00000°. NP2:ϕ_s48.00000°, δ83.00000°,λ150.00000°. Principal axes: T 18.8000, Plg25.0000°, Azm1.0000°; N -0.8200, Plg60.0000°, Azm215.0000°; P -17.9900, Plg15.0000°, Azm98.0000°;*

WEL 29 06:45:29.2,43˚S±2˚×**17˚3E**±˚**,h9**^{km}±1^{km}**,M3.8**/12**, ML4.0**/12**,MLv3.8**/12 **Error ellipse: s-maj=0.0km s-min=0.0km az=39.3,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.23	182	P	Pg	06 45 35.3	+1.4
MQZ				S	Sg	06 45 39.0	+1.9
AMCZ	Amberley	0.30	358	P	Pb	06 45 37.1	+0.5
OKCZ	Okains Bay	0.38	131	P	Pb	06 45 37.4	-0.7
AKCZ	Akaroa Harbour	0.44	156	P	Pb	06 45 38.7	-0.3
AKCZ				S	Sb	06 45 44.8	-1.0
RACZ	Rakaia	0.46	236	P	Pn	06 45 40.8	-1.1
OXZ	Oxford	0.48	288	P	Pb	06 45 41.0	+1.2
GVZ	Greta Valley S	0.57	28	P	Pb	06 45 41.7	+0.3
LTZ	Lake Taylor	0.75	337	P	Pn	06 45 45.7	-0.3
LTZ				S	Sn	06 45 56.8	-0.7
WACZ	Wakanui South	0.76	232	P	Pn	06 45 46.5	+0.4
MHCZ	Mount Hutt	0.80	266	P	Pn	06 45 46.9	+0.2
INZ	Inchbonnie	1.17	310	P	Pn	06 45 52.1	+0.5
ARCZ	Arundel	1.18	246	P	Pn	06 45 52.1	+0.3
RPZ	Rata Peaks	1.20	258	P	Pg	06 45 52.5	+0.4
KHZ	Kahutara	1.24	32	P	Pn	06 45 51.3	-1.3
WVZ	Waitaha Valley	1.46	285	P	Pb	06 45 56.8	+0.3
TMZ	Timaru	1.50	232	P	Pn	06 45 56.7	+0.4
GCSZ	Gaunt Creek Bo	1.71	274	P	Pb	06 46 00.7	0.0
THZ	Tophouse	1.72	6	P	Pn	06 45 59.1	-0.3
DSZ	Denniston Nort	1.84	340	P	Pn	06 46 01.5	+0.5
BSWZ	Blackbirch Sta	1.97	27	P	Pn	06 46 02.1	-0.6
LBZ	Lake Benmore	2.01	242	P	Pn	06 46 04.2	+0.9
FOZ	Fox Glacier	2.07	267	P	Pb	06 46 06.3	-0.6
MRNZ	Matariki Terra	2.08	2	P	Pn	06 46 04.7	+0.5
ODZ	Otahua Downs	2.14	222	P	Pn	06 46 05.3	+0.2
TUWZ	Tuamarina	2.25	25	P	Pn	06 46 05.7	-0.9
NNZ	Nelson	2.32	13	P	Pn	06 46 07.5	0.0
TKNZ	Takaka Hill	2.45	5	P	Pn	06 46 10.0	+0.6
TCW	Tory Channel	2.56	28	P	Pn	06 46 09.4	-1.4
BHW	Baring Head	2.63	39	P	Pn	06 46 10.2	-1.6
QRZ	Quartz Range	2.65	358	P	Pn	06 46 12.1	0.0
WEL	Wellington	2.69	36	P	Pn	06 46 11.2	-1.3
PLWZ	Palliser	2.70	46	P	Pn	06 46 11.0	-1.8
MSWZ	Moikau Station	2.81	44	P	Pn	06 46 12.3	-2.0
DUWZ	D'Urville Isla	2.83	20	P	Pn	06 46 14.6	0.0
JCZ	Jackson Bay	2.87	257	P	Pn	06 46 16.1	+0.8
PAWZ	Paruwai Farm	2.92	45	P	Pn	06 46 13.6	-2.3
WKZ	Wanaka	2.95	241	P	Pn	06 46 16.8	+0.5
CAW	Cannon Point	2.96	38	P	Pn	06 46 14.6	-1.7
EAZ	Earnscleugh	2.98	233	P	Pn	06 46 17.0	+0.4
TRWZ	Traveller	3.05	48	P	Pn	06 46 15.6	-2.0
MTW	Mount Morrison	3.13	43	P	Pn	06 46 16.4	-2.2
OGWZ	Otaki Gorge	3.24	36	P	Pn	06 46 18.5	-1.8
TUZ	Tuapeka	3.29	220	P	Pn	06 46 21.4	+0.6
HOWZ	Holdsworth Sta	3.33	40	P	Pn	06 46 20.1	-1.4
TMWZ	Te Maipa	3.37	46	P	Pn	06 46 19.7	-2.2
MRZ	Mangatainoka R	3.55	39	P	Pn	06 46 22.3	-2.2
TIWZ	Tintock	3.61	43	P	Pn	06 46 24.3	-0.9
MSZ	Milford Sound	3.62	249	P	Pn	06 46 26.1	+0.8
MLZ	Mavora Lakes	3.77	238	P	Pn	06 46 27.7	+0.2
POWZ	Post Office Ro	3.85	38	P	Pn	06 46 27.5	-1.1
BFZ	Birch Farm	3.86	45	P	Pn	06 46 26.1	-2.6
SYZ	Scrubby Hill	3.95	218	P	Pn	06 46 30.7	+0.7
WAZ	Wanganui	4.10	26	P	Pn	06 46 33.0	+1.0
DVHZ	Dannevirke	4.11	41	P	Pn	06 46 29.6	-2.6
ANWZ	Angora Road	4.14	45	P	Pn	06 46 30.4	-2.1
WHZ	Wether Hill Ro	4.14	233	P	Pn	06 46 32.0	-0.6
TSZ	Takapari Road	4.21	37	P	Pn	06 46 32.1	-1.4
KHEZ	Kahui Hut	4.30	14	P	Pn	06 46 35.9	+1.1
NBEZ	Newall Road No	4.30	13	P	Pn	06 46 35.7	+0.9
NEZ	North Egmont	4.34	15	P	Pn	06 46 36.4	+1.1
PRHZ	Porangahau	4.37	44	P	Pn	06 46 33.9	-1.8
PKE	Pukeiti	4.39	14	P	Pn	06 46 37.7	+1.7
DCZ	Deep Cove	4.42	241	P	Pn	06 46 36.7	+0.3
WPHZ	Waipukurau	4.42	41	P	Pn	06 46 34.6	-1.9
PNHZ	Pukenui	4.43	38	P	Pn	06 46 33.9	-2.7
DREZ	Durham Road	4.43	16	P	Pn	06 46 37.7	+1.0
MTVZ	Mangateitei	4.60	28	P	Pn	06 46 39.3	+0.4
VRZ	Vera Road	4.62	21	P	Pn	06 46 39.7	+0.6
PKVZ	Pokaka	4.64	27	P	Pn	06 46 40.2	+0.7
MOVZ	Moawhango	4.68	31	P	Pn	06 46 39.0	-1.0
WNVZ	Wahianoa	4.69	29	P	Pn	06 46 39.8	-0.5
TRVZ	Turoa	4.70	28	P	Pn	06 46 41.0	+0.5
APZ	The Paps	4.71	223	P	Pn	06 46 40.4	-0.1
BHHZ	Black Hill Sta	4.73	34	P	Pn	06 46 39.3	-1.4
KRHZ	Kereru	4.73	37	P	Pn	06 46 38.0	-2.7
WHVZ	Whangaehu Hut	4.73	29	P	Pn	06 46 41.3	+0.4
FWVZ	Far West T-bar	4.74	28	P	Pn	06 46 41.5	+0.4
TUVZ	Tukino	4.77	29	P	Pn	06 46 41.6	+0.3
NGZ	Ngauruhoe	4.83	28	P	Pn	06 46 42.2	0.0
SNVZ	South Ngauruho	4.83	29	P	Pn	06 46 42.5	+0.2
KAHZ	Kahuranaki	4.84	42	P	Pn	06 46 40.4	-1.9
OTVZ	Oturere	4.86	29	P	Pn	06 46 42.0	-0.6
TWVZ	Taurewa	4.87	26	P	Pn	06 46 42.3	-0.3
NNVZ	North Ngauruho	4.87	28	P	Pn	06 46 42.7	-0.1
WTVZ	West Tongariro	4.88	28	P	Pn	06 46 42.6	-0.2
ETVZ	East Tongariro	4.90	29	P	Pn	06 46 42.9	-0.3
TMVZ	Te Maari	4.92	29	P	Pn	06 46 42.7	-0.7
NTVZ	North Tongarir	4.92	28	P	Pn	06 46 41.2	-2.2
RITZ	Rihia Road	5.10	29	P	Pn	06 46 45.2	-0.5
BKZ	Black Stump Fm	5.18	35	P	Pn	06 46 44.5	-2.4
HIZ	Hauiti	5.23	19	P	Pn	06 46 47.3	-0.2
ARHZ	Aropaoanui	5.32	39	P	Pn	06 46 46.7	-2.0
TLZ	Tolley Road	5.58	24	P	Pn	06 46 51.7	-0.7
MTHZ	Maungataniwha	5.59	36	P	Pn	06 46 50.8	-1.8
TOZ	Tahuroa Road	6.13	22	P	Pn	06 46 59.0	-0.9
URZ	Urewera	6.20	34	P	Pn	06 46 58.2	-2.7
MWZ	Matawai	6.32	37	P	Pn	06 46 59.6	-2.9
TKGZ	Te Karaka	6.38	40	P	Pn	06 46 59.9	-3.4
AWAZ	Awhitu Peninsu	6.58	14	P	Pn	06 47 06.4	+0.3
MKAZ	Moumakai	6.64	18	P	Pn	06 47 06.3	-0.6
ETAZ	East Tamaki Re	6.74	16	P	Pn	06 47 08.4	+0.2
WMGZ	Waiomatatini S	7.14	40	P	Pn	06 47 12.2	-1.6

IDC ***29*** *06:45:57.6±2.9,35˚.94N×70˚.96E,h75^{km}±25^{km},mb4.1/24, mbtmp4.5/28,MS3.3/4,Error ellipse: s-maj=16.4km s-min=10.7km az=175.0*

BJI ***29*** *06:45:59.1±0.0,36˚.18N×70˚.87E,h95^{km},mb4.5/24, mB4.5/14*

MOS ***29*** *06:45:59.3±0.9,36˚.08N×70˚.97E,h100^{km},mb4.5/21,Error ellipse: s-maj=7.7km s-min=4.0km az=81.2*

NEIC ***29*** *06:46:00.1±1.4,36˚.07N±0˚.05×70˚.83E±0˚.07,h93^{km}±5^{km}, mb4.5/74,Error ellipse: s-maj=8.6km s-min=7.7km az=114.0*

NNC ***29*** *06:46:02.5±2.6,36˚.33N×70˚.77E,h119^{km}±23^{km},mb4.2, mpv5.0,Error ellipse: s-maj=20.9km s-min=18.9km az=34.0*

ISC 29 06:45:59.9±0.3**,36˚.00N**±0˚.04×**70˚.94E**±0˚.04**,h102**^{km}**,n349,** σ**1^{s}59**/366**,mb4.5**/72**,11C-8D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.12	227		Pn	06 46 35.9	+1.5
KBL	Kabul	2.12	227	PN	Pn	06 46 35.9	+1.5
CEP	Cherat	2.31	159	P	Pn	06 46 38.9	+2.1
CEP				S	Sn	06 47 08.0	+3.1
CHGR	Chuyangaron	3.01	332	Pn	Pn	06 46 44.6	-1.3
CHGR	Chuyangaron	3.01	332	PN	Pn	06 46 44.6	-1.3
CHCP	Chirah Chowk	3.02	140	P	Pn	06 46 47.9	+1.9
NIL	Nilore	3.02	140		Pn	06 46 47.3	+1.3
NIL	Nilore	3.02	140	PN	Pn	06 46 47.3	+1.3
GAR	Garm	3.04	351		Pn	06 46 45.7	-0.6
THW	Thamme Wali	3.26	168	P	Pn	06 46 49.8	+0.5
DRK	Karamyk	3.54	11		Pn	06 46 54.0	+0.7
BTK	Batken	4.06	359	Pn	Pn	06 47 00.6	+0.7
BTK	Batken	4.06	359	PN	Pn	06 47 00.6	+0.7
SARP	Sargodha	4.31	160	P	Pn	06 47 03.8	+0.4
JMU	Jammu	4.63	134	*e*P	Pn	06 47 08.7	+1.0
JMU				*i* x	Pn	06 47 09.4	+1.7
JMU				*e*S	Sn	06 47 59.6	-0.7
KSH	Kashi	5.32	47	P	Pn	06 47 13.8	-3.2
KSH				sP		06 47 32.3	
KSH				S	Sn	06 48 08.3	-8.8
KSH				smax	smax		
	comp=N,1µm,0.6s						
KSH				smax	smax		
	comp=E,540nm,0.7s						
THN	Thein Dam	5.32	131	*e*P	Pn	06 47 18.1	+1.1
THN				*i* x	Pn	06 47 19.2	+2.2
THN				*e*S	Sn	06 48 16.4	-0.6
TAS	Tashkent	5.47	347	Pn	Pn	06 47 17.8	-1.2
TAS	Tashkent	5.47	347	PN	Pn	06 47 17.8	-1.2
IUG	Iuzhnay	6.18	354	*e*PN	Pn	06 47 27.7	-1.0
BHK	Bhakra	6.46	133	*e*PN	Pn	06 47 27.0	-5.5
BHK				*e*P	Pn	06 47 32.6	+0.1
BHK				*i* x	Pn	06 47 33.5	+1.0
BHK				*e*SN	Sn	06 48 37.2	-7.5
BHK				*e*S	Sn	06 48 42.6	-2.1
AML	Almayashu	6.49	18	P	Pn	06 47 32.9	-0.3
	SNR=141						
UCH	Uchtor	6.81	23	P	Pn	06 47 37.6	-0.1
	SNR=70						
EKS2	Erkin-Say	7.01	17	P	Pn	06 47 40.0	0.0
	SNR=35						
KK31	Karatay Array	7.11	357		Pn	06 47 40.0	-1.2
KK31	Karatay Array	7.11	357	PN	Pn	06 47 40.0	-1.2
KK31	Karatay Array	7.11	357	P	Pn	06 47 40.0	-1.2
	35nm,0.3s,baz=184,slow=13,SNR=1178						
KK31				S	Sn	06 48 54.7	-5.7
	60nm,0.4s,baz=190,slow=19,SNR=12						
KKAR	Karatay Array	7.11	357	Pn	Pn	06 47 40.1	-1.1
KKAR	Karatay Array	7.11	357		Pn	06 47 40.1	-1.1
KKAR	Karatay Array	7.11	357	PN	Pn	06 47 40.1	-1.1
SMLA	Simla	7.11	131	*e*P	Pn	06 47 40.9	-0.5
SMLA				*i* x	Pn	06 47 42.6	+1.3
SMLA				*e*S	Sn	06 48 57.7	-2.9
SMLA				IAML		06 49 01.9	
	comp=N,357nm,0.3s						
SMLA				IAML		06 49 02.2	
	comp=E,565nm,0.4s						
AAK	Ala-Archa	7.18	21	P	Pn	06 47 42.5	+0.2
	SNR=96						
AAK	Ala-Archa	7.18	21	P	Pn	06 47 42.7	+0.3
	comp=E,96nm,0.3s,baz=189,slow=6.7,SNR=169						
AAK				S	Sn	06 48 59.7	-2.7
	comp=E,54nm,0.7s,baz=135,slow=22,SNR=10						
AAK	Ala-Archa	7.18	21	Pn	Pn	06 47 42.4	0.0
KBK	Karagaybulak	7.34	24	P	Pn	06 47 45.1	+0.6
	SNR=25						
FRU1	Bishkek	7.38	22	Pn	Pn	06 47 45.4	+0.5
FRU1	Bishkek	7.38	22	PN	Pn	06 47 45.4	+0.5
ULHL	Ulahol	7.48	32	P	Pn	06 47 46.2	-0.2
	SNR=14						
BOOM	Boomskoye usch	7.56	29		Pn	06 47 47.7	+0.3
BOOM	Boomskoye usch	7.56	29	PN	Pn	06 47 47.7	+0.3
CHMS	Chumysh	7.59	22	P	Pn	06 47 47.6	-0.1
	SNR=69						
CHMS	Chumysh	7.59	22	*i* PN	Pn	06 47 47.1	-0.6
CHMS				pmax	pmax		
	comp=Z,45nm,0.4s						
CHMS	Chumysh	7.59	22	⇑P	Pn	06 47 47.2	-0.6
	comp=Z,45nm,0.4s						
CHMS				⇓S	Sn	06 49 09.4	-2.7
	comp=Z,103nm,1.2s						
USP	Ospenovka	7.76	20	P	Pn	06 47 49.4	-0.7
	SNR=17						
TKM2	Tokmak 2	7.80	26	P	Pn	06 47 50.3	-0.4
	SNR=59						
TKM2	Tokmak 2	7.80	26	*i* PN	Pn	06 47 50.8	+0.1
TKM2				pmax	pmax		
	comp=Z,75nm,0.5s						
TKM2	Tokmak 2	7.80	26	⇓P	Pn	06 47 50.9	+0.1
	comp=Z,75nm,0.5s						
TKM2				⇓S	Sn	06 49 15.6	-1.8
	comp=Z,58nm,0.8s						
KDJ	Kajisay	7.81	37		Pn	06 47 51.0	0.0
KDJ	Kajisay	7.81	37	PN	Pn	06 47 51.0	0.0
TARG	Taragay, Kyrgy	7.84	41		Pn	06 47 51.3	-0.2
TARG	Taragay, Kyrgy	7.84	41	PN	Pn	06 47 51.3	-0.2
MDOK	Medeo	8.57	32	PN	Pn	06 48 01.0	-0.2
MDOK	Medeo	8.57	32	⇑P	Pn	06 48 01.0	-0.2
	comp=Z,27nm,0.6s						
PRZ	Przheval'sk	8.69	40	Pn	Pn	06 48 02.6	-0.2
PRZ	Przheval'sk	8.69	40	PN	Pn	06 48 02.6	-0.2
KHET	Khetri	8.91	151	*e*P	Pn	06 48 04.8	-1.0
NDI	New Delhi	9.02	142	*e*P	Pn	06 48 07.5	+0.2
NDI				*e*S	Sn	06 49 41.0	-6.1
KUDL	Kundal	9.13	147	*e*P	Pn	06 48 08.0	-0.8
AYAN	Aya Nagar	9.14	143	*e*P	Pn	06 48 08.8	-0.1
SONA	Sohna	9.31	144	*e*P	Pn	06 48 10.1	-1.2
BTLS	Baital	9.34	14	*e*P	Pn	06 48 09.9	-1.6
UZB	Uzynbulak	9.48	39	*e*P	Pn	06 48 13.2	-0.4
KPKS	Kokpek	9.55	36	*e*P	Pn	06 48 14.2	-0.3
PDGK	Podgornoye	9.85	39	P	Pn	06 48 17.6	-1.0
PDGK	Podgornoye	9.85	39	⇓P	Pn	06 48 17.6	-1.0
	comp=Z,7.4nm,0.8s						
AJM	Ajmer	10.00	161	*e*P	Pn	06 48 20.7	0.0
PTH	Pithoragarh	10.11	127	*e*P	Pn	06 48 20.3	-2.0
LGTI	Lohaghat	10.20	127	*e*P	Pn	06 48 19.7	-3.6
GEYT	Alibeck	10.44	284	P	Pn	06 48 23.1	-3.4
	comp=Z,12nm,0.3s,baz=102,slow=12,SNR=30						
GEYT				S	Sn	06 50 14.6	-6.9
	comp=Z,16nm,0.3s,baz=140,slow=19,SNR=10.0						
GEYT	Alibeck	10.44	284	Pn	Pn	06 48 23.3	-3.2
GYA0B	ALIBECK ARRAY	10.44	284	Pn	Pn	06 48 23.2	-3.3
OTUK	Ortayu	12.28	4	P	Pn	06 48 47.8	-3.4
OTUK	Ortayu	12.28	4	⇑P	Pn	06 48 47.8	-3.4
	comp=Z,8.2nm,0.7s						
PYUN	Piuthan	12.89	124	*e*P	Pn	06 48 55.9	-3.7
	comp=Z,119nm,0.4s						
DANN	Dangsing	13.26	121	*e*P	Pn	06 49 01.3	-3.2
	comp=Z,85nm,0.3s						
KOLN	Koldanda	13.52	124	*e*P	Pn	06 49 04.0	-3.7
MAKZ	Makanchi	13.60	34	Pn	Pn	06 49 06.3	-2.1
MAKZ	Makanchi	13.60	34	P	Pn	06 49 06.3	-2.1
MAKZ	Makanchi	13.60	34	⇓P	Pn	06 49 05.6	-2.8
	comp=Z,9.0nm,0.6s						
MK31	Makanchi Array	13.73	35		Pn	06 49 08.5	-1.7
MK31	Makanchi Array	13.73	35	P	Pn	06 49 08.5	-1.7
MK31	Makanchi Array	13.73	35	P	Pn	06 49 08.1	-2.1
	comp=Z,6.6nm,0.6s,baz=212,slow=11,SNR=62						
MKAR	Makanchi Array	13.73	35	P	Pn	06 49 07.8	-2.4
	comp=Z,4.2nm,0.7s,baz=223,slow=12,SNR=25						
MKAR	Makanchi Array	13.73	35	Pn	Pn	06 49 08.8	-1.4
MKAR	Makanchi Array	13.73	35	P	Pn	06 49 08.8	-1.4
BHPL	Bhopal	13.90	154	*e*P	Pn	06 49 10.3	-2.3
BHPL				*i* x	Pn	06 49 13.1	+0.5
BHPL				*e*S	Sn	06 51 35.9	-10
GKN	Gorkha	14.08	121	*e*P	Pn	06 49 11.7	-3.3
	comp=Z,56nm,0.3s						
DMN	Daman	14.65	121	*e*P	Pn	06 49 19.5	-2.9
	comp=Z,105nm,0.5s						
KKN	Kakani	14.66	120	*e*P	Pn	06 49 19.6	-2.9
PKIN	Phulchoki	14.88	120	*e*P	Pn	06 49 22.6	-2.6
	comp=Z,125nm,0.4s						
PKI	Pulchoki	14.89	120	*e*P	Pn	06 49 22.9	-2.6
	comp=Z,114nm,0.5s						
GUN	Gumba	15.02	118	*e*P	Pn	06 49 24.0	-3.1
	comp=Z,53nm,0.4s						
WMQ	Urumqi	15.03	54	*e*P	P	06 49 29.3	-0.5
WMQ				LR	LR		
	comp=Z,140nm,18.9s						
JIRN	Jiri	15.39	118	*e*P	Pn	06 49 28.8	-3.0
	comp=Z,144nm,0.4s						
AB31	Akbulak array	15.50	332	P	Pn	06 49 29.6	-3.1
AB31	Akbulak array	15.50	332	⇓P	Pn	06 49 29.6	-3.1
	comp=Z,30nm,0.6s						
ABKAR	Akbulak array	15.50	332	Pn	Pn	06 49 30.0	-2.7
KURBB	Kurchatov Arra	15.62	18	P	Pn	06 49 31.1	-3.0
	comp=Z,6.2nm,0.6s,baz=208,slow=10,SNR=17						
KURK	Kurchatov	15.72	18	Pn	Pn	06 49 34.7	-0.7
KURK	Kurchatov	15.72	18	*ce*P	Pn	06 49 35.3	-0.1
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
RAMN	Ramite	16.10	120	*e*P	Pn	06 49 39.1	-1.5
	comp=Z,101nm,0.5s						
ODAN	Odare	16.72	118	*e*P	Pn	06 49 47.0	-1.2
	comp=Z,12nm,0.6s						
BRVK	Borovoye	17.07	359		Pn	06 49 50.8	-1.2
BRVK	Borovoye	17.07	359	*i* P	Pn	06 49 50.9	-1.1
BRVK				pmax	pmax		
	comp=Z,27nm,1.6s						
BRVK	Borovoye	17.07	359	⇓P	Pn	06 49 50.7	-1.3
	comp=Z,15nm,1.0s						
AKTO	Aktyubinsk	17.19	331	P	Pn	06 49 53.1	-0.4
	comp=Z,51nm,0.8s,baz=148,slow=14,SNR=112						
AKTO				S	Sn	06 52 51.0	-14
	comp=Z,4.9nm,0.6s,baz=103,slow=19,SNR=2.6						
GOMU	GeErMu	19.29	82	P	Pn	06 50 20.0	+0.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,80nm,7.3s						
ZAA0	Zalesovo Array	20.39	24	P	P	06 50 28.0	-0.5
ZAA0	Zalesovo Array	20.39	24	⇑P	P	06 50 27.5	-0.9
	comp=Z,7.5nm,0.9s						
ZALV	Zalesovo Beam	20.39	24	P	P	06 50 28.2	-0.2
	comp=Z,28nm,0.6s,baz=224,slow=10,SNR=123						
	comp=Z,28nm,0.6s						
SHL	Shillong	20.74	114	P	P	06 50 33.5	+0.8
SHL				IAmb	IAmb	06 50 39.9	
	comp=Z,20nm,0.7s						
SHL	Shillong	20.74	114	P	P	06 50 33.5	+0.8
SHL				pmax	pmax		
	comp=Z,20nm,0.7s						
GNI	Garni	21.01	289	P	P	06 50 38.4	+3.1
	comp=Z,9.9nm,0.4s,baz=219,slow=5.3,SNR=7.2						
GNI	Garni	21.01	289	P	P	06 50 35.3	0.0
GNI				IAmb	IAmb	06 50 39.2	
	comp=Z,19nm,1.0s						
GNI	Garni	21.01	289	*ce*P	P	06 50 38.4	+3.1
GNI				pmax	pmax		
	comp=Z,30nm,1.3s						
SVE	Sverdlovsk	21.96	345	*e*P	P	06 50 46.1	+0.9
SVE				*e*S	S	06 54 44.3	+3.1
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
ARU	Arti	22.09	342	P	P	06 50 47.6	+1.1
	comp=Z,5.2nm,0.6s,baz=147,slow=9.7,SNR=17						
	comp=Z,5.2nm,0.6s						
ARU	Arti	22.09	342	P	P	06 50 46.1	-0.4
ARU				IAmb	IAmb	06 50 51.6	
	comp=Z,18nm,0.8s						
ARU	Arti	22.09	342	*d i*P	P	06 50 47.4	+0.9
ARU				*PP	pP	06 51 06.4	-0.5
ARU						06 51 16.7	
ARU				S	S	06 54 46.8	+3.4
ARU				SS	SnSn	06 55 23.7	+3.9
ARU				pmax	pmax		
	comp=Z,22nm,0.8s						
KBZ	Khabaz	22.79	298	P	P	06 50 55.3	+1.5
	comp=Z,2.2nm,0.7s,baz=149,slow=8.6,SNR=6.1						
	comp=Z,2.2nm,0.7s						
KIV	Kislovodsk	22.98	299	*e*P	P	06 50 56.9	+1.1
KIV				*e*S	S	06 55 01.8	+3.5
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA	Gaotai	23.06	73	*e*P	P	06 50 59.5	+2.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,62nm,5.8s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
GTA				LR	LR		
	comp=Z,110nm,16.0s						
GTA				LR	LR		
	comp=Z,140nm,17.5s						
BELG	Belogornoye	23.25	322	P	P	06 51 00.0	+1.9
	comp=Z,27nm,0.7s,baz=163,slow=2.4,SNR=12						
	comp=Z,27nm,0.7s						
RAYN	Ar Rayn	25.26	248	P	P	06 51 16.1	-0.6
RAYN	Ar Rayn	25.26	248	P	P	06 51 16.1	-0.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LZH	Lanzhou	26.54	80	*e*P	P	06 51 24.8	-3.5
LZH				pP	pP	06 51 46.5	-5.5
LZH				pmax	pmax		
	comp=Z,15nm,1.6s						
LZH				LR	LR		
	comp=N,150nm,16.2s						
LZH				LR	LR		
	comp=E,130nm,15.1s						
LZH				LR	LR		
	comp=Z,140nm,16.8s						
KIRV	Kirov	26.67	335	P	P	06 51 30.5	+1.5
	comp=Z,16nm,0.5s,baz=271,slow=3.2,SNR=5.6						
	comp=Z,16nm,0.5s						
ANN	Anapa	26.83	299	*e*P	P	06 51 29.7	-0.9
ANN				*e**PP	pP	06 51 49.9	-4.3
ANN				*e*		06 52 16.9	
ANN				*e*		06 54 46.4	
ANN				*e*S	S	06 55 59.7	+0.3
ANN				pmax	pmax		
	comp=Z,39nm,1.5s						
PZH	PanZhiHua	27.89	101	P	P	06 51 42.0	+1.6
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.4s						
SONM	Songino Array	28.66	55	P	P	06 51 48.4	+1.3
	comp=Z,2.2nm,0.7s,baz=285,slow=12,SNR=6.8						
	comp=Z,2.2nm,0.7s						
SONM	Songino Array	28.66	55	P	P	06 51 48.4	+1.3
ULN	Ulaanbaatar	29.11	55	*ce*P	P	06 51 51.3	+0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BR131	Keskin Array S	29.54	289	P	P	06 51 54.0	-0.9
BR131				IAmb	IAmb	06 51 57.1	
	comp=Z,6.3nm,0.8s						
BR131	Keskin Array S	29.54	289	P	P	06 51 54.1	-0.9
BR131				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	29.54	289	P	P	06 51 56.8	+1.8
	comp=Z,2.9nm,0.7s,baz=104,slow=9.4,SNR=17						
	comp=Z,2.9nm,0.7s						
BRTR	Keskin Array B	29.54	289	P	P	06 51 56.0	+1.0
OBN	Obninsk	30.29	320	⇑*e*P	P	06 52 02.5	+1.4
OBN				*e*		06 53 06.7	
OBN				pmax	pmax		
	comp=Z,16nm,1.3s						
KLMR	Klimovskoe	31.89	331	*e*P	P	06 52 14.8	-0.4
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLMR	Klimovskoe	31.89	331	*e*P	P	06 52 14.8	-0.4
KLMR				AMP		06 52 16.5	
	comp=Z,6.0nm,0.7s						
HHC	Hu-ho-hao-te	31.99	69	*e*P	P	06 52 18.8	+2.3
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
HHC				LR	LR		
	comp=Z,160nm,14.6s						
HHC				LR	LR		
	comp=Z,180nm,14.6s						
HHC				LR	LR		
	comp=Z,380nm,14.6s						
AKASG	Malin Array Be	33.22	309	P	P	06 52 27.1	+0.2
	comp=Z,1.8nm,0.5s,baz=80,slow=7.1,SNR=16						
AKASG				LR	LR	07 08 21.7	
	comp=Z,24nm,18.4s,baz=204,slow=40						
	comp=Z,1.8nm,0.5s						
AKBB	Malin Array Si	33.22	309	P	P	06 52 26.7	-0.2
AKBB				IAmb	IAmb	06 52 27.9	
	comp=Z,4.8nm,0.6s						
AKBB	Malin Array Si	33.22	309	*ce*P	P	06 52 27.3	+0.4
NRIK	Noril'sk	34.63	10	P	P	06 52 40.1	+1.2
	comp=Z,8.4nm,0.6s,baz=221,slow=4.3,SNR=9.3						
	comp=Z,8.4nm,0.6s						
NRIK	Noril'sk	34.63	10	P	P	06 52 39.4	+0.6
NRIK	Noril'sk	34.63	10	*ce*P	P	06 52 40.4	+1.5
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK	Minsk	34.82	316	*i* P	P	06 52 40.5	-0.2
MNK				*i*		06 53 58.7	

MNK				iS	S	06 58 05.7	+1.9
MNK				iSS	SnSn	07 00 30.3	+1.9
MNK				pmax	pmax		
	comp=N,6.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.2s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MNK				MLR	MLR		
	comp=N,107nm,23.0s						
MNK				MLR	MLR		
	comp=E,28nm,26.0s						
MNK				MLR	MLR		
	comp=Z,115nm,17.0s						
MNK	**Minsk**	**34.82**	**316**	iP	**P**	**06 52 40.5**	**-0.2**
	comp=E,1.0nm,1.2s,baz=104						
MNK				iP	**P**	**06 52 40.5**	**-0.2**
	comp=N,6.0nm,0.6s						
MNK				iP	**P**	**06 52 40.5**	**-0.2**
	comp=Z,7.0nm,1.2s						
MNK				iPP	**PP**	**06 53 58.8**	**-2.7**
MNK				iS	**S**	**06 58 05.7**	**+1.9**
MNK				iSS	**SnSn**	**07 00 30.3**	**+1.9**
MNK				iLQ	LQ	07 04 26.2	
MNK				iLR	LR	07 07 05.6	
MNK				iLRM	MLR	07 09 40.8	
	comp=E,28nm,25.6s						
MNK				iLRM	MLR	07 09 40.8	
	comp=N,107nm,23.0s						
MNK				iLRM	MLR	07 10 05.7	
	comp=Z,115nm,17.2s						
MLR	**Muntele Rosu**	**34.98**	**300**	P	**P**	**06 52 42.3**	**-0.1**
MLR				IAmb	IAmb	06 52 45.7	
	comp=Z,4.8nm,0.8s						
MLR	**Muntele Rosu**	**34.98**	**300**	P	**P**	**06 52 42.3**	**-0.1**
MLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT	**XiLinHaoTe**	**35.14**	**63**	eP	**P**	**06 52 45.5**	**+1.8**
XLT				pP	pP	06 53 08.0	-0.2
XLT				sP	sP	06 53 17.8	-2.7
XLT				pmax	pmax		
	comp=Z,13nm,1.1s						
XLT				pmax	pmax		
	comp=Z,120nm,4.6s						
BURAR	**Bucovina Array**	**35.52**	**304**	P	**P**	**06 52 46.8**	**-0.1**
NACGM	**Naroch**	**35.54**	**316**	⇑eP	**P**	**06 52 47.6**	**+0.7**
	baz=104						
FINES	**FINESS Array B**	**37.87**	**326**	P	**P**	**06 53 07.4**	**+0.8**
	comp=Z,5.1nm,0.7s,baz=100,slow=10,SNR=22						
	comp=Z,5.1nm,0.7s						
FINES	**FINESS Array B**	**37.87**	**326**	P	**P**	**06 53 07.3**	**+0.7**
ITM	**Ithomi**	**39.02**	**287**	P	**P**	**06 53 16.3**	**-0.3**
ITM				IAmb	IAmb	06 53 17.9	
	comp=Z,2.9nm,0.6s						
NJ2	**Nanjing**	**39.60**	**81**	eP	**P**	**06 53 22.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
ARA0	**ARCESS Array S**	**41.59**	**338**	eP	**P**	**06 53 38.5**	**+1.2**
ARCES	**ARCESS Array B**	**41.59**	**338**	P	**P**	**06 53 38.6**	**+1.3**
	comp=Z,3.9nm,0.7s,baz=116,slow=7.4,SNR=18						
	comp=Z,3.9nm,0.7s						
ARCES	**ARCESS Array B**	**41.59**	**338**	P	**P**	**06 53 37.9**	**+0.6**
ARCES				IAmb	IAmb	06 53 39.3	
	comp=Z,9.6nm,0.9s						
KTK1	**Kautokeino**	**42.06**	**337**	eP	**P**	**06 53 41.8**	**+0.7**
HAMF	**Hammerfest**	**42.68**	**339**	eP	**P**	**06 53 47.3**	**+1.3**
CUC	**Castrocucco**	**43.04**	**293**	P	**P**	**06 53 51.3**	**+1.8**
CUC				IAmb	IAmb	06 53 52.4	
	comp=Z,5.7nm,0.7s						
JETT	**Jettan, Norway**	**43.20**	**337**	eP	**P**	**06 53 52.2**	**+1.9**
HFS	**Hagfors**	**43.43**	**322**	LR	LR	07 14 16.2	
	comp=Z,22nm,19.4s,baz=125,slow=39						
TRO	**Tromso**	**43.71**	**336**	eP	**P**	**06 53 56.2**	**+1.9**
FAUS	**Fauske**	**44.23**	**333**	eP	**P**	**06 53 59.4**	**+0.9**
MOR8	**Moi Rana**	**44.23**	**331**	eP	**P**	**06 53 58.5**	**-0.1**
STEI	**Steigen**	**44.40**	**334**	eP	**P**	**06 54 00.1**	**+0.2**
NC405	**NORSAR Array S**	**44.52**	**323**	P	**P**	**06 54 01.2**	**+0.2**
NC602	**NORSAR Array S**	**44.56**	**323**	eP	**P**	**06 54 01.3**	**0.0**
NC303	**NORSAR Array S**	**44.70**	**324**	P	**P**	**06 54 03.2**	**+0.8**
NB2	**NORSAR Subarra**	**44.75**	**323**	P	**P**	**06 54 02.4**	**-0.5**
	comp=Z,4.6nm,0.6s,baz=97,slow=7.9						
NB2	**NORSAR Subarra**	**44.75**	**323**	P	**P**	**06 54 02.4**	**-0.5**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.75**	**323**	P	**P**	**06 54 02.9**	**0.0**
	comp=Z,4.0nm,0.5s,baz=97,slow=7.8,SNR=40						
NOA				LR	LR	07 15 46.6	
	comp=Z,18nm,18.5s,baz=80,slow=40						
	comp=Z,4.0nm,0.5s						
KONS	**Konsvik**	**44.83**	**331**	eP	**P**	**06 54 03.9**	**+0.6**
NSS	**Namsos**	**44.90**	**328**	eP	**P**	**06 54 04.4**	**+0.5**
NC204	**NORSAR Array S**	**44.99**	**324**	P	**P**	**06 54 04.8**	**0.0**
KS19	**Wonju Array Si**	**45.04**	**70**	P	**P**	**06 54 07.0**	**+1.6**
KSAR	**Wonju Array Be**	**45.07**	**70**	P	**P**	**06 54 06.8**	**+1.2**
KSAR	**Wonju Array Be**	**45.07**	**70**	P	**P**	**06 54 06.8**	**+1.2**
LOF	**Lofoten**	**45.07**	**334**	eP	**P**	**06 54 05.2**	**0.0**
KSRS	**Korea Array**	**45.09**	**70**	P	**P**	**06 54 07.0**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=279,slow=7.1,SNR=10.0						
	comp=Z,1.4nm,0.7s						
KONO	**Kongsberg**	**45.44**	**321**	eP	**P**	**06 54 08.4**	**+0.1**
HOPEN	**Hopen**	**45.48**	**346**	eP	**P**	**06 54 09.4**	**+1.0**
KLR	**Kul'dur**	**45.48**	**53**	P	**P**	**06 54 09.8**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=277,slow=9.1,SNR=4.3						
	comp=Z,0.7nm,0.4s						
DOMB	**Dombas**	**45.87**	**325**	eP	**P**	**06 54 11.6**	**-0.1**
SKAR	**Skarslia**	**46.14**	**323**	eP	**P**	**06 54 14.7**	**+0.8**
TIXI	**Tiksi**	**46.26**	**22**	P	**P**	**06 54 14.7**	**+0.2**
	comp=Z,5.6nm,0.3s,baz=275,slow=12,SNR=14						
	comp=Z,5.6nm,0.3s						
TIXI	**Tiksi**	**46.26**	**22**	P	**P**	**06 54 14.7**	**+0.2**
TIXI				IAmb	IAmb	06 54 15.4	
	comp=Z,6.5nm,0.8s						
SNART	**Snartemo**	**46.65**	**319**	eP	**P**	**06 54 18.0**	**+0.3**
BLS5	**Blasjo**	**47.04**	**321**	eP	**P**	**06 54 20.6**	**-0.3**
HYA	**Hoyanger**	**47.20**	**323**	eP	**P**	**06 54 21.6**	**-0.4**
BER	**Bergen**	**47.60**	**322**	eP	**P**	**06 54 25.5**	**+0.4**
HSPB	**Hornsund (broa**	**47.61**	**345**	eP	**P**	**06 54 26.6**	**+1.7**
ASK	**Askoy**	**47.67**	**322**	eP	**P**	**06 54 26.0**	**+0.4**
SPA0	**Spitsbergen Ar**	**47.97**	**347**	eP	**P**	**06 54 29.3**	**+1.5**
KBS	**Kingsbay**	**49.09**	**347**	P	**P**	**06 54 37.6**	**+1.3**
KBS	**Kingsbay**	**49.09**	**347**	P	**P**	**06 54 37.6**	**+1.3**
KBS				pmax	pmax		
	comp=Z,41nm,1.5s						
KBS	**Kingsbay**	**49.09**	**347**	eP	**P**	**06 54 37.9**	**+1.5**
KEST	**Kesra**	**49.15**	**289**	P	**P**	**06 54 38.8**	**+1.3**
	comp=Z,3.9nm,0.5s,baz=27,slow=5.0,SNR=7.7						
	comp=Z,3.9nm,0.5s						
KEST	**Kesra**	**49.15**	**289**	P	**P**	**06 54 36.6**	**-0.8**
KEST				IAmb	IAmb	06 54 40.6	
	comp=Z,6.6nm,0.8s						
MJAR	**Matsushiro Arr**	**53.19**	**68**	P	**P**	**06 55 08.6**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=290,slow=8.0,SNR=5.0						
	comp=Z,1.2nm,0.7s						
DAG	**Danmarks Havn**	**55.20**	**344**	iP	**P**	**06 55 22.0**	**+0.5**
DAG				IAmb	IAmb	06 55 22.9	
	comp=Z,5.2nm,0.7s						
DBG	**Daneborg**	**56.04**	**341**	iP	**P**	**06 55 29.1**	**+1.6**
DBG				IAmb	IAmb	06 55 30.4	
	comp=Z,8.1nm,1.7s						
ESDC	**Sonseca Array**	**57.65**	**298**	P	**P**	**06 55 40.4**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=56,slow=7.8,SNR=15						
	comp=Z,2.0nm,0.7s						
ESDC	**Sonseca Array**	**57.65**	**298**	P	**P**	**06 55 39.4**	**-0.2**
SUMG	**Summit**	**61.52**	**341**	P	**P**	**06 56 07.2**	**+1.2**
SUMG				IAmb	IAmb	06 56 08.0	
	comp=Z,3.7nm,0.9s						
SUMG	**Summit**	**61.52**	**341**	P	**P**	**06 56 07.2**	**+1.2**
SUMG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUMG	**Summit**	**61.52**	**341**	iP	**P**	**06 56 06.0**	**0.0**
SUMG				IAmb	IAmb	06 56 08.3	
	comp=Z,4.2nm,1.0s						
TOA0	**Torodi Ar. Sit**	**65.66**	**269**	P	**P**	**06 56 32.7**	**-0.9**
TOA0				IAmb	IAmb	06 56 34.5	
	comp=Z,3.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.66**	**269**	P	**P**	**06 56 32.6**	**-1.0**
	comp=Z,2.7nm,0.5s,baz=50,slow=6.0,SNR=29						
	comp=Z,2.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.66**	**269**	P	**P**	**06 56 32.7**	**-1.0**
KOWA	**Kowa**	**69.55**	**273**	P	**P**	**06 56 58.0**	**-0.1**
KOWA				IAmb	IAmb	06 57 00.5	
	comp=Z,5.0nm,0.7s						
TOLK	**Toolik Lake Re**	**71.42**	**15**	P	**P**	**06 57 09.7**	**+1.0**
	baz=326,SNR=10						
A36M	**Sachs Harbour**	**71.71**	**5**	IAmb	IAmb	06 57 16.2	
	comp=Z,7.4nm,0.8s						
A36M	**Sachs Harbour**	**71.71**	**5**	P	**P**	**06 57 10.9**	**+0.7**
	baz=346						
GCSA	**Galena City Sc**	**72.84**	**19**	P	**P**	**06 57 18.2**	**+1.1**
	baz=321						
H21K	**Melozitna Rive**	**73.16**	**17**	IAmb	IAmb	06 57 21.0	
	comp=Z,7.0nm,1.1s						
H21K	**Melozitna Rive**	**73.16**	**17**	P	**P**	**06 57 19.6**	**+0.5**
	baz=324,SNR=8.8						
I21K	**Tanana**	**73.75**	**17**	IAmb	IAmb	06 57 24.0	
	comp=Z,4.9nm,0.9s						
I21K	**Tanana**	**73.75**	**17**	P	**P**	**06 57 23.4**	**+1.0**
	baz=325,SNR=5.6						
H23K	**Yukon River**	**73.79**	**16**	IAmb	IAmb	06 57 24.7	
	comp=Z,5.0nm,0.7s						
H23K	**Yukon River**	**73.79**	**16**	P	**P**	**06 57 24.1**	**+1.4**
	baz=327,SNR=8.8						
J20K	**Nowinta River**	**74.02**	**19**	P	**P**	**06 57 24.7**	**+0.6**
J20K				IAmb	IAmb	06 57 25.7	
	comp=Z,7.1nm,0.7s						
J20K	**Nowinta River**	**74.02**	**19**	P	**P**	**06 57 24.9**	**+0.9**
	baz=324,SNR=11						
H24K	**Noodor Dome**	**74.15**	**16**	P	**P**	**06 57 25.9**	**+1.0**
H24K				IAmb	IAmb	06 57 26.7	
	comp=Z,4.0nm,0.8s						
H24K	**Noodor Dome**	**74.15**	**16**	P	**P**	**06 57 26.1**	**+1.2**
	baz=328,SNR=5.6						
MLY	**Manley**	**74.17**	**17**	P	**P**	**06 57 25.4**	**+0.3**
MLY	**Manley**	**74.17**	**17**	P	**P**	**06 57 25.7**	**+0.7**
	baz=326,SNR=6.9						
LBTB	**Lobatse**	**74.27**	**222**	P	**P**	**06 57 27.2**	**+1.1**
LBTB				IAmb	IAmb	06 57 29.0	
	comp=Z,8.1nm,0.8s						
LBTB	**Lobatse**	**74.27**	**222**	P	**P**	**06 57 27.2**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
C36M	**Paulatuk**	**74.38**	**5**	P	**P**	**06 57 26.6**	**+0.5**
C36M	**Paulatuk**	**74.38**	**5**	P	**P**	**06 57 26.2**	**+0.1**
	baz=348,SNR=9.6						
I23K	**Minto, Yukon-K**	**74.40**	**16**	IAmb	IAmb	06 57 28.0	
	comp=Z,4.1nm,0.8s						
I23K	**Minto, Yukon-K**	**74.40**	**16**	P	**P**	**06 57 27.3**	**+1.1**
	baz=327						
INK	**Inuvik**	**74.41**	**9**	P	**P**	**06 57 27.7**	**+1.5**
INK				IAmb	IAmb	06 57 28.0	
	comp=Z,9.7nm,1.2s						
INK	**Inuvik**	**74.41**	**9**	P	**P**	**06 57 27.7**	**+1.5**
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INK	**Inuvik**	**74.41**	**9**	P	**P**	**06 57 27.3**	**+1.1**
	baz=340,SNR=6.4						
TTA	**Tatalina**	**74.51**	**20**	P	**P**	**06 57 28.0**	**+1.0**
TTA	**Tatalina**	**74.51**	**20**	P	**P**	**06 57 28.0**	**+1.0**
TTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TTA	**Tatalina**	**74.51**	**20**	P	**P**	**06 57 27.5**	**+0.5**
	baz=322						
K20K	**Telida**	**74.70**	**19**	P	**P**	**06 57 29.2**	**+1.1**
K20K	**Telida**	**74.70**	**19**	P	**P**	**06 57 29.2**	**+1.1**
	baz=324,SNR=15						
CHUM	**Lake Minchumin**	**74.73**	**18**	P	**P**	**06 57 29.2**	**+1.0**
	baz=325,SNR=5.4						
MDM	**Murphy Dome**	**74.82**	**16**	P	**P**	**06 57 29.6**	**+0.9**
MDM				IAmb	IAmb	06 57 30.6	
	comp=Z,7.5nm,1.0s						
POKR	**Poker Plat Res**	**74.86**	**16**	P	**P**	**06 57 29.6**	**+0.6**
POKR	**Poker Plat Res**	**74.86**	**16**	P	**P**	**06 57 29.9**	**+0.9**
	baz=329						
BPAW	**Bear Paw Mtn.**	**74.89**	**18**	P	**P**	**06 57 29.5**	**+0.3**
BPAW	**Bear Paw Mtn.**	**74.89**	**18**	P	**P**	**06 57 29.2**	**+0.1**
	baz=326,SNR=6.4						
NEA2	**Nenana**	**74.93**	**17**	P	**P**	**06 57 29.7**	**+0.4**
NEA2	**Nenana**	**74.93**	**17**	P	**P**	**06 57 29.6**	**+0.2**
	baz=328						
TCOL	**CIGO, UAF Yank**	**74.97**	**16**	P	**P**	**06 57 30.2**	**+0.7**
	baz=328						
COLA	**College**	**74.97**	**16**	P	**P**	**06 57 30.4**	**+0.8**
COLA	**College**	**74.97**	**16**	P	**P**	**06 57 30.4**	**+0.8**
COLA				pmax	pmax		
	comp=Z,13nm,0.9s						
KNRA	**Kununurra**	**75.00**	**122**	P	**P**	**06 57 31.7**	**+1.3**
ILAR	**Eielson Array**	**75.28**	**16**	P	**P**	**06 57 31.2**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=316,slow=4.7,SNR=27						
	comp=Z,2.3nm,0.8s						
ILAR	**Eielson Array**	**75.28**	**16**	P	**P**	**06 57 31.4**	**+0.1**
ILAR	**Eielson Array**	**75.28**	**16**	P	**P**	**06 57 31.4**	**+0.1**
L19K	**White Mountain**	**75.43**	**20**	P	**P**	**06 57 33.2**	**+0.9**
	baz=323						
L20K	**Farewell, AK**	**75.47**	**20**	P	**P**	**06 57 33.3**	**+0.9**
	baz=324,SNR=5.4						
HDA	**Harding Lake**	**75.57**	**16**	P	**P**	**06 57 33.2**	**+0.2**
	baz=329						
PPLA	**Purkeypile**	**75.58**	**19**	IAmb	IAmb	06 57 34.1	
	comp=Z,4.3nm,0.6s						
PPLA	**Purkeypile**	**75.58**	**19**	P	**P**	**06 57 33.5**	**+0.2**
	baz=325						
N16K	**Nishlik Lake**	**75.61**	**23**	P	**P**	**06 57 34.8**	**+1.5**
	baz=320						
MCK	**McKinley**	**75.69**	**17**	P	**P**	**06 57 33.9**	**+0.2**
	baz=328						
J25K	**Salcha River,**	**75.74**	**15**	IAmb	IAmb	06 57 34.7	
	comp=Z,3.3nm,0.7s						
J25K	**Salcha River,**	**75.74**	**15**	P	**P**	**06 57 33.9**	**-0.1**
	baz=330,SNR=9.4						
EPYK	**Eagle Plains**	**75.76**	**11**	P	**P**	**06 57 34.6**	**+0.5**
	baz=337						
M19K	**Big River Lodg**	**75.79**	**20**	P	**P**	**06 57 35.3**	**+1.0**
	baz=324						
J26L	**Joseph Creek**	**76.22**	**15**	IAmb	IAmb	06 57 38.0	
	comp=Z,5.8nm,0.7s						
J26L	**Joseph Creek**	**76.22**	**15**	P	**P**	**06 57 37.4**	**+0.6**
	baz=332,SNR=8.9						
N18K	**Kilae Creek**	**76.33**	**22**	P	**P**	**06 57 38.8**	**+1.3**
	baz=323						
K24K	**Donnelly Dome**	**76.36**	**16**	P	**P**	**06 57 37.7**	**+0.1**
	baz=330,SNR=10						
I29M	**Ogilvie Camp,**	**76.43**	**12**	IAmb	IAmb	06 57 38.9	
	comp=Z,4.3nm,0.8s						
I29M	**Ogilvie Camp,**	**76.43**	**12**	P	**P**	**06 57 38.3**	**+0.3**
	baz=336,SNR=8.4						
EGAK	**Eagle**	**76.45**	**14**	P	**P**	**06 57 38.7**	**+0.8**
	baz=334						
O16K	**Kokwok River B**	**76.51**	**23**	P	**P**	**06 57 39.9**	**+1.5**
	baz=321						
SCRK	**Sand Creek**	**76.59**	**15**	IAmb	IAmb	06 57 40.3	
	comp=Z,5.3nm,0.6s						
SCRK	**Sand Creek**	**76.59**	**15**	P	**P**	**06 57 39.8**	**+0.8**
	baz=332,SNR=9.5						
RIDG	**Independent Ri**	**76.62**	**16**	P	**P**	**06 57 38.7**	**-0.3**
	baz=331						
DHY	**Denali Highway**	**76.62**	**17**	P	**P**	**06 57 39.3**	**+0.1**
	baz=329,SNR=7.0						
K27K	**Chicken**	**76.94**	**14**	P	**P**	**06 57 41.8**	**+1.1**
	baz=333						
WAT6	**Susitna Watana**	**76.96**	**17**	P	**P**	**06 57 40.8**	**-0.3**
	baz=329						
PAX	**Paxson**	**77.15**	**16**	P	**P**	**06 57 42.4**	**+0.3**
	baz=331,SNR=5.5						
BOSA	**Boshof**	**77.33**	**220**	P	**P**	**06 57 44.9**	**+1.4**
	comp=Z,6.4nm,0.7s,baz=8.9,slow=4.4,SNR=17						
	comp=Z,6.4nm,0.7s						
BOSA	**Boshof**	**77.33**	**220**	P	**P**	**06 57 45.1**	**+1.6**
BOSA				IAmb	IAmb	06 57 46.1	
	comp=Z,8.7nm,0.9s						
BOSA	**Boshof**	**77.33**	**220**	P	**P**	**06 57 45.1**	**+1.6**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DAWY	**Dawson**	**77.42**	**13**	P	**P**	**06 57 44.5**	**+1.0**
DAWY				IAmb	IAmb	06 57 44.8	
	comp=Z,5.8nm,0.9s						
DAWY	**Dawson**	**77.42**	**13**	P	**P**	**06 57 44.2**	**+0.7**
	baz=335,SNR=9.7						
PMR	**Palmer**	**77.46**	**18**	P	**P**	**06 57 43.6**	**-0.1**
	baz=328						
SML	**Sawmill**	**77.48**	**18**	P	**P**	**06 57 44.0**	**+0.1**
	baz=328,SNR=7.1						
P18K	**Big Mountain,**	**77.56**	**22**	IAmb	IAmb	06 57 45.8	
	comp=Z,5.3nm,0.7s						
P18K	**Big Mountain,**	**77.56**	**22**	P	**P**	**06 57 45.2**	**+0.8**
	baz=323						
L26K	**Log Cabin Wild**	**77.57**	**15**	P	**P**	**06 57 45.3**	**+1.0**
	baz=332						
M23K	**Glacier View**	**77.64**	**18**	P	**P**	**06 57 45.0**	**+0.2**
	baz=329,SNR=6.4						
SCM	**Sheep Creek Mo**	**77.70**	**18**	P	**P**	**06 57 45.5**	**+0.4**
	baz=329,SNR=5.9						
HARP	**HAARP**	**77.72**	**16**	P	**P**	**06 57 46.6**	**+1.4**
	baz=331,SNR=7.1						
M24K	**Tolsona, Glenn**	**77.74**	**17**	P	**P**	**06 57 46.4**	**+1.0**
	baz=330,SNR=5.5						
KNK	**Knik Glacier**	**77.78**	**18**	P	**P**	**06 57 46.1**	**+0.6**
	baz=328						
L27K	**Beaver Creek,**	**77.86**	**15**	IAmb	IAmb	06 57 47.8	
	comp=Z,3.9nm,0.7s						
L27K	**Beaver Creek,**	**77.86**	**15**	P	**P**	**06 57 47.2**	**+1.2**
	baz=334,SNR=9.0						
M26K	**Nabesna, AK**	**78.20**	**15**	P	**P**	**06 57 48.5**	**+0.6**
	baz=333						
KLU	**Klutina**	**78.34**	**17**	IAmb	IAmb	06 57 50.2	
	comp=Z,5.5nm,0.9s						
KLU	**Klutina**	**78.34**	**17**	P	**P**	**06 57 49.5**	**+0.8**
	baz=330						
M27K	**Edge Creek, AK**	**78.48**	**15**	P	**P**	**06 57 50.8**	**+1.3**
	baz=334,SNR=14						
N25K	**Chitina, Valde**	**78.55**	**16**	P	**P**	**06 57 50.3**	**+0.4**
	baz=331						
GLI	**Glacier Island**	**78.58**	**18**	P	**P**	**06 57 49.6**	**-0.3**
	baz=330						
FID	**Port Fidalgo**	**78.85**	**18**	P	**P**	**06 57 52.2**	**+0.8**
FID				IAmb	IAmb	06 57 52.6	
	comp=Z,4.0nm,0.6s						
BMRM	**Bremner River**	**79.11**	**17**	P	**P**	**06 57 53.4**	**+0.6**
	baz=332						
EYAK	**Cordova Ski Ar**	**79.20**	**17**	P	**P**	**06 57 54.4**	**+1.1**
	baz=331						
M30M	**Minto, Yukon**	**79.26**	**13**	P	**P**	**06 57 54.5**	**+0.8**
	baz=338						
YUK3	**Moose Creek**	**79.30**	**15**	P	**P**	**06 57 54.9**	**+0.8**
	baz=335,SNR=7.2						
KDAK	**Kodiak Island**	**79.68**	**22**	LR	LR	07 37 44.0	
	comp=Z,69nm,18.2s,baz=235,slow=39						
KDAK	**Kodiak Island**	**79.68**	**22**	P	**P**	**06 57 55.9**	**0.0**
	baz=326						
CTG	**Chitna Glacier**	**79.84**	**15**	P	**P**	**06 57 57.6**	**+0.6**
	baz=334						
OHAK	**Old Harbor**	**79.93**	**23**	P	**P**	**06 57 58.0**	**+0.8**
	baz=325						
M31M	**Drury Creek, Y**	**80.02**	**12**	P	**P**	**06 57 58.2**	**+0.4**
	baz=340						
YUK4	**Talbot Arm**	**80.05**	**14**	P	**P**	**06 57 58.7**	**+0.6**
	baz=336,SNR=7.4						
N30M	**Aishikik Lake**	**80.24**	**13**	P	**P**	**06 57 59.5**	**+0.5**
	baz=337						
N31M	**Braeburn, Yuko**	**80.46**	**13**	P	**P**	**06 58 00.8**	**+0.7**
	baz=338						
YUK6	**Outpost Mounta**	**80.48**	**14**	P	**P**	**06 58 01.4**	**+0.9**
	baz=336						
HYT	**Haines Junctio**	**80.75**	**14**	P	**P**	**06 58 02.8**	**+1.0**
	baz=337						
O30N	**Mendenhall**	**81.07**	**13**	P	**P**	**06 58 04.4**	**+1.0**
	baz=338						
WHY	**Whitehorse**	**81.39**	**13**	P	**P**	**06 58 05.5**	**+0.3**
WHY	**Whitehorse**	**81.39**	**13**	P	**P**	**06 58 05.3**	**+0.1**
	baz=339						
WB0	**Warramunga Arr**	**81.69**	**122**	P	**P**	**06 58 07.9**	**+0.7**
WB0				IAmb	IAmb	06 58 10.2	
	comp=Z,7.4nm,1.4s						
YKA	**Yellowknife Ar**	**81.75**	**3**	P	**P**	**06 58 07.5**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=351,slow=5.3,SNR=9.3						
	comp=Z,1.9nm,0.6s						
WRA	**Warramunga Arr**	**81.77**	**122**	P	**P**	**06 58 08.0**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=327,slow=4.8,SNR=49						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**81.77**	**122**	P	**P**	**06 58 08.1**	**+0.4**
WRA	**Warramunga Arr**	**81.77**	**122**	P	**P**	**06 58 08.1**	**+0.4**
WRAB	**Tennant Creek**	**81.77**	**122**	P	**P**	**06 58 08.1**	**+0.5**
WRAB				IAmb	IAmb	06 58 08.7	
	comp=Z,3.2nm,0.6s						
WRAB	**Tennant Creek**	**81.77**	**122**	P	**P**	**06 58 08.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WB2	**Warramunga Arr**	**81.78**	**122**	P	**P**	**06 58 07.8**	**+0.2**
WR0	**Warramunga Arr**	**81.92**	**122**	P	**P**	**06 58 08.7**	**+0.3**
P33M	**Teslin, Yukon**	**82.16**	**12**	P	**P**	**06 58 09.5**	**+0.2**
	baz=341						
ASAR	**Alice Springs**	**84.01**	**125**	P	**P**	**06 58 19.1**	**0.0**
	comp=Z,2.0nm,0.7s,baz=319,slow=5.4,SNR=24						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**84.01**	**125**	P	**P**	**06 58 20.2**	**+1.0**
ASAR	**Alice Springs**	**84.01**	**125**	P	**P**	**06 58 20.2**	**+1.0**
S34M	**Telegraph Cree**	**84.62**	**12**	P	**P**	**06 58 23.1**	**+1.3**
	baz=342						
VNA2	**Neumayer--Watz**	**119.91**	**202**	PKPdf	**PKiKP**	**07 04 37.8**	**+0.5**
	baz=29,slow=4.1						
VNA3	**Neumayer Olymp**	**120.72**	**202**	PKPdf	**PKiKP**	**07 04 39.1**	**+0.2**
QSPA	**South Pole Qui**	**125.79**	**180**	PKP	**PKPdf**	**07 04 48.9**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=194,slow=1.8,SNR=2.6						
CPUP	**Villa Florida**	**135.14**	**267**	PKP	**PKPdf**	**07 05 07.1**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=90,slow=8.1,SNR=3.1						
CPUP	**Villa Florida**	**135.14**	**267**		**PKPdf**	**07 05 07.5**	**0.0**
CPUP	**Villa Florida**	**135.14**	**267**	PKIKP	**PKPdf**	**07 05 07.5**	**0.0**
PLCA	**Paso Flores**	**149.60**	**249**	PKPbc	**PKiKP**	**07 05 38.4**	**0.0**
	comp=Z,2.5nm,0.9s,baz=117,slow=2.3,SNR=6.2						
PLCA	**Paso Flores**	**149.60**	**249**		**PKiKP**	**07 05 38.6**	**+0.2**
PLCA	**Paso Flores**	**149.60**	**249**	PKP2	**PKiKP**	**07 05 38.6**	**+0.2**

KRSC 29 06:56:06.5±2.3**, 48.°27N**×**157.°38E, h30**^{km}±50^{km}**, ML3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.55**	**342**	P	Pn	06 56 44.8	-1.0
PAU	**Pauzhetka**	**3.22**	**354**	eS	Sn	06 57 36.9	+4.6
KDTR	**Khodutka, Kamc**	**3.57**	**7**	eS	Sn	06 57 46.1	+5.2
ASAK	**Asacha**	**4.13**	**4**	eP	Pn	06 57 12.4	+4.8
RUS	**Russkaya**	**4.23**	**9**	eP	Pn	06 57 12.8	+4.0
RUS				eS	Sn	06 58 01.8	+4.6
MTVR	**Mutnovka**	**4.25**	**7**	eP	Pn	06 57 13.7	+4.5
MTVR				eS	Sn	06 58 03.4	+5.5
GRL	**Gorelyy**	**4.31**	**6**	eP	Pn	06 57 15.0	+4.9
GRL				eS	Sn	06 58 05.6	+6.3
UGLR	**Uglovaya**	**5.03**	**10**	P	Pn	06 57 25.3	+5.4
AVH	**Avacha**	**5.08**	**9**	eP	Pn	06 57 25.2	+4.7
KOK	**Koryaka**	**5.09**	**9**	eP	Pn	06 57 26.2	+5.4
SPN	**Mys Shipunski**	**5.12**	**18**	S	Sn	06 58 24.6	+5.6

IDC ***29*** *07:01:16.8±0.7, 21.°83N×144.°14E, h118^{km}±6^{km}, mb3.8/16, mbtmp4.2/19, MS2.8/2, Error ellipse: s-maj=19.5km s-min=10.4km az=83.0*

NEIC ***29*** *07:01:16.3±1.4, 21.°92N±0.°09×144.°0E±0.°1, h107^{km}±7^{km}, mb4.5/45, Error ellipse: s-maj=19.6km s-min=12.9km az=87.0*

JMA ***29*** *07:01:20.8±0.3, 22°N±1°×14°4E±°, h132^{km}, MV4.8/10, IOTO ISLANDS REGION*

ISC 29 07:01:15.4±0.4**, 21.°87N**±0.°05×**144.°1E**±0.°1**, h105**^{km}**, n92, σ1.^{s}07**/91**, mb4.4**/30**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**5.06**	**340**	eP	**Pn**	**07 02 31.8**	**+2.9**
JHH2				eS	**Sn**	**07 03 26.3**	**+0.1**
JHH2	**Haha-jima-NKT2**	**5.06**	**340**	A	A	07 02 31.8	
	comp=E,5.0nm,0.4s,comp=E,4.0nm,0.5s						
CBIJ	**Chichi jima**	**5.49**	**342**	eP	**Pn**	**07 02 37.0**	**+2.2**
CBIJ				eS	**Sn**	**07 03 35.8**	**-0.8**
JCJ	**Chichijima**	**5.49**	**342**	P	**Pn**	**07 02 36.7**	**+1.9**
	79nm,0.5s,baz=98,slow=23,SNR=36						
JCJ				S	**Sn**	**07 03 35.8**	**-0.9**
	307nm,0.3s,baz=277,slow=22,SNR=27						
GUMO	**Guam**	**8.27**	**175**	LR	LR	07 05 20.7	
	comp=Z,51nm,21.1s,baz=243,slow=30						
BSO1	**Boso 1**	**13.03**	**349**	eP	**Pn**	**07 04 17.4**	**+1.4**
BSO1				eS	**Sn**	**07 06 36.4**	**-2.6**
JGF	**Kuroka**	**14.90**	**338**		**Pn**	**07 04 40.2**	**-0.5**
MJAR	**Matsushiro Arr**	**15.49**	**342**	P	**P**	**07 04 48.1**	**-2.2**
	4.6nm,0.8s,baz=162,slow=9.2,SNR=17						
MJAR	**Matsushiro Arr**	**15.49**	**342**		**Pn**	**07 04 46.9**	**-1.2**
MAJO	**Matsushiro**	**15.49**	**342**		**Pn**	**07 04 47.7**	**-0.4**
MAJO				IAmb	IAmb	07 04 53.6	
	comp=Z,17nm,0.9s						
MJB9	**Matsu-Tunnel**	**15.50**	**342**	P	**P**	**07 04 49.0**	**-1.3**
MJB9				IAmb	IAmb	07 04 53.5	
	comp=Z,16nm,0.9s						
JMM	**Marumori**	**16.20**	**351**	P	**P**	**07 04 56.7**	**-1.3**
JMM				IAmb	IAmb	07 04 58.7	
	comp=Z,22nm,1.0s						
JNU	**Nakatsue**	**16.20**	**317**	P	**P**	**07 04 58.5**	**+0.3**
	comp=Z,23nm,0.3s,baz=11,slow=6.0,SNR=36						
JNU	**Nakatsue**	**16.20**	**317**	P	**Pn**	**07 04 56.9**	**-0.2**
JNU				IAmb	IAmb	07 05 00.6	
	comp=Z,29nm,1.1s						

JHS	Saijyo	16.24	326		P	07 05 00.5	+1.9
JSD	Sado	16.88	344		Pn	07 05 03.8	-1.4
JSD				IAmb	IAmb	07 05 04.4	
	comp=Z,26nm,1.3s						
ERM	Erimo	20.10	358	P	Pn	07 05 41.4	-2.1
ERM				IAmb	IAmb	07 05 52.1	
	comp=Z,39nm,1.2s						
KSRS	Korea Array	20.90	322	P	Pn	07 05 52.2	-0.6
	comp=Z,3.0nm,0.7s,baz=145,slow=8.7,SNR=20						
	comp=Z,3.0nm,0.7s						
KSAR	Wonju Array Be	20.91	321	P	P	07 05 49.2	-0.2
KS19	Wonju Array Si	20.96	322	P	P	07 05 50.5	+0.4
KS19				IAmb	IAmb	07 05 58.1	
	comp=Z,12nm,0.9s						
JEW	Eniwo	21.03	355	P	P	07 05 50.6	-0.1
YHNB	Yeheng	21.05	282	P	P	07 05 49.5	-1.8
YHNB				IAmb	IAmb	07 06 17.8	
	comp=Z,20nm,0.8s						
SEHB	SEOHWA	21.28	324	P	P	07 05 52.9	-0.6
SSLB	Suanglung	21.41	280	P	P	07 05 54.8	-0.3
SSLB				IAmb	IAmb	07 06 16.7	
	comp=Z,26nm,1.3s						
H11N1	WAKE ISLAND Hy	21.42	92	T	T	07 28 26.6	
	baz=282,slow=74,SNR=3.9						
H11N2	WAKE ISLAND Hy	21.42	92	T	T	07 28 23.9	
	baz=282,slow=74,SNR=1.6						
H11N3	WAKE ISLAND Hy	21.43	92	T	T	07 28 26.1	
	baz=282,slow=74,SNR=3.4						
H11S3	WAKE ISLAND Hy	21.47	95	T	T	07 28 48.1	
	baz=283,slow=75,SNR=7.4						
H11S1	WAKE ISLAND Hy	21.48	95	T	T	07 28 42.0	
	baz=283,slow=75,SNR=5.9						
H11S2	WAKE ISLAND Hy	21.48	95	T	T	07 28 42.6	
	baz=283,slow=75,SNR=3.4						
ASAJ	Asahikawa	22.22	357	P	P	07 06 06.0	+2.7
	comp=Z,4.8nm,0.6s,baz=214,slow=3.6,SNR=5.0						
	comp=Z,4.8nm,0.6s						
USRK	Ussuriysk Ar.	24.42	339	P	P	07 06 26.2	+2.2
	comp=Z,2.0nm,0.5s,baz=147,slow=6.3,SNR=4.2						
	comp=Z,2.0nm,0.5s						
USRK	Ussuriysk Ar.	24.42	339	P	P	07 06 23.6	-0.4
SIJI	Sorong	25.84	211	P	P	07 06 38.0	+0.7
	comp=Z,3.5nm,0.4s,baz=58,slow=16,SNR=3.7						
	comp=Z,3.5nm,0.4s						
FAKI	Fak Fak	27.23	207	P	P	07 06 49.4	-0.3
FAKI				IAmb	IAmb	07 06 56.4	
	comp=Z,14nm,1.2s						
KLR	Kul'dur	29.01	343	P	P	07 07 06.0	+0.7
	comp=Z,7.2nm,0.6s,baz=152,slow=6.7,SNR=32						
	comp=Z,7.2nm,0.6s						
PETK	Petropavlovsk-	32.88	15	P	P	07 07 40.8	+1.5
COEN	Coen	35.62	182	P	P	07 08 04.4	+1.1
MTN	Manton Dam	36.77	201	P	P	07 08 13.0	0.0
SONM	Songino Array	39.75	320	P	P	07 08 39.7	+1.8
	comp=Z,0.6nm,0.6s,baz=126,slow=7.3,SNR=3.0						
	comp=Z,0.6nm,0.6s						
KNRA	Kununurra	40.23	203	P	P	07 08 42.1	+0.1
KNRA				IAmb	IAmb	07 08 44.1	
	comp=Z,7.2nm,0.7s						
YAK	Yakutsk	41.34	350	LR	LR	07 30 30.7	
	comp=Z,14nm,18.1s,baz=267,slow=42						
YAK	Yakutsk	41.34	350	P	P	07 08 50.5	-0.2
CTAO	Charters Tower	41.75	177	P	P	07 08 55.2	+0.8
CTAO				IAmb	IAmb	07 08 55.7	
	comp=Z,8.7nm,0.6s						
WB0	Warramunga Arr	42.45	194	P	P	07 09 00.2	0.0
WB0				IAmb	IAmb	07 09 02.4	
	comp=Z,14nm,1.4s						
WR0	Warramunga Arr	42.61	193	P	P	07 09 01.3	-0.1
WR0				IAmb	IAmb	07 09 19.9	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	42.62	194	P	P	07 09 01.7	+0.1
WRAB				IAmb	IAmb	07 09 04.6	
	comp=Z,6.7nm,0.6s						
WB2	Warramunga Arr	42.63	194	P	P	07 09 01.8	+0.1
WB2				IAmb	IAmb	07 09 04.7	
	comp=Z,6.7nm,0.7s						
WRA	Warramunga Arr	42.64	194	P	P	07 09 01.5	-0.2
	comp=Z,2.8nm,0.5s,baz=15,slow=8.5,SNR=69						
WRA				PcP	PcP	07 10 51.4	-0.6
	comp=Z,0.7nm,0.4s,baz=4.1,slow=3.2,SNR=6.1						
	comp=Z,2.8nm,0.5s						
WRA	Warramunga Arr	42.64	194	P	P	07 09 01.4	-0.2
KULM	Kulim	45.13	255	P	P	07 09 22.9	+1.1
ASAR	Alice Springs	46.34	193	P	P	07 09 30.4	-0.6
	comp=Z,1.5nm,0.6s,baz=11,slow=6.3,SNR=23						
ASAR				PcP	PcP	07 11 03.8	-0.9
	comp=Z,0.7nm,0.6s,baz=15,slow=3.9,SNR=6.5						
	comp=Z,1.5nm,0.6s						
ASAR	Alice Springs	46.34	193	P	P	07 09 29.8	-1.3
DZM	Mont Dzumac	48.81	152	P	P	07 09 50.2	-0.1
PSA00	Pilbara Seismi	49.23	210	P	P	07 09 53.1	-0.3
STKA	Stephens Creek	53.49	183	P	P	07 10 24.5	-0.6
	comp=Z,5.7nm,0.5s,baz=0.7,slow=8.2,SNR=19						
	comp=Z,5.7nm,0.5s						
STKA	Stephens Creek	53.49	183	P	P	07 10 24.9	-0.2
FORT	Forrest	54.56	197	P	P	07 10 32.5	-0.4
ZALV	Zalesovo Beam	54.60	321	P	P	07 10 32.4	-0.6
	comp=Z,0.9nm,0.5s,baz=111,slow=8.1,SNR=3.7						
	comp=Z,0.9nm,0.5s						
BBOO	Buckleboo	54.91	188	P	P	07 10 34.7	-0.6
MKAR	Makanchi Array	55.21	312	P	P	07 10 37.2	-0.2
	comp=Z,0.4nm,0.5s,baz=90,slow=8.3,SNR=7.6						
MKAR				pP	pwP	07 11 05.8	-0.2
	comp=Z,0.8nm,0.5s,baz=90,slow=10.0,SNR=4.6						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	55.21	312	P	P	07 10 37.7	+0.3
MAKZ	Makanchi	55.42	312	P	P	07 10 39.3	+0.3
OHAK	Old Harbor	57.10	35	P	P	07 10 51.1	+0.4
OHAK				IAmb	IAmb	07 11 18.7	
	comp=Z,6.0nm,1.0s						
Q19K	Cape Douglas,	57.26	33	P	P	07 10 51.1	-0.7
MORW	Morawa	57.41	209	P	P	07 10 53.5	+0.3
K20K	Telida	58.11	28	P	P	07 10 58.4	+0.7
J20K	Nowinta River	58.30	27	P	P	07 11 00.1	+1.2
J20K				IAmb	IAmb	07 11 01.7	
	comp=Z,7.1nm,1.4s						
IMAR	Indian Mountai	58.97	25	P	P	07 11 04.1	+0.5
H21K	Melozitna Rive	59.26	25	P	P	07 11 06.6	+1.0
H21K				IAmb	IAmb	07 11 07.4	
	comp=Z,3.8nm,1.3s						
SEW	Seward	59.58	32	P	P	07 11 07.9	+0.1
SEW				IAmb	IAmb	07 11 34.1	
	comp=Z,7.8nm,1.2s						
BPAW	Bear Paw Mtn.	59.63	27	P	P	07 11 08.8	+0.6
BPAW				IAmb	IAmb	07 11 09.3	
	comp=Z,2.1nm,0.6s						
BOOM	Boomskoye usch	59.68	307	P	P	07 11 09.8	+0.7
ILAR	Eielson Array	61.50	27	P	P	07 11 19.8	-1.1
	comp=Z,0.9nm,0.8s,baz=261,slow=5.4,SNR=15						
ILAR				pP	pwP	07 11 48.2	-2.3
	comp=Z,0.4nm,0.7s,baz=256,slow=6.2,SNR=2.7						
	comp=Z,0.9nm,0.8s						
SCRK	Sand Creek	62.64	28	P	P	07 11 28.9	+0.2
BMAR	Burnt Mountain	62.84	24	P	P	07 11 31.1	+1.3
J26L	Joseph Creek	62.88	28	P	P	07 11 30.4	+0.2
BCAR	Beaver Creek A	63.55	29	P	P	07 11 35.1	+0.5
KKAR	Karatay Array	63.61	308	P	P	07 11 35.1	-0.2
ABKAR	Akbulak array	70.01	316	P	P	07 12 14.9	-0.9
EUNU	Eureka	74.81	8	P	P	07 12 44.0	+0.1
RES	Resolute Bay	76.71	14	P	P	07 12 54.7	+0.1
RES				IAmb	IAmb	07 13 02.1	
	comp=Z,6.2nm,1.1s						
ARCES	ARCESS Array B	79.03	342	P	P	07 13 07.1	-0.5
	comp=Z,1.2nm,0.7s,baz=68,slow=9.8,SNR=5.0						
	comp=Z,1.2nm,0.7s						
ARCES	ARCESS Array B	79.03	342	P	P	07 13 07.3	-0.3
ARCES				IAmb	IAmb	07 13 07.5	
	comp=Z,17nm,1.5s						
NVAR	Mina Array Bea	82.37	52	P	P	07 13 27.1	+0.8
	comp=Z,0.6nm,0.6s,baz=286,slow=5.4,SNR=8.7						
NVAR				pP	pwP	07 13 58.2	+1.2
	comp=Z,0.9nm,0.7s,baz=272,slow=5.0,SNR=4.2						
	comp=Z,0.6nm,0.6s						
KBZ	Khabaz	82.86	314	P	P	07 13 28.4	0.0
	comp=Z,3.1nm,0.8s,baz=194,slow=4.2,SNR=5.1						
	comp=Z,3.1nm,0.8s						
FINES	FINESS Array B	83.39	335	P	P	07 13 28.9	-1.8
	comp=Z,1.3nm,0.6s,baz=80,slow=5.3,SNR=10						
FINES				pP	pwP	07 13 59.5	-1.6
	comp=Z,0.7nm,0.3s,baz=67,slow=4.7,SNR=1.8						
	comp=Z,1.3nm,0.6s						
FINES	FINESS Array B	83.39	335	P	P	07 13 29.2	-1.6
TORD	Torodi Ar. Bea	129.29	310	PKP	PKPdf	07 20 11.5	-0.9
	comp=Z,0.5nm,0.9s,baz=20,slow=1.0,SNR=2.5						
PLCA	Paso Flores	145.23	131	PKPbc	PKPdf	07 20 40.9	-0.2
	comp=Z,2.7nm,0.5s,baz=240,slow=4.8,SNR=32						
PLCA	Paso Flores	145.23	131		PKPdf	07 20 41.0	0.0
LPAZ	La Paz	149.08	85	PKPbc	PKPbc	07 20 51.7	-1.3
	comp=Z,1.1nm,0.5s,baz=352,slow=3.2,SNR=8.1						

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*NEIC **29** 07:17:11.5±1.6, 14°.23S±0°.10×167°.54E±0°.10, h149^{km}±10^{km}, mb4.4/18, Error ellipse: s-maj=15.4km s-min=12.3km az=222.0*

*IDC **29** 07:17:15.4±3.5, 14°.40S×167°.27E, h176^{km}±32^{km}, mb3.6/9, mbtmp4.1/10, Error ellipse: s-maj=23.9km s-min=20.3km az=109.0*

ISC 29 07:17:14.0±0.7**, 14°.36S**±0°.07×**167°.5E**±0°.1**, h170^{km}, n41, σ1^s.16**/43**, mb4.2**/18**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	6.38	182		Pn	07 18 45.2	-0.8
KOUNC	Koumac, New Ca	6.86	206		Pn	07 18 51.5	-0.7
KOUNC				Sn	Sn	07 20 10.2	+0.6
MARNC	Mare, Loyalty	7.10	176		Pn	07 18 53.8	-1.7
DZM	Mont Dzumac	7.73	187	P	Pn	07 19 05.0	+1.1
	11nm,0.3s,baz=180,slow=16,SNR=29						
DZM				S	Sn	07 20 30.7	+0.1
	12nm,0.7s,baz=143,slow=20,SNR=1.8						
DZM	Mont Dzumac	7.73	187		Pn	07 19 04.5	+0.7
ONTNC	Ouen Toro	7.96	187	Pn	Pn	07 19 04.5	-2.4
OUENC	Ouen Island, N	8.04	184		Pn	07 19 06.5	-1.4
PINNC	Pines Island,	8.21	180	Pn	Pn	07 19 08.1	-2.0
EIDS	Eidsvold	18.87	232	P	P	07 21 22.5	+1.1
CTA	Charters Tower	21.02	251	P	P	07 21 44.0	-0.6
	3.8nm,0.8s,baz=72,slow=12,SNR=5.2						
	3.8nm,0.8s						
CTAO	Charters Tower	21.02	251	P	P	07 21 44.3	-0.2
BKZ	Black Stump Fm	25.96	164	P	P	07 22 31.0	+0.1
STKA	Stephens Creek	29.36	229	P	P	07 23 01.6	+0.4
	2.0nm,0.4s,baz=60,slow=9.6,SNR=9.6						
STKA				PcP	PcP	07 26 03.5	+0.2
	0.4nm,0.3s,baz=328,slow=7.4,SNR=3.1						
	2.0nm,0.4s						
STKA	Stephens Creek	29.36	229	P	P	07 23 02.2	+1.0
WR0	Warramunga Arr	31.89	255	P	P	07 23 22.1	-1.5
WR0				IAmb	IAmb	07 23 36.9	
	comp=Z,4.9nm,1.4s						
WB0	Warramunga Arr	32.02	256	P	P	07 23 23.6	-1.1
WB0				IAmb	IAmb	07 23 24.2	
	comp=Z,5.1nm,0.9s						
WB2	Warramunga Arr	32.07	255	P	P	07 23 24.2	-1.0
WB2				IAmb	IAmb	07 23 39.4	
	comp=Z,6.1nm,1.4s						
WRAB	Tennant Creek	32.07	255	P	P	07 23 24.1	-1.1
WRAB				IAmb	IAmb	07 23 24.3	
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	32.08	255	P	P	07 23 23.8	-1.4
	comp=Z,1.7nm,0.5s,baz=85,slow=9.5,SNR=41						
	comp=Z,1.7nm,0.5s						
WRA	Warramunga Arr	32.08	255	P	P	07 23 23.5	-1.8
ASAR	Alice Springs	32.97	249	P	P	07 23 31.6	-1.3
	comp=Z,2.7nm,0.6s,baz=78,slow=9.0,SNR=63						
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	32.97	249	P	P	07 23 31.5	-1.5
TAU	Tasmania Unive	33.31	207	P	P	07 23 36.1	+0.6
WAKE	Wake Island	33.44	359	P	P	07 23 35.5	-1.4
BBOO	Buckleboo	33.94	232	P	P	07 23 41.9	+0.7
BBOO				IAmb	IAmb	07 24 10.2	
	comp=Z,14nm,1.2s						
MTN	Manton Dam	35.30	268	P	P	07 23 53.1	0.0
MTN				IAmb	IAmb	07 24 08.1	
	comp=Z,25nm,1.5s						
KNRA	Kununurra	37.35	263	P	P	07 24 09.8	-0.7
KNRA				IAmb	IAmb	07 24 11.5	
	comp=Z,9.0nm,0.8s						
FORT	Forrest	39.63	239	P	P	07 24 29.3	-0.1
MORW	Morawa	49.58	244	P	P	07 25 47.6	-0.5
MORW				IAmb	IAmb	07 26 06.1	
	comp=Z,30nm,1.5s						
MJAR	Matsushiro Arr	57.66	332	P	P	07 26 45.9	-0.7
	comp=Z,0.8nm,0.5s,baz=160,slow=7.5,SNR=4.0						
	comp=Z,0.8nm,0.5s						
VNDA	Vanda	63.23	181	P	P	07 27 23.9	+0.1
	comp=Z,0.6nm,0.7s,baz=350,slow=5.9,SNR=7.1						
	comp=Z,0.6nm,0.7s						
VNDA	Vanda	63.23	181	P	P	07 27 24.3	+0.4
SBA	Scott Base	63.50	180	P	P	07 27 27.0	+1.4
CASY	Casey	63.93	202	P	P	07 27 28.7	+0.2
CASY				IAmb	IAmb	07 27 34.9	
	comp=Z,8.0nm,1.4s						
PETK	Petropavlovsk-	67.71	354	P	P	07 27 55.1	+2.3
	comp=Z,2.2nm,0.8s,baz=172,slow=12,SNR=4.8						
	comp=Z,2.2nm,0.8s						
QSPA	South Pole Qui	75.67	180	P	P	07 28 40.4	0.0
QSPA				IAmb	IAmb	07 29 00.8	
	comp=Z,8.0nm,1.5s						
ILAR	Eielson Array	86.12	18	P	P	07 29 35.2	-0.2
	comp=Z,0.5nm,0.7s,baz=237,slow=5.1,SNR=7.9						
	comp=Z,0.5nm,0.7s						
MKAR	Makanchi Array	97.06	316	P	Pdif	07 30 27.9	+1.2
	comp=Z,0.5nm,0.6s,baz=130,slow=3.8,SNR=6.0						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	97.06	316	P	P	07 30 25.9	-0.7
FINES	FINESS Array B	125.44	338	PKP	PKiKP	07 35 55.0	+0.2
	comp=Z,0.4nm,0.7s,baz=50,slow=4.3,SNR=1.2						
NB2	NORSAR Subarra	130.31	345	SKPa	SKPab	07 39 13.8	+2.6
	comp=Z,1.7nm,0.8s,baz=38,slow=4.8						

SSNC 29 07:25:45.5±1.6**, 18°.53N**×**81°.40W, h5^{km}**±89^{km}**, MD3.7, ML2.4, MW3.3, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	0.81	15	*e*P	Pg	07 25 45.4	-16
FSCY				*e*S	Sg	07 25 56.4	-15
MTDJ	Mount Denham	3.69	94	*e*P	Pn	07 26 42.1	-1.2
MTDJ				*e*S	Sn	07 27 23.9	-3.3
CCCC	Cccc	4.33	52	*e*P	Pn	07 26 54.7	+2.7
CCCC				*e*S	Sn	07 27 45.6	+2.6
CCCC				IAML		07 27 49.7	
	comp=N,1.6nm,0.5s						
CCCC				IAML		07 27 50.0	
	comp=E,1.5nm,0.5s						
LMGC	Las Mercedes	4.43	69	*e*P	Pn	07 26 52.4	-0.9
LMGC				*e*S	Sn	07 27 40.3	-5.0
LMGC				IAML		07 27 42.8	
	comp=E,2.0nm,0.4s						
RCC	Rio Carpintero	5.58	74	*e*P	Pn	07 27 06.9	-2.4
RCC				IAML		07 28 09.4	
	comp=N,0.5nm,0.3s						
RCC				IAML		07 28 10.3	
	comp=E,0.9nm,0.3s						
GTBY	Guantanamo Bay	6.11	76	*e*P	Pn	07 27 14.8	-1.6
MASC	Masc	6.97	75	*e*P	Pn	07 27 27.5	-0.8
MASC				IAML		07 28 41.2	
	comp=E,1.1nm,0.5s						
MASC				IAML		07 28 41.4	
	comp=N,1.6nm,0.8s						

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*WEL **29** 07:26:23.4, 38˚S±9˚×17˚6E±1˚0, h132^{km}±16^{km}, M2.5/29, MLv2.5/29, Error ellipse: s-maj=0.0km s-min=0.0km az=120.8*

*IDC **29** 07:26:28.6±1.8, 32°.44S×177°.26W, h0^{km}, mb3.7/2, mbtmp4.0/3, ML5.9/1, Error ellipse: s-maj=61.7km s-min=37.4km az=166.0*

ISC 29 07:26:20.8±1.4**, 38°.01S**±0°.05×**176°.51E**±0°.05**, h150^{km}, n80, σ1^s.13**/75**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RRRZ	Republican Roa	0.33	179	P	Pn	07 26 41.9	+0.4
MUGZ	Murupara	0.52	156	P	Pn	07 26 42.5	+0.3
URZ	Urewera	0.54	118	P	Pn	07 26 42.0	-0.3
ALRZ	Allen Road	0.57	193	P	Pn	07 26 43.5	+0.9
WPRZ	Whakapapatarin	0.58	208	P	Pn	07 26 43.6	+1.0
RTZ	Ruatahuna	0.71	149	P	Pn	07 26 43.8	+0.3
MRHZ	Matea Rd	0.83	185	P	Pn	07 26 45.1	+0.8
TOZ	Tahuroa Road	0.84	289	P	Pn	07 26 44.8	+0.5
MWZ	Matawai	0.87	113	P	Pn	07 26 44.6	0.0
MTHZ	Maungataniwha	0.89	163	P	Pn	07 26 45.5	+0.8
RUGZ	Raukumara Rang	0.93	88	P	Pn	07 26 43.8	-1.3
SNGZ	Shannon Statio	1.01	140	P	Pn	07 26 46.4	+0.7
RAHZ	Arahi	1.02	154	P	Pn	07 26 46.9	+1.1
RITZ	Rihia Road	1.10	207	P	Pn	07 26 47.9	+1.5
NMHZ	Naumai	1.11	168	P	Pn	07 26 48.3	+1.6
BKZ	Black Stump Fm	1.16	181	P	Pn	07 26 47.7	+0.6
RIGZ	Rimuhau	1.21	126	P	Pn	07 26 48.1	+0.6
ETVZ	East Tongariro	1.29	209	P	Pn	07 26 49.7	+1.4
ARHZ	Aropaoanui	1.31	163	P	Pn	07 26 49.5	+1.1
SNVZ	South Ngauruho	1.36	210	P	Pn	07 26 50.6	+1.5
KNZ	Kokohu	1.37	138	P	Pn	07 26 49.4	+0.4
NGZ	Ngauruhoe	1.37	211	P	Pn	07 26 50.6	+1.4
PUZ	Puketiti	1.38	93	P	Pn	07 26 48.1	-1.0
MKAZ	Moumakai	1.40	310	P	Pn	07 26 49.2	-0.1
KWHZ	Kaweka Forest	1.42	183	P	Pn	07 26 50.6	+1.1
CNGZ	Carnagh Statio	1.42	110	P	Pn	07 26 50.0	+0.5
TUVZ	Tukino	1.43	208	P	Pn	07 26 50.8	+1.0
MCHZ	McNeill Hill	1.45	174	P	Pn	07 26 51.1	+1.3
FWVZ	Far West T-bar	1.46	211	P	Pn	07 26 51.5	+1.4
TRVZ	Turoa	1.50	210	P	Pn	07 26 51.8	+1.2
WNVZ	Wahianoa	1.50	208	P	Pn	07 26 51.6	+1.0
MOVZ	Moawhango	1.52	203	P	Pn	07 26 51.2	+0.6
WMGZ	Waiomatatini S	1.52	84	P	Pn	07 26 49.5	-1.0
BHHZ	Black Hill Sta	1.52	193	P	Pn	07 26 51.3	+0.7
MHGZ	Mahia Peninsul	1.59	137	P	Pn	07 26 51.9	+0.7
MTVZ	Mangateitei	1.60	210	P	Pn	07 26 52.1	+0.6
ETAZ	East Tamaki Re	1.64	309	P	Pn	07 26 51.0	-0.8
KRHZ	Kereru	1.64	184	P	Pn	07 26 52.5	+0.6
CKHZ	Cape Kidnapper	1.71	165	P	Pn	07 26 53.6	+1.0
AWAZ	Awhitu Peninsu	1.75	302	P	Pn	07 26 53.0	-0.1
MBAZ	Motutapu North	1.78	313	P	Pn	07 26 53.3	-0.1
KAHZ	Kahuranaki	1.81	171	P	Pn	07 26 54.7	+0.9
PNHZ	Pukenui	1.92	187	P	Pn	07 26 55.4	+0.3
PXZ	Pawanui	2.04	172	P	Pn	07 26 56.8	+0.4
WPHZ	Waipukurau	2.06	181	P	Pn	07 26 56.8	+0.3
TSZ	Takapari Road	2.09	192	P	Pn	07 26 57.2	+0.2
WAZ	Wanganui	2.11	214	P	Pn	07 26 58.2	+1.0
DREZ	Durham Road	2.16	236	P	Pn	07 26 59.2	+1.4
PRHZ	Porangahau	2.26	178	P	Pn	07 26 59.2	+0.2
PREZ	Palmer Road	2.27	233	P	Pn	07 27 04.4	+5.2
DVHZ	Dannevirke	2.31	186	P	Pn	07 26 59.3	-0.3
ANWZ	Angora Road	2.45	181	P	Pn	07 27 01.4	+0.1
POWZ	Post Office Ro	2.45	193	P	Pn	07 27 01.2	-0.1
BFZ	Birch Farm	2.68	184	P	Pn	07 27 03.7	-0.4
MRZ	Mangatainoka R	2.75	195	P	Pn	07 27 04.3	-0.6
TIWZ	Tintock	2.81	190	P	Pn	07 27 05.3	-0.5
CPWZ	Castlepoint	2.91	185	P	Pn	07 27 07.1	+0.1
HOWZ	Holdsworth Sta	2.99	195	P	Pn	07 27 07.0	-1.0
OGWZ	Otaki Gorge	2.99	200	P	Pn	07 27 07.4	-0.6
KIW	Kapiti Island	3.11	203	P	Pn	07 27 08.4	-1.1
TMWZ	Te Maipa	3.13	189	P	Pn	07 27 08.9	-0.9
MTW	Mount Morrison	3.24	194	P	Pn	07 27 09.8	-1.4
CAW	Cannon Point	3.29	199	P	Pn	07 27 10.6	-1.3
TRWZ	Traveller	3.45	190	P	Pn	07 27 12.5	-1.3
PAWZ	Paruwai Farm	3.47	194	P	Pn	07 27 12.6	-1.6
WEL	Wellington	3.54	202	P	Pn	07 27 13.8	-1.2
MSWZ	Moikau Station	3.54	196	P	Pn	07 27 13.4	-1.7
TCW	Tory Channel	3.64	208	P	Pn	07 27 14.7	-1.5
PLWZ	Palliser	3.69	195	P	Pn	07 27 15.1	-1.9
TUWZ	Tuamarina	3.95	209	P	Pn	07 27 18.6	-1.8
BSWZ	Blackbirch Sta	4.22	208	P	Pn	07 27 22.2	-1.7
THZ	Tophouse	4.67	215	P	Pn	07 27 29.2	-0.6
KHZ	Kahutara	4.96	206	P	Pn	07 27 31.4	-2.2
GVZ	Greta Valley S	5.62	207	P	Pn	07 27 39.8	-2.6
TMZ	Timaru	7.60	211	P	Pn	07 28 06.0	-2.8
ARCES	ARCESS Array B	144.78	343	PKhKP	PKPpre	07 45 52.1	
	2.9nm,1.0s,baz=64,slow=2.1,SNR=1.6						
FINES	FINESS Array B	150.21	331	PKPbc	PKPab	07 46 11.6	+12
	4.7nm,0.4s,baz=52,slow=4.3,SNR=71						
AKASG	Malin Array Be	153.62	309	PKPbc	PKPab	07 46 28.4	+14
	1.2nm,0.5s,baz=51,slow=3.5,SNR=7.2						
NB2	NORSAR Subarra	155.16	343	PKP	PKPab	07 46 22.8	+2.1
	comp=Z,0.7nm,0.5s,baz=16,slow=2.5						
NOA	NORSAR Array B	155.16	343	PKPbc	PKPbc	07 46 22.9	
	comp=Z,1.0nm,0.5s,baz=17,slow=4.2,SNR=7.9						

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*WEL **29** 07:27:20.0±0.6, 31˚S±6˚×17˚8W±1˚4, h276^{km}±7^{km}, M4.4/23, mB4.9/23, ML5.2/14, MLv5.1/12, Mw(mB)4.2/23, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2*

ISC 29 07:27:22.1±2.7**, 31°.1S**±0°.1×**178°.3W**±0°.2**, h500^{km}, n79, σ1^s.86**/96**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.83	10	P	P	07 28 03.7	-23
GLKZ				S	S	07 28 33.8	-45
RIZ	Raoul Island	1.85	10	S	S	07 28 32.1	-47
MXZ	Matakaoa Point	7.06	203	P	P	07 29 10.7	+2.0
MXZ				S	S	07 30 34.1	-2.1
WMGZ	Waiomatatini S	7.26	201	P	P	07 29 12.6	+1.9
WMGZ				S	S	07 30 38.6	-1.3
PKGZ	Pakihiroa	7.43	203	P	P	07 29 14.9	+2.3
PKGZ				S	S	07 30 41.9	-1.4
PUZ	Puketiti	7.54	201	P	P	07 29 11.8	-1.9
PUZ				S	S	07 30 43.8	-1.4
RUGZ	Raukumara Rang	7.64	205	P	P	07 29 11.6	-3.2
RUGZ				S	S	07 30 43.7	-3.5
TWGZ	Tauwhareparae	7.72	202	P	P	07 29 17.7	+2.1
TWGZ				S	S	07 30 47.7	-1.1
WCZ	Waipu Caves	7.83	230	P	P	07 29 13.3	-3.4
CNGZ	Carnagh Statio	7.94	200	P	P	07 29 18.0	+0.3
CNGZ				S	S	07 30 46.5	-6.1
TKGZ	Te Karaka	8.01	202	P	P	07 29 14.9	-3.5
TKGZ				S	S	07 30 54.2	+0.3
MBAZ	Motutapu North	8.02	223	P	P	07 29 18.5	-0.1
MBAZ				S	S	07 30 54.7	+0.6
MWZ	Matawai	8.02	204	P	P	07 29 16.6	-2.0
MWZ				S	S	07 30 53.7	-0.6
MARZ	Manawahe	8.05	210	P	P	07 29 17.4	-1.6
MKAZ	Moumakai	8.10	220	P	P	07 29 19.3	-0.1
URZ	Urewera	8.11	207	P	P	07 29 17.6	-1.8
URZ				S	S	07 30 54.8	-1.1
ETAZ	East Tamaki Re	8.13	222	P	P	07 29 20.2	+0.5
RAGZ	Rawiri	8.21	204	P	P	07 29 20.0	-0.6
RAGZ				S	S	07 30 59.3	+1.4
KMRZ	Kaimai	8.27	214	P	P	07 29 25.1	+4.0
RIGZ	Rimuhau	8.28	202	P	P	07 29 20.6	-0.7
RIGZ				S	S	07 30 55.2	-4.0
RRRZ	Republican Roa	8.42	209	P	P	07 29 25.7	+2.9
MUGZ	Murupara	8.43	207	P	P	07 29 22.0	-0.8
MUGZ				S	S	07 30 60.0	-2.0
RTZ	Ruatahuna	8.47	206	P	P	07 29 22.1	-1.2
RTZ				S	S	07 31 00.1	-2.8
SNGZ	Shannon Statio	8.49	204	P	P	07 29 22.1	-1.3
SNGZ				S	S	07 31 03.5	+0.4
HRRZ	Handcock Road	8.56	210	P	P	07 29 26.1	+1.9
KNZ	Kokohu	8.59	202	P	P	07 29 22.9	-1.6
KNZ				S	S	07 31 04.4	-0.7
PRRZ	Plateau Road	8.60	209	P	P	07 29 26.7	+2.1
PRRZ				S	S	07 31 09.0	+3.7
MHGZ	Mahia Peninsul	8.64	200	P	P	07 29 25.4	+0.4
MHGZ				S	S	07 31 00.8	-5.2
ALRZ	Allen Road	8.68	209	P	P	07 29 26.5	+1.1
RAHZ	Arahi	8.70	205	P	P	07 29 25.0	-0.6
RAHZ				S	S	07 31 07.3	+0.2
WPRZ	Whakapapatarin	8.72	210	P	P	07 29 28.5	+2.7
MTHZ	Maungataniwha	8.73	206	P	P	07 29 26.0	0.0
MTHZ				S	S	07 31 07.4	-0.4
KUTZ	Kaahu Road	8.84	212	P	P	07 29 29.1	+1.9
TLZ	Tolley Road	8.84	213	P	P	07 29 30.7	+3.5
MRHZ	Matea Rd	8.88	208	P	P	07 29 28.1	+0.5
MRHZ				S	S	07 31 12.1	+1.4
NMHZ	Naumai	8.96	205	P	P	07 29 27.2	-1.2
NMHZ				S	S	07 31 13.8	+1.6
ARHZ	Aropaoanui	9.04	204	P	P	07 29 28.9	-0.3
ARHZ				S	S	07 31 13.7	+0.1
BKZ	Black Stump Fm	9.13	206	P	P	07 29 28.9	-1.3
BKZ				S	S	07 31 16.4	+0.8
MCHZ	McNeill Hill	9.30	205	P	P	07 29 31.7	-0.2
CKHZ	Cape Kidnapper	9.36	203	P	P	07 29 34.7	+2.1
KWHZ	Kaweka Forest	9.39	206	P	P	07 29 33.9	+1.0
ETVZ	East Tongariro	9.43	210	P	P	07 29 33.8	+0.4
SNVZ	South Ngauruho	9.50	210	P	P	07 29 34.0	-0.2
NGZ	Ngauruhoe	9.51	210	P	P	07 29 35.9	+1.6
KAHZ	Kahuranaki	9.55	203	P	P	07 29 34.4	-0.2
TUVZ	Tukino	9.56	210	P	P	07 29 34.8	0.0
BHHZ	Black Hill Sta	9.58	207	P	P	07 29 34.0	-1.0
FWVZ	Far West T-bar	9.59	210	P	P	07 29 35.8	+0.5
KRHZ	Kereru	9.60	206	P	P	07 29 34.1	-1.1
WNVZ	Wahianoa	9.63	210	P	P	07 29 35.8	+0.1
MOVZ	Moawhango	9.63	209	P	P	07 29 36.2	+0.6
PXZ	Pawanui	9.77	202	P	P	07 29 36.9	0.0
PNHZ	Pukenui	9.90	205	P	P	07 29 37.5	-0.8
WPHZ	Waipukurau	9.94	204	P	P	07 29 40.6	+1.8

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRHZ	Porangahau	10.06	203	P	P	07 29 40.3	+0.3
TSZ	Takapari Road	10.11	206	P	P	07 29 41.0	+0.5
DVHZ	Dannevirke	10.25	205	P	P	07 29 43.3	+1.3
WAZ	Wanganui	10.25	210	P	P	07 29 42.7	+0.7
ANWZ	Angora Road	10.29	203	P	P	07 29 45.3	+3.0
POWZ	Post Office Ro	10.48	206	P	P	07 29 46.4	+2.1
PRWZ	Pori Road	10.54	205	P	P	07 29 47.6	+2.5
BFZ	Birch Farm	10.56	203	P	P	07 29 45.9	+0.7
TIWZ	Tintock	10.77	204	P	P	07 29 49.2	+1.7
MRZ	Mangatainoka R	10.78	206	P	P	07 29 48.0	+0.4
CPWZ	Castlepoint	10.78	203	P	P	07 29 50.9	+3.4
HOWZ	Holdsworth Sta	11.01	205	P	P	07 29 50.6	+0.6
TMWZ	Te Maipa	11.06	204	P	P	07 29 51.7	+1.1
MTW	Mount Morrison	11.24	205	P	P	07 29 54.2	+1.8
TRWZ	Traveller	11.39	204	P	P	07 29 57.0	+3.0
PAWZ	Paruwai Farm	11.47	204	P	P	07 29 57.3	+2.4
MSWZ	Moikau Station	11.56	205	P	P	07 29 57.3	+1.5
PLWZ	Palliser	11.69	205	P	P	07 30 00.6	+3.3
MSVF	Nonsavu	13.69	345	Pn	P	07 30 05.6	-13
	2.1nm,0.3s,baz=182,slow=5.4,SNR=21						
MSVF	Nonsavu	13.69	345				
	15nm,0.7s						
DZM	Mont Dzumac	16.32	300	P	P	07 30 38.2	-8.2
	4.6nm,0.8s,baz=131,slow=21,SNR=5.8						
ASAR	Alice Springs	42.83	268	P	P	07 34 36.1	+0.4
	0.5nm,0.6s,baz=100,slow=7.4,SNR=9.9						
ASAR	Alice Springs	42.83	268				
	0.5nm,0.6s						
WRA	Warramunga Arr	43.88	273	P	P	07 34 43.5	-0.4
	1.0nm,0.6s,baz=115,slow=6.4,SNR=24						
WRA	Warramunga Arr	43.88	273				
	1.0nm,0.6s						

SSNC 29 07:28:42.4±1.3, 18°.61N×81°.33W, h5^{km}±86^{km}, MD3.8, ML2.6, MW3.3, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTDJ	Mount Denham	3.62	95	*e*P	Pn	07 29 37.4	-1.9
MTDJ				*e*S	Sn	07 30 19.2	-3.2
CCCC	Cccc	4.23	52	*e*P	Pn	07 29 50.5	+3.0
CCCC				IAML		07 30 47.3	
	comp=E,2.4nm,0.4s						
CCCC				IAML		07 30 52.7	
	comp=N,1.8nm,0.4s						
LMGC	Las Mercedes	4.33	70	*e*P	Pn	07 29 47.6	-1.3
LMGC				*e*S	Sn	07 30 35.2	-4.6
LMGC				IAML		07 30 40.7	
	comp=N,5.1nm,0.1s						
LMGC				IAML		07 30 40.8	
	comp=E,4.7nm,0.1s						
RCC	Rio Carpintero	5.49	75	*e*P	Pn	07 30 02.9	-2.1
GTBY	Guantanamo Bay	6.02	76	*e*P	Pn	07 30 11.0	-1.1
MASC	Masc	6.88	76	*e*P	Pn	07 30 23.1	-0.8

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*DJA **29** 08:19:57.3±1.2, 5°N±6°×9°6E±°, h10^{km}, M4.3/7, mb4.4/2, MLv4.3/7*
*IDC **29** 08:19:57.0±1.0, 4°.68N×95°.94E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML3.7/1, Error ellipse: s-maj=43.7km s-min=13.7km az=45.0*
*NEIC **29** 08:20:04.4±1.4, 5°.01N±0°.08×96°.26E±0°.05, h49^{km}±10^{km}, mb4.4/11, Error ellipse: s-maj=12.8km s-min=4.7km az=152.0*
ISC 29 08:20:01.4±0.6, **4°.96N**±0°.06×**96°.12E**±0°.06, **h29**^{km}, **n34**, σ**1^{s}.50**/36, **mb4.1**/14, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	0.87	72		Pb	08 20 18.1	+0.1
LHMI				Sn	Sb	08 20 28.4	-0.8
LHMI	Lhok Sumawe	0.87	72	P	Pb	08 20 17.5	-0.4
LHMI				S	Sn	08 20 31.8	+2.5
KCSI	Kotacane, Aceh	2.18	131	P	Pn	08 20 37.2	+1.4
KCSI				S	Sb	08 21 06.8	0.0
TSI	Tuntungan	2.83	121	P	Pn	08 20 46.0	+1.2
PSI	Prapat	3.52	127	Pn	Pn	08 20 55.0	+0.7
	7.0nm,0.3s,baz=309,slow=17,SNR=13						
PSI				Sn	Sn	08 21 36.6	+1.5
	3.2nm,0.3s,baz=288,slow=19,SNR=3.7						
PSI				Lg	Lg	08 21 51.1	
	5.7nm,0.3s,baz=218,slow=23,SNR=4.7						
	25nm,0.5s						
GSI	Gunungsitoli	3.91	158	Pn	Pn	08 21 01.7	+2.2
KULM	Kulim	4.52	86		Pn	08 21 09.5	+1.5
IPM	Ipoh	4.91	95		Pn	08 21 14.1	+0.7
SRIT	Nakonsritamara	5.00	44		Pn	08 21 16.2	+1.6
MNSI	Mandailing Nat	5.39	140	P	Pn	08 21 17.1	-2.8
CMAR	Chiang Mai Arr	13.70	11	Pn	P	08 23 18.5	-3.8
	0.5nm,0.3s,baz=202,slow=12,SNR=1.0						
H08S2	Diego Garcia H	26.69	242	T	T	08 52 47.5	
	baz=62,slow=75,SNR=52						
H08S3	Diego Garcia H	26.69	242	T	T	08 52 34.8	
	baz=62,slow=75,SNR=30						
H08S1	Diego Carcia H	26.71	242	T	T	08 52 48.9	
	baz=62,slow=75,SNR=22						
JNU	Nakatsue	42.81	45	P	P	08 27 55.1	-1.8
MKAR	Makanchi Array	43.36	346	P	P	08 28 03.2	+2.1
	0.3nm,0.5s,baz=166,slow=7.7,SNR=3.9						
	0.3nm,0.5s						
MKAR	Makanchi Array	43.36	346	P	P	08 28 00.9	-0.3
SONM	Songino Array	43.62	10	P	P	08 28 05.7	+2.3
	0.8nm,0.7s,baz=199,slow=9.1,SNR=4.7						
	0.8nm,0.7s						
SONM	Songino Array	43.62	10	P	P	08 28 01.9	-1.4
WB0	Warramunga Arr	44.94	124	P	P	08 28 13.1	-1.2
WB0				IAmb	IAmb	08 28 36.9	
	comp=Z,3.8nm,0.9s						
WRA	Warramunga Arr	44.98	125	P	P	08 28 13.8	-0.8
	comp=Z,0.5nm,0.5s,baz=303,slow=9.0,SNR=15						
WRA				PcP	PcP	08 29 56.3	+0.7
	comp=Z,0.5nm,0.9s,baz=306,slow=2.9,SNR=1.0						
	comp=Z,0.5nm,0.5s						
WRA	Warramunga Arr	44.98	125	P	P	08 28 13.0	-1.6
WRAB	Tennant Creek	44.99	125	P	P	08 28 14.2	-0.4
WRAB				IAmb	IAmb	08 28 19.2	
	comp=Z,8.0nm,1.4s						
WB2	Warramunga Arr	44.99	125	P	P	08 28 12.5	-2.1
WB2				IAmb	IAmb	08 28 31.6	
	comp=Z,6.3nm,1.2s						
WR0	Warramunga Arr	45.16	124	P	P	08 28 15.3	-0.6
WR0				IAmb	IAmb	08 28 20.4	
	comp=Z,6.8nm,1.1s						
JHS	Saijyo	45.39	44	P	P	08 28 16.9	-0.7
JHS				IAmb	IAmb	08 28 29.5	
	comp=Z,15nm,1.3s						
ASAR	Alice Springs	46.55	129	P	P	08 28 26.6	-0.3
	comp=Z,1.0nm,0.5s,baz=300,slow=7.9,SNR=21						
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	46.55	129	P	P	08 28 26.4	-0.6
GEYT	Alibeck	47.67	319	P	P	08 28 36.3	+0.8
	comp=Z,1.5nm,0.5s,baz=139,slow=1.4,SNR=2.6						
	comp=Z,1.5nm,0.5s						
ABKAR	Akbulak array	53.72	331	P	P	08 29 20.6	-0.3
FINES	FINESS Array B	76.19	332	P	P	08 31 48.2	+1.4
	comp=Z,0.9nm,0.8s,baz=48,slow=5.7,SNR=4.1						
	comp=Z,0.9nm,0.8s						
ARCES	ARCESS Array B	78.66	340	P	P	08 32 00.1	-0.4
	comp=Z,2.6nm,1.0s,baz=97,slow=7.4,SNR=1.9						
	comp=Z,2.6nm,1.0s						
GERES	GERESS Array B	81.30	319	P	P	08 32 15.6	+0.3
	comp=Z,0.1nm,0.4s,baz=156,slow=6.9,SNR=1.6						
	comp=Z,0.1nm,0.4s						
TORD	Torodi Ar. Bea	93.18	283	P	P	08 33 14.4	+0.6
	comp=Z,0.3nm,0.6s,baz=116,slow=5.6,SNR=1.7						
	comp=Z,0.3nm,0.6s						

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*IDC **29** 08:24:52.6±2.6, 15°.80S×173°.11W, h0^{km}, mb3.7/4, mbtmp3.8/5, ML4.5/1, MS3.2/3, Error ellipse: s-maj=147.8km s-min=21.8km az=145.0*
ISC 29 08:24:59.2±3.0, **15°S**±2°×**173°.6W**±0°.8, **h35**^{km}, **n15**, σ**1^{s}.79**/7, **mb3.7**/4, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.98	61	Pn	Pn	08 25 31.4	+1.2
	120nm,0.3s,baz=200,slow=3.9,SNR=622						
AFI				Sn	Sn	08 25 51.7	-2.2
	115nm,0.3s,baz=217,slow=20,SNR=9.5						
	488nm,0.2s						
MSVF	Nonsavu	8.54	249	LR	LR	08 29 60.0	
	comp=Z,102nm,20.2s,baz=47,slow=35						
PPT	Papeete	23.18	100	LR	LR	08 37 11.5	
	comp=Z,35nm,18.1s,baz=318,slow=33						
H11S2	WAKE ISLAND Hy	38.44	329	T	T	09 13 39.7	
	baz=145,slow=76,SNR=7.1						
H11S3	WAKE ISLAND Hy	38.46	329	T	T	09 13 39.2	
	baz=145,slow=76,SNR=7.1						
H11S1	WAKE ISLAND Hy	38.46	329	T	T	09 13 49.8	
	baz=145,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	39.39	330	T	T	09 14 54.7	
	baz=152,slow=80,SNR=9.3						
H11N1	WAKE ISLAND Hy	39.39	330	T	T	09 14 56.4	
	baz=152,slow=80,SNR=5.9						
H11N2	WAKE ISLAND Hy	39.41	330	T	T	09 14 56.2	
	baz=152,slow=80,SNR=5.2						
WRA	Warramunga Arr	49.82	256	P	P	08 33 49.0	-0.1
	1.0nm,0.8s,baz=90,slow=7.3,SNR=15						
	1.0nm,0.8s						
ASAR	Alice Springs	50.13	251	P	P	08 33 51.0	-0.5
	1.2nm,0.5s,baz=90,slow=7.5,SNR=23						
	1.2nm,0.5s						
SIJI	Sorong	56.23	279	LR	LR	08 58 11.7	
	comp=Z,36nm,20.1s,baz=93,slow=35						
NVAR	Mina Array Bea	74.05	42	P	P	08 36 33.4	+1.5
	0.5nm,0.8s,baz=235,slow=9.5,SNR=3.3						
	0.5nm,0.8s						
PDAR	Pinedale Array	81.98	42	P	P	08 37 16.7	+0.8
	0.2nm,0.7s,baz=206,slow=3.9,SNR=1.9						
	0.2nm,0.7s						
BRTR	Keskin Array B	145.66	321	PKPbc	PKiKP	08 44 36.5	-1.9
	1.1nm,0.7s,baz=22,slow=16,SNR=4.6						

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*ECX **29** 08:27:33.9±0.5, 32°.12N×115°.21W, h12^{km}±2^{km}, MD3.5, ML3.7*
*MEX **29** 08:27:34.9±0.9, 32°.23N×114°.96W, h46^{km}±8^{km}, MD3.9*
*PAS **29** 08:27:34.7±2.3, 32°.10N±0°.02×115°.17W±0°.04, h24^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=3.2km az=80.0*
*ANF **29** 08:27:35.0±0.4, 32°.18N×115°.16W, h25^{km}, ML3.6/21, Error ellipse: s-maj=5.0km s-min=2.2km az=21.0*
*NEIC **29** 08:27:35.0±2.1, 32°.13N±0°.01×115°.20W±0°.04, h23^{km}±8^{km}, Error ellipse: s-maj=5.1km s-min=2.1km az=92.0*
ISC 29 08:27:35.3±0.9, **32°.13N**±0°.02×**115°.19W**±0°.02, **h23**^{km}±6^{km}, **n91**, σ**1^{s}.24**/128, **8C-14D**, **California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RITX	Riito Sonora	0.19	78	⇑*i*P	Pb	08 27 40.3	-0.3
RITX				*i* S	Sb	08 27 44.5	+0.2
GUVIX	Guadalupe Vict	0.20	28		Pb	08 27 40.3	-0.4
GUVIX	Guadalupe Vict	0.20	28	⇓*i*P	Pb	08 27 40.3	-0.4
GUVIX				*i* S	Sb	08 27 44.4	0.0
MBIG	Mexicali	0.28	358		Pb	08 27 41.9	0.0
MBIG					Sn	08 27 47.7	-1.8
MBIG	Mexicali	0.28	358	*i* P	Pb	08 27 41.9	0.0
MBIG				*i* P	Pb	08 27 41.9	0.0
MBIG				*i* S	Sn	08 27 47.7	-1.8
MBIG				*i* S	Sn	08 27 47.7	-1.8
MBIG	Mexicali	0.28	358	⇓*i*P	Pb	08 27 41.8	0.0
SALX	Saltillo	0.30	9	*e*P	Pn	08 27 57.1	+13
CPBX	Cerro Prieto	0.31	341		Pb	08 27 42.0	-0.4
CPBX	Cerro Prieto	0.31	341	⇓*i*P	Pb	08 27 41.9	-0.4
CPBX				*e*S	Sb	08 27 47.5	+0.4
CPBX				⇑*e*		08 27 48.7	
CPBX				IAML		08 27 48.7	
	comp=E,27µm,0.3s						
CPBX				IAML		08 27 56.4	
	comp=N,20µm,0.3s						
CPBX				⇑*e*		08 27 56.4	
CTLX	Tlaxcala, TLX	0.35	6	⇓*i*P	Pb	08 27 42.4	-0.5
CTLX				*e*S	Sb	08 27 48.5	+0.4
ALAMX	Rancho Alamar	0.46	255	⇑*i*P	Pb	08 27 44.5	-0.2
ALAMX				*i* S	Sb	08 27 50.9	-0.3
ALAMX				IAML		08 27 51.6	
	comp=E,8µm,0.2s						
ALAMX				⇑*e*		08 27 51.6	
YUCAX	Ej. Yucat¡n	0.48	9	⇓*i*P	Pb	08 27 45.2	+0.1
YUCAX				*i* S	Sn	08 27 53.2	-1.3
SLRCX	San Luis Rio C	0.52	51	*e*P	Pb	08 27 45.6	-0.3
POT2	Potabilizadora	0.53	341	*e*P	Pb	08 27 46.1	+0.2
POT2				*i* S	Sn	08 27 54.6	-1.0
UABX	UABC, Campus M	0.55	337		Pb	08 27 46.4	+0.1
UABX	UABC, Campus M	0.55	337	*e*P	Pb	08 27 46.2	0.0
UABX				*e*S	Sn	08 27 55.2	-0.9
EMSC	East Mesa	0.63	15	⇓*e*P	Pb	08 27 47.2	-0.5
ECBX	El Chinero	0.66	170	*e*P	Pb	08 27 47.9	-0.3
ECBX				*e*S	Sn	08 27 57.5	-1.4
ECBX				IAML		08 27 58.1	
	comp=N,4µm,0.2s						
ECBX				*e*		08 27 58.1	
CEA0	Mexicali	0.67	322	*e*P	Pb	08 27 47.9	-0.4
CEA0				*e*S	Sb	08 27 57.5	+0.5
YMD	Yuma Desert	0.69	52	⇓*i*P	Pb	08 27 48.0	-0.7
SGL	Mount Signal	0.69	319	⇓*i*P	Pb	08 27 47.9	-0.8
SGL				⇓*i*P	Pb	08 27 47.9	-0.8
DREC	Desert Rsrch C	0.71	342	⇓*e*P	Pb	08 27 48.7	-0.3
COA	Coachella	0.74	4	⇓*i*P	Pb	08 27 48.6	-0.8
COA				⇓*i*P	Pb	08 27 48.6	-0.8
WESC	Westside Schoo	0.78	324	*e*P	Pb	08 27 49.2	-1.0
YUH2	Yuha Desert	0.81	310	*e*P	Pb	08 27 49.6	-1.1
YUH2				*e*S	Sb	08 28 01.0	-0.3
YUH	Yuha Desert	0.81	310		Pb	08 27 50.0	-0.7
YUH				IAML		08 28 01.6	
	comp=N,1µm,0.5s						
YUH				IAML		08 28 01.8	
	comp=E,2µm,0.4s						
COK2	Cook Ranch 2	0.86	328	*e*P	Pb	08 27 51.1	-0.3
COK2				*e*P	Pb	08 27 51.1	-0.3
RMX	La Rumorosa	0.89	302		Pb	08 27 50.3	-1.9
RMX				IAML		08 28 02.5	
	comp=N,3µm,0.7s						
RMX				IAML		08 28 02.5	
	comp=E,2µm,0.5s						
RMX	La Rumorosa	0.89	302	*e*P	Pb	08 27 50.4	-1.8
RMX				IAML		08 28 02.2	
	comp=N,3µm,0.3s						
RMX				IAML		08 28 02.5	
	comp=E,2µm,0.2s						
RMX				⇓*e*		08 28 02.5	
IKP	In-Ko-Pah, Jac	0.94	304	⇑*e*P	Pb	08 27 52.0	-1.0
IKP				*e*S	Sb	08 28 05.0	0.0
IKP	In-Ko-Pah, Jac	0.94	304	P	Pb	08 27 52.0	-1.0
	baz=124,SNR=156						
IKP				S	Sb	08 28 04.7	-0.4
	baz=124						
SWSC	Sam W. Stewart	0.97	328	*e*P	Pn	08 27 51.5	-1.9
SWSC	Sam W. Stewart	0.97	328	P	Pn	08 27 51.5	-1.9
	baz=148,SNR=32						
SWSC				S	Sn	08 28 06.2	-0.3
	baz=148						
GLA	Glamis	0.97	18		Pb	08 27 51.8	-1.6
GLA				IAML		08 28 05.9	
	comp=E,1µm,0.5s						
GLA				IAML		08 28 06.5	
	comp=N,1µm,0.3s						
GLA	Glamis	0.97	18	⇓*i*P	Pb	08 27 51.9	-1.6
GLA	Glamis	0.97	18	P	Pb	08 27 51.9	-1.6
	baz=197,SNR=119						
GLA				S	Sb	08 28 04.4	-1.5
	baz=197						
SPIG	San Pedro Mart	1.10	193		Pn	08 27 55.0	-0.6
SPIG					Sn	08 28 09.8	-0.4
SPIG	San Pedro Mart	1.10	193	*e*P	Pn	08 27 55.0	-0.6
SPIG				*i* S	Sn	08 28 09.8	-0.4
SFX	San Felipe	1.12	165	Pn	Pb	08 27 55.9	0.0
SFX				IAML		08 28 14.9	
	comp=N,651nm,0.4s						
SFX				IAML		08 28 19.2	
	comp=E,508nm,0.5s						
SFX	San Felipe	1.12	165	*e*P	Pb	08 27 55.6	-0.3
CBX	Cerro Bola	1.27	279		Pn	08 27 57.2	-0.5
CBX				IAML		08 28 15.8	
	comp=N,1µm,0.4s						
CBX				IAML		08 28 15.8	
	comp=E,1µm,0.5s						
CBX	Cerro Bola	1.27	279	*i* P	Pn	08 27 57.2	-0.5
CBX				*i* S	Sb	08 28 14.8	+0.3
CBX	Cerro Bola	1.27	279	*e*P	Pn	08 27 57.2	-0.5
TKX	Tecate	1.28	291	Pn	Pb	08 27 58.7	-0.1
TKX	Tecate	1.28	291	*e*P	Pn	08 27 50.9	-6.9
MONP2	Monument Peak	1.29	306	*e*P	Pn	08 27 57.2	-1.0
MONP2	Monument Peak	1.29	306	Pn	Pn	08 27 57.2	-1.0
	baz=126,SNR=201						
MONP2				Pb	Pb	08 27 58.9	-0.2
	baz=126						
MONP2				S	Sn	08 28 14.6	-0.3
	baz=126						
TJIG	Tijuana	1.30	284		Pn	08 27 57.3	-0.7
TJIG					Sn	08 28 14.0	-0.7
TJIG	Tijuana	1.30	284	*i* P	Pn	08 27 57.3	-0.7
TJIG				*i* S	Sn	08 28 14.0	-0.7
113A	Mohawk Valley,	1.36	62		Pn	08 27 57.9	-1.0
113A				IAML		08 28 24.6	
	comp=N,441nm,0.6s						
BAR	Barrett	1.37	294		Pn	08 27 58.6	-0.5
BAR	Barrett	1.37	294	⇑*e*P	Pn	08 27 58.5	-0.6
BC3	Big Chuckawall	1.54	352	P	Pn	08 28 00.3	-1.1
	baz=171,SNR=89						
BC3				S	Sn	08 28 19.0	-1.9
	baz=171						
SDRC	San Diego Road	1.61	293	*e*P	Pn	08 28 01.7	-0.5
TJX	Tijuana	1.63	284		Pn	08 28 02.7	+0.2
BLYC	Blythe	1.71	19		Pn	08 28 03.2	-0.5
BLYC				IAML		08 28 39.1	
	comp=E,334nm,0.7s						
109C	Camp Elliot, M	1.79	296		Pn	08 28 05.0	+0.2
109C	Camp Elliot, M	1.79	296	Pn	Pn	08 28 04.6	-0.2
	baz=115,SNR=99						
109C				Pb	Pb	08 28 07.3	-0.1
	baz=115						
109C				Sb	Sb	08 28 29.8	+0.4
	baz=115						
PFO	Pinyon Flats O	1.83	324	Pn	Pn	08 28 04.3	-1.2
PFO	Pinyon Flats O	1.83	324	P	Pn	08 28 04.2	-1.2
	baz=144,SNR=20						
PFO				Sb	Sb	08 28 32.2	+1.5
	baz=144						
214A	Organ Pipe Nat	2.02	94		Pn	08 28 06.8	-1.2
214A				IAML		08 28 51.9	
	comp=N,191nm,0.5s						
214A	Organ Pipe Nat	2.02	94	⇑*e*P	Pn	08 28 06.7	-1.2
214A	Organ Pipe Nat	2.02	94	Pn	Pn	08 28 06.7	-1.2
	baz=275,SNR=58						
214A				Pb	Pb	08 28 11.3	-0.1
	baz=275						
214A				Sb	Sb	08 28 37.6	+1.4
	baz=275						
IRM	Iron Mountain	2.03	1	P	Pn	08 28 07.2	-0.8
	baz=181,SNR=29						
MURC	Murrieta	2.24	312	Pn	Pn	08 28 10.6	-0.4
	baz=131						
MURC				Pb	Pb	08 28 15.9	+0.8
	baz=131,SNR=40						
MURC				Sb	Sb	08 28 44.6	+2.2
	baz=131						
ELS	Elsinore Mount	2.42	309		Pn	08 28 13.5	0.0
ELS				IAML		08 28 56.5	
	comp=N,114nm,0.4s						
ELS				IAML		08 28 58.3	
	comp=E,183nm,0.5s						
Y14A	Wickenburg	2.57	45		Pn	08 28 15.7	+0.2
Y14A				IAML		08 29 07.1	
	comp=E,208nm,0.4s						
Y14A				IAML		08 29 07.9	
	comp=N,243nm,0.6s						
BBRC	Big Bear Solar	2.58	326	Sb	Sb	08 28 56.4	+4.0
	baz=145						
GMRC	Granite Mounta	2.68	352	P	Pn	08 28 16.4	-0.7
	baz=171,SNR=8.9						
LAPR	La Primavera	2.94	123	*e*	Pn	08 28 15.1	-5.5
LAPR				*e*		08 29 14.1	
LAPR	La Primavera	2.94	123	*e*P	Pn	08 28 19.4	-1.2
BFSC	Mount Baldy Ra	2.96	316	Pb	Pb	08 28 28.4	+1.1
	baz=135,SNR=19						
BFSC				Sb	Sb	08 29 06.2	+3.1
	baz=135						
SCI2	San Clemente I	2.96	288	Sb	Sb	08 29 05.7	+2.5
	baz=106						
CIS	Catalina Islan	3.00	296	P	Pn	08 28 21.0	-0.5
	baz=115						
CIS				Sb	Sb	08 29 05.0	+0.7
	baz=115						
FMP	Fort Macarthur	3.06	302	Sb	Sb	08 29 07.7	+1.9
	baz=121						
W13A	Hualapai Mount	3.16	20	Pn	Pn	08 28 23.6	-0.1
PASC	Pasadena Art C	3.24	310		Pn	08 28 21.1	-3.6
PASC				IAML		08 29 16.5	
	comp=E,98nm,0.8s						
PASC				IAML		08 29 16.5	
	comp=N,144nm,0.8s						
DECC	Green Verdugo	3.39	310	Sb	Sb	08 29 17.8	+2.4
	baz=128						
EDW2	Edwards Air Fo	3.61	320	Sb	Sb	08 29 25.9	+3.9
	baz=139						
TUC	Tucson	3.73	86	Pn	Pn	08 28 29.4	-2.1
TUC				IAML		08 29 41.5	
	comp=N,68nm,0.6s						
TUC	Tucson	3.73	86	*e*	Pb	08 28 44.0	+3.4
TUC				*e*		08 29 30.2	
TUC	Tucson	3.73	86	P	Pn	08 28 31.5	-0.1
	baz=268						
OSI	Osito Audit: C	3.86	311	Sb	Sb	08 29 30.4	+1.3
	baz=129						
X16A	Lo Mia Camp, P	3.88	53		Pn	08 28 34.8	+1.1
X16A				IAML		08 29 43.4	
	comp=E,43nm,0.8s						
X16A				IAML		08 29 49.3	
	comp=N,59nm,1.1s						
SHPR	Sheep Range	4.37	0	Pn	Pn	08 28 41.7	+1.3
WUAZ	Wupatki	4.64	42	P	Pn	08 28 45.8	+1.7
	baz=224,SNR=7.4						
U15A	North Rim	4.91	28		Pn	08 28 50.2	+2.2
U15A				IAML		08 30 17.7	
	comp=E,43nm,1.2s						
U15A				IAML		08 30 21.7	
	comp=N,22nm,0.7s						
319A	Douglas	5.08	97		Pn	08 28 48.6	-1.6
LCMT	Little Creek M	5.13	18		Pn	08 28 52.3	+1.5
121A	Cookes Peak, D	6.28	84	Pn	Pn	08 29 06.7	+0.1
121A	Cookes Peak, D	6.28	84	P	Pn	08 29 07.2	+0.6
	baz=268						
121A				S	Sn	08 30 15.9	-1.8
	baz=268						

TAP 29 08:45:12.9, 23°.22N×120°.93E, h2^{km}, ML3.5, 25C-18D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau	0.08	109	⇓*i*P	Pg	08 45 15.6	+1.0
	baz=107						
ELDTW				*i* S	Sg	08 45 17.2	+1.5
	baz=107						
STYH	Taoyuan	0.15	252	⇑*i*P	Pg	08 45 16.3	+0.5
	baz=253						
STYH				*i* S	Sg	08 45 18.4	+0.7
	baz=253						
STYT	Tauyuan	0.17	252	⇑*i*P	Pg	08 45 17.0	+0.9
	baz=250						
STYT				*i* S	Sg	08 45 19.5	+1.1
	baz=250						
YUS	Yu-Shan	0.27	4	⇑*i*P	Pg	08 45 18.9	+0.7
	baz=7.0						
YUS				*i* S	Sg	08 45 23.5	+1.6
	baz=7.0						
TPUB	Ta-pu	0.29	287	⇓*i*P	Pb	08 45 19.9	-0.9
	baz=293						
TPUB				*i* S	Sb	08 45 24.2	-1.8
	baz=293						
ECS	Chishang	0.29	114	⇓*i*P	Pb	08 45 19.8	-1.0
	baz=114						
ECS				*i* S	Sb	08 45 24.5	-1.7
	baz=114						
WTP	Ta-pu	0.29	276	⇓*i*P	Pb	08 45 19.9	-1.0
	baz=277						
WTP				S	Sb	08 45 24.5	-1.7
	baz=277						
ALS	Alishan	0.32	339	⇓*i*P	Pg	08 45 19.9	+0.9
	baz=341						
ALS				*i* S	Sg	08 45 24.6	+1.5
	baz=341						
FULB	Fuli	0.34	93	⇑P	Pb	08 45 20.9	-0.7
	baz=80						
FULB				*e*S	Sb	08 45 26.1	-1.3
	baz=80						
SLGT	Liugui	0.34	230	⇑*i*P	Pb	08 45 21.0	-0.7
	baz=221						
SLGT				*i* S	Sb	08 45 25.9	-1.7
	baz=221						
SGST	Jiashian	0.35	247	⇑*i*P	Pg	08 45 20.1	+0.6

	baz=247						
SGST	baz=247			*e*S	Sg	08 45 25.3	+1.2
LONT	Longtian baz=148	0.36	149	⇓P	Pb	08 45 21.0	-1.0
LONT	baz=148			*i* S	Sg	08 45 25.7	+1.3
TWF1	Yuli baz=68	0.36	68	⇑*i*P	Pg	08 45 20.9	+1.0
TWF1	baz=68			*i* S	Sg	08 45 25.4	+0.7
CHN1	Nanshi baz=266	0.37	265	⇑*i*P	Pb	08 45 21.9	-0.3
CHN1	baz=266			S	Sb	08 45 27.7	-0.7
YULB	Yu-li baz=62	0.38	62	⇑*i*P	Pg	08 45 20.9	+0.7
YULB	baz=62			*e*S	Sg	08 45 25.1	-0.1
SNST	Tainan City baz=272	0.40	271	⇓P	Pb	08 45 22.5	-0.2
SNST	baz=272			S	Sb	08 45 28.9	-0.3
TWK	Hsinying baz=279	0.41	277	⇓P	Pb	08 45 22.6	-0.3
TWK	baz=279			S	Sb	08 45 28.9	-0.7
TWG	Pinlang baz=153	0.41	162	⇓*i*P	Pb	08 45 22.0	-1.0
TWG	baz=153			*i* S	Sg	08 45 27.4	+1.1
CHKT	Chengkung baz=105	0.42	106	⇓P	Pb	08 45 22.9	-0.1
CHKT	baz=105			S	Sb	08 45 29.5	-0.2
TWGBT	Beinan baz=153	0.42	161	⇓*i*P	Pg	08 45 21.9	+1.0
TWGBT	baz=153			*i* S	Sg	08 45 27.3	+0.9
EDH	Donghe baz=134	0.42	125	⇓P	Pb	08 45 22.6	-0.5
EDH	baz=134			*e*S	Sb	08 45 29.3	-0.5
ECBN	Changbin baz=66	0.49	78	*e*P	Pb	08 45 24.6	+0.4
ECBN	baz=66			*e*S	Sb	08 45 32.7	+0.9
TTN	Taitung baz=145	0.50	156	*e*P	Pb	08 45 24.4	+0.1
TTN	baz=145			S	Sb	08 45 32.1	0.0
SCST	Cishan baz=221	0.52	231	*e*P	Pb	08 45 24.8	+0.1
SCST	baz=221			*e*S	Sb	08 45 34.5	+1.8
CHN2	Minshiung baz=309	0.52	307	*e*P	Pb	08 45 25.1	+0.3
CHN2	baz=309			*e*S	Sb	08 45 34.0	+1.2
HGSD	Ruisui baz=58	0.53	59	⇑*i*P	Pb	08 45 24.3	-0.7
HGSD	baz=58			*e*S	Sb	08 45 32.4	-0.6
CHN3	Shinhua baz=253	0.54	255	*e*P	Pb	08 45 26.1	+1.1
CHN3	baz=253			*e*S	Sb	08 45 35.1	+1.9
SSD	Sandimen baz=211	0.54	210	⇑*i*P	Pg	08 45 23.9	+0.6
SSD	baz=211			*e*S	Sg	08 45 30.1	-0.2
CHY	Chiayi baz=304	0.54	301	⇓P	Pb	08 45 25.2	+0.1
CHY	baz=304			*e*S	Sb	08 45 34.4	+1.0
SSLB	Suanglung baz=3.0	0.57	2	⇑*i*P	Pg	08 45 23.9	+0.1
SSLB	baz=3.0			*e*S	Sg	08 45 31.3	+0.1
VWDT	VWDT baz=20	0.57	20	⇑*i*P	Pg	08 45 24.0	+0.2
SHHT	Tainan City baz=254	0.57	250	*e*P	Pn	08 45 27.1	-0.9
SHHT	baz=254			*e*S	Sn	08 45 36.9	-1.1
TSMG	Majia baz=216	0.57	207	⇑*i*P	Pg	08 45 24.4	+0.5
TSMG	baz=216			*e*S	Sg	08 45 31.3	+0.1
WGK	Gukeng baz=327	0.58	324	*e*P	Pb	08 45 26.0	+0.3
WDLH	Douliu baz=324	0.59	323	⇓*e*P	Pb	08 45 26.7	+0.8
TWM1	Shoushan baz=230	0.61	230	⇑*e*P	Pb	08 45 27.1	+0.8
ICHU	Yijhu baz=285	0.61	284	⇓*e*P	Pb	08 45 26.9	+0.6
ICHU	baz=285			*e*S	Sn	08 45 37.5	-1.6
ECL	Taimali baz=176	0.62	178	⇑P	Pg	08 45 25.3	+0.6
ECL	baz=176			*e*S	Sg	08 45 32.9	+0.2
WJS	Zhushan baz=354	0.63	343	*e*P	Pb	08 45 27.0	+0.3
WJS	baz=354			*e*S	Sb	08 45 36.5	+0.6
SGLT	Jiouru baz=209	0.63	220	*e*P	Pb	08 45 27.0	+0.3
SGLT	baz=209			*e*S	Sb	08 45 36.8	+0.8
EGFH	Guangfu baz=54	0.64	45	*e*P	Pg	08 45 25.5	+0.3
MASBT	Mashibuluo baz=209	0.66	205	⇑*i*P	Pg	08 45 25.9	+0.4
MASBT	baz=209			*e*S	Sg	08 45 34.1	0.0
SMLT	Sun Moon Lake baz=6.0	0.67	358	⇑P	Pg	08 45 26.4	+0.8
SMLT	baz=6.0			*e*S	Sb	08 45 36.5	-0.5
TAI1	Yung-k'ang baz=273	0.67	255	*e*P	Pb	08 45 28.3	+1.0
CHN8	Yiju baz=283	0.67	281	*e*P	Pb	08 45 28.0	+0.7
CHN8	baz=283			S	Sn	08 45 39.2	-1.3
SCLT	Jiali baz=268	0.68	267	*e*P	Pb	08 45 27.8	+0.4
SCLT	baz=268			*e*S	Sn	08 45 39.5	-1.2
WTK	Tuku baz=315	0.68	313	⇓*e*P	Pb	08 45 28.0	+0.5
WTK	baz=315			*e*S	Sn	08 45 39.6	-1.1
TYC	Yuchr baz=3.0	0.69	354	⇑P	Pb	08 45 27.0	-0.6
TYC	baz=3.0			*e*S	Sb	08 45 38.2	+0.7
WNT	Mingjian baz=343	0.70	341	⇓*e*P	Pb	08 45 28.4	+0.7
WNT	baz=343			S	Sb	08 45 39.4	+1.6
TAI	Tainan baz=272	0.71	252	*e*P	Pb	08 45 27.8	-0.2
WSL	Shuilin Townsh baz=298	0.71	295	*e*P	Pb	08 45 27.9	-0.1
WNT1	Nantou City baz=343	0.72	342	*e*P	Pn	08 45 29.2	-0.9
LDUT	Ludao baz=135	0.73	137	*e*P	Pb	08 45 27.8	-0.6
LDUT	baz=135			*e*S	Sb	08 45 38.9	0.0
TEGC	Jichi Village baz=48	0.74	49	*e*P	Pb	08 45 28.6	0.0
ESL	Shilin baz=37	0.75	38	*e*P	Pg	08 45 27.7	+0.3
OWD	Renai baz=17	0.77	17	*e*P	Pg	08 45 27.3	-0.4
WSF	Szhu baz=305	0.77	303	*e*P	Pb	08 45 29.4	+0.4
WSF	baz=305			*e*S	Sb	08 45 41.0	+1.0
WUSB	Renai baz=24	0.79	13	⇑*e*P	Pg	08 45 27.7	-0.3
WPL	Puli Township baz=14	0.79	2	*e*P	Pb	08 45 29.2	-0.2
SSPT	Xinbi baz=208	0.80	205	⇑*e*P	Pb	08 45 29.2	-0.3
DPDB	Guoxing baz=12	0.81	360	*e*P	Pb	08 45 29.3	-0.5
EAST	Anshuo baz=183	0.83	185	⇑P	Pg	08 45 29.5	+0.6
EAST	baz=183			*e*S	Sg	08 45 40.3	+0.7
WCS	Beigang Elemen baz=11	0.84	359	*e*P	Pb	08 45 29.7	-0.5
WSSB	Gushan baz=249	0.84	227	*e*P	Pn	08 45 32.1	+0.4
WRL	Guolierlin Hig baz=325	0.85	323	*e*P	Pb	08 45 30.5	+0.1
WRL	baz=325			*e*S	Sb	08 45 43.1	+0.9
WWF	Wufeng baz=347	0.85	346	*e*P	Pn	08 45 31.3	-0.6
TAW	Tawu baz=180	0.85	182	*e*P	Pb	08 45 29.9	-0.5
CHGB	Renai baz=25	0.87	15	⇑P	Pg	08 45 29.2	-0.4
SCZT	Fangliau baz=189	0.89	199	⇑P	Pg	08 45 30.2	+0.3
TEYL	Yanliau Villag baz=34	0.89	43	*e*P	Pb	08 45 31.5	+0.4
ETM	Tongmen baz=42	0.91	35	*e*P	Pb	08 45 30.9	-0.4
WCHH	Zhanghua baz=340	0.93	338	*e*P	Pn	08 45 32.3	-0.6
WCHH	baz=340			*e*S	Sn	08 45 46.0	-0.8
TCU	Taichung baz=332	0.96	346	*e*P	Pb	08 45 32.4	+0.2
WHF	Hehuan Shan baz=18	0.97	18	⇑*e*P	Pg	08 45 31.1	-0.5
HWA	Hwalien baz=48	0.98	39	*e*P	Pb	08 45 32.8	+0.2
WLCH	Liuqiu baz=190	1.00	211	*e*P	Pn	08 45 36.2	+2.3
WLCH	baz=190			*e*S	Sn	08 45 53.6	+5.1
SLIU	Shizi baz=178	1.00	187	*e*P	Pb	08 45 32.6	-0.4
TWP	Hsiaoliuchiu baz=215	1.01	211	*e*P	Pn	08 45 36.1	+2.0
TDCB	Techi baz=28	1.05	11	*e*P	Pg	08 45 33.0	-0.1
TWD	Chiawan baz=42	1.05	35	*e*P	Pg	08 45 33.4	+0.2
TWT	Tachien baz=3.0	1.06	12	*e*P	Pb	08 45 33.7	-0.3
WHP	Taichung City baz=10.0	1.06	1	*e*P	Pn	08 45 34.7	-0.1
FUSS	Fushou baz=15	1.07	16	*e*P	Pg	08 45 32.8	-0.6
ETLH	Xiulin Townshi baz=40	1.11	27	*e*P	Pg	08 45 34.3	+0.2
ETLH	baz=40			*e*S	Sn	08 45 51.1	-0.3
NACB	Ninganchiao baz=33	1.13	32	P	Pg	08 45 34.5	-0.1
NACB	baz=33			*e*S	Sn	08 45 51.6	-0.2
ETL	Fush Village baz=40	1.13	34	*e*P	Pb	08 45 35.3	+0.1
TWQ1	Liyutan baz=354	1.14	353	*e*P	Pn	08 45 36.2	+0.4
WDJ	Dajia District baz=334	1.16	347	*e*P	Pn	08 45 37.1	+1.0
WDGT	Dungji baz=275	1.17	272	⇓P	Pb	08 45 35.6	-0.2
WDGT	baz=275			S	Sb	08 45 51.4	0.0
NSY	Sanyi baz=354	1.21	353	*e*P	Pn	08 45 37.4	+0.7
HEN	Hengchun baz=169	1.22	188	*e*P	Pn	08 45 38.2	+1.3
TWK1	Hengchun baz=183	1.27	185	*e*P	Pn	08 45 38.9	+1.3
TWKBT	Hengchun baz=183	1.27	185	*e*P	Pn	08 45 38.8	+1.1
NNSB	Datong baz=20	1.28	19	*e*P	Pg	08 45 36.6	-0.8
PHUB	P'eng-hu baz=286	1.28	284	*e*P	Pg	08 45 36.6	-0.8
PHUB	baz=286			*e*S	Sb	08 45 54.5	-0.2
NNS	Nan Shan baz=18	1.28	18	*e*P	Pg	08 45 37.0	-0.6
PNG	Penghu baz=288	1.31	286	*e*P	Pg	08 45 37.8	-0.2
PNG	baz=288			*e*S	Sg	08 45 55.1	+0.1
LYUB	Lan-yu baz=148	1.35	153	*e*P	Pb	08 45 39.1	+0.3
VCHM	Qimei baz=272	1.38	270	*e*P	Pn	08 45 38.3	-0.8
VCHM	baz=272			*e*S	Sg	08 45 56.7	-0.6
NSTT	Nanjuang baz=348	1.41	3	*e*P	Pg	08 45 40.9	+1.0
ENA	Nanau baz=45	1.42	31	*e*P	Pn	08 45 39.6	-0.1
NFF	Wufeng Townshi baz=352	1.42	7	*e*P	Pb	08 45 40.9	+0.8
LATG	Datong baz=24	1.42	22	*e*P	Pn	08 45 39.8	0.0
LIOB	Emei baz=348	1.43	3	*e*P	Pg	08 45 40.6	+0.4
EWUT	Wuta baz=45	1.45	32	*e*P	Pn	08 45 40.3	+0.2
NDT	Datong Townshi baz=22	1.48	21	*e*P	Pg	08 45 41.3	0.0
YHNB	Yeheng baz=15	1.50	16	*e*P	Pn	08 45 40.5	-0.4
NSK	Sanguang baz=15	1.50	15	*e*P	Pg	08 45 41.9	+0.1
NDS	Dongshan baz=15	1.58	27	*e*P	Pb	08 45 43.0	+0.2
TWC	Suao baz=32	1.62	31	*e*P	Pg	08 45 43.9	-0.1
NWLT	Wulai baz=19	1.64	19	*e*P	Pg	08 45 44.5	+0.2
TWE	Neicheng baz=25	1.64	24	*e*P	Pg	08 45 44.8	+0.4
FUSB	Fushanzhiwuyua baz=36	1.65	21	*e*P	Pb	08 45 44.0	0.0
FUSB	baz=36			*e*S	Sg	08 46 08.7	+2.7
TATO	Taipei baz=16	1.82	16	*e*P	Pg	08 45 48.5	+0.6
TWA	Mucha baz=18	1.85	19	*e*P	Pg	08 45 48.5	0.0
EGS	baz=31	1.86	29	*e*P	Pg	08 45 48.5	-0.1
TIPB	Shuangxi baz=40	1.93	25	*e*P	Pb	08 45 48.9	+0.1
NWF	Wu-fen Shan baz=43	2.00	23	*e*P	Pg	08 45 51.1	-0.2
WFSB	Wu-fen Shan baz=42	2.00	23	*e*P	Pg	08 45 51.3	0.0
YM01	YM01 baz=17	2.01	17	*e*P	Pb	08 45 50.0	-0.1
TWB1	Santiao Chiao baz=42	2.03	28	*e*P	Pb	08 45 50.2	-0.3
SXI1	Grass Mountain baz=5.0	2.06	25	*e*P	Pb	08 45 50.6	-0.4
VWUC	VWUC baz=326	2.23	323	*e*P	Pb	08 45 52.7	-1.2
YOJ	Yonaguni jima baz=57	2.27	57	*e*P	Pn	08 45 51.7	+0.3
KNMB	Chin-men Tao baz=302	2.64	299	*e*P	Pb	08 45 58.7	-2.2
MATB	Ma-tsu baz=345	3.06	343	*e*P	Pn	08 46 01.6	-0.6

IDC ***29*** *08:53:03.1±2.2, 38.°30S×177.°64E, h68^{km}±9^{km}, mb3.6/2, mbtmp3.9/3, Error ellipse: s-maj=39.6km s-min=23.9km az=118.0*

WEL ***29*** *08:53:04.0, 38°S±4°×17°8E±°, h40^{km}±6^{km}, M3.6/70, ML3.9/74, MLv3.6/70, Error ellipse: s-maj=0.0km s-min=0.0km az=172.3*

ISC 29 08:53:02.3±1.0**, 37.°79S**±0.°05×**177.°63E**±0.°04**, h58**^{km}±6^{km}**, n144, σ1.°50**/146**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.18	169	P	Pn	08 53 11.1	-0.5
RUGZ				S	Sn	08 53 17.0	-1.3
PKGZ	Pakihiroa	0.36	106	P	Pn	08 53 13.2	+0.4
WIZ	White Island	0.44	306	P	Pn	08 53 13.3	-0.1
WSRZ	White Island S	0.45	307	P	Pn	08 53 13.7	+0.1
TWGZ	Tauwhareparae	0.47	145	P	Pn	08 53 15.5	+1.6
WHRZ	Whale Island	0.53	262	P	Pn	08 53 14.3	-0.1
WHRZ				S	Sn	08 53 24.2	+1.1
MWZ	Matawai	0.55	189	P	Pn	08 53 15.3	+0.6
MWZ				S	Sn	08 53 24.4	+0.6
PUZ	Puketiti	0.57	120	P	Pn	08 53 16.4	+1.6
MXZ	Matakaoa Point	0.58	67	P	Pn	08 53 16.0	+1.1
WMGZ	Waiomatatini S	0.62	93	P	Pn	08 53 17.3	+1.9
URZ	Urewera 602nm,0.3s,baz=22,slow=5.4,SNR=2675	0.63	221	P	Pn	08 53 16.0	+0.5
URZ	baz=162,slow=20			S	Sn	08 53 25.8	+0.7
URZ	comp=Z,101nm,21.9s,baz=299,slow=58			LR	LR	08 53 27.1	
URZ	Urewera	0.63	221	P	Pn	08 53 16.1	+0.6
TKGZ	Te Karaka	0.67	165	P	Pn	08 53 18.0	+2.0
RAGZ	Rawiri	0.73	194	P	Pn	08 53 18.1	+1.3
EDRZ	Edgecumbe	0.78	246	P	Pn	08 53 18.2	+0.8
MARZ	Manawahe	0.78	255	P	Pn	08 53 17.9	+0.4
CNGZ	Carnagh Statio	0.83	147	P	Pn	08 53 19.9	+1.9
RIGZ	Rimuhau	0.92	174	P	Pn	08 53 20.8	+1.6
MUGZ	Murupara	0.97	224	P	Pn	08 53 20.6	+0.7
RTZ	Ruatahuna	0.97	212	P	Pn	08 53 20.7	+0.7
MKRZ	Makatiti	0.99	249	P	Pn	08 53 21.6	+1.4
TARZ	Mount Tarawera	1.00	243	P	Pn	08 53 21.3	+1.1
LIRZ	Lichensteins R	1.01	257	P	Pn	08 53 21.4	+1.0
SNGZ	Shannon Statio	1.02	193	P	Pn	08 53 22.7	+2.2
RRRZ	Republican Roa	1.04	238	P	Pn	08 53 21.7	+0.9
OMRZ	Omania	1.05	252	P	Pn	08 53 21.7	+0.8
TGRZ	Tauranga	1.09	273	P	Pn	08 53 21.8	+0.4
HLRZ	Highlands Stat	1.11	245	P	Pn	08 53 22.9	+1.1
KARZ	Kaharoa	1.12	258	P	Pn	08 53 22.7	+0.8
NGRZ	Ngongotaha	1.19	254	P	Pn	08 53 23.9	+1.2
UTU	Utuhina	1.20	251	P	Pn	08 53 24.6	+1.6
RAHZ	Arahi	1.21	201	P	Pn	08 53 24.7	+1.7
PRRZ	Plateau Road	1.21	234	P	Pn	08 53 23.9	+0.9
HSRZ	Hossack Road	1.21	244	P	Pn	08 53 24.6	+1.5
MYRZ	Mayor Island	1.22	294	P	Pn	08 53 23.7	+0.5
HRRZ	Handcock Road	1.22	240	P	Pn	08 53 24.3	+1.1
KNZ	Kokohu	1.23	179	P	Pn	08 53 24.2	+0.9
MTHZ	Maungataniwha	1.23	210	P	Pn	08 53 24.3	+1.0
ALRZ	Allen Road	1.28	232	P	Pn	08 53 24.9	+0.9
GRRZ	Galatos Road	1.33	245	P	Pn	08 53 25.9	+1.3
KMRZ	Kaimai	1.34	267	P	Pn	08 53 25.3	+0.5
WPRZ	Whakapapatarin	1.37	237	P	Pn	08 53 26.4	+1.3
MHGZ	Mahia Peninsul	1.38	171	P	Pn	08 53 26.5	+1.2
MRHZ	Matea Rd	1.42	222	P	Pn	08 53 26.8	+1.0
NMHZ	Naumai	1.46	206	P	Pn	08 53 28.4	+1.9
ARHZ	Aropaoanui	1.56	199	P	Pn	08 53 29.5	+1.8
WHTZ	Whakaora	1.58	236	P	Pn	08 53 29.9	+1.8
KUTZ	Kaahu Road	1.59	243	P	Pn	08 53 29.4	+1.3
BKZ	Black Stump Fm	1.64	213	P	Pn	08 53 29.8	+1.0
TOZ	Tahuroa Road	1.69	271	P	Pn	08 53 30.0	+0.6
TLZ	Tolley Road	1.74	251	P	Pn	08 53 31.1	+0.9
MCHZ	McNeill Hill	1.81	204	P	Pn	08 53 33.3	+2.2
RATZ	Rangitukua	1.82	233	P	Pn	08 53 32.8	+1.5
KUZ	Kuaotunu	1.85	304	P	Pn	08 53 31.7	+0.1
KWHZ	Kaweka Forest	1.89	210	P	Pn	08 53 34.3	+2.1
CKHZ	Cape Kidnapper	1.92	193	P	Pn	08 53 33.2	+0.6
TMVZ	Te Maari	2.01	228	P	Pn	08 53 35.5	+1.5
NTVZ	North Tongarir	2.02	229	P	Pn	08 53 35.9	+1.8
ETVZ	East Tongariro	2.02	228	P	Pn	08 53 35.5	+1.4
KRVZ	Karewarewa	2.04	230	P	Pn	08 53 37.2	+2.8
OTVZ	Oturere	2.07	228	P	Pn	08 53 36.3	+1.5
NNVZ	North Ngauruho	2.08	229	P	Pn	08 53 36.5	+1.6
WTVZ	West Tongariro	2.08	230	P	Pn	08 53 36.5	+1.6
MKAZ	Moumakai	2.08	288	P	Pn	08 53 35.5	+0.7
KAHZ	Kahuranaki	2.09	196	P	Pn	08 53 35.7	+0.8
SNVZ	South Ngauruho	2.10	228	P	Pn	08 53 36.6	+1.5
BHHZ	Black Hill Sta	2.10	215	P	Pn	08 53 36.3	+1.2
KRHZ	Kereru	2.10	208	P	Pn	08 53 36.3	+1.2
NGZ	Ngauruhoe	2.11	228	P	Pn	08 53 37.1	+1.7
TUVZ	Tukino	2.14	226	P	Pn	08 53 37.1	+1.3
TWVZ	Taurewa	2.15	233	P	Pn	08 53 37.8	+2.0
MOVZ	Moawhango	2.19	222	P	Pn	08 53 37.3	+0.9
WHVZ	Whangaehu Hut	2.19	226	P	Pn	08 53 38.0	+1.5
FWVZ	Far West T-bar	2.19	227	P	Pn	08 53 38.4	+1.9
WNVZ	Wahianoa	2.21	225	P	Pn	08 53 38.1	+1.3
TRVZ	Turoa	2.23	227	P	Pn	08 53 39.9	+2.9
WIAZ	Waiheke Island	2.23	296	P	Pn	08 53 37.6	+0.8
HIZ	Hauiti	2.31	251	P	Pn	08 53 39.7	+1.8
ETAZ	East Tamaki Re	2.31	290	P	Pn	08 53 39.0	+1.1
PXZ	Pawanui	2.32	195	P	Pn	08 53 37.7	-0.3
GRZ	Great Barrier	2.32	311	P	Pn	08 53 38.6	+0.5
MTVZ	Mangateitei	2.33	226	P	Pn	08 53 40.9	+2.6
PKVZ	Pokaka	2.34	229	P	Pn	08 53 40.5	+2.1
PNHZ	Pukenui	2.40	207	P	Pn	08 53 39.9	+0.7
MBAZ	Motutapu North	2.41	294	P	Pn	08 53 40.4	+1.1
WPHZ	Waipukurau	2.46	202	P	Pn	08 53 40.3	+0.4
EPAZ	Eden Park BICE	2.48	291	P	Pn	08 53 41.8	+1.6
AWAZ	Awhitu Peninsu	2.49	286	P	Pn	08 53 41.8	+1.5
HBAZ	Herne Bay Bore	2.50	291	P	Pn	08 53 42.1	+1.6
WTAZ	Waiatarua	2.58	288	P	Pn	08 53 43.3	+1.6
PRHZ	Porangahau	2.59	197	P	Pn	08 53 41.4	-0.4
TSZ	Takapari Road	2.62	209	P	Pn	08 53 42.7	+0.6
VRZ	Vera Road	2.62	239	P	Pn	08 53 44.6	+2.4
RVAZ	Riverhead Bore	2.64	292	P	Pn	08 53 43.9	+1.5
DVHZ	Dannevirke	2.75	204	P	Pn	08 53 43.7	-0.3
ANWZ	Angora Road	2.82	198	P	Pn	08 53 44.7	-0.1
WAZ	Wanganui	2.85	226	P	Pn	08 53 47.6	+2.2
POWZ	Post Office Ro	2.98	209	P	Pn	08 53 47.3	+0.2
OHWZ	Ohakea	3.02	216	P	Pn	08 53 49.5	+2.0
LREZ	Lake Rotokare	3.03	236	P	Pn	08 53 47.9	+0.1
DREZ	Durham Road	3.04	242	P	Pn	08 53 51.7	+3.9
PRWZ	Pori Road	3.05	205	P	Pn	08 53 48.2	+0.2
BFZ	Birch Farm	3.08	200	P	Pn	08 53 47.7	-0.8
NEZ	North Egmont	3.14	241	P	Pn	08 53 53.6	+4.2
PKE	Pukeiti	3.19	243	P	Pn	08 53 54.0	+4.1
KHEZ	Kahui Hut	3.21	241	P	Pn	08 53 54.4	+4.0
WCZ	Waipu Caves	3.22	304	P	Pn	08 53 51.4	+1.1
TIWZ	Tintock	3.28	204	P	Pn	08 53 50.6	-0.5
MRZ	Mangatainoka R	3.28	208	P	Pn	08 53 50.4	-0.8
NBEZ	Newall Road No	3.30	242	P	Pn	08 53 54.8	+3.3
CPWZ	Castlepoint	3.31	199	P	Pn	08 53 51.1	-0.4
HOWZ	Holdsworth Sta	3.51	207	P	Pn	08 53 53.2	-1.2
OGWZ	Otaki Gorge	3.58	212	P	Pn	08 53 54.7	-0.5
TMWZ	Te Maipa	3.58	202	P	Pn	08 53 54.1	-1.2
KIW	Kapiti Island	3.73	214	P	Pn	08 53 56.8	-0.4
MTW	Mount Morrison	3.75	205	P	Pn	08 53 55.9	-1.7
CAW	Cannon Point	3.86	210	P	Pn	08 53 57.8	-1.4
TRWZ	Traveller	3.91	202	P	Pn	08 53 58.5	-1.2
PAWZ	Paruwai Farm	3.97	205	P	Pn	08 53 59.4	-1.3
MSWZ	Moikau Station	4.06	206	P	Pn	08 54 00.2	-1.7
OUZ	Omahuta	4.14	307	P	Pn	08 54 04.7	+1.7
DUWZ	D'Urville Isla	4.17	223	P	Pn	08 54 03.0	-0.3
TCW	Tory Channel	4.29	216	P	Pn	08 54 03.9	-1.2
TUWZ	Tuamarina	4.62	217	P	Pn	08 54 08.1	-1.4
NNZ	Nelson	4.75	223	P	Pn	08 54 10.4	-0.8
TKNZ	Takaka Hill	4.86	227	P	Pn	08 54 13.1	+0.3
BSWZ	Blackbirch Sta	4.87	215	P	Pn	08 54 11.6	-1.4
QRZ	Quartz Range	4.99	231	P	Pn	08 54 13.9	-0.6
MRNZ	Matariki Terra	5.21	225	P	Pn	08 54 16.2	-1.5
THZ	Tophouse	5.39	221	P	Pn	08 54 18.4	-1.7
DSZ	Denniston Nort	5.98	227	P	Pn	08 54 26.8	-1.4
CTZ	Chatham Island	7.37	146	P	Pn	08 54 48.3	+1.2
WVZ	Waitaha Valley	7.45	223	P	Pn	08 54 49.1	+0.8
RPZ	Rata Peaks 13nm,0.9s,baz=87,slow=17,SNR=15	7.74	218	P	Pn	08 54 49.5	-2.8
RPZ	9.8nm,0.3s,baz=321,slow=23,SNR=22			S	Sn	08 56 09.2	-9.3
RPZ	Rata Peaks	7.74	218	P	Pn	08 54 50.6	-1.6
ARCZ	Arundel	7.86	216	P	Pn	08 54 52.4	-1.5
JCZ	Jackson Bay	9.18	224	P	Pn	08 55 11.3	-0.7
ASAR	Alice Springs 0.8nm,0.6s,baz=125,slow=8.3,SNR=16	39.78	278	P	P	09 00 30.1	+0.3
ASAR	0.1nm,0.5s,baz=106,slow=3.2,SNR=1.1 0.8nm,0.6s			PcP	PcP	09 02 33.1	-2.0
WRA	Warramunga Arr 1.4nm,0.6s,baz=124,slow=7.3,SNR=22 1.4nm,0.6s	41.47	283	P	P	09 00 44.6	+1.0
H03S2	Juan Fernandez baz=226	79.34	125	T	T	10 30 51.4	
H03S1	Juan Fernandez baz=226	79.35	125	T	T	10 30 49.8	
H03S3	Juan Fernandez baz=226	79.36	125	T	T	10 31 07.2	

ARCES	ARCESS Array B	144.84	343	PKPbc	PKPdf	09 12 31.8	+0.2
	2.5nm,1.0s,baz=51,slow=4.9,SNR=6.5						
FINES	FINESS Array B	150.44	332	PKPbc	PKiKP	09 12 46.6	-0.4
	1.8nm,0.9s,baz=56,slow=2.5,SNR=2.4						

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*ISK **29** 09:19:52.9, 38°.72N×26°.50E, h7^{km}, ML2.5/23*

*DDA **29** 09:19:52.5±0.0, 38°.71N×26°.49E, h7^{km}±3^{km}, ML2.4*

*ATH **29** 09:19:54.0, 38°.71N×26°.44E, h20^{km}±4^{km}, ML2.3/4, Error ellipse: s-maj=5.2km s-min=1.4km az=244.0*

*THE **29** 09:19:53.5, 38°.72N×26°.52E, h12^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=2.1km s-min=0.8km az=243.0*

ISC 29 09:19:53.5±0.9, **38°.72N**±0°.02×**26°.51E**±0°.02, **h11**^{km}±7^{km}, **n46**, σ**0^{s}.63**/65, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOCM	Foa	0.18	91	PG	Pg	09 19 57.1	-0.3
FOCM				SG	Sg	09 20 00.2	+0.1
CAND	Candarli	0.33	44	PG	Pg	09 20 00.3	+0.1
CAND				SG	Sg	09 20 05.4	+0.7
URLA	Izmir	0.36	169	PG	Pg	09 20 00.4	-0.3
URLA				SG	Sg	09 20 06.6	+1.1
DKL	Dikili	0.47	41	PG	Pg	09 20 02.7	-0.1
DKL				SG	Sg	09 20 09.8	+0.8
ZEYE	Izmir, Urla-Ze	0.48	180	P	Pg	09 20 02.5	-0.3
CHOS	Chios island	0.48	227	P	Pg	09 20 02.8	-0.1
CHOS				S	Sg	09 20 09.5	+0.1
CHOS				AML	AML	09 20 12.2	
	comp=E,778µm,0.3s						
CHOS				AML	AML	09 20 15.7	
	comp=N,398µm,0.2s						
CHOS	Chios island	0.48	227	P	Pg	09 20 02.8	-0.1
CHOS	Chios island	0.48	227	PG	Pg	09 20 02.8	-0.1
ZEDA	zmir-Bergama	0.51	61	P	Pg	09 20 02.4	-1.1
ZEDA				S	Sg	09 20 10.3	+0.1
BLCB	Balcova	0.53	128	P	Pg	09 20 03.8	-0.1
BLCB				S	Sg	09 20 11.2	+0.2
BLCB	Balcova	0.53	128	PG	Pg	09 20 04.1	+0.2
PRK	Paraskevi	0.56	341	P	Pb	09 20 05.0	-0.3
PRK				AML	AML	09 20 16.1	
	comp=N,1245µm,0.3s						
PRK				AML	AML	09 20 16.9	
	comp=E,611µm,0.2s						
PRK	Paraskevi	0.56	341	P	Pb	09 20 04.8	-0.5
PRK				S	Sb	09 20 13.8	+0.5
	comp=E,448nm,0.2s						
SIGR	SIGRI	0.71	315	P	Pg	09 20 06.8	-0.5
SIGR				S	Sb	09 20 17.9	+0.4
SIGR				AML	AML	09 20 18.9	
	comp=E,336µm,0.5s						
SIGR				AML	AML	09 20 19.7	
	comp=N,430µm,0.3s						
SIGR	SIGRI	0.71	315	P	Pg	09 20 06.7	-0.5
SIGR				S	Sb	09 20 17.5	0.0
	comp=N,215nm,0.5s						
DGB	zmir	0.73	156	P	Pg	09 20 06.4	-1.1
DGB				S	Sg	09 20 16.5	-0.5
DGB				*i* AML	AML	09 20 20.0	
	comp=N,82nm,0.5s						
DGB				*i* AML	AML	09 20 20.0	
	comp=N,99nm,0.4s						
GPNR	Gulpinar-Canak	0.79	339	PG	Pg	09 20 08.9	+0.1
KOCA	Canakkale, Ayv	0.84	340	P	Pg	09 20 08.8	-0.9
KOCA				S	Sg	09 20 20.7	+0.1
KOCA				*i* AML	AML	09 20 23.0	
	comp=N,129nm,0.5s						
KOCA				*i* AML	AML	09 20 23.0	
	comp=N,122nm,0.4s						
BUHA	Balikesir, Bur	0.90	29	P	Pg	09 20 10.8	-0.1
BUHA				S	Sn	09 20 24.1	-0.9
BUHA				*i* AML	AML	09 20 25.0	
	comp=N,141nm,0.3s						
BUHA				*i* AML	AML	09 20 27.0	
	comp=N,103nm,0.3s						
BAYC	CANAKKALE_Bayr	1.02	2	P	Pb	09 20 11.9	-1.3
BAYC				S	Sb	09 20 25.7	-1.0
BAYC				*i* AML	AML	09 20 27.0	
	comp=N,74nm,0.2s						
BAYC				*i* AML	AML	09 20 28.0	
	comp=N,114nm,0.2s						
AKS	Akhisar	1.03	81	PG	Pg	09 20 13.7	+0.3
SMG	Samos	1.04	165	P	Pb	09 20 13.1	-0.3
SMG				S	Sn	09 20 29.3	+0.9
SMG				AML	AML	09 20 30.3	
	comp=N,710µm,0.3s						
SMG				AML	AML	09 20 30.6	
	comp=E,510µm,0.2s						
SMG	Samos	1.04	165	P	Pb	09 20 12.9	-0.5
SMG				S	Sn	09 20 28.1	-0.3
	comp=E,305nm,0.2s						
EZN	Ezine	1.12	353	P	Pb	09 20 13.9	-0.9
EZN				S	Sb	09 20 28.8	-0.5
	comp=E,148nm,0.3s						
EZN	Ezine	1.12	353	PN	Pn	09 20 14.8	-0.2
STEP	BALIKESIR_Sava	1.15	55	P	Pb	09 20 14.5	-0.9
STEP				S	Sn	09 20 31.8	+0.6
STEP				*i* AML	AML	09 20 33.0	
	comp=E,103nm,0.5s						
STEP				*i* AML	AML	09 20 35.0	
	comp=E,100nm,0.3s						
GCAM	G?zelcaml?	1.17	150	PN	Pb	09 20 14.7	-0.9
BOZC	Bozcaada	1.18	343	PN	Pb	09 20 15.1	-0.7
AYDB	Zeytinkoy-Aydi	1.33	125	PN	Pn	09 20 17.9	-0.2
ECEA	Canakkale, Ece	1.35	349	P	Pb	09 20 18.8	0.0
ECEA				S	Sg	09 20 36.9	-0.1
ECEA				*i* AML	AML	09 20 39.0	
	comp=E,148nm,0.3s						
GADA	Gvkgeada	1.55	342	PN	Pb	09 20 21.8	-0.3
LIA	Limnos Island	1.56	319	P	Pb	09 20 22.4	0.0
GONE	Gonen-Balikesi	1.61	34	PN	Pb	09 20 22.9	-0.3
GELI	Tayfur-Gelibol	1.68	359	PN	Pb	09 20 23.8	-0.6
KULA	Kula-Manisa	1.70	96	PN	Pn	09 20 23.9	+0.8
BODT	Bodrum	1.77	159	PN	Pb	09 20 25.3	-0.6
SMTH	Samothraki Isl	1.91	337	P	Pb	09 20 27.9	-0.4
EDC	Edincik	1.94	32	PN	Pn	09 20 27.4	+1.1
ERIK	Erikli-Kesan	1.95	0	PN	Pn	09 20 27.4	+0.9
MRMT	Marmara Adasi	2.06	24	PN	Pn	09 20 28.4	+0.3
MAR6	Marsite Statio	2.07	16	PN	Pn	09 20 28.7	+0.6
MAR3	Marsite Statio	2.11	16	PN	Pn	09 20 29.7	+1.0
GZKV	Gazikoy-Tekird	2.13	17	PN	Pn	09 20 29.8	+0.9
DAT	Datca	2.16	156	PN	Pn	09 20 30.3	+0.9
ALN	Alexandroupoli	2.21	351	PN	Pn	09 20 30.9	+0.9
TVSB	Tavsanli	2.41	71	PN	Pn	09 20 33.9	+1.0

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*IDC **29** 09:23:49.6±0.9, 10°.26S×161°.16E, h90^{km}±7^{km}, mb3.7/11, mbtmp4.1/13, MS3.1/1, Error ellipse: s-maj=16.1km s-min=11.8km az=59.0*

*NEIC **29** 09:23:49.7±1.1, 10°.30S±0°.06×161°.2E±0°.1, h81^{km}±5^{km}, mb4.2/26, Error ellipse: s-maj=15.7km s-min=8.8km az=86.0*

ISC 29 09:23:50.5±0.6, **10°.34S**±0°.06×**161°.19E**±0°.09, **h100**^{km}, **n51**, σ**1^{s}.56**/54, **mb4.0**/23, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.52	306	P	Pn	09 24 14.9	-2.1
	418nm,0.4s,baz=176,slow=6.8,SNR=35						
HNR				S	Sn	09 24 33.6	-3.5
	297nm,0.3s,baz=141,slow=9.9,SNR=6.3						
HNR	Honiara	1.52	306		Pn	09 24 14.7	-2.4
KOUNC	Koumac, New Ca	10.58	164	Pn	Pn	09 26 19.3	+0.1
LIFNC	LIFOU	11.90	151	Pn	Pn	09 26 35.4	-1.6
DZM	Mont Dzumac	12.71	157	P	Pn	09 26 48.3	+0.6
	3.3nm,0.6s,baz=45,slow=11,SNR=20						
DZM				S	Sn	09 29 01.1	-6.5
	2.7nm,0.5s,baz=343,slow=21,SNR=2.5						
DZM	Mont Dzumac	12.71	157		Pn	09 26 47.3	-0.4
OUENC	Ouen Island, N	13.18	156	Pn	Pn	09 26 54.9	+1.1
PATS	Pohnpei	17.30	350	P	Pn	09 27 47.5	+1.5
CTA	Charters Tower	17.35	234	P	Pn	09 27 48.0	+1.5
	7.4nm,0.7s,baz=58,slow=11,SNR=8.8						
CTAO	Charters Tower	17.35	234	P	Pn	09 27 49.7	+3.2
CTAO				IAmb	IAmb	09 27 51.7	
	comp=Z,8.6nm,0.8s						
EIDS	Eidsvold	17.76	211	P	Pn	09 27 53.4	+2.0
ARMA	Armidale	21.87	203	P	P	09 28 36.2	+0.8
ARMA				IAmb	IAmb	09 28 42.9	
	comp=Z,22nm,1.4s						
AFI	Afiamalu	26.66	100	LR	LR	09 37 29.8	
	comp=Z,35nm,18.4s,baz=174,slow=31						
WR0	Warramunga Arr	27.40	246	P	P	09 29 27.5	+0.6
WB0	Warramunga Arr	27.48	247	P	P	09 29 27.6	-0.1
WB0				IAmb	IAmb	09 29 49.9	
	comp=Z,5.8nm,0.9s						
WRAB	Tennant Creek	27.57	247	P	P	09 29 28.7	+0.3
WRAB				IAmb	IAmb	09 29 29.3	
	comp=Z,4.1nm,0.8s						
WB2	Warramunga Arr	27.57	247	P	P	09 29 28.6	+0.2
WB2				IAmb	IAmb	09 29 50.3	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	27.58	247	P	P	09 29 28.5	0.0
	comp=Z,2.5nm,0.6s,baz=76,slow=9.3,SNR=29						
WRA				pP	pP	09 29 49.2	-0.1
	comp=Z,2.5nm,0.6s,baz=76,slow=9.4,SNR=9.7						
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	27.58	247	P	P	09 29 28.2	-0.3
STKA	Stephens Creek	28.07	217	P	P	09 29 34.0	+1.3
	comp=Z,2.9nm,0.9s,baz=30,slow=16,SNR=3.8						
	comp=Z,2.9nm,0.9s						
STKA	Stephens Creek	28.07	217	P	P	09 29 34.8	+2.1
AS31	Alice Springs	29.19	240	P	P	09 29 34.7	-8.1
ASAR	Alice Springs	29.19	240	P	P	09 29 42.0	-0.8
	comp=Z,1.1nm,0.6s,baz=62,slow=9.6,SNR=17						
ASAR				pP	pP	09 30 03.2	-0.4
	comp=Z,0.5nm,0.6s,baz=63,slow=10.0,SNR=3.0						
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	29.19	240	P	P	09 29 37.6	-5.2
KNRA	Kununurra	32.01	257	P	P	09 30 07.8	+0.1
BBOO	Buckleboo	32.18	222	P	P	09 30 09.4	+0.4
MORW	Morawa	46.07	240	P	P	09 32 04.5	-0.2
JGF	Kuroka	50.94	335	P	P	09 32 42.1	+0.3
JGF				IAmb	IAmb	09 33 04.3	
	comp=Z,7.0nm,1.2s						
MJAR	Matsushiro Arr	51.40	336	P	P	09 32 44.4	-0.9
	comp=Z,0.7nm,0.6s,baz=150,slow=5.1,SNR=1.2						
	comp=Z,0.7nm,0.6s						
USRK	Ussuriysk Ar.	60.40	336	P	P	09 33 49.3	0.0
	comp=Z,3.4nm,0.7s,baz=121,slow=5.6,SNR=3.5						
	comp=Z,3.4nm,0.7s						
VNDA	Vanda	67.16	180	P	P	09 34 34.1	+0.9
	comp=Z,0.8nm,0.7s,baz=338,slow=6.4,SNR=5.2						
	comp=Z,0.8nm,0.7s						
VNDA	Vanda	67.16	180	P	P	09 34 35.1	+1.8
VNDA				IAmb	IAmb	09 34 50.1	
	comp=Z,3.9nm,1.5s						
SONM	Songino Array	75.50	325	P	P	09 35 24.4	+0.4
	comp=Z,1.3nm,0.5s,baz=140,slow=6.6,SNR=7.6						
SONM				pP	pP	09 35 47.5	-1.7
	comp=Z,0.4nm,0.3s,baz=151,slow=6.3,SNR=2.6						
	comp=Z,1.3nm,0.5s						
SONM	Songino Array	75.50	325	P	P	09 35 24.5	+0.5
KDAK	Kodiak Island	77.64	23	P	P	09 35 36.7	+1.1
Q19K	Cape Douglas,	78.03	22	P	P	09 35 38.5	+0.6
QSPA	South Pole Qui	79.66	180	P	P	09 35 47.5	+0.6
QSPA				IAmb	IAmb	09 36 03.5	
	comp=Z,7.3nm,1.5s						
L19K	White Mountain	79.93	19	P	P	09 35 49.5	+1.3
L19K				IAmb	IAmb	09 35 51.2	
	comp=Z,1.7nm,0.8s						
IMAR	Indian Mountai	83.01	17	P	P	09 36 05.5	+1.2
MAW	Mawson	83.67	202	P	P	09 36 08.1	+0.3
	comp=Z,1.8nm,0.7s,baz=66,slow=5.6,SNR=3.8						
	comp=Z,1.8nm,0.7s						
MAW	Mawson	83.67	202	P	P	09 36 09.2	+1.4
CTGM	Chitina Glacie	84.12	24	P	P	09 36 11.0	+0.7
CTGM				IAmb	IAmb	09 36 12.7	
	comp=Z,2.1nm,0.8s						
IL31		84.32	20	P	P	09 36 10.5	-0.5
IL31				IAmb	IAmb	09 36 37.4	
	comp=Z,4.1nm,1.5s						
ILAR	Eielson Array	84.32	20	P	P	09 36 10.1	-0.9
	comp=Z,0.3nm,0.4s,baz=243,slow=5.1,SNR=14						
ILAR				pP	pP	09 36 34.2	-2.5
	comp=Z,0.4nm,0.8s,baz=238,slow=4.5,SNR=3.0						
	comp=Z,0.3nm,0.4s						
ILAR	Eielson Array	84.32	20	P	P	09 36 11.6	+0.5
DOT	Dot Lake	84.62	21	P	P	09 36 13.7	+1.1
DOT				IAmb	IAmb	09 36 14.6	
	comp=Z,1.5nm,0.7s						
M27K	Edge Creek, AK	84.69	23	P	P	09 36 14.3	+1.2
M27K				IAmb	IAmb	09 36 37.7	
	comp=Z,3.4nm,1.4s						
EGAK	Eagle	86.31	21	P	P	09 36 22.4	+1.4
EGAK				IAmb	IAmb	09 36 47.1	
	comp=Z,3.4nm,1.4s						
NVAR	Mina Array Bea	89.02	51	P	P	09 36 35.9	+1.1
	comp=Z,0.2nm,0.6s,baz=234,slow=8.5,SNR=2.4						
	comp=Z,0.2nm,0.6s						
MKAR	Makanchi Array	89.96	318	P	P	09 36 39.1	+0.3
	comp=Z,0.4nm,0.6s,baz=95,slow=6.1,SNR=6.1						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	89.96	318	P	P	09 36 39.5	+0.7

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*TUL **29** 09:32:36.1±1.1, 35°.86N±0°.01×97°.22W±0°.01, h5^{km}±7^{km}, ML2.6, mb_Lg2.3/29(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=144.0*

NEIC 29 09:32:36.4±0.9, **35°.87N**±0°.01×**97°.23W**±0°.01, **h8**^{km}±6^{km}, **Error ellipse: s-maj=1.9km s-min=1.5km az=149.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.21	172	Pg	Pg	09 32 40.2	-0.5
OKCFA	Oklahoma City	0.49	202	Pg	Pg	09 32 45.8	0.0
OKCFA				Sg	Sg	09 32 51.8	-0.4
OKCSW	OKLAHOMA CITY	0.49	201		Pg	09 32 45.8	-0.1
OKCSW				Sg	Sg	09 32 52.1	-0.2
FNO	Franklin	0.62	193	Pg	Pg	09 32 48.1	-0.4
FNO				Sg	Sg	09 32 56.6	0.0
TUL1	Leonard	1.17	87		Pb	09 32 57.5	-1.3
TUL1				Sg	Sg	09 33 13.2	-0.6
T35A	Sooner Cattle	1.20	29		Pb	09 32 59.1	-0.2
T35A				Sg	Sg	09 33 14.7	-0.2
X34A	Smith Ranch, M	1.36	202		Pn	09 33 01.6	0.0
U32A	Winter Ranch,	1.53	290		Pn	09 33 03.9	-0.1
WMOK	Wichita Mounta	1.70	229		Pn	09 33 06.8	+0.5
X37A	Clayton	1.98	129		Pn	09 33 10.4	+0.2
X37A				IAmb_Lg		09 33 41.0	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	2.69	80		Pn	09 33 20.5	+0.5
W39A	Magazine	2.88	102		Pn	09 33 22.2	-0.4
W39A				IAmb_Lg		09 34 15.0	
	comp=Z,11nm,0.8s						
Z38A	Mt. Pleasant	3.19	144	IAmb_Lg		09 34 24.1	
	comp=Z,7.1nm,0.8s						
MIAR	Mount Ida	3.27	113		Pn	09 33 30.0	+2.2
KSU1	Kansas State U	3.27	8		Pn	09 33 26.8	-1.1
KSU1				IAmb_Lg		09 34 26.8	
	comp=Z,7.5nm,0.8s						
CBKS	Cedar Bluff	3.56	327	IAmb_Lg		09 34 30.5	
	comp=Z,8.3nm,1.1s						
U40A	Yellville	3.57	81		Pn	09 33 33.9	+1.8
S39A	Bolivar	3.62	59		Pn	09 33 33.1	+0.3
S39A				IAmb_Lg		09 34 30.2	
	comp=Z,5.8nm,0.8s						
AMTX	Amarillo	3.77	256		Pn	09 33 34.9	0.0
AMTX				IAmb_Lg		09 34 45.9	
	comp=Z,7.4nm,1.0s						
X40A	Basin Creek Fa	3.85	110		Pn	09 33 36.8	+0.9
X40A				IAmb_Lg		09 34 40.7	
	comp=Z,9.1nm,0.7s						
WLAR	White Oak Lake	4.02	122	IAmb_Lg		09 34 50.6	
	comp=Z,5.4nm,0.8s						
WHAR	Wooly Hollow	4.07	97	Pn	Pn	09 33 39.1	+0.3
W41B	Gary Mavity, V	4.12	98	Pn	Pn	09 33 39.2	-0.4
FCAR	Ozark Folk Cen	4.14	88		Pn	09 33 40.6	+0.7
MGMO	Mountain Grove	4.20	71	Pn	Pn	09 33 40.5	-0.1
MGMO				IAmb_Lg		09 35 00.3	
	comp=Z,7.5nm,1.1s						
R40A	Maddies Statio	4.64	57		Pn	09 33 46.5	-0.3
R40A				IAmb_Lg		09 35 04.7	
	comp=Z,6.6nm,0.9s						
P38A	Dawn	4.76	37	Pn	Pn	09 33 48.1	-0.2
LCAR	Lake Charles	4.93	86	Pn	Pn	09 33 49.5	-1.2
N35A	Tabor	5.14	14	Pn	Pn	09 33 53.2	-0.4
CCM	Cathedral Cave	5.26	64	Pn	Pn	09 33 54.2	-1.1
KSCO	Kaye Shedlock’	5.32	308	IAmb_Lg		09 35 37.0	
	comp=Z,4.9nm,0.8s						
P40A	Paris	5.50	47	Pn	Pn	09 33 57.8	-0.7
PBMO	Poplar Bluff	5.56	79	Pn	Pn	09 33 59.3	-0.1
JCT	Junction City	5.79	203	IAmb_Lg		09 35 49.4	
	comp=Z,4.2nm,0.7s						
N38A	Joes South For	5.83	31	Pn	Pn	09 34 01.4	-1.7
FVM	French Village	5.84	67	Pn	Pn	09 34 02.1	-1.2
T25A	Trinidad	5.93	284	Pn	Pn	09 34 02.9	-1.8
WVT	Waverly	7.62	85	IAmb_Lg		09 36 44.3	
	comp=Z,2.4nm,1.0s						

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*TUL **29** 09:59:39.5±0.8, 35°.93N±0°.01×96°.75W±0°.01, h4^{km}±2^{km}, ML2.4, mb_Lg2.0/20(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=157.0*

NEIC 29 09:59:40.2±0.8, **35°.94N**±0°.01×**96°.74W**±0°.01, **h5**^{km}±1^{km}, **Error ellipse: s-maj=2.5km s-min=2.4km az=168.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.46	233	Pg	Pg	09 59 48.3	-0.7
TUL1	Leonard	0.77	92	Pg	Pg	09 59 54.2	-0.8
TUL1				Sg	Sg	10 00 04.5	-0.6
OKCSW	OKLAHOMA CITY	0.77	227	Pg	Pg	09 59 53.9	-1.1
OKCSW				Sg	Sg	10 00 05.0	-0.1
OKCFA	Oklahoma City	0.78	228	Pg	Pg	09 59 54.0	-1.0
OKCFA				Sg	Sg	10 00 04.7	-0.4
FNO	Franklin	0.86	219	Pg	Pg	09 59 55.6	-1.1
FNO				Sg	Sg	10 00 07.4	-0.5
T35A	Sooner Cattle	1.00	11	Pg	Pg	09 59 58.4	-0.9
X34A	Smith Ranch, M	1.60	214		Pn	10 00 09.1	-0.1
X37A	Clayton	1.75	140	Pn	Pn	10 00 11.6	+0.4
X37A				IAmb_Lg		10 00 37.8	
	comp=Z,14nm,0.7s						
U32A	Winter Ranch,	1.88	284	Pn	Pn	10 00 13.1	+0.1
WMOK	Wichita Mounta	2.05	235	Pn	Pn	10 00 15.5	+0.2
WMOK				IAmb_Lg		10 00 47.9	
	comp=Z,4.1nm,0.8s						
HHAR	Hobbs	2.30	81	Pn	Pn	10 00 19.2	+0.5
W39A	Magazine	2.52	106	Pn	Pn	10 00 21.8	0.0
R32A	Long Quarter,	2.94	328	Pn	Pn	10 00 26.9	-0.6
R32A				IAmb_Lg		10 01 15.5	
	comp=Z,2.9nm,0.7s						
MIAR	Mount Ida	2.94	117	Pn	Pn	10 00 27.9	+0.3
Z38A	Mt. Pleasant	3.04	151	Pn	Pn	10 00 26.2	-2.7
KSU1	Kansas State U	3.16	2	Pn	Pn	10 00 29.2	-1.4
KSU1				IAmb_Lg		10 01 28.4	
	comp=Z,5.2nm,0.8s						
U40A	Yellville	3.18	81	Pn	Pn	10 00 29.5	-1.4
S39A	Bolivar	3.26	56	Pn	Pn	10 00 30.6	-1.4
X40A	Basin Creek Fa	3.51	113	Pn	Pn	10 00 36.9	+1.4
WHAR	Wooly Hollow	3.69	99	Pn	Pn	10 00 37.3	-0.5
W41B	Gary Mavity, V	3.74	100	Pn	Pn	10 00 37.9	-0.7
FCAR	Ozark Folk Cen	3.75	89	Pn	Pn	10 00 37.8	-0.9
FCAR				IAmb_Lg		10 01 49.5	
	comp=Z,5.2nm,1.0s						
MGMO	Mountain Grove	3.80	70	Pn	Pn	10 00 38.5	-1.0
AMTX	Amarillo	4.17	257	Pn	Pn	10 00 43.2	-1.4
AMTX				IAmb_Lg		10 01 57.1	
	comp=Z,4.6nm,0.8s						
R40A	Maddies Statio	4.28	55	Pn	Pn	10 00 43.6	-2.4
R40A				IAmb_Lg		10 01 54.0	
	comp=Z,4.5nm,0.8s						
P38A	Dawn	4.48	34	Pn	Pn	10 00 45.6	-3.1
CCM	Cathedral Cave	4.88	63	Pn	Pn	10 00 53.6	-0.7
X43A	Marvell	5.00	105	IAmb_Lg		10 02 23.2	
	comp=Z,2.2nm,0.9s						
PBMO	Poplar Bluff	5.17	79	Pn	Pn	10 00 56.6	-1.6
P40A	Paris	5.17	45	Pn	Pn	10 00 57.1	-1.1
P40A				IAmb_Lg		10 02 31.1	
	comp=Z,4.1nm,0.8s						
FVM	French Village	5.46	66	Pn	Pn	10 01 01.4	-0.7
S44A	Carbondale	6.26	72	Pn	Pn	10 01 12.2	-0.9
T25A	Trinidad	6.29	283	Pn	Pn	10 01 13.6	-0.2
I37A	Lemond, Waseca	8.47	17	IAmb_Lg		10 04 04.1	
	comp=Z,1.7nm,1.2s						

IDC 29 10:04:16.3±6.9, **3°.58S×141°.95E, h0**^{km}, **mb3.3**/3, **mbtmp3.4**/4, **ML3.4**/1, **Error ellipse: s-maj=264.4km s-min=28.9km az=93.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.88	204	P	Pn	10 08 26.4	-0.2
	0.1nm,0.3s,baz=24,slow=12,SNR=8.0						
	0.3nm,0.4s						
ASAR	Alice Springs	21.43	201	P	P	10 09 06.2	+0.1
	0.4nm,0.8s,baz=29,slow=12,SNR=5.0						
	0.4nm,0.8s						
SONM	Songino Array	59.92	333	P	P	10 14 24.4	+0.1
	0.4nm,0.5s,baz=134,slow=6.2,SNR=1.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	72.47	322	P	P	10 15 44.7	-0.1
	0.4nm,1.0s,baz=108,slow=4.7,SNR=2.2						
	0.4nm,1.0s						

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*IDC **29** 10:25:08.9±2.7, 20°.29S×177°.51W, h507^{km}±21^{km}, mb3.2/7, mbtmp4.1/9, Error ellipse: s-maj=61.4km s-min=17.4km az=149.0*

*NEIC **29** 10:25:09.4±1.7, 20°.2S±0°.1×177°.5W±0°.1, h509^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=20.1km s-min=13.9km az=208.0*

ISC 29 10:25:08.5±0.6, **20°.1S**±0°.1×**177°.55W**±0°.09, **h500**^{km}, **n40**, σ**1^{s}.49**/41, **mb4.0**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.80	299	P	P	10 26 36.9	+3.1
	3.3nm,0.5s,baz=126,slow=21,SNR=14						
MSVF	Nonsavu	4.80	299	P	P	10 26 37.1	+3.3
NIUE	Niue	7.26	83	P	P	10 27 00.1	+2.8
AFI	Afiamalu	8.28	43	P	P	10 27 08.0	0.0
	12nm,0.3s,baz=209,slow=8.0,SNR=5.5						
AFI				S	S	10 28 42.1	-3.9
	28nm,0.5s,baz=358,slow=21,SNR=6.6						
AFI	Afiamalu	8.28	43	P	P	10 27 07.4	-0.5
PINNC	Pines Island,	14.20	257	P	P	10 28 11.9	+1.6
LIFNC	LIFOU	14.28	265	P	P	10 28 09.9	-1.2
ARMA	Armidale	29.62	244	P	P	10 30 33.1	+0.5
ARMA				IAmb	IAmb	10 30 43.7	
	comp=Z,22nm,1.4s						
CTAO	Charters Tower	33.95	264	P	P	10 31 09.8	0.0
CTAO				IAmb	IAmb	10 31 12.1	
	comp=Z,15nm,1.4s						
TAU	Tasmania Unive	37.19	224	P	P	10 31 32.2	-4.2
STKA	Stephens Creek	38.34	244	P	P	10 31 45.7	-0.3
	comp=Z,1.6nm,0.7s,baz=95,slow=15,SNR=3.2						
	comp=Z,1.6nm,0.7s						
STKA	Stephens Creek	38.34	244	P	P	10 31 46.3	+0.3
BBOO	Buckleboo	43.10	243	P	P	10 32 23.8	-0.2
WR0	Warramunga Arr	44.89	262	P	P	10 32 37.3	-0.8
WR0				IAmb	IAmb	10 32 56.9	
	comp=Z,7.4nm,1.4s						
ASAR	Alice Springs	45.02	256	P	P	10 32 38.7	-0.4
	comp=Z,3.5nm,0.8s,baz=100,slow=7.5,SNR=63						
ASAR				PcP	PcP	10 34 10.1	+0.4
	comp=Z,0.7nm,0.5s,baz=108,slow=3.7,SNR=8.9						
	comp=Z,3.5nm,0.8s						
ASAR	Alice Springs	45.02	256	P	P	10 32 38.4	-0.7
WB0	Warramunga Arr	45.05	262	P	P	10 32 38.4	-1.0
WB0				IAmb	IAmb	10 32 40.3	
	comp=Z,7.8nm,1.4s						
WB2	Warramunga Arr	45.06	262	P	P	10 32 38.3	-1.2
WB2				IAmb	IAmb	10 32 42.9	
	comp=Z,7.1nm,1.4s						
WRAB	Tennant Creek	45.07	262	P	P	10 32 38.0	-1.5
WRAB				IAmb	IAmb	10 32 40.0	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	45.08	262	P	P	10 32 38.8	-0.8
	comp=Z,1.1nm,0.6s,baz=96,slow=7.7,SNR=24						
WRA				PcP	PcP	10 34 09.9	0.0
	comp=Z,0.8nm,0.9s,baz=92,slow=3.3,SNR=4.0						
	comp=Z,1.1nm,0.6s						
WRA	Warramunga Arr	45.08	262	P	P	10 32 38.6	-1.0
FORT	Forrest	49.84	246	P	P	10 33 14.4	-0.8
KNRA	Kununurra	51.11	266	P	P	10 33 24.6	-0.1
KNRA				IAmb	IAmb	10 33 45.5	
	comp=Z,6.9nm,1.1s						
SIJI	Sorong	53.56	284	P	P	10 33 42.8	+0.4
	comp=Z,3.9nm,0.5s,baz=82,slow=11,SNR=5.4						
	comp=Z,3.9nm,0.5s						
QSPA	South Pole Qui	69.94	180	P	P	10 35 29.5	+0.7
QSPA				IAmb	IAmb	10 35 30.8	
	comp=Z,4.5nm,1.1s						
BELA	Belgrano 2	79.88	173	P	P	10 36 24.4	+0.2
IMAR	Indian Mountai	87.72	10	P	P	10 37 03.7	+0.7
ILAR	Eielson Array	87.86	13	P	P	10 37 04.0	+0.3

	comp=Z,0.4nm,0.8s,baz=221,slow=6.7,SNR=4.1						
	comp=Z,0.4nm,0.8s						
SNAA	**Sanae**	**88.37**	**178**	P	**P**	**10 37 05.5**	**-0.8**
SNAA				IAmb	IAmb	10 37 17.4	
	comp=Z,5.4nm,1.3s						
PDAR	**Pinedale Array**	**88.40**	**43**	P	**P**	**10 37 08.2**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=238,slow=5.2,SNR=2.5						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**90.39**	**289**	P	**P**	**10 37 16.3**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=141,slow=5.8,SNR=4.8						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**111.25**	**313**	PKiKP	**PKiKP**	**10 42 45.1**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=93,slow=2.9,SNR=2.6						
FINES	**FINESS Array B**	**135.53**	**344**	PKP	**PKPdf**	**10 43 29.0**	**-1.8**
	comp=Z,1.2nm,0.8s,baz=42,slow=2.5,SNR=1.5						
FINES	**FINESS Array B**	**135.53**	**344**		**PKPdf**	**10 43 30.3**	**-0.6**
AKASG	**Malin Array Be**	**142.89**	**332**	PKP		10 43 41.9	
	comp=Z,2.1nm,0.5s,baz=39,slow=4.0,SNR=7.6						
AKASG	**Malin Array Be**	**142.89**	**332**			10 43 43.4	
BRTR	**Keskin Array B**	**146.90**	**313**	PKPbc	**PKPbc**	**10 43 54.6**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=109,slow=4.3,SNR=5.5						
BRTR	**Keskin Array B**	**146.90**	**313**		**PKPbc**	**10 43 55.4**	**+0.6**
CLL	**Collm**	**147.79**	**348**	*i* PKPbc	**PKPbc**	**10 43 57.8**	**+1.3**
	comp=Z,7.0nm,1.1s						
CLL				Lm	MLR	16 26 00.0	
	comp=Z,100nm,19.1s						
GERES	**GERESS Array B**	**149.95**	**345**	PKPbc	**PKPbc**	**10 44 02.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=70,slow=1.6,SNR=4.2						

IDC ***29*** *10:49:40.7±2.3, 5°.10N×126°.88E, h0^{km}, mb3.5/3, mbtmp3.5/3, MS2.8/1, Error ellipse: s-maj=161.0km s-min=28.0km az=66.0*

DJA ***29*** *10:50:01.4±0.5, 4°N±5°×12°6E±°, h10^{km}, M3.8/6, mb4.3/1, MLv3.6/6*

ISC 29 10:49:49.9±1.6**, 5°.1N**±0°.2×**126°.9E**±0°.2**, h76^{km}, n7, σ1^{s}.23**/6**, mb3.3**/3**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.98**	**225**	P	**Pn**	**10 50 20.1**	**-1.4**
LBMI	**Labuha**	**5.73**	**174**	P	**Pn**	**10 51 12.8**	**+0.3**
MRSI	**Marisa**	**6.78**	**228**	P	**Pn**	**10 51 28.3**	**+1.5**
WRA	**Warramunga Arr**	**25.93**	**164**	P	**P**	**10 55 15.2**	**-0.1**
	0.6nm,0.6s,baz=344,slow=10,SNR=9.4						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**29.39**	**167**	P	**P**	**10 55 45.9**	**-0.4**
	0.4nm,0.9s,baz=347,slow=6.7,SNR=7.2						
	0.4nm,0.9s						
PETK	**Petropavlovsk-**	**54.09**	**22**	LR	LR	11 20 14.1	
	comp=Z,8.6nm,20.4s,baz=253,slow=34						
MKAR	**Makanchi Array**	**56.56**	**325**	P	**P**	**10 59 24.8**	**+0.1**
	0.2nm,0.4s,baz=134,slow=8.3,SNR=3.7						
	0.2nm,0.4s						

ZUR 29 10:55:54.0, 46°.27N×7°.41E, h9^{km}, MLh0.9/10**, 3C-1D, Error ellipse: s-maj=1.5km s-min=0.7km az=18.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIOO	**Sion-Ophtalmol**	**0.04**	**206**	Pg	Pg	10 55 56.1	+0.3
SIOO				Sg	Sg	10 55 57.4	+0.4
SIOV	**Sion-Valere**	**0.04**	**223**	⇑Pg	Pg	10 55 56.0	+0.1
SIOV				Sg	Sg	10 55 57.0	-0.2
ESION	**College des Cr**	**0.06**	**226**	Sg	Sg	10 55 57.6	+0.1
SENIN	**Lac Senin/Sane**	**0.12**	**322**	⇓Pg	Pg	10 55 57.3	+0.3
SENIN				Sg	Sg	10 55 59.3	+0.2
VANNI	**Vissoie, Val d**	**0.14**	**114**	Sg	Sg	10 56 00.2	+0.6
DIX	**Grande Dixence**	**0.19**	**180**	Pg	Pg	10 55 58.5	+0.4
DIX				Sg	Sg	10 56 01.0	+0.2
LKBD	**Leukerbad**	**0.19**	**52**	Sg	Sg	10 56 01.5	+0.6
LKBD2	**Leukerbad 2**	**0.20**	**57**	⇑Pg	Pg	10 55 58.8	+0.6
LKBD2				Sg	Sg	10 56 01.7	+0.6
GRYON	**Gryon**	**0.21**	**265**	⇑Pg	Pg	10 55 58.5	+0.2
GRYON				Sg	Sg	10 56 01.4	+0.1
EMBD	**Embd, Matterta**	**0.30**	**100**	Sg	Sg	10 56 04.4	+0.4
FIESA	**Fiescheralp**	**0.51**	**71**	Sg	Sg	10 56 10.5	-0.4

ZUR 29 10:56:07.1, 46°.26N×7°.39E, h8^{km}±1^{km}, MLh0.6/5**, 1D, Error ellipse: s-maj=2.7km s-min=1.2km az=187.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIOV	**Sion-Valere**	**0.03**	**221**	Pg	Pg	10 56 08.8	+0.2
SIOV				Sg	Sg	10 56 09.8	+0.2
SENIN	**Lac Senin/Sane**	**0.12**	**328**	⇓Pg	Pg	10 56 10.1	+0.2
SENIN				Sg	Sg	10 56 12.1	+0.2
DIX	**Grande Dixence**	**0.18**	**177**	Sg	Sg	10 56 13.8	+0.4
GRYON	**Gryon**	**0.20**	**268**	Pg	Pg	10 56 11.4	+0.3
GRYON				Sg	Sg	10 56 14.2	+0.4

IDC 29 10:58:23.8±1.9**, 2°.17N×123°.59E, h0^{km}, mb3.3**/3**, mbtmp3.3**/3**, Error ellipse: s-maj=197.1km s-min=28.8km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.37**	**155**	P	P	11 03 43.6	-0.3
	0.3nm,0.3s,baz=332,slow=10,SNR=17						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**27.57**	**159**	P	P	11 04 13.5	+0.7
	0.1nm,0.6s,baz=347,slow=7.8,SNR=1.5						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**57.11**	**327**	P	P	11 08 11.8	-0.4
	0.1nm,0.3s,baz=136,slow=6.8,SNR=2.5						
	0.1nm,0.3s						

NEIC ***29*** *11:04:42.1±1.7, 14°.89S±0°.08×167°.4E±0°.2, h153^{km}±7^{km}, mb4.3/15, Error ellipse: s-maj=21.9km s-min=10.5km az=105.0*

IDC ***29*** *11:04:46.9±12.0, 15°.50S×164°.93E, h0^{km}, mb3.8/3, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=214.8km s-min=34.2km az=50.0*

NOU ***29*** *11:04:46.9, 15°.25S×167°.00E, h21^{km}, MLv4.3/4, Vanuatu Islands*

ISC 29 11:04:41.4±1.0**, 14°.86S**±0°.08×**167°.4E**±0°.1**, h150^{km}, n31, σ1^{s}.25**/34**, mb4.3**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.95**	**165**	P	**Pn**	**11 05 29.3**	**+1.2**
RTV	**Rentapao**	**3.08**	**162**	P	**Pn**	**11 05 31.5**	**+1.8**
LIFNC	**LIFOU**	**5.89**	**181**	Pn	**Pn**	**11 06 05.8**	**-0.8**
KOUNC	**Koumac, New Ca**	**6.39**	**207**	Pn	**Pn**	**11 06 15.7**	**+2.4**
DZM	**Mont Dzumac**	**7.23**	**187**	Pn	**Pn**	**11 06 27.0**	**+2.4**
	1.7nm,0.3s,baz=294,slow=20,SNR=21						
DZM				Sn	**Sn**	**11 07 42.9**	**-2.7**
	0.3nm,0.3s,baz=120,slow=19,SNR=1.1						
	3.3nm,0.3s						
DZM	**Mont Dzumac**	**7.23**	**187**		**Pn**	**11 06 24.8**	**+0.2**
DZM				Sn	**Sn**	**11 07 47.6**	**+2.0**
ONTNC	**Ouen Toro**	**7.46**	**187**	Pn	**Pn**	**11 06 28.9**	**+1.3**
ONTNC				Sn	**Sn**	**11 07 50.5**	**-0.5**
OUENC	**Ouen Island, N**	**7.54**	**184**	Pn	**Pn**	**11 06 29.5**	**+0.9**
PINNC	**Pines Island,**	**7.71**	**180**	Pn	**Pn**	**11 06 31.1**	**+0.2**
EIDS	**Eidsvold**	**18.53**	**233**		**P**	**11 08 45.0**	**-1.5**
CTAO	**Charters Tower**	**20.82**	**253**	P	**P**	**11 09 10.9**	**-0.4**
CTAO				IAmb	IAmb	11 09 15.9	
	comp=Z,12nm,1.4s						
ARMA	**Armidale**	**21.21**	**220**	P	**P**	**11 09 15.2**	**-0.3**
ARMA				IAmb	IAmb	11 09 22.6	
	comp=Z,13nm,1.4s						
URZ	**Urewera**	**24.84**	**162**	P	**P**	**11 09 47.7**	**-2.1**
BSWZ	**Blackbirch Sta**	**27.34**	**169**	P	**P**	**11 10 12.5**	**+0.3**
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**11 10 28.8**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=56,slow=12,SNR=4.9						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**11 10 27.1**	**-0.1**
TOO	**Toolangi**	**29.82**	**217**	P	**P**	**11 10 33.6**	**-0.8**
TOO				IAmb	IAmb	11 10 45.4	
	comp=Z,8.6nm,1.1s						
WB0	**Warramunga Arr**	**31.86**	**256**	P	**P**	**11 10 51.6**	**-0.9**
WB0				IAmb	IAmb	11 11 19.4	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**31.91**	**256**	P	**P**	**11 10 52.2**	**-0.7**
WB2				IAmb	IAmb	11 11 04.2	
	comp=Z,6.4nm,1.4s						
WRAB	**Tennant Creek**	**31.91**	**256**	P	**P**	**11 10 52.5**	**-0.4**
WRAB				IAmb	IAmb	11 11 17.6	
	comp=Z,2.7nm,1.1s						
WRA	**Warramunga Arr**	**31.92**	**256**	P	**P**	**11 10 52.5**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=84,slow=8.9,SNR=8.8						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**31.92**	**256**	P	**P**	**11 10 51.9**	**-1.2**
ASAR	**Alice Springs**	**32.74**	**249**	P	**P**	**11 11 00.1**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=79,slow=9.2,SNR=38						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**32.74**	**249**	P	**P**	**11 10 59.5**	**-0.8**
BBOO	**Buckleboo**	**33.60**	**232**	P	**P**	**11 11 07.2**	**-0.3**
BBOO				IAmb	IAmb	11 11 21.5	
	comp=Z,38nm,1.5s						
KNRA	**Kununurra**	**37.25**	**264**	P	**P**	**11 11 38.3**	**-0.5**
KNRA				IAmb	IAmb	11 12 06.7	
	comp=Z,9.0nm,1.3s						
FORT	**Forrest**	**39.34**	**239**	P	**P**	**11 11 56.1**	**-0.1**
VNDA	**Vanda**	**62.73**	**181**	P	**P**	**11 14 51.0**	**+1.0**
SBA	**Scott Base**	**63.01**	**180**	P	**P**	**11 14 53.0**	**+1.2**
KSAR	**Wonju Array Be**	**63.93**	**326**	P	**P**	**11 14 59.0**	**+0.6**
KDAK	**Kodiak Island**	**79.54**	**21**	P	**P**	**11 16 30.9**	**-0.4**
KDAK				IAmb	IAmb	11 16 54.9	
	comp=Z,22nm,1.5s						

ISK ***29*** *11:33:15.3, 38°.89N×43°.58E, h14^{km}, ML2.6/7*

DDA ***29*** *11:33:16.1±0.0, 38°.97N×43°.49E, h7^{km}±3^{km}, ML2.4*

ISC 29 11:33:16.0±0.9**, 38°.94N**±0°.03×**43°.54E**±0°.03**, h17^{km}**±8^{km}**, n16, σ0^{s}.73**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERCV	**ERCIS-VAN**	**0.18**	**297**	PG	**Pg**	**11 33 20.3**	**-0.4**
ERCV				SG	**Sg**	**11 33 24.9**	**+1.1**
CLDR	**Caldiran**	**0.36**	**55**	PG	**Pg**	**11 33 23.2**	**-0.3**
CLDR				SG	**Sg**	**11 33 28.9**	**+0.2**
CLDR	**Caldiran**	**0.36**	**55**	P	**Pg**	**11 33 23.2**	**-0.3**
CLDR				S	**Sb**	**11 33 29.6**	**+0.1**
CLDR				*i* AML	AML	11 33 31.0	
	comp=N,516nm,0.6s						
CLDR				*i* AML	AML	11 33 36.0	
	comp=E,326nm,0.3s						
VANB	**Van**	**0.36**	**199**	PG	**Pb**	**11 33 23.9**	**-0.2**
TVAN	**Van**	**0.42**	**195**	P	**Pb**	**11 33 24.5**	**-0.6**
TVAN				S	**Sb**	**11 33 32.0**	**+0.7**
TVAN				*i* AML	AML	11 33 33.0	
	comp=E,445nm,0.5s						
TVAN				*i* AML	AML	11 33 37.0	
	comp=N,371nm,0.6s						
OZAP	**Van, Ozalp-Mer**	**0.45**	**128**	P	**Pg**	**11 33 24.6**	**-0.6**
OZAP				S	**Sb**	**11 33 33.8**	**+1.8**
ADCV	**BITLIS_Adilcev**	**0.65**	**259**	P	**Pg**	**11 33 28.6**	**-0.3**
ADCV				S	**Sb**	**11 33 37.9**	**0.0**
ADCV				*i* AML	AML	11 33 40.0	
	comp=E,315nm,0.5s						
ADCV				*i* AML	AML	11 33 41.0	
	comp=N,225nm,0.2s						
AKDM	**Akdamar-Van**	**0.75**	**216**	PG	**Pg**	**11 33 29.9**	**-0.8**
AGRB	**Hanur-Agry**	**0.77**	**326**	PG	**Pb**	**11 33 31.2**	**+0.2**
MLAZ	**Malazgirt-MUS**	**0.80**	**285**	PG	**Pb**	**11 33 32.2**	**+0.7**
KOTA	**Agri, Merkez-K**	**0.90**	**343**	P	**Pg**	**11 33 33.1**	**-0.5**
KOTA				S	**Sg**	**11 33 44.9**	**-0.6**
EATA	**Eleskirt**	**1.23**	**319**	P	**Pg**	**11 33 39.8**	**0.0**
EATA				S	**Sb**	**11 33 55.0**	**+0.3**
EATA				*i* AML	AML	11 34 01.0	
	comp=E,37nm,0.4s						
EATA				*i* AML	AML	11 34 04.0	
	comp=N,37nm,0.3s						
BLIS	**Bitlis-Merkez**	**1.23**	**245**	P	**Pn**	**11 33 37.4**	**-1.2**
BLIS				S	**Sg**	**11 33 55.2**	**-0.8**
GURO	**Guroymak-BITLI**	**1.24**	**252**	PN	**Pn**	**11 33 39.1**	**+0.4**
PERV	**Siirt/Pervari-**	**1.27**	**219**	P	**Pg**	**11 33 41.4**	**+1.0**
HAKT	**HAKKARI**	**1.38**	**175**	P	**Pb**	**11 33 41.8**	**+0.2**

NEIC ***29*** *11:34:25.5±1.6, 34°.1S±0°.1×178°.20W±0°.06, h10^{km}±2^{km}, mb4.2/9, Error ellipse: s-maj=20.8km s-min=7.9km az=9.0*

IDC ***29*** *11:34:26.9±2.5, 33°.94S×178°.68W, h0^{km}, mb3.8/2, mbtmp3.9/3, ML4.1/1, MS3.3/2, Error ellipse: s-maj=65.9km s-min=34.8km az=125.0*

ISC 29 11:34:25.5±1.2**, 34°.0S**±0°.1×**178°.3W**±0°.2**, h10^{km}, n19, σ1^{s}.14**/21**, mb4.1**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.49**	**218**	Pn	Pn	11 35 26.9	-6.7
MXZ				Sn	**Sn**	**11 36 27.4**	**+1.6**
URZ	**Urewera**	**5.64**	**220**	Pn	**Pn**	**11 35 50.9**	**+1.6**
	5.9nm,0.3s,baz=272,slow=2.3,SNR=41						
URZ				Sn	**Sn**	**11 36 52.2**	**-2.0**
	4.9nm,0.3s,baz=57,slow=23,SNR=11						
	18nm,0.4s						
URZ	**Urewera**	**5.64**	**220**	Pn	**Pn**	**11 35 51.4**	**+2.1**
URZ				Sn	**Sn**	**11 36 53.1**	**-1.0**
BKZ	**Black Stump Fm**	**6.63**	**218**		**Pn**	**11 36 04.6**	**+1.5**
BKZ				Sn	**Sn**	**11 37 17.6**	**-1.2**
BFZ	**Birch Farm**	**7.94**	**212**	Pn	**Pn**	**11 36 21.0**	**0.0**
DZM	**Mont Dzumac**	**17.99**	**308**	LR	LR	11 43 26.9	
	comp=Z,72nm,20.1s,baz=39,slow=31						
EIDS	**Eidsvold**	**27.92**	**280**	P	**P**	**11 40 15.1**	**-0.9**
EIDS				IAmb	IAmb	11 40 19.0	
	comp=Z,4.1nm,1.2s						
ASAR	**Alice Springs**	**42.83**	**271**	P	**P**	**11 42 23.9**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=114,slow=6.9,SNR=10						
ASAR				PcP	**PcP**	**11 44 16.5**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=117,slow=3.8,SNR=4.8						
	comp=Z,1.3nm,0.8s						
WR0	**Warramunga Arr**	**43.97**	**276**	P	**P**	**11 42 32.0**	**-1.1**
WR0				IAmb	IAmb	11 42 39.2	
	comp=Z,6.8nm,1.4s						
WB2	**Warramunga Arr**	**44.13**	**276**	P	**P**	**11 42 34.2**	**-0.2**
WB2				IAmb	IAmb	11 43 01.3	
	comp=Z,5.8nm,1.3s						
WRAB	**Tennant Creek**	**44.14**	**276**	P	**P**	**11 42 34.0**	**-0.5**
WRA	**Warramunga Arr**	**44.14**	**276**	P	**P**	**11 42 34.3**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=118,slow=7.4,SNR=13						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.14**	**276**	P	**P**	**11 42 34.1**	**-0.4**
WB0	**Warramunga Arr**	**44.18**	**276**	P	**P**	**11 42 34.8**	**0.0**
KNRA	**Kununurra**	**50.86**	**277**	P	**P**	**11 43 26.2**	**-0.6**
QSPA	**South Pole Qui**	**56.08**	**180**	P	**P**	**11 44 04.3**	**-0.3**
QSPA				IAmb	IAmb	11 44 13.1	
	comp=Z,2.1nm,1.2s						
SNAA	**Sanae**	**74.53**	**178**	P	**P**	**11 46 03.3**	**-0.7**
SNAA				IAmb	IAmb	11 46 26.4	
	comp=Z,5.4nm,1.4s						
YBH	**Yreka Blue Hor**	**91.02**	**38**	LR	LR	12 20 49.8	
	comp=Z,20nm,20.0s,baz=307,slow=30						
FINES	**FINESS Array B**	**148.45**	**338**	PKPbc	**PKiKP**	**11 54 13.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=44,slow=4.6,SNR=11						

MOS ***29*** *11:46:34.9±1.0, 48°.60N×153°.31E, h171^{km}, mb4.2/9, Error ellipse: s-maj=14.1km s-min=4.0km az=62.3*

SKHL ***29*** *11:46:35.0±0.2, 48°.60N×153°.30E, h151^{km}±5^{km}, mb5.0/7, msha5.7/4*

NEIC ***29*** *11:46:36.8±1.6, 48°.7N±0°.1×153°.1E±0°.1, h164^{km}±6^{km}, mb4.2/49, Error ellipse: s-maj=18.2km s-min=11.0km az=140.0*

IDC ***29*** *11:46:37.2±2.0, 48°.70N×153°.07E, h172^{km}±19^{km}, mb3.5/16, mbtmp4.0/19, Error ellipse: s-maj=15.9km s-min=10.2km az=135.0*

ISC 29 11:46:34.9±0.5**, 48°.60N**±0°.07×**153°.31E**±0°.07**, h150^{km}, n166, σ1^{s}.42**/173**, mb4.1**/42**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.77**	**40**	⇑*i*PN	**Pn**	**11 47 21.1**	**+1.8**
SKR				*e*S	**Sn**	**11 47 55.9**	**+2.3**
SKR				pmax	pmax		
	comp=Z,113nm,0.5s						
SKR				smax	smax		
	comp=N,205nm,0.5s						
SKR				smax	smax		
	comp=E,232nm,0.5s						
SKR	**Severo-Kuril's**	**2.77**	**40**	*i* P	**Pn**	**11 47 21.1**	**+1.8**
SKR				AMB	AMB	11 47 21.8	
	comp=E,110nm,0.5s						
SKR				*e*S	**Sn**	**11 47 55.6**	**+2.0**
SKR				A	A	11 47 59.7	
	comp=E,210nm,0.3s						
SKR				A	A	11 47 59.7	
	comp=E,230nm,0.3s						
PAU	**Pauzhetka**	**3.65**	**37**	PN	**Pn**	**11 47 31.8**	**+1.3**
PAU				S	**Sn**	**11 48 15.0**	**+1.3**
PAU	**Pauzhetka**	**3.65**	**37**	*i* P	**Pn**	**11 47 32.0**	**+1.5**
PAU				AMB	AMB	11 47 32.7	
	comp=E,260nm,0.4s						
PAU				*e*S	**Sn**	**11 48 15.4**	**+1.7**
PAU				A	A	11 48 16.1	
	comp=E,580nm,0.4s						
PAU				A	A	11 48 16.1	
	comp=E,540nm,0.4s						
MIPR	**Malaya Ipel'ka**	**4.29**	**30**	PN	**Pn**	**11 47 40.8**	**+1.9**
KDTR	**Khodutka, Kamc**	**4.44**	**42**	PN	**Pn**	**11 47 40.8**	**0.0**
ASAK	**Asacha**	**4.79**	**36**	PN	**Pn**	**11 47 46.7**	**+1.2**
APC	**Apacha**	**4.97**	**28**	PN	**Pn**	**11 47 49.3**	**+1.5**
MTVR	**Mutnovka**	**4.98**	**37**	PN	**Pn**	**11 47 49.6**	**+1.6**
MTVR				S	**Sn**	**11 48 45.0**	**-0.1**
GRL	**Gorelyy**	**4.99**	**36**	PN	**Pn**	**11 47 49.8**	**+1.6**
GRL				S	**Sn**	**11 48 47.1**	**+1.8**
KUR	**Kuril'sk**	**5.02**	**230**	*e*PN	**Pn**	**11 47 51.1**	**+2.6**
KUR				S	**Sn**	**11 48 52.7**	**+6.8**
KUR				pmax	pmax		
	comp=Z,46nm,0.3s						
KUR				smax	smax		
	comp=N,38nm,0.3s						
KUR				smax	smax		
	comp=E,25nm,0.3s						
KUR	**Kuril'sk**	**5.02**	**230**	*e*P	**Pn**	**11 47 50.0**	**+1.5**
KUR				AMB	AMB	11 47 55.7	
	comp=E,50nm,0.3s						
KUR				*e*S	**Sn**	**11 48 50.0**	**+4.0**
KUR				A	A	11 48 59.1	
	comp=E,140nm,0.3s						
KUR				A	A	11 48 59.1	
	comp=E,60nm,0.3s						
RUS	**Russkaya**	**5.08**	**39**	PN	**Pn**	**11 47 48.9**	**-0.3**
RUS	**Russkaya**	**5.08**	**39**	*e*P	**Pn**	**11 47 48.9**	**-0.3**
KRMR	**Karymshinskiy**	**5.23**	**34**	PN	**Pn**	**11 47 52.3**	**+1.1**
PEA0B	**Petropavlovsk-**	**5.30**	**30**		**Pn**	**11 47 54.2**	**+2.1**
PEA0B	**Petropavlovsk-**	**5.30**	**30**	PN	**Pn**	**11 47 54.3**	**+2.1**
PETK	**Petropavlovsk-**	**5.30**	**30**	P	**Pn**	**11 47 54.0**	**+1.8**
	comp=E,11nm,0.6s,baz=196,slow=11,SNR=59						
PETK				S	Sn	11 49 07.5	+15
	comp=E,1.5nm,0.5s,baz=224,slow=18,SNR=1.1						
PETK	**Petropavlovsk-**	**5.30**	**30**		**Pn**	**11 47 53.6**	**+1.4**
PETK	**Petropavlovsk-**	**5.30**	**30**	PN	**Pn**	**11 47 54.0**	**+1.8**
PET	**Petropavlovsk**	**5.58**	**35**	Pn	**Pn**	**11 47 56.4**	**+0.6**
PET	**Petropavlovsk**	**5.58**	**35**	*e*PN	**Pn**	**11 47 56.5**	**+0.7**
PET				*e*S	**Sn**	**11 48 59.2**	**+0.1**
PET				smax	smax		
	comp=N,46nm,0.5s						
PET	**Petropavlovsk**	**5.58**	**35**	*e*P	**Pn**	**11 47 56.6**	**+0.7**
PET				AMB	AMB	11 47 58.7	
	comp=N,20nm,0.3s						
PET				*e*S	**Sn**	**11 48 59.8**	**+0.7**
PET				A	A	11 49 02.5	
	comp=N,100nm,0.4s						
PET				A	A	11 49 02.5	
	comp=N,110nm,0.4s						
DALK	**Dalny**	**5.62**	**36**	PN	**Pn**	**11 47 57.0**	**+0.6**
KOK	**Koryaka**	**5.78**	**34**	PN	**Pn**	**11 48 00.6**	**+2.0**
KOK	**Koryaka**	**5.78**	**34**	*e*P	**Pn**	**11 48 00.6**	**+2.0**
UGLR	**Uglovaya**	**5.79**	**35**	PN	**Pn**	**11 48 00.4**	**+1.7**
AVH	**Avacha**	**5.80**	**34**	PN	**Pn**	**11 48 00.7**	**+1.9**
SMAR	**Somma**	**5.82**	**35**	PN	**Pn**	**11 48 00.6**	**+1.3**
KRER	**Koryakskii**	**5.83**	**34**	PN	**Pn**	**11 48 01.3**	**+1.9**
KRX	**Arik**	**5.84**	**33**	PN	**Pn**	**11 48 00.9**	**+1.5**
SDLR	**Sedlovina**	**5.86**	**35**	PN	**Pn**	**11 48 00.4**	**+0.7**
SPN	**Mys Shipunski**	**6.19**	**41**	PN	**Pn**	**11 48 03.4**	**-0.6**
SHO	**Shikotan**	**6.52**	**226**	⇓*i*PN	**Pn**	**11 48 07.0**	**-1.5**
SHO				pmax	pmax		
	comp=Z,60nm,0.3s						
SHO				pmax	pmax		
	comp=N,12nm,0.2s						
SHO	**Shikotan**	**6.52**	**226**	*i* P	**Pn**	**11 48 07.0**	**-1.5**
SHO				AMB	AMB	11 48 09.8	
	comp=N,60nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.88**	**231**	*d i*PN	**Pn**	**11 48 14.2**	**+0.9**
YUK				S	**Sn**	**11 49 31.6**	**+1.1**
YUK				pmax	pmax		
	comp=Z,338nm,0.3s						
YUK				pmax	pmax		
	comp=N,28nm,0.2s						
YUK				pmax	pmax		
	comp=E,56nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**6.88**	**231**	*i* P	**Pn**	**11 48 14.2**	**+0.9**
YUK				AMB	AMB	11 48 15.2	
	comp=E,50nm,0.3s						
YUK				*e*S	**Sn**	**11 49 31.0**	**+0.5**
RUSJ	**Misakicho**	**7.16**	**234**	*e*PN	**Pn**	**11 48 18.9**	**+1.9**
GLVR	**Golovnino**	**7.27**	**231**	*e*PN	**Pn**	**11 48 18.8**	**+0.4**
GLVR	**Golovnino**	**7.27**	**231**	*e*P	**Pn**	**11 48 18.8**	**+0.4**
YSS	**Yuzh-Sakhalins**	**7.30**	**261**	*e*PN	**Pn**	**11 48 21.9**	**+3.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.30**	**261**	*e*P	**Pn**	**11 48 19.2**	**+0.4**
YSS				AMB	AMB	11 48 23.1	
	comp=Z,10.0nm,1.0s						
NMR	**Nemuro--Hokkai**	**7.43**	**228**	⇑*i*PN	**Pn**	**11 48 18.5**	**-2.1**
NMR	**Nemuro--Hokkai**	**7.43**	**228**	*i* P	**Pn**	**11 48 18.5**	**-2.1**
UGL	**Uglegorsk**	**7.44**	**278**	*e*PN	**Pn**	**11 48 23.5**	**+2.9**
UGL	**Uglegorsk**	**7.44**	**278**	*e*P	**Pn**	**11 48 21.9**	**+1.3**
UGL				AMB	AMB	11 48 26.2	
	comp=Z,10.0nm,1.0s						
TUMR	**Tumrok**	**7.91**	**30**	PN	**Pn**	**11 48 29.5**	**+2.4**
MKZ	**Mys Kozlova**	**7.94**	**38**	PN	**Pn**	**11 48 25.7**	**-1.6**
OKH	**Okha**	**8.20**	**311**	*e*P	**Pn**	**11 48 32.2**	**+1.4**
OKH				AMB	AMB	11 48 33.6	
	comp=Z,40nm,0.4s						
JKA	**Kamikawa-asahi**	**8.65**	**243**		**Pn**	**11 48 39.5**	**+2.6**
JKA	**Kamikawa-asahi**	**8.65**	**243**	*e*P	**Pn**	**11 48 39.5**	**+2.6**
ASAJ	**Asahikawa**	**8.66**	**243**	P	**Pn**	**11 48 38.4**	**+1.5**
	comp=Z,27nm,0.7s,baz=63,slow=14,SNR=33						
ASAJ	**Asahikawa**	**8.66**	**243**	PN	**Pn**	**11 48 39.5**	**+2.5**
KBTR	**Krutoberegovo**	**9.58**	**34**	PN	**Pn**	**11 48 47.5**	**-1.6**
ERM	**Erimo**	**9.71**	**231**	Pn	**Pn**	**11 48 50.7**	**-0.3**
ERM	**Erimo**	**9.71**	**231**	PN	**Pn**	**11 48 50.7**	**-0.3**
KLR	**Kul'dur**	**14.19**	**281**	P	**P**	**11 49 50.6**	**-1.3**
	comp=Z,3.6nm,0.9s,baz=78,slow=13,SNR=11						
KLR	**Kul'dur**	**14.19**	**281**	*i* P	**Pn**	**11 49 47.2**	**-1.8**
KLR	**Kul'dur**	**14.19**	**281**	*i* P	**Pn**	**11 49 47.2**	**-1.8**
JSD	**Sado**	**15.18**	**232**		**Pn**	**11 50 03.4**	**+1.9**
JSD				IAmb	IAmb	11 50 22.7	
	comp=Z,12nm,1.1s						
VLA	**Vladivostok**	**15.88**	**258**	*e*P	**Pn**	**11 50 08.8**	**-1.2**
MJA0	**Matsu Arr-Jizo**	**16.34**	**228**	*e*P	**Pn**	**11 50 15.8**	**+0.1**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJB9	**Matsu-Tunnel**	**16.36**	**228**	P	**Pn**	**11 50 16.8**	**+0.8**
MAJO	**Matsushiro**	**16.36**	**228**	P	**Pn**	**11 50 17.4**	**+1.5**
MAJO	**Matsushiro**	**16.36**	**228**	P	**Pn**	**11 50 17.4**	**+1.5**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MJAR	**Matsushiro Arr**	**16.36**	**228**	P	**Pn**	**11 50 15.8**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=28,slow=12,SNR=8.1						
MJAR	**Matsushiro Arr**	**16.36**	**228**	P	**Pn**	**11 50 16.8**	**+0.9**
MJAR	**Matsushiro Arr**	**16.36**	**228**	P	**Pn**	**11 50 16.8**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ZEA	**Zeya**	**17.09**	**297**	*e*P	**Pn**	**11 50 24.0**	**-0.5**
JGF	**Kuroka**	**17.52**	**228**	P	**P**	**11 50 29.8**	**+0.9**
JHS	**Saijyo**	**20.20**	**235**	P	**P**	**11 50 58.8**	**+1.0**
KSRS	**Korea Array**	**21.54**	**248**	P	**P**	**11 51 12.8**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=49,slow=10,SNR=10						
	comp=Z,1.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.81**	**154**	T	T	12 24 46.4	
	baz=343,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**30.83**	**154**	T	T	12 24 55.2	
	baz=343,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**30.83**	**154**	T	T	12 25 11.7	
	baz=343,slow=76,SNR=20						
TTA	**Tatalina**	**30.97**	**43**	P	**P**	**11 52 38.6**	**+1.1**
TTA	**Tatalina**	**30.97**	**43**	P	**P**	**11 52 38.6**	**+1.1**
TTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
J20K	**Nowinta River**	**31.88**	**41**	P	**P**	**11 52 46.1**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**31.92**	**155**	T	T	12 26 25.2	
	baz=344,slow=76,SNR=141						
H11S3	**WAKE ISLAND Hy**	**31.93**	**155**	T	T	12 26 27.0	
	baz=344,slow=76,SNR=124						
H11S2	**WAKE ISLAND Hy**	**31.94**	**155**	T	T	12 26 24.2	
	baz=344,slow=76,SNR=119						
IMAR	**Indian Mountai**	**32.21**	**38**	P	**P**	**11 52 48.4**	**+0.1**
CNPM	**China Poot**	**33.35**	**50**	P	**P**	**11 52 58.8**	**+0.5**
TRF	**Thorofare Moun**	**33.57**	**43**	P	**P**	**11 53 00.8**	**+0.4**

TRF				IAmb	IAmb	11 53 01.9	
	comp=Z,4.1nm,1.0s						
H23K	Yukon River	33.92	38	P	P	11 53 03.9	+0.7
TOLK	Toolik Lake Re	34.12	33	P	P	11 53 05.0	+0.2
TOLK				IAmb	IAmb	11 53 06.1	
	comp=Z,2.0nm,0.6s						
MDM	Murphy Dome	34.46	40	P	P	11 53 08.6	+0.8
MDM				IAmb	IAmb	11 53 10.1	
	comp=Z,2.9nm,0.7s						
H24K	Noodor Dome	34.61	38	P	P	11 53 10.2	+1.1
ILAR	Eielson Array	35.03	40	P	P	11 53 13.0	+0.3
	comp=Z,0.7nm,0.5s,baz=257,slow=5.1,SNR=23						
	comp=Z,0.7nm,0.5s						
J25K	Salcha River,	35.69	40	P	P	11 53 18.1	-0.3
J25K				IAmb	IAmb	11 53 19.3	
	comp=Z,2.3nm,0.6s						
DOT	Dot Lake	36.34	42	P	P	11 53 23.4	-0.5
SCRK	Sand Creek	36.34	41	P	P	11 53 23.9	-0.2
SCRK				IAmb	IAmb	11 53 24.8	
	comp=Z,1.6nm,0.4s						
M26K	Nabesna, AK	36.98	44	P	P	11 53 30.6	+1.2
M26K				IAmb	IAmb	11 53 31.9	
	comp=Z,5.0nm,0.9s						
K27K	Chicken	37.18	41	P	P	11 53 31.8	+0.8
K27K				IAmb	IAmb	11 53 32.5	
	comp=Z,3.6nm,0.7s						
L27K	Beaver Creek,	37.42	43	P	P	11 53 34.7	+1.7
L27K				IAmb	IAmb	11 53 35.7	
	comp=Z,6.4nm,1.1s						
BCAR	Beaver Creek A	37.44	43	P	P	11 53 34.5	+1.4
EGAK	Eagle	37.48	40	P	P	11 53 34.0	+0.6
EGAK				IAmb	IAmb	11 53 34.5	
	comp=Z,3.4nm,0.9s						
INK	Inuvik	40.03	34	P	P	11 53 55.6	+1.0
	comp=Z,1.1nm,0.4s,baz=280,slow=9.5,SNR=11						
	comp=Z,1.1nm,0.4s						
INK	Inuvik	40.03	34	P	P	11 53 55.3	+0.7
A36M	Sachs Harbour	42.14	27	P	P	11 54 13.7	+1.9
A36M				IAmb	IAmb	11 54 14.4	
	comp=Z,6.8nm,0.7s						
MKAR	Makanchi Array	46.23	296	P	P	11 54 42.6	-2.2
	comp=Z,0.6nm,0.7s,baz=61,slow=5.7,SNR=6.4						
	comp=Z,0.6nm,0.7s						
MKAR	Makanchi Array	46.23	296	*e*P	P	11 54 44.4	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.23	296	*e*P	P	11 54 44.4	-0.3
KURK	Kurchatov	46.47	302	P	P	11 54 46.3	-0.2
KURK						11 56 18.3	
KURK	Kurchatov	46.47	302	*e*P	P	11 54 46.3	-0.2
KURBB	Kurchatov Arra	46.57	302	P	P	11 54 46.2	-0.9
	comp=Z,0.9nm,0.5s,baz=68,slow=8.4,SNR=7.6						
KURBB				PcP	PcP	11 56 18.3	-0.4
	comp=Z,0.3nm,0.5s,baz=54,slow=3.4,SNR=1.9						
	comp=Z,0.9nm,0.5s						
EUNU	Eureka	47.29	12	P	P	11 54 53.0	+0.5
EUNU				IAmb	IAmb	11 54 53.8	
	comp=Z,4.7nm,0.8s						
RES	Resolute Bay	49.04	19	P	P	11 55 06.0	+0.1
RES				IAmb	IAmb	11 55 23.7	
	comp=Z,10.0nm,1.3s						
RES	Resolute Bay	49.04	19	P	P	11 55 06.0	+0.1
RES				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YKA	Yellowknife Ar	49.37	38	P	P	11 55 07.3	-1.2
	comp=Z,2.5nm,0.7s,baz=299,slow=7.0,SNR=6.2						
	comp=Z,2.5nm,0.7s						
YKA	Yellowknife Ar	49.37	38	P	P	11 55 09.0	+0.5
YKA	Yellowknife Ar	49.37	38	*e*P	P	11 55 09.4	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	52.95	255	PcP	PcP	11 56 41.2	-1.5
	comp=Z,0.6nm,0.6s,baz=18,slow=3.2,SNR=2.6						
ARCES	ARCESS Array B	56.15	340	P	P	11 55 57.0	-1.3
	comp=Z,1.5nm,0.8s,baz=49,slow=8.8,SNR=1.6						
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	56.15	340	P	P	11 55 55.8	-2.4
ARCES				IAmb	IAmb	11 56 00.8	
	comp=Z,7.1nm,1.4s						
ARCES	ARCESS Array B	56.15	340	P	P	11 55 57.0	-1.3
ABKAR	Akbulak array	57.36	309	P	P	11 56 06.1	-0.9
PLID	Pearl Lake	58.52	56	P	P	11 56 15.6	+0.1
FCC	Fort Churchill	59.65	34	P	P	11 56 22.6	-0.1
FCC	Fort Churchill	59.65	34	P	P	11 56 22.6	-0.1
FCC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LRM	Limekiln Ridge	59.98	54	P	P	11 56 26.2	+0.7
PNTR	Pine Nut	60.27	64	P	P	11 56 28.0	+0.5
PNTR				IAmb	IAmb	11 56 32.8	
	comp=Z,7.3nm,1.4s						
BOZ	Bozeman (W)	60.56	53	P	P	11 56 29.8	+0.4
BOZ				IAmb	IAmb	11 56 31.5	
	comp=Z,2.7nm,0.8s						
BOZ	Bozeman (W)	60.56	53	P	P	11 56 29.8	+0.4
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	Mina Array Bea	61.47	63	P	P	11 56 36.5	+0.8
	comp=Z,0.8nm,0.5s,baz=291,slow=8.0,SNR=9.3						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	61.47	63	P	P	11 56 36.1	+0.4
FIA1	FINESS Array S	62.43	334	P	P	11 56 40.2	-1.2
FIA1				IAmb	IAmb	11 56 41.9	
	comp=Z,4.4nm,0.9s						
FINES	FINESS Array B	62.43	334	P	P	11 56 39.7	-1.6
	comp=Z,0.9nm,0.4s,baz=35,slow=7.4,SNR=17						
	comp=Z,0.9nm,0.4s						
FINES	FINESS Array B	62.43	334	P	P	11 56 40.2	-1.2
FINES	FINESS Array B	62.43	334	*e*P	P	11 56 40.3	-1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	63.56	55	P	P	11 56 50.1	+0.6
	comp=Z,1.3nm,0.7s,baz=318,slow=2.0,SNR=12						
	comp=Z,1.3nm,0.7s						
PDAR	Pinedale Array	63.56	55	P	P	11 56 49.9	+0.5
MTN	Manton Dam	64.25	204	P	P	11 56 53.7	-0.2
NB2	NORSAR Subarra	66.52	341	P	P	11 57 07.3	-0.7
	comp=Z,0.7nm,0.6s,baz=30,slow=6.5						
NOA	NORSAR Array B	66.52	341	P	P	11 57 07.3	-0.7
	comp=Z,0.3nm,0.5s,baz=28,slow=6.6,SNR=6.1						
	comp=Z,0.3nm,0.5s						
PV13	Radium Mtn., P	67.14	58	P	P	11 57 13.4	+0.9
PV13				IAmb	IAmb	11 57 14.2	
	comp=Z,3.6nm,0.7s						
KNRA	Kununurra	67.61	206	P	P	11 57 15.2	-0.1
OGNE	Ogallala	68.84	52	P	P	11 57 23.5	+0.5
OGNE				IAmb	IAmb	11 57 37.1	
	comp=Z,5.0nm,0.9s						
ECSD	EROS Data Cent	69.51	47	P	P	11 57 26.6	-0.3
AKASG	Malin Array Be	70.09	326	P	P	11 57 28.5	-1.8
	comp=Z,0.4nm,0.4s,baz=32,slow=6.8,SNR=2.4						
	comp=Z,0.4nm,0.4s						
WB0	Warramunga Arr	70.12	199	P	P	11 57 29.9	-0.9
WR0	Warramunga Arr	70.28	199	P	P	11 57 31.3	-0.4
WR0				IAmb	IAmb	11 57 38.9	
	comp=Z,6.9nm,1.4s						
WRAB	Tennant Creek	70.29	199	P	P	11 57 30.9	-0.8
WRAB				IAmb	IAmb	11 57 32.8	
	comp=Z,5.6nm,1.2s						
WRAB	Tennant Creek	70.29	199	P	P	11 57 31.0	-0.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WB2	Warramunga Arr	70.30	199	P	P	11 57 31.0	-0.9
WB2				IAmb	IAmb	11 57 32.8	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	70.30	199	P	P	11 57 31.2	-0.7
	comp=Z,1.4nm,0.8s,baz=18,slow=6.2,SNR=15						
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	70.30	199	P	P	11 57 31.0	-0.9
WRA	Warramunga Arr	70.30	199	*e*P	P	11 57 31.4	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	71.56	23	P	P	11 57 38.8	-0.4
	comp=Z,1.5nm,0.4s,baz=345,slow=6.3,SNR=9.6						
	comp=Z,1.5nm,0.4s						
SCHQ	Schefferville	71.56	23	P	P	11 57 38.7	-0.4
ASAR	Alice Springs	74.00	198	P	P	11 57 54.1	+0.3
	comp=Z,0.9nm,0.4s,baz=8.9,slow=5.5,SNR=47						
	comp=Z,0.9nm,0.4s						
ASAR	Alice Springs	74.00	198	P	P	11 57 53.8	0.0
ESK	Eskdalemuir	74.60	346	P	P	11 57 55.9	-1.1
ESK	Eskdalemuir	74.60	346	P	P	11 57 55.9	-1.1
ESK				pmax	pmax		
	comp=Z,12nm,1.4s						
HHAR	Hobbs	76.52	50	P	P	11 58 07.2	-1.1
HHAR				IAmb	IAmb	11 58 11.4	
	comp=Z,5.8nm,1.4s						
GERES	GERESS Array B	76.85	334	P	P	11 58 08.9	-1.1
	comp=Z,0.4nm,0.4s,baz=38,slow=6.8,SNR=4.3						
	comp=Z,0.4nm,0.4s						
MIAR	Mount Ida	78.05	51	P	P	11 58 16.8	0.0
MIAR				IAmb	IAmb	11 58 17.4	
	comp=Z,2.4nm,0.7s						
MIAR	Mount Ida	78.05	51	P	P	11 58 16.8	0.0
MIAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BATG	Bathurst New B	78.56	26	P	P	11 58 19.3	-0.1
LMN	Caledonia Moun	80.22	26	P	P	11 58 27.3	-1.1
Y49A	Blount Mountai	82.17	47	P	P	11 58 37.8	-1.1
Y49A				IAmb	IAmb	11 58 39.8	
	comp=Z,9.0nm,1.2s						
FORT	Forrest	82.19	202	P	P	11 58 38.1	-0.6
CPUP	Villa Florida	147.41	58	PKPbc	PKPdf	12 06 00.1	+2.0
	comp=Z,1.9nm,0.8s,baz=359,slow=5.7,SNR=3.0						
CPUP	Villa Florida	147.41	58	PKP2	PKPdf	12 06 00.2	+2.1
PLCA	Paso Flores	148.20	92	PKPbc	PKPdf	12 06 02.2	+3.1
	comp=Z,1.8nm,0.7s,baz=313,slow=3.3,SNR=7.5						
PLCA	Paso Flores	148.20	92		PKPdf	12 06 02.4	+3.3

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*IDC **29** 12:01:36.2±2.2, 21.°25S×178.°00W, h461km±22km, mb3.2/7, mbtmp4.1/9, Error ellipse: s-maj=28.3km s-min=17.0km az=136.0*

ISC 29 12:01:35.1±0.9**, 21.°3S**±0.°1×**177.°9W**±0.°2**, h450**km**, n13, σ0.s80**/13**, mb3.6**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.21	312	P	P	12 03 02.5	+0.8
	47nm,0.7s,baz=133,slow=8.9,SNR=51						
URZ	Urewera	17.45	193	P	P	12 05 12.0	+0.1
	2.9nm,0.3s,baz=229,slow=13,SNR=1.7						
STKA	Stephens Creek	37.53	245	P	P	12 08 09.6	+0.2
	2.4nm,0.9s,baz=89,slow=11,SNR=3.7						
	2.4nm,0.9s						
ASAR	Alice Springs	44.43	257	P	P	12 09 04.7	-0.1
	2.4nm,0.6s,baz=95,slow=7.9,SNR=51						
ASAR				PcP	PcP	12 10 38.1	-1.1
	0.4nm,0.9s,baz=102,slow=4.6,SNR=4.2						
	2.4nm,0.6s						
WRA	Warramunga Arr	44.59	263	P	P	12 09 05.4	-0.6
	0.5nm,0.3s,baz=95,slow=7.8,SNR=38						
	0.5nm,0.3s						
PETK	Petropavlovsk-	77.06	345	P	P	12 12 40.8	+0.4
	2.5nm,1.0s,baz=140,slow=9.4,SNR=4.8						
	2.5nm,1.0s						
NVAR	Mina Array Bea	81.54	43	P	P	12 13 05.6	+0.8
	0.9nm,0.8s,baz=220,slow=9.3,SNR=9.4						
	0.9nm,0.8s						
ILAR	Eielson Array	89.06	13	P	P	12 13 39.4	-1.2
	0.3nm,0.7s,baz=213,slow=4.7,SNR=4.4						
	0.3nm,0.7s						
PDAR	Pinedale Array	89.47	43	P	P	12 13 43.6	+0.3
	0.7nm,0.7s,baz=270,slow=0.7,SNR=6.0						
	0.7nm,0.7s						
AKASG	Malin Array Be	143.75	331	PKP	PKPab	12 20 15.4	-1.0
	0.6nm,0.4s,baz=42,slow=5.6,SNR=4.7						
BRTR	Keskin Array B	147.44	311	PKPbc	PKPbc	12 20 27.5	-0.4
	0.6nm,0.7s,baz=71,slow=3.4,SNR=2.4						
GERES	GERESS Array B	150.99	344	PKPbc	PKPbc	12 20 35.7	-0.4
	0.4nm,0.5s,baz=356,slow=4.2,SNR=2.6						
TORD	Torodi Ar. Bea	171.89	177	PKPab	PKPab	12 22 18.4	+1.2
	0.7nm,0.8s,baz=175,slow=4.3,SNR=3.3						

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*IDC **29** 12:12:33.3±0.8, 56.°18S×25.°58W, h0km, mb4.3/8, mbtmp4.2/9, ML4.1/1, MS3.8/13, Error ellipse: s-maj=27.2km s-min=18.7km az=73.0*

*NEIC **29** 12:12:38.6±2.7, 56.°2S±0.°1×25.°7W±0.°2, h28km±6km, mb4.6/22, Error ellipse: s-maj=18.8km s-min=16.0km az=48.0*

ISC 29 12:12:35.2±0.7**, 56.°13S**±0.°10×**25.°7W**±0.°1**, h10**km**, n53, σ1.s13**/44**, mb4.5**/14**, MS3.9**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.47	282	Pn	Pn	12 14 11.7	+1.3
ORCD	Orcadas	11.00	237	Pn	Pn	12 15 13.5	+1.2
VNA1	Neumayer--Stat	16.41	159	P	Pn	12 16 25.8	+0.7
VNA3	Neumayer Olymp	16.64	162	P	Pn	12 16 27.7	-0.4
VNA3				S	Sn	12 19 18.0	-15
VNA3	Neumayer Olymp	16.64	162	P	Pn	12 16 27.5	-0.6
VNA2	Neumayer--Watz	16.80	159	P	Pn	12 16 29.7	-0.5
	baz=327,slow=16						
SNAA	Sanae	18.33	157	P	P	12 16 51.0	+1.7
SNAA	Sanae	18.33	157	P	Pn	12 16 48.1	-1.1
	0.6nm,0.3s,baz=326,slow=15,SNR=14						
	1.2nm,0.3s						
SNAA	Sanae	18.33	157	P	Pn	12 16 48.8	-0.3
TROLL	Troll, Antarti	19.80	154	P	Pn	12 17 10.7	+3.8
PMSA	Palmer Station	20.50	229	P	P	12 17 12.9	0.0
	11nm,0.8s,baz=44,slow=4.8,SNR=4.1						
PMSA				LR	LR	12 24 23.0	
	comp=Z,266nm,18.7s,baz=70,slow=35						
	11nm,0.8s						
BELA	Belgrano 2	22.07	185	P	P	12 17 28.3	-1.4
DSPA	Despedida	24.23	257	P	P	12 17 51.2	-0.6
GO09	Cerro Castillo	27.63	260	P	P	12 18 21.0	-1.6
GO09				IAmb	IAmb	12 18 34.5	
	comp=Z,27nm,1.4s						
TRQA	Tornquist	30.15	291	P	P	12 18 44.7	-0.4
PLCA	Paso Flores	32.86	279	P	P	12 19 07.5	-1.5
	comp=Z,1.8nm,0.9s,baz=145,slow=1.5,SNR=4.0						
PLCA				LR	LR	12 33 07.3	
	comp=Z,111nm,18.2s,baz=148,slow=38						
	comp=Z,1.8nm,0.9s						
PLCA	Paso Flores	32.86	279	P	P	12 19 08.2	-0.8
PLCA				IAmb	IAmb	12 19 17.7	
	comp=Z,8.7nm,1.4s						
LL05	Los Muermos	34.03	275	P	P	12 19 19.4	+0.3
QSPA	South Pole Qui	34.12	180	P	P	12 19 19.4	-0.4
	comp=Z,4.8nm,0.6s,baz=204,slow=1.6,SNR=40						
QSPA				LR	LR	12 32 57.2	
	comp=Z,71nm,19.6s,baz=224,slow=36						
	comp=Z,4.8nm,0.6s						
QSPA	South Pole Qui	34.12	180	P	P	12 19 19.9	+0.1
QSPA				IAmb	IAmb	12 19 33.4	
	comp=Z,17nm,1.5s						
CPUP	Villa Florida	37.52	309	P	P	12 19 48.4	-0.7
	comp=Z,2.5nm,0.8s,baz=168,slow=8.5,SNR=3.7						
	comp=Z,2.5nm,0.8s						
CPUP	Villa Florida	37.52	309	P	P	12 19 48.6	-0.5
CPUP				IAmb	IAmb	12 20 08.5	
	comp=Z,16nm,1.4s						
MT09	Talagante	38.16	286	P	P	12 19 53.3	-1.3
MT09				IAmb	IAmb	12 20 01.0	
	comp=Z,18nm,1.5s						
VA03	San Esteban	38.70	288	P	P	12 19 58.7	-0.5
VA03				IAmb	IAmb	12 20 16.8	
	comp=Z,6.2nm,0.6s						
MAW	Mawson	39.57	143	LR	LR	12 35 05.9	
	comp=Z,83nm,19.6s,baz=283,slow=34						
SUR	Sutherland	39.83	73	LR	LR	12 33 51.5	
	comp=Z,166nm,19.2s,baz=168,slow=32						
CO02	Combarbal	40.15	289	P	P	12 20 10.6	-0.7
CO02				IAmb	IAmb	12 20 20.5	
	comp=Z,18nm,1.1s						
AC02	Maricunga	42.69	295	P	P	12 20 33.8	+1.2
AC02				IAmb	IAmb	12 20 34.8	
	comp=Z,16nm,0.8s						
GO02	Mina Guanaco	44.30	296	P	P	12 20 45.9	+0.6
BOSA	Boshof	45.16	74	LR	LR	12 36 48.7	
	comp=Z,269nm,18.3s,baz=188,slow=32						
SBA	Scott Base	46.06	184	P	P	12 20 59.6	+1.3
LVC	Limon Verde	46.09	298	P	P	12 21 00.8	+1.2
VNDA	Vanda	46.53	182	P	P	12 21 01.2	-0.8
	comp=Z,1.3nm,0.6s,baz=177,slow=8.0,SNR=16						
	comp=Z,1.3nm,0.6s						
VNDA	Vanda	46.53	182	P	P	12 21 02.2	+0.2
PB09	IPOC Station P	46.94	299	P	P	12 21 07.5	+1.4
LBTB	Lobatse	48.21	72	LR	LR	12 39 08.2	
	comp=Z,102nm,18.8s,baz=131,slow=33						
SIV	San Ignacio	48.26	312	LR	LR	12 41 02.0	
	comp=Z,55nm,21.4s,baz=114,slow=35						
LPAZ	La Paz	51.13	304	P	P	12 21 40.1	+1.3
	comp=Z,1.6nm,0.3s,baz=131,slow=3.1,SNR=18						
	comp=Z,1.6nm,0.3s						
LPAZ	La Paz	51.13	304	P	P	12 21 40.0	+1.2
LSZ	Lusaka	57.60	67	LR	LR	12 45 07.0	
	comp=Z,124nm,18.7s,baz=146,slow=34						
DBIC	Dimbokro	64.89	23	LR	LR	12 45 54.3	
	comp=Z,100nm,19.7s,baz=150,slow=31						
OTAV	Otavalo	70.42	302	P	P	12 23 50.0	0.0
OTAV				IAmb	IAmb	12 24 01.7	
	comp=Z,2.8nm,0.7s						
TOA0	Torodi Ar. Sit	72.71	28	P	P	12 24 03.1	0.0
TOA0				IAmb	IAmb	12 24 05.2	
	comp=Z,4.1nm,0.8s						
TORD	Torodi Ar. Bea	72.71	28	P	P	12 24 03.4	+0.2
	comp=Z,2.4nm,0.7s,baz=202,slow=5.0,SNR=15						
	comp=Z,2.4nm,0.7s						
TORD	Torodi Ar. Bea	72.71	28	P	P	12 24 04.3	+1.2
TORD				IAmb	IAmb	12 24 05.2	
	comp=Z,3.3nm,0.9s						
KMBO	Kilima Mbogo	74.27	68	LR	LR	12 55 45.6	
	comp=Z,97nm,18.1s,baz=94,slow=35						
PPT	Papeete	92.84	232	LR	LR	13 00 16.1	
	comp=Z,51nm,18.2s,baz=2.5,slow=31						
ESDC	Sonseca Array	97.20	17	LR	LR	13 07 19.3	
	comp=Z,36nm,18.6s,baz=150,slow=34						
ASAR	Alice Springs	98.64	161	P	P	12 26 13.3	-1.2
	comp=Z,0.6nm,0.9s,baz=177,slow=4.4,SNR=3.3						
	comp=Z,0.6nm,0.9s						
SONM	Songino Array	149.88	85	PKPbc	PKPbc	12 32 22.7	-2.0
	comp=Z,0.5nm,0.5s,baz=206,slow=3.2,SNR=4.7						
SONM	Songino Array	149.88	85		PKPbc	12 32 24.5	-0.2
ILAR	Eielson Array	150.81	311	PKPbc	PKPbc	12 32 26.0	-0.2
	comp=Z,2.0nm,0.9s,baz=137,slow=1.6,SNR=17						
ILAR	Eielson Array	150.81	311		PKPbc	12 32 26.4	+0.2
ILAR				PKPab	pPKPab	12 32 35.2	+0.6

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*GII **29** 12:45:36.4±0.2, 33.°68N×35.°45E, h9km, MD2.1/8, Mm2.3/9*

*GRAL **29** 12:45:37.9±0.3, 33.°62N×35.°45E, h18km±1km, MD3.1*

*JSO **29** 12:45:38.2±1.1, 34°N±7°×3°5E±°, h0km, MLv3.1/8*

ISC 29 12:45:37.2±0.9**, 33.°64N**±0.°03×**35.°44E**±0.°04**, h18**km±2km**, n27, σ0.s58**/43**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.13	59	*e*P	Pg	12 45 41.8	+0.4
DQRL				*e*S	Sg	12 45 44.5	+0.3
QRWL	Qaraoun	0.22	114	*e*P	Pb	12 45 42.5	+0.1
QRWL				*e*S	Sb	12 45 45.9	+0.1
BEYL	Beirut	0.24	11	*e*P	Pg	12 45 43.3	+0.5
BHL	Bhannes	0.32	34	*e*P	Pg	12 45 44.3	+0.2
BHL				*e*S	Sg	12 45 49.3	+0.4
RCY	Rachaya	0.36	113	*e*P	Pg	12 45 44.7	-0.2
RCY				*e*S	Sg	12 45 49.5	-0.6
SHBL	Chebaa	0.39	139	*e*P	Pg	12 45 44.9	-0.4
NATI	Neve Ativ	0.45	147	P	Pg	12 45 46.0	-0.5
NATI				S	Sg	12 45 52.5	-0.1
NATI	Neve Ativ	0.45	147	Pg	Pg	12 45 45.9	-0.5
NATI				Sg	Sg	12 45 52.1	-0.5
GEM	Giv'at Ha'Em	0.47	156	P	Pg	12 45 46.5	-0.3
GEM	Giv'at Ha'Em	0.47	156	Pg	Pg	12 45 46.4	-0.3
GEM				Sg	Sg	12 45 52.8	-0.3
HNTI	Hanita	0.60	202	P	Pb	12 45 48.9	-0.2
HNTI	Hanita	0.60	202	Pg	Pb	12 45 48.9	-0.2
HNTI				Sg	Sg	12 45 57.4	+0.3
KSHT	Keshet	0.73	155	Pg	Pb	12 45 50.8	-0.5
KSHT				Sg	Sb	12 46 00.7	-0.2
HWQ	Hawqa	0.76	33	*e*P	Pb	12 45 51.6	-0.4
BLGI	Bet Lehem HaGe	0.93	193	P	Pb	12 45 54.6	-0.1
BLGI	Bet Lehem HaGe	0.93	193	Pg	Pb	12 45 54.6	-0.1
BLGI				Sg	Sb	12 46 07.2	+0.5
OFRI	\`Ofer	1.08	201	P	Pb	12 45 57.2	-0.2
OFRI	\`Ofer	1.08	201	Pg	Pb	12 45 57.1	-0.3
OFRI				Sg	Sn	12 46 12.0	-0.1
MMLI	Mount Malkishu	1.20	181	Pg	Pn	12 45 58.6	-0.5
MMLI				Sg	Sn	12 46 15.4	+0.5
HMDT	Nahal Hemdat	1.39	177	P	Pn	12 46 01.8	+0.2
HMDT	Nahal Hemdat	1.39	177	Pn	Pn	12 46 01.6	0.0
HMDT				Sn	Sb	12 46 20.2	+0.3
SLTI	Sal'it	1.44	194	P	Pn	12 46 03.0	+0.7
SLTI	Sal'it	1.44	194	Pn	Pn	12 46 02.8	+0.5
SLTI				Sn	Sb	12 46 21.7	+0.4
UJAP	Al Uja	1.68	179	Pn	Pn	12 46 05.3	-0.4
DSI	Dead Sea	2.06	181	P	Pn	12 46 12.8	+1.9
CSS	Mathiatis	2.19	308	Pn	Pn	12 46 12.3	-0.4
CSS				Sn	Sn	12 46 37.5	-1.8
YTIR	Yattir	2.29	187	Pn	Pn	12 46 15.1	+1.0
YTIR				Sn	Sn	12 46 42.5	+0.7

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*IDC **29** 13:17:58.2±1.5, 36.°31N×3.°44E, h0km, mb3.3/2, mbtmp3.3/6, ML3.3/3, MS2.2/1, Error ellipse: s-maj=29.5km s-min=23.3km az=156.0*

*CRAAG **29** 13:17:59.1, 36.°36N×3.°42E, Ml3.8*

*MDD **29** 13:18:01.8±1.1, 36.°32N×3.°52E, h11km±22km, Mb4.3/7, M_mb3.7/7, Error ellipse: s-maj=27.0km s-min=5.8km az=137.0*

*LDG **29** 13:18:04.7±0.6, 36.°29N×3.°58E, h25km, Ml3.1/11, Error ellipse: s-maj=11.8km s-min=6.4km az=171.0*

*CNRM **29** 13:18:21.9, 35.°43N×1.°71E, h0km, ml3.0*

ISC 29 13:18:00.9±1.2**, 36.°37N**±0.°04×**3.°50E**±0.°03**, h17**km±9km**, n64, σ1.s98**/73**, 5C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.22	192	P	Pg	13 18 04.4	-1.7
ABMS	Boumerdes	0.38	358	P	Pg	13 18 09.1	+0.3
AKET	Djebel Ketaf	0.45	136	P	Pg	13 18 09.2	-0.9
EMHD	Djebel Mahouad	0.47	249	P	Pg	13 18 09.1	-1.3
EBNR	Beni Rached	1.59	268	P	Pg	13 18 31.0	-0.5
CKHR	Kef el Ahmar	1.67	102	P	Pb	13 18 32.7	+1.4
ECHA	Ech Chlef	1.73	263	P	Pg	13 18 33.5	-0.7
DFRA	Djebel Bou Aff	1.93	84	P	Pn	13 18 33.1	+0.1
EANR	'Ain N'Sour	1.98	259	P	Pn	13 18 33.3	-0.4
OKGL	Djebel Kef Gue	2.33	263	P	Pg	13 18 48.0	+2.4
CTEI	Djebel Teioual	2.37	97	P	Pg	13 18 47.1	+0.6
OJGS	Djebel Guires	2.39	250	P	Pb	13 18 45.0	+1.5
ODJA	Bouhanifia	3.14	252	P	Pg	13 18 59.0	-2.0
EIBI	Ibiza	3.15	328	P	Pn	13 18 50.1	+0.3
EIBI				⇑*i*Vmb_V		13 18 54.7	
	773nm,SNR=1.6						
EIBI				S	Sn	13 19 25.0	-2.0
CMAH	Djebel Manchou	3.17	84	P	Pn	13 18 50.2	+0.1
USTO	Oran	3.34	260	P	Pn	13 18 47.5	-4.8
ETOS	Mallorca	3.44	351	P	Pn	13 18 54.2	+0.5
ETOS				⇑*i*Vmb_V		13 19 01.3	
	674nm,SNR=1.5						
ETOS				S	Sn	13 19 29.1	-4.9
OTSS	Djebel Tessala	3.65	254	P	Pn	13 18 55.0	-1.7
EMUR	La Murta	4.06	293	P	Pn	13 19 02.8	+0.5
EMUR				S	Sn	13 19 50.3	+0.9
ETOB	Tobarra	4.61	301	P	Pn	13 19 10.9	+1.0
ETOB				⇑*i*Vmb_V		13 19 16.4	
	304nm,SNR=2.4						
ETOB				S	Sn	13 20 02.5	-0.5
KEST	Kesra	4.78	96	Pn	Pn	13 19 13.5	+1.3
	1.2nm,0.3s,baz=167,slow=1.4,SNR=7.0						
KEST				Sn	Sn	13 20 08.6	+1.2
	1.2nm,0.3s,baz=356,slow=23,SNR=1.8						
	5.8nm,0.5s						
TAF	Taforalt	5.06	254	P	Pn	13 19 16.4	+0.3
EMOS	Mosqueruela	5.06	323	P	Pn	13 19 17.4	+1.3
EMOS				⇑*i*Vmb_V		13 19 20.5	
	196nm,SNR=1.4						
EMOS				S	Sn	13 20 11.1	-3.2
JBK	JBK	5.35	249	P	Pn	13 19 21.0	+0.8
TDRA	Tendrara	5.63	235	P	Pn	13 19 23.8	-0.2
FIGM	Figuig	5.78	224	P	Pn	13 19 26.6	+0.7
EJON	La Jonquera	6.09	356	P	Pn	13 19 32.6	+2.5
ETOR	Torete	6.21	317	P	Pn	13 19 35.2	+3.2
ETOR				⇑*i*Vmb_V		13 19 43.6	
	176nm,SNR=2.4						
ESDC	Sonseca Array	6.75	302	Pn	Pn	13 19 39.6	+0.4
	0.4nm,0.3s,baz=111,slow=13,SNR=29						
ESDC				Sn	Sn	13 21 07.1	+11
	0.1nm,0.3s,baz=115,slow=25,SNR=4.2						
ESDC				LR	LR	13 21 57.4	
	comp=Z,22nm,21.2s,baz=143,slow=36						
	1.7nm,0.5s						
MTLF	Montolieu	7.03	352	*e*Pn	Pn	13 19 45.0	+1.9
MTLF				*e*Sn	Sn	13 21 01.1	-1.5
	0.4nm,0.2s						
EPF	Esparros	7.08	341	*e*Pn	Pn	13 19 47.0	+3.2
EPF				*e*Sn	Sn	13 21 03.3	-0.6
	5.2nm,0.5s						
ETSF	Etsaut	7.23	336	*e*Pn	Pn	13 19 47.4	+1.6
ETSF	Etsaut	7.23	336	*e*P	Pn	13 19 51.7	+5.9
ETSF				*e*Sn	Sn	13 21 04.6	-3.0
	0.8nm,0.4s						

LMR	La Mourre	7.33	17	*e*Pn	Pn	13 19 47.3	+0.2
LMR				*e*Sn	Sn	13 21 05.1	-4.8
	2.2nm,0.3s						
PGF	Pioggiola	7.50	33	*e*Pn	Pn	13 19 50.1	+0.6
PGF				*e*Sn	Sn	13 21 07.1	-7.0
	2.4nm,0.3s						
MDT	Midelt	7.56	244	Pn	Pn	13 19 47.4	-3.0
	0.1nm,0.3s,baz=84,slow=10,SNR=3.0						
MDT				Lg	Lg	13 22 07.3	
	0.3nm,0.3s,baz=88,slow=9.6,SNR=3.7						
	1.2nm,0.8s						
MD31	MD31	7.65	245	P	Pn	13 19 53.2	+1.6
SJPF	Ste Jean	7.65	333	*e*Pn	Pn	13 19 55.0	+3.4
SJPF				*e*Sn	Sn	13 21 14.8	-3.1
	4.0nm,0.6s						
LASF	Ste Croix	7.70	2	*e*Pn	Pn	13 19 53.2	+0.9
LASF				*e*Sn	Sn	13 21 14.1	-5.0
	6.6nm,0.4s						
SMRF	Simiane la Rot	7.76	11	*e*Pn	Pn	13 19 54.7	+1.6
SMRF				*e*Sn	Sn	13 21 19.4	-1.2
	0.1nm,0.2s						
SBF	Sospel	8.07	21	*e*Pn	Pn	13 19 57.9	+0.6
SBF				*e*Sn	Sn	13 21 22.7	-5.5
	7.1nm,0.6s						
VIVF	Saint-Julien-l	8.53	6	*e*Pn	Pn	13 20 05.5	+1.9
CAF	Calviac	8.62	353	*e*Pn	Pn	13 20 06.9	+2.1
ORIF	Oris-en-Rattie	8.73	11	*e*P	Pn	13 20 12.6	+6.2
RJF	Les Rejaudoux	9.05	351	*e*Pn	Pn	13 20 12.5	+1.8
LPG	La Plagne	9.45	14	*e*Pn	Pn	13 20 18.7	+2.3
TCF	Toulx Ste Croi	9.96	355	*e*Pn	Pn	13 20 25.5	+2.3
BGF	Bois d'Agland	10.19	357	*e*Pn	Pn	13 20 27.9	+1.5
AVF	Avril sur Loir	10.41	359	*e*Pn	Pn	13 20 31.3	+1.9
CABF	La Chapelle	10.42	10	*e*Pn	Pn	13 20 30.1	+0.6
SSF	Saint Saulge	10.68	0	*e*Pn	Pn	13 20 35.1	+2.0
LOR	Lormes	10.89	1	*e*P	Pn	13 20 45.6	+10
	baz=184						
HYF	Humbligny	10.91	357	*e*Pn	Pn	13 20 37.8	+1.6
HINF	Hinteralfeld	11.71	11	*e*Pn	Pn	13 20 47.9	+0.8
HAU	Haudompre	11.82	9	*e*Pn	Pn	13 20 49.5	+0.9
HAU				*e*Sn	Sn	13 22 53.5	-6.6
	1.1nm,0.2s						
SFTF	Sexfontaines	11.88	5	*e*Pn	Pn	13 20 50.8	+1.3
SAVF	Savonnieres en	12.30	5	*e*Pn	Pn	13 20 57.5	+2.4
	baz=188						
LDF	La Druitiere	12.50	349	*e*Pn	Pn	13 20 59.9	+2.0
SGMF	Saint Gilles	12.69	341	*e*Pn	Pn	13 21 02.7	+2.3
ROSF	Rostrenen	12.96	339	*e*Pn	Pn	13 21 07.1	+3.0
BAIF	Baives	13.69	2	*e*Pn	Pn	13 21 16.4	+2.2
GERES	GERESS Array B	14.54	28	Pn	Pn	13 21 26.6	+0.7
	0.5nm,0.7s,baz=217,slow=13,SNR=1.9						
TORD	Torodi Ar. Bea	23.18	184	P	P	13 23 06.2	-0.5
	0.8nm,0.7s,baz=1.1,slow=9.9,SNR=5.8						
	0.8nm,0.7s						
MKAR	Makanchi Array	57.54	53	P	P	13 27 48.9	-0.4
	0.2nm,0.5s,baz=283,slow=5.4,SNR=2.9						
	0.2nm,0.5s						

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*IDC **29** 13:30:43.1±1.1, 55°.50S×26°.30W, h0^{km}, mb3.9/5, mbtmp3.8/6, ML3.4/1, MS3.8/1, Error ellipse: s-maj=39.7km s-min=22.7km az=85.0*

*NEIC **29** 13:30:44.2±1.6, 55°.6S±0°.1×26°.3W±0°.1, h10^{km}±2^{km}, mb4.3/14, Error ellipse: s-maj=22.6km s-min=11.1km az=18.0*

ISC 29 13:30:47.8±0.7**, 55°.52S**±0°.10×**26°.4W**±0°.1**, h38**^{km}**, n26, σ0^s.89**/24**, mb4.2**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.95	278	Pn	Pn	13 32 13.1	-0.1
VNA3	Neumayer Olymp	17.35	162	P	P	13 34 47.7	0.0
VNA2	Neumayer--Watz	17.53	159	P	P	13 34 49.9	+0.4
	baz=320,slow=14						
SNAA	Sanae	19.06	157	P	Pn	13 35 07.3	-0.1
SNAA	Sanae	19.06	157	P	Pn	13 35 07.0	-0.4
	0.1nm,0.3s,baz=305,slow=13,SNR=3.6						
	1.3nm,0.8s						
SNAA	Sanae	19.06	157	P	P	13 35 06.3	-0.1
PMSA	Palmer Station	20.59	228	P	P	13 35 24.0	+1.0
	4.0nm,0.5s,baz=29,slow=4.4,SNR=4.1						
	4.0nm,0.5s						
PMSA	Palmer Station	20.59	228	P	P	13 35 23.6	+0.6
PMSA				IAmb	IAmb	13 35 27.9	
	comp=Z,12nm,1.1s						
BELA	Belgrano 2	22.65	185	P	P	13 35 42.4	-2.6
QSPA	South Pole Qui	34.74	180	P	P	13 37 34.4	+0.5
	comp=Z,1.3nm,0.5s,baz=24,slow=10.0,SNR=20						
	comp=Z,1.3nm,0.5s						
QSPA	South Pole Qui	34.74	180	P	P	13 37 33.9	0.0
QSPA				IAmb	IAmb	13 38 00.3	
	comp=Z,5.5nm,1.4s						
MT09	Talagante	37.58	286	P	P	13 37 58.1	-0.4
MT09				IAmb	IAmb	13 38 23.2	
	comp=Z,10nm,1.5s						
MT02	Curacav	38.05	287	P	P	13 38 02.5	+0.2
MT02				IAmb	IAmb	13 38 14.1	
	comp=Z,6.3nm,1.1s						
BOSA	Boshof	45.40	76	LR	LR	13 54 55.5	
	comp=Z,111nm,18.4s,baz=130,slow=32						
VNDA	Vanda	47.13	182	P	P	13 39 16.3	+0.8
	comp=Z,0.7nm,0.6s,baz=184,slow=6.5,SNR=9.5						
	comp=Z,0.7nm,0.6s						
VNDA	Vanda	47.13	182	P	P	13 39 16.2	+0.8
PB08	IPOC Station P	47.63	300	P	P	13 39 19.4	-1.0
PB08				IAmb	IAmb	13 39 34.9	
	comp=Z,3.6nm,0.9s						
RCBR	Riachuelo	50.13	348	P	P	13 39 37.6	-1.6
LPAZ	La Paz	50.44	304	P	P	13 39 43.0	+0.8
	comp=Z,0.9nm,0.6s,baz=146,slow=3.6,SNR=3.8						
	comp=Z,0.9nm,0.6s						
LPAZ	La Paz	50.44	304	IAmb	IAmb	13 39 48.6	
	comp=Z,2.8nm,1.1s						
ROSC	El Rosal	71.89	309	P	P	13 42 07.2	-0.1
TOA0	Torodi Ar. Sit	72.37	29	P	P	13 42 10.0	+0.4
TOA0				IAmb	IAmb	13 42 38.6	
	comp=Z,3.3nm,1.3s						
TORD	Torodi Ar. Bea	72.37	29	P	P	13 42 10.3	+0.7
	comp=Z,0.5nm,0.6s,baz=205,slow=6.4,SNR=4.5						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	72.37	29	P	P	13 42 09.9	+0.3
TORD				IAmb	IAmb	13 42 24.8	
	comp=Z,2.5nm,1.3s						
AOPR	Arecibo Observ	81.12	321	P	P	13 42 59.7	+0.8
ILAR	Eielson Array	150.09	312	PKPbc	PKiKP	13 50 34.4	+0.8
	comp=Z,1.1nm,0.9s,baz=117,slow=1.5,SNR=8.8						

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*IDC **29** 13:32:18.0±1.0, 5°.31S×151°.48E, h70^{km}±9^{km}, mb3.7/7, mbtmp4.0/8, MS2.8/2, Error ellipse: s-maj=32.5km s-min=10.4km az=125.0*

*NEIC **29** 13:32:18.3±1.6, 5°.26S±0°.06×151°.49E±0°.08, h65^{km}±6^{km}, mb4.4/15, Error ellipse: s-maj=12.0km s-min=8.5km az=94.0*

ISC 29 13:32:16.8±0.6**, 5°.27S**±0°.09×**151°.5E**±0°.1**, h57**^{km}**, n32, σ1^s.13**/32**, mb4.3**/15**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.11	31	P	Pn	13 32 37.6	+1.4
	1µm,0.4s,baz=278,slow=1.0,SNR=452						
KRVT				S	Sn	13 32 53.5	+2.8
	2µm,0.4s,baz=282,slow=23,SNR=7.7						
RABL	Rabaul	1.28	34	Pn	Pn	13 32 39.6	+1.0
PMG	Port Moresby	5.92	226	P	Pn	13 33 44.0	+2.1
	8.9nm,0.4s,baz=45,slow=9.0,SNR=11						
PMG				S	Sn	13 34 49.7	+1.3
	30nm,0.4s,baz=158,slow=17,SNR=7.5						
CTA	Charters Tower	15.58	198	LR	LR	13 41 33.6	
	comp=Z,51nm,19.8s,baz=270,slow=36						
GUMO	Guam	19.84	341	LR	LR	13 44 50.8	
	comp=Z,18nm,18.6s,baz=185,slow=38						
EIDS	Eidsvold	19.99	181	P	P	13 36 44.3	-0.4
MTN	Manton Dam	21.41	248	P	P	13 37 02.0	+1.8
MTN				IAmb	IAmb	13 37 26.7	
	comp=Z,19nm,1.3s						
WB0	Warramunga Arr	21.98	228	P	P	13 37 06.5	+0.2
WB0				IAmb	IAmb	13 37 09.5	
	comp=Z,8.8nm,0.8s						
WR0	Warramunga Arr	22.00	227	P	P	13 37 06.6	+0.2
WR0				IAmb	IAmb	13 37 09.6	
	comp=Z,7.2nm,0.8s						
WRAB	Tennant Creek	22.12	227	P	P	13 37 07.7	0.0
WRAB				IAmb	IAmb	13 37 10.7	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	22.12	227	P	P	13 37 07.8	+0.1
WB2				IAmb	IAmb	13 37 10.8	
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	22.13	227	P	P	13 37 07.6	-0.3
	comp=Z,10nm,0.7s,baz=52,slow=10.0,SNR=103						
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	22.13	227	P	P	13 37 07.5	-0.4
KNRA	Kununurra	24.56	243	P	P	13 37 32.1	+0.5
KNRA				IAmb	IAmb	13 37 37.2	
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	24.91	221	P	P	13 37 35.1	+0.4
	comp=Z,5.9nm,0.7s,baz=56,slow=8.8,SNR=103						
ASAR				PcP	PcP	13 41 08.8	-0.6
	comp=Z,0.4nm,0.9s,baz=29,slow=2.1,SNR=2.8						
	comp=Z,5.9nm,0.7s						
ASAR	Alice Springs	24.91	221	P	P	13 37 35.3	+0.6
ARMA	Armidale	25.02	180	P	P	13 37 37.0	+1.3
ARMA				IAmb	IAmb	13 38 02.3	
	comp=Z,19nm,1.4s						
FORT	Forrest	33.58	218	P	P	13 38 50.0	-1.7
MBWA	Marble Bar	34.57	240	P	P	13 39 00.6	+0.3
SSLB	Suanglung	41.45	315	P	P	13 39 56.3	-2.0
SONM	Songino Array	66.01	329	P	P	13 42 58.0	+0.4
	comp=Z,0.5nm,0.5s,baz=136,slow=4.6,SNR=5.2						
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	66.01	329	IAmb	IAmb	13 43 00.8	
	comp=Z,0.9nm,0.8s						
VNDA	Vanda	72.42	178	P	P	13 43 36.2	-0.4
	comp=Z,0.7nm,0.8s,baz=333,slow=6.7,SNR=3.3						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	72.42	178	P	P	13 43 36.6	0.0
VNDA				IAmb	IAmb	13 44 01.0	
	comp=Z,6.1nm,1.5s						
MKAR	Makanchi Array	79.79	319	P	P	13 44 18.4	-0.6
	comp=Z,0.6nm,0.8s,baz=92,slow=6.1,SNR=4.6						
	comp=Z,0.6nm,0.8s						
ZALV	Zalesovo Beam	80.80	327	P	P	13 44 24.6	+0.4
	comp=Z,0.6nm,0.5s,baz=104,slow=6.1,SNR=2.6						
	comp=Z,0.6nm,0.5s						
QSPA	South Pole Qui	84.70	180	P	P	13 44 43.8	-0.7
QSPA				IAmb	IAmb	13 44 44.9	
	comp=Z,4.1nm,0.9s						
NVAR	Mina Array Bea	93.43	52	P	P	13 45 26.8	+0.1
	comp=Z,1.0nm,0.8s,baz=259,slow=6.4,SNR=8.3						
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	123.74	328	PKP	PKPdf	13 51 06.6	-1.9
	comp=Z,0.3nm,0.6s,baz=25,slow=3.2,SNR=2.1						
TORD	Torodi Ar. Bea	149.16	287	PKPbc	PKPbc	13 51 59.7	-0.3
	comp=Z,0.8nm,0.5s,baz=111,slow=2.8,SNR=8.8						
TORD	Torodi Ar. Bea	149.16	287		PKPbc	13 52 00.1	+0.1
BDFB	Brasilia	151.66	137	PKPbc	PKPbc	13 52 04.7	-1.3
	comp=Z,0.7nm,0.4s,baz=180,slow=21,SNR=3.7						

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*IDC **29** 13:35:59.9±27.0, 21°.18S×173°.03W, h0^{km}, mb4.1/4, mbtmp4.1/4, MS3.1/1, Error ellipse: s-maj=503.0km s-min=164.8km az=75.0*

*NEIC **29** 13:36:02.4±1.0, 21°.2S±0°.2×173°.0W±0°.2, h10^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=48.2km s-min=21.4km az=133.0*

ISC 29 13:36:09.1±11.0**, 21°.3S**±0°.3×**17°.4W**±°**, h35**^{km}**, n19, σ0^s.62**/18**, mb4.4**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	8.86	206	LR	LR	13 42 15.9	
	comp=Z,113nm,20.4s,baz=328,slow=41						
RAO	Raoul Island	8.86	206	Pn	Pn	13 38 14.8	0.0
CAN	Canberra	35.60	239	P	P	13 43 03.5	-0.1
CTA	Charters Tower	37.57	264	P	P	13 43 21.2	+0.7
	2.6nm,0.3s,baz=98,slow=10,SNR=7.3						
	2.6nm,0.3s						
CTAO	Charters Tower	37.57	264	P	P	13 43 21.1	+0.7
CTAO				IAmb	IAmb	13 43 22.5	
	comp=Z,20nm,1.5s						
TOO	Toolangi	38.86	236	P	P	13 43 31.8	+0.6
TOO				IAmb	IAmb	13 43 56.3	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	41.23	246	P	P	13 43 49.8	-1.1
	comp=Z,0.9nm,0.5s,baz=89,slow=12,SNR=3.4						
	comp=Z,0.9nm,0.5s						
STKA	Stephens Creek	41.23	246	P	P	13 43 50.0	-0.8
BBOO	Buckleboo	45.95	245	P	P	13 44 27.6	-1.3
ASAR	Alice Springs	48.40	257	P	P	13 44 47.9	-0.2
	comp=Z,1.3nm,0.8s,baz=96,slow=7.3,SNR=33						
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	48.40	257	P	P	13 44 47.6	-0.5
WR0	Warramunga Arr	48.43	262	P	P	13 44 48.3	-0.1
WR0				IAmb	IAmb	13 45 07.8	
	comp=Z,4.6nm,1.4s						
WB0	Warramunga Arr	48.60	262	P	P	13 44 49.6	-0.1
WB0				IAmb	IAmb	13 44 50.3	
	comp=Z,3.7nm,0.8s						
WB2	Warramunga Arr	48.61	262	P	P	13 44 49.7	0.0
WRAB	Tennant Creek	48.61	262	P	P	13 44 49.7	-0.1
WRAB				IAmb	IAmb	13 44 58.3	
	comp=Z,8.8nm,1.5s						
WRA	Warramunga Arr	48.62	262	P	P	13 44 49.3	-0.6
	comp=Z,1.0nm,0.6s,baz=96,slow=8.4,SNR=14						
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	48.62	262	P	P	13 44 49.7	-0.1
FORT	Forrest	52.82	247	P	P	13 45 21.0	-0.3
PSA00	Pilbara Seismi	61.55	256	P	P	13 46 23.3	+0.1
PSA00				IAmb	IAmb	13 46 34.9	
	comp=Z,5.8nm,1.4s						

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*NEIC **29** 14:16:13.4±1.4, 20°.48S±0°.03×69°.45W±0°.09, h86^{km}±6^{km}, mb4.1/7, ML4.1(GUC), Error ellipse: s-maj=12.0km s-min=4.8km az=84.0*

*GUC **29** 14:16:13.5±0.7, 20°.47S×69°.27W, h85^{km}±3^{km}, ML3.9*

ISC 29 14:16:13.2±0.8**, 20°.48S**±0°.03×**69°.36W**±0°.06**, h85**^{km}±6^{km}**, n46, σ0^s.85**/59**, mb4.3**/3**, 6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.39	30		Pn	14 16 26.2	-0.9
PB08	IPOC Station P	0.39	30	⇓*i*P	Pn	14 16 26.7	-0.4
PB08				*i* S	Sn	14 16 37.3	-0.1
PB08				IAML		14 16 38.7	
	comp=N,3µm,0.3s						
PB01	IPOC Station P	0.58	192		Pn	14 16 27.9	-0.3
PB01	IPOC Station P	0.58	192	⇑*i*P	Pn	14 16 28.2	-0.1
PB01				*i* S	Sn	14 16 39.8	+0.4
PB01				IAML		14 16 40.9	
	comp=N,7µm,0.3s						
PB11	IPOC Station P	0.77	339		Pn	14 16 30.0	-0.2
PB11				Sn	Sn	14 16 42.6	-0.2
PB11	IPOC Station P	0.77	339	⇓*i*P	Pn	14 16 30.3	+0.1
PB11				*i* S	Sn	14 16 43.6	+0.9
PB11				IAML		14 16 45.2	
	comp=E,5µm,0.3s						
TA01	Diego Aracena	0.77	263	Pn	Pn	14 16 30.1	+0.1
TA01	Diego Aracena	0.77	263	⇑*i*P	Pn	14 16 30.2	+0.2
TA01				*i* S	Sn	14 16 43.4	+0.8
TA01				IAML		14 16 44.0	
	comp=E,2µm,0.2s						
PB02	IPOC Station P	0.98	211		Pn	14 16 32.5	+0.1
PB02	IPOC Station P	0.98	211	⇑*i*P	Pn	14 16 32.7	+0.3
PB02				*i* S	Sn	14 16 47.8	+1.0
PB02				IAML		14 16 50.4	
PB09	IPOC Station P	1.32	175		Pn	14 16 36.7	+0.1
PB09				Sn	Sn	14 16 54.0	-0.2
PB09	IPOC Station P	1.32	175	⇑*i*P	Pn	14 16 36.8	+0.2
PB09				*i* S	Sn	14 16 55.2	+1.0
PB09				IAML		14 16 57.8	
	comp=N,2µm,0.6s						
PB07	IPOC Station P	1.34	201		Pn	14 16 36.9	+0.1
PB07	IPOC Station P	1.34	201	⇑*i*P	Pn	14 16 37.1	+0.2
PB07				*i* S	Sn	14 16 55.7	+1.1
PB07				IAML		14 16 59.2	
	comp=E,3µm,0.1s						
PB04	IPOC Station P	1.99	202		Pn	14 16 45.6	+0.3
PB04	IPOC Station P	1.99	202	*e*P	Pn	14 16 45.7	+0.5
PB04				IAML		14 17 20.3	
	comp=N,1µm,0.3s						
PB12	IPOC Station P	2.07	334		Pn	14 16 46.4	+0.1
PB12	IPOC Station P	2.07	334	*e*P	Pn	14 16 46.2	0.0
PB12				*i* S	Sn	14 17 11.6	+0.2
PB12				IAML		14 17 18.8	
	comp=N,846nm,0.2s						
PB16	IPOC Station P	2.14	356		Pn	14 16 49.0	+1.4
PB16	IPOC Station P	2.14	356	⇑*i*P	Pn	14 16 49.0	+1.4
PB16				*i* S	Sn	14 17 15.3	+1.6
PB16				IAML		14 17 21.0	
	comp=E,585nm,0.5s						
LVC	Limon Verde	2.16	169	Pn	Pn	14 16 48.6	+0.8
LVC	Limon Verde	2.16	169	*e*P	Pn	14 16 48.6	+0.8
LVC				*i* S	Sn	14 17 15.4	+1.3
PB06	IPOC Station P	2.23	185		Pn	14 16 48.4	-0.1
PB06	IPOC Station P	2.23	185	*e*P	Pn	14 16 48.3	-0.1
PB06				*i* S	Sn	14 17 16.4	+1.1
PB06				IAML		14 17 21.2	
	comp=E,2µm,0.2s						
AP01	Chacalluta	2.29	336	Pn	Pn	14 16 47.2	-1.9
AP01	Chacalluta	2.29	336	*e*P	Pn	14 16 49.5	+0.4
AP01				*i* S	Sn	14 17 17.8	+1.2
AP01				IAML		14 17 30.0	
	comp=E,2µm,0.3s						
AF01	San Pedro de A	2.70	156	Pn	Pn	14 16 56.0	+1.1
AF01	San Pedro de A	2.70	156	IAML		14 17 57.6	
	comp=N,710nm,0.7s						
PB15	IPOC Station P	2.72	182		Pn	14 16 55.0	0.0
PB15	IPOC Station P	2.72	182	*e*P	Pn	14 16 55.2	+0.1
PB10	IPOC Station P	3.22	200		Pn	14 17 01.1	-0.5
PB10	IPOC Station P	3.22	200	*e*P	Pn	14 17 00.9	-0.7
PB10				IAML		14 17 53.0	
	comp=N,310nm,0.4s						
PB14	IPOC Station P	4.24	193	Pn	Pn	14 17 15.8	0.0
LPAZ	La Paz	4.33	16		Pn	14 17 17.9	+0.6
GO02	Mina Guanaco	4.67	183	Pn	Pn	14 17 20.1	-1.4
GO02	Mina Guanaco	4.67	183	*e*P	Pn	14 17 20.5	-1.0
AC02	Maricunga	6.33	178	Pn	Pn	14 17 43.5	-0.9
NNA	Nana	11.08	318	Pn	Pn	14 18 50.1	+1.3
MT02	Curacav	12.83	187	Pn	Pn	14 19 12.2	-0.1
GO05	Huala	14.65	188	Pn	Pn	14 19 37.4	+1.2
PLTB	Pedras Altas	18.05	132	P	Pn	14 20 18.9	+0.5
PLTB				IAmb	IAmb	14 20 22.1	
	comp=Z,12nm,1.3s						
PLCA	Paso Flores	20.22	183	P	P	14 20 41.1	-0.2
MG05	Puerto Natales	31.24	184	P	P	14 22 23.7	-0.8
MG03	Isla Dawson	33.32	181	P	P	14 22 42.4	-0.3
MG03				IAmb	IAmb	14 22 50.9	
	comp=Z,14nm,1.2s						
TOA0	Torodi Ar. Sit	77.41	71	P	P	14 27 57.8	-1.7
TOA0				IAmb	IAmb	14 28 04.9	
	comp=Z,7.2nm,1.4s						
TORD	Torodi Ar. Bea	77.41	71	P	P	14 27 57.7	-1.9
TORD				IAmb	IAmb	14 28 22.5	
	comp=Z,1.7nm,1.1s						

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*ATH **29** 14:39:21.3, 36°.07N×23°.43E, h16^{km}±2^{km}, ML3.5/19, Error ellipse: s-maj=3.9km s-min=0.9km az=244.0*

*THE **29** 14:39:21.2, 36°.01N×23°.36E, h22^{km}±3^{km}, ML3.6/8, Error ellipse: s-maj=4.9km s-min=0.7km az=241.0*

*IDC **29** 14:39:29.8±4.4, 36°.02N×23°.62E, h107^{km}±43^{km}, mb3.4/4, mbtmp3.5/6, Error ellipse: s-maj=41.7km s-min=24.5km az=143.0*

ISC 29 14:39:21.1±0.9**, 36°.04N**±0°.02×**23°.42E**±0°.03**, h18**^{km}±3^{km}**, n61, σ0^s.90**/79**, mb3.7**/4**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.20	209	P	Pb	14 39 26.4	+0.4
ANKY				S	Sb	14 39 29.3	+0.2
ANKY				AML	AML	14 39 29.4	
	comp=E,38953µm,0.4s						
ANKY				AML	AML	14 39 30.0	
	comp=N,43400µm,0.4s						
ANKY	Antikythira Is	0.20	209	P	Pb	14 39 26.4	+0.4
ANKY				S	Sb	14 39 29.0	-0.1
	comp=N,21µm,0.2s						
KTHA	Kythira Island	0.36	306	P	Pg	14 39 29.2	+0.5
KTHA				S	Sg	14 39 34.3	+0.4
KTHA				AML	AML	14 39 34.5	
	comp=N,21997µm,0.2s						
KTHA				AML	AML	14 39 35.5	
	comp=E,60970µm,0.4s						
KTHA	Kythira Island	0.36	306	P	Pg	14 39 29.2	+0.5
KTHA				S	Sg	14 39 34.0	+0.1
	comp=E,21µm,0.3s						
KTHR	Kythira	0.40	303	P	Pg	14 39 29.8	+0.3
KTHR				S	Sg	14 39 34.9	-0.1
KTHR				AML	AML	14 39 35.6	
KTHR				AML	AML	14 39 36.9	
KTHR	Kythira	0.40	303	P	Pg	14 39 29.7	+0.3
KTHR				S	Sg	14 39 34.8	-0.3
	comp=E,29µm,0.4s						
MNVA	Monemvasia	0.71	334	P	Pb	14 39 35.2	+0.3
MNVA				S	Sb	14 39 43.3	-1.1
MNVA				AML	AML	14 39 45.5	
	comp=E,5784µm,0.5s						
MNVA				AML	AML	14 39 46.0	
	comp=N,4854µm,0.2s						
CHAN	Chania	0.73	136	P	Pg	14 39 35.9	+0.6
CHAN				S	Sg	14 39 45.8	+0.8
CHAN				AML	AML	14 39 46.3	
	comp=N,19113µm,0.5s						
CHAN				AML	AML	14 39 47.1	
	comp=E,19877µm,0.5s						
IMMV	Iera Moni Meta	0.74	142	P	Pg	14 39 35.8	+0.3
IMMV				S	Sn	14 39 46.3	-1.0
IMMV				AML	AML	14 39 48.0	
	comp=N,10713µm,0.3s						
IMMV				AML	AML	14 39 50.0	
	comp=E,6785µm,0.4s						
IMMV	Iera Moni Meta	0.74	142	P	Pg	14 39 35.7	+0.1
IMMV				S	Sg	14 39 45.5	+0.1
	comp=E,4µm,0.3s						
VLI	Veliai	0.78	330	P	Pb	14 39 36.1	0.0
VLI				S	Sb	14 39 45.4	-1.0
VLI				AML	AML	14 39 48.3	
	comp=N,7514µm,0.2s						
VLI				AML	AML	14 39 48.9	
	comp=E,4773µm,0.3s						
VLI	Veliai	0.78	330	P	Pb	14 39 36.2	0.0
VLI				S	Sb	14 39 45.9	-0.4
	comp=E,5µm,0.2s						
KNDR	Palaiochora Ch	0.84	165	P	Pb	14 39 36.5	-0.6
KNDR				S	Sb	14 39 47.6	-0.3
KNDR				AML	AML	14 39 51.6	
	comp=N,9405µm,0.3s						
KNDR				AML	AML	14 39 53.0	
	comp=E,14481µm,0.4s						
KNDR	Palaiochora Ch	0.84	165	P	Pb	14 39 36.4	-0.6
KNDR				S	Sb	14 39 46.8	-1.1
	comp=E,2µm,0.3s						
MHLO	Agia Marina, M	1.02	50	P	Pn	14 39 40.6	+0.1
MHLO				AML	AML	14 39 56.5	
	comp=N,12348µm,0.6s						
MHLO				AML	AML	14 39 56.8	
	comp=E,9560µm,0.5s						
MHLO	Agia Marina, M	1.02	50	P	Pn	14 39 40.6	+0.1
MHLO				S	Sn	14 39 54.2	-0.1
	comp=E,5µm,0.6s						
YDRA	Hydra	1.30	1	P	Pn	14 39 44.8	+0.4
YDRA				S	Sn	14 40 01.1	-0.2
YDRA				AML	AML	14 40 02.7	
	comp=N,2800µm,0.3s						
YDRA				AML	AML	14 40 03.2	
	comp=E,3742µm,0.4s						
GVDS	Gavdos	1.32	155	P	Pb	14 39 45.8	+0.6
GVD	Gavdhos	1.32	156	P	Pb	14 39 45.8	+0.5
GVD	Gavdhos	1.32	156	P	Pb	14 39 45.6	+0.3
KRND	KRANIDI	1.35	351	P	Pn	14 39 45.3	+0.2
KRND				S	Sn	14 40 02.9	+0.3
KRND				AML	AML	14 40 09.3	
	comp=E,2261µm,0.2s						
KRND				AML	AML	14 40 11.3	
	comp=N,2363µm,0.3s						
KRND	KRANIDI	1.35	351	P	Pn	14 39 45.2	+0.2
KRND				S	Sb	14 40 03.3	+0.4
	comp=N,1µm,0.2s						
IDI	Anoyia	1.41	122	P	Pn	14 39 45.5	-0.5
IDI	Anoyia	1.41	122	P	Pn	14 39 45.5	-0.5
SIVA	Sivas	1.53	132	P	Pg	14 39 49.8	-0.6
KSTL	Kastelli Herak	1.53	118	P	Pg	14 39 53.6	+3.0
KSTL				AML	AML	14 40 20.9	
	comp=E,826µm,0.5s						
KSTL				AML	AML	14 40 21.9	
	comp=N,1085µm,0.4s						
EPID	Epidavros	1.59	351	P	Pn	14 39 48.9	+0.6
THR9	Santorini-Faro	1.59	78	P	Pn	14 39 49.1	+0.7
PYL	PYLOS	1.60	303	P	Pb	14 39 50.5	+0.4
PYL	PYLOS	1.60	303	P	Pb	14 39 50.3	+0.2
THR5	Thira Island,	1.60	76	P	Pn	14 39 48.9	+0.4

THR6	Thira Island,	1.63	78	P	Pn	14 39 49.6	+0.8
THR3	Thira Island,	1.64	77	P	Pn	14 39 49.5	+0.5
ITM	Ithomi	1.65	314	P	Pb	14 39 51.8	+0.8
ITM				AML	AML	14 40 19.8	
	comp=N,844µm,0.4s						
ITM				AML	AML	14 40 19.8	
	comp=E,746µm,0.3s						
ITM	Ithomi	1.65	314	P	Pb	14 39 51.9	+0.8
SANT	Santorini	1.68	78	P	Pn	14 39 50.0	+0.4
SANT				AML	AML	14 40 19.3	
	comp=N,775µm,0.6s						
SANT				AML	AML	14 40 20.6	
	comp=E,1824µm,0.3s						
TRIP	Tripoli	1.75	328	P	Pb	14 39 52.3	-0.4
TRIP				AML	AML	14 40 24.4	
	comp=E,651µm,0.3s						
TRIP				AML	AML	14 40 28.4	
	comp=N,732µm,0.7s						
TRIP	Tripoli	1.75	328	P	Pb	14 39 52.9	+0.3
VLY	Voula,Athens	1.83	9	P	Pn	14 39 51.3	-0.3
VLY	Voula,Athens	1.83	9	P	Pn	14 39 51.4	-0.2
ATHU	Athens Univers	1.94	8	P	Pn	14 39 53.2	0.0
LTK	Loutraki	2.01	350	P	Pn	14 39 54.8	+0.7
LTK				AML	AML	14 40 32.3	
	comp=N,2710µm,0.4s						
LTK				AML	AML	14 40 36.7	
	comp=E,3143µm,0.4s						
PTL	Penteli	2.03	10	P	Pn	14 39 54.7	+0.2
PTL				AML	AML	14 40 30.6	
	comp=E,568µm,0.4s						
PTL				AML	AML	14 40 34.4	
	comp=N,344µm,0.6s						
DION	Dionisos Attik	2.07	11	P	Pn	14 39 55.2	+0.3
DION	Dionisos Attik	2.07	11	P	Pn	14 39 55.1	+0.1
GUR	Goura	2.08	336	P	Pn	14 39 56.6	+1.5
GUR	Goura	2.08	336	P	Pn	14 39 55.5	+0.4
THAL	Thalero	2.08	343	P	Pn	14 39 56.4	+1.4
THAL				AML	AML	14 40 31.0	
	comp=E,1713µm,0.4s						
THAL				AML	AML	14 40 32.1	
	comp=N,1465µm,0.7s						
VIL2	Platees	2.17	357	P	Pn	14 39 56.2	-0.1
KLV	Kalavryta, Ach	2.24	333	P	Pn	14 39 58.7	+1.3
KLV				AML	AML	14 40 37.2	
	comp=E,385µm,0.4s						
KLV				AML	AML	14 40 42.4	
	comp=N,346µm,0.9s						
KLV	Kalavryta, Ach	2.24	333	P	Pn	14 39 57.8	+0.5
RLS	Riolos of Patr	2.55	323	P	Pb	14 40 05.5	-0.7
LKR	Lokris	2.62	353	P	Pn	14 40 01.9	-0.6
ANX	Ano Chora	2.81	335	P	Pn	14 40 06.0	+0.8
NEO	Neokhori	3.26	357	P	Pn	14 40 12.2	+0.9
BRTR	Keskin Array B	8.87	62	P	Pn	14 41 32.9	+4.4
	comp=N,0.3nm,0.4s,baz=243,slow=13,SNR=2.8						
GERES	GERESS Array B	14.65	334	P	P	14 42 54.8	+1.2
	comp=N,0.2nm,0.4s,baz=152,slow=11,SNR=1.9						
FINES	FINESS Array B	25.48	3	P	P	14 44 46.9	-1.0
	comp=N,1.0nm,0.8s,baz=159,slow=12,SNR=1.8						
	comp=N,1.0nm,0.8s						
TORD	Torodi Ar. Bea	30.03	226	P	P	14 45 29.5	+0.5
	comp=N,0.6nm,1.0s,baz=34,slow=8.9,SNR=2.2						
	comp=N,0.6nm,1.0s						
MKAR	Makanchi Array	44.48	57	P	P	14 47 29.6	-1.6
	comp=N,0.6nm,0.4s,baz=275,slow=8.2,SNR=15						
	comp=N,0.6nm,0.4s						
ZALV	Zalesovo Beam	45.42	47	P	P	14 47 36.6	-1.9
	comp=N,0.5nm,0.3s,baz=260,slow=10,SNR=2.9						
	comp=N,0.5nm,0.3s						

IDC 29 14:55:08.1±2.4**,28°.16N×87°.23E,h0**^{km}**,mb3.2**/4**,**
mbtmp3.2/5**,ML3.2**/1**,MS3.0**/1**,Error ellipse:**
s-maj=92.7km s-min=25.0km az=70.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	19.01	350	P	Pn	14 59 32.0	0.0
	0.1nm,0.3s,baz=165,slow=13,SNR=3.2						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	23.39	346	P	P	15 00 17.9	-0.5
	0.2nm,0.3s,baz=159,slow=8.0,SNR=1.3						
	0.2nm,0.3s						
SONM	Songino Array	24.66	32	P	P	15 00 30.7	+0.1
	0.2nm,0.4s,baz=207,slow=9.3,SNR=2.0						
	0.2nm,0.4s						
AKTO	Aktyubinsk	31.38	323	LR	LR	15 13 43.6	
	comp=Z,24nm,18.8s,baz=129,slow=36						
WRA	Warramunga Arr	66.03	131	P	P	15 05 57.2	+0.3
	0.3nm,0.7s,baz=322,slow=6.7,SNR=2.7						
	0.3nm,0.7s						
ASAR	Alice Springs	68.40	134	P	P	15 06 11.7	-0.2
	0.3nm,0.7s,baz=321,slow=7.3,SNR=6.0						
	0.3nm,0.7s						

NOU 29 15:03:43.7,15°.26S×167°.54E,h112^{km}**,MLv4.3**/10**,**
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	2.53	166	P	Pn	15 04 23.9	+0.3
RTV	Rentapao	2.66	161	P	Pn	15 04 25.1	-0.2
LIFNC	LIFOU	5.50	183	P	Pn	15 05 02.4	-0.8
KOUNC	Koumac, New Ca	6.11	210	P	Pn	15 05 11.4	-0.1
YATNC	Mamie plateau,	6.79	185	P	Pn	15 05 20.6	-0.2
OUENC	Ouen Island, N	7.15	185	P	Pn	15 05 26.5	+0.8

MAN ***29*** *15:11:34.7, 13°.60N×121°.49E, h8*^{km}*, mb3.6, ML2.3, MS1.8,*
Hypocentre not reviewed by the ISC
ISC 29 15:11:34.9±1.1**,13°.59N**±0°.05×**121°.46E**±0°.04**,h15**^{km}±10^{km}**,**
n7,σ**0**^{s}**.77**/13**,3C-4D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	Boac	0.39	109⇓	*e*P	Pg	15 11 42.0	-0.8
BOAC				*e*S	Sg	15 11 48.0	-0.3
PGP	Puerto Galera	0.50	260⇓	*e*P	Pg	15 11 44.8	-0.1
PGP				*i* S	Sb	15 11 52.3	-0.3
LQP	Lukban	0.53	8⇑	*e*P	Pg	15 11 45.8	+0.4
MACP	Maragondon, Ca	0.99	313⇑	*e*P	Pn	15 11 54.0	-0.2
MACP				*e*S	Sn	15 12 08.3	+0.5
SJMP	San Jose	1.17	197⇓	*e*P	Pn	15 11 57.2	+0.5
SJMP				*e*S	Sg	15 12 14.2	+1.5
LUBP	Lubang	1.19	277⇓	*e*P	Pn	15 11 56.0	-1.0
LUBP				*e*S	Sn	15 12 12.3	-0.6
JCNP	Jose Panganiba	1.39	60⇑	*e*P	Pn	15 12 00.0	+0.4
JCNP				*e*S	Sn	15 12 17.8	+0.1

IDC ***29*** *15:15:37.9±0.8, 13°.15S×142°.00W, h0*^{km}*, mb4.0/9,*
mbtmp4.0/9, MS3.5/12, Error ellipse: s-maj=36.4km
s-min=24.5km az=132.0
NEIC ***29*** *15:15:39.8±1.8, 13°.2S±0°.1×142°.17W±0°.06, h10*^{km}*±1*^{km}*,*
mb4.5/126, Error ellipse: s-maj=18.0km s-min=8.3km
az=164.0
ISC 29 15:15:38.4±0.5**,13°.3S**±0°.1×**142°.3W**±0°.1**,h10**^{km}**,n171,**
σ**0**^{s}**.79**/155**,mb4.5**/70**,MS3.5**/11**,Tuamotu Archipelago**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	4.90	26	Pn	Pn	15 16 46.5	-5.7
TAOE				Sn	Sn	15 17 34.2	-15
PPT	Papeete	8.21	238	Pn	Pn	15 17 38.3	+0.6
	0.3nm,0.3s,baz=90,slow=9.1,SNR=1.8						
PPT				Sn	Sn	15 19 08.3	-2.2
	2.1nm,0.3s,baz=45,slow=8.8,SNR=11						
PPTF	Pamatai, Papee	8.21	238	Pn	Pn	15 17 36.6	-1.1
RAR	Rarotonga	18.45	242	LR	LR	15 24 40.1	
	comp=Z,68nm,18.4s,baz=140,slow=29						
URZ	Urewera	43.71	228	LR	LR	15 39 17.0	
	comp=Z,59nm,18.1s,baz=239,slow=32						
RPZ	Rata Peaks	50.06	223	LR	LR	15 41 23.3	
	comp=Z,60nm,21.0s,baz=262,slow=31						
PFO	Pinyon Flats O	52.75	27	LR	LR	15 40 26.5	
	comp=Z,43nm,19.2s,baz=216,slow=28						
319A	Douglas	54.56	35	P	P	15 25 07.3	+0.2
MDPB	Devils Postpil	55.16	22	P	P	15 25 13.0	+1.5
MDPB				IAmb	IAmb	15 25 14.1	
	comp=Z,3.8nm,0.7s						
OMMB	Old Mammoth Mi	55.17	22	P	P	15 25 13.0	+1.4
OMMB				IAmb	IAmb	15 25 14.1	
	comp=Z,3.0nm,0.7s						
LCH	Last Change Ra	55.36	24	P	P	15 25 13.9	+1.2
NVAR	Mina Array Bea	56.15	23	P	P	15 25 18.1	-0.4
	comp=Z,0.6nm,0.7s,baz=202,slow=11,SNR=5.9						
NVAR				LR	LR	15 45 55.5	
	comp=Z,38nm,18.0s,baz=319,slow=32						
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	56.15	23	P	P	15 25 19.2	+0.6
NV11	Mina Array Sit	56.21	23	P	P	15 25 19.9	+1.0
RYN	Ryan	56.24	22	P	P	15 25 19.8	+0.7
PNTR	Pine Nut	56.26	21	P	P	15 25 19.2	-0.1
PNTR				IAmb	IAmb	15 25 24.8	
	comp=Z,4.4nm,1.0s						
121A	Cookes Peak, D	56.27	35	P	P	15 25 20.1	+0.7
YERR	Yerington	56.30	22	P	P	15 25 19.9	+0.3
X18A	Snowflake	56.63	32	P	P	15 25 21.6	-0.4
WUAZ	Wupatki	56.70	30	P	P	15 25 23.0	+0.6
WUAZ				IAmb	IAmb	15 25 24.7	
	comp=Z,4.2nm,0.9s						
KVN	Kaiserville	56.77	22	P	P	15 25 23.7	+0.7
U15A	North Rim	56.99	29	P	P	15 25 24.7	+0.1
LCMT	Little Creek M	57.03	28	P	P	15 25 25.6	+0.9
MNTX	Cornudas Mount	57.05	38	P	P	15 25 24.4	-0.4
R11A	Troy Canyon, C	57.15	25	P	P	15 25 25.8	+0.2
YBH	Yreka Blue Hor	57.66	17	P	P	15 25 28.7	-0.4
	comp=Z,1.4nm,0.8s,baz=237,slow=2.3,SNR=3.9						
YBH				LR	LR	15 42 10.6	
	comp=Z,36nm,19.4s,baz=235,slow=28						
	comp=Z,1.4nm,0.8s						
YBH	Yreka Blue Hor	57.66	17	IAmb	IAmb	15 25 31.4	
	comp=Z,4.6nm,1.1s						
LENM	Lemitar	57.94	34	P	P	15 25 31.2	0.0
PSUT	Pine Spring	58.03	26	P	P	15 25 32.0	+0.2
MSU	Marysvale	58.74	27	P	P	15 25 38.4	+1.5
ANMO	Albuquerque	58.80	34	LR	LR	15 44 33.3	
	comp=Z,22nm,20.8s,baz=265,slow=30						
ANMO	Albuquerque	58.80	34	P	P	15 25 37.3	0.0
ELK	Elko	59.33	24	LR	LR	15 45 45.2	
	comp=Z,64nm,19.1s,baz=260,slow=31						
ELK	Elko	59.33	24	P	P	15 25 41.6	+0.7
ELK				IAmb	IAmb	15 25 42.9	
	comp=Z,3.2nm,0.8s						
H11S2	WAKE ISLAND Hy	59.39	301	T	T	16 30 24.6	
	baz=109,slow=74						
H11S1	WAKE ISLAND Hy	59.40	301	T	T	16 30 22.9	
	baz=109,slow=74						
H11S3	WAKE ISLAND Hy	59.41	301	T	T	16 30 26.3	
	baz=109						
WVOR	Wild Horse Val	59.57	20	P	P	15 25 42.9	+0.5
WVOR				IAmb	IAmb	15 25 44.4	
	comp=Z,5.6nm,1.1s						
H11N3	WAKE ISLAND Hy	59.81	302	T	T	16 32 13.1	
	baz=122						
H11N1	WAKE ISLAND Hy	59.82	302	T	T	16 32 13.4	
	baz=122						
H11N2	WAKE ISLAND Hy	59.83	302	T	T	16 32 14.8	
	baz=122						
SRU	San Rafael Swe	59.98	28	P	P	15 25 45.8	+0.4
SRU				IAmb	IAmb	15 25 47.0	
	comp=Z,4.1nm,0.7s						
PV13	Radium Mtn., P	60.03	30	P	P	15 25 46.2	+0.4
PV13				IAmb	IAmb	15 25 48.1	
	comp=Z,6.7nm,1.5s						
PINE	Pine Mountain	60.07	18	P	P	15 25 46.8	+0.9
PINE				IAmb	IAmb	15 25 47.6	
	comp=Z,4.1nm,0.9s						
PV07	Paradox Valley	60.34	30	P	P	15 25 48.1	+0.3
PV07				IAmb	IAmb	15 25 49.6	
	comp=Z,4.1nm,0.9s						
BGU	Big Grassy Mou	60.38	25	P	P	15 25 48.0	0.0
J08A	Circle Bar Ran	60.45	20	P	P	15 25 48.7	+0.3
J08A				IAmb	IAmb	15 25 50.9	
	comp=Z,5.6nm,1.2s						
P18A	Preston Nutter	60.53	28	P	P	15 25 48.8	-0.4
P18A				IAmb	IAmb	15 25 50.8	
	comp=Z,2.2nm,0.7s						
H04A	Detroit Lake	60.54	16	P	P	15 25 49.0	+0.2
I07A	Izee	60.77	19	P	P	15 25 51.3	+0.7
I07A				IAmb	IAmb	15 25 52.5	
	comp=Z,3.9nm,0.9s						
JLU	Jordanelle	60.78	27	P	P	15 25 51.8	+0.9
JLU				IAmb	IAmb	15 25 53.1	
	comp=Z,4.1nm,0.8s						
T25A	Trinidad	61.54	34	P	P	15 25 56.4	+0.3
T25A				IAmb	IAmb	15 25 57.6	
	comp=Z,4.4nm,0.8s						
RDMU	Red Mountain	61.59	28	P	P	15 25 56.8	+0.4
RDMU				IAmb	IAmb	15 25 58.3	
	comp=Z,4.4nm,0.9s						
SMCO	Snowmass	61.73	31	P	P	15 25 58.0	+0.4
SMCO				IAmb	IAmb	15 25 59.6	
	comp=Z,4.4nm,0.9s						
O20A	White River Ci	61.86	29	P	P	15 25 59.0	+0.8
O20A				IAmb	IAmb	15 26 00.0	
	comp=Z,4.7nm,0.8s						
Q24A	Divide	62.50	32	P	P	15 26 03.3	+0.7
Q24A				IAmb	IAmb	15 26 04.4	
	comp=Z,4.4nm,0.8s						
PLID	Pearl Lake	62.81	21	P	P	15 26 04.6	+0.1
PLID				IAmb	IAmb	15 26 05.7	
	comp=Z,3.0nm,1.0s						
ECR	Eagle Creek	62.83	25	P	P	15 26 05.0	+0.3
HAWA	Hanford	62.85	18	P	P	15 26 04.7	+0.3
HAWA				IAmb	IAmb	15 26 06.0	
	comp=Z,4.0nm,0.9s						
ISCO	Idaho Springs	62.89	31	P	P	15 26 05.5	+0.4
ISCO				IAmb	IAmb	15 26 07.1	
	comp=Z,2.1nm,0.8s						
BCYI	Bear Canyon	63.08	23	P	P	15 26 06.7	+0.5
REDW	Red Top Meadow	63.30	25	P	P	15 26 08.1	+0.4
REDW				IAmb	IAmb	15 26 09.3	
	comp=Z,2.6nm,1.0s						
PDAR	Pinedale Array	63.36	26	P	P	15 26 08.3	+0.1
	comp=Z,0.6nm,0.6s,baz=180,slow=8.0,SNR=6.3						
PDAR				LR	LR	15 46 33.2	
	comp=Z,37nm,21.9s,baz=18,slow=29						
	comp=Z,0.6nm,0.6s						
N23A	Red Feather La	63.56	30	P	P	15 26 09.7	+0.1
N23A				IAmb	IAmb	15 26 11.2	
	comp=Z,3.6nm,0.8s						
RWWY	Rawlins	63.56	29	P	P	15 26 09.7	+0.1
LOHW	Long Hollow	63.61	25	P	P	15 26 10.1	+0.4
LOHW				IAmb	IAmb	15 26 11.4	
	comp=Z,3.7nm,0.8s						
MCMT	McKenzie Canyo	63.73	23	P	P	15 26 10.4	-0.1
FLWY	Flagg Ranch	63.95	25	P	P	15 26 12.2	+0.2
FLWY				IAmb	IAmb	15 26 14.1	
	comp=Z,2.8nm,0.9s						
K22A	Casper	64.63	28	P	P	15 26 15.9	-0.6
LRM	Limekiln Ridge	64.72	23	P	P	15 26 17.5	+0.4
MSO	Missoula	65.04	21	P	P	15 26 19.2	+0.3
MSO				IAmb	IAmb	15 26 21.0	
	comp=Z,3.5nm,0.9s						
NEW	Newport	65.25	18	LR	LR	15 48 42.7	
	comp=Z,33nm,19.1s,baz=281,slow=30						
NEW	Newport	65.25	18	P	P	15 26 19.9	-0.3
NEW				IAmb	IAmb	15 26 21.5	
	comp=Z,3.4nm,0.9s						
RLMT	Red Lodge	65.39	25	P	P	15 26 22.0	+0.6
RLMT				IAmb	IAmb	15 26 23.4	
	comp=Z,4.1nm,1.1s						
OGNE	Ogallala	65.57	33	P	P	15 26 22.6	+0.1
LL01	San Ignacio de	66.31	131	P	P	15 26 27.0	-0.2
344A	Westbrook Farm	66.51	47	P	P	15 26 29.1	+0.5
RSSD	Black Hills	66.92	29	P	P	15 26 31.1	-0.2
RSSD				IAmb	IAmb	15 26 32.9	
	comp=Z,4.7nm,1.4s						
LAO	LASA Array	67.92	26	P	P	15 26 38.0	+0.6
R40A	Maddies Statio	69.45	40	P	P	15 26 46.1	-0.8
R40A				IAmb	IAmb	15 26 47.1	
	comp=Z,3.6nm,0.7s						
P40A	Paris	70.33	39	P	P	15 26 51.4	-1.0
ECSD	EROS Data Cent	70.39	33	P	P	15 26 51.9	-0.8
ECSD				IAmb	IAmb	15 26 52.9	
	comp=Z,6.3nm,0.9s						
EDM	Edmonton	70.76	18	P	P	15 26 54.0	-0.7
EDM				IAmb	IAmb	15 26 55.7	
	comp=Z,6.4nm,1.1s						
KDAK	Kodiak Island	71.34	354	LR	LR	15 51 37.6	
	comp=Z,39nm,18.3s,baz=326,slow=30						
LPAZ	La Paz	71.40	103	P	P	15 27 00.2	+0.1
	comp=Z,1.9nm,0.8s,baz=235,slow=2.5,SNR=9.8						
	comp=Z,1.9nm,0.8s						
LPAZ	La Paz	71.40	103	P	P	15 26 59.6	-0.6
N41A	Harden Midland	71.77	39	P	P	15 26 59.6	-1.4
T47A	Sharon Grove	72.06	44	P	P	15 27 02.3	-0.6
L40A	Anamosa	72.37	37	P	P	15 27 03.7	-0.9
U49A	Red Boiling Sp	72.70	45	P	P	15 27 06.0	-0.7
U49A				IAmb	IAmb	15 27 07.1	
	comp=Z,3.1nm,0.8s						
GOGA	Godfrey	72.77	49	P	P	15 27 06.6	-0.6
CPCT	Cooper Cave	73.03	46	P	P	15 27 07.8	-0.9
HOM	Homer	73.11	355	P	P	15 27 07.8	-0.8
PCA	Pinnacle	73.17	1	P	P	15 27 08.4	-0.7
L42A	Oliver, Polo	73.26	38	P	P	15 27 08.9	-1.0
SPMN	Marine on St.	73.43	34	P	P	15 27 09.8	-1.1
JFWS	Jewell Farm	73.45	37	P	P	15 27 10.2	-0.9
JFWS				IAmb	IAmb	15 27 12.5	
	comp=Z,5.8nm,0.9s						
HIN	Hinchinbrook I	73.53	358	P	P	15 27 11.6	+0.4
AGMN	Agassiz Nation	73.87	30	P	P	15 27 12.5	-0.9
AGMN				IAmb	IAmb	15 27 13.6	
	comp=Z,5.6nm,1.1s						
LOGN	Logan Glacier	73.89	1	P	P	15 27 13.1	-0.3
LOGN				IAmb	IAmb	15 27 15.0	
	comp=Z,3.1nm,0.8s						
CTGM	Chitina Glacie	74.03	0	P	P	15 27 14.8	+0.6
CTGM				IAmb	IAmb	15 27 15.9	
	comp=Z,4.2nm,1.0s						
BMRM	Bremner River	74.05	359	P	P	15 27 14.8	+0.6
BMRM				IAmb	IAmb	15 27 16.2	
	comp=Z,5.0nm,0.7s						
TZTN	Tazewell	74.26	46	P	P	15 27 15.9	-0.1
VRDI	Verde Repeater	74.29	359	P	P	15 27 16.3	+0.5
RC01	Rabbit Creek A	74.39	356	P	P	15 27 15.7	-0.4
RC01				IAmb	IAmb	15 27 16.5	
	comp=Z,2.9nm,0.8s						
K43A	Burlington	74.47	38	P	P	15 27 16.4	-0.7
GLB	Gilahina Butte	74.51	359	P	P	15 27 17.3	+0.4
GLB				IAmb	IAmb	15 27 18.7	
	comp=Z,6.4nm,1.4s						
N19K	Bonanza Creek	74.51	354	P	P	15 27 17.1	+0.1
N19K				IAmb	IAmb	15 27 24.0	
	comp=Z,9.1nm,1.5s						
N18K	Kilae Creek	74.54	353	P	P	15 27 17.4	+0.4
S51A	Beattyville	74.78	45	P	P	15 27 17.4	-1.5
I42A	Draeger Farm,	74.82	37	P	P	15 27 18.3	-0.7
I42A				IAmb	IAmb	15 27 24.7	
	comp=Z,5.5nm,0.8s						
SVW2	Sparrevohn	74.91	353	P	P	15 27 18.5	-0.6
B35A	Bob, Littlefor	74.97	31	P	P	15 27 19.5	-0.3
B35A				IAmb	IAmb	15 27 20.1	
	comp=Z,3.5nm,0.8s						
E38A	The Farm, Brul	74.98	34	P	P	15 27 19.6	-0.3
KMSC	Kings Mountain	75.15	48	P	P	15 27 21.0	-0.1
KMSC				IAmb	IAmb	15 27 24.6	
	comp=Z,7.1nm,1.0s						
ULM	Lac du Bonnet	75.19	29	P	P	15 27 20.2	-0.8
	comp=Z,2.4nm,0.6s,baz=213,slow=10,SNR=3.8						
	comp=Z,2.4nm,0.6s						
ULM	Lac du Bonnet	75.19	29	P	P	15 27 20.0	-1.0
ULM				IAmb	IAmb	15 27 28.1	
	comp=Z,2.8nm,0.7s						
M27K	Edge Creek, AK	75.42	0	P	P	15 27 22.2	0.0
M26K	Nabesna, AK	75.47	360	P	P	15 27 23.4	+1.0
M31M	Drury Creek, Y	75.52	4	P	P	15 27 23.4	+0.7
V55A	Taylorsville	75.57	47	P	P	15 27 22.8	-0.7
M30M	Minto, Yukon	75.76	3	P	P	15 27 24.6	+0.5
EYMN	Ely	75.85	32	P	P	15 27 24.5	-0.4
COWI	Conover	76.00	35	P	P	15 27 25.5	-0.2
MENT	Mentasta	76.01	359	P	P	15 27 25.9	+0.5
PAX	Paxson	76.08	359	P	P	15 27 26.0	+0.1
PAX				IAmb	IAmb	15 27 27.3	
	comp=Z,3.2nm,0.9s						
L27K	Beaver Creek,	76.13	0	P	P	15 27 27.0	+0.9
BCAR	Beaver Creek A	76.13	0	P	P	15 27 27.0	+0.8
PPLA	Purkeypile	76.35	355	P	P	15 27 27.9	+0.3
PPLA				IAmb	IAmb	15 27 30.8	
	comp=Z,5.3nm,1.1s						
RND	Reindeer	76.64	357	P	P	15 27 29.1	0.0
RND				IAmb	IAmb	15 27 30.6	
	comp=Z,4.6nm,1.0s						
TRF	Thorofare Moun	76.77	356	P	P	15 27 28.9	-1.0
TRF				IAmb	IAmb	15 27 31.6	
	comp=Z,3.5nm,0.8s						
RIDG	Independent Ri	76.83	359	P	P	15 27 29.9	-0.3
RIDG				IAmb	IAmb	15 27 31.8	
	comp=Z,5.2nm,1.1s						
CAST	Castle Rocks	76.86	355	P	P	15 27 30.2	-0.1
GUMO	Guam	76.95	287	P	P	15 27 29.7	-2.1
SCRK	Sand Creek	77.06	359	P	P	15 27 32.1	+0.6
SCRK				IAmb	IAmb	15 27 33.3	
	comp=Z,3.9nm,0.9s						
SAML	Samuel	77.46	96	P	P	15 27 33.0	-1.7
BPAW	Bear Paw Mtn.	77.46	356	P	P	15 27 33.5	-0.1
BPAW				IAmb	IAmb	15 27 34.7	
	comp=Z,3.2nm,0.8s						
J26L	Joseph Creek	77.58	359	P	P	15 27 35.4	+1.0
J26L				IAmb	IAmb	15 27 36.4	
	comp=Z,5.0nm,0.8s						
J25K	Salcha River,	77.72	359	P	P	15 27 35.7	+0.5
J20K	Nowinta River	77.78	355	P	P	15 27 35.2	-0.2
CCB	Clear Creek Bu	77.83	358	P	P	15 27 35.7	0.0
EGAK	Eagle	77.85	0	P	P	15 27 36.3	+0.5
EGAK				IAmb	IAmb	15 27 37.6	
	comp=Z,4.2nm,1.0s						
IL31		77.92	358	P	P	15 27 36.4	+0.3
IL31				IAmb	IAmb	15 27 37.5	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	77.92	358	P	P	15 27 36.5	+0.3
	comp=Z,2.2nm,0.7s,baz=183,slow=6.1,SNR=33						
	comp=Z,2.2nm,0.7s						
ILAR	Eielson Array	77.92	358	P	P	15 27 36.2	+0.1
MDM	Murphy Dome	78.16	357	P	P	15 27 37.8	+0.3
MDM				IAmb	IAmb	15 27 39.0	
	comp=Z,4.9nm,0.9s						
MLY	Manley	78.37	356	P	P	15 27 39.0	+0.3
MLY				IAmb	IAmb	15 27 39.9	
	comp=Z,3.0nm,0.7s						
I49A	Point Hope	78.51	39	P	P	15 27 40.1	+0.2
I21K	Tanana	78.60	356	P	P	15 27 40.1	+0.2
I21K				IAmb	IAmb	15 27 41.4	
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	78.60	13	P	P	15 27 39.7	-0.2
	comp=Z,2.0nm,0.8s,baz=199,slow=5.4,SNR=5.1						
	comp=Z,2.0nm,0.8s						
H24K	Noodor Dome	79.03	358	P	P	15 27 42.9	+0.6
H24K				IAmb	IAmb	15 27 43.5	
	comp=Z,4.5nm,0.9s						
H21K	Melozitna Rive	79.13	356	P	P	15 27 43.3	+0.5
ASAR	Alice Springs	79.19	248	P	P	15 27 47.1	+2.9
	comp=Z,0.4nm,0.8s,baz=90,slow=4.6,SNR=3.3						
	comp=Z,0.4nm,0.8s						
WRA	Warramunga Arr	79.44	252	P	P	15 27 49.1	+3.4
	comp=Z,0.8nm,0.9s,baz=92,slow=4.1,SNR=4.7						
	comp=Z,0.8nm,0.9s						
IMAR	Indian Mountai	79.52	355	P	P	15 27 45.8	+0.8
BMAR	Burnt Mountain	80.53	359	P	P	15 27 51.8	+1.4
SADO	Sadowa	81.21	40	P	P	15 27 53.9	-0.7
SADO				IAmb	IAmb	15 28 21.6	
	comp=Z,5.1nm,1.0s						
KSPA	Keystone Colle	81.95	44	P	P	15 27 58.7	+0.2
ORCD	Orcadas	82.16	151	P	P	15 27 59.0	-0.3
ORCD				IAmb	IAmb	15 28 00.2	
	comp=Z,4.1nm,0.9s						
TRQ	Mont Tremblant	84.75	40	P	P	15 28 12.0	-0.9
A36M	Sachs Harbour	85.86	5	P	P	15 28 18.2	+0.5
VNA2	Neumayer--Watz	90.57	167	P	P	15 28 41.5	+1.0
	baz=250,slow=3.0						
FRB	Frobisher Bay	94.80	25	LR	LR	16 06 42.9	
	comp=Z,38nm,20.6s,baz=238,slow=32						
CMAR	Chiang Mai Arr	121.11	284	PKP	PKiKP	15 34 34.4	+1.9
	comp=Z,0.3nm,0.3s,baz=29,slow=2.1,SNR=5.4						
ARCES	ARCESS Array B	123.28	5	PKP	PKPdf	15 34 34.9	-0.2
	comp=Z,4.0nm,1.1s,baz=316,slow=5.0,SNR=5.0						
ZALV	Zalesovo Beam	125.18	328	PKP	PKiKP	15 34 39.8	+0.3
	comp=Z,1.2nm,0.7s,baz=341,slow=3.1,SNR=6.4						
MKAR	Makanchi Array	129.99	321	PKP	PKiKP	15 34 50.1	+0.8
	comp=Z,0.4nm,0.6s,baz=99,slow=1.0,SNR=5.6						
FINES	FINESS Array B	131.20	7	PKP	PKiKP	15 34 51.3	0.0
	comp=Z,1.1nm,0.6s,baz=336,slow=4.2,SNR=7.5						
AKASG	Malin Array Be	142.07	9	PKP	PKPdf	15 35 11.4	+0.6
	comp=Z,0.2nm,0.3s,baz=8.2,slow=1.8,SNR=4.1						
TORD	Torodi Ar. Bea	144.95	86	PKP	PKPab	15 35 15.3	-0.8
	comp=Z,4.9nm,0.9s,baz=292,slow=3.2,SNR=21						
BRTR	Keskin Array B	153.44	7	PKPbc	PKPbc	15 35 37.7	+0.1
	comp=Z,0.8nm,0.7s,baz=336,slow=3.2,SNR=4.7						

IDC ***29*** *15:16:11.3±2.1, 3°.57S×135°.73E, h0*^{km}*, mb3.6/2,*
mbtmp3.8/5, ML3.7/3, MS3.8/2, Error ellipse: s-maj=68.1km

s-min=25.0km az=62.0

ISC 29 15:16:12.4±1.2**,3°.6S**±0°.1×**135°.7E**±0°.1**,h10**^{km}**,n19,** σ**3**^{s}.**11**/17**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.48	282	P	Pb	15 17 10.3	-3.9
SIJI	Sorong	5.18	302	Pn	Pn	15 17 32.5	+2.4
	4.4nm,0.3s,baz=322,slow=3.3,SNR=74						
SIJI				Sn	Sn	15 18 28.4	-1.5
	6.2nm,0.3s,baz=149,slow=23,SNR=15						
	12nm,0.2s						
KDU	Kakadu	9.54	199	P	Pn	15 18 33.8	+3.9
SANI	Sanana	9.79	279	P	Pn	15 18 36.5	+3.1
	11nm,0.7s						
MTN	Manton Dam	10.19	206	P	Pn	15 18 44.1	+5.2
COEN	Coen	12.66	145	P	Pn	15 19 12.3	-0.4
KNRA	Kununurra	13.76	209	P	Pn	15 19 31.1	+3.3
WRAB	Tennant Creek	16.25	184	P	P	15 20 03.4	-0.7
WRA	Warramunga Arr	16.26	184	Pn	Pn	15 19 59.9	-1.2
	0.2nm,0.3s,baz=0.9,slow=13,SNR=14						
WRA				Sn	Sn	15 22 51.2	-11
	0.3nm,0.3s,baz=7.3,slow=23,SNR=5.2						
	0.5nm,0.4s						
MTSU	Mount Surprise	16.72	150	P	P	15 20 08.7	-0.6
QIS	Mount Isa	17.26	167	P	P	15 20 16.2	+1.0
CTA	Charters Tower	19.34	149	P	Pn	15 20 38.7	-0.6
	0.1nm,0.3s,baz=319,slow=10,SNR=1.9						
	2.8nm,0.9s						
ASAR	Alice Springs	19.99	185	P	Pn	15 20 47.2	+0.2
	3.2nm,0.7s,baz=12,slow=10,SNR=42						
ASAR				S	S	15 24 22.4	-7.9
	0.6nm,0.8s,baz=8.0,slow=27,SNR=4.5						
	3.2nm,0.7s						
WRKA	Warakurna	22.43	198	P	P	15 21 13.3	+1.6
OOD	Oodnadatta	24.03	180	P	P	15 21 29.9	+2.2
INKA	Innaminka	24.46	169	P	P	15 21 33.3	+1.6
	12nm,2.0s						
JNU	Nakatsue	36.83	353	LR	LR	15 37 20.2	
	comp=Z,221nm,20.5s,baz=250,slow=34						
YAK	Yakutsk	65.64	357	LR	LR	15 53 33.9	
	comp=Z,53nm,20.9s,baz=268,slow=34						
MKAR	Makanchi Array	68.69	324	P	P	15 27 16.0	-0.3
	0.2nm,0.5s,baz=113,slow=7.6,SNR=2.7						
	0.2nm,0.5s						

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*IASPEI **29** 15:29:52.5±0.9,38°.69N±0°.02×26°.66E±0°.02,h6^{km}±7^{km}, Error ellipse: s-maj=3.5km s-min=2.7km az=86.5,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ISK **29** 15:29:52.4,38°.70N×26°.67E,h4^{km},ML2.4/5*

*ATH **29** 15:29:52.7,38°.68N×26°.67E,h30^{km}±1^{km},ML2.3/8,Error ellipse: s-maj=3.3km s-min=1.2km az=263.0*

*DDA **29** 15:29:52.6±0.0,38°.69N×26°.66E,h7^{km}±1^{km},ML2.4*

*THE **29** 15:29:53.2,38°.67N×26°.66E,h5^{km}±6^{km},ML2.5/4,Error ellipse: s-maj=6.3km s-min=0.5km az=74.0*

ISC 29 15:29:52.6±0.9**,38°.69N**±0°.02×**26°.67E**±0°.02**,h6**^{km}±6^{km}**, n40,** σ**0**^{s}.**63**/64**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	Foa	0.06	62	PG	Pg	15 29 53.8	-0.4
FOCM				SG	Sg	15 29 54.9	-0.4
CAND	Candarli	0.29	22	PG	Pg	15 29 58.8	+0.5
URLA	Izmir	0.33	190	P	Pg	15 29 59.7	+0.7
URLA				*i* AML	AML	15 30 07.0	
	comp=E,419nm,0.3s						
BLCB	Balcova	0.42	135	P	Pg	15 30 01.2	+0.4
BLCB				S	Sg	15 30 07.6	+1.3
BLCB	Balcova	0.42	135	PG	Pg	15 30 01.5	+0.7
BLCB				SG	Sb	15 30 07.9	-1.2
ZEDA	zmir-Bergama	0.43	49	P	Pg	15 30 01.2	+0.3
ZEDA				S	Sg	15 30 07.4	+0.9
DKL	Dikili	0.43	26	PG	Pg	15 30 01.3	+0.4
DKL				SG	Sg	15 30 07.5	+1.0
ZEYE	Izmir, Urla-Ze	0.47	196	P	Pg	15 30 02.0	+0.4
ZEYE				S	Sb	15 30 09.9	-0.4
ZEYE				*i* AML	AML	15 30 10.0	
	comp=N,236nm,0.3s						
ZEYE				*i* AML	AML	15 30 11.0	
	comp=E,312nm,0.3s						
CHOS	Chios island	0.56	238	P	Pb	15 30 04.4	-0.6
CHOS				S	Sb	15 30 12.4	-0.9
CHOS				AML	AML	15 30 12.5	
	comp=N,980µm,0.3s						
CHOS				AML	AML	15 30 18.9	
	comp=E,1486µm,0.2s						
CHOS	Chios island	0.56	238	P	Pg	15 30 04.3	+0.8
CHOS				S	Sb	15 30 12.2	-1.1
	comp=E,615nm,0.2s						
CHOS	Chios island	0.56	238	PG	Pb	15 30 04.4	-0.6
CHOS				SG	Sb	15 30 12.5	-0.8
PRK	Paraskevi	0.64	331	P	Pb	15 30 06.4	+0.2
PRK				S	Sb	15 30 15.4	+0.1
PRK				AML	AML	15 30 17.5	
	comp=E,797µm,0.5s						
PRK				AML	AML	15 30 20.9	
	comp=N,536µm,0.7s						
PRK	Paraskevi	0.64	331	P	Pb	15 30 06.2	0.0
PRK				S	Sb	15 30 15.0	-0.4
	comp=N,525nm,0.7s						
SIGR	SIGRI	0.82	310	P	Pg	15 30 08.7	+0.3
SIGR				S	Sb	15 30 21.6	+1.0
SIGR				AML	AML	15 30 27.2	
	comp=N,716µm,0.6s						
SIGR				AML	AML	15 30 27.6	
	comp=E,656µm,0.6s						
SIGR	SIGRI	0.82	310	P	Pg	15 30 08.7	+0.3
SIGR				S	Sb	15 30 21.6	+1.0
	comp=E,345nm,0.6s						
GPNR	Gulpinar-Canak	0.87	332	PG	Pg	15 30 09.7	+0.3
BUHA	Balikesir, Bur	0.87	21	P	Pg	15 30 08.6	-0.9
BUHA				S	Sb	15 30 23.0	+0.8
BUHA				*i* AML	AML	15 30 25.0	
	comp=E,93nm,0.5s						
BUHA				*i* AML	AML	15 30 26.0	
	comp=E,94nm,0.5s						
PSRA	Psara	0.88	261	P	Pb	15 30 10.8	+0.6
PSRA				S	Sn	15 30 23.4	-1.1
PSRA				AML	AML	15 30 25.5	
	comp=N,851µm,0.3s						
PSRA				AML	AML	15 30 25.6	
	comp=E,923µm,0.2s						
KOCA	Canakkale, Ayv	0.91	333	P	Pg	15 30 10.2	0.0
KOCA				*i* AML	AML	15 30 30.0	
	comp=E,131nm,0.5s						
KOCA				*i* AML	AML	15 30 30.0	
	comp=E,155nm,0.4s						
AKHS	Akhisar	0.92	78	P	Pg	15 30 10.5	+0.2
AKHS				*i* AML	AML	15 30 26.0	
	comp=E,186nm,0.5s						
AKS	Akhisar	0.92	78	PG	Pb	15 30 10.7	-0.2
GOMA	Golmarmara-Man	0.98	88	PG	Pn	15 30 12.5	-0.4
SMG	Samos	0.98	172	P	Pg	15 30 11.5	0.0
SMG				S	Sb	15 30 25.8	+0.5
SMG				AML	AML	15 30 28.5	
	comp=E,494µm,0.4s						
SMG				AML	AML	15 30 29.3	
	comp=N,939µm,0.3s						
SMG	Samos	0.98	172	P	Pg	15 30 11.6	0.0
SMG				S	Sb	15 30 25.8	+0.5
	comp=N,360nm,0.4s						
BAYC	CANAKKALE_Bayr	1.06	355	P	Pg	15 30 12.5	-0.4
BAYC				S	Sb	15 30 27.4	-0.1
STEP	BALIKESIR_Sava	1.07	50	P	Pb	15 30 13.6	0.0
STEP				S	Sn	15 30 29.7	+0.2
STEP				*i* AML	AML	15 30 30.0	
	comp=N,191nm,0.4s						
STEP				*i* AML	AML	15 30 32.0	
	comp=N,163nm,1.2s						
GCAM	G?zelcaml?	1.08	155	P	Pg	15 30 13.3	-0.1
EZN	Ezine	1.17	347	PN	Pg	15 30 15.1	0.0
AYDB	Zeytinkoy-Aydi	1.21	127	PN	Pg	15 30 15.9	0.0
BOZC	Bozcaada	1.25	338	P	Pn	15 30 16.0	-0.7
BOZC				S	Sn	15 30 33.7	-0.1
BOZC				*i* AML	AML	15 30 38.0	
	comp=N,74nm,0.4s						
DDIM	Aydin, Didim	1.31	160	P	Pg	15 30 18.9	+1.2
DDIM				*i* AML	AML	15 30 39.0	
	comp=N,55nm,0.7s						
AYDN	Tasoluk	1.40	137	P	Pn	15 30 18.8	+0.1
AYDN				S	Sg	15 30 37.6	0.0
ECEA	Canakkale, Ece	1.41	344	P	Pg	15 30 20.4	+0.8
ECEA				S	Sg	15 30 39.2	+1.3
ECEA				*i* AML	AML	15 30 41.0	
	comp=N,92nm,0.5s						
ECEA				*i* AML	AML	15 30 42.0	
	comp=N,69nm,0.4s						
KULA	Kula-Manisa	1.57	96	PN	Pn	15 30 20.9	-0.2
DEMI	Demirci	1.64	77	P	Pb	15 30 23.3	0.0
DEMI				*i* AML	AML	15 30 47.0	
	comp=N,36nm,0.4s						
MLSB	Milas	1.64	147	PN	Pb	15 30 22.9	-0.4
LIA	Limnos Island	1.67	317	P	Pn	15 30 22.0	-0.4
LIA				S	Sn	15 30 43.3	-0.9
LIA				AML	AML	15 30 48.5	
	comp=N,57µm,0.4s						
LIA				AML	AML	15 30 52.1	
	comp=E,93µm,0.7s						
BODT	Bodrum	1.70	162	PN	Pn	15 30 23.3	+0.5
SMTH	Samothraki Isl	1.99	334	P	Pn	15 30 26.3	-0.4
SMTH				S	Sn	15 30 51.2	-0.8
SMTH				AML	AML	15 31 01.9	
	comp=E,32µm,0.4s						
SMTH				AML	AML	15 31 02.7	
	comp=N,32µm,0.4s						
ALN	Alexandroupoli	2.26	348	P	Pn	15 30 29.9	-0.6
ALN				AML	AML	15 31 08.6	
	comp=N,44µm,0.6s						
ALN				AML	AML	15 31 08.7	
	comp=E,27µm,0.4s						

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*MAN **29** 15:30:30.3,14°.79N×119°.43E,h3^{km},mb4.7,ML3.6,MS3.5, Hypocentre not reviewed by the ISC*

*IDC **29** 15:30:36.1±1.7,13°.75N×119°.72E,h0^{km},mb3.5/3, mbtmp3.6/3,Error ellipse: s-maj=34.5km s-min=21.9km az=162.0*

ISC 29 15:30:32.5±1.6**,14°.77N**±0°.04×**119°.3E**±0°.1**,h40**^{km}±12^{km}**, n15,** σ**1**^{s}.**64**/22**,6C-5D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	1.40	137	⇓*e*P	Pn	15 30 54.2	-1.4
LUBP				*e*S	Sn	15 31 11.2	-1.7
MACP	Maragondon, Ca	1.50	110	⇓*e*P	Pn	15 30 55.8	-1.1
MACP				*e*S	Sn	15 31 15.5	+0.3
TGY	Tagaytay City	1.75	112	Pn	Pn	15 31 00.4	-0.1
	31nm,0.3s,baz=222,slow=19,SNR=6.9						
TGY				Sn	Sn	15 31 19.7	-1.9
	43nm,0.3s,baz=333,slow=23,SNR=3.6						
TGY	Tagaytay City	1.75	112	⇓*e*P	Sn	15 31 23.8	+2.2
SMPP	San Manuel, Pa	1.94	45	⇓*e*P	Pn	15 31 01.8	-1.2
SMPP				*e*S	Sn	15 31 27.3	+1.2
PCPH	Palayan	1.94	66	⇑*e*P	Pn	15 31 01.8	-1.2
PGP	Puerto Galera	2.07	127	⇑*e*P	Pn	15 31 05.3	+0.5
LQP	Lukban	2.30	106	⇑*e*P	Pn	15 31 07.8	-0.3
BALP	Baler	2.43	66	⇑*e*P	Pn	15 31 09.5	-0.3
BALP				*e*S	Sn	15 31 38.7	+0.4
SAMP	Sagada Mountai	2.79	34	⇑*e*P	Pn	15 31 15.0	+0.3
SAMP				*e*S	Sn	15 31 48.5	+1.4
SJMP	San Jose	2.92	142	⇓*e*P	Pn	15 31 19.0	+2.6
SJMP				*e*S	Sn	15 31 54.0	+3.7
ENPP	El Nido	3.55	177	⇑*e*P	Pn	15 31 25.9	+0.7
ENPP				*e*S	Sn	15 32 03.4	-2.5
CMAR	Chiang Mai Arr	19.81	283	P	Pn	15 35 16.0	+14
	0.4nm,0.6s,baz=102,slow=7.6,SNR=5.8						
	0.4nm,0.6s						
WRA	Warramunga Arr	37.55	156	P	P	15 37 42.7	-0.5
	1.1nm,0.8s,baz=337,slow=9.5,SNR=4.6						
	1.1nm,0.8s						
ASAR	Alice Springs	40.80	159	P	P	15 38 10.4	+0.1
	1.1nm,0.7s,baz=336,slow=7.4,SNR=11						
	1.1nm,0.7s						

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*IDC **29** 15:31:16.9±0.7,24°.41N×125°.20E,h0^{km},mb4.1/22, mbtmp4.1/23,ML3.3/1,MS3.5/11,Error ellipse: s-maj=18.2km s-min=16.3km az=90.0*

*JMA **29** 15:31:21.4±0.2,24°N±1°×125°.3E±0°.7,h41^{km}±4^{km}, MD4.2/11,MV4.1/11,NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

*NIED **29** 15:31:21.4,24°.32N×125°.25E,h41^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-1.12; $M_{\phi\phi}$0.17; $M_{r\theta}$3.78; $M_{\theta\phi}$-0.98; $M_{\phi r}$1.90; Fault plane solution: $M_0$4.42000×10^{15} NP1: ϕ_s237.00000°,δ9.00000°,λ84.00000°. NP2:ϕ_s63.00000°, δ81.00000°,λ91.00000°.*

*NEIC **29** 15:31:23.0±2.1,24°.29N±0°.10×125°.19E±0°.08,h38^{km}±8^{km}, mb4.6/59 Error ellipse: s-maj=15.1km s-min=9.3km az=157.0*

ISC 29 15:31:22.8±0.5**,24°.37N**±0°.06×**125°.21E**±0°.04**,h39**^{km}±3^{km}**, n167,** σ**1**^{s}.**44**/143**,mb4.5**/57**,MS3.8**/13**,3C-3D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.39	17	*i* P	Pn	15 31 31.1	-0.9
JMJ2				S	Sn	15 31 38.2	-0.3
JMJ2	Miyako jima3	0.39	17	A	A	15 31 31.1	
	comp=E,57nm,2.8s,comp=E,28nm,1.2s						
JOGS	Gusukube	0.43	25	*i* P	Pn	15 31 31.7	-0.9
JOGS				S	Sn	15 31 38.7	-0.8
JOGS	Gusukube	0.43	25	A	A	15 31 31.7	
	comp=E,50nm,0.7s,comp=E,31nm,0.9s						
JIRB	Irabujima	0.46	356	*i* P	Pn	15 31 32.0	-1.0
JIRB				S	Sn	15 31 39.7	-0.4
JIRB	Irabujima	0.46	356	A	A	15 31 32.0	
	comp=E,27nm,1.7s,comp=E,18nm,0.9s						
JTJ	Tarama	0.53	301	*i* P	Pn	15 31 33.2	-0.8
JTJ				*e*S	Sn	15 31 42.4	+0.5
JTJ	Tarama	0.53	301	A	A	15 31 33.2	
	comp=E,18nm,2.2s,comp=E,20nm,1.7s						
JIKM	Ikemajima	0.56	4	*i* P	Pn	15 31 33.6	-0.8
JIKM				S	Sn	15 31 42.7	+0.3
JIKM	Ikemajima	0.56	4	A	A	15 31 33.6	
	comp=E,38nm,0.8s,comp=E,19nm,1.2s						
JISG	Ishigakijimahi	0.84	285	*i* P	Pn	15 31 37.4	-0.8
JISG				*e*S	Sn	15 31 50.4	+1.0
JISG	Ishigakijimahi	0.84	285	A	A	15 31 37.4	
	comp=E,18nm,0.5s,comp=E,22nm,0.5s						
JIJ	Ishigaki jima	0.97	270	*i* P	Pn	15 31 39.3	-0.6
JIJ				S	Sn	15 31 53.7	+1.2
JIJ	Ishigaki jima	0.97	270	A	A	15 31 39.3	
	comp=E,7.0nm,1.5s,comp=E,6.0nm,0.6s						
JKRS	Kuro-shima	1.10	264	*i* P	Pn	15 31 42.0	+0.3
JKRS				*e*S	Sn	15 31 58.1	+2.5
JKRS	Kuro-shima	1.10	264	A	A	15 31 42.0	
	comp=E,17nm,1.4s,comp=E,15nm,2.1s						
HATJ	Hateruma jima	1.32	257	P	Pn	15 31 44.4	-0.3
HATJ	Hateruma jima	1.32	257	A	A	15 31 44.4	
	comp=E,12nm,3.2s,comp=E,12nm,1.9s						
IRIF	Iriomote-Funau	1.35	269	*i* P	Pn	15 31 45.2	+0.1
IRIF	Iriomote-Funau	1.35	269	A	A	15 31 45.2	
	comp=E,16nm,0.7s,comp=E,13nm,1.5s						
YOJ	Yonaguni jima	2.00	273		Pn	15 31 55.2	+1.1
YOJ	Yonaguni jima	2.00	273	A	A	15 31 54.4	
	comp=E,4.0nm,2.3s,comp=E,2.0nm,5.8s						
NACB	Ninganchiao	3.30	267		Pn	15 32 10.9	-1.1
TATO	Taipei	3.44	281		Pn	15 32 15.2	+1.4
YHNB	Yeheng	3.50	276		Pn	15 32 15.6	+0.8
JOW	Kunigami	3.70	48	Pn	Pn	15 32 17.1	-0.3
	4.6nm,0.3s,baz=139,slow=20,SNR=14						
JOW				Sn	Sn	15 33 06.8	+7.0
	7.9nm,0.3s,baz=109,slow=25,SNR=1.3						
	11nm,0.3s						
JOW	Kunigami	3.70	48	Pn	Pn	15 32 17.3	-0.2
YULB	Yu-li	3.71	256		Pn	15 32 15.2	-2.4
SSLB	Suanglung	3.93	262	Pn	Pn	15 32 19.4	-1.3
TWG	Pinlang	4.09	249		Pn	15 32 19.9	-3.0
TPUB	Ta-pu	4.32	257		Pn	15 32 25.5	-0.5
KNMB	Chin-men Tao	6.21	272	Pn	Pn	15 32 51.9	-0.1
NJ2	Nanjing	9.48	325	*e*P	Pn	15 33 31.8	-5.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LQP	Lukban	10.77	199	⇑*e*P	Pn	15 33 54.4	-0.3
WHN	Wuhan	11.43	305	⇑P	Pn	15 33 58.5	-5.0
KSRS	Korea Array	13.25	9	Pn	Pn	15 34 29.6	+1.3
	comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=6.4						
DL2	Dalian	14.81	349	P	P	15 34 55.5	+0.8
DL2				S	S	15 37 45.0	-4.4
DL2				pmax	pmax		
	comp=Z,32nm,0.7s						
DL2				pmax	pmax		
	comp=Z,54nm,3.9s						
DL2				LR	LR		
	comp=N,130nm,11.1s						
DL2				LR	LR		
	comp=E,130nm,9.0s						
DL2				LR	LR		
	comp=Z,170nm,12.4s						
JGF	Kuroka	15.35	40		P	15 35 00.6	-0.2
JHJ	Hachijo jima 2	15.46	52	LR	LR	15 40 30.2	
	comp=Z,64nm,19.4s,baz=270,slow=36						
HNS	HongShan	15.79	328	⇓P	P	15 35 07.8	+2.1
HNS				S	S	15 38 09.8	+0.2
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
HNS				LR	LR		
	comp=N,170nm,13.6s						
HNS				LR	LR		
	comp=E,270nm,15.7s						
HNS				LR	LR		
	comp=Z,280nm,18.4s						
MAJO	Matsushiro	16.50	40		P	15 35 14.4	+0.9
MJAR	Matsushiro Arr	16.50	40	Pn	P	15 35 14.6	+1.0
	comp=Z,0.1nm,0.3s,baz=221,slow=12,SNR=16						
MJAR	Matsushiro Arr	16.50	40	P	P	15 35 13.9	+0.3
MJB9	Matsu-Tunnel	16.50	40		P	15 35 14.3	+0.7
DAV	Davao City (W)	17.20	179	LR	LR	15 41 48.3	
	comp=Z,129nm,20.1s,baz=340,slow=37						
JYT	Yasato	17.50	44		Pn	15 35 25.2	+1.4
JMM	Marumori	18.92	41	P	P	15 35 38.9	-1.3
HHC	Hu-ho-hao-te	20.01	328	*e*P	Pn	15 35 56.0	+1.8
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=N,380nm,12.4s						
HHC				LR	LR		
	comp=E,340nm,12.7s						
HHC				LR	LR		
	comp=Z,440nm,13.7s						
KMI	Kunming	20.42	277	⇑P	Pn	15 36 02.8	+3.6
KMI				pmax	pmax		
	comp=Z,21nm,0.7s						
JTM	Tenmabayashi	21.08	35	P	P	15 36 02.9	-0.8
JTM				IAmb	IAmb	15 36 20.3	
	comp=Z,31nm,1.0s						
PZH	PanZhiHua	21.29	281	P	P	15 36 07.5	+1.3
PZH				S	S	15 40 05.0	+4.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,5.9s						
PZH				LR	LR		
	comp=N,290nm,16.9s						
PZH				LR	LR		
	comp=E,530nm,16.9s						
PZH				LR	LR		
	comp=Z,770nm,19.6s						
GUMO	Guam	21.43	116	LR	LR	15 42 34.8	
	comp=Z,91nm,20.5s,baz=273,slow=32						
LZH	Lanzhou	21.79	307	sP	sP	15 36 32.0	+5.5
LZH	Lanzhou	21.79	307	LR	LR		
	comp=Z,250nm,11.9s						
LZH	Lanzhou	21.79	307	LR	LR		
	comp=E,250nm,12.5s						
LZH	Lanzhou	21.79	307	LR	LR		
	comp=N,190nm,13.0s						
LZH	Lanzhou	21.79	307	pmax	pmax		
	comp=Z,25nm,1.5s						
LZH	Lanzhou	21.79	307	pmax	pmax		
	comp=Z,110nm,5.4s						
LZH	Lanzhou	21.79	307	*e*P	P	15 36 13.8	+2.2
LZH	Lanzhou	21.79	307	pP	pP	15 36 26.5	+5.0
ERM	Erimo	23.06	36	P	P	15 36 25.0	+0.3
ERM				IAmb	IAmb	15 36 42.5	
	comp=Z,28nm,0.9s						
ASAJ	Asahikawa	24.30	32	P	P	15 36 35.3	-1.2
	comp=Z,4.9nm,0.8s,baz=240,slow=8.6,SNR=7.0						
	comp=Z,4.9nm,0.8s						
JKA	Kamikawa-asahi	24.30	32	P	P	15 36 35.3	-1.2
JKA	Kamikawa-asahi	24.30	32	IAmb	IAmb	15 36 55.5	
	comp=Z,18nm,1.2s						
CMAR	Chiang Mai Arr	25.12	262	P	P	15 36 45.0	+0.7
	comp=Z,0.8nm,0.7s,baz=68,slow=8.0,SNR=6.4						
CMAR				LR	LR	15 47 51.5	
	comp=Z,57nm,19.4s,baz=25,slow=40						
	comp=Z,0.8nm,0.7s						
KLR	Kul'dur	25.34	10	P	P	15 36 43.7	-2.2
	comp=Z,0.8nm,0.8s,baz=234,slow=6.5,SNR=3.6						
KLR				LR	LR	15 48 19.2	
	comp=Z,67nm,18.6s,baz=200,slow=40						
	comp=Z,0.8nm,0.8s						
GTA	Gaotai	26.15	311	⇓P	P	15 36 53.0	-0.5
GTA				pP	pP	15 36 59.8	-4.3
GTA				sP	sP	15 37 03.0	-6.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,5.8s						
GTA				LR	LR		
	comp=N,100nm,16.0s						
GTA				LR	LR		
	comp=E,88nm,14.9s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
SONM	Songino Array	27.77	332	P	P	15 37 06.6	-1.4
	comp=Z,0.6nm,0.3s,baz=155,slow=11,SNR=4.8						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	27.77	332	P	P	15 37 07.4	-0.6
TAPN	Taplejung	33.79	283	*e*P	P	15 38 02.5	+1.0
ODAN	Odare	34.11	282	*e*P	P	15 38 05.0	+0.8
RAMN	Ramite	34.81	283	*e*P	P	15 38 10.8	+0.5
JIRN	Jiri	35.12	284	*e*P	P	15 38 13.3	+0.2
GUN	Gumba	35.38	284	*e*P	P	15 38 16.1	+0.8
PKI	Pulchoki	35.82	284	*e*P	P	15 38 19.3	+0.3
PKIN	Phulchoki	35.83	284	*e*P	P	15 38 19.3	+0.2
DMN	Daman	36.08	284	*e*P	P	15 38 21.9	+0.7
WMQ	Urumqi	36.23	312	*e*P	P	15 38 22.8	+0.8
WMQ				pP	sP	15 38 37.0	-0.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GKN	Gorkha	36.47	285	*e*P	P	15 38 24.8	+0.4
DANN	Dangsing	37.22	285	*e*P	P	15 38 31.8	+0.8
	comp=Z,36nm,0.9s						
KOLN	Koldanda	37.40	284	*e*P	P	15 38 33.0	+0.6
PEA0B	Petropavlovsk-	37.72	32	P	P	15 38 34.5	+0.1
PETK	Petropavlovsk-	37.72	32	P	P	15 38 34.5	0.0
	comp=Z,1.1nm,0.6s,baz=167,slow=2.1,SNR=4.4						
PETK				LR	LR	15 55 50.3	
	comp=Z,39nm,18.4s,baz=242,slow=39						
	comp=Z,1.1nm,0.6s						
PYUN	Piuthan	37.91	285	*e*P	P	15 38 37.6	+0.8
	comp=Z,32nm,0.8s						
PET	Petropavlovsk	38.13	33	P	P	15 38 37.9	0.0
H11N1	WAKE ISLAND Hy	38.81	88	T	T	16 20 18.8	
	baz=283,slow=74,SNR=6.1						
H11N2	WAKE ISLAND Hy	38.81	88	T	T	16 20 18.4	
	baz=283,slow=74,SNR=6.1						
H11N3	WAKE ISLAND Hy	38.83	88	T	T	16 20 18.9	
	baz=283,slow=74,SNR=7.3						
MA2	Magadan	39.48	20	LR	LR	15 55 24.8	
	comp=Z,47nm,20.5s,baz=184,slow=37						
MK31	Makanchi Array	40.80	314	P	P	15 38 59.8	-0.6
MKAR	Makanchi Array	40.80	314	P	P	15 39 00.1	-0.3
	comp=Z,4.4nm,0.3s,baz=98,slow=9.6,SNR=140						
MKAR				PcP	PcP	15 41 00.7	-0.2
	comp=Z,0.3nm,0.6s,baz=151,slow=2.8,SNR=2.5						
	comp=Z,4.4nm,0.3s						
MKAR	Makanchi Array	40.80	314	P	P	15 38 60.0	-0.4
MAKZ	Makanchi	41.01	314	P	P	15 39 01.4	-0.7
MAKZ				IAmb	IAmb	15 39 02.9	
	comp=Z,14nm,1.2s						
ZAA0	Zalesovo Array	42.14	325	P	P	15 39 09.3	-1.8
ZALV	Zalesovo Beam	42.14	325	P	P	15 39 09.8	-1.3
	comp=Z,3.8nm,0.5s,baz=113,slow=8.9,SNR=23						
	comp=Z,3.8nm,0.5s						
ZALV	Zalesovo Beam	42.14	325	P	P	15 39 09.2	-2.0
KDJ	Kajisay	43.29	306	P	P	15 39 22.2	+1.3
KDJ				IAmb	IAmb	15 39 22.6	
	comp=Z,6.5nm,0.8s						
KSH	Kashi	43.89	302	P	P	15 39 30.3	+4.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	44.34	319	P	P	15 39 28.2	-0.8

KURK				IAmb	IAmb	15 39 30.0	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**44.77**	**168**	P	**P**	**15 39 31.7**	**-1.0**
WB0				IAmb	IAmb	15 39 43.0	
	comp=Z,7.9nm,1.1s						
WRAB	**Tennant Creek**	**44.92**	**168**	P	**P**	**15 39 33.0**	**-1.0**
WRAB				IAmb	IAmb	15 39 53.5	
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**44.93**	**168**	P	**P**	**15 39 33.3**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=348,slow=8.8,SNR=12						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**44.93**	**168**	P	**P**	**15 39 33.5**	**-0.5**
WB2	**Warramunga Arr**	**44.93**	**168**	P	**P**	**15 39 33.2**	**-0.8**
WR0	**Warramunga Arr**	**44.99**	**168**	P	**P**	**15 39 33.6**	**-0.8**
PALK	**Pallekele**	**45.83**	**256**	LR	LR	16 00 05.3	
	comp=Z,117nm,18.1s,baz=197,slow=38						
PALK	**Pallekele**	**45.83**	**256**	P	**P**	**15 39 39.3**	**-2.0**
GAR	**Garm**	**48.25**	**301**	P	**P**	**15 39 60.0**	**-0.1**
KK31	**Karatay Array**	**48.29**	**307**	P	**P**	**15 40 00.8**	**+0.6**
KK31				IAmb	IAmb	15 40 01.9	
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**48.29**	**307**	P	**P**	**15 40 00.9**	**+0.8**
KKAR	**Karatay Array**	**48.29**	**307**	P	**P**	**15 40 00.8**	**+0.7**
ASAR	**Alice Springs**	**48.49**	**169**	P	**P**	**15 40 01.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=355,slow=8.2,SNR=18						
	comp=Z,0.7nm,0.5s						
CHGR	**Chuyangaron**	**49.16**	**301**	P	**P**	**15 40 07.6**	**+0.6**
KBL	**Kabul**	**49.40**	**295**	P	**P**	**15 40 09.1**	**0.0**
BRVK	**Borovoye**	**49.95**	**320**	P	**P**	**15 40 12.8**	**+0.1**
NRIK	**Noril'sk**	**50.22**	**344**	P	**P**	**15 40 13.4**	**-1.0**
	comp=Z,2.1nm,0.4s,baz=122,slow=8.4,SNR=3.8						
	comp=Z,2.1nm,0.4s						
ABKAR	**Akbulak array**	**55.95**	**314**	P	**P**	**15 40 57.0**	**+0.1**
ARU	**Arti**	**57.18**	**323**	P	**P**	**15 41 04.9**	**-0.7**
ARU				IAmb	IAmb	15 41 05.9	
	comp=Z,5.0nm,0.8s						
GEYT	**Alibeck**	**57.87**	**301**	P	**P**	**15 41 11.6**	**+0.7**
	comp=Z,5.1nm,0.6s,baz=69,slow=5.1,SNR=8.6						
	comp=Z,5.1nm,0.6s						
GEYT	**Alibeck**	**57.87**	**301**	P	**P**	**15 41 11.8**	**+1.0**
GEYT				IAmb	IAmb	15 41 13.1	
	comp=Z,4.9nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**57.87**	**301**	P	**P**	**15 41 11.6**	**+0.8**
ANM	**Nome**	**59.44**	**28**	P	**P**	**15 41 22.8**	**+1.5**
ANM				IAmb	IAmb	15 41 35.1	
	comp=Z,4.1nm,1.0s						
J20K	**Nowinta River**	**64.30**	**29**	P	**P**	**15 41 57.2**	**+3.3**
J20K				IAmb	IAmb	15 42 07.9	
	comp=Z,3.7nm,0.7s						
K20K	**Telida**	**64.38**	**30**	P	**P**	**15 41 55.8**	**+1.3**
K20K				IAmb	IAmb	15 42 09.3	
	comp=Z,4.8nm,1.2s						
IMAR	**Indian Mountai**	**64.38**	**27**	P	**P**	**15 41 55.7**	**+1.3**
H21K	**Melozitna Rive**	**64.78**	**27**	P	**P**	**15 41 58.8**	**+1.8**
H21K				IAmb	IAmb	15 42 01.5	
	comp=Z,4.4nm,0.8s						
I21K	**Tanana**	**65.16**	**27**	P	**P**	**15 42 00.2**	**+0.7**
I21K				IAmb	IAmb	15 42 23.1	
	comp=Z,4.5nm,1.0s						
BPAW	**Bear Paw Mtn.**	**65.68**	**29**	P	**P**	**15 42 06.1**	**+3.2**
BPAW				IAmb	IAmb	15 42 17.0	
	comp=Z,9.4nm,1.5s						
MLY	**Manley**	**65.70**	**28**	P	**P**	**15 42 06.0**	**+2.9**
MLY				IAmb	IAmb	15 42 07.2	
	comp=Z,2.7nm,0.6s						
TOLK	**Toolik Lake Re**	**65.82**	**24**	P	**P**	**15 42 06.8**	**+3.0**
TOLK				IAmb	IAmb	15 42 07.2	
	comp=Z,4.9nm,0.8s						
H23K	**Yukon River**	**66.11**	**27**	P	**P**	**15 42 08.8**	**+3.1**
RND	**Reindeer**	**66.71**	**29**	P	**P**	**15 42 09.7**	**+0.1**
RND				IAmb	IAmb	15 42 17.1	
	comp=Z,5.6nm,0.8s						
MDM	**Murphy Dome**	**66.76**	**28**	P	**P**	**15 42 11.1**	**+1.2**
MDM				IAmb	IAmb	15 42 17.8	
	comp=Z,4.1nm,0.7s						
KLMR	**Klimovskoe**	**66.96**	**328**	*e*P	**P**	**15 42 09.3**	**-1.8**
KLMR				AMP		15 42 11.6	
	comp=Z,4.0nm,0.7s						
ILAR	**Eielson Array**	**67.36**	**28**	P	**P**	**15 42 13.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=298,slow=10,SNR=7.0						
	comp=Z,0.5nm,0.5s						
SCM	**Sheep Creek Mo**	**67.65**	**31**	P	**P**	**15 42 15.7**	**+0.1**
SCM				IAmb	IAmb	15 42 42.5	
	comp=Z,14nm,1.5s						
BMAR	**Burnt Mountain**	**67.84**	**25**	P	**P**	**15 42 18.4**	**+1.7**
KBZ	**Khabaz**	**68.22**	**309**	P	**P**	**15 42 17.5**	**-1.9**
	comp=Z,2.7nm,0.9s,baz=133,slow=6.6,SNR=4.4						
	comp=Z,2.7nm,0.9s						
J26L	**Joseph Creek**	**68.82**	**28**	P	**P**	**15 42 24.9**	**+2.1**
J26L				IAmb	IAmb	15 42 26.3	
	comp=Z,2.8nm,0.7s						
M26K	**Nabesna, AK**	**69.53**	**30**	P	**P**	**15 42 29.4**	**+2.2**
M26K				IAmb	IAmb	15 42 46.6	
	comp=Z,4.8nm,1.1s						
SPB2	**Spitsbergen Ar**	**70.08**	**348**	P	**P**	**15 42 30.0**	**-0.4**
ARCES	**ARCESS Array B**	**70.73**	**338**	P	**P**	**15 42 33.5**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=79,slow=7.3,SNR=6.7						
ARCES				LR	LR	16 18 17.9	
	comp=Z,55nm,19.7s,baz=116,slow=40						
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**71.66**	**23**	P	**P**	**15 42 40.1**	**0.0**
	comp=Z,1.4nm,0.6s,baz=213,slow=4.0,SNR=4.5						
	comp=Z,1.4nm,0.6s						
INK	**Inuvik**	**71.66**	**23**	P	**P**	**15 42 41.6**	**+1.6**
INK				IAmb	IAmb	15 42 55.9	
	comp=Z,4.3nm,0.9s						
A36M	**Sachs Harbour**	**72.84**	**18**	P	**P**	**15 42 48.0**	**+0.9**
A36M				IAmb	IAmb	15 43 02.5	
	comp=Z,4.7nm,0.8s						
FIA1	**FINESS Array S**	**73.12**	**330**	P	**P**	**15 42 48.4**	**-0.5**
FIA1				IAmb	IAmb	15 42 49.6	
	comp=Z,5.2nm,0.6s						
FINES	**FINESS Array B**	**73.12**	**330**	P	**P**	**15 42 49.0**	**+0.1**
	comp=Z,5.3nm,0.6s,baz=64,slow=6.2,SNR=44						
	comp=Z,5.3nm,0.6s						
FINES	**FINESS Array B**	**73.12**	**330**	P	**P**	**15 42 48.5**	**-0.4**
EUNU	**Eureka**	**74.39**	**5**	P	**P**	**15 42 56.7**	**+0.5**
EUNU				IAmb	IAmb	15 43 09.8	
	comp=Z,8.0nm,1.5s						
NACGM	**Naroch**	**75.06**	**324**	⇓*e*P	P	15 43 09.9	+10
	baz=69						
AKASG	**Malin Array Be**	**75.16**	**319**	P	**P**	**15 43 00.5**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=61,slow=6.7,SNR=5.2						
	comp=Z,0.6nm,0.4s						
BRTR	**Keskin Array B**	**76.00**	**307**	P	**P**	**15 43 06.7**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=103,slow=5.6,SNR=5.9						
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**76.00**	**307**	P	**P**	**15 43 06.0**	**-0.3**
PABE	**Paberze**	**76.33**	**325**	P	**P**	**15 43 07.6**	**+0.1**
NC405	**NORSAR Array S**	**79.51**	**333**	P	**P**	**15 43 25.3**	**+0.2**
NC405				IAmb	IAmb	15 43 36.0	
	comp=Z,8.5nm,0.8s						
NB2	**NORSAR Subarra**	**79.75**	**333**	P	**P**	**15 43 26.2**	**-0.3**
	comp=Z,5.0nm,1.1s,baz=54,slow=6.2						
NOA	**NORSAR Array B**	**79.75**	**333**	P	**P**	**15 43 26.6**	**0.0**
	comp=Z,1.7nm,0.7s,baz=55,slow=5.7,SNR=10						
	comp=Z,1.7nm,0.7s						
NC204	**NORSAR Array S**	**79.81**	**333**	P	**P**	**15 43 26.6**	**-0.2**
NC204				IAmb	IAmb	15 43 27.6	
	comp=Z,5.1nm,0.7s						
YKA	**Yellowknife Ar**	**81.35**	**24**	P	**P**	**15 43 34.9**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=304,slow=5.5,SNR=2.2						
	comp=Z,1.0nm,0.8s						
LANS	**Liptovska Anna**	**81.55**	**320**	*e*P	P	15 43 48.2	+12
VYHS	**Vyhne**	**82.22**	**320**	*e*P	P	15 43 51.0	+11
SMOL	**Smolenice**	**83.03**	**320**	*e*P	P	15 43 56.0	+12
VRAC	**Vranov**	**83.13**	**321**	LR	LR	16 22 12.9	
	comp=Z,55nm,18.5s,baz=63,slow=37						
GERES	**GERESS Array B**	**85.00**	**322**	P	**P**	**15 43 54.7**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=76,slow=8.2,SNR=3.5						
	comp=Z,0.4nm,0.6s						
ILULI	**Ilulissat**	**86.66**	**359**	P	**P**	**15 44 03.0**	**+1.1**
FRB	**Frobisher Bay**	**91.52**	**6**	LR	LR	16 28 25.3	
	comp=Z,30nm,18.8s,baz=316,slow=38						
NVAR	**Mina Array Bea**	**93.76**	**45**	P	**P**	**15 44 36.5**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=324,slow=5.7,SNR=2.1						
	comp=Z,0.2nm,0.6s						

KRSC 29 15:41:39.5±1.7, 48°.93N×156°.60E, h33$^{\text{km}}$±23$^{\text{km}}$, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.78**	**350**	P	Pn	15 42 08.7	+0.8
SKR				S	Sn	15 42 29.7	+0.4
PAU	**Pauzhetka**	**2.54**	**3**	S	Sn	15 42 51.2	+3.1
KDTR	**Khodutka, Kamc**	**3.04**	**18**	P	Pn	15 42 28.7	+3.6
KDTR				S	Sb	15 43 05.1	-4.2
MIPR	**Malaya Ipel'ka**	**3.35**	**2**	P	Pn	15 42 31.8	+2.3
ASAK	**Asacha**	**3.56**	**13**	P	Pb	15 42 37.3	-4.4
ASAK				S	Sb	15 43 19.3	-5.1
MTVR	**Mutnovka**	**3.70**	**15**	P	Pn	15 42 38.4	+4.1
MTVR				S	Sn	15 43 22.4	+5.6
RUS	**Russkaya**	**3.71**	**18**	P	Pn	15 42 38.4	+4.0
RUS				S	Sn	15 43 22.1	+5.2
GRL	**Gorelyy**	**3.75**	**14**	P	Pn	15 42 39.8	+4.8
GRL				S	Sb	15 43 24.1	-5.8
PET	**Petropavlovsk**	**4.30**	**17**	S	Sn	15 43 37.3	+5.9
DALK	**Dalny**	**4.33**	**18**	P	Pn	15 42 46.5	+3.7
DALK				S	Sn	15 43 37.5	+5.5
UGLR	**Uglovaya**	**4.51**	**17**	P	Pn	15 42 50.7	+5.3
AVH	**Avacha**	**4.55**	**16**	P	Pn	15 42 51.2	+5.3
KOK	**Koryaka**	**4.55**	**16**	P	Pn	15 42 52.0	+6.0
SDLR	**Sedlovina**	**4.59**	**17**	P	Pn	15 42 51.1	+4.6
KRX	**Arik**	**4.62**	**15**	P	Pn	15 42 52.0	+5.0
SPN	**Mys Shipunski**	**4.70**	**26**	P	Pn	15 42 53.2	+5.3
SPN				S	Sn	15 43 46.5	+5.2
MKZ	**Mys Kozlova**	**6.47**	**28**	P	Pn	15 43 17.0	+4.8

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*KRNET **29** 15:59:40.0±0.1, 39°.47N×73°.20E, h17$^{\text{km}}$, mb3.5*

*SOME **29** 15:59:44.8, 39°.57N×73°.20E, h30$^{\text{km}}$*

*NNC **29** 15:59:47.3±1.5, 39°.81N×73°.07E, h0$^{\text{km}}$, mb4.0, mpv3.6, Error ellipse: s-maj=12.3km s-min=6.4km az=176.0*

ISC 29 15:59:41.5±1.0, 39°.55N±0°.04×73°.13E±0°.03, h10$^{\text{km}}$, n51, σ2^{s}.47/87, 30C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.01**	**345**	⇓*i*P	**Pg**	**16 00 00.9**	**-0.1**
	baz=43						
OHH				⇓*i*S	**Sn**	**16 00 16.5**	**+0.2**
	baz=43						
DRK	**Karamyk**	**1.03**	**267**	⇑*i*P	**Pg**	**16 00 00.7**	**-0.6**
	baz=71						
DRK				⇑*i*S	**Sn**	**16 00 16.1**	**-0.8**
	baz=71						
BTK	**Batken**	**1.85**	**287**	⇑*i*P	**Pb**	**16 00 15.9**	**+0.4**
	baz=88						
BTK				⇑*i*S	**Sg**	**16 00 42.2**	**+1.2**
	baz=88						
GAR	**Garm**	**2.25**	**257**	⇑*i*P	**Pb**	**16 00 21.2**	**-1.1**
	baz=59						
GAR				⇑*i*S	**Sb**	**16 00 51.2**	**+1.0**
	baz=59						
ARK	**Arkit**	**2.42**	**339**	⇑*i*P	**Pb**	**16 00 24.3**	**-0.9**
	baz=38						
ARK				⇑*i*S	**Sb**	**16 00 56.5**	**+1.4**
	baz=38						
ARLS	**Aral**	**2.49**	**21**	⇓*i*P	**Pb**	**16 00 24.4**	**-2.0**
	baz=19						
ARLS				⇓*i*S	**Sb**	**16 00 57.1**	**-0.1**
	baz=19						
TRKS	**Terek-Say**	**2.49**	**323**	⇓*i*P	**Pn**	**16 00 24.3**	**+2.0**
	baz=23						
TRKS				⇓*i*S	**Sb**	**16 00 56.8**	**-0.6**
	baz=23						
UCH	**Uchtor**	**2.88**	**21**	⇑*i*P	**Pb**	**16 00 30.4**	**-2.9**
	baz=19						
UCH				⇑*i*S	**Sb**	**16 01 07.1**	**-1.6**
	baz=19						
EKS2	**Erkin-Say**	**3.15**	**9**	⇑*i*P	**Pb**	**16 00 34.0**	**-3.7**
	baz=8.0						
EKS2				⇑*i*S	**Sb**	**16 01 13.6**	**-2.7**
	baz=8.0						
MRKS	**Merke**	**3.20**	**1**	*e*P	**Pg**	**16 00 41.1**	**-1.8**
	3.9nm,0.2s						
MRKS				*e*S	**Sg**	**16 01 21.6**	**-2.7**
	34nm,0.4s						
MRKS	**Merke**	**3.20**	**1**	Pg	**Pg**	**16 00 41.1**	**-1.8**
	3.9nm,0.2s						
MRKS				Lg	Lg	16 01 21.6	
	34nm,0.4s						
CHGR	**Chuyangaron**	**3.21**	**255**	⇑*i*P	**Pb**	**16 00 34.5**	**-4.2**
	baz=57						
CHGR				⇑*i*S	**Sb**	**16 01 14.3**	**-3.6**
	baz=57						
AAK	**Ala-Archa**	**3.26**	**18**	⇑*i*P	**Pb**	**16 00 35.6**	**-4.0**
	baz=17						
AAK				⇑*i*S	**Sb**	**16 01 15.8**	**-3.6**
	baz=17						
KBK	**Karagaybulak**	**3.40**	**23**	⇓*i*P	**Pn**	**16 00 37.2**	**+2.4**
	baz=22						
KBK				⇓*i*S	**Sn**	**16 01 19.0**	**+3.7**
	baz=22						
IUG	**Iuzhnay**	**3.50**	**319**	*e*P	**Pg**	**16 00 46.9**	**-1.7**
	127nm,0.3s						
IUG				*e*S	**Sg**	**16 01 31.8**	**-2.2**
	25nm,1.0s						
IUG	**Iuzhnay**	**3.50**	**319**	Pg	**Pg**	**16 00 46.9**	**-1.7**
	571nm,0.6s						
IUG				Lg	Lg	16 01 31.8	
	44nm,0.3s						
ULHL	**Ulahol**	**3.59**	**40**	⇑*i*P	**Pn**	**16 00 39.5**	**+2.1**
	baz=39						
ULHL				⇑*i*S	**Sn**	**16 01 23.1**	**+3.2**
	baz=39						
BOOM	**Boomskoye usch**	**3.63**	**35**	⇑*i*P	**Pn**	**16 00 40.5**	**+2.5**
	baz=34						
BOOM				⇑*i*S	**Sn**	**16 01 24.2**	**+3.2**
	baz=34						
CHMS	**Chumysh**	**3.66**	**19**	⇑*i*P	**Pn**	**16 00 41.0**	**+2.7**
	baz=18						
CHMS				⇑*i*S	**Sn**	**16 01 25.3**	**+3.8**
	baz=18						
TKM2	**Tokmak 2**	**3.85**	**28**	⇑Pn	**Pn**	**16 00 43.2**	**+2.1**
	2.0nm,0.6s						
TKM2				Pg	**Pb**	**16 00 51.1**	**+1.3**
	5.2nm,0.6s						
TKM2				Lg	Lg	16 01 43.2	
	10nm,0.7s						
TKM2	**Tokmak 2**	**3.85**	**28**	⇑*i*P	**Pn**	**16 00 43.4**	**+2.3**
	baz=27						
TKM2				⇑*i*S	**Sn**	**16 01 29.8**	**+3.3**
	baz=27						
USP	**Ospenovka**	**3.86**	**15**	⇑*i*P	**Pn**	**16 00 43.7**	**+2.7**
	baz=14						
USP				⇑*i*S	**Sn**	**16 01 30.3**	**+3.9**
	baz=14						
KDJ	**Kajisay**	**4.02**	**49**	⇓*i*P	**Pn**	**16 00 45.3**	**+2.0**
	baz=48						
KDJ				⇓*i*S	**Sn**	**16 01 33.2**	**+2.7**
	baz=48						
KK31	**Karatay Array**	**4.06**	**332**	⇑Pn	**Pn**	**16 00 48.2**	**+4.4**
	0.5nm,0.3s,baz=136,slow=12,SNR=16						
KK31				Pg	**Pg**	**16 00 57.2**	**-2.2**
	1.2nm,0.3s,baz=149,slow=14,SNR=11						
KK31				Lg	Lg	16 01 49.6	
	9.8nm,0.5s,baz=148,slow=23,SNR=4.8						
KKAR	**Karatay Array**	**4.06**	**332**	⇑*i*P	**Pn**	**16 00 47.0**	**+3.2**
	baz=32						
KKAR				⇑*i*S	**Sn**	**16 01 35.9**	**+4.5**
	baz=32						
SGDS	**Sogindy**	**4.06**	**16**	*e*P	**Pg**	**16 00 56.5**	**-2.9**
	6.5nm,0.3s						
SGDS				*e*S	**Sg**	**16 01 47.8**	**-4.3**
	9.1nm,0.3s						
SGDS	**Sogindy**	**4.06**	**16**	Pg	**Pg**	**16 00 56.5**	**-2.9**
	6.5nm,0.3s						
SGDS				Lg	Lg	16 01 47.8	
	9.1nm,0.3s						
KST	**Kastek**	**4.10**	**31**	*e*P	**Pg**	**16 00 58.3**	**-1.7**
	5.7nm,0.3s						
KST				*e*S	**Sg**	**16 01 50.9**	**-2.2**
	18nm,0.5s						
KST	**Kastek**	**4.10**	**31**	Pg	**Pg**	**16 00 58.3**	**-1.7**
	5.7nm,0.3s						
KST				Lg	Lg	16 01 50.9	
	18nm,0.5s						
MTBS	**Maitube**	**4.36**	**34**	*e*P	**Pg**	**16 01 03.0**	**-2.0**
	4.6nm,0.1s						
MTBS				*e*S	**Sg**	**16 01 59.3**	**-2.3**
	8.7nm,0.1s						
MTBS	**Maitube**	**4.36**	**34**	Pg	**Pg**	**16 01 03.0**	**-2.0**
	4.6nm,0.1s						
MTBS				Lg	Lg	16 01 59.3	
	8.7nm,0.1s						
TNSS	**Tian-Shan**	**4.52**	**38**	*e*P	**Pg**	**16 01 05.1**	**-3.1**
	5.5nm,0.3s						
TNSS				*e*S	**Sg**	**16 02 02.7**	**-4.1**
	6.1nm,0.3s						
TNSS	**Tian-Shan**	**4.52**	**38**	Pg	**Pg**	**16 01 05.1**	**-3.1**
	5.5nm,0.3s						
TNSS				Lg	Lg	16 02 02.7	
	6.1nm,0.3s						
KRBS	**Karabastau**	**4.57**	**24**	*e*P	**Pg**	**16 01 05.8**	**-3.2**
	5.4nm,0.6s						
KRBS				*e*S	**Sg**	**16 02 04.3**	**-3.8**
	5.6nm,0.4s						
KRBS	**Karabastau**	**4.57**	**24**	Pg	**Pg**	**16 01 05.8**	**-3.2**
	5.4nm,0.6s						
KRBS				Lg	Lg	16 02 04.3	
	5.6nm,0.4s						
MDOK	**Medeo**	**4.67**	**38**	*e*P	**Pg**	**16 01 08.9**	**-2.1**
	5.6nm,0.3s						
MDOK				*e*S	**Sg**	**16 02 09.4**	**-2.0**
	12nm,0.8s						
MDOK	**Medeo**	**4.67**	**38**	Pg	**Pg**	**16 01 08.9**	**-2.1**
	5.6nm,0.3s						
MDOK				Lg	Lg	16 02 09.4	
	12nm,0.8s						
KUU	**Kurty**	**4.97**	**28**	*e*P	**Pg**	**16 01 14.5**	**-2.1**
	2.2nm,0.2s						
KUU				*e*S	**Sg**	**16 02 18.8**	**-2.1**
	26nm,0.5s						
KUU	**Kurty**	**4.97**	**28**	Pg	**Pg**	**16 01 14.5**	**-2.1**
	2.2nm,0.2s						
KUU				Lg	Lg	16 02 18.8	
	26nm,0.5s						
SATY	**Saty**	**5.30**	**47**	*e*P	**Pg**	**16 01 21.6**	**-1.6**
	7.5nm,0.4s						
SATY				*e*S	**Sg**	**16 02 30.9**	**-1.0**
	14nm,0.7s						
SATY	**Saty**	**5.30**	**47**	Pg	**Pg**	**16 01 21.6**	**-1.6**
	7.5nm,0.4s						
SATY				Lg	Lg	16 02 30.9	
	14nm,0.7s						
KURS	**Kuram**	**5.46**	**42**	*e*P	**Pg**	**16 01 27.2**	**+1.0**
	5.2nm,0.6s						
KURS				*e*S	**Sg**	**16 02 40.7**	**+3.8**
	6.7nm,1.0s						
KURS	**Kuram**	**5.46**	**42**	Pg	**Pg**	**16 01 27.2**	**+1.0**
	5.2nm,0.6s						
KURS				Lg	Lg	16 02 40.7	
	6.7nm,1.0s						
BTLS	**Baital**	**5.54**	**7**	*e*P	**Pg**	**16 01 28.6**	**+1.1**
	1.3nm,0.2s						
BTLS				*e*S	**Sg**	**16 02 42.9**	**+3.7**
	3.4nm,0.6s						
BTLS	**Baital**	**5.54**	**7**	Pg	**Pg**	**16 01 28.6**	**+1.1**
	1.3nm,0.2s						
BTLS				Lg	Lg	16 02 42.9	
	3.4nm,0.6s						
UZB	**Uzynbulak**	**5.71**	**49**	*e*P	**Pg**	**16 01 30.2**	**-0.7**
	3.3nm,0.3s						
UZB				*e*S	**Sg**	**16 02 45.4**	**+0.5**
	3.9nm,0.3s						
UZB	**Uzynbulak**	**5.71**	**49**	Pg	**Pg**	**16 01 30.2**	**-0.7**
	3.3nm,0.3s						
UZB				Lg	Lg	16 02 45.4	
	3.9nm,0.3s						
KPKS	**Kokpek**	**5.72**	**45**	*e*P	**Pg**	**16 01 30.3**	**-0.9**
	4.4nm,0.3s						
KPKS				*e*S	**Sg**	**16 02 45.5**	**+0.2**
	8.8nm,0.4s						
PDGK	**Podgornoye**	**6.10**	**50**	Pg	**Pg**	**16 01 36.9**	**-1.4**
	1.4nm,0.4s						
PDGK				Lg	Lg	16 02 57.4	
	2.8nm,0.6s						
KTMS	**Ketmen**	**6.68**	**52**	*e*P	**Pg**	**16 01 48.8**	**-0.6**
	0.9nm,0.4s						
KTMS				*e*S	**Sg**	**16 03 17.5**	**+1.6**
	1.7nm,0.1s						
KTMS	**Ketmen**	**6.68**	**52**	Pg	**Pg**	**16 01 48.8**	**-0.6**
	0.9nm,0.4s						
KTMS				Lg	Lg	16 03 17.5	
	1.7nm,0.1s						

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*IDC **29** 16:19:31.3±3.5, 21°.12S×178°.93W, h619$^{\text{km}}$±25$^{\text{km}}$, mb3.3/5, mbtmp4.4/6, Error ellipse: s-maj=67.1km s-min=29.5km az=137.0*

*NEIC **29** 16:19:32.4±1.0, 21°.0S±0°.2×179°.0W±0°.2, h620$^{\text{km}}$±10$^{\text{km}}$, mb4.1/19, Error ellipse: s-maj=27.9km s-min=24.9km az=106.0*

ISC 29 16:19:32.0±1.2, 21°.0S±0°.2×179°.1W±0°.2, h619$^{\text{km}}$, n28, σ0^{s}.63/28, mb4.1/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.23**	**319**	P	**P**	**16 21 01.1**	**+0.4**
	25nm,0.4s,baz=273,slow=23,SNR=56						
MSVF	**Nonsavu**	**4.23**	**319**	P	**P**	**16 21 01.0**	**+0.3**
ARMA	**Armidale**	**27.97**	**244**	P	**P**	**16 24 35.8**	**+0.4**
CTA	**Charters Tower**	**32.46**	**265**	P	**P**	**16 25 14.2**	**+0.4**
	3.4nm,0.4s,baz=92,slow=10,SNR=13						
	3.4nm,0.4s						
CTAO	**Charters Tower**	**32.46**	**265**	P	**P**	**16 25 14.2**	**+0.4**
CTAO				IAmb	IAmb	16 25 39.3	
	comp=Z,15nm,1.3s						
TOO	**Toolangi**	**34.81**	**234**	P	**P**	**16 25 33.4**	**+0.2**
TOO				IAmb	IAmb	16 25 34.6	
	comp=Z,3.3nm,0.8s						
STKA	**Stephens Creek**	**36.69**	**245**	P	**P**	**16 25 48.5**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=96,slow=9.7,SNR=9.9						
	comp=Z,1.4nm,0.5s						
BBOO	**Buckleboo**	**41.45**	**244**	P	**P**	**16 26 26.7**	**0.0**
WR0	**Warramunga Arr**	**43.37**	**263**	P	**P**	**16 26 42.2**	**+0.3**
ASAR	**Alice Springs**	**43.45**	**257**	P	**P**	**16 26 42.5**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=97,slow=7.7,SNR=80						
	comp=Z,3.9nm,0.5s						
WB0	**Warramunga Arr**	**43.53**	**263**	P	**P**	**16 26 42.7**	**-0.5**
WB0				IAmb	IAmb	16 26 43.4	
	comp=Z,4.3nm,0.6s						
WB2	**Warramunga Arr**	**43.54**	**263**	P	**P**	**16 26 42.8**	**-0.5**
WB2				IAmb	IAmb	16 26 43.5	
	comp=Z,4.7nm,0.9s						
WRAB	**Tennant Creek**	**43.55**	**263**	P	**P**	**16 26 42.8**	**-0.5**
WRAB				IAmb	IAmb	16 26 43.5	
	comp=Z,4.1nm,1.0s						
WRA	**Warramunga Arr**	**43.56**	**263**	P	**P**	**16 26 42.9**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=97,slow=7.5,SNR=37						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**43.56**	**263**	P	**P**	**16 26 42.8**	**-0.5**
MTN	**Manton Dam**	**48.18**	**271**	P	**P**	**16 27 18.1**	**-0.2**
MTN				IAmb	IAmb	16 27 43.0	
	comp=Z,9.4nm,1.1s						
FORT	**Forrest**	**48.19**	**247**	P	**P**	**16 27 17.8**	**-0.4**
KNRA	**Kununurra**	**49.64**	**267**	P	**P**	**16 27 28.9**	**-0.2**
KNRA				IAmb	IAmb	16 27 58.0	
	comp=Z,9.3nm,1.1s						
SIJI	**Sorong**	**52.41**	**286**	P	**P**	**16 27 49.4**	**+0.4**
	comp=Z,6.7nm,0.7s,baz=69,slow=6.7,SNR=7.4						
	comp=Z,6.7nm,0.7s						
PSA00	**Pilbara Seismi**	**56.59**	**257**	P	**P**	**16 28 17.2**	**-0.9**
MBWA	**Marble Bar**	**56.78**	**258**	P	**P**	**16 28 19.0**	**-0.4**
MBWA				IAmb	IAmb	16 28 19.7	
	comp=Z,5.5nm,0.8s						
MORW	**Morawa**	**58.73**	**248**	P	**P**	**16 28 31.6**	**-0.8**
MORW				IAmb	IAmb	16 28 54.3	
	comp=Z,27nm,1.4s						
QSPA	**South Pole Qui**	**69.08**	**180**	P	**P**	**16 29 38.2**	**+0.9**
QSPA				IAmb	IAmb	16 29 45.5	
	comp=Z,7.1nm,1.4s						
KSM	**Kuching**	**72.50**	**279**	P	**P**	**16 29 58.5**	**+0.4**
KSM				IAmb	IAmb	16 29 59.7	
	comp=Z,4.7nm,0.8s						
PEA0B	**Petropavlovsk-**	**76.49**	**346**	P	**P**	**16 30 19.9**	**+0.5**
ARCES	**ARCESS Array B**	**129.21**	**349**	PKP	**PKPdf**	**16 37 30.3**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=18,slow=3.8,SNR=3.7						
AKASG	**Malin Array Be**	**142.95**	**330**	PKP	**PKPdf**	**16 37 54.0**	**-2.2**
	comp=Z,1.6nm,0.5s,baz=44,slow=4.5,SNR=8.6						
BRTR	**Keskin Array B**	**146.42**	**311**	PKPbc	**PKPbc**	**16 38 05.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=157,slow=4.2,SNR=2.4						

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*IDC **29** 16:20:00.6±0.6, 17°.20N×146°.08E, h104$^{\text{km}}$±5$^{\text{km}}$, mb4.0/26, mbtmp4.4/28, MS2.6/3, Error ellipse: s-maj=14.4km s-min=7.1km az=96.0*

*NEIC **29** 16:20:00.9±1.5, 17°.18N±0°.06×146°.22E±0°.09, h102$^{\text{km}}$±6$^{\text{km}}$, mb4.5/115, Error ellipse: s-maj=13.2km s-min=9.0km az=74.0*

ISC 29 16:19:59.9±0.3, 17°.20N±0°.04×146°.22E±0°.07, h98$^{\text{km}}$, n218, σ0^{s}.94/218, mb4.5/81, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.82**	**200**	P	**Pn**	**16 20 57.9**	**+1.3**
	763nm,0.5s,baz=97,slow=2.0,SNR=141						

GUMO				LR	LR	16 21 33.0	
	comp=Z,54nm,20.5s,baz=96,slow=24						
GUMO				S	Sn	16 21 41.1	+0.6
	752nm,0.4s,baz=296,slow=22,SNR=19						
GUMO	Guam	3.82	200	Pn	Pn	16 20 57.5	+0.9
GUMO	Guam	3.82	200	P	Pn	16 20 58.0	+1.4
JCJ	Chichijima	10.53	340	LR	LR	16 24 52.4	
	comp=Z,86nm,20.6s,baz=142,slow=28						
JCJ	Chichijima	10.53	340	Pn	Pn	16 22 28.2	+0.4
PATS	Pohnpei	15.67	130		Pn	16 23 33.1	-2.2
MANU	Manus Island	19.15	177	P	P	16 24 15.3	-0.3
MANU				IAmb	IAmb	16 24 20.0	
	comp=Z,18nm,0.6s						
JOW	Kunigami	19.18	303	P	Pn	16 24 16.9	-0.9
	comp=Z,18nm,0.5s,baz=142,slow=10,SNR=6.3						
JOW	Kunigami	19.18	303	Pn	Pn	16 24 18.3	+0.5
JOW				IAmb	IAmb	16 24 44.0	
	comp=Z,68nm,1.5s						
JYT	Yasato	19.69	345	P	P	16 24 21.8	+0.5
JGF	Kuroka	19.95	338	P	P	16 24 24.7	+0.4
SMPI	Sarmi	20.46	202	P	P	16 24 29.9	+0.2
	comp=Z,25nm,0.8s						
MJAR	Matsushiro Arr	20.53	341	P	P	16 24 30.4	0.0
	comp=Z,2.6nm,0.7s,baz=166,slow=9.8,SNR=10						
	comp=Z,2.6nm,0.7s						
MJAR	Matsushiro Arr	20.53	341	IAmb	IAmb	16 24 33.4	
	comp=Z,1.5nm,0.9s						
MAJO	Matsushiro	20.53	341	P	P	16 24 31.0	+0.6
MAJO	Matsushiro	20.53	341	P	Pn	16 24 32.5	-1.0
MJB9	Matsu-Tunnel	20.54	341	P	P	16 24 31.0	+0.6
JNU	Nakatsue	21.03	322	P	P	16 24 36.2	+0.4
JMM	Marumori	21.14	348	P	P	16 24 37.2	+0.4
JSD	Sado	21.91	343	P	P	16 24 44.9	-0.1
JSD				IAmb	IAmb	16 24 46.0	
	comp=Z,21nm,1.1s						
RABL	Rabaul	22.05	164	P	P	16 24 48.0	+1.2
RABL	Rabaul	22.05	164	P	P	16 24 48.2	+1.4
KRVT	Keravat (AS076	22.12	164	P	P	16 24 48.5	+1.0
	comp=Z,8.1nm,0.5s,baz=59,slow=1.5,SNR=3.9						
	comp=Z,8.1nm,0.5s						
SWI	Sorong	23.23	221	P	P	16 24 59.2	+0.5
	comp=Z,26nm,0.8s						
SIJI	Sorong	23.23	221	P	P	16 24 58.7	0.0
	comp=Z,15nm,0.5s,baz=31,slow=10,SNR=14						
	comp=Z,15nm,0.5s						
JTM	Tenmabayashi	23.92	350	P	P	16 25 05.7	+1.0
NACB	Ninganchiao	24.04	291	P	P	16 25 06.7	+0.8
NACB				IAmb	IAmb	16 25 17.7	
	comp=Z,36nm,1.5s						
YULB	Yu-li	24.16	289	P	P	16 25 08.0	+1.0
FAKI	Fak Fak	24.29	216	P	P	16 25 08.3	0.0
FAKI				IAmb	IAmb	16 25 10.9	
	comp=Z,13nm,0.7s						
FAKI	Fak Fak	24.29	216	P	P	16 25 08.5	+0.3
YHNB	Yeheng	24.34	292	P	P	16 25 09.4	+0.7
YHNB	Yeheng	24.34	292	P	P	16 25 10.0	+1.2
SSLB	Suanglung	24.54	290	P	P	16 25 11.3	+0.8
SSLB				IAmb	IAmb	16 25 15.7	
	comp=Z,12nm,0.7s						
SSLB	Suanglung	24.54	290	P	P	16 25 11.7	+1.2
KSRS	Korea Array	25.82	325	P	P	16 25 20.5	-1.4
	comp=Z,0.9nm,0.5s,baz=145,slow=9.0,SNR=8.6						
KSRS				LR	LR	16 34 01.4	
	comp=Z,8.9nm,21.0s,baz=205,slow=33						
	comp=Z,0.9nm,0.5s						
KSAR	Wonju Array Be	25.83	325	P	P	16 25 21.4	-0.7
PMG	Port Moresby	26.45	178	P	P	16 25 28.0	+0.1
	comp=Z,16nm,0.6s,baz=80,slow=4.3,SNR=7.4						
	comp=Z,16nm,0.6s						
PMG	Port Moresby	26.45	178	P	P	16 25 27.7	-0.1
PMG				IAmb	IAmb	16 25 39.0	
	comp=Z,18nm,0.7s						
PMG	Port Moresby	26.45	178	P	P	16 25 28.2	+0.4
JKA	Kamikawa-asahi	27.01	354	P	P	16 25 33.3	+0.8
JKA				IAmb	IAmb	16 25 34.9	
	comp=Z,27nm,1.2s						
ASAJ	Asahikawa	27.01	354	P	P	16 25 33.2	+0.7
	comp=Z,11nm,0.8s,baz=227,slow=10.0,SNR=11						
	comp=Z,11nm,0.8s						
NJ2	Nanjing	28.83	306	*e*P	P	16 25 42.5	-6.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SAUI	Saumlaki	29.05	212	P	P	16 25 51.4	+0.4
LUWI	Luwuk	29.37	234	P	P	16 25 53.8	-0.2
LUWI	Luwuk	29.37	234	P	P	16 25 54.1	+0.2
COEN	Coen	31.10	186	P	P	16 26 09.3	+0.2
COEN				IAmb	IAmb	16 26 10.1	
	comp=Z,11nm,1.1s						
COEN	Coen	31.10	186	P	P	16 26 09.4	+0.3
KDU	Kakadu	32.65	205	P	P	16 26 21.9	-0.8
MTN	Manton Dam	33.36	207	P	P	16 26 28.4	-0.6
MTN				IAmb	IAmb	16 26 33.5	
	comp=Z,11nm,1.1s						
MTSU	Mount Surprise	35.16	183	P	P	16 26 45.5	+1.1
SBUM	Sibu	36.47	250	P	P	16 26 56.6	+0.9
KNRA	Kununurra	36.93	209	P	P	16 26 58.7	-0.8
KNRA	Kununurra	36.93	209	P	P	16 26 59.0	-0.5
PEA0B	Petropavlovsk-	36.95	12	P	P	16 27 00.5	+1.2
PETK	Petropavlovsk-	36.95	12	P	P	16 27 00.6	+1.3
	comp=Z,3.3nm,0.8s,baz=94,slow=31,SNR=8.8						
	comp=Z,3.3nm,0.8s						
PETK	Petropavlovsk-	36.95	12	P	P	16 27 00.3	+1.0
CTA	Charters Tower	37.05	180	P	P	16 27 00.9	+0.3
	comp=Z,2.8nm,0.6s,baz=51,slow=11,SNR=3.8						
	comp=Z,2.8nm,0.6s						
CTA	Charters Tower	37.05	180	P	P	16 27 01.0	+0.4
CTAO	Charters Tower	37.05	180	P	P	16 27 01.0	+0.4
CTAO				IAmb	IAmb	16 27 04.0	
	comp=Z,9.0nm,1.1s						
CTAO	Charters Tower	37.05	180	P	P	16 27 00.9	+0.3
PET	Petropavlovsk	37.06	12	P	P	16 27 00.6	+0.4
HHC	Hu-ho-hao-te	38.01	316	*e*P	P	16 27 11.5	+2.9
HHC				pmax	pmax		
	comp=Z,40nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
QIS	Mount Isa	38.08	190	P	P	16 27 09.0	-0.2
PLAI	Plampang	38.20	230	P	P	16 27 10.4	+0.1
HIA	Hailar	38.51	332	P	P	16 27 12.8	+0.2
WB0	Warramunga Arr	38.53	198	P	P	16 27 12.4	-0.6
KSM	Kuching	38.61	250	P	P	16 27 12.6	-1.2
KSM				IAmb	IAmb	16 27 36.1	
	comp=Z,9.1nm,1.3s						
KSM	Kuching	38.61	250	P	P	16 27 15.1	+1.3
WR0	Warramunga Arr	38.67	198	P	P	16 27 13.1	-1.0
WRAB	Tennant Creek	38.70	198	P	P	16 27 13.4	-1.0
WRAB	Tennant Creek	38.70	198	P	P	16 27 13.8	-0.6
WB2	Warramunga Arr	38.71	198	P	P	16 27 13.6	-0.9
WRA	Warramunga Arr	38.71	198	P	P	16 27 13.9	-0.6
	comp=Z,13nm,0.7s,baz=27,slow=9.3,SNR=36						
	comp=Z,13nm,0.7s						
RK1H	Rockhampton Ha	40.55	174	P	P	16 27 29.8	+0.1
JAGI	Jajag, Banyuwa	40.69	234	P	P	16 27 29.6	-1.4
GMJI	Gumukmas	41.11	235	P	P	16 27 26.6	-7.9
PZH	PanZhiHua	42.13	291	P	P	16 27 43.8	+0.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,6.7s						
ASAR	Alice Springs	42.36	197	P	P	16 27 44.1	-0.5
	comp=Z,3.1nm,0.7s,baz=19,slow=6.2,SNR=26						
	comp=Z,3.1nm,0.7s						
ASAR	Alice Springs	42.36	197	P	P	16 27 43.5	-1.1
MA2	Magadan	42.45	3	P	P	16 27 46.0	+1.3
	comp=Z,9.6nm,1.0s,baz=185,slow=5.4,SNR=4.5						
	comp=Z,9.6nm,1.0s						
LIFNC	LIFOU	43.01	151	P	P	16 27 49.2	-0.6
LIFNC				IAmb	IAmb	16 27 51.2	
	comp=Z,11nm,0.9s						
RMQ	Roma	43.49	177	P	P	16 27 53.7	+0.1
QLP	Quilpie	43.56	183	P	P	16 27 53.7	-0.4
DZM	Mont Dzumac	43.77	152	P	P	16 27 56.7	+0.8
	comp=Z,5.7nm,0.9s,baz=334,slow=22,SNR=2.5						
	comp=Z,5.7nm,0.9s						
SONM	Songino Array	44.62	322	P	P	16 28 01.5	-1.1
	comp=Z,1.2nm,0.7s,baz=138,slow=6.8,SNR=7.1						
	comp=Z,1.2nm,0.7s						
SONM	Songino Array	44.62	322	P	P	16 28 01.4	-1.1
CMAR	Chiang Mai Arr	44.92	279	P	P	16 28 06.0	+0.7
	comp=Z,2.0nm,0.7s,baz=68,slow=6.9,SNR=18						
	comp=Z,2.0nm,0.7s						
CMAR	Chiang Mai Arr	44.92	279	P	P	16 28 05.5	+0.2
INKA	Innaminka	44.99	187	P	P	16 28 05.2	-0.3
WRKA	Warakurna	45.47	203	P	P	16 28 09.6	+0.2
OOD	Oodnadatta	45.88	193	P	P	16 28 12.3	-0.2
MBWA	Marble Bar	46.13	215	P	P	16 28 13.6	-1.0
ARMA	Armidale	47.63	174	P	P	16 28 26.0	-0.3
ARMA				IAmb	IAmb	16 28 28.2	
	comp=Z,14nm,1.1s						
ARMA	Armidale	47.63	174	P	P	16 28 26.2	-0.1
LCRK	Leigh Creek	47.99	189	P	P	16 28 29.2	+0.2
CMSA	Cobar Meteorol	48.46	181	P	P	16 28 32.7	+0.2
MULG	Mulgathing	48.64	194	P	P	16 28 33.9	0.0
STKA	Stephens Creek	49.00	185	P	P	16 28 35.9	-0.8
	comp=Z,1.6nm,0.3s,baz=26,slow=6.3,SNR=10.0						
	comp=Z,1.6nm,0.3s						
STKA	Stephens Creek	49.00	185	P	P	16 28 36.0	-0.7
STKA	Stephens Creek	49.00	185	P	P	16 28 36.5	-0.1
GIRL	Giralia	50.47	219	P	P	16 28 47.4	-0.5
BBOO	Buckleboo	50.67	191	P	P	16 28 49.0	-0.3
BBOO	Buckleboo	50.67	191	P	P	16 28 49.3	0.0
NAPP	Napperby	50.69	189	P	P	16 28 50.0	+0.6
FORT	Forrest	50.80	200	P	P	16 28 50.2	-0.1
FORT	Forrest	50.80	200	P	P	16 28 50.4	+0.1
HTT	Hallett	50.83	188	P	P	16 28 51.1	+0.6
AKUT	Akutan	52.13	34	P	P	16 29 00.3	+0.4
CAN	Canberra	52.30	177	P	P	16 29 02.2	+0.8
CAN	Canberra	52.30	177	P	P	16 29 02.7	+1.2
CNB	Canberra Magne	52.31	177	P	P	16 29 02.8	+1.2
BILL	Bilibino	52.41	9	P	P	16 29 02.3	+0.5
TWOA	Tennyson Woods	52.45	188	P	P	16 29 03.4	+0.9
ARPS	Mount Arapiles	53.84	184	P	P	16 29 13.5	+0.9
MORW	Morawa	54.46	213	P	P	16 29 16.1	-1.3
MORW	Morawa	54.46	213	P	P	16 29 16.1	-1.3
TOO	Toolangi	54.48	181	P	P	16 29 18.3	+0.9
TOO				IAmb	IAmb	16 29 27.9	
	comp=Z,6.6nm,1.1s						
TOO	Toolangi	54.48	181	P	P	16 29 18.6	+1.2
BLDU	Ballidu	55.38	211	P	P	16 29 23.3	-0.6
TIXI	Tiksi	55.41	353	P	P	16 29 23.0	-0.6
WMQ	Urumqi	55.67	312	*e*P	P	16 29 29.0	+3.0
NWAO	Narrogin (SRO)	57.03	209	P	P	16 29 35.0	-0.7
ZALV	Zalesovo Beam	59.50	323	P	P	16 29 50.8	-1.8
	comp=Z,1.3nm,0.6s,baz=107,slow=7.9,SNR=5.9						
	comp=Z,1.3nm,0.6s						
N18K	Kilae Creek	59.61	29	P	P	16 29 54.7	+1.4
N18K				IAmb	IAmb	16 30 22.1	
	comp=Z,5.9nm,1.1s						
TAU	Tasmania Unive	59.82	179	P	P	16 29 55.2	+0.4
TAU	Tasmania Unive	59.82	179	P	P	16 29 55.4	+0.6
MK31	Makanchi Array	59.86	314	P	P	16 29 55.1	-0.1
MKAR	Makanchi Array	59.86	314	P	P	16 29 54.4	-0.9
	comp=Z,0.8nm,0.7s,baz=86,slow=9.3,SNR=10						
MKAR				pP	pwP	16 30 20.4	-0.8
	comp=Z,0.5nm,0.6s,baz=96,slow=11,SNR=2.5						
	comp=Z,0.8nm,0.7s						
MKAR	Makanchi Array	59.86	314	P	P	16 29 55.0	-0.3
SVW2	Sparrevohn	59.90	29	P	P	16 29 56.6	+1.3
SVW2				IAmb	IAmb	16 29 57.7	
	comp=Z,3.3nm,0.7s						
MAKZ	Makanchi	60.07	314	P	P	16 29 55.9	-0.9
MAKZ				IAmb	IAmb	16 29 56.9	
	comp=Z,1.8nm,0.7s						
N19K	Bonanza Creek	60.30	29	P	P	16 29 59.2	+1.0
N19K				IAmb	IAmb	16 30 04.2	
	comp=Z,5.9nm,0.9s						
TTA	Tatalina	60.36	26	P	P	16 29 59.1	+0.6
TTA				IAmb	IAmb	16 30 26.1	
	comp=Z,3.9nm,1.0s						
K20K	Telida	61.34	26	P	P	16 30 06.2	+1.2
K20K				IAmb	IAmb	16 30 33.3	
	comp=Z,3.8nm,0.8s						
CNPM	China Poot	61.48	31	P	P	16 30 06.5	+0.4
J20K	Nowinta River	61.59	25	P	P	16 30 08.2	+1.6
J20K				IAmb	IAmb	16 30 35.7	
	comp=Z,7.1nm,1.0s						
BRLK	Bradley Lake	61.71	31	P	P	16 30 07.5	-0.1
BRLK				IAmb	IAmb	16 30 10.0	
	comp=Z,6.8nm,0.8s						
IMAR	Indian Mountai	62.38	24	P	P	16 30 12.7	+0.8
SEW	Seward	62.50	31	P	P	16 30 13.3	+0.5
SEW				IAmb	IAmb	16 30 18.8	
	comp=Z,8.3nm,0.8s						
RC01	Rabbit Creek A	62.60	29	P	P	16 30 13.7	+0.2
RC01				IAmb	IAmb	16 30 14.7	
	comp=Z,4.6nm,0.6s						
H21K	Melozitna Rive	62.63	24	P	P	16 30 14.4	+0.7
H21K				IAmb	IAmb	16 30 41.6	
	comp=Z,2.6nm,0.7s						
CUT	Chulitna	62.70	28	P	P	16 30 14.2	+0.1
CUT				IAmb	IAmb	16 30 15.1	
	comp=Z,7.7nm,0.7s						
KURK	Kurchatov	62.72	319	P	P	16 30 12.5	-1.9
KURK				IAmb	IAmb	16 30 13.5	
	comp=Z,2.5nm,0.7s						
I21K	Tanana	62.80	25	P	P	16 30 15.5	+0.8
I21K				IAmb	IAmb	16 30 18.4	
	comp=Z,3.7nm,0.7s						
BKZ	Black Stump Fm	62.81	154	P	P	16 30 15.8	+0.6
BPAW	Bear Paw Mtn.	62.87	26	P	P	16 30 16.0	+0.7
BPAW				IAmb	IAmb	16 30 43.4	
	comp=Z,11nm,1.0s						
TRF	Thorofare Moun	62.98	27	P	P	16 30 16.5	+0.3
TRF				IAmb	IAmb	16 30 43.6	
	comp=Z,7.1nm,0.9s						
PMR	Palmer	63.01	29	P	P	16 30 16.2	+0.1
PMR				IAmb	IAmb	16 30 17.2	
	comp=Z,4.3nm,0.8s						
NRIK	Noril'sk	63.18	340	P	P	16 30 15.0	-2.2
	comp=Z,1.9nm,0.5s,baz=104,slow=7.4,SNR=5.4						
	comp=Z,1.9nm,0.5s						
MLY	Manley	63.25	25	P	P	16 30 18.2	+0.4
MLY				IAmb	IAmb	16 30 45.6	
	comp=Z,4.5nm,0.8s						
SML	Sawmill	63.43	29	P	P	16 30 19.5	+0.4
SCM	Sheep Creek Mo	63.90	29	P	P	16 30 23.2	+1.0
H23K	Yukon River	63.97	24	P	P	16 30 23.6	+1.1
BFZ	Birch Farm	63.99	155	P	P	16 30 23.3	+0.5
HIN	Hinchinbrook I	64.00	31	P	P	16 30 23.8	+1.0
HIN				IAmb	IAmb	16 30 41.8	
	comp=Z,9.4nm,1.0s						
BHW	Baring Head	64.07	156	P	P	16 30 23.4	+0.1
FID	Port Fidalgo	64.08	30	P	P	16 30 23.7	+0.4
FID				IAmb	IAmb	16 30 24.9	
	comp=Z,6.9nm,0.7s						
KHZ	Kahutara	64.44	158	P	P	16 30 25.0	-0.7
KLU	Klutina	64.49	29	P	P	16 30 26.7	+0.7
KLU				IAmb	IAmb	16 30 28.1	
	comp=Z,3.1nm,0.8s						
H24K	Noodor Dome	64.63	25	P	P	16 30 28.0	+1.2
HDA	Harding Lake	64.66	26	P	P	16 30 27.7	+0.8
HDA				IAmb	IAmb	16 30 29.1	
	comp=Z,3.1nm,0.8s						
RPZ	Rata Peaks	64.75	160	P	P	16 30 26.9	-0.9
	comp=Z,21nm,1.0s,baz=46,slow=12,SNR=2.9						
	comp=Z,21nm,1.0s						
IL31		64.77	26	P	P	16 30 26.9	-0.7
IL31				IAmb	IAmb	16 30 53.8	
	comp=Z,3.5nm,0.8s						
ILAR	Eielson Array	64.77	26	P	P	16 30 27.2	-0.5
	comp=Z,1.5nm,0.6s,baz=248,slow=4.9,SNR=21						
ILAR				pP	pP	16 30 53.1	+1.9
	comp=Z,2.3nm,0.9s,baz=259,slow=5.2,SNR=6.3						
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	64.77	26	P	P	16 30 26.8	-0.8
TOLK	Toolik Lake Re	64.80	21	P	P	16 30 28.9	+1.0
TOLK				IAmb	IAmb	16 30 31.4	
	comp=Z,3.4nm,0.7s						
PAX	Paxson	64.99	28	P	P	16 30 29.6	+0.3
PAX				IAmb	IAmb	16 30 56.8	
	comp=Z,4.5nm,0.8s						
J25K	Salcha River,	65.37	26	P	P	16 30 31.8	+0.2
RIDG	Independent Ri	65.42	27	P	P	16 30 32.3	+0.3
RIDG				IAmb	IAmb	16 30 59.4	
	comp=Z,6.5nm,1.0s						
SCRK	Sand Creek	65.83	27	P	P	16 30 35.8	+1.1
SCRK				IAmb	IAmb	16 30 38.4	
	comp=Z,11nm,1.5s						
J26L	Joseph Creek	66.11	26	P	P	16 30 37.6	+1.1
J26L				IAmb	IAmb	16 31 04.3	
	comp=Z,9.5nm,1.2s						
BMAR	Burnt Mountain	66.29	23	P	P	16 30 38.8	+1.3
M27K	Edge Creek, AK	66.52	29	P	P	16 30 39.5	+0.4
L27K	Beaver Creek,	66.64	28	P	P	16 30 40.2	+0.5
BCAR	Beaver Creek A	66.66	28	P	P	16 30 40.4	+0.5
BRVK	Borovoye	68.01	321	P	P	16 30 46.9	-1.7
BRVK				IAmb	IAmb	16 30 48.4	
	comp=Z,3.1nm,0.7s						
KK31	Karatay Array	68.11	310	P	P	16 30 48.1	-1.3
KKAR	Karatay Array	68.11	310	P	P	16 30 47.5	-1.8
HYT	Haines Junctio	68.45	31	P	P	16 30 53.1	+1.8
HYT				IAmb	IAmb	16 30 56.5	
	comp=Z,8.1nm,1.0s						
M30M	Minto, Yukon	68.89	29	P	P	16 30 55.1	+1.2
N31M	Braeburn, Yuko	69.32	30	P	P	16 30 57.8	+1.2
N31M				IAmb	IAmb	16 31 25.3	
	comp=Z,4.0nm,0.8s						
M31M	Drury Creek, Y	70.00	29	P	P	16 31 01.5	+0.8
INK	Inuvik	70.55	23	P	P	16 31 05.7	+1.8
	comp=Z,5.1nm,0.8s,baz=270,slow=5.5,SNR=13						
	comp=Z,5.1nm,0.8s						
INK	Inuvik	70.55	23	P	P	16 31 05.0	+1.1
INK				IAmb	IAmb	16 31 06.7	
	comp=Z,5.9nm,0.8s						
A36M	Sachs Harbour	73.33	19	P	P	16 31 20.8	+0.3
C36M	Paulatuk	73.95	22	P	P	16 31 24.2	+0.1
C36M				IAmb	IAmb	16 31 26.0	
	comp=Z,10nm,0.8s						
ABKAR	Akbulak array	74.77	317	P	P	16 31 26.6	-2.7
YKA	Yellowknife Ar	79.08	28	P	P	16 31 52.6	-0.5
	comp=Z,2.7nm,0.8s,baz=282,slow=6.1,SNR=5.6						
YKA				pP	pwP	16 32 20.2	-1.3
	comp=Z,1.7nm,0.8s,baz=287,slow=5.7,SNR=2.5						
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	79.08	28	P	P	16 31 52.8	-0.4
EUNU	Eureka	79.13	8	P	P	16 31 53.4	+0.1
EUNU				IAmb	IAmb	16 31 54.6	
	comp=Z,7.6nm,0.7s						
B08A	Colville Reser	80.24	42	P	P	16 32 00.3	+0.5
B08A				IAmb	IAmb	16 32 03.9	
	comp=Z,3.3nm,0.6s						
PINE	Pine Mountain	80.31	47	P	P	16 32 01.4	+0.9
PINE				IAmb	IAmb	16 32 03.1	
	comp=Z,7.3nm,0.8s						
K05A	Summer Lake	80.61	48	P	P	16 32 03.6	+1.5
RES	Resolute Bay	80.76	14	P	P	16 32 02.4	+0.4
RES				IAmb	IAmb	16 32 03.3	
	comp=Z,8.4nm,0.8s						
KBS	Kingsbay	80.83	352	P	P	16 32 01.3	-1.0
KBS				IAmb	IAmb	16 32 14.5	
	comp=Z,9.1nm,1.4s						
BEKR	Beckworth	81.74	51	P	P	16 32 08.9	+0.8
PNTR	Pine Nut	82.51	52	P	P	16 32 13.9	+1.6
PNTR				IAmb	IAmb	16 32 29.8	
	comp=Z,6.1nm,1.1s						
BMO	Blue Mountains	82.54	45	P	P	16 32 12.5	+0.4
KEV	Kevo	83.50	342	P	P	16 32 15.2	-1.2
NVAR	Mina Array Bea	83.67	52	P	P	16 32 19.8	+1.6
	comp=Z,1.8nm,0.7s,baz=262,slow=6.0,SNR=18						
NVAR				pP	pwP	16 32 46.3	-0.6
	comp=Z,1.3nm,0.6s,baz=273,slow=5.3,SNR=6.0						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	83.67	52	P	P	16 32 19.2	+1.0
ARCES	ARCESS Array B	84.06	342	P	P	16 32 18.1	-1.3
	comp=Z,1.3nm,0.6s,baz=61,slow=8.5,SNR=6.9						
	comp=Z,1.3nm,0.6s						
ARCES	ARCESS Array B	84.06	342	P	P	16 32 18.4	-1.0
ARCES				IAmb	IAmb	16 32 30.4	
	comp=Z,6.4nm,1.2s						
TULEG	Thule	84.12	8	P	P	16 32 20.0	+0.5
ELK	Elko	85.23	49	P	P	16 32 26.5	+0.4
BCYI	Bear Canyon	85.35	45	P	P	16 32 26.2	-0.4
LRM	Limekiln Ridge	85.48	43	P	P	16 32 27.4	+0.1
HRY	Holter Researc	85.58	42	P	P	16 32 28.2	+0.6
BOZ	Bozeman (W)	86.10	43	P	P	16 32 30.4	+0.2
YHL	Hebgen Lake	86.66	44		P	16 32 34.8	+1.7
YHL				IAmb	IAmb	16 32 35.8	
	comp=Z,5.2nm,1.0s						
PSUT	Pine Spring	86.95	51	P	P	16 32 35.1	+0.5
PSUT				IAmb	IAmb	16 32 43.8	
	comp=Z,4.0nm,1.2s						
DUG	Dugway, Tooele	87.16	49	P	P	16 32 35.6	+0.1
DUG				IAmb	IAmb	16 32 37.0	
	comp=Z,2.2nm,0.7s						
MPU	Maple Canyon	88.06	49	P	P	16 32 39.6	-0.3
FINES	FINESS Array B	88.45	335	P	P	16 32 38.8	-2.1
	comp=Z,1.3nm,0.7s,baz=73,slow=6.4,SNR=5.5						
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	88.45	335	P	P	16 32 38.9	-2.0
PDAR	Pinedale Array	88.52	46	P	P	16 32 43.1	+1.1
	comp=Z,0.4nm,0.6s,baz=158,slow=0.5,SNR=5.4						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	88.52	46	P	P	16 32 42.3	+0.3
LPAZ	La Paz	147.12	94	PKPbc	PKPbc	16 39 33.4	+0.2
	comp=Z,1.0nm,0.4s,baz=268,slow=13,SNR=5.6						

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*IDC **29** 16:22:53.9±2.8, 38.°95N×20.°71E, h0^{km}, mb3.4/4, mbtmp3.3/7, ML3.4/3, MS3.4/2, Error ellipse: s-maj=51.0km s-min=23.7km az=20.0*

*ATH **29** 16:22:54.2, 38.°70N×20.°62E, h12^{km}±1^{km}, ML3.2/23, Error ellipse: s-maj=1.9km s-min=0.7km az=277.0*

*BEO **29** 16:22:54.5±0.7, 38.°67N×20.°44E, h4^{km}±2^{km}, ML3.0/6*

*THE **29** 16:22:54.3, 38.°69N×20.°56E, h6^{km}±4^{km}, ML3.5/10, Error ellipse: s-maj=4.3km s-min=0.5km az=29.0*

ISC 29 16:22:54.4±0.8**, 38.°70N**±0.°02×**20.°62E**±0.°02**, h10**^{km}±5^{km}**, n92, σ1.^{s}20**/117**, mb3.5**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.10	20	P	Pg	16 22 56.7	-0.3
LKD2				S	Sg	16 22 58.8	-0.1
LKD2				AML	AML	16 22 59.0	
LKD2				AML	AML	16 22 59.2	
LKD2	Lefkada island	0.10	20	P	Pg	16 22 56.7	-0.3
LKD2				S	Sg	16 22 58.7	-0.1
	89µm,0.2s						
FSK	Fiskardo	0.24	190	P	Pg	16 22 59.7	+0.4
FSK				S	Sg	16 23 03.4	+0.9
FSK				AML	AML	16 23 06.5	
	comp=N,11389µm,0.7s						
FSK				AML	AML	16 23 06.6	
	comp=E,21658µm,0.6s						
KEF4	Livadi, Kephal	0.46	199	P	Pg	16 23 02.8	-0.6
KEF4	Livadi, Kephal	0.46	199	P	Pg	16 23 02.8	-0.6
KEF4				S	Sg	16 23 10.2	+0.7
	comp=E,23µm,0.4s						
LXRA	Lixouri, Kepha	0.51	196	P	Pg	16 23 03.2	-1.2
VLS	Valsamata	0.52	182	P	Pg	16 23 03.8	-0.7
VLS				S	Sg	16 23 11.3	0.0
VLS				AML	AML	16 23 14.2	
	comp=E,4457µm,0.2s						
VLS				AML	AML	16 23 14.7	
	comp=N,5440µm,0.4s						
VLS	Valsamata	0.52	182	P	Pg	16 23 03.5	-1.0
VLS				S	Sg	16 23 11.9	+0.6
ARGA	Argostoli. Kep	0.53	192	P	Pg	16 23 04.7	0.0
ARGA				S	Sg	16 23 12.1	+0.5
KEF3	Kipouria, Keph	0.54	203	P	Pg	16 23 03.5	-1.3
KEF3	Kipouria, Keph	0.54	203	P	Pg	16 23 03.5	-1.3
KEF3				S	Sg	16 23 11.3	-0.5
	comp=N,7µm,0.4s						
PVO	Paravola	0.72	96	P	Pb	16 23 08.6	-0.4
PVO	Paravola	0.72	96	P	Pg	16 23 08.4	+0.2
PVO				S	Sb	16 23 20.6	+1.7
	comp=N,5µm,0.5s						
IGT	Igoumenitsa	0.86	345	*e*Pn	Pg	16 23 10.4	-0.6
IGT				*e*Sn	Sb	16 23 24.1	+0.9
IGT	Igoumenitsa	0.86	345	P	Pg	16 23 10.2	-0.9
IGT				S	Sb	16 23 23.3	+0.1
IGT				AML	AML	16 23 28.2	
	comp=E,5082µm,0.6s						
IGT				AML	AML	16 23 28.4	
	comp=N,6809µm,0.5s						
IGT	Igoumenitsa	0.86	345	P	Pg	16 23 10.1	-0.9
IGT				S	Sb	16 23 24.1	+0.9
	comp=N,3µm,0.5s						
RLS	Riolos of Patr	0.92	133	P	Pg	16 23 11.4	-0.8
RLS				AML	AML	16 23 33.4	
	comp=N,3122µm,0.5s						
RLS				AML	AML	16 23 34.1	
	comp=E,3361µm,0.5s						
RLS	Riolos of Patr	0.92	133	P	Pg	16 23 11.4	-0.8
EVR	Evrytania	0.96	76	P	Pg	16 23 12.2	-0.6
EVR				AML	AML	16 23 39.0	
	comp=N,1477µm,0.6s						
EVR				AML	AML	16 23 40.1	
	comp=E,1253µm,0.7s						
EVR	Evrytania	0.96	76	P	Pg	16 23 12.4	-0.4
JAN	Janina	0.98	11	P	Pg	16 23 12.4	-0.8
JAN				AML	AML	16 23 30.8	
	comp=E,3280µm,0.3s						
JAN				AML	AML	16 23 31.1	

	comp=N,3385µm,0.3s						
JAN	Janina	0.98	11	P	Pg	16 23 12.3	-0.9
JAN				S	Sn	16 23 27.9	-0.3
	comp=N,2µm,0.3s						
ANX	Ano Chora	1.03	95	P	Pg	16 23 13.4	-0.8
ANX				S	Sg	16 23 27.6	0.0
ANX				AML	AML	16 23 37.4	
	comp=E,4147µm,0.7s						
ANX				AML	AML	16 23 37.8	
	comp=N,9106µm,0.5s						
ANX	Ano Chora	1.03	95	P	Pg	16 23 13.3	-0.8
ANX				S	Sn	16 23 30.5	+1.0
	comp=N,3µm,0.6s						
EFP	Efpalio	1.05	104	P	Pg	16 23 13.3	-1.1
EFP				AML	AML	16 23 36.9	
	comp=E,3256µm,0.5s						
EFP				AML	AML	16 23 36.9	
	comp=N,5496µm,0.5s						
EFP	Efpalio	1.05	104	P	Pg	16 23 13.4	-1.1
EFP				S	Sn	16 23 30.6	+0.8
	comp=N,2µm,0.5s						
DRO	Drossia	1.14	130	P	Pg	16 23 14.9	-1.3
DRO				AML	AML	16 23 42.4	
	comp=E,1886µm,0.5s						
DRO				AML	AML	16 23 44.7	
	comp=N,3452µm,0.5s						
DRO	Drossia	1.14	130	P	Pg	16 23 15.0	-1.3
LAKA	Lakka	1.16	113	P	Pg	16 23 15.3	-1.4
LAKA				AML	AML	16 23 38.3	
	comp=E,1580µm,0.7s						
LAKA				AML	AML	16 23 39.6	
	comp=N,1758µm,0.7s						
KASA	Kassiopi	1.17	334	P	Pg	16 23 16.4	-0.6
KASA				AML	AML	16 23 37.0	
	comp=E,4965µm,0.4s						
KASA				AML	AML	16 23 39.7	
	comp=N,2769µm,0.4s						
KEK	Kerkira	1.20	328	P	Pg	16 23 16.9	-0.5
KEK				AML	AML	16 23 40.6	
	comp=N,2070µm,0.6s						
KEK				AML	AML	16 23 43.3	
	comp=E,1752µm,0.4s						
KEK	Kerkira	1.20	328	P	Pg	16 23 17.0	-0.4
KEK				S	Sn	16 23 34.3	+0.7
	comp=E,958nm,0.5s						
MAKR	Makrakomi, Fth	1.23	75	P	Pg	16 23 16.3	-1.7
MAKR				AML	AML	16 23 46.0	
	comp=E,3404µm,0.4s						
MAKR				AML	AML	16 23 46.8	
	comp=N,2100µm,0.5s						
ALIK	Aliki, Aigiali	1.25	110	P	Pg	16 23 16.9	-1.5
SRN	Sarande	1.27	338	P	Pn	16 23 18.7	+0.4
KLV	Kalavryta, Ach	1.37	118	P	Pn	16 23 18.6	-1.2
KLV				AML	AML	16 23 51.8	
	comp=N,814µm,0.9s						
KLV				AML	AML	16 23 53.9	
	comp=E,867µm,0.7s						
KLV	Kalavryta, Ach	1.37	118	P	Pn	16 23 18.5	-1.2
KPRO	Kipourio	1.39	25	P	Pn	16 23 20.4	+0.5
KPRO				S	Sn	16 23 41.6	+3.3
	comp=E,682nm,0.4s						
THL	Klokotos Trika	1.39	51	P	Pn	16 23 19.7	-0.2
THL				AML	AML	16 23 46.9	
	comp=E,1411µm,0.6s						
THL				AML	AML	16 23 49.8	
	comp=N,1021µm,0.6s						
THL	Klokotos Trika	1.39	51	P	Pg	16 23 20.9	-0.2
LSK	Leskovik	1.45	360	P	Pg	16 23 22.3	0.0
GUR	Goura	1.56	119	P	Pn	16 23 21.7	-0.6
GUR				AML	AML	16 23 52.8	
	comp=E,1912µm,0.5s						
GUR				AML	AML	16 23 54.7	
	comp=N,2291µm,0.6s						
GUR	Goura	1.56	119	P	Pn	16 23 22.2	-0.1
THAL	Thalero	1.74	112	P	Pn	16 23 25.7	+1.0
THAL				AML	AML	16 24 01.6	
	comp=N,1950µm,0.6s						
THAL				AML	AML	16 24 02.8	
	comp=E,2136µm,0.5s						
TRIP	Tripoli	1.75	131	P	Pn	16 23 25.0	+0.1
TRIP				AML	AML	16 24 03.0	
	comp=E,802µm,0.6s						
TRIP				AML	AML	16 24 03.1	
	comp=N,981µm,0.6s						
ITM	Ithomi	1.83	145	P	Pn	16 23 27.1	+1.1
ITM				AML	AML	16 24 05.3	
	comp=E,580µm,0.6s						
ITM				AML	AML	16 24 07.5	
	comp=N,783µm,0.8s						
ITM	Ithomi	1.83	145	P	Pb	16 23 28.1	0.0
KZN	Kozani	1.84	29	P	Pb	16 23 28.4	+0.2
ATAL	Atalanti	1.88	89	P	Pb	16 23 28.2	-0.7
ATAL				AML	AML	16 24 11.6	
	comp=N,458µm,1.0s						
ATAL				AML	AML	16 24 13.4	
	comp=E,241µm,0.8s						
LTK	Loutraki	1.97	109	P	Pb	16 23 29.8	-0.5
PYL	PYLOS	2.01	153	P	Pn	16 23 29.4	+1.0
PYL				AML	AML	16 24 09.1	
	comp=E,378µm,0.5s						
PYL				AML	AML	16 24 12.6	
	comp=N,362µm,0.7s						
PYL	PYLOS	2.01	153	P	Pn	16 23 29.6	+1.2
XOR	Xorichti	2.12	71	P	Pb	16 23 31.7	-1.2
XOR	Xorichti	2.12	71	P	Pb	16 23 31.7	-1.2
VIL2	Platees	2.14	102	P	Pb	16 23 32.2	-1.1
VIL2				AML	AML	16 24 14.7	
	comp=N,711µm,0.6s						
VIL2				AML	AML	16 24 19.6	
	comp=E,1232µm,1.1s						
FNA	Florina	2.17	15	*e*Pn	Pn	16 23 32.3	+1.6
FNA				*e*Sn	Sb	16 24 00.4	-0.3
FNA	Florina	2.17	15	P	Pn	16 23 32.2	+1.6
OHR	Ohrid	2.42	3	*e*Pn	Pb	16 23 36.8	-1.2
OHR				*e*Sn	Sb	16 24 07.1	-0.8
GRG	Griva	2.64	31	P	Pn	16 23 38.0	+0.8
DION	Dionisos Attik	2.68	102	P	Pn	16 23 39.9	+2.2
VLI	Veliai	2.70	136	P	Pb	16 23 41.9	-0.9
VLI	Veliai	2.70	136	P	Pb	16 23 42.4	-0.4
TIR	Tirane	2.71	348	*e*Pn	Pn	16 23 39.5	+1.5
TIR				*e*Sn	Sn	16 24 12.7	+1.8
VAY	Valandovo	3.02	29	*e*Pn	Pn	16 23 45.0	+2.7
VAY				*e*Sn	Sn	16 24 21.9	+3.3
SRS	Serrai	3.33	43	*e*Pn	Pn	16 23 49.0	+2.4
SKO	Skopje	3.33	11	*e*Pn	Pn	16 23 47.0	+0.4
SKO				*e*Sn	Sn	16 24 27.0	+0.7
MMB	Musomiste	3.75	39	*e*P	Pn	16 23 54.7	+2.4
PDG	Podgorica	3.87	345	*e*Pn	Pn	16 23 54.6	+0.6
PDG				*e*Sn	Sn	16 24 39.5	0.0
PRVS	Prvonek	3.97	16	*e*Pn	Pn	16 23 55.7	+0.3
PRVS				*e*Sn	Sn	16 24 42.0	0.0
BOSS	Bosilegrad	4.05	20	*e*Pn	Pn	16 23 58.4	+1.9
BOSS				*e*Sn	Sn	16 24 46.1	+2.0
BARS	Barje	4.22	12	*e*Pn	Pn	16 23 59.4	+0.6
BARS				*e*Sn	Sn	16 24 48.5	+0.4
RZN	Rozhen	4.33	45	*e*P	Pn	16 24 04.3	+3.7
VTS	Vitosha	4.39	26	*e*Pn	Pn	16 24 02.5	+1.1
VTS	Vitosha	4.39	26	*e*P	Pn	16 24 02.4	+1.1
SELS	Selova	4.54	5	*e*Pn	Pn	16 24 03.2	0.0
SJES	Sjenica	4.59	354	*e*Pn	Pn	16 24 04.6	+0.7
IVAS	Ivanjica	4.89	356	*e*Pn	Pn	16 24 07.9	-0.1
BOVS	Bovan	5.00	9	*e*Pn	Pn	16 24 10.6	+1.1
GRUS	Gruza	5.19	1	*e*Pn	Pn	16 24 12.3	+0.2
BBLS	Lazići	5.25	350	*e*Pn	Pn	16 24 13.0	+0.1
DIVS	Divibare	5.42	355	*e*Pn	Pn	16 24 15.8	+0.5
SOKA	Soboth	8.97	335	*e*Pn	Pn	16 25 02.4	-1.7
	comp=E,0.5nm,0.3s						
OBKA	Obir	8.99	332	*e*Pn	Pn	16 25 04.5	+0.1
	comp=E,0.3nm,0.2s						
BRTR	Keskin Array B	10.16	80	Pn	Pn	16 25 24.3	+3.9
	comp=E,0.1nm,0.3s,baz=250,slow=12,SNR=2.5						
	comp=E,0.4nm,0.5s						
GERES	GERESS Array B	11.30	336	Pn	Pn	16 25 35.1	-1.0
	comp=E,0.1nm,0.3s,baz=147,slow=15,SNR=1.5						
	comp=E,0.3nm,0.5s						
AKASG	Malin Array Be	13.46	24	LR	LR	16 32 10.9	
	comp=E,25nm,19.9s,baz=164,slow=42						
ESDC	Sonseca Array	19.07	281	P	Pn	16 27 18.4	+0.7
	baz=74,slow=11,SNR=1.5						
	comp=E,0.3nm,0.7s						
FINES	FINESS Array B	23.02	7	P	P	16 27 58.0	-1.4
	comp=E,1.0nm,0.6s,baz=169,slow=11,SNR=8.7						
	comp=E,1.0nm,0.6s						
NOA	NORSAR Array B	23.13	348	P	P	16 27 58.8	-1.7
	comp=E,0.3nm,0.7s,baz=160,slow=9.9,SNR=2.3						
	comp=E,0.3nm,0.7s						
MKAR	Makanchi Array	44.97	59	P	P	16 31 08.6	-1.1
	comp=E,0.3nm,0.4s,baz=271,slow=9.2,SNR=6.2						
	comp=E,0.3nm,0.4s						
ZALV	Zalesovo Beam	45.29	48	P	P	16 31 10.8	-1.3
	comp=E,0.9nm,0.5s,baz=276,slow=8.9,SNR=4.1						
	comp=E,0.9nm,0.5s						
MATP	Matopo	59.27	171	LR	LR	17 00 46.8	
	comp=E,251nm,21.1s,baz=240,slow=38						

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*IDC **29** 16:29:43.7±0.8, 20°.48N×120°.43E, h0^{km}, mb3.7/10, mbtmp3.7/11, ML3.3/1, MS2.9/2, Error ellipse: s-maj=28.6km s-min=15.0km az=71.0*

*MAN **29** 16:29:45.3, 20°.76N×120°.73E, h47^{km}, mb4.8, ML3.7, MS3.6, Hypocentre not reviewed by the ISC*

ISC 29 16:29:47.6±0.7**, 20°.49N**±0°.06×**120°.4E**±0°.1**, h26^{km}, n21,** σ**1^{s}73**/20**, mb3.8**/9**, 1C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	2.55	179	⇓*i*P	Pn	16 30 29.3	+2.1
SIPP				*i* S	Sb	16 31 02.6	-1.1
SGCP	Gonzaga	2.71	145	⇓*e*P	Pn	16 30 28.9	-0.6
SGCP				*e*S	Sn	16 31 01.5	0.0
SAMP	Sagada Mountai	3.42	172	⇓*e*P	Pn	16 30 39.0	-0.3
SAMP				*e*S	Sn	16 31 04.9	-14
SMPP	San Manuel, Pa	4.32	177	⇑*e*P	Pn	16 30 51.4	-0.2
SMPP				*e*S	Sn	16 31 37.3	-4.0
BALP	Baler	4.85	167	⇓*e*P	Pn	16 31 00.2	+1.3
BALP				*e*S	Sn	16 31 58.7	+4.6
LQP	Lukban	6.43	170	⇓*e*P	Pn	16 31 28.2	+7.4
KSRS	Korea Array	18.12	20	P	Pn	16 33 57.5	+0.1
	0.1nm,0.3s,baz=194,slow=12,SNR=5.6						
	0.8nm,0.6s						
CMAR	Chiang Mai Arr	20.35	268	P	P	16 34 23.3	+1.1
	0.6nm,0.8s,baz=75,slow=10.0,SNR=4.8						
CMAR				LR	LR	16 42 08.4	
	comp=Z,57nm,19.7s,baz=180,slow=37						
	0.6nm,0.8s						
MJAR	Matsushiro Arr	22.30	40	P	P	16 34 44.3	+1.2
	1.1nm,0.8s,baz=250,slow=11,SNR=2.5						
	1.1nm,0.8s						
SIJI	Sorong	23.73	152	P	P	16 34 58.8	+0.9
	5.0nm,0.6s,baz=44,slow=8.2,SNR=7.5						
	5.0nm,0.6s						
GUMO	Guam	24.34	102	LR	LR	16 42 21.2	
	comp=Z,21nm,21.2s,baz=237,slow=31						
SONM	Songino Array	29.55	341	P	P	16 35 48.8	-1.4
	0.4nm,0.7s,baz=159,slow=9.3,SNR=3.6						
	0.4nm,0.7s						
MKAR	Makanchi Array	40.58	319	P	P	16 37 25.2	+0.2
	0.6nm,0.5s,baz=112,slow=8.9,SNR=10						
	0.6nm,0.5s						
WRA	Warramunga Arr	42.43	160	P	P	16 37 39.6	-0.7
	2.7nm,0.9s,baz=342,slow=9.1,SNR=17						
	2.7nm,0.9s						
ZALV	Zalesovo Beam	43.01	330	P	P	16 37 44.8	+0.1
	1.2nm,0.6s,baz=112,slow=5.7,SNR=7.4						
	1.2nm,0.6s						
H11S3	WAKE ISLAND Hy	43.55	84	T	T	17 24 26.5	
	baz=286						
H11S1	WAKE ISLAND Hy	43.56	84	T	T	17 24 29.9	
	baz=286						
H11S2	WAKE ISLAND Hy	43.57	84	T	T	17 24 29.3	
	baz=286						
ASAR	Alice Springs	45.81	163	P	P	16 38 07.4	0.0
	0.9nm,0.4s,baz=344,slow=6.7,SNR=35						
	0.9nm,0.4s						
STKA	Stephens Creek	55.88	158	P	P	16 39 22.2	-1.0
	1.5nm,0.7s,baz=286,slow=3.4,SNR=3.5						
	1.5nm,0.7s						
ILAR	Eielson Array	72.81	27	P	P	16 41 13.6	0.0
	0.4nm,0.8s,baz=289,slow=5.6,SNR=4.5						
	0.4nm,0.8s						

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*UCR **29** 16:44:41.4±1.1, 12°.52N×89°.47W, h202^{km}±54^{km}, ML4.1, mb4.6(NEIC)*

*SNET **29** 16:44:42.1±1.7, 11°.82N×89°.67W, h22^{km}±509^{km}, ML4.2*

*IDC **29** 16:44:48.4±1.0, 12°.81N×89°.18W, h0^{km}, mb4.1/10, mbtmp4.1/12, ML3.4/2, MS3.4/16, Error ellipse: s-maj=33.2km s-min=16.9km az=50.0*

*NEIC **29** 16:44:50.0±1.9, 12°.63N±0°.09×89°.29W±0°.07, h10^{km}±1^{km}, mb4.6/140, Md4.1(SNET), Error ellipse: s-maj=16.5km s-min=9.0km az=211.0*

*INET **29** 16:44:51.8±1.3, 12°.49N×89°.48W, h16^{km}±80^{km}, MW3.9*

*GCG **29** 16:44:54.7±0.3, 16°.30N×92°.00W, h58^{km}, MD4.3*

ISC 29 16:44:53.7±0.6**, 12°.60N**±0°.07×**89°.35W**±0°.06**, h47^{km}, n246,** σ**1^{s}06**/234**, mb4.4**/61**, MS3.4**/16**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.88	2	*e*P	Pn	16 45 11.6	+1.8
LALI	Alcalda de L	0.88	2	*e*P	Pn	16 45 11.6	+1.8
LALI	Alcalda de L	0.88	2	*e*P	Pn	16 45 09.6	-0.1
JAYA	Jayaque - finc	1.05	355	*e*P	Pn	16 45 12.1	-0.1
JAYA	Jayaque - finc	1.05	355	*e*P	Pn	16 45 12.1	-0.1
LFRS	El Faro	1.05	16	*e*P	Pn	16 45 12.7	+0.5
LFRS	El Faro	1.05	16	*e*P	Pn	16 45 12.7	+0.5
SNET	Serv Nac Est T	1.08	6	Pn	Pn	16 45 10.8	-1.8
SNET	Serv Nac Est T	1.08	6	*e*P	Pn	16 45 14.1	+1.5
SNET	Serv Nac Est T	1.08	6	*e*P	Pn	16 45 14.1	+1.5
SNET	Serv Nac Est T	1.08	6	*e*P	Pn	16 45 13.0	+0.4
COEG	Centro de Oper	1.11	24	*e*P	Pn	16 45 13.8	+0.8
COEG				IAML		16 45 39.0	
	comp=Z,1µm,0.4s						
COEG	Centro de Oper	1.11	24	*e*P	Pn	16 45 13.8	+0.8
COEG				IAML		16 45 39.0	
	comp=Z,1µm,0.4s						
COEG	Centro de Oper	1.11	24	*e*P	Pn	16 45 13.7	+0.7
BOQS	Boqueron	1.13	4	*e*P	Pn	16 45 14.1	+0.7
BOQS	Boqueron	1.13	4	*e*P	Pn	16 45 14.1	+0.7
PAVA	Las Pavas	1.18	20	*e*P	Pn	16 45 14.6	+0.7
CEDA	San Andres	1.19	358	*e*P	Pn	16 45 14.3	+0.2
CEVE	Cerro Verde	1.25	348	*e*P	Pn	16 45 14.7	-0.3
CEVE				*e*S	Sn	16 45 41.2	+10
CEVE				IAML		16 45 41.8	
	comp=Z,3µm,0.4s						
CEVE	Cerro Verde	1.25	348	*e*P	Pn	16 45 14.7	-0.3
CEVE				*e*S	Sn	16 45 41.2	+10
CEVE				IAML		16 45 41.8	
	comp=Z,3µm,0.4s						
SBLS	San Blas	1.26	348	*e*P	Pn	16 45 14.8	-0.3
SBLS	San Blas	1.26	348	*e*P	Pn	16 45 14.8	-0.3
PACA	Pacayal	1.32	49	*e*P	Pn	16 45 17.7	+1.8
FAGO	Alcalda de S	1.63	48	*e*P	Pn	16 45 20.2	+0.2
NBG	Las Nubes	2.20	334	*e*P	Pn	16 45 29.7	+1.7
CRIN	San Cristobal	2.25	87		Pn	16 45 27.1	-1.5
CRIN	San Cristobal	2.25	87	*e*P	Pn	16 45 30.1	+1.6
FUG	Fuego 3	2.34	322	*e*P	Pn	16 45 29.0	-0.8
FUG				*e*S	Sn	16 45 55.8	-1.6
MRL	Marmol	2.48	353	*e*P	Pn	16 45 34.5	+2.6
TGUH	Tegucigalpa,Un	2.49	54	Pn	Pn	16 45 29.5	-2.3
CNGN	Cerro Negro	2.59	92		Pn	16 45 29.8	-3.5
CNGN	Cerro Negro	2.59	92	*e*P	Pn	16 45 33.1	-0.1
MOMN	Momotombo	2.75	94	*e*P	Pn	16 45 35.2	-0.3
MATN	Matagalpa	3.36	84	Pn	Pn	16 45 42.6	-1.2
MATN	Matagalpa	3.36	84	*e*P	Pn	16 45 42.9	-0.9
BOAB	BOACO BROADBAN	3.60	92	Pn	Pn	16 45 46.3	-0.7
BOAB	BOACO BROADBAN	3.60	92	*e*P	Pn	16 45 46.5	-0.6
HZTE	Horizontes, Gu	4.13	117	Pn	Pn	16 45 52.5	-1.8
ACON	Acoyapa	4.13	98	*e*P	Pn	16 45 54.4	+0.1
ORTG	Ortega, Santa	4.42	120	Pn	Pn	16 45 58.0	-0.4
CCIG	Comitan	4.54	324	Pn	Pn	16 45 59.9	-0.2
JTS	Las Juntas de	4.89	118	Pn	Pn	16 46 04.3	-0.4
	comp=Z,2.5nm,0.3s,baz=14,slow=18,SNR=8.2						
JTS				Sn	Sn	16 46 60.0	-0.1
	comp=Z,1.2nm,0.3s,baz=3.1,slow=21,SNR=1.9						
	comp=Z,3.8nm,0.3s						
JTS	Las Juntas de	4.89	118	Pn	Pn	16 46 02.1	-2.6
JACO	JACO, Garabito	5.46	122	Pn	Pn	16 46 13.2	+0.7
RIMA	Rio Macho	6.08	117		Pn	16 46 22.0	+0.7
SRBA	San Rafael, Bu	6.77	119	Pn	Pn	16 46 32.1	+1.4
CMIG	Matias Romero	6.96	311	Pn	Pn	16 46 31.7	-1.5
	comp=Z,0.5nm,0.3s,baz=111,slow=12,SNR=9.2						
CMIG				Sn	Sn	16 47 47.3	-3.8
	comp=Z,0.5nm,0.3s,baz=305,slow=18,SNR=1.9						
	comp=Z,3.9nm,0.6s						
TLIG	Tlapa	10.17	300	Pn	Pn	16 47 17.4	+0.1
ROSC	El Rosal	16.73	116	Pn	P	16 48 48.4	+1.3
	baz=324,slow=18						
833A	Chaparral WMA,	18.23	331	P	P	16 49 03.1	0.0
HKT	Hockley	18.28	342	P	P	16 49 03.3	-0.2
344A	Westbrook Farm	18.80	356	P	Pn	16 49 10.6	+0.4
344A				IAmb	IAmb	16 49 19.0	
	comp=Z,30nm,0.8s						
342A	Flagon Creek P	18.88	352	P	Pn	16 49 11.6	+0.5
342A				IAmb	IAmb	16 49 14.2	
	comp=Z,78nm,1.3s						
352A	Blakely	19.23	12	P	Pn	16 49 14.8	-0.5
352A				IAmb	IAmb	16 49 17.6	
	comp=Z,27nm,0.8s						
TIGA	Tifton	19.48	15	P	Pn	16 49 18.8	+0.5
	baz=197						
VBMS	Vicksburg	19.55	357	P	Pn	16 49 20.1	+0.9
	baz=176						
435B	Jarrell	19.63	338	P	P	16 49 18.6	+0.2
435B	Jarrell	19.63	338	P	P	16 49 19.1	+0.8
	baz=155						
NATX	Nacogdoches	19.68	346	P	P	16 49 19.5	+0.5
NATX				IAmb	IAmb	16 49 20.7	
	comp=Z,29nm,0.7s						
NATX	Nacogdoches	19.68	346	P	Pn	16 49 20.2	-0.5
	baz=164,SNR=6.6						
146A	Union	19.94	1	P	P	16 49 21.4	-0.4
146A				IAmb	IAmb	16 49 29.0	
	comp=Z,39nm,1.1s						
143A	Socs Landing,	20.10	355	P	P	16 49 24.1	+0.7
143A				IAmb	IAmb	16 49 26.7	
	comp=Z,50nm,1.5s						
237A	Washetta, Mont	20.20	344	P	Pn	16 49 25.7	-1.1
237A				IAmb	IAmb	16 49 27.4	
	comp=Z,25nm,0.8s						
JCT	Junction City	20.25	333	P	P	16 49 24.2	-1.0
JCT	Junction City	20.25	333	P	P	16 49 25.0	-0.1
	baz=149,SNR=6.5						
152A	Waverly Hall	20.42	11	P	P	16 49 27.8	+0.8
LRAL	Lakeview Retre	20.45	6	P	Pn	16 49 29.6	-0.2
	baz=186,SNR=6.1						
Z47A	Carrollton	20.54	3	P	P	16 49 26.8	-1.4
Z47A				IAmb	IAmb	16 49 31.2	
	comp=Z,26nm,1.0s						
WHTX	Lake Whitney,	20.69	340	P	P	16 49 29.3	-0.5
WHTX	Lake Whitney,	20.69	340	P	P	16 49 29.9	+0.1
	baz=157,SNR=34						
Z41A	Richland Creek	20.80	352	P	Pn	16 49 35.1	+1.2
	baz=170						
HPIG		20.91	315	P	P	16 49 34.0	+1.4
BAUV	El Baul	21.25	98	P	P	16 49 35.2	-0.8
BAUV				IAmb	IAmb	16 49 51.0	
	comp=Z,42nm,1.5s						
Y49A	Blount Mountai	21.33	7	P	P	16 49 37.8	+1.1
Y49A				IAmb	IAmb	16 49 39.2	
	comp=Z,14nm,0.7s						
CCAR	Cane Creek	21.33	354	P	P	16 49 37.2	+0.5
CCAR				IAmb	IAmb	16 49 41.5	
	comp=Z,24nm,0.6s						
GOGA	Godfrey	21.40	14	P	P	16 49 38.3	+0.8
GOGA	Godfrey	21.40	14	P	P	16 49 38.9	+1.4
	baz=196						
Y52A	Lilburn	21.71	12	P	P	16 49 42.0	+1.2
OXF	Oxford	21.81	360	P	P	16 49 42.4	+0.5
OXF	Oxford	21.81	360	P	P	16 49 43.3	+1.4
	baz=180,SNR=15						
X48A	Hartselle	21.85	5	P	P	16 49 42.9	+0.6
Z35A	Perchaven, San	21.86	342	P	P	16 49 41.8	-0.7
X40A	Basin Creek Fa	22.02	352	P	P	16 49 43.8	-0.3
X40A	Basin Creek Fa	22.02	352	P	P	16 49 46.5	+2.4
	baz=171						
ABTX	Abilene, Hawle	22.05	336	P	P	16 49 43.5	-1.0
ABTX				IAmb	IAmb	16 49 51.6	
	comp=Z,18nm,1.0s						
ABTX	Abilene, Hawle	22.05	336	P	P	16 49 43.6	-1.0
	baz=152						
FPAL	Fort Paine	22.10	8	P	P	16 49 45.7	+0.6
MIAR	Mount Ida	22.18	351	P	P	16 49 46.0	+0.2
MIAR				IAmb	IAmb	16 49 49.2	
	comp=Z,25nm,0.9s						
MIAR	Mount Ida	22.18	351	P	P	16 49 48.3	+2.4
	baz=169,SNR=14						
UALR	University of	22.24	353	P	P	16 49 46.5	0.0
UALR				IAmb	IAmb	16 49 50.3	
	comp=Z,34nm,0.9s						
PLAL	Pickwick Lake	22.31	3	P	P	16 49 47.5	+0.2
W45A	Hickory Valley	22.46	0	P	P	16 49 49.1	+0.3
HODGE	Hodges	22.48	16	P	P	16 49 48.9	-0.2
HODGE				IAmb	IAmb	16 49 51.4	
	comp=Z,14nm,0.8s						
X37A	Clayton	22.56	347	P	P	16 49 50.0	0.0
X37A				IAmb	IAmb	16 49 53.6	
	comp=Z,15nm,0.9s						
W41B	Gary Mavity, V	22.62	354	P	P	16 49 51.3	+0.7
W41B	Gary Mavity, V	22.62	354	P	P	16 49 50.9	+0.3
	baz=172,SNR=8.1						
WHAR	Wooly Hollow	22.74	354	P	P	16 49 51.5	-0.4
WHAR				IAmb	IAmb	16 49 54.3	
	comp=Z,14nm,0.9s						
W39A	Magazine	22.85	351	P	P	16 49 53.3	+0.3
W39A				IAmb	IAmb	16 49 56.1	
	comp=Z,22nm,1.1s						
W39A	Magazine	22.85	351	P	P	16 49 54.0	+1.0
	baz=169,SNR=7.8						
V48A	Smith Brothers	23.15	5	P	P	16 49 56.3	+0.2
CPCT	Cooper Cave	23.16	10	P	P	16 49 56.3	+0.2
X34A	Smith Ranch, M	23.21	342		P	16 49 56.6	-0.1
GNAR	Gosnell	23.27	359	P	P	16 49 57.5	+0.4
FCAR	Ozark Folk Cen	23.32	354	P	P	16 49 57.5	-0.2
FCAR				IAmb	IAmb	16 49 59.6	
	comp=Z,12nm,0.9s						
LNXT	Lenox	23.40	360	P	P	16 49 58.8	+0.4
PEBM	Pemiscott Bayo	23.41	359	P	P	16 49 59.0	+0.5
LCAR	Lake Charles	23.42	356	P	P	16 49 58.4	-0.2
LCAR				IAmb	IAmb	16 50 01.0	
	comp=Z,19nm,0.9s						
WVT	Waverly	23.47	3	P	P	16 49 59.2	+0.2
WVT	Waverly	23.47	3	P	P	16 49 59.8	+0.7
	baz=184						
TKL	Tuckaleechee C	23.50	11	P	P	16 49 59.6	+0.2
	comp=Z,6.4nm,0.7s,baz=181,slow=12,SNR=9.6						
TKL				LR	LR	16 59 58.9	
	comp=Z,84nm,18.2s,baz=182,slow=39						
	comp=Z,6.4nm,0.7s						
TKL	Tuckaleechee C	23.50	11	P	P	16 49 59.6	+0.2
TKL				IAmb	IAmb	16 50 25.1	
	comp=Z,23nm,1.5s						
CLTN	Cedars of Leba	23.55	6	P	P	16 50 00.2	+0.4
CLTN				IAmb	IAmb	16 50 01.2	
	comp=Z,9.1nm,0.7s						
GLAT	Glass	23.57	0	P	P	16 49 59.6	-0.4
KMSC	Kings Mountain	23.59	17	P	P	16 50 01.0	+0.8
	baz=200						
WMOK	Wichita Mounta	23.64	340	P	P	16 49 58.9	-1.9
WMOK				IAmb	IAmb	16 50 01.4	
	comp=Z,17nm,0.9s						
WMOK	Wichita Mounta	23.64	340	P	P	16 49 59.5	-1.3
	baz=156,SNR=19						
FNO	Franklin	23.70	343		P	16 49 60.0	-1.4
U40A	Yellville	23.86	353	P	P	16 50 03.1	+0.3
	baz=171,SNR=11						
TUL1	Leonard	23.92	347	P	P	16 50 02.2	-1.1
TUL1	Leonard	23.92	347	P	P	16 50 04.4	+1.1
	baz=164						
HHAR	Hobbs	23.94	351	P	P	16 50 02.7	-0.8
PARMO	Parma	23.96	359	P	P	16 50 02.9	-0.7
U49A	Red Boiling Sp	24.02	7	P	P	16 50 04.0	-0.3
U49A				IAmb	IAmb	16 50 05.5	
	comp=Z,12nm,0.9s						
MNTX	Cornudas Mount	24.06	325	P	P	16 50 03.9	-0.8
MNTX	Cornudas Mount	24.06	325	P	P	16 50 04.5	-0.2
	baz=139,SNR=14						
PBMO	Poplar Bluff	24.09	358	P	P	16 50 05.1	+0.2
T45A	Paducah	24.32	1	P	P	16 50 07.5	+0.6
T47A	Sharon Grove	24.37	4	P	P	16 50 06.8	-0.6
MSTX	Muleshoe	24.53	332	P	P	16 50 07.8	-1.3
MSTX				IAmb	IAmb	16 50 10.5	
	comp=Z,12nm,1.0s						
MSTX	Muleshoe	24.53	332	P	P	16 50 08.1	-1.0
	baz=147						
MGMO	Mountain Grove	24.59	354	P	P	16 50 09.2	-0.2
MGMO				IAmb	IAmb	16 50 12.3	
	comp=Z,21nm,0.9s						
U54A	Nelsons Funny	24.76	15	P	P	16 50 11.4	+0.3
AMTX	Amarillo	24.84	335	P	P	16 50 12.1	+0.2
AMTX				IAmb	IAmb	16 50 12.8	
	comp=Z,18nm,0.9s						
AMTX	Amarillo	24.84	335	P	P	16 50 11.7	-0.1

	baz=150						
S44A	Carbondale	24.99	0	P	P	16 50 13.1	+0.1
SIUC	Southern Illin	25.01	0	P	P	16 50 13.4	+0.2
T35A	Sooner Cattle	25.05	346	P	P	16 50 13.6	0.0
T35A				IAmb	IAmb	16 50 15.3	
	comp=Z,7.9nm,0.7s						
S39A	Bolivar	25.23	353	P	P	16 50 14.9	-0.4
S39A				IAmb	IAmb	16 50 16.2	
	comp=Z,11nm,0.6s						
FVM	French Village	25.30	358	P	P	16 50 16.0	+0.2
FVM				IAmb	IAmb	16 50 18.3	
	comp=Z,9.9nm,0.7s						
CCM	Cathedral Cave	25.40	357	P	P	16 50 16.3	-0.5
CCM				IAmb	IAmb	16 50 17.6	
	comp=Z,13nm,0.8s						
CCM	Cathedral Cave	25.40	357	P	P	16 50 16.8	0.0
	baz=176						
R40A	Maddies Statio	25.71	355	P	P	16 50 19.1	-0.5
R40A				IAmb	IAmb	16 50 22.7	
	comp=Z,13nm,1.0s						
R49A	Shelbyville	25.85	8	P	P	16 50 19.7	-1.1
R49A				IAmb	IAmb	16 50 21.2	
	comp=Z,7.1nm,0.8s						
121A	Cookes Peak, D	26.06	323	P	P	16 50 23.5	+0.5
121A				IAmb	IAmb	16 50 27.6	
	comp=Z,8.8nm,0.8s						
121A	Cookes Peak, D	26.06	323	P	P	16 50 24.8	+1.8
	baz=135						
Q44A	Meyer Farm, Va	26.20	1	P	P	16 50 23.2	-0.8
R53A	Hurricane	26.46	13	P	P	16 50 26.2	-0.1
R53A				IAmb	IAmb	16 50 30.1	
	comp=Z,11nm,1.1s						
T59A	Double "B" Far	26.48	22	P	P	16 50 26.6	+0.1
T59A				IAmb	IAmb	16 50 28.3	
	comp=Z,9.7nm,0.8s						
BNM	Barren Site	26.59	327	P	P	16 50 28.3	+0.4
Q51A	Peebles	26.85	10	P	P	16 50 29.2	-0.7
Q51A				IAmb	IAmb	16 50 30.8	
	comp=Z,8.4nm,0.8s						
P40A	Paris	26.93	355	P	P	16 50 29.7	-0.9
P40A				IAmb	IAmb	16 50 30.9	
	comp=Z,9.5nm,0.8s						
P43A	Skaggs, Pawnee	26.93	360	P	P	16 50 29.6	-1.0
P43A				IAmb	IAmb	16 50 35.2	
	comp=Z,13nm,0.8s						
ANMO	Albuquerque	27.11	328	P	P	16 50 32.6	+0.1
	comp=Z,0.5nm,0.5s,baz=163,slow=14,SNR=1.9						
	comp=Z,0.5nm,0.5s						
ANMO	Albuquerque	27.11	328	IAmb	IAmb	16 50 39.4	
	comp=Z,1.2nm,0.8s						
KSU1	Kansas State U	27.16	348	P	P	16 50 32.3	-0.4
KSU1				IAmb	IAmb	16 50 33.7	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	27.16	348	P	P	16 50 32.7	0.0
	baz=164						
Q54A	Coxs Mills	27.34	15	P	P	16 50 34.4	+0.2
P51A	Williamsport	27.35	11	P	P	16 50 34.3	0.0
P51A				IAmb	IAmb	16 50 34.8	
	comp=Z,6.3nm,0.8s						
TUC	Tucson	27.77	318	P	P	16 50 44.4	+6.1
	baz=130						
T25A	Trinidad	27.91	334	P	P	16 50 40.3	+0.6
T25A	Trinidad	27.91	334	P	P	16 50 40.9	+1.2
	baz=147						
N41A	Harden Midland	28.03	358	P	P	16 50 40.0	-0.4
N41A				IAmb	IAmb	16 50 41.1	
	comp=Z,20nm,1.2s						
KSCO	Kaye Shedlock'	28.82	338	P	P	16 50 47.9	+0.3
SDMD	Soldier's Deli	28.91	20	P	P	16 50 48.0	-0.3
W18A	Petrified Fore	29.03	324	P	P	16 50 50.0	+0.3
L42A	Oliver, Polo	29.29	360	P	P	16 50 50.9	-0.7
L42A				IAmb	IAmb	16 50 52.0	
	comp=Z,12nm,0.8s						
S22A	4UR Ranch, Cre	29.51	331	P	P	16 50 54.9	+0.9
	baz=143,SNR=6.3						
JFWS	Jewell Farm	30.21	359	P	P	16 50 59.3	-0.5
JFWS				IAmb	IAmb	16 51 00.3	
	comp=Z,6.3nm,0.7s						
M55A	Ridgway	30.21	16	P	P	16 50 59.6	-0.2
M55A				IAmb	IAmb	16 51 07.0	
	comp=Z,11nm,1.2s						
OGNE	Ogallala	30.35	341	P	P	16 51 01.3	+0.3
	baz=155						
PV13	Radium Mtn., P	30.80	329	P	P	16 51 05.6	+0.3
PV11	David Mesa, Pa	30.93	329	P	P	16 51 06.8	+0.4
PV11				IAmb	IAmb	16 51 10.3	
	comp=Z,4.6nm,0.8s						
PV23	Carpenter Ridg	31.12	329	P	P	16 51 08.7	+0.5
PV23				IAmb	IAmb	16 51 10.1	
	comp=Z,5.9nm,0.8s						
I42A	Draeger Farm,	31.18	1	P	P	16 51 07.8	-0.4
ECSD	EROS Data Cent	31.65	350	P	P	16 51 11.8	-0.6
ECSD	EROS Data Cent	31.65	350	P	P	16 51 11.3	-1.1
	baz=166						
BC3	Big Chuckawall	31.70	316	P	P	16 51 15.2	+2.1
	baz=125						
O20A	White River Ci	32.08	332	P	P	16 51 17.6	+1.1
	baz=144						
SPMN	Marine on St.	32.65	355	P	P	16 51 20.3	-0.8
SPMN	Marine on St.	32.65	355	P	P	16 51 20.5	-0.6
	baz=174						
P17A	Butcher Ranch,	32.77	329	P	P	16 51 22.2	-0.3
J57A	Williamstown	32.79	18	P	P	16 51 21.0	-1.4
J57A				IAmb	IAmb	16 51 22.9	
	comp=Z,5.6nm,0.8s						
SADO	Sadowa	33.23	13	P	P	16 51 25.0	-1.2
	comp=Z,3.8nm,0.6s,baz=209,slow=9.5,SNR=5.3						
SADO				LR	LR	17 04 55.7	
	comp=Z,84nm,21.3s,baz=190,slow=37						
	comp=Z,3.8nm,0.6s						
SADO	Sadowa	33.23	13	IAmb	IAmb	16 51 38.0	
	comp=Z,12nm,1.4s						
COWI	Conover	33.39	0	P	P	16 51 26.8	-0.9
F33A	5 Mile Ranch,	33.65	351	P	P	16 51 28.4	-1.5
F33A				IAmb	IAmb	16 51 29.8	
	comp=Z,4.9nm,0.7s						
SAML	Samuel	33.68	128	P	P	16 51 30.0	-0.5
E43A	Lone Tree Farm	33.72	3	P	P	16 51 29.5	-1.0
RSSD	Black Hills	33.85	341	P	P	16 51 31.9	0.0
RSSD	Black Hills	33.85	341	P	P	16 51 32.7	+0.8
	baz=154						
TPNV	Topopah Spring	34.19	320	P	P	16 51 37.1	+2.3
	baz=128						
LONY	Lake Ozonia	34.32	19	P	P	16 51 35.7	-0.1
LONY				IAmb	IAmb	16 51 36.3	
	comp=Z,7.3nm,1.1s						
D41A	Chassel	34.35	1	P	P	16 51 34.9	-1.1
R11A	Troy Canyon, C	34.67	322	P	P	16 51 40.6	+1.6
	baz=131						
PDAR	Pinedale Array	34.78	334	P	P	16 51 39.7	-0.3
	comp=Z,0.4nm,0.7s,baz=98,slow=12,SNR=3.2						
PDAR				PcP	PcP	16 54 13.9	+1.1
	comp=Z,0.2nm,0.5s,baz=140,slow=3.5,SNR=2.8						
	comp=Z,0.4nm,0.7s						
EYMN	Ely	35.28	358	P	P	16 51 42.5	-1.5
EYMN				IAmb	IAmb	16 51 43.2	
	comp=Z,4.6nm,0.8s						
EYMN	Ely	35.28	358	P	P	16 51 43.0	-1.0
	baz=176						
REDW	Red Top Meadow	35.83	333	P	P	16 51 49.3	+0.3
REDW				IAmb	IAmb	16 51 51.9	
	comp=Z,4.6nm,0.8s						
AGMN	Agassiz Nation	36.00	353	P	P	16 51 49.1	-1.0
AGMN				IAmb	IAmb	16 51 50.1	
	comp=Z,6.3nm,0.7s						
AGMN	Agassiz Nation	36.00	353	P	P	16 51 49.4	-0.8
	baz=169,SNR=5.3						
ELK	Elko	36.07	326	LR	LR	17 08 26.1	
	comp=Z,39nm,18.3s,baz=140,slow=39						
NV11	Mina Array Sit	36.29	320	P	P	16 51 54.5	+1.6
NVAR	Mina Array Bea	36.38	320	P	P	16 51 55.7	+1.9
	comp=Z,2.6nm,0.8s,baz=134,slow=7.8,SNR=24						
NVAR				PcP	PcP	16 54 19.9	+2.3
	comp=Z,0.4nm,0.8s,baz=153,slow=4.4,SNR=4.2						
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	36.38	320	P	P	16 51 55.2	+1.4
LHV	Little Huntoon	36.40	320	P	P	16 51 55.4	+1.8
LHV				IAmb	IAmb	16 51 57.2	
	comp=Z,5.6nm,0.8s						
MCMT	McKenzie Canyo	37.87	332	P	P	16 52 07.3	+0.9
ULM	Lac du Bonnet	37.92	353	P	P	16 52 04.5	-1.9
	comp=Z,3.2nm,0.7s,baz=159,slow=7.8,SNR=4.4						
	comp=Z,3.2nm,0.7s						
BOZ	Bozeman (W)	37.94	334	P	P	16 52 07.6	+0.8
	baz=143						
LRM	Limekiln Ridge	38.47	334	P	P	16 52 12.2	+0.7
EGMT	Eagleton	39.20	338	P	P	16 52 17.7	+0.3
	baz=147						
SIV	San Ignacio	39.87	135	P	P	16 52 23.8	+0.6
	comp=Z,3.0nm,1.0s,baz=312,slow=11,SNR=6.8						
	comp=Z,3.0nm,1.0s						
F10A	Beach Ranch, E	40.78	330	P	P	16 52 29.8	-0.7
YBH	Yreka Blue Hor	41.05	321	LR	LR	17 10 59.1	
	comp=Z,54nm,18.4s,baz=170,slow=38						
NEW	Newport	42.40	333	LR	LR	17 14 17.7	
	comp=Z,35nm,18.4s,baz=348,slow=42						
SCHQ	Schefferville	45.69	18	P	P	16 53 08.7	-1.1
	comp=Z,6.3nm,0.7s,baz=222,slow=8.4,SNR=16						
SCHQ				LR	LR	17 14 29.0	
	comp=Z,53nm,18.6s,baz=268,slow=39						
	comp=Z,6.3nm,0.7s						
SCHQ	Schefferville	45.69	18	P	P	16 53 08.4	-1.4
SCHQ				IAmb	IAmb	16 53 09.6	
	comp=Z,7.0nm,0.8s						
FCC	Fort Churchill	46.21	357	P	P	16 53 13.4	-0.3
FCC				IAmb	IAmb	16 53 34.2	
	comp=Z,4.6nm,1.1s						
BBB	Bella Bella	50.24	330	LR	LR	17 16 41.5	
	comp=Z,19nm,21.4s,baz=98,slow=38						
YKA	Yellowknife Ar	52.99	346	P	P	16 54 04.7	-0.7
	comp=Z,3.0nm,0.8s,baz=142,slow=7.6,SNR=10						
YKA				LR	LR	17 19 55.2	
	comp=Z,55nm,18.6s,baz=314,slow=40						
	comp=Z,3.0nm,0.8s						
FRB	Frobisher Bay	53.13	11	LR	LR	17 17 12.0	
	comp=Z,64nm,19.6s,baz=208,slow=37						
DLBC	Dease Lake	54.98	335	LR	LR	17 23 00.6	
	comp=Z,56nm,18.5s,baz=296,slow=42						
RCBR	Riachuelo	56.19	106	P	P	16 54 29.1	-0.3
SFJD	Kangerlussuaq	60.09	16	LR	LR	17 19 25.4	
	comp=Z,32nm,21.1s,baz=266,slow=35						
BCAR	Beaver Creek A	62.35	336	P	P	16 55 11.6	+0.3
L27K	Beaver Creek,	62.37	336	P	P	16 55 11.7	+0.4
INK	Inuvik	62.51	343	LR	LR	17 25 31.4	
	comp=Z,35nm,18.6s,baz=263,slow=39						
M24K	Tolsona, Glenn	63.73	334	P	P	16 55 21.2	+0.8
ILAR	Eielson Array	65.14	337	P	P	16 55 29.2	-0.2
	comp=Z,1.5nm,1.0s,baz=130,slow=5.0,SNR=11						
	comp=Z,1.5nm,1.0s						
ILAR	Eielson Array	65.14	337	P	P	16 55 28.9	-0.6
BMAR	Burnt Mountain	65.49	340	P	P	16 55 32.1	+0.4
MLY	Manley	66.75	336	P	P	16 55 39.6	-0.3
MLY				IAmb	IAmb	16 55 40.5	
	comp=Z,2.2nm,0.7s						
MLY	Manley	66.75	336	P	P	16 55 39.8	-0.1
	baz=111						
COLD	Coldfoot	67.37	338	P	P	16 55 43.5	-0.2
EUNU	Eureka	67.48	1	P	P	16 55 44.0	-0.3
EUNU				IAmb	IAmb	16 55 44.5	
	comp=Z,4.1nm,1.1s						
L19K	White Mountain	67.58	332	P	P	16 55 44.9	-0.3
L19K				IAmb	IAmb	16 55 45.5	
	comp=Z,3.8nm,1.1s						
ESDC	Sonseca Array	78.56	52	LR	LR	17 26 55.6	
	comp=Z,33nm,18.3s,baz=156,slow=32						
RCHB	Rochefort	83.35	40	*d*PcP	PcP	16 57 21.2	+1.1
BILL	Bilibino	83.70	338	P	P	16 57 17.6	+0.4
BILL				IAmb	IAmb	16 57 21.0	
	comp=Z,5.3nm,1.3s						
SSB	Saint Sauveur	83.88	45	P	P	16 57 18.1	-0.5
SSB				IAmb	IAmb	16 57 32.5	
	comp=Z,5.4nm,1.3s						
SHEM	Shemya Is, Ala	84.01	323	LR	LR	17 33 32.1	
	comp=Z,18nm,21.0s,baz=80,slow=35						
NOA	NORSAR Array B	84.13	29	LR	LR	17 30 43.8	
	comp=Z,8.2nm,21.9s,baz=130,slow=33						
YAK	Yakutsk	99.57	342	LR	LR	17 49 23.6	
	comp=Z,61nm,20.5s,baz=265,slow=39						
MKAR	Makanchi Array	120.40	7	PKP	PKiKP	17 03 40.7	+0.5
	comp=Z,0.3nm,0.8s,baz=30,slow=4.0,SNR=2.4						
WRA	Warramunga Arr	137.52	254	PKP	PKiKP	17 04 15.6	+0.4
	comp=Z,0.4nm,0.9s,baz=100,slow=8.7,SNR=2.5						
ASAR	Alice Springs	137.59	249	PKP	PKiKP	17 04 16.7	+1.4
	comp=Z,0.2nm,0.7s,baz=91,slow=2.6,SNR=1.3						
CMAR	Chiang Mai Arr	148.07	345	PKPbc	PKPbc	17 04 35.4	+0.3
	comp=Z,2.0nm,0.8s,baz=335,slow=3.2,SNR=13						

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*IDC **29** 16:46:03.9±0.8, 55°.22S×28°.08W, h0km, mb4.1/8, mbtmp4.1/9, ML4.3/1, MS3.3/2, Error ellipse: s-maj=33.3km s-min=17.5km az=65.0*

*NEIC **29** 16:46:04.8±1.4, 55°.2S±0°.1×28°.3W±0°.2, h6km±4km, mb4.3/17, Error ellipse: s-maj=15.9km s-min=13.3km az=206.0*

ISC 29 16:46:05.1±0.6**, 55°.21S**±0°.09×**28°.3W**±0°.1**, h10**km**, n37, σ0s.89**/32**, mb4.3**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	4.82	278	Pn	Pn	16 47 17.4	-0.1
ORCD	Orcadas	10.31	231	Pn	Pn	16 48 33.6	+0.8
VNA3	Neumayer Olymp	18.00	160	P	P	16 50 15.1	-0.3
VNA2	Neumayer--Watz	18.21	158	P	P	16 50 18.0	+0.2
	baz=314,slow=12						
SNAA	Sanae	19.77	156	P	P	16 50 34.4	-0.5
SNAA	Sanae	19.77	156	P	P	16 50 34.4	-0.5
	1.0nm,0.3s,baz=301,slow=12,SNR=38						
SNAA				LR	LR	16 57 20.6	
	comp=Z,44nm,18.3s,baz=120,slow=34						
	2.4nm,0.4s						
SNAA	Sanae	19.77	156	P	P	16 50 34.4	-0.5
PMSA	Palmer Station	19.98	227	P	Pn	16 50 42.4	+3.5
	6.2nm,0.8s,baz=50,slow=11,SNR=5.0						
PMSA	Palmer Station	19.98	227	IAmb	IAmb	16 50 43.9	
	comp=Z,6.7nm,0.7s						
TROLL	Troll, Antarti	21.28	154	P	P	16 50 51.9	+0.5
BELA	Belgrano 2	22.87	183	P	P	16 51 06.7	-1.5
DSPA	Despedida	22.96	257	P	P	16 51 08.7	-0.6
GO08	Villa O'Higgin	27.75	265	P	P	16 51 51.2	-2.4
GO08				IAmb	IAmb	16 52 11.8	
	comp=Z,4.9nm,0.9s						
QSPA	South Pole Qui	35.04	180	P	P	16 52 58.1	+0.4
	comp=Z,1.5nm,0.6s,baz=153,slow=4.5,SNR=17						
	comp=Z,1.5nm,0.6s						
QSPA	South Pole Qui	35.04	180	P	P	16 52 57.9	+0.2
QSPA				IAmb	IAmb	16 53 15.4	
	comp=Z,4.5nm,1.1s						
CPUP	Villa Florida	35.77	312	P	P	16 53 04.1	0.0
	comp=Z,1.9nm,0.6s,baz=152,slow=6.5,SNR=4.7						
	comp=Z,1.9nm,0.6s						
CPUP	Villa Florida	35.77	312	P	P	16 53 03.5	-0.6
CPUP				IAmb	IAmb	16 53 17.4	
	comp=Z,9.5nm,1.3s						
GO05	Huala	36.03	286	P	P	16 53 05.8	-0.5
GO05				IAmb	IAmb	16 53 12.9	
	comp=Z,6.8nm,1.1s						
MT09	Talagante	36.44	288	P	P	16 53 09.8	-0.1
LVC	Limon Verde	44.32	301	P	P	16 54 17.4	+1.9
	comp=Z,2.7nm,0.5s,baz=101,slow=5.2,SNR=2.3						
	comp=Z,2.7nm,0.5s						
LVC	Limon Verde	44.32	301	IAmb	IAmb	16 54 37.2	
	comp=Z,4.2nm,0.8s						
BOSA	Boshof	46.41	78	LR	LR	17 10 14.2	
	comp=Z,68nm,18.1s,baz=36,slow=31						
BOSA	Boshof	46.41	78	P	P	16 54 31.4	-0.4
BOSA				IAmb	IAmb	16 54 50.1	
	comp=Z,6.2nm,1.4s						
SIV	San Ignacio	46.53	314	P	P	16 54 34.5	+1.8
	comp=Z,1.0nm,0.8s,baz=187,slow=4.4,SNR=3.8						
	comp=Z,1.0nm,0.8s						
SBA	Scott Base	46.87	184	P	P	16 54 35.9	+1.2
VNDA	Vanda	47.38	183	P	P	16 54 39.0	+0.4
	comp=Z,1.6nm,0.8s,baz=187,slow=6.7,SNR=9.8						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	47.38	183	P	P	16 54 39.0	+0.4
VNDA				IAmb	IAmb	16 54 39.9	
	comp=Z,1.6nm,0.8s						
LPAZ	La Paz	49.36	306	P	P	16 54 56.5	+1.2
	comp=Z,1.6nm,0.5s,baz=138,slow=3.8,SNR=9.2						
	comp=Z,1.6nm,0.5s						
LPAZ	La Paz	49.36	306	P	P	16 54 55.4	+0.1
LPAZ				IAmb	IAmb	16 55 09.1	
	comp=Z,2.2nm,0.7s						
TOA0	Torodi Ar. Sit	72.65	31	P	P	16 57 33.0	+0.3
TORD	Torodi Ar. Bea	72.65	31	P	P	16 57 33.2	+0.5
	comp=Z,2.2nm,0.9s,baz=200,slow=6.7,SNR=8.4						
	comp=Z,2.2nm,0.9s						
TORD	Torodi Ar. Bea	72.65	31	IAmb	IAmb	16 57 37.8	
	comp=Z,2.4nm,1.0s						
ASAR	Alice Springs	99.98	163	P	Pdif	16 59 50.6	+0.3
	comp=Z,0.2nm,0.8s,baz=176,slow=2.8,SNR=1.5						
	comp=Z,0.2nm,0.8s						
FINES	FINESS Array B	123.95	28	PKP	PKPdf	17 05 01.0	-0.9
	comp=Z,1.7nm,0.9s,baz=198,slow=7.3,SNR=2.1						
ILAR	Eielson Array	149.07	313	PKPbc	PKPbc	17 05 52.5	+0.6
	comp=Z,2.7nm,0.7s,baz=121,slow=1.9,SNR=23						
ILAR	Eielson Array	149.07	313		PKPbc	17 05 52.1	+0.2
SONM	Songino Array	151.32	86	PKPbc	PKPbc	17 05 57.8	-0.2
	comp=Z,0.8nm,0.6s,baz=228,slow=3.2,SNR=6.7						

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*IDC **29** 16:46:17.3±1.6, 32°.66S×71°.77W, h0km, mb3.5/3, mbtmp3.4/6, ML3.4/3, MS2.8/1, Error ellipse: s-maj=51.3km s-min=32.5km az=91.0*

*GUC **29** 16:46:20.6±0.8, 32°.72S×72°.06W, h32km±4km, ML3.5*

ISC 29 16:46:18.4±1.6**, 32°.71S**±0°.04×**72°.04W**±0°.06**, h13**km±10km**, n38, σ0s.91**/39**, mb3.5**/3**, 5C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	0.46	134	*e*P	Pn	16 46 30.0	-0.7
VA01				*i* S	Sn	16 46 37.1	-1.6
VA01				IAML		16 46 39.1	
	comp=N,6μm,0.1s						
VA06	Catapilco	0.64	77	⇓*i*P	Pn	16 46 33.3	+0.1
VA06				*i* S	Sn	16 46 42.5	-0.8
VA06				IAML		16 46 43.7	
	comp=N,11μm,0.4s						
ROCH	El Roble	0.91	107	⇓*i*P	Pn	16 46 37.6	+0.5
ROCH				⇓*i*P	Pn	16 46 37.6	+0.5
ROCH				*i* S	Sn	16 46 49.9	-0.2
ROCH				*i* S	Sn	16 46 49.9	-0.2
ROCH				IAML		16 46 51.7	
	comp=E,3μm,0.4s						
ROCH				IAML		16 46 52.2	
	comp=E,3μm,0.2s						
MT02	Curacav	0.94	126	⇓*i*P	Pn	16 46 37.8	+0.5
MT02				*i* S	Sn	16 46 50.3	-0.4
MT02				IAML		16 46 53.0	
	comp=E,857nm,0.4s						
VA05	Santo Domingo	1.01	159	*e*P	Pn	16 46 38.6	+0.3
VA05				*i* S	Sg	16 46 51.6	+0.4
VA05				IAML		16 46 55.3	
	comp=N,1μm,0.5s						
PEL	Peldehue	1.22	111	*e*P	Pg	16 46 42.3	+0.4
PEL				*i* S	Sg	16 46 59.1	+1.3
PEL				IAML		16 47 02.2	
	comp=E,2μm,0.2s						
VA03	San Esteban	1.26	93	⇑*i*P	Pg	16 46 42.7	+0.2
VA03				*i* S	Sg	16 46 59.6	+0.7
MT05	Renca	1.29	122	*e*P	Pg	16 46 43.8	+0.6
MT05				IAML		16 47 05.4	
	comp=E,2μm,0.4s						
MT09	Talagante	1.38	141	*e*P	Pg	16 46 44.6	-0.4
MT09				*i* S	Sg	16 47 02.7	-0.3
MT09				IAML		16 47 04.4	
	comp=N,2μm,0.2s						
MT03	Universidad Ad	1.50	122	*e*P	Pg	16 46 47.2	-0.1
MT03				IAML		16 47 14.2	
	comp=N,2μm,0.2s						
FCH	Farellones	1.59	113	⇑*i*P	Pg	16 46 48.2	-0.9
FCH				*i* S	Sg	16 47 10.3	+0.5
FCH				IAML		16 47 11.1	
	comp=E,2μm,0.4s						
CO02	Combarbal	1.74	31	⇑*i*P	Pb	16 46 49.4	-0.9
CO02				IAML		16 47 22.6	
	comp=E,2μm,0.3s						
BO04	La Punta	1.75	137	*e*P	Pb	16 46 50.4	-0.1
BO04				IAML		16 47 20.1	
	comp=N,851nm,0.6s						
BO03	Pichilemu	1.79	178	*e*P	Pn	16 46 48.9	0.0
BO03				IAML		16 47 10.9	
	comp=E,135nm,0.2s						
LMEL	Las Melosas	1.91	127	*e*P	Pg	16 46 53.8	-1.3
LMEL				*i* S	Sg	16 47 18.1	-1.9
LMEL				IAML		16 47 22.8	
	comp=N,1μm,0.2s						
CO06	Fray Jorge	2.06	10	⇑*i*P	Pn	16 46 52.5	-0.2
CO06				IAML		16 47 30.2	
	comp=N,229nm,0.8s						
GO05	Huala	2.30	178	*e*P	Pn	16 46 55.6	-0.4
GO04	Tololo Observa	2.74	23	⇑*i*P	Pn	16 47 03.0	+0.7
CO05	La Serena	2.86	14	IAML		16 47 52.4	
	comp=E,187nm,0.6s						
ML02	Panimavida	3.09	171	*e*P	Pn	16 47 08.3	+1.4
ML02				IAML		16 48 03.8	
	comp=N,292nm,0.8s						
CO01	Juntas del Tor	3.19	32	*e*P	Pn	16 47 10.2	+1.7
CO01				IAML		16 48 04.1	
	comp=N,98nm,0.6s						
AC04	Llanos de Chal	4.56	11	⇓*i*P	Pn	16 47 26.6	-0.6
H03N1	Juan Fernandez	5.81	261	T	T	16 54 27.2	
	baz=78,slow=73						
H03N3	Juan Fernandez	5.83	261	T	T	16 54 23.1	
	baz=78,slow=73						
H03N2	Juan Fernandez	5.83	261	T	T	16 54 29.5	
	baz=78,slow=73						
H03S1	Juan Fernandez	5.86	257	T	T	16 54 11.8	
	baz=77						
H03S3	Juan Fernandez	5.86	257	T	T	16 54 13.7	
	baz=77						
H03S2	Juan Fernandez	5.88	257	T	T	16 54 10.7	
	baz=77						
PLCA	Paso Flores	8.10	172	Pn	Pn	16 48 17.5	+1.7
	comp=N,0.1nm,0.3s,baz=346,slow=11,SNR=5.9						
	comp=N,0.9nm,0.7s						
LPAZ	La Paz	16.73	13	Pn	Pn	16 50 13.3	+0.1
	baz=186,slow=11,SNR=4.8						
	comp=N,1.4nm,0.9s						
SIV	San Ignacio	19.39	33	P	P	16 50 44.1	-0.1
	baz=203,slow=12,SNR=4.7						
	comp=N,0.7nm,0.6s						
PMSA	Palmer Station	32.47	174	LR	LR	17 06 03.7	
	comp=N,16nm,19.4s,baz=214,slow=36						
PDAR	Pinedale Array	82.61	333	P	P	16 58 42.8	+1.4
	comp=N,0.1nm,0.4s,baz=140,slow=4.7,SNR=1.8						
	comp=N,0.1nm,0.4s						
NVAR	Mina Array Bea	82.83	325	P	P	16 58 44.1	+1.5
	comp=N,0.1nm,0.3s,baz=119,slow=6.6,SNR=1.9						
	comp=N,0.1nm,0.3s						
TORD	Torodi Ar. Bea	83.77	70	P	P	16 58 46.7	-1.1
	comp=N,0.6nm,0.8s,baz=254,slow=4.1,SNR=1.8						
	comp=N,0.6nm,0.8s						
H11S2	WAKE ISLAND Hy	125.78	270	T	T	19 24 24.8	
	baz=118,slow=75,SNR=9.1						
H11S1	WAKE ISLAND Hy	125.79	270	T	T	19 24 25.7	
	baz=118,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	125.80	270	T	T	19 24 26.2	
	baz=118,slow=75,SNR=11						

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*SSNC **29** 16:51:47.9±3.7, 19°.86N×74°.45W, h5km±15km, MD3.5, ML3.1, MW3.4*

*OSPL **29** 16:51:49.4±2.8, 19°.99N×74°.55W, h5km±28km, ML2.9*

ISC 29 16:51:47.2±1.4**, 19°.97N**±0°.05×**74°.53W**±0°.03**, h11**km±11km**, n14, σ1s.04**/24**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	Masc	0.35	53	*e*P	Pb	16 51 55.5	+0.1
MASC				*e*S	Sb	16 52 01.5	+0.6
MASC	Masc	0.35	53	*i* P	Pb	16 51 55.5	+0.1
MASC				*e*S	Sb	16 52 00.5	-0.4
MASC				IAML		16 52 04.8	
	comp=Z,399nm,0.3s						
GTBY	Guantanamo Bay	0.55	266	*e*P	Pb	16 51 59.6	+0.8
GTBY				*e*S	Sb	16 52 08.5	+1.7
GTBY	Guantanamo Bay	0.55	266	*i* P	Pb	16 51 59.6	+0.8
GTBY				*e*S	Sg	16 52 05.4	+0.2
GTBY				IAML		16 52 16.9	
	comp=Z,341nm,0.8s						
MOAC	Moa	0.80	330	*e*P	Pb	16 52 03.7	+0.5
MOAC				IAML		16 52 22.8	
	comp=N,134nm,0.2s						
MOAC				IAML		16 52 23.2	
	comp=E,88nm,0.4s						
RCC	Rio Carpintero	1.10	272	*e*P	Pg	16 52 07.5	-0.8
RCC				*e*S	Sg	16 52 23.3	+0.7
RCC				IAML		16 52 28.7	
	comp=E,177nm,0.2s						
RCC				IAML		16 52 28.9	
	comp=N,222nm,0.3s						
LMGC	Las Mercedes	2.33	273	*e*P	Pn	16 52 25.9	+0.4
LMGC				*e*S	Sn	16 52 54.8	+0.7
LMGC				IAML		16 53 03.8	
	comp=N,107nm,0.3s						
LMGC				IAML		16 53 04.6	

	comp=E,120nm,0.3s						
PAPH	Port-au-Prince	2.55	124	i P	Pb	16 52 32.5	-0.5
PAPH				eS	Sn	16 52 59.5	0.0
LONE2	Loma La Sidra	3.21	115	i P	Pn	16 52 38.5	+0.8
LONE2				IAML		16 53 32.0	
	comp=Z,30nm,0.5s						
SDDR	Presa de Saban	3.21	107	eP	Pn	16 52 37.4	-0.3
SDDR	Presa de Saban	3.21	107	i P	Pn	16 52 37.4	-0.3
SDDR				eS	Sn	16 53 15.7	-0.3
SDDR				IAML		16 53 25.8	
	comp=Z,48nm,0.8s						
CCCC	Cccc	3.27	293	eP	Pn	16 52 36.1	-2.3
CCCC				eS	Sn	16 53 16.0	-1.3
MTDJ	Mount Denham	3.33	239	eP	Pn	16 52 39.6	+0.3
MTDJ				eS	Sn	16 53 17.1	-1.8
GRTK	Grand Turk	3.53	64	i P	Pn	16 52 43.8	+1.8
GRTK				IAML		16 53 32.9	
	comp=Z,83nm,1.8s						

TEH ***29*** *17:18:30.4, 27°.85N×55°.19E, h20^{km}, ML4.3*

DSN ***29*** *17:18:31.0±1.8, 27°.85N×55°.16E, h10^{km}, ML4.0/11, Error ellipse: s-maj=26.1km s-min=7.4km az=34.0*

MOS ***29*** *17:18:31.0±1.0, 27°.88N×55°.13E, h38^{km}, mb4.7/18, Error ellipse: s-maj=7.7km s-min=5.1km az=90.0*

OMAN ***29*** *17:18:32.1±1.3, 27°.87N×55°.20E, h25^{km}±12^{km}, mb5.3/15, ml4.3/18, ms3.8/3, Error ellipse: s-maj=6.3km s-min=5.0km az=25.0*

NEIC ***29*** *17:18:33.1±1.2, 27°.90N±0°.09×55°.2E±0°.1, h38^{km}±7^{km}, mb4.5/22, mb_Lg4.3(TEH), Error ellipse: s-maj=14.8km s-min=12.4km az=52.0*

IDC ***29*** *17:18:34.2±2.8, 27°.84N×55°.17E, h52^{km}±27^{km}, mb4.0/26, mbtmp4.3/30, ML3.9/4, MS3.3/15, Error ellipse: s-maj=14.1km s-min=11.2km az=7.0*

ISC 29 17:18:32.2±0.7, **27°.88N**±0°.04×**55°.20E**±0°.03, **h32**^{km}±4^{km}, **n308**, σ1^{s}**42**/334, **mb4.4**/73, **MS3.4**/18, **14C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.76	254	ePg	Pn	17 18 44.6	-2.1
LAR1				eSg	Sb	17 18 57.6	+0.5
LAR1				e		17 19 15.3	
	comp=Z,90µm,0.6s						
GENO	Geno	0.99	118	ePg	Pn	17 18 48.5	-1.5
GENO				eSg	Sb	17 19 03.8	0.0
GENO				e		17 19 11.2	
	comp=Z,70µm,0.4s						
IBND	Bandar-abas	1.27	109	ePg	Pn	17 18 54.3	+0.6
IBND				e		17 19 41.7	
	comp=Z,86µm,0.4s						
JHRM	Jahrom	1.56	294	ePg	Pb	17 18 59.6	-1.0
JHRM				e		17 19 40.5	
	comp=Z,79µm,0.6s						
LMD1	Lamerd	1.88	254	ePn	Pb	17 19 04.6	-1.3
LMD1				e		17 19 51.0	
	comp=Z,32µm,0.4s						
QIR1	Qir	1.99	288	e		17 19 47.7	
	comp=Z,25µm,0.9s						
QIR1				ePn	Pn	17 19 05.0	+1.3
SHME	Shamm	2.00	155	ePn	Pn	17 19 04.2	+0.4
SHME	Shamm	2.00	155	P	Pn	17 19 04.1	+0.2
	SNR=17						
SHME				S	Sb	17 19 31.1	-1.5
SHME	Shamm	2.00	155	eP	Pn	17 19 03.9	+0.1
	SNR=22						
SHME				S	Sn	17 19 30.1	+2.3
BANOM	Banah	2.18	153	ePn	Pn	17 19 06.9	+0.6
BANOM	Banah	2.18	153	P	Pn	17 19 07.0	+0.6
	SNR=72						
BANOM				S	Sn	17 19 34.4	+2.2
BANOM	Banah	2.18	153	eP	Pn	17 19 06.6	+0.3
	SNR=72						
NGRK	Negar Kerman	2.22	37	e		17 19 54.9	
	comp=Z,13µm,0.9s						
NGRK				ePn	Pn	17 19 07.8	+0.7
KHNJ	Kahnooj	2.22	88	ePn	Pn	17 19 08.1	+1.2
UMQ	Umm Al-Quwin	2.38	170	P	Pn	17 19 10.7	+1.7
KRBR	Kerman	2.51	33	ePn	Pn	17 19 13.0	+2.0
TVBK	TV Kerman	2.51	33	ePn	Pn	17 19 12.9	+1.8
TVBK				e		17 20 02.6	
	comp=Z,18µm,0.7s						
MASF	Masafi	2.64	161	P	Pn	17 19 14.1	+1.5
	SNR=21						
MASF				S	Sn	17 19 46.1	+2.5
MSFE	Esma-Masafi	2.65	161	ePn	Pn	17 19 14.2	+1.4
MSFE	Esma-Masafi	2.65	161	eP	Pn	17 19 13.8	+1.0
	SNR=21						
KHGB	Koh Gabri	2.73	24	ePn	Pn	17 19 15.9	+1.8
KHGB				e		17 20 00.5	
	comp=Z,10µm,0.6s						
CHMN	Cheshme madani	2.85	46	ePn	Pn	17 19 18.0	+2.2
CHMN				e		17 19 55.9	
	comp=Z,8µm,0.6s						
NAZ	Nazwa, Dubai	2.91	172	ePn	Pn	17 19 18.3	+2.0
NAZ	Nazwa, Dubai	2.91	172	P	Pn	17 19 18.3	+2.0
	SNR=12						
NAZ	Nazwa, Dubai	2.91	172	eP	Pn	17 19 18.2	+1.9
	SNR=12						
SHI	Shiraz	2.94	307	ePn	Pn	17 19 17.8	+0.9
UOSS	Minazif	3.06	163	Pn	Pn	17 19 19.1	+0.8
UOSS	Minazif	3.06	163	P	Pn	17 19 19.3	+0.9
UOSS				S	Sn	17 19 57.5	+3.7
UOSS	Minazif	3.06	163	i P	Pn	17 19 19.0	+0.7
	SNR=18						
JASK	Jask - Hormozg	3.11	129	ePn	Pn	17 19 18.8	-0.3
JASK				e		17 20 41.3	
	comp=Z,8µm,0.6s						
KBAM	BAM	3.13	66	ePn	Pn	17 19 21.2	+1.8
KBAM				e		17 20 19.8	
	comp=Z,4µm,0.5s						
FAQ	Al Faqa, Dubai	3.14	173	ePn	Pn	17 19 21.3	+1.9
FAQ	Al Faqa, Dubai	3.14	173	P	Pn	17 19 21.5	+2.1
	SNR=10						
FAQ	Al Faqa, Dubai	3.14	173	i P	Pn	17 19 21.0	+1.5
	SNR=10						
HATD	Hatta, Dubai	3.15	164	ePn	Pn	17 19 21.0	+1.4
HATD	Hatta, Dubai	3.15	164	P	Pn	17 19 21.2	+1.5
	SNR=20						
HATD	Hatta, Dubai	3.15	164	i P	Pn	17 19 20.7	+1.1
	SNR=20						
ASUD	Al Ashush, Dub	3.24	178	ePn	Pn	17 19 23.4	+2.6
ASUD	Al Ashush, Dub	3.24	178	P	Pn	17 19 24.0	+3.2
	SNR=19						
ASUD	Al Ashush, Dub	3.24	178	i P	Pn	17 19 22.7	+1.8
	SNR=19						
ASHO	Ashiyiah	3.27	166	ePn	Pn	17 19 22.6	+1.3
ASHO	Ashiyiah	3.27	166	P	Pn	17 19 22.8	+1.5
	SNR=78						
ASHO				S	Sn	17 20 01.9	+2.7
ASHO	Ashiyiah	3.27	166	i P	Pn	17 19 22.5	+1.2
	SNR=78						
AJN	Ajban	3.31	183	ePn	Pn	17 19 25.2	+3.5
AJN	Ajban	3.31	183	P	Pn	17 19 24.5	+2.7
IMEH	Mehriz	3.54	352	ePn	Pn	17 19 27.3	+2.1
IMEH				e		17 20 12.9	
	comp=Z,4µm,0.5s						
AHBU	AHRAM	3.58	287	ePn	Pn	17 19 26.3	+0.9
AHBU				ePn	Pn	17 19 26.6	+1.2
AHBU				e		17 20 43.8	
	comp=Z,99nm,0.5s						
KAZ1	Kazerun	3.58	300	ePn	Pn	17 19 26.2	+0.7
JRN	Qarnain Island	3.60	216	ePn	Pn	17 19 26.8	+1.0
IBAF	Bafgh	3.72	5	ePn	Pn	17 19 29.3	+1.8
IBAF				e		17 20 46.0	
	comp=Z,7µm,1.3s						
ALNE	Al Ain	3.84	172	ePn	Pn	17 19 30.6	+1.5
ALNE	Al Ain	3.84	172	P	Pn	17 19 30.5	+1.4
	SNR=12						
ALNE	Al Ain	3.84	172	i P	Pn	17 19 29.7	+0.6
	SNR=12						
KHOR	Al-Khor Airpor	3.98	237	P	Pn	17 19 32.3	+1.2
ISAD	Sadrabad	4.23	342	ePn	Pn	17 19 36.6	+1.9
MZWR	Madinat Zayed	4.27	196	ePn	Pn	17 19 36.4	+1.5
MZWR	Madinat Zayed	4.27	196	P	Pn	17 19 36.4	+1.5
MZWR				S	Sn	17 20 25.2	+1.6
SHMA	Al-Shehemyia	4.28	243	P	Pn	17 19 37.0	+1.9
SHMA				S	Sn	17 20 26.0	+2.0
GHWR	Ruwais	4.42	209	ePn	Pn	17 19 37.8	+0.7
GHWR	Ruwais	4.42	209	P	Pn	17 19 37.6	+0.6
GHWR				S	Sn	17 20 29.2	+1.7
KLNJ	Kolanjah	4.43	316	ePn	Pn	17 19 38.1	+0.6
YZKH	Yazd	4.53	354	ePn	Pn	17 19 40.7	+2.1
IRAM	Ramesheh	4.62	329	ePn	Pn	17 19 41.6	+1.6
IRAM				e		17 20 41.2	
	comp=Z,3µm,0.5s						
ARQ	Araqi	4.68	165	P	Pn	17 19 41.4	+0.8
	SNR=32						
HOQ	Hoqain	4.68	155	P	Pn	17 19 40.9	+0.2
SLWR	Sila	4.93	221	ePn	Pn	17 19 44.7	+0.6
SLWR	Sila	4.93	221	P	Pn	17 19 44.8	+0.8
SLWR				S	Sn	17 20 41.2	+1.2
SMRA	Abu-Samra	5.01	233	P	Pn	17 19 46.3	+1.1
SMRA				S	Sn	17 20 42.4	+0.4
BIDO	Bidbid	5.08	148	ePn	Pn	17 19 45.8	-0.3
BIDO	Bidbid	5.08	148	P	Pn	17 19 46.1	0.0
	SNR=5.4						
MZR	Muzera	5.09	198	ePn	Pn	17 19 47.1	+0.7
MZR	Muzera	5.09	198	P	Pn	17 19 46.2	-0.2
MZR				S	Sn	17 20 45.9	+1.8
UMZA	Um Al Zommool	5.14	180	ePn	Pn	17 19 47.9	+0.9
UMZA	Um Al Zommool	5.14	180	P	Pn	17 19 47.9	+0.9
UMZA				S	Sn	17 20 45.3	+0.1
CHBR	Chabahar	5.25	114	ePn	Pn	17 19 48.7	+0.3
CHBR				ePn	Pn	17 19 48.9	+0.5
IBRJ	Brojen	5.27	321	ePn	Pn	17 19 50.1	+1.1
IGAR	Gharneh	5.27	330	ePn	Pn	17 19 50.5	+1.5
IGAR				e		17 20 55.4	
	comp=Z,2µm,0.6s						
TPRV	Parvadeh(Tabas	5.29	14	ePn	Pn	17 19 50.8	+1.6
BSRN	Basiran	5.32	39	ePn	Pn	17 19 50.4	+0.9
NASN	Na'in	5.32	338	ePn	Pn	17 19 51.0	+1.2
BSY	Bisya	5.42	160	P	Pn	17 19 51.6	+0.8
	SNR=8.1						
BSY				S	Sn	17 20 54.0	+1.8
ANAR	Anarak	5.45	347	ePn	Pn	17 19 52.9	+1.6
SMDO	Samad	5.45	151	P	Pn	17 19 53.3	+2.0
	SNR=5.7						
SMDO				S	Sn	17 20 53.3	+0.4
NHDN	Nehbandan	5.49	49	ePn	Pn	17 19 53.4	+1.5
WSAR	Wadi Sarin	5.56	145	P	Pn	17 19 53.0	+0.3
	comp=Z,6.5nm,0.3s,baz=351,slow=13,SNR=74						
WSAR				S	Sn	17 20 53.5	-2.2
	comp=Z,19nm,0.3s,baz=158,slow=16,SNR=6.1						
WSAR				LR	LR	17 22 48.4	
	comp=Z,228nm,20.8s,baz=352,slow=46						
	comp=Z,19nm,0.4s						
WSAR	Wadi Sarin	5.56	145	P	Pn	17 19 53.1	+0.3
	SNR=44						
WSAR				S	Sn	17 20 54.1	-1.6
IZEF	Zefreh	5.58	334	ePn	Pn	17 19 54.0	+0.7
IKOO	Kooshah	5.61	35	ePn	Pn	17 19 55.5	+1.9
SHK1	Shahrekord	5.80	321	ePn	Pn	17 19 57.3	+1.1
ITEG	Tejag	5.87	31	ePn	Pn	17 19 58.5	+1.3
NGCH	Negor - Chabah	5.88	114	ePn	Pn	17 19 57.8	+0.7
TKDS	Koohdasht(Taba	5.96	16	ePn	Pn	17 19 59.8	+1.5
TABS	Tabas	5.99	16	ePn	Pn	17 19 58.7	0.0
IPIR	Pirpir	6.07	323	ePn	Pn	17 20 01.7	+1.7
JMDO	Jabal Madar	6.08	154	P	Pn	17 20 00.9	+1.0
JMDO				S	Sn	17 21 09.1	+0.7
TNSJ	Nastanj	6.19	11	ePn	Pn	17 20 02.9	+1.5
IKLH	Kolahrood	6.26	331	ePn	Pn	17 20 03.9	+1.4
WBK	Wadi Bani Khal	6.26	146	P	Pn	17 20 02.1	-0.2
	SNR=40						
AMIS	Naft Sefid	6.37	308	ePn	Pn	17 20 02.7	-1.2
SRVN	Saravan	6.41	93	ePn	Pn	17 20 05.8	+1.3
IMON	Monand	6.55	35	ePn	Pn	17 20 08.8	+2.2
KRSH	Karshahi	6.62	337	ePn	Pn	17 20 09.0	+1.6
QAMS	Qamsar	6.69	332	ePn	Pn	17 20 10.1	+1.6
JLN	Jalan Bani Buh	6.86	145	P	Pn	17 20 10.1	-0.5
	SNR=26						
ISFB	Sefidab	6.93	339	ePn	Pn	17 20 12.9	+1.2
SHRT	Shahrakht	7.23	36	ePn	Pn	17 20 18.3	+2.6
MHTO	MHTO	7.31	159	P	Pn	17 20 17.3	+0.5
	SNR=9.6						
KHMZ	Khomeyn	7.38	324	ePn	Pn	17 20 18.1	+0.2
GHVR	GHOM	7.38	334	ePn	Pn	17 20 19.3	+1.5
IANJ	Anjilo	7.65	352	ePn	Pn	17 20 23.1	+1.5
IVRN	Varamin	7.69	338	ePn	Pn	17 20 23.4	+1.4
IQOM	Qom	7.79	334	ePn	Pn	17 20 24.9	+1.4
ASAO	Ashtian	7.99	328	ePn	Pn	17 20 27.3	+1.0
IFIR	Firoozkooh	8.02	346	ePn	Pn	17 20 27.8	+1.1
ISHM	Shahmirzad	8.07	349	ePn	Pn	17 20 28.9	+1.4
SHRO	Shahrood	8.12	5	ePn	Pn	17 20 28.7	+0.7
IDMV	Damavand	8.14	341	ePn	Pn	17 20 30.3	+1.9
DQM	DQM	8.20	164	P	Pn	17 20 28.3	-0.7
DQM				P	Pn	17 20 28.3	-0.7
IDOB	Doab	8.43	316	ePn	Pn	17 20 33.4	+1.1
IKFM	Kafar-mosalman	8.47	313	ePn	Pn	17 20 34.0	+1.4
HSAM	Samen	8.47	320	ePn	Pn	17 20 33.7	+0.7
TBJM	Torbat-e-JAM	8.57	29	ePn	Pn	17 20 35.4	+1.2
HAGD	Aghdareh	8.64	325	ePn	Pn	17 20 37.4	+2.1
IGLO	Ghaloghah	8.68	353	ePn	Pn	17 20 38.5	+2.8
CHTH	Charan	8.72	338	ePn	Pn	17 20 38.1	+1.8
SBZV	Sabzevar	8.73	13	ePn	Pn	17 20 37.5	+1.1
IRAZ	Razeghan	8.74	330	ePn	Pn	17 20 37.5	+0.9
IKOM	Komasi	9.10	316	ePn	Pn	17 20 42.5	+1.0
IPAY	Payeh	9.13	20	ePn	Pn	17 20 44.6	+2.6
QABG	Abgarm-Qazvin	9.15	330	ePn	Pn	17 20 40.8	-1.4
DOK	Doka	9.27	186	P	Pn	17 20 43.2	-0.4
	SNR=11						
QALM	Alamut, Qazvin	9.36	337	ePn	Pn	17 20 46.0	+0.9
IMYA	Miami	9.41	25	ePn	Pn	17 20 49.1	+3.4
RAYN	Ar Rayn	9.76	246	Pn	Pn	17 20 49.9	-0.5
RAYN	Ar Rayn	9.76	246	P	Pn	17 20 49.9	-0.5
RAYN	Ar Rayn	9.76	246	P	Pn	17 20 50.2	-0.2
RAYN	Ar Rayn	9.76	246	i P	Pn	17 20 49.5	-0.8
	SNR=7.2						
IGHG	Ghaleghazi	9.80	313	ePn	Pn	17 20 51.2	+0.1
SHAO	Shalim	9.81	178	P	Pn	17 20 50.8	-0.4
	SNR=10						
IEMG	Emamgholi	9.95	16	ePn	Pn	17 20 54.3	+1.1
BJRD	Bojnurd	9.97	10	ePn	Pn	17 20 54.8	+1.4
WHFO	Wadi Hawf	10.00	188	P	Pn	17 20 54.3	+0.6
	SNR=69						
DMTO	DMTO	10.12	181	P	Pn	17 20 54.0	-1.3
	SNR=8.7						
IDHR	Dehrash	10.15	314	ePn	Pn	17 20 55.5	-0.4
GEYT	Alibeck	10.32	13	LR	LR	17 25 43.0	
	comp=Z,510nm,19.2s,baz=190,slow=41						
RBK	Rabkut	10.36	185	P	Pn	17 20 57.7	-1.0
ABTO	Aybut	10.62	190	P	Pn	17 21 00.9	-1.3
	SNR=19						
GRMI	Germi	12.49	333	ePn	Pn	17 21 29.0	+1.2
GEVA	Gevas	14.54	319	Pn	Pn	17 21 53.9	-1.9
GNI	Garni	14.98	327	P	P	17 22 09.2	+2.3
	comp=Z,11nm,0.5s,baz=340,slow=0.7,SNR=6.5						
GNI				LR	LR	17 27 48.1	
	comp=Z,30nm,21.2s,baz=128,slow=37						
GNI	Garni	14.98	327	i P	Pn	17 21 59.4	-2.4
THW	Thamme Wali	15.10	67	P	P	17 22 05.9	-2.3
CEP	Cherat	15.52	63	P	P	17 22 11.9	-1.1
ASF	Jabal al Asfar	16.41	290	P	P	17 22 23.7	+0.9
	comp=Z,4.3nm,0.6s,baz=134,slow=6.7,SNR=8.2						
GAR	Garm	16.78	45	P	Pn	17 22 23.5	-1.4
GAR				IAmb	IAmb	17 22 37.5	
	comp=Z,14nm,0.8s						
ZEI	Tsey	17.48	331	eP	P	17 22 36.1	+1.5
ZEI				pmax	pmax		
	comp=Z,20nm,0.7s						
BTK	Batken	17.73	43		P	17 22 37.6	+0.3
BTK	Batken	17.73	43	P	P	17 22 37.6	+0.3
BTK				pmax	pmax		
	comp=Z,12nm,1.2s						
EIL	Elat	17.84	281	P	P	17 22 39.0	+0.6
	comp=Z,0.5nm,0.3s,baz=96,slow=11,SNR=4.6						
	comp=Z,3.9nm,0.6s						
KBZ	Khabaz	18.67	331	P	Pn	17 22 49.4	+1.5
	comp=Z,0.2nm,0.3s,baz=144,slow=10.0,SNR=7.4						
	comp=Z,7.0nm,0.8s						
KVAR	Kislovodsk Arr	18.94	331	P	Pn	17 22 53.0	+1.7
	baz=348,slow=20						
	comp=Z,6.0nm,0.8s						
KIV	Kislovodsk	18.94	331	eP	P	17 22 49.5	-1.1
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,14.0s						
KK31	Karatay Array	19.61	35	i P	P	17 22 57.9	+0.1
KKAR	Karatay Array	19.61	35	P	P	17 22 57.5	-0.3
KKAR	Karatay Array	19.61	35	P	P	17 22 57.5	-0.3
GOF	Gofitskoye	19.70	334⇑	eP	Pn	17 23 04.7	+4.4
SOC	Sochi	20.04	326	eP	Pn	17 23 04.7	+0.4
SOC				MLR	MLR		
	comp=Z,150nm,21.0s						
AML	Almayashu	20.72	42	P	P	17 23 10.4	+0.1
KSH	Kashi	20.77	51	P	P	17 23 09.5	-1.1
KSH				sP	sP	17 23 24.5	+0.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BR131	Keskin Array S	21.40	309	P	P	17 23 17.6	+0.2
BR131				IAmb	IAmb	17 23 21.9	
	comp=Z,10nm,0.8s						
BR131	Keskin Array S	21.40	309⇑	iP	P	17 23 17.9	+0.5
BR131	Keskin Array S	21.40	309	P	P	17 23 18.0	+0.6
	SNR=12						
BRTR	Keskin Array B	21.40	309	P	P	17 23 17.9	+0.5
	comp=Z,6.3nm,0.9s,baz=129,slow=14,SNR=29						
BRTR				LR	LR	17 34 11.4	
	comp=Z,132nm,19.0s,baz=122,slow=44						
	comp=Z,6.3nm,0.9s						
AAK	Ala-Archa	21.50	42	P	P	17 23 19.4	+0.9
	comp=Z,4.1nm,0.6s,baz=215,slow=7.9,SNR=14						
AAK				LR	LR	17 33 17.7	
	comp=Z,124nm,19.5s,baz=248,slow=41						
	comp=Z,4.1nm,0.6s						
AAK	Ala-Archa	21.50	42	P	P	17 23 18.8	+0.4
AAK				IAmb	IAmb	17 23 29.0	
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	21.50	42	P	P	17 23 19.4	+0.9
AB31	Akbulak array	21.66	8	i P	P	17 23 19.7	-0.2
ABKAR	Akbulak array	21.66	8	P	P	17 23 19.8	-0.1
ABKAR				IAmb	IAmb	17 23 39.3	
	comp=Z,8.7nm,0.9s						
ANN	Anapa	22.06	325	eP	P	17 23 22.6	-1.6
ANN				e*PP	sP	17 23 36.3	-0.9
ANN				e		17 27 18.4	
ANN				eS	S	17 27 22.4	-3.2
ANN				pmax	pmax		
	comp=Z,63nm,1.7s						
TKM2	Tokmak 2	22.32	42	i P	P	17 23 26.3	-1.0
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKTO	Aktyubinsk	22.63	5	P	P	17 23 30.7	+0.4
	comp=Z,3.0nm,0.7s,baz=194,slow=12,SNR=8.7						
AKTO				LR	LR	17 34 01.9	
	comp=Z,164nm,18.2s,baz=164,slow=41						
	comp=Z,3.0nm,0.7s						
TARG	Taragay, Kyrgy	23.06	47	P	P	17 23 35.2	-0.1
TARG	Taragay, Kyrgy	23.06	47	P	P	17 23 35.2	-0.1
TARG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDOK	Medeo	23.33	43	P	P	17 23 37.4	-0.4
OTUK	Ortayu	24.30	29	P	P	17 23 46.8	+0.1
PDGK	Podgornoye	24.93	45	P	P	17 23 52.3	-0.3
BELG	Belogornoye	25.14	349	P	P	17 23 54.0	-0.1
	comp=Z,12nm,0.9s,baz=142,slow=3.9,SNR=4.0						
	comp=Z,12nm,0.9s						
VRH	Novokhopyorsk	25.43	340	eP	P	17 23 56.5	-0.3
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
VORD	Divnogorie	26.02	337	eP	P	17 24 01.8	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	26.27	337	eP	P	17 24 04.0	-0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SANT	Santorini	26.49	296	P	P	17 24 04.0	-2.6
SANT				IAmb	IAmb	17 24 10.8	
	comp=Z,26nm,1.3s						
VORR	Voronezh	26.64	338	eP	P	17 24 06.3	-1.4
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
IDI	Anoyia	26.78	294	P	P	17 24 09.8	+0.5
	comp=Z,1.8nm,0.5s,baz=87,slow=8.6,SNR=7.6						
	comp=Z,1.8nm,0.5s						
LPSR	Galich'ya Gora	27.51	338	eP	P	17 24 13.3	-2.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	27.53	20	ceP	P	17 24 15.1	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MAKZ	Makanchi	28.25	41	P	P	17 24 23.1	+0.7
MAKZ	Makanchi	28.25	41	P	P	17 24 23.1	+0.7
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	28.43	41	P	P	17 24 24.4	+0.5
MK31	Makanchi Array	28.43	41	P	P	17 24 24.4	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	28.43	41	P	P	17 24 24.4	+0.4
	comp=Z,1.0nm,0.5s,baz=228,slow=10,SNR=14						
MKAR				LR	LR	17 35 31.1	
	comp=Z,62nm,19.2s,baz=210,slow=36						
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	28.43	41	P	P	17 24 24.5	+0.6
MKAR	Makanchi Array	28.43	41	P	P	17 24 24.5	+0.6
KURBB	Kurchatov Arra	28.80	32	P	P	17 24 27.4	+0.3
	comp=Z,2.3nm,0.9s,baz=231,slow=8.7,SNR=15						
	comp=Z,2.3nm,0.9s						
KURK	Kurchatov	28.91	32	ceP	P	17 24 28.3	+0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURK	Kurchatov	28.91	32	P	P	17 24 28.5	+0.5
KURK				P	P	17 24 28.5	+0.5
MLR	Muntele Rosu	29.09	315	P	P	17 24 31.1	+1.2
	comp=Z,2.3nm,0.5s,baz=77,slow=3.3,SNR=4.0						
	comp=Z,2.3nm,0.5s						
AKASG	Malin Array Be	30.11	326	P	P	17 24 38.2	-0.5
	comp=Z,2.6nm,0.7s,baz=94,slow=7.3,SNR=12						
	comp=Z,2.6nm,0.7s						
AKBB	Malin Array Si	30.11	326	P	P	17 24 36.2	-2.5
AKBB				IAmb	IAmb	17 24 44.1	
	comp=Z,6.2nm,0.9s						
AKBB	Malin Array Si	30.11	326	ceP	P	17 24 37.8	-0.9
OBN	Obninsk	30.39	339	LR	LR	17 39 55.6	
	comp=Z,14nm,19.6s,baz=156,slow=42						
OBN	Obninsk	30.39	339	ceP	P	17 24 41.5	+0.4
OBN				e		17 25 43.7	
OBN				pmax	pmax		
	comp=Z,12nm,0.7s						
OBN				MLR	MLR		
	comp=Z,55nm,19.0s						
WMQ	Urumqi	30.53	50	eP	P	17 24 44.5	+1.8
KIRV	Kirov	30.96	354	ceP	P	17 24 46.7	+0.6
KMBO	Kilima Mbogo	33.60	214	P	P	17 25 13.2	+3.2
	comp=Z,2.5nm,1.0s,baz=31,slow=7.9,SNR=4.0						
ZAA0	Zalesovo Array	33.90	32	P	P	17 25 10.2	-1.8
ZAA0				IAmb	IAmb	17 25 12.4	
	comp=Z,6.1nm,0.7s						
ZALV	Zalesovo Beam	33.90	32	P	P	17 25 11.7	-0.2
	comp=Z,5.2nm,0.6s,baz=236,slow=9.4,SNR=30						
	comp=Z,5.2nm,0.6s						
ZALV	Zalesovo Beam	33.90	32	P	P	17 25 10.3	-1.6
NACGM	Naroch	33.97	331	eP	P	17 25 11.9	-0.6
	baz=131						
IDID	Didziasalis	34.26	331	eP	P	17 25 16.6	+1.6
GOMU	GeErMu	34.41	66	P	P	17 25 18.0	+1.0
GOMU				pP	pP	17 25 22.0	-4.8
GOMU				sP	sP	17 25 26.0	-4.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,48nm,6.6s						
IIGN	Ignalina	34.50	331	eP	P	17 25 17.4	+0.2
KLMR	Klimovskoe	34.63	347	eP	P	17 25 15.4	-2.7
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	34.63	347	eP	P	17 25 15.5	-2.7
KLMR				AMP		17 25 18.9	
	comp=Z,14nm,1.1s						
VYHS	Vyhne	34.76	316	eP	P	17 25 20.1	+0.6
VYHS	Vyhne	34.76	316	eP	P	17 25 20.1	+0.6
SRO	Srobarova	34.83	315	eP	P	17 25 21.1	+1.0
SRO	Srobarova	34.83	315	eP	P	17 25 21.1	+1.0
PABE	Paberze	35.59	330	eP	P	17 25 27.1	+0.6
RONA	Rosalia, Austr	36.07	314	eP	P	17 25 30.3	-0.4
VSU	Vasula	36.41	335	i P	P	17 25 33.4	-0.1
VSU				pmax	pmax		
	comp=Z,27nm,0.5s						
VSU	Vasula	36.41	335	eP	P	17 25 33.9	+0.4
CONA	Conrad Observa	36.42	314	eP	P	17 25 32.8	-1.0
	comp=Z,4.0nm,1.2s						
VRAC	Vranov	36.44	317	LR	LR	17 44 30.4	
	comp=Z,46nm,18.2s,baz=241,slow=43						
DPC	Dobruska-Polom	37.00	318	eP	P	17 25 38.1	-0.6
DPC	Dobruska-Polom	37.00	318	eP	P	17 25 38.1	-0.6
CHVC	Chvalec	37.25	318	eP	P	17 25 40.3	-0.5
CKRC	Cesky Krumlov	37.69	315	eP	P	17 25 45.4	+0.9
MTSE	Matsula	37.71	334	eP	P	17 25 44.1	-0.4

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GERES GERESS Array B   38.08 315   P      P       17 25 47.1  -0.8
      comp=Z,0.4nm,0.4s,baz=96,slow=9.5,SNR=5.0
GERES                              PcP    PcP     17 28 02.0  -0.6
      comp=Z,0.2nm,0.4s,baz=123,slow=4.8,SNR=2.6
      comp=Z,0.4nm,0.4s
GERES GERESS Array B   38.08 315   P      P       17 25 46.1  -1.8
KHC   Kasperske Hory   38.24 315  eP      P       17 25 48.6  -0.6
KHC   Kasperske Hory   38.24 315  eP      P       17 25 48.6  -0.6
GTA   Gaotai           38.53  61 ⇓P       P       17 25 53.0  +1.1
GTA                                sP     sP      17 26 21.5  +16
GTA                                pmax   pmax
      comp=Z,7.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,40nm,5.8s
GTA                                LR     LR
      comp=N,64nm,17.8s
GTA                                LR     LR
      comp=E,76nm,17.8s
GTA                                LR     LR
      comp=Z,74nm,16.0s
FIA1  FINESS Array S   38.78 338   P      P       17 25 53.4  -0.1
FINES FINESS Array B   38.78 338   P      P       17 25 53.5   0.0
      comp=Z,5.8nm,0.5s,baz=144,slow=10,SNR=80
      comp=Z,5.8nm,0.5s
WTTA  Wattenberg       38.97 312  eP      P       17 25 54.5  -1.1
      comp=Z,3.2nm,0.6s
WATA  Walderalm        39.03 312  eP      P       17 25 54.9  -1.1
      comp=Z,8.9nm,1.5s
KNGR  Kungurtug, Tuv   39.15  43  i P     P       17 25 57.2  +0.3
KNGR                               pmax   pmax
      comp=Z,4.0nm,1.0s
SQTA  Sankt Quirin     39.24 312  eP      P       17 25 56.6  -1.1
      comp=Z,3.9nm,0.8s
CLL   Collm            39.31 318  i P     P       17 25 57.6  -0.5
      comp=Z,4.0nm,1.0s
CLL                               i sP    sP      17 26 12.1  +0.3
CLL                               ex      x       17 26 18.0
CLL                               ePP     PnPn    17 27 31.0  -0.3
MOTA  Moosalm          39.34 312  eP      P       17 25 58.1  -0.5
      comp=Z,5.9nm,1.1s
FETA  Feichten         39.52 311  eP      P       17 25 59.3  -0.8
      comp=Z,9.8nm,1.3s
DAVOX Davos/Dischmat   40.03 311   LR     LR      17 46 17.2
      comp=Z,47nm,18.2s,baz=78,slow=42
DAVA  Damuels          40.14 311  eP      P       17 26 04.2  -1.1
      comp=Z,6.7nm,0.6s
AAL   Aland            40.15 333  eP      P       17 26 04.0  -0.8
CHTO  Chiang Mai       40.99  93   P      P       17 26 13.9  +1.4
CMAR  Chiang Mai Arr   41.12  94   P      P       17 26 14.9  +1.5
      comp=Z,2.0nm,1.0s,baz=300,slow=6.6,SNR=6.6
CMAR                               PcP    PcP     17 28 12.0  -0.7
      comp=Z,0.5nm,0.6s,baz=280,slow=4.5,SNR=4.7
CMAR                               LR     LR      17 45 50.3
      comp=Z,17nm,19.1s,baz=255,slow=40
      comp=Z,2.0nm,1.0s
PZH   PanZhiHua        41.23  81   P      P       17 26 15.0  +0.5
PZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
PZH                                pmax   pmax
      comp=Z,80nm,4.7s
LZH   Lanzhou          41.71  66  eP      P       17 26 22.8  +4.4
LZH                                sP     sP      17 26 31.3  -0.9
LZH                                pmax   pmax
      comp=Z,27nm,1.5s
LZH                                LR     LR
      comp=N,160nm,14.3s
LZH                                LR     LR
      comp=E,120nm,13.1s
LZH                                LR     LR
      comp=Z,170nm,15.8s
HFS   Hagfors          42.73 331   LR     LR      17 46 20.1
      comp=Z,30nm,18.2s,baz=123,slow=39
NC405 NORSAR Array S   44.07 331   P      P       17 26 36.5  -0.5
DOU   Dourbes          44.14 314  dP      P       17 26 37.8  +0.2
      comp=Z,4.9nm,1.2s
SONM  Songino Array    44.16  49   P      P       17 26 38.6  +0.7
      comp=Z,1.4nm,1.0s,baz=252,slow=8.9,SNR=8.6
SONM                               LR     LR      17 45 33.3
      comp=Z,70nm,18.7s,baz=182,slow=37
      comp=Z,1.4nm,1.0s
NB2   NORSAR Subarra   44.25 331   P      P       17 26 37.7  -0.7
      comp=Z,2.0nm,0.6s,baz=116,slow=7.9
NOA   NORSAR Array B   44.25 331   P      P       17 26 37.5  -0.9
      comp=Z,3.8nm,0.7s,baz=117,slow=7.9,SNR=21
NOA                                LR     LR      17 48 44.6
      comp=Z,22nm,19.1s,baz=100,slow=41
      comp=Z,3.8nm,0.7s
KONO  Kongsberg        44.34 329ceP       P       17 26 35.3  -3.7
KONO                               pmax   pmax
      comp=Z,15nm,2.5s
ULN   Ulaanbaatar      44.60  49ceP       P       17 26 42.4  +0.9
ULN                                pmax   pmax
      comp=Z,4.0nm,1.7s
ARCES ARCESS Array B   45.10 346   P      P       17 26 45.0   0.0
      comp=Z,1.4nm,0.6s,baz=140,slow=9.6,SNR=12
      comp=Z,1.4nm,0.6s
NRIK  Noril'sk         45.55  15   P      P       17 26 49.0  +0.4
      comp=Z,4.6nm,0.8s,baz=196,slow=6.3,SNR=8.6
      comp=Z,4.6nm,0.8s
NRIK  Noril'sk         45.55  15ceP       P       17 26 49.6  +1.0
NRIK                               pmax   pmax
      comp=Z,21nm,3.0s
HHC   Hu-ho-hao-te     47.55  59  eP      P       17 27 06.5  +1.7
HHC                                pmax   pmax
      comp=Z,19nm,0.9s
HHC                                pmax   pmax
      comp=Z,160nm,6.1s
HHC                                LR     LR
      comp=N,270nm,13.3s
HHC                                LR     LR
      comp=E,350nm,14.0s
HHC                                LR     LR
      comp=Z,230nm,14.6s
EKA   Eskdalemuir Ar   49.68 320   LR     LR      17 52 44.2
      comp=Z,37nm,18.5s,baz=154,slow=41
ESDC  Sonseca Array    49.76 300   P      P       17 27 21.4  -0.4
      comp=Z,1.1nm,0.7s,baz=75,slow=7.0,SNR=11
      comp=Z,1.1nm,0.7s
BOD   Bodaibo          50.34  36  eP      P       17 27 25.4  -0.4
BOD                                pmax   pmax
      comp=Z,8.0nm,1.1s
QIZ   Qiongzhong       50.56  88   P      P       17 27 27.0  -1.0
QIZ                                S      S       17 34 38.8  -1.6
QIZ                                LR     LR
      comp=N,320nm,20.1s
QIZ                                LR     LR
      comp=E,250nm,14.3s
QIZ                                LR     LR
      comp=Z,270nm,14.3s
XLT   XiLinHaoTe       50.75  55  eP      P       17 27 30.0  +0.8
XLT                                pP     pP      17 27 40.3  +1.1
XLT                                sP     sP      17 27 42.8  -0.5
XLT                                pmax   pmax
      comp=Z,8.0nm,0.9s
XLT                                pmax   pmax
      comp=Z,81nm,5.3s
TOA0  Torodi Ar. Sit   51.83 265   P      P       17 27 36.7  -0.8
TOA0  Torodi Ar. Sit   51.83 265   P      P       17 27 37.1  -0.4
TORD  Torodi Ar. Bea   51.83 265   P      P       17 27 37.0  -0.5
      comp=Z,6.8nm,0.7s,baz=61,slow=7.2,SNR=35
      comp=Z,6.8nm,0.7s
TORD  Torodi Ar. Bea   51.83 265   P      P       17 27 36.7  -0.9
TORD                               IAmb   IAmb    17 27 37.9
      comp=Z,7.4nm,0.9s
NJ2   Nanjing          54.61  69  eP      P       17 27 55.0  -2.8
NJ2                                pmax   pmax
      comp=Z,4.0nm,0.5s
KOWA  Kowa             56.32 269   P      P       17 28 09.8  -0.6
ZEA   Zeya             57.58  42  eP      P       17 28 19.5  +0.8
YAK   Yakutsk          58.55  32ceP       P       17 28 24.8  -0.5
YAK                                pmax   pmax
      comp=Z,4.0nm,0.6s
TIXI  Tiksi            58.67  21ceP       P       17 28 25.0  -1.0
TIXI                               pmax   pmax
      comp=Z,2.0nm,0.8s
DBIC  Dimbokro         60.48 262   P      P       17 28 38.8  -0.6
      comp=Z,4.7nm,0.8s,baz=83,slow=4.5,SNR=4.2
      comp=Z,4.7nm,0.8s
KSRS  Korea Array      60.61  61   P      P       17 28 39.3  -0.6
      comp=Z,2.0nm,0.6s,baz=277,slow=6.9,SNR=14
      comp=Z,2.0nm,0.6s
KLR   Kul'dur          60.91  47ceP       P       17 28 41.0  -0.8
KLR                                pmax   pmax
      comp=Z,2.0nm,1.3s
BOSA  Boshof           63.07 209   P      P       17 28 56.5  -0.1
      comp=Z,3.1nm,0.8s,baz=46,slow=7.1,SNR=5.8
      comp=Z,3.1nm,0.8s
BOSA  Boshof           63.07 209   P      P       17 28 56.2  -0.4
BOSA                               IAmb   IAmb    17 29 01.6
      comp=Z,6.0nm,1.1s
MTKI  Muara Teweh, K   63.96 106   P      P       17 29 03.8  +1.1
SUMG  Summit           64.75 341  i P     P       17 29 08.0  +0.5
SEY   Seymchan         68.72  29ceP       P       17 29 33.4  +1.0
SEY                                pmax   pmax
      comp=Z,5.0nm,0.6s
BILL  Bilibino         71.87  22deP       P       17 29 52.8  +1.2
BILL                              e               17 30 14.4
BILL                              e               17 32 32.9
BILL                              eS      SKSac   17 39 45.6  -7.2
BILL                              eSS     SS      17 43 51.2  +5.6
BILL                               pmax   pmax
      comp=Z,6.0nm,1.0s
BILL                               MLR    MLR
      comp=Z,25nm,16.0s
SCHQ  Schefferville    83.82 330   P      P       17 30 58.2  -0.1
      comp=Z,2.4nm,0.5s,baz=31,slow=2.7,SNR=8.2
      comp=Z,2.4nm,0.5s
SCHQ  Schefferville    83.82 330   P      P       17 30 58.0  -0.3
SCHQ                               IAmb   IAmb    17 30 58.4
      comp=Z,7.7nm,1.3s
BMAR  Burnt Mountain   83.83   8   P      P       17 30 59.1  +0.9
IMAR  Indian Mountai   83.84  11   P      P       17 30 58.0  -0.2
H21K  Melozitna Rive   84.30  11   P      P       17 31 00.3  -0.3
H21K                               IAmb   IAmb    17 31 02.7
      comp=Z,4.0nm,1.1s
YKA   Yellowknife Ar   89.58 355   P      P       17 31 26.2   0.0
      comp=Z,2.7nm,0.6s,baz=8.3,slow=5.3,SNR=11
      comp=Z,2.7nm,0.6s
WRA   Warramunga Arr   90.05 112   P      P       17 31 28.6  -0.5
      comp=Z,1.6nm,0.9s,baz=308,slow=4.0,SNR=6.0
      comp=Z,1.6nm,0.9s
WRA   Warramunga Arr   90.05 112   P      P       17 31 28.6  -0.5
WRAB  Tennant Creek    90.05 112   P      P       17 31 29.5  +0.3
WRAB                               IAmb   IAmb    17 31 33.8
      comp=Z,3.0nm,0.9s
WRAB  Tennant Creek    90.05 112   P      P       17 31 29.5  +0.3
WRAB                               pmax   pmax
      comp=Z,3.0nm,1.0s
WB2   Warramunga Arr   90.06 112   P      P       17 31 29.0  -0.2
AS31  Alice Springs    91.53 116   P      P       17 31 34.9  -1.2
ASAR  Alice Springs    91.53 116   P      P       17 31 35.1  -0.9
      comp=Z,1.1nm,0.7s,baz=307,slow=4.8,SNR=14
      comp=Z,1.1nm,0.7s
ASAR  Alice Springs    91.53 116   P      P       17 31 34.6  -1.4
```

DDA ***29*** *17:47:35.9±0.0, 41°.57N×43°.92E, h7^{km}±3^{km}, ML2.6*
TIF ***29*** *17:47:35.7, 41°.55N×43°.93E, h19^{km}*
NORS ***29*** *17:47:36.5±0.0, 41°.58N×43°.90E, h3^{km}, MPVA3.4*
ISC 29 17:47:36.1±0.7**, 41°.56N**±0°.02×**43°.92E**±0°.02**, h11**^{km}±6^{km}**,**
n31, σ1§12/56**, Turkey-Georgia-Armenia border region**

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Code  Station Name          Δ°  AZ°   Phase ID        Time     Res
                                      Op     ISC      h  m  s  ISC
BRNG  Burnasheti          0.10 315    P      Pg       17 47 39.8 +1.0
BRNG                                  S      Sg       17 47 42.3 +1.4
TRLG  Trialeti            0.14  96    P      Pg       17 47 40.3 +0.9
DMNI  Dmanisi             0.30 138    P      Pg       17 47 42.9 +0.6
DMNI                                  S      Sg       17 47 47.4 +1.0
AKH   Akhalkalaki         0.35 246    P      Pg       17 47 43.1  0.0
AKH                                   S      Sg       17 47 49.0 +1.2
BKRG  Bakuriani           0.36 305    P      Pb       17 47 43.9 -0.7
BKRG                                  S      Sb       17 47 49.6 -0.8
KZRT  Kazreti             0.40 115    P      Pg       17 47 44.3 +0.4
KZRT                                  S      Sg       17 47 49.8 +0.6
KZRT  Kazreti             0.40 115    P      Pg       17 47 44.2 +0.2
KZRT                                  S      Sg       17 47 49.7 +0.4
BTNK  Botanikuri          0.67  79    P      Pg       17 47 44.4 -4.7
BTNK                                  S      Sg       17 47 54.0 -4.0
BTNK  Botanikuri          0.67  79    P      Pg       17 47 44.3 -4.7
BTNK                                  S      Sg       17 47 53.9 -4.0
ABS   Abastumani          0.85 284    P      Pg       17 47 52.4 -0.1
ABS                                   S      Sb       17 48 04.5  0.0
EPOS  Posof               0.89 267    P      Pg       17 47 52.8 -0.5
EPOS                                  S      Sg       17 48 05.2 +0.2
GUDG  Gudauri             1.00  24    P      Pg       17 47 55.1 -0.2
ONI   Oni                 1.09 342    P      Pg       17 47 56.6 -0.5
ONI                                   S      Sb       17 48 11.5 +0.2
ONI   Oni                 1.09 342  i Pg     Pg       17 47 56.6 -0.5
ONI                                 eSg      Sb       17 48 11.5 +0.2
DGRG  David-gareji        1.10  95    P      Pb       17 47 57.3 +0.2
DGRG                                  S      Sn       17 48 13.7 +1.0
PNSH  Pansheti            1.20  26    P      Pg       17 47 58.6 -0.5
PNSH                                  S      Sb       17 48 14.9 +0.4
DIGO  Kars                1.21 200    P      Pb       17 47 59.5 +0.3
DIGO                                  S      Sn       17 48 16.1 +0.4
ZEI   Tsey                1.23 359  ePg      Pn       17 47 59.7 +0.2
ZEI                                 eSg      Sn       17 48 16.6 +0.3
LACR  Lac                 1.30  12  i Pg     Pg       17 48 00.7 -0.3
LACR                                eSg      Sn       17 48 18.5 +0.6
DIGR  Digorskoe uzhe      1.37 350  ePg      Pb       17 48 01.9  0.0
DIGR                                eSg      Sn       17 48 20.6 +1.1
KORR  Kora                1.53   4  ePg      Pg       17 48 06.0 +0.5
KORR                                eSg      Sg       17 48 28.1 +2.7
DAGI  Agillar             1.58 253    P      Pb       17 48 05.7 +0.2
DAGI                                  S      Sg       17 48 27.0 +0.1
DDFL  Dedoflistskaro      1.66  93    P      Pg       17 48 08.5 +0.6
DDFL  Dedoflistskaro      1.66  93    P      Pg       17 48 08.2 +0.4
BATM  Batumi              1.67 272    P      Pn       17 48 05.9 +0.7
BATM                                  S      Sb       17 48 28.5 +0.6
LSNR  Lesken              1.72 358  ePg      Pg       17 48 09.2 +0.1
LSNR                                eSg      Sg       17 48 33.8 +2.3
DBAD  Bademkaya           1.76 253    P      Pb       17 48 08.8 +0.4
DBAD                                  S      Sb       17 48 31.3 +0.8
DBAD                                i AML    AML      17 48 33.0
      comp=E,39nm,0.7s
DDEM  Demirkent           1.76 249    P      Pb       17 48 09.1 +0.6
DDEM                                  S      Sb       17 48 31.8 +1.1
DDEM                                i AML    AML      17 48 34.0
      comp=E,62nm,0.4s
DDEM                                i AML    AML      17 48 38.0
      comp=N,82nm,0.4s
LGD   Lagodekhi           1.76  80    P      Pb       17 48 08.2 -0.2
LGD                                   S      Sg       17 48 33.0 +0.3
DVE   Vedeno              2.16  49  ePg      Pg       17 48 18.6 +1.2
DVE                                 eSg      Sb       17 48 43.2 +1.3
SHA1  Shidzhatmaz         2.37 337  ePn      Pg       17 48 21.3 -0.3
SHA1                                eSn      Sg       17 48 51.1 -1.1
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NIED ***29*** *17:48:35.8, 23°.00N×121°.29E, h0^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.04; M$_{\theta\theta}$1.12; M$_{\phi\phi}$-0.08; M$_{r\theta}$0.62; M$_{\theta\phi}$-0.17; M$_{\phi r}$1.38; Fault plane solution: M$_0$1.73000×10^{15} NP1: φ$_s$113.00000°, δ32.00000°, λ-34.00000°. NP2: φ$_s$232.00000°, δ73.00000°, λ-118.00000°.*
JMA ***29*** *17:48:35.8±0.2, 23°.0N±0°.7×121°.3E±0°.9, h0^{km}, MV3.9/15, TAIWAN REGION*
ASIES ***29*** *17:48:35.9, 23°.07N×121°.04E, h20^{km}, MW3.9*
TAP ***29*** *17:48:36.6, 23°.08N×121°.03E, h4^{km}, ML4.5, C*
IDC ***29*** *17:48:44.4±5.3, 22°.86N×121°.11E, h64^{km}±50^{km}, mb3.5/11, mbtmp3.8/12, ML3.4/1, MS3.2/5, Error ellipse: s-maj=28.7km s-min=14.6km az=68.0*
ISC 29 17:48:37.7±0.7**, 23°.08N**±0°.01×**121°.10E**±0°.01**, h15**^{km}±4^{km}**,**
n154, σ1§58/246**, mb4.0**/10**, MS3.5**/4**, 44C-19D, Taiwan**

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Code  Station Name          Δ°  AZ°   Phase ID        Time     Res
                                      Op     ISC      h  m  s  ISC
ECS   Chishang            0.11  83⇑iP        Pg       17 48 40.8 -0.3
      baz=85
ECS                                  i S     Sg       17 48 43.7 +0.3
      baz=85
ELDTW Lidau               0.13 325⇑iP        Pg       17 48 39.4 -2.1
      baz=358
ELDTW                                i S     Sg       17 48 41.0 -2.9
      baz=358
LONT  Longtian            0.18 170⇓iP        Pg       17 48 41.1 -0.8
      baz=152
LONT                                 i S     Sg       17 48 43.9 -0.9
      baz=152
FULB  Fuli                0.21  57⇑iP        Pg       17 48 42.8 +0.2
      baz=64
FULB                                 i S     Sg       17 48 47.2 +1.3
      baz=64
EDH   Donghe              0.22 120⇓iP        Pg       17 48 42.9 +0.3
      baz=113
EDH                                  i S     Sg       17 48 47.5 +1.6
      baz=113
CHKT  Chengkung           0.25  86⇓iP        Pg       17 48 44.0 +1.0
      baz=87
CHKT                                   S     Sg       17 48 49.3 +2.6
      baz=87
TWG   Pinlang             0.26 185⇑iP        Pg       17 48 42.4 -0.9
      baz=170
TWG                                    S     Sg       17 48 46.2 -0.9
      baz=170
TWGBT Beinan              0.26 184⇑iP        Pg       17 48 42.4 -0.9
      baz=170
TWGBT                                i S     Sg       17 48 46.1 -1.1
      baz=170
STYH  Taoyuan             0.31 287⇓iP        Pg       17 48 42.1 -2.0
      baz=293
STYH                                   S     Sg       17 48 46.0 -2.5
      baz=293
STYT  Tauyuan             0.32 285⇓eP        Pg       17 48 42.6 -1.8
      baz=288
STYT                                  eS     Sg       17 48 46.6 -2.5
      baz=288
TWF1  Yuli                0.33  34⇑iP        Pb       17 48 43.9 -1.4
      baz=43
TWF1                                 i S     Sb       17 48 48.3 -2.1
      baz=43
TTN   Taitung             0.33 172 ⇑P        Pn       17 48 44.9 -3.1
      baz=161
TTN                                   eS     Sb       17 48 50.6 +0.3
      baz=161
YULB  Yu-li               0.36  31⇑iP        Pb       17 48 44.2 -1.7
      baz=38
YULB                                  eS     Sb       17 48 49.6 -1.7
      baz=38
ECBN  Changbin            0.40  54  eP       Pn       17 48 46.7 -2.3
      baz=59
SLGT  Liugui              0.42 258⇑eP        Pg       17 48 45.0 -1.2
      baz=256
SLGT                                  eS     Sg       17 48 50.2 -1.8
      baz=256
YUS   Yu-Shan             0.43 342⇑iP        Pg       17 48 45.0 -1.5
      baz=351
YUS                                    S     Sg       17 48 50.5 -1.9
      baz=351
EHY   Hungye              0.47  26⇑iP        Pb       17 48 46.0 -1.7
      baz=33
EHY                                   eS     Sb       17 48 52.5 -2.1
      baz=33
SGST  Jiashian            0.47 270⇑eP        Pg       17 48 45.0 -2.1
      baz=270
SGST                                  eS     Sg       17 48 51.6 -1.9
      baz=270
WTP   Ta-pu               0.47 290 ⇓P        Pg       17 48 45.9 -1.2
      baz=293
WTP                                   eS     Sg       17 48 52.6 -0.9
      baz=293
TPUB  Ta-pu               0.48 297⇓eP        Pg       17 48 46.1 -1.1
      baz=301
TPUB                                  eS     Sg       17 48 52.8 -1.0
      baz=301
ECL   Taimali             0.50 195⇑iP        Pb       17 48 46.2 -2.0
      baz=187
ECL                                   eS     Sb       17 48 52.9 -2.4
      baz=187
ALS   Alishan             0.50 328 ⇓P        Pg       17 48 46.6 -1.2
      baz=335
ALS                                   eS     Sg       17 48 53.4 -1.2
      baz=335
HGSD  Ruisui              0.51  36⇑iP        Pb       17 48 47.8 -0.5
      baz=42
HGSD                                  eS     Sb       17 48 56.4 +0.9
      baz=42
LDUT  Ludao               0.53 140⇓iP        Pn       17 48 47.9 -2.8
      baz=135
LDUT                                  eS     Sb       17 48 57.0 +0.8
      baz=135
CHN1  Nanshi              0.53 281  eP       Pb       17 48 47.4 -1.4
      baz=283
CHN1                                  eS     Sg       17 48 55.2 -0.2
      baz=283
SSD   Sandimen            0.54 232⇑iP        Pg       17 48 46.3 -2.1
      baz=227
SSD                                   eS     Sg       17 48 53.0 -2.7
      baz=227
TSMG  Majia               0.56 228⇑iP        Pg       17 48 46.7 -2.1
      baz=223
TSMG                                  eS     Sg       17 48 53.5 -2.7
      baz=223
SNST  Tainan City         0.57 284⇓eP        Pb       17 48 48.1 -1.3
      baz=286
SNST                                  eS     Sg       17 48 56.3 -0.2
      baz=286
SCST  Cishan              0.59 251 ⇑P        Pb       17 48 48.3 -1.4
      baz=248
SCST                                  eS     Sb       17 48 57.6 -0.3
      baz=248
TWK   Hsinying            0.59 288 ⇓P        Pb       17 48 48.4 -1.4
      baz=291
TWK                                   eS     Sb       17 48 57.2 -0.8
      baz=291
MASBT Mashibuluo          0.63 223⇑iP        Pg       17 48 48.1 -2.0
      baz=218
MASBT                                 eS     Sg       17 48 56.4 -2.2
      baz=218
CHN5  Tsauling            0.64 323  eP       Pb       17 48 49.5 -1.2
      baz=328
EGFH  Guangfu             0.66  27⇑eP        Pb       17 48 49.4 -1.6
      baz=32
EGFH                                  eS     Sb       17 48 58.1 -1.8
      baz=32
SGLT  Jiouru              0.66 238⇑eP        Pb       17 48 50.0 -1.0
      baz=234
VWDT  VWDT                0.67   3⇑eP        Pg       17 48 49.2 -1.6
      baz=9.0
VWDT                                  eS     Sb       17 49 00.5 +0.3
      baz=9.0
TWM1  Shoushan            0.67 248⇑eP        Pb       17 48 50.6 -0.6
      baz=245
CHN3  Shinhua             0.68 270⇑eP        Pn       17 48 51.5 -1.2
      baz=269
CHN3                                  eS     Sn       17 49 02.8 -0.3
      baz=269
TSPT  Pingtung City       0.69 234⇑eP        Pb       17 48 50.4 -1.0
      baz=231
SHHT  Tainan City         0.69 265⇑eP        Pn       17 48 52.0 -1.0
      baz=265
SHHT                                  eS     Sn       17 49 03.4 -0.1
      baz=265
SSLB  Suanglung           0.71 349⇑eP        Pg       17 48 49.9 -1.8
      baz=354
SSLB                                  eS     Sg       17 48 59.9 -1.2
      baz=354
CHN2  Minshiung           0.73 308⇓eP        Pb       17 48 51.6 -0.4
      baz=311
CHN2                                  eS     Sb       17 49 02.6 +0.8
      baz=311
EAST  Anshuo              0.73 198 ⇑P        Pb       17 48 50.6 -1.6
      baz=193
EAST                                  eS     Sb       17 49 01.0 -1.1
      baz=193
TAW   Tawu                0.74 195⇑eP        Pb       17 48 50.7 -1.6
      baz=189
TAW                                   eS     Sb       17 49 01.3 -1.0
      baz=189
CHY   Chiayi              0.74 304⇓eP        Pb       17 48 51.5 -0.9
      baz=307
CHY                                   eS     Sb       17 49 02.4  0.0
      baz=307
TEGC  Jichi Village       0.74  33  eP       Pn       17 48 52.1 -1.6
      baz=37
SSPT  Xinbi               0.77 219 ⇑P        Pb       17 48 51.4 -1.4
      baz=216
SSPT                                  eS     Sb       17 49 01.6 -1.5
      baz=216
SNJT  Kaohsiung City      0.78 245  eP       Pn       17 48 53.3 -0.8
      baz=243
SNJT                                  eS     Sn       17 49 06.9 +1.4
      baz=243
WGK   Gukeng              0.78 321⇓eP        Pb       17 48 52.7 -0.3
      baz=325
WGK                                   eS     Sb       17 49 03.8 +0.4
      baz=325
ESL   Shilin              0.79  23⇑eP        Pb       17 48 51.7 -1.5
      baz=27
ESL                                   eS     Sb       17 49 02.9 -0.9
      baz=27
WDLH  Douliu              0.79 320⇓eP        Pb       17 48 52.9 -0.3
      baz=323
WDLH                                  eS     Sb       17 49 04.3 +0.5
      baz=323
ICHU  Yijhu               0.80 290  eP       Pb       17 48 52.6 -0.7
      baz=292
```

ICHU				*e*S	**Sb**	**17 49 04.5**	**+0.4**
	baz=292						
TAI1	**Yung-k'ang**	**0.80**	**267**	*e*P	**Pn**	**17 48 53.7**	**-0.8**
	baz=267						
TAI1				*e*S	**Sn**	**17 49 07.2**	**+1.1**
	baz=267						
WJS	**Zhushan**	**0.81**	**335**	*e*P	**Pb**	**17 48 53.3**	**-0.3**
	baz=339						
WJS				*e*S	**Sb**	**17 49 04.8**	**+0.5**
	baz=339						
SMLT	**Sun Moon Lake**	**0.82**	**347**	*e*P	**Pb**	**17 48 52.3**	**-1.4**
	baz=352						
SMLT				*e*S	**Sb**	**17 49 05.4**	**+0.8**
	baz=352						
SCZT	**Fangliau**	**0.83**	**212**	⇑*i*P	**Pb**	**17 48 52.1**	**-1.7**
	baz=208						
SCZT				*e*S	**Sb**	**17 49 03.4**	**-1.5**
	baz=208						
SCLT	**Jiali**	**0.84**	**277**	*e*P	**Pn**	**17 48 54.0**	**-1.0**
	baz=277						
SCLT				*e*S	**Sn**	**17 49 07.3**	**+0.2**
	baz=277						
TYC	**Yuchr**	**0.85**	**345**	*e*P	**Pb**	**17 48 53.1**	**-1.1**
	baz=350						
TYC				*e*S	**Sn**	**17 49 06.8**	**-0.5**
	baz=350						
CHN8	**Yiju**	**0.86**	**288**	*e*P	**Pb**	**17 48 53.7**	**-0.6**
	baz=290						
CHN8				*e*S	**Sb**	**17 49 06.8**	**+1.2**
	baz=290						
OWD	**Renai**	**0.87**	**5**	⇑*e*P	**Pg**	**17 48 52.5**	**-2.1**
	baz=9.0						
OWD				*e*S	**Sb**	**17 49 06.0**	**-0.2**
	baz=9.0						
WNT	**Mingjian**	**0.88**	**334**	⇓*e*P	**Pn**	**17 48 54.8**	**-0.7**
	baz=339						
WNT				*e*S	**Sb**	**17 49 07.5**	**+1.2**
	baz=339						
WSSB	**Gushan**	**0.89**	**241**	⇑*e*P	**Pn**	**17 48 55.9**	**+0.2**
	baz=238						
WSSB				*e*S	**Sn**	**17 49 11.5**	**+3.2**
	baz=238						
WTK	**Tuku**	**0.89**	**313**	⇓*e*P	**Pb**	**17 48 54.4**	**-0.5**
	baz=316						
WTK				*e*S	**Sb**	**17 49 07.1**	**+0.6**
	baz=316						
KAU	**Kaohsiung**	**0.89**	**235**	*e*P	**Pn**	**17 48 56.4**	**+0.7**
	baz=232						
SLIU	**Shizi**	**0.91**	**198**	⇑P	**Pb**	**17 48 53.7**	**-1.5**
	baz=194						
SLIU				*e*S	**Sb**	**17 49 06.0**	**-1.0**
	baz=194						
WNT1	**Nantou City**	**0.91**	**335**	*e*P	**Pn**	**17 48 55.5**	**-0.5**
	baz=339						
WNT1				*e*S	**Sb**	**17 49 08.4**	**+1.3**
	baz=339						
WUSB	**Renai**	**0.91**	**1**	⇑*e*P	**Pg**	**17 48 53.3**	**-2.0**
	baz=5.0						
WUSB				*e*S	**Sn**	**17 49 08.3**	**-0.7**
	baz=5.0						
TEYL	**Yanliau Villag**	**0.91**	**30**	*e*P	**Pn**	**17 48 55.0**	**-0.9**
	baz=33						
WSL	**Shuilin Townsh**	**0.91**	**299**	⇓*e*P	**Pb**	**17 48 54.5**	**-0.7**
	baz=301						
WSL				*e*S	**Sb**	**17 49 07.8**	**+0.6**
	baz=301						
WPL	**Puli Township**	**0.94**	**352**	*e*P	**Pb**	**17 48 54.3**	**-1.4**
	baz=355						
WPL				*e*S	**Sn**	**17 49 09.3**	**-0.2**
	baz=355						
ETM	**Tongmen**	**0.95**	**22**	*e*P	**Pb**	**17 48 54.5**	**-1.4**
	baz=26						
ETM				*e*S	**Sb**	**17 49 07.0**	**-1.4**
	baz=26						
DPDB	**Guoxing**	**0.96**	**351**	*e*P	**Pb**	**17 48 55.3**	**-0.8**
	baz=354						
DPDB				*e*S	**Sn**	**17 49 10.1**	**-0.2**
	baz=354						
CHGB	**Renai**	**0.98**	**4**	*e*P	**Pb**	**17 48 55.0**	**-1.5**
	baz=8.0						
CHGB				*e*S	**Sn**	**17 49 11.8**	**+0.9**
	baz=8.0						
WSF	**Szhu**	**0.98**	**305**	*e*P	**Pb**	**17 48 55.5**	**-0.8**
	baz=307						
WSF				*e*S	**Sb**	**17 49 09.5**	**+0.5**
	baz=307						
WLCH	**Liuqiu**	**0.98**	**223**	*e*P	**Pn**	**17 48 58.2**	**+1.2**
	baz=220						
WCS	**Beigang Elemen**	**0.99**	**350**	*e*P	**Pb**	**17 48 56.0**	**-0.6**
	baz=354						
WCS				*e*S	**Sb**	**17 49 10.3**	**+1.0**
	baz=354						
WYL	**Yuanlin Townsh**	**1.00**	**332**	⇑*e*P	**Pn**	**17 48 56.8**	**-0.4**
	baz=335						
WYL				*e*S	**Sn**	**17 49 11.0**	**0.0**
	baz=335						
TWP	**Hsiaoliuchiu**	**1.00**	**223**	*e*P	**Pn**	**17 48 58.1**	**+0.9**
	baz=220						
TWP				*e*S	**Sn**	**17 49 16.2**	**+5.1**
	baz=220						
HWA	**Hwalien**	**1.01**	**27**	*e*P	**Pn**	**17 48 56.4**	**-0.9**
	baz=31						
WWF	**Wufeng**	**1.02**	**339**	*e*P	**Pn**	**17 48 57.5**	**0.0**
	baz=342						
WWF				*e*S	**Sn**	**17 49 12.3**	**+0.6**
	baz=342						
WRL	**Guolierlin Hig**	**1.05**	**321**	*e*P	**Pb**	**17 48 56.7**	**-0.9**
	baz=324						
WHF	**Hehuan Shan**	**1.07**	**8**	*e*P	**Pg**	**17 48 56.6**	**-1.8**
	baz=12						
WHF				*e*S	**Sn**	**17 49 13.1**	**-0.3**
	baz=12						
SMST	**Manzhou Townsh**	**1.08**	**193**	*e*P	**Pn**	**17 48 57.4**	**-0.9**
	baz=190						
TWD	**Chiawan**	**1.09**	**25**	⇑*e*P	**Pn**	**17 48 57.6**	**-0.9**
	baz=28						
TWD				*e*S	**Sn**	**17 49 13.8**	**+0.4**
	baz=28						
WCHH	**Zhanghua**	**1.11**	**334**	*e*P	**Pn**	**17 48 59.0**	**+0.2**
	baz=336						
LAY	**Lan-yu**	**1.12**	**158**	*e*P	**Pb**	**17 48 56.7**	**-2.1**
	baz=155						
HEN	**Hengchun**	**1.12**	**197**	*e*P	**Pn**	**17 48 59.0**	**+0.1**
	baz=194						
HEN				*e*S	**Sn**	**17 49 18.6**	**+4.6**
	baz=194						
TCU	**Taichung**	**1.13**	**340**	*e*P	**Pn**	**17 48 59.2**	**+0.2**
	baz=343						
LYUB	**Lan-yu**	**1.17**	**157**	*e*P	**Pg**	**17 48 55.8**	**-4.3**
	baz=154						
LYUB				*e*S	**Sg**	**17 49 10.8**	**-4.6**
	baz=154						
TWK1	**Hengchun**	**1.17**	**193**	*e*P	**Pn**	**17 48 59.2**	**-0.3**
	baz=190						
TWKBT	**Hengchun**	**1.17**	**193**	⇑*e*P	**Pn**	**17 48 59.1**	**-0.4**
	baz=190						
TWKBT				*e*S	**Sn**	**17 49 20.0**	**+4.8**
	baz=190						
TDCB	**Techi**	**1.17**	**3**	*e*P	**Pb**	**17 48 58.8**	**-0.9**
	baz=6.0						
TDCB				*e*S	**Sn**	**17 49 15.9**	**+0.4**
	baz=6.0						
FUSS	**Fushou**	**1.17**	**7**	⇑*e*P	**Pb**	**17 48 58.6**	**-1.2**
	baz=10.0						
FUSS				*e*S	**Sb**	**17 49 15.1**	**+0.2**
	baz=10.0						
TWT	**Tachien**	**1.17**	**4**	*e*P	**Pn**	**17 48 58.9**	**-0.8**
	baz=6.0						
ETLH	**Xiulin Townshi**	**1.17**	**17**	*e*P	**Pb**	**17 48 58.4**	**-1.4**
	baz=20						
ETLH				*e*S	**Sn**	**17 49 15.1**	**-0.4**
	baz=20						
ETL	**Fush Village**	**1.18**	**24**	*e*P	**Pn**	**17 48 58.6**	**-1.1**
	baz=27						
NACB	**Ninganchiao**	**1.18**	**23**	*e*P	**Pb**	**17 48 58.6**	**-1.2**
	baz=25						
NACB				*e*S	**Sn**	**17 49 15.0**	**-0.6**
	baz=25						
TSEB	**Hengchuen, Pin**	**1.19**	**189**	*e*P	**Pn**	**17 48 59.4**	**-0.4**
	baz=188						
WHP	**Taichung City**	**1.20**	**353**	*e*P	**Pn**	**17 49 00.6**	**+0.6**
	baz=356						
TWQ1	**Liyutan**	**1.29**	**347**	*e*P	**Pb**	**17 49 02.1**	**+0.3**
	baz=349						
WDGT	**Dungji**	**1.33**	**278**	⇑*e*P	**Pn**	**17 49 00.6**	**-1.2**
	baz=278						
WDGT				*e*S	**Sg**	**17 49 17.5**	**-3.3**
	baz=278						
NSY	**Sanyi**	**1.36**	**347**	*e*P	**Pg**	**17 49 03.5**	**-0.5**
	baz=350						
NSY				*e*S	**Sn**	**17 49 23.2**	**+3.1**
	baz=350						
NNSB	**Datong**	**1.37**	**11**	*e*P	**Pb**	**17 49 01.9**	**-1.1**
	baz=14						
NNSB				*e*S	**Sn**	**17 49 20.3**	**0.0**
	baz=14						
ENA	**Nanau**	**1.46**	**24**	*e*P	**Pg**	**17 49 03.5**	**-2.3**
	baz=26						
PHUB	**P'eng-hu**	**1.47**	**287**	⇑*e*P	**Pn**	**17 49 02.4**	**-1.2**
	baz=288						
PHUB				*e*S	**Sn**	**17 49 20.5**	**-2.1**
	baz=288						
EWUT	**Wuta**	**1.49**	**25**	*e*P	**Pb**	**17 49 03.6**	**-1.5**
	baz=27						
EWUT				*e*S	**Sg**	**17 49 23.6**	**-2.3**
	baz=27						
PNG	**Penghu**	**1.50**	**289**	⇑*e*P	**Pn**	**17 49 03.0**	**-1.0**
	baz=290						
PNG				*e*S	**Sn**	**17 49 22.0**	**-1.3**
	baz=290						
LATG	**Datong**	**1.50**	**15**	*e*P	**Pg**	**17 49 04.5**	**-2.1**
	baz=17						
LATG				*e*S	**Sb**	**17 49 23.9**	**-0.4**
	baz=17						
NFF	**Wufeng Townshi**	**1.54**	**1**	⇑*e*P	**Pg**	**17 49 06.1**	**-1.3**
	baz=3.0						
NFF				*e*S	**Sg**	**17 49 26.9**	**-0.5**
	baz=3.0						
LIOB	**Emei**	**1.56**	**357**	*e*P	**Pg**	**17 49 06.2**	**-1.5**
	baz=360						
LIOB				*e*S	**Sg**	**17 49 27.1**	**-0.8**
	baz=360						
YHNB	**Yeheng**	**1.60**	**9**	⇑*e*P	**Pg**	**17 49 06.7**	**-1.8**
	baz=11						
NSK	**Sanguang**	**1.60**	**8**	*e*P	**Pg**	**17 49 06.5**	**-2.0**
	baz=11						
ENTT	**Nioudou**	**1.61**	**15**	*e*P	**Pg**	**17 49 07.0**	**-1.6**
	baz=18						
NDS	**Dongshan**	**1.65**	**20**	*e*P	**Pg**	**17 49 07.1**	**-2.2**
	baz=22						
NDS				*e*S	**Sg**	**17 49 28.6**	**-2.1**
	baz=22						
TWC	**Suao**	**1.67**	**24**	*e*P	**Pg**	**17 49 07.8**	**-2.0**
	baz=27						
TWC				*e*S	**Sg**	**17 49 29.6**	**-1.8**
	baz=27						
SBCB	**Hsinchu**	**1.71**	**357**	*e*P	**Pg**	**17 49 10.0**	**-0.5**
	baz=359						
SBCB				*e*S	**Sg**	**17 49 33.0**	**+0.3**
	baz=359						
FUSB	**Fushanzhiwuyua**	**1.73**	**15**	*e*P	**Pg**	**17 49 08.6**	**-2.3**
	baz=17						
JYNG	**Yonagunijimaku**	**2.17**	**51**	P	**Pn**	**17 49 13.1**	**-0.3**
JYNG				*e*S	**Sn**	**17 49 40.3**	**+0.2**
YOJ	**Yonaguni jima**	**2.23**	**52**	*e*P	**Pn**	**17 49 13.0**	**-1.1**
	baz=53						
YOJ				*e*S	**Sn**	**17 49 41.6**	**+0.3**
	baz=53						
YOJ	**Yonaguni jima**	**2.23**	**52**	P	**Pn**	**17 49 14.1**	**0.0**
YOJ				*e*S	**Sn**	**17 49 41.7**	**+0.3**
HATJ	**Hateruma jima**	**2.67**	**68**	*e*P	**Pn**	**17 49 19.3**	**-0.8**
HATJ				S	**Sn**	**17 49 50.7**	**-1.6**
IRIF	**Iriomote-Funau**	**2.72**	**62**	P	**Pn**	**17 49 20.9**	**0.0**
IRIF				S	**Sn**	**17 49 53.1**	**-0.4**
JKRS	**Kuro-shima**	**2.91**	**66**	P	**Pn**	**17 49 23.1**	**-0.3**
JKRS				*e*S	**Sn**	**17 49 57.4**	**-0.7**
QZH	**Quanzhou**	**2.95**	**309**	Pn	**Pn**	**17 49 23.5**	**-0.5**
QZH				Sn	**Sn**	**17 49 56.5**	**-2.6**
QZH				smax	smax		
	comp=N,270nm,0.7s						
QZH				smax	smax		
	comp=E,150nm,0.4s						
JIJ	**Ishigaki jima**	**3.07**	**65**	P	**Pn**	**17 49 24.9**	**-0.8**
JIJ				S	**Sn**	**17 50 00.2**	**-2.0**
JISG	**Ishigakijimahi**	**3.30**	**62**	P	**Pn**	**17 49 28.2**	**-0.6**
JISG				S	**Sn**	**17 50 05.6**	**-2.3**
JTJ	**Tarama**	**3.65**	**64**	S	**Sn**	**17 50 14.7**	**-1.7**
JIRB	**Irabujima**	**4.11**	**64**	P	**Pn**	**17 49 39.6**	**-0.5**
JIRB				*e*S	**Sn**	**17 50 25.7**	**-2.2**
JMJ2	**Miyako jima3**	**4.21**	**66**	P	**Pn**	**17 49 41.4**	**0.0**
JMJ2				*e*S	**Sn**	**17 50 28.9**	**-1.4**
JIKM	**Ikemajima**	**4.21**	**63**	S	**Sn**	**17 50 28.9**	**-1.6**
JOGS	**Gusukube**	**4.28**	**66**	*e*P	**Pn**	**17 49 42.5**	**+0.1**
JOGS				*e*S	**Sn**	**17 50 31.8**	**-0.3**
CNSH	**ChangSha**	**8.95**	**306**	⇓P	**Pn**	**17 50 42.0**	**-4.5**
CNSH				S	**Sn**	**17 52 22.0**	**-5.0**
CNSH				smax	smax		
	comp=N,83nm,0.9s						
CNSH				smax	smax		
	comp=E,71nm,1.0s						
KSRS	**Korea Array**	**15.48**	**21**	P	**P**	**17 52 20.9**	**+1.0**
	0.1nm,0.3s,baz=197,slow=11,SNR=6.4						
	1.7nm,0.8s						
JHJ	**Hachijo jima 2**	**19.25**	**55**	LR	LR	18 00 30.8	
	comp=Z,29nm,20.0s,baz=301,slow=36						
MJAR	**Matsushiro Arr**	**19.97**	**44**	P	**Pn**	**17 53 13.8**	**+2.6**
	0.9nm,0.8s,baz=226,slow=8.1,SNR=2.9						
	0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.21**	**262**	P	**P**	**17 53 24.2**	**+1.1**
	0.5nm,0.8s,baz=66,slow=9.0,SNR=4.9						
	0.5nm,0.8s						
GUMO	**Guam**	**24.43**	**109**	LR	LR	18 03 42.2	
	comp=Z,23nm,19.4s,baz=206,slow=37						
ASAJ	**Asahikawa**	**27.43**	**35**	LR	LR	18 05 38.4	
	comp=Z,80nm,20.8s,baz=220,slow=37						
MKAR	**Makanchi Array**	**39.08**	**317**	P	**P**	**17 56 07.2**	**+3.0**
	1.5nm,0.9s,baz=110,slow=11,SNR=12						
MKAR				PcP	**PcP**	**17 58 14.9**	**+0.9**
	0.6nm,0.7s,baz=104,slow=5.1,SNR=4.8						
	1.5nm,0.9s						
ZALV	**Zalesovo Beam**	**41.13**	**328**	P	**P**	**17 56 23.8**	**+2.7**
	2.6nm,0.7s,baz=114,slow=7.5,SNR=11						
	2.6nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**42.64**	**86**	T	T	18 41 47.6	
	baz=283,slow=74,SNR=21						
H11N2	**WAKE ISLAND Hy**	**42.64**	**86**	T	T	18 41 47.4	
	baz=283,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**42.66**	**86**	T	T	18 41 45.4	
	baz=283,slow=74,SNR=30						
H11S3	**WAKE ISLAND Hy**	**42.74**	**87**	T	T	18 41 55.2	
	baz=284,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**42.75**	**87**	T	T	18 42 00.8	
	baz=284,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**42.76**	**87**	T	T	18 41 56.5	
	baz=284,slow=75,SNR=17						
WRA	**Warramunga Arr**	**44.67**	**162**	P	**P**	**17 56 48.0**	**-2.2**
	0.5nm,0.6s,baz=344,slow=8.5,SNR=8.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**48.11**	**164**	P	**P**	**17 57 16.3**	**-0.8**
	0.5nm,0.3s,baz=339,slow=7.3,SNR=33						
	0.5nm,0.3s						
STKA	**Stephens Creek**	**58.06**	**159**	P	**P**	**17 58 30.8**	**+0.4**
	1.1nm,0.5s,baz=327,slow=11,SNR=4.4						
	1.1nm,0.5s						
ARCES	**ARCESS Array B**	**70.53**	**338**	P	**P**	**17 59 53.1**	**+1.4**
	1.6nm,1.0s,baz=49,slow=9.7,SNR=4.3						
	1.6nm,1.0s						
SPITS	**Spitsbergen Ar**	**70.54**	**348**	P	**P**	**17 59 51.8**	**+0.2**
	4.2nm,1.0s,baz=76,slow=6.1,SNR=4.7						
	4.2nm,1.0s						
FINES	**FINESS Array B**	**72.35**	**330**	P	**P**	**18 00 04.0**	**+1.3**
	0.4nm,0.5s,baz=46,slow=6.0,SNR=7.2						
	0.4nm,0.5s						
HFS	**Hagfors**	**78.48**	**331**	LR	LR	18 38 20.8	
	comp=Z,35nm,19.6s,baz=84,slow=38						
NOA	**NORSAR Array B**	**79.16**	**332**	LR	LR	18 39 33.6	
	comp=Z,30nm,18.2s,baz=95,slow=38						
GERES	**GERESS Array B**	**83.64**	**321**	P	**P**	**18 01 07.2**	**+1.3**
	0.7nm,0.7s,baz=72,slow=9.4,SNR=5.7						
	0.7nm,0.7s						

IDC ***29*** *17:56:16.5±1.4, 1°.87N×98°.93E, h130^{km}±5^{km}, mb3.6/8, mbtmp4.0/9, Error ellipse: s-maj=42.1km s-min=14.6km az=60.0*

DJA ***29*** *17:56:18.7±0.5, 2°N±3°×9°9E±°, h124^{km}±6^{km}, M3.5/10, MLv3.5/10*

ISC 29 17:56:18.4±0.7**, 2°.02N**±0°.06×**98°.92E**±0°.08**, h150^{km}, n16, σ1^{s}.75**/20**, mb3.7**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.78**	**0**	P	**Pn**	**17 56 39.4**	**-2.3**
	198nm,0.3s,baz=335,slow=13,SNR=138						
PSI				S	**Sn**	**17 56 54.9**	**-4.5**
	235nm,0.6s,baz=89,slow=23,SNR=69						
MNSI	**Mandailing Nat**	**1.38**	**152**	P	**Pn**	**17 56 45.6**	**-1.2**
TSI	**Tuntungan**	**1.51**	**346**	P	**Pn**	**17 56 46.9**	**-1.3**
GSI	**Gunungsitoli**	**1.52**	**242**	P	**Pn**	**17 56 47.5**	**-0.7**
GSI				S	**Sn**	**17 57 09.2**	**-1.9**
KCSI	**Kotacane, Aceh**	**1.88**	**322**	P	**Pn**	**17 56 51.1**	**-1.2**
KCSI				S	**Sn**	**17 57 15.7**	**-2.5**
BKNI	**Bangkinang**	**2.71**	**128**	P	**Pn**	**17 57 01.3**	**-0.8**
LHMI	**Lhok Sumawe**	**3.75**	**328**	P	**Pn**	**17 57 14.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**16.34**	**0**	P	**P**	**18 00 00.6**	**+1.1**
	2.1nm,0.8s,baz=191,slow=11,SNR=20						
WRA	**Warramunga Arr**	**41.03**	**124**	P	**P**	**18 03 46.5**	**-0.9**
	3.7nm,0.4s,baz=302,slow=9.1,SNR=48						
	3.7nm,0.4s						
ASAR	**Alice Springs**	**42.54**	**129**	P	**P**	**18 03 58.2**	**-1.3**
	0.4nm,0.5s,baz=300,slow=7.5,SNR=11						
ASAR				PcP	**PcP**	**18 05 49.8**	**+0.3**
	0.3nm,0.6s,baz=294,slow=2.6,SNR=5.2						
	0.4nm,0.5s						
KSRS	**Korea Array**	**44.21**	**34**	P	**P**	**18 04 13.3**	**+0.6**
	1.0nm,0.7s,baz=221,slow=8.2,SNR=6.9						
	1.0nm,0.7s						
SONM	**Songino Array**	**46.09**	**7**	P	**P**	**18 04 29.2**	**+1.7**
	0.4nm,0.4s,baz=189,slow=11,SNR=4.4						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**46.89**	**344**	P	**P**	**18 04 34.8**	**+1.1**
	1.0nm,0.4s,baz=155,slow=8.7,SNR=25						
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**53.05**	**350**	P	**P**	**18 05 20.8**	**+0.9**
	1.9nm,0.4s,baz=172,slow=6.0,SNR=13						
	1.9nm,0.4s						
KLR	**Kul'dur**	**54.76**	**26**	P	**P**	**18 05 33.7**	**+1.2**
	1.4nm,0.5s,baz=204,slow=10.0,SNR=4.4						
	1.4nm,0.5s						
FINES	**FINESS Array B**	**80.08**	**332**	P	**P**	**18 08 11.9**	**+0.6**
	0.3nm,0.3s,baz=114,slow=6.2,SNR=8.0						
	0.3nm,0.3s						

BJI ***29*** *18:20:16.5±0.0, 7°.37S×129°.28E, h172^{km}, mb5.2/73, mB4.8/31*

MOS ***29*** *18:20:16.1±0.9, 7°.19S×128°.94E, h145^{km}, mb5.1/28, Error ellipse: s-maj=9.6km s-min=4.7km az=112.7*

IDC ***29*** *18:20:18.6±1.1, 7°.19S×128°.96E, h152^{km}±9^{km}, mb4.7/33, mbtmp5.2/36, MS3.6/20, Error ellipse: s-maj=11.7km s-min=8.2km az=91.0*

DJA ***29*** *18:20:18.8±0.2, 7°S±2°×12°9E±°, h151^{km}±2^{km}, M4.9/87, mB5.4/57, mb5.2/87, MLv5.4/18, Mw(mB)4.9/57, MwMwp4.7/6, Mwp5.1/6*

NEIC ***29*** *18:20:18.9±1.8, 7°.27S±0°.08×128°.93E±0°.07, h154^{km}±5^{km}, mb5.1/119, Error ellipse: s-maj=11.5km s-min=9.8km az=203.0*

GCMT ***29*** *18:20:19.9±0.2, 7°.35S±0°.01×128°.94E±0°.02, h160^{km}±1^{km}, MW5.0/117, Moment Tensor Solution. s50,c62; s117,c188; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.27±.10; M$_{\theta\theta}$-3.52±.11; M$_{\phi\phi}$1.25±.12; M$_{r\theta}$2.03±.08; M$_{\theta\phi}$1.07±.12; M$_{\phi r}$2.40±.09; Best double couple: M$_0$4.50200×10^{16} NP1:φ$_s$313.00000°, δ43.00000°, λ150.00000°. NP2:φ$_s$67.00000°, δ70.00000°, λ52.00000°. Principal axes: T 4.8240, Plg50.0000°, Azm294.0000°; N -0.6430, Plg36.0000°, Azm82.0000°; P -4.1810, Plg16.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 18:20:18.5±0.3**, 7°.34S**±0°.03×**128°.99E**±0°.04**, h159^{km}**±2^{km}**, h159^{km}:pP-P, n780, σ1^{s}.39**/820**, mb5.1**/167**, 48C-4D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.37**	**106**		**Pn**	**18 20 59.2**	**+0.6**
SAUI	**Saumlaki**	**2.37**	**106**	P	**Pn**	**18 20 57.7**	**-0.9**
SAUI	**Saumlaki**	**2.37**	**106**	P	**Pn**	**18 20 59.8**	**+1.2**
BNDI	**Bandanaira**	**2.94**	**18**	P	**Pn**	**18 21 07.6**	**+2.1**
AAI	**Ambon**	**3.71**	**348**	P	**Pn**	**18 21 17.0**	**+1.6**
MSAI	**Masohi**	**3.96**	**359**	P	**Pn**	**18 21 20.2**	**+1.6**
SOEI	**Soe**	**5.26**	**242**	Pn	**Pn**	**18 21 35.5**	**-0.2**
SOEI	**Soe**	**5.26**	**242**	P	**Pn**	**18 21 35.4**	**-0.2**
	11nm4μm23μm3μm,0.8s						
SOEI	**Soe**	**5.26**	**242**	P	**Pn**	**18 21 36.3**	**+0.7**
FAKI	**Fak Fak**	**5.46**	**37**	Pn	**Pn**	**18 21 36.0**	**-2.1**
FAKI	**Fak Fak**	**5.46**	**37**	P	**Pn**	**18 21 36.3**	**-1.9**
MTN	**Manton Dam**	**5.86**	**159**	P	**Pn**	**18 21 42.7**	**-0.9**
	baz=5.9,SNR=1000						
MTN				S	**Sn**	**18 22 45.0**	**-5.2**
	baz=5.9						
MTN	**Manton Dam**	**5.86**	**159**	Pn	**Pn**	**18 21 42.7**	**-0.9**
MTN	**Manton Dam**	**5.86**	**159**	P	**Pn**	**18 21 43.4**	**-0.2**
KMPI	**Kaimana, Papua**	**5.94**	**52**	P	**Pn**	**18 21 43.5**	**-1.1**
	15nm11μm502nm,0.5s						
BATI	**Baumata**	**5.99**	**241**	P	**Pn**	**18 21 45.8**	**+0.5**
	767nm,0.5s,baz=120,slow=2.8,SNR=242						
BATI				S	**Sn**	**18 22 51.1**	**-2.1**
	989nm,0.5s,baz=297,slow=23,SNR=19						
BATI				LR	LR	18 23 51.0	
	comp=Z,597nm,20.2s,baz=275,slow=35						
BATI	**Baumata**	**5.99**	**241**	P	**Pn**	**18 21 45.0**	**-0.3**
	3.7nm3μm8μm606nm,0.7s						
SANI	**Sanana**	**6.04**	**330**	P	**Pn**	**18 21 47.5**	**+1.5**
	0.7nm4μm2μm203nm,1.0s						
SANI	**Sanana**	**6.04**	**330**	P	**Pn**	**18 21 48.2**	**+2.2**
KDU	**Kakadu**	**6.33**	**147**	P	**Pn**	**18 21 48.8**	**-0.8**
	baz=6.3,SNR=1000						
KDU				S	**Sn**	**18 22 56.3**	**-4.8**
	baz=6.3						
KDU	**Kakadu**	**6.33**	**147**	P	**Pn**	**18 21 49.7**	**0.0**
BBSI	**Bau Bau**	**6.64**	**286**	P	**Pn**	**18 21 55.9**	**+2.0**
	0.2nm722nm84nm,1.1s						
SIJI	**Sorong**	**6.81**	**20**	P	**Pn**	**18 21 54.8**	**-1.4**
	122nm,0.3s,baz=203,slow=11,SNR=277						
SIJI				S	**Sn**	**18 23 09.3**	**-3.6**
	218nm,0.2s,baz=320,slow=22,SNR=21						
SIJI				LR	LR	18 24 15.7	
	comp=Z,590nm,20.0s,baz=164,slow=35						
MMRI	**Maumere**	**6.81**	**259**	Pn	**Pn**	**18 21 56.7**	**+0.5**
MMRI	**Maumere**	**6.81**	**259**	P	**Pn**	**18 21 56.3**	**+0.1**
	1.2nm4μm199nm,1.0s						
MMRI	**Maumere**	**6.81**	**259**	P	**Pn**	**18 21 57.1**	**+0.9**
SWI	**Sorong**	**6.82**	**19**	P	**Pn**	**18 21 54.5**	**-1.7**
LBMI	**Labuha**	**6.82**	**347**	P	**Pn**	**18 21 57.1**	**+0.8**
	3.3nm8μm1μm,0.8s						
EDFI	**Ende, Flores**	**7.37**	**259**	P	**Pn**	**18 22 03.5**	**-0.2**
	0.3nm874nm74nm,0.9s						
TNTI	**Ternate**	**8.22**	**349**	Pn	**Pn**	**18 22 15.4**	**+0.6**
TNTI	**Ternate**	**8.22**	**349**	P	**Pn**	**18 22 16.1**	**+1.2**
	2μm232nm,1.0s						
TNTI	**Ternate**	**8.22**	**349**	P	**Pn**	**18 22 16.9**	**+2.0**
KNRA	**Kununurra**	**8.29**	**182**	P	**Pn**	**18 22 13.6**	**-2.2**
	baz=8.3,SNR=1000						
KNRA				S	**Sn**	**18 23 41.8**	**-6.6**
	baz=8.3						
KNRA	**Kununurra**	**8.29**	**182**	Pn	**Pn**	**18 22 13.8**	**-2.0**
KNRA	**Kununurra**	**8.29**	**182**	P	**Pn**	**18 22 14.2**	**-1.6**
BSSI	**Bau Bau, Buton**	**8.53**	**277**	P	**Pn**	**18 22 20.8**	**+1.8**
	80nm,1.0s						
BASI	**Baing, Sumba**	**8.80**	**250**	P	**Pn**	**18 22 21.7**	**-0.9**
	3μm205nm,0.6s						
LUWI	**Luwuk**	**8.81**	**315**		**Pn**	**18 22 24.1**	**+1.4**
LUWI	**Luwuk**	**8.81**	**315**	P	**Pn**	**18 22 25.1**	**+2.4**
	1μm116nm,0.9s						
LUWI	**Luwuk**	**8.81**	**315**	P	**Pn**	**18 22 24.9**	**+2.2**
SRPI	**Serui, Papua**	**9.03**	**53**	P	**Pn**	**18 22 24.0**	**-1.7**
BKSI	**Bulukumba**	**9.04**	**282**	P	**Pn**	**18 22 26.5**	**+0.7**
	2μm187nm,1.0s						
BNSI	**Bone**	**9.31**	**288**	P	**Pn**	**18 22 30.3**	**+1.0**
	2μm119nm,1.1s						
KMSI	**Cibinong**	**9.31**	**327**	P	**Pn**	**18 22 30.3**	**+0.9**
	2μm213nm,0.7s						
BAKI	**Biak**	**9.36**	**50**	P	**Pn**	**18 22 29.6**	**-0.4**
KAPI	**Kappang**	**9.47**	**284**	P	**Pn**	**18 22 32.2**	**+0.7**
	69nm,0.9s,baz=75,slow=7.5,SNR=20						
KAPI	**Kappang**	**9.47**	**284**	Pn	**Pn**	**18 22 32.7**	**+1.2**
KAPI	**Kappang**	**9.47**	**284**	P	**Pn**	**18 22 32.7**	**+1.2**
KAPI	**Kappang**	**9.47**	**284**	P	**Pn**	**18 22 33.2**	**+1.7**
APSI	**Ampana**	**9.71**	**311**	P	**Pn**	**18 22 35.6**	**+0.9**
	1μm102nm,0.9s						
WBSI	**Waikabubak, Su**	**9.77**	**256**	P	**Pn**	**18 22 35.2**	**-0.3**
	2μm238nm,0.6s						
SPSI	**Sidrap Palu**	**9.77**	**290**	P	**Pn**	**18 22 36.1**	**+0.6**
	1μm117nm,1.0s						
GTOI	**Gorontalo**	**9.92**	**323**	P	**Pn**	**18 22 41.2**	**+3.8**
	656nm77nm,1.2s						

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TTSI  Tana Toraja        10.08 295   P      Pn      18 22 40.3 +0.7
      2µm208nm,0.8s
MRSI  Marisa             10.47 318   P      Pn      18 22 45.7 +1.0
      3µm415nm,1.0s
SMPI  Sarmi              11.04  62   P      Pn      18 22 51.5 -0.7
      753nm72nm,1.2s
PLAI  Plampang           11.21 262   P      Pn      18 22 53.2 -1.1
      2µm154nm,0.9s
PLAI  Plampang           11.21 262   P      Pn      18 22 52.9 -1.4
MMPI  Merauke            11.34  96   P      Pn      18 22 55.3 -0.7
SGSI  Sangihe            11.48 342   P      Pn      18 22 58.8 +0.9
      4µm551nm,0.7s
TOLI2 Tolitoli           11.73 315   Pn     Pn      18 23 03.2 +2.1
TOLI2 Tolitoli           11.73 315   P      P       18 23 04.5 -3.4
MPSI  Mapaga             11.85 310   P      Pn      18 23 04.7 +2.0
      1µm71nm,1.0s
WB0   Warramunga Arr     13.42 158   Pn     Pn      18 23 19.1 -3.8
BKB   Balikpapan         13.48 296          P       18 23 28.7 +1.3
BKB   Balikpapan         13.48 296   P      Pn      18 23 25.4 +1.7
      5µm457nm,1.5s
WRAB  Tennant Creek      13.56 158          Pn      18 23 20.7 -3.9
WRAB  Tennant Creek      13.56 158 i P      Pn      18 23 24.4 -0.2
WRA   Warramunga Arr     13.56 158   P      Pn      18 23 21.4 -3.3
      126nm,0.8s,baz=342,slow=12,SNR=180
WRA                                  S      Sn      18 25 43.4  -12
      409nm,0.8s,baz=331,slow=22,SNR=16
WRA                                  LR     LR      18 29 29.7
      comp=Z,567nm,18.6s,baz=281,slow=40
WRA   Warramunga Arr     13.56 158          Pn      18 23 19.8 -4.9
WRA   Warramunga Arr     13.56 158   P      Pn      18 23 19.8 -4.8
WB2   Warramunga Arr     13.57 158   Pn     Pn      18 23 20.9 -3.8
SMKI  Samarinda          13.60 300   P      Pn      18 23 26.1 +1.0
      4µm344nm,1.1s
WR0   Warramunga Arr     13.65 157          Pn      18 23 22.2 -3.6
SRBI  Singaraja          13.68 266   P      Pn      18 23 26.4 +0.3
      58nm,0.8s
IGBI  Denpasar           13.79 263   P      Pn      18 23 28.2 +0.7
      2µm89nm,0.8s
BBKI  Banjar Baru        14.60 285   P      Pn      18 23 38.7 +0.9
      6µm567nm,1.4s
ABJI  Asem Bagus         14.64 267   P      Pn      18 23 38.8 +0.6
      75nm,0.8s
JAGI  Jajag, Banyuwa     14.74 265   Pn     Pn      18 23 34.7 -4.8
JAGI  Jajag, Banyuwa     14.74 265   P      Pn      18 23 40.2 +0.7
      63nm,0.7s
JAGI  Jajag, Banyuwa     14.74 265   P      Pn      18 23 38.3 -1.2
KMMI  Kalianget          14.91 270   P      P       18 23 43.9 +0.6
      202nm,0.8s
BLJI  Banyuglugur        15.27 267   P      Pn      18 23 46.2 +0.2
      1µm132nm,0.6s
COEN  Coen               15.41 116   P      Pn      18 23 47.6  0.0
      baz=15,SNR=28
COEN  Coen               15.41 116          Pn      18 23 47.7  0.0
COEN                                 IAmb   IAmb    18 23 51.8
      comp=Z,66nm,0.8s
COEN  Coen               15.41 116   P      P       18 23 48.2 -0.5
MTKI  Muara Teweh, K     15.42 294   P      P       18 23 48.9  0.0
      comp=Z,4µmcomp=Z,529nm,0.8s
GMJI  Gumukmas           15.44 266   P      P       18 23 48.8 -0.2
      comp=Z,69nm,0.9s
MYLDM Lahad Datu         16.25 320   Pn     P       18 24 00.8 +2.7
BWJI  Bawean             16.30 274   P      P       18 24 00.8 +2.2
      comp=Z,296nm,1.2s
GRJI  Gresik             16.39 270   P      Pn      18 24 01.4 +1.7
      comp=Z,186nm,0.7s
MBWA  Marble Bar         16.40 212   P      P       18 23 59.3 -0.4
QIS   Mount Isa          16.68 143   P      P       18 24 02.9 +0.1
      baz=17,SNR=160
QIS   Mount Isa          16.68 143   P      Pn      18 24 03.3 +0.1
PSA00 Pilbara Seismi     16.68 211   P      P       18 24 00.2 -2.6
PSA00                                IAmb   IAmb    18 24 05.3
      comp=Z,67nm,1.0s
PSA00 Pilbara Seismi     16.68 211   P      P       18 24 02.4 -0.4
AS31  Alice Springs      16.91 164          Pn      18 24 06.5 +0.6
ASAR  Alice Springs      16.91 164   P      P       18 24 04.5 -0.7
      comp=Z,149nm,0.7s,baz=338,slow=9.6,SNR=434
ASAR                                 S      S       18 27 05.5 -8.0
      comp=Z,61nm,0.7s,baz=354,slow=24,SNR=7.0
ASAR                                 ScP    ScP     18 32 02.0 -1.3
      comp=Z,8.2nm,0.6s,baz=12,slow=1.4,SNR=4.1
PWJI  Pagerwojo          17.05 267   P      P       18 24 05.5 -1.4
WRKA  Warakurna          17.61 182   P      P       18 24 13.2 +0.1
      baz=18,SNR=624
WRKA  Warakurna          17.61 182   P      Pn      18 24 13.7 -0.7
PCJI  Pacitan            17.68 266   P      P       18 24 11.8 -1.9
PBKI  Pangkalan Bun      17.86 284   P      Pn      18 24 18.3 +1.0
      comp=Z,18µmcomp=Z,2µm,1.1s
WOJI  Wonogiri, Jawa     17.92 267   P      P       18 24 16.0 -0.4
      comp=Z,106nm,1.3s
PMG   Port Moresby       18.09  98   P      Pn      18 24 23.0 +3.0
      comp=Z,45nm,0.8s,baz=281,slow=12,SNR=8.6
PMG                                  S      S       18 27 32.5 -4.9
      comp=Z,14nm,0.5s,baz=197,slow=19,SNR=2.0
PMG                                  LR     LR      18 32 38.8
      comp=Z,189nm,18.4s,baz=291,slow=41
PMG   Port Moresby       18.09  98   P      Pn      18 24 23.2 +3.2
MTSU  Mount Surprise     18.38 127   P      Pn      18 24 23.7 +0.2
      baz=18,SNR=109
MTSU  Mount Surprise     18.38 127   P      Pn      18 24 23.8 +0.3
SMRI  Semarang           18.41 270   P      Pn      18 24 22.9 -0.9
      comp=Z,104nm,1.0s
STKI  Sintang            18.95 292   P      P       18 24 28.9 +1.2
      comp=Z,2µmcomp=Z,203nm,0.9s
MANU  Manus Island       19.05  75          Pn      18 24 32.5 +1.2
SBUM  Sibu               19.36 300   P      P       18 24 33.2 +1.1
KSM   Kuching            20.59 294   P      P       18 24 44.9 -0.5
KSM   Kuching            20.59 294   P      P       18 24 45.5 +0.1
GIRL  Giralia            20.82 221   P      Pn      18 24 50.2 -2.1
      baz=21,SNR=5.9
CTA   Charters Tower     20.99 129   P      P       18 24 51.7 +2.2
      comp=Z,23nm,0.8s,baz=302,slow=12,SNR=26
      comp=Z,23nm,0.8s
CTA   Charters Tower     20.99 129   P      P       18 24 51.5 +1.9
CTAO  Charters Tower     20.99 129   P      P       18 24 51.5 +1.9
CTAO                                 IAmb   IAmb    18 25 16.5
      comp=Z,76nm,1.2s
CTAO  Charters Tower     20.99 129   P      P       18 24 51.5 +1.9
CTAO                                 pmax   pmax
      comp=Z,76nm,1.3s
CTAO  Charters Tower     20.99 129   P      P       18 24 51.5 +1.9
LEM   Lembang            21.22 270   P      P       18 24 50.8 -1.4
      comp=Z,41nm,0.6s,baz=72,slow=10,SNR=9.8
      comp=Z,41nm,0.6s
OOD   Oodnadatta         21.31 163   P      P       18 24 53.8 +0.9
CNJI  Cibinong           21.69 269   P      P       18 24 55.3 -1.7
TPI   Tanjungpandan      21.73 281   P      P       18 24 56.9 -0.6
      comp=Z,928nmcomp=Z,61nm,1.1s
CBJI  Citeko             22.00 271   P      P       18 24 59.6 -0.7
      comp=Z,2µmcomp=Z,140nm,0.7s
DBJI  Dramaga            22.09 271   P      P       18 25 00.2 -1.0
TGY   Tagaytay City      22.75 339   P      P       18 25 07.3 -0.1
      comp=Z,532nm,0.6s,baz=178,slow=4.8,SNR=17
INKA  Innaminka          23.15 153   P      P       18 25 12.7 +1.8
MULG  Mulgathing         23.32 169   P      P       18 25 13.8 +1.4
FORT  Forrest            23.34 182   P      P       18 25 13.8 +1.2
      baz=23,SNR=116
FORT  Forrest            23.34 182   P      P       18 25 13.5 +0.9
FORT  Forrest            23.34 182   P      P       18 25 14.0 +1.4
QLP   Quilpie            24.01 145   P      P       18 25 20.3 +1.6
      baz=24,SNR=182
QLP   Quilpie            24.01 145   P      P       18 25 20.6 +1.8
PMBI  Palembang          24.51 279   P      P       18 25 25.4 +1.9
      comp=Z,317nm,1.2s
PMBI  Palembang          24.51 279   P      P       18 25 27.3 +3.8
LCRK  Leigh Creek        24.57 161   P      P       18 25 25.3 +1.6
MORW  Morawa             24.83 208   P      P       18 25 27.0 +0.9
      baz=25,SNR=33
MORW  Morawa             24.83 208   P      P       18 25 26.7 +0.5
MORW                                 IAmb   IAmb    18 25 29.6
      comp=Z,47nm,0.7s
MORW  Morawa             24.83 208   P      P       18 25 27.3 +1.1
DSRI  Dabo               25.28 285   P      P       18 25 32.9 +2.5
      comp=Z,53nm,1.0s
TPRI  Tanjung Pinang     25.75 288   P      P       18 25 36.6 +2.0
      comp=Z,76nm,0.6s
BLDU  Ballidu            25.86 205   P      P       18 25 36.3 +0.8
      baz=26,SNR=29
JMBI  JAMBI              25.89 281   P      P       18 25 36.8 +0.9
      comp=Z,69nm,1.0s
RK1H  Rockhampton Ha     26.10 130   P      P       18 25 39.6 +1.9
BBOO  Buckleboo          26.18 166   P      P       18 25 39.3 +0.9
      baz=26,SNR=51
BBOO  Buckleboo          26.18 166   P      P       18 25 38.6 +0.3
BBOO                                 IAmb   IAmb    18 25 42.8
      comp=Z,40nm,0.7s
BBOO  Buckleboo          26.18 166   P      P       18 25 39.4 +1.1
KLBR  Kellerberrin       26.32 202   P      P       18 25 40.7 +1.1
      baz=26,SNR=16
KLBR  Kellerberrin       26.32 202   P      P       18 25 40.7 +1.1
MYKOM Kota Tinggi        26.68 289   P      P       18 25 42.6 -0.3
RMQ   Roma               26.76 138   P      P       18 25 45.5 +1.9
      baz=27,SNR=11
RMQ   Roma               26.76 138   P      P       18 25 45.5 +1.9
WHYH  Whyalla            26.78 164   P      P       18 25 45.7 +2.0
NAPP  Napperby           27.08 163   P      P       18 25 47.9 +1.5
STKA  Stephens Creek     27.10 156   P      P       18 25 47.8 +1.3
      comp=Z,33nm,0.8s,baz=325,slow=9.0,SNR=45
      comp=Z,33nm,0.8s
STKA  Stephens Creek     27.10 156   P      P       18 25 47.9 +1.3
      baz=27,SNR=32
STKA  Stephens Creek     27.10 156   P      P       18 25 47.4 +0.9
STKA  Stephens Creek     27.10 156   P      P       18 25 47.9 +1.4
MUN   Mundaring          27.26 204   P      P       18 25 49.0 +1.0
      baz=27,SNR=8.5
HTT   Hallett            27.55 162   P      P       18 25 52.0 +1.4
      baz=28,SNR=24
HTT   Hallett            27.55 162   P      P       18 25 52.0 +1.4
EIDS  Eidsvold           27.68 133   P      P       18 25 53.9 +2.1
      baz=28,SNR=5.6
EIDS  Eidsvold           27.68 133   P      P       18 25 52.5 +0.7
EIDS  Eidsvold           27.68 133   P      P       18 25 53.3 +1.5
NWAO  Narrogin (SRO)     27.71 202   P      P       18 25 52.9 +1.0
NWAO                                 IAmb   IAmb    18 26 17.0
      comp=Z,27nm,0.9s
NWAO  Narrogin (SRO)     27.71 202   P      P       18 25 52.9 +1.0
NWAO                                 pmax   pmax
      comp=Z,27nm,0.9s
KRJI  Kerinci            27.92 279   P      P       18 25 56.6 +2.4
      comp=Z,124nm,0.8s
CMSA  Cobar Meteorol     28.68 149   P      P       18 26 02.1 +1.5
      baz=29,SNR=158
CMSA  Cobar Meteorol     28.68 149   P      P       18 26 02.6 +1.9
IPM   Ipoh               30.28 292   P      P       18 26 13.4 -1.5
IPM                                  IAmb   IAmb    18 26 16.7
      comp=Z,59nm,0.9s
IPM   Ipoh               30.28 292   P      P       18 26 15.6 +0.6
MNSI  Mandailing Nat     30.43 284   P      P       18 26 16.8 +0.5
      comp=Z,74nm,0.7s
HNR   Honiara            30.69  96   LR     LR      18 40 18.2
      comp=Z,112nm,18.9s,baz=16,slow=39
KULM  Kulim              30.94 293   P      P       18 26 19.7 -1.1
KULM                                 IAmb   IAmb    18 26 22.5
      comp=Z,53nm,0.8s
ARMA  Armidale           31.27 140   P      P       18 26 26.1 +2.5
      baz=31,SNR=23
ARMA  Armidale           31.27 140   P      P       18 26 26.2 +2.6
ARPS  Mount Arapiles     31.55 160   P      P       18 26 27.9 +2.1
      baz=32,SNR=24
ARPS  Mount Arapiles     31.55 160   P      P       18 26 27.8 +1.9
PSI   Prapat             31.65 288   P      P       18 26 26.6 -0.6
      comp=Z,64nm,0.8s,baz=125,slow=3.9,SNR=28
      comp=Z,64nm,0.8s
COCO  West Island        32.04 259   P      P       18 26 29.1 -1.2
COCO  West Island        32.04 259   P      P       18 26 29.2 -1.2
COCO                                 pmax   pmax
      comp=Z,656nm,0.7s
TSI   Tuntungan          32.22 289   P      P       18 26 34.5 +2.5
      comp=Z,75nm,0.5s
QIZ   Qiongzhong         32.29 324   P      P       18 26 32.5  0.0
QIZ                                  sS     sS      18 32 38.0 +6.3
QIZ                                  pmax   pmax
      comp=Z,26nm,1.0s
GSI   Gunungsitoli       32.50 284   P      P       18 26 32.8 -1.6
GSI                                  IAmb   IAmb    18 26 37.0
      comp=Z,59nm,1.0s
KCSI  Kotacane, Aceh     32.97 288   P      P       18 26 39.2 +0.6
      comp=Z,30nm,0.8s
BRAT  Ballarat           32.99 158   P      P       18 26 41.2 +2.8
CAN   Canberra           33.36 149   P      P       18 26 44.1 +2.4
CAN                                  IAmb   IAmb    18 26 45.1
      comp=Z,34nm,0.7s
CAN   Canberra           33.36 149   P      P       18 26 44.1 +2.4
CAN                                  pmax   pmax
      comp=Z,34nm,0.7s
CAN   Canberra           33.36 149   P      P       18 26 44.3 +2.6
CNB   Canberra Magne     33.54 149   P      P       18 26 45.8 +2.5
      baz=34,SNR=9.6
TOO   Toolangi           33.62 156   P      P       18 26 47.0 +3.0
      baz=34,SNR=38
TOO   Toolangi           33.62 156   P      P       18 26 46.7 +2.8
TOO                                  IAmb   IAmb    18 26 47.4
      comp=Z,25nm,0.7s
TOO   Toolangi           33.62 156   P      P       18 26 46.7 +2.8
TOO                                  pmax   pmax
      comp=Z,25nm,0.7s
TOO   Toolangi           33.62 156   P      P       18 26 46.9 +3.0
QZH   Quanzhou           33.65 343  eP      P       18 26 43.3 -0.9
GEXS  Deakin Univers     33.70 158   P      P       18 26 48.1 +3.6
JOW   Kunigami           33.97 359   P      P       18 26 47.3 +0.3
      comp=Z,40nm,0.5s,baz=157,slow=10.0,SNR=7.1
      comp=Z,40nm,0.5s
LHMI  Lhok Sumawe        34.33 290   P      P       18 26 48.5 -1.7
JCJ   Chichijima         36.54  20   LR     LR      18 39 28.6
      comp=Z,55nm,21.0s,baz=168,slow=32
GULI  GuiLin             37.16 331 ⇑P      P       18 27 12.3 -1.9
MOO   Moorlands          38.48 158   P      P       18 27 28.6 +3.5
      baz=39,SNR=3.1
JSU   Suzuyama           38.65   2   P      P       18 27 25.9 -0.7
JSU                                  IAmb   IAmb    18 27 27.6
      comp=Z,42nm,0.9s
CM31  Chiang Mai Arr     39.19 311   P      P       18 27 31.8 +0.4
CM31                                 IAmb   IAmb    18 27 33.9
      comp=Z,68nm,1.1s
CMAR  Chiang Mai Arr     39.19 311   P      P       18 27 31.6 +0.3
      comp=Z,24nm,0.7s,baz=140,slow=6.9,SNR=194
CMAR                                 PcP    PcP     18 29 39.0 +1.4
      comp=Z,5.5nm,0.6s,baz=164,slow=2.5,SNR=12
CMAR                                 ScP    ScP     18 33 11.9 +0.7
      comp=Z,3.3nm,0.8s,baz=159,slow=3.4,SNR=14
      comp=Z,24nm,0.7s
CMAR  Chiang Mai Arr     39.19 311   P      P       18 27 31.5 +0.2
CMAR  Chiang Mai Arr     39.19 311 i P      P       18 27 31.7 +0.3
CMAR                                 pmax   pmax
      comp=Z,29nm,0.7s
LIFNC LIFOU              39.31 114   P      P       18 27 36.2 +3.9
YATNC Mamie plateau,     39.33 116   P      P       18 27 35.1 +2.6
CHTO  Chiang Mai         39.41 312   P      P       18 27 32.7 -0.4
CHTO                                 IAmb   IAmb    18 27 35.6
      comp=Z,56nm,0.8s
CHTO  Chiang Mai         39.41 312   P      P       18 27 32.7 -0.4
CHTO                                 pmax   pmax
      comp=Z,56nm,0.8s
CHTO  Chiang Mai         39.41 312   P      P       18 27 33.7 +0.5
CHTO  Chiang Mai         39.41 312 ⇑P      P       18 27 33.5 +0.3
CHTO                                 sP     sP      18 28 26.3 +2.6
GYA   Guiyang            39.98 328⇑iP      P       18 27 37.8 -0.1
GYA                                  pP     pwP     18 28 18.8 +1.3
GYA                                  PcP    PcP     18 29 41.5 +1.5
GYA                                  pmax   pmax
      comp=Z,91nm,0.8s
WHN   Wuhan              40.20 340 ⇑P      P       18 27 39.5 +0.1
WHN                                  pmax   pmax
      comp=Z,110nm,0.9s
JNU   Nakatsue           40.27   2   P      P       18 27 38.9 -1.2
      comp=Z,21nm,0.8s,baz=337,slow=2.8,SNR=11
      comp=Z,21nm,0.8s
JNU   Nakatsue           40.27   2   P      P       18 27 39.3 -0.8
JNU                                  IAmb   IAmb    18 27 40.5
      comp=Z,28nm,0.9s
JNU   Nakatsue           40.27   2   P      P       18 27 43.2 +3.1
NJ2   Nanjing            40.34 347⇓iP      P       18 27 41.0 +0.4
NJ2                                  pmax   pmax
      comp=Z,23nm,0.6s
KMI   Kunming            41.16 322 ⇑P      P       18 27 48.5 +0.8
KMI                                  pmax   pmax
      comp=Z,100nm,0.8s
KMI                                  pmax   pmax
      comp=Z,200nm,3.5s
KMI   Kunming            41.16 322 ⇑P      P       18 27 48.3 +0.5
KMI                                  pP     pP      18 28 20.1 -1.0
JHJ   Hachijo jima 2     41.52  14   LR     LR      18 41 37.7
      comp=Z,72nm,21.1s,baz=69,slow=31
ENH   Enshi              41.82 334   P      P       18 27 51.9 -0.9
ENH                                  IAmb   IAmb    18 27 53.0
      comp=Z,39nm,0.6s
JHS   Saijyo             42.28   5   P      P       18 27 55.9 -0.5
PZH   PanZhiHua          42.78 323 ⇑P      P       18 28 00.5 -0.3
PZH                                  pmax   pmax
      comp=Z,110nm,0.9s
PZH                                  pmax   pmax
      comp=Z,140nm,3.5s
INU   Inuyama            43.12  10   P      P       18 28 02.9 -0.2
TJN   Taejon             43.51 358   P      P       18 28 06.1 -0.1
TJN   Taejon             43.51 358   P      P       18 28 06.1 -0.1
TJN                                  pmax   pmax
      comp=Z,136nm,0.8s
KSCHJ Chungju            43.99 359   P      P       18 28 10.5 +0.5
KSCHJ                                IAmb   IAmb    18 28 11.1
      comp=Z,35nm,0.7s
MAJO  Matsushiro         44.49  11   P      P       18 28 11.9 -2.3
MAJO                                 IAmb   IAmb    18 28 14.1
      comp=Z,40nm,0.8s
MAJO  Matsushiro         44.49  11⇑iP      P       18 28 12.5 -1.6
MAJO  Matsushiro         44.49  11 ⇑P      P       18 28 12.5 -1.6
MAJO                                 pP     pP      18 28 49.2 +0.8
MJAR  Matsushiro Arr     44.49  11   P      P       18 28 12.2 -1.9
      comp=Z,22nm,0.8s,baz=180,slow=9.6,SNR=77
MJAR                                 PcP    PcP     18 29 54.6 -0.2
      comp=Z,3.1nm,0.9s,baz=195,slow=2.6,SNR=4.1
MJAR                                 ScP    ScP     18 33 31.5 -0.5
      comp=Z,2.6nm,0.9s,baz=197,slow=4.8,SNR=6.3
      comp=Z,22nm,0.8s
MJAR  Matsushiro Arr     44.49  11   P      P       18 28 12.3 -1.8
LYN   LuoYang            44.50 340 ⇑P      P       18 28 13.3 -0.8
LYN                                  pP     pP      18 28 48.3 +0.4
LYN                                  S      S       18 34 39.5 +2.1
LYN                                  pmax   pmax
      comp=Z,20nm,1.4s
MJB9  Matsu-Tunnel       44.50  11   P      P       18 28 12.1 -2.0
MJB9                                 IAmb   IAmb    18 28 14.1
      comp=Z,40nm,0.8s
KSAR  Wonju Array Be     44.56 359   P      P       18 28 12.7 -1.8
KSAR  Wonju Array Be     44.56 359   P      P       18 28 12.7 -1.8
KSRS  Korea Array        44.57 359   P      P       18 28 14.8 +0.1
      comp=Z,13nm,0.6s,baz=175,slow=9.0,SNR=96
KSRS                                 PcP    PcP     18 29 55.5 +0.6
      comp=Z,5.5nm,0.8s,baz=183,slow=3.2,SNR=12
KSRS                                 ScP    ScP     18 33 32.0 -0.2
      comp=Z,2.4nm,0.9s,baz=190,slow=3.2,SNR=8.7
KSRS                                 LR     LR      18 45 18.5
      comp=Z,69nm,21.7s,baz=210,slow=34
      comp=Z,13nm,0.6s
KS19  Wonju Array Si     44.62 359   P      P       18 28 15.4 +0.3
TIA   Tai'an             44.73 346 ⇑P      P       18 28 14.5 -1.5
TIA                                  pmax   pmax
      comp=Z,11nm,1.1s
CD2   Chengdu            45.06 329   P      P       18 28 18.5 -0.3
CD2                                  pmax   pmax
      comp=Z,120nm,0.6s
XAN   Xi'an              45.33 336   P      P       18 28 19.5 -1.3
XAN                                  S      S       18 34 44.8 -4.8
XAN                                  pmax   pmax
      comp=Z,81nm,1.0s
XAN   Xi'an              45.33 336 ⇑P      P       18 28 19.4 -1.5
XAN                                  sP     sP      18 29 11.5 -0.5
SEHB  SEOHWA             45.37 359   P      P       18 28 21.7 +0.7
SEHB                                 IAmb   IAmb    18 28 23.7
      comp=Z,30nm,0.8s
JMM   Marumori           46.30  13   P      P       18 28 28.2  0.0
JMM                                  IAmb   IAmb    18 28 32.8
      comp=Z,43nm,0.7s
HNS   HongShan           46.46 344 ⇑P      P       18 28 29.0 -0.5
HNS                                  S      S       18 35 06.8 +1.3
HNS                                  pmax   pmax
      comp=Z,41nm,1.0s
HNS                                  LR     LR
      comp=Z,110nm,18.3s
HNS                                  LR     LR
      comp=Z,110nm,12.2s
TIY   Taiyuan            47.41 342  eP      P       18 28 36.3 -0.7
BJI   Beijing            48.60 347   P      P       18 28 45.3 -0.7
BJI                                  PcP    PcP     18 30 10.5 +1.4
BJI                                  pmax   pmax
      comp=Z,28nm,1.0s
LZH   Lanzhou            49.24 333  eP      P       18 28 51.3 +0.2
LZH                                  pP     pwP     18 29 31.3 -0.7
LZH                                  sP     sP      18 29 50.0 +7.3
LZH                                  pmax   pmax
      comp=Z,160nm,1.5s
LZH                                  pmax   pmax
      comp=Z,90nm,4.1s
LZH                                  LR     LR
      comp=Z,200nm,17.9s
LZH                                  LR     LR
      comp=Z,220nm,17.1s
LZH                                  LR     LR
      comp=Z,220nm,17.8s
MSHR  Mys Shultsa        49.72   2 ceP      P       18 28 54.7 +0.3
MSHR                                 pmax   pmax
      comp=Z,49nm,1.7s
PALK  Pallekele          50.30 286   PcP    PcP     18 30 17.7 +1.7
      comp=Z,18nm,1.0s,baz=38,slow=0.9,SNR=5.2
HHC   Hu-ho-hao-te       50.56 343  eP      P       18 29 00.5 -0.5
HHC                                  pmax   pmax
      comp=Z,46nm,0.8s
HHC                                  pmax   pmax
      comp=Z,270nm,5.4s
HHC                                  LR     LR
      comp=Z,110nm,14.6s
HHC                                  LR     LR
      comp=Z,170nm,14.6s
HHC                                  LR     LR
      comp=Z,180nm,15.2s
ERM   Erimo              50.79  14 i P      P       18 29 02.6 +0.1
ERM                                  pmax   pmax
      comp=Z,6.0nm,0.8s
BTO   Baotou             50.81 341  eP      P       18 29 07.8 +5.0
BTO                                  S      S       18 36 05.3 -1.2
BTO                                  LR     LR
      comp=N,370nm,18.6s
BTO                                  LR     LR
      comp=E,240nm,11.0s
WHZ   Wether Hill Ro     50.98 146   P      P       18 29 05.8 +1.8
WHZ                                  IAmb   IAmb    18 29 06.6
      comp=Z,34nm,0.9s
CN2   Changchun          51.00 357  eP      P       18 29 03.0 -1.0
CN2                                 ePP     PP      18 31 03.0 +0.7
CN2                                  S      S       18 36 07.5 -1.3
CN2                                 esS     sS      18 37 11.5 +2.0
CN2                                  SS     SS      18 39 43.3 -2.9
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                  LR     LR
      comp=Z,100nm,15.0s
CN2                                  LR     LR
      comp=Z,80nm,15.0s
CN2                                  LR     LR
      comp=Z,50nm,16.0s
USRK  Ussuriysk Ar.      51.37   3   P      P       18 29 07.3 +0.5
      comp=Z,27nm,0.8s,baz=185,slow=6.7,SNR=37
      comp=Z,27nm,0.8s
USRK  Ussuriysk Ar.      51.37   3   P      P       18 29 06.6 -0.1
USA0B Ussuriysk Arra     51.37   3   P      P       18 29 05.5 -1.2
USA0B                                IAmb   IAmb    18 29 07.8
      comp=Z,24nm,0.8s
USA0B Ussuriysk Arra     51.37   3 i P      P       18 29 06.2 -0.5
RPZ   Rata Peaks         51.59 142   P      P       18 29 10.6 +2.0
RPZ                                  IAmb   IAmb    18 29 12.4
      comp=Z,46nm,0.8s
MDJ   Mudanjiang         51.71   1   P      P       18 29 10.3 +1.0
MDJ                                  pmax   pmax
      comp=Z,31nm,0.8s
MDJ                                  pmax   pmax
      comp=Z,90nm,4.0s
LSA   Lhasa              51.76 317   P      P       18 29 10.8 +0.2
LSA   Lhasa              51.76 317   P      P       18 29 10.8 +0.2
LSA                                  pmax   pmax
      comp=Z,107nm,0.8s
LSA   Lhasa              51.76 317   P      P       18 29 11.5 +1.0
LSA   Lhasa              51.76 317   P      P       18 29 11.6 +1.1
LSA   Lhasa              51.76 317   P      P       18 29 11.8 +1.2
LSA                                  pP     pP      18 29 44.9 -0.8
XLT   XiLinHaoTe         52.32 348  eP      P       18 29 14.0  0.0
XLT                                  pmax   pmax
      comp=Z,25nm,1.1s
XLT                                  pmax   pmax
      comp=Z,140nm,4.8s
ASAJ  Asahikawa          52.67  12   P      P       18 29 16.9 +0.6
      comp=Z,22nm,0.6s,baz=227,slow=9.1,SNR=47
ASAJ                                 LR     LR      18 51 59.0
      comp=Z,35nm,21.0s,baz=202,slow=36
      comp=Z,22nm,0.6s
ASAJ  Asahikawa          52.67  12   P      P       18 29 17.0 +0.6
JKA   Kamikawa-asahi     52.67  12   P      P       18 29 16.9 +0.5
JKA                                  IAmb   IAmb    18 29 17.1
      comp=Z,22nm,0.7s
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ODAN	Odare	52.73	312	eP	P	18 29 17.3	-0.2
TAPN	Taplejung	52.77	313	eP	P	18 29 17.6	-0.2
	comp=Z,158nm,0.4s						
BNX	BinXian	52.85	359	⇓P	P	18 29 16.8	-0.9
BNX				pmax	pmax		
	comp=Z,27nm,1.3s						
BNX				pmax	pmax		
	comp=Z,160nm,4.1s						
RAMN	Ramite	53.36	311	eP	P	18 29 22.2	+0.1
	comp=Z,346nm,0.6s						
GTA	Gaotai	53.79	332	⇑P	P	18 29 25.0	+0.1
GTA				PcP	PcP	18 30 30.0	+1.3
GTA				S	S	18 36 43.3	-4.0
GTA				pmax	pmax		
	comp=Z,77nm,1.0s						
GTA				pmax	pmax		
	comp=Z,64nm,6.5s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
GTA				LR	LR		
	comp=Z,95nm,17.5s						
GTA				LR	LR		
	comp=Z,120nm,18.2s						
GOMU	GeErMu	53.90	326	P	P	18 29 26.0	0.0
GOMU				pmax	pmax		
	comp=Z,11nm,1.4s						
GOMU				pmax	pmax		
	comp=Z,73nm,7.1s						
JIRN	Jiri	54.06	312	eP	P	18 29 27.1	-0.2
	comp=Z,122nm,0.7s						
GUN	Gumba	54.43	312	eP	P	18 29 29.7	-0.3
	comp=Z,282nm,0.6s						
PKI	Pulchoki	54.59	311	eP	P	18 29 30.5	-0.6
	comp=Z,80nm,0.5s						
PKIN	Phulchoki	54.60	311	eP	P	18 29 30.5	-0.6
	comp=Z,86nm,0.5s						
KKN	Kakani	54.80	311	eP	P	18 29 32.1	-0.4
DMN	Daman	54.84	311	eP	P	18 29 32.8	0.0
PCHI	Peechi	55.34	288	eP	P	18 29 36.4	+0.2
GKN	Gorkha	55.40	311	eP	P	18 29 36.4	-0.3
	comp=Z,163nm,0.5s						
YSS	Yuzh-Sakhalins	55.42	11	P	P	18 29 36.0	-0.3
YSS	Yuzh-Sakhalins	55.42	11	eP	P	18 29 36.1	-0.1
YSS				e		18 30 06.8	
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
HYBB	Hyderabad (bro	55.57	297	eP	P	18 29 36.5	-1.5
HYBB				IVmB_BB		18 29 38.4	
	comp=Z,199nm,1.0s						
KOLN	Koldanda	56.05	310	eP	P	18 29 41.2	-0.2
DANN	Dangsing	56.24	311	eP	P	18 29 42.3	-0.5
	comp=Z,156nm,0.9s						
KLR	Kul'dur	56.38	2	P	P	18 29 43.3	+0.3
	comp=Z,12nm,0.8s,baz=215,slow=3.7,SNR=55						
KLR				PcP	PcP	18 30 37.6	-0.7
	comp=Z,7.8nm,0.8s,baz=173,slow=3.9,SNR=4.8						
	comp=Z,12nm,0.8s						
PYUN	Piuthan	56.68	310	eP	P	18 29 45.7	-0.2
	comp=Z,276nm,0.8s						
GRNR	Gornyy	58.23	6	⇑iP	P	18 29 56.3	+0.3
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				MLR	MLR		
	comp=E,40nm,10.0s						
GRNR				MLR	MLR		
	comp=N,60nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,60nm,15.0s						
ULN	Ulaanbaatar	58.28	343	P	P	18 29 56.2	-0.4
ULN				IAmb	IAmb	18 29 58.5	
	comp=Z,51nm,1.4s						
ULN	Ulaanbaatar	58.28	343	ceP	P	18 29 56.9	+0.3
ULN				pmax	pmax		
	comp=Z,41nm,1.5s						
SONM	Songino Array	58.45	342	P	P	18 29 58.3	+0.6
	comp=Z,12nm,0.6s,baz=158,slow=7.0,SNR=80						
SONM				ScP	ScP	18 34 33.2	+1.1
	comp=Z,2.6nm,0.8s,baz=156,slow=4.9,SNR=8.0						
SONM				PKP2bc		18 59 45.5	
	comp=Z,1.3nm,0.8s,baz=257,slow=1.9,SNR=7.4						
	comp=Z,12nm,0.6s						
SONM	Songino Array	58.45	342	P	P	18 29 57.6	-0.1
SONM				IAmb	IAmb	18 30 00.2	
	comp=Z,15nm,0.8s						
TYV	Tymovskoe	59.16	10	eP	P	18 30 03.3	+0.9
TYV				pmax	pmax		
	comp=Z,22nm,1.4s						
TYV				pmax	pmax		
	comp=Z,100nm,7.0s						
ZEA	Zeya	60.86	359	eP	P	18 30 14.0	+0.1
ZEA				e		18 30 57.4	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZAK	Zakamensk	61.66	342	eP	P	18 30 19.1	-0.4
ZAK				e		18 30 58.3	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ	Urumqi	63.14	328	⇓P	P	18 30 30.3	+0.9
WMQ				PcP	PcP	18 30 59.5	-6.1
WMQ				pP	pwP	18 31 08.5	-2.0
WMQ				pmax	pmax		
	comp=Z,90nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
MOY	Mondy	63.50	341	eP	P	18 30 32.6	+0.9
MOY				pmax	pmax		
	comp=Z,28nm,1.5s						
KNGR	Kungurtug, Tuv	63.81	338	i P	P	18 30 34.2	+0.4
KNGR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PEA0B	Petropavlovsk-	64.96	19	P	P	18 30 42.1	+1.1
PEA0B	Petropavlovsk-	64.96	19	P	P	18 30 42.1	+1.1
PEA0B				pmax	pmax		
	comp=Z,53nm,0.8s						
PETK	Petropavlovsk-	64.96	19	P	P	18 30 41.6	+0.5
	comp=Z,43nm,0.8s,baz=198,slow=7.6,SNR=60						
PETK				PcP	PcP	18 31 12.3	-0.4
	comp=Z,4.5nm,0.5s,baz=209,slow=3.3,SNR=4.8						
PETK				LR	LR	18 54 58.2	
	comp=Z,21nm,21.9s,baz=207,slow=32						
	comp=Z,43nm,0.8s						
PETK	Petropavlovsk-	64.96	19	P	P	18 30 41.4	+0.3
PET	Petropavlovsk	65.19	19	P	P	18 30 42.9	+0.4
PET	Petropavlovsk	65.19	19	ceP	P	18 30 42.3	-0.2
PET				pmax	pmax		
	comp=Z,37nm,1.3s						
BOD	Bodaibo	66.07	351	eP	P	18 30 47.7	-0.4
BOD				pmax	pmax		
	comp=Z,22nm,1.4s						
NIL	Nilore	66.68	311	P	P	18 30 51.0	-1.6
NIL	Nilore	66.68	311	P	P	18 30 51.0	-1.6
NIL				pmax	pmax		
	comp=Z,81nm,0.7s						
PDGK	Podgornoye	67.46	323	P	P	18 30 57.2	-0.2
TARG	Taragay, Kyrgy	67.59	321	P	P	18 30 59.4	+0.8
TARG				IAmb	IAmb	18 31 08.8	
	comp=Z,18nm,0.7s						
TARG	Taragay, Kyrgy	67.59	321	P	P	18 30 59.4	+0.8
TARG				pmax	pmax		
	comp=Z,18nm,0.7s						
KSH	Kashi	67.59	318	P	P	18 30 59.5	+1.2
KSH				PcP	PcP	18 31 27.0	+2.7
KSH				pP	pP	18 31 36.8	+1.5
KSH				S	S	18 39 44.3	+1.7
KSH				pmax	pmax		
	comp=Z,24nm,0.8s						
PRZ	Przheval'sk	67.64	322	P	P	18 31 00.5	+1.9
PRZ	Przheval'sk	67.64	322	P	P	18 31 00.5	+1.9
PRZ				pmax	pmax		
	comp=Z,53nm,0.7s						
SATY	Saty	67.96	322	c iP	P	18 31 00.9	+0.4
SATY				pmax	pmax		
	comp=Z,34nm,0.7s						
SATY	Saty	67.96	322	⇑iP	P	18 31 00.9	+0.4
	comp=Z,34nm,0.7s,baz=322						
MK31	Makanchi Array	67.96	327	P	P	18 31 00.5	+0.1
MK31	Makanchi Array	67.96	327	⇑iP	P	18 31 00.6	+0.3
MKAR	Makanchi Array	67.96	327	P	P	18 31 01.3	+1.0
	comp=Z,60nm,0.6s,baz=125,slow=7.9,SNR=530						
	comp=Z,60nm,0.6s						
MKAR	Makanchi Array	67.96	327	P	P	18 31 00.3	0.0
ZHN	Zhinishke	68.00	322	eP	P	18 31 00.8	+0.1
ZHN	Zhinishke	68.00	322	eP	P	18 31 00.8	+0.1
	baz=322						
KPKS	Kokpek	68.02	323	c iP	P	18 31 01.2	+0.4
KPKS				pmax	pmax		
	comp=Z,19nm,0.5s						
KPKS	Kokpek	68.02	323	⇑iP	P	18 31 01.2	+0.4
	comp=Z,19nm,0.5s,baz=323						
MAKZ	Makanchi	68.14	327	P	P	18 31 01.1	-0.3
MAKZ	Makanchi	68.14	327	P	P	18 31 01.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,36nm,0.6s						
MAKZ	Makanchi	68.14	327	⇑P	P	18 31 01.3	-0.1
KDJ	Kajisay	68.20	321	P	P	18 31 02.0	-0.1
KDJ	Kajisay	68.20	321	P	P	18 31 02.0	-0.1
KDJ				pmax	pmax		
	comp=Z,43nm,0.7s						
TNSS	Tian-Shan	68.84	322	i P	P	18 31 07.0	+0.7
TNSS	Tian-Shan	68.84	322	i P	P	18 31 07.1	+0.7
	baz=322						
MDOK	Medeo	68.84	322	i P	P	18 31 06.7	+0.7
MDOK	Medeo	68.84	322	i P	P	18 31 06.7	+0.7
	baz=322						
ULHL	Ulahol	68.85	321	P	P	18 31 07.2	+1.0
	SNR=7.7						
MA2	Magadan	68.92	12	LR	LR	19 02 13.9	
	comp=Z,43nm,19.9s,baz=203,slow=37						
MA2	Magadan	68.92	12	P	P	18 31 06.4	+0.5
MA2				IAmb	IAmb	18 31 07.9	
	comp=Z,31nm,0.9s						
MA2	Magadan	68.92	12	P	P	18 31 06.4	+0.5
MA2				pmax	pmax		
	comp=Z,31nm,0.9s						
AAA	Alma-Ata	68.95	322	eP	P	18 31 07.1	+0.5
AAA				pmax	pmax		
	comp=Z,23nm,0.6s						
AAA	Alma-Ata	68.95	322	eP	P	18 31 07.1	+0.5
	comp=Z,22nm,0.6s,baz=322						
TDK	Taldyqorghan	69.06	324	c iP	P	18 31 07.5	+0.4
TDK				pmax	pmax		
	comp=Z,20nm,0.5s						
TDK	Taldyqorghan	69.06	324	⇑iP	P	18 31 07.5	+0.4
	comp=Z,20nm,0.5s,baz=324						
YAK	Yakutsk	69.16	0	P	P	18 31 07.4	+0.1
	comp=Z,70nm,0.7s,baz=198,slow=0.3,SNR=149						
	comp=Z,70nm,0.7s						
YAK	Yakutsk	69.16	0	P	P	18 31 06.9	-0.5
YAK	Yakutsk	69.16	0	c iP	P	18 31 07.4	+0.1
YAK				e		18 33 41.0	
YAK				ePPP	PPP	18 35 20.2	
YAK				eS	S	18 39 58.4	-1.5
YAK				e		18 40 49.8	
YAK				eSSS	SSS	18 47 31.2	
YAK				pmax	pmax		
	comp=Z,118nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,24nm,0.9s						
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				smax	smax		
	comp=N,77nm,1.5s						
YAK				smax	smax		
	comp=E,65nm,1.5s						
YAK	Yakutsk	69.16	0	⇑P	P	18 31 07.1	-0.3
BOOM	Boomskoye usch	69.17	321	P	P	18 31 08.6	+0.5
BOOM				IAmb	IAmb	18 31 10.8	
	comp=Z,33nm,0.7s						
BOOM	Boomskoye usch	69.17	321	P	P	18 31 08.6	+0.5
BOOM				pmax	pmax		
	comp=Z,33nm,0.7s						
CHKK	Chushkaly	69.26	322	⇑iP	P	18 31 08.3	-0.1
CHKK	Chushkaly	69.26	322	⇑iP	P	18 31 08.4	-0.1
	baz=322						
TKM2	Tokmak 2	69.61	321	P	P	18 31 11.4	+0.5
	SNR=74						
TKM2	Tokmak 2	69.61	321	P	P	18 31 11.0	+0.2
KUU	Kurty	69.67	322	c iP	P	18 31 11.3	+0.4
KUU	Kurty	69.67	322	⇑iP	P	18 31 11.3	+0.4
	baz=322						
KBK	Karagaybulak	69.88	321	P	P	18 31 13.4	+1.0
	SNR=22						
UCH	Uchtor	69.94	320	P	P	18 31 13.9	+0.8
	SNR=36						
AAK	Ala-Archa	70.16	320	P	P	18 31 15.1	+1.0
	SNR=22						
AAK	Ala-Archa	70.16	320	LR	LR	19 03 24.0	
	comp=Z,78nm,20.3s,baz=134,slow=37						
AAK	Ala-Archa	70.16	320	P	P	18 31 14.5	+0.4
AAK				IAmb	IAmb	18 31 16.6	
	comp=Z,19nm,0.8s						
AAK	Ala-Archa	70.16	320	ceP	P	18 31 15.0	+0.8
AAK				pmax	pmax		
	comp=Z,68nm,1.7s						
AAK	Ala-Archa	70.16	320	P	P	18 31 15.4	+1.3
AAK	Ala-Archa	70.16	320	i P	P	18 31 15.2	+1.0
	SNR=25						
AAK	Ala-Archa	70.16	320	⇑P	P	18 31 14.9	+0.8
AAK				pP	pP	18 31 52.1	+0.7
AAK				sP	sP	18 32 07.6	-0.4
CHMS	Chumysh	70.18	321	P	P	18 31 14.4	+0.3
	SNR=13						
CHMS	Chumysh	70.18	321	P	P	18 31 13.8	-0.3
KBL	Kabul	70.22	311	P	P	18 31 14.2	-0.5
KBL				IAmb	IAmb	18 31 15.9	
	comp=Z,30nm,0.9s						
KBL	Kabul	70.22	311	P	P	18 31 14.2	-0.5
KBL				pmax	pmax		
	comp=Z,30nm,0.9s						
KBL	Kabul	70.22	311	P	P	18 31 15.1	+0.3
	SNR=8.1						
DRK	Karamyk	70.39	316	P	P	18 31 16.7	+0.9
DRK				IAmb	IAmb	18 31 17.5	
	comp=Z,34nm,0.8s						
AML	Almayashu	70.41	320	P	P	18 31 16.6	+0.6
	SNR=48						
AML	Almayashu	70.41	320	P	P	18 31 17.3	+1.3
AML	Almayashu	70.41	320	i P	P	18 31 16.9	+0.9
	SNR=48						
USP	Ospenovka	70.48	321	P	P	18 31 16.5	+0.6
	SNR=44						
SGDS	Sogindy	70.49	321	c iP	P	18 31 16.2	+0.2
SGDS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SGDS	Sogindy	70.49	321	⇑iP	P	18 31 16.3	+0.2
	comp=Z,8.8nm,0.8s,baz=321						
EKS2	Erkin-Say	70.62	320	P	P	18 31 18.0	+1.1
	SNR=40						
SHEM	Shemya Is, Ala	71.03	27	LR	LR	19 02 13.7	
	comp=Z,12nm,18.3s,baz=133,slow=36						
GAR	Garm	71.20	315	P	P	18 31 20.4	-0.1
SEM	Semipalatinsk	71.27	329	ceP	P	18 31 20.2	-0.5
SEM				pmax	pmax		
	comp=Z,14nm,0.8s						
SEM	Semipalatinsk	71.27	329	⇑eP	P	18 31 20.2	-0.5
	comp=Z,14nm,0.8s,baz=329						
ZAA0	Zalesovo Array	71.44	334	P	P	18 31 20.8	-0.6
ZAA0				IAmb	IAmb	18 31 22.7	
	comp=Z,32nm,0.8s						
ZALV	Zalesovo Beam	71.44	334	P	P	18 31 21.1	-0.3
	comp=Z,33nm,0.7s,baz=126,slow=5.4,SNR=100						
	comp=Z,33nm,0.7s						
ZALV	Zalesovo Beam	71.44	334	P	P	18 31 21.0	-0.4
BTLS	Baital	71.67	322	c iP	P	18 31 23.2	+0.2
BTLS	Baital	71.67	322	⇑iP	P	18 31 23.3	+0.2
	baz=322						
CHGR	Chuyangaron	71.86	315	P	P	18 31 24.0	-0.4
CHGR	Chuyangaron	71.86	315	P	P	18 31 24.0	-0.4
CHGR				pmax	pmax		
	comp=Z,165nm,0.9s						
VNDA	Vanda	72.24	173	P	P	18 31 27.1	+1.3
	comp=Z,1.4nm,0.4s,baz=305,slow=5.0,SNR=14						
VNDA				LR	LR	19 03 09.5	
	comp=Z,67nm,19.0s,baz=335,slow=36						
	comp=Z,1.4nm,0.4s						
VNDA	Vanda	72.24	173	P	P	18 31 26.9	+1.1
KURBB	Kurchatov Arra	72.28	329	P	P	18 31 26.2	-0.2
KURK	Kurchatov	72.29	329	P	P	18 31 26.6	+0.1
KURK	Kurchatov	72.29	329	P	P	18 31 26.6	+0.1
KURK				pmax	pmax		
	comp=Z,62nm,0.7s						
SEY	Seymchan	72.32	11	LR	LR	19 02 57.4	
	comp=Z,35nm,20.1s,baz=210,slow=35						
SEY	Seymchan	72.32	11	ceP	P	18 31 27.4	+1.0
SEY				pmax	pmax		
	comp=Z,65nm,1.1s						
IUG	Iuzhnay	72.81	318	eP	P	18 31 30.8	+0.8
IUG	Iuzhnay	72.81	318	eP	P	18 31 30.8	+0.8
	baz=318						
KK31	Karatay Array	72.94	319	P	P	18 31 30.9	+0.3
KK31	Karatay Array	72.94	319	P	P	18 31 30.9	+0.3
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
KKAR	Karatay Array	72.94	319	P	P	18 31 31.1	+0.5
KKAR	Karatay Array	72.94	319	P	P	18 31 31.2	+0.7
KKAR				IAmb	IAmb	18 31 32.0	
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	72.94	319	P	P	18 31 31.1	+0.5
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
BRLS	Borolday	73.34	319	eP	P	18 31 33.0	+0.1
BRLS	Borolday	73.34	319	eP	P	18 31 33.1	+0.1
	baz=319						
JLN	Jalan Bani Buh	74.14	295	P	P	18 31 37.5	-0.5
MAW	Mawson	74.28	201	P	P	18 31 39.9	+2.0
	comp=Z,12nm,1.0s,baz=75,slow=8.9,SNR=14						
	comp=Z,12nm,1.0s						
MAW	Mawson	74.28	201	P	P	18 31 40.1	+2.2
	baz=74,SNR=11						
MAW	Mawson	74.28	201	P	P	18 31 39.4	+1.5
OTUK	Ortayu	74.33	325	P	P	18 31 39.0	+0.4
WBK	Wadi Bani Khal	74.65	296	P	P	18 31 41.0	0.0
BRZS	Berezniki	75.03	326	c iP	P	18 31 42.6	+0.1
BRZS				pmax	pmax		
	comp=Z,18nm,0.6s						
BRZS	Berezniki	75.03	326	⇑iP	P	18 31 42.7	+0.1
	comp=Z,18nm,0.6s,baz=326						
WSAR	Wadi Sarin	75.12	296	P	P	18 31 43.5	-0.1
MHTO	MHTO	75.15	294	P	P	18 31 43.2	-0.6
	SNR=7.4						
JMDO	Jabal Madar	75.37	295	P	P	18 31 44.9	-0.2
SMDO	Samad	75.59	296	P	P	18 31 46.0	-0.5
BIDO	Bidbid	75.64	296	P	P	18 31 46.8	+0.2
BSY	Bisya	76.27	295	P	P	18 31 49.1	-1.1
HOQ	Hoqain	76.38	296	P	P	18 31 51.2	+0.4
SHAO	Shalim	76.64	290	P	P	18 31 52.9	+0.6
ARQ	Araqi	77.02	296	P	P	18 31 55.2	+0.8
DMTO	DMTO	77.20	290	P	P	18 31 55.6	+0.1
UOSS	Minazif	77.69	297	P	P	18 31 57.6	-0.5
UOSS	Minazif	77.69	297	P	P	18 31 58.3	+0.2
UOSS	Minazif	77.69	297	P	P	18 31 58.1	+0.1
HATD	Hatta, Dubai	77.72	297	P	P	18 31 59.0	+0.8
HATD	Hatta, Dubai	77.72	297	P	P	18 31 58.7	+0.4
ASHO	Ashiyiah	77.75	297	P	P	18 31 59.1	+0.6
ASHO	Ashiyiah	77.75	297	P	P	18 31 58.8	+0.4
MSFE	Esma-Masafi	77.83	298	i P	P	18 31 59.7	+0.8
	SNR=7.4						
MASF	Masafi	77.83	298	P	P	18 31 59.6	+0.7
	SNR=7.3						
BANOM	Banah	77.84	298	P	P	18 31 59.6	+0.6
BANOM	Banah	77.84	298	i P	P	18 31 59.2	+0.3
	SNR=6.4						
ALNE	Al Ain	77.88	296	P	P	18 32 00.0	+0.9
BRVK	Borovoye	77.89	328	P	P	18 31 58.0	-0.6
BRVK				IAmb	IAmb	18 32 00.8	
	comp=Z,30nm,0.9s						
BRVK	Borovoye	77.89	328	P	P	18 31 58.0	-0.6
BRVK				pmax	pmax		
	comp=Z,30nm,0.9s						
SHME	Shamm	78.01	299	P	P	18 32 00.7	+0.8
	SNR=7.2						
SHME	Shamm	78.01	299	i P	P	18 32 00.3	+0.5
	SNR=7.1						
UMZA	Um Al Zommool	78.09	295	P	P	18 32 00.0	-0.3
DOK	Doka	78.15	291	P	P	18 31 59.9	-0.8
NAZ	Nazwa, Dubai	78.18	297	P	P	18 32 01.1	+0.3
NAZ	Nazwa, Dubai	78.18	297	P	P	18 32 01.1	+0.3
FAQ	Al Faqa, Dubai	78.18	297	P	P	18 32 01.0	+0.2
FAQ	Al Faqa, Dubai	78.18	297	i P	P	18 32 00.9	+0.1
	SNR=5.1						
WHFO	Wadi Hawf	78.34	290	P	P	18 32 00.9	-0.9
ASUD	Al Ashush, Dub	78.38	297	P	P	18 32 02.6	+0.7
ASUD	Al Ashush, Dub	78.38	297	i P	P	18 32 02.5	+0.6
	SNR=8.5						
ABTO	Aybut	78.67	289	P	P	18 32 01.2	-2.5
TIXI	Tiksi	78.82	360	P	P	18 32 02.9	-0.4
	comp=Z,35nm,0.5s,baz=124,slow=8.1,SNR=312						
	comp=Z,35nm,0.5s						
TIXI	Tiksi	78.82	360	P	P	18 32 01.9	-1.4
MZWR	Madinat Zayed	79.48	296	P	P	18 32 08.1	+0.2
BILL	Bilibino	79.67	13	⇑eP	P	18 32 08.2	+0.3
BILL				e*PP	pwP	18 32 48.4	-0.9
BILL				e		18 35 18.0	
BILL				eS	sS	18 43 00.4	-1.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MZR	Muzera	79.67	295	P	P	18 32 09.6	+0.6
MZR	Muzera	79.67	295	i P	P	18 32 09.0	0.0
	SNR=11						
GEYT	Alibeck	79.67	311	P	P	18 32 09.0	+0.3
	comp=Z,10nm,0.8s,baz=159,slow=4.6,SNR=15						
GEYT				LR	LR	19 14 10.9	
	comp=Z,55nm,19.3s,baz=162,slow=41						
	comp=Z,10nm,0.8s						
GEYT	Alibeck	79.67	311	P	P	18 32 08.8	+0.1
NIKH	Nikolski High	79.68	33	P	P	18 32 08.6	+0.3
	baz=243						
OPO	Ambohidratompo	79.96	252	LR	LR	19 03 11.2	
	comp=Z,147nm,18.3s,baz=160,slow=32						
VOI	Vohitsoka	80.09	249	P	P	18 32 11.5	0.0
VOI				IAmb	IAmb	18 32 12.9	
	comp=Z,22nm,0.8s						
VOI	Vohitsoka	80.09	249	P	P	18 32 14.1	+2.7
GHWR	Ruwais	80.42	296	P	P	18 32 13.4	+0.5
JRN	Qarnain Island	80.65	297	P	P	18 32 14.4	+0.2
SPIA	Saint Paul Isl	80.94	29	P	P	18 32 16.3	+1.4
	baz=241						
UNV	Unalaska Valle	81.32	33	P	P	18 32 16.9	-0.1
UNV				IAmb	IAmb	18 32 19.0	
	comp=Z,20nm,0.7s						
UNV	Unalaska Valle	81.32	33	P	P	18 32 17.6	+0.6
	baz=245						
SLWR	Sila	81.50	296	P	P	18 32 19.1	+0.5
NRIK	Noril'sk	81.64	346	P	P	18 32 18.8	+0.4
	comp=Z,18nm,0.8s,baz=134,slow=5.2,SNR=23						
	comp=Z,18nm,0.8s						
NRIK	Noril'sk	81.64	346	ceP	P	18 32 18.9	+0.5
NRIK				pmax	pmax		
	comp=Z,40nm,1.3s						
AB31	Akbulak array	82.15	322	i P	P	18 32 20.9	-0.6
ABKAR	Akbulak array	82.15	322	P	P	18 32 20.9	-0.6
ABKAR	Akbulak array	82.15	322	P	P	18 32 21.3	-0.2
ABKAR				IAmb	IAmb	18 32 23.4	
	comp=Z,19nm,0.6s						
SMRA	Abu-Samra	82.41	296	P	P	18 32 23.7	+0.3
SHMA	Al-Shehemyia	82.51	297	P	P	18 32 23.9	0.0
QSPA	South Pole Qui	82.64	180	P	P	18 32 24.9	+0.9
SAKB	Bahrain	82.91	297	P	P	18 32 25.7	-0.3
FALS	False Pass	83.39	33	P	P	18 32 28.3	+0.6
	baz=248						
GAMB	Gambell	83.61	23	P	P	18 32 29.5	+0.8
GAMB				IAmb	IAmb	18 32 30.8	
	comp=Z,26nm,0.9s						
GAMB	Gambell	83.61	23	P	P	18 32 29.9	+1.3
	baz=239						
AKTO	Aktyubinsk	83.73	323	P	P	18 32 29.8	+0.2
	comp=Z,22nm,0.8s,baz=102,slow=8.0,SNR=8.9						
AKTO				LR	LR	19 14 40.6	
	comp=Z,27nm,19.4s,baz=128,slow=39						
	comp=Z,22nm,0.8s						
SVE	Sverdlovsk	84.54	329	deP	P	18 32 33.6	+0.1
SVE				pmax	pmax		
	comp=Z,63nm,1.1s						
SDPT	Sand Point	85.14	33	P	P	18 32 37.0	+0.5
SDPT	Sand Point	85.14	33	P	P	18 32 37.0	+0.5
	baz=250						
CHNA	Chernabura Isl	85.44	33	P	P	18 32 38.5	+0.4
	baz=251						
ARU	Arti	85.46	328	P	P	18 32 37.5	-0.7
	comp=Z,14nm,0.8s,baz=110,slow=2.2,SNR=34						
	comp=Z,14nm,0.8s						
ARU	Arti	85.46	328	P	P	18 32 37.4	-0.7
ARU				IAmb	IAmb	18 32 40.1	
	comp=Z,33nm,0.8s						
ARU	Arti	85.46	328	c iP	P	18 32 37.7	-0.5
ARU				*PP	pP	18 33 16.9	+0.2
ARU						18 35 54.4	
ARU				S	S	18 42 46.9	-9.0
ARU				SS	SS	18 48 32.5	-2.6
ARU				pmax	pmax		
	comp=Z,40nm,0.8s						

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TNA   Tin City           85.90  22   P        P        18 32 40.4 +0.3
TNA   Tin City           85.90  22   P        P        18 32 40.5 +0.4
      baz=243
ANM   Nome               86.43  23   P        P        18 32 43.5 +0.8
      baz=245
RAYN  Ar Rayn            86.97 294   P        P        18 32 46.0 -0.3
RAYN  Ar Rayn            86.97 294   P        P        18 32 46.1 -0.3
RAYN                                 pmax     pmax
      comp=Z,46nm,0.8s
RAYN  Ar Rayn            86.97 294   P        P        18 32 46.7 +0.3
RAYN  Ar Rayn            86.97 294 i P        P        18 32 46.5 +0.2
      SNR=58
P16K  Nushagak River     87.64  30   P        P        18 32 49.4 +0.8
      baz=252
N16K  Nishlik Lake       87.72  28   P        P        18 32 50.6 +1.5
      baz=251
O16K  Kokwok River B     87.76  29   P        P        18 32 50.1 +0.9
      baz=252
SII   Sitkinak Islan     88.88  33   P        P        18 32 55.8 +1.2
      baz=255
N18K  Kilae Creek        89.14  28   P        P        18 32 57.3 +1.5
      baz=254
SVW2  Sparrevohn         89.41  28   P        P        18 32 58.4 +1.4
OHAK  Old Harbor         89.52  32   P        P        18 32 58.3 +0.8
      baz=256
TTA   Tatalina           89.73  26   P        P        18 32 58.8 +0.3
TTA   Tatalina           89.73  26   P        P        18 32 58.8 +0.3
TTA                                  pmax     pmax
      comp=Z,7.0nm,0.8s
TTA   Tatalina           89.73  26   P        P        18 32 59.0 +0.5
      baz=253
N19K  Bonanza Creek      89.84  28   P        P        18 32 60.0 +0.9
N19K                                 IAmb     IAmb     18 33 01.8
      comp=Z,13nm,0.9s
N19K  Bonanza Creek      89.84  28   P        P        18 32 59.8 +0.7
      baz=255,SNR=9.2
GCSA  Galena City Sc     89.90  24   P        P        18 32 59.9 +0.8
      baz=253
KDAK  Kodiak Island      90.03  32   P        P        18 33 00.5 +0.7
      comp=Z,5.7nm,0.7s,baz=241,slow=10,SNR=8.6
      comp=Z,5.7nm,0.7s
L19K  White Mountain     90.04  27   P        P        18 33 00.5 +0.6
L19K  White Mountain     90.04  27   P        P        18 33 00.8 +0.9
      baz=254
M19K  Big River Lodg     90.17  27   P        P        18 33 01.8 +1.2
M19K  Big River Lodg     90.17  27   P        P        18 33 01.6 +1.1
      baz=255
BELG  Belogornoye        90.52 323   P        P        18 33 01.5 -0.8
      comp=Z,17nm,0.9s,baz=163,slow=1.8,SNR=6.0
      comp=Z,17nm,0.9s
L20K  Farewell, AK       90.55  27   P        P        18 33 03.1 +0.8
      baz=255,SNR=7.2
K20K  Telida             90.70  26   P        P        18 33 03.4 +0.4
K20K                                 IAmb     IAmb     18 33 04.5
      comp=Z,9.4nm,0.7s
K20K  Telida             90.70  26   P        P        18 33 03.6 +0.7
      baz=255,SNR=12
M20K  Styx River         90.75  28   P        P        18 33 04.4 +1.1
M20K  Styx River         90.75  28   P        P        18 33 03.4 +0.2
      baz=256
KIRV  Kirov              90.81 329   P        P        18 33 02.3 -1.1
      comp=Z,9.4nm,0.8s,baz=105,slow=5.9,SNR=5.4
      comp=Z,9.4nm,0.8s
J20K  Nowinta River      90.88  25   P        P        18 33 04.2 +0.5
J20K                                 IAmb     IAmb     18 33 06.1
      comp=Z,8.5nm,0.8s
J20K  Nowinta River      90.88  25   P        P        18 33 04.3 +0.6
      baz=255,SNR=16
GEVA  Gevas              91.32 308   P        P        18 33 06.5 -0.2
GEVA                                 IAmb     IAmb     18 33 11.7
      comp=Z,16nm,0.9s
ZEI   Tsey               91.34 313 eP       P        18 33 06.4 -0.2
ZEI                                  pmax     pmax
      comp=Z,9.0nm,0.9s
PPLA  Purkeypile         91.41  27   P        P        18 33 06.0 -0.5
PPLA                                 IAmb     IAmb     18 33 07.3
      comp=Z,21nm,1.3s
PPLA  Purkeypile         91.41  27   P        P        18 33 06.3 -0.1
      baz=257,SNR=6.0
IMAR  Indian Mountai     91.50  24   P        P        18 33 06.5  0.0
CHUM  Lake Minchumin     91.58  26   P        P        18 33 08.0 +1.0
      baz=257
KMBO  Kilima Mbogo       91.58 269   P        P        18 33 09.2 +0.7
      comp=Z,6.5nm,0.9s,baz=39,slow=6.7,SNR=11
KMBO                                 PKiKP    PKiKP    18 37 59.0 -0.3
      comp=Z,1.1nm,0.5s,baz=119,slow=6.7,SNR=3.6
      comp=Z,6.5nm,0.9s
KMBO  Kilima Mbogo       91.58 269   P        P        18 33 08.3 -0.2
KMBO  Kilima Mbogo       91.58 269 i P        P        18 33 09.3 +0.8
      SNR=7.6
H21K  Melozitna Rive     91.80  24   P        P        18 33 07.0 -1.0
H21K  Melozitna Rive     91.80  24   P        P        18 33 08.1 +0.1
      baz=256
RC01  Rabbit Creek A     92.16  29   P        P        18 33 09.0 -0.7
RC01                                 IAmb     IAmb     18 33 12.0
      comp=Z,7.8nm,0.8s
RC01  Rabbit Creek A     92.16  29   P        P        18 33 09.4 -0.3
      baz=259
KBZ   Khabaz             92.20 314   P        P        18 33 10.6 +0.3
      comp=Z,4.2nm,0.9s,baz=167,slow=4.5,SNR=6.4
      comp=Z,4.2nm,0.9s
BPAW  Bear Paw Mtn.      92.20  26   P        P        18 33 08.7 -1.2
BPAW  Bear Paw Mtn.      92.20  26   P        P        18 33 09.6 -0.3
      baz=258
TRF   Thorofare Moun     92.37  26   P        P        18 33 09.2 -1.7
TRF   Thorofare Moun     92.37  26   P        P        18 33 10.2 -0.6
      baz=259,SNR=6.7
KIV   Kislovodsk         92.38 314 eP       P        18 33 09.7 -1.6
KIV                                  pmax     pmax
      comp=Z,5.0nm,1.0s
MLY   Manley             92.50  25   P        P        18 33 10.4 -1.0
MLY                                  IAmb     IAmb     18 33 12.8
      comp=Z,9.3nm,0.7s
MLY   Manley             92.50  25   P        P        18 33 11.3  0.0
      baz=258,SNR=17
SML   Sawmill            92.96  28   P        P        18 33 13.5  0.0
      baz=260,SNR=6.1
RND   Reindeer           93.00  27   P        P        18 33 12.3 -1.4
RND   Reindeer           93.00  27   P        P        18 33 12.3 -1.4
RND                                  pmax     pmax
      comp=Z,28nm,0.7s
MCK   McKinley           93.02  26   P        P        18 33 13.1 -0.6
      baz=260,SNR=6.9
WAT1  Susitna Watana     93.03  27   P        P        18 33 13.4 -0.4
      baz=260
I23K  Minto, Yukon-K     93.10  25   P        P        18 33 13.8 -0.1
I23K  Minto, Yukon-K     93.10  25   P        P        18 33 14.1 +0.2
      baz=260,SNR=13
NEA2  Nenana             93.12  25   P        P        18 33 14.1  0.0
      baz=260,SNR=5.9
H23K  Yukon River        93.15  24   P        P        18 33 14.3 +0.1
H23K                                 IAmb     IAmb     18 33 15.4
      comp=Z,8.7nm,0.8s
H23K  Yukon River        93.15  24   P        P        18 33 14.4 +0.1
      baz=259,SNR=13
COLD  Coldfoot           93.16  23   P        P        18 33 14.0 -0.2
COLD                                 IAmb     IAmb     18 33 15.4
      comp=Z,8.6nm,1.0s
COLD  Coldfoot           93.16  23   P        P        18 33 14.6 +0.4
      baz=259
M23K  Glacier View       93.24  28   P        P        18 33 14.7  0.0
      baz=261
PRGR  Permogore          93.25 332 eP       P        18 33 11.5 -3.2
PRGR                               e*PP     pP       18 33 52.4 -1.2
WAT6  Susitna Watana     93.36  27   P        P        18 33 15.0 -0.4
      baz=261,SNR=5.1
SCM   Sheep Creek Mo     93.43  28   P        P        18 33 16.1 +0.4
      baz=261,SNR=5.4
WRH   Wood River Hil     93.52  26   P        P        18 33 14.3 -1.6
WRH                                  IAmb     IAmb     18 33 15.9
      comp=Z,14nm,0.8s
TROLL Troll, Antarti     93.59 195   P        P        18 33 18.0 +1.6
DHY   Denali Highway     93.60  27   P        P        18 33 16.6  0.0
DHY                                  IAmb     IAmb     18 33 17.3
      comp=Z,15nm,0.8s
DHY   Denali Highway     93.60  27   P        P        18 33 16.7 +0.2
      baz=261,SNR=22
TOLK  Toolik Lake Re     93.66  21   P        P        18 33 17.0 +0.5
      baz=260
H24K  Noodor Dome        93.83  24   P        P        18 33 17.6 +0.2
H24K                                 IAmb     IAmb     18 33 18.5
      comp=Z,12nm,0.8s
H24K  Noodor Dome        93.83  24   P        P        18 33 17.8 +0.4
      baz=261,SNR=21
HDA   Harding Lake       94.00  26   P        P        18 33 16.4 -1.7
HDA                                  IAmb     IAmb     18 33 18.5
      comp=Z,9.1nm,0.8s
HDA   Harding Lake       94.00  26   P        P        18 33 17.0 -1.1
      baz=262,SNR=12
M24K  Tolsona, Glenn     94.01  28   P        P        18 33 19.3 +0.9
      baz=262
IL31                     94.07  25   P        P        18 33 17.2 -1.2
ILAR  Eielson Array      94.07  25   P        P        18 33 16.9 -1.6
      comp=Z,4.0nm,0.8s,baz=270,slow=4.4,SNR=38
ILAR                                 PP       PP       18 37 03.1 -3.8
      comp=Z,0.9nm,0.9s,baz=246,slow=6.6,SNR=5.6
ILAR                                 PKKP     PKKPdf   18 50 20.7 -0.7
      comp=Z,1.0nm,0.8s,baz=37,slow=2.5,SNR=8.6
ILAR                                 LR       LR       19 10 21.5
      comp=Z,11nm,20.8s,baz=289,slow=32
      comp=Z,4.0nm,0.8s
ILAR  Eielson Array      94.07  25   P        P        18 33 16.6 -1.9
K24K  Donnelly Dome      94.42  26   P        P        18 33 20.2  0.0
      baz=263,SNR=6.6
BELA  Belgrano 2         94.43 183   P        P        18 33 20.3 +0.3
BELA                                 IAmb     IAmb     18 33 21.5
      comp=Z,10nm,1.1s
PAX   Paxson             94.45  27   P        P        18 33 19.8 -0.6
PAX                                  IAmb     IAmb     18 33 21.9
      comp=Z,9.8nm,0.9s
PAX   Paxson             94.45  27   P        P        18 33 19.8 -0.6
PAX   Paxson             94.45  27   P        P        18 33 20.5 +0.1
      baz=263,SNR=9.2
HARP  HAARP              94.52  28   P        P        18 33 20.8 +0.2
      baz=263
BMRM  Bremner River      94.61  29   P        P        18 33 21.2 +0.1
      baz=263
N25K  Chitina, Valde     94.69  29   P        P        18 33 21.9 +0.4
      baz=264
J25K  Salcha River,      94.70  26   P        P        18 33 19.8 -1.6
J25K  Salcha River,      94.70  26   P        P        18 33 20.1 -1.3
      baz=263,SNR=8.1
RIDG  Independent Ri     94.82  26   P        P        18 33 21.8 -0.2
      baz=263,SNR=14
SNAA  Sanae              95.11 194   P        P        18 33 24.4 +1.2
SNAA  Sanae              95.11 194   P        P        18 33 24.2 +1.0
SNAA                                 IAmb     IAmb     18 33 25.7
      comp=Z,12nm,1.2s
SNAA  Sanae              95.11 194ceP       P        18 33 25.4 +2.2
SNAA                                 pmax     pmax
      comp=Z,19nm,2.5s
DOT   Dot Lake           95.16  27   P        P        18 33 21.3 -2.2
DOT                                  IAmb     IAmb     18 33 24.2
      comp=Z,10.0nm,0.8s
SCRK  Sand Creek         95.23  26   P        P        18 33 22.5 -1.4
SCRK  Sand Creek         95.23  26   P        P        18 33 23.8 -0.1
      baz=264,SNR=7.5
BMAR  Burnt Mountain     95.34  23   P        P        18 33 24.9 +0.6
L26K  Log Cabin Wild     95.42  27   P        P        18 33 24.9 +0.2
L26K                                 IAmb     IAmb     18 33 25.8
      comp=Z,5.0nm,0.7s
L26K  Log Cabin Wild     95.42  27   P        P        18 33 25.2 +0.5
      baz=265,SNR=6.6
J26L  Joseph Creek       95.46  26   P        P        18 33 24.8 -0.1
J26L                                 IAmb     IAmb     18 33 25.7
      comp=Z,12nm,0.8s
J26L  Joseph Creek       95.46  26   P        P        18 33 25.1 +0.2
      baz=265,SNR=20
VORR  Voronezh           95.56 321 eP       P        18 33 24.4 -1.1
VORR                                 pmax     pmax
      comp=Z,50nm,0.4s
K27K  Chicken            96.07  26   P        P        18 33 28.2 +0.6
K27K  Chicken            96.07  26   P        P        18 33 28.9 +1.3
      baz=266
KLMR  Klimovskoe         96.09 331 eP       P        18 33 24.3 -3.4
KLMR                               e                 18 37 17.0
KLMR                                 pmax     pmax
      comp=Z,8.0nm,0.8s
KLMR  Klimovskoe         96.09 331 eP       P        18 33 24.4 -3.3
KLMR                                 AMP               18 33 28.0
      comp=Z,8.0nm,0.8s
KLMR                               ePP      PP       18 37 17.0 -5.6
L27K  Beaver Creek,      96.11  27   P        P        18 33 28.4 +0.6
L27K                                 IAmb     IAmb     18 33 29.3
      comp=Z,11nm,0.8s
L27K  Beaver Creek,      96.11  27   P        P        18 33 28.7 +0.8
      baz=266
BCAR  Beaver Creek A     96.13  27   P        P        18 33 28.4 +0.5
EGAK  Eagle              96.52  26   P        P        18 33 29.7 +0.1
      baz=267
VNA2  Neumayer--Watz     96.68 193   P        P        18 33 31.6 +1.2
      baz=215,slow=4.6
VNA3  Neumayer Olymp     96.94 192   P        P        18 33 32.7 +1.1
DAWY  Dawson             97.25  26   P        Pdif     18 33 33.4 +0.3
      baz=268,SNR=10
I29M  Ogilvie Camp,      97.74  25   P        Pdif     18 33 35.3 +0.1
      baz=270
MBAR  Mbarara            98.11 268ceP       Pdif     18 33 39.0 +0.8
MBAR                                 pmax     pmax
      comp=Z,4.0nm,1.7s
N30M  Aishikik Lake      98.27  29   P        Pdif     18 33 37.8 +0.1
      baz=270
M30M  Minto, Yukon       98.41  28   P        Pdif     18 33 39.0 +0.8
      baz=270
BOSA  Boshof             98.43 240   P        Pdif     18 33 40.0 +0.7
      comp=Z,1.5nm,0.6s,baz=97,slow=5.0,SNR=7.4
      comp=Z,1.5nm,0.6s
BOSA  Boshof             98.43 240   P        Pdif     18 33 40.0 +0.7
BRTR  Keskin Array B     98.75 309   P        P        18 33 39.5 -1.0
      comp=Z,0.9nm,0.6s,baz=116,slow=3.1,SNR=6.1
BRTR                                 PP       PP       18 37 42.5 -1.3
      comp=Z,1.0nm,0.8s,baz=114,slow=7.0,SNR=4.1
      comp=Z,0.9nm,0.6s
BRTR  Keskin Array B     98.75 309 i P        Pdif     18 33 43.4 +3.0
BRTR                                 pmax     pmax
      comp=Z,1.0nm,0.6s
WHY   Whitehorse         99.35  30   P        Pdif     18 33 42.9 +0.3
      baz=272
INK   Inuvik             99.54  22   P        Pdif     18 33 42.0 -1.0
      comp=Z,1.9nm,0.8s,baz=274,slow=6.5,SNR=3.8
INK                                  LR       LR       19 13 54.4
      comp=Z,20nm,21.9s,baz=162,slow=32
      comp=Z,1.9nm,0.8s
INK   Inuvik             99.54  22   P        Pdif     18 33 42.8 -0.2
      baz=274
ARCES ARCESS Array B    101.54 340   P        Pdif     18 33 51.0 -1.0
      comp=Z,2.4nm,0.6s,baz=70,slow=3.9,SNR=15
ARCES                                PKiKP    PKiKP    18 38 15.8 +0.8
      comp=Z,1.6nm,0.8s,baz=100,slow=1.0,SNR=5.6
ARCES                                PKKPbc   PKKPbc   18 49 59.8 -2.4
      comp=Z,0.8nm,0.4s,baz=254,slow=2.7,SNR=16
ARCES ARCESS Array B    101.54 340   P        Pdif     18 33 51.0 -1.0
AKASG Malin Array Be    101.83 320   P        Pdif     18 33 52.3 -1.3
      comp=Z,1.8nm,0.5s,baz=65,slow=5.7,SNR=7.7
MNK   Minsk             102.39 324 i P        Pdif     18 33 53.8 -2.2
MNK                                i                   18 38 08.3
MNK                                i PPP      PPP      18 40 20.5
MNK                                i S        SKSac    18 44 17.8 -2.5
MNK                                i *SS      Sdif     18 45 32.0 +6.0
MNK                                i SS       SS       18 52 34.7 -1.1
MNK                                i SSS      SSS      18 56 29.7
MNK                                  pmax     pmax
      comp=E,2.0nm,1.3s
MNK                                  pmax     pmax
      comp=Z,11nm,0.8s
MNK                                  pmax     pmax
      comp=N,10.0nm,1.3s
MNK                                  MLR      MLR
      comp=N,53nm,23.0s
MNK                                  MLR      MLR
      comp=Z,125nm,27.0s
MNK                                  MLR      MLR
      comp=E,7.0nm,23.0s
MNK   Minsk             102.39 324 i P        Pdif     18 33 53.9 -2.2
      comp=E,2.0nm,1.3s
MNK                                i P        Pdif     18 33 53.9 -2.2
      comp=N,10.0nm,1.3s
MNK                                i P        Pdif     18 33 53.9 -2.2
      comp=Z,11nm,0.8s,baz=85
MNK                                i pP       pPdif    18 34 34.5 -0.9
MNK                                i PP       PP       18 38 08.3 -2.2
MNK                                i PPP      PPP      18 40 20.6
MNK                                i S        SKSac    18 44 17.9 -2.5
MNK                                i sS       Sdif     18 45 32.0 +6.0
MNK                                i SS       SS       18 52 34.8 -1.1
MNK                                i SSS      SSS      18 56 29.7
MNK                                i LRM      MLR      19 20 45.8
      comp=N,53nm,23.0s
MNK                                i LRM      MLR      19 20 58.0
      comp=Z,125nm,27.5s
MNK                                i LRM      MLR      19 21 36.9
      comp=E,7.0nm,23.0s
FINES FINESS Array B    102.58 331   P        Pdif     18 33 55.0 -1.7
      comp=E,0.7nm,0.6s,baz=64,slow=4.4,SNR=7.3
FINES                                PKiKP    PKiKP    18 38 18.6 +1.7
      comp=E,2.1nm,0.7s,baz=114,slow=3.4,SNR=3.8
YKA   Yellowknife Ar    108.49  26   PKiKP    PKiKP    18 38 27.5 -0.4
      comp=E,1.7nm,0.7s,baz=298,slow=1.9,SNR=5.9
YKA                                  PKKPbc   PKKPbc   18 49 37.5 -3.4
      comp=E,1.7nm,0.7s,baz=116,slow=3.6,SNR=5.0
MAUC  Maruska           109.28 320 ePKP     PKiKP    18 38 31.0 +1.2
MORC  Moravsky Berou    109.38 320 ePKIKP   PKiKP    18 38 31.0 +1.0
MORC                               e                   18 39 05.1
JAVC  Velka Javorina    109.48 319 ePKIKP   PKiKP    18 38 31.8 +1.6
JAVC                               e                   18 39 06.3
NB2   NORSAR Subarra    109.62 333   PKPdf    PKiKP    18 38 30.2 +0.1
      comp=Z,1.0nm,0.8s,baz=68,slow=1.9
NOA   NORSAR Array B    109.62 333   PKiKP    PKiKP    18 38 30.5 +0.4
      comp=Z,1.5nm,0.8s,baz=270,slow=3.2,SNR=8.6
KRLC  Kraliky           109.79 321 ePKP     PKiKP    18 38 31.6 +0.8
DPC   Dobruska-Polom    110.02 321 ePKP     PKiKP    18 38 31.2  0.0
OSTC  Ostas             110.04 321 ePKP     PKiKP    18 38 32.0 +0.8
VRAC  Vranov            110.08 320   PKiKP    PKiKP    18 38 31.0 -0.3
      comp=Z,1.2nm,0.4s,baz=98,slow=7.1,SNR=4.3
VRAC  Vranov            110.08 320 ePKIKP   PKiKP    18 38 31.2 -0.1
VRAC                               e                   18 39 11.4
UPC   Upice             110.18 321 ePKP     PKiKP    18 38 32.5 +1.1
KRUC  Moravsky          110.26 320 ePKIKP   PKiKP    18 38 32.0 +0.4
KRUC                               e                   18 39 11.9
RONA  Rosalia, Austr    110.61 318 eP       PKiKP    18 38 33.2 +0.8
TREC  Trest             110.79 320 ePKIKP   PKiKP    18 38 29.4 -3.3
TREC  Trest             110.79 320 ePKP     PKiKP    18 38 29.4 -3.3
PVCC  Panska Ves        111.06 321 ePKIKP   PKiKP    18 38 34.0 +0.9
PVCC  Panska Ves        111.06 321 ePKP     PKiKP    18 38 34.0 +0.9
PRU   Pruhonice         111.22 321 ePKIKP   PKiKP    18 38 33.6 +0.2
PRU   Pruhonice         111.22 321 ePKP     PKiKP    18 38 33.6 +0.2
CKRC  Cesky Krumlov     111.65 320 ePKP     PKiKP    18 38 34.7 +0.4
SOKA  Soboth            111.68 317 eP       PKiKP    18 38 34.5  0.0
      comp=Z,2.4nm,1.1s
CLL   Collm             111.81 323 i PKiKP    PKiKP    18 38 34.6 +0.1
      comp=Z,5.0nm,0.8s
CLL                                ePP      PP       18 39 21.0 +1.6
CLL                                  Lm       MLR      21 33 00.0
      comp=Z,100nm,21.2s
MOA   Molln             111.92 319 eP       PKiKP    18 38 35.1 +0.3
      comp=Z,2.1nm,0.9s
GERES GERESS Array B    112.03 320   PKiKP    PKiKP    18 38 35.5 +0.4
      comp=Z,3.3nm,0.6s,baz=76,slow=2.0,SNR=28
OBKA  Obir              112.04 317 eP       PKiKP    18 38 35.6 +0.4
      comp=Z,4.5nm,1.1s
KHC   Kasperske Hory    112.04 320 ePKIKP   PKiKP    18 38 35.6 +0.5
KHC   Kasperske Hory    112.04 320 ePKP     PKiKP    18 38 35.6 +0.5
NVAR  Mina Array Bea    112.28  52   PKiKP    PKiKP    18 38 37.7 +1.6
      comp=Z,0.8nm,0.8s,baz=260,slow=3.8,SNR=6.1
NVAR                                 PKKPbc   PKKPbc   18 49 26.7 -1.3
      comp=Z,0.4nm,0.6s,baz=107,slow=5.9,SNR=5.2
CWC   Cottonwood Cre    112.74  54   P        PKiKP    18 38 38.3 +1.3
      baz=278
EDW2  Edwards Air Fo    113.02  55   P        PKiKP    18 38 39.3 +1.9
      baz=277
ABTA  Abfaltersbach     113.34 318 eP       PKiKP    18 38 37.6 -0.1
      comp=Z,3.5nm,0.5s,SNR=6.7
WTTA  Wattenberg        113.79 319 eP       PKiKP    18 38 39.0 +0.4
      comp=Z,13nm,0.5s,SNR=16
WATA  Walderalm         113.81 319 eP       PKiKP    18 38 38.8 +0.1
      comp=Z,3.9nm,0.5s
GSC   Goldstone, Bar    113.93  55   P        PKiKP    18 38 41.0 +1.9
      baz=278
SQTA  Sankt Quirin      114.08 319 eP       PKiKP    18 38 39.2 +0.1
      comp=Z,2.3nm,0.7s
MOTA  Moosalm           114.11 319 eP       PKiKP    18 38 39.3 +0.1
      comp=Z,5.5nm,0.5s,SNR=6.9
HLID  Hailey            114.20  45   P        PKiKP    18 38 41.4 +1.9
      baz=284,SNR=13
R11A  Troy Canyon, C    114.40  51   P        PKiKP    18 38 41.6 +1.5
      baz=280
PFO   Pinyon Flats O    114.44  56   P        PKiKP    18 38 41.9 +1.7
      baz=278
FETA  Feichten          114.45 319 eP       PKiKP    18 38 40.2 +0.3
      comp=Z,2.6nm,0.6s
BELC  Belle Mtn. Jos    114.77  56   P        PKiKP    18 38 42.6 +1.7
      baz=278,SNR=5.7
DAVA  Damuels           114.93 319 eP       PKPdf    18 38 41.2 +0.3
      comp=Z,4.3nm,0.5s,SNR=5.9
GMRC  Granite Mounta    114.93  55   P        PKPdf    18 38 43.2 +2.0
      baz=279
DAVOX Davos/Dischmat    115.08 318   PKP      PKPdf    18 38 41.3 +0.2
      comp=Z,3.9nm,0.5s,baz=211,slow=2.3,SNR=12
BC3   Big Chuckawall    115.27  56   P        PKPdf    18 38 43.2 +1.4
      baz=278
IRM   Iron Mountain     115.45  56   P        PKiKP    18 38 44.0 +2.0
      baz=279
BOZ   Bozeman (W)       115.59  43   P        PKPdf    18 38 43.4 +1.3
      baz=287
EGMT  Eagleton          116.07  40   P        PKiKP    18 38 43.8 +0.9
      baz=289
DUG   Dugway, Tooele    116.14  49   P        PKiKP    18 38 44.7 +1.3
      baz=283
RLMT  Red Lodge         117.32  43   P        PKiKP    18 38 47.0 +1.4
      baz=288
HOPE  Hope Point        117.41 190 i PKIKP    PKPdf    18 38 42.9 -2.2
BW06  Boulder Array     117.83  45   P        PKiKP    18 38 47.5 +0.8
      baz=287
PDAR  Pinedale Array    117.83  45   PKP      PKiKP    18 38 47.5 +0.9
      comp=Z,2.1nm,0.7s,baz=243,slow=1.0,SNR=22
PDAR                                 PKKPbc   PKKPbc   18 49 08.8 -0.3
      comp=Z,0.8nm,0.8s,baz=119,slow=6.0,SNR=5.5
PDAR  Pinedale Array    117.83  45   PKPdf    PKiKP    18 38 47.3 +0.6
KEST  Kesra             118.23 307   PKP      PKiKP    18 38 48.2 +0.8
      comp=Z,4.8nm,0.5s,baz=288,slow=1.1,SNR=11
KEST  Kesra             118.23 307            PKiKP    18 38 48.1 +0.7
WUAZ  Wupatki           118.26  54   P        PKiKP    18 38 49.1 +1.5
      baz=282
LAO   LASA Array        118.79  40   P        PKiKP    18 38 48.8 +0.6
      baz=292
LAO   LASA Array        118.79  40   P        PKiKP    18 38 49.6 +1.4
      baz=292,SNR=5.2
EKA   Eskdalemuir Ar    118.98 331   PKP      PKiKP    18 38 48.7 +0.5
      comp=Z,2.2nm,0.5s,baz=28,slow=2.7,SNR=30
TUC   Tucson            119.36  57   P        PKiKP    18 38 51.6 +1.8
      baz=281
O20A  White River Ci    119.54  48   P        PKiKP    18 38 51.5 +1.5
      baz=287
K22A  Casper            120.00  45   P        PKiKP    18 38 51.4 +0.6
      baz=289
MVCO  Mesa Verde        120.13  51   P        PKiKP    18 38 53.0 +1.7
      baz=285,SNR=5.3
N23A  Red Feather La    120.98  46   P        PKiKP    18 38 53.7 +0.8
      baz=289
RSSD  Black Hills       121.17  42   P        PKiKP    18 38 53.2 +0.1
      baz=292
RSSD  Black Hills       121.17  42   P        PKiKP    18 38 53.5 +0.3
      baz=292
S22A  4UR Ranch, Cre    121.27  50   P        PKiKP    18 38 55.7 +2.1
      baz=286,SNR=9.0
ISCO  Idaho Springs     121.56  47   P        PKiKP    18 38 54.9 +0.8
      baz=289
ISCO  Idaho Springs     121.56  47   P        PKiKP    18 38 54.9 +0.8
      baz=289
121A  Cookes Peak, D    121.80  56   P        PKiKP    18 38 56.3 +1.6
      baz=283
121A  Cookes Peak, D    121.80  56   P        PKiKP    18 38 56.3 +1.6
      baz=283
Y22A  Socorro           122.15  54   P        PKiKP    18 38 56.7 +1.4
      baz=284
SDCO  Great Sand Dun    122.28  50   P        PKiKP    18 38 56.9 +1.3
      baz=287
SDCO  Great Sand Dun    122.28  50   P        PKiKP    18 38 57.1 +1.5
      baz=287,SNR=6.6
ANMO  Albuquerque       122.31  53   P        PKiKP    18 38 56.9 +1.2
      baz=285
ANMO  Albuquerque       122.31  53   P        PKiKP    18 38 56.9 +1.2
      baz=285
E28A  Huff              122.31  38   P        PKiKP    18 38 55.5 +0.4
      baz=297
ULM   Lac du Bonnet     123.27  33   PKP      PKPdf    18 38 56.3 -0.2
      comp=Z,7.0nm,0.7s,baz=296,slow=1.6,SNR=9.5
T25A  Trinidad          123.29  50   P        PKiKP    18 38 59.1 +1.6
      baz=288,SNR=5.9
MNTX  Cornudas Mount    123.97  57   P        PKiKP    18 38 59.9 +1.1
      baz=284
MNTX  Cornudas Mount    123.97  57   P        PKiKP    18 39 00.1 +1.3
      baz=284
F33A  5 Mile Ranch,     125.35  38   P        PKiKP    18 39 01.4 +0.3
      baz=300
B35A  Bob, Littlefor    125.49  34   P        PKPdf    18 39 00.6 -0.2
      baz=304
MSTX  Muleshoe          125.50  53   P        PKiKP    18 39 02.8 +1.0
      baz=287
MSTX  Muleshoe          125.50  53   P        PKiKP    18 39 02.8 +1.0
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	baz=287						
TXAR	Lajitas Array	125.96	59	PKP	PKiKP	18 39 04.3	+1.4
	comp=Z,1.1nm,0.5s,baz=189,slow=1.5,SNR=14						
ECSD	EROS Data Cent	126.18	40	PKPdf	PKiKP	18 39 03.1	+0.3
ECSD	EROS Data Cent	126.18	40	P	PKiKP	18 39 02.8	0.0
	baz=299						
ECSD	EROS Data Cent	126.18	40	P	PKiKP	18 39 03.0	+0.3
	baz=299,SNR=10						
BGNE	Belgrade	126.23	43	P	PKiKP	18 39 03.5	+0.5
	baz=296						
EYMN	Ely	126.95	33	P	PKiKP	18 39 04.4	+0.2
	baz=306						
F36A	Milaca	126.99	36		PKiKP	18 39 04.8	+0.4
F36A	Milaca	126.99	36	P	PKiKP	18 39 04.7	+0.4
	baz=303						
ESDC	Sonseca Array	127.04	315	PKP	PKiKP	18 39 05.4	+0.7
	comp=Z,2.7nm,0.9s,baz=46,slow=2.1,SNR=14						
R32A	Long Quarter,	127.07	47	P	PKiKP	18 39 05.2	+0.5
	baz=293						
SPMN	Marine on St.	127.76	37	P	PKiKP	18 39 06.5	+0.6
	baz=304						
TORD	Torodi Ar. Bea	127.89	281	PKP	PKiKP	18 39 06.9	-0.1
	comp=Z,7.8nm,0.7s,baz=73,slow=2.2,SNR=41						
TORD				SKPab	SKiKP	18 42 09.6	-19
	comp=Z,3.0nm,1.0s,baz=70,slow=4.1,SNR=4.7						
PBRG	Braganca	127.97	319	*e*PKPdf	PKPdf	18 39 05.2	-0.7
I37B	Waseca	128.05	38	P	PKiKP	18 39 06.8	+0.3
	baz=302						
KSU1	Kansas State U	128.29	45	P	PKiKP	18 39 07.9	+0.8
	baz=296						
WMOK	Wichita Mounta	128.38	51	P	PKiKP	18 39 08.2	+0.7
	baz=291						
MVO	Moncorvo	128.47	318	*e*PKPdf	PKiKP	18 39 08.9	+1.4
PVRL	Vila Real	128.87	318	*e*PKPdf	PKiKP	18 39 09.6	+1.3
POLO	Lamas de Olo	128.87	319	*e*PKPdf	PKiKP	18 39 09.8	+1.4
PGAV	Gavieira, Arco	128.89	319	*e*PKPdf	PKiKP	18 39 09.5	+1.1
PLCA	Paso Flores	128.90	161	PKP	PKiKP	18 39 10.1	+1.6
	comp=Z,6.7nm,0.7s,baz=213,slow=3.1,SNR=24						
PLCA				SKPab	SKiKP	18 42 13.4	-16
	comp=Z,6.6nm,1.2s,baz=221,slow=5.2,SNR=4.0						
JCT	Junction City	128.91	57	P	PKiKP	18 39 09.1	+0.4
	baz=287						
JCT	Junction City	128.91	57	P	PKiKP	18 39 09.4	+0.7
	baz=287						
MTE	Manteigas	129.18	317	*e*PKPdf	PKiKP	18 39 10.2	+1.2
PCBR	Castelo Branco	129.40	317	*e*PKPdf	PKiKP	18 39 09.9	+0.6
PCBR				*i* LQ	LQ	18 42 17.8	
PMRV	Marv??o	129.53	316	*e*PKPdf	PKiKP	18 39 10.8	+1.2
PMRV				*i* LQ	LQ	18 42 17.2	
PESTR	Estremoz	129.92	316	*e*PKPdf	PKiKP	18 39 11.7	+1.3
PESTR				*i* LQ	LQ	18 42 17.1	
MDT	Midelt	130.12	307	PKP	PKiKP	18 39 12.6	+1.5
	comp=Z,3.3nm,0.5s,baz=349,slow=0.5,SNR=16						
P38A	Dawn	130.18	43	P	PKiKP	18 39 10.9	0.0
	baz=299						
TUL1	Leonard	130.21	48	P	PKiKP	18 39 12.2	+1.1
	baz=294						
PMTG	Montargil	130.27	316	*i* LQ	LQ	18 42 20.0	
EVO	Evora	130.37	315	*i* LQ	LQ	18 42 19.9	
PBEJ	Beja	130.50	315	*e*PKPdf	PKiKP	18 39 12.1	+0.5
PBEJ				*i* LQ	LQ	18 42 20.7	
JFWS	Jewell Farm	130.57	38	P	PKiKP	18 39 11.3	-0.3
	baz=305						
JFWS	Jewell Farm	130.57	38	P	PKiKP	18 39 11.3	-0.3
	baz=305						
PVAQ	Vaqueiros	130.67	314	*i* LQ	LQ	18 42 22.8	
MESJ	Messejana	130.83	315	*e*PKPdf	PKiKP	18 39 12.6	+0.3
MESJ				*i* LQ	LQ	18 42 22.0	
PBDV	Barranco-do-Ve	130.89	314	*i* LQ	LQ	18 42 22.9	
PNCL	Nicolau / Gran	130.92	315	*e*PKPdf	PKiKP	18 39 13.1	+0.7
PNCL				*i* LQ	LQ	18 42 23.9	
SCHQ	Schefferville	130.97	12	PKP	PKiKP	18 39 12.1	0.0
	comp=Z,2.6nm,0.5s,baz=291,slow=3.0,SNR=12						
SCHQ				SKPbc	SKPbc	18 42 20.9	+0.1
	comp=Z,10nm,0.8s,baz=351,slow=6.1,SNR=14						
PMST	Lisbon--Monsan	131.08	316	*e*PKPdf	PKPdf	18 39 11.4	-0.4
S39A	Bolivar	131.23	45	P	PKPdf	18 39 10.4	-1.7
	baz=298						
MORF	Marmelete	131.38	314	*e*PKPdf	PKiKP	18 39 14.5	+1.0
MORF				*i* LQ	LQ	18 42 21.6	
L42A	Oliver, Polo	131.44	38	P	PKiKP	18 39 13.1	-0.3
	baz=304						
PFVI	Vila Bisbo	131.58	314	*e*PKPdf	PKiKP	18 39 15.0	+1.2
W39A	Magazine	132.00	48	P	PKPdf	18 39 13.8	+0.2
	baz=295						
W39A	Magazine	132.00	48	P	PKPdf	18 39 13.8	+0.2
	baz=295						
U40A	Yellville	132.17	47	P	PKPdf	18 39 14.1	+0.1
	baz=297						
CCM	Cathedral Cave	132.50	44	P	PKPdf	18 39 14.7	+0.2
	baz=300						
KIC	Kosan Boka	134.07	272	*e*PKP1	PKiKP	18 39 19.7	+0.2
	comp=Z,8.3nm,0.6s						
DBIC	Dimbokro	134.21	272	PKP	PKiKP	18 39 20.4	+0.6
	comp=Z,3.7nm,0.5s,baz=90,slow=2.6,SNR=9.3						
LIC	Lamto	134.34	272	*e*PKP1	PKiKP	18 39 20.8	+0.8
	comp=Z,23nm,1.2s						
TIC	Toumodi	134.37	272	*e*PKP1	PKiKP	18 39 20.2	+0.1
	comp=Z,5.2nm,0.3s						
O48B	Farmland	135.22	38	P	PKPdf	18 39 20.1	+0.5
	baz=308						
WVT	Waverly	135.83	44	P	PKPdf	18 39 21.2	+0.4
	baz=302						
P49A	Miami Univ. Ec	135.93	38	P	PKPdf	18 39 21.3	+0.4
	baz=308						
ACSO	Alum Creek Sta	136.53	36	P	PKPdf	18 39 22.6	+0.6
	baz=310						
M53A	WI Miller and	137.03	33	P	PKPdf	18 39 21.7	-1.2
	baz=314						
P52A	Corning	137.42	36	P	PKiKP	18 39 25.4	-0.2
	baz=311						
LRAL	Lakeview Retre	137.99	48	P	PKPdf	18 39 25.3	+0.4
	baz=300						
BINY	Binghamton	138.85	28	P	PKPdf	18 39 26.7	+0.5
	baz=321						
FUL	Funchal	139.55	313	*i* LQ	LQ	18 42 03.9	
KMSC	Kings Mountain	140.75	41	P	PKPdf	18 39 31.1	+1.2
	baz=308						
GO02	Mina Guanaco	142.97	151	PKPdf	PKPdf	18 39 33.1	-1.5
PB14	IPOC Station P	143.03	150	PKPdf	PKPbc	18 39 33.3	+1.4
DWPF	Disney Wildern	144.59	51	P	PKPdf	18 39 36.5	-0.3
	baz=300						
CPUP	Villa Florida	145.98	170	PKPbc	PKPab	18 39 41.5	+0.6
	comp=Z,25nm,0.6s,baz=192,slow=1.9,SNR=51						
LPAZ	La Paz	151.05	144	PKP	PKPdf	18 39 50.4	+1.9
	comp=Z,4.5nm,0.9s,baz=238,slow=1.8,SNR=17						
LPAZ				PKPbc	PKiKP	18 39 55.5	+0.5
	comp=Z,15nm,0.7s,baz=72,slow=2.9,SNR=29						
BDFB	Brasilia	156.98	187	PKP	PKPdf	18 39 57.8	+1.5
	comp=Z,4.1nm,0.8s,baz=33,slow=1.4,SNR=5.2						

DJA 29 18:27:26.4±1.1**, 11°S**±6°×**11°1E**±°**, h37**^{km}±38^{km}**, M4.4**/15**,**
mb4.4/2**, MLv4.4**/15**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	2.75	11	P	Pn	18 28 07.8	-0.2
PCJI				S	Sn	18 28 40.5	+0.5
UGM	Wanagama	2.98	358	P	Pn	18 28 11.3	+0.1
UGM				S	Sn	18 28 46.4	+0.7
WOJI	Wonogiri, Jawa	3.07	5	P	Pn	18 28 12.5	+0.2
WOJI				S	Sn	18 28 48.8	+1.0
YOGI	Yogyakarta	3.09	354	P	Pn	18 28 12.9	+0.2
YOGI				S	Sn	18 28 49.2	+0.8
PWJI	Pagerwojo	3.10	22	P	Pn	18 28 12.9	+0.2
PWJI				S	Sn	18 28 48.7	+0.3
CMJI	Cimerak	3.78	325	P	Pn	18 28 21.6	-0.5
GMJI	Gumukmas	3.82	47	P	Pn	18 28 22.9	+0.3
JAGI	Jajag, Banyuwa	4.24	55	P	Pn	18 28 28.7	+0.3
BLJI	Banyuglugur	4.30	43	P	Pn	18 28 29.4	+0.2
UWJI	Ujung Watu	4.47	4	P	Pn	18 28 31.5	-0.2
ABJI	Asem Bagus	4.71	49	P	Pn	18 28 34.6	-0.4
IGBI	Denpasar	4.91	65	P	Pn	18 28 38.4	+0.7
CNJI	Cibinong	4.97	316	P	Pn	18 28 37.6	-1.0
SRBI	Singaraja	5.32	59	P	Pn	18 28 44.3	+1.0
PLAI	Plampang	7.34	74	P	Pn	18 29 10.6	-0.5
WBSI	Waikabubak, Su	8.71	82	P	Pn	18 29 27.4	-2.6
EDFI	Ende, Flores	11.11	80	P	Pn	18 30 01.3	-1.6

IDC 29 18:36:56.5±3.7**, 28°45S**×**178°38W, h0**^{km}**, mb3.7**/2**,**
mbtmp3.7/2**, Error ellipse: s-maj=97.0km s-min=19.2km**
az=46.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.89	153	Pn	Pn	18 37 16.7	+0.4
	58nm,0.3s,baz=90,slow=20,SNR=1.6						
RAO				Sn	Sn	18 37 30.4	+0.4
	171nm,0.3s,baz=25,slow=22,SNR=10						
ASAR	Alice Springs	42.91	265	P	P	18 44 56.4	-0.8
	0.5nm,0.7s,baz=103,slow=7.6,SNR=4.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	43.72	270	P	P	18 45 04.2	+0.4
	1.0nm,0.4s,baz=111,slow=7.9,SNR=22						
	1.0nm,0.4s						
H10N3	ASCENSION HYDR	140.70	154	T	T	21 32 09.7	
	baz=203,slow=75,SNR=6.1						
H10N1	ASCENSION HYDR	140.71	154	T	T	21 32 09.0	
	baz=203,slow=75,SNR=3.0						
H10N2	ASCENSION HYDR	140.72	154	T	T	21 32 10.9	
	baz=203,slow=75,SNR=5.2						
FINES	FINESS Array B	143.21	341	PKP	PKPbc	18 56 30.0	+1.2
	0.4nm,0.3s,baz=94,slow=5.6,SNR=7.9						

NNC ***29*** *18:51:40.3±18.0, 36°63N×70°68E, h132^{km}±280^{km}, mb2.9,*
mpv3.7, Error ellipse: s-maj=159.9km s-min=110.8km
az=0.0

ISC 29 18:51:37.7±1.6**, 36°4N**±0°1×**71°2E**±0°2**, h200**^{km}**, n16,**
σ**1**^{s}**44**/17**, 2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.05	18	P	Pn	18 53 06.4	+0.5
	SNR=20						
UCH	Uchtor	6.37	23	P	Pn	18 53 10.9	+0.9
	SNR=7.2						
EKS2	Erkin-Say	6.57	17	P	Pn	18 53 13.6	+1.2
	SNR=26						
KK31	Karatay Array	6.72	356	P	Pn	18 53 14.7	+0.5
	2.3nm,0.3s,baz=180,slow=13,SNR=53						
KK31				S	Sn	18 54 27.4	-3.4
	3.2nm,0.3s,baz=185,slow=22,SNR=12						
AAK	Ala-Archa	6.74	21	P	Pn	18 53 16.1	+1.6
	SNR=6.7						
USP	Ospenovka	7.32	19	P	Pn	18 53 22.7	+0.7
	SNR=6.3						
TKM2	Tokmak 2	7.35	26	P	Pn	18 53 23.9	+1.4
	SNR=6.9						
TKM2	Tokmak 2	7.35	26	⇓P	Pn	18 53 23.7	+1.1
	2.1nm,0.6s						
TKM2				⇑S	Sn	18 54 45.6	-0.2
	1.3nm,0.7s						
PKIN	Phulchoki	14.90	122	*e*P	Pn	18 54 58.1	-0.9
	2.3nm,0.2s						
PKI	Pulchoki	14.92	122	*e*P	Pn	18 54 58.4	-0.8
	3.0nm,0.2s						
GUN	Gumba	15.03	120	*e*P	Pn	18 54 59.3	-1.3
	3.4nm,0.3s						
AB31	Akbulak array	15.25	331	P	P	18 55 10.5	+7.4
	0.2nm,0.3s,baz=166,slow=12,SNR=7.1						
JIRN	Jiri	15.40	120	*e*P	Pn	18 55 03.7	-1.5
	7.2nm,0.4s						
RAMN	Ramite	16.13	121	*e*P	P	18 55 13.5	+0.2
	3.9nm,0.4s						
TAPN	Taplejung	16.66	118	*e*P	Pn	18 55 20.1	-0.1
	3.8nm,0.4s						
AKTO	Aktyubinsk	16.95	330	⇑P	Pn	18 55 24.7	+1.6
	0.9nm,0.7s						

IDC 29 18:51:46.8±49.0**, 14°84S**×**170°61W, h0**^{km}**, mb4.4**/3**,**
mbtmp4.4/3**, Error ellipse: s-maj=967.2km**
s-min=171.6km az=79.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	46.65	240	P	P	19 00 17.4	+0.2
	2.2nm,0.5s,baz=80,slow=7.3,SNR=15						
	2.2nm,0.5s						
WRA	Warramunga Arr	52.59	256	P	P	19 01 02.4	-0.4
	1.0nm,0.5s,baz=94,slow=6.9,SNR=37						
	1.0nm,0.5s						
ASAR	Alice Springs	52.84	251	P	P	19 01 04.5	-0.1
	9.7nm,0.5s,baz=89,slow=7.8,SNR=250						
	9.7nm,0.5s						

IDC ***29*** *19:15:46.2±1.4, 55°18S×29°30W, h0^{km}, mb3.7/3,*
mbtmp3.7/3, Error ellipse: s-maj=56.7km s-min=34.0km
az=113.0

ISC 29 19:15:47.5±1.5**, 55°3S**±0°2×**28°5W**±0°5**, h10**^{km}**, n6,** σ**0**^{s}**11**/5**,**
mb3.7/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.75	156	P	P	19 20 17.3	+0.1
TROLL	Troll, Antarti	21.27	154	P	P	19 20 33.6	-0.1
BOSA	Boshof	46.49	78	P	P	19 24 19.9	+5.0
	1.7nm,0.8s,baz=217,slow=5.1,SNR=3.1						
	1.7nm,0.8s						
VNDA	Vanda	47.32	183	P	P	19 24 20.6	0.0
	0.6nm,0.9s,baz=192,slow=7.8,SNR=6.0						
	0.6nm,0.9s						
TORD	Torodi Ar. Bea	72.74	31	P	P	19 27 15.7	0.0
	0.3nm,0.5s,baz=201,slow=5.7,SNR=5.4						
	0.3nm,0.5s						
ILAR	Eielson Array	149.06	313	PKPbc	PKPbc	19 35 34.3	0.0
	0.7nm,0.6s,baz=114,slow=1.8,SNR=7.5						

IDC ***29*** *19:32:42.0±1.5, 43°92N×105°73W, h0^{km}, mb3.9/2,*
mbtmp3.6/6, ML3.4/3, MS3.1/7, Error ellipse: s-maj=49.7km
s-min=8.4km az=147.0

NEIC ***29*** *19:32:42.3±1.6, 43°63N±0°06×105°29W±0°09, h0^{km}±2^{km},*
ML3.5/34, Error ellipse: s-maj=10.8km s-min=9.5km
az=77.0

ISC 29 19:32:41.1±0.9**, 43°62N**±0°06×**105°31W**±0°06**, h0**^{km}**, n44,**
σ**1**^{s}**29**/37**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.04	61		Pb	19 33 01.9	-0.2
K22A	Casper	1.32	223	Pg	Pg	19 33 05.0	-1.4
K22A				IAML		19 33 26.9	
	comp=N,723nm,0.3s						
K22A				IAML		19 33 32.2	
	comp=E,761nm,0.3s						
PHWY	Pilot Hill	2.32	183		Pn	19 33 21.1	+0.3
PHWY				IAML		19 33 54.6	
	comp=E,182nm,0.3s						
RWWY	Rawlins	2.39	217		Pn	19 33 23.1	+1.3
N23A	Red Feather La	2.77	190	Pn	Pn	19 33 27.9	+1.0
N23A				IAML		19 34 09.5	
	comp=N,208nm,0.8s						
N23A				IAML		19 34 13.4	
	comp=E,173nm,0.8s						
LAO	LASA Array	3.13	348	Pn	Pn	19 33 32.5	+0.7
LAO				IAML		19 34 30.0	
	comp=E,190nm,1.9s						
LAO				IAML		19 34 33.9	
	comp=E,204nm,1.4s						
RLMT	Red Lodge	3.21	299	Pn	Pn	19 33 33.8	+0.8
RLMT				IAML		19 34 41.1	
	comp=E,93nm,1.5s						
BW06	Boulder Array	3.23	256		Pn	19 33 34.4	+1.2
BW06				IAML		19 34 24.3	
	comp=E,80nm,0.9s						
BW06				IAML		19 34 52.2	
	comp=E,81nm,1.1s						
PD31	Pinedale Array	3.23	256		Pn	19 33 33.4	+0.2
PDAR	Pinedale Array	3.23	256	Pn	Pn	19 33 33.6	+0.4
	comp=E,4.0nm,0.3s,baz=74,slow=17,SNR=46						
PDAR				Lg	Lg	19 34 16.8	
	comp=E,15nm,0.3s,baz=70,slow=34,SNR=3.5						
	comp=E,3.9nm,0.3s						
OGNE	Ogallala	3.61	137	Pn	Pn	19 33 39.8	+1.3
GCMT	Greycliff	3.79	306		Pn	19 33 41.9	+1.0
ISCO	Idaho Springs	3.83	184	Pn	Pn	19 33 42.8	+1.2
ISCO				IAML		19 34 46.0	
	comp=E,61nm,1.2s						
LOHW	Long Hollow	3.85	272		Pn	19 33 44.3	+2.6
LOHW				IAML		19 34 43.0	
	comp=E,60nm,1.0s						
FLWY	Flagg Ranch	3.93	279		Pn	19 33 45.6	+2.8
FLWY				IAML		19 34 56.0	
	comp=E,68nm,1.4s						
FLWY				IAML		19 34 59.2	
	comp=E,71nm,1.8s						
MOOW	Moose Ponds	3.95	274	Pn	Pn	19 33 45.2	+2.1
O20A	White River Ci	4.12	213		Pn	19 33 46.6	+1.1
E28A	Huff	4.40	46		Pn	19 33 50.8	+1.6
SMCO	Snowmass	4.62	196	Pn	Pn	19 33 54.3	+1.8
SMCO				IAML		19 35 18.5	
	comp=E,51nm,1.4s						
SMCO				IAML		19 35 38.0	
	comp=E,62nm,1.3s						
BOZ	Bozeman (W)	4.93	296		Pn	19 33 57.1	+0.5
BOZ				IAML		19 35 17.7	
	comp=E,23nm,1.4s						
BOZ				IAML		19 36 07.7	
	comp=E,25nm,1.4s						
KSCO	Kaye Shedlock’	5.03	155		Pn	19 33 58.1	+0.1
P18A	Preston Nutter	5.44	225		Pn	19 34 04.3	+0.5
PV07	Paradox Valley	5.76	207		Pn	19 34 09.8	+1.7
PV15	Paradox Valley	5.80	206		Pn	19 34 10.5	+1.9
MDND	Maddock	5.81	41		Pn	19 34 08.6	+0.1
SRU	San Rafael Swe	5.98	223		Pn	19 34 10.7	-0.3
PV13	Radium Mtn., P	6.07	207		Pn	19 34 13.6	+1.2
ECSD	EROS Data Cent	6.30	86		Pn	19 34 16.1	+0.8
Q16A	Castle Valley	6.45	225	Pn	Pn	19 34 18.1	+0.5
T25A	Trinidad	6.51	174	Pn	Pn	19 34 18.9	+0.5
DUG	Dugway, Tooele	6.56	241		Pn	19 34 19.1	+0.1
MTPU	Mount Pierson	7.63	225		Pn	19 34 34.9	+1.0
ELK	Elko	7.92	252	Pn	Pn	19 34 38.0	+0.4
	comp=E,0.2nm,0.3s,baz=56,slow=15,SNR=3.3						
	comp=E,0.5nm,0.3s						
ULM	Lac du Bonnet	9.24	41	Pn	Pn	19 34 54.3	-1.2
	comp=E,1.1nm,0.3s,baz=228,slow=9.3,SNR=10						
ULM				Lg	Lg	19 37 25.6	
	comp=E,0.5nm,0.3s,baz=306,slow=19,SNR=1.6						
ULM				LR	LR	19 38 34.8	
	comp=E,68nm,19.9s,baz=275,slow=38						
	comp=E,3.0nm,0.3s						
NEW	Newport	9.45	304	LR	LR	19 37 53.7	
	comp=E,20nm,19.8s,baz=213,slow=34						
I56US	NEWPORT INFRAS	9.45	304	*i*		20 30 30.0	
	baz=116,slow=311,SNR=1.3						
NVAR	Mina Array Bea	11.10	247	Pn	Pn	19 35 23.9	+2.6
	comp=E,0.2nm,0.4s,baz=71,slow=12,SNR=1.9						
YBH	Yreka Blue Hor	12.95	268	LR	LR	19 41 12.4	
	comp=E,66nm,21.1s,baz=38,slow=40						
BBB	Bella Bella	17.47	307	LR	LR	19 44 02.7	
	comp=E,58nm,21.4s,baz=357,slow=40						
SADO	Sadowa	18.77	77	LR	LR	19 44 14.4	
	comp=E,52nm,19.8s,baz=328,slow=36						
SHEM	Shemya Is, Ala	51.84	310	LR	LR	20 02 16.5	
	comp=E,37nm,18.4s,baz=278,slow=34						
ARCES	ARCESS Array B	61.53	18	P	P	19 42 59.1	-0.3
	comp=E,1.3nm,0.8s,baz=320,slow=6.3,SNR=1.6						
	comp=E,1.3nm,0.8s						
FINES	FINESS Array B	68.15	23	P	P	19 43 42.3	-0.2
	comp=E,1.0nm,0.9s,baz=306,slow=5.0,SNR=1.3						
	comp=E,1.0nm,0.9s						
TORD	Torodi Ar. Bea	92.95	69	LR	LR	20 26 02.7	
	comp=E,34nm,18.8s,baz=212,slow=34						

CRAAG ***29*** *19:44:29.2, 36°36N×3°49E, Ml2.9*

MDD ***29*** *19:44:31.6±1.4, 36°37N×3°42E, h0^{km}, Mb4.1/6,*
M_mb3.5/6, Error ellipse: s-maj=12.1km s-min=5.4km
az=136.0

ISC 29 19:44:30.8±1.2**, 36°34N**±0°06×**3°47E**±0°08**, h18**^{km}**, n10,**
σ**1**^{s}**46**/14**, 6C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.18	188	P	Pg	19 44 34.9	-0.7
AKET	Djebel Ketaf	0.44	131	P	Pg	19 44 39.8	-0.1
ABA	Alger-Bouzarea	0.58	323	P	Pg	19 44 42.1	-0.3
EIBI	Ibiza	3.17	329	P	Pn	19 45 21.2	+1.4
EIBI				⇑*i*Vmb_V		19 45 30.3	
	353nm,SNR=1.2						
EIBI				S	Sn	19 45 57.7	+0.5
ETOS	Mallorca	3.46	352	⇑*i*Vmb_V		19 45 22.8	
	483nm,SNR=1.2						
ETOS				P	Pn	19 45 23.8	-0.1
ETOS				S	Sn	19 46 03.9	-0.6
EMUR	La Murta	4.05	293	P	Pn	19 45 30.7	-1.3
EMUR				⇑*i*Vmb_V		19 45 37.5	
	163nm,SNR=0.9						
EZAR	Zarzadilla de	4.40	292	P	Pn	19 45 39.1	+2.2
ETOB	Tobarra	4.61	302	P	Pn	19 45 41.6	+1.9
ETOB				⇑*i*Vmb_V		19 45 50.1	
	248nm,SNR=1.5						
ETOB				S	Sn	19 46 31.7	-1.1
ECHE	Chera	4.78	314	P	Pn	19 45 43.8	+1.8
ECHE				⇑*i*Vmb_V		19 45 50.8	
	279nm,SNR=1.6						
EMOS	Mosqueruela	5.08	324	P	Pn	19 45 46.8	+0.6
EMOS				⇑*i*Vmb_V		19 45 47.5	
	115nm,SNR=1.0						
EMOS				S	Sn	19 46 42.1	-2.3

TIR ***29*** *19:51:30.5, 40°00N×19°82E, h6^{km}±1^{km}, Md2.9, Ml2.2*

ATH ***29*** *19:51:32.0, 39°83N×19°71E, h24^{km}±2^{km}, ML1.6/1, Error*
ellipse: s-maj=7.9km s-min=1.7km az=198.0

ISC 29 19:51:30.9±1.0**, 39°97N**±0°04×**19°77E**±0°03**, h17**^{km}±7^{km}**,**
n16, σ**1**^{s}**88**/30**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.20	116	P	Pg	19 51 34.9	-0.8
	baz=129						
SRN				S	Sg	19 51 38.7	-0.3
	baz=129						
SRN				AMP			
	comp=N,1.4nm,0.1s,baz=129						
KASA	Kassiopi	0.25	150	P	Pb	19 51 36.7	-0.3
KASA				S	Sb	19 51 41.3	+0.2
KEK	Kerkira	0.25	175	P	Pb	19 51 36.5	-0.5
KEK				S	Sb	19 51 40.5	-0.7
KEK				AML	AML	19 51 46.1	
	comp=N,375µm,0.2s						
KEK				AML	AML	19 51 46.3	
	comp=E,454µm,0.2s						
IGT	Igoumenitsa	0.61	135	P	Pb	19 51 42.9	-0.3
IGT				S	Sb	19 51 50.8	-0.7
IGT	Igoumenitsa	0.61	135	P	Pb	19 51 42.9	-0.3
	baz=139						
IGT				S	Sb	19 51 52.2	+0.7
	baz=139						
LSK	Leskovik	0.66	74	P	Pg	19 51 43.7	-0.3
	baz=75						
LSK				S	Sg	19 51 52.6	-0.3
	baz=75						
JAN	Janina	0.89	110	P	Pn	19 51 48.7	+0.1
SCTE	Santa Cesarea	1.01	277	P	Pb	19 51 50.2	+0.3
SCTE	Santa Cesarea	1.01	277	P	Pg	19 51 50.6	+0.2
	baz=275						
SCTE				S	Sn	19 52 05.2	+1.3
	baz=275						
SCTE				AMP			
	comp=E,0.2nm,0.2s,baz=275						
LKD2	Lefkada island	1.36	149	P	Pg	19 51 57.6	+0.4
	baz=151						
LKD2				S	Sg	19 52 16.2	+1.3
	baz=151						
FNA	Florina	1.47	56	P	Pb	19 51 58.9	+1.0
	baz=56						
FNA				S	Sn	19 52 17.5	+1.9
	baz=56						
DBRK	Dubrovnik	2.96	336	*e*Pn	Pn	19 52 19.8	+2.6
DBRK				Sn	Sn	19 52 51.2	-1.1
STON	Ston	3.29	332	*e*Pn	Pn	19 52 24.2	+2.5
STON				Sn	Sn	19 52 57.0	-3.5
RICI	Ricice	4.04	332	*e*Pn	Pn	19 52 33.7	+1.7
RICI				Sn	Sn	19 53 15.1	-3.8
KIJV	Kijevo	4.75	329	*e*Pn	Pn	19 52 43.7	+1.9
KIJV				Sn	Sn	19 53 32.9	-3.5
MORI	Morici	4.94	323	*e*Pn	Pn	19 52 45.1	+0.8
MORI				Sn	Sn	19 53 36.4	-4.6

ATH ***29*** *19:56:54.9, 34°26N×25°62E, h10^{km}±5^{km}, ML3.5/5, Error*
ellipse: s-maj=6.4km s-min=1.8km az=4.0

ISK ***29*** *19:56:56.1, 34°36N×25°65E, h24^{km}, ML3.5/23*

THE ***29*** *19:56:56.6, 34°33N×25°63E, h14^{km}±3^{km}, ML3.4/3, Error*
ellipse: s-maj=5.2km s-min=0.9km az=162.0

IDC ***29*** *19:56:57.8±1.9, 34°47N×25°66E, h43^{km}±20^{km}, mb3.5/5,*
mbtmp3.6/9, ML3.8/4, MS2.7/1, Error ellipse: s-maj=23.2km

s-min=19.3km az=32.0
*HLW **29** 19:56:58.0, 34°.16N×25°.88E, h11^{km}±19^{km}, Md3.4, Ml3.7*
*DDA **29** 19:56:59.8±0.0, 34°.69N×25°.86E, h6^{km}±3^{km}, MW3.5*
*NIC **29** 19:57:00.1±0.0, 34°.20N×26°.06E, h32^{km}±27^{km}, Ml4.0/6*
*GII **29** 19:57:05.7±0.3, 34°.19N×26°.40E, h40^{km}, MD3.3/4, Mm3.6/2*
ISC 29 19:56:53.0±1.4, **34°.31N**±0°.04×**25°.76E**±0°.03, **h9**^{km}±9^{km}, **n120**, σ**2^{s}.42**/153, **mb3.6**/5, **4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.71	358	P	Pn	19 57 09.8	+0.7
FRMA				S	Sn	19 57 19.8	-0.3
FRMA				AML	AML	19 57 22.8	
	comp=E,9931μm,0.5s						
FRMA				AML	AML	19 57 23.3	
	comp=N,9332μm,0.6s						
ZKR	Zakros	0.89	25	P	Pn	19 57 13.7	+2.0
ZKR				S	Sn	19 57 26.9	+2.2
ZKR				AML	AML	19 57 29.6	
	comp=E,8351μm,0.6s						
ZKR				AML	AML	19 57 32.4	
	comp=N,5254μm,0.6s						
ZKR	Zakros	0.89	25	P	Pn	19 57 13.7	+2.0
ZKR				S	Sn	19 57 26.6	+1.9
	comp=N,3μm,0.6s						
ZKR	Zakros	0.89	25	PG	Pn	19 57 14.1	+2.4
ZKR				SG	Sn	19 57 26.1	+1.4
ZKR	Zakros	0.89	25	P	Pn	19 57 14.0	+2.3
ZKR				AML	AML	19 57 28.4	
	comp=N,8.2nm,0.6s						
ZKR				AML	AML	19 57 28.4	
	comp=N,8.2nm,0.6s						
ZKR				S	Sn	19 57 29.2	+4.5
ZKR				AML	AML	19 57 31.0	
	comp=N,5.0nm,0.5s						
ZKR				AML	AML	19 57 31.0	
	comp=N,5.0nm,0.5s						
NPS	Neapolis	0.96	353	P	Pn	19 57 13.7	+1.0
NPS	Neapolis	0.96	353	P	Pn	19 57 13.4	+0.7
SIVA	Sivas	1.05	313	P	Pb	19 57 14.2	+0.8
SIVA				AML	AML	19 57 29.6	
	comp=N,8768μm,0.5s						
SIVA				AML	AML	19 57 31.6	
	comp=E,17987μm,0.7s						
SIVA	Sivas	1.05	313	P	Pb	19 57 14.2	+0.8
HRKL	Herakleio	1.14	332	P	Pn	19 57 16.2	+1.2
HRKL	Herakleio	1.14	332	PG	Pn	19 57 15.9	+0.8
HRKL				SG	Sn	19 57 29.9	-0.9
KSTL	Kastelli Herak	1.14	331	P	Pg	19 57 13.0	-2.0
KSTL				S	Sg	19 57 26.9	-2.9
KSTL				AML	AML	19 57 33.2	
	comp=N,7188μm,0.6s						
KSTL				AML	AML	19 57 35.3	
	comp=E,1831μm,0.4s						
IDI	Anoyia	1.21	324	P	Pg	19 57 16.2	-0.1
	comp=E,95nm,0.3s,baz=161,slow=18,SNR=130						
IDI	Anoyia	1.21	324	P	Pb	19 57 16.7	+0.6
IDI				AML	AML	19 57 38.5	
	comp=E,1182μm,0.6s						
IDI				AML	AML	19 57 42.4	
	comp=N,1418μm,0.7s						
IDI	Anoyia	1.21	324	P	Pg	19 57 16.5	+0.2
IDI				S	Sn	19 57 32.6	-0.1
	comp=N,628nm,0.5s						
IDI	Anoyia	1.21	324	PN	Pb	19 57 16.7	+0.6
IDI				SN	Sb	19 57 31.9	0.0
GVDS	Gavdos	1.48	292	P	Pn	19 57 20.6	+0.9
GVD	Gavdhos	1.48	292	P	Pn	19 57 20.4	+0.7
GVD	Gavdhos	1.48	292	P	Pn	19 57 20.4	+0.7
GVD				S	Sn	19 57 37.4	-1.7
	comp=N,2μm,0.5s						
GVD	Gavdhos	1.48	292	PN	Pn	19 57 20.5	+0.8
GVD				SN	Sn	19 57 38.2	-0.9
KARP	Karpathos	1.69	43	P	Pg	19 57 26.9	+1.4
KARP	Karpathos	1.69	43	P	Pg	19 57 26.7	+1.3
KARP	Karpathos	1.69	43	PN	Pg	19 57 25.4	-0.1
KARP	Karpathos	1.69	43	P	Pg	19 57 26.8	+1.3
KARP				S	Sg	19 57 46.6	-0.9
KARP				AML	AML	19 58 07.0	
	comp=N,1.2nm,1.2s						
KARP				AML	AML	19 58 07.0	
	comp=N,1.2nm,1.2s						
KARP				AML	AML	19 58 07.7	
	comp=N,0.9nm,0.5s						
KARP				AML	AML	19 58 07.7	
	comp=N,0.9nm,0.5s						
IMMV	Iera Moni Meta	1.86	309	P	Pn	19 57 26.3	+1.4
IMMV	Iera Moni Meta	1.86	309	P	Pn	19 57 25.9	+0.9
IMMV	Iera Moni Meta	1.86	309	PN	Pn	19 57 25.9	+0.9
KNDR	Palaiochora Ch	1.94	299	PN	Pn	19 57 27.7	+1.6
RODP	Rodopos	2.06	308	P	Pn	19 57 28.9	+1.1
SANT	Santorini	2.07	353	PN	Pn	19 57 29.3	+1.3
THR3	Thira Island,	2.12	352	P	Pn	19 57 28.8	+0.3
THR5	Thira Island,	2.13	351	P	Pn	19 57 29.1	+0.4
ANKY	Antikythira Is	2.54	308	P	Pn	19 57 35.6	+1.2
NIS1	Nisyros Isl.	2.57	26	P	Pn	19 57 36.9	+2.2
NIS1	Nisyros Isl.	2.57	26	PN	Pb	19 57 37.2	-2.0
KOSK	Kos Island	2.63	22	PN	Pb	19 57 38.2	-2.1
ARG	Arkhangelos	2.72	45	PN	Pb	19 57 40.1	-1.7
ARG	Arkhangelos	2.72	45	P	Pb	19 57 40.6	-1.2
ARG				S	Sb	19 58 12.3	-2.9
DAT	Datca	2.84	31	P	Pn	19 57 40.9	+2.4
DAT	Datca	2.84	31	PN	Pn	19 57 41.2	+2.7
DAT	Datca	2.84	31	P	Pn	19 57 40.8	+2.2
DAT				S	Sn	19 58 09.6	-3.3
SLUM	Salum	2.84	189	⇓P	Pn	19 57 41.8	+3.3
	baz=193						
SLUM				S	Sn	19 58 13.5	+0.7
	baz=193						
KTHA	Kythira Island	2.94	312	P	Pn	19 57 39.8	-0.1
KTHR	Kythira	2.98	312	P	Pn	19 57 41.1	+0.7
BODT	Bodrum	3.03	24	PN	Pn	19 57 43.5	+2.4
BDRM	Kayabasi	3.08	26	P	Pn	19 57 44.0	+2.3
TURN	Turunc	3.19	39	PN	Pn	19 57 46.4	+3.1
TURN	Turunc	3.19	39	P	Pn	19 57 45.7	+2.4
TURN				S	Sn	19 58 20.6	-0.8
VLI	Veliai	3.33	317	P	Pn	19 57 44.6	-0.6
MLSB	Milas	3.40	28	PN	Pn	19 57 49.3	+3.0
DALY	Dalyan (Mula)	3.44	42	PN	Pn	19 57 50.1	+3.4
YER	Yerkesik	3.49	35	PN	Pn	19 57 50.5	+3.0
FETY	Fethiye	3.57	49	PN	Pn	19 57 52.0	+3.4
FETY	Fethiye	3.57	49	P	Pn	19 57 51.8	+3.2
MULA	Mugla, Merkez-	3.61	35	P	Pn	19 57 52.1	+3.1
MULA				S	Sn	19 58 30.7	-1.1
AKAS	Kas	3.69	58	PN	Pn	19 57 53.8	+3.5
AKAS	Kas	3.69	58	P	Pn	19 57 53.3	+3.1
AKAS				S	Sn	19 58 33.7	-0.2
KRND	KRANIDI	3.73	326	P	Pn	19 57 50.4	-0.3
AYDN	Tasoluk	3.76	27	P	Pn	19 57 53.7	+2.5
AYDN				S	Sn	19 58 32.7	-3.0
DGB	zmir	3.85	13	P	Pn	19 57 53.1	+0.8
CAME	Cameli-Denizli	3.91	47	PN	Pn	19 57 56.3	+3.0
CAME				SN	Sn	19 58 41.2	+1.9
ZEYE	Izmir, Urla-Ze	3.97	9	P	Pn	19 57 56.5	+2.6
AYDB	Zeytinkoy-Aydi	4.02	25	PN	Pn	19 57 57.6	+2.8
CAEL	Denizli, Camel	4.04	45	P	Pn	19 57 57.7	+2.6
DION	Dionisos Attik	4.04	339	P	Pn	19 57 55.3	+0.3
TAVA	DENIZLI_Tavas	4.06	38	P	Pn	19 57 57.7	+2.3
TAVA				S	Sn	19 58 40.5	-2.6
CHOS	Chios island	4.08	3	PN	Pn	19 57 58.3	+2.7
URLA	Izmir	4.10	9	PN	Pn	19 57 58.7	+2.9
URLA	Izmir	4.10	9	P	Pn	19 57 57.3	+1.5
PYL	PYLOS	4.17	309	P	Pn	19 57 55.3	-1.4
ELL	Elmali	4.17	53	PN	Pn	19 58 00.5	+3.6
ELL	Elmali	4.17	53	P	Pn	19 58 00.7	+3.8
AKUM	Antalya-Kumluc	4.26	60	P	Pn	19 58 00.5	+2.6
AKUM				S	Sn	19 58 45.5	-2.1
GOLH	Golhisar	4.26	46	P	Pn	19 58 01.1	+3.0
GOLH				S	Sn	19 58 46.4	-1.5
KORT	Korkueli	4.61	53	P	Pn	19 58 08.2	+5.4
KORT				S	Sn	19 58 58.3	+1.8
OSC1	CSNet OBS 1	4.66	98	P	Pn	19 58 06.2	+2.7
BUCA	Burdur, Bucak-	4.93	51	P	Pn	19 58 10.3	+3.1
BUCA				S	Sn	19 59 04.3	-0.2
SWA2		5.05	183	P	Pn	19 58 12.4	+3.5
	baz=185						
SWA2				S	Sn	19 59 06.5	-0.8
	baz=185						
USAK	Uak-Merkez	5.12	30	P	Pn	19 58 12.1	+2.2
ANX	Ano Chora	5.28	325	P	Pn	19 58 12.8	+0.7
AKMS	Akamas	5.47	81	P	Pn	19 58 16.9	+2.2
AKMS				AML	AML	19 59 17.1	
	comp=N,0.4nm,0.4s						
AKMS				AML	AML	19 59 17.2	
	comp=N,0.2nm,0.3s						
OSC2	CSNet OBS 4	5.56	101	P	Pn	19 58 19.3	+3.4
NATA	Nata	5.64	83	P	Pn	19 58 19.7	+2.7
NATA				AML	AML	19 59 23.0	
	comp=N,0.8nm,0.5s						
NATA				AML	AML	19 59 25.2	
	comp=N,0.4nm,0.4s						
ALFC	Alefka	5.70	80	P	Pn	19 58 20.3	+2.6
ALFC				AML	AML	19 59 21.9	
	comp=N,0.5nm,0.6s						
ALFC				AML	AML	19 59 23.5	
	comp=N,0.3nm,0.2s						
SZAC	Souni	5.90	84	P	Pn	19 58 22.7	+2.2
SZAC				AML	AML	19 59 27.9	
	comp=N,0.3nm,0.4s						
SZAC				AML	AML	19 59 29.5	
	comp=N,0.3nm,0.3s						
ASGA	Asgata	6.20	83	P	Pn	19 58 27.3	+2.7
CSS	Mathiatis	6.28	82	P	Pn	19 58 28.2	+2.5
RYAN	Fayoum	6.48	142	P	Pn	19 58 32.1	+3.6
	baz=142						
MVOU	Mavrovouni	6.53	82	P	Pn	19 58 31.7	+2.5
GLL	Jalalah	6.91	131	⇓P	Pn	19 58 38.3	+3.8
	baz=131						
OFRI	\`Ofer	7.89	100	Pn	Pn	19 58 51.0	+3.1
OFRI				Sn	Sn	20 00 13.0	-4.4
TAMRE	El Minia	7.95	145	⇓P	Pn	19 58 52.4	+3.7
	baz=144						
SLTI	Sal'it	8.04	102	Pn	Pn	19 58 53.4	+3.4
SLTI				Sn	Sn	20 00 16.7	-4.3
MMA0B	Mount Meron ar	8.14	96	Pn	Pn	19 58 54.5	+3.1
MMAI	Mount Meron Ar	8.14	96	P	Pn	19 58 52.9	+1.5
	comp=N,0.9nm,0.3s,baz=284,slow=12,SNR=2.4						
MMAI				S	Sn	20 00 20.8	-2.9
	comp=N,1.4nm,0.4s,baz=171,slow=30,SNR=3.3						
	comp=N,0.3nm,0.3s						
AMAZ	Amatzia	8.18	107	Pn	Pn	19 58 55.3	+3.4
MMLI	Mount Malkishu	8.30	100	Pn	Pn	19 58 56.8	+3.3
BRTR	Keskin Array B	8.30	47	P	Pn	19 58 57.6	+3.9
	comp=N,0.2nm,0.5s,baz=226,slow=14,SNR=2.6						
GEM	Giv'at Ha'Em	8.32	95	Pn	Pn	19 58 56.7	+2.9
NATI	Neve Ativ	8.37	94	Pn	Pn	19 58 57.0	+2.5
YTIR	Yattir	8.40	108	Pn	Pn	19 58 57.7	+2.7
YTIR				Sn	Sn	20 00 26.6	-3.5
HMDT	Nahal Hemdat	8.43	101	Pn	Pn	19 58 58.6	+3.3
HMDT				Sn	Sn	20 00 27.8	-2.8
GRB	Gharib	8.51	133	⇓P	Pn	19 58 59.4	+3.1
	baz=133						
DSI	Dead Sea	8.54	106	Pn	Pn	19 58 59.7	+3.0
KRMI	Paran Flat	8.67	116	Pn	Pn	19 59 01.5	+2.9
PRNI	Paran	8.76	114	Pn	Pn	19 59 03.1	+3.2
PRNI				Sn	Sn	20 00 34.8	-3.9
GHAJ	Ghor Haditha	8.78	107	Pn	Pn	19 59 03.3	+3.2
HRFI	Mount Harif	8.94	116	Pn	Pn	19 59 05.6	+3.3
HRFI				Sn	Sn	20 00 39.4	-3.8
MBRI	Mt Berech	8.98	118	Pn	Pn	19 59 06.1	+3.2
EIL	Elat	9.07	118	P	Pn	19 59 07.2	+3.2
	comp=N,0.7nm,0.3s,baz=318,slow=2.7,SNR=11						
EIL				S	Sn	20 00 42.6	-3.7
	comp=N,5.3nm,0.3s,baz=202,slow=4.4,SNR=8.4						
EIL				LR	LR	20 03 40.0	
	comp=N,47nm,19.1s,baz=65,slow=44						
	comp=N,2.1nm,0.4s						
EIL	Elat	9.07	118	Pn	Pn	19 59 07.4	+3.3
ASF	Jabal al Asfar	9.57	100	S	Sn	20 00 56.9	-1.8
	comp=N,1.2nm,0.3s,baz=40,slow=18,SNR=1.6						
KBZ	Khabaz	16.28	50	P	P	20 00 48.4	+3.6
	comp=N,2.5nm,0.9s,baz=235,slow=14,SNR=6.5						
AKASG	Malin Array Be	16.58	8	P	Pn	20 00 46.8	+1.3
	comp=N,0.9nm,0.3s,baz=200,slow=11,SNR=6.7						
	comp=N,0.3nm,0.3s						
GERES	GERESS Array B	17.07	332	P	Pn	20 00 52.1	+0.4
	comp=N,0.1nm,0.3s,baz=138,slow=14,SNR=5.3						
	comp=N,0.6nm,0.7s						
FINES	FINESS Array B	27.16	0	P	P	20 02 34.1	-2.1
	comp=N,0.7nm,0.6s,baz=157,slow=12,SNR=4.1						
	comp=N,0.7nm,0.6s						
EKA	Eskdalemuir Ar	29.02	325	P	P	20 02 51.4	-1.6
	comp=N,0.4nm,0.5s,baz=118,slow=9.9,SNR=2.9						
	comp=N,0.4nm,0.5s						
TORD	Torodi Ar. Bea	30.33	232	P	P	20 03 05.9	+0.9
	comp=N,0.6nm,0.5s,baz=38,slow=7.8,SNR=10						
	comp=N,0.6nm,0.5s						
ARCES	ARCESS Array B	35.28	360	P	P	20 03 44.9	-2.8
	comp=N,0.6nm,0.7s,baz=184,slow=7.2,SNR=3.9						
	comp=N,0.6nm,0.7s						
MKAR	Makanchi Array	43.84	56	P	P	20 05 00.8	+1.5
	comp=N,0.5nm,0.5s,baz=272,slow=6.9,SNR=11						
	comp=N,0.5nm,0.5s						

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*IDC **29** 20:23:47.1±1.0, 3°.47S×144°.75E, h0^{km}, mb4.1/10, mbtmp4.2/13, ML3.4/2, MS3.9/48, Error ellipse: s-maj=27.1km s-min=16.5km az=81.0*
*NEIC **29** 20:23:52.4±1.0, 3°.56S±0°.09×144°.6E±0°.1, h29^{km}±7^{km}, mb4.4/15, Error ellipse: s-maj=18.5km s-min=11.6km az=118.0*
*GCMT **29** 20:23:53.4±0.3, 3°.34S±0°.01×144°.74E±0°.02, h22^{km}±1^{km}, MW4.8/98, Moment Tensor Solution. s23,c25; s98,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24±.14; $M_{\theta\theta}$0.01±.10; $M_{\phi\phi}$0.23±.12; $M_{r\theta}$-0.44±.18; $M_{\theta\phi}$2.26±.08; $M_{\phi r}$0.16±.16; Best double couple: $M_0$2.31600×10^{16} NP1:ϕ_s179.00000°, δ78.00000°, λ-174.00000°. NP2: ϕ_s88.00000°, δ84.00000°, λ-12.00000°. Principal axes: T 2.3970, Plg4.0000°, Azm134.0000°; N -0.1610, Plg77.0000°, Azm243.0000°; P -2.2360, Plg12.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **29** 20:23:53.1±0.8, 4°S±4°×14°5E±°, h35^{km}±8^{km}, M4.6/22, mB5.2/9, mb4.8/22, MLv4.6/4, Mw(mB)4.6/9*
ISC 29 20:23:51.8±0.6, **3°.57S**±0°.07×**144°.62E**±0°.08, **h26**^{km}, **n112**, σ**1^{s}.33**/63, **mb4.5**/23, **MS4.0**/47, **1C, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.13	61		Pn	20 24 39.6	0.0
SMPI	Sarmi	6.10	285	P	Pn	20 25 20.5	+0.1
	0.2nm40nm,0.8s						
PMG	Port Moresby	6.33	157	Pn	Pn	20 25 23.7	+0.2
	6.0nm,0.3s,baz=358,slow=7.1,SNR=21						
PMG				Sn	Sn	20 26 34.4	-0.6
	1.1nm,0.3s,baz=307,slow=20,SNR=1.8						
PMG				LR	LR	20 28 17.9	
	comp=Z,3μm,20.3s,baz=326,slow=42						
	48nm,0.6s						
PMG	Port Moresby	6.33	157	Pn	Pn	20 25 23.2	-0.3
PMG	Port Moresby	6.33	157	P	Pn	20 25 24.5	+1.0
PMG	Port Moresby	6.33	157	P	Pn	20 25 25.0	+1.5
KRVT	Keravat (AS076	7.43	96	LR	LR	20 27 50.9	
	comp=Z,861nm,20.0s,baz=55,slow=33						
SIJI	Sorong	13.61	281	Pn	Pn	20 27 03.8	+0.4
	8.4nm,0.8s,baz=162,slow=11,SNR=1.0						
SIJI				LR	LR	20 33 21.2	
	comp=Z,453nm,18.1s,baz=49,slow=42						
KDU	Kakadu	15.04	232	P	Pn	20 27 22.7	-0.2
MTN	Manton Dam	16.21	235	P	Pn	20 27 38.0	+0.1
MTN	Manton Dam	16.21	235	P	P	20 27 39.8	-1.1
HNR	Honiara	16.30	112	LR	LR	20 32 47.5	
	comp=Z,310nm,22.0s,baz=270,slow=33						
AAI	Ambon	16.39	269	P	Pn	20 27 36.2	-4.1
CTA	Charters Tower	16.50	175	LR	LR	20 34 15.5	
	comp=Z,465nm,21.2s,baz=356,slow=38						
LBMI	Labuha	17.35	279	P	P	20 27 53.5	-0.1
	2μm30nm,1.4s						
SANI	Sanana	18.67	274	P	Pn	20 28 09.1	+0.5
	22nm,0.9s						
SANI	Sanana	18.67	274	P	Pn	20 28 14.8	+6.2
WB0	Warramunga Arr	18.94	211		P	20 28 10.4	-0.7
WB0				IAmb	IAmb	20 28 32.9	
	comp=Z,27nm,1.2s						
WR0	Warramunga Arr	19.03	210	P	P	20 28 11.8	-0.2
WR0				IAmb	IAmb	20 28 27.2	
	comp=Z,17nm,1.0s						
WRAB	Tennant Creek	19.10	211	P	P	20 28 12.5	-0.3
WRAB				IAmb	IAmb	20 28 32.5	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	19.10	211	P	P	20 28 12.8	-0.1
WB2	Warramunga Arr	19.11	211		P	20 28 12.8	-0.2
WB2				IAmb	IAmb	20 28 28.1	
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	19.12	211	P	P	20 28 12.9	-0.2
	comp=Z,0.4nm,0.3s,baz=36,slow=10,SNR=17						
WRA				LR	LR	20 36 55.2	
	comp=Z,976nm,18.1s,baz=358,slow=41						
	comp=Z,4.8nm,0.9s						
WRA	Warramunga Arr	19.12	211	P	P	20 28 12.8	-0.2
KNRA	Kununurra	19.70	231		P	20 28 19.1	-0.3
KNRA				IAmb	IAmb	20 28 38.1	
	comp=Z,43nm,0.9s						
KNRA	Kununurra	19.70	231	P	P	20 28 19.4	0.0
KMSI	Cibinong	21.03	281	P	P	20 28 34.8	+0.9
	comp=Z,2μmcomp=Z,94nm,0.7s						
SOEI	Soe	21.12	252	P	P	20 28 36.4	+1.4
	comp=Z,87nm,0.9s						
DAV	Davao City (W)	21.74	299	LR	LR	20 37 24.0	
	comp=Z,167nm,18.4s,baz=124,slow=38						
BATI	Baumata	21.81	251	P	P	20 28 42.4	0.0
	comp=Z,48nm,0.5s,baz=146,slow=3.6,SNR=7.7						
BATI				LR	LR	20 39 08.9	
	comp=Z,341nm,19.4s,baz=312,slow=42						
	comp=Z,48nm,0.5s						
BATI	Baumata	21.81	251	P	P	20 28 41.9	-0.4
	comp=Z,609nmcomp=Z,55nm,0.9s						
LUWI	Luwuk	21.97	276	P	P	20 28 45.0	+1.0
	comp=Z,64nm,1.2s						
LUWI	Luwuk	21.97	276	P	P	20 28 52.6	+8.6
ASAR	Alice Springs	22.50	206	P	P	20 28 49.5	-0.2
	comp=Z,7.5nm,0.8s,baz=28,slow=14,SNR=59						
	comp=Z,7.5nm,0.8s						
ASAR	Alice Springs	22.50	206	P	P	20 28 48.5	-1.2
EIDS	Eidsvold	22.55	165	P	P	20 28 50.7	+0.6
EIDS	Eidsvold	22.55	165	P	P	20 28 51.1	+1.0
	comp=Z,9.6nm,1.0s						
MMRI	Maumere	22.81	256	P	P	20 28 51.8	-1.2
MMRI				IAmb	IAmb	20 28 56.9	
	comp=Z,25nm,0.7s						
MRSI	Marisa	23.02	280	P	P	20 29 14.9	+20
APSI	Ampana	23.10	276	P	P	20 28 56.0	0.0
	comp=Z,398nmcomp=Z,41nm,1.0s						
RMQ	Roma	23.13	171	P	P	20 28 56.6	+0.4
EDFI	Ende, Flores	23.36	256	P	P	20 28 55.0	-3.7
TOLI2	Tolitoli	24.27	281	P	P	20 29 06.9	-0.4
INKA	Innaminka	24.32	188	P	P	20 29 07.9	+0.4
TTSI	Tana Toraja	24.76	270	P	P	20 29 13.3	+1.6
	comp=Z,1μmcomp=Z,26nm,1.2s						
KAPI	Kappang	24.84	266	P	P	20 29 13.5	+1.2
	comp=Z,6.8nm,0.7s,baz=122,slow=12,SNR=3.9						
	comp=Z,6.8nm,0.7s						
MPSI	Mapaga	25.01	278	P	P	20 29 14.6	+0.7
	comp=Z,19nm,1.0s						
OOD	Oodnadatta	25.55	199	P	P	20 29 18.9	+0.2
WRKA	Warakurna	26.50	215	P	P	20 29 27.1	-0.3
LCRK	Leigh Creek	27.41	192	P	P	20 29 35.7	+0.2
DZM	Mont Dzumac	28.05	133	*e*LR	LR	20 36 45.8	
	comp=Z,536nm,25.2s						
DZM	Mont Dzumac	28.05	133	LR	LR	20 39 32.6	
	comp=Z,183nm,20.4s,baz=306,slow=34						
STKA	Stephens Creek	28.30	185	P	P	20 29 42.9	-0.5
	comp=Z,2.7nm,0.8s,baz=1.4,slow=7.6,SNR=5.5						
STKA				LR	LR	20 41 10.1	
	comp=Z,298nm,18.8s,baz=6.7,slow=37						
	comp=Z,2.7nm,0.8s						
STKA	Stephens Creek	28.30	185	P	P	20 29 42.5	-0.9
MULG	Mulgathing	28.39	199	P	P	20 29 44.2	0.0
MBWA	Marble Bar	29.86	232	P	P	20 29 56.5	-0.9
MBWA				IAmb	IAmb	20 30 23.2	
	comp=Z,11nm,1.2s						
BBOO	Buckleboo	30.18	194	P	P	20 29 59.5	-0.5
BBOO				IAmb	IAmb	20 30 00.2	
	comp=Z,16nm,0.8s						
H11S3	WAKE ISLAND Hy	30.88	44	T	T	21 02 38.3	
	baz=228,slow=76,SNR=3.5						
H11S2	WAKE ISLAND Hy	30.89	44	T	T	21 02 38.0	
	baz=228,slow=76,SNR=3.2						
H11S1	WAKE ISLAND Hy	30.89	44	T	T	21 02 38.2	
	baz=228,slow=76,SNR=2.7						
FORT	Forrest	31.26	208	P	P	20 30 08.2	-1.4
H11N1	WAKE ISLAND Hy	31.85	43	T	T	21 03 40.2	
	baz=225,slow=76,SNR=6.6						
H11N2	WAKE ISLAND Hy	31.87	43	T	T	21 03 42.1	
	baz=225,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	31.87	43	T	T	21 03 35.7	
	baz=225,slow=76,SNR=7.2						
JOW	Kunigami	34.10	333	LR	LR	20 41 39.5	
	comp=Z,330nm,20.1s,baz=258,slow=32						
LEM	Lembang	36.98	263	LR	LR	20 47 40.5	
	comp=Z,227nm,19.7s,baz=334,slow=39						
NJ2	Nanjing	43.06	327	*e*P	P	20 31 51.3	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	Korea Array	43.66	341	P	P	20 31 53.4	-1.1
	comp=Z,1.6nm,1.0s,baz=152,slow=11,SNR=2.2						
KSRS				LR	LR	20 47 04.0	
	comp=Z,218nm,21.9s,baz=155,slow=32						
	comp=Z,1.6nm,1.0s						
WHN	Wuhan	44.56	322	⇑P	P	20 32 08.8	+7.0
URZ	Urewera	45.51	144	LR	LR	20 49 45.3	
	comp=Z,99nm,18.6s,baz=31,slow=34						
PSI	Prapat	46.10	277	LR	LR	20 54 38.2	
	comp=Z,384nm,18.0s,baz=269,slow=40						
RPZ	Rata Peaks	46.32	153	LR	LR	20 49 39.1	
	comp=Z,305nm,21.6s,baz=304,slow=34						
ASAJ	Asahikawa	47.50	358	LR	LR	20 50 30.4	
	comp=Z,49nm,21.4s,baz=173,slow=34						
CMAR	Chiang Mai Arr	50.02	298	P	P	20 32 45.2	+0.6
	comp=Z,0.8nm,0.4s,baz=110,slow=6.0,SNR=8.1						
CMAR				LR	LR	20 51 48.6	
	comp=Z,35nm,21.1s,baz=175,slow=34						
	comp=Z,0.8nm,0.4s						
KLR	Kul'dur	53.76	350	LR	LR	20 54 14.5	
	comp=Z,83nm,18.9s,baz=190,slow=34						
LZH	Lanzhou	54.83	320	*e*P	P	20 33 21.5	+1.3
LZH				pP	pP	20 33 29.3	+1.4
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				LR	LR		
	comp=N,190nm,11.2s						
LZH				LR	LR		
	comp=E,150nm,14.3s						
LZH				LR	LR		
	comp=Z,170nm,15.1s						
RAR	Rarotonga	56.75	113	LR	LR	20 54 56.3	
	comp=Z,28nm,21.9s,baz=273,slow=33						
PETK	Petropavlovsk-	57.53	9	LR	LR	20 54 23.6	
	comp=Z,61nm,22.0s,baz=197,slow=32						
GTA	Gaotai	59.37	321	*e*P	P	20 33 52.0	-0.2
GTA				pP	pP	20 33 57.0	-2.9
GTA				sP	sP	20 34 00.5	-2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,37nm,5.1s						
GTA				LR	LR		
	comp=N,91nm,17.5s						
GTA				LR	LR		
	comp=E,92nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
SONM	Songino Array	61.14	332	LR	LR	20 58 56.4	
	comp=Z,178nm,21.1s,baz=160,slow=34						
SHEM	Shemya Is, Ala	61.36	20	LR	LR	20 56 05.5	
	comp=Z,140nm,20.3s,baz=149,slow=32						
PPT	Papeete	65.88	108	LR	LR	20 59 26.2	
	comp=Z,32nm,20.3s,baz=168,slow=32						
PPT2	Papeete2	65.88	108	*e*P	P	20 34 36.0	0.0
	comp=Z,83nm,36.5s						
PPT2	Papeete2	65.88	108	*e*LR	LR	20 54 38.5	
	comp=Z,98nm,26.0s						
YAK	Yakutsk	66.41	352	LR	LR	21 02 49.1	
	comp=Z,87nm,18.9s,baz=267,slow=35						
TBI	Tubuai	66.51	114	*e*LR	LR	20 55 04.0	
	comp=Z,141nm,41.2s						
MKAR	Makanchi Array	74.12	321	P	P	20 35 24.3	-1.7
	comp=Z,1.5nm,1.0s,baz=95,slow=7.2,SNR=9.3						
MKAR				LR	LR	21 08 21.2	
	comp=Z,78nm,20.4s,baz=136,slow=36						
	comp=Z,1.5nm,1.0s						
MKAR	Makanchi Array	74.12	321	P	P	20 35 25.2	-0.8
VNDA	Vanda	74.47	176	P	P	20 35 28.8	+1.3
	comp=Z,0.7nm,0.8s,baz=299,slow=2.2,SNR=4.2						
VNDA				LR	LR	21 05 57.9	
	comp=Z,114nm,19.4s,baz=340,slow=34						
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	74.47	176	P	P	20 35 27.8	+0.3
VNDA				IAmb	IAmb	20 35 37.1	

	comp=Z,3.5nm,1.1s						
TAOE	Nuku Hiva Isla	74.88	98	*e*LR	LR	20 58 31.2	
	comp=Z,1µm,57.8s						
ZALV	Zalesovo Beam	75.70	328	P	P	20 35 34.5	-0.4
	comp=Z,0.7nm,0.6s,baz=106,slow=3.1,SNR=2.4						
ZALV				LR	LR	21 06 57.4	
	comp=Z,175nm,21.7s,baz=120,slow=34						
	comp=Z,0.7nm,0.6s						
AAK	Ala-Archa	77.95	315	LR	LR	21 10 36.1	
	comp=Z,92nm,20.3s,baz=145,slow=36						
KDAK	Kodiak Island	78.92	29	LR	LR	21 05 59.1	
	comp=Z,59nm,19.8s,baz=274,slow=32						
NRIK	Noril'sk	82.25	343	LR	LR	21 13 13.5	
	comp=Z,101nm,19.9s,baz=150,slow=36						
MAW	Mawson	83.57	202	LR	LR	21 09 52.6	
	comp=Z,87nm,21.6s,baz=46,slow=33						
ILAR	Eielson Array	84.20	24	P	P	20 36 19.4	-1.4
	comp=Z,0.7nm,0.7s,baz=235,slow=4.3,SNR=5.9						
ILAR				LR	LR	21 08 00.9	
	comp=Z,55nm,21.9s,baz=272,slow=32						
	comp=Z,0.7nm,0.7s						
QSPA	South Pole Qui	86.38	180	LR	LR	21 15 58.1	
	comp=Z,123nm,18.0s,baz=2.0,slow=36						
GEYT	Alibeck	89.41	308	LR	LR	21 18 09.5	
	comp=Z,49nm,21.2s,baz=154,slow=36						
INK	Inuvik	90.28	22	LR	LR	21 16 03.3	
	comp=Z,69nm,18.6s,baz=234,slow=35						
AKTO	Aktyubinsk	90.55	320	LR	LR	21 18 53.6	
	comp=Z,41nm,19.2s,baz=122,slow=36						
DLBC	Dease Lake	90.58	32	LR	LR	21 10 43.8	
	comp=Z,50nm,20.3s,baz=277,slow=31						
ARU	Arti	90.76	326	LR	LR	21 18 32.1	
	comp=Z,74nm,20.2s,baz=107,slow=36						
BBB	Bella Bella	91.11	38	LR	LR	21 08 18.3	
	comp=Z,53nm,21.9s,baz=312,slow=29						
YBH	Yreka Blue Hor	94.35	49	LR	LR	21 11 01.2	
	comp=Z,78nm,21.4s,baz=280,slow=30						
KIRV	Kirov	95.74	328	LR	LR	21 20 42.6	
	comp=Z,104nm,20.9s,baz=105,slow=36						
NVAR	Mina Array Bea	97.75	52	LR	LR	21 12 20.1	
	comp=Z,85nm,21.8s,baz=274,slow=30						
YKA	Yellowknife Ar	98.13	27	LR	LR	21 15 57.6	
	comp=Z,45nm,21.9s,baz=308,slow=32						
NEW	Newport	98.15	42	LR	LR	21 14 44.9	
	comp=Z,61nm,19.8s,baz=314,slow=31						
PFO	Pinyon Flats O	99.39	57	LR	LR	21 14 40.8	
	comp=Z,36nm,21.4s,baz=219,slow=31						
GNI	Garni	99.84	310	LR	LR	21 25 07.1	
	comp=Z,27nm,21.4s,baz=110,slow=37						
ELK	Elko	100.00	49	LR	LR	21 15 14.5	
	comp=Z,35nm,20.9s,baz=253,slow=31						

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*IDC **29** 20:26:31.6±8.1, 21°.53S×178°.74W, h586^{km}±77^{km}, mb2.9/5, mbtmp3.9/5, Error ellipse: s-maj=188.2km s-min=34.9km az=157.0*

ISC 29 20:26:27.3±3.2, **22°S**±1°×**178°.5W**±0°.5, **h550**^{km}**, n10,** σ**1^{s}.18**/9, **mb3.5**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	32.90	266	P	P	20 32 17.6	+0.9
	1.3nm,0.4s,baz=86,slow=11,SNR=1.4						
	1.3nm,0.4s						
WRA	Warramunga Arr	43.96	263	P	P	20 33 46.3	0.0
	0.5nm,0.3s,baz=92,slow=5.7,SNR=1.5						
	0.5nm,0.3s						
NVAR	Mina Array Bea	82.25	43	P	P	20 37 53.0	+1.4
	0.4nm,0.4s,baz=214,slow=4.4,SNR=1.7						
	0.4nm,0.4s						
ILAR	Eielson Array	89.61	13	P	P	20 38 25.6	-0.5
	0.3nm,0.5s,baz=223,slow=5.8,SNR=2.0						
	0.3nm,0.5s						
PDAR	Pinedale Array	90.18	43	P	P	20 38 30.6	+1.0
	0.4nm,0.7s,baz=234,slow=3.1,SNR=4.6						
	0.4nm,0.7s						
ARCES	ARCESS Array B	130.03	349	PKP	PKiKP	20 44 34.0	-1.0
	2.0nm,0.9s,baz=18,slow=3.1,SNR=4.2						
FINES	FINESS Array B	136.80	343	PKP	PKPdf	20 44 46.3	-0.7
	0.6nm,0.7s,baz=251,slow=2.5,SNR=4.5						
AKASG	Malin Array Be	143.83	330	PKP	PKPab	20 44 58.2	-0.9
	1.6nm,0.4s,baz=43,slow=4.3,SNR=13						
BRTR	Keskin Array B	147.28	311	PKPbc	PKiKP	20 45 09.6	-1.7
	0.7nm,0.6s,baz=81,slow=3.6,SNR=4.7						
GERES	GERESS Array B	151.23	343	PKPbc	PKiKP	20 45 19.4	+0.2
	0.2nm,0.4s,baz=31,slow=3.4,SNR=5.4						

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*IDC **29** 20:26:36.4±2.3, 7°.31S×129°.33E, h142^{km}±27^{km}, mb3.0/1, mbtmp3.9/5, Error ellipse: s-maj=27.4km s-min=21.5km az=125.0*

ISC 29 20:26:35.6±1.0, **7°.33S**±0°.07×**129°.5E**±0°.1, **h150**^{km}**, n5,** σ**2^{s}.71**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.41	243	P	Pn	20 28 08.9	+1.1
	12nm,0.4s,baz=220,slow=1.5,SNR=13						
BATI				S	Sn	20 29 17.6	-2.4
	26nm,0.5s,baz=40,slow=22,SNR=8.9						
SIJI	Sorong	6.66	16	P	Pn	20 28 12.4	+1.1
	2.2nm,0.3s,baz=124,slow=15,SNR=1.1						
SIJI				S	Sn	20 29 23.0	-3.2
	11nm,0.2s,baz=231,slow=23,SNR=7.7						
WRA	Warramunga Arr	13.40	160	P	Pn	20 29 40.2	+0.2
	1.5nm,0.3s,baz=336,slow=13,SNR=14						
WRA				S	Sn	20 32 00.8	-7.7
	4.5nm,0.6s,baz=330,slow=22,SNR=9.4						
ASAR	Alice Springs	16.79	166	P	Pn	20 30 24.9	+2.7
	2.2nm,0.5s,baz=336,slow=9.2,SNR=19						
ASAR				S	S	20 33 25.9	-3.1
	0.5nm,0.4s,baz=342,slow=24,SNR=5.6						
MKAR	Makanchi Array	68.21	327	P	P	20 37 20.8	+0.8
	0.3nm,0.6s,baz=120,slow=6.6,SNR=4.3						
	0.3nm,0.6s						

IDC 29 20:57:37.0±4.4, **48°.17N×153°.82E, h172**^{km}±38^{km}, **mb2.8**/2, **mbtmp3.6**/5, **MS2.7**/1, **Error ellipse: s-maj=96.9km s-min=17.9km az=144.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.52	25	P	Pn	20 58 57.2	-0.3
	1.8nm,0.5s,baz=198,slow=9.1,SNR=13						
ASAJ	Asahikawa	8.78	247	P	Pn	20 59 41.3	+0.7
	10nm,0.6s,baz=81,slow=13,SNR=14						
KLR	Kul'dur	14.61	282	P	Pn	21 00 54.7	-0.7
	1.0nm,0.5s,baz=75,slow=11,SNR=9.5						
KSRS	Korea Array	21.71	250	P	P	21 02 14.4	+0.1
	0.7nm,0.5s,baz=48,slow=11,SNR=4.2						
	0.7nm,0.5s						
JCJ	Chichijima	22.92	207	LR	LR	21 11 59.1	
	comp=Z,20nm,19.8s,baz=152,slow=38						
ILAR	Eielson Array	35.14	40	P	P	21 04 13.8	+0.1
	0.3nm,0.8s,baz=260,slow=5.9,SNR=6.6						
	0.3nm,0.8s						

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*MAN **29** 21:03:44.1, 9°.90N×122°.20E, h17^{km}, mb4.3, ML3.1, MS2.9, Hypocentre not reviewed by the ISC*

ISC 29 21:03:45.0±1.1, **10°.01N**±0°.06×**122°.27E**±0°.06, **h27**^{km}**, n7,** σ**1^{s}.83**/12, **3C-3D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	0.41	117	⇑*e*P	Pb	21 03 53.5	-0.2
CNOP				*e*S	Sb	21 03 59.4	-0.3
SNPH	Sibulan	1.16	125	⇓*i*P	Pn	21 04 05.2	-0.2
SNPH				*i* S	Sb	21 04 21.1	0.0
TBP	Tagbilaran	1.60	101	*e*P	Pn	21 04 11.8	+0.4
RCP	Roxas	1.61	17	⇑*e*P	Pb	21 04 13.4	-0.6
RCP				*e*S	Sb	21 04 36.3	+2.5
PAGZ	Pagadian	2.41	153	⇓*e*P	Pn	21 04 25.7	+3.0
MSLP	Maasin	2.55	87	⇑*e*P	Pb	21 04 27.1	-2.9
MSLP				*e*S	Sn	21 04 55.9	+1.2
ENPP	El Nido	3.04	293	⇓*e*P	Pn	21 04 31.9	+0.6
ENPP				*e*S	Sn	21 05 04.8	-2.1

IDC 29 21:11:11.9±4.2, **48°.19N×155°.35E, h0**^{km}, **mb3.4**/3, **mbtmp3.4**/3, **MS2.9**/2, **Error ellipse: s-maj=138.9km s-min=33.6km az=175.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.15	16	LR	LR	21 14 42.7	
	comp=Z,35nm,19.1s,baz=306,slow=41						
ILAR	Eielson Array	34.47	40	P	P	21 18 00.8	-0.1
	0.1nm,0.4s,baz=248,slow=7.9,SNR=4.7						
	0.1nm,0.4s						
MKAR	Makanchi Array	47.63	297	P	P	21 19 49.4	-0.1
	0.6nm,0.7s,baz=58,slow=9.7,SNR=6.7						
	0.6nm,0.7s						
YKA	Yellowknife Ar	48.86	38	LR	LR	21 41 41.7	
	comp=Z,42nm,19.8s,baz=346,slow=37						
NVAR	Mina Array Bea	60.43	64	P	P	21 21 23.3	0.0
	0.3nm,0.5s,baz=284,slow=7.4,SNR=4.1						
	0.3nm,0.5s						
PDAR	Pinedale Array	62.67	56	P	P	21 21 42.0	+3.5
	0.2nm,0.4s,baz=316,slow=2.5,SNR=2.7						

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*IDC **29** 21:30:09.7±0.9, 18°.14S×167°.39E, h0^{km}, mb4.2/11, mbtmp4.3/13, ML4.7/2, MS3.1/6, Error ellipse: s-maj=26.8km s-min=19.7km az=121.0*

*NOU **29** 21:30:11.8, 18°.03S×167°.32E, h16^{km}, MLv4.6/14, Vanuatu Islands*

*NEIC **29** 21:30:15.3±2.0, 18°.21S±0°.08×167°.25E±0°.08, h36^{km}±5^{km}, mb4.5/7, Error ellipse: s-maj=11.9km s-min=11.2km az=178.0*

ISC 29 21:30:13.0±0.5, **18°.14S**±0°.06×**167°.34E**±0°.06, **h23**^{km}**, n56,** σ**1^{s}.13**/52, **mb4.3**/13, **MS3.0**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.91	63	P	Pb	21 30 29.1	-1.0
RTV	Rentapao	1.09	72	P	Pn	21 30 32.0	-0.9
LIFNC	LIFOU	2.62	182		Pn	21 30 52.5	-1.4
LIFNC	LIFOU	2.62	182	P	Pn	21 30 54.9	+0.9
MARNC	Mare, Loyalty	3.38	169		Pn	21 31 03.7	-0.8
MARNC				Sn	Sn	21 31 40.0	-3.9
MARNC	Mare, Loyalty	3.38	169	P	Pn	21 31 06.3	+1.9
KOUNC	Koumac, New Ca	3.75	230		Pn	21 31 09.1	-0.4
KOUNC	Koumac, New Ca	3.75	230	P	Pn	21 31 09.7	+0.2
YATNC	Mamie plateau,	3.92	186	P	Pn	21 31 12.0	+0.2
DZM	Mont Dzumac	4.00	192	Pn	Pn	21 31 13.6	+0.6
	17nm,0.3s,baz=288,slow=8.2,SNR=136						
DZM				Sn	Sn	21 31 57.3	-1.9
	17nm,0.3s,baz=331,slow=23,SNR=14						
DZM				LR	LR	21 32 02.2	
	comp=Z,59nm,21.1s,baz=0.5,slow=28						
	34nm,0.3s						
DZM	Mont Dzumac	4.00	192	P	Pn	21 31 14.6	+1.6
NOUC	Port Laguerre	4.06	194	P	Pn	21 31 14.7	+1.0
OUENC	Ouen Island, N	4.28	186		Pn	21 31 17.5	+0.7
PINNC	Pines Island,	4.45	179		Pn	21 31 20.1	+1.0
MSVF	Nonsavu	10.20	89	Pn	Pn	21 32 42.8	+4.6
	0.3nm,0.3s,baz=244,slow=9.1,SNR=10.0						
MSVF				LR	LR	21 36 13.0	
	comp=Z,278nm,19.9s,baz=175,slow=36						
MSVF	Nonsavu	10.20	89		Pn	21 32 40.5	+2.3
HNR	Honiara	11.25	319	Pn	Pn	21 32 51.3	-1.1
	14nm,0.3s,baz=231,slow=1.2,SNR=15						
	144nm,0.6s						
HNR	Honiara	11.25	319		Pn	21 32 51.6	-0.8
CTA	Charters Tower	20.02	261	P	Pn	21 34 45.6	-0.6
	7.4nm,0.8s,baz=84,slow=12,SNR=13						
	7.4nm,0.8s						
AFI	Afiamalu	20.50	81	LR	LR	21 42 05.1	
	comp=Z,40nm,20.9s,baz=142,slow=35						
STKA	Stephens Creek	26.96	235	P	P	21 35 54.5	+1.6
	9.9nm,0.8s,baz=61,slow=9.1,SNR=16						
	9.9nm,0.8s						
STKA	Stephens Creek	26.96	235	P	P	21 35 53.7	+0.8
RAR	Rarotonga	31.09	101	LR	LR	21 48 16.4	
	comp=Z,25nm,18.9s,baz=234,slow=35						
WB2	Warramunga Arr	31.21	261	P	P	21 36 30.7	-0.2
WB2				IAmb	IAmb	21 36 41.9	
	comp=Z,5.6nm,1.2s						
WRA	Warramunga Arr	31.22	261	P	P	21 36 31.2	+0.2
	comp=Z,1.4nm,1.1s,baz=90,slow=9.3,SNR=6.6						
	comp=Z,1.4nm,1.1s						
BBOO	Buckleboo	31.65	236	P	P	21 36 35.3	+0.7
BBOO				IAmb	IAmb	21 36 41.3	
	comp=Z,24nm,1.2s						
ASAR	Alice Springs	31.67	254	P	P	21 36 34.5	-0.4
	comp=Z,2.4nm,0.6s,baz=82,slow=8.6,SNR=37						
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	31.67	254	P	P	21 36 33.9	-1.1
KNRA	Kununurra	36.95	268	P	P	21 37 20.1	-0.6
KNRA				IAmb	IAmb	21 37 29.2	
	comp=Z,16nm,1.4s						
FORT	Forrest	37.71	243	P	P	21 37 25.6	-1.4
GUMO	Guam	38.54	323	LR	LR	21 54 22.4	
	comp=Z,22nm,18.3s,baz=131,slow=38						
PPT	Papeete	40.94	96	LR	LR	21 51 34.3	
	comp=Z,83nm,21.3s,baz=176,slow=31						
VNDA	Vanda	59.47	181	P	P	21 40 12.8	-0.8
	comp=Z,0.3nm,0.5s,baz=15,slow=4.8,SNR=2.0						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	59.47	181	P	P	21 40 13.5	-0.2
VNDA				IAmb	IAmb	21 40 36.4	
	comp=Z,2.2nm,1.1s						
CMAR	Chiang Mai Arr	76.41	295	P	P	21 42 02.5	+1.3
	comp=Z,1.1nm,0.3s,baz=134,slow=3.9,SNR=5.9						
	comp=Z,1.1nm,0.3s						
MAW	Mawson	78.77	202	P	P	21 42 13.4	0.0
	comp=Z,1.8nm,1.0s,baz=58,slow=9.5,SNR=2.6						
	comp=Z,1.8nm,1.0s						
SONM	Songino Array	85.27	324	P	P	21 42 48.3	+0.3
	comp=Z,0.9nm,0.6s,baz=134,slow=5.6,SNR=7.9						
	comp=Z,0.9nm,0.6s						
NVAR	Mina Array Bea	89.44	49	P	P	21 43 10.3	+1.8
	comp=Z,1.4nm,0.8s,baz=226,slow=8.1,SNR=5.0						
	comp=Z,1.4nm,0.8s						
NVAR	Mina Array Bea	89.44	49	P	P	21 43 08.7	+0.2
TROLL	Troll, Antarti	89.48	185	P	P	21 43 09.0	+0.9
ILAR	Eielson Array	89.74	18	P	P	21 43 07.8	-1.1
	comp=Z,1.6nm,0.7s,baz=236,slow=5.4,SNR=27						
	comp=Z,1.6nm,0.7s						
ILAR	Eielson Array	89.74	18	P	P	21 43 08.4	-0.6
POKR	Poker Plat Res	89.83	17	P	P	21 43 10.3	+0.9
POKR				IAmb	IAmb	21 43 12.3	
	comp=Z,1.9nm,0.7s						
SNAA	Sanae	90.16	183	P	P	21 43 11.8	+0.6
VNA3	Neumayer Olymp	90.82	181	P	P	21 43 14.6	+0.5
VNA2	Neumayer--Watz	91.09	182	P	P	21 43 16.1	+0.7
	baz=167,slow=4.4						
MKAR	Makanchi Array	99.70	316	P	Pdif	21 43 54.0	-1.0
	comp=Z,0.3nm,0.7s,baz=69,slow=7.1,SNR=3.8						
	comp=Z,0.3nm,0.7s						
BRTR	Keskin Array B	134.72	308	PKP	PKiKP	21 49 30.5	-1.2
	comp=Z,0.4nm,0.7s,baz=146,slow=2.8,SNR=2.3						
ABTA	Abfaltersbach	144.74	330	*e*P	PKPdf	21 49 47.1	-1.0
	comp=Z,9.3nm,1.3s						
MOTA	Moosalm	144.96	331	*i* P	PKPdf	21 49 48.2	-0.4
	comp=Z,5.4nm,0.9s						
SQTA	Sankt Quirin	145.00	331	*e*P	PKPdf	21 49 48.5	-0.1
	comp=Z,6.0nm,0.8s						
FETA	Feichten	145.37	331	*e*P	PKPab	21 49 50.1	+0.7
	comp=Z,8.1nm,0.8s						
DAVA	Damuels	145.55	333	*i* P	PKPab	21 49 50.5	+0.5
	comp=Z,7.9nm,0.7s						
DAVOX	Davos/Dischmat	145.94	332	PKPbc	PKPab	21 49 52.0	+0.6
	comp=Z,4.0nm,0.6s,baz=91,slow=3.7,SNR=10						
ESDC	Sonseca Array	157.26	342	PKPab	PKPab	21 50 39.0	+0.7
	comp=Z,0.7nm,0.9s,baz=357,slow=2.7,SNR=4.2						
TORD	Torodi Ar. Bea	165.31	252	PKP	PKPdf	21 50 16.2	-0.3
	comp=Z,0.5nm,0.9s,baz=90,slow=2.9,SNR=3.5						

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*TAP **29** 22:09:01.4, 23°.12N×121°.35E, h18^{km}, ML4.0, B*

*JMA **29** 22:09:02.1±0.5, 23°N±2°×12°2E±°, h5^{km}, MV3.2/10, TAIWAN REGION*

ISC 29 22:09:00.9±0.9, **23°.08N**±0°.02×**121°.41E**±0°.02, **h18**^{km}±2^{km}, **n73,** σ**0^{s}.95**/134, **25C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.05	297	⇑*i*P	Pg	22 09 05.0	+0.9
	baz=141						
CHKT				S	Sg	22 09 07.9	+1.5
	baz=141						
EDH	Donghe	0.14	223	⇑*i*P	Pg	22 09 05.9	+0.9
	baz=197						
EDH				*i* S	Sg	22 09 09.4	+1.5
	baz=197						
FULB	Fuli	0.16	318	⇓*i*P	Pb	22 09 05.5	+0.7
	baz=325						
FULB				S	Sg	22 09 08.9	+0.5
	baz=325						
ECS	Chishang	0.18	276	P	Pg	22 09 06.2	+0.6
	baz=258						
ECS				*e*S	Sg	22 09 10.0	+1.3
	baz=258						
TWF1	Yuli	0.29	339	P	Pg	22 09 07.6	+0.3
	baz=349						
TWF1				*e*S	Sb	22 09 12.1	0.0
	baz=349						
LONT	Longtian	0.31	237	⇑*i*P	Pg	22 09 08.1	+0.5
	baz=224						
LONT				*e*S	Sb	22 09 13.4	+0.7
	baz=224						
YULB	Yu-li	0.33	342	⇑*i*P	Pg	22 09 08.0	0.0
	baz=349						
YULB				*e*S	Sg	22 09 12.2	-0.6
	baz=349						
ELDTW	Lidau	0.38	287	⇑*i*P	Pg	22 09 08.2	-0.7
	baz=282						
ELDTW				S	Sg	22 09 12.8	-1.4
	baz=282						
TWGBT	Beinan	0.40	230	⇑*i*P	Pg	22 09 09.3	+0.2
	baz=220						
TWGBT				S	Sg	22 09 15.3	+0.5
	baz=220						
TTN	Taitung	0.40	217	P	Pb	22 09 10.2	+0.7
	baz=206						
TTN				*e*S	Sn	22 09 17.9	-1.0
	baz=206						
TWG	Pinlang	0.40	231	⇑P	Pg	22 09 09.4	+0.1
	baz=220						
TWG				*e*S	Sg	22 09 15.3	+0.4
	baz=220						
LDUT	Ludao	0.41	172	⇓*i*P	Pb	22 09 10.4	+0.8
	baz=166						
LDUT				*e*S	Sn	22 09 17.6	-1.4
	baz=166						
HGSD	Ruisui	0.41	2	*i* P	Pg	22 09 09.9	+0.5
	baz=10.0						
HGSD				*e*S	Sn	22 09 17.9	-1.3
	baz=10.0						
EHY	Hungye	0.43	349	*i* P	Pg	22 09 09.7	-0.1
	baz=357						
EHY				*i* S	Sb	22 09 16.7	+0.4
	baz=357						
EGFH	Guangfu	0.59	1	*e*P	Pb	22 09 12.0	-0.6
	baz=7.0						
YUS	Yu-Shan	0.59	314	P	Pb	22 09 12.3	-0.7
	baz=315						
YUS				*e*S	Sb	22 09 19.2	-1.9
	baz=315						
STYH	Taoyuan	0.59	279	⇑*i*P	Pb	22 09 11.8	-0.9
	baz=276						
STYH				S	Sb	22 09 19.1	-1.6
	baz=276						
STYT	Tauyuan	0.61	278	⇑P	Pb	22 09 12.3	-0.7
	baz=274						
STYT				*e*S	Sb	22 09 19.9	-1.3
	baz=274						
ECL	Taimali	0.64	222	P	Pb	22 09 12.6	-0.9
	baz=215						
ECL				*e*S	Sb	22 09 21.3	-0.7
	baz=215						
TEGC	Jichi Village	0.64	11	*e*P	Pg	22 09 14.2	+0.7
	baz=17						
ALS	Alishan	0.70	308	⇑P	Pb	22 09 14.6	-0.3
	baz=308						
ALS				*e*S	Sb	22 09 23.6	-0.7
	baz=308						
SLGT	Liugui	0.71	263	*e*P	Pb	22 09 14.8	0.0
	baz=259						
SLGT				*e*S	Sb	22 09 23.8	-0.4
	baz=259						
VWDT	VWDT	0.72	340	⇑*e*P	Pb	22 09 14.6	-0.2
	baz=343						
VWDT				*e*S	Sb	22 09 23.5	-0.9
	baz=343						
ESL	Shilin	0.73	2	⇑*e*P	Pb	22 09 14.2	-1.0
	baz=7.0						
ESL				*e*S	Sb	22 09 24.0	-0.9
	baz=7.0						
TPUB	Ta-pu	0.75	287	⇑*e*P	Pb	22 09 15.5	0.0
	baz=285						
TPUB				*e*S	Sb	22 09 25.7	+0.2
	baz=285						
WTP	Ta-pu	0.75	283	⇑*e*P	Pb	22 09 15.3	-0.2
	baz=280						
WTP				*e*S	Sb	22 09 25.6	+0.2
	baz=280						
SSD	Sandimen	0.79	245	⇑*e*P	Pb	22 09 15.3	-0.9
	baz=240						
SSD				*e*S	Sb	22 09 24.7	-1.8
	baz=240						
TSMG	Majia	0.80	242	⇑*e*P	Pb	22 09 15.4	-0.8
	baz=238						
TSMG				*e*S	Sb	22 09 24.7	-2.0
	baz=238						
TEYL	Yanliau Villag	0.81	12	*e*P	Pg	22 09 17.4	+0.7
	baz=16						
TEYL				*e*S	Sn	22 09 29.8	+0.9
	baz=16						
CHN1	Nanshi	0.82	278	⇑*e*P	Pb	22 09 16.9	+0.2
	baz=275						
CHN1				*e*S	Sg	22 09 28.7	+0.9
	baz=275						
SSLB	Suanglung	0.82	329	*e*P	Pb	22 09 16.2	-0.5
	baz=331						
SSLB				*e*S	Sb	22 09 26.1	-1.4
	baz=331						
CHN5	Tsauling	0.85	308	*e*P	Pb	22 09 17.5	+0.3
	baz=307						
CHN5				*e*S	Sb	22 09 28.1	-0.2
	baz=307						
SNST	Tainan City	0.85	280	⇑*e*P	Pb	22 09 17.3	+0.1
	baz=277						
SNST				*e*S	Sg	22 09 29.4	+0.6
	baz=277						
MASBT	Mashibuluo	0.85	237	⇑*i*P	Pb	22 09 16.6	-0.6
	baz=233						
MASBT				S	Sb	22 09 26.6	-1.7
	baz=233						
EAST	Anshuo	0.86	217	*e*P	Pb	22 09 16.4	-1.0
	baz=212						
EAST				*e*S	Sb	22 09 26.4	-2.3
	baz=212						
SCST	Cishan	0.87	257	⇑*e*P	Pb	22 09 17.9	+0.5
	baz=254						
SCST				*e*S	Sg	22 09 29.9	+0.6
	baz=254						
TWK	Hsinying	0.87	283	⇑*e*P	Pb	22 09 17.5	0.0
	baz=280						
TWK				*e*S	Sg	22 09 29.7	+0.3
	baz=280						
ETM	Tongmen	0.89	5	*e*P	Pb	22 09 16.6	-1.2
	baz=9.0						
OWD	Renai	0.90	346	⇑*e*P	Pb	22 09 17.2	-0.8
	baz=349						
OWD				*e*S	Sb	22 09 28.3	-1.5
	baz=349						
SMLT	Sun Moon Lake	0.93	330	*e*P	Pb	22 09 18.5	-0.1
	baz=332						
SMLT				*e*S	Sg	22 09 31.8	+0.5
	baz=332						
TWM1	Shoushan	0.95	255	*e*P	Pg	22 09 20.3	+1.0
	baz=251						
TWM1				*e*S	Sn	22 09 34.5	+2.1
	baz=251						
WUSB	Renai	0.95	344	*e*P	Pb	22 09 18.3	-0.6
	baz=346						
WUSB				*e*S	Sb	22 09 30.2	-1.0
	baz=346						
CHN3	Shinhua	0.96	270	*e*P	Pg	22 09 20.1	+0.5
	baz=267						
TYC	Yuchr	0.97	328	*e*P	Pb	22 09 19.4	+0.3
	baz=330						
WJS	Zhushan	0.97	320	*e*P	Pg	22 09 20.2	+0.4
	baz=321						
WJS				*e*S	Sg	22 09 33.8	+1.1
	baz=321						
CHN2	Minshiung	0.97	298	*e*P	Pn	22 09 19.9	+0.2
	baz=297						
CHN2				*e*S	Sg	22 09 34.0	+1.3
	baz=297						
SSPT	Xinbi	0.98	233	*e*P	Pb	22 09 19.3	0.0
	baz=229						
SHHT	Tainan City	0.98	267	*e*P	Pg	22 09 21.2	+1.2
	baz=264						
SHHT				*e*S	Sg	22 09 36.0	+3.0
	baz=264						
WGK	Gukeng	0.99	308	*e*P	Pn	22 09 20.2	+0.4
	baz=308						

CHY	Chiayi	1.00	295	eP	Pn	22 09 20.2	+0.1
	baz=294						
CHY				eS	Sg	22 09 34.0	+0.5
	baz=294						
CHGB	Renai	1.00	347	⇑eP	Pb	22 09 19.3	-0.6
	baz=350						
CHGB				eS	Sb	22 09 31.9	-1.0
	baz=350						
WDLH	Douliu	1.01	307	eP	Pn	22 09 20.6	+0.5
	baz=307						
WDLH				eS	Sg	22 09 34.4	+0.7
	baz=307						
TWD	Chiawan	1.01	10	eP	Pb	22 09 18.8	-1.1
	baz=14						
SCZT	Fangliau	1.01	226	⇑P	Pb	22 09 19.4	-0.5
	baz=222						
SLIU	Shizi	1.03	214	eP	Pb	22 09 19.0	-1.2
	baz=210						
LAY	Lan-yu	1.04	173	eP	Pb	22 09 20.3	-0.1
	baz=170						
WHF	Hehuan Shan	1.07	353	eP	Pb	22 09 20.2	-1.0
	baz=356						
WHF				eS	Sb	22 09 34.8	-0.2
	baz=356						
WCS	Beigang Elemen	1.08	335	eP	Pb	22 09 20.9	-0.2
	baz=337						
WCS				eS	Sb	22 09 35.3	+0.5
	baz=337						
ICHU	Yijhu	1.08	285	⇑eP	Pn	22 09 21.6	+0.5
	baz=284						
ICHU				eS	Sg	22 09 36.4	+0.4
	baz=284						
LYUB	Lan-yu	1.08	171	eP	Pn	22 09 20.0	-1.1
	baz=169						
LYUB				eS	Sb	22 09 33.8	-1.1
	baz=169						
NACB	Ninganchiao	1.10	9	eP	Pn	22 09 20.0	-1.5
	baz=12						
NACB				eS	Sn	22 09 36.2	0.0
	baz=12						
ETLH	Xiulin Townshi	1.13	3	eP	Pn	22 09 20.1	-1.7
	baz=6.0						
ETLH				eS	Sb	22 09 35.9	-0.3
	baz=6.0						
TDCB	Techi	1.19	349	eP	Pn	22 09 22.4	-0.5
	baz=351						
LATG	Datong	1.46	4	eP	Pn	22 09 25.7	-0.7
	baz=6.0						
LATG				eS	Sn	22 09 45.0	-0.1
	baz=6.0						
JYNG	Yonagunijimaku	1.96	45	eP	Pn	22 09 33.9	+0.6
JYNG				S	Sn	22 09 56.5	-0.9
YOJ	Yonaguni jima	2.01	46	eP	Pn	22 09 35.1	+1.2
	baz=48						
YOJ				eS	Sn	22 09 59.0	+0.3
	baz=48						
YOJ	Yonaguni jima	2.01	46	P	Pn	22 09 35.2	+1.3
YOJ				S	Sn	22 09 58.7	0.0
HATJ	Hateruma jima	2.40	66	eP	Pn	22 09 40.8	+1.5
HATJ				S	Sn	22 10 08.6	+0.3
IRIF	Iriomote-Funau	2.47	59	P	Pn	22 09 41.4	+1.2
IRIF				eS	Sn	22 10 09.9	0.0
JKRS	Kuro-shima	2.65	64	P	Pn	22 09 44.2	+1.5
JKRS				eS	Sn	22 10 15.1	+0.8
JIJ	Ishigaki jima	2.81	62	P	Pn	22 09 45.8	+0.9
JIJ				S	Sn	22 10 17.7	-0.7
JISG	Ishigakijimahi	3.05	60	P	Pn	22 09 49.1	+0.8
JISG				S	Sn	22 10 23.7	-0.6
JTJ	Tarama	3.39	62	P	Pn	22 09 54.4	+1.5
JTJ				S	Sn	22 10 33.5	+0.8

*IDC **29** 23:05:43.8±0.8, 36°.37N×3°.47E, h0^{km}, mb3.7/14, mbtmp3.8/21, ML3.8/7, MS3.3/10, Error ellipse: s-maj=18.8km s-min=13.6km az=150.0*

*CRAAG **29** 23:05:44.5, 36°.35N×3°.47E, Ml4.1*

*MDD **29** 23:05:46.3±0.4, 36°.30N×3°.55E, h7^{km}±3^{km}, Mb4.5/38, M_mb3.9/38, Error ellipse: s-maj=3.1km s-min=1.6km az=157.0*

*SFS **29** 23:05:46.0, 36°.30N×3°.55W, ML3.9, BOUIRA(ARGELIA)*

*NEIC **29** 23:05:47.1±2.5, 36°.38N±0°.08×3°.48E±0°.06, h10^{km}±1^{km}, mb4.3/30, Error ellipse: s-maj=13.1km s-min=8.6km az=181.0*

*LDG **29** 23:05:48.2±0.2, 36°.19N×3°.52E, h20^{km}, Ml3.7/39, Error ellipse: s-maj=4.2km s-min=2.4km az=156.0*

*CNRM **29** 23:05:53.0, 36°.39N×3°.05E, h53^{km}, ml4.0*

ISC 29 23:05:46.7±0.4**, 36°.40N**±0°.04×**3°.55E**±0°.03**, h18**^{km}**, n250,** σ**2^{s}.02**/313**, mb4.1**/27**, MS3.3**/8**, 33C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.26	201	P	Pg	23 05 49.5	-3.1
ABMS	Boumerdes	0.36	351	P	Pg	23 05 54.1	-0.1
AKET	Djebel Ketaf	0.44	142	P	Pg	23 05 54.7	-1.1
ABA	Alger-Bouzarea	0.58	314	P	Pg	23 05 56.6	-1.6
EBNR	Beni Rached	1.63	267	P	Pn	23 06 15.0	+0.4
ECHA	Ech Chlef	1.78	263	P	Pn	23 06 17.4	+0.9
DFRA	Djebel Bou Aff	1.88	85	P	Pb	23 06 19.7	-0.9
EANR	'Ain N'Sour	2.03	258	P	Pn	23 06 20.3	+0.3
CTEI	Djebel Teioual	2.33	97	P	Pb	23 06 26.9	-1.4
OKGL	Djebel Kef Gue	2.38	262	P	Pn	23 06 25.0	+0.2
CASM	Ain Smara	2.38	92	P	Pb	23 06 27.4	-1.6
OJGS	Djebel Guires	2.44	249	P	Pn	23 06 23.0	-2.7
CKFL	Kef-Lekhel	2.56	89	P	Pn	23 06 28.4	+1.0
OJBR	Djebel Berber	2.72	254	P	Pn	23 06 28.0	-1.6
CMAH	Djebel Manchou	3.13	85	P	Pn	23 06 36.8	+1.7
EIBI	Ibiza	3.15	327	P	Pn	23 06 35.6	+0.2
EIBI				⇑iVmb_V		23 06 36.7	
	2µm,SNR=5.7						
EIBI				S	Sn	23 07 11.6	-1.1
ABSA	Djebel Ababsia	3.17	91	P	Pn	23 06 37.0	+1.2
USTO	Oran	3.39	260	P	Pg	23 06 54.0	+2.4
ETOS	Mallorca	3.42	350	P	Pn	23 06 39.3	+0.2
ETOS				⇑iVmb_V		23 06 40.3	
	1µm,SNR=3.2						
ETOS				S	Sn	23 07 18.8	-0.3
MAHO	Mahon	3.54	9	P	Pn	23 06 40.0	-0.7
MAHO				S	Sn	23 07 19.9	-2.2
ETRV	Los Montesinos	3.80	296	P	Pn	23 06 43.0	-1.4
ETRV				⇑iVmb_V		23 06 44.6	
	325nm,SNR=1.7						
ETRV				S	Sn	23 07 27.6	-1.0
CART	Cartagena	3.83	289	P	Pn	23 06 44.0	-0.7
CART				S	Sn	23 07 27.5	-1.8
CART	Cartagena	3.83	289		Pn	23 06 43.9	-0.9
CART	Cartagena	3.83	289	P	Pn	23 06 44.1	-0.6
AFON	Font Roja	3.96	306	P	Pn	23 06 45.9	-0.8
AFON				⇑iVmb_V		23 06 48.9	
	223nm,SNR=1.2						
AFON				S	Sn	23 07 31.8	-0.9
EMUR	La Murta	4.09	292	P	Pn	23 06 47.9	-0.4
EMUR				⇑iVmb_V		23 06 53.3	
	519nm,SNR=6.6						
EMUR				S	Sn	23 07 33.9	-1.9
ECOL	Islas Columbre	4.16	328	P	Pn	23 06 49.8	+0.5
ECOL				S	Sn	23 07 35.7	-1.7
TLOR	Lorca, Murcia	4.38	288	P	Pn	23 06 51.6	-0.6
TLOR				S	Sn	23 07 40.2	-2.6
EZAR	Zarzadilla de	4.44	291	P	Pn	23 06 53.5	+0.2
EZAR				S	Sn	23 07 42.8	-1.7
ETOB	Tobarra	4.63	300	P	Pn	23 06 55.8	0.0
ETOB				⇑iVmb_V		23 06 59.3	
	728nm,SNR=6.7						
ETOB				S	Sn	23 07 47.2	-1.9
ENIJ	Nijar	4.66	279	P	Pn	23 06 56.1	-0.1
ENIJ				⇑iVmb_V		23 07 03.6	
	364nm,SNR=2.9						
ENIJ				S	Sn	23 07 47.1	-2.7
KEST	Kesra	4.74	96	Pn	Pn	23 06 58.9	+1.5
	2.4nm,0.3s,baz=204,slow=9.0,SNR=43						
KEST				Sn	Sn	23 07 54.5	+2.5
	2.0nm,0.3s,baz=355,slow=21,SNR=2.5						
	37nm,0.7s						
KEST	Kesra	4.74	96		Pn	23 06 58.7	+1.4
ECHE	Chera	4.78	313	P	Pn	23 06 58.2	+0.3
ECHE				⇑iVmb_V		23 07 01.5	
	812nm,SNR=6.3						
ECHE				S	Sn	23 07 50.9	-2.0
EMOS	Mosqueruela	5.07	323	P	Pn	23 07 02.6	+0.8
EMOS				⇑iVmb_V		23 07 02.9	
	857nm,SNR=8.7						
EMOS				S	Sn	23 07 57.1	-2.9
TAF	Taforalt	5.11	254	P	Pn	23 07 02.1	-0.3
TAF	Taforalt	5.11	254	P	Pn	23 07 01.8	-0.6
EBER	Berja	5.20	277	P	Pn	23 07 02.4	-1.4
EBER				⇑iVmb_V		23 07 08.6	
	155nm,SNR=1.0						
EBER				S	Sn	23 07 59.0	-4.3
ERTA	Horta de San J	5.20	332	P	Pn	23 07 03.7	+0.1
ERTA				⇑iVmb_V		23 07 12.3	
	329nm,SNR=2.9						
ERTA				S	Sn	23 08 00.4	-2.8
EPOB	Poblet	5.31	339	S	Sn	23 08 03.3	-2.6
JBK	JBK	5.40	249	P	Pn	23 07 07.0	+0.4
JBK	JBK	5.40	249	P	Pn	23 07 06.3	-0.2
EQES	Quesada	5.47	287	P	Pn	23 07 08.9	+1.5
EQES				⇑iVmb_V		23 07 11.1	
	351nm,SNR=4.6						
EQES				S	Sn	23 08 07.0	-3.0
VSL	Villasalto	5.55	54	Pn	Pn	23 07 09.2	+0.9
VSL	Villasalto	5.55	54	P	Pn	23 07 08.7	+0.3
VSL				S	Sn	23 08 09.8	-1.9
EQUE	Quentar	5.67	280	P	Pn	23 07 09.7	-0.3
EQUE				⇑iVmb_V		23 07 13.5	
	206nm,SNR=2.3						
EQUE				S	Sn	23 08 12.2	-2.5
TDRA	Tendrara	5.68	236	P	Pn	23 07 09.4	-1.0
EMIR	Miracle	5.73	345	P	Pn	23 07 13.1	+2.3
EMIR				⇑iVmb_V		23 07 16.1	
	2µm,SNR=9.0						
EMIR				S	Sn	23 08 14.3	-1.9
ELGU	Los Guajares,	5.79	277	P	Pn	23 07 11.0	-0.7
ELGU				⇑iVmb_V		23 07 15.8	
	116nm,SNR=0.6						
ELGU				S	Sn	23 08 14.3	-3.4
FIGM	Figuig	5.83	224	P	Pn	23 07 13.0	+0.7
FIGM	Figuig	5.83	224	P	Pn	23 07 11.0	-1.3
EJON	La Jonquera	6.07	355	P	Pn	23 07 16.5	+1.1
EJON				⇑iVmb_V		23 07 18.6	
	562nm,SNR=4.0						
EJON				S	Sn	23 08 22.7	-1.7
ESAC	San Caprasio	6.17	331	P	Pn	23 07 18.4	+1.5
ESAC				⇑iVmb_V		23 07 20.2	
	397nm,SNR=2.2						
ESAC				S	Sn	23 08 24.5	-2.5
EGOR	Sierra Gorda,	6.19	279	P	Pn	23 07 18.5	+1.2
EGOR				⇑iVmb_V		23 07 25.0	
	204nm,SNR=2.0						
EGOR				S	Sn	23 08 25.5	-2.1
ETOR	Torete	6.22	317	P	Pn	23 07 19.2	+1.5
ETOR				⇑iVmb_V		23 07 22.0	
	212nm,SNR=2.7						
ETOR				S	Sn	23 08 25.1	-3.3
AKLM	AKL	6.33	255	P	Pn	23 07 19.2	-0.1
AKLM	AKL	6.33	255	P	Pn	23 07 19.5	+0.3
UCM	Universidad Co	6.61	308	P	Pn	23 07 23.6	+0.6
EMIJ	Mijas	6.71	274	P	Pn	23 07 22.6	-1.7
EMIJ				⇑iVmb_V		23 07 31.6	
	122nm,SNR=1.3						
EMIJ				S	Sn	23 08 34.9	-5.3
EADA	Adamuz	6.71	288	P	Pn	23 07 24.2	-0.2
EADA				⇑iVmb_V		23 07 29.8	
	39nm,SNR=1.0						
EADA				S	Sn	23 08 37.6	-2.8
ESBB	Sonseca Array	6.77	301		Pn	23 07 25.2	+0.1
ESDC	Sonseca Array	6.77	301	Pn	Pn	23 07 24.9	-0.2
	1.5nm,0.3s,baz=115,slow=13,SNR=54						
	10nm,0.6s						
ESDC	Sonseca Array	6.77	301	Pn	Pn	23 07 24.5	-0.7
ESDC	Sonseca Array	6.77	301	P	Pn	23 07 24.7	-0.5
ESDC				⇑iVmb_V		23 07 29.1	
	118nm,SNR=2.8						
ESDC				S	Sn	23 08 39.7	-2.1
ECHI	Chisagues Biel	6.77	339	P	Pn	23 07 26.5	+1.2
ECHI				⇑iVmb_V		23 07 30.5	
	78nm,SNR=1.5						
ECHI				S	Sn	23 08 39.7	-2.3
PAB	San Pablo	6.99	299	Pn	Pn	23 07 27.0	-1.1
PAB	San Pablo	6.99	299	P	Pn	23 07 27.8	-0.3
PAB				⇑iVmb_V		23 07 30.8	
	156nm,SNR=3.0						
PAB				S	Sn	23 08 44.2	-3.0
PAB	San Pablo	6.99	299	P	Pn	23 07 27.8	-0.3
MTLF	Montolieu	7.01	352	ePn	Pn	23 07 30.4	+2.0
MTLF				eSn	Sn	23 08 47.1	-0.5
	12nm,0.7s						
EPF	Esparros	7.07	341	ePn	Pn	23 07 31.4	+2.1
EPF				eSn	Sn	23 08 47.9	-1.3
	14nm,0.6s						
ETSF	Etsaut	7.22	335	ePn	Pn	23 07 33.4	+2.0
ETSF				eSn	Sn	23 08 51.2	-1.8
	23nm,0.8s						
EJIF	Jimena Fronter	7.27	273	P	Pn	23 07 33.1	+1.1
EJIF				S	Sn	23 08 50.7	-3.4
LMR	La Mourre	7.29	17	ePn	Pn	23 07 32.2	-0.1
LMR				eSn	Sn	23 08 50.5	-4.0
	6.3nm,0.3s						
ECAB	El Cabril	7.35	286	P	Pn	23 07 32.0	-1.0
ECAB				⇑iVmb_V		23 07 36.7	
	100nm,SNR=2.1						
ECAB				S	Sn	23 08 51.5	-4.5
GUD	Guadarrama	7.38	307	P	Pn	23 07 34.1	+0.6
GUD				⇑iVmb_V		23 07 37.0	
	168nm,SNR=4.0						
GUD				S	Sn	23 08 52.6	-4.3
PGF	Pioggiola	7.45	33	ePn	Pn	23 07 35.6	+1.1
PGF				eSn	Sn	23 08 54.8	-3.8
	16nm,0.4s						
EORO	Oroz-Betelu	7.49	331	P	Pn	23 07 36.2	+1.2
EORO				⇑iVmb_V		23 07 41.5	
	113nm,SNR=1.3						
EORO				S	Sn	23 08 56.2	-3.3
MDT	Midelt	7.61	244	Pn	Pn	23 07 36.5	-0.3
	0.7nm,0.3s,baz=123,slow=12,SNR=16						
MDT				Lg	Lg	23 09 41.4	
	0.3nm,0.3s,baz=32,slow=13,SNR=2.5						
	7.4nm,0.8s						
MDT	Midelt	7.61	244	P	Pn	23 07 37.7	+0.9
SJPF	Ste Jean	7.65	333	ePn	Pn	23 07 39.3	+2.1
SJPF				eSn	Sn	23 09 01.8	-1.5
	19nm,0.4s						
LASF	Ste Croix	7.67	2	ePn	Pn	23 07 38.4	+0.9
LASF				eSn	Sn	23 09 02.7	-1.3
	50nm,0.8s						
SMRF	Simiane la Rot	7.73	11	ePn	Pn	23 07 40.0	+1.7
SMRF				eSn	Sn	23 09 04.3	-1.0
	18nm,0.6s						
CLTB	Caltabellotta	7.83	78	Pn	Pn	23 07 40.1	+0.4
CLTB	Caltabellotta	7.83	78	P	Pn	23 07 38.6	-1.1
CLTB				S	Sn	23 09 02.3	-5.6
EALK	Alkurruntz	7.84	332	P	Pn	23 07 41.5	+1.5
SBF	Sospel	8.03	21	ePn	Pn	23 07 42.9	+0.5
SBF				eSn	Sn	23 09 10.0	-2.8
	27nm,0.6s						
EMIN	Mina Concepcio	8.28	283	P	Pn	23 07 44.9	-1.0
EMIN				⇑iVmb_V		23 07 48.3	
	116nm,SNR=1.8						
EPLA	Plasencia	8.41	299	P	Pn	23 07 47.2	-0.5
EPLA				⇑iVmb_V		23 07 47.7	
	77nm,SNR=1.3						
VIVF	Saint-Julien-l	8.49	5	ePn	Pn	23 07 50.4	+1.6
VIVF				eSn	Sn	23 09 20.9	-3.2
	12nm,0.6s						
CASP	Castiglione de	8.52	39	Pn	Pn	23 07 49.6	+0.4
CAF	Calviac	8.59	353	ePn	Pn	23 07 52.9	+2.7
CAF				eSn	Sn	23 09 23.5	-3.1
	22nm,1.1s						
PBAR	Barrancos	8.62	285	eP	Pn	23 07 52.3	+1.8
MBDF	Montbardon	8.67	15	ePn	Pn	23 07 53.6	+2.2
MBDF				eSn	Sn	23 09 27.3	-1.4
	2.9nm,0.4s						
ELAN	Lanestosa	8.68	324	P	Pn	23 07 52.5	+1.1
ELAN				⇑iVmb_V		23 07 53.4	
	123nm,SNR=1.0						
ELAN				S	Sn	23 09 24.5	-4.4
ORIF	Oris-en-Rattie	8.69	11	ePn	Pn	23 07 54.3	+2.7
EBAD	Badajoz	8.71	289	P	Pn	23 07 50.9	-0.8
EBAD				⇑iVmb_V		23 07 51.6	
	46nm,SNR=1.0						
EBAD				S	Sn	23 09 25.6	-3.8
RAFF	Raffo Rosso	8.71	81	Pn	Pn	23 07 55.1	+3.4
LFF	La Frestale	8.79	347	ePn	Pn	23 07 54.4	+1.5
LFF				eSn	Sn	23 09 29.5	-2.0
	24nm,0.9s						
SSB	Saint Sauveur	8.90	5	Pn	Pn	23 07 55.7	+1.3
BNI	Bardonecchia	8.96	14	Pn	Pn	23 07 57.6	+2.3
BNI	Bardonecchia	8.96	14	P	Pn	23 07 57.5	+2.1
BNI				S	Sn	23 09 29.8	-6.1
RJF	Les Rejaudoux	9.03	351	ePn	Pn	23 07 58.5	+2.4
RJF				eSn	Sn	23 09 35.2	-2.1
	7.9nm,0.7s						
PVAQ	Vaqueiros	9.08	280	eP	Pn	23 07 57.1	+0.3
PVAQ				eLR	LR	23 10 28.9	
	115nm,20.0s						
PVAQ	Vaqueiros	9.08	280		Pn	23 07 57.5	+0.6
MSSA	Maissana	9.12	28	Pn	Pn	23 07 58.2	+0.7
PMRV	Marv??o	9.16	293	eP	Pn	23 08 00.3	+2.4
	31nm,1.2s						
PMRV				eLR	LR	23 10 20.1	
	97nm,18.0s						
PESTR	Estremoz	9.17	289	eP	Pn	23 07 57.8	-0.3
PESTR	Estremoz	9.17	289	Pn	Pn	23 07 59.1	+1.0
PBDV	Barranco-do-Ve	9.24	279	eP	Pn	23 08 00.1	+1.0
OSSC	Osservatorio P	9.25	37	Pn	Pn	23 08 00.5	+1.4
PBEJ	Beja	9.25	284	eP	Pn	23 07 58.9	-0.3
PCBR	Castelo Branco	9.34	295	eP	Pn	23 08 00.8	+0.4
	24nm,1.0s						
VLC	Villacollemand	9.35	32	Pn	Pn	23 08 01.6	+1.2
VLC	Villacollemand	9.35	32	P	Pn	23 08 01.7	+1.2
LPG	La Plagne	9.41	14	ePn	Pn	23 08 04.0	+2.5
LPG				eSn	Sn	23 09 47.2	+0.2
	7.4nm,0.6s						
LPL	La Plagne	9.42	14	ePn	Pn	23 08 04.5	+2.8
LPL				eSn	Sn	23 09 44.8	-2.4
	3.4nm,0.4s						
EVO	Evora	9.44	287	eP	Pn	23 08 03.6	+1.9
	27nm,1.7s						
MESJ	Messejana	9.51	282	eP	Pn	23 08 03.7	+1.0
MVO	Moncorvo	9.53	303	eP	Pn	23 08 03.6	+0.6
	30nm,0.7s						
MVO				eLR	LR	23 10 32.8	
	150nm,18.0s						
MTE	Manteigas	9.58	298	eP	Pn	23 08 05.6	+1.9
	33nm,2.2s						
MTE				eLR	LR	23 10 32.8	
	136nm,16.0s						
MTE	Manteigas	9.58	298	Pn	Pn	23 08 05.1	+1.4
EARI	Arriondas	9.63	318	P	Pn	23 08 06.4	+2.0
EARI				⇑iVmb_V		23 08 08.1	
	332nm,SNR=2.3						
EARI				S	Sn	23 09 48.7	-3.5
PBRG	Braganca	9.65	307	eP	Pn	23 08 04.8	+0.2
	24nm,1.9s						
AQU	L'Aquila	9.67	49	Pn	Pn	23 08 07.3	+2.3
PMTG	Montargil	9.70	289	eP	Pn	23 08 05.1	-0.2
ECAL	Calabor	9.71	308	P	Pn	23 08 05.3	-0.2
ECAL				⇑iVmb_V		23 08 08.7	
	483nm,SNR=5.5						
ECAL				S	Sn	23 09 47.7	-6.6
MURB	Monte Urbino	9.72	42	Pn	Pn	23 08 07.3	+1.6
ZCCA	Zocca	9.75	33	Pn	Pn	23 08 08.5	+2.4
PNCL	Nicolau / Gran	9.78	284	eP	Pn	23 08 07.3	+0.9
NRCA	Norcia	9.78	46	Pn	Pn	23 08 08.6	+2.1
PTEO	Sao Teotonio	9.89	280	eP	Pn	23 08 09.3	+1.4
TCF	Toulx Ste Croi	9.93	355	ePn	Pn	23 08 10.5	+2.0
TCF				eSn	Sn	23 09 56.8	-2.7
	4.9nm,0.7s						
PVIS	Viseu	9.94	299	eP	Pn	23 08 08.6	-0.1
	21nm,1.5s						
PFVI	Vila Bisbo	9.96	278	Pn	Pn	23 08 09.5	+0.7
PVRL	Vila Real	10.04	302	eP	Pn	23 08 10.3	+0.2
COI	Coimbra	10.14	296	eP	Pn	23 08 14.1	+2.8
COI	Coimbra	10.14	296	Pn	Pn	23 08 13.1	+1.8
POLO	Lamas de Olo	10.14	303	eP	Pn	23 08 11.4	0.0
PCAS	Casmilo, Conde	10.16	295	eP	Pn	23 08 12.0	+0.5
BGF	Bois d'Agland	10.17	357	ePn	Pn	23 08 13.0	+1.3
BGF				eSn	Sn	23 10 01.7	-3.5
	13nm,0.6s						
SMF	Signal de Mont	10.24	1	ePn	Pn	23 08 14.5	+1.8
SMF				eSn	Sn	23 10 04.4	-2.6
	10nm,0.8s						
CUC	Castrocucco	10.30	66	Pn	Pn	23 08 15.0	+1.5
SENIN	Lac Senin/Sane	10.35	15	Pn	Pn	23 08 16.6	+2.3
CABF	La Chapelle	10.38	10	ePn	Pn	23 08 27.2	+13
CABF				eSn	Sn	23 10 07.8	-2.7
	17nm,1.0s						
AVF	Avril sur Loir	10.39	359	ePn	Pn	23 08 16.6	+1.9
AVF				eSn	Sn	23 10 07.7	-2.8
	1.7nm,0.4s						
PCAB	Cabril	10.45	304	eP	Pn	23 08 14.6	-0.9
MFF	Saint Martin d	10.56	346	ePn	Pn	23 08 18.1	+1.0
MFF				eSn	Sn	23 10 12.0	-2.9
	9.3nm,0.9s						
SALO	Salr	10.61	28	Pn	Pn	23 08 19.4	+1.7
SSF	Saint Saulge	10.66	360	ePn	Pn	23 08 20.3	+1.9
SSF				eSn	Sn	23 10 14.4	-2.8
	2.4nm,0.5s						
PGAV	Gavieira, Arco	10.72	305	eP	Pn	23 08 18.9	-0.5
PGAV				eLR	LR	23 11 15.7	
	132nm,18.0s						
TIP	Timpagrande	10.82	71	Pn	Pn	23 08 22.9	+2.3
TEOL	Teolo	10.85	32	Pn	Pn	23 08 25.0	+3.9
LOR	Lormes	10.87	1	ePn	Pn	23 08 23.7	+2.5
	baz=181						
LOR				eSn	Sn	23 10 19.1	-3.2
	5.0nm,0.7s,baz=180						
HYF	Humbligny	10.88	357	ePn	Pn	23 08 24.4	+2.9
HYF				eSn	Sn	23 10 19.2	-3.6
TUE	Stuetta	10.96	22	Pn	Pn	23 08 25.0	+2.3
DAVOX	Davos/Dischmat	11.40	23	LR	LR	23 12 40.8	
	comp=Z,76nm,19.1s,baz=256,slow=36						
CTI	Castel Tesino	11.40	30	Pn	Pn	23 08 30.6	+1.9
CLF	Chambon-Foret	11.66	356	Pn	Pn	23 08 35.1	+3.0
HINF	Hinteralfeld	11.67	11	ePn	Pn	23 08 32.8	+0.5
HINF				eSn	Sn	23 10 38.1	-4.0
	3.4nm,0.6s						
HAU	Haudompre	11.78	9	ePn	Pn	23 08 40.5	+6.7
HAU				eSn	Sn	23 10 41.3	-3.5
	2.1nm,0.5s						
SFTF	Sexfontaines	11.85	5	ePn	Pn	23 08 36.5	+1.8
DAVA	Damuels	11.86	21	i P	Pn	23 08 39.9	+5.0
	3.5nm,0.7s						
FETA	Feichten	11.89	25	eP	Pn	23 08 40.5	+5.1
	2.5nm,0.7s						
ECH	Echery	12.11	12		Pn	23 08 38.5	+0.3
MEZF	Maizieres J'vi	12.15	5	ePn	Pn	23 08 40.1	+1.4
	baz=185						
MEZF				eSn	Sn	23 10 49.9	-3.7
	1.6nm,0.3s						
SQTA	Sankt Quirin	12.22	25	eP	Pn	23 08 44.7	+4.8
	4.8nm,1.0s						
PAGF	Fort de Pagny	12.26	7	ePn	Pn	23 08 42.9	+2.7
PAGF				eSn	Sn	23 10 52.9	-3.4
	1.9nm,0.4s,baz=186						
SAVF	Savonnieres en	12.27	5	ePn	Pn	23 08 42.4	+2.1
	baz=185						
MOTA	Moosalm	12.29	25	eP	Pn	23 08 46.0	+5.1
	4.4nm,0.9s						
RETA	Reutte	12.31	24	eP	Pn	23 08 46.6	+5.6
	2.1nm,0.8s						
CDF	Champ du Feu	12.32	12	ePn	Pn	23 08 41.6	+0.5
CDF				eSn	Sn	23 10 54.2	-3.7
	0.9nm,0.3s						
ABTA	Abfaltersbach	12.32	30	eP	Pn	23 08 44.9	+3.7
	2.7nm,0.8s						
WTTA	Wattenberg	12.41	26	eP	Pn	23 08 45.2	+2.7
	3.0nm,1.1s						
GRR	Gorron	12.41	346	ePn	Pn	23 08 44.7	+2.3
GRR				eSn	Sn	23 10 56.0	-4.2
	3.6nm,0.5s						
BFO	Black Forest	12.43	15	Pn	Pn	23 08 42.3	-0.4
WATA	Walderalm	12.45	26	eP	Pn	23 08 46.9	+3.9
	3.8nm,0.7s						
LDF	La Druitiere	12.48	349	ePn	Pn	23 08 44.3	+1.0
LDF				eSn	Sn	23 10 58.0	-3.9
	0.2nm,0.2s						
QUIF	Quistinic	12.54	339	ePn	Pn	23 08 44.9	+0.9
QUIF				eSn	Sn	23 10 59.2	-3.9
	0.7nm,0.3s						
SGMF	Saint Gilles	12.68	341	ePn	Pn	23 08 46.1	+0.2
FLN	La Foliniere	12.71	348	ePn	Pn	23 08 49.4	+3.0
	baz=168						
ROSF	Rostrenen	12.95	339	ePn	Pn	23 08 50.0	+0.4
ROSF				eSn	Sn	23 11 08.8	-4.4
	1.3nm,0.5s						
SOKA	Soboth	13.38	36	eP	Pn	23 08 58.4	+2.7
	3.2nm,1.0s						
WLF	Walferdange	13.40	7	Pn	Pn	23 08 57.8	+2.0
BAIF	Baives	13.66	2	ePn	Pn	23 09 01.7	+2.3
GIVF	Givet	13.73	3	ePn	Pn	23 09 02.6	+2.3

GEC2	GERESS Array S	14.49	28		Pn	23 09 12.8	+1.9
GERES	GERESS Array B	14.49	28	Pn	Pn	23 09 12.2	+1.3
	0.1nm,0.3s,baz=200,slow=11,SNR=21						
	2.7nm,0.8s						
GERES	GERESS Array B	14.49	28	Pn	Pn	23 09 13.2	+2.3
FNA	Florina	14.61	67	Pn	Pn	23 09 14.8	+2.3
CONA	Conrad Observa	14.68	34	eP	Pn	23 09 16.1	+2.6
	5.4nm,1.1s						
KHC	Kasperske Hory	14.69	27	Pn	Pn	23 09 15.0	+1.5
KHC	Kasperske Hory	14.69	27	eP	Pn	23 09 15.9	+2.4
KHC				ex	x	23 09 21.1	
CKRC	Cesky Krumlov	14.71	29	eP	Pn	23 09 15.9	+2.2
CKRC				ex	x	23 09 20.7	
RONA	Rosalia, Austr	14.71	36	i P	Pn	23 09 16.5	+2.6
	7.5nm,0.9s						
ITM	Ithomi	14.75	81	Pn	P	23 09 18.8	-1.6
LIT	Litokhoron	15.33	70	Pn	P	23 09 24.7	-2.1
VRAC	Vranov	16.03	32	LR	LR	23 16 23.3	
	comp=Z,34nm,20.1s,baz=219,slow=40						
CLL	Collm	16.37	21	eP	P	23 09 37.0	-1.2
OSTC	Ostas	16.84	29	eP	P	23 09 44.8	+1.4
OSTC				ex	x	23 09 49.4	
IDI	Anoyia	17.34	87	P	P	23 09 49.8	+0.7
	0.1nm,0.3s,baz=278,slow=12,SNR=7.6						
	3.4nm,0.8s						
IDI	Anoyia	17.34	87	P	P	23 09 50.2	+1.1
KARP	Karpathos	19.12	86	P	P	23 10 09.1	+0.3
KARP				IAmb	IAmb	23 10 28.4	
	comp=Z,12nm,0.9s						
MLR	Muntele Rosu	19.15	55	P	Pn	23 10 10.9	+0.9
	comp=Z,0.1nm,0.3s,baz=288,slow=4.1,SNR=9.0						
	comp=Z,9.6nm,1.1s						
MLR	Muntele Rosu	19.15	55	P	Pn	23 10 11.1	+1.1
ESK	Eskdalemuir	19.48	348	Pn	Pn	23 10 15.9	+2.3
EKA	Eskdalemuir Ar	19.49	348	P	Pn	23 10 13.8	0.0
	baz=171,slow=9.1						
	comp=Z,1.3nm,0.8s						
BURAR	Bucovina Array	19.55	48		Pn	23 10 16.2	+1.5
BUR08	Bucovina Ar. S	19.55	48	P	Pn	23 10 16.2	+1.5
ARG	Arkhangelos	19.80	83	P	Pn	23 10 18.6	+1.0
ARG				IAmb	IAmb	23 10 31.4	
	comp=Z,15nm,1.1s						
KOWA	Kowa	22.84	199	P	P	23 10 50.3	+1.4
KOWA				IAmb	IAmb	23 10 53.6	
	comp=Z,10nm,1.4s						
TOA0	Torodi Ar. Sit	23.21	185	P	P	23 10 53.6	+0.9
TOA0				IAmb	IAmb	23 10 55.2	
	comp=Z,4.2nm,0.7s						
TORD	Torodi Ar. Bea	23.21	185	P	P	23 10 51.7	-1.0
	comp=Z,3.3nm,0.6s,baz=357,slow=11,SNR=31						
	comp=Z,3.3nm,0.6s						
TORD	Torodi Ar. Bea	23.21	185	P	P	23 10 53.2	+0.5
AKASG	Malin Array Be	23.31	44	P	P	23 10 52.6	-0.8
	comp=Z,2.0nm,0.7s,baz=246,slow=9.6,SNR=8.1						
AKASG				LR	LR	23 21 04.6	
	comp=Z,48nm,18.3s,baz=174,slow=39						
	comp=Z,2.0nm,0.7s						
AKBB	Malin Array Si	23.31	44	P	P	23 10 54.3	+0.8
AKBB				IAmb	IAmb	23 10 54.9	
	comp=Z,4.8nm,1.0s						
PABE	Paberze	23.65	30	P	P	23 10 57.0	+0.3
PABE				IAmb	IAmb	23 10 58.8	
	comp=Z,17nm,0.9s						
BRTR	Keskin Array B	23.87	73	P	P	23 10 59.7	+0.4
	comp=Z,0.3nm,0.5s,baz=245,slow=12,SNR=2.3						
	comp=Z,0.3nm,0.5s						
HFS	Hagfors	24.64	12	P	P	23 11 05.4	-0.5
	comp=Z,0.9nm,0.5s,baz=183,slow=2.5,SNR=6.7						
HFS				LR	LR	23 21 01.9	
	comp=Z,50nm,18.4s,baz=134,slow=37						
	comp=Z,0.9nm,0.5s						
NAO01	NORSAR Array S	24.91	9	P	P	23 11 09.0	+0.7
NAO01				IAmb	IAmb	23 11 22.4	
	comp=Z,8.8nm,1.0s						
NOA	NORSAR Array B	25.14	9	P	P	23 11 10.6	+0.1
	comp=Z,0.4nm,0.7s,baz=205,slow=11,SNR=3.4						
NOA				LR	LR	23 21 28.4	
	comp=Z,19nm,18.4s,baz=195,slow=38						
	comp=Z,0.4nm,0.7s						
NC405	NORSAR Array S	25.27	9	P	P	23 11 11.7	+0.1
NC405				IAmb	IAmb	23 11 30.3	
	comp=Z,14nm,1.3s						
BNN	Bunyan	25.63	75	P	P	23 11 16.1	+0.8
BNN				IAmb	IAmb	23 11 35.5	
	comp=Z,7.0nm,0.9s						
FINES	FINESS Array B	28.81	22	P	P	23 11 42.7	-0.7
	comp=Z,1.6nm,1.0s,baz=213,slow=6.6,SNR=3.8						
	comp=Z,1.6nm,1.0s						
FIA1	FINESS Array S	28.81	22	P	P	23 11 43.2	-0.2
FIA1				IAmb	IAmb	23 11 43.6	
	comp=Z,13nm,1.5s						
DBIC	Dimbokro	30.57	197	P	P	23 12 00.8	+1.4
KBZ	Khabaz	30.77	64	P	P	23 12 01.1	+0.2
	comp=Z,1.5nm,0.9s,baz=315,slow=1.4,SNR=1.9						
	comp=Z,1.5nm,0.9s						
GEVA	Gevas	31.30	74	P	P	23 12 07.7	+1.7
GEVA				IAmb	IAmb	23 12 15.9	
	comp=Z,2.5nm,1.0s						
BORG	Borgarnes	32.04	340	LR	LR	23 24 45.9	
	comp=Z,36nm,19.5s,baz=88,slow=36						
ARCES	ARCESS Array B	35.29	13	P	P	23 12 40.0	-0.2
	comp=Z,1.4nm,0.6s,baz=198,slow=3.2,SNR=8.0						
	comp=Z,1.4nm,0.6s						
KEV	Kevo	35.76	14	P	P	23 12 43.2	-0.9
SFJD	Kangerlussuaq	43.21	332	P	P	23 13 48.1	+1.9
SFJD				IAmb	IAmb	23 13 53.6	
	comp=Z,7.6nm,0.9s						
MBAR	Mbarara	44.65	139	LR	LR	23 32 05.5	
	comp=Z,58nm,20.8s,baz=82,slow=35						
UOSS	Minazif	46.20	89	P	P	23 14 11.5	+0.8
GBN	Guysborough	48.78	302	P	P	23 14 28.6	-1.8
SCHQ	Schefferville	50.31	315	P	P	23 14 40.7	-1.3
SCHQ				IAmb	IAmb	23 14 43.0	
	comp=Z,5.0nm,1.1s						
BATG	Bathurst New B	51.38	305	P	P	23 14 49.8	-0.4
BATG				IAmb	IAmb	23 15 05.6	
	comp=Z,5.1nm,1.2s						
D62A	Allapoint, All	53.40	306	P	P	23 15 05.6	+0.5
D62A				IAmb	IAmb	23 15 18.0	
	comp=Z,5.1nm,1.0s						
G62A	West of Eustis	54.95	304	P	P	23 15 17.4	+0.9
I63A	Otisfield	55.36	303	P	P	23 15 22.3	+2.8
I62A	Tamworth	55.93	303	P	P	23 15 26.1	+2.5
LSZ	Lusaka	56.42	151	LR	LR	23 43 48.3	
	comp=Z,85nm,18.7s,baz=120,slow=40						
ZALV	Zalesovo Beam	56.71	44	P	P	23 15 28.9	0.0
	comp=Z,0.5nm,0.5s,baz=264,slow=10.0,SNR=2.1						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	57.49	53	P	P	23 15 34.4	-0.2
	comp=Z,0.6nm,0.6s,baz=291,slow=5.8,SNR=7.9						
MKAR				PcP	PcP	23 16 29.0	+0.9
	comp=Z,0.8nm,0.8s,baz=278,slow=4.5,SNR=3.6						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	57.49	53	P	P	23 15 34.6	0.0
YKA	Yellowknife Ar	69.73	334	P	P	23 16 55.4	+0.3
	comp=Z,1.2nm,0.6s,baz=57,slow=6.0,SNR=5.3						
	comp=Z,1.2nm,0.6s						
SONM	Songino Array	71.60	44	P	P	23 17 07.7	+0.8
	comp=Z,0.4nm,0.6s,baz=289,slow=9.2,SNR=3.6						
	comp=Z,0.4nm,0.6s						
PALK	Pallekele	75.39	92	LR	LR	23 54 13.6	
	comp=Z,125nm,19.0s,baz=204,slow=39						
SIV	San Ignacio	80.16	242	P	P	23 17 55.9	-0.1
	comp=Z,0.8nm,0.6s,baz=78,slow=7.0,SNR=6.7						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	80.41	317	P	P	23 17 57.0	-0.5
	comp=Z,0.6nm,0.8s,baz=69,slow=8.1,SNR=4.5						
	comp=Z,0.6nm,0.8s						
YBH	Yreka Blue Hor	88.02	323	LR	LR	23 55 10.8	
	comp=Z,28nm,20.8s,baz=302,slow=34						

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*IDC **29** 23:09:11.0±2.8, 25°.62N×141°.81E, h77^{km}±37^{km}, mb3.3/5, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=62.7km s-min=20.3km az=79.0*

ISC 29 23:09:07.7±1.2**, 25°.5N**±0°.1×**141°.5E**±0°.2**, h35**^{km}**, n13, σ1^{s}41**/8**, mb3.5**/5**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.68	20	P	Pn	23 09 34.2	-0.3
	82nm,0.3s,baz=158,slow=19,SNR=15						
JCJ				S	Sn	23 09 55.9	+1.0
	53nm,0.2s,baz=210,slow=20,SNR=7.5						
KSRS	Korea Array	16.61	319	P	P	23 13 01.6	+1.6
	0.2nm,0.3s,baz=138,slow=13,SNR=6.2						
	1.2nm,0.7s						
H11N1	WAKE ISLAND Hy	24.08	99	T	T	23 39 38.7	
	baz=288,slow=75,SNR=9.2						
H11N2	WAKE ISLAND Hy	24.08	99	T	T	23 39 33.3	
	baz=288,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	24.10	99	T	T	23 39 34.7	
	baz=288,slow=75,SNR=8.8						
H11S3	WAKE ISLAND Hy	24.31	102	T	T	23 39 54.4	
	baz=291,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	24.32	102	T	T	23 39 55.3	
	baz=291,slow=75,SNR=39						
H11S2	WAKE ISLAND Hy	24.33	102	T	T	23 39 56.0	
	baz=291,slow=75,SNR=51						
SONM	Songino Array	35.48	318	P	P	23 16 01.1	+0.1
	0.2nm,0.3s,baz=123,slow=7.1,SNR=2.2						
	0.2nm,0.3s						
WRA	Warramunga Arr	45.72	189	P	P	23 17 25.4	-0.1
	1.7nm,0.7s,baz=10.0,slow=8.7,SNR=13						
	1.7nm,0.7s						
ASAR	Alice Springs	49.44	189	P	P	23 17 55.9	+1.5
	0.3nm,0.8s,baz=17,slow=14,SNR=1.9						
	0.3nm,0.8s						
MKAR	Makanchi Array	51.05	311	P	P	23 18 06.0	-0.4
	0.3nm,0.7s,baz=93,slow=8.8,SNR=3.1						
	0.3nm,0.7s						
FINES	FINESS Array B	79.11	334	P	P	23 21 06.3	-1.9
	1.5nm,1.1s,baz=60,slow=5.0,SNR=5.7						
	1.5nm,1.1s						

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*SJA **29** 23:17:43.0±0.7, 31°.75S×72°.73W, h13^{km}, ML4.3, MW4.6*

*IDC **29** 23:17:47.6±0.8, 31°.76S×72°.10W, h0^{km}, mb4.2/9, mbtmp4.1/14, ML3.6/5, MS3.8/18, Error ellipse: s-maj=26.0km s-min=19.1km az=87.0*

*VAO **29** 23:17:48.6±1.2, 31°.94S×72°.51W, h35^{km}, mb4.4*

*GUC **29** 23:17:48.7±0.8, 31°.75S×72°.29W, h36^{km}±3^{km}, ML4.1*

*NEIC **29** 23:17:50.8, 31°.77S×72°.35W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.44; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-5.79; M$_{r\theta}$0.02; M$_{\theta\phi}$-0.14; M$_{\phi r}$-0.13; Fault plane solution: M$_0$5.63000×10^{15} NP1:φ$_s$181.04000°, δ45.65000°, λ89.59000°. NP2:φ$_s$1.63000°, δ44.35000°, λ90.42000°. Principal axes: T 5.4446, Plg90.0000°, Azm67.0000°; N 0.3515, Plg0.0000°, Azm181.0000°; P -5.7961, Plg1.0000°, Azm271.0000°;*

*NEIC **29** 23:17:51.1±2.2, 31°.76S±0°.03×72°.30W±0°.07, h35^{km}±2^{km}, mb4.6/18, Mwr4.4/62, ML4.1(GUC) Error ellipse: s-maj=9.9km s-min=5.2km az=272.0*

ISC 29 23:17:49.0±2.1**, 31°.73S**±0°.03×**72°.43W**±0°.04**, h17**^{km}±13^{km}**, n177, σ1^{s}79**/187**, mb4.3**/11**, MS3.9**/14**, 12C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.25	33		Pn	23 18 10.4	-1.3
CO06					Sb	23 18 25.6	-2.3
CO06	Fray Jorge	1.25	33	⇑iP	Pn	23 18 10.3	-1.3
CO06				i S	Sb	23 18 25.7	-2.2
VA06	Catapilco	1.27	131		Pn	23 18 09.5	-2.4
VA06					Sb	23 18 23.9	-4.6
VA06	Catapilco	1.27	131	⇑iP	Pn	23 18 09.5	-2.4
VA06				i S	Sb	23 18 24.4	-4.1
VA06				IAML		23 18 31.7	
	comp=E,7µm,0.6s						
CO02	Combarbal	1.33	67		Pn	23 18 10.8	-2.0
CO02					Sn	23 18 28.2	-1.9
CO02	Combarbal	1.33	67	⇑iP	Pn	23 18 10.7	-2.1
CO02				i S	Sn	23 18 26.6	-3.5
CO02				IAML		23 18 33.4	
	comp=E,9µm,0.4s						
CO02	Combarbal	1.33	67	eP	Pn	23 18 05.4	-7.4
CO02				eP	Pn	23 18 11.0	-1.8
CO02				IAML		23 18 30.1	
	comp=Z,5µm,0.3s						
VA01	Torpederas	1.45	153	Pn	Pn	23 18 12.5	-1.9
VA01					Sn	23 18 29.2	-3.8
VA01	Torpederas	1.45	153	eP	Pn	23 18 12.3	-2.1
VA01	Torpederas	1.45	153	eP	Pn	23 18 12.7	-1.7
ROCH	El Roble	1.73	136	⇑iP	Pn	23 18 16.6	-1.8
ROCH				i S	Sn	23 18 38.5	-1.7
ROCH				IAML		23 18 46.9	
	comp=N,5µm,0.8s						
ROC1	El Roble	1.73	137		Pn	23 18 16.3	-2.2
ROC1				Sn	Sn	23 18 38.3	-1.9
ROC1	El Roble	1.73	137	eP	Pn	23 18 16.8	-1.7
ROC1				eS	Sn	23 18 38.9	-1.3
MT02	Curacav	1.88	145		Pn	23 18 18.6	-1.6
MT02				Sn	Sn	23 18 42.6	-0.9
MT02	Curacav	1.88	145	⇑iP	Pn	23 18 18.7	-1.6
MT02				i S	Sn	23 18 39.5	-4.1
MT02	Curacav	1.88	145	eP	Pn	23 18 19.0	-1.3
MT02				IAML		23 18 54.3	
	comp=Z,1µm,0.8s						
VA03	San Esteban	1.90	124		Pn	23 18 19.0	-1.7
VA03	San Esteban	1.90	124	⇑iP	Pn	23 18 18.9	-1.7
VA03				i S	Sn	23 18 41.6	-2.6
VA03				IAML		23 18 58.3	
	comp=E,2µm,0.5s						
VA03	San Esteban	1.90	124	eP	Pn	23 18 19.3	-1.4
VA03				IAML		23 18 57.4	
	comp=Z,3µm,0.8s						
PEL	Peldehue	2.04	134		Pn	23 18 21.2	-1.4
PEL	Peldehue	2.04	134	⇑iP	Pn	23 18 21.1	-1.4
PEL				i S	Sn	23 18 46.1	-1.6
PEL				IAML		23 18 59.8	
	comp=E,2µm,0.7s						
PEL	Peldehue	2.04	134	eP	Pn	23 18 21.1	-1.4
PEL				eS	Sb	23 18 51.4	+0.7
VA05	Santo Domingo	2.04	161		Pn	23 18 20.9	-1.7
CO05	La Serena	2.07	30		Pn	23 18 23.1	+0.2
CO05	La Serena	2.07	30	eP	Pn	23 18 22.4	-0.6
CO05				i S	Sb	23 18 53.2	+1.7
CO05				IAML		23 19 03.1	
	comp=E,2µm,0.5s						
GO04	Tololo Observa	2.09	43	Pn	Pn	23 18 22.4	-1.0
GO04	Tololo Observa	2.09	43	⇑iP	Pn	23 18 22.3	-1.1
GO04				i S	Sn	23 18 48.0	-1.0
GO04	Tololo Observa	2.09	43	eP	Pn	23 18 22.9	-0.4
GO04				eS	Sn	23 18 49.1	0.0
MT05	Renca	2.19	140		Pn	23 18 23.4	-1.3
MT05	Renca	2.19	140	⇑iP	Pn	23 18 23.4	-1.3
MT05				i S	Sn	23 18 49.9	-1.5
MT05				IAML		23 19 11.9	
	comp=E,2µm,0.5s						
MT05	Renca	2.19	140	eP	Pn	23 18 23.8	-0.8
MT05				IAML		23 19 16.5	
	comp=Z,2µm,1.3s						
MT09	Talagante	2.38	150		Pn	23 18 26.2	-1.0
MT09	Talagante	2.38	150	⇑iP	Pn	23 18 26.3	-1.0
MT09				eS	Sn	23 18 54.9	-1.2
MT09				IAML		23 19 15.5	
	comp=N,1µm,0.6s						
MT03	Universidad Ad	2.40	138	eP	Pn	23 18 26.7	-0.8
MT03				eS	Sn	23 18 59.4	+3.0
MT03				IAML		23 19 14.5	
	comp=Z,2µm,1.1s						
FCH	Farellones	2.41	132	⇑iP	Pn	23 18 26.4	-1.5
FCH				i S	Sn	23 18 59.5	+2.3
FCH				IAML		23 19 07.3	
	comp=E,3µm,1.0s						
AUSP	Uspallata	2.63	102	eP	Pn	23 18 26.4	-4.5
AUSP				eP	Pn	23 18 31.7	+0.8
AUSP				eP	Pn	23 18 32.0	+1.1
AUSP				eS	Sb	23 19 07.9	-0.1
CO01	Juntas del Tor	2.66	50		Pn	23 18 31.3	0.0
CO01	Juntas del Tor	2.66	50	eP	Pn	23 18 30.5	-0.7
CO01				i S	Sn	23 19 03.0	-0.2
CO01				IAML		23 19 13.4	
	comp=E,613nm,0.5s						
CO01	Juntas del Tor	2.66	50	eP	Pn	23 18 26.4	-4.8
CO01				eP	Pn	23 18 31.6	+0.4
CO01				eP	Pn	23 18 32.0	+0.8
CO01				IAML		23 19 23.5	
	comp=Z,587nm,0.9s						
RTLS	Leoncito	2.67	92	eP	Pn	23 18 32.0	+0.6
RTLS				eS	Sn	23 19 05.4	+1.9
RTLS				IAML		23 19 23.7	
	comp=Z,1µm,1.8s						
BO04	La Punta	2.73	146		Pn	23 18 31.0	-1.0
BO04	La Punta	2.73	146	⇑iP	Pn	23 18 31.4	-0.6
BO04				i S	Sb	23 19 09.5	-1.0
BO04				IAML		23 19 18.3	
	comp=E,665nm,0.3s						
BO03	Pichilemu	2.79	172	eP	Pn	23 18 31.8	-1.0
BO03				eS	Sn	23 18 59.5	-6.5
BO03				IAML		23 19 04.3	
	comp=N,685nm,0.5s						
LMEL	Las Melosas	2.83	139		Pn	23 18 32.8	-0.7
LCO	Las Campanas	3.09	29	Pn	Pn	23 18 36.5	-0.7
LCO	Las Campanas	3.09	29	eP	Pn	23 18 37.0	-0.2
ZON	Zonda	3.21	88		Pn	23 18 38.4	-0.1
ZON	Zonda	3.21	88	eP	Pn	23 18 40.4	+1.8
ZON				eS	Sb	23 19 22.9	-1.3
ZON				IAML		23 19 44.5	
	comp=Z,620nm,2.0s						
GO05	Huala	3.30	173	Pn	Pn	23 18 38.8	-1.1
GO05	Huala	3.30	173	eP	Pn	23 18 38.8	-1.1
GO05				eS	Sn	23 19 15.9	-2.8
RTCV	Cerro Valdivia	3.32	93	eP	Pn	23 18 39.4	-0.6
RTCV				eP	Pn	23 18 40.4	+0.4
RTCV				eS	Sg	23 19 40.4	+4.9
RTLL	Cerro Villicun	3.40	84	eP	Pn	23 18 39.4	-1.8
RTLL				eS	Sn	23 19 26.4	+5.2
AC04	Llanos de Chal	3.70	19	Pn	Pn	23 18 44.6	-0.7
AC04	Llanos de Chal	3.70	19	eP	Pn	23 18 44.6	-0.7
AC04				eS	Sg	23 19 45.9	-1.9
AC04				IAML		23 20 04.6	
	comp=Z,419nm,1.1s						
ML02	Panimavida	4.11	168	Pn	Pn	23 18 49.5	-1.5
AVFE	Valle Fertil	4.39	77	eP	Pn	23 18 56.1	+1.2
AVFE				IAML		23 20 14.0	
	comp=Z,321nm,0.6s						
RFA	San Rafael	4.50	133	eP	Pn	23 18 51.4	-4.9
RFA				eP	Pn	23 18 56.4	+0.1
RFA				eS	Sn	23 19 52.9	+4.6
RFA				eS	Sb	23 19 56.4	-5.1
RFA				IAML		23 20 20.0	
	comp=Z,228nm,1.3s						
GO03	Copiap	4.54	25	Pn	Pn	23 18 57.5	+0.5
GO03	Copiap	4.54	25	eP	Pn	23 18 58.0	+1.1
AC06	Mina Casimiro	4.71	23		Pn	23 18 59.2	-0.1
BI05	Punta Hualpn	5.05	187	Pn	Pn	23 19 02.6	-1.2
AC02	Maricunga	5.66	31	Pn	Pn	23 19 13.0	+0.3
H03N1	Juan Fernandez	5.73	251	Pn	Pn	23 19 15.1	+2.2
H03N1				T	T	23 26 07.5	
	baz=80,slow=73						
H03N3	Juan Fernandez	5.75	251	Pn	Pn	23 19 15.0	+1.8
	baz=153,slow=74						
H03N3				T	T	23 25 58.7	
	baz=80,slow=73,SNR=117						
H03N2	Juan Fernandez	5.75	251	Pn	Pn	23 19 15.6	+2.5
	baz=354,slow=74						
H03N2				T	T	23 26 02.2	
	baz=80,slow=73						
AC01	Pan de Azucar	5.79	17		Pn	23 19 13.8	-0.2
H03S3	Juan Fernandez	5.84	247	Pn	Pn	23 19 17.4	+2.9
H03S3				T	T	23 26 11.3	
	baz=84						
H03S1	Juan Fernandez	5.85	247	Pn	Pn	23 19 17.2	+2.6
H03S1				T	T	23 26 09.2	
	baz=84						
H03S2	Juan Fernandez	5.86	247	Pn	Pn	23 19 17.4	+2.6
H03S2				T	T	23 26 08.5	
	baz=84						
GO02	Mina Guanaco	7.00	22	Pn	Pn	23 19 31.2	+0.3
PB14	IPOC Station P	7.30	15		Pn	23 19 35.0	0.0
LR03	Panguipulli	7.89	180		Pn	23 19 42.8	0.0
LR04	Corral	8.18	185	Pn	Pn	23 19 44.7	-2.0
PB15	IPOC Station P	8.88	18	Pn	Pn	23 19 57.0	+0.3
PLCA	Paso Flores	9.12	171	Pn	Pn	23 19 59.9	+0.1
	comp=Z,0.4nm,0.3s,baz=336,slow=12,SNR=12						
PLCA				Sn	Sn	23 21 48.3	+6.3
	baz=304,slow=20						
PLCA				LR	LR	23 23 15.7	
	comp=Z,138nm,18.6s,baz=350,slow=36						
	comp=Z,1.6nm,0.4s						
PLCA	Paso Flores	9.12	171		Pn	23 19 58.9	-0.8
LL04	Puerto Octay	9.16	180	Pn	Pn	23 20 00.3	0.0
PB06	IPOC Station P	9.34	16	Pn	Pn	23 20 02.7	-0.2
LL03	Petrohue	9.39	180	Pn	Pn	23 20 01.6	-1.8
AF01	San Pedro de A	9.52	24	Pn	Pn	23 20 03.8	-1.7
PB04	IPOC Station P	9.57	13	Pn	Pn	23 20 05.9	-0.3
LVC	Limon Verde	9.61	20	Pn	Pn	23 20 05.8	-0.9
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=1.5						
LVC				Sn	Sn	23 22 03.6	+9.2
	comp=Z,0.4nm,0.3s,baz=174,slow=15,SNR=1.3						
LVC				LR	LR	23 23 29.2	
	comp=Z,142nm,20.5s,baz=196,slow=36						
	comp=Z,2.3nm,0.8s						
LVC	Limon Verde	9.61	20	Pn	Pn	23 20 06.7	-0.1
PB07	IPOC Station P	10.21	13	Pn	Pn	23 20 16.4	+1.5
TRQA	Tornquist	10.65	129	Pn	Pn	23 20 19.7	-1.0
PB16	IPOC Station P	13.59	12	Pn	Pn	23 21 02.2	+0.7
ITQB	Itaqui	13.76	86	Pn	Pn	23 21 01.3	-1.9
CPUP	Villa Florida	14.26	72	Pn	Pn	23 21 07.9	-2.1
	comp=Z,0.1nm,0.3s,baz=123,slow=17,SNR=2.2						
CPUP				LR	LR	23 27 00.3	
	comp=Z,447nm,19.3s,baz=252,slow=40						
	comp=Z,2.6nm,1.0s						
CPUP	Villa Florida	14.26	72	eP	Pn	23 21 09.5	-0.6
LPAZ	La Paz	15.86	15	Pn	Pn	23 21 33.4	+1.4
	comp=Z,0.1nm,0.3s,baz=171,slow=2.1,SNR=14						
	comp=Z,3.1nm,0.9s						
LPAZ	La Paz	15.86	15	Pn	Pn	23 21 30.7	-1.3
LPAZ	La Paz	15.86	15	eP	Pn	23 21 33.1	+1.1
PLTB	Pedras Altas	16.02	95	eP	Pn	23 21 32.8	-0.6
CPSB	Cacapava Do Su	16.33	90	eP	Pn	23 21 38.6	+1.2
SIV	San Ignacio	18.77	36	P	P	23 22 06.2	-1.2
	baz=222,slow=11,SNR=19						
SIV				LR	LR	23 28 41.2	
	comp=Z,102nm,20.6s,baz=220,slow=35						
	comp=Z,4.6nm,0.9s						
PTGB	Pitanga	19.24	74	eP	P	23 22 11.5	-1.1
TRCB	Terra Rica	19.70	68	P	P	23 22 14.5	-3.0
TRCB				IAmb	IAmb	23 22 22.4	
	comp=Z,12nm,0.6s						
MG05	Puerto Natales	19.94	180	P	P	23 22 19.4	-0.4
MG05				IAmb	IAmb	23 22 34.2	
	comp=Z,22nm,1.1s						
PTLB	Pontes e Lacer	20.24	40	eP	P	23 22 22.7	-0.6
PCMB	Pacaembu	21.40	67	eP	P	23 22 34.5	-1.4
TIJ01	Guaruva-PR	21.53	79	eP	P	23 22 36.0	-1.4
VILB	Vilhena	21.81	34	eP	P	23 22 40.9	+0.6
FRTB	Fartura	21.90	73	eP	P	23 22 40.0	-1.3
SALV	Santo Antonio	21.92	48	eP	P	23 22 40.0	-1.5
MG03	Isla Dawson	22.16	177	P	P	23 22 43.9	+0.2
MG03				IAmb	IAmb	23 22 53.1	
	comp=Z,20nm,1.1s						
ETMB	Extrema	22.55	16	eP	P	23 22 49.8	+1.5
ITRB	Iturama	23.16	64	eP	P	23 22 52.1	-2.5
USHA	Ushuaia	23.27	174	P	P	23 22 55.4	0.0
	comp=Z,3.7nm,0.9s,baz=38,slow=6.1,SNR=2.6						
	comp=Z,3.7nm,0.9s						
PET01	Itanhaem-SP	23.38	78	eP	P	23 22 55.3	-1.5
MG01	Puerto William	23.45	173	P	P	23 22 57.1	0.0
MG01				IAmb	IAmb	23 23 16.5	
	comp=Z,17nm,0.6s						
BB19B	Bebedouro	23.85	69	eP	P	23 23 00.5	-1.0
CZSB	Cruzeiro do Su	23.88	359	eP	P	23 23 00.5	-1.2
RCLB	Rio Claro- Sao	23.99	73	eP	P	23 23 00.8	-2.0
VAO	Valinhos	24.18	75	eP	P	23 23 02.5	-2.1
SAML	Samuel	24.24	23	P	P	23 23 05.2	+0.2
PDRB	Porto dos Gac	24.71	39	eP	P	23 23 09.1	-0.2
PARB	Paraibuna	25.15	77	eP	P	23 23 11.7	-1.7
IPMB	Ipameri, GO	25.81	64	eP	P	23 23 17.8	-1.6
CLDB	Colider	25.83	40	eP	P	23 23 19.5	0.0
BDFB	Brasilia	27.41	60	P	P	23 23 32.2	-1.7
	comp=Z,17nm,1.0s,baz=237,slow=4.6,SNR=14						
	comp=Z,17nm,1.0s						
BDFB	Brasilia	27.41	60	P	P	23 23 32.0	-1.8
BDFB				IAmb	IAmb	23 23 34.8	
	comp=Z,17nm,1.0s						
BDFB	Brasilia	27.41	60	eP	P	23 23 32.2	-1.7
VAS01	Vassouras-RJ	27.42	77	eP	P	23 23 31.9	-2.0
SNDB	Serra Nova Dou	27.67	49	eP	P	23 23 34.5	-1.6
PEXB	Peixe	29.58	54	eP	P	23 23 51.2	-1.9
ITTB	Itaituba	31.41	33	eP	P	23 24 07.6	-1.6
OTAV	Otavalo	32.30	349	eP	P	23 24 16.0	-1.5
RPN	Rapa Nui	32.37	269	LR	LR	23 33 21.8	
	comp=Z,94nm,18.5s,baz=154,slow=29						
SMTB	Santa Maria do	32.41	51	eP	P	23 24 17.9	-0.2
PMSA	Palmer Station	33.48	173	LR	LR	23 36 39.9	
	comp=Z,99nm,18.2s,baz=336,slow=34						
MDP	Montagnes des	41.20	31	LR	LR	23 44 19.7	
	comp=Z,166nm,18.2s,baz=318,slow=39						
RIMA	Rio Macho	42.68	343	P	P	23 25 45.0	-0.1
RCBR	Riachuelo	42.77	61	LR	LR	23 45 44.3	

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      comp=Z,215nm,18.5s,baz=356,slow=39
SJG   San Juan          49.92   8  LR       LR       23 49 52.5
      comp=Z,40nm,18.3s,baz=192,slow=39
VNA3  Neumayer Olymp    51.59 158  P        P        23 26 55.0 +1.2
VNA3  Neumayer Olymp    51.59 158  PP       PP       23 28 53.2 +2.2
VNA3  Neumayer Olymp    51.59 158  pP       pP       23 27 04.4 +6.4
VNA1  Neumayer--Stat    51.89 158  P        P        23 26 57.0 +1.0
VNA1  Neumayer--Stat    51.89 158  pP       pP       23 27 06.6 +6.4
VNA2  Neumayer--Watz    52.23 158  P        P        23 26 59.8 +1.2
      baz=283,slow=7.8
VNA2  Neumayer--Watz    52.23 158  pP       pP       23 27 08.8 +6.0
SNAA  Sanae             53.81 158  P        P        23 27 11.5 +1.2
SNAA  Sanae             53.81 158  pP       pP       23 27 22.7 +8.1
SNAA  Sanae             53.81 158  sP       sP       23 27 26.8  +11
SNAA  Sanae             53.81 158  LR       LR       23 48 17.0
      comp=Z,83nm,19.6s,baz=297,slow=34
SNAA  Sanae             53.81 158  P        P        23 27 10.0 -0.3
SOR   Soroa             55.15 348  P        P        23 27 20.7 +0.3
TROLL Troll, Antarti    55.52 159  P        P        23 27 24.1 +1.3
TROLL Troll, Antarti    55.52 159  pP       pP       23 27 33.0 +6.0
QSPA  South Pole Qui    58.50 180  P        P        23 27 44.6 +0.6
TXAR  Lajitas Array     67.59 331  P        P        23 28 47.2 +2.5
      comp=Z,0.7nm,0.8s,baz=147,slow=6.9,SNR=5.1
      comp=Z,0.7nm,0.8s
TXAR  Lajitas Array     67.59 331  P        P        23 28 44.8 +0.1
DBIC  Dimbokro          74.78  72  P        P        23 29 29.3 +0.8
      comp=Z,7.6nm,0.9s,baz=228,slow=8.9,SNR=4.6
DBIC                               LR       LR       23 58 34.1
      comp=Z,62nm,21.6s,baz=168,slow=33
      comp=Z,7.6nm,0.9s
DBIC  Dimbokro          74.78  72  P        P        23 29 27.0 -1.5
MAW   Mawson            75.45 164  P        P        23 29 31.9 +0.5
      comp=Z,1.0nm,0.6s,baz=274,slow=6.8,SNR=2.4
      comp=Z,1.0nm,0.6s
SUR   Sutherland        76.22 120  LR       LR       00 00 20.5
      comp=Z,54nm,18.8s,baz=132,slow=34
TSUM  Tsumeb            80.16 106  LR       LR       00 03 54.7
      comp=Z,117nm,18.3s,baz=148,slow=35
BOSA  Boshof            81.42 118  P        P        23 30 06.0 +0.6
      comp=Z,3.0nm,0.9s,baz=260,slow=10.0,SNR=3.9
BOSA                               LR       LR       00 04 10.9
      comp=Z,64nm,18.1s,baz=62,slow=34
      comp=Z,3.0nm,0.9s
PDAR  Pinedale Array    81.59 333  P        P        23 30 08.2 +2.4
      comp=Z,0.2nm,0.6s,baz=142,slow=5.1,SNR=3.8
      comp=Z,0.2nm,0.6s
PDAR  Pinedale Array    81.59 333  P        P        23 30 07.0 +1.2
NVAR  Mina Array Bea    81.83 325  P        P        23 30 09.7 +2.5
      comp=Z,1.0nm,0.9s,baz=163,slow=5.8,SNR=8.4
      comp=Z,1.0nm,0.9s
LBTB  Lobatse           83.56 115  LR       LR       00 05 23.8
      comp=Z,74nm,19.3s,baz=78,slow=34
TORD  Torodi Ar. Bea    83.75  70  P        P        23 30 17.7 +0.3
      comp=Z,3.5nm,0.8s,baz=259,slow=4.6,SNR=16
      comp=Z,3.5nm,0.8s
TORD  Torodi Ar. Bea    83.75  70  P        P        23 30 17.2 -0.3
TORD                               IAmb     IAmb     23 30 29.3
      comp=Z,7.3nm,0.8s
AFI   Afiamalu          90.54 253  LR       LR       00 05 02.0
      comp=Z,42nm,18.0s,baz=132,slow=31
MDT   Midelt            90.65  51  LR       LR       00 09 32.8
      comp=Z,42nm,19.0s,baz=154,slow=34
LSZ   Lusaka            90.83 108  LR       LR       00 07 52.8
      comp=Z,110nm,18.1s,baz=136,slow=33
NOA   NORSAR Array B   114.28  32  PKKPbc   PKKPbc   23 47 11.6 +3.4
      comp=Z,0.7nm,0.8s,baz=4.6,slow=4.0,SNR=3.7
BRTR  Keskin Array B   121.00  60  PKKPbc   PKKPbc   23 46 44.4 +0.7
      comp=Z,0.6nm,0.6s,baz=122,slow=4.6,SNR=5.3
H11S2 WAKE ISLAND Hy   125.44 271  T        T        01 55 45.8
      baz=118,slow=75,SNR=24
H11S1 WAKE ISLAND Hy   125.45 271  T        T        01 55 53.6
      baz=118,slow=75,SNR=29
H11S3 WAKE ISLAND Hy   125.46 271  T        T        01 55 52.4
      baz=118,slow=75,SNR=17
H11N3 WAKE ISLAND Hy   125.79 272  T        T        01 56 13.9
      baz=117,slow=74,SNR=4.8
H11N1 WAKE ISLAND Hy   125.81 272  T        T        01 56 10.7
      baz=117
H11N2 WAKE ISLAND Hy   125.81 272  T        T        01 56 16.7
      baz=117,slow=74,SNR=7.8
KURBB Kurchatov Arra   151.40  40  PKPbc    PKPbc    23 37 42.3 +1.0
      comp=Z,1.0nm,0.6s,baz=304,slow=2.8,SNR=6.0
ZALV  Zalesovo Beam    152.45  30  PKPbc    PKiKP    23 37 44.8 +1.0
      comp=Z,1.8nm,0.5s,baz=298,slow=5.2,SNR=7.9
```

IDC 29 23:18:17.9±3.6, 20.°12N×147.°29E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=150.1km s-min=36.1km az=83.0, Mariana Islands region

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op       ISC       h  m  s    ISC
ASAR  Alice Springs     45.44 197  P        P        23 26 38.7 -0.1
      0.4nm,0.5s,baz=40,slow=7.6,SNR=1.0
      0.4nm,0.5s
MKAR  Makanchi Array    58.58 313  P        P        23 28 16.6  0.0
      0.1nm,0.5s,baz=89,slow=6.2,SNR=1.8
      0.1nm,0.5s
KURBB Kurchatov Arra    61.28 317  P        P        23 28 34.7 -0.4
      0.4nm,0.4s,baz=92,slow=7.5,SNR=4.7
      0.4nm,0.4s
FINES FINESS Array B    86.22 336  P        P        23 31 01.4 +0.2
      0.3nm,0.4s,baz=49,slow=4.2,SNR=7.1
      0.3nm,0.4s
```

MOS 29 23:19:01.9±0.8, 3.°70S×150.°49E, h451km, mb4.4/15, Error ellipse: s-maj=25.1km s-min=12.0km az=104.4

IDC 29 23:19:04.2±0.3, 3.°99S×150.°43E, h477km±3km, mb3.7/27, mbtmp4.6/31, Error ellipse: s-maj=9.1km s-min=6.9km az=97.0

NEIC 29 23:19:04.4±1.4, 3.°90S±0.°09×150.°47E±0.°07, h472km±5km, mb4.5/169, Error ellipse: s-maj=12.8km s-min=9.7km az=194.0

ISC 29 23:19:04.1±0.4, 3.°93S±0.°04×150.°45E±0.°05, h472km±4km, h474km:pP-P, n401, σ0.s89/410, mb4.5/123, 12C-2D, New Ireland region

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Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                   Op       ISC       h  m  s    ISC
KRVT  Keravat (AS076     1.62 103  P        P        23 20 05.3 +0.4
      467nm,0.4s,baz=314,slow=1.2,SNR=41
KRVT                               S        S        23 20 55.0 +1.0
      555nm,0.7s,baz=342,slow=19,SNR=8.1
RABL  Rabaul             1.73  99  P        P        23 20 05.8 +0.4
RABL  Rabaul             1.73  99  P        P        23 20 07.0 +1.6
MANU  Manus Island       3.60 301  P        P        23 20 17.9 +0.3
MANU                               S        S        23 21 17.5 +0.4
PMG   Port Moresby       6.34 211  P        P        23 20 44.4 +1.6
      150nm,0.7s,baz=36,slow=5.4,SNR=33
PMG                                S        S        23 22 03.0 -0.4
      45nm,0.8s,baz=49,slow=22,SNR=4.3
PMG   Port Moresby       6.34 211  P        P        23 20 43.5 +0.7
PMG   Port Moresby       6.34 211 iP        P        23 20 42.7 -0.1
PMG   Port Moresby       6.34 211  P        P        23 20 44.5 +1.7
HNR   Honiara           10.90 121  P        P        23 21 31.1 +0.1
      346nm,0.7s,baz=270,slow=2.0,SNR=16
HNR                                S        S        23 23 29.6 -2.4
      76nm,0.4s,baz=262,slow=15,SNR=1.5
HNR   Honiara           10.90 121  P        P        23 21 30.4 -0.6
PATS  Pohnpei           13.27  36  P        P        23 21 55.8 -0.7
CTA   Charters Tower    16.57 194  P        P        23 22 31.4 -0.1
      28nm,0.6s,baz=11,slow=11,SNR=36
CTA                                S        S        23 25 26.3 +3.8
      4.5nm,1.0s,baz=157,slow=22,SNR=1.4
CTAO  Charters Tower    16.57 194  P        P        23 22 32.0 +0.5
FAKI  Fak Fak           18.19 273  P        P        23 22 48.0 +0.1
SIJI  Sorong            19.40 279  P        P        23 22 57.8 -1.3
      52nm,0.7s,baz=67,slow=9.1,SNR=16
QIS   Mount Isa         19.61 212  P        P        23 23 01.5 +0.7
KOUNC Koumac, New Ca    21.32 142  P        P        23 23 16.3  0.0
KOUNC                              IAmb     IAmb     23 23 27.7
      comp=Z,12nm,0.9s
EIDS  Eidsvold          21.32 178  P        P        23 23 16.7 +0.4
EIDS  Eidsvold          21.32 178  P        P        23 23 16.8 +0.5
WB0   Warramunga Arr    22.20 224  P        P        23 23 24.7 +0.4
WR0   Warramunga Arr    22.23 223  P        P        23 23 25.0 +0.4
WRAB  Tennant Creek     22.34 223  P        P        23 23 25.4 -0.3
WRAB  Tennant Creek     22.34 223  P        P        23 23 25.5 -0.1
WB2   Warramunga Arr    22.35 223  P        P        23 23 25.2 -0.5
WRA   Warramunga Arr    22.36 223  P        P        23 23 25.1 -0.6
      comp=Z,1.4nm,0.4s,baz=46,slow=9.4,SNR=14
WRA                                S        S        23 26 53.1 -4.5
      comp=Z,1.2nm,0.6s,baz=46,slow=15,SNR=3.5
WRA                                PcP      PcP      23 27 03.4  0.0
      comp=Z,4.1nm,0.8s,baz=39,slow=2.0,SNR=10
WRA                                ScP      ScP      23 29 55.3 -0.6
      comp=Z,3.8nm,0.8s,baz=44,slow=3.0,SNR=13
      comp=Z,1.4nm,0.4s
WRA   Warramunga Arr    22.36 223           PcP      23 27 03.6 +0.2
WRA   Warramunga Arr    22.36 223  P        P        23 23 25.4 -0.4
RMQ   Roma              22.49 184  P        P        23 23 27.6 +0.8
LIFNC LIFOU             23.40 137  P        P        23 23 35.3 +0.3
DZM   Mont Dzumac       23.79 141  P        P        23 23 38.1 -0.5
      comp=Z,10.0nm,0.5s,baz=275,slow=6.5,SNR=16
      comp=Z,10.0nm,0.5s
DZM   Mont Dzumac       23.79 141  P        P        23 23 38.9 +0.3
DZM                                IAmb     IAmb     23 23 39.4
      comp=Z,12nm,0.7s
DZM   Mont Dzumac       23.79 141  P        P        23 23 38.9 +0.3
YATNC Mamie plateau,    24.06 140  P        P        23 23 42.2 +1.2
OUENC Ouen Island, N    24.29 141  P        P        23 23 42.6 -0.4
OUENC                              IAmb     IAmb     23 23 46.4
      comp=Z,16nm,1.0s
KNRA  Kununurra         24.31 240  P        P        23 23 44.5 +1.3
KNRA                               IAmb     IAmb     23 23 58.6
      comp=Z,14nm,1.1s
ASAR  Alice Springs     25.30 218  P        P        23 23 51.6 -0.4
      comp=Z,1.8nm,0.5s,baz=48,slow=7.8,SNR=26
ASAR                               pP       pP       23 25 09.2 -3.3
      comp=Z,1.9nm,0.7s,baz=54,slow=9.5,SNR=3.3
ASAR                               PcP      PcP      23 27 10.0 +0.2
      comp=Z,2.8nm,0.7s,baz=46,slow=2.9,SNR=10
ASAR                               S        S        23 27 40.6 -3.2
      comp=Z,1.2nm,0.9s,baz=41,slow=11,SNR=3.5
ASAR                               ScP      ScP      23 30 03.9 -0.1
      comp=Z,3.6nm,0.8s,baz=45,slow=3.1,SNR=16
      comp=Z,1.8nm,0.5s
ASAR  Alice Springs     25.30 218  P        P        23 23 52.2 +0.2
INKA  Innaminka         25.42 200  P        P        23 23 53.1 +0.1
ARMA  Armidale          26.37 178  P        P        23 24 02.5 +1.1
ARMA                               IAmb     IAmb     23 24 05.4
      comp=Z,15nm,1.0s
ARMA                                        S        23 28 03.0 +2.4
ARMA  Armidale          26.37 178  P        P        23 24 02.8 +1.3
CMSA  Cobar Meteorol    27.82 189  P        P        23 24 15.0 +0.9
MGCD  Mangrove Creek    29.14 179  P        P        23 24 26.5 +0.9
WRKA  Warakurna         29.90 223  P        P        23 24 31.4 -1.1
TOLI2 Tolitoli          30.07 279  P        P        23 24 33.1 -0.9
MSVF  Nonsavu           30.32 119  P        P        23 24 36.2  0.0
      comp=Z,5.1nm,0.6s,baz=276,slow=13,SNR=6.7
      comp=Z,5.1nm,0.6s
MSVF  Nonsavu           30.32 119  P        P        23 24 37.2 +1.0
MULG  Mulgathing        30.45 209  P        P        23 24 36.0 -1.0
CAN   Canberra          31.26 182  P        P        23 24 45.1 +1.0
CAN                                IAmb     IAmb     23 24 47.2
      comp=Z,18nm,1.1s
MYLDM Lahad Datu        33.17 286  P        P        23 25 00.2 -0.5
FORT  Forrest           34.04 216  P        P        23 25 06.9 -0.9
OUZ   Omahuta           37.80 148  P        P        23 25 40.5 +1.5
OUZ                                IAmb     IAmb     23 25 41.2
      comp=Z,29nm,1.2s
YOJ   Yonaguni jima     38.84 318  P        P        23 25 48.5 +0.8
YOJ                                IAmb     IAmb     23 25 51.7
      comp=Z,19nm,0.9s
RAO   Raoul Island      39.16 133  P        P        23 25 50.3 +0.1
YULB  Yu-li             39.32 315  P        P        23 25 51.6  0.0
JGF   Kuroka            41.20 344  P        P        23 26 06.8 +0.2
JNU   Nakatsue          41.25 335  P        P        23 26 06.7 -0.3
JNU                                IAmb     IAmb     23 26 08.2
      comp=Z,11nm,0.8s
QRZ   Quartz Range      41.76 155  P        P        23 26 10.8 -0.1
MJAR  Matsushiro Arr    41.85 345  P        P        23 26 10.7 -1.0
      comp=Z,2.6nm,0.7s,baz=106,slow=17,SNR=6.3
      comp=Z,2.6nm,0.7s
URZ   Urewera           41.94 148  P        P        23 26 12.3  0.0
URZ                                IAmb     IAmb     23 26 22.8
      comp=Z,17nm,1.2s
BKZ   Black Stump Fm    42.30 150  P        P        23 26 15.5 +0.2
TUWZ  Tuamarina         42.87 154  P        P        23 26 19.9 +0.2
SNZO  South Karori      43.11 153  P        P        23 26 23.0 +1.5
JSD   Sado              43.26 346  P        P        23 26 23.1 +0.4
LTZ   Lake Taylor       43.28 156  P        P        23 26 22.9 -0.1
LTZ                                IAmb     IAmb     23 26 34.8
      comp=Z,18nm,1.1s
BFZ   Birch Farm        43.34 151  P        P        23 26 23.3  0.0
BFZ                                IAmb     IAmb     23 26 42.8
      comp=Z,28nm,1.1s
RPZ   Rata Peaks        43.61 158  P        P        23 26 26.2 +0.7
RPZ                                IAmb     IAmb     23 26 28.1
      comp=Z,17nm,0.9s
MLZ   Mavora Lakes      44.08 162  P        P        23 26 29.5 +0.5
MLZ                                IAmb     IAmb     23 26 36.6
      comp=Z,18nm,1.1s
JTM   Tenmabayashi      45.32 350  P        P        23 26 39.0 +0.3
KSRS  Korea Array       46.20 335  P        P        23 26 46.2 +0.8
      comp=Z,2.5nm,0.7s,baz=150,slow=8.8,SNR=12
KSRS                               PcP      pP       23 28 13.2 -0.8
      comp=Z,1.2nm,0.6s,baz=179,slow=2.6,SNR=5.3
      comp=Z,2.5nm,0.7s
USRK  Ussuriysk Ar.     50.70 343  P        P        23 27 19.8 +0.8
      comp=Z,3.0nm,0.8s,baz=182,slow=8.7,SNR=3.0
      comp=Z,3.0nm,0.8s
KLR   Kul'dur           55.38 345  P        P        23 27 52.5 +0.1
      comp=Z,3.2nm,0.8s,baz=184,slow=3.4,SNR=14
KLR                                PcP      PcP      23 28 45.6 -0.4
      comp=Z,1.8nm,0.8s,baz=76,slow=0.9,SNR=4.2
      comp=Z,3.2nm,0.8s
KLR   Kul'dur           55.38 345ceP        P        23 27 52.6 +0.1
KLR                                pmax     pmax
      comp=Z,10.0nm,1.7s
CMAR  Chiang Mai Arr    55.39 295  P        P        23 27 54.2 +1.1
      comp=Z,1.8nm,0.4s,baz=106,slow=5.2,SNR=9.1
      comp=Z,1.8nm,0.4s
CMAR  Chiang Mai Arr    55.39 295  P        P        23 27 53.5 +0.4
CMAR  Chiang Mai Arr    55.39 295ceP        P        23 27 54.7 +1.6
CMAR                               pmax     pmax
      comp=Z,2.0nm,0.4s
PZH   PanZhiHua         55.96 306  P        P        23 28 00.3 +3.2
PZH                                pmax     pmax
      comp=Z,10.0nm,0.7s
PZH                                pmax     pmax
      comp=Z,110nm,7.8s
OPA   Opana             56.49  61  P        P        23 28 01.2 +0.5
OPA                                IAmb     IAmb     23 28 03.0
      comp=Z,24nm,0.8s
XLT   XiLinHaoTe        56.75 331 eP        P        23 28 03.5 +1.3
XLT                                PcP      PcP      23 28 53.0 +1.3
XLT                                pP       pP       23 29 38.0 +1.2
XLT                                pmax     pmax
      comp=Z,16nm,1.1s
XLT                                pmax     pmax
      comp=Z,82nm,5.1s
HHC   Hu-ho-hao-te      56.99 325 eP        P        23 28 06.8 +2.9
HHC                                pmax     pmax
      comp=Z,42nm,1.1s
HHC                                AMB      AMB
      comp=Z,76nm,6.6s
PEA0B Petropavlovsk-    57.16   5  P        P        23 28 04.8 +0.1
PEA0B                              IAmb     IAmb     23 28 05.5
      comp=Z,14nm,0.7s
PEA0B Petropavlovsk-    57.16   5ceP        P        23 28 04.4 -0.3
PETK  Petropavlovsk-    57.16   5  P        P        23 28 04.3 -0.4
      comp=Z,8.8nm,0.6s,baz=170,slow=7.0,SNR=20
      comp=Z,8.8nm,0.6s
PETK  Petropavlovsk-    57.16   5  P        P        23 28 05.0 +0.3
BTO   Baotou            57.72 324 eP        P        23 28 12.8 +3.9
SHEM  Shemya Is, Ala    59.89  16  P        P        23 28 22.8 -0.3
      comp=Z,15nm,0.5s,baz=130,slow=1.0,SNR=6.2
      comp=Z,15nm,0.5s
SMY   Shemya            59.89  16  P        P        23 28 23.0 -0.2
ZEA   Zeya              60.66 344 eP        P        23 28 29.6 +1.3
ZEA                                pmax     pmax
      comp=Z,10.0nm,1.2s
KIWB  Kanaga Island     62.03  22  P        P        23 28 38.1 +0.8
ADK   Adak              62.23  22  P        P        23 28 38.6  0.0
MA2   Magadan           63.31   0  P        P        23 28 45.3 -0.2
      comp=Z,3.6nm,0.4s,baz=189,slow=19,SNR=4.2
      comp=Z,3.6nm,0.4s
GTA   Gaotai            63.44 318 eP        P        23 28 47.8 +0.9
GTA                                pP       pP       23 30 45.5  +21
GTA                                sP       sP       23 31 40.5  +26
GTA                                pmax     pmax
      comp=Z,3.0nm,0.8s
ULN   Ulaanbaatar       64.04 329  P        P        23 28 52.1 +1.5
ULN   Ulaanbaatar       64.04 329ceP        P        23 28 51.7 +1.1
ULN                                pmax     pmax
      comp=Z,6.0nm,1.0s
SONM  Songino Array     64.36 329  P        P        23 28 53.3 +0.6
      comp=Z,3.0nm,0.6s,baz=139,slow=4.9,SNR=24
SONM                               PcP      PcP      23 29 22.4  0.0
      comp=Z,1.8nm,0.8s,baz=152,slow=5.8,SNR=5.4
      comp=Z,3.0nm,0.6s
SONM  Songino Array     64.36 329  P        P        23 28 53.5 +0.9
SEY   Seymchan          66.70   1  P        P        23 29 06.4 -0.4
      comp=Z,2.4nm,0.5s,baz=84,slow=2.6,SNR=8.4
SEY                                PcP      PcP      23 29 32.0 +0.3
      comp=Z,2.2nm,0.3s,baz=168,slow=3.5,SNR=7.5
      comp=Z,2.4nm,0.5s
SEY   Seymchan          66.70   1ceP        P        23 29 06.8 -0.1
SEY                                pmax     pmax
      comp=Z,7.0nm,0.9s
ZAK   Zakamensk         67.55 329 eP        P        23 29 12.1 -0.4
ZAK                                pmax     pmax
      comp=Z,17nm,1.2s
YAK   Yakutsk           67.68 350ceP        P        23 29 13.8 +0.9
YAK                                pmax     pmax
      comp=Z,16nm,0.7s
UNV   Unalaska Valle    67.84  26  P        P        23 29 13.6 -0.5
UNV                                IAmb     IAmb     23 29 14.5
      comp=Z,14nm,0.8s
TAPN  Taplejung         67.95 301 eP        P        23 29 16.1 +0.3
BOD   Bodaibo           68.16 340 eP        P        23 29 15.9 -0.1
BOD                                pmax     pmax
      comp=Z,7.0nm,1.3s
AKUT  Akutan            68.36  26  P        P        23 29 16.6 -0.7
JIRN  Jiri              69.33 301 eP        P        23 29 24.5 +0.3
GUN   Gumba             69.67 302 eP        P        23 29 26.7 +0.5
PKI   Pulchoki          69.98 301 eP        P        23 29 28.1 +0.1
PKIN  Phulchoki         69.99 301 eP        P        23 29 28.0  0.0
DMN   Daman             70.25 301 eP        P        23 29 30.0 +0.4
GKN   Gorkha            70.75 301 eP        P        23 29 32.5 +0.1
      comp=Z,15nm,0.7s
SDPT  Sand Point        71.50  27  P        P        23 29 35.8 -0.2
SDPT  Sand Point        71.50  27  P        P        23 29 35.6 -0.3
      baz=233
CNBA  Chernabura Isl    71.59  28  P        P        23 29 36.5  0.0
CNBA                               IAmb     IAmb     23 29 37.4
      comp=Z,22nm,1.1s
DANN  Dangsing          71.59 301 eP        P        23 29 37.4 -0.1
      comp=Z,14nm,0.6s
CHNA  Chernabura Isl    71.59  28  P        P        23 29 36.1 -0.5
      baz=234
PYUN  Piuthan           72.18 301 eP        P        23 29 40.5 -0.4
      comp=Z,18nm,0.8s
BILL  Bilibino          72.67   6  P        P        23 29 43.1 +0.5
BILL                               IAmb     IAmb     23 29 44.5
      comp=Z,12nm,0.8s
BILL  Bilibino          72.67   6deP        P        23 29 42.8 +0.2
BILL                              e*PP      pP       23 31 19.1 -3.8
BILL                              e                  23 32 29.1
BILL                              ePPP      PPP      23 34 16.8
BILL                              eS        SKiKP    23 38 23.3 -2.7
BILL                               pmax     pmax
      comp=Z,17nm,1.0s
GAMB  Gambell           73.20  17  P        P        23 29 46.2 +0.5
GAMB                               IAmb     IAmb     23 29 47.1
      comp=Z,12nm,1.0s
GAMB  Gambell           73.20  17  P        P        23 29 45.9 +0.2
      baz=220
WMQ   Urumqi            73.52 318 eP        P        23 29 49.8 +1.7
WMQ                                PcP      PcP      23 30 04.5 +3.2
WMQ                                pmax     pmax
      comp=Z,12nm,0.6s
VNDA  Vanda             73.79 177  P        P        23 29 48.5 -0.4
      comp=Z,2.0nm,0.6s,baz=328,slow=6.3,SNR=20
      comp=Z,2.0nm,0.6s
VNDA  Vanda             73.79 177  P        P        23 29 49.2 +0.3
CHIR  Chirikof Islan    74.02  28  P        P        23 29 50.8 +0.2
CHIR  Chirikof Islan    74.02  28  P        P        23 29 50.8 +0.2
      baz=237
SBA   Scott Base        74.37 176  P        P        23 29 53.7 +1.4
O16K  Kokwok River B    75.07  24  P        P        23 29 56.7 +0.2
      baz=234
SII   Sitkinak Islan    75.10  28  P        P        23 29 57.4 +0.7
SII   Sitkinak Islan    75.10  28  P        P        23 29 57.1 +0.4
      baz=238
N16K  Nishlik Lake      75.33  23  P        P        23 29 59.1 +1.2
      baz=233
TNA   Tin City          75.62  17  P        P        23 29 59.1 -0.2
      baz=223
ANM   Nome              75.67  18  P        P        23 30 00.5 +0.8
ANM                                IAmb     IAmb     23 30 00.9
      comp=Z,9.0nm,0.8s
ANM   Nome              75.67  18  P        P        23 30 00.5 +0.8
      baz=226,SNR=7.2
OHAK  Old Harbor        75.86  28  P        P        23 30 01.1 +0.3
OHAK                               IAmb     IAmb     23 30 02.1
      comp=Z,16nm,0.9s
OHAK  Old Harbor        75.86  28  P        P        23 30 01.2 +0.3
      baz=239
P18K  Big Mountain,     76.16  25  P        P        23 30 01.6 -0.9
      baz=236
KDAK  Kodiak Island     76.48  28  P        P        23 30 04.6 +0.3
      comp=Z,7.8nm,0.9s,baz=98,slow=8.5,SNR=3.8
      comp=Z,7.8nm,0.9s
KDAK  Kodiak Island     76.48  28  P        P        23 30 04.1 -0.2
KDAK                               IAmb     IAmb     23 30 05.5
      comp=Z,10.0nm,0.9s
KDAK  Kodiak Island     76.48  28  P        P        23 30 04.6 +0.3
      baz=239
Q19K  Cape Douglas,     76.60  26  P        P        23 30 05.0  0.0
Q19K  Cape Douglas,     76.60  26  P        P        23 30 04.6 -0.4
      baz=238
N18K  Kilae Creek       76.60  24  IAmb     IAmb     23 30 07.1
      comp=Z,14nm,1.1s
N18K  Kilae Creek       76.60  24  P        P        23 30 05.7 +0.7
      baz=236
TIXI  Tiksi             76.75 353  P        P        23 30 04.5 -1.0
      comp=Z,2.8nm,0.7s,baz=84,slow=23,SNR=9.9
      comp=Z,2.8nm,0.7s
TIXI  Tiksi             76.75 353  P        P        23 30 05.1 -0.4
TIXI  Tiksi             76.75 353ceP        P        23 30 04.0 -1.5
TIXI                               pmax     pmax
      comp=Z,5.0nm,1.1s
SVW2  Sparrevohn        76.96  24  P        P        23 30 07.7 +0.8
SVW2                               IAmb     IAmb     23 30 09.0
      comp=Z,17nm,1.0s
Q20K  Shuyak Island     76.99  27  P        P        23 30 07.5 +0.4
      baz=239
N19K  Bonanza Creek     77.25  24  P        P        23 30 08.8 +0.1
N19K  Bonanza Creek     77.25  24  P        P        23 30 08.8 +0.1
      baz=237
O20K  Slope Mountain    77.64  25  P        P        23 30 10.4 -0.3
      baz=239
TTA   Tatalina          77.84  22  P        P        23 30 12.2 +0.4
TTA                                IAmb     IAmb     23 30 13.2
      comp=Z,14nm,1.2s
TTA   Tatalina          77.84  22  P        P        23 30 12.1 +0.4
      baz=235
L19K  White Mountain    77.86  23  P        P        23 30 12.6 +0.8
L19K                               IAmb     IAmb     23 30 13.5
      comp=Z,18nm,0.9s
L19K  White Mountain    77.86  23  P        P        23 30 12.4 +0.5
      baz=236
M19K  Big River Lodg    77.89  23  P        P        23 30 12.7 +0.7
M19K  Big River Lodg    77.89  23  P        P        23 30 12.8 +0.9
      baz=237
CNPM  China Poot        77.97  26  P        P        23 30 12.6 +0.2
MK31  Makanchi Array    78.14 319⇓iP        P        23 30 13.4 -0.3
MKAR  Makanchi Array    78.14 319  P        P        23 30 13.5 -0.2
      comp=Z,2.1nm,0.7s,baz=103,slow=6.3,SNR=25
MKAR                               pP       pP       23 31 57.2 +1.0
      comp=Z,0.7nm,0.9s,baz=69,slow=7.1,SNR=2.7
      comp=Z,2.1nm,0.7s
MKAR  Makanchi Array    78.14 319ceP        P        23 30 13.8 +0.1
MKAR                               pmax     pmax
      comp=Z,2.0nm,0.7s
BRLK  Bradley Lake      78.24  26  P        P        23 30 13.3 -0.6
BRLK                               IAmb     IAmb     23 30 14.6
      comp=Z,13nm,0.8s
MAKZ  Makanchi          78.35 319  P        P        23 30 14.5 -0.3
M20K  Styx River        78.38  24  P        P        23 30 14.6 -0.1
M20K                               IAmb     IAmb     23 30 16.2
      comp=Z,10.0nm,0.9s
M20K  Styx River        78.38  24  P        P        23 30 15.2 +0.5
      baz=238
L20K  Farewell, AK      78.40  23  P        P        23 30 15.7 +0.9
      baz=237
K20K  Telida            78.81  22  P        P        23 30 17.3 +0.4
K20K                               IAmb     IAmb     23 30 18.6
      comp=Z,19nm,0.9s
K20K  Telida            78.81  22  P        P        23 30 17.7 +0.8
      baz=237,SNR=20
SEW   Seward            79.04  26  P        P        23 30 18.1  0.0
SEW                                IAmb     IAmb     23 30 19.0
      comp=Z,19nm,0.9s
SEW   Seward            79.04  26  P        P        23 30 18.2  0.0
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	baz=242						
ZAA0	**Zalesovo Array**	**79.14**	**327**	P	**P**	**23 30 18.1**	**-0.8**
ZALV	**Zalesovo Beam**	**79.14**	**327**	P	**P**	**23 30 18.0**	**-0.8**
	comp=Z,6.5nm,0.7s,baz=109,slow=5.0,SNR=31						
ZALV				pP	**pP**	**23 32 01.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=80,slow=12,SNR=2.1						
	comp=Z,6.5nm,0.7s						
J20K	**Nowinta River**	**79.23**	**22**	IAmb	IAmb	23 30 20.8	
	comp=Z,17nm,1.1s						
J20K	**Nowinta River**	**79.23**	**22**	P	**P**	**23 30 19.8**	**+0.7**
	baz=237,SNR=15						
PPLA	**Purkeypile**	**79.28**	**23**	P	**P**	**23 30 19.4**	**-0.2**
	baz=239						
RC01	**Rabbit Creek A**	**79.38**	**25**	P	**P**	**23 30 19.6**	**-0.3**
RC01				IAmb	IAmb	23 30 21.2	
	comp=Z,12nm,0.9s						
RC01	**Rabbit Creek A**	**79.38**	**25**	P	**P**	**23 30 19.5**	**-0.4**
	baz=241						
PRZ	**Przheval'sk**	**79.53**	**314**	P	**P**	**23 30 21.8**	**+0.4**
M22K	**Willow**	**79.54**	**25**	P	**P**	**23 30 20.3**	**-0.5**
CHUM	**Lake Minchumin**	**79.75**	**22**	P	**P**	**23 30 22.4**	**+0.6**
	baz=238						
PMR	**Palmer**	**79.88**	**25**	P	**P**	**23 30 21.4**	**-1.1**
PMR	**Palmer**	**79.88**	**25**	P	**P**	**23 30 22.0**	**-0.6**
	baz=242						
P23K	**Montague Islan**	**79.90**	**27**	P	**P**	**23 30 22.5**	**-0.2**
	baz=244						
GHO	**Glory Hole Cre**	**80.05**	**25**	P	**P**	**23 30 23.3**	**-0.3**
GHO				IAmb	IAmb	23 30 24.1	
	comp=Z,11nm,0.8s						
KNK	**Knik Glacier**	**80.08**	**25**	P	**P**	**23 30 23.6**	**-0.1**
KNK				IAmb	IAmb	23 30 24.7	
	comp=Z,17nm,1.1s						
KNK	**Knik Glacier**	**80.08**	**25**	P	**P**	**23 30 23.7**	**0.0**
	baz=242						
KTH	**Kantishna Hill**	**80.12**	**23**	P	**P**	**23 30 23.0**	**-0.9**
KTH				IAmb	IAmb	23 30 23.8	
	comp=Z,15nm,0.9s						
TRF	**Thorofare Moun**	**80.31**	**23**	IAmb	IAmb	23 30 26.7	
	comp=Z,9.8nm,0.8s						
TRF	**Thorofare Moun**	**80.31**	**23**	P	**P**	**23 30 24.2**	**-0.8**
	baz=240,SNR=8.0						
SML	**Sawmill**	**80.32**	**25**	P	**P**	**23 30 24.5**	**-0.5**
	baz=242						
KDJ	**Kajisay**	**80.32**	**314**	P	**P**	**23 30 24.8**	**-0.8**
KDJ				IAmb	IAmb	23 30 27.3	
	comp=Z,11nm,0.9s						
BPAW	**Bear Paw Mtn.**	**80.37**	**22**	P	**P**	**23 30 23.9**	**-1.2**
BPAW				IAmb	IAmb	23 30 25.3	
	comp=Z,9.0nm,0.9s						
BPAW	**Bear Paw Mtn.**	**80.37**	**22**	P	**P**	**23 30 24.4**	**-0.7**
	baz=240,SNR=8.0						
GLI	**Glacier Island**	**80.43**	**26**	IAmb	IAmb	23 30 27.5	
	comp=Z,16nm,0.8s						
GLI	**Glacier Island**	**80.43**	**26**	P	**P**	**23 30 25.5**	**0.0**
	baz=244						
H21K	**Melozitna Rive**	**80.52**	**21**	P	**P**	**23 30 25.8**	**-0.1**
H21K	**Melozitna Rive**	**80.52**	**21**	P	**P**	**23 30 26.1**	**+0.3**
	baz=238,SNR=5.7						
M23K	**Glacier View**	**80.57**	**25**	P	**P**	**23 30 26.1**	**-0.2**
	baz=243						
KSH	**Kashi**	**80.59**	**311**	P	**P**	**23 30 28.3**	**+1.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WAT1	**Susitna Watana**	**80.70**	**24**	P	**P**	**23 30 26.5**	**-0.5**
	baz=242						
SCM	**Sheep Creek Mo**	**80.75**	**25**	P	**P**	**23 30 27.0**	**-0.2**
SCM				IAmb	IAmb	23 30 28.3	
	comp=Z,19nm,1.0s						
SCM	**Sheep Creek Mo**	**80.75**	**25**	P	**P**	**23 30 27.3**	**0.0**
	baz=243						
RND	**Reindeer**	**80.86**	**23**	P	**P**	**23 30 26.8**	**-0.9**
WAT6	**Susitna Watana**	**80.92**	**24**	P	**P**	**23 30 27.8**	**-0.4**
	baz=243,SNR=7.4						
MLY	**Manley**	**80.93**	**22**	P	**P**	**23 30 28.0**	**-0.1**
	baz=240,SNR=26						
MCK	**McKinley**	**80.98**	**23**	P	**P**	**23 30 27.5**	**-0.8**
	baz=242,SNR=19						
DIV	**Divide**	**81.12**	**26**	P	**P**	**23 30 29.4**	**+0.3**
KLU	**Klutina**	**81.21**	**26**	P	**P**	**23 30 30.0**	**+0.4**
	baz=245						
DHY	**Denali Highway**	**81.29**	**24**	P	**P**	**23 30 29.4**	**-0.8**
DHY				IAmb	IAmb	23 30 30.9	
	comp=Z,17nm,0.8s						
DHY	**Denali Highway**	**81.29**	**24**	P	**P**	**23 30 29.9**	**-0.2**
	baz=243,SNR=7.9						
BOOM	**Boomskoye usch**	**81.30**	**314**	P	**P**	**23 30 30.8**	**+0.1**
BOOM				IAmb	IAmb	23 30 32.3	
	comp=Z,7.5nm,0.7s						
NEA2	**Nenana**	**81.34**	**22**	IAmb	IAmb	23 30 30.1	
	comp=Z,15nm,0.8s						
NEA2	**Nenana**	**81.34**	**22**	P	**P**	**23 30 29.4**	**-0.8**
	baz=241,SNR=9.9						
M24K	**Tolsona, Glenn**	**81.36**	**25**	P	**P**	**23 30 30.5**	**+0.1**
M24K	**Tolsona, Glenn**	**81.36**	**25**	P	**P**	**23 30 30.5**	**+0.1**
	baz=244,SNR=6.3						
HMT	**Hamilton**	**81.47**	**27**	P	**P**	**23 30 30.9**	**0.0**
HMT				IAmb	IAmb	23 30 32.1	
	comp=Z,23nm,1.1s						
I23K	**Minto, Yukon-K**	**81.50**	**22**	P	**P**	**23 30 30.8**	**-0.1**
I23K	**Minto, Yukon-K**	**81.50**	**22**	P	**P**	**23 30 30.7**	**-0.1**
	baz=241						
NIL	**Nilore**	**81.55**	**305**	P	**P**	**23 30 30.8**	**-1.2**
NIL				IAmb	IAmb	23 30 31.9	
	comp=Z,12nm,0.8s						
BMRM	**Bremner River**	**81.57**	**27**	P	**P**	**23 30 31.1**	**-0.4**
BMRM				IAmb	IAmb	23 30 32.5	
	comp=Z,15nm,1.0s						
BMRM	**Bremner River**	**81.57**	**27**	P	**P**	**23 30 31.7**	**+0.2**
	baz=246						
TKM2	**Tokmak 2**	**81.64**	**314**	P	**P**	**23 30 33.0**	**+0.6**
	SNR=12						
KURK	**Kurchatov**	**81.65**	**322**	P	**P**	**23 30 31.8**	**-0.2**
KURK				IAmb	IAmb	23 30 32.8	
	comp=Z,11nm,1.0s						
KURK	**Kurchatov**	**81.65**	**322**	*ce*P	**P**	**23 30 30.8**	**-1.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
WRH	**Wood River Hil**	**81.65**	**23**	IAmb	IAmb	23 30 31.6	
	comp=Z,17nm,0.9s						
KURBB	**Kurchatov Arra**	**81.68**	**322**	P	**P**	**23 30 31.9**	**-0.3**
	comp=Z,5.2nm,1.0s,baz=110,slow=4.2,SNR=25						
KURBB				pP	**pP**	**23 32 18.8**	**+3.1**
	comp=Z,0.8nm,0.7s,baz=114,slow=4.3,SNR=3.9						
	comp=Z,5.2nm,1.0s						
H23K	**Yukon River**	**81.76**	**21**	P	**P**	**23 30 32.4**	**+0.1**
	baz=241,SNR=9.0						
N25K	**Chitina, Valde**	**81.83**	**26**	P	**P**	**23 30 32.3**	**-0.5**
N25K	**Chitina, Valde**	**81.83**	**26**	P	**P**	**23 30 32.9**	**0.0**
	baz=246						
CCB	**Clear Creek Bu**	**81.84**	**23**	IAmb	IAmb	23 30 32.4	
	comp=Z,15nm,0.8s						
HARP	**HAARP**	**81.92**	**25**	P	**P**	**23 30 33.1**	**-0.1**
	baz=245						
TCOL	**CIGO, UAF Yank**	**81.93**	**22**	P	**P**	**23 30 32.2**	**-0.9**
COLA	**College**	**81.93**	**22**	P	**P**	**23 30 31.8**	**-1.3**
COLA	**College**	**81.93**	**22**	*i* P	**P**	**23 30 31.8**	**-1.3**
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
PAX	**Paxson**	**82.03**	**25**	P	**P**	**23 30 33.3**	**-0.5**
PAX	**Paxson**	**82.03**	**25**	P	**P**	**23 30 33.6**	**-0.3**
	baz=245						
SNH	**Sunshine Point**	**82.06**	**28**	P	**P**	**23 30 34.3**	**+0.3**
HDA	**Harding Lake**	**82.07**	**23**	P	**P**	**23 30 32.7**	**-1.1**
	baz=243,SNR=7.2						
GLB	**Gilahina Butte**	**82.11**	**26**	P	**P**	**23 30 34.1**	**-0.1**
GLB				IAmb	IAmb	23 30 35.3	
	comp=Z,14nm,0.9s						
WAX	**Waxell Ridge**	**82.16**	**27**	P	**P**	**23 30 34.5**	**0.0**
WAX				IAmb	IAmb	23 30 35.8	
	comp=Z,19nm,1.2s						
VRDI	**Verde Repeater**	**82.19**	**27**	IAmb	IAmb	23 30 35.8	
	comp=Z,9.4nm,0.9s						
POKR	**Poker Plat Res**	**82.20**	**22**	P	**P**	**23 30 33.9**	**-0.7**
POKR				IAmb	IAmb	23 30 34.2	
	comp=Z,7.8nm,0.7s						
POKR	**Poker Plat Res**	**82.20**	**22**	P	**P**	**23 30 33.7**	**-0.9**
	baz=243						
COLD	**Coldfoot**	**82.23**	**20**	P	**P**	**23 30 34.3**	**-0.4**
COLD				IAmb	IAmb	23 30 36.2	
	comp=Z,12nm,1.1s						
COLD	**Coldfoot**	**82.23**	**20**	P	**P**	**23 30 35.3**	**+0.6**
	baz=240						
ILAR	**Eielson Array**	**82.25**	**23**	P	**P**	**23 30 33.2**	**-1.6**
	comp=Z,14nm,0.7s,baz=251,slow=5.4,SNR=106						
	comp=Z,14nm,0.7s						
K24K	**Donnelly Dome**	**82.26**	**24**	P	**P**	**23 30 34.6**	**-0.3**
	baz=244,SNR=5.5						
CHMS	**Chumysh**	**82.27**	**314**	P	**P**	**23 30 36.4**	**+0.9**
	SNR=5.5						
UCH	**Uchtor**	**82.27**	**313**	P	**P**	**23 30 37.3**	**+1.3**
	SNR=9.7						
TGL	**Tana Glacier**	**82.28**	**27**	P	**P**	**23 30 34.8**	**-0.4**
TGL				IAmb	IAmb	23 30 35.8	
	comp=Z,9.4nm,1.0s						
FRU1	**Bishkek**	**82.31**	**314**	P	**P**	**23 30 36.2**	**+0.4**
FRU1				IAmb	IAmb	23 30 37.4	
	comp=Z,9.9nm,1.0s						
H24K	**Noodor Dome**	**82.37**	**21**	P	**P**	**23 30 34.8**	**-0.7**
	baz=242,SNR=8.1						
AAK	**Ala-Archa**	**82.37**	**314**	P	**P**	**23 30 36.3**	**+0.2**
AAK	**Ala-Archa**	**82.37**	**314**	*ce*P	**P**	**23 30 37.0**	**+0.8**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
MCARA	**McCarthy VSAT**	**82.44**	**26**	P	**P**	**23 30 36.4**	**+0.6**
MCARA				IAmb	IAmb	23 30 37.0	
	comp=Z,11nm,0.9s						
MCARA	**McCarthy VSAT**	**82.44**	**26**	P	**P**	**23 30 36.3**	**+0.4**
	baz=247						
ISLE	**Juniper Island**	**82.45**	**27**	P	**P**	**23 30 35.7**	**-0.3**
ISLE				IAmb	IAmb	23 30 37.1	
	comp=Z,8.2nm,0.9s						
MESA	**MESA**	**82.47**	**28**	P	**P**	**23 30 36.1**	**-0.2**
USP	**Ospenovka**	**82.50**	**314**	P	**P**	**23 30 36.7**	**0.0**
	SNR=17						
A21K	**Barrow**	**82.57**	**15**	P	**P**	**23 30 36.8**	**+0.5**
RIDG	**Independent Ri**	**82.61**	**24**	IAmb	IAmb	23 30 37.4	
	comp=Z,18nm,1.0s						
RIDG	**Independent Ri**	**82.61**	**24**	P	**P**	**23 30 36.6**	**-0.1**
	baz=245,SNR=6.9						
YAH	**Yahtse**	**82.63**	**28**	P	**P**	**23 30 36.7**	**-0.4**
YAH				IAmb	IAmb	23 30 41.6	
	comp=Z,13nm,1.2s						
MENT	**Mentasta**	**82.75**	**25**	P	**P**	**23 30 37.3**	**-0.1**
MENT				IAmb	IAmb	23 30 42.7	
	comp=Z,12nm,0.9s						
GRNC	**Granite Creek**	**82.77**	**27**	P	**P**	**23 30 37.6**	**-0.2**
J25K	**Salcha River,**	**82.77**	**23**	P	**P**	**23 30 37.0**	**-0.5**
J25K	**Salcha River,**	**82.77**	**23**	P	**P**	**23 30 37.1**	**-0.5**
	baz=245,SNR=36						
M26K	**Nabesna, AK**	**82.84**	**26**	P	**P**	**23 30 37.7**	**-0.2**
M26K	**Nabesna, AK**	**82.84**	**26**	P	**P**	**23 30 38.6**	**+0.7**
	baz=247,SNR=5.6						
AML	**Almayashu**	**82.85**	**313**	P	**P**	**23 30 40.1**	**+1.3**
	SNR=24						
DOT	**Dot Lake**	**82.89**	**24**	P	**P**	**23 30 37.7**	**-0.4**
EKS2	**Erkin-Say**	**82.89**	**314**	P	**P**	**23 30 39.4**	**+0.7**
	SNR=12						
BARN	**Barnard Glacie**	**82.93**	**27**	IAmb	IAmb	23 30 39.9	
	comp=Z,13nm,0.7s						
L26K	**Log Cabin Wild**	**82.94**	**25**	IAmb	IAmb	23 30 39.4	
	comp=Z,12nm,0.7s						
L26K	**Log Cabin Wild**	**82.94**	**25**	P	**P**	**23 30 38.5**	**+0.2**
	baz=247						
TABL	**Table Mountain**	**82.94**	**28**	P	**P**	**23 30 38.4**	**-0.3**
TABL				IAmb	IAmb	23 30 39.4	
	comp=Z,6.5nm,0.7s						
CTG	**Chitna Glacier**	**83.04**	**27**	P	**P**	**23 30 39.6**	**+0.5**
	baz=249						
CTGM	**Chitina Glacie**	**83.04**	**27**	P	**P**	**23 30 39.0**	**-0.1**
CTGM				IAmb	IAmb	23 30 40.0	
	comp=Z,9.1nm,0.7s						
SCRK	**Sand Creek**	**83.06**	**24**	P	**P**	**23 30 38.5**	**-0.6**
SCRK				IAmb	IAmb	23 30 39.9	
	comp=Z,10nm,1.0s						
SCRK	**Sand Creek**	**83.06**	**24**	P	**P**	**23 30 38.8**	**-0.2**
	baz=246,SNR=12						
TOLK	**Toolik Lake Re**	**83.14**	**19**	IAmb	IAmb	23 30 40.6	
	comp=Z,12nm,1.1s						
TOLK	**Toolik Lake Re**	**83.14**	**19**	P	**P**	**23 30 39.4**	**+0.1**
	baz=240						
LOGN	**Logan Glacier**	**83.14**	**27**	IAmb	IAmb	23 30 40.8	
	comp=Z,8.3nm,0.8s						
PCA	**Pinnacle**	**83.23**	**28**	P	**P**	**23 30 39.7**	**-0.3**
PCA				IAmb	IAmb	23 30 40.7	
	comp=Z,8.5nm,0.7s						
PINM	**Pinnacle**	**83.24**	**28**	P	**P**	**23 30 40.4**	**+0.4**
	baz=250						
M27K	**Edge Creek, AK**	**83.31**	**26**	P	**P**	**23 30 41.0**	**+0.6**
	baz=248,SNR=39						
J26L	**Joseph Creek**	**83.44**	**23**	IAmb	IAmb	23 30 41.9	
	comp=Z,12nm,1.1s						
J26L	**Joseph Creek**	**83.44**	**23**	P	**P**	**23 30 41.0**	**+0.1**
	baz=246,SNR=11						
PNL	**Peninsula**	**83.50**	**29**	P	**P**	**23 30 41.7**	**+0.4**
	baz=251						
L27K	**Beaver Creek,**	**83.59**	**25**	P	**P**	**23 30 41.9**	**+0.3**
L27K				IAmb	IAmb	23 30 43.1	
	comp=Z,11nm,1.0s						
L27K	**Beaver Creek,**	**83.59**	**25**	P	**P**	**23 30 42.1**	**+0.4**
	baz=248,SNR=18						
BCAR	**Beaver Creek A**	**83.61**	**25**	P	**P**	**23 30 41.9**	**+0.2**
YUK3	**Moose Creek**	**83.72**	**27**	P	**P**	**23 30 42.9**	**+0.3**
	baz=250,SNR=13						
K27K	**Chicken**	**83.85**	**24**	P	**P**	**23 30 43.4**	**+0.5**
K27K	**Chicken**	**83.85**	**24**	P	**P**	**23 30 43.6**	**+0.7**
	baz=248						
YUK8	**Steele Glacier**	**83.87**	**27**	P	**P**	**23 30 44.1**	**+0.7**
	baz=250,SNR=9.6						
NRIK	**Noril'sk**	**84.39**	**341**	P	**P**	**23 30 44.9**	**-0.6**
	comp=Z,5.6nm,0.6s,baz=118,slow=4.4,SNR=13						
	comp=Z,5.6nm,0.6s						
NRIK	**Noril'sk**	**84.39**	**341**	IAmb	IAmb	23 30 46.2	
	comp=Z,6.4nm,0.7s						
NRIK	**Noril'sk**	**84.39**	**341**	*ce*P	**P**	**23 30 44.5**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YUK4	**Talbot Arm**	**84.40**	**27**	P	**P**	**23 30 46.9**	**+1.0**
	baz=251,SNR=8.2						
YUK6	**Outpost Mounta**	**84.40**	**28**	P	**P**	**23 30 46.4**	**+0.5**
	baz=252						
EGAK	**Eagle**	**84.50**	**24**	P	**P**	**23 30 46.1**	**0.0**
EGAK	**Eagle**	**84.50**	**24**	P	**P**	**23 30 46.3**	**+0.2**
	baz=249,SNR=30						
BTK	**Batken**	**84.59**	**311**	P	**P**	**23 30 47.4**	**+0.1**
HYT	**Haines Junctio**	**84.76**	**28**	P	**P**	**23 30 48.2**	**+0.6**
HYT	**Haines Junctio**	**84.76**	**28**	P	**P**	**23 30 48.3**	**+0.7**
	baz=252,SNR=21						
GAR	**Garm**	**84.80**	**310**	P	**P**	**23 30 48.0**	**-0.3**
GAR				IAmb	IAmb	23 30 49.2	
	comp=Z,12nm,1.2s						
PLBC	**Pleasant Camp**	**84.90**	**29**	P	**P**	**23 30 48.4**	**+0.2**
	baz=254,SNR=5.9						
DAWY	**Dawson**	**84.97**	**25**	P	**P**	**23 30 48.5**	**+0.1**
DAWY	**Dawson**	**84.97**	**25**	P	**P**	**23 30 48.8**	**+0.4**
	baz=250,SNR=15						
N30M	**Aishikik Lake**	**85.14**	**27**	P	**P**	**23 30 49.8**	**+0.4**
	baz=253,SNR=8.4						
O30N	**Mendenhall**	**85.41**	**28**	P	**P**	**23 30 51.2**	**+0.6**
	baz=254,SNR=11						
SKAG	**Skagway**	**85.41**	**30**	P	**P**	**23 30 51.4**	**+0.8**
SKAG				IAmb	IAmb	23 30 52.5	
	comp=Z,14nm,1.0s						
SKAG	**Skagway**	**85.41**	**30**	P	**P**	**23 30 51.5**	**+0.9**
	baz=254						
BESE	**Bessie Mountai**	**85.42**	**30**	P	**P**	**23 30 50.7**	**-0.1**
BESE				IAmb	IAmb	23 30 52.4	
	comp=Z,12nm,1.0s						
MAW	**Mawson**	**85.47**	**203**	P	**P**	**23 30 49.6**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=105,slow=6.6,SNR=11						
	comp=Z,2.4nm,0.6s						
M30M	**Minto, Yukon**	**85.61**	**26**	IAmb	IAmb	23 30 53.8	
	comp=Z,13nm,1.1s						
M30M	**Minto, Yukon**	**85.61**	**26**	P	**P**	**23 30 52.2**	**+0.6**
	baz=253,SNR=18						
N31M	**Braeburn, Yuko**	**85.75**	**28**	P	**P**	**23 30 52.6**	**+0.3**
N31M	**Braeburn, Yuko**	**85.75**	**28**	P	**P**	**23 30 53.2**	**+0.9**
	baz=254,SNR=11						
I29M	**Ogilvie Camp,**	**85.83**	**23**	P	**P**	**23 30 52.7**	**+0.1**
	baz=251						
WHY	**Whitehorse**	**85.95**	**28**	IAmb	IAmb	23 30 54.8	
	comp=Z,11nm,0.8s						
WHY	**Whitehorse**	**85.95**	**28**	P	**P**	**23 30 53.8**	**+0.5**
	baz=255,SNR=15						
M31M	**Drury Creek, Y**	**86.58**	**27**	IAmb	IAmb	23 30 57.3	
	comp=Z,8.1nm,0.8s						
M31M	**Drury Creek, Y**	**86.58**	**27**	P	**P**	**23 30 56.3**	**+0.1**
	baz=255,SNR=7.7						
P33M	**Teslin, Yukon**	**86.83**	**29**	IAmb	IAmb	23 30 58.7	
	comp=Z,9.0nm,1.1s						
P33M	**Teslin, Yukon**	**86.83**	**29**	P	**P**	**23 30 57.7**	**+0.2**
	baz=256,SNR=5.7						
FARO	**Faro, Yukon**	**87.06**	**27**	P	**P**	**23 30 58.6**	**+0.1**
	baz=256,SNR=19						
S34M	**Telegraph Cree**	**87.17**	**32**	P	**P**	**23 30 60.0**	**+0.9**
	baz=258,SNR=5.9						
BRVK	**Borovoye**	**87.22**	**323**	P	**P**	**23 30 59.0**	**-0.4**
BRVK	**Borovoye**	**87.22**	**323**	*ce*P	**P**	**23 30 58.4**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
DLBC	**Dease Lake**	**87.85**	**31**	P	**P**	**23 31 02.8**	**+0.5**
	baz=259,SNR=5.5						
MMPY	**Sheldon Lake,**	**88.09**	**27**	P	**P**	**23 31 03.7**	**+0.3**
	baz=258						
INK	**Inuvik**	**88.49**	**21**	P	**P**	**23 31 03.5**	**-1.5**
	comp=Z,8.8nm,1.0s,baz=183,slow=3.2,SNR=9.9						
	comp=Z,8.8nm,1.0s						
INK	**Inuvik**	**88.49**	**21**	IAmb	IAmb	23 31 06.0	
	comp=Z,13nm,1.1s						
INK	**Inuvik**	**88.49**	**21**	P	**P**	**23 31 04.4**	**-0.6**
	baz=256						
PKM	**Mcpherson Peak**	**92.01**	**55**	P	**P**	**23 31 21.7**	**-0.6**
	baz=267						
C36M	**Paulatuk**	**92.05**	**21**	P	**P**	**23 31 20.4**	**-1.0**
	baz=264						
NVAR	**Mina Array Bea**	**93.40**	**52**	P	**P**	**23 31 28.8**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=262,slow=6.2,SNR=6.8						
	comp=Z,0.7nm,0.7s						
CWC	**Cottonwood Cre**	**93.49**	**54**	P	**P**	**23 31 29.3**	**+0.2**
	baz=268						
EDW2	**Edwards Air Fo**	**93.50**	**55**	P	**P**	**23 31 29.6**	**+0.6**
	baz=268						
LRMC	**Laurel Mtn Rad**	**93.78**	**55**	P	**P**	**23 31 30.5**	**+0.1**
	baz=268						
ARU	**Arti**	**94.29**	**326**	P	**P**	**23 31 30.0**	**-2.0**
	comp=Z,1.0nm,0.6s,baz=205,slow=5.7,SNR=4.5						
	comp=Z,1.0nm,0.6s						
F10A	**Beach Ranch, E**	**94.42**	**44**	P	**P**	**23 31 33.2**	**+0.2**
F10A				IAmb	IAmb	23 31 34.1	
	comp=Z,3.1nm,0.8s						
QSM	**Queen of Sheba**	**94.46**	**54**	P	**P**	**23 31 32.3**	**-1.0**
QSM				IAmb	IAmb	23 31 34.2	
	comp=Z,4.5nm,0.9s						
FURC	**Furnace Creek,**	**94.47**	**54**	P	**P**	**23 31 33.6**	**+0.3**
	baz=268						
GSC	**Goldstone, Bar**	**94.49**	**55**	P	**P**	**23 31 33.9**	**+0.4**
	baz=268						
MONP2	**Monument Peak**	**94.74**	**57**	P	**P**	**23 31 35.8**	**+0.9**
	baz=268						
TPNV	**Topopah Spring**	**94.98**	**53**	P	**P**	**23 31 35.9**	**0.0**
	baz=269						
BELC	**Belle Mtn. Jos**	**95.12**	**56**	P	**P**	**23 31 36.9**	**+0.4**
	baz=269						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	**P**	**23 31 38.1**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=278,slow=4.7,SNR=6.0						
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**109.29**	**335**	Pdiff	**Pdif**	**23 32 37.0**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=75,slow=8.1,SNR=3.6						
FINES				PKiKP	**PKiKP**	**23 36 39.7**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=27,slow=9.0,SNR=3.5						
FINES	**FINESS Array B**	**109.29**	**335**		**Pdif**	**23 32 38.4**	**-0.4**
AKASG	**Malin Array Be**	**112.42**	**324**	PKiKP	**PKiKP**	**23 36 44.7**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=50,slow=1.6,SNR=1.7						
NB2	**NORSAR Subarra**	**115.29**	**339**	PKPdf	**PKPdf**	**23 36 49.6**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**115.29**	**339**	PKP	**PKPdf**	**23 36 50.2**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=41,slow=1.6,SNR=4.7						
BOSA	**Boshof**	**118.23**	**235**	PKP	**PKPdf**	**23 36 56.8**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=124,slow=2.5,SNR=5.9						
RDO	**Rodhopi**	**118.41**	**315**		**PKPdf**	**23 36 56.6**	**-1.0**
LANS	**Liptovska Anna**	**118.75**	**326**	*e*PKIKP	**PKiKP**	**23 36 58.7**	**+0.5**
LANS	**Liptovska Anna**	**118.75**	**326**	*e*PKP	**PKiKP**	**23 36 58.7**	**+0.5**
VTS	**Vitosha**	**119.43**	**318**	PKPdf	**PKPdf**	**23 36 59.0**	**-0.8**
KOLL	**Kolacno**	**119.64**	**325**	*e*PKP	**PKPdf**	**23 36 59.7**	**-0.1**
KRLC	**Kraliky**	**119.73**	**328**	*e*PKIKP	**PKPdf**	**23 36 59.5**	**-0.5**
KRLC	**Kraliky**	**119.73**	**328**	*e*PKPDF	**PKPdf**	**23 36 59.5**	**-0.5**
OSTC	**Ostas**	**119.76**	**328**	*e*PKPDF	**PKPdf**	**23 37 00.0**	**0.0**
DPC	**Dobruska-Polom**	**119.82**	**328**	*e*PKIKP	**PKPdf**	**23 37 00.2**	**+0.1**
DPC	**Dobruska-Polom**	**119.82**	**328**	*e*PKPDF	**PKPdf**	**23 37 00.2**	**+0.1**
MODS	**Modra-Piesok**	**120.39**	**326**	*e*PKIKP	**PKPdf**	**23 37 01.6**	**+0.3**
MODS	**Modra-Piesok**	**120.39**	**326**	*e*PKP	**PKPdf**	**23 37 01.6**	**+0.3**
BRG	**Berggiesshubel**	**120.75**	**330**	*e*PKP	**PKPdf**	**23 37 01.8**	**-0.1**
BRG				Amp		23 37 03.0	
	comp=Z,3.7nm,0.9s						
BRG	**Berggiesshubel**	**120.75**	**330**	*e*PKIKP	**PKPdf**	**23 37 01.7**	**-0.1**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**120.95**	**330**	*i* PKPdf	**PKPdf**	**23 37 01.9**	**-0.3**
	comp=Z,4.0nm,0.6s						
CLL				*e*PP	**PP**	**23 38 41.0**	**+2.4**
CLL				*e*x	x	23 39 01.0	
SCHQ	**Schefferville**	**120.98**	**24**	PKP	**PKPdf**	**23 37 01.1**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=293,slow=5.2,SNR=3.1						
RONA	**Rosalia, Austr**	**121.31**	**325**	*e*P	**PKPdf**	**23 37 02.6**	**-0.5**
CONA	**Conrad Observa**	**121.43**	**326**	*e*P	**PKPdf**	**23 37 02.8**	**-0.5**
	comp=Z,2.2nm,0.7s						
FNA	**Florina**	**121.45**	**316**		**PKPdf**	**23 37 02.6**	**-1.0**
CKRC	**Cesky Krumlov**	**121.77**	**327**	*e*PKPDF	**PKPdf**	**23 37 03.4**	**-0.5**
PLCA	**Paso Flores**	**121.87**	**144**	PKP	**PKPdf**	**23 37 04.8**	**+0.3**
	comp=Z,2.6nm,0.5s,baz=242,slow=2.0,SNR=21						
NKC	**Novy Kostel**	**121.89**	**330**	*e*PKIKP	**PKPdf**	**23 37 03.7**	**-0.4**
NKC	**Novy Kostel**	**121.89**	**330**	*e*PKPDF	**PKPdf**	**23 37 03.7**	**-0.4**
KHC	**Kasperske Hory**	**121.98**	**328**	PKPdf	**PKPdf**	**23 37 03.5**	**-0.8**
KHC	**Kasperske Hory**	**121.98**	**328**	*e*PKIKP	**PKPdf**	**23 37 03.7**	**-0.6**
KHC	**Kasperske Hory**	**121.98**	**328**	*e*PKPDF	**PKPdf**	**23 37 03.7**	**-0.6**
GERES	**GERESS Array B**	**122.08**	**328**	PKP	**PKPdf**	**23 37 04.2**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=85,slow=1.8,SNR=29						
MOA	**Molln**	**122.36**	**326**	*e*P	**PKPdf**	**23 37 04.1**	**-0.9**
	comp=Z,1.2nm,0.6s						
SOKA	**Soboth**	**122.59**	**325**	*e*P	**PKPdf**	**23 37 04.9**	**-0.8**
	comp=Z,4.6nm,1.0s						
OBKA	**Obir**	**122.96**	**325**	*e*P	**PKPdf**	**23 37 05.7**	**-0.6**
	comp=Z,11nm,1.3s						
ABTA	**Abfaltersbach**	**123.97**	**326**	*e*P	**PKPdf**	**23 37 07.2**	**-1.1**
	comp=Z,4.1nm,0.7s						
WATA	**Walderalm**	**124.13**	**327**	*e*P	**PKPdf**	**23 37 07.7**	**-0.9**
	comp=Z,3.5nm,0.7s						
WTTA	**Wattenberg**	**124.14**	**327**	*e*P	**PKPdf**	**23 37 08.0**	**-0.7**
	comp=Z,4.1nm,0.6s						
MOTA	**Moosalm**	**124.38**	**328**	*e*P	**PKPdf**	**23 37 08.1**	**-1.1**
	comp=Z,4.3nm,0.7s						
SQTA	**Sankt Quirin**	**124.40**	**327**	*e*P	**PKPdf**	**23 37 08.5**	**-0.6**
	comp=Z,3.1nm,0.7s						
FETA	**Feichten**	**124.78**	**327**	*i* P	**PKPdf**	**23 37 09.7**	**-0.2**
	comp=Z,4.3nm,0.9s						
TUE	**Stuetta**	**125.86**	**328**		**PKPdf**	**23 37 11.6**	**-0.4**
PB08	**IPOC Station P**	**134.34**	**123**		**PKPdf**	**23 37 29.3**	**+0.2**
LPAZ	**La Paz**	**136.89**	**119**	PKP	**PKPdf**	**23 37 34.6**	**+0.5**
	comp=Z,2.8nm,0.5s,baz=295,slow=2.6,SNR=10						
CPUP	**Villa Florida**	**139.65**	**140**	PKhKP	PKPpre	23 37 29.9	
	comp=Z,3.1nm,1.0s,baz=168,slow=7.8,SNR=3.3						
CPUP				PKP	**PKPdf**	**23 37 38.4**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=238,slow=2.1,SNR=5.1						
HUMP	**Col San Antoni**	**141.78**	**65**		**PKPdf**	**23 37 42.2**	**0.0**
SMRT	**St. Maarten**	**144.32**	**64**		PKPbc	23 37 44.8	-1.5
TORD	**Torodi Ar. Bea**	**147.81**	**288**	PKPbc	**PKPbc**	**23 37 55.6**	**-0.6**
	comp=Z,12nm,0.8s,baz=68,slow=2.7,SNR=55						
TORD				PKPab	**PKPab**	**23 38 00.3**	**-0.1**
	comp=Z,6.9nm,0.8s,baz=68,slow=3.4,SNR=4.4						
TORD				pPKPbc	**pPKPab**	**23 39 48.1**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=75,slow=2.7,SNR=9.9						
TORD	**Torodi Ar. Bea**	**147.81**	**288**		**PKPdf**	**23 37 54.8**	**+2.2**
BDFB	**Brasilia**	**153.31**	**137**	PKP	**PKPdf**	**23 38 01.2**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=162,slow=6.4,SNR=5.7						
BDFB				PKPbc	**PKPbc**	**23 38 08.8**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=302,slow=2.0,SNR=6.5						
BDFB				PKPab	**PKPab**	**23 38 22.1**	**-1.3**
	comp=Z,4.5nm,0.8s,baz=165,slow=8.1,SNR=5.8						

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*IDC **29** 23:21:47.5±3.9, 36.°25N×71.°30E, h195^{km}±29^{km}, mb3.1/6, mbtmp3.6/11, Error ellipse: s-maj=47.2km s-min=21.2km az=142.0*

*NNC **29** 23:21:55.6±3.1, 36.°91N×71.°22E, h219^{km}±39^{km}, mb2.6, mpv3.5, Error ellipse: s-maj=32.3km s-min=20.0km az=9.0*

ISC 29 23:21:49.4±0.8**, 36.°48N**±0.°08×**71.°25E**±0.°08**, h200^{km}, n26, σ1^{s}.17**/27**, mb3.4**/5**, 4C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**3.26**	**149**	P	Pn	23 22 47.4	+5.2
AAK	**Ala-Archa**	**6.64**	**21**	P	**Pn**	**23 23 26.2**	**+1.3**
	2.7nm,0.3s,baz=195,slow=3.6,SNR=11						
AAK				S	**Sn**	**23 24 40.6**	**-0.2**
	3.2nm,0.5s,baz=170,slow=11,SNR=3.6						
KK31	**Karatay Array**	**6.64**	**355**	⇑P	**Pn**	**23 23 25.9**	**+1.1**
	2.2nm,0.3s,baz=176,slow=12,SNR=136						
KK31				S	**Sn**	**23 24 37.8**	**-2.7**
	7.4nm,0.3s,baz=174,slow=15,SNR=13						

TKM2	**Tokmak 2**	**7.25**	**26**	⇑P	**Pn**	**23 23 34.3**	**+1.4**
	2.0nm,0.8s						
TKM2				⇑S	**Sn**	**23 24 54.1**	**-1.1**
	12nm,1.1s						
GEYT	**Alibeck**	**10.58**	**282**	P	**Pn**	**23 24 16.8**	**+0.7**
	0.7nm,0.5s,baz=94,slow=13,SNR=1.3						
PYUN	**Piuthan**	**12.97**	**127**	*e*P	**P**	**23 24 47.8**	**-2.1**
	9.7nm,0.4s						
MKAR	**Makanchi Array**	**13.19**	**35**	P	**P**	**23 24 51.2**	**-0.8**
	0.1nm,0.3s,baz=207,slow=9.7,SNR=4.2						
DANN	**Dangsing**	**13.31**	**124**	*e*P	**P**	**23 24 52.1**	**-1.7**
KOLN	**Koldanda**	**13.59**	**126**	*e*P	**P**	**23 24 56.4**	**-0.4**
GKN	**Gorkha**	**14.12**	**123**	*e*P	**P**	**23 25 02.6**	**-0.1**
DMN	**Daman**	**14.69**	**123**	*e*P	**P**	**23 25 09.3**	**+0.2**
PKI	**Pulchoki**	**14.92**	**123**	*e*P	**P**	**23 25 12.2**	**+0.5**
	13nm,0.4s						
GUN	**Gumba**	**15.03**	**120**	*e*P	**P**	**23 25 13.5**	**+0.5**
	9.5nm,0.3s						
KURBB	**Kurchatov Arra**	**15.08**	**18**	P	**P**	**23 25 13.2**	**+0.3**
	0.2nm,0.3s,baz=209,slow=12,SNR=2.5						
AB31	**Akbulak array**	**15.20**	**331**	P	**P**	**23 25 15.5**	**+1.2**
	0.4nm,0.3s,baz=140,slow=12,SNR=34						
JIRN	**Jiri**	**15.40**	**121**	*e*P	**P**	**23 25 16.6**	**-0.5**
RAMN	**Ramite**	**16.13**	**122**	*e*P	**Pn**	**23 25 26.6**	**+1.1**
	4.3nm,0.4s						
AKTO	**Aktyubinsk**	**16.90**	**330**	P	**Pn**	**23 25 34.3**	**+0.1**
	1.6nm,0.3s,baz=140,slow=8.1,SNR=8.4						
AKTO	**Aktyubinsk**	**16.90**	**330**	⇑P	**P**	**23 25 33.2**	**+0.2**
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**19.85**	**24**	P	Pn	23 26 07.4	-1.6
	1.0nm,0.3s,baz=226,slow=9.3,SNR=5.5						
	1.0nm,0.3s						
BRTR	**Keskin Array B**	**29.64**	**288**	P	**P**	**23 27 37.3**	**+1.2**
	0.2nm,0.5s,baz=74,slow=5.1,SNR=1.5						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**37.61**	**326**	P	**P**	**23 28 44.6**	**+0.1**
	0.8nm,0.5s,baz=124,slow=10,SNR=13						
	0.8nm,0.5s						
ARCES	**ARCESS Array B**	**41.24**	**338**	P	**P**	**23 29 14.3**	**0.0**
	0.6nm,0.4s,baz=108,slow=7.8,SNR=7.4						
	0.6nm,0.4s						
NB2	**NORSAR Subarra**	**44.52**	**323**	P	**P**	**23 29 39.9**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.52**	**323**	P	**P**	**23 29 40.1**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=94,slow=7.9,SNR=3.7						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.92**	**269**	P	**P**	**23 32 12.1**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=50,slow=6.5,SNR=10.0						
	comp=Z,0.8nm,0.6s						

IDC 29 23:27:52.7±2.2**, 8°.39S**×**128°.28E, h0km, mb3.4**/1**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse: s-maj=147.2km s-min=29.0km az=68.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.89**	**154**	Pn	Pn	23 30 57.5	+0.1
	0.1nm,0.3s,baz=331,slow=14,SNR=9.0						
WRA				Sn	Sn	23 33 22.2	+0.5
	0.4nm,0.3s,baz=332,slow=24,SNR=9.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**16.11**	**161**	Pn	Pn	23 31 41.0	+0.2
	0.2nm,0.3s,baz=341,slow=11,SNR=11						
	1.4nm,0.8s						
SONM	**Songino Array**	**59.24**	**343**	P	P	23 37 56.0	-0.1
	0.2nm,0.5s,baz=150,slow=6.0,SNR=1.7						
	0.2nm,0.5s						

NEIC ***29*** *23:28:06.9±1.2, 20°.73S±0°.07×178°.6W±0°.1, h588km±9km, mb4.0/26, Error ellipse: s-maj=17.5km s-min=10.4km az=92.0*

IDC ***29*** *23:28:07.7±2.2, 20°.81S×178°.80W, h583km±24km, mb3.1/6, mbtmp4.1/8, Error ellipse: s-maj=30.8km s-min=27.7km az=166.0*

ISC 29 23:28:07.6±0.6**, 20°.7S**±0°.1×**178°.66W**±0°.09**, h600km, n40,** σ**0^{s}96**/40**, mb3.9**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.27**	**313**	P	**P**	**23 29 33.9**	**-1.3**
	13nm,0.4s,baz=142,slow=3.8,SNR=27						
NIUE	**Niue**	**8.38**	**80**	P	**P**	**23 30 09.1**	**-1.4**
MARNC	**Mare, Loyalty**	**12.45**	**264**	P	**P**	**23 30 49.4**	**-1.4**
DZM	**Mont Dzumac**	**13.94**	**262**	P	**P**	**23 31 05.2**	**-0.8**
	2.5nm,0.5s,baz=137,slow=19,SNR=5.2						
KOUNC	**Koumac, New Ca**	**15.96**	**267**	P	**P**	**23 31 25.0**	**+0.3**
WHZ	**Wether Hill Ro**	**27.44**	**201**	P	**P**	**23 33 05.8**	**-1.1**
WHZ				IAmb	IAmb	23 33 13.1	
	comp=Z,4.5nm,0.9s						
EIDS	**Eidsvold**	**28.20**	**255**	P	**P**	**23 33 13.9**	**0.0**
EIDS				IAmb	IAmb	23 33 24.5	
	comp=Z,3.6nm,1.1s						
ARMA	**Armidale**	**28.43**	**244**	P	**P**	**23 33 16.2**	**+0.3**
ARMA				IAmb	IAmb	23 33 16.8	
	comp=Z,4.1nm,0.7s						
CTA	**Charters Tower**	**32.85**	**265**	P	**P**	**23 33 54.0**	**+0.3**
	comp=Z,4.1nm,0.5s,baz=99,slow=11,SNR=9.6						
	comp=Z,4.1nm,0.5s						
CTAO	**Charters Tower**	**32.85**	**265**	P	**P**	**23 33 54.5**	**+0.7**
COEN	**Coen**	**36.97**	**274**	P	**P**	**23 34 28.3**	**+0.4**
STKA	**Stephens Creek**	**37.15**	**244**	P	**P**	**23 34 28.1**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=97,slow=14,SNR=3.1						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**37.15**	**244**	P	**P**	**23 34 28.4**	**-0.7**
BBOO	**Buckleboo**	**41.91**	**244**	P	**P**	**23 35 06.7**	**-0.4**
BBOO				IAmb	IAmb	23 35 16.6	
	comp=Z,6.1nm,1.1s						
WR0	**Warramunga Arr**	**43.77**	**262**	P	**P**	**23 35 21.6**	**-0.2**
WR0				IAmb	IAmb	23 35 21.6	
	comp=Z,2.9nm,1.0s						
AS31	**Alice Springs**	**43.87**	**257**	P	**P**	**23 35 22.4**	**-0.1**
ASAR	**Alice Springs**	**43.87**	**257**	P	**P**	**23 35 22.5**	**-0.1**
	comp=Z,3.3nm,0.5s,baz=95,slow=7.9,SNR=28						
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**43.87**	**257**	P	**P**	**23 35 22.4**	**-0.2**
WB0	**Warramunga Arr**	**43.94**	**263**	P	**P**	**23 35 23.0**	**-0.1**
WB0				IAmb	IAmb	23 35 23.4	
	comp=Z,2.8nm,0.8s						
WB2	**Warramunga Arr**	**43.95**	**262**	P	**P**	**23 35 22.9**	**-0.2**
WB2				IAmb	IAmb	23 35 23.6	
	comp=Z,6.4nm,1.1s						
WRAB	**Tennant Creek**	**43.95**	**262**	P	**P**	**23 35 21.2**	**-2.0**
WRAB				IAmb	IAmb	23 35 23.5	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**43.96**	**262**	P	**P**	**23 35 22.9**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=97,slow=7.4,SNR=21						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**43.96**	**262**	P	**P**	**23 35 23.0**	**-0.2**
MTN	**Manton Dam**	**48.54**	**271**	P	**P**	**23 35 58.3**	**+0.5**
MTN				IAmb	IAmb	23 35 59.1	
	comp=Z,4.1nm,0.8s						
MIDW	**Midway**	**48.63**	**2**	P	**P**	**23 35 58.0**	**-0.2**
PSA00	**Pilbara Seismi**	**57.02**	**257**	P	**P**	**23 36 57.8**	**-0.1**
PSA00				IAmb	IAmb	23 37 09.3	
	comp=Z,5.6nm,1.1s						
MBWA	**Marble Bar**	**57.20**	**258**	P	**P**	**23 36 59.2**	**0.0**
MBWA				IAmb	IAmb	23 36 59.7	
	comp=Z,5.0nm,0.8s						
SBA	**Scott Base**	**57.65**	**184**	P	**P**	**23 37 03.2**	**+2.0**
VNDA	**Vanda**	**57.67**	**185**	P	**P**	**23 37 01.9**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=358,slow=6.9,SNR=6.3						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**57.67**	**185**	P	**P**	**23 37 02.2**	**+0.8**
GIRL	**Giralia**	**61.90**	**255**	P	**P**	**23 37 32.1**	**+1.8**
QSPA	**South Pole Qui**	**69.38**	**180**	P	**P**	**23 38 16.6**	**+0.4**
QSPA				IAmb	IAmb	23 38 17.4	
	comp=Z,3.0nm,0.9s						
PETK	**Petropavlovsk-**	**76.29**	**346**	P	**P**	**23 38 56.6**	**+1.0**
BELA	**Belgrano 2**	**79.45**	**173**	P	**P**	**23 39 12.0**	**-0.3**
ELS	**Elsinore Mount**	**79.50**	**48**	P	**P**	**23 39 12.1**	**-1.3**
PNTR	**Pine Nut**	**81.14**	**42**	P	**P**	**23 39 22.5**	**+0.6**
PNTR				IAmb	IAmb	23 39 33.1	
	comp=Z,6.8nm,1.2s						
NVAR	**Mina Array Bea**	**81.59**	**44**	P	**P**	**23 39 22.4**	**-1.8**
H04D	**Lebanon**	**82.54**	**37**	P	**P**	**23 39 28.9**	**+0.4**
H04D				IAmb	IAmb	23 39 42.6	
	comp=Z,4.1nm,0.9s						
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**23 39 59.1**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=242,slow=5.0,SNR=2.7						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**135.77**	**343**	PKP	**PKiKP**	**23 46 23.3**	**+1.2**
	comp=Z,2.1nm,1.1s,baz=116,slow=4.4,SNR=3.7						

IDC ***29*** *23:39:43.9±0.8, 25°.48N×141°.30E, h0km, mb3.9/10, mbtmp3.9/10, MS3.2/9, Error ellipse: s-maj=27.2km s-min=16.5km az=109.0*

NEIC ***29*** *23:39:57.8±1.0, 25°.49N±0°.09×141°.3E±0°.2, h108km±4km, mb4.3/23, Error ellipse: s-maj=21.4km s-min=13.4km az=92.0*

ISC 29 23:39:56.8±0.6**, 25°.42N**±0°.09×**141°.2E**±0°.1**, h100km, n57,** σ**1^{s}07**/39**, mb4.2**/22**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.88**	**27**	Pn	Pn	23 40 16.9	-11
	168nm,0.3s,baz=221,slow=4.8,SNR=51						
JCJ				Sn	Sn	23 40 39.5	-12
	92nm,0.3s,baz=283,slow=24,SNR=16						
JCJ				LR	LR	23 41 06.3	
	comp=Z,273nm,20.1s,baz=180,slow=46						
JHJ2	**Mitsune**	**7.76**	**351**	Pn	**Pn**	**23 41 45.5**	**-1.5**
JHJ	**Hachijo jima 2**	**7.78**	**351**	LR	LR	23 44 33.8	
	comp=Z,86nm,18.8s,baz=200,slow=38						
MJAR	**Matsushiro Arr**	**11.38**	**348**	LR	LR	23 46 39.4	
	comp=Z,81nm,18.6s,baz=184,slow=37						
GUMO	**Guam**	**12.26**	**163**	LR	LR	23 46 48.3	
	comp=Z,66nm,18.6s,baz=46,slow=34						
KSRS	**Korea Array**	**16.49**	**320**	Pn	**P**	**23 43 43.5**	**+0.5**
	0.2nm,0.3s,baz=135,slow=12,SNR=35						
KSAR	**Wonju Array Be**	**16.50**	**320**	P	**Pn**	**23 43 43.2**	**+0.9**
KS19	**Wonju Array Si**	**16.56**	**320**	P	**Pn**	**23 43 43.3**	**+0.4**
KS19				IAmb	IAmb	23 43 47.5	
	comp=Z,12nm,0.8s						
ERM	**Erimo**	**16.63**	**5**		**Pn**	**23 43 43.5**	**-0.2**
ERM				IAmb	IAmb	23 43 52.1	
	comp=Z,26nm,1.1s						
ASAJ	**Asahikawa**	**18.69**	**3**	LR	LR	23 52 31.4	
	comp=Z,42nm,18.8s,baz=142,slow=41						
H11N2	**WAKE ISLAND Hy**	**24.36**	**98**	T	T	00 10 20.3	
	baz=288,slow=74,SNR=60						
H11N1	**WAKE ISLAND Hy**	**24.36**	**98**	T	T	00 10 20.2	
	baz=288,slow=74,SNR=70						
H11N3	**WAKE ISLAND Hy**	**24.37**	**98**	T	T	00 10 21.3	
	baz=288,slow=74,SNR=66						
H11S3	**WAKE ISLAND Hy**	**24.58**	**101**	T	T	00 10 36.8	
	baz=291,slow=75,SNR=187						
H11S1	**WAKE ISLAND Hy**	**24.59**	**101**	T	T	00 10 36.9	
	baz=291,slow=75,SNR=223						
H11S2	**WAKE ISLAND Hy**	**24.60**	**101**	T	T	00 10 37.7	
	baz=291,slow=75,SNR=198						
KLR	**Kul'dur**	**24.89**	**345**	LR	LR	23 53 47.5	
	comp=Z,66nm,19.7s,baz=214,slow=34						
PETK	**Petropavlovsk-**	**30.30**	**20**	LR	LR	23 58 19.4	
	comp=Z,30nm,20.1s,baz=255,slow=37						
MA2	**Magadan**	**34.78**	**9**	LR	LR	00 09 23.0	
	comp=Z,21nm,18.0s,baz=122,slow=51						
ULN	**Ulaanbaatar**	**34.97**	**319**	P	**P**	**23 46 39.1**	**-0.4**
ULN				IAmb	IAmb	23 46 40.6	
	comp=Z,5.5nm,1.0s						
SONM	**Songino Array**	**35.35**	**318**	P	**P**	**23 46 42.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=120,slow=7.9,SNR=6.8						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**35.35**	**318**	P	**P**	**23 46 42.0**	**-0.7**
GTA	**Gaotai**	**37.31**	**302**	*e*P	**P**	**23 47 00.5**	**+1.1**
GTA				pP	pP	23 47 06.5	-15
GTA				sP	pwP	23 47 10.5	-15
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.69**	**269**	P	**P**	**23 47 19.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=62,slow=8.7,SNR=2.0						
	comp=Z,0.8nm,0.3s						
GOMU	**GeErMu**	**40.94**	**297**	P	**P**	**23 47 31.3**	**+1.3**
GOMU				pP	pP	23 47 35.0	-17
GOMU				sP	pwP	23 47 38.8	-17
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,65nm,7.6s						
WB0	**Warramunga Arr**	**45.40**	**189**	P	**P**	**23 48 05.0**	**-0.5**
WB0				IAmb	IAmb	23 48 11.1	
	comp=Z,5.0nm,0.9s						
WR0	**Warramunga Arr**	**45.57**	**189**	P	**P**	**23 48 06.9**	**0.0**
WR0				IAmb	IAmb	23 48 08.6	
	comp=Z,6.8nm,0.9s						
WRAB	**Tennant Creek**	**45.57**	**189**	P	**P**	**23 48 06.5**	**-0.4**
WRAB				IAmb	IAmb	23 48 12.6	
	comp=Z,6.8nm,0.8s						
WB2	**Warramunga Arr**	**45.58**	**189**	P	**P**	**23 48 07.0**	**0.0**
WRA	**Warramunga Arr**	**45.58**	**189**	P	**P**	**23 48 06.3**	**-0.6**
	comp=Z,6.0nm,0.6s,baz=8.1,slow=8.6,SNR=37						
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	**45.58**	**189**	P	**P**	**23 48 06.7**	**-0.3**
ASAR	**Alice Springs**	**49.31**	**189**	P	**P**	**23 48 35.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=14,slow=13,SNR=7.6						
	comp=Z,0.5nm,0.7s						
MK31	**Makanchi Array**	**50.89**	**311**	P	**P**	**23 48 47.4**	**-0.2**
MKAR	**Makanchi Array**	**50.89**	**311**	P	**P**	**23 48 47.8**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=94,slow=9.0,SNR=9.3						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**50.89**	**311**	P	**P**	**23 48 47.4**	**-0.2**
MAKZ	**Makanchi**	**51.10**	**311**	P	**P**	**23 48 48.4**	**-0.8**
MAKZ				IAmb	IAmb	23 48 51.2	
	comp=Z,2.1nm,1.0s						
CNBA	**Chernabura Isl**	**51.97**	**39**	P	**P**	**23 48 54.8**	**-0.6**
BOOM	**Boomskoye usch**	**55.46**	**305**	P	**P**	**23 49 20.8**	**-0.6**
BOOM				IAmb	IAmb	23 49 25.0	
	comp=Z,1.7nm,1.0s						
LHI	**Lord Howe Isla**	**59.13**	**162**	P	**P**	**23 49 46.6**	**-0.3**
KK31	**Karatay Array**	**59.37**	**307**	P	**P**	**23 49 48.2**	**-0.5**
KK31				IAmb	IAmb	23 49 54.0	
	comp=Z,2.2nm,1.1s						
KKAR	**Karatay Array**	**59.37**	**307**	P	**P**	**23 49 48.6**	**0.0**
KKAR	**Karatay Array**	**59.37**	**307**	P	**P**	**23 49 48.5**	**-0.1**
KKAR				IAmb	IAmb	23 49 54.0	
	comp=Z,2.2nm,1.1s						
ILAR	**Eielson Array**	**59.59**	**28**	P	**P**	**23 49 49.1**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=259,slow=5.9,SNR=10						
	comp=Z,1.5nm,0.9s						
HRA	**Herat**	**67.48**	**299**	P	**P**	**23 50 42.1**	**-0.4**
DIB	**Dawson Inlet,**	**67.91**	**40**	P	**P**	**23 50 45.7**	**+1.1**
DIB				IAmb	IAmb	23 50 52.7	
	comp=Z,4.9nm,0.9s						
KBS	**Kingsbay**	**72.05**	**351**	P	**P**	**23 51 13.4**	**+3.9**
YKA	**Yellowknife Ar**	**74.02**	**28**	P	**P**	**23 51 20.9**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=316,slow=6.4,SNR=3.6						
	comp=Z,1.1nm,0.8s						
FIA1	**FINESS Array S**	**79.06**	**334**	P	**P**	**23 51 48.2**	**-1.5**
FIA1				IAmb	IAmb	23 52 04.8	
	comp=Z,4.6nm,1.1s						
FINES	**FINESS Array B**	**79.06**	**334**	P	**P**	**23 51 48.0**	**-1.8**
	comp=Z,1.4nm,0.4s,baz=72,slow=4.6,SNR=34						
FINES				LR	LR	00 26 50.4	
	comp=Z,37nm,21.3s,baz=134,slow=36						
	comp=Z,1.4nm,0.4s						
FINES	**FINESS Array B**	**79.06**	**334**	P	**P**	**23 51 48.1**	**-1.6**
SNCC	**San Nicolas Is**	**83.63**	**56**	P	**P**	**23 52 15.0**	**+0.6**
NOA	**NORSAR Array B**	**84.84**	**338**	P	**P**	**23 52 18.1**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=44,slow=5.0,SNR=4.2						
	comp=Z,0.8nm,0.8s						
PFO	**Pinyon Flats O**	**85.75**	**55**	LR	LR	00 25 13.5	
	comp=Z,33nm,18.8s,baz=184,slow=32						
PDAR	**Pinedale Array**	**86.01**	**44**	P	**P**	**23 52 27.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=299,slow=3.7,SNR=2.2						
	comp=Z,0.2nm,0.5s						
H03N2	**Juan Fernandez**	**144.30**	**112**	T	T	02 40 17.0	
	baz=271,slow=74,SNR=16						
H03N3	**Juan Fernandez**	**144.31**	**113**	T	T	02 40 18.3	
	baz=271,slow=74,SNR=18						
H03N1	**Juan Fernandez**	**144.32**	**112**	T	T	02 40 18.5	
	baz=271,slow=74,SNR=20						

TUL ***29*** *23:47:09.5±1.4, 35°.67N±0°.01×97°.39W±0°.01, h6km±3km, ML2.7, mb_Lg2.4/37(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=49.0*

NEIC 29 23:47:09.5±1.4**, 35°.70N**±0°.01×**97°.40W**±0°.01**, h5km**±2km**, Error ellipse: s-maj=3.0km s-min=2.1km az=180.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.12**	**188**		Pg	23 47 12.0	+0.1
OK009				Sg	Sg	23 47 13.7	+0.3
OK005	**Luther M Schoo**	**0.18**	**103**	Pg	Pg	23 47 13.3	+0.3
OK005				Sg	Sg	23 47 16.1	+0.7
OKCFA	**Oklahoma City**	**0.28**	**188**	Pg	Pg	23 47 15.1	+0.1
OKCFA				Sg	Sg	23 47 19.1	+0.4
OKCSW	**OKLAHOMA CITY**	**0.29**	**186**		Pg	23 47 15.1	0.0
OKCSW				Sg	Sg	23 47 19.4	+0.5
FNO	**Franklin**	**0.44**	**180**	Pg	Pg	23 47 17.9	-0.1
FNO				Sg	Sg	23 47 24.1	+0.5
X34A	**Smith Ranch, M**	**1.15**	**198**		Pg	23 47 31.1	-0.4
TUL1	**Leonard**	**1.33**	**80**	Pn	Pn	23 47 33.3	-1.4
T35A	**Sooner Cattle**	**1.42**	**30**		Pn	23 47 35.5	-0.5
U32A	**Winter Ranch,**	**1.46**	**298**	Pn	Pn	23 47 35.4	-1.2
U32A					Sg	23 47 57.0	+0.4
WMOK	**Wichita Mounta**	**1.48**	**230**		Pn	23 47 36.1	-0.7
X37A	**Clayton**	**2.00**	**123**	Pn	Pn	23 47 42.9	-1.0
X37A				Sb	Sn	23 48 10.4	+1.1
X37A				IAmb_Lg		23 48 14.5	
	comp=Z,21nm,0.8s						
Z35A	**Perchaven, San**	**2.36**	**177**	Pn	Pn	23 47 48.2	-0.7
Z35A				IAmb_Lg		23 48 24.9	
	comp=Z,10nm,0.7s						
HHAR	**Hobbs**	**2.87**	**77**	Pn	Pn	23 47 56.6	+0.6
R32A	**Long Quarter,**	**2.92**	**339**	Pn	Pn	23 47 56.4	-0.2
R32A					Pg	23 48 04.4	-1.0
W39A	**Magazine**	**3.00**	**99**	Pn	Pn	23 47 58.0	+0.3
W39A					Pg	23 48 05.7	-1.2
W39A				IAmb_Lg		23 48 49.3	
	comp=Z,15nm,0.9s						
Z38A	**Mt. Pleasant**	**3.15**	**140**	IAmb_Lg		23 48 48.8	
	comp=Z,12nm,0.7s						
MIAR	**Mount Ida**	**3.34**	**109**		Pn	23 48 01.8	-0.5
MIAR				IAmb_Lg		23 49 03.2	
	comp=Z,7.3nm,0.9s						
KSU1	**Kansas State U**	**3.46**	**10**		Pb	23 48 12.9	+1.7
KSU1				IAmb_Lg		23 49 07.2	
	comp=Z,11nm,0.8s						
ABTX	**Abilene, Hawle**	**3.58**	**212**	Pn	Pn	23 48 05.7	-0.1
ABTX				IAmb_Lg		23 49 04.7	
	comp=Z,9.3nm,0.8s						
AMTX	**Amarillo**	**3.59**	**258**		Pn	23 48 05.1	-0.9
CBKS	**Cedar Bluff**	**3.63**	**330**	Pn	Pn	23 48 06.2	-0.2
CBKS				IAmb_Lg		23 49 12.7	
	comp=Z,16nm,0.9s						
WHTX	**Lake Whitney,**	**3.69**	**181**	Pn	Pn	23 48 06.7	-0.6
U40A	**Yellville**	**3.75**	**79**		Pn	23 48 08.0	0.0
S39A	**Bolivar**	**3.84**	**58**		Pn	23 48 09.2	0.0
X40A	**Basin Creek Fa**	**3.94**	**107**		Pn	23 48 09.6	-0.9
X40A				IAmb_Lg		23 49 14.8	
	comp=Z,12nm,0.7s						
WHAR	**Wooly Hollow**	**4.19**	**94**	Pn	Pn	23 48 12.9	-1.2
W41B	**Gary Mavity, V**	**4.24**	**96**	Pn	Pn	23 48 14.3	-0.5
W41B					Pb	23 48 14.6	-10
UALR	**University of**	**4.24**	**101**	Pn	Pn	23 48 14.6	-0.2
FCAR	**Ozark Folk Cen**	**4.30**	**86**	Pn	Pn	23 48 15.8	+0.3
MGMO	**Mountain Grove**	**4.39**	**69**	IAmb_Lg		23 49 39.7	
	comp=Z,7.8nm,0.9s						
R40A	**Maddies Statio**	**4.86**	**56**	IAmb_Lg		23 49 55.4	
	comp=Z,4.8nm,0.8s						
LCAR	**Lake Charles**	**5.09**	**84**	IAmb_Lg		23 49 55.4	
	comp=Z,4.6nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.32**	**310**	IAmb_Lg		23 50 00.8	
	comp=Z,8.3nm,0.8s						
CCM	**Cathedral Cave**	**5.47**	**63**	IAmb_Lg		23 50 03.9	
	comp=Z,8.3nm,0.9s						
JCT	**Junction City**	**5.58**	**202**	IAmb_Lg		23 50 12.5	
	comp=Z,10nm,0.9s						
T25A	**Trinidad**	**5.83**	**286**	IAmb_Lg		23 50 24.3	
	comp=Z,6.1nm,0.9s						
ISCO	**Idaho Springs**	**7.69**	**305**	IAmb_Lg		23 51 16.9	
	comp=Z,2.6nm,0.8s						

DNK ***29*** *23:51:20.8±1.5, 71°.68N×12°.54W, h0km±42km, ML1.5*

BER 29 23:51:18.3±0.6**, 71°.33N**×**10°.99W, h0km**±575km**, ML2.3, Confirmed Earthquake, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	**Jan Mayen**	**0.84**	**118**	*e*P	Pg	23 51 34.6	+0.3
JMI				*e*S	Sg	23 51 46.2	+1.0
JMI				IAML		23 51 47.3	
	comp=Z,124nm,0.3s						
JMIC	**Jan Mayen**	**0.88**	**112**	*e*P	Pg	23 51 34.9	-0.2
JMIC				*e*S	Sg	23 51 46.7	+0.2
JMIC				IAML		23 51 51.5	
	comp=Z,46nm,0.3s						
JNW	**Jan Mayen West**	**0.89**	**109**	*e*P	Pg	23 51 34.9	-0.4
JNW				*e*S	Sg	23 51 47.1	+0.5
JNW				IAML		23 51 47.6	
	comp=Z,58nm,0.5s						
JNE	**Jan Mayen East**	**0.94**	**110**	*e*P	Pg	23 51 35.7	-0.5
JNE				*e*S	Sg	23 51 49.0	+0.6
JNE				IAML		23 51 49.8	
	comp=Z,68nm,0.6s						
SCO	**Scoresbysund**	**3.70**	**262**	*i* P	Pn	23 52 13.0	-3.6
DBG	**Daneborg**	**4.05**	**322**	*i* P	Pn	23 52 15.6	-5.8
DBG				*i* S	Sn	23 52 55.6	-14
DBG				IAML		23 52 58.4	
	comp=Z,3.7nm,0.2s						
DAG	**Danmarks Havn**	**5.86**	**342**	*i* P	Pn	23 52 40.0	-6.2
DAG				*i* S	Sn	23 53 41.0	-13
DAG				IAML		23 53 42.5	
	comp=Z,1.8nm,0.6s						
NOR	**Nord**	**10.41**	**355**	*i* P	Pn	23 53 43.0	-5.5

WEL 29 23:52:02.2±0.8**, 45°S**±3°×**16°7E**±°**, h5km, M3.3**/10**, ML3.6**/18**, MLv3.3**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=92.1, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.39**	**111**	P	Pb	23 52 11.1	-0.4
DCZ				S	Sb	23 52 16.5	-1.2
PYZ	**Puysegur Point**	**0.84**	**178**	P	Pg	23 52 18.5	+0.3
PYZ				S	Sg	23 52 29.1	0.0
MLZ	**Mavora Lakes**	**1.04**	**93**	P	Pg	23 52 21.9	-0.3
MLZ				S	Sb	23 52 36.4	-0.2
WHZ	**Wether Hill Ro**	**1.07**	**122**	P	Pg	23 52 22.5	-0.3
WHZ				S	Sg	23 52 36.8	0.0
MSZ	**Milford Sound**	**1.12**	**55**	P	Pg	23 52 22.9	-0.8
WKZ	**Wanaka**	**1.76**	**74**	P	Pn	23 52 34.0	+0.7
APZ	**The Paps**	**1.77**	**149**	P	Pn	23 52 34.3	+0.8
EAZ	**Earnscleugh**	**1.89**	**88**	P	Pn	23 52 35.7	+0.7
JCZ	**Jackson Bay**	**1.98**	**51**	P	Pn	23 52 36.9	+0.5
SYZ	**Scrubby Hill**	**2.12**	**126**	P	Pn	23 52 38.6	+0.3
SYZ				S	Sn	23 53 05.3	+0.3
TUZ	**Tuapeka**	**2.19**	**108**	P	Pn	23 52 39.3	+0.1
TUZ				S	Sn	23 53 05.9	-0.7
LBZ	**Lake Benmore**	**2.69**	**71**	P	Pn	23 52 46.2	+0.1
HHSZ	**Highcliff Hill**	**2.83**	**103**	P	Pn	23 52 50.2	+2.2
ODZ	**Otahua Downs**	**2.84**	**86**	P	Pn	23 52 47.8	-0.4
FOZ	**Fox Glacier**	**2.90**	**53**	P	Pn	23 52 47.9	-1.1
TMZ	**Timaru**	**3.24**	**75**	P	Pn	23 52 53.5	-0.3
GCSZ	**Gaunt Creek Bo**	**3.32**	**54**	P	Pn	23 52 53.0	-1.8
ARCZ	**Arundel**	**3.52**	**68**	P	Pn	23 52 57.5	0.0
RPZ	**Rata Peaks**	**3.54**	**64**	P	Pn	23 52 58.9	+1.1
WVZ	**Waitaha Valley**	**3.71**	**54**	P	Pn	23 52 58.6	-1.5
LTZ	**Lake Taylor**	**4.79**	**60**	P	Pn	23 53 15.6	+0.6
DSZ	**Denniston Nort**	**5.19**	**48**	P	Pn	23 53 19.8	-0.7

WEL 30 00:05:02.9±0.8**, 39°S**±4°×**17°7E**±°**, h28km**±9km**, M3.8**/9**, ML4.2**/9**, MLv3.8**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=147.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.29**	**44**	P	Pn	00 05 11.1	-0.2
KNZ				S	Sn	00 05 17.7	+1.0
ARHZ	**Aropaoanui**	**0.33**	**264**	P	Pn	00 05 11.7	-0.1
ARHZ				S	Sn	00 05 18.7	+1.1
MHGZ	**Mahia Peninsul**	**0.39**	**79**	P	Pn	00 05 12.7	0.0
MHGZ				S	Sn	00 05 21.1	+1.9
RAHZ	**Arahi**	**0.40**	**321**	P	Pn	00 05 12.8	-0.1
RAHZ				S	Sn	00 05 20.4	+0.8
SNGZ	**Shannon Statio**	**0.45**	**353**	P	Pn	00 05 13.7	+0.1
SNGZ				S	Sn	00 05 22.1	+1.4
NMHZ	**Naumai**	**0.49**	**286**	P	Pn	00 05 14.2	+0.1
NMHZ				S	Sn	00 05 23.0	+1.2
CKHZ	**Cape Kidnapper**	**0.50**	**211**	P	Pn	00 05 14.0	-0.3
CKHZ				S	Sn	00 05 22.5	+0.6
MTHZ	**Maungataniwha**	**0.58**	**310**	P	Pn	00 05 15.3	-0.1
RIGZ	**Rimuhau**	**0.59**	**27**	P	Pn	00 05 15.8	+0.3
MCHZ	**McNeill Hill**	**0.60**	**249**	P	Pn	00 05 15.7	+0.1
MCHZ				S	Sn	00 05 26.0	+1.7
KAHZ	**Kahuranaki**	**0.70**	**216**	P	Pb	00 05 16.8	+0.1
KAHZ				S	Sn	00 05 28.0	+1.0
RTZ	**Ruatahuna**	**0.70**	**331**	P	Pn	00 05 17.1	+0.1

BKZ	**Black Stump Fm**	**0.72**	**275**	P	Pn	00 05 17.2	-0.1
RAGZ	**Rawiri**	**0.73**	**0**	P	Pn	00 05 17.7	+0.2
KWHZ	**Kaweka Forest**	**0.79**	**256**	P	Pb	00 05 18.2	0.0
TKGZ	**Te Karaka**	**0.86**	**23**	P	Pn	00 05 19.1	0.0
MRHZ	**Matea Rd**	**0.87**	**297**	P	Pb	00 05 19.9	+0.3
MWZ	**Matawai**	**0.90**	**6**	P	Pn	00 05 19.5	-0.2
MUGZ	**Murupara**	**0.90**	**326**	P	Pb	00 05 20.0	-0.1
PXZ	**Pawanui**	**0.91**	**208**	P	Pn	00 05 18.5	-1.3
KRHZ	**Kereru**	**0.91**	**243**	P	Pn	00 05 19.4	-0.5
CNGZ	**Carnagh Statio**	**0.97**	**40**	P	Pn	00 05 20.5	-0.2
URZ	**Urewera**	**1.00**	**346**	P	Pn	00 05 21.2	+0.2
ALRZ	**Allen Road**	**1.07**	**308**	P	Pb	00 05 22.5	-0.3
BHHZ	**Black Hill Sta**	**1.08**	**256**	P	Pn	00 05 22.0	-0.2
PRRZ	**Plateau Road**	**1.08**	**312**	P	Pb	00 05 23.5	+0.5
HATZ	**Hinemaiaia**	**1.08**	**288**	P	Pb	00 05 23.4	+0.3
WPHZ	**Waipukurau**	**1.12**	**222**	P	Pn	00 05 22.0	-0.8
RRRZ	**Republican Roa**	**1.13**	**321**	P	Pb	00 05 25.1	+1.2
TWGZ	**Tauwhareparae**	**1.14**	**23**	P	Pb	00 05 23.7	-0.4
PNHZ	**Pukenui**	**1.16**	**234**	P	Pn	00 05 22.3	-1.0
PRHZ	**Porangahau**	**1.20**	**210**	P	Pn	00 05 22.5	-1.4
WPRZ	**Whakapapatarin**	**1.21**	**306**	P	Pb	00 05 24.6	-0.6
HRRZ	**Handcock Road**	**1.22**	**313**	P	Pn	00 05 24.5	+0.4
TARZ	**Mount Tarawera**	**1.22**	**324**	P	Pb	00 05 24.8	-0.6
RITZ	**Rihia Road**	**1.24**	**281**	P	Pb	00 05 26.0	+0.4
EDRZ	**Edgecumbe**	**1.24**	**335**	P	Pb	00 05 27.0	+1.3
WHTZ	**Whakaora**	**1.27**	**296**	P	Pb	00 05 27.9	+1.7
RUGZ	**Raukumara Rang**	**1.28**	**9**	P	Pn	00 05 25.0	0.0
HLRZ	**Highlands Stat**	**1.28**	**319**	P	Pb	00 05 27.3	+0.8
MOVZ	**Moawhango**	**1.30**	**262**	P	Pn	00 05 25.9	+0.6
ETVZ	**East Tongariro**	**1.33**	**274**	P	Pb	00 05 26.8	-0.5
RATZ	**Rangitukua**	**1.33**	**285**	P	Pb	00 05 28.3	+1.1
PUZ	**Puketiti**	**1.33**	**30**	P	Pn	00 05 24.8	-0.8
TMVZ	**Te Maari**	**1.33**	**274**	P	Pn	00 05 26.4	+0.7
GRRZ	**Galatos Road**	**1.35**	**310**	P	Pb	00 05 29.6	+2.0
NTVZ	**North Tongarir**	**1.36**	**275**	P	Pb	00 05 27.9	+0.1
OTVZ	**Oturere**	**1.36**	**272**	P	Pb	00 05 29.7	+1.9
KATZ	**Kakaramea**	**1.36**	**280**	P	Pb	00 05 29.4	+1.5
TUVZ	**Tukino**	**1.37**	**268**	P	Pn	00 05 25.6	-0.7
MARZ	**Manawahe**	**1.37**	**335**	P	Pb	00 05 28.4	+0.5
SNVZ	**South Ngauruho**	**1.38**	**271**	P	Pn	00 05 26.9	+0.5
OMRZ	**Omania**	**1.39**	**324**	P	Pb	00 05 29.3	+1.0
TSZ	**Takapari Road**	**1.39**	**233**	P	Pn	00 05 25.3	-1.2
NNVZ	**North Ngauruho**	**1.40**	**273**	P	Pb	00 05 28.5	0.0
NGZ	**Ngauruhoe**	**1.41**	**272**	P	Pn	00 05 27.6	+0.7
WNVZ	**Wahianoa**	**1.41**	**266**	P	Pn	00 05 27.4	+0.5
WHRZ	**Whale Island**	**1.42**	**346**	P	Pb	00 05 34.3	+5.6
WHVZ	**Whangaehu Hut**	**1.42**	**267**	P	Pn	00 05 27.4	+0.4
WTVZ	**West Tongariro**	**1.42**	**274**	P	Pb	00 05 28.6	-0.3
ANWZ	**Angora Road**	**1.43**	**210**	P	Pn	00 05 25.4	-1.5
DVHZ	**Dannevirke**	**1.44**	**222**	P	Pn	00 05 25.9	-1.3
DRZ	**Dome Shelter**	**1.44**	**268**	P	Pb	00 05 32.8	+3.6
FWVZ	**Far West T-bar**	**1.45**	**268**	P	Pn	00 05 27.7	+0.3
KUTZ	**Kaahu Road**	**1.45**	**300**	P	Pn	00 05 28.0	+0.8
TRVZ	**Turoa**	**1.45**	**267**	P	Pn	00 05 27.8	+0.3
HAZ	**Te Kaha**	**1.50**	**11**	P	Pn	00 05 28.0	0.0
MTVZ	**Mangateitei**	**1.52**	**264**	P	Pn	00 05 28.9	+0.6
TWVZ	**Taurewa**	**1.54**	**275**	P	Pb	00 05 30.8	-0.2
PKVZ	**Pokaka**	**1.61**	**267**	P	Pn	00 05 30.1	+0.6
WMGZ	**Waiomatatini S**	**1.61**	**29**	P	Pn	00 05 28.8	-0.7
BFZ	**Birch Farm**	**1.71**	**211**	P	Pn	00 05 28.8	-2.0
WIZ	**White Island**	**1.71**	**354**	P	Pb	00 05 37.4	+3.8
POWZ	**Post Office Ro**	**1.72**	**227**	P	Pn	00 05 29.8	-1.1
TLZ	**Tolley Road**	**1.72**	**301**	P	Pn	00 05 31.1	0.0
PRWZ	**Pori Road**	**1.73**	**220**	P	Pn	00 05 29.9	-1.2
TIWZ	**Tintock**	**1.94**	**217**	P	Pn	00 05 32.3	-1.8
WAZ	**Wanganui**	**1.95**	**254**	P	Pn	00 05 35.8	+1.7
MRZ	**Mangatainoka R**	**2.01**	**224**	P	Pn	00 05 33.2	-1.7
TOZ	**Tahuroa Road**	**2.12**	**314**	P	Pb	00 05 42.3	+1.7
HIZ	**Hauiti**	**2.12**	**289**	P	Pb	00 05 42.3	+1.6
TMWZ	**Te Maipa**	**2.21**	**211**	P	Pn	00 05 35.3	-2.4
HOWZ	**Holdsworth Sta**	**2.21**	**221**	P	Pn	00 05 35.6	-2.2
OGWZ	**Otaki Gorge**	**2.34**	**227**	P	Pn	00 05 37.7	-1.9
MTW	**Mount Morrison**	**2.42**	**217**	P	Pn	00 05 37.7	-2.9
KIW	**Kapiti Island**	**2.52**	**229**	P	Pn	00 05 40.1	-1.9
NEZ	**North Egmont**	**2.58**	**268**	P	Pn	00 05 44.8	+2.0
CAW	**Cannon Point**	**2.60**	**223**	P	Pn	00 05 40.6	-2.5
PAWZ	**Paruwai Farm**	**2.63**	**215**	P	Pn	00 05 40.8	-2.8
KHEZ	**Kahui Hut**	**2.64**	**268**	P	Pn	00 05 45.5	+1.8
PLWZ	**Palliser**	**2.86**	**215**	P	Pn	00 05 43.3	-3.4
DUWZ	**D'Urville Isla**	**3.11**	**239**	P	Pn	00 05 48.3	-1.8
TCW	**Tory Channel**	**3.11**	**230**	P	Pn	00 05 47.6	-2.5
TUWZ	**Tuamarina**	**3.44**	**229**	P	Pn	00 05 51.7	-3.0
BSWZ	**Blackbirch Sta**	**3.67**	**226**	P	Pn	00 05 54.7	-3.1
NNZ	**Nelson**	**3.67**	**236**	P	Pn	00 05 56.1	-1.7
QRZ	**Quartz Range**	**4.08**	**245**	P	Pn	00 06 00.7	-2.6
MRNZ	**Matariki Terra**	**4.17**	**237**	P	Pn	00 06 02.3	-2.4
THZ	**Tophouse**	**4.27**	**232**	P	Pn	00 06 03.3	-2.7
OKCZ	**Okains Bay**	**5.55**	**215**	P	Pn	00 06 19.5	-4.2
CTZ	**Chatham Island**	**6.35**	**137**	P	Pn	00 06 33.1	-1.5

IDC 30 00:07:20.6±2.5**,6°.03S**×**130°.14E,h0**^{km}**,mb3.5**/1**,**
mbtmp3.2/3**,ML3.1**/2**,Error ellipse: s-maj=150.1km**
s-min=33.2km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.42**	**164**	Pn	Pn	00 10 46.5	+0.4
	0.1nm,0.3s,baz=347,slow=14,SNR=6.1						
WRA				Sn	Sn	00 13 13.6	-13
	0.3nm,0.3s,baz=334,slow=22,SNR=6.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.91**	**169**	P	Pn	00 11 31.0	-0.3
	0.1nm,0.3s,baz=341,slow=8.6,SNR=2.7						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**67.49**	**327**	P	P	00 18 18.5	0.0
	0.2nm,0.5s,baz=122,slow=7.7,SNR=3.9						
	0.2nm,0.5s						

IDC ***30*** *00:10:33.1±0.8, 34°.27N×25°.56E, h0^{km}, mb3.9/10, mbtmp3.9/22, ML3.7/13, MS3.0/8, Error ellipse: s-maj=14.9km s-min=11.0km az=43.0*
ATH ***30*** *00:10:36.4, 34°.37N×25°.59E, h51^{km}±11^{km}, ML3.9/9, Error ellipse: s-maj=13.4km s-min=1.9km az=358.0*
TIR ***30*** *00:10:37.6, 34°.30N×23°.60E, h23^{km}±55^{km}, Ml4.0*
ISK ***30*** *00:10:37.2, 34°.43N×25°.62E, h78^{km}, ML3.9/25*
HLW ***30*** *00:10:38.3, 34°.17N×25°.90E, h10^{km}±12^{km}, Md3.7, Ml3.9*
NEIC ***30*** *00:10:39.0±1.8, 34°.56N±0°.07×25°.52E±0°.07, h37^{km}±7^{km}, mb4.0/48, Mwr4.0/14, ML4.0(THE), Error ellipse: s-maj=11.0km s-min=8.2km az=205.0*
THE ***30*** *00:10:39.1, 34°.46N×25°.58E, h18^{km}±2^{km}, ML4.0/7, Error ellipse: s-maj=3.1km s-min=0.8km az=143.0*
NEIC ***30*** *00:10:39.4, 34°.57N×25°.52E, h37^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.63; $M_{\theta\theta}$0.29; $M_{\phi\phi}$0.34; $M_{r\theta}$-0.19; $M_{\theta\phi}$-0.82; $M_{\phi r}$-0.58; Fault plane solution: $M_0$1.16000×10^{15} NP1:ϕ_s349.20000°, δ65.61000°, λ-45.71000°. NP2:ϕ_s102.14000°, δ49.31000°, λ-147.01000°. Principal axes: T 1.1828, Plg10.0000°, Azm49.0000°; N -0.0548, Plg39.0000°, Azm147.0000°; P -1.1280, Plg49.0000°, Azm308.0000°;*
DDA ***30*** *00:10:42.5±0.0, 34°.78N×26°.00E, h6^{km}±3^{km}, MW4.0*
GII ***30*** *00:10:43.8±0.4, 34°.25N×26°.21E, h51^{km}, mb4.3/4, MD4.2/4, Mm4.1/2*
NIC ***30*** *00:10:43.0±0.0, 34°.29N×26°.24E, h35^{km}±22^{km}, Ml4.2/5*
ISC 30 00:10:36.2±0.7**,34°.33N**±0°.04×**25°.62E**±0°.03**,h28**^{km}±5^{km}**,**
n339,σ**1§85**/371**,mb4.1**/33**,9C-13D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.69**	**8**	P	**Pn**	**00 10 50.5**	**+0.4**
FRMA				S	**Sn**	**00 11 01.0**	**+1.2**
FRMA				AML	AML	00 11 05.7	
	comp=E,16068µm,0.5s						
FRMA				AML	AML	00 11 09.9	
	comp=N,15998µm,0.9s						
FRMA	**Ierapetra Chan**	**0.69**	**8**	P	**Pn**	**00 10 50.4**	**+0.4**
FRMA				S	**Sn**	**00 11 00.3**	**+0.5**
	comp=N,3µm,0.5s						
ZKR	**Zakros**	**0.92**	**32**	P	**Pb**	**00 10 54.4**	**+0.8**
ZKR				S	**Sn**	**00 11 06.6**	**+1.0**
ZKR				AML	AML	00 11 10.7	
	comp=E,15528µm,0.7s						
ZKR				AML	AML	00 11 12.8	
	comp=N,8816µm,0.9s						
ZKR	**Zakros**	**0.92**	**32**	P	**Pb**	**00 10 54.2**	**+0.5**
ZKR				S	**Sn**	**00 11 06.5**	**+0.8**
	comp=N,6µm,0.7s						
ZKR	**Zakros**	**0.92**	**32**	PG	**Pb**	**00 10 54.7**	**+1.0**
ZKR				SG	**Sn**	**00 11 07.8**	**+2.1**
ZKR	**Zakros**	**0.92**	**32**	P	**Pb**	**00 10 54.7**	**+1.0**
ZKR				AML	AML	00 11 08.8	
	comp=N,16nm,0.7s						
ZKR				AML	AML	00 11 08.8	
	comp=N,16nm,0.7s						
ZKR				S	**Sn**	**00 11 09.9**	**+4.2**
ZKR				AML	AML	00 11 11.7	
	comp=N,8.7nm,0.8s						
ZKR				AML	AML	00 11 11.7	
	comp=N,8.7nm,0.8s						
NPS	**Neapolis**	**0.93**	**360**	P	**Pn**	**00 10 53.8**	**+0.3**
NPS				S	**Sn**	**00 11 06.6**	**+0.8**
NPS	**Neapolis**	**0.93**	**360**	P	**Pb**	**00 10 53.9**	**+0.1**
NPS				S	**Sn**	**00 11 06.3**	**+0.5**
SIVA	**Sivas**	**0.96**	**316**	P	**Pb**	**00 10 54.5**	**+0.3**
SIVA				S	**Sb**	**00 11 06.8**	**+0.3**
SIVA				AML	AML	00 11 09.7	
	comp=N,37335µm,0.7s						
SIVA				AML	AML	00 11 11.8	
	comp=E,61844µm,0.6s						
SIVA	**Sivas**	**0.96**	**316**	P	**Pb**	**00 10 54.7**	**+0.5**
SIVA				S	**Sb**	**00 11 06.0**	**-0.5**
	comp=E,31µm,0.5s						
TMBK	**Timbaki Herakl**	**1.02**	**317**	P	**Pb**	**00 10 55.9**	**+0.6**
TMBK	**Timbaki Herakl**	**1.02**	**317**	P	**Pb**	**00 10 55.8**	**+0.5**
TMBK				S	**Sb**	**00 11 08.7**	**+0.4**
	comp=E,5µm,0.6s						
HRKL	**Herakleio**	**1.07**	**337**	P	**Pb**	**00 10 56.9**	**+0.8**
HRKL	**Herakleio**	**1.07**	**337**	P	**Pn**	**00 10 55.8**	**+0.5**
HRKL				S	**Sn**	**00 11 07.7**	**-1.5**
	comp=E,15µm,1.0s						
HRKL	**Herakleio**	**1.07**	**337**	PG	**Pb**	**00 10 56.6**	**+0.5**
HRKL				SG	**Sb**	**00 11 10.9**	**+1.2**
KSTL	**Kastelli Herak**	**1.07**	**335**	P	**Pn**	**00 10 53.5**	**-1.8**
KSTL	**Kastelli Herak**	**1.07**	**335**	P	**Pn**	**00 10 53.4**	**-1.9**
IACM	**Heraklion**	**1.07**	**335**	P	**Pb**	**00 10 56.8**	**+0.6**
IACM	**Heraklion**	**1.07**	**335**	P	**Pb**	**00 10 56.8**	**+0.6**
IDI	**Anoyia**	**1.13**	**328**	Pg	**Pn**	**00 10 57.0**	**+0.8**
	comp=E,111nm,0.3s,baz=158,slow=14,SNR=698						
IDI				Lg	Lg	00 11 12.3	
	comp=E,171nm,0.3s,baz=229,slow=20,SNR=6.5						
IDI				LR	LR	00 11 43.5	
	comp=E,447nm,19.6s,baz=166,slow=61						
IDI	**Anoyia**	**1.13**	**328**	P	**Pb**	**00 10 57.1**	**-0.1**
IDI				AML	AML	00 11 14.7	
	comp=E,3788µm,0.6s						
IDI				AML	AML	00 11 17.0	
	comp=N,3718µm,0.7s						
IDI	**Anoyia**	**1.13**	**328**	P	**Pn**	**00 10 57.0**	**+0.8**
IDI	**Anoyia**	**1.13**	**328**	PG	**Pb**	**00 10 57.3**	**+0.1**
IDI	**Anoyia**	**1.13**	**328**		**Pn**	**00 10 56.2**	**0.0**
GVDS	**Gavdos**	**1.36**	**292**	P	**Pb**	**00 11 01.1**	**0.0**
GVDS				S	**Sb**	**00 11 18.6**	**+0.5**
	comp=N,6µm,0.3s						
GVD	**Gavdhos**	**1.36**	**292**	P	**Pb**	**00 11 00.9**	**-0.2**
GVD				AML	AML	00 11 29.0	
	comp=N,16077µm,0.4s						
GVD				AML	AML	00 11 30.9	
	comp=E,16328µm,0.5s						
GVD	**Gavdhos**	**1.36**	**292**	P	**Pb**	**00 11 00.8**	**-0.3**
GVD				S	**Sn**	**00 11 17.5**	**+1.0**
	comp=E,10µm,0.4s						
GVD	**Gavdhos**	**1.36**	**292**	PN	**Pb**	**00 11 00.9**	**-0.2**
KARP	**Karpathos**	**1.75**	**46**	P	**Pb**	**00 11 07.4**	**-0.4**
KARP				AML	AML	00 11 35.0	
	comp=N,1595µm,0.6s						
KARP				AML	AML	00 11 41.6	
	comp=E,2081µm,0.7s						
KARP	**Karpathos**	**1.75**	**46**	P	**Pb**	**00 11 07.3**	**-0.5**
KARP	**Karpathos**	**1.75**	**46**	PN	**Pb**	**00 11 06.4**	**-1.4**
KARP	**Karpathos**	**1.75**	**46**	Pn	**Pn**	**00 11 05.8**	**+1.0**
KARP	**Karpathos**	**1.75**	**46**	P	**Pb**	**00 11 07.0**	**-0.7**
KARP				AML	AML	00 11 46.5	
	comp=E,2.5nm,0.8s						
KARP				AML	AML	00 11 50.6	
	comp=E,2.9nm,1.2s						
CHAN	**Chania**	**1.76**	**313**	P	**Pb**	**00 11 06.8**	**-1.0**
CHAN				AML	AML	00 11 40.8	
	comp=N,6831µm,0.5s						
CHAN				AML	AML	00 11 45.9	
	comp=E,4423µm,0.9s						
IMMV	**Iera Moni Meta**	**1.76**	**310**	P	**Pn**	**00 11 06.6**	**+1.9**
IMMV				AML	AML	00 11 40.7	
	comp=N,5719µm,0.7s						
IMMV				AML	AML	00 11 45.6	
	comp=E,7402µm,0.6s						
IMMV	**Iera Moni Meta**	**1.76**	**310**	P	**Pn**	**00 11 06.4**	**+1.6**
IMMV	**Iera Moni Meta**	**1.76**	**310**	PN	**Pn**	**00 11 06.3**	**+1.5**
KNDR	**Palaiochora Ch**	**1.83**	**300**	P	**Pb**	**00 11 08.2**	**-0.9**
KNDR				AML	AML	00 11 42.3	
	comp=E,3657µm,0.5s						
KNDR				AML	AML	00 11 46.6	
	comp=N,4836µm,0.4s						
KNDR	**Palaiochora Ch**	**1.83**	**300**	P	**Pn**	**00 11 07.2**	**+1.4**
KNDR	**Palaiochora Ch**	**1.83**	**300**	PN	**Pn**	**00 11 07.7**	**+1.9**
RODP	**Rodopos**	**1.96**	**309**	P	**Pn**	**00 11 09.2**	**+1.6**
RODP	**Rodopos**	**1.96**	**309**	PN	**Pn**	**00 11 09.4**	**+1.8**
THR6	**Thira Island,**	**2.03**	**355**	P	**Pn**	**00 11 08.9**	**+0.4**
THR9	**Santorini-Faro**	**2.03**	**354**	P	**Pn**	**00 11 09.2**	**+0.6**
SANT	**Santorini**	**2.04**	**356**	P	**Pn**	**00 11 08.8**	**+0.1**
SANT	**Santorini**	**2.04**	**356**	PN	**Pn**	**00 11 08.8**	**+0.1**
SANT	**Santorini**	**2.04**	**356**	Pn	**Pn**	**00 11 08.4**	**-0.3**
THR8	**Santorini-Mono**	**2.08**	**357**	P	**Pn**	**00 11 09.1**	**0.0**
THR3	**Thira Island,**	**2.08**	**355**	P	**Pn**	**00 11 09.4**	**+0.2**
THR5	**Thira Island,**	**2.09**	**354**	P	**Pn**	**00 11 09.6**	**+0.2**
SAP3	**Santorini-Thir**	**2.11**	**354**	P	**Pn**	**00 11 09.8**	**+0.1**
CMBO	**Columbo, Santo**	**2.14**	**355**	P	**Pn**	**00 11 10.8**	**+0.7**
ANKY	**Antikythira Is**	**2.44**	**310**	P	**Pn**	**00 11 16.0**	**+1.8**
MHLO	**Agia Marina, M**	**2.56**	**337**	P	**Pn**	**00 11 16.1**	**+0.3**
NIS1	**Nisyros Isl.**	**2.60**	**29**	P	**Pn**	**00 11 17.2**	**+0.8**
NIS1	**Nisyros Isl.**	**2.60**	**29**	PN	**Pn**	**00 11 17.4**	**+1.0**
KOSK	**Kos Island**	**2.66**	**24**	PN	**Pn**	**00 11 17.9**	**+0.8**
ARG	**Arkhangelos**	**2.78**	**47**	P	**Pn**	**00 11 20.9**	**+2.0**
ARG	**Arkhangelos**	**2.78**	**47**	PN	**Pn**	**00 11 20.5**	**+1.6**
ARG	**Arkhangelos**	**2.78**	**47**	Pn	**Pn**	**00 11 20.8**	**+2.0**
ARG	**Arkhangelos**	**2.78**	**47**	P	**Pn**	**00 11 21.0**	**+2.1**
KTHA	**Kythira Island**	**2.84**	**313**	P	**Pn**	**00 11 20.0**	**+0.3**
SLUM	**Salum**	**2.85**	**187**	P	**Pn**	**00 11 22.3**	**+2.5**
	baz=193						
SLUM				S	**Sn**	**00 11 53.9**	**+0.6**
	baz=193						
DAT	**Datca**	**2.88**	**33**	P	**Pn**	**00 11 21.3**	**+1.0**
DAT	**Datca**	**2.88**	**33**	PN	**Pn**	**00 11 21.5**	**+1.2**
DAT	**Datca**	**2.88**	**33**	P	**Pn**	**00 11 21.7**	**+1.4**
DAT				S	**Sn**	**00 11 49.6**	**-4.4**
KTHR	**Kythira**	**2.88**	**313**	P	**Pn**	**00 11 20.9**	**+0.7**
BODT	**Bodrum**	**3.05**	**26**	P	**Pn**	**00 11 23.8**	**+1.2**
BODT	**Bodrum**	**3.05**	**26**	PN	**Pn**	**00 11 23.9**	**+1.3**
BDRM	**Kayabasi**	**3.11**	**28**	P	**Pn**	**00 11 24.7**	**+1.4**
VLI	**Veliai**	**3.23**	**318**	P	**Pn**	**00 11 24.8**	**-0.3**
TURN	**Turunc**	**3.24**	**41**	PN	**Pn**	**00 11 26.5**	**+1.3**
TURN	**Turunc**	**3.24**	**41**	P	**Pn**	**00 11 26.4**	**+1.2**
MATC	**Matruh**	**3.27**	**155**	P	**Pn**	**00 11 28.9**	**+3.3**
	baz=158						
DDIM	**Aydin, Didim**	**3.38**	**22**	P	**Pb**	**00 11 37.7**	**+2.2**
MLSB	**Milas**	**3.44**	**30**	PN	**Pn**	**00 11 29.3**	**+1.4**
DALY	**Dalyan (Mula)**	**3.50**	**44**	PN	**Pn**	**00 11 30.6**	**+1.9**
SMG	**Samos**	**3.51**	**16**	P	**Pn**	**00 11 29.4**	**+0.5**
YER	**Yerkesik**	**3.54**	**37**	P	**Pn**	**00 11 31.1**	**+1.8**
YER	**Yerkesik**	**3.54**	**37**	PN	**Pn**	**00 11 30.9**	**+1.6**
GCAM	**G?zelcaml?**	**3.61**	**21**	PN	**Pn**	**00 11 31.9**	**+1.7**
FETY	**Fethiye**	**3.64**	**50**	PN	**Pn**	**00 11 32.0**	**+1.3**
FETY	**Fethiye**	**3.64**	**50**	P	**Pn**	**00 11 32.2**	**+1.4**
KRND	**KRANIDI**	**3.65**	**327**	P	**Pn**	**00 11 30.8**	**0.0**
MULA	**Mugla, Merkez-**	**3.65**	**36**	P	**Pn**	**00 11 32.7**	**+1.8**
MULA				S	**Sn**	**00 12 09.5**	**-3.6**
AKAS	**Kas**	**3.77**	**59**	PN	**Pn**	**00 11 33.8**	**+1.2**
AKAS	**Kas**	**3.77**	**59**		**Pn**	**00 11 34.2**	**+1.6**
AKAS	**Kas**	**3.77**	**59**	P	**Pn**	**00 11 34.1**	**+1.6**
AKAS				S	**Sn**	**00 12 12.2**	**-3.9**
AYDN	**Tasoluk**	**3.79**	**28**	P	**Pn**	**00 11 35.0**	**+2.1**
AYDN				S	**Sn**	**00 12 09.8**	**-6.8**
VLY	**Voula,Athens**	**3.81**	**338**	P	**Pn**	**00 11 33.3**	**+0.3**
DGB	**zmir**	**3.85**	**15**	P	**Pn**	**00 11 33.3**	**-0.3**
EPID	**Epidavros**	**3.85**	**329**	P	**Pn**	**00 11 33.4**	**-0.2**
CAME	**Cameli-Denizli**	**3.97**	**48**	PN	**Pn**	**00 11 36.8**	**+1.4**
PTL	**Penteli**	**3.97**	**340**	P	**Pn**	**00 11 35.6**	**+0.3**
DION	**Dionisos Attik**	**3.98**	**340**	P	**Pn**	**00 11 35.8**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**4.05**	**26**	PN	**Pn**	**00 11 37.8**	**+1.4**
CHOS	**Chios island**	**4.06**	**5**	PN	**Pn**	**00 11 36.8**	**+0.2**
URLA	**Izmir**	**4.10**	**11**	PN	**Pn**	**00 11 37.9**	**+0.9**
CAEL	**Denizli, Camel**	**4.10**	**46**	P	**Pn**	**00 11 38.5**	**+1.4**
TAVA	**DENIZLI_Tavas**	**4.11**	**40**	P	**Pn**	**00 11 38.3**	**+1.0**
ITM	**Ithomi**	**4.14**	**314**	P	**Pn**	**00 11 37.7**	**+0.2**
ITM	**Ithomi**	**4.14**	**314**	PN	**Pn**	**00 11 37.8**	**+0.2**
ITM	**Ithomi**	**4.14**	**314**	Pn	**Pn**	**00 11 37.4**	**-0.1**
BLCB	**Balcova**	**4.21**	**15**	PN	**Pn**	**00 11 39.9**	**+1.5**
ELL	**Elmali**	**4.25**	**54**		**Pn**	**00 11 40.8**	**+1.7**
ELL	**Elmali**	**4.25**	**54**	P	**Pn**	**00 11 41.2**	**+2.1**
GOLH	**Golhisar**	**4.32**	**47**	P	**Pn**	**00 11 41.6**	**+1.5**
GOLH				S	**Sn**	**00 12 23.9**	**-5.8**
AKUM	**Antalya-Kumluc**	**4.34**	**61**	P	**Pn**	**00 11 41.6**	**+1.3**
AKUM				S	**Sn**	**00 12 29.4**	**-0.6**
GUR	**Goura**	**4.47**	**325**	P	**Pn**	**00 11 41.9**	**-0.3**
KLV	**Kalavryta, Ach**	**4.65**	**324**	P	**Pn**	**00 11 44.3**	**-0.3**
KORT	**Korkueli**	**4.68**	**54**	P	**Pn**	**00 11 46.5**	**+1.4**
KORT				S	**Sn**	**00 12 36.0**	**-2.6**
ZEDA	**zmir-Bergama**	**4.77**	**14**	P	**Pn**	**00 11 47.1**	**+0.9**
OSC1	**CSNet OBS 1**	**4.78**	**98**	P	**Pn**	**00 11 46.4**	**+0.2**
DRO	**Drossia**	**4.80**	**320**	P	**Pn**	**00 11 47.1**	**+0.4**
BUCA	**Burdur, Bucak-**	**5.00**	**52**	P	**Pn**	**00 11 51.8**	**+2.3**
EFP	**Efpalio**	**5.07**	**325**	P	**Pn**	**00 11 50.7**	**+0.4**
SWA2		**5.08**	**182**	P	**Pn**	**00 11 52.8**	**+2.4**
	baz=185						
SWA2				S	**Sn**	**00 12 47.6**	**-0.4**
	baz=185						
PASA	**Karahalli, USA**	**5.08**	**37**	P	**Pn**	**00 11 51.0**	**+0.4**
USAK	**Uak-Merkez**	**5.16**	**31**	P	**Pn**	**00 11 52.6**	**+1.0**
ANX	**Ano Chora**	**5.19**	**326**	P	**Pn**	**00 11 52.3**	**+0.2**
ISP	**Isparta**	**5.28**	**47**	Pn	**Pn**	**00 11 53.7**	**+0.4**
BUHA	**Balikesir, Bur**	**5.29**	**12**	P	**Pn**	**00 11 55.1**	**+1.8**
KZIL	**AFYON_Kizioren**	**5.36**	**42**	P	**Pn**	**00 11 54.8**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**5.45**	**8**	P	**Pn**	**00 11 55.9**	**+0.4**
EVR	**Evrytania**	**5.51**	**327**	P	**Pn**	**00 11 57.7**	**+1.3**
AKMS	**Akamas**	**5.58**	**81**	P	**Pn**	**00 11 57.4**	**+0.1**
AKMS				S	**Sn**	**00 12 56.0**	**-4.4**
AKMS				AML	AML	00 12 57.7	
	comp=N,0.5nm,0.4s						
AKMS				AML	AML	00 12 57.7	
	comp=N,0.5nm,0.4s						
AKMS				AML	AML	00 12 58.4	
	comp=N,0.4nm,0.8s						
AKMS				AML	AML	00 12 58.4	
	comp=N,0.4nm,0.8s						
GDZ	**Gediz**	**5.67**	**32**	P	**Pn**	**00 11 59.3**	**+0.6**
GAZI	**Gazipasa**	**5.80**	**69**	P	**Pn**	**00 11 59.8**	**-0.5**
GAZI				S	Sn	00 12 56.5	-9.4
ALFC	**Alefka**	**5.80**	**80**	P	**Pn**	**00 12 00.4**	**0.0**
ALFC				AML	AML	00 13 02.6	
	comp=N,0.6nm,0.6s						
ALFC				AML	AML	00 13 05.6	
	comp=N,0.6nm,0.6s						
LKD2	**Lefkada island**	**5.98**	**320**	P	Pn	00 11 58.0	-4.8
	baz=334						
LKD2				S	Sn	00 12 58.7	-12
	baz=334						
SZAC	**Souni**	**6.01**	**84**	P	**Pn**	**00 12 03.9**	**+0.7**
SZAC				AML	AML	00 13 10.7	
	comp=N,0.4nm,1.0s						
SZAC				AML	AML	00 13 11.4	
	comp=N,0.4nm,0.8s						
DOGA	**KONYA_Doganhis**	**6.17**	**51**	P	**Pn**	**00 12 08.6**	**+3.1**
LIT	**Litokhoron**	**6.28**	**337**	Pn	**Pn**	**00 12 06.4**	**-0.5**
ASGA	**Asgata**	**6.31**	**84**	P	**Pn**	**00 12 08.4**	**+1.0**
ERMK	**Ermenek**	**6.38**	**67**	P	**Pn**	**00 12 10.9**	**+2.3**
ERMK				S	**Sn**	**00 13 14.7**	**-5.8**
CSS	**Mathiatis**	**6.39**	**82**	Pn	**Pn**	**00 12 09.7**	**+1.3**
CSS	**Mathiatis**	**6.39**	**82**	P	**Pn**	**00 12 08.9**	**+0.5**
KONT	**Konya--Tatoy**	**6.54**	**55**	P	**Pn**	**00 12 10.3**	**-0.2**
ALN	**Alexandroupoli**	**6.56**	**3**	Pn	**Pn**	**00 12 09.9**	**-0.9**
RYAN	**Fayoum**	**6.57**	**142**	P	**Pn**	**00 12 12.8**	**+1.9**
	baz=142						
KKBE	**Karaman, Kazim**	**6.61**	**62**	P	**Pn**	**00 12 15.0**	**+3.4**
KKBE				S	**Sn**	**00 13 23.8**	**-2.2**
THE	**Thessaloniki**	**6.63**	**342**	P	**Pn**	**00 12 14.6**	**+2.8**
	baz=356						
MVOU	**Mavrovouni**	**6.64**	**82**	P	**Pn**	**00 12 12.3**	**+0.4**
IGT	**Igoumenitsa**	**6.70**	**322**	P	**Pn**	**00 12 11.3**	**-1.4**
	baz=335						
IGT				S	**Sn**	**00 13 20.0**	**-8.0**
	baz=335						
KDHN	**Kadinhani**	**6.70**	**50**	P	**Pn**	**00 12 12.5**	**-0.3**
BORA	**Eskisehir**	**6.75**	**33**	Pn	**Pn**	**00 12 13.2**	**-0.2**
RDO	**Rodhopi**	**6.80**	**359**		**Pn**	**00 12 12.8**	**-1.4**
KOT	**Kottamia**	**6.86**	**128**	P	**Pn**	**00 12 15.7**	**+0.8**
	baz=128						
HSAF	**As Saff**	**6.89**	**131**	P	**Pn**	**00 12 17.0**	**+1.7**
	baz=131						
GLL	**Jalalah**	**7.01**	**131**	⇑P	**Pn**	**00 12 18.6**	**+1.5**
	baz=131						
LSK	**Leskovik**	**7.05**	**327**	P	**Pn**	**00 12 17.8**	**+0.2**
	baz=339						
LSK				S	**Sn**	**00 13 32.4**	**-4.5**
	baz=339						
KEK	**Kerkira**	**7.11**	**321**		**Pn**	**00 12 16.6**	**-1.7**
SRN	**Sarande**	**7.13**	**323**	P	**Pn**	**00 12 16.9**	**-1.7**
	baz=334						
SRN				S	Sn	00 13 29.6	-9.0
	baz=334						
SRN				AMP			
	comp=E,0.2nm,0.1s,baz=334						
FNA	**Florina**	**7.27**	**334**		**Pn**	**00 12 20.3**	**-0.3**
FNA	**Florina**	**7.27**	**334**	P	**Pn**	**00 12 21.4**	**+0.8**
	baz=346						
KDZ	**Kurdzhali**	**7.31**	**359**	*e*P	Pn	00 12 30.9	+10
KBN	**Korca**	**7.36**	**330**	Pn	**Pn**	**00 12 21.5**	**-0.4**
KBN	**Korca**	**7.36**	**330**	P	**Pn**	**00 12 22.0**	**+0.2**
	baz=342						
RZN	**Rozhen**	**7.38**	**355**	*e*P	**Pn**	**00 12 23.3**	**+1.1**
MMB	**Musomiste**	**7.40**	**349**	*e*P	**Pn**	**00 12 22.6**	**+0.3**
NBNS	**Bani Suef**	**7.47**	**138**	P	**Pn**	**00 12 25.3**	**+2.0**
	baz=138						
HFRF	**Wahat Farafira**	**7.52**	**161**	P	**Pn**	**00 12 26.2**	**+2.1**
	baz=162						
MDUB	**Mudurnu**	**7.56**	**34**	Pn	**Pn**	**00 12 24.6**	**0.0**
KKB	**Krupnik**	**7.78**	**346**	*e*P	Pn	00 12 34.1	+6.5
ANTO	**Ankara**	**7.96**	**44**	Pn	**Pn**	**00 12 29.8**	**-0.2**
SCTE	**Santa Cesarea**	**8.09**	**317**	Pn	**Pn**	**00 12 29.5**	**-2.2**
SCTE	**Santa Cesarea**	**8.09**	**317**	P	Pn	00 12 27.2	-4.5
	baz=327						
SCTE				S	Sn	00 13 51.8	-10
	baz=327						
KZIT	**Kziot**	**8.15**	**112**	Pn	**Pn**	**00 12 32.3**	**-0.4**
KZIT				Sn	**Sn**	**00 13 58.3**	**-5.6**
SLTI	**Sal'it**	**8.16**	**102**	Pn	**Pn**	**00 12 32.7**	**0.0**
SLTI				Sn	**Sn**	**00 13 58.0**	**-6.0**
MMA0B	**Mount Meron ar**	**8.26**	**96**	Pn	**Pn**	**00 12 34.5**	**+0.3**
MMAI	**Mount Meron Ar**	**8.26**	**96**	Pn	**Pn**	**00 12 36.3**	**+2.1**
	comp=E,1.4nm,0.3s,baz=356,slow=1.3,SNR=10						
MMAI				Sn	**Sn**	**00 14 03.6**	**-3.0**
	comp=E,4.0nm,0.3s,baz=274,slow=26,SNR=6.0						
	comp=E,0.4nm,0.3s						
AMAZ	**Amatzia**	**8.30**	**107**	Pn	**Pn**	**00 12 35.6**	**+0.9**
AMAZ				Sn	**Sn**	**00 14 02.5**	**-4.9**
TIR	**Tirane**	**8.35**	**329**	Pn	**Pn**	**00 12 33.3**	**-2.0**
BR131	**Keskin Array S**	**8.37**	**48**	Pn	**Pn**	**00 12 36.8**	**+1.0**
BRTR	**Keskin Array B**	**8.37**	**48**	Pn	**Pn**	**00 12 38.5**	**+2.8**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=4.8						
BRTR				LR	LR	00 16 41.1	
	comp=E,89nm,19.1s,baz=268,slow=44						
BRTR	**Keskin Array B**	**8.37**	**48**	Pn	**Pn**	**00 12 37.7**	**+2.0**
PHP	**Peshkopia**	**8.40**	**332**	P	**Pn**	**00 12 39.2**	**+3.2**
	baz=343						
MMLI	**Mount Malkishu**	**8.41**	**100**	Pn	**Pn**	**00 12 36.4**	**+0.2**
MMLI				Sn	**Sn**	**00 14 04.8**	**-5.5**
GEM	**Giv'at Ha'Em**	**8.44**	**95**	Pn	**Pn**	**00 12 37.0**	**+0.4**
GEM				Sn	**Sn**	**00 14 06.4**	**-4.4**
VTS	**Vitosha**	**8.48**	**348**	Pn	**Pn**	**00 12 36.0**	**-1.3**
VTS	**Vitosha**	**8.48**	**348**	*e*P	Pn	00 12 44.9	+7.6
NATI	**Neve Ativ**	**8.49**	**94**	Pn	**Pn**	**00 12 37.8**	**+0.6**
YTIR	**Yattir**	**8.52**	**108**	Pn	**Pn**	**00 12 38.9**	**+1.1**
YTIR				Sn	**Sn**	**00 14 08.6**	**-4.4**
HMDT	**Nahal Hemdat**	**8.55**	**101**	Pn	**Pn**	**00 12 38.6**	**+0.5**
HMDT				Sn	**Sn**	**00 14 08.1**	**-5.5**
TIP	**Timpagrande**	**8.60**	**307**		**Pn**	**00 12 37.6**	**-1.3**
KSHT	**Keshet**	**8.60**	**96**	Pn	**Pn**	**00 12 39.7**	**+0.8**
DSI	**Dead Sea**	**8.65**	**106**	Pn	**Pn**	**00 12 40.3**	**+0.8**
DSI				Sn	**Sn**	**00 14 11.7**	**-4.4**
CEL	**Celeste**	**8.78**	**299**		**Pn**	**00 12 40.4**	**-0.8**
KRMI	**Paran Flat**	**8.78**	**116**	Pn	**Pn**	**00 12 41.5**	**+0.2**
PRNI	**Paran**	**8.87**	**114**	Pn	**Pn**	**00 12 43.2**	**+0.6**
PRNI				Sn	**Sn**	**00 14 16.2**	**-5.4**
GHAJ	**Ghor Haditha**	**8.90**	**107**		**Pn**	**00 12 46.8**	**+3.9**
GHAJ	**Ghor Haditha**	**8.90**	**107**	Pn	**Pn**	**00 12 44.2**	**+1.3**
HRFI	**Mount Harif**	**9.05**	**116**	Pn	**Pn**	**00 12 45.7**	**+0.6**

HRFI				Sn	Sn	00 14 21.8	-4.3
MBRI	Mt Berech	9.09	117	Pn	Pn	00 12 46.2	+0.6
MBRI				Sn	Sn	00 14 23.6	-3.4
BCI	Bajram Curri	9.13	333	P	Pn	00 12 46.2	+0.1
	baz=343						
EIL	Elat	9.18	118	Pn	Pn	00 12 48.1	+1.3
	comp=E,0.9nm,0.3s,baz=276,slow=1.8,SNR=16						
EIL				Sn	Sn	00 14 24.1	-5.1
	comp=E,2.1nm,0.3s,baz=119,slow=4.7,SNR=5.3						
	comp=E,5.2nm,0.6s						
EIL	Elat	9.18	118	Pn	Pn	00 12 47.4	+0.6
NOCI	Noci	9.36	316	P	Pn	00 12 46.9	-2.4
	baz=324						
BNN	Bunyan	9.38	58	Pn	Pn	00 12 50.4	+0.8
PDG	Podgorica	9.50	330	Pn	Pn	00 12 50.4	-0.8
RAFF	Raffo Rosso	9.59	291		Pn	00 12 52.7	+0.3
VAE	Valguarnera	9.62	292	Pn	Pn	00 12 53.6	+0.8
	comp=E,1.9nm,0.3s,baz=163,slow=7.9,SNR=19						
VAE				Sn	Sn	00 14 33.1	-6.8
	comp=E,2.8nm,0.3s,baz=232,slow=12,SNR=2.9						
	comp=E,15nm,0.6s						
CUC	Castrocucco	9.65	309		Pn	00 12 52.2	-1.0
ASF	Jabal al Asfar	9.69	100	Pn	Pn	00 12 55.5	+1.8
	comp=E,0.2nm,0.3s,baz=298,slow=17,SNR=2.0						
ASF				Sn	Sn	00 14 35.6	-6.0
	comp=E,0.3nm,0.3s,baz=54,slow=8.1,SNR=3.5						
	comp=E,1.0nm,0.5s						
ICOR	Ion Corvin	9.92	9	⇑P	Pn	00 13 03.3	+6.5
TIRR	Tirgusor	10.34	11	⇑P	Pn	00 13 09.3	+6.7
TLBR	Topalu	10.37	10	⇑P	Pn	00 13 10.8	+7.8
HERR	Herculane	10.82	348	⇑P	Pn	00 13 09.5	+0.4
PAOL	Paolisi	11.01	311	Pn	Pn	00 13 10.4	-1.5
VOIR		11.10	358	⇑P	Pn	00 13 17.2	+4.1
MLR	Muntele Rosu	11.15	1	⇓P	Pn	00 13 19.0	+5.2
MLR	Muntele Rosu	11.15	1	Pn	Pn	00 13 15.8	+2.0
	baz=181,slow=13,SNR=1.7						
MLR				LR	LR	00 18 30.7	
	comp=E,54nm,21.2s,baz=202,slow=43						
	comp=E,0.6nm,0.6s						
MLR	Muntele Rosu	11.15	1	Pn	Pn	00 13 13.3	-0.5
LOT	Lotru	11.19	353	⇑P	Pn	00 13 15.7	+1.3
GZR	Gura Zlata	11.26	350	⇑P	Pn	00 13 16.4	+1.2
PLOR	Plostina	11.53	4	⇓P	Pn	00 13 25.2	+6.2
VRI	Vrincioaia	11.55	4	⇓P	Pn	00 13 25.4	+6.2
BZS	Buzias	11.68	346	⇑P	Pn	00 13 20.2	-0.8
TESR	Tescani	12.19	3	⇓P	Pn	00 13 34.0	+6.1
AQU	L'Aquila	12.49	313	Pn	Pn	00 13 31.9	-0.1
BIZ	Bicaz	12.60	2	⇑P	Pn	00 13 32.9	-0.6
NRCA	Norcia	12.94	315	Pn	Pn	00 13 38.0	-0.2
BURAR	Bucovina Array	13.28	359	Pn	Pn	00 13 42.4	-0.4
KEST	Kesra	13.41	281	Pn	Pn	00 13 44.6	-0.1
	comp=E,0.1nm,0.3s,baz=210,slow=20,SNR=2.4						
KEST				LR	LR	00 20 29.7	
	comp=E,90nm,18.2s,baz=130,slow=45						
	comp=E,2.3nm,0.7s						
KEST	Kesra	13.41	281		Pn	00 13 43.9	-0.8
SOKA	Soboth	14.71	330	ePn	P	00 14 08.2	0.0
	comp=E,1.7nm,0.5s						
OBKA	Obir	14.78	329	ePn	P	00 14 09.0	0.0
	comp=E,1.4nm,0.5s						
ARSA	Arzberg	14.98	332	ePn	P	00 14 11.2	0.0
	comp=E,3.1nm,0.6s						
RONA	Rosalia, Austr	15.08	335	ePn	P	00 14 11.3	-1.0
ZCCA	Zocca	15.09	316		Pn	00 14 06.4	-1.0
VLC	Villacollemand	15.33	314		Pn	00 14 09.5	-1.1
VLC				IAmb	IAmb	00 14 16.7	
	comp=Z,5.1nm,0.9s						
TEOL	Teolo	15.34	320		Pn	00 14 09.3	-1.4
CONA	Conrad Observa	15.43	335	ePn	P	00 14 15.4	-0.7
	comp=Z,0.3nm,0.3s						
CTI	Castel Tesino	15.81	322		Pn	00 14 16.4	-0.5
CTI				IAmb	IAmb	00 14 21.3	
	comp=Z,9.6nm,0.7s						
ABTA	Abfaltersbach	15.88	325	ePn	Pn	00 14 16.5	-1.2
	comp=Z,1.9nm,0.6s						
MSSA	Maissana	15.93	314		Pn	00 14 17.5	-0.9
MOA	Molln	15.96	331	ePn	P	00 14 22.2	+0.1
	comp=Z,2.8nm,0.5s						
SALO	Salr	16.12	319		Pn	00 14 19.6	-1.2
KRUC	Moravsky	16.23	338	ePN	Pn	00 14 22.3	+0.2
GNI	Garni	16.29	64	LR	LR	00 22 12.0	
	comp=Z,54nm,19.1s,baz=233,slow=43						
KIV	Kislovodsk	16.33	49		Pn	00 14 23.2	-0.4
KIV				IAmb	IAmb	00 14 40.9	
	comp=Z,10nm,0.8s						
KVAR	Kislovodsk Arr	16.34	49	Pn	P	00 14 28.2	+1.9
	baz=261,slow=19						
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	16.35	50	Pn	P	00 14 28.3	+2.0
	comp=Z,0.1nm,0.3s,baz=242,slow=8.9,SNR=13						
	comp=Z,6.2nm,0.8s						
VRAC	Vranov	16.39	339	Pn	P	00 14 26.0	-0.7
	comp=Z,0.3nm,0.3s,baz=126,slow=12,SNR=4.1						
	comp=Z,1.9nm,0.4s						
VRAC	Vranov	16.39	339	ePN	Pn	00 14 24.2	+0.1
MORC	Moravsky Berou	16.54	341		Pn	00 14 24.7	-1.4
MORC	Moravsky Berou	16.54	341	ePN	Pn	00 14 24.5	-1.6
AKASG	Malin Array Be	16.57	8	Pn	Pn	00 14 27.2	+0.8
	comp=Z,2.1nm,0.3s,baz=200,slow=11,SNR=16						
AKASG				LR	LR	00 22 20.4	
	comp=Z,23nm,19.6s,baz=230,slow=42						
	comp=Z,1.1nm,0.5s						
AKASG	Malin Array Be	16.57	8	Pn	Pn	00 14 25.5	-0.8
AKBB	Malin Array Si	16.57	8		Pn	00 14 26.3	0.0
AKBB				IAmb	IAmb	00 14 43.6	
	comp=Z,6.4nm,0.7s						
WTTA	Wattenberg	16.67	325	ePn	Pn	00 14 27.6	-0.2
	comp=Z,3.3nm,0.6s						
CKRC	Cesky Krumlov	16.74	333	eP	Pn	00 14 29.7	+1.1
CKRC				epP	pP	00 14 36.3	-1.7
WATA	Walderalm	16.75	325	Pn	Pn	00 14 28.0	-0.9
	comp=Z,5.5nm,0.5s,SNR=4.6						
SQTA	Sankt Quirin	16.84	324	ePn	Pn	00 14 31.2	+1.2
	comp=Z,1.7nm,0.4s						
FETA	Feichten	16.94	323	Pn	Pn	00 14 31.9	+0.6
	comp=Z,4.4nm,0.7s,SNR=7.3						
MOTA	Moosalm	16.98	324	ePn	Pn	00 14 31.9	+0.1
	comp=Z,4.3nm,0.8s						
GEC2	GERESS Array S	16.99	332	P	Pn	00 14 31.5	-0.3
GERES	GERESS Array B	16.99	332	P	Pn	00 14 32.5	+0.7
	comp=Z,0.4nm,0.3s,baz=142,slow=12,SNR=11						
	comp=Z,1.6nm,0.6s						
GERES	GERESS Array B	16.99	332		Pn	00 14 31.0	-0.8
KRLC	Kraliky	17.02	340	eP	Pn	00 14 32.9	+0.8
DAVOX	Davos/Dischmat	17.21	321	P	Pn	00 14 35.9	+1.1
	comp=Z,0.7nm,0.3s,baz=138,slow=16,SNR=9.3						
DAVOX				LR	LR	00 22 52.9	
	comp=Z,76nm,18.6s,baz=164,slow=43						
	comp=Z,3.3nm,0.4s						
RETA	Reutte	17.25	324	ePn	Pn	00 14 34.5	-0.5
	comp=Z,1.4nm,0.3s						
KHC	Kasperske Hory	17.27	333	P	Pn	00 14 35.3	+0.1
KHC	Kasperske Hory	17.27	333	eP	P	00 14 37.9	+1.4
KHC				epP	sP	00 14 46.0	-1.1
KHC				AMS	AMS	00 21 30.0	
TUE	Stuetta	17.30	319	P	Pn	00 14 34.9	-0.9
TUE				IAmb	IAmb	00 14 53.9	
	comp=Z,6.6nm,0.8s						
DPC	Dobruska-Polom	17.40	340	eP	Pn	00 14 36.7	-0.1
DPC				epP	pP	00 14 46.8	+1.5
DAVA	Damuels	17.55	322	ePn	Pn	00 14 38.6	-0.2
	comp=Z,5.3nm,0.5s						
PRU	Pruhonice	17.64	336	eP	Pn	00 14 39.3	-0.4
PRU				AMS	AMS	00 21 00.0	
BNI	Bardonecchia	18.04	312		Pn	00 14 43.2	-1.7
SENIN	Lac Senin/Sane	18.37	316	P	P	00 14 47.5	-1.4
SENIN				IAmb	IAmb	00 14 53.0	
	comp=Z,5.7nm,0.6s						
BRG	Berggiesshubel	18.59	336	eP	P	00 14 43.9	-7.2
BRG				Amp		00 14 50.7	
	comp=Z,3.7nm,1.0s						
GRA1	Grafenberg Arr	18.66	330	P	P	00 14 50.6	-1.2
GRFO	Grafenberg	18.66	330	P	P	00 14 50.5	-1.3
BFO	Black Forest	19.02	323	P	P	00 14 54.3	-1.5
BFO				IAmb	IAmb	00 14 56.2	
	comp=Z,4.5nm,0.7s						
CLL	Collm	19.28	335	eP	P	00 14 57.0	-1.5
CLL				epP	pP	00 15 06.0	+0.1
SSB	Saint Sauveur	19.48	310	P	P	00 15 00.0	-0.9
ECH	Echery	19.55	321	P	P	00 15 01.2	-0.4
SUW	Suwalki	19.75	356	eP	P	00 15 02.1	-1.5
NACGM	Naroch	20.59	2	eP	P	00 15 09.9	-2.8
	baz=182						
WLF	Walferdange	20.98	323	P	P	00 15 16.4	-0.7
WLF				IAmb	IAmb	00 15 18.7	
	comp=Z,11nm,0.8s						
WLF	Walferdange	20.98	323	dP	P	00 15 16.3	-0.8
	comp=Z,9.2nm,0.9s						
IDID	Didziasalis	21.00	2	eP	P	00 15 14.7	-2.5
IIGN	Ignalina	21.02	1	eP	P	00 15 15.1	-2.3
PABE	Paberze	21.20	357	P	P	00 15 17.5	-1.8
PABE	Paberze	21.20	357	eP	P	00 15 17.5	-1.8
ISAL	Salakas	21.24	1	eP	P	00 15 16.1	-3.6
BTNL	Ternell	21.59	325	dP	P	00 15 23.4	-0.2
	comp=Z,13nm,0.8s						
MEM	Membach	21.66	325	dP	P	00 15 24.3	-0.1
	comp=Z,22nm,0.8s						
RCHB	Rochefort	21.75	323	dP	P	00 15 26.6	+1.3
	comp=Z,4.9nm,0.9s						
BSTI	Sart Tilman	21.86	324	dP	P	00 15 26.9	+0.4
	comp=Z,3.3nm,0.8s						
BCLA	Clavier	21.88	323	dP	P	00 15 26.9	+0.1
BGES	Gesves	21.97	323	dP	P	00 15 28.6	+1.0
	comp=Z,3.6nm,0.6s						
DOU	Dourbes	22.04	322	dP	P	00 15 28.7	+0.3
	comp=Z,12nm,0.7s						
BMRD	Maredsous	22.08	323	dP	P	00 15 28.6	-0.2
	comp=Z,4.5nm,0.8s						
BELG	Belogornoye	23.96	34	P	P	00 15 49.7	+1.8
	comp=Z,11nm,0.8s,baz=180,slow=15,SNR=3.5						
	comp=Z,11nm,0.8s						
ESBB	Sonseca Array	24.16	291	P	P	00 15 49.6	-0.4
ESBB				IAmb	IAmb	00 16 09.3	
	comp=Z,4.3nm,1.1s						
ESDC	Sonseca Array	24.16	291	P	P	00 15 50.2	+0.2
	comp=Z,1.6nm,0.8s,baz=76,slow=9.6,SNR=15						
	comp=Z,1.6nm,0.8s						
ESDC	Sonseca Array	24.16	291	P	P	00 15 49.4	-0.6
PAB	San Pablo	24.45	291	P	P	00 15 52.9	+0.2
PVAQ	Vaqueiros	27.11	286	P	P	00 16 15.8	-0.9
PVAQ				IAmb	IAmb	00 16 17.0	
	comp=Z,8.1nm,1.0s						
FINES	FINESS Array B	27.13	0	P	P	00 16 14.2	-2.4
	comp=Z,2.0nm,0.9s,baz=158,slow=10,SNR=8.1						
FINES	FINESS Array B	27.13	0	P	P	00 16 14.0	-2.5
FIA1	FINESS Array S	27.13	0	P	P	00 16 14.0	-2.5
FIA1				IAmb	IAmb	00 16 29.2	
	comp=Z,3.5nm,0.9s						
KONO	Kongsberg	27.43	342	P	P	00 16 20.4	+1.1
KONO				IAmb	IAmb	00 16 35.0	
	comp=Z,7.1nm,1.1s						
NB201	NORSAR Array S	28.29	345	P	P	00 16 25.4	-1.6
NB201				IAmb	IAmb	00 16 42.8	
	comp=Z,5.3nm,0.9s						
NOA	NORSAR Array B	28.30	345	LR	LR	00 28 30.8	
	comp=Z,19nm,20.7s,baz=240,slow=38						
EKA	Eskdalemuir Ar	28.93	325	P	P	00 16 32.4	-0.3
	comp=Z,1.0nm,0.5s,baz=126,slow=10,SNR=10						
	comp=Z,1.0nm,0.5s						
ESK	Eskdalemuir	28.95	325	P	P	00 16 32.6	-0.2
ESK				IAmb	IAmb	00 16 34.1	
	comp=Z,3.7nm,0.8s						
ABKAR	Akbulak array	29.32	49	P	P	00 16 36.0	-0.3
TOA0	Torodi Ar. Sit	30.26	232	P	P	00 16 46.5	+1.6
TOA0				IAmb	IAmb	00 16 47.1	
	comp=Z,2.7nm,0.7s						
TORD	Torodi Ar. Bea	30.26	232	P	P	00 16 46.0	+1.2
	comp=Z,2.2nm,0.6s,baz=35,slow=8.9,SNR=37						
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	30.26	232	P	P	00 16 46.3	+1.5
TORD				IAmb	IAmb	00 17 01.8	
	comp=Z,3.2nm,1.1s						
KOWA	Kowa	33.25	241	P	P	00 17 13.0	+1.8
KOWA				IAmb	IAmb	00 17 23.5	
	comp=Z,2.0nm,0.8s						
LVZ	Lovozero	34.01	6	P	P	00 17 15.6	-1.7
ARCES	ARCESS Array B	35.26	360	P	P	00 17 25.9	-2.1
	comp=Z,2.2nm,0.9s,baz=7.4,slow=2.8,SNR=8.3						
ARCES	ARCESS Array B	35.26	360	P	P	00 17 25.4	-2.6
ARCES				IAmb	IAmb	00 17 38.0	
	comp=Z,2.7nm,1.1s						
MK31	Makanchi Array	43.92	56	P	P	00 18 41.2	+0.8
MK31				IAmb	IAmb	00 18 54.1	
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	43.92	56	P	P	00 18 41.6	+1.2
	comp=Z,0.8nm,0.6s,baz=275,slow=6.8,SNR=9.6						
	comp=Z,0.8nm,0.6s						
SCO	Scoresbysund	44.24	339	P	P	00 18 42.5	-0.1
SCO				IAmb	IAmb	00 18 44.1	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	45.31	46	P	P	00 18 52.7	+1.4
	comp=Z,0.6nm,0.3s,baz=264,slow=8.8,SNR=3.9						
	comp=Z,0.6nm,0.3s						
WMQ	Urumqi	48.10	59	eP	P	00 19 15.8	+2.4
SUMG	Summit	49.89	339	P	P	00 19 26.9	-0.2
SFJD	Kangerlussuaq	53.59	332	P	P	00 19 53.9	-0.4
TSUM	Tsumeb	53.78	189	LR	LR	00 46 21.4	
	comp=Z,56nm,19.6s,baz=78,slow=40						
SONM	Songino Array	59.72	50	P	P	00 20 40.4	+2.0
	comp=Z,0.1nm,0.3s,baz=292,slow=7.6,SNR=1.5						
	comp=Z,0.1nm,0.3s						
SONM	Songino Array	59.72	50	P	P	00 20 39.5	+1.1
SONM				IAmb	IAmb	00 20 53.8	
	comp=Z,0.8nm,1.0s						
LZH	Lanzhou	62.22	64	eP	P	00 21 00.0	+4.4
LZH				pP	pwP	00 21 12.8	+6.1
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
BOSA	Boshof	62.60	180	P	P	00 20 59.9	+1.9
	comp=Z,0.8nm,0.7s,baz=6.3,slow=9.2,SNR=1.4						
	comp=Z,0.8nm,0.7s						
BOSA	Boshof	62.60	180	P	P	00 21 01.2	+3.3
BOSA				IAmb	IAmb	00 21 18.0	
	comp=Z,2.2nm,1.1s						
SCHQ	Schefferville	64.06	320	P	P	00 21 06.9	-0.4
	comp=Z,1.7nm,0.7s,baz=55,slow=12,SNR=1.9						
	comp=Z,1.7nm,0.7s						
SCHQ	Schefferville	64.06	320	P	P	00 21 06.5	-0.8
SCHQ				IAmb	IAmb	00 21 09.5	
	comp=Z,1.8nm,0.8s						
PZH	PanZhiHua	64.72	74	P	P	00 21 13.3	+1.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.2s						
HHC	Hu-ho-hao-te	65.78	56	eP	P	00 21 20.8	+2.0
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.3s						
BATG	Bathurst New B	66.76	312	P	P	00 21 24.9	0.0
D62A	Allapoint, All	68.67	313	P	P	00 21 35.4	-1.5
EMMW	East Machias	68.78	310	P	P	00 21 37.1	-0.5
F64A	Sherman	68.81	312	P	P	00 21 35.5	-2.2
F64A				IAmb	IAmb	00 21 41.5	
	comp=Z,1.6nm,0.9s						
A36M	Sachs Harbour	72.02	351	P	P	00 21 57.2	+0.2
YKA	Yellowknife Ar	78.35	342	P	P	00 22 33.3	-0.2
	comp=Z,0.3nm,0.4s,baz=31,slow=5.2,SNR=1.4						
	comp=Z,0.3nm,0.4s						

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*IDC **30** 00:17:40.3±1.2, 2°.74S×128°.72E, h0^{km}, mb4.1/5, mbtmp4.2/7, ML4.2/2, MS2.8/1, Error ellipse: s-maj=39.0km s-min=21.9km az=75.0*

*DJA **30** 00:17:43.9±0.3, 3°S±2°×12°9E±°, h12^{km}, M4.0/10, mb4.0/1, MLv4.0/10*

*NEIC **30** 00:17:45.9±1.8, 2°.8S±0°.1×128°.69E±0°.10, h35^{km}±2^{km}, mb4.1/13, Error ellipse: s-maj=23.2km s-min=11.9km az=33.0*

ISC 30 00:17:41.1±0.6**, 2°.65S**±0°.05×**129°.07E**±0°.05**, h10**^{km}**, n38,** σ**1^{s}.56**/39**, mb4.1**/7**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.70	192	P	Pn	00 17 58.6	+1.4
AAI	Ambon	1.35	220	P	Pg	00 18 08.3	+1.2
AAI				S	Sb	00 18 25.3	+1.4
LBMI	Labuha	2.54	322	P	Pn	00 18 22.4	-0.1
LBMI				Pg	Pb	00 18 27.3	+0.4
SWI	Sorong	2.82	51	P	Pb	00 18 30.9	-0.7
SIJI	Sorong	2.82	51	Pn	Pb	00 18 30.8	-0.9
	20nm,0.3s,baz=255,slow=15,SNR=39						
SIJI				Sn	Sb	00 19 06.4	+0.1
	8.7nm,0.3s,baz=220,slow=10.0,SNR=9.9						
	48nm,0.3s						
SANI	Sanana	3.14	281	P	Pn	00 18 29.8	-0.9
FAKI	Fak Fak	3.19	95		Pb	00 18 38.5	+0.7
FAKI	Fak Fak	3.19	95	P	Pb	00 18 37.0	-0.9
TNTI	Ternate	3.80	333	Pn	Pn	00 18 42.4	+2.5
APSI	Ampana	7.62	283	P	Pn	00 19 37.2	+4.9
TOLI2	Tolitoli	9.09	294	Pn	Pn	00 19 51.2	-1.4
GRJI	Gresik	17.07	255	P	Pn	00 21 27.5	-13
WB0	Warramunga Arr	17.79	163		Pn	00 21 49.0	-0.1
WB0				IAmb	IAmb	00 21 52.4	
	comp=Z,22nm,1.1s						
COEN	Coen	17.90	130	P	P	00 21 54.6	+3.6
COEN				IAmb	IAmb	00 22 00.5	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	17.93	164		Pn	00 21 51.3	+0.5
WRAB				IAmb	IAmb	00 21 54.7	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	17.94	164	P	Pn	00 21 50.3	-0.6
	comp=Z,1.0nm,0.3s,baz=344,slow=12,SNR=31						
WRA				S	Sn	00 25 09.1	-2.1
	comp=Z,0.8nm,0.8s,baz=338,slow=22,SNR=2.5						
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	17.94	164	P	P	00 21 51.9	+0.4
WB2	Warramunga Arr	17.94	164	P	Pn	00 21 51.1	+0.1
WB2				IAmb	IAmb	00 21 54.8	
	comp=Z,17nm,0.9s						
WR0	Warramunga Arr	18.01	163		Pn	00 21 51.8	0.0
MBWA	Marble Bar	20.52	206	P	P	00 22 17.5	-2.2
AS31	Alice Springs	21.41	168	P	P	00 22 26.4	-3.0
ASAR	Alice Springs	21.41	168	P	P	00 22 30.1	+0.7
	comp=Z,22nm,0.8s,baz=348,slow=11,SNR=151						
ASAR				S	S	00 26 22.2	-4.9
	comp=Z,3.4nm,0.9s,baz=347,slow=19,SNR=7.6						
	comp=Z,22nm,0.8s						
ASAR	Alice Springs	21.41	168	P	P	00 22 29.9	+0.5
CBJI	Citeko	22.46	260	P	P	00 22 24.5	-16
GUMO	Guam	22.49	44	LR	LR	00 31 57.5	
	comp=Z,25nm,19.1s,baz=179,slow=38						
CTA	Charters Tower	24.12	137	P	P	00 23 00.2	+2.9
	comp=Z,2.8nm,0.6s,baz=308,slow=9.7,SNR=1.7						
	comp=Z,2.8nm,0.6s						
STKA	Stephens Creek	31.37	159	P	P	00 24 03.5	+1.3
	comp=Z,0.8nm,0.4s,baz=315,slow=11,SNR=1.9						
	comp=Z,0.8nm,0.4s						
TOO	Toolangi	37.88	159	P	P	00 24 59.0	+0.4
MKAR	Makanchi Array	64.11	326	P	P	00 28 15.7	+0.1
	comp=Z,0.8nm,0.8s,baz=133,slow=8.5,SNR=7.2						
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	64.11	326	P	P	00 28 14.8	-0.9
KURK	Kurchatov	68.35	328	P	P	00 28 41.8	-0.9
KKAR	Karatay Array	69.49	318	P	P	00 28 49.0	-1.0
KKAR	Karatay Array	69.49	318	P	P	00 28 49.5	-0.6
KKAR				IAmb	IAmb	00 28 59.0	
	comp=Z,2.2nm,1.2s						
BRVK	Borovoye	73.99	328	P	P	00 29 15.8	-1.1
BRVK				IAmb	IAmb	00 29 22.8	
	comp=Z,1.9nm,0.8s						
VNDA	Vanda	76.85	173	P	P	00 29 33.4	+0.5
	comp=Z,1.2nm,0.8s,baz=309,slow=6.3,SNR=7.5						
	comp=Z,1.2nm,0.8s						
VNDA	Vanda	76.85	173	P	P	00 29 33.1	+0.2
VNDA				IAmb	IAmb	00 29 49.0	
	comp=Z,2.2nm,1.0s						
ABKAR	Akbulak array	78.55	321	P	P	00 29 42.7	-0.2
ABKAR	Akbulak array	78.55	321	P	P	00 29 43.1	+0.2
ABKAR				IAmb	IAmb	00 29 54.5	
	comp=Z,2.4nm,1.1s						

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*IDC **30** 01:03:10.1±0.5, 3°.75S×131°.64E, h0^{km}, mb4.5/15, mbtmp4.5/20, ML3.9/4, MS4.0/46, Error ellipse: s-maj=22.4km s-min=12.6km az=71.0*

*BJI **30** 01:03:13.1±0.0, 3°.93S×131°.86E, h45^{km}, mb4.8/23, mB4.9/10, Ms4.5/11, Ms7 4.2/12*

*GCMT **30** 01:03:13.6±0.3, 3°.79S±0°.02×131°.73E±0°.02, h20^{km}±1^{km}, MW5.0/91, Moment Tensor Solution. s43,c45; s91,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.96±.17; $M_{\theta\theta}$-0.69±.09; $M_{\phi\phi}$-2.26±.11; $M_{r\theta}$-0.74±.17; $M_{\theta\phi}$0.89±.06; $M_{\phi r}$2.45±.20; Best double couple: $M_0$3.80100×10^{16} NP1:ϕ_s152.00000°, δ24.00000°, λ82.00000°. NP2: ϕ_s340.00000°, δ66.00000°, λ93.00000°. Principal axes: T 3.9600, Plg69.0000°, Azm257.0000°; N -0.3120, Plg3.0000°, Azm159.0000°; P -3.6420, Plg21.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 01:03:14.6±1.9, 3°.74S±0°.07×131°.54E±0°.07, h28^{km}±4^{km}, mb4.7/57 Error ellipse: s-maj=11.2km s-min=9.0km az=143.0*

*DJA **30** 01:03:15.1±0.9, 4°S±3°×13°2E±°, h26^{km}±9^{km}, M4.7/31, mb4.9/31, mB5.3/14, MLv4.6/12, Mw(mB)4.8/14, MwMwp4.7/1, Mwp5.0/1*

ISC 30 01:03:13.8±0.3**, 3°.79S**±0°.04×**131°.60E**±0°.05**, h29**^{km}**, n188,** σ**1^{s}.96**/161**, mb4.7**/48**, MS4.0**/48**, 1C, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.08	37	Pn	Pb	01 03 33.7	-0.2
FAKI	Fak Fak	1.08	37	P	Pb	01 03 34.0	0.0
FAKI				S	Sb	01 03 47.9	+0.2
KMPI	Kaimana, Papua	2.11	87	P	Pn	01 03 48.7	+1.5
MSAI	Masohi	2.70	279	P	Pn	01 03 55.8	+0.5
SIJI	Sorong	2.92	354	Pn	Pn	01 03 57.9	-0.5
	17nm,0.3s,baz=31,slow=5.0,SNR=43						
SIJI				Sn	Sn	01 04 30.6	-1.8
	57nm,0.3s,baz=351,slow=20,SNR=12						
SIJI				LR	LR	01 05 19.6	
	comp=Z,2µm,19.3s,baz=195,slow=45						
	38nm,0.3s						
SWI	Sorong	2.92	353	P	Pn	01 03 58.6	+0.2
AAI	Ambon	3.40	272	P	Pn	01 04 05.0	+0.1
SRPI	Serui, Papua	5.01	68	P	Pn	01 04 29.0	+1.8
	1.6nm4µm152nm,0.4s						
LBMI	Labuha	5.15	307	P	Pn	01 04 27.7	-1.3
	0.9nm2µm203nm,0.7s						
BAKI	Biak	5.19	60	P	Pn	01 04 31.8	+2.2
	270nm,0.7s						
SANI	Sanana	5.86	287	P	Pn	01 04 36.7	-2.1
	0.6nm2µm143nm,0.6s						
TNTI	Ternate	6.19	317	Pn	Pn	01 04 42.6	-0.8
TNTI	Ternate	6.19	317	P	Pn	01 04 43.1	-0.3
	0.3nm30nm,0.4s						
KDU	Kakadu	8.89	174	P	Pn	01 05 18.0	-2.4
	baz=8.8,SNR=183						
MTN	Manton Dam	9.01	183	P	Pn	01 05 20.2	-1.9
	baz=8.9,SNR=132						
LUWI	Luwuk	9.23	287	Pn	Pn	01 05 23.2	-1.8
SOEI	Soe	9.38	230	Pn	Pn	01 05 28.8	+1.4
SOEI	Soe	9.38	230	P	Pn	01 05 29.3	+1.9
	3µm217nm,1.4s						
BATI	Baumata	10.13	231	Pn	Pn	01 05 38.5	+1.0
	122nm,0.5s,baz=171,slow=0.7,SNR=27						
BATI				Sn	Sn	01 07 34.1	+3.9
	10nm,0.3s,baz=62,slow=16,SNR=3.6						
BATI				LR	LR	01 09 44.1	
	comp=Z,2µm,20.0s,baz=52,slow=39						
BATI	Baumata	10.13	231	P	Pn	01 05 40.5	+3.0
	1µm88nm,0.6s						
APSI	Ampana	10.34	286	P	Pn	01 05 40.5	+0.2
	586nm28nm,0.7s						
MMRI	Maumere	10.47	242	Pn	Pn	01 05 41.2	-1.0
MMRI	Maumere	10.47	242	P	Pn	01 05 43.2	+1.0
	75nm,1.1s						
MRSI	Marisa	10.54	293	P	Pn	01 05 41.4	-1.6
	43nm,1.1s						
EDFI	Ende, Flores	11.01	243	P	Pn	01 05 51.7	+2.1
	494nm26nm,1.2s						
BNSI	Bone	11.47	267	P	Pn	01 05 57.4	+1.5
	37nm,0.9s						
BKSI	Bulukumba	11.54	262	P	Pn	01 05 58.7	+2.0
	32nm,1.1s						
SPSI	Sidrap Palu	11.80	269	P	Pn	01 06 01.0	+0.7
	916nm30nm,1.4s						
KAPI	Kappang	11.87	264	Pn	Pn	01 06 02.7	+1.4
	1.2nm,0.3s,baz=82,slow=12,SNR=12						
KAPI				LR	LR	01 10 51.8	
	comp=Z,2µm,21.4s,baz=103,slow=39						
	20nm,0.9s						
KAPI	Kappang	11.87	264	Pn	Pn	01 06 02.1	+0.8
PLAI	Plampang	14.62	249	P	Pn	01 06 39.2	+0.4
	2µm89nm,1.2s						
COEN	Coen	15.26	132	P	Pn	01 06 46.3	-1.1
	baz=15,SNR=7.2						
MYLDM	Lahad Datu	15.82	304	Pn	Pn	01 06 55.5	+0.8
MYLDM				IAmb	IAmb	01 07 20.8	
	comp=Z,59nm,1.2s						
WB0	Warramunga Arr	16.12	170	Pn	Pn	01 06 54.8	-3.7
WRAB	Tennant Creek	16.27	171	Pn	Pn	01 06 56.8	-3.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	16.28	171	Pn	Pn	01 06 55.1	-5.5
	comp=Z,2.1nm,0.3s,baz=354,slow=13,SNR=77						
WRA				Sn	Sn	01 09 48.6	-12
	comp=Z,7.1nm,0.3s,baz=358,slow=23,SNR=9.9						
WRA	Warramunga Arr	16.28	171	Pn	Pn	01 06 56.6	-4.0
WB2	Warramunga Arr	16.28	171	P	Pn	01 06 55.4	-5.2
	baz=16						
WB2	Warramunga Arr	16.28	171	Pn	Pn	01 06 55.6	-5.0
WR0	Warramunga Arr	16.33	170	Pn	Pn	01 06 57.7	-3.5
WR0				IAmb	IAmb	01 07 26.8	
	comp=Z,71nm,1.3s						
PMG	Port Moresby	16.43	111	Pn	Pn	01 07 02.8	+0.3
	comp=Z,2.0nm,0.3s,baz=327,slow=9.8,SNR=3.0						
	comp=Z,29nm,0.9s						
PMG	Port Moresby	16.43	111	P	P	01 07 04.6	-0.4
SRBI	Singaraja	16.84	255	P	P	01 07 09.3	-0.3
	comp=Z,36nm,1.2s						
MTKI	Muara Teweh, K	16.92	279	P	P	01 07 10.8	+0.3
	comp=Z,4µmcomp=Z,29nm,0.5s						
BLJI	Banyuglugur	18.33	257	P	Pn	01 07 26.4	+0.2
	comp=Z,43nm,0.8s						
QIS	Mount Isa	18.41	156	P	P	01 07 26.1	-0.8
	baz=18,SNR=16						
MTSU	Mount Surprise	18.93	140	P	P	01 07 32.7	0.0
	baz=19,SNR=11						
ASAR	Alice Springs	19.89	174	P	P	01 07 42.8	-0.3
	comp=Z,3.0nm,0.3s,baz=347,slow=9.9,SNR=97						
	comp=Z,28nm,0.7s						
ASAR	Alice Springs	19.89	174	P	P	01 07 41.1	-2.0
KRVT	Keravat (AS076	20.39	92	LR	LR	01 16 25.1	
	comp=Z,628nm,19.6s,baz=61,slow=39						
STKI	Sintang	20.46	280	P	Pn	01 07 51.4	-0.3
MBWA	Marble Bar	20.77	213	P	P	01 07 49.1	-3.5
WRKA	Warakurna	21.37	188	P	P	01 07 58.4	-0.7
	baz=21,SNR=63						
CTA	Charters Tower	21.61	140	P	P	01 08 02.8	+1.1
	comp=Z,8.4nm,0.6s,baz=320,slow=11,SNR=20						
CTA				LR	LR	01 17 32.9	
	comp=Z,443nm,21.2s,baz=316,slow=40						
	comp=Z,8.4nm,0.6s						
CTA	Charters Tower	21.61	140	P	P	01 08 02.9	+1.2
	baz=22						
CTAO	Charters Tower	21.61	140	P	P	01 08 01.3	-0.4
GUMO	Guam	21.71	37	LR	LR	01 16 39.8	
	comp=Z,440nm,19.2s,baz=224,slow=37						
KSM	Kuching	21.91	283	P	P	01 08 04.1	-0.9
KSM				IAmb	IAmb	01 08 06.6	
	comp=Z,22nm,0.8s						
LEM	Lembang	24.06	262	LR	LR	01 19 02.9	
	comp=Z,2µm,19.4s,baz=86,slow=40						
FORT	Forrest	27.06	187	P	P	01 08 54.5	+0.6
	baz=27,SNR=12						
EIDS	Eidsvold	28.48	141	P	P	01 09 04.7	-2.0
MORW	Morawa	29.16	209	P	P	01 09 11.9	-0.8
	baz=29,SNR=6.2						
STKA	Stephens Creek	29.48	163	P	P	01 09 16.1	+0.6
	comp=Z,3.4nm,0.3s,baz=335,slow=9.1,SNR=13						
STKA				LR	LR	01 22 43.2	
	comp=Z,998nm,20.1s,baz=330,slow=40						
	comp=Z,3.4nm,0.3s						
STKA	Stephens Creek	29.48	163	P	P	01 09 16.7	+1.2
	baz=30,SNR=5.9						
STKA	Stephens Creek	29.48	163	P	P	01 09 14.6	-0.9
BLDU	Ballidu	30.16	206	P	P	01 09 21.6	0.0
	baz=30,SNR=5.9						
KLBR	Kellerberrin	30.57	204	P	P	01 09 24.6	-0.6
	baz=31,SNR=11						
JOW	Kunigami	30.61	354	LR	LR	01 21 19.6	
	comp=Z,367nm,20.9s,baz=253,slow=36						
CMSA	Cobar Meteorol	30.63	156	P	P	01 09 27.0	+1.3
	baz=31,SNR=15						
BKNI	Bangkinang	30.81	277	P	P	01 09 27.2	-0.3
PPI	Padang Panjang	31.35	275	P	P	01 09 32.4	+0.2
	comp=Z,42nm,1.2s						
IPM	Ipoh	31.63	285	P	P	01 09 33.4	-1.4
MNSI	Mandailing Nat	32.32	277	P	P	01 09 40.7	-0.1
	comp=Z,43nm,0.6s						
JCJ	Chichijima	32.36	18	LR	LR	01 22 06.3	
	comp=Z,421nm,18.4s,baz=150,slow=35						
ARPS	Mount Arapiles	34.15	165	P	P	01 09 58.3	+1.8
	baz=34,SNR=7.2						
TOO	Toolangi	35.96	161	P	P	01 10 13.9	+1.9
	baz=36,SNR=5.3						
JHJ	Hachijo jima 2	37.51	11	LR	LR	01 24 51.2	
	comp=Z,378nm,18.6s,baz=169,slow=35						
NJ2	Nanjing	37.64	342	*e*P	P	01 10 25.8	-0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
DZM	Mont Dzumac	38.36	121	*e*LR	LR	01 21 33.7	
	comp=Z,373nm,23.8s						
CM31	Chiang Mai Arr	39.03	306	P	P	01 10 38.1	-0.2
CM31				IAmb	IAmb	01 10 40.6	
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	39.03	306	P	P	01 10 39.1	+0.8
	comp=Z,6.9nm,0.8s,baz=138,slow=7.8,SNR=36						
	comp=Z,6.9nm,0.8s						
CMAR	Chiang Mai Arr	39.03	306	P	P	01 10 37.7	-0.6
CHTO	Chiang Mai	39.21	306	P	P	01 10 39.6	-0.2
CHTO				IAmb	IAmb	01 10 41.8	
	comp=Z,19nm,0.9s						
MJAR	Matsushiro Arr	40.59	8	LR	LR	01 27 38.8	
	comp=Z,287nm,18.1s,baz=186,slow=36						
KSRS	Korea Array	41.17	356	P	P	01 10 56.5	+0.8
	comp=Z,0.5nm,0.4s,baz=172,slow=9.8,SNR=1.4						
KSRS				LR	LR	01 28 33.9	
	comp=Z,188nm,19.8s,baz=165,slow=37						
	comp=Z,0.5nm,0.4s						
BJT	Baijiatuau	45.84	343	P	P	01 11 33.4	+0.1
MSVF	Nonsavu	47.54	111	LR	LR	01 31 25.7	
	comp=Z,250nm,20.0s,baz=55,slow=36						
USRK	Ussuriysk Ar.	47.77	0	LR	LR	01 30 46.8	
	comp=Z,171nm,20.9s,baz=182,slow=35						
SHL	Shillong	48.30	309	P	P	01 11 52.2	-0.9
ASAJ	Asahikawa	48.70	11	LR	LR	01 33 18.2	
	comp=Z,166nm,18.9s,baz=180,slow=37						
LSA	Lhasa	51.07	313	P	P	01 12 14.6	+0.2
LSA				IAmb	IAmb	01 12 17.9	
	comp=Z,8.5nm,0.7s						
GTA	Gaotai	52.00	329	⇑P	P	01 12 21.3	+0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAPN	Taplejung	52.43	309	*e*P	P	01 12 24.1	-0.4
ODAN	Odare	52.44	308	*e*P	P	01 12 24.8	+0.3
	comp=Z,13nm,0.9s						
KLR	Kul'dur	52.80	0	LR	LR	01 36 50.8	
	comp=Z,117nm,18.7s,baz=175,slow=38						
RAMN	Ramite	53.11	308	*e*P	P	01 12 29.2	-0.2
	comp=Z,56nm,0.8s						
JIRN	Jiri	53.76	308	*e*P	P	01 12 34.0	-0.4
	comp=Z,17nm,0.7s						
GUN	Gumba	54.12	309	*e*P	P	01 12 36.6	-0.4
	comp=Z,30nm,0.7s						
PKI	Pulchoki	54.33	308	*e*P	P	01 12 38.5	0.0
PKIN	Phulchoki	54.35	308	*e*P	P	01 12 38.4	-0.1
DMN	Daman	54.59	308	*e*P	P	01 12 40.3	0.0
GKN	Gorkha	55.14	308	*e*P	P	01 12 43.8	-0.3
	comp=Z,44nm,0.9s						
ULN	Ulaanbaatar	55.76	340	P	P	01 12 49.0	+0.8
ULN				IAmb	IAmb	01 12 50.9	
	comp=Z,12nm,1.4s						
KOLN	Koldanda	55.85	307	*e*P	P	01 12 49.3	0.0
	comp=Z,25nm,0.9s						
SONM	Songino Array	55.95	340	P	P	01 12 50.6	+1.0
	comp=Z,2.2nm,1.0s,baz=158,slow=6.0,SNR=13						
SONM				LR	LR	01 38 13.0	
	comp=Z,95nm,21.6s,baz=158,slow=38						
	comp=Z,2.2nm,1.0s						
SONM	Songino Array	55.95	340	P	P	01 12 49.7	+0.1
DANN	Dangsing	55.99	308	*e*P	P	01 12 50.0	-0.4
	comp=Z,30nm,0.7s						
PYUN	Piuthan	56.48	307	*e*P	P	01 12 53.7	-0.1
	comp=Z,63nm,0.8s						
AFI	Afiamalu	56.73	104	LR	LR	01 37 07.1	
	comp=Z,111nm,21.5s,baz=297,slow=36						
PETK	Petropavlovsk-	60.80	18	LR	LR	01 37 38.6	
	comp=Z,73nm,21.9s,baz=208,slow=34						
MA2	Magadan	64.96	11	LR	LR	01 41 56.8	
	comp=Z,106nm,20.1s,baz=189,slow=36						
YAK	Yakutsk	65.65	359	LR	LR	01 42 35.8	
	comp=Z,148nm,20.2s,baz=271,slow=36						
MK31	Makanchi Array	66.46	325	P	P	01 14 00.6	-0.1
MKAR	Makanchi Array	66.46	325	P	P	01 14 01.4	+0.7
	comp=Z,2.6nm,0.6s,baz=121,slow=8.0,SNR=36						
MKAR				LR	LR	01 46 34.8	
	comp=Z,100nm,18.3s,baz=110,slow=39						
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	66.46	325	P	P	01 13 59.9	-0.8
PRZ	Przheval'sk	66.54	320	P	P	01 14 02.8	+1.3
MAKZ	Makanchi	66.65	325	P	P	01 14 01.9	0.0
MAKZ				IAmb	IAmb	01 14 04.0	
	comp=Z,4.5nm,0.8s						
SHEM	Shemya Is, Ala	66.71	27	LR	LR	01 41 52.4	
	comp=Z,86nm,19.3s,baz=269,slow=35						
KSH	Kashi	66.78	316	P	P	01 14 04.5	+1.5
KSH				sP	sP	01 14 21.0	+6.0
KSH				PcP	PcP	01 14 35.0	+3.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KDJ	Kajisay	67.16	319	P	P	01 14 05.1	-0.4
KDJ				IAmb	IAmb	01 14 08.0	
	comp=Z,7.9nm,0.9s						
BOOM	Boomskoye usch	68.14	319	P	P	01 14 11.9	+0.3
BOOM				IAmb	IAmb	01 14 14.2	
	comp=Z,11nm,1.3s						
RAR	Rarotonga	68.73	111	LR	LR	01 43 44.5	
	comp=Z,41nm,20.9s,baz=266,slow=35						
AAK	Ala-Archa	69.16	318	LR	LR	01 49 58.3	
	comp=Z,73nm,18.2s,baz=105,slow=41						
AAK	Ala-Archa	69.16	318	P	P	01 14 18.5	+0.6
AAK				IAmb	IAmb	01 14 20.7	
	comp=Z,8.2nm,1.2s						
ZAA0	Zalesovo Array	69.45	333	P	P	01 14 17.9	-1.4
ZAA0				IAmb	IAmb	01 14 34.4	
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	69.45	333	P	P	01 14 19.1	-0.1
	comp=Z,2.7nm,0.7s,baz=106,slow=6.2,SNR=12						
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	69.45	333	P	P	01 14 18.7	-0.6
DRK	Karamyk	69.70	315	P	P	01 14 23.0	+1.5
KBL	Kabul	69.96	309	P	P	01 14 22.5	-0.7
GAR	Garm	70.58	314	P	P	01 14 26.5	-0.2
BTK	Batken	70.62	315	P	P	01 14 27.3	+0.4
BTK				IAmb	IAmb	01 14 30.1	
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	70.65	327	P	P	01 14 26.3	-0.4
KK31	Karatay Array	72.02	318	P	P	01 14 35.5	+0.3
KK31				IAmb	IAmb	01 14 37.3	
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	72.02	318	P	P	01 14 34.7	-0.5
KKAR	Karatay Array	72.02	318	P	P	01 14 35.0	-0.2
KKAR				IAmb	IAmb	01 14 37.4	
	comp=Z,7.0nm,1.0s						
TAS	Tashkent	72.17	316	P	P	01 14 38.5	+2.3
HRA	Herat	75.28	307	P	P	01 14 54.9	+0.1
HRA				IAmb	IAmb	01 14 56.7	
	comp=Z,7.2nm,0.9s						
TIXI	Tiksi	75.31	359	P	P	01 14 53.9	0.0
VNDA	Vanda	75.43	173	P	P	01 14 55.6	+1.0
	comp=Z,6.6nm,0.8s,baz=314,slow=6.3,SNR=33						
VNDA				LR	LR	01 49 09.8	
	comp=Z,165nm,18.9s,baz=339,slow=37						
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	75.43	173	P	P	01 14 55.0	+0.4
VNDA				IAmb	IAmb	01 14 58.1	
	comp=Z,8.8nm,0.9s						
WSAR	Wadi Sarin	75.93	295	LR	LR	01 52 52.3	
	comp=Z,108nm,18.8s,baz=131,slow=39						
SBA	Scott Base	76.30	173	P	P	01 15 00.3	+0.8
SBA				IAmb	IAmb	01 15 04.2	
	comp=Z,15nm,1.4s						
BRVK	Borovoye	76.30	327	P	P	01 14 59.0	-0.9
BRVK				IAmb	IAmb	01 15 01.9	
	comp=Z,6.8nm,0.9s						
PPT	Papeete	78.22	107	LR	LR	01 48 15.4	
	comp=Z,28nm,21.9s,baz=285,slow=35						
PPT2	Papeete2	78.22	107	*e*LR	LR	01 40 03.5	
	comp=Z,163nm,24.2s						
TBI	Tubuai	78.36	113	*e*LR	LR	01 40 31.9	
	comp=Z,154nm,28.8s						
MAW	Mawson	78.50	201	P	P	01 15 13.0	+1.0
	comp=Z,2.3nm,0.8s,baz=62,slow=2.5,SNR=5.3						
MAW				LR	LR	01 48 59.5	
	comp=Z,185nm,19.2s,baz=58,slow=35						
	comp=Z,2.3nm,0.8s						
MAW	Mawson	78.50	201	P	P	01 15 12.5	+0.5
NRIK	Noril'sk	78.86	345	P	P	01 15 14.7	+0.8
	comp=Z,5.1nm,0.9s,baz=126,slow=5.6,SNR=10						
NRIK				LR	LR	01 52 27.2	
	comp=Z,252nm,19.5s,baz=140,slow=38						
	comp=Z,5.1nm,0.9s						
NRIK	Noril'sk	78.86	345	P	P	01 15 14.4	+0.5
NRIK				IAmb	IAmb	01 15 16.1	
	comp=Z,8.6nm,1.1s						
GEYT	Alibeck	79.38	310	P	P	01 15 18.6	+1.1
	comp=Z,4.8nm,0.6s,baz=124,slow=4.3,SNR=9.2						
	comp=Z,4.8nm,0.6s						
GEYT	Alibeck	79.38	310	P	P	01 15 19.1	+1.7
GEYT				IAmb	IAmb	01 15 20.2	
	comp=Z,6.5nm,0.8s						
GYA0B	ALIBECK ARRAY	79.38	310	P	P	01 15 19.1	+1.7
GYA0B				IAmb	IAmb	01 15 20.1	
	comp=Z,8.2nm,0.8s						
ABKAR	Akbulak array	81.01	321	P	P	01 15 25.5	-0.5
AKTO	Aktyubinsk	82.53	322	LR	LR	01 57 54.6	
	comp=Z,44nm,18.6s,baz=104,slow=40						
ARU	Arti	83.84	328	P	P	01 15 40.1	-0.4
KDAK	Kodiak Island	85.67	31	LR	LR	01 55 09.8	
	comp=Z,97nm,18.1s,baz=265,slow=36						
L19K	White Mountain	85.72	27	P	P	01 15 50.8	+0.9
L19K				IAmb	IAmb	01 16 17.5	
	comp=Z,5.6nm,1.1s						
QSPA	South Pole Qui	86.17	180	LR	LR	01 57 05.8	
	comp=Z,111nm,18.1s,baz=354,slow=38						
QSPA	South Pole Qui	86.17	180	P	P	01 15 51.9	-0.3
K20K	Telida	86.39	26	P	P	01 15 53.0	-0.2
K20K				IAmb	IAmb	01 15 56.5	
	comp=Z,6.1nm,1.1s						
M20K	Styx River	86.42	27	P	P	01 15 53.9	+0.4
M20K				IAmb	IAmb	01 16 11.2	
	comp=Z,6.4nm,1.1s						
J20K	Nowinta River	86.58	25	P	P	01 15 54.1	0.0
TAOE	Nuku Hiva Isla	87.71	99	*e*LR	LR	01 43 38.7	
	comp=Z,95nm,22.3s						
RAYN	Ar Rayn	87.91	294	P	P	01 16 00.9	-0.6
ATD	Arta Tunnel	89.52	282	LR	LR	01 55 47.4	
	comp=Z,57nm,18.2s,baz=346,slow=35						
ILAR	Eielson Array	89.78	25	P	P	01 16 09.8	+0.5
	comp=Z,0.8nm,0.9s,baz=277,slow=5.4,SNR=5.9						
ILAR				LR	LR	01 58 08.8	
	comp=Z,22nm,18.6s,baz=252,slow=37						
	comp=Z,0.8nm,0.9s						
GNI	Garni	90.01	310	LR	LR	02 04 22.3	
	comp=Z,34nm,18.2s,baz=96,slow=41						
GURO	Guroymak-BITLI	91.99	308	P	P	01 16 20.8	+0.4
GURO				IAmb	IAmb	01 16 25.5	
	comp=Z,2.7nm,0.9s						
DAWY	Dawson	92.94	26	P	P	01 16 24.1	0.0
DAWY				IAmb	IAmb	01 16 33.4	
	comp=Z,2.6nm,0.9s						
KMBO	Kilima Mbogo	94.26	269	P	P	01 16 32.7	+1.2
	comp=Z,1.5nm,0.6s,baz=54,slow=6.2,SNR=4.7						
KMBO				LR	LR	01 55 31.9	
	comp=Z,176nm,21.1s,baz=72,slow=33						
	comp=Z,1.5nm,0.6s						
KMBO	Kilima Mbogo	94.26	269	P	P	01 16 31.8	+0.3
KMBO				IAmb	IAmb	01 16 33.9	
	comp=Z,3.1nm,0.9s						
INK	Inuvik	95.30	22	LR	LR	01 55 53.2	
	comp=Z,51nm,21.4s,baz=267,slow=33						
MMAI	Mount Meron Ar	97.24	303	LR	LR	02 08 04.4	
	comp=Z,54nm,20.1s,baz=248,slow=40						
DLBC	Dease Lake	97.60	32	LR	LR	02 00 02.3	
	comp=Z,86nm,18.5s,baz=286,slow=35						
EIL	Elat	97.63	299	LR	LR	02 04 33.3	
	comp=Z,32nm,21.6s,baz=76,slow=38						
BRTR	Keskin Array B	98.53	309	P	Pdif	01 16 50.9	+0.6
	comp=Z,0.3nm,0.8s,baz=151,slow=11,SNR=4.2						
BRTR				LR	LR	02 07 39.0	
	comp=Z,43nm,19.5s,baz=96,slow=39						
	comp=Z,0.3nm,0.8s						
SPITS	Spitsbergen Ar	98.73	349	LR	LR	02 04 59.7	
	comp=Z,74nm,20.5s,baz=27,slow=38						
ARCES	ARCESS Array B	99.13	340	P	Pdif	01 16 52.0	-0.1
	comp=Z,3.3nm,1.1s,baz=54,slow=6.3,SNR=3.7						
ARCES				LR	LR	02 08 22.4	
	comp=Z,71nm,19.9s,baz=104,slow=40						
	comp=Z,3.3nm,1.1s						
BBB	Bella Bella	99.29	38	LR	LR	01 56 02.3	
	comp=Z,84nm,20.9s,baz=252,slow=32						
MNK	Minsk	101.02	325	*i* P	Pdif	01 16 54.3	-6.5
	comp=E,1.0nm,0.9s						
MNK				*i* P	Pdif	01 16 54.3	-6.5
	comp=N,7.0nm,0.8s						
MNK				*i* P	Pdif	01 16 54.3	-6.5
	comp=Z,3.0nm,0.8s,baz=261						
MNK				*i* PP	PP	01 21 02.8	-6.4
MNK				*i* PPP	PPP	01 23 11.6	
MNK				*i* SKS		01 27 29.1	
MNK				*i* S	Sdif	01 28 46.4	+8.9
MNK				*i* PS	PS	01 30 06.8	-5.0
MNK				*i* SS	SS	01 35 40.5	+4.2
MNK				*i* SSS	SSS	01 39 26.7	
MNK				*i* LR	LR	01 58 19.5	
MNK				*i* LRM	MLR	02 02 47.6	
	comp=Z,97nm,18.7s						
MNK				*i* LRM	MLR	02 02 50.2	
	comp=E,6.0nm,17.4s						
MNK				*i* LRM	MLR	02 03 03.7	
	comp=N,34nm,18.7s						
BOSA	Boshof	102.45	240	P	Pdif	01 17 08.9	+1.0
	comp=N,3.1nm,0.9s,baz=137,slow=3.0,SNR=5.5						
TXAR	Lajitas Array	121.90	58	PKP	PKiKP	01 22 06.9	+0.5
	comp=N,0.4nm,0.6s,baz=238,slow=1.6,SNR=4.9						
TXAR	Lajitas Array	121.90	58		PKiKP	01 22 07.1	+0.7
TORD	Torodi Ar. Bea	129.67	284	PKP	PKiKP	01 22 21.9	-0.1
	comp=N,2.0nm,0.7s,baz=108,slow=2.0,SNR=12						
CPUP	Villa Florida	148.84	164	PKPbc	PKPbc	01 22 59.8	+0.3
	comp=N,3.5nm,0.9s,baz=214,slow=5.7,SNR=4.1						
LPAZ	La Paz	152.10	136	PKPbc	PKiKP	01 23 09.2	+0.6
	comp=N,1.2nm,0.5s,baz=284,slow=2.1,SNR=6.1						
LPAZ	La Paz	152.10	136		PKiKP	01 23 09.5	+0.8

*IDC **30** 01:15:43.7±10.0, 2°.01N×128°.54E, h170km±101km, mb3.5/6, mbtmp3.9/6, Error ellipse: s-maj=144.8km s-min=20.5km az=70.0*

ISC 30 01:15:35.5±1.3**, 2°.1N**±0°.4×**12°8E**±°**, h92km, n7,** σ1s.**14**/7**,**
mb4.1/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.62	166	P	P	01 20 28.9	-0.1
	0.4nm,0.7s,baz=334,slow=11,SNR=6.4						
	0.4nm,0.7s						
ASAR	Alice Springs	26.12	169	P	P	01 21 02.0	+0.9
	0.3nm,0.6s,baz=346,slow=10,SNR=2.0						
	0.3nm,0.6s						
STKA	Stephens Creek	35.99	161	P	P	01 22 27.8	+0.1
	1.2nm,0.3s,baz=1.7,slow=6.6,SNR=5.8						
	1.2nm,0.3s						
SONM	Songino Array	49.42	341	P	P	01 24 17.2	+1.0
	1.0nm,0.7s,baz=145,slow=7.3,SNR=5.7						
	1.0nm,0.7s						
MKAR	Makanchi Array	59.90	325	P	P	01 25 32.3	+0.5
	3.2nm,0.4s,baz=115,slow=8.0,SNR=60						
	3.2nm,0.4s						
ARCES	ARCESS Array B	92.59	340	P	P	01 28 35.4	-1.0
	1.2nm,0.6s,baz=70,slow=5.3,SNR=4.3						
	1.2nm,0.6s						
TORD	Torodi Ar. Bea	125.07	288	PKP	PKPdf	01 34 24.8	-1.5
	0.7nm,1.1s,baz=153,slow=2.6,SNR=2.3						

IDC 30 01:17:53.2±1.8**, 3°.64S**×**151°.74E, h0km, mb3.5**/3**,**
mbtmp3.6/3**, Error ellipse: s-maj=43.3km s-min=11.0km**
az=58.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.72	157	Pg	Pg	01 18 05.3	-1.8
	623nm,0.3s,baz=250,slow=1.1,SNR=289						
KRVT				Lg	Lg	01 18 19.3	
	748nm,0.3s,baz=149,slow=20,SNR=7.7						
WRA	Warramunga Arr	23.46	225	P	P	01 23 04.8	+0.2
	2.5nm,1.0s,baz=52,slow=9.9,SNR=13						
	2.5nm,1.0s						
ASAR	Alice Springs	26.33	219	P	P	01 23 30.7	-0.3
	0.5nm,0.4s,baz=58,slow=9.3,SNR=7.3						
	0.5nm,0.4s						
MKAR	Makanchi Array	78.76	319	P	P	01 29 58.2	+0.4
	0.1nm,0.3s,baz=112,slow=6.4,SNR=1.7						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	148.93	290	PKPbc	PKPbc	01 37 44.4	+0.2
	0.6nm,0.8s,baz=72,slow=3.3,SNR=2.0						

*MAN **30** 02:10:11.5, 9°.67N×125°.53E, h41km, mb3.7, ML2.5, MS2.0,*
Hypocentre not reviewed by the ISC

ISC 30 02:10:12.4±1.6**, 9°.46N**±0°.06×**125°.57E**±0°.05**, h12km**±13km**,**
n7, σ1s.**08**/12**, 5C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.33	347	⇑*i*P	Pg	02 10 19.6	+0.5
SCPH				*i* S	Sb	02 10 25.4	-0.2
BUTP	Butuan	0.49	173	⇑*e*P	Pn	02 10 27.6	+2.3
GLSP	General Luna,	0.64	60	⇑*e*P	Pg	02 10 24.9	0.0
GLSP				*e*S	Sb	02 10 34.4	-0.2
MSLP	Maasin	0.97	314	⇓*e*P	Pb	02 10 30.4	-0.7
MSLP				*e*S	Sn	02 10 46.7	+1.2
CGP	Cagayan de Oro	1.32	221	⇑*i*P	Pn	02 10 35.7	-0.9
CGP				*i* S	Sn	02 10 54.3	+0.2
BIPH	Bislig	1.49	148	⇑*i*P	Pn	02 10 38.1	-0.9
BIPH				*i* S	Sn	02 10 58.5	+0.1
BUKP	Musuan	1.65	198	⇓*e*P	Pn	02 10 40.8	-0.4

*IDC **30** 02:12:28.6±1.4, 9°.94S×118°.41E, h0km, mb3.7/4, mbtmp3.9/7, ML4.0/3, MS3.7/2, Error ellipse: s-maj=47.8km s-min=21.9km az=49.0*

*DJA **30** 02:12:38.6±0.6, 10°S±4°×11°9E±°, h26km±6km, M4.5/17, mb4.7/7, mB5.1/3, MLv4.3/17, Mw(mB)4.5/3*

ISC 30 02:12:37.5±0.7**, 9°.61S**±0°.06×**119°.01E**±0°.05**, h50km, n41,**
σ1s.**74**/37**, mb3.8**/3**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.38	94	P	Pn	02 12 48.1	+0.7
PLAI	Plampang	1.45	303	P	Pn	02 13 02.0	+0.7
PLAI	Plampang	1.45	303	P	Pn	02 13 02.2	+0.9
BASI	Baing, Sumba	1.66	111	P	Pn	02 13 06.1	+1.9
EDFI	Ende, Flores	2.78	72	P	Pn	02 13 20.2	+0.5
MMRI	Maumere	3.33	73	P	Pn	02 13 28.6	+1.5
BSSI	Bau Bau, Buton	3.75	23	P	Pn	02 13 33.9	+1.1
IGBI	Denpasar	3.90	281	P	Pn	02 13 37.4	+2.6
SRBI	Singaraja	4.05	292	P	Pn	02 13 39.1	+2.2
BKSI	Bulukumba	4.40	15	P	Pn	02 13 43.1	+1.3
BATI	Baumata	4.62	98	Pn	Pn	02 13 46.9	+2.0
	20nm,0.3s,baz=297,slow=5.7,SNR=5.5						
BATI				Sn	Sn	02 14 38.0	+0.7
	12nm,0.3s,baz=267,slow=22,SNR=4.1						
	44nm,0.3s						
BATI	Baumata	4.62	98	P	Pn	02 13 46.9	+2.0
KAPI	Kappang	4.63	9	Pn	Pn	02 13 46.4	+1.4
	17nm,0.3s,baz=189,slow=4.2,SNR=63						
KAPI				Sn	Sn	02 14 36.3	-1.1
	11nm,0.3s,baz=344,slow=23,SNR=9.8						
	51nm,0.2s						
KAPI	Kappang	4.63	9	P	Pn	02 13 46.7	+1.8
JAGI	Jajag, Banyuwa	4.93	283	P	Pn	02 13 50.8	+1.7
JAGI	Jajag, Banyuwa	4.93	283	P	Pn	02 13 51.0	+1.9
ABJI	Asem Bagus	5.05	291	P	Pn	02 13 53.8	+3.0
	0.4nm74nm,0.7s						
SOEI	Soe	5.19	92	P	Pn	02 13 54.6	+1.9
	38nm,0.9s						
BNSI	Bone	5.29	12	P	Pn	02 13 55.6	+1.6
	0.2nm2µm57nm,0.6s						
SPSI	Sidrap Palu	5.66	8	P	Pn	02 14 01.7	+2.6
	0.2nm1µm50nm,0.5s						
BLJI	Banyuglugur	5.67	289	P	Pn	02 14 09.6	+10
TTSI	Tana Toraja	6.57	7	P	Pn	02 14 14.3	+2.7
	0.2nm3µm32nm,0.5s						
PWJI	Pagerwojo	7.29	282	P	Pn	02 14 24.4	+2.9
MBWA	Marble Bar	11.50	177	P	Pn	02 15 16.9	-2.2
PSA00	Pilbara Seismi	11.92	176	P	Pn	02 15 25.2	+0.4
GIRL	Giralia	13.74	199	P	Pn	02 15 50.3	+0.6
WRKA	Warakurna	17.70	151	P	Pn	02 16 40.7	+0.1
WRA	Warramunga Arr	18.02	126	P	P	02 16 43.3	-1.1
	0.2nm,0.3s,baz=296,slow=13,SNR=8.4						
WRA				S	Sn	02 19 49.3	-15
	0.6nm,0.8s,baz=310,slow=22,SNR=4.0						
	0.4nm,0.5s						
WRAB	Tennant Creek	18.02	126	P	P	02 16 43.8	-0.6
MORW	Morawa	19.55	188	P	Pn	02 17 03.4	+0.6
ASAR	Alice Springs	19.95	136	P	P	02 17 05.0	-0.6
	2.4nm,0.8s,baz=313,slow=9.4,SNR=18						
	2.4nm,0.8s						
OOD	Oodnadatta	23.96	141	P	P	02 17 48.1	+0.8
H08S2	Diego Garcia H	46.01	269	T	T	03 10 17.2	

	baz=95,slow=76,SNR=7.7						
H08S3	**Diego Garcia H**	**46.02**	**269**	T	T	03 10 17.1	
	baz=95,slow=76,SNR=9.9						
H08S1	**Diego Carcia H**	**46.02**	**269**	T	T	03 10 23.2	
	baz=95,slow=76,SNR=4.7						
ASAJ	**Asahikawa**	**57.60**	**20**	LR	LR	02 47 49.7	
	comp=Z,71nm,21.4s,baz=180,slow=36						
SONM	**Songino Array**	**58.28**	**350**	P	**P**	**02 22 27.1**	**-0.1**
	0.4nm,0.5s,baz=167,slow=8.7,SNR=2.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**65.00**	**333**	P	**P**	**02 23 09.4**	**-2.9**
	0.4nm,0.4s,baz=163,slow=6.7,SNR=7.0						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**69.61**	**339**	P	**P**	**02 23 41.2**	**-0.1**
	0.6nm,0.5s,baz=145,slow=5.3,SNR=2.5						
	0.6nm,0.5s						
SHEM	**Shemya Is, Ala**	**77.79**	**31**	LR	LR	02 53 48.8	
	comp=Z,50nm,21.0s,baz=268,slow=32						
TORD	**Torodi Ar. Bea**	**118.58**	**280**	PKP	**PKPdf**	**02 31 18.6**	**-2.2**
	0.4nm,0.9s,baz=102,slow=3.1,SNR=1.5						

IDC ***30*** *02:27:49.3±0.8, 12.°27N×144.°18E, h0^{km}, mb4.0/9, mbtmp4.0/9, MS3.6/12, Error ellipse: s-maj=31.0km s-min=15.8km az=108.0*

NEIC ***30*** *02:27:51.1±2.4, 12.°18N±0.°09×144.°4E±0.°1, h10^{km}±1^{km}, mb4.7/32, Error ellipse: s-maj=23.4km s-min=14.3km az=99.0*

ISC 30 02:27:53.2±0.5**, 12.°20N**±0.°07×**144.°4E**±0.°1**, h29^{km}, n69, σ1^{s}11**/50**, mb4.5**/24**, MS3.7**/11**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**17**	Pn	**Pn**	**02 28 18.5**	**+1.0**
	151nm,0.3s,baz=172,slow=5.2,SNR=78						
GUMO				Sn	**Sb**	**02 28 38.2**	**+0.5**
	300nm,0.3s,baz=277,slow=20,SNR=23						
GUMO	**Guam**	**1.45**	**17**		**Pn**	**02 28 17.9**	**+0.4**
PATS	**Pohnpei**	**14.70**	**110**	Pn	**Pn**	**02 31 17.3**	**-1.9**
SIJI	**Sorong**	**18.41**	**226**	LR	LR	02 37 19.1	
	comp=Z,112nm,20.0s,baz=198,slow=31						
JOW	**Kunigami**	**21.03**	**316**	LR	LR	02 41 39.8	
	comp=Z,64nm,18.2s,baz=152,slow=40						
H11S3	**WAKE ISLAND Hy**	**22.36**	**71**	T	T	02 56 21.7	
	baz=253,slow=76,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**22.37**	**71**	T	T	02 56 36.5	
	baz=253,slow=76,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	**22.37**	**71**	T	T	02 56 22.7	
	baz=253,slow=76,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**22.84**	**68**	T	T	02 56 38.8	
	baz=255,slow=75,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**22.85**	**68**	T	T	02 56 38.1	
	baz=255,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**22.86**	**68**	T	T	02 56 38.8	
	baz=255,slow=75,SNR=5.9						
MJAR	**Matsushiro Arr**	**24.88**	**348**	LR	LR	02 41 12.6	
	comp=Z,81nm,21.5s,baz=169,slow=32						
LUWI	**Luwuk**	**25.20**	**240**	P	**P**	**02 33 16.0**	**-0.6**
MYLDM	**Lahad Datu**	**26.54**	**257**	P	**P**	**02 33 30.7**	**+2.0**
MYLDM				IAmb	IAmb	02 33 59.1	
	comp=Z,29nm,1.2s						
WB0	**Warramunga Arr**	**33.26**	**197**	P	**P**	**02 34 28.5**	**+0.3**
WB0				IAmb	IAmb	02 34 32.5	
	comp=Z,17nm,1.6s						
WR0	**Warramunga Arr**	**33.40**	**197**	P	**P**	**02 34 29.7**	**+0.3**
WR0				IAmb	IAmb	02 34 32.2	
	comp=Z,27nm,1.8s						
WB2	**Warramunga Arr**	**33.44**	**197**	P	**P**	**02 34 29.8**	**0.0**
WRA	**Warramunga Arr**	**33.44**	**197**	P	**P**	**02 34 30.2**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=22,slow=9.8,SNR=20						
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**33.44**	**197**	P	**P**	**02 34 29.5**	**-0.2**
ASAR	**Alice Springs**	**37.10**	**196**	P	**P**	**02 35 01.9**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=18,slow=11,SNR=32						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**37.10**	**196**	P	**P**	**02 35 01.6**	**+0.4**
PSA00	**Pilbara Seismi**	**41.33**	**216**	P	**P**	**02 35 37.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**44.21**	**284**	LR	LR	02 55 04.8	
	comp=Z,75nm,18.7s,baz=270,slow=37						
BBOO	**Buckleboo**	**45.46**	**190**	P	**P**	**02 36 10.4**	**+0.7**
SONM	**Songino Array**	**47.62**	**326**	P	**P**	**02 36 26.7**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=154,slow=9.2,SNR=2.6						
	comp=Z,0.6nm,0.7s						
SONM	**Songino Array**	**47.62**	**326**	P	**P**	**02 36 26.9**	**+0.1**
MORW	**Morawa**	**49.34**	**213**	P	**P**	**02 36 40.7**	**+0.7**
YAK	**Yakutsk**	**50.88**	**351**	LR	LR	02 57 49.0	
	comp=Z,68nm,19.7s,baz=248,slow=35						
MK31	**Makanchi Array**	**62.19**	**317**	P	**P**	**02 38 11.3**	**-0.8**
MKAR	**Makanchi Array**	**62.19**	**317**	P	**P**	**02 38 11.8**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=92,slow=9.7,SNR=14						
	comp=Z,1.0nm,0.7s						
MAKZ	**Makanchi**	**62.41**	**317**	P	**P**	**02 38 13.2**	**-0.3**
MAKZ				IAmb	IAmb	02 38 14.6	
	comp=Z,4.6nm,1.2s						
ZALV	**Zalesovo Beam**	**62.50**	**325**	P	**P**	**02 38 13.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=101,slow=7.5,SNR=1.9						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**65.37**	**320**	P	**P**	**02 38 32.2**	**-0.7**
KURK				IAmb	IAmb	02 38 34.0	
	comp=Z,9.2nm,1.2s						
KDAK	**Kodiak Island**	**65.48**	**32**	LR	LR	03 06 03.6	
	comp=Z,28nm,19.7s,baz=226,slow=35						
NIL	**Nilore**	**67.73**	**301**	P	**P**	**02 38 46.6**	**-1.7**
KNK	**Knik Glacier**	**68.48**	**28**	P	**P**	**02 38 55.3**	**+2.7**
H24K	**Noodor Dome**	**69.88**	**24**	P	**P**	**02 39 01.6**	**+0.4**
H24K				IAmb	IAmb	02 39 03.1	
	comp=Z,6.0nm,1.2s						
ILAR	**Eielson Array**	**70.01**	**25**	P	**P**	**02 39 01.3**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=255,slow=5.3,SNR=7.7						
	comp=Z,0.9nm,0.8s						
KK31	**Karatay Array**	**70.04**	**312**	P	**P**	**02 39 02.5**	**-0.1**
KK31				IAmb	IAmb	02 39 03.3	
	comp=Z,4.1nm,0.9s						
KKAR	**Karatay Array**	**70.04**	**312**	P	**P**	**02 39 01.5**	**-1.0**
GAR	**Garm**	**70.11**	**307**	P	**P**	**02 39 02.6**	**-0.6**
GAR				IAmb	IAmb	02 39 07.2	
	comp=Z,6.3nm,0.9s						
BRVK	**Borovoye**	**70.81**	**322**	P	**P**	**02 39 06.0**	**-1.0**
BRVK				IAmb	IAmb	02 39 07.7	
	comp=Z,8.0nm,1.2s						
KBL	**Kabul**	**71.20**	**302**	P	**P**	**02 39 09.9**	**-0.2**
KBL				IAmb	IAmb	02 39 11.1	
	comp=Z,4.6nm,0.9s						
BCAR	**Beaver Creek A**	**71.87**	**27**	P	**P**	**02 39 13.6**	**+0.3**
HRA	**Herat**	**76.82**	**303**	P	**P**	**02 39 43.0**	**+0.1**
HRA				IAmb	IAmb	02 39 44.0	
	comp=Z,5.8nm,1.2s						
ABKAR	**Akbulak array**	**77.28**	**318**	P	**P**	**02 39 43.4**	**-1.5**
ARU	**Arti**	**77.66**	**325**	LR	LR	03 15 39.4	
	comp=Z,58nm,18.4s,baz=125,slow=37						
BBB	**Bella Bella**	**78.93**	**39**	LR	LR	03 10 27.3	
	comp=Z,53nm,20.1s,baz=342,slow=32						
YKA	**Yellowknife Ar**	**84.29**	**27**	P	**P**	**02 40 22.5**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=294,slow=3.4,SNR=3.1						
	comp=Z,0.6nm,0.5s						
YKA	**Yellowknife Ar**	**84.29**	**27**	P	**P**	**02 40 21.1**	**-1.0**
PINE	**Pine Mountain**	**84.98**	**46**	P	**P**	**02 40 28.0**	**+1.8**
PINE				IAmb	IAmb	02 40 33.5	
	comp=Z,4.6nm,0.8s						
NEW	**Newport**	**86.56**	**41**	LR	LR	03 22 50.7	
	comp=Z,23nm,18.3s,baz=214,slow=38						
BMO	**Blue Mountains**	**87.28**	**45**	P	**P**	**02 40 38.3**	**+0.8**
NVAR	**Mina Array Bea**	**88.13**	**51**	P	**P**	**02 40 44.0**	**+2.1**
	comp=Z,1.3nm,0.8s,baz=255,slow=6.1,SNR=8.8						
	comp=Z,1.3nm,0.8s						
NVAR	**Mina Array Bea**	**88.13**	**51**	P	**P**	**02 40 43.7**	**+1.8**
KVN	**Kaiserville**	**88.13**	**51**	P	**P**	**02 40 43.3**	**+1.5**
MFID	**Camas Ranch**	**88.68**	**46**	P	**P**	**02 40 44.0**	**-0.2**
MFID				IAmb	IAmb	02 40 47.0	
	comp=Z,3.6nm,0.9s						
HLID	**Hailey**	**89.63**	**45**	P	**P**	**02 40 50.1**	**+1.4**
ELK	**Elko**	**89.82**	**48**	LR	LR	03 17 00.7	
	comp=Z,48nm,18.6s,baz=292,slow=33						
ELK	**Elko**	**89.82**	**48**	P	**P**	**02 40 51.0**	**+1.3**
GSC	**Goldstone, Bar**	**90.07**	**54**	P	**P**	**02 40 50.9**	**+0.1**
GSC				IAmb	IAmb	02 40 55.5	
	comp=Z,5.7nm,1.3s						
TPNV	**Topopah Spring**	**90.08**	**52**	P	**P**	**02 40 53.1**	**+2.2**
TPNV				IAmb	IAmb	02 40 55.7	
	comp=Z,6.5nm,1.4s						
FINES	**FINESS Array B**	**92.23**	**335**	P	**P**	**02 40 58.6**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=66,slow=4.4,SNR=22						
	comp=Z,1.1nm,0.3s						
FINES	**FINESS Array B**	**92.23**	**335**	P	**P**	**02 40 58.7**	**-1.4**
AKASG	**Malin Array Be**	**95.89**	**325**	LR	LR	03 28 20.7	
	comp=Z,29nm,18.5s,baz=9.0,slow=38						
LPIG	**La Paz**	**98.63**	**63**	LR	LR	03 25 02.9	
	comp=Z,22nm,18.6s,baz=8.0,slow=35						
DBIC	**Dimbokro**	**144.16**	**300**	PKP	PKPbc	02 47 25.8	+0.4
	comp=Z,3.9nm,0.8s,baz=83,slow=4.8,SNR=6.5						
DBIC	**Dimbokro**	**144.16**	**300**		PKPbc	02 47 25.6	+0.1
LPAZ	**La Paz**	**148.21**	**101**	PKPbc	**PKiKP**	**02 47 40.0**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=333,slow=4.5,SNR=2.5						

IDC ***30*** *02:52:45.1±0.7, 24.°21N×121.°86E, h0^{km}, mb4.0/16, mbtmp4.1/17, ML3.7/1, MS3.4/9, Error ellipse: s-maj=20.5km s-min=14.8km az=70.0*

BJI ***30*** *02:52:46.5±0.0, 24.°16N×121.°84E, h8^{km}, mb4.1/21, mB4.4/14, ML4.2/9, Ms4.1/18, Ms7 4.0/19*

JMA ***30*** *02:52:46.9±0.1, 24.°0N±0.°5×121.°7E±0.°6, h17^{km}, MD4.2/11, MV4.0/11, TAIWAN REGION*

NIED ***30*** *02:52:46.9, 24.°04N×121.°68E, h17^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.44; M$_{\theta\theta}$-1.83; M$_{\phi\phi}$-0.62; M$_{r\theta}$5.81; M$_{\theta\phi}$-0.98; M$_{\phi r}$3.40; Fault plane solution: M$_0$7.15000×10^{15} NP1: ϕ_s242.00000°, δ10.00000°, λ92.00000°. NP2:ϕ_s60.00000°, δ80.00000°, λ90.00000°.*

TAP ***30*** *02:52:47.8, 24.°17N×121.°72E, h14^{km}, ML4.7, B*

ASIES ***30*** *02:52:47.8, 24.°18N×121.°71E, h19^{km}, MW4.1*

NEIC ***30*** *02:52:47.2±1.6, 24.°12N±0.°03×121.°76E±0.°04, h12^{km}±3^{km}, mb4.5/36, ML4.7(TAP), Error ellipse: s-maj=5.4km s-min=3.1km az=127.0*

ISC 30 02:52:47.3±0.7**, 24.°16N**±0.°01×**121.°76E**±0.°02**, h13^{km}**±4^{km}**, n213, σ0^{s}99**/311**, mb4.3**/36**, MS3.5**/10**, 6C-34D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.13**	**272**	⇓*i*P	**Pg**	**02 52 50.8**	**+0.1**
	baz=264						
ETL				*i* S	**Sg**	**02 52 53.0**	**0.0**
	baz=264						
NACB	**Ninganchiao**	**0.15**	**277**		**Pg**	**02 52 50.9**	**-0.2**
NACB				Sg	**Sg**	**02 52 52.9**	**-0.8**
NACB	**Ninganchiao**	**0.15**	**277**	⇓*i*P	**Pg**	**02 52 51.0**	**0.0**
	baz=273						
NACB				*i* S	**Sg**	**02 52 53.8**	**+0.1**
	baz=273						
EHP	**Heping Village**	**0.15**	**353**	*i* P	**Pb**	**02 52 51.5**	**-0.6**
	baz=12						
EHP				S	**Sb**	**02 52 54.5**	**-0.7**
	baz=12						
TWD	**Chiawan**	**0.17**	**244**	⇓*i*P	**Pg**	**02 52 51.4**	**+0.1**
	baz=230						
TWD				*i* S	**Sg**	**02 52 54.5**	**+0.5**
	baz=230						
HWA	**Hwalien**	**0.23**	**219**	P	**Pb**	**02 52 53.3**	**0.0**
	baz=206						
HWA				*e*S	**Sb**	**02 52 57.8**	**+0.5**
	baz=206						
ETLH	**Xiulin Townshi**	**0.26**	**281**	⇓*i*P	**Pg**	**02 52 52.9**	**0.0**
	baz=280						
ETLH				S	**Sg**	**02 52 56.8**	**+0.2**
	baz=280						
ENA	**Nanau**	**0.27**	**356**	⇓*i*P	**Pb**	**02 52 53.4**	**-0.7**
	baz=6.0						
ENA				*i* S	**Sb**	**02 52 57.7**	**-0.9**
	baz=6.0						
EWUT	**Wuta**	**0.29**	**3**	⇓*i*P	**Pb**	**02 52 53.7**	**-0.6**
	baz=11						
EWUT				*e*S	**Sb**	**02 52 58.1**	**-1.0**
	baz=11						
ETM	**Tongmen**	**0.31**	**233**	⇓P	**Pg**	**02 52 53.8**	**+0.1**
	baz=226						
ETM				*e*S	**Sg**	**02 52 58.7**	**+0.7**
	baz=226						
TEYL	**Yanliau Villag**	**0.32**	**208**	*e*P	**Pb**	**02 52 54.8**	**-0.2**
	baz=202						
TEYL				*e*S	**Sb**	**02 53 01.5**	**+1.5**
	baz=202						
LATG	**Datong**	**0.43**	**330**	⇓*i*P	**Pb**	**02 52 56.4**	**-0.5**
	baz=335						
LATG				S	**Sb**	**02 53 03.1**	**-0.4**
	baz=335						
NNSB	**Datong**	**0.44**	**308**	⇓*i*P	**Pb**	**02 52 56.4**	**-0.6**
	baz=310						
NNSB				S	**Sb**	**02 53 02.7**	**-0.9**
	baz=310						
ESL	**Shilin**	**0.45**	**222**	⇓*i*P	**Pg**	**02 52 56.5**	**+0.2**
	baz=216						
ESL				*e*S	**Sb**	**02 53 03.4**	**-0.5**
	baz=216						
NNS	**Nan Shan**	**0.46**	**309**	⇓*i*P	**Pb**	**02 52 56.7**	**-0.6**
	baz=311						
NNS				*e*S	**Sb**	**02 53 03.1**	**-0.9**
	baz=311						
WHF	**Hehuan Shan**	**0.46**	**269**	⇓*i*P	**Pg**	**02 52 56.5**	**0.0**
	baz=267						
WHF				S	**Sb**	**02 53 03.2**	**-1.0**
	baz=267						
TWC	**Suao**	**0.46**	**10**	⇓*i*P	**Pb**	**02 52 57.0**	**-0.3**
	baz=16						
TWC				*e*S	**Sb**	**02 53 03.7**	**-0.3**
	baz=16						
NDS	**Dongshan**	**0.48**	**355**	⇓*i*P	**Pb**	**02 52 57.3**	**-0.3**
	baz=360						
NDS				*e*S	**Sb**	**02 53 03.8**	**-0.7**
	baz=360						
FUSS	**Fushou**	**0.48**	**281**	⇓*i*P	**Pb**	**02 52 57.2**	**-0.6**
	baz=280						
FUSS				S	**Sb**	**02 53 04.2**	**-0.7**
	baz=280						
TEGC	**Jichi Village**	**0.49**	**205**	*e*P	**Pb**	**02 52 58.3**	**+0.6**
	baz=199						
TEGC				*e*S	**Sn**	**02 53 06.9**	**-1.4**
	baz=199						
NDT	**Datong Townshi**	**0.50**	**333**	⇓*i*P	**Pb**	**02 52 57.5**	**-0.5**
	baz=337						
NDT				*e*S	**Sb**	**02 53 04.8**	**-0.4**
	baz=337						
ENTT	**Nioudou**	**0.52**	**340**	⇓*i*P	**Pb**	**02 52 58.0**	**-0.2**
	baz=344						
ENTT				S	**Sb**	**02 53 05.3**	**-0.3**
	baz=344						
TWT	**Tachien**	**0.55**	**280**	⇓*e*P	**Pb**	**02 52 58.8**	**0.0**
	baz=279						
TWT				*e*S	**Sb**	**02 53 06.6**	**0.0**
	baz=279						
CHGB	**Renai**	**0.55**	**260**	*e*P	**Pb**	**02 52 58.4**	**-0.4**
	baz=258						
CHGB				*e*S	**Sb**	**02 53 06.1**	**-0.6**
	baz=258						
TDCB	**Techi**	**0.56**	**280**	⇓P	**Pb**	**02 52 58.9**	**-0.2**
	baz=279						
TDCB				*e*S	**Sb**	**02 53 06.5**	**-0.5**
	baz=279						
TWE	**Neicheng**	**0.57**	**351**	⇓*i*P	**Pb**	**02 52 59.0**	**-0.1**
	baz=357						
TWE				S	**Sb**	**02 53 07.1**	**-0.1**
	baz=357						
OWD	**Renai**	**0.57**	**250**	⇓*i*P	**Pg**	**02 52 58.6**	**+0.1**
	baz=247						
OWD				S	**Sg**	**02 53 06.5**	**+0.3**
	baz=247						
EGFH	**Guangfu**	**0.57**	**212**	P	**Pb**	**02 52 59.1**	**-0.1**
	baz=208						
EGFH				*e*S	**Sb**	**02 53 07.9**	**+0.7**
	baz=208						
ILA	**Ilan**	**0.61**	**359**	*e*P	**Pb**	**02 53 00.1**	**+0.3**
	baz=3.0						
ILA				*e*S	**Sb**	**02 53 08.9**	**+0.7**
	baz=3.0						
WUSB	**Renai**	**0.61**	**255**	*e*P	**Pb**	**02 52 59.6**	**-0.3**
	baz=252						
WUSB				*e*S	**Sb**	**02 53 07.9**	**-0.6**
	baz=252						
FUSB	**Fushanzhiwuyua**	**0.62**	**345**	⇓*e*P	**Pb**	**02 53 00.0**	**-0.1**
	baz=349						
FUSB				*e*S	**Sb**	**02 53 08.4**	**-0.4**
	baz=349						
YHNB	**Yeheng**	**0.62**	**326**		**Pb**	**02 52 59.6**	**-0.5**
YHNB				Sg	**Sb**	**02 53 08.1**	**-0.7**
YHNB	**Yeheng**	**0.62**	**326**	⇓P	**Pb**	**02 52 60.0**	**-0.1**
	baz=328						
YHNB				*e*S	**Sb**	**02 53 08.4**	**-0.3**
	baz=328						
NSK	**Sanguang**	**0.64**	**325**	⇓P	**Pb**	**02 53 00.1**	**-0.2**
	baz=328						
NSK				*e*S	**Sb**	**02 53 08.8**	**-0.3**
	baz=328						
NWLT	**Wulai**	**0.66**	**339**	⇓*e*P	**Pb**	**02 53 00.7**	**0.0**
	baz=342						
NWLT				*e*S	**Sb**	**02 53 09.6**	**-0.3**
	baz=342						
VWDT	**VWDT**	**0.69**	**235**	⇓*e*P	**Pb**	**02 53 01.1**	**-0.2**
	baz=232						
VWDT				*e*S	**Sn**	**02 53 12.0**	**-1.4**
	baz=232						
NTC	**Toucheng**	**0.70**	**5**	*e*P	**Pb**	**02 53 01.5**	**+0.2**
	baz=8.0						
NTC				*e*S	**Sb**	**02 53 10.8**	**0.0**
	baz=8.0						
EGS		**0.70**	**13**	*e*P	**Pn**	**02 53 02.0**	**-1.0**
	baz=17						
HGSD	**Ruisui**	**0.73**	**205**	*e*P	**Pb**	**02 53 02.1**	**+0.2**
	baz=202						
HGSD				*e*S	**Sn**	**02 53 15.2**	**+0.9**
	baz=202						
WPL	**Puli Township**	**0.75**	**259**	*e*P	**Pb**	**02 53 02.3**	**+0.1**
	baz=258						
WPL				*e*S	**Sb**	**02 53 12.1**	**-0.2**
	baz=258						
NFF	**Wufeng Townshi**	**0.76**	**309**	⇓*e*P	**Pb**	**02 53 02.4**	**+0.1**
	baz=310						
NFF				*e*S	**Sb**	**02 53 12.3**	**-0.3**
	baz=310						
WHP	**Taichung City**	**0.76**	**279**	*e*P	**Pb**	**02 53 02.5**	**+0.2**
	baz=279						
WHP				*e*S	**Sb**	**02 53 13.1**	**+0.5**
	baz=279						
EHY	**Hungye**	**0.76**	**212**	*e*P	**Pg**	**02 53 01.6**	**-0.5**
	baz=208						
EHY				*e*S	**Sb**	**02 53 13.6**	**+0.9**
	baz=208						
DPDB	**Guoxing**	**0.77**	**261**	*e*P	**Pb**	**02 53 02.8**	**+0.2**
	baz=260						
DPDB				*e*S	**Sb**	**02 53 13.1**	**0.0**
	baz=260						
WCS	**Beigang Elemen**	**0.78**	**263**	⇓*e*P	**Pb**	**02 53 02.8**	**+0.1**
	baz=262						
WCS				*e*S	**Sb**	**02 53 13.6**	**+0.3**
	baz=262						
TIPB	**Shuangxi**	**0.81**	**4**	⇓P	**Pb**	**02 53 03.6**	**+0.3**
	baz=7.0						
TIPB				*e*S	**Sb**	**02 53 14.2**	**-0.1**
	baz=7.0						
SSLB	**Suanglung**	**0.82**	**244**	Pg	**Pb**	**02 53 03.3**	**-0.2**
SSLB				Sg	**Sg**	**02 53 13.3**	**-0.8**
SSLB	**Suanglung**	**0.82**	**244**	⇓P	**Pg**	**02 53 03.2**	**-0.1**
	baz=242						
SSLB				*e*S	**Sg**	**02 53 13.7**	**-0.4**
	baz=242						
NHDH	**Xindian Distri**	**0.83**	**345**	*e*P	**Pn**	**02 53 04.3**	**-0.4**
	baz=348						
NHDH				*e*S	**Sn**	**02 53 15.5**	**-1.4**
	baz=348						
SMLT	**Sun Moon Lake**	**0.83**	**251**	*e*P	**Pb**	**02 53 03.8**	**0.0**
	baz=249						
SMLT				*e*S	**Sb**	**02 53 15.0**	**+0.2**
	baz=249						
TWA	**Mucha**	**0.84**	**349**	*e*P	**Pn**	**02 53 04.2**	**-0.6**
	baz=352						
TWA				*e*S	**Sb**	**02 53 15.5**	**+0.6**
	baz=352						
LIOB	**Emei**	**0.84**	**306**	*e*P	**Pn**	**02 53 04.3**	**-0.6**
	baz=307						
LIOB				*e*S	**Sb**	**02 53 14.6**	**-0.3**
	baz=307						
NSTT	**Nanjuang**	**0.84**	**304**	*e*P	**Pn**	**02 53 04.1**	**-0.7**
	baz=305						
NSTT				*e*S	**Sb**	**02 53 14.9**	**0.0**
	baz=305						
TATO	**Taipei**	**0.85**	**343**		**Pn**	**02 53 04.8**	**-0.2**
TATO				Sg	**Sn**	**02 53 15.9**	**-1.4**
TATO	**Taipei**	**0.85**	**343**	*e*P	**Pn**	**02 53 04.5**	**-0.5**
	baz=346						
TATO				*e*S	**Sn**	**02 53 15.9**	**-1.4**
	baz=346						
TYC	**Yuchr**	**0.86**	**253**	*e*P	**Pg**	**02 53 03.9**	**-0.1**
	baz=251						
TYC				*e*S	**Sb**	**02 53 15.4**	**-0.2**
	baz=251						
YULB	**Yu-li**	**0.87**	**209**		**Pg**	**02 53 02.2**	**-1.9**
YULB	**Yu-li**	**0.87**	**209**	*e*P	**Pg**	**02 53 03.2**	**-1.0**
	baz=207						
YULB				*e*S	**Sn**	**02 53 17.0**	**-0.8**
	baz=207						
TWB1	**Santiao Chiao**	**0.87**	**14**	*e*P	**Pb**	**02 53 04.4**	**+0.1**
	baz=17						
TWB1				*e*S	**Sb**	**02 53 16.4**	**+0.5**
	baz=17						
TWF1	**Yuli**	**0.91**	**208**	*e*P	**Pb**	**02 53 03.6**	**-1.3**
	baz=205						
TWF1				*e*S	**Sg**	**02 53 15.8**	**-0.9**
	baz=205						
NWF	**Wu-fen Shan**	**0.91**	**1**	*e*P	**Pn**	**02 53 05.8**	**-0.1**
	baz=4.0						
NWF				*e*S	**Sb**	**02 53 16.7**	**-0.4**
	baz=4.0						
WFSB	**Wu-fen Shan**	**0.91**	**1**	⇓*e*P	**Pn**	**02 53 05.8**	**0.0**
	baz=4.0						
WFSB				*e*S	**Sn**	**02 53 17.9**	**-0.9**
	baz=4.0						
HSN1	**Hsinchu**	**0.92**	**313**	*e*P	**Pn**	**02 53 06.4**	**+0.5**
	baz=314						
TWQ1	**Liyutan**	**0.92**	**282**	*e*P	**Pn**	**02 53 06.3**	**+0.3**
	baz=282						
TWQ1				*e*S	**Sn**	**02 53 19.2**	**+0.1**
	baz=282						
SXI1	**Grass Mountain**	**0.94**	**6**	⇓*e*P	**Pn**	**02 53 06.1**	**-0.2**
	baz=9.0						
SXI1				*e*S	**Sb**	**02 53 18.3**	**+0.4**
	baz=9.0						
NSY	**Sanyi**	**0.95**	**286**	*e*P	**Pn**	**02 53 07.0**	**+0.7**
	baz=286						
SBCB	**Hsinchu**	**0.95**	**312**	*e*P	**Pn**	**02 53 07.2**	**+0.8**
	baz=313						
SBCB				*e*S	**Sn**	**02 53 20.4**	**+0.6**
	baz=313						
NMLH	**Miaoli**	**0.96**	**293**	*e*P	**Pn**	**02 53 07.4**	**+0.9**
	baz=294						
NMLH				*e*S	**Sn**	**02 53 20.0**	**-0.1**
	baz=294						
NCUH	**Zhongli**	**0.96**	**327**	*e*P	**Pn**	**02 53 07.2**	**+0.6**
	baz=329						
NCUH				*e*S	**Sn**	**02 53 20.1**	**0.0**
	baz=329						
NCU	**National Centr**	**0.97**	**327**	*e*P	**Pn**	**02 53 07.0**	**+0.4**
	baz=329						
NCU				*e*S	**Sn**	**02 53 21.1**	**+0.9**
	baz=329						
HSN	**Hsinchu**	**0.97**	**312**	*e*P	**Pn**	**02 53 07.1**	**+0.5**
	baz=316						
HSN				*e*S	**Sn**	**02 53 20.9**	**+0.7**
	baz=316						
WWF	**Wufeng**	**0.98**	**264**	*e*P	**Pn**	**02 53 08.0**	**+1.3**
	baz=262						
TNOU	**National Taiwa**	**0.99**	**1**	*e*P	**Pn**	**02 53 07.2**	**+0.4**
	baz=3.0						
TWS1	**Kuangyinshan**	**0.99**	**342**	*e*P	**Pn**	**02 53 07.7**	**+0.7**
	baz=344						
TWS1				*e*S	**Sn**	**02 53 22.3**	**+1.5**
	baz=344						
TCU	**Taichung**	**0.99**	**270**	*e*P	**Pn**	**02 53 07.6**	**+0.7**
	baz=269						
TCU				*e*S	**Sn**	**02 53 22.1**	**+1.3**
	baz=269						
YUS	**Yu-Shan**	**0.99**	**228**	*e*P	**Pb**	**02 53 06.7**	**0.0**
	baz=226						
YUS				*e*S	**Sb**	**02 53 20.2**	**+0.3**
	baz=226						
YM01	**YM01**	**1.00**	**350**	*e*P	**Pn**	**02 53 07.1**	**0.0**
	baz=352						
WJS	**Zhushan**	**1.00**	**251**	⇑*e*P	**Pn**	**02 53 07.7**	**+0.6**
	baz=249						
WJS				*e*S	**Sn**	**02 53 21.6**	**+0.6**
	baz=249						
WNT1	**Nantou City**	**1.02**	**256**	*e*P	**Pn**	**02 53 08.8**	**+1.5**
	baz=255						
WNT	**Mingjian**	**1.02**	**255**	*e*P	**Pn**	**02 53 08.2**	**+0.9**
	baz=253						
WNT				*e*S	**Sn**	**02 53 23.5**	**+2.0**
	baz=253						
YM08	**YM08**	**1.04**	**351**	*e*P	**Pn**	**02 53 07.7**	**+0.1**
	baz=353						
WDJ	**Dajia District**	**1.04**	**281**	*e*P	**Pn**	**02 53 09.3**	**+1.7**
	baz=280						
WDJ				*e*S	**Sn**	**02 53 22.6**	**+0.6**
	baz=280						

NTST	Danshui	1.04	344	eP	Pn	02 53 08.6	+1.0
	baz=346						
NTST				eS	Sn	02 53 23.1	+1.0
	baz=346						
FULB	Fuli	1.04	204	⇑eP	Pb	02 53 06.7	-0.6
	baz=202						
FULB				eS	Sn	02 53 23.0	+0.9
	baz=202						
ALS	Alishan	1.09	234	⇑eP	Pn	02 53 08.4	-0.1
	baz=232						
ALS				eS	Sn	02 53 23.8	+0.2
	baz=232						
WCHH	Zhanghua	1.10	266	eP	Pg	02 53 09.4	+0.9
	baz=265						
WCHH				eS	Sn	02 53 25.0	+1.5
	baz=265						
CHKT	Chengkung	1.11	199	eP	Pb	02 53 08.1	-0.3
	baz=197						
CHKT				eS	Sn	02 53 24.8	+1.1
	baz=197						
JYNG	Yonagunijimaku	1.12	74	P	Pg	02 53 09.2	+0.4
JYNG				eS	Sn	02 53 25.3	+1.4
JYNG	Yonagunijimaku	1.12	74	A	A	02 53 09.2	
	comp=E,7.0nm,4.2s,comp=E,8.0nm,3.5s						
TWY	Chenhua	1.12	352	eP	Pg	02 53 10.1	+1.1
	baz=355						
YOJ	Yonaguni jima	1.18	75		Pg	02 53 09.8	-0.2
YOJ					Sg	02 53 25.8	+0.5
YOJ	Yonaguni jima	1.18	75	⇓iP	Pg	02 53 10.1	+0.1
	baz=76						
YOJ				eS	Sg	02 53 26.3	+0.9
	baz=76						
YOJ	Yonaguni jima	1.18	75	P	Pg	02 53 10.1	+0.1
YOJ				eS	Sg	02 53 26.8	+1.4
YOJ	Yonaguni jima	1.18	75	A	A	02 53 10.1	
	comp=E,9.0nm,2.8s,comp=E,5.0nm,2.0s						
ELDTW	Lidau	1.18	216	eP	Pn	02 53 08.2	-1.4
	baz=213						
ELDTW				eS	Sg	02 53 26.0	+0.5
	baz=213						
WGK	Gukeng	1.19	247	eP	Pg	02 53 11.0	+0.7
	baz=245						
WGK				eS	Sg	02 53 28.7	+2.8
	baz=245						
WDLH	Douliu	1.21	248	⇑eP	Pg	02 53 11.2	+0.5
	baz=246						
WDLH				eS	Sg	02 53 28.1	+1.7
	baz=246						
EDH	Donghe	1.25	200	eP	Pn	02 53 09.0	-1.4
	baz=198						
EDH				eS	Sb	02 53 26.4	-0.4
	baz=198						
WRL	Guolierlin Hig	1.29	259	⇑eP	Pg	02 53 12.1	-0.1
	baz=258						
WRL				eS	Sg	02 53 30.6	+1.6
	baz=258						
CHN2	Minshiung	1.33	242	eP	Pg	02 53 13.2	+0.3
	baz=241						
CHN2				eS	Sg	02 53 32.9	+2.6
	baz=241						
STYH	Taoyuan	1.33	223	⇑eP	Pn	02 53 11.7	+0.1
	baz=221						
STYH				eS	Sn	02 53 29.6	+0.5
	baz=221						
WTK	Tuku	1.34	250	eP	Pg	02 53 12.8	-0.2
	baz=249						
WTK				eS	Sg	02 53 31.1	+0.5
	baz=249						
STYT	Tauyuan	1.35	223	eP	Pb	02 53 12.2	-0.3
	baz=221						
STYT				eS	Sg	02 53 30.7	-0.2
	baz=221						
LONT	Longtian	1.37	205	eP	Pn	02 53 10.9	-1.2
	baz=203						
LONT				eS	Sn	02 53 30.3	+0.1
	baz=203						
WTP	Ta-pu	1.39	230	eP	Pb	02 53 13.4	+0.3
	baz=228						
WTP				eS	Sg	02 53 33.1	+1.0
	baz=228						
CHY	Chiayi	1.39	242	eP	Pg	02 53 13.6	-0.4
	baz=240						
CHY				eS	Sg	02 53 33.5	+1.3
	baz=240						
TWK	Hsinying	1.47	233	eP	Pg	02 53 15.2	-0.3
	baz=231						
TWK				eS	Sg	02 53 35.9	+1.3
	baz=231						
TWG	Pinlang	1.47	206		Pn	02 53 11.7	-1.9
TWG	Pinlang	1.47	206	eP	Pn	02 53 11.9	-1.6
	baz=204						
TWG				eS	Sn	02 53 32.0	-0.6
	baz=204						
CHN1	Nanshi	1.49	230	eP	Pb	02 53 15.2	+0.4
	baz=228						
CHN1				eS	Sg	02 53 37.2	+1.9
	baz=228						
SNST	Tainan City	1.49	231	eP	Pb	02 53 15.0	+0.2
	baz=230						
SNST				eS	Sg	02 53 35.9	+0.6
	baz=230						
PCYT	Pengchaiyu	1.49	11	eP	Pb	02 53 15.1	+0.2
	baz=13						
LDUT	Ludao	1.50	190	eP	Pn	02 53 12.0	-1.9
	baz=189						
LDUT				eS	Sn	02 53 30.9	-2.4
	baz=189						
WSF	Szhu	1.50	250	eP	Pg	02 53 15.6	-0.5
	baz=249						
WSF				eS	Sg	02 53 36.8	+1.1
	baz=249						
WSL	Shuilin Townsh	1.54	246	eP	Pb	02 53 15.9	+0.2
	baz=245						
WSL				eS	Sg	02 53 37.8	+0.9
	baz=245						
ICHU	Yijhu	1.57	240	eP	Pb	02 53 16.3	+0.1
	baz=239						
ICHU				eS	Sg	02 53 38.3	+0.3
	baz=239						
CHN8	Yiju	1.63	241	eP	Pb	02 53 17.3	+0.1
	baz=239						
ECL	Taimali	1.72	206	eP	Pn	02 53 16.5	-0.5
	baz=204						
ECL				eS	Sb	02 53 41.0	+0.8
	baz=204						
SSD	Sandimen	1.75	217	eP	Pn	02 53 18.0	+0.8
	baz=215						
SSD				eS	Sg	02 53 42.9	-0.6
	baz=215						
IRIF	Iriomote-Funau	1.81	84	P	Pn	02 53 18.8	+0.7
MASBT	Mashibuluo	1.85	214	eP	Pn	02 53 19.3	+0.5
	baz=213						
MASBT				eS	Sb	02 53 45.5	+1.4
	baz=213						
HATJ	Hateruma jima	1.87	93	P	Pn	02 53 19.8	+0.8
HATJ				eS	Sb	02 53 44.0	-0.6
HATJ	Hateruma jima	1.87	93	A	A	02 53 19.8	
	comp=E,7.0nm,2.4s,comp=E,6.0nm,3.1s						
JKRS	Kuro-shima	2.05	87	P	Pn	02 53 22.6	+1.1
JKRS	Kuro-shima	2.05	87	A	A	02 53 22.6	
	comp=E,5.0nm,4.3s,comp=E,8.0nm,3.1s						
JIJ	Ishigaki jima	2.18	84	P	Pn	02 53 23.8	+0.5
JISG	Ishigakijimahi	2.36	79	P	Pn	02 53 26.3	+0.6
JISG				eS	Sn	02 53 55.8	+1.2
JTJ	Tarama	2.72	79	P	Pn	02 53 31.9	+1.2
QZH	Quanzhou	2.99	286	Pn	Pn	02 53 34.8	+0.4
QZH				Sn	Sn	02 54 09.5	-0.6
QZH				smax	smax		
	comp=N,570nm,0.8s						
QZH				smax	smax		
	comp=E,290nm,0.8s						
QZH				LR	LR		
	comp=E,1µm,8.2s						
QZH				LR	LR		
	comp=Z,1µm,9.5s						
KNMB	Chin-men Tao	3.09	276	Pn	Pn	02 53 35.6	-0.2
JOW	Kunigami	6.46	64	Pn	Pn	02 54 21.4	-0.7
	3.8nm,0.3s,baz=109,slow=21,SNR=6.8						
JOW				Sn	Sn	02 55 35.4	-0.3
	baz=119,slow=19						
	8.7nm,0.3s						
JOW	Kunigami	6.46	64	Pn	Pn	02 54 20.5	-1.6
NJ2	Nanjing	8.28	343	eP	Pn	02 54 48.5	+1.5
NJ2				S	Sn	02 56 20.5	+0.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				smax	smax		
	comp=N,110nm,0.8s						
NJ2				smax	smax		
	comp=E,120nm,0.9s						
CNSH	ChangSha	8.89	299	⇓P	Pn	02 54 50.5	-4.9
CNSH				S	Sn	02 56 29.5	-6.0
CNSH				smax	smax		
	comp=N,210nm,0.9s						
CNSH				smax	smax		
	comp=E,260nm,1.1s						
WHN	Wuhan	9.16	316	P	Pn	02 55 09.8	+11
WHN				S	Sn	02 56 53.3	+11
WHN				LR	LR		
	comp=N,2µm,8.5s						
WHN				LR	LR		
	comp=E,1µm,8.1s						
WHN				LR	LR		
	comp=Z,2µm,10.7s						
LYN	LuoYang	13.14	324	eP	Pn	02 55 51.0	-2.7
LYN				S	Sn	02 58 23.0	+3.2
LYN				LR	LR		
	comp=N,980nm,10.2s						
LYN				LR	LR		
	comp=E,380nm,10.0s						
LYN				LR	LR		
	comp=Z,990nm,10.4s						
KSRS	Korea Array	14.27	20	Pn	P	02 56 14.8	-1.4
	comp=Z,0.4nm,0.3s,baz=201,slow=12,SNR=19						
JHS	Saijyo	14.63	40	P	P	02 56 22.2	+1.8
JHJ	Hachijo jima 2	18.14	56	LR	LR	03 03 57.2	
	comp=Z,73nm,19.2s,baz=268,slow=37						
MJAR	Matsushiro Arr	18.78	45	LR	LR	03 05 02.8	
	comp=Z,116nm,20.7s,baz=218,slow=40						
LZH	Lanzhou	19.50	312	eP	P	02 57 13.5	-0.8
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,310nm,11.9s						
LZH				LR	LR		
	comp=Z,480nm,11.4s						
LZH				LR	LR		
	comp=Z,620nm,11.4s						
CMAR	Chiang Mai Arr	21.99	259	P	P	02 57 43.1	+1.8
	comp=Z,0.7nm,0.3s,baz=55,slow=9.1,SNR=6.1						
CMAR				LR	LR	03 07 44.6	
	comp=Z,53nm,19.4s,baz=180,slow=41						
	comp=Z,0.7nm,0.3s						
GTA	Gaotai	23.98	315	eP	P	02 58 02.5	+0.8
GTA				pP	sP	02 58 09.5	+1.8
GTA				sP	pP	02 58 12.3	+6.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,84nm,5.5s						
GTA				LR	LR		
	comp=Z,140nm,12.0s						
GTA				LR	LR		
	comp=Z,240nm,11.3s						
GTA				LR	LR		
	comp=Z,320nm,13.5s						
GUMO	Guam	24.22	112	LR	LR	03 06 50.6	
	comp=Z,47nm,19.2s,baz=106,slow=35						
GOMU	GeErMu	26.11	304	P	P	02 58 26.8	+5.4
GOMU				pP	sP	02 58 29.8	+2.4
GOMU				sP	pP	02 58 34.3	+8.8
GOMU				S	S	03 02 55.8	+2.9
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,70nm,5.9s						
GOMU				LR	LR		
	comp=Z,100nm,10.3s						
GOMU				LR	LR		
	comp=Z,48nm,10.7s						
GOMU				LR	LR		
	comp=Z,49nm,10.5s						
KLR	Kul'dur	26.23	15	P	P	02 58 22.2	+0.4
	comp=Z,1.8nm,0.7s,baz=230,slow=5.5,SNR=5.5						
	comp=Z,1.8nm,0.7s						
ULN	Ulaanbaatar	26.39	337	P	P	02 58 23.7	+0.2
ULN				IAmb	IAmb	02 58 25.7	
	comp=Z,4.9nm,0.8s						
SONM	Songino Array	26.60	337	P	P	02 58 25.5	+0.1
	comp=Z,4.7nm,1.0s,baz=152,slow=9.5,SNR=17						
	comp=Z,4.7nm,1.0s						
SONM	Songino Array	26.60	337	P	P	02 58 25.2	-0.2
UGM	Wanagama	33.71	200	P	P	02 59 26.0	-2.4
WMQ	Urumqi	34.06	314	eP	P	02 59 33.5	+2.2
WMQ				LR	LR		
	comp=Z,150nm,13.9s						
WMQ				LR	LR		
	comp=Z,150nm,12.3s						
WMQ				LR	LR		
	comp=Z,76nm,13.9s						
MTN	Manton Dam	37.90	165	P	P	03 00 03.5	-0.8
MK31	Makanchi Array	38.73	316	P	P	03 00 10.8	-0.4
MKAR	Makanchi Array	38.73	316	P	P	03 00 11.3	+0.2
	comp=Z,1.8nm,0.6s,baz=104,slow=10,SNR=25						
	comp=Z,1.8nm,0.6s						
MKAR	Makanchi Array	38.73	316	P	P	03 00 11.2	+0.1
MAKZ	Makanchi	38.93	316	P	P	03 00 13.8	+1.0
ZAA0	Zalesovo Array	40.56	327	P	P	03 00 24.8	-1.4
ZALV	Zalesovo Beam	40.56	327	P	P	03 00 26.0	-0.2
	comp=Z,5.1nm,0.9s,baz=116,slow=7.8,SNR=16						
ZALV				LR	LR	03 18 36.3	
	comp=Z,37nm,18.0s,baz=50,slow=38						
	comp=Z,5.1nm,0.9s						
ZALV	Zalesovo Beam	40.56	327	P	P	03 00 26.2	0.0
H11N1	WAKE ISLAND Hy	41.96	87	T	T	03 46 09.2	
	baz=283						
H11N2	WAKE ISLAND Hy	41.96	87	T	T	03 46 05.6	
	baz=283,slow=74						
H11N3	WAKE ISLAND Hy	41.98	87	T	T	03 46 03.1	
	baz=283,slow=74						
KURK	Kurchatov	42.45	320	P	P	03 00 41.6	-0.1
PSA00	Pilbara Seismi	45.49	183	P	P	03 01 04.8	-1.6
WRAB	Tennant Creek	45.51	163	P	P	03 01 06.5	-0.1
WRAB				IAmb	IAmb	03 01 26.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	45.51	163	P	P	03 01 05.7	-0.9
	comp=Z,1.4nm,0.7s,baz=346,slow=8.8,SNR=18						
	comp=Z,1.4nm,0.7s						
WRA	Warramunga Arr	45.51	163	P	P	03 01 05.0	-1.7
WB2	Warramunga Arr	45.52	163	P	P	03 01 06.7	0.0
WB2				IAmb	IAmb	03 01 08.0	
	comp=Z,3.5nm,0.7s						
WR0	Warramunga Arr	45.58	163	P	P	03 01 05.7	-1.5
WR0				IAmb	IAmb	03 01 08.6	
	comp=Z,3.6nm,0.7s						
KKAR	Karatay Array	45.91	307	P	P	03 01 10.3	+0.7
TIXI	Tiksi	47.69	3	LR	LR	03 20 59.9	
	comp=Z,60nm,19.4s,baz=181,slow=36						
TIXI	Tiksi	47.69	3	P	P	03 01 22.3	-0.9
TIXI				IAmb	IAmb	03 01 22.5	
	comp=Z,5.6nm,0.8s						
ASAR	Alice Springs	48.98	165	P	P	03 01 33.8	+0.2
	comp=Z,0.8nm,0.7s,baz=339,slow=7.7,SNR=11						
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	48.98	165	P	P	03 01 34.2	+0.6
NRIK	Noril'sk	49.57	345	P	P	03 01 37.1	-0.5
	comp=Z,1.3nm,0.4s,baz=115,slow=6.5,SNR=3.6						
	comp=Z,1.3nm,0.4s						
ABKAR	Akbulak array	53.84	314	P	P	03 02 10.2	+0.4
STKA	Stephens Creek	58.86	160	P	P	03 02 46.5	+0.8
	comp=Z,1.2nm,0.6s,baz=353,slow=7.9,SNR=4.7						
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	58.86	160	P	P	03 02 47.1	+1.4
TTA	Tatalina	65.27	30	P	P	03 03 29.0	+0.4
TTA				IAmb	IAmb	03 03 45.1	
	comp=Z,3.0nm,1.2s						
KLMR	Klimovskoe	65.47	328	eP	P	03 03 24.7	-5.1
KLMR				AMP		03 03 30.3	
	comp=Z,6.0nm,0.9s						
LHI	Lord Howe Isla	65.87	145	P	P	03 03 33.0	+0.4
KBZ	Khabaz	65.91	309	P	P	03 03 33.1	+0.2
	comp=Z,1.1nm,0.6s,baz=72,slow=3.2,SNR=2.5						
	comp=Z,1.1nm,0.6s						
K20K	Telida	66.10	29	P	P	03 03 34.7	+0.8
K20K				IAmb	IAmb	03 03 38.6	
	comp=Z,2.4nm,0.9s						
TOLK	Toolik Lake Re	67.27	23	P	P	03 03 41.5	+0.3
TOLK				IAmb	IAmb	03 04 07.8	
	comp=Z,5.4nm,1.3s						
KDAK	Kodiak Island	67.62	35	P	P	03 03 44.7	+1.1
RND	Reindeer	68.42	29	P	P	03 03 48.3	-0.4
SEW	Seward	68.78	32	P	P	03 03 49.9	-0.9
IL31		69.00	27	P	P	03 03 50.9	-1.1
IL31				IAmb	IAmb	03 03 52.7	
	comp=Z,2.7nm,1.3s						
ILAR	Eielson Array	69.00	27	P	P	03 03 51.0	-1.2
	comp=Z,0.4nm,0.6s,baz=278,slow=5.6,SNR=4.2						
	comp=Z,0.4nm,0.6s						
BMAR	Burnt Mountain	69.33	24	P	P	03 03 54.9	+0.7
SCM	Sheep Creek Mo	69.43	30	P	P	03 03 53.4	-1.6
M24K	Tolsona, Glenn	69.90	30	P	P	03 03 57.5	-0.4
SCRK	Sand Creek	70.41	28	P	P	03 04 00.5	-0.5
SCRK				IAmb	IAmb	03 04 25.8	
	comp=Z,4.7nm,1.5s						
GLB	Gilahina Butte	71.16	30	P	P	03 04 05.7	+0.1
GLB				IAmb	IAmb	03 04 11.3	
	comp=Z,7.3nm,1.4s						
M26K	Nabesna, AK	71.26	29	P	P	03 04 06.2	+0.1
M26K				IAmb	IAmb	03 04 09.5	
	comp=Z,3.5nm,1.0s						
L27K	Beaver Creek,	71.59	28	P	P	03 04 08.5	+0.4
L27K				IAmb	IAmb	03 04 09.1	
	comp=Z,2.0nm,0.8s						
BCAR	Beaver Creek A	71.61	28	P	P	03 04 08.1	-0.1
FINES	FINESS Array B	71.74	330	P	P	03 04 08.4	-0.5
	comp=Z,3.9nm,1.0s,baz=90,slow=4.2,SNR=7.5						
FINES				LR	LR	03 38 45.2	
	comp=Z,57nm,19.0s,baz=103,slow=38						
	comp=Z,3.9nm,1.0s						
FINES	FINESS Array B	71.74	330	P	P	03 04 07.5	-1.3
WAX	Waxell Ridge	71.89	31	P	P	03 04 10.0	+0.1
WAX				IAmb	IAmb	03 04 16.4	
	comp=Z,5.8nm,1.0s						
DAWY	Dawson	72.32	27	P	P	03 04 12.4	0.0
DAWY				IAmb	IAmb	03 04 15.6	
	comp=Z,2.2nm,0.8s						
CTGM	Chitina Glacie	72.44	31	P	P	03 04 13.6	+0.3
CTGM				IAmb	IAmb	03 04 14.0	
	comp=Z,3.2nm,0.7s						
BRTR	Keskin Array B	73.61	307	P	P	03 04 20.9	+0.2
	comp=Z,0.6nm,0.8s,baz=64,slow=2.9,SNR=5.0						
	comp=Z,0.6nm,0.8s						
BRTR	Keskin Array B	73.61	307	P	P	03 04 20.3	-0.5
M30M	Minto, Yukon	73.93	28	P	P	03 04 22.0	0.0
C36M	Paulatuk	75.65	20	P	P	03 04 30.5	-1.3
C36M				IAmb	IAmb	03 04 33.4	
	comp=Z,3.2nm,0.7s						
HFS	Hagfors	77.85	331	LR	LR	03 42 42.1	
	comp=Z,77nm,18.1s,baz=80,slow=38						
NC405	NORSAR Array S	78.25	332	P	P	03 04 46.0	-0.6
NB2	NORSAR Subarra	78.50	332	P	P	03 04 46.8	-1.2
	comp=Z,0.4nm,0.6s,baz=57,slow=5.3						
NOA	NORSAR Array B	78.50	332	P	P	03 04 46.9	-1.1
	comp=Z,0.7nm,0.7s,baz=58,slow=5.6,SNR=5.5						
NOA				LR	LR	03 43 29.7	
	comp=Z,23nm,20.4s,baz=100,slow=39						
	comp=Z,0.7nm,0.7s						
DLBC	Dease Lake	78.70	31	P	P	03 04 50.4	+1.2
DLBC				IAmb	IAmb	03 05 08.5	
	comp=Z,8.8nm,1.4s						
YKA	Yellowknife Ar	82.79	23	P	P	03 05 10.2	-0.7
	comp=Z,2.1nm,0.7s,baz=316,slow=5.0,SNR=6.9						
	comp=Z,2.1nm,0.7s						
KMBO	Kilima Mbogo	85.44	267	P	P	03 05 26.6	+0.9
	comp=Z,1.7nm,0.7s,baz=96,slow=2.0,SNR=4.8						
	comp=Z,1.7nm,0.7s						

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*IDC **30** 03:19:04.6±8.5, 32°.27N×137°.10E, h0^{km}, mb3.4/3, mbtmp3.4/4, ML2.7/1, MS2.9/1, Error ellipse: s-maj=149.4km s-min=40.6km az=132.0*

*JMA **30** 03:19:09.3±0.1, 38°.3N±0°.4×142°.6E±0°.7, h32^{km}±2^{km}, MV3.9/32, E OFF MIYAGI PREF*

*NIED **30** 03:19:09.3, 38°.29N×142°.60E, h32^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.61; $M_{\theta\theta}$0.67; $M_{\phi\phi}$0.94; $M_{r\theta}$-0.47; $M_{\theta\phi}$0.29; $M_{\phi r}$1.51; Fault plane solution: $M_0$2.02000×10^{14} NP1:ϕ_s27.00000°, δ23.00000°, λ-61.00000°. NP2:ϕ_s175.00000°, δ70.00000°, λ-102.00000°.*

ISC 30 03:19:06.5±2.1, **38°.21N**±0°.05×**142°.7E**±0°.1, **h19**^{km}±4^{km}, **n18**, σ1.^{s}**14**/26, **mb3.1**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.95	277	P	Pg	03 19 25.5	+0.5
JIKH				eS	Sb	03 19 37.0	+0.6
JIO	Ouri	1.06	284	P	Pg	03 19 27.2	+0.1
JIO				eS	Sb	03 19 40.0	+0.3
JKMT	Kesennumamotoy	1.11	303	P	Pg	03 19 27.7	-0.4
JKMT				S	Sb	03 19 40.8	-0.3
OFUJ	Ofunato	1.17	319	P	Pb	03 19 28.4	+0.3
OFUJ				eS	Sb	03 19 42.2	-0.6
JMK	Ichinoseki	1.35	304	iP	Pb	03 19 31.4	+0.2
JMM	Marumori	1.51	258	iP	Pb	03 19 33.8	-0.1
JOU	Okura	1.58	276	iP	Pb	03 19 35.4	+0.3
JFK	Kawauchi	1.64	240	P	Pb	03 19 35.9	-0.3
JFK				S	Sb	03 19 56.8	+0.3
JOM	Ohasama	1.66	320	iP	Pb	03 19 36.0	-0.4
JOM				eS	Sn	03 19 55.5	+0.2
JYK	Kaneyama	1.94	292	P	Pb	03 19 40.3	-0.9
JFT	Otama	1.96	250	P	Pb	03 19 41.5	-0.1
JFT				eS	Sb	03 20 06.0	+0.2
JRG	Rokugo	1.98	308	eP	Pb	03 19 41.2	-0.7
JYS	Shirataka	2.04	271	eP	Pb	03 19 42.0	-1.0
JYS				eS	Sb	03 20 06.8	-1.3
MJAR	Matsushiro Arr	3.92	246	Pn	Pb	03 20 12.4	-2.5
	0.4nm,0.3s,baz=194,slow=16,SNR=12						
MJAR				Sn	Sb	03 21 03.8	+1.8
	0.2nm,0.3s,baz=324,slow=27,SNR=4.2						
	1.8nm,0.3s						
KSRS	Korea Array	11.68	271	LR	LR	03 24 39.7	
	comp=Z,80nm,20.9s,baz=200,slow=37						
SONM	Songino Array	27.98	302	P	P	03 24 57.5	+1.4
	0.2nm,0.5s,baz=106,slow=11,SNR=2.2						
	0.2nm,0.5s						
MKAR	Makanchi Array	44.35	301	P	P	03 27 12.7	-2.7
	0.1nm,0.4s,baz=72,slow=14,SNR=2.9						
	0.1nm,0.4s						
KURBB	Kurchatov Arra	46.07	307	P	P	03 27 30.8	+1.8
	0.8nm,0.5s,baz=81,slow=7.9,SNR=12						
	0.8nm,0.5s						

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*BJI **30** 03:20:41.2±0.0, 12°.13N×144°.82E, h31^{km}, mb4.6/40, mB4.8/22, Ms4.3/19, Ms7 4.2/21*

*NEIC **30** 03:20:42.5±1.6, 12°.17N±0°.07×144°.4E±0°.1, h10^{km}±1^{km}, mb4.8/118, Error ellipse: s-maj=17.6km s-min=10.7km az=102.0*

*IDC **30** 03:20:43.8±3.9, 12°.29N×144°.29E, h13^{km}±24^{km}, mb4.3/30, mbtmp4.4/31, ML4.4/1, MS3.8/48, Error ellipse: s-maj=18.3km s-min=12.3km az=102.0*

*DJA **30** 03:20:44.9±2.1, 12°N±4°×14°5E±°, h25^{km}±17^{km}, M5.1/19, mB5.8/6, mb4.9/19, MLv5.0/1, Mw(mB)5.3/6*

ISC 30 03:20:45.1±0.4, **12°.18N**±0°.05×**144°.46E**±0°.06, **h29**^{km}, **n296**, σ1.^{s}**37**/279, **mb4.7**/104, **MS4.0**/53, **2C-1D**, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.46	16	Pn	Pb	03 21 10.7	-0.9
	369nm,0.3s,baz=187,slow=8.7,SNR=89						
GUMO				Sn	Sb	03 21 29.3	-0.4
	458nm,0.3s,baz=180,slow=20,SNR=10						
GUMO	Guam	1.46	16		Pb	03 21 10.5	-1.1
GUMO				Sn	Sn	03 21 27.8	+0.2
PATS	Pohnpei	14.65	110	Pn	Pn	03 24 08.9	-1.7
KRVT	Keravat (AS076	18.02	155	LR	LR	03 30 55.5	
	comp=Z,258nm,20.5s,baz=114,slow=34						
SIJI	Sorong	18.43	226	P	Pn	03 24 59.4	+0.8
	1.1nm,0.3s,baz=210,slow=20,SNR=1.3						
SIJI				LR	LR	03 30 21.9	
	comp=Z,332nm,21.9s,baz=78,slow=31						
	6.1nm,0.3s						
DAV	Davao City (W)	19.29	256	LR	LR	03 33 08.6	
	comp=Z,201nm,20.1s,baz=162,slow=39						
JOW	Kunigami	21.06	316	P	P	03 25 26.4	-0.6
	19nm,0.8s,baz=130,slow=11,SNR=3.0						
JOW				LR	LR	03 32 49.0	
	comp=Z,207nm,18.7s,baz=128,slow=35						
	19nm,0.8s						
JHJ	Hachijo jima 2	21.28	349	LR	LR	03 32 16.0	
	comp=Z,273nm,20.7s,baz=173,slow=33						
PMG	Port Moresby	21.61	173	LR	LR	03 33 44.3	
	comp=Z,269nm,18.1s,baz=316,slow=36						

H11N1	WAKE ISLAND Hy	22.82	68	T	T	03 49 29.9	
	baz=255,slow=75,SNR=7.6						
H11N2	WAKE ISLAND Hy	22.82	68	T	T	03 49 30.1	
	baz=255,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	22.83	68	T	T	03 49 30.7	
	baz=255,slow=75,SNR=7.1						
KWAJ	Kwajalein Atol	23.01	96	P	P	03 25 47.1	-0.8
GTOI	Gorontalo	24.17	243	P	P	03 26 00.6	+1.5
	193nm14nm,1.6s						
JNU	Nakatsue	24.27	331		P	03 25 59.6	-0.4
JNU				IAmb	IAmb	03 26 14.2	
	comp=Z,50nm,1.4s						
YULB	Yu-li	24.67	300	P	P	03 26 02.2	-1.5
YULB				IAmb	IAmb	03 26 28.0	
	comp=Z,15nm,0.9s						
NACB	Ninganchiao	24.74	302	P	P	03 26 04.0	-0.2
NACB				IAmb	IAmb	03 26 13.8	
	comp=Z,27nm,1.3s						
MJAR	Matsushiro Arr	24.90	348	P	P	03 26 04.9	-0.7
	comp=Z,3.6nm,0.9s,baz=162,slow=8.8,SNR=5.9						
MJAR				LR	LR	03 34 53.7	
	comp=Z,204nm,18.1s,baz=158,slow=34						
	comp=Z,3.6nm,0.9s						
MJAR	Matsushiro Arr	24.90	348	P	P	03 26 03.3	-2.3
MAJO	Matsushiro	24.90	348	P	P	03 26 02.8	-2.8
MJB9	Matsu-Tunnel	24.91	348	P	P	03 26 01.3	-4.3
SSLB	Suanglung	25.12	301	P	P	03 26 05.4	-2.3
SSLB				IAmb	IAmb	03 26 19.6	
	comp=Z,12nm,0.7s						
MRSI	Marisa	25.19	244	P	P	03 26 10.1	+1.7
	comp=Z,51nm,1.2s						
LUWI	Luwuk	25.23	240	P	P	03 26 06.9	-1.8
LUWI	Luwuk	25.23	240	P	P	03 26 07.7	-1.0
	comp=Z,5µmcomp=Z,81nm,0.6s						
TOLI2	Tolitoli	25.93	247	P	P	03 26 13.9	-1.3
TOLI2				IAmb	IAmb	03 26 18.7	
	comp=Z,15nm,1.0s						
MYLDM	Lahad Datu	26.57	257	P	P	03 26 21.7	+0.7
MTN	Manton Dam	28.16	208	P	P	03 26 35.2	+0.1
MTN				IAmb	IAmb	03 26 36.5	
	comp=Z,18nm,1.1s						
KSRS	Korea Array	29.20	332	P	P	03 26 43.3	-0.9
	comp=Z,1.6nm,0.6s,baz=137,slow=9.5,SNR=9.9						
KSRS				PcP	PcP	03 29 51.8	+0.7
	comp=Z,0.9nm,0.7s,baz=127,slow=1.5,SNR=5.1						
KSRS				ScP	ScP	03 33 34.1	+3.2
	comp=Z,0.9nm,0.7s,baz=151,slow=2.9,SNR=6.1						
	comp=Z,1.6nm,0.6s						
KSAR	Wonju Array Be	29.21	332	P	P	03 26 42.5	-1.7
KAPI	Kappang	29.92	237	LR	LR	03 37 49.9	
	comp=Z,202nm,20.7s,baz=130,slow=34						
NJ2	Nanjing	30.74	314	*e*P	P	03 26 55.5	-2.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KNRA	Kununurra	31.74	210	P	P	03 27 05.9	-0.9
CTA	Charters Tower	32.11	177	LR	LR	03 38 44.9	
	comp=Z,121nm,21.8s,baz=267,slow=34						
WB0	Warramunga Arr	33.26	197	P	P	03 27 18.9	-1.2
WB0				IAmb	IAmb	03 27 21.5	
	comp=Z,16nm,1.4s						
SBUM	Sibu	33.36	256	P	P	03 27 20.3	-0.9
WR0	Warramunga Arr	33.40	197	P	P	03 27 20.1	-1.2
WRAB	Tennant Creek	33.43	197	P	P	03 27 20.4	-1.2
WB2	Warramunga Arr	33.44	197	P	P	03 27 21.1	-0.5
WB2				IAmb	IAmb	03 27 28.3	
	comp=Z,6.7nm,0.8s						
WRA	Warramunga Arr	33.44	197	P	P	03 27 22.7	+1.1
	comp=Z,3.2nm,0.7s,baz=22,slow=9.9,SNR=22						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	33.44	197	P	P	03 27 20.8	-0.9
KSM	Kuching	35.48	255	P	P	03 27 39.2	-0.4
LYN	LuoYang	36.60	313	*e*P	P	03 27 48.5	-0.3
LYN				pmax	pmax		
	comp=Z,20nm,0.5s						
HNS	HongShan	36.60	318	⇑P	P	03 27 48.3	-0.4
HNS				S	S	03 33 29.8	0.0
HNS				pmax	pmax		
	comp=Z,19nm,1.2s						
HNS				LR	LR		
	comp=Z,230nm,18.0s						
HNS				LR	LR		
	comp=Z,280nm,19.2s						
HNS				LR	LR		
	comp=Z,420nm,19.2s						
ENH	Enshi	37.03	305	P	P	03 27 50.1	-2.6
ENH				IAmb	IAmb	03 27 53.2	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	37.09	196	P	P	03 27 51.6	-1.5
ASAR	Alice Springs	37.09	196	P	P	03 27 54.5	+1.3
	comp=Z,6.8nm,1.1s,baz=19,slow=11,SNR=35						
	comp=Z,6.8nm,1.1s						
ASAR	Alice Springs	37.09	196	P	P	03 27 52.5	-0.6
BJT	Baijiatuau	37.30	323	P	P	03 27 53.6	-1.1
BJI	Beijing	37.31	323	P	P	03 27 54.0	-0.8
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,150nm,19.1s						
BJI				LR	LR		
	comp=Z,190nm,21.7s						
BJI				LR	LR		
	comp=Z,200nm,19.3s						
EIDS	Eidsvold	37.88	170	P	P	03 27 58.4	-1.3
KLR	Kul'dur	38.41	347	P	P	03 28 03.5	-0.4
	comp=Z,1.4nm,0.6s,baz=151,slow=9.1,SNR=6.2						
KLR				PcP	PcP	03 30 18.0	+1.1
	comp=Z,3.1nm,0.9s,baz=117,slow=3.7,SNR=4.3						
KLR				LR	LR	03 42 52.9	
	comp=Z,168nm,19.5s,baz=113,slow=35						
	comp=Z,1.4nm,0.6s						
XLT	XiLinHaoTe	39.94	328	*e*P	P	03 28 16.0	-0.9
XLT				pP	sP	03 28 25.5	-1.1
XLT				S	S	03 34 21.0	+0.6
XLT				pmax	pmax		
	comp=Z,16nm,1.0s						
XLT				pmax	pmax		
	comp=Z,170nm,5.4s						
XLT				LR	LR		
	comp=Z,250nm,19.4s						
XLT				LR	LR		
	comp=Z,380nm,20.8s						
DZM	Mont Dzumac	40.30	148	LR	LR	03 44 21.2	
	comp=Z,127nm,18.1s,baz=288,slow=35						
HHC	Hu-ho-hao-te	40.59	321	*e*P	P	03 28 24.5	+2.1
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,7.8s						
HHC				LR	LR		
	comp=Z,420nm,18.6s						
HHC				LR	LR		
	comp=Z,470nm,16.3s						
HHC				LR	LR		
	comp=Z,570nm,16.7s						
PSA00	Pilbara Seismi	41.34	216	P	P	03 28 27.9	-0.7
BTO	Baotou	41.42	319	*e*P	P	03 28 30.5	+1.3
PZH	PanZhiHua	42.54	296	P	P	03 28 40.5	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,50nm,5.0s						
BLSI	Bandar Lampung	42.71	248	P	P	03 28 40.1	+0.1
	comp=Z,225nm,0.4s						
LZH	Lanzhou	43.60	310	*e*P	P	03 28 47.0	-0.1
LZH				sP	pwP	03 29 00.8	-0.9
LZH				pmax	pmax		
	comp=Z,25nm,1.5s						
LZH				LR	LR		
	comp=Z,190nm,15.2s						
LZH				LR	LR		
	comp=Z,240nm,15.7s						
LZH				LR	LR		
	comp=Z,230nm,14.6s						
STKA	Stephens Creek	43.89	184	P	P	03 28 50.9	+1.7
	comp=Z,2.4nm,0.7s,baz=351,slow=7.9,SNR=3.8						
	comp=Z,2.4nm,0.7s						
CM31	Chiang Mai Arr	44.25	284	P	P	03 28 52.4	+0.1
CMAR	Chiang Mai Arr	44.25	284	P	P	03 28 52.7	+0.3
	comp=Z,2.1nm,0.6s,baz=86,slow=6.3,SNR=14						
CMAR				LR	LR	03 45 48.1	
	comp=Z,148nm,20.2s,baz=190,slow=34						
	comp=Z,2.1nm,0.6s						
CMAR	Chiang Mai Arr	44.25	284	P	P	03 28 51.5	-0.8
MSVF	Nonsavu	44.54	131	LR	LR	03 44 21.8	
	comp=Z,48nm,21.1s,baz=6.9,slow=32						
KCSI	Kotacane, Aceh	46.98	263	P	P	03 29 14.0	0.0
	comp=Z,3µmcomp=Z,39nm,1.2s						
ULN	Ulaanbaatar	47.31	326	P	P	03 29 15.1	-1.2
ULN				IAmb	IAmb	03 29 17.1	
	comp=Z,9.3nm,1.3s						
MA2	Magadan	47.54	4	LR	LR	03 49 09.2	
	comp=Z,59nm,20.3s,baz=172,slow=36						
SONM	Songino Array	47.66	326	P	P	03 29 18.9	-0.1
	comp=Z,1.7nm,0.6s,baz=145,slow=9.5,SNR=11						
SONM				PcP	PcP	03 30 49.0	+0.8
	comp=Z,1.9nm,0.9s,baz=151,slow=3.6,SNR=6.0						
SONM				LR	LR	03 49 50.8	
	comp=Z,315nm,18.5s,baz=155,slow=37						
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	47.66	326	P	P	03 29 18.1	-0.9
GTA	Gaotai	47.82	313	⇓P	P	03 29 20.5	+0.1
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,43nm,5.1s						
GTA				LR	LR		
	comp=Z,99nm,18.5s						
GTA				LR	LR		
	comp=Z,200nm,18.9s						
GTA				LR	LR		
	comp=Z,250nm,19.6s						
AFI	Afiamalu	50.53	120	LR	LR	03 48 46.5	
	comp=Z,63nm,19.1s,baz=305,slow=33						
GOMU	GeErMu	50.55	307	P	P	03 29 42.0	+0.4
GOMU				S	S	03 37 01.0	+6.5
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,59nm,6.1s						
GOMU				LR	LR		
	comp=Z,65nm,16.3s						
GOMU				LR	LR		
	comp=Z,110nm,16.5s						
GOMU				LR	LR		
	comp=Z,110nm,16.6s						
YAK	Yakutsk	50.91	351	P	P	03 29 42.0	-1.4
SEY	Seymchan	50.99	5	P	P	03 29 44.3	+0.3
	comp=Z,1.3nm,0.6s,baz=202,slow=7.8,SNR=3.6						
	comp=Z,1.3nm,0.6s						
LSA	Lhasa	52.29	298	P	P	03 29 54.8	0.0
BILL	Bilibino	57.61	10	P	P	03 30 31.8	-0.3
BILL				IAmb	IAmb	03 30 33.3	
	comp=Z,8.6nm,1.1s						
WMQ	Urumqi	57.82	314	⇑P	P	03 30 35.3	+1.2
WMQ				pP	pwP	03 30 47.5	-1.2
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.9s						
URZ	Urewera	58.75	150	LR	LR	03 54 07.2	
	comp=Z,82nm,19.2s,baz=212,slow=34						
TIXI	Tiksi	60.19	354	P	P	03 30 49.8	-0.1
	comp=Z,1.3nm,0.4s,baz=90,slow=20,SNR=2.7						
	comp=Z,1.3nm,0.4s						
RPZ	Rata Peaks	60.69	158	LR	LR	03 58 10.2	
	comp=Z,60nm,18.0s,baz=310,slow=37						
MK31	Makanchi Array	62.23	317	P	P	03 31 03.8	-0.5
MK31				IAmb	IAmb	03 31 05.4	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	62.23	317	P	P	03 31 04.3	0.0
	comp=Z,5.0nm,1.0s,baz=94,slow=8.6,SNR=28						
	comp=Z,5.0nm,1.0s						
MKAR	Makanchi Array	62.23	317	P	P	03 31 03.6	-0.6
MAKZ	Makanchi	62.44	317	P	P	03 31 04.7	-0.9
ZAA0	Zalesovo Array	62.53	325	P	P	03 31 04.8	-1.3
ZAA0				IAmb	IAmb	03 31 11.8	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	62.53	325	P	P	03 31 05.7	-0.4
	comp=Z,1.4nm,0.5s,baz=100,slow=7.8,SNR=6.3						
ZALV				PcP	PcP	03 31 44.7	-0.3
	comp=Z,1.7nm,0.6s,baz=142,slow=2.5,SNR=4.0						
ZALV				LR	LR	03 58 15.1	
	comp=Z,80nm,19.9s,baz=108,slow=36						
	comp=Z,1.4nm,0.5s						
ZALV	Zalesovo Beam	62.53	325	P	P	03 31 04.7	-1.4
ANM	Nome	62.64	22	P	P	03 31 07.6	+1.0
PALK	Pallekele	62.92	272	LR	LR	03 58 30.2	
	comp=Z,107nm,19.2s,baz=199,slow=36						
PRZ	Przheval'sk	64.24	311	P	P	03 31 18.5	+0.6
KDJ	Kajisay	65.10	311	P	P	03 31 23.3	-0.2
KDJ				IAmb	IAmb	03 31 24.9	
	comp=Z,11nm,1.0s						
SVW2	Sparrevohn	65.10	28	P	P	03 31 23.8	+0.9
SVW2				IAmb	IAmb	03 31 28.2	
	comp=Z,11nm,1.1s						
KURK	Kurchatov	65.40	320	P	P	03 31 23.6	-1.5
KURBB	Kurchatov Arra	65.44	320	P	P	03 31 25.0	-0.3
	comp=Z,5.8nm,0.6s,baz=102,slow=6.4,SNR=42						
	comp=Z,5.8nm,0.6s						
KDAK	Kodiak Island	65.47	32	LR	LR	03 59 09.5	
	comp=Z,38nm,19.6s,baz=255,slow=35						
N19K	Bonanza Creek	65.50	28	P	P	03 31 26.0	+0.4
N19K				IAmb	IAmb	03 31 28.5	
	comp=Z,9.6nm,1.4s						
TTA	Tatalina	65.59	26	P	P	03 31 26.7	+0.5
TTA				IAmb	IAmb	03 31 32.7	
	comp=Z,9.4nm,1.5s						
TTA	Tatalina	65.59	26	P	P	03 31 26.4	+0.3
	baz=248						
KSH	Kashi	65.78	308	P	P	03 31 30.5	+2.6
KSH				pP	sP	03 31 39.5	+2.7
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
L19K	White Mountain	65.81	27	P	P	03 31 27.4	-0.1
L19K				IAmb	IAmb	03 31 29.4	
	comp=Z,7.3nm,1.2s						
L19K	White Mountain	65.81	27	P	P	03 31 28.3	+0.7
	baz=249						
BOOM	Boomskoye usch	66.05	311	P	P	03 31 29.2	-0.4
BOOM				IAmb	IAmb	03 31 30.8	
	comp=Z,13nm,1.4s						
M20K	Styx River	66.47	27	P	P	03 31 31.4	-0.4
M20K				IAmb	IAmb	03 31 34.6	
	comp=Z,7.6nm,1.2s						
M20K	Styx River	66.47	27	P	P	03 31 33.5	+1.6
	baz=251						
K20K	Telida	66.57	26	P	P	03 31 33.6	+1.3
K20K	Telida	66.57	26	P	P	03 31 33.4	+1.1
	baz=249						
CNPM	China Poot	66.64	30	P	P	03 31 33.3	+0.4
J20K	Nowinta River	66.83	25	P	P	03 31 33.9	0.0
J20K				IAmb	IAmb	03 31 36.8	
	comp=Z,14nm,1.4s						
J20K	Nowinta River	66.83	25	P	P	03 31 35.0	+1.1
	baz=249						
AAK	Ala-Archa	67.13	311	P	P	03 31 36.4	-0.1
	comp=Z,1.1nm,0.3s,baz=96,slow=4.2,SNR=7.6						
AAK				LR	LR	04 01 59.6	
	comp=Z,108nm,20.4s,baz=138,slow=37						
	comp=Z,1.1nm,0.3s						
AAK	Ala-Archa	67.13	311	P	P	03 31 36.0	-0.5
AAK				IAmb	IAmb	03 31 37.6	
	comp=Z,8.8nm,1.3s						
IMAR	Indian Mountai	67.64	23	P	P	03 31 40.0	+0.9
SEW	Seward	67.67	30	P	P	03 31 39.6	+0.3
	baz=255						
NIL	Nilore	67.77	301	P	P	03 31 39.4	-1.1
RC01	Rabbit Creek A	67.79	29	P	P	03 31 39.7	-0.4
RC01				IAmb	IAmb	03 31 42.4	
	comp=Z,7.5nm,1.0s						
RC01	Rabbit Creek A	67.79	29	P	P	03 31 40.9	+0.8
	baz=254						
H21K	Melozitna Rive	67.89	23	P	P	03 31 41.0	+0.4
H21K	Melozitna Rive	67.89	23	P	P	03 31 41.5	+0.9
	baz=250,SNR=5.5						
KTH	Kantishna Hill	67.97	26	P	P	03 31 41.1	-0.2
TRF	Thorofare Moun	68.21	26	P	P	03 31 42.6	-0.3
	baz=253						
KNK	Knik Glacier	68.47	28	P	P	03 31 43.9	-0.5
KNK				IAmb	IAmb	03 31 46.5	
	comp=Z,12nm,1.2s						
KNK	Knik Glacier	68.47	28	P	P	03 31 45.2	+0.8
	baz=256						
MLY	Manley	68.50	24	P	P	03 31 44.8	+0.3
MLY				IAmb	IAmb	03 31 46.7	
	comp=Z,8.5nm,1.2s						
MLY	Manley	68.50	24	P	P	03 31 45.8	+1.2
	baz=252,SNR=8.4						
SML	Sawmill	68.63	28	P	P	03 31 46.1	+0.7
SML	Sawmill	68.63	28	P	P	03 31 46.2	+0.8
	baz=256						
DRK	Karamyk	69.00	308	P	P	03 31 48.5	0.0
I23K	Minto, Yukon-K	69.09	24	P	P	03 31 49.0	+0.8
I23K				IAmb	IAmb	03 31 51.2	
	comp=Z,16nm,1.4s						
I23K	Minto, Yukon-K	69.09	24	P	P	03 31 49.4	+1.3
	baz=253						
WAT6	Susitna Watana	69.09	27	P	P	03 31 48.5	+0.1
	baz=256						
SCM	Sheep Creek Mo	69.10	28	P	P	03 31 47.8	-0.6
SCM	Sheep Creek Mo	69.10	28	P	P	03 31 49.5	+1.1
	baz=256						
H23K	Yukon River	69.22	24	P	P	03 31 48.9	-0.1
H23K				IAmb	IAmb	03 31 50.9	
	comp=Z,5.7nm,1.1s						
H23K	Yukon River	69.22	24	P	P	03 31 50.4	+1.4
	baz=253,SNR=5.7						
COLD	Coldfoot	69.39	22	P	P	03 31 51.0	+0.9
COLD				IAmb	IAmb	03 31 52.5	
	comp=Z,7.5nm,1.0s						
COLD	Coldfoot	69.39	22	P	P	03 31 51.7	+1.7
	baz=252,SNR=7.8						
MDM	Murphy Dome	69.50	25	P	P	03 31 50.9	+0.2
MDM				IAmb	IAmb	03 32 08.0	
	comp=Z,8.1nm,1.2s						
DIV	Divide	69.67	29	P	P	03 31 52.7	+0.8
DIV				IAmb	IAmb	03 31 53.9	
	comp=Z,13nm,1.2s						
KLU	Klutina	69.68	29	P	P	03 31 52.1	+0.2
KLU				IAmb	IAmb	03 31 53.9	
	comp=Z,5.9nm,0.9s						
KLU	Klutina	69.68	29	P	P	03 31 53.0	+1.1
	baz=258						
M24K	Tolsona, Glenn	69.69	28	P	P	03 31 52.5	+0.5
BTK	Batken	69.77	308	P	P	03 31 52.2	-0.7
BTK				IAmb	IAmb	03 31 54.1	
	comp=Z,17nm,1.4s						
H24K	Noodor Dome	69.88	24	P	P	03 31 53.5	+0.4
H24K				IAmb	IAmb	03 31 55.4	
	comp=Z,5.8nm,1.0s						
H24K	Noodor Dome	69.88	24	P	P	03 31 53.8	+0.8
	baz=254,SNR=8.1						
IL31		70.00	25	P	P	03 31 52.7	-1.1
ILAR	Eielson Array	70.00	25	P	P	03 31 53.7	-0.1
	comp=Z,3.0nm,0.9s,baz=257,slow=4.7,SNR=20						
ILAR				LR	LR	04 00 27.3	
	comp=Z,64nm,22.0s,baz=271,slow=34						
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	70.00	25	P	P	03 31 52.7	-1.1
TOLK	Toolik Lake Re	70.07	21	P	P	03 31 53.4	-0.8
TOLK				IAmb	IAmb	03 31 56.1	
	comp=Z,5.4nm,0.9s						
TOLK	Toolik Lake Re	70.07	21	P	P	03 31 55.4	+1.2
	baz=252						
KK31	Karatay Array	70.08	312	P	P	03 31 54.4	-0.3
KK31				IAmb	IAmb	03 31 55.6	
	comp=Z,12nm,1.0s						
KKAR	Karatay Array	70.08	312	P	P	03 31 53.8	-0.9
GAR	Garm	70.15	307	P	P	03 31 54.8	-0.5
BMRM	Bremner River	70.20	29	P	P	03 31 54.7	-0.5
BMRM				IAmb	IAmb	03 31 58.9	
	comp=Z,12nm,1.2s						
BMRM	Bremner River	70.20	29	P	P	03 31 55.6	+0.5
	baz=259						
PAX	Paxson	70.20	27	P	P	03 31 54.8	-0.3
PAX	Paxson	70.20	27	P	P	03 31 55.9	+0.8
	baz=258						
HARP	HAARP	70.22	28	P	P	03 31 56.3	+1.1
	baz=258						
K24K	Donnelly Dome	70.25	26	P	P	03 31 56.2	+0.8
	baz=257						
N25K	Chitina, Valde	70.32	29	P	P	03 31 55.8	-0.1
N25K				IAmb	IAmb	03 31 58.8	
	comp=Z,10nm,1.4s						
N25K	Chitina, Valde	70.32	29	P	P	03 31 57.1	+1.2
	baz=259						
J25K	Salcha River,	70.60	25	P	P	03 31 56.5	-1.1
J25K	Salcha River,	70.60	25	P	P	03 31 57.2	-0.3
	baz=257						
RIDG	Independent Ri	70.64	26	P	P	03 31 58.5	+0.7
RIDG				IAmb	IAmb	03 31 59.6	
	comp=Z,16nm,1.4s						
RIDG	Independent Ri	70.64	26	P	P	03 31 58.2	+0.4
	baz=258,SNR=5.5						
GLB	Gilahina Butte	70.66	29	P	P	03 31 58.5	+0.6
GLB				IAmb	IAmb	03 32 00.4	
	comp=Z,14nm,1.3s						
VRDI	Verde Repeater	70.79	29	P	P	03 31 59.5	+0.5
BRVK	Borovoye	70.85	322	P	P	03 31 58.7	-0.5
DOT	Dot Lake	70.96	27	P	P	03 31 59.4	-0.3
DOT				IAmb	IAmb	03 32 01.4	
	comp=Z,6.9nm,0.9s						
TGL	Tana Glacier	71.02	30	P	P	03 32 00.1	0.0
TGL				IAmb	IAmb	03 32 02.1	
	comp=Z,9.5nm,1.2s						
MCARA	McCarthy VSAT	71.03	29	P	P	03 32 00.9	+0.8
MCARA				IAmb	IAmb	03 32 02.5	
	comp=Z,16nm,1.2s						
MCARA	McCarthy VSAT	71.03	29	P	P	03 32 01.5	+1.4
	baz=260						
CHGR	Chuyangaron	71.06	307	P	P	03 31 59.8	-1.1
SCRK	Sand Creek	71.06	26	P	P	03 31 59.5	-0.9
SCRK	Sand Creek	71.06	26	P	P	03 32 00.7	+0.2
	baz=259,SNR=5.6						
L26K	Log Cabin Wild	71.16	27	P	P	03 32 01.6	+0.7
L26K	Log Cabin Wild	71.16	27	P	P	03 32 02.4	+1.5
	baz=260,SNR=5.8						
KBL	Kabul	71.24	302	P	P	03 32 01.2	-1.0
J26L	Joseph Creek	71.34	26	P	P	03 32 01.7	-0.4
J26L	Joseph Creek	71.34	26	P	P	03 32 02.8	+0.7
	baz=259,SNR=8.3						
YAH	Yahtse	71.49	30	P	P	03 32 03.7	+0.5
YAH				IAmb	IAmb	03 32 07.3	
	comp=Z,7.7nm,0.9s						
PPT	Papeete	71.52	113	LR	LR	03 57 01.4	
	comp=Z,82nm,20.0s,baz=300,slow=30						
GRNC	Granite Creek	71.53	30	P	P	03 32 02.9	-0.6
GRNC				IAmb	IAmb	03 32 05.5	
	comp=Z,6.2nm,0.9s						
BMAR	Burnt Mountain	71.55	23	P	P	03 32 04.3	+1.1
M27K	Edge Creek, AK	71.72	28	P	P	03 32 03.8	-0.6
M27K	Edge Creek, AK	71.72	28	P	P	03 32 05.3	+0.9
	baz=261						
CTG	Chitna Glacier	71.77	30	P	P	03 32 06.4	+1.6
	baz=262						
CTGM	Chitina Glacie	71.77	30	P	P	03 32 04.6	-0.2
CTGM				IAmb	IAmb	03 32 07.5	
	comp=Z,10nm,0.9s						
TABL	Table Mountain	71.79	30	P	P	03 32 05.6	+0.5
TABL				IAmb	IAmb	03 32 07.1	
	comp=Z,9.6nm,0.9s						
L27K	Beaver Creek,	71.85	27	P	P	03 32 05.8	+0.7
	baz=261						
BCAR	Beaver Creek A	71.87	27	P	P	03 32 05.5	+0.2
K27K	Chicken	71.90	26	P	P	03 32 06.8	+1.5
	baz=260						
LOGN	Logan Glacier	71.91	30	P	P	03 32 05.1	-0.5
LOGN				IAmb	IAmb	03 32 17.8	
	comp=Z,7.4nm,0.8s						
BVCY	Beaver Creek	72.19	28	P	P	03 32 08.5	+1.3
	baz=262						
YUK3	Moose Creek	72.30	29	P	P	03 32 09.3	+1.3
	baz=263,SNR=8.1						
YUK8	Steele Glacier	72.57	29	P	P	03 32 10.9	+1.2
	baz=263						
DAWY	Dawson	73.07	27	P	P	03 32 13.2	+0.8
DAWY				IAmb	IAmb	03 32 14.5	
	comp=Z,6.4nm,1.1s						
DAWY	Dawson	73.07	27	P	P	03 32 13.7	+1.3
	baz=263,SNR=8.1						
YUK4	Talbot Arm	73.11	29	P	P	03 32 14.9	+2.0
	baz=264,SNR=7.9						
HYT	Haines Junctio	73.62	30	P	P	03 32 16.7	+0.9
HYT				IAmb	IAmb	03 32 18.5	
	comp=Z,8.4nm,0.9s						
HYT	Haines Junctio	73.62	30	P	P	03 32 17.7	+2.0
	baz=266,SNR=8.6						
I29M	Ogilvie Camp,	73.69	25	P	P	03 32 16.2	+0.3
I29M	Ogilvie Camp,	73.69	25	P	P	03 32 17.1	+1.1
	baz=264,SNR=7.4						
N30M	Aishikik Lake	73.87	29	P	P	03 32 18.8	+1.7
	baz=266						
M30M	Minto, Yukon	74.09	28	P	P	03 32 20.1	+1.7
	baz=266,SNR=6.0						
PLBC	Pleasant Camp	74.10	31	P	P	03 32 19.9	+1.5
	baz=267						
N31M	Braeburn, Yuko	74.50	29	P	P	03 32 22.7	+2.0
	baz=267,SNR=5.2						
SKAG	Skagway	74.62	31	P	P	03 32 21.3	-0.2

WHY	**Whitehorse**	**74.89**	**30**	P	**P**	**03 32 23.5**	**+0.4**
WHY	**Whitehorse**	**74.89**	**30**	P	**P**	**03 32 24.8**	**+1.6**
	baz=268						
JIS	**Juneau Island**	**75.08**	**33**	P	**P**	**03 32 25.6**	**+1.5**
JIS				IAmb	IAmb	03 32 26.9	
	comp=Z,12nm,1.0s						
M31M	**Drury Creek, Y**	**75.19**	**29**	P	**P**	**03 32 24.5**	**-0.2**
M31M	**Drury Creek, Y**	**75.19**	**29**	P	**P**	**03 32 25.8**	**+1.1**
	baz=268						
FARO	**Faro, Yukon**	**75.67**	**29**	P	**P**	**03 32 28.7**	**+1.2**
	baz=269						
INK	**Inuvik**	**75.81**	**22**	P	**P**	**03 32 28.8**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=289,slow=2.7,SNR=5.0						
	comp=Z,3.7nm,0.8s						
INK	**Inuvik**	**75.81**	**22**	P	**P**	**03 32 28.6**	**+0.5**
INK				IAmb	IAmb	03 32 29.5	
	comp=Z,5.7nm,0.9s						
INK	**Inuvik**	**75.81**	**22**	P	**P**	**03 32 28.4**	**+0.3**
	baz=267						
P33M	**Teslin, Yukon**	**75.91**	**31**	P	**P**	**03 32 27.9**	**-1.1**
P33M	**Teslin, Yukon**	**75.91**	**31**	P	**P**	**03 32 30.0**	**+1.1**
	baz=270						
MMPY	**Sheldon Lake,**	**76.65**	**28**	P	**P**	**03 32 34.6**	**+1.5**
	baz=271						
S34M	**Telegraph Cree**	**76.81**	**33**	P	**P**	**03 32 35.8**	**+1.8**
	baz=272						
HRA	**Herat**	**76.86**	**303**	P	**P**	**03 32 34.3**	**-0.8**
HRA				IAmb	IAmb	03 32 36.3	
	comp=Z,14nm,1.1s						
ABKAR	**Akbulak array**	**77.31**	**318**	P	**P**	**03 32 35.8**	**-1.2**
T35M	**Bob Quinn**	**77.33**	**34**	P	**P**	**03 32 38.6**	**+1.6**
	baz=273						
DLBC	**Dease Lake**	**77.38**	**33**	LR	LR	04 08 57.3	
	comp=Z,39nm,18.0s,baz=296,slow=37						
DLBC	**Dease Lake**	**77.38**	**33**	P	**P**	**03 32 38.9**	**+1.6**
	baz=273						
ARU	**Arti**	**77.69**	**325**	P	**P**	**03 32 38.6**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=110,slow=2.1,SNR=10						
ARU				LR	LR	04 08 51.1	
	comp=Z,72nm,18.2s,baz=124,slow=37						
	comp=Z,2.1nm,0.6s						
ARU	**Arti**	**77.69**	**325**	P	**P**	**03 32 37.9**	**-1.0**
ARU				IAmb	IAmb	03 32 39.3	
	comp=Z,9.3nm,0.9s						
AKTO	**Aktyubinsk**	**78.47**	**319**	P	**P**	**03 32 42.9**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=82,slow=16,SNR=6.9						
AKTO				LR	LR	04 10 32.2	
	comp=Z,64nm,18.3s,baz=113,slow=38						
	comp=Z,2.4nm,0.6s						
A36M	**Sachs Harbour**	**78.60**	**19**	P	**P**	**03 32 44.5**	**+0.8**
	baz=274						
BBB	**Bella Bella**	**78.92**	**39**	LR	LR	04 04 01.1	
	comp=Z,90nm,19.8s,baz=282,slow=33						
C36M	**Paulatuk**	**79.22**	**21**	P	**P**	**03 32 47.4**	**+0.3**
C36M				IAmb	IAmb	03 32 48.4	
	comp=Z,16nm,1.4s						
C36M	**Paulatuk**	**79.22**	**21**	P	**P**	**03 32 47.5**	**+0.3**
	baz=276						
GEYT	**Alibeck**	**79.77**	**307**	P	**P**	**03 32 51.2**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=47,slow=14,SNR=7.3						
GEYT				LR	LR	04 13 30.3	
	comp=Z,68nm,18.2s,baz=148,slow=40						
	comp=Z,5.6nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**79.77**	**307**	P	**P**	**03 32 51.3**	**+0.4**
GYA0B				IAmb	IAmb	03 32 52.4	
	comp=Z,9.4nm,0.8s						
WSAR	**Wadi Sarin**	**81.51**	**292**	LR	LR	04 12 45.6	
	comp=Z,46nm,18.8s,baz=130,slow=38						
KIRV	**Kirov**	**82.33**	**328**	P	**P**	**03 33 04.2**	**+0.2**
	comp=Z,6.9nm,0.5s,baz=81,slow=14,SNR=6.9						
	comp=Z,6.9nm,0.5s						
YBH	**Yreka Blue Hor**	**84.09**	**49**	LR	LR	04 05 16.5	
	comp=Z,81nm,20.5s,baz=277,slow=32						
YKA	**Yellowknife Ar**	**84.29**	**27**	P	**P**	**03 33 14.7**	**+0.7**
	comp=Z,4.0nm,0.9s,baz=286,slow=4.8,SNR=8.9						
YKA				LR	LR	04 08 20.8	
	comp=Z,84nm,21.7s,baz=330,slow=34						
	comp=Z,4.0nm,0.9s						
YKA	**Yellowknife Ar**	**84.29**	**27**	P	**P**	**03 33 14.6**	**+0.6**
EUNU	**Eureka**	**84.31**	**8**	P	**P**	**03 33 14.3**	**+0.4**
BELG	**Belogornoye**	**84.59**	**322**	P	**P**	**03 33 15.9**	**+0.2**
	comp=Z,17nm,0.7s,baz=285,slow=0.7,SNR=6.4						
BELG				LR	LR	04 12 41.5	
	comp=Z,151nm,19.3s,baz=101,slow=37						
	comp=Z,17nm,0.7s						
J05D	**Fort Rock, OR**	**84.86**	**47**	P	**P**	**03 33 19.3**	**+1.8**
	baz=282						
PINE	**Pine Mountain**	**84.96**	**46**	P	**P**	**03 33 19.1**	**+1.0**
PINE				IAmb	IAmb	03 33 21.7	
	comp=Z,9.8nm,0.9s						
B08A	**Colville Reser**	**85.08**	**42**	P	**P**	**03 33 19.1**	**+0.7**
B08A				IAmb	IAmb	03 33 21.3	
	comp=Z,12nm,1.3s						
SPITS	**Spitsbergen Ar**	**85.37**	**351**	LR	LR	04 12 16.2	
	comp=Z,51nm,20.1s,baz=26,slow=36						
MOD	**Modoc Plateau**	**85.82**	**48**	P	**P**	**03 33 21.6**	**-0.7**
MOD				IAmb	IAmb	03 33 25.8	
	comp=Z,9.9nm,1.3s						
RES	**Resolute Bay**	**86.00**	**13**	P	**P**	**03 33 21.5**	**-0.9**
NEW	**Newport**	**86.54**	**41**	LR	LR	04 10 54.1	
	comp=Z,34nm,18.3s,baz=279,slow=35						
NEW	**Newport**	**86.54**	**41**	P	**P**	**03 33 27.6**	**+1.9**
	baz=284						
EDM	**Edmonton**	**87.52**	**36**	P	**P**	**03 33 31.5**	**+1.2**
PKM	**Mcpherson Peak**	**87.76**	**55**	P	**P**	**03 33 35.0**	**+3.0**
	baz=283						
NVAR	**Mina Array Bea**	**88.11**	**51**	P	**P**	**03 33 36.1**	**+2.5**
	comp=Z,3.0nm,0.8s,baz=266,slow=5.5,SNR=16						
NVAR				LR	LR	04 11 05.0	
	comp=Z,16nm,18.1s,baz=264,slow=34						
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**88.11**	**51**	P	**P**	**03 33 34.7**	**+1.0**
KVN	**Kaiserville**	**88.11**	**51**	P	**P**	**03 33 34.9**	**+1.3**
KVN				IAmb	IAmb	03 33 37.2	
	comp=Z,5.4nm,1.0s						
ARCES	**ARCESS Array B**	**88.29**	**342**	P	**P**	**03 33 34.1**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=66,slow=7.1,SNR=13						
ARCES				LR	LR	04 18 09.3	
	comp=Z,62nm,18.1s,baz=100,slow=39						
	comp=Z,0.8nm,0.5s						
MFID	**Camas Ranch**	**88.66**	**46**	P	**P**	**03 33 38.1**	**+2.1**
CWC	**Cottonwood Cre**	**88.76**	**53**	P	**P**	**03 33 39.5**	**+2.7**
	baz=284						
LRMC	**Laurel Mtn Rad**	**89.31**	**54**	P	**P**	**03 33 42.3**	**+3.1**
	baz=284						
GNI	**Garni**	**89.53**	**311**	LR	LR	04 18 20.7	
	comp=Z,34nm,19.1s,baz=129,slow=39						
HLID	**Hailey**	**89.61**	**46**	P	**P**	**03 33 43.2**	**+2.6**
	baz=286						
FURC	**Furnace Creek,**	**89.70**	**53**	P	**P**	**03 33 43.9**	**+3.1**
	baz=285						
ELK	**Elko**	**89.80**	**48**	LR	LR	04 09 22.4	
	comp=Z,94nm,19.9s,baz=288,slow=32						
KBZ	**Khabaz**	**89.87**	**315**	P	**P**	**03 33 41.6**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=48,slow=6.0,SNR=4.4						
KBZ				LR	LR	04 17 42.4	
	comp=Z,70nm,19.7s,baz=69,slow=38						
	comp=Z,3.5nm,1.0s						
GSC	**Goldstone, Bar**	**90.05**	**54**	P	**P**	**03 33 43.3**	**+0.6**
GSC				IAmb	IAmb	03 33 46.4	
	comp=Z,5.6nm,0.9s						
GSC	**Goldstone, Bar**	**90.05**	**54**	P	**P**	**03 33 45.3**	**+2.6**
	baz=285						
TPNV	**Topopah Spring**	**90.06**	**52**	P	**P**	**03 33 45.6**	**+2.8**
	baz=285						
R11A	**Troy Canyon, C**	**90.19**	**51**	P	**P**	**03 33 46.1**	**+2.7**
	baz=286						
MCMT	**McKenzie Canyo**	**90.32**	**44**	P	**P**	**03 33 43.5**	**-0.5**
HEC	**Hector,Ludlow**	**90.54**	**54**	P	**P**	**03 33 47.7**	**+2.8**
	baz=285						
PFO	**Pinyon Flats O**	**90.76**	**56**	LR	LR	04 08 58.4	
	comp=Z,60nm,19.3s,baz=266,slow=32						
BOZ	**Bozeman (W)**	**90.90**	**43**	P	**P**	**03 33 48.1**	**+1.6**
	baz=288						
MONP2	**Monument Peak**	**90.98**	**56**	P	**P**	**03 33 49.6**	**+2.4**
	baz=285						
GMRC	**Granite Mounta**	**91.09**	**54**	P	**P**	**03 33 50.4**	**+2.8**
	baz=286						
BC3	**Big Chuckawall**	**91.56**	**55**	P	**P**	**03 33 52.6**	**+2.8**
	baz=286						
IRM	**Iron Mountain**	**91.67**	**55**	P	**P**	**03 33 52.7**	**+2.6**
	baz=286						
DUG	**Dugway, Tooele**	**91.73**	**48**	P	**P**	**03 33 52.9**	**+2.4**
	baz=288						
H17A	**Grant Village**	**92.00**	**44**	P	**P**	**03 33 55.7**	**+3.9**
	baz=289						
FINES	**FINESS Array B**	**92.26**	**335**	P	**P**	**03 33 51.2**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=73,slow=4.9,SNR=38						
FINES				LR	LR	04 19 09.8	
	comp=Z,41nm,18.6s,baz=74,slow=38						
	comp=Z,4.2nm,0.7s						
PDAR	**Pinedale Array**	**93.23**	**45**	P	**P**	**03 33 58.4**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=206,slow=3.8,SNR=5.1						
PDAR				LR	LR	04 12 00.4	
	comp=Z,61nm,19.4s,baz=311,slow=33						
	comp=Z,0.4nm,0.6s						
LAO	**LASA Array**	**94.05**	**41**	P	**P**	**03 34 02.1**	**+1.2**
MNK	**Minsk**	**94.87**	**328**	*i* P	**P**	**03 34 04.0**	**-0.4**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**03 34 04.0**	**-0.4**
	comp=N,13nm,1.1s						
MNK				*i* P	**P**	**03 34 04.0**	**-0.4**
	comp=Z,8.0nm,1.0s,baz=242						
MNK				*i* PP	**PP**	**03 37 51.6**	**-1.2**
MNK				*i* PPP	PPP	03 39 54.0	
MNK				*i* SKS	**SKSac**	**03 44 40.5**	**+2.5**
MNK				*i* S	**SKKSac**	**03 45 07.3**	**+7.1**
MNK				*i* PS	**PS**	**03 46 35.6**	**-0.4**
MNK				*i* SS	**SS**	**03 51 40.0**	**-0.3**
MNK				*i* SSS	SSS	03 55 22.6	
MNK				*i* LQ	LQ	04 10 54.4	
MNK				*i* LR	LR	04 15 59.4	
MNK				*i* LRM	MLR	04 17 21.8	
	comp=N,45nm,18.5s						
MNK				*i* LRM	MLR	04 17 28.2	
	comp=Z,204nm,24.3s						
MNK				*i* LRM	MLR	04 17 36.6	
	comp=E,6.0nm,19.2s						
AKASG	**Malin Array Be**	**95.93**	**325**	P	**P**	**03 34 07.5**	**-1.8**
	comp=E,0.1nm,0.3s,baz=49,slow=5.6,SNR=4.2						
AKASG				LR	LR	04 19 58.4	
	comp=E,61nm,18.5s,baz=39,slow=37						
	comp=E,0.1nm,0.3s						
BRTR	**Keskin Array B**	**97.73**	**313**	P	Pdif	03 34 18.9	+0.9
	comp=E,0.4nm,0.8s,baz=68,slow=6.8,SNR=3.7						
	comp=E,0.4nm,0.8s						
HFS	**Hagfors**	**97.94**	**337**	LR	LR	04 21 14.1	
	comp=E,47nm,20.2s,baz=64,slow=37						
NOA	**NORSAR Array B**	**98.22**	**339**	LR	LR	04 21 04.1	
	comp=E,32nm,18.2s,baz=40,slow=37						
ANMO	**Albuquerque**	**98.23**	**52**	LR	LR	04 21 32.3	
	comp=E,49nm,18.7s,baz=289,slow=37						
ULM	**Lac du Bonnet**	**98.62**	**34**	LR	LR	04 17 57.4	
	comp=E,50nm,18.5s,baz=310,slow=35						
CLL	**Collm**	**104.07**	**331**	*e*Pdif	**Pdif**	**03 34 46.0**	**+0.3**
	comp=Z,7.0nm,1.4s						
CLL				*e*PP	**PKiKP**	**03 39 02.0**	**-0.8**
CLL				LmV		04 26 00.0	
	comp=Z,100nm,18.2s						
TORD	**Torodi Ar. Bea**	**135.31**	**303**	PKhKP	PKPpre	03 39 56.8	
	comp=Z,0.9nm,1.1s,baz=198,slow=1.6,SNR=2.6						
TORD				PKP	**PKPdf**	**03 40 02.9**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=38,slow=2.5,SNR=8.2						
TORD	**Torodi Ar. Bea**	**135.31**	**303**	PKPdf	**PKPdf**	**03 40 02.8**	**-0.3**
DBIC	**Dimbokro**	**144.20**	**300**	PKP	PKPbc	03 40 18.3	+0.9
	comp=Z,8.2nm,0.9s,baz=77,slow=3.7,SNR=7.4						
KIC	**Kosan Boka**	**144.26**	**299**	*e*P	PKPbc	03 40 18.1	+0.4
	comp=Z,18nm,0.9s						
TIC	**Toumodi**	**144.35**	**300**	*e*P	PKPbc	03 40 18.4	+0.4
	comp=Z,79nm,1.5s						
LIC	**Lamto**	**144.58**	**299**	*e*P	**PKPdf**	**03 40 19.8**	**-0.2**
	comp=Z,18nm,0.6s						
LPAZ	**La Paz**	**148.17**	**101**	PKPbc	**PKiKP**	**03 40 31.6**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=172,slow=5.7,SNR=6.1						

*JMA **30** 03:35:08.7±0.1,27°.0N±0°.4×130°.3E±0°.5,h55^{km},NEAR MINAMI-DAITOJIMA IS*

ISC 30 03:35:10.6±1.3,**26°.90N**±0°.06×**130°.30E**±0°.06,**h38**^{km},**n18,** σ**3**^{s}**.32**/18,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.30**	**136**	P	**Pn**	**03 35 31.8**	**-0.4**
JKDJ				S	**Sn**	**03 35 48.7**	**+0.4**
JMZ	**Minamidaito 2**	**1.35**	**142**	P	**Pn**	**03 35 32.2**	**-0.7**
JTK	**Tokunoshima**	**1.49**	**307**	P	**Pn**	**03 35 33.3**	**-1.5**
JTK				*e*S	**Sn**	**03 35 50.7**	**-2.3**
JTK	**Tokunoshima**	**1.49**	**307**	*e*S	**Sn**	**03 36 01.3**	**+8.3**
JTK	**Tokunoshima**	**1.49**	**307**	P	Pn	03 35 43.7	+8.9
JOKE	**Okinoerabujima**	**1.61**	**287**	P	**Pn**	**03 35 35.2**	**-1.2**
JAM	**Amami Oshima**	**1.63**	**338**	P	**Pn**	**03 35 35.1**	**-1.6**
JAM				*e*S	**Sn**	**03 35 54.3**	**-2.1**
JAM	**Amami Oshima**	**1.63**	**338**	*e*S	**Sn**	**03 36 04.3**	**+7.9**
JAM	**Amami Oshima**	**1.63**	**338**	*e*P	Pn	03 35 45.5	+8.8
JYRO	**Yoronjima**	**1.65**	**275**	P	**Pn**	**03 35 35.8**	**-1.2**
JAMN	**Amaminishikomi**	**1.67**	**324**	P	**Pn**	**03 35 35.4**	**-1.9**
JAMN				S	**Sn**	**03 35 54.8**	**-2.7**
JAMN	**Amaminishikomi**	**1.67**	**324**	P	Pn	03 35 45.9	+8.6
JOW	**Kunigami**	**1.81**	**268**	Sn	Sn	03 35 49.1	-12
	36nm,0.3s,baz=108,slow=15,SNR=28						
JOW	**Kunigami**	**1.81**	**268**	P	**Pn**	**03 35 38.1**	**-1.1**
JOW	**Kunigami**	**1.81**	**268**	Pn	**Pn**	**03 35 38.0**	**-1.1**
	8.8nm,0.3s,baz=112,slow=26,SNR=29						
JNTH	**Nagotoyohara**	**2.07**	**260**	P	**Pn**	**03 35 41.5**	**-1.2**
JIH	**Iheya**	**2.08**	**274**	*e*P	**Pn**	**03 35 42.0**	**-0.9**
JJT3	**Tamagusuku3**	**2.37**	**252**	P	**Pn**	**03 35 45.9**	**-1.0**

*JMA **30** 03:35:19.2±0.1,27°.0N±0°.4×130°.3E±0°.5,h49^{km},NEAR MINAMI-DAITOJIMA IS*

*IDC **30** 03:35:20.7±1.8,26°.34N×128°.82E,h0^{km},mb3.4/3, mbtmp3.4/4,ML3.4/1,Error ellipse: s-maj=70.5km s-min=15.0km az=59.0*

ISC 30 03:35:18.5±1.0,**26°.6N**±0°.1×**130°.05E**±0°.06,**h10**^{km},**n12,** σ**1**^{s}**.06**/18,**mb3.5**/3,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.31**	**121**	P	**Pn**	**03 35 42.3**	**-0.6**
JKDJ				*e*S	**Sb**	**03 35 59.0**	**-1.1**
JMZ	**Minamidaito 2**	**1.33**	**127**	P	**Pn**	**03 35 42.6**	**-0.5**
JMZ				*e*S	**Sb**	**03 35 59.7**	**-0.8**
JYRO	**Yoronjima**	**1.48**	**286**	P	**Pb**	**03 35 46.5**	**+0.4**
JYRO				*e*S	**Sg**	**03 36 05.9**	**-0.3**
JOKE	**Okinoerabujima**	**1.51**	**299**	P	**Pn**	**03 35 45.5**	**-0.1**
JOKE				S	**Sn**	**03 36 04.5**	**-0.8**
JOW	**Kunigami**	**1.60**	**278**	P	**Pb**	**03 35 48.5**	**+0.3**
JNTH	**Nagotoyohara**	**1.82**	**267**	P	**Pb**	**03 35 51.8**	**-0.1**
JNTH				*e*S	**Sg**	**03 36 16.0**	**-1.0**
JIH	**Iheya**	**1.90**	**283**	P	**Pb**	**03 35 52.5**	**-0.9**
JIH				S	**Sb**	**03 36 17.3**	**+0.1**
JJT3	**Tamagusuku3**	**2.09**	**257**	*e*P	**Pb**	**03 35 56.9**	**+0.4**
JJT3				S	**Sg**	**03 36 24.0**	**-1.7**
KSRS	**Korea Array**	**10.94**	**351**	Pn	Pn	03 38 00.5	+5.4
	0.3nm,0.3s,baz=167,slow=12,SNR=4.1						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**42.49**	**311**	P	**P**	**03 43 13.7**	**-0.3**
	0.1nm,0.3s,baz=97,slow=9.2,SNR=1.9						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**46.48**	**174**	P	**P**	**03 43 47.9**	**+1.9**
	0.6nm,0.7s,baz=354,slow=8.4,SNR=6.2						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**50.14**	**175**	P	**P**	**03 44 16.5**	**+2.3**
	0.4nm,0.7s,baz=8.3,slow=14,SNR=5.8						
	0.4nm,0.7s						

IDC 30 03:43:55.9±2.2,**6°.89S**×**128°.40E**,**h0**^{km},**mb3.3**/1,**mbtmp3.3**/3,**ML3.3**/2,**MS4.2**/1,**Error ellipse: s-maj=111.1km s-min=33.2km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.20**	**157**	Pn	Pn	03 47 18.1	-0.3
	0.2nm,0.3s,baz=335,slow=13,SNR=11						
WRA				Sn	Sn	03 49 43.6	-13
	0.1nm,0.3s,baz=332,slow=22,SNR=2.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.50**	**163**	P	Pn	03 48 01.8	+0.2
	0.1nm,0.3s,baz=333,slow=9.1,SNR=8.1						
	0.6nm,0.7s						
PSI	**Prapat**	**30.96**	**287**	LR	LR	04 05 00.7	
	comp=Z,402nm,18.4s,baz=196,slow=41						
MKAR	**Makanchi Array**	**67.28**	**328**	P	P	03 54 52.5	0.0
	0.1nm,0.5s,baz=124,slow=7.6,SNR=2.0						
	0.1nm,0.5s						

*HEL **30** 03:54:16.6±0.4,66°.56N×12°.19E,h10^{km},ML2.9, Confirmed Earthquake*

*DNK **30** 03:54:16.9±0.7,66°.30N×13°.45E,h0^{km},ML2.8(UPP), Suspected explosion*

*NAO **30** 03:54:17.5±0.5,66°.42N×13°.34E,h4^{km}±6^{km},ML2.9*

*BER **30** 03:54:17.7±0.9,66°.39N×13°.35E,h5^{km}±3^{km},ML2.4, ML2.9(NAO),Confirmed Earthquake*

*UPP **30** 03:54:18.7±2.5,66°.34N×13°.74E,h0^{km},ML2.8,Suspected explosion*

*IDC **30** 03:54:19.4±1.1,66°.41N×13°.83E,h0^{km},mbtmp3.1/5, ML2.5/5,Error ellipse: s-maj=14.9km s-min=7.2km az=112.0*

*KOLA **30** 03:54:22.1,66°.51N×13°.79E,h0^{km},ML2.6*

ISC 30 03:54:16.3±0.7,**66°.41N**±0°.02×**13°.44E**±0°.03,**h0**^{km},**n77,** σ**2**^{s}**.16**/123,**2C,Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONS	**Konsvik**	**0.16**	**306**	Pg	**Pg**	**03 54 20.4**	**+1.0**
KONS				Lg	Lg	03 54 22.4	
KONS	**Konsvik**	**0.16**	**306**	Pg	**Pg**	**03 54 20.4**	**+1.0**
KONS				Lg	Lg	03 54 22.4	
KONS	**Konsvik**	**0.16**	**306**	⇑*i*P	**Pg**	**03 54 20.4**	**+1.0**
KONS				*e*S	**Sg**	**03 54 22.4**	**+1.0**
KONS				IAML		03 54 22.7	
	comp=Z,2μm,0.2s						
STOK	**Stokkvaagen**	**0.19**	**247**	Pg	**Pg**	**03 54 20.5**	**+0.7**
STOK				Lg	Lg	03 54 22.9	
STOK	**Stokkvaagen**	**0.19**	**247**	Pg	**Pg**	**03 54 20.5**	**+0.7**
STOK				Lg	Lg	03 54 22.9	
STOK	**Stokkvaagen**	**0.19**	**247**	*e*P	**Pg**	**03 54 20.5**	**+0.7**
STOK				*e*S	**Sg**	**03 54 22.6**	**+0.4**
MOR8	**Moi Rana**	**0.47**	**120**	Pg	**Pb**	**03 54 27.6**	**+0.3**
MOR8				Lg	Lg	03 54 34.8	
MOR8	**Moi Rana**	**0.47**	**120**	Pg	**Pb**	**03 54 27.6**	**+0.3**
MOR8				Lg	Lg	03 54 34.8	
MOR8	**Moi Rana**	**0.47**	**120**	⇑*i*P	**Pb**	**03 54 27.6**	**+0.3**
MOR8				*e*S	**Sb**	**03 54 35.6**	**+0.8**
MOR8				IAML		03 54 37.1	
	comp=Z,242nm,0.2s						
FAUS	**Fauske**	**1.22**	**36**	*e*P	**Pg**	**03 54 39.8**	**+0.1**
FAUS				*e*S	**Sb**	**03 54 57.0**	**+0.5**
FAUS				IAML		03 55 00.9	
	comp=Z,133nm,0.3s						
STEI	**Steigen**	**1.69**	**24**	Pn	**Pb**	**03 54 47.7**	**-0.4**
STEI				Sn	**Sg**	**03 55 11.2**	**+0.8**
STEI	**Steigen**	**1.69**	**24**	Pn	**Pb**	**03 54 47.7**	**-0.4**
STEI				Sn	**Sg**	**03 55 11.2**	**+0.8**
STEI	**Steigen**	**1.69**	**24**	*e*P	**Pb**	**03 54 47.6**	**-0.4**
STEI				*e*Sg	**Sg**	**03 55 10.5**	**+0.1**
STEI				IAML		03 55 14.4	
	comp=Z,108nm,0.3s						
STEI	**Steigen**	**1.69**	**24**	*e*P	**Pb**	**03 54 47.6**	**-0.4**
STEI				*e*S	**Sg**	**03 55 10.8**	**+0.4**
STEI				*e*SG	**Sb**	**03 55 12.9**	**+3.1**
LOF	**Lofoten**	**1.73**	**1**	Pn	**Pn**	**03 54 46.1**	**-1.5**
LOF				Sn	**Sn**	**03 55 07.6**	**-2.8**
LOF				Lg	Lg	03 55 12.4	
LOF	**Lofoten**	**1.73**	**1**	Pn	**Pn**	**03 54 46.1**	**-1.5**
LOF				Sn	**Sn**	**03 55 07.6**	**-2.8**
LOF				Lg	Lg	03 55 12.4	
LOF	**Lofoten**	**1.73**	**1**	*e*P	**Pn**	**03 54 46.1**	**-1.5**
LOF				*e*S	**Sn**	**03 55 07.6**	**-2.8**
LOF				IAML		03 55 17.8	
	comp=Z,39nm,0.3s						
NSS	**Namsos**	**1.98**	**199**	*e*Pg	**Pn**	**03 54 52.5**	**+1.5**
NSS				*e*S	**Sn**	**03 55 12.6**	**-3.8**
NSS				*e*Sg	**Sb**	**03 55 18.2**	**-0.1**
NSS				IAML		03 55 25.2	
	comp=Z,48nm,0.3s						
NSS	**Namsos**	**1.98**	**199**	*e*PB	**Pn**	**03 54 52.2**	**+1.2**
NSS				*e*SG	**Sb**	**03 55 18.8**	**+0.5**
SALU	**Saltoluokta**	**2.23**	**62**	P	**Pn**	**03 54 56.0**	**+1.6**
SALU	**Saltoluokta**	**2.23**	**62**	*e*Pg	**Pb**	**03 54 56.9**	**-0.5**
SALU				*e*Sg	**Sg**	**03 55 28.3**	**+0.7**
SALU	**Saltoluokta**	**2.23**	**62**	P	**Pn**	**03 54 56.0**	**+1.6**
NIKU	**Nikkaluokta**	**2.63**	**54**	P	**Pn**	**03 55 01.4**	**+1.5**
NIKU				S	**Sn**	**03 55 34.3**	**+1.8**
NIKU	**Nikkaluokta**	**2.63**	**54**	P	**Pn**	**03 55 01.4**	**+1.5**
NIKU				S	**Sn**	**03 55 34.3**	**+1.8**
LILU	**Lilltraesk**	**2.86**	**110**	P	**Pn**	**03 55 04.1**	**+0.9**
LILU	**Lilltraesk**	**2.86**	**110**	P	**Pn**	**03 55 04.1**	**+0.9**
DUNU	**Dundret**	**2.92**	**72**	P	**Pn**	**03 55 05.5**	**+1.6**
DUNU	**Dundret**	**2.92**	**72**	P	**Pn**	**03 55 05.5**	**+1.6**
NOD	**Norderasen**	**3.04**	**168**	*e*P	**Pn**	**03 55 06.5**	**+0.9**
NOD				*e*Sg	**Sb**	**03 55 50.2**	**+1.5**
HARU	**Harads**	**3.06**	**91**	P	**Pn**	**03 55 06.2**	**+0.5**
HARU	**Harads**	**3.06**	**91**	P	**Pn**	**03 55 06.2**	**+0.5**
KUA	**Kurravaara**	**3.10**	**57**	P	**Pn**	**03 55 07.9**	**+1.5**
KOVU	**Salmi**	**3.18**	**52**	P	**Pn**	**03 55 09.4**	**+1.9**
KOVU	**Salmi**	**3.18**	**52**	P	**Pn**	**03 55 09.4**	**+1.9**
SJUU	**Sjulsmark**	**3.46**	**101**	P	**Pn**	**03 55 11.6**	**+0.3**
SJUU	**Sjulsmark**	**3.46**	**101**	P	**Pn**	**03 55 11.6**	**+0.3**
ERTU	**Ertsjaerv**	**3.51**	**84**	P	**Pn**	**03 55 12.6**	**+0.6**
ERTU	**Ertsjaerv**	**3.51**	**84**	P	**Pn**	**03 55 12.6**	**+0.6**
KIF	**Kilpisjarvi**	**3.83**	**44**	Pn	**Pn**	**03 55 18.3**	**+2.0**
KIF				Sn	**Sn**	**03 56 03.4**	**+1.4**
KIF				Lg	Lg	03 56 18.6	
KIF	**Kilpisjarvi**	**3.83**	**44**	Pn	**Pn**	**03 55 18.3**	**+2.0**
KIF				Sn	**Sn**	**03 56 03.4**	**+1.4**
KIF				Lg	Lg	03 56 18.6	
KIF	**Kilpisjarvi**	**3.83**	**44**	Sg	**Sg**	**03 56 18.6**	**-0.5**
KIF				MSG		03 56 23.0	
	comp=Z,24nm,0.2s						
TRO	**Tromso**	**3.84**	**30**	*e*P	**Pn**	**03 55 17.6**	**+1.0**
TRO				*e*S	**Sn**	**03 55 59.8**	**-2.5**
TRO				IAML		03 56 21.9	
	comp=Z,13nm,0.4s						
TRO	**Tromso**	**3.84**	**30**	*e*P	**Pn**	**03 55 17.8**	**+1.3**
TRO				*e*S	**Sn**	**03 56 03.1**	**+0.8**
JETT	**Jettan, Norway**	**4.11**	**37**	Pn	**Pn**	**03 55 21.6**	**+1.3**
JETT				Sn	**Sn**	**03 56 08.4**	**-0.6**
JETT				Sg	**Sg**	**03 56 25.9**	**-2.2**
HEF	**Hetta**	**4.42**	**58**	*e*P	**Pn**	**03 55 25.4**	**+0.8**
HEF				MSG		03 56 38.4	
	comp=Z,23nm,0.2s						
KTK1	**Kautokeino**	**4.55**	**51**	*e*P	**Pn**	**03 55 26.8**	**+0.4**
KTK1				*e*S	**Sn**	**03 56 18.2**	**-1.7**
KTK1				IAML		03 56 42.8	
	comp=Z,22nm,0.5s						
DOMB	**Dombas**	**4.78**	**206**	*e*P	**Pn**	**03 55 30.1**	**+0.6**
DOMB				*e*Sg	**Sb**	**03 56 44.8**	**+6.0**
DOMB				IAML		03 56 49.2	
	comp=Z,7.6nm,0.4s						
AKN	**Aaknes**	**5.09**	**216**	Pn	**Pn**	**03 55 37.0**	**+3.3**
AKN				Sn	**Sn**	**03 56 30.8**	**-2.2**
AKN	**Aaknes**	**5.09**	**216**	Pn	**Pn**	**03 55 37.0**	**+3.3**
AKN				Sn	**Sn**	**03 56 30.8**	**-2.2**
AKN	**Aaknes**	**5.09**	**216**	*e*P	**Pn**	**03 55 31.7**	**-2.0**
AKN				*e*S	**Sn**	**03 56 29.0**	**-4.1**
AKN				IAML		03 56 34.9	
	comp=Z,4.4nm,0.4s						
NB2	**NORSAR Subarra**	**5.48**	**191**	Pn	**Pn**	**03 55 40.4**	**+1.3**
	baz=15,slow=18						
NB2	**NORSAR Subarra**	**5.48**	**191**	Pn	**Pn**	**03 55 40.4**	**+1.3**
	baz=15,slow=18						
NB2	**NORSAR Subarra**	**5.48**	**191**	Sg	**Sg**	**03 57 07.2**	**-4.8**
	baz=17,slow=37						
NOA	**NORSAR Array B**	**5.48**	**191**	Pn	**Pn**	**03 55 41.4**	**+2.3**
	baz=4.0,slow=13,SNR=7.3						
NOA				Sn	**Sn**	**03 56 45.4**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=351,slow=16,SNR=3.9						
NOA				Lg	Lg	03 57 07.3	
	comp=Z,0.2nm,0.3s,baz=16,slow=19,SNR=4.0						
	comp=Z,0.2nm,0.3s						
ARA0	**ARCESS Array S**	**5.52**	**50**	Pn	**Pn**	**03 55 39.5**	**-0.1**
	baz=235,slow=16						
ARA0				Sn	**Sn**	**03 56 40.8**	**-2.8**
	baz=236,slow=22						
ARA0				Lg	Lg	03 57 07.6	
	baz=235,slow=37						
ARA0	**ARCESS Array S**	**5.52**	**50**	Pn	**Pn**	**03 55 39.5**	**-0.1**
	baz=235,slow=16						
ARA0				Sn	**Sn**	**03 56 40.8**	**-2.8**
	baz=236,slow=22						
ARA0				Lg	Lg	03 57 07.6	
	baz=235,slow=37						
ARA0	**ARCESS Array S**	**5.52**	**50**	Pn	**Pn**	**03 55 39.5**	**-0.1**
	baz=235,slow=16						
ARA0				Sn	**Sn**	**03 56 40.8**	**-2.8**
	baz=236,slow=22						
ARA0				IAML		03 57 12.3	
	comp=Z,7.6nm,0.5s						
ARCES	**ARCESS Array B**	**5.52**	**50**	Pn	**Pn**	**03 55 39.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=242,slow=14,SNR=20						

ARCES				Sn	**Sn**	**03 56 40.9**	**-2.7**
	comp=Z,2.2nm,0.3s,baz=236,slow=21,SNR=14						
ARCES				Lg	Lg	03 57 07.9	
	comp=Z,1.7nm,0.3s,baz=234,slow=28,SNR=10						
	comp=Z,0.4nm,0.2s						
ARCES	**ARCESS Array B**	**5.52**	**50**	P	**Pn**	**03 55 40.2**	**+0.6**
ARCES				S	**Sn**	**03 56 41.6**	**-2.0**
NRA0	**NORESS Array S**	**5.76**	**189**	Pn	**Pn**	**03 55 44.6**	**+1.8**
	baz=4.7,slow=16						
NRA0				Sn	**Sn**	**03 56 52.4**	**+2.9**
	baz=15,slow=28						
NRA0				Lg	Lg	03 57 16.4	
	baz=5.4,slow=37						
NRA0	**NORESS Array S**	**5.76**	**189**	Pn	**Pn**	**03 55 44.6**	**+1.8**
	baz=4.7,slow=16						
NRA0				Sn	**Sn**	**03 56 52.4**	**+2.9**
	baz=15,slow=28						
NRA0				Lg	Lg	03 57 16.4	
	baz=5.4,slow=37						
NRA0	**NORESS Array S**	**5.76**	**189**	Sg	**Sg**	**03 57 16.4**	**-4.5**
	baz=5.4,slow=37						
KEV	**Kevo**	**6.08**	**50**	*e*P	**Pn**	**03 55 48.3**	**+1.0**
KEV				*e*S	**Sn**	**03 56 53.7**	**-3.8**
HFC2	**Hagfors New Ar**	**6.30**	**179**	*e*P	**Pn**	**03 55 51.6**	**+1.4**
HFC2				*e*S	**Sn**	**03 57 02.7**	**-0.2**
HFS	**Hagfors**	**6.30**	**179**	Pn	**Pn**	**03 55 52.9**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=111,slow=16,SNR=7.2						
HFS				Sn	**Sn**	**03 57 03.6**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=231,slow=18,SNR=3.1						
HFS				Lg	Lg	03 57 35.0	
	comp=Z,1.2nm,0.3s,baz=20,slow=4.9,SNR=6.3						
	comp=Z,0.4nm,0.3s						
OLKF	**Oulanka, Finla**	**6.42**	**83**	MSG		03 57 44.5	
	comp=Z,7.0nm,0.3s						
OLKF	**Oulanka, Finla**	**6.42**	**83**	MSG		03 57 44.5	
	comp=Z,7.0nm,0.3s						
FIA0	**FINESS Array S**	**7.46**	**126**	Pn	**Pn**	**03 56 06.2**	**0.0**
	baz=324,slow=11						
FIA0				Sn	**Sn**	**03 57 27.6**	**-3.7**
	baz=326,slow=28						
FIA0				Lg	Lg	03 58 06.9	
	baz=328,slow=28						
FIA0	**FINESS Array S**	**7.46**	**126**	Pn	**Pn**	**03 56 06.2**	**0.0**
	baz=324,slow=11						
FIA0				Sn	**Sn**	**03 57 27.6**	**-3.7**
	baz=326,slow=28						
FIA0				Lg	Lg	03 58 06.9	
	baz=328,slow=28						
FIA0	**FINESS Array S**	**7.46**	**126**	Pn	**Pn**	**03 56 06.2**	**0.0**
	baz=324,slow=11						
FIA0				Sn	**Sn**	**03 57 27.6**	**-3.7**
	baz=326,slow=28						
FINES	**FINESS Array B**	**7.46**	**126**	Pn	**Pn**	**03 56 06.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=328,slow=13,SNR=13						
FINES				Sn	**Sn**	**03 57 28.3**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=323,slow=23,SNR=5.8						
FINES				Lg	Lg	03 58 09.6	
	comp=Z,1.1nm,0.3s,baz=322,slow=24,SNR=5.1						
	comp=Z,0.6nm,0.3s						
APA0	**Apatity Array**	**7.74**	**72**	P	**Pn**	**03 56 11.6**	**+1.5**
APA0				S	**Sn**	**03 57 33.0**	**-5.3**
PRVG	**Vayda Guba**	**7.76**	**56**	S	**Sn**	**03 57 34.0**	**-4.6**
APA	**Apatity**	**7.90**	**72**	S	**Sn**	**03 57 37.5**	**-4.7**
LVZ	**Lovozero**	**8.37**	**70**	P	**Pn**	**03 56 19.4**	**+0.7**
LVZ				S	**Sn**	**03 57 48.5**	**-5.3**
TERR	**Teriberka**	**8.64**	**61**	P	**Pn**	**03 56 24.8**	**+2.4**
TERR				S	**Sn**	**03 57 54.7**	**-5.7**
SPITS	**Spitsbergen Ar**	**11.87**	**3**	Pn	**Pn**	**03 57 06.5**	**0.0**
	baz=164,slow=16						
	comp=Z,2.6nm,1.0s						

NOU 30 04:01:41.1, 17°.18S×167°.72E, h12^{km}, mb3.8/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.70**	**141**	P	Pb	04 01 55.5	+0.2
RTV	**Rentapao**	**0.91**	**132**	P	Pg	04 01 58.5	-0.1
YATNC	**Mamie plateau,**	**4.92**	**189**	P	Pn	04 02 53.6	-1.3
DZM	**Mont Dzumac**	**5.01**	**194**	P	Pn	04 02 56.4	+0.1
OUENC	**Ouen Island, N**	**5.28**	**189**	P	Pn	04 03 01.1	+1.3

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*NIC **30** 04:02:52.5±0.0, 36°.96N×30°.45E, h127^{km}±1^{km}, Ml3.6/4*

*ISK **30** 04:02:53.0, 37°.17N×30°.41E, h104^{km}±1^{km}, ML3.2/27*

*DDA **30** 04:02:53.0±0.0, 37°.19N×30°.42E, h102^{km}±4^{km}, ML3.3*

*THE **30** 04:02:55.6, 37°.14N×30°.41E, h103^{km}±8^{km}, ML3.2/3, Error ellipse: s-maj=8.5km s-min=1.6km az=305.0*

ISC 30 04:02:52.4±1.2**, 37°.15N**±0°.03×**30°.43E**±0°.02**, h113**^{km}±6^{km}**, n84, σ0^{s}.83**/131**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KORT	**Korkueli**	**0.16**	**202**	PG	**Pn**	**04 03 08.4**	**+0.1**
KORT	**Korkueli**	**0.16**	**202**	P	**Pn**	**04 03 08.3**	**+0.1**
KORT				S	**Sn**	**04 03 19.7**	**-0.4**
KORT				*i* AML	AML	04 03 23.0	
	comp=E,986nm,0.4s						
BUCA	**Burdur, Bucak-**	**0.21**	**31**	P	**Pn**	**04 03 08.0**	**-0.3**
BUCA				S	**Sn**	**04 03 18.4**	**-1.8**
BUCA				*i* AML	AML	04 03 19.0	
	comp=E,677nm,0.4s						
ANTB	**Antalya**	**0.31**	**144**	PG	**Pn**	**04 03 08.8**	**+0.3**
ANTB				SG	**Sn**	**04 03 20.4**	**-0.2**
BCK	**Bucak**	**0.34**	**23**	PG	**Pn**	**04 03 08.6**	**-0.2**
BCK				SG	**Sn**	**04 03 20.1**	**-1.0**
KEMT	**Kemer-ANTALYA**	**0.56**	**169**	PG	**Pn**	**04 03 10.7**	**+0.8**
SUTC	**Sutluce-Ispart**	**0.56**	**54**	PG	**Pn**	**04 03 09.5**	**-0.7**
SUTC				SG	**Sn**	**04 03 22.2**	**-1.3**
ELL	**Elmali**	**0.58**	**226**	PG	**Pn**	**04 03 11.3**	**+1.1**
ELL	**Elmali**	**0.58**	**226**	P	**Pn**	**04 03 11.4**	**+1.1**
ELL				S	**Sn**	**04 03 26.0**	**+2.4**
BRDR	**BURDUR-Merkez**	**0.62**	**332**	P	**Pn**	**04 03 10.3**	**-0.2**
BRDR				S	**Sn**	**04 03 23.4**	**-0.8**
ISP	**Isparta**	**0.68**	**7**	PG	**Pn**	**04 03 10.9**	**-0.1**
GOLH	**Golhisar**	**0.69**	**277**	P	**Pn**	**04 03 11.8**	**+0.7**
GOLH				S	**Sn**	**04 03 25.3**	**+0.1**
GOLH				*i* AML	AML	04 03 26.0	
	comp=N,780nm,0.4s						
GOLH				*i* AML	AML	04 03 26.0	
	comp=E,797nm,0.3s						
BASM	**Basmaki-Afyon**	**0.82**	**339**	PG	**Pn**	**04 03 12.2**	**0.0**
BASM				SG	**Sn**	**04 03 26.7**	**-0.5**
AKUM	**Antalya-Kumluc**	**0.83**	**185**	P	**Pn**	**04 03 13.1**	**+0.9**
AKUM				S	**Sn**	**04 03 28.5**	**+1.5**
AKUM				*i* AML	AML	04 03 30.0	
	comp=N,907nm,0.4s						
CAEL	**Denizli, Camel**	**0.88**	**269**	P	**Pn**	**04 03 13.8**	**+0.9**
CAEL				S	**Sn**	**04 03 28.5**	**+0.3**
CAEL				*i* AML	AML	04 03 29.0	
	comp=N,1µm,0.7s						
BAGO	**Egridir - ISPA**	**0.89**	**19**	P	**Pn**	**04 03 13.1**	**+0.3**
BAGO				S	**Sn**	**04 03 26.5**	**-1.8**
CAME	**Cameli-Denizli**	**0.92**	**257**	PG	**Pn**	**04 03 13.9**	**+0.7**
CAME				SG	**Sn**	**04 03 28.7**	**-0.2**
DEMR	**Demre-Antalya**	**1.00**	**205**	PG	**Pn**	**04 03 14.6**	**+0.7**
SEDI	**Konya, Seydise**	**1.10**	**74**	P	**Pn**	**04 03 15.7**	**+0.7**
SEDI				S	**Sn**	**04 03 31.9**	**-0.2**
SEDI				*i* AML	AML	04 03 33.0	
	comp=N,411nm,0.6s						
SEDI				*i* AML	AML	04 03 33.0	
	comp=E,695nm,0.5s						
AKAS	**Kas**	**1.13**	**216**	PN	**Pn**	**04 03 15.7**	**+0.4**
AKAS	**Kas**	**1.13**	**216**	P	**Pn**	**04 03 15.6**	**+0.2**
AKAS				*i* AML	AML	04 03 44.0	
	comp=N,393nm,0.5s						
KZIL	**AFYON_Kizioren**	**1.13**	**349**	P	**Pn**	**04 03 15.6**	**+0.3**
KZIL				S	**Sn**	**04 03 32.8**	**+0.1**
SEYD	**Seydisehir-KON**	**1.16**	**77**	PN	**Pn**	**04 03 16.6**	**+1.0**
SEYD				SN	**Sn**	**04 03 32.7**	**-0.4**
FETY	**Fethiye**	**1.19**	**245**	PN	**Pn**	**04 03 16.5**	**+0.6**
FETY				SN	**Sn**	**04 03 33.2**	**-0.4**
FETY	**Fethiye**	**1.19**	**245**	P	**Pn**	**04 03 16.9**	**+1.0**
FETY				S	**Sn**	**04 03 33.7**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.25**	**285**	P	**Pn**	**04 03 17.2**	**+0.7**
TAVA				S	**Sn**	**04 03 34.1**	**-0.8**
YVAC	**Isparta, Yalva**	**1.29**	**30**	P	**Pn**	**04 03 17.6**	**+0.5**
YVAC				S	**Sn**	**04 03 35.0**	**-0.8**
DOGA	**KONYA_Doganhis**	**1.37**	**46**	P	**Pn**	**04 03 18.9**	**+0.8**
DOGA				S	**Sn**	**04 03 37.3**	**-0.2**
DOGA				*i* AML	AML	04 03 38.0	
	comp=N,374nm,0.4s						
DOGA				*i* AML	AML	04 03 38.0	
	comp=E,346nm,0.5s						
KHL	**Karahalli**	**1.37**	**329**	PN	**Pn**	**04 03 18.8**	**+0.8**
SHUT	**Suhut-Afyon**	**1.41**	**4**	PN	**Pn**	**04 03 19.2**	**+0.8**
SHUT				SN	**Sn**	**04 03 38.5**	**+0.4**
PASA	**Karahalli, USA**	**1.41**	**328**	P	**Pn**	**04 03 18.8**	**+0.3**
PASA				S	**Sn**	**04 03 37.6**	**-0.5**
PASA				*i* AML	AML	04 03 38.0	
	comp=N,264nm,0.4s						
DALY	**Dalyan (Mula)**	**1.46**	**257**	PN	**Pn**	**04 03 19.6**	**+0.8**
DALY				SN	**Sn**	**04 03 38.7**	**-0.2**
AFYO	**Afyonkarahisar**	**1.64**	**357**	P	**Pn**	**04 03 22.0**	**+0.9**
AFYO				S	**Sn**	**04 03 42.8**	**-0.2**
HDMB	**Hadim**	**1.66**	**96**	PN	**Pn**	**04 03 22.9**	**+1.4**
HDMB				SN	**Sn**	**04 03 44.5**	**+0.9**
KMER	**Konya-Meram**	**1.67**	**68**	P	**Pn**	**04 03 22.3**	**+0.8**
KMER				S	**Sn**	**04 03 43.5**	**-0.1**
MULA	**Mugla, Merkez-**	**1.68**	**274**	P	**Pn**	**04 03 22.6**	**+0.9**
MULA				S	**Sn**	**04 03 42.4**	**-1.5**
MULA				*i* AML	AML	04 03 45.0	
	comp=E,352nm,0.5s						
MULA				*i* AML	AML	04 03 47.0	
	comp=N,177nm,0.3s						
YER	**Yerkesik**	**1.71**	**270**	P	**Pn**	**04 03 23.0**	**+1.1**
YER				S	**Sn**	**04 03 44.3**	**-0.2**
YER	**Yerkesik**	**1.71**	**270**	PN	**Pn**	**04 03 23.1**	**+1.1**
YER				SN	**Sn**	**04 03 44.7**	**+0.2**
KONT	**Konya--Tatoy**	**1.73**	**62**	PN	**Pn**	**04 03 23.3**	**+1.1**
KONT	**Konya--Tatoy**	**1.73**	**62**	P	**Pn**	**04 03 23.2**	**+0.9**
GAZI	**Gazipasa**	**1.77**	**120**	PN	**Pn**	**04 03 22.9**	**+0.2**
GAZI	**Gazipasa**	**1.77**	**120**	P	**Pn**	**04 03 22.9**	**+0.2**
GAZI				S	**Sn**	**04 03 46.2**	**+0.4**
GAZI				*i* AML	AML	04 03 51.0	
	comp=N,192nm,0.7s						
GAZI				*i* AML	AML	04 03 55.0	
	comp=E,181nm,0.3s						
TURN	**Turunc**	**1.79**	**259**	PN	**Pn**	**04 03 23.7**	**+0.9**
TURN	**Turunc**	**1.79**	**259**	P	**Pn**	**04 03 23.6**	**+0.8**
TURN				S	**Sn**	**04 03 45.4**	**-0.6**
TURN				*i* AML	AML	04 03 47.0	
	comp=N,222nm,0.4s						
TURN				*i* AML	AML	04 03 48.0	
	comp=E,189nm,0.6s						
LADK	**Ladik-KONYA**	**1.86**	**55**	PN	**Pn**	**04 03 24.5**	**+0.6**
KDHN	**Kadinhani**	**1.92**	**44**	P	**Pn**	**04 03 24.9**	**+0.4**
KDHN				S	**Sn**	**04 03 48.7**	**-0.4**
USAK	**Uak-Merkez**	**1.92**	**325**	P	**Pn**	**04 03 25.3**	**+0.8**
USAK				S	**Sn**	**04 03 48.8**	**-0.3**
USAK				*i* AML	AML	04 03 49.0	
	comp=E,182nm,0.5s						
KULA	**Kula-Manisa**	**1.95**	**315**	P	**Pn**	**04 03 25.6**	**+0.6**
KULA				S	**Sn**	**04 03 49.3**	**-0.6**
KULA	**Kula-Manisa**	**1.95**	**315**	PN	**Pn**	**04 03 25.8**	**+0.8**
KKBE	**Karaman, Kazim**	**2.01**	**87**	P	**Pn**	**04 03 26.6**	**+0.8**
KKBE				S	**Sn**	**04 03 51.2**	**0.0**
KKBE				*i* AML	AML	04 03 52.0	
	comp=E,195nm,0.9s						
GEDZ	**Gediz**	**2.05**	**337**	PN	**Pn**	**04 03 27.4**	**+1.1**
ERMK	**Ermenek**	**2.06**	**104**	P	**Pn**	**04 03 28.1**	**+1.7**
ERMK				*i* AML	AML	04 03 54.0	
	comp=E,308nm,0.5s						
ERMK				S	**Sn**	**04 03 54.1**	**+1.7**
ERMK				*i* AML	AML	04 03 56.0	
	comp=N,293nm,0.8s						
ARG	**Arkhangelos**	**2.07**	**244**	P	**Pn**	**04 03 26.9**	**+0.5**
ARG				S	**Sn**	**04 03 51.2**	**-1.2**
	305nm,0.3s						
ARG	**Arkhangelos**	**2.07**	**244**	PN	**Pn**	**04 03 27.3**	**+0.9**
ARG	**Arkhangelos**	**2.07**	**244**	P	**Pn**	**04 03 26.8**	**+0.5**
GDZ	**Gediz**	**2.07**	**339**	P	**Pn**	**04 03 27.3**	**+0.7**
GDZ				S	**Sn**	**04 03 53.2**	**+0.5**
KIZT	**Kizilcal**	**2.08**	**33**	PN	**Pn**	**04 03 27.1**	**+0.5**
AYDN	**Tasoluk**	**2.09**	**285**	P	**Pn**	**04 03 27.5**	**+0.8**
AYDN				S	**Sn**	**04 03 51.0**	**-2.0**
MLSB	**Milas**	**2.12**	**275**	PN	**Pn**	**04 03 28.2**	**+1.1**
AYDB	**Zeytinkoy-Aydi**	**2.17**	**292**	PN	**Pn**	**04 03 27.9**	**+0.2**
ALIN	**Konya, Altinte**	**2.26**	**59**	P	**Pn**	**04 03 29.9**	**+1.0**
ALIN				S	**Sn**	**04 03 56.0**	**-0.9**
DAT	**Datca**	**2.32**	**260**	P	**Pn**	**04 03 30.6**	**+0.9**
DAT				S	**Sn**	**04 03 58.1**	**-0.2**
DAT	**Datca**	**2.32**	**260**	P	**Pn**	**04 03 30.5**	**+0.9**
DAT				S	**Sn**	**04 03 58.8**	**+0.6**
DAT				*i* AML	AML	04 04 00.0	
	comp=E,134nm,0.6s						
DAT				*i* AML	AML	04 04 01.0	
	comp=N,143nm,0.2s						
DEMI	**Demirci**	**2.32**	**325**	P	**Pn**	**04 03 30.2**	**+0.5**
BDRM	**Kayabasi**	**2.38**	**269**	P	**Pn**	**04 03 31.0**	**+0.6**
BODT	**Bodrum**	**2.49**	**269**	P	**Pn**	**04 03 32.4**	**+0.6**
BODT				S	**Sn**	**04 04 01.3**	**-0.8**
AKMS	**Akamas**	**2.63**	**143**	P	**Pn**	**04 03 33.1**	**-0.6**
AKMS				AML	AML	04 04 04.0	
	0.5nm,0.3s						
AKMS				AML	AML	04 04 06.1	
	0.6nm,0.3s						
ALFC	**Alefka**	**2.66**	**138**	P	**Pn**	**04 03 33.2**	**-0.9**
ALFC				AML	AML	04 04 04.5	
	0.8nm,0.4s						
ALFC				AML	AML	04 04 05.2	
	0.7nm,0.3s						
NIS1	**Nisyros Isl.**	**2.66**	**259**	P	**Pn**	**04 03 35.1**	**+1.1**
BORA	**Eskisehir**	**2.73**	**0**	P	**Pn**	**04 03 35.3**	**+0.3**
SMG	**Samos**	**2.91**	**282**	P	**Pn**	**04 03 37.9**	**+0.6**
SMG				S	**Sn**	**04 04 10.3**	**-1.6**
	140nm,0.3s						
NATA	**Nata**	**2.94**	**143**	P	**Pn**	**04 03 37.0**	**-0.7**
BLCB	**Balcova**	**2.95**	**296**	P	**Pn**	**04 03 38.7**	**+0.9**
BLCB				S	**Sn**	**04 04 11.5**	**-1.3**
KARP	**Karpathos**	**3.08**	**240**	P	**Pn**	**04 03 40.1**	**+0.5**
KARP				S	**Sn**	**04 04 14.7**	**-1.3**
	155nm,0.4s						
KARP	**Karpathos**	**3.08**	**240**	P	**Pn**	**04 03 39.9**	**+0.3**
KARP				AML	AML	04 04 15.0	
	0.3nm,0.5s						
KARP				AML	AML	04 04 19.8	
	0.3nm,0.5s						
SZAC	**Souni**	**3.11**	**139**	P	**Pn**	**04 03 39.4**	**-0.6**
SZAC				AML	AML	04 04 17.2	
	0.5nm,0.4s						
SZAC				AML	AML	04 04 18.5	
	0.6nm,0.4s						
CSS	**Mathiatis**	**3.21**	**132**	P	**Pn**	**04 03 40.7**	**-0.6**
ASGA	**Asgata**	**3.29**	**135**	P	**Pn**	**04 03 42.1**	**-0.2**
CHOS	**Chios island**	**3.68**	**291**	P	**Pn**	**04 03 48.9**	**+1.4**
OSC1	**CSNet OBS 1**	**3.71**	**169**	P	**Pn**	**04 03 46.5**	**-1.4**
ZKR	**Zakros**	**3.96**	**240**	P	**Pn**	**04 03 52.3**	**+0.9**
OSC2	**CSNet OBS 4**	**4.34**	**159**	P	**Pn**	**04 03 55.8**	**-0.6**
HWQ	**Hawqa**	**5.33**	**121**	*e*P	**Pn**	**04 04 09.3**	**-0.5**
RCY	**Rachaya**	**5.73**	**128**	*e*P	**Pn**	**04 04 14.7**	**-0.6**

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*IDC **30** 04:09:08.9±2.0, 47°.08N×153°.85E, h0^{km}, mb3.8/7, mbtmp3.7/9, ML3.0/2, Error ellipse: s-maj=51.6km s-min=28.9km az=166.0*

ISC 30 04:09:13.3±1.9**, 47°.1N**±0°.3×**153°.8E**±0°.2**, h27**^{km}**, n19, σ0^{s}.69**/10**, mb3.9**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.50**	**21**	Pn	**Pn**	**04 10 46.5**	**-0.6**
	0.5nm,0.3s,baz=171,slow=12,SNR=4.7						
	1.5nm,0.5s						
ASAJ	**Asahikawa**	**8.40**	**253**	Pn	**Pn**	**04 11 12.7**	**-0.4**
	0.4nm,0.3s,baz=70,slow=15,SNR=1.7						
	2.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**29.34**	**154**	T	T	04 46 48.9	
	baz=342,slow=74						
H11N1	**WAKE ISLAND Hy**	**29.36**	**154**	T	T	04 46 47.1	
	baz=342						
H11N3	**WAKE ISLAND Hy**	**29.36**	**154**	T	T	04 47 02.0	
	baz=342,slow=74						
H11S1	**WAKE ISLAND Hy**	**30.44**	**155**	T	T	04 47 14.8	
	baz=343,slow=75,SNR=90						
H11S3	**WAKE ISLAND Hy**	**30.45**	**155**	T	T	04 47 12.4	
	baz=343,slow=75,SNR=89						
H11S2	**WAKE ISLAND Hy**	**30.46**	**155**	T	T	04 47 13.2	
	baz=343,slow=75,SNR=87						
MKAR	**Makanchi Array**	**47.18**	**297**	P	**P**	**04 17 42.9**	**-0.4**
	0.4nm,0.5s,baz=69,slow=7.4,SNR=4.6						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**57.66**	**341**	P	**P**	**04 19 00.8**	**+0.2**
	1.1nm,0.8s,baz=33,slow=7.5,SNR=5.3						
	1.1nm,0.8s						
FINES	**FINESS Array B**	**63.90**	**335**	P	**P**	**04 19 43.1**	**0.0**
	0.5nm,0.5s,baz=59,slow=11,SNR=6.0						
	0.5nm,0.5s						
NB2	**NORSAR Subarra**	**68.03**	**341**	P	**P**	**04 20 10.0**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.03**	**341**	P	**P**	**04 20 10.3**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=26,slow=6.4,SNR=7.1						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**71.50**	**326**	P	**P**	**04 20 30.6**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=36,slow=6.5,SNR=4.3						
	comp=Z,0.9nm,0.5s						
TXAR	**Lajitas Array**	**76.91**	**61**	P	**P**	**04 21 03.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=302,slow=4.5,SNR=7.7						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**78.44**	**317**	P	**P**	**04 21 13.0**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=108,slow=4.0,SNR=4.6						
	comp=Z,0.6nm,0.7s						
H03N2	**Juan Fernandez**	**138.29**	**90**	T	T	07 02 16.4	
	baz=308,slow=77,SNR=3.8						
H03N1	**Juan Fernandez**	**138.31**	**90**	T	T	07 01 56.7	
	baz=308,slow=77,SNR=5.9						
H03N3	**Juan Fernandez**	**138.31**	**90**	T	T	07 02 16.2	
	baz=308,slow=77,SNR=5.7						

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*DDA **30** 04:22:05.8±0.0, 36°.26N×36°.09E, h12^{km}±3^{km}, ML2.8*

*ISK **30** 04:22:06.1, 36°.25N×36°.11E, h10^{km}, ML2.9/13*

ISC 30 04:22:06.3±0.9**, 36°.26N**±0°.03×**36°.09E**±0°.02**, h11**^{km}±7^{km}**, n32, σ0^{s}.80**/48**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAHT	**Tahtakopru-Hat**	**0.14**	**33**	PG	**Pg**	**04 22 09.6**	**0.0**
TAHT				SG	**Sg**	**04 22 12.4**	**+0.4**
YAYL	**Yayladag**	**0.22**	**177**	PG	**Pg**	**04 22 10.9**	**-0.1**
YAYL				SG	**Sg**	**04 22 14.6**	**+0.3**
YAYL	**Yayladag**	**0.22**	**177**	P	**Pg**	**04 22 10.9**	**-0.1**
YAYL				S	**Sg**	**04 22 14.3**	**0.0**
YAYL				*i* AML	AML	04 22 15.0	
	comp=E,2µm,0.3s						
YAYL				*i* AML	AML	04 22 15.0	
	comp=N,3µm,0.9s						
ASUZ	**Hatay-Arsuz**	**0.25**	**278**	P	**Pg**	**04 22 11.6**	**+0.2**
ASUZ				S	**Sg**	**04 22 14.8**	**-0.1**
ASUZ				*i* AML	AML	04 22 17.0	
	comp=E,1µm,0.2s						
YURE	**YUREGIR**	**0.68**	**327**	P	**Pb**	**04 22 20.1**	**-0.1**
CEYT	**Ceyhan**	**0.80**	**340**	PG	**Pb**	**04 22 22.5**	**+0.2**
KUZU	**Kuzuini**	**0.94**	**57**	P	**Pb**	**04 22 24.6**	**-0.2**
KUZU				S	**Sb**	**04 22 36.7**	**-0.6**
KUZU				*i* AML	AML	04 22 43.0	
	comp=N,389nm,0.3s						
KUZU				*i* AML	AML	04 22 46.0	
	comp=E,481nm,0.5s						
KAMA	**Osmaniye**	**1.04**	**26**	P	**Pg**	**04 22 25.7**	**-0.6**
KAMA				S	**Sn**	**04 22 40.7**	**-0.7**
KOZT	**Kozan**	**1.24**	**350**	PN	**Pg**	**04 22 29.8**	**-0.3**
KOZT				SN	**Sn**	**04 22 47.7**	**+1.4**
HCB	**Kahramanmara**	**1.27**	**31**	P	**Pg**	**04 22 30.5**	**-0.2**
HCB				S	**Sg**	**04 22 48.0**	**+0.8**
KARA	**Karaisali**	**1.30**	**321**	PN	**Pb**	**04 22 30.7**	**-0.1**
MERS	**Mersin**	**1.40**	**296**	PN	**Pn**	**04 22 31.8**	**-0.1**
KMRS	**Kahramanmaras**	**1.40**	**27**	PN	**Pg**	**04 22 33.0**	**-0.3**
KMRS				SN	**Sg**	**04 22 51.4**	**-0.1**
KAHM	**Kahramanmaras,**	**1.45**	**29**	P	**Pg**	**04 22 34.0**	**-0.1**
KAHM				S	**Sg**	**04 22 52.8**	**-0.2**
GULE	**Gulek**	**1.47**	**315**	P	**Pg**	**04 22 34.0**	**-0.6**
GULE				S	**Sg**	**04 22 54.6**	**+0.9**
GULE				*i* AML	AML	04 22 57.0	
	comp=E,204nm,0.5s						
GULE				*i* AML	AML	04 23 02.0	
	comp=N,121nm,0.4s						
GZT	**Gaziantep**	**1.61**	**47**	P	**Pg**	**04 22 36.9**	**-0.4**
GZT				S	**Sg**	**04 22 58.3**	**+0.1**
GZT				*i* AML	AML	04 23 03.0	
	comp=N,111nm,0.4s						
CMRD	**Camardi-Nigde**	**1.66**	**328**	PN	**Pb**	**04 22 36.3**	**-0.6**
SILI	**Silifke-Mersin**	**1.75**	**274**	PN	**Pb**	**04 22 37.9**	**-0.6**
SILI				SN	**Sb**	**04 23 00.6**	**+0.1**
YAHY	**KAYSERI_Yahyal**	**1.92**	**343**	P	**Pb**	**04 22 40.2**	**-1.3**
KEBE	**Keben-Mersin**	**1.93**	**276**	PN	**Pb**	**04 22 40.1**	**-1.4**
TISA	**Tisan-Mersin**	**1.95**	**268**	PN	**Pb**	**04 22 40.5**	**-1.4**
KERG	**Konya-Eregli**	**1.96**	**307**	P	**Pb**	**04 22 41.1**	**-0.9**
KERG				S	**Sg**	**04 23 08.7**	**-0.5**
AKKU	**Akkuyu-Mersin**	**2.06**	**268**	PN	**Pn**	**04 22 41.8**	**+1.0**
AKK2	**Akkuyu-Mersin**	**2.06**	**267**	PN	**Pn**	**04 22 41.9**	**+1.1**
GULN	**MERSIN_Gulnar**	**2.06**	**269**	P	**Pn**	**04 22 41.8**	**+0.9**
GULN				S	**Sn**	**04 23 07.7**	**+1.2**
AKK1	**Akkuyu-Mersin**	**2.07**	**268**	PN	**Pn**	**04 22 42.0**	**+1.1**
SURC	**SANLIURFA_SURC**	**2.12**	**72**	P	**Pb**	**04 22 44.6**	**-0.3**
SURC				*i* AML	AML	04 23 17.0	
	comp=E,57nm,0.2s						
ATAB	**Bozova**	**2.14**	**55**	P	**Pg**	**04 22 46.3**	**-1.1**
ATAB				S	**Sg**	**04 23 15.4**	**+0.2**
ATAB				*i* AML	AML	04 23 19.0	
	comp=E,77nm,0.4s						
ATAB				*i* AML	AML	04 23 23.0	
	comp=N,58nm,0.6s						
TEVE	**Tevekalti-Mers**	**2.15**	**276**	PN	**Pb**	**04 22 43.7**	**-1.5**
BERE	**Bereket-Mersin**	**2.32**	**273**	PN	**Pn**	**04 22 45.6**	**+1.0**
TEKE	**Tekeli-Mersin**	**2.41**	**268**	PN	**Pn**	**04 22 47.0**	**+1.3**
ERMK	**Ermenek**	**2.59**	**279**	P	**Pb**	**04 22 51.2**	**-1.7**
ERMK				*i* AML	AML	04 23 31.0	
	comp=N,40nm,0.3s						

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*IDC **30** 05:14:37.7±0.6, 55°.55S×26°.49W, h0^{km}, mb4.4/12, mbtmp4.4/13, ML3.9/1, MS4.1/32, Error ellipse: s-maj=18.7km s-min=16.0km az=65.0*

*NEIC **30** 05:14:39.3±1.4, 55°.63S±0°.10×26°.67W±0°.10, h10^{km}±1^{km}, mb4.8/62, Error ellipse: s-maj=17.0km s-min=8.1km az=163.0*

*GCMT **30** 05:14:47.3±0.4, 55°.63S±0°.04×26°.27W±0°.06, h27^{km}, MW4.9/75, Moment Tensor Solution. s10,c10; s75,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.48±.25; M$_{\theta\theta}$-1.58±.17; M$_{\phi\phi}$-1.90±.15; M$_{r\theta}$0.12±.33; M$_{\theta\phi}$0.99±.07; M$_{\phi r}$0.71±.23; Best double couple: M$_0$3.17900×10^{16} NP1:φ$_s$133.00000°, δ41.00000°, λ79.00000°. NP2: φ$_s$327.00000°, δ50.00000°, λ99.00000°. Principal axes: T 3.5840, Plg82.0000°, Azm290.0000°; N -0.8090, Plg7.0000°, Azm141.0000°; P -2.7750, Plg4.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 05:14:39.1±0.5**, 55°.60S**±0°.08×**26°.69W**±0°.09**, h10**^{km}**, n148, σ0^{s}.71**/121**, mb4.8**/32**, MS4.1**/31**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.80**	**279**	Pn	**Pn**	**05 16 05.8**	**+0.8**
ORCD	**Orcadas**	**10.81**	**234**	Pn	**Pn**	**05 17 12.7**	**-1.0**
VNA1	**Neumayer--Stat**	**17.11**	**159**	P	**P**	**05 18 40.6**	**+1.0**
VNA3	**Neumayer Olymp**	**17.33**	**161**	P	**P**	**05 18 42.8**	**+0.7**
VNA2	**Neumayer--Watz**	**17.51**	**159**	P	**P**	**05 18 45.3**	**+1.2**
	baz=315,slow=14						
EFI	**East Falkland**	**18.92**	**269**	P	**P**	**05 18 60.0**	**+0.3**
SNAA	**Sanae**	**19.04**	**157**	P	**Pn**	**05 19 02.3**	**+0.5**
SNAA	**Sanae**	**19.04**	**157**	P	**P**	**05 19 00.6**	**-0.4**
	0.4nm,0.3s,baz=319,slow=14,SNR=9.5						
SNAA				LR	LR	05 26 27.5	
	comp=Z,426nm,18.9s,baz=302,slow=37						
	2.5nm,0.7s						
SNAA	**Sanae**	**19.04**	**157**	P	**P**	**05 19 00.7**	**-0.4**
PMSA	**Palmer Station**	**20.41**	**228**	P	Pn	05 19 17.9	0.0
	28nm,0.7s,baz=67,slow=5.6,SNR=14						
PMSA				LR	LR	05 26 34.4	
	comp=Z,437nm,18.1s,baz=80,slow=35						
	28nm,0.7s						
PMSA	**Palmer Station**	**20.41**	**228**	P	**P**	**05 19 15.0**	**-0.8**
PMSA				IAmb	IAmb	05 19 22.4	
	comp=Z,28nm,0.8s						
TROLL	**Troll, Antarti**	**20.53**	**154**	P	**P**	**05 19 17.6**	**+0.4**
BELA	**Belgrano 2**	**22.55**	**184**	P	**P**	**05 19 37.7**	**-1.1**
MG01	**Puerto William**	**23.10**	**255**	P	**P**	**05 19 44.2**	**-0.5**
MG01				IAmb	IAmb	05 19 58.8	
	comp=Z,19nm,0.8s						
USHA	**Ushuaia**	**23.57**	**254**	P	**P**	**05 19 49.9**	**+0.4**
	comp=Z,6.0nm,1.0s,baz=131,slow=3.1,SNR=4.8						
USHA				LR	LR	05 27 27.9	
	comp=Z,356nm,18.5s,baz=220,slow=32						
	comp=Z,6.0nm,1.0s						
DSPA	**Despedida**	**23.78**	**257**	P	**P**	**05 19 51.2**	**-0.3**
MG02	**Cerro Sombrero**	**24.76**	**259**	P	**P**	**05 20 00.9**	**+0.4**

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MG03  Isla Dawson        25.03 256  P       P       05 20 02.1  -0.9
MG03                                IAmb    IAmb    05 20 31.3
      comp=Z,21nm,1.2s
MG05  Puerto Natales     27.05 259  P       P       05 20 20.9  -0.3
MG05                                IAmb    IAmb    05 20 47.7
      comp=Z,20nm,1.3s
GO09  Cerro Castillo     27.15 260  P       P       05 20 21.4  -0.7
GO09                                IAmb    IAmb    05 20 40.6
      comp=Z,28nm,1.4s
TRQA  Tornquist          29.41 292  P       P       05 20 42.0  -0.4
TRQA                                IAmb    IAmb    05 20 44.6
      comp=Z,25nm,1.3s
COYC  Coyhaique          30.00 270  P       P       05 20 46.3  -1.3
PLTB  Pedras Altas       30.41 310  P       P       05 20 52.2  +0.9
PLTB                                IAmb    IAmb    05 20 54.6
      comp=Z,18nm,1.2s
AY01  Puyuhuapi          31.02 272  P       P       05 20 56.5   0.0
PLCA  Paso Flores        32.20 279  LR      LR      05 35 20.3
      comp=Z,268nm,18.2s,baz=129,slow=38
QSPA  South Pole Qui     34.65 180  P       P       05 21 29.2  +0.9
      comp=Z,10nm,0.7s,baz=207,slow=3.5,SNR=103
QSPA                                PcP     PcP     05 24 02.3  +0.3
      comp=Z,2.2nm,0.9s,baz=252,slow=2.8,SNR=2.3
      comp=Z,10nm,0.7s
QSPA  South Pole Qui     34.65 180  P       P       05 21 29.2  +0.9
QSPA                                IAmb    IAmb    05 21 30.0
      comp=Z,9.4nm,0.7s
CPUP  Villa Florida      36.73 310  P       P       05 21 46.4  +0.1
      comp=Z,8.8nm,1.0s,baz=161,slow=7.8,SNR=13
CPUP                                LR      LR      05 37 30.0
      comp=Z,293nm,19.7s,baz=154,slow=37
      comp=Z,8.8nm,1.0s
CPUP  Villa Florida      36.73 310  P       P       05 21 46.4  +0.1
CPUP                                IAmb    IAmb    05 21 47.2
      comp=Z,13nm,1.1s
MT09  Talagante          37.44 287  P       P       05 21 51.8  -0.7
MT05  Renca              37.60 288  P       P       05 21 52.3  -1.4
MT05                                IAmb    IAmb    05 22 05.4
      comp=Z,24nm,1.4s
PEL   Peldehue           37.76 288  P       P       05 21 55.2  +0.2
PEL                                 IAmb    IAmb    05 21 58.5
      comp=Z,35nm,1.5s
VA05  Santo Domingo      37.87 286  P       P       05 21 56.0  +0.1
VA05                                IAmb    IAmb    05 21 57.0
      comp=Z,17nm,0.9s
MT02  Curacav            37.92 287  P       P       05 21 56.4   0.0
ZON   Zonda              37.92 292  P       P       05 21 56.5   0.0
ZON                                 IAmb    IAmb    05 21 57.4
      comp=Z,9.1nm,0.7s
VA06  Catapilco          38.54 288  P       P       05 22 01.6   0.0
VA06                                IAmb    IAmb    05 22 14.2
      comp=Z,25nm,1.1s
CO02  Combarbal          39.42 290  P       P       05 22 06.7  -2.5
CO01  Juntas del Tor     39.91 292  P       P       05 22 14.9  +1.6
GO04  Tololo Observa     40.12 291  P       P       05 22 15.1   0.0
GO04                                IAmb    IAmb    05 22 16.7
      comp=Z,19nm,1.1s
SUR   Sutherland         40.25  75  LR      LR      05 35 57.0
      comp=Z,506nm,18.5s,baz=200,slow=32
MAW   Mawson             40.35 144  P       P       05 22 16.2   0.0
      comp=Z,1.8nm,0.8s,baz=255,slow=16,SNR=3.2
MAW                                 LR      LR      05 37 41.9
      comp=Z,257nm,19.6s,baz=256,slow=34
      comp=Z,1.8nm,0.8s
CO05  La Serena          40.56 291  P       P       05 22 18.9  +0.5
LCO   Las Campanas       40.99 292  P       P       05 22 22.9  +0.6
LCO                                 IAmb    IAmb    05 22 23.8
      comp=Z,15nm,1.1s
AC04  Llanos de Chal     41.83 292  P       P       05 22 29.1  +0.2
GO03  Copiap             41.89 294  P       P       05 22 28.6  -0.8
AC02  Maricunga          41.93 296  P       P       05 22 29.4  -0.9
AC02                                IAmb    IAmb    05 22 33.2
      comp=Z,34nm,1.4s
AC06  Mina Casimiro      42.14 294  P       P       05 22 31.4  -0.1
AC06                                IAmb    IAmb    05 22 33.0
      comp=Z,28nm,1.3s
BDFB  Brasilia           43.12 329  P       P       05 22 39.8  +0.3
      comp=Z,2.0nm,0.8s,baz=218,slow=11,SNR=3.6
      comp=Z,2.0nm,0.8s
GO02  Mina Guanaco       43.54 296  P       P       05 22 43.2  +0.1
AF01  San Pedro de A     44.67 300  P       P       05 22 54.2  +1.9
PB15  IPOC Station P     45.10 298  P       P       05 22 55.6   0.0
PB15                                IAmb    IAmb    05 23 12.6
      comp=Z,9.9nm,0.7s
LVC   Limon Verde        45.32 299  LR      LR      05 41 28.4
      comp=Z,138nm,21.3s,baz=159,slow=36
LVC   Limon Verde        45.32 299  P       P       05 22 58.9  +1.4
PB06  IPOC Station P     45.57 298  P       P       05 22 58.9  -0.3
PB06                                IAmb    IAmb    05 23 00.9
      comp=Z,12nm,0.9s
BOSA  Boshof             45.59  76  P       P       05 22 58.0  -1.3
      comp=Z,2.9nm,0.8s,baz=204,slow=7.5,SNR=6.7
BOSA                                LR      LR      05 38 53.7
      comp=Z,767nm,18.6s,baz=194,slow=32
      comp=Z,2.9nm,0.8s
BOSA  Boshof             45.59  76  P       P       05 22 58.4  -0.9
BOSA                                IAmb    IAmb    05 23 01.6
      comp=Z,12nm,1.4s
PB09  IPOC Station P     46.17 299  P       P       05 23 05.4  +1.4
PB04  IPOC Station P     46.17 298  P       P       05 23 03.6  -0.3
PB07  IPOC Station P     46.55 299  P       P       05 23 07.5  +0.5
SBA   Scott Base         46.55 184  P       P       05 23 06.9  +0.8
PB02  IPOC Station P     46.90 299  P       P       05 23 08.2  -1.4
PB01  IPOC Station P     46.93 300  P       P       05 23 10.2  +0.4
VNDA  Vanda              47.04 183  P       P       05 23 10.4  +0.5
      comp=Z,6.5nm,0.6s,baz=189,slow=6.1,SNR=41
      comp=Z,6.5nm,0.6s
VNDA  Vanda              47.04 183  P       P       05 23 10.9  +1.0
VNDA                                IAmb    IAmb    05 23 13.1
      comp=Z,7.7nm,0.7s
SIV   San Ignacio        47.47 313  LR      LR      05 42 38.2
      comp=Z,160nm,21.1s,baz=156,slow=35
PB08  IPOC Station P     47.53 301  P       P       05 23 13.0  -1.9
PB08                                IAmb    IAmb    05 23 18.8
      comp=Z,11nm,0.9s
PB11  IPOC Station P     48.10 300  P       P       05 23 18.9  -0.1
LBTB  Lobatse            48.61  73  P       P       05 23 22.2  -0.6
      comp=Z,2.4nm,0.8s,baz=216,slow=7.3,SNR=3.2
LBTB                                LR      LR      05 40 30.1
      comp=Z,133nm,18.7s,baz=169,slow=32
      comp=Z,2.4nm,0.8s
TSUM  Tsumeb             49.22  61  LR      LR      05 40 52.2
      comp=Z,254nm,18.4s,baz=156,slow=32
PB16  IPOC Station P     49.24 302  P       P       05 23 29.6  +1.3
RCBR  Riachuelo          50.18 348  LR      LR      05 41 56.6
      comp=Z,118nm,18.9s,baz=318,slow=33
LPAZ  La Paz             50.35 304  P       P       05 23 37.8  +0.9
      comp=Z,13nm,0.8s,baz=144,slow=5.3,SNR=49
LPAZ                                LR      LR      05 44 49.4
      comp=Z,80nm,20.8s,baz=202,slow=36
      comp=Z,13nm,0.8s
LPAZ  La Paz             50.35 304  P       P       05 23 37.7  +0.9
SAML  Samuel             54.69 314  P       P       05 24 08.2   0.0
SAML                                IAmb    IAmb    05 24 11.0
      comp=Z,4.8nm,0.6s
LSZ   Lusaka             57.95  69  LR      LR      05 46 49.4
      comp=Z,380nm,18.2s,baz=162,slow=33
NNA   Nana               58.28 298  LR      LR      05 51 06.7
      comp=Z,66nm,18.9s,baz=148,slow=38
MDP   Montagnes des      64.18 331  LR      LR      05 52 17.4
      comp=Z,139nm,19.1s,baz=174,slow=35
DBIC  Dimbokro           64.64  24  LR      LR      05 47 55.8
      comp=Z,246nm,18.4s,baz=186,slow=31
OPO   Ambohidratompo     65.79  88  LR      LR      05 49 35.9
      comp=Z,229nm,18.1s,baz=347,slow=32
OTAV  Otavalo            69.64 303  P       P       05 25 48.0  -1.1
OTAV                                IAmb    IAmb    05 26 05.2
      comp=Z,8.9nm,1.3s
MBAR  Mbarara            71.69  63  LR      LR      05 54 42.2
      comp=Z,196nm,18.1s,baz=161,slow=34
ROSC  El Rosal           71.81 309  LR      LR      05 59 16.6
      comp=Z,143nm,19.8s,baz=164,slow=37
TOA0  Torodi Ar. Sit     72.52  29  P       P       05 26 05.6  -0.3
TOA0                                IAmb    IAmb    05 26 10.0
      comp=Z,7.0nm,1.0s
TORD  Torodi Ar. Bea     72.52  29  P       P       05 26 05.8  -0.1
      comp=Z,3.9nm,0.5s,baz=200,slow=6.6,SNR=52
TORD                                LR      LR      05 53 20.8
      comp=Z,144nm,18.6s,baz=216,slow=32
      comp=Z,3.9nm,0.5s
TORD  Torodi Ar. Bea     72.52  29  P       P       05 26 06.0   0.0
BAUV  El Baul            72.92 317  P       P       05 26 08.3   0.0
BIRV  Birongo            73.65 319  P       P       05 26 11.8  -0.8
KMBO  Kilima Mbogo       74.61  69  LR      LR      05 56 46.8
      comp=Z,178nm,19.1s,baz=98,slow=34
SJCC  San Jacinto, C     76.70 311  P       P       05 26 30.4  +0.1
SJCC                                IAmb    IAmb    05 26 32.1
      comp=Z,12nm,1.0s
SJG   San Juan           80.66 322  LR      LR      06 04 31.7
      comp=Z,86nm,19.6s,baz=221,slow=37
JTS   Las Juntas de      81.51 302  LR      LR      06 06 29.8
      comp=Z,47nm,19.6s,baz=215,slow=38
URZ   Urewera            84.32 199  LR      LR      06 02 41.1
      comp=Z,78nm,18.3s,baz=211,slow=34
ATD   Arta Tunnel        88.23  67  LR      LR      06 07 34.9
      comp=Z,80nm,18.1s,baz=306,slow=36
MDT   Midelt             90.07  18  LR      LR      06 04 17.0
      comp=Z,202nm,18.2s,baz=218,slow=33
STKA  Stephens Creek     92.30 170  LR      LR      06 10 00.5
      comp=Z,174nm,18.0s,baz=210,slow=36
PPT   Papeete            92.69 233  LR      LR      06 03 40.0
      comp=Z,34nm,18.6s,baz=154,slow=32
RAR   Rarotonga          93.76 223  LR      LR      06 01 34.8
      comp=Z,31nm,19.0s,baz=158,slow=30
ESDC  Sonseca Array      96.86  17  LR      LR      06 08 26.4
      comp=Z,94nm,18.8s,baz=162,slow=33
ASAR  Alice Springs      99.33 162  P       Pdif    05 28 21.2  -0.3
      comp=Z,0.6nm,0.8s,baz=176,slow=4.4,SNR=6.1
      comp=Z,0.6nm,0.8s
YKA   Yellowknife Ar    136.02 318  PKP     PKPdf   05 33 58.7  -0.1
      comp=Z,1.8nm,0.8s,baz=130,slow=2.1,SNR=4.1
FARO  Faro, Yukon       143.48 311  P       PKPbc   05 34 10.4  +0.7
      baz=114
WHY   Whitehorse        143.50 308  P       PKPbc   05 34 10.0   0.0
      baz=115
M31M  Drury Creek, Y    143.91 311  P       PKPbc   05 34 11.3  +0.3
      baz=113
O30N  Mendenhall        144.08 308  P       PKPbc   05 34 12.5  +0.8
      baz=114
N31M  Braeburn, Yuko    144.24 309  P       PKPab   05 34 12.0  +0.3
      baz=113
HYT   Haines Junctio    144.74 307  P       PKPdf   05 34 14.7  -0.1
      baz=113,SNR=9.1
N30M  Aishikik Lake     144.80 309  P       PKPdf   05 34 15.0  +0.3
      baz=113,SNR=14
M30M  Minto, Yukon      145.09 311  P       PKPbc   05 34 15.0  +0.2
      baz=111,SNR=13
YUK4  Talbot Arm        145.45 308  P       PKPab   05 34 17.0  +0.6
      baz=112
INK   Inuvik            145.63 321  P       PKPbc   05 34 16.4  +0.2
      baz=106
PINM  Pinnacle          145.71 305  P       PKPbc   05 34 17.2  +0.4
      baz=113
YUK8  Steele Glacier    145.93 308  P       PKPab   05 34 18.3  +0.1
      baz=111
YUK3  Moose Creek       146.42 308  P       PKPbc   05 34 18.9  -0.2
      baz=110
CTG   Chitna Glacier    146.53 306  P       PKPbc   05 34 20.0  +0.6
      baz=111
I29M  Ogilvie Camp,     146.63 315  P       PKPbc   05 34 19.4  +0.1
      baz=106
DAWY  Dawson            146.70 312  P       PKPbc   05 34 19.7   0.0
      baz=108,SNR=15
M27K  Edge Creek, AK    147.24 309  P       PKPbc   05 34 20.9  -0.4
      baz=108
L27K  Beaver Creek,     147.44 310  P       PKPbc   05 34 22.1  +0.4
      baz=107
M26K  Nabesna, AK       147.75 309  P       PKPbc   05 34 22.7  +0.1
      baz=108
K27K  Chicken           147.82 312  P       PKPbc   05 34 22.4  -0.2
      baz=106
BMRM  Bremner River     148.03 305  P       PKPbc   05 34 24.0  +0.6
      baz=109
L26K  Log Cabin Wild    148.09 310  P       PKPbc   05 34 24.0  +0.5
      baz=106
J26L  Joseph Creek      148.57 312  P       PKPbc   05 34 24.9  +0.2
      baz=104,SNR=7.6
SCRK  Sand Creek        148.62 311  P       PKPbc   05 34 25.4  +0.5
      baz=104,SNR=7.3
KLU   Klutina           148.80 306  P       PKPbc   05 34 26.3  +0.9
      baz=107,SNR=5.9
RIDG  Independent Ri    148.93 311  P       PKPbc   05 34 26.5  +0.9
      baz=104,SNR=9.5
PAX   Paxson            149.01 309  P       PKPbc   05 34 26.5  +0.6
      baz=105
J25K  Salcha River,     149.35 312  P       PKPbc   05 34 27.2  +0.5
      baz=102
SCM   Sheep Creek Mo    149.54 306  P       PKiKP   05 34 28.2  -0.1
      baz=106
M23K  Glacier View      149.71 306  P       PKPbc   05 34 28.3  +0.7
      baz=105
DHY   Denali Highway    149.87 309  P       PKiKP   05 34 29.1   0.0
      baz=104
WAT6  Susitna Watana    149.92 308  P       PKPbc   05 34 28.7  +0.4
      baz=104,SNR=6.7
SML   Sawmill           149.99 306  P       PKPbc   05 34 29.0  +0.7
      baz=105
ILAR  Eielson Array     150.02 312  PKPbc   PKPbc   05 34 28.6  +0.3
      comp=Z,5.9nm,0.8s,baz=126,slow=1.7,SNR=52
ILAR  Eielson Array     150.02 312          PKPbc   05 34 28.3  +0.1
SONM  Songino Array     150.41  85  PKPbc   PKPbc   05 34 29.6  -0.3
      comp=Z,0.7nm,0.3s,baz=273,slow=2.7,SNR=5.1
H24K  Noodor Dome       150.61 314  P       PKPbc   05 34 30.1  +0.4
      baz=98
MCK   McKinley          150.70 310  P       PKiKP   05 34 30.6   0.0
      baz=101
M22K  Willow            150.80 306  P       PKiKP   05 34 31.1  +0.3
      baz=104
NEA2  Nenana            150.91 311  P       PKPbc   05 34 30.4  +0.1
      baz=100
TRF   Thorofare Moun    151.24 309  P       PKPbc   05 34 31.6  +0.2
      baz=101
H23K  Yukon River       151.29 314  P       PKPbc   05 34 31.8  +0.5
      baz=97
TOLK  Toolik Lake Re    151.52 320  P       PKPbc   05 34 32.2  +0.5
      baz=92
BPAW  Bear Paw Mtn.     151.66 310  P       PKPbc   05 34 32.4  +0.3
      baz=99
MLY   Manley            151.69 312  P       PKPbc   05 34 31.2  -1.0
      baz=98
COLD  Coldfoot          151.69 317  P       PKiKP   05 34 33.0  +0.6
      baz=94
M20K  Styx River        152.23 305  P       PKPbc   05 34 33.6   0.0
      baz=102
H21K  Melozitna Rive    152.61 313  P       PKPbc   05 34 34.6  +0.4
      baz=95
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*AEIC **30** 05:40:11±3.8, 52°.4N±0°.2×173°.8W±0°.1, h208^{km}±5^{km}, Error ellipse: s-maj=25.1km s-min=9.5km az=162.0*

*NEIC **30** 05:40:11.7±1.4, 52°.8N±0°.2×173°.8W±0°.1, h209^{km}±6^{km}, mb4.4/71, ML3.9/6, ML3.6/22(AEIC), Error ellipse: s-maj=24.5km s-min=9.3km az=165.0*

*IDC **30** 05:40:13.3±2.5, 53°.02N×173°.91W, h224^{km}±25^{km}, mb3.2/7, mbtmp3.9/9, Error ellipse: s-maj=35.2km s-min=16.2km az=152.0*

ISC 30 05:40:11.3±0.6**, 52°.8N**±0°.1×**173°.65W**±0°.07**, h200**^{km}**, n213,** σ**0^{s}.86**/204**, mb4.1**/13**, Andreanof Islands**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC       h  m  s    ISC
KOSE  Korovin Southe      0.47 211           Pn      05 40 40.0  +1.6
KOSE                                         Sn      05 41 03.0  +3.7
KOKL  Mount Kliuchef      0.54 219           Pn      05 40 40.4  +1.7
ATKA  Atka Island         0.64 212           Pn      05 40 40.0  +1.1
ATKA                                         Sn      05 41 02.0  +1.7
GSTR  Great Sitkin T      1.61 247           Pn      05 40 46.9  +0.8
GSMY  Great Sitkin M      1.64 245           Pn      05 40 46.7  +0.5
GSTD  Great Sitkin T      1.68 247           Pn      05 40 47.4  +0.6
GSTD                                         Sn      05 41 14.7  +0.6
ADK   Adak                2.05 246           Pn      05 40 50.7  +0.4
ADK                                  IAML            05 41 22.3
      984nm,0.2s
ADK   Adak                2.05 246           Sn      05 41 20.8  +0.1
KICM  Kanaga Island       2.33 251           Pn      05 40 53.8  +0.6
KIWB  Kanaga Island       2.33 249           Pn      05 40 53.9  +0.6
KIKV  Kanaga Island       2.33 249           Pn      05 40 54.0  +0.7
KIMD  Kanaga Island       2.42 247           Pn      05 40 54.7  +0.5
KIMD                                         Sn      05 41 27.5  -0.1
TAPA  Tanaga Point A      2.72 252           Pn      05 40 58.3  +0.5
TAFP  Tanaga Falls P      2.79 254           Pn      05 40 59.0  +0.5
TASE  Tanaga Southea      2.84 253           Pn      05 41 00.1  +1.0
NIKH  Nikolski High       2.92  84   Pn      Pn      05 41 00.8  +0.9
GAEA  Gareloi East        3.28 255           Pn      05 41 04.8  +0.6
GALAA Gareloi Lava P      3.30 255           Pn      05 41 04.9  +0.5
GASW  Gareloi Southw      3.34 255           Pn      05 41 05.2  +0.3
UNV   Unalaska Valle      4.42  73   Pn      Pn      05 41 18.7  +0.4
UNV   Unalaska Valle      4.42  73   P       Pn      05 41 19.5  +1.2
      baz=254
AKUT  Akutan              4.91  70   Pn      Pn      05 41 25.9  +1.5
AKUT                                 IAML            05 42 30.1
      comp=E,47nm,0.7s
FALS  False Pass          6.42  67   Pn      Pn      05 41 43.4  -0.5
SHEM  Shemya Is, Ala      7.44 275   P       Pn      05 41 57.9  +0.8
      comp=E,16nm,0.7s,baz=85,slow=3.1,SNR=4.5
SDPT  Sand Point          8.18  66   Pn      Pn      05 42 05.4  -1.3
SDPT  Sand Point          8.18  66   P       Pn      05 42 05.4  -1.3
      baz=255
CNBA  Chernabura Isl      8.58  70   Pn      Pn      05 42 11.2  -0.8
CHNA  Chernabura Isl      8.58  70   P       Pn      05 42 10.2  -1.7
      baz=259,SNR=5.7
CHIR  Chirikof Islan     10.97  67   Pn      Pn      05 42 42.0  -0.9
SII   Sitkinak Islan     11.89  64   Pn      Pn      05 42 52.6  -2.0
OHAK  Old Harbor         12.51  61   Pn      Pn      05 43 00.6  -1.7
OHAK  Old Harbor         12.51  61   P       Pn      05 43 00.2  -2.1
      baz=256,SNR=7.5
N18K  Kilae Creek        12.55  44           Pn      05 43 02.6  -0.3
N18K  Kilae Creek        12.55  44   P       P       05 43 07.5  +0.8
      baz=238,SNR=5.3
Q19K  Cape Douglas,      12.80  53           Pn      05 43 05.7  -0.4
Q19K  Cape Douglas,      12.80  53   P       Pn      05 43 06.9  +0.8
      baz=249
O19K  Port Alsworth      12.99  47   Pn      Pn      05 43 08.3   0.0
KDAK  Kodiak Island      13.00  59   P       Pn      05 43 05.7  -2.9
      comp=E,13nm,0.2s,baz=209,slow=0.7,SNR=52
KDAK                                 S       S       05 45 23.5   -10
      comp=E,2.8nm,0.7s,baz=313,slow=16,SNR=1.6
KDAK  Kodiak Island      13.00  59           Pn      05 43 07.8  -0.7
N19K  Bonanza Creek      13.21  45   Pn      Pn      05 43 11.3  +0.1
N19K  Bonanza Creek      13.21  45   P       Pn      05 43 12.8  +1.5
      baz=240,SNR=10
Q20K  Shuyak Island      13.32  55   P       Pn      05 43 12.3  -0.2
      baz=252
O20K  Slope Mountain     13.71  49   P       P       05 43 20.2  +0.4
      baz=246
L19K  White Mountain     13.79  39           Pn      05 43 18.6  +0.3
L19K  White Mountain     13.79  39   P       P       05 43 22.4  +1.9
      baz=234,SNR=11
RSO   Redoubt South      13.81  48   Pn      Pn      05 43 18.7  -0.1
M19K  Big River Lodg     13.81  41           Pn      05 43 19.1  +0.4
M19K  Big River Lodg     13.81  41   P       P       05 43 21.6  +0.9
      baz=236,SNR=20
TTA   Tatalina           13.81  35           Pn      05 43 18.8  +0.1
TTA   Tatalina           13.81  35   P       Pn      05 43 19.0  +0.3
      baz=230
HOM   Homer              14.02  52   Pn      Pn      05 43 21.2   0.0
HOM   Homer              14.02  52   P       P       05 43 22.6  -0.4
      baz=249
CNPM  China Poot         14.17  53   P       Pn      05 43 23.5  +0.4
M20K  Styx River         14.31  42           Pn      05 43 24.6  -0.3
M20K  Styx River         14.31  42   P       P       05 43 28.0  +1.7
      baz=239
L20K  Farewell, AK       14.33  39   P       Pn      05 43 25.7  +0.7
      baz=235
BRLK  Bradley Lake       14.42  52   Pn      Pn      05 43 25.3  -0.8
SPU   Mount Spurr        14.43  46           P       05 43 27.7  +0.1
BRSE  Bradley Lake S     14.48  52   P       Pn      05 43 26.6  -0.3
      baz=250
K20K  Telida             14.77  36           Pn      05 43 30.7  +0.3
K20K  Telida             14.77  36   P       Pn      05 43 31.0  +0.6
      baz=232
O22K  Cooper Landing     15.21  50   P       Pn      05 43 34.9  -0.8
O22K  Cooper Landing     15.21  50   P       Pn      05 43 35.2  -0.5
      baz=249,SNR=5.7
SEW   Seward             15.21  51   P       Pn      05 43 34.2  -1.5
SEW   Seward             15.21  51   P       Pn      05 43 34.4  -1.3
      baz=251,SNR=11
PPLA  Purkeypile         15.21  40   P       P       05 43 37.1  +0.8
PPLA                                 IAmb    IAmb    05 43 41.8
      comp=Z,14nm,0.6s
J20K  Nowinta River      15.25  34   P       Pn      05 43 36.3  +0.1
J20K                                 IAmb    IAmb    05 43 53.4
      comp=Z,7.6nm,0.4s
J20K  Nowinta River      15.25  34   P       P       05 43 36.6   0.0
      baz=230
RC01  Rabbit Creek A     15.42  48           Pn      05 43 37.9  -0.4
RC01                                 IAmb    IAmb    05 43 43.1
      comp=Z,8.3nm,0.4s
RC01  Rabbit Creek A     15.42  48   P       Pn      05 43 38.5  +0.2
      baz=247
CUT   Chulitna           15.74  43   P       P       05 43 41.4  -0.6
PMR   Palmer             15.88  46   P       Pn      05 43 44.4  +0.5
PMR   Palmer             15.88  46   P       P       05 43 43.6  +0.1
      baz=246
GHO   Glory Hole Cre     16.04  46   P       P       05 43 46.0  +0.5
KNK   Knik Glacier       16.11  48   P       P       05 43 45.7  -0.4
KNK                                  IAmb    IAmb    05 43 48.3
      comp=Z,12nm,0.5s
KNK   Knik Glacier       16.11  48   P       P       05 43 46.3  +0.1
      baz=248,SNR=6.2
P23K  Montague Islan     16.16  53   P       P       05 43 46.4  -0.3
      baz=254
TRF   Thorofare Moun     16.24  40   P       Pn      05 43 48.4  +0.1
TRF                                  IAmb    IAmb    05 43 52.3
      comp=Z,11nm,0.5s
TRF   Thorofare Moun     16.24  40   P       P       05 43 48.2  +0.5
      baz=239,SNR=10
SML   Sawmill            16.32  46           P       05 43 49.0  +0.6
SML                                  IAmb    IAmb    05 43 52.8
      comp=Z,9.9nm,1.1s
SML   Sawmill            16.32  46   P       P       05 43 49.0  +0.6
      baz=247
BPAW  Bear Paw Mtn.      16.32  37   P       P       05 43 48.5  +0.1
BPAW                                 IAmb    IAmb    05 43 53.8
      comp=Z,13nm,0.9s
BPAW  Bear Paw Mtn.      16.32  37   P       Pn      05 43 49.2   0.0
      baz=236,SNR=12
GLI   Glacier Island     16.56  50   P       P       05 43 50.2  -0.8
      baz=252
M23K  Glacier View       16.58  47   P       Pn      05 43 52.1  -0.1
      baz=248,SNR=15
WAT1  Susitna Watana     16.64  43   P       P       05 43 52.3  +0.3
      baz=244
H21K  Melozitna Rive     16.65  31   P       P       05 43 52.2  +0.2
H21K  Melozitna Rive     16.65  31   P       P       05 43 52.2  +0.2
      baz=229
HIN   Hinchinbrook I     16.70  52   P       P       05 43 53.0  +0.4
SCM   Sheep Creek Mo     16.77  47   P       P       05 43 52.6  -0.8
SCM                                  IAmb    IAmb    05 44 01.8
      comp=Z,11nm,1.0s
SCM   Sheep Creek Mo     16.77  47   P       P       05 43 52.7  -0.8
      baz=248
RND   Reindeer           16.78  41           P       05 43 53.3  -0.3
FID   Port Fidalgo       16.81  51   P       P       05 43 53.3  -0.6
WAT6  Susitna Watana     16.88  44   P       P       05 43 54.3  -0.4
      baz=246,SNR=12
MCK   McKinley           16.90  40   P       P       05 43 54.4  -0.5
MCK   McKinley           16.90  40   P       P       05 43 55.3  +0.4
      baz=240,SNR=13
MLY   Manley             16.94  35   P       P       05 43 55.1  -0.1
MLY                                  IAmb    IAmb    05 43 60.0
      comp=Z,12nm,0.5s
MLY   Manley             16.94  35   P       Pn      05 43 56.0  -0.5
      baz=234,SNR=13
EYAK  Cordova Ski Ar     17.10  52   P       P       05 43 57.3  +0.3
      baz=254
DHY   Denali Highway     17.23  43   P       P       05 43 58.5  -0.1
DHY   Denali Highway     17.23  43   P       P       05 43 58.6   0.0
      baz=245,SNR=37
DIV   Divide             17.25  50   P       P       05 43 58.5  -0.2
DIV                                  IAmb    IAmb    05 44 08.4
      comp=Z,18nm,1.4s
KLU   Klutina            17.29  49   P       P       05 43 58.9  -0.2
KLU                                  IAmb    IAmb    05 44 01.2
      comp=Z,7.7nm,0.6s
KLU   Klutina            17.29  49   P       Pn      05 44 00.3  -0.4
      baz=251,SNR=7.1
NEA2  Nenana             17.29  37   P       P       05 43 58.2  -0.8
NEA2                                 IAmb    IAmb    05 43 59.9
      comp=Z,14nm,1.4s
NEA2  Nenana             17.29  37   P       P       05 43 58.8  -0.2
      baz=238,SNR=7.2
M24K  Tolsona, Glenn     17.38  47   P       P       05 43 60.0  -0.1
M24K                                 IAmb    IAmb    05 44 06.5
      comp=Z,12nm,0.6s
M24K  Tolsona, Glenn     17.38  47   P       P       05 44 00.5  +0.5
      baz=249
I23K  Minto, Yukon-K     17.49  35   P       P       05 44 01.1   0.0
I23K                                 IAmb    IAmb    05 44 07.3
      comp=Z,12nm,0.6s
I23K  Minto, Yukon-K     17.49  35   P       P       05 44 02.1  +0.9
      baz=236,SNR=9.0
WRH   Wood River Hil     17.59  38   P       P       05 44 01.3  -1.0
BMRM  Bremner River      17.75  51   P       P       05 44 04.0  -0.2
BMRM                                 IAmb    IAmb    05 44 09.1
      comp=Z,8.9nm,0.8s
BMRM  Bremner River      17.75  51   P       P       05 44 05.4  +1.2
      baz=255,SNR=7.5
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HMT	Hamilton	17.77	53	P	P	05 44 03.9	-0.5
CCB	Clear Creek Bu	17.79	38	P	P	05 44 03.2	-1.2
CCB				IAmb	IAmb	05 44 06.5	
	comp=Z,10.0nm,0.8s						
MDM	Murphy Dome	17.79	37	P	P	05 44 03.3	-1.1
MDM				IAmb	IAmb	05 44 08.1	
	comp=Z,9.0nm,0.8s						
H23K	Yukon River	17.81	33	P	P	05 44 05.2	+0.5
H23K	Yukon River	17.81	33	P	P	05 44 05.4	+0.7
	baz=234,SNR=8.9						
COLA	College	17.88	37	P	P	05 44 05.4	0.0
COLA				IAmb	IAmb	05 44 09.4	
	comp=Z,17nm,0.8s						
HARP	HAARP	17.92	46	P	P	05 44 05.1	-0.9
	baz=250						
N25K	Chitina, Valde	17.93	49	P	Pn	05 44 07.6	-0.6
N25K				IAmb	IAmb	05 44 09.9	
	comp=Z,6.2nm,0.8s						
N25K	Chitina, Valde	17.93	49	P	Pn	05 44 07.9	-0.4
	baz=253,SNR=5.3						
SUCK	Suckling Hills	17.95	54	P	P	05 44 07.1	+0.8
SUCK				IAmb	IAmb	05 44 25.5	
	comp=Z,11nm,0.9s						
PAX	Paxson	17.99	44	P	P	05 44 06.4	-0.4
PAX	Paxson	17.99	44	P	P	05 44 07.3	+0.6
	baz=248,SNR=11						
HDA	Harding Lake	18.00	39	P	P	05 44 06.2	-0.5
HDA	Harding Lake	18.00	39	P	P	05 44 05.9	-0.8
	baz=242,SNR=34						
K24K	Donnelly Dome	18.19	42	P	P	05 44 08.9	0.0
	baz=245,SNR=28						
IL31		18.19	38	P	P	05 44 07.8	-0.9
ILAR	Eielson Array	18.19	38	P	P	05 44 06.7	-2.1
	comp=Z,5.4nm,0.4s,baz=234,slow=11,SNR=38						
GLB	Gilahina Butte	18.25	50	IAmb	IAmb	05 44 13.2	
	comp=Z,7.6nm,0.5s						
VRDI	Verde Repeater	18.36	51	IAmb	IAmb	05 44 15.0	
	comp=Z,7.3nm,0.4s						
H24K	Noodor Dome	18.38	35	IAmb	IAmb	05 44 12.7	
	comp=Z,15nm,0.8s						
H24K	Noodor Dome	18.38	35	P	P	05 44 11.2	+0.2
	baz=236,SNR=22						
COLD	Coldfoot	18.47	29	P	P	05 44 11.2	-0.6
COLD	Coldfoot	18.47	29	P	Pn	05 44 15.6	+1.2
	baz=229,SNR=5.9						
RIDG	Independent Ri	18.54	42	P	P	05 44 12.2	-0.5
	baz=246,SNR=24						
MCARA	McCarthy VSAT	18.60	50		P	05 44 12.9	-0.3
MCARA				IAmb	IAmb	05 44 18.6	
	comp=Z,10.0nm,0.9s						
MCARA	McCarthy VSAT	18.60	50	P	Pn	05 44 17.0	+1.1
	baz=255						
J25K	Salcha River,	18.70	40	P	P	05 44 13.5	-0.9
	baz=243,SNR=34						
DOT	Dot Lake	18.83	43	IAmb	IAmb	05 44 16.5	
	comp=Z,22nm,1.0s						
MESA	MESA	18.87	54	P	P	05 44 17.2	+0.7
MESA	MESA	18.87	54	P	P	05 44 17.1	+0.7
	baz=260,SNR=5.7						
M26K	Nabesna, AK	18.88	47	P	P	05 44 15.3	-1.0
M26K				IAmb	IAmb	05 44 21.3	
	comp=Z,5.6nm,0.5s						
M26K	Nabesna, AK	18.88	47	P	P	05 44 15.9	-0.4
	baz=253,SNR=7.7						
L26K	Log Cabin Wild	18.92	45	P	P	05 44 16.2	-0.5
L26K				IAmb	IAmb	05 44 17.7	
	comp=Z,8.8nm,0.6s						
L26K	Log Cabin Wild	18.92	45	P	P	05 44 17.0	+0.3
	baz=250,SNR=12						
SCRK	Sand Creek	18.99	42	P	P	05 44 16.9	-0.7
SCRK	Sand Creek	18.99	42	P	P	05 44 16.9	-0.7
	baz=247,SNR=71						
CTG	Chitna Glacier	19.31	52	P	P	05 44 20.4	-0.6
	baz=259						
J26L	Joseph Creek	19.36	41	P	P	05 44 21.3	-0.2
	baz=246,SNR=29						
M27K	Edge Creek, AK	19.37	48	IAmb	IAmb	05 44 27.5	
	comp=Z,5.2nm,0.6s						
M27K	Edge Creek, AK	19.37	48	P	P	05 44 21.3	-0.4
	baz=254						
TOLK	Toolik Lake Re	19.59	26	P	P	05 44 23.8	-0.1
TOLK				IAmb	IAmb	05 44 26.5	
	comp=Z,6.8nm,0.6s						
TOLK	Toolik Lake Re	19.59	26	P	P	05 44 24.4	+0.5
	baz=227,SNR=5.9						
L27K	Beaver Creek,	19.59	46	P	P	05 44 23.9	-0.1
	baz=252,SNR=9.6						
BCAR	Beaver Creek A	19.61	46	P	P	05 44 23.5	-0.6
K27K	Chicken	19.79	43	IAmb	IAmb	05 44 28.5	
	comp=Z,10nm,0.7s						
K27K	Chicken	19.79	43	P	P	05 44 25.9	-0.2
	baz=250						
YUK3	Moose Creek	19.88	50	P	P	05 44 27.9	+0.6
	baz=257,SNR=10						
PNL	Peninsula	20.09	56	P	P	05 44 29.7	+0.4
	baz=264						
YUK8	Steele Glacier	20.12	52	P	P	05 44 30.4	+0.5
	baz=260						
EGAK	Eagle	20.43	41	P	P	05 44 32.6	-0.2
	baz=249,SNR=5.9						
YUK4	Talbot Arm	20.66	52	P	P	05 44 36.2	+0.7
	baz=260						
YUK6	Outpost Mounta	20.74	53	P	P	05 44 36.1	-0.3
	baz=262						
DAWY	Dawson	20.92	44	IAmb	IAmb	05 44 38.7	
	comp=Z,6.0nm,0.6s						
DAWY	Dawson	20.92	44	P	P	05 44 37.9	-0.2
	baz=253,SNR=15						
HYT	Haines Junctio	21.14	53	P	P	05 44 40.3	-0.2
	baz=263						
N30M	Aishikik Lake	21.42	52	P	P	05 44 43.0	-0.4
	baz=262						
I29M	Ogilvie Camp,	21.76	41	P	P	05 44 45.2	-1.5
	baz=251,SNR=6.1						
MMPY	Sheldon Lake,	24.27	49	P	P	05 45 09.6	-0.1
	baz=265						
INK	Inuvik	24.51	35	P	P	05 45 11.2	-0.5
	comp=Z,1.6nm,0.3s,baz=230,slow=7.6,SNR=9.5						
	comp=Z,1.6nm,0.3s						
INK	Inuvik	24.51	35	IAmb	IAmb	05 45 11.6	
	comp=Z,3.6nm,1.1s						
INK	Inuvik	24.51	35	P	P	05 45 11.4	-0.4
	baz=250						
YKA	Yellowknife Ar	31.96	49	P	P	05 46 17.2	-0.7
	comp=Z,0.3nm,0.4s,baz=277,slow=7.3,SNR=6.9						
	comp=Z,0.3nm,0.4s						
B08A	Colville Reser	34.09	75		P	05 46 36.7	0.0
B08A				IAmb	IAmb	05 46 38.6	
	comp=Z,6.1nm,0.8s						
F07A	Phinny Hill Vi	34.97	79	P	P	05 46 42.1	-2.0
F07A				IAmb	IAmb	05 47 00.5	
	comp=Z,4.4nm,0.7s						
C09A	Chrisman Ranch	34.99	75	P	P	05 46 43.9	-0.4
EDM	Edmonton	35.36	64	P	P	05 46 45.9	-1.5
EDM				IAmb	IAmb	05 46 48.5	
	comp=Z,6.3nm,0.4s						
NEW	Newport	35.44	74	P	P	05 46 47.1	-1.1
NEW				IAmb	IAmb	05 46 49.5	
	comp=Z,5.8nm,0.7s						
NEW	Newport	35.44	74	P	P	05 46 48.8	+0.7
	baz=298						
H11N2	WAKE ISLAND Hy	36.25	212	T	T	06 24 19.0	
	baz=18,slow=76,SNR=8.1						
H11N3	WAKE ISLAND Hy	36.26	212	T	T	06 24 24.2	
	baz=18,slow=76,SNR=6.4						
H11N1	WAKE ISLAND Hy	36.27	212	T	T	06 24 20.5	
	baz=18,slow=76,SNR=6.4						
H11S1	WAKE ISLAND Hy	37.46	212	T	T	06 25 23.7	
	baz=17,slow=76,SNR=8.5						
H11S2	WAKE ISLAND Hy	37.47	212	T	T	06 25 26.9	
	baz=17,slow=76,SNR=5.3						
H11S3	WAKE ISLAND Hy	37.48	212	T	T	06 25 23.7	
	baz=17,slow=76,SNR=4.4						
MSO	Missoula	38.02	74	P	P	05 47 09.9	-0.1
MSO	Missoula	38.02	74	P	P	05 47 10.4	+0.3
	baz=301,SNR=6.2						
EMB	Emerald Bay	38.84	89	P	P	05 47 14.7	-2.4
EMB				IAmb	IAmb	05 47 15.4	
	comp=Z,5.9nm,0.5s						
VCNR	Virginia City	38.91	88	P	P	05 47 17.0	-0.6
PNTR	Pine Nut	39.07	88	P	P	05 47 19.3	+0.3
PNTR				IAmb	IAmb	05 47 23.4	
	comp=Z,6.7nm,0.7s						
HLID	Hailey	39.53	79	P	P	05 47 23.9	+1.2
	baz=304						
EGMT	Eagleton	39.82	70	P	P	05 47 25.4	+0.6
	baz=301						
BOZ	Bozeman (W)	40.04	75	P	P	05 47 26.4	-0.4
BOZ	Bozeman (W)	40.04	75	P	P	05 47 27.1	+0.3
	baz=303,SNR=5.7						
NVAR	Mina Array Bea	40.27	88	P	P	05 47 30.5	+1.6
	comp=Z,0.5nm,0.6s,baz=304,slow=7.6,SNR=6.7						
	comp=Z,0.5nm,0.6s						
RLMT	Red Lodge	41.68	74	P	P	05 47 39.5	-0.8
RLMT	Red Lodge	41.68	74	P	P	05 47 40.8	+0.5
	baz=304						
R11A	Troy Canyon, C	41.98	86	P	P	05 47 43.6	+0.9
	baz=309						
TPNV	Topopah Spring	42.47	88	P	P	05 47 47.8	+1.1
TPNV	Topopah Spring	42.47	88	P	P	05 47 48.2	+1.5
	baz=310						
BW06	Boulder Array	42.88	77	P	P	05 47 50.5	+0.5
BW06	Boulder Array	42.88	77	P	P	05 47 50.3	+0.3
	baz=306,SNR=5.3						
PD31	Pinedale Array	42.88	77	P	P	05 47 50.3	+0.3
PDAR	Pinedale Array	42.88	77	P	P	05 47 50.1	+0.1
	comp=Z,1.7nm,0.6s,baz=297,slow=4.5,SNR=18						
	comp=Z,1.7nm,0.6s						
PDAR	Pinedale Array	42.88	77	P	P	05 47 49.8	-0.2
RSSD	Black Hills	45.30	72	P	P	05 48 08.6	-0.6
	baz=306						
PV13	Radium Mtn., P	46.18	81	P	P	05 48 16.1	-0.1
TXAR	Lajitas Array	55.34	86	P	P	05 49 24.8	+0.4
	comp=Z,0.2nm,0.4s,baz=307,slow=6.0,SNR=6.6						
TXAR				ScP	ScP	05 53 59.3	-2.4
	comp=Z,0.4nm,0.8s,baz=301,slow=3.0,SNR=6.0						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	55.34	86	P	P	05 49 23.9	-0.4
WRA	Warramunga Arr	85.25	228	P	P	05 52 24.0	-1.3
	comp=Z,0.3nm,0.6s,baz=31,slow=5.5,SNR=2.8						
	comp=Z,0.3nm,0.6s						
ASAR	Alice Springs	88.69	227	P	P	05 52 41.2	-0.5
	comp=Z,0.6nm,0.7s,baz=26,slow=5.0,SNR=7.1						
	comp=Z,0.6nm,0.7s						

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*NEIC **30** 05:41:42.9±1.7, 25°.76N±0°.09×142°.0E±0°.2, h83^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=27.8km s-min=11.4km az=74.0*

*IDC **30** 05:41:43.6±1.6, 25°.65N×141°.90E, h86^{km}±15^{km}, mb3.5/9, mbtmp3.8/10, MS3.5/2, Error ellipse: s-maj=33.4km s-min=15.9km az=88.0*

ISC 30 05:41:44.6±0.8, **25°.76N**±0°.08×**142°.0E**±0°.2, **h100**^{km}, **n36**, σ**0^{s}.90**/28, **mb4.0**/14, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.34	8	P	Pn	05 42 06.8	-2.2
	216nm,0.5s,baz=312,slow=24,SNR=23						
JCJ				S	Sn	05 42 27.9	+0.5
	109nm,0.3s,baz=246,slow=20,SNR=10						
JHJ2	Mitsune	7.56	346	Pn	Pn	05 43 30.4	-1.6
JNU	Nakatsue	12.13	310	LR	LR	05 47 49.1	
	comp=Z,898nm,19.5s,baz=107,slow=30						
KSRS	Korea Array	16.68	318	P	P	05 45 33.2	+0.4
	3.4nm,0.8s,baz=131,slow=11,SNR=18						
KSRS				LR	LR	05 50 29.4	
	comp=Z,36nm,20.8s,baz=135,slow=31						
KSAR	Wonju Array Be	16.70	318		Pn	05 45 31.9	-0.5
KS19	Wonju Array Si	16.75	318		Pn	05 45 32.1	-0.9
KS19				IAmb	IAmb	05 45 35.8	
	comp=Z,24nm,1.4s						
H11N2	WAKE ISLAND Hy	23.74	100	T	T	06 12 06.3	
	baz=287,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	23.74	100	T	T	06 12 10.5	
	baz=287,slow=74,SNR=25						
H11N3	WAKE ISLAND Hy	23.75	100	T	T	06 12 07.4	
	baz=287,slow=74,SNR=38						
H11S3	WAKE ISLAND Hy	23.99	103	T	T	06 12 26.4	
	baz=291,slow=75,SNR=186						
H11S1	WAKE ISLAND Hy	23.99	102	T	T	06 12 26.3	
	baz=291,slow=75,SNR=189						
H11S2	WAKE ISLAND Hy	24.00	103	T	T	06 12 28.2	
	baz=291,slow=75,SNR=248						
SONM	Songino Array	35.55	318	P	P	05 48 32.7	+0.6
	comp=Z,0.8nm,0.6s,baz=125,slow=5.9,SNR=5.2						
	comp=Z,0.8nm,0.6s						
SONM	Songino Array	35.55	318	IAmb	IAmb	05 48 35.2	
	comp=Z,0.8nm,0.7s						
WB0	Warramunga Arr	45.85	190	P	P	05 49 56.9	0.0
WB0				IAmb	IAmb	05 49 58.5	
	comp=Z,7.3nm,0.9s						
WR0	Warramunga Arr	46.02	190	P	P	05 49 57.8	-0.4
WR0				IAmb	IAmb	05 49 59.4	
	comp=Z,4.6nm,0.8s						
WRAB	Tennant Creek	46.02	190	P	P	05 49 56.8	-1.3
WB2	Warramunga Arr	46.03	190	P	P	05 49 58.1	-0.2
WRA	Warramunga Arr	46.03	190	P	P	05 49 57.5	-0.7
	comp=Z,7.8nm,0.8s,baz=8.3,slow=8.6,SNR=42						
	comp=Z,7.8nm,0.8s						
WRA	Warramunga Arr	46.03	190	P	P	05 49 57.7	-0.6
ASAR	Alice Springs	49.75	190	P	P	05 50 27.2	+0.3
	comp=Z,0.5nm,0.7s,baz=11,slow=12,SNR=6.3						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	49.75	190	P	P	05 50 26.5	-0.5
MK31	Makanchi Array	51.18	310	P	P	05 50 37.8	+0.2
MKAR	Makanchi Array	51.18	310	P	P	05 50 38.0	+0.5
	comp=Z,0.5nm,0.6s,baz=92,slow=11,SNR=3.7						
	comp=Z,0.5nm,0.6s						
MKAR	Makanchi Array	51.18	310	P	P	05 50 36.7	-0.9
KURK	Kurchatov	53.79	315	P	P	05 50 56.6	-0.1
KURK				IAmb	IAmb	05 50 59.9	
	comp=Z,4.0nm,1.1s						
STKA	Stephens Creek	57.31	180	P	P	05 51 21.6	-0.5
	comp=Z,1.6nm,0.7s,baz=315,slow=11,SNR=1.9						
	comp=Z,1.6nm,0.7s						
STKA	Stephens Creek	57.31	180	IAmb	IAmb	05 51 22.6	
	comp=Z,0.8nm,1.3s						
BBOO	Buckleboo	58.52	186	P	P	05 51 30.0	-0.4
BRVK	Borovoye	58.96	318	P	P	05 51 33.1	-0.2
BRVK				IAmb	IAmb	05 51 37.3	
	comp=Z,2.5nm,0.8s						
ILAR	Eielson Array	58.97	28	P	P	05 51 34.8	+1.5
	comp=Z,0.3nm,1.1s,baz=251,slow=5.6,SNR=1.6						
	comp=Z,0.3nm,1.1s						
KKAR	Karatay Array	59.71	306	P	P	05 51 39.5	+0.7
MCARA	McCarthy VSAT	60.58	32	P	P	05 51 43.6	-0.8
MCARA				IAmb	IAmb	05 51 44.9	
	comp=Z,3.3nm,0.7s						
YKA	Yellowknife Ar	73.41	28	P	P	05 53 06.6	+1.2
	comp=Z,0.4nm,0.6s,baz=295,slow=6.0,SNR=2.1						
	comp=Z,0.4nm,0.6s						
FINES	FINESS Array B	79.06	334	P	P	05 53 38.9	+1.4
	comp=Z,0.7nm,0.5s,baz=70,slow=6.3,SNR=7.4						
	comp=Z,0.7nm,0.5s						
NOA	NORSAR Array B	84.78	338	P	P	05 54 07.9	+0.4
	comp=Z,0.2nm,0.4s,baz=48,slow=5.3,SNR=2.4						
	comp=Z,0.2nm,0.4s						

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*IDC **30** 05:53:04.1±1.2, 14°.06S×166°.44E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML3.6/1, MS3.0/2, Error ellipse: s-maj=42.9km s-min=27.3km az=121.0*

ISC 30 05:53:09.6±1.3, **14°.3S**±0°.1×**166°.5E**±0°.2, **h35**^{km}, **n8**, σ**1^{s}.49**/8, **mb3.8**/5, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.74	181	Pn	Pn	05 55 00.6	+0.6
	0.7nm,0.3s,baz=49,slow=20,SNR=2.2						
DZM				Sn	Sn	05 56 24.5	-2.0
	0.4nm,0.3s,baz=140,slow=21,SNR=3.1						
DZM				LR	LR	05 57 14.4	
	comp=Z,109nm,18.1s,baz=206,slow=31						
	1.9nm,0.3s						
MSVF	Nonsavu	11.59	109	LR	LR	05 59 04.9	
	comp=Z,70nm,19.6s,baz=298,slow=31						
STKA	Stephens Creek	28.75	228	P	P	05 59 05.5	+1.5
	1.5nm,0.5s,baz=52,slow=12,SNR=3.3						
	1.5nm,0.5s						
WRA	Warramunga Arr	31.25	255	P	P	05 59 25.3	-1.0
	0.4nm,0.8s,baz=86,slow=9.5,SNR=1.8						
	0.4nm,0.8s						
ASAR	Alice Springs	32.17	248	P	P	05 59 33.3	-1.0
	0.2nm,0.5s,baz=72,slow=9.1,SNR=4.7						
	0.2nm,0.5s						
VNDA	Vanda	63.29	181	P	P	06 03 35.7	+1.3
	0.7nm,0.8s,baz=340,slow=5.3,SNR=2.7						
	0.7nm,0.8s						
ILAR	Eielson Array	86.33	18	P	P	06 05 46.8	-0.8
	0.8nm,0.7s,baz=233,slow=5.6,SNR=11						
	0.8nm,0.7s						
ARCES	ARCESS Array B	119.64	345	PKP	PKPdf	06 11 54.9	-0.3
	1.8nm,0.8s,baz=42,slow=1.5,SNR=6.1						

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*IDC **30** 05:58:56.8±1.1, 32°.17S×71°.66W, h0^{km}, mb4.0/7, mbtmp3.9/12, ML4.1/4, MS3.4/7, Error ellipse: s-maj=36.0km s-min=19.3km az=103.0*

*NEIC **30** 05:59:00.6, 32°.25S×71°.79W, h34^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.53; M$_{\theta\theta}$0.16; M$_{\phi\phi}$-0.69; M$_{r\theta}$0.24; M$_{\theta\phi}$-0.20; M$_{\phi r}$-1.20; Fault plane solution: M$_0$1.39000×10^{15} NP1:ϕ_s39.33000°, δ18.47000°, λ137.10000°. NP2:ϕ_s170.73000°, δ77.55000°, λ76.26000°. Principal axes: T 1.3460, Plg55.0000°, Azm64.0000°; N 0.0774, Plg13.0000°, Azm174.0000°; P -1.4234, Plg31.0000°, Azm272.0000°;*

*SJA **30** 05:59:00.6±1.9, 32°.23S×71°.63W, h10^{km}±10^{km}, ML4.1, MW4.1*

*NEIC **30** 05:59:01.1±1.5, 32°.27S±0°.03×71°.80W±0°.07, h26^{km}±3^{km}, mb4.3/13, Mwr4.0/39, ML4.3(GUC), Error ellipse: s-maj=8.6km s-min=4.6km az=92.0*

*GUC **30** 05:59:01.0±0.9, 32°.23S×71°.59W, h41^{km}±3^{km}, ML4.3*

ISC 30 05:59:00.9±0.8, **32°.22S**±0°.02×**71°.69W**±0°.04, **h28**^{km}±6^{km}, **n109**, σ**1^{s}.27**/126, **mb4.1**/10, **MS3.6**/3, **6D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.48	136	Pn	Pn	05 59 11.2	-0.8
VA06				Sg	Sn	05 59 18.4	-1.0
VA06	Catapilco	0.48	136	⇓ *i*P	Pn	05 59 11.5	-0.4
VA06				*i* S	Sn	05 59 18.4	-1.0
VA06				IAML		05 59 19.8	
	comp=E,91µm,0.4s						
VA01	Torpederas	0.80	177		Pb	05 59 15.9	-0.4
VA01				Sg	Sb	05 59 25.6	-1.1
VA01	Torpederas	0.80	177	*e*P	Pb	05 59 16.0	-0.3
VA01	Torpederas	0.80	177	*e*P	Pb	05 59 16.0	-0.3
VA01				*e*S	Sn	05 59 27.3	-0.1
ROCH	El Roble	0.95	143	⇓ *i*P	Pn	05 59 18.6	0.0
ROCH				⇓ *i*P	Pn	05 59 18.5	0.0
ROCH				*i* S	Sn	05 59 30.7	-0.6
ROCH				*i* S	Sb	05 59 31.0	-0.1
ROCH				IAML		05 59 34.7	
	comp=N,17µm,0.3s						
ROC1	El Roble	0.95	143		Pn	05 59 18.6	0.0
ROC1				Sg	Sn	05 59 31.0	-0.4
ROC1	El Roble	0.95	143	*e*P	Pn	05 59 18.6	0.0
ROC1				*e*S	Sn	05 59 31.1	-0.2
VA03	San Esteban	1.11	120		Pb	05 59 21.1	-0.5
VA03	San Esteban	1.11	120	⇓ *i*P	Pb	05 59 21.0	-0.5
VA03				*e*S	Sn	05 59 35.6	+0.5
VA03				IAML		05 59 38.6	
	comp=E,18µm,0.2s						
MT02	Curacav	1.14	156		Pn	05 59 21.2	+0.1
MT02				Sn	Sb	05 59 36.0	-0.4
CO02	Combarbal	1.17	30		Pb	05 59 22.6	0.0
CO02	Combarbal	1.17	30	*e*P	Pb	05 59 22.4	-0.1
CO02				*i* S	Sb	05 59 38.1	+0.7
CO02				IAML		05 59 39.8	
	comp=E,16µm,0.3s						
CO02	Combarbal	1.17	30	*e*P	Pb	05 59 22.5	0.0
CO02				*e*S	Sb	05 59 39.1	+1.7
PEL	Peldehue	1.25	138		Pb	05 59 23.3	-0.6
PEL	Peldehue	1.25	138	⇓ *i*P	Pb	05 59 23.3	-0.6
PEL				*e*S	Sb	05 59 39.3	-0.5
PEL				IAML		05 59 41.5	
	comp=N,8µm,0.3s						
PEL	Peldehue	1.25	138	*e*P	Pb	05 59 23.4	-0.6
PEL				*e*S	Sb	05 59 40.5	+0.7
MT05	Renca	1.42	146		Pb	05 59 25.6	-1.2
MT05	Renca	1.42	146	*e*P	Pn	05 59 24.8	-0.2
MT05				*e*S	Sb	05 59 44.2	-0.3
MT05				IAML		05 59 49.8	
	comp=E,9µm,0.3s						
MT05	Renca	1.42	146	*e*P	Pb	05 59 26.0	-0.8
VA05	Santo Domingo	1.44	177		Pn	05 59 25.5	+0.5
CO06	Fray Jorge	1.54	2		Pn	05 59 27.1	+0.5
CO06	Fray Jorge	1.54	2	*i* P	Pn	05 59 27.0	+0.5
CO06				*e*S	Sb	05 59 47.8	-0.1
CO06				IAML		05 59 52.2	
	comp=E,3µm,0.5s						
MT03	Universidad Ad	1.62	142	Pn	Pb	05 59 28.7	-1.4
MT03	Universidad Ad	1.62	142	*e*P	Pb	05 59 28.6	-1.4
MT03				*e*S	Sb	05 59 49.2	-0.9
MT03				IAML		05 59 52.2	
	comp=E,11µm,0.1s						
MT03	Universidad Ad	1.62	142	*e*P	Pb	05 59 29.1	-1.0
MT03				*e*S	Sb	05 59 51.4	+1.2
MT09	Talagante	1.66	159		Pb	05 59 29.4	-1.5
MT09	Talagante	1.66	159	*e*P	Pb	05 59 29.5	-1.5
MT09				*e*S	Sb	05 59 51.6	+0.1
MT09				IAML		05 59 57.5	
	comp=N,6µm,0.3s						
AUSP	Uspallata	1.96	91	*e*P	Pb	05 59 36.3	+0.3
AUSP				*e*S	Sb	06 00 01.8	+1.7
BO04	La Punta	1.99	153		Pb	05 59 34.3	-2.1
BO04	La Punta	1.99	153	*e*P	Pn	05 59 34.0	+1.3
BO04				*e*S	Sn	05 59 57.9	+1.2
BO04				IAML		06 00 05.1	
	comp=N,3µm,0.6s						
LMEL	Las Melosas	2.05	143		Pb	05 59 35.4	-2.2
LMEL	Las Melosas	2.05	143	*e*P	Pb	05 59 35.3	-2.3
LMEL				IAML		06 00 07.5	
	comp=N,3µm,0.2s						
RTLS	Leoncito	2.08	79	*e*P	Pb	05 59 38.4	+0.3
RTLS				IAML		06 00 16.3	
	comp=Z,1µm,0.9s						
GO04	Tololo Observa	2.18	21	Pn	Pn	05 59 37.1	+1.6
GO04	Tololo Observa	2.18	21	*e*P	Pn	05 59 36.8	+1.3
GO04				*i* S	Sb	06 00 06.8	+0.4
BO03	Pichilemu	2.28	186	⇓ *i*P	Pn	05 59 36.3	-0.4
CO05	La Serena	2.33	10		Pn	05 59 39.1	+1.8
CO05	La Serena	2.33	10	*e*P	Pn	05 59 38.2	+0.9
CO05				*e*S	Sb	06 00 10.7	+0.3
CO05				IAML		06 00 17.4	
	comp=N,2µm,0.7s						
ARCO	CERRO ARCO	2.41	106	*e*P	Pb	05 59 44.2	+0.4
ARCO				IAML		06 00 24.0	
	comp=Z,923nm,0.5s						
CO01	Juntas del Tor	2.62	32		Pn	05 59 42.9	+1.2
CO01	Juntas del Tor	2.62	32	*e*P	Pn	05 59 44.2	+2.6
CO01				*e*S	Sb	06 00 16.3	-2.9
CO01				IAML		06 00 22.6	
	comp=E,1µm,0.5s						
CO01	Juntas del Tor	2.62	32	*e*P	Pb	05 59 44.9	-2.4
CO01				*e*S	Sb	06 00 18.0	-1.2
ZON	Zonda	2.65	76	Pn	Pb	05 59 46.4	-1.3
GO05	Huala	2.79	184	Pn	Pn	05 59 43.4	-0.3
GO05	Huala	2.79	184	*i* P	Pn	05 59 43.4	-0.3
LCO	Las Campanas	3.31	15	Pn	Pn	05 59 52.1	+1.0
ML02	Panimavida	3.54	176	Pn	Pn	05 59 54.6	+0.5
ML02	Panimavida	3.54	176	*e*P	Pn	05 59 54.5	+0.5
AC04	Llanos de Chal	4.04	8	Pn	Pn	06 00 01.7	+0.8
AC04	Llanos de Chal	4.04	8	*e*P	Pn	06 00 01.2	+0.4
BI05	Punta Hualpn	4.69	195	Pn	Pn	06 00 08.8	-0.9
GO03	Copiap	4.78	16	Pn	Pn	06 00 12.4	+1.3
GO03	Copiap	4.78	16	*e*P	Pn	06 00 12.7	+1.6
AC06	Mina Casimiro	4.98	14		Pn	06 00 14.0	+0.2
AC02	Maricunga	5.81	23	Pn	Pn	06 00 26.6	+0.9
AC01	Pan de Azucar	6.12	9	Pn	Pn	06 00 30.4	+0.8
H03N1	Juan Fernandez	6.20	257	T	T	06 07 06.6	
	baz=87,slow=73,SNR=1170						
H03N3	Juan Fernandez	6.21	257	T	T	06 06 58.8	
	baz=87,slow=73,SNR=1084						
H03N2	Juan Fernandez	6.21	257	T	T	06 07 03.3	
	baz=87,slow=73,SNR=1144						
H03S3	Juan Fernandez	6.27	253	T	T	06 07 02.7	
	SNR=128						
H03S1	Juan Fernandez	6.27	253	T	T	06 07 02.4	
	SNR=127						
H03S2	Juan Fernandez	6.29	253	T	T	06 06 58.7	
	SNR=211						
LR03	Panguipulli	7.42	184		Pn	06 00 46.6	-0.6
LR04	Corral	7.77	190	Pn	Pn	06 00 51.2	-0.9
PLCA	Paso Flores	8.55	174	Pn	Pn	06 01 04.1	+1.3
	comp=E,0.7nm,0.3s,baz=341,slow=12,SNR=56						
PLCA				Sn	Sn	06 02 46.2	+7.8
	comp=E,0.1nm,0.3s,baz=311,slow=7.5,SNR=1.2						
PLCA				LR	LR	06 04 08.6	
	comp=E,75nm,18.1s,baz=342,slow=36						
	comp=E,1.5nm,0.3s						
PLCA	Paso Flores	8.55	174	Pn	Pn	06 01 04.3	+1.4
LL04	Puerto Octay	8.69	184	Pn	Pn	06 01 05.1	+0.3
LL03	Petrohue	8.92	183	Pn	Pn	06 01 07.7	-0.2

LL05	Los Muermos	9.28	188	Pn	Pn	06 01 13.3	+0.5
TRQA	Tornquist	9.86	129	Pn	Pn	06 01 22.3	+1.5
LVC	Limon Verde	9.88	15	Pn	Pn	06 01 21.3	-0.2
	comp=E,1.8nm,0.3s,baz=188,slow=14,SNR=0.5						
LVC				Sn	Sn	06 03 11.4	-0.4
	comp=E,0.2nm,0.3s,baz=247,slow=19,SNR=1.7						
LVC				LR	LR	06 05 54.0	
	comp=E,48nm,19.1s,baz=212,slow=42						
GO07	Milladeo Hill,	10.99	188	Pn	Pn	06 01 34.3	-1.9
ITQB	Itaqui	13.18	83	Pn	Pn	06 02 06.6	+0.4
CPUP	Villa Florida	13.84	69	Pn	Pn	06 02 15.7	+0.5
	comp=E,0.3nm,0.3s,baz=224,slow=12,SNR=7.0						
CPUP				Sn	Sn	06 04 43.7	-4.2
	comp=E,0.2nm,0.3s,baz=244,slow=15,SNR=3.1						
CPUP				LR	LR	06 08 03.5	
	comp=E,226nm,18.1s,baz=245,slow=40						
	comp=E,0.8nm,0.4s						
CPUP	Villa Florida	13.84	69	Pn	Pn	06 02 16.8	+1.6
PB16	IPOC Station P	13.96	9	Pn	Pn	06 02 19.4	+1.9
LPAZ	La Paz	16.19	12	Pn	Pn	06 02 47.4	+0.4
	comp=E,0.3nm,0.3s,baz=136,slow=2.6,SNR=11						
	comp=E,4.8nm,0.9s						
LPAZ	La Paz	16.19	12	Pn	Pn	06 02 47.8	+0.7
SIV	San Ignacio	18.82	33	P	P	06 03 18.2	-0.3
	baz=258,slow=11,SNR=4.6						
SIV				LR	LR	06 12 07.9	
	comp=E,110nm,20.1s,baz=226,slow=42						
	comp=E,1.2nm,0.6s						
MG05	Puerto Natales	19.46	182	P	P	06 03 24.4	-0.8
EFI	East Falkland	21.86	157	P	P	06 03 51.1	-0.1
BDFB	Brasilia	27.12	58	P	P	06 04 41.1	-0.7
	comp=E,3.4nm,0.7s,baz=235,slow=8.6,SNR=6.6						
BDFB				LR	LR	06 16 55.0	
	comp=E,159nm,18.8s,baz=224,slow=40						
	comp=E,3.4nm,0.7s						
BDFB	Brasilia	27.12	58	P	P	06 04 41.3	-0.5
BDFB				IAmb	IAmb	06 04 42.5	
	comp=Z,16nm,1.3s						
OTAV	Otavalo	32.91	347	P	P	06 05 32.2	-1.1
OTAV				IAmb	IAmb	06 05 35.1	
	comp=Z,3.1nm,1.1s						
MDP	Montagnes des	41.30	30	LR	LR	06 24 17.8	
	comp=Z,52nm,20.0s,baz=200,slow=37						
RCBR	Riachuelo	42.48	60	LR	LR	06 26 04.9	
	comp=Z,132nm,18.6s,baz=350,slow=38						
QSPA	South Pole Qui	58.01	180	P	P	06 08 52.0	+1.0
	comp=Z,0.6nm,0.6s,baz=77,slow=1.4,SNR=6.8						
	comp=Z,0.6nm,0.6s						
QSPA	South Pole Qui	58.01	180	P	P	06 08 52.3	+1.3
TX31	Lajitas Ar. Si	68.33	330	P	P	06 09 59.5	-0.2
TX31				IAmb	IAmb	06 10 19.8	
	comp=Z,4.3nm,1.1s						
TX32	Lajitas Array	68.33	330	P	P	06 09 59.5	-0.2
TX32				IAmb	IAmb	06 10 02.9	
	comp=Z,2.3nm,1.4s						
TXAR	Lajitas Array	68.33	330	P	P	06 09 59.7	-0.1
	comp=Z,0.1nm,0.3s,baz=157,slow=4.9,SNR=2.2						
	comp=Z,0.1nm,0.3s						
TXAR	Lajitas Array	68.33	330	P	P	06 09 59.2	-0.5
DBIC	Dimbokro	74.34	72	P	P	06 10 35.9	-0.3
	comp=Z,6.3nm,1.1s,baz=253,slow=9.1,SNR=4.7						
	comp=Z,6.3nm,1.1s						
DBIC	Dimbokro	74.34	72	P	P	06 10 36.5	+0.3
MAW	Mawson	74.80	164	P	P	06 10 38.4	+0.3
	comp=Z,1.1nm,0.7s,baz=269,slow=8.4,SNR=2.4						
	comp=Z,1.1nm,0.7s						
BOSA	Boshof	80.64	118	P	P	06 11 12.1	+0.5
	comp=Z,0.9nm,0.8s,baz=297,slow=6.8,SNR=1.1						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	83.33	70	P	P	06 11 25.2	-0.4
	comp=Z,2.8nm,0.8s,baz=256,slow=4.4,SNR=12						
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	83.33	70	P	P	06 11 26.4	+0.8
TORD				IAmb	IAmb	06 11 27.2	
	comp=Z,3.2nm,0.9s						
H11S2	WAKE ISLAND Hy	126.07	270	T	T	08 36 56.6	
	baz=118,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	126.08	270	T	T	08 37 06.3	
	baz=118,slow=75,SNR=85						
H11S3	WAKE ISLAND Hy	126.09	270	T	T	08 37 06.6	
	baz=118,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	126.44	272	T	T	08 37 27.1	
	baz=117,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	126.45	272	T	T	08 37 32.7	
	baz=117,slow=75,SNR=6.5						
H11N2	WAKE ISLAND Hy	126.45	272	T	T	08 37 25.7	
	baz=117,slow=75,SNR=29						
ZALV	Zalesovo Beam	152.56	31	PKPbc	PKPbc	06 18 54.4	+0.3
	comp=Z,1.3nm,0.4s,baz=297,slow=1.3,SNR=4.2						
ZALV	Zalesovo Beam	152.56	31		PKPbc	06 18 54.6	+0.5
ZALV				PKPab	sPKPbc	06 19 06.3	+0.1
MKAR	Makanchi Array	155.35	46	PKPab	PKPab	06 19 16.3	-0.6
	comp=Z,0.9nm,0.8s,baz=265,slow=4.4,SNR=5.2						
MKAR	Makanchi Array	155.35	46	PKPdf	PKPdf	06 18 50.5	-0.9
MKAR					PKPab	06 19 17.4	+0.6

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*NORS **30** 06:25:11.4±0.0, 42°.46N×41°.18E, h15^{km}, MPVA3.1*
*DDA **30** 06:25:11.8±0.0, 42°.10N×40°.66E, h39^{km}±2^{km}, ML2.6*
*MOS **30** 06:25:11.1±0.0, 42°.46N×41°.02E, h4^{km}, MPVA3.5*
*TIF **30** 06:25:11.0, 42°.36N×40°.96E, h26^{km}±3^{km}*
ISC 30 06:25:11.8±1.2, **42°.44N**±0°.03×**40°.98E**±0°.03, **h34**^{km}±3^{km}, **n27**, σ**1s.38**/53, **Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.86	71	P	Pb	06 25 27.2	-1.2
CHVG				S	Sn	06 25 40.2	+1.2
DOMR	Dombai	0.98	29	*i* Pg	Pb	06 25 29.3	-1.2
DOMR				*e*Sg	Sn	06 25 41.5	-0.6
BATM	Batumi	0.99	147	P	Pn	06 25 29.4	+0.1
BATM				S	Sn	06 25 43.7	+1.6
ARXR	Arkhyz	1.15	11	*e*Pg	Pb	06 25 32.8	-0.4
ARXR				*e*Sg	Sb	06 25 48.0	+0.1
DBOC	Borcka	1.21	155	P	Pn	06 25 31.9	-0.4
DBOC				S	Sn	06 25 47.7	+0.2
DBOC				*i* AML	AML	06 25 49.0	
	comp=E,156nm,0.3s						
VSLR	Vesyoloye	1.24	326	*i* Pg	Pb	06 25 34.9	+0.2
VSLR				*e*Sg	Sb	06 25 51.9	+1.6
RPOR	Krasnaya Polya	1.37	338	*i* Pg	Pb	06 25 36.8	-0.1
RPOR				*e*Sg	Sb	06 25 55.4	+1.4
SOC	Sochi	1.47	322	*e*Pg	Pb	06 25 38.3	-0.3
SOC				*e*Sg	Sb	06 25 58.1	+1.1
DBAD	Bademkaya	1.52	159	P	Pn	06 25 37.0	+0.4
DBAD				S	Sn	06 25 54.7	-0.5
ABS	Abastumani	1.53	116	P	Pb	06 25 38.4	-1.2
ABS				S	Sb	06 25 58.8	+0.1
DAGI	Agillar	1.53	152	P	Pn	06 25 37.0	+0.2
DAGI				S	Sn	06 25 55.9	+0.3
EPOS	Posof	1.60	125	P	Pb	06 25 39.7	-1.3
EPOS				S	Sb	06 26 00.4	-0.5
EPOS				*i* AML	AML	06 26 02.0	
	comp=N,150nm,0.5s						
EPOS				*i* AML	AML	06 26 02.0	
	comp=E,87nm,0.3s						
DDEM	Demirkent	1.65	159	P	Pn	06 25 39.1	+0.6
DDEM				S	Sn	06 25 59.3	+0.8
DDEM				*i* AML	AML	06 26 02.0	
	comp=E,78nm,0.4s						
DDEM				*i* AML	AML	06 26 03.0	
	comp=N,89nm,0.6s						
AHMR	Akhmetovskaya	1.72	2	*e*Pg	Pb	06 25 42.6	-0.3
AHMR				*e*Sg	Sb	06 26 04.2	0.0
SHA1	Shidzhatmaz	1.79	43	*e*Pg	Pb	06 25 43.6	-0.5
SHA1				*e*Sg	Sb	06 26 06.7	+0.4
ONI	Oni	1.84	84	P	Pb	06 25 43.2	-1.6
ONI				S	Sb	06 26 07.7	+0.2
ONI	Oni	1.84	84	*i* Pg	Pb	06 25 43.2	-1.6
ONI				*e*Sg	Sb	06 26 07.4	-0.1
LZRR	Lazarevskoye	1.90	323	*e*Pg	Pb	06 25 44.4	-1.5
LZRR				*e*Sg	Sb	06 26 11.1	+1.9
KBZ	Khabaz	1.91	47	*e*Pg	Pb	06 25 44.8	-1.2
KBZ				*e*Sg	Sb	06 26 08.8	-0.6
KIV	Kislovodsk	1.97	39	*e*Pg	Pb	06 25 46.7	-0.4
KIV				*e*Sg	Sb	06 26 11.6	+0.4
KIV0	Kislovodsk Arr	1.97	39	*e*Pg	Pb	06 25 46.7	-0.5
KIV0				*e*Sg	Sb	06 26 11.4	+0.1
DIGR	Digorskoe uzhe	1.97	76	*e*Pg	Pb	06 25 45.8	-1.4
DIGR				*e*Sg	Sb	06 26 11.3	-0.3
BEYR	Belyy Ugol+	2.07	40	*e*Pg	Pb	06 25 47.4	-1.3
BEYR				*e*Sg	Sb	06 26 14.7	+0.5
KRIK	Erzurum-spir	2.10	181	P	Pn	06 25 38.5	-6.2
KRIK				S	Sn	06 26 05.0	-4.8
GOYR	Goytkh	2.15	328	*e*Pg	Pb	06 25 48.3	-1.9
GOYR				*e*Sg	Sb	06 26 16.8	+0.3
TRLG	Trialeti	2.50	110	P	Pb	06 25 55.6	-0.4
TRLG				S	Sb	06 26 28.0	+1.5
DGRG	David-gareji	3.42	105	P	Pb	06 26 14.1	+2.3
DGRG				S	Sb	06 26 57.7	+4.7

IDC 30 06:27:21.9±5.2, **3°.69S**×**150°.94E**, **h74**^{km}±55^{km}, **mb3.3**/2, **mbtmp3.6**/2, **Error ellipse: s-maj=68.0km s-min=26.7km az=137.0**, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.24	119	P	Pn	06 27 45.2	+1.5
	164nm,0.5s,baz=189,slow=3.3,SNR=9.9						
KRVT				S	Sn	06 27 59.6	-0.4
	119nm,0.6s,baz=257,slow=23,SNR=7.1						
WRA	Warramunga Arr	22.87	224	P	P	06 32 21.4	+1.9
	2.2nm,0.4s,baz=52,slow=10,SNR=48						
	2.2nm,0.4s						
ASAR	Alice Springs	25.79	218	P	P	06 32 47.0	+0.7
	0.1nm,0.3s,baz=49,slow=8.5,SNR=5.0						
	0.1nm,0.3s						
TORD	Torodi Ar. Bea	148.20	289	PKPbc	PKPdf	06 46 57.8	+0.6
	0.4nm,0.3s,baz=76,slow=2.4,SNR=8.4						

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*CRAAG **30** 06:29:15.0, 36°.32N×3°.40E, Ml3.0*
*MDD **30** 06:29:17.9±1.5, 36°.43N×3°.37E, h0^{km}, Mb4.0/3, M_mb3.3/6, Error ellipse: s-maj=12.9km s-min=7.0km az=138.0*
ISC 30 06:29:15.9±1.2, **36°.35N**±0°.05×**3°.47E**±0°.07, **h18**^{km}, **n11**, σ**1s.88**/16, **3C**, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.19	188	P	Pg	06 29 19.9	-0.9
ABMS	Boumerdes	0.40	1	P	Pg	06 29 24.7	+0.5
AKET	Djebel Ketaf	0.45	132	P	Pg	06 29 25.2	+0.1
ABA	Alger-Bouzarea	0.57	322	P	Pg	06 29 27.0	-0.4
EIBI	Ibiza	3.16	328	P	Pn	06 30 06.4	+1.6
EIBI				⇑*i*Vmb_V		06 30 08.1	
	370nm,SNR=1.3						
EIBI				S	Sn	06 30 41.4	-0.7
ETOS	Mallorca	3.45	352	P	Pn	06 30 09.7	+0.9
ETOS				⇑*i*Vmb_V		06 30 12.5	
	346nm,SNR=1.6						
ETOS				S	Sn	06 30 45.8	-3.5
ECOL	Islas Columbre	4.17	329	P	Pn	06 30 19.9	+1.2
ECOL				S	Sn	06 31 06.3	-0.6
EZAR	Zarzadilla de	4.40	292	P	Pn	06 30 23.6	+1.7
ETOB	Tobarra	4.60	301	P	Pn	06 30 26.8	+2.1
ETOB				⇑*i*Vmb_V		06 30 32.2	
	134nm,SNR=1.8						
ETOB				S	Sn	06 31 16.7	-1.0
ECHE	Chera	4.77	314	P	Pn	06 30 28.8	+1.8
EMOS	Mosqueruela	5.07	323	P	Pn	06 30 32.8	+1.6
EMOS				S	Sn	06 31 25.7	-3.6

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*NEIC **30** 06:41:18.7±1.5, 18°.74N±0°.06×67°.38W±0°.03, h33^{km}±10^{km}, Error ellipse: s-maj=8.6km s-min=3.3km az=197.0*
*RSPR **30** 06:41:18.3, 18°.75N×67°.42W, h5^{km}±1^{km}, MD3.5/21*
*OSPL **30** 06:41:20.3±1.6, 18°.75N×67°.15W, h31^{km}±7^{km}, ML3.1*
ISC 30 06:41:17.0±1.1, **18°.79N**±0°.05×**67°.41W**±0°.03, **h30**^{km}±9^{km}, **n65**, σ**1s.31**/72, **20C-1D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.40	188	⇑*e*P	Pb	06 41 26.1	+0.2
IDE	Isla Desecheo	0.40	188	*e*S	Sb	06 41 32.0	0.0
AGPR	Aguadilla, PR	0.42	138	⇓*e*P	Pn	06 41 26.6	-0.5
AGPR	Aguadilla, PR	0.42	138		Pn	06 41 26.6	-0.5
AGPR					Sb	06 41 32.2	-0.4
AGPR				IAML		06 41 33.1	
	comp=E,6μm,0.3s						
AGPR	Aguadilla, PR	0.42	138	*i* P	Pn	06 41 26.6	-0.5
AGPR				*e*S	Sb	06 41 32.4	-0.2
AGPR				IAML		06 41 32.8	
	comp=Z,3μm,0.5s						
PRSN	Puerto Rico Se	0.62	156		Pn	06 41 29.6	-0.2
LSP	Las Mesas	0.68	153	⇑*e*P	Pn	06 41 30.7	0.0
LSP	Las Mesas	0.68	153	*e*S	Sn	06 41 40.0	-0.3
AOPR	Arecibo Observ	0.76	125	⇑*e*P	Pb	06 41 31.6	-0.2
AOPR	Arecibo Observ	0.76	125	*e*S	Sb	06 41 41.8	-0.1
AOPR	Arecibo Observ	0.76	125		Pb	06 41 31.6	-0.2
AOPR	Arecibo Observ	0.76	125		Sb	06 41 41.8	-0.1
CRPR	Cabo Rojo, PR	0.83	160	⇑*e*P	Pn	06 41 32.7	+0.1
CRPR	Cabo Rojo, PR	0.83	160		Pn	06 41 32.7	+0.1
CRPR					Sb	06 41 43.3	-0.3
CRPR				IAML		06 41 43.9	
	comp=N,843nm,0.5s						
CRPR	Cabo Rojo, PR	0.83	160	*i* P	Pn	06 41 32.7	+0.1
CRPR				*e*S	Sb	06 41 43.1	-0.6
CRPR				IAML		06 41 44.1	
	comp=Z,750nm,0.1s						
MLPR	Magueyes Islan	0.88	157	⇑*e*P	Pb	06 41 33.5	-0.3
MLPR	Magueyes Islan	0.88	157	*e*S	Sn	06 41 45.1	-0.1
MLPR	Magueyes Islan	0.88	157		Pb	06 41 33.5	-0.3
MLPR					Sb	06 41 44.9	-0.4
EMPR	Esperanza - Ma	0.89	110	⇑*e*P	Pn	06 41 33.8	+0.3
EMPR	Esperanza - Ma	0.89	110	*e*S	Sn	06 41 46.8	+1.4
EMPR	Esperanza - Ma	0.89	110		Pn	06 41 33.8	+0.3
EMPR					Sn	06 41 46.8	+1.4
EMPR	Esperanza - Ma	0.89	110	IAML		06 41 50.7	
	comp=E,911nm,0.4s						
GBPR	Guanica, Bosqu	0.95	148	⇑*e*P	Pb	06 41 34.8	-0.1
GBPR	Guanica, Bosqu	0.95	148	*e*S	Sn	06 41 47.9	+1.0
CELP	Cerrillos	1.06	132	⇑*e*P	Pb	06 41 36.3	-0.5
CELP	Cerrillos	1.06	132	*e*S	Sn	06 41 50.8	+1.2
CELP	Cerrillos	1.06	132	Pg	Pb	06 41 36.3	-0.5
CELP				IAML		06 41 50.8	
	comp=E,620nm,0.6s						
CELP	Cerrillos	1.06	132		Sn	06 41 50.8	+1.2
OBIP	Obispado Ponce	1.06	134	⇑*e*P	Pb	06 41 36.4	-0.5
OBIP	Obispado Ponce	1.06	134	*e*S	Sn	06 41 50.2	+0.5
OBIP	Obispado Ponce	1.06	134		Pb	06 41 36.4	-0.5
OBIP	Obispado Ponce	1.06	134		Sn	06 41 50.2	+0.5
ICMP	Isla Caja de M	1.23	137	⇑*e*P	Pb	06 41 38.9	-0.7
ICMP	Isla Caja de M	1.23	137	*e*S	Sb	06 41 54.8	-0.3
ICMP	Isla Caja de M	1.23	137		Pb	06 41 39.4	-0.2
ICMP					Sb	06 41 56.0	+0.9
ICMP				IAML		06 42 09.9	
	comp=N,418nm,0.4s						
GCPR	Guaynabo City	1.35	110	⇑*e*P	Pn	06 41 40.4	+0.6
GCPR	Guaynabo City	1.35	110	*e*S	Sb	06 41 57.9	-0.6
GCPR	Guaynabo City	1.35	110		Pn	06 41 40.6	+0.8
SJG	San Juan	1.37	119	Pn	Pn	06 41 40.7	+0.6
SJG				IAML		06 42 03.2	
	comp=N,440nm,0.3s						
SJG				IAML		06 42 06.1	
	comp=N,386nm,0.3s						
IGPR	InterUniversit	1.48	123	⇑*e*P	Pb	06 41 42.7	-1.2
IGPR	InterUniversit	1.48	123	*e*S	Sb	06 42 01.2	-1.2
PDPR	Patillas Dam,	1.52	120	Pn	Pn	06 41 43.0	+0.7
PDPR				IAML		06 42 11.6	
	comp=E,254nm,1.1s						
CBYP	Canovanas	1.56	109	⇑*e*P	Pn	06 41 43.2	+0.4
CBYP	Canovanas	1.56	109	Pn	Pn	06 41 43.3	+0.4
CBYP				IAML		06 42 14.4	
	comp=N,938nm,0.2s						
HUMP	Col San Antoni	1.61	113	⇑*e*P	Pn	06 41 44.2	+0.7
HUMP	Col San Antoni	1.61	113	Pn	Pn	06 41 44.3	+0.9
HUMP				IAML		06 42 13.7	
	comp=N,294nm,0.4s						
DR12	Loma Pena Alta	1.86	270	⇑*e*P	Pn	06 41 47.7	+0.7
MTP	Monte Pirata	1.89	111	⇑*e*P	Pn	06 41 48.1	+0.8
MTP	Monte Pirata	1.89	111	Pn	Pn	06 41 48.2	+0.9
CUPR	Culebra, Puert	2.08	103	⇑*e*P	Pn	06 41 50.0	+0.2
STVI	Saint Thomas	2.37	100	⇑*e*P	Pn	06 41 54.9	+1.0
STVI	Saint Thomas	2.37	100	Pn	Pn	06 41 54.9	+1.0
SDD	Santo Domingo	2.39	263	Pn	Pn	06 41 56.9	+2.7
SDD				IAML		06 42 37.3	
	comp=N,169nm,0.4s						
SDD				IAML		06 42 40.1	
	comp=E,166nm,0.8s						
SDD	Santo Domingo	2.39	263	*i* P	Pb	06 42 00.2	+0.8
SJVI	Gifft Hill Sch	2.54	100	⇑*e*P	Pn	06 41 57.3	+1.0
SJVI	Gifft Hill Sch	2.54	100		Pn	06 41 57.3	+1.0
CDVI	St. Croix	2.72	112	⇑*e*P	Pn	06 42 01.0	+2.3
CDVI	St. Croix	2.72	112		Pb	06 42 02.0	-2.9
CDVI				IAML		06 42 47.6	
	comp=E,171nm,0.6s						
CDVI				IAML		06 42 49.9	
	comp=N,129nm,0.7s						
BANI	BANI	2.82	263	Pn	Pn	06 42 01.5	+1.3
BANI	BANI	2.82	263	*i* P	Pb	06 42 06.0	-0.8
BANI				*e*S	Sb	06 42 38.3	-2.7
BANI				IAML		06 42 52.6	
	comp=Z,59nm,0.8s						
SDDR	Presa de Saban	3.67	274		Pn	06 42 16.3	+4.4
SDDR				IAML		06 43 17.5	
	comp=Z,115nm,0.7s						
SDDR				IAML		06 43 19.3	
	comp=Z,93nm,0.6s						
SDDR	Presa de Saban	3.67	274	*i* P	Pb	06 42 17.0	-4.3
SDDR				IAML		06 43 21.2	
	comp=Z,49nm,0.8s						
LONE2	Loma La Sidra	3.86	267	*i* P	Pb	06 42 20.4	-4.0
LONE2				IAML		06 43 26.3	
	comp=Z,26nm,3.3s						
SMRT	St. Maarten	4.18	99	Pn	Pn	06 42 19.6	+0.8
SMRT				IAML		06 43 41.9	
	comp=E,83nm,0.1s						
GRTK	Grand Turk	4.42	308	Pn	Pn	06 42 24.4	+2.2

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*MDD **30** 06:57:23.5±1.2, 36°.50N×9°.83W, h30^{km}, mb_Lg2.1/3, Error ellipse: s-maj=9.7km s-min=8.4km az=12.0*
*IGIL **30** 06:57:23.4, 36°.56N×9°.81W, h13^{km}, ML1.5*
*INMG **30** 06:57:23.7±1.3, 36°.56N×9°.80W, h14^{km}±5^{km}, ML1.7, Error ellipse: s-maj=6.3km s-min=5.9km az=45.0*
*SFS **30** 06:57:23.0, 36°.50N×9°.82W, h30^{km}, ML2.5, SW. CABO DE SAN VICENTE*
*CNRM **30** 06:57:33.5, 35°.34N×8°.94W, h270^{km}*
ISC 30 06:57:19.3±1.8, **36°.33N**±0°.04×**9°.86W**±0°.09, **h32**^{km}±14^{km}, **n26**, σ**1s.98**/45, **3C-1D**, **West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.15	46	⇑*e*P	Pb	06 57 41.0	+0.3
PFVI				*e*S	Sb	06 57 54.2	-1.1
PFVI				A	A	06 58 03.1	
	5.9nm,0.8s						
MORF	Marmelete	1.37	44	*e*P	Pb	06 57 44.0	-0.4
MORF				*e*S	Sn	06 57 59.1	-0.4
MORF				IAML		06 57 60.0	
	comp=N,10nm,0.1s						
MORF	Marmelete	1.37	44	⇑*e*P	Pb	06 57 44.0	-0.4
MORF				*e*S	Sn	06 57 59.7	+0.2
MORF				A	A	06 58 00.2	
	comp=N,7.1nm,0.1s						
PTEO	Sao Teotonio	1.52	36	*e*P	Pn	06 57 44.9	+0.7
PTEO				*e*S	Sn	06 58 02.8	-0.1
PTEO				A	A	06 58 05.1	
	comp=N,4.6nm,0.3s						
PBDV	Barranco-do-Ve	1.79	59	*e*Pn	Pb	06 57 50.5	-1.0
PBDV				*e*Sn	Sn	06 58 11.0	+1.2
MESJ	Messejana	2.00	41	*e*S	Sn	06 58 13.6	-1.1
MESJ				IAML		06 58 15.3	
	comp=N,2.4nm,0.1s						
MESJ	Messejana	2.00	41	*e*Pn	Pn	06 57 52.5	+1.7
MESJ				*e*Sn	Sn	06 58 14.4	-0.3
MESJ				A	A	06 58 26.9	
	comp=N,2.1nm,0.4s						
PVAQ	Vaqueiros	2.02	57	⇑*e*Pn	Pn	06 57 53.4	+2.2
PVAQ				*e*Sn	Sn	06 58 15.9	+0.5
PVAQ				A	A	06 58 19.2	
	comp=N,2.6nm,0.4s						
PNCL	Nicolau / Gran	2.07	30	⇓*i*Pn	Pn	06 57 53.3	+1.5
PNCL				*e*Sn	Sn	06 58 15.3	-1.3
PNCL				A	A	06 58 18.8	
	comp=N,3.8nm,0.5s						
EGRO	El Granado	2.25	57	P	Pn	06 57 56.6	+2.3
EGRO				S	Sn	06 58 20.2	-0.8
EGRO				*i* Vmb_Lg		06 58 24.4	
PBEJ	Beja	2.32	43	*e*Sn	Sn	06 58 22.8	0.0
EVO	Evora	2.64	33	P	Pb	06 58 11.1	+5.1
EVO				S	Sn	06 58 28.9	-1.8
EVO	Evora	2.64	33	*e*Pn	Pn	06 58 00.9	+1.2
EVO				*e*Sn	Sn	06 58 29.2	-1.5
EVO				A	A	06 58 29.4	
	comp=N,5.5nm,0.4s						
PMAFR	Mafra	2.66	10	*e*Pn	Pn	06 58 01.2	+1.2
PMAFR				*e*Sn	Sn	06 58 30.1	-1.0
PMAFR				A	A	06 58 32.4	
	comp=N,11nm,0.3s						
PBAR	Barrancos	2.91	50	*e*Pn	Pn	06 58 05.7	+2.4
PBAR				*e*Sn	Sn	06 58 36.5	-0.7
PBAR				A	A	06 58 48.7	
	comp=N,1.7nm,0.7s						
EMIN	Mina Concepcio	2.92	60	S	Sn	06 58 37.6	0.0
PMTG	Montargil	3.02	25	*e*Pn	Pn	06 58 06.3	+1.3
PMTG				*e*Sn	Sn	06 58 38.3	-1.8
PMTG				A	A	06 58 40.1	
	comp=N,2.7nm,0.1s						
PESTR	Estremoz	3.11	35	*e*Sn	Sn	06 58 40.6	-1.6
EBAD	Badajoz	3.31	42	S	Sn	06 58 45.1	-2.1
PMRV	Marv??o	3.66	32	*e*Pn	Pn	06 58 14.9	+1.2
PMRV				*e*Sn	Sn	06 58 53.0	-2.7
PMRV				A	A	06 58 55.9	
	comp=N,1.6nm,0.2s						
ECAB	El Cabril	3.95	63	P	Pn	06 58 19.6	+1.9
ECAB				S	Sn	06 59 01.3	-1.7
ECAB				*i* Vmb_Lg		06 59 05.3	
EADA	Adamuz	4.59	65	P	Pn	06 58 29.1	+2.5
EADA				S	Sn	06 59 16.3	-2.6
EADA				*i* Vmb_Lg		06 59 21.9	
OUK	Oukaimeden	5.37	161	P	Pn	06 58 40.5	+2.9
OUK				S	Sn	06 59 36.0	-2.5
MD31	MD31	5.44	128	P	Pn	06 58 41.2	+3.0
MD31				S	Sn	06 59 34.4	-5.4
MDT	Midelt	5.57	127	P	Pn	06 58 43.0	+2.9
MDT				S	Sn	06 59 39.5	-3.6
OUZM	OUZ	5.99	154	P	Pn	06 58 48.4	+2.5
OUZM				S	Sn	06 59 47.8	-5.7

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*NOU **30** 07:14:11.8, 30°.66S×177°.03W, h30^{km}, ML5.8/100, Kermadec Islands, New Zealand*
*BJI **30** 07:14:15.6±0.0, 29°.71S×177°.61W, h38^{km}, mb5.6/58, mB5.7/44, Ms5.2/53, Ms7 5.0/55*
*MOS **30** 07:14:17.8±0.9, 30°.15S×178°.14W, h52^{km}, mb6.0/53, MS4.8/21, Error ellipse: s-maj=9.0km s-min=7.3km az=100.0*
*IDC **30** 07:14:18.2±0.9, 30°.13S×178°.01W, h48^{km}±7^{km}, mb5.2/26, mbtmp5.4/28, MS4.9/56, Error ellipse: s-maj=13.5km s-min=9.3km az=91.0*
*NEIC **30** 07:14:18.6±1.8, 30°.27S±0°.06×177°.98W±0°.09, h47^{km}±1^{km}, mb5.8/398, Mww5.7, Error ellipse: s-maj=13.5km s-min=9.4km az=95.0*
*GCMT **30** 07:14:20.6±0.1, 30°.25S±0°.01×177°.85W±0°.01, h58^{km}, MW5.6/152, Moment Tensor Solution. s152,c281; s148,c278; Duration: 1s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.92±.04; $M_{\theta\theta}$-0.42±.03; $M_{\phi\phi}$-2.50±.03; $M_{r\theta}$0.51±.03; $M_{\theta\phi}$-1.13±.02; $M_{\phi r}$1.20±.03; Best double couple: $M_0$3.23300×10^{17} NP1:ϕ_s204.00000°,δ33.00000°, λ90.00000°. NP2:ϕ_s23.00000°,δ57.00000°,λ90.00000°. Principal axes: T 3.1950, Plg78.0000°, Azm293.0000°; N 0.0760, Plg0.0000°, Azm24.0000°; P -3.2710, Plg12.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **30** 07:14:22, 29°.98S×177°.82W, h46^{km}, Moment Tensor Solution. Duration: 12s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.69; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-2.75; $M_{r\theta}$1.20; $M_{\theta\phi}$-0.98; $M_{\phi r}$2.25; Fault plane solution: $M_0$3.85000×10^{17} NP1: ϕ_s188.00000°,δ25.00000°,λ75.00000°. NP2:ϕ_s25.00000°, δ66.00000°,λ97.00000°. Principal axes: T 3.6834, Plg68.0000°, Azm308.0000°; N 0.3201, Plg6.0000°, Azm202.0000°; P -4.0035, Plg21.0000°, Azm110.0000°;*
ISC 30 07:14:17.6±0.3, **30°.31S**±0°.02×**177°.83W**±0°.03, **h48**^{km}±2^{km}, **h48**^{km}**:pP-P**, **n1776**, σ**1s.65**/1838, **mb5.8**/304, **MS4.9**/98, **66C-44D**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.05	356	P	Pn	07 14 35.7	-0.2
GLKZ				S	Sn	07 14 46.7	-2.7

RAO	Raoul Island	1.06	356	P	Pn	07 14 35.2	-0.8
	18µm,0.3s,baz=151,slow=4.5,SNR=314						
RAO				S	Sn	07 14 46.5	-3.1
	97µm,0.3s,baz=328,slow=23,SNR=21						
RAO	Raoul Island	1.06	356	P	Pn	07 14 36.1	+0.1
RIZ	Raoul Island	1.06	355	P	Pn	07 14 35.9	-0.2
RIZ				S	Sn	07 14 47.1	-2.8
MXZ	Matakaoa Point	7.91	203	Pn	Pn	07 16 07.3	-2.7
MXZ	Matakaoa Point	7.91	203	P	Pn	07 16 07.4	-2.7
MXZ				S	Sn	07 17 37.1	-1.1
WMGZ	Waiomatatini S	8.11	202	P	Pn	07 16 09.7	-3.0
WMGZ				S	Sn	07 17 41.7	-1.3
GRZ	Great Barrier	8.16	222	P	Pn	07 16 16.7	+3.2
HAZ	Te Kaha	8.27	205	P	Pn	07 16 11.9	-3.0
HAZ				S	Sn	07 17 47.0	0.0
PKGZ	Pakihiroa	8.29	203	P	Pn	07 16 11.8	-3.4
PKGZ				S	Sn	07 17 47.0	-0.4
KUZ	Kuaotunu	8.38	218	P	Pn	07 16 18.8	+2.5
PUZ	Puketiti	8.39	202	P	Pn	07 16 12.8	-3.8
PUZ				S	Sn	07 17 45.3	-4.7
RUGZ	Raukumara Rang	8.49	205	P	Pn	07 16 14.8	-3.3
RUGZ				S	Sn	07 17 51.6	-1.1
TWGZ	Tauwhareparae	8.58	203	P	Pn	07 16 15.6	-3.6
TWGZ				S	Sn	07 17 53.6	-1.0
WCZ	Waipu Caves	8.63	227	P	Pn	07 16 26.1	+6.2
WHRZ	Whale Island	8.67	208	P	Pn	07 16 21.5	+1.0
WHRZ				S	Sn	07 18 00.5	+3.6
OUZ	Omahuta	8.72	234	P	Pn	07 16 27.7	+6.6
CNGZ	Carnagh Statio	8.79	201	P	Pn	07 16 18.4	-3.6
CNGZ				S	Sn	07 17 58.8	-0.8
TKGZ	Te Karaka	8.86	203	P	Pn	07 16 19.7	-3.3
TKGZ				S	Sn	07 17 59.6	-1.8
MWZ	Matawai	8.88	204	P	Pn	07 16 19.0	-4.3
MWZ				S	Sn	07 17 58.8	-3.1
MARZ	Manawahe	8.91	209	P	Pn	07 16 23.3	-0.4
MARZ				S	Sn	07 18 03.9	+1.3
URZ	Urewera	8.97	206	P	Pn	07 16 20.9	-3.5
	32nm,0.3s,baz=269,slow=3.9,SNR=77						
URZ				S	Sn	07 18 01.6	-2.4
	299nm,0.3s,baz=187,slow=22,SNR=18						
URZ	Urewera	8.97	206	Pn	Pn	07 16 21.3	-3.2
URZ	Urewera	8.97	206	P	Pn	07 16 21.1	-3.3
URZ				S	Sn	07 18 02.2	-1.8
URZ	Urewera	8.97	206	P	Pn	07 16 20.6	-3.8
EDRZ	Edgecumbe	8.98	209	P	Pn	07 16 24.5	-0.2
RAGZ	Rawiri	9.06	204	P	Pn	07 16 22.1	-3.7
RAGZ				S	Sn	07 18 04.7	-1.7
RIGZ	Rimuhau	9.13	202	P	Pn	07 16 22.4	-4.3
RIGZ				S	Sn	07 18 04.7	-3.5
OMRZ	Omania	9.14	210	P	Pn	07 16 28.1	+1.2
HLRZ	Highlands Stat	9.27	210	P	Pn	07 16 30.2	+1.6
RRRZ	Republican Roa	9.27	209	P	Pn	07 16 29.4	+0.7
MUGZ	Murupara	9.29	207	P	Pn	07 16 24.8	-4.1
MUGZ				S	Sn	07 18 08.1	-3.9
RTZ	Ruatahuna	9.33	206	P	Pn	07 16 26.8	-2.7
SNGZ	Shannon Statio	9.34	204	P	Pn	07 16 26.2	-3.5
SNGZ				S	Sn	07 18 12.4	-0.9
HRRZ	Handcock Road	9.41	210	P	Pn	07 16 31.2	+0.6
KNZ	Kokohu	9.45	202	P	Pn	07 16 26.9	-4.1
PRRZ	Plateau Road	9.46	209	P	Pn	07 16 28.8	-2.5
MHGZ	Mahia Peninsul	9.49	201	P	Pn	07 16 27.1	-4.6
ALRZ	Allen Road	9.53	209	P	Pn	07 16 29.4	-2.8
RAHZ	Arahi	9.55	205	P	Pn	07 16 27.9	-4.6
WPRZ	Whakapapatarin	9.57	210	P	Pn	07 16 32.8	0.0
MTHZ	Maungataniwha	9.59	206	P	Pn	07 16 30.8	-2.1
KUTZ	Kaahu Road	9.70	211	P	Pn	07 16 34.9	+0.4
MRHZ	Matea Rd	9.73	208	P	Pn	07 16 31.2	-3.8
WHTZ	Whakaora	9.78	210	P	Pn	07 16 38.3	+2.6
NMHZ	Naumai	9.81	205	P	Pn	07 16 31.0	-5.1
ARHZ	Aropaoanui	9.89	204	P	Pn	07 16 32.5	-4.7
WATZ	Wairara	9.92	211	P	Pn	07 16 43.3	+5.8
BKZ	Black Stump Fm	9.99	206	P	Pn	07 16 33.1	-5.5
BKZ	Black Stump Fm	9.99	206	P	Pn	07 16 34.0	-4.5
RITZ	Rihia Road	10.09	209	P	Pn	07 16 37.5	-2.3
KATZ	Kakaramea	10.15	210	P	Pn	07 16 40.7	-0.1
MCHZ	McNeill Hill	10.16	205	P	Pn	07 16 36.1	-4.7
CKHZ	Cape Kidnapper	10.22	203	P	Pn	07 16 36.8	-4.8
KWHZ	Kaweka Forest	10.24	206	P	Pn	07 16 37.5	-4.5
NTVZ	North Tongarir	10.27	210	P	Pn	07 16 38.9	-3.5
TMVZ	Te Maari	10.27	209	P	Pn	07 16 39.1	-3.3
ETVZ	East Tongariro	10.28	209	P	Pn	07 16 40.2	-2.4
WTVZ	West Tongariro	10.32	210	P	Pn	07 16 41.8	-1.3
NNVZ	North Ngauruho	10.32	210	P	Pn	07 16 40.2	-3.0
OTVZ	Oturere	10.32	209	P	Pn	07 16 42.0	-1.2
TWVZ	Taurewa	10.35	211	P	Pn	07 16 42.3	-1.1
SNVZ	South Ngauruho	10.35	209	P	Pn	07 16 41.1	-2.5
NGZ	Ngauruhoe	10.36	210	P	Pn	07 16 41.1	-2.6
KAHZ	Kahuranaki	10.41	203	P	Pn	07 16 38.2	-6.0
TUVZ	Tukino	10.42	209	P	Pn	07 16 41.2	-3.3
BHHZ	Black Hill Sta	10.44	207	P	Pn	07 16 39.5	-5.2
FWVZ	Far West T-bar	10.45	210	P	Pn	07 16 42.5	-2.4
KRHZ	Kereru	10.45	205	P	Pn	07 16 39.0	-5.9
WHVZ	Whangaehu Hut	10.46	209	P	Pn	07 16 44.6	-0.5
TRVZ	Turoa	10.49	209	P	Pn	07 16 46.3	+0.8
WNVZ	Wahianoa	10.49	209	P	Pn	07 16 42.0	-3.4
MOVZ	Moawhango	10.49	208	P	Pn	07 16 41.3	-4.1
PKVZ	Pokaka	10.57	210	P	Pn	07 16 45.6	-0.8
PXZ	Pawanui	10.62	203	P	Pn	07 16 40.5	-6.6
VRZ	Vera Road	10.70	213	P	Pn	07 16 48.1	-0.1
PNHZ	Pukenui	10.75	205	P	Pn	07 16 43.4	-5.5
WPHZ	Waipukurau	10.80	204	P	Pn	07 16 44.2	-5.3
PRHZ	Porangahau	10.91	203	P	Pn	07 16 44.7	-6.4
TSZ	Takapari Road	10.97	206	P	Pn	07 16 45.4	-6.5
DVHZ	Dannevirke	11.11	205	P	Pn	07 16 48.1	-5.7
WAZ	Wanganui	11.11	210	P	Pn	07 16 50.5	-3.2
ANWZ	Angora Road	11.14	203	P	Pn	07 16 48.3	-5.8
POWZ	Post Office Ro	11.33	206	P	Pn	07 16 51.6	-5.2
PRWZ	Pori Road	11.40	205	P	Pn	07 16 52.8	-5.0
BFZ	Birch Farm	11.42	203	P	Pn	07 16 51.3	-6.7
BFZ	Birch Farm	11.42	203	P	Pn	07 16 51.4	-6.6
TIWZ	Tintock	11.63	204	P	Pn	07 16 53.8	-7.1
NFK	Norfolk Island	12.44	272	P	Pn	07 17 14.8	+2.8
	baz=12,SNR=5.5						
NFK	Norfolk Island	12.44	272	P	Pn	07 17 15.1	+3.1
SNZO	South Karori	12.53	207	P	Pn	07 17 06.6	-6.5
MSVF	Nonsavu	13.07	342	P	Pn	07 17 19.5	-1.2
	37nm,0.9s,baz=151,slow=15,SNR=21						
MSVF				LR	LR	07 21 37.1	
	comp=Z,11µm,19.1s,baz=176,slow=34						
MSVF	Nonsavu	13.07	342	Pn	Pn	07 17 20.3	-0.5
MSVF	Nonsavu	13.07	342	⇑*e*P	Pn	07 17 22.4	+1.7
MSVF				pmax	pmax		
	comp=Z,503nm,1.8s						
MSVF	Nonsavu	13.07	342	P	Pn	07 17 22.0	+1.3
	comp=Z,157nm,0.9s						
QRZ	Quartz Range	13.09	214	P	Pn	07 17 18.0	-2.8
KHZ	Kahutara	13.93	207	P	Pn	07 17 25.7	-6.5
DGTI	Dogotuki	14.12	350	P	P	07 17 39.5	-1.9
PINNC	Pines Island,	15.24	297	Pn	Pn	07 17 46.1	-3.5
PINNC				IAmb	IAmb	07 18 07.2	
	comp=Z,326nm,0.9s						
PINNC	Pines Island,	15.24	297	P	P	07 17 54.1	+0.3
MARNC	Mare, Loyalty	15.45	301	Pn	Pn	07 17 50.6	-1.9
MARNC	Mare, Loyalty	15.45	301	P	P	07 17 56.8	+0.6
OUENC	Ouen Island, N	15.82	296	Pn	Pn	07 17 55.1	-2.0
OUENC				IAmb	IAmb	07 18 13.8	
	comp=Z,484nm,0.8s						
OUENC	Ouen Island, N	15.82	296	P	P	07 18 04.0	+3.8
YATNC	Mamie plateau,	15.98	297	P	P	07 18 05.8	+3.8
RPZ	Rata Peaks	16.04	210	P	Pn	07 17 54.5	-5.3
	comp=Z,14nm,0.3s,baz=261,slow=1.9,SNR=9.9						
RPZ				S	Sn	07 20 40.6	-16
	comp=Z,24nm,0.3s,baz=163,slow=23,SNR=14						
RPZ				LR	LR	07 24 46.0	
	comp=Z,2µm,20.7s,baz=47,slow=39						
RPZ	Rata Peaks	16.04	210	P	Pn	07 17 54.8	-5.0
ONTNC	Ouen Toro	16.18	296	P	P	07 18 06.3	+2.1
DZM	Mont Dzumac	16.31	296	P	P	07 18 05.5	-0.4
	comp=Z,78nm,0.8s,baz=144,slow=13,SNR=42						
DZM				LR	LR	07 22 57.7	
	comp=Z,14µm,21.5s,baz=132,slow=32						
DZM	Mont Dzumac	16.31	296	Pn	Pn	07 18 01.1	-2.5
DZM				IAmb	IAmb	07 18 18.5	
	comp=Z,398nm,0.7s						
DZM	Mont Dzumac	16.31	296	P	P	07 18 08.9	+3.1
NOUC	Port Laguerre	16.41	296	P	P	07 18 10.6	+3.8
LIFNC	LIFOU	16.47	302	Pn	Pn	07 18 03.3	-2.0
LIFNC				IAmb	IAmb	07 18 14.2	
	comp=Z,2µm,1.5s						
LIFNC	LIFOU	16.47	302	P	P	07 18 10.6	+3.2
AFI	Afiamalu	17.25	20	P	Pn	07 18 08.1	-7.1
	comp=Z,24nm,0.5s,baz=255,slow=4.2,SNR=8.7						
AFI				S	Sn	07 21 05.3	-21
	comp=Z,19nm,0.5s,baz=266,slow=21,SNR=1.6						
AFI	Afiamalu	17.25	20	P	Pn	07 18 10.2	-5.0
ODZ	Otahua Downs	17.28	208	P	Pn	07 18 08.3	-7.1
RTV	Rentapao	17.66	312	P	P	07 18 25.9	+5.2
DVP	Devils Point	17.87	311	P	P	07 18 28.1	+5.2
RAR	Rarotonga	18.60	65	P	Pn	07 18 32.1	+0.5
	comp=Z,82nm,0.5s,baz=268,slow=8.4,SNR=46						
RAR				S	Sn	07 21 40.0	-19
	comp=Z,19nm,0.4s,baz=249,slow=18,SNR=2.4						
RAR				LR	LR	07 25 01.0	
	comp=Z,1µm,20.4s,baz=246,slow=34						
RAR	Rarotonga	18.60	65	P	P	07 18 31.4	+0.5
KOUNC	Koumac, New Ca	18.83	297	P	P	07 18 32.5	-1.0
KOUNC	Koumac, New Ca	18.83	297	P	Pn	07 18 38.7	+4.3
LHI	Lord Howe Isla	19.86	261	P	Pn	07 18 49.1	+2.6
	baz=20,SNR=8.4						
LHI	Lord Howe Isla	19.86	261	P	P	07 18 43.0	-1.7
LHI	Lord Howe Isla	19.86	261	P	Pn	07 18 49.2	+2.6
NTLH	Newcastle Hard	26.04	256	P	P	07 19 49.9	+3.6
ARMA	Armidale	26.32	262	P	P	07 19 51.3	+2.3
	baz=26,SNR=166						
ARMA	Armidale	26.32	262	P	P	07 19 51.4	+2.3
ARMA				IAmb	IAmb	07 19 53.4	
	comp=Z,139nm,0.7s						
ARMA	Armidale	26.32	262	P	P	07 19 52.8	+3.7
RIV	Riverview	26.46	254	P	P	07 19 53.2	+3.0
	baz=26,SNR=7.0						
MGCD	Mangrove Creek	26.52	256	P	P	07 19 53.8	+3.1
	baz=26,SNR=27						
MGCD	Mangrove Creek	26.52	256	P	P	07 19 55.0	+4.3
SYDH	Sydney Hard Ro	26.81	254	P	P	07 19 56.1	+2.8
	comp=Z,402nm,0.7s						
EIDS	Eidsvold	27.88	273	P	P	07 20 03.7	+0.7
EIDS				IAmb	IAmb	07 20 05.6	
	comp=Z,169nm,0.8s						
EIDS	Eidsvold	27.88	273	P	P	07 20 04.9	+1.9
KNTN	Kanton	27.99	13	P	P	07 20 03.1	-0.9
KNTN				IAmb	IAmb	07 20 04.2	
	comp=Z,135nm,0.8s						
CAN	Canberra	28.24	251	P	P	07 20 08.2	+2.0
CAN				IAmb	IAmb	07 20 11.3	
	comp=Z,164nm,0.8s						
CAN	Canberra	28.24	251	P	P	07 20 08.2	+2.0
CAN				pmax	pmax		
	comp=Z,165nm,0.8s						
CAN	Canberra	28.24	251	P	P	07 20 09.5	+3.3
PPTF	Pamatai, Papee	28.68	70	P	P	07 20 11.2	+1.0
PPTF				IAmb	IAmb	07 20 31.9	
	comp=Z,311nm,1.5s						
PPT	Papeete	28.68	70	LR	LR	07 28 53.4	
	comp=Z,2µm,21.6s,baz=240,slow=30						
RK1H	Rockhampton Ha	29.03	276	P	P	07 20 14.9	+1.7
HNR	Honiara	29.35	310	LR	LR	07 30 04.9	
	comp=Z,3µm,21.4s,baz=147,slow=32						
HNR	Honiara	29.35	310	P	P	07 20 15.1	-1.0
HNR				IAmb	IAmb	07 20 49.1	
	comp=Z,219nm,0.8s						
HNR	Honiara	29.35	310	P	P	07 20 15.1	-1.0
HNR				pmax	pmax		
	comp=Z,219nm,0.8s						
GLAD	Gladstone	29.57	239	P	P	07 20 18.8	+1.0
	comp=Z,72nm,0.7s						
RMQ	Roma	29.58	269	P	P	07 20 20.5	+2.4
	baz=30,SNR=209						
RMQ	Roma	29.58	269	P	P	07 20 20.7	+2.6
MOO	Moorlands	30.45	237	P	P	07 20 27.6	+2.0
TAU	Tasmania Unive	30.45	236	P	P	07 20 25.0	-0.6
TAU				IAmb	IAmb	07 20 27.7	
	comp=Z,116nm,0.9s						
TAU	Tasmania Unive	30.45	236	P	P	07 20 25.0	-0.6
TAU				pmax	pmax		
	comp=Z,116nm,1.0s						
TAU	Tasmania Unive	30.45	236	P	P	07 20 26.7	+1.1
TOO	Toolangi	31.13	247	P	P	07 20 32.9	+1.1
TOO				IAmb	IAmb	07 20 36.0	
	comp=Z,234nm,0.9s						
TOO	Toolangi	31.13	247	P	P	07 20 32.9	+1.1
TOO				pmax	pmax		
	comp=Z,234nm,0.9s						
TOO	Toolangi	31.13	247	P	P	07 20 33.6	+1.8
CMSA	Cobar Meteorol	31.23	258	P	P	07 20 34.0	+1.4
	baz=31,SNR=286						
CMSA	Cobar Meteorol	31.23	258	P	P	07 20 35.0	+2.4
BRAT	Ballarat	32.37	247	P	P	07 20 45.2	+2.6
TARA	Tarawa	32.70	343	P	P	07 20 43.9	-1.7
TARA				IAmb	IAmb	07 20 45.7	
	comp=Z,123nm,0.8s						
QLP	Quilpie	33.46	267	P	P	07 20 52.8	+0.6
	baz=33,SNR=53						
QLP	Quilpie	33.46	267	P	P	07 20 54.4	+2.2
CTA	Charters Tower	33.93	279	LR	LR	07 33 32.4	
	comp=Z,5µm,18.0s,baz=115,slow=34						
CTA	Charters Tower	33.93	279	P	P	07 20 57.9	+1.5
CTAO	Charters Tower	33.93	279	P	P	07 20 57.5	+1.1
CTAO	Charters Tower	33.93	279	P	P	07 20 57.5	+1.1
CTAO				pmax	pmax		
	comp=Z,341nm,0.7s						
CTAO	Charters Tower	33.93	279	P	P	07 20 57.9	+1.5
CTAO	Charters Tower	33.93	279	⇑P	P	07 20 57.6	+1.1
CTAO				sP	sP	07 21 16.0	+2.2
ARPS	Mount Arapiles	34.04	248	P	P	07 20 58.5	+1.3
	baz=34,SNR=25						
ARPS	Mount Arapiles	34.04	248	P	P	07 20 59.4	+2.2
STKA	Stephens Creek	34.64	257	P	P	07 21 03.6	+1.3
	comp=Z,407nm,0.8s,baz=98,slow=10.0,SNR=405						
STKA				LR	LR	07 33 49.0	
	comp=Z,4µm,20.0s,baz=90,slow=34						
	comp=Z,407nm,0.8s						
STKA	Stephens Creek	34.64	257	P	P	07 21 03.4	+1.0
	baz=35,SNR=319						
STKA	Stephens Creek	34.64	257	P	P	07 21 03.8	+1.3
STKA				IAmb	IAmb	07 21 06.1	
	comp=Z,83nm,0.7s						
STKA	Stephens Creek	34.64	257	P	P	07 21 03.8	+1.4
STKA				pmax	pmax		
	comp=Z,83nm,0.7s						
STKA	Stephens Creek	34.64	257	P	P	07 21 04.4	+2.0
INKA	Innaminka	36.17	264	P	P	07 21 17.3	+1.7
MTSU	Mount Surprise	36.42	281	P	P	07 21 19.5	+1.6
HTT	Hallett	36.67	254	P	P	07 21 20.9	+1.0
	baz=37,SNR=228						
HTT	Hallett	36.67	254	P	P	07 21 21.4	+1.5
TWOA	Tennyson Woods	36.78	251	P	P	07 21 22.3	+1.6
	comp=Z,128nm,0.7s						
NAPP	Napperby	37.34	254	P	P	07 21 26.3	+0.8
	comp=Z,858nm,0.8s						
PTPS	Port Pirie	37.47	254	P	P	07 21 29.1	+2.5
	comp=Z,1µm,0.7s						
LCRK	Leigh Creek	37.74	258	P	P	07 21 29.6	+0.7
WHYH	Whyalla	37.84	254	P	P	07 21 30.7	+1.0
	comp=Z,553nm,0.7s						
RABL	Rabaul	38.43	307	P	P	07 21 33.8	-1.1
RABL				IAmb	IAmb	07 21 40.7	
	comp=Z,101nm,0.6s						
PMG	Port Moresby	38.70	295	LR	LR	07 34 37.5	
	comp=Z,4µm,21.6s,baz=118,slow=32						
PMG	Port Moresby	38.70	295	P	P	07 21 35.9	-1.2
PMG	Port Moresby	38.70	295	*c i*P	P	07 21 36.9	-0.2
PMG				pmax	pmax		
	comp=Z,40nm,0.6s						
PMG	Port Moresby	38.70	295	P	P	07 21 37.1	0.0
PMG	Port Moresby	38.70	295	P	P	07 21 37.3	+0.2
BBOO	Buckleboo	39.13	254	P	P	07 21 40.4	-0.3
	baz=39,SNR=243						
BBOO	Buckleboo	39.13	254	P	P	07 21 40.4	-0.3
BBOO	Buckleboo	39.13	254	P	P	07 21 41.1	+0.5
COEN	Coen	39.39	286	P	P	07 21 43.2	+0.3
COEN				IAmb	IAmb	07 21 45.1	
	comp=Z,81nm,0.8s						
COEN	Coen	39.39	286	P	P	07 21 44.1	+1.2
QIS	Mount Isa	39.45	274	P	P	07 21 43.3	-0.1
OOD	Oodnadatta	40.50	262	P	P	07 21 52.4	+0.4
MULG	Mulgathing	41.29	257	P	P	07 21 57.9	-0.6
PTCN	Pitcairn Islan	42.35	95	P	P	07 22 07.2	0.0
PTCN				IAmb	IAmb	07 22 28.3	
	comp=Z,441nm,1.4s						
AS31	Alice Springs	43.26	267	P	P	07 22 13.8	-0.9
ASAR	Alice Springs	43.26	267	P	P	07 22 13.7	-1.0
	comp=Z,108nm,0.7s,baz=104,slow=7.8,SNR=644						
ASAR				PcP	PcP	07 24 02.1	-1.1
	comp=Z,20nm,0.8s,baz=108,slow=5.1,SNR=2.6						
ASAR				ScP	ScP	07 27 50.0	-0.5
	comp=Z,6.8nm,0.9s,baz=110,slow=4.1,SNR=5.6						
ASAR				PKiKP	PKiKP	07 31 05.0	-1.2
	comp=Z,1.7nm,0.6s,baz=85,slow=1.7,SNR=7.3						
ASAR				P3KP		07 52 51.1	
	comp=Z,0.5nm,0.8s,baz=302,slow=0.5,SNR=4.1						
	comp=Z,108nm,0.7s						
MANU	Manus Island	43.33	304	P	P	07 22 14.4	-0.8
PATS	Pohnpei	43.45	324	P	P	07 22 14.8	-1.3
WR0	Warramunga Arr	44.06	272	P	P	07 22 19.3	-1.8
WB2	Warramunga Arr	44.23	272	P	P	07 22 21.6	-0.9
WRAB	Tennant Creek	44.24	272	P	P	07 22 21.5	-0.9
WRAB	Tennant Creek	44.24	272	P	P	07 22 21.5	-0.9
WRAB				pmax	pmax		
	comp=Z,315nm,0.7s						
WRAB	Tennant Creek	44.24	272	P	P	07 22 21.6	-0.9
WRAB	Tennant Creek	44.24	272	⇑P	P	07 22 21.5	-1.0
WRAB				sP	sP	07 22 50.0	+10
WRA	Warramunga Arr	44.24	272	P	P	07 22 21.6	-1.0
	comp=Z,284nm,0.5s,baz=112,slow=7.7,SNR=1111						
WRA				ScP	ScP	07 27 54.8	+0.2
	comp=Z,4.2nm,0.8s,baz=104,slow=3.8,SNR=2.1						
WRA				PKiKP	PKiKP	07 31 05.9	-1.2
	comp=Z,2.4nm,0.6s,baz=106,slow=0.5,SNR=10						
WRA				LR	LR	07 39 10.4	
	comp=Z,4µm,21.9s,baz=102,slow=34						
WRA	Warramunga Arr	44.24	272	P	P	07 22 21.5	-1.0
WB0	Warramunga Arr	44.26	272	P	P	07 22 21.2	-1.5
DRV	Dumont d'Urvil	44.28	203	⇑P	P	07 22 22.8	+0.6
DRV				⇓pP	pwP	07 22 36.4	-1.8
DRV				sP	sP	07 22 44.8	+5.4
FORT	Forrest	46.21	255	P	P	07 22 36.5	-1.5
	baz=46,SNR=139						
FORT	Forrest	46.21	255	P	P	07 22 36.8	-1.2
FORT				PcP	PcP	07 24 13.3	+0.2
FORT	Forrest	46.21	255	P	P	07 22 38.0	0.0
WRKA	Warakurna	47.64	263	P	P	07 22 47.4	-1.9
	baz=48,SNR=316						
WRKA	Warakurna	47.64	263	P	P	07 22 47.2	-2.1
SBA	Scott Base	48.14	184	P	P	07 22 56.7	+4.3
SBA				IAmb	IAmb	07 22 58.6	
	comp=Z,180nm,1.1s						
SBA				PcP	PcP	07 24 22.3	+3.1
SBA	Scott Base	48.14	184	⇑P	P	07 22 57.1	+4.8
SBA				pP	sP	07 23 14.3	+4.8
SBA				PP	PcP	07 24 22.2	+3.1
VNDA	Vanda	48.20	186	P	P	07 22 56.1	+3.2
	comp=Z,11nm,0.5s,baz=6.6,slow=8.3,SNR=93						
VNDA				PcP	PcP	07 24 20.5	+1.1
	comp=Z,32nm,0.9s,baz=3.2,slow=5.4,SNR=5.3						
VNDA				LR	LR	07 39 56.2	
	comp=Z,509nm,21.5s,baz=23,slow=32						
	comp=Z,11nm,0.5s						
VNDA	Vanda	48.20	186	P	P	07 22 53.5	+0.6
VNDA					PcP	07 24 20.0	+0.7
GENI	Genyem	48.35	297	P	P	07 22 54.3	-0.5
	comp=Z,4µmcomp=Z,399nm,1.0s						
KDU	Kakadu	49.05	280	P	P	07 22 58.6	-1.5
	baz=49,SNR=24						
KDU	Kakadu	49.05	280	P	P	07 23 00.0	-0.1
MTN	Manton Dam	50.11	279	P	P	07 23 06.8	-1.5
	baz=50,SNR=29						
MTN	Manton Dam	50.11	279	P	P	07 23 06.6	-1.7
MTN				IAmb	IAmb	07 23 08.8	
	comp=Z,190nm,1.4s						
MTN				PcP	PcP	07 24 26.3	-1.1
MTN	Manton Dam	50.11	279	P	P	07 23 08.1	-0.2
KNRA	Kununurra	50.84	274	P	P	07 23 12.8	-0.9
	baz=51,SNR=52						
KNRA	Kununurra	50.84	274	P	P	07 23 12.3	-1.4
KNRA	Kununurra	50.84	274	P	P	07 23 14.1	+0.3
WAKE	Wake Island	51.52	341	P	P	07 23 17.9	-0.7
H11N3	WAKE ISLAND Hy	51.86	342	P	P	07 23 21.0	+0.1
	baz=185,slow=9.9,SNR=17						
H11N1	WAKE ISLAND Hy	51.86	342	P	P	07 23 20.4	-0.6
	baz=185,slow=9.9,SNR=14						
SRPI	Serui, Papua	51.87	294	P	P	07 23 21.7	+0.2
	comp=Z,8µmcomp=Z,203nm,0.6s						
H11N2	WAKE ISLAND Hy	51.88	342	P	P	07 23 20.9	-0.2
	baz=185,slow=9.9,SNR=13						
KMPI	Kaimana, Papua	52.84	290	P	P	07 23 28.9	+0.3
	comp=Z,388nm,0.7s						
CCD	Concordia, Ant	53.08	196	⇑P	P	07 23 31.4	+1.3
KHLU	Kahalu`u	53.92	26	P	P	07 23 37.5	+1.0
SDHHI	Sand Hill	53.96	27	P	P	07 23 37.9	+1.0
WRMHI	West Rim	53.98	27	P	P	07 23 38.1	+1.2
WRMHI				IAmb	IAmb	07 23 39.3	
	comp=Z,147nm,0.9s						
PUH	Pauahi	53.98	27	P	P	07 23 38.0	+1.0
MLOA	Mauna Loa Obse	53.99	26	P	P	07 23 38.5	+1.0
MLOA				IAmb	IAmb	07 23 39.7	
	comp=Z,160nm,1.2s						
NPH	North Pit	53.99	27	P	P	07 23 37.8	+0.7
NPH				IAmb	IAmb	07 23 40.8	
	comp=Z,92nm,1.0s						
HATHI	Halema‘uma‘u T	54.01	27	P	P	07 23 37.8	+0.6
MLH	Mauna Loa	54.02	26	P	P	07 23 38.4	+1.0
POHA	Pohakuloa	54.21	26	⇓P	P	07 23 40.5	+1.7
POHA				pP	sP	07 23 57.2	+1.2
RKGY	Rocky Gully	54.33	247	P	P	07 23 39.3	-0.1
HPAH	Hawaii Prepara	54.39	26	P	P	07 23 41.1	+1.2
FAKI	Fak Fak	54.45	290	P	P	07 23 38.8	-1.6
FAKI	Fak Fak	54.45	290	P	P	07 23 38.6	-1.9
	comp=Z,2µmcomp=Z,176nm,0.9s						
FAKI	Fak Fak	54.45	290	P	P	07 23 39.9	-0.6
MHA	Mahukona	54.46	26	P	P	07 23 41.7	+1.4
MHA	Mahukona	54.46	26	P	P	07 23 41.7	+1.4
NWAO	Narrogin (SRO)	54.57	249	P	P	07 23 39.5	-1.6
NWAO				IAmb	IAmb	07 23 40.6	
	comp=Z,79nm,1.2s						
NWAO	Narrogin (SRO)	54.57	249	P	P	07 23 39.6	-1.6
NWAO				pmax	pmax		
	comp=Z,79nm,1.2s						
NWAO	Narrogin (SRO)	54.57	249	P	P	07 23 40.0	-1.2
NWAO				P	P	07 23 40.0	-1.2
NWAO	Narrogin (SRO)	54.57	249	P	P	07 23 40.6	-0.5
KIP	Kipapa	54.85	23	P	P	07 23 43.4	+0.3
KIP	Kipapa	54.85	23	*ce*P	P	07 23 43.7	+0.6
KIP				pmax	pmax		
	comp=Z,223nm,1.1s						
KIP	Kipapa	54.85	23	⇓P	P	07 23 44.9	+1.8
KIP				sP	sP	07 24 03.9	+3.6
KHLH	Kahului Airpor	54.92	25	P	P	07 23 44.8	+1.2
KHLH				IAmb	IAmb	07 23 47.3	
	comp=Z,138nm,1.3s						
OPA	Opana	55.10	23	P	P	07 23 44.1	-0.8
OPA				IAmb	IAmb	07 23 47.1	
	comp=Z,126nm,1.1s						
OPA	Opana	55.10	23	P	P	07 23 44.1	-0.8
OPA				pmax	pmax		
	comp=Z,126nm,1.1s						
CASY	Casey	55.29	208	P	P	07 23 45.2	-0.6
CASY	Casey	55.29	208	⇑P	P	07 23 45.9	+0.1
CASY				sP	sP	07 24 08.4	+5.1
BLDU	Ballidu	55.66	252	P	P	07 23 47.2	-1.8
	baz=56,SNR=28						
BLDU	Ballidu	55.66	252	P	P	07 23 48.7	-0.4
MUN	Mundaring	55.67	250	P	P	07 23 47.9	-1.2
	baz=56,SNR=18						
MUN	Mundaring	55.67	250	P	P	07 23 51.5	+2.4
PSA00	Pilbara Seismi	56.12	263	P	P	07 23 50.2	-2.2
PSA00				IAmb	IAmb	07 23 52.3	
	comp=Z,88nm,1.4s						
PSA00	Pilbara Seismi	56.12	263	P	P	07 23 51.1	-1.4
MBWA	Marble Bar	56.38	264	P	P	07 23 52.0	-2.3
MBWA				IAmb	IAmb	07 23 54.2	
	comp=Z,148nm,1.0s						
MBWA	Marble Bar	56.38	264	P	P	07 23 52.7	-1.6
MBWA				P	P	07 23 52.7	-1.6
MBWA	Marble Bar	56.38	264	P	P	07 23 52.7	-1.6
SIJI	Sorong	56.44	291	LR	LR	07 48 04.5	
	comp=Z,957nm,19.3s,baz=138,slow=36						
SWI	Sorong	56.45	291	P	P	07 23 54.2	-0.6
	comp=Z,3µmcomp=Z,320nm,0.8s						
GUMO	Guam	56.52	315	LR	LR	07 45 57.9	
	comp=Z,731nm,19.0s,baz=130,slow=34						
GUMO	Guam	56.52	315	P	P	07 23 53.5	-1.7
GUMO	Guam	56.52	315	P	P	07 23 53.5	-1.7
GUMO				pmax	pmax		
	comp=Z,340nm,0.9s						
GUMO	Guam	56.52	315	P	P	07 23 54.5	-0.7
GUMO	Guam	56.52	315	⇑P	P	07 23 53.0	-2.2
MORW	Morawa	56.70	253	P	P	07 23 54.7	-1.7
	baz=57,SNR=45						
MORW	Morawa	56.70	253	P	P	07 23 54.8	-1.7
MORW	Morawa	56.70	253	P	P	07 23 55.3	-1.2

MSAI	Masohi	56.92	287	P	P	07 23 56.4	-1.8
	comp=Z,25nm,0.8s						
SOEI	Soe	57.49	278	P	P	07 24 00.5	-1.8
SOEI	Soe	57.49	278	P	P	07 24 02.5	+0.1
	comp=Z,2µmcomp=Z,172nm,0.8s						
BATI	Baumata	57.78	277	LR	LR	07 48 54.1	
	comp=Z,6µm,19.9s,baz=126,slow=36						
BATI	Baumata	57.78	277	P	P	07 24 06.5	+2.2
	comp=Z,985nmcomp=Z,61nm,0.7s						
RPN	Rapa Nui	59.32	105	LR	LR	07 43 31.2	
	comp=Z,1µm,21.9s,baz=233,slow=30						
LBMI	Labuha	59.63	289	P	P	07 24 17.5	+0.4
	comp=Z,2µmcomp=Z,108nm,0.6s						
MMRI	Maumere	59.78	278	P	P	07 24 16.2	-1.9
MMRI	Maumere	59.78	278	P	P	07 24 16.6	-1.6
	comp=Z,3µmcomp=Z,177nm,0.9s						
QSPA	South Pole Qui	59.80	180	P	P	07 24 20.2	+2.4
	comp=Z,95nm,0.7s,baz=6.9,slow=0.6,SNR=491						
QSPA				LR	LR	07 49 25.3	
	comp=Z,801nm,18.0s,baz=36,slow=35						
	comp=Z,95nm,0.7s						
QSPA	South Pole Qui	59.80	180	P	P	07 24 20.5	+2.8
SANI	Sanana	60.08	287	P	P	07 24 18.7	-1.5
	comp=Z,2µmcomp=Z,200nm,1.2s						
SANI	Sanana	60.08	287	P	P	07 24 19.3	-0.9
EDFI	Ende, Flores	60.19	278	P	P	07 24 19.2	-1.9
	comp=Z,720nmcomp=Z,66nm,0.7s						
GIRL	Giralia	60.51	260	P	P	07 24 22.4	-0.6
	baz=60,SNR=25						
GIRL	Giralia	60.51	260	P	P	07 24 22.9	-0.1
GIRL	Giralia	60.51	260	P	P	07 24 22.9	-0.1
TNTI	Ternate	60.55	290	P	P	07 24 22.0	-1.4
TNTI				IAmb	IAmb	07 24 23.4	
	comp=Z,80nm,1.0s						
TNTI	Ternate	60.55	290	P	P	07 24 23.0	-0.4
	comp=Z,2µmcomp=Z,103nm,1.4s						
WBSI	Waikabubak, Su	61.73	275	P	P	07 24 34.0	+2.5
	comp=Z,103nm,0.7s						
KMSI	Cibinong	63.20	288	P	P	07 24 42.4	+1.1
	comp=Z,185nm,0.6s						
BKSI	Bulukumba	63.26	280	P	P	07 24 40.6	-1.1
	comp=Z,1µmcomp=Z,91nm,0.6s						
LUWI	Luwuk	63.31	286	P	P	07 24 40.9	-1.0
LUWI	Luwuk	63.31	286	P	P	07 24 42.1	+0.2
	comp=Z,9µmcomp=Z,116nm,1.1s						
PLAI	Plampang	63.52	275	P	P	07 24 43.8	+0.4
	comp=Z,191nm,0.8s						
PLAI	Plampang	63.52	275	P	P	07 24 43.2	-0.2
KAPI	Kappang	63.74	280	LR	LR	07 53 12.8	
	comp=Z,983nm,18.9s,baz=126,slow=37						
KAPI	Kappang	63.74	280	P	P	07 24 43.9	-0.9
KAPI				IAmb	IAmb	07 24 45.3	
	comp=Z,43nm,0.8s						
KAPI	Kappang	63.74	280	P	P	07 24 43.9	-0.9
KAPI				pmax	pmax		
	comp=Z,43nm,0.8s						
KAPI	Kappang	63.74	280	P	P	07 24 44.2	-0.6
KAPI	Kappang	63.74	280	P	P	07 24 45.4	+0.6
SGSI	Sangihe	63.74	292	P	P	07 24 48.7	+3.9
BNSI	Bone	63.75	281	P	P	07 24 44.9	0.0
	comp=Z,97nm,1.6s						
SPSI	Sidrap Palu	64.27	281	P	P	07 24 46.9	-1.4
	comp=Z,68nm,0.9s						
APSI	Ampana	64.31	285	P	P	07 24 49.6	+1.0
	comp=Z,777nmcomp=Z,63nm,1.2s						
TTSI	Tana Toraja	64.71	282	P	P	07 24 50.6	-0.6
	comp=Z,970nmcomp=Z,54nm,1.1s						
MRSI	Marisa	64.84	286	P	P	07 24 50.1	-1.9
	comp=Z,91nm,0.8s						
DAV	Davao City (W)	65.72	295	P	P	07 24 57.1	-0.6
TOLI2	Tolitoli	66.15	286	P	P	07 24 58.5	-2.0
TOLI2	Tolitoli	66.15	286	P	P	07 25 00.0	-0.5
JAGI	Jajag, Banyuwa	66.82	274	P	P	07 25 02.7	-2.1
JAGI				IAmb	IAmb	07 25 04.1	
	comp=Z,147nm,1.2s						
GMJI	Gumukmas	67.52	274	P	P	07 25 11.4	+2.2
	comp=Z,121nm,0.8s						
BLJI	Banyuglugur	67.65	274	P	P	07 25 10.9	+0.9
	comp=Z,127nm,0.7s						
KMMI	Kalianget	67.67	275	P	P	07 25 11.7	+1.5
	comp=Z,133nm,0.8s						
JCJ	Chichijima	68.70	322	LR	LR	07 49 54.6	
	comp=Z,523nm,21.2s,baz=132,slow=31						
JCJ	Chichijima	68.70	322	P	P	07 25 15.0	-1.2
JCJ	Chichijima	68.70	322	P	P	07 25 17.7	+1.4
BBKI	Banjar Baru	68.72	279	P	P	07 25 16.7	-0.1
	comp=Z,44nm,0.6s						
PWJI	Pagerwojo	69.06	273	P	P	07 25 19.2	+0.3
	comp=Z,146nm,1.0s						
PCJI	Pacitan	69.52	272	P	P	07 25 21.8	+0.1
	comp=Z,6µmcomp=Z,607nm,0.9s						
BELA	Belgrano 2	69.86	172	P	P	07 25 23.5	+0.7
BELA				IAmb	IAmb	07 25 43.1	
	comp=Z,158nm,1.2s						
WOJI	Wonogiri, Jawa	69.91	273	P	P	07 25 23.7	-0.4
	comp=Z,4µmcomp=Z,221nm,1.0s						
UGM	Wanagama	70.22	272	P	P	07 25 24.2	-1.9
UGM	Wanagama	70.22	272	P	P	07 25 23.6	-2.5
	comp=Z,284nm,0.7s						
MYLDM	Lahad Datu	70.31	289	P	P	07 25 26.0	-0.5
MYLDM				IAmb	IAmb	07 25 53.4	
	comp=Z,151nm,1.4s						
PBKI	Pangkalan Bun	71.83	278	P	P	07 25 36.3	+0.5
	comp=Z,8µmcomp=Z,112nm,0.6s						
KPJI	Karang Pucung	71.88	272	P	P	07 25 35.2	-0.9
	comp=Z,176nm,0.6s						
PMSA	Palmer Station	72.29	156	P	P	07 25 39.6	+2.0
	comp=Z,26nm,0.7s,baz=295,slow=4.5,SNR=13						
PMSA				LR	LR	07 50 22.8	
	comp=Z,694nm,21.7s,baz=238,slow=30						
	comp=Z,26nm,0.7s						
PMSA	Palmer Station	72.29	156	P	P	07 25 38.3	+0.7
PMSA				IAmb	IAmb	07 25 59.1	
	comp=Z,162nm,1.2s						
PMSA	Palmer Station	72.29	156	*e*P	P	07 25 40.8	+3.1
MAW	Mawson	72.44	201	P	P	07 25 39.5	+1.0
	comp=Z,31nm,0.6s,baz=132,slow=7.2,SNR=93						
MAW				LR	LR	07 56 04.7	
	comp=Z,2µm,21.0s,baz=118,slow=34						
	comp=Z,31nm,0.6s						
MAW	Mawson	72.44	201	P	P	07 25 39.5	+1.0
	baz=72,SNR=113						
MAW	Mawson	72.44	201	P	P	07 25 39.6	+1.0
MAW	Mawson	72.44	201	P	P	07 25 39.6	+1.0
MAW				pmax	pmax		
	comp=Z,13nm,1.0s						
JCJI	Jatiwangi	72.86	272	P	P	07 25 43.5	+1.6
	comp=Z,347nm,0.8s						
XMIS	Christmas Isla	73.20	268	P	P	07 25 42.5	-1.5
LEM	Lembang	73.26	272	LR	LR	07 59 52.1	
	comp=Z,1µm,18.9s,baz=152,slow=37						
STKI	Sintang	73.42	280	P	P	07 25 45.3	+0.1
	comp=Z,12µmcomp=Z,145nm,1.0s						
CNJI	Cibinong	73.45	271	P	P	07 25 44.3	-1.1
	comp=Z,4µmcomp=Z,470nm,0.9s						
TGY	Tagaytay City	73.61	298	LR	LR	07 56 31.7	
	comp=Z,344nm,20.5s,baz=149,slow=34						
SBUM	Sibu	74.05	283	P	P	07 25 48.0	-0.9
SBUM				IAmb	IAmb	07 25 49.5	
	comp=Z,87nm,0.9s						
DBJI	Dramaga	74.14	272	P	P	07 25 48.8	-0.7
	comp=Z,8µmcomp=Z,354nm,0.9s						
JHJ	Hachijo jima 2	74.75	324	LR	LR	07 55 06.1	
	comp=Z,388nm,19.7s,baz=102,slow=33						
TPI	Tanjungpandan	75.25	275	P	P	07 25 55.6	-0.3
	comp=Z,78nm,1.3s						
USHA	Ushuaia	75.91	146	P	P	07 26 00.9	+1.9
	comp=Z,20nm,1.0s,baz=245,slow=6.1,SNR=11						
USHA				LR	LR	07 51 49.7	
	comp=Z,500nm,21.7s,baz=238,slow=30						
	comp=Z,20nm,1.0s						
BLSI	Bandar Lampung	76.03	272	P	P	07 25 58.8	-1.6
KASI	Kota Agung	76.60	271	P	P	07 26 01.9	-1.7
	comp=Z,229nm,0.8s						
KLI	Kotabumi	76.61	272	P	P	07 26 01.9	-1.8
	comp=Z,9µmcomp=Z,432nm,0.9s						
JOW	Kunigami	76.71	312	LR	LR	07 55 32.1	
	comp=Z,805nm,21.4s,baz=134,slow=32						
JOW	Kunigami	76.71	312	P	P	07 26 04.5	+0.7
JYT	Yasato	77.03	326	P	P	07 26 05.5	0.0
JYT				IAmb	IAmb	07 26 06.4	
	comp=Z,150nm,0.9s						
LWLI	Liwa	77.23	272	P	P	07 26 06.2	-1.1
	comp=Z,220nm,0.8s						
INU	Inuyama	77.92	324	P	P	07 26 09.5	-0.9
JGF	Kuroka	77.94	324	P	P	07 26 09.8	-0.8
JGF				IAmb	IAmb	07 26 13.0	
	comp=Z,66nm,0.6s						
TROLL	Troll, Antarti	77.96	180	P	P	07 26 12.0	+1.6
SNAA	Sanae	78.24	178	P	P	07 26 13.2	+1.3
SNAA	Sanae	78.24	178	LR	LR	07 57 36.0	
	comp=Z,463nm,22.0s,baz=203,slow=33						
SNAA	Sanae	78.24	178	P	P	07 26 12.7	+0.8
SNAA				IAmb	IAmb	07 26 14.8	
	comp=Z,125nm,1.1s						
SNAA	Sanae	78.24	178	*c i*P	P	07 26 13.0	+1.1
SNAA				pmax	pmax		
	comp=Z,204nm,1.7s						
MJAR	Matsushiro Arr	78.25	325	P	P	07 26 11.2	-1.0
	comp=Z,35nm,0.9s,baz=160,slow=5.6,SNR=41						
MJAR				LR	LR	07 55 38.1	
	comp=Z,347nm,21.5s,baz=144,slow=32						
	comp=Z,35nm,0.9s						
MJAR	Matsushiro Arr	78.25	325	P	P	07 26 11.4	-0.9
MJAR	Matsushiro Arr	78.25	325	P	P	07 26 11.4	-0.9
MJAR				pmax	pmax		
	comp=Z,42nm,1.0s						
MAJO	Matsushiro	78.25	325	P	P	07 26 11.6	-0.7
MAJO				IAmb	IAmb	07 26 12.9	
	comp=Z,71nm,1.1s						
MAJO	Matsushiro	78.25	325	P	P	07 26 11.6	-0.7
MAJO				pmax	pmax		
	comp=Z,71nm,1.1s						
MJB9	Matsu-Tunnel	78.26	325	P	P	07 26 11.8	-0.5
MJB9				IAmb	IAmb	07 26 12.9	
	comp=Z,67nm,1.0s						
VNA3	Neumayer Olymp	78.39	176	P	P	07 26 13.7	+1.1
VNA2	Neumayer--Watz	78.82	177	P	P	07 26 16.4	+1.4
	baz=174,slow=5.1						
VNA2	Neumayer--Watz	78.82	177	PKiKP	PKiKP	07 31 53.0	+3.8
	baz=189,slow=1.8						
DSRI	Dabo	79.05	276	P	P	07 26 16.6	-0.6
	comp=Z,58nm,1.0s						
VNA1	Neumayer--Stat	79.05	176	P	P	07 26 17.7	+1.5
TPUB	Ta-pu	79.55	305	P	P	07 26 17.6	-2.0
TPUB				IAmb	IAmb	07 26 19.6	
	comp=Z,87nm,0.8s						
JNU	Nakatsue	79.59	318	LR	LR	07 58 16.3	
	comp=Z,174nm,19.4s,baz=106,slow=33						
SSLB	Suanglung	79.63	305	P	P	07 26 18.4	-1.7
TPRI	Tanjung Pinang	79.80	277	P	P	07 26 21.2	-0.1
	comp=Z,78nm,0.8s						
YHNB	Yeheng	79.89	306	P	P	07 26 21.9	+0.3
H03S2	Juan Fernandez	80.39	123	T	T	08 55 38.0	
	SNR=312						
H03S1	Juan Fernandez	80.40	124	T	T	08 55 39.1	
	SNR=264						
H03S3	Juan Fernandez	80.41	123	T	T	08 55 38.0	
	SNR=281						
ERM	Erimo	80.45	332	P	P	07 26 24.0	0.0
H03N3	Juan Fernandez	80.58	123	T	T	08 55 52.3	
	baz=242,slow=72,SNR=105						
H03N2	Juan Fernandez	80.58	123	T	T	08 55 53.9	
	baz=242,slow=72,SNR=241						
H03N1	Juan Fernandez	80.60	123	T	T	08 55 49.4	
	baz=242,slow=72,SNR=299						
H06S1	SOCORRO T	80.70	62	T	T	08 55 41.5	
	SNR=9.8						
H06E1	SOCORRO T-PHAS	80.75	62	T	T	08 56 02.0	
	SNR=3.8						
KUR	Kuril'sk	81.40	336	*e*P	P	07 26 28.1	-0.9
KUR				*e*S	S	07 36 35.4	-1.0
KUR				SS	SS	07 41 56.5	+2.3
KUR				pmax	pmax		
	comp=Z,548µm,3.9s						
KUR				MLR	MLR		
	comp=Z,700nm,16.0s						
KUR				MLR	MLR		
	comp=N,600nm,17.0s						
KUR				MLR	MLR		
	comp=E,500nm,19.0s						
ORCD	Orcadas	81.54	159	P	P	07 26 31.1	+1.3
ORCD				IAmb	IAmb	07 26 50.7	
	comp=Z,158nm,1.1s						
ADK	Adak	81.84	1	P	P	07 26 30.8	-0.4
QZH	Quanzhou	82.03	305	⇑*i*P	P	07 26 31.8	-1.0
QZH				sP	pP	07 26 46.5	+0.5
QZH				S	S	07 36 37.5	-6.2
QZH				sS	sS	07 37 04.8	-1.3
QZH				pmax	pmax		
	comp=Z,280nm,3.7s						
QZH				LR	LR		
	comp=Z,300nm,18.5s						
QZH				LR	LR		
	comp=Z,260nm,18.0s						
QZH				LR	LR		
	comp=Z,450nm,18.9s						
ASAJ	Asahikawa	82.43	332	LR	LR	08 01 59.3	
	comp=Z,753nm,18.6s,baz=168,slow=35						
PLCA	Paso Flores	82.46	133	P	P	07 26 37.6	+2.5
	comp=Z,45nm,1.0s,baz=225,slow=5.5,SNR=60						
PLCA				PKPPKP		07 53 01.0	
	comp=Z,1.3nm,0.8s,baz=58,slow=4.3,SNR=3.9						
PLCA				LR	LR	07 54 43.8	
	comp=Z,1µm,21.7s,baz=221,slow=29						
	comp=Z,45nm,1.0s						
PLCA	Paso Flores	82.46	133	P	P	07 26 37.0	+1.8
PLCA	Paso Flores	82.46	133	*e*P	P	07 26 38.0	+2.8
BKNI	Bangkinang	82.50	275	P	P	07 26 34.2	-1.4
BKNI	Bangkinang	82.50	275	P	P	07 26 34.5	-1.2
	comp=Z,279nm,1.0s						
PPI	Padang Panjang	82.66	274	P	P	07 26 34.0	-2.5
	comp=Z,42nm,0.6s						
EFI	East Falkland	82.79	147	*c i*P	P	07 26 38.1	+1.6
EFI				pmax	pmax		
	comp=Z,123nm,1.4s						
SHEM	Shemya Is, Ala	82.99	355	P	P	07 26 37.4	+0.2
	comp=Z,132nm,0.8s,baz=5.1,slow=2.4,SNR=13						
SHEM				LR	LR	07 56 43.6	
	comp=Z,1µm,21.8s,baz=131,slow=31						
	comp=Z,132nm,0.8s						
NAWB	Namwon	83.24	318	P	P	07 26 38.7	-0.2
NIKH	Nikolski High	83.30	5	P	P	07 26 38.2	-0.5
	baz=188,SNR=11						
SKR	Severo-Kuril's	83.87	344	*e*P	P	07 26 41.8	+0.1
SKR				*e*S	S	07 37 07.4	+6.2
SKR				pmax	pmax		
	comp=Z,200nm,8.6s						
SKR				MLR	MLR		
	comp=Z,200nm,20.0s						
SNCC	San Nicolas Is	83.87	46	P	P	07 26 44.8	+2.6
	baz=228						
TJN	Taejon	83.93	318	*ce*P	P	07 26 42.1	-0.3
MNSI	Mandailing Nat	84.00	274	P	P	07 26 40.9	-2.5
	comp=Z,8µmcomp=Z,157nm,0.7s						
SSE	Sheshan	84.16	311	P	P	07 26 43.0	-0.7
SSE				S	S	07 37 06.8	+1.7
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,3.1s						
SSE				LR	LR		
	comp=Z,170nm,20.7s						
SSE				LR	LR		
	comp=Z,230nm,21.9s						
SCI2	San Clemente I	84.30	47	P	P	07 26 47.2	+2.8
	baz=228						
SCZ2	Santa Cruz Isl	84.31	45	P	P	07 26 46.9	+2.4
	baz=228						
LPIG	La Paz	84.36	58	LR	LR	07 59 52.8	
	comp=Z,646nm,18.1s,baz=214,slow=32						
KSRS	Korea Array	84.37	320	P	P	07 26 45.0	+0.4
	comp=Z,23nm,0.8s,baz=142,slow=5.7,SNR=100						
KSRS				LR	LR	08 04 05.0	
	comp=Z,200nm,18.1s,baz=110,slow=36						
	comp=Z,23nm,0.8s						
UNV	Unalaska Valle	84.38	7	P	P	07 26 44.5	+0.3
	baz=190,SNR=10						
KSAR	Wonju Array Be	84.39	320	P	P	07 26 44.4	-0.3
KSAR	Wonju Array Be	84.39	320	P	P	07 26 44.4	-0.3
KS19	Wonju Array Si	84.44	320	P	P	07 26 45.5	+0.5
SBC	Santa Barbara	84.56	45	P	P	07 26 48.6	+2.9
	baz=227						
IPM	Ipoh	84.62	278	P	P	07 26 45.1	-1.4
CIS	Catalina Islan	84.67	46	P	P	07 26 47.9	+1.6
	baz=228,SNR=5.8						
YSS	Yuzh-Sakhalins	84.73	334	P	P	07 26 46.7	+0.5
YSS				IAmb	IAmb	07 26 50.0	
	comp=Z,76nm,0.9s						
YSS	Yuzh-Sakhalins	84.73	334	α*e*P	P	07 26 47.1	+0.9
YSS				*e**SP	pwP	07 27 02.3	-1.0
YSS				*e*		07 30 00.0	
YSS				*e*PPP	PPP	07 32 03.4	
YSS				*e*S	S	07 37 12.8	+2.8
YSS				*e*PS	PnS	07 38 20.0	+10
YSS				*e*SS	SS	07 42 47.8	+4.3
YSS				pmax	pmax		
	comp=Z,700nm,3.7s						
YSS				pmax	pmax		
	comp=N,200nm,2.3s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,600nm,3.8s						
YSS				MLR	MLR		
	comp=Z,600nm,19.0s						
YSS				MLR	MLR		
	comp=N,500nm,18.0s						
CCX	Cicese	84.78	48	P	P	07 26 48.0	+1.2
CCX				IAmb	IAmb	07 27 08.6	
	comp=Z,107nm,1.4s						
PKM	Mcpherson Peak	84.80	44	P	P	07 26 49.9	+2.7
	baz=227,SNR=13						
FMP	Fort Macarthur	84.95	46	P	P	07 26 49.5	+1.8
	baz=228						
SMMC	Simmler	84.98	44	P	P	07 26 50.5	+2.7
	baz=227						
QIZ	Qiongzhong	85.09	295	P	P	07 26 48.5	-0.2
QIZ	Qiongzhong	85.09	295	P	P	07 26 49.8	+1.1
QIZ				S	S	07 37 18.3	+3.4
QIZ				pmax	pmax		
	comp=Z,45nm,1.0s						
QIZ				LR	LR		
	comp=Z,230nm,11.2s						
QIZ				LR	LR		
	comp=Z,360nm,16.1s						
QIZ				LR	LR		
	comp=Z,860nm,38.4s						
PAGB	Antelope Grade	85.11	44	P	P	07 26 50.1	+1.6
PAGB				IAmb	IAmb	07 27 09.7	
	comp=Z,48nm,1.0s						
109C	Camp Elliot, M	85.16	47	P	P	07 26 49.8	+1.1
109C				IAmb	IAmb	07 27 10.3	
	comp=Z,94nm,1.5s						
109C	Camp Elliot, M	85.16	47	P	P	07 26 50.7	+2.0
	baz=229,SNR=5.2						
BBGB	Big Mountain B	85.22	43	P	P	07 26 51.2	+2.1
BBGB				IAmb	IAmb	07 27 11.2	
	comp=Z,115nm,1.2s						
TKX	Tecate	85.27	48	P	P	07 26 51.3	+2.0
TKX				IAmb	IAmb	07 27 11.8	
	comp=Z,94nm,1.3s						
OSI	Osito Audit: C	85.28	45	P	P	07 26 51.5	+2.1
	baz=228						
DECC	Green Verdugo	85.28	46	P	P	07 26 51.7	+2.4
	baz=228,SNR=7.5						
KULM	Kulim	85.35	279	P	P	07 26 49.1	-1.1
KULM				IAmb	IAmb	07 26 50.4	
	comp=Z,97nm,0.8s						
SFX	San Felipe	85.43	50	IAmb	IAmb	07 27 13.7	
	comp=Z,56nm,1.5s						
ELS	Elsinore Mount	85.45	47	P	P	07 26 51.3	+1.0
PET	Petropavlovsk	85.48	346	*c i*P	P	07 26 48.3	-1.5
PET				*e*		07 30 06.2	
PET				*e*S	S	07 37 17.7	+0.5
PET				*e*PS	PnS	07 38 17.5	-1.6
PET				*e*PPS	PPS	07 38 34.9	
PET				pmax	pmax		
	comp=Z,500nm,7.8s						
PET				pmax	pmax		
	comp=Z,82nm,0.7s						
PET				pmax	pmax		
	comp=Z,400nm,13.3s						
ARVC	Arvin	85.56	45	P	P	07 26 52.6	+1.9
	baz=228,SNR=18						
MURC	Murrieta	85.56	47	P	P	07 26 52.8	+2.0
	baz=229,SNR=24						
PSI	Prapat	85.57	276	PP	PP	07 30 10.5	-0.2
	comp=Z,12nm,0.9s,baz=229,slow=5.0,SNR=3.9						
PSI				LR	LR	08 05 16.9	
	comp=Z,2µm,21.5s,baz=130,slow=36						
MONP2	Monument Peak	85.59	48	P	P	07 26 53.4	+2.2
	baz=230,SNR=38						
IKP	In-Ko-Pah, Jac	85.64	48	P	P	07 26 53.5	+2.2
	baz=230,SNR=16						
TEY	Ternei	85.69	329	⇓*e*P	P	07 26 50.9	-0.1
TEY				*e*		07 37 23.3	
TEY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,100nm,4.4s						
BFSC	Mount Baldy Ra	85.69	46	P	P	07 26 53.2	+1.6
	baz=229,SNR=36						
FALS	False Pass	85.72	8	P	P	07 26 51.8	+0.9
FALS	False Pass	85.72	8	P	P	07 26 50.8	-0.1
	baz=192,SNR=8.6						
HOPS	Hopland Field	85.75	40	IAmb	IAmb	07 26 54.9	
	comp=Z,77nm,1.1s						
YUH	Yuha Desert	85.76	48	P	P	07 26 52.1	+0.4
YUH				IAmb	IAmb	07 27 13.6	
	comp=Z,123nm,1.4s						
PEA0B	Petropavlovsk-	85.76	345	P	P	07 26 51.8	+0.6
PEA0B	Petropavlovsk-	85.76	345	P	P	07 26 51.8	+0.6
PEA0B				pmax	pmax		
	comp=Z,202nm,1.2s						
PETK	Petropavlovsk-	85.76	345	P	P	07 26 51.4	+0.2
	comp=Z,97nm,0.9s,baz=141,slow=7.6,SNR=52						
PETK				PKiKP	PKiKP	07 31 60.0	-0.5
	comp=Z,2.6nm,0.7s,baz=197,slow=4.6,SNR=3.8						
PETK				LR	LR	08 00 06.3	
	comp=Z,442nm,20.6s,baz=170,slow=32						
	comp=Z,97nm,0.9s						
GDXM	Geysers	85.77	40	IAmb	IAmb	07 27 13.5	
	comp=Z,64nm,1.1s						
VES	Vestal, Richgr	85.88	44	P	P	07 26 53.7	+1.5
	baz=228,SNR=25						
EDW2	Edwards Air Fo	85.91	45	P	P	07 26 54.2	+1.7
	baz=228,SNR=29						
GSI	Gunungsitoli	85.98	274	P	P	07 26 52.4	-0.9
GSI	Gunungsitoli	85.98	274	P	P	07 26 53.3	0.0
GSI	Gunungsitoli	85.98	274	P	P	07 26 53.7	+0.4
VOG	Valley Oaks Go	86.02	44	P	P	07 26 54.5	+1.5
	baz=228						
SWSC	Sam W. Stewart	86.03	48	P	P	07 26 55.2	+2.1
	baz=230,SNR=26						
MT09	Talagante	86.03	127	P	P	07 26 53.3	-0.2
PFO	Pinyon Flats O	86.04	47	LR	LR	08 01 24.6	
	comp=Z,351nm,18.3s,baz=252,slow=33						
PFO	Pinyon Flats O	86.04	47	P	P	07 26 54.5	+1.2
PFO				IAmb	IAmb	07 27 15.0	
	comp=Z,140nm,1.4s						
PFO	Pinyon Flats O	86.04	47	P	P	07 26 54.5	+1.2
PFO				pmax	pmax		
	comp=Z,140nm,1.5s						
PFO	Pinyon Flats O	86.04	47	P	P	07 26 55.2	+2.0
	baz=229,SNR=27						
CCAC	Calif City Air	86.07	45	IAmb	IAmb	07 27 15.0	
	comp=Z,86nm,1.3s						
ISA	Isabella, Lake	86.13	45	P	P	07 26 55.6	+2.0
ISA				IAmb	IAmb	07 27 15.3	
	comp=Z,96nm,1.1s						
ISA	Isabella, Lake	86.13	45	P	P	07 26 55.6	+2.0
ISA				pmax	pmax		
	comp=Z,96nm,1.1s						
ISA	Isabella, Lake	86.13	45	P	P	07 26 55.6	+2.0
	baz=228,SNR=54						
BBRC	Big Bear Solar	86.17	46	P	P	07 26 56.0	+2.0
	baz=229,SNR=7.5						
BO04	La Punta	86.18	127	P	P	07 26 55.4	+1.3
BO04				IAmb	IAmb	07 27 15.5	
	comp=Z,125nm,1.4s						
MT02	Curacav	86.22	126	P	P	07 26 55.9	+1.7
CHNA	Chernabura Isl	86.24	10	P	P	07 26 54.1	+0.6
	baz=196,SNR=53						
NJ2	Nanjing	86.30	311	⇑*i*P	P	07 26 54.3	-0.1
NJ2				pP	pP	07 27 05.0	-2.6
NJ2				sP	pwP	07 27 09.5	-1.4
NJ2				PP	PP	07 30 15.0	-1.2
NJ2				S	S	07 37 29.8	+3.6
NJ2				sS	pS	07 37 43.3	0.0
NJ2				pmax	pmax		
	comp=Z,58nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,600nm,4.0s						
NJ2				LR	LR		
	comp=Z,570nm,18.2s						
NJ2				LR	LR		
	comp=Z,940nm,21.2s						
NJ2				LR	LR		

	comp=Z,880nm,22.7s						
MSHR	Mys Shultsa	86.37	325	⇓eP	P	07 26 54.1	-0.4
MSHR				pmax	pmax		
	comp=Z,30nm,1.0s						
MT05	Renca	86.42	127	P	P	07 26 57.2	+1.9
LRMC	Laurel Mtn Rad	86.49	45	P	P	07 26 57.4	+1.9
	baz=229,SNR=40						
VA06	Catapilco	86.49	126	P	P	07 26 57.1	+1.5
RRX	Edison Barstow	86.52	46	P	P	07 26 57.3	+1.9
	baz=229						
MT03	Universidad Ad	86.52	127	P	P	07 26 57.2	+1.4
BELC	Belle Mtn. Jos	86.58	47	P	P	07 26 58.1	+2.2
	baz=230,SNR=53						
CMB	Columbia Colle	86.59	42	P	P	07 26 57.0	+1.2
CMB				IAmb	IAmb	07 27 16.9	
	comp=Z,52nm,1.1s						
CMB	Columbia Colle	86.59	42	P	P	07 26 57.0	+1.2
CMB				pmax	pmax		
	comp=Z,52nm,1.1s						
SDPT	Sand Point	86.60	10	P	P	07 26 55.4	+0.2
SDPT	Sand Point	86.60	10	P	P	07 26 55.7	+0.5
	baz=195,SNR=43						
BC3	Big Chuckawall	86.70	48	P	P	07 26 59.1	+2.6
	baz=230,SNR=61						
KHMM	Horse Mountain	86.72	38	IAmb	IAmb	07 27 18.1	
	comp=Z,62nm,1.1s						
GLA	Glamis	86.72	49	P	P	07 26 58.7	+2.1
GLA	Glamis	86.72	49	P	P	07 26 58.7	+2.1
GLA				pmax	pmax		
	comp=Z,169nm,1.4s						
GLA	Glamis	86.72	49	P	P	07 26 59.2	+2.7
	baz=230,SNR=22						
UGL	Uglegorsk	86.75	335	eP	P	07 26 55.7	-0.5
UGL				pmax	pmax		
	comp=Z,60nm,0.8s						
UGL				pmax	pmax		
	comp=Z,900nm,4.5s						
HSIG		86.84	54	P	P	07 26 58.4	+1.3
HSIG				IAmb	IAmb	07 27 18.7	
	comp=Z,122nm,1.4s						
CWC	Cottonwood Cre	86.88	44	P	P	07 26 59.0	+1.7
	baz=228						
VA03	San Esteban	86.90	126	P	P	07 26 58.8	+1.1
HEC	Hector,Ludlow	86.90	46	P	P	07 26 59.4	+2.0
	baz=229,SNR=44						
GSC	Goldstone, Bar	86.92	46	P	P	07 26 59.4	+1.9
GSC	Goldstone, Bar	86.92	46	P	P	07 26 59.4	+1.9
GSC				pmax	pmax		
	comp=Z,130nm,1.2s						
GSC	Goldstone, Bar	86.92	46	P	P	07 26 59.6	+2.2
	baz=229,SNR=60						
KCSI	Kotacane, Aceh	86.93	276	P	P	07 26 56.2	-1.8
	comp=Z,92nm,1.2s						
ORV	Oroville	87.01	40	P	P	07 26 59.0	+1.3
ORV	Oroville	87.01	40	P	P	07 26 59.0	+1.3
ORV				pmax	pmax		
	comp=Z,34nm,1.2s						
MDPB	Devils Postpil	87.08	43	P	P	07 26 60.0	+1.5
OMMB	Old Mammoth Mi	87.12	43	P	P	07 26 59.6	+0.9
OMMB				IAmb	IAmb	07 27 21.0	
	comp=Z,54nm,1.4s						
USA0B	Ussuriysk Arra	87.17	326	P	P	07 26 58.2	-0.1
USA0B				IAmb	IAmb	07 27 03.1	
	comp=Z,66nm,1.3s						
USA0B	Ussuriysk Arra	87.17	326	P	P	07 26 58.2	-0.1
USA0B				pmax	pmax		
	comp=Z,65nm,1.3s						
USRK	Ussuriysk Ar.	87.17	326	P	P	07 26 59.0	+0.7
	comp=Z,25nm,0.7s,baz=122,slow=4.0,SNR=35						
USRK				LR	LR	07 59 55.6	
	comp=Z,454nm,21.9s,baz=130,slow=32						
	comp=Z,25nm,0.7s						
USRK	Ussuriysk Ar.	87.17	326	P	P	07 26 58.1	-0.2
USRK	Ussuriysk Ar.	87.17	326	P	P	07 26 59.0	+0.7
TIN	Tinemaha, Big	87.20	44	P	P	07 27 00.8	+1.9
	baz=228,SNR=5.1						
IRM	Iron Mountain	87.22	48	P	P	07 27 01.6	+2.6
	baz=230,SNR=80						
MLAC	Mammoth, Mammo	87.23	43	P	P	07 27 01.2	+2.1
	baz=228,SNR=11						
113A	Mohawk Valley,	87.24	49	P	P	07 27 00.5	+1.5
113A				IAmb	IAmb	07 27 02.8	
	comp=Z,65nm,1.3s						
GMRC	Granite Mounta	87.30	47	P	P	07 27 01.5	+2.1
	baz=230,SNR=30						
QSM	Queen of Sheba	87.31	45	P	P	07 27 00.9	+1.7
QSM				IAmb	IAmb	07 27 20.7	
	comp=Z,84nm,1.2s						
BLYC	Blythe	87.36	48	P	P	07 27 01.8	+2.2
BLYC				IAmb	IAmb	07 27 21.8	
	comp=Z,129nm,1.4s						
214A	Organ Pipe Nat	87.36	50	P	P	07 27 02.0	+2.4
214A	Organ Pipe Nat	87.36	50	P	P	07 27 02.2	+2.5
	baz=232						
SPIA	Saint Paul Isl	87.38	4	P	P	07 27 00.8	+1.8
SPIA	Saint Paul Isl	87.38	4	P	P	07 27 00.5	+1.5
	baz=187						
EMB	Emerald Bay	87.40	41	P	P	07 27 01.3	+1.4
EMB				IAmb	IAmb	07 27 20.9	
	comp=Z,52nm,1.3s						
CO02	Combarbal	87.46	125	P	P	07 27 01.8	+1.4
TUQ	Turquoise Moun	87.55	46	P	P	07 27 02.6	+2.0
	baz=230,SNR=26						
GWY	Greenwater Val	87.58	45	P	P	07 27 01.8	+1.1
GWY				IAmb	IAmb	07 27 22.0	
	comp=Z,74nm,1.2s						
SHOC	Shoshone, Teco	87.63	46	P	P	07 27 02.8	+1.9
	baz=229,SNR=38						
FURC	Furnace Creek,	87.64	45	P	P	07 27 02.8	+2.0
	baz=229,SNR=20						
MPK	Martis Peak	87.66	41	P	P	07 27 02.5	+1.3
MPK				IAmb	IAmb	07 27 22.4	
	comp=Z,62nm,1.0s						
LCH	Last Change Ra	87.67	44	P	P	07 27 02.4	+1.2
LCH				IAmb	IAmb	07 27 22.3	
	comp=Z,61nm,1.5s						
GRAC	Grapevine Rang	87.68	44	P	P	07 27 03.0	+1.9
GRAC				IAmb	IAmb	07 27 22.8	
	comp=Z,88nm,1.1s						
GRAC	Grapevine Rang	87.68	44	P	P	07 27 03.2	+2.1
	baz=229,SNR=39						
L02F	Cave Junction	87.69	37	P	P	07 27 03.2	+2.3
	baz=225						
PNTR	Pine Nut	87.76	41	P	P	07 27 03.2	+1.6
PNTR				IAmb	IAmb	07 27 22.7	
	comp=Z,68nm,0.9s						
LHV	Little Huntoon	87.84	43	P	P	07 27 03.6	+1.9
LHV				IAmb	IAmb	07 27 23.3	
	comp=Z,60nm,1.0s						
BEKR	Beckworth	87.86	40	P	P	07 27 03.1	+1.1
CHIR	Chirikof Islan	87.86	12	P	P	07 27 02.2	+0.9
CHIR	Chirikof Islan	87.86	12	P	P	07 27 02.2	+0.9
	baz=199,SNR=9.5						
YBH	Yreka Blue Hor	87.87	38	P	P	07 27 03.5	+1.6
	comp=Z,12nm,0.8s,baz=218,slow=2.4,SNR=20						
YBH				LR	LR	07 58 35.3	
	comp=Z,389nm,21.9s,baz=238,slow=30						
	comp=Z,12nm,0.8s						
YBH	Yreka Blue Hor	87.87	38	P	P	07 27 03.2	+1.3
VCNR	Virginia City	87.87	41	P	P	07 27 03.6	+1.5
VCNR				IAmb	IAmb	07 27 26.4	
	comp=Z,57nm,1.3s						
YERR	Yerington	87.90	42	P	P	07 27 03.7	+1.4
YERR				IAmb	IAmb	07 27 05.0	
	comp=Z,33nm,0.9s						
SRIT	Nakonsritamara	87.93	281	P	P	07 27 02.8	0.0
SRIT				IAmb	IAmb	07 27 04.0	
	comp=Z,40nm,0.7s						
NEE2	Needles Airpor	87.95	47	P	P	07 27 04.7	+2.3
	baz=230,SNR=7.6						
PDMCI	Parker Dam,Lak	87.96	48	P	P	07 27 04.9	+2.5
	baz=231,SNR=16						
CNSH	ChangSha	88.01	304	⇑P	P	07 27 00.8	-2.0
CNSH				S	S	07 37 38.8	-4.1
CNSH				LR	LR		
	comp=Z,340nm,20.7s						
CNSH				LR	LR		
	comp=Z,370nm,24.3s						
CNSH				LR	LR		
	comp=Z,570nm,24.3s						
TYV	Tymovskoe	88.03	336	eP	P	07 27 03.0	+0.7
TYV				pmax	pmax		
	comp=Z,1µm,4.8s						
TYV				pmax	pmax		
	comp=Z,53nm,2.0s						
K02D	Willamette Mer	88.05	37	P	P	07 27 04.7	+1.9
	baz=224						
NVAR	Mina Array Bea	88.07	43	P	P	07 27 04.5	+1.4
	comp=Z,24nm,0.7s,baz=221,slow=7.9,SNR=189						
NVAR				PKKPbc	PKKPbc	07 44 47.3	-1.7
	comp=Z,1.3nm,0.7s,baz=78,slow=2.3,SNR=7.6						
NVAR				PKPPKP	P'P'df	07 52 50.0	-3.2
	comp=Z,0.9nm,0.7s,baz=94,slow=4.3,SNR=4.8						
NVAR				LR	LR	08 03 13.8	
	comp=Z,714nm,18.1s,baz=232,slow=33						
	comp=Z,24nm,0.7s						
NVAR	Mina Array Bea	88.07	43	P	P	07 27 04.3	+1.2
RYN	Ryan	88.08	42	P	P	07 27 04.0	+1.0
NV11	Mina Array Sit	88.16	43	P	P	07 27 04.8	+1.3
NV11				IAmb	IAmb	07 27 24.5	
	comp=Z,38nm,1.0s						
GO04	Tololo Observa	88.18	124	P	P	07 27 03.6	-0.5
GO04				IAmb	IAmb	07 27 25.0	
	comp=Z,83nm,1.1s						
PAHR	Pah Rah Range	88.30	41	P	P	07 27 05.3	+1.3
TPNV	Topopah Spring	88.33	45	P	P	07 27 06.1	+1.8
TPNV	Topopah Spring	88.33	45	P	P	07 27 06.1	+1.8
TPNV				pmax	pmax		
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	88.33	45	P	P	07 27 06.3	+2.0
	baz=229,SNR=47						
HUMO	Hull Mountain	88.36	37	P	P	07 27 04.2	+0.1
WHN	Wuhan	88.41	307	⇑iP	P	07 27 04.0	-0.6
WHN				S	S	07 37 43.5	-3.0
WHN				pmax	pmax		
	comp=Z,860nm,3.4s						
WHN				LR	LR		
	comp=Z,1µm,23.4s						
L04D	Klamath Falls	88.43	38	P	P	07 27 05.0	+0.4
L04D				IAmb	IAmb	07 27 25.6	
	comp=Z,55nm,1.1s						
L04D	Klamath Falls	88.43	38	P	P	07 27 05.9	+1.3
	baz=225,SNR=7.3						
TPH	Tonopah	88.48	43	P	P	07 27 06.1	+1.1
TPH	Tonopah	88.48	43	P	P	07 27 06.1	+1.1
TPH				pmax	pmax		
	comp=Z,221nm,0.9s						
DBO	Dodson Butte	88.57	37	P	P	07 27 06.6	+1.4
DBO				IAmb	IAmb	07 27 07.8	
	comp=Z,41nm,1.4s						
KVN	Kaiserville	88.60	42	P	P	07 27 06.4	+0.8
KVN				IAmb	IAmb	07 27 08.3	
	comp=Z,33nm,0.9s						
KVN	Kaiserville	88.60	42	P	P	07 27 06.4	+0.8
KVN				pmax	pmax		
	comp=Z,33nm,0.9s						
W13A	Hualapai Mount	88.62	47	P	P	07 27 07.6	+1.8
W13A				IAmb	IAmb	07 27 09.6	
	comp=Z,48nm,1.1s						
MDJ	Mudanjiang	88.63	325	P	P	07 27 05.3	-0.1
MDJ				IAmb	IAmb	07 27 09.1	
	comp=Z,31nm,0.9s						
MDJ	Mudanjiang	88.63	325	P	P	07 27 06.3	+1.0
MDJ				pmax	pmax		
	comp=Z,27nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,670nm,4.7s						
MDJ				LR	LR		
	comp=Z,370nm,22.6s						
MDJ				LR	LR		
	comp=Z,410nm,23.5s						
MDJ				LR	LR		
	comp=Z,1µm,23.5s						
SHPR	Sheep Range	88.71	46	P	P	07 27 07.6	+1.5
SHPR				IAmb	IAmb	07 27 28.2	
	comp=Z,95nm,1.5s						
CO01	Juntas del Tor	88.79	124	P	P	07 27 08.0	+1.0
CO01				IAmb	IAmb	07 27 35.8	
	comp=Z,51nm,1.2s						
SII	Sitkinak Islan	88.83	13	P	P	07 27 07.1	+1.1
SII	Sitkinak Islan	88.83	13	P	P	07 27 07.0	+1.1
	baz=200,SNR=15						
SII	Sitkinak Islan	88.83	13	P	P	07 27 06.1	+0.1
ZON	Zonda	88.90	126	P	P	07 27 09.4	+2.2
ZON	Zonda	88.90	126	P	P	07 27 09.4	+2.2
ZON				pmax	pmax		
	comp=Z,180nm,1.4s						
LCO	Las Campanas	88.90	123	P	P	07 27 08.5	+1.0
LCO	Las Campanas	88.90	123	P	P	07 27 08.5	+1.0
LCO				pmax	pmax		
	comp=Z,103nm,1.2s						
I03D	Drain, OR	88.93	36	P	P	07 27 08.0	+1.3
	baz=225,SNR=5.6						
TUC	Tucson	88.94	51	P	P	07 27 09.2	+2.0
TUC	Tucson	88.94	51	P	P	07 27 09.2	+2.0
TUC				pmax	pmax		
	comp=Z,142nm,1.4s						
TUC	Tucson	88.94	51	P	P	07 27 10.0	+2.8
	baz=233						
DL2	Dalian	88.98	317	P	P	07 27 07.0	-0.1
DL2				S	S	07 37 56.8	+5.3
DL2				sS	sS	07 38 11.8	-2.3
DL2				pmax	pmax		
	comp=Z,36nm,0.7s						
DL2				pmax	pmax		
	comp=Z,320nm,4.4s						
DL2				LR	LR		
	comp=Z,350nm,23.1s						
DL2				LR	LR		
	comp=Z,520nm,23.1s						
DL2				LR	LR		
	comp=Z,900nm,25.9s						
Q09A	Carvers	89.00	43	P	P	07 27 08.8	+1.4
Q09A				IAmb	IAmb	07 27 28.6	
	comp=Z,64nm,1.1s						
K04D	Chiloquin, OR	89.00	38	P	P	07 27 09.0	+1.7
	baz=226						
S11A	Rachel	89.08	45	P	P	07 27 09.1	+1.2
S11A				IAmb	IAmb	07 27 29.2	
	comp=Z,60nm,1.1s						
J04D	Umpqua Nationa	89.25	37	P	P	07 27 09.4	+0.9
J04D	Umpqua Nationa	89.25	37	P	P	07 27 10.2	+1.7
	baz=226,SNR=15						
MOD	Modoc Plateau	89.28	39	P	P	07 27 09.7	+1.1
MOD				IAmb	IAmb	07 27 29.5	
	comp=Z,35nm,1.0s						
PRN	Pahroc Range	89.35	45	P	P	07 27 11.0	+1.9
HOPE	Hope Point	89.38	159	P	P	07 27 09.6	+0.7
HOPE	Hope Point	89.38	159	P	P	07 27 09.6	+0.7
TRQA	Tornquist	89.39	135	P	P	07 27 11.0	+1.6
TRQA				IAmb	IAmb	07 27 30.8	
	comp=Z,88nm,1.2s						
TRQA	Tornquist	89.39	135	P	P	07 27 11.0	+1.6
TRQA				pmax	pmax		
	comp=Z,88nm,1.3s						
TRQA	Tornquist	89.39	135	eP	P	07 27 12.7	+3.4
319A	Douglas	89.41	53	P	P	07 27 11.0	+1.6
HPIG		89.41	58	P	P	07 27 11.1	+1.4
HPIG				IAmb	IAmb	07 27 31.1	
	comp=Z,53nm,1.2s						
ZAIG	Zacatecas	89.44	63	P	P	07 27 10.9	+0.9
ZAIG				IAmb	IAmb	07 27 33.4	
	comp=Z,66nm,1.5s						
BUCK	Buck Mountain	89.47	36	P	P	07 27 11.1	+1.7
BUCK				IAmb	IAmb	07 27 12.7	
	comp=Z,99nm,1.2s						
I04A	Tendick Farm,	89.48	37	P	P	07 27 10.7	+1.3
	baz=225,SNR=11						
K05A	Summer Lake	89.53	38	P	P	07 27 11.5	+1.7
OHAK	Old Harbor	89.62	13	P	P	07 27 09.8	+0.3
OHAK	Old Harbor	89.62	13	P	P	07 27 10.7	+1.1
	baz=201,SNR=25						
R11A	Troy Canyon, C	89.63	44	P	P	07 27 11.5	+1.1
R11A	Troy Canyon, C	89.63	44	P	P	07 27 11.9	+1.5
	baz=230,SNR=14						
J05D	Fort Rock, OR	89.73	38	P	P	07 27 12.5	+1.7
	baz=226,SNR=24						
X16A	Lo Mia Camp, P	89.78	49	P	P	07 27 10.6	-0.7
X16A				IAmb	IAmb	07 27 15.4	
	comp=Z,74nm,1.0s						
H04D	Lebanon	89.82	36	P	P	07 27 11.4	+0.5
H04D	Lebanon	89.82	36	P	P	07 27 12.7	+1.8
	baz=225,SNR=10						
TLIG	Tlapa	89.82	70	P	P	07 27 12.5	+0.8
TIA	Tai'an	90.02	313	⇑P	P	07 27 12.0	0.0
TIA				S	S	07 38 03.8	+2.4
TIA				SS	SS	07 43 57.8	-3.4
TIA				pmax	pmax		
	comp=Z,69nm,0.6s						
TIA				pmax	pmax		
	comp=Z,460nm,8.4s						
TIA				LR	LR		
	comp=Z,260nm,24.1s						
TIA				LR	LR		
	comp=Z,320nm,23.3s						
TIA				LR	LR		
	comp=Z,670nm,24.5s						
BMN	Battle Mountai	90.02	42	P	P	07 27 13.2	+1.0
BMN				IAmb	IAmb	07 27 15.0	
	comp=Z,70nm,1.4s						
BMN	Battle Mountai	90.02	42	P	P	07 27 13.2	+1.0
BMN				pmax	pmax		
	comp=Z,70nm,1.4s						
G03D	McMinnville, O	90.04	35	P	P	07 27 13.2	+1.3
G03D	McMinnville, O	90.04	35	P	P	07 27 13.9	+2.0
	baz=225,SNR=7.2						
AC06	Mina Casimiro	90.08	122	P	P	07 27 14.1	+1.3
AC06				IAmb	IAmb	07 27 35.4	
	comp=Z,35nm,1.1s						
CN2	Changchun	90.16	323	eP	P	07 27 12.0	-0.5
CN2				S	S	07 37 56.5	-5.8
CN2				LR	LR		
	comp=Z,400nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,23.4s						
H04A	Detroit Lake	90.22	36	P	P	07 27 13.9	+1.1
H04A				IAmb	IAmb	07 27 33.5	
	comp=Z,62nm,1.0s						
LCMT	Little Creek M	90.22	46	P	P	07 27 13.7	+0.6
LCMT				IAmb	IAmb	07 27 35.0	
	comp=Z,35nm,1.1s						
PINE	Pine Mountain	90.24	37	P	P	07 27 14.7	+1.6
GRNR	Gornyy	90.27	333	⇓iP	P	07 27 14.2	+1.4
GRNR				e		07 30 43.1	
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
KDAK	Kodiak Island	90.29	13	LR	LR	08 00 42.8	
	comp=Z,263nm,21.8s,baz=230,slow=31						
KDAK	Kodiak Island	90.29	13	P	P	07 27 13.8	+1.1
KDAK	Kodiak Island	90.29	13	P	P	07 27 13.8	+1.1
KDAK				pmax	pmax		
	comp=Z,91nm,1.0s						
KDAK	Kodiak Island	90.29	13	P	P	07 27 13.6	+0.9
	baz=202						
I05D	Terrebonne, OR	90.41	37	P	P	07 27 15.2	+1.5
	baz=226,SNR=19						
U15A	North Rim	90.46	47	P	P	07 27 15.7	+1.2
CCUT	Cedar City	90.49	46	P	P	07 27 16.3	+1.8
CCUT				IAmb	IAmb	07 27 36.5	
	comp=Z,44nm,1.3s						
WUAZ	Wupatki	90.49	48	P	P	07 27 16.1	+1.6
WUAZ				IAmb	IAmb	07 27 36.5	
	comp=Z,84nm,1.1s						
WUAZ	Wupatki	90.49	48	P	P	07 27 17.0	+2.5
	baz=232						
BNX	BinXian	90.52	325	⇓P	P	07 27 13.8	-0.3
BNX				pP	pP	07 27 27.5	+0.3
BNX				sP	sP	07 27 33.0	+0.9
BNX				PP	PP	07 30 47.3	-2.5
BNX				S	S	07 38 02.0	-3.5
BNX				sS	pS	07 38 22.0	-0.7
BNX				pmax	pmax		
	comp=Z,67nm,0.7s						
BNX				pmax	pmax		
	comp=Z,420nm,9.0s						
BNX				LR	LR		
	comp=Z,1µm,24.4s						
P16K	Nushagak River	90.52	10	P	P	07 27 13.9	+0.2
	baz=197						
WVOR	Wild Horse Val	90.56	39	P	P	07 27 15.8	+1.3
WVOR				IAmb	IAmb	07 27 35.7	
	comp=Z,72nm,1.4s						
WVOR	Wild Horse Val	90.56	39	P	P	07 27 15.8	+1.3
WVOR				pmax	pmax		
	comp=Z,72nm,1.4s						
NKL	Nikolayevsk	90.61	336	eP	P	07 27 12.3	-2.0
NKL				pmax	pmax		
	comp=E,4.0nm,0.7s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,54nm,1.2s						
NKL				MLR	MLR		
	comp=E,130nm,12.0s						
NKL				MLR	MLR		
	comp=N,1.0nm,11.0s						
NKL				MLR	MLR		
	comp=Z,611nm,18.0s						
SZCU	Shurtz Canyon	90.68	46	P	P	07 27 17.2	+1.8
SZCU				IAmb	IAmb	07 27 19.1	
	comp=Z,27nm,1.0s						
F04D	Rainier, OR	90.79	35	P	P	07 27 17.5	+2.2
	baz=225						
X18A	Snowflake	90.83	50	P	P	07 27 17.8	+1.7
X18A				IAmb	IAmb	07 27 38.3	
	comp=Z,73nm,1.2s						
HOOD	Mount Hood Mea	90.93	36	P	P	07 27 17.5	+1.2
HOOD				IAmb	IAmb	07 27 37.0	
	comp=Z,62nm,1.1s						
F04A	Amboy	90.97	35	P	P	07 27 16.9	+0.7
F04A				IAmb	IAmb	07 27 19.0	
	comp=Z,58nm,0.9s						
KLR	Kul'dur	91.03	330	P	P	07 27 16.4	0.0
	comp=Z,27nm,0.6s,baz=133,slow=3.2,SNR=131						
KLR				LR	LR	08 02 57.6	
	comp=Z,725nm,21.4s,baz=145,slow=32						
	comp=Z,27nm,0.6s						
KLR	Kul'dur	91.03	330	c iP	P	07 27 16.4	0.0
KLR				pmax	pmax		
	comp=Z,23nm,0.6s						
G05D	Wamic, OR	91.05	36	P	P	07 27 18.6	+1.9
	baz=226,SNR=9.5						
O16K	Kokwok River B	91.05	10	P	P	07 27 15.8	-0.4
	baz=197						
Q20K	Shuyak Island	91.09	13	P	P	07 27 17.4	+0.9
	baz=202,SNR=12						
121A	Cookes Peak, D	91.11	53	P	P	07 27 19.2	+1.8
121A				IAmb	IAmb	07 27 39.7	
	comp=Z,88nm,1.4s						
121A	Cookes Peak, D	91.11	53	P	P	07 27 20.1	+2.6
	baz=234						
121A	Cookes Peak, D	91.11	53	P	P	07 27 19.9	+2.5
	baz=234						
Q19K	Cape Douglas,	91.16	12	P	P	07 27 17.1	+0.3
Q19K	Cape Douglas,	91.16	12	P	P	07 27 17.3	+0.5
	baz=201,SNR=12						
I07A	Izee	91.19	38	P	P	07 27 18.7	+1.2
I07A				IAmb	IAmb	07 27 38.6	
	comp=Z,46nm,1.0s						
J08A	Circle Bar Ran	91.26	39	P	P	07 27 18.9	+1.1
J08A				IAmb	IAmb	07 27 38.8	
	comp=Z,63nm,1.3s						
AC02	Maricunga	91.28	122	IAmb	IAmb	07 27 41.9	
	comp=Z,70nm,1.2s						
NLWA	Neilton Lookou	91.30	33	IAmb	IAmb	07 27 39.1	
	comp=Z,42nm,1.1s						
P18K	Big Mountain,	91.31	11	P	P	07 27 18.0	+0.5
P18K	Big Mountain,	91.31	11	P	P	07 27 17.3	-0.2
	baz=200						
W18A	Petrified Fore	91.32	50	P	P	07 27 20.6	+2.2
W18A	Petrified Fore	91.32	50	P	P	07 27 20.7	+2.3
	baz=233						
E04D	Cinebar	91.34	35	IAmb	IAmb	07 27 40.2	
	comp=Z,73nm,1.4s						
E04D	Cinebar	91.34	35	P	P	07 27 19.9	+2.0
	baz=225,SNR=10.0						
ELK	Elko	91.38	42	P	P	07 27 19.7	+1.2
	comp=Z,11nm,0.9s,baz=228,slow=5.5,SNR=37						
ELK				LR	LR	08 05 27.2	
	comp=Z,672nm,18.1s,baz=248,slow=34						
	comp=Z,11nm,0.9s						
ELK	Elko	91.38	42	P	P	07 27 19.8	+1.2
ELK	Elko	91.38	42	P	P	07 27 19.8	+1.2
ELK				pmax	pmax		
	comp=Z,23nm,1.1s						
F05D	White Salmon	91.42	36	IAmb	IAmb	07 27 39.3	
	comp=Z,33nm,1.3s						
F05D	White Salmon	91.42	36	P	P	07 27 19.6	+1.3
	baz=226						
MTPU	Mount Pierson	91.52	46	P	P	07 27 21.1	+1.6
MTPU				IAmb	IAmb	07 27 41.9	
	comp=Z,69nm,1.3s						
KIDD	KIDD Seismic O	91.56	54	P	P	07 27 21.8	+2.4
	baz=235						
GYA	Guiyang	91.63	300	⇑P	P	07 27 21.0	+1.1

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GYA                               S      S        07 38 19.3 +2.5
GYA                               SS     SS       07 44 21.0 -4.1
GYA                               pmax   pmax
      comp=Z,71nm,1.3s
GYA                               pmax   pmax
      comp=Z,330nm,3.5s
GYA                               LR     LR
      comp=Z,640nm,26.5s
ENH   Enshi             91.67 304  P      P        07 27 19.3 -0.6
D04E  Lakebay           91.68  34  P      P        07 27 21.8 +2.4
      baz=225
TCRU  Three Creeks R    91.71  45  IAmb   IAmb     07 27 42.1
      comp=Z,24nm,1.0s
O18K  Koktuh Hills      91.75  11  P      P        07 27 20.1 +0.5
O18K  Koktuh Hills      91.75  11  P      P        07 27 19.7 +0.2
      baz=200
D03D  Eldon             91.78  34  P      P        07 27 21.3 +1.4
      baz=225,SNR=7.1
HOLB  Holberg           91.78  29  P      P        07 27 20.5 +0.7
HG4B  Hotspring         91.81  27  IAmb   IAmb     07 27 23.2
      comp=Z,54nm,0.9s
GO02  Mina Guanaco      91.89 121  P      P        07 27 22.9 +1.3
B04A  Port Angeles      91.95  33  IAmb   IAmb     07 27 24.2
      comp=Z,76nm,1.4s
LYN   LuoYang           92.06 309 ⇑P      P        07 27 21.5  0.0
LYN                                S      S        07 38 15.8 -4.2
LYN                                pmax   pmax
      comp=Z,70nm,0.7s
LYN                                pmax   pmax
      comp=Z,250nm,8.7s
LYN                                LR     LR
      comp=Z,550nm,21.0s
LYN                                LR     LR
      comp=Z,410nm,23.0s
LYN                                LR     LR
      comp=Z,840nm,24.9s
D05A  Enumclaw          92.06  34  P      P        07 27 22.9 +1.6
CNPM  China Poot        92.17  13  P      P        07 27 22.5 +1.0
CLRS  Cowichan Lake     92.20  32  IAmb   IAmb     07 27 49.8
      comp=Z,31nm,1.4s
F07A  Phinny Hill Vi    92.20  36  P      P        07 27 23.2 +1.3
F07A                               IAmb   IAmb     07 27 42.9
      comp=Z,49nm,1.3s
HOM   Homer             92.21  13  P      P        07 27 22.3 +0.7
HOM   Homer             92.21  13  P      P        07 27 23.1 +1.5
      baz=202
TX31  Lajitas Ar. Si    92.22  57  P      P        07 27 24.3 +1.8
TX31  Lajitas Ar. Si    92.22  57  P      P        07 27 24.4 +1.8
      baz=236
TX32  Lajitas Array     92.22  57  P      P        07 27 24.3 +1.8
TX32                               IAmb   IAmb     07 27 25.9
      comp=Z,32nm,1.3s
TXAR  Lajitas Array     92.22  57  P      P        07 27 24.4 +1.9
      comp=Z,8.3nm,1.0s,baz=212,slow=5.9,SNR=63
TXAR                               PP     PP       07 31 12.6 +8.9
      comp=Z,2.9nm,1.2s,baz=224,slow=5.2,SNR=3.9
TXAR                               PKKPbc PKKPdf   07 44 33.4 -2.6
      comp=Z,0.6nm,0.8s,baz=116,slow=4.4,SNR=4.4
TXAR                               PKPPKP          07 52 42.8
      comp=Z,0.4nm,0.9s,baz=98,slow=2.5,SNR=3.7
TXAR                               LR     LR       08 04 21.6
      comp=Z,297nm,18.2s,baz=218,slow=33
      comp=Z,8.3nm,1.0s
TXAR  Lajitas Array     92.22  57  P      P        07 27 23.9 +1.4
O19K  Port Alsworth     92.22  12  P      P        07 27 21.6  0.0
O19K  Port Alsworth     92.22  12  P      P        07 27 21.6  0.0
      baz=200
HNS   HongShan          92.28 313 ⇑P      P        07 27 22.5  0.0
HNS                                pP     pwP      07 27 37.8 -1.1
HNS                                S      S        07 38 17.0 -4.8
HNS                                pmax   pmax
      comp=Z,62nm,0.8s
HNS                                pmax   pmax
      comp=Z,300nm,4.4s
HNS                                LR     LR
      comp=Z,290nm,21.8s
HNS                                LR     LR
      comp=Z,270nm,22.9s
HNS                                LR     LR
      comp=Z,680nm,24.1s
G08A  Pilot Rock        92.30  37  P      P        07 27 23.8 +1.3
MNTX  Cornudas Mount    92.31  54  P      P        07 27 24.2 +1.5
MNTX                               IAmb   IAmb     07 27 44.1
      comp=Z,32nm,1.2s
MNTX  Cornudas Mount    92.31  54  P      P        07 27 24.3 +1.5
      baz=236
MNTX  Cornudas Mount    92.31  54  P      P        07 27 24.4 +1.6
      baz=236
N18K  Kilae Creek       92.42  11  P      P        07 27 22.9 +0.3
N18K                               IAmb   IAmb     07 27 24.1
      comp=Z,25nm,0.9s
N18K  Kilae Creek       92.42  11  P      P        07 27 22.4 -0.2
      baz=199,SNR=10
BRLK  Bradley Lake      92.46  13  P      P        07 27 23.6 +0.8
DUG   Dugway, Tooele    92.47  44  P      P        07 27 25.1 +1.6
      baz=232
BRSE  Bradley Lake S    92.47  13  P      P        07 27 23.3 +0.5
      baz=203,SNR=22
Y22A  Socorro           92.48  52  P      P        07 27 25.6 +1.8
      baz=235
CBB   Campbell River    92.52  31  P      P        07 27 24.8 +1.5
CBB                                IAmb   IAmb     07 27 45.3
      comp=Z,84nm,1.5s
CMIG  Matias Romero     92.58  72  LR     LR       07 59 01.5
      comp=Z,241nm,20.9s,baz=244,slow=29
Y22D  IRIS PASSCAL I    92.59  52  IAmb   IAmb     07 27 28.0
      comp=Z,28nm,0.9s
Y22D  IRIS PASSCAL I    92.59  52  P      P        07 27 26.3 +2.1
      baz=235
E07A  Sunnyside         92.69  36  P      P        07 27 25.6 +1.4
E07A                               IAmb   IAmb     07 27 27.2
      comp=Z,44nm,1.2s
HAWA  Hanford           92.74  36  IAmb   IAmb     07 27 45.4
      comp=Z,39nm,1.1s
MFID  Camas Ranch       92.75  40  P      P        07 27 25.0 +0.3
MFID                               IAmb   IAmb     07 27 45.6
      comp=Z,38nm,1.1s
NLU   North Lily Min    92.76  45  P      P        07 27 25.3 +0.4
N19K  Bonanza Creek     92.78  11  P      P        07 27 23.8 -0.5
N19K                               IAmb   IAmb     07 27 25.4
      comp=Z,46nm,0.9s
N19K  Bonanza Creek     92.78  11  P      P        07 27 23.9 -0.4
      baz=200,SNR=17
BNM   Barren Site       92.84  52  P      P        07 27 27.3 +1.9
SVW2  Sparrevohn        92.87  11  P      P        07 27 24.9 +0.2
BMO   Blue Mountains    92.88  38  IAmb   IAmb     07 27 45.1
      comp=Z,33nm,1.5s
TMUT  Trail Mountain    92.89  45  P      P        07 27 27.8 +2.1
TMUT                               IAmb   IAmb     07 27 47.4
      comp=Z,30nm,1.0s
BBB   Bella Bella       92.95  28  P      P        07 27 26.5 +1.4
      comp=Z,20nm,0.9s,baz=240,slow=3.1,SNR=7.4
BBB                                LR     LR       08 01 26.6
      comp=Z,234nm,21.9s,baz=208,slow=30
      comp=Z,20nm,0.9s
BBB   Bella Bella       92.95  28  IAmb   IAmb     07 27 46.1
      comp=Z,55nm,1.1s
BJT   Baijiatuau        92.95 315  P      P        07 27 24.9 -0.6
BJT   Baijiatuau        92.95 315  P      P        07 27 24.9 -0.6
BJT                                pmax   pmax
      comp=Z,17nm,0.8s
BJI   Beijing           92.96 315  P      P        07 27 26.0 +0.5
BJI                                S      S        07 38 20.8 -7.0
BJI                                sS     sS       07 38 48.3 -2.2
BJI                                SS     SS       07 44 45.0 +1.5
BJI                                pmax   pmax
      comp=Z,22nm,1.1s
BJI                                pmax   pmax
      comp=Z,220nm,5.9s
BJI                                LR     LR
      comp=Z,400nm,32.1s
BJI                                LR     LR
      comp=Z,1μm,34.0s
SEW   Seward            93.06  14  P      P        07 27 26.4 +0.9
SEW                                IAmb   IAmb     07 27 27.9
      comp=Z,59nm,1.2s
SEW   Seward            93.06  14  P      P        07 27 25.9 +0.4
      baz=204,SNR=9.3
Q23K  Middleton Isla    93.13  16  P      P        07 27 26.1 +0.3
      baz=207
SRU   San Rafael Swe    93.20  46  IAmb   IAmb     07 27 48.1
      comp=Z,29nm,1.1s
MA2   Magadan           93.24 345  LR     LR       08 04 07.7
      comp=Z,966nm,21.8s,baz=163,slow=32
MA2   Magadan           93.24 345  P      P        07 27 26.1 -0.3
MA2                                IAmb   IAmb     07 27 29.8
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      comp=Z,22nm,0.8s
MA2   Magadan           93.24 345  P      P        07 27 26.1 -0.3
MA2                                pmax   pmax
      comp=Z,23nm,0.8s
P17A  Butcher Ranch,    93.29  46  P      P        07 27 28.9 +1.5
NNA   Nana              93.31 106  LR     LR       07 59 50.9
      comp=Z,641nm,21.6s,baz=222,slow=29
O22K  Cooper Landing    93.35  14  P      P        07 27 28.0 +1.1
O22K  Cooper Landing    93.35  14  P      P        07 27 27.6 +0.8
      baz=204
P23K  Montague Islan    93.40  15  P      P        07 27 25.3 -1.8
      baz=206
ANMO  Albuquerque       93.41  51  LR     LR       08 06 04.1
      comp=Z,515nm,18.1s,baz=243,slow=33
ANMO  Albuquerque       93.41  51  P      P        07 27 29.8 +1.8
ANMO                               IAmb   IAmb     07 27 49.5
      comp=Z,30nm,1.2s
ANMO  Albuquerque       93.41  51ceP      P        07 27 30.0 +2.0
ANMO                               pmax   pmax
      comp=Z,24nm,1.2s
ANMO  Albuquerque       93.41  51  P      P        07 27 30.0 +2.0
      baz=235
HVU   Hansel Valley     93.47  43  P      P        07 27 29.5 +1.4
HVU                                IAmb   IAmb     07 27 30.9
      comp=Z,40nm,0.9s
HVU   Hansel Valley     93.47  43  P      P        07 27 29.5 +1.4
HVU                                pmax   pmax
      comp=Z,40nm,0.9s
GRNB  Grenville Isla    93.48  26  IAmb   IAmb     07 27 48.8
      comp=Z,45nm,1.3s
D08A  Wollman Farm,     93.50  36  P      P        07 27 29.1 +1.2
D08A                               IAmb   IAmb     07 27 30.6
      comp=Z,21nm,0.8s
CM31  Chiang Mai Arr    93.51 289  P      P        07 27 29.5 +0.8
CMAR  Chiang Mai Arr    93.51 289  P      P        07 27 29.4 +0.8
      comp=Z,9.8nm,0.7s,baz=146,slow=3.4,SNR=39
CMAR                               PP     PP       07 31 16.7 +2.8
      comp=Z,3.2nm,0.8s,baz=138,slow=6.2,SNR=7.0
CMAR                               PKKPbc PKKPbc   07 44 34.9 +1.0
      comp=Z,1.9nm,0.3s,baz=295,slow=5.2,SNR=8.2
      comp=Z,9.8nm,0.7s
CMAR  Chiang Mai Arr    93.51 289  P      P        07 27 28.5 -0.1
CMAR  Chiang Mai Arr    93.51 289 iP      P        07 27 29.5 +0.8
CMAR                               pmax   pmax
      comp=Z,15nm,0.9s
E09A  Wood Farm, Sta    93.54  37  P      P        07 27 28.7 +0.6
E09A                               IAmb   IAmb     07 27 49.3
      comp=Z,39nm,1.3s
PB07  IPOC Station P    93.61 118  IAmb   IAmb     07 27 51.2
      comp=Z,77nm,1.2s
HLID  Hailey            93.64  41  P      P        07 27 30.3 +1.5
HLID  Hailey            93.64  41  P      P        07 27 30.4 +1.5
      baz=231,SNR=37
F10A  Beach Ranch, E    93.66  38  IAmb   IAmb     07 27 30.7
      comp=Z,22nm,0.8s
P18A  Preston Nutter    93.69  46  P      P        07 27 30.5 +1.2
CHTO  Chiang Mai        93.69 290  P      P        07 27 29.9 +0.4
CHTO                               IAmb   IAmb     07 27 32.5
      comp=Z,24nm,0.9s
CHTO  Chiang Mai        93.69 290  P      P        07 27 29.9 +0.4
CHTO                               pmax   pmax
      comp=Z,24nm,1.0s
PV13  Radium Mtn., P    93.71  48  P      P        07 27 30.4 +1.0
PLID  Pearl Lake        93.74  39  P      P        07 27 29.8 +0.4
PLID                               IAmb   IAmb     07 27 31.7
      comp=Z,34nm,1.1s
M19K  Big River Lodg    93.82  11  P      P        07 27 29.1  0.0
M19K                               IAmb   IAmb     07 27 30.4
      comp=Z,30nm,0.8s
M19K  Big River Lodg    93.82  11  P      P        07 27 28.8 -0.3
      baz=200
LVC   Limon Verde       93.85 119  LR     LR       08 01 05.8
      comp=Z,831nm,21.5s,baz=204,slow=30
LVC   Limon Verde       93.85 119  P      P        07 27 29.4 -1.2
LVC                                IAmb   IAmb     07 27 53.1
      comp=Z,89nm,1.4s
LVC   Limon Verde       93.85 119  P      P        07 27 29.5 -1.2
LVC                                pmax   pmax
      comp=Z,89nm,1.4s
LVC   Limon Verde       93.85 119 eP      P        07 27 34.4 +3.7
GAMB  Gambell           93.89   3  P      P        07 27 30.2 +0.9
GAMB  Gambell           93.89   3  P      P        07 27 30.1 +0.9
      baz=185
RC01  Rabbit Creek A    93.91  13  P      P        07 27 29.7 +0.3
RC01                               IAmb   IAmb     07 27 31.1
      comp=Z,54nm,0.9s
RC01  Rabbit Creek A    93.91  13  P      P        07 27 29.8 +0.4
      baz=204,SNR=8.7
KMI   Kunming           93.91 297 ⇑P      P        07 27 31.3 +0.7
KMI                                sP     pwP      07 27 46.0 -1.6
KMI                                pmax   pmax
      comp=Z,44nm,1.0s
KMI                                pmax   pmax
      comp=Z,230nm,7.2s
KMI                                LR     LR
      comp=Z,160nm,26.8s
KMI                                LR     LR
      comp=Z,290nm,25.1s
KMI                                LR     LR
      comp=Z,1μm,48.4s
TIY   Taiyuan           93.92 312 eP      P        07 27 30.3 +0.1
TIY                                S      S        07 38 36.0 -0.5
TIY                                LR     LR
      comp=Z,360nm,23.0s
TIY                                LR     LR
      comp=Z,350nm,24.5s
TIY                                LR     LR
      comp=Z,460nm,22.1s
HIN   Hinchinbrook I    93.96  15  IAmb   IAmb     07 27 31.5
      comp=Z,53nm,0.8s
L19K  White Mountain    94.01  11  P      P        07 27 30.3 +0.4
      baz=200,SNR=36
M20K  Styx River        94.01  11  P      P        07 27 29.6 -0.4
M20K  Styx River        94.01  11  P      P        07 27 29.4 -0.6
      baz=201
TA01  Diego Aracena     94.03 116  P      P        07 27 31.7 +0.6
PB09  IPOC Station P    94.06 118  IAmb   IAmb     07 27 53.9
      comp=Z,68nm,1.1s
HWUT  Hardware Ranch    94.08  43  P      P        07 27 31.6 +0.7
B08A  Colville Reser    94.17  35  P      P        07 27 31.1 +0.1
GLI   Glacier Island    94.26  15  P      P        07 27 31.2 +0.2
      baz=206,SNR=6.6
EYAK  Cordova Ski Ar    94.27  15  P      P        07 27 32.2 +1.1
EYAK                               IAmb   IAmb     07 27 33.0
      comp=Z,42nm,0.8s
EYAK  Cordova Ski Ar    94.27  15  P      P        07 27 31.4 +0.3
      baz=208,SNR=9.7
C09A  Chrisman Ranch    94.33  36  P      P        07 27 32.2 +0.5
HMT   Hamilton          94.43  16  IAmb   IAmb     07 27 34.0
      comp=Z,29nm,0.8s
M22K  Willow            94.44  13  P      P        07 27 32.1 +0.3
M22K  Willow            94.44  13  P      P        07 27 32.0 +0.2
      baz=204,SNR=5.9
L20K  Farewell, AK      94.45  11  P      P        07 27 31.8 -0.2
      baz=201,SNR=21
KNK   Knik Glacier      94.46  14  P      P        07 27 33.0 +1.1
KNK                                IAmb   IAmb     07 27 33.8
      comp=Z,36nm,0.8s
KNK   Knik Glacier      94.46  14  P      P        07 27 32.4 +0.4
      baz=205,SNR=8.8
PMR   Palmer            94.49  13  P      P        07 27 32.5 +0.5
PMR                                IAmb   IAmb     07 27 33.6
      comp=Z,36nm,0.9s
PMR   Palmer            94.49  13  P      P        07 27 32.5 +0.5
PMR                                pmax   pmax
      comp=Z,36nm,0.9s
PMR   Palmer            94.49  13  P      P        07 27 32.2 +0.2
      baz=205,SNR=22
ATAH  Atahualpa         94.52 101  LR     LR       08 00 32.6
      comp=Z,456nm,21.8s,baz=227,slow=29
TTA   Tatalina          94.54  10  P      P        07 27 32.7 +0.3
TTA                                IAmb   IAmb     07 27 35.0
      comp=Z,40nm,1.1s
TTA   Tatalina          94.54  10  P      P        07 27 32.7 +0.3
TTA                                pmax   pmax
      comp=Z,40nm,1.1s
TTA   Tatalina          94.54  10  P      P        07 27 32.8 +0.3
      baz=199,SNR=30
WRAK  Wrangell Islan    94.62  23  P      P        07 27 33.0 +0.3
SNH   Sunshine Point    94.64  17  P      P        07 27 33.2 +0.3
SNH                                IAmb   IAmb     07 27 37.2
      comp=Z,45nm,0.8s
RDMU  Red Mountain      94.66  45  P      P        07 27 35.0 +1.3
BCYI  Bear Canyon       94.68  41  P      P        07 27 34.8 +1.1
GHO   Glory Hole Cre    94.69  13  P      P        07 27 33.3 +0.2
S22A  4UR Ranch, Cre    94.76  49  P      P        07 27 36.0 +1.7
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S22A  4UR Ranch, Cre    94.76  49  P      P        07 27 35.9 +1.7
      baz=235
DIV   Divide            94.78  15  P      P        07 27 33.7 +0.2
DIV                                IAmb   IAmb     07 27 35.3
      comp=Z,36nm,1.0s
833A  Chaparral WMA,    94.83  60  P      P        07 27 36.5 +2.0
      baz=238
SML   Sawmill           94.84  14  P      P        07 27 34.4 +0.6
SML   Sawmill           94.84  14  P      P        07 27 33.5 -0.3
      baz=205
MESA  MESA              94.86  17  IAmb   IAmb     07 27 38.1
      comp=Z,41nm,0.8s
MESA  MESA              94.86  17  P      P        07 27 34.9 +0.8
      baz=211
WAX   Waxell Ridge      94.87  17  P      P        07 27 35.8 +1.8
WAX                                IAmb   IAmb     07 27 36.4
      comp=Z,37nm,0.8s
BMRM  Bremner River     94.90  16  P      P        07 27 34.4 +0.4
BMRM                               IAmb   IAmb     07 27 36.5
      comp=Z,45nm,0.8s
BMRM  Bremner River     94.90  16  P      P        07 27 34.6 +0.5
      baz=208,SNR=24
M23K  Glacier View      94.95  14  P      P        07 27 34.2  0.0
      baz=206,SNR=7.9
CUT   Chulitna          95.01  12  P      P        07 27 34.2 -0.2
      baz=204,SNR=12
AHID  Auburn Hatcher    95.06  43  IAmb   IAmb     07 27 56.4
      comp=Z,31nm,1.1s
ANM   Nome              95.06   5  P      P        07 27 35.3 +0.6
      baz=191
KLU   Klutina           95.07  15  IAmb   IAmb     07 27 36.7
      comp=Z,20nm,0.9s
KLU   Klutina           95.07  15  P      P        07 27 34.5 -0.3
      baz=207,SNR=7.9
SCM   Sheep Creek Mo    95.07  14  P      P        07 27 35.6 +0.8
SCM   Sheep Creek Mo    95.07  14  P      P        07 27 35.6 +0.8
SCM                                pmax   pmax
      comp=Z,55nm,0.8s
SCM   Sheep Creek Mo    95.07  14  P      P        07 27 35.1 +0.3
      baz=206,SNR=19
PNL   Peninsula         95.10  18  P      P        07 27 35.7 +0.8
      baz=213
PPLA  Purkeypile        95.12  11  P      P        07 27 34.8 -0.4
ISLE  Juniper Island    95.13  17  P      P        07 27 35.3 +0.1
ISLE                               IAmb   IAmb     07 27 37.3
      comp=Z,27nm,0.9s
TGL   Tana Glacier      95.14  16  P      P        07 27 35.5 +0.3
TGL                                IAmb   IAmb     07 27 37.4
      comp=Z,27nm,1.0s
NEW   Newport           95.21  36  P      P        07 27 36.8 +1.0
      comp=Z,2.5nm,0.7s,baz=255,slow=6.7,SNR=6.6
NEW                                PP     PP       07 31 25.0 -1.7
      comp=Z,1.5nm,0.8s,baz=215,slow=11,SNR=3.4
NEW                                LR     LR       08 06 36.0
      comp=Z,383nm,18.4s,baz=214,slow=33
      comp=Z,2.5nm,0.7s
NEW   Newport           95.21  36  P      P        07 27 36.0 +0.2
O20A  White River Ci    95.23  46  P      P        07 27 36.4 +0.1
K20K  Telida            95.24  11  IAmb   IAmb     07 27 37.0
      comp=Z,27nm,1.1s
K20K  Telida            95.24  11  P      P        07 27 35.6 +0.1
      baz=200,SNR=16
XLT   XiLinHaoTe        95.37 318 eP      P        07 27 38.0 +1.3
XLT                                pP     pP       07 27 49.5 -0.6
XLT                                S      S        07 38 47.8 -1.1
XLT                                sS     sS       07 39 11.3 -0.5
XLT                                pmax   pmax
      comp=Z,12nm,0.9s
XLT                                pmax   pmax
      comp=Z,180nm,9.4s
XLT                                LR     LR
      comp=Z,530nm,23.4s
XLT                                LR     LR
      comp=Z,810nm,24.1s
GRNC  Granite Creek     95.39  17  P      P        07 27 36.7 +0.2
MSTX  Muleshoe          95.39  54  P      P        07 27 37.4 +0.4
MSTX                               IAmb   IAmb     07 27 57.7
      comp=Z,33nm,1.2s
MSTX  Muleshoe          95.39  54  P      P        07 27 38.5 +1.4
      baz=237
MSTX  Muleshoe          95.39  54  P      P        07 27 37.8 +0.7
      baz=237
PZH   PanZhiHua         95.39 297  P      P        07 27 37.3  0.0
PZH                                S      S        07 38 50.5 +0.5
PZH                                pmax   pmax
      comp=Z,10.0nm,0.7s
PZH                                pmax   pmax
      comp=Z,100nm,4.2s
PZH                                LR     LR
      comp=Z,800nm,24.5s
PZH                                LR     LR
      comp=Z,650nm,23.9s
PZH                                LR     LR
      comp=Z,2μm,23.7s
VRDI  Verde Repeater    95.40  16  IAmb   IAmb     07 27 38.5
      comp=Z,27nm,1.0s
N25K  Chitina, Valde    95.47  15  P      P        07 27 37.3 +0.6
N25K                               IAmb   IAmb     07 27 38.7
      comp=Z,29nm,0.8s
N25K  Chitina, Valde    95.47  15  P      P        07 27 37.1 +0.5
      baz=208,SNR=18
SMCO  Snowmass          95.48  48  P      P        07 27 38.9 +1.2
GLB   Gilahina Butte    95.50  16  IAmb   IAmb     07 27 38.8
      comp=Z,25nm,0.8s
REDW  Red Top Meadow    95.56  42  P      P        07 27 37.7  0.0
REDW                               IAmb   IAmb     07 27 40.5
      comp=Z,26nm,1.1s
M24K  Tolsona, Glenn    95.56  14  P      P        07 27 37.8 +0.8
M24K                               IAmb   IAmb     07 27 41.3
      comp=Z,29nm,0.9s
M24K  Tolsona, Glenn    95.56  14  P      P        07 27 38.0 +0.9
      baz=207
TPAW  Teton Pass        95.58  42  P      P        07 27 39.6 +1.7
SDCO  Great Sand Dun    95.62  49  P      P        07 27 39.2 +0.9
SDCO  Great Sand Dun    95.62  49  P      P        07 27 39.8 +1.5
      baz=236
CAST  Castle Rocks      95.62  11  P      P        07 27 37.3 +0.1
CAST                               IAmb   IAmb     07 27 37.6
      comp=Z,28nm,0.9s
CAST  Castle Rocks      95.62  11  P      P        07 27 36.2 -1.1
      baz=202,SNR=6.0
MCARA McCarthy VSAT     95.64  16  P      P        07 27 37.8 +0.4
MCARA                              IAmb   IAmb     07 27 40.1
      comp=Z,36nm,1.0s
MCARA McCarthy VSAT     95.64  16  P      P        07 27 38.1 +0.8
      baz=210,SNR=11
JCT   Junction City     95.66  58  P      P        07 27 39.5 +1.2
      baz=238
JCT   Junction City     95.66  58  P      P        07 27 38.8 +0.5
      baz=238
WAT6  Susitna Watana    95.66  13  P      P        07 27 37.0 -0.7
      baz=206,SNR=22
SNOW  Snow King Moun    95.68  42  IAmb   IAmb     07 27 41.1
      comp=Z,26nm,0.9s
CTG   Chitna Glacier    95.69  17  P      P        07 27 38.4 +0.7
      baz=211,SNR=10
BARN  Barnard Glacie    95.69  17  P      P        07 27 38.6 +0.7
BARN                               IAmb   IAmb     07 27 40.1
      comp=Z,24nm,1.0s
WAT1  Susitna Watana    95.73  13  P      P        07 27 37.6 -0.1
      baz=205
PLBC  Pleasant Camp     95.78  20  P      P        07 27 39.5 +1.4
      baz=215
T35M  Bob Quinn         95.79  24  P      P        07 27 40.3 +2.2
      baz=220
PB16  IPOC Station P    95.81 115  IAmb   IAmb     07 28 03.2
      comp=Z,61nm,1.3s
MOOW  Moose Ponds       95.85  42  P      P        07 27 40.2 +1.1
TNA   Tin City          95.86   4  P      P        07 27 38.6 +0.3
TNA   Tin City          95.86   4  P      P        07 27 39.0 +0.8
      baz=189
SEY   Seymchan          95.92 347  P      P        07 27 38.6 +0.1
      comp=Z,12nm,0.6s,baz=143,slow=5.5,SNR=27
SEY                                LR     LR       08 07 15.5
      comp=Z,426nm,20.6s,baz=170,slow=33
      comp=Z,12nm,0.6s
KTH   Kantishna Hill    95.95  12  IAmb   IAmb     07 27 57.5
      comp=Z,43nm,1.2s
MSO   Missoula          95.95  38  P      P        07 27 39.2 -0.1
      baz=231
BW06  Boulder Array     95.97  43  P      P        07 27 40.0 +0.4
BW06  Boulder Array     95.97  43  P      P        07 27 39.8 +0.2
      baz=234
PD31  Pinedale Array    95.97  43  P      P        07 27 40.6 +0.9
PDAR  Pinedale Array    95.97  43  P      P        07 27 40.8 +1.1
      comp=Z,3.5nm,0.8s,baz=210,slow=3.5,SNR=31
PDAR                               PP     PP       07 31 32.5 -0.4
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	comp=Z,1.3nm,1.0s,baz=219,slow=6.9,SNR=5.6						
PDAR				PKKPbc	PKKPbc	07 44 28.4	-0.2
	comp=Z,3.3nm,0.6s,baz=85,slow=4.1,SNR=20						
PDAR				PKPPKP	P'P'df	07 52 38.5	-0.1
	comp=Z,0.7nm,0.9s,baz=108,slow=4.8,SNR=4.8						
PDAR				LR	LR	08 08 27.0	
	comp=Z,466nm,18.0s,baz=232,slow=34						
	comp=Z,3.5nm,0.8s						
TRF	Thorofare Moun	95.97	12	P	P	07 27 39.2	+0.2
TRF				IAmb	IAmb	07 27 42.3	
	comp=Z,35nm,0.9s						
TRF	Thorofare Moun	95.97	12	P	P	07 27 38.9	-0.1
	baz=204,SNR=27						
J20K	Nowinta River	96.00	10	P	P	07 27 39.0	+0.1
J20K				IAmb	IAmb	07 27 40.6	
	comp=Z,22nm,1.0s						
J20K	Nowinta River	96.00	10	P	P	07 27 39.4	+0.5
	baz=200,SNR=28						
T25A	Trinidad	96.01	50	IAmb	IAmb	07 28 00.8	
	comp=Z,27nm,1.5s						
T25A	Trinidad	96.01	50	P	P	07 27 40.6	+0.7
	baz=236						
CHUM	Lake Minchumin	96.02	11	P	P	07 27 38.4	-0.5
	baz=202						
HARP	HAARP	96.04	15	P	P	07 27 40.1	+0.9
	baz=208,SNR=8.9						
SKAG	Skagway	96.09	20	P	P	07 27 40.5	+1.1
SKAG	Skagway	96.09	20	P	P	07 27 41.5	+2.1
	baz=216						
QLMT	Earthquake Lak	96.11	41	P	P	07 27 41.9	+1.7
YPP	Pitchstone Pla	96.13	42	P	P	07 27 41.6	+1.2
LRM	Limekiln Ridge	96.14	40	P	P	07 27 40.9	+0.6
GCSA	Galena City Sc	96.15	9	P	P	07 27 40.8	+1.3
	baz=198,SNR=7.2						
CD2	Chengdu	96.16	302	P	P	07 27 41.8	+1.2
CD2				S	S	07 38 59.3	+3.0
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,260nm,24.5s						
CD2				LR	LR		
	comp=Z,350nm,25.5s						
DHY	Denali Highway	96.18	13	P	P	07 27 40.6	+0.7
DHY	Denali Highway	96.18	13	P	P	07 27 40.2	+0.2
	baz=206,SNR=15						
RND	Reindeer	96.19	13	P	P	07 27 40.3	+0.4
RND	Reindeer	96.19	13	P	P	07 27 40.3	+0.4
RND				pmax	pmax		
	comp=Z,51nm,0.9s						
S34M	Telegraph Cree	96.20	23	P	P	07 27 41.9	+1.9
	baz=219						
ZEA	Zeya	96.24	331	eP	P	07 27 40.4	+0.2
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YHL	Hebgen Lake	96.26	41	IAmb	IAmb	07 28 02.6	
	comp=Z,22nm,1.1s						
HHC	Hu-ho-hao-te	96.28	314	eP	P	07 27 41.0	+0.1
HHC				sP	pP	07 27 54.3	0.0
HHC				S	S	07 39 01.5	+4.5
HHC				pmax	pmax		
	comp=Z,44nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
HHC				LR	LR		
	comp=Z,520nm,22.6s						
HHC				LR	LR		
	comp=Z,710nm,23.5s						
HHC				LR	LR		
	comp=Z,2µm,23.5s						
YMR	Madison River	96.28	41	IAmb	IAmb	07 28 02.6	
	comp=Z,31nm,1.2s						
H17A	Grant Village	96.34	42	P	P	07 27 43.3	+2.0
H17A	Grant Village	96.34	42	P	P	07 27 44.2	+2.9
	baz=233						
YUK8	Steele Glacier	96.37	17	P	P	07 27 43.0	+2.0
	baz=212,SNR=12						
BPAW	Bear Paw Mtn.	96.44	12	P	P	07 27 40.6	-0.4
BPAW	Bear Paw Mtn.	96.44	12	P	P	07 27 40.2	-0.8
	baz=203,SNR=6.1						
BOZ	Bozeman (W)	96.46	40	P	P	07 27 43.6	+2.0
	baz=233						
MCK	McKinley	96.48	12	IAmb	IAmb	07 27 45.5	
	comp=Z,39nm,0.8s						
MCK	McKinley	96.48	12	P	P	07 27 41.6	+0.4
	baz=205,SNR=22						
PAX	Paxson	96.48	14	P	P	07 27 41.1	-0.2
PAX	Paxson	96.48	14	P	P	07 27 41.1	-0.2
PAX				pmax	pmax		
	comp=Z,15nm,0.9s						
PAX	Paxson	96.48	14	P	P	07 27 41.6	+0.3
	baz=208,SNR=14						
M26K	Nabesna, AK	96.53	16	P	P	07 27 42.7	+1.3
M26K				IAmb	IAmb	07 27 49.0	
	comp=Z,22nm,1.1s						
M26K	Nabesna, AK	96.53	16	P	P	07 27 42.5	+1.1
	baz=210,SNR=20						
Q24A	Divide	96.53	49	P	P	07 27 44.3	+1.9
	baz=236						
HYT	Haines Junctio	96.58	19	P	P	07 27 42.1	+0.3
HYT	Haines Junctio	96.58	19	P	P	07 27 43.3	+1.4
	baz=214						
YUK3	Moose Creek	96.61	17	P	P	07 27 42.4	+0.4
	baz=212,SNR=23						
AMTX	Amarillo	96.64	53	P	P	07 27 43.3	+0.6
	baz=238						
ISCO	Idaho Springs	96.70	48	P	P	07 27 44.9	+1.7
	baz=236						
ISCO	Idaho Springs	96.70	48	P	P	07 27 44.6	+1.5
	baz=236						
M27K	Edge Creek, AK	96.76	16	P	P	07 27 43.8	+1.2
M27K				IAmb	IAmb	07 27 45.7	
	comp=Z,30nm,0.9s						
M27K	Edge Creek, AK	96.76	16	P	P	07 27 44.2	+1.6
	baz=211,SNR=30						
MENT	Mentasta	96.84	15	IAmb	IAmb	07 27 44.9	
	comp=Z,22nm,0.8s						
ABTX	Abilene, Hawle	96.89	56	P	P	07 27 45.1	+1.3
	baz=238						
O30N	Mendenhall	96.94	19	P	P	07 27 43.9	+0.6
	baz=216						
DLBC	Dease Lake	96.98	23	P	P	07 27 43.8	+0.2
	comp=Z,2.8nm,0.8s,baz=231,slow=9.9,SNR=6.7						
	comp=Z,2.8nm,0.8s						
DLBC	Dease Lake	96.98	23	P	P	07 27 44.3	+0.7
DLBC	Dease Lake	96.98	23	P	P	07 27 44.4	+0.7
	baz=220						
L26K	Log Cabin Wild	97.00	15	P	P	07 27 44.5	+1.0
	baz=210,SNR=13						
BVCY	Beaver Creek	97.05	16	P	Pdif	07 27 44.9	+1.0
	baz=212,SNR=8.8						
N23A	Red Feather La	97.10	47	P	Pdif	07 27 46.4	+1.4
	baz=236						
BTO	Baotou	97.11	313	eP	Pdif	07 27 49.5	+4.7
K24K	Donnelly Dome	97.16	14	P	Pdif	07 27 44.8	+0.5
	baz=208,SNR=34						
WHY	Whitehorse	97.20	20	P	Pdif	07 27 46.1	+1.5
WHY	Whitehorse	97.20	20	P	Pdif	07 27 45.8	+1.1
	baz=216,SNR=5.5						
N30M	Aishikik Lake	97.22	18	P	Pdif	07 27 45.0	+0.3
	baz=215						
NEA2	Nenana	97.24	12	P	P	07 27 43.6	-1.0
	baz=205						
I21K	Tanana	97.28	11	P	Pdif	07 27 45.0	+0.3
I21K	Tanana	97.28	11	P	P	07 27 44.5	-0.2
	baz=202,SNR=14						
RIDG	Independent Ri	97.30	14	P	Pdif	07 27 45.2	+0.3
	baz=208,SNR=17						
WRH	Wood River Hil	97.31	13	IAmb	IAmb	07 27 49.5	
	comp=Z,31nm,0.9s						
MLY	Manley	97.35	11	P	P	07 27 44.6	-0.5
MLY	Manley	97.35	11	P	P	07 27 44.9	-0.2
	baz=203,SNR=14						
L27K	Beaver Creek,	97.38	16	P	Pdif	07 27 45.9	+0.6
	baz=211,SNR=12						
DOT	Dot Lake	97.39	14	P	Pdif	07 27 45.9	+0.6
DOT				IAmb	IAmb	07 27 47.5	
	comp=Z,28nm,0.8s						
BCAR	Beaver Creek A	97.39	16	P	Pdif	07 27 45.8	+0.5
P33M	Teslin, Yukon	97.46	21	P	Pdif	07 27 47.0	+1.2
P33M	Teslin, Yukon	97.46	21	P	Pdif	07 27 46.8	+1.0
	baz=218						
HDA	Harding Lake	97.47	13	IAmb	IAmb	07 27 46.8	
	comp=Z,28nm,0.7s						
HDA	Harding Lake	97.47	13	P	P	07 27 45.6	0.0
	baz=207,SNR=33						
CCB	Clear Creek Bu	97.52	13	IAmb	IAmb	07 27 49.8	
	comp=Z,25nm,0.8s						
JTS	Las Juntas de	97.58	83	LR	LR	08 02 30.9	
	comp=Z,513nm,20.1s,baz=302,slow=30						
H21K	Melozitna Rive	97.59	10	P	Pdif	07 27 46.7	+0.5
H21K	Melozitna Rive	97.59	10	P	Pdif	07 27 46.9	+0.7
	baz=202						
N31M	Braeburn, Yuko	97.61	19	P	Pdif	07 27 47.8	+1.4
	baz=216,SNR=5.1						
SCRK	Sand Creek	97.69	14	P	P	07 27 46.6	-0.1
SCRK				IAmb	IAmb	07 27 50.4	
	comp=Z,19nm,0.9s						
SCRK	Sand Creek	97.69	14	P	Pdif	07 27 47.5	+0.7
	baz=209,SNR=32						
I23K	Minto, Yukon-K	97.69	12	P	Pdif	07 27 47.0	+0.5
	baz=205,SNR=6.4						
TCOL	CIGO, UAF Yank	97.71	12	P	Pdif	07 27 47.1	+0.5
TCOL				IAmb	IAmb	07 27 51.3	
	comp=Z,40nm,0.8s						
TCOL	CIGO, UAF Yank	97.71	12	P	Pdif	07 27 47.0	+0.3
	baz=206						
COLA	College	97.71	12	P	P	07 27 46.5	-0.1
COLA				IAmb	IAmb	07 27 51.3	
	comp=Z,39nm,0.8s						
COLA	College	97.71	12	P	P	07 27 46.5	-0.1
COLA				pmax	pmax		
	comp=Z,39nm,0.8s						
MDM	Murphy Dome	97.72	12	P	Pdif	07 27 46.9	+0.1
MDM				IAmb	IAmb	07 27 47.7	
	comp=Z,33nm,1.2s						
K22A	Casper	97.73	45	P	P	07 27 47.3	-0.2
K22A	Casper	97.73	45	P	Pdif	07 27 48.6	+1.1
	baz=236						
K22A	Casper	97.73	45	P	Pdif	07 27 49.2	+1.6
	baz=236						
IMAR	Indian Mountai	97.76	10	P	P	07 27 46.2	-0.6
IL31		97.81	13	P	P	07 27 46.9	-0.1
IL31				IAmb	IAmb	07 27 48.2	
	comp=Z,17nm,0.9s						
ILAR	Eielson Array	97.81	13	P	P	07 27 46.6	-0.5
	comp=Z,9.1nm,0.8s,baz=219,slow=5.1,SNR=97						
ILAR				PKiKP	PKiKP	07 32 20.4	-0.2
	comp=Z,1.6nm,0.7s,baz=311,slow=2.9,SNR=7.7						
ILAR				PKKPbc	PKKPbc	07 44 19.4	-4.7
	comp=Z,3.5nm,0.8s,baz=341,slow=2.8,SNR=16						
ILAR				LR	LR	08 08 10.7	
	comp=Z,155nm,18.5s,baz=204,slow=33						
	comp=Z,9.1nm,0.8s						
ILAR	Eielson Array	97.81	13	P	P	07 27 46.4	-0.7
J25K	Salcha River,	97.96	14	P	P	07 27 47.9	0.0
J25K				IAmb	IAmb	07 27 49.5	
	comp=Z,21nm,0.8s						
J25K	Salcha River,	97.96	14	P	Pdif	07 27 48.1	+0.2
	baz=208,SNR=31						
POKR	Poker Plat Res	98.01	12	P	P	07 27 48.1	0.0
POKR				IAmb	IAmb	07 27 52.4	
	comp=Z,21nm,0.8s						
POKR	Poker Plat Res	98.01	12	P	Pdif	07 27 48.5	+0.4
	baz=206,SNR=5.4						
LPAZ	La Paz	98.05	114	P	Pdif	07 27 51.9	+1.6
	comp=Z,2.2nm,0.6s,baz=279,slow=4.7,SNR=9.3						
LPAZ				LR	LR	08 03 30.4	
	comp=Z,385nm,21.0s,baz=194,slow=30						
	comp=Z,2.2nm,0.6s						
LPAZ	La Paz	98.05	114	P	Pdif	07 27 52.3	+2.0
LPAZ	La Paz	98.05	114	P	Pdif	07 27 52.3	+2.1
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPAZ	La Paz	98.05	114	eP	Pdif	07 27 53.5	+3.2
K27K	Chicken	98.15	15	P	Pdif	07 27 50.0	+1.3
K27K	Chicken	98.15	15	P	Pdif	07 27 50.1	+1.4
	baz=211						
KSCO	Kaye Shedlock'	98.20	50	P	Pdif	07 27 50.1	+0.3
	baz=238						
OTAV	Otavalo	98.22	95	eP	Pdif	07 27 53.7	+2.9
M30M	Minto, Yukon	98.22	18	P	Pdif	07 27 50.3	+1.2
M30M	Minto, Yukon	98.22	18	P	Pdif	07 27 50.1	+1.0
	baz=215,SNR=12						
J26L	Joseph Creek	98.24	14	P	Pdif	07 27 50.0	+0.9
J26L	Joseph Creek	98.24	14	P	Pdif	07 27 50.2	+1.0
	baz=210,SNR=72						
H23K	Yukon River	98.28	11	P	Pdif	07 27 49.8	+0.6
H23K	Yukon River	98.28	11	P	P	07 27 48.8	-0.4
	baz=204						
H24K	Noodor Dome	98.58	12	P	P	07 27 49.6	-1.0
H24K	Noodor Dome	98.58	12	P	Pdif	07 27 50.9	+0.3
	baz=206						
RDOG	Red Dog Mine	98.70	6	P	P	07 27 48.6	-2.4
	baz=193						
BILL	Bilibino	98.77	354		Pdif	07 27 51.6	+0.3
BILL	Bilibino	98.77	354	i P	P	07 27 50.9	-0.4
BILL				i		07 31 57.6	
BILL				pmax	pmax		
	comp=Z,24nm,1.9s						
BILL				MLR	MLR		
	comp=Z,223nm,19.0s						
LZH	Lanzhou	98.78	307	⇓P	Pdif	07 27 59.5	+7.1
LZH				sP	sP	07 28 17.0	+6.2
DAWY	Dawson	98.81	16	P	P	07 27 51.7	0.0
DAWY	Dawson	98.81	16	P	Pdif	07 27 53.1	+1.5
	baz=213,SNR=15						
EGAK	Eagle	99.00	15	P	Pdif	07 27 53.1	+0.7
EGAK	Eagle	99.00	15	P	Pdif	07 27 53.5	+1.1
	baz=212,SNR=18						
CZSB	Cruzeiro do Su	99.00	104	eP	Pdif	07 27 56.3	+2.5
COLD	Coldfoot	99.45	11	P	Pdif	07 27 55.5	+1.1
	baz=204						
MMPY	Sheldon Lake,	99.81	20	P	Pdif	07 27 57.8	+1.6
	baz=220						
CPUP	Villa Florida	99.93	128	P	Pdif	07 27 58.5	+0.8
	comp=Z,3.7nm,1.1s,baz=177,slow=18,SNR=2.1						
RSSD	Black Hills	100.05	45	P	Pdif	07 27 59.9	+2.0
	baz=237						
RSSD	Black Hills	100.05	45	P	Pdif	07 27 58.9	+1.0
	baz=237						
I29M	Ogilvie Camp,	100.15	16	P	Pdif	07 27 58.1	+0.5
	baz=214						
LAO	LASA Array	100.16	42	P	Pdif	07 28 00.4	+2.2
	baz=236						
TOLK	Toolik Lake Re	100.85	10	P	Pdif	07 28 01.1	+0.5
	baz=205						
SONM	Songino Array	103.17	318	Pdiff	Pdif	07 28 11.1	-0.5
	comp=Z,1.2nm,0.6s,baz=138,slow=3.2,SNR=6.2						
SONM				PP	PP	07 32 14.5	-13
	comp=Z,0.8nm,0.7s,baz=142,slow=5.6,SNR=3.8						
SONM				PKKP	PKKPbc	07 44 09.5	+1.4
	comp=Z,1.7nm,0.9s,baz=272,slow=3.1,SNR=6.5						
INK	Inuvik	103.65	16	Pdiff	Pdif	07 28 13.5	+0.5
	comp=Z,2.5nm,0.9s,baz=186,slow=7.0,SNR=5.4						
YKA	Yellowknife Ar	105.30	25	Pdiff	Pdif	07 28 20.3	-0.2
	comp=Z,0.7nm,0.7s,baz=233,slow=4.7,SNR=3.2						
YKA				PKiKP	PKiKP	07 32 33.6	-0.6
	comp=Z,1.5nm,0.6s,baz=257,slow=1.5,SNR=10						
YKA				PKKPbc	PKKPbc	07 43 57.8	-4.2
	comp=Z,5.9nm,0.7s,baz=38,slow=2.6,SNR=5.1						
YKA				PKKP	PKKPdf	07 44 11.7	-1.3
	comp=Z,7.3nm,1.0s,baz=51,slow=3.8,SNR=5.3						
YKA	Yellowknife Ar	105.30	25	Pdif	Pdif	07 28 21.1	+0.7
YKA	Yellowknife Ar	105.30	25	P	Pdif	07 28 21.2	+0.7
ULM	Lac du Bonnet	107.90	42	PKKP		07 44 05.3	
	comp=Z,16nm,0.9s,baz=72,slow=5.7,SNR=21						
TIXI	Tiksi	108.22	344	Pdiff	Pdif	07 28 32.6	-0.6
	comp=Z,1.6nm,0.7s,baz=264,slow=15,SNR=7.6						
TIXI				PKiKP	PKiKP	07 32 37.6	-1.7
	comp=Z,6.5nm,0.8s,baz=87,slow=20,SNR=16						
TIXI	Tiksi	108.22	344	Pdif	Pdif	07 28 33.2	-0.1
TIXI	Tiksi	108.22	344	P	Pdif	07 28 33.2	-0.1
JFWS	Jewell Farm	108.29	51	P	PKiKP	07 32 39.5	-0.9
	baz=245						
PCHI	Peechi	108.85	271	eP	PKiKP	07 32 37.6	-4.7
PCHI				ex	x	07 43 06.2	
I42A	Draeger Farm,	109.58	50	P	PKiKP	07 32 42.2	-0.6
	baz=246						
TKL	Tuckaleechee C	109.95	60	PKiKP	PKiKP	07 32 43.7	0.0
	comp=Z,5.0nm,0.8s,baz=181,slow=3.5,SNR=3.2						
TKL				PKKPab	PKKPab	07 43 56.7	+0.6
	comp=Z,2.4nm,0.6s,baz=120,slow=6.9,SNR=5.3						
COWI	Conover	110.30	48	P	PKiKP	07 32 43.5	-0.6
	baz=247						
WMQ	Urumqi	113.28	308	ePKP	PKiKP	07 32 51.5	+1.6
WMQ				LR	LR		
	comp=Z,300nm,20.9s						
WMQ				LR	LR		
	comp=Z,410nm,17.9s						
WMQ				LR	LR		
	comp=Z,420nm,21.3s						
BDFB	Brasilia	113.51	126	PKiKP	PKiKP	07 32 51.8	+0.5
	comp=Z,1.2nm,0.5s,baz=315,slow=4.3,SNR=4.0						
BDFB				PKKPab	PKKPab	07 43 39.6	-4.6
	comp=Z,4.5nm,0.7s,baz=48,slow=5.4,SNR=3.8						
BDFB	Brasilia	113.51	126	Pdif	Pdif	07 28 54.8	-3.6
OPO	Ambohidratompo	114.89	228	PKP	PKPdf	07 32 54.4	+0.5
	comp=Z,5.3nm,0.6s,baz=204,slow=7.8,SNR=3.1						
SUR	Sutherland	115.20	197	PKP	PKPdf	07 32 54.6	+0.4
	comp=Z,20nm,0.7s,baz=96,slow=2.1,SNR=23						
SUR	Sutherland	115.20	197	PKiKP	PKPdf	07 32 55.0	+0.7
M55A	Ridgway	115.70	55		PKPdf	07 32 54.3	-0.3
ZSN	Zaisan	116.32	311	ePKIKP	PKPdf	07 32 53.5	-2.0
ZSN	Zaisan	116.32	311	ePKP	PKPdf	07 32 53.6	-2.0
	baz=311						
SADO	Sadowa	116.45	52	PKP	PKPdf	07 32 55.1	-0.8
	comp=Z,10nm,0.7s,baz=307,slow=1.6,SNR=11						
SADO				PKKPab	PKKPbc	07 43 23.6	-1.1
	comp=Z,2.7nm,0.7s,baz=21,slow=1.5,SNR=3.4						
SADO	Sadowa	116.45	52	PKPdf	PKPdf	07 32 55.4	-0.5
L56A	Greenwood	116.76	55	PKPdf	PKiKP	07 32 56.9	+0.3
L56A	Greenwood	116.76	55	P	PKPdf	07 32 56.3	-0.3
	baz=252						
L56A				P	PKPdf	07 32 56.3	-0.3
	baz=252						
M57A	Sunshine Farm,	116.83	56	PKPdf	PKPdf	07 32 56.6	-0.1
M57A	Sunshine Farm,	116.83	56	P	PKPdf	07 32 56.7	0.0
	baz=252,SNR=6.5						
M57A				P	PKPdf	07 32 56.7	0.0
	baz=252,SNR=6.5						
N58A	Sunbury	116.97	57		PKPdf	07 32 56.7	-0.2
MVL	Millersville	116.98	58		PKiKP	07 32 57.8	+0.8
RES	Resolute Bay	117.12	17	PKP	PKPdf	07 32 55.8	-0.4
	comp=Z,13nm,0.7s,baz=224,slow=2.2,SNR=9.2						
RES				PKP2ab		07 43 21.8	
	comp=Z,14nm,0.9s,baz=50,slow=4.8,SNR=7.9						
RES	Resolute Bay	117.12	17	PKPdf	PKiKP	07 32 56.5	+0.3
RES	Resolute Bay	117.12	17	PKIKP	PKiKP	07 32 56.5	+0.3
BOSA	Boshof	117.40	203	PKP	PKiKP	07 32 59.4	+0.9
	comp=Z,12nm,0.5s,baz=163,slow=1.8,SNR=47						
BOSA	Boshof	117.40	203	PKPdf	PKiKP	07 32 58.8	+0.3
BOSA	Boshof	117.40	203	i P	PKiKP	07 32 59.5	+1.0
BOSA	Boshof	117.40	203	i P	PKiKP	07 32 59.5	+1.0
GCPR	Guaynabo City	117.46	84		PKPdf	07 32 58.7	+0.1
HUMP	Col San Antoni	117.59	84		PKPdf	07 32 58.5	-0.3
K57A	Scipio Center	117.68	55		PKPdf	07 32 58.2	-0.1
K57A	Scipio Center	117.68	55	P	PKPdf	07 32 58.0	-0.3
	baz=253,SNR=6.4						
MK31	Makanchi Array	117.83	310		PKPdf	07 32 57.0	-1.4
MK31	Makanchi Array	117.83	310	d iPKIKP	PKPdf	07 32 57.5	-1.0
MKAR	Makanchi Array	117.83	310	PKP	PKPdf	07 32 57.6	-0.8
	comp=Z,15nm,0.8s,baz=90,slow=1.2,SNR=74						
MKAR				PKKPab	PKKPbc	07 43 20.4	+0.5
	comp=Z,1.1nm,0.6s,baz=285,slow=3.8,SNR=6.3						
MKAR	Makanchi Array	117.83	310	PKPdf	PKPdf	07 32 56.9	-1.6
KSPA	Keystone Colle	117.87	56		PKPdf	07 32 58.6	-0.1
KSPA	Keystone Colle	117.87	56	P	PKPdf	07 32 58.4	-0.3
	baz=253,SNR=5.4						
LUPA	Lehigh Univers	117.88	57		PKPdf	07 32 58.0	-0.7
BINY	Binghamton	117.90	55		PKPdf	07 32 58.8	0.0
BINY	Binghamton	117.90	55	P	PKPdf	07 32 58.3	-0.4
	baz=253						
MAKZ	Makanchi	118.04	310	PKPdf	PKPdf	07 32 57.4	-1.5
MAKZ	Makanchi	118.04	310	PKIKP	PKPdf	07 32 57.4	-1.5
ZAA0	Zalesovo Array	118.06	318		PKPdf	07 32 57.8	-0.9
ZALV	Zalesovo Beam	118.06	318	PKP	PKPdf	07 32 57.7	-1.0
	comp=Z,12nm,0.7s,baz=147,slow=1.2,SNR=45						
ZALV	Zalesovo Beam	118.06	318	PKPdf	PKPdf	07 32 57.0	-1.6
VLDQ	Val d'Or	118.49	49	PKPdf	PKPdf	07 32 58.6	-1.0
WCNY	West Carthage	118.63	54	P	PKPdf	07 32 58.8	-1.2
	baz=254,SNR=7.0						
J58A	Remsen	118.72	54		PKPdf	07 32 59.8	-0.5
J58A	Remsen	118.72	54	P	PKPdf	07 32 59.8	-0.5
	baz=254,SNR=5.2						
J58A				P	PKPdf	07 32 59.8	-0.5
	baz=254,SNR=5.2						
PDGK	Podgornoye	118.81	306	PKIKP	PKPdf	07 32 57.6	-3.0
PAL	Palisades	119.06	57		PKPdf	07 33 00.3	-0.6
PAL	Palisades	119.06	57	PKIKP	PKPdf	07 33 00.3	-0.6
UZB	Uzynbulak	119.09	305	ePKIKP	PKPdf	07 32 59.2	-2.0
UZB	Uzynbulak	119.09	305	ePKP	PKPdf	07 32 59.2	-2.0
	baz=305						
BRNY	Black Rk. Fore	119.09	57	P	PKPdf	07 33 00.8	-0.2
	baz=254						
HCNY	Howe Caverns	119.17	55	P	PKiKP	07 33 01.3	+0.2
	baz=254						
J59A	Piesco	119.30	54		PKPdf	07 33 01.2	-0.2
PRZ	Przheval'sk	119.35	304	PKPdf	PKiKP	07 33 02.0	+0.2
PRZ	Przheval'sk	119.35	304	PKIKP	PKiKP	07 33 02.0	+0.2
KPKS	Kokpek	119.41	306	ePKIKP	PKPdf	07 32 59.6	-2.1
KPKS	Kokpek	119.41	306	ePKP	PKPdf	07 32 59.6	-2.1
	baz=306						
SATY	Saty	119.50	305	ePKIKP	PKPdf	07 32 59.9	-2.0
SATY	Saty	119.50	305	ePKP	PKPdf	07 32 60.0	-2.0
	baz=305						
ZHN	Zhinishke	119.51	305	ePKIKP	PKPdf	07 33 00.6	-1.3
ZHN	Zhinishke	119.51	305	ePKP	PKPdf	07 33 00.7	-1.3
	baz=305						
LONY	Lake Ozonia	119.54	53		PKPdf	07 33 01.6	-0.2
KSCT	Kent School, K	119.56	56		PKPdf	07 33 01.8	-0.1
MOPA	Mopani	119.57	211	i P	PKiKP	07 33 02.8	+0.1
MOPA	Mopani	119.57	211	i P	PKiKP	07 33 02.8	+0.1
NRIK	Noril'sk	119.61	336	PKP	PKPdf	07 33 00.9	-0.3
	comp=Z,19nm,0.6s,baz=95,slow=3.2,SNR=36						
NRIK				PKKPbc	PKKPbc	07 43 16.2	+2.3
	comp=Z,1.2nm,0.4s,baz=306,slow=3.7,SNR=3.8						
NRIK	Noril'sk	119.61	336	PKPdf	PKPdf	07 33 00.5	-0.7
NCB	Newcomb	119.62	54		PKPdf	07 33 02.1	+0.1
NCB	Newcomb	119.62	54	P	PKPdf	07 33 01.8	-0.2
	baz=255,SNR=7.7						
BMNY	Brushton-Moira	119.65	53	P	PKPdf	07 33 01.7	-0.2
	baz=256						
TRY	Troy	119.70	55		PKiKP	07 33 02.6	+0.4
ACCN	Adirondack Com	119.86	55	PKPdf	PKiKP	07 33 02.8	+0.3
ACCN	Adirondack Com	119.86	55	P	PKPdf	07 33 02.4	-0.1
	baz=255						
EUNU	Eureka	119.88	12	PKPdf	PKPdf	07 33 01.1	-0.5
TDK	Taldyqorghan	119.99	307	ePKIKP	PKPdf	07 33 01.7	-1.0
TDK	Taldyqorghan	119.99	307	ePKP	PKPdf	07 33 01.7	-1.0
	baz=307						
SEM	Semipalatinsk	120.01	314	ePKIKP	PKPdf	07 33 01.2	-1.6
SEM	Semipalatinsk	120.01	314	ePKP	PKPdf	07 33 01.3	-1.6
	baz=314						
KDJ	Kajisay	120.13	304		PKPdf	07 33 02.7	-0.6
KDJ	Kajisay	120.13	304	PKIKP	PKPdf	07 33 02.7	-0.6
MCPB	Macapa, AP	120.16	110	eP	PKiKP	07 33 07.0	+2.9
FRNY	Flat Rock	120.28	53		PKPdf	07 33 03.2	0.0
FRNY	Flat Rock	120.28	53	P	PKiKP	07 33 03.6	+0.3
	baz=256						
KSH	Kashi	120.32	301	PKP	PKiKP	07 33 04.8	+1.1
KSH				LR	LR		
	comp=Z,880nm,19.6s						
KSH				LR	LR		
	comp=Z,370nm,19.9s						
KSH				LR	LR		
	comp=Z,480nm,25.8s						
MNTQ	Montreal, Queb	120.41	52		PKPdf	07 33 03.4	0.0
MDOK	Medeo	120.49	305	ePKIKP	PKPdf	07 33 01.4	-2.4
MDOK	Medeo	120.49	305	ePKP	PKPdf	07 33 01.5	-2.4
	baz=305						
UCCT	U. Connecticut	120.49	57		PKPdf	07 33 03.9	+0.2
QUA2	Belchertown	120.52	56		PKiKP	07 33 04.2	+0.4
TNSS	Tian-Shan	120.53	305	ePKIKP	PKPdf	07 33 03.0	-1.3
TNSS	Tian-Shan	120.53	305	ePKP	PKPdf	07 33 03.0	-1.3
	baz=305						
GDU01	Guandu, BA	120.58	131	eP	PKiKP	07 33 06.7	+1.8
LBTB	Lobatse	120.58	205	PKP	PKiKP	07 33 05.3	+0.5
	comp=Z,15nm,0.6s,baz=164,slow=2.6,SNR=32						
LBTB	Lobatse	120.58	205	PKPdf	PKPdf	07 33 04.4	-0.3
LBTB	Lobatse	120.58	205	i P	PKiKP	07 33 05.5	+0.7
LBTB	Lobatse	120.58	205	i P	PKiKP	07 33 05.5	+0.7
AAA	Alma-Ata	120.59	305	ePKIKP	PKPdf	07 33 02.6	-1.4
AAA	Alma-Ata	120.59	305	ePKP	PKPdf	07 33 02.6	-1.4
	baz=305						
J61A	Chester	120.64	55		PKiKP	07 33 04.6	+0.5
J61A	Chester	120.64	55	P	PKPdf	07 33 04.2	+0.2
	baz=256,SNR=6.7						
J61A				P	PKPdf	07 33 04.2	+0.2
	baz=256,SNR=6.7						
CHKK	Chushkaly	120.70	306	ePKIKP	PKPdf	07 33 02.7	-1.4
CHKK	Chushkaly	120.70	306	ePKP	PKPdf	07 33 02.7	-1.4
	baz=306						
K62A	Royalston	120.70	56		PKPdf	07 33 03.9	-0.2
NIL	Nilore	120.72	293	PKPdf	PKPdf	07 33 02.8	-1.7
NIL	Nilore	120.72	293	PKIKP	PKPdf	07 33 02.8	-1.7

NIL	Nilore	120.72	293	P	PKPdf	07 33 02.8	-1.7
VT1	Waterbury	120.74	54		PKPdf	07 33 04.2	+0.1
ULHL	Ulahol	120.83	304	P	PKPdf	07 33 03.9	-0.8
	SNR=44						
KURK	Kurchatov	121.09	314	PKPdf	PKPdf	07 33 03.2	-1.3
KURK	Kurchatov	121.09	314	PKIKP	PKPdf	07 33 03.3	-1.3
KURK	Kurchatov	121.09	314	P	PKPdf	07 33 03.7	-0.9
BOOM	Boomskoye usch	121.11	304		PKPdf	07 33 04.5	-0.6
BOOM	Boomskoye usch	121.11	304	PKIKP	PKPdf	07 33 04.6	-0.6
KURBB	Kurchatov Arra	121.13	314	PKP	PKPdf	07 33 03.2	-1.4
	comp=Z,45nm,0.8s,baz=105,slow=1.9,SNR=265						
KUU	Kurty	121.16	306	ePKIKP	PKPdf	07 33 02.8	-2.2
KUU	Kurty	121.16	306	ePKP	PKPdf	07 33 02.9	-2.2
	baz=306						
LBNH	Lisbon	121.29	54		PKPdf	07 33 05.3	+0.1
LBNH	Lisbon	121.29	54	PKIKP	PKPdf	07 33 05.3	+0.1
LBNH	Lisbon	121.29	54	P	PKPdf	07 33 04.8	-0.4
	baz=257,SNR=5.7						
TKM2	Tokmak 2	121.46	304	P	PKPdf	07 33 04.8	-1.0
	SNR=30						
TKM2	Tokmak 2	121.46	304	PKIKP	PKPdf	07 33 03.6	-2.2
KBK	Karagaybulak	121.86	304	P	PKPdf	07 33 05.9	-0.7
	SNR=29						
H62A	Milan	121.91	54	P	PKiKP	07 33 07.0	+0.5
	baz=257,SNR=5.8						
H62A				P	PKiKP	07 33 07.0	+0.5
	baz=257,SNR=5.8						
UCH	Uchtor	122.08	303	P	PKPdf	07 33 07.0	-0.3
	SNR=70						
CHMS	Chumysh	122.08	304	P	PKPdf	07 33 06.0	-0.8
	SNR=26						
AAK	Ala-Archa	122.19	304	P	PKPdf	07 33 06.6	-0.6
	SNR=18						
AAK	Ala-Archa	122.19	304	PKP	PKPdf	07 33 06.2	-1.0
	comp=Z,19nm,0.6s,baz=162,slow=2.5,SNR=34						
AAK	Ala-Archa	122.19	304	PKPdf	PKPdf	07 33 06.5	-0.6
AAK	Ala-Archa	122.19	304	PKIKP	PKPdf	07 33 06.5	-0.6
AAK	Ala-Archa	122.19	304	P	PKPdf	07 33 06.8	-0.3
AAK	Ala-Archa	122.19	304	i PKPdf	PKPdf	07 33 06.6	-0.6
	SNR=19						
I63A	Otisfield	122.20	54	PKPdf	PKiKP	07 33 07.8	+0.7
SGDS	Sogindy	122.27	305	ePKIKP	PKPdf	07 33 05.2	-2.0
SGDS	Sogindy	122.27	305	ePKP	PKPdf	07 33 05.2	-2.0
	baz=305						
USP	Ospenovka	122.32	305	P	PKPdf	07 33 06.7	-0.5
	SNR=34						
G62A	West of Eustis	122.48	53	P	PKPdf	07 33 07.1	-0.4
	baz=258,SNR=11						
G62A				P	PKPdf	07 33 07.1	-0.4
	baz=258,SNR=11						
AML	Almayashu	122.65	303	P	PKPdf	07 33 07.9	-0.5
	SNR=70						
AML	Almayashu	122.65	303	P	PKPdf	07 33 08.1	-0.3
AML	Almayashu	122.65	303	i PKPdf	PKPdf	07 33 07.9	-0.5
	SNR=73						
EKS2	Erkin-Say	122.71	304	P	PKiKP	07 33 08.4	0.0
	SNR=29						
WVL	Waterville	122.95	54	P	PKPdf	07 33 08.0	-0.3
	baz=258						
F62A	Pittston Farm,	123.00	52	P	PKPdf	07 33 08.5	+0.1
	baz=259						
F62A				P	PKPdf	07 33 08.5	+0.1
	baz=259						
BTLS	Baital	123.02	307	ePKIKP	PKPdf	07 33 06.8	-1.6
BTLS	Baital	123.02	307	ePKP	PKPdf	07 33 06.9	-1.6
	baz=306						
LMQ	La Malbaie	123.06	50		PKPdf	07 33 08.1	-0.4
PKME	Peaks-Kenny Pk	123.34	53		PKiKP	07 33 09.3	+0.1
PKME	Peaks-Kenny Pk	123.34	53	P	PKPdf	07 33 09.0	-0.1
	baz=259,SNR=7.7						
PKME	Peaks-Kenny Pk	123.34	53	P	PKiKP	07 33 09.4	+0.1
	baz=259						
MATP	Matopo	123.55	210	PKP	PKPdf	07 33 10.4	-0.1
	comp=Z,51nm,0.6s,baz=172,slow=1.8,SNR=117						
MATP	Matopo	123.55	210	i P	PKPdf	07 33 10.8	+0.2
MATP	Matopo	123.55	210	i P	PKPdf	07 33 10.8	+0.2
BLWY	Bulawayo	123.76	210	i P	PKiKP	07 33 11.3	+0.1
BLWY	Bulawayo	123.76	210	i P	PKiKP	07 33 11.3	+0.1
D62A	Allapoint, All	123.84	51	PKPdf	PKPdf	07 33 09.5	-0.5
D62A	Allapoint, All	123.84	51	P	PKPdf	07 33 09.6	-0.4
	baz=260,SNR=11						
D62A				P	PKPdf	07 33 09.6	-0.4
	baz=260,SNR=11						
F64A	Sherman	124.11	53	P	PKPdf	07 33 10.3	-0.2
	baz=260,SNR=5.5						
F64A				P	PKPdf	07 33 10.3	-0.2
	baz=260,SNR=5.5						
E63A	Oxbow	124.15	52	P	PKPdf	07 33 10.4	-0.2
	baz=260,SNR=6.2						
E63A				P	PKPdf	07 33 10.4	-0.2
	baz=260,SNR=6.2						
BTK	Batken	124.30	300	PKPdf	PKPdf	07 33 10.9	-0.3
BTK	Batken	124.30	300	PKIKP	PKPdf	07 33 10.9	-0.3
KBL	Kabul	124.32	293	PKPdf	PKPdf	07 33 11.2	-0.3
KBL	Kabul	124.32	293	PKIKP	PKPdf	07 33 11.3	-0.3
KBL	Kabul	124.32	293	P	PKPdf	07 33 11.6	0.0
	SNR=40						
GAR	Garm	124.44	299		PKPdf	07 33 11.2	-0.3
PQI	Presque Isle	124.47	52		PKPdf	07 33 10.7	-0.5
DZA	Taraz	124.52	304	ePKIKP	PKPdf	07 33 10.1	-1.4
DZA	Taraz	124.52	304	ePKP	PKPdf	07 33 10.2	-1.3
	baz=304						
G65A	Princeton	124.53	54	P	PKPdf	07 33 11.1	-0.2
	baz=260,SNR=9.9						
G65A				P	PKPdf	07 33 11.1	-0.2
	baz=260,SNR=9.9						
BRZS	Berezniki	124.73	312	ePKIKP	PKPdf	07 33 09.1	-2.5
BRZS	Berezniki	124.73	312	ePKP	PKPdf	07 33 09.2	-2.5
	baz=312						
GGN	Saint George	125.02	54		PKiKP	07 33 12.9	+0.3
KK31	Karatay Array	125.15	304		PKPdf	07 33 11.8	-0.8
KK31	Karatay Array	125.15	304	PKIKP	PKPdf	07 33 11.9	-0.8
KKAR	Karatay Array	125.15	304	PKPdf	PKPdf	07 33 11.6	-1.0
KKAR	Karatay Array	125.15	304	PKIKP	PKPdf	07 33 11.6	-1.0
FRB	Frobisher Bay	125.22	31	PKP	PKPdf	07 33 11.1	-1.0
	comp=Z,24nm,1.0s,baz=281,slow=2.8,SNR=17						
CHGR	Chuyangaron	125.25	298	PKPdf	PKPdf	07 33 12.8	-0.3
CHGR	Chuyangaron	125.25	298	PKIKP	PKPdf	07 33 12.8	-0.3
IUG	Iuzhnay	125.31	302	ePKIKP	PKPdf	07 33 11.7	-1.4
IUG	Iuzhnay	125.31	302	ePKP	PKPdf	07 33 11.8	-1.4
	baz=302						
CHM	Chimkent	125.66	303	PKIKP	PKPdf	07 33 05.4	-8.3
NBMA	Muriti-CE	125.73	127	eP	PKiKP	07 33 15.8	+0.7
BATG	Bathurst New B	125.88	51	PKPdf	PKPdf	07 33 13.6	-0.3
SCHQ	Schefferville	126.07	42	PKP	PKPdf	07 33 13.2	-0.9
	comp=Z,21nm,0.9s,baz=1.4,slow=2.1,SNR=24						
SCHQ	Schefferville	126.07	42	PKPdf	PKPdf	07 33 13.4	-0.7
NBPB	Pedra_Branca-C	126.44	125	eP	PKiKP	07 33 19.5	+3.0
BRVK	Borovoye	126.51	316c	i PKIKP	PKPdf	07 33 13.7	-1.2
BRVK				pmax	pmax		
	comp=Z,84nm,1.0s						
BRVK	Borovoye	126.51	316	P	PKiKP	07 33 15.3	-0.1
LMN	Caledonia Moun	126.55	53		PKPdf	07 33 14.9	-0.3
NOR	Nord	128.10	3	eP	PKPdf	07 33 16.9	-0.3
LSZ	Lusaka	128.21	213	PKP	PKPdf	07 33 19.8	+0.3
	comp=Z,33nm,0.6s,baz=168,slow=1.7,SNR=40						
JLN	Jalan Bani Buh	128.47	275	P	PKPdf	07 33 19.9	+0.3
TSUM	Tsumeb	128.59	199	PKPdf	PKPdf	07 33 20.6	+0.4
SOCY	Socotra	128.91	261	P	PKPdf	07 33 20.8	0.0
WBK	Wadi Bani Khal	129.01	276	P	PKiKP	07 33 22.4	+1.0
DQM	DQM	129.24	272	P	PKiKP	07 33 22.1	+0.3
MHTO	MHTO	129.28	273	P	PKPdf	07 33 20.9	-0.3
	SNR=5.9						
WSAR	Wadi Sarin	129.53	276	PKP	PKPdf	07 33 21.3	-0.3
	comp=Z,4.6nm,0.7s,baz=187,slow=6.5,SNR=5.5						
WSAR	Wadi Sarin	129.53	276	P	PKPdf	07 33 22.0	+0.4
JMDO	Jabal Madar	129.67	275	P	PKiKP	07 33 22.7	0.0
SMDO	Samad	129.97	276	P	PKPdf	07 33 22.7	+0.1
	SNR=5.7						
SQUM	Sultan Qaboos	130.04	276	P	PKPdf	07 33 22.1	-0.4
BIDO	Bidbid	130.06	276	P	PKPdf	07 33 22.6	0.0
DMTO	DMTO	130.58	268	P	PKiKP	07 33 24.2	-0.3
BSY	Bisya	130.59	275	P	PKPdf	07 33 23.9	+0.2
HOQ	Hoqain	130.79	276	P	PKiKP	07 33 24.8	-0.1
	SNR=5.5						
ILULI	Ilulissat	130.82	22		PKPdf	07 33 23.1	+0.6
ILULI	Ilulissat	130.82	22	PKIKP	PKPdf	07 33 23.2	+0.6
ILULI	Ilulissat	130.82	22	eP	PKPdf	07 33 22.6	0.0
KBS	Kingsbay	131.10	358		PKiKP	07 33 23.6	-0.3
KBS	Kingsbay	131.10	358d	i PKIKP	PKiKP	07 33 23.7	-0.3
KBS				pmax	pmax		
	comp=Z,75nm,2.5s						
KBS	Kingsbay	131.10	358	eP	PKiKP	07 33 23.6	-0.3
RBK	Rabkut	131.13	267	P	PKiKP	07 33 26.3	+0.6
ARQ	Araqi	131.38	275	P	PKPdf	07 33 24.8	-0.3
SPITS	Spitsbergen Ar	131.62	356	PKIKP	PKPdf	07 33 24.3	+0.3
SPB2	Spitsbergen Ar	131.62	356	PKPdf	PKPdf	07 33 24.1	+0.1
SOHO	SOHO	131.64	276	P	PKPdf	07 33 25.5	0.0
SOHO	SOHO	131.64	276	i PKPdf	PKPdf	07 33 25.6	0.0
	SNR=18						
DOK	Doka	131.66	269	P	PKPdf	07 33 25.8	+0.1
WHFO	Wadi Hawf	131.68	268	P	PKiKP	07 33 26.5	-0.4
ABTO	Aybut	131.85	267	P	PKiKP	07 33 26.9	-0.4
SFJD	Kangerlussuaq	131.86	25	PKP	PKPdf	07 33 24.9	+0.2
	comp=Z,11nm,0.5s,baz=290,slow=0.6,SNR=9.8						
SFJD	Kangerlussuaq	131.86	25	PKPdf	PKiKP	07 33 25.4	-0.2
SFJD	Kangerlussuaq	131.86	25	PKIKP	PKiKP	07 33 25.4	-0.2
SVE	Sverdlovsk	131.92	321	i PKIKP	PKPdf	07 33 24.8	-0.3
SVE				pmax	pmax		
	comp=Z,57nm,1.0s						
UOSS	Minazif	132.20	277	PKPdf	PKPdf	07 33 25.5	-1.1
UOSS	Minazif	132.20	277	P	PKPdf	07 33 26.4	-0.2
UOSS	Minazif	132.20	277	i PKPdf	PKPdf	07 33 24.6	-2.0
	SNR=6.4						
HATD	Hatta, Dubai	132.22	277	P	PKPdf	07 33 26.3	-0.4
	SNR=6.1						
HATD	Hatta, Dubai	132.22	277	i PKPdf	PKPdf	07 33 25.5	-1.1
	SNR=9.3						
ASHO	Ashiyiah	132.24	277	P	PKPdf	07 33 27.3	+0.6
ASHO	Ashiyiah	132.24	277	i PKPdf	PKPdf	07 33 26.5	-0.3
	SNR=7.8						
ALNE	Al Ain	132.29	276	P	PKiKP	07 33 28.5	+0.6
	SNR=7.1						
UMZA	Um Al Zommool	132.33	274	P	PKiKP	07 33 28.9	+1.0
MASF	Masafi	132.37	278	P	PKiKP	07 33 28.6	+0.5
BANOM	Banah	132.43	279	P	PKiKP	07 33 28.2	0.0
BANOM	Banah	132.43	279	PKPdf	PKPdf	07 33 26.7	-0.4
DAG	Danmarks Havn	132.44	6	i P	PKPdf	07 33 24.5	-1.0
SUMG	Summit	132.57	15	i P	PKPdf	07 33 27.0	+0.6
SHME	Shamm	132.60	279	P	PKiKP	07 33 29.0	+0.5
FAQ	Al Faqa, Dubai	132.66	277	P	PKiKP	07 33 29.8	+1.2
FAQ	Al Faqa, Dubai	132.66	277	PKPdf	PKPdf	07 33 26.9	-0.6
NAZ	Nazwa, Dubai	132.68	277	P	PKiKP	07 33 29.0	+0.4
	SNR=5.6						
NAZ	Nazwa, Dubai	132.68	277	PKPdf	PKPdf	07 33 27.5	0.0
KIBK	Kibwezi	132.83	233	P	PKiKP	07 33 30.2	+0.8
ASUD	Al Ashush, Dub	132.84	277	P	PKiKP	07 33 29.8	+0.8
ASUD	Al Ashush, Dub	132.84	277	PKPdf	PKPdf	07 33 28.0	+0.2
AB31	Akbulak array	132.96	311	i PKHKP	PKPpre	07 33 11.3	
ARU	Arti	133.11	321	PKhKP	PKPpre	07 33 16.6	
	comp=Z,6.2nm,0.2s,baz=169,slow=23,SNR=7.9						
ARU				PKP	PKPdf	07 33 27.2	-0.2
	comp=Z,51nm,0.5s,baz=240,slow=0.3,SNR=33						
ARU				SKPbc	SKPbc	07 36 49.7	-1.5
	comp=Z,6.4nm,0.2s,baz=89,slow=1.1,SNR=4.6						
ARU	Arti	133.11	321	i PKIKP	PKPdf	07 33 27.3	0.0
ARU						07 35 50.5	
ARU				MLR	MLR		
	comp=Z,747nm,22.0s						
AJN	Ajban	133.12	276	P	PKiKP	07 33 31.4	+1.9
DY2G	Dye2	133.65	25	i P	PKPdf	07 33 27.1	-1.2
GEYT	Alibeck	133.65	295	PKP	PKPdf	07 33 29.0	0.0
	comp=Z,32nm,0.9s,baz=224,slow=12,SNR=15						
GEYT				SKPbc	SKPbc	07 36 53.3	-0.5
	comp=Z,4.7nm,0.7s,baz=45,slow=11,SNR=3.7						
GEYT	Alibeck	133.65	295	PKPdf	PKPdf	07 33 29.1	+0.1
MZR	Muzera	133.89	274	P	PKPdf	07 33 30.4	+0.5
MZR	Muzera	133.89	274	PKPdf	PKPdf	07 33 29.9	0.0
AKTO	Aktyubinsk	134.15	312	PKhKP	PKPpre	07 33 15.5	
	comp=Z,6.3nm,0.6s,baz=106,slow=3.3,SNR=23						
AKTO				PKP	PKPdf	07 33 28.8	-0.7
	comp=Z,27nm,0.8s,baz=83,slow=2.0,SNR=24						
AKTO				SKPbc	SKPbc	07 36 54.3	-0.6
	comp=Z,5.2nm,0.7s,baz=36,slow=6.6,SNR=3.5						
KMBO	Kilima Mbogo	134.25	233	PKP	PKPdf	07 33 31.2	+0.1
	comp=Z,4.5nm,0.7s,baz=9.6,slow=3.6,SNR=4.2						
KMBO				PP	PP	07 35 57.8	-4.4
	comp=Z,0.9nm,0.5s,baz=135,slow=5.6,SNR=3.3						
KMBO				SKPbc	SKPbc	07 36 58.2	+1.4
	comp=Z,5.9nm,1.0s,baz=191,slow=6.5,SNR=5.0						
KMBO	Kilima Mbogo	134.25	233	PKPdf	PKPdf	07 33 28.7	-2.4
KMBO	Kilima Mbogo	134.25	233	⇓iPKIKP	PKiKP	07 33 32.4	-0.1
KMBO	Kilima Mbogo	134.25	233	PKiKP	PKiKP	07 33 32.6	+0.1
ICESG	Greenland Ices	134.43	20	eP	PKPdf	07 33 30.2	+0.3
DBG	Daneborg	134.49	8	i P	PKPdf	07 33 28.2	-1.3
GHWR	Ruwais	134.74	275	P	PKPdf	07 33 31.4	+0.1
IVI	Ivigtut	134.96	32		PKPdf	07 33 30.5	-0.1
JRN	Qarnain Island	135.08	276	P	PKiKP	07 33 35.8	+2.4
NRS	Narsarsuaq	136.22	31		PKPdf	07 33 32.7	-0.2
NRS	Narsarsuaq	136.22	31	PKIKP	PKPdf	07 33 32.7	-0.2
TRNA	Turayna	136.42	275	P	PKiKP	07 33 35.7	-0.6
SMRA	Abu-Samra	136.76	275	P	PKPdf	07 33 36.0	+0.9
SHMA	Al-Shehemyia	136.98	276	P	PKiKP	07 33 39.5	+2.2
KIRV	Kirov	137.33	325	PKP	PKPdf	07 33 34.2	-0.8
	comp=Z,60nm,0.7s,baz=101,slow=3.0,SNR=22						
KIRV				PP	PP	07 36 16.7	-4.2
	comp=Z,8.2nm,0.5s,baz=334,slow=0.8,SNR=4.9						
KIRV	Kirov	137.33	325d	ePKIKP	PKPdf	07 33 35.2	+0.1
SAKB	Bahrain	137.38	276	P	PKPdf	07 33 36.5	+0.3
SCO	Scoresbysund	137.58	12	eP	PKPdf	07 33 35.8	+0.6
H10S3	ASCENSION HYDR	137.74	155	T	T	10 08 06.5	
	baz=204,slow=74,SNR=1913						
H10S2	ASCENSION HYDR	137.75	155	T	T	10 08 09.0	
	baz=16,slow=74,SNR=634						
LVZ	Lovozero	137.81	342	⇑ePKIKP	PKPdf	07 33 34.8	-1.0
PRGR	Permogore	137.81	331	⇓iPKIKP	PKPdf	07 33 35.5	-0.4
PRGR				e		07 36 20.2	
ATD	Arta Tunnel	137.95	252	P	PKPdf	07 33 34.5	-3.1
APA	Apatity	138.37	343	⇓iPKIKP	PKPdf	07 33 34.2	-2.6
APA				i		07 33 52.0	
APA				i		07 36 36.0	
APA				pmax	pmax		
	comp=Z,23nm,0.9s						
ARCES	ARCESS Array B	138.53	348	PKhKP	PKPpre	07 33 26.9	
	comp=Z,7.3nm,0.6s,baz=48,slow=2.6,SNR=29						
ARCES				PKP	PKPdf	07 33 35.5	-1.6
	comp=Z,24nm,0.6s,baz=48,slow=1.8,SNR=15						
LODK	Lodwar	138.78	236	P	PKPdf	07 33 34.2	-5.1
H10N3	ASCENSION HYDR	138.83	154	T	T	10 09 25.3	
	baz=203,slow=75,SNR=4424						
H10N1	ASCENSION HYDR	138.83	154	T	T	10 09 22.6	
	baz=203,slow=75,SNR=4690						
H10N2	ASCENSION HYDR	138.85	154	T	T	10 09 23.6	
	baz=203,slow=75,SNR=5816						
MBAR	Mbarara	138.96	227	SKP		07 37 11.1	
	comp=Z,4.3nm,0.3s,baz=103,slow=3.3,SNR=6.6						
BELG	Belogornoye	140.22	317	PKhKP	PKPpre	07 33 35.9	
	comp=Z,216nm,1.1s,baz=313,slow=1.9,SNR=14						
BELG	Belogornoye	140.22	317d	ePKIKP	PKPdf	07 33 40.5	-0.1
KLMR	Klimovskoe	140.75	332	ePKIKP	PKPdf	07 33 37.9	-3.3
KLMR				pmax	pmax		
	comp=Z,84nm,1.1s						
KLMR	Klimovskoe	140.75	332	ePKPdf	PKPdf	07 33 38.0	-3.3
KLMR				AMP		07 33 44.4	
	comp=Z,84nm,1.1s						
KLMR				ePP	PP	07 36 36.8	-5.0
KLMR				LQ	LQ	08 22 46.9	
KLMR				LQ	LQ	08 22 46.9	
KLMR				LR	LR	08 27 05.9	
RAYN	Ar Rayn	140.96	271	P	PKPdf	07 33 40.6	-2.4
RAYN	Ar Rayn	140.96	271	PKPdf	PKPdf	07 33 37.1	-5.9
MAK	Makhachkala	141.93	302	eP	Pdif	07 30 57.7	-6.1
MAK				i		07 33 43.6	
MAK				pmax	pmax		
	comp=Z,300nm,1.5s						
BORG	Borgarnes	142.54	16	PKP	PKPdf	07 33 43.2	-1.2
	comp=Z,7.0nm,0.7s,baz=353,slow=4.2,SNR=8.4						
GROC	Groznyy	143.16	303	ePKIKP	PKPbc	07 33 43.6	+0.4
GROC				e		07 36 54.7	
GROC				pmax	pmax		
	comp=Z,41nm,0.5s						
VRH	Novokhopyorsk	144.08	317	ePKIKP	PKPbc	07 33 45.4	-0.2
VRH				pmax	pmax		
	comp=Z,100nm,0.7s						
GNI	Garni	144.16	298	eP	PKPab	07 33 45.0	-1.1
GNI	Garni	144.16	298	PKPdf	PKPbc	07 33 46.7	+0.2
GNI	Garni	144.16	298	PKIKP	PKPbc	07 33 46.7	+0.2
GNI	Garni	144.16	298	P	PKPbc	07 33 47.3	+0.8
GNI	Garni	144.16	298	PKPdf	PKPbc	07 33 46.8	+0.3
MOS	Moscow	144.34	326	i PKHKP	PKPpre	07 33 44.2	
MOS				pmax	pmax		
	comp=Z,46nm,0.6s						
TASB	TASBURUN-IGDIR	144.55	297	P	PKPab	07 33 47.5	+0.1
ZEI	Tsey	144.58	302	i PKHKP	PKPpre	07 33 44.8	
ZEI				pmax	pmax		
	comp=Z,171nm,1.3s						
CLDR	Caldiran	144.83	296	i P	PKPbc	07 33 48.8	+0.1
PUL	Pulkovo	144.97	335d	ePKIKP	PKPab	07 33 47.9	-0.3
PUL				pmax	pmax		
	comp=Z,405nm,0.7s						
AKH	Akhalkalaki	145.03	300	eP	PKPdf	07 33 50.2	+0.4
FIA1	FINESS Array S	145.11	340		PKPbc	07 33 47.4	-1.1
FINES	FINESS Array B	145.11	340	PKP	PKPbc	07 33 47.5	-1.0
	comp=Z,333nm,0.7s,baz=64,slow=4.4,SNR=694						
LPSR	Galich'ya Gora	145.14	320	ePKIKP	PKPbc	07 33 48.0	-0.9
LPSR				pmax	pmax		
	comp=Z,130nm,1.0s						
OBN	Obninsk	145.18	325	PKP	PKPbc	07 33 48.1	-0.9
	comp=Z,38nm,0.4s,baz=58,slow=2.9,SNR=49						
OBN	Obninsk	145.18	325		PKPbc	07 33 48.2	-0.7
OBN	Obninsk	145.18	325c	iPKIKP	PKPbc	07 33 47.5	-1.5
OBN				i		07 34 06.1	
OBN				pmax	pmax		
	comp=Z,98nm,0.8s						
OBN				MLR	MLR		
	comp=Z,534nm,22.0s						
KBZ	Khabaz	145.18	304	PKP	PKPbc	07 33 48.8	-0.6
	comp=Z,59nm,0.8s,baz=130,slow=1.9,SNR=95						
NSS	Namsos	145.21	353	ePKPbc	PKPbc	07 33 48.1	-0.7
VANB	Van	145.25	295	eP	PKPbc	07 33 49.7	-0.3
KSLA	Kassala	145.28	252	i P	PKPbc	07 33 50.6	+0.1
KSLA				i		07 34 17.1	
	baz=100,slow=2.4						
KIV	Kislovodsk	145.30	304	eP	PKPbc	07 33 49.3	-0.6
KIV	Kislovodsk	145.30	304		PKPbc	07 33 49.6	-0.3
KIV	Kislovodsk	145.30	304	ePKIKP	PKPbc	07 33 47.7	-2.2
KIV				e		07 37 07.6	
KIV				eSS	SS	07 55 57.6	-0.7
KIV				pmax	pmax		
	comp=Z,106nm,1.0s						
KIV				MLR	MLR		
	comp=Z,392nm,25.0s						
KIV	Kislovodsk	145.30	304	P	PKPdf	07 33 50.2	+0.2
KIV	Kislovodsk	145.30	304	i PKPbc	PKPbc	07 33 49.5	-0.4
	SNR=19						
VORR	Voronezh	145.36	319	ePKIKP	PKPbc	07 33 49.4	-0.3
VORR				pmax	pmax		
	comp=Z,100nm,0.4s						
KARS	Kars	145.40	299	eP	PKPab	07 33 50.7	+0.1
AGRB	Hanur-Agry	145.53	297	eP	PKPbc	07 33 50.9	0.0
VSR	Storozhevoye	145.57	318	ePKIKP	PKPdf	07 33 49.3	-0.8
VSR				pmax	pmax		
	comp=Z,160nm,0.6s						
AKDM	Akdamar-Van	145.58	295	eP	PKPdf	07 33 50.9	+0.1
VORD	Divnogorie	145.59	318	ePKP2	PKPdf	07 33 49.1	-1.0
VORD				pmax	pmax		
	comp=Z,80nm,0.7s						
MLAZ	Malazgirt-MUS	145.89	296	eP	PKPdf	07 33 51.4	+0.1
GURO	Guroymak-BITLI	146.32	295	eP	PKPdf	07 33 51.6	-0.4
GURO	Guroymak-BITLI	146.32	295		PKPdf	07 33 52.3	+0.3
BATM	Batumi	146.35	301	eP	PKPdf	07 33 51.7	-0.1
KOPR	Koprukoy-ERZUR	146.38	298	eP	PKPbc	07 33 53.7	+0.2
RAF	Rauma	146.65	343	eP	PKPdf	07 33 51.4	-0.2
SVAN	Silvan-Diyarba	146.99	294	eP	PKPdf	07 33 52.7	-0.3
MQOL	MQOL	147.19	261	i P	PKPab	07 33 57.3	-0.5
VSU	Vasula	147.20	336d	ePKIKP	PKPdf	07 33 52.5	-0.1
VSU	Vasula	147.20	336	eP	PKPdf	07 33 52.6	-0.1
MARD	Mardin	147.34	293		PKPbc	07 33 55.9	-0.3
BNGB	Bingl	147.35	296	eP	PKPdf	07 33 53.7	0.0
KOPT	Kop Dagi	147.42	298		PKPbc	07 33 57.2	+0.6
YEDI	Yedisu-Bingol	147.43	297	eP	PKPbc	07 33 56.2	-0.2
SOC	Sochi	147.48	305	ePKIKP	PKPdf	07 33 51.6	-2.0
SOC				i		07 33 56.9	
SOC				e		07 37 20.8	
SOC				ePPP	PPP	07 40 45.9	
SOC				pmax	pmax		
	comp=Z,77nm,0.7s						
SOC				pmax	pmax		
	comp=Z,98nm,0.6s						
SOC				MLR	MLR		
	comp=Z,298nm,20.0s						
MOL	Molde	147.54	355	ePKPdf	PKPdf	07 33 54.2	+1.2
BAYT	Aydıntepe-Bayb	147.65	299	i P	PKiKP	07 33 58.1	-0.9
AAL	Aland	147.82	343	eP	PKPdf	07 33 53.2	-0.4
DYBB	Diyarbakir	147.83	294	eP	PKPbc	07 33 56.2	-1.2
AKN	Aaknes	147.97	356	ePKPbc	PKPbc	07 33 56.5	-0.5
MTSE	Matsula	147.97	339	eP	PKPbc	07 33 56.5	-0.5
JAWL	J.Aulia	148.40	248	i P	PKPdf	07 33 55.7	-0.2
SVRC	Sivrice-ELAZID	148.46	295	i P	PKPbc	07 33 59.1	-0.1
FOO	Floro	148.65	357	ePKPdf	PKPdf	07 33 55.7	+0.8
ESPY	Espiye-Giresun	148.66	300	eP	PKPbc	07 33 58.0	-1.4
NB201	NORSAR Array S	148.66	351	PKPbc	PKPbc	07 33 58.8	0.0
UPP	Uppsala	148.66	345	eP	PKPdf	07 33 55.2	+0.2
NB2	NORSAR Subarra	148.68	352	PKP	PKPbc	07 33 58.5	-0.4
	comp=Z,160nm,0.8s,baz=12,slow=2.7						
NB2	NORSAR Subarra	148.68	352	PKPbc	PKPbc	07 33 58.5	-0.4
	baz=12,slow=2.7						
NOA	NORSAR Array B	148.68	352	PKPbc	PKPbc	07 33 58.3	-0.6
	comp=Z,89nm,0.7s,baz=15,slow=4.3,SNR=198						
NBO00	NORSAR Array S	148.75	352	PKPdf	PKPdf	07 33 54.7	-0.4
NBO00				PKPbc	PKPbc	07 33 59.5	+0.5
ANN	Anapa	148.80	308c	iPKP2	PKPbc	07 33 58.6	-1.0
ANN				e		07 40 57.2	
ANN				pmax	pmax		
	comp=Z,239nm,0.7s						
ANN				MLR	MLR		
	comp=Z,621nm,23.0s						
NAO01	NORSAR Array S	148.91	352	PKPbc	PKPbc	07 33 59.9	+0.5
NAO01				PKPab	PKPab	07 34 03.9	+0.4
NC602	NORSAR Array S	148.94	351	ePKPdf	PKPbc	07 33 57.8	-1.7
ILIC	ilic-Erzincan	148.95	297	P	PKiKP	07 34 01.3	-0.4
HYA	Hoyanger	149.02	356	ePKPbc	PKPbc	07 33 59.7	+0.1
ARPR	Arapgir-MALATY	149.17	296	P	PKiKP	07 34 01.9	-0.3
SUE	Sulen	149.20	358	ePKPbc	PKPbc	07 33 59.4	-0.7
SLIT	Slitere, Latvi	149.33	339	eP	PKPdf	07 33 56.4	+0.3
SKAR	Skarslia	149.35	354	ePKPbc	PKPbc	07 34 00.4	-0.2
IDID	Didziasalis	149.50	332	eP	PKPbc	07 34 00.8	-0.2
ISAL	Salakas	149.56	333	eP	PKPbc	07 34 01.4	+0.3
MNK	Minsk	149.58	330	i PKP2	PKPbc	07 34 01.7	+0.5
MNK				i		07 37 40.2	
MNK				i PPP	PPP	07 41 01.1	
MNK				pmax	pmax		
	comp=Z,339nm,0.8s						
MNK				pmax	pmax		
	comp=E,12nm,1.1s						
MNK				pmax	pmax		
	comp=N,87nm,1.0s						
MNK				MLR	MLR		
	comp=E,23nm,19.0s						
MNK				MLR	MLR		
	comp=N,352nm,19.0s						
MNK				MLR	MLR		
	comp=Z,607nm,19.0s						
MNK	Minsk	149.58	330	i PKP	PKPbc	07 34 01.7	+0.5
	comp=E,12nm,1.1s						
MNK				i PKP	PKPbc	07 34 01.7	+0.5
	comp=N,87nm,1.0s						
MNK				i PKP	PKPbc	07 34 01.7	+0.5
	comp=Z,339nm,0.8s,baz=226						
MNK				i PP	PP	07 37 40.2	+5.9
MNK				i PPP	PPP	07 41 01.2	
MNK				i SKKS		07 49 36.9	
MNK				i SS	SS	07 56 53.9	+9.0
MNK				i SSS	SSS	08 02 33.4	
MNK				i LR	LR	08 32 48.6	
MNK				i LRM	MLR	08 41 08.3	
	comp=E,23nm,18.7s						
MNK				i LRM	MLR	08 41 08.3	
	comp=N,352nm,19.4s						
MNK				i LRM	MLR	08 41 08.3	
	comp=Z,607nm,19.3s						
IIGN	Ignalina	149.68	333	eP	PKPbc	07 34 01.8	+0.3
ASK	Askoy	149.76	357	ePKPbc	PKPbc	07 34 01.4	0.0
NACGM	Naroch	149.77	331	ePKP	PKPdf	07 33 56.8	-0.1
RSDY	Resadiye-TOKAT	149.78	299	eP	PKiKP	07 34 03.1	-0.1
BER	Bergen	149.85	357	ePKPbc	PKPbc	07 34 01.3	-0.4
DARE	Darende-Malaty	149.88	295	eP	PKiKP	07 34 03.2	-0.4
VSVD	Vaisvydziai	150.08	335	eP	PKPbc	07 34 02.5	+0.1
VIKU	Vikbolandet	150.10	345	eP	PKPdf	07 33 57.4	+0.1
SVSK	Karacayir	150.10	298	eP	PKiKP	07 34 03.8	0.0
KONO	Kongsberg	150.23	352	PKPdf	PKPdf	07 33 56.9	-0.6
KONO				PKPbc	PKPbc	07 34 02.4	-0.2
KONO				PKPab	PKPab	07 34 09.4	+0.5
KONO	Kongsberg	150.23	352	PKIKP	PKPbc	07 34 02.4	-0.2
KONO						08 33 56.9	
ODD1	Odda	150.24	355	ePKPbc	PKPbc	07 34 02.5	-0.3
KMRS	Kahramanmaras	150.42	293	eP	PKPbc	07 34 03.4	-0.5
PABE	Paberze	150.43	335	PKPdf	PKPdf	07 33 57.4	-0.6
PABE				PKPbc	PKPbc	07 34 03.1	-0.1
PABE				PKPab	PKPab	07 34 09.9	+0.1
PABE	Paberze	150.43	335	eP	PKPbc	07 34 02.9	-0.3

SARI	SarD1z-Kayseri	150.72	295	i P	PKPdf	07 33 59.1	-0.1
BLS5	Blasjo	150.74	356	ePKPdf	PKPdf	07 33 59.2	+0.9
PBUR	Paburge	150.75	337	eP	PKPbc	07 34 03.4	-0.6
SIM	Simferopol'	151.00	309	i PKIKP	PKPbc	07 34 04.7	-0.3
SIM				pmax	pmax		
	comp=Z,222nm,1.4s						
KMY	Karmoy	151.02	357	ePKPbc	PKiKP	07 34 04.9	-0.2
BNN	Bunyan	151.12	296	PKPdf	PKPdf	07 33 59.1	-0.6
BNN				PKPbc	PKPbc	07 34 05.5	-0.2
H07S1	FLORES T-PHASE	151.28	63	ePKP	PKPdf	07 34 00.8	+0.9
H07N1	FLORES T-PHASE	151.31	62	ePKP	PKPbc	07 34 06.1	+0.2
AKASG	Malin Array Be	151.32	323	PKP	PKPdf	07 33 58.6	-0.8
	comp=Z,6.9nm,0.8s,baz=50,slow=2.5,SNR=27						
AKASG				PKPbc	PKPbc	07 34 04.8	-0.7
	comp=Z,164nm,0.7s,baz=47,slow=3.5,SNR=138						
AKASG	Malin Array Be	151.32	323		PKPdf	07 33 58.7	-0.7
AKASG				PKPbc	PKPbc	07 34 04.7	-0.9
AKBB	Malin Array Si	151.32	323	PKPdf	PKPdf	07 33 58.4	-1.1
AKBB				PKPbc	PKPbc	07 34 05.6	+0.1
AKBB	Malin Array Si	151.32	323	PKIKP	PKPdf	07 33 58.4	-1.1
SHBL	Chebaa	151.38	285	eP	PKPdf	07 34 00.2	-0.2
BHL	Bhannes	151.48	286	eP	PKPdf	07 34 00.1	-0.3
SNART	Snartemo	151.76	354	ePKPbc	PKPbc	07 34 06.2	-0.1
SUW	Suwalki	151.86	333	ePKPdf	PKPdf	07 33 59.9	-0.3
SUW				ePKPbc	PKPbc	07 34 06.2	-0.5
SUW	Suwalki	151.86	333		PKPdf	07 33 59.9	-0.3
SUW					PKPbc	07 34 06.8	+0.1
SUW	Suwalki	151.86	333	PKIKP	PKPdf	07 33 59.9	-0.3
SUW	Suwalki	151.86	333	eP	PKPbc	07 34 05.0	-1.7
BZK	Bozkurt	151.94	303		PKPbc	07 34 06.4	-0.8
ILGA	Ilgaz	152.36	301	PKPdf	PKPdf	07 34 01.3	-0.4
ILGA					PKPbc	07 34 08.4	-0.1
OVD	Ostervraa, Den	152.42	351	eP	PKiKP	07 34 08.0	0.0
DEL	Delary	152.58	346	eP	PKPbc	07 34 07.9	-0.3
BR131	Keskin Array S	152.69	299		PKPdf	07 34 00.4	-1.7
BR131				PKPbc	PKPbc	07 34 09.2	0.0
BR131	Keskin Array S	152.69	299	PKIKP	PKPdf	07 34 00.4	-1.7
BRTR	Keskin Array B	152.69	299	PKP	PKPdf	07 34 01.1	-1.0
	comp=Z,5.1nm,1.0s,baz=132,slow=1.8,SNR=12						
BRTR				PKPbc	PKPbc	07 34 08.4	-0.8
	comp=Z,38nm,0.5s,baz=142,slow=5.7,SNR=29						
BRTR	Keskin Array B	152.69	299	PKPdf	PKPdf	07 34 00.1	-2.0
BRTR				PKPbc	PKPbc	07 34 08.9	-0.3
BRTR				PKPab	PKPab	07 34 19.7	-0.4
PURM	Purcari	153.11	315	⇓P	PKPdf	07 34 02.3	0.0
ANTO	Ankara	153.30	299		PKPdf	07 34 01.7	-1.2
ANTO				PKPbc	PKiKP	07 34 10.7	+0.2
ANTO	Ankara	153.30	299	PKIKP	PKPdf	07 34 01.7	-1.2
BR231	Keskin MP Arra	153.32	299	PKPdf	PKPdf	07 34 02.6	-0.4
BR231					PKPbc	07 34 10.6	0.0
PCED	Cedros	153.32	64	ePKP	PKPdf	07 33 57.2	-5.7
CALA	Caldeira	153.33	64	ePKP	PKPdf	07 34 05.7	+2.7
MUD	Monsted U'grnd	153.40	351	eP	PKiKP	07 34 11.0	+0.9
CSS	Mathiatis	153.41	288		PKPbc	07 34 10.3	-0.4
PCAN	Candelaria	153.52	64	ePKP	PKPdf	07 33 58.1	-5.1
KIS	Kishinev	153.53	316	ePKP	PKPbc	07 34 09.0	-1.6
KIS				eL	L	08 00 27.0	
KIS				LRM	MLR	08 40 34.0	
	comp=Z,250nm,19.0s						
KIS	Kishinev	153.53	316	ePKIKP	PKPbc	07 34 09.0	-1.6
PICO	Pico	153.56	64	ePKP	PKPdf	07 33 57.9	-5.4
MILM	Milestii Mici	153.57	316	⇑iPKP	PKPdf	07 34 00.0	-2.9
	comp=Z,180nm,4.8s						
MILM	Milestii Mici	153.57	316	ePP	PP	07 37 51.0	-6.6
MILM				eL	L	08 30 38.0	
MILM				LRM	MLR	08 40 04.0	
	comp=Z,400nm,23.0s						
MILM	Milestii Mici	153.57	316	⇑P	PKPdf	07 34 05.4	+2.5
MILM	Milestii Mici	153.57	316	i PKIKP	PKPdf	07 34 00.0	-2.9
MILM				e		07 50 58.0	
MILM				pmax	pmax		
	comp=Z,180nm,4.8s						
PPNO	Prainha do Nor	153.69	64	ePKP	PKPdf	07 33 59.0	-4.5
PMAN	Manadas	153.80	63	ePKP	PKPdf	07 33 58.2	-5.3
PID	Ribeirinha	153.80	64	ePKP	PKPdf	07 33 57.2	-6.4
MDUB	Mudurnu	154.36	301	PKPdf	PKPdf	07 34 03.0	-1.5
MDUB				PKPbc	PKiKP	07 34 12.9	+0.1
MDUB				PKPab	PKPab	07 34 26.2	-0.9
TLCR		154.38	313	⇑P	PKiKP	07 34 12.8	+0.3
TLCR		154.38	313	⇑PKIKP	PKiKP	07 34 12.8	+0.3
ADH	Angra Heroismo	154.45	63	ePKP	PKPdf	07 34 05.5	+1.1
BEL	Belsk	154.46	333	ePKPbc	PKiKP	07 34 13.2	+0.8
PAGU	Agualva, Azore	154.47	63	ePKP	PKPdf	07 33 56.9	-7.6
LVV	L'vov	154.48	326	ePKIKP	PKPdf	07 34 03.5	-0.6
VLDR	Vladesti	154.53	315	⇑P	PKPbc	07 34 09.3	-3.5
GKP	Gorka Klasztor	154.56	339	ePKPbc	PKiKP	07 34 13.4	+0.8
GKP	Gorka Klasztor	154.56	339	eP	PKiKP	07 34 13.4	+0.8
ESK	Eskdalemuir	154.71	7	PKPdf	PKPdf	07 34 02.1	-2.2
ESK					PKiKP	07 34 13.2	+0.3
ESK				PKPab	PKPab	07 34 27.3	-0.6
ESK	Eskdalemuir	154.71	7	PKIKP	PKPdf	07 34 02.1	-2.2
ESK						07 34 13.2	
ESK						07 34 27.3	
TPGR	Topolog	154.77	312	⇑P	PKiKP	07 34 13.6	+0.2
CFR	Carcaliu	154.81	313	⇑P	PKPbc	07 34 12.3	-1.1
CFR	Carcaliu	154.81	313	⇑PKIKP	PKPbc	07 34 12.3	-1.1
GHRR		154.84	316	⇓P	PKPdf	07 34 07.9	+3.2
TIRR	Tirgusor	154.95	312	⇑P	PKiKP	07 34 14.2	+0.5
TIRR	Tirgusor	154.95	312	PKPdf	PKPdf	07 34 04.3	-0.6
TIRR				PKPbc	PKiKP	07 34 14.3	+0.6
TIRR				PKPab	PKPab	07 34 28.7	-0.6
TIRR	Tirgusor	154.95	312	PKIKP	PKPdf	07 34 04.3	-0.6
TIRR						07 34 14.3	
TIRR						07 34 28.7	
BORA	Eskisehir	155.05	300	PKPdf	PKPdf	07 34 04.0	-1.3
BORA				PKPbc	pPKPdf	07 34 14.0	-5.0
BORA				PKPab	PKPab	07 34 29.8	-0.3
TESR	Tescani	155.06	317	⇑P	PKPdf	07 34 06.3	+1.3
LIC	Lamto	155.10	163	eP	PKPdf	07 34 07.6	+1.5
	comp=Z,112nm,1.3s						
BIZ	Bicaz	155.14	319	⇑P	PKPdf	07 34 02.1	-3.0
HARR	Harsova	155.16	312	⇑P	PKPdf	07 34 13.8	+8.5
HARR	Harsova	155.16	312	⇑PKIKP	PKPdf	07 34 13.8	+8.6
BURAR	Bucovina Array	155.25	321	⇓P	PKPdf	07 34 00.6	-4.8
BURAR	Bucovina Array	155.25	321	⇓PKIKP	PKPdf	07 34 00.6	-4.8
KIC	Kosan Boka	155.31	163	ePKIKP	PKPdf	07 34 07.4	+1.0
	comp=Z,70nm,0.7s						
VRI	Vrincioaia	155.34	316	⇑P	PKPdf	07 34 08.3	+2.8
VRI	Vrincioaia	155.34	316	⇑PKIKP	PKPdf	07 34 08.3	+2.8
PLOR	Plostina	155.40	316	⇑P	PKPdf	07 34 08.5	+2.9
PLOR	Plostina	155.40	316	⇑PKIKP	PKPdf	07 34 08.5	+2.9
ISP	Isparta	155.41	295	PKPdf	PKPdf	07 34 04.4	-1.6
ISP					pPKPdf	07 34 14.5	-5.1
ISP				PKPab	PKPab	07 34 30.4	-1.3
ISP	Isparta	155.41	295	PKIKP	PKPdf	07 34 04.4	-1.6
ISP						07 34 14.5	
ISP						07 34 30.4	
PSN	Preselentsi	155.43	310	i P	PKPdf	07 34 14.0	+8.4
TIC	Toumodi	155.51	163	ePKIKP	PKPdf	07 34 07.8	+1.1
	comp=Z,227nm,1.4s						
BISRR	Bisoca	155.51	315	⇑P	PKPdf	07 34 09.4	+3.6
DBIC	Dimbokro	155.57	163	PKP	PKPdf	07 34 07.3	+0.6
	comp=Z,12nm,0.6s,baz=214,slow=3.4,SNR=9.1						
DBIC				PKPbc	pPKPdf	07 34 12.4	-7.8
	comp=Z,12nm,0.6s,baz=182,slow=2.2,SNR=18						
DBIC	Dimbokro	155.57	163	PKPdf	PKPdf	07 34 05.0	-1.7
COVR	Voineasa-Covas	155.67	316	⇑P	PKPdf	07 34 08.4	+2.4
OZUR		155.78	317	⇑P	PKPdf	07 34 06.4	+0.3
ISR	Istrita	155.83	314	⇑P	PKPdf	07 34 12.2	+6.0
ISR	Istrita	155.83	314	⇑PKIKP	PKPdf	07 34 12.2	+6.0
KOLS	Kolonicke sedl	155.93	326	ePKIKP	PKPdf	07 34 08.0	+1.8
KOLS	Kolonicke sedl	155.93	326	ePKP	PKPdf	07 34 08.0	+1.8
KOLS				e		07 34 17.1	
CMLA	Cha da Macela	155.93	65	ePKP	PKPdf	07 34 02.9	-3.6
MLR	Muntele Rosu	156.01	316	⇑P	PKPdf	07 34 09.8	+3.3
MLR	Muntele Rosu	156.01	316	PKPdf	PKPdf	07 34 04.9	-1.7
MLR				PKPab		07 34 31.9	
MLR	Muntele Rosu	156.01	316	PKP2	PKPab	07 34 31.9	-2.1
MLR						08 34 04.9	
UZH	Uzhgorod	156.12	326	ePKIKP	PKPdf	07 34 13.2	+6.8
UZH				i		07 34 23.9	
UZH				i		07 34 30.8	
PRD	Provadia	156.14	310	i P	PKPdf	07 34 05.1	-1.5
BART	Pico Bartolome	156.21	64	ePKP	PKPdf	07 34 02.9	-4.1
CRVS	Cervenica-Dubn	156.33	327	ePKIKP	PKPdf	07 34 07.1	+0.4
CRVS				e		07 34 34.8	
CRVS	Cervenica-Dubn	156.33	327	ePKP	PKPdf	07 34 07.1	+0.4
CRVS				e		07 34 34.8	
AKAS	Kas	156.36	292		PKPdf	07 34 05.6	-1.7
AKAS				PKPab	PKPab	07 34 35.9	0.0
PSMA	Santa Maria	156.37	66	ePKP	PKPdf	07 34 00.7	-6.4
NIE	Niedzica	156.49	329	ePKPdf	PKPdf	07 34 07.2	+0.3
VOIR		156.57	316	⇑P	PKPdf	07 34 09.1	+1.9
VOIR		156.57	316	⇑PKIKP	PKPdf	07 34 09.1	+1.9
KSP	Ksiaz	156.93	337	ePKPdf	PKPdf	07 34 07.3	0.0
LANS	Liptovska Anna	157.05	330	ePKIKP	PKPdf	07 34 08.5	+0.8
LANS				e		07 34 19.5	
LANS	Liptovska Anna	157.05	330	ePKP	PKPdf	07 34 08.5	+0.8
LANS				e		07 34 19.5	
LANS				e		07 34 38.0	
OKC	Ostrava-Krasne	157.07	333	ePKIKP	PKPdf	07 34 07.6	0.0
OKC	Ostrava-Krasne	157.07	333	ePKPDF	PKPdf	07 34 07.6	0.0
SZH	Strazhica	157.08	311	i P	PKPdf	07 34 06.9	-0.9
KECS	Kecovo	157.09	328	e	PKPab	07 34 38.3	0.0
KECS	Kecovo	157.09	328	ePKP	PKPab	07 34 25.1	-13
DRGR		157.11	322	⇑P	PKPdf	07 34 02.9	-5.0
DRGR		157.11	322	⇑PKIKP	PKPdf	07 34 02.9	-5.0
OSTC	Ostas	157.20	336	ePKPDF	PKPdf	07 34 08.4	+0.6
OSTC				ePP	PP	07 38 14.8	-2.5
OSTC				AMS	AMS	08 08 20.0	
	comp=Z,200nm,24.7s						
CHVC	Chvalec	157.23	337	ePKPDF	PKPdf	07 34 08.4	+0.6
CHVC				ePKPAB	PKPab	07 34 38.5	-0.4
CHVC				ePP	PP	07 38 14.7	-2.7
CHVC				AMS	AMS	08 08 30.0	
	comp=Z,200nm,23.6s						
UPC	Upice	157.31	337	ePKIKP	PKPdf	07 34 08.6	+0.7
UPC				e		07 38 15.0	
UPC				MLR	MLR		
	comp=Z,200nm,18.8s						
UPC	Upice	157.31	337	ePKPDF	PKPdf	07 34 08.6	+0.7
UPC				ePKPAB	PKPab	07 34 39.4	+0.2
UPC				ePP	PP	07 38 15.0	-2.8
UPC				AMS	AMS	08 08 30.0	
	comp=Z,200nm,18.8s						
DPC	Dobruska-Polom	157.33	336	ePKIKP	PKPdf	07 34 08.0	0.0
DPC				e		07 38 15.9	
DPC				MLR	MLR		
	comp=Z,100nm,18.2s						
DPC	Dobruska-Polom	157.33	336	ePKPDF	PKPdf	07 34 08.0	0.0
DPC				ePKPAB	PKPab	07 34 39.8	+0.4
DPC				ePP	PP	07 38 15.9	-2.1
DPC				AMS	AMS	08 08 20.0	
	comp=Z,100nm,18.2s						
MORC	Moravsky Berou	157.35	333	PKPdf	PKPdf	07 34 07.8	-0.2
MORC				PKPab	PKPab	07 34 39.7	+0.2
MORC	Moravsky Berou	157.35	333	PKIKP	PKPdf	07 34 07.8	-0.2
MORC	Moravsky Berou	157.35	333	ePKP	PKPdf	07 34 07.9	-0.2
KRLC	Kraliky	157.40	335	ePKIKP	PKPdf	07 34 08.0	-0.1
KRLC				e		07 38 16.0	
KRLC				MLR	MLR		
	comp=Z,100nm,25.3s						
KRLC	Kraliky	157.40	335	ePKPDF	PKPdf	07 34 08.0	-0.1
KRLC				ePKPAB	PKPab	07 34 39.1	-0.5
KRLC				ePP	PP	07 38 16.0	-2.4
KRLC				AMS	AMS	08 07 20.0	
	comp=Z,100nm,25.3s						
CLL	Collm	157.52	342	PKPdf	PKPdf	07 34 07.9	-0.1
CLL				PKPab	PKPab	07 34 40.1	0.0
CLL	Collm	157.52	342	PKIKP	PKPdf	07 34 07.9	-0.1
CLL	Collm	157.52	342	ePKPdf	PKPdf	07 34 08.0	-0.1
	comp=Z,48nm,1.7s						
CLL				i PKPdif	pPKPdf	07 34 19.4	-2.4
	comp=Z,31nm,1.0s						
CLL				e(pPKPdf)		07 34 26.0	
CLL				i PKPab	PKPab	07 34 39.6	-0.4
	comp=Z,63nm,0.9s						
CLL				i x	x	07 34 42.1	
	comp=Z,62nm,0.7s						
CLL				ePP	PP	07 38 17.0	-1.9
CLL				epPP		07 38 31.0	
CLL				ePPP	PPP	07 41 58.0	
CLL				ePPPP		07 44 18.0	
CLL				esSKKSac		07 45 30.0	
CLL				e(PPPrev)		07 46 54.0	
CLL				ePSKS		07 48 42.0	
CLL				ePPS	PPS	07 51 33.0	
CLL				ex	x	07 53 18.0	
CLL				ex	x	07 56 06.0	
CLL				eSS	SS	07 58 12.0	+0.9
CLL				eSSP	SSP	07 59 12.0	
CLL				ex	x	08 03 12.0	
CLL				eSSS	SSS	08 04 12.0	
CLL				ex	x	08 06 54.0	
CLL				eSSSS		08 08 36.0	
MAUC	Maruska	157.57	332	ePKPDF	PKPdf	07 34 08.6	+0.3
MAUC				ePKPAB	PKPab	07 34 37.7	-2.7
MAUC				AMS	AMS	08 09 10.0	
	comp=Z,400nm,32.7s						
BRG	Berggiesshubel	157.65	340	⇓ePKPf		07 34 08.3	
BRG				Amp		07 34 11.9	
	comp=Z,48nm,1.4s						
BRG				⇑PKP	PKPdf	07 34 20.0	+12
BRG				Amp		07 34 21.3	
	comp=Z,24nm,1.2s						
BRG				PKPab	PKPab	07 34 40.4	-0.3
BRG				Amp		07 34 41.9	
	comp=Z,49nm,1.0s						
BRG	Berggiesshubel	157.65	340	ePKIKP	PKPdf	07 34 08.3	0.0
BRG						07 34 20.0	
BRG				e		07 38 19.0	
BRG				e		07 51 37.0	
BRG				pmax	pmax		
	comp=Z,48nm,1.4s						
BRG				pmax	pmax		
	comp=Z,24nm,1.2s						
BRG				pmax	pmax		
	comp=Z,49nm,1.0s						
BRG				pmax	pmax		
	comp=N,260nm,25.2s						
PVCC	Panska Ves	157.76	339	ePKIKP	PKPdf	07 34 09.2	+0.8
PVCC				e		07 38 17.0	
PVCC				MLR	MLR		
	comp=Z,100nm,27.7s						
PVCC	Panska Ves	157.76	339	ePKPDF	PKPdf	07 34 09.2	+0.8
PVCC				ePKPAB	PKPab	07 34 41.9	+0.8
PVCC				ePP	PP	07 38 17.0	-3.3
PVCC				AMS	AMS	08 08 20.0	
	comp=Z,100nm,27.7s						
PSZ	Piszkesteto	157.77	327	PKPdf	PKPdf	07 34 07.4	-1.3
PSZ				PKPab	PKPab	07 34 40.9	-0.5
PSZ	Piszkesteto	157.77	327	PKP2	PKPab	07 34 40.9	-0.5
PSZ						08 34 07.4	
VYHS	Vyhne	157.82	330	ePKP2	PKPab	07 34 41.3	-0.2
VYHS	Vyhne	157.82	330	ePKP	PKPab	07 34 41.3	-0.2
DAT	Datca	157.91	294	P	PKPdf	07 34 06.8	-2.4
GZR	Gura Zlata	157.92	319	⇑P	PKPdf	07 34 08.3	-0.6
GZR	Gura Zlata	157.92	319	⇑PKIKP	PKPdf	07 34 08.3	-0.6
KOLL	Kolacno	157.94	330	ePKP	PKPab	07 34 42.1	+0.1
ALN	Alexandroupoli	157.96	305	PKPdf	PKPdf	07 34 07.2	-1.8
ALN				PKPab	PKPab	07 34 40.9	-1.5
ALN	Alexandroupoli	157.96	305	PKP2	PKPab	07 34 40.9	-1.5
ALN						08 34 07.2	
SIRR	Siria	158.00	322	⇑P	PKPdf	07 34 08.7	-0.2
JAVC	Velka Javorina	158.03	332	ePKP	PKPdf	07 34 09.6	+0.7
BODT	Bodrum	158.06	295	P	PKPdf	07 34 06.8	-2.5
VRAC	Vranov	158.10	334	ePKP	PKPdf	07 34 08.6	-0.3
VRAC				e		07 34 42.0	
RDO	Rodhopi	158.23	306	P	PKPdf	07 34 07.4	-1.9
RDO	Rodhopi	158.23	306		PKPdf	07 34 07.3	-1.9
RDO				PKPab	PKPab	07 34 43.0	-0.5
PRU	Pruhonice	158.24	338	ePKIKP	PKPdf	07 34 08.8	-0.2
PRU				e		07 34 43.5	
PRU				e		07 38 20.3	
PRU				MLR	MLR		
	comp=Z,200nm,23.1s						
PRU	Pruhonice	158.24	338	ePKPDF	PKPdf	07 34 08.8	-0.2
PRU				ePKPAB	PKPab	07 34 43.5	+0.3
PRU				ePP	PP	07 38 20.3	-2.6
PRU				AMS	AMS	08 08 20.0	
	comp=Z,200nm,23.1s						
SMG	Samos	158.30	296	P	PKPdf	07 34 07.5	-2.0
KRUC	Moravsky	158.37	334	e	PKPab	07 34 43.1	-0.7
KRUC	Moravsky	158.37	334	ePKP	PKPdf	07 34 08.7	-0.5
SMOL	Smolenice	158.40	332	ePKP2	PKPab	07 34 44.4	+0.4
SMOL	Smolenice	158.40	332	ePKP	PKPab	07 34 44.4	+0.4
KARP	Karpathos	158.41	291	P	PKPdf	07 34 08.3	-1.5
KARP	Karpathos	158.41	291	PKPdf	PKPdf	07 34 08.6	-1.1
KARP				PKPab	PKPab	07 34 45.3	+0.7
HERR	Herculane	158.43	318	⇑P	PKPdf	07 34 10.2	+0.8
BZS	Buzias	158.44	321	⇑P	PKPdf	07 34 08.0	-1.4
BZS	Buzias	158.44	321	⇑PKIKP	PKPdf	07 34 08.0	-1.4
SMTH	Samothraki Isl	158.48	304	P	PKPdf	07 34 05.5	-4.2
TREC	Trest	158.51	336	ePKIKP	PKPdf	07 34 06.4	-3.0
TREC				e		07 34 43.4	
TREC				e		07 38 21.8	
TREC				MLR	MLR		
	comp=Z,100nm,23.6s						
TREC	Trest	158.51	336	ePKPDF	PKPdf	07 34 06.4	-3.0
TREC				ePKPAB	PKPab	07 34 43.4	-1.1
TREC				ePP	PP	07 38 21.8	-2.7
TREC				AMS	AMS	08 08 20.0	
	comp=Z,100nm,23.6s						
MODS	Modra-Piesok	158.58	332	ePKIKP	PKPdf	07 34 10.0	+0.5
MODS				e		07 34 44.8	
MODS	Modra-Piesok	158.58	332	e	PKPab	07 34 44.8	0.0
MODS	Modra-Piesok	158.58	332	ePKP	PKPdf	07 34 10.0	+0.5
NKC	Novy Kostel	158.65	342	ePKIKP	PKPdf	07 34 10.6	+1.0
NKC				e		07 34 45.4	
NKC				e		07 38 22.4	
NKC				MLR	MLR		
	comp=Z,300nm,32.7s						
NKC	Novy Kostel	158.65	342	ePKPDF	PKPdf	07 34 10.6	+1.0
NKC				ePKPAB	PKPab	07 34 45.4	+0.4
NKC				ePP	PP	07 38 22.4	-2.7
NKC				AMS	AMS	08 09 40.0	
	comp=Z,300nm,32.7s						
MDVR	Moldovita	158.89	319	⇑P	PKPdf	07 34 10.5	+0.4
KAVA	Kavala	159.00	307	P	PKPdf	07 34 08.2	-2.0
VTS	Vitosha	159.14	312		PKPdf	07 34 09.8	-0.8
VTS				PKPab	PKPab	07 34 47.4	-0.2
VTS	Vitosha	159.14	312	PKIKP	PKPdf	07 34 09.8	-0.8
VTS						07 34 47.4	
VTS	Vitosha	159.14	312	i P	PKPdf	07 34 08.3	-2.3
MMB	Musomiste	159.29	309	i P	PKPdf	07 34 08.3	-2.3
KHC	Kasperske Hory	159.30	338	PKPdf	PKPdf	07 34 09.4	-1.0
KHC				PKPab	PKPab	07 34 48.2	+0.3
KHC	Kasperske Hory	159.30	338	ePKIKP	PKPdf	07 34 10.5	+0.1
KHC				e		07 34 23.0	
KHC				e		07 34 48.1	
KHC				e		07 38 27.0	
KHC				MLR	MLR		
	comp=Z,200nm,23.1s						
KHC	Kasperske Hory	159.30	338	ePKPDF	PKPdf	07 34 10.5	+0.1
KHC				x	x	07 34 23.0	
KHC				ePKPAB	PKPab	07 34 48.1	+0.2
KHC				x	x	07 34 51.0	
KHC				ePP	PP	07 38 27.0	-1.7
KHC				AMS	AMS	08 07 50.0	
	comp=Z,200nm,23.1s						
NVR	Nevrokopi	159.30	308	P	PKPdf	07 34 08.3	-2.3
CKRC	Cesky Krumlov	159.33	337	ePKPDF	PKPdf	07 34 10.7	+0.3
CKRC				ePKPAB	PKPab	07 34 47.9	-0.1
CKRC				ePP	PP	07 38 27.0	-1.9
CKRC				AMS	AMS	08 08 00.0	
	comp=Z,200nm,33.4s						
BEBN	Eben Emael	159.37	354	dPKPab	PKPab	07 34 47.7	-0.3
MPLH	Magyarpolny	159.40	329	PKP	PKPdf	07 34 10.4	-0.1
MPLH	Magyarpolny	159.40	329	PKP	PKPdf	07 34 11.3	+0.8
KOKK	Kokkinochori,	159.43	307	P	PKPdf	07 34 08.3	-2.4
GRA1	Grafenberg Arr	159.47	343	PKPdf	PKPdf	07 34 10.7	+0.2
GRA1					PKPab	07 34 48.8	+0.3
GRF	Grafenberg Arr	159.47	343	PKIKP	PKPdf	07 34 10.7	+0.2
GRF						07 34 48.8	
GRFO	Grafenberg	159.47	343	PKPdf	PKPdf	07 34 10.9	+0.4
GRFO				PKPab	PKPab	07 34 49.1	+0.6
GRFO	Grafenberg	159.47	343	PKP2	PKPab	07 34 49.1	+0.6
GRFO						08 34 11.0	
CONA	Conrad Observa	159.50	333	i P	PKPdf	07 34 10.1	-0.6
	comp=Z,11nm,1.1s,SNR=5.6						
CONA				eP	PKPab	07 34 49.0	+0.1
	comp=Z,35nm,1.8s						
GEC2	GERESS Array S	159.51	338		PKPdf	07 34 10.4	-0.3
GEC2					PKPab	07 34 49.1	+0.2
GERES	GERESS Array B	159.51	338	PKP	PKPdf	07 34 10.1	-0.6
	comp=Z,4.6nm,0.9s,baz=72,slow=4.3,SNR=28						
GERES				PKPab	PKPab	07 34 48.5	-0.4
	comp=Z,7.5nm,0.6s,baz=40,slow=4.2,SNR=9.3						
GERES	GERESS Array B	159.51	338	PKPdf	PKPdf	07 34 09.4	-1.3
GERES				PKPab	PKPab	07 34 48.2	-0.7
RONA	Rosalia, Austr	159.51	332	eP	PKPdf	07 34 10.2	-0.4
RONA				eP	PKPab	07 34 49.2	+0.3
MEM	Membach	159.52	353	dPKPdf	PKPdf	07 34 10.5	0.0
MEM				dPKPab	PKPab	07 34 48.2	-0.5
BTNL	Ternell	159.53	353	dPKPdf	PKPdf	07 34 10.5	0.0
BTNL				dPKPab	PKPab	07 34 48.5	-0.2
BSTI	Sart Tilman	159.59	354	dPKPdf	PKPdf	07 34 10.8	+0.3
BSTI				dPKPab	PKPab	07 34 48.6	-0.4
KKB	Krupnik	159.60	310	i P	PKPdf	07 34 08.3	-2.6
SANT	Santorini	159.65	293	PKPdf	PKPdf	07 34 09.6	-1.6
SANT				PKPab	PKPab	07 34 48.4	-1.5
SNF	Seneffe	159.76	356	dPKPdf	PKPdf	07 34 11.4	+0.7
SNF				dPKPab	PKPab	07 34 49.5	-0.2
BHOU	Houvegnez	159.77	353	dPKPdf	PKPdf	07 34 11.2	+0.4
BHOU				dPKPab	PKPab	07 34 49.6	-0.2
BCLA	Clavier	159.77	354	dPKPab	PKPab	07 34 49.2	-0.5
BGES	Gesves	159.83	355	dPKPdf	PKPdf	07 34 09.8	-1.0
BGES				dPKPab	PKPab	07 34 49.2	-0.8
BMRD	Maredsous	159.93	355	dPKPdf	PKPdf	07 34 10.9	-0.1
BMRD				dPKPab	PKPab	07 34 49.9	-0.6
RCHB	Rochefort	160.04	354	dPKPdf	PKPdf	07 34 10.5	-0.6
RCHB				dPKPab	PKPab	07 34 50.4	-0.6
HORT	Hortiatis	160.14	307	P	PKPdf	07 34 09.2	-2.5
DOU	Dourbes	160.15	355	dPKPdf	PKPdf	07 34 11.3	+0.1
DOU				dPKPab	PKPab	07 34 50.9	-0.6
MOA	Molln	160.17	335	eP	PKPdf	07 34 11.1	-0.3
	comp=Z,9.0nm,1.4s						
MOA				eP	PKPab	07 34 51.8	+0.1
	comp=Z,17nm,1.1s						
ARSA	Arzberg	160.19	332	eP	PKPdf	07 34 10.6	-0.8
	comp=Z,16nm,1.1s						
ARSA				eP	PKPab	07 34 50.8	-1.0
	comp=Z,9.9nm,0.9s						
IDI	Anoyia	160.28	291	P	PKPdf	07 34 10.7	-1.3
IDI	Anoyia	160.28	291	PKPdf	PKPdf	07 34 10.5	-1.4
IDI				PKPab	PKPab	07 34 52.0	-0.8
DIVS	Divibare	160.28	319		PKPdf	07 34 10.7	-1.0
DIVS				PKPab	PKPab	07 34 52.7	+0.3
DION	Dionisos Attik	160.43	299	P	PKPdf	07 34 10.1	-1.9
WLF	Walferdange	160.43	352	PKPdf	PKPdf	07 34 11.5	-0.1
WLF				PKPab	PKPab	07 34 52.8	+0.1
WLF	Walferdange	160.43	352	PKP2	PKPab	07 34 52.8	+0.1
WLF						08 34 11.5	
WLF	Walferdange	160.43	352	dPKPdf	PKPdf	07 34 10.9	-0.7
WLF				dPKPab	PKPab	07 34 52.6	-0.1
GRG	Griva	160.47	308	P	PKPdf	07 34 09.9	-2.1
BIOA	Bad Ischl, Aus	160.53	336	eP	PKPdf	07 34 11.5	-0.3
BIOA				eP	PKPab	07 34 53.1	-0.2
NEO	Neokhori	160.56	303	P	PKPdf	07 34 10.3	-1.8
XOR	Xorichti	160.56	303	P	PKPdf	07 34 09.9	-2.2
LIT	Litokhoron	160.77	306	P	PKPdf	07 34 10.2	-2.1
LIT	Litokhoron	160.77	306	PKPdf	PKPdf	07 34 11.1	-1.2
LIT				PKPab	PKPab	07 34 53.1	-1.6
LIT	Litokhoron	160.77	306	PKIKP	PKPdf	07 34 11.1	-1.2
LIT						07 34 53.1	
STU	Stuttgart	160.80	346	PKPdf	PKPdf	07 34 11.9	-0.1
STU					PKPab	07 34 53.7	-0.7
STU	Stuttgart	160.80	346	PKIKP	PKPdf	07 34 11.9	-0.1
STU						07 34 53.7	
GROS	Grobnik	160.83	331	i PKPdf	PKPdf	07 34 10.9	-1.3
SOKA	Soboth	160.85	332	i P	PKPdf	07 34 11.6	-0.7
	comp=Z,21nm,1.2s,SNR=9.0						
SOKA				eP	PKPab	07 34 54.4	-0.4
	comp=Z,32nm,1.7s						
VILL	Villia	160.87	300	P	PKPdf	07 34 09.4	-3.1
ATAL	Atalanti	160.92	302	P	PKPdf	07 34 10.5	-2.0
LKR	Lokris	160.95	301	P	PKPdf	07 34 09.2	-3.3
IMMV	Iera Moni Meta	160.99	291	P	PKPdf	07 34 11.8	-0.9
GVD	Gavdhos	160.99	289	P	PKPdf	07 34 11.5	-1.2
GOLS	Golise	161.13	330	i PKPdf	PKPdf	07 34 11.7	-0.8
KBA	Koelnbreinsper	161.15	336	eP	PKPdf	07 34 11.6	-1.1
	comp=Z,19nm,1.2s						
KBA				eP	PKPab	07 34 56.4	+0.2
	comp=Z,13nm,0.7s						
LTK	Loutraki	161.17	300	P	PKPdf	07 34 10.5	-2.3
OBKA	Obir	161.18	333	eP	PKPab	07 34 54.9	-1.4
	comp=Z,11nm,1.0s						
EPID	Epidavros	161.18	298	P	PKPdf	07 34 10.7	-2.1
KRND	KRANIDI	161.22	298	P	PKPdf	07 34 10.4	-2.4
FNA	Florina	161.24	309	P	PKPdf	07 34 10.9	-1.9
FNA	Florina	161.24	309		PKPdf	07 34 11.7	-1.1
FNA				PKPab	PKPab	07 34 55.6	-1.1
FNA	Florina	161.24	309	PKP2	PKPab	07 34 55.6	-1.1
FNA						08 34 11.7	

THL	Klokotos Trika	161.32	305	P	PKPdf	07 34 11.1	-1.8
BFO	Black Forest	161.40	347	PKPdf	PKPdf	07 34 11.3	-1.4
BFO				PKPab	PKPab	07 34 56.2	-0.8
BFO	Black Forest	161.40	347	PKP2	PKPab	07 34 56.2	-0.8
BFO						08 34 11.3	
MYKA	Terra Mystica	161.43	335	*e*P	PKPab	07 34 56.4	-0.9
	comp=Z,11nm,0.7s						
MAKR	Makrakomi, Fth	161.45	303	P	PKPdf	07 34 11.9	-1.2
WATA	Walderalm	161.51	339	*e*P	PKPdf	07 34 12.2	-0.8
	comp=Z,16nm,1.8s						
WATA				*e*P	PKPab	07 34 58.1	+0.4
	comp=Z,18nm,0.6s						
WTTA	Wattenberg	161.56	339	*i* P	PKPdf	07 34 13.1	0.0
	comp=Z,28nm,1.3s,SNR=7.5						
WTTA				*e*P	PKPab	07 34 57.7	-0.3
	comp=Z,37nm,1.1s						
LJU	Ljubljana	161.57	332	*i* PKPdf	PKPdf	07 34 12.1	-0.8
KTHA	Kythira Island	161.57	294	P	PKPdf	07 34 11.9	-1.4
RETA	Reutte	161.61	341	*e*P	PKPdf	07 34 12.4	-0.7
	comp=Z,4.0nm,0.6s						
RETA				*i* P	PKPab	07 34 58.4	+0.3
	comp=Z,53nm,1.1s,SNR=8.8						
KPRO	Kipourio	161.62	307	P	PKPdf	07 34 11.9	-1.4
MOTA	Moosalm	161.64	340	*i* P	PKPdf	07 34 12.5	-0.7
	comp=Z,20nm,1.1s,SNR=6.1						
MOTA				*i* P	PKPab	07 34 58.8	+0.5
	comp=Z,59nm,0.9s,SNR=8.0						
GUR	Goura	161.67	300	P	PKPdf	07 34 11.9	-1.5
ECH	Echery	161.71	349		PKPdf	07 34 11.6	-1.4
ECH					PKPab	07 34 57.5	-0.9
ECH	Echery	161.71	349	PKP2	PKPab	07 34 57.5	-0.9
ECH						08 34 11.6	
EVR	Evrytania	161.72	303	P	PKPdf	07 34 12.4	-1.1
SQTA	Sankt Quirin	161.72	340	*i* P	PKPdf	07 34 13.0	-0.2
	comp=Z,24nm,1.3s,SNR=5.5						
SQTA				*e*P	PKPab	07 34 58.8	+0.2
	comp=Z,31nm,0.8s						
ABTA	Abfaltersbach	161.73	337	*i* P	PKPdf	07 34 11.7	-1.5
	comp=Z,32nm,1.4s,SNR=7.5						
ABTA				*e*P	PKPab	07 34 57.2	-1.4
	comp=Z,13nm,0.7s						
ANX	Ano Chora	161.76	302	P	PKPdf	07 34 12.7	-0.8
KLV	Kalavryta, Ach	161.78	300	P	PKPdf	07 34 12.1	-1.4
EFP	Efpalio	161.83	302	P	PKPdf	07 34 12.9	-0.5
LAKA	Lakka	161.84	301	P	PKPdf	07 34 12.5	-1.0
TRIP	Tripoli	161.85	299	P	PKPdf	07 34 11.7	-1.9
DAVA	Damuels	162.03	343	*e*P	PKPdf	07 34 13.4	-0.2
	comp=Z,6.8nm,0.7s						
DAVA				*i* P	PKPab	07 34 59.2	-0.8
	comp=Z,4.6nm,0.5s,SNR=7.6						
PVO	Paravola	162.04	303	P	PKPdf	07 34 12.8	-0.8
FETA	Feichten	162.04	341	*i* P	PKPdf	07 34 12.8	-0.8
	comp=Z,21nm,1.1s,SNR=8.5						
FETA				*e*P	PKPab	07 35 00.4	+0.4
	comp=Z,30nm,0.9s						
DRO	Drossia	162.14	300	P	PKPdf	07 34 13.1	-0.7
ITM	Ithomi	162.21	298	P	PKPdf	07 34 12.2	-1.7
CLF	Chambon-Foret	162.31	360	PKPdf	PKPdf	07 34 12.5	-1.0
CLF				PKPab	PKPab	07 35 01.0	+0.1
PYL	PYLOS	162.44	297	P	PKPdf	07 34 12.2	-1.9
LKD2	Lefkada island	162.60	304	P	PKPdf	07 34 13.1	-1.1
NYDR	Nydri-Lefkada	162.60	304	P	PKPdf	07 34 13.5	-0.7
EVGI	Lefkada island	162.67	304	P	PKPdf	07 34 13.1	-1.2
FSK	Fiskardo	162.80	303	P	PKPdf	07 34 13.7	-0.7
KEK	Kerkira	162.80	308	P	PKPdf	07 34 13.2	-1.2
TORD	Torodi Ar. Bea	162.92	178	PKP	PKPdf	07 34 14.9	-0.3
	comp=Z,20nm,1.0s,baz=289,slow=0.5,SNR=56						
TORD				PKPab	PKPab	07 35 03.9	-0.5
	comp=Z,114nm,1.0s,baz=178,slow=2.9,SNR=42						
TORD				PP	PP	07 38 52.0	+4.2
	comp=Z,4.0nm,0.8s,baz=138,slow=4.8,SNR=3.8						
TORD	Torodi Ar. Bea	162.92	178		PKPdf	07 34 14.3	-0.9
TORD					PKPab	07 35 04.1	-0.3
TUE	Stuetta	162.92	343		PKPdf	07 34 13.7	-0.9
TUE				PKPab	PKPab	07 35 04.1	+0.2
KEF3	Kipouria, Keph	163.05	303	P	PKPdf	07 34 13.0	-1.6
TEOL	Teolo	163.22	336		PKPdf	07 34 14.5	-0.1
TEOL					PKPab	07 35 04.4	-0.7
KOWA	Kowa	163.26	159	P	PKPdf	07 34 16.7	+1.2
PMOZ	Porto Moniz, M	163.30	76	*e*PKPdf	PKPdf	07 34 16.6	+1.4
PMOZ	Porto Moniz, M	163.30	76	*e*LR	LR	08 30 37.4	
	comp=Z,268nm,18.0s						
SENIN	Lac Senin/Sane	163.48	347		PKPdf	07 34 14.8	-0.3
SENIN				PKPab	PKPab	07 35 06.3	-0.1
PMPST	Porto Santo, M	164.01	75	*e*PKPdf	PKPdf	07 34 17.5	+1.8
NRCA	Norcia	164.74	328		PKPdf	07 34 14.5	-1.7
NRCA					PKPab	07 35 11.1	-0.9
BNI	Bardonecchia	164.86	348		PKPdf	07 34 16.0	-0.3
BNI				PKPab	PKPab	07 35 13.1	+0.6
BNI	Bardonecchia	164.86	348	PKIKP	PKPdf	07 34 16.0	-0.3
SSB	Saint Sauveur	164.94	354		PKPdf	07 34 15.4	-0.8
SSB				PKPab	PKPab	07 35 12.6	-0.1
SSB	Saint Sauveur	164.94	354	PKIKP	PKPdf	07 34 15.4	-0.8
SSB						07 35 12.6	
TIP	Timpagrande	165.11	310		PKPdf	07 34 16.0	-0.6
TIP					PKPab	07 35 12.8	-1.0
CUC	Castrocucco	165.25	315	PKPdf	PKPdf	07 34 14.9	-1.8
CUC				PKPab	PKPab	07 35 14.0	-0.3
PGAV	Gavieira, Arco	165.65	33	*e*PKPdf	PKPdf	07 34 17.5	+0.5
PGAV	Gavieira, Arco	165.65	33	*e*LR	LR	08 31 50.7	
	comp=Z,361nm,20.0s						
PCAB	Cabril	165.96	33	*e*PKPdf	PKPdf	07 34 17.9	+0.7
PCAB	Cabril	165.96	33	*e*PKPab	PKPab	07 35 17.8	+0.5
CEL	Celeste	166.17	309	PKPab	PKPab	07 35 18.4	0.0
POLO	Lamas de Olo	166.33	33	*e*PKPdf	PKPdf	07 34 18.8	+1.2
POLO	Lamas de Olo	166.33	33	*e*PKPab	PKPab	07 35 19.7	+0.7
PVRL	Vila Real	166.44	34	*e*PKPdf	PKPdf	07 34 19.2	+1.6
PVRL	Vila Real	166.44	34	*e*PKPab	PKPab	07 35 20.2	+0.7
PBRG	Braganca	166.46	30	*e*PKPdf	PKPdf	07 34 18.1	+0.5
PBRG	Braganca	166.46	30	*e*PKPab	PKPab	07 35 20.4	+0.9
PVIS	Viseu	166.78	36	*e*PKPdf	PKPdf	07 34 18.6	+0.7
MVO	Moncorvo	166.85	32	*e*PKPdf	PKPdf	07 34 18.8	+0.9
MVO	Moncorvo	166.85	32	*e*PKPab	PKPab	07 35 22.4	+1.1
MVO	Moncorvo	166.85	32	*e*LR	LR	08 32 15.1	
	comp=Z,469nm,22.0s						
COI	Coimbra	166.88	38	*e*PKPdf	PKPdf	07 34 19.8	+1.9
PCAS	Casmilo, Conde	166.95	39	*e*PKPdf	PKPdf	07 34 18.3	+0.4
PSBE	So Bento	167.15	41	*e*PKPdf	PKPdf	07 34 19.5	+1.4
MTE	Manteigas	167.19	36	*e*PKPdf	PKPdf	07 34 19.1	+0.9
MTE	Manteigas	167.19	36	*e*PKPab	PKPab	07 35 23.4	+0.5
MTE	Manteigas	167.19	36	*e*LR	LR	08 31 50.7	
	comp=Z,375nm,22.0s						
LIS	Lisbon	167.46	45	*e*PKPdf	PKPdf	07 34 18.9	+0.6
LIS	Lisbon	167.46	45	*e*PKIKP	PKPdf	07 34 18.9	+0.6
PACT	Alcochete	167.62	44	*e*PKPdf	PKPdf	07 34 19.3	+0.9
PACT	Alcochete	167.62	44	*e*PKPab	PKPab	07 35 25.3	+0.6
PCBR	Castelo Branco	167.65	37	*e*PKPdf	PKPdf	07 34 20.1	+1.7
RAFF	Raffo Rosso	167.74	307		PKPab	07 35 24.0	-1.4
PMTG	Montargil	167.78	42	*e*PKPdf	PKPdf	07 34 19.0	+0.4
PMTG	Montargil	167.78	42	*e*PKPab	PKPab	07 35 25.6	+0.2
PMRV	Marv??o	167.99	38	*e*PKPdf	PKPdf	07 34 18.8	+0.1
PMRV	Marv??o	167.99	38	*e*PKPab	PKPab	07 35 26.9	+0.6
PMRV	Marv??o	167.99	38	*e*LR	LR	08 33 31.9	
	comp=Z,434nm,22.0s						
PNCL	Nicolau / Gran	168.22	46	*e*PKPdf	PKPdf	07 34 19.9	+1.0
PNCL	Nicolau / Gran	168.22	46	*e*PKPab	PKPab	07 35 28.2	+0.8
EVO	Evora	168.26	43	*e*PKPdf	PKPdf	07 34 19.8	+0.9
EVO	Evora	168.26	43	*e*PKPab	PKPab	07 35 28.0	+0.4
PESTR	Estremoz	168.28	41	*e*PKPdf	PKPdf	07 34 19.6	+0.7
PESTR	Estremoz	168.28	41		PKPdf	07 34 18.4	-0.5
PESTR				PKPab	PKPab	07 35 27.3	-0.3
PESTR	Estremoz	168.28	41	P	PKPdf	07 34 21.1	+2.1
PTEO	Sao Teotonio	168.43	49	*e*PKPdf	PKPdf	07 34 20.1	+1.1
MESJ	Messejana	168.58	46	*e*PKPdf	PKPdf	07 34 19.7	+0.6
MESJ				*e*PP	PP	07 39 19.6	+1.5
MESJ				*e*SS	SS	08 00 11.3	+4.4
MESJ				IAMs_20	IAMs_20	08 48 21.2	
	comp=Z,636nm,30.6s						
MESJ	Messejana	168.58	46	*e*PKPdf	PKPdf	07 34 20.4	+1.3
MESJ	Messejana	168.58	46	*e*PKPab	PKPab	07 35 29.6	+0.6
MESJ	Messejana	168.58	46	*e*PKIKP	PKPdf	07 34 19.7	+0.6
MESJ				*e*		07 39 19.6	
MESJ				*e*SS	SS	08 00 11.3	+4.4
PFVI	Vila Bisbo	168.60	50	*e*PKPdf	PKPdf	07 34 20.3	+1.1
MORF	Marmelete	168.62	49	*e*PKPdf	PKPdf	07 34 19.7	+0.4
MORF				*e*PP	PP	07 39 19.9	+1.3
MORF				IAMs_20	IAMs_20	08 45 48.6	
	comp=E,4µm,59.4s						
MORF	Marmelete	168.62	49	*e*PKPdf	PKPdf	07 34 20.5	+1.2
MORF	Marmelete	168.62	49	*e*PKIKP	PKPdf	07 34 19.7	+0.4
MORF				*e*		07 39 19.8	
PBEJ	Beja	168.68	45	*e*PKPdf	PKPdf	07 34 19.9	+0.7
PCVE	Castro Verde	168.82	47	*e*PKPdf	PKPdf	07 34 20.7	+1.4
PBAR	Barrancos	169.07	42	*e*PKPdf	PKPdf	07 34 21.5	+2.1
PBAR	Barrancos	169.07	42	*e*PKPab	PKPab	07 35 31.5	+0.4
VSL	Villasalto	169.10	329		PKPdf	07 34 19.4	-0.1
PBDV	Barranco-do-Ve	169.12	48	*e*PKPdf	PKPdf	07 34 20.5	+0.9
PVAQ	Vaqueiros	169.16	47	*e*PKPdf	PKPdf	07 34 19.9	+0.4
PVAQ	Vaqueiros	169.16	47	*e*LR	LR	08 33 23.3	
	comp=E,381nm,20.0s						
PAB	San Pablo	169.35	28	P	PKPdf	07 34 21.9	+2.2
ESBB	Sonseca Array	169.39	27		PKPdf	07 34 20.8	+1.1
ESBB				PKPab	PKPab	07 35 33.5	+1.0
ESDC	Sonseca Array	169.39	27	PKP	PKPdf	07 34 20.7	+1.0
	comp=E,15nm,1.1s,baz=342,slow=2.8,SNR=58						
ESDC				PKPab	PKPab	07 35 32.4	-0.1
	comp=E,7.1nm,0.9s,baz=328,slow=4.0,SNR=9.8						
ESDC				PP	PP	07 39 21.8	+0.1
	comp=E,12nm,1.3s,baz=332,slow=4.4,SNR=14						
ESDC				SKKPbc		07 43 42.3	
	comp=E,2.2nm,1.0s,baz=113,slow=1.4,SNR=4.9						
ESDC	Sonseca Array	169.39	27		PKPdf	07 34 20.4	+0.7
ESDC				PKPab	PKPab	07 35 32.7	+0.2
OUK	Oukaimeden	171.32	82	P	PKPdf	07 34 24.0	+2.6
ZHG	ZHG	171.88	65	P	PKPdf	07 34 23.0	+1.8
KEST	Kesra	171.91	314	PKP	PKPdf	07 34 21.9	+0.7
	comp=E,15nm,0.9s,baz=276,slow=1.2,SNR=13						
KEST				PKPab	PKPab	07 35 43.9	-0.1
	comp=E,8.7nm,0.7s,baz=90,slow=3.2,SNR=6.2						
KEST	Kesra	171.91	314		PKPdf	07 34 21.2	0.0
KEST				PKPab	PKPab	07 35 44.1	+0.2
CHEFC	Chefchaouen	172.07	51	P	PKPdf	07 34 24.0	+2.7
OUZM	OUZ	172.28	83	P	PKPdf	07 34 24.0	+2.4
LCRM	LCR	173.15	59	P	PKPdf	07 34 25.0	+3.1
ZGR	Zagora	173.25	90	P	PKPdf	07 34 24.0	+2.0
TZRR	Tazzarine	173.31	84	P	PKPdf	07 34 24.0	+2.0
MDT	Midelt	173.70	65	P	PKPdf	07 34 24.1	+2.0
GOLM	Goulmima	173.73	75	P	PKPdf	07 34 25.0	+2.8
JBK	JBK	174.33	44	P	PKPdf	07 34 25.0	+2.6
TDRA	Tendrara	175.50	52	P	PKPdf	07 34 25.0	+2.3
FIGM	Figuig	176.54	57	P	PKPdf	07 34 25.0	+2.1

IDC ***30*** *07:24:05.9±0.7, 31°.07S×177°.60W, h0^{km}, mb4.4/12, mbtmp4.4/13, ML3.7/1, MS4.1/3, Error ellipse: s-maj=22.0km s-min=18.7km az=69.0*

NEIC ***30*** *07:24:12.4±1.8, 31°.04S±0°.10×177°.7W±0°.1, h35^{km}±2^{km}, mb4.7/22, Error ellipse: s-maj=20.2km s-min=16.1km az=81.0*

ISC 30 07:24:09.9±0.5**, 31°.22S**±0°.04×**177°.9W**±0°.1**, h35^{km}, n82,** σ2^{s}**38**/67**, mb4.7**/23**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.95	1	P	Pn	07 24 37.9	-2.6
GLKZ				S	Sn	07 25 01.8	-2.0
RAO	Raoul Island	1.96	1	Pn	Pn	07 24 39.6	-1.0
	217nm,0.3s,baz=65,slow=8.3,SNR=14						
RAO				Sn	Sn	07 24 60.0	-4.0
	744nm,0.3s,baz=265,slow=23,SNR=7.0						
WMGZ	Waiomatatini S	7.24	204	P	Pn	07 25 52.5	-0.6
WMGZ				S	Sn	07 27 15.7	+1.6
HAZ	Te Kaha	7.41	207	P	Pn	07 25 56.4	+0.9
HAZ				S	Sn	07 27 23.8	+5.4
PKGZ	Pakihiroa	7.42	205	P	Pn	07 25 54.8	-0.8
PKGZ				S	Sn	07 27 21.4	+2.8
PUZ	Puketiti	7.52	204	P	Pn	07 25 53.8	-3.2
PUZ				S	Sn	07 27 23.3	+2.2
RUGZ	Raukumara Rang	7.63	207	P	Pn	07 25 58.0	-0.7
RUGZ				S	Sn	07 27 25.8	+1.7
TWGZ	Tauwhareparae	7.71	205	P	Pn	07 25 59.0	-0.6
TWGZ				S	Sn	07 27 28.9	+3.2
URZ	Urewera	8.12	209	Pn	Pn	07 26 04.7	-0.5
	1.4nm,0.3s,baz=268,slow=4.7,SNR=10						
URZ				Sn	Sn	07 27 37.2	+1.5
	3.6nm,0.3s,baz=192,slow=22,SNR=3.0						
OUZ	Omahuta	8.13	238	P	Pn	07 26 15.6	+10
NMHZ	Naumai	8.96	207	P	Pn	07 26 15.2	-1.6
NMHZ				S	Sn	07 27 58.7	+2.2
ARHZ	Aropaoanui	9.03	206	P	Pn	07 26 15.8	-1.9
ARHZ				S	Sn	07 27 59.1	+1.0
BKZ	Black Stump Fm	9.14	208	P	Pn	07 26 14.6	-4.7
BKZ				S	Sn	07 28 01.8	+0.8
MCHZ	McNeill Hill	9.30	207	P	Pn	07 26 20.3	-1.1
MCHZ				S	Sn	07 28 06.6	+1.9
KRHZ	Kereru	9.60	207	P	Pn	07 26 22.3	-3.3
KRHZ				S	Sn	07 28 09.4	-2.7
PXZ	Pawanui	9.75	204	P	Pn	07 26 22.9	-4.8
PXZ				S	Sn	07 28 14.1	-1.7
PNHZ	Pukenui	9.90	207	P	Pn	07 26 22.8	-6.9
PNHZ				S	Sn	07 28 17.3	-2.2
WPHZ	Waipukurau	9.94	206	P	Pn	07 26 25.4	-4.8
WPHZ				S	Sn	07 28 19.1	-1.2
DVHZ	Dannevirke	10.24	206	P	Pn	07 26 32.4	-2.0
DVHZ				S	Sn	07 28 24.9	-3.0
MSVF	Nonsavu	13.91	344	LR	LR	07 31 22.6	
	comp=Z,642nm,18.8s,baz=191,slow=32						
MSVF	Nonsavu	13.91	344	Pn	Pn	07 27 25.0	+0.3
NIUE	Niue	14.09	33	Pn	Pn	07 27 25.6	-1.5
RPZ	Rata Peaks	15.21	212	Pn	P	07 27 42.1	-4.5
	0.7nm,0.3s,baz=197,slow=4.9,SNR=2.7						
PINNC	Pines Island,	15.59	300	Pn	P	07 27 50.8	0.0
PINNC				IAmb	IAmb	07 28 00.0	
	comp=Z,66nm,1.3s						
DZM	Mont Dzumac	16.65	299	Pn	P	07 28 05.3	+2.5
	comp=Z,0.3nm,0.3s,baz=140,slow=8.4,SNR=3.7						
DZM				LR	LR	07 33 30.6	
	comp=Z,2µm,18.1s,baz=192,slow=34						
	comp=Z,5.9nm,1.0s						
AFI	Afiamalu	18.14	20		P	07 28 17.9	-1.3
AFI				IAmb	IAmb	07 28 37.3	
	comp=Z,36nm,0.8s						
RAR	Rarotonga	19.08	63	LR	LR	07 35 29.9	
	comp=Z,232nm,18.4s,baz=244,slow=36						
ARMA	Armidale	26.11	264	P	P	07 29 45.4	+4.8
ARMA				IAmb	IAmb	07 30 15.1	
	comp=Z,18nm,1.2s						
EIDS	Eidsvold	27.83	274	P	P	07 30 00.8	+4.7
CTA	Charters Tower	33.98	280	P	P	07 30 54.5	+4.1
	comp=Z,15nm,0.7s,baz=104,slow=10,SNR=17						
	comp=Z,15nm,0.7s						
CTAO	Charters Tower	33.98	280	P	P	07 30 55.5	+5.1
STKA	Stephens Creek	34.35	258	P	P	07 30 57.5	+4.1
	comp=Z,3.9nm,0.6s,baz=113,slow=11,SNR=7.3						
	comp=Z,3.9nm,0.6s						
STKA	Stephens Creek	34.35	258	P	P	07 30 57.8	+4.4
BBOO	Buckleboo	38.80	255	P	P	07 31 34.7	+3.4
BBOO				IAmb	IAmb	07 31 36.8	
	comp=Z,16nm,1.0s						
COEN	Coen	39.55	287	P	P	07 31 39.8	+2.1
COEN				IAmb	IAmb	07 31 56.0	
	comp=Z,14nm,1.0s						
ASAR	Alice Springs	43.12	268	P	P	07 32 10.5	+3.4
	comp=Z,8.9nm,0.8s,baz=112,slow=7.7,SNR=26						
ASAR				ScP	ScP	07 37 50.4	+5.4
	comp=Z,1.7nm,0.9s,baz=124,slow=4.3,SNR=6.8						
	comp=Z,8.9nm,0.8s						
ASAR	Alice Springs	43.12	268	P	P	07 32 09.9	+2.8
WR0	Warramunga Arr	44.00	273	P	P	07 32 17.6	+3.4
WR0				IAmb	IAmb	07 32 23.4	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	44.17	273	P	P	07 32 19.0	+3.4
WB2				IAmb	IAmb	07 32 39.2	
	comp=Z,21nm,1.0s						
WRAB	Tennant Creek	44.18	273	P	P	07 32 19.0	+3.4
WRAB				IAmb	IAmb	07 32 31.1	
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	44.18	273	P	P	07 32 18.9	+3.3
	comp=Z,8.2nm,0.7s,baz=112,slow=7.6,SNR=41						
	comp=Z,8.2nm,0.7s						
WRA	Warramunga Arr	44.18	273	P	P	07 32 19.0	+3.3
WB0	Warramunga Arr	44.21	273	P	P	07 32 19.3	+3.5
FORT	Forrest	45.89	256	P	P	07 32 32.9	+3.8
SBA	Scott Base	47.23	184	P	P	07 32 41.5	+2.6
SBA				IAmb	IAmb	07 32 54.1	
	comp=Z,13nm,1.2s						
VNDA	Vanda	47.29	186	P	P	07 32 43.2	+3.8
KNRA	Kununurra	50.82	275	P	P	07 33 10.2	+3.0
KNRA				IAmb	IAmb	07 33 33.0	
	comp=Z,10nm,1.1s						
QSPA	South Pole Qui	58.89	180	P	P	07 34 08.2	+3.1
	comp=Z,5.9nm,1.0s,baz=76,slow=6.5,SNR=3.8						
	comp=Z,5.9nm,1.0s						
QSPA	South Pole Qui	58.89	180	P	P	07 34 08.3	+3.2
BELA	Belgrano 2	68.97	172	P	P	07 35 12.2	+1.2
BELA				IAmb	IAmb	07 35 36.9	
	comp=Z,3.9nm,0.9s						
MAW	Mawson	71.56	201	P	P	07 35 29.8	+2.8
	comp=Z,5.6nm,1.1s,baz=128,slow=6.3,SNR=6.2						
	comp=Z,5.6nm,1.1s						
MAW	Mawson	71.56	201	P	P	07 35 30.3	+3.3
TROLL	Troll, Antarti	77.06	180	P	P	07 36 01.9	+2.8
TROLL	Troll, Antarti	77.06	180	pP	pP	07 36 12.4	+3.8
SNAA	Sanae	77.34	178	P	P	07 36 02.2	+1.6
SNAA	Sanae	77.34	178	P	P	07 36 03.4	+2.8
	comp=Z,3.0nm,1.0s,baz=159,slow=5.2,SNR=3.7						
	comp=Z,3.0nm,1.0s						
SNAA	Sanae	77.34	178	P	P	07 36 02.4	+1.8
VNA3	Neumayer Olymp	77.49	176	P	P	07 36 03.5	+2.1
VNA3	Neumayer Olymp	77.49	176	pP	pP	07 36 14.4	+3.5
VNA2	Neumayer--Watz	77.92	177	P	P	07 36 06.2	+2.5
	baz=166,slow=5.3						
VNA2	Neumayer--Watz	77.92	177	pP	pP	07 36 16.9	+3.6
VNA1	Neumayer--Stat	78.15	177	P	P	07 36 07.2	+2.2
PLCA	Paso Flores	81.92	133	P	P	07 36 27.9	+1.8
	comp=Z,1.2nm,0.8s,baz=280,slow=1.9,SNR=3.4						
	comp=Z,1.2nm,0.8s						
PLCA	Paso Flores	81.92	133	IAmb	IAmb	07 36 39.7	
	comp=Z,7.1nm,1.4s						
KSRS	Korea Array	85.00	320	P	P	07 36 43.5	+1.9
	comp=Z,0.5nm,0.4s,baz=147,slow=5.8,SNR=4.2						
	comp=Z,0.5nm,0.4s						
PETK	Petropavlovsk-	86.61	346	P	P	07 36 51.7	+2.5
	comp=Z,4.4nm,1.1s,baz=112,slow=7.0,SNR=3.0						
	comp=Z,4.4nm,1.1s						
NVAR	Mina Array Bea	88.81	43	P	P	07 37 01.0	+0.6
	comp=Z,0.6nm,0.7s,baz=221,slow=7.7,SNR=5.0						
	comp=Z,0.6nm,0.7s						
KLR	Kul'dur	91.77	330	P	P	07 37 14.6	+1.0
	comp=Z,1.5nm,0.7s,baz=123,slow=3.6,SNR=5.1						
	comp=Z,1.5nm,0.7s						
PZH	PanZhiHua	95.72	297	P	P	07 37 37.8	+5.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,6.8s						
HHC	Hu-ho-hao-te	96.84	314	*e*P	P	07 37 41.0	+3.8
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
KBZ	Khabaz	145.60	303	PKPbc	PKiKP	07 43 46.5	-1.8
	comp=Z,6.8nm,0.9s,baz=227,slow=3.3,SNR=5.3						
OBN	Obninsk	145.87	325	PKPbc	PKiKP	07 43 46.1	-2.4
	comp=Z,7.6nm,0.4s,baz=98,slow=4.8,SNR=10						
FINES	FINESS Array B	145.93	340	PKPbc	PKiKP	07 43 45.8	-2.6
	comp=Z,12nm,0.8s,baz=56,slow=4.8,SNR=24						
NB2	NORSAR Subarra	149.57	351	PKP	PKiKP	07 43 55.7	-0.3
	comp=Z,0.8nm,0.6s,baz=15,slow=2.8						
NOA	NORSAR Array B	149.57	351	PKPbc	PKiKP	07 43 54.8	-1.2
	comp=Z,0.1nm,0.4s,baz=184,slow=19,SNR=1.5						
NACGM	Naroch	150.51	331	*e*PKP	PKiKP	07 43 58.8	+0.8
	baz=46						
EIL	Elat	151.65	275	PKPbc	PKiKP	07 44 00.7	-0.6
	comp=Z,5.5nm,0.7s,baz=237,slow=21,SNR=3.9						
AKASG	Malin Array Be	151.97	322	PKPbc	PKiKP	07 44 02.5	+1.3
	comp=Z,1.1nm,0.4s,baz=51,slow=3.4,SNR=12						
AKASG	Malin Array Be	151.97	322	PKPdf	PKPbc	07 43 55.6	-5.3
AKASG					pPKPdf	07 44 02.3	-2.0
AKASG				PKPab	sPKPbc	07 44 13.2	-0.9
BRTR	Keskin Array B	153.02	297	PKPbc	PKiKP	07 44 04.0	+0.1
	comp=Z,2.4nm,0.9s,baz=108,slow=1.6,SNR=5.9						
BRTR	Keskin Array B	153.02	297		PKiKP	07 44 05.2	+1.3
TORD	Torodi Ar. Bea	162.01	179	PKPab	PKPab	07 44 56.2	+2.0
	comp=Z,1.9nm,0.9s,baz=190,slow=2.6,SNR=3.5						

IDC 30 07:25:35.3±2.9**, 53°.60N**×**87°.65E, h0^{km}, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=24.1km s-min=14.7km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.72	283	*i*		07 36 50.0	
	0.7nm,1.1s,baz=101,slow=321,SNR=3.2						
ZALV	Zalesovo Beam	1.72	283	Pg	Pn	07 26 06.4	0.0
	1.7nm,0.3s,baz=101,slow=16,SNR=14						
ZALV				Lg	Lg	07 26 29.6	
	2.6nm,0.3s,baz=99,slow=28,SNR=11						
KURBB	Kurchatov Arra	6.36	246	Pn	Pn	07 27 10.9	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=7.0						
KURBB				Sn	Sn	07 28 22.8	-0.7
	0.1nm,0.3s,baz=34,slow=32,SNR=2.3						
KURBB				Lg	Lg	07 28 55.0	
	0.1nm,0.3s,baz=63,slow=32,SNR=7.8						
	0.7nm,0.5s						
MKAR	Makanchi Array	7.63	209	Pn	Pn	07 27 28.6	+1.0
	0.2nm,0.3s,baz=27,slow=14,SNR=7.2						
MKAR				Sn	Sn	07 28 55.5	+0.7
	0.1nm,0.3s,baz=32,slow=23,SNR=3.6						
	0.3nm,0.3s						

ROM 30 07:32:38.8±0.1**, 43°.286N**±0°.004×**12°.654E**±0°.005**, h9^{km}, ML0.9**/1**, Error ellipse: s-maj=0.3km s-min=0.3km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FOSV	Fossato di Vic	0.08	83	P	Pg	07 32 40.6	-0.5
FOSV				S	Sg	07 32 43.2	+0.5
MURB	Monte Urbino	0.10	257	P	Pg	07 32 41.8	+0.4
MURB				S	Sg	07 32 43.6	+0.4
MURB				AML	AML		
	comp=E,161µm,0.2s						
MURB				AML	AML		
	comp=N,130µm,1.2s						
ATCC	AVT- Casa Cast	0.10	186	P	Pg	07 32 41.8	+0.4
ATCC				S	Sg	07 32 44.1	+0.9
ATFO	Monte Foce - G	0.10	323	P	Pg	07 32 41.9	+0.5
ATFO				S	Sg	07 32 43.9	+0.6
SSFR	Montelago di S	0.18	32	P	Pg	07 32 43.5	+0.8
SSFR				S	Sg	07 32 46.5	+1.3
ATVO	AVT- Monte Val	0.20	298	P	Pg	07 32 43.6	+0.5
ATVO				S	Sg	07 32 47.3	+1.3
ATVO				AML	AML		
	comp=N,40µm,1.4s						
ATVO				AML	AML		
	comp=E,40µm,1.6s						
SNTG	Esanatoglia	0.21	98	P	Pg	07 32 43.9	+0.7
SNTG				S	Sg	07 32 47.5	+1.3
PIEI	Pieia	0.27	341	P	Pg	07 32 44.7	+0.5
PIEI				S	Sb	07 32 49.6	-0.9

WEL 30 07:33:19.3±1.1**, 32°S**±6°×**17°7E**±2°2**, h33^{km}, M4.8**/3**, mB4.7**/2**, ML4.5**/13**, MLv4.8**/3**, Mw(mB)4.0**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=87.9, North of New Zealand**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HAZ	Te Kaha	5.44	174	P	Pn	07 34 41.0	+2.9
HAZ				S	Sn	07 35 42.9	+3.3
WMGZ	Waiomatatini S	5.59	169	P	Pn	07 34 41.8	+1.7
WMGZ				S	Sn	07 35 41.1	-2.0
RUGZ	Raukumara Rang	5.64	175	P	Pn	07 34 43.3	+2.3
RUGZ				S	Sn	07 35 45.5	+0.9
URZ	Urewera	5.91	179	P	Pn	07 34 46.2	+1.7
URZ				S	Sn	07 35 57.2	+6.1
MWZ	Matawai	6.00	176	P	Pn	07 34 44.9	-0.9
MWZ				S	Sn	07 35 56.2	+2.9
MUGZ	Murupara	6.13	182	P	Pn	07 34 50.1	+2.5
MUGZ				S	Sn	07 36 02.1	+5.6
RIGZ	Rimuhau	6.38	175	P	Pn	07 34 47.9	-3.2
RIGZ				S	Sn	07 35 59.9	-2.9
NMHZ	Naumai	6.75	181	P	Pn	07 34 57.4	+1.4
NMHZ				S	Sn	07 36 13.6	+1.8
BKZ	Black Stump Fm	6.83	183	P	Pn	07 34 57.7	+0.5
BKZ				S	Sn	07 36 14.9	+1.1
BHHZ	Black Hill Sta	7.18	186	P	Pn	07 35 02.6	+0.6
KRHZ	Kereru	7.31	184	P	Pn	07 35 02.3	-1.5
KRHZ				S	Sn	07 36 26.5	+1.0
KAHZ	Kahuranaki	7.44	181	P	Pn	07 35 03.5	-2.1
KAHZ				S	Sn	07 36 26.0	-2.8
PNHZ	Pukenui	7.59	185	P	Pn	07 35 06.2	-1.4
PNHZ				S	Sn	07 36 32.1	-0.3
PXZ	Pawanui	7.68	181	P	Pn	07 35 06.2	-2.6
PXZ				S	Sn	07 36 30.4	-4.2
PRHZ	Porangahau	7.92	182	P	Pn	07 35 10.5	-1.6

DNK 30 07:35:47.4±2.4, 80°.84N×4°.11W, h36^{km}±999^{km}, Mc3.0, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.07	298	*i* P	Pn	07 36 19.0	-0.5
KBS	Kingsbay	3.41	116	*i* P	Pn	07 36 36.6	-1.3
KBS				*e*S	Sn	07 37 14.8	-2.3
DAG	Danmarks Havn	4.96	222	*i* P	Pn	07 37 00.0	+0.9
DAG				*e*S	Sn	07 37 49.7	-5.3

BER 30 07:35:53.3±0.3, 71°.14N×8°.33W, h18^{km}±1^{km}, ML1.4, 1C, Confirmed Earthquake, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.11	197	*e*P	Pg	07 35 57.4	+0.3
JNW				*e*S	Sg	07 36 00.3	+0.7
JNW				IAML		07 36 01.4	
	comp=Z,38nm,0.2s						
JNE	Jan Mayen East	0.15	176	*e*P	Pg	07 35 57.7	+0.3
JNE				*e*S	Sg	07 36 01.3	+1.0
JNE				IAML		07 36 01.7	
	comp=Z,55nm,0.3s						
JMIC	Jan Mayen	0.16	201	⇑*i*P	Pg	07 35 57.8	+0.2
JMIC				*e*S	Sg	07 36 01.4	+0.8
JMIC				IAML		07 36 01.6	
	comp=Z,26nm,0.3s						
JMI	Jan Mayen	0.25	212	*e*P	Pb	07 35 59.2	+0.1
JMI				*e*S	Sb	07 36 03.3	+0.3
JMI				IAML		07 36 05.1	
	comp=Z,19nm,0.6s						

*IDC **30** 07:35:55.8±0.5, 49°.16S×7°.97W, h0^{km}, mb4.7/18, mbtmp4.7/18, MS4.5/11, Error ellipse: s-maj=16.8km s-min=12.5km az=154.0*

*NEIC **30** 07:35:57.8±1.3, 49°.3S±0°.1×8°.0W±0°.2, h10^{km}±1^{km}, mb5.3/89, Error ellipse: s-maj=18.8km s-min=16.8km az=147.0*

*MOS **30** 07:35:58.0±1.1, 49°.18S×8°.01W, h22^{km}, mb5.3/18, Error ellipse: s-maj=14.9km s-min=13.4km az=144.0*

*GCMT **30** 07:35:59.8±0.3, 49°.30S±0°.02×7°.65W±0°.03, h14^{km}±1^{km}, MW5.1/99, Moment Tensor Solution. s28,c31; s99,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.73±.26; $M_{\theta\theta}$1.84±.18; $M_{\phi\phi}$1.89±.17; $M_{r\theta}$5.38±.70; $M_{\theta\phi}$-1.39±.10; $M_{\phi r}$-1.59±.37; Best double couple: $M_0$6.56800×10^{16} NP1:ϕ_s145.00000°, δ18.00000°, λ-58.00000°. NP2: ϕ_s292.00000°, δ75.00000°, λ-100.00000°. Principal axes: T 6.0870, Plg29.0000°, Azm30.0000°; N 0.9630, Plg10.0000°, Azm295.0000°; P -7.0500, Plg59.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 07:35:57.6±0.3, 49°.24S±0°.07×7°.98W±0°.06, h10^{km}, n397, σ1^{s}.05/419, mb5.3/82, MS4.4/13, 5C-2D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	18.29	243	P	P	07 40 11.8	+0.6
HOPE	Hope Point	18.29	243	P	P	07 40 11.8	+0.6
HOPE				pmax	pmax		
	comp=Z,140nm,1.6s						
VNA1	Neumayer--Stat	21.48	180	P	P	07 40 46.6	+0.7
VNA2	Neumayer--Watz	21.76	179	PcP	PcP	07 44 48.6	-0.2
VNA2	Neumayer--Watz	21.76	179	P	P	07 40 48.6	-0.3
	baz=355,slow=12						
VNA3	Neumayer Olymp	22.09	181	P	P	07 40 52.0	-0.4
SNAA	Sanae	22.63	176	PcP	PcP	07 44 50.5	-0.2
SNAA	Sanae	22.63	176	P	P	07 40 57.6	-0.7
SNAA	Sanae	22.63	176	*e*P	P	07 40 57.7	-0.6
SNAA	Sanae	22.63	176	P	P	07 40 57.7	-0.6
	comp=Z,31nm,0.9s,baz=347,slow=11,SNR=26						
	comp=Z,31nm,0.9s						
SNAA	Sanae	22.63	176	P	P	07 40 58.1	-0.2
SNAA	Sanae	22.63	176	P	P	07 40 58.1	-0.2
SNAA				pmax	pmax		
	comp=Z,53nm,1.1s						
TROLL	Troll, Antarti	23.34	172	PcP	PcP	07 44 52.3	+0.1
TROLL	Troll, Antarti	23.34	172	P	P	07 41 06.0	+0.2
ORCD	Orcadas	23.68	227	P	P	07 41 09.0	+0.1
ORCD				IAmb	IAmb	07 41 11.2	
	comp=Z,86nm,1.4s						
CER	Ceres	25.72	62	*e*P	P	07 41 26.5	-1.5
CER				IAmb	IAmb	07 41 28.3	
	comp=Z,170nm,2.3s						
MATJ	Matjiesfontein	26.54	64	*e*P	P	07 41 34.3	-1.2
MATJ				IAmb	IAmb	07 41 35.2	
	comp=Z,45nm,1.0s						
SUR	Sutherland	27.31	63	P	P	07 41 42.0	-0.5
	comp=Z,42nm,0.9s,baz=226,slow=9.0,SNR=22						
SUR				LR	LR	07 49 43.5	
	comp=Z,839nm,21.6s,baz=224,slow=30						
	comp=Z,42nm,0.9s						
SUR	Sutherland	27.31	63	P	P	07 41 42.6	+0.1
SUR				IAmb	IAmb	07 41 43.2	
	comp=Z,68nm,1.1s						
CVNA	Calvinia	27.36	60	*e*P	P	07 41 41.6	-1.4
CVNA				IAmb	IAmb	07 41 45.8	
	comp=Z,151nm,2.3s						
GRAN	Grantham	28.16	64	*e*P	P	07 41 48.9	-1.1
GRAN				IAmb	IAmb	07 41 50.3	
	comp=Z,20nm,0.9s						
ROSN	Rosenhof	28.34	70	*e*P	P	07 41 49.9	-1.6
ROSN				IAmb	IAmb	07 41 53.2	
	comp=Z,79nm,1.5s						
KEIM	Keimoes	30.15	58	*e*P	P	07 42 06.6	-1.1
KEIM				IAmb	IAmb	07 42 07.9	
	comp=Z,24nm,0.9s						
BELA	Belgrano 2	30.45	191	P	P	07 42 09.3	-0.5
UPI	Upington	30.57	58	*e*P	P	07 42 09.6	-1.8
UPI				IAmb	IAmb	07 42 12.3	
	comp=Z,92nm,2.3s						
EFI	East Falkland	31.48	246	P	P	07 42 19.2	+0.1
EFI				IAmb	IAmb	07 42 20.0	
	comp=Z,54nm,1.1s						
EFI	East Falkland	31.48	246	P	P	07 42 19.2	+0.1
EFI				pmax	pmax		
	comp=Z,54nm,1.1s						
BOSA	Boshof	32.66	63	*e*P	P	07 42 28.0	-1.9
BOSA				IAmb	IAmb	07 42 29.3	
	comp=Z,46nm,1.1s						
BOSA	Boshof	32.66	63	P	P	07 42 28.8	-1.1
	comp=Z,27nm,0.9s,baz=220,slow=8.7,SNR=37						
BOSA				LR	LR	07 53 00.7	
	comp=Z,1µm,20.9s,baz=214,slow=31						
	comp=Z,27nm,0.9s						
BOSA	Boshof	32.66	63	P	P	07 42 29.0	-0.9
BOSA				IAmb	IAmb	07 42 29.6	
	comp=Z,45nm,1.1s						
BOSA	Boshof	32.66	63	P	P	07 42 29.0	-0.9
BOSA				pmax	pmax		
	comp=Z,45nm,1.1s						
PMSA	Palmer Station	32.95	221	P	P	07 42 32.7	+0.9
	comp=Z,14nm,1.0s,baz=60,slow=4.8,SNR=3.9						
	comp=Z,14nm,1.0s						
PMSA	Palmer Station	32.95	221	P	P	07 42 31.7	-0.1
PMSA				IAmb	IAmb	07 42 35.1	
	comp=Z,35nm,1.2s						
PMSA	Palmer Station	32.95	221	*e*P	P	07 42 32.3	+0.5
KSTD	Kokstad	33.66	70	*e*P	P	07 42 37.8	-0.9
KSTD				IAmb	IAmb	07 42 39.6	
	comp=Z,64nm,1.4s						
SWZ	Schweizer	33.78	62	*e*P	P	07 42 37.8	-1.9
SWZ				IAmb	IAmb	07 42 39.1	
	comp=Z,72nm,0.9s						
SNKL	Senekal, Frees	34.40	66	*e*P	P	07 42 44.3	-0.8
SNKL				IAmb	IAmb	07 42 45.1	
	comp=Z,70nm,0.8s						
PRYS	Parys	35.16	64	*e*P	P	07 42 49.9	-1.7
PRYS				IAmb	IAmb	07 42 51.1	
	comp=Z,50nm,1.0s						
LBTB	Lobatse	35.60	60	⇑*i*P	P	07 42 53.5	-2.0
LBTB				IAmb	IAmb	07 42 55.0	
	comp=Z,35nm,1.0s						
LBTB	Lobatse	35.60	60	P	P	07 42 54.0	-1.4
	comp=Z,18nm,0.9s,baz=220,slow=10,SNR=23						
LBTB				LR	LR	07 55 24.2	
	comp=Z,448nm,18.2s,baz=204,slow=33						
	comp=Z,18nm,0.9s						
LBTB	Lobatse	35.60	60	P	P	07 42 54.2	-1.2
LBTB				IAmb	IAmb	07 42 55.2	
	comp=Z,38nm,1.1s						
LBTB	Lobatse	35.60	60	P	P	07 42 54.2	-1.2
LBTB				pmax	pmax		
	comp=Z,38nm,1.1s						
KSR	Koster	35.70	62	*e*P	P	07 42 54.9	-1.4
KSR				IAmb	IAmb	07 42 57.8	
	comp=Z,31nm,1.2s						
HRAO	HartRAO	36.13	63	*e*P	P	07 42 58.9	-1.1
HRAO				IAmb	IAmb	07 42 59.6	
	comp=Z,60nm,1.0s						
TSUM	Tsumeb	36.32	43	⇑*i*P	P	07 43 00.6	-1.0
TSUM				IAmb	IAmb	07 43 02.1	
	comp=Z,300nm,0.9s						
TSUM	Tsumeb	36.32	43	LR	LR	07 54 41.9	
	comp=Z,668nm,20.9s,baz=153,slow=31						
TSUM	Tsumeb	36.32	43	P	P	07 43 01.3	-0.3
TSUM				IAmb	IAmb	07 43 02.4	
	comp=Z,37nm,0.9s						
USHA	Ushuaia	36.58	238	P	P	07 43 02.8	-0.5
	comp=Z,6.8nm,1.0s,baz=62,slow=8.5,SNR=3.5						
	comp=Z,6.8nm,1.0s						
SLR	Silverton	36.60	63	*e*P	P	07 43 02.9	-1.0
SLR				IAmb	IAmb	07 43 03.4	
	comp=Z,40nm,1.0s						
DSPA	Despedida	36.75	239	P	P	07 43 04.4	-0.4
CRLN	Carolina, Mapu	37.43	66	*e*P	P	07 43 09.5	-1.6
CRLN				IAmb	IAmb	07 43 10.4	
	comp=Z,40nm,1.6s						
POGA	Pongola	37.46	69	*e*P	P	07 43 09.4	-1.7
POGA				IAmb	IAmb	07 43 10.9	
	comp=Z,56nm,1.4s						
MG02	Cerro Sombrero	37.68	241	P	P	07 43 12.6	0.0
MG03	Isla Dawson	38.02	239	P	P	07 43 13.9	-1.6
HAGI	HAGI	38.05	67	*e*P	P	07 43 14.6	-1.6
HAGI				IAmb	IAmb	07 43 18.4	
	comp=Z,228nm,2.2s						
MMAL	MMAL	38.10	67	*e*P	P	07 43 15.9	-0.7
MMAL				IAmb	IAmb	07 43 18.9	
	comp=Z,116nm,1.6s						
MAGG	Maguga Dam	38.12	67	*e*P	P	07 43 15.7	-1.1
MAGG				IAmb	IAmb	07 43 16.4	
	comp=Z,39nm,1.0s						
PLTB	Pedras Altas	38.18	280	P	P	07 43 16.0	-1.2
PLTB	Pedras Altas	38.18	280	*e*P	P	07 43 18.7	+1.5
CNG	Changalane	38.52	68	*e*P	P	07 43 17.4	-2.7
CNG				IAmb	IAmb	07 43 21.7	
	comp=Z,21nm,1.4s						
GO10	Punta Arenas	38.58	239	P	P	07 43 20.0	-0.4
GO10				IAmb	IAmb	07 43 21.5	
	comp=Z,58nm,1.1s						
MAW	Mawson	38.74	145	P	P	07 43 23.0	+1.6
	comp=Z,16nm,0.9s,baz=265,slow=9.9,SNR=28						
	comp=Z,16nm,0.9s						
MAW	Mawson	38.74	145	P	P	07 43 20.1	-1.3
CPSB	Cacapava Do Su	38.97	282	*e*P	P	07 43 24.9	+1.1
PET01	Itanhaem-SP	39.49	295	*e*P	P	07 43 29.6	+1.4
RIB01	Linhares ES	39.57	307	*e*P	P	07 43 30.7	+1.8
TRQA	Tornquist	39.85	265	P	P	07 43 30.6	-0.5
TRQA	Tornquist	39.85	265	P	P	07 43 30.6	-0.5
TRQA				pmax	pmax		
	comp=Z,52nm,1.3s						
MG05	Puerto Natales	39.96	241	P	P	07 43 29.7	-2.0
MOPA	Mopani	40.12	65	*e*P	P	07 43 31.8	-1.6
MOPA				IAmb	IAmb	07 43 34.9	
	comp=Z,42nm,1.1s						
MATP	Matopo	40.86	58	⇑*i*P	P	07 43 37.9	-1.8
MATP				IAmb	IAmb	07 43 39.2	
	comp=Z,790nm,0.9s						
MATP	Matopo	40.86	58	P	P	07 43 38.0	-1.7
	comp=Z,17nm,0.7s,baz=214,slow=8.5,SNR=30						
	comp=Z,17nm,0.7s						
QSPA	South Pole Qui	41.01	180	LR	LR	07 59 20.5	
	comp=Z,548nm,19.2s,baz=187,slow=34						
QSPA	South Pole Qui	41.01	180	P	P	07 43 39.5	-1.1
BLWY	Bulawayo	41.15	58	*e*P	P	07 43 40.1	-2.0
BLWY				IAmb	IAmb	07 43 41.5	
	comp=Z,314nm,1.6s						
ITQB	Itaqui	41.51	280	P	P	07 43 43.4	-1.5
ITQB				IAmb	IAmb	07 43 47.0	
	comp=Z,78nm,1.2s						
ITQB	Itaqui	41.51	280	*e*P	P	07 43 45.6	+0.8
COYC	Coyhaique	42.38	250	P	P	07 43 50.7	-1.1
AY01	Puyuhuapi	43.30	251	P	P	07 43 58.6	-0.6
LL02	Futaleuf	43.43	253	P	P	07 43 59.5	-0.9
LL02				IAmb	IAmb	07 44 03.9	
	comp=Z,106nm,1.6s						
TRCB	Terra Rica	43.85	291	P	P	07 44 01.4	-2.6
TRCB				IAmb	IAmb	07 44 06.1	
	comp=Z,65nm,1.6s						
GDU01	Guandu, BA	43.91	313	*e*P	P	07 44 05.3	+0.9
PLCA	Paso Flores	43.92	257	P	P	07 44 03.2	-1.2
	comp=Z,3.3nm,1.0s,baz=111,slow=6.9,SNR=6.2						
	comp=Z,3.3nm,1.0s						
PLCA	Paso Flores	43.92	257	P	P	07 44 03.5	-0.8
PLCA	Paso Flores	43.92	257	P	P	07 44 03.6	-0.8
PLCA				pmax	pmax		
	comp=Z,13nm,1.3s						
PLCA	Paso Flores	43.92	257	*e*P	P	07 44 04.6	+0.2
CPUP	Villa Florida	44.25	283	P	P	07 44 07.0	0.0
	comp=Z,14nm,1.0s,baz=117,slow=7.2,SNR=12						
	comp=Z,14nm,1.0s						
CPUP	Villa Florida	44.25	283	P	P	07 44 06.6	-0.5
CPUP	Villa Florida	44.25	283	*e*P	P	07 44 08.1	+1.0
ITRB	Iturama	44.83	296	*e*P	P	07 44 12.7	+0.9
LL03	Petrohue	44.87	255	P	P	07 44 10.8	-1.2
LSZ	Lusaka	44.89	54	P	P	07 44 11.6	-0.9
	comp=Z,8.1nm,0.7s,baz=215,slow=8.2,SNR=13						
	comp=Z,8.1nm,0.7s						
LSZ	Lusaka	44.89	54	P	P	07 44 12.1	-0.4
LSZ				IAmb	IAmb	07 44 15.8	
	comp=Z,104nm,1.8s						
LSZ	Lusaka	44.89	54	P	P	07 44 12.1	-0.4
LSZ				pmax	pmax		
	comp=Z,104nm,1.8s						
IPMB	Ipameri, GO	44.93	299	*e*P	P	07 44 13.5	+0.8
LL04	Puerto Octay	45.00	255	P	P	07 44 11.7	-1.3
JANB	Januaria	45.17	306	*e*P	P	07 44 15.2	+0.7
NBLA	Lagarto - SE	45.46	317	*e*P	P	07 44 17.9	+1.1
NBAN	Anadia - AL	45.97	319	*e*P	P	07 44 20.8	-0.1
NBPN	Ponto Novo - B	46.70	314	*e*P	P	07 44 26.6	+0.1
BDFB	Brasilia	46.70	302	P	P	07 44 27.2	+0.4
	comp=Z,18nm,1.1s,baz=115,slow=8.4,SNR=8.8						
	comp=Z,18nm,1.1s						
BDFB	Brasilia	46.70	302	*e*P	P	07 44 28.2	+1.4
ML02	Panimavida	47.33	262	P	P	07 44 30.7	-0.6
ML02				IAmb	IAmb	07 44 33.8	
	comp=Z,59nm,1.6s						
SDBA	SAO DESIDERIO	47.69	307	*e*P	P	07 44 34.8	+0.4
LMEL	Las Melosas	47.71	265	P	P	07 44 34.9	+0.4
LMEL				IAmb	IAmb	07 44 36.4	
	comp=Z,27nm,1.1s						
BO04	La Punta	47.89	264	P	P	07 44 35.2	-0.6
BO04				IAmb	IAmb	07 44 39.3	
	comp=Z,66nm,1.4s						
GO05	Huala	48.12	262	P	P	07 44 37.1	-0.4
GO05				IAmb	IAmb	07 44 38.1	
	comp=Z,48nm,1.1s						
MT03	Universidad Ad	48.13	265	P	P	07 44 37.2	-0.5
ZON	Zonda	48.16	268	P	P	07 44 37.9	0.0
ZON				IAmb	IAmb	07 44 38.9	
	comp=Z,51nm,1.3s						
ZON	Zonda	48.16	268	P	P	07 44 37.9	0.0
ZON				pmax	pmax		
	comp=Z,51nm,1.3s						
MT09	Talagante	48.27	264	P	P	07 44 38.5	-0.3
MT05	Renca	48.34	265	P	P	07 44 38.9	-0.5
PEL	Peldehue	48.46	265	P	P	07 44 40.0	-0.2
PEL	Peldehue	48.46	265	P	P	07 44 40.0	-0.2
PEL				pmax	pmax		
	comp=Z,65nm,1.2s						
VA03	San Esteban	48.61	265	P	P	07 44 41.8	+0.3
VA03				IAmb	IAmb	07 44 42.8	
	comp=Z,34nm,1.1s						
MT02	Curacav	48.69	264	P	P	07 44 41.9	0.0
MT02				IAmb	IAmb	07 44 43.8	
	comp=Z,28nm,0.8s						
NBMA	Muriti-CE	49.11	318	*e*P	P	07 44 46.0	+0.7
VA06	Catapilco	49.23	265	P	P	07 44 45.7	-0.4
VA06				IAmb	IAmb	07 44 49.4	
	comp=Z,58nm,1.1s						
PEXB	Peixe	49.75	304	*e*P	P	07 44 51.0	+0.8
CO02	Combarbal	49.90	267	P	P	07 44 51.4	0.0
CO02				IAmb	IAmb	07 44 52.4	
	comp=Z,38nm,1.1s						
CO01	Juntas del Tor	50.10	269	P	P	07 44 53.2	+0.1
CO01				IAmb	IAmb	07 44 55.4	
	comp=Z,42nm,1.1s						
GO04	Tololo Observa	50.44	268	P	P	07 44 54.9	-0.7
GO04				IAmb	IAmb	07 44 56.5	
	comp=Z,43nm,1.0s						
CO06	Fray Jorge	50.66	267	P	P	07 44 56.7	-0.3
CO06				IAmb	IAmb	07 44 57.6	
	comp=Z,28nm,1.0s						
CO05	La Serena	50.89	268	P	P	07 44 58.7	0.0
CO05				IAmb	IAmb	07 44 59.3	
	comp=Z,34nm,0.9s						
SALV	Santo Antonio	50.96	294	*e*P	P	07 45 00.3	+1.0
LCO	Las Campanas	51.14	269	P	P	07 45 00.3	-0.6
LCO				IAmb	IAmb	07 45 01.8	
	comp=Z,30nm,0.9s						
LCO	Las Campanas	51.14	269	P	P	07 45 00.3	-0.6
LCO				pmax	pmax		
	comp=Z,30nm,1.0s						
SNDB	Serra Nova Dou	51.52	301	*e*P	P	07 45 04.2	+0.7
AC02	Maricunga	51.56	272	P	P	07 45 03.6	-0.7
AC02				IAmb	IAmb	07 45 08.8	
	comp=Z,40nm,1.2s						
GO03	Copiap	51.77	271	P	P	07 45 05.5	+0.1
AC06	Mina Casimiro	52.01	271	P	P	07 45 06.8	-0.3
AC06				IAmb	IAmb	07 45 08.7	
	comp=Z,62nm,1.1s						
SMTB	Santa Maria do	52.08	307	*e*P	P	07 45 08.0	+0.3
NBPS	Pedro II - PI	52.94	316	*e*P	P	07 45 14.4	+0.2
AC01	Pan de Azucar	52.99	272	P	P	07 45 14.4	0.0
AC01				IAmb	IAmb	07 45 15.5	
	comp=Z,64nm,1.1s						
GO02	Mina Guanaco	53.01	273	P	P	07 45 15.3	+0.4
GO02				IAmb	IAmb	07 45 16.6	
	comp=Z,57nm,0.9s						
SBA	Scott Base	53.14	179	P	P	07 45 15.2	+0.5
SBA				IAmb	IAmb	07 45 16.7	
	comp=Z,41nm,1.3s						
SBA	Scott Base	53.14	179	P	P	07 45 15.3	+0.5
SBA				pmax	pmax		
	comp=Z,41nm,1.3s						
VNDA	Vanda	53.35	177	P	P	07 45 16.3	0.0
	comp=Z,10nm,1.0s,baz=215,slow=8.0,SNR=28						
VNDA				LR	LR	08 06 45.0	
	comp=Z,355nm,19.4s,baz=174,slow=35						
	comp=Z,10nm,1.0s						
VNDA	Vanda	53.35	177	P	P	07 45 16.4	0.0
VNDA	Vanda	53.35	177	P	P	07 45 16.4	0.0
VNDA				pmax	pmax		
	comp=Z,28nm,1.3s						
PTLB	Pontes e Lacer	53.40	291	*e*P	P	07 45 17.5	+0.1
AF01	San Pedro de A	53.63	277	P	P	07 45 19.6	+0.2
SIV	San Ignacio	54.18	288	LR	LR	08 06 20.0	
	comp=Z,977nm,20.9s,baz=210,slow=34						
PB15	IPOC Station P	54.29	275	P	P	07 45 24.3	+0.1
LVC	Limon Verde	54.34	276	P	P	07 45 24.7	-0.1
LVC	Limon Verde	54.34	276	*e*P	P	07 45 25.6	+0.8
LVC	Limon Verde	54.34	276	*e*P	P	07 45 25.4	+0.7
PB06	IPOC Station P	54.71	276	P	P	07 45 27.1	-0.1
PB10	IPOC Station P	54.78	274	P	P	07 45 28.2	+0.7
PDRB	Porto dos Gac	54.94	296	*e*P	P	07 45 29.3	+0.6
CLDB	Colider	54.98	297	*e*P	P	07 45 29.9	+0.9
PB09	IPOC Station P	55.14	277	P	P	07 45 30.9	+0.6
PB04	IPOC Station P	55.35	275	P	P	07 45 32.0	+0.2
PRPB	Parauapebas	55.52	306	*e*P	P	07 45 34.0	+1.1
PB07	IPOC Station P	55.60	276	P	P	07 45 33.2	-0.5
PB01	IPOC Station P	55.83	277	P	P	07 45 35.1	-0.1
PB02	IPOC Station P	55.90	277	P	P	07 45 34.9	-0.8
VILB	Vilhena	55.97	292	*e*P	P	07 45 37.2	+1.1
PB08	IPOC Station P	56.26	278	P	P	07 45 38.7	+0.1
PB11	IPOC Station P	56.86	278	P	P	07 45 41.6	-1.0
PB16	IPOC Station P	57.80	279	P	P	07 45 49.9	+0.1
TMAB	Tom-Au,PA,Br	57.88	311	*e*P	P	07 45 50.4	+0.8
LPAZ	La Paz	58.42	282	P	P	07 45 53.7	-0.5
	comp=Z,15nm,1.0s,baz=114,slow=6.4,SNR=22						
	comp=Z,15nm,1.0s						
LPAZ	La Paz	58.42	282	P	P	07 45 53.2	-0.9
LPAZ				IAmb	IAmb	07 45 55.9	
	comp=Z,47nm,1.4s						
LPAZ	La Paz	58.42	282	*e*P	P	07 45 53.5	-0.7
MBAR	Mbarara	58.72	47	LR	LR	08 09 02.2	
	comp=Z,449nm,19.5s,baz=148,slow=34						
MBAR	Mbarara	58.72	47	P	P	07 45 54.2	-1.5
MBAR	Mbarara	58.72	47	*de*P	P	07 45 54.6	-1.1
MBAR				pmax	pmax		
	comp=Z,16nm,1.2s						
ITTB	Itaituba	60.23	302	*e*P	P	07 46 06.7	+0.7
SAML	Samuel	60.91	292	P	P	07 46 10.2	-0.4
SAML	Samuel	60.91	292	P	P	07 46 10.2	-0.4
SAML				pmax	pmax		
	comp=Z,14nm,1.0s						
MALB	Monte Alegre	61.52	305	*e*P	P	07 46 15.0	+0.3
KMBO	Kilima Mbogo	61.56	54	LR	LR	08 11 42.6	
	comp=Z,523nm,18.2s,baz=104,slow=35						
KMBO	Kilima Mbogo	61.56	54	*i* P	P	07 46 19.0	+3.7
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MCPB	Macapa, AP	61.61	308	*e*P	P	07 46 15.9	+0.6
ETMB	Extrema	62.10	289	*e*P	P	07 46 18.6	0.0
TOA0	Torodi Ar. Sit	62.70	11	P	P	07 46 22.2	-0.3
TOA0				IAmb	IAmb	07 46 23.7	
	comp=Z,28nm,1.6s						
TORD	Torodi Ar. Bea	62.70	11	P	P	07 46 22.3	-0.2
	comp=Z,3.7nm,1.1s,baz=146,slow=3.2,SNR=6.3						
	comp=Z,3.7nm,1.1s						
TORD	Torodi Ar. Bea	62.70	11	P	P	07 46 22.6	+0.1
TORD				IAmb	IAmb	07 46 25.6	
	comp=Z,38nm,1.7s						
KOWA	Kowa	63.55	4	P	P	07 46 28.7	+0.5
KOWA				IAmb	IAmb	07 46 31.8	
	comp=Z,43nm,1.5s						
MACA	Manacapuru-AM	64.03	298	*e*P	P	07 46 32.2	+0.7
LODK	Lodwar	64.47	49	P	P	07 46 35.3	+0.9
LODK				IAmb	IAmb	07 46 39.4	
	comp=Z,29nm,1.6s						
NNA	Nana	67.23	278	P	P	07 46 51.9	-0.3
NNA				IAmb	IAmb	07 46 53.9	
	comp=Z,36nm,0.9s						
NNA	Nana	67.23	278	*ce*P	P	07 46 53.5	+1.3
NNA				pmax	pmax		
	comp=Z,45nm,1.3s						
CZSB	Cruzeiro do Su	67.78	285	*e*P	P	07 46 54.4	-1.2
BOAV	Boa Vista	68.48	302	*e*P	P	07 46 59.9	-0.1
ATAH	Atahualpa	71.87	280	LR	LR	08 18 34.6	
	comp=Z,158nm,19.6s,baz=170,slow=36						
RPN	Rapa Nui	76.85	244	LR	LR	08 19 11.8	
	comp=Z,105nm,18.9s,baz=139,slow=34						
OTAV	Otavalo	77.53	285	P	P	07 47 53.0	-1.2
OTAV				IAmb	IAmb	07 50 36.1	
	comp=Z,24nm,0.8s						
OTAV	Otavalo	77.53	285	P	P	07 47 53.0	-1.2
OTAV				pmax	pmax		
	comp=Z,24nm,0.8s						
OTAV	Otavalo	77.53	285	*e*P	P	07 47 55.6	+1.4
BAUV	El Baul	78.08	299	P	P	07 47 55.2	-1.5
ROSC	El Rosal	78.54	291	P	P	07 47 58.9	-0.8
ROSC	El Rosal	78.54	291	P	P	07 47 58.9	-0.8
ROSC				pmax	pmax		
	comp=Z,25nm,1.4s						
SDV	Santo Domingo	79.54	297	*e*P	P	07 48 05.7	+0.8
SJCC	San Jacinto, C	83.04	294	P	P	07 48 22.4	-0.9
SJCC				IAmb	IAmb	07 48 24.5	
	comp=Z,28nm,1.2s						
PCVE	Castro Verde	86.50	360	*e*P	P	07 48 45.4	+5.3
MESJ	Messejana	86.70	360	*e*P	P	07 48 45.5	+4.4
	comp=Z,31nm,1.9s						
PNCL	Nicolau / Gran	86.98	360	*e*P	P	07 48 45.3	+2.9
	comp=Z,47nm,1.7s						
SRBA	San Rafael, Bu	87.54	287	P	P	07 48 45.5	-0.5
SRBA				IAmb	IAmb	07 48 47.5	
	comp=Z,25nm,1.1s						
PMTG	Montargil	87.93	360	*e*P	P	07 48 52.2	+5.2
	comp=Z,26nm,1.5s						
PMRV	Marv??o	88.29	0	*e*P	P	07 48 50.7	+2.0
	comp=Z,35nm,1.3s						
ESDC	Sonseca Array	88.61	3	P	P	07 48 50.7	+0.5
	comp=Z,1.9nm,1.1s,baz=164,slow=4.2,SNR=5.7						
	comp=Z,1.9nm,1.1s						
ESDC	Sonseca Array	88.61	3	P	P	07 48 50.2	0.0
MTE	Manteigas	89.26	0	*e*P	P	07 48 57.5	+4.2
JTS	Las Juntas de	89.35	286	⇑*e*P	P	07 48 55.8	+1.4
JTS				pmax	pmax		
	comp=Z,22nm,1.4s						

PVIS	Viseu	89.58	0	*e*P	P	07 48 58.5	+3.7
KARP	Karpathos	90.00	28	P	P	07 48 56.3	-0.5
MVO	Moncorvo	90.03	1	*e*P	P	07 49 02.0	+5.1
	comp=Z,26nm,2.0s						
POLO	Lamas de Olo	90.23	0	*e*P	P	07 49 03.3	+5.4
PBRG	Braganca	90.67	1	*e*P	P	07 49 01.6	+1.8
	comp=Z,19nm,1.5s						
BRTR	Keskin Array B	95.91	31	P	P	07 49 24.9	+0.8
	comp=Z,2.2nm,1.0s,baz=224,slow=5.2,SNR=4.5						
	comp=Z,2.2nm,1.0s						
BRTR	Keskin Array B	95.91	31	*i* P	P	07 49 28.2	+4.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	99.86	145	P	Pdif	07 49 43.6	+1.1
	comp=Z,0.5nm,0.9s,baz=165,slow=3.8,SNR=3.0						
ASAR				PP	PP	07 53 53.1	+6.8
	comp=Z,0.6nm,0.8s,baz=239,slow=1.9,SNR=4.3						
	comp=Z,0.5nm,0.9s						
PBKI	Pangkalan Bun	106.76	115	P	Pdif	07 50 14.9	+1.7
TXAR	Lajitas Array	115.14	286	PKP	PKPdf	07 54 38.8	-0.1
	comp=Z,0.5nm,0.9s,baz=176,slow=3.6,SNR=4.5						
TXAR				PKKPbc	PKKPbc	08 05 12.9	+0.1
	comp=Z,0.1nm,0.5s,baz=100,slow=1.5,SNR=3.6						
ECSD	EROS Data Cent	120.60	303	P	PKPdf	07 54 47.9	-0.9
	baz=131						
ANMO	Albuquerque	120.67	289	⇓*i*PKIKP	PKPdf	07 54 48.9	-0.6
ANMO	Albuquerque	120.67	289	P	PKPdf	07 54 49.3	-0.2
	baz=131						
PZH	PanZhiHua	122.23	86	PKP	PKPdf	07 54 52.5	-0.2
S22A	4UR Ranch, Cre	122.71	291	P	PKiKP	07 54 53.6	0.0
	baz=130						
MKAR	Makanchi Array	123.43	55	PKP	PKPdf	07 54 53.2	-1.0
	comp=Z,0.1nm,0.3s,baz=120,slow=40,SNR=2.3						
Y14A	Wickenburg	124.13	284		PKPdf	07 54 55.3	-0.7
N23A	Red Feather La	124.16	295	P	PKPdf	07 54 55.9	-0.2
	baz=128						
ULM	Lac du Bonnet	124.31	309	PKP	PKPdf	07 54 54.1	-1.5
	comp=Z,1.7nm,0.6s,baz=174,slow=5.3,SNR=3.0						
ULM	Lac du Bonnet	124.31	309		PKPdf	07 54 54.3	-1.4
ULM	Lac du Bonnet	124.31	309	PKIKP	PKPdf	07 54 54.3	-1.4
WMQ	Urumqi	124.61	61	*e*PKP	PKiKP	07 54 57.3	+0.4
WMQ				LR	LR		
	comp=Z,240nm,15.7s						
WMQ				LR	LR		
	comp=Z,430nm,20.7s						
WMQ				LR	LR		
	comp=Z,420nm,23.3s						
RSSD	Black Hills	125.02	299		PKPdf	07 54 56.6	-1.0
RSSD	Black Hills	125.02	299	PKIKP	PKPdf	07 54 56.6	-1.0
RSSD	Black Hills	125.02	299	P	PKPdf	07 54 57.1	-0.5
	baz=127						
BC3	Big Chuckawall	125.51	282	P	PKiKP	07 54 59.1	0.0
	baz=130						
K22A	Casper	125.57	296	P	PKPdf	07 54 57.7	-1.0
	baz=127						
IRM	Iron Mountain	125.63	283	P	PKiKP	07 54 59.2	0.0
	baz=130						
MONP2	Monument Peak	125.64	281	P	PKPdf	07 54 59.3	+0.2
	baz=130						
P18A	Preston Nutter	125.97	291		PKPdf	07 54 58.3	-1.4
BELC	Belle Mtn. Jos	126.08	282	P	PKiKP	07 55 00.3	+0.1
	baz=130						
GMRC	Granite Mounta	126.36	283	P	PKiKP	07 55 01.0	+0.2
	baz=129						
TMUT	Trail Mountain	126.36	290		PKPdf	07 55 00.1	-0.3
MSU	Marysvale	126.48	289		PKiKP	07 55 01.3	+0.3
MSU	Marysvale	126.48	289	PKIKP	PKiKP	07 55 01.3	+0.3
SZCU	Shurtz Canyon	126.48	287		PKPdf	07 55 00.4	-0.2
CD2	Chengdu	126.49	83	PKP	PKPdf	07 55 00.5	-0.1
CCUT	Cedar City	126.63	287	PKPdf	PKiKP	07 55 01.5	+0.1
TCRU	Three Creeks R	126.70	289		PKPdf	07 55 01.1	0.0
NLU	North Lily Min	127.29	290		PKPdf	07 55 01.9	-0.1
BW06	Boulder Array	127.44	295		PKPdf	07 55 01.1	-1.1
BW06	Boulder Array	127.44	295	P	PKPdf	07 55 00.8	-1.5
	baz=126						
PD31	Pinedale Array	127.44	295		PKPdf	07 55 00.7	-1.5
PDAR	Pinedale Array	127.44	295	PKP	PKPdf	07 55 00.2	-2.1
	comp=Z,2.2nm,0.8s,baz=127,slow=3.9,SNR=13						
PDAR				PP	PP	07 57 00.5	-2.8
	comp=Z,0.2nm,0.4s,baz=99,slow=9.3,SNR=3.9						
PDAR	Pinedale Array	127.44	295	PKPdf	PKPdf	07 55 00.8	-1.5
PSUT	Pine Spring	127.53	288		PKPdf	07 55 02.8	+0.2
DGMT	Dagmar	127.66	303	PKPdf	PKPdf	07 55 01.7	-0.5
DGMT	Dagmar	127.66	303	P	PKPdf	07 55 01.6	-0.6
	baz=125						
LAO	LASA Array	127.78	300	PKPdf	PKPdf	07 55 02.3	-0.2
LAO	LASA Array	127.78	300	P	PKPdf	07 55 02.5	0.0
	baz=125						
QSM	Queen of Sheba	127.86	284		PKPdf	07 55 03.1	+0.1
GWY	Greenwater Val	127.87	284	PKPdf	PKPdf	07 55 03.4	+0.2
HWUT	Hardware Ranch	127.96	292	PKPdf	PKPdf	07 55 02.6	-0.6
TPNV	Topopah Spring	128.07	285	P	PKPdf	07 55 03.1	-0.5
	baz=128						
R11A	Troy Canyon, C	128.50	287	P	PKiKP	07 55 04.8	-0.2
	baz=127						
LOHW	Long Hollow	128.55	295		PKPdf	07 55 04.0	-0.3
TPAW	Teton Pass	128.69	295		PKPdf	07 55 04.3	-0.4
CWC	Cottonwood Cre	128.93	283	P	PKiKP	07 55 06.3	+0.4
	baz=128						
GTA	Gaotai	129.25	72	*e*PKP	PKPdf	07 55 05.0	-0.7
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,130nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,19.6s						
YHL	Hebgen Lake	129.60	296		PKPdf	07 55 06.7	+0.3
ELK	Elko	129.71	289	PKPdf	PKPdf	07 55 06.8	+0.1
ELK	Elko	129.71	289	PKIKP	PKPdf	07 55 06.8	+0.1
LZH	Lanzhou	129.81	78	*e*PKP	PKPdf	07 55 06.3	-0.6
NVAR	Mina Array Bea	130.27	285	PKP	PKPdf	07 55 07.3	-0.5
	comp=Z,1.1nm,0.8s,baz=173,slow=1.9,SNR=5.2						
EGMT	Eagleton	130.51	300	PKPdf	PKPdf	07 55 07.8	+0.1
EGMT	Eagleton	130.51	300	P	PKPdf	07 55 07.9	+0.1
	baz=122						
DLMT	Dillon	130.72	296		PKPdf	07 55 08.7	+0.4
HLID	Hailey	130.81	293	P	PKiKP	07 55 09.4	-0.1
	baz=124						
YERR	Yerington	131.19	285		PKiKP	07 55 10.1	-0.3
MSO	Missoula	132.29	297	P	PKPdf	07 55 10.7	-0.5
	baz=122						
G08A	Pilot Rock	134.48	293	PKPdf	PKPdf	07 55 15.5	+0.2
EDM	Edmonton	135.07	305	PKPdf	PKPdf	07 55 15.7	-0.4
EDM	Edmonton	135.07	305	PKIKP	PKPdf	07 55 15.7	-0.4
B08A	Colville Reser	136.22	296	PKPdf	PKPdf	07 55 17.9	-0.4
NJ2	Nanjing	137.10	93	*e*PKP	PKPdf	07 55 21.3	+0.8
HHC	Hu-ho-hao-te	137.50	78	*e*PKP	PKPdf	07 55 18.8	-2.3
YKA	Yellowknife Ar	139.12	317	PKP	PKPdf	07 55 22.8	-0.4
	comp=Z,3.1nm,0.8s,baz=83,slow=1.8,SNR=8.2						
YKA	Yellowknife Ar	139.12	317	PKPdf	PKPdf	07 55 22.6	-0.6
GRNB	Grenville Isla	144.50	300	PKPdf	PKPbc	07 55 32.1	+0.3
RUBB	Prince Rupert	144.80	301	PKPdf	PKPdf	07 55 33.9	+0.3
TGTN	Hyland Airport	145.22	313	P	PKPdf	07 55 34.9	+0.7
	baz=97,SNR=5.4						
T35M	Bob Quinn	145.45	305	P	PKPab	07 55 35.6	+0.6
	baz=102,SNR=7.4						
BOD	Bodaibo	145.47	53	*e*PKIKP	PKPdf	07 55 33.7	-0.9
BOD				pmax	pmax		
	comp=Z,59nm,1.7s						
JNU	Nakatsue	145.58	102	PKPbc	PKPbc	07 55 36.0	+0.1
	comp=Z,10.0nm,0.8s,baz=219,slow=10,SNR=3.7						
JNU	Nakatsue	145.58	102		PKPdf	07 55 33.9	-1.8
DLBC	Dease Lake	145.62	308	PKPdf	PKPdf	07 55 34.0	-1.0
DLBC	Dease Lake	145.62	308	P	PKPab	07 55 36.0	+0.4
	baz=100,SNR=9.5						
KSCHJ	Chungju	146.00	94	PKPdf	PKPdf	07 55 34.6	-1.6
S34M	Telegraph Cree	146.10	307	P	PKPab	07 55 37.1	-0.3
	baz=100,SNR=7.3						
KSAR	Wonju Array Be	146.26	94	PKPdf	PKPdf	07 55 36.6	-0.1
KSAR	Wonju Array Be	146.26	94	PKP2	PKPdf	07 55 36.6	-0.1
KSRS	Korea Array	146.29	94	PKPbc	PKPbc	07 55 37.5	-0.5
	comp=Z,3.5nm,0.8s,baz=243,slow=4.7,SNR=12						
WRAK	Wrangell Islan	146.47	304	P	PKPbc	07 55 37.9	+0.1
	baz=102						
MMPY	Sheldon Lake,	146.72	315	P	PKPbc	07 55 38.0	-0.5
	baz=93,SNR=9.2						
P33M	Teslin, Yukon	147.28	311	PKPbc	PKPbc	07 55 39.6	-0.6
P33M	Teslin, Yukon	147.28	311	P	PKPbc	07 55 39.3	-0.8
	baz=96,SNR=15						
INK	Inuvik	147.44	326		PKPbc	07 55 39.9	-0.3
INK	Inuvik	147.44	326	PKP2	PKPbc	07 55 39.9	-0.3
INK	Inuvik	147.44	326	P	PKPbc	07 55 39.6	-0.6
	baz=82						
FARO	Faro, Yukon	147.68	314	P	PKPbc	07 55 40.4	-0.7
	baz=92,SNR=12						
CN2	Changchun	147.90	82	*e*PKPbc	PKiKP	07 55 44.0	-0.1
M31M	Drury Creek, Y	148.16	314		PKPbc	07 55 41.9	-0.5
M31M	Drury Creek, Y	148.16	314	P	PKPbc	07 55 41.7	-0.7
	baz=91,SNR=20						
WHY	Whitehorse	148.34	311	P	PKPdf	07 55 39.4	-0.1
	baz=93,SNR=8.3						
SKAG	Skagway	148.48	309		PKPbc	07 55 43.7	+0.5
SKAG	Skagway	148.48	309	P	PKPbc	07 55 43.5	+0.3
	baz=95,SNR=6.3						
N31M	Braeburn, Yuko	148.81	313		PKPbc	07 55 44.0	-0.1
N31M	Braeburn, Yuko	148.81	313	P	PKPbc	07 55 42.8	-1.4
	baz=91,SNR=7.7						
O30N	Mendenhall	148.94	312	P	PKPdf	07 55 40.8	+0.4
	baz=92,SNR=16						
PLBC	Pleasant Camp	149.01	309	P	PKPbc	07 55 45.0	+0.4
	baz=94						
M30M	Minto, Yukon	149.28	315	PKPbc	PKPbc	07 55 44.8	-0.5
M30M	Minto, Yukon	149.28	315	P	PKPdf	07 55 40.5	-0.4
	baz=88,SNR=14						
N30M	Aishikik Lake	149.44	313	P	PKPbc	07 55 45.1	-0.6
	baz=90,SNR=12						
HYT	Haines Junctio	149.63	312	PKPdf	PKPdf	07 55 39.7	-1.9
HYT				PKPbc	PKPbc	07 55 46.4	+0.1
HYT	Haines Junctio	149.63	312	P	PKiKP	07 55 47.4	0.0
	baz=91,SNR=9.1						
I29M	Ogilvie Camp,	149.72	321		PKPbc	07 55 45.3	-0.9
I29M	Ogilvie Camp,	149.72	321	P	PKPbc	07 55 45.8	-0.5
	baz=82						
YUK6	Outpost Mounta	150.05	312	P	PKPbc	07 55 47.7	+0.3
	baz=90						
YUK4	Talbot Arm	150.19	313	P	PKiKP	07 55 48.2	-0.4
	baz=89,SNR=8.9						
TIXI	Tiksi	150.21	26		PKPbc	07 55 46.5	-0.7
TIXI	Tiksi	150.21	26	PKIKP	PKPbc	07 55 46.5	-0.7
DAWY	Dawson	150.34	318		PKPbc	07 55 47.1	-0.7
DAWY	Dawson	150.34	318	P	PKPbc	07 55 47.6	-0.2
	baz=83,SNR=7.9						
PNL	Peninsula	150.56	309	P	PKPbc	07 55 48.6	+0.1
	baz=91						
YUK8	Steele Glacier	150.73	313	P	PKPbc	07 55 48.8	-0.3
	baz=88,SNR=18						
PINM	Pinnacle	150.99	310	P	PKiKP	07 55 50.1	0.0
	baz=90,SNR=9.8						
PCA	Pinnacle	151.00	310		PKPbc	07 55 49.6	+0.1
EGAK	Eagle	151.00	320		PKPbc	07 55 48.7	-0.6
EGAK				PKPab	PKPab	07 55 56.9	0.0
EGAK	Eagle	151.00	320	P	PKPbc	07 55 49.1	-0.2
	baz=80,SNR=18						
YUK3	Moose Creek	151.03	314	P	PKPbc	07 55 48.4	-1.3
	baz=86						
BVCY	Beaver Creek	151.17	315	P	PKPbc	07 55 49.6	-0.2
	baz=85						
LOGN	Logan Glacier	151.35	312		PKPbc	07 55 50.3	-0.1
LOGN				PKPab	PKPab	07 55 58.3	-0.4
TABL	Table Mountain	151.43	311		PKPbc	07 55 50.3	-0.4
TABL				PKPab	PKPab	07 55 58.5	-0.6
CTGM	Chitina Glacie	151.50	312	PKPdf	PKPdf	07 55 42.5	-2.1
CTGM				PKPbc	PKPbc	07 55 50.5	-0.3
CTG	Chitna Glacier	151.50	312	P	PKPbc	07 55 50.5	-0.3
	baz=87						
K27K	Chicken	151.52	318	P	PKPbc	07 55 50.3	-0.2
	baz=81						
BCAR	Beaver Creek A	151.53	316	PKPdf	PKPdf	07 55 42.9	-1.5
BCAR				PKPbc	PKPbc	07 55 50.7	+0.1
BCAR				PKPab	PKPab	07 55 58.7	-0.6
L27K	Beaver Creek,	151.55	316	PKPdf	PKPdf	07 55 43.5	-0.9
L27K				PKPbc	PKPbc	07 55 50.5	-0.2
L27K				PKPab	pPKPab	07 56 00.8	-0.9
L27K	Beaver Creek,	151.55	316	P	PKPdf	07 55 43.6	-0.8
	baz=83,SNR=10						
M27K	Edge Creek, AK	151.65	315		PKPdf	07 55 43.8	-1.0
M27K					PKiKP	07 55 51.5	0.0
M27K				PKPab	PKPab	07 55 59.7	-0.2
M27K	Edge Creek, AK	151.65	315	P	PKPdf	07 55 44.7	-0.1
	baz=84,SNR=7.4						
BARN	Barnard Glacie	151.66	312		PKPdf	07 55 43.8	-1.1
BMAR	Burnt Mountain	151.71	326	PKPdf	PKPdf	07 55 42.8	-1.8
BMAR					PKiKP	07 55 51.7	+0.4
BMAR				PKPab	PKPab	07 55 59.9	0.0
GRNC	Granite Creek	151.72	312		PKPbc	07 55 51.4	+0.1
GRNC				PKPab	PKPab	07 55 59.4	-1.0
J26L	Joseph Creek	152.07	320		PKPbc	07 55 51.0	-0.9
J26L	Joseph Creek	152.07	320	P	PKPbc	07 55 52.0	+0.1
	baz=78,SNR=15						
ZEA	Zeya	152.12	63	*e*PKIKP	PKiKP	07 55 54.8	+2.3
M26K	Nabesna, AK	152.16	315	P	PKPbc	07 55 51.2	-0.9
	baz=83						
L26K	Log Cabin Wild	152.24	317		PKPdf	07 55 43.9	-1.6
L26K				PKPbc	PKPbc	07 55 52.1	-0.1
L26K				PKPab	PKPab	07 56 02.6	+0.4
L26K	Log Cabin Wild	152.24	317	P	PKPbc	07 55 52.3	+0.1
	baz=81,SNR=6.6						
TGL	Tana Glacier	152.25	312	PKPdf	PKPdf	07 55 43.3	-2.3
TGL					PKPbc	07 55 52.5	+0.1
TGL				PKPab	PKPab	07 56 02.5	+0.1
MCARA	McCarthy VSAT	152.29	313	PKPdf	PKPdf	07 55 43.1	-2.4
MCARA					PKiKP	07 55 53.0	+0.4
MCARA				PKPab	PKPab	07 56 01.3	-1.1
MCARA	McCarthy VSAT	152.29	313	P	PKiKP	07 55 52.6	0.0
	baz=85,SNR=6.2						
SCRK	Sand Creek	152.35	319		PKiKP	07 55 53.1	+0.2
SCRK	Sand Creek	152.35	319	P	PKiKP	07 55 52.7	-0.1
	baz=79,SNR=8.7						
MJAR	Matsushiro Arr	152.41	105	PKPbc	PKiKP	07 55 54.1	+0.4
	comp=Z,4.6nm,1.0s,baz=225,slow=1.8,SNR=7.0						
MENT	Mentasta	152.42	316		PKPbc	07 55 52.1	-0.6
MENT				PKPab	PKPab	07 56 01.5	-1.5
DOT	Dot Lake	152.45	318		PKPbc	07 55 52.3	-0.4
VRDI	Verde Repeater	152.51	313		PKPbc	07 55 53.2	+0.1
GLB	Gilahina Butte	152.66	313	PKPdf	PKPdf	07 55 45.3	-0.9
GLB					PKPbc	07 55 53.2	0.0
GLB				PKPab	PKPab	07 56 04.6	+0.6
RIDG	Independent Ri	152.78	318		PKPdf	07 55 44.5	-1.8
RIDG				PKPbc	PKPbc	07 55 53.3	-0.1
RIDG				PKPab	PKPab	07 56 04.5	0.0
RIDG	Independent Ri	152.78	318	P	PKiKP	07 55 53.6	0.0
	baz=78,SNR=9.2						
J25K	Salcha River,	152.81	320	P	PKPbc	07 55 53.0	-0.5
	baz=76						
TOLK	Toolik Lake Re	152.99	330		PKiKP	07 55 54.1	+0.2
TOLK				PKPab	PKPab	07 56 06.0	+0.8
TOLK	Toolik Lake Re	152.99	330	P	PKPbc	07 55 53.5	-0.2
	baz=64,SNR=5.0						
N25K	Chitina, Valde	153.01	314		PKiKP	07 55 54.2	-0.1
N25K	Chitina, Valde	153.01	314	P	PKiKP	07 55 54.6	+0.4
	baz=83						
BMRM	Bremner River	153.09	312	P	PKiKP	07 55 54.6	+0.3
	baz=84						
PAX	Paxson	153.20	317	P	PKPbc	07 55 54.3	-0.1
	baz=79						
IL31		153.40	321		PKPbc	07 55 54.3	-0.3
ILAR	Eielson Array	153.40	321	PKP	PKPdf	07 55 45.9	-1.2
	comp=Z,3.0nm,0.9s,baz=323,slow=2.7,SNR=5.1						
ILAR				PKPbc	PKPbc	07 55 54.0	-0.7
	comp=Z,3.8nm,0.9s,baz=342,slow=1.4,SNR=15						
ILAR	Eielson Array	153.40	321		PKPdf	07 55 45.1	-1.9
ILAR				PKPbc	PKPbc	07 55 54.5	-0.2
ILAR				PKPab	PKPab	07 56 06.6	-0.3
ILAR	Eielson Array	153.40	321	PKIKP	PKPdf	07 55 45.2	-1.9
ILAR						07 55 54.5	
ILAR						07 56 06.6	
H24K	Noodor Dome	153.47	324	P	PKPbc	07 55 54.3	-0.5
	baz=71						
HDA	Harding Lake	153.52	320		PKPdf	07 55 47.1	-0.2
HDA				PKPab	pPKPab	07 56 08.8	-1.0
HDA	Harding Lake	153.52	320	P	PKPbc	07 55 54.4	-0.5
	baz=75						
KLR	Kul'dur	153.92	75	PKPbc	PKPbc	07 55 55.8	-0.5
	comp=Z,1.4nm,0.9s,baz=345,slow=3.1,SNR=4.3						
DHY	Denali Highway	154.03	317	P	PKiKP	07 55 59.3	+3.0
	baz=77						
H23K	Yukon River	154.12	324	P	PKiKP	07 55 56.5	+0.2
	baz=69						
SCM	Sheep Creek Mo	154.26	315		PKPbc	07 55 56.5	-0.2
SCM				PKPab	PKPab	07 56 10.2	-0.7
SCM	Sheep Creek Mo	154.26	315	PKP2	PKPab	07 56 10.2	-0.7
SCM	Sheep Creek Mo	154.26	315	P	PKiKP	07 55 57.0	+0.2
	baz=80						
WAT6	Susitna Watana	154.30	316	P	PKPdf	07 55 48.1	-0.5
	baz=78						
RND	Reindeer	154.60	319		PKPbc	07 55 57.0	-0.4
RND				PKPab	PKPab	07 56 11.3	-0.9
RND	Reindeer	154.60	319	PKIKP	PKPbc	07 55 57.0	-0.4
RND						07 56 11.3	
TRF	Thorofare Moun	155.20	319	PKPdf	PKPdf	07 55 48.5	-1.4
TRF				PKPbc	pPKPbc	07 55 59.0	-2.1
TRF				PKPab	PKPab	07 56 14.6	-0.3
TRF	Thorofare Moun	155.20	319	P	PKPdf	07 55 58.7	+8.9
	baz=73						
I21K	Tanana	155.30	324	PKPdf	PKPdf	07 55 49.0	-0.7
I21K	Tanana	155.30	324	P	PKPdf	07 55 58.5	+8.8
	baz=67						
M19K	Big River Lodg	157.48	317		PKPab	07 56 24.3	-0.3
BILL	Bilibino	160.93	7	*i* PKP2	PKPab	07 56 40.7	+1.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						

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*IDC **30** 07:51:34.0±3.3, 55°.52N×86°.12E, h0^{km}, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=26.5km s-min=24.7km az=38.0*

NNC 30 07:51:31.1±3.8**, 55°.53N×86°.52E, h0^{km}, mb3.2, mpv2.8, 2C-4D, Error ellipse: s-maj=27.0km s-min=20.7km az=37.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.87	213	*i*		08 03 00.0	
	0.1nm,0.8s,baz=23,slow=330,SNR=2.5						
ZAA0	Zalesovo Array	1.87	213	⇓Pn	Pn	07 52 04.5	+0.2
	0.5nm,0.2s,baz=36,slow=17						
ZAA0				⇑Sn	Sb	07 52 29.5	-0.4
	1.2nm,0.3s,baz=29,slow=26						
ZALV	Zalesovo Beam	1.87	213	Pg	Pn	07 52 04.7	+0.4
	6.6nm,0.3s,baz=26,slow=16,SNR=62						
ZALV				Lg	Lg	07 52 30.4	
	2.8nm,0.3s,baz=25,slow=31,SNR=7.5						
KURK	Kurchatov	6.77	228	⇓Pn	Pn	07 53 10.7	-0.9
	1.2nm,0.7s						
KURK				⇑Lg	Lg	07 55 06.2	
	3.3nm,1.1s						
KURBB	Kurchatov Arra	6.88	228	Pn	Pn	07 53 13.8	+0.8
	0.1nm,0.3s,baz=45,slow=13,SNR=5.0						
KURBB				Lg	Lg	07 55 05.9	
	baz=44,slow=31,SNR=4.1						
	0.5nm,0.4s						
KURBB	Kurchatov Arra	6.88	228	⇓Pn	Pn	07 53 12.8	-0.3
	0.6nm,0.5s						
KURBB				⇓Lg	Lg	07 55 09.9	
	3.3nm,0.7s						
MKAR	Makanchi Array	9.14	199	Pn	Pn	07 53 45.9	+1.7
	0.1nm,0.3s,baz=21,slow=14,SNR=5.8						
MKAR				Lg	Lg	07 56 19.1	
	baz=12,slow=30,SNR=3.0						
	0.2nm,0.4s						

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*IDC **30** 08:00:20.8±2.8, 30°.28S×177°.92W, h0^{km}, mb3.9/3, mbtmp3.9/4, ML3.2/1, Error ellipse: s-maj=63.2km s-min=18.4km az=110.0*

*NEIC **30** 08:00:26.6±1.3, 30°.29S±0°.04×177°.9W±0°.2, h35^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=36.6km s-min=5.9km az=85.0*

ISC 30 08:00:25.2±2.5**, 30°.3S**±0°.1×**177°.7W**±0°.4**, h35^{km}, n19, σ0^{s}.85**/13**, mb4.1**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.08	352	Pn	Pn	08 00 44.1	+0.3
	50nm,0.3s,baz=97,slow=20,SNR=1.5						
RAO				Sn	Sn	08 00 56.8	-0.7
	584nm,0.3s,baz=55,slow=22,SNR=13						
RAO	Raoul Island	1.08	352		Pn	08 00 44.7	+0.9
URZ	Urewera	8.99	207	Pn	Pn	08 02 32.6	+0.2
	0.3nm,0.3s,baz=114,slow=20,SNR=1.7						
URZ				Sn	Sn	08 04 12.0	-0.3
	0.6nm,0.3s,baz=308,slow=20,SNR=2.1						
	11nm,1.1s						
STKA	Stephens Creek	34.71	257	P	P	08 07 13.1	+1.2
	2.7nm,0.9s,baz=109,slow=15,SNR=4.7						
	2.7nm,0.9s						
STKA	Stephens Creek	34.71	257	IAmb	IAmb	08 07 40.4	
	comp=Z,2.2nm,1.5s						
ASAR	Alice Springs	43.33	267	P	P	08 08 22.8	-1.3
	comp=Z,0.5nm,0.7s,baz=103,slow=7.3,SNR=7.4						
	comp=Z,0.5nm,0.7s						
WR0	Warramunga Arr	44.13	272	P	P	08 08 30.1	-0.4
WR0				IAmb	IAmb	08 08 36.1	
	comp=Z,4.5nm,1.1s						
WB2	Warramunga Arr	44.30	272	P	P	08 08 31.5	-0.4
WB2				IAmb	IAmb	08 08 33.9	
	comp=Z,4.1nm,0.9s						
WRAB	Tennant Creek	44.31	272	P	P	08 08 31.9	-0.1
WRA	Warramunga Arr	44.32	272	P	P	08 08 30.8	-1.2
	comp=Z,0.7nm,0.3s,baz=111,slow=8.1,SNR=26						
	comp=Z,0.7nm,0.3s						
WRA	Warramunga Arr	44.32	272	IAmb	IAmb	08 08 34.2	
	comp=Z,0.1nm,0.8s						
WB0	Warramunga Arr	44.34	272	P	P	08 08 31.8	-0.3
WB0				IAmb	IAmb	08 08 59.3	
	comp=Z,7.3nm,1.5s						
H03S2	Juan Fernandez	80.32	123	T	T	09 41 45.7	
	baz=238						
H03S1	Juan Fernandez	80.33	123	T	T	09 41 46.1	
	baz=238						
H03S3	Juan Fernandez	80.34	123	T	T	09 41 48.7	
	baz=238						
H10N3	ASCENSION HYDR	138.78	154	T	T	10 55 30.9	
	baz=203,slow=75						
H10N1	ASCENSION HYDR	138.79	154	T	T	10 55 34.4	
	baz=203,slow=75						
H10N2	ASCENSION HYDR	138.80	154	T	T	10 55 29.4	
	baz=203,slow=75						
FINES	FINESS Array B	145.15	340	PKPbc	PKPbc	08 19 57.0	-0.8
	comp=Z,0.7nm,0.3s,baz=48,slow=4.3,SNR=8.8						

IDC 30 08:17:06.7±3.5**, 31°.55S×177°.74W, h0^{km}, mb3.8**/2**, mbtmp3.8**/3**, ML2.6**/1**, Error ellipse: s-maj=75.9km s-min=38.5km az=112.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.92	211	Pn	Pn	08 19 03.1	+0.1
	0.1nm,0.3s,baz=298,slow=23,SNR=0.6						
URZ				Sn	Sn	08 20 32.1	-1.2
	0.3nm,0.3s,baz=294,slow=24,SNR=1.6						
	5.1nm,0.7s						
ASAR	Alice Springs	43.28	268	P	P	08 25 10.9	+0.6
	0.6nm,0.6s,baz=108,slow=7.2,SNR=16						
	0.6nm,0.6s						
WRA	Warramunga Arr	44.37	273	P	P	08 25 18.4	-0.7
	0.9nm,0.5s,baz=112,slow=7.7,SNR=14						
	0.9nm,0.5s						
FINES	FINESS Array B	146.30	340	PKPbc	PKPdf	08 36 47.6	+0.2
	0.7nm,0.6s,baz=30,slow=6.6,SNR=1.8						

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*MDD **30** 08:21:47.8±1.9, 36°.36N×3°.61E, h0^{km}, Mb4.0/4, M_mb3.3/4, Error ellipse: s-maj=15.2km s-min=7.4km az=138.0*

*CRAAG **30** 08:21:47.8, 36°.33N×3°.42E, Ml2.7*

ISC 30 08:21:48.8±1.1**, 36°.34N**±0°.05×**3°.55E**±0°.09**, h18^{km}, n7, σ1^{s}.32**/11**, 4C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.21	206	P	Pg	08 21 53.0	-0.9
AKET	Djebel Ketaf	0.40	138	P	Pb	08 21 58.3	+0.8
ABMS	Boumerdes	0.41	352	P	Pg	08 21 57.5	+0.2
EIBI	Ibiza	3.20	328	P	Pn	08 22 39.1	+0.9
EIBI				⇑*i*Vmb_V		08 22 41.0	
	354nm,SNR=1.3						
EIBI				S	Sn	08 23 15.1	-0.8
ETOS	Mallorca	3.47	351	P	Pn	08 22 41.6	-0.3
ETOS				⇑*i*Vmb_V		08 22 41.9	
	159nm,SNR=0.8						
ETOS				S	Sn	08 23 20.2	-2.4
ETOB	Tobarra	4.66	301	P	Pn	08 22 59.2	+0.9
ETOB				⇑*i*Vmb_V		08 23 03.3	
	102nm,SNR=1.3						
ETOB				S	Sn	08 23 52.0	+0.1
EMOS	Mosqueruela	5.11	323	P	Pn	08 23 05.9	+1.3
EMOS				⇑*i*Vmb_V		08 23 08.7	
	212nm,SNR=1.2						
EMOS				S	Sn	08 24 01.5	-1.7

*IDC **30** 08:24:52.5±1.0, 6°.80N×127°.25E, h0^{km}, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=69.7km s-min=21.5km az=76.0*

*MAN **30** 08:24:57.9, 7°.04N×127°.31E, h19^{km}, mb4.6, ML3.5, MS3.4, Hypocentre not reviewed by the ISC*

ISC 30 08:24:57.2±0.9, **6°.93N**±0°.06×**127°.47E**±0°.09, **h31**^{km}, **n11**, σ**0ˢ.99**/16, **mb3.6**/5, **3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.20	271	⇑eP	Pn	08 25 17.2	-0.7
MATI				eS	Sn	08 25 32.4	-0.8
BIPH	Bislig	1.66	319	⇓iP	Pn	08 25 23.8	-0.4
BIPH				i S	Sn	08 25 43.3	-1.2
DDMP	Don Marcelino,	1.93	245	⇓eP	Pn	08 25 28.9	+1.0
DDMP				eS	Sn	08 25 51.8	+0.7
BUKP	Musuan	2.57	292	⇑eP	Pn	08 25 38.3	+1.6
GLSP	General Luna,	3.13	335	⇑eP	Pn	08 25 45.1	+0.7
GLSP				eS	Sn	08 26 21.1	+0.2
WRA	Warramunga Arr	27.54	166	P	P	08 30 40.2	-1.2
	0.6nm,0.5s,baz=340,slow=10,SNR=12						
	0.6nm,0.5s						
ASAR	Alice Springs	31.05	169	P	P	08 31 11.8	-0.8
	0.2nm,0.4s,baz=346,slow=7.2,SNR=7.9						
ASAR				PcP	PcP	08 34 08.3	+0.3
	0.6nm,0.4s,baz=344,slow=2.3,SNR=12						
	0.2nm,0.4s						
STKA	Stephens Creek	40.88	162	P	P	08 32 36.2	-0.3
	2.6nm,0.9s,baz=335,slow=10,SNR=5.3						
	2.6nm,0.9s						
MKAR	Makanchi Array	55.40	324	P	P	08 34 28.8	+0.2
	0.4nm,0.6s,baz=107,slow=6.6,SNR=4.6						
	0.4nm,0.6s						
ILAR	Eielson Array	81.92	26	P	P	08 37 14.8	+1.3
	0.5nm,0.6s,baz=241,slow=5.6,SNR=11						
	0.5nm,0.6s						
TORD	Torodi Ar. Bea	122.57	290	PKP	PKPdf	08 43 49.5	-1.2
	0.4nm,0.7s,baz=69,slow=3.4,SNR=2.0						

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*IDC **30** 08:36:26.8±1.7, 41°.39N×141°.14E, h98^{km}±16^{km}, mb3.3/7, mbtmp3.6/10, Error ellipse: s-maj=24.0km s-min=13.4km az=114.0*

*JMA **30** 08:36:28.2±0.1, 41°.5N±0°.3×141°.1E±0°.6, h99^{km}, MV3.1/39, TSUGARU STRAIT REGION*

ISC 30 08:36:27.7±0.8, **41°.43N**±0°.03×**141°.08E**±0°.05, **h104**^{km}±6^{km}, **n35**, σ**0ˢ.75**/44, **mb3.6**/7, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOT	Ohata	0.06	208	i P	Pn	08 36 42.0	-0.1
JOT				eS	Sn	08 36 52.6	-0.2
JAHD	Aomorihigashid	0.25	131	i P	Pn	08 36 42.4	-0.1
JAHD				eS	Sn	08 36 53.2	-0.4
JKB	Kayabe	0.46	355	i P	Pn	08 36 43.6	0.0
JKB				eS	Sn	08 36 55.6	0.0
JARK	Aomorirokkasho	0.47	153	i P	Pn	08 36 43.7	0.0
JARK				eS	Sn	08 36 55.9	+0.2
JSR	Shiriuchi	0.51	281	P	Pn	08 36 44.1	+0.1
JTM	Tenmabayashi	0.64	181	P	Pn	08 36 45.3	+0.3
JTM				S	Sn	08 36 58.2	+0.3
JOMM	Oshimamatsumae	0.81	277	i P	Pn	08 36 46.8	+0.3
JOMM				eS	Sn	08 37 00.8	+0.2
JYM2	Yakumo 2	0.87	322	P	Pn	08 36 47.4	+0.3
JYM2				S	Sn	08 37 02.3	+0.7
JNB	Noboribetsu	1.04	358	i P	Pn	08 36 48.8	-0.1
JNB				S	Sn	08 37 04.1	-0.6
JANG	Nango	1.10	163	P	Pn	08 36 49.6	0.0
JANG				S	Sn	08 37 05.8	-0.3
JIW	Iwasaki	1.17	225	P	Pn	08 36 51.0	+0.7
JIW				S	Sn	08 37 08.0	+0.7
JAH	Hinai	1.29	195	P	Pn	08 36 52.6	+1.0
JAH				eS	Sn	08 37 12.1	+2.4
JHST	Hiyamasetana	1.34	318	P	Pn	08 36 52.4	+0.2
JIAM	Iburiatsuma	1.34	27	P	Pn	08 36 53.4	+1.1
JIAM				eS	Sn	08 37 12.0	+1.1
JOSM	Okushiri--Mats	1.37	299	P	Pn	08 36 52.3	-0.3
JEW	Eniwo	1.44	11	P	Pn	08 36 54.1	+0.7
JEW				S	Sn	08 37 13.6	+0.7
JSH	Shimam	1.44	328	P	Pn	08 36 53.7	+0.3
JNBK	Urakawa-nobuka	1.51	55	P	Pn	08 36 54.8	+0.5
JNBK				S	Sn	08 37 16.0	+1.6
ASAJ	Asahikawa	2.91	22	P	Pn	08 37 12.2	-0.1
	9.0nm,0.3s,baz=213,slow=15,SNR=22						
ASAJ				S	Sn	08 37 46.0	-0.6
	8.1nm,0.3s,baz=234,slow=19,SNR=4.1						
MJAR	Matsushiro Arr	5.37	206	P	Pn	08 37 44.2	-1.3
	2.2nm,0.5s,baz=27,slow=11,SNR=1.8						
USRK	Ussuriysk Ar.	7.24	296	P	Pn	08 38 12.2	+1.4
	2.1nm,0.5s,baz=100,slow=14,SNR=5.2						
SEY	Seymchan	22.55	14	P	P	08 41 18.1	-0.8
	1.5nm,0.4s,baz=221,slow=19,SNR=5.3						
	1.5nm,0.4s						
H11N2	WAKE ISLAND Hy	30.81	127	T	T	09 13 52.6	
	baz=317,slow=75						
H11N1	WAKE ISLAND Hy	30.82	127	T	T	09 13 54.3	
	baz=317,slow=75						
H11N3	WAKE ISLAND Hy	30.82	127	T	T	09 13 54.3	
	baz=317,slow=75						
H11S1	WAKE ISLAND Hy	31.64	129	T	T	09 15 55.3	
	baz=318						
H11S3	WAKE ISLAND Hy	31.64	129	T	T	09 15 58.1	
	baz=318						
H11S2	WAKE ISLAND Hy	31.65	129	T	T	09 15 55.3	
	baz=318						
MKAR	Makanchi Array	41.70	298	P	P	08 44 06.2	+0.1
	0.2nm,0.5s,baz=84,slow=8.6,SNR=2.8						
	0.2nm,0.5s						
KURBB	Kurchatov Arra	43.20	304	P	P	08 44 17.6	-0.5
	1.3nm,0.7s,baz=78,slow=8.8,SNR=7.9						
	1.3nm,0.7s						
ILAR	Eielson Array	45.97	35	P	P	08 44 40.6	+0.6
	0.4nm,0.7s,baz=270,slow=6.9,SNR=5.8						
	0.4nm,0.7s						
INK	Inuvik	50.62	29	P	P	08 45 15.8	+0.2
	1.2nm,0.8s,baz=268,slow=4.7,SNR=4.8						
	1.2nm,0.8s						
WRA	Warramunga Arr	61.38	187	P	P	08 46 31.7	-1.0
	0.7nm,0.4s,baz=4.9,slow=7.0,SNR=18						
	0.7nm,0.4s						
ASAR	Alice Springs	65.11	187	P	P	08 46 57.0	-0.3
	0.2nm,0.4s,baz=3.2,slow=7.5,SNR=5.4						
	0.2nm,0.4s						
SNAA	Sanae	144.85	199	PKP	PKPab	08 55 50.5	-0.1
	0.9nm,0.6s,baz=106,slow=18,SNR=6.2						

IDC 30 08:36:36.4±8.0, **14°.10S**×**166°.93E**, **h186**^{km}±85^{km}, **mb3.6**/4, **mbtmp4.0**/5, **Error ellipse: s-maj=74.9km s-min=53.3km az=131.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.94	183	P	Pn	08 38 30.7	+1.7
	4.2nm,0.9s,baz=100,slow=21,SNR=1.7						
DZM				S	Sn	08 39 55.9	-2.4
	4.5nm,1.0s,baz=234,slow=19,SNR=1.7						
STKA	Stephens Creek	29.16	228	P	P	08 42 20.6	+0.4
	2.6nm,0.4s,baz=52,slow=9.6,SNR=20						
	2.6nm,0.4s						
WRA	Warramunga Arr	31.66	255	P	P	08 42 42.4	-0.1
	0.8nm,0.6s,baz=86,slow=9.2,SNR=16						
	0.8nm,0.6s						
ASAR	Alice Springs	32.59	248	P	P	08 42 50.4	-0.2
	0.9nm,0.4s,baz=77,slow=9.2,SNR=25						
	0.9nm,0.4s						
MKAR	Makanchi Array	96.52	316	P	P	08 49 43.9	-0.9
	0.2nm,0.5s,baz=99,slow=6.4,SNR=2.6						
	0.2nm,0.5s						

KRSZO 30 08:48:41.3, 47°.90N×20°.09E, h0^{km}**, ML1.9**/5**, Explosion. locality : Recsk GT info : GT2 explosion, Hungary**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.13	279	Pg	Pg	08 48 43.9	+0.1
PSZ				Lg	Lg	08 48 46.7	
PSZ	Piszkesteto	0.13	279	P	Pg	08 48 43.9	+0.1
PSZ				S	Sg	08 48 46.7	+1.1
KECS	Kecovo	0.64	24	Pg	Pg	08 48 53.9	+0.3
KECS				Lg	Lg	08 49 04.2	
KECS	Kecovo	0.64	24	ePG	Pg	08 48 54.4	+0.8
KECS				eSG	Sb	08 49 03.9	-1.0
KECS				eLG	Lg	08 49 12.6	
A336A	Medovarce	0.80	295	Pg	Pb	08 48 57.5	-0.7
VYHS	Vyhne	1.03	306	Pg	Pb	08 49 01.9	-0.1
VYHS				Lg	Lg	08 49 14.1	
VYHS	Vyhne	1.03	306	ePG	Pg	08 49 01.2	+0.2
VYHS				eSG	Sg	08 49 14.0	-0.3
LANS	Liptovska Anna	1.32	342	Lg	Lg	08 49 26.6	
LANS	Liptovska Anna	1.32	342	eSG	Sn	08 49 26.6	+1.3
LANS				eLG	Lg	08 49 34.3	
CSKK	Cskako	1.35	247	Pn	Pg	08 49 06.1	-1.0
CRVS	Cervenica-Dubn	1.36	42	Lg	Lg	08 49 31.5	

IDC 30 08:54:50.3±3.5, **31°.31S**×**177°.56W**, **h0**^{km}, **mb3.6**/2, **mbtmp3.7**/3, **ML3.0**/1, **MS3.3**/1, **Error ellipse: s-maj=76.9km s-min=38.5km az=112.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.20	211	Pn	Pn	08 56 50.4	-0.1
	0.2nm,0.3s,baz=128,slow=20,SNR=1.6						
URZ				Sn	Sn	08 58 23.1	-0.8
	0.4nm,0.3s,baz=308,slow=20,SNR=1.6						
	9.6nm,1.1s						
ASAR	Alice Springs	43.45	268	P	P	09 02 55.0	-0.2
	0.4nm,0.6s,baz=107,slow=7.6,SNR=8.6						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.52	273	P	P	09 03 04.1	+0.2
	0.5nm,0.4s,baz=112,slow=7.8,SNR=19						
	0.5nm,0.4s						
VNDA	Vanda	47.23	186	LR	LR	09 20 57.7	
	comp=Z,35nm,20.1s,baz=332,slow=33						
FINES	FINESS Array B	146.13	340	PKPbc	PKPdf	09 14 30.6	-0.1
	0.6nm,0.6s,baz=0.0,slow=5.6,SNR=1.6						

IDC 30 09:08:26.0±3.3, **6°.06S**×**147°.56E**, **h0**^{km}, **mb3.1**/1, **mbtmp3.3**/3, **ML3.3**/1, **MS2.8**/1, **Error ellipse: s-maj=78.0km s-min=35.7km az=95.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.35	187	Pn	Pn	09 09 21.2	+1.6
	25nm,0.5s,baz=5.6,slow=9.2,SNR=3.4						
PMG				Sn	Sn	09 10 01.3	+1.3
	0.9nm,0.3s,baz=180,slow=20,SNR=1.7						
WRA	Warramunga Arr	18.86	222	P	P	09 12 47.5	-0.4
	0.1nm,0.3s,baz=49,slow=11,SNR=9.5						
	0.2nm,0.5s						
ASAR	Alice Springs	21.89	216	P	P	09 13 21.2	+0.4
	0.5nm,0.6s,baz=53,slow=8.6,SNR=15						
	0.5nm,0.6s						
JCJ	Chichijima	33.37	351	LR	LR	09 25 07.6	
	comp=Z,14nm,19.6s,baz=130,slow=30						
TORD	Torodi Ar. Bea	145.65	284	PKPbc	PKPdf	09 28 06.0	-1.6
	0.5nm,0.6s,baz=83,slow=3.7,SNR=2.4						

IDC 30 09:12:35.0±2.5, **3°.48N**×**123°.92E**, **h0**^{km}, **mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=339.3km s-min=29.3km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.42	157	P	P	09 18 05.1	+0.5
	0.6nm,0.9s,baz=337,slow=9.8,SNR=8.3						
	0.6nm,0.9s						
ASAR	Alice Springs	28.68	161	P	P	09 18 33.1	-0.7
	0.1nm,0.3s,baz=332,slow=8.1,SNR=2.0						
	0.1nm,0.3s						
MKAR	Makanchi Array	56.20	327	P	P	09 22 16.8	-0.1
	0.2nm,0.4s,baz=117,slow=8.7,SNR=2.8						
	0.2nm,0.4s						

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*DJA **30** 09:14:13.9±2.7, 9°N±20°×12°7E±°, h51^{km}±13^{km}, M5.0/12, mB5.3/5, mb4.7/12, MLv5.2/4, Mw(mB)4.7/5*

*MAN **30** 09:14:17.3, 8°.85N×126°.37E, h24^{km}, mb5.0, ML3.9, MS3.9, Hypocentre not reviewed by the ISC*

MAN INTENSITY III - LIANGA SURIGAO DEL SUR; INTENSITY II - BISLIG CITY SURIGAO DEL SUR.

*NEIC **30** 09:14:19.4±1.8, 8°.88N±0°.07×126°.3E±0°.1, h70^{km}±6^{km}, mb4.5/53, Error ellipse: s-maj=17.4km s-min=9.9km az=82.0*

*IDC **30** 09:14:19.6±1.4, 8°.84N×126°.28E, h83^{km}±14^{km}, mb4.0/19, mbtmp4.4/22, MS3.3/8, Error ellipse: s-maj=20.2km s-min=9.2km az=84.0*

ISC 30 09:14:17.7±0.8, **8°.87N**±0°.03×**126°.40E**±0°.05, **h62**^{km}±7^{km}, **n123**, σ**1ˢ.52**/132, **mb4.5**/41, **12C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.68	184	⇑eP	Pn	09 14 29.4	-2.4
BIPH				eS	Sn	09 14 38.7	-3.5
BUTP	Butuan	0.78	277	⇑eP	Pn	09 14 32.0	-1.0
BUTP				eS	Sn	09 14 44.2	-0.1
GLSP	General Luna,	0.95	343	⇓eP	Pn	09 14 34.3	-0.8
GLSP				eS	Sn	09 14 48.4	+0.4
SCPH	Surigao	1.28	315	i S	Sn	09 14 56.4	+0.7
SCPH	Surigao	1.28	315	⇓iP	Pn	09 14 39.3	-0.1
BUKP	Musuan	1.65	234	⇑iP	Pn	09 14 45.2	+0.7
BUKP				i S	Sn	09 15 07.1	+2.3
CGP	Cagayan de Oro	1.74	256	⇑iP	Pn	09 14 45.4	-0.2
CGP				i S	Sn	09 15 07.0	+0.1
MATI	Mati	1.92	184	⇓eP	Pn	09 14 48.8	+0.7
MATI				eS	Sn	09 15 12.1	+1.0
DAV	Davao City (W)	1.97	205	P	Pn	09 14 50.2	+1.4
	257nm,0.3s,baz=58,slow=4.4,SNR=6.2						
DAV				S	Sn	09 15 14.2	+1.8
	1µm,0.6s,baz=66,slow=20,SNR=6.6						
DAV	Davao City (W)	1.97	205		Pn	09 14 50.0	+1.3
MSLP	Maasin	1.98	310	⇓iP	Pn	09 14 50.2	+1.3
MSLP				i S	Sn	09 15 13.2	+0.7
KCP	Kidapawan	2.26	215	⇑iP	Pn	09 14 53.1	+0.3
KCP				i S	Sn	09 15 19.2	-0.4
TBP	Tagbilaran	2.64	288	⇓eP	Pn	09 14 58.4	+0.6
TBP				i S	Sn	09 15 30.5	+1.7
CTBH	Cotabato--PC H	2.69	233	eP	Pn	09 14 58.9	+0.3
CTBH				i S	Sn	09 15 31.2	+1.1
OCLP	Ormoc	2.80	321	⇑eP	Pn	09 15 02.2	+2.2
OCLP				eS	Sn	09 15 31.5	-1.1
LLP	Lapu-Lapu	2.80	301	⇑iP	Pn	09 15 01.3	+1.2
LLP				i S	Sn	09 15 35.1	+2.4
DDMP	Don Marcelino,	2.83	194	⇑eP	Pn	09 15 02.0	+1.5
DDMP				eS	Sn	09 15 35.1	+1.6
DCPH	Dipolog City	3.03	265	⇓eP	Pn	09 15 04.0	+0.8
DCPH				eS	Sn	09 15 31.0	-7.4
GSPH	General Santos	3.12	208	eP	Pn	09 15 05.9	+1.4
PAGZ	Pagadian	3.16	251	⇑iP	Pn	09 15 06.4	+1.4
SNPH	Sibulan	3.16	279	eP	Pn	09 15 05.5	+0.4
SNPH				eS	Sn	09 15 41.6	-0.1
CNOP	Candoni, Negro	3.83	285	⇑eP	Pn	09 15 15.2	+0.9
CNOP				eS	Sn	09 15 58.8	+0.7
GUIM	Jordan	4.15	295	⇓eP	Pn	09 15 19.5	+1.0
RCP	Roxas	4.49	307	⇑eP	Pn	09 15 25.1	+1.9
PVCP	Virac	5.19	335	⇑eP	Pn	09 15 34.0	+1.2
PVCP				eS	Sn	09 16 33.0	+1.7
SGSI	Sangihe	5.22	190	P	Pn	09 15 36.0	+2.7
	2.2nm5µm166nm,0.6s						
LQP	Lukban	7.06	318	⇓eP	Pn	09 16 00.7	+2.1
TGY	Tagaytay City	7.47	315	P	Pn	09 16 05.3	+1.2
	89nm,0.3s,baz=233,slow=6.0,SNR=4.7						
MYLDM	Lahad Datu	8.66	245	Pn	Pn	09 16 20.3	0.0
GTOI	Gorontalo	8.85	203	P	Pn	09 16 21.2	-1.7
	20nm,0.6s						
MRSI	Marisa	9.45	208	P	Pn	09 16 32.9	+1.8
	723nm47nm,0.8s						
LUWI	Luwuk	10.49	200	Pn	Pn	09 16 46.8	+1.4
LUWI	Luwuk	10.49	200	P	Pn	09 16 49.2	+3.8
	8µm40nm,0.8s						
APSI	Ampana	10.81	206	P	Pn	09 16 53.2	+3.5
	32nm,1.2s						
SIJI	Sorong	10.82	153	P	Pn	09 16 51.7	+1.8
	7.8nm,0.4s,baz=247,slow=8.7,SNR=4.4						
SANI	Sanana	10.86	182	P	Pn	09 16 51.7	+1.3
	34nm,0.9s						
TTSI	Tana Toraja	13.54	209	P	P	09 17 43.3	+9.3
SPSI	Sidrap Palu	14.36	208	P	Pn	09 17 40.5	+2.6
	8.2nm,0.5s						
BNSI	Bone	14.60	206	P	Pn	09 17 43.2	+2.2
	32nm,1.2s						
YULB	Yu-li	15.25	342	Pn	Pn	09 17 49.4	+0.1
KAPI	Kappang	15.30	206	P	Pn	09 17 49.5	-0.5
	6.6nm,0.4s,baz=295,slow=14,SNR=2.4						
KAPI				LR	LR	09 24 44.7	
	comp=Z,211nm,19.0s,baz=24,slow=41						
TPUB	Ta-pu	15.38	340		P	09 17 53.0	-1.5
YOJ	Yonaguni jima	15.84	349		P	09 17 58.9	-0.6
JOW	Kunigami	17.95	5	P	Pn	09 18 24.8	+1.7
	13nm,0.6s,baz=187,slow=11,SNR=7.2						
JOW				LR	LR	09 27 24.2	
	comp=Z,13nm,18.1s,baz=240,slow=44						
JOW	Kunigami	17.95	5	IAmb	IAmb	09 18 35.0	
	comp=Z,23nm,0.9s						
EDFI	Ende, Flores	18.12	195	P	Pn	09 18 26.1	+0.8
	comp=Z,6.6nm,1.1s						
GUMO	Guam	18.70	74	LR	LR	09 24 31.0	
	comp=Z,61nm,21.0s,baz=256,slow=32						
MTN	Manton Dam	22.08	168	P	P	09 19 08.2	+0.5
MTN				IAmb	IAmb	09 19 29.1	
	comp=Z,30nm,1.4s						
JNU	Nakatsue	24.49	9	P	P	09 19 30.6	-0.5
	comp=Z,16nm,0.8s,baz=202,slow=2.8,SNR=5.6						
	comp=Z,16nm,0.8s						
JNU	Nakatsue	24.49	9	IAmb	IAmb	09 19 33.2	
	comp=Z,19nm,0.9s						
KNRA	Kununurra	24.50	175	P	P	09 19 31.9	+0.5
KNRA				IAmb	IAmb	09 19 45.5	
	comp=Z,28nm,1.1s						
MDSI	Maura Dua	25.83	240	P	P	09 19 45.0	+1.5
JHJ	Hachijo jima 2	27.11	25	LR	LR	09 30 07.2	
	comp=Z,58nm,21.0s,baz=296,slow=35						
KSCHJ	Chungju	27.91	3	P	P	09 20 02.2	+0.3
KSCHJ				IAmb	IAmb	09 20 03.8	
	comp=Z,14nm,0.9s						
CMAR	Chiang Mai Arr	28.30	293	P	P	09 20 04.8	-0.8
	comp=Z,1.0nm,0.4s,baz=106,slow=7.2,SNR=9.6						
	comp=Z,1.0nm,0.4s						
KSAR	Wonju Array Be	28.48	2		P	09 20 06.7	-0.2
KSRS	Korea Array	28.49	3	P	P	09 20 07.4	+0.3
	comp=Z,6.5nm,0.9s,baz=180,slow=10,SNR=24						
KSRS				LR	LR	09 32 46.4	
	comp=Z,36nm,19.2s,baz=340,slow=39						
	comp=Z,6.5nm,0.9s						
WB0	Warramunga Arr	29.52	165	P	P	09 20 14.7	-1.8
MJAR	Matsushiro Arr	29.56	20	P	P	09 20 15.9	-0.7
	comp=Z,1.5nm,0.7s,baz=194,slow=8.8,SNR=4.4						
MJAR				LR	LR	09 31 08.7	
	comp=Z,55nm,20.8s,baz=272,slow=34						
	comp=Z,1.5nm,0.7s						
WRAB	Tennant Creek	29.67	165	P	P	09 20 17.7	0.0
WRA	Warramunga Arr	29.68	165	P	P	09 20 16.4	-1.4
	comp=Z,0.8nm,0.6s,baz=343,slow=8.6,SNR=26						
WRA				PcP	PcP	09 23 20.8	-0.2
	comp=Z,0.9nm,0.5s,baz=337,slow=2.8,SNR=5.6						
	comp=Z,0.8nm,0.6s						
WRA	Warramunga Arr	29.68	165	IAmb	IAmb	09 20 19.8	
	comp=Z,0.6nm,1.4s						
WB2	Warramunga Arr	29.68	165	P	P	09 20 17.8	-0.1
WR0	Warramunga Arr	29.75	164	P	P	09 20 18.5	+0.1
WR0				IAmb	IAmb	09 20 29.7	
	comp=Z,9.5nm,1.4s						
ASAR	Alice Springs	33.16	167	P	P	09 20 47.5	-1.0
	comp=Z,0.5nm,0.3s,baz=353,slow=7.1,SNR=23						
ASAR				PcP	PcP	09 23 30.4	0.0
	comp=Z,2.0nm,0.6s,baz=341,slow=2.2,SNR=11						
	comp=Z,0.5nm,0.3s						
USA0B	Ussuriysk Arra	35.53	7	P	P	09 21 09.6	+1.0
USRK	Ussuriysk Ar.	35.53	7	P	P	09 21 09.9	+1.3
	comp=Z,18nm,0.8s,baz=196,slow=8.5,SNR=22						
	comp=Z,18nm,0.8s						
USRK	Ussuriysk Ar.	35.53	7	P	P	09 21 09.4	+0.8
MDJ	Mudanjiang	35.72	4	P	P	09 21 10.2	-0.1
ASAJ	Asahikawa	37.83	19	LR	LR	09 36 54.3	
	comp=Z,76nm,21.4s,baz=3.0,slow=36						
JKA	Kamikawa-asahi	37.84	19	P	P	09 21 30.3	+2.0
MORW	Morawa	39.02	194	P	P	09 21 39.3	+0.9
MORW				IAmb	IAmb	09 21 53.5	
	comp=Z,7.0nm,1.1s						
FORT	Forrest	39.45	178	P	P	09 21 42.8	+0.8
SONM	Songino Array	42.37	340	P	P	09 22 04.0	-1.9
	comp=Z,0.3nm,0.4s,baz=156,slow=7.6,SNR=3.6						
SONM				PcP	PcP	09 23 58.2	-0.2
	comp=Z,1.1nm,0.7s,baz=171,slow=2.7,SNR=4.8						
	comp=Z,0.3nm,0.4s						
BBOO	Buckleboo	42.46	168	P	P	09 22 07.1	+0.4
NWAO	Narrogin (SRO)	42.47	191	P	P	09 22 07.6	+0.8
STKA	Stephens Creek	43.04	161	P	P	09 22 10.2	-1.2
	comp=Z,1.6nm,0.4s,baz=346,slow=5.0,SNR=6.6						
	comp=Z,1.6nm,0.4s						
STKA	Stephens Creek	43.04	161	P	P	09 22 11.2	-0.3
ARMA	Armidale	45.97	149	P	P	09 22 35.7	+0.8
TOO	Toolangi	49.53	160	P	P	09 23 03.4	+1.1
PETK	Petropavlovsk-	50.85	24	P	P	09 23 13.2	+1.1
	comp=Z,4.8nm,0.7s,baz=212,slow=5.3,SNR=6.0						
	comp=Z,4.8nm,0.7s						
MK31	Makanchi Array	53.22	323	P	P	09 23 28.5	-1.3
MK31				IAmb	IAmb	09 23 30.6	
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	53.22	323	P	P	09 23 29.0	-0.8
	comp=Z,6.0nm,0.8s,baz=121,slow=8.3,SNR=65						
MKAR				PcP	PcP	09 24 36.2	-0.8
	comp=Z,2.8nm,0.8s,baz=112,slow=5.5,SNR=6.1						
	comp=Z,6.0nm,0.8s						
MKAR	Makanchi Array	53.22	323	P	P	09 23 29.4	-0.4
MAKZ	Makanchi	53.41	323	P	P	09 23 29.9	-1.3
MAKZ				IAmb	IAmb	09 23 31.6	
	comp=Z,5.3nm,0.8s						
NIL	Nilore	54.63	305	P	P	09 23 38.6	-1.8
AAK	Ala-Archa	56.41	316	LR	LR	09 49 24.7	
	comp=Z,192nm,21.9s,baz=114,slow=37						
KURK	Kurchatov	57.29	326	P	P	09 23 58.0	-1.0
TIXI	Tiksi	62.74	1	P	P	09 24 36.0	+0.1
NRIK	Noril'sk	65.39	346	P	P	09 24 52.9	-0.5
	comp=Z,6.4nm,0.7s,baz=152,slow=7.4,SNR=9.5						
	comp=Z,6.4nm,0.7s						
NRIK	Noril'sk	65.39	346	P	P	09 24 52.4	-1.0
NRIK				IAmb	IAmb	09 24 54.0	
	comp=Z,9.0nm,0.8s						
RPZ	Rata Peaks	66.15	146	P	P	09 24 59.7	+1.0
	comp=Z,6.0nm,0.5s,baz=18,slow=3.2,SNR=1.5						
	comp=Z,6.0nm,0.5s						
ABKAR	Akbulak array	68.02	320	P	P	09 25 09.9	-0.6
J20K	Nowinta River	77.47	26	P	P	09 26 07.7	+1.5
J20K				IAmb	IAmb	09 26 10.1	
	comp=Z,4.8nm,1.1s						
IMAR	Indian Mountai	77.81	24	P	P	09 26 09.2	+1.1
H21K	Melozitna Rive	78.17	25	P	P	09 26 12.0	+1.8
H21K				IAmb	IAmb	09 26 12.6	
	comp=Z,5.6nm,1.2s						
RAYN	Ar Rayn	78.22	292	P	P	09 26 10.7	-0.6
RAYN				IAmb	IAmb	09 26 11.5	
	comp=Z,7.9nm,0.9s						
PPLA	Purkeypile	78.24	28	P	P	09 26 12.8	+2.1
PPLA				IAmb	IAmb	09 26 38.1	
	comp=Z,14nm,1.4s						
H23K	Yukon River	79.53	25	P	P	09 26 18.4	+0.8
H23K				IAmb	IAmb	09 26 20.1	
	comp=Z,5.3nm,1.1s						
I23K	Minto, Yukon-K	79.58	25	P	P	09 26 20.3	+2.5
I23K				IAmb	IAmb	09 26 22.7	
	comp=Z,3.5nm,0.8s						
TOLK	Toolik Lake Re	79.62	22	P	P	09 26 19.4	+1.3
TOLK				IAmb	IAmb	09 26 20.8	
	comp=Z,5.1nm,0.8s						
HDA	Harding Lake	80.61	26	P	P	09 26 23.8	+0.4
HDA				IAmb	IAmb	09 26 25.9	
	comp=Z,4.1nm,0.7s						
ILAR	Eielson Array	80.64	26	P	P	09 26 22.9	-0.6
	comp=Z,0.7nm,0.5s,baz=266,slow=3.3,SNR=17						
	comp=Z,0.7nm,0.5s						
KLMR	Klimovskoe	80.80	330	eP	P	09 26 21.4	-3.1
KLMR				AMP		09 26 23.9	
	comp=Z,12nm,1.1s						
RIDG	Independent Ri	81.56	27	P	P	09 26 29.6	+1.1
RIDG				IAmb	IAmb	09 26 31.1	
	comp=Z,10.0nm,1.0s						
DOT	Dot Lake	81.91	27	IAmb	IAmb	09 26 32.5	
	comp=Z,6.1nm,1.0s						
SCRK	Sand Creek	81.93	26	IAmb	IAmb	09 26 45.1	
	comp=Z,10nm,1.5s						
J26L	Joseph Creek	82.08	26	P	P	09 26 32.3	+1.0
J26L				IAmb	IAmb	09 26 45.6	
	comp=Z,5.9nm,1.2s						
GLB	Gilahina Butte	82.18	29	IAmb	IAmb	09 26 38.6	
	comp=Z,4.6nm,0.9s						
K27K	Chicken	82.76	26	P	P	09 26 37.1	+2.4
K27K				IAmb	IAmb	09 26 38.3	
	comp=Z,7.0nm,0.9s						
M30M	Minto, Yukon	85.32	27	P	P	09 26 49.9	+2.1

INK	Inuvik	85.53	22	P	P	09 26 49.5	+0.8
INK				IAmb	IAmb	09 26 50.5	
	comp=Z,8.8nm,1.4s						
ARCES	ARCESS Array B	85.54	340	P	P	09 26 47.1	-1.6
	comp=Z,3.6nm,0.8s,baz=64,slow=5.5,SNR=8.4						
	comp=Z,3.6nm,0.8s						
ARCES	ARCESS Array B	85.54	340	IAmb	IAmb	09 26 49.9	
	comp=Z,6.1nm,1.0s						
FINES	FINESS Array B	87.18	332	P	P	09 26 55.2	-1.7
	comp=Z,1.0nm,0.4s,baz=60,slow=4.1,SNR=16						
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	87.73	321	P	P	09 26 58.0	-1.8
	comp=Z,0.2nm,0.3s,baz=55,slow=4.0,SNR=2.2						
	comp=Z,0.2nm,0.3s						
VNDA	Vanda	88.53	173	P	P	09 27 03.0	+0.1
	comp=Z,2.9nm,0.7s,baz=333,slow=5.7,SNR=12						
	comp=Z,2.9nm,0.7s						
VNDA	Vanda	88.53	173	P	P	09 27 03.3	+0.4
VNDA				IAmb	IAmb	09 27 17.8	
	comp=Z,5.4nm,0.9s						
YKA	Yellowknife Ar	94.97	24	P	P	09 27 34.0	+0.8
	comp=Z,1.6nm,0.7s,baz=309,slow=5.0,SNR=5.7						
	comp=Z,1.6nm,0.7s						
TXAR	Lajitas Array	118.63	50	PKP	PKPdf	09 32 59.3	-0.2
	comp=Z,0.2nm,0.5s,baz=271,slow=2.1,SNR=5.5						
TORD	Torodi Ar. Bea	120.90	291	PKP	PKPdf	09 33 03.1	-1.0
	comp=Z,1.0nm,0.8s,baz=42,slow=2.4,SNR=5.0						
PLCA	Paso Flores	144.87	157	PKP	PKPbc	09 33 47.5	+0.1
	comp=Z,5.5nm,0.8s,baz=218,slow=4.2,SNR=18						
PLCA	Paso Flores	144.87	157		PKPdf	09 33 48.0	-0.2

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*IDC **30** 09:14:38.8±2.7,31°.28S×177°.57W,h0^{km},mb3.9/3,
mbtmp3.9/5,ML3.5/2,Error ellipse: s-maj=62.0km
s-min=23.1km az=106.0*

ISC 30 09:14:41.6±2.4,**31°.26S**±0°.09×**177°.5W**±0°.4,**h26**^{km},**n6**,
σ**1^{s}.12**/9,**mb4.0**/3,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.03	350	Pn	Pn	09 15 14.0	-0.1
	36nm,0.3s,baz=292,slow=19,SNR=1.7						
RAO				Sn	Sb	09 15 41.4	-1.2
	58nm,0.3s,baz=270,slow=20,SNR=1.7						
	124nm,0.3s						
URZ	Urewera	8.27	211	Pn	Pn	09 16 38.1	-1.7
	0.3nm,0.3s,baz=128,slow=20,SNR=1.6						
URZ				Sn	Sn	09 18 12.2	-0.1
	0.8nm,0.3s,baz=308,slow=20,SNR=2.0						
	7.3nm,0.9s						
STKA	Stephens Creek	34.71	258	P	P	09 21 30.4	+0.9
	1.4nm,0.7s,baz=105,slow=16,SNR=3.1						
	1.4nm,0.7s						
ASAR	Alice Springs	43.50	268	P	P	09 22 43.5	+0.5
	0.6nm,0.5s,baz=105,slow=7.4,SNR=6.4						
ASAR				PcP	PcP	09 24 32.1	+1.3
	0.2nm,0.4s,baz=112,slow=4.3,SNR=1.6						
	0.6nm,0.5s						
WRA	Warramunga Arr	44.56	273	P	P	09 22 52.1	+0.6
	1.0nm,0.4s,baz=112,slow=7.6,SNR=9.3						
	1.0nm,0.4s						
FINES	FINESS Array B	146.09	340	PKPbc	PKPab	09 34 19.2	+0.1
	1.0nm,0.4s,baz=49,slow=5.0,SNR=4.2						

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*IDC **30** 09:16:56.0±0.8,31°.12S×177°.47W,h0^{km},mb4.3/7,
mbtmp4.3/9,ML3.3/2,MS4.2/12,Error ellipse:
s-maj=23.8km s-min=18.2km az=86.0*

*NEIC **30** 09:17:03.0±2.7,31°.14S±0°.07×177°.6W±0°.1,h35^{km}±6^{km},
mb4.6/17,Error ellipse: s-maj=16.1km s-min=9.5km
az=101.0*

ISC 30 09:17:00.7±0.7,**31°.16S**±0°.06×**177°.6W**±0°.1,**h27**^{km},**n56**,
σ**1^{s}.56**/46,**mb4.6**/14,**MS4.2**/9,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.92	353	Pn	Pn	09 17 30.8	-0.8
	208nm,0.3s,baz=88,slow=8.5,SNR=15						
RAO				Sn	Sn	09 17 54.4	-0.5
	826nm,0.3s,baz=261,slow=23,SNR=7.4						
URZ	Urewera	8.29	210	Pn	Pn	09 18 58.6	-0.6
	0.7nm,0.3s,baz=301,slow=19,SNR=1.6						
URZ				Sn	Sn	09 20 29.6	-2.3
	3.7nm,0.3s,baz=108,slow=20,SNR=2.2						
	8.0nm,0.5s						
URZ	Urewera	8.29	210	Pn	Pn	09 18 58.3	-0.9
OUZ	Omahuta	8.39	239	Pn	Pn	09 19 06.3	+5.8
BKZ	Black Stump Fm	9.32	209	Pn	Pn	09 19 14.8	+1.6
MSVF	Nonsavu	13.93	343	LR	LR	09 24 48.9	
	comp=Z,580nm,18.8s,baz=175,slow=34						
OXZ	Oxford	14.65	211	Pn	Pn	09 20 22.1	-4.0
RPZ	Rata Peaks	15.40	212	Pn	Pn	09 20 31.4	-4.6
	0.8nm,0.3s,baz=82,slow=3.4,SNR=1.0						
RPZ				Sn	Sn	09 23 11.6	-14
	0.5nm,0.3s,baz=342,slow=19,SNR=1.6						
DZM	Mont Dzumac	16.85	299	Pn	Pn	09 20 54.5	-0.4
	0.1nm,0.3s,baz=115,slow=16,SNR=1.8						
DZM				LR	LR	09 26 22.8	
	comp=Z,2µm,18.3s,baz=138,slow=33						
	9.0nm,1.2s						
DZM	Mont Dzumac	16.85	299		Pn	09 20 54.8	-0.1
DZM				IAmb	IAmb	09 21 02.6	
	comp=Z,53nm,1.4s						
WHZ	Wether Hill Ro	18.49	213	P	P	09 21 13.4	-1.2
RAR	Rarotonga	18.82	63	LR	LR	09 26 43.0	
	comp=Z,230nm,21.9s,baz=263,slow=31						
EIDS	Eidsvold	28.09	274	P	P	09 22 52.0	+1.7
EIDS				IAmb	IAmb	09 22 53.0	
	comp=Z,10nm,1.1s						
PPT	Papeete	28.82	69	LR	LR	09 34 35.5	
	comp=Z,168nm,18.0s,baz=240,slow=37						
CTA	Charters Tower	34.23	280	P	P	09 23 45.9	+1.5
	comp=Z,8.4nm,0.8s,baz=104,slow=9.8,SNR=12						
	comp=Z,8.4nm,0.8s						
CTAO	Charters Tower	34.23	280	P	P	09 23 46.4	+2.0
CTAO				IAmb	IAmb	09 23 54.8	
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	34.62	258	P	P	09 23 49.2	+1.6
	comp=Z,1.9nm,0.5s,baz=109,slow=13,SNR=6.6						
STKA				LR	LR	09 37 05.5	
	comp=Z,416nm,18.4s,baz=59,slow=35						
	comp=Z,1.9nm,0.5s						
STKA	Stephens Creek	34.62	258	P	P	09 23 49.4	+1.8
BBOO	Buckleboo	39.07	255	P	P	09 24 26.0	+0.5
COEN	Coen	39.78	287	P	P	09 24 31.0	-0.6
COEN				IAmb	IAmb	09 24 48.3	
	comp=Z,8.0nm,0.9s						
ASAR	Alice Springs	43.38	268	P	P	09 25 00.8	-0.3
	comp=Z,5.7nm,0.9s,baz=109,slow=7.8,SNR=25						
ASAR				PcP	PcP	09 26 48.7	-0.7
	comp=Z,0.6nm,0.4s,baz=112,slow=3.8,SNR=4.7						
ASAR				ScP	ScP	09 30 40.9	+1.9
	comp=Z,1.6nm,1.0s,baz=100,slow=5.0,SNR=6.1						
	comp=Z,5.7nm,0.9s						
WR0	Warramunga Arr	44.26	273	P	P	09 25 08.7	+0.6
WR0				IAmb	IAmb	09 25 26.9	
	comp=Z,8.5nm,0.8s						
WB2	Warramunga Arr	44.43	273	P	P	09 25 10.1	+0.6
WRAB	Tennant Creek	44.44	273	P	P	09 25 10.0	+0.5
WRAB				IAmb	IAmb	09 25 28.2	
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	44.44	273	P	P	09 25 09.4	-0.2
	comp=Z,4.8nm,0.4s,baz=113,slow=7.4,SNR=70						
WRA				PcP	PcP	09 26 53.0	0.0
	comp=Z,1.2nm,0.9s,baz=106,slow=6.2,SNR=1.4						
WRA				ScP	ScP	09 30 46.5	+3.2
	comp=Z,2.4nm,1.2s,baz=108,slow=5.4,SNR=6.3						
WRA				LR	LR	09 42 55.9	
	comp=Z,450nm,18.3s,baz=99,slow=35						
	comp=Z,4.8nm,0.4s						
WRA	Warramunga Arr	44.44	273	P	P	09 25 09.3	-0.3
WB0	Warramunga Arr	44.47	273	P	P	09 25 10.3	+0.5
SBA	Scott Base	47.30	184	P	P	09 25 33.7	+2.3
SBA				IAmb	IAmb	09 25 44.6	
	comp=Z,12nm,1.3s						
VNDA	Vanda	47.37	186	P	P	09 25 32.3	+0.4
	comp=Z,0.6nm,0.7s,baz=10,slow=5.9,SNR=1.5						
	comp=Z,0.6nm,0.7s						
VNDA	Vanda	47.37	186	P	P	09 25 34.0	+2.0
KNRA	Kununurra	51.08	275	P	P	09 26 01.4	+0.3
KNRA				IAmb	IAmb	09 26 16.2	
	comp=Z,5.2nm,0.8s						
PSA00	Pilbara Seismi	56.19	264	P	P	09 26 39.0	+0.5
PSA00				IAmb	IAmb	09 26 43.7	
	comp=Z,7.2nm,1.1s						
BATI	Baumata	58.06	278	LR	LR	09 50 32.8	
	comp=Z,621nm,18.9s,baz=270,slow=35						
RPN	Rapa Nui	58.94	105	LR	LR	09 45 30.2	
	comp=Z,75nm,19.8s,baz=295,slow=29						
QSPA	South Pole Qui	58.95	180	P	P	09 26 57.2	-0.3
	comp=Z,5.8nm,1.1s,baz=27,slow=2.3,SNR=6.7						
	comp=Z,5.8nm,1.1s						
QSPA	South Pole Qui	58.95	180	P	P	09 27 00.6	+3.1
MAW	Mawson	71.71	201	LR	LR	10 01 09.2	
	comp=Z,62nm,18.4s,baz=80,slow=37						
JHJ	Hachijo jima 2	75.54	324	LR	LR	09 56 40.8	
	comp=Z,534nm,20.6s,baz=273,slow=32						
MJAR	Matsushiro Arr	79.04	325	LR	LR	09 58 01.7	
	comp=Z,437nm,21.4s,baz=222,slow=31						
H03S2	Juan Fernandez	79.79	123	T	T	10 58 10.7	
	baz=237						
H03S1	Juan Fernandez	79.80	123	T	T	10 58 10.7	
	baz=237						
H03S3	Juan Fernandez	79.80	123	T	T	10 58 10.7	
	baz=237						
H03N3	Juan Fernandez	79.98	123	T	T	10 58 18.5	
	baz=237						
H03N2	Juan Fernandez	79.98	123	T	T	10 58 20.2	
	baz=237,slow=74						
H03N1	Juan Fernandez	80.00	123	T	T	10 58 18.5	
	baz=237,slow=74						
NVAR	Mina Array Bea	88.59	43	P	P	09 29 50.1	-1.2
	comp=Z,0.3nm,0.6s,baz=235,slow=7.6,SNR=4.0						
	comp=Z,0.3nm,0.6s						
LPAZ	La Paz	97.55	114	LR	LR	10 04 53.5	
	comp=Z,82nm,21.0s,baz=280,slow=30						
MKAR	Makanchi Array	118.50	310	PKP	PKPdf	09 35 43.9	-1.7
	comp=Z,0.3nm,0.4s,baz=77,slow=3.1,SNR=7.1						
ARCES	ARCESS Array B	139.40	348	PKP	PKPdf	09 36 23.8	-0.7
	comp=Z,0.8nm,0.7s,baz=18,slow=6.1,SNR=1.1						
KBZ	Khabaz	145.79	303	PKPbc	PKPbc	09 36 37.1	0.0
	comp=Z,4.3nm,1.0s,baz=156,slow=2.5,SNR=4.3						
FINES	FINESS Array B	145.97	340	PKPbc	PKPbc	09 36 36.7	-0.4
	comp=Z,6.9nm,0.6s,baz=33,slow=4.5,SNR=16						
NB2	NORSAR Subarra	149.55	352	PKP	PKiKP	09 36 47.6	-0.4
	comp=Z,5.7nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.55	352	PKPbc	PKPbc	09 36 46.5	-0.4
	comp=Z,1.2nm,0.8s,baz=17,slow=4.2,SNR=4.4						
AKASG	Malin Array Be	152.09	322	PKPbc	PKPbc	09 36 52.4	-0.8
	comp=Z,1.6nm,0.5s,baz=51,slow=3.8,SNR=8.8						
BRTR	Keskin Array B	153.23	297	PKPbc	PKiKP	09 36 56.4	0.0
	comp=Z,1.6nm,0.9s,baz=137,slow=4.2,SNR=5.2						
TORD	Torodi Ar. Bea	162.06	178	PKPab	PKPab	09 37 46.7	+0.3
	comp=Z,0.9nm,0.8s,baz=172,slow=3.9,SNR=4.1						

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*ASRS **30** 09:41:41.9±0.2,51°N±1°×89°.9E±1°.0,h5^{km},MLh4.0/14,
Error ellipse: s-maj=2.6km s-min=1.8km az=148.7,
confirmed*

*NNC **30** 09:41:46.4±2.3,51°.28N×89°.65E,h0^{km},mb3.8,mpv3.5,
Error ellipse: s-maj=19.6km s-min=13.9km az=97.0*

*IDC **30** 09:41:47.6±2.2,51°.20N×89°.46E,h0^{km},mb3.6/1,
mbtmp3.6/5,ML3.3/4,MS3.5/4,Error ellipse: s-maj=22.7km
s-min=16.1km az=96.0*

ISC 30 09:41:43.9±1.3,**51°.24N**±0°.03×**90°.01E**±0°.02,**h1**^{km}±11^{km},
n37,σ**1^{s}.74**/60,**MS3.4**/4,**9C-5D**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULGR	Ulagan, Altay	1.44	245	Pg	Pn	09 42 10.9	-0.3
ULGR				Sg	Sn	09 42 29.3	-1.4
CUR	Chagan-Uzun	1.55	223	Pg	Pn	09 42 11.7	-1.1
CUR				Sg	Sn	09 42 31.7	-2.0
DJO	Djoy, Khakassi	1.72	25	⇓Pg	Pg	09 42 16.4	-0.3
DJO				Sg	Sg	09 42 39.4	+0.5
DJOS	Djoyskaya Sosn	1.78	28	Pg	Pg	09 42 18.6	+0.6
DJOS				Sg	Sg	09 42 42.8	+1.9
ARTR	Artybash	1.79	289	Pg	Pb	09 42 17.1	-0.4
ARTR				Sg	Sb	09 42 40.6	0.0
CERR	Cheremushki	1.84	28	Pg	Pg	09 42 19.6	+0.6
CERR				Sg	Sg	09 42 44.4	+1.5
CHBI	Chibit, Altay	1.84	241	Pg	Pb	09 42 18.8	+0.4
CHBI				Sg	Sb	09 42 42.8	+0.8
TASR	Tashtagol	2.01	320	Pg	Pb	09 42 21.0	-0.3
TASR				Sg	Sg	09 42 47.9	-0.6
DGZ	Jazzator, Alta	2.25	228	Pg	Pb	09 42 24.6	-0.9
DGZ				Sg	Sb	09 42 54.0	+0.1
ARDR	Aradan	2.51	56	Pg	Pb	09 42 30.6	+0.8
ARDR				Sg	Sg	09 43 03.6	-0.8
ABNR	Abakan	2.64	19	Pg	Pb	09 42 32.9	+1.0
ABNR				Sg	Sg	09 43 07.6	-0.9
KZLR	Kyzyl	2.82	79	Pg	Pb	09 42 34.5	-0.5
KZLR				Sg	Sg	09 43 14.7	+0.4
ELT	Eltsovka	3.08	313	Pn	Pn	09 42 32.7	-1.0
ELT				Pg	Pb	09 42 39.9	+0.5
ELT				Sg	Sb	09 43 20.0	+2.6
UKR	Ust'-Kan	3.31	267	Pg	Pb	09 42 44.9	+1.4
UKR				Sg	Sb	09 43 26.4	+2.0
ERNS	Erzin	3.41	105	Pn	Pn	09 42 37.1	-1.2
ERNS				Pg	Pg	09 42 49.8	+0.6
ERNS				Sg	Sb	09 43 27.5	+0.4
SALR	Pechorkino, Sa	4.12	322	Pn	Pn	09 42 50.5	+2.6
SALR				Sg	Sg	09 43 56.1	+0.1
ZAA0	Zalesovo Array	4.17	313	⇓Pn	Pn	09 42 48.1	-0.5
	0.2nm,0.5s						
ZAA0				⇓Pg	Pb	09 42 59.2	+1.2
	2.8nm,0.5s						
ZAA0				⇑Lg	Lg	09 43 53.2	
	14nm,0.8s						
ZALV	Zalesovo Beam	4.17	313	Pn	Pn	09 42 49.7	+1.1
	2.4nm,0.3s,baz=134,slow=11,SNR=15						
ZALV				Sn	Sn	09 43 37.3	-0.6
	4.5nm,0.3s,baz=128,slow=29,SNR=5.0						
ZALV				Lg	Lg	09 43 51.2	
	11nm,0.3s,baz=129,slow=27,SNR=8.2						
	4.8nm,0.3s						
MINR	Mina	4.45	33	Pn	Pb	09 42 58.2	-4.7
MINR				Sg	Sg	09 44 06.4	-0.4
BRCR	Berchikul'	4.52	348	Pn	Pb	09 43 00.6	-3.5
BRCR				Pg	Pg	09 43 04.6	-5.8
BRCR				Sg	Sg	09 44 07.4	-1.6
KEM	Kemerovo	4.74	332	Sg	Sg	09 44 13.6	-2.3
KNGR	Kungurtug, Tuv	4.79	95	Pn	Pn	09 42 59.5	+2.2
KNGR				Sg	Sg	09 44 15.3	-2.4
NVSII	Novosibirsk	5.45	314	Sg	Sg	09 44 34.4	-4.4
BSTK	Bystrovka, Nov	5.56	310	Pn	Pn	09 43 08.6	+0.9
BSTK				Sg	Sg	09 44 43.5	+1.2
MK31	Makanchi Array	6.75	232	⇑Pn	Pn	09 43 24.8	+0.7
	5.2nm,0.5s,baz=60,slow=12,SNR=102						
MK31				⇑Lg	Lg	09 45 15.1	
	30nm,1.0s,baz=56,slow=31,SNR=3.8						
MKAR	Makanchi Array	6.75	232	Pn	Pn	09 43 24.9	+0.9
	3.1nm,0.3s,baz=52,slow=12,SNR=105						
MKAR				Sn	Sn	09 44 39.1	-2.5
	0.6nm,0.3s,baz=47,slow=26,SNR=2.2						
MKAR				Lg	Lg	09 45 09.8	
	1.1nm,0.3s,baz=45,slow=18,SNR=1.8						
	6.1nm,0.4s						
MAKZ	Makanchi	6.89	233	⇑Pn	Pn	09 43 26.7	+0.7
	2.1nm,0.5s						
MAKZ				⇑Lg	Lg	09 45 21.0	
	12nm,0.7s						
KURK	Kurchatov	7.21	270	⇓Pn	Pn	09 43 30.7	+0.3
	5.6nm,0.7s						
KURK				⇑Sn	Sn	09 44 49.6	-3.3
	7.6nm,0.7s						
KURK				⇓Lg	Lg	09 45 28.6	
	21nm,0.7s						
KURBB	Kurchatov Arra	7.28	270	Pn	Pn	09 43 30.4	-1.0
	0.2nm,0.3s,baz=82,slow=14,SNR=12						
KURBB				Sn	Sn	09 44 50.4	-4.2
	0.3nm,0.3s,baz=79,slow=26,SNR=4.8						
KURBB				Lg	Lg	09 45 28.0	
	0.3nm,0.3s,baz=83,slow=33,SNR=2.4						
	0.9nm,0.4s						
KURBB	Kurchatov Arra	7.28	270	⇑Pn	Pn	09 43 31.6	+0.2
	8.0nm,0.7s						
KURBB				⇑Sn	Sn	09 44 53.7	-0.9
	18nm,0.7s						
KURBB				⇑Lg	Lg	09 45 31.4	
	46nm,0.6s						
SONM	Songino Array	11.18	101	Lg	Lg	09 47 38.9	
	0.2nm,0.3s,baz=295,slow=28,SNR=6.9						
AKTO	Aktyubinsk	20.14	280	P	P	09 46 18.5	-0.7
	0.1nm,0.3s,baz=72,slow=9.5,SNR=5.0						
	1.0nm,0.6s						
GEYT	Alibeck	26.09	252	LR	LR	09 59 12.2	
	comp=Z,72nm,18.1s,baz=126,slow=41						
NOA	NORSAR Array B	42.37	315	LR	LR	10 10 39.5	
	comp=Z,33nm,20.4s,baz=60,slow=41						
IDI	Anoyia	48.42	277	LR	LR	10 12 26.9	
	comp=Z,44nm,18.8s,baz=88,slow=38						
VAE	Valguarnera	53.45	286	LR	LR	10 14 24.8	
	comp=Z,107nm,18.1s,baz=154,slow=37						
ESDC	Sonseca Array	62.55	300	P	P	09 52 12.3	+3.0
	0.4nm,0.6s,baz=53,slow=7.5,SNR=4.2						
	0.4nm,0.6s						

KRSC 30 09:43:10.4±2.2,**50°.02N**×**156°.90E**,**h48**^{km}±24^{km},**ML3.7**,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.83	323	*e*P	Pn	09 43 24.8	-0.9
SKR				*e*S	Sn	09 43 35.5	-1.4
PAU	Pauzhetka	1.45	358	*e*P	Pn	09 43 36.1	+2.0
PAU				*e*S	Sn	09 43 53.9	+2.0
KDTR	Khodutka, Kamc	1.94	22	*e*P	Pn	09 43 43.4	+2.6
KDTR				*e*S	Sn	09 44 07.2	+3.3
MIPR	Malaya Ipel'ka	2.26	358	*e*P	Pn	09 43 47.6	+2.4
ASAK	Asacha	2.44	15	*e*P	Pn	09 43 51.2	+3.4
MTVR	Mutnovka	2.59	18	*e*P	Pn	09 43 53.3	+3.4
MTVR				*e*S	Sn	09 44 25.6	+5.4
RUS	Russkaya	2.62	22	*e*P	Pn	09 43 52.3	+2.2
RUS				*e*S	Sn	09 44 23.4	+2.8
GRL	Gorelyy	2.64	16	*e*P	Pn	09 43 54.1	+3.6
DALK	Dalny	3.23	20	*e*P	Pn	09 44 01.6	+3.1
UGLR	Uglovaya	3.41	20	*e*P	Pn	09 44 05.4	+4.3
AVH	Avacha	3.44	19	*e*P	Pn	09 44 06.0	+4.5
KOK	Koryaka	3.45	18	*e*P	Pn	09 44 06.3	+4.7
SMAR	Somma	3.45	19	*e*P	Pn	09 44 05.8	+4.0
SDLR	Sedlovina	3.49	20	*e*P	Pn	09 44 05.4	+3.3
KRX	Arik	3.51	17	*e*P	Pn	09 44 07.4	+4.9
MKZ	Mys Kozlova	5.42	31	*e*P	Pn	09 44 30.4	+1.9

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*IDC **30** 09:47:44.8±0.3,24°.44N×126°.50E,h0^{km},mb4.8/42,
mbtmp4.8/46,ML4.4/3,MS4.5/56,Error ellipse:
s-maj=12.6km s-min=8.2km az=70.0*

*BJI **30** 09:47:44.4±0.0,24°.42N×126°.65E,h15^{km},mb4.8/73,
mB4.9/52,Ms5.2/88,Ms7 5.1/84*

*MOS **30** 09:47:45.9±1.2,24°.43N×126°.40E,h14^{km},mb5.3/58,
MS4.8/17,Error ellipse: s-maj=6.8km s-min=4.0km
az=113.7*

*NEIC **30** 09:47:47.0±2.5,24°.44N±0°.07×126°.45E±0°.07,h10^{km}±1^{km},
mb5.2/214,Error ellipse: s-maj=12.5km s-min=9.1km
az=141.0*

*JMA **30** 09:47:47.9±0.1,24°N±1°×126°.5E±1°.0,h85^{km}±3^{km},
MD5.3/29,MW4.8/29,NEAR MIYAKOJIMA ISLAND*

JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

*NIED **30** 09:47:47.9,24°.46N×126°.49E,h85^{km},MW5.2,Moment
Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm;
M$_{rr}$-1.62; M$_{\theta\theta}$1.69; M$_{\phi\phi}$-0.08; M$_{r\theta}$6.01; M$_{\theta\phi}$-0.81; M$_{\phi r}$0.20;
Fault plane solution: M$_0$6.29000×10^{16} NP1:
φ$_s$135.00000°,δ11.00000°,λ-45.00000°. NP2:
φ$_s$269.00000°,δ82.00000°,λ-98.00000°.*

*GCMT **30** 09:47:48.0±0.4,24°.52N±0°.03×126°.32E±0°.03,h37^{km}±1^{km},
MW5.0/70,Moment Tensor Solution. s29,c34; s70,c78;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.35±.24;
M$_{\theta\theta}$2.29±.16; M$_{\phi\phi}$1.06±.15; M$_{r\theta}$2.32±.15; M$_{\theta\phi}$0.91±.06;
M$_{\phi r}$0.39±.15; Best double couple: M$_0$3.84900×10^{16}
NP1:φ$_s$56.00000°,δ27.00000°,λ-105.00000°. NP2:
φ$_s$252.00000°,δ64.00000°,λ-83.00000°. Principal axes:
T 3.5150, Plg18.0000°, Azm337.0000°; N 0.6670,
Plg7.0000°, Azm69.0000°; P -4.1820, Plg70.0000°,
Azm178.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function*

ISC 30 09:47:46.8±0.5,**24°.41N**±0°.03×**126°.53E**±0°.03,**h11**^{km}±2^{km},
h11^{km}**:pP-P**,**n791**,σ**1^{s}.69**/716,**mb5.1**/232,**MS4.8**/96,
102C-74D,**Fault plane solution:** **NP1:**φ$_s$81.24175°,
δ87.01858°,λ104.46909°. **NP2:**φ$_s$182.63786°,δ14.76664°,
λ11.77466°. **Principal axes:** T Plg46.0983°,
Azm6.0028°; N Plg14.4491°, Azm260.4728°; P
Plg40.3139°, Azm157.8444°; **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.08	289	P	Pn	09 48 07.9	+0.1
JOGS				*e*S	Sn	09 48 22.5	-0.2
JOGS	Gusukube	1.08	289	A	A	09 48 07.9	
	comp=E,356nm,2.3s,comp=E,295nm,2.0s						
JMJ2	Miyako jima3	1.14	287	P	Pn	09 48 08.5	-0.1
JMJ2				S	Sn	09 48 23.6	-0.7
JMJ2	Miyako jima3	1.14	287	A	A	09 48 08.5	
	comp=E,248nm,4.9s,comp=E,253nm,1.6s						
JMJ	Miyako jima 2	1.19	290	P	Pn	09 48 09.5	+0.1
JIKM	Ikemajima	1.27	294	P	Pg	09 48 10.3	-0.9
JIKM				S	Sn	09 48 27.2	-0.3
JIKM	Ikemajima	1.27	294	A	A	09 48 10.3	
	comp=E,159nm,3.8s,comp=E,202nm,1.1s						
JIRB	Irabujima	1.30	289	P	Pn	09 48 10.2	-0.6
JIRB				*e*S	Sn	09 48 27.5	-0.8
JIRB	Irabujima	1.30	289	A	A	09 48 10.2	
	comp=E,231nm,2.7s,comp=E,151nm,1.9s						
JTJ	Tarama	1.68	278	P	Pn	09 48 15.6	-0.4
JTJ				*e*S	Sn	09 48 36.4	-1.2
JTJ	Tarama	1.68	278	A	A	09 48 15.6	
	comp=E,75nm,2.1s,comp=E,60nm,1.8s						
JKE	Kume jima 2	1.92	7	P	Pn	09 48 18.8	-0.6
JKE				*e*S	Sn	09 48 42.3	-1.3
JKE	Kume jima 2	1.92	7	A	A	09 48 18.8	
	comp=E,30nm,1.3s,comp=E,28nm,5.5s						
JISG	Ishigakijimahi	2.03	275	P	Pn	09 48 20.2	-0.6
JISG				*e*S	Sn	09 48 45.2	-1.0
JISG	Ishigakijimahi	2.03	275	A	A	09 48 20.2	
	comp=E,23nm,1.9s,comp=E,27nm,1.2s						
JJT3	Tamagusuku3	2.07	33	P	Pn	09 48 21.1	-0.3
JJT3				*e*S	Sn	09 48 45.7	-1.5
JJT3	Tamagusuku3	2.07	33	A	A	09 48 21.1	
	comp=E,99nm,4.5s,comp=E,91nm,2.0s						
JIJ	Ishigaki jima	2.17	269	P	Pn	09 48 22.4	-0.5
JIJ				*e*S	Sn	09 48 46.8	-3.1
JIJ	Ishigaki jima	2.17	269	A	A	09 48 22.4	
	comp=E,23nm,1.7s,comp=E,33nm,1.9s						
JAGN	Aguni-jima	2.26	16	P	Pn	09 48 23.8	-0.3
JAGN				*e*S	Sn	09 48 50.6	-1.4
JAGN	Aguni-jima	2.26	16	A	A	09 48 23.8	
	comp=E,50nm,2.4s,comp=E,45nm,2.0s						
JKRS	Kuro-shima	2.30	266	P	Pn	09 48 24.7	0.0
JKRS	Kuro-shima	2.30	266	A	A	09 48 24.7	
	comp=E,89nm,2.0s,comp=E,122nm,1.7s						
JNTH	Nagotoyohara	2.50	32	P	Pn	09 48 26.7	-0.6
JNTH				*e*S	Sn	09 48 56.4	-1.4
JNTH	Nagotoyohara	2.50	32	A	A	09 48 26.7	
	comp=E,17nm,1.8s,comp=E,18nm,5.6s						
HATJ	Hateruma jima	2.51	262	P	Pn	09 48 26.6	-0.9
HATJ	Hateruma jima	2.51	262	A	A	09 48 26.6	
	comp=E,64nm,4.3s,comp=E,98nm,2.2s						
IRIF	Iriomote-Funau	2.55	269	P	Pn	09 48 27.3	-0.8
IRIF	Iriomote-Funau	2.55	269	A	A	09 48 27.3	
	comp=E,43nm,2.3s,comp=E,37nm,3.6s						
JOW	Kunigami	2.88	33	Pn	Pn	09 48 32.5	-0.2
	151nm,0.3s,baz=221,slow=12,SNR=128						
JOW				Sn	Sn	09 49 04.6	-2.7
	191nm,0.3s,baz=329,slow=30,SNR=12						
	400nm,0.3s						
JOW	Kunigami	2.88	33	Pn	Pn	09 48 32.3	-0.3
JOW	Kunigami	2.88	33	P	Pn	09 48 33.7	+1.1
JOW	Kunigami	2.88	33	*e*P	Pn	09 48 32.3	-0.3
JOW				*e*S	Sn	09 49 05.0	-2.3
JOW	Kunigami	2.88	33	A	A	09 48 32.3	
	comp=E,16nm,2.2s,comp=E,15nm,6.2s						
JIH	Iheya	2.92	26	P	Pn	09 48 32.8	-0.3
JIH				S	Sn	09 49 05.5	-2.7
JIH	Iheya	2.92	26	A	A	09 48 32.8	
	comp=E,29nm,3.3s,comp=E,19nm,6.8s						
JYRO	Yoronjima	3.13	33	P	Pn	09 48 35.8	-0.2
JYRO				*e*S	Sn	09 49 11.1	-2.2
JYRO	Yoronjima	3.13	33	A	A	09 48 35.8	
	comp=E,13nm,3.7s,comp=E,11nm,9.7s						
YOJ	Yonaguni jima	3.21	272	Pn	Pn	09 48 36.3	-0.8
YOJ	Yonaguni jima	3.21	272	P	Pn	09 48 36.3	-0.8
YOJ	Yonaguni jima	3.21	272	P	Pn	09 48 36.6	-0.5
YOJ	Yonaguni jima	3.21	272	*e*S	Sn	09 49 13.6	-1.7
JYNG	Yonagunijimaku	3.27	271	P	Pn	09 48 37.1	-0.8
JYNG				*e*S	Sn	09 49 15.6	-1.1
JYNG	Yonagunijimaku	3.27	271	A	A	09 48 37.1	
	comp=E,13nm,3.9s,comp=E,20nm,4.0s						
JOKE	Okinoerabujima	3.47	32	P	Pn	09 48 40.6	-0.1

JOKE				*e*S	**Sn**	**09 49 20.6**	**-1.1**
JOKE	**Okinoerabujima**	**3.47**	**32**	A	A	09 48 40.6	
	comp=E,14nm,12.0s,comp=E,12nm,6.2s						
JTK	**Tokunoshima**	**4.00**	**32**	P	**Pn**	**09 48 47.2**	**-0.9**
JTK				*e*S	**Sn**	**09 49 32.9**	**-2.2**
JTK	**Tokunoshima**	**4.00**	**32**	A	A	09 48 47.2	
	comp=E,9.0nm,3.0s,comp=E,6.0nm,10.2s						
JMZ	**Minamidaito 2**	**4.48**	**71**	P	**Pn**	**09 48 51.9**	**-2.7**
JMZ				*e*S	**Sn**	**09 49 39.9**	**-6.8**
JMZ	**Minamidaito 2**	**4.48**	**71**	A	A	09 48 51.9	
	comp=E,9.0nm,6.3s,comp=E,10.0nm,5.5s						
JAMN	**Amaminishikomi**	**4.50**	**31**	P	**Pn**	**09 48 54.1**	**-0.7**
JAMN	**Amaminishikomi**	**4.50**	**31**	A	A	09 48 54.1	
	comp=E,5.0nm,3.7s,comp=E,4.0nm,7.7s						
NACB	**Ninganchiao**	**4.51**	**268**		**Pn**	**09 48 53.5**	**-1.5**
JKDJ	**Kitadaitoujima**	**4.58**	**69**	P	**Pn**	**09 48 53.3**	**-2.7**
JKDJ				S	**Sn**	**09 49 42.3**	**-7.0**
JKDJ	**Kitadaitoujima**	**4.58**	**69**	A	A	09 48 53.3	
	comp=E,11nm,4.0s,comp=E,7.0nm,4.8s						
TATO	**Taipei**	**4.62**	**278**		**Pn**	**09 48 55.6**	**-0.9**
YHNB	**Yeheng**	**4.70**	**274**		**Pn**	**09 48 57.6**	**-0.1**
YHNB	**Yeheng**	**4.70**	**274**	P	**Pn**	**09 48 58.8**	**+1.1**
YULB	**Yu-li**	**4.89**	**259**		**Pn**	**09 48 58.1**	**-2.2**
JZK	**Kikaishima**	**4.96**	**38**	A	A	09 49 01.2	
	comp=E,30nm,3.5s,comp=E,25nm,3.5s						
SSLB	**Suanglung**	**5.13**	**264**	Pn	**Pn**	**09 49 02.2**	**-1.4**
SSLB	**Suanglung**	**5.13**	**264**	P	**Pn**	**09 49 02.3**	**-1.4**
TWG	**Pinlang**	**5.25**	**254**		**Pn**	**09 49 02.8**	**-2.4**
JTAJ	**Takarajima**	**5.29**	**26**	A	A	09 49 05.6	
	comp=E,4.0nm,4.2s,comp=E,7.0nm,9.3s						
TPUB	**Ta-pu**	**5.51**	**260**		**Pn**	**09 49 08.4**	**-0.5**
TPUB	**Ta-pu**	**5.51**	**260**	P	**Pn**	**09 49 08.7**	**-0.1**
QZH	**Quanzhou**	**7.24**	**276**	⇓*i*Pn	**Pn**	**09 49 31.5**	**-1.0**
QZH				LR	LR		
	comp=N,4µm,13.3s						
QZH				LR	LR		
	comp=E,4µm,10.0s						
QZH				LR	LR		
	comp=Z,6µm,11.1s						
KNMB	**Chin-men Tao**	**7.42**	**272**	Pn	**Pn**	**09 49 33.6**	**-1.4**
JSU	**Suzuyama**	**7.87**	**25**	Pn	**Pn**	**09 49 40.6**	**-0.7**
SSE	**Sheshan**	**8.17**	**326**	P	**Pn**	**09 49 46.5**	**+1.3**
SSE				S	**Sn**	**09 51 15.5**	**-2.0**
SSE				LR	LR		
	comp=N,5µm,12.2s						
SSE				LR	LR		
	comp=E,5µm,12.1s						
JNU	**Nakatsue**	**9.48**	**23**	Pn	**Pn**	**09 50 02.3**	**-1.0**
	3.7nm,0.3s,baz=175,slow=7.3,SNR=15						
JNU				Sn	**Sn**	**09 51 45.4**	**-4.5**
	1.1nm,0.3s,baz=180,slow=20,SNR=1.1						
	73nm,1.0s						
JNU	**Nakatsue**	**9.48**	**23**		**Pn**	**09 50 01.9**	**-1.4**
JNU	**Nakatsue**	**9.48**	**23**	P	**Pn**	**09 50 03.6**	**+0.3**
NJ2	**Nanjing**	**10.18**	**320**	⇓P	**Pn**	**09 50 15.8**	**+2.9**
NJ2				pP		09 50 19.5	
NJ2				sP		09 50 21.8	
NJ2				S	Sn	09 52 15.0	+8.0
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,510nm,9.0s						
NJ2				LR	LR		
	comp=N,11µm,13.3s						
NJ2				LR	LR		
	comp=E,7µm,12.4s						
NJ2				LR	LR		
	comp=Z,12µm,13.3s						
NAWB	**Namwon**	**11.00**	**4**	Pn	**Pn**	**09 50 22.3**	**-1.8**
LQP	**Lukban**	**11.27**	**206**	⇑*e*P	**Pn**	**09 50 27.4**	**-0.6**
TGY	**Tagaytay City**	**11.53**	**208**	Pn	**Pn**	**09 50 32.1**	**+0.6**
	56nm,0.3s,baz=329,slow=4.7,SNR=4.0						
TJN	**Taejon**	**11.95**	**3**	Pn	**Pn**	**09 50 38.1**	**+1.0**
TJN	**Taejon**	**11.95**	**3**	*c i*P	**Pn**	**09 50 38.7**	**+1.7**
TJN	**Taejon**	**11.95**	**3**	P	**Pn**	**09 50 39.7**	**+2.7**
JHS	**Saijyo**	**12.00**	**27**	Pn	**Pn**	**09 50 35.9**	**-1.9**
WHN	**Wuhan**	**12.41**	**302**	⇑P	**Pn**	**09 50 44.8**	**+1.4**
WHN				pP		09 50 51.3	
WHN				S	**Sn**	**09 53 09.0**	**+7.2**
WHN				LR	LR		
	comp=N,12µm,11.0s						
WHN				LR	LR		
	comp=E,17µm,12.4s						
WHN				LR	LR		
	comp=Z,25µm,12.6s						
CNSH	**ChangSha**	**12.76**	**290**	⇑P	**Pn**	**09 50 48.0**	**-0.2**
CNSH				S	**Sn**	**09 53 12.0**	**+1.7**
CNSH				LR	LR		
	comp=N,3µm,9.8s						
CNSH				LR	LR		
	comp=E,6µm,11.0s						
CNSH				LR	LR		
	comp=Z,7µm,11.1s						
INCN	**Inchon**	**13.03**	**0**		**Pn**	**09 50 52.5**	**+0.6**
INCN	**Inchon**	**13.03**	**0**	P	**Pn**	**09 50 52.5**	**+0.6**
INCN	**Inchon**	**13.03**	**0**	P	**Pn**	**09 50 54.9**	**+3.0**
	65nm,1.4s						
KSAR	**Wonju Array Be**	**13.04**	**5**	Pn	**Pn**	**09 50 52.5**	**+0.6**
KSAR	**Wonju Array Be**	**13.04**	**5**	P	**Pn**	**09 50 52.6**	**+0.6**
KSRS	**Korea Array**	**13.06**	**5**	Pn	**Pn**	**09 50 52.7**	**+0.5**
	0.4nm,0.3s,baz=179,slow=14,SNR=67						
KSRS				LR	LR	09 56 27.5	
	comp=Z,2µm,18.1s,baz=185,slow=40						
	18nm,0.9s						
INU	**Inuyama**	**14.19**	**37**	Pn	**Pn**	**09 51 08.8**	**+1.2**
INU	**Inuyama**	**14.19**	**37**	P	**Pn**	**09 51 09.9**	**+2.2**
TIA	**Tai'an**	**14.28**	**328**	*e*P	**Pn**	**09 51 11.0**	**+2.0**
TIA				S	Sn	09 53 56.3	+8.9
TIA				pmax	pmax		
	comp=Z,53nm,0.8s						
TIA				LR	LR		
	comp=N,8µm,13.2s						
TIA				LR	LR		
	comp=E,4µm,13.7s						
TIA				LR	LR		
	comp=Z,12µm,12.8s						
JCJ	**Chichijima**	**14.36**	**76**	LR	LR	09 56 12.7	
	comp=Z,573nm,18.8s,baz=304,slow=35						
JGF	**Kuroka**	**14.56**	**38**		**Pn**	**09 51 12.3**	**-0.5**
TBP	**Tagbilaran**	**14.86**	**190**	*e*P	**Pn**	**09 51 16.6**	**-0.3**
DL2	**Dalian**	**15.04**	**345**	P	**Pn**	**09 51 20.3**	**+1.1**
DL2				S	**Sn**	**09 54 10.3**	**+4.6**
DL2				pmax	pmax		
	comp=Z,18nm,0.9s						
DL2				pmax	pmax		
	comp=Z,310nm,4.1s						
DL2				LR	LR		
	comp=N,5µm,12.7s						
DL2				LR	LR		
	comp=E,7µm,11.9s						
DL2				LR	LR		
	comp=Z,9µm,12.4s						
MAJO	**Matsushiro**	**15.72**	**37**		**Pn**	**09 51 30.3**	**+2.1**
MAJO	**Matsushiro**	**15.72**	**37**	P	**Pn**	**09 51 30.3**	**+2.1**
MAJO				pmax	pmax		
	comp=Z,43nm,1.0s						
MAJO	**Matsushiro**	**15.72**	**37**	P	**Pn**	**09 51 30.7**	**+2.5**
MJAR	**Matsushiro Arr**	**15.72**	**37**	Pn	**Pn**	**09 51 27.2**	**-1.0**
	comp=Z,2.3nm,0.7s,baz=216,slow=13,SNR=5.5						
MJAR	**Matsushiro Arr**	**15.72**	**37**	P	**P**	**09 51 31.2**	**-1.0**
MJAR	**Matsushiro Arr**	**15.72**	**37**	P	**P**	**09 51 31.2**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,41nm,1.3s						
MJB9	**Matsu-Tunnel**	**15.72**	**37**	P	**Pn**	**09 51 30.0**	**+1.8**
LYN	**LuoYang**	**15.86**	**313**	⇑*i*P	**P**	**09 51 33.8**	**+0.1**
LYN				sP	pwP	09 51 41.0	+2.2
LYN				S	**S**	**09 54 35.8**	**-4.4**
LYN				pmax	pmax		
	comp=Z,130nm,0.8s						
LYN				pmax	pmax		
	comp=Z,270nm,4.4s						
LYN				LR	LR		
	comp=Z,11µm,12.3s						
LYN				LR	LR		
	comp=Z,6µm,12.9s						
LYN				LR	LR		
	comp=Z,13µm,12.7s						
ENH	**Enshi**	**16.22**	**295**	P	**P**	**09 51 38.8**	**+0.9**
QIZ	**Qiongzhong**	**16.40**	**254**	P	**Pn**	**09 51 36.3**	**-0.7**
QIZ				S	**Sn**	**09 54 31.0**	**-8.1**
QIZ				LR	LR		
	comp=Z,2µm,18.1s						
QIZ				LR	LR		
	comp=Z,2µm,20.6s						
QIZ				LR	LR		
	comp=Z,1µm,15.7s						
HNS	**HongShan**	**16.43**	**325**	⇑P	**Pn**	**09 51 37.5**	**+0.3**
HNS				PP	**PnPn**	**09 51 49.0**	**+2.6**
HNS				S	**Sn**	**09 54 43.5**	**+4.0**
HNS				SS	**SnSn**	**09 54 57.0**	**+4.2**
HNS				pmax	pmax		
	comp=Z,39nm,0.9s						
HNS				pmax	pmax		
	comp=Z,480nm,5.0s						
HNS				LR	LR		
	comp=Z,5µm,13.0s						
HNS				LR	LR		
	comp=Z,8µm,13.0s						
HNS				LR	LR		
	comp=Z,9µm,13.1s						
JYT	**Yasato**	**16.65**	**42**	P	**Pn**	**09 51 41.1**	**+1.0**
DAV	**Davao City (W)**	**17.27**	**183**	LR	LR	09 58 24.9	
	comp=Z,557nm,20.1s,baz=14,slow=37						
BJT	**Baijiatuau**	**17.84**	**333**	P	**P**	**09 51 55.7**	**+0.1**
BJT	**Baijiatuau**	**17.84**	**333**	P	**P**	**09 51 55.7**	**+0.1**
BJT				pmax	pmax		
	comp=Z,50nm,1.1s						
BJI	**Beijing**	**17.85**	**333**	P	**Pn**	**09 51 55.0**	**-0.1**
BJI				PP	**PnPn**	**09 52 06.5**	**+0.6**
BJI				S	**Sn**	**09 55 16.3**	**+2.2**
BJI				pmax	pmax		
	comp=Z,42nm,0.8s						
BJI				pmax	pmax		
	comp=Z,490nm,3.8s						
BJI				LR	LR		
	comp=Z,5µm,13.9s						
BJI				LR	LR		
	comp=Z,2µm,13.0s						
BJI				LR	LR		
	comp=Z,6µm,14.4s						
TIY	**Taiyuan**	**17.90**	**321**	*e*P	**Pn**	**09 51 55.8**	**-0.1**
TIY				S	**Sn**	**09 55 16.5**	**+1.0**
TIY				pmax	pmax		
	comp=Z,740nm,6.0s						
TIY				LR	LR		
	comp=Z,3µm,13.1s						
TIY				LR	LR		
	comp=Z,4µm,13.9s						
TIY				LR	LR		
	comp=Z,5µm,13.6s						
GYA	**Guiyang**	**18.06**	**281**	⇑P	**P**	**09 51 59.3**	**+1.0**
GYA				S	**S**	**09 55 24.5**	**-0.9**
GYA				pmax	pmax		
	comp=Z,200nm,4.1s						
GYA				LR	LR		
	comp=Z,2µm,12.0s						
GYA				LR	LR		
	comp=Z,4µm,12.0s						
GYA				LR	LR		
	comp=Z,5µm,12.3s						
XAN	**Xi'an**	**18.09**	**306**	P	**P**	**09 51 58.3**	**-0.3**
XAN				pP	pwP	09 52 06.0	+2.3
XAN				sP	sP	09 52 09.3	+6.9
XAN				S	**S**	**09 55 24.5**	**-1.4**
XAN				pmax	pmax		
	comp=Z,22nm,0.7s						
XAN				pmax	pmax		
	comp=Z,460nm,5.3s						
XAN				LR	LR		
	comp=Z,7µm,12.4s						
XAN				LR	LR		
	comp=Z,10µm,11.0s						
XAN				LR	LR		
	comp=Z,15µm,9.6s						
CN2	**Changchun**	**19.36**	**358**	*e*P	**P**	**09 52 10.5**	**-1.9**
CN2				S	**Sn**	**09 55 42.8**	**-7.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,14.4s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,2µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,15.1s						
USRK	**Ussuriysk Ar.**	**20.24**	**11**	P	**P**	**09 52 19.9**	**-2.0**
	comp=Z,7.3nm,0.6s,baz=198,slow=10,SNR=7.9						
	comp=Z,7.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**20.24**	**11**	P	**P**	**09 52 23.0**	**+1.1**
USRK	**Ussuriysk Ar.**	**20.24**	**11**	P	**P**	**09 52 23.0**	**+1.1**
MDJ	**Mudanjiang**	**20.31**	**6**	P	**P**	**09 52 23.0**	**+0.3**
MDJ				S	**S**	**09 56 10.8**	**+0.5**
MDJ				SS	**SnSn**	**09 56 31.5**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,20nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,370nm,12.0s						
MDJ				LR	LR		
	comp=Z,3µm,13.2s						
MDJ				LR	LR		
	comp=Z,4µm,10.3s						
MDJ				LR	LR		
	comp=Z,4µm,12.0s						
MDJ	**Mudanjiang**	**20.31**	**6**	P	**P**	**09 52 22.6**	**-0.1**
GUMO	**Guam**	**20.39**	**119**	P	**P**	**09 52 25.1**	**+1.3**
	comp=Z,168nm,0.9s,baz=197,slow=6.8,SNR=10						
GUMO				LR	LR	10 01 03.2	
	comp=Z,361nm,18.1s,baz=297,slow=39						
	comp=Z,168nm,0.9s						
GUMO	**Guam**	**20.39**	**119**	P	**P**	**09 52 25.2**	**+1.5**
GUMO	**Guam**	**20.39**	**119**	P	**P**	**09 52 25.2**	**+1.5**
GUMO				pmax	pmax		
	comp=Z,378nm,1.2s						
GUMO	**Guam**	**20.39**	**119**	P	**P**	**09 52 25.8**	**+2.1**
HHC	**Hu-ho-hao-te**	**20.63**	**326**	*e*P	**P**	**09 52 26.8**	**+0.5**
HHC				sP	pwP	09 52 37.0	+5.6
HHC				S	**S**	**09 56 17.3**	**+0.5**
HHC				SS	**SnSn**	**09 56 46.0**	**+10**
HHC				pmax	pmax		
	comp=Z,120nm,1.0s						
HHC				pmax	pmax		
	comp=Z,800nm,4.5s						
HHC				LR	LR		
	comp=Z,11µm,12.9s						
HHC				LR	LR		
	comp=Z,4µm,14.1s						
HHC				LR	LR		
	comp=Z,13µm,12.9s						
SGSI	**Sangihe**	**20.63**	**183**	P	**P**	**09 52 26.2**	**-0.1**
	comp=Z,3µmcomp=Z,124nm,0.7s						
CD2	**Chengdu**	**21.16**	**293**	P	**P**	**09 52 32.0**	**-0.1**
CD2				sP	pwP	09 52 38.8	+1.6
CD2				S	Sn	09 56 32.8	-1.4
CD2				pmax	pmax		
	comp=Z,100nm,0.7s						
CD2				LR	LR		
	comp=Z,4µm,9.4s						
CD2				LR	LR		
	comp=Z,5µm,9.0s						
XLT	**XiLinHaoTe**	**21.24**	**339**	⇑*i*P	**P**	**09 52 31.5**	**-1.4**
XLT				pP	sP	09 52 35.8	-0.9
XLT				sP	pwP	09 52 38.8	+0.8
XLT				S	**S**	**09 56 24.5**	**-4.4**
XLT				SS	**SnSn**	**09 56 54.5**	**+3.4**
XLT				pmax	pmax		
	comp=Z,38nm,1.4s						
XLT				LR	LR		
	comp=Z,340nm,11.0s						
XLT				LR	LR		
	comp=Z,3µm,11.8s						
XLT				LR	LR		
	comp=Z,4µm,11.3s						
BTO	**Baotou**	**21.26**	**323**	*e*P	**P**	**09 52 34.0**	**+0.9**
BTO				S	Sn	09 56 33.5	-3.0
BTO				LR	LR		
	comp=Z,18µm,12.8s						
BTO				LR	LR		
	comp=Z,10µm,12.8s						
BNX	**BinXian**	**21.29**	**2**	⇓P	**P**	**09 52 34.0**	**+0.7**
BNX				pP	**P**	**09 52 34.0**	**+0.7**
BNX				sP	**pwP**	**09 52 38.5**	**-0.1**
BNX				PP	**PnPn**	**09 52 57.8**	**+4.8**
BNX				S	**S**	**09 56 25.0**	**-4.7**
BNX				sS	**sS**	**09 56 30.5**	**-3.3**
BNX				pmax	pmax		
	comp=Z,23nm,0.8s						
BNX				pmax	pmax		
	comp=Z,280nm,10.3s						
BNX				LR	LR		
	comp=Z,8µm,12.6s						
BNX				LR	LR		
	comp=Z,3µm,12.9s						
BNX				LR	LR		
	comp=Z,10µm,12.9s						
KMI	**Kunming**	**21.61**	**277**	⇑P	**P**	**09 52 39.0**	**+1.9**
KMI				sP	pwP	09 52 45.3	+3.1
KMI				S	**S**	**09 56 37.3**	**+0.6**
KMI				pmax	pmax		
	comp=Z,26nm,1.5s						
KMI				pmax	pmax		
	comp=Z,120nm,3.5s						
KMI				LR	LR		
	comp=Z,2µm,12.0s						
KMI				LR	LR		
	comp=Z,2µm,17.4s						
KMI				LR	LR		
	comp=Z,2µm,11.6s						
ERM	**Erimo**	**22.33**	**34**	P	**P**	**09 52 43.9**	**-0.6**
ERM				IAmb	IAmb	09 52 51.3	
	comp=Z,74nm,0.8s						
ERM	**Erimo**	**22.33**	**34**	⇑*e*P	**P**	**09 52 44.3**	**-0.2**
ERM				pmax	pmax		
	comp=Z,30nm,0.9s						
PZH	**PanZhiHua**	**22.47**	**281**	P	**P**	**09 52 47.3**	**+1.0**
PZH				pP	**sP**	**09 52 49.3**	**-0.8**
PZH				sP	**pwP**	**09 52 53.8**	**+2.5**
PZH				S	**S**	**09 56 51.8**	**-1.2**
PZH				pmax	pmax		
	comp=Z,40nm,1.1s						
PZH				pmax	pmax		
	comp=Z,330nm,4.4s						
PZH				LR	LR		
	comp=Z,2µm,12.6s						
PZH				LR	LR		
	comp=Z,3µm,13.8s						
PZH				LR	LR		
	comp=Z,3µm,12.6s						
LZH	**Lanzhou**	**22.73**	**306**	⇑P	**P**	**09 52 48.0**	**-1.0**
LZH				sP	pwP	09 52 53.8	-0.3
LZH				S	**S**	**09 56 50.5**	**-7.2**
LZH				pmax	pmax		
	comp=Z,33nm,1.5s						
LZH				pmax	pmax		
	comp=Z,360nm,4.9s						
LZH				LR	LR		
	comp=Z,3µm,14.6s						
LZH				LR	LR		
	comp=Z,8µm,13.6s						
LZH				LR	LR		
	comp=Z,10µm,13.5s						
TNTI	**Ternate**	**23.51**	**178**	P	**P**	**09 52 56.8**	**-0.1**
TNTI	**Ternate**	**23.51**	**178**	P	**P**	**09 52 57.5**	**+0.6**
	comp=Z,2µmcomp=Z,137nm,1.2s						
TNTI	**Ternate**	**23.51**	**178**	P	**P**	**09 52 57.7**	**+0.8**
ASAJ	**Asahikawa**	**23.64**	**30**	P	**P**	**09 52 57.4**	**-0.6**
	comp=Z,38nm,0.7s,baz=219,slow=11,SNR=25						
	comp=Z,38nm,0.7s						
JKA	**Kamikawa-asahi**	**23.64**	**30**	IAmb	IAmb	09 53 14.8	
	comp=Z,73nm,1.1s						
TOLI2	**Tolitoli**	**23.82**	**194**	P	**P**	**09 52 59.5**	**-0.5**
TOLI2	**Tolitoli**	**23.82**	**194**	P	**P**	**09 53 00.2**	**+0.3**
GTOI	**Gorontalo**	**23.88**	**189**	P	**P**	**09 52 58.1**	**-2.4**
	comp=Z,356nmcomp=Z,21nm,0.9s						
MRSI	**Marisa**	**24.20**	**191**	P	**P**	**09 53 04.0**	**+0.5**
	comp=Z,2µmcomp=Z,120nm,1.4s						
MPSI	**Mapaga**	**24.78**	**196**	P	**P**	**09 53 10.1**	**+1.3**
	comp=Z,1µmcomp=Z,70nm,1.4s						
LBMI	**Labuha**	**24.92**	**178**	P	**P**	**09 53 10.1**	**+0.1**
	comp=Z,1µmcomp=Z,89nm,0.9s						
KLR	**Kul'dur**	**25.11**	**8**	P	**P**	**09 53 10.0**	**-1.5**
	comp=Z,21nm,0.9s,baz=218,slow=5.9,SNR=44						
	comp=Z,21nm,0.9s						
KLR	**Kul'dur**	**25.11**	**8**	*de*P	**P**	**09 53 10.3**	**-1.2**
KLR				pmax	pmax		
	comp=Z,62nm,1.7s						
HIA	**Hailar**	**25.38**	**350**	*de*P	**P**	**09 53 12.4**	**-1.5**
HIA				pmax	pmax		
	comp=Z,11nm,1.0s						
SWI	**Sorong**	**25.54**	**169**	P	**P**	**09 53 15.0**	**-0.6**
	comp=Z,35nm,1.1s						
SIJI	**Sorong**	**25.55**	**169**	P	**P**	**09 53 14.3**	**-1.4**
	comp=Z,18nm,0.8s,baz=351,slow=14,SNR=7.0						
SIJI				LR	LR	10 01 28.5	
	comp=Z,652nm,20.4s,baz=24,slow=32						
	comp=Z,18nm,0.8s						
LUWI	**Luwuk**	**25.56**	**189**	P	**P**	**09 53 16.3**	**+0.5**
	comp=Z,3µmcomp=Z,82nm,1.0s						
APSI	**Ampana**	**25.61**	**191**	P	**P**	**09 53 15.9**	**-0.4**
	comp=Z,624nmcomp=Z,58nm,1.2s						
SBUM	**Sibu**	**25.84**	**215**	P	**P**	**09 53 17.6**	**-0.7**
SBUM				IAmb	IAmb	09 53 22.5	
	comp=Z,37nm,1.0s						
YSS	**Yuzh-Sakhalins**	**25.97**	**26**	P	**P**	**09 53 18.9**	**-0.3**
YSS	**Yuzh-Sakhalins**	**25.97**	**26**	*ce*P	**P**	**09 53 19.3**	**0.0**
YSS				*e*		09 53 29.3	
YSS				*e*S	**S**	**09 57 48.2**	**-1.4**
YSS				*e*		09 57 58.0	
YSS				pmax	pmax		
	comp=Z,500nm,2.0s						
YSS				pmax	pmax		
	comp=N,300nm,2.1s						
YSS				pmax	pmax		
	comp=E,200nm,2.3s						
YSS				pmax	pmax		
	comp=Z,270nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,17.0s						
YSS	**Yuzh-Sakhalins**	**25.97**	**26**	P	**P**	**09 53 21.4**	**+2.1**
CHTO	**Chiang Mai**	**26.22**	**263**	P	**P**	**09 53 22.0**	**+0.1**
CHTO	**Chiang Mai**	**26.22**	**263**	P	**P**	**09 53 22.0**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,20nm,1.2s						
CHTO	**Chiang Mai**	**26.22**	**263**	P	**P**	**09 53 23.3**	**+1.4**
SANI	**Sanana**	**26.31**	**181**	P	**P**	**09 53 21.5**	**-1.1**
	comp=Z,1µmcomp=Z,92nm,1.4s						
SANI	**Sanana**	**26.31**	**181**	P	**P**	**09 53 21.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**26.32**	**262**	P	**P**	**09 53 23.2**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=63,slow=8.0,SNR=23						
CMAR				LR	LR	10 03 11.6	
	comp=Z,334nm,18.9s,baz=80,slow=35						
	comp=Z,4.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**26.32**	**262**	P	**P**	**09 53 23.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**26.32**	**262**	*i* P	**P**	**09 53 23.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KUR	**Kuril'sk**	**27.02**	**34**	*c i*P	**P**	**09 53 32.5**	**+3.7**
KUR				*e*S	**S**	**09 58 12.6**	**+6.3**
KUR				pmax	pmax		
	comp=Z,219nm,1.1s						
KUR				pmax	pmax		
	comp=N,75nm,1.2s						
KUR				pmax	pmax		
	comp=E,65nm,1.3s						
KUR				pmax	pmax		
	comp=Z,500nm,7.1s						
KUR				MLR	MLR		
	comp=Z,600nm,16.0s						
KUR				MLR	MLR		
	comp=N,1µm,20.0s						
GTA	**Gaotai**	**27.03**	**310**	*e*P	**P**	**09 53 27.8**	**-1.4**
GTA				pP	pwP	09 53 33.3	-1.2
GTA				sP	sP	09 53 36.0	+2.8
GTA				pmax	pmax		
	comp=N,14nm,1.3s						
GTA				pmax	pmax		
	comp=N,89nm,5.5s						
GTA				LR	LR		
	comp=N,2µm,14.9s						
GTA				LR	LR		
	comp=N,5µm,13.5s						
GTA				LR	LR		
	comp=N,5µm,14.5s						
BKB	**Balikpapan**	**27.18**	**201**	P	**P**	**09 53 31.1**	**+0.6**
	comp=N,138nm,1.3s						
GRNR	**Gornyy**	**27.41**	**14**	⇑*i*P	**P**	**09 53 32.5**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,760nm,14.0s						
GRNR				MLR	MLR		
	comp=N,1µm,13.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,14.0s						
UGL	**Uglegorsk**	**27.48**	**22**	*e*P	**P**	**09 53 36.8**	**+3.9**

UGL				eS	S	09 58 15.1	+1.7
UGL				pmax	pmax		
	comp=Z,80nm,1.0s						
UGL				pmax	pmax		
	comp=Z,470nm,2.5s						
UGL				smax	smax		
	comp=E,350nm,4.5s						
UGL				smax	smax		
	comp=N,140nm,5.0s						
UGL				MLR	MLR		
	comp=N,350nm,14.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
UGL				MLR	MLR		
	comp=Z,2µm,14.0s						
MTKI	Muara Teweh, K	27.61	206	P	P	09 53 35.8	+1.4
KSM	Kuching	27.68	217	P	P	09 53 33.2	-1.8
KSM				IAmb	IAmb	09 53 36.8	
	comp=Z,40nm,1.1s						
KSM	Kuching	27.68	217	P	P	09 53 36.0	+1.0
	comp=Z,40nm,1.2s						
FAKI	Fak Fak	27.73	168	P	P	09 53 34.5	-0.9
FAKI				IAmb	IAmb	09 53 36.1	
	comp=Z,80nm,1.0s						
FAKI	Fak Fak	27.73	168	P	P	09 53 34.8	-0.6
	comp=Z,909nmcomp=Z,89nm,1.1s						
FAKI	Fak Fak	27.73	168	P	P	09 53 35.3	-0.1
ULN	Ulaanbaatar	28.04	331	P	P	09 53 37.1	-1.1
ULN				IAmb	IAmb	09 53 42.3	
	comp=Z,80nm,1.1s						
ULN	Ulaanbaatar	28.04	331	P	P	09 53 37.1	-1.1
ULN				pmax	pmax		
	comp=Z,80nm,1.1s						
TTSI	Tana Toraja	28.06	194	P	P	09 53 45.6	+7.2
SONM	Songino Array	28.31	331	P	P	09 53 39.4	-1.1
	comp=Z,15nm,0.8s,baz=149,slow=9.1,SNR=23						
SONM				LR	LR	10 06 46.3	
	comp=Z,3µm,19.8s,baz=138,slow=40						
	comp=Z,15nm,0.8s						
SONM	Songino Array	28.31	331	P	P	09 53 39.7	-0.8
SONM				IAmb	IAmb	09 53 51.9	
	comp=Z,72nm,1.3s						
SONM	Songino Array	28.31	331	P	P	09 53 39.7	-0.8
SONM				pmax	pmax		
	comp=Z,73nm,1.3s						
SPSI	Sidrap Palu	28.96	194	P	P	09 53 45.7	-0.7
	comp=Z,11nm,1.2s						
TYV	Tymovskoe	29.20	21	eP	P	09 53 55.2	+7.0
TYV				eS	S	09 58 48.1	+7.6
TYV				pmax	pmax		
	comp=Z,82nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,3.3s						
TYV				smax	smax		
	comp=N,100nm,3.9s						
TYV				smax	smax		
	comp=E,100nm,3.9s						
ZEA	Zeya	29.29	1	eP	P	09 53 51.7	+2.7
ZEA				e		09 54 51.7	
ZEA				eS	S	09 58 41.7	-0.1
ZEA				pmax	pmax		
	comp=Z,100nm,7.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,100nm,11.9s						
ZEA				smax	smax		
	comp=N,200nm,12.9s						
ZEA				MLR	MLR		
	comp=E,1µm,11.0s						
ZEA				MLR	MLR		
	comp=N,3µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,13.0s						
GOMU	GeErMu	29.66	301	P	P	09 53 53.5	+0.5
GOMU				pP	pwP	09 53 57.3	-0.9
GOMU				sP	sP	09 54 01.0	+4.0
GOMU				S	S	09 58 41.5	-7.3
GOMU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.8s						
GOMU				LR	LR		
	comp=Z,2µm,15.2s						
GOMU				LR	LR		
	comp=Z,1µm,15.0s						
GOMU				LR	LR		
	comp=Z,2µm,14.7s						
BBKI	Banjar Baru	29.95	204	P	P	09 53 55.5	+0.3
	comp=Z,62nm,1.0s						
BBSI	Bau Bau	29.97	188	P	P	09 53 58.4	+3.1
	comp=Z,16nm,0.9s						
KAPI	Kappang	29.98	194	LR	LR	10 05 10.4	
	comp=Z,259nm,21.6s,baz=345,slow=35						
KULM	Kulim	31.30	237	P	P	09 54 07.0	-0.2
KULM				IAmb	IAmb	09 54 09.3	
	comp=Z,45nm,1.3s						
IPM	Ipoh	31.55	235	P	P	09 54 09.6	+0.3
ZAK	Zakamensk	31.57	331	eP	P	09 54 07.3	-2.0
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
LSA	Lhasa	31.86	287	P	P	09 54 12.6	0.0
LSA	Lhasa	31.86	287	P	P	09 54 12.6	0.0
LSA				pmax	pmax		
	comp=Z,12nm,0.7s						
PPBI	Pangkal Pinang	33.02	220	P	P	09 54 24.2	+2.0
MMRI	Maumere	33.11	188	P	P	09 54 24.0	+1.0
	comp=Z,72nm,1.2s						
MMRI	Maumere	33.11	188	P	P	09 54 24.0	+1.0
	comp=Z,72nm,1.2s						
EDFI	Ende, Flores	33.30	189	P	P	09 54 23.3	-1.4
	comp=Z,22nm,1.0s						
MOY	Mondy	33.50	331	eP	P	09 54 24.3	-1.9
MOY				pmax	pmax		
	comp=Z,42nm,1.7s						
RGRI	Rengat	34.00	227	P	P	09 54 28.6	-2.2
	comp=Z,61µmcomp=Z,378nm,0.4s						
SOEI	Soe	34.03	184	IAmb	IAmb	09 54 56.1	
	comp=Z,57nm,1.1s						
SOEI	Soe	34.03	184	P	P	09 54 30.0	-1.1
	comp=Z,51nm,1.2s						
SOEI	Soe	34.03	184	P	P	09 54 29.4	-1.7
JMBI	JAMBI	34.12	224	P	P	09 54 35.5	+3.7
	comp=Z,144nm,0.9s						
PLAI	Plampang	34.12	196	P	P	09 54 32.2	+0.4
	comp=Z,228nm,0.9s						
PLAI	Plampang	34.12	196	P	P	09 54 31.8	0.0
BKNI	Bangkinang	34.39	230	P	P	09 54 34.8	+0.7
BATI	Baumata	34.52	185	LR	LR	10 10 12.8	
	comp=Z,761nm,19.0s,baz=279,slow=39						
BATI	Baumata	34.52	185	P	P	09 54 33.3	-2.0
	comp=Z,56nm,0.8s						
SKR	Severo-Kuril's	34.77	33⇓	eP	P	09 54 37.4	+0.3
TAPN	Taplejung	34.95	283	eP	P	09 54 40.3	+0.9
ODAN	Odare	35.28	282	ePn	P	09 54 42.7	+0.6
	comp=Z,71nm,1.6s						
RAMN	Ramite	35.97	283	eP	P	09 54 49.2	+1.1
MDSI	Maura Dua	36.03	220	P	P	09 54 49.5	+1.2
	comp=Z,31nm,1.1s						
JIRN	Jiri	36.28	284	eP	P	09 54 51.4	+0.6
	comp=Z,35nm,0.8s						
GUN	Gumba	36.53	284	eP	P	09 54 53.6	+0.6
	comp=Z,106nm,1.1s						
PKI	Pulchoki	36.98	284	eP	P	09 54 57.3	+0.6
PKIN	Phulchoki	36.99	284	eP	P	09 54 57.4	+0.7
	comp=Z,43nm,0.9s						
PEA0B	Petropavlovsk-	37.05	31	P	P	09 54 57.9	+1.3
PEA0B	Petropavlovsk-	37.05	31⇓	eP	P	09 54 59.2	+2.6
PETK	Petropavlovsk-	37.05	31	P	P	09 54 56.9	+0.3
	comp=Z,12nm,0.8s,baz=239,slow=11,SNR=17						
PETK				LR	LR	10 11 53.0	
	comp=Z,518nm,18.4s,baz=220,slow=39						
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	37.05	31	P	P	09 54 57.5	+0.9
PETK	Petropavlovsk-	37.05	31	P	P	09 54 57.5	+0.9
KKN	Kakani	37.07	284	ePn	P	09 54 57.6	+0.2
WMQ	Urumqi	37.10	311	eP	P	09 54 58.8	+1.5
WMQ				LR	LR		
	comp=Z,4µm,11.7s						
WMQ				LR	LR		
	comp=Z,3µm,12.1s						
WMQ				LR	LR		
	comp=Z,2µm,13.9s						
DMN	Daman	37.24	284	eP	P	09 54 59.2	+0.3
MTN	Manton Dam	37.30	173	P	P	09 54 58.0	-1.0
KDU	Kakadu	37.33	170	P	P	09 54 58.1	-1.2
PET	Petropavlovsk	37.45	32	P	P	09 55 01.3	+1.3
PET				IAmb	IAmb	09 55 04.7	
	comp=Z,65nm,0.9s						
PET	Petropavlovsk	37.45	32	eP	P	09 55 00.9	+0.9
PET				eS	S	10 00 46.8	-1.4
PET				pmax	pmax		
	comp=Z,200nm,7.6s						
PET				pmax	pmax		
	comp=Z,100nm,14.0s						
PET				pmax	pmax		
	comp=Z,111nm,0.8s						
PET				MLR	MLR		
	comp=Z,800nm,19.0s						
PET				MLR	MLR		
	comp=Z,700nm,19.0s						
PET	Petropavlovsk	37.45	32	P	P	09 55 01.3	+1.3
H11N1	WAKE ISLAND Hy	37.61	89	T	T	10 35 06.6	
	baz=283,slow=75						
H11N2	WAKE ISLAND Hy	37.61	89	T	T	10 35 02.9	
	baz=283,slow=75						
H11N3	WAKE ISLAND Hy	37.62	89	T	T	10 35 00.4	
	baz=283,slow=75						
GKN	Gorkha	37.62	285	eP	P	09 55 02.2	+0.2
YAK	Yakutsk	37.67	2	P	P	09 55 00.8	-0.9
	comp=Z,6.4nm,0.3s,baz=174,slow=0.9,SNR=5.8						
YAK				LR	LR	10 11 34.2	
	comp=Z,914nm,18.2s,baz=98,slow=38						
	comp=Z,6.4nm,0.3s						
YAK	Yakutsk	37.67	2	P	P	09 55 00.0	-1.7
YAK				IAmb	IAmb	09 55 09.7	
	comp=Z,45nm,1.0s						
YAK	Yakutsk	37.67	2	eP	P	09 55 00.4	-1.3
YAK				e*PP	pwP	09 55 08.7	+1.6
YAK				e		09 56 25.4	
YAK				e		09 57 15.9	
YAK				eS	S	10 00 48.5	-2.8
YAK				eSS	SnSn	10 03 31.2	+0.9
YAK				eSSS	SSS	10 03 52.4	
YAK				e		10 05 11.2	
YAK				pmax	pmax		
	comp=Z,29nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,36nm,2.1s						
YAK				pmax	pmax		
	comp=N,23nm,1.6s						
YAK				pmax	pmax		
	comp=E,16nm,2.0s						
YAK				smax	smax		
	comp=N,28nm,1.6s						
YAK				smax	smax		
	comp=E,12nm,1.6s						
H11S3	WAKE ISLAND Hy	37.74	91	T	T	10 35 12.5	
	baz=289						
H11S1	WAKE ISLAND Hy	37.75	91	T	T	10 35 19.6	
	baz=289						
H11S2	WAKE ISLAND Hy	37.76	91	T	T	10 35 19.7	
	baz=289						
KRVT	Keravat (AS076	37.82	136	P	P	09 55 03.6	0.0
	comp=E,128nm,0.9s,baz=261,slow=4.7,SNR=23						
KRVT				LR	LR	10 09 10.5	
	comp=E,325nm,19.8s,baz=91,slow=34						
	comp=E,128nm,0.9s						
RABL	Rabaul	37.82	135	P	P	09 55 03.6	0.0
DANN	Dangsing	38.37	285	eP	P	09 55 09.1	+0.6
	comp=E,70nm,0.8s						
KOLN	Koldanda	38.56	284	ePn	P	09 55 10.4	+0.4
	comp=E,52nm,1.7s						
MA2	Magadan	39.03	19	P	P	09 55 12.8	-0.4
	comp=E,8.7nm,0.9s,baz=198,slow=6.8,SNR=5.2						
	comp=E,8.7nm,0.9s						
MA2	Magadan	39.03	19	P	P	09 55 13.3	+0.1
MA2				IAmb	IAmb	09 55 22.4	
	comp=Z,56nm,1.4s						
MA2	Magadan	39.03	19⇑	eP	P	09 55 14.7	+1.5
MA2				pmax	pmax		
	comp=Z,13nm,1.3s						
MA2	Magadan	39.03	19	P	P	09 55 14.7	+1.5
PYUN	Piuthan	39.07	285	eP	P	09 55 14.9	+0.7
	comp=Z,121nm,1.0s						
PMG	Port Moresby	39.18	147	P	P	09 55 15.2	+0.3
	comp=Z,30nm,1.0s,baz=355,slow=9.7,SNR=4.6						
PMG				LR	LR	10 09 40.9	
	comp=Z,191nm,21.3s,baz=310,slow=34						
	comp=Z,30nm,1.0s						
PMG	Port Moresby	39.18	147⇑	eP	P	09 55 15.3	+0.3
PMG				pmax	pmax		
	comp=Z,74nm,1.5s						
KNRA	Kununurra	39.90	177	IAmb	IAmb	09 55 21.5	
	comp=Z,68nm,1.0s						
KNRA	Kununurra	39.90	177	P	P	09 55 20.6	-0.3
ZSN	Zaisan	40.17	316	eP	P	09 55 21.5	-1.5
ZSN	Zaisan	40.17	316	eP	P	09 55 21.5	-1.5
	baz=316						
COEN	Coen	41.46	155	P	P	09 55 33.6	-0.2
COEN	Coen	41.46	155	P	P	09 55 34.7	+0.9
MK31	Makanchi Array	41.64	314c	iP	P	09 55 33.9	-1.2
MK31				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	Makanchi Array	41.64	314	P	P	09 55 34.1	-1.0
	comp=Z,5.2nm,0.5s,baz=98,slow=9.6,SNR=73						
MKAR				LR	LR	10 14 26.8	
	comp=Z,460nm,20.2s,baz=110,slow=38						
	comp=Z,5.2nm,0.5s						
MAKZ	Makanchi	41.85	314	P	P	09 55 35.7	-1.1
MAKZ	Makanchi	41.85	314	P	P	09 55 35.7	-1.1
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
SEY	Seymchan	42.20	17	P	P	09 55 39.7	+0.3
	comp=Z,7.4nm,0.6s,baz=223,slow=6.3,SNR=38						
SEY				LR	LR	10 14 43.0	
	comp=Z,887nm,18.4s,baz=213,slow=38						
	comp=Z,7.4nm,0.6s						
SEY	Seymchan	42.20	17c	eP	P	09 55 40.7	+1.3
SEY				pmax	pmax		
	comp=Z,49nm,2.5s						
PDGK	Podgornoye	42.74	308	P	P	09 55 42.3	-2.0
ZAA0	Zalesovo Array	42.80	325	P	P	09 55 42.7	-1.6
ZALV	Zalesovo Beam	42.80	325	P	P	09 55 42.8	-1.5
	comp=Z,22nm,0.7s,baz=112,slow=7.9,SNR=69						
ZALV				LR	LR	10 14 35.3	
	comp=Z,429nm,19.1s,baz=122,slow=38						
	comp=Z,22nm,0.7s						
ZALV	Zalesovo Beam	42.80	325	P	P	09 55 42.5	-1.9
UZB	Uzynbulak	43.05	308	eP	P	09 55 45.7	-1.1
UZB				eS	S	10 02 11.5	-1.0
UZB				pmax	pmax		
	comp=Z,26nm,1.6s						
UZB	Uzynbulak	43.05	308	eP	P	09 55 45.7	-1.1
	comp=Z,26nm,1.6s,baz=308						
UZB				eS	S	10 02 11.5	-1.0
	baz=308						
KPKS	Kokpek	43.35	308	eP	P	09 55 47.5	-1.6
KPKS				eS	S	10 02 15.6	-1.2
KPKS	Kokpek	43.35	308	eP	P	09 55 47.5	-1.6
	baz=308						
KPKS				eS	S	10 02 15.7	-1.2
	baz=308						
PRZ	Przheval'sk	43.39	307	P	P	09 55 50.6	+1.0
PRZ	Przheval'sk	43.39	307	P	P	09 55 50.6	+1.0
PRZ				pmax	pmax		
	comp=Z,29nm,1.0s						
ZHN	Zhinishke	43.48	308	eP	P	09 55 48.7	-1.5
ZHN	Zhinishke	43.48	308	eP	P	09 55 48.8	-1.5
	baz=308						
SATY	Saty	43.48	308	eP	P	09 55 49.0	-1.2
SATY				pmax	pmax		
	comp=Z,21nm,1.8s						
SATY	Saty	43.48	308	eP	P	09 55 49.0	-1.2
	comp=Z,21nm,1.8s,baz=308						
TDK	Taldyqorghan	43.83	310	eP	P	09 55 52.4	-0.5
TDK				eS	S	10 02 23.8	+0.1
TDK				pmax	pmax		
	comp=Z,25nm,1.0s						
TDK				MLR	MLR		
	comp=Z,1µm,15.0s						
TDK	Taldyqorghan	43.83	310	eP	P	09 55 52.4	-0.5
	comp=Z,24nm,1.0s,baz=310						
TDK				eS	S	10 02 23.9	+0.2
	baz=310						
TDK				LR	LR	10 14 46.0	
	comp=Z,1µm,14.6s,baz=310						
SEM	Semipalatinsk	44.03	318	eP	P	09 55 52.0	-2.6
SEM	Semipalatinsk	44.03	318	eP	P	09 55 52.0	-2.6
	baz=318						
SEM				LR	LR	10 14 56.7	
	baz=318						
KDJ	Kajisay	44.24	306	IAmb	IAmb	09 56 06.5	
	comp=Z,32nm,1.1s						
MDOK	Medeo	44.48	307	eP	P	09 55 58.0	-0.2
MDOK				MLR	MLR		
	comp=Z,1µm,14.0s						
MDOK	Medeo	44.48	307	eP	P	09 55 58.1	-0.2
	baz=308						
MDOK				LR	LR	10 15 17.4	
	comp=Z,1µm,13.6s,baz=308						
TNSS	Tian-Shan	44.53	307	eP	P	09 55 58.7	-0.3
TNSS	Tian-Shan	44.53	307	eP	P	09 55 58.8	-0.3
	baz=307						
CHKK	Chushkaly	44.62	308	eP	P	09 55 58.6	-0.6
CHKK	Chushkaly	44.62	308	eP	P	09 55 58.7	-0.6
	baz=308						
WRAB	Tennant Creek	44.73	170	P	P	09 55 59.6	-0.6
WRAB	Tennant Creek	44.73	170d	iP	P	09 55 59.9	-0.3
WRAB				pmax	pmax		
	comp=Z,70nm,1.0s						
WRAB	Tennant Creek	44.73	170	P	P	09 56 00.2	0.0
WRA	Warramunga Arr	44.74	170	P	P	09 55 59.8	-0.5
	comp=Z,38nm,0.8s,baz=352,slow=8.5,SNR=138						
WRA				PcP	PcP	09 57 41.2	-1.4
	comp=Z,3.9nm,0.9s,baz=346,slow=4.3,SNR=2.5						
WRA				LR	LR	10 13 48.9	
	comp=Z,199nm,20.7s,baz=330,slow=35						
	comp=Z,38nm,0.8s						
WRA	Warramunga Arr	44.74	170	i P	P	09 56 00.1	-0.2
WRA				pmax	pmax		
	comp=Z,39nm,0.8s						
WB2	Warramunga Arr	44.74	170	P	P	09 55 59.9	-0.4
WR0	Warramunga Arr	44.79	169	P	P	09 56 00.2	-0.5
KSH	Kashi	44.89	302	P	P	09 56 05.5	+3.9
KSH				sP	pwP	09 56 13.5	+6.6
KSH				S	S	10 02 44.0	+4.6
KSH				pmax	pmax		
	comp=Z,23nm,1.0s						
KSH				LR	LR		
	comp=Z,2µm,15.8s						
KSH				LR	LR		
	comp=Z,2µm,14.4s						
KSH				LR	LR		
	comp=Z,3µm,14.1s						
KUU	Kurty	45.09	308	eP	P	09 56 01.6	-1.4
KUU				i S	S	10 02 41.2	-0.9
KUU				pmax	pmax		
	comp=Z,19nm,0.8s						
KUU				MLR	MLR		
	comp=Z,1µm,16.0s						
KUU	Kurty	45.09	308	eP	P	09 56 01.6	-1.4
	comp=Z,19nm,0.8s,baz=308						
KUU				i S	S	10 02 41.2	-0.9
	baz=308						
KUU				LR	LR	10 15 48.7	
	comp=Z,1µm,15.6s,baz=308						
KURK	Kurchatov	45.11	318	P	P	09 56 02.3	-0.7
KURK	Kurchatov	45.11	318d	eP	P	09 56 02.3	-0.7
KURK				pmax	pmax		
	comp=Z,15nm,1.0s						
KURBB	Kurchatov Arra	45.14	318	P	P	09 56 02.1	-1.1
	comp=Z,4.8nm,0.7s,baz=106,slow=8.6,SNR=33						
KURBB				PcP	PcP	09 57 43.0	-0.6
	comp=Z,2.7nm,0.9s,baz=107,slow=6.5,SNR=1.4						
KURBB				LR	LR	10 18 14.4	
	comp=Z,368nm,18.2s,baz=87,slow=41						
	comp=Z,4.8nm,0.7s						
KURBB	Kurchatov Arra	45.14	318	P	P	09 56 01.4	-1.8
HYBB	Hyderabad (bro	45.17	271	eP	P	09 56 03.3	-0.7
TKM2	Tokmak 2	45.50	307	i P	P	09 56 05.7	-0.8
TKM2				pmax	pmax		
	comp=Z,27nm,0.8s						
MTSU	Mount Surprise	45.71	156	P	P	09 56 09.3	+1.3
MBWA	Marble Bar	45.78	189	P	P	09 56 07.3	-1.2
MBWA				IAmb	IAmb	09 56 08.7	
	comp=Z,31nm,0.9s						
MBWA	Marble Bar	45.78	189	P	P	09 56 07.8	-0.7
PSA00	Pilbara Seismi	46.17	189	IAmb	IAmb	09 56 11.9	
	comp=Z,29nm,1.0s						
PSA00	Pilbara Seismi	46.17	189	P	P	09 56 10.9	-0.7
SGDS	Sogindy	46.27	308	eP	P	09 56 10.9	-1.4
SGDS	Sogindy	46.27	308	eP	P	09 56 11.0	-1.4
	baz=308						
AAK	Ala-Archa	46.27	306	P	P	09 56 12.8	+0.3
	comp=Z,3.5nm,0.7s,baz=270,slow=5.1						
AAK				LR	LR	10 18 49.7	
	comp=Z,2µm,18.6s,baz=106,slow=40						
	comp=Z,3.5nm,0.7s						
AAK	Ala-Archa	46.27	306	P	P	09 56 12.7	+0.2
AAK	Ala-Archa	46.27	306c	iP	P	09 56 13.2	+0.7
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
QIS	Mount Isa	46.48	163	P	P	09 56 14.4	+0.3
HNR	Honiara	46.85	132	LR	LR	10 13 33.0	
	comp=Z,156nm,21.7s,baz=286,slow=33						
BTLS	Baital	46.88	310	eP	P	09 56 15.8	-1.3
BTLS				pmax	pmax		
	comp=Z,17nm,1.6s						
BTLS	Baital	46.88	310	eP	P	09 56 15.9	-1.3
	comp=Z,17nm,1.6s,baz=310						
NIL	Nilore	47.05	294	P	P	09 56 17.4	-1.2
NIL				IAmb	IAmb	09 56 34.9	
	comp=Z,30nm,1.0s						
NIL	Nilore	47.05	294	P	P	09 56 17.4	-1.2
NIL				pmax	pmax		
	comp=Z,30nm,1.0s						
TIXI	Tiksi	47.29	1	P	P	09 56 18.2	-1.6
	comp=Z,9.8nm,1.1s,baz=91,slow=23,SNR=17						
TIXI				LR	LR	10 18 00.6	
	comp=Z,774nm,18.5s,baz=180,slow=38						
	comp=Z,9.8nm,1.1s						
TIXI	Tiksi	47.29	1	P	P	09 56 18.0	-1.8
TIXI				IAmb	IAmb	09 56 26.6	
	comp=Z,37nm,1.4s						
TIXI	Tiksi	47.29	1c	eP	P	09 56 18.7	-1.1
TIXI				pmax	pmax		
	comp=Z,27nm,1.7s						
DRK	Karamyk	48.11	302	IAmb	IAmb	09 56 37.5	
	comp=Z,38nm,1.1s						
CTA	Charters Tower	48.22	155	LR	LR	10 15 37.5	
	comp=Z,283nm,20.7s,baz=320,slow=35						
CTA	Charters Tower	48.22	155	P	P	09 56 28.5	+0.9
CTAO	Charters Tower	48.22	155	P	P	09 56 28.1	+0.5
CTAO	Charters Tower	48.22	155	P	P	09 56 28.2	+0.5
CTAO				pmax	pmax		
	comp=Z,83nm,1.6s						
CTAO	Charters Tower	48.22	155	P	P	09 56 28.6	+0.9
ASAR	Alice Springs	48.33	171	P	P	09 56 28.4	-0.1
	comp=Z,15nm,0.8s,baz=358,slow=7.9,SNR=124						
ASAR				PcP	PcP	09 57 54.9	-0.3
	comp=Z,6.6nm,0.9s,baz=355,slow=3.8,SNR=8.0						
	comp=Z,15nm,0.8s						
DZA	Taraz	48.62	306	eP	P	09 56 29.8	-0.8
DZA	Taraz	48.62	306	eP	P	09 56 29.8	-0.8
	baz=306						
BRZS	Berezniki	48.62	316	eP	P	09 56 28.6	-1.9
BRZS				pmax	pmax		
	comp=Z,13nm,1.7s						
BRZS	Berezniki	48.62	316	eP	P	09 56 28.7	-1.9
	comp=Z,13nm,1.7s,baz=316						
BTK	Batken	48.88	303	IAmb	IAmb	09 56 41.7	
	comp=Z,52nm,1.6s						
WRKA	Warakurna	49.19	178	P	P	09 56 35.4	+0.4
KK31	Karatay Array	49.23	307	IAmb	IAmb	09 56 46.1	
	comp=Z,41nm,1.4s						
KK31	Karatay Array	49.23	307	i P	P	09 56 35.2	-0.1
KKAR	Karatay Array	49.23	307	IAmb	IAmb	09 56 46.1	
	comp=Z,41nm,1.4s						
IUG	Iuzhnay	49.53	305	eP	P	09 56 37.5	-0.2
IUG	Iuzhnay	49.53	305	eP	P	09 56 37.6	-0.2
	baz=305						
BILL	Bilibino	49.87	18	P	P	09 56 40.0	+0.2
BILL				IAmb	IAmb	09 56 51.5	
	comp=Z,68nm,1.4s						
BILL	Bilibino	49.87	18d	iP	P	09 56 40.4	+0.6
BILL				i		09 57 54.5	
BILL				i S	S	10 03 48.3	-1.1
BILL				pmax	pmax		
	comp=Z,34nm,1.4s						
BILL				MLR	MLR		
	comp=Z,510nm,18.0s						
CHGR	Chuyangaron	50.17	301	IAmb	IAmb	09 56 44.1	
	comp=Z,49nm,0.9s						

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KBL   Kabul            50.47 296    P     P      09 56 45.8 +0.7
KBL                                 IAmb  IAmb   09 56 55.3
      comp=Z,58nm,1.3s
KBL   Kabul            50.47 296    P     P      09 56 45.8 +0.7
KBL                                 pmax  pmax
      comp=Z,58nm,1.3s
NRIK  Noril'sk         50.52 343    P     P      09 56 44.0 -0.7
      comp=Z,35nm,1.1s,baz=125,slow=7.9,SNR=32
NRIK                                LR    LR     10 20 44.8
      comp=Z,2µm,18.5s,baz=102,slow=39
      comp=Z,35nm,1.1s
NRIK  Noril'sk         50.52 343    P     P      09 56 43.1 -1.5
NRIK                                IAmb  IAmb   09 56 52.4
      comp=Z,40nm,1.1s
NRIK  Noril'sk         50.52 343ceP       P      09 56 43.8 -0.9
NRIK                                pmax  pmax
      comp=Z,40nm,1.0s
BRVK  Borovoye         50.70 320    P     P      09 56 45.6 -0.7
BRVK                                IAmb  IAmb   09 56 55.4
      comp=Z,31nm,1.2s
BRVK  Borovoye         50.70 320c iP      P      09 56 45.7 -0.5
BRVK                                pmax  pmax
      comp=Z,21nm,1.0s
OOD   Oodnadatta       52.65 170    P     P      09 57 01.2 +0.2
RK1H  Rockhampton Ha   52.90 152    P     P      09 57 03.6 +0.6
QLP   Quilpie          53.50 160    P     P      09 57 07.2 -0.2
INKA  Innaminka        53.63 164    P     P      09 57 08.6 +0.4
MORW  Morawa           54.12 191    IAmb  IAmb   09 57 12.3
      comp=Z,16nm,0.9s
MORW  Morawa           54.12 191    P     P      09 57 12.1 +0.3
MULG  Mulgathing       54.86 172    P     P      09 57 17.1 -0.1
FORT  Forrest          54.90 178    P     P      09 57 18.2 +0.8
EIDS  Eidsvold         54.90 153    P     P      09 57 17.0 -0.6
EIDS                                IAmb  IAmb   09 57 18.6
      comp=Z,30nm,1.2s
EIDS  Eidsvold         54.90 153    P     P      09 57 17.6  0.0
RMQ   Roma             54.97 156    P     P      09 57 18.5 +0.4
BLDU  Ballidu          55.52 190    P     P      09 57 22.2 +0.3
LCRK  Leigh Creek      55.69 168    P     P      09 57 23.7 +0.6
HRA   Herat            56.07 296    P     P      09 57 25.1 -1.2
SVE   Sverdlovsk       56.77 323⇑eP       P      09 57 31.2 +0.6
SVE                                 pmax  pmax
      comp=Z,47nm,1.1s
SVE                                 MLR   MLR
      comp=Z,2µm,17.0s
AB31  Akbulak array    56.78 314  i P     P      09 57 30.1 -0.8
ABKAR Akbulak array    56.78 314    IAmb  IAmb   09 57 32.2
      comp=Z,28nm,1.0s
MUN   Mundaring        56.93 190    P     P      09 57 32.4 +0.4
BBOO  Buckleboo        57.62 170    P     P      09 57 37.0 +0.1
NWAO  Narrogin (SRO)   57.70 189    P     P      09 57 37.1 -0.4
NWAO  Narrogin (SRO)   57.70 189    P     P      09 57 37.1 -0.4
NWAO                                pmax  pmax
      comp=Z,161nm,1.4s
NWAO  Narrogin (SRO)   57.70 189    P     P      09 57 37.9 +0.5
STKA  Stephens Creek   57.80 165    P     P      09 57 37.5 -0.6
      comp=Z,11nm,0.7s,baz=347,slow=6.7,SNR=26
STKA                                PcP   PcP    09 58 30.6 -0.1
      comp=Z,2.5nm,0.8s,baz=346,slow=6.3,SNR=3.0
      comp=Z,11nm,0.7s
STKA  Stephens Creek   57.80 165    P     P      09 57 38.4 +0.3
ARU   Arti             57.88 323    P     P      09 57 37.5 -1.0
      comp=Z,10nm,0.2s,baz=121,slow=3.4,SNR=24
ARU                                 LR    LR     10 24 42.1
      comp=Z,1µm,18.3s,baz=82,slow=38
      comp=Z,10nm,0.2s
ARU   Arti             57.88 323    P     P      09 57 36.8 -1.6
ARU                                 IAmb  IAmb   09 57 51.6
      comp=Z,34nm,1.0s
ARU   Arti             57.88 323c iP      P      09 57 38.2 -0.3
ARU                                              09 58 26.9
ARU                                 S     S      10 05 40.2 +2.2
ARU                                 SS    SS     10 09 28.0 -0.4
ARU                                 pmax  pmax
      comp=Z,35nm,1.1s
ARU                                 MLR   MLR
      comp=Z,935nm,16.0s
AKTO  Aktyubinsk       58.03 315    LR    LR     10 23 18.9
      comp=Z,292nm,20.3s,baz=93,slow=37
AKTO  Aktyubinsk       58.03 315    P     P      09 57 38.9 -0.8
NAPP  Napperby         58.33 169    P     P      09 57 42.5 +0.7
CMSA  Cobar Meteorol   58.58 161    P     P      09 57 44.8 +1.2
HTT   Hallett          58.72 168    P     P      09 57 45.3 +0.7
GEYT  Alibeck          58.88 301    P     P      09 57 46.7 +0.8
      comp=Z,2.8nm,0.4s,baz=218,slow=12,SNR=5.5
GEYT                                LR    LR     10 28 02.3
      comp=Z,650nm,18.8s,baz=88,slow=41
      comp=Z,2.8nm,0.4s
GEYT  Alibeck          58.88 301    P     P      09 57 47.0 +1.1
TWOA  Tennyson Woods   60.21 169    P     P      09 57 55.9 +1.1
DZM   Mont Dzumac      60.33 137    P     P      09 57 55.8 -0.2
      comp=Z,23nm,1.1s,baz=356,slow=16,SNR=5.2
      comp=Z,23nm,1.1s
DZM   Mont Dzumac      60.33 137    P     P      09 57 56.3 +0.3
DZM                                 IAmb  IAmb   09 57 58.1
      comp=Z,35nm,1.3s
DZM   Mont Dzumac      60.33 137    P     P      09 57 57.4 +1.4
YATNC Mamie plateau,   60.60 136    P     P      09 57 59.3 +1.6
CHNA  Chernabura Isl   61.21  39    P     P      09 58 01.9 +0.4
      baz=272,SNR=7.2
WSAR  Wadi Sarin       61.52 284    LR    LR     10 28 02.0
      comp=Z,202nm,19.8s,baz=103,slow=39
N16K  Nishlik Lake     61.56  33    P     P      09 58 04.3 +0.5
      baz=270
O16K  Kokwok River B   61.91  34    P     P      09 58 07.3 +1.2
      baz=271
GCSA  Galena City Sc   62.49  28    P     P      09 58 11.1 +1.2
      baz=269
ARPS  Mount Arapiles   62.54 166    P     P      09 58 11.0 +0.4
KIRV  Kirov            62.83 325    P     P      09 58 12.0 -0.3
      comp=Z,25nm,0.7s,baz=46,slow=3.8,SNR=15
KIRV                                LR    LR     10 28 45.2
      comp=Z,998nm,18.0s,baz=98,slow=39
      comp=Z,25nm,0.7s
KIRV  Kirov            62.83 325ceP       P      09 58 12.1 -0.2
TTA   Tatalina         62.87  30    P     P      09 58 13.2 +0.6
      baz=271,SNR=11
N18K  Kilae Creek      62.98  33    P     P      09 58 14.2 +0.9
      baz=272,SNR=7.0
SVW2  Sparrevohn       63.12  32    P     P      09 58 15.7 +1.4
SVW2                                IAmb  IAmb   09 58 23.8
      comp=Z,20nm,0.9s
O18K  Koktuh Hills     63.36  34    P     P      09 58 17.1 +1.2
      baz=273
L19K  White Mountain   63.43  31    P     P      09 58 16.8 +0.5
L19K                                IAmb  IAmb   09 58 25.6
      comp=Z,28nm,1.0s
L19K  White Mountain   63.43  31    P     P      09 58 17.7 +1.4
      baz=272,SNR=14
M19K  Big River Lodg   63.66  31    P     P      09 58 19.5 +1.7
      baz=273
N19K  Bonanza Creek    63.67  32    P     P      09 58 18.6 +0.7
      baz=273,SNR=6.2
J20K  Nowinta River    63.68  29    IAmb  IAmb   09 58 26.5
      comp=Z,27nm,0.8s
J20K  Nowinta River    63.68  29    P     P      09 58 19.1 +1.2
      baz=272,SNR=27
K20K  Telida           63.74  30    P     P      09 58 19.7 +1.4
      baz=272,SNR=34
BRAT  Ballarat         63.77 165    P     P      09 58 19.7 +1.0
IMAR  Indian Mountai   63.80  27    P     P      09 58 18.9 +0.3
L20K  Farewell, AK     63.87  31    P     P      09 58 20.2 +1.0
      baz=273,SNR=16
TOO   Toolangi         64.18 163    P     P      09 58 22.1 +0.6
TOO   Toolangi         64.18 163    P     P      09 58 22.1 +0.6
TOO                                 pmax  pmax
      comp=Z,52nm,1.3s
TOO   Toolangi         64.18 163    P     P      09 58 22.5 +1.0
H21K  Melozitna Rive   64.20  27    P     P      09 58 22.8 +1.5
      baz=272,SNR=45
M20K  Styx River       64.25  31    P     P      09 58 23.4 +1.6
      baz=274
BELG  Belogornoye      64.39 318    P     P      09 58 21.5 -1.1
      comp=Z,18nm,0.7s,baz=217,slow=0.4,SNR=6.3
BELG                                LR    LR     10 29 55.4
      comp=Z,641nm,18.1s,baz=99,slow=39
      comp=Z,18nm,0.7s
BELG  Belogornoye      64.39 318c iP      P      09 58 22.3 -0.4
PRGR  Permogore        64.54 329  eP      P      09 58 22.7 -0.8
I21K  Tanana           64.56  28    P     P      09 58 25.2 +1.5
      baz=273,SNR=8.7
OHAK  Old Harbor       64.57  36    P     P      09 58 25.1 +1.3
      baz=276
PPLA  Purkeypile       64.62  30    P     P      09 58 24.5 +0.2
      baz=274,SNR=10
CAST  Castle Rocks     64.63  29    P     P      09 58 25.5 +1.3
      baz=274,SNR=8.4
KDAK  Kodiak Island    64.89  36    P     P      09 58 26.2 +0.3
      comp=Z,5.0nm,0.9s,baz=276,slow=10,SNR=2.2
      comp=Z,5.0nm,0.9s
BPAW  Bear Paw Mtn.    65.06  29    P     P      09 58 28.1 +1.1
      baz=275,SNR=7.6
MLY   Manley           65.10  28    IAmb  IAmb   09 58 36.1
      comp=Z,29nm,1.0s
MLY   Manley           65.10  28    P     P      09 58 28.4 +1.2
      baz=274,SNR=18
TOLK  Toolik Lake Re   65.30  24    P     P      09 58 29.5 +1.0
TOLK                                IAmb  IAmb   09 58 36.5
      comp=Z,24nm,0.8s
TOLK  Toolik Lake Re   65.30  24    P     P      09 58 30.4 +2.0
      baz=274,SNR=6.3
MSVF  Nonsavu          65.41 125    P     P      09 58 31.0 +1.1
      comp=Z,37nm,1.1s,baz=223,slow=2.6,SNR=11
      comp=Z,37nm,1.1s
MSVF  Nonsavu          65.41 125    P     P      09 58 30.9 +1.1
MSVF  Nonsavu          65.41 125deP       P      09 58 31.3 +1.4
MSVF                                pmax  pmax
      comp=Z,66nm,1.2s
MSVF  Nonsavu          65.41 125    P     P      09 58 31.6 +1.7
TRF   Thorofare Moun   65.43  29    P     P      09 58 31.0 +1.4
      baz=276,SNR=8.1
H23K  Yukon River      65.53  27    P     P      09 58 32.0 +2.0
      baz=275,SNR=83
BRSE  Bradley Lake S   65.62  33    P     P      09 58 31.8 +1.2
      baz=277,SNR=5.4
I23K  Minto, Yukon-K   65.67  27    IAmb  IAmb   09 58 39.8
      comp=Z,20nm,1.1s
I23K  Minto, Yukon-K   65.67  27    P     P      09 58 32.2 +1.4
      baz=276,SNR=7.5
M22K  Willow           65.69  31    P     P      09 58 31.3 +0.3
      baz=277,SNR=11
DGTI  Dogotuki         65.82 123    P     P      09 58 34.0 +1.5
NEA2  Nenana           65.85  28    P     P      09 58 33.2 +1.1
      baz=276,SNR=11
MCK   McKinley         66.00  29    IAmb  IAmb   09 58 42.0
      comp=Z,33nm,1.0s
MCK   McKinley         66.00  29    P     P      09 58 33.7 +0.7
      baz=277,SNR=7.9
PMR   Palmer           66.18  31    IAmb  IAmb   09 58 44.9
      comp=Z,15nm,1.0s
PMR   Palmer           66.18  31    P     P      09 58 33.8 -0.3
      baz=278,SNR=6.4
H24K  Noodor Dome      66.21  27    IAmb  IAmb   09 58 43.5
      comp=Z,31nm,0.9s
H24K  Noodor Dome      66.21  27    P     P      09 58 35.8 +1.4
      baz=277,SNR=13
WRH   Wood River Hil   66.28  28    IAmb  IAmb   09 58 44.3
      comp=Z,22nm,1.0s
COLA  College          66.34  28    P     P      09 58 42.3 +7.2
POKR  Poker Plat Res   66.48  27    P     P      09 58 38.2 +2.1
POKR  Poker Plat Res   66.48  27    P     P      09 58 38.5 +2.4
      baz=277,SNR=9.7
KNK   Knik Glacier     66.52  31    IAmb  IAmb   09 58 45.2
      comp=Z,23nm,0.9s
KNK   Knik Glacier     66.52  31    P     P      09 58 36.9 +0.5
      baz=278
SML   Sawmill          66.53  31    P     P      09 58 38.0 +1.5
      baz=278,SNR=5.6
WAT6  Susitna Watana   66.69  30    P     P      09 58 37.8 +0.1
      baz=278,SNR=5.4
ILAR  Eielson Array    66.76  28    P     P      09 58 37.3 -0.6
      comp=Z,0.8nm,0.7s,baz=270,slow=5.7,SNR=7.7
ILAR                                LR    LR     10 30 59.6
      comp=Z,230nm,18.0s,baz=294,slow=39
      comp=Z,0.8nm,0.7s
HDA   Harding Lake     66.78  28    P     P      09 58 38.2 +0.2
      baz=278,SNR=19
M23K  Glacier View     66.81  31    P     P      09 58 38.8 +0.5
      baz=279
SCM   Sheep Creek Mo   66.99  31    IAmb  IAmb   09 58 48.0
      comp=Z,24nm,0.8s
SCM   Sheep Creek Mo   66.99  31    P     P      09 58 40.1 +0.6
      baz=279,SNR=6.4
P23K  Montague Islan   67.25  33    P     P      09 58 41.7 +0.7
      baz=280
K24K  Donnelly Dome    67.38  29    P     P      09 58 42.7 +0.8
      baz=279,SNR=13
J25K  Salcha River,    67.43  28    P     P      09 58 42.8 +0.6
      baz=279,SNR=5.7
M24K  Tolsona, Glenn   67.49  31    P     P      09 58 43.4 +0.8
      baz=280,SNR=8.6
KLMR  Klimovskoe       67.56 328  eP      P      09 58 41.7 -1.3
KLMR                              e              10 01 11.1
KLMR                                pmax  pmax
      comp=Z,63nm,1.5s
KLMR                                MLR   MLR
      comp=Z,2µm,14.0s
KLMR  Klimovskoe       67.56 328  eP      P      09 58 41.7 -1.3
KLMR                                AMP          09 58 52.1
      comp=Z,63nm,1.5s
KLMR                              ePP     PP     10 01 11.1 -0.5
KLMR                                LQ    LQ     10 23 38.7
KLMR                                LQ    LQ     10 23 38.7
KLMR                                LR    LR     10 29 12.5
KLMR                                AMP          10 32 23.7
      comp=Z,2µm,14.0s
PAX   Paxson           67.66  30    IAmb  IAmb   09 58 52.4
      comp=Z,14nm,0.8s
PAX   Paxson           67.66  30    P     P      09 58 44.2 +0.5
      baz=280,SNR=9.5
KLU   Klutina          67.71  31    IAmb  IAmb   09 58 53.1
      comp=Z,13nm,0.8s
KLU   Klutina          67.71  31    P     P      09 58 44.6 +0.6
      baz=280,SNR=7.1
RIDG  Independent Ri   67.80  29    P     P      09 58 45.4 +0.8
      baz=280,SNR=16
DIV   Divide           67.85  32    IAmb  IAmb   09 58 54.2
      comp=Z,23nm,0.8s
SCRK  Sand Creek       68.13  28    IAmb  IAmb   09 58 54.5
      comp=Z,16nm,0.8s
SCRK  Sand Creek       68.13  28    P     P      09 58 46.9 +0.2
      baz=281,SNR=11
VRH   Novokhopyorsk    68.20 318  eP      P      09 58 46.3 -0.9
VRH                                 pmax  pmax
      comp=Z,20nm,0.4s
J26L  Joseph Creek     68.22  28    P     P      09 58 47.2  0.0
      baz=281,SNR=15
N25K  Chitina, Valde   68.31  31    P     P      09 58 48.7 +0.8
      baz=281
LVZ   Lovozero         68.34 336 ⇓P       P      09 58 46.1 -1.7
BMRM  Bremner River    68.44  32    IAmb  IAmb   09 58 57.5
      comp=Z,17nm,0.8s
BMRM  Bremner River    68.44  32    P     P      09 58 48.8 +0.2
      baz=282,SNR=7.8
L26K  Log Cabin Wild   68.60  29    IAmb  IAmb   09 58 58.9
      comp=Z,18nm,1.0s
L26K  Log Cabin Wild   68.60  29    P     P      09 58 50.5 +1.0
      baz=282,SNR=14
ZEI   Tsey             68.64 308  eP      P      09 58 50.4  0.0
ZEI                                 pmax  pmax
      comp=Z,20nm,1.0s
GNI   Garni            68.67 305    LR    LR     10 34 40.4
      comp=Z,144nm,21.5s,baz=75,slow=41
GOF   Gofitskoye       68.70 311⇑eP       P      09 58 59.9 +9.4
GOF                                 pmax  pmax
      comp=Z,50nm,1.3s
GLB   Gilahina Butte   68.72  31    IAmb  IAmb   09 58 59.3
      comp=Z,14nm,0.8s
APA   Apatity          68.87 336⇓iP       P      09 58 51.0 -0.1
APA                                 pmax  pmax
      comp=Z,16nm,0.9s
APA                                 MLR   MLR
      comp=Z,1µm,16.0s
M26K  Nabesna, AK      68.89  30    P     P      09 58 52.2 +0.8
      baz=282,SNR=16
VRDI  Verde Repeater   68.93  31    IAmb  IAmb   09 59 00.6
      comp=Z,18nm,0.8s
K27K  Chicken          68.95  28    IAmb  IAmb   09 59 01.0
      comp=Z,32nm,1.1s
K27K  Chicken          68.95  28    P     P      09 58 52.4 +0.7
      baz=282
MCARA McCarthy VSAT    69.10  31    P     P      09 58 53.7 +1.0
      baz=283,SNR=7.3
KBZ   Khabaz           69.12 310    P     P      09 58 53.8 +0.8
      comp=Z,5.8nm,0.7s,baz=69,slow=5.8,SNR=9.8
KBZ                                 LR    LR     10 33 50.9
      comp=Z,606nm,18.2s,baz=58,slow=40
      comp=Z,5.8nm,0.7s
KBZ   Khabaz           69.12 310ceP       P      09 58 54.5 +1.5
KBZ                                 pmax  pmax
      comp=Z,11nm,0.8s
EGAK  Eagle            69.17  27    IAmb  IAmb   09 59 01.4
      comp=Z,20nm,0.9s
EGAK  Eagle            69.17  27    P     P      09 58 53.8 +0.8
      baz=283,SNR=18
KIV   Kislovodsk       69.21 310 ⇓P       P      09 58 53.0 -0.8
KIV   Kislovodsk       69.21 310    P     P      09 58 53.3 -0.4
KIV   Kislovodsk       69.21 310  eP      P      09 58 54.9 +1.1
KIV                               eS      S      10 08 01.4 +1.5
KIV                                 pmax  pmax
      comp=Z,40nm,1.0s
KIV                                 pmax  pmax
      comp=Z,8.0nm,4.3s
KIV                                 MLR   MLR
      comp=Z,366nm,17.0s
L27K  Beaver Creek,    69.27  29    IAmb  IAmb   09 59 03.4
      comp=Z,30nm,1.4s
L27K  Beaver Creek,    69.27  29    P     P      09 58 54.8 +1.1
      baz=283,SNR=14
M27K  Edge Creek, AK   69.41  30    IAmb  IAmb   09 59 04.0
      comp=Z,14nm,0.8s
M27K  Edge Creek, AK   69.41  30    P     P      09 58 55.4 +0.6
      baz=283,SNR=14
LPSR  Galich'ya Gora   69.58 319  eP      P      09 58 55.2 -0.5
LPSR                                pmax  pmax
      comp=Z,20nm,0.9s
MOS   Moscow           69.58 323  eP      P      09 59 03.1 +7.4
MOS                                 MLR   MLR
      comp=Z,500nm,16.0s
VORR  Voronezh         69.63 318  eP      P      09 58 57.2 +1.1
VORR                                pmax  pmax
      comp=Z,70nm,0.4s
VORD  Divnogorie       69.75 318  eP      P      09 58 56.7 -0.1
VORD                                pmax  pmax
      comp=Z,10.0nm,1.1s
VSR   Storozhevoye     69.76 318  eP      P      09 58 56.0 -0.9
VSR                                 pmax  pmax
      comp=Z,20nm,1.0s
BVCY  Beaver Creek     69.86  30    P     P      09 58 57.8 +0.5
      baz=284,SNR=5.5
CTG   Chitna Glacier   69.99  31    P     P      09 58 58.3  0.0
      baz=284,SNR=12
CTGM  Chitina Glacie   69.99  31    IAmb  IAmb   09 59 08.1
      comp=Z,22nm,0.8s
DAWY  Dawson           70.09  28    IAmb  IAmb   09 59 07.8
      comp=Z,20nm,1.0s
DAWY  Dawson           70.09  28    P     P      09 58 59.7 +0.9
      baz=285,SNR=15
YUK3  Moose Creek      70.20  30    P     P      09 59 00.4 +0.7
      baz=285,SNR=6.8
I29M  Ogilvie Camp,    70.20  26    IAmb  IAmb   09 59 08.6
      comp=Z,32nm,0.9s
I29M  Ogilvie Camp,    70.20  26    P     P      09 59 00.5 +1.1
      baz=285,SNR=8.2
SPITS Spitsbergen Ar   70.28 348    LR    LR     10 34 28.0
      comp=Z,146nm,18.8s,baz=15,slow=40
SPITS Spitsbergen Ar   70.28 348    P     P      09 59 01.7 +2.0
SPITS                               pmax  pmax
      comp=Z,137nm,1.7s
OBN   Obninsk          70.32 322  i P     P      09 59 00.4 +0.2
OBN                               i              09 59 03.8
OBN                                 pmax  pmax
      comp=Z,17nm,1.5s
OBN                                 MLR   MLR
      comp=Z,662nm,16.0s
EPYK  Eagle Plains     70.56  25    P     P      09 59 02.5 +0.9
      baz=286
YUK8  Steele Glacier   70.65  31    P     P      09 59 03.0 +0.5
      baz=286
ARCES ARCESS Array B   71.13 339    P     P      09 59 05.2 +0.2
      comp=Z,4.2nm,0.8s,baz=69,slow=5.7,SNR=8.8
ARCES                               LR    LR     10 38 06.4
      comp=Z,465nm,18.4s,baz=67,slow=42
      comp=Z,4.2nm,0.8s
ARCES ARCESS Array B   71.13 339    IAmb  IAmb   09 59 13.9
      comp=Z,34nm,1.4s
YUK4  Talbot Arm       71.15  30    P     P      09 59 06.8 +1.3
      baz=286,SNR=6.3
INK   Inuvik           71.16  23    P     P      09 59 05.0 -0.1
      comp=Z,7.6nm,1.1s,baz=286,slow=8.5,SNR=9.9
INK                                 LR    LR     10 34 12.3
      comp=Z,317nm,18.2s,baz=268,slow=39
      comp=Z,7.6nm,1.1s
INK   Inuvik           71.16  23    P     P      09 59 05.7 +0.6
INK   Inuvik           71.16  23    P     P      09 59 05.7 +0.6
INK                                 pmax  pmax
      comp=Z,44nm,1.0s
INK   Inuvik           71.16  23    P     P      09 59 05.9 +0.8
      baz=288,SNR=12
SOC   Sochi            71.39 310  eP      P      09 59 06.0 -1.0
SOC                               ePPP    PPP    10 03 24.3
SOC                               eS      S      10 08 25.6 +0.5
SOC                               eSS     SS     10 12 58.3 -0.8
SOC                                 MLR   MLR
      comp=Z,458nm,17.0s
YUK6  Outpost Mounta   71.39  31    P     P      09 59 08.3 +1.3
      baz=287,SNR=7.9
M30M  Minto, Yukon     71.63  29    P     P      09 59 08.9 +0.7
      baz=288,SNR=7.5
HYT   Haines Junctio   71.83  31    IAmb  IAmb   09 59 20.0
      comp=Z,23nm,1.1s
HYT   Haines Junctio   71.83  31    P     P      09 59 10.5 +1.0
      baz=288,SNR=8.1
N30M  Aishikik Lake    71.83  30    P     P      09 59 10.4 +1.0
      baz=288,SNR=7.0
N31M  Braeburn, Yuko   72.42  30    IAmb  IAmb   09 59 23.4
      comp=Z,32nm,1.1s
N31M  Braeburn, Yuko   72.42  30    P     P      09 59 14.2 +1.3
      baz=289,SNR=5.5
A36M  Sachs Harbour    72.43  18    P     P      09 59 13.6 +0.9
      baz=295,SNR=14
O30N  Mendenhall       72.51  31    P     P      09 59 14.3 +0.9
      baz=289,SNR=7.5
ANN   Anapa            72.61 312  eP      P      09 59 11.0 -3.3
ANN                               eS      S      10 08 37.0 -2.1
ANN                                 pmax  pmax
      comp=Z,57nm,1.2s
PLBC  Pleasant Camp    72.80  32    P     P      09 59 15.8 +0.6
      baz=289,SNR=6.9
M31M  Drury Creek, Y   72.81  29    IAmb  IAmb   09 59 25.0
      comp=Z,16nm,0.8s
M31M  Drury Creek, Y   72.81  29    P     P      09 59 16.0 +0.8
      baz=290,SNR=13
RAYN  Ar Rayn          72.92 288    P     P      09 59 16.8 +0.2
RAYN                                IAmb  IAmb   09 59 25.7
      comp=Z,36nm,1.4s
RAYN  Ar Rayn          72.92 288 ⇑P       P      09 59 17.8 +1.2
WHY   Whitehorse       73.11  31    IAmb  IAmb   09 59 27.1
      comp=Z,19nm,1.0s
WHY   Whitehorse       73.11  31    P     P      09 59 17.8 +0.7
      baz=290,SNR=7.7
FARO  Faro, Yukon      73.26  29    P     P      09 59 19.0 +1.2
      baz=290,SNR=16
SKAG  Skagway          73.30  32    IAmb  IAmb   09 59 28.9
      comp=Z,23nm,0.9s
SKAG  Skagway          73.30  32    P     P      09 59 19.4 +1.4
      baz=290,SNR=8.7
FINES FINESS Array B   73.68 331    P     P      09 59 20.3  0.0
      comp=Z,2.5nm,0.6s,baz=70,slow=5.2,SNR=15
FINES                               LR    LR     10 35 05.4
      comp=Z,389nm,18.8s,baz=64,slow=39
      comp=Z,2.5nm,0.6s
FINES FINESS Array B   73.68 331    P     P      09 59 19.6 -0.7
FINES FINESS Array B   73.68 331  i P     P      09 59 20.6 +0.3
FINES                               pmax  pmax
      comp=Z,3.0nm,0.6s
C36M  Paulatuk         73.93  20    IAmb  IAmb   09 59 29.3
      comp=Z,44nm,1.0s
C36M  Paulatuk         73.93  20    P     P      09 59 22.0 +0.4
      baz=297,SNR=12
MMPY  Sheldon Lake,    74.02  28    P     P      09 59 23.3 +1.0
      baz=292,SNR=6.6
JIS   Juneau Island    74.17  33    IAmb  IAmb   09 59 34.4
      comp=Z,23nm,0.9s
P33M  Teslin, Yukon    74.22  31    IAmb  IAmb   09 59 34.2
      comp=Z,31nm,1.1s
P33M  Teslin, Yukon    74.22  31    P     P      09 59 24.6 +1.0
      baz=292
VSU   Vasula           74.45 327ceP       P      09 59 25.0 +0.2
VSU                                 pmax  pmax
      comp=Z,22nm,1.0s
VSU   Vasula           74.45 327  eP      P      09 59 25.4 +0.6
SIM   Simferopol'      74.80 313    P     P      09 59 29.6 +2.4
SIM                                 pmax  pmax
      comp=Z,33nm,1.0s
MNK   Minsk            75.29 323  i P     P      09 59 16.4   -13
      comp=E,3.0nm,0.9s
MNK                               i P     P      09 59 16.4   -13
      comp=N,22nm,1.0s
MNK                               i P     P      09 59 16.4   -13
      comp=Z,10.0nm,0.6s,baz=248
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MNK				*i* PP	PP	10 02 04.6	-13
MNK				*i* PPP	PPP	10 03 50.5	
MNK				*i* S	**SKiKP**	**10 08 55.0**	**+2.2**
MNK				*i* SS	SS	10 13 46.6	-11
MNK				*i* SSS	SSS	10 17 09.1	
MNK				*i* LQ	LQ	10 27 59.3	
MNK				*i* LR	LR	10 33 07.4	
MNK				*i* LRM	MLR	10 34 40.4	
	comp=E,129nm,22.4s						
MNK				*i* LRM	MLR	10 35 05.8	
	comp=N,641nm,17.9s						
MNK				*i* LRM	MLR	10 35 12.8	
	comp=Z,346nm,17.9s						
NACGM	**Naroch**	**75.73**	**324**	*e*P	**P**	**09 59 34.5**	**+2.1**
	baz=67						
MTSE	**Matsula**	**75.77**	**328**	*e*P	**P**	**09 59 33.2**	**+0.8**
AKASG	**Malin Array Be**	**75.91**	**319**	P	**P**	**09 59 33.0**	**-0.4**
	comp=Z,3.3nm,0.6s,baz=55,slow=7.4,SNR=19						
AKASG				LR	LR	10 35 43.2	
	comp=Z,392nm,18.0s,baz=54,slow=38						
	comp=Z,3.3nm,0.6s						
AKASG	**Malin Array Be**	**75.91**	**319**	IAmb	IAmb	09 59 43.1	
	comp=Z,38nm,1.6s						
AKASG	**Malin Array Be**	**75.91**	**319**	*i* P	**P**	**09 59 33.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	**75.91**	**319**	IAmb	IAmb	09 59 42.0	
	comp=Z,54nm,1.4s						
AKBB	**Malin Array Si**	**75.91**	**319**	*de*P	**P**	**09 59 33.5**	**+0.1**
DLBC	**Dease Lake**	**76.23**	**32**	LR	LR	10 34 59.0	
	comp=Z,178nm,19.5s,baz=306,slow=37						
DLBC	**Dease Lake**	**76.23**	**32**	IAmb	IAmb	09 59 46.8	
	comp=Z,18nm,1.1s						
DLBC	**Dease Lake**	**76.23**	**32**	P	**P**	**09 59 36.3**	**+1.1**
	baz=294						
T35M	**Bob Quinn**	**76.72**	**33**	P	**P**	**09 59 39.6**	**+1.6**
	baz=294						
DAG	**Danmarks Havn**	**76.85**	**352**	*i* P	**P**	**09 59 37.0**	**-1.2**
DAG				IAmb	IAmb	09 59 45.7	
	comp=Z,16nm,1.1s						
BR131	**Keskin Array S**	**76.93**	**308**	*de*P	**P**	**09 59 41.8**	**+2.2**
BRTR	**Keskin Array B**	**76.93**	**308**	P	**P**	**09 59 39.1**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=89,slow=5.2,SNR=7.5						
BRTR				LR	LR	10 38 42.3	
	comp=Z,161nm,19.0s,baz=90,slow=40						
	comp=Z,1.9nm,0.6s						
BRTR	**Keskin Array B**	**76.93**	**308**	*i* P	**P**	**09 59 40.2**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PABE	**Paberze**	**76.98**	**325**	*e*P	**P**	**09 59 40.0**	**+0.7**
SORM	**Soroca**	**77.39**	**317**	⇑P	**P**	**09 59 42.1**	**+0.3**
SORM	**Soroca**	**77.39**	**317**	⇑P	**P**	**09 59 42.1**	**+0.3**
RES	**Resolute Bay**	**77.61**	**10**	LR	LR	10 36 23.9	
	comp=Z,124nm,19.6s,baz=282,slow=38						
MMAI	**Mount Meron Ar**	**78.00**	**301**	LR	LR	10 41 08.3	
	comp=Z,177nm,18.4s,baz=232,slow=41						
SUW	**Suwalki**	**78.02**	**324**	*e*P	**P**	**09 59 45.9**	**+0.7**
TPGR	**Topolog**	**78.61**	**314**	⇑P	**P**	**09 59 49.3**	**+0.6**
CFR	**Carcaliu**	**78.67**	**314**	⇑P	**P**	**09 59 50.6**	**+1.6**
CFR	**Carcaliu**	**78.67**	**314**	⇑P	**P**	**09 59 50.6**	**+1.6**
TIRR	**Tirgusor**	**78.77**	**314**	⇑P	**P**	**09 59 50.3**	**+0.7**
TIRR	**Tirgusor**	**78.77**	**314**	⇑P	**P**	**09 59 50.3**	**+0.7**
CSS	**Mathiatis**	**78.89**	**303**	IAmb	IAmb	09 59 59.3	
	comp=Z,35nm,1.2s						
TESR	**Tescani**	**79.09**	**316**	⇓P	**P**	**09 59 52.0**	**+0.7**
RPZ	**Rata Peaks**	**79.15**	**149**	P	**P**	**09 59 50.6**	**-0.8**
	comp=Z,16nm,0.9s,baz=308,slow=22,SNR=3.6						
	comp=Z,16nm,0.9s						
DBG	**Daneborg**	**79.17**	**351**	*e*P	**P**	**09 59 48.2**	**-3.0**
DBG				IAmb	IAmb	09 59 59.5	
	comp=Z,21nm,1.3s						
BIZ	**Bicaz**	**79.26**	**317**	⇑P	**P**	**09 59 53.1**	**+0.9**
LVV	**L'vov**	**79.32**	**320**	*e*P	**P**	**09 59 53.4**	**+0.9**
PLOR	**Plostina**	**79.36**	**316**	⇑P	**P**	**09 59 54.3**	**+1.5**
PLOR	**Plostina**	**79.36**	**316**	⇑P	**P**	**09 59 54.3**	**+1.5**
BISRR	**Bisoca**	**79.44**	**315**	⇓P	**P**	**09 59 55.2**	**+1.8**
BURAR	**Bucovina Array**	**79.53**	**318**	⇑P	**P**	**09 59 54.9**	**+1.1**
BURAR	**Bucovina Array**	**79.53**	**318**	⇑P	**P**	**09 59 54.9**	**+1.1**
COVR	**Voineasa-Covas**	**79.65**	**316**	⇑P	**P**	**09 59 54.5**	**+0.1**
HFS	**Hagfors**	**79.70**	**332**	LR	LR	10 40 43.6	
	comp=Z,581nm,18.2s,baz=56,slow=40						
OZUR		**79.81**	**316**	⇑P	**P**	**09 59 56.6**	**+1.3**
JMIC	**Jan Mayen**	**79.81**	**346**	LR	LR	10 39 41.3	
	comp=Z,159nm,18.3s,baz=72,slow=39						
MLR	**Muntele Rosu**	**79.96**	**315**	⇑P	**P**	**09 59 57.6**	**+1.4**
MLR	**Muntele Rosu**	**79.96**	**315**	LR	LR	10 39 41.5	
	comp=Z,312nm,19.2s,baz=57,slow=39						
MLR	**Muntele Rosu**	**79.96**	**315**	P	**P**	**09 59 55.0**	**-1.2**
MLR	**Muntele Rosu**	**79.96**	**315**	⇑P	**P**	**09 59 57.6**	**+1.4**
NC405	**NORSAR Array S**	**80.01**	**333**	IAmb	IAmb	10 00 10.4	
	comp=Z,39nm,0.9s						
DOPR	**Dopca**	**80.11**	**316**	⇑P	**P**	**09 59 58.2**	**+1.3**
NB201	**NORSAR Array S**	**80.21**	**333**	IAmb	IAmb	10 00 18.6	
	comp=Z,31nm,1.0s						
NB2	**NORSAR Subarra**	**80.25**	**333**	P	**P**	**09 59 56.8**	**-0.6**
	comp=Z,30nm,2.0s,baz=56,slow=5.3						
NOA	**NORSAR Array B**	**80.25**	**333**	P	**P**	**09 59 56.5**	**-0.9**
	comp=Z,2.6nm,0.7s,baz=54,slow=5.6,SNR=15						
NOA				LR	LR	10 39 47.6	
	comp=Z,1µm,18.2s,baz=55,slow=39						
	comp=Z,2.6nm,0.7s						
NC204	**NORSAR Array S**	**80.30**	**334**	IAmb	IAmb	10 00 12.1	
	comp=Z,28nm,0.9s						
VOIR		**80.55**	**316**	⇑P	**P**	**10 00 00.5**	**+1.1**
VOIR		**80.55**	**316**	⇑P	**P**	**10 00 00.5**	**+1.1**
KOLS	**Kolonicke sedl**	**80.74**	**320**	*e*P	**P**	**10 00 03.1**	**+2.9**
KOLS	**Kolonicke sedl**	**80.74**	**320**	*e*P	**P**	**10 00 03.1**	**+2.9**
YKA	**Yellowknife Ar**	**80.81**	**24**	P	**P**	**09 59 59.7**	**-0.6**
	comp=Z,3.5nm,0.9s,baz=303,slow=5.1,SNR=7.6						
	comp=Z,3.5nm,0.9s						
YKA	**Yellowknife Ar**	**80.81**	**24**	*i* P	**P**	**10 00 00.8**	**+0.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
UZH	**Uzhgorod**	**80.86**	**319**	*e*P	P	10 00 05.8	+5.0
UZH				*e*		10 00 08.0	
UZH				*i*		10 00 15.0	
CRVS	**Cervenica-Dubn**	**81.23**	**320**	*e*P	P	10 00 08.6	+5.8
CRVS				pmax	pmax		
	comp=Z,32nm,1.3s						
CRVS	**Cervenica-Dubn**	**81.23**	**320**	*e*P	P	10 00 08.6	+5.8
GZR	**Gura Zlata**	**82.01**	**316**	⇓P	**P**	**10 00 07.8**	**+0.7**
GZR	**Gura Zlata**	**82.01**	**316**	⇓P	**P**	**10 00 07.8**	**+0.7**
RDO	**Rodhopi**	**82.06**	**312**	IAmb	IAmb	10 00 16.2	
	comp=Z,19nm,1.1s						
SIRR	**Siria**	**82.31**	**317**	⇑P	**P**	**10 00 10.7**	**+2.1**
HERR	**Herculane**	**82.47**	**316**	⇓P	**P**	**10 00 10.4**	**+1.0**
PSZ	**Piszkesteto**	**82.61**	**319**	⇓P	**P**	**10 00 11.3**	**+1.1**
PSZ	**Piszkesteto**	**82.61**	**319**	⇓P	**P**	**10 00 11.3**	**+1.1**
PSZ	**Piszkesteto**	**82.61**	**319**	P	P	10 00 16.1	+5.9
BZS	**Buzias**	**82.64**	**317**	⇓P	**P**	**10 00 13.0**	**+2.7**
BZS	**Buzias**	**82.64**	**317**	⇓P	**P**	**10 00 13.0**	**+2.7**
OKC	**Ostrava-Krasne**	**82.70**	**322**	AMS	AMS	10 42 30.0	
	comp=Z,600nm,15.2s						
SUMG	**Summit**	**82.73**	**355**	IAmb	IAmb	10 00 23.8	
	comp=Z,29nm,1.0s						
SUMG	**Summit**	**82.73**	**355**	*i* P	**P**	**10 00 11.0**	**+0.3**
SUMG				IAmb	IAmb	10 00 22.9	
	comp=Z,35nm,1.1s						
SCO	**Scoresbysund**	**82.77**	**350**	P	**P**	**10 00 10.7**	**+0.3**
SCO				IAmb	IAmb	10 00 20.8	
	comp=Z,35nm,1.3s						
SCO	**Scoresbysund**	**82.77**	**350**	P	**P**	**10 00 10.7**	**+0.3**
SCO				pmax	pmax		
	comp=Z,35nm,1.3s						
SCO	**Scoresbysund**	**82.77**	**350**	*e*P	**P**	**10 00 12.2**	**+1.8**
SCO				IAmb	IAmb	10 00 20.4	
	comp=Z,42nm,1.4s						
BLKB	**Belogradchik**	**82.88**	**315**	⇑P	P	10 00 03.0	-8.6
VYHS	**Vyhne**	**82.96**	**320**	*e*P	**P**	**10 00 15.6**	**+3.7**
VYHS				pmax	pmax		
	comp=Z,16nm,1.4s						
VYHS	**Vyhne**	**82.96**	**320**	*e*P	**P**	**10 00 15.6**	**+3.7**
VTS	**Vitosha**	**82.96**	**314**	⇑P	**P**	**10 00 13.5**	**+1.3**
VTS	**Vitosha**	**82.96**	**314**	⇑P	**P**	**10 00 13.5**	**+1.3**
VTS	**Vitosha**	**82.96**	**314**	*e*P	**P**	**10 00 12.9**	**+0.7**
MDVR	**Moldovita**	**82.96**	**316**	⇓P	**P**	**10 00 13.0**	**+0.9**
MORC	**Moravsky Berou**	**83.07**	**322**	⇓P	**P**	**10 00 14.1**	**+1.6**
MORC	**Moravsky Berou**	**83.07**	**322**	P	**P**	**10 00 12.0**	**-0.5**
MORC	**Moravsky Berou**	**83.07**	**322**	⇓P	**P**	**10 00 14.1**	**+1.6**
MORC	**Moravsky Berou**	**83.07**	**322**	*e*P	**P**	**10 00 14.2**	**+1.7**
MMB	**Musomiste**	**83.09**	**313**	*e*P	P	10 00 19.1	+6.3
MAUC	**Maruska**	**83.11**	**321**	AMS	AMS	10 42 40.0	
	comp=Z,1µm,14.1s						
KOLL	**Kolacno**	**83.17**	**321**	*e*P	**P**	**10 00 16.9**	**+3.9**
KRLC	**Kraliky**	**83.35**	**322**	AMS	AMS	10 43 00.0	
	comp=Z,600nm,12.4s						
KKB	**Krupnik**	**83.40**	**313**	*e*P	P	10 00 19.7	+5.4
OSTC	**Ostas**	**83.42**	**323**	AMS	AMS	10 41 00.0	
	comp=Z,1µm,13.7s						
JAVC	**Velka Javorina**	**83.45**	**321**	*e*P	**P**	**10 00 18.6**	**+4.1**
DPC	**Dobruska-Polom**	**83.46**	**323**	AMS	AMS	10 41 10.0	
	comp=Z,1µm,13.9s						
CHVC	**Chvalec**	**83.49**	**323**	AMS	AMS	10 41 10.0	
	comp=Z,900nm,14.8s						
UPC	**Upice**	**83.55**	**323**	AMS	AMS	10 41 10.0	
	comp=Z,1µm,13.6s						
SMOL	**Smolenice**	**83.76**	**321**	*e*P	**P**	**10 00 20.5**	**+4.5**
SMOL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SMOL	**Smolenice**	**83.76**	**321**	*e*P	**P**	**10 00 20.5**	**+4.5**
VRAC	**Vranov**	**83.84**	**322**	⇓P	**P**	**10 00 18.0**	**+1.6**
VRAC	**Vranov**	**83.84**	**322**	LR	LR	10 42 18.5	
	comp=Z,451nm,18.1s,baz=63,slow=39						
VRAC	**Vranov**	**83.84**	**322**	⇓P	**P**	**10 00 18.0**	**+1.6**
VRAC	**Vranov**	**83.84**	**322**	*e*P	**P**	**10 00 18.9**	**+2.5**
MODS	**Modra-Piesok**	**83.92**	**321**	*e*P	P	10 00 22.6	+5.7
MODS	**Modra-Piesok**	**83.92**	**321**	*e*P	P	10 00 22.6	+5.7
FRGS	**Fruska Gora**	**83.98**	**317**	⇓P	**P**	**10 00 18.2**	**+1.0**
KRUC	**Moravsky**	**84.08**	**322**	*e*P	**P**	**10 00 19.7**	**+2.1**
ZST	**Bratislava**	**84.11**	**321**	*e*P	P	10 00 22.6	+4.8
ZST	**Bratislava**	**84.11**	**321**	*e*P	P	10 00 22.6	+4.8
SANT	**Santorini**	**84.18**	**307**	⇓P	**P**	**10 00 21.2**	**+2.7**
MORH	**Mrgy, Hungar**	**84.18**	**318**	⇓P	**P**	**10 00 19.9**	**+1.7**
PVCC	**Panska Ves**	**84.33**	**323**	AMS	AMS	10 42 30.0	
	comp=Z,1µm,13.4s						
TREC	**Trest**	**84.47**	**322**	AMS	AMS	10 41 50.0	
	comp=Z,700nm,16.9s						
BRG	**Berggiesshubel**	**84.48**	**324**	*e*P	**P**	**10 00 21.3**	**+1.6**
BRG				Amp		10 00 24.2	
	comp=Z,7.6nm,1.1s						
BRG				*e*x	x	10 00 28.4	
BRG				Amp		10 00 29.4	
	comp=Z,20nm,1.2s						
BRG				Amp		10 43 08.0	
	comp=Z,1.1nm,16.4s						
BRG				Amp		10 43 22.0	
	comp=E,0.7nm,18.8s						
BRG				Amp		10 43 23.0	
	comp=N,0.5nm,15.9s						
BRG	**Berggiesshubel**	**84.48**	**324**	*e*P	**P**	**10 00 21.2**	**+1.6**
BRG				*e*		10 00 28.3	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,20nm,1.2s						
LIT	**Litokhoron**	**84.60**	**312**	IAmb	IAmb	10 00 29.6	
	comp=Z,25nm,1.1s						
PRU	**Pruhonice**	**84.63**	**323**	*e*S	**S**	**10 10 49.0**	**+1.4**
PRU				AMS	AMS	10 41 50.0	
	comp=Z,900nm,14.1s						
CLL	**Collm**	**84.75**	**325**	IAmb	IAmb	10 00 30.2	
	comp=Z,46nm,1.5s						
CLL	**Collm**	**84.75**	**325**	*e*P	**P**	**10 00 22.0**	**+1.0**
	comp=Z,11nm,1.0s						
CLL				*i* x	x	10 00 28.4	
	comp=Z,32nm,1.4s						
CLL				*i* x	x	10 00 35.4	
CLL				*e*PP	**PP**	**10 03 30.0**	**-6.5**
CLL				*e*x	x	10 04 16.0	
CLL				*e*(PPPP)		10 07 12.0	
CLL				*e*S	**S**	**10 10 45.0**	**-3.7**
CLL				*e*PS	**PnS**	**10 11 47.0**	**+4.3**
CLL				*e*SS	**SS**	**10 16 24.0**	**+4.5**
CLL				*e*SSS	SSS	10 20 12.0	
CLL				Lmax		10 44 00.0	
RONA	**Rosalia, Austr**	**84.83**	**320**	*e*P	**P**	**10 00 23.3**	**+1.7**
CONA	**Conrad Observa**	**84.96**	**321**	*e*P	**P**	**10 00 23.6**	**+1.3**
	comp=Z,13nm,1.3s						
D03D	**Eldon**	**85.00**	**40**	P	**P**	**10 00 23.6**	**+1.2**
	baz=301						
IDI	**Anoyia**	**85.07**	**306**	⇓P	**P**	**10 00 26.0**	**+3.0**
IDI	**Anoyia**	**85.07**	**306**	LR	LR	10 42 12.4	
	comp=Z,88nm,19.2s,baz=86,slow=38						
CKRC	**Cesky Krumlov**	**85.38**	**322**	*e*S	**S**	**10 10 56.7**	**+1.6**
CKRC				AMS	AMS	10 42 10.0	
	comp=Z,600nm,16.9s						
ARSA	**Arzberg**	**85.51**	**320**	*e*P	**P**	**10 00 27.2**	**+2.2**
	comp=Z,5.7nm,1.0s						
KHC	**Kasperske Hory**	**85.62**	**323**	*e*P	**P**	**10 00 21.0**	**-4.4**
KHC				*e*S	**S**	**10 10 56.7**	**-0.8**
KHC				MLR	MLR		
	comp=Z,1µm,14.4s						
KHC	**Kasperske Hory**	**85.62**	**323**	*e*P	**P**	**10 00 21.0**	**-4.4**
KHC				x	x	10 00 32.5	
KHC				*e*S	**S**	**10 10 56.7**	**-0.8**
KHC				AMS	AMS	10 42 30.0	
	comp=Z,1µm,14.4s						
NKC	**Novy Kostel**	**85.63**	**324**	AMS	AMS	10 44 10.0	
	comp=Z,1µm,14.3s						
GEC2	**GERESS Array S**	**85.70**	**322**	IAmb	IAmb	10 00 35.2	
	comp=Z,17nm,1.3s						
GERES	**GERESS Array B**	**85.70**	**322**	P	**P**	**10 00 26.1**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=57,slow=11,SNR=9.5						
GERES				LR	LR	10 41 40.2	
	comp=Z,488nm,19.0s,baz=64,slow=38						
	comp=Z,0.8nm,0.5s						
E04D	**Cinebar**	**85.81**	**40**	P	**P**	**10 00 27.8**	**+1.4**
	baz=302						
D05A	**Enumclaw**	**85.82**	**40**	IAmb	IAmb	10 00 43.7	
	comp=Z,14nm,1.0s						
MOA	**Molln**	**85.92**	**321**	*e*P	**P**	**10 00 28.0**	**+1.1**
	comp=Z,4.5nm,0.4s						
SOKA	**Soboth**	**86.10**	**320**	*e*P	**P**	**10 00 27.5**	**-0.5**
	comp=Z,13nm,1.3s						
F04A	**Amboy**	**86.23**	**41**	IAmb	IAmb	10 00 30.3	
	comp=Z,17nm,1.0s						
ICESG	**Greenland Ices**	**86.23**	**355**	*e*P	**P**	**10 00 31.1**	**+2.7**
ICESG				IAmb	IAmb	10 00 47.1	
	comp=Z,19nm,1.0s						
BIOA	**Bad Ischl, Aus**	**86.36**	**321**	*e*P	**P**	**10 00 30.9**	**+1.7**
H04D	**Lebanon**	**86.77**	**42**	P	**P**	**10 00 32.5**	**+1.4**
	baz=302						
I03D	**Drain, OR**	**86.82**	**43**	P	**P**	**10 00 32.2**	**+0.8**
	baz=301						
KBA	**Koelnbreinsper**	**86.86**	**321**	*e*P	**P**	**10 00 34.0**	**+2.2**
	comp=Z,12nm,1.6s						
MYKA	**Terra Mystica**	**86.93**	**321**	*e*P	**P**	**10 00 35.5**	**+3.5**
	comp=Z,7.6nm,1.0s						
EDM	**Edmonton**	**86.94**	**31**	IAmb	IAmb	10 00 43.8	
	comp=Z,21nm,1.2s						
K02D	**Willamette Mer**	**87.14**	**44**	P	**P**	**10 00 33.6**	**+0.5**
	baz=301						
G05D	**Wamic, OR**	**87.25**	**41**	P	**P**	**10 00 34.7**	**+1.1**
	baz=302						
I04A	**Tendick Farm,**	**87.35**	**43**	P	**P**	**10 00 35.2**	**+1.1**
	baz=302						
ABTA	**Abfaltersbach**	**87.52**	**321**	*e*P	**P**	**10 00 35.3**	**+0.4**
	comp=Z,10nm,1.0s						
BORG	**Borgarnes**	**87.70**	**347**	LR	LR	10 43 09.1	
	comp=Z,162nm,18.9s,baz=29,slow=38						
I05D	**Terrebonne, OR**	**87.72**	**42**	P	**P**	**10 00 36.4**	**+0.6**
	baz=302						
WATA	**Walderalm**	**87.72**	**322**	*e*P	**P**	**10 00 37.4**	**+1.5**
	comp=Z,5.9nm,0.8s						
WTTA	**Wattenberg**	**87.73**	**322**	*e*P	**P**	**10 00 35.0**	**-1.0**
	comp=Z,13nm,1.2s						
J04D	**Umpqua Nationa**	**87.83**	**43**	P	**P**	**10 00 36.8**	**+0.2**
J04D	**Umpqua Nationa**	**87.83**	**43**	P	**P**	**10 00 37.3**	**+0.7**
	baz=302						
NEW	**Newport**	**87.97**	**37**	P	**P**	**10 00 38.0**	**+1.0**
	baz=305						
MOTA	**Moosalm**	**87.98**	**322**	*e*P	**P**	**10 00 37.4**	**+0.2**
	comp=Z,8.3nm,1.0s						
SQTA	**Sankt Quirin**	**88.00**	**322**	*e*P	**P**	**10 00 36.4**	**-0.8**
	comp=Z,9.4nm,1.0s						
RETA	**Reutte**	**88.09**	**322**	*e*P	**P**	**10 00 37.1**	**-0.5**
	comp=Z,3.2nm,0.6s						
L04D	**Klamath Falls**	**88.25**	**44**	P	**P**	**10 00 39.3**	**+0.8**
	baz=302						
PINE	**Pine Mountain**	**88.26**	**42**	P	**P**	**10 00 39.8**	**+1.2**
PINE				IAmb	IAmb	10 00 41.2	
	comp=Z,19nm,1.1s						
J05D	**Fort Rock, OR**	**88.35**	**43**	P	**P**	**10 00 40.6**	**+1.6**
	baz=303						
K04D	**Chiloquin, OR**	**88.38**	**43**	P	**P**	**10 00 40.4**	**+1.3**
	baz=302						
FETA	**Feichten**	**88.38**	**322**	*e*P	**P**	**10 00 39.0**	**0.0**
	comp=Z,9.6nm,1.0s						
DAVA	**Damuels**	**88.70**	**323**	*e*P	**P**	**10 00 43.5**	**+2.9**
	comp=Z,15nm,1.1s						
SFJD	**Kangerlussuaq**	**88.85**	**359**	LR	LR	10 42 24.8	
	comp=Z,140nm,18.3s,baz=348,slow=37						
K05A	**Summer Lake**	**88.86**	**43**	IAmb	IAmb	10 00 43.9	
	comp=Z,14nm,1.0s						
DAVOX	**Davos/Dischmat**	**88.99**	**322**	LR	LR	10 45 00.7	
	comp=Z,669nm,19.9s,baz=64,slow=39						
WALA	**Waterton Lakes**	**89.22**	**35**	IAmb	IAmb	10 00 45.4	
	comp=Z,14nm,1.4s						
EKA	**Eskdalemuir Ar**	**89.73**	**334**	LR	LR	10 46 08.3	
	comp=Z,959nm,18.0s,baz=14,slow=39						
MSO	**Missoula**	**90.56**	**37**	IAmb	IAmb	10 01 11.1	
	comp=Z,11nm,1.2s						
MSO	**Missoula**	**90.56**	**37**	P	**P**	**10 00 50.0**	**+0.7**
	baz=308						
FRB	**Frobisher Bay**	**91.34**	**7**	LR	LR	10 46 26.2	
	comp=Z,251nm,18.1s,baz=358,slow=39						
EMB	**Emerald Bay**	**91.40**	**46**	IAmb	IAmb	10 01 04.2	
	comp=Z,12nm,1.4s						
MFID	**Camas Ranch**	**91.53**	**40**	IAmb	IAmb	10 00 56.2	
	comp=Z,11nm,1.2s						
EGMT	**Eagleton**	**92.01**	**34**	P	**P**	**10 00 57.2**	**+1.3**
	baz=311						
DLMT	**Dillon**	**92.20**	**37**	IAmb	IAmb	10 00 59.6	
	comp=Z,17nm,1.1s						
HLID	**Hailey**	**92.27**	**39**	IAmb	IAmb	10 00 60.0	
	comp=Z,8.2nm,0.9s						
HLID	**Hailey**	**92.27**	**39**	P	**P**	**10 00 58.7**	**+1.4**
	baz=307						
BOZ	**Bozeman (W)**	**92.58**	**37**	P	**P**	**10 00 59.4**	**+0.7**
	baz=309						
LHV	**Little Huntoon**	**92.84**	**46**	IAmb	IAmb	10 01 02.5	
	comp=Z,11nm,1.2s						
NVAR	**Mina Array Bea**	**92.87**	**45**	P	**P**	**10 01 00.6**	**+0.3**
	comp=Z,4.2nm,1.0s,baz=276,slow=4.8,SNR=19						
	comp=Z,4.2nm,1.0s						
MLAC	**Mammoth, Mammo**	**92.97**	**46**	P	**P**	**10 01 02.7**	**+2.0**
	baz=304						
YHL	**Hebgen Lake**	**93.30**	**37**	IAmb	IAmb	10 01 05.2	
	comp=Z,10nm,1.1s						
YMR	**Madison River**	**93.53**	**37**	IAmb	IAmb	10 01 05.8	
	comp=Z,7.3nm,0.9s						
YPP	**Pitchstone Pla**	**93.88**	**37**	IAmb	IAmb	10 01 38.4	
	comp=Z,12nm,1.5s						
H17A	**Grant Village**	**93.92**	**37**	IAmb	IAmb	10 01 08.9	
	comp=Z,7.3nm,1.0s						
H17A	**Grant Village**	**93.92**	**37**	P	**P**	**10 01 08.2**	**+3.2**
	baz=310						
FLWY	**Flagg Ranch**	**94.06**	**37**	IAmb	IAmb	10 01 26.4	
	comp=Z,8.7nm,1.1s						
CWC	**Cottonwood Cre**	**94.14**	**47**	P	**P**	**10 01 06.7**	**+0.7**
	baz=304						
RLMT	**Red Lodge**	**94.16**	**36**	IAmb	IAmb	10 01 27.8	
	comp=Z,9.9nm,1.4s						
RLMT	**Red Lodge**	**94.16**	**36**	P	**P**	**10 01 06.9**	**+0.8**
	baz=311						
R11A	**Troy Canyon, C**	**94.67**	**44**	P	**P**	**10 01 09.2**	**+0.8**
	baz=306						
FURC	**Furnace Creek,**	**94.93**	**46**	P	**P**	**10 01 10.3**	**+0.9**
	baz=305						
LRMC	**Laurel Mtn Rad**	**94.95**	**48**	P	**P**	**10 01 11.1**	**+1.4**
	baz=305						
TPNV	**Topopah Spring**	**95.06**	**46**	P	**P**	**10 01 11.0**	**+0.8**
	baz=306						
EDW2	**Edwards Air Fo**	**95.07**	**48**	P	**P**	**10 01 11.4**	**+1.1**
	baz=304						
HWUT	**Hardware Ranch**	**95.13**	**40**	IAmb	IAmb	10 01 21.5	
	comp=Z,8.2nm,1.3s						
QSM	**Queen of Sheba**	**95.22**	**47**	IAmb	IAmb	10 01 12.6	
	comp=Z,8.5nm,1.1s						
GWY	**Greenwater Val**	**95.22**	**46**	IAmb	IAmb	10 01 12.8	
	comp=Z,9.3nm,1.4s						
MBAR	**Mbarara**	**95.52**	**272**	LR	LR	10 46 54.8	
	comp=Z,80nm,19.1s,baz=88,slow=37						
PDAR	**Pinedale Array**	**95.54**	**38**	P	**P**	**10 01 11.5**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=321,slow=1.9,SNR=8.6						
	comp=Z,1.0nm,0.9s						
GSC	**Goldstone, Bar**	**95.64**	**47**	IAmb	IAmb	10 01 14.7	
	comp=Z,6.6nm,1.1s						
GSC	**Goldstone, Bar**	**95.64**	**47**	P	**P**	**10 01 14.1**	**+1.3**
	baz=305						
SHOC	**Shoshone, Teco**	**95.65**	**47**	P	**P**	**10 01 13.7**	**+0.9**
	baz=306						
KEST	**Kesra**	**95.73**	**313**	LR	LR	10 52 17.2	
	comp=Z,154nm,18.8s,baz=270,slow=40						
SHPR	**Sheep Range**	**96.02**	**46**	P	**P**	**10 01 14.2**	**-0.5**
TUQ	**Turquoise Moun**	**96.15**	**47**	P	**P**	**10 01 16.3**	**+1.1**
	baz=306						
ULM	**Lac du Bonnet**	**96.72**	**26**	LR	LR	10 49 16.3	
	comp=Z,68nm,18.8s,baz=317,slow=38						
PFO	**Pinyon Flats O**	**96.84**	**48**	P	**P**	**10 01 18.8**	**+0.4**
	baz=305						
TPFO	**Pinon Flats**	**96.85**	**48**	P	**P**	**10 01 19.0**	**+0.6**
	baz=305						
P17A	**Butcher Ranch,**	**96.97**	**41**	IAmb	IAmb	10 01 20.9	
	comp=Z,5.5nm,1.2s						
BC3	**Big Chuckawall**	**97.50**	**48**	P	Pdif	10 01 22.4	+1.0
	baz=306						
WUAZ	**Wupatki**	**99.06**	**44**	P	**Pdif**	**10 01 30.4**	**+2.0**
	baz=309						
TROLL	**Troll, Antarti**	**123.30**	**198**	PKPdf	**PKPdf**	**10 06 43.5**	**+0.3**
SNAA	**Sanae**	**124.95**	**197**	PKPdf	**PKPdf**	**10 06 46.2**	**0.0**
BELA	**Belgrano 2**	**125.74**	**185**	PKPdf	**PKPdf**	**10 06 46.1**	**-1.5**
VNA2	**Neumayer--Watz**	**126.59**	**197**	PKPdf	**PKPdf**	**10 06 49.6**	**+0.3**
	baz=91,slow=1.3						
VNA1	**Neumayer--Stat**	**126.98**	**197**	PKPdf	**PKPdf**	**10 06 50.4**	**+0.4**
VNA3	**Neumayer Olymp**	**126.99**	**196**	PKPdf	**PKPdf**	**10 06 50.1**	**0.0**
BAUV	**El Baul**	**143.93**	**25**	PKPdf	PKPab	10 07 19.7	-0.6
USHA	**Ushuaia**	**147.65**	**164**	PKPbc	**PKPbc**	**10 07 30.4**	**-0.5**
	comp=Z,14nm,0.9s,baz=163,slow=1.3,SNR=9.1						
MG03	**Isla Dawson**	**147.96**	**161**		**PKPbc**	**10 07 31.0**	**-0.8**
ATAH	**Atahualpa**	**150.59**	**58**	PKPbc	**PKPbc**	**10 07 39.2**	**-1.0**
	comp=Z,8.2nm,1.0s,baz=17,slow=5.8,SNR=6.2						
LPAZ	**La Paz**	**164.06**	**62**	PKP	**PKPdf**	**10 07 51.4**	**-0.4**
	comp=Z,3.1nm,1.1s,baz=348,slow=3.6,SNR=4.1						
LPAZ	**La Paz**	**164.06**	**62**		**PKPdf**	**10 07 50.8**	**-1.0**
LPAZ	**La Paz**	**164.06**	**62**	PKIKP	**PKPdf**	**10 07 50.8**	**-1.0**
SIV	**San Ignacio**	**169.00**	**42**	PKP	**PKPdf**	**10 07 53.6**	**-1.3**
	comp=Z,4.3nm,1.0s,baz=19,slow=1.5,SNR=5.7						

IDC 30 09:58:47.3±3.4**, 31°.34S**×**177°.74W, h0^{km}, mb3.7**/2**, mbtmp3.8**/3**, ML3.0**/1 **Error ellipse: s-maj=75.4km s-min=38.4km az=111.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.10**	**210**	Pn	Pn	10 00 46.1	0.0
	0.2nm,0.3s,baz=127,slow=20,SNR=2.0						
URZ				Sn	Sn	10 02 17.4	-0.9
	0.3nm,0.3s,baz=312,slow=19,SNR=1.9						
	10nm,0.9s						
ASAR	**Alice Springs**	**43.29**	**268**	P	P	10 06 51.0	0.0
	0.3nm,0.5s,baz=106,slow=7.2,SNR=13						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.36**	**273**	P	P	10 06 59.5	-0.1
	0.6nm,0.4s,baz=112,slow=7.7,SNR=23						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**146.10**	**340**	PKPbc	PKPdf	10 18 27.6	0.0
	0.4nm,0.5s,baz=31,slow=3.2,SNR=1.3						

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*IDC **30** 10:01:22.3±1.0, 31°.10S×177°.48W, h0^{km}, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=29.4km s-min=23.5km az=131.0*

*NEIC **30** 10:01:24.5±2.7, 31°.16S±0°.07×177°.5W±0°.2, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=22.9km s-min=11.5km az=101.0*

ISC 30 10:01:26.3±0.7**, 31°.17S**±0°.07×**177°.7W**±0°.1**, h27^{km}, n28, σ1^s.46**/29**, mb4.3**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.93**	**353**	Pn	**Pn**	**10 01 56.0**	**-1.3**
	124nm,0.3s,baz=72,slow=8.4,SNR=7.7						
RAO				Sn	**Sb**	**10 02 22.8**	**-1.6**
	207nm,0.3s,baz=37,slow=22,SNR=2.7						
MXZ	**Matakaoa Point**	**7.20**	**207**	Pn	**Pn**	**10 03 07.8**	**-2.0**
URZ	**Urewera**	**8.28**	**210**	Pn	Pn	10 03 20.5	-4.1
	0.2nm,0.3s,baz=302,slow=24,SNR=2.3						
URZ				Sn	**Sn**	**10 04 53.8**	**-3.4**
	0.8nm,0.3s,baz=120,slow=23,SNR=2.7						
URZ	**Urewera**	**8.28**	**210**	Pn	**Pn**	**10 03 22.6**	**-2.1**
OUZ	**Omahuta**	**8.38**	**239**	Pn	**Pn**	**10 03 26.0**	**+0.1**
BKZ	**Black Stump Fm**	**9.30**	**209**	Pn	**Pn**	**10 03 38.3**	**-0.4**
MLZ	**Mavora Lakes**	**18.01**	**214**	Pn	**Pn**	**10 05 32.6**	**-2.0**
MLZ				IAmb	IAmb	10 05 36.5	
	comp=Z,8.8nm,0.9s						

WHZ	Wether Hill Ro	18.48	213		P	10 05 39.8	-0.3
WHZ				IAmb	IAmb	10 05 47.5	
	comp=Z,36nm,1.4s						
CTAO	Charters Tower	34.23	280	P	P	10 08 11.7	+1.7
CTAO				IAmb	IAmb	10 08 20.6	
	comp=Z,8.7nm,1.1s						
STKA	Stephens Creek	34.61	258	P	P	10 08 15.8	+2.7
	comp=Z,2.5nm,0.9s,baz=50,slow=16,SNR=3.8						
	comp=Z,2.5nm,0.9s						
STKA	Stephens Creek	34.61	258	IAmb	IAmb	10 08 20.2	
	comp=Z,1.7nm,1.1s						
ASAR	Alice Springs	43.38	268	P	P	10 09 27.6	+0.9
	comp=Z,2.9nm,0.8s,baz=106,slow=7.3,SNR=25						
ASAR				PcP	PcP	10 11 15.2	+0.2
	comp=Z,0.3nm,0.4s,baz=119,slow=3.7,SNR=2.6						
	comp=Z,2.9nm,0.8s						
WR0	Warramunga Arr	44.26	273	P	P	10 09 34.5	+0.8
WR0				IAmb	IAmb	10 09 48.3	
	comp=Z,4.9nm,0.9s						
WB2	Warramunga Arr	44.42	273	P	P	10 09 36.0	+1.0
WRAB	Tennant Creek	44.43	273	P	P	10 09 36.0	+0.8
WRAB				IAmb	IAmb	10 09 49.7	
	comp=Z,4.5nm,0.8s						
WRA	Warramunga Arr	44.44	273	P	P	10 09 35.8	+0.6
	comp=Z,3.2nm,0.6s,baz=113,slow=7.5,SNR=39						
	comp=Z,3.2nm,0.6s						
WRA	Warramunga Arr	44.44	273	P	P	10 09 34.8	-0.4
WB0	Warramunga Arr	44.46	273	P	P	10 09 36.4	+1.0
WB0				IAmb	IAmb	10 09 41.8	
	comp=Z,5.3nm,0.8s						
QSPA	South Pole Qui	58.94	180	P	P	10 11 25.9	+2.9
NVAR	Mina Array Bea	88.60	43	P	P	10 14 16.2	-0.8
	comp=Z,0.3nm,0.6s,baz=225,slow=7.4,SNR=3.9						
	comp=Z,0.3nm,0.6s						
KLR	Kul'dur	91.85	330	P	P	10 14 31.6	0.0
	comp=Z,0.8nm,0.7s,baz=180,slow=5.8,SNR=4.7						
	comp=Z,0.8nm,0.7s						
TXAR	Lajitas Array	92.55	57	P	P	10 14 36.2	+0.8
	comp=Z,0.2nm,0.8s,baz=224,slow=5.0,SNR=3.0						
	comp=Z,0.2nm,0.8s						
MKAR	Makanchi Array	118.50	310	PKP	PKiKP	10 20 11.3	-0.1
	comp=Z,0.3nm,0.5s,baz=169,slow=1.5,SNR=1.6						
FINES	FINESS Array B	145.97	340	PKPbc	PKPab	10 21 02.9	-0.4
	comp=Z,3.5nm,0.6s,baz=47,slow=4.2,SNR=14						
NOA	NORSAR Array B	149.56	351	PKPbc	PKPbc	10 21 11.7	-0.8
	comp=Z,0.7nm,0.8s,baz=17,slow=4.8,SNR=2.9						
AKASG	Malin Array Be	152.10	322	PKPbc	PKiKP	10 21 19.5	+0.4
	comp=Z,0.8nm,0.5s,baz=48,slow=3.0,SNR=4.6						
GERES	GERESS Array B	160.36	337	PKPab	PKPab	10 22 02.5	-1.5
	comp=Z,0.3nm,0.2s,baz=28,slow=4.4,SNR=3.5						
TORD	Torodi Ar. Bea	162.05	178	PKPab	PKPab	10 22 12.6	+0.6
	comp=Z,0.9nm,1.0s,baz=143,slow=2.5,SNR=2.4						

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*ARE **30** 10:01:49±2.5, 16°.18S±0°.07×73°.01W±0°.10, h29^{km}±5^{km}, Error ellipse: s-maj=13.7km s-min=9.3km az=60.0*
*NEIC **30** 10:01:51.7±1.7, 16°.25S±0°.08×73°.01W±0°.10, h54^{km}±8^{km}, mb4.0/3, ML4.2(ARE), Error ellipse: s-maj=16.7km s-min=4.9km az=50.0*
*IDC **30** 10:01:54.4±1.8, 16°.34S×72°.90W, h79^{km}±17^{km}, mb3.4/4, mbtmp3.9/7, MS2.8/1, Error ellipse: s-maj=40.2km s-min=13.8km az=46.0*
ISC 30 10:01:51.7±0.7, **16°.36S**±0°.08×**73°.0W**±0°.1, **h57**^{km}, **n43**, σ**1^{s}.63**/32, **mb3.9**/5, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.37	132	Pn	Pn	10 02 43.2	+1.1
PB16	IPOC Station P	3.84	121	Pn	Pn	10 02 50.6	+1.7
PB11	IPOC Station P	4.62	138		Pn	10 03 00.5	+1.3
LPAZ	La Paz	4.64	90	P	Pn	10 03 03.0	+3.1
	20nm,0.5s,baz=273,slow=10,SNR=112						
LPAZ	La Paz	4.64	90	Pn	Pn	10 03 02.2	+2.3
TA01	Diego Aracena	4.95	148	Pn	Pn	10 03 03.9	+0.3
PB08	IPOC Station P	5.22	137		Pn	10 03 09.3	+1.6
PB01	IPOC Station P	5.71	145		Pn	10 03 15.1	+1.0
PB02	IPOC Station P	5.73	150		Pn	10 03 16.1	+1.7
NNA	Nana	5.74	319	P	Pn	10 03 18.2	+3.6
	10nm,0.3s,baz=166,slow=12,SNR=3.2						
NNA				S	Sn	10 04 22.7	+3.6
	17nm,0.3s,baz=237,slow=18,SNR=1.7						
NNA	Nana	5.74	319		Pn	10 03 13.6	-0.9
PB07	IPOC Station P	6.08	152		Pn	10 03 20.9	+1.6
PB09	IPOC Station P	6.46	148		Pn	10 03 26.3	+1.9
PB04	IPOC Station P	6.51	156		Pn	10 03 26.3	+1.1
PB06	IPOC Station P	7.08	154	Pn	Pn	10 03 33.8	+0.8
LVC	Limon Verde	7.30	149	P	Pn	10 03 38.6	+2.4
	15nm,0.3s,baz=354,slow=8.7,SNR=49						
LVC				S	Sn	10 04 58.9	+1.0
	11nm,0.6s,baz=88,slow=18,SNR=2.2						
LVC	Limon Verde	7.30	149	Pn	Pn	10 03 38.4	+2.2
PB10	IPOC Station P	7.47	163	Pn	Pn	10 03 38.5	+0.3
PB15	IPOC Station P	7.57	155		Pn	10 03 40.4	+0.7
AF01	San Pedro de A	7.96	146		Pn	10 03 43.8	-1.4
PB14	IPOC Station P	8.57	164	Pn	Pn	10 03 54.3	+0.8
GO02	Mina Guanaco	9.31	161	Pn	Pn	10 04 04.9	+1.3
ATAH	Atahualpa	10.59	329	LR	LR	10 07 56.7	
	comp=Z,51nm,19.9s,baz=184,slow=34						
AC06	Mina Casimiro	11.21	168	Pn	Pn	10 04 30.3	+1.0
SIV	San Ignacio	11.43	90	P	Pn	10 04 30.1	-2.3
	1.3nm,0.5s,baz=280,slow=10.0,SNR=11						
H03N1	Juan Fernandez	17.84	196	T	T	10 24 15.9	
	baz=18,slow=74,SNR=1592						
H03N2	Juan Fernandez	17.84	196	T	T	10 24 23.6	
	baz=18,slow=74,SNR=930						
H03N3	Juan Fernandez	17.86	196	T	T	10 24 14.6	
	baz=18,slow=74,SNR=1725						
TXAR	Lajitas Array	54.24	327	P	P	10 11 11.9	-0.2
	0.2nm,0.8s,baz=127,slow=10,SNR=2.3						
	0.2nm,0.8s						
SDCO	Great Sand Dun	61.90	331	P	P	10 12 06.4	+0.6
SDCO				IAmb	IAmb	10 12 06.9	
	comp=Z,1.2nm,0.7s						
TORD	Torodi Ar. Bea	79.39	73	P	P	10 13 51.9	-0.4
	comp=Z,0.9nm,0.9s,baz=285,slow=5.6,SNR=3.9						
	comp=Z,0.9nm,0.9s						
TORD	Torodi Ar. Bea	79.39	73	IAmb	IAmb	10 14 04.9	
	comp=Z,1.9nm,1.1s						
ESDC	Sonseca Array	84.98	46	P	P	10 14 20.0	-1.1
	comp=Z,0.6nm,0.8s,baz=231,slow=6.1,SNR=4.6						
	comp=Z,0.6nm,0.8s						
ESDC	Sonseca Array	84.98	46	IAmb	IAmb	10 14 27.0	
	comp=Z,1.6nm,1.2s						
YKA	Yellowknife Ar	85.11	342	P	P	10 14 19.4	-1.7
	comp=Z,0.8nm,0.7s,baz=119,slow=5.1,SNR=3.5						
	comp=Z,0.8nm,0.7s						
H11N3	WAKE ISLAND Hy	123.22	283	T	T	12 36 00.1	
	baz=98						
H11N2	WAKE ISLAND Hy	123.23	283	T	T	12 36 00.5	
	baz=98						
H11N1	WAKE ISLAND Hy	123.23	283	T	T	12 36 01.0	
	baz=98						
H11S2	WAKE ISLAND Hy	123.25	282	T	T	12 36 00.9	
	baz=98,slow=75,SNR=2.6						
H11S1	WAKE ISLAND Hy	123.26	282	T	T	12 36 00.8	
	baz=98,slow=75,SNR=4.2						
H11S3	WAKE ISLAND Hy	123.27	282	T	T	12 36 01.4	
	baz=98,slow=75,SNR=3.0						
MJAR	Matsushiro Arr	145.83	312	PKPbc	PKPab	10 21 25.8	+0.3
	comp=Z,0.6nm,0.5s,baz=341,slow=0.4,SNR=4.2						
SONM	Songino Array	148.60	1	PKPbc	PKiKP	10 21 33.6	-0.4
	comp=Z,0.4nm,0.4s,baz=341,slow=2.3,SNR=5.3						

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*IDC **30** 10:06:50.7±6.5, 4°.22N×125°.69E, h94^{km}±62^{km}, mb3.5/6, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=80.9km s-min=16.4km az=79.0*
*DJA **30** 10:06:52.2±0.7, 4°N±5°×12°6E±°, h76^{km}±6^{km}, M4.1/8, mb4.3/4, mB4.7/2, MLv4.1/8, Mw(mB)3.9/2*
ISC 30 10:06:51.2±0.7, **4°.21N**±0°.05×**125°.88E**±0°.07, **h107**^{km}, **n17**, σ**1^{s}.89**/24, **mb3.8**/6, **2C**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.63	214	P	Pn	10 07 07.2	-1.5
SGSI				S	Sn	10 07 19.6	-2.3
GSPH	General Santos	2.09	334	⇑eP	Pn	10 07 23.3	-2.0
TNTI	Ternate	3.72	157	P	Pn	10 07 47.0	+0.2
TNTI				S	Sn	10 08 28.7	-1.1
BIPH	Bislig	3.98	7	⇑eP	Pn	10 07 49.6	-0.7
BIPH				eS	Sn	10 08 35.2	-0.8
GTOI	Gorontalo	4.56	219	P	Pn	10 07 58.4	+0.2
GTOI				S	Sn	10 08 47.2	-3.0
LBMI	Labuha	5.08	161	P	Pn	10 08 06.2	+1.1
	0.1nm23nm,0.8s						
LBMI				S	Sn	10 08 59.3	-3.3
	0.1nm23nm,0.8s						
MRSI	Marisa	5.41	227	P	Pn	10 08 11.0	+1.4
	0.1nm711nm17nm,0.5s						
SANI	Sanana	6.22	179	P	Pn	10 08 18.2	-2.4
	0.1nm699nm24nm,0.8s						
SWI	Sorong	7.36	133	P	Pn	10 08 35.0	-1.1
SIJI	Sorong	7.37	133	P	Pn	10 08 36.8	+0.5
	3.3nm,0.3s,baz=329,slow=24,SNR=7.5						
SIJI				S	Sn	10 09 53.9	-4.5
	2.5nm,0.3s,baz=332,slow=24,SNR=1.7						
	5.9nm,0.3s						
WRA	Warramunga Arr	25.40	161	P	P	10 12 10.9	+2.0
	3.0nm,0.8s,baz=342,slow=10,SNR=16						
	3.0nm,0.8s						
ASAR	Alice Springs	28.79	165	P	P	10 12 41.1	+1.9
	0.5nm,0.7s,baz=351,slow=8.3,SNR=6.7						
	0.5nm,0.7s						
KSRS	Korea Array	33.14	3	P	P	10 13 18.8	+1.5
	0.7nm,0.5s,baz=182,slow=10,SNR=5.4						
	0.7nm,0.5s						
STKA	Stephens Creek	38.88	158	P	P	10 14 06.8	+0.5
	1.1nm,0.4s,baz=340,slow=12,SNR=3.5						
	1.1nm,0.4s						
KLR	Kul'dur	45.14	5	P	P	10 14 57.5	+0.6
	1.0nm,0.4s,baz=182,slow=7.2,SNR=8.1						
	1.0nm,0.4s						
MKAR	Makanchi Array	56.69	325	P	P	10 16 23.7	+0.1
	0.3nm,0.5s,baz=124,slow=8.0,SNR=5.1						
MKAR				PcP	PcP	10 17 18.5	0.0
	0.3nm,0.4s,baz=108,slow=3.9,SNR=3.7						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	121.97	288	PKP	PKPdf	10 25 33.6	-0.5
	0.3nm,0.8s,baz=35,slow=1.2,SNR=1.6						

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*IDC **30** 10:16:03.5±2.0, 3°.91S×101°.85E, h0^{km}, mb4.0/8, mbtmp4.0/8, MS3.6/1, Error ellipse: s-maj=83.3km s-min=17.7km az=59.0*
*DJA **30** 10:16:09.1±0.2, 3°S±2°×10°2E±°, h10^{km}, M4.7/14, mb5.1/1, MLv4.5/14*
*NEIC **30** 10:16:13.9±2.4, 3°.4S±0°.1×102°.57E±0°.09, h54^{km}±5^{km}, mb4.4/9, Error ellipse: s-maj=19.8km s-min=9.0km az=214.0*
ISC 30 10:16:06.2±1.3, **3°.43S**±0°.04×**102°.56E**±0°.04, **h0**^{km}±9^{km}, **n43**, σ**1^{s}.51**/49, **mb4.2**/12, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.43	312	P	Pg	10 16 15.4	+0.8
MASI				S	Sg	10 16 21.2	+1.0
KRJI	Kerinci	1.73	320	P	Pb	10 16 38.9	0.0
MDSI	Maura Dua	1.92	123	P	Pb	10 16 41.7	-0.4
JMBI	JAMBI	2.09	31	P	Pb	10 16 44.7	-0.3
JMBI				S	Sn	10 17 10.0	+0.8
LWLI	Liwa	2.17	137	P	Pg	10 16 47.6	-0.2
LWLI				S	Sg	10 17 17.5	+1.5
PMBI	Palembang	2.26	77	Pn	Pb	10 16 47.7	-0.3
PMBI	Palembang	2.26	77	P	Pb	10 16 47.4	-0.6
PMBI				S	Sb	10 17 17.0	+0.5
KLI	Kotabumi	2.69	122	P	Pg	10 16 56.7	-1.2
KASI	Kota Agung	2.83	137	P	Pb	10 16 57.6	-0.1
KASI				S	Sb	10 17 32.1	-0.9
RGRI	Rengat	3.07	356	P	Pn	10 16 56.2	+0.2
RGRI				S	Sb	10 17 37.0	-2.9
BLSI	Bandar Lampung	3.29	126	P	Pb	10 17 03.5	-2.1
DSRI	Dabo	3.56	35	P	Pn	10 17 03.9	+1.2
PPI	Padang Panjang	3.66	324	P	Pn	10 17 03.7	-0.5
PPBI	Pangkal Pinang	3.79	71	P	Pb	10 17 11.3	-2.7
BKNI	Bangkinang	4.03	338		Pb	10 17 13.9	-4.3
BKNI	Bangkinang	4.03	338	P	Pn	10 17 10.0	+0.7
BKNI				S	Sn	10 17 59.0	+1.8
TPRI	Tanjung Pinang	4.75	24	P	Pn	10 17 19.8	+0.7
MYKOM	Kota Tinggi	5.35	14	Pn	Pn	10 17 28.5	+1.1
GSI	Gunungsitoli	6.86	313	Pn	Pn	10 17 49.7	+1.6
IPM	Ipoh	8.01	349		Pn	10 18 06.7	+2.7
KULM	Kulim	8.87	348	Pn	Pn	10 18 17.5	+1.7
KAPI	Kappang	17.21	96	LR	LR	10 27 18.8	
	comp=Z,204nm,21.4s,baz=301,slow=38						
CMAR	Chiang Mai Arr	22.04	351	P	P	10 21 04.1	+1.5
	0.7nm,0.4s,baz=188,slow=8.4,SNR=7.1						
	0.7nm,0.4s						
WB0	Warramunga Arr	35.04	120	P	P	10 23 01.0	0.0
WB0				IAmb	IAmb	10 23 01.9	
	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	35.06	120	P	P	10 23 00.4	-0.9
	comp=Z,0.6nm,0.6s,baz=301,slow=8.9,SNR=4.8						
	comp=Z,0.6nm,0.6s						
WRA	Warramunga Arr	35.06	120	P	P	10 23 00.3	-0.9
WRAB	Tennant Creek	35.07	120	P	P	10 23 00.2	-1.1
WRAB				IAmb	IAmb	10 23 22.5	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	35.08	120	P	P	10 23 00.6	-0.8
WB2				IAmb	IAmb	10 23 18.2	
	comp=Z,3.1nm,0.9s						
WR0	Warramunga Arr	35.24	120	P	P	10 23 03.4	+0.6
WR0				IAmb	IAmb	10 23 23.4	
	comp=Z,15nm,1.5s						
ASAR	Alice Springs	36.35	126	P	P	10 23 11.6	-0.7
	comp=Z,2.5nm,0.8s,baz=297,slow=7.8,SNR=20						
ASAR				PcP	PcP	10 25 35.7	-1.4
	comp=Z,0.2nm,0.5s,baz=301,slow=2.4,SNR=2.1						
	comp=Z,2.5nm,0.8s						
COEN	Coen	41.41	107	P	P	10 23 57.3	+2.4
STKA	Stephens Creek	46.29	132	P	P	10 24 34.7	+0.8
	comp=Z,3.3nm,1.1s,baz=270,slow=5.1,SNR=1.7						
	comp=Z,3.3nm,1.1s						
STKA	Stephens Creek	46.29	132	IAmb	IAmb	10 24 54.7	
	comp=Z,3.0nm,1.5s						
SONM	Songino Array	51.16	3	P	P	10 25 10.8	-0.4
	comp=Z,1.9nm,0.6s,baz=183,slow=9.6,SNR=3.7						
	comp=Z,1.9nm,0.6s						
MK31	Makanchi Array	53.12	343	P	P	10 25 26.1	+0.5
MKAR	Makanchi Array	53.12	343	P	P	10 25 23.8	-1.9
	comp=Z,1.0nm,0.6s,baz=147,slow=7.7,SNR=11						
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	53.12	343	P	P	10 25 25.7	0.0
CAN	Canberra	53.36	132	P	P	10 25 25.6	-2.1
USRK	Ussuriysk Ar.	54.27	26	P	P	10 25 36.7	+2.6
	comp=Z,2.1nm,0.8s,baz=231,slow=2.9,SNR=4.8						
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	59.07	348	P	P	10 26 08.3	+0.2
	comp=Z,1.5nm,0.5s,baz=157,slow=7.9,SNR=6.6						
	comp=Z,1.5nm,0.5s						
ZALV	Zalesovo Beam	59.07	348	P	P	10 26 07.8	-0.3
ABKAR	Akbulak array	64.13	330	P	P	10 26 40.1	-2.2
TXAR	Lajitas Array	144.18	41	PKPbc	PKPab	10 35 41.5	-1.1
	comp=Z,0.1nm,0.4s,baz=255,slow=2.1,SNR=5.4						

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*IDC **30** 10:24:09.8±1.2, 1°.72S×120°.13E, h0^{km}, mb3.5/4, mbtmp3.6/5, ML3.5/1, MS3.1/1, Error ellipse: s-maj=70.6km s-min=20.2km az=66.0*
*DJA **30** 10:24:11.1±0.2, 2°S±2°×11°9E±°, h10^{km}, M4.2/14, mb4.3/2, MLv4.1/14*
ISC 30 10:24:15.0±1.0, **1°.98S**±0°.04×**119°.35E**±0°.08, **h50**^{km}, **n19**, σ**1^{s}.93**/21, **mb3.5**/4, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.16	156	P	Pn	10 24 31.5	-3.3
TTSI				S	Sn	10 24 47.7	-1.8
SPSI	Sidrap Palu	2.01	168	P	Pn	10 24 45.1	-1.4
SPSI				S	Sn	10 25 10.3	-0.2
MPSI	Mapaga	2.37	13	P	Pn	10 24 48.6	-2.8
BNSI	Bone	2.52	163	P	Pn	10 24 52.5	-0.9
APSI	Ampana	2.53	65	P	Pn	10 24 51.7	-2.0
APSI				S	Sn	10 25 23.7	+0.4
BKB	Balikpapan	2.55	286	P	Pn	10 24 53.4	-0.5
KAPI	Kappang	3.04	172	Pn	Pn	10 25 00.7	+0.2
	5.3nm,0.3s,baz=340,slow=12,SNR=16						
KAPI				Sn	Sn	10 25 34.8	-1.0
	8.9nm,0.3s,baz=67,slow=19,SNR=7.9						
	47nm,0.6s						
BKSI	Bulukumba	3.41	167	P	Pn	10 25 06.1	+0.5
LUWI	Luwuk	3.55	75	P	Pn	10 25 04.4	-3.2
LUWI				S	Sn	10 25 57.4	+9.1
MRSI	Marisa	3.56	47	P	Pn	10 25 07.4	-0.4
BSSI	Bau Bau, Buton	4.29	165	P	Pn	10 25 17.8	+0.1
GTOI	Gorontalo	4.49	55	P	Pn	10 25 19.7	-0.8
SANI	Sanana	6.64	91	P	Pn	10 25 42.9	-7.1
	0.1nm14nm,0.8s						
LBMI	Labuha	8.26	81	P	Pn	10 26 15.6	+3.4
DAV	Davao City (W)	10.93	35	LR	LR	10 31 20.6	
	comp=Z,97nm,18.2s,baz=194,slow=42						
WRA	Warramunga Arr	23.09	142	P	P	10 29 14.9	-1.8
	0.8nm,0.8s,baz=328,slow=12,SNR=9.4						
	0.8nm,0.8s						
ASAR	Alice Springs	25.76	148	P	P	10 29 41.3	+0.1
	0.5nm,0.7s,baz=326,slow=8.3,SNR=11						
	0.5nm,0.7s						
MKAR	Makanchi Array	58.47	331	P	P	10 34 08.5	+2.6
	0.5nm,0.7s,baz=136,slow=6.1,SNR=5.6						
	0.5nm,0.7s						
ZALV	Zalesovo Beam	62.68	338	P	P	10 34 36.6	+2.2
	0.7nm,0.7s,baz=134,slow=4.2,SNR=3.7						
	0.7nm,0.7s						

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*IDC **30** 10:24:23.5±1.0, 31°.08S×177°.62W, h0^{km}, mb4.2/6, mbtmp4.2/7, ML3.7/1, Error ellipse: s-maj=27.3km s-min=20.0km az=95.0*
*NEIC **30** 10:24:24.8±0.8, 31°.25S±0°.07×177°.5W±0°.2, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=22.3km s-min=11.7km az=102.0*
ISC 30 10:24:26.4±0.8, **31°.18S**±0°.07×**177°.5W**±0°.1, **h27**^{km}, **n36**, σ**1^{s}.53**/37, **mb4.5**/16, **2C**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.96	349	Pn	Pn	10 24 57.3	-0.6
	153nm,0.3s,baz=90,slow=7.7,SNR=8.5						
RAO				Sn	Sn	10 25 19.7	-2.0
	246nm,0.3s,baz=61,slow=23,SNR=4.1						
URZ	Urewera	8.35	211	Pn	Pn	10 26 24.7	-0.9
	0.9nm,0.3s,baz=119,slow=23,SNR=1.2						
URZ				Sn	Sn	10 27 55.6	-3.3
	1.8nm,0.3s,baz=303,slow=24,SNR=1.9						
	3.4nm,0.4s						
URZ	Urewera	8.35	211	Pn	Pn	10 26 24.9	-0.7
OUZ	Omahuta	8.50	239	Pn	Pn	10 26 31.1	+3.5
BKZ	Black Stump Fm	9.37	210	Pn	Pn	10 26 37.9	-1.7
THZ	Tophouse	13.08	214	Pn	Pn	10 27 28.7	-1.7
MSVF	Nonsavu	13.99	342	Pn	Pn	10 27 37.6	-5.4
	0.9nm,0.3s,baz=231,slow=9.8,SNR=27						
MSVF	Nonsavu	13.99	342		Pn	10 27 37.6	-5.4
RPZ	Rata Peaks	15.45	213	Pn	P	10 28 06.3	-0.5
	0.9nm,0.3s,baz=36,slow=19,SNR=1.8						
RPZ				Sn	Sn	10 30 35.3	-17
	0.3nm,0.3s,baz=0.7,slow=17,SNR=2.8						
WKZ	Wanaka	17.25	214	Pn	Pn	10 28 24.9	-0.5
WKZ				IAmb	IAmb	10 28 34.5	
	comp=Z,38nm,1.1s						
WHZ	Wether Hill Ro	18.55	214	P	P	10 28 39.8	-1.1
CTA	Charters Tower	34.37	280	P	P	10 31 11.7	+0.4
	comp=Z,4.8nm,0.6s,baz=100,slow=11,SNR=3.8						
	comp=Z,4.8nm,0.6s						
CTAO	Charters Tower	34.37	280	P	P	10 31 11.8	+0.4
STKA	Stephens Creek	34.75	258	P	P	10 31 14.6	+0.1
	comp=Z,1.4nm,0.4s,baz=106,slow=14,SNR=3.7						
	comp=Z,1.4nm,0.4s						
BBOO	Buckleboo	39.20	255	P	P	10 31 51.4	-0.8
BBOO				IAmb	IAmb	10 32 13.4	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	43.52	268	P	P	10 32 28.0	+0.1
	comp=Z,2.6nm,0.7s,baz=105,slow=7.7,SNR=11						
ASAR				PcP	PcP	10 34 15.8	+0.3
	comp=Z,0.4nm,0.3s,baz=112,slow=3.9,SNR=2.1						
	comp=Z,2.6nm,0.7s						
WR0	Warramunga Arr	44.40	273	P	P	10 32 35.0	0.0
WR0				IAmb	IAmb	10 32 56.8	
	comp=Z,7.9nm,1.2s						
WB2	Warramunga Arr	44.57	273	P	P	10 32 36.4	0.0
WB2				IAmb	IAmb	10 33 03.8	
	comp=Z,9.3nm,1.2s						
WRAB	Tennant Creek	44.58	273	P	P	10 32 36.1	-0.3
WRAB				IAmb	IAmb	10 32 47.6	
	comp=Z,9.7nm,1.1s						
WRA	Warramunga Arr	44.58	273	P	P	10 32 36.5	0.0
	comp=Z,2.5nm,0.4s,baz=112,slow=7.9,SNR=50						
WRA				PcP	PcP	10 34 19.5	+0.3
	comp=Z,0.1nm,0.3s,baz=143,slow=1.1,SNR=0.9						
	comp=Z,2.5nm,0.4s						
WB0	Warramunga Arr	44.61	273	P	P	10 32 36.5	-0.2
WB0				IAmb	IAmb	10 32 42.5	
	comp=Z,5.9nm,0.8s						
SBA	Scott Base	47.29	184	P	P	10 32 57.9	+0.9
SBA				IAmb	IAmb	10 33 21.6	
	comp=Z,3.4nm,1.1s						
PSA00	Pilbara Seismi	56.33	264	P	P	10 34 05.8	+0.6
QSPA	South Pole Qui	58.93	180	P	P	10 34 25.6	+2.6
	comp=Z,2.7nm,1.0s,baz=45,slow=4.3,SNR=7.1						
	comp=Z,2.7nm,1.0s						
QSPA	South Pole Qui	58.93	180	P	P	10 34 25.5	+2.4
NJ2	Nanjing	87.09	310	eP	P	10 37 01.3	-8.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NVAR	Mina Array Bea	88.51	42	P	P	10 37 17.6	+1.0
	comp=Z,0.3nm,0.7s,baz=251,slow=5.6,SNR=2.0						
	comp=Z,0.3nm,0.7s						
BNX	BinXian	91.41	325	⇑P	P	10 37 28.0	-1.7
BNX				pmax	pmax		
	comp=Z,11nm,0.7s						
BNX				pmax	pmax		
	comp=Z,340nm,11.7s						
LYN	LuoYang	92.84	309	eP	P	10 37 33.5	-3.1
HNS	HongShan	93.09	312	⇑P	P	10 37 35.0	-2.7
HNS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	Lanzhou	99.55	306	eP	Pdif	10 38 09.0	+1.7
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
FINES	FINESS Array B	146.03	340	PKPbc	PKPbc	10 44 03.2	+0.2
	comp=Z,2.1nm,0.4s,baz=48,slow=4.1,SNR=17						
AKASG	Malin Array Be	152.19	322	PKPbc	PKiKP	10 44 20.0	+0.7
	comp=Z,0.5nm,0.4s,baz=47,slow=3.4,SNR=5.3						
BRTR	Keskin Array B	153.36	297	PKPbc	PKiKP	10 44 23.4	+1.1
	comp=Z,0.7nm,0.5s,baz=93,slow=2.9,SNR=2.4						
CLL	Collm	158.45	342	ePKPab	PKPab	10 44 56.0	+0.5
TORD	Torodi Ar. Bea	162.03	177	PKPab	PKPab	10 45 13.7	+1.7
	comp=Z,0.4nm,0.8s,baz=199,slow=4.0,SNR=1.9						

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*IDC **30** 10:25:26.6±0.6, 22°.33S×170°.61E, h0^{km}, mb4.3/17, mbtmp4.3/18, ML4.2/1, MS4.0/16, Error ellipse: s-maj=19.9km s-min=19.6km az=118.0*
*NOU **30** 10:25:32.0, 22°.35S×170°.23E, h0^{km}, MLv4.8/13, Southeast of Loyalty Islands*
*NEIC **30** 10:25:34.1±2.4, 22°.33S±0°.10×170°.26E±0°.08, h34^{km}±5^{km}, mb4.7/22, Error ellipse: s-maj=14.4km s-min=10.1km az=172.0*
ISC 30 10:25:32.2±0.5, **22°.36S**±0°.08×**170°.39E**±0°.07, **h33**^{km}, **n127**, σ**1^{s}.12**/120, **mb4.5**/24, **MS3.9**/10, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.36	291	Pn	Pn	10 26 08.3	-0.4
MARNC	Mare, Loyalty	2.36	291	P	Pn	10 26 08.8	+0.1
PINNC	Pines Island,	2.74	264		Pn	10 26 14.5	+0.7
PINNC	Pines Island,	2.74	264	P	Pn	10 26 14.8	+1.0
YATNC	Mamie plateau,	3.26	275	P	Pn	10 26 21.5	+0.5
OUENC	Ouen Island, N	3.29	268	Pn	Pn	10 26 22.4	+1.0
OUENC	Ouen Island, N	3.29	268	P	Pn	10 26 22.6	+1.2
LIFNC	LIFOU	3.33	298	Pn	Pn	10 26 21.1	-0.9
LIFNC					Sn	10 26 55.2	-5.2
ONTNC	Ouen Toro	3.65	270	Pn	Pn	10 26 27.0	+0.6
ONTNC	Ouen Toro	3.65	270	P	Pn	10 26 28.1	+1.7
DZM	Mont Dzumac	3.67	274	Pn	Pn	10 26 27.6	+0.8
	16nm,0.3s,baz=130,slow=16,SNR=344						
DZM				Sn	Sn	10 27 10.5	+1.5
	7.9nm,0.3s,baz=22,slow=20,SNR=3.1						
DZM				LR	LR	10 28 00.9	
	comp=Z,2µm,19.7s,baz=38,slow=40						
	59nm,0.4s						
DZM	Mont Dzumac	3.67	274	Pn	Pn	10 26 27.4	+0.7
DZM	Mont Dzumac	3.67	274	P	Pn	10 26 27.8	+1.0
NOUC	Port Laguerre	3.80	273	P	Pn	10 26 29.5	+1.1
RTV	Rentapao	4.90	338	P	Pn	10 26 46.9	+3.2
DVP	Devils Point	5.05	335	P	Pn	10 26 48.5	+2.8
KOUNC	Koumac, New Ca	5.96	286	Pn	Pn	10 26 59.2	+1.0
KOUNC	Koumac, New Ca	5.96	286	P	Pn	10 27 00.5	+2.3
MSVF	Nonsavu	8.54	59	LR	LR	10 30 10.0	
	comp=Z,2µm,18.1s,baz=259,slow=34						
RAO	Raoul Island	12.56	126	LR	LR	10 32 11.8	
	comp=Z,707nm,20.6s,baz=302,slow=33						
HNR	Honiara	16.30	320	LR	LR	10 35 04.2	
	comp=Z,165nm,19.4s,baz=148,slow=35						
URZ	Urewera	16.87	161	LR	LR	10 34 43.7	

	comp=Z,776nm,19.2s,baz=31,slow=33						
AFI	Afiamalu	18.90	67	LR	LR	10 35 25.9	
	comp=Z,254nm,21.0s,baz=232,slow=32						
RPZ	Rata Peaks	21.31	179	LR	LR	10 38 08.2	
	comp=Z,402nm,18.2s,baz=350,slow=36						
CTA	Charters Tower	22.61	271	P	P	10 30 30.3	0.0
	2.1nm,0.6s,baz=96,slow=13,SNR=1.7						
CTA				LR	LR	10 38 58.7	
	comp=Z,306nm,19.0s,baz=92,slow=36						
	2.1nm,0.6s						
CTAO	Charters Tower	22.61	271	P	P	10 30 29.9	-0.4
CTAO				IAmb	IAmb	10 30 53.5	
	comp=Z,20nm,1.4s						
CAN	Canberra	22.70	231	P	P	10 30 31.4	+0.2
CAN				IAmb	IAmb	10 30 55.4	
	comp=Z,36nm,1.3s						
KRVT	Keravat (AS076	25.27	313	P	P	10 30 56.2	+0.5
	comp=Z,24nm,0.5s,baz=128,slow=13,SNR=4.6						
	comp=Z,24nm,0.5s						
PMG	Port Moresby	25.74	296	LR	LR	10 39 52.2	
	comp=Z,303nm,20.2s,baz=124,slow=33						
COEN	Coen	27.14	283	P	P	10 31 15.1	+2.5
COEN				IAmb	IAmb	10 31 30.7	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	27.26	243	LR	LR	10 41 10.6	
	comp=Z,315nm,19.6s,baz=68,slow=34						
RAR	Rarotonga	27.71	93	LR	LR	10 42 17.8	
	comp=Z,132nm,18.0s,baz=283,slow=37						
WR0	Warramunga Arr	33.47	267	P	P	10 32 10.3	+1.7
ASAR	Alice Springs	33.55	261	P	P	10 32 10.2	+0.9
	comp=Z,1.5nm,0.8s,baz=87,slow=9.0,SNR=14						
ASAR				PcP	PcP	10 34 49.3	-0.3
	comp=Z,1.2nm,0.9s,baz=119,slow=3.3,SNR=4.6						
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	33.55	261	P	P	10 32 09.3	0.0
WB0	Warramunga Arr	33.65	268	P	P	10 32 12.1	+2.0
WB0				IAmb	IAmb	10 32 37.3	
	comp=Z,8.0nm,1.1s						
WB2	Warramunga Arr	33.65	267	P	P	10 32 13.2	+3.0
WRAB	Tennant Creek	33.65	267	P	P	10 32 11.8	+1.6
WRA	Warramunga Arr	33.66	267	P	P	10 32 10.1	-0.2
	comp=Z,1.8nm,1.0s,baz=100,slow=9.0,SNR=5.2						
WRA				PcP	PcP	10 34 49.9	0.0
	comp=Z,0.7nm,0.8s,baz=288,slow=1.7,SNR=3.2						
WRA				LR	LR	10 46 04.0	
	comp=Z,389nm,18.7s,baz=73,slow=37						
	comp=Z,1.8nm,1.0s						
WRA	Warramunga Arr	33.66	267	P	P	10 32 11.4	+1.1
KNRA	Kununurra	39.82	272	P	P	10 33 02.5	-0.2
KNRA				IAmb	IAmb	10 33 04.4	
	comp=Z,8.7nm,0.9s						
FAKI	Fak Fak	41.73	292	P	P	10 33 18.5	0.0
GUMO	Guam	43.62	323	LR	LR	10 50 27.8	
	comp=Z,87nm,18.9s,baz=150,slow=34						
SIJI	Sorong	43.63	294	P	P	10 33 34.7	+0.8
	comp=Z,10.0nm,0.6s,baz=124,slow=5.2,SNR=6.6						
SIJI				LR	LR	10 51 16.7	
	comp=Z,193nm,20.2s,baz=90,slow=35						
	comp=Z,10.0nm,0.6s						
BATI	Baumata	46.27	277	LR	LR	10 54 35.8	
	comp=Z,923nm,18.7s,baz=244,slow=38						
MBWA	Marble Bar	46.89	261	P	P	10 33 59.2	-0.5
MBWA				IAmb	IAmb	10 34 01.7	
	comp=Z,8.3nm,1.0s						
KAPI	Kappang	51.85	282	LR	LR	10 57 34.7	
	comp=Z,100nm,18.2s,baz=152,slow=37						
JGF	Kuroka	65.59	331	P	P	10 36 12.8	-0.1
JGF				IAmb	IAmb	10 36 25.9	
	comp=Z,13nm,1.2s						
MJAR	Matsushiro Arr	66.00	332	P	P	10 36 14.4	-1.1
	comp=Z,5.8nm,1.0s,baz=156,slow=8.2,SNR=7.8						
	comp=Z,5.8nm,1.0s						
MJAR	Matsushiro Arr	66.00	332	P	P	10 36 14.7	-0.8
MJAR				IAmb	IAmb	10 36 15.6	
	comp=Z,4.2nm,1.0s						
TPUB	Ta-pu	66.36	310	P	P	10 36 17.5	-0.5
SSLB	Suanglung	66.44	311	P	P	10 36 17.9	-0.7
JHS	Saijyo	67.12	327	P	P	10 36 23.1	+0.4
JSD	Sado	67.24	333	P	P	10 36 23.4	+0.1
QSPA	South Pole Qui	67.71	180	P	P	10 36 26.7	+0.5
	comp=Z,4.6nm,1.0s,baz=35,slow=4.5,SNR=4.0						
	comp=Z,4.6nm,1.0s						
QSPA	South Pole Qui	67.71	180	P	P	10 36 26.7	+0.5
QSPA				IAmb	IAmb	10 36 27.7	
	comp=Z,11nm,1.1s						
KSRS	Korea Array	71.68	326	P	P	10 36 50.6	-0.1
	comp=Z,3.0nm,0.8s,baz=145,slow=5.6,SNR=12						
	comp=Z,3.0nm,0.8s						
KSAR	Wonju Array Be	71.69	325	P	P	10 36 50.1	-0.8
USRK	Ussuriysk Ar.	74.99	332	P	P	10 37 09.4	-0.7
	comp=Z,1.3nm,0.6s,baz=191,slow=6.8,SNR=2.4						
	comp=Z,1.3nm,0.6s						
PETK	Petropavlovsk-	75.95	352	P	P	10 37 16.8	+1.4
	comp=Z,1.8nm,0.7s,baz=161,slow=9.2,SNR=2.8						
	comp=Z,1.8nm,0.7s						
MAW	Mawson	75.96	202	P	P	10 37 16.8	+1.3
	comp=Z,1.4nm,0.8s,baz=0.0,slow=3.0,SNR=3.6						
	comp=Z,1.4nm,0.8s						
CMAR	Chiang Mai Arr	80.76	294	P	P	10 37 45.0	+2.1
	comp=Z,4.8nm,0.9s,baz=137,slow=4.2,SNR=25						
	comp=Z,4.8nm,0.9s						
CMAR	Chiang Mai Arr	80.76	294	P	P	10 37 43.8	+1.0
CHTO	Chiang Mai	80.92	295	P	P	10 37 45.6	+1.9
CHTO				IAmb	IAmb	10 37 47.0	
	comp=Z,16nm,1.1s						
TROLL	Troll, Antarti	85.51	184	P	P	10 38 06.6	-0.1
SNAA	Sanae	86.10	182	P	P	10 38 09.0	-0.5
SNAA	Sanae	86.10	182	P	P	10 38 08.3	-1.2
	comp=Z,4.4nm,0.9s,baz=196,slow=1.7,SNR=9.2						
	comp=Z,4.4nm,0.9s						
SNAA	Sanae	86.10	182	P	P	10 38 08.6	-0.9
VNA3	Neumayer Olymp	86.65	180	P	P	10 38 11.4	-0.8
VNA2	Neumayer--Watz	86.96	181	P	P	10 38 13.3	-0.4
	baz=176,slow=4.4						
VNA1	Neumayer--Stat	87.24	180	P	P	10 38 14.7	-0.2
NVAR	Mina Array Bea	90.06	48	P	P	10 38 28.0	-1.1
	comp=Z,0.6nm,0.7s,baz=218,slow=7.0,SNR=4.2						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	90.35	323	P	P	10 38 30.5	+0.5
	comp=Z,4.5nm,0.9s,baz=142,slow=5.0,SNR=18						
	comp=Z,4.5nm,0.9s						
ILAR	Eielson Array	92.88	17	P	P	10 38 38.8	-2.4
	comp=Z,0.5nm,0.8s,baz=224,slow=5.8,SNR=5.7						
	comp=Z,0.5nm,0.8s						
PDAR	Pinedale Array	97.94	47	P	P	10 39 04.7	-0.5
	comp=Z,0.1nm,0.3s,baz=357,slow=1.8,SNR=1.8						
	comp=Z,0.1nm,0.3s						
SCHQ	Schefferville	126.76	37	PKP	PKPdf	10 44 30.4	-1.7
	comp=Z,2.1nm,0.8s,baz=247,slow=7.7,SNR=2.9						
ARCES	ARCESS Array B	128.34	345	PKP	PKPdf	10 44 34.1	-0.6
	comp=Z,1.1nm,0.5s,baz=45,slow=2.1,SNR=9.8						
CRVS	Cervenica-Dubn	143.84	325	*e*PKP	PKPbc	10 45 02.3	+0.6
KECS	Kecovo	144.61	325	*e*PKP	PKPdf	10 45 05.6	+0.3
OKC	Ostrava-Krasne	144.95	328	*e*PKP	PKPdf	10 45 05.7	-0.1
MORC	Moravsky Berou	145.28	329	*e*PKP	PKPbc	10 45 06.2	-0.1
OSTC	Ostas	145.37	331	*e*PKP	PKPab	10 45 07.1	+0.5
CHVC	Chvalec	145.42	331	*e*PKP	PKPab	10 45 07.0	+0.2
MAUC	Maruska	145.42	328	*e*PKP	PKPab	10 45 07.6	+0.7
KRLC	Kraliky	145.44	330	*e*PKP	PKPab	10 45 07.1	+0.1
DPC	Dobruska-Polom	145.46	330	*e*PKP	PKPab	10 45 07.3	+0.3
VYHS	Vyhne	145.47	326	*e*PKP	PKPab	10 45 07.8	+0.7
UPC	Upice	145.49	331	*e*PKP	PKPab	10 45 07.3	+0.2
KOLL	Kolacno	145.64	326	*e*PKP	PKPab	10 45 08.5	+0.8
JAVC	Velka Javorina	145.83	327	*e*PKP	PKPab	10 45 09.4	+0.9
VRAC	Vranov	146.06	329	PKPbc	PKPab	10 45 09.0	-0.3
	comp=Z,12nm,0.9s,baz=47,slow=2.6,SNR=14						
VRAC	Vranov	146.06	329	*e*PKP	PKPab	10 45 09.0	-0.3
PVCC	Panska Ves	146.12	332	*e*PKP	PKPab	10 45 09.6	+0.2
BRG	Berggiesshubel	146.13	333	*e*PKP	PKPab	10 45 09.1	-0.3
SMOL	Smolenice	146.18	327	*e*PKP	PKPab	10 45 10.5	+0.8
CLL	Collm	146.18	334	*i* PKPbc	PKPbc	10 45 08.8	-0.1
	comp=Z,15nm,0.8s						
CLL				*i* PKPab	PKiKP	10 45 11.1	-1.0
CLL				*e*(PKiKP)		10 45 14.0	
CLL				*e*x	x	10 45 18.0	
KRUC	Moravsky	146.32	329	*e*PKP	PKPbc	10 45 09.4	0.0
MODS	Modra-Piesok	146.34	327	*e*PKP	PKPab	10 45 10.5	+0.1
PRU	Pruhonice	146.52	331	*e*PKP	PKPab	10 45 10.6	-0.4
EKA	Eskdalemuir Ar	146.72	353	PKPbc	PKPdf	10 45 09.1	+0.5
	comp=Z,8.2nm,0.7s,baz=356,slow=2.6,SNR=29						
NKC	Novy Kostel	147.24	334	*e*PKP	PKPbc	10 45 12.7	+0.6
RONA	Rosalia, Austr	147.28	327	*i* P	PKPbc	10 45 12.9	+0.6
	SNR=6.3						
IDI	Anoyia	147.31	301	PKPbc	PKPbc	10 45 12.8	0.0
	comp=Z,5.1nm,0.7s,baz=45,slow=2.9,SNR=6.8						
CONA	Conrad Observa	147.35	328	*e*P	PKPab	10 45 13.5	-1.0
	comp=Z,5.3nm,0.6s						
CKRC	Cesky Krumlov	147.47	330	*e*PKP	PKPbc	10 45 13.3	+0.5
KHC	Kasperske Hory	147.58	331	*e*PKP	PKPbc	10 45 13.3	+0.2
GERES	GERESS Array B	147.73	331	PKPbc	PKPbc	10 45 13.7	+0.1
	comp=Z,5.5nm,0.9s,baz=57,slow=4.9,SNR=24						
GERES	GERESS Array B	147.73	331		PKPbc	10 45 13.1	-0.5
ARSA	Arzberg	147.97	327	*e*P	PKPab	10 45 16.4	-0.5
	comp=Z,7.8nm,1.0s						
MOA	Molln	148.18	329	*e*P	PKiKP	10 45 16.8	+0.4
	comp=Z,6.2nm,1.2s						
BIOA	Bad Ischl, Aus	148.59	329	*e*P	PKPbc	10 45 15.4	-0.4
SOKA	Soboth	148.61	327	*e*P	PKPbc	10 45 15.2	-0.8
	comp=Z,8.0nm,1.2s						
OBKA	Obir	148.97	327	*e*P	PKPab	10 45 20.5	-0.5
	comp=Z,8.8nm,1.3s						
KBA	Koelnbreinsper	149.17	329	*e*P	PKPbc	10 45 15.3	-2.2
	comp=Z,6.0nm,1.1s						
MYKA	Terra Mystica	149.34	328	*e*P	PKPbc	10 45 16.9	-0.8
	comp=Z,2.9nm,0.4s						
ABTA	Abfaltersbach	149.81	329	*e*P	PKPbc	10 45 17.9	-1.0
	comp=Z,7.7nm,1.0s						
WATA	Walderalm	149.81	331	*e*P	PKPbc	10 45 18.4	-0.6
	comp=Z,6.1nm,0.6s						
WTTA	Wattenberg	149.83	331	*e*P	PKPbc	10 45 18.9	-0.2
	comp=Z,6.6nm,0.6s						
MOTA	Moosalm	150.01	331	*e*P	PKPbc	10 45 19.0	-0.5
	comp=Z,8.6nm,0.6s						
RETA	Reutte	150.06	332	*e*P	PKPbc	10 45 19.2	-0.3
	comp=Z,5.3nm,1.1s						
SQTA	Sankt Quirin	150.06	331	*e*P	PKPbc	10 45 19.3	-0.2
	comp=Z,6.9nm,0.6s						
FETA	Feichten	150.43	331	*i* P	PKPbc	10 45 20.5	0.0
	comp=Z,17nm,1.1s,SNR=5.5						
DAVA	Damuels	150.59	332	*e*P	PKPbc	10 45 20.2	-0.7
	comp=Z,6.3nm,0.6s						
DAVOX	Davos/Dischmat	150.99	332	PKPbc	PKPbc	10 45 21.6	-0.2
	comp=Z,13nm,0.7s,baz=29,slow=2.7,SNR=19						
TUE	Stuetta	151.46	332		PKPbc	10 45 22.1	-0.8
ESDC	Sonseca Array	162.08	346	PKPab	PKPab	10 46 15.2	-1.6
	comp=Z,0.5nm,0.8s,baz=356,slow=3.9,SNR=4.2						
TORD	Torodi Ar. Bea	165.87	231	PKP	PKPdf	10 45 32.5	-2.1
	comp=Z,2.2nm,1.1s,baz=216,slow=1.2,SNR=5.6						
TORD				PKPab	PKPab	10 46 33.9	-0.3
	comp=Z,1.1nm,1.1s,baz=174,slow=3.6,SNR=2.7						

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*NOU **30** 10:42:01.8, 12°.61S×166°.60E, h2km, mb4.6/11, Santa Cruz Islands*

*IDC **30** 10:42:20.9±1.1, 14°.18S×166°.71E, h0km, mb3.9/8, mbtmp3.9/9, ML3.7/1, MS3.8/1, Error ellipse: s-maj=34.6km s-min=23.5km az=106.0*

ISC 30 10:42:26.5±0.8**, 14°.27S**±0°.09×**166°.7E**±0°.1**, h35km, n22,** σ**1**s.**33**/23**, mb3.8**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	3.73	157	P	Pn	10 43 21.8	+0.2
RTV	Rentapao	3.89	154	P	Pn	10 43 24.4	+0.6
LIFNC	LIFOU	6.49	175	P	Pn	10 44 00.6	+1.0
KOUNC	Koumac, New Ca	6.64	200	P	Pn	10 44 01.5	-0.1
MARNC	Mare, Loyalty	7.29	170	P	Pn	10 44 10.9	+0.4
YATNC	Mamie plateau,	7.75	178	P	Pn	10 44 17.5	+0.7
DZM	Mont Dzumac	7.76	182	Pn	Pn	10 44 16.3	-0.8
	1.0nm,0.3s,baz=296,slow=18,SNR=18						
DZM				Sn	Sn	10 45 41.4	-2.4
	1.2nm,0.3s,baz=256,slow=12,SNR=3.1						
	4.0nm,0.5s						
DZM	Mont Dzumac	7.76	182	P	Pn	10 44 19.0	+1.9
NOUC	Port Laguerre	7.79	182	P	Pn	10 44 19.8	+2.4
ONTNC	Ouen Toro	7.99	181	P	Pn	10 44 22.7	+2.5
PINNC	Pines Island,	8.33	175	P	Pn	10 44 26.4	+1.6
MSVF	Nonsavu	11.48	109	LR	LR	10 48 39.1	
	comp=Z,427nm,18.2s,baz=281,slow=33						
STKA	Stephens Creek	28.85	228	P	P	10 48 22.0	+0.2
	1.7nm,0.8s,baz=45,slow=11,SNR=3.4						
	1.7nm,0.8s						
WRA	Warramunga Arr	31.37	255	P	P	10 48 43.8	-0.5
	0.9nm,0.9s,baz=84,slow=8.7,SNR=3.8						
	0.9nm,0.9s						
ASAR	Alice Springs	32.29	248	P	P	10 48 51.6	-0.7
	0.3nm,0.6s,baz=74,slow=9.5,SNR=10						
ASAR				PcP	PcP	10 51 39.0	-1.1
	0.5nm,0.8s,baz=76,slow=3.9,SNR=3.9						
	0.3nm,0.6s						
VNDA	Vanda	63.30	181	P	P	10 52 52.7	+1.3
	0.7nm,0.7s,baz=357,slow=7.2,SNR=6.4						
	0.7nm,0.7s						
CMAR	Chiang Mai Arr	74.23	294	P	P	10 54 01.1	+0.7
	0.7nm,0.6s,baz=132,slow=4.7,SNR=4.7						
	0.7nm,0.6s						
SONM	Songino Array	81.78	324	P	P	10 54 42.6	+0.7
	0.3nm,0.4s,baz=126,slow=2.5,SNR=2.1						
	0.3nm,0.4s						
ILAR	Eielson Array	86.28	18	P	P	10 55 02.9	-1.4
	1.3nm,0.7s,baz=233,slow=5.4,SNR=16						
	1.3nm,0.7s						
MKAR	Makanchi Array	96.47	317	P	P	10 55 52.9	+0.6
	0.7nm,0.8s,baz=103,slow=3.9,SNR=5.8						
	0.7nm,0.8s						
ARCES	ARCESS Array B	119.67	345	PKP	PKPdf	11 01 11.0	-1.2
	2.4nm,0.9s,baz=0.0,slow=0.9,SNR=2.1						
TORD	Torodi Ar. Bea	165.35	267	PKPab	PKPab	11 03 25.9	-0.3
	0.5nm,0.9s,baz=100,slow=7.5,SNR=2.2						

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*BJI **30** 10:55:15.1±0.0, 29°.96S×177°.46W, h32km, mb5.3/36, mB5.6/24, Ms5.0/14, Ms7 4.7/16*

*NEIC **30** 10:55:17.1±2.4, 30°.32S±0°.05×177°.9W±0°.1, h30km±4km, mb5.3/233, Error ellipse: s-maj=14.1km s-min=5.8km az=106.0*

*MOS **30** 10:55:18.5±0.8, 30°.19S×178°.07W, h51km, mb5.4/21, MS4.6/5, Error ellipse: s-maj=10.2km s-min=8.6km az=99.9*

*NOU **30** 10:55:19.6, 30°.83S×177°.51W, h63km, mb5.4/46, Kermadec Islands, New Zealand*

*IDC **30** 10:55:20.2±1.0, 30°.11S×177°.99W, h56km±8km, mb4.7/25, mbtmp5.0/26, MS4.4/54, Error ellipse: s-maj=12.6km s-min=12.2km az=90.0*

*GCMT **30** 10:55:22.1±0.1, 30°.20S±0°.01×177°.90W±0°.01, h55km, MW5.3/125, Moment Tensor Solution. s125,c196; s123,c205; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}1.00±.02; $M_{\theta\theta}$-0.24±.02; $M_{\phi\phi}$-0.75±.01; $M_{r\theta}$0.34±.01; $M_{\theta\phi}$-0.39±.01; $M_{\phi r}$0.49±.01; Best double couple: $M_0$1.14600×10^{17} NP1:ϕ_s205.00000°, δ30.00000°, λ84.00000°. NP2:ϕ_s32.00000°, δ61.00000°, λ93.00000°. Principal axes: T 1.1660, Plg74.0000°, Azm310.0000°; N -0.0390, Plg3.0000°, Azm210.0000°; P -1.1260, Plg16.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 10:55:16.7±0.4**, 30°.29S**±0°.03×**177°.88W**±0°.05**, h31**km±2km**, h32km:pP-P, n777,** σ**1**s.**85**/685**, mb5.3**/180**, MS4.5**/62**, 61C-32D, Fault plane solution: NP1:**ϕ_s12.65735°, δ55.15725°**,** λ60.22623°. **NP2:**ϕ_s237.69601°**,** δ44.57096°**,** λ125.50193°. **Principal axes:** T Plg65.1920°, Azm225.8465°**;** N Plg24.0511°**,** Azm30.7576°**;** P Plg5.7243°**,** Azm123.3217°**; Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.02	358	P	Pb	10 55 36.1	+0.2
GLKZ				S	Sn	10 55 48.5	+0.3
RAO	Raoul Island	1.03	358	P	Pb	10 55 36.5	+0.5
	14μm,0.2s,baz=131,slow=5.6,SNR=65						
RAO				S	Sn	10 55 48.8	+0.4
	57μm,0.3s,baz=206,slow=24,SNR=14						
RAO				LR	LR	10 55 53.0	
	comp=Z,4μm,18.2s,baz=313,slow=38						
RAO	Raoul Island	1.03	358		Pb	10 55 36.6	+0.6
RIZ	Raoul Island	1.04	357	P	Pb	10 55 37.9	+1.7
RIZ				S	Sn	10 55 48.9	+0.3
MXZ	Matakaoa Point	7.92	203	Pn	Pn	10 57 07.7	-1.9
MXZ	Matakaoa Point	7.92	203	P	Pn	10 57 08.0	-1.6
MXZ				S	Sn	10 58 35.9	-2.2
WMGZ	Waiomatatini S	8.12	201	P	Pn	10 57 11.5	-0.8
WMGZ				S	Sn	10 58 43.4	+0.4
GRZ	Great Barrier	8.15	221	P	Pn	10 57 20.9	+8.1
HAZ	Te Kaha	8.27	205	P	Pn	10 57 13.5	-1.0
HAZ				S	Sn	10 58 47.1	+0.3
PKGZ	Pakihiroa	8.29	203	P	Pn	10 57 12.4	-2.3
PKGZ				S	Sn	10 58 46.0	-1.3
KUZ	Kuaotunu	8.37	218	P	Pn	10 57 19.3	+3.6
PUZ	Puketiti	8.40	201	P	Pn	10 57 13.4	-2.8
PUZ				S	Sn	10 58 46.2	-3.7
RUGZ	Raukumara Rang	8.50	205	P	Pn	10 57 16.5	-1.1
RUGZ				S	Sn	10 58 50.9	-1.6
TWGZ	Tauwhareparae	8.58	202	P	Pn	10 57 17.4	-1.4
TWGZ				S	Sn	10 58 51.8	-2.7
WCZ	Waipu Caves	8.62	227	P	Pn	10 57 27.6	+8.4
OUZ	Omahuta	8.70	233	P	Pn	10 57 29.3	+9.0
CNGZ	Carnagh Statio	8.79	201	P	Pn	10 57 20.3	-1.3
CNGZ				S	Sn	10 59 00.2	+0.7
TKGZ	Te Karaka	8.86	202	P	Pn	10 57 21.5	-1.1
TKGZ				S	Sn	10 58 58.4	-2.9
MWZ	Matawai	8.88	204	P	Pn	10 57 20.6	-2.3
MWZ				S	Sn	10 59 01.2	-0.6
MARZ	Manawahe	8.90	209	P	Pn	10 57 26.3	+3.1
URZ	Urewera	8.96	206	P	Pn	10 57 21.6	-2.4
	12nm,0.3s,baz=301,slow=23,SNR=40						
URZ				S	Sn	10 59 03.2	-0.6
	124nm,0.3s,baz=216,slow=12,SNR=14						
URZ	Urewera	8.96	206	Pn	Pn	10 57 23.0	-1.0
URZ	Urewera	8.96	206	P	Pn	10 57 22.0	-2.0
KARZ	Kaharoa	9.12	211	P	Pn	10 57 31.3	+5.2
RIGZ	Rimuhau	9.13	202	P	Pn	10 57 23.9	-2.4
RIGZ				S	Sn	10 59 05.9	-2.2
OMRZ	Omania	9.13	210	P	Pn	10 57 31.9	+5.6
RRRZ	Republican Roa	9.27	209	P	Pn	10 57 32.1	+3.9
PRGZ	Paritu Road	9.29	201	P	Pn	10 57 25.4	-3.1
PRGZ				S	Sn	10 59 08.7	-3.3
RTZ	Ruatahuna	9.33	206	P	Pn	10 57 27.8	-1.2
RTZ				S	Sn	10 59 10.5	-2.3
SNGZ	Shannon Statio	9.34	204	P	Pn	10 57 28.7	-0.5
SNGZ				S	Sn	10 59 10.9	-2.3
PRRZ	Plateau Road	9.46	208	P	Pn	10 57 30.2	-0.5
PRRZ				S	Sn	10 59 14.0	-1.9
MHGZ	Mahia Peninsul	9.50	200	P	Pn	10 57 28.2	-3.1
MHGZ				S	Sn	10 59 10.9	-6.0
ALRZ	Allen Road	9.53	208	P	Pn	10 57 32.3	+0.5
ALRZ				S	Sn	10 59 15.0	-2.8
RAHZ	Arahi	9.55	204	P	Pn	10 57 30.3	-1.8
RAHZ				S	Sn	10 59 14.6	-3.8
MTHZ	Maungataniwha	9.59	206	P	Pn	10 57 30.7	-1.9
MTHZ				S	Sn	10 59 17.0	-2.1
TLZ	Tolley Road	9.69	212	P	Pn	10 57 33.6	-0.3
NMHZ	Naumai	9.81	205	P	Pn	10 57 33.1	-2.5
NMHZ				S	Sn	10 59 23.1	-1.7
ARHZ	Aropaoanui	9.89	204	P	Pn	10 57 33.9	-2.8
ARHZ				S	Sn	10 59 24.4	-2.2
BKZ	Black Stump Fm	9.99	206		Pn	10 57 38.1	0.0
BKZ	Black Stump Fm	9.99	206	P	Pn	10 57 34.4	-3.7
BKZ				S	Sn	10 59 26.9	-2.2
RITZ	Rihia Road	10.08	209	P	Pn	10 57 42.5	+3.1
RITZ				S	Sn	10 59 30.9	-0.5
MCHZ	McNeill Hill	10.16	205	P	Pn	10 57 37.2	-3.1
MCHZ				S	Sn	10 59 28.2	-5.0
HIZ	Hauiti	10.16	214	Pn	Pn	10 57 40.5	+0.1
HIZ	Hauiti	10.16	214	P	Pn	10 57 45.1	+4.7
HIZ	Hauiti	10.16	214	P	Pn	10 57 38.9	-1.5
CKHZ	Cape Kidnapper	10.22	203	P	Pn	10 57 37.4	-3.8
CKHZ				S	Sn	10 59 30.4	-4.2
KWHZ	Kaweka Forest	10.24	206	P	Pn	10 57 39.2	-2.3
TMVZ	Te Maari	10.27	209	P	Pn	10 57 40.9	-1.0
ETVZ	East Tongariro	10.28	209	P	Pn	10 57 41.5	-0.6
NNVZ	North Ngauruho	10.32	209	P	Pn	10 57 43.8	+1.1
OTVZ	Oturere	10.32	209	P	Pn	10 57 44.2	+1.5
TWVZ	Taurewa	10.34	210	P	Pn	10 57 43.6	+0.7
NGZ	Ngauruhoe	10.36	209	P	Pn	10 57 44.5	+1.2
KAHZ	Kahuranaki	10.41	203	P	Pn	10 57 39.6	-4.2
TUVZ	Tukino	10.41	209	P	Pn	10 57 45.3	+1.3
BHHZ	Black Hill Sta	10.44	207	P	Pn	10 57 43.0	-1.2
FWVZ	Far West T-bar	10.45	209	P	Pn	10 57 44.4	0.0
KRHZ	Kereru	10.46	205	P	Pn	10 57 41.1	-3.3
WNVZ	Wahianoa	10.49	209	P	Pn	10 57 45.8	+0.8
MOVZ	Moawhango	10.49	208	P	Pn	10 57 43.2	-1.7
PXZ	Pawanui	10.63	202	P	Pn	10 57 42.1	-4.7
PNHZ	Pukenui	10.76	205	P	Pn	10 57 45.2	-3.3
WPHZ	Waipukurau	10.80	204	P	Pn	10 57 45.3	-3.9
PRHZ	Porangahau	10.91	203	P	Pn	10 57 46.2	-4.5
TSZ	Takapari Road	10.97	206	P	Pn	10 57 47.9	-3.5
DVHZ	Dannevirke	11.11	204	P	Pn	10 57 50.2	-3.1
ANWZ	Angora Road	11.14	203	P	Pn	10 57 50.3	-3.4
POWZ	Post Office Ro	11.33	205	P	Pn	10 57 53.9	-2.5
PRWZ	Pori Road	11.40	204	P	Pn	10 57 54.0	-3.3
BFZ	Birch Farm	11.42	203	Pn	Pn	10 57 55.6	-2.0
BFZ	Birch Farm	11.42	203	P	Pn	10 57 52.1	-5.5
TIWZ	Tintock	11.63	204	P	Pn	10 57 55.0	-5.4
LKBA	Tubou, Lakemba	12.03	356	P	P	10 58 15.9	-2.7
	4.9nm,0.8s						
DUWZ	D'Urville Isla	12.43	210	P	Pn	10 58 11.1	-0.2
SNZO	South Karori	12.53	207	Pn	Pn	10 58 09.2	-3.5
PLWZ	Palliser	12.55	204	Pn	Pn	10 58 11.5	-1.6
TUWZ	Tuamarina	12.94	209		Pn	10 58 16.4	-1.8
NNZ	Nelson	13.00	211	Pn	Pn	10 58 18.8	-0.4
MSVF	Nonsavu	13.04	343	P	Pn	10 58 24.2	+4.3
	29nm,0.8s,baz=159,slow=12,SNR=8.1						
MSVF				LR	LR	11 02 38.8	
	comp=Z,4μm,19.0s,baz=179,slow=34						
MSVF	Nonsavu	13.04	343	Pn	Pn	10 58 20.9	+1.0
MSVF	Nonsavu	13.04	343⥣	*e*P	Pn	10 58 22.1	+2.2
MSVF				pmax	pmax		
	comp=Z,15nm,0.9s						
QRZ	Quartz Range	13.09	214	P	Pn	10 58 18.1	-2.3
NIUE	Niue	13.29	35		Pn	10 58 20.2	-3.0
THZ	Tophouse	13.65	211	Pn	Pn	10 58 27.6	-0.5
KHZ	Kahutara	13.93	207		Pn	10 58 29.5	-2.3
KHZ	Kahutara	13.93	207	P	Pn	10 58 29.8	-2.0
DGTI	Dogotuki	14.10	351	P	P	10 58 43.2	+1.6
DSZ	Denniston Nort	14.14	213	P	Pn	10 58 33.9	-0.9
LTZ	Lake Taylor	14.76	210	Pn	Pn	10 58 41.9	-1.2
AMCZ	Amberley	14.92	208	P	P	10 58 48.7	-1.9
INZ	Inchbonnie	15.07	212	P	Pn	10 58 48.0	+0.7
PINNC	Pines Island,	15.20	297	P	P	10 58 53.2	-0.6
PINNC	Pines Island,	15.20	297	P	P	10 58 58.1	+4.3
MARNC	Mare, Loyalty	15.41	301	P	P	10 58 57.6	+1.5
RACZ	Rakaia	15.59	208	P	Pn	10 58 55.7	+1.7
WVZ	Waitaha Valley	15.67	212	P	Pn	10 58 54.5	-0.6
OUENC	Ouen Island, N	15.77	296		P	10 58 59.5	-0.7
OUENC	Ouen Island, N	15.77	296	P	P	10 59 04.8	+4.6
YATNC	Mamie plateau,	15.93	297	P	P	10 59 07.7	+5.8
RPZ	Rata Peaks	16.03	210	P	Pn	10 59 00.4	+0.6
	comp=Z,21nm,0.5s,baz=199,slow=1.5,SNR=11						
RPZ				S	Sn	11 01 40.8	-16
	comp=Z,20nm,0.5s,baz=146,slow=22,SNR=7.7						
RPZ				LR	LR	11 05 45.6	
	comp=Z,889nm,20.8s,baz=46,slow=39						
RPZ	Rata Peaks	16.03	210	Pn	Pn	10 58 58.1	-1.7
RPZ	Rata Peaks	16.03	210	P	Pn	10 58 58.1	-1.7
GCSZ	Gaunt Creek Bo	16.05	213	P	Pn	10 58 59.4	-0.6
DZM	Mont Dzumac	16.27	297	P	P	10 59 08.9	+3.1
	comp=Z,156nm,1.3s,baz=60,slow=18,SNR=9.5						
DZM				LR	LR	11 03 59.1	
	comp=Z,5μm,21.2s,baz=134,slow=32						
DZM	Mont Dzumac	16.27	297	P	P	10 59 10.7	+4.9
NOUC	Port Laguerre	16.36	296	P	P	10 59 11.6	+4.9
LIFNC	LIFOU	16.42	302	P	P	10 59 06.7	-0.7
LIFNC	LIFOU	16.42	302	P	P	10 59 13.5	+6.1
LBZ	Lake Benmore	16.95	211	P	P	10 59 12.6	-0.4
AFI	Afiamalu	17.25	20	P	Pn	10 59 13.1	-2.2
	comp=Z,25nm,0.5s,baz=254,slow=8.0,SNR=5.9						
AFI				S	Sn	11 02 08.8	-18
	comp=Z,50nm,0.7s,baz=241,slow=22,SNR=4.1						
AFI	Afiamalu	17.25	20	Pn	Pn	10 59 12.3	-3.0
AFI	Afiamalu	17.25	20	P	Pn	10 59 12.3	-3.0
AFI				pmax	pmax		
	comp=Z,71nm,0.7s						
ODZ	Otahua Downs	17.28	208	P	Pn	10 59 11.6	-3.9
WKZ	Wanaka	17.81	212	P	P	10 59 22.8	+0.1
EAZ	Earnscleugh	18.00	210	P	P	10 59 24.7	0.0
RAR	Rarotonga	18.62	65	P	Pn	10 59 33.1	+1.0
	comp=Z,94nm,0.8s,baz=268,slow=8.5,SNR=18						
RAR				S	Sn	11 02 43.5	-16
	comp=Z,45nm,0.5s,baz=70,slow=19,SNR=7.0						
RAR				LR	LR	11 07 38.6	
	comp=Z,376nm,18.2s,baz=234,slow=40						
RAR	Rarotonga	18.62	65	P	Pn	10 59 33.6	+1.4
RAR	Rarotonga	18.62	65	P	Pn	10 59 33.6	+1.4
RAR				pmax	pmax		
	comp=Z,113nm,0.9s						
RAR	Rarotonga	18.62	65	P	Pn	10 59 32.8	+0.7
KOUNC	Koumac, New Ca	18.78	297	P	P	10 59 33.3	-0.2
KOUNC	Koumac, New Ca	18.78	297	P	Pn	10 59 39.0	+4.9
ARMA	Armidale	26.28	262	P	P	11 00 51.0	+1.5

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      baz=26,SNR=5.5
ARMA  Armidale          26.28 262   P       P       11 00 49.7 +0.2
RIV   Riverview         26.43 254   P       P       11 00 52.1 +1.4
      baz=26,SNR=4.2
MGCD  Mangrove Creek    26.49 256   P       P       11 00 52.7 +1.5
      baz=26,SNR=20
MGCD  Mangrove Creek    26.49 256   P       P       11 00 53.0 +1.8
EIDS  Eidsvold          27.84 273   P       P       11 01 05.3 +1.9
      baz=28,SNR=22
EIDS  Eidsvold          27.84 273   P       P       11 01 04.8 +1.4
EIDS  Eidsvold          27.84 273   P       P       11 01 04.9 +1.5
CAN   Canberra          28.21 251   P       P       11 01 04.7 -2.0
CAN                                 IAmb    IAmb    11 01 12.9
      comp=Z,78nm,1.1s
CAN   Canberra          28.21 251   P       P       11 01 04.7 -2.0
CAN                                 pmax    pmax
      comp=Z,78nm,1.1s
CAN   Canberra          28.21 251   P       P       11 01 06.2 -0.5
PPT   Papeete           28.71  70   LR      LR      11 09 54.3
      comp=Z,516nm,21.4s,baz=238,slow=30
HNR   Honiara           29.31 310   LR      LR      11 11 06.7
      comp=Z,826nm,21.9s,baz=153,slow=32
RMQ   Roma              29.54 269   P       P       11 01 19.4 +0.8
      baz=30,SNR=49
RMQ   Roma              29.54 269   P       P       11 01 22.3 +3.8
MOO   Moorlands         30.42 237   P       P       11 01 27.3 +1.1
      baz=30,SNR=4.3
TAU   Tasmania Unive    30.43 236   P       P       11 01 26.8 +0.6
TAU                                 IAmb    IAmb    11 01 28.4
      comp=Z,112nm,1.9s
TAU   Tasmania Unive    30.43 236   P       P       11 01 26.8 +0.6
TAU                                 pmax    pmax
      comp=Z,112nm,1.9s
TOO   Toolangi          31.11 247   P       P       11 01 33.7 +1.4
      baz=31,SNR=22
TOO   Toolangi          31.11 247   P       P       11 01 32.7 +0.4
TOO                                 IAmb    IAmb    11 01 37.6
      comp=Z,57nm,1.0s
TOO   Toolangi          31.11 247   P       P       11 01 32.7 +0.4
TOO                                 pmax    pmax
      comp=Z,57nm,1.0s
CMSA  Cobar Meteorol    31.20 258   P       P       11 01 34.3 +1.2
      baz=31,SNR=50
CMSA  Cobar Meteorol    31.20 258   P       P       11 01 36.0 +2.9
QLP   Quilpie           33.42 267   P       P       11 01 53.7 +1.0
      baz=34,SNR=40
QLP   Quilpie           33.42 267   P       P       11 01 54.7 +2.0
CTA   Charters Tower    33.89 279   P       P       11 01 58.5 +1.7
      comp=Z,90nm,0.8s,baz=106,slow=10,SNR=87
CTA                                 LR      LR      11 14 33.6
      comp=Z,2µm,18.2s,baz=114,slow=34
      comp=Z,90nm,0.8s
CTA   Charters Tower    33.89 279   P       P       11 01 59.4 +2.6
CTAO  Charters Tower    33.89 279   P       P       11 01 58.0 +1.2
CTAO  Charters Tower    33.89 279   P       P       11 01 58.0 +1.2
CTAO                                pmax    pmax
      comp=Z,112nm,0.9s
CTAO  Charters Tower    33.89 279   P       P       11 01 59.4 +2.6
CTAO  Charters Tower    33.89 279 ⇑P       P       11 01 58.5 +1.7
CTAO                              ⇑pP      pP      11 02 02.3 -2.9
ARPS  Mount Arapiles    34.01 248   P       P       11 01 59.0 +1.3
      baz=34,SNR=7.8
ARPS  Mount Arapiles    34.01 248   P       P       11 01 59.1 +1.4
STKA  Stephens Creek    34.61 257   P       P       11 02 04.6 +1.6
      comp=Z,128nm,0.9s,baz=96,slow=9.9,SNR=108
STKA                                LR      LR      11 14 59.7
      comp=Z,1µm,19.4s,baz=89,slow=34
      comp=Z,128nm,0.9s
STKA  Stephens Creek    34.61 257   P       P       11 02 04.4 +1.4
      baz=35,SNR=91
STKA  Stephens Creek    34.61 257   P       P       11 02 03.9 +1.0
STKA                                IAmb    IAmb    11 02 07.7
      comp=Z,30nm,1.0s
STKA  Stephens Creek    34.61 257   P       P       11 02 05.0 +2.1
INKA  Innaminka         36.14 264   P       P       11 02 18.8 +2.7
MTSU  Mount Surprise    36.38 281   P       P       11 02 20.6 +2.3
HTT   Hallett           36.64 254   P       P       11 02 21.7 +1.3
      baz=37,SNR=60
HTT   Hallett           36.64 254   P       P       11 02 22.5 +2.1
LCRK  Leigh Creek       37.70 258   P       P       11 02 30.8 +1.4
KRVT  Keravat (AS076    38.40 306   P       P       11 02 34.9 -0.5
      comp=Z,32nm,0.6s,baz=131,slow=3.2,SNR=5.9
      comp=Z,32nm,0.6s
PMG   Port Moresby      38.66 295   P       P       11 02 37.2 -0.3
      comp=Z,25nm,1.1s,baz=235,slow=9.2,SNR=3.1
PMG                                 LR      LR      11 16 00.1
      comp=Z,897nm,19.9s,baz=122,slow=32
      comp=Z,25nm,1.1s
BBOO  Buckleboo         39.10 254   P       P       11 02 41.7 +0.5
      baz=39,SNR=39
BBOO  Buckleboo         39.10 254   P       P       11 02 41.2 +0.1
BBOO                                IAmb    IAmb    11 02 44.0
      comp=Z,72nm,0.8s
BBOO  Buckleboo         39.10 254   P       P       11 02 43.8 +2.6
COEN  Coen              39.34 286   P       P       11 02 44.6 +1.3
      baz=39,SNR=9.0
COEN  Coen              39.34 286   P       P       11 02 44.5 +1.1
COEN  Coen              39.34 286   P       P       11 02 46.6 +3.2
      comp=Z,22nm,1.4s
QIS   Mount Isa         39.41 274   P       P       11 02 44.3 +0.4
      baz=40,SNR=29
QIS   Mount Isa         39.41 274   P       P       11 02 44.5 +0.6
OOD   Oodnadatta        40.46 262   P       P       11 02 54.5 +2.0
MULG  Mulgathing        41.25 257   P       P       11 02 59.9 +0.9
ASAR  Alice Springs     43.22 267   P       P       11 03 14.7 -0.5
      comp=Z,19nm,0.6s,baz=103,slow=7.9,SNR=285
ASAR                                PcP     PcP     11 05 03.3 -0.9
      comp=Z,4.1nm,0.8s,baz=123,slow=4.7,SNR=2.0
ASAR                                ScP     ScP     11 08 49.6 -3.5
      comp=Z,1.2nm,0.9s,baz=109,slow=4.3,SNR=3.2
ASAR                                PKiKP   PKiKP   11 12 06.0 -1.3
      comp=Z,0.3nm,0.6s,baz=126,slow=1.3,SNR=4.8
      comp=Z,19nm,0.6s
WR0   Warramunga Arr    44.02 272   P       P       11 03 20.8 -0.8
WR0                                 IAmb    IAmb    11 03 25.3
      comp=Z,77nm,1.1s
WB2   Warramunga Arr    44.19 272   IAmb    IAmb    11 03 24.6
      comp=Z,78nm,0.9s
WRAB  Tennant Creek     44.20 272   P       P       11 03 22.3 -0.8
WRAB                                IAmb    IAmb    11 03 24.6
      comp=Z,63nm,0.8s
WRAB  Tennant Creek     44.20 272c iP       P       11 03 22.4 -0.6
WRAB                                pmax    pmax
      comp=Z,85nm,1.0s
WRAB  Tennant Creek     44.20 272   P       P       11 03 23.4 +0.4
WRA   Warramunga Arr    44.20 272   P       P       11 03 22.5 -0.6
      comp=Z,42nm,0.5s,baz=112,slow=7.5,SNR=261
WRA                                 ScP     ScP     11 08 55.1 -2.0
      comp=Z,1.9nm,1.1s,baz=113,slow=3.9,SNR=3.0
WRA                                 S       S       11 09 49.6 -5.0
      comp=Z,2.1nm,0.9s,baz=110,slow=14,SNR=1.5
WRA                                 PKiKP   PKiKP   11 12 06.6 -1.7
      comp=Z,0.7nm,0.7s,baz=101,slow=0.5,SNR=6.3
WRA                                 LR      LR      11 20 11.7
      comp=Z,1µm,21.9s,baz=83,slow=34
      comp=Z,42nm,0.5s
WRA   Warramunga Arr    44.20 272   P       P       11 03 22.9 -0.2
WB0   Warramunga Arr    44.22 272   P       P       11 03 22.7 -0.6
DRV   Dumont d'Urvil    44.28 202 ⇑P       P       11 03 23.5 +0.5
DRV                                 sP      pwP     11 03 36.1 +0.9
FORT  Forrest           46.18 255   P       P       11 03 37.6 -1.0
      baz=46,SNR=21
FORT  Forrest           46.18 255   P       P       11 03 37.3 -1.4
FORT  Forrest           46.18 255   P       P       11 03 40.7 +2.1
WRKA  Warakurna         47.60 263   P       P       11 03 48.3 -1.5
      baz=48,SNR=32
WRKA  Warakurna         47.60 263   P       P       11 03 49.2 -0.7
SBA   Scott Base        48.16 184   P       P       11 03 55.9 +2.6
SBA   Scott Base        48.16 184   P       P       11 03 55.9 +2.6
SBA                                 pmax    pmax
      comp=Z,191nm,2.0s
SBA   Scott Base        48.16 184 ⇑P       P       11 03 57.9 +4.5
SBA                                 pP      pwP     11 04 08.6 +2.4
VNDA  Vanda             48.22 186   P       P       11 03 57.0 +3.2
      comp=Z,3.2nm,0.6s,baz=0.2,slow=7.4,SNR=20
VNDA                                LR      LR      11 20 11.3
      comp=Z,184nm,21.6s,baz=20,slow=31
      comp=Z,3.2nm,0.6s
VNDA  Vanda             48.22 186   P       P       11 03 55.3 +1.5
VNDA  Vanda             48.22 186 ⇑P       P       11 03 57.1 +3.3
VNDA                              ⇑pP      sP      11 04 05.8 +0.1
KDU   Kakadu            49.00 280   P       P       11 04 00.7  0.0
      baz=49,SNR=7.6
KDU   Kakadu            49.00 280   P       P       11 04 02.9 +2.2
SMPI  Sarmi             49.82 296   P       P       11 04 21.6  +15
      comp=Z,2µmcomp=Z,8µmcomp=Z,103nm,0.4s
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MTN   Manton Dam        50.07 279   P       P       11 04 07.8 -1.0
      baz=50,SNR=6.3
MTN   Manton Dam        50.07 279   P       P       11 04 07.5 -1.3
MTN                                 IAmb    IAmb    11 04 10.4
      comp=Z,43nm,1.2s
MTN   Manton Dam        50.07 279   P       P       11 04 10.0 +1.1
KNRA  Kununurra         50.80 274   P       P       11 04 14.0 -0.4
      baz=51,SNR=45
KNRA  Kununurra         50.80 274   P       P       11 04 13.9 -0.4
KNRA                                IAmb    IAmb    11 04 16.1
      comp=Z,26nm,0.7s
KNRA  Kununurra         50.80 274   P       P       11 04 16.5 +2.1
WAKE  Wake Island       51.49 341   P       P       11 04 20.0 +0.7
CCD   Concordia, Ant    53.09 196 ⇑P       P       11 04 32.2 +1.1
HMH   Humu'ula Sheep    54.09  26   P       P       11 04 40.3 +1.4
HPAH  Hawaii Prepara    54.39  26   P       P       11 04 41.8 +0.9
FAKI  Fak Fak           54.40 290   P       P       11 04 39.6 -1.5
FAKI                                IAmb    IAmb    11 05 03.7
      comp=Z,74nm,1.4s
NWAO  Narrogin (SRO)    54.54 249   P       P       11 04 39.6 -2.3
NWAO                                IAmb    IAmb    11 06 21.9
      comp=Z,93nm,1.8s
NWAO  Narrogin (SRO)    54.54 249   P       P       11 04 39.6 -2.3
NWAO                                pmax    pmax
      comp=Z,93nm,1.8s
KIP   Kipapa            54.85  23⇓eP       P       11 04 45.5 +1.5
KIP                                 pmax    pmax
      comp=Z,77nm,1.3s
CASY  Casey             55.29 208   P       P       11 04 46.4 -0.3
CASY  Casey             55.29 208 ⇓P       P       11 04 47.1 +0.4
CASY                                pP      pP      11 04 54.6 -0.8
MUN   Mundaring         55.64 250   P       P       11 04 50.1 +0.3
      baz=56,SNR=5.9
PSA00 Pilbara Seismi    56.09 263   P       P       11 04 50.8 -2.3
PSA00                               IAmb    IAmb    11 04 56.3
      comp=Z,23nm,1.1s
PSA00 Pilbara Seismi    56.09 263   P       P       11 04 53.2  0.0
MBWA  Marble Bar        56.34 264   P       P       11 04 52.8 -2.2
MBWA                                IAmb    IAmb    11 04 55.8
      comp=Z,39nm,1.1s
MBWA  Marble Bar        56.34 264   P       P       11 04 55.6 +0.6
MBWA  Marble Bar        56.34 264   P       P       11 04 52.9 -2.2
MBWA                                pP      pP      11 05 02.5 -1.5
SIJI  Sorong            56.39 291   P       P       11 04 54.8 -0.6
      comp=Z,29nm,0.7s,baz=89,slow=3.7,SNR=18
SIJI                                LR      LR      11 29 05.5
      comp=Z,308nm,19.5s,baz=116,slow=36
      comp=Z,29nm,0.7s
SWI   Sorong            56.40 291   P       P       11 04 55.9 +0.5
      comp=Z,940nmcomp=Z,62nm,0.8s
GUMO  Guam              56.48 315   LR      LR      11 27 08.9
      comp=Z,261nm,19.3s,baz=126,slow=34
MORW  Morawa            56.67 253   P       P       11 04 55.7 -1.5
      baz=57,SNR=12
MORW  Morawa            56.67 253   P       P       11 04 55.8 -1.5
MORW                                IAmb    IAmb    11 04 56.3
      comp=Z,42nm,1.6s
SOEI  Soe               57.45 278   P       P       11 05 01.6 -1.4
SOEI                                IAmb    IAmb    11 05 57.1
      comp=Z,46nm,1.0s
SOEI  Soe               57.45 278   P       P       11 05 06.0 +3.0
      comp=Z,40nm,0.8s
SOEI  Soe               57.45 278   P       P       11 05 04.8 +1.8
BATI  Baumata           57.74 277   P       P       11 05 05.8 +0.8
      comp=Z,13nm,0.3s,baz=38,slow=5.9,SNR=4.0
BATI                                LR      LR      11 29 45.4
      comp=Z,2µm,20.1s,baz=126,slow=36
      comp=Z,13nm,0.3s
RPN   Rapa Nui          59.36 105   LR      LR      11 24 20.9
      comp=Z,429nm,22.0s,baz=264,slow=29
LBMI  Labuha            59.58 289   P       P       11 05 20.7 +2.9
      comp=Z,578nmcomp=Z,23nm,0.7s
QSPA  South Pole Qui    59.82 180   P       P       11 05 21.5 +2.7
      comp=Z,24nm,0.5s,baz=5.6,slow=0.7,SNR=104
QSPA                                LR      LR      11 29 02.6
      comp=Z,282nm,19.1s,baz=33,slow=34
      comp=Z,24nm,0.5s
QSPA  South Pole Qui    59.82 180   P       P       11 05 21.1 +2.3
QSPA  South Pole Qui    59.82 180 ⇑P       P       11 05 21.3 +2.5
QSPA                                sP      pwP     11 05 36.6 +5.0
SANI  Sanana            60.03 287   P       P       11 05 20.2 -0.7
      comp=Z,622nmcomp=Z,38nm,1.1s
EDFI  Ende, Flores      60.15 278   P       P       11 05 22.1 +0.3
      comp=Z,21nm,0.8s
GIRL  Giralia           60.47 260   P       P       11 05 23.5 -0.3
      baz=60,SNR=4.0
BKSI  Bulukumba         63.22 280   P       P       11 05 42.3 -0.1
      comp=Z,19nm,0.6s
KAPI  Kappang           63.70 280   P       P       11 05 44.8 -0.7
      comp=Z,9.8nm,0.3s,baz=72,slow=3.8,SNR=5.7
KAPI                                LR      LR      11 34 05.5
      comp=Z,260nm,18.3s,baz=130,slow=37
      comp=Z,9.8nm,0.3s
TTSI  Tana Toraja       64.67 282   P       P       11 05 52.7 +0.8
      comp=Z,17nm,1.1s
MPSI  Mapaga            66.42 285   P       P       11 06 03.3 +0.1
      comp=Z,18nm,0.8s
GMJI  Gumukmas          67.48 274   P       P       11 06 21.1  +11
      comp=Z,127nm,0.7s
JCJ   Chichijima        68.66 322   LR      LR      11 30 55.9
      comp=Z,162nm,19.7s,baz=134,slow=31
PCJI  Pacitan           69.48 272   P       P       11 06 25.2 +2.7
      comp=Z,153nm,1.2s
WOJI  Wonogiri, Jawa    69.87 273   P       P       11 06 25.9 +1.0
      comp=Z,71nm,1.1s
BELA  Belgrano 2        69.88 172   P       P       11 06 24.2 +0.3
BELA                                IAmb    IAmb    11 06 43.9
      comp=Z,21nm,1.0s
PMSA  Palmer Station    72.32 156   LR      LR      11 31 33.8
      comp=Z,244nm,20.1s,baz=238,slow=30
MAW   Mawson            72.45 201   P       P       11 06 40.4 +0.8
      comp=Z,7.4nm,0.5s,baz=123,slow=7.8,SNR=14
MAW                                 LR      LR      11 37 05.0
      comp=Z,496nm,20.7s,baz=118,slow=34
      comp=Z,7.4nm,0.5s
MAW   Mawson            72.45 201   P       P       11 06 40.5 +0.8
      baz=72,SNR=19
MAW   Mawson            72.45 201   P       P       11 06 39.6  0.0
LEM   Lembang           73.22 272   P       P       11 06 45.0 -0.3
      comp=Z,48nm,0.7s,baz=114,slow=6.0,SNR=7.6
LEM                                 LR      LR      11 39 54.0
      comp=Z,458nm,18.9s,baz=134,slow=37
      comp=Z,48nm,0.7s
LEM   Lembang           73.22 272   P       P       11 06 45.0 -0.3
STKI  Sintang           73.38 280   P       P       11 06 46.9 +0.9
      comp=Z,40nm,0.8s
DBJI  Dramaga           74.11 272   P       P       11 06 50.7 +0.4
      comp=Z,64nm,1.1s
JHJ   Hachijo jima 2    74.72 324   LR      LR      11 36 07.4
      comp=Z,116nm,19.0s,baz=115,slow=33
MG03  Isla Dawson       75.47 144   P       P       11 06 57.8 +0.3
MG05  Puerto Natales    75.53 142   IAmb    IAmb    11 07 19.1
      comp=Z,52nm,0.9s
USHA  Ushuaia           75.95 146   LR      LR      11 31 53.0
      comp=Z,354nm,20.9s,baz=234,slow=29
JOW   Kunigami          76.67 312   LR      LR      11 36 44.5
      comp=Z,277nm,21.4s,baz=125,slow=32
JYT   Yasato            77.00 326   P       P       11 07 06.0 -0.2
JYT                                 IAmb    IAmb    11 07 08.5
      comp=Z,72nm,1.3s
MDSI  Maura Dua         77.35 272   P       P       11 07 06.4 -2.4
      comp=Z,37nm,0.8s
TROLL Troll, Antarti    77.98 180   P       P       11 07 13.1 +1.5
MJAR  Matsushiro Arr    78.21 325   P       P       11 07 12.0 -1.1
      comp=Z,9.1nm,1.0s,baz=155,slow=5.7,SNR=14
MJAR                                LR      LR      11 36 29.0
      comp=Z,150nm,22.0s,baz=143,slow=32
      comp=Z,9.1nm,1.0s
MJAR  Matsushiro Arr    78.21 325   P       P       11 07 11.4 -1.7
MAJO  Matsushiro        78.22 325   P       P       11 07 12.9 -0.2
MAJO  Matsushiro        78.22 325⇑eP       P       11 07 13.8 +0.7
MAJO                                pmax    pmax
      comp=Z,22nm,1.2s
SNAA  Sanae             78.26 178   P       P       11 07 14.1 +1.1
SNAA  Sanae             78.26 178   P       P       11 07 14.1 +1.1
      comp=Z,4.7nm,0.6s,baz=128,slow=14,SNR=16
SNAA                                LR      LR      11 38 35.8
      comp=Z,193nm,21.7s,baz=152,slow=33
      comp=Z,4.7nm,0.6s
SNAA  Sanae             78.26 178   P       P       11 07 13.2 +0.1
VNA3  Neumayer Olymp    78.41 176   P       P       11 07 14.6 +0.8
VNA3  Neumayer Olymp    78.41 176   S       S       11 17 12.9 +5.8
VNA2  Neumayer--Watz    78.84 177   P       P       11 07 17.4 +1.2
      baz=169,slow=5.0
VNA2  Neumayer--Watz    78.84 177   S       S       11 17 16.3 +4.6
COYC  Coyhaique         78.94 136   P       P       11 07 19.1 +1.9
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VNA1  Neumayer--Stat    79.07 176   P       P       11 07 18.8 +1.4
AY01  Puyuhuapi         79.21 135   IAmb    IAmb    11 07 40.2
      comp=Z,43nm,1.1s
JSD   Sado              79.37 326   IAmb    IAmb    11 07 20.9
      comp=Z,79nm,1.9s
TPUB  Ta-pu             79.51 305   IAmb    IAmb    11 07 19.4
      comp=Z,23nm,0.8s
JNU   Nakatsue          79.55 318   P       P       11 07 20.6 +0.1
JNU                                 IAmb    IAmb    11 07 23.8
      comp=Z,32nm,1.2s
JHS   Saijyo            79.67 321   IAmb    IAmb    11 07 23.2
      comp=Z,28nm,1.1s
LL02  Futaleuf          80.35 135   P       P       11 07 26.4 +1.5
LL02                                IAmb    IAmb    11 07 46.5
      comp=Z,75nm,1.2s
H03S2 Juan Fernandez    80.44 124   T       T       12 36 37.9
      baz=240
H03S1 Juan Fernandez    80.45 124   T       T       12 36 39.1
      baz=240
H03S3 Juan Fernandez    80.45 124   T       T       12 36 38.1
      baz=240
H03N3 Juan Fernandez    80.63 123   T       T       12 36 54.2
      baz=241,slow=72,SNR=40
H03N2 Juan Fernandez    80.63 123   T       T       12 36 54.5
      baz=241,slow=72,SNR=28
H03N1 Juan Fernandez    80.64 123   T       T       12 36 53.3
      baz=241,slow=72,SNR=46
LL04  Puerto Octay      81.22 132   IAmb    IAmb    11 07 50.9
      comp=Z,48nm,1.3s
ASAJ  Asahikawa         82.39 332   LR      LR      11 39 26.3
      comp=Z,297nm,21.4s,baz=168,slow=32
PLCA  Paso Flores       82.50 133   P       P       11 07 38.6 +2.2
      comp=Z,10nm,1.1s,baz=239,slow=8.0,SNR=11
PLCA                                LR      LR      11 35 44.3
      comp=Z,431nm,21.4s,baz=260,slow=29
      comp=Z,10nm,1.1s
SHEM  Shemya Is, Ala    82.96 355   LR      LR      11 39 55.2
      comp=Z,324nm,19.8s,baz=136,slow=32
TJN   Taejon            83.89 318⇑eP       P       11 07 42.5 -0.8
KSRS  Korea Array       84.33 320   P       P       11 07 46.5 +1.0
      comp=Z,5.1nm,0.9s,baz=143,slow=5.7,SNR=17
KSRS                                LR      LR      11 45 15.4
      comp=Z,66nm,18.0s,baz=115,slow=36
      comp=Z,5.1nm,0.9s
KSAR  Wonju Array Be    84.35 320   P       P       11 07 44.8 -0.8
KSAR  Wonju Array Be    84.35 320   P       P       11 07 44.8 -0.8
UNV   Unalaska Valle    84.36   7   P       P       11 07 44.7 -0.5
UNV   Unalaska Valle    84.36   7   P       P       11 07 45.1 -0.2
      baz=190
LPIG  La Paz            84.39  58   LR      LR      11 40 44.7
      comp=Z,209nm,18.2s,baz=198,slow=32
IPM   Ipoh              84.58 278   P       P       11 07 46.0 -1.4
IPM                                 IAmb    IAmb    11 07 47.6
      comp=Z,21nm,0.7s
YSS   Yuzh-Sakhalins    84.69 334   P       P       11 07 48.0 +0.9
YSS                                 IAmb    IAmb    11 08 24.5
      comp=Z,28nm,0.7s
YSS   Yuzh-Sakhalins    84.69 334  eP       P       11 07 47.7 +0.6
YSS                                e*SP     pwP     11 08 03.4 +3.1
YSS                                eS       S       11 18 11.5 -0.8
YSS                                 pmax    pmax
      comp=Z,20nm,0.9s
GO05  Huala             84.75 128   P       P       11 07 47.2 -0.7
PKM   Mcpherson Peak    84.81  44   P       P       11 07 51.1 +2.8
      baz=227
QIZ   Qiongzhong        85.05 295   P       P       11 07 50.3 +0.7
QIZ                                 S       S       11 18 09.0 -8.0
QIZ                                 LR      LR
      comp=Z,290nm,9.2s
QIZ                                 LR      LR
      comp=Z,130nm,8.8s
QIZ                                 LR      LR
      comp=Z,350nm,35.1s
BAR   Barrett           85.31  48   IAmb    IAmb    11 08 12.1
      comp=Z,32nm,1.6s
KULM  Kulim             85.31 279   P       P       11 07 49.6 -1.4
KULM                                IAmb    IAmb    11 07 51.5
      comp=Z,20nm,0.9s
PSI   Prapat            85.53 276   LR      LR      11 47 11.8
      comp=Z,600nm,19.5s,baz=134,slow=36
ARVC  Arvin             85.57  45   P       P       11 07 54.2 +2.3
      baz=228
MURC  Murrieta          85.58  47   P       P       11 07 53.9 +2.0
      baz=229,SNR=8.0
MONP2 Monument Peak     85.61  48   P       P       11 07 54.4 +2.0
      baz=230,SNR=8.3
IKP   In-Ko-Pah, Jac    85.66  48   P       P       11 07 54.8 +2.4
      baz=230
BFSC  Mount Baldy Ra    85.71  46   P       P       11 07 54.6 +1.9
      baz=229,SNR=9.4
PEA0B Petropavlovsk-    85.73 346deP       P       11 07 52.1 -0.1
PETK  Petropavlovsk-    85.73 346   P       P       11 07 52.1 -0.1
      comp=Z,9.8nm,0.8s,baz=157,slow=8.0,SNR=12
PETK                                LR      LR      11 41 07.6
      comp=Z,156nm,20.5s,baz=170,slow=32
      comp=Z,9.8nm,0.8s
YUH   Yuha Desert       85.77  48   IAmb    IAmb    11 08 14.5
      comp=Z,37nm,1.6s
VES   Vestal, Richgr    85.89  44   P       P       11 07 55.1 +1.7
      baz=228
EDW2  Edwards Air Fo    85.92  45   P       P       11 07 55.6 +1.9
      baz=228,SNR=8.3
GSI   Gunungsitoli      85.94 274   P       P       11 07 53.0 -1.2
GSI   Gunungsitoli      85.94 274   P       P       11 07 55.5 +1.3
      comp=Z,96nm,0.9s
SWSC  Sam W. Stewart    86.05  48   P       P       11 07 56.9 +2.7
      baz=230
PFO   Pinyon Flats O    86.05  47   LR      LR      11 38 17.9
      comp=Z,123nm,20.0s,baz=242,slow=30
PFO   Pinyon Flats O    86.05  47   P       P       11 07 55.7 +1.3
PFO   Pinyon Flats O    86.05  47   P       P       11 07 55.7 +1.3
PFO                                 pmax    pmax
      comp=Z,92nm,1.9s
PFO   Pinyon Flats O    86.05  47   P       P       11 07 56.5 +2.0
      baz=230,SNR=6.5
CCAC  Calif City Air    86.09  45   IAmb    IAmb    11 08 15.2
      comp=Z,18nm,1.1s
ISA   Isabella, Lake    86.14  45   P       P       11 07 57.0 +2.3
      baz=228
BBRC  Big Bear Solar    86.18  47   P       P       11 07 57.2 +2.1
      baz=229
BO04  La Punta          86.22 127   IAmb    IAmb    11 08 16.3
      comp=Z,40nm,1.4s
CHNA  Chernabura Isl    86.22  10   P       P       11 07 55.3 +0.8
      baz=196
NJ2   Nanjing           86.25 311  eP       P       11 07 55.5 +0.2
NJ2                                 pmax    pmax
      comp=Z,10.0nm,0.5s
LRMC  Laurel Mtn Rad    86.51  45   P       P       11 07 58.9 +2.3
      baz=229
SDPT  Sand Point        86.59  10   P       P       11 07 56.0 -0.3
SDPT  Sand Point        86.59  10   P       P       11 07 56.8 +0.5
      baz=195
BELC  Belle Mtn. Jos    86.60  47   P       P       11 07 59.3 +2.2
      baz=230,SNR=12
CMB   Columbia Colle    86.61  42   IAmb    IAmb    11 08 19.5
      comp=Z,16nm,1.0s
BC3   Big Chuckawall    86.72  48   P       P       11 08 00.4 +2.7
      baz=230,SNR=12
GLA   Glamis            86.74  49   IAmb    IAmb    11 08 19.9
      comp=Z,28nm,1.0s
GLA   Glamis            86.74  49   P       P       11 08 00.3 +2.5
      baz=230
CWC   Cottonwood Cre    86.90  44   P       P       11 08 01.2 +2.6
      baz=228
HEC   Hector,Ludlow     86.92  46   P       P       11 08 00.7 +2.1
      baz=230
GSC   Goldstone, Bar    86.93  46   IAmb    IAmb    11 08 20.1
      comp=Z,46nm,1.2s
GSC   Goldstone, Bar    86.93  46   P       P       11 08 00.7 +2.0
      baz=229,SNR=17
VA03  San Esteban       86.94 126   IAmb    IAmb    11 08 20.1
      comp=Z,37nm,1.2s
ORV   Oroville          87.02  40   IAmb    IAmb    11 08 19.8
      comp=Z,30nm,1.7s
MDPB  Devils Postpil    87.10  43   P       P       11 08 01.3 +1.7
USRK  Ussuriysk Ar.     87.13 326   P       P       11 08 00.1 +0.9
      comp=Z,9.2nm,0.9s,baz=82,slow=3.4,SNR=11
USRK                                LR      LR      11 40 57.1
      comp=Z,190nm,21.7s,baz=122,slow=32
      comp=Z,9.2nm,0.9s
USA0B Ussuriysk Arra    87.13 326   IAmb    IAmb    11 08 03.4
      comp=Z,25nm,1.2s
USA0B Ussuriysk Arra    87.13 326deP       P       11 08 00.7 +1.5
OMMB  Old Mammoth Mi    87.13  43   P       P       11 08 00.8 +0.9
OMMB                                IAmb    IAmb    11 08 21.1
      comp=Z,45nm,1.9s
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MLAC	Mammoth, Mammo	87.24	43	P	P	11 08 02.9	+2.7
	baz=228						
IRM	Iron Mountain	87.24	48	P	P	11 08 02.6	+2.5
	baz=230,SNR=18						
113A	Mohawk Valley,	87.25	49	IAmb	IAmb	11 08 22.0	
	comp=Z,56nm,1.7s						
GMRC	Granite Mounta	87.31	47	P	P	11 08 02.9	+2.3
	baz=230,SNR=6.3						
QSM	Queen of Sheba	87.32	45	IAmb	IAmb	11 08 21.6	
	comp=Z,26nm,1.2s						
214A	Organ Pipe Nat	87.38	50	P	P	11 08 03.1	+2.2
	baz=232						
EMB	Emerald Bay	87.41	41	IAmb	IAmb	11 08 21.9	
	comp=Z,39nm,1.8s						
CO02	Combarbal	87.50	125	P	P	11 08 02.5	+0.7
TUQ	Turquoise Moun	87.57	46	P	P	11 08 04.0	+2.2
	baz=230,SNR=9.7						
SHOC	Shoshone, Teco	87.65	46	P	P	11 08 04.3	+2.3
	baz=230,SNR=8.5						
FURC	Furnace Creek,	87.65	45	P	P	11 08 04.0	+2.1
	baz=229,SNR=6.5						
GRAC	Grapevine Rang	87.69	44	IAmb	IAmb	11 08 26.1	
	comp=Z,26nm,1.1s						
GRAC	Grapevine Rang	87.69	44	P	P	11 08 04.6	+2.4
	baz=229,SNR=10.0						
PNTR	Pine Nut	87.78	41	P	P	11 08 03.3	+0.5
PNTR				IAmb	IAmb	11 08 23.7	
	comp=Z,17nm,0.9s						
LHV	Little Huntoon	87.85	43	IAmb	IAmb	11 08 24.2	
	comp=Z,16nm,1.0s						
YBH	Yreka Blue Hor	87.88	38	LR	LR	11 39 47.8	
	comp=Z,136nm,21.8s,baz=242,slow=30						
VCNR	Virginia City	87.89	41	IAmb	IAmb	11 08 27.2	
	comp=Z,40nm,1.7s						
PDMCI	Parker Dam,Lak	87.97	48	P	P	11 08 06.2	+2.6
	baz=231						
TYV	Tymovskoe	88.00	336	*e*P	P	11 08 02.3	-0.9
TYV				*e*S	S	11 18 37.8	-6.5
TYV				pmax	pmax		
	comp=Z,13nm,1.9s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
TYV				smax	smax		
	comp=N,100nm,4.3s						
TYV				smax	smax		
	comp=E,6.0nm,1.8s						
NVAR	Mina Array Bea	88.08	43	P	P	11 08 05.7	+1.4
	comp=E,2.8nm,0.7s,baz=220,slow=7.7,SNR=30						
NVAR				LR	LR	11 44 51.3	
	comp=E,217nm,18.1s,baz=220,slow=34						
	comp=E,2.8nm,0.7s						
NVAR	Mina Array Bea	88.08	43	P	P	11 08 05.1	+0.8
RYN	Ryan	88.09	42	IAmb	IAmb	11 08 20.8	
	comp=Z,15nm,1.3s						
NV11	Mina Array Sit	88.17	43	IAmb	IAmb	11 11 30.7	
	comp=Z,9.3nm,0.5s						
PAHR	Pah Rah Range	88.31	41	IAmb	IAmb	11 08 07.9	
	comp=Z,37nm,1.9s						
TPNV	Topopah Spring	88.34	45	P	P	11 08 07.3	+1.9
	baz=230,SNR=11						
HUMO	Hull Mountain	88.36	37	IAmb	IAmb	11 08 27.1	
	comp=Z,57nm,1.9s						
Y14A	Wickenburg	88.48	49	IAmb	IAmb	11 08 09.7	
	comp=Z,25nm,1.3s						
TPH	Tonopah	88.49	43	P	P	11 08 06.8	+0.6
TPH	Tonopah	88.49	43	P	P	11 08 06.8	+0.6
TPH				pmax	pmax		
	comp=Z,65nm,1.0s						
MDJ	Mudanjiang	88.60	325	P	P	11 08 09.8	+3.6
MDJ				pmax	pmax		
	comp=Z,13nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,63nm,5.6s						
W13A	Hualapai Mount	88.64	47	IAmb	IAmb	11 08 28.7	
	comp=Z,14nm,1.1s						
SHPR	Sheep Range	88.73	46	IAmb	IAmb	11 08 29.1	
	comp=Z,38nm,1.7s						
CO01	Juntas del Tor	88.84	124	IAmb	IAmb	11 08 42.5	
	comp=Z,29nm,1.5s						
TUC	Tucson	88.96	51	P	P	11 08 10.4	+2.0
TUC	Tucson	88.96	51	P	P	11 08 10.4	+2.0
TUC				pmax	pmax		
	comp=Z,96nm,1.8s						
TUC	Tucson	88.96	51	P	P	11 08 11.1	+2.7
	baz=233						
S11A	Rachel	89.10	45	IAmb	IAmb	11 08 53.9	
	comp=Z,16nm,1.0s						
J04D	Umpqua Nationa	89.25	37	IAmb	IAmb	11 08 30.6	
	comp=Z,16nm,0.8s						
J04D	Umpqua Nationa	89.25	37	P	P	11 08 11.0	+1.3
	baz=226						
MOD	Modoc Plateau	89.29	39	P	P	11 08 09.8	0.0
MOD				IAmb	IAmb	11 08 31.3	
	comp=Z,38nm,1.7s						
PRN	Pahroc Range	89.37	45	IAmb	IAmb	11 08 32.2	
	comp=Z,47nm,1.6s						
I04A	Tendick Farm,	89.48	37	P	P	11 08 11.6	+1.0
	baz=225						
K05A	Summer Lake	89.54	38	IAmb	IAmb	11 08 32.1	
	comp=Z,24nm,1.2s						
OHAK	Old Harbor	89.61	13	P	P	11 08 09.8	-0.9
OHAK	Old Harbor	89.61	13	P	P	11 08 11.9	+1.3
	baz=201						
R11A	Troy Canyon, C	89.65	44	P	P	11 08 11.1	-0.5
R11A	Troy Canyon, C	89.65	44	P	P	11 08 12.0	+0.4
	baz=230						
J05D	Fort Rock, OR	89.74	38	P	P	11 08 13.3	+1.4
	baz=226,SNR=8.3						
X16A	Lo Mia Camp, P	89.80	49	IAmb	IAmb	11 08 34.5	
	comp=Z,21nm,1.0s						
H04D	Lebanon	89.83	36	P	P	11 08 13.9	+1.9
	baz=225						
TIA	Tai'an	89.97	313	⇑P	P	11 08 13.0	+0.1
TIA				pmax	pmax		
	comp=Z,20nm,1.1s						
BMN	Battle Mountai	90.03	42	IAmb	IAmb	11 08 16.0	
	comp=Z,25nm,1.5s						
G03D	McMinnville, O	90.05	35	P	P	11 08 15.4	+2.4
	baz=225						
CN2	Changchun	90.12	323	*e*P	P	11 08 14.0	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,27.0s						
H04A	Detroit Lake	90.22	36	IAmb	IAmb	11 08 37.8	
	comp=Z,14nm,1.0s						
GRNR	Gornyy	90.23	333	⇑*i*P	P	11 08 14.5	+0.7
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PINE	Pine Mountain	90.25	37	IAmb	IAmb	11 08 35.5	
	comp=Z,26nm,1.0s						
KDAK	Kodiak Island	90.28	13	LR	LR	11 43 15.0	
	comp=Z,64nm,19.9s,baz=230,slow=32						
KDAK	Kodiak Island	90.28	13	P	P	11 08 15.8	+2.0
	baz=202						
I05D	Terrebonne, OR	90.42	37	P	P	11 08 16.3	+1.4
	baz=226,SNR=6.8						
BNX	BinXian	90.48	325	⇓P	P	11 08 15.8	+0.8
BNX				pmax	pmax		
	comp=Z,20nm,0.9s						
BNX				pmax	pmax		
	comp=Z,250nm,5.7s						
CCUT	Cedar City	90.50	46	IAmb	IAmb	11 08 37.5	
	comp=Z,15nm,1.3s						
WUAZ	Wupatki	90.51	48	IAmb	IAmb	11 08 37.5	
	comp=Z,27nm,1.2s						
WUAZ	Wupatki	90.51	48	P	P	11 08 18.1	+2.4
	baz=232						
WVOR	Wild Horse Val	90.56	40	IAmb	IAmb	11 08 36.6	
	comp=Z,23nm,1.4s						
X18A	Snowflake	90.85	50	IAmb	IAmb	11 08 39.2	
	comp=Z,16nm,1.1s						
F04A	Amboy	90.98	35	IAmb	IAmb	11 08 38.0	
	comp=Z,20nm,1.1s						
KLR	Kul'dur	91.00	330	LR	LR	11 44 21.2	
	comp=Z,260nm,21.4s,baz=146,slow=32						
KLR	Kul'dur	91.00	330	*ce*P	P	11 08 17.4	+0.1
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
O16K	Kokwok River B	91.03	10	P	P	11 08 16.7	-0.5
	baz=197						
PKCU	Pink Cliffs	91.09	46	IAmb	IAmb	11 08 42.5	
	comp=Z,22nm,1.1s						
121A	Cookes Peak, D	91.13	53	P	P	11 08 20.9	+2.3
	baz=234						
121A	Cookes Peak, D	91.13	53	P	P	11 08 20.9	+2.3
	baz=234						
I07A	Izee	91.20	38	IAmb	IAmb	11 08 39.5	
	comp=Z,14nm,1.1s						
J08A	Circle Bar Ran	91.27	39	IAmb	IAmb	11 08 21.6	
	comp=Z,22nm,1.4s						
P18K	Big Mountain,	91.30	11	IAmb	IAmb	11 08 21.7	
	comp=Z,21nm,1.0s						
P18K	Big Mountain,	91.30	11	P	P	11 08 18.7	+0.2
	baz=200						
W18A	Petrified Fore	91.34	50	IAmb	IAmb	11 08 41.2	
	comp=Z,17nm,1.1s						
W18A	Petrified Fore	91.34	50	P	P	11 08 21.8	+2.3
	baz=233						
E04D	Cinebar	91.34	35	IAmb	IAmb	11 08 54.0	
	comp=Z,30nm,1.4s						
E04D	Cinebar	91.34	35	P	P	11 08 20.6	+1.6
	baz=225						
ELK	Elko	91.39	42	LR	LR	11 47 04.7	
	comp=Z,226nm,18.0s,baz=250,slow=34						
ELK	Elko	91.39	42	P	P	11 08 20.9	+1.2
ELK	Elko	91.39	42	P	P	11 08 20.9	+1.2
ELK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MTPU	Mount Pierson	91.54	46	IAmb	IAmb	11 08 44.6	
	comp=Z,15nm,1.2s						
O18K	Koktuh Hills	91.74	11	P	P	11 08 21.1	+0.5
	baz=200						
N16K	Nishlik Lake	91.78	9	P	P	11 08 21.9	+1.2
	baz=196						
LYN	LuoYang	92.01	309	*e*P	P	11 08 23.3	+0.9
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
O19K	Port Alsworth	92.21	12	P	P	11 08 22.7	0.0
	baz=200						
HNS	HongShan	92.23	313	⇑P	P	11 08 25.0	+1.6
HNS				*e*S	S	11 19 19.3	-4.7
HNS				pmax	pmax		
	comp=Z,15nm,0.9s						
HNS				LR	LR		
	comp=Z,230nm,21.0s						
HNS				LR	LR		
	comp=Z,230nm,22.6s						
TX31	Lajitas Ar. Si	92.24	57	P	P	11 08 25.5	+1.8
	baz=236						
TX32	Lajitas Array	92.24	57	IAmb	IAmb	11 08 45.2	
	comp=Z,25nm,1.6s						
TXAR	Lajitas Array	92.24	57	P	P	11 08 25.6	+1.9
	comp=Z,2.6nm,1.1s,baz=205,slow=5.5,SNR=17						
TXAR				LR	LR	11 45 30.7	
	comp=Z,110nm,18.2s,baz=218,slow=33						
	comp=Z,2.6nm,1.1s						
G08A	Pilot Rock	92.31	37	IAmb	IAmb	11 08 44.5	
	comp=Z,20nm,1.1s						
MNTX	Cornudas Mount	92.33	54	IAmb	IAmb	11 08 45.1	
	comp=Z,32nm,1.8s						
MNTX	Cornudas Mount	92.33	54	P	P	11 08 25.2	+1.2
	baz=236						
MNTX	Cornudas Mount	92.33	54	P	P	11 08 25.3	+1.3
	baz=236						
N18K	Kilae Creek	92.41	11	P	P	11 08 23.7	0.0
N18K	Kilae Creek	92.41	11	P	P	11 08 24.0	+0.3
	baz=199						
BRSE	Bradley Lake S	92.46	13	P	P	11 08 25.4	+1.5
	baz=203						
Y22A	Socorro	92.50	52	P	P	11 08 26.9	+1.9
	baz=235						
CMIG	Matias Romero	92.62	72	LR	LR	11 40 03.4	
	comp=Z,93nm,21.5s,baz=236,slow=29						
HAWA	Hanford	92.75	36	IAmb	IAmb	11 08 46.4	
	comp=Z,8.8nm,0.9s						
MFID	Camas Ranch	92.77	40	IAmb	IAmb	11 08 46.5	
	comp=Z,8.6nm,1.0s						
N19K	Bonanza Creek	92.77	11	IAmb	IAmb	11 08 26.4	
	comp=Z,18nm,1.4s						
N19K	Bonanza Creek	92.77	11	P	P	11 08 25.3	-0.1
	baz=200						
BMO	Blue Mountains	92.89	38	IAmb	IAmb	11 08 46.7	
	comp=Z,29nm,2.0s						
TMUT	Trail Mountain	92.91	46	IAmb	IAmb	11 08 50.7	
	comp=Z,8.7nm,0.9s						
BJI	Beijing	92.92	315	P	P	11 08 28.5	+2.0
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI				LR	LR		
	comp=Z,140nm,25.8s						
BJI				LR	LR		
	comp=Z,180nm,24.0s						
BJI				LR	LR		
	comp=Z,360nm,30.7s						
BBB	Bella Bella	92.95	28	LR	LR	11 42 50.0	
	comp=Z,58nm,21.7s,baz=188,slow=31						
MA2	Magadan	93.22	345	LR	LR	11 45 09.3	
	comp=Z,318nm,21.8s,baz=147,slow=32						
P17A	Butcher Ranch,	93.30	46	IAmb	IAmb	11 08 49.8	
	comp=Z,23nm,1.7s						
NNA	Nana	93.35	106	LR	LR	11 40 52.0	
	comp=Z,212nm,22.0s,baz=245,slow=29						
P23K	Montague Islan	93.39	15	P	P	11 08 27.9	-0.3
	baz=206						
ANMO	Albuquerque	93.42	51	LR	LR	11 46 56.4	
	comp=Z,160nm,18.2s,baz=255,slow=33						
ANMO	Albuquerque	93.42	51	P	P	11 08 30.2	+1.0
ANMO				IAmb	IAmb	11 08 50.4	
	comp=Z,31nm,2.0s						
ANMO	Albuquerque	93.42	51	⇑*e*P	P	11 08 30.7	+1.4
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ANMO	Albuquerque	93.42	51	P	P	11 08 30.6	+1.4
	baz=235						
ANMO	Albuquerque	93.42	51	P	P	11 08 30.6	+1.4
	baz=235						
CMAR	Chiang Mai Arr	93.47	289	P	P	11 08 31.1	+1.6
	comp=Z,2.8nm,0.8s,baz=133,slow=2.8,SNR=15						
	comp=Z,2.8nm,0.8s						
HVU	Hansel Valley	93.48	43	IAmb	IAmb	11 08 50.0	
	comp=Z,11nm,0.9s						
CHTO	Chiang Mai	93.65	290	P	P	11 08 29.5	-0.8
CHTO				IAmb	IAmb	11 08 34.2	
	comp=Z,10nm,1.1s						
CHTO	Chiang Mai	93.65	290	P	P	11 08 29.5	-0.8
CHTO				pmax	pmax		
	comp=Z,11nm,1.2s						
HLID	Hailey	93.65	41	P	P	11 08 31.4	+1.4
	baz=231						
F10A	Beach Ranch, E	93.67	38	IAmb	IAmb	11 09 12.0	
	comp=Z,9.6nm,1.1s						
M19K	Big River Lodg	93.81	11	IAmb	IAmb	11 08 31.4	
	comp=Z,28nm,1.8s						
M19K	Big River Lodg	93.81	11	P	P	11 08 29.8	-0.3
	baz=200						
KMI	Kunming	93.87	297	⇑P	P	11 08 34.0	+2.5
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				LR	LR		
	comp=Z,240nm,34.9s						
LVC	Limon Verde	93.89	119	LR	LR	11 42 06.5	
	comp=Z,297nm,21.4s,baz=269,slow=30						
L19K	White Mountain	94.00	11	IAmb	IAmb	11 08 33.6	
	comp=Z,26nm,1.2s						
L19K	White Mountain	94.00	11	P	P	11 08 31.7	+0.7
	baz=200						
XAN	Xi'an	94.13	307	P	P	11 08 34.5	+2.2
XAN				pP	pP	11 08 41.5	-0.1
XAN				sP	pwP	11 08 46.0	+1.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
M22K	Willow	94.43	13	P	P	11 08 33.9	+1.1
	baz=204						
L20K	Farewell, AK	94.44	11	P	P	11 08 33.2	+0.2
	baz=201						
PMR	Palmer	94.48	13	P	P	11 08 33.6	+0.5
	baz=205						
TTA	Tatalina	94.53	10	IAmb	IAmb	11 08 35.4	
	comp=Z,18nm,1.4s						
TTA	Tatalina	94.53	10	P	P	11 08 34.2	+0.7
	baz=199						
ATAH	Atahualpa	94.56	101	LR	LR	11 41 33.0	
	comp=Z,145nm,21.7s,baz=233,slow=29						
GHO	Glory Hole Cre	94.68	13	IAmb	IAmb	11 08 59.3	
	comp=Z,10.0nm,0.8s						
S22A	4UR Ranch, Cre	94.77	49	P	P	11 08 37.4	+1.9
	baz=235						
BMRM	Bremner River	94.89	16	IAmb	IAmb	11 09 00.9	
	comp=Z,11nm,0.9s						
BMRM	Bremner River	94.89	16	P	P	11 08 35.9	+0.7
	baz=208						
SCM	Sheep Creek Mo	95.06	14	IAmb	IAmb	11 08 55.6	
	comp=Z,14nm,1.0s						
SCM	Sheep Creek Mo	95.06	14	P	P	11 08 36.4	+0.5
	baz=206						
AHID	Auburn Hatcher	95.07	43	IAmb	IAmb	11 08 57.4	
	comp=Z,11nm,1.1s						
NEW	Newport	95.22	36	LR	LR	11 48 14.2	
	comp=Z,153nm,18.2s,baz=214,slow=33						
K20K	Telida	95.23	11	IAmb	IAmb	11 08 38.8	
	comp=Z,14nm,1.4s						
K20K	Telida	95.23	11	P	P	11 08 37.0	+0.4
	baz=201						
XLT	XiLinHaoTe	95.33	318	*e*P	P	11 08 37.8	+0.2
XLT				pP	pwP	11 08 48.3	-1.7
XLT				sP	sP	11 08 52.5	+2.2
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
XLT				pmax	pmax		
	comp=Z,110nm,4.5s						
PZH	PanZhiHua	95.35	297	P	P	11 08 38.5	+0.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,7.2s						
MSTX	Muleshoe	95.41	54	P	P	11 08 39.1	+0.9
	baz=237						
N25K	Chitina, Valde	95.46	15	P	P	11 08 38.7	+1.0
	baz=208						
REDW	Red Top Meadow	95.57	42	IAmb	IAmb	11 09 40.4	
	comp=Z,8.1nm,0.5s						
CAST	Castle Rocks	95.61	11	P	P	11 08 37.8	-0.5
	baz=202						
SDCO	Great Sand Dun	95.64	49	P	P	11 08 40.6	+1.2
	baz=236						
SDCO	Great Sand Dun	95.64	49	P	P	11 08 40.9	+1.5
	baz=236						
WAT6	Susitna Watana	95.65	14	P	P	11 08 39.1	+0.4
	baz=206						
CTG	Chitna Glacier	95.68	17	P	P	11 08 39.7	+0.8
	baz=211						
SNOW	Snow King Moun	95.69	42	IAmb	IAmb	11 09 44.7	
	comp=Z,6.1nm,0.7s						
DLMT	Dillon	95.79	40	IAmb	IAmb	11 09 00.5	
	comp=Z,10nm,1.2s						
SEY	Seymchan	95.89	347	LR	LR	11 48 16.7	
	comp=Z,156nm,20.6s,baz=182,slow=33						
SEY	Seymchan	95.89	347	⇓*e*P	P	11 08 41.1	+1.5
SEY				pmax	pmax		
	comp=Z,9.0nm,1.6s						
TRF	Thorofare Moun	95.96	12	IAmb	IAmb	11 09 07.0	
	comp=Z,13nm,1.0s						
TRF	Thorofare Moun	95.96	12	P	P	11 08 39.4	-0.7
	baz=204						
PDAR	Pinedale Array	95.98	43	P	P	11 08 41.3	+0.5
	comp=Z,0.5nm,0.7s,baz=219,slow=3.8,SNR=4.8						
PDAR				PP	PP	11 12 33.1	-0.8
	comp=Z,0.2nm,0.3s,baz=226,slow=7.5,SNR=1.8						
PDAR				PKKPbc	PKKPbc	11 25 28.8	-1.1
	comp=Z,0.6nm,0.7s,baz=88,slow=3.6,SNR=5.6						
PDAR				LR	LR	11 49 19.5	
	comp=Z,157nm,18.2s,baz=230,slow=34						
	comp=Z,0.5nm,0.7s						
J20K	Nowinta River	95.99	10	P	P	11 08 40.5	+0.5
	baz=200						
FLWY	Flagg Ranch	96.09	42	IAmb	IAmb	11 09 15.9	
	comp=Z,10nm,1.1s						
CD2	Chengdu	96.12	302	*e*P	P	11 08 42.5	+1.0
DHY	Denali Highway	96.17	13	P	P	11 08 41.3	+0.3
	baz=206						
RND	Reindeer	96.19	13	IAmb	IAmb	11 09 03.2	
	comp=Z,21nm,1.2s						
ZEA	Zeya	96.20	331	*e*P	P	11 08 40.3	-0.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	96.23	314	*e*P	P	11 08 43.3	+1.5
HHC				pP	pP	11 08 50.0	-1.2
HHC				pmax	pmax		
	comp=Z,33nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
HHC				LR	LR		
	comp=Z,210nm,18.4s						
HHC				LR	LR		
	comp=Z,390nm,18.8s						
HHC				LR	LR		
	comp=Z,490nm,22.7s						
YMR	Madison River	96.29	41	IAmb	IAmb	11 08 45.4	
	comp=Z,13nm,1.3s						
MCK	McKinley	96.47	13	IAmb	IAmb	11 09 04.2	
	comp=Z,13nm,1.2s						
MCK	McKinley	96.47	13	P	P	11 08 42.7	+0.5
	baz=205						
BOZ	Bozeman (W)	96.47	40	IAmb	IAmb	11 09 13.0	
	comp=Z,15nm,1.6s						
BOZ	Bozeman (W)	96.47	40	P	P	11 08 44.8	+2.0
	baz=233						
PAX	Paxson	96.47	14	P	P	11 08 42.0	-0.4
	baz=208						
M26K	Nabesna, AK	96.52	16	IAmb	IAmb	11 09 01.5	
	comp=Z,16nm,1.6s						
M26K	Nabesna, AK	96.52	16	P	P	11 08 43.4	+0.9
	baz=210						
YUK3	Moose Creek	96.60	17	P	P	11 08 44.6	+1.5
	baz=212						
M27K	Edge Creek, AK	96.75	16	IAmb	IAmb	11 09 08.8	
	comp=Z,14nm,1.2s						
M27K	Edge Creek, AK	96.75	16	P	P	11 08 45.0	+1.4
	baz=211						
K24K	Donnelly Dome	97.15	14	P	Pdif	11 08 45.9	+0.5
	baz=208						
RIDG	Independent Ri	97.29	14	IAmb	IAmb	11 10 21.1	
	comp=Z,12nm,1.5s						
RIDG	Independent Ri	97.29	14	P	Pdif	11 08 46.5	+0.4
	baz=208						
WRH	Wood River Hil	97.30	13	IAmb	IAmb	11 08 49.6	
	comp=Z,14nm,1.2s						
MLY	Manley	97.33	11	P	P	11 08 45.6	-0.6
	baz=204						
L27K	Beaver Creek,	97.37	16	P	Pdif	11 08 47.1	+0.7
	baz=211						
HDA	Harding Lake	97.46	13	P	P	11 08 46.6	0.0
	baz=207						
H21K	Melozitna Rive	97.58	10	IAmb	IAmb	11 08 49.2	
	comp=Z,12nm,1.6s						
H21K	Melozitna Rive	97.58	10	P	Pdif	11 08 48.3	+1.0
	baz=202						
N31M	Braeburn, Yuko	97.60	19	P	Pdif	11 08 49.6	+2.1
	baz=216						
JTS	Las Juntas de	97.61	83	LR	LR	11 43 21.5	
	comp=Z,180nm,20.8s,baz=308,slow=30						
JTS	Las Juntas de	97.61	83	⇑*e*P	Pdif	11 08 49.6	+0.9
JTS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SCRK	Sand Creek	97.68	14	P	P	11 08 46.0	-1.8
	baz=209						
TCOL	CIGO, UAF Yank	97.70	12	P	Pdif	11 08 48.4	+0.7
	baz=206						
COLA	College	97.70	12	⇓*e*P	P	11 08 47.4	-0.3
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDM	Murphy Dome	97.71	12	IAmb	IAmb	11 08 50.3	
	comp=Z,24nm,1.8s						
K22A	Casper	97.74	45	P	Pdif	11 08 49.6	+0.9
	baz=236						
ILAR	Eielson Array	97.80	13	P	P	11 08 47.8	-0.4
	comp=Z,1.2nm,0.7s,baz=222,slow=5.7,SNR=14						
ILAR				PP	PP	11 12 44.6	-2.4
	comp=Z,0.5nm,0.9s,baz=213,slow=9.7,SNR=4.5						
ILAR				PKKPbc	PKKPbc	11 25 19.0	-6.4
	comp=Z,0.4nm,0.7s,baz=338,slow=3.5,SNR=5.3						
ILAR				LR	LR	11 50 18.4	
	comp=Z,54nm,18.3s,baz=220,slow=34						
	comp=Z,1.2nm,0.7s						
J25K	Salcha River,	97.95	14	P	Pdif	11 08 49.4	+0.4
	baz=208						
LPAZ	La Paz	98.09	114	P	Pdif	11 08 53.8	+2.3
	comp=Z,0.5nm,0.5s,baz=180,slow=1.0,SNR=2.1						
LPAZ				PP	PP	11 12 47.6	-2.8
	comp=Z,2.9nm,0.8s,baz=211,slow=8.3,SNR=7.1						
LPAZ				LR	LR	11 44 41.8	
	comp=Z,126nm,20.8s,baz=229,slow=30						
	comp=Z,0.5nm,0.5s						
LPAZ	La Paz	98.09	114	IAmb	IAmb	11 09 13.0	
	comp=Z,13nm,1.8s						
K27K	Chicken	98.15	15	P	Pdif	11 08 50.5	+0.8

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      baz=211
M30M  Minto, Yukon        98.22  18   P          Pdif      11 08 52.7 +2.5
      baz=215
J26L  Joseph Creek        98.23  14   IAmb       IAmb      11 08 52.6
      comp=Z,31nm,1.6s
J26L  Joseph Creek        98.23  14   P          Pdif      11 08 51.2 +0.9
      baz=210
LZH   Lanzhou             98.74 307  eP          Pdif      11 08 53.5 +0.1
LZH                                   pP         pP        11 09 03.5 +0.8
LZH                                   sP         pwP       11 09 07.0 +1.2
LZH                                   pmax       pmax
      comp=Z,17nm,1.5s
BILL  Bilibino            98.74 354  i P         Pdif      11 08 52.5 +0.2
BILL                                  pmax       pmax
      comp=Z,2.0nm,1.1s
BILL                                  MLR        MLR
      comp=Z,102nm,19.0s
EGAK  Eagle               99.00  15   P          Pdif      11 08 54.4 +0.9
      baz=212
SONM  Songino Array      103.13 318   Pdiff      Pdif      11 09 13.6 +1.1
      comp=Z,0.4nm,0.6s,baz=130,slow=5.8,SNR=2.4
SONM                                  PP         PP        11 13 23.6 -4.5
      comp=Z,0.4nm,0.7s,baz=129,slow=5.7,SNR=4.2
PCHI  Peechi             108.81 271  eP          PKiKP     11 13 31.5  -12
PCHI                                 ex          x         11 21 10.9
WMQ   Urumqi             113.24 308  ePKP        PKiKP     11 13 51.8 +0.8
WMQ                                   LR         LR
      comp=Z,340nm,20.3s
WMQ                                   LR         LR
      comp=Z,150nm,21.3s
BOSA  Boshof             117.40 203   PKP        PKiKP     11 14 00.3 +0.6
      comp=Z,2.8nm,0.7s,baz=146,slow=2.3,SNR=12
MK31  Makanchi Array     117.78 310d iPKIKP      PKPdf     11 13 58.3 -1.3
MKAR  Makanchi Array     117.78 310   PKP        PKPdf     11 13 58.1 -1.5
      comp=Z,3.1nm,0.7s,baz=95,slow=0.8,SNR=19
ZALV  Zalesovo Beam      118.02 318   PKP        PKPdf     11 13 58.5 -1.3
      comp=Z,2.9nm,0.7s,baz=102,slow=2.1,SNR=11
UZB   Uzynbulak          119.04 305  ePKIKP      PKPdf     11 14 00.9 -1.4
UZB   Uzynbulak          119.04 305  ePKP        PKPdf     11 14 00.9 -1.4
      baz=305
KPKS  Kokpek             119.37 306  ePKIKP      PKPdf     11 14 01.4 -1.4
KPKS  Kokpek             119.37 306  ePKP        PKPdf     11 14 01.5 -1.4
      baz=306
SATY  Saty               119.46 305  ePKIKP      PKPdf     11 14 01.5 -1.6
SATY  Saty               119.46 305  ePKP        PKPdf     11 14 01.6 -1.6
      baz=305
NRIK  Noril'sk           119.58 336   PKP        PKPdf     11 14 01.6 -0.7
      comp=Z,3.1nm,0.4s,baz=149,slow=2.3,SNR=7.3
SEM   Semipalatinsk      119.97 314  ePKIKP      PKPdf     11 14 01.3 -2.6
SEM   Semipalatinsk      119.97 314  ePKP        PKPdf     11 14 01.3 -2.6
      baz=314
KSH   Kashi              120.28 301   PKP        PKiKP     11 14 05.5 +0.6
MDOK  Medeo              120.44 305  ePKIKP      PKPdf     11 14 03.1 -1.9
MDOK  Medeo              120.44 305  ePKP        PKPdf     11 14 03.2 -1.9
      baz=305
TNSS  Tian-Shan          120.48 305  ePKIKP      PKPdf     11 14 04.8 -0.6
TNSS  Tian-Shan          120.48 305  ePKP        PKPdf     11 14 04.8 -0.6
      baz=305
CHKK  Chushkaly          120.66 306  ePKIKP      PKPdf     11 14 04.5 -0.7
CHKK  Chushkaly          120.66 306  ePKP        PKPdf     11 14 04.6 -0.7
      baz=306
KURK  Kurchatov          121.05 314   PKPdf      PKPdf     11 14 04.2 -1.5
KURK  Kurchatov          121.05 314   PKIKP      PKPdf     11 14 04.2 -1.5
KURBB Kurchatov Arra     121.09 314   PKIKP      PKPdf     11 14 03.9 -1.9
KUU   Kurty              121.12 306  ePKIKP      PKPdf     11 14 03.8 -2.3
KUU   Kurty              121.12 306  ePKP        PKPdf     11 14 03.9 -2.3
      baz=306
AAK   Ala-Archa          122.14 304   PKPdf      PKPdf     11 14 08.4 +0.1
AAK   Ala-Archa          122.14 304c iPKIKP      PKiKP     11 14 08.6 +0.1
AAK                                   pmax       pmax
      comp=Z,10.0nm,1.0s
SGDS  Sogindy            122.23 305  ePKIKP      PKPdf     11 14 06.6 -1.7
SGDS  Sogindy            122.23 305  ePKP        PKPdf     11 14 06.6 -1.7
      baz=305
BTLS  Baital             122.97 307  ePKIKP      PKPdf     11 14 08.0 -1.6
BTLS  Baital             122.97 307  ePKP        PKPdf     11 14 08.1 -1.6
      baz=307
MATP  Matopo             123.55 210   PKP        PKiKP     11 14 11.9 -0.1
      comp=Z,8.9nm,0.6s,baz=197,slow=1.0,SNR=28
KBL   Kabul              124.28 293   PKPdf      PKPdf     11 14 12.2 -0.5
KBL   Kabul              124.28 293   PKIKP      PKPdf     11 14 12.2 -0.5
KK31  Karatay Array      125.10 304  i PKIKP     PKPdf     11 14 13.2 -0.6
IUG   Iuzhnay            125.27 302  ePKIKP      PKPdf     11 14 12.9 -1.3
IUG   Iuzhnay            125.27 302  ePKP        PKPdf     11 14 13.0 -1.3
      baz=302
SCHQ  Schefferville      126.09  42   PKP        PKPdf     11 14 15.0 -0.2
      comp=Z,2.7nm,0.8s,baz=344,slow=2.3,SNR=3.2
BRVK  Borovoye           126.47 316   PKPdf      PKPdf     11 14 15.3 -0.7
BRVK  Borovoye           126.47 316   PKIKP      PKPdf     11 14 15.3 -0.7
LMN   Caledonia Moun     126.57  53              PKPdf     11 14 15.9 -0.6
LSZ   Lusaka             128.21 213              PKPdf     11 14 20.4 -0.3
LSZ   Lusaka             128.21 213   PKIKP      PKPdf     11 14 20.4 -0.3
ILULI Ilulissat          130.81  22  i P         PKiKP     11 14 25.4 +0.7
SPA0  Spitsbergen Ar     131.60 356  ePKPdf      PKiKP     11 14 25.9 -0.3
SPITS Spitsbergen Ar     131.60 356   PKIKP      PKPdf     11 14 24.5 -0.7
SPB2  Spitsbergen Ar     131.60 356   PKPdf      PKPdf     11 14 25.5 +0.3
DAG   Danmarks Havn      132.42   6  i P         PKPdf     11 14 26.0 -0.7
SUMG  Summit             132.57  15  i P         PKPdf     11 14 26.8 -0.8
AB31  Akbulak array      132.92 311  i PKIKP     PKPdf     11 14 23.3 -5.1
ARU   Arti               133.07 321   PKPdf      PKPdf     11 14 28.3 -0.2
ARU   Arti               133.07 321  i PKIKP     PKPdf     11 14 28.1 -0.4
ARU                                                        11 16 51.4
ARU                                   SS         SS        11 34 29.0 -6.9
ARU                                   MLR        MLR
      comp=Z,283nm,21.0s
GEYT  Alibeck            133.61 295   PKP        PKPdf     11 14 29.3 -0.9
      comp=Z,2.4nm,0.5s,baz=237,slow=24,SNR=2.5
DY2G  Dye2               133.65  25  i P         PKPdf     11 14 29.0 -0.6
AKTO  Aktyubinsk         134.11 312   PKIKP      PKPdf     11 14 29.0 -1.6
KMBO  Kilima Mbogo       134.23 233⇑iPKIKP       PKiKP     11 14 34.5 +0.8
ICESG Greenland Ices     134.42  20  eP          PKPdf     11 14 28.4 -2.7
DBG   Daneborg           134.48   8  i P         PKPdf     11 14 30.4 -0.2
KIRV  Kirov              137.29 325⇑iPKIKP       PKPdf     11 14 36.5 +0.3
SCO   Scoresbysund       137.57  12  i P         PKPdf     11 14 34.0 -2.4
PRGR  Permogore          137.78 331  ePKIKP      PKPdf     11 14 36.7 -0.3
APA   Apatity            138.34 343⇓iPKHKP       PKPpre    11 14 30.9
APA                                   pmax       pmax
      comp=Z,4.0nm,1.3s
ARA0  ARCESS Array S     138.50 348  e           PKPpre    11 14 30.2
ARCES ARCESS Array B     138.50 348   PKhKP      PKPpre    11 14 29.8
      comp=Z,1.6nm,0.5s,baz=51,slow=2.1,SNR=12
H10N3 ASCENSION HYDR138.86 154        T          T         13 50 22.0
      baz=202,slow=75,SNR=564
H10N1 ASCENSION HYDR138.87 155        T          T         13 50 24.5
      baz=202,slow=75,SNR=586
H10N2 ASCENSION HYDR138.88 154        T          T         13 50 23.4
      baz=202,slow=75,SNR=593
KTK1  Kautokeino         139.36 349  ePKPdf      PKPdf     11 14 40.9 +1.1
BELG  Belogornoye        140.18 317⇓iPKIKP       PKPdf     11 14 42.3 +0.6
KLMR  Klimovskoe         140.72 332  ePKIKP      PKPdf     11 14 41.2 -1.2
KLMR                                  pmax       pmax
      comp=Z,26nm,1.2s
KLMR  Klimovskoe         140.72 332  ePKPdf      PKPdf     11 14 41.2 -1.2
KLMR                                  AMP                  11 14 45.5
      comp=Z,26nm,1.2s
LOF   Lofoten            141.53 353  ePKPdf      PKiKP     11 14 48.2 +1.7
STEI  Steigen            141.53 352  ePKPdf      PKPdf     11 14 43.9 +0.2
KONS  Konsvik            143.15 353  ePKPdf      PKPdf     11 14 47.8 +1.2
STOK  Stokkvaagen        143.32 353  ePKPdf      PKPdf     11 14 46.7 -0.2
MOS   Moscow             144.30 326  ePKIKP      PKPab     11 14 45.5 -1.5
MOS                                  e                     11 15 07.5
ZEI   Tsey               144.54 302  i PKHKP     PKPpre    11 14 45.9
ZEI                                   pmax       pmax
      comp=Z,28nm,1.1s
GOF   Gofitskoye         144.81 306⇑ePKIKP       PKPab     11 14 49.2 -0.1
GOF                                   pmax       pmax
      comp=Z,51nm,0.7s
AKH   Akhalkalaki        144.98 300  ⇑P          PKPab     11 14 50.5 +0.3
FINES FINESS Array B     145.08 340   PKP        PKPbc     11 14 48.6 -1.0
      comp=Z,46nm,0.6s,baz=54,slow=3.6,SNR=178
FINES FINESS Array B     145.08 340              PKPbc     11 14 48.3 -1.3
LPSR  Galich'ya Gora     145.10 320  ePKIKP      PKPbc     11 14 48.5 -1.5
LPSR                                  pmax       pmax
      comp=Z,30nm,1.2s
KBZ   Khabaz             145.14 304   PKP        PKPbc     11 14 50.2 -0.2
      comp=Z,14nm,0.7s,baz=163,slow=1.6,SNR=18
OBN   Obninsk            145.14 325c iPKIKP      PKPbc     11 14 48.8 -1.2
OBN                                  i                     11 15 05.6
OBN                                   pmax       pmax
      comp=Z,36nm,1.0s
OBN                                   MLR        MLR
      comp=Z,205nm,21.0s
NSS   Namsos             145.19 353  ePKPbc      PKPbc     11 14 49.0 -0.9
KSLA  Kassala            145.24 252  i P         PKPdf     11 14 52.8 +0.9
KSLA                                 i                     11 15 01.8
      baz=122,slow=5.6
KIV   Kislovodsk         145.25 305  ⇑P          PKPbc     11 14 48.4 -2.5
KIV   Kislovodsk         145.25 305              PKPbc     11 14 50.9 -0.1
KIV   Kislovodsk         145.25 305  i PKIKP     PKiKP     11 14 53.8 -1.3
KIV                                   pmax       pmax
      comp=Z,30nm,1.1s
KIV                                   MLR        MLR
      comp=Z,141nm,25.0s
VORR  Voronezh           145.32 319  ePKIKP      PKPbc     11 14 50.0 -0.7
VORR                                  pmax       pmax
      comp=Z,120nm,0.5s
VSR   Storozhevoye       145.53 318  ePKP2       PKPdf     11 14 49.5 -1.7
VSR                                   pmax       pmax
      comp=Z,70nm,1.2s
VORD  Divnogorie         145.55 318  ePKP2       PKPdf     11 14 50.2 -1.1
VORD                                  pmax       pmax
      comp=Z,30nm,0.9s
CHVG  Ch'k'valeri        145.88 302  ⇑P          PKPab     11 14 54.0 +0.7
CHVG  Ch'k'valeri        145.88 302  ⇑PKP2       PKPab     11 14 54.0 +0.7
BATM  Batumi             146.31 301  ⇑P          PKPab     11 14 55.1 +0.2
BATM  Batumi             146.31 301  ⇑PKP2       PKPab     11 14 55.1 +0.2
RAF   Rauma              146.62 343  eP          PKPdf     11 14 53.4 +0.6
MQOL  MQOL               147.16 261  i P         PKPdf     11 14 55.7 +0.8
VSU   Vasula             147.17 336  eP          PKPbc     11 14 55.8 -0.2
MOL   Molde              147.52 355  ePKPbc      PKPbc     11 14 56.6 -0.3
AAL   Aland              147.79 343  eP          PKPbc     11 14 56.8 -0.9
DOMB  Dombas             147.92 354  ePKPbc      PKPbc     11 14 57.4 -0.6
MTSE  Matsula            147.94 339  eP          PKPbc     11 14 58.0 -0.1
AKN   Aaknes             147.94 356  ePKPbc      PKPbc     11 14 58.0 -0.1
JAWL  J.Aulia            148.37 249  i P         PKPbc     11 14 59.4 -1.2
FOO   Floro              148.63 357  ePKPbc      PKPbc     11 14 59.9 +0.1
UPP   Uppsala            148.64 345  eP          PKPbc     11 14 59.1 -0.8
NB2   NORSAR Subarra148.66 351        PKP        PKPbc     11 14 59.1 -0.9
      comp=Z,147nm,1.7s,baz=12,slow=2.8
NB2   NORSAR Subarra148.66 351        PKPbc      PKPbc     11 14 59.1 -0.9
      baz=12,slow=2.8
NOA   NORSAR Array B 148.66 351       PKPbc      PKPbc     11 14 59.3 -0.7
      comp=Z,16nm,0.8s,baz=14,slow=4.2,SNR=62
NC602 NORSAR Array S 148.91 351  ePKPbc      PKPbc     11 14 59.9 -0.7
HYA   Hoyanger           149.00 356  ePKPbc      PKPbc     11 14 59.9 -0.8
SUE   Sulen              149.18 357  ePKPbc      PKPbc     11 15 01.0 -0.2
SKAR  Skarslia           149.33 354  ePKPbc      PKPbc     11 15 01.6 -0.1
IDID  Didziasalis        149.46 332  eP          PKiKP     11 15 03.6 +0.4
ISAL  Salakas            149.52 333  eP          PKiKP     11 15 03.6 +0.2
MNK   Minsk              149.54 330  i PKP2      PKiKP     11 15 03.4  0.0
MNK                                  i                     11 18 41.1
MNK                                  i PPP       PPP       11 22 01.7
MNK                                   pmax       pmax
      comp=E,3.0nm,1.0s
MNK                                   pmax       pmax
      comp=Z,75nm,0.9s
MNK                                   pmax       pmax
      comp=N,20nm,0.8s
MNK                                   MLR        MLR
      comp=E,123nm,22.0s
MNK                                   MLR        MLR
      comp=N,491nm,18.0s
MNK                                   MLR        MLR
      comp=Z,162nm,21.0s
MNK   Minsk              149.54 330  i PKP       PKiKP     11 15 03.4  0.0
      comp=E,3.0nm,1.0s
MNK                                  i PKP       PKiKP     11 15 03.4  0.0
      comp=N,20nm,0.8s
MNK                                  i PKP       PKiKP     11 15 03.4  0.0
      comp=Z,75nm,0.9s,baz=47
MNK                                  i PP        PP        11 18 41.1 +5.9
MNK                                  i PPP       PPP       11 22 01.7
MNK                                  i SS        SS        11 37 53.7 +6.7
MNK                                  i SSS       SSS       11 43 32.6
MNK                                  i LR        LR        12 14 32.5
MNK                                  i LRM       MLR       12 21 23.3
      comp=E,123nm,21.5s
MNK                                  i LRM       MLR       12 21 49.1
      comp=N,491nm,18.1s
MNK                                  i LRM       MLR       12 22 12.8
      comp=Z,162nm,20.6s
IIGN  Ignalina           149.64 333  eP          PKPbc     11 15 02.9 +0.3
NACGM Naroch             149.73 331  ePKP        PKPbc     11 15 02.6 -0.2
ASK   Askoy              149.73 357  ePKPbc      PKPbc     11 15 02.3 -0.3
BER   Bergen             149.83 357  ePKPbc      PKPbc     11 15 03.1 +0.2
VSVD  Vaisvydziai        150.05 335  eP          PKPbc     11 15 03.7 +0.2
VIKU  Vikbolandet        150.07 345  eP          PKPbc     11 15 03.0 -0.5
KONO  Kongsberg          150.21 352              PKPbc     11 15 03.1 -0.7
KONO  Kongsberg          150.21 352c iPKIKP      PKiKP     11 15 04.5 -0.1
KONO                                  pmax       pmax
      comp=Z,38nm,1.0s
KONO  Kongsberg          150.21 352  ePKPbc      PKPbc     11 15 03.5 -0.3
ODD1  Odda               150.22 355  ePKPbc      PKPbc     11 15 03.9  0.0
PABE  Paberze            150.40 335  eP          PKPbc     11 15 04.5 +0.1
BLS5  Blasjo             150.72 355  ePKPbc      PKPbc     11 15 05.3 +0.2
SIM   Simferopol'        150.96 309  i PKIKP     PKiKP     11 15 06.5 -0.2
SIM                                  e                     11 15 13.0
SIM                                   pmax       pmax
      comp=Z,35nm,0.8s
KMY   Karmoy             151.00 357  ePKPbc      PKPbc     11 15 05.7  0.0
DIKM  Dikmen             151.06 302  ⇑P          PKPbc     11 15 06.0 -0.5
AKASG Malin Array Be     151.28 323   PKP        PKPdf     11 15 00.4 -0.2
      comp=Z,0.8nm,0.6s,baz=34,slow=2.0,SNR=8.4
AKASG                                 PKPbc      PKPbc     11 15 05.8 -0.8
      comp=Z,33nm,0.8s,baz=48,slow=3.3,SNR=62
AKBB  Malin Array Si     151.28 323   PKPbc      PKPbc     11 15 05.5 -1.1
AKBB  Malin Array Si     151.28 323   PKIKP      PKPbc     11 15 05.5 -1.1
HOMB  Homborsund         151.68 353  ePKPbc      PKPbc     11 15 07.1 -0.1
SNART Snartemo           151.74 354  ePKPbc      PKiKP     11 15 07.6 -0.2
SUW   Suwalki            151.83 333  ePKP        PKPbc     11 15 07.2 -0.5
SUW   Suwalki            151.83 333  eP          PKiKP     11 15 08.6 +0.5
BZK   Bozkurt            151.90 303  ⇑P          PKiKP     11 15 09.5 +0.9
DEL   Delary             152.55 346  eP          PKPbc     11 15 09.3  0.0
BRTR  Keskin Array B     152.64 299   PKPbc      PKPbc     11 15 09.3 -1.0
      comp=Z,7.9nm,0.9s,baz=151,slow=5.6,SNR=11
CSS   Mathiatis          153.37 288              PKPbc     11 15 11.4 -0.4
MUD   Monsted U'grnd     153.38 351  i P         PKiKP     11 15 11.4 +0.2
MILM  Milestii Mici      153.53 316  ePKP        PKPdf     11 15 03.0 -1.1
MILM                                 eL          L         12 12 43.0
MILM                                  LRM        MLR       12 21 17.0
      comp=Z,150nm,23.0s
MILM  Milestii Mici      153.53 316  ePKIKP      PKPdf     11 15 03.0 -1.1
LVV   L'vov              154.44 326  ePKIKP      PKPbc     11 15 11.8 -1.9
TPGR  Topolog            154.73 312  ⇑P          PKPab     11 15 29.0 -0.6
CFR   Carcaliu           154.77 313  ⇑P          PKiKP     11 15 15.0 +0.5
CFR   Carcaliu           154.77 313  ⇑PKIKP      PKiKP     11 15 15.0 +0.5
BIZ   Bicaz              155.10 319  ⇑P          PKPdf     11 15 16.6  +10
HARR  Harsova            155.12 312  ⇑P          PKPdf     11 15 16.1  +10
HARR  Harsova            155.12 312  ⇑PKIKP      PKPdf     11 15 16.1  +10
BURAR Bucovina Array     155.21 321  ⇑P          PKPdf     11 15 16.3  +10
BURAR Bucovina Array     155.21 321  ⇑PKIKP      PKPdf     11 15 16.3  +10
VRI   Vrincioaia         155.30 316  ⇓P          PKPdf     11 15 19.2  +13
PLOR  Plostina           155.36 316  ⇓P          PKPab     11 15 22.9 -9.3
BISRR Bisoca             155.47 315  ⇑P          PKPdf     11 15 10.5 +3.5
DBIC  Dimbokro           155.60 163   PKP        PKPdf     11 15 07.3 -0.7
      comp=Z,6.5nm,0.9s,baz=226,slow=5.9,SNR=2.8
MLR   Muntele Rosu       155.97 316  ⇓P          PKPab     11 15 23.1  -12
UZH   Uzhgorod           156.09 326  ePKIKP      PKPdf     11 15 18.1  +11
UZH                                  i                     11 15 30.1
UZH                                  i                     11 15 40.6
CRVS  Cervenica-Dubn     156.30 327  ePKP2       PKPab     11 15 36.0  0.0
LANS  Liptovska Anna     157.02 330  ePKP2       PKPab     11 15 39.8 +0.6
SZH   Strazhica          157.04 311  eP          PKPab     11 15 39.6 +0.1
CLL   Collm              157.49 342  ePKPdf      PKPdf     11 15 09.0 -0.3
CLL                                  epPKPdf     pPKPdf    11 15 15.0 -3.6
CLL                                  ePKPdif     sPKPdf    11 15 20.0 -1.8
CLL                                  epPKPdif    PKPab     11 15 27.0  -14
CLL                                  i PKPab     pPKPab    11 15 40.8 -9.4
      comp=Z,19nm,1.2s
CLL                                  i pPKPab    sPKPab    11 15 47.4 -6.0
      comp=Z,15nm,1.2s
CLL                                  i x         x         11 15 54.4
CLL                                  ePP         PP        11 19 18.0 -1.8
CLL                                  ex          x         11 22 30.0
CLL                                  ePPP        PPP       11 23 00.0
CLL                                  ex          x         11 28 24.0
CLL                                  ePPS        PPS       11 32 34.0
CLL                                  eSS         SS        11 39 18.0 +4.8
CLL                                  eSSS        SSS       11 45 48.0
CLL                                  eSSSS                 11 49 18.0
BRG   Berggiesshubel     157.62 340  ePKIKP      PKPdf     11 15 09.2 -0.3
BRG                                   pmax       pmax
      comp=Z,21nm,1.7s
BRG   Berggiesshubel     157.62 340   Amp                  10 45 11.5
      comp=Z,17nm,0.9s
BRG   Berggiesshubel     157.62 340⇓ePKPf                  11 15 09.2
BRG   Berggiesshubel     157.62 340   Amp                  11 15 12.8
      comp=Z,21nm,1.7s
BRG   Berggiesshubel     157.62 340  ⇑PKP        PKPdf     11 15 24.2  +15
BRG   Berggiesshubel     157.62 340   Amp                  11 15 25.2
      comp=Z,5.7nm,0.9s
BRG   Berggiesshubel     157.62 340   PKPab      PKPab     11 15 42.1 +0.5
BRG   Berggiesshubel     157.62 340   Amp                  11 15 44.8
      comp=Z,12nm,1.1s
VYHS  Vyhne              157.79 330  ePKP2       PKPab     11 15 42.3 -0.2
VTS   Vitosha            159.10 312  eP          PKPab     11 15 48.1 -0.5
MMB   Musomiste          159.25 309  eP          PKPab     11 15 49.0 -0.1
CONA  Conrad Observa     159.47 333  eP          PKPdf     11 15 11.1 -0.8
      comp=Z,5.6nm,1.4s
CONA                                 eP          PKPab     11 15 50.3 +0.5
      comp=Z,8.3nm,1.2s
GERES GERESS Array B 159.47 338       PKP        PKPdf     11 15 11.1 -0.8
      comp=Z,0.3nm,0.3s,baz=95,slow=4.3,SNR=6.0
GERES                                 PKPab      PKPab     11 15 49.2 -0.7
      comp=Z,1.8nm,0.7s,baz=46,slow=3.9,SNR=5.6
RONA  Rosalia, Austr     159.48 332  eP          PKPdf     11 15 11.1 -0.7
RONA                                 eP          PKPab     11 15 50.3 +0.5
MEM   Membach            159.49 353  dPKPab      PKPab     11 15 50.0 +0.3
BTNL  Ternell            159.50 353  dPKPdf      PKPdf     11 15 12.1 +0.3
BTNL                                 dPKPab      PKPab     11 15 49.8  0.0
BSTI  Sart Tilman        159.56 354  dPKPab      PKPab     11 15 50.3 +0.3
BHOU  Houvegnez          159.75 353  dPKPab      PKPab     11 15 51.5 +0.7
BCLA  Clavier            159.75 354  dPKPab      PKPab     11 15 50.9 +0.1
BGES  Gesves             159.80 355  dPKPab      PKPab     11 15 50.8 -0.2
BGES                                 dpPKPab     pPKPab    11 16 00.1 -0.1
BMRD  Maredsous          159.91 355  dPKPab      PKPab     11 15 51.9 +0.3
BMRD                                 dpPKPab     pPKPab    11 16 01.0 +0.4
DOU   Dourbes            160.13 355  dPKPab      PKPab     11 15 52.6 +0.2
IDI   Anoyia             160.24 291              PKPdf     11 15 13.0 -0.1
SOKA  Soboth             160.81 332  eP          PKPdf     11 15 13.6 +0.1
      comp=Z,7.9nm,1.3s
SOKA                                 eP          PKPab     11 15 54.5 -1.2
      comp=Z,5.2nm,0.9s
KBA   Koelnbreinsper     161.12 336  eP          PKPdf     11 15 12.2 -1.7
      comp=Z,7.6nm,1.1s
KBA                                  eP          PKPab     11 15 58.9 +1.7
      comp=Z,5.8nm,1.1s
MYKA  Terra Mystica      161.39 334  eP          PKPdf     11 15 14.6 +0.6
      comp=Z,5.2nm,0.9s
MYKA                                 eP          PKPab     11 15 57.5 -0.7
      comp=Z,11nm,1.4s
WATA  Walderalm          161.48 339  eP          PKPdf     11 15 13.8 -0.4
      comp=Z,2.3nm,0.5s
WATA                                 eP          PKPab     11 15 59.0 +0.3
      comp=Z,7.8nm,0.8s
WTTA  Wattenberg         161.53 339  eP          PKPdf     11 15 15.2 +0.9
      comp=Z,19nm,1.8s
WTTA                                 eP          PKPab     11 15 58.7 -0.2
      comp=Z,13nm,1.2s
RETA  Reutte             161.58 341  eP          PKPab     11 15 59.2 +0.2
      comp=Z,17nm,1.2s
MOTA  Moosalm            161.61 340  eP          PKPdf     11 15 14.2 -0.2
      comp=Z,8.1nm,1.5s
MOTA                                 eP          PKPab     11 15 59.3 +0.1
      comp=Z,15nm,1.0s
SQTA  Sankt Quirin       161.69 340  eP          PKPab     11 16 00.4 +0.8
      comp=Z,12nm,1.0s
ABTA  Abfaltersbach      161.70 337  eP          PKPdf     11 15 13.4 -1.0
      comp=Z,12nm,1.4s
DAVA  Damuels            162.00 343  eP          PKPab     11 16 00.8 -0.2
      comp=Z,8.4nm,0.8s
FETA  Feichten           162.01 341  eP          PKPdf     11 15 15.0 +0.2
      comp=Z,4.2nm,0.8s
FETA                                 eP          PKPab     11 16 00.2 -0.8
      comp=Z,9.8nm,1.5s
TOA0  Torodi Ar. Sit     162.94 179              PKPdf     11 15 16.1 -0.3
TORD  Torodi Ar. Bea     162.94 179   PKP        PKPdf     11 15 14.9 -1.5
      comp=Z,3.0nm,0.9s,baz=311,slow=0.4,SNR=12
TORD                                  PKPab      PKPab     11 16 06.3 +0.7
      comp=Z,12nm,0.8s,baz=178,slow=3.2,SNR=17
TORD                                  PP         PP        11 19 49.7 +0.8
      comp=Z,0.8nm,0.8s,baz=213,slow=4.6,SNR=2.0
PTO   Porto              166.12  36  ePKPdf      PKPdf     11 15 18.8 +0.3
MVO   Moncorvo           166.86  32  ePKPdf      PKPdf     11 15 20.0 +0.8
PCBR  Castelo Branco     167.65  37  ePKPdf      PKPdf     11 15 20.7 +1.0
PMRV  Marv??o            168.00  38  ePKPdf      PKPdf     11 15 18.8 -1.2
EVO   Evora              168.27  43  ePKPdf      PKPdf     11 15 19.8 -0.3
MORF  Marmelete          168.63  49  ePKPdf      PKPdf     11 15 22.6 +2.1
PBEJ  Beja               168.69  44  ePKPdf      PKPdf     11 15 22.9 +2.5
PBDV  Barranco-do-Ve     169.14  48  ePKPdf      PKPdf     11 15 21.2 +0.4
PVAQ  Vaqueiros          169.17  46  ePKPdf      PKPdf     11 15 20.9 +0.1
ESDC  Sonseca Array      169.39  26   PKP        PKPdf     11 15 20.6 -0.3
      comp=Z,4.2nm,1.2s,baz=343,slow=2.6,SNR=17
ESDC                                  PP         PP        11 20 23.6 +0.8
      comp=Z,3.4nm,1.3s,baz=341,slow=5.5,SNR=6.0
KEST  Kesra              171.86 314   PKP        PKPdf     11 15 22.5 +0.1
      comp=Z,2.6nm,0.7s,baz=168,slow=2.4,SNR=3.6
```

IDC ***30*** *11:13:04.9±1.6, 31°.41S×177°.55W, h0^{km}, mb4.0/4, mbtmp4.1/7, ML3.8/3, MS3.7/1 Error ellipse: s-maj=42.8km s-min=23.4km az=123.0*

NEIC ***30*** *11:13:06.9±2.3, 31°.43S±0°.08×177°.67W±0°.05, h10^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=13.2km s-min=7.6km az=174.0*

ISC 30 11:13:09.7±0.9**, 31°.31S**±0°.07×**177°.7W**±0°.2**, h35**^{km}**, n28,** σ**2^{s}.42**/30**, mb4.3**/12**, Kermadec Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID              Time      Res
                                     Op         ISC        h  m  s   ISC
RAO   Raoul Island        2.06 356   Pn         Pn         11 13 41.3 -0.6
      73nm,0.3s,baz=100,slow=23,SNR=2.4
RAO                                  Sn         Sn         11 14 03.1 -3.2
      223nm,0.3s,baz=244,slow=22,SNR=4.1
      232nm,0.3s
RAO   Raoul Island        2.06 356              Pn         11 13 41.8  0.0
URZ   Urewera             8.12 210   Pn         Pn         11 15 03.4 -1.6
      0.7nm,0.3s,baz=267,slow=2.7,SNR=12
URZ                                  Sn         Sn         11 16 35.7 +0.2
      4.7nm,0.3s,baz=239,slow=20,SNR=6.6
      2.9nm,0.5s
URZ   Urewera             8.12 210              Pn         11 15 02.6 -2.5
LTZ   Lake Taylor        13.94 212   Pn         Pn         11 16 24.0 -0.8
RPZ   Rata Peaks         15.22 212   Pn         Pn         11 16 40.9 -1.1
      0.3nm,0.3s,baz=99,slow=19,SNR=1.4
RPZ                                  Sn         Sn         11 19 17.5  -12
      0.2nm,0.3s,baz=38,slow=16,SNR=1.7
      9.7nm,1.0s
DZM   Mont Dzumac        16.85 299   LR         LR         11 22 24.1
      comp=Z,218nm,18.8s,baz=191,slow=33
CTAO  Charters Tower     34.17 280              P          11 19 52.6 +0.8
STKA  Stephens Creek     34.50 258   P          P          11 19 56.7 +2.2
      0.8nm,0.4s,baz=114,slow=14,SNR=3.7
      0.8nm,0.4s
STKA  Stephens Creek     34.50 258   P          P          11 19 50.9 -3.6
BBOO  Buckleboo          38.94 255   P          P          11 20 31.8 -0.6
BBOO                                 IAmb       IAmb       11 20 51.9
      comp=Z,15nm,1.1s
ASAR  Alice Springs      43.29 268   P          P          11 21 09.8 +1.6
      comp=Z,1.2nm,0.5s,baz=106,slow=7.2,SNR=38
ASAR                                 PcP        PcP        11 22 57.1 +0.2
      comp=Z,0.4nm,0.8s,baz=107,slow=4.0,SNR=1.5
      comp=Z,1.2nm,0.5s
ASAR  Alice Springs      43.29 268   P          P          11 21 09.3 +1.1
WR0   Warramunga Arr     44.18 273   P          P          11 21 16.8 +1.3
WB2   Warramunga Arr     44.35 273   P          P          11 21 18.1 +1.3
WB2                                  IAmb       IAmb       11 21 36.0
      comp=Z,5.1nm,0.9s
WRAB  Tennant Creek      44.35 273   P          P          11 21 17.6 +0.8
WRAB                                 IAmb       IAmb       11 21 31.3
      comp=Z,4.2nm,0.8s
WRA   Warramunga Arr     44.36 273   P          P          11 21 18.3 +1.4
      comp=Z,1.8nm,0.4s,baz=112,slow=7.7,SNR=60
      comp=Z,1.8nm,0.4s
WRA   Warramunga Arr     44.36 273   P          P          11 21 17.3 +0.4
WB0   Warramunga Arr     44.39 273              P          11 21 17.8 +0.6
WB0                                  IAmb       IAmb       11 21 31.5
      comp=Z,3.8nm,0.7s
VNDA  Vanda              47.21 186   P          P          11 21 38.1 -0.5
VNDA                                 IAmb       IAmb       11 21 56.8
      comp=Z,4.2nm,1.4s
MTN   Manton Dam         50.35 280   P          P          11 22 03.6 +0.1
KNRA  Kununurra          51.00 275   P          P          11 22 09.2 +0.8
KNRA                                 IAmb       IAmb       11 22 12.7
      comp=Z,5.3nm,0.9s
PSA00 Pilbara Seismi     56.09 264   P          P          11 22 45.2 -0.4
PSA00                                IAmb       IAmb       11 23 11.7
      comp=Z,8.2nm,1.1s
QSPA  South Pole Qui     58.80 180   P          P          11 23 03.5 -0.9
NVAR  Mina Array Bea     88.76  43   P          P          11 26 00.2 +0.3
      comp=Z,0.2nm,0.5s,baz=220,slow=7.9,SNR=2.2
      comp=Z,0.2nm,0.5s
```

LZH	Lanzhou	99.44	306	eP	Pdif	11 26 58.8	+10
LZH				pP	pwP	11 27 04.3	-1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
MKAR	Makanchi Array	118.53	310	PKP	PKiKP	11 31 56.6	+3.0
	comp=Z,0.4nm,0.8s,baz=90,slow=2.9,SNR=2.7						
AKASG	Malin Array Be	152.16	322	PKPbc	PKiKP	11 33 01.9	+0.5
	comp=Z,0.7nm,0.5s,baz=48,slow=3.3,SNR=2.0						

IDC 30 11:50:48.7±1.6**, 5°.59S**×**149°.34E, h0^{km}, mb3.2**/2**, mbtmp3.7**/4**, ML2.4**/1**, Error ellipse: s-maj=67.5km s-min=21.2km az=142.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.96	65	Pn	Pn	11 51 37.6	+0.5
	145nm,0.5s,baz=342,slow=20,SNR=89						
KRVT				Sn	Sn	11 52 15.3	+1.9
	13nm,0.3s,baz=311,slow=17,SNR=5.4						
PMG	Port Moresby	4.37	210	Pn	Pn	11 51 57.3	+0.9
	15nm,0.3s,baz=28,slow=6.0,SNR=41						
PMG				Sn	Sn	11 52 45.9	-2.1
	13nm,0.3s,baz=345,slow=20,SNR=9.2						
	31nm,0.3s						
WRA	Warramunga Arr	20.41	224	P	P	11 55 27.8	+0.2
	1.0nm,0.6s,baz=51,slow=11,SNR=14						
	1.0nm,0.6s						
ASAR	Alice Springs	23.32	218	P	P	11 55 58.4	-0.4
	0.2nm,0.5s,baz=54,slow=9.3,SNR=13						
	0.2nm,0.5s						
TORD	Torodi Ar. Bea	147.23	286	PKPbc	PKPdf	12 10 34.0	+1.0
	0.3nm,0.3s,baz=55,slow=2.2,SNR=4.1						

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*JMA **30** 11:54:55.5±0.5, 44°N±3°×14°8E±°, h0^{km}, MV3.6/13, SE OFF ETOROFU*
*SKHL **30** 11:54:56.4±0.3, 45°.00N×148°.10E, h102^{km}±2^{km}, mb3.9/3, msha4.8/3*
ISC 30 11:54:57.1±3.3**, 44°.57N**±0°.09×**148°.3E**±0°.3**, h8^{km}**±27^{km}**, n12, $\sigma 0^{s}.99$**/20**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.72	338	iP	Pg	11 55 11.0	0.0
KUR				AMB	AMB	11 55 12.7	
	40nm,0.4s						
KUR				eS	Sb	11 55 22.0	0.0
KUR				A	A	11 55 26.7	
	100nm,0.4s						
KUR				A	A	11 55 26.7	
	260nm,0.4s						
SHO	Shikotan	1.24	236	eP	Pn	11 55 20.7	0.0
SHO				AMB	AMB	11 55 21.6	
	50nm,0.5s						
SHO				eS	Sn	11 55 38.6	+1.0
SHO				A	A	11 55 46.6	
	70nm,0.4s						
SHO				A	A	11 55 46.6	
	110nm,0.4s						
YUK	Yuzh-Kuril'sk	1.80	254	eP	Pn	11 55 26.7	-1.7
YUK				AMB	AMB	11 55 27.8	
	20nm,0.2s						
YUK				eS	Sn	11 55 49.6	-1.8
YUK				A	A	11 55 55.4	
	150nm,0.4s						
YUK				A	A	11 55 55.4	
	240nm,0.4s						
NEM2	Nemuro 2	2.17	237	eP	Pn	11 55 33.1	-0.5
NEM2				eS	Sn	11 56 00.0	-0.7
NMR	Nemuro--Hokkai	2.18	238	eP	Pn	11 55 33.4	-0.3
NMR				eS	Sn	11 56 01.0	+0.1
JRA	Rausu	2.34	256	eP	Pn	11 55 36.8	+1.0
JKHN	Kushirohamanak	2.69	238	eP	Pn	11 55 40.4	-0.2
JNK	Nakash	2.73	250	eS	Sn	11 56 16.1	+1.7
AKK	Akkeshi	2.92	239	eP	Pn	11 55 44.5	+0.7
AKK				eS	Sn	11 56 19.5	+0.5
JAK	Akkeshi	3.02	240	eP	Pn	11 55 44.8	-0.3
JAK				eS	Sn	11 56 20.6	-0.8
JAR	Ashorobuto	3.48	250	eP	Pn	11 55 53.0	+1.5
JCH	Churui	4.05	243	eP	Pn	11 55 59.5	0.0
JCH				eS	Sn	11 56 46.8	-0.3

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*IDC **30** 12:20:30.2±1.4, 35°.41N×141°.12E, h0^{km}, mb3.3/3, mbtmp3.4/6, ML3.0/3, MS2.4/1, Error ellipse: s-maj=31.3km s-min=22.1km az=92.0*
*JMA **30** 12:20:32.6±0.2, 35°.5N±0°.5×141°.0E±0°.8, h22^{km}±1^{km}, MV3.7/38, NEAR CHOSHI CITY*
JMA Felt II J1 at NEAR CHOSHI CITY .
*NIED **30** 12:20:32.6, 35°.48N×140°.99E, h22^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.30; $M_{\theta\theta}$2.41; $M_{\phi\phi}$-0.11; $M_{r\theta}$-0.44; $M_{\theta\phi}$-0.39; $M_{\phi r}$0.43; Fault plane solution: $M_0$2.47000×10^{14} NP1: ϕ_s269.00000°, δ40.00000°, λ-104.00000°. NP2: ϕ_s108.00000°, δ52.00000°, λ-78.00000°.*
ISC 30 12:20:31.6±1.3**, 35°.44N**±0°.04×**141°.08E**±0°.06**, h13^{km}**±9^{km}**, n24, $\sigma 0^{s}.88$**/20**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.32	325	P	Pg	12 20 38.5	+0.4
CHOJ				S	Sg	12 20 42.9	+0.3
JSMT	Sammumatsuo	0.56	291	S	Sg	12 20 49.8	-0.1
KTR	Katsuura	0.69	245	P	Pg	12 20 44.8	-0.2
KTR				S	Sg	12 20 54.0	-0.2
JIHU	Itakohorinouch	0.69	319	P	Pg	12 20 45.0	-0.1
JIHU				eS	Sg	12 20 54.2	-0.1
JCN	Nagara	0.72	268	P	Pg	12 20 45.7	+0.1
JCN				S	Sb	12 20 55.8	0.0
BSO4	Boso 4	0.76	234	P	Pg	12 20 46.9	+0.7
BSO4				X		12 20 58.2	
BSO1	Boso 1	0.79	186	P	Pg	12 20 47.3	+0.5
BSO3	Boso 3	0.79	217	iP	Pg	12 20 47.4	+0.5
JIM2	Oshima 3	1.54	242	P	Pn	12 20 56.6	-2.1
JHJ	Hachijo jima 2	2.55	205	Pn	Pn	12 21 13.5	+0.8
	11nm,0.3s,baz=342,slow=20,SNR=1.3						
	148nm,0.9s						
MJAR	Matsushiro Arr	2.58	296	Pn	Pn	12 21 14.1	+1.0
	0.4nm,0.3s,baz=115,slow=16,SNR=14						
MJAR				Sn	Sn	12 21 45.1	+0.8
	0.6nm,0.3s,baz=134,slow=24,SNR=2.5						
MJAR				LR	LR	12 22 32.6	
	comp=Z,65nm,18.4s,baz=55,slow=47						
	2.9nm,0.6s						
ASAJ	Asahikawa	8.74	7	Pn	Pn	12 22 36.8	-0.9
	0.5nm,0.3s,baz=235,slow=9.5,SNR=5.1						
	1.8nm,0.4s						
H11N2	WAKE ISLAND Hy	27.60	118	T	T	12 55 25.9	
	baz=310,slow=75,SNR=107						
H11N1	WAKE ISLAND Hy	27.61	118	T	T	12 55 20.2	
	baz=310,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	27.62	118	T	T	12 55 20.1	
	baz=310,slow=75,SNR=71						
H11S1	WAKE ISLAND Hy	28.26	120	T	T	12 56 08.8	
	baz=312,slow=75,SNR=317						
H11S3	WAKE ISLAND Hy	28.26	120	T	T	12 56 07.7	
	baz=312,slow=75,SNR=278						
H11S2	WAKE ISLAND Hy	28.27	120	T	T	12 56 10.7	
	baz=312,slow=75,SNR=311						
ILAR	Eielson Array	50.98	32	P	P	12 29 34.1	+1.4
	0.3nm,0.9s,baz=263,slow=7.2,SNR=2.1						
	0.3nm,0.9s						
WRA	Warramunga Arr	55.45	188	P	P	12 30 05.1	-0.9
	0.6nm,0.9s,baz=6.7,slow=7.5,SNR=3.4						
	0.6nm,0.9s						
ASAR	Alice Springs	59.18	188	P	P	12 30 33.2	+0.9
	0.3nm,0.8s,baz=359,slow=6.4,SNR=2.2						
	0.3nm,0.8s						
H03N2	Juan Fernandez	147.09	98	T	T	15 24 45.8	
	baz=289,slow=76,SNR=15						
H03N3	Juan Fernandez	147.10	98	T	T	15 24 44.4	
	baz=289,slow=76,SNR=11						
H03N1	Juan Fernandez	147.11	98	T	T	15 24 43.3	
	baz=289,slow=76,SNR=16						

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*IDC **30** 12:20:49.6±0.9, 42°.73S×83°.81W, h0^{km}, mb4.0/9, mbtmp4.0/10, ML3.6/1, MS3.8/15, Error ellipse: s-maj=37.8km s-min=22.1km az=82.0*
*NEIC **30** 12:20:52.0±1.6, 42°.72S±0°.08×83°.9W±0°.2, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=20.6km s-min=14.4km az=272.0*
ISC 30 12:20:51.5±0.7**, 42°.71S**±0°.09×**83°.9W**±0°.1**, h10^{km}, n50, $\sigma 1^{s}.06$**/32**, mb4.2**/12**, MS3.9**/18**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AY01	Puyuhuapi	8.36	106		Pn	12 22 53.5	+0.8
LL02	Futaleuf	8.87	97	Pn	Pn	12 22 59.9	+0.2
H03S1	Juan Fernandez	9.69	26	T	T	12 32 55.3	
	baz=198						
H03S2	Juan Fernandez	9.69	25	T	T	12 32 55.2	
	baz=198,SNR=354						
H03S3	Juan Fernandez	9.70	26	T	T	12 32 54.9	
	baz=198,SNR=208						
USHA	Ushuaia	15.81	145	Pn	Pn	12 24 34.3	+0.3
	0.2nm,0.3s,baz=286,slow=6.5,SNR=3.8						
USHA				LR	LR	12 29 53.0	
	comp=Z,179nm,19.8s,baz=8.5,slow=34						
	6.5nm,1.0s						
TRQA	Tornquist	17.34	82	P	P	12 24 56.2	+1.3
LCO	Las Campanas	17.34	42		P	12 24 58.0	+2.8
LCO				IAmb	IAmb	12 25 00.7	
	comp=Z,39nm,1.4s						
AC02	Maricunga	19.91	42	P	P	12 25 23.7	-0.1
LVC	Limon Verde	23.62	37	LR	LR	12 32 54.8	
	comp=Z,185nm,19.7s,baz=218,slow=31						
PMSA	Palmer Station	24.81	160	LR	LR	12 33 18.0	
	comp=Z,68nm,18.5s,baz=246,slow=30						
RPN	Rapa Nui	25.86	299	LR	LR	12 33 57.2	
	comp=Z,285nm,21.2s,baz=128,slow=30						
CPUP	Villa Florida	27.17	62	LR	LR	12 37 02.0	
	comp=Z,503nm,18.9s,baz=234,slow=36						
LPAZ	La Paz	29.60	32	P	P	12 26 57.3	-0.2
	comp=Z,1.3nm,0.7s,baz=198,slow=4.2,SNR=4.3						
LPAZ				LR	LR	12 37 07.4	
	comp=Z,51nm,20.4s,baz=204,slow=33						
	comp=Z,1.3nm,0.7s						
LPAZ	La Paz	29.60	32	P	P	12 26 57.1	-0.4
LPAZ				IAmb	IAmb	12 27 04.4	
	comp=Z,8.0nm,1.4s						
NNA	Nana	31.22	13	LR	LR	12 36 02.5	
	comp=Z,153nm,21.6s,baz=184,slow=29						
SIV	San Ignacio	33.04	43	LR	LR	12 40 07.1	
	comp=Z,187nm,20.4s,baz=249,slow=35						
ATAH	Atahualpa	35.77	9	LR	LR	12 38 45.4	
	comp=Z,84nm,18.9s,baz=196,slow=30						
BDFB	Brasilia	40.86	60	P	P	12 28 32.6	-1.2
	comp=Z,2.5nm,0.4s,baz=230,slow=16,SNR=1.8						
	comp=Z,2.5nm,0.4s						
SNAA	Sanae	47.37	155	P	P	12 29 24.5	-0.8
	comp=Z,1.3nm,0.9s,baz=320,slow=6.9,SNR=2.5						
	comp=Z,1.3nm,0.9s						
SNAA	Sanae	47.37	155	P	P	12 29 24.1	-1.2
QSPA	South Pole Qui	47.53	180	P	P	12 29 26.7	-0.1
	comp=Z,1.0nm,0.8s,baz=176,slow=0.5,SNR=2.4						
QSPA				LR	LR	12 48 14.0	
	comp=Z,97nm,18.2s,baz=93,slow=35						
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	47.53	180	P	P	12 29 26.7	-0.1
ROSC	El Rosal	48.12	13	P	P	12 29 32.5	+0.4
	comp=Z,4.2nm,0.3s,baz=126,slow=13,SNR=5.0						
ROSC				LR	LR	12 47 54.1	
	comp=Z,161nm,19.2s,baz=186,slow=34						
	comp=Z,4.2nm,0.3s						
ROSC	El Rosal	48.12	13	P	P	12 29 31.8	-0.3
BAUV	El Baul	53.41	20	P	P	12 30 10.1	-1.4
VNDA	Vanda	53.57	194	LR	LR	12 48 27.4	
	comp=Z,107nm,21.4s,baz=134,slow=31						
VNDA	Vanda	53.57	194	P	P	12 30 13.2	+1.2
RCBR	Riachuelo	56.03	63	LR	LR	12 54 36.1	
	comp=Z,686nm,19.3s,baz=350,slow=36						
TBI	Tubuai	56.85	268	eLR	LR	12 46 43.0	
	comp=Z,149nm,28.5s						
TAOE	Nuku Hiva Isla	59.45	287	eLR	LR	12 48 46.3	
	comp=Z,138nm,26.8s						
PPT2	Papeete2	60.48	273	eLR	LR	12 48 47.3	
	comp=Z,293nm,38.0s						
RAR	Rarotonga	65.72	263	LR	LR	12 52 16.8	
	comp=Z,93nm,21.6s,baz=156,slow=29						
TXAR	Lajitas Array	73.96	342	P	P	12 32 27.1	+0.1
	comp=Z,0.5nm,0.8s,baz=163,slow=8.5,SNR=7.2						
	comp=Z,0.5nm,0.8s						
TXAR	Lajitas Array	73.96	342	P	P	12 32 26.6	-0.4
AFI	Afiamalu	79.15	261	LR	LR	13 00 18.6	
	comp=Z,87nm,18.2s,baz=139,slow=30						
ANMO	Albuquerque	79.99	341	P	P	12 33 01.6	+0.7
ANMO				IAmb	IAmb	12 33 03.0	
	comp=Z,5.1nm,1.2s						
SHPR	Sheep Range	83.83	335	P	P	12 33 22.5	+1.4
SHPR				IAmb	IAmb	12 33 23.9	
	comp=Z,3.8nm,1.2s						
PRN	Pahroc Range	84.63	336	P	P	12 33 26.5	+1.4
TPH	Tonopah	85.92	334	P	P	12 33 33.2	+1.6
NVAR	Mina Array Bea	86.59	334	P	P	12 33 35.7	+0.7
	comp=Z,0.5nm,0.8s,baz=145,slow=5.4,SNR=5.2						
	comp=Z,0.5nm,0.8s						
NVAR	Mina Array Bea	86.59	334	P	P	12 33 36.1	+1.2
PDAR	Pinedale Array	88.16	341	P	P	12 33 42.3	-0.2
	comp=Z,0.2nm,0.5s,baz=125,slow=7.8,SNR=2.3						
	comp=Z,0.2nm,0.5s						
PDAR	Pinedale Array	88.16	341	P	P	12 33 42.6	+0.1
DZM	Mont Dzumac	88.70	241	eLR	LR	13 01 50.0	
	comp=Z,122nm,26.4s						
HLID	Hailey	90.14	338	P	P	12 33 52.5	+0.9
HLID				IAmb	IAmb	12 33 53.8	
	comp=Z,3.8nm,1.3s						
TORD	Torodi Ar. Bea	95.61	77	P	P	12 34 15.4	-2.0
	comp=Z,0.8nm,0.9s,baz=223,slow=5.9,SNR=2.9						
	comp=Z,0.8nm,0.9s						
TORD	Torodi Ar. Bea	95.61	77	P	P	12 34 16.7	-0.7
TORD				IAmb	IAmb	12 34 20.7	
	comp=Z,1.5nm,1.1s						
TIXI	Tiksi	146.86	342	PKPbc	PKPdf	12 40 30.1	-0.7
	comp=Z,2.1nm,0.8s,baz=106,slow=18,SNR=12						
TIXI	Tiksi	146.86	342		PKPdf	12 40 30.2	-0.6

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*JMA **30** 12:29:55.0±0.2, 24°N±1°×12°2E±°, h13^{km}±3^{km}, MV2.2/8, TAIWAN REGION*
*TAP **30** 12:29:55.4, 24°.18N×121°.73E, h12^{km}, ML2.9, B*
ISC 30 12:29:55.4±0.8**, 24°.17N**±0°.01×**121°.76E**±0°.02**, h11^{km}**±4^{km}**, n92, $\sigma 0^{s}.58$**/166**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.13	264	iP	Pg	12 29 58.3	-0.2
	baz=258						
ETL				iS	Sg	12 30 00.5	-0.3
	baz=258						
EHP	Heping Village	0.14	353	P	Pg	12 29 58.9	+0.2
	baz=9.0						
EHP				S	Sg	12 30 01.7	+0.6
	baz=9.0						
NACB	Ninganchiao	0.15	271	iP	Pg	12 29 58.6	-0.3
	baz=268						
NACB				S	Sg	12 30 00.9	-0.5
	baz=268						
TWD	Chiawan	0.18	239	P	Pg	12 29 59.1	-0.1
	baz=230						
TWD				S	Sg	12 30 01.8	-0.1
	baz=230						
HWA	Hwalien	0.24	216	eP	Pb	12 30 01.7	-0.1
	baz=219						
HWA				eS	Sb	12 30 06.4	+2.7
	baz=219						
ENA	Nanau	0.26	356	iP	Pg	12 30 00.7	0.0
	baz=4.0						
ENA				eS	Sg	12 30 04.4	+0.2
	baz=4.0						
ETLH	Xiulin Townshi	0.26	278	P	Pg	12 30 00.5	-0.3
	baz=278						
ETLH				S	Sg	12 30 04.0	-0.3
	baz=278						
EWUT	Wuta	0.27	3	iP	Pg	12 30 01.1	+0.1
	baz=10.0						
EWUT				S	Sg	12 30 05.3	+0.5
	baz=10.0						
ETM	Tongmen	0.32	230	P	Pg	12 30 01.6	-0.2
	baz=226						
ETM				S	Sg	12 30 06.4	+0.3
	baz=226						
TEYL	Yanliau Villag	0.34	206	P	Pb	12 30 03.0	-0.4
	baz=213						
LATG	Datong	0.42	329	P	Pg	12 30 03.5	-0.2
	baz=332						
LATG				eS	Sg	12 30 09.5	+0.1
	baz=332						
NNSB	Datong	0.43	307	P	Pg	12 30 03.7	-0.2
	baz=308						
NNSB				S	Sg	12 30 09.3	-0.3
	baz=308						
NNS	Nan Shan	0.44	307	P	Pg	12 30 04.0	-0.2
	baz=309						
NNS				S	Sg	12 30 09.8	-0.3
	baz=309						
TWC	Suao	0.44	10	P	Pg	12 30 04.3	+0.2
	baz=9.0						
TWC				eS	Sb	12 30 11.0	-0.9
	baz=9.0						
WHF	Hehuan Shan	0.45	267	P	Pg	12 30 04.2	-0.3
	baz=266						
WHF				eS	Sg	12 30 10.1	-0.4
	baz=266						
NDS	Dongshan	0.46	355	P	Pg	12 30 04.7	+0.2
	baz=358						
NDS				S	Sg	12 30 10.7	+0.1
	baz=358						
ESL	Shilin	0.47	220	P	Pg	12 30 04.2	-0.3
	baz=224						
ESL				eS	Sg	12 30 11.5	+0.7
	baz=224						
FUSS	Fushou	0.48	279	eP	Pg	12 30 04.6	-0.2
	baz=279						
FUSS				S	Sg	12 30 11.2	0.0
	baz=279						
NDT	Datong Townshi	0.48	332	P	Pg	12 30 04.7	-0.2
	baz=334						
NDT				S	Sg	12 30 11.7	+0.4
	baz=334						
ENTT	Nioudou	0.50	339	P	Pg	12 30 05.2	0.0
	baz=342						
ENTT				S	Sg	12 30 12.1	+0.3
	baz=342						
TEGC	Jichi Village	0.50	204	P	Pb	12 30 06.2	-0.1
	baz=191						
TWT	Tachien	0.54	279	eP	Pb	12 30 06.8	-0.2
	baz=278						
TWT				S	Sg	12 30 13.4	+0.2
	baz=278						
CHGB	Renai	0.55	258	eP	Pg	12 30 06.1	-0.1
	baz=250						
CHGB				S	Sg	12 30 13.1	-0.4
	baz=250						
TWE	Neicheng	0.55	351	P	Pg	12 30 06.3	+0.1
	baz=354						
TWE				eS	Sb	12 30 14.2	-0.9
	baz=354						
TDCB	Techi	0.56	278	eP	Pg	12 30 06.2	-0.1
	baz=278						
TDCB				eS	Sg	12 30 13.1	-0.5
	baz=278						
OWD	Renai	0.58	248	eP	Pg	12 30 06.5	-0.2
	baz=248						
OWD				S	Sg	12 30 13.7	-0.7
	baz=248						
EGFH	Guangfu	0.59	211	P	Pg	12 30 06.8	0.0
	baz=217						
EGFH				eS	Sb	12 30 16.1	+0.2
	baz=217						
ILA	Ilan	0.59	359	eS	Sb	12 30 16.2	+0.1
	baz=2.0						
FUSB	Fushanzhiwuyua	0.61	345	P	Pg	12 30 07.5	+0.2
	baz=347						
FUSB				S	Sg	12 30 15.5	+0.2
	baz=347						
YHNB	Yeheng	0.61	325	eP	Pg	12 30 07.2	-0.1
	baz=326						
YHNB				eS	Sg	12 30 15.4	+0.1
	baz=326						
WUSB	Renai	0.61	253	P	Pg	12 30 07.2	-0.2
	baz=245						
WUSB				eS	Sg	12 30 14.4	-1.1
	baz=245						
NSK	Sanguang	0.62	324	eP	Pg	12 30 07.3	-0.2
	baz=326						
NSK				eS	Sg	12 30 15.4	-0.3
	baz=326						
NWLT	Wulai	0.65	339	eP	Pg	12 30 08.1	+0.1
	baz=340						
NWLT				eS	Sg	12 30 16.4	-0.1
	baz=340						
NTC	Toucheng	0.68	5	eP	Pg	12 30 08.7	+0.1
	baz=7.0						
NTC				eS	Sg	12 30 17.8	+0.2
	baz=7.0						
EGS		0.69	13	eP	Pb	12 30 09.3	-0.1
	baz=22						
VWDT	VWDT	0.70	234	eP	Pg	12 30 08.9	-0.1
	baz=233						
VWDT				eS	Sg	12 30 18.4	+0.2
	baz=233						
HGSD	Ruisui	0.74	205	eP	Pb	12 30 10.2	-0.2
	baz=216						
NFF	Wufeng Townshi	0.74	308	eP	Pg	12 30 09.7	-0.2
	baz=309						
NFF				eS	Sg	12 30 19.3	-0.3
	baz=309						
WHP	Taichung City	0.75	278	eP	Pg	12 30 09.8	-0.2
	baz=278						
WHP				eS	Sg	12 30 20.3	+0.5
	baz=278						
WPL	Puli Township	0.75	258	eP	Pg	12 30 09.8	-0.2
	baz=249						
WPL				eS	Sg	12 30 19.4	-0.4
	baz=249						
DPDB	Guoxing	0.78	260	eP	Pg	12 30 10.3	-0.1
	baz=252						
DPDB				eS	Sg	12 30 20.4	-0.2
	baz=252						
EHY	Hungye	0.78	211	eP	Pg	12 30 09.8	-0.6
	baz=220						
EHY				eS	Sb	12 30 21.8	+0.4
	baz=220						
WCS	Beigang Elemen	0.78	262	eP	Pg	12 30 10.3	-0.3
	baz=254						
WCS				eS	Sg	12 30 20.5	-0.3
	baz=254						
TIPB	Shuangxi	0.80	4	eP	Pg	12 30 10.8	0.0
	baz=358						
TIPB				eS	Sb	12 30 21.5	-0.6
	baz=358						
NHDH	Xindian Distri	0.82	345	eP	Pn	12 30 12.2	-0.6
	baz=346						
NHDH				eS	Sg	12 30 22.0	+0.2
	baz=346						
TWA	Mucha	0.82	349	eP	Pg	12 30 11.2	0.0
	baz=350						
TWA				eS	Sb	12 30 22.6	-0.2
	baz=350						
LIOB	Emei	0.83	305	eP	Pg	12 30 11.6	+0.2
	baz=305						
LIOB				eS	Sg	12 30 22.6	+0.4
	baz=305						
NSTT	Nanjuang	0.83	304	eP	Pg	12 30 11.6	+0.1
	baz=304						
NSTT				eS	Sg	12 30 22.3	0.0
	baz=304						
SSLB	Suanglung	0.83	243	eP	Pg	12 30 11.1	-0.4
	baz=252						
SSLB				eS	Sg	12 30 21.3	-1.0
	baz=252						
TATO	Taipei	0.84	343	P	Pb	12 30 11.9	0.0
	baz=344						
TATO				eS	Sg	12 30 22.7	+0.2
	baz=344						
SMLT	Sun Moon Lake	0.84	250	eP	Pg	12 30 11.4	-0.2
	baz=250						
SMLT				eS	Sg	12 30 22.3	-0.3
	baz=250						
TWB1	Santiao Chiao	0.86	14	eP	Pb	12 30 12.6	+0.2
	baz=8.0						
TWB1				eS	Sb	12 30 24.1	+0.2
	baz=8.0						
TYC	Yuchr	0.87	252	eP	Pg	12 30 11.8	-0.4
	baz=245						
TYC				eS	Sg	12 30 22.8	-0.7
	baz=245						
YULB	Yu-li	0.89	209	eP	Pg	12 30 11.2	-1.2
	baz=219						
TAP	Taipei	0.89	345	eS	Sb	12 30 24.9	+0.1
	baz=346						
NWF	Wu-fen Shan	0.90	1	eP	Pn	12 30 13.7	-0.3
	baz=353						
NWF				eS	Sg	12 30 23.8	-0.6
	baz=353						
WFSB	Wu-fen Shan	0.90	1	eP	Pn	12 30 13.8	-0.2
	baz=353						

WFSB				eS	Sb	12 30 25.6	+0.7
	baz=353						
TWQ1	Liyutan	0.92	281	eP	Pn	12 30 14.7	+0.5
	baz=291						
TWQ1				eS	Sb	12 30 26.2	+0.7
	baz=291						
TWF1	Yuli	0.92	208	eP	Pg	12 30 12.8	-0.3
	baz=218						
TWF1				eS	Sb	12 30 26.5	+0.9
	baz=218						
SXI1	Grass Mountain	0.92	6	eP	Pb	12 30 13.7	+0.2
	baz=354						
NSY	Sanyi	0.94	285	eP	Pn	12 30 15.4	+0.8
	baz=285						
NMLH	Miaoli	0.96	293	eP	Pn	12 30 14.9	+0.2
	baz=292						
NMLH				eS	Sg	12 30 26.7	+0.4
	baz=292						
YM01	YM01	0.98	350	eP	Pn	12 30 15.2	0.0
	baz=350						
YM01				eS	Sb	12 30 27.4	-0.1
	baz=350						
YUS	Yu-Shan	1.00	228	P	Pg	12 30 14.6	-0.2
	baz=218						
YUS				eS	Sb	12 30 29.0	+0.5
	baz=218						
WJS	Zhushan	1.01	250	eP	Pn	12 30 15.4	-0.1
	baz=245						
WJS				eS	Sn	12 30 30.2	+0.6
	baz=245						
WNT	Mingjian	1.03	254	eP	Pn	12 30 15.7	-0.1
	baz=250						
WNT				eS	Sn	12 30 30.4	+0.3
	baz=250						
WDJ	Dajia District	1.04	280	eP	Pn	12 30 16.2	+0.3
	baz=289						
WDJ				eS	Sn	12 30 30.8	+0.4
	baz=289						
FULB	Fuli	1.06	204	eP	Pg	12 30 15.5	-0.3
	baz=219						
ALS	Alishan	1.09	233	eP	Pg	12 30 16.1	-0.4
	baz=234						
ALS				eS	Sn	12 30 32.8	+0.5
	baz=234						
TWY	Chenhua	1.11	352	eP	Pn	12 30 17.2	+0.3
	baz=339						
JYNG	Yonagunijimaku	1.12	75	eP	Pn	12 30 16.7	-0.3
YOJ	Yonaguni jima	1.18	76	P	Pn	12 30 17.8	-0.1
	baz=67						
YOJ				S	Sn	12 30 35.0	+1.2
	baz=67						
YOJ	Yonaguni jima	1.18	76	eP	Pn	12 30 17.7	-0.1
ECS	Chishang	1.18	205	eP	Pg	12 30 18.5	+0.4
	baz=219						
ELDTW	Lidau	1.19	215	eP	Pb	12 30 16.5	-1.6
	baz=229						
ELDTW				eS	Sg	12 30 34.0	+0.1
	baz=229						
WDLH	Douliu	1.22	247	eP	Pg	12 30 18.9	+0.1
	baz=248						
WDLH				eS	Sn	12 30 36.3	+1.5
	baz=248						
EDH	Donghe	1.27	199	eP	Pn	12 30 17.2	-1.9
	baz=187						
EDH				eS	Sn	12 30 36.3	+0.3
	baz=187						
WRL	Guolierlin Hig	1.29	258	eP	Pn	12 30 19.7	+0.3
	baz=259						
WRL				eS	Sg	12 30 38.9	+1.8
	baz=259						
STYH	Taoyuan	1.34	222	eP	Pn	12 30 19.9	-0.2
	baz=224						
TPUB	Ta-pu	1.35	230	P	Pn	12 30 20.5	+0.3
	baz=221						
TPUB				eS	Sg	12 30 40.2	+1.2
	baz=221						
WTP	Ta-pu	1.40	229	eP	Pn	12 30 21.1	+0.2
	baz=220						
WTP				eS	Sg	12 30 42.3	+1.9
	baz=220						
TWK	Hsinying	1.47	233	eP	Pb	12 30 22.9	0.0
	baz=236						
TWK				eS	Sg	12 30 44.0	+1.1
	baz=236						
SNST	Tainan City	1.50	231	eP	Pn	12 30 22.6	+0.4
	baz=234						
SNST				eS	Sg	12 30 43.5	0.0
	baz=234						
CHN1	Nanshi	1.50	229	eP	Pb	12 30 23.6	+0.3
	baz=222						
CHN1				eS	Sg	12 30 44.8	+1.2
	baz=222						
WSL	Shuilin Townsh	1.54	246	eP	Pn	12 30 23.6	+0.7
	baz=247						
WSL				eS	Sg	12 30 45.2	0.0
	baz=247						
IRIF	Iriomote-Funau	1.81	84	eP	Pb	12 30 27.4	-1.0
PHUB	P'eng-hu	2.11	252	eS	Sn	12 30 57.8	+1.0
	baz=257						
WDGT	Dungji	2.13	245	eP	Pn	12 30 31.2	+0.4
	baz=236						
WDGT				eS	Sb	12 30 59.7	-0.7
	baz=236						
JIJ	Ishigaki jima	2.18	85	eS	Sn	12 30 58.7	0.0
VWUC	VWUC	2.26	292	eP	Pn	12 30 32.3	-0.3
	baz=291						
VWUC				eS	Sn	12 30 58.9	-1.6
	baz=291						
JISG	Ishigakijimahi	2.36	79	P	Pn	12 30 34.2	+0.1
JISG				eS	Sn	12 31 03.4	+0.3
PTMZ	Houxiangcun	2.55	290	eP	Pn	12 30 36.5	-0.2
	baz=289						
PTMZ				eS	Sn	12 31 06.3	-1.6
	baz=289						

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*IDC **30** 12:41:47.7±0.5, 31°.62S×71°.42W, h0km, mb4.5/13, mbtmp4.5/17, ML4.3/4, MS3.8/14, Error ellipse: s-maj=21.7km s-min=15.2km az=93.0*

*SJA **30** 12:41:53.4±0.7, 31°.65S×71°.63W, h53km±8km, ML5.0, MW4.6*

*VAO **30** 12:41:54.0±0.9, 31°.78S×71°.54W, h52km, mb4.7*

*GUC **30** 12:41:54.7±0.9, 31°.70S×71°.36W, h45km±6km, ML4.6*

*NEIC **30** 12:41:55.2, 31°.65S×71°.52W, h56km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}6.01; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-5.48; $M_{r\theta}$-1.21; $M_{\theta\phi}$-0.52; $M_{\phi r}$6.14; Fault plane solution: $M_0$8.53000×10^{15} NP1:ϕ_s194.81000°, δ22.50000°, λ109.43000°. NP2:ϕ_s353.91000°, δ68.84000°, λ82.15000°. Principal axes: T 8.8597, Plg65.0000°, Azm251.0000°; N -0.7130, Plg7.0000°, Azm357.0000°; P -8.1468, Plg23.0000°, Azm90.0000°;*

*NEIC **30** 12:41:55.9±1.6, 31°.65S±0°.03×71°.44W±0°.09, h56km±1km, mb4.9/78, Mwr4.6/62, Mwr4.7(GUC) Error ellipse: s-maj=13.8km s-min=5.0km az=100.0*

ISC 30 12:41:54.4±0.7**, 31°.65S**±0°.03×**71°.50W**±0°.04**, h47**km±6km**, n350,** $\sigma1^{s}53$/373**, mb4.8**/47**, MS4.0**/13**, 10C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CO02	Combarbal	0.62	44		Pn	12 42 07.8	+0.8
CO02				Sn	Sn	12 42 17.4	+1.4
CO02	Combarbal	0.62	44	⇑iP	Pn	12 42 08.1	+1.1
CO02				eS	Sn	12 42 17.3	+1.2
CO02	Combarbal	0.62	44	eP	Pn	12 42 08.2	+1.1
CO02				eS	Sn	12 42 18.2	+2.2
VA06	Catapilco	0.93	169		Pn	12 42 12.2	+1.2
VA06				Sn	Sn	12 42 24.4	+1.1
VA06	Catapilco	0.93	169	⇑iP	Pn	12 42 12.1	+1.0
VA06				i S	Sn	12 42 24.4	+1.1
VA06				IAML		12 42 28.2	
	comp=N,28µm,0.2s						
CO06	Fray Jorge	0.97	353		Pn	12 42 13.3	+1.6
VA03	San Esteban	1.38	144	⇓iP	Pn	12 42 18.1	+0.8
VA03				eS	Sn	12 42 35.5	+1.2
VA03				IAML		12 42 38.4	
	comp=E,20µm,0.2s						
VA03	San Esteban	1.38	144	eP	Pn	12 42 18.2	+1.0
VA03				eS	Sn	12 42 37.8	+3.4
VA03				IAML		12 42 39.8	
	comp=Z,10µm,0.5s						
VA01	Torpederas	1.38	185		Pn	12 42 17.9	+0.7
VA01	Torpederas	1.38	185	⇑iP	Pn	12 42 17.9	+0.7
VA01	Torpederas	1.38	185	eP	Pn	12 42 17.9	+0.7
VA01				eS	Sn	12 42 35.4	+1.1
ROCH	El Roble	1.39	163	⇑iP	Pn	12 42 18.6	+1.0
ROCH				⇑iP	Pn	12 42 18.5	+1.0
ROCH				eS	Sn	12 42 36.6	+1.8
ROCH				eS	Sn	12 42 36.7	+1.9
ROCH				IAML		12 42 39.7	
	comp=N,22µm,0.5s						
ROC1	El Roble	1.39	163		Pn	12 42 18.7	+1.1
ROC1	El Roble	1.39	163	eP	Pn	12 42 18.6	+1.0
ROC1				eS	Sn	12 42 36.6	+1.7
GO04	Tololo Observa	1.59	23		Pn	12 42 21.9	+1.6
GO04	Tololo Observa	1.59	23	eP	Pn	12 42 21.5	+1.2
GO04				i S	Sn	12 42 41.8	+2.1
GO04	Tololo Observa	1.59	23	eP	Pn	12 42 21.7	+1.4
GO04				eS	Sn	12 42 42.4	+2.7
MT02	Curacav	1.64	169		Pn	12 42 21.3	+0.6
PEL	Peldehue	1.65	155		Pn	12 42 22.0	+1.1
PEL	Peldehue	1.65	155	eP	Pn	12 42 21.9	+1.1
PEL				eS	Sn	12 42 42.5	+1.6
PEL	Peldehue	1.65	155	eP	Pn	12 42 21.9	+1.1
PEL				eS	Sn	12 42 43.7	+2.8
CO05	La Serena	1.74	8	eP	Pn	12 42 23.5	+1.4
CO05				eS	Sn	12 42 48.1	+5.0
CO05				IAML		12 42 52.5	
	comp=E,10µm,0.5s						
MT05	Renca	1.86	160		Pn	12 42 25.0	+1.2
MT05	Renca	1.86	160	⇑iP	Pn	12 42 24.9	+1.2
MT05				eS	Sn	12 42 47.9	+1.8
MT05				IAML		12 42 51.4	
	comp=E,12µm,0.4s						
MT05	Renca	1.86	160	eP	Pn	12 42 19.7	-4.1
MT05				eP	Pn	12 42 25.1	+1.2
MT05				eS	Sn	12 42 48.0	+1.9
RTLS	Leoncito	1.89	95	eP	Pn	12 42 27.0	+2.6
RTLS				eP	Pn	12 42 27.1	+2.7
RTLS				eS	Sn	12 42 46.2	-0.9
RTLS				eS	Sn	12 42 52.2	+5.1
RTLS				IAML		12 42 52.3	
	comp=Z,9µm,0.6s						
AUSP	Uspallata	1.89	108	eP	Pn	12 42 27.1	+2.7
FCH	Farellones	1.97	149	⇓iP	Pn	12 42 26.7	+1.1
VA05	Santo Domingo	2.01	183	eP	Pn	12 42 26.3	+0.5
VA05				IAML		12 43 05.0	
	comp=E,7µm,0.5s						
MT03	Universidad Ad	2.02	156	⇑eP	Pn	12 42 27.3	+1.2
MT03				IAML		12 42 59.8	
MT03	Universidad Ad	2.02	156	eP	Pn	12 42 27.5	+1.3
MT03				eS	Sn	12 42 53.8	+3.5
CO01	Juntas del Tor	2.06	36	eP	Pn	12 42 28.8	+2.1
CO01				i S	Sn	12 42 53.9	+2.6
CO01	Juntas del Tor	2.06	36	eP	Pn	12 42 28.8	+2.1
CO01				eS	Sn	12 42 54.2	+2.9
CO01				IAML		12 42 54.9	
	comp=Z,15µm,0.3s						
MT09	Talagante	2.17	169	⇑iP	Pn	12 42 29.4	+1.2
MT09				i S	Sn	12 42 55.6	+1.8
MT09				IAML		12 43 02.7	
	comp=N,5µm,0.3s						
MT01	Popeta	2.22	175		Pn	12 42 29.6	+0.8
ZON	Zonda	2.41	88	eP	Pn	12 42 34.7	+3.3
ZON				eS	Sn	12 43 03.1	+3.3
ZON				IAML		12 43 05.0	
	comp=Z,4µm,0.6s						
LMEL	Las Melosas	2.45	154		Pn	12 42 34.0	+1.9
LMEL	Las Melosas	2.45	154	⇑eP	Pn	12 42 33.6	+1.6
LMEL				eS	Sn	12 43 04.0	+3.0
LMEL				IAML		12 43 09.8	
	comp=N,4µm,0.1s						
BO04	La Punta	2.46	162		Pn	12 42 33.5	+1.4
BO04	La Punta	2.46	162	⇑iP	Pn	12 42 33.2	+1.2
BO04				eS	Sn	12 43 02.5	+1.7
BO04				IAML		12 43 13.2	
	comp=E,2µm,0.4s						
RTCV	Cerro Valdivia	2.53	96	eP	Pn	12 42 36.4	+3.4
RTCV				eS	Sn	12 43 09.1	+6.4
RTLL	Cerro Villicun	2.61	84	eP	Pn	12 42 36.7	+2.6
RTLL				eS	Sn	12 43 08.9	+4.3
LCO	Las Campanas	2.72	15	Pn	Pn	12 42 37.2	+1.4
LCO	Las Campanas	2.72	15	i P	Pn	12 42 37.1	+1.4
LCO				i S	Sn	12 43 10.1	+2.6
LCO	Las Campanas	2.72	15	eP	Pn	12 42 37.3	+1.5
LCO				eS	Sn	12 43 10.0	+2.5
BO01	Tunca	2.76	173		Pn	12 42 36.9	+0.7
BO03	Pichilemu	2.87	188	i P	Pn	12 42 37.3	-0.3
GO05	Huala	3.37	186	Pn	Pn	12 42 44.4	-0.2
GO05	Huala	3.37	186	i P	Pn	12 42 44.3	-0.2
GO05				IAML		12 43 52.6	
	comp=E,874nm,0.6s						
GO05	Huala	3.37	186	eP	Pn	12 42 44.4	-0.2
GO05				eS	Sn	12 43 29.7	+6.3
AC04	Llanos de Chal	3.45	6	Pn	Pn	12 42 46.4	+0.7
AC04	Llanos de Chal	3.45	6	eP	Pn	12 42 46.2	+0.6
AC04	Llanos de Chal	3.45	6	eP	Pn	12 42 46.3	+0.7
AC04				eS	Sn	12 43 30.2	+5.0
AC04				IAML		12 43 54.3	
	comp=Z,1µm,0.9s						
AVFE	Valle Fertil	3.61	75	eP	Pn	12 42 50.0	+2.2
AVFE				eS	Sn	12 43 29.7	+0.5
AVFE				eS	Sn	12 43 31.1	+1.8
AVFE				IAML		12 43 40.8	
	comp=Z,3µm,0.5s						
RFA	San Rafael	4.02	142	eP	Pn	12 42 55.3	+1.8
ML02	Panimavida	4.11	179	Pn	Pn	12 42 54.9	+0.3
ML02	Panimavida	4.11	179	eP	Pn	12 42 55.1	+0.5
ACHE	Chepes	4.17	85	eP	Pn	12 42 57.4	+1.9
GO03	Copiap	4.19	16	eP	Pn	12 42 56.6	+0.8
GO03	Copiap	4.19	16	eP	Pn	12 42 56.9	+1.1
GO03				eS	Sn	12 43 46.2	+2.8
AC06	Mina Casimiro	4.39	13	eP	Pn	12 42 59.0	+0.5
APLL	PUNTA DE LOS L	4.45	75	eP	Pn	12 43 01.0	+1.6
ACLC	CERRO LA CRUZ	4.51	62	eP	Pn	12 43 02.1	+1.8
ACLC				eS	Sn	12 43 53.9	+2.4
ACLC				IAML		12 44 01.6	
	comp=Z,3µm,0.6s						
MRA	San Martin	4.97	100	eP	Pn	12 43 07.5	+0.8
MRA				eS	Sn	12 44 19.7	+17
MRA				IAML		12 44 25.4	
	comp=Z,3µm,0.7s						
AC02	Maricunga	5.22	24	eP	Pn	12 43 11.4	+1.0
AC02	Maricunga	5.22	24	eP	Pn	12 43 11.6	+1.2
AC02				IAML		12 44 42.3	
	comp=Z,675nm,1.4s						
BI05	Punta Hualpn	5.28	195	Pn	Pn	12 43 09.9	-0.8
BI05	Punta Hualpn	5.28	195	eP	Pn	12 43 09.2	-1.4
H03N1	Juan Fernandez	6.51	252	Pn	Pn	12 43 29.4	+2.1
	baz=74,slow=14						
H03N1				T	T	12 50 13.6	
	baz=81,slow=73,SNR=1129						
H03N3	Juan Fernandez	6.52	252	Pn	Pn	12 43 28.7	+1.2
	baz=74,slow=14						
H03N3				T	T	12 50 12.2	
	baz=81,slow=73,SNR=1451						
H03N2	Juan Fernandez	6.52	252	Pn	Pn	12 43 29.5	+2.0
	baz=74,slow=14						
H03N2				T	T	12 50 13.5	
	baz=81,slow=73,SNR=1380						
H03S3	Juan Fernandez	6.61	249	Pn	Pn	12 43 29.3	+0.6
H03S3				T	T	12 50 16.6	
	baz=84,SNR=32						
H03S1	Juan Fernandez	6.61	249	Pn	Pn	12 43 29.0	+0.3
H03S1				T	T	12 50 14.6	
	baz=84,SNR=28						
H03S2	Juan Fernandez	6.62	249	Pn	Pn	12 43 29.1	+0.2
H03S2				T	T	12 50 15.8	
	baz=84,SNR=44						
LR04	Corral	8.36	190		Pn	12 43 51.5	-1.5
PB15	IPOC Station P	8.60	13		Pn	12 43 56.6	+0.2
LVC	Limon Verde	9.29	15	Pn	Pn	12 44 02.9	-3.2
	comp=Z,0.6nm,0.3s,baz=169,slow=8.5,SNR=14						
LVC				Sn	Sn	12 45 47.9	-1.6
	comp=Z,2.1nm,0.3s,baz=180,slow=19,SNR=1.6						
	comp=Z,2.7nm,0.2s						
LVC	Limon Verde	9.29	15		Pn	12 44 06.0	-0.1
LVC	Limon Verde	9.29	15	eP	Pn	12 44 05.3	-0.8
TRQA	Tornquist	10.10	132		Pn	12 44 17.4	+0.5
ITQB	Itaqui	12.96	85	Pn	Pn	12 44 53.7	-2.2
PB16	IPOC Station P	13.38	8		Pn	12 45 04.2	+2.1
CPUP	Villa Florida	13.48	70	Pn	Pn	12 45 01.2	-1.9
	comp=Z,0.8nm,0.3s,baz=247,slow=12,SNR=21						
CPUP				Sn	Sn	12 47 26.0	-5.5
	comp=Z,0.9nm,0.3s,baz=268,slow=9.9,SNR=2.9						
	comp=Z,13nm,0.9s						
COYC	Coyhaique	13.91	182		Pn	12 45 07.1	-1.7
PLTB	Pedras Altas	15.24	95	Pn	Pn	12 45 23.1	-3.4
LPAZ	La Paz	15.60	12	Pn	Pn	12 45 30.7	-1.0
	comp=Z,0.7nm,0.3s,baz=186,slow=7.2,SNR=15						
	comp=Z,2.7nm,0.5s						
LPAZ	La Paz	15.60	12	P	Pn	12 45 33.0	+1.2
LPAZ	La Paz	15.60	12	eP	Pn	12 45 32.5	+0.8
ITAB	Concordia	17.43	80	P	P	12 45 55.1	+0.2
ITAB				IAmb	IAmb	12 45 57.5	
	comp=Z,91nm,1.2s						
ITAB	Concordia	17.43	80	eP	Pn	12 45 53.6	-0.6
CNLB	Canela	17.95	88	eP	Pn	12 45 58.9	-1.7
SIV	San Ignacio	18.25	34	P	P	12 46 03.6	-0.5
	comp=Z,0.1nm,0.3s,baz=205,slow=10.0,SNR=19						
SIV				LR	LR	12 54 03.9	
	comp=Z,192nm,18.4s,baz=234,slow=40						
	comp=Z,7.5nm,0.7s						
PTGB	Pitanga	18.46	73	eP	Pn	12 46 06.8	-0.1
TER01	Tubaro-SC	19.60	87	eP	P	12 46 18.5	-0.3
GO09	Cerro Castillo	19.62	182	P	Pn	12 46 20.6	+0.1
PTLB	Pontes e Lacer	19.68	38	eP	P	12 46 19.3	-0.4
MG05	Puerto Natales	20.03	182	P	Pn	12 46 24.9	-0.4
MG05				IAmb	IAmb	12 46 29.2	
	comp=Z,35nm,0.8s						
NNA	Nana	20.18	345	LR	LR	12 53 03.6	
	comp=Z,43nm,19.8s,baz=162,slow=34						
PCMB	Pacaembu	20.64	66	eP	P	12 46 29.2	-0.9
FRTB	Fartura	21.12	72	eP	P	12 46 34.5	-0.8
SALV	Santo Antonio	21.29	46	eP	P	12 46 36.5	-0.5
VILB	Vilhena	21.31	32	eP	P	12 46 36.7	-0.7
GO10	Punta Arenas	21.50	179	P	P	12 46 41.6	+2.5
GO10				IAmb	IAmb	12 46 42.2	
	comp=Z,58nm,0.9s						
MG03	Isla Dawson	22.20	178	P	P	12 46 47.2	+0.6
MG03				IAmb	IAmb	12 46 55.0	
	comp=Z,62nm,1.4s						
ETMB	Extrema	22.27	14	eP	P	12 46 48.0	+0.4
EFI	East Falkland	22.32	158	P	P	12 46 48.3	+0.4
EFI				IAmb	IAmb	12 46 54.7	
	comp=Z,91nm,1.5s						
ITRB	Iturama	22.42	63	eP	P	12 46 47.5	-1.8
DSPA	Despedida	22.42	175	P	P	12 46 49.7	+0.8
PET01	Itanhaem-SP	22.59	77	eP	P	12 46 50.4	-0.6
BB19B	Bebedouro	23.08	68	eP	P	12 46 55.0	-1.1
USHA	Ushuaia	23.28	176	P	P	12 46 58.7	+1.0
	comp=Z,16nm,0.7s,baz=314,slow=11,SNR=12						
	comp=Z,16nm,0.7s						
VAO	Valinhos	23.40	74	eP	P	12 46 57.8	-1.5
CZSB	Cruzeiro do Su	23.82	357	eP	P	12 47 02.4	-0.8
SAML	Samuel	23.87	21	P	P	12 47 02.5	-1.1
PDRB	Porto dos Gac	24.16	38	eP	P	12 47 05.6	-0.7
PARB	Paraibuna	24.36	77	eP	P	12 47 07.4	-0.8
IPMB	Ipameri, GO	25.07	63	eP	P	12 47 13.3	-1.3
CLDB	Colider	25.27	39	eP	P	12 47 16.1	-0.3
BDFB	Brasilia	26.68	59	P	P	12 47 28.1	-1.3
	comp=Z,14nm,0.9s,baz=234,slow=7.7,SNR=14						
BDFB				LR	LR	12 59 09.2	
	comp=Z,423nm,20.4s,baz=254,slow=39						
	comp=Z,14nm,0.9s						
BDFB	Brasilia	26.68	59	P	P	12 47 28.6	-0.7
BDFB	Brasilia	26.68	59	eP	P	12 47 28.4	-0.9
SNDB	Serra Nova Dou	27.02	48	eP	P	12 47 32.6	+0.3
PEXB	Peixe	28.90	53	eP	P	12 47 46.8	-2.2
JANB	Januaria	29.81	63	eP	P	12 47 56.0	-1.1
SJMB	Sao Joao De Ma	30.20	72	eP	P	12 47 59.3	-1.2
ITTB	Itaituba	30.92	32	eP	P	12 48 05.2	-1.7
SDBA	SAO DESIDERIO	31.07	58	eP	P	12 48 08.6	+0.3
NAN01	Guarapari, ES	31.51	72	eP	P	12 48 10.2	-1.8
SMTB	Santa Maria do	31.75	50	eP	P	12 48 13.9	-0.3
GUA01	Guaratinga, BA	32.44	70	eP	P	12 48 19.0	-1.2
CMC01	Camacan, BA	33.35	68	eP	P	12 48 28.4	+0.2
GDU01	Guandu, BA	34.26	66	eP	P	12 48 35.8	-0.4
BOAV	Boa Vista	35.43	19	eP	P	12 48 46.2	+0.1
NBPN	Ponto Novo - B	35.56	61	eP	P	12 48 45.9	-1.5
MCPB	Macapa, AP	36.15	34	eP	P	12 48 52.5	+0.1
NBLA	Lagarto - SE	37.30	64	eP	P	12 49 00.8	-1.3
NBPS	Pedro II - PI	39.12	52	eP	P	12 49 16.9	-0.8
NBAN	Anadia - AL	39.28	64	eP	P	12 49 17.4	-1.5
NBPB	Pedra_Branca-C	39.59	56	eP	P	12 49 21.9	+0.5
BAUV	El Baul	40.49	5	P	P	12 49 28.7	-0.1
BAUV				IAmb	IAmb	12 49 43.3	
	comp=Z,24nm,1.2s						
MDP	Montagnes des	40.73	30	LR	LR	13 07 48.7	
	comp=Z,116nm,19.4s,baz=193,slow=38						
RCBR	Riachuelo	42.05	60	LR	LR	13 08 36.3	
	comp=Z,282nm,18.7s,baz=7.0,slow=38						
BELA	Belgrano 2	49.12	170	P	P	12 50 37.3	+0.6
BELA				IAmb	IAmb	12 50 38.6	
	comp=Z,10nm,1.0s						
VNA3	Neumayer Olymp	51.37	159	P	P	12 50 54.4	+0.5
VNA3	Neumayer Olymp	51.37	159	pP	pP	12 51 09.3	+2.3
VNA1	Neumayer--Stat	51.67	158	pP	pP	12 51 10.4	+1.3
VNA2	Neumayer--Watz	52.01	158	P	P	12 50 59.1	+0.5
	baz=280,slow=7.6						
VNA2	Neumayer--Watz	52.01	158	pP	pP	12 51 12.5	+0.7
SNAA	Sanae	53.60	159	P	P	12 51 10.8	+0.3
SNAA	Sanae	53.60	159	pP	pP	12 51 25.4	+1.8
SNAA	Sanae	53.60	159	P	P	12 51 10.3	-0.1
SNAA				IAmb	IAmb	12 51 26.2	
	comp=Z,18nm,1.0s						
TROLL	Troll, Antarti	55.31	159	P	P	12 51 22.5	-0.4
TROLL	Troll, Antarti	55.31	159	pP	pP	12 51 36.4	+0.4
QSPA	South Pole Qui	58.58	180	P	P	12 51 47.0	+0.8
833A	Chaparral WMA,	65.28	333	P	P	12 52 32.7	+1.3
833A	Chaparral WMA,	65.28	333	P	P	12 52 33.0	+1.6
	baz=154						
GOGA	Godfrey	65.69	349	P	P	12 52 33.7	-0.2
	baz=169						
LRAL	Lakeview Retre	65.98	346	P	P	12 52 35.6	-0.1
LRAL	Lakeview Retre	65.98	346	P	P	12 52 35.2	-0.5
	baz=166						
VNDA	Vanda	66.49	191	P	P	12 52 39.8	+1.2
	comp=Z,1.1nm,0.7s,baz=124,slow=6.9,SNR=7.8						
	comp=Z,1.1nm,0.7s						
VNDA	Vanda	66.49	191	P	P	12 52 39.6	+1.0
143A	Socs Landing,	66.71	342	P	P	12 52 42.0	+1.6
HPIG		66.75	327	P	P	12 52 42.5	+1.4
HPIG				IAmb	IAmb	12 52 43.0	
	comp=Z,5.5nm,0.7s						
X51A	Calhoun	67.05	348	P	P	12 52 41.6	-1.0
Y45A	Yeager Farm, C	67.34	344	P	P	12 52 45.4	+0.9
X48A	Hartselle	67.36	346	P	P	12 52 44.2	-0.3
JCT	Junction City	67.37	334	P	P	12 52 45.6	+0.8
JCT				IAmb	IAmb	12 52 46.8	
	comp=Z,14nm,0.8s						
JCT	Junction City	67.37	334	P	P	12 52 46.0	+1.2
	baz=154						
W50A	Signal Mountai	67.75	348	P	P	12 52 47.1	0.0
W50A				IAmb	IAmb	12 52 48.2	
	comp=Z,14nm,0.8s						
SWET	Sewanee	67.88	347	P	P	12 52 48.2	+0.3
SWET				IAmb	IAmb	12 52 49.0	
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	67.89	336	P	P	12 52 49.0	+1.0
	baz=156						
TX32	Lajitas Array	67.92	330	P	P	12 52 49.5	+1.2
TXAR	Lajitas Array	67.92	330	P	P	12 52 49.4	+1.1
	comp=Z,3.5nm,0.7s,baz=151,slow=8.3,SNR=51						
	comp=Z,3.5nm,0.7s						
TXAR	Lajitas Array	67.92	330	P	P	12 52 48.6	+0.3
TX31	Lajitas Ar. Si	67.92	330	P	P	12 52 49.1	+0.8
TX31				IAmb	IAmb	12 52 50.4	
	comp=Z,14nm,0.9s						
OXF	Oxford	67.93	344	P	P	12 52 48.3	+0.2
OXF	Oxford	67.93	344	P	P	12 52 48.1	-0.1
	baz=164,SNR=11						
V48A	Smith Brothers	68.56	347	P	P	12 52 52.0	0.0
V48A				IAmb	IAmb	12 52 53.3	
	comp=Z,24nm,1.1s						
TZTN	Tazewell	68.77	350	P	P	12 52 53.1	-0.3
	baz=169						
MIAR	Mount Ida	69.04	341	P	P	12 52 54.2	-0.9
MIAR				IAmb	IAmb	12 52 56.5	
	comp=Z,16nm,1.4s						
MIAR	Mount Ida	69.04	341	P	P	12 52 55.9	+0.8
	baz=160						
Z35A	Perchaven, San	69.05	337	P	P	12 52 55.7	+0.5
WVT	Waverly	69.14	346	P	P	12 52 55.0	-0.7
WVT	Waverly	69.14	346	P	P	12 52 56.1	+0.4
	baz=165						
ABTX	Abilene, Hawle	69.24	335	P	P	12 52 56.9	+0.5
ABTX				IAmb	IAmb	12 52 58.2	
	comp=Z,15nm,0.9s						
ABTX	Abilene, Hawle	69.24	335	P	P	12 52 57.4	+1.0
	baz=155						

W41B	**Gary Mavity, V**	**69.27**	**342**	P	**P**	**12 52 56.9**	**+0.4**
W41B	**Gary Mavity, V**	**69.27**	**342**	P	**P**	**12 52 57.0**	**+0.5**
	baz=161						
W39A	**Magazine**	**69.71**	**341**	P	**P**	**12 52 59.9**	**+0.7**
W39A	**Magazine**	**69.71**	**341**	P	**P**	**12 53 00.5**	**+1.3**
	baz=160,SNR=12						
LCAR	**Lake Charles**	**69.84**	**343**	P	**P**	**12 52 59.5**	**-0.5**
LCAR				IAmb	IAmb	12 53 01.0	
	comp=Z,17nm,0.7s						
PARMO	**Parma**	**70.07**	**344**	P	**P**	**12 53 01.5**	**+0.2**
PBMO	**Poplar Bluff**	**70.34**	**344**	P	**P**	**12 53 02.8**	**-0.2**
PBMO				IAmb	IAmb	12 53 04.1	
	comp=Z,16nm,0.9s						
X34A	**Smith Ranch, M**	**70.40**	**337**	P	**P**	**12 53 04.0**	**+0.5**
X34A				IAmb	IAmb	12 53 05.2	
	comp=Z,16nm,0.9s						
U40A	**Yellville**	**70.55**	**342**	P	**P**	**12 53 04.7**	**+0.4**
	baz=161,SNR=11						
MNTX	**Cornudas Mount**	**70.70**	**330**	P	**P**	**12 53 05.4**	**0.0**
MNTX				IAmb	IAmb	12 53 06.3	
	comp=Z,8.8nm,0.8s						
MNTX	**Cornudas Mount**	**70.70**	**330**	P	**P**	**12 53 05.4**	**0.0**
	baz=150						
HHAR	**Hobbs**	**70.77**	**341**	P	**P**	**12 53 05.8**	**+0.1**
HHAR				IAmb	IAmb	12 53 07.0	
	comp=Z,13nm,0.9s						
WMOK	**Wichita Mounta**	**70.84**	**336**	P	**P**	**12 53 06.6**	**+0.4**
	baz=156,SNR=5.2						
TUL1	**Leonard**	**70.96**	**339**	P	**P**	**12 53 06.9**	**+0.1**
	baz=158						
MGMO	**Mountain Grove**	**71.15**	**343**	P	**P**	**12 53 08.1**	**+0.1**
MGMO				IAmb	IAmb	12 53 09.3	
	comp=Z,9.3nm,0.9s						
FVM	**French Village**	**71.49**	**344**	P	**P**	**12 53 10.2**	**+0.2**
FVM				IAmb	IAmb	12 53 11.3	
	comp=Z,17nm,0.9s						
P52A	**Corning**	**71.60**	**351**	P	**P**	**12 53 10.7**	**0.0**
P52A				IAmb	IAmb	12 53 11.4	
	comp=Z,13nm,1.1s						
P52A	**Corning**	**71.60**	**351**	P	**P**	**12 53 10.6**	**0.0**
	baz=170						
MSTX	**Muleshoe**	**71.61**	**333**	P	**P**	**12 53 11.7**	**+0.8**
	baz=152						
CCM	**Cathedral Cave**	**71.75**	**344**	P	**P**	**12 53 11.8**	**+0.3**
CCM	**Cathedral Cave**	**71.75**	**344**	P	**P**	**12 53 12.0**	**+0.4**
	baz=162						
P49A	**Miami Univ. Ec**	**71.88**	**349**	P	**P**	**12 53 11.8**	**-0.4**
	baz=168						
AMTX	**Amarillo**	**72.01**	**334**	P	**P**	**12 53 13.7**	**+0.4**
AMTX				IAmb	IAmb	12 53 15.2	
	comp=Z,23nm,1.2s						
AMTX	**Amarillo**	**72.01**	**334**	P	**P**	**12 53 14.3**	**+1.0**
	baz=153						
R40A	**Maddies Statio**	**72.22**	**343**	P	**P**	**12 53 14.2**	**-0.2**
ACSO	**Alum Creek Sta**	**72.30**	**351**	P	**P**	**12 53 14.2**	**-0.6**
ACSO				IAmb	IAmb	12 53 16.1	
	comp=Z,19nm,1.1s						
ACSO	**Alum Creek Sta**	**72.30**	**351**	P	**P**	**12 53 15.1**	**+0.2**
	baz=170						
121A	**Cookes Peak, D**	**72.46**	**328**	P	**P**	**12 53 18.0**	**+1.8**
	baz=148						
O48B	**Farmland**	**72.65**	**349**	P	**P**	**12 53 16.5**	**-0.4**
	baz=168						
TUC	**Tucson**	**73.66**	**326**	P	**P**	**12 53 24.6**	**+1.4**
	baz=146						
HDIL	**Hopedale**	**73.70**	**346**	P	**P**	**12 53 23.0**	**0.0**
	baz=164						
P38A	**Dawn**	**73.80**	**342**	P	**P**	**12 53 23.7**	**0.0**
P38A				IAmb	IAmb	12 53 24.7	
	comp=Z,14nm,0.8s						
ANMO	**Albuquerque**	**73.95**	**331**	P	**P**	**12 53 26.6**	**+1.7**
	baz=150						
DBIC	**Dimbokro**	**74.00**	**72**	P	**P**	**12 53 25.8**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=238,slow=9.0,SNR=4.2						
DBIC				LR	LR	13 22 33.8	
	comp=Z,90nm,21.8s,baz=199,slow=33						
	comp=Z,4.2nm,0.7s						
DBIC	**Dimbokro**	**74.00**	**72**	IAmb	IAmb	12 53 40.4	
	comp=Z,31nm,1.4s						
KSU1	**Kansas State U**	**74.16**	**340**	P	**P**	**12 53 26.6**	**+0.8**
	baz=158						
214A	**Organ Pipe Nat**	**74.36**	**324**	P	**P**	**12 53 29.0**	**+1.8**
	baz=144						
N38A	**Joes South For**	**74.83**	**343**	P	**P**	**12 53 29.7**	**+0.1**
N38A				IAmb	IAmb	12 53 30.8	
	comp=Z,22nm,0.9s						
CBKS	**Cedar Bluff**	**74.86**	**337**	P	**P**	**12 53 31.3**	**+1.3**
	baz=155						
L44A	**Lake County Fo**	**75.00**	**347**	P	**P**	**12 53 30.6**	**0.0**
	baz=166						
T25A	**Trinidad**	**75.03**	**333**	P	**P**	**12 53 32.8**	**+1.6**
	baz=151,SNR=14						
MAW	**Mawson**	**75.30**	**164**	P	**P**	**12 53 32.4**	**+0.3**
	comp=Z,5.8nm,0.8s,baz=226,slow=7.7,SNR=12						
	comp=Z,5.8nm,0.8s						
MAW	**Mawson**	**75.30**	**164**	P	**P**	**12 53 32.2**	**0.0**
W18A	**Petrified Fore**	**75.51**	**328**	P	**P**	**12 53 35.1**	**+1.2**
W18A				IAmb	IAmb	12 53 37.4	
	comp=Z,14nm,1.1s						
W18A	**Petrified Fore**	**75.51**	**328**	P	**P**	**12 53 35.6**	**+1.7**
	baz=147,SNR=6.8						
N35A	**Tabor**	**75.52**	**341**	P	**P**	**12 53 33.2**	**-0.4**
SUR	**Sutherland**	**75.58**	**119**	LR	LR	13 23 26.4	
	comp=Z,42nm,19.4s,baz=208,slow=33						
X16A	**Lo Mia Camp, P**	**75.71**	**327**	P	**P**	**12 53 36.0**	**+0.9**
X16A				IAmb	IAmb	12 53 38.0	
	comp=Z,12nm,1.2s						
SDCO	**Great Sand Dun**	**75.98**	**333**	P	**P**	**12 53 38.2**	**+1.5**
	baz=151,SNR=8.9						
JFWS	**Jewell Farm**	**76.17**	**346**	P	**P**	**12 53 37.6**	**+0.3**
	baz=164						
GLA	**Glamis**	**76.25**	**324**	P	**P**	**12 53 39.8**	**+1.8**
	baz=143						
S22A	**4UR Ranch, Cre**	**76.51**	**332**	P	**P**	**12 53 41.2**	**+1.5**
	baz=150,SNR=5.5						
WUAZ	**Wupatki**	**76.58**	**327**	P	**P**	**12 53 41.8**	**+1.8**
	baz=146,SNR=5.6						
IKP	**In-Ko-Pah, Jac**	**76.59**	**322**	P	**P**	**12 53 41.8**	**+1.8**
	baz=142						
MVCO	**Mesa Verde**	**76.74**	**330**	P	**P**	**12 53 42.3**	**+1.4**
	baz=148,SNR=7.2						
BGNE	**Belgrade**	**76.74**	**340**	P	**P**	**12 53 41.5**	**+0.9**
	baz=157						
Q24A	**Divide**	**76.91**	**334**	P	**P**	**12 53 43.5**	**+1.5**
Q24A				IAmb	IAmb	12 53 44.4	
	comp=Z,13nm,0.8s						
Q24A	**Divide**	**76.91**	**334**	P	**P**	**12 53 43.8**	**+1.8**
	baz=151,SNR=9.2						
MONP2	**Monument Peak**	**76.94**	**322**	P	**P**	**12 53 44.1**	**+1.9**
	baz=142						
BC3	**Big Chuckawall**	**77.05**	**324**	P	**P**	**12 53 44.5**	**+1.9**
	baz=143						
IRM	**Iron Mountain**	**77.29**	**324**	P	**P**	**12 53 45.8**	**+1.9**
	baz=143,SNR=5.3						
TPFO	**Pinon Flats**	**77.52**	**323**	P	**P**	**12 53 47.1**	**+1.9**
	baz=142						
BELC	**Belle Mtn. Jos**	**77.60**	**323**	P	**P**	**12 53 47.5**	**+1.8**
	baz=142						
PV13	**Radium Mtn., P**	**77.67**	**331**	P	**P**	**12 53 47.4**	**+1.2**
PV13				IAmb	IAmb	12 53 48.6	
	comp=Z,13nm,1.2s						
U15A	**North Rim**	**77.75**	**327**	P	**P**	**12 53 46.4**	**-0.3**
ISCO	**Idaho Springs**	**77.81**	**334**	P	**P**	**12 53 47.5**	**+0.5**
ISCO	**Idaho Springs**	**77.81**	**334**	P	**P**	**12 53 48.3**	**+1.3**
	baz=151,SNR=6.7						
MURC	**Murrieta**	**77.90**	**322**	P	**P**	**12 53 49.3**	**+2.1**
	baz=142						
K31A	**O'Neill**	**78.03**	**340**	P	**P**	**12 53 48.7**	**+0.9**
GMRC	**Granite Mounta**	**78.05**	**324**	P	**P**	**12 53 50.1**	**+1.9**
	baz=143,SNR=6.9						
HEC	**Hector,Ludlow**	**78.42**	**324**	P	**P**	**12 53 52.7**	**+2.5**
	baz=142,SNR=6.6						
ECSD	**EROS Data Cent**	**78.45**	**342**	P	**P**	**12 53 50.0**	**-0.1**
ECSD	**EROS Data Cent**	**78.45**	**342**	P	**P**	**12 53 50.5**	**+0.4**
	baz=158						
BFSC	**Mount Baldy Ra**	**78.64**	**322**	P	**P**	**12 53 53.2**	**+1.7**
	baz=141,SNR=8.0						
TUQ	**Turquoise Moun**	**78.69**	**324**	P	**P**	**12 53 53.8**	**+2.0**
	baz=143,SNR=11						
N23A	**Red Feather La**	**78.89**	**334**	P	**P**	**12 53 54.4**	**+1.5**
	baz=151						
SPMN	**Marine on St.**	**78.92**	**345**	P	**P**	**12 53 52.6**	**0.0**
	baz=162						
GSC	**Goldstone, Bar**	**79.03**	**324**	P	**P**	**12 53 55.4**	**+1.9**
	baz=142,SNR=6.8						
O20A	**White River Ci**	**79.12**	**332**	P	**P**	**12 53 55.4**	**+1.4**
	baz=149,SNR=5.3						
EDW2	**Edwards Air Fo**	**79.31**	**323**	P	**P**	**12 53 56.6**	**+1.5**
	baz=141,SNR=7.7						
TSUM	**Tsumeb**	**79.42**	**106**	LR	LR	13 24 04.7	
	comp=Z,82nm,19.6s,baz=156,slow=32						
OSI	**Osito Audit: C**	**79.48**	**322**	P	**P**	**12 53 58.1**	**+2.1**
	baz=141						
LRMC	**Laurel Mtn Rad**	**79.61**	**323**	P	**P**	**12 53 58.6**	**+1.8**
	baz=141						
FURC	**Furnace Creek,**	**79.97**	**324**	P	**P**	**12 54 00.3**	**+1.8**
	baz=142						
TPNV	**Topopah Spring**	**80.05**	**325**	P	**P**	**12 54 01.1**	**+2.0**
	baz=142,SNR=10						
ISA	**Isabella, Lake**	**80.16**	**323**	P	**P**	**12 54 01.9**	**+2.2**
	baz=141,SNR=8.0						
PKM	**Mcpherson Peak**	**80.27**	**321**	P	**P**	**12 54 02.5**	**+2.1**
	baz=140,SNR=9.3						
CWC	**Cottonwood Cre**	**80.56**	**324**	P	**P**	**12 54 03.7**	**+1.8**
	baz=141						
VES	**Vestal, Richgr**	**80.61**	**323**	P	**P**	**12 54 04.1**	**+2.2**
	baz=140,SNR=7.0						
K22A	**Casper**	**80.63**	**335**	P	**P**	**12 54 03.8**	**+1.6**
	baz=150						
GRAC	**Grapevine Rang**	**80.64**	**324**	P	**P**	**12 54 04.3**	**+2.2**
	baz=142						
SMMC	**Simmler**	**80.69**	**322**	P	**P**	**12 54 04.7**	**+2.3**
	baz=140						
BOSA	**Boshof**	**80.77**	**118**	P	**P**	**12 54 02.6**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=220,slow=5.6,SNR=6.1						
	comp=Z,3.4nm,0.8s						
JLU	**Jordanelle**	**80.83**	**330**	P	**P**	**12 54 03.5**	**+0.1**
R11A	**Troy Canyon, C**	**80.84**	**326**	P	**P**	**12 54 05.4**	**+2.0**
	baz=143,SNR=14						
RSSD	**Black Hills**	**81.05**	**337**	P	**P**	**12 54 04.9**	**+0.5**
RSSD	**Black Hills**	**81.05**	**337**	P	**P**	**12 54 05.3**	**+1.0**
	baz=152						
DUG	**Dugway, Tooele**	**81.08**	**329**	P	**P**	**12 54 05.9**	**+1.3**
	baz=145,SNR=6.5						
EYMN	**Ely**	**81.24**	**347**	P	**P**	**12 54 04.6**	**-0.4**
	baz=163						
TPH	**Tonopah**	**81.41**	**325**	P	**P**	**12 54 07.2**	**+0.8**
MLAC	**Mammoth, Mammo**	**81.87**	**324**	P	**P**	**12 54 10.9**	**+2.0**
	baz=141						
PD31	**Pinedale Array**	**81.88**	**333**	P	**P**	**12 54 08.8**	**0.0**
PDAR	**Pinedale Array**	**81.88**	**333**	P	**P**	**12 54 09.1**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=156,slow=4.7,SNR=11						
	comp=Z,1.5nm,0.8s						
PDAR	**Pinedale Array**	**81.88**	**333**	P	**P**	**12 54 09.6**	**+0.8**
BW06	**Boulder Array**	**81.88**	**333**	P	**P**	**12 54 09.3**	**+0.5**
	baz=148						
NVAR	**Mina Array Bea**	**82.22**	**325**	P	**P**	**12 54 12.2**	**+1.4**
	comp=Z,5.2nm,0.8s,baz=156,slow=6.4,SNR=52						
	comp=Z,5.2nm,0.8s						
AGMN	**Agassiz Nation**	**82.52**	**344**	P	**P**	**12 54 11.8**	**+0.1**
	baz=159						
ELK	**Elko**	**82.60**	**328**	LR	LR	13 28 07.5	
	comp=Z,36nm,19.1s,baz=82,slow=34						
ELK	**Elko**	**82.60**	**328**	P	**P**	**12 54 13.3**	**+0.6**
ELK				IAmb	IAmb	12 54 14.6	
	comp=Z,6.4nm,0.8s						
LBTB	**Lobatse**	**82.88**	**115**	LR	LR	13 26 10.0	
	comp=Z,93nm,18.9s,baz=196,slow=32						
TOA0	**Torodi Ar. Sit**	**82.98**	**70**	P	**P**	**12 54 14.5**	**-0.4**
TOA0				IAmb	IAmb	12 54 30.1	
	comp=Z,7.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.98**	**70**	P	**P**	**12 54 14.5**	**-0.4**
	comp=Z,4.5nm,0.8s,baz=255,slow=4.6,SNR=20						
	comp=Z,4.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.98**	**70**	P	**P**	**12 54 14.1**	**-0.9**
TORD				IAmb	IAmb	12 54 30.1	
	comp=Z,5.4nm,0.7s						
MDND	**Maddock**	**83.06**	**341**	P	**P**	**12 54 14.8**	**+0.2**
	baz=156						
YERR	**Yerington**	**83.11**	**324**	P	**P**	**12 54 17.3**	**+2.0**
YERR				IAmb	IAmb	12 54 18.0	
	comp=Z,9.5nm,0.9s						
RLMT	**Red Lodge**	**83.77**	**334**	P	**P**	**12 54 19.2**	**+0.6**
	baz=148						
YHL	**Hebgen Lake**	**84.27**	**333**	P	**P**	**12 54 22.2**	**+1.0**
YHL				IAmb	IAmb	12 54 23.6	
	comp=Z,9.9nm,1.5s						
QLMT	**Earthquake Lak**	**84.34**	**333**	P	**P**	**12 54 23.1**	**+1.6**
ULM	**Lac du Bonnet**	**84.35**	**345**	P	**P**	**12 54 20.4**	**-0.7**
	comp=Z,6.7nm,0.8s,baz=159,slow=5.0,SNR=12						
	comp=Z,6.7nm,0.8s						
HLID	**Hailey**	**84.52**	**330**	P	**P**	**12 54 23.5**	**+1.1**
	baz=144						
BCYI	**Bear Canyon**	**84.71**	**331**	P	**P**	**12 54 23.9**	**+0.5**
MCMT	**McKenzie Canyo**	**84.91**	**332**	P	**P**	**12 54 24.6**	**+0.2**
DGMT	**Dagmar**	**84.95**	**339**	P	**P**	**12 54 25.3**	**+1.1**
	baz=152						
BOZ	**Bozeman (W)**	**85.06**	**333**	P	**P**	**12 54 25.7**	**+0.7**
	baz=147						
RPZ	**Rata Peaks**	**85.73**	**220**	LR	LR	13 25 32.5	
	comp=Z,147nm,18.8s,baz=34,slow=31						
EGMT	**Eagleton**	**86.41**	**335**	P	**P**	**12 54 31.7**	**+0.1**
	baz=148						
J05D	**Fort Rock, OR**	**87.37**	**326**	P	**P**	**12 54 37.9**	**+1.4**
	baz=139						
J04D	**Umpqua Nationa**	**87.76**	**326**	P	**P**	**12 54 39.7**	**+1.3**
	baz=139						
I05D	**Terrebonne, OR**	**88.22**	**327**	P	**P**	**12 54 41.8**	**+1.5**
	baz=139						
WALA	**Waterton Lakes**	**88.80**	**334**	P	**P**	**12 54 43.3**	**+0.3**
WALA				IAmb	IAmb	12 54 44.6	
	comp=Z,7.3nm,0.9s						
NEW	**Newport**	**89.42**	**331**	LR	LR	13 31 46.9	
	comp=Z,46nm,18.6s,baz=78,slow=34						
LSZ	**Lusaka**	**90.11**	**108**	LR	LR	13 30 05.4	
	comp=Z,56nm,21.4s,baz=94,slow=32						
ESDC	**Sonseca Array**	**94.62**	**46**	P	**P**	**12 55 09.5**	**-0.7**
	comp=Z,0.8nm,1.0s,baz=241,slow=1.5,SNR=4.5						
ESDC				LR	LR	13 37 16.7	
	comp=Z,30nm,18.9s,baz=198,slow=35						
	comp=Z,0.8nm,1.0s						
YKA	**Yellowknife Ar**	**99.98**	**341**	P	**Pdif**	**12 55 33.2**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=143,slow=4.9,SNR=2.3						
	comp=Z,0.6nm,0.5s						
BMRM	**Bremner River**	**109.56**	**330**	P	**PKiKP**	**13 00 21.4**	**+2.2**
	baz=120						
ASAR	**Alice Springs**	**119.86**	**207**	PKP	**PKPdf**	**13 00 38.8**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=141,slow=2.0,SNR=11						
WRA	**Warramunga Arr**	**123.03**	**209**	PKP	**PKPdf**	**13 00 45.4**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=170,slow=1.6,SNR=24						
WRA	**Warramunga Arr**	**123.03**	**209**		**PKPdf**	**13 00 45.7**	**-0.6**
H11S2	**WAKE ISLAND Hy**	**126.23**	**271**	T	T	15 19 55.0	
	baz=117,slow=74,SNR=236						
H11S1	**WAKE ISLAND Hy**	**126.24**	**271**	T	T	15 19 55.8	
	baz=117,slow=74,SNR=281						
H11S3	**WAKE ISLAND Hy**	**126.25**	**271**	T	T	15 19 57.3	
	baz=117,slow=74,SNR=223						
H11N3	**WAKE ISLAND Hy**	**126.58**	**272**	T	T	15 20 18.3	
	baz=116,slow=75,SNR=350						
H11N1	**WAKE ISLAND Hy**	**126.60**	**272**	T	T	15 20 18.3	
	baz=116,slow=75,SNR=77						
H11N2	**WAKE ISLAND Hy**	**126.60**	**272**	T	T	15 20 20.0	
	baz=116,slow=75,SNR=542						
SEY	**Seymchan**	**138.20**	**332**	PKP	**PKPdf**	**13 01 12.3**	**-1.2**
	comp=Z,4.9nm,0.9s,baz=359,slow=6.7,SNR=7.7						
TIXI	**Tiksi**	**138.46**	**350**	PKP	**PKPdf**	**13 01 13.3**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=86,slow=20,SNR=6.4						
PETK	**Petropavlovsk-**	**138.81**	**316**	PKP	**PKPdf**	**13 01 15.1**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=107,slow=1.5,SNR=4.3						
PETK	**Petropavlovsk-**	**138.81**	**316**		**PKPdf**	**13 01 15.4**	**+0.5**
KURBB	**Kurchatov Arra**	**150.82**	**41**	PKPbc	**PKPbc**	**13 01 41.1**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=298,slow=3.0,SNR=37						
ZALV	**Zalesovo Beam**	**151.99**	**30**	PKPbc	**PKPbc**	**13 01 43.7**	**-0.1**
	comp=Z,10nm,0.7s,baz=294,slow=3.1,SNR=40						
ZALV	**Zalesovo Beam**	**151.99**	**30**		**PKPbc**	**13 01 42.8**	**-1.0**
ZALV				PKPab	**pPKPdf**	**13 01 51.7**	**0.0**
KSH	**Kashi**	**152.52**	**64**	PKPbc	**PKiKP**	**13 01 46.3**	**+0.4**
KSH				sPKP		13 02 00.5	
KSH	**Kashi**	**152.52**	**64**	PKP	**PKiKP**	**13 01 46.3**	**+0.4**
KSH	**Kashi**	**152.52**	**64**	sPKP		13 02 00.5	
MKAR	**Makanchi Array**	**154.84**	**46**	PKPbc	**PKPbc**	**13 01 49.5**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=321,slow=1.7,SNR=9.1						
MKAR	**Makanchi Array**	**154.84**	**46**	PKPdf	**PKPdf**	**13 01 41.4**	**-0.3**
MKAR					**PKPbc**	**13 01 50.0**	**-0.3**
MKAR				PKPab	**PKPab**	**13 02 06.0**	**+0.3**
WMQ	**Urumqi**	**159.61**	**48**	*e*P	**PKPdf**	**13 01 47.5**	**-0.3**
KSRS	**Korea Array**	**162.99**	**295**	PKP	**PKPdf**	**13 01 51.1**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=29,slow=2.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**164.28**	**144**	PKP	**PKPdf**	**13 01 53.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=268,slow=4.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**164.28**	**144**		**PKPdf**	**13 01 52.1**	**-1.2**
CMAR				PKPab	**PKPab**	**13 02 46.9**	**-0.4**
GTA	**Gaotai**	**169.51**	**40**	*e*PKPbc	**PKPdf**	**13 01 55.5**	**-1.3**
GTA				sPKP		13 02 13.0	
GTA				PKPab	**PKPab**	**13 03 11.0**	**+0.9**
GTA				LR	LR		
	comp=N,65nm,19.3s						
GTA				LR	LR		
	comp=E,70nm,18.2s						
GTA				LR	LR		
	comp=Z,71nm,20.4s						
HHC	**Hu-ho-hao-te**	**170.49**	**346**	*e*P	**PKPdf**	**13 01 57.8**	**+0.6**
PZH	**PanZhiHua**	**172.18**	**129**	PKP	**PKPdf**	**13 01 55.5**	**-3.0**
PZH	**PanZhiHua**	**172.18**	**129**	PKP	**PKPdf**	**13 01 55.5**	**-3.0**

DJA ***30*** *12:46:17.8±0.3, 2°N±3°×12°9E±°, h221km±3km, M4.4/18, mB4.9/6, mb4.3/18, MLv4.5/18, Mw(mB)4.2/6*

NEIC ***30*** *12:46:18.1±1.5, 2°.45N±0°.09×128°.54E±0°.10, h231km±6km, mb4.5/59, Error ellipse: s-maj=14.6km s-min=12.0km az=60.0*

IDC ***30*** *12:46:18.2±1.3, 2°.43N×128°.60E, h236km±12km, mb4.0/27, mbtmp4.6/29, Error ellipse: s-maj=15.8km s-min=6.4km az=76.0*

ISC 30 12:46:19.4±0.3**, 2°.40N**±0°.04×**128°.53E**±0°.06**, h250**km**, n180, σ1^{s}16**/185**, mb4.4**/63**, 1C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.99**	**216**	Pn	**Pn**	**12 46 59.4**	**-2.5**
TNTI	**Ternate**	**1.99**	**216**	P	**Pn**	**12 46 59.2**	**-2.6**
TNTI				S	**S**	**12 47 30.5**	**-4.8**
TNTI	**Ternate**	**1.99**	**216**	P	**Pn**	**12 46 59.3**	**-2.5**
LBMI	**Labuha**	**3.19**	**199**	P	**Pn**	**12 47 11.7**	**-2.3**
SGSI	**Sangihe**	**3.26**	**293**	P	**Pn**	**12 47 11.9**	**-2.9**
SWI	**Sorong**	**4.24**	**140**	P	**Pn**	**12 47 23.4**	**-2.7**
SIJI	**Sorong**	**4.25**	**140**	P	**Pn**	**12 47 25.0**	**-1.2**
	55nm,0.4s,baz=332,slow=15,SNR=42						
KMSI	**Cibinong**	**4.89**	**248**	P	**Pn**	**12 47 32.3**	**-1.6**
SANI	**Sanana**	**5.09**	**210**	P	**Pn**	**12 47 32.8**	**-3.6**
	1.4nm6μm252nm,0.6s						
SANI	**Sanana**	**5.09**	**210**	P	**Pn**	**12 47 33.0**	**-3.4**
MSAI	**Masohi**	**5.72**	**176**	P	**Pn**	**12 47 45.1**	**+1.0**
	0.1nm22nm,0.8s						
GTOI	**Gorontalo**	**5.79**	**252**	P	**Pn**	**12 47 44.2**	**-0.7**
	0.2nm216nm15nm,0.6s						
AAI	**Ambon**	**6.05**	**183**	P	**Pn**	**12 47 47.7**	**-0.6**
	0.2nm79nm,1.0s						
BIPH	**Bislig**	**6.14**	**340**⇓	*i*P	**Pn**	**12 47 46.7**	**-2.7**
BIPH				*i* S	S	12 48 46.5	-15
FAKI	**Fak Fak**	**6.46**	**145**	Pn	**Pn**	**12 47 53.0**	**-0.4**
FAKI	**Fak Fak**	**6.46**	**145**	P	**Pn**	**12 47 52.5**	**-0.9**
	0.2nm47nm,1.2s						
FAKI	**Fak Fak**	**6.46**	**145**	P	**Pn**	**12 47 52.0**	**-1.4**
LUWI	**Luwuk**	**6.69**	**239**		**Pn**	**12 47 56.1**	**-0.2**
LUWI	**Luwuk**	**6.69**	**239**	P	**Pn**	**12 47 54.3**	**-2.0**
	1.3nm2μm98nm,0.6s						
LUWI	**Luwuk**	**6.69**	**239**	P	**Pn**	**12 47 55.6**	**-0.7**
MRSI	**Marisa**	**6.86**	**254**	P	**Pn**	**12 47 57.3**	**-1.0**
	0.2nm809nm34nm,0.5s						
APSI	**Ampana**	**7.62**	**245**	P	**Pn**	**12 48 06.3**	**-1.7**
	0.3nm873nm27nm,0.6s						
TOLI2	**Tolitoli**	**7.85**	**261**	Pn	**Pn**	**12 48 09.4**	**-1.5**
TOLI2	**Tolitoli**	**7.85**	**261**	P	**Pn**	**12 48 10.0**	**-0.9**
MPSI	**Mapaga**	**8.87**	**257**	P	**Pn**	**12 48 23.9**	**+0.1**
	4.9nm,0.7s						
TTSI	**Tana Toraja**	**10.25**	**238**	P	**Pn**	**12 48 40.8**	**-0.4**
	19nm,0.5s						
SPSI	**Sidrap Palu**	**10.80**	**234**	P	**Pn**	**12 48 47.9**	**-0.2**
	15nm,0.6s						
BKSI	**Bulukumba**	**11.37**	**228**	P	**Pn**	**12 48 56.5**	**+1.2**
	34nm,0.6s						
EDFI	**Ende, Flores**	**13.00**	**212**	P	**P**	**12 49 16.8**	**-0.6**
	6.5nm,0.8s						
BATI	**Baumata**	**13.43**	**201**	P	**Pn**	**12 49 20.9**	**+0.2**
	16nm,0.4s,baz=293,slow=7.3,SNR=3.7						
BATI	**Baumata**	**13.43**	**201**	P	**P**	**12 49 21.8**	**-0.2**
	19nm,0.8s						
LQP	**Lukban**	**13.53**	**330**⇑	*e*P	**Pn**	**12 49 22.1**	**-0.1**
WBSI	**Waikabubak, Su**	**15.03**	**217**	P	**Pn**	**12 49 40.4**	**+0.3**
	55nm,1.0s						
MTN	**Manton Dam**	**15.36**	**170**	P	**P**	**12 49 42.2**	**-1.1**
MTN	**Manton Dam**	**15.36**	**170**	P	**P**	**12 49 43.0**	**-0.3**
KDU	**Kakadu**	**15.49**	**165**	P	**P**	**12 49 44.4**	**-0.4**
MMPI	**Merauke**	**16.01**	**133**	P	**Pn**	**12 49 52.1**	**+0.3**
	13μm244nm,0.6s						
SBUM	**Sibu**	**16.29**	**271**	P	**Pn**	**12 49 55.4**	**+0.2**
KNRA	**Kununurra**	**17.96**	**179**	P	**P**	**12 50 11.6**	**-0.1**
KNRA	**Kununurra**	**17.96**	**179**	P	**P**	**12 50 12.3**	**+0.6**
COEN	**Coen**	**21.79**	**139**	P	**P**	**12 50 50.2**	**-1.5**
COEN				IAmb	IAmb	12 50 51.6	
	comp=Z,13nm,0.9s						
COEN	**Coen**	**21.79**	**139**	P	**P**	**12 50 50.7**	**-1.0**
YULB	**Yu-li**	**22.02**	**342**	P	**P**	**12 50 51.2**	**-2.5**
YULB				IAmb	IAmb	12 50 56.6	
	comp=Z,10nm,0.8s						
TPUB	**Ta-pu**	**22.14**	**340**	P	**P**	**12 50 53.0**	**-1.8**
TPUB	**Ta-pu**	**22.14**	**340**	P	**P**	**12 50 53.8**	**-1.1**
SSLB	**Suanglung**	**22.49**	**342**	P	**P**	**12 50 56.0**	**-2.0**
SSLB				IAmb	IAmb	12 51 00.0	
	comp=Z,18nm,0.6s						
YOJ	**Yonaguni jima**	**22.57**	**347**	P	**P**	**12 50 57.8**	**-0.9**
YOJ	**Yonaguni jima**	**22.57**	**347**	P	**P**	**12 50 59.6**	**+0.9**
WB0	**Warramunga Arr**	**22.77**	**166**	P	**P**	**12 50 59.8**	**-0.8**
WRAB	**Tennant Creek**	**22.92**	**166**	P	**P**	**12 51 02.0**	**+0.1**
WRAB	**Tennant Creek**	**22.92**	**166**	P	**P**	**12 51 01.6**	**-0.3**
WRA	**Warramunga Arr**	**22.92**	**166**	P	**P**	**12 51 01.3**	**-0.7**
	comp=Z,11nm,0.4s,baz=345,slow=10.0,SNR=182						
WRA				S	**S**	**12 54 56.5**	**+3.4**
	comp=Z,2.6nm,1.0s,baz=335,slow=19,SNR=7.0						
WRA				ScP	**ScP**	**12 57 59.3**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=340,slow=2.9,SNR=7.7						
	comp=Z,11nm,0.4s						
WRA	**Warramunga Arr**	**22.92**	**166**	P	**P**	**12 51 00.2**	**-1.8**
WB2	**Warramunga Arr**	**22.93**	**166**	P	**P**	**12 51 01.6**	**-0.4**
WB2				IAmb	IAmb	12 51 03.7	
	comp=Z,21nm,0.7s						
WR0	**Warramunga Arr**	**22.99**	**165**	P	**P**	**12 51 02.1**	**-0.4**
WR0				IAmb	IAmb	12 51 04.3	
	comp=Z,15nm,0.9s						
YHNB	**Yeheng**	**23.19**	**343**	P	**P**	**12 51 03.7**	**-0.7**
YHNB	**Yeheng**	**23.19**	**343**	P	**P**	**12 51 05.0**	**+0.5**
JOW	**Kunigami**	**24.30**	**359**	P	**P**	**12 51 13.7**	**-0.7**
	comp=Z,22nm,0.6s,baz=160,slow=16,SNR=11						
	comp=Z,22nm,0.6s						
JOW	**Kunigami**	**24.30**	**359**	P	**P**	**12 51 13.8**	**-0.5**
JOW	**Kunigami**	**24.30**	**359**	P	**P**	**12 51 15.2**	**+0.8**
PMBI	**Palembang**	**24.33**	**258**	P	**P**	**12 51 14.1**	**-0.7**
	comp=Z,551nm,0.4s						
KRVT	**Keravat (AS076**	**24.41**	**106**	P	**P**	**12 51 13.8**	**-1.8**
	comp=Z,19nm,0.8s,baz=212,slow=9.5,SNR=3.9						
	comp=Z,19nm,0.8s						
MBWA	**Marble Bar**	**24.95**	**200**	P	**P**	**12 51 19.8**	**-0.5**
QIS	**Mount Isa**	**25.27**	**155**	P	**P**	**12 51 22.9**	**-0.3**
PSA00	**Pilbara Seismi**	**25.29**	**199**	P	**P**	**12 51 23.0**	**-0.4**
MTSU	**Mount Surprise**	**25.66**	**143**	P	**P**	**12 51 26.5**	**-0.2**
ASAR	**Alice Springs**	**26.43**	**169**	P	**P**	**12 51 33.3**	**-0.3**
	comp=Z,6.0nm,0.6s,baz=355,slow=7.3,SNR=200						
ASAR				PcP	**PcP**	**12 54 52.8**	**+0.6**
	comp=Z,2.7nm,0.4s,baz=350,slow=2.0,SNR=17						
ASAR				S	**S**	**12 55 47.4**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=352,slow=22,SNR=6.8						
ASAR				ScP	**ScP**	**12 58 09.3**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=349,slow=2.0,SNR=15						
	comp=Z,6.0nm,0.6s						
WRKA	**Warakurna**	**27.27**	**180**	P	**P**	**12 51 40.9**	**-0.2**
CTA	**Charters Tower**	**28.32**	**143**	P	**P**	**12 51 49.6**	**-0.8**
	comp=Z,4.4nm,1.0s,baz=328,slow=10.0,SNR=6.6						
	comp=Z,4.4nm,1.0s						
CTAO	**Charters Tower**	**28.32**	**143**	P	**P**	**12 51 49.9**	**-0.5**
CTAO				IAmb	IAmb	12 51 55.8	
	comp=Z,7.9nm,0.9s						
GIRL	**Giralia**	**28.53**	**209**	P	**P**	**12 51 53.2**	**+1.0**
OOD	**Oodnadatta**	**30.80**	**168**	P	**P**	**12 52 11.8**	**-0.3**
INKA	**Innaminka**	**32.19**	**159**	P	**P**	**12 52 24.2**	**-0.1**
QLP	**Quilpie**	**32.56**	**153**	P	**P**	**12 52 28.1**	**+0.6**
NAWB	**Namwon**	**32.88**	**358**	P	**P**	**12 52 29.6**	**-0.5**
NAWB				IAmb	IAmb	12 52 31.0	
	comp=Z,13nm,0.7s						
MULG	**Mulgathing**	**32.92**	**171**	P	**P**	**12 52 31.1**	**+0.5**
FORT	**Forrest**	**32.99**	**181**	P	**P**	**12 52 30.8**	**-0.4**
FORT	**Forrest**	**32.99**	**181**	P	**P**	**12 52 31.1**	**-0.1**
ENH	**Enshi**	**33.08**	**329**	P	**P**	**12 52 32.4**	**+0.4**
ENH				IAmb	IAmb	12 52 33.7	
	comp=Z,13nm,0.7s						
CM31	**Chiang Mai Arr**	**33.09**	**301**	P	**P**	**12 52 33.2**	**+0.9**
CM31				IAmb	IAmb	12 52 35.1	
	comp=Z,5.8nm,0.7s						

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CMAR  Chiang Mai Arr    33.09 301  P      P        12 52 34.2 +2.0
      comp=Z,4.2nm,0.8s,baz=116,slow=7.1,SNR=4.0
CMAR                               ScP    ScP      12 58 30.8 +0.9
      comp=Z,0.3nm,0.4s,baz=169,slow=2.3,SNR=4.5
      comp=Z,4.2nm,0.8s
CMAR  Chiang Mai Arr    33.09 301  P      P        12 52 33.9 +1.6
CHTO  Chiang Mai        33.24 301  P      P        12 52 34.3 +0.7
CHTO                               IAmb   IAmb     12 52 36.1
      comp=Z,8.1nm,0.8s
RK1H  Rockhampton Ha    33.39 141  P      P        12 52 35.0 +0.3
MORW  Morawa            33.50 200  P      P        12 52 34.9 -0.8
MORW                               IAmb   IAmb     12 52 35.1
      comp=Z,10nm,1.2s
MORW  Morawa            33.50 200  P      P        12 52 36.1 +0.5
LCRK  Leigh Creek       33.95 165  P      P        12 52 39.7 +0.3
JGF   Kuroka            34.04  13  P      P        12 52 40.5 +0.3
JGF                                IAmb   IAmb     12 52 41.1
      comp=Z,10nm,1.0s
BLDU  Ballidu           34.71 198  P      P        12 52 45.7 -0.3
KSRS  Korea Array       34.89 359  P      P        12 52 47.4  0.0
      comp=Z,7.3nm,0.6s,baz=176,slow=9.8,SNR=37
      comp=Z,7.3nm,0.6s
KS19  Wonju Array Si    34.94 359  P      P        12 52 47.3 -0.5
KS19                               IAmb   IAmb     12 52 48.2
      comp=Z,14nm,1.0s
MJAR  Matsushiro Arr    35.13  14  P      P        12 52 47.9 -1.7
      comp=Z,7.2nm,0.8s,baz=177,slow=10,SNR=19
      comp=Z,7.2nm,0.8s
PZH   PanZhiHua         35.14 315  P      P        12 52 51.0 +1.1
PZH                                pmax   pmax
      comp=Z,10.0nm,0.6s
PZH                                pmax   pmax
      comp=Z,120nm,5.4s
EIDS  Eidsvold          35.21 143  P      P        12 52 48.9 -1.4
EIDS                               IAmb   IAmb     12 52 51.2
      comp=Z,12nm,1.4s
BBOO  Buckleboo         35.73 169  P      P        12 52 54.5 -0.1
BBOO  Buckleboo         35.73 169  P      P        12 52 54.8 +0.1
STKA  Stephens Creek    36.27 161  P      P        12 52 59.0 -0.2
      comp=Z,8.6nm,0.3s,baz=339,slow=8.5,SNR=65
STKA                               PcP    PcP      12 55 18.6 +0.1
      comp=Z,1.9nm,0.4s,baz=339,slow=4.5,SNR=4.3
      comp=Z,8.6nm,0.3s
STKA  Stephens Creek    36.27 161  P      P        12 52 59.0 -0.2
STKA  Stephens Creek    36.27 161  P      P        12 52 59.0 -0.2
XAN   Xi'an             36.42 332  P      P        12 53 00.5  0.0
XAN                                pmax   pmax
      comp=Z,12nm,0.7s
NAPP  Napperby          36.54 166  P      P        12 53 01.7 +0.3
JSD   Sado              36.58  13  P      P        12 52 59.9 -1.8
JSD                                IAmb   IAmb     12 53 00.7
      comp=Z,6.5nm,0.6s
NWAO  Narrogin (SRO)    36.72 196  P      P        12 53 02.7 -0.3
NWAO                               IAmb   IAmb     12 53 03.4
      comp=Z,7.9nm,0.8s
HTT   Hallett           36.96 165  P      P        12 53 06.1 +1.0
JMM   Marumori          37.05  16  P      P        12 53 04.2 -1.5
JMM                                IAmb   IAmb     12 53 07.5
      comp=Z,14nm,0.6s
HNS   HongShan          37.08 342 ⇓P      P        12 53 06.3 +0.4
HNS                                pmax   pmax
      comp=Z,18nm,0.7s
CMSA  Cobar Meteorol    37.49 156  P      P        12 53 09.2 -0.2
TWOA  Tennyson Woods    38.41 167  P      P        12 53 17.8 +0.7
BJT   Baijiatuau        39.09 345  P      P        12 53 22.7 +0.1
BJT                                IAmb   IAmb     12 53 23.5
      comp=Z,14nm,0.9s
BJI   Beijing           39.11 345  P      P        12 53 22.8  0.0
BJI                                pmax   pmax
      comp=Z,17nm,0.8s
ARMA  Armidale          39.38 148  P      P        12 53 24.9 -0.5
ARMA  Armidale          39.38 148  P      P        12 53 25.6 +0.3
LZH   Lanzhou           40.56 329 eP      P        12 53 37.0 +2.0
LZH                                pP     pP       12 54 21.8 -4.6
LZH                                pmax   pmax
      comp=Z,38nm,1.5s
H11S3 WAKE ISLAND Hy    40.66  64  T      T        13 37 26.1
      baz=253,slow=74
H11S2 WAKE ISLAND Hy    40.67  64  T      T        13 37 25.6
      baz=253,slow=74
H11S1 WAKE ISLAND Hy    40.67  64  T      T        13 37 27.5
      baz=253
ARPS  Mount Arapiles    40.89 164  P      P        12 53 38.3 +0.9
HHC   Hu-ho-hao-te      41.23 340 eP      P        12 53 41.5 +1.2
HHC                                pmax   pmax
      comp=Z,19nm,1.0s
HHC                                pmax   pmax
      comp=Z,150nm,6.0s
USRK  Ussuriysk Ar.     41.74   4  P      P        12 53 44.2  0.0
      comp=Z,4.5nm,0.5s,baz=183,slow=8.0,SNR=10
      comp=Z,4.5nm,0.5s
USRK  Ussuriysk Ar.     41.74   4  P      P        12 53 44.0 -0.2
TOO   Toolangi          42.77 160  P      P        12 53 53.5 +0.9
XLT   XiLinHaoTe        42.78 347 eP      P        12 53 52.8 +0.1
XLT                                pP     pP       12 54 38.0 -6.3
XLT                                pmax   pmax
      comp=Z,17nm,0.9s
XLT                                pmax   pmax
      comp=Z,83nm,7.2s
ASAJ  Asahikawa         43.38  15  P      P        12 53 57.6 +0.3
      comp=Z,3.7nm,0.5s,baz=242,slow=12,SNR=12
      comp=Z,3.7nm,0.5s
GTA   Gaotai            45.16 328 eP      P        12 54 12.3 +0.6
GTA                                pP     pwP      12 55 13.3 +6.8
GTA                                pmax   pmax
      comp=Z,8.0nm,0.7s
GTA                                pmax   pmax
      comp=Z,40nm,6.5s
GTA                                LR     LR
      comp=N,83nm,17.5s
GTA                                LR     LR
      comp=E,97nm,17.1s
GTA                                LR     LR
      comp=Z,99nm,18.2s
TAPN  Taplejung         46.25 306 eP      P        12 54 21.5 +0.9
KLR   Kul'dur           46.74   3  P      P        12 54 23.1 -0.5
      comp=Z,2.3nm,0.7s,baz=230,slow=7.2,SNR=6.6
      comp=Z,2.3nm,0.7s
RAMN  Ramite            46.98 305 eP      P        12 54 27.4 +1.2
      comp=Z,25nm,0.4s
JIRN  Jiri              47.60 306 eP      P        12 54 32.0 +0.9
GUN   Gumba             47.95 306 eP      P        12 54 34.5 +0.7
      comp=Z,27nm,0.7s
SONM  Songino Array     49.14 340  P      P        12 54 42.5 +0.3
      comp=Z,3.7nm,0.8s,baz=150,slow=8.3,SNR=16
      comp=Z,3.7nm,0.8s
SONM  Songino Array     49.14 340  P      P        12 54 42.5 +0.3
DANN  Dangsing          49.84 306 eP      P        12 54 48.7 +0.6
PYUN  Piuthan           50.38 305 eP      P        12 54 54.0 +2.1
      comp=Z,12nm,0.4s
MSVF  Nonsavu           52.73 114  P      P        12 55 10.3 +1.0
      comp=Z,5.2nm,0.6s,baz=301,slow=23,SNR=7.5
      comp=Z,5.2nm,0.6s
MSVF  Nonsavu           52.73 114  P      P        12 55 10.6 +1.3
MSVF                               IAmb   IAmb     12 55 18.5
      comp=Z,24nm,1.3s
WMQ   Urumqi            54.84 325 eP      P        12 55 26.0 +1.9
PETK  Petropavlovsk-    56.01  21  P      P        12 55 32.6 +0.5
      comp=Z,4.1nm,0.6s,baz=180,slow=4.0,SNR=5.2
      comp=Z,4.1nm,0.6s
PETK  Petropavlovsk-    56.01  21  P      P        12 55 31.7 -0.4
YAK   Yakutsk           59.50   1  P      P        12 55 56.1  0.0
YAK   Yakutsk           59.50   1  P      P        12 55 55.4 -0.7
MA2   Magadan           59.57  13  P      P        12 55 56.7  0.0
      comp=Z,4.4nm,0.7s,baz=168,slow=4.0,SNR=5.6
      comp=Z,4.4nm,0.7s
MA2   Magadan           59.57  13  P      P        12 55 57.3 +0.5
MA2                                IAmb   IAmb     12 55 57.9
      comp=Z,4.3nm,0.7s
MK31  Makanchi Array    59.67 325  P      P        12 55 58.1 +0.4
MK31                               IAmb   IAmb     12 55 58.8
      comp=Z,4.3nm,0.7s
MKAR  Makanchi Array    59.67 325  P      P        12 55 58.1 +0.4
      comp=Z,5.1nm,0.4s,baz=116,slow=8.3,SNR=66
      comp=Z,5.1nm,0.4s
MKAR  Makanchi Array    59.67 325  P      P        12 55 58.3 +0.6
MAKZ  Makanchi          59.86 325  P      P        12 55 58.9 -0.1
MAKZ                               IAmb   IAmb     12 56 00.0
      comp=Z,7.5nm,0.7s
KSH   Kashi             60.25 315  P      P        12 56 04.5 +2.6
KSH                                pmax   pmax
      comp=Z,4.0nm,1.0s
BKZ   Black Stump Fm    60.40 138  P      P        12 56 03.2 +0.4
BKZ                                IAmb   IAmb     12 56 06.0
      comp=Z,28nm,1.3s
KDJ   Kajisay           60.53 318  P      P        12 56 04.0 +0.2
ZAA0  Zalesovo Array    62.59 333  P      P        12 56 15.8 -1.2
ZALV  Zalesovo Beam     62.59 333  P      P        12 56 16.1 -0.9
      comp=Z,1.6nm,0.3s,baz=119,slow=6.6,SNR=10.0
      comp=Z,1.6nm,0.3s
ZALV  Zalesovo Beam     62.59 333  P      P        12 56 16.4 -0.6
SEY   Seymchan          62.94  12  P      P        12 56 19.0 -0.1
      comp=Z,2.4nm,0.6s,baz=216,slow=6.0,SNR=9.0
      comp=Z,2.4nm,0.6s
KURBB Kurchatov Arra    63.82 327  P      P        12 56 25.2  0.0
      comp=Z,15nm,0.6s,baz=127,slow=6.0,SNR=97
      comp=Z,15nm,0.6s
KURK  Kurchatov         63.82 327  P      P        12 56 25.3 +0.1
KKAR  Karatay Array     65.42 317  P      P        12 56 36.0 +0.3
TIXI  Tiksi             69.15   0  P      P        12 56 58.2 -0.2
      comp=Z,3.1nm,0.5s,baz=264,slow=23,SNR=12
      comp=Z,3.1nm,0.5s
TIXI  Tiksi             69.15   0  P      P        12 56 58.0 -0.4
TIXI                               IAmb   IAmb     12 56 58.9
      comp=Z,3.0nm,0.6s
BRVK  Borovoye          69.48 327  P      P        12 57 00.8  0.0
BRVK                               IAmb   IAmb     12 57 01.7
      comp=Z,4.9nm,1.1s
NRIK  Noril'sk          72.15 346  P      P        12 57 16.6  0.0
      comp=Z,3.0nm,0.6s,baz=121,slow=5.3,SNR=6.5
      comp=Z,3.0nm,0.6s
NRIK  Noril'sk          72.15 346  P      P        12 57 15.8 -0.7
NRIK                               IAmb   IAmb     12 57 17.0
      comp=Z,3.3nm,0.6s
ABKAR Akbulak array     74.31 321  P      P        12 57 28.2 -1.3
ABKAR Akbulak array     74.31 321  P      P        12 57 29.5 -0.1
SDPT  Sand Point        77.30  34  P      P        12 57 46.7 +0.5
SDPT                               IAmb   IAmb     12 57 58.0
      comp=Z,18nm,1.0s
VNDA  Vanda             81.89 173  P      P        12 58 11.1 +0.7
      comp=Z,4.1nm,0.5s,baz=317,slow=6.7,SNR=39
      comp=Z,4.1nm,0.5s
VNDA  Vanda             81.89 173  P      P        12 58 11.2 +0.7
VNDA                               IAmb   IAmb     12 58 11.9
      comp=Z,6.2nm,0.9s
KDAK  Kodiak Island     82.06  32  P      P        12 58 12.2 +0.5
      comp=Z,1.4nm,0.4s,baz=254,slow=1.1,SNR=10
      comp=Z,1.4nm,0.4s
KDAK  Kodiak Island     82.06  32  P      P        12 58 12.4 +0.7
KDAK                               IAmb   IAmb     12 58 23.4
      comp=Z,17nm,1.2s
SBA   Scott Base        82.78 172  P      P        12 58 16.2 +1.2
IMAR  Indian Mountai    82.83  24  P      P        12 58 16.6 +1.1
MAW   Mawson            83.14 201  P      P        12 58 17.7 +0.6
      comp=Z,2.2nm,0.7s,baz=102,slow=7.8,SNR=10
      comp=Z,2.2nm,0.7s
MAW   Mawson            83.14 201  P      P        12 58 17.6 +0.6
VOI   Vohitsoka         83.22 248  P      P        12 58 18.6 -0.1
ILAR  Eielson Array     85.53  25  P      P        12 58 28.5 -0.7
      comp=Z,0.2nm,0.4s,baz=255,slow=4.7,SNR=7.2
      comp=Z,0.2nm,0.4s
BMAR  Burnt Mountain    86.60  23  P      P        12 58 35.9 +1.5
DAWY  Dawson            88.78  26  P      P        12 58 44.9 +0.2
ARCES ARCESS Array B    92.31 340  P      P        12 58 59.7 -1.3
      comp=Z,4.3nm,1.1s,baz=87,slow=6.2,SNR=6.5
      comp=Z,4.3nm,1.1s
ARCES ARCESS Array B    92.31 340  P      P        12 58 59.1 -1.9
ARCES                              IAmb   IAmb     12 59 06.3
      comp=Z,17nm,1.5s
QSPA  South Pole Qui    92.31 180  P      P        12 59 02.3 +1.2
QSPA                               IAmb   IAmb     12 59 06.4
      comp=Z,14nm,1.4s
TORD  Torodi Ar. Bea   125.03 288  PKP    PKiKP    13 04 51.2 -0.2
      comp=Z,0.4nm,0.7s,baz=57,slow=2.1,SNR=2.1
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*IDC **30** 12:50:54.1±1.1, 17°.65N×122°.49E, h0^{km}, mb3.7/8, mbtmp3.8/9, ML3.7/1, MS3.7/3, Error ellipse: s-maj=35.3km s-min=20.7km az=70.0*
*MAN **30** 12:50:58.7, 17°.92N×122°.41E, h20^{km}, mb4.5, ML3.4, MS3.2, Hypocentre not reviewed by the ISC*
MAN INTENSITY II - PEABLANCA CAGAYAN.
*NEIC **30** 12:51:01.1±1.6, 17°.86N±0°.10×122°.7E±0°.1, h49^{km}±8^{km}, mb4.4/9, Error ellipse: s-maj=18.8km s-min=13.8km az=75.0*
ISC 30 12:50:53.7±1.5**, 17°.73N**±0°.04×**122°.64E**±0°.05**, h2**^{km}±10^{km}**, n48, σ2^{s}27**/50**, mb4.0**/13**, MS3.8**/3**, 6C-5D, Luzon**

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Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                      Op     ISC       h  m  s     ISC
SGCP  Gonzaga            0.76 312 ⇓iP     Pg       12 51 09.2 +0.9
SGCP                               i S    Sg       12 51 16.5 -1.8
APYP  Conner             1.34 276 ⇑eP     Pn       12 51 17.6 -1.8
APYP                                eS    Sg       12 51 31.5 -5.2
SAMP  Sagada Mountai     1.78 249 ⇓eP     Pn       12 51 26.2 +0.6
SAMP                                eS    Sn       12 51 45.8 -3.0
SIPP  Brgy, Tapao        2.09 276 ⇓iP     Pn       12 51 30.5 +0.7
SIPP                               i S    Sg       12 52 07.7 +6.8
BALP  Baler             2.22 207 ⇑eP     Pg       12 51 35.9 -0.5
BALP                                eS    Sn       12 52 01.0 +1.2
SMPP  San Manuel, Pa     2.45 230 ⇑eP     Pb       12 51 37.3 -1.1
SMPP                                eS    Sn       12 52 05.8 +0.5
PCPH  Palayan            2.61 215 ⇑eP     Pb       12 51 42.1 +0.7
PCPH                                eS    Sb       12 52 14.4 +0.5
JCNP  Jose Panganiba     3.42 179 ⇑eP     Pb       12 51 54.6 -0.5
LQP   Lukban             3.75 197 ⇑eP     Pb       12 51 59.0 -1.9
LQP                                 eS    Sn       12 52 38.0 +0.2
GQP   Guinayangan        3.81 183 ⇓eP     Pb       12 51 59.6 -2.0
GQP                                 eS    Sb       12 52 44.9 -3.4
PVCP  Virac              4.36 160 ⇓eP     Pb       12 52 08.3 -2.9
PVCP                                eS    Sn       12 52 57.0 +4.5
YULB  Yu-li              5.77 348  Pn     Pn       12 52 22.2 +1.7
NACB  Ninganchiao        6.49 352  Pn     Pn       12 52 31.3 +1.0
YOJ   Yonaguni jima      6.71   3  Pn     Pn       12 52 35.0 +1.6
YHNB  Yeheng             7.01 351  Pn     Pn       12 52 39.4 +1.9
JOW   Kunigami          10.45  29  Pn     Pn       12 53 28.0 +3.3
      1.3nm,0.3s,baz=148,slow=16,SNR=6.9
JOW                                Sn     Sn       12 55 15.2 -7.2
      0.2nm,0.3s,baz=93,slow=22,SNR=1.6
      3.4nm,0.3s
JOW   Kunigami          10.45  29         Pn       12 53 27.3 +2.6
CMAR  Chiang Mai Arr    22.54 276  P      P        12 55 54.3 -0.9
      0.4nm,0.4s,baz=105,slow=6.7,SNR=6.0
      0.4nm,0.4s
FAKI  Fak Fak           22.60 154  P      P        12 55 56.4 +0.5
FAKI                               IAmb   IAmb     12 56 20.8
      comp=Z,25nm,1.1s
SAUI  Saumlaki          26.94 161  P      P        12 56 37.5 +0.8
KLR   Kul'dur           32.28  11  LR     LR       13 10 03.8
      comp=Z,67nm,18.2s,baz=266,slow=36
SONM  Songino Array     32.84 340  P      P        12 57 30.3 +1.3
      comp=Z,0.7nm,0.7s,baz=154,slow=7.9,SNR=2.6
      comp=Z,0.7nm,0.7s
WRA   Warramunga Arr    39.16 162  P      P        12 58 25.1 +1.9
      comp=Z,0.4nm,0.7s,baz=341,slow=9.3,SNR=2.8
      comp=Z,0.4nm,0.7s
H11S3 WAKE ISLAND Hy    41.79  82  T      T        13 43 57.2
      baz=277,slow=75,SNR=412
H11S1 WAKE ISLAND Hy    41.80  82  T      T        13 43 52.7
      baz=277,slow=75,SNR=266
H11S2 WAKE ISLAND Hy    41.81  82  T      T        13 43 54.4
      baz=277,slow=75,SNR=352
H11N1 WAKE ISLAND Hy    41.87  80  T      T        13 43 56.1
      baz=275,slow=75,SNR=573
H11N2 WAKE ISLAND Hy    41.87  80  T      T        13 43 59.8
      baz=275,slow=75,SNR=477
H11N3 WAKE ISLAND Hy    41.89  80  T      T        13 43 57.3
      baz=275,slow=75,SNR=396
ASAR  Alice Springs     42.59 165  P      P        12 58 50.3 -1.2
      comp=Z,0.6nm,0.7s,baz=359,slow=7.5,SNR=2.4
      comp=Z,0.6nm,0.7s
MK31  Makanchi Array    44.03 320  P      P        12 59 03.6 +0.7
MKAR  Makanchi Array    44.03 320  P      P        12 59 03.9 +0.9
      comp=Z,1.1nm,0.4s,baz=110,slow=8.4,SNR=9.9
      comp=Z,1.1nm,0.4s
MKAR  Makanchi Array    44.03 320  P      P        12 59 03.6 +0.7
MAKZ  Makanchi          44.23 320  P      P        12 59 03.7 -0.8
KURK  Kurchatov         47.98 324  P      P        12 59 33.3 -0.7
KURK                               IAmb   IAmb     12 59 35.2
      comp=Z,5.2nm,1.4s
KURBB Kurchatov Arra    47.99 323  P      P        12 59 34.5 +0.4
      comp=Z,1.4nm,0.6s,baz=119,slow=7.7,SNR=10.0
      comp=Z,1.4nm,0.6s
KK31  Karatay Array     50.61 312  P      P        12 59 55.0 +0.8
KK31                               IAmb   IAmb     12 59 55.5
      comp=Z,2.0nm,1.1s
KKAR  Karatay Array     50.61 312  P      P        12 59 54.6 +0.3
TIXI  Tiksi             54.04   2  P      P        13 00 19.5 +0.2
      comp=Z,0.9nm,0.4s,baz=90,slow=23,SNR=2.2
      comp=Z,0.9nm,0.4s
ARMA  Armidale          55.41 149  P      P        13 00 30.8 +1.0
ABKAR Akbulak array     59.00 317  P      P        13 00 54.7 -0.2
ABKAR Akbulak array     59.00 317  P      P        13 00 55.1 +0.2
ABKAR                              IAmb   IAmb     13 00 55.6
      comp=Z,1.2nm,0.7s
BMAR  Burnt Mountain    74.85  24  P      P        13 02 35.4 -0.2
FINES FINESS Array B    77.70 331  P      P        13 02 52.2 +0.3
      comp=Z,1.1nm,0.8s,baz=99,slow=4.6,SNR=2.2
      comp=Z,1.1nm,0.8s
FINES FINESS Array B    77.70 331  P      P        13 02 52.5 +0.7
EUNU  Eureka            81.19   5  P      P        13 03 10.3 -0.4
EUNU                               IAmb   IAmb     13 03 20.3
      comp=Z,10nm,1.4s
KMBO  Kilima Mbogo      85.94 268  LR     LR       13 40 27.2
      comp=Z,59nm,19.6s,baz=92,slow=35
GERES GERESS Array B    88.69 321  LR     LR       13 44 23.1
      comp=Z,40nm,21.7s,baz=242,slow=36
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*INET **30** 13:01:20.7±0.4, 12°.32N×88°.32W, h15^{km}, MW3.0*
*SNET **30** 13:01:22.5±1.0, 12°.46N×88°.31W, h25^{km}±9^{km}, ML3.2*
ISC 30 13:01:20.5±2.7**, 12°.33N**±0°.10×**88°.28W**±0°.07**, h25**^{km}±19^{km}**, n20, σ0^{s}48**/25**, Off coast of central America**

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Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                      Op     ISC       h  m  s     ISC
CNCH  Conchagua          1.04  25  i P    Pb       13 01 39.6 -0.3
CNCH                                eS    Sb       13 01 52.9 -0.2
CNCH                               IAML            13 01 58.6
      comp=Z,1μm,0.3s
LCND  La Caada           1.04  21  eP     Pn       13 01 39.4 -0.2
LCND                                eS    Sb       13 01 53.8 +0.5
VSM   San Miguel         1.09   0  eP     Pn       13 01 40.9 +0.4
RANC  El Ranchito        1.10 360  eP     Pn       13 01 40.6 +0.1
PACA  Pacayal            1.13 358  eP     Pn       13 01 41.2 +0.2
PACA  Pacayal            1.13 358  eP     Pn       13 01 41.1 +0.2
CRIN  San Cristobal      1.26  73  eP     Pn       13 01 43.2 +0.6
PQSS  Presa 15 de Se     1.32 348  eP     Pn       13 01 43.7 +0.3
PQSS                                eS    Sn       13 01 59.7 -0.4
UESV  Universidad de     1.39 339  eS     Sn       13 02 02.3 +0.3
TEL3  Telica 3           1.42  80  eP     Pn       13 01 45.3 +0.5
SCLA  Alcaldia de Sa     1.43 342  i P    Pn       13 01 45.7 +0.7
SCLA                                eS    Sn       13 02 03.2 +0.1
TELN  Telica             1.44  79  eP     Pn       13 01 45.8 +0.7
SJTE  Alcalda de S       1.46 331  eS     Sn       13 02 03.7 -0.1
CNGN  Cerro Negro        1.55  84  eP     Pn       13 01 47.0 +0.3
COPN  Copaltepe          1.66  95  eP     Pn       13 01 48.2 +0.2
JAYA  Jayaque - finc     1.74 319  eP     Pn       13 01 49.3 -0.1
JAYA                                eS    Sn       13 02 09.9 -1.0
APYN  Apoyeque           1.89  93  eP     Pn       13 01 51.5 +0.3
CEVE  Cerro Verde        1.98 319  IAML            13 02 19.7
      comp=Z,110nm,0.3s
NUBE  Las Nubes          2.14 317  eP     Pn       13 01 55.6 +0.7
NUBE                                eS    Sn       13 02 20.4 -0.3
BOAB  BOACO BROADBAN2.56    87  eP     Pn       13 01 59.8 -0.6
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*IDC **30** 13:12:20.5±1.3, 33°.85S×178°.81W, h0^{km}, mb3.9/4, mbtmp3.9/5, ML4.2/1, MS4.0/1, Error ellipse: s-maj=59.5km s-min=27.2km az=157.0*
*WEL **30** 13:12:25.8±1.0, 34°S±19°×17°9W±2°4, h130^{km}±58^{km}, M4.3/10, mB4.8/5, ML4.6/13, MLv4.4/10, Mw(mB)4.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=125.9*
*NEIC **30** 13:12:26.5±1.6, 34°.0S±0°.1×178°.9W±0°.2, h35^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=24.0km s-min=17.7km az=102.0*
ISC 30 13:12:27.0±0.9**, 33°.99S**±0°.09×**178°.8W**±0°.1**, h50**^{km}**, n46, σ1^{s}06**/62**, mb4.2**/10**, South of Kermadec Islands**

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Code  Station Name          Δ°  AZ°    Phase ID          Time      Res
                                      Op     ISC       h  m  s     ISC
MXZ   Matakaoa Point     4.26 212  Pn     Pn       13 13 28.5 -0.8
MXZ   Matakaoa Point     4.26 212  S      Sn       13 14 19.1 +1.3
PKGZ  Pakihiroa          4.63 212  P      Pn       13 13 32.9 -1.6
PKGZ                               S      Sn       13 14 27.6 +0.6
HAZ   Te Kaha            4.66 215  P      Pn       13 13 34.8  0.0
HAZ                                S      Sn       13 14 31.6 +4.0
PUZ   Puketiti           4.71 209  P      Pn       13 13 33.6 -1.9
PUZ                                S      Sn       13 14 28.8 -0.1
RUGZ  Raukumara Rang     4.88 215  P      Pn       13 13 37.0 -0.8
RUGZ                               S      Sn       13 14 35.5 +2.4
TWGZ  Tauwhareparae      4.92 211  P      Pn       13 13 37.4 -0.9
TWGZ                               S      Sn       13 14 35.0 +1.1
CNGZ  Carnagh Statio     5.09 207  P      Pn       13 13 41.4 +0.7
TKGZ  Te Karaka          5.19 210  P      Pn       13 13 43.3 +1.3
TKGZ                               S      Sn       13 14 41.4 +0.8
MWZ   Matawai            5.25 213  P      Pn       13 13 43.0 +0.1
MWZ                                S      Sn       13 14 42.2 +0.2
URZ   Urewera            5.38 216  Pn     Pn       13 13 44.2 -0.5
      6.6nm,0.3s,baz=120,slow=23,SNR=30
URZ                                Sn     Sn       13 14 45.4 +0.1
      4.1nm,0.3s,baz=196,slow=14,SNR=6.0
      12nm,0.3s
URZ   Urewera            5.38 216         Pn       13 13 43.9 -0.7
URZ   Urewera            5.38 216  P      Pn       13 13 44.1 -0.6
URZ                                S      Sn       13 14 46.3 +1.0
RAGZ  Rawiri             5.43 213  P      Pn       13 13 45.6 +0.2
RAGZ                               S      Sn       13 14 47.0 +0.4
RIGZ  Rimuhau            5.46 209  P      Pn       13 13 44.5 -1.2
RIGZ                               S      Sn       13 14 48.0 +0.8
TGRZ  Tauranga           5.46 225  P      Pn       13 13 46.3 +0.5
SNGZ  Shannon Statio     5.70 212  P      Pn       13 13 49.2 +0.2
SNGZ                               S      Sn       13 14 54.7 +1.6
MUGZ  Murupara           5.72 217  P      Pn       13 13 48.5 -0.8
MUGZ                               S      Sn       13 14 52.8 -0.9
RTZ   Ruatahuna          5.73 215  P      Pn       13 13 48.8 -0.7
RTZ                                S      Sn       13 14 53.9  0.0
MHGZ  Mahia Peninsul     5.79 206  P      Pn       13 13 49.6 -0.6
RAHZ  Arahi              5.92 213  P      Pn       13 13 52.3 +0.2
RAHZ                               S      Sn       13 14 59.5 +0.9
TOZ   Tahuroa Road       5.93 229  P      Pn       13 13 53.9 +1.7
NMHZ  Naumai             6.19 213  P      Pn       13 13 56.3 +0.5
NMHZ                               S      Sn       13 15 05.2 -0.1
BKZ   Black Stump Fm     6.39 215  Pn     Pn       13 13 57.3 -1.3
BFZ   Birch Farm         7.75 209  Pn     Pn       13 14 14.4 -2.7
WHZ   Wether Hill Ro    15.60 216  P      P        13 16 06.8 -0.1
WHZ                                IAmb   IAmb     13 16 07.8
      comp=Z,37nm,1.4s
CAN   Canberra          26.44 258  P      P        13 17 58.2 -1.0
CAN                                IAmb   IAmb     13 18 18.0
      comp=Z,27nm,1.4s
EIDS  Eidsvold          27.44 280  P      P        13 18 07.0 -1.2
EIDS                               IAmb   IAmb     13 18 33.8
      comp=Z,6.8nm,1.1s
PMG   Port Moresby      39.65 300  P      P        13 19 53.0 -1.2
PMG                                IAmb   IAmb     13 20 15.2
      comp=Z,21nm,1.1s
ASAR  Alice Springs     42.35 271  P      P        13 20 16.9 +0.5
      comp=Z,1.7nm,0.8s,baz=113,slow=7.4,SNR=28
      comp=Z,1.7nm,0.8s
WR0   Warramunga Arr    43.49 276  P      P        13 20 25.9 +0.4
WR0                                IAmb   IAmb     13 20 27.9
      comp=Z,8.8nm,1.4s
WB2   Warramunga Arr    43.65 276  P      P        13 20 26.9  0.0
WB2                                IAmb   IAmb     13 20 43.4
      comp=Z,8.6nm,1.4s
WRA   Warramunga Arr    43.66 276  P      P        13 20 27.3 +0.3
      comp=Z,2.1nm,0.8s,baz=117,slow=7.4,SNR=14
WRA                                LR     LR       13 39 01.2
      comp=Z,157nm,18.0s,baz=24,slow=37
      comp=Z,2.1nm,0.8s
WRA   Warramunga Arr    43.66 276  P      P        13 20 26.7 -0.3
WB0   Warramunga Arr    43.70 277  P      P        13 20 27.2 -0.1
MTN   Manton Dam        49.96 282  P      P        13 21 16.5 +0.3
KNRA  Kununurra         50.38 278  P      P        13 21 19.9 +0.5
KNRA                               IAmb   IAmb     13 21 21.6
      comp=Z,8.3nm,1.3s
USRK  Ussuriysk Ar.     89.77 327  P      P        13 25 19.6  0.0
USA0B Ussuriysk Arra    89.77 327  P      P        13 25 19.6 -0.1
NVAR  Mina Array Bea    91.33  43  P      P        13 25 28.7 +1.3
      comp=Z,0.2nm,0.5s,baz=239,slow=7.0,SNR=1.9
      comp=Z,0.2nm,0.5s
TXAR  Lajitas Array     94.90  58  P      P        13 25 44.9 +1.0
      comp=Z,0.2nm,0.9s,baz=182,slow=2.7,SNR=3.6
      comp=Z,0.2nm,0.9s
MKAR  Makanchi Array   119.50 309  PKP    PKPdf    13 31 10.5 -0.2
      comp=Z,0.2nm,0.6s,baz=135,slow=0.2,SNR=1.9
ZALV  Zalesovo Beam    120.21 317  PKP    PKPdf    13 31 11.7  0.0
      comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=1.6
KURK  Kurchatov        122.98 312         PKPdf    13 31 16.8 -0.3
KURBB Kurchatov Arra   123.01 312  PKP    PKPdf    13 31 16.8 -0.4
      comp=Z,0.3nm,0.5s,baz=103,slow=1.7,SNR=6.3
FINES FINESS Array B   148.22 337  PKPbc  PKPbc    13 32 06.9 +0.3
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Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,1.6nm,0.6s,baz=22,slow=6.2,SNR=7.9						

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*IDC **30** 13:13:52.0±1.0, 31°.13S×177°.60W, h0km, mb4.1/6, mbtmp4.2/8, ML3.6/1, MS3.7/4, Error ellipse: s-maj=29.5km s-min=20.6km az=119.0*

*NEIC **30** 13:13:55.0±1.1, 31°.08S±0°.09×177°.6W±0°.2, h10km±1km, mb4.5/14, Error ellipse: s-maj=30.5km s-min=13.4km az=78.0*

ISC 30 13:13:52.8±0.8**, 31°.29S**±0°.05×**177°.5W**±0°.1**, h10km, n57, σ1ˢ.96**/55**, mb4.5**/12**, MS3.8**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.05	350	P	Pn	13 14 24.1	-3.3
GLKZ				S	Sb	13 14 56.6	+0.8
RAO	Raoul Island	2.06	350	Pn	Pn	13 14 25.6	-2.0
	118nm,0.3s,baz=233,slow=20,SNR=3.3						
RAO				Sn	Sn	13 14 50.3	-3.0
	271nm,0.3s,baz=90,slow=20,SNR=6.5						
RIZ	Raoul Island	2.07	350	P	Pn	13 14 25.0	-2.7
MXZ	Matakaoa Point	7.14	208	P	Pn	13 15 29.6	-7.7
HAZ	Te Kaha	7.52	210	P	Pn	13 15 42.5	0.0
HAZ				S	Sn	13 17 09.2	+1.4
WCZ	Waipu Caves	8.21	233	P	Pn	13 16 01.2	+9.2
URZ	Urewera	8.23	211	Pn	Pn	13 15 52.3	0.0
	6.4nm,0.6s,baz=296,slow=23,SNR=0.7						
URZ				Sn	Sn	13 17 22.8	-2.4
	1.5nm,0.3s,baz=172,slow=21,SNR=2.8						
OUZ	Omahuta	8.40	240	P	Pn	13 16 03.0	+8.4
SNGZ	Shannon Statio	8.57	208	S	Sn	13 17 35.5	+1.7
RAHZ	Arahi	8.79	209	S	Sn	13 17 34.5	-4.6
MTHZ	Maungataniwha	8.84	210	P	Pn	13 15 59.9	-0.8
MTHZ				S	Sn	13 17 36.4	-4.0
NMHZ	Naumai	9.06	209	P	Pn	13 16 02.0	-1.7
NMHZ				S	Sn	13 17 44.3	-1.5
MCHZ	McNeill Hill	9.40	209	S	Sn	13 17 49.2	-4.8
KWHZ	Kaweka Forest	9.49	210	S	Sn	13 17 54.9	-1.6
KAHZ	Kahuranaki	9.63	207	P	Pn	13 16 08.1	-3.4
KAHZ				S	Sn	13 17 57.4	-2.3
KRHZ	Kereru	9.70	209	S	Sn	13 17 56.7	-4.8
PXZ	Pawanui	9.84	206	S	Sn	13 18 02.6	-2.2
RPZ	Rata Peaks	15.34	213	Pn	Pn	13 17 29.7	+0.4
	0.3nm,0.3s,baz=99,slow=20,SNR=1.3						
	6.7nm,0.7s						
LBZ	Lake Benmore	16.25	213	P	P	13 17 47.5	+3.2
LBZ				IAmb	IAmb	13 17 49.6	
	comp=Z,40nm,1.3s						
OUENC	Ouen Island, N	16.50	299	P	P	13 17 48.6	+1.5
DZM	Mont Dzumac	17.00	299	LR	LR	13 23 19.6	
	comp=Z,300nm,18.1s,baz=172,slow=34						
MLZ	Mavora Lakes	17.97	215	Pn	P	13 18 03.0	-0.2
MLZ				IAmb	IAmb	13 18 25.3	
	comp=Z,33nm,1.3s						
WHZ	Wether Hill Ro	18.43	214	P	Pn	13 18 08.8	+0.4
EIDS	Eidsvold	28.20	274	P	P	13 19 47.6	+1.8
EIDS				IAmb	IAmb	13 19 57.0	
	comp=Z,9.3nm,1.4s						
CTA	Charters Tower	34.35	280	P	P	13 20 39.2	-0.8
	comp=Z,3.5nm,0.5s,baz=103,slow=11,SNR=6.0						
CTA				LR	LR	13 33 47.6	
	comp=Z,162nm,18.5s,baz=154,slow=35						
	comp=Z,3.5nm,0.5s						
CTAO	Charters Tower	34.35	280	P	P	13 20 41.4	+1.4
STKA	Stephens Creek	34.68	258	P	P	13 20 42.6	-0.2
	comp=Z,1.3nm,0.7s,baz=102,slow=15,SNR=2.0						
	comp=Z,1.3nm,0.7s						
STKA	Stephens Creek	34.68	258	P	P	13 20 44.4	+1.6
BBOO	Buckleboo	39.13	255	P	P	13 21 21.7	+1.1
BBOO				IAmb	IAmb	13 21 45.1	
	comp=Z,21nm,1.5s						
ASAR	Alice Springs	43.47	268	P	P	13 21 57.3	+0.8
	comp=Z,1.5nm,0.5s,baz=107,slow=7.2,SNR=26						
ASAR				PcP	PcP	13 23 44.6	0.0
	comp=Z,0.3nm,0.5s,baz=112,slow=4.5,SNR=1.3						
ASAR				ScP	ScP	13 27 37.2	+1.1
	comp=Z,1.0nm,0.8s,baz=115,slow=4.4,SNR=8.4						
	comp=Z,1.5nm,0.5s						
WR0	Warramunga Arr	44.36	273	P	P	13 22 03.9	+0.3
WR0				IAmb	IAmb	13 22 21.5	
	comp=Z,8.2nm,1.1s						
WB2	Warramunga Arr	44.53	273	P	P	13 22 05.3	+0.3
WB2				IAmb	IAmb	13 22 11.5	
	comp=Z,6.0nm,0.7s						
WRAB	Tennant Creek	44.54	273	P	P	13 22 05.6	+0.6
WRAB				IAmb	IAmb	13 22 18.3	
	comp=Z,7.5nm,0.9s						
WRA	Warramunga Arr	44.54	273	P	P	13 22 05.7	+0.6
	comp=Z,2.3nm,0.4s,baz=113,slow=7.5,SNR=36						
WRA				PcP	PP	13 23 50.5	+1.5
	comp=Z,0.3nm,0.7s,baz=99,slow=6.3,SNR=1.1						
WRA				ScP	ScP	13 27 41.3	+0.8
	comp=Z,1.0nm,1.0s,baz=116,slow=5.3,SNR=3.9						
	comp=Z,2.3nm,0.4s						
WB0	Warramunga Arr	44.57	273	P	P	13 22 05.7	+0.4
WB0				IAmb	IAmb	13 22 19.0	
	comp=Z,6.9nm,0.8s						
KNRA	Kununurra	51.18	275	P	P	13 22 57.5	+1.0
QSPA	South Pole Qui	58.82	180	P	P	13 23 56.2	+4.9
PMSA	Palmer Station	71.28	155	LR	LR	13 52 15.8	
	comp=Z,56nm,18.1s,baz=182,slow=32						
H03S2	Juan Fernandez	79.63	123	T	T	14 55 15.2	
	baz=236						
H03S1	Juan Fernandez	79.64	123	T	T	14 55 12.9	
	baz=236						
H03S3	Juan Fernandez	79.65	123	T	T	14 55 15.4	
	baz=236						
H03N3	Juan Fernandez	79.83	123	T	T	14 55 20.5	
	baz=240						
H03N2	Juan Fernandez	79.83	123	T	T	14 55 19.4	
	baz=240						
H03N1	Juan Fernandez	79.84	123	T	T	14 55 21.4	
	baz=240						
KSRS	Korea Array	85.29	319	LR	LR	14 00 44.7	
	comp=Z,17nm,19.9s,baz=115,slow=33						
PETK	Petropavlovsk-	86.78	345	P	P	13 26 36.5	-0.3
	comp=Z,0.8nm,0.5s,baz=147,slow=6.0,SNR=2.1						
	comp=Z,0.8nm,0.5s						
NVAR	Mina Array Bea	88.62	42	P	P	13 26 46.1	-0.2
	comp=Z,0.5nm,0.8s,baz=240,slow=7.2,SNR=2.9						
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	118.66	310	PKP	PKPdf	13 32 39.7	-1.2
	comp=Z,0.1nm,0.4s,baz=132,slow=2.1,SNR=1.8						
KURBB	Kurchatov Arra	122.00	313	PKP	PKiKP	13 32 47.5	+0.2
	comp=Z,0.4nm,0.5s,baz=102,slow=1.8,SNR=4.5						
ARCES	ARCESS Array B	139.55	348	PKP	PKPdf	13 33 19.8	+0.1
	comp=Z,2.8nm,1.1s,baz=30,slow=2.2,SNR=1.8						
FINES	FINESS Array B	146.12	340	PKPbc	PKPbc	13 33 32.6	+0.1
	comp=Z,4.7nm,0.7s,baz=46,slow=5.5,SNR=9.3						
NB2	NORSAR Subarra	149.69	352	PKP	PKiKP	13 33 45.1	+1.9
	comp=Z,5.2nm,1.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.69	352	PKPbc	PKPbc	13 33 42.4	+0.2
	comp=Z,0.3nm,0.6s,baz=15,slow=4.2,SNR=2.3						
AKASG	Malin Array Be	152.25	322	PKPbc	PKPbc	13 33 48.3	-0.1
	comp=Z,0.3nm,0.3s,baz=49,slow=2.8,SNR=1.4						
BRTR	Keskin Array B	153.38	297	PKPbc	PKiKP	13 33 52.9	+1.2
	comp=Z,0.5nm,0.4s,baz=122,slow=1.9,SNR=1.6						
BRTR	Keskin Array B	153.38	297	PKPab	PKPab	13 34 03.1	-0.5
TORD	Torodi Ar. Bea	161.93	178	PKPab	PKPab	13 34 42.8	+2.2
	comp=Z,0.5nm,1.0s,baz=160,slow=4.6,SNR=1.6						

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*GUC **30** 13:26:20.4±0.7, 22°.34S×67°.68W, h201km±13km, ML3.6*

*SCB **30** 13:26:21.6±2.0, 22°.25S×67°.50W, h127km±25km, ML3.4/6, MW2.7, Error ellipse: s-maj=7.7km s-min=4.9km az=0.0*

ISC 30 13:26:19.0±1.8**, 22°.32S**±0°.05×**67°.47W**±0°.05**, h174km**±16km**, n28, σ1ˢ.30**/40**, 1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.36	257	P	Pn	13 26 50.8	+1.2
PB09	IPOC Station P	1.72	287	eP	Pn	13 26 54.5	+1.5
PB09				iS	Sn	13 27 19.8	+0.7
YJA	Yavi	1.82	86	P	Pn	13 26 55.2	+1.0
PB06	IPOC Station P	1.98	258	IAML		13 27 27.1	
	comp=N,154nm,0.1s						
PB06	IPOC Station P	1.98	258	P	Pn	13 26 56.6	+0.9
PB06				IAML		13 27 36.8	
	comp=N,125nm,0.5s						
MOCB	Mochara	2.01	58	P	Pn	13 26 57.1	+0.8
MOCB				S	Sn	13 27 22.3	-2.7
MOCB				IAML		13 27 26.0	
	comp=N,102nm,0.4s						
PB15	IPOC Station P	2.05	244	eP	Pn	13 26 57.3	+0.9
PB15				iS	Sn	13 27 26.0	+0.6
PB15	IPOC Station P	2.05	244	P	Pn	13 26 56.9	+0.4
PB01	IPOC Station P	2.26	304	eP	Pn	13 26 59.6	+0.8
PB01				iS	Sn	13 27 29.7	+0.2
PB01				IAML		13 27 31.1	
	comp=E,173nm,0.2s						
PB01	IPOC Station P	2.26	304	P	Pn	13 26 59.1	+0.3
PB01				S	Sn	13 27 27.5	-2.1
PB01				IAML		13 27 33.1	
	comp=E,189nm,0.2s						
PB07	IPOC Station P	2.32	284	eP	Pn	13 27 00.3	+0.9
PB07				iS	Sn	13 27 30.1	-0.7
PB07				IAML		13 27 31.6	
	comp=N,288nm,0.1s						
PB07	IPOC Station P	2.32	284	P	Pn	13 26 59.6	+0.1
PB07				S	Sn	13 27 28.4	-2.4
PB07				IAML		13 27 30.9	
	comp=N,232nm,0.3s						
PB02	IPOC Station P	2.46	293	eP	Pn	13 27 01.7	+0.6
PB02				iS	Sn	13 27 33.0	-0.7
PB02				IAML		13 27 34.6	
	comp=N,259nm,0.2s						
PB02	IPOC Station P	2.46	293	P	Pn	13 27 01.8	+0.7
PB04	IPOC Station P	2.48	269	IAML		13 27 35.7	
	comp=N,232nm,0.3s						
PB04	IPOC Station P	2.48	269	P	Pn	13 27 02.2	+0.9
PB04				IAML		13 27 38.5	
	comp=N,120nm,0.2s						
PB08	IPOC Station P	2.67	324	⇓iP	Pn	13 27 05.7	+1.8
PB08				iS	Sn	13 27 39.6	+0.9
PB08	IPOC Station P	2.67	324	P	Pn	13 27 05.7	+1.8
TA01	Diego Aracena	3.07	304	eP	Pn	13 27 07.9	-0.4
TA01				iS	Sn	13 27 44.6	-1.9
TA01				IAML		13 27 47.2	
	comp=N,66nm,0.3s						
PB10	IPOC Station P	3.08	247	P	Pn	13 27 08.7	+0.3
PB11	IPOC Station P	3.26	321	eP	Pn	13 27 10.9	+0.1
PB11				iS	Sn	13 27 50.0	-1.1
PB11				IAML		13 27 52.3	
	comp=E,75nm,0.3s						
PB11	IPOC Station P	3.26	321	P	Pn	13 27 10.9	+0.1
PB11				S	Sn	13 27 48.1	-3.0
PB11				IAML		13 27 52.1	
	comp=E,147nm,0.4s						
GO02	Mina Guanaco	3.44	214	eP	Pn	13 27 13.7	+0.6
GO02				iS	Sn	13 27 54.2	-1.1
PB16	IPOC Station P	4.40	334	eP	Pn	13 27 26.7	+1.0
PB16				iS	Sn	13 28 16.9	-0.8
PB16				IAML		13 28 18.1	
	comp=N,9.1nm,0.5s						
PB16	IPOC Station P	4.40	334	P	Pn	13 27 26.8	+1.1
BBOE	La Paz, Chanca	5.50	355	P	Pn	13 27 41.3	+1.3
BBOD	La Paz, Gloria	5.75	349	P	Pn	13 27 44.5	+1.2
LPAZ	La Paz	6.03	354	P	Pn	13 27 48.5	+1.5

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*IDC **30** 13:33:56.5±3.0, 14°.92S×167°.45E, h105km±25km, mb3.9/11, mbtmp4.2/12, MS3.5/2, Error ellipse: s-maj=24.2km s-min=19.4km az=84.0*

*NEIC **30** 13:33:58.5±2.2, 15°.0S±0°.1×167°.5E±0°.1, h120km±6km, mb4.6/27, Error ellipse: s-maj=20.3km s-min=15.1km az=86.0*

ISC 30 13:33:58.9±0.6**, 15°.01S**±0°.07×**167°.5E**±0°.1**, h129km, n59, σ0ˢ.89**/57**, mb4.5**/21**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	LIFOU	5.74	182	Pn	Pn	13 35 22.0	0.0
KOUNC	Koumac, New Ca	6.29	208		Pn	13 35 28.7	-0.7
MARNC	Mare, Loyalty	6.46	175	Pn	Pn	13 35 29.7	-1.9
DZM	Mont Dzumac	7.09	188	P	Pn	13 35 39.8	-0.5
	20nm,0.4s,baz=319,slow=9.3,SNR=60						
DZM				S	Sn	13 36 58.4	-1.1
	28nm,0.5s,baz=317,slow=23,SNR=11						
DZM	Mont Dzumac	7.09	188		Pn	13 35 39.5	-0.7
ONTNC	Ouen Toro	7.32	187		Pn	13 35 43.1	-0.2
OUENC	Ouen Island, N	7.39	185		Pn	13 35 43.8	-0.5
PINNC	Pines Island,	7.56	180	Pn	Pn	13 35 46.6	+0.1
EIDS	Eidsvold	18.50	234	P	P	13 38 05.7	+0.6
CTA	Charters Tower	20.84	253	P	P	13 38 31.7	+1.1
	5.7nm,0.9s,baz=76,slow=10,SNR=6.6						
CTA				LR	LR	13 46 03.7	
	comp=Z,164nm,18.8s,baz=264,slow=35						
	5.7nm,0.9s						
CTAO	Charters Tower	20.84	253	P	P	13 38 31.5	+0.9
CTAO				IAmb	IAmb	13 39 27.0	
	comp=Z,48nm,1.8s						
ARMA	Armidale	21.14	221	P	P	13 38 34.7	+0.8
ARMA				IAmb	IAmb	13 39 25.7	
	comp=Z,35nm,1.7s						
URZ	Urewera	24.68	162	P	P	13 39 08.3	+0.5
	comp=Z,11nm,0.9s,baz=283,slow=21,SNR=2.4						
	comp=Z,11nm,0.9s						
URZ	Urewera	24.68	162	P	P	13 39 08.7	+0.8
URZ				IAmb	IAmb	13 40 03.9	
	comp=Z,93nm,1.7s						
BKZ	Black Stump Fm	25.34	163	P	P	13 39 14.5	+0.6
BKZ				IAmb	IAmb	13 40 03.0	
	comp=Z,116nm,1.9s						
KHZ	Kahutara	27.81	170	P	P	13 39 36.8	+0.9
STKA	Stephens Creek	28.96	230	P	P	13 39 47.2	+0.9
	comp=Z,7.7nm,0.5s,baz=46,slow=8.7,SNR=30						
	comp=Z,7.7nm,0.5s						
STKA	Stephens Creek	28.96	230	P	P	13 39 46.9	+0.5
TOO	Toolangi	29.74	217	P	P	13 39 53.6	+0.4
TOO				IAmb	IAmb	13 40 10.2	
	comp=Z,18nm,1.4s						
WR0	Warramunga Arr	31.76	256	P	P	13 40 10.8	-0.3
WB0	Warramunga Arr	31.88	257	P	P	13 40 11.3	-0.9
WB0				IAmb	IAmb	13 40 18.7	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	31.93	256	P	P	13 40 11.3	-1.4
WB2				IAmb	IAmb	13 40 12.2	
	comp=Z,6.7nm,1.1s						
WRAB	Tennant Creek	31.93	256	P	P	13 40 11.5	-1.2
WRAB				IAmb	IAmb	13 40 12.2	
	comp=Z,8.3nm,1.1s						
WRA	Warramunga Arr	31.94	256	P	P	13 40 11.4	-1.3
	comp=Z,2.3nm,0.8s,baz=86,slow=8.8,SNR=10.0						
WRA				PcP	PcP	13 43 00.9	+0.8
	comp=Z,0.8nm,0.9s,baz=88,slow=4.4,SNR=3.2						
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	31.94	256	IAmb	IAmb	13 40 12.2	
	comp=Z,0.4nm,1.1s						
AS31	Alice Springs	32.75	250	P	P	13 40 19.1	-0.8
ASAR	Alice Springs	32.75	250	P	P	13 40 19.1	-0.8
	comp=Z,5.9nm,0.6s,baz=77,slow=9.3,SNR=138						
ASAR				PcP	PcP	13 43 01.6	-0.8
	comp=Z,0.4nm,0.6s,baz=96,slow=2.3,SNR=4.5						
ASAR				ScP	ScP	13 46 37.5	+2.9
	comp=Z,0.2nm,0.8s,baz=91,slow=4.6,SNR=1.8						
	comp=Z,5.9nm,0.6s						
ASAR	Alice Springs	32.75	250	P	P	13 40 18.6	-1.2
BBOO	Buckleboo	33.56	233	P	P	13 40 27.2	+0.5
KNRA	Kununurra	37.30	264	P	P	13 40 57.8	-1.0
KNRA				IAmb	IAmb	13 40 58.9	
	comp=Z,12nm,1.1s						
FORT	Forrest	39.32	240	P	P	13 41 15.6	0.0
FORT				IAmb	IAmb	13 41 24.1	
	comp=Z,16nm,0.9s						
NWAO	Narrogin (SRO)	48.77	239	P	P	13 42 30.6	-0.4
MORW	Morawa	49.32	244	P	P	13 42 34.4	-0.8
MORW				IAmb	IAmb	13 42 40.3	
	comp=Z,33nm,1.6s						
MJAR	Matsushiro Arr	58.24	332	P	P	13 43 38.9	-1.0
	comp=Z,0.4nm,0.5s,baz=171,slow=9.9,SNR=1.6						
	comp=Z,0.4nm,0.5s						
JHS	Saijyo	59.47	327	P	P	13 43 49.3	+0.8
TPUB	Ta-pu	59.57	309	P	P	13 43 49.3	0.0
VNDA	Vanda	62.59	181	P	P	13 44 10.0	+1.2
	comp=Z,0.5nm,0.8s,baz=26,slow=6.2,SNR=3.6						
	comp=Z,0.5nm,0.8s						
VNDA	Vanda	62.59	181	IAmb	IAmb	13 45 09.8	
	comp=Z,16nm,1.9s						
SBA	Scott Base	62.86	180	P	P	13 44 12.3	+1.7
SBA				IAmb	IAmb	13 45 46.2	
	comp=Z,12nm,1.7s						
PETK	Petropavlovsk-	68.36	354	LR	LR	14 13 20.9	
	comp=Z,18nm,18.1s,baz=246,slow=35						
QSPA	South Pole Qui	75.02	180	P	P	13 45 26.4	+0.2
SONM	Songino Array	82.83	324	P	P	13 46 09.7	+0.7
	comp=Z,0.9nm,0.6s,baz=141,slow=6.6,SNR=6.4						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	82.83	324	IAmb	IAmb	13 46 11.1	
	comp=Z,1.6nm,0.9s						
BPAW	Bear Paw Mtn.	85.04	17	P	P	13 46 18.4	-1.3
BPAW				IAmb	IAmb	13 49 13.4	
	comp=Z,9.3nm,1.2s						
BCPM	Bancas Point	85.93	24	P	P	13 46 24.2	+0.1
BELA	Belgrano 2	86.43	175	P	P	13 46 25.9	-0.6
BELA				IAmb	IAmb	13 49 34.3	
	comp=Z,19nm,2.0s						
ILAR	Eielson Array	86.73	18	P	P	13 46 27.7	-0.3
	comp=Z,0.5nm,0.8s,baz=241,slow=2.9,SNR=4.2						
	comp=Z,0.5nm,0.8s						
TROLL	Troll, Antarti	92.60	185	P	P	13 46 55.9	+0.1
SNAA	Sanae	93.28	183	P	P	13 46 58.5	-0.3
VNA3	Neumayer Olymp	93.94	181	P	P	13 47 01.2	-0.6
VNA2	Neumayer--Watz	94.21	182	P	P	13 47 02.8	-0.2
	baz=177,slow=4.4						
VNA1	Neumayer--Stat	94.51	181	P	P	13 47 03.8	-0.5
MKAR	Makanchi Array	97.54	316	P	Pdif	13 47 19.2	+0.6
	comp=Z,1.0nm,0.7s,baz=88,slow=6.6,SNR=12						
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	97.54	316	P	Pdif	13 47 18.9	+0.4
ZALV	Zalesovo Beam	97.73	324	P	P	13 47 18.6	-0.5
	comp=Z,0.9nm,0.7s,baz=124,slow=13,SNR=4.4						
	comp=Z,0.9nm,0.7s						
ARCES	ARCESS Array B	120.57	345	PKP	PKPdf	13 52 34.3	-0.5
	comp=Z,0.6nm,0.4s,baz=54,slow=2.3,SNR=9.2						
ARCES	ARCESS Array B	120.57	345		PKPdf	13 52 34.9	+0.1
FINES	FINESS Array B	126.05	338	PKP	PKPdf	13 52 45.5	0.0
	comp=Z,1.4nm,0.9s,baz=48,slow=2.1,SNR=2.7						
TORD	Torodi Ar. Bea	166.07	264	PKP	PKPdf	13 53 49.2	-0.4
	comp=Z,0.4nm,0.6s,baz=19,slow=0.4,SNR=4.0						

OMAN 30 13:39:26.3±0.2**, 17°.77N**×**59°.98E, h35km**±37km**, mb3.6**/4**, ml3.6**/6**, Error ellipse: s-maj=7.6km s-min=1.9km az=306.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQM	DQM	3.15	313	P	Pn	13 40 13.0	-0.5
DQM				S	Sn	13 40 52.2	+2.3
MHTO	MHTO	3.72	330	P	Pn	13 40 20.1	-1.2
MHTO				S	Sn	13 41 03.9	0.0
SHAO	Shalim	4.15	274	P	Pn	13 40 26.4	-0.8
	SNR=10						
SHAO				S	Sn	13 41 14.6	0.0
JLN	Jalan Bani Buh	4.39	353	P	Pn	13 40 29.4	-1.2
JLN				S	Sn	13 41 19.2	-1.2
DMTO	DMTO	4.79	270	P	Pn	13 40 36.0	-0.1
	SNR=14						
DMTO				S	Sn	13 41 29.7	-0.7
JMDO	Jabal Madar	4.90	339	P	Pn	13 40 37.6	+0.1
	SNR=12						
JMDO				S	Sn	13 41 34.7	+1.6
WBK	Wadi Bani Khal	4.91	349	P	Pn	13 40 38.6	+1.0
RBK	Rabkut	5.51	268	P	Pn	13 40 45.4	-0.6
SMDO	Samad	5.56	341	P	Pn	13 40 46.5	-0.2
	SNR=5.4						
SMDO				S	Sn	13 41 49.6	+0.1
BSY	Bisya	5.59	333	P	Pn	13 40 47.3	+0.3
BSY				S	Sn	13 41 51.7	+1.6
DOK	Doka	5.62	280	P	Pn	13 40 47.9	+0.5
DOK				S	Sn	13 41 51.7	+0.8
WHFO	Wadi Hawf	5.91	272	P	Pn	13 40 51.6	+0.1
BIDO	Bidbid	5.98	343	P	Pn	13 40 52.6	+0.2
HOQ	Hoqain	6.30	337	P	Pn	13 40 57.1	+0.3
ABTO	Aybut	6.38	267	P	Pn	13 40 58.2	+0.2
ARQ	Araqi	6.41	330	P	Pn	13 40 58.1	-0.2
ARQ				S	Sn	13 42 10.8	+0.5

IDC 30 14:32:43.4±359.0**, 57°.50N**×**30°.49E, h0km, Error ellipse: s-maj=91.6km s-min=49.3km az=153.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	3.75	99	i		14 59 30.0	
	baz=282,slow=311,SNR=2.9						
I37NO	I37NO	12.75	340	i		15 40 00.0	
	baz=149,slow=323,SNR=2.7						
I26DE	FREYUNG INFRAS	13.24	236	i		15 52 30.0	
	baz=40,slow=327,SNR=1.0						
I18DK	QAANAAQ INFRAS	36.73	339	i		18 14 00.0	
	baz=62,slow=333,SNR=1.3						

IDC 30 14:45:42.9±369.0**, 57°.61N**×**29°.71E, h0km, Error ellipse: s-maj=97.3km s-min=66.2km az=147.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	4.19	99	i		15 15 00.0	
	0.1nm,1.6s,baz=283,slow=308,SNR=6.8						
I37NO	I37NO	12.50	341	i		15 52 00.0	
	baz=151,slow=323,SNR=2.1						
I26DE	FREYUNG INFRAS	12.96	234	i		16 05 10.0	
	baz=40,slow=329,SNR=0.6						
I18DK	QAANAAQ INFRAS	36.47	339	i		18 25 40.0	
	baz=62,slow=330,SNR=1.1						

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*JMA **30** 14:50:01.7±0.4, 30°N±2°×13°9E±°, h463km, MV3.4/30, NEAR TORISHIMA IS*

*IDC **30** 14:50:01.6±0.7, 29°.81N×138°.88E, h424km±7km, mb3.1/12, mbtmp3.9/18, Error ellipse: s-maj=13.9km s-min=10.1km az=86.0*

ISC 30 14:50:01.9±0.6**, 29°.91N**±0°.07×**138°.92E**±0°.08**, h421km, n34, σ1ˢ.69**/42**, mb3.5**/16**, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	3.28	13	P	P	14 51 10.4	+1.7
	191nm,0.9s,baz=286,slow=20,SNR=5.1						
JHJ				S	S	14 52 05.9	+2.7
	233nm,0.9s,baz=135,slow=19,SNR=2.2						
CBIJ	Chichi jima	4.02	134	eS	S	14 52 13.8	-1.3
JCJ	Chichijima	4.02	134	P	P	14 51 15.6	+0.2
	42nm,0.5s,baz=289,slow=15,SNR=1.9						
JCJ				S	S	14 52 13.8	-1.4
	295nm,0.4s,baz=293,slow=24,SNR=27						
JIE	Ise	4.84	338	eP	P	14 51 27.7	+4.7
BSO1	Boso 1	5.04	20	eP	P	14 51 26.6	+2.2
BSO1				eS	S	14 52 33.8	+1.8
BSO3	Boso 3	5.06	15	eP	P	14 51 26.9	+2.0
BSO3				eS	S	14 52 34.2	+1.4
BSO4	Boso 4	5.20	13	eS	S	14 52 37.1	+1.3
JHU	Hanno	5.93	3	eP	P	14 51 35.7	+1.6
JHU				eS	S	14 52 48.6	-1.2
JYT	Yasato	6.39	9	eS	S	14 52 56.4	-2.3
JAG	Ashikaga	6.51	4	P	P	14 51 40.7	-0.1
JAG				S	S	14 52 57.7	-3.5
MJAR	Matsushiro Arr	6.64	355	P	P	14 51 41.3	-0.9
	1.0nm,0.6s,baz=173,slow=13,SNR=1.7						
JHO	Hitachi	6.82	11	eP	P	14 51 44.8	+0.7
JHO				eS	S	14 53 05.2	-2.1
JHS	Saijyo	7.05	317	P	P	14 51 49.6	+2.8
JSJ	Shimokoshiki	8.11	285	P	P	14 52 00.6	+2.4
JOW	Kunigami	9.86	254	P	P	14 52 18.1	+0.4
	18nm,0.7s,baz=108,slow=25,SNR=8.4						
KSRS	Korea Array	11.84	312	P	P	14 52 40.9	+1.7
	3.1nm,0.5s,baz=126,slow=10,SNR=17						
ASAJ	Asahikawa	14.48	11	P	P	14 53 10.1	+2.2
	3.2nm,0.7s,baz=269,slow=28,SNR=1.6						
CMAR	Chiang Mai Arr	38.03	262	P	P	14 56 41.9	-0.6
	1.0nm,0.6s,baz=56,slow=6.8,SNR=9.3						
	1.0nm,0.6s						
RAMN	Ramite	45.78	280	⇑eP	P	14 57 43.9	-0.4
JIRN	Jiri	45.93	281	eP	P	14 57 45.5	-0.1
	23nm,0.4s						
GUN	Gumba	46.13	281	eP	P	14 57 46.9	-0.2
	18nm,0.6s						
MKAR	Makanchi Array	46.48	308	P	P	14 57 48.2	-0.9
	0.4nm,0.5s,baz=92,slow=8.6,SNR=5.2						
	0.4nm,0.5s						
DANN	Dangsing	47.81	282	eP	P	14 57 59.7	-0.2
	17nm,0.5s						
PYUN	Piuthan	48.53	282	eP	P	14 58 04.9	-0.3
	27nm,0.4s						
WRA	Warramunga Arr	49.76	186	P	P	14 58 12.8	-1.3
	0.5nm,0.7s,baz=1.5,slow=8.5,SNR=9.1						
	0.5nm,0.7s						
ASAR	Alice Springs	53.49	186	P	P	14 58 40.0	-1.2
	0.3nm,0.7s,baz=23,slow=11,SNR=9.6						

```
                0.3nm,0.7s
ILAR   Eielson Array     56.66  30  P         P        14 59 02.9 -0.1
       0.6nm,0.6s,baz=258,slow=4.9,SNR=15
ILAR                                PcP       PcP      14 59 52.8 -0.7
       0.2nm,0.6s,baz=298,slow=3.9,SNR=2.1
       0.6nm,0.6s
ARCES  ARCESS Array B    69.93 340  P         P        15 00 28.3 -0.5
       3.5nm,1.0s,baz=65,slow=8.6,SNR=7.7
       3.5nm,1.0s
YKA    Yellowknife Ar    71.03  28  P         P        15 00 35.3 -0.1
       0.6nm,0.4s,baz=297,slow=5.9,SNR=5.8
       0.6nm,0.4s
FINES  FINESS Array B    74.15 333  P         P        15 00 52.8 -0.6
       0.4nm,0.3s,baz=40,slow=5.9,SNR=6.5
       0.4nm,0.3s
NOA    NORSAR Array B    79.92 337  P         P        15 01 24.0 -1.3
       0.5nm,0.6s,baz=49,slow=4.8,SNR=3.6
       0.5nm,0.6s
NVAR   Mina Array Bea    81.01  51  P         P        15 01 33.4 +1.7
       1.1nm,0.7s,baz=291,slow=5.6,SNR=10
       1.1nm,0.7s
PDAR   Pinedale Array    84.20  44  P         P        15 01 48.4 +0.5
       0.3nm,0.6s,baz=315,slow=0.8,SNR=4.0
       0.3nm,0.6s
TXAR   Lajitas Array     96.16  51  P         P        15 02 43.6 -0.2
       0.3nm,0.6s,baz=304,slow=5.1,SNR=5.0
       0.3nm,0.6s
```

IDC 30 14:53:28.6±344.0**,57°.74N**×**29°.87E,h0**^{km}**,Error ellipse: s-maj=97.7km s-min=73.8km az=130.0,Baltic States-Belarus-Northwestern Russia**

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op        ISC      h  m  s    ISC
I43RU  DUBNA INFRASON   4.12 101  i                    15 24 40.0
       baz=282,slow=316,SNR=7.3
I37NO  I37NO           12.41 341  i                    16 02 40.0
       baz=149,slow=323,SNR=1.9
I26DE  FREYUNG INFRAS13.11 234  i                    16 15 00.0
       baz=39,slow=328,SNR=0.7
I18DK  QAANAAQ INFRAS36.39 339  i                    18 33 30.0
       baz=62,slow=326,SNR=1.9
```

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*MAN **30** 15:08:00.3, 9°.49N×123°.70E, h34^{km}, mb3.8, ML2.6, MS2.1, Hypocentre not reviewed by the ISC*

ISC 30 15:08:03.1±1.1**,9°.72N**±0°.07×**123°.54E**±0°.03**,h14**^{km}±13^{km}**, n5,**σ**0^{s}.94**/10**,2C-1D,Negros**

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op        ISC      h  m  s    ISC
TBP    Tagbilaran        0.32  95  eP        Pg       15 08 08.9 -0.7
TBP                                iS        Sg       15 08 14.9 +0.9
SNPH   Sibulan           0.48 219  iP        Pg       15 08 12.4 -0.2
SNPH                               iS        Sg       15 08 19.3 +0.2
CNOP   Candoni, Negro    0.90 277⇑eP        Pg       15 08 19.9 -0.6
CNOP                               eS        Sb       15 08 33.4 +1.2
GUIM   Jordan            1.30 314⇓eP        Pn       15 08 26.6 -0.2
GUIM                               eS        Sg       15 08 45.1 +0.1
MSLP   Maasin            1.36  72⇑eP        Pn       15 08 26.9 -0.7
MSLP                               eS        Sg       15 08 48.3 +1.3
```

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*IDC **30** 15:17:24.2±1.6, 14°.49S×177°.47W, h354^{km}±22^{km}, mb3.1/7, mbtmp3.9/9, Error ellipse: s-maj=48.9km s-min=16.5km az=152.0*

*NEIC **30** 15:17:24.4±1.2, 14°.2S±0°.3×177°.4W±0°.2, h337^{km}±12^{km}, mb4.1/15, Error ellipse: s-maj=48.4km s-min=14.6km az=157.0*

ISC 30 15:17:24.1±0.8**,14°.5S**±0°.2×**177°.4W**±0°.1**,h350**^{km}**,n30,**σ**1^{s}.14**/30**,mb4.0**/16**,Fiji Islands region**

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op        ISC      h  m  s    ISC
AFI    Afiamalu          5.46  85  P         Pn       15 18 48.5 -0.4
       94nm,0.7s,baz=247,slow=7.7,SNR=23
AFI    Afiamalu          5.46  85            Pn       15 18 48.2 -0.7
MSVF   Nonsavu           5.48 233  P         Pn       15 18 50.3 +1.2
       12nm,0.6s,baz=61,slow=12,SNR=20
WR0    Warramunga Arr   46.14 256  P         P        15 25 16.6 +1.5
WB0    Warramunga Arr   46.28 256  P         P        15 25 16.6 +0.3
WRA    Warramunga Arr   46.33 256  P         P        15 25 14.4 -2.3
       0.2nm,0.4s,baz=95,slow=6.7,SNR=1.4
       0.2nm,0.4s
ASAR   Alice Springs    46.77 251  P         P        15 25 18.7 -1.3
       3.0nm,0.4s,baz=84,slow=8.2,SNR=70
       3.0nm,0.4s
MJAR   Matsushiro Arr   65.78 322  P         P        15 27 30.7 -2.1
       0.4nm,0.4s,baz=106,slow=10,SNR=2.3
       0.4nm,0.4s
MAJO   Matsushiro       65.78 322  P         P        15 27 32.3 -0.5
MJB9   Matsu-Tunnel     65.78 322  P         P        15 27 32.1 -0.7
PETK   Petropavlovsk-   70.62 344  P         P        15 28 02.5 +0.4
       1.6nm,0.8s,baz=141,slow=9.3,SNR=2.9
       1.6nm,0.8s
PGC    Sidney           78.89  33  P         P        15 28 50.0 +0.8
TTA    Tatalina         78.92  10  P         P        15 28 50.7 +1.5
TTA                                IAmb      IAmb     15 28 56.5
       comp=Z,7.0nm,1.5s
K20K   Telida           79.64  10  P         P        15 28 54.5 +1.5
K20K                               IAmb      IAmb     15 28 55.6
       comp=Z,1.9nm,0.8s
CAST   Castle Rocks     80.06  11  P         P        15 28 54.8 -0.4
CAST                               IAmb      IAmb     15 28 59.3
       comp=Z,4.5nm,0.7s
GLB    Gilahina Butte   80.19  16  P         P        15 28 57.1 +1.2
GLB                                IAmb      IAmb     15 29 20.4
       comp=Z,4.6nm,1.3s
J20K   Nowinta River    80.39  10  P         P        15 28 57.5 +0.6
J20K                               IAmb      IAmb     15 28 59.1
       comp=Z,6.2nm,1.5s
DOT    Dot Lake         81.99  14  P         P        15 29 06.1 +0.8
CCB    Clear Creek Bu   82.01  12  P         P        15 29 06.0 +0.7
CCB                                IAmb      IAmb     15 29 06.9
       comp=Z,1.7nm,0.6s
BCAR   Beaver Creek A   82.07  16  P         P        15 29 06.7 +1.0
IMAR   Indian Mountai   82.12  10  P         P        15 29 07.4 +1.4
MDM    Murphy Dome      82.20  12  P         P        15 29 07.2 +0.9
MDM                                IAmb      IAmb     15 29 15.0
       comp=Z,2.5nm,1.1s
IL31                    82.31  13  P         P        15 29 07.5 +0.6
IL31                               IAmb      IAmb     15 29 08.7
       comp=Z,3.1nm,1.1s
ILAR   Eielson Array    82.31  13  P         P        15 29 07.7 +0.7
       comp=Z,0.7nm,0.6s,baz=228,slow=6.5,SNR=9.9
       comp=Z,0.7nm,0.6s
BCYI   Bear Canyon      82.38  41  P         P        15 29 07.8 -0.2
J25K   Salcha River,    82.51  13  P         P        15 29 08.7 +0.7
J25K                               IAmb      IAmb     15 29 13.6
       comp=Z,5.3nm,1.5s
TXAR   Lajitas Array    83.31  58  P         P        15 29 13.7 +0.7
       comp=Z,0.3nm,0.9s,baz=187,slow=9.7,SNR=2.7
       comp=Z,0.3nm,0.9s
PDAR   Pinedale Array   84.17  43  P         P        15 29 17.4 +0.3
       comp=Z,0.2nm,0.6s,baz=254,slow=5.4,SNR=2.1
       comp=Z,0.2nm,0.6s
BRTR   Keskin Array B  142.96 319  PKP       PKPdf    15 36 14.9 -2.1
       comp=Z,0.7nm,0.7s,baz=86,slow=1.9,SNR=4.5
GERES  GERESS Array B  144.51 347  PKP       PKPdf    15 36 19.0 -0.3
       comp=Z,0.4nm,0.5s,baz=3.8,slow=4.0,SNR=5.2
```

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*IDC **30** 15:25:01.6±1.5, 35°.95N×27°.18E, h0^{km}, mb3.7/4, mbtmp3.6/5, ML2.6/1, MS3.3/3, Error ellipse: s-maj=59.9km s-min=21.5km az=141.0*

*DDA **30** 15:25:03.9±0.0, 35°.62N×27°.36E, h9^{km}±2^{km}, MW3.3*

*THE **30** 15:25:03.1, 35°.66N×27°.48E, h0^{km}, ML3.2/6, Error ellipse: s-maj=1.4km s-min=0.4km az=136.0*

*ISK **30** 15:25:03.4, 35°.73N×27°.39E, h11^{km}, ML3.3/16*

*NIC **30** 15:25:03.1±0.0, 35°.67N×27°.47E, h15^{km}, Ml3.8/5*

*ATH **30** 15:25:04.1, 35°.76N×27°.35E, h14^{km}±3^{km}, ML3.3/12, Error ellipse: s-maj=4.4km s-min=1.1km az=131.0*

ISC 30 15:25:03.8±0.9**,35°.70N**±0°.02×**27°.39E**±0°.02**,h16**^{km}±7^{km}**, n93,**σ**0^{s}.98**/119**,mb3.7**/4**,Dodecanese Islands**

```
Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op        ISC      h  m  s    ISC
KARP   Karpathos         0.24 231  P         Pg       15 25 09.4 +0.1
KARP                               S         Sb       15 25 13.9  0.0
KARP                               AML       AML      15 25 14.4
       comp=E,71026µm,0.4s
KARP                               AML       AML      15 25 14.5
       comp=N,57170µm,0.4s
KARP   Karpathos         0.24 231  P         Pg       15 25 09.4 +0.1
KARP                               S         Sb       15 25 14.1 +0.2
       comp=N,31µm,0.2s
KARP   Karpathos         0.24 231  PG        Pg       15 25 09.3 +0.1
KARP                               SG        Sb       15 25 13.7 -0.2
KARP   Karpathos         0.24 231  P         Pg       15 25 09.4 +0.1
KARP                               AML       AML      15 25 13.9
       comp=N,57nm,0.4s
KARP                               AML       AML      15 25 13.9
       comp=N,57nm,0.4s
KARP                               S         Sb       15 25 14.0 +0.1
KARP                               AML       AML      15 25 14.2
       comp=N,71nm,0.3s
KARP                               AML       AML      15 25 14.2
       comp=N,71nm,0.3s
ARG    Arkhangelos       0.79  49  P         Pg       15 25 18.6 -0.6
ARG                                S         Sb       15 25 29.4 -0.2
ARG                                AML       AML      15 25 32.1
       comp=N,3952µm,0.2s
ARG                                AML       AML      15 25 34.8
       comp=E,7586µm,0.2s
ARG    Arkhangelos       0.79  49  P         Pg       15 25 18.6 -0.6
ARG                                S         Sb       15 25 30.1 +0.6
       comp=E,3µm,0.2s
ARG    Arkhangelos       0.79  49  PG        Pg       15 25 18.4 -0.8
ARG                                SG        Sb       15 25 29.8 +0.3
ARG    Arkhangelos       0.79  49  P         Pg       15 25 18.3 -0.8
ARG                                S         Sb       15 25 29.1 -0.4
NIS1   Nisyros Isl.      0.92 349  P         Pb       15 25 21.2 -0.2
NIS1                               AML       AML      15 25 43.2
       comp=N,2803µm,0.4s
NIS1                               AML       AML      15 25 49.0
       comp=E,2817µm,0.6s
NIS1   Nisyros Isl.      0.92 349  P         Pn       15 25 22.1 +0.1
NIS1                               S         Sn       15 25 37.5 +2.6
       comp=E,1µm,0.4s
NIS1   Nisyros Isl.      0.92 349  PG        Pb       15 25 21.0 -0.3
NISR   Nisiros           0.93 347  P         Pb       15 25 21.4 -0.2
NISR                               AML       AML      15 25 41.5
       comp=E,2349µm,0.3s
NISR                               AML       AML      15 25 47.7
       comp=N,1797µm,0.4s
NISR   Nisiros           0.93 347  P         Pn       15 25 22.3 +0.1
DAT    Datca             1.04   8  P         Pn       15 25 23.5 -0.3
DAT                                S         Sn       15 25 39.3 +1.3
DAT    Datca             1.04   8  PG        Pn       15 25 23.4 -0.3
DAT    Datca             1.04   8  P         Pn       15 25 23.7 -0.1
DAT                                S         Sn       15 25 39.0 +1.0
DAT                               i AML      AML      15 25 41.0
       comp=N,468nm,0.6s
DAT                               i AML      AML      15 25 45.0
       comp=N,416nm,0.2s
KOSK   Kos Island        1.10 342  P         Pn       15 25 24.5 -0.1
KOSK                               AML       AML      15 25 46.2
       comp=N,2840µm,0.4s
KOSK                               AML       AML      15 25 48.8
       comp=E,2674µm,0.5s
KOSK   Kos Island        1.10 342  PG        Pn       15 25 24.3 -0.2
ZKR    Zakros            1.12 239  P         Pb       15 25 24.8 -0.1
ZKR                                S         Sb       15 25 39.6 +0.4
ZKR                                AML       AML      15 25 44.6
       comp=E,3921µm,0.3s
ZKR                                AML       AML      15 25 46.2
       comp=N,1722µm,0.3s
ZKR    Zakros            1.12 239  P         Pb       15 25 24.6 -0.2
ZKR                                S         Sn       15 25 42.7 +2.7
       comp=N,1µm,0.3s
ZKR    Zakros            1.12 239  PN        Pb       15 25 24.7 -0.1
ZKR    Zakros            1.12 239  P         Pb       15 25 24.8 -0.1
ZKR                                S         Sn       15 25 41.4 +1.4
ZKR                                AML       AML      15 25 43.3
       comp=N,3.5nm,0.3s
ZKR                                AML       AML      15 25 43.3
       comp=N,3.5nm,0.3s
ZKR                                AML       AML      15 25 45.2
       comp=N,1.6nm,0.6s
ZKR                                AML       AML      15 25 45.2
       comp=N,1.6nm,0.6s
TURN   Turunc            1.27  33  PN        Pb       15 25 27.2 -0.2
TURN   Turunc            1.27  33  P         Pb       15 25 27.2 -0.2
TURN                               S         Sg       15 25 45.3 +0.3
TURN                              i AML      AML      15 25 51.0
       comp=N,404nm,0.2s
TURN                              i AML      AML      15 25 52.0
       comp=N,451nm,0.5s
BODT   Bodrum            1.36 357  P         Pg       15 25 28.9 -1.1
BODT   Bodrum            1.36 357  PN        Pg       15 25 28.8 -1.2
BDRM   Kayabasi          1.36   2  P         Pg       15 25 29.1 -1.0
BDRM                               S         Sg       15 25 48.2 +0.3
BDRM                              i AML      AML      15 25 52.0
       comp=N,117nm,0.6s
BDRM                              i AML      AML      15 25 57.0
       comp=N,115nm,0.3s
DALY   Dalyan (Mula)     1.51  42  PN        Pb       15 25 30.9 -0.5
NPS    Neapolis          1.52 254  P         Pn       15 25 31.1 +0.8
NPS    Neapolis          1.52 254  P         Pn       15 25 31.1 +0.8
FRMA   Ierapetra Chan    1.52 244  P         Pn       15 25 30.1 -0.2
FRMA                               S         Sn       15 25 48.9 -0.8
FRMA                               AML       AML      15 25 56.2
       comp=E,3073µm,0.4s
FRMA                               AML       AML      15 25 57.0
       comp=N,2683µm,0.5s
FRMA   Ierapetra Chan    1.52 244  P         Pn       15 25 29.9 -0.4
YER    Yerkesik          1.60  26  P         Pn       15 25 31.4 -0.1
YER    Yerkesik          1.60  26  PN        Pb       15 25 32.3 -0.7
MLSB   Milas             1.62  11  PN        Pb       15 25 32.3 -1.1
FETY   Fethiye           1.66  55  PN        Pb       15 25 33.1 -0.9
FETY   Fethiye           1.66  55  P         Pg       15 25 35.9 +0.2
FETY                               S         Sg       15 26 01.8 +4.5
THR8   Santorini-Mono    1.70 295  P         Pn       15 25 33.3 +0.6
THR8   Santorini-Mono    1.70 295  P         Pn       15 25 33.4 +0.6
SANT   Santorini         1.70 294  P         Pn       15 25 33.3 +0.4
SANT                               AML       AML      15 26 03.3
       comp=N,760µm,0.3s
SANT                               AML       AML      15 26 04.6
       comp=E,2395µm,0.4s
SANT   Santorini         1.70 294  P         Pn       15 25 33.3 +0.4
SANT                               S         Sg       15 25 58.0 -0.7
SANT   Santorini         1.70 294  PN        Pn       15 25 33.3 +0.4
MULA   Mugla, Merkez-    1.72  26  P         Pb       15 25 35.3 +0.2
MULA                               S         Sg       15 25 58.6 -0.7
MULA                              i AML      AML      15 26 03.0
       comp=E,93nm,0.9s
MULA                              i AML      AML      15 26 08.0
       comp=E,182nm,0.4s
THR6   Thira Island,     1.74 293  P         Pn       15 25 34.1 +0.8
THR6   Thira Island,     1.74 293  P         Pn       15 25 34.2 +0.8
DDIM   Aydin, Didim      1.76 356  P         Pb       15 25 34.9 -0.7
DDIM                              i AML      AML      15 26 11.0
       comp=E,76nm,0.7s
DDIM                              i AML      AML      15 26 13.0
       comp=E,90nm,0.7s
THR3   Thira Island,     1.76 294  P         Pn       15 25 34.3 +0.7
THR3   Thira Island,     1.76 294  P         Pn       15 25 34.1 +0.5
SNT5   Nea Kammeni, S    1.76 294  P         Pn       15 25 34.3 +0.7
THR9   Santorini-Faro    1.77 292  P         Pn       15 25 34.7 +0.9
THR9   Santorini-Faro    1.77 292  P         Pb       15 25 34.9 -1.0
CMBO   Columbo, Santo    1.78 296  P         Pn       15 25 34.1 +0.2
CMBO                               AML       AML      15 26 07.0
       comp=N,4167µm,0.5s
CMBO                               AML       AML      15 26 09.3
       comp=E,3323µm,0.4s
CMBO   Columbo, Santo    1.78 296  P         Pn       15 25 34.7 +0.8
THR5   Thira Island,     1.80 294  P         Pn       15 25 35.1 +0.9
AKAS   Kas               1.87  73  PN        Pn       15 25 36.1 +0.8
AKAS   Kas               1.87  73  P         Pn       15 25 36.2 +0.9
AKAS                               S         Sb       15 26 01.4 +0.5
AKAS                              i AML      AML      15 26 07.0
       comp=E,196nm,0.4s
AKAS                              i AML      AML      15 26 15.0
       comp=E,160nm,0.6s
HRKL   Herakleio         1.91 259  PN        Pn       15 25 36.8 +1.2
KSTL   Kastelli Herak    1.93 259  P         Pn       15 25 36.2 +0.2
KSTL   Kastelli Herak    1.93 259  P         Pn       15 25 34.2 -1.8
CAME   Cameli-Denizli    1.98  51  PN        Pn       15 25 37.7 +0.9
AYDN   Tasoluk           1.99  11  P         Pb       15 25 38.8 -0.9
AYDN                               S         Sb       15 26 04.0 -0.4
AYDN                              i AML      AML      15 26 11.0
       comp=E,80nm,0.8s
AYDN                              i AML      AML      15 26 20.0
       comp=E,82nm,0.3s
GCAM   G?zelcaml?        2.00 356  PN        Pn       15 25 37.9 +1.0
APE    Apeiranthos       2.03 313  P         Pn       15 25 37.9 +0.5
APE                                AML       AML      15 26 04.3
       comp=N,493µm,0.2s
APE                                AML       AML      15 26 04.3
       comp=E,328µm,0.3s
APE    Apeiranthos       2.03 313  P         Pn       15 25 37.8 +0.5
APE                                S         Sb       15 26 05.6 +0.3
       comp=E,170nm,0.2s
APE    Apeiranthos       2.03 313  PN        Pn       15 25 37.9 +0.5
SMG    Samos             2.05 348  P         Pn       15 25 38.1 +0.4
IDI    Anoyia            2.08 259  P         Pn       15 25 38.6 +0.5
IDI                                AML       AML      15 26 12.9
       comp=N,632µm,0.5s
IDI                                AML       AML      15 26 14.4
       comp=E,554µm,0.4s
IDI    Anoyia            2.08 259  P         Pn       15 25 38.5 +0.4
IDI                                S         Sb       15 26 06.0 -0.9
       comp=E,298nm,0.4s
IDI    Anoyia            2.08 259  PN        Pn       15 25 38.5 +0.4
CAEL   Denizli, Camel    2.11  47  P         Pb       15 25 41.3 -0.4
CAEL                               S         Sg       15 26 10.7 -0.9
CAEL                              i AML      AML      15 26 21.0
       comp=E,284nm,0.5s
CAEL                              i AML      AML      15 26 24.0
       comp=E,290nm,0.9s
TAVA   DENIZLI_Tavas     2.15  34  P         Pb       15 25 41.5 -0.8
TAVA                               S         Sg       15 26 12.0 -0.8
TAVA                              i AML      AML      15 26 16.0
       comp=E,170nm,0.5s
TAVA                              i AML      AML      15 26 17.0
       comp=E,115nm,0.3s
SIVA   Sivas             2.22 253  P         Pb       15 25 42.6 -0.9
SIVA                               AML       AML      15 26 18.4
       comp=E,1105µm,0.4s
SIVA                               AML       AML      15 26 21.3
       comp=N,805µm,0.7s
GOLH   Golhisar          2.33  48  P         Pb       15 25 44.2 -1.2
GOLH                               S         Sg       15 26 20.7 +2.1
GOLH                              i AML      AML      15 26 21.0
       comp=N,147nm,0.4s
GOLH                              i AML      AML      15 26 23.0
       comp=N,137nm,0.8s
IMMV   Iera Moni Meta    2.79 266  P         Pn       15 25 48.8 +1.0
GVD    Gavdhos           2.84 253  P         Pb       15 25 51.9 -2.2
GVD    Gavdhos           2.84 253  P         Pn       15 25 48.7 +0.3
RODP   Rodopos           2.96 268  P         Pn       15 25 51.3 +1.1
VLI    Veliai            3.74 287  P         Pn       15 26 02.4 +1.5
OSC1   CSNet OBS 1       3.89 123  P         Pn       15 26 01.6 -1.2
AKMS   Akamas            4.10  98  P         Pn       15 26 05.1 -0.7
AKMS                               AML       AML      15 26 53.2
       comp=N,0.5nm,0.4s
AKMS                               AML       AML      15 26 53.5
       comp=N,0.5nm,0.5s
ALFC   Alefka            4.29  96  P         Pn       15 26 07.3 -1.1
ALFC                               AML       AML      15 26 57.1
       comp=N,0.3nm,0.4s
ALFC                               AML       AML      15 26 58.6
       comp=N,0.5nm,0.5s
NATA   Nata              4.34 101  P         Pn       15 26 08.3 -0.8
SZAC   Souni             4.59 100  P         Pn       15 26 12.4 -0.2
SZAC                               AML       AML      15 27 06.0
       comp=N,0.4nm,0.5s
SZAC                               AML       AML      15 27 06.2
       comp=N,0.6nm,0.6s
OSC2   CSNet OBS 4       4.81 122  P         Pn       15 26 14.6 -0.9
ASGA   Asgata            4.88  99  P         Pn       15 26 15.9 -0.6
CSS    Mathiatis         4.91  97  P         Pn       15 26 16.0 -1.0
BRTR   Keskin Array B    6.38  49  Pn        Pn       15 26 38.8 +1.6
       comp=N,0.1nm,0.3s,baz=239,slow=12,SNR=2.0
BRTR                               Sn        Sn       15 27 52.8 +3.1
       comp=N,0.1nm,0.3s,baz=241,slow=21,SNR=1.3
BRTR                               LR        LR       15 29 50.5
       comp=N,52nm,19.7s,baz=187,slow=46
       comp=N,0.2nm,0.3s
TORD   Torodi Ar. Bea   32.25 232  P         P        15 31 32.1 +0.5
       comp=N,0.5nm,0.5s,baz=36,slow=9.2,SNR=8.7
       comp=N,0.5nm,0.5s
ARCES  ARCESS Array B   33.91 359  P         P        15 31 44.2 -1.4
       comp=N,1.6nm,0.8s,baz=172,slow=9.7,SNR=2.5
       comp=N,1.6nm,0.8s
MKAR   Makanchi Array   41.95  57  P         P        15 32 53.6 -0.2
       comp=N,0.5nm,0.5s,baz=277,slow=7.0,SNR=6.3
       comp=N,0.5nm,0.5s
ZALV   Zalesovo Beam    43.31  47  P         P        15 33 04.3 -0.4
       comp=N,0.5nm,0.3s,baz=251,slow=9.0,SNR=1.7
       comp=N,0.5nm,0.3s
NRIK   Noril'sk         46.62  25  LR        LR       15 56 57.2
       comp=N,47nm,18.3s,baz=349,slow=41
RCBR   Riachuelo        72.22 249  LR        LR       16 08 46.4
       comp=N,44nm,18.2s,baz=334,slow=36
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*IDC **30** 15:35:07.5±0.6, 61°.65S×54°.74W, h0^{km}, mb4.3/13, mbtmp4.2/15, ML3.5/2, MS4.0/28, Error ellipse: s-maj=18.6km s-min=15.3km az=84.0*

*NEIC **30** 15:35:09.1±2.0, 61°.65S±0°.06×54°.70W±0°.09, h10^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=11.2km s-min=7.1km az=192.0*

*GCMT **30** 15:35:15.1±0.4, 61°.82S±0°.03×55°.13W±0°.04, h16^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s24,c29; s81,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01±.21; $M_{\theta\theta}$-1.35±.13; $M_{\phi\phi}$3.37±.16; $M_{r\theta}$-0.33±.44; $M_{\theta\phi}$0.85±.10; $M_{\phi r}$-0.28±.33; Best double couple: $M_0$2.84300×10^{16} NP1:ϕ_s167.00000°,δ46.00000°,λ-123.00000°. NP2: ϕ_s31.00000°,δ53.00000°,λ-60.00000°. Principal axes: T 3.5370, Plg3.0000°, Azm100.0000°; N -1.3780, Plg23.0000°, Azm192.0000°; P -2.1490, Plg67.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 15:35:09.0±0.4**,61°.64S**±0°.06×**54°.68W**±0°.07**,h10**^{km}**,n90,**σ**0^{s}.85**/61**,mb4.5**/18**,MS4.0**/28**,South Shetland Islands**

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Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op        ISC      h  m  s    ISC
ESPZ   Base Esperanza    2.07 210            Pn       15 35 36.2 -7.5
ORCD   Orcadas           4.89  84  Pn        Pn       15 36 21.7 -0.8
PMSA   Palmer Station    5.28 229  Pn        Pn       15 36 28.4 +0.6
       1.3nm,0.3s,baz=59,slow=11,SNR=4.0
PMSA                               Lg        Lg       15 37 54.5
       8.0nm,0.3s,baz=332,slow=19,SNR=6.3
       14nm,0.9s
SMAI   San Martin Ant    8.37 214  Pn        Pn       15 37 09.4 -0.8
USHA   Ushuaia           9.94 307  Pn        Pn       15 37 32.3 +0.6
       0.5nm,0.3s,baz=61,slow=1.6,SNR=2.0
USHA                               Sn        Sn       15 39 22.1 -1.1
       0.4nm,0.3s,baz=43,slow=19,SNR=1.6
USHA                               LR        LR       15 40 40.4
       comp=Z,2µm,21.4s,baz=159,slow=34
       1.7nm,0.3s
EFI    East Falkland    10.16 348  Pn        Pn       15 37 34.2 -0.5
DSPA   Despedida        10.56 311  Pn        Pn       15 37 38.9 -1.3
MG03   Isla Dawson      11.46 306            Pn       15 37 51.9 -0.6
MG02   Cerro Sombrero   11.84 312  Pn        Pn       15 37 58.7 +0.9
HOPE   Hope Point       12.11  61  Pn        Pn       15 38 01.4  0.0
GO09   Cerro Castillo   14.20 309  Pn        Pn       15 38 30.3 +0.4
BELA   Belgrano 2       17.52 166  Pn        Pn       15 39 12.3 -0.7
BELA                               IAmb      IAmb     15 39 36.3
       comp=Z,29nm,1.1s
COYC   Coyhaique        19.01 320            Pn       15 39 31.0 -0.3
COYC                               IAmb      IAmb     15 39 35.9
       comp=Z,22nm,0.9s
VNA3   Neumayer Olymp   19.85 138  P         Pn       15 39 42.0 +0.7
AY01   Puyuhuapi        20.23 320            P        15 39 44.1 +0.2
AY01                               IAmb      IAmb     15 39 57.1
       comp=Z,28nm,1.2s
VNA1   Neumayer--Stat   20.26 136  P         Pn       15 39 46.2 +0.1
VNA2   Neumayer--Watz   20.57 137  P         P        15 39 46.8 -0.7
       baz=273,slow=13
VNA2   Neumayer--Watz   20.57 137  pP        pP       15 39 53.8 +3.8
LL02   Futaleuf         21.11 323  P         P        15 39 53.9 +0.4
SNAA   Sanae            22.05 139  P         P        15 40 03.1 -0.4
SNAA   Sanae            22.05 139  pP        pP       15 40 08.0 +1.9
SNAA   Sanae            22.05 139  P         P        15 40 02.8 -0.7
       comp=Z,1.4nm,0.8s,baz=274,slow=6.7,SNR=3.3
SNAA                               LR        LR       15 46 53.0
       comp=Z,601nm,21.6s,baz=298,slow=32
       comp=Z,1.4nm,0.8s
SNAA   Sanae            22.05 139  P         P        15 40 02.8 -0.7
SNAA                               IAmb      IAmb     15 40 20.2
       comp=Z,34nm,1.0s
LL04   Puerto Octay     23.38 324  P         P        15 40 18.4 +0.8
TROLL  Troll, Antarti   23.73 140  P         P        15 40 21.7 +0.8
TRQA   Tornquist        24.04 346  P         P        15 40 24.8 +0.8
TRQA                               IAmb      IAmb     15 40 46.3
       comp=Z,32nm,1.2s
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QSPA	South Pole Qui	28.59	180	P	P	15 41 05.6	+0.6
	comp=Z,34nm,1.0s,baz=164,slow=2.8,SNR=96						
	comp=Z,34nm,1.0s						
QSPA	South Pole Qui	28.59	180	P	P	15 41 07.0	+2.0
CPUP	Villa Florida	35.34	356	P	P	15 42 05.0	+0.7
	comp=Z,2.6nm,0.8s,baz=202,slow=11,SNR=3.0						
CPUP				LR	LR	15 55 37.3	
	comp=Z,105nm,21.8s,baz=182,slow=35						
	comp=Z,2.6nm,0.8s						
CPUP	Villa Florida	35.34	356	P	P	15 42 05.6	+1.3
CPUP				IAmb	IAmb	15 42 13.8	
	comp=Z,7.9nm,1.1s						
AC01	Pan de Azucar	37.08	336	P	P	15 42 19.3	+0.2
SBA	Scott Base	38.48	193	P	P	15 42 30.5	0.0
SBA				IAmb	IAmb	15 42 36.4	
	comp=Z,13nm,1.4s						
VNDA	Vanda	39.27	192	LR	LR	15 59 51.5	
	comp=Z,351nm,21.9s,baz=150,slow=38						
VNDA	Vanda	39.27	192	P	P	15 42 35.5	-1.6
MAW	Mawson	43.37	150	P	P	15 43 11.9	+1.1
	comp=Z,5.3nm,0.9s,baz=237,slow=11,SNR=9.7						
MAW				LR	LR	16 00 27.3	
	comp=Z,619nm,21.3s,baz=219,slow=35						
	comp=Z,5.3nm,0.9s						
MAW	Mawson	43.37	150	P	P	15 43 11.7	+0.9
PB16	IPOC Station P	44.51	340	P	P	15 43 21.9	+0.8
PB16				IAmb	IAmb	15 43 33.3	
	comp=Z,9.3nm,1.2s						
SIV	San Ignacio	45.81	351	P	P	15 43 31.1	+0.2
	comp=Z,0.9nm,0.5s,baz=178,slow=7.2,SNR=5.6						
SIV				LR	LR	16 03 36.2	
	comp=Z,129nm,19.4s,baz=210,slow=37						
	comp=Z,0.9nm,0.5s						
BDFB	Brasilia	46.18	9	LR	LR	16 00 55.3	
	comp=Z,155nm,20.7s,baz=251,slow=34						
LPAZ	La Paz	46.30	342	P	P	15 43 35.6	+0.2
	comp=Z,1.4nm,0.7s,baz=145,slow=5.8,SNR=4.7						
LPAZ				LR	LR	16 06 46.9	
	comp=Z,62nm,18.1s,baz=190,slow=41						
	comp=Z,1.4nm,0.7s						
LPAZ	La Paz	46.30	342	P	P	15 43 35.7	+0.4
RPN	Rapa Nui	49.86	288	LR	LR	16 00 07.4	
	comp=Z,115nm,19.0s,baz=138,slow=30						
SUR	Sutherland	55.28	95	P	P	15 44 43.4	+0.9
	comp=Z,4.0nm,0.9s,baz=279,slow=5.6,SNR=2.2						
SUR				LR	LR	16 02 56.3	
	comp=Z,436nm,21.7s,baz=216,slow=30						
	comp=Z,4.0nm,0.9s						
SUR	Sutherland	55.28	95	P	P	15 44 43.2	+0.7
H10S2	ASCENSION HYDR	60.19	47	T	T	16 50 43.3	
	baz=18,slow=74,SNR=3.3						
H10S3	ASCENSION HYDR	60.19	47	T	T	16 50 43.1	
	baz=202,slow=74,SNR=9.2						
BOSA	Boshof	60.53	96	P	P	15 45 19.5	+0.2
	comp=Z,1.1nm,0.5s,baz=199,slow=5.2,SNR=5.9						
BOSA				LR	LR	16 06 11.9	
	comp=Z,52nm,20.8s,baz=198,slow=31						
	comp=Z,1.1nm,0.5s						
BOSA	Boshof	60.53	96	P	P	15 45 18.9	-0.4
BOSA				IAmb	IAmb	15 45 32.9	
	comp=Z,14nm,1.4s						
H10N3	ASCENSION HYDR	61.28	47	T	T	16 52 13.3	
	baz=201,slow=75,SNR=20						
H10N1	ASCENSION HYDR	61.28	47	T	T	16 52 10.9	
	baz=201,slow=75,SNR=18						
H10N2	ASCENSION HYDR	61.30	47	T	T	16 52 09.7	
	baz=201,slow=75,SNR=18						
LBTB	Lobatse	63.73	94	P	P	15 45 41.5	+0.7
	comp=Z,2.9nm,0.8s,baz=193,slow=8.1,SNR=3.7						
LBTB				LR	LR	16 07 55.2	
	comp=Z,546nm,21.4s,baz=208,slow=31						
	comp=Z,2.9nm,0.8s						
LBTB	Lobatse	63.73	94	P	P	15 45 38.9	-1.9
LBTB				IAmb	IAmb	15 45 54.9	
	comp=Z,8.3nm,1.1s						
OTAV	Otavalo	64.32	333	P	P	15 45 43.8	-1.3
TSUM	Tsumeb	64.87	84	LR	LR	16 08 24.8	
	comp=Z,164nm,21.1s,baz=150,slow=31						
MDP	Montagnes des	66.56	2	LR	LR	16 16 08.9	
	comp=Z,54nm,20.8s,baz=214,slow=37						
RPZ	Rata Peaks	68.69	214	LR	LR	16 13 04.3	
	comp=Z,94nm,18.1s,baz=186,slow=33						
MATP	Matopo	69.02	94	LR	LR	16 13 02.9	
	comp=Z,263nm,20.3s,baz=240,slow=33						
SDV	Santo Domingo	71.41	343	LR	LR	16 21 12.4	
	comp=Z,86nm,18.2s,baz=182,slow=39						
URZ	Urewera	71.98	221	LR	LR	16 13 43.4	
	comp=Z,65nm,19.5s,baz=211,slow=32						
BIRV	Birongo	72.46	348	P	P	15 46 35.4	0.0
LSZ	Lusaka	73.31	91	LR	LR	16 15 07.0	
	comp=Z,115nm,18.4s,baz=164,slow=33						
PPT	Papeete	77.02	257	LR	LR	16 13 19.3	
	comp=Z,64nm,18.6s,baz=142,slow=30						
RAR	Rarotonga	78.46	247	LR	LR	16 16 08.5	
	comp=Z,72nm,18.4s,baz=182,slow=31						
OPO	Ambohidratompo	79.34	109	LR	LR	16 19 14.8	
	comp=Z,83nm,18.2s,baz=30,slow=33						
TOO	Toolangi	79.79	196	P	P	15 47 17.9	+0.8
TOO				IAmb	IAmb	15 47 28.3	
	comp=Z,6.4nm,0.9s						
SJG	San Juan	80.00	349	LR	LR	16 25 31.6	
	comp=Z,35nm,18.1s,baz=218,slow=38						
CMIG	Matias Romero	84.71	322	LR	LR	16 19 17.5	
	comp=Z,73nm,18.1s,baz=188,slow=31						
STKA	Stephens Creek	85.88	194	P	P	15 47 48.1	-0.7
	comp=Z,2.0nm,0.8s,baz=133,slow=3.0,SNR=5.5						
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	85.88	194	P	P	15 47 48.1	-0.7
TOA0	Torodi Ar. Sit	86.62	54	P	P	15 47 52.7	+0.4
TOA0				IAmb	IAmb	15 47 57.8	
	comp=Z,6.9nm,1.1s						
TORD	Torodi Ar. Bea	86.62	54	P	P	15 47 52.0	-0.4
	comp=Z,2.5nm,1.0s,baz=224,slow=5.1,SNR=5.4						
	comp=Z,2.5nm,1.0s						
TORD	Torodi Ar. Bea	86.62	54	P	P	15 47 52.5	+0.1
TORD				IAmb	IAmb	15 48 01.1	
	comp=Z,5.2nm,1.1s						
MBAR	Mbarara	87.29	86	LR	LR	16 24 02.6	
	comp=Z,166nm,18.7s,baz=178,slow=34						
FORT	Forrest	87.89	182	P	P	15 47 58.2	-0.3
AFI	Afiamalu	90.08	240	LR	LR	16 21 35.1	
	comp=Z,45nm,19.3s,baz=178,slow=31						
ASAR	Alice Springs	94.72	188	P	P	15 48 29.9	-0.6
	comp=Z,1.0nm,0.9s,baz=169,slow=4.4,SNR=9.0						
	comp=Z,1.0nm,0.9s						
LPIG	La Paz	96.34	311	LR	LR	16 25 19.8	
	comp=Z,41nm,18.7s,baz=192,slow=31						
WRA	Warramunga Arr	98.38	189	P	P	15 48 46.1	-0.9
	comp=Z,1.4nm,0.7s,baz=180,slow=4.1,SNR=8.5						
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	98.89	318	LR	LR	16 26 39.3	
	comp=Z,48nm,18.9s,baz=167,slow=31						
YKA	Yellowknife Ar	131.84	327	PKP	PKPdf	15 54 19.5	-1.2
	comp=Z,0.8nm,0.7s,baz=122,slow=3.6,SNR=2.9						
CMAR	Chiang Mai Arr	133.04	145	PKP	PKPdf	15 54 24.7	+0.3
	comp=Z,0.8nm,0.9s,baz=235,slow=4.6,SNR=4.9						
PZH	PanZhiHua	141.46	145	PKP	PKPdf	15 54 40.8	+0.9
ARCES	ARCESS Array B	142.55	35	PKhKP	PKPpre	15 54 34.4	
	comp=Z,1.1nm,0.6s,baz=225,slow=2.8,SNR=6.3						
ILAR	Eielson Array	143.29	314	PKhKP	PKPpre	15 54 36.9	
	comp=Z,0.9nm,0.7s,baz=161,slow=2.1,SNR=9.1						
SPITS	Spitsbergen Ar	145.87	20	PKPbc	PKPab	15 54 47.2	+0.1
	comp=Z,8.6nm,1.0s,baz=243,slow=6.3,SNR=2.8						
MKAR	Makanchi Array	151.43	101	PKPbc	PKPbc	15 55 00.0	-1.9
	comp=Z,4.5nm,1.0s,baz=225,slow=1.5,SNR=20						
MKAR	Makanchi Array	151.43	101		PKPbc	15 55 01.0	-0.9
GTA	Gaotai	152.81	133	*e*PKPbc	PKiKP	15 55 06.8	+1.2
GTA				pPKP	PKPab	15 55 17.0	+0.6
GTA				sPKP		15 55 21.5	
GTA				LR	LR		
	comp=N,75nm,17.4s						
GTA				LR	LR		
	comp=E,120nm,17.8s						
GTA				LR	LR		
	comp=Z,68nm,18.5s						
SONM	Songino Array	162.48	133	PKPab	PKPab	15 55 58.4	+0.5
	comp=Z,2.6nm,0.9s,baz=205,slow=4.6,SNR=9.8						

JMA ***30*** *15:35:34.4±0.4, 44°N±3°×14°8E±°, h0^{km}, MV3.5/18, SE OFF ETOROFU*

SKHL ***30*** *15:35:35.6±0.1, 44°.50N×148°.50E, h30^{km}±3^{km}, mb4.1/3*

ISC 30 15:35:32.9±4.5, **44°.5N**±0°.1×**148°.6E**±0°.2, **h27**^{km}±29^{km}**, n11, σ1ˢ.37**/20**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.94	326	*i* P	Pn	15 35 50.7	+0.3
KUR				AMB	AMB	15 35 52.1	
	60nm,0.3s						
KUR				*e*S	Sb	15 36 01.9	-0.8
KUR				A	A	15 36 03.1	
	400nm,0.3s						
KUR				A	A	15 36 03.1	
	160nm,0.3s						
YUK	Yuzh-Kuril'sk	2.02	259	*e*P	Pn	15 36 06.2	+1.0
YUK				AMB	AMB	15 36 07.0	
	50nm,0.2s						
YUK				*i* S	Sn	15 36 29.2	-0.3
YUK				A	A	15 36 34.8	
	160nm,0.3s						
YUK				A	A	15 36 34.8	
	100nm,0.3s						
NEM2	Nemuro 2	2.34	243	*e*P	Pn	15 36 09.9	+0.3
NEM2				*e*S	Sn	15 36 35.6	-1.8
NMR	Nemuro--Hokkai	2.35	244	*e*P	Pn	15 36 09.9	+0.2
NMR				*e*S	Sn	15 36 35.6	-2.0
JRA	Rausu	2.56	260	*e*P	Pn	15 36 14.0	+1.4
JKHN	Kushirohamanak	2.85	242	*e*P	Pn	15 36 17.4	+0.8
JKHN				*e*S	Sn	15 36 49.4	-0.6
JNK	Nakash	2.94	254	*e*P	Pn	15 36 19.4	+1.6
JNK				*e*S	Sn	15 36 52.2	0.0
AKK	Akkeshi	3.09	244	*e*P	Pn	15 36 20.5	+0.7
AKK				*e*S	Sn	15 36 53.8	-2.0
JAK	Akkeshi	3.19	244	*e*P	Pn	15 36 22.0	+0.8
JAK				*e*S	Sn	15 36 56.6	-1.8
JAR	Ashorobuto	3.69	253	*e*P	Pn	15 36 30.5	+2.4
JAR				*e*S	Sn	15 37 11.5	+0.8
JCH	Churui	4.24	246	*e*S	Sn	15 37 24.0	-0.2

IDC ***30*** *15:41:33.0±2.3, 6°.50N×126°.50E, h107^{km}±20^{km}, mb3.3/4, mbtmp3.6/4, MS3.4/1, Error ellipse: s-maj=61.8km s-min=18.6km az=68.0*

MAN ***30*** *15:41:33.5, 6°.07N×125°.42E, h68^{km}, mb4.3, ML3.2, MS2.9, Hypocentre not reviewed by the ISC*

DJA ***30*** *15:41:33.4±0.5, 6°N±4°×12°6E±°, h84^{km}±11^{km}, M4.2/12, mb4.1/10, mB4.9/4, MLv4.4/12, Mw(mB)4.1/4*

ISC 30 15:41:32.8±0.9, **5°.90N**±0°.05×**125°.45E**±0°.06, **h73**^{km}±8^{km}**, n24, σ1ˢ.71**/33**, mb3.5**/4**, 4C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.34	52	⇓*e*P	Pn	15 41 45.8	+1.2
DDMP				*e*S	Sn	15 41 51.6	-1.6
GSPH	General Santos	0.53	291	⇑*i*P	Pn	15 41 45.9	-0.4
GSPH				*i* S	Sn	15 41 56.1	-0.2
KCP	Kidapawan	1.16	342	⇑*e*P	Pn	15 41 53.9	+0.4
KCP				*i* S	Sn	15 42 10.3	+1.3
DAV	Davao City (W)	1.17	6	P	Pn	15 41 54.0	+0.4
	216nm,0.3s,baz=191,slow=5.9,SNR=8.2						
DAV				S	Sn	15 42 11.6	+2.4
	1µm,0.3s,baz=107,slow=22,SNR=9.1						
DAV				LR	LR	15 42 25.1	
	comp=Z,216nm,18.8s,baz=162,slow=48						
MATI	Mati	1.32	38	⇑*e*P	Pn	15 41 55.2	-0.3
MATI				*e*S	Sn	15 42 11.4	-1.1
CTBH	Cotabato--PC H	1.78	318	⇓*i*P	Pn	15 42 01.0	-0.5
CTBH				*i* S	Sn	15 42 21.0	-2.3
SGSI	Sangihe	2.20	178	P	Pn	15 42 08.5	+1.3
BIPH	Bislig	2.45	22	⇓*e*P	Pn	15 42 10.2	-0.3
BIPH				*e*S	Sn	15 42 37.9	-1.6
CGP	Cagayan de Oro	2.65	344	⇓*e*P	Pn	15 42 17.1	+3.8
CGP				*e*S	Sn	15 42 46.5	+2.2
PAGZ	Pagadian	2.82	314	⇓*e*P	Pn	15 42 16.1	+0.5
PAGZ				*e*S	Sn	15 42 47.9	-0.6
BUTP	Butuan	3.06	3	⇓*e*P	Pn	15 42 19.9	+1.0
BUTP				*e*S	Sn	15 42 57.6	+3.3
GLSP	General Luna,	3.92	10	⇑*e*P	Pn	15 42 30.8	+0.2
GLSP				*e*S	Sn	15 43 14.2	-1.2
GTOI	Gorontalo	5.76	205	P	Pn	15 42 56.4	+0.6
	0.3nm968nm54nm,0.5s						
MRSI	Marisa	6.42	213	P	Pn	15 43 06.7	+1.9
	0.8nm2µm78nm,0.6s						
LBMI	Labuha	6.81	162	P	Pn	15 43 10.8	+0.7
	0.1nm6.1nm,0.8s						
LUWI	Luwuk	7.39	201	P	Pn	15 43 21.6	+3.6
	0.3nm64nm,0.7s						
APSI	Ampana	7.75	209	P	Pn	15 43 26.0	+3.0
	0.1nm609nm32nm,0.8s						
MPSI	Mapaga	7.82	225	P	Pn	15 43 23.3	-0.6
	0.1nm3.7nm,0.5s						
SANI	Sanana	7.91	176	P	Pn	15 43 25.1	-0.1
	0.0nm7.2nm,0.9s						
WRA	Warramunga Arr	27.13	161	P	P	15 47 08.3	-0.8
	0.6nm,0.5s,baz=332,slow=11,SNR=12						
	0.6nm,0.5s						
ASAR	Alice Springs	30.52	165	P	P	15 47 39.0	-0.4
	0.5nm,0.4s,baz=342,slow=7.0,SNR=37						
	0.5nm,0.4s						
KLR	Kul'dur	43.51	6	LR	LR	16 09 29.2	
	comp=Z,44nm,18.2s,baz=172,slow=39						
MKAR	Makanchi Array	55.06	325	P	P	15 50 56.2	-1.0
	0.1nm,0.3s,baz=122,slow=7.0,SNR=2.5						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	58.09	333	P	P	15 51 13.3	-5.1
	0.3nm,0.4s,baz=125,slow=7.6,SNR=1.5						
	0.3nm,0.4s						

MAN ***30*** *16:00:30.1, 15°.05N×122°.67E, h1^{km}, mb4.2, ML3.0, MS2.6, Hypocentre not reviewed by the ISC*

ISC 30 16:00:32.7±1.2, **14°.92N**±0°.07×**122°.66E**±0°.07, **h32**^{km}**, n5, σ1ˢ.27**/9**, 4C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCNP	Jose Panganiba	0.63	177	⇑*i*P	Pb	16 00 44.3	-1.0
JCNP				*i* S	Sb	16 00 53.1	-0.8
BALP	Baler	1.33	308	⇑*e*P	Pb	16 00 55.8	-1.2
BALP				*e*S	Sb	16 01 12.3	-1.4
LQP	Lukban	1.35	234	⇑*e*P	Pb	16 00 57.2	-0.4
PVCP	Virac	1.96	132	⇑*e*P	Pb	16 01 06.9	-0.8
PVCP				*e*S	Sb	16 01 32.0	+0.4
SMPP	San Manuel, Pa	2.27	303	⇓*e*P	Pn	16 01 09.1	+1.1
SMPP				*e*S	Sn	16 01 36.5	+1.6

IDC 30 16:21:18.5±31.0**, 7°.69N**×**103°.65W, h0**^{km}**, mb3.3**/3**, mbtmp3.4**/3**, MS3.2**/1**, Error ellipse: s-maj=992.1km s-min=107.5km az=115.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	12.67	42	LR	LR	16 27 55.4	
	comp=Z,114nm,21.9s,baz=196,slow=31						
TXAR	Lajitas Array	21.54	360	P	P	16 26 09.2	-0.4
	0.4nm,0.8s,baz=179,slow=12,SNR=4.5						
	0.4nm,0.8s						
PDAR	Pinedale Array	35.33	352	P	P	16 28 16.2	+0.3
	0.6nm,0.8s,baz=161,slow=9.4,SNR=5.9						
	0.6nm,0.8s						
H03N2	Juan Fernandez	47.16	152	T	T	17 21 18.9	
	baz=329,slow=78,SNR=3.8						
H03N1	Juan Fernandez	47.17	152	T	T	17 21 19.5	
	baz=329,slow=78,SNR=4.1						
H03N3	Juan Fernandez	47.18	152	T	T	17 21 17.4	
	baz=329,slow=78,SNR=3.6						
ILAR	Eielson Array	64.56	341	P	P	16 31 57.1	-0.2
	0.6nm,0.8s,baz=153,slow=5.0,SNR=7.4						
	0.6nm,0.8s						

IDC ***30*** *16:22:44.4±0.9, 5°.86N×127°.62E, h0^{km}, mb3.8/8, mbtmp3.9/11, ML4.1/3, MS3.4/3, Error ellipse: s-maj=48.3km s-min=14.7km az=63.0*

MAN ***30*** *16:22:53.4, 5°.28N×126°.49E, h21^{km}, mb4.9, ML3.8, MS3.8, Hypocentre not reviewed by the ISC*

DJA ***30*** *16:22:53.4±0.6, 5°N±5°×12°7E±°, h59^{km}±12^{km}, M4.4/12, mB5.0/7, mb4.3/12, MLv4.5/12, Mw(mB)4.3/7*

NEIC ***30*** *16:22:53.1±2.8, 5°.55N±0°.09×126°.8E±0°.1, h53^{km}±5^{km}, mb4.1/11, Error ellipse: s-maj=19.4km s-min=10.4km az=62.0*

ISC 30 16:22:46.7±1.5, **5°.70N**±0°.05×**127°.06E**±0°.06, **h15**^{km}±10^{km}**, n48, σ2ˢ.08**/54**, mb3.9**/14**, 6C-6D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.40	287	⇑*e*P	Pg	16 23 13.2	-0.5
DDMP				*e*S	Sb	16 23 29.5	-0.9
MATI	Mati	1.48	327	⇓*e*P	Pg	16 23 20.0	+4.9
MATI				*e*S	Sg	16 23 45.8	+11
DAV	Davao City (W)	2.01	313	Pn	Pg	16 23 24.9	-0.4
	83nm,0.3s,baz=110,slow=1.3,SNR=23						
DAV				Sn	Sg	16 23 56.8	+5.5
	56nm,0.3s,baz=65,slow=21,SNR=8.1						
DAV				LR	LR	16 24 20.4	
	comp=Z,195nm,21.1s,baz=135,slow=41						
	349nm,0.5s						
DAV	Davao City (W)	2.01	313	Pn	Pg	16 23 24.6	-0.7
GSPH	General Santos	2.14	281	⇑*i*P	Pn	16 23 20.6	-1.4
GSPH				*i* S	Sn	16 23 42.7	-5.7
KCP	Kidapawan	2.35	304	⇑*i*P	Pb	16 23 28.8	-0.1
KCP				*i* S	Sg	16 24 03.8	+1.3
SGSI	Sangihe	2.52	217	P	Pn	16 23 25.7	-1.4
BIPH	Bislig	2.57	344	⇓*e*P	Pg	16 23 34.8	-1.2
BIPH				*e*S	Sg	16 24 08.8	-0.5
CTBH	Cotabato--PC H	3.18	299	⇑*i*P	Pn	16 23 39.4	+3.1
CTBH				*i* S	Sn	16 24 13.4	-0.6
BUTP	Butuan	3.55	336	⇓*e*P	Pg	16 23 52.2	-2.6
BUTP				*e*S	Sg	16 24 41.5	+0.7
CGP	Cagayan de Oro	3.61	320	⇓*e*P	Pg	16 23 52.8	-3.2
CGP				*e*S	Sb	16 24 36.3	+2.4
GLSP	General Luna,	4.17	347	⇓*e*P	Pb	16 24 01.4	+1.6
GLSP				*e*S	Sb	16 24 46.1	-3.9
PAGZ	Pagadian	4.23	301	⇓*e*P	Pn	16 23 54.5	+3.7
PAGZ				*e*S	Sn	16 24 42.1	+2.2
TNTI	Ternate	4.90	176		Pn	16 24 01.5	+1.6
TNTI	Ternate	4.90	176	P	Pn	16 24 02.1	+2.2
MSLP	Maasin	4.92	334	⇑*e*P	Pb	16 24 11.3	-1.3
LBMI	Labuha	6.31	176	P	Pn	16 24 21.0	+1.7
	0.2nm539nm43nm,0.8s						
GTOI	Gorontalo	6.45	219	P	Pn	16 24 19.7	-1.6
	0.1nm8.7nm,0.5s						
MRSI	Marisa	7.28	225	P	Pn	16 24 31.6	-1.1
	0.3nm850nm61nm,0.7s						
TOLI2	Tolitoli	7.75	234		Pn	16 24 36.4	-2.7
SIJI	Sorong	7.76	147	Pn	Pn	16 24 37.0	-2.3
	0.8nm,0.3s,baz=123,slow=23,SNR=2.2						
	3.8nm,0.4s						
SANI	Sanana	7.77	188	P	Pn	16 24 36.2	-3.2
	0.2nm652nm17nm,1.0s						
LUWI	Luwuk	7.95	213	P	Pn	16 24 43.8	+2.0
	0.5nm1µm46nm,0.9s						
APSI	Ampana	8.50	220	P	Pn	16 24 52.6	+3.2
	19nm,0.7s						
MYLDM	Lahad Datu	8.54	267	Pn	Pn	16 24 51.2	+1.2
MPSI	Mapaga	8.91	234	P	Pn	16 24 55.0	-0.1
	5.5nm,0.8s						
AAI	Ambon	9.39	173	P	Pn	16 25 02.3	+0.7
LQP	Lukban	9.97	327	⇑*e*P	Pn	16 25 19.1	+9.2
FAKI	Fak Fak	10.00	149	Pn	Pn	16 25 14.6	+4.6
BATI	Baumata	16.16	192	Pn	P	16 26 35.1	-1.6
	1.3nm,0.3s,baz=49,slow=2.9,SNR=1.9						
	8.5nm,0.5s						
MTN	Manton Dam	18.86	168	P	P	16 27 05.3	-1.2
MTN				IAmb	IAmb	16 27 10.8	
	comp=Z,18nm,1.2s						
KNRA	Kununurra	21.30	175	P	P	16 27 32.6	-0.5
KNRA				IAmb	IAmb	16 27 51.4	
	comp=Z,14nm,1.2s						
WB0	Warramunga Arr	26.31	164	P	P	16 28 24.0	+1.9
WB0				IAmb	IAmb	16 28 25.4	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	26.46	164	P	P	16 28 24.1	+0.6
	comp=Z,1.4nm,0.7s,baz=341,slow=10,SNR=24						
	comp=Z,1.4nm,0.7s						
WB2	Warramunga Arr	26.47	164	P	P	16 28 25.7	+2.2
WB2				IAmb	IAmb	16 28 39.7	
	comp=Z,6.2nm,1.1s						
WR0	Warramunga Arr	26.54	164	P	P	16 28 26.2	+2.1
WR0				IAmb	IAmb	16 28 51.7	
	comp=Z,6.2nm,1.2s						
ASAR	Alice Springs	29.94	167	P	P	16 28 54.3	-0.2
	comp=Z,0.3nm,0.6s,baz=344,slow=7.0,SNR=7.5						
ASAR				PcP	PcP	16 31 57.2	0.0
	comp=Z,0.2nm,0.4s,baz=353,slow=2.2,SNR=5.9						
	comp=Z,0.3nm,0.6s						
BBOO	Buckleboo	39.24	168	P	P	16 30 15.0	+0.3
STKA	Stephens Creek	39.85	161	P	P	16 30 19.4	-0.5
	comp=Z,0.7nm,0.4s,baz=339,slow=14,SNR=3.1						
	comp=Z,0.7nm,0.4s						
SONM	Songino Array	45.56	341	P	P	16 31 06.5	+0.4
	comp=Z,0.2nm,0.5s,baz=131,slow=5.9,SNR=1.8						
	comp=Z,0.2nm,0.5s						
PETK	Petropavlovsk-	53.50	22	LR	LR	16 54 45.2	
	comp=Z,88nm,21.2s,baz=135,slow=36						
MK31	Makanchi Array	56.15	324	P	P	16 32 25.7	-0.2
MK31				IAmb	IAmb	16 32 35.6	
	comp=Z,1.2nm,1.1s						
MKAR	Makanchi Array	56.15	324	P	P	16 32 26.5	+0.6
	comp=Z,0.4nm,0.4s,baz=113,slow=7.5,SNR=7.2						
	comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	59.00	332	P	P	16 32 45.3	-0.5
	comp=Z,0.4nm,0.5s,baz=108,slow=4.7,SNR=2.3						
	comp=Z,0.4nm,0.5s						
SEY	Seymchan	60.05	13	LR	LR	16 58 11.0	
	comp=Z,64nm,21.8s,baz=114,slow=36						
KURK	Kurchatov	60.28	327	P	P	16 32 55.2	+0.5
KURK				IAmb	IAmb	16 33 04.2	
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	88.73	340	P	P	16 35 40.6	+1.1
	comp=Z,2.0nm,0.9s,baz=357,slow=9.9,SNR=1.4						
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	90.27	332	P	P	16 35 48.4	+1.6
	comp=Z,0.6nm,0.6s,baz=36,slow=10,SNR=1.6						
	comp=Z,0.6nm,0.6s						

IDC ***30*** *16:27:26.3±0.7, 3°.49S×149°.89E, h0^{km}, mb4.2/13, mbtmp4.3/17, ML1.6/1, MS3.6/18, Error ellipse: s-maj=19.1km s-min=16.1km az=79.0*

NEIC ***30*** *16:27:29.8±1.8, 3°.54S±0°.05×149°.84E±0°.06, h10^{km}±1^{km}, mb4.6/26, Error ellipse: s-maj=11.2km s-min=8.7km az=243.0*

ISC 30 16:27:30.2±0.5, **3°.48S**±0°.07×**149°.93E**±0°.06, **h19**^{km}**, n74, σ1ˢ.58**/60**, mb4.5**/31**, MS3.6**/16**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.24	111	Pn	Pn	16 28 04.5	-1.8
	99nm,0.4s,baz=269,slow=12,SNR=61						
RABL	Rabaul	2.34	108	Pn	Pn	16 28 06.5	-1.2
MANU	Manus Island	2.94	299	Pn	Pn	16 28 12.9	-3.0
PMG	Port Moresby	6.50	205	Pn	Pn	16 29 04.9	0.0
	0.8nm,0.3s,baz=309,slow=14,SNR=3.0						
	23nm,0.9s						
PMG	Port Moresby	6.50	205	Pn	Pn	16 29 06.4	+1.5
HNR	Honiara	11.57	121	Pn	Pn	16 30 11.6	-2.9
	48nm,0.5s,baz=215,slow=12,SNR=2.8						
HNR				LR	LR	16 35 10.4	
	comp=Z,425nm,18.7s,baz=255,slow=40						
GUMO	Guam	17.69	344	LR	LR	16 36 45.9	
	comp=Z,142nm,21.8s,baz=151,slow=32						
SIJI	Sorong	18.83	278	P	P	16 31 47.2	-1.9
	2.6nm,0.4s,baz=98,slow=17,SNR=1.0						
SIJI				LR	LR	16 37 57.6	
	comp=Z,351nm,20.4s,baz=32,slow=34						
MTN	Manton Dam	20.78	242	P	P	16 32 09.3	-1.2
EIDS	Eidsvold	21.79	177	P	P	16 32 20.9	-0.2
WB0	Warramunga Arr	22.18	222	P	P	16 32 24.5	-0.9
WB0				IAmb	IAmb	16 32 39.2	
	comp=Z,30nm,1.4s						
WR0	Warramunga Arr	22.22	221	P	P	16 32 24.1	-1.8
WB2	Warramunga Arr	22.33	222	P	P	16 32 25.0	-2.1
WB2				IAmb	IAmb	16 32 50.4	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	22.34	222	P	P	16 32 24.6	-2.5
	comp=Z,6.5nm,0.9s,baz=46,slow=10,SNR=18						
WRA				LR	LR	16 40 58.5	
	comp=Z,201nm,18.8s,baz=22,slow=36						
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	22.34	222	P	P	16 32 25.1	-2.1
KNRA	Kununurra	24.10	238	P	P	16 32 42.8	-2.1
DZM	Mont Dzumac	24.46	140	P	P	16 32 48.1	-0.1
	comp=Z,5.9nm,0.7s,baz=270,slow=11,SNR=7.3						
	comp=Z,5.9nm,0.7s						
DZM	Mont Dzumac	24.46	140	P	P	16 32 48.4	+0.1
ASAR	Alice Springs	25.35	216	P	P	16 32 54.9	-1.4
	comp=Z,3.2nm,0.8s,baz=50,slow=8.6,SNR=37						
ASAR				LR	LR	16 44 20.8	
	comp=Z,48nm,21.1s,baz=22,slow=40						
	comp=Z,3.2nm,0.8s						
ASAR	Alice Springs	25.35	216	P	P	16 32 55.5	-0.7
DAV	Davao City (W)	26.47	293	LR	LR	16 43 17.4	

	comp=Z,130nm,19.0s,baz=108,slow=36						
KAPI	**Kappang**	30.13	266	LR	LR	16 45 32.8	
	comp=Z,173nm,18.4s,baz=159,slow=36						
MSVF	**Nonsavu**	30.98	119	LR	LR	16 45 14.4	
	comp=Z,180nm,20.9s,baz=284,slow=34						
CAN	**Canberra**	31.69	181	P	P	16 33 54.3	+1.6
JOW	**Kunigami**	36.69	327	LR	LR	16 47 20.9	
	comp=Z,93nm,19.1s,baz=166,slow=33						
AFI	**Afiamalu**	39.18	108	LR	LR	16 48 07.2	
	comp=Z,76nm,19.5s,baz=194,slow=32						
MJAR	**Matsushiro Arr**	41.30	346	LR	LR	16 49 04.6	
	comp=Z,53nm,21.5s,baz=166,slow=31						
KSRS	**Korea Array**	45.58	335	LR	LR	16 52 09.8	
	comp=Z,19nm,21.8s,baz=145,slow=33						
NJ2	**Nanjing**	46.05	322	*e*P	P	16 35 52.3	-0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	**Ussuriysk Ar.**	50.13	343	P	P	16 36 24.0	-0.2
	comp=Z,3.2nm,1.0s,baz=186,slow=9.6,SNR=5.3						
	comp=Z,3.2nm,1.0s						
CMAR	**Chiang Mai Arr**	54.73	295	P	P	16 36 58.3	-0.6
	comp=Z,5.3nm,1.1s,baz=115,slow=5.6,SNR=16						
CMAR				LR	LR	17 00 03.8	
	comp=Z,46nm,19.1s,baz=125,slow=36						
	comp=Z,5.3nm,1.1s						
CMAR	**Chiang Mai Arr**	54.73	295	P	P	16 36 57.5	-1.4
PZH	**PanZhiHua**	55.28	306	P	P	16 37 07.0	+4.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,4.6s						
HHC	**Hu-ho-hao-te**	56.33	326	*e*P	P	16 37 13.3	+3.1
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.0s						
PETK	**Petropavlovsk-**	56.76	6	P	P	16 37 11.9	-1.0
	comp=Z,3.0nm,0.9s,baz=149,slow=4.3,SNR=3.8						
	comp=Z,3.0nm,0.9s						
PETK	**Petropavlovsk-**	56.76	6	P	P	16 37 14.3	+1.4
GTA	**Gaotai**	62.76	318	*e*P	P	16 37 55.8	+1.2
GTA				pP	PcP	16 38 21.8	-11
GTA				sP	pwP	16 38 29.8	+27
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,38nm,4.7s						
GTA				LR	LR		
	comp=N,75nm,16.0s						
GTA				LR	LR		
	comp=E,120nm,17.4s						
GTA				LR	LR		
	comp=Z,100nm,18.9s						
SONM	**Songino Array**	63.71	329	P	P	16 37 59.0	-1.7
	comp=Z,0.6nm,0.7s,baz=126,slow=3.7,SNR=1.7						
	comp=Z,0.6nm,0.7s						
YAK	**Yakutsk**	67.15	350	LR	LR	17 11 40.8	
	comp=Z,37nm,19.1s,baz=89,slow=40						
BILL	**Bilibino**	72.28	6	P	P	16 38 56.0	+2.0
BILL				IAmb	IAmb	16 38 57.8	
	comp=Z,5.6nm,1.1s						
WMQ	**Urumqi**	72.85	318	*e*P	P	16 39 00.5	+2.5
MKAR	**Makanchi Array**	77.47	319	P	P	16 39 22.7	-1.8
	comp=Z,1.0nm,1.0s,baz=98,slow=8.9,SNR=6.0						
	comp=Z,1.0nm,1.0s						
L19K	**White Mountain**	77.65	23	P	P	16 39 27.0	+1.8
CNPM	**China Poot**	77.80	26	P	P	16 39 27.6	+1.6
ZALV	**Zalesovo Beam**	78.49	327	P	P	16 39 28.0	-1.9
	comp=Z,0.9nm,0.6s,baz=117,slow=5.4,SNR=5.1						
	comp=Z,0.9nm,0.6s						
J20K	**Nowinta River**	79.01	22	P	P	16 39 34.6	+1.9
J20K				IAmb	IAmb	16 39 36.6	
	comp=Z,6.5nm,1.2s						
IMAR	**Indian Mountai**	80.13	20	P	P	16 39 40.5	+1.8
MCK	**McKinley**	80.77	23	P	P	16 39 43.5	+1.2
MCK				IAmb	IAmb	16 39 44.4	
	comp=Z,7.8nm,1.0s						
DIV	**Divide**	80.95	26	P	P	16 39 45.3	+2.0
DIV				IAmb	IAmb	16 39 46.5	
	comp=Z,8.8nm,1.2s						
KLU	**Klutina**	81.03	26	P	P	16 39 45.9	+2.1
KLU				IAmb	IAmb	16 39 47.7	
	comp=Z,8.4nm,1.3s						
WRH	**Wood River Hil**	81.44	23	P	P	16 39 46.8	+1.0
WRH				IAmb	IAmb	16 39 48.2	
	comp=Z,4.2nm,1.1s						
CCB	**Clear Creek Bu**	81.63	23	P	P	16 39 47.5	+0.8
CCB				IAmb	IAmb	16 39 48.5	
	comp=Z,4.9nm,1.2s						
IL31		82.04	23	P	P	16 39 49.1	+0.3
ILAR	**Eielson Array**	82.04	23	P	P	16 39 48.3	-0.6
	comp=Z,1.8nm,0.8s,baz=258,slow=5.2,SNR=17						
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	82.04	23	P	P	16 39 48.8	-0.1
J25K	**Salcha River,**	82.56	23	P	P	16 39 52.6	+0.8
J25K				IAmb	IAmb	16 39 53.9	
	comp=Z,3.9nm,0.8s						
DOT	**Dot Lake**	82.70	24	P	P	16 39 53.7	+1.3
DOT				IAmb	IAmb	16 39 55.2	
	comp=Z,6.3nm,1.2s						
M27K	**Edge Creek, AK**	83.13	26	P	P	16 39 56.8	+1.9
M27K				IAmb	IAmb	16 39 58.3	
	comp=Z,3.8nm,0.9s						
BCAR	**Beaver Creek A**	83.43	25	P	P	16 39 58.1	+1.9
NRIK	**Noril'sk**	83.81	342	P	P	16 39 58.0	0.0
	comp=Z,6.7nm,1.0s,baz=115,slow=5.8,SNR=10.0						
	comp=Z,6.7nm,1.0s						
NRIK	**Noril'sk**	83.81	342	P	P	16 39 59.6	+1.6
BMAR	**Burnt Mountain**	84.02	21	P	P	16 40 00.8	+1.6
HYT	**Haines Junctio**	84.61	28	P	P	16 40 04.6	+2.2
HYT				IAmb	IAmb	16 40 06.0	
	comp=Z,6.2nm,1.1s						
KK31	**Karatay Array**	84.66	314	P	P	16 40 04.0	+1.0
KKAR	**Karatay Array**	84.66	314	P	P	16 40 03.7	+0.8
MAW	**Mawson**	85.68	203	P	P	16 40 07.0	-0.4
	comp=Z,2.2nm,0.9s,baz=355,slow=9.5,SNR=3.7						
	comp=Z,2.2nm,0.9s						
BRVK	**Borovoye**	86.55	323	P	P	16 40 12.8	+0.7
BRVK				IAmb	IAmb	16 40 15.3	
	comp=Z,2.9nm,1.1s						
YBH	**Yreka Blue Hor**	90.32	48	LR	LR	17 16 42.8	
	comp=Z,61nm,18.1s,baz=261,slow=33						
ARU	**Arti**	93.64	326	LR	LR	17 22 58.8	
	comp=Z,55nm,21.8s,baz=63,slow=36						
NEW	**Newport**	94.54	42	LR	LR	17 20 08.6	
	comp=Z,33nm,18.6s,baz=279,slow=33						
PFO	**Pinyon Flats O**	94.92	57	LR	LR	17 16 09.4	
	comp=Z,36nm,19.4s,baz=172,slow=31						
YKA	**Yellowknife Ar**	95.60	28	P	P	16 40 54.2	+0.1
	comp=Z,1.2nm,0.8s,baz=264,slow=3.7,SNR=3.9						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	147.18	289	PKPbc	PKPbc	16 47 12.6	-0.7
	comp=Z,2.4nm,0.9s,baz=65,slow=3.4,SNR=9.1						
TORD	**Torodi Ar. Bea**	147.18	289	PKPdf	PKPdf	16 47 10.5	-0.6

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*IDC **30** 16:33:00.8±3.2, 10°.93N×141°.80E, h44^{km}±34^{km}, mb3.4/9, mbtmp3.7/10, ML4.3/1, MS3.1/1, Error ellipse: s-maj=27.7km s-min=17.3km az=100.0*

*NEIC **30** 16:33:09.3±1.4, 12°.1N±0°.2×141°.70E±0°.09, h91^{km}±10^{km}, mb4.1/7, Error ellipse: s-maj=24.5km s-min=10.1km az=161.0*

ISC 30 16:33:01.1±0.9**, 11°.0N**±0°.1×**141°.7E**±0°.1**, h50**^{km}**, n19,** σ**2^{s}.29**/14**, mb3.5**/13**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	4.01	49	P	Pn	16 34 01.2	+1.1
	18nm,0.3s,baz=194,slow=3.4,SNR=5.0						
GUMO				S	Sn	16 34 45.3	-0.6
	33nm,0.3s,baz=58,slow=24,SNR=2.5						
	37nm,0.3s						
TWG	**Pinlang**	22.97	303	P	P	16 37 59.3	-2.3
TWG				IAmb	IAmb	16 37 59.4	
	comp=Z,19nm,1.4s						
MJAR	**Matsushiro Arr**	25.64	353	P	P	16 38 25.3	-0.9
	comp=Z,1.4nm,0.8s,baz=162,slow=13,SNR=2.4						
	comp=Z,1.4nm,0.8s						
MAJO	**Matsushiro**	25.65	353	P	P	16 38 18.8	-7.3
MJB9	**Matsu-Tunnel**	25.65	353	P	P	16 38 18.8	-7.5
MJB9				IAmb	IAmb	16 38 36.6	
	comp=Z,5.2nm,1.1s						
JMM	**Marumori**	26.78	358	P	P	16 38 30.1	-6.3
JMM				IAmb	IAmb	16 38 43.7	
	comp=Z,9.3nm,1.1s						
KAPI	**Kappang**	27.04	235	P	P	16 38 48.0	+9.0
KAPI				IAmb	IAmb	16 39 00.7	
	comp=Z,5.3nm,0.8s						
MMRI	**Maumere**	27.50	226	P	P	16 38 52.9	+10
WRA	**Warramunga Arr**	31.58	193	P	P	16 39 18.3	-0.9
	comp=Z,0.6nm,0.7s,baz=15,slow=9.8,SNR=3.8						
	comp=Z,0.6nm,0.7s						
ASAJ	**Asahikawa**	33.02	1	LR	LR	16 52 00.2	
	comp=Z,32nm,21.0s,baz=168,slow=34						
USRK	**Ussuriysk Ar.**	34.15	347	P	P	16 39 42.0	+0.6
	comp=Z,1.1nm,0.8s,baz=177,slow=11,SNR=2.6						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	35.28	192	P	P	16 39 50.9	-0.4
	comp=Z,0.4nm,0.6s,baz=18,slow=13,SNR=17						
	comp=Z,0.4nm,0.6s						
PSA00	**Pilbara Seismi**	38.84	214	P	P	16 40 31.5	+10
CMAR	**Chiang Mai Arr**	41.97	285	P	P	16 40 48.6	+1.0
	comp=Z,0.6nm,0.7s,baz=92,slow=7.2,SNR=4.4						
	comp=Z,0.6nm,0.7s						
SONM	**Songino Array**	47.19	328	P	P	16 41 31.5	+2.5
	comp=Z,0.3nm,0.5s,baz=140,slow=5.6,SNR=1.9						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	61.28	318	P	P	16 43 12.6	+1.2
	comp=Z,0.2nm,0.5s,baz=124,slow=7.5,SNR=2.3						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	72.22	25	P	P	16 44 21.1	+0.5
	comp=Z,0.4nm,0.8s,baz=244,slow=5.7,SNR=2.7						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	92.19	334	P	P	16 46 04.5	-0.7
	comp=Z,0.6nm,0.4s,baz=64,slow=5.3,SNR=9.2						
	comp=Z,0.6nm,0.4s						
LPAZ	**La Paz**	150.52	104	PKPbc	PKiKP	16 52 50.1	+0.3
	comp=Z,2.2nm,0.8s,baz=225,slow=3.0,SNR=7.5						

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*NOU **30** 16:35:42.8, 14°.16S×166°.76E, h0^{km}, MLv4.8/13, Vanuatu Islands*

*IDC **30** 16:35:46.0±4.0, 14°.48S×166°.86E, h32^{km}±27^{km}, mb3.8/11, mbtmp4.0/13, ML4.3/2, MS3.4/3, Error ellipse: s-maj=30.6km s-min=19.9km az=115.0*

*NEIC **30** 16:35:48.5±1.6, 14°.36S±0°.08×166°.7E±0°.1, h44^{km}±6^{km}, mb4.5/30, Error ellipse: s-maj=16.1km s-min=10.2km az=63.0*

ISC 30 16:35:48.7±0.5**, 14°.43S**±0°.06×**166°.68E**±0°.08**, h50**^{km}**, n71,** σ**1^{s}.22**/70**, mb4.3**/26**, MS3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	3.58	156	P	Pn	16 36 42.8	+1.0
RTV	**Rentapao**	3.74	154	P	Pn	16 36 44.6	+0.7
LIFNC	**LIFOU**	6.33	175	Pn	Pn	16 37 19.1	-0.5
LIFNC	**LIFOU**	6.33	175	P	Pn	16 37 21.0	+1.5
KOUNC	**Koumac, New Ca**	6.50	200		Pn	16 37 22.6	+0.9
KOUNC	**Koumac, New Ca**	6.50	200	P	Pn	16 37 23.6	+1.8
MARNC	**Mare, Loyalty**	7.13	170		Pn	16 37 30.7	+0.3
MARNC	**Mare, Loyalty**	7.13	170	P	Pn	16 37 32.7	+2.3
DZM	**Mont Dzumac**	7.60	182	Pn	Pn	16 37 36.0	-1.0
	1.6nm,0.3s,baz=346,slow=5.3,SNR=17						
DZM				Sn	Sn	16 38 58.8	-3.1
	2.3nm,0.3s,baz=328,slow=22,SNR=1.9						
	3.3nm,0.3s						
DZM	**Mont Dzumac**	7.60	182		Pn	16 37 37.2	+0.2
DZM	**Mont Dzumac**	7.60	182	P	Pn	16 37 37.4	+0.4
NOUC	**Port Laguerre**	7.64	183	P	Pn	16 37 38.2	+0.8
ONTNC	**Ouen Toro**	7.84	182	Pn	Pn	16 37 42.6	+2.5
ONTNC	**Ouen Toro**	7.84	182	P	Pn	16 37 42.9	+2.8
OUENC	**Ouen Island, N**	7.95	179	Pn	Pn	16 37 42.6	+1.0
OUENC	**Ouen Island, N**	7.95	179	P	Pn	16 37 43.5	+1.9
PINNC	**Pines Island,**	8.17	175		Pn	16 37 45.1	+0.4
PINNC	**Pines Island,**	8.17	175	P	Pn	16 37 46.2	+1.5
HNR	**Honiara**	8.25	306	Pn	Pn	16 37 47.2	+1.5
	9.0nm,0.3s,baz=166,slow=4.9,SNR=2.9						
HNR				Sn	Sn	16 39 16.8	-0.8
	10nm,0.3s,baz=211,slow=5.5,SNR=1.5						
	35nm,0.4s						
HNR	**Honiara**	8.25	306	Pn	Pn	16 37 42.5	-3.3
EIDS	**Eidsvold**	18.24	231	P	P	16 39 56.7	-1.2
COEN	**Coen**	22.79	268	P	P	16 40 48.5	+1.2
COEN				IAmb	IAmb	16 40 52.8	
	comp=Z,14nm,1.1s						
BKZ	**Black Stump Fm**	26.11	162	P	P	16 41 17.8	-0.2
TUWZ	**Tuamarina**	27.63	168	P	P	16 41 30.8	-0.7
STKA	**Stephens Creek**	28.75	229	P	P	16 41 41.1	-0.6
	comp=Z,1.8nm,0.5s,baz=31,slow=8.2,SNR=8.4						
	comp=Z,1.8nm,0.5s						
WB0	**Warramunga Arr**	31.28	256	P	P	16 42 04.5	+0.4
WRA	**Warramunga Arr**	31.34	255	P	P	16 42 04.4	-0.4
	comp=Z,0.8nm,0.8s,baz=86,slow=9.4,SNR=5.3						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	31.34	255	IAmb	IAmb	16 42 11.9	
	comp=Z,0.2nm,1.4s						
ASAR	**Alice Springs**	32.24	248	P	P	16 42 12.8	+0.1
	comp=Z,0.2nm,0.4s,baz=76,slow=9.3,SNR=13						
ASAR				PcP	PcP	16 45 00.6	+0.3
	comp=Z,0.4nm,0.5s,baz=64,slow=2.5,SNR=8.0						
ASAR				ScP	ScP	16 48 42.1	+2.1
	comp=Z,0.7nm,1.1s,baz=66,slow=1.5,SNR=4.1						
	comp=Z,0.2nm,0.4s						
BBOO	**Buckleboo**	33.31	231	P	P	16 42 22.3	+0.5
GUMO	**Guam**	35.23	321	LR	LR	16 58 45.2	
	comp=Z,23nm,18.1s,baz=180,slow=39						
KNRA	**Kununurra**	36.60	263	P	P	16 42 50.8	+0.4
KNRA				IAmb	IAmb	16 43 02.9	
	comp=Z,8.9nm,1.2s						
SIJI	**Sorong**	37.51	288	LR	LR	16 58 56.3	
	comp=Z,95nm,18.5s,baz=124,slow=37						
MORW	**Morawa**	48.88	244	P	P	16 44 29.8	+0.1
MAJO	**Matsushiro**	57.38	333	P	P	16 45 32.2	+0.2
MAJO				IAmb	IAmb	16 45 38.8	
	comp=Z,5.8nm,0.9s						
MJB9	**Matsu-Tunnel**	57.38	333	P	P	16 45 32.3	+0.2
MJB9				IAmb	IAmb	16 45 38.8	
	comp=Z,5.7nm,0.9s						
JHS	**Saijyo**	58.57	328	P	P	16 45 38.6	-1.9
VNDA	**Vanda**	63.15	181	P	P	16 46 12.6	+1.7
VNDA				IAmb	IAmb	16 46 15.5	
	comp=Z,4.4nm,1.4s						
SBA	**Scott Base**	63.43	180	P	P	16 46 14.1	+1.3
SBA				IAmb	IAmb	16 46 36.1	
	comp=Z,6.6nm,1.4s						
KLR	**Kul'dur**	70.50	337	P	P	16 46 58.9	+0.8
	comp=Z,1.0nm,0.7s,baz=134,slow=19,SNR=4.1						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	74.30	294	P	P	16 47 23.0	+1.7
	comp=Z,0.4nm,0.3s,baz=131,slow=5.4,SNR=2.6						
	comp=Z,0.4nm,0.3s						
MA2	**Magadan**	74.87	352	LR	LR	17 15 35.9	
	comp=Z,38nm,22.0s,baz=251,slow=32						
QSPA	**South Pole Qui**	75.59	180	P	P	16 47 28.4	+0.3
QSPA				IAmb	IAmb	16 47 53.8	
	comp=Z,8.6nm,1.4s						
YAK	**Yakutsk**	81.58	343	P	P	16 48 01.0	+0.2
	comp=Z,0.9nm,0.3s,baz=206,slow=1.0,SNR=1.9						
	comp=Z,0.9nm,0.3s						
YAK	**Yakutsk**	81.58	343	IAmb	IAmb	16 48 01.9	
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	81.92	324	P	P	16 48 03.4	+0.3
	comp=Z,0.2nm,0.5s,baz=151,slow=6.6,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TNA	**Tin City**	82.02	10	P	P	16 48 04.5	+1.6
M19K	**Big River Lodg**	82.03	17	P	P	16 48 04.6	+1.4
M19K				IAmb	IAmb	16 48 22.1	
	comp=Z,4.1nm,1.2s						
BILL	**Bilibino**	82.24	360	P	P	16 48 04.6	+0.5
BILL				IAmb	IAmb	16 48 05.2	
	comp=Z,3.1nm,0.7s						
TTA	**Tatalina**	82.40	16	P	P	16 48 05.7	+0.5
J20K	**Nowinta River**	83.90	16	P	P	16 48 13.4	+0.6
RND	**Reindeer**	84.83	18	P	P	16 48 17.9	+0.3
RND				IAmb	IAmb	16 48 18.1	
	comp=Z,2.4nm,0.6s						
VRDI	**Verde Repeater**	85.10	22	P	P	16 48 19.1	-0.1
IMAR	**Indian Mountai**	85.43	15	P	P	16 48 21.1	+0.6
CCB	**Clear Creek Bu**	86.06	18	P	P	16 48 22.5	-1.1
CCB				IAmb	IAmb	16 48 23.6	
	comp=Z,1.9nm,0.5s						
HDA	**Harding Lake**	86.14	18	P	P	16 48 23.8	-0.2
MDM	**Murphy Dome**	86.16	18	P	P	16 48 23.3	-0.9
MDM				IAmb	IAmb	16 48 26.2	
	comp=Z,3.1nm,1.3s						
IL31		86.42	18	P	P	16 48 24.2	-1.1
IL31				IAmb	IAmb	16 48 26.0	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	86.42	18	P	P	16 48 24.3	-1.1
	comp=Z,1.3nm,0.7s,baz=236,slow=5.5,SNR=14						
	comp=Z,1.3nm,0.7s						
J25K	**Salcha River,**	86.78	19	P	P	16 48 26.5	-0.7
J25K				IAmb	IAmb	16 48 43.1	
	comp=Z,4.5nm,1.4s						
BELA	**Belgrano 2**	87.06	176	P	P	16 48 27.8	-0.7
BELA				IAmb	IAmb	16 48 29.1	
	comp=Z,2.1nm,1.0s						
NVAR	**Mina Array Bea**	87.51	49	P	P	16 48 30.0	-1.6
	comp=Z,0.1nm,0.4s,baz=250,slow=2.6,SNR=1.3						
	comp=Z,0.1nm,0.4s						
TROLL	**Troll, Antarti**	93.11	185	P	P	16 48 57.1	+0.1
SNAA	**Sanae**	93.81	183	P	P	16 48 59.7	-0.6
VNA3	**Neumayer Olymp**	94.50	181	P	P	16 49 02.6	-0.7
VNA2	**Neumayer--Watz**	94.76	182	P	P	16 49 04.6	+0.1
	baz=173,slow=4.0						
MKAR	**Makanchi Array**	96.59	317	P	P	16 49 12.1	-1.2
	comp=Z,0.3nm,0.6s,baz=80,slow=6.1,SNR=4.1						
	comp=Z,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	96.81	324	P	P	16 49 12.4	-1.6
	comp=Z,0.5nm,0.5s,baz=121,slow=7.9,SNR=3.0						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	119.82	345	PKP	PKPdf	16 54 32.6	-0.3
	comp=Z,1.3nm,0.6s,baz=86,slow=6.2,SNR=11						
FINES	**FINESS Array B**	125.23	338	PKP	PKPdf	16 54 42.8	-0.5
	comp=Z,0.8nm,0.8s,baz=336,slow=3.0,SNR=1.8						
ESDC	**Sonseca Array**	153.54	344	PKPbc	PKiKP	16 55 42.5	+0.2
	comp=Z,0.3nm,0.5s,baz=339,slow=3.2,SNR=2.5						

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*IDC **30** 16:44:06.9±2.3, 36°.44N×3°.58E, h0^{km}, mb3.3/1, mbtmp3.2/4, ML3.1/3, MS3.2/2, Error ellipse: s-maj=41.1km s-min=22.3km az=178.0*

*CRAAG **30** 16:44:06.9, 36°.33N×3°.44E, Ml3.2*

*MDD **30** 16:44:08.8±0.8, 36°.28N×3°.48E, h9^{km}±14^{km}, Mb4.2/15, M_mb3.6/13, Error ellipse: s-maj=19.9km s-min=4.1km az=135.0*

ISC 30 16:44:08.8±0.8**, 36°.36N**±0°.04×**3°.51E**±0°.04**, h18**^{km}**, n33,** σ**1^{s}.34**/37**, 13C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	0.21	196	P	Pb	16 44 11.9	-2.0
ABMS	**Boumerdes**	0.39	357	P	Pg	16 44 16.4	-0.5
AKET	**Djebel Ketaf**	0.43	136	P	Pg	16 44 16.6	-1.1
ABA	**Alger-Bouzarea**	0.58	319	P	Pg	16 44 19.1	-1.3
CKHR	**Kef el Ahmar**	1.66	101	P	Pb	16 44 40.3	+1.5
DFRA	**Djebel Bou Aff**	1.92	84	P	Pn	16 44 41.3	+0.6
OKGL	**Djebel Kef Gue**	2.34	263	P	Pg	16 45 02.0	+8.3
OJGS	**Djebel Guires**	2.40	250	P	Pg	16 45 09.0	+14
OJBR	**Djebel Berber**	2.68	254	P	Pg	16 45 04.0	+3.8
ODJA	**Bouhanifia**	3.15	252	P	Pg	16 45 10.0	+1.0
CMAH	**Djebel Manchou**	3.16	84	P	Pn	16 44 58.7	+1.0
EIBI	**Ibiza**	3.17	328	Pn	Pn	16 44 58.3	+0.6
EIBI				⇑*i*Vmb_V		16 45 03.6	
	481nm,SNR=2.3						
EIBI				Sn	Sn	16 45 33.5	-1.5
ETOS	**Mallorca**	3.45	351	Pn	Pn	16 45 01.7	+0.1
ETOS				⇑*i*Vmb_V		16 45 06.2	
	439nm,SNR=2.0						
ETOS				Sn	Sn	16 45 42.4	+0.4
OTSS	**Djebel Tessala**	3.66	254	P	Pn	16 45 03.0	-1.6
EMUR	**La Murta**	4.07	293	Pn	Pn	16 45 10.5	+0.2
EMUR				⇑*i*Vmb_V		16 45 20.5	
	143nm,SNR=1.7						
ECOL	**Islas Columbre**	4.18	329	Pn	Pn	16 45 11.7	+0.2
ECOL				Sn	Sn	16 45 59.2	-0.6
EZAR	**Zarzadilla de**	4.42	292	Pn	Pn	16 45 15.7	+0.6
ETOB	**Tobarra**	4.62	301	Pn	Pn	16 45 18.5	+0.7
ETOB				⇑*i*Vmb_V		16 45 22.0	
	193nm,SNR=2.8						
ETOB				Sn	Sn	16 46 08.4	-2.6
KEST	**Kesra**	4.77	96	Pn	Pn	16 45 20.7	+0.9
	0.5nm,0.3s,baz=280,slow=8.5,SNR=7.0						
KEST				Sn	Sn	16 46 14.6	-0.1
	0.2nm,0.3s,baz=330,slow=20,SNR=1.8						
	2.0nm,0.5s						
ECHE	**Chera**	4.79	314	Pn	Pn	16 45 21.2	+1.2
ECHE				⇑*i*Vmb_V		16 45 21.6	
	279nm,SNR=2.3						
EMOS	**Mosqueruela**	5.08	323	Pn	Pn	16 45 24.6	+0.5
EMOS				⇑*i*Vmb_V		16 45 27.3	
	157nm,SNR=1.7						
EMOS				Sn	Sn	16 46 21.0	-1.3
EBER	**Berja**	5.17	278	Pn	Pn	16 45 25.5	+0.1
EBER				⇑*i*Vmb_V		16 45 26.3	
	124nm,SNR=1.6						
EPOB	**Poblet**	5.33	340	Pn	Pn	16 45 28.9	+1.4
EPOB				⇑*i*Vmb_V		16 45 37.7	
	146nm,SNR=1.4						
EPOB				Sn	Sn	16 46 25.9	-2.7
EQES	**Quesada**	5.45	287	Pn	Pn	16 45 29.5	+0.3
EQES				⇑*i*Vmb_V		16 45 39.3	
	109nm,SNR=2.3						
EMIR	**Miracle**	5.76	345	Pn	Pn	16 45 34.5	+1.2
EMIR				⇑*i*Vmb_V		16 45 36.0	
	523nm,SNR=2.2						
EMIR				Sn	Sn	16 46 37.6	-1.4
EJON	**La Jonquera**	6.10	356	Pn	Pn	16 45 39.0	+1.0
EJON				⇑*i*Vmb_V		16 45 42.8	
	194nm,SNR=1.8						
ETOR	**Torete**	6.23	317	Pn	Pn	16 45 39.5	-0.3
ETOR				⇑*i*Vmb_V		16 45 46.4	
	95nm,SNR=1.3						
ESDC	**Sonseca Array**	6.76	302	Pn	Pn	16 45 47.5	+0.3
	0.3nm,0.3s,baz=111,slow=13,SNR=12						
	0.9nm,0.4s						
GUD	**Guadarrama**	7.37	308	Pn	Pn	16 45 55.2	-0.5
GUD				⇑*i*Vmb_V		16 45 59.8	
	41nm,SNR=1.8						
MDT	**Midelt**	7.57	244	Pn	Pn	16 45 59.7	+1.4
	0.1nm,0.3s,baz=54,slow=19,SNR=1.4						
MDT				Lg	Lg	16 48 10.9	
	0.2nm,0.3s,baz=39,slow=13,SNR=2.2						
	0.4nm,0.3s						
VRAC	**Vranov**	16.08	32	LR	LR	16 53 01.1	
	comp=Z,34nm,20.5s,baz=131,slow=33						
TORD	**Torodi Ar. Bea**	23.17	184	P	P	16 49 15.6	+1.2
	0.8nm,0.8s,baz=360,slow=10.0,SNR=3.8						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	56.76	44	LR	LR	17 20 55.3	
	comp=Z,54nm,18.4s,baz=74,slow=39						

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*TUL **30** 16:47:59.4±1.1, 36°.67N±0°.01×97°.84W±0°.02, h6^{km}±7^{km}, ML2.6, mb_Lg2.4/29(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=109.0*

NEIC 30 16:47:59.3±0.4**, 36°.65N**±0°.01×**97°.83W**±0°.01**, h7**^{km}±6^{km}**, Error ellipse: s-maj=1.6km s-min=1.2km az=182.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	0.98	254	Pg	Pg	16 48 17.8	-0.4
T35A	**Sooner Cattle**	1.09	76		Pg	16 48 19.9	-0.3
OKCFA	**Oklahoma City**	1.27	166		Pn	16 48 23.5	0.0
OKCSW	**OKLAHOMA CITY**	1.29	166		Pn	16 48 23.6	-0.1
FNO	**Franklin**	1.44	166		Pn	16 48 25.9	+0.1
TUL1	**Leonard**	1.81	114		Pn	16 48 31.5	+0.7
R32A	**Long Quarter,**	1.90	339		Pn	16 48 32.4	+0.2
X34A	**Smith Ranch, M**	2.05	180	Pn	Pn	16 48 34.0	-0.2
WMOK	**Wichita Mounta**	2.06	202	IAmb_Lg		16 49 05.2	
	comp=Z,18nm,0.8s						
KSU1	**Kansas State U**	2.63	21	Pn	Pn	16 48 42.4	+0.3
W39A	**Magazine**	3.59	113	IAmb_Lg		16 49 59.5	
	comp=Z,7.9nm,0.8s						
MIAR	**Mount Ida**	4.05	120	IAmb_Lg		16 50 12.5	
	comp=Z,7.3nm,0.7s						
MGMO	**Mountain Grove**	4.48	82	IAmb_Lg		16 50 22.0	
	comp=Z,6.2nm,0.7s						
P38A	**Dawn**	4.50	47	IAmb_Lg		16 50 31.1	
	comp=Z,7.3nm,0.8s						
X40A	**Basin Creek Fa**	4.61	117	IAmb_Lg		16 50 29.1	
	comp=Z,6.0nm,0.7s						
FCAR	**Ozark Folk Cen**	4.67	98	IAmb_Lg		16 50 38.5	
	comp=Z,6.1nm,1.0s						
WHAR	**Wooly Hollow**	4.70	105	IAmb_Lg		16 50 34.4	
	comp=Z,8.2nm,1.0s						
T25A	**Trinidad**	5.30	277	IAmb_Lg		16 50 49.2	
	comp=Z,6.1nm,0.7s						
P40A	**Paris**	5.39	56	IAmb_Lg		16 50 55.3	
	comp=Z,5.6nm,0.9s						
CCM	**Cathedral Cave**	5.43	73	IAmb_Lg		16 51 00.5	
	comp=Z,4.8nm,0.9s						
Q24A	**Divide**	6.24	294	IAmb_Lg		16 51 20.5	
	comp=Z,5.2nm,0.8s						
JCT	**Junction City**	6.38	196	IAmb_Lg		16 51 26.7	
	comp=Z,5.3nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
N23A	Red Feather La	7.62	306	IAmb_Lg		16 52 19.3	
	comp=Z,4.0nm,0.8s						

*IDC **30** 16:56:50.2±2.4, 33°.77S×178°.49W, h0^{km}, mb3.9/2, mbtmp4.0/3, ML4.2/1, Error ellipse: s-maj=67.6km s-min=41.3km az=138.0*

*NEIC **30** 16:56:52.4±1.7, 33°.9S±0°.2×178°.7W±0°.2, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=37.0km s-min=24.3km az=143.0*

ISC 30 16:56:55.2±1.8**, 33°.8S**±0°.1×**178°.6W**±0°.3**, h37^{km}, n17, σ0^{s}.84**/18**, mb4.0**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.50	213	Pn	Pn	16 58 02.3	+1.5
URZ	Urewera	5.63	217	Pn	Pn	16 58 16.5	+0.1
	6.9nm,0.3s,baz=46,slow=14,SNR=46						
URZ				Sn	Sn	16 59 20.3	+0.6
	7.1nm,0.3s,baz=18,slow=19,SNR=8.0						
	15nm,0.3s						
URZ	Urewera	5.63	217	Pn	Pn	16 58 15.9	-0.4
BKZ	Black Stump Fm	6.64	215	Pn	Pn	16 58 29.3	-0.9
BFZ	Birch Farm	7.99	210	Pn	Pn	16 58 47.0	-1.6
EIDS	Eidsvold	27.62	280	P	P	17 02 38.6	-0.7
EIDS				IAmb	IAmb	17 02 48.0	
	comp=Z,9.8nm,1.4s						
STKA	Stephens Creek	33.38	262	P	P	17 03 30.4	+0.3
STKA				IAmb	IAmb	17 03 31.1	
	comp=Z,0.8nm,1.1s						
ASAR	Alice Springs	42.56	271	P	P	17 04 48.4	+0.8
	comp=Z,1.2nm,0.7s,baz=110,slow=7.9,SNR=34						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	42.56	271	P	P	17 04 47.8	+0.2
WR0	Warramunga Arr	43.68	276	P	P	17 04 55.7	-1.0
WR0				IAmb	IAmb	17 05 24.6	
	comp=Z,7.7nm,1.4s						
WB2	Warramunga Arr	43.85	276	P	P	17 04 57.1	-0.9
WB2				IAmb	IAmb	17 05 00.4	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	43.86	276	P	P	17 04 58.6	+0.5
	comp=Z,1.2nm,0.6s,baz=120,slow=7.1,SNR=8.5						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	43.86	276	P	P	17 04 57.6	-0.5
KNRA	Kununurra	50.57	277	P	P	17 05 51.0	+0.6
KURK	Kurchatov	123.03	312		PKiKP	17 15 47.3	0.0
KURBB	Kurchatov Arra	123.06	312	PKP	PKPdf	17 15 47.3	+0.1
	comp=Z,0.2nm,0.5s,baz=104,slow=3.1,SNR=2.4						
FINES	FINESS Array B	148.16	338	PKPbc	PKPbc	17 16 37.0	+0.7
	comp=Z,1.0nm,0.5s,baz=25,slow=3.7,SNR=7.3						

IDC 30 17:01:51.8±3.2**, 31°.34S**×**177°.68W, h0^{km}, mb3.4**/2**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=75.9km s-min=37.9km az=114.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.12	210	Pn	Pn	17 03 51.0	0.0
	0.3nm,0.3s,baz=107,slow=19,SNR=1.3						
URZ				Sn	Sn	17 05 24.2	+0.7
	0.4nm,0.3s,baz=126,slow=21,SNR=1.2						
	5.2nm,0.9s						
ASAR	Alice Springs	43.34	268	P	P	17 09 55.8	-0.1
	0.4nm,0.8s,baz=107,slow=7.5,SNR=6.4						
	0.4nm,0.8s						
WRA	Warramunga Arr	44.41	273	P	P	17 10 04.4	-0.1
	0.3nm,0.4s,baz=113,slow=7.6,SNR=6.4						
	0.3nm,0.4s						
FINES	FINESS Array B	146.12	340	PKPbc	PKPdf	17 21 32.2	+0.1
	0.3nm,0.4s,baz=20,slow=4.4,SNR=4.6						

*IDC **30** 17:25:09.7±0.6, 55°.52S×26°.54W, h0^{km}, mb4.6/11, mbtmp4.6/12, ML3.9/1, MS4.1/27, Error ellipse: s-maj=18.8km s-min=17.3km az=25.0*

*NEIC **30** 17:25:11.4±2.2, 55°.5S±0°.1×26°.6W±0°.2, h10^{km}±1^{km}, mb4.8/34, Error ellipse: s-maj=21.3km s-min=14.9km az=199.0*

ISC 30 17:25:14.9±0.5**, 55°.57S**±0°.09×**26°.69W**±0°.08**, h38^{km}, n73, σ0^{s}.90**/56**, mb4.7**/21**, MS4.1**/26**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.80	279	Pn	Pn	17 26 37.5	-0.7
HOPE				Sn	Sn	17 27 42.4	-0.9
VNA1	Neumayer--Stat	17.14	159	P	P	17 29 12.4	-0.1
VNA3	Neumayer Olymp	17.35	161	P	Pn	17 29 14.3	+0.5
VNA2	Neumayer--Watz	17.54	159	P	Pn	17 29 16.7	+0.7
	baz=315,slow=14						
SNAA	Sanae	19.07	157	P	P	17 29 33.1	-0.6
SNAA	Sanae	19.07	157	P	P	17 29 33.1	-0.6
	0.4nm,0.3s,baz=294,slow=11,SNR=28						
SNAA				LR	LR	17 36 58.8	
	comp=Z,380nm,19.1s,baz=296,slow=37						
	4.1nm,0.7s						
SNAA	Sanae	19.07	157	P	P	17 29 32.8	-1.0
PMSA	Palmer Station	20.43	228	P	P	17 29 49.8	+1.3
	45nm,0.7s,baz=74,slow=6.1,SNR=24						
PMSA				LR	LR	17 36 57.9	
	comp=Z,390nm,18.5s,baz=74,slow=34						
	45nm,0.7s						
PMSA	Palmer Station	20.43	228	P	P	17 29 49.5	+1.1
PMSA				IAmb	IAmb	17 29 54.2	
	comp=Z,43nm,0.7s						
TROLL	Troll, Antarti	20.55	154	P	P	17 29 49.4	-0.5
BELA	Belgrano 2	22.58	184	P	P	17 30 09.1	-2.4
USHA	Ushuaia	23.58	254	P	P	17 30 21.4	-0.4
	comp=Z,8.6nm,1.0s,baz=57,slow=7.6,SNR=3.9						
USHA				LR	LR	17 37 60.0	
	comp=Z,388nm,18.0s,baz=111,slow=32						
	comp=Z,8.6nm,1.0s						
QSPA	South Pole Qui	34.68	180	LR	LR	17 46 14.8	
	comp=Z,377nm,18.9s,baz=186,slow=36						
QSPA	South Pole Qui	34.68	180	P	P	17 32 00.3	-0.3
QSPA				IAmb	IAmb	17 32 01.8	
	comp=Z,15nm,0.7s						
CPUP	Villa Florida	36.71	310	P	P	17 32 17.8	-0.4
	comp=Z,4.6nm,0.6s,baz=147,slow=7.8,SNR=9.9						
CPUP				LR	LR	17 47 42.6	
	comp=Z,238nm,19.8s,baz=168,slow=37						
	comp=Z,4.6nm,0.6s						
MT09	Talagante	37.44	287	P	P	17 32 23.5	-1.0
MT02	Curacav	37.91	287	P	P	17 32 28.2	-0.1
MT02				IAmb	IAmb	17 32 42.2	
	comp=Z,9.8nm,1.1s						
ZON	Zonda	37.91	292	P	P	17 32 28.5	+0.1
ZON				IAmb	IAmb	17 32 29.3	
	comp=Z,10nm,0.7s						
CO03	El Pedregal	39.53	290	P	P	17 32 42.8	+0.7
CO01	Juntas del Tor	39.90	292	P	P	17 32 46.9	+1.7
CO01				IAmb	IAmb	17 32 48.1	
	comp=Z,10nm,0.7s						
SUR	Sutherland	40.24	75	P	P	17 32 48.1	+0.1
	comp=Z,7.2nm,0.8s,baz=210,slow=8.1,SNR=8.2						
SUR				LR	LR	17 46 19.1	
	comp=Z,484nm,18.6s,baz=208,slow=32						
	comp=Z,7.2nm,0.8s						
MAW	Mawson	40.37	144	P	P	17 32 48.7	+0.3
	comp=Z,2.2nm,0.7s,baz=208,slow=6.5,SNR=7.7						
MAW				LR	LR	17 48 13.3	
	comp=Z,180nm,20.0s,baz=262,slow=34						
	comp=Z,2.2nm,0.7s						
MAW	Mawson	40.37	144	IAmb	IAmb	17 32 53.2	
	comp=Z,0.8nm,0.9s						
AC04	Llanos de Chal	41.82	292	P	P	17 33 01.2	+0.4
AC04				IAmb	IAmb	17 33 02.8	
	comp=Z,23nm,0.8s						
AC02	Maricunga	41.92	296	P	P	17 33 03.8	+1.6
AC02				IAmb	IAmb	17 33 18.0	
	comp=Z,18nm,1.2s						
AC06	Mina Casimiro	42.13	294	P	P	17 33 04.3	+0.9
AC06				IAmb	IAmb	17 33 04.8	
	comp=Z,42nm,1.5s						
GO02	Mina Guanaco	43.53	296	P	P	17 33 16.0	+1.0
GO02				IAmb	IAmb	17 33 17.9	
	comp=Z,14nm,0.8s						
LVC	Limon Verde	45.31	299	LR	LR	17 55 14.3	
	comp=Z,100nm,18.7s,baz=180,slow=40						
LVC	Limon Verde	45.31	299	P	P	17 33 30.8	+1.4
BOSA	Boshof	45.58	76	P	P	17 33 29.6	-1.6
	comp=Z,5.8nm,0.8s,baz=216,slow=7.4,SNR=15						
BOSA				LR	LR	17 49 34.9	
	comp=Z,607nm,18.7s,baz=192,slow=32						
	comp=Z,5.8nm,0.8s						
BOSA	Boshof	45.58	76	P	P	17 33 29.7	-1.4
BOSA				IAmb	IAmb	17 33 30.8	
	comp=Z,8.1nm,0.8s						
PB07	IPOC Station P	46.53	299	P	P	17 33 39.7	+0.9
SBA	Scott Base	46.58	184	P	P	17 33 38.9	+0.6
SBA				IAmb	IAmb	17 33 42.0	
	comp=Z,4.8nm,0.7s						
PB02	IPOC Station P	46.88	299	P	P	17 33 42.3	+0.9
PB01	IPOC Station P	46.91	300	P	P	17 33 42.5	+0.9
VNDA	Vanda	47.07	183	P	P	17 33 42.9	+0.8
	comp=Z,10nm,0.6s,baz=190,slow=6.4,SNR=39						
	comp=Z,10nm,0.6s						
VNDA	Vanda	47.07	183	P	P	17 33 42.8	+0.7
PB11	IPOC Station P	48.08	300	P	P	17 33 50.9	+0.1
LBTB	Lobatse	48.60	73	LR	LR	17 53 08.2	
	comp=Z,98nm,18.3s,baz=196,slow=35						
LBTB	Lobatse	48.60	73	P	P	17 33 53.5	-1.2
LBTB				IAmb	IAmb	17 34 10.2	
	comp=Z,3.9nm,0.8s						
TSUM	Tsumeb	49.20	61	LR	LR	17 51 24.2	
	comp=Z,165nm,18.9s,baz=168,slow=32						
RCBR	Riachuelo	50.15	348	LR	LR	17 52 28.6	
	comp=Z,150nm,18.3s,baz=318,slow=33						
LPAZ	La Paz	50.33	304	P	P	17 34 09.9	+1.3
	comp=Z,12nm,0.8s,baz=143,slow=5.3,SNR=46						
LPAZ				LR	LR	17 55 22.7	
	comp=Z,59nm,21.1s,baz=210,slow=36						
	comp=Z,12nm,0.8s						
LPAZ	La Paz	50.33	304	P	P	17 34 09.6	+1.1
LPAZ				IAmb	IAmb	17 34 10.8	
	comp=Z,14nm,0.9s						
SAML	Samuel	54.67	314	P	P	17 34 39.8	-0.1
LSZ	Lusaka	57.94	69	LR	LR	17 57 30.4	
	comp=Z,329nm,18.1s,baz=158,slow=34						
NNA	Nana	58.27	298	LR	LR	18 04 01.6	
	comp=Z,39nm,18.1s,baz=149,slow=40						
MDP	Montagnes des	64.15	331	LR	LR	18 02 49.0	
	comp=Z,140nm,18.8s,baz=82,slow=35						
DBIC	Dimbokro	64.61	24	LR	LR	17 58 00.2	
	comp=Z,211nm,18.9s,baz=176,slow=30						
OPO	Ambohidratompo	65.78	88	LR	LR	18 00 17.8	
	comp=Z,221nm,18.9s,baz=14,slow=32						
OTAV	Otavalo	69.63	303	P	P	17 36 19.8	-1.0
OTAV				IAmb	IAmb	17 36 37.9	
	comp=Z,8.3nm,1.4s						
ROSC	El Rosal	71.79	309	LR	LR	18 10 09.5	
	comp=Z,125nm,19.5s,baz=208,slow=38						
TOA0	Torodi Ar. Sit	72.50	29	P	P	17 36 37.7	+0.2
TORD	Torodi Ar. Bea	72.50	29	P	P	17 36 37.6	+0.1
	comp=Z,9.0nm,0.6s,baz=200,slow=6.5,SNR=35						
TORD				LR	LR	18 04 02.5	
	comp=Z,97nm,18.9s,baz=207,slow=32						
	comp=Z,9.0nm,0.6s						
TORD	Torodi Ar. Bea	72.50	29	P	P	17 36 37.0	-0.5
TORD				IAmb	IAmb	17 36 38.4	
	comp=Z,6.7nm,0.7s						
BAUV	El Baul	72.89	317	P	P	17 36 40.2	+0.3
SJCC	San Jacinto, C	76.68	311	P	P	17 37 02.3	+0.4
SJCC				IAmb	IAmb	17 37 03.5	
	comp=Z,12nm,1.0s						
SJG	San Juan	80.63	322	LR	LR	18 15 12.9	
	comp=Z,57nm,19.3s,baz=220,slow=37						
ATD	Arta Tunnel	88.21	67	LR	LR	18 17 49.9	
	comp=Z,89nm,18.0s,baz=352,slow=36						
STKA	Stephens Creek	92.33	170	P	P	17 38 21.6	+0.5
	comp=Z,0.6nm,0.3s,baz=156,slow=8.1,SNR=3.6						
STKA				LR	LR	18 18 58.7	
	comp=Z,171nm,18.2s,baz=211,slow=35						
	comp=Z,0.6nm,0.3s						
PPT	Papeete	92.71	233	LR	LR	18 11 20.7	
	comp=Z,43nm,19.3s,baz=144,slow=30						
RAR	Rarotonga	93.78	223	LR	LR	18 13 20.1	
	comp=Z,43nm,19.4s,baz=185,slow=31						
ESDC	Sonseca Array	96.84	17	LR	LR	18 18 59.3	
	comp=Z,75nm,19.3s,baz=146,slow=33						
ASAR	Alice Springs	99.36	162	P	Pdif	17 38 52.5	-0.7
	comp=Z,0.7nm,0.6s,baz=186,slow=3.8,SNR=19						
	comp=Z,0.7nm,0.6s						
EIL	Elat	99.82	51	LR	LR	18 20 28.3	
	comp=Z,77nm,19.7s,baz=272,slow=33						
WRA	Warramunga Arr	103.08	162	Pdiff	Pdif	17 39 09.8	0.0
	comp=Z,0.3nm,0.7s,baz=195,slow=4.2,SNR=2.0						
YKA	Yellowknife Ar	136.00	318	PKP	PKPdf	17 44 30.8	+0.6
	comp=Z,1.7nm,0.8s,baz=121,slow=2.0,SNR=5.1						
KURBB	Kurchatov Arra	136.84	64	PKP	PKPdf	17 44 32.5	+0.4
	comp=Z,0.2nm,0.4s,baz=181,slow=10,SNR=2.4						
KURK	Kurchatov	136.94	64		PKPdf	17 44 32.5	+0.2
RIDG	Independent Ri	148.91	311		PKiKP	17 44 58.6	+0.2
PAX	Paxson	148.99	309	PKPdf	PKPdf	17 44 54.8	+1.6
ILAR	Eielson Array	150.00	312	PKPbc	PKiKP	17 45 00.5	-0.1
	comp=Z,6.6nm,0.8s,baz=129,slow=1.9,SNR=52						
SONM	Songino Array	150.41	85	PKP	PKPdf	17 44 56.2	+0.1
	comp=Z,0.5nm,0.8s,baz=174,slow=2.9,SNR=2.2						

*IDC **30** 17:36:17.6±1.2, 22°.05S×170°.28E, h0^{km}, mb3.8/7, mbtmp4.0/10, ML4.2/3, MS3.8/32, Error ellipse: s-maj=39.1km s-min=21.9km az=166.0*

*GCMT **30** 17:36:21.5±0.4, 21°.97S±0°.03×170°.20E±0°.03, h23^{km}±1^{km}, MW4.9/60, Moment Tensor Solution. s18,c21; s60,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.29±.20; M$_{\theta\theta}$1.72±.13; M$_{\phi\phi}$0.56±.11; M$_{r\theta}$-1.04±.19; M$_{\theta\phi}$1.12±.06; M$_{\phi r}$0.51±.16; Best double couple: M$_0$2.61100×10^{16} NP1:ϕ_s220.00000°, δ41.00000°, λ-121.00000°. NP2: ϕ_s79.00000°, δ56.00000°, λ-66.00000°. Principal axes: T 2.4900, Plg8.0000°, Azm152.0000°; N 0.2390, Plg20.0000°, Azm245.0000°; P -2.7320, Plg69.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 17:36:21.5±1.4, 21°.80S±0°.09×170°.14E±0°.07, h18^{km}±4^{km}, mb4.4/9 Error ellipse: s-maj=12.6km s-min=8.6km az=196.0*

*NOU **30** 17:36:23.4, 21°.70S×169°.82E, h0^{km}, ML4.1/11, Southeast of Loyalty Islands*

ISC 30 17:36:22.2±0.6**, 21°.87S**±0°.07×**170°.16E**±0°.06**, h25^{km}, n94, σ0^{s}.87**/51**, mb4.1**/11**, MS3.9**/37**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.02	281		Pn	17 36 53.6	-1.0
PINNC	Pines Island,	2.62	253		Pn	17 37 02.5	-0.4
PINNC	Pines Island,	2.62	253	P	Pn	17 37 03.3	+0.4
LIFNC	LIFOU	2.93	291	Pn	Pn	17 37 06.0	-1.1
LIFNC	LIFOU	2.93	291	P	Pn	17 37 06.1	-1.1
YATNC	Mamie plateau,	3.04	266	P	Pn	17 37 08.2	-0.5
OUENC	Ouen Island, N	3.12	259		Pn	17 37 09.8	-0.1
OUENC	Ouen Island, N	3.12	259	P	Pn	17 37 10.4	+0.6
DZM	Mont Dzumac	3.46	266	ePn	Pn	17 37 14.7	+0.2
DZM				eSn	Sn	17 37 54.8	+0.1
	497nm,25.8s						
DZM	Mont Dzumac	3.46	266	Pn	Pn	17 37 14.7	+0.2
	10.0nm,0.3s,baz=122,slow=18,SNR=68						
DZM				Sn	Sn	17 37 54.9	+0.2
	13nm,0.3s,baz=180,slow=19,SNR=13						
DZM				LR	LR	17 38 24.7	
	comp=Z,466nm,18.8s,baz=88,slow=36						
	22nm,0.3s						
DZM	Mont Dzumac	3.46	266		Pn	17 37 14.1	-0.4
DZM	Mont Dzumac	3.46	266	P	Pn	17 37 14.6	+0.1
ONTNC	Ouen Toro	3.46	262		Pn	17 37 14.4	-0.1
ONTNC	Ouen Toro	3.46	262	P	Pn	17 37 15.0	+0.5
NOUC	Port Laguerre	3.59	266	P	Pn	17 37 16.3	+0.1
RTV	Rentapao	4.38	338	P	Pn	17 37 27.4	+0.3
DVP	Devils Point	4.53	335	P	Pn	17 37 29.5	+0.4
KOUNC	Koumac, New Ca	5.64	282	Pn	Pn	17 37 44.7	+0.3
MSVF	Nonsavu	8.49	62	Pn	Pn	17 38 23.5	-0.2
	0.3nm,0.3s,baz=218,slow=8.5,SNR=11						
	20nm,1.1s						
RAO	Raoul Island	13.02	127	LR	LR	17 43 26.3	
	comp=Z,372nm,18.1s,baz=269,slow=33						
HNR	Honiara	15.79	320	LR	LR	17 45 18.4	
	comp=Z,412nm,20.4s,baz=132,slow=34						
URZ	Urewera	17.39	161	P	Pn	17 40 20.1	-3.0
	0.1nm,0.3s,baz=303,slow=22,SNR=3.9						
URZ				LR	LR	17 45 40.9	
	comp=Z,387nm,19.8s,baz=31,slow=33						
	19nm,1.1s						
URZ	Urewera	17.39	161	P	Pn	17 40 22.9	-0.2
BKZ	Black Stump Fm	18.07	164	P	Pn	17 40 31.7	+0.1
AFI	Afiamalu	18.91	68	LR	LR	17 46 10.5	
	comp=Z,68nm,18.6s,baz=178,slow=31						
RPZ	Rata Peaks	21.80	178	LR	LR	17 49 06.8	
	comp=Z,341nm,18.4s,baz=352,slow=36						
CTA	Charters Tower	22.39	270	LR	LR	17 49 28.3	
	comp=Z,177nm,18.0s,baz=98,slow=35						
KRVT	Keravat (AS076	24.78	312	P	P	17 41 43.7	+1.4
	8.8nm,0.9s,baz=252,slow=13,SNR=3.7						
	8.8nm,0.9s						
PMG	Port Moresby	25.34	296	LR	LR	17 49 54.5	
	comp=Z,237nm,20.3s,baz=130,slow=32						
STKA	Stephens Creek	27.29	243	LR	LR	17 51 40.8	
	comp=Z,156nm,21.5s,baz=62,slow=34						
RAR	Rarotonga	27.95	94	LR	LR	17 52 48.6	
	comp=Z,47nm,18.6s,baz=260,slow=36						
WR0	Warramunga Arr	33.28	267	P	P	17 42 57.6	-0.3
ASAR	Alice Springs	33.42	260	P	P	17 42 58.5	-0.7
	0.4nm,0.9s,baz=71,slow=8.4,SNR=6.6						
	0.4nm,0.9s						
WB0	Warramunga Arr	33.45	267	P	P	17 42 59.6	+0.2
WB0				IAmb	IAmb	17 43 10.4	
	comp=Z,7.4nm,1.2s						
WB2	Warramunga Arr	33.46	267	P	P	17 42 58.4	-1.1
WB2				IAmb	IAmb	17 43 10.8	
	comp=Z,9.6nm,1.4s						
WRA	Warramunga Arr	33.47	267	P	P	17 42 59.6	-0.1
	comp=Z,0.3nm,0.4s,baz=98,slow=8.4,SNR=10						
WRA				LR	LR	17 56 34.8	
	comp=Z,246nm,18.2s,baz=22,slow=36						
	comp=Z,0.3nm,0.4s						
WRA	Warramunga Arr	33.47	267	P	P	17 42 59.7	+0.1
TBI	Tubuai	37.22	100	eS	S	17 49 18.1	+0.6
	comp=Z,187nm,31.8s						
TBI				eLR	LR	17 53 03.0	
	comp=Z,187nm,31.8s						
PPT2	Papeete2	38.06	91	eLR	LR	17 53 26.5	
	comp=Z,224nm,31.5s						
GUMO	Guam	43.10	323	LR	LR	18 00 06.0	
	comp=Z,76nm,19.6s,baz=161,slow=33						
SIJI	Sorong	43.24	294	LR	LR	18 01 52.0	
	comp=Z,148nm,20.9s,baz=174,slow=35						
BATI	Baumata	46.00	277	LR	LR	18 03 49.4	
	comp=Z,794nm,18.8s,baz=236,slow=36						
TAOE	Nuku Hiva Isla	49.42	83	eLR	LR	17 58 45.0	
	comp=Z,119nm,24.7s						
KAPI	Kappang	51.55	281	LR	LR	18 10 34.4	
	comp=Z,160nm,18.1s,baz=144,slow=40						
DAV	Davao City (W)	52.31	298	LR	LR	18 06 35.6	
	comp=Z,66nm,20.3s,baz=94,slow=35						
VNDA	Vanda	55.84	182	LR	LR	18 06 45.9	
	comp=Z,97nm,18.5s,baz=305,slow=33						
JHJ	Hachijo jima 2	61.90	331	LR	LR	18 13 10.4	
	comp=Z,46nm,18.7s,baz=159,slow=36						
LEM	Lembang	62.03	274	LR	LR	18 17 06.0	
	comp=Z,222nm,18.2s,baz=163,slow=39						
JOW	Kunigami	63.15	318	LR	LR	18 10 32.1	
	comp=Z,56nm,21.3s,baz=296,slow=32						
QSPA	South Pole Qui	68.19	180	LR	LR	18 13 13.3	
	comp=Z,82nm,18.2s,baz=346,slow=33						
QSPA	South Pole Qui	68.19	180	P	P	17 47 22.4	+2.1
QSPA				IAmb	IAmb	17 47 27.3	
	comp=Z,4.3nm,1.0s						
ASAJ	Asahikawa	70.36	339	LR	LR	18 15 17.8	
	comp=Z,34nm,20.1s,baz=160,slow=33						
KSRS	Korea Array	71.16	326	LR	LR	18 17 54.0	
	comp=Z,43nm,18.8s,baz=160,slow=35						
RPN	Rapa Nui	72.27	113	LR	LR	18 09 55.0	
	comp=Z,36nm,20.6s,baz=210,slow=28						
PSI	Prapat	73.71	280	LR	LR	18 23 31.3	
	comp=Z,252nm,18.0s,baz=156,slow=38						
SHEM	Shemya Is, Ala	74.36	2	LR	LR	18 14 22.1	
	comp=Z,56nm,21.1s,baz=145,slow=31						
KLR	Kul'dur	78.61	335	LR	LR	18 21 51.6	
	comp=Z,60nm,19.1s,baz=186,slow=35						
BELA	Belgrano 2	79.41	175	P	P	17 48 25.3	-0.4
BELA				IAmb	IAmb	17 48 37.7	
	comp=Z,4.2nm,1.1s						
CMAR	Chiang Mai Arr	80.37	294	P	P	17 48 33.8	+1.9
	comp=Z,0.7nm,0.7s,baz=148,slow=3.3,SNR=6.4						
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	80.37	294	P	P	17 48 32.4	+0.6
MA2	Magadan	82.70	350	LR	LR	18 19 53.6	
	comp=Z,88nm,21.8s,baz=166,slow=32						
PMSA	Palmer Station	84.15	160	LR	LR	18 19 42.7	
	comp=Z,86nm,18.3s,baz=207,slow=31						
SEY	Seymchan	85.68	352	LR	LR	18 27 04.4	
	comp=Z,50nm,18.0s,baz=184,slow=36						
SNAA	Sanae	86.58	182	LR	LR	18 26 58.3	
	comp=Z,87nm,18.8s,baz=328,slow=35						
YAK	Yakutsk	89.63	342	LR	LR	18 25 40.4	
	comp=Z,34nm,19.4s,baz=96,slow=33						
SONM	Songino Array	89.83	323	P	P	17 49 18.1	-0.7
	comp=Z,0.4nm,0.6s,baz=151,slow=3.4,SNR=3.5						
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	89.83	323	IAmb	IAmb	17 49 19.2	
	comp=Z,2.4nm,1.3s						
NVAR	Mina Array Bea	89.90	48	P	P	17 49 18.6	-0.8
	comp=Z,0.3nm,0.2s,baz=238,slow=6.0,SNR=3.9						
	comp=Z,0.3nm,0.2s						
ILAR	Eielson Array	92.48	17	P	P	17 49 30.9	+0.3
	comp=Z,0.1nm,0.5s,baz=222,slow=1.2,SNR=4.6						
	comp=Z,0.1nm,0.5s						
H03S2	Juan Fernandez	94.05	129	T	T	19 33 19.5	
	baz=238						
H03S1	Juan Fernandez	94.06	129	T	T	19 33 36.6	
	baz=238						
H03S3	Juan Fernandez	94.07	129	T	T	19 33 39.7	
	baz=238						
OKC	Ostrava-Krasne	144.43	329	AMS	AMS	18 28 00.0	
	comp=Z,100nm,22.6s						
PSZ	Piszkesteto	144.75	325	PKPdf	PKPab	17 55 54.8	-0.9
MORC	Moravsky Berou	144.76	329	ePKP	PKPdf	17 55 56.3	-0.5
OSTC	Ostas	144.84	331	AMS	AMS	18 27 40.0	
	comp=Z,100nm,9.6s						
CHVC	Chvalec	144.89	331	eP	PKPbc	17 55 56.1	0.0
CHVC				AMS	AMS	18 27 00.0	
	comp=Z,100nm,4.7s						
MAUC	Maruska	144.90	328	AMS	AMS	18 27 30.0	
	comp=Z,200nm,21.7s						
KRLC	Kraliky	144.92	330	AMS	AMS	18 26 50.0	
	comp=Z,100nm,5.9s						
DPC	Dobruska-Polom	144.94	331	eP	PKPdf	17 55 57.0	0.0
DPC				AMS	AMS	18 28 20.0	
	comp=Z,100nm,11.4s						
UPC	Upice	144.97	331	AMS	AMS	18 27 40.0	
	comp=Z,100nm,8.8s						
JAVC	Velka Javorina	145.31	328	ePKP	PKPdf	17 55 58.4	+0.6
VRAC	Vranov	145.53	329	ePKP	PKPbc	17 55 58.2	0.0
PVCC	Panska Ves	145.59	332	AMS	AMS	18 26 30.0	
	comp=Z,200nm,21.0s						
CLL	Collm	145.66	334	PKPdf	PKPdf	17 55 55.9	-2.3
CLL	Collm	145.66	334	i PKPbc	PKPdf	17 55 57.2	-1.0
	comp=Z,9.0nm,0.9s						
CLL				i (PKiKP)		17 56 03.9	
	comp=Z,14nm,1.6s						
CLL				ex	x	18 00 42.0	
KRUC	Moravsky	145.79	329	ePKP	PKPdf	17 55 58.4	-0.1
PRU	Pruhonice	146.00	332	AMS	AMS	18 26 20.0	
	comp=Z,100nm,21.1s						
TREC	Trest	146.06	330	AMS	AMS	18 27 50.0	
NKC	Novy Kostel	146.71	334	AMS	AMS	18 27 00.0	
	comp=Z,100nm,5.4s						
CKRC	Cesky Krumlov	146.95	330	eP	PKPbc	17 56 01.9	-0.5
CKRC				AMS	AMS	18 26 30.0	
	comp=Z,100nm,12.5s						
KHC	Kasperske Hory	147.05	331	eP	PKPbc	17 56 02.3	-0.5
KHC				AMS	AMS	18 25 50.0	
	comp=Z,100nm,10.9s						
GERES	GERESS Array B	147.21	331	PKPbc	PKPdf	17 56 01.4	+0.4
	comp=Z,2.0nm,0.9s,baz=29,slow=3.0,SNR=15						
GERES	GERESS Array B	147.21	331		PKPdf	17 56 01.1	+0.1

*NDI **30** 17:40:16.8±2.5, 31°.13N×92°.43E, h33^{km}±308^{km}, ML4.0, mb4.0(NEIC)*

*IDC **30** 17:40:18.8±1.0, 30°.02N×92°.47E, h0^{km}, mb3.7/10, mbtmp3.7/12, ML3.4/2, MS3.9/4, Error ellipse: s-maj=35.2km s-min=16.2km az=58.0*

*NEIC **30** 17:40:24.1±1.8, 29°.9N±0°.1×92°.14E±0°.07, h37^{km}±7^{km}, mb4.0/21, Error ellipse: s-maj=15.8km s-min=9.1km az=188.0*

ISC 30 17:40:23.7±0.6**, 30°.07N**±0°.07×**92°.22E**±0°.06**, h35^{km}, n49, σ1^{s}.80**/42**, mb3.8**/12**, MS4.2**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	1.00	249	Pn	Pn	17 40 38.7	-2.9

LSA				Sn	Sn	17 40 52.3	-2.4
TEZP	TEZPUR	3.48	171	*e*P	Pn	17 41 17.8	+2.6
TEZP				*e*S	Sn	17 42 05.2	+10
DIBR	DIBRUGARH	3.51	137	*e*P	Pn	17 41 21.5	+5.8
DIBR				*e*S	Sn	17 42 04.9	+8.9
DIBR				IAML		17 42 07.4	
	comp=E,2µm,0.9s						
LKP	Lekhapani	4.19	130	*e*P	Pn	17 41 26.0	+0.9
LKP				*e*S	Sn	17 42 23.6	+11
LKP				IAML		17 42 31.3	
	comp=N,433nm,0.7s						
LKP				IAML		17 42 32.7	
	comp=E,351nm,0.4s						
GTK	Tadong	4.19	230	*e*P	Pn	17 41 29.8	+4.5
GTK				*e*S	Sn	17 42 31.4	+18
GTK				IAML		17 42 39.5	
	comp=N,89nm,0.9s						
GTK				IAML		17 42 39.7	
	comp=E,96nm,0.8s						
MOKO	MOKOCHONG	4.25	151	*e*P	Pn	17 41 26.1	+0.1
MOKO				*e*S	Sn	17 42 25.5	+11
MOKO				IAML		17 42 31.2	
	comp=E,549nm,0.4s						
MOKO				IAML		17 42 33.0	
	comp=N,314nm,0.4s						
KOHI	KOHIMA	4.64	158	*e*P	Pn	17 41 33.4	+1.9
TURI	Tura	4.80	201	*e*x	x	17 41 22.9	
TURI				*e*S	Sn	17 42 44.2	+16
CM31	Chiang Mai Arr	13.08	151	Pn	Pn	17 43 25.0	-2.0
CMAR	Chiang Mai Arr	13.08	151	Pn	Pn	17 43 24.3	-2.7
	comp=N,0.1nm,0.3s,baz=321,slow=12,SNR=6.1						
	comp=N,0.5nm,0.8s						
KSH	Kashi	16.32	310	P	P	17 44 20.8	+8.0
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NIL	Nilore	16.50	287	Pn	Pn	17 44 11.0	-1.5
NIL				IAmb	IAmb	17 44 17.2	
	comp=Z,11nm,1.0s						
PRZ	Przheval'sk	16.64	322	Pn	Pn	17 44 13.4	-0.8
PRZ				IAmb	IAmb	17 44 22.6	
	comp=Z,6.2nm,0.7s						
KDJ	Kajisay	17.07	319	Pn	Pn	17 44 17.9	-1.9
MK31	Makanchi Array	18.40	338	P	P	17 44 32.4	-3.2
MKAR	Makanchi Array	18.40	338	P	Pn	17 44 37.2	+1.4
	comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=15						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	18.40	338	P	P	17 44 34.1	-1.5
MAKZ	Makanchi	18.51	337	P	P	17 44 36.6	-0.2
KBL	Kabul	20.08	289	P	P	17 44 55.8	+1.4
KBL				IAmb	IAmb	17 45 05.2	
	comp=Z,8.2nm,0.8s						
GAR	Garm	20.09	302	P	P	17 44 54.3	0.0
GAR				IAmb	IAmb	17 45 10.3	
	comp=Z,6.4nm,1.0s						
BTK	Batken	20.11	305	P	P	17 44 56.1	+1.6
BTK				IAmb	IAmb	17 45 08.0	
	comp=Z,5.7nm,0.9s						
SONM	Songino Array	20.83	28	P	P	17 45 01.1	-1.2
	comp=Z,5.8nm,0.8s,baz=213,slow=12,SNR=36						
	comp=Z,5.8nm,0.8s						
SONM	Songino Array	20.83	28		P	17 45 01.2	-1.1
CHGR	Chuyangaron	20.84	300		P	17 45 04.1	+1.7
ULN	Ulaanbaatar	21.12	29	P	P	17 45 04.2	-1.3
ULN				IAmb	IAmb	17 45 07.7	
	comp=Z,7.0nm,1.1s						
HKPS	Hong Kong Po S	21.13	106	P	P	17 45 03.1	-2.4
KURBB	Kurchatov Arra	22.96	337	P	P	17 45 26.1	+1.3
	comp=Z,2.6nm,0.9s,baz=148,slow=10,SNR=13						
	comp=Z,2.6nm,0.9s						
KURK	Kurchatov	23.01	338	P	P	17 45 26.1	+0.8
ZALV	Zalesovo Beam	24.46	349	P	P	17 45 40.7	+1.6
	comp=Z,1.3nm,0.6s,baz=170,slow=8.5,SNR=6.8						
	comp=Z,1.3nm,0.6s						
KSRS	Korea Array	30.45	66	P	P	17 46 30.7	-2.2
	comp=Z,0.9nm,0.9s,baz=257,slow=8.6,SNR=2.5						
	comp=Z,0.9nm,0.9s						
ABKAR	Akbulak array	31.04	317	P	P	17 46 39.0	+1.0
GNI	Garni	39.71	298	LR	LR	18 05 52.4	
	comp=Z,40nm,19.3s,baz=127,slow=38						
MARD	Mardin	42.97	294	P	P	17 48 19.8	+0.2
TIXI	Tiksi	46.12	15	P	P	17 48 45.1	+1.1
TIXI				IAmb	IAmb	17 48 46.3	
	comp=Z,3.1nm,1.2s						
AKASG	Malin Array Be	50.58	313	P	P	17 49 19.3	+0.6
	comp=Z,0.1nm,0.3s,baz=80,slow=6.4,SNR=3.4						
	comp=Z,0.1nm,0.3s						
AKASG	Malin Array Be	50.58	313	IAmb	IAmb	17 49 33.4	
	comp=Z,2.6nm,1.4s						
FINES	FINESS Array B	52.72	326	P	P	17 49 36.9	+2.4
	comp=Z,0.9nm,0.8s,baz=94,slow=11,SNR=2.1						
	comp=Z,0.9nm,0.8s						
NB2	NORSAR Subarra	59.91	326	P	P	17 50 26.8	+1.0
	comp=Z,0.9nm,0.8s,baz=84,slow=6.9						
NOA	NORSAR Array B	59.91	326	P	P	17 50 26.7	+0.8
	comp=Z,0.7nm,0.7s,baz=82,slow=6.7,SNR=4.1						
	comp=Z,0.7nm,0.7s						
NAO01	NORSAR Array S	60.09	326	P	P	17 50 27.9	+0.8
DAVOX	Davos/Dischmat	63.80	311	LR	LR	18 24 17.4	
	comp=Z,143nm,19.2s,baz=182,slow=41						
WRA	Warramunga Arr	64.16	135	P	P	17 50 53.9	-1.0
	comp=Z,0.7nm,0.9s,baz=326,slow=7.1,SNR=5.1						
	comp=Z,0.7nm,0.9s						
ASAR	Alice Springs	66.76	138	P	P	17 51 11.3	-0.3
	comp=Z,0.8nm,0.7s,baz=324,slow=6.5,SNR=20						
	comp=Z,0.8nm,0.7s						
CTA	Charters Tower	72.04	127	LR	LR	18 26 41.7	
	comp=Z,113nm,18.7s,baz=258,slow=39						
BMAR	Burnt Mountain	73.94	20	P	P	17 51 57.2	+2.2
ILAR	Eielson Array	74.95	22	P	P	17 52 01.4	+0.5
	comp=Z,0.7nm,0.8s,baz=300,slow=4.9,SNR=6.8						
	comp=Z,0.7nm,0.8s						
L27K	Beaver Creek,	77.76	22	P	P	17 52 18.7	+1.8
L27K				IAmb	IAmb	17 52 20.4	
	comp=Z,1.6nm,0.8s						
BCAR	Beaver Creek A	77.77	22	P	P	17 52 18.3	+1.4
MDT	Midelt	79.51	302	LR	LR	18 34 47.9	
	comp=Z,97nm,18.9s,baz=136,slow=41						

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*BJI **30** 17:50:50.4±0.0, 24°.34N×122°.64E, h47^{km}, mb4.0/23, mB4.2/14, ML3.8/7, Ms3.8/9, Ms7 3.6/8*

*JMA **30** 17:50:50.9±0.1, 24°N±2°×122°.5E±0°.5, h42^{km}±3^{km}, MD4.3/15, MV4.3/15, NW OFF ISHIGAKIJIMA IS*

*NEIC **30** 17:50:50.9±1.9, 24°.19N±0°.05×122°.54E±0°.05, h44^{km}±6^{km}, mb4.5/72, ML4.0(BJI), ML4.9(TAP), Error ellipse: s-maj=8.0km s-min=6.5km az=146.0*

*NIED **30** 17:50:50.9, 24°.14N×122°.49E, h42^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.99; $M_{\theta\theta}$1.75; $M_{\phi\phi}$-2.75; $M_{r\theta}$3.37; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.38; Fault plane solution: $M_0$3.88000×10^{15} NP1: ϕ_s154.00000°, δ45.00000°, λ19.00000°. NP2: ϕ_s50.00000°, δ77.00000°, λ133.00000°.*

*TAP **30** 17:50:51.0, 24°.20N×122°.53E, h51^{km}, ML4.9, B*

*IDC **30** 17:50:53.4±2.7, 24°.41N×122°.68E, h69^{km}±24^{km}, mb3.9/25, mbtmp4.1/27, MS3.4/4, Error ellipse: s-maj=14.5km s-min=11.5km az=65.0*

ISC 30 17:50:51.2±0.7**, 24°.20N**±0°.02×**122°.49E**±0°.02**, h51**^{km}±6^{km}**, n327, σ1^s.59**/491**, mb4.4**/59**, MS3.2**/5**, 6C-115D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	58	P	Pn	17 51 02.0	-0.3
JYNG				S	Sn	17 51 09.3	-1.0
JYNG	Yonagunijimaku	0.48	58	A	A	17 51 02.0	
	comp=E,44nm,1.6s,comp=E,26nm,0.6s						
YOJ	Yonaguni jima	0.54	61		Pn	17 51 02.7	-0.2
YOJ	Yonaguni jima	0.54	61	P	Pn	17 51 02.9	-0.1
YOJ	Yonaguni jima	0.54	61	P	Pn	17 51 02.9	-0.1
YOJ	Yonaguni jima	0.54	61	⇓*i*P	Pn	17 51 02.7	-0.2
	baz=58						
YOJ				*i* S	Sn	17 51 10.9	-0.5
	baz=58						
YOJ	Yonaguni jima	0.54	61	P	Pn	17 51 02.7	-0.2
YOJ				*e*S	Sn	17 51 10.9	-0.5
YOJ	Yonaguni jima	0.54	61	A	A	17 51 02.7	
	comp=E,24nm,3.7s,comp=E,16nm,1.7s						
EHP	Heping Village	0.70	280	*e*P	Pn	17 51 05.5	+0.6
	baz=278						
EWUT	Wuta	0.70	291	⇓*i*P	Pn	17 51 05.1	+0.2
	baz=289						
EWUT				*e*S	Sn	17 51 16.2	+1.3
	baz=289						
TWC	Suao	0.72	305	⇓*i*P	Pn	17 51 05.4	+0.2
	baz=303						
TWC				*e*S	Sn	17 51 16.1	+0.8
	baz=303						
ENA	Nanau	0.72	289	⇓*i*P	Pn	17 51 05.6	+0.3
	baz=287						
ENA				*e*S	Sn	17 51 16.9	+1.4
	baz=287						
ETL	Fush Village	0.80	268	⇓P	Pn	17 51 06.4	+0.2
	baz=267						
ETL				*e*S	Sn	17 51 18.0	+0.8
	baz=267						
NACB	Ninganchiao	0.82	269		Pn	17 51 06.2	-0.3
NACB				Sn	Sn	17 51 17.5	-0.3
NACB	Ninganchiao	0.82	269	⇓*i*P	Pn	17 51 06.7	+0.1
	baz=268						
NACB				*e*S	Sn	17 51 18.0	+0.2
	baz=268						
EGS		0.82	322	*e*P	Pn	17 51 07.2	+0.6
	baz=320						
EGS				*e*S	Sn	17 51 19.0	+1.2
	baz=320						
TWD	Chiawan	0.83	262	⇓*i*P	Pn	17 51 06.7	0.0
	baz=262						
TWD				S	Sn	17 51 17.7	-0.2
	baz=262						
NDS	Dongshan	0.83	302	⇓*i*P	Pn	17 51 07.3	+0.6
	baz=300						
NDS				*e*S	Sn	17 51 18.9	+0.8
	baz=300						
HWA	Hwalien	0.84	255	⇓*i*P	Pn	17 51 07.0	+0.3
	baz=255						
HWA				S	Sn	17 51 19.1	+0.9
	baz=255						
TEYL	Yanliau Villag	0.88	248	⇓P	Pn	17 51 07.4	+0.1
	baz=251						
TEYL				*e*S	Sn	17 51 19.6	+0.5
	baz=251						
ILA	Ilan	0.89	310	*e*P	Pn	17 51 08.4	+1.0
	baz=308						
ILA				*e*S	Sn	17 51 21.0	+1.7
	baz=308						
NTC	Toucheng	0.89	317	⇓P	Pn	17 51 08.0	+0.5
	baz=315						
NTC				*e*S	Sn	17 51 20.1	+0.7
	baz=315						
TWE	Neicheng	0.92	305	⇓P	Pn	17 51 08.6	+0.8
	baz=304						
TWE				*e*S	Sn	17 51 21.2	+1.2
	baz=304						
ETLH	Xiulin Townshi	0.93	271	⇓*i*P	Pn	17 51 08.2	+0.2
	baz=270						
ETLH				*e*S	Sn	17 51 20.6	+0.3
	baz=270						
TWB1	Santiao Chiao	0.93	330	*e*P	Pn	17 51 08.5	+0.5
	baz=329						
TWB1				*e*S	Sn	17 51 20.5	+0.1
	baz=329						
ETM	Tongmen	0.94	256	⇓*i*P	Pn	17 51 08.1	-0.1
	baz=256						
ETM				*e*S	Sn	17 51 20.2	-0.5
	baz=256						
LATG	Datong	0.94	291	⇓*i*P	Pn	17 51 09.1	+0.8
	baz=290						
LATG				*e*S	Sn	17 51 21.9	+1.1
	baz=290						
ENTT	Nioudou	0.95	298	⇓*i*P	Pn	17 51 09.4	+1.0
	baz=296						
ENTT				*e*S	Sn	17 51 22.3	+1.3
	baz=296						
NDT	Datong Townshi	0.98	295	⇓*e*P	Pn	17 51 09.4	+0.7
	baz=293						
NDT				*e*S	Sn	17 51 22.9	+1.3
	baz=293						
TIPB	Shuangxi	0.98	322	⇓*i*P	Pn	17 51 09.2	+0.5
	baz=320						
TIPB				*e*S	Sn	17 51 22.2	+0.5
	baz=320						
FUSB	Fushanzhiwuyua	1.00	304	⇓P	Pn	17 51 10.1	+1.1
	baz=303						
FUSB				*e*S	Sn	17 51 23.7	+1.6
	baz=303						
TEGC	Jichi Village	1.00	241	*e*P	Pn	17 51 08.9	0.0
	baz=241						
TEGC				*e*S	Sn	17 51 21.9	0.0
	baz=241						
NNSB	Datong	1.04	283	⇓P	Pn	17 51 10.2	+0.6
	baz=282						
NNSB				*e*S	Sn	17 51 24.2	+1.0
	baz=282						
ESL	Shilin	1.04	249	⇓*i*P	Pn	17 51 09.2	-0.3
	baz=249						
ESL				S	Sn	17 51 22.9	-0.1
	baz=249						
NNS	Nan Shan	1.05	284	⇓*e*P	Pn	17 51 10.3	+0.5
	baz=283						
NNS				*e*S	Sn	17 51 24.4	+1.0
	baz=283						
SXI1	Grass Mountain	1.06	328	⇓P	Pn	17 51 10.3	+0.5
	baz=326						
SXI1				*e*S	Sn	17 51 23.8	+0.3
	baz=326						
NWLT	Wulai	1.07	303	⇓*i*P	Pn	17 51 11.2	+1.3
	baz=301						
NWLT				*e*S	Sn	17 51 25.3	+1.5
	baz=301						
NWF	Wu-fen Shan	1.09	323	⇓*e*P	Pn	17 51 10.9	+0.7
	baz=322						
NWF				*e*S	Sn	17 51 24.7	+0.5
	baz=322						
WFSB	Wu-fen Shan	1.09	323	⇓*e*P	Pn	17 51 10.9	+0.8
	baz=322						
WFSB				*e*S	Sn	17 51 24.8	+0.7
	baz=322						
EGFH	Guangfu	1.11	242	⇓*i*P	Pn	17 51 10.1	-0.3
	baz=242						
EGFH				S	Sn	17 51 24.3	-0.3
	baz=242						
YHNB	Yeheng	1.12	295		Pn	17 51 11.1	+0.5
YHNB	Yeheng	1.12	295	P	Pn	17 51 11.9	+1.3
YHNB	Yeheng	1.12	295	P	Pn	17 51 12.0	+1.3
YHNB	Yeheng	1.12	295	⇓P	Pn	17 51 11.8	+1.3
	baz=294						
YHNB				*e*S	Sn	17 51 26.0	+0.9
	baz=294						
WHF	Hehuan Shan	1.12	268	⇓*i*P	Pn	17 51 11.2	+0.2
	baz=267						
WHF				*e*S	Sn	17 51 26.0	+0.4
	baz=267						
IRIF	Iriomote-Funau	1.14	83	P	Pn	17 51 10.8	+0.1
IRIF				S	Sn	17 51 25.1	-0.2
IRIF	Iriomote-Funau	1.14	83	A	A	17 51 10.8	
	comp=E,9.0nm,2.8s,comp=E,13nm,1.0s						
TWA	Mucha	1.14	313	⇓*e*P	Pn	17 51 11.7	+0.9
	baz=312						
TWA				*e*S	Sn	17 51 26.4	+1.0
	baz=312						
NSK	Sanguang	1.14	295	⇓*e*P	Pn	17 51 12.0	+1.1
	baz=294						
NSK				*e*S	Sn	17 51 26.3	+0.8
	baz=294						
FUSS	Fushou	1.14	273	⇓P	Pn	17 51 11.8	+0.7
	baz=272						
FUSS				*e*S	Sn	17 51 26.6	+0.8
	baz=272						
TNOU	National Taiwa	1.16	326	⇓*e*P	Pn	17 51 11.5	+0.5
	baz=324						
TNOU				*e*S	Sn	17 51 25.9	+0.2
	baz=324						
NHDH	Xindian Distri	1.17	311	*e*P	Pn	17 51 12.1	+0.9
	baz=310						
NHDH				*e*S	Sn	17 51 27.9	+1.8
	baz=310						
NHY	Taipei	1.19	315	*e*P	Pn	17 51 13.3	+1.8
	baz=314						
TATO	Taipei	1.20	310		Pn	17 51 12.4	+0.8
TATO				Sn	Sn	17 51 27.4	+0.5
TATO	Taipei	1.20	310	⇓*e*P	Pn	17 51 12.5	+0.9
	baz=309						
TATO				*e*S	Sn	17 51 28.7	+1.9
	baz=309						
HGSD	Ruisui	1.21	235	⇓*i*P	Pn	17 51 11.5	-0.2
	baz=235						
HGSD				*e*S	Sn	17 51 26.3	-0.7
	baz=235						
TWT	Tachien	1.21	273	*e*P	Pn	17 51 12.9	+1.1
	baz=272						
TWT				*e*S	Sn	17 51 28.5	+1.3
	baz=272						
HATJ	Hateruma jima	1.21	96	P	Pn	17 51 12.3	+0.6
HATJ				S	Sn	17 51 27.5	+0.6
HATJ	Hateruma jima	1.21	96	A	A	17 51 12.3	
	comp=E,17nm,3.5s,comp=E,13nm,1.9s						
CHGB	Renai	1.21	264	⇓*e*P	Pn	17 51 12.6	+0.6
	baz=264						
CHGB				*e*S	Sn	17 51 28.0	+0.5
	baz=264						
TAP1	Taipei	1.22	314	*e*P	Pn	17 51 13.0	+1.1
	baz=312						
TAP1				*e*S	Sn	17 51 28.5	+1.2
	baz=312						
TDCB	Techi	1.22	273	⇓P	Pn	17 51 13.0	+0.9
	baz=272						
TDCB				*e*S	Sn	17 51 29.4	+1.8
	baz=272						
OWD	Renai	1.23	259	⇓*i*P	Pn	17 51 12.5	+0.4
	baz=259						
OWD				*e*S	Sn	17 51 27.4	-0.4
	baz=259						
TAP	Taipei	1.23	313	*e*P	Pn	17 51 12.8	+0.8
	baz=312						
TAP				*e*S	Sn	17 51 28.4	+0.8
	baz=312						
YM01	YM01	1.27	319	⇓*e*P	Pn	17 51 13.1	+0.5
	baz=317						
YM01				*e*S	Sn	17 51 28.6	+0.1
	baz=317						
EHY	Hungye	1.27	238	⇓*i*P	Pn	17 51 12.6	-0.1
	baz=238						
EHY				*e*S	Sn	17 51 28.0	-0.6
	baz=238						
WUSB	Renai	1.27	261	⇓*e*P	Pn	17 51 13.5	+0.7
	baz=261						
WUSB				*e*S	Sn	17 51 29.7	+0.9
	baz=261						
YM08	YM08	1.29	320	⇓*e*P	Pn	17 51 13.0	+0.2
	baz=319						
YM08				*e*S	Sn	17 51 29.8	+0.8
	baz=319						
ECBN	Changbin	1.30	228	*e*P	Pn	17 51 12.7	-0.2
	baz=228						
ECBN				*e*S	Sn	17 51 28.4	-0.8
	baz=228						
VWDT	VWDT	1.31	251	⇓P	Pn	17 51 14.0	+0.8
	baz=251						
VWDT				*e*S	Sn	17 51 30.0	+0.4
	baz=251						
ANP	Anpu	1.33	318	*e*P	Pn	17 51 13.5	+0.1
	baz=317						
NFF	Wufeng Townshi	1.33	289	⇓*e*P	Pn	17 51 14.8	+1.4
	baz=288						
NFF				*e*S	Sn	17 51 32.2	+2.1
	baz=288						
TWS1	Kuangyinshan	1.33	313	⇓*e*P	Pn	17 51 14.2	+0.8
	baz=312						
TWS1				*e*S	Sn	17 51 31.9	+1.9
	baz=312						
TWY	Chenhua	1.35	323	*e*P	Pn	17 51 14.3	+0.7
	baz=322						
TWY				*e*S	Sn	17 51 32.0	+1.6
	baz=322						
NTST	Danshui	1.35	316	*e*P	Pn	17 51 14.1	+0.4
	baz=314						
NTST				*e*S	Sn	17 51 31.8	+1.3
	baz=314						
YULB	Yu-li	1.36	234		Pn	17 51 13.5	-0.3
YULB	Yu-li	1.36	234	⇓*i*P	Pn	17 51 13.9	+0.1
	baz=235						
YULB				*e*S	Sn	17 51 29.8	-0.9
	baz=235						
TWF1	Yuli	1.38	233	⇓P	Pn	17 51 14.3	+0.2
	baz=233						
TWF1				*e*S	Sn	17 51 30.9	-0.4
	baz=233						
JKRS	Kuro-shima	1.38	88	P	Pn	17 51 14.8	+0.7
JKRS				S	Sn	17 51 32.4	+1.1
JKRS	Kuro-shima	1.38	88	A	A	17 51 14.8	
	comp=E,21nm,1.6s,comp=E,17nm,3.6s						
NJD	Zhudong	1.39	293	⇓*e*P	Pn	17 51 16.2	+2.0
	baz=292						
NJD				*e*S	Sn	17 51 34.6	+3.2
	baz=292						
WHP	Taichung City	1.42	274	⇓*e*P	Pn	17 51 16.2	+1.6
	baz=273						
WHP				*e*S	Sn	17 51 35.4	+3.2
	baz=273						
WPL	Puli Township	1.42	263	⇓*e*P	Pn	17 51 15.5	+1.0
	baz=263						
NCU	National Centr	1.42	303	⇓*e*P	Pn	17 51 16.0	+1.4
	baz=302						
NCU				*e*S	Sn	17 51 34.5	+2.4
	baz=302						
NCUH	Zhongli	1.42	303	⇓*e*P	Pn	17 51 16.0	+1.4
	baz=302						
LIOB	Emei	1.42	289	⇓*e*P	Pn	17 51 16.5	+1.8
	baz=288						
LIOB				*e*S	Sn	17 51 34.3	+2.1
	baz=288						
NSTT	Nanjuang	1.43	288	⇓*e*P	Pn	17 51 16.5	+1.8
	baz=287						
NSTT				*e*S	Sn	17 51 34.3	+1.9
	baz=287						
DPDB	Guoxing	1.44	264	⇓*e*P	Pn	17 51 16.2	+1.2
	baz=264						
DPDB				*e*S	Sn	17 51 34.9	+2.0
	baz=264						
WCS	Beigang Elemen	1.45	265	⇓*e*P	Pn	17 51 16.2	+1.2
	baz=264						
WCS				*e*S	Sn	17 51 33.8	+0.8
	baz=264						
HSN1	Hsinchu	1.47	294	*e*P	Pn	17 51 16.9	+1.7
	baz=293						
HSN1				*e*S	Sn	17 51 35.1	+1.8
	baz=293						
SSLB	Suanglung	1.47	254	Pn	Pn	17 51 15.6	+0.3
SSLB				Sn	Sn	17 51 32.3	-1.1
SSLB	Suanglung	1.47	254	P	Pn	17 51 16.3	+1.0
SSLB	Suanglung	1.47	254	P	Pn	17 51 16.3	+1.0
SSLB	Suanglung	1.47	254	⇓*e*P	Pn	17 51 16.1	+0.8
	baz=254						
SSLB				*e*S	Sn	17 51 33.0	-0.3
	baz=254						
PCYT	Pengchaiyu	1.48	345	⇑*i*P	Pn	17 51 16.1	+0.7
	baz=344						
PCYT				*e*S	Sn	17 51 34.8	+1.2
	baz=344						
FULB	Fuli	1.48	228	⇓*i*P	Pn	17 51 15.2	-0.3
	baz=229						
FULB				S	Sn	17 51 33.0	-0.7
	baz=229						
SMLT	Sun Moon Lake	1.49	258	⇓*e*P	Pn	17 51 16.8	+1.1
	baz=258						
SMLT				*e*S	Sn	17 51 35.0	+0.9
	baz=258						
SBCB	Hsinchu	1.50	294	⇓*e*P	Pn	17 51 17.3	+1.7
	baz=293						
SBCB				*e*S	Sn	17 51 35.5	+1.5
	baz=293						
CHKT	Chengkung	1.50	224	⇓P	Pn	17 51 15.2	-0.6
	baz=224						
CHKT				*e*S	Sn	17 51 31.9	-2.3
	baz=224						
JIJ	Ishigaki jima	1.51	83	P	Pn	17 51 15.8	-0.1
JIJ				*e*S	Sn	17 51 34.1	-0.4
JIJ	Ishigaki jima	1.51	83	A	A	17 51 15.8	
	comp=E,3.0nm,1.2s,comp=E,6.0nm,2.2s						
HSN	Hsinchu	1.52	294	*e*P	Pn	17 51 16.8	+1.0
	baz=294						
TYC	Yuchr	1.52	259	⇓*e*P	Pn	17 51 17.1	+1.1
	baz=259						
TYC				*e*S	Sn	17 51 35.4	+0.7
	baz=259						
NHW	Xinwu Township	1.54	302	*e*P	Pn	17 51 17.6	+1.3
	baz=301						
NHW				*e*S	Sn	17 51 37.1	+1.9
	baz=301						
NJN	Zhunan	1.56	288	*e*P	Pn	17 51 18.3	+1.9
	baz=288						
TWQ1	Liyutan	1.58	276	⇓*e*P	Pn	17 51 18.8	+2.0
	baz=275						
TWQ1				*e*S	Sn	17 51 38.7	+2.6
	baz=275						
YUS	Yu-Shan	1.58	244	⇓*e*P	Pn	17 51 18.1	+0.9
	baz=244						
YUS				*e*S	Sn	17 51 36.6	-0.2
	baz=244						
NMLH	Miaoli	1.59	283	⇓*e*P	Pn	17 51 18.9	+2.0

	baz=282						
NMLH				*e*S	Sn	17 51 38.4	+2.0
	baz=282						
NSY	Sanyi	1.60	278	*e*P	Pn	17 51 19.2	+2.2
	baz=278						
NSY				*e*S	Sn	17 51 40.1	+3.6
	baz=278						
ECS	Chishang	1.60	227	*e*P	Pn	17 51 17.4	+0.3
	baz=228						
ECS				*e*S	Sn	17 51 35.9	-0.7
	baz=228						
EDH	Donghe	1.64	222	⇓*i*P	Pn	17 51 17.0	-0.6
	baz=223						
EDH				S	Sn	17 51 35.6	-1.8
	baz=223						
WWF	Wufeng	1.65	265	⇓*e*P	Pn	17 51 20.3	+2.6
	baz=265						
WWF				*e*S	Sn	17 51 41.0	+3.2
	baz=265						
WJS	Zhushan	1.66	257	⇓*e*P	Pn	17 51 19.8	+2.0
	baz=257						
WJS				*e*S	Sn	17 51 40.1	+2.1
	baz=257						
TCU	Taichung	1.66	269	⇓*e*P	Pn	17 51 20.2	+2.3
	baz=268						
TCU				*e*S	Sn	17 51 42.1	+4.0
	baz=268						
WNT1	Nantou City	1.68	261	⇓*e*P	Pn	17 51 20.8	+2.6
	baz=260						
WNT1				*e*S	Sn	17 51 41.0	+2.4
	baz=260						
ELDTW	Lidau	1.69	234	⇓*i*P	Pn	17 51 18.3	0.0
	baz=234						
ELDTW				*e*S	Sn	17 51 37.7	-1.1
	baz=234						
WNT	Mingjian	1.69	260	⇓*e*P	Pn	17 51 20.6	+2.4
	baz=259						
WNT				*e*S	Sn	17 51 41.8	+3.1
	baz=259						
ALS	Alishan	1.69	247	⇓*e*P	Pn	17 51 19.9	+1.4
	baz=246						
ALS				*e*S	Sn	17 51 39.1	-0.1
	baz=246						
WDJ	Dajia District	1.70	275	⇓*e*P	Pn	17 51 20.5	+2.1
	baz=275						
WDJ				*e*S	Sn	17 51 41.1	+2.1
	baz=275						
JISG	Ishigakijimahi	1.70	76	P	Pn	17 51 18.3	-0.1
JISG				S	Sn	17 51 38.7	-0.3
JISG	Ishigakijimahi	1.70	76	A	A	17 51 18.3	
	comp=E,7.0nm,0.6s,comp=E,9.0nm,0.5s						
WYL	Yuanlin Townsh	1.77	263	*e*P	Pn	17 51 21.7	+2.4
	baz=262						
WYL				*e*S	Sn	17 51 44.5	+3.9
	baz=262						
WCHH	Zhanghua	1.77	267	⇓*e*P	Pn	17 51 21.5	+2.1
	baz=266						
WCHH				*e*S	Sn	17 51 44.1	+3.3
	baz=266						
LDUT	Ludao	1.78	212	⇑*i*P	Pn	17 51 18.9	-0.6
	baz=213						
LDUT				*e*S	Sn	17 51 38.4	-2.6
	baz=213						
LONT	Longtian	1.79	225	⇓*i*P	Pn	17 51 19.7	0.0
	baz=225						
LONT				*e*S	Sn	17 51 40.4	-0.9
	baz=225						
WGK	Gukeng	1.84	254	⇓*e*P	Pn	17 51 22.6	+2.3
	baz=254						
WGK				*e*S	Sn	17 51 45.6	+3.1
	baz=254						
WDLH	Douliu	1.86	255	⇓*e*P	Pn	17 51 22.9	+2.3
	baz=254						
WDLH				*e*S	Sn	17 51 45.9	+3.0
	baz=254						
STYH	Taoyuan	1.88	237	⇓*e*P	Pn	17 51 21.8	+1.0
	baz=238						
STYH				*e*S	Sn	17 51 44.1	+0.8
	baz=238						
TWGBT	Beinan	1.89	224	⇓*i*P	Pn	17 51 20.7	-0.3
	baz=224						
TWGBT				*e*S	Sn	17 51 42.2	-1.5
	baz=224						
TWG	Pinlang	1.89	224		Pn	17 51 20.3	-0.7
TWG	Pinlang	1.89	224	⇓P	Pn	17 51 20.8	-0.3
	baz=224						
TWG				*e*S	Sn	17 51 39.6	-4.2
	baz=224						
TTN	Taitung	1.90	221	⇓P	Pn	17 51 20.9	-0.2
	baz=221						
TTN				*e*S	Sn	17 51 43.1	-0.7
	baz=221						
STYT	Tauyuan	1.90	238	⇓*e*P	Pn	17 51 22.5	+1.3
	baz=237						
STYT				*e*S	Sn	17 51 44.2	+0.3
	baz=237						
TPUB	Ta-pu	1.93	243		Pn	17 51 23.2	+1.7
TPUB	Ta-pu	1.93	243	P	Pn	17 51 23.8	+2.2
TPUB	Ta-pu	1.93	243	P	Pn	17 51 23.8	+2.2
TPUB	Ta-pu	1.93	243	⇓*e*P	Pn	17 51 23.5	+1.9
	baz=243						
TPUB				*e*S	Sn	17 51 47.4	+2.8
	baz=243						
WRL	Guolierlin Hig	1.96	262	⇓*e*P	Pn	17 51 23.5	+1.5
	baz=261						
WRL				*e*S	Sn	17 51 47.9	+2.6
	baz=261						
CHN2	Minshiung	1.96	251	⇓*e*P	Pn	17 51 24.7	+2.7
	baz=251						
CHN2				*e*S	Sn	17 51 48.2	+2.7
	baz=251						
WTP	Ta-pu	1.97	242	⇓*e*P	Pn	17 51 24.1	+2.0
	baz=241						
WTP				*e*S	Sn	17 51 48.3	+2.6
	baz=241						
WTK	Tuku	1.99	256	⇓*e*P	Pn	17 51 24.6	+2.2
	baz=255						
WTK				*e*S	Sn	17 51 49.6	+3.4
	baz=255						
CHY	Chiayi	2.02	250	⇓*e*P	Pn	17 51 25.0	+2.2
	baz=250						
CHY				*e*S	Sn	17 51 50.1	+3.3
	baz=250						
WTCT	Ta-ch'eng	2.05	261	*e*P	Pn	17 51 24.9	+1.8
	baz=261						
WTCT				*e*S	Sn	17 51 49.6	+2.0
	baz=261						
TWK	Hsinying	2.06	244	⇓*e*P	Pn	17 51 25.3	+1.9
	baz=243						
TWK				*e*S	Sn	17 51 50.8	+2.9
	baz=243						
JTJ	Tarama	2.06	77	P	Pn	17 51 23.8	+0.5
JTJ				S	Sn	17 51 47.2	-0.6
JTJ	Tarama	2.06	77	A	A	17 51 23.8	
	comp=E,7.0nm,2.0s,comp=E,10.0nm,1.3s						
CHN1	Nanshi	2.06	241	⇓*e*P	Pn	17 51 25.5	+2.1
	baz=241						
CHN1				*e*S	Sn	17 51 50.4	+2.3
	baz=241						
SNST	Tainan City	2.07	242	⇓*e*P	Pn	17 51 25.1	+1.6
	baz=242						
SNST				*e*S	Sn	17 51 50.3	+2.2
	baz=242						
SGST	Jiashian	2.07	238	*e*P	Pn	17 51 24.8	+1.3
	baz=238						
SGST				*e*S	Sn	17 51 50.1	+1.9
	baz=238						
SLGT	Liugui	2.08	235	⇓*e*P	Pn	17 51 25.7	+2.1
	baz=235						
SLGT				*e*S	Sn	17 51 50.1	+1.9
	baz=235						
ECL	Taimali	2.13	222	⇓*e*P	Pn	17 51 23.8	-0.5
	baz=222						
ECL				*e*S	Sn	17 51 47.6	-2.0
	baz=222						
WSF	Szhu	2.15	256	⇓*e*P	Pn	17 51 26.7	+2.1
	baz=255						
WSF				*e*S	Sn	17 51 53.8	+3.7
	baz=255						
WSL	Shuilin Townsh	2.18	253	⇓*e*P	Pn	17 51 27.1	+2.1
	baz=252						
WSL				*e*S	Sn	17 51 53.0	+2.2
	baz=252						
ICHU	Yijhu	2.19	248	⇓*e*P	Pn	17 51 27.1	+1.9
	baz=248						
ICHU				*e*S	Sn	17 51 53.2	+2.1
	baz=248						
SSD	Sandimen	2.24	230	*e*P	Pn	17 51 26.6	+0.8
	baz=230						
SSD				*e*S	Sn	17 51 52.9	+0.6
	baz=230						
CHN3	Shinhua	2.25	241	*e*P	Pn	17 51 28.9	+3.0
	baz=241						
CHN3				*e*S	Sn	17 51 56.8	+4.3
	baz=241						
SCST	Cishan	2.25	235	⇓*e*P	Pn	17 51 28.9	+2.9
	baz=235						
SCST				*e*S	Sn	17 51 56.0	+3.4
	baz=235						
TSMG	Majia	2.25	229	*e*P	Pn	17 51 26.7	+0.7
	baz=229						
TSMG				*e*S	Sn	17 51 52.4	-0.3
	baz=229						
CHN8	Yiju	2.26	248	⇓*e*P	Pn	17 51 28.0	+2.0
	baz=248						
CHN8				*e*S	Sn	17 51 55.5	+2.8
	baz=248						
SHHT	Tainan City	2.29	240	*e*P	Pn	17 51 28.2	+1.7
	baz=240						
SHHT				*e*S	Sn	17 51 57.4	+3.9
	baz=240						
LAY	Lan-yu	2.32	202	⇑*i*P	Pn	17 51 25.6	-1.3
	baz=203						
LAY				*e*S	Sn	17 51 49.5	-4.7
	baz=203						
MASBT	Mashibuluo	2.33	228	⇓*e*P	Pn	17 51 27.8	+0.8
	baz=228						
MASBT				*e*S	Sn	17 51 53.4	-1.0
	baz=228						
LYUB	Lan-yu	2.34	201	P	Pn	17 51 25.8	-1.4
	baz=202						
LYUB				*e*S	Sn	17 51 49.7	-5.0
	baz=202						
SCLT	Jiali	2.34	245	*e*P	Pn	17 51 29.4	+2.2
	baz=244						
SCLT				*e*S	Sn	17 51 57.9	+3.2
	baz=244						
TWM1	Shoushan	2.34	235	*e*P	Pn	17 51 30.5	+3.2
	baz=235						
TWM1				*e*S	Sn	17 52 00.3	+5.5
	baz=235						
TAW	Tawu	2.35	219	*e*P	Pn	17 51 26.7	-0.6
	baz=219						
SGLT	Jiouru	2.35	232	*e*P	Pn	17 51 31.1	+3.8
	baz=232						
SGLT				*e*S	Sn	17 51 59.6	+4.6
	baz=232						
EAST	Anshuo	2.35	220	⇓*e*P	Pn	17 51 27.2	-0.3
	baz=220						
EAST				*e*S	Sn	17 51 52.2	-3.0
	baz=220						
TAI1	Yung-k'ang	2.38	241	*e*P	Pn	17 51 29.0	+1.3
	baz=241						
TAI1				*e*S	Sn	17 51 59.5	+4.0
	baz=241						
TSPT	Pingtung City	2.38	231	*e*P	Pn	17 51 31.4	+3.7
	baz=231						
TSPT				*e*S	Sn	17 52 01.0	+5.3
	baz=231						
SSPT	Xinbi	2.46	226	⇑*e*P	Pn	17 51 30.8	+2.0
	baz=227						
SSPT				*e*S	Sn	17 51 59.3	+1.7
	baz=227						
SCZT	Fangliau	2.50	224	*e*P	Pn	17 51 30.4	+1.0
	baz=224						
SCZT				*e*S	Sn	17 52 00.2	+1.5
	baz=224						
SLIU	Shizi	2.51	219	*e*P	Pn	17 51 29.5	-0.1
	baz=219						
SLIU				*e*S	Sn	17 51 56.5	-2.5
	baz=219						
JIRB	Irabujima	2.52	75	P	Pn	17 51 30.3	+0.7
JIRB				*e*S	Sn	17 51 59.6	+0.5
JIRB	Irabujima	2.52	75	A	A	17 51 30.3	
	comp=E,4.0nm,8.7s,comp=E,4.0nm,5.7s						
WSSB	Gushan	2.57	233	*e*P	Pn	17 51 33.4	+3.0
	baz=233						
WSSB				*e*S	Sn	17 52 04.5	+4.1
	baz=233						
JIKM	Ikemajima	2.61	73	P	Pn	17 51 31.6	+0.8
JIKM				*e*S	Sn	17 52 02.4	+1.1
JIKM	Ikemajima	2.61	73	A	A	17 51 31.6	
	comp=E,4.0nm,1.8s,comp=E,4.0nm,4.8s						
JMJ	Miyako jima 2	2.62	76	P	Pn	17 51 32.6	+1.6
JMJ	Miyako jima 2	2.62	76	*e*P	Pn	17 51 32.0	+1.0
	baz=76						
JMJ				*e*S	Sn	17 52 03.1	+1.4
	baz=76						
JMJ2	Miyako jima3	2.64	78	P	Pn	17 51 32.3	+1.0
JMJ2				*e*S	Sn	17 52 03.0	+1.0
JMJ2	Miyako jima3	2.64	78	A	A	17 51 32.3	
	comp=E,6.0nm,6.4s,comp=E,6.0nm,5.6s						
SMST	Manzhou Townsh	2.65	216	*e*P	Pn	17 51 32.0	+0.6
	baz=216						
SMST				*e*S	Sn	17 52 00.9	-1.4
	baz=216						
WLCH	Liuqiu	2.67	227	*e*P	Pn	17 51 34.5	+2.7
	baz=227						
WLCH				*e*S	Sn	17 52 08.1	+5.2
	baz=227						
JOGS	Gusukube	2.71	77	P	Pn	17 51 33.5	+1.2
JOGS				*e*S	Sn	17 52 05.5	+1.6
JOGS	Gusukube	2.71	77	A	A	17 51 33.5	
	comp=E,7.0nm,4.9s,comp=E,5.0nm,4.0s						
HEN	Hengchun	2.71	217	*e*P	Pn	17 51 33.4	+1.1
	baz=217						
HEN				*e*S	Sn	17 52 03.5	-0.4
	baz=217						
TSEB	Hengchuen, Pin	2.72	213	*e*P	Pn	17 51 33.4	+1.0
	baz=214						
TSEB				*e*S	Sn	17 52 04.7	+0.7
	baz=214						
TWKBT	Hengchun	2.73	215	*e*P	Pn	17 51 33.1	+0.6
	baz=215						
TWKBT				*e*S	Sn	17 52 03.9	-0.3
	baz=215						
TWK1	Hengchun	2.73	215	*e*P	Pn	17 51 32.9	+0.4
	baz=215						
TWK1				*e*S	Sn	17 52 03.8	-0.5
	baz=215						
WDGT	Dungji	2.76	251	⇓*e*P	Pn	17 51 34.2	+1.3
	baz=250						
WDGT				*e*S	Sn	17 52 05.0	0.0
	baz=250						
PHUB	P'eng-hu	2.76	256	⇓*e*P	Pn	17 51 33.7	+0.8
	baz=256						
PHUB				*e*S	Sn	17 52 05.7	+0.6
	baz=256						
PNG	Penghu	2.76	258	⇓*e*P	Pn	17 51 33.7	+0.8
	baz=257						
PNG				*e*S	Sn	17 52 06.8	+1.7
	baz=257						
VWUC	VWUC	2.88	287	⇓*e*P	Pn	17 51 35.0	+0.3
	baz=286						
VWUC				*e*S	Sn	17 52 06.1	-2.0
	baz=286						
VCHM	Qimei	2.98	251	⇓*e*P	Pn	17 51 37.1	+1.2
	baz=251						
VCHM				*e*S	Sn	17 52 10.3	-0.1
	baz=251						
MATB	Ma-tsu	3.02	311	⇓*e*P	Pn	17 51 36.9	+0.4
	baz=309						
MATB				*e*S	Sn	17 52 10.3	-1.2
	baz=309						
MSUT	Lienchiang	3.05	311	*e*P	Pn	17 51 37.4	+0.5
	baz=310						
MSUT				*e*S	Sn	17 52 10.8	-1.3
	baz=310						
PTMZ	Houxiangcun	3.18	286	⇓*e*P	Pn	17 51 39.0	+0.3
	baz=285						
PTMZ				*e*S	Sn	17 52 13.4	-2.1
	baz=285						
LYJJ	Jianjiangzhen	3.41	314	*e*P	Pn	17 51 42.3	+0.5
	baz=313						
LYJJ				*e*S	Sn	17 52 20.2	-0.7
	baz=313						
XPSS	Dashiqiu	3.43	323	⇑*e*P	Pn	17 51 42.1	0.0
	baz=322						
XPSS				*e*S	Sn	17 52 19.8	-1.7
	baz=322						
QZH	Quanzhou	3.63	283	⇓*i*P	Pn	17 51 45.0	+0.1
QZH				S	Sn	17 52 23.5	-2.9
QZH				smax	smax		
	comp=N,250nm,0.3s						
QZH				smax	smax		
	comp=E,210nm,0.3s						
KNM	Kinmen	3.71	274	*e*P	Pn	17 51 47.9	+1.9
	baz=273						
KNM				*e*S	Sn	17 52 29.3	+0.8
	baz=273						
KNMB	Chin-men Tao	3.75	275	Pn	Pn	17 51 46.6	0.0
KNMB	Chin-men Tao	3.75	275	⇓*e*P	Pn	17 51 46.7	+0.1
	baz=274						
KNMB				*e*S	Sn	17 52 27.4	-2.2
	baz=274						
AXDP	Jialang	4.18	281	⇓*e*P	Pn	17 51 52.8	+0.4
	baz=279						
AXDP				*e*S	Sn	17 52 35.8	-4.1
	baz=279						
ZPLA	Ao Xicun	4.34	267	⇓*e*P	Pn	17 51 55.1	+0.4
	baz=267						
ZPLA				*e*S	Sn	17 52 41.4	-2.6
	baz=267						
JOW	Kunigami	5.84	62	P	Pn	17 52 13.6	-1.7
	15nm,0.3s,baz=191,slow=13,SNR=71						
JOW				S	Sn	17 53 19.7	-1.3
	9.5nm,0.4s,baz=328,slow=25,SNR=1.1						
JOW	Kunigami	5.84	62	Pn	Pn	17 52 14.4	-0.9
JOW	Kunigami	5.84	62	P	Pn	17 52 14.6	-0.7
NJ2	Nanjing	8.46	338	⇓P	Pn	17 52 51.0	-0.1
NJ2				S	Sn	17 54 24.0	-1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				smax	smax		
	comp=N,43nm,1.0s						
NJ2				smax	smax		
	comp=E,49nm,1.1s						
NJ2				LR	LR		
	comp=N,200nm,3.8s						
NJ2				LR	LR		
	comp=E,380nm,4.0s						
NJ2				LR	LR		
	comp=Z,190nm,4.7s						
CNSH	ChangSha	9.46	297	⇑P	Pn	17 53 01.3	-3.5
CNSH				S	Sn	17 54 45.5	-4.3
CNSH				smax	smax		
	comp=N,77nm,1.2s						
CNSH				smax	smax		
	comp=E,63nm,0.9s						
WHN	Wuhan	9.61	313	⇓P	Pn	17 53 16.8	+10
WHN				S	Sn	17 55 03.5	+10
WHN				LR	LR		
	comp=N,860nm,8.1s						
WHN				LR	LR		
	comp=E,770nm,7.2s						
KSAR	Wonju Array Be	13.99	18	P	P	17 54 12.4	-0.7
KSRS	Korea Array	14.01	18	P	Pn	17 54 09.0	+2.1
	comp=E,21nm,0.7s,baz=197,slow=12,SNR=54						
KS19	Wonju Array Si	14.04	18	P	P	17 54 11.4	-2.3
JHS	Saijyo	14.18	38	Pn	Pn	17 54 08.6	-0.5
SEHB	SEOHWA	14.86	18		P	17 54 23.7	+0.8
MJAR	Matsushiro Arr	18.28	44	P	P	17 54 58.9	-1.9
	comp=E,0.7nm,0.5s,baz=241,slow=8.7,SNR=2.5						
MJAR	Matsushiro Arr	18.28	44	IAmb	IAmb	17 55 08.0	
	comp=Z,3.2nm,1.3s						
LZH	Lanzhou	19.98	311	*e*P	Pn	17 55 25.5	+4.0
LZH				sP	sP	17 55 38.0	+1.1
LZH				pmax	pmax		
	comp=Z,34nm,1.4s						
LZH				LR	LR		
	comp=Z,160nm,14.4s						
LZH				LR	LR		
	comp=Z,160nm,16.5s						
LZH				LR	LR		
	comp=Z,120nm,15.4s						
USRK	Ussuriysk Ar.	21.41	19	P	P	17 55 32.2	-2.5
	comp=Z,2.4nm,0.6s,baz=183,slow=3.8,SNR=5.1						
USRK				LR	LR	18 04 07.2	
	comp=Z,91nm,20.4s,baz=212,slow=38						
	comp=Z,2.4nm,0.6s						
CMAR	Chiang Mai Arr	22.66	260	P	P	17 55 51.2	+3.0
	comp=Z,0.8nm,0.7s,baz=66,slow=8.1,SNR=7.4						
CMAR				PcP	PcP	17 59 41.4	+1.9
	comp=Z,0.7nm,0.6s,baz=70,slow=0.7,SNR=8.5						
CMAR				LR	LR	18 05 38.9	
	comp=Z,61nm,18.9s,baz=85,slow=39						
	comp=Z,0.8nm,0.7s						
GTA	Gaotai	24.43	314	⇓P	P	17 56 05.8	+0.6
GTA				sP	sP	17 56 25.0	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,5.5s						
GTA				LR	LR		
	comp=Z,71nm,17.4s						
GTA				LR	LR		
	comp=Z,65nm,17.1s						
GTA				LR	LR		
	comp=Z,59nm,17.4s						
ASAJ	Asahikawa	25.79	35	P	P	17 56 14.7	-2.7
	comp=Z,2.5nm,0.4s,baz=244,slow=11,SNR=10						
	comp=Z,2.5nm,0.4s						
JKA	Kamikawa-asahi	25.79	35	P	P	17 56 14.7	-2.7
KLR	Kul'dur	26.02	14	P	P	17 56 17.7	-1.7
	comp=Z,1.9nm,0.8s,baz=163,slow=8.3,SNR=7.1						
	comp=Z,1.9nm,0.8s						
ULN	Ulaanbaatar	26.62	336	P	P	17 56 24.6	-0.4
GOMU	GeErMu	26.65	303	P	P	17 56 41.3	+16
GOMU				pP	sP	17 56 44.8	+0.7
GOMU				sP	pP	17 56 48.5	+10
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	26.84	336	P	P	17 56 26.9	0.0
	comp=Z,8.1nm,0.9s,baz=154,slow=10,SNR=33						
SONM				LR	LR	18 08 26.7	
	comp=Z,77nm,19.5s,baz=166,slow=39						
	comp=Z,8.1nm,0.9s						
SONM	Songino Array	26.84	336	P	P	17 56 26.3	-0.6
SONM				IAmb	IAmb	17 56 27.6	
	comp=Z,6.6nm,0.9s						
WMQ	Urumqi	34.52	313	*e*P	P	17 57 38.5	+3.9
MTN	Manton Dam	37.77	166	P	P	17 58 00.9	-1.6
MTN				IAmb	IAmb	17 58 24.4	
	comp=Z,15nm,1.2s						
YAK	Yakutsk	38.13	5	P	P	17 58 03.2	-1.9
	comp=Z,4.2nm,0.7s,baz=210,slow=1.3,SNR=13						
	comp=Z,4.2nm,0.7s						
YAK	Yakutsk	38.13	5	P	P	17 58 03.0	-2.0
MK31	Makanchi Array	39.17	315	P	P	17 58 14.0	0.0
MK31				IAmb	IAmb	17 58 15.2	
	comp=Z,6.3nm,1.2s						
MK31					PcP	18 00 22.4	-0.2
MKAR	Makanchi Array	39.17	315	P	P	17 58 14.6	+0.6
	comp=Z,2.9nm,0.6s,baz=101,slow=10,SNR=49						
MKAR				PcP	PcP	18 00 22.9	+0.3
	comp=Z,1.5nm,0.7s,baz=96,slow=4.9,SNR=8.8						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	39.17	315	P	P	17 58 13.9	-0.2
MKAR					PcP	18 00 22.4	-0.2
MAKZ	Makanchi	39.37	315	P	P	17 58 15.4	-0.3
MAKZ				IAmb	IAmb	17 58 17.0	
	comp=Z,11nm,1.2s						
MAKZ					PcP	18 00 22.9	-0.3
ZAA0	Zalesovo Array	40.89	327	P	P	17 58 27.3	-0.9
ZALV	Zalesovo Beam	40.89	327	P	P	17 58 27.0	-1.2
	comp=Z,2.4nm,0.5s,baz=114,slow=7.9,SNR=12						
ZALV				PcP	PcP	18 00 27.0	-0.9
	comp=Z,1.1nm,0.6s,baz=118,slow=4.3,SNR=3.9						
	comp=Z,2.4nm,0.5s						
KDJ	Kajisay	41.40	307	P	P	17 58 33.3	+0.5
KDJ				IAmb	IAmb	17 58 35.4	
	comp=Z,5.7nm,0.9s						
KSH	Kashi	41.90	303	P	P	17 58 41.8	+5.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	42.85	320	P	P	17 58 43.6	-0.6
KURK				IAmb	IAmb	17 58 45.0	
	comp=Z,6.2nm,0.9s						
KURBB	Kurchatov Arra	42.87	319	P	P	17 58 44.1	-0.2
	comp=Z,1.5nm,0.2s,baz=110,slow=7.6,SNR=14						
KURBB				PcP	PcP	18 00 33.1	-1.4
	comp=Z,1.6nm,0.2s,baz=122,slow=3.4,SNR=5.9						
	comp=Z,1.5nm,0.2s						
AAK	Ala-Archa	43.45	307	P	P	17 58 50.7	+1.3
	comp=Z,1.6nm,0.6s,baz=32,slow=10,SNR=4.7						
	comp=Z,1.6nm,0.6s						
SEY	Seymchan	43.56	19	PcP	PcP	18 00 37.8	+1.2
	comp=Z,1.3nm,0.5s,baz=236,slow=2.4,SNR=11						
WRA	Warramunga Arr	45.36	164	P	P	17 59 05.3	+0.7
	comp=Z,2.3nm,0.8s,baz=347,slow=8.7,SNR=19						
WRA				PcP	PcP	18 00 44.0	+0.6
	comp=Z,1.2nm,0.7s,baz=355,slow=3.4,SNR=7.0						
WRA				PKiKP	PKiKP	18 07 40.9	-0.6

	comp=Z,0.2nm,0.4s,baz=116,slow=7.3,SNR=5.4						
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	45.36	164	IAmb	IAmb	17 59 06.9	
	comp=Z,0.2nm,1.0s						
WB2	Warramunga Arr	45.37	164	P	P	17 59 05.5	+0.8
WB2				IAmb	IAmb	17 59 20.7	
	comp=Z,4.9nm,0.9s						
WR0	Warramunga Arr	45.43	164	P	P	17 59 05.4	+0.3
WR0				IAmb	IAmb	17 59 07.0	
	comp=Z,6.3nm,0.9s						
GAR	Garm	46.23	302	P	P	17 59 12.2	+0.7
KK31	Karatay Array	46.42	307	P	P	17 59 13.3	+0.5
KKAR	Karatay Array	46.42	307	P	P	17 59 13.6	+0.8
KKAR	Karatay Array	46.42	307	P	P	17 59 13.1	+0.3
KBL	Kabul	47.24	295	P	P	17 59 20.0	+0.4
KBL				IAmb	IAmb	17 59 22.9	
	comp=Z,8.8nm,0.8s						
TIXI	Tiksi	47.62	3	P	P	17 59 19.4	-2.2
	comp=Z,3.0nm,0.7s,baz=111,slow=14,SNR=36						
	comp=Z,3.0nm,0.7s						
TIXI	Tiksi	47.62	3	P	P	17 59 18.7	-2.9
TIXI				IAmb	IAmb	17 59 20.9	
	comp=Z,3.3nm,0.8s						
ASAR	Alice Springs	48.85	166	P	P	17 59 33.4	+1.6
	comp=Z,3.0nm,0.9s,baz=348,slow=6.7,SNR=54						
ASAR				PcP	PcP	18 00 56.2	+0.4
	comp=Z,1.6nm,0.7s,baz=343,slow=3.4,SNR=8.3						
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	48.85	166	P	P	17 59 30.5	-1.2
ABKAR	Akbulak array	54.29	314	P	P	18 00 12.3	+0.2
ABKAR	Akbulak array	54.29	314	P	P	18 00 12.2	0.0
ABKAR				IAmb	IAmb	18 00 13.3	
	comp=Z,3.7nm,0.8s						
ARU	Arti	55.82	323	P	P	18 00 22.0	-1.0
	comp=Z,1.7nm,0.4s,baz=34,slow=5.6,SNR=3.3						
ARU				PcP	PcP	18 01 20.6	-0.9
	comp=Z,1.1nm,0.3s,baz=7.1,slow=8.1,SNR=3.1						
	comp=Z,1.7nm,0.4s						
GEYT	Alibeck	55.82	300	P	P	18 00 25.0	+1.5
	comp=Z,5.6nm,0.9s,baz=65,slow=14,SNR=6.6						
	comp=Z,5.6nm,0.9s						
GEYT	Alibeck	55.82	300	P	P	18 00 23.4	-0.1
GEYT				IAmb	IAmb	18 00 26.4	
	comp=Z,4.8nm,0.9s						
STKA	Stephens Creek	58.67	161	P	P	18 00 44.8	+1.4
	comp=Z,0.7nm,0.4s,baz=330,slow=8.4,SNR=3.4						
	comp=Z,0.7nm,0.4s						
TTA	Tatalina	64.90	30	P	P	18 01 25.4	+0.4
TTA				IAmb	IAmb	18 01 43.5	
	comp=Z,3.3nm,1.2s						
IMAR	Indian Mountai	65.64	27	P	P	18 01 29.5	-0.2
K20K	Telida	65.74	29	P	P	18 01 31.4	+1.0
H21K	Melozitna Rive	66.06	27	P	P	18 01 32.9	+0.5
H21K				IAmb	IAmb	18 01 34.0	
	comp=Z,4.0nm,0.7s						
MLY	Manley	66.99	27	P	P	18 01 38.6	+0.2
BPAW	Bear Paw Mtn.	67.01	28	P	P	18 01 38.0	-0.5
BPAW				IAmb	IAmb	18 01 60.0	
	comp=Z,3.3nm,0.8s						
H23K	Yukon River	67.37	26	P	P	18 01 41.6	+0.8
H23K				IAmb	IAmb	18 01 42.9	
	comp=Z,4.5nm,0.7s						
NEA2	Nenana	67.76	28	P	P	18 01 43.2	0.0
NEA2				IAmb	IAmb	18 01 44.4	
	comp=Z,2.9nm,0.6s						
H24K	Noodor Dome	68.05	26	P	P	18 01 45.1	+0.1
H24K				IAmb	IAmb	18 02 13.4	
	comp=Z,4.0nm,1.1s						
MDM	Murphy Dome	68.05	27	P	P	18 01 45.3	+0.2
MDM				IAmb	IAmb	18 01 46.5	
	comp=Z,3.0nm,0.8s						
RND	Reindeer	68.06	29	P	P	18 01 44.5	-0.7
RND				IAmb	IAmb	18 01 46.4	
	comp=Z,4.2nm,0.6s						
WRH	Wood River Hil	68.20	28	P	P	18 01 46.2	+0.3
WRH				IAmb	IAmb	18 02 13.8	
	comp=Z,5.1nm,1.2s						
PMR	Palmer	68.26	31	P	P	18 01 46.0	-0.3
ILAR	Eielson Array	68.65	27	P	P	18 01 47.8	-1.0
	comp=Z,0.5nm,0.6s,baz=298,slow=8.5,SNR=8.4						
	comp=Z,0.5nm,0.6s						
DHY	Denali Highway	68.78	29	P	P	18 01 49.6	-0.3
BMAR	Burnt Mountain	69.02	24	P	P	18 01 51.7	+0.5
SCM	Sheep Creek Mo	69.06	31	P	P	18 01 51.8	+0.3
SCM				IAmb	IAmb	18 01 59.0	
	comp=Z,6.0nm,0.6s						
RAYN	Ar Rayn	69.49	287	P	P	18 01 55.9	+1.1
RAYN				IAmb	IAmb	18 01 56.7	
	comp=Z,12nm,1.3s						
ARCES	ARCESS Array B	69.97	338	P	P	18 01 56.6	-0.3
	comp=Z,1.8nm,0.7s,baz=61,slow=5.3,SNR=7.5						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	69.97	338	IAmb	IAmb	18 02 21.1	
	comp=Z,7.0nm,1.3s						
SCRK	Sand Creek	70.06	28	P	P	18 01 57.8	+0.1
J26L	Joseph Creek	70.11	27	P	P	18 01 57.1	-0.8
M26K	Nabesna, AK	70.90	29	P	P	18 02 02.5	-0.3
M26K				IAmb	IAmb	18 02 10.5	
	comp=Z,10nm,1.4s						
EGAK	Eagle	71.03	27	P	P	18 02 03.4	0.0
L27K	Beaver Creek,	71.23	29	P	P	18 02 05.3	+0.6
BCAR	Beaver Creek A	71.25	29	P	P	18 02 05.4	+0.6
FINES	FINESS Array B	72.04	330	P	P	18 02 09.1	-0.4
	comp=Z,0.7nm,0.4s,baz=62,slow=6.2,SNR=8.8						
	comp=Z,0.7nm,0.4s						
FINES	FINESS Array B	72.04	330	P	P	18 02 09.3	-0.2
CTGM	Chitina Glacie	72.07	31	P	P	18 02 10.4	+0.5
CTGM				IAmb	IAmb	18 02 28.3	
	comp=Z,5.7nm,1.1s						
LOGN	Logan Glacier	72.27	31	P	P	18 02 10.4	-0.7
LOGN				IAmb	IAmb	18 02 11.1	
	comp=Z,3.5nm,0.5s						
EPYK	Eagle Plains	72.30	25	P	P	18 02 10.3	-0.7
EPYK				IAmb	IAmb	18 02 12.3	
	comp=Z,3.3nm,0.7s						
BNN	Bunyan	72.76	305	P	P	18 02 14.1	-0.4
BNN				IAmb	IAmb	18 02 16.7	
	comp=Z,14nm,1.1s						
INK	Inuvik	72.76	22	P	P	18 02 13.0	-0.7
INK				IAmb	IAmb	18 02 14.6	
	comp=Z,2.7nm,0.7s						
AKASG	Malin Array Be	73.66	319	P	P	18 02 18.5	-0.8
	comp=Z,0.4nm,0.4s,baz=51,slow=5.4,SNR=4.2						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	73.66	319	IAmb	IAmb	18 02 20.5	
	comp=Z,1.6nm,1.1s						
BRTR	Keskin Array B	74.13	307	P	P	18 02 22.9	+0.4
	comp=Z,6.1nm,1.2s,baz=122,slow=6.0,SNR=6.6						
	comp=Z,6.1nm,1.2s						
BRTR	Keskin Array B	74.13	307	P	P	18 02 22.8	+0.3
RES	Resolute Bay	78.46	9	LR	LR	18 40 09.6	
	comp=Z,33nm,20.6s,baz=226,slow=38						
NB2	NORSAR Subarra	78.77	332	P	P	18 02 47.9	-0.3
	comp=Z,0.3nm,0.4s,baz=60,slow=5.6						
NOA	NORSAR Array B	78.77	332	P	P	18 02 47.2	-1.0
	comp=Z,0.9nm,0.9s,baz=56,slow=6.1,SNR=4.0						
	comp=Z,0.9nm,0.9s						
DIB	Dawson Inlet,	79.45	36	P	P	18 02 52.2	+0.2
DIB				IAmb	IAmb	18 02 52.8	
	comp=Z,7.5nm,0.8s						
YKA	Yellowknife Ar	82.49	23	P	P	18 03 07.2	-0.8
	comp=Z,2.2nm,0.6s,baz=310,slow=5.1,SNR=14						
	comp=Z,2.2nm,0.6s						
GERES	GERESS Array B	83.59	321	P	P	18 03 14.0	-0.1
	comp=Z,0.6nm,0.7s,baz=45,slow=5.8,SNR=4.7						
	comp=Z,0.6nm,0.7s						
KMBO	Kilima Mbogo	86.11	267	P	P	18 03 29.9	+2.3
KMBO				IAmb	IAmb	18 03 30.8	
	comp=Z,5.5nm,1.1s						
F04A	Amboy	88.76	39	P	P	18 03 40.6	+1.1
LTY	Liberty	88.99	37	P	P	18 03 40.3	-0.3
EDM	Edmonton	89.00	30	P	P	18 03 40.9	+0.4
B08A	Colville Reser	89.08	36	P	P	18 03 41.7	+0.7
HOOD	Mount Hood Mea	89.55	39	P	P	18 03 43.6	+0.2
E07A	Sunnyside	89.85	38	P	P	18 03 45.6	+0.9
D08A	Wollman Farm,	90.08	37	P	P	18 03 46.6	+1.0
HAWA	Hanford	90.13	38	P	P	18 03 46.7	+0.8
NEW	Newport	90.31	35	P	P	18 03 47.6	+0.8
PINE	Pine Mountain	90.84	40	P	P	18 03 51.0	+1.5
WALA	Waterton Lakes	91.45	33	P	P	18 03 52.9	+0.8
K05A	Summer Lake	91.48	41	P	P	18 03 54.0	+1.5
BMO	Blue Mountains	92.31	38	P	P	18 03 56.8	+0.7
MOD	Modoc Plateau	92.32	42	P	P	18 03 56.3	-0.1
MOD				IAmb	IAmb	18 03 58.1	
	comp=Z,4.0nm,0.9s						
J08A	Circle Bar Ran	92.55	40	P	P	18 03 58.3	+1.0
MSO	Missoula	92.89	35	P	P	18 03 58.8	0.0
MSO				IAmb	IAmb	18 03 60.0	
	comp=Z,4.8nm,1.1s						
HLID	Hailey	94.73	38	P	P	18 04 08.1	+0.7
HLID				IAmb	IAmb	18 04 10.6	
	comp=Z,2.4nm,0.9s						
NVAR	Mina Array Bea	95.60	44	P	P	18 04 11.2	-0.3
	comp=Z,0.8nm,0.6s,baz=292,slow=5.5,SNR=9.5						
	comp=Z,0.8nm,0.6s						

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*DJA **30** 18:10:01.0±0.6,9°S±6°×12°4E±°,h111^{km}±9^{km},M3.4/8, mb4.0/3,MLv3.1/8*

*IDC **30** 18:10:03.3±1.9,9°.63S×124°.56E,h0^{km},mb3.2/1, mbtmp3.2/3,ML3.3/2,MS3.6/1,Error ellipse: s-maj=27.5km s-min=23.2km az=153.0*

ISC 30 18:09:54.7±1.9,**8°.8S**±0°.1×**124°.4E**±0°.1,**h100^{km},n11, σ2^{s}.17**/10,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.00	187	P	Pn	18 10 21.0	+5.7
BATI	Baumata	1.61	206	Pn	Pn	18 10 24.8	+2.5
	22nm,0.3s,baz=109,slow=5.3,SNR=44						
BATI				Sn	Sn	18 10 42.4	-0.9
	21nm,0.3s,baz=183,slow=21,SNR=24						
BATI	Baumata	1.61	206	P	Pn	18 10 24.9	+2.5
MMRI	Maumere	2.13	273	P	Pn	18 10 30.5	+1.5
EDFI	Ende, Flores	2.67	270	P	Pn	18 10 37.3	+1.2
WBSI	Waikabubak, Su	5.01	260	P	Pn	18 11 05.8	-1.9
PLAI	Plampang	6.54	269	P	Pn	18 11 29.0	+0.7
	0.2nm66nm,0.7s						
WRA	Warramunga Arr	14.71	140	Pn	P	18 13 21.9	+0.7
	0.2nm,0.3s,baz=316,slow=13,SNR=11						
WRA				Sn	Sn	18 15 57.8	-2.3
	0.1nm,0.3s,baz=320,slow=25,SNR=2.7						
	0.3nm,0.4s						
ASAR	Alice Springs	17.40	150	Pn	Pn	18 13 58.8	+7.5
	0.1nm,0.3s,baz=319,slow=12,SNR=7.4						
ASAR				Sn	Sn	18 17 02.5	-2.5
	0.1nm,0.3s,baz=322,slow=24,SNR=3.2						
	0.2nm,0.5s						
HNR	Honiara	35.11	94	LR	LR	18 31 34.5	
	comp=Z,99nm,19.2s,baz=74,slow=37						
SONM	Songino Array	58.56	346	P	P	18 20 08.2	+27
	0.1nm,0.3s,baz=152,slow=8.7,SNR=1.8						
	0.1nm,0.3s						

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*DJA **30** 18:12:35.7±0.5,4°N±5°×12°7E±°,h41^{km}±5^{km},M3.9/10, mb4.0/5,MLv3.9/10*

*IDC **30** 18:13:31.6±1.8,1°.66S×129°.08E,h0^{km},mb3.1/2, mbtmp3.2/4,ML3.2/2,Error ellipse: s-maj=41.4km s-min=28.0km az=86.0*

ISC 30 18:12:35.5±1.5,**4°.1N**±0°.1×**126°.65E**±0°.09,**h45^{km},n11, σ1^{s}.96**/12,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.19	249	P	Pn	18 12 55.6	-0.1
SGSI				S	Sn	18 13 09.4	-1.4
LBMI	Labuha	4.80	170	P	Pn	18 13 43.9	-1.3
GTOI	Gorontalo	5.01	227	P	Pn	18 13 47.6	-0.6
MRSI	Marisa	5.93	233	P	Pn	18 14 01.5	+0.7
	0.1nm15nm,0.5s						
SANI	Sanana	6.16	186	P	Pn	18 14 02.9	-1.0
	0.4nm6.2nm,1.1s						
SWI	Sorong	6.76	137	P	Pn	18 14 12.4	+0.2
	0.1nm11nm,1.1s						
SIJI	Sorong	6.77	137	Pn	Pn	18 14 11.8	-0.5
	1.6nm,0.3s,baz=287,slow=19,SNR=7.7						
	4.8nm,0.4s						
APSI	Ampana	7.06	225	P	Pn	18 14 16.2	-0.1
WRA	Warramunga Arr	25.07	163	P	P	18 17 53.2	-2.8
	0.1nm,0.3s,baz=346,slow=11,SNR=4.7						
	0.8nm,0.7s						
ASAR	Alice Springs	28.50	166	P	P	18 18 31.2	+4.4
	0.1nm,0.3s,baz=350,slow=11,SNR=2.1						
	0.1nm,0.3s						
SONM	Songino Array	46.91	341	P	PP	18 22 51.3	-1.2
	0.2nm,0.6s,baz=160,slow=8.8,SNR=2.0						
	0.2nm,0.6s						

DJA 30 18:17:20.7±0.4,**2°S**±5°×**10°2E**±°,**h185**^{km}±7^{km},**M4.0**/11, **mb4.5**/5,**MLv3.8**/11,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.68	171	P	Pn	18 17 46.9	-0.1
KRJI	Kerinci	0.77	299	P	Pn	18 17 47.6	+0.1
PPSI	Pulau Pagai	2.14	262	P	Pn	18 18 00.8	+1.2
BKNI	Bangkinang	2.98	339	P	Pn	18 18 10.2	+0.8
DSRI	Dabo	3.15	51	P	Pn	18 18 12.1	+0.7
LWLI	Liwa	3.18	143	P	Pn	18 18 12.1	+0.2
SISI	Saibi	3.24	290	P	Pn	18 18 12.2	-0.4
KASI	Kota Agung	3.84	142	P	Pn	18 18 20.9	+0.9
GSI	Gunungsitoli	5.90	309	P	Pn	18 18 46.7	+0.2
	0.5nm88nm,0.5s						
CNJI	Cibinong	6.92	134	P	Pn	18 18 58.8	-1.1
	0.3nm63nm,1.3s						
KCSI	Kotacane, Aceh	7.38	324	P	Pn	18 19 05.3	-0.6
	0.1nm20nm,2.3s						
LHMI	Lhok Sumawe	9.23	326	P	Pn	18 19 30.0	-0.2
	209nm,1.2s						
STKI	Sintang	9.68	75	P	Pn	18 19 36.1	0.0

IDC 30 18:25:53.7±5.0,**2°.70S**×**140°.55E**,**h0^{km}**,**mb3.0**/2, **mbtmp3.1**/3,**ML3.3**/1,**Error ellipse: s-maj=186.8km s-min=32.6km az=90.0**,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.18	199	P	P	18 30 08.0	-0.2
	0.1nm,0.3s,baz=20,slow=12,SNR=2.5						
	0.3nm,0.4s						
ASAR	Alice Springs	21.82	197	P	P	18 30 47.3	-0.4
	0.2nm,0.5s,baz=19,slow=11,SNR=4.8						
	0.2nm,0.5s						
MKAR	Makanchi Array	70.91	322	P	P	18 37 13.1	+0.2
	0.3nm,0.9s,baz=131,slow=8.0,SNR=2.3						
	0.3nm,0.9s						

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*TRN **30** 18:55:20.4,14°.15N×60°.25W,h36^{km},MD3.8*

*NEIC **30** 18:55:22.1±1.7,14°.27N±0°.03×60°.26W±0°.10,h26^{km}±14^{km}, ML4.0/30,Error ellipse: s-maj=14.2km s-min=1.8km az=70.0*

ISC 30 18:55:19.4±1.2,**14°.17N**±0°.02×**60°.19W**±0°.04,**h18**^{km}±7^{km}, **n77,σ0^{s}.94**/124,**7C-2D,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPOM	Morne Pois Mar	0.70	293		Pn	18 55 34.2	-0.4
MPOM				Sn	Sg	18 55 43.0	+0.3
MPOM	Morne Pois Mar	0.70	293	⇑iP	Pn	18 55 34.1	-0.4
MPOM				eS	Sb	18 55 44.2	+1.6
SLAC	Saint Lucia, A	0.73	249	⇑iP	Pn	18 55 34.7	-0.3
SLAC				eS	Sb	18 55 45.0	+1.6
SLBI	Saint Lucia, B	0.77	260	⇑iP	Pb	18 55 34.7	+0.4
SLBI				eS	Sg	18 55 45.2	+0.4
MVM	Montagne Vaucl	0.78	300	eP	Pn	18 55 35.5	-0.2
MVM				eS	Sn	18 55 46.8	-0.2
SLCP	Castries, St.	0.79	259	eP	Pb	18 55 35.2	+0.6
SLCP				eS	Sb	18 55 46.3	+1.3
LPMF	Morne Lapointe	0.85	299	eP	Pn	18 55 36.5	-0.1
LPMF				eS	Sb	18 55 48.3	+1.4
MCLT	Moule a Chique	0.86	238		Pb	18 55 35.9	+0.1
MCLT				Sn	Sg	18 55 45.9	-1.6
MCLT	Moule a Chique	0.86	238	⇑iP	Pb	18 55 35.9	+0.1
MCLT				eS	Sg	18 55 47.5	0.0
SLB	Belfond	0.89	248	⇓iP	Pn	18 55 37.7	+0.6
ILAM	Ilet Lapin Mar	0.90	313		Pn	18 55 36.9	-0.3
ILAM				Sn	Sb	18 55 49.0	+0.9
ILAM				IAML		18 55 50.2	
	comp=E,4μm,0.2s						
ILAM	Ilet Lapin Mar	0.90	313	eP	Pn	18 55 37.0	-0.2
ILAM				eS	Sb	18 55 49.0	+0.9
ZAM	Aeronautique	0.91	297	⇑eP	Pn	18 55 37.2	-0.1
ZAM				eS	Sb	18 55 49.6	+1.2
TRMF	Trois Ilets	0.91	294	eP	Pn	18 55 37.1	-0.2
TRMF				eS	Sb	18 55 49.8	+1.3
SLDE	Delcer	0.92	247	eP	Pn	18 55 38.1	+0.7
SLDE				eS	Sb	18 55 50.0	+1.4
BIM	Bigot	0.92	292		Pn	18 55 37.4	-0.1
BIM				Sn	Sg	18 55 49.2	-0.3
BIM				IAML		18 55 52.7	
	comp=E,10μm,0.4s						
BIM	Bigot	0.92	292	⇑iP	Pn	18 55 37.5	-0.1
BIM				eS	Sb	18 55 50.4	+1.6
FDF	Fort de France	1.09	301		Pb	18 55 39.7	-0.1
FDF				Sn	Sb	18 55 53.9	+0.2
FDF				IAML		18 55 57.6	
	comp=E,2μm,0.6s						
FDF				IAML		18 55 59.9	
	comp=N,3μm,0.7s						
FDF	Fort de France	1.09	301	⇑iP	Pb	18 55 39.6	-0.1
FDF				eS	Sb	18 55 54.4	+0.7
BAMF	Morne Balai	1.13	305	eP	Pn	18 55 40.5	0.0
GBMF	Grand Be	1.13	304	eP	Pb	18 55 40.5	-0.1
PML	Morne Lenard	1.14	303	eP	Pn	18 55 40.6	0.0
CXM	Morne La Croix	1.14	304	eP	Pb	18 55 40.1	-0.7
CXM				eS	Sb	18 55 55.5	+0.1
SVN	Savane Anatole	1.16	306		Pn	18 55 40.8	-0.1
SVN				Sn	Sb	18 55 55.7	0.0
SVN	Savane Anatole	1.16	306	eP	Pb	18 55 41.0	-0.1
SVN				eS	Sb	18 55 56.6	+0.8
BCHC	Barbados, Cave	1.16	152	eP	Pg	18 55 42.4	+0.5
BCHC				eS	Sn	18 55 56.0	-0.2
PCM	Pelee Case Pet	1.18	303	eP	Pn	18 55 40.8	-0.3
PCM	Pelee Case Pet	1.18	303	⇓eP	Pb	18 55 41.2	-0.1
BBGH	Gun Hill	1.19	149	Pn	Pg	18 55 42.2	-0.2
BBGH	Gun Hill	1.19	149	eP	Pg	18 55 42.5	+0.1
BBSP	Saint Philip	1.27	146	eP	Pg	18 55 43.9	-0.1
BBSP				eS	Sg	18 56 00.5	-0.2
SSV	Crater Summit	1.28	230	eP	Pb	18 55 43.2	+0.1
SSV				eS	Sb	18 55 58.4	-0.9
SVV	Soufriere Volc	1.30	230	eP	Pb	18 55 43.5	0.0
SVV				eS	Sb	18 55 58.4	-1.5
SVOC	Richmond Hill,	1.42	225	eP	Pn	18 55 43.3	-1.1
SVOC				eS	Sn	18 56 01.4	-1.2
DLPL	La Plaine	1.55	319		Pn	18 55 44.2	-1.9
DLPL	La Plaine	1.55	319	eP	Pn	18 55 46.0	-0.2
DLPL				eS	Sn	18 56 06.2	+0.4
MDN	Morne-Daniel	1.63	315	eP	Pn	18 55 47.5	+0.2
MDN				eS	Sn	18 56 08.1	+0.2
DSLB	Salisbury	1.74	317	eP	Pn	18 55 49.4	+0.6
DSLB				eS	Sn	18 56 10.5	-0.1
MDVC	Dominica, Viel	1.86	321	eP	Pn	18 55 51.0	+0.6
MDVC				eS	Sn	18 56 12.7	-0.8
MDCT	Cottage Hill,	1.90	320	eP	Pn	18 55 51.8	+0.9
MDCT				eS	Sn	18 56 14.2	-0.2
GCMP	Grenada, Carri	2.06	216	eP	Pn	18 55 53.3	+0.2
GCMP				eS	Sn	18 56 17.8	-0.6
MAGL	Barre de l’ile	2.06	329	Pn	Pn	18 55 52.6	-0.6
MAGL				IAML		18 56 25.9	
	comp=N,735nm,0.3s						
MAGL				IAML		18 56 27.4	
	comp=E,876nm,0.2s						
MAGL	Barre de l’ile	2.06	329	eP	Pn	18 55 53.0	-0.2
MAGL				eS	Sn	18 56 17.1	-1.5
TDBA	Terre de Bas,	2.18	320		Pn	18 55 54.9	+0.1
TDBA				IAML		18 56 24.2	
	comp=E,680nm,0.5s						
TDBA				IAML		18 56 26.1	
	comp=N,1μm,0.6s						
TDBA	Terre de Bas,	2.18	320	eP	Pn	18 55 55.8	+0.9
TDBA				eS	Sn	18 56 21.4	0.0
TBG	Guadaloupe-3	2.19	320	eP	Pn	18 55 55.8	+0.8
TBG				eS	Sn	18 56 21.1	-0.6
GDSD	La Dsirade Is	2.30	339		Pn	18 55 55.9	-0.6
CBE	Ff, Capester	2.33	324		Pn	18 55 56.9	-0.1
CBE	Ff, Capester	2.33	324	eP	Pn	18 55 57.4	+0.4
CBE				eS	Sn	18 56 25.0	-0.3
GRGR	Grenville	2.47	215	Pn	Pn	18 55 59.8	+0.9
GRGR				IAML		18 56 32.4	
	comp=N,1μm,0.3s						
GRGR				IAML		18 56 37.2	
	comp=N,1μm,0.5s						
GRGR	Grenville	2.47	215	eP	Pn	18 55 59.8	+0.9
GRGR				eS	Sn	18 56 28.6	0.0
GRFF	Grenada Fort F	2.59	216	eP	Pn	18 56 01.8	+1.3
GRFF				eS	Sn	18 56 30.5	-1.0
GDHS	Morne Mazeau,	2.59	324		Pn	18 56 00.9	+0.4
GDHS				IAML		18 56 35.2	
	comp=N,1μm,0.5s						
ABD	La Joyeuse, An	2.62	332	Pn	Pn	18 56 00.8	0.0
ABD				IAML		18 56 36.2	
	comp=N,401nm,0.5s						
ABD				IAML		18 56 41.5	
	comp=E,400nm,0.4s						
ABD	La Joyeuse, An	2.62	332	eP	Pn	18 56 01.3	+0.5
ABD				eS	Sn	18 56 31.7	-0.5
TOSP	Speyside	2.87	187	Pn	Pn	18 56 04.9	+0.6
TOSP	Speyside	2.87	187	eP	Pn	18 56 05.0	+0.6
TOSP				eS	Sn	18 56 38.3	-0.2
MLYT	Lee's Yard	3.19	323	eP	Pn	18 56 09.8	+1.0
MLYT				eS	Sn	18 56 46.2	-0.2
MBFL	Flemmings, Mon	3.22	323	eP	Pn	18 56 10.3	+1.1
MBFL				eS	Sn	18 56 47.5	+0.3
ANBD	Bethesda, Anti	3.24	332	eP	Pn	18 56 10.4	+0.9
ANBD				eS	Sn	18 56 47.2	-0.4
BPA	Boggy Peak	3.28	331	eP	Pn	18 56 11.1	+1.1
BPA				eS	Sn	18 56 47.5	-1.2
TRN	Trinidad (W)	3.69	199	eP	Pn	18 56 15.8	+0.2
TRN				eS	Sn	18 56 56.6	-2.1
ANWB	Willy Bob	3.81	336	eP	Pn	18 56 17.3	+0.1
ANWB				eS	Sn	18 57 00.1	-1.5
SKI	Saint Kitts	3.99	322	eP	Pn	18 56 20.2	+0.4
SKI				eS	Sn	18 57 05.0	-1.2
CUPR	Culebra, Puert	6.39	311		Pn	18 56 55.2	+2.4
MTP	Monte Pirata	6.47	308	Pn	Pn	18 56 54.4	+0.5
HUMP	Col San Antoni	6.72	307	Pn	Pn	18 56 54.9	-2.5
PDPR	Patillas Dam,	6.79	305	Pn	Pn	18 56 58.2	0.0
BIRV	Birongo	6.98	239	Pn	Pn	18 57 00.7	-0.2
CELP	Cerrillos	7.26	303	Pn	Pn	18 57 05.0	+0.2
AOPR	Arecibo Observ	7.55	304	eP	Pn	18 57 09.5	+0.8
AOPR	Arecibo Observ	7.55	304	eS	Sn	18 58 28.7	-5.2
MLPR	Magueyes Islan	7.59	301	Pn	Pn	18 57 09.6	+0.3
CRPR	Cabo Rojo, PR	7.67	301	Pn	Pn	18 57 10.3	0.0
DR12	Loma Pena Alta	9.94	299	Pn	Pn	18 57 42.6	+1.1
BANI	BANI	10.63	295	Pn	Pn	18 57 52.5	+1.5
SDDR	Presa de Saban	11.66	296	Pn	Pn	18 58 05.5	+0.3

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*NAO **30** 18:59:13.0±3.7,75°.16N×7°.22E,ML2.8*

*BER **30** 18:59:15.8±2.5,75°.22N×7°.46E,h10^{km},ML1.7,Confirmed Earthquake*

*DNK **30** 18:59:19.0±2.7,75°.39N×6°.84E,h21^{km}±29^{km},ML1.5*

*IEPN **30** 18:59:20.0,75°.20N×8°.81E,h10^{km}*

ISC 30 18:59:11.3±1.4,**75°.21N**±0°.07×**7°.30E**±0°.06,**h10^{km},n27, σ3^{s}.29**/43,**1D,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.68	44	Pn	Pn	18 59 57.1	+2.7
HSPB				Sn	Sn	19 00 24.1	-2.8
HSPB	Hornsund (broa	2.68	44	eP	Pn	18 59 57.3	+2.8
HSPB				IAML		19 00 29.4	
	comp=Z,6.7nm,0.7s						
HSPB	Hornsund (broa	2.68	44	eP	Pn	18 59 56.8	+2.4
HSPB				eS	Sn	19 00 23.0	-3.9
BJO1	Bjornoya	3.15	97	eP	Pn	19 00 04.0	+3.1
BJO1				eS	Sn	19 00 36.5	-2.0
BJO1				IAML		19 00 50.9	
	comp=Z,11nm,0.7s						
BJO1	Bjornoya	3.15	97	i P	Pn	19 00 02.9	+2.0
BJO1				i S	Sn	19 00 34.5	-4.0
BRBA	Barentsburg A	3.29	26	Pn	Pn	19 00 06.1	+3.4
BRBA	Barentsburg A	3.29	26	eP	Pn	19 00 06.0	+3.3
BRBA				eS	Sn	19 00 41.1	-0.6
BRBA				IAML		19 01 05.7	
	comp=Z,2.8nm,0.3s						
BRBB	Barentsburg B	3.31	26	Pn	Pn	19 00 06.3	+3.2
BRBB	Barentsburg B	3.31	26	eP	Pn	19 00 06.1	+3.1
BRBB				eS	Sn	19 00 41.6	-0.8
SPA0	Spitsbergen Ar	3.65	31	Pn	Pn	19 00 11.4	+3.8
	baz=215,slow=16						
SPA0				Sn	Sn	19 00 50.8	+0.1
	baz=200,slow=28						
SPA0	Spitsbergen Ar	3.65	31	eP	Pn	19 00 11.5	+3.8
SPA0				eS	Sn	19 00 51.5	+0.9
SPA0				IAML		19 00 59.1	
	comp=Z,3.4nm,0.6s						

SPA0	Spitsbergen Ar	3.65	31	⇓iP	Pn	19 00 11.4	+3.8
SPA0				eS	Sn	19 00 50.3	-0.3
KBS	Kingsbay	3.88	13	Pn	Pn	19 00 14.3	+3.5
KBS	Kingsbay	3.88	13	i P	Pn	19 00 14.4	+3.6
KBS	Kingsbay	3.88	13	eP	Pn	19 00 14.0	+3.2
KBS				eS	Sn	19 00 54.6	-1.8
KBS				IAML		19 00 59.8	
	comp=Z,2.0nm,0.7s						
KBS	Kingsbay	3.88	13	eP	Pn	19 00 13.9	+3.1
KBS				eS	Sn	19 00 54.5	-2.0
HOPEN	Hopen	4.53	65	Pn	Pn	19 00 22.3	+2.5
HOPEN				Sn	Sn	19 01 08.5	-3.8
HOPEN	Hopen	4.53	65	eP	Pn	19 00 22.6	+2.9
HOPEN				eS	Sn	19 01 09.0	-3.3
HOPEN				IAML		19 01 11.9	
	comp=Z,7.3nm,0.7s						
HOPEN	Hopen	4.53	65	eP	Pn	19 00 22.2	+2.5
HOPEN				eS	Sn	19 01 08.5	-3.8
DAG	Danmarks Havn	6.46	296	eP	Pn	19 00 51.6	+5.4
DAG				i S	Sn	19 01 55.6	-4.2
DAG				IAML		19 01 57.0	
	comp=Z,1.7nm,0.3s						
DBG	Daneborg	7.27	276	Pn	Pn	19 00 59.1	+1.8
DBG				Sn	Sn	19 02 15.9	-3.8
DBG	Daneborg	7.27	276	eP	Pn	19 00 59.4	+2.0
DBG				i S	Sn	19 02 15.8	-4.0
DBG	Daneborg	7.27	276	eS	Sn	19 02 16.1	-3.6
NOR	Nord	7.93	334	i P	Pg	19 01 53.0	+10
NOR				i S	Sn	19 02 15.6	-20
SCO	Scoresbysund	9.75	256	i P	Pn	19 02 16.0	+45
ZFI2	Zemlya Franca-	9.82	38	eP	Pn	19 01 36.0	+3.7
ZFI2				eS	Sn	19 03 16.8	-5.6
ZFI	Zemlya Franca-	9.82	38	eP	Pn	19 01 35.9	+3.6
ZFI				eS	Sn	19 03 16.9	-5.5

IDC ***30*** *19:01:27.0±0.9, 59°.21N×153°.93W, h83^{km}±11^{km}, mb3.8/22, mbtmp4.2/28, MS3.2/2, Error ellipse: s-maj=10.1km s-min=8.9km az=180.0*

MOS ***30*** *19:01:27.9±1.0, 59°.20N×153°.78W, h111^{km}, mb4.5/9, Error ellipse: s-maj=13.8km s-min=6.6km az=89.9*

NEIC ***30*** *19:01:28.6±1.3, 59°.10N±0°.04×153°.80W±0°.07, h106^{km}±2^{km}, Error ellipse: s-maj=5.6km s-min=5.3km az=216.0*

NEIC ***30*** *19:01:29, 59°.16N×153°.66W, h96^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.22; $M_{\theta\theta}$-1.64; $M_{\phi\phi}$0.42; $M_{r\theta}$0.76; $M_{\theta\phi}$0.07; $M_{\phi r}$0.79; Fault plane solution: $M_0$1.84000×10^{15} NP1:ϕ_s299.00000°, δ38.00000°, λ137.00000°. NP2:ϕ_s65.00000°, δ65.00000°, λ60.00000°. Principal axes: T 1.8398, Plg59.0000°, Azm292.0000°; N -0.0007, Plg27.0000°, Azm79.0000°; P -1.8392, Plg15.0000°, Azm176.0000°;*

AEIC ***30*** *19:01:29±1.5, 59°.08N±0°.04×153°.76W±0°.08, h103^{km}±3^{km}, ML4.1, mb4.4/24(NEIC), ML4.2/96(NEIC), Mwr4.1/11(SLM) Error ellipse: s-maj=5.7km s-min=5.5km az=225.0*

ISC 30 19:01:29.0±0.5, **59°.13N**±0°.04×**153°.75W**±0°.03, **h110**^{km}±4^{km}**, n335,** σ1^{s}.**16**/343, **mb4.3**/44, **4C-6D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q19K	Cape Douglas,	0.21	165		Sn	19 01 54.8	-1.2
Q19K	Cape Douglas,	0.21	165	Pn	Pn	19 01 43.7	-0.7
Q19K	Cape Douglas,	0.21	165	P	Pn	19 01 43.4	-1.0
	baz=333						
Q19K				S	Sn	19 01 54.8	-1.2
	baz=333						
AUCH	Augustine Cone	0.28	34		Pn	19 01 44.5	-0.1
AUH	Augustine H	0.28	34		Pn	19 01 44.7	0.0
AUQ	Augustine Qik'	0.28	38		Pn	19 01 44.5	-0.1
AUL	Augustine Lava	0.30	33		Pn	19 01 44.6	-0.1
AU2	Augustine Isla	0.30	39		Pn	19 01 44.7	+0.1
AU22	Augustine Moun	0.31	40		Pn	19 01 44.6	0.0
AU22					Sn	19 01 56.0	-0.4
OPT	Oil Point	0.58	27		Pn	19 01 46.6	+0.3
OPT	Oil Point	0.58	27	P	Pn	19 01 46.6	+0.3
	baz=206						
P18K	Big Mountain,	0.80	289	Pn	Pn	19 01 47.3	-0.9
P18K	Big Mountain,	0.80	289		Sn	19 02 00.9	-1.9
P18K	Big Mountain,	0.80	289	IAML		19 02 01.4	
	comp=N,3µm,0.8s						
P18K				IAML		19 02 01.6	
	comp=E,3µm,0.5s						
P18K	Big Mountain,	0.80	289	P	Pn	19 01 47.3	-0.9
	baz=113						
P18K				S	Sn	19 02 00.9	-1.9
	baz=113						
O18K	Koktuh Hills	1.04	315		Pn	19 01 50.1	-0.4
O18K	Koktuh Hills	1.04	315		Sn	19 02 05.9	-0.9
O18K	Koktuh Hills	1.04	315	IAML		19 02 06.2	
	comp=E,1µm,0.8s						
O18K				IAML		19 02 06.9	
	comp=N,2µm,0.8s						
O18K	Koktuh Hills	1.04	315	P	Pn	19 01 50.2	-0.4
	baz=137						
O18K				S	Sn	19 02 05.9	-0.9
	baz=137						
O20K	Slope Mountain	1.11	31		Pn	19 01 51.6	+0.3
O20K					Sn	19 02 08.7	+0.4
O20K	Slope Mountain	1.11	31	P	Pn	19 01 51.6	+0.3
	baz=211						
O20K				S	Sn	19 02 08.7	+0.4
	baz=211						
HOM	Homer	1.20	63		Pn	19 01 52.5	+0.3
HOM	Homer	1.20	63		Sn	19 02 10.6	+0.8
HOM	Homer	1.20	63	IAML		19 02 11.1	
	comp=E,15µm,0.6s						
HOM	Homer	1.20	63	P	Pn	19 01 52.5	+0.3
	baz=243						
HOM				S	Sn	19 02 10.6	+0.8
	baz=243						
CNPM	China Poot	1.35	72	Pn	Pn	19 01 53.9	0.0
CNPM	China Poot	1.35	72		Sn	19 02 11.9	-1.0
CNPM	China Poot	1.35	72	IAML		19 02 13.0	
	comp=E,3µm,0.5s						
CNPM				IAML		19 02 13.0	
	comp=N,3µm,0.7s						
RED	Redoubt Volcan	1.38	21		Pn	19 01 54.7	+0.3
RED					Sn	19 02 14.3	+0.6
RSO	Redoubt South	1.42	20		Pn	19 01 55.4	+0.4
RDWB	Redoubt West	1.43	18		Pn	19 01 55.3	+0.3
KDAK	Kodiak Island	1.49	155	P	Pn	19 01 54.3	-1.2
	comp=N,572nm,0.3s,baz=2.5,slow=9.9,SNR=3281						
KDAK				S	Sn	19 02 13.4	-2.3
	comp=N,2µm,0.4s,baz=230,slow=22,SNR=13						
KDAK				LR	LR	19 02 32.1	
	comp=N,350nm,19.4s,baz=273,slow=41						
KDAK	Kodiak Island	1.49	155	Pn	Pn	19 01 54.7	-0.8
KDAK				IAML		19 02 16.8	
	comp=N,5µm,0.5s						
KDAK	Kodiak Island	1.49	155	P	Pn	19 01 54.7	-0.8
NCT	North Crescent	1.49	16		Pn	19 01 56.1	+0.4
RDJH	Redoubt Jeurge	1.54	18		Pn	19 01 56.7	+0.4
DFR	Drift River	1.56	20		Pn	19 01 56.9	+0.4
BRLK	Bradley Lake	1.59	65		Sn	19 02 16.9	-1.2
BRLK	Bradley Lake	1.59	65	Pn	Pn	19 01 56.3	-0.6
BRLK	Bradley Lake	1.59	65	IAML		19 02 21.4	
	comp=N,2µm,0.6s						
BRSE	Bradley Lake S	1.65	67		Pn	19 01 57.1	-0.4
BRSE	Bradley Lake S	1.65	67	P	Pn	19 01 57.1	-0.4
	baz=248						
N19K	Bonanza Creek	1.73	348	Pn	Pn	19 01 58.8	+0.3
N19K	Bonanza Creek	1.73	348	P	Pn	19 01 58.6	+0.1
	baz=168						
N18K	Kilae Creek	1.89	326	Pn	Pn	19 02 00.5	0.0
N18K	Kilae Creek	1.89	326	P	Pn	19 02 00.5	0.0
	baz=146						
OHAK	Old Harbor	1.93	173		Sn	19 02 22.9	-2.5
OHAK	Old Harbor	1.93	173	Pn	Pn	19 01 59.8	-1.2
OHAK	Old Harbor	1.93	173	IAML		19 02 24.0	
	comp=E,4µm,0.7s						
OHAK				IAML		19 02 24.1	
	comp=N,4µm,0.4s						
OHAK	Old Harbor	1.93	173	P	Pn	19 01 59.9	-1.1
	baz=352						
OHAK				S	Sn	19 02 22.9	-2.5
	baz=352						
CAPN	Captain Cook N	2.10	37		Pn	19 02 04.8	+1.7
CAPN				IAML		19 02 43.6	
	comp=E,3µm,0.7s						
CAPN	Captain Cook N	2.10	37	P	Pn	19 02 04.8	+1.7
	baz=219						
SVW2	Sparrevohn	2.17	336	Pn	Pn	19 02 04.0	0.0
SPU	Mount Spurr	2.22	22		Pn	19 02 04.9	+0.2
SPWE	Spurr West	2.23	15		Pn	19 02 06.1	+1.2
CKN	Chakachatna No	2.24	20		Pn	19 02 05.8	+0.8
SPBG	Spurr Blockage	2.24	17		Pn	19 02 05.9	+0.9
SLKM	Skilak Lake	2.25	51		Pn	19 02 05.2	+0.1
SPCG	Spurr Capps Gl	2.33	21		Pn	19 02 06.7	+0.5
SEW	Seward	2.39	64	Pn	Pn	19 02 09.8	+3.0
SEW	Seward	2.39	64	P	Pn	19 02 06.6	-0.3
	baz=247						
O22K	Cooper Landing	2.44	55	Pn	Pn	19 02 07.8	+0.3
O22K	Cooper Landing	2.44	55	P	Pn	19 02 08.0	+0.5
	baz=237						
STLK	Strandline Lak	2.56	21		Pn	19 02 09.6	+0.5
SII	Sitkinak Islan	2.59	185	Pn	Pn	19 02 08.4	-1.1
SII	Sitkinak Islan	2.59	185	P	Pn	19 02 08.5	-1.1
	baz=4.7						
M20K	Styx River	2.77	6		Pn	19 02 12.8	+0.8
M19K	Big River Lodg	2.80	354		Pn	19 02 12.4	+0.3
RC01	Rabbit Creek A	2.81	44	Pn	Pn	19 02 12.3	0.0
RC01				IAML		19 02 47.1	
	comp=E,1µm,0.6s						
RC01				IAML		19 02 47.2	
	comp=N,1µm,0.8s						
RC01	Rabbit Creek A	2.81	44	P	Pn	19 02 12.5	+0.2
	baz=227						
L19K	White Mountain	3.11	350	Pn	Pn	19 02 16.5	+0.2
L19K	White Mountain	3.11	350	P	Pn	19 02 16.7	+0.4
	baz=170						
M22K	Willow	3.18	33		Pn	19 02 17.9	+0.6
L20K	Farewell, AK	3.36	359		Pn	19 02 20.4	+0.7
L20K	Farewell, AK	3.36	359	P	Pn	19 02 20.4	+0.7
	baz=179						
PMR	Palmer	3.37	41		Pn	19 02 19.2	-0.5
PMR				IAML		19 02 58.7	
	comp=N,444nm,0.4s						
PMR				IAML		19 02 59.1	
	comp=E,531nm,0.8s						
PMR	Palmer	3.37	41	P	Pn	19 02 19.2	-0.5
PMR	Palmer	3.37	41	P	Pn	19 02 19.2	-0.5
	baz=224						
CHIR	Chirikof Islan	3.47	198	Pn	Pn	19 02 19.6	-1.5
CHIR				IAML		19 02 58.8	
	comp=N,867nm,0.5s						
CHIR				IAML		19 02 59.1	
	comp=E,488nm,0.6s						
CHIR	Chirikof Islan	3.47	198	P	Pn	19 02 19.6	-1.5
	baz=16						
KNK	Knik Glacier	3.49	47		Pn	19 02 21.1	-0.3
KNK	Knik Glacier	3.49	47	P	Pn	19 02 20.9	-0.4
	baz=231						
GHO	Glory Hole Cre	3.57	40		Pn	19 02 21.8	-0.7
GHO				IAML		19 03 03.4	
	comp=E,802nm,1.0s						
GHO				IAML		19 03 06.1	
	comp=N,662nm,0.8s						
CUT	Chulitna	3.70	26		Pn	19 02 24.0	-0.1
CUT				IAML		19 03 11.2	
	comp=N,429nm,0.4s						
CUT				IAML		19 03 14.5	
	comp=E,555nm,0.6s						
CUT	Chulitna	3.70	26	P	Pn	19 02 24.4	+0.3
	baz=209						
GLI	Glacier Island	3.77	59		Pn	19 02 23.8	-1.3
GLI				IAML		19 03 06.0	
	comp=E,657nm,0.6s						
GLI	Glacier Island	3.77	59	P	Pn	19 02 23.8	-1.3
	baz=244						
SML	Sawmill	3.79	43	Pn	Pn	19 02 24.9	-0.6
SML				IAML		19 03 08.9	
	comp=N,671nm,0.8s						
SML				IAML		19 03 10.0	
	comp=E,477nm,1.0s						
SML	Sawmill	3.79	43	P	Pn	19 02 24.8	-0.6
	baz=227						
Q23K	Middleton Isla	3.81	82	Pn	Pn	19 02 25.2	-0.3
Q23K				IAML		19 03 12.0	
	comp=E,710nm,0.5s						
Q23K	Middleton Isla	3.81	82	P	Pn	19 02 25.3	-0.3
	baz=268						
MID	Middleton Isla	3.81	82	Pn	Pn	19 02 25.2	-0.4
MID	Middleton Isla	3.81	82	P	Pn	19 02 25.2	-0.4
PPLA	Purkeypile	3.85	11	Pn	Pn	19 02 27.6	+1.3
PPLA	Purkeypile	3.85	11	P	Pn	19 02 27.6	+1.3
	baz=192						
HIN	Hinchinbrook I	3.88	68	Pn	Pn	19 02 26.1	-0.5
TT01	Tatalina	3.94	345		Pn	19 02 27.8	+0.3
TTA	Tatalina	3.96	345	Pn	Pn	19 02 28.0	+0.2
TTA	Tatalina	3.96	345	P	Pn	19 02 28.0	+0.2
TTA	Tatalina	3.96	345	P	Pn	19 02 28.0	+0.2
	baz=163						
FID	Port Fidalgo	4.00	63		Pn	19 02 26.6	-1.6
JPK	Jack Peak	4.07	59		Pn	19 02 28.6	-0.5
SCM	Sheep Creek Mo	4.17	47		Pn	19 02 30.4	-0.2
SCM	Sheep Creek Mo	4.17	47	P	Pn	19 02 30.4	-0.2
SCM	Sheep Creek Mo	4.17	47	P	Pn	19 02 30.3	-0.2
	baz=232						
K20K	Telida	4.24	358	Pn	Pn	19 02 31.7	+0.2
K20K	Telida	4.24	358	P	Pn	19 02 31.7	+0.2
	baz=178						
EYAK	Cordova Ski Ar	4.28	67		Pn	19 02 30.9	-1.0
EYAK	Cordova Ski Ar	4.28	67	P	Pn	19 02 31.0	-0.8
	baz=253						
CAST	Castle Rocks	4.37	10		Pn	19 02 33.8	+0.6
DIV	Divide	4.46	60		Pn	19 02 34.5	+0.1
WAT1	Susitna Watana	4.49	32		Pn	19 02 34.4	-0.4
WAT1	Susitna Watana	4.49	32	P	Pn	19 02 34.4	-0.4
	baz=216						
WAT6	Susitna Watana	4.54	38		Pn	19 02 35.0	-0.6
WAT6	Susitna Watana	4.54	38	P	Pn	19 02 35.0	-0.6
	baz=223						
KLU	Klutina	4.55	55		Pn	19 02 35.5	-0.2
KLU				IAML		19 03 29.0	
	comp=E,333nm,0.5s						
KLU	Klutina	4.55	55	P	Pn	19 02 35.5	-0.2
	baz=242						
KTH	Kantishna Hill	4.64	16		Pn	19 02 37.2	+0.4
KTH				IAML		19 03 30.8	
	comp=N,107nm,0.6s						
KTH				IAML		19 03 34.7	
	comp=E,112nm,0.8s						
TRF	Thorofare Moun	4.64	20	Pn	Pn	19 02 36.6	-0.3
TRF				IAML		19 03 38.8	
	comp=E,126nm,0.6s						
TRF				IAML		19 03 58.4	
	comp=N,150nm,0.8s						
TRF	Thorofare Moun	4.64	20	P	Pn	19 02 36.7	-0.3
	baz=202						
M24K	Tolsona, Glenn	4.78	48		Pn	19 02 38.8	+0.1
M24K	Tolsona, Glenn	4.78	48	P	Pn	19 02 38.8	+0.1
	baz=234						
CHUM	Lake Minchumin	4.81	8		Pn	19 02 39.7	+0.6
CHUM	Lake Minchumin	4.81	8	P	Pn	19 02 39.7	+0.6
	baz=189						
RND	Reindeer	4.89	27	Pn	Pn	19 02 40.0	-0.3
RND				IAML		19 03 38.9	
	comp=N,112nm,0.7s						
RND				IAML		19 03 56.0	
	comp=E,101nm,1.1s						
RND	Reindeer	4.89	27	P	Pn	19 02 40.0	-0.3
BMRM	Bremner River	4.94	64		Pn	19 02 40.5	-0.4
BMRM				IAML		19 03 37.6	
	comp=N,306nm,0.5s						
BMRM				IAML		19 03 37.6	
	comp=E,270nm,0.5s						
BMRM	Bremner River	4.94	64	P	Pn	19 02 40.1	-0.7
	baz=252						
HMT	Hamilton	4.95	72		Pn	19 02 41.0	0.0
DHY	Denali Highway	5.02	35		Pn	19 02 41.5	-0.5
DHY				IAML		19 03 41.7	
	comp=N,225nm,0.5s						
J20K	Nowinta River	5.07	358	Pn	Pn	19 02 42.3	-0.2
J20K				IAML		19 04 27.8	
	comp=N,52nm,0.7s						
J20K				IAML		19 04 33.8	
	comp=E,54nm,0.9s						
J20K	Nowinta River	5.07	358	P	Pn	19 02 42.4	0.0
	baz=178						
NICHA	Nichawak Mount	5.08	73		Pn	19 02 42.6	-0.1
SUCK	Suckling Hills	5.15	75	Pn	Pn	19 02 43.9	+0.2
SUCK				IAML		19 03 42.7	
	comp=N,202nm,0.5s						
SUCK				IAML		19 03 43.6	
	comp=E,145nm,1.0s						
BPAW	Bear Paw Mtn.	5.15	14	Pn	Pn	19 02 43.3	-0.4
BPAW	Bear Paw Mtn.	5.15	14	P	Pn	19 02 43.3	-0.4
	baz=196						
MCK	McKinley	5.16	25		Pn	19 02 43.8	0.0
MCK				IAML		19 03 44.8	
	comp=E,96nm,0.6s						
MCK				IAML		19 04 21.0	
	comp=N,85nm,1.2s						
MCK	McKinley	5.16	25	P	Pn	19 02 43.8	0.0
MCK	McKinley	5.16	25	P	Pn	19 02 43.9	0.0
	baz=209						
N25K	Chitina, Valde	5.17	57		Pn	19 02 43.9	-0.1
N25K				IAML		19 03 44.4	
	comp=N,165nm,0.7s						
N25K				IAML		19 03 45.5	
	comp=E,162nm,0.6s						
N25K	Chitina, Valde	5.17	57	P	Pn	19 02 44.0	-0.1
	baz=245						
SDPT	Sand Point	5.27	227	Pn	Pn	19 02 44.4	-0.9
SDPT				IAML		19 03 47.7	
	comp=N,107nm,0.6s						
SDPT				IAML		19 03 51.6	
	comp=E,87nm,0.9s						
HARP	HAARP	5.33	48		Pn	19 02 46.3	+0.1
HARP	HAARP	5.33	48	P	Pn	19 02 46.3	+0.1
	baz=236						
CNBA	Chernabura Isl	5.38	219		Pn	19 02 44.9	-1.8
CNBA				IAML		19 03 45.2	
	comp=N,135nm,0.7s						
CNBA				IAML		19 03 51.0	
	comp=E,85nm,0.6s						
GRIN	Grindle Hills	5.41	73		Pn	19 02 46.4	-0.7
GLB	Gilahina Butte	5.46	61		Pn	19 02 47.5	-0.4
KHIT	Khitrov Hills	5.46	72		Pn	19 02 47.6	-0.4
VRDI	Verde Repeater	5.55	63		Pn	19 02 48.8	-0.5
PAX	Paxson	5.56	43		Pn	19 02 49.0	-0.3
PAX	Paxson	5.56	43	P	Pn	19 02 49.0	-0.3
PAX	Paxson	5.56	43	P	Pn	19 02 49.2	-0.1
	baz=230						
SNH	Sunshine Point	5.63	75		Pn	19 02 50.6	+0.4
WAX	Waxell Ridge	5.66	72		Pn	19 02 50.7	+0.1
TGL	Tana Glacier	5.72	69		Pn	19 02 51.4	-0.1
MCARA	McCarthy VSAT	5.79	63	Pn	Pn	19 02 52.6	+0.2
MCARA	McCarthy VSAT	5.79	63	P	Pn	19 02 52.5	+0.1
	baz=251						
NEA2	Nenana	5.91	20		Pn	19 02 53.2	-0.6
NEA2	Nenana	5.91	20	P	Pn	19 02 53.3	-0.6
	baz=204						
ISLE	Juniper Island	5.93	71		Pn	19 02 54.3	-0.1
WRH	Wood River Hil	5.99	24	Pn	Pn	19 02 54.1	-0.8
PTPK	Patty Peak	6.00	65		Pn	19 02 55.4	+0.1
BAGL	Bagley Icefiel	6.04	72		Pn	19 02 56.1	+0.4
MESA	MESA	6.07	75		Pn	19 02 56.6	+0.3
MESA	MESA	6.07	75	P	Pn	19 02 56.1	-0.3
	baz=265						
MLY	Manley	6.08	12		Pn	19 02 55.7	-0.6
MLY	Manley	6.08	12	P	Pn	19 02 55.8	-0.6
	baz=195						
I21K	Tanana	6.12	7	Pn	Pn	19 02 57.3	+0.5
I21K	Tanana	6.12	7	P	Pn	19 02 57.1	+0.3
	baz=189						
YAH	Yahtse	6.19	73		Pn	19 02 58.4	+0.4
HDA	Harding Lake	6.20	28		Pn	19 02 57.3	-0.5
CCB	Clear Creek Bu	6.20	24		Pn	19 02 56.9	-0.9
M26K	Nabesna, AK	6.20	54		Pn	19 02 58.0	+0.1
M26K	Nabesna, AK	6.20	54	P	Pn	19 02 58.0	+0.1
	baz=242						
GRNC	Granite Creek	6.24	70		Pn	19 02 58.7	+0.1
RIDG	Independent Ri	6.29	39		Pn	19 02 59.2	+0.1
RIDG	Independent Ri	6.29	39	P	Pn	19 02 58.8	-0.3
	baz=226						
BARN	Barnard Glacie	6.35	67		Pn	19 03 00.2	+0.1
I23K	Minto, Yukon-K	6.38	17		Pn	19 02 59.9	-0.3
I23K	Minto, Yukon-K	6.38	17	P	Pn	19 02 59.5	-0.6
	baz=201						
L26K	Log Cabin Wild	6.38	48		Pn	19 03 00.8	+0.6
TCOL	CIGO, UAF Yank	6.39	23		Pn	19 02 59.6	-0.8
TCOL	CIGO, UAF Yank	6.39	23	P	Pn	19 02 59.6	-0.8
	baz=208						
COLA	College	6.39	23		Pn	19 02 59.8	-0.6
COLA	College	6.39	23	P	Pn	19 02 59.8	-0.6
MDM	Murphy Dome	6.39	22	Pn	Pn	19 03 00.0	-0.4
CTG	Chitna Glacier	6.48	68	P	Pn	19 03 01.9	+0.2
	baz=258						
CTGM	Chitina Glacie	6.48	68		Pn	19 03 02.5	+0.6
DOT	Dot Lake	6.49	42	Pn	Pn	19 03 02.2	+0.4
TABL	Table Mountain	6.50	73		Pn	19 03 02.6	+0.5
IL31		6.51	27		Pn	19 03 01.3	-0.7
ILAR	Eielson Array	6.51	27	P	Pn	19 03 00.9	-1.1
	comp=E,13nm,0.4s,baz=216,slow=13,SNR=177						
ILAR				S	Sn	19 04 10.7	-4.2
	comp=E,21nm,0.7s,baz=214,slow=18,SNR=9.4						
H21K	Melozitna Rive	6.56	3		Pn	19 03 03.3	+0.5
H21K	Melozitna Rive	6.56	3	P	Pn	19 03 03.3	+0.5
	baz=184						
LOGN	Logan Glacier	6.62	70		Pn	19 03 04.0	+0.3
SAMH	Samovar Hills	6.65	76		Pn	19 03 04.0	-0.1
M27K	Edge Creek, AK	6.65	56		Pn	19 03 04.5	+0.4
POKR	Poker Plat Res	6.69	24		Pn	19 03 03.8	-0.7
POKR	Poker Plat Res	6.69	24	P	Pn	19 03 04.1	-0.4
	baz=209						
SCRK	Sand Creek	6.73	40	Pn	Pn	19 03 04.4	-0.8
SCRK	Sand Creek	6.73	40	P	Pn	19 03 03.7	-1.5
	baz=228						
J25K	Salcha River,	6.77	32		Pn	19 03 05.0	-0.7
J25K	Salcha River,	6.77	32	P	Pn	19 03 04.9	-0.8
	baz=219						
IM03		6.88	360		Pn	19 03 07.5	+0.5
IMAR	Indian Mountai	6.88	360		Pn	19 03 06.9	0.0
PCA	Pinnacle	6.91	76		Pn	19 03 08.0	+0.4
PINM	Pinnacle	6.92	76	P	Pn	19 03 08.0	+0.4
	baz=267						
L27K	Beaver Creek,	6.99	51	Pn	Pn	19 03 08.4	-0.2
L27K	Beaver Creek,	6.99	51	P	Pn	19 03 08.6	0.0
	baz=241						
H23K	Yukon River	6.99	14		Pn	19 03 08.8	+0.2
H23K	Yukon River	6.99	14	P	Pn	19 03 07.6	-0.9
	baz=198						
BC03		7.01	51		Pn	19 03 08.5	-0.3
BCAR	Beaver Creek A	7.01	51	Pn	Pn	19 03 08.6	-0.2
BCPM	Bancas Point	7.22	77		Pn	19 03 12.0	+0.3
J26L	Joseph Creek	7.22	38	Pn	Pn	19 03 11.3	-0.5
J26L	Joseph Creek	7.22	38	P	Pn	19 03 11.0	-0.7
	baz=226						
H24K	Noodor Dome	7.25	19	Pn	Pn	19 03 11.6	-0.5
H24K	Noodor Dome	7.25	19	P	Pn	19 03 11.6	-0.5
	baz=205						
K27K	Chicken	7.42	44		Pn	19 03 14.6	+0.3
ANM	Nome	7.73	320		Pn	19 03 20.3	+1.7
ANM	Nome	7.73	320	P	Pn	19 03 20.3	+1.7
EGAK	Eagle	8.19	41		Pn	19 03 23.9	-0.9
COLD	Coldfoot	8.28	10	Pn	Pn	19 03 25.6	-0.4
HYT	Haines Junctio	8.32	71	Pn	Pn	19 03 25.6	-1.1
DAWY	Dawson	8.43	48		Pn	19 03 28.3	+0.2
M30M	Minto, Yukon	8.96	60	Pn	Pn	19 03 36.3	+1.0
J29M	Klondike Camp	9.07	47		Pn	19 03 38.0	+1.2
TNA	Tin City	9.20	320	Pn	Pn	19 03 38.5	+0.1
N31M	Braeburn, Yuko	9.22	68		Pn	19 03 38.9	+0.1
BMAR	Burnt Mountain	9.28	22	Pn	Pn	19 03 37.6	-2.0
SKAG	Skagway	9.43	80		Pn	19 03 41.4	-0.1
I29M	Ogilvie Camp,	9.51	42		Pn	19 03 43.2	+0.5
WHY	Whitehorse	9.60	73		Pn	19 03 43.6	-0.4
TOLK	Toolik Lake Re	9.72	9	Pn	Pn	19 03 46.0	+0.5
BESE	Bessie Mountai	9.80	85	Pn	Pn	19 03 47.3	+0.6
SIT	Sitka	9.97	94	Pn	Pn	19 03 48.3	-0.6
SIT	Sitka	9.97	94	P	Pn	19 03 48.3	-0.6
M31M	Drury Creek, Y	9.97	64		Pn	19 03 49.1	+0.1
JIS	Juneau Island	10.11	87		Pn	19 03 51.3	+0.5
EPYK	Eagle Plains	10.62	40		Pn	19 03 58.3	+0.5
P33M	Teslin, Yukon	10.63	75	Pn	Pn	19 03 58.0	0.0
CRAG	Craig	11.73	99	Pn	Pn	19 04 11.1	-1.4
WRAK	Wrangell Islan	11.73	94		Pn	19 04 13.5	+0.9
DLBC	Dease Lake	12.31	83	P	Pn	19 04 21.4	+1.1
	comp=E,14nm,0.4s,baz=256,slow=10,SNR=44						
DLBC				S	Sn	19 06 33.5	-2.0
	comp=E,1.8nm,0.4s,baz=151,slow=26,SNR=1.9						
INK	Inuvik	12.76	36	P	Pn	19 04 25.4	-0.6
	comp=E,4.8nm,0.8s,baz=217,slow=6.5,SNR=9.4						
INK				S	S	19 07 02.5	-2.3
	comp=E,7.0nm,1.0s,baz=280,slow=32,SNR=13						
INK				LR	LR	19 10 02.4	
	comp=E,52nm,18.1s,baz=152,slow=40						
INK	Inuvik	12.76	36	Pn	Pn	19 04 26.0	-0.1

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INK   Inuvik            12.76  36    P      Pn     19 04 26.0 -0.1
BBB   Bella Bella       15.98 105    P      P      19 05 09.4 +0.9
        comp=E,2.4nm,0.6s,baz=282,slow=5.3,SNR=5.8
BBB                                  S      Sn     19 08 00.6 -3.3
        comp=E,1.1nm,0.5s,baz=319,slow=13,SNR=1.6
BBB   Bella Bella       15.98 105    IAmb   IAmb   19 05 13.9
        comp=Z,21nm,1.6s
C36M  Paulatuk          16.25  39    Pn     Pn     19 05 08.4 -2.1
A36M  Sachs Harbour     17.20  30    P      Pn     19 05 22.2 +0.2
A36M                                 IAmb   IAmb   19 05 57.8
        comp=Z,25nm,0.8s
SHEM  Shemya Is, Ala    18.98 264    P      P      19 05 41.0 -0.4
        comp=Z,18nm,0.5s,baz=53,slow=5.9,SNR=5.7
SHEM                                 S      S      19 09 10.6 -0.3
        comp=Z,17nm,0.8s,baz=314,slow=15,SNR=1.8
YKA   Yellowknife Ar    19.17  63    P      Pn     19 05 44.6 -0.9
        comp=Z,4.6nm,0.9s,baz=276,slow=9.9,SNR=20
YKA                                  PcP    PcP    19 10 02.8 +0.7
        comp=Z,0.6nm,0.6s,baz=286,slow=1.6,SNR=5.1
YKA   Yellowknife Ar    19.17  63    P      Pn     19 05 44.7 -0.8
YKA   Yellowknife Ar    19.17  63    P      Pn     19 05 44.7 -0.8
BILL  Bilibino          19.52 314    P      P      19 05 47.7 +0.4
BILL                                 IAmb   IAmb   19 05 49.0
        comp=Z,7.7nm,0.7s
BILL  Bilibino          19.52 314d iP     P      19 05 47.8 +0.6
BILL                                 pmax   pmax
        comp=Z,8.0nm,1.0s
NEW   Newport           23.94 101    P      P      19 06 34.7 +2.0
        comp=Z,1.5nm,0.5s,baz=299,slow=9.1,SNR=4.2
        comp=Z,1.5nm,0.5s
J04D  Umpqua Nationa    25.09 115    P      P      19 06 44.0 +0.7
J04D                                 IAmb   IAmb   19 07 19.4
        comp=Z,29nm,1.4s
SEY   Seymchan          25.71 302    P      P      19 06 47.7 -0.8
        comp=Z,4.9nm,0.6s,baz=88,slow=8.3,SNR=22
        comp=Z,4.9nm,0.6s
SEY   Seymchan          25.71 302deP    P      19 06 49.2 +0.7
SEY                                  pmax   pmax
        comp=Z,8.0nm,1.3s
PETK  Petropavlovsk-    27.21 279    P      P      19 07 01.6 -0.5
        comp=Z,2.4nm,0.6s,baz=65,slow=14,SNR=28
        comp=Z,2.4nm,0.6s
MA2   Magadan           27.59 295    P      P      19 07 04.8 -0.6
        comp=Z,5.6nm,0.5s,baz=117,slow=12,SNR=6.2
        comp=Z,5.6nm,0.5s
MA2   Magadan           27.59 295    P      P      19 07 06.2 +0.8
MA2                                  IAmb   IAmb   19 07 07.8
        comp=Z,7.9nm,0.8s
MA2   Magadan           27.59 295⇑eP    P      19 07 07.2 +1.8
MA2                                  pmax   pmax
        comp=Z,10.0nm,1.1s
NVAR  Mina Array Bea    30.65 117    P      P      19 07 34.9 +1.9
        comp=Z,0.5nm,0.5s,baz=315,slow=11,SNR=5.2
        comp=Z,0.5nm,0.5s
PDAR  Pinedale Array    31.58 101    P      P      19 07 43.0 +1.9
        comp=Z,0.5nm,0.7s,baz=290,slow=4.3,SNR=4.8
        comp=Z,0.5nm,0.7s
TIXI  Tiksi             31.96 324    P      P      19 07 43.5 -0.3
        comp=Z,2.5nm,0.5s,baz=90,slow=23,SNR=38
        comp=Z,2.5nm,0.5s
TIXI  Tiksi             31.96 324    P      P      19 07 43.3 -0.5
TIXI  Tiksi             31.96 324⇓eP    P      19 07 43.9 +0.1
TIXI                                 pmax   pmax
        comp=Z,2.0nm,0.7s
TPNV  Topopah Spring    32.80 116    P      P      19 07 54.9 +3.1
TPNV                                 IAmb   IAmb   19 08 02.2
        comp=Z,16nm,1.9s
TPNV  Topopah Spring    32.80 116    P      P      19 07 54.9 +3.1
TPNV                                 pmax   pmax
        comp=Z,16nm,2.0s
Q16A  Castle Valley     33.67 108    P      P      19 08 02.6 +3.3
Q16A                                 IAmb   IAmb   19 08 03.7
        comp=Z,4.5nm,1.0s
SRU   San Rafael Swe    33.84 107    P      P      19 08 03.7 +2.9
SRU                                  IAmb   IAmb   19 08 05.0
        comp=Z,5.1nm,0.8s
SRU   San Rafael Swe    33.84 107    P      P      19 08 03.7 +2.9
SRU                                  pmax   pmax
        comp=Z,5.0nm,0.8s
PV13  Radium Mtn., P    35.42 106    P      P      19 08 17.0 +2.6
PV13                                 IAmb   IAmb   19 08 18.6
        comp=Z,7.2nm,1.1s
YAK   Yakutsk           35.70 308    P      P      19 08 15.9 -0.3
YAK   Yakutsk           35.70 308   eP      P      19 08 15.1 -1.1
YAK                                 e              19 09 37.2
YAK                                 e              19 10 40.2
YAK                                 eS      S      19 13 45.0 +0.6
YAK                                 e*SS    sS     19 14 27.3 +0.4
YAK                                 e              19 18 20.8
YAK                                  pmax   pmax
        comp=Z,6.0nm,0.6s
YAK                                  pmax   pmax
        comp=E,5.0nm,1.1s
YAK                                  pmax   pmax
        comp=Z,9.0nm,1.9s
YAK                                  pmax   pmax
        comp=E,7.0nm,1.8s
YAK                                  pmax   pmax
        comp=N,21nm,2.4s
YAK                                  smax   smax
        comp=N,21nm,3.0s
YAK                                  smax   smax
        comp=E,32nm,3.5s
ZEA   Zeya              41.61 299   eP      P      19 09 05.6 -0.1
ZEA                                  pmax   pmax
        comp=Z,10.0nm,1.2s
MNTX  Cornudas Mount    42.27 109    P      P      19 09 13.9 +2.6
KLR   Kul'dur           42.49 291c iP     P      19 09 13.1 +0.2
KLR                                  pmax   pmax
        comp=Z,16nm,0.6s
SCHQ  Schefferville     44.36  56    P      P      19 09 28.8 +0.9
        comp=Z,1.2nm,0.5s,baz=342,slow=13,SNR=2.3
        comp=Z,1.2nm,0.5s
NRIK  Noril'sk          44.50 334    P      P      19 09 28.8 +0.1
        comp=Z,6.3nm,0.4s,baz=58,slow=5.9,SNR=7.1
        comp=Z,6.3nm,0.4s
NRIK  Noril'sk          44.50 334    P      P      19 09 28.6 -0.1
NRIK                                 IAmb   IAmb   19 09 29.5
        comp=Z,6.4nm,0.7s
NRIK  Noril'sk          44.50 334    P      P      19 09 28.6 -0.1
NRIK                                 pmax   pmax
        comp=Z,6.0nm,0.7s
TX31  Lajitas Ar. Si    45.05 109    P      P      19 09 35.2 +1.5
TX31                                 IAmb   IAmb   19 10 03.6
        comp=Z,11nm,1.2s
TX32  Lajitas Array     45.05 109    P      P      19 09 34.3 +0.6
TXAR  Lajitas Array     45.05 109    P      P      19 09 35.7 +2.0
        comp=Z,0.8nm,0.7s,baz=331,slow=6.0,SNR=12
        comp=Z,0.8nm,0.7s
TXAR  Lajitas Array     45.05 109    P      P      19 09 34.3 +0.6
TXAR  Lajitas Array     45.05 109    P      P      19 09 34.3 +0.6
USRK  Ussuriysk Ar.     45.90 285    P      P      19 09 39.1 -1.0
        comp=Z,1.5nm,0.4s,baz=52,slow=9.2,SNR=6.9
        comp=Z,1.5nm,0.4s
NRS   Narsarsuaq        47.87  38    P      P      19 09 51.7 -3.5
NRS   Narsarsuaq        47.87  38    P      P      19 09 51.7 -3.5
NRS                                  pmax   pmax
        comp=Z,16nm,0.7s
MJAR  Matsushiro Arr    48.45 274    P      P      19 10 01.0 +1.0
        comp=Z,0.9nm,0.6s,baz=18,slow=7.2,SNR=4.1
        comp=Z,0.9nm,0.6s
ARCES ARCESS Array B    51.63   0    P      P      19 10 24.1 +0.6
        comp=Z,0.8nm,0.6s,baz=355,slow=5.7,SNR=4.2
        comp=Z,0.8nm,0.6s
ARCES ARCESS Array B    51.63   0    P      P      19 10 24.1 +0.6
ARCES                                pmax   pmax
        comp=Z,45nm,1.7s
KSRS  Korea Array       53.00 283    P      P      19 10 34.6 +0.6
        comp=Z,3.5nm,0.5s,baz=40,slow=6.7,SNR=19
        comp=Z,3.5nm,0.5s
ULN   Ulaanbaatar       54.69 305    P      P      19 10 46.6 +0.2
ULN   Ulaanbaatar       54.69 305ceP    P      19 10 46.9 +0.5
ULN                                  pmax   pmax
        comp=Z,9.0nm,1.0s
SONM  Songino Array     54.99 306    P      P      19 10 49.5 +0.9
        comp=Z,12nm,0.6s,baz=43,slow=6.3,SNR=82
SONM                                 ScP    ScP    19 15 38.2 +1.2
        comp=Z,0.3nm,0.7s,baz=4.8,slow=5.1,SNR=3.7
        comp=Z,12nm,0.6s
SONM  Songino Array     54.99 306    P      P      19 10 49.3 +0.8
KNGR  Kungurtug, Tuv    56.30 314⇓eP    P      19 10 58.9 +1.0
ZAA0  Zalesovo Array    57.85 323    P      P      19 11 07.5 -1.0
ZAA0                                 IAmb   IAmb   19 11 09.1
        comp=Z,3.7nm,0.7s
ZALV  Zalesovo Beam     57.85 323    P      P      19 11 08.2 -0.3
        comp=Z,4.5nm,0.7s,baz=28,slow=6.8,SNR=21
        comp=Z,4.5nm,0.7s
ZALV  Zalesovo Beam     57.85 323    P      P      19 11 08.0 -0.5
ZALV  Zalesovo Beam     57.85 323  i P      P      19 11 08.5  0.0
ZALV                                 pmax   pmax
        comp=Z,5.0nm,0.7s
HHC   Hu-ho-hao-te      58.24 297   eP      P      19 11 14.3 +2.7
HHC                                  pmax   pmax
        comp=Z,26nm,0.9s
HHC                                  pmax   pmax
        comp=Z,160nm,6.5s
FINES FINESS Array B    59.75   0    P      P      19 11 22.5 +0.9
        comp=Z,1.8nm,0.9s,baz=8.8,slow=10.0,SNR=5.1
        comp=Z,1.8nm,0.9s
NJ2   Nanjing           61.81 286   eP      P      19 11 34.3 -1.6
NJ2                                  pmax   pmax
        comp=Z,6.0nm,0.5s
KURK  Kurchatov         62.53 325⇓eP    P      19 11 40.1 -0.4
KURK                                 pmax   pmax
        comp=Z,1.0nm,0.9s
BRVK  Borovoye          62.65 332⇑eP    P      19 11 41.1 -0.2
EKA   Eskdalemuir Ar    63.48  18    P      P      19 11 47.3 +0.7
        comp=Z,0.5nm,0.4s,baz=332,slow=5.4,SNR=12
        comp=Z,0.5nm,0.4s
GTA   Gaotai            64.61 305   eP      P      19 11 55.3 +0.8
GTA                                  sP     PcP    19 12 25.3 -2.2
GTA                                  pmax   pmax
        comp=Z,4.0nm,0.9s
MK31  Makanchi Array    64.87 321    P      P      19 11 54.6 -1.4
MK31  Makanchi Array    64.87 321    P      P      19 11 54.6 -1.4
MK31                                 pmax   pmax
        comp=Z,1.0nm,0.8s
MKAR  Makanchi Array    64.87 321    P      P      19 11 55.2 -0.7
        comp=Z,0.8nm,0.5s,baz=32,slow=6.4,SNR=11
MKAR                                 PP     PP     19 14 16.9 -2.4
        comp=Z,0.6nm,0.7s,baz=46,slow=7.7,SNR=5.5
        comp=Z,0.8nm,0.5s
MKAR  Makanchi Array    64.87 321    P      P      19 11 54.9 -1.0
MKAR  Makanchi Array    64.87 321    P      P      19 11 54.9 -1.0
WMQ   Urumqi            65.62 316   eP      P      19 12 05.5 +4.6
LZH   Lanzhou           65.62 300   eP      P      19 12 03.5 +2.3
LZH                                  pP     pP     19 12 08.5  -20
LZH                                  pmax   pmax
        comp=Z,19nm,1.6s
MNK   Minsk             66.71 359  i P      P      19 11 59.3 -8.3
MNK                                i *PP    pP     19 12 24.3  -11
MNK                                i S      S      19 20 40.3  -10
MNK                                i *SS    pS     19 21 23.8 +1.4
MNK                                i SSS    SSS    19 28 06.4
MNK                                  pmax   pmax
        comp=N,14nm,0.7s
MNK                                  pmax   pmax
        comp=Z,8.0nm,0.8s
MNK                                  pmax   pmax
        comp=E,1.0nm,0.6s
MNK                                  MLR    MLR
        comp=N,56nm,17.0s
MNK                                  MLR    MLR
        comp=Z,134nm,20.0s
MNK                                  MLR    MLR
        comp=E,9.0nm,18.0s
MNK   Minsk             66.71 359  i P      P      19 11 59.3 -8.2
        comp=E,1.0nm,0.6s
MNK                                i P      P      19 11 59.3 -8.2
        comp=N,14nm,0.7s
MNK                                i P      P      19 11 59.3 -8.2
        comp=Z,8.0nm,0.8s,baz=181
MNK                                i pP     pP     19 12 24.4  -10
MNK                                i PP     PP     19 14 25.8 -9.2
MNK                                i PPP    PPP    19 16 01.5
MNK                                i S      S      19 20 40.4  -10
MNK                                i sS     pS     19 21 23.9 +1.4
MNK                                i SS     SS     19 24 58.7  -10
MNK                                i SSS    SSS    19 28 06.4
MNK                                i LR     LR     19 39 57.1
MNK                                i LRM    MLR    19 43 54.1
        comp=N,56nm,17.4s
MNK                                i LRM    MLR    19 43 59.9
        comp=Z,134nm,19.6s
MNK                                i LRM    MLR    19 44 20.9
        comp=E,9.0nm,18.1s
MNK   Minsk             66.71 359  i LR     LR     19 39 56.9
GOMU  GeErMu            69.43 306    P      P      19 12 25.5 +0.2
GOMU                                 pP     PcP    19 12 28.8  -19
GOMU                                 sP     pP     19 12 33.3  -19
GOMU                                 pmax   pmax
        comp=Z,3.0nm,0.7s
GOMU                                 pmax   pmax
        comp=Z,76nm,8.8s
AKASG Malin Array Be    70.50 358    P      P      19 12 29.9 -1.2
        comp=Z,0.8nm,0.5s,baz=10,slow=7.8,SNR=5.1
        comp=Z,0.8nm,0.5s
AKASG Malin Array Be    70.50 358    IAmb   IAmb   19 14 18.8
        comp=Z,4.1nm,0.8s
AKASG Malin Array Be    70.50 358    P      P      19 12 29.9 -1.2
AKASG                                pmax   pmax
        comp=Z,4.0nm,0.8s
AKBB  Malin Array Si    70.50 358⇓eP    P      19 12 30.7 -0.4
KSH   Kashi             73.43 322    P      P      19 12 54.0 +5.0
KSH                                  pmax   pmax
        comp=Z,4.0nm,0.9s
PZH   PanZhiHua         74.66 296    P      P      19 12 57.3 +0.9
PZH                                  pmax   pmax
        comp=Z,1µm,0.1s
PZH                                  pmax   pmax
        comp=Z,120nm,8.5s
PPT   Papeete           76.50 176    LR     LR     19 38 19.3
        comp=Z,24nm,19.6s,baz=198,slow=29
ESDC  Sonseca Array     78.41  23    P      P      19 13 18.0 +0.8
        comp=Z,0.6nm,0.8s,baz=343,slow=4.2,SNR=4.7
        comp=Z,0.6nm,0.8s
CMAR  Chiang Mai Arr    82.88 294    P      P      19 13 42.0 +0.7
        comp=Z,0.3nm,0.4s,baz=12,slow=4.9,SNR=2.5
        comp=Z,0.3nm,0.4s
KMBO  Kilima Mbogo     121.52 347    PKP    PKiKP  19 20 10.8 +0.8
        comp=Z,1.5nm,0.6s,baz=26,slow=23,SNR=2.3
BOSA  Boshof           149.48   2    PKPbc  PKPbc  19 21 04.7 -0.2
        comp=Z,5.2nm,0.6s,baz=13,slow=2.8,SNR=14
```

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*IDC **30** 19:03:05.3±0.9, 40°.50N×34°.82E, h0^{km}, mb3.6/6, mbtmp3.6/12, ML3.5/6, MS2.9/4, Error ellipse: s-maj=13.6km s-min=8.2km az=127.0*

*ISK **30** 19:03:05.2, 40°.53N×34°.85E, h5^{km}, ML3.8/24*

*DDA **30** 19:03:06.0±0.0, 40°.50N×34°.85E, h17^{km}, MW3.8*

ISC 30 19:03:07.0±0.8**, 40°.52N**±0°.02×**34°.85E**±0°.02**, h12**^{km}±6^{km}**, n89, σ1^{s}.12**/126**, mb3.4**/6**, 10C-5D, Turkey**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time     Res
                                     Op     ISC        h  m  s   ISC
CTAK  Corum_Osmancik     0.14 342    P      Pg     19 03 10.3 -0.2
CTAK                               i AML    AML    19 03 13.0
        comp=N,4µm,0.5s
CTAK                                 S      Sg     19 03 13.3 +0.3
CTAK                               i AML    AML    19 03 14.0
        comp=E,6µm,0.3s
COAL  Corum-Alaca        0.28 158    P      Pg     19 03 12.2 -0.6
COAL                                 S      Sg     19 03 16.9 +0.3
COAL                               i AML    AML    19 03 17.0
        comp=N,6µm,0.2s
COAL                               i AML    AML    19 03 17.0
        comp=E,7µm,0.3s
CORM  Corum              0.38 206    PG     Pg     19 03 14.5  0.0
CORM                                 SG     Sb     19 03 20.7 -0.8
CKRK  Yozgat, Cekere     0.67 131    P      Pg     19 03 18.8 -1.1
CKRK                               i AML    AML    19 03 28.0
        comp=E,4µm,0.5s
CKRK                                 S      Sg     19 03 28.2 -0.4
CKRK                               i AML    AML    19 03 29.0
        comp=N,3µm,0.6s
KAGI  orum-Kargı         0.68 336    P      Pg     19 03 19.6 -0.6
KAGI                               i AML    AML    19 03 32.0
        comp=N,1µm,0.4s
TOS   Tosya              0.81 310    PG     Pg     19 03 21.9 -0.8
TOS                                  SG     Sg     19 03 34.1 +0.7
YARM  Yarimca-Ladik(     0.85  61    PG     Pg     19 03 22.5 -0.9
YARM                                 SG     Sb     19 03 35.3 +0.2
HAVZ  Havza              0.86  49    P      Pg     19 03 22.8 -0.9
HAVZ                                 S      Sb     19 03 35.8 +0.3
HAVZ                               i AML    AML    19 03 36.0
        comp=N,1µm,0.5s
HAVZ                               i AML    AML    19 03 36.0
        comp=E,8µm,0.2s
DELI  KIRIKKALE          0.88 234    P      Pg     19 03 22.9 -1.0
DELI                                 S      Sg     19 03 35.0 -0.4
DELI                               i AML    AML    19 03 36.0
        comp=E,892nm,0.3s
DELI                               i AML    AML    19 03 37.0
        comp=N,744nm,0.8s
KIZO  Buyukkizoglu-L     0.91  65    PG     Pg     19 03 23.3 -1.2
KIZO                                 SG     Sb     19 03 37.4 +0.5
CANT  Cankiri            0.94 276    PG     Pg     19 03 24.7 -0.4
CANT                                 SG     Sg     19 03 37.9 +0.5
YOZ   Yozgat             0.95 157    PG     Pg     19 03 24.2 -1.0
CDAG  Cicekdag           0.96 202    P      Pg     19 03 24.6 -0.9
CDAG                               i AML    AML    19 03 38.0
        comp=N,3µm,0.5s
CDAG                                 S      Sg     19 03 38.3 +0.3
CDAG                               i AML    AML    19 03 40.0
        comp=E,3µm,0.5s
ILGA  Ilgaz              1.01 302    P      Pg     19 03 26.0 -0.5
ILGA                                 S      Sg     19 03 40.2 +0.4
ILGA                               i AML    AML    19 03 41.0
        comp=E,3µm,0.4s
ILGA                               i AML    AML    19 03 43.0
        comp=N,2µm,0.4s
BOYA  Sinop/Boyabat-     1.02 353    P      Pg     19 03 25.5 -1.2
BOYA                                 S      Sg     19 03 39.5 -0.5
BOYA                               i AML    AML    19 03 45.0
        comp=N,1µm,0.5s
BOYA                               i AML    AML    19 03 45.0
        comp=E,828nm,0.4s
HACI  Hacifakili, Ak     1.06 140    P      Pg     19 03 26.1 -1.2
HACI                                 S      Sb     19 03 40.9 -0.2
HACI                               i AML    AML    19 03 45.0
        comp=E,643nm,0.7s
HACI                               i AML    AML    19 03 46.0
        comp=N,672nm,0.4s
ELDT  Eldivan            1.08 269    P      Pg     19 03 26.9 -0.9
ELDT                                 S      Sg     19 03 42.0  0.0
ELDT                               i AML    AML    19 03 43.0
        comp=E,2µm,0.5s
ELDT                               i AML    AML    19 03 46.0
        comp=N,2µm,0.4s
DIKM  Dikmen             1.18  15  ⇑P      Pg     19 03 29.3 -0.3
DIKM                               ⇑S      Sn     19 03 46.0 +0.7
DIKM  Dikmen             1.18  15    PN     Pg     19 03 28.9 -0.7
DIKM                                 SN     Sn     19 03 45.9 +0.7
KMON  Kastamonu          1.18 317    PN     Pg     19 03 29.2 -0.4
KAST  KASTAMONU          1.20 325    P      Pg     19 03 29.3 -0.7
KAST                                 S      Sn     19 03 47.2 +1.4
KAST                               i AML    AML    19 03 48.0
        comp=E,4µm,0.6s
SIRC  Yozgat             1.20 169    P      Pg     19 03 28.5 -1.5
SIRC                                 S      Sb     19 03 45.4 +0.2
SIRC                               i AML    AML    19 03 48.0
        comp=E,2µm,0.8s
SIRC                               i AML    AML    19 03 49.0
        comp=N,1µm,0.6s
BRTR  Keskin Array B     1.22 230    Pg     Pg     19 03 28.7 -1.6
        309nm,0.3s,baz=62,slow=15,SNR=4174
BRTR                                 Lg     Lg     19 03 45.5
        142nm,0.3s,baz=70,slow=25,SNR=15
BRTR  Keskin Array B     1.22 230    PN     Pg     19 03 28.8 -1.6
TOKA  Tokat              1.26  98    P      Pg     19 03 29.9 -1.3
TOKA                                 S      Sb     19 03 47.0 +0.1
TOKA                               i AML    AML    19 03 48.0
        comp=N,2µm,0.7s
KOZK  Kozakli-Nevseh     1.30 179    PN     Pg     19 03 31.1 -0.9
KOZK                                 SN     Sn     19 03 50.7 +2.2
SAMS  Samsun-Alacam      1.32  50    P      Pg     19 03 31.1 -1.2
SAMS                                 S      Sn     19 03 50.1 +1.3
SAMS                               i AML    AML    19 03 52.0
        comp=N,3µm,0.6s
SAMS                               i AML    AML    19 03 53.0
        comp=E,4µm,0.7s
PELI  Kastamonı-Ara      1.40 304    P      Pn     19 03 33.2 +0.7
PELI                                 S      Sg     19 03 51.5 -0.7
PELI                               i AML    AML    19 03 54.0
        comp=N,996nm,0.4s
PELI                               i AML    AML    19 03 54.0
        comp=E,670nm,0.4s
KAMT  Kaman              1.44 218    PN     Pn     19 03 32.6 -0.4
ERBA  Erbaa              1.46  83    P      Pn     19 03 32.4 -0.8
ERBA                                 S      Sn     19 03 53.5 +1.2
ERBA                               i AML    AML    19 03 58.0
        comp=N,507nm,0.6s
ERBA                               i AML    AML    19 04 01.0
        comp=E,418nm,0.6s
CUSAR Sarkisla-SIVAS     1.53 135    P      Pn     19 03 34.6 +0.3
CUSAR                                S      Sg     19 03 57.3 +1.0
CUSAR                              i AML    AML    19 03 59.0
        comp=N,1µm,0.5s
KIRS  Kirsehir-Merke     1.56 208    P      Pn     19 03 34.5 -0.1
KIRS                                 S      Sn     19 03 55.7 +1.0
KIRS                               i AML    AML    19 03 59.0
        comp=E,481nm,0.5s
KIRS                               i AML    AML    19 04 04.0
        comp=N,344nm,0.7s
BZK   Bozkurt            1.58 336  ⇑P      Pn     19 03 35.6 +0.9
BZK   Bozkurt            1.58 336    PN     Pn     19 03 35.3 +0.5
BBAL  Bala               1.64 234    P      Pn     19 03 36.4 +0.6
BBAL                                 S      Sg     19 04 00.0 +0.2
BBAL                               i AML    AML    19 04 02.0
        comp=E,1µm,0.6s
BBAL                               i AML    AML    19 04 04.0
        comp=N,802nm,0.4s
ANTO  Ankara             1.70 248    PN     Pn     19 03 37.5 +1.0
AVNS  Nevsehir-Avano     1.71 180    P      Pb     19 03 38.5 +0.2
AVNS                                 S      Sg     19 04 01.1 -0.8
AVNS                               i AML    AML    19 04 03.0
        comp=E,3µm,0.9s
AVNS                               i AML    AML    19 04 08.0
        comp=N,3µm,0.6s
LOD   Lodumlu            1.71 249    PN     Pn     19 03 37.6 +0.9
GUNE  Kayseri            1.72 159    P      Pb     19 03 38.1 -0.5
GUNE                                 S      Sg     19 04 02.9 +0.7
GUNE                               i AML    AML    19 04 10.0
        comp=E,2µm,0.4s
GUNE                               i AML    AML    19 04 11.0
        comp=N,1µm,0.7s
AFSR  Afar-Bala (An      1.73 233    PN     Pn     19 03 37.9 +0.9
SVSK  Karacayir          1.75 109    PN     Pb     19 03 38.3 -0.7
YAYX  Yaylak             1.77 207    PN     Pn     19 03 38.3 +0.8
SAFT  Safranbolu         1.79 295    PN     Pn     19 03 38.3 +0.6
CMDR  Camlidere-ANKA     1.81 270    P      Pn     19 03 39.5 +1.4
CMDR                                 S      Sg     19 04 05.7 +0.6
CMDR                               i AML    AML    19 04 06.0
        comp=N,536nm,0.4s
CMDR                               i AML    AML    19 04 08.0
        comp=E,504nm,0.4s
BNN   Bunyan             1.83 155    PN     Pb     19 03 39.7 -0.8
SERE  Sereflikochisa     1.85 213    PN     Pn     19 03 39.5 +0.8
RSDY  Resadiye-TOKAT     1.90  93    PN     Pb     19 03 40.5 -1.0
CUAYA Sivas-Altinyay     1.92 130    P      Pb     19 03 42.1 +0.1
CUAYA                                S      Sg     19 04 09.2 +0.5
CUAYA                              i AML    AML    19 04 11.0
        comp=N,563nm,0.9s
CUAYA                              i AML    AML    19 04 11.0
        comp=E,570nm,0.4s
KKUL  Konya-Kulu         2.00 229    P      Pn     19 03 42.0 +1.2
KKUL                                 S      Sg     19 04 11.7 +0.4
KKUL                               i AML    AML    19 04 18.0
        comp=E,528nm,0.6s
KKUL                               i AML    AML    19 04 19.0
        comp=N,808nm,0.9s
AKSY  AKSARAY - Alti     2.04 205    P      Pn     19 03 42.1 +0.9
AKSY                                 S      Sg     19 04 12.2 -0.5
AKSY                               i AML    AML    19 04 15.0
        comp=N,558nm,0.4s
AKSY                               i AML    AML    19 04 21.0
        comp=E,297nm,0.6s
KULU  Kulu               2.05 225    PN     Pn     19 03 42.4 +1.1
KURC  Kurucasile-Bar     2.07 311    PN     Pn     19 03 42.4 +0.8
BCAM  Yenicaga           2.14 279    P      Pn     19 03 43.7 +1.1
BCAM                               i AML    AML    19 04 15.0
        comp=N,154nm,0.8s
BCAM                               i AML    AML    19 04 19.0
        comp=E,136nm,0.6s
GULA  Gulagac            2.22 193    PN     Pn     19 03 44.8 +1.1
BTIN  Bartın             2.26 301    P      Pn     19 03 45.5 +1.4
BTIN                                 S      Sg     19 04 19.9 +0.2
BTIN                               i AML    AML    19 04 21.0
        comp=N,223nm,0.5s
BTIN                               i AML    AML    19 04 25.0
        comp=E,317nm,0.8s
DEVR  Zonguldak/Devr     2.27 287    P      Pn     19 03 45.1 +0.8
DEVR                               i AML    AML    19 04 21.0
        comp=N,220nm,0.8s
DEVR                               i AML    AML    19 04 22.0
        comp=E,102nm,0.5s
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KIBS	**BOLU**	**2.29**	**269**	P	**Pn**	**19 03 45.6**	**+1.0**
KIBS				S	**Sg**	**19 04 20.4**	**0.0**
KIBS				*i* AML	AML	19 04 25.0	
	comp=E,428nm,0.9s						
KIBS				*i* AML	AML	19 04 27.0	
	comp=N,342nm,1.1s						
NIG	**Nigde**	**2.41**	**184**	PN	**Pn**	**19 03 47.4**	**+1.0**
SARI	**SarD1z-Kayseri**	**2.43**	**150**	PN	**Pn**	**19 03 48.3**	**+1.6**
CHBY	**Cihanbeyli**	**2.45**	**219**	PN	**Pn**	**19 03 48.1**	**+1.2**
SULT	**Sultanhani-AKS**	**2.53**	**204**	PN	**Pn**	**19 03 49.2**	**+1.2**
SAIM	**ADANA**	**2.71**	**159**	P	**Pb**	**19 03 55.9**	**+0.5**
SAIM				S	**Sg**	**19 04 34.1**	**+0.1**
KTUT	**Trabzon**	**3.77**	**81**	⇑P	**Pn**	**19 04 07.9**	**+3.0**
CHVG	**Ch'k'valeri**	**5.85**	**66**	⇑P	**Pn**	**19 04 35.2**	**+1.6**
CHVG				⇓S	**Sn**	**19 05 43.2**	**+2.6**
TIRR	**Tirgusor**	**6.18**	**312**	⇓P	**Pn**	**19 04 38.1**	**+0.1**
TPGR	**Topolog**	**6.42**	**315**	⇑P	**Pn**	**19 04 40.9**	**-0.4**
KVAR	**Kislovodsk Arr**	**6.76**	**57**	Sn	**Sn**	**19 06 07.1**	**+4.0**
	baz=286,slow=16						
CFR	**Carcaliu**	**6.78**	**316**	⇓P	**Pn**	**19 04 46.6**	**+0.3**
KBZ	**Khabaz**	**6.79**	**59**	Pn	**Pn**	**19 04 48.2**	**+1.8**
	0.2nm,0.3s,baz=234,slow=11,SNR=2.8						
KBZ				Sn	**Sn**	**19 06 01.8**	**-1.8**
	baz=292,slow=22						
KBZ				LR	LR	19 08 22.1	
	comp=Z,62nm,18.9s,baz=230,slow=46						
	1.3nm,0.5s						
MMAI	**Mount Meron Ar**	**7.50**	**176**	LR	LR	19 08 32.1	
	comp=Z,95nm,21.4s,baz=229,slow=44						
GNI	**Garni**	**7.57**	**90**	LR	LR	19 07 57.8	
	comp=Z,52nm,20.8s,baz=46,slow=39						
BISRR	**Bisoca**	**7.80**	**313**	⇑P	**Pn**	**19 04 59.5**	**-0.7**
MLR	**Muntele Rosu**	**8.20**	**310**	Pn	**Pn**	**19 05 07.4**	**+1.6**
	0.4nm,0.3s,baz=141,slow=19,SNR=3.6						
MLR				Sn	**Sn**	**19 06 37.4**	**-1.1**
	0.3nm,0.3s,baz=54,slow=12,SNR=1.7						
	1.0nm,0.3s						
COVR	**Voineasa-Covas**	**8.26**	**313**	⇑P	**Pn**	**19 05 05.6**	**-1.0**
TESR	**Tescani**	**8.45**	**318**	⇑P	**Pn**	**19 05 09.0**	**-0.1**
SORM	**Soroca**	**8.93**	**331**	⇓P	**Pn**	**19 05 14.0**	**-1.6**
BIZ	**Bicaz**	**9.01**	**318**	⇑P	**Pn**	**19 05 16.0**	**-0.9**
IDI	**Anoyia**	**9.44**	**240**	Pn	**Pn**	**19 05 23.4**	**+0.6**
	0.1nm,0.3s,baz=45,slow=14,SNR=2.5						
	3.0nm,0.8s						
BURAR	**Bucovina Array**	**9.91**	**319**	⇓P	**Pn**	**19 05 29.0**	**-0.4**
AKASG	**Malin Array Be**	**10.92**	**341**	Pn	**Pn**	**19 05 41.1**	**-1.8**
	2.0nm,0.3s,baz=166,slow=12,SNR=11						
AKASG				Sn	**Sn**	**19 07 40.8**	**-4.1**
	1.8nm,0.3s,baz=158,slow=23,SNR=6.2						
	1.2nm,0.4s						
GERES	**GERESS Array B**	**17.15**	**306**	Pn	**Pn**	**19 07 07.3**	**+0.8**
	0.1nm,0.3s,baz=121,slow=13,SNR=4.0						
	0.3nm,0.5s						
AKTO	**Aktyubinsk**	**18.96**	**51**	P	**P**	**19 07 28.1**	**+0.1**
	0.1nm,0.3s,baz=252,slow=13,SNR=2.7						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**21.63**	**349**	P	**P**	**19 07 58.4**	**+1.6**
	1.9nm,0.5s,baz=160,slow=12,SNR=11						
	1.9nm,0.5s						
ARU	**Arti**	**22.20**	**36**	P	**P**	**19 08 04.1**	**+1.2**
	0.7nm,0.4s,baz=232,slow=18,SNR=2.1						
	0.7nm,0.4s						
ARCES	**ARCESS Array B**	**29.50**	**353**	P	**P**	**19 09 10.1**	**-0.5**
	1.7nm,0.9s,baz=174,slow=9.8,SNR=5.0						
	1.7nm,0.9s						
ESDC	**Sonseca Array**	**29.54**	**281**	P	**P**	**19 09 10.2**	**-1.2**
	0.2nm,0.4s,baz=76,slow=8.1,SNR=2.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**31.78**	**57**	LR	LR	19 24 03.1	
	comp=Z,59nm,18.1s,baz=112,slow=40						
MKAR	**Makanchi Array**	**34.47**	**63**	P	**P**	**19 09 56.1**	**+1.6**
	0.3nm,0.7s,baz=271,slow=9.2,SNR=2.2						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**39.82**	**236**	P	**P**	**19 10 39.7**	**-0.6**
	0.5nm,0.6s,baz=34,slow=8.7,SNR=2.7						
	0.5nm,0.6s						

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*IDC **30** 19:28:59.8±0.5, 71.°67N×1.°94W, h0^{km}, mb3.8/20, mbtmp3.8/27, ML3.2/6, MS3.7/66, Error ellipse: s-maj=13.7km s-min=11.0km az=36.0*

*NEIC **30** 19:29:02.0±1.9, 71.°74N±0.°05×2.°1W±0.°2, h10^{km}±1^{km}, mb4.4/38, Error ellipse: s-maj=12.0km s-min=6.8km az=119.0*

*BER **30** 19:29:01.8±3.6, 71.°71N×2.°44W, h10^{km}, ML2.4, MS3.5, MW3.3, Confirmed Earthquake*

*IEPN **30** 19:29:02.0, 71.°68N×1.°64W, h10^{km}*

*DNK **30** 19:29:07.7±4.1, 71.°99N×3.°43W, h29^{km}±96^{km}, ML2.5, Ms3.3*

ISC 30 19:29:01.7±0.4**, 71.°78N**±0.°04×**1.°78W**±0.°04**, h10**^{km}**, n208, σ2.^{s}18**/167**, mb4.2**/35**, MS3.7**/73**, 1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**2.30**	**253**	Pn	**Pn**	**19 29 38.1**	**-1.5**
	3.5nm,0.3s,baz=192,slow=17,SNR=2.0						
JMIC				Sn	**Sn**	**19 30 05.5**	**-2.4**
	3.2nm,0.3s,baz=349,slow=18,SNR=1.4						
	23nm,0.5s						
JMIC	**Jan Mayen**	**2.30**	**253**	Pn	**Pn**	**19 29 38.7**	**-1.0**
JMIC	**Jan Mayen**	**2.30**	**253**	*e*P	**Pn**	**19 29 35.7**	**-3.9**
JMIC				*e*S	**Sn**	**19 30 04.7**	**-3.2**
JMIC				IAML		19 30 12.3	
	comp=Z,15nm,0.4s						
JMIC				IVMs_BB	IVMs_BB	19 30 58.8	
	comp=Z,3µm,5.2s						
DBG	**Daneborg**	**5.95**	**304**	*i* P	**Pn**	**19 30 24.9**	**-4.8**
DBG				IVMsBB		19 32 30.1	
	comp=Z,598nm,10.4s						
DBG	**Daneborg**	**5.95**	**304**	*e*P	**Pn**	**19 30 25.4**	**-4.2**
DBG				*e*S	Sn	19 31 26.5	-11
LOF	**Lofoten**	**6.40**	**117**	Pn	**Pn**	**19 30 36.1**	**+0.2**
LOF	**Lofoten**	**6.40**	**117**	*e*P	**Pn**	**19 30 35.8**	**-0.1**
LOF				*e*S	**Sn**	**19 31 43.8**	**-5.1**
LOF				IAML		19 31 50.0	
	comp=Z,9.8nm,0.4s						
LOF				IVMsBB		19 32 44.6	
	comp=Z,467nm,2.9s						
BJO1	**Bjornoya**	**6.61**	**56**	Pn	**Pn**	**19 30 40.3**	**+1.6**
BJO1	**Bjornoya**	**6.61**	**56**	Pn	**Pn**	**19 30 40.3**	**+1.6**
BJO1	**Bjornoya**	**6.61**	**56**	*e*P	**Pn**	**19 30 39.2**	**+0.5**
BJO1				*e*S	**Sn**	**19 31 50.6**	**-3.3**
SCO	**Scoresbysund**	**6.66**	**268**	Pn	**Pn**	**19 30 37.1**	**-2.3**
SCO	**Scoresbysund**	**6.66**	**268**	*i* P	**Pn**	**19 30 36.0**	**-3.4**
SCO				IVMs_BB	IVMs_BB	19 32 22.6	
	comp=Z,253nm,9.0s						
DAG	**Danmarks Havn**	**6.76**	**325**	*i* P	Pn	19 30 36.0	-4.9
DAG				*i* P	Pn	19 30 36.0	-4.9
DAG				*i* S	Sn	19 31 43.4	-14
DAG				IAML		19 31 45.7	
	comp=Z,34nm,0.4s						
DAG				IVMs_BB	IVMs_BB	19 33 18.2	
	comp=Z,340nm,12.1s						
DAG	**Danmarks Havn**	**6.76**	**325**	*e*P	**Pn**	**19 30 37.4**	**-3.5**
DAG				*e*S	Sn	19 31 43.6	-14
HSPB	**Hornsund (broa**	**6.99**	**34**	Pn	**Pn**	**19 30 44.8**	**+0.8**
HSPB	**Hornsund (broa**	**6.99**	**34**	*e*P	**Pn**	**19 30 44.5**	**+0.6**
HSPB				IAML		19 33 31.3	
	comp=Z,4.1nm,0.7s						
STEI	**Steigen**	**7.01**	**115**	*e*P	**Pn**	**19 30 43.7**	**-0.6**
STEI				*e*S	**Sn**	**19 31 57.5**	**-6.4**
STEI				IAML		19 31 59.9	
	comp=Z,16nm,0.5s						
STEI				IAMs_20	IAMs_20	19 32 41.4	
	comp=Z,1µm,17.7s						
TRO	**Tromso**	**7.17**	**97**	*e*P	**Pn**	**19 30 45.2**	**-1.2**
TRO				IAML		19 32 01.5	
	comp=Z,4.9nm,0.6s						
TRO				*e*S	**Sn**	**19 32 02.1**	**-5.7**
TRO				IVMs_BB	IVMs_BB	19 33 37.4	
	comp=Z,444nm,3.6s						
BRBA	**Barentsburg A**	**7.53**	**26**	Pn	**Pn**	**19 30 53.2**	**+2.0**
BRBA	**Barentsburg A**	**7.53**	**26**	*e*P	**Pn**	**19 30 51.1**	**-0.1**
BRBA				*e*S	**Sn**	**19 32 12.4**	**-4.0**
BRBA				IAML		19 32 35.0	
	comp=Z,3.0nm,0.6s						
BRBB	**Barentsburg B**	**7.55**	**26**	Pn	**Pn**	**19 30 53.6**	**+2.0**
BRBB	**Barentsburg B**	**7.55**	**26**	*e*P	**Pn**	**19 30 52.0**	**+0.4**
JETT	**Jettan, Norway**	**7.67**	**96**	Pn	**Pn**	**19 30 53.7**	**+0.4**
SPB2	**Spitsbergen Ar**	**7.92**	**28**	Pn	**Pn**	**19 30 58.0**	**+1.3**
SPA0	**Spitsbergen Ar**	**7.92**	**28**	Pn	**Pn**	**19 30 58.0**	**+1.3**
	baz=215,slow=16						
SPA0	**Spitsbergen Ar**	**7.92**	**28**	Pn	**Pn**	**19 30 58.0**	**+1.3**
	baz=215,slow=16						
SPA0				IAML		19 32 14.9	
	comp=Z,2.3nm,0.8s						
SPA0	**Spitsbergen Ar**	**7.92**	**28**	*e*P	**Pn**	**19 30 58.1**	**+1.4**
SPA0				*i* S	**Sn**	**19 32 24.5**	**-1.7**
SPITS	**Spitsbergen Ar**	**7.92**	**28**	Pn	**Pn**	**19 30 57.8**	**+1.1**
	comp=Z,6.9nm,0.3s,baz=203,slow=14,SNR=86						
KBS	**Kingsbay**	**7.95**	**19**	Pn	**Pn**	**19 30 57.2**	**+0.2**
KBS				Sn	**Sn**	**19 32 24.0**	**-2.8**
KBS	**Kingsbay**	**7.95**	**19**		**Pn**	**19 30 56.4**	**-0.6**
KBS	**Kingsbay**	**7.95**	**19**	*i* P	**Pn**	**19 30 57.0**	**-0.1**
KBS	**Kingsbay**	**7.95**	**19**	*e*P	**Pn**	**19 30 56.1**	**-0.9**
KBS				IAML		19 32 23.8	
	comp=Z,2.5nm,0.7s						
KBS	**Kingsbay**	**7.95**	**19**	*e*P	**Pn**	**19 30 56.5**	**-0.6**
KBS				*e*S	**Sn**	**19 32 24.2**	**-2.6**
KIF	**Kilpisjarvi**	**8.06**	**99**	Pn	**Pn**	**19 30 58.2**	**-0.4**
KIF				Sn	**Sn**	**19 32 24.3**	**-5.3**
KIF	**Kilpisjarvi**	**8.06**	**99**	Pn	**Pn**	**19 30 58.2**	**-0.4**
KIF				Sn	**Sn**	**19 32 24.3**	**-5.3**
HAMF	**Hammerfest**	**8.27**	**86**	Pn	**Pn**	**19 31 00.4**	**-1.1**
HAMF	**Hammerfest**	**8.27**	**86**	Pn	**Pn**	**19 31 00.4**	**-1.1**
HOPEN	**Hopen**	**8.65**	**45**	Pn	**Pn**	**19 31 07.8**	**+1.1**
HOPEN	**Hopen**	**8.65**	**45**	*e*P	**Pn**	**19 31 08.3**	**+1.6**
HOPEN	**Hopen**	**8.65**	**45**	*e*P	**Pn**	**19 31 06.7**	**0.0**
HOPEN				S	**Sn**	**19 32 39.1**	**-5.0**
NSS	**Namsos**	**8.87**	**138**	*e*P	**Pn**	**19 31 09.9**	**+0.2**
NSS				*e*S	**Sn**	**19 32 42.1**	**-7.5**
NSS				IAML		19 32 47.8	
	comp=Z,7.5nm,0.5s						
HEF	**Hetta**	**9.26**	**99**	*e*P	**Pn**	**19 31 14.8**	**-0.3**
HEF				*e*S	**Sn**	**19 32 50.9**	**-8.3**
ARA0	**ARCESS Array S**	**9.28**	**91**	Pn	**Pn**	**19 31 14.9**	**-0.4**
	baz=288,slow=11						
ARA0	**ARCESS Array S**	**9.28**	**91**	Pn	**Pn**	**19 31 14.9**	**-0.4**
	baz=288,slow=11						
ARCES	**ARCESS Array B**	**9.28**	**91**	Pn	**Pn**	**19 31 15.2**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=290,slow=11,SNR=34						
ARCES				LR	LR	19 34 30.0	
	comp=Z,387nm,19.4s,baz=300,slow=35						
	comp=Z,1.6nm,0.3s						
ARCES	**ARCESS Array B**	**9.28**	**91**	Pn	**Pn**	**19 31 15.4**	**0.0**
KEV	**Kevo**	**9.65**	**88**	Pn	**Pn**	**19 31 21.2**	**+0.8**
BORG	**Borgarnes**	**10.06**	**235**	LR	LR	19 34 19.1	
	comp=Z,153nm,20.9s,baz=1.6,slow=32						
AKN	**Aaknes**	**10.22**	**156**	Pn	**Pn**	**19 31 28.6**	**+0.4**
AKN				Sn	Sn	19 33 11.5	-11
AKN	**Aaknes**	**10.22**	**156**	Pn	**Pn**	**19 31 29.5**	**+1.3**
AKN				Sn	Sn	19 33 11.9	-11
SUMG	**Summit**	**11.15**	**291**	IVMsBB		19 35 33.4	
	comp=Z,473nm,9.0s						
NC204	**NORSAR Array S**	**11.63**	**149**	Pn	**Pn**	**19 31 47.8**	**+0.2**
NC303	**NORSAR Array S**	**11.78**	**147**	Pn	**Pn**	**19 31 49.7**	**+0.2**
NB2	**NORSAR Subarra**	**11.93**	**148**	Pn	**Pn**	**19 31 52.3**	**+0.7**
	comp=Z,4.6nm,1.0s,baz=340,slow=14						
NB2	**NORSAR Subarra**	**11.93**	**148**	Pn	**Pn**	**19 31 51.4**	**-0.2**
	baz=340,slow=14						
NB2	**NORSAR Subarra**	**11.93**	**148**	Pn	**Pn**	**19 31 51.4**	**-0.2**
	baz=340,slow=14						
NOA	**NORSAR Array B**	**11.93**	**148**	Pn	**Pn**	**19 31 50.9**	**-0.7**
	baz=336,slow=13,SNR=6.6						
NOA				LR	LR	19 36 14.7	
	comp=Z,535nm,20.4s,baz=340,slow=37						
	comp=Z,1.8nm,0.8s						
NB201	**NORSAR Array S**	**11.93**	**148**		**Pn**	**19 31 51.2**	**-0.4**
NC405	**NORSAR Array S**	**11.94**	**147**		**Pn**	**19 31 52.1**	**+0.4**
NRA0	**NORESS Array S**	**12.27**	**148**	Pn	**Pn**	**19 31 55.5**	**-0.7**
	baz=336,slow=14						
NRA0	**NORESS Array S**	**12.27**	**148**	Pn	**Pn**	**19 31 55.5**	**-0.7**
	baz=336,slow=14						
APA0	**Apatity Array**	**12.63**	**92**	Pn	**Pn**	**19 32 01.8**	**+0.6**
	baz=293,slow=9.3						
APA0	**Apatity Array**	**12.63**	**92**	Pn	**Pn**	**19 32 01.8**	**+0.6**
	baz=293,slow=9.3						
HFS	**Hagfors**	**13.21**	**144**	Pn	**Pn**	**19 32 07.7**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=351,slow=29,SNR=20						
HFS				LR	LR	19 37 04.6	
	comp=Z,529nm,20.1s,baz=334,slow=37						
	comp=Z,2.0nm,0.5s						
RAF	**Rauma**	**14.18**	**127**	*e*P	**Pn**	**19 32 22.9**	**+0.7**
FIA0	**FINESS Array S**	**14.96**	**120**	P	**Pn**	**19 32 31.9**	**-1.0**
	baz=327,slow=12						
FIA0	**FINESS Array S**	**14.96**	**120**	Pn	**Pn**	**19 32 31.3**	**-1.6**
FIA1	**FINESS Array S**	**14.96**	**120**		**Pn**	**19 32 31.0**	**-1.9**
FIA1				IAmb	IAmb	19 32 36.9	
	comp=Z,34nm,1.1s						
FINES	**FINESS Array B**	**14.96**	**120**	Pn	**Pn**	**19 32 31.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=335,slow=13,SNR=21						
FINES				LR	LR	19 37 45.5	
	comp=Z,631nm,19.2s,baz=328,slow=35						
	comp=Z,12nm,0.8s						
FINES	**FINESS Array B**	**14.96**	**120**		**Pn**	**19 32 30.7**	**-2.1**
EKA	**Eskdalemuir Ar**	**16.52**	**183**	Pn	**Pn**	**19 32 51.2**	**-1.9**
	baz=3.9,slow=11						
EKA				LR	LR	19 38 01.2	
	comp=Z,230nm,21.4s,baz=3.5,slow=33						
	comp=Z,1.6nm,0.9s						
ADZR	**Andozero**	**16.68**	**98**	*e*P	**Pn**	**19 32 53.9**	**-1.2**
	comp=Z,7.0nm,0.6s						
MTSE	**Matsula**	**16.70**	**128**	*e*P	**P**	**19 32 59.4**	**+1.7**
SLIT	**Slitere, Latvi**	**17.31**	**132**	*e*P	**P**	**19 33 07.6**	**+3.1**
SFJD	**Kangerlussuaq**	**17.41**	**278**	LR	LR	19 38 55.1	
	comp=Z,381nm,18.9s,baz=52,slow=34						
VSU	**Vasula**	**17.67**	**124**	*e*P	**Pn**	**19 33 06.8**	**-0.7**
LSH	**Leshukonskoye**	**18.36**	**88**	*e*P	**P**	**19 33 16.3**	**+0.3**
	comp=Z,20nm,1.3s						
KLMR	**Klimovskoe**	**19.37**	**103**	*e*P	**P**	**19 33 27.7**	**+0.6**
	comp=Z,35nm,1.1s						
KLMR	**Klimovskoe**	**19.37**	**103**	*e*Pn	**Pn**	**19 33 29.0**	**+0.8**
KLMR				AMP		19 33 34.4	
	comp=Z,35nm,1.1s						
PABE	**Paberze**	**19.63**	**133**	P	**Pn**	**19 33 30.8**	**-0.6**
PABE				IAmb	IAmb	19 33 36.9	
	comp=Z,41nm,1.1s						
PABE	**Paberze**	**19.63**	**133**	*e*P	**Pn**	**19 33 31.6**	**+0.3**
ISAL	**Salakas**	**20.09**	**129**	*e*P	Pn	19 33 37.2	+0.4
IIGN	**Ignalina**	**20.31**	**129**	*e*P	Pn	19 33 39.1	-0.3
PRGR	**Permogore**	**20.66**	**95**	*e*P	Pn	19 33 44.3	+0.8
SUW	**Suwalki**	**20.83**	**136**	P	Pn	19 33 44.6	-0.9
SUW	**Suwalki**	**20.83**	**136**	*e*P	Pn	19 33 45.0	-0.5
NACGM	**Naroch**	**20.85**	**129**	⇓*e*P	Pn	19 33 44.7	-1.0
	baz=336						
MNK	**Minsk**	**21.49**	**128**	*i* P	**P**	**19 33 51.9**	**+1.8**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**19 33 51.9**	**+1.8**
	comp=N,33nm,1.0s						
MNK				*i* P	**P**	**19 33 51.9**	**+1.8**
	comp=Z,42nm,1.1s,baz=336						
MNK				*i* PP	**PnPn**	**19 34 11.8**	**+1.8**
MNK				*i* PPP	PPP	19 34 19.7	
MNK				*i* S	**S**	**19 37 50.3**	**+2.3**
MNK				*i* SS	**SnSn**	**19 38 14.6**	**+3.8**
MNK				*i* SSS	SSS	19 38 27.8	
MNK				*i* LRM	MLR	19 41 51.7	
	comp=E,32nm,17.4s						
MNK				*i* LRM	MLR	19 41 54.9	
	comp=Z,480nm,18.1s						
MNK				*i* LRM	MLR	19 42 00.7	
	comp=N,335nm,16.8s						
CLL	**Collm**	**21.58**	**154**	P	**P**	**19 33 53.7**	**+2.5**
CLL				IAmb	IAmb	19 34 12.1	
	comp=Z,21nm,1.5s						
CLL	**Collm**	**21.58**	**154**	*e*P	**P**	**19 33 54.0**	**+2.8**
	comp=Z,9.0nm,1.1s						
CLL				*e*x	x	19 34 03.0	
CLL				*i* PP	**PnPn**	**19 34 11.1**	**-0.3**
CLL				*e*S	**S**	**19 37 52.0**	**+2.1**
BRG	**Berggiesshubel**	**22.14**	**153**	*e*P	**P**	**19 33 58.7**	**+1.6**
BRG				Amp		19 34 02.8	
	comp=Z,4.5nm,0.9s						
BRG				Amp		19 42 02.0	
	comp=E,0.1nm,14.0s						
BRG				Amp		19 42 08.0	
	comp=N,0.2nm,21.4s						
BRG				Amp		19 42 13.0	
	comp=Z,0.2nm,17.7s						
NKC	**Novy Kostel**	**22.56**	**156**	*e*P	**P**	**19 34 07.8**	**+6.1**
NKC				AMS	AMS	19 44 10.0	
	comp=Z,200nm,13.9s						
PVCC	**Panska Ves**	**22.57**	**152**	AMS	AMS	19 44 00.0	
	comp=Z,300nm,13.5s						
CHVC	**Chvalec**	**22.74**	**150**	*e*P	**P**	**19 34 05.5**	**+2.0**
CHVC				AMS	AMS	19 43 40.0	
	comp=Z,300nm,19.8s						
OSTC	**Ostas**	**22.79**	**149**	*e*P	**P**	**19 34 06.6**	**+2.5**
OSTC				AMS	AMS	19 43 40.0	
	comp=Z,300nm,12.8s						
UPC	**Upice**	**22.81**	**150**	AMS	AMS	19 43 40.0	
	comp=Z,300nm,16.9s						
DPC	**Dobruska-Polom**	**23.01**	**149**	*e*P	**P**	**19 34 08.8**	**+2.4**
DPC				AMS	AMS	19 43 50.0	
	comp=Z,300nm,14.8s						
PRU	**Pruhonice**	**23.09**	**152**	AMS	AMS	19 44 30.0	
	comp=Z,200nm,16.3s						
OBN	**Obninsk**	**23.27**	**116**	LR	LR	19 42 45.8	
	comp=Z,141nm,18.8s,baz=2.5,slow=36						
OBN	**Obninsk**	**23.27**	**116**	P	**P**	**19 34 10.3**	**+1.4**
KRLC	**Kraliky**	**23.35**	**149**	*e*P	P	19 34 18.5	+8.6
KRLC				AMS	AMS	19 44 00.0	
	comp=Z,300nm,14.0s						
MORC	**Moravsky Berou**	**23.76**	**148**	*e*P	**P**	**19 34 09.7**	**-4.3**
KHC	**Kasperske Hory**	**23.79**	**154**	AMS	AMS	19 42 50.0	
	comp=Z,200nm,20.3s						
OKC	**Ostrava-Krasne**	**23.81**	**147**	AMS	AMS	19 44 10.0	
	comp=Z,400nm,18.4s						
TREC	**Trest**	**23.91**	**151**	AMS	AMS	19 44 40.0	
	comp=Z,300nm,12.6s						
VRAC	**Vranov**	**24.06**	**150**	LR	LR	19 44 27.8	
	comp=Z,234nm,18.8s,baz=338,slow=39						
GERES	**GERESS Array B**	**24.09**	**154**	P	**P**	**19 34 16.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=0.0,slow=9.8,SNR=8.2						
GERES				LR	LR	19 44 24.5	
	comp=Z,188nm,18.5s,baz=350,slow=38						
	comp=Z,0.7nm,0.7s						
CKRC	**Cesky Krumlov**	**24.20**	**153**	AMS	AMS	19 43 10.0	
	comp=Z,300nm,23.3s						
MAUC	**Maruska**	**24.21**	**148**	AMS	AMS	19 44 40.0	
	comp=Z,500nm,12.1s						
KIRV	**Kirov**	**24.23**	**96**	LR	LR	19 43 20.7	
	comp=Z,184nm,19.9s,baz=327,slow=36						
RES	**Resolute Bay**	**24.42**	**320**	LR	LR	19 43 28.0	
	comp=Z,333nm,20.7s,baz=56,slow=36						
MODS	**Modra-Piesok**	**25.08**	**149**	*e*P	**P**	**19 34 32.3**	**+6.3**
FRB	**Frobisher Bay**	**25.13**	**286**	LR	LR	19 43 38.5	
	comp=Z,202nm,19.6s,baz=21,slow=35						
AKASG	**Malin Array Be**	**25.30**	**130**	P	**P**	**19 34 27.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=337,slow=8.7,SNR=4.4						
AKASG				LR	LR	19 44 08.6	
	comp=Z,410nm,18.4s,baz=338,slow=36						
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	**25.30**	**130**	P	**P**	**19 34 28.8**	**+0.9**
AKBB				IAmb	IAmb	19 34 45.4	
	comp=Z,14nm,1.3s						
DAVOX	**Davos/Dischmat**	**25.67**	**161**	LR	LR	19 44 41.1	
	comp=Z,68nm,21.2s,baz=60,slow=37						
NRIK	**Noril'sk**	**27.29**	**51**	LR	LR	19 48 36.2	
	comp=Z,109nm,18.2s,baz=18,slow=43						
ARU	**Arti**	**28.86**	**90**	P	**P**	**19 34 59.1**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=297,slow=11,SNR=3.8						
ARU				LR	LR	19 46 18.1	
	comp=Z,198nm,19.1s,baz=330,slow=36						
	comp=Z,0.6nm,0.3s						
ARU	**Arti**	**28.86**	**90**	P	**P**	**19 35 00.9**	**+1.0**
ARU				IAmb	IAmb	19 35 08.6	
	comp=Z,6.4nm,1.2s						
MLR	**Muntele Rosu**	**29.47**	**138**	LR	LR	19 47 13.4	
	comp=Z,407nm,19.8s,baz=344,slow=37						
SCHQ	**Schefferville**	**31.68**	**273**	LR	LR	19 46 55.8	
	comp=Z,200nm,21.5s,baz=34,slow=34						
ESDC	**Sonseca Array**	**32.20**	**183**	P	**P**	**19 35 28.3**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=7.7,slow=10,SNR=7.9						
	comp=Z,0.7nm,0.8s						
ESDC	**Sonseca Array**	**32.20**	**183**	IAmb	IAmb	19 35 30.5	
	comp=Z,3.8nm,1.6s						
FNA	**Florina**	**33.14**	**147**	P	**P**	**19 35 37.8**	**0.0**
FNA				IAmb	IAmb	19 35 40.5	
	comp=Z,8.0nm,0.9s						
TIXI	**Tiksi**	**33.34**	**26**	P	**P**	**19 35 40.7**	**+1.5**
	comp=Z,1.6nm,1.0s,baz=272,slow=21,SNR=9.3						
	comp=Z,1.6nm,1.0s						
TIXI	**Tiksi**	**33.34**	**26**	P	**P**	**19 35 41.7**	**+2.6**
TIXI				IAmb	IAmb	19 35 57.6	
	comp=Z,7.6nm,1.5s						
AKTO	**Aktyubinsk**	**33.80**	**97**	LR	LR	19 49 14.6	
	comp=Z,149nm,20.1s,baz=339,slow=36						
KVAR	**Kislovodsk Arr**	**35.05**	**118**	LR	LR	19 50 03.7	
	comp=Z,140nm,18.6s,baz=253,slow=36						
KBZ	**Khabaz**	**35.31**	**118**	P	**P**	**19 35 56.7**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=340,slow=12,SNR=3.1						
KBZ				LR	LR	19 51 02.5	
	comp=Z,85nm,20.1s,baz=358,slow=38						
	comp=Z,2.1nm,0.9s						
ABKAR	**Akbulak array**	**35.44**	**96**	P	**P**	**19 35 58.6**	**+1.0**
ABKAR	**Akbulak array**	**35.44**	**96**	P	**P**	**19 35 58.4**	**+0.9**
INK	**Inuvik**	**36.55**	**332**	P	**P**	**19 36 05.7**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=19,slow=6.0,SNR=1.5						
INK				LR	LR	19 51 44.0	
	comp=Z,61nm,21.5s,baz=58,slow=37						
	comp=Z,1.5nm,0.9s						
INK	**Inuvik**	**36.55**	**332**	IAmb	IAmb	19 36 18.5	
	comp=Z,7.3nm,1.3s						
KEST	**Kesra**	**36.58**	**165**	LR	LR	19 51 41.6	
	comp=Z,115nm,19.4s,baz=244,slow=37						
BRTR	**Keskin Array B**	**36.68**	**132**	P	**P**	**19 36 07.7**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=316,slow=8.5,SNR=3.7						
BRTR				LR	LR	19 51 57.8	
	comp=Z,96nm,20.3s,baz=14,slow=38						
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**38.37**	**316**	P	**P**	**19 36 21.5**	**-0.8**
	comp=Z,2.7nm,1.1s,baz=32,slow=8.0,SNR=3.9						
YKA				PcP	**PcP**	**19 38 36.0**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=34,slow=3.3,SNR=3.8						
YKA				LR	LR	19 51 33.9	
	comp=Z,151nm,20.2s,baz=24,slow=35						
	comp=Z,2.7nm,1.1s						
BMAR	**Burnt Mountain**	**38.84**	**338**	P	**P**	**19 36 27.7**	**+1.4**
ZALV	**Zalesovo Beam**	**39.04**	**70**	P	**P**	**19 36 28.5**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=325,slow=7.4,SNR=2.0						
ZALV				LR	LR	19 55 42.7	
	comp=Z,52nm,20.3s,baz=308,slow=41						
	comp=Z,0.6nm,0.7s						
MDT	**Midelt**	**39.05**	**184**	LR	LR	19 52 41.9	
	comp=Z,62nm,18.4s,baz=358,slow=36						
GNI	**Garni**	**39.14**	**118**	LR	LR	19 52 37.9	
	comp=Z,85nm,19.1s,baz=294,slow=36						
KURK	**Kurchatov**	**40.00**	**77**	P	**P**	**19 36 37.4**	**+1.4**
KURK	**Kurchatov**	**40.00**	**77**		**PcP**	**19 38 42.1**	**+1.3**
KURBB	**Kurchatov Arra**	**40.05**	**77**	PcP	**PcP**	**19 38 42.1**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=327,slow=10.0,SNR=1.9						
KURBB				LR	LR	19 54 18.8	
	comp=Z,89nm,19.9s,baz=323,slow=38						
ILAR	**Eielson Array**	**41.67**	**338**	P	**P**	**19 36 50.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=16,slow=6.0,SNR=9.2						
ILAR				PcP	**PcP**	**19 38 45.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=323,slow=1.4,SNR=3.2						
ILAR				LR	LR	19 54 24.9	
	comp=Z,66nm,21.7s,baz=356,slow=36						
	comp=Z,0.6nm,0.7s						
CCB	**Clear Creek Bu**	**41.89**	**339**	P	**P**	**19 36 53.6**	**+2.1**
YAK	**Yakutsk**	**42.36**	**32**	LR	LR	19 55 59.3	
	comp=Z,39nm,18.8s,baz=272,slow=38						
M30M	**Minto, Yukon**	**42.41**	**331**	P	**P**	**19 36 57.7**	**+1.8**
M30M				IAmb	IAmb	19 37 09.5	
	comp=Z,7.2nm,1.3s						
BCAR	**Beaver Creek A**	**42.67**	**334**	P	**P**	**19 37 00.1**	**+2.2**
L27K	**Beaver Creek,**	**42.68**	**334**	P	**P**	**19 37 00.2**	**+2.3**
KK31	**Karatay Array**	**44.24**	**90**	P	**P**	**19 37 12.1**	**+1.4**
KK31				IAmb	IAmb	19 37 13.7	
	comp=Z,7.6nm,1.6s						
KKAR	**Karatay Array**	**44.24**	**90**	P	**P**	**19 37 12.4**	**+1.6**
KKAR				IAmb	IAmb	19 37 13.7	
	comp=Z,7.6nm,1.6s						
SADO	**Sadowa**	**44.34**	**276**	LR	LR	19 54 29.0	
	comp=Z,82nm,20.2s,baz=182,slow=34						
SEY	**Seymchan**	**44.40**	**17**	LR	LR	19 54 40.2	
	comp=Z,45nm,18.4s,baz=352,slow=35						
ULM	**Lac du Bonnet**	**44.49**	**294**	P	**P**	**19 37 13.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=292,slow=5.4,SNR=1.4						
ULM				LR	LR	19 55 19.2	
	comp=Z,102nm,21.5s,baz=9.5,slow=36						
	comp=Z,1.6nm,0.7s						
ULM	**Lac du Bonnet**	**44.49**	**294**	IAmb	IAmb	19 37 22.2	
	comp=Z,6.9nm,1.3s						
MK31	**Makanchi Array**	**44.60**	**77**	P	**P**	**19 37 14.4**	**+0.8**
MKAR	**Makanchi Array**	**44.60**	**77**	P	**P**	**19 37 14.3**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=347,slow=6.2,SNR=9.2						
MKAR				PcP	**PP**	**19 38 56.9**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=37,slow=5.8,SNR=3.3						
MKAR				LR	LR	19 58 48.2	
	comp=Z,72nm,19.3s,baz=288,slow=40						
	comp=Z,0.7nm,0.7s						
GEYT	**Alibeck**	**45.10**	**105**	LR	LR	19 57 55.7	
	comp=Z,151nm,19.0s,baz=354,slow=38						

DLBC	**Dease Lake**	**45.18**	**324**	LR	LR	19 56 20.1	
	comp=Z,170nm,18.6s,baz=94,slow=36						
AAK	**Ala-Archa**	**45.92**	**86**	LR	LR	19 56 00.7	
	comp=Z,83nm,21.9s,baz=283,slow=35						
BOOM	**Boomskoye usch**	**46.50**	**85**	P	**P**	**19 37 30.3**	**+1.4**
BOOM				IAmb	IAmb	19 37 38.8	
	comp=Z,3.5nm,1.1s						
MA2	**Magadan**	**47.55**	**19**	LR	LR	19 57 18.1	
	comp=Z,48nm,18.2s,baz=336,slow=36						
GAR	**Garm**	**47.91**	**92**	P	**P**	**19 37 38.0**	**-1.8**
KDAK	**Kodiak Island**	**49.13**	**340**	LR	LR	20 02 00.3	
	comp=Z,54nm,19.5s,baz=46,slow=40						
SONM	**Songino Array**	**50.56**	**56**	P	**P**	**19 38 00.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=342,slow=9.1,SNR=6.0						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**50.56**	**56**	P	**P**	**19 37 59.8**	**-0.2**
ULN	**Ulaanbaatar**	**50.70**	**55**	P	**P**	**19 38 02.1**	**+1.1**
BBB	**Bella Bella**	**50.71**	**320**	LR	LR	19 59 58.7	
	comp=Z,110nm,18.4s,baz=12,slow=37						
NEW	**Newport**	**51.96**	**310**	LR	LR	20 00 05.3	
	comp=Z,138nm,21.6s,baz=5.5,slow=36						
TKL	**Tuckaleechee C**	**54.09**	**275**	LR	LR	20 00 43.1	
	comp=Z,65nm,19.4s,baz=32,slow=35						
PETK	**Petropavlovsk-**	**54.57**	**15**	LR	LR	20 00 41.6	
	comp=Z,34nm,19.1s,baz=314,slow=35						
KLR	**Kul'dur**	**54.92**	**36**	LR	LR	20 02 24.5	
	comp=Z,79nm,18.1s,baz=250,slow=36						
PDAR	**Pinedale Array**	**55.15**	**301**	P	**P**	**19 38 33.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=59,slow=8.7,SNR=3.8						
PDAR				LR	LR	20 01 44.6	
	comp=Z,91nm,18.8s,baz=22,slow=36						
	comp=Z,0.3nm,0.5s						
MGMO	**Mountain Grove**	**55.34**	**284**	P	**P**	**19 38 36.9**	**+1.7**
MGMO				IAmb	IAmb	19 38 40.2	
	comp=Z,6.2nm,0.8s						
O20A	**White River Ci**	**57.24**	**299**	P	**P**	**19 38 49.5**	**+0.5**
GOMU	**GeErMu**	**58.07**	**71**	P	**P**	**19 38 57.0**	**+1.9**
GOMU				pP	pwP	19 39 00.3	-0.3
GOMU				sP	sP	19 39 04.3	+5.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,30nm,4.9s						
ELK	**Elko**	**58.53**	**305**	LR	LR	20 04 31.5	
	comp=Z,154nm,18.0s,baz=6.5,slow=36						
TORD	**Torodi Ar. Bea**	**58.64**	**176**	P	**P**	**19 38 57.2**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=360,slow=7.4,SNR=6.9						
	comp=Z,1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**58.64**	**176**	IAmb	IAmb	19 39 03.9	
	comp=Z,16nm,1.9s						
PV13	**Radium Mtn., P**	**59.25**	**299**	P	**P**	**19 39 05.1**	**+2.0**
YBH	**Yreka Blue Hor**	**59.44**	**312**	LR	LR	20 04 56.1	
	comp=Z,153nm,18.6s,baz=13,slow=36						
MVCO	**Mesa Verde**	**60.05**	**298**	P	**P**	**19 39 08.9**	**+0.3**
PSUT	**Pine Spring**	**60.25**	**303**	P	**P**	**19 39 11.0**	**+1.1**
PSUT				IAmb	IAmb	19 39 17.2	
	comp=Z,4.0nm,1.1s						
NVAR	**Mina Array Bea**	**61.50**	**307**	LR	LR	20 06 26.4	
	comp=Z,145nm,18.4s,baz=82,slow=36						
ANMO	**Albuquerque**	**61.59**	**295**	LR	LR	20 05 52.6	
	comp=Z,116nm,18.3s,baz=33,slow=36						
ANMO	**Albuquerque**	**61.59**	**295**	P	**P**	**19 39 21.1**	**+2.0**
ANMO				IAmb	IAmb	19 39 25.3	
	comp=Z,3.7nm,1.1s						
TPNV	**Topopah Spring**	**62.37**	**305**	P	**P**	**19 39 25.7**	**+1.4**
TPNV				IAmb	IAmb	19 39 37.8	
	comp=Z,3.2nm,1.1s						
MNTX	**Cornudas Mount**	**64.33**	**293**	P	**P**	**19 39 37.2**	**+0.1**
MNTX				IAmb	IAmb	19 39 39.2	
	comp=Z,2.9nm,1.1s						
SJG	**San Juan**	**64.99**	**251**	LR	LR	20 04 30.0	
	comp=Z,21nm,19.8s,baz=62,slow=33						
DBIC	**Dimbokro**	**65.06**	**183**	LR	LR	20 07 32.7	
	comp=Z,24nm,21.0s,baz=64,slow=36						
KSRS	**Korea Array**	**65.49**	**42**	P	**P**	**19 39 43.8**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=350,slow=5.9,SNR=2.6						
KSRS				LR	LR	20 12 03.9	
	comp=Z,31nm,18.1s,baz=340,slow=39						
	comp=Z,0.5nm,0.5s						
PFO	**Pinyon Flats O**	**65.58**	**304**	LR	LR	20 08 41.8	
	comp=Z,49nm,18.2s,baz=18,slow=36						
ATD	**Arta Tunnel**	**65.92**	**131**	LR	LR	20 07 51.6	
	comp=Z,35nm,18.2s,baz=325,slow=35						
TX31	**Lajitas Ar. Si**	**66.04**	**291**	P	**P**	**19 39 48.0**	**-0.4**
TX32	**Lajitas Array**	**66.04**	**291**	P	**P**	**19 39 47.7**	**-0.6**
TX32				IAmb	IAmb	19 40 08.5	
	comp=Z,5.1nm,1.6s						
TXAR	**Lajitas Array**	**66.04**	**291**	P	**P**	**19 39 47.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=54,slow=4.7,SNR=12						
TXAR				LR	LR	20 09 09.1	
	comp=Z,69nm,20.1s,baz=10,slow=36						
	comp=Z,0.8nm,0.7s						
MJAR	**Matsushiro Arr**	**68.37**	**34**	P	**P**	**19 40 02.6**	**-0.3**
	comp=Z,3.0nm,1.1s,baz=345,slow=7.3,SNR=4.6						
	comp=Z,3.0nm,1.1s						
LPIG	**La Paz**	**72.90**	**295**	LR	LR	20 14 14.4	
	comp=Z,41nm,18.1s,baz=18,slow=37						
MDP	**Montagnes des**	**73.64**	**234**	LR	LR	20 06 30.6	
	comp=Z,42nm,19.4s,baz=207,slow=31						
CMIG	**Matias Romero**	**74.87**	**278**	LR	LR	20 17 02.9	
	comp=Z,46nm,18.2s,baz=32,slow=38						
MBAR	**Mbarara**	**75.20**	**146**	LR	LR	20 16 06.7	
	comp=Z,45nm,18.4s,baz=45,slow=38						
CMAR	**Chiang Mai Arr**	**75.93**	**74**	P	**P**	**19 40 48.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=328,slow=8.0,SNR=4.9						
CMAR				LR	LR	20 18 49.2	
	comp=Z,43nm,18.3s,baz=195,slow=39						
	comp=Z,0.4nm,0.3s						
JTS	**Las Juntas de**	**78.16**	**267**	LR	LR	20 15 50.7	
	comp=Z,24nm,18.1s,baz=79,slow=36						
PSI	**Prapat**	**90.70**	**79**	LR	LR	20 31 56.7	
	comp=Z,324nm,18.1s,baz=270,slow=42						
TSUM	**Tsumeb**	**91.71**	**162**	LR	LR	20 24 54.3	
	comp=Z,25nm,19.3s,baz=109,slow=37						
ATAH	**Atahualpa**	**92.57**	**255**	LR	LR	20 19 45.3	
	comp=Z,41nm,21.7s,baz=25,slow=33						
WRA	**Warramunga Arr**	**122.36**	**51**	PKP	**PKPdf**	**19 47 55.0**	**-1.4**
	comp=Z,0.4nm,1.0s,baz=326,slow=2.5,SNR=1.9						
ASAR	**Alice Springs**	**125.82**	**52**	PKP	**PKPdf**	**19 48 01.9**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=352,slow=1.9,SNR=5.5						

NAO ***30*** *19:51:51.0±1.9, 79°.52N×3°.04E, ML2.7*
BER ***30*** *19:51:53.6±2.0, 79°.41N×3°.09E, h10^{km}, ML2.3, Confirmed Earthquake*
IEPN ***30*** *19:51:57.0, 78°.99N×3°.58E, h10^{km}*
ISC 30 19:51:50.2±1.8**, 79°.48N**±0°.07×**3°.66E**±0°.05**, h9**^{km}±12^{km}**,**
n36, σ1^{s}.92/60**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.66**	**105**	Pn	**Pg**	**19 52 21.7**	**-0.1**
KBS				Sn	**Sn**	**19 52 39.5**	**-1.2**
KBS	**Kingsbay**	**1.66**	**105**	Pn	**Pg**	**19 52 21.7**	**-0.1**
KBS				Sn	**Sn**	**19 52 39.5**	**-1.2**
KBS	**Kingsbay**	**1.66**	**105**	*i* P	**Pg**	**19 52 21.7**	**-0.1**
KBS				*i* S	**Sb**	**19 52 41.0**	**-0.6**
KBS	**Kingsbay**	**1.66**	**105**	*e*P	**Pg**	**19 52 21.6**	**-0.1**
KBS				*e*S	**Sb**	**19 52 41.4**	**-0.3**
KBS				IAML		19 52 51.1	
	comp=Z,56nm,0.3s						
KBS	**Kingsbay**	**1.66**	**105**	*e*P	**Pg**	**19 52 21.3**	**-0.5**
KBS				*e*S	**Sn**	**19 52 39.4**	**-1.2**
BRBB	**Barentsburg B**	**2.48**	**119**	Pn	**Pb**	**19 52 34.3**	**-0.6**
BRBB				Sn	**Sn**	**19 53 01.6**	**+0.5**
BRBB	**Barentsburg B**	**2.48**	**119**	Pn	**Pb**	**19 52 34.3**	**-0.6**
BRBB				Sn	**Sn**	**19 53 01.6**	**+0.5**
BRBB	**Barentsburg B**	**2.48**	**119**	*e*P	**Pb**	**19 52 33.6**	**-1.2**
BRBB				*e*S	**Sn**	**19 53 01.8**	**+0.7**
BRBA	**Barentsburg A**	**2.51**	**119**	Pn	**Pb**	**19 52 34.7**	**-0.6**
BRBA				Sn	**Sn**	**19 53 02.1**	**+0.4**
BRBA	**Barentsburg A**	**2.51**	**119**	Pn	**Pb**	**19 52 34.7**	**-0.6**
BRBA				Sn	**Sn**	**19 53 02.1**	**+0.4**
BRBA	**Barentsburg A**	**2.51**	**119**	*e*P	**Pb**	**19 52 34.8**	**-0.6**
BRBA				*e*S	**Sn**	**19 53 02.8**	**+1.2**
BRBA				IAML		19 53 05.6	
	comp=Z,26nm,0.3s						
SPA0	**Spitsbergen Ar**	**2.79**	**111**	Pn	**Pb**	**19 52 38.3**	**-1.9**
	baz=298,slow=10						
SPA0				Sn	**Sn**	**19 53 09.8**	**+1.1**
SPA0	**Spitsbergen Ar**	**2.79**	**111**	Pn	**Pb**	**19 52 38.3**	**-1.9**
	baz=298,slow=10						
SPA0				Sn	**Sn**	**19 53 09.8**	**+1.1**
SPA0	**Spitsbergen Ar**	**2.79**	**111**	*e*P	**Pb**	**19 52 38.3**	**-1.9**
SPA0				*e*S	**Sn**	**19 53 09.6**	**+0.8**
SPA0				IAML		19 53 17.9	
	comp=Z,24nm,0.4s						
SPA0	**Spitsbergen Ar**	**2.79**	**111**	⇑*i*P	**Pb**	**19 52 38.2**	**-1.9**
SPA0				*i* S	**Sn**	**19 53 09.3**	**+0.6**
HSPB	**Hornsund (broa**	**3.47**	**130**	Pn	**Pn**	**19 52 47.0**	**+2.8**
HSPB				Sn	**Sn**	**19 53 24.5**	**-0.9**
HSPB	**Hornsund (broa**	**3.47**	**130**	Pn	**Pn**	**19 52 47.0**	**+2.8**
HSPB				Sn	**Sn**	**19 53 24.5**	**-0.9**
HSPB	**Hornsund (broa**	**3.47**	**130**	*e*P	**Pn**	**19 52 47.1**	**+2.9**
HSPB				*e*S	**Sn**	**19 53 25.4**	**0.0**
HSPB				IAML		19 53 29.5	
	comp=Z,14nm,0.2s						
HSPB	**Hornsund (broa**	**3.47**	**130**	*e*P	**Pn**	**19 52 47.2**	**+2.9**
HSPB				*e*S	**Sn**	**19 53 23.5**	**-1.9**
NOR	**Nord**	**3.96**	**312**	Pn	**Pn**	**19 52 51.2**	**+0.3**
NOR	**Nord**	**3.96**	**312**	Pn	**Pn**	**19 52 51.2**	**+0.3**
NOR	**Nord**	**3.96**	**312**	*i* P	**Pn**	**19 52 51.0**	**+0.1**
NOR	**Nord**	**3.96**	**312**	*e*P	**Pn**	**19 52 51.8**	**+0.9**
DAG	**Danmarks Havn**	**5.32**	**251**	*i* P	**Pn**	**19 53 08.0**	**-1.5**
DAG				*e*S	Sn	19 54 01.9	-8.9
DAG				IAML		19 54 04.0	
	comp=Z,2.2nm,0.4s						
DAG	**Danmarks Havn**	**5.32**	**251**	*e*P	**Pn**	**19 53 08.5**	**-1.0**
DAG				*e*S	**Sn**	**19 54 03.3**	**-7.5**
HOPEN	**Hopen**	**5.33**	**113**	Pn	**Pn**	**19 53 12.3**	**+2.7**
HOPEN				Sn	**Sn**	**19 54 09.2**	**-1.8**
HOPEN	**Hopen**	**5.33**	**113**	Pn	**Pn**	**19 53 12.3**	**+2.7**
HOPEN				Sn	**Sn**	**19 54 09.2**	**-1.8**
HOPEN	**Hopen**	**5.33**	**113**	*e*P	**Pn**	**19 53 12.5**	**+2.8**
HOPEN				*e*S	**Sn**	**19 54 10.1**	**-0.9**
HOPEN				IAML		19 54 38.8	
	comp=Z,10nm,0.7s						
HOPEN	**Hopen**	**5.33**	**113**	*e*P	**Pn**	**19 53 13.0**	**+3.3**
HOPEN				*e*S	**Sn**	**19 54 09.2**	**-1.8**
BJO1	**Bjornoya**	**6.05**	**138**	*e*P	**Pn**	**19 53 20.8**	**+1.2**
DBG	**Daneborg**	**7.43**	**238**	Pn	**Pn**	**19 53 39.7**	**+1.1**
DBG				Sn	Sn	19 54 53.8	-9.1
DBG	**Daneborg**	**7.43**	**238**	Pn	**Pn**	**19 53 39.7**	**+1.1**
DBG				Sn	Sn	19 54 53.8	-9.1
DBG	**Daneborg**	**7.43**	**238**	*e*P	**Pn**	**19 53 37.4**	**-1.2**
DBG				*e*S	Sn	19 54 50.0	-13
DBG				IAML		19 55 01.7	
	comp=Z,1.2nm,0.6s						
DBG	**Daneborg**	**7.43**	**238**	*e*P	**Pn**	**19 53 39.0**	**+0.5**
DBG				*e*S	Sn	19 54 53.9	-9.0
ZFI2	**Zemlya Franca-**	**7.50**	**59**	*e*S	**Sn**	**19 55 00.7**	**-3.9**
	comp=Z,20nm,1.0s						
ZFI	**Zemlya Franca-**	**7.51**	**59**	*e*S	**Sn**	**19 55 00.7**	**-3.9**
	comp=Z,17nm,1.6s						

IDC ***30*** *19:53:03.3±4.4, 36°.23N×70°.02E, h65^{km}±33^{km}, mb3.3/5, mbtmp3.6/10, ML3.3/5, Error ellipse: s-maj=42.3km s-min=18.3km az=165.0*
NNC ***30*** *19:53:05.9±3.3, 36°.70N×69°.72E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=32.3km s-min=14.5km az=152.0*
ISC 30 19:53:07.3±1.4**, 36°.4N**±0°.1×**69°.93E**±0°.07**, h100**^{km}**, n15,**
σ1^{s}.57/23**, mb3.4**/4**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.69**	**4**	Pn	**Pn**	**19 54 43.4**	**+0.4**
	2.8nm,0.3s,baz=174,slow=10,SNR=55						
KK31				⇓Sn	**Sn**	**19 55 58.4**	**+0.8**
	2.3nm,0.3s,baz=192,slow=22,SNR=6.7						
AAK	**Ala-Archa**	**7.14**	**28**	P	**Pn**	**19 54 47.8**	**-1.4**
	0.8nm,0.3s,baz=188,slow=7.1,SNR=6.0						
AAK				S	**Sn**	**19 56 09.0**	**+0.2**
	5.7nm,0.5s,baz=183,slow=19,SNR=13						
	1.3nm,0.3s						
TKM2	**Tokmak 2**	**7.82**	**32**	⇑Pn	**Pn**	**19 54 59.1**	**+0.5**
	2.1nm,0.7s						
TKM2				⇓Sn	**Sn**	**19 56 26.0**	**+0.5**
	3.8nm,0.8s						
GEYT	**Alibeck**	**9.55**	**283**	P	**Pn**	**19 55 19.3**	**-2.6**
	0.4nm,0.3s,baz=125,slow=12,SNR=6.2						
GEYT				S	**Sn**	**19 57 06.9**	**-0.4**
	1.5nm,0.4s,baz=91,slow=28,SNR=2.5						
	0.9nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**9.55**	**283**	⇑Pn	**Pn**	**19 55 21.1**	**-0.7**
GYA0B				⇑Sn	**Sn**	**19 57 08.1**	**+0.8**
MKAR	**Makanchi Array**	**13.87**	**38**	P	**Pn**	**19 56 17.5**	**-2.0**
	0.1nm,0.3s,baz=219,slow=8.7,SNR=3.9						
	0.2nm,0.5s						
AB31	**Akbulak array**	**14.75**	**334**	Pn	**Pn**	**19 56 32.2**	**+1.5**
	2.3nm,0.5s,baz=152,slow=12,SNR=65						
AB31				Sn	**Sn**	**19 59 09.4**	**-3.9**
	0.4nm,0.4s,baz=154,slow=23,SNR=5.9						
KURBB	**Kurchatov Arra**	**15.49**	**21**	P	**Pn**	**19 56 39.9**	**-0.1**
	baz=211,slow=10,SNR=13						
	0.7nm,0.6s						
AKTO	**Aktyubinsk**	**16.43**	**332**	P	**Pn**	**19 56 52.2**	**+0.4**
	0.3nm,0.3s,baz=144,slow=11,SNR=5.9						
AKTO				S	**Sn**	**19 59 52.7**	**-1.1**
	0.6nm,0.4s,baz=48,slow=17,SNR=1.8						
	1.3nm,0.4s						
AKTO	**Aktyubinsk**	**16.43**	**332**	⇑Pn	**P**	**19 56 55.0**	**+2.2**
	3.5nm,1.1s						
AKTO				⇑Sn	**Sn**	**19 59 52.4**	**-1.4**
	4.2nm,1.4s						
ZALV	**Zalesovo Beam**	**20.35**	**26**	P	**P**	**19 57 36.0**	**+0.5**
	5.1nm,0.5s,baz=219,slow=11,SNR=32						
	5.1nm,0.5s						
ARU	**Arti**	**21.44**	**343**	P	**P**	**19 57 48.6**	**+1.4**
	0.7nm,0.3s,baz=127,slow=20,SNR=1.8						
	0.7nm,0.3s						
SONM	**Songino Array**	**29.09**	**55**	P	**P**	**19 58 56.9**	**-1.5**
	0.2nm,0.5s,baz=285,slow=2.8,SNR=1.6						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**40.89**	**338**	P	**P**	**20 00 41.0**	**+1.8**
	1.2nm,0.8s,baz=119,slow=7.3,SNR=4.0						
	1.2nm,0.8s						
NOA	**NORSAR Array B**	**43.92**	**323**	P	**P**	**20 01 04.5**	**+0.5**
	0.2nm,0.4s,baz=98,slow=7.9,SNR=2.2						
	0.2nm,0.4s						

IDC 30 20:08:53.2±2.9**, 13°.25S**×**170°.12E, h0**^{km}**, mb4.0**/4**,**
mbtmp4.0/4**, Error ellipse: s-maj=121.1km**
s-min=34.1km az=135.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**32.05**	**230**	P	P	20 15 21.8	-0.1
	2.1nm,0.3s,baz=57,slow=8.4,SNR=18						
	2.1nm,0.3s						
WRA	**Warramunga Arr**	**34.88**	**254**	P	P	20 15 47.0	+0.4
	0.6nm,0.4s,baz=86,slow=8.3,SNR=15						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**35.78**	**248**	P	P	20 15 54.0	-0.5
	1.2nm,0.3s,baz=74,slow=9.5,SNR=52						
	1.2nm,0.3s						
ILAR	**Eielson Array**	**84.29**	**17**	P	P	20 21 26.6	0.0
	0.4nm,0.9s,baz=217,slow=6.8,SNR=2.8						
	0.4nm,0.9s						

IDC ***30*** *20:24:19.8±0.6, 42°.83N×11°.97E, h0^{km}, mb4.1/18, mbtmp3.9/30, ML3.5/11, MS3.5/36, Error ellipse: s-maj=11.7km s-min=9.4km az=108.0*
LDG ***30*** *20:24:20.9±0.1, 42°.69N×11°.96E, h15^{km}, Ml3.7/39, Error ellipse: s-maj=4.4km s-min=2.8km az=21.0*
NEIC ***30*** *20:24:20.5, 42°.71N×11°.96E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.33; $M_{\theta\theta}$2.35; $M_{\phi\phi}$0.98; $M_{r\theta}$0.74; $M_{\theta\phi}$-1.08; $M_{\phi r}$0.49; Fault plane solution: $M_0$3.28000×10^{15} NP1:ϕ_s287.19000°, δ49.91000°, λ-104.78000°. NP2:ϕ_s129.46000°, δ42.29000°, λ-73.15000°. Principal axes: T 2.9781, Plg4.0000°, Azm28.0000°; N 0.5364, Plg11.0000°, Azm297.0000°; P -3.5146, Plg78.0000°, Azm136.0000°;*
MED_RC ***30*** *20:24:20.0±0.3, 42°.61N×12°.00E, h12^{km}±1^{km}, MW4.4/16, Moment Tensor Solution. Mantle waves: s16,c27; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.51±.39; $M_{\theta\theta}$2.83±.22; $M_{\phi\phi}$0.68±.22; $M_{r\theta}$-2.53±.40; $M_{\theta\phi}$-1.99±.12; $M_{\phi r}$-1.06±.41; Best double couple: $M_0$4.66000×10^{15} NP1:ϕ_s95.00000°, δ62.00000°, λ-118.00000°. NP2:ϕ_s324.00000°, δ38.00000°, λ-48.00000°. Principal axes: T 4.4000, Plg13.0000°, Azm205.0000°; N 0.5100, Plg24.0000°, Azm109.0000°; P -4.9100, Plg62.0000°, Azm321.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
GEN ***30*** *20:24:20.8, 42°.74N×11°.94E, h12^{km}±21^{km}, Ml0.0*
NEIC ***30*** *20:24:20.8±1.7, 42°.74N±0°.03×11°.94E±0°.07, h8^{km}±4^{km}, Error ellipse: s-maj=7.2km s-min=4.9km az=90.0*
MOS ***30*** *20:24:20.1±1.3, 42°.82N×11°.96E, h11^{km}, mb4.5/19, Error ellipse: s-maj=6.2km s-min=3.3km az=73.3*
ROM ***30*** *20:24:20.5±0.1, 42°.700N±0°.004×11°.976E±0°.005, h8^{km}, ML4.1/58, Mw4.1, Error ellipse: s-maj=0.4km s-min=0.2km az=25.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.85; $M_{\theta\theta}$1.36; $M_{\phi\phi}$0.49; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.91; $M_{\phi r}$0.13; Fault plane solution: $M_0$1.89589×10^{15} NP1:ϕ_s300.00000°, δ43.00000°, λ-93.00000°. NP2:ϕ_s124.00000°, δ47.00000°, λ-87.00000°.*
PDG ***30*** *20:24:21.1±0.7, 42°.72N×11°.97E, h13^{km}, ML4.0/13 Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
PRU ***30*** *20:24:22.3±0.0, 43°.00N×11°.77E, h0^{km}, M4.6*
STR ***30*** *20:24:22.5±2.1, 42°N±11°×1°2E±1°4, h16^{km}±18^{km}, MLv4.3/13*
BEO ***30*** *20:24:29.6±0.8, 43°.13N×12°.65E, h13^{km}±9^{km}, ML4.2/5*
ISC 30 20:24:21.6±0.6**, 42°.72N**±0°.02×**11°.97E**±0°.02**, h14**^{km}±3^{km}**,**
n598, σ2^{s}.15/708**, mb4.5**/52**, MS3.6**/28**, 81C-41D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACS	**San Casciano d**	**0.13**	**342**	⇓P	**Pb**	**20 24 24.6**	**-1.3**
SACS				S	**Sg**	**20 24 27.5**	**-0.2**
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
LATE	**Laterza**	**0.16**	**228**	Pg	**Pg**	**20 24 24.7**	**-1.0**
LATE	**Laterza**	**0.16**	**228**	⇑P	**Pg**	**20 24 24.7**	**-1.0**
MGAB	**Montegabbione**	**0.22**	**30**	⇑P	**Pg**	**20 24 25.9**	**-0.6**
MGAB				S	**Sg**	**20 24 29.7**	**-0.1**
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
MCIV	**Monte Civitell**	**0.22**	**285**	⇓P	**Pg**	**20 24 25.8**	**-0.8**
MCIV				S	**Sg**	**20 24 29.4**	**-0.5**
MCIV				AML	AML		
MCIV				AML	AML		
MCIV				AML	AML		
MCIV				AML	AML		
ARCI	**Arcidosso**	**0.38**	**290**	⇓P	**Pg**	**20 24 28.9**	**-0.5**
ARCI				S	**Sb**	**20 24 34.9**	**-1.1**
ARCI				AML	AML		
	comp=E,50550µm,0.3s						
ARCI				AML	AML		
	comp=N,51900µm,0.4s						
CESX	**Cesi**	**0.47**	**104**	⇑P	**Pg**	**20 24 29.7**	**-1.1**
CESX				AML	AML		
	comp=E,14550µm,1.6s						
CESX				AML	AML		
	comp=N,10600µm,1.0s						
ATTE	**AVT- Monte Tez**	**0.55**	**31**	⇑P	**Pg**	**20 24 31.6**	**-0.9**
ATTE				S	**Sb**	**20 24 41.3**	**+0.4**
ATTE				AML	AML		
	comp=N,53700µm,0.9s						
ATTE				AML	AML		
	comp=E,43400µm,1.0s						
ASSB	**Assisi San Ben**	**0.60**	**58**	⇑P	**Pg**	**20 24 32.2**	**-1.1**
ASSB				S	**Sb**	**20 24 41.7**	**-0.5**
ASSB				AML	AML		
	comp=N,13700µm,0.9s						
ASSB				AML	AML		
	comp=E,13000µm,1.2s						
ATVA	**AVT- Monte Val**	**0.60**	**23**	⇑P	**Pg**	**20 24 32.2**	**-1.2**
ATVA				S	**Sb**	**20 24 41.4**	**-0.9**
CAFI	**Castiglion Fio**	**0.61**	**0**	⇑P	**Pb**	**20 24 32.8**	**-1.2**
ARRO	**Arrone**	**0.61**	**103**	⇑P	**Pg**	**20 24 32.3**	**-1.2**
ARRO				AML	AML		
	comp=E,12600µm,1.1s						
ARRO				AML	AML		
	comp=N,12850µm,0.4s						
ARRO				AML	AML		
	comp=N,12900µm,0.4s						
SRES	**S.Oreste - Sor**	**0.63**	**140**	⇑P	**Pg**	**20 24 32.6**	**-1.3**
SRES				AML	AML		
	comp=E,11385µm,0.9s						
SRES				AML	AML		
	comp=N,9225µm,1.1s						
ATMI	**Monte Miggiano**	**0.65**	**20**	AML	AML		
ATMI				AML	AML		
TOLF	**Tolfa**	**0.66**	**178**	⇑P	**Pg**	**20 24 32.7**	**-1.7**
TOLF				S	**Sg**	**20 24 42.9**	**-0.3**
TOLF				AML	AML		
	comp=N,9820µm,0.7s						
TOLF				AML	AML		
	comp=E,16950µm,0.7s						
ATCC	**AVT- Casa Cast**	**0.68**	**47**	⇑P	**Pg**	**20 24 33.8**	**-1.1**
ATCC				S	**Sb**	**20 24 43.5**	**-0.9**
ATCC				AML	AML		
	comp=E,51100µm,0.5s						
ATCC				AML	AML		
	comp=N,32200µm,0.5s						
ATCC				AML	AML		
	comp=N,32150µm,0.5s						
ATCC				AML	AML		
	comp=E,51150µm,0.5s						
MURB	**Monte Urbino**	**0.68**	**37**		**Pg**	**20 24 33.9**	**-0.9**
MURB	**Monte Urbino**	**0.68**	**37**	⇑P	**Pg**	**20 24 33.9**	**-0.9**
MURB				AML	AML		
	comp=E,99900µm,0.4s						
MURB				AML	AML		
	comp=N,85250µm,0.5s						
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
	comp=N,85350µm,0.5s						
MURB				AML	AML		
	comp=N,93600µm,0.7s						
MURB				AML	AML		
MURB				AML	AML		
	comp=N,84950µm,0.5s						
MAON	**Monte Argentar**	**0.68**	**245**	P	**Pg**	**20 24 34.0**	**-0.9**
MAON	**Monte Argentar**	**0.68**	**245**	P	**Pg**	**20 24 34.0**	**-0.9**
MAON				AML	AML		
	comp=E,54100µm,0.8s						
MAON				AML	AML		
	comp=N,50600µm,0.9s						
ATVO	**AVT- Monte Val**	**0.73**	**26**	⇑P	**Pg**	**20 24 34.9**	**-1.0**
ATVO				S	**Sn**	**20 24 46.7**	**-1.8**
ATVO				AML	AML		
	comp=N,32200µm,0.6s						
ATVO				AML	AML		
	comp=E,24650µm,1.2s						
CESI	**CESI - Serrava**	**0.74**	**67**	⇑P	**Pg**	**20 24 34.9**	**-1.2**
CESI				S	**Sb**	**20 24 46.1**	**-0.3**
CESI				AML	AML		
	comp=N,12400µm,0.5s						
CESI				AML	AML		
	comp=E,15550µm,0.8s						
FROS	**Frosini**	**0.77**	**310**	P	**Pb**	**20 24 36.1**	**-0.6**
FROS	**Frosini**	**0.77**	**310**	⇓P	**Pb**	**20 24 36.1**	**-0.6**
FROS				S	**Sn**	**20 24 47.8**	**-1.5**
FROS				AML	AML		
	comp=E,10625µm,0.7s						
FROS				AML	AML		
	comp=N,12080µm,1.5s						
ATFO	**Monte Foce - G**	**0.78**	**34**	⇑P	**Pg**	**20 24 35.8**	**-1.0**
ATFO				S	**Sn**	**20 24 47.9**	**-1.9**
ATFO				AML	AML		
	comp=N,50550µm,0.5s						
ATFO				AML	AML		
	comp=E,52350µm,0.6s						
ATPI	**Pietralunga -**	**0.79**	**24**	⇑P	**Pg**	**20 24 36.0**	**-1.0**
ATPI				S	**Sb**	**20 24 48.0**	**+0.2**
ATPI				AML	AML		
	comp=N,26200µm,0.5s						
ATPI				AML	AML		
	comp=E,25500µm,0.5s						
LNSS	**Leonessa**	**0.80**	**98**	⇑P	**Pg**	**20 24 35.6**	**-1.6**
LNSS				AML	AML		
	comp=E,28600µm,0.9s						
LNSS				AML	AML		
	comp=N,17050µm,0.9s						
BADI	**Badiali**	**0.81**	**14**	⇑P	**Pb**	**20 24 36.4**	**-1.0**
BADI				AML	AML		
	comp=E,22600µm,0.5s						
BADI				AML	AML		
	comp=N,30050µm,0.8s						

BADI				AML	AML		
	comp=N,30100µm,0.8s						
BADI				AML	AML		
	comp=E,22550µm,0.5s						
CASP	**Castiglione de**	**0.81**	**275**	Pg	**Pb**	**20 24 36.9**	**-0.6**
CASP	**Castiglione de**	**0.81**	**275**	P	**Pb**	**20 24 36.8**	**-0.7**
CASP				S	**Sb**	**20 24 48.9**	**+0.6**
CASP				AML	AML		
	comp=N,30300µm,0.9s						
CASP				AML	AML		
	comp=E,15050µm,0.6s						
FOSV	**Fossato di Vic**	**0.82**	**45**	⇑P	**Pg**	**20 24 36.2**	**-1.2**
FOSV				S	**Sb**	**20 24 48.6**	**+0.2**
FOSV				AML	AML		
	comp=E,15850µm,0.7s						
FOSV				AML	AML		
	comp=N,15500µm,0.6s						
FOSV				AML	AML		
	comp=E,15800µm,0.7s						
NRCA	**Norcia**	**0.85**	**82**		**Pg**	**20 24 36.6**	**-1.5**
NRCA	**Norcia**	**0.85**	**82**	⇑P	**Pg**	**20 24 36.6**	**-1.5**
NRCA				AML	AML		
	comp=E,8380µm,0.6s						
NRCA				AML	AML		
	comp=N,8445µm,0.7s						
NRCA				AML	AML		
	comp=N,8055µm,0.7s						
NRCA				AML	AML		
	comp=E,8065µm,0.6s						
SSP9	**Sansepolcro**	**0.86**	**8**	AML	AML		
	comp=N,25450µm,1.5s						
SSP9				AML	AML		
	comp=E,29450µm,1.6s						
TRIF	**Trifonti**	**0.87**	**297**	⇓P	**Pn**	**20 24 38.4**	**-1.0**
TRIF				AML	AML		
	comp=N,10545µm,0.6s						
TRIF				AML	AML		
	comp=E,9155µm,0.7s						
FDMO	**Fiordimonte**	**0.88**	**69**	⇑P	**Pg**	**20 24 37.3**	**-1.4**
FDMO				AML	AML		
	comp=E,9695µm,0.8s						
FDMO				AML	AML		
	comp=N,7960µm,0.6s						
SNTG	**Esanatoglia**	**0.89**	**53**	⇑P	**Pg**	**20 24 37.5**	**-1.4**
SNTG				AML	AML		
SNTG				AML	AML		
	comp=E,13350µm,0.7s						
CRE	**Caprese Michel**	**0.90**	**359**	⇑P	**Pg**	**20 24 37.9**	**-1.0**
CRE				S	**Sn**	**20 24 51.8**	**-0.8**
CRE				AML	AML		
	comp=N,16350µm,0.7s						
CRE				AML	AML		
	comp=E,13200µm,0.9s						
APEC	**Apecchio**	**0.90**	**22**	AML	AML		
	comp=E,4755µm,0.7s						
APEC				AML	AML		
	comp=N,6000µm,0.6s						
APEC				AML	AML		
	comp=E,21450µm,0.7s						
APEC				AML	AML		
	comp=N,6005µm,0.6s						
APEC				AML	AML		
	comp=N,33400µm,0.6s						
MTCE	**Montecelio**	**0.91**	**140**	P	**Pg**	**20 24 37.4**	**-1.7**
MTCE				AML	AML		
	comp=N,8670µm,0.9s						
MTCE				AML	AML		
	comp=E,6700µm,1.3s						
PIEI	**Pieia**	**0.91**	**27**	AML	AML		
	comp=E,16850µm,0.9s						
PIEI				AML	AML		
	comp=N,9790µm,0.5s						
PIEI				AML	AML		
	comp=E,16900µm,0.9s						
SSFR	**Montelago di S**	**0.93**	**40**	⇓P	**Pg**	**20 24 38.5**	**-1.1**
SSFR				AML	AML		
	comp=E,12945µm,0.6s						
SSFR				AML	AML		
	comp=E,18700µm,1.1s						
SSFR				AML	AML		
	comp=N,17650µm,1.3s						
SSFR				AML	AML		
	comp=N,14350µm,1.5s						
PARC	**Parchiule**	**0.95**	**12**	P	**Pg**	**20 24 38.8**	**-1.1**
PARC				AML	AML		
	comp=E,19200µm,1.2s						
PARC				AML	AML		
	comp=N,20100µm,0.8s						
RM33	**Pellescritta (**	**0.95**	**103**	P	**Pg**	**20 24 38.4**	**-1.5**
RM33				AML	AML		
	comp=N,13950µm,1.4s						
RM33				AML	AML		
	comp=E,8650µm,1.6s						
RM33				AML	AML		
	comp=E,8845µm,1.6s						
RM33				AML	AML		
	comp=N,13950µm,1.4s						
OSSC	**Osservatorio P**	**0.96**	**327**		**Pb**	**20 24 39.2**	**-0.7**
OSSC	**Osservatorio P**	**0.96**	**327**	P	**Pb**	**20 24 39.3**	**-0.7**
OSSC	**Osservatorio P**	**0.96**	**327**	P	**Pb**	**20 24 39.2**	**-0.7**
OSSC				AML	AML		
	comp=E,3780µm,0.8s						
OSSC				AML	AML		
	comp=N,4275µm,1.5s						
OSSC				AML	AML		
	comp=E,4255µm,1.5s						
OSSC				AML	AML		
	comp=N,3800µm,0.8s						
OSSC				AML	AML		
	comp=N,4280µm,1.5s						
OSSC				AML	AML		
	comp=E,3780µm,0.8s						
FIAM	**Fiamignano**	**0.96**	**118**	P	**Pg**	**20 24 38.5**	**-1.7**
FIAM				AML	AML		
	comp=E,10950µm,0.9s						
FIAM				AML	AML		
	comp=N,8410µm,0.8s						
FRON	**Frontone**	**0.97**	**35**	AML	AML		
	comp=N,14650µm,0.8s						
FRON				AML	AML		
	comp=E,14550µm,0.6s						
CSP1	**Cessapalombo**	**0.98**	**68**	P	**Pg**	**20 24 39.1**	**-1.5**
CSP1				AML	AML		
	comp=N,16750µm,0.6s						
CSP1				AML	AML		
	comp=E,12610µm,0.7s						
SMA1	**SAN MARTINO**	**1.01**	**95**	⇑P	**Pb**	**20 24 39.5**	**-1.4**
SMA1				AML	AML		
	comp=N,14700µm,1.0s						
SMA1				AML	AML		
	comp=E,15550µm,1.4s						
EL6	**Elcito**	**1.03**	**54**	P	**Pb**	**20 24 40.2**	**-1.0**
EL6				AML	AML		
	comp=E,23950µm,0.9s						
EL6				AML	AML		
	comp=N,25350µm,0.8s						
PE3	**Peglio**	**1.05**	**22**	P	**Pn**	**20 24 41.2**	**-0.6**
SAMA	**S.Maria delle**	**1.05**	**154**	P	**Pb**	**20 24 40.3**	**-1.2**
ARVD	**Arcevia**	**1.05**	**42**	⇑P	**Pb**	**20 24 40.5**	**-1.1**
ARVD				AML	AML		
	comp=E,7365µm,1.5s						
ARVD				AML	AML		
	comp=N,8695µm,1.3s						
RMP	**Rome, Mte Porz**	**1.06**	**149**	⇑P	**Pb**	**20 24 40.5**	**-1.2**
RMP				AML	AML		
	comp=N,5630µm,0.8s						
RMP				AML	AML		
	comp=E,6270µm,0.9s						
MPAG	**Monte Paganucc**	**1.08**	**32**	⇑P	**Pb**	**20 24 40.5**	**-1.5**
MPAG				AML	AML		
	comp=E,7440µm,0.6s						
MPAG				AML	AML		
	comp=N,9305µm,1.4s						
MPAG				AML	AML		
	comp=E,7630µm,0.6s						
MPAG				AML	AML		
	comp=N,9430µm,1.5s						
CERT	**Cerreto**	**1.08**	**135**	P	**Pb**	**20 24 41.0**	**-1.0**
CERT				AML	AML		
	comp=E,10850µm,0.8s						
CERT				AML	AML		
	comp=N,4895µm,1.0s						
ASQU	**Asqua**	**1.08**	**353**	P	**Pn**	**20 24 41.6**	**-0.7**
ASQU	**Asqua**	**1.08**	**353**	P	**Pn**	**20 24 41.6**	**-0.7**
ASQU				AML	AML		
	comp=N,12065µm,0.6s						
ASQU				AML	AML		
	comp=E,11730µm,1.2s						
CAMP	**Campotosto**	**1.08**	**99**	P	**Pb**	**20 24 40.4**	**-1.7**
CAMP				AML	AML		
	comp=N,12965µm,1.0s						
CAMP				AML	AML		
	comp=E,7610µm,0.9s						
CING	**Cingoli**	**1.11**	**54**	P	**Pn**	**20 24 42.1**	**-0.7**
CING				AML	AML		
	comp=N,7730µm,0.6s						
CING				AML	AML		
	comp=E,10550µm,0.7s						
AQU	**L'Aquila**	**1.12**	**109**		**Pg**	**20 24 42.6**	**-0.6**
AQU	**L'Aquila**	**1.12**	**109**	P	**Pg**	**20 24 42.6**	**-0.6**
FSSB	**Fossombrone**	**1.14**	**31**	⇑P	**Pb**	**20 24 42.2**	**-0.8**
FSSB				AML	AML		
	comp=E,13000µm,1.3s						
FSSB				AML	AML		
	comp=N,14400µm,0.5s						
RCAV	**Rocca di Cave**	**1.14**	**140**	P	**Pb**	**20 24 41.7**	**-1.3**
RCAV				AML	AML		
	comp=N,4015µm,1.5s						
RCAV				AML	AML		
	comp=E,4775µm,0.9s						
COR1	**Corinaldo**	**1.18**	**39**	P	**Pg**	**20 24 43.9**	**-0.5**
COR1				AML	AML		
	comp=E,14900µm,0.7s						
COR1				AML	AML		
	comp=E,28350µm,0.7s						
COR1				AML	AML		
	comp=N,23200µm,1.1s						
COR1				AML	AML		
	comp=N,23950µm,1.2s						
SFI	**Santa Sofia**	**1.18**	**356**	⇑P	**Pg**	**20 24 43.4**	**-1.1**
SFI				AML	AML		
	comp=E,12550µm,0.8s						
SFI				AML	AML		
	comp=N,7230µm,0.9s						
TERO	**Teramo**	**1.21**	**94**	P	**Pn**	**20 24 42.4**	**-1.7**
TERO				AML	AML		
	comp=N,5740µm,0.9s						
TERO				AML	AML		
	comp=E,5315µm,0.8s						
TERO				AML	AML		
	comp=E,5190µm,0.8s						
TERO				AML	AML		
	comp=N,5570µm,0.9s						
PTQR	**Pietraquaria**	**1.27**	**123**	AML	AML		
	comp=E,2055µm,1.6s						
PTQR				AML	AML		
	comp=N,2510µm,1.5s						
FAGN	**Fagnano**	**1.28**	**110**	P	**Pb**	**20 24 45.0**	**-0.4**
FAGN				AML	AML		
	comp=E,9785µm,1.2s						
FAGN				AML	AML		
	comp=N,8250µm,1.4s						
OFFI	**Offida**	**1.28**	**80**	AML	AML		
	comp=N,16900µm,0.9s						
OFFI				AML	AML		
	comp=E,11900µm,0.8s						
CRMI	**Carmignano**	**1.29**	**326**	P	**Pb**	**20 24 44.7**	**-0.9**
CELB	**S.Piero in Cam**	**1.29**	**272**	P	**Pn**	**20 24 43.7**	**-1.5**
CELB	**S.Piero in Cam**	**1.29**	**272**	⇓P	**Pn**	**20 24 43.8**	**-1.5**
CELB				AML	AML		
	comp=N,5890µm,0.6s						
CELB				AML	AML		
	comp=E,4850µm,0.4s						
GUAR	**Guarcino**	**1.36**	**132**	AML	AML		
	comp=E,3755µm,0.6s						
GUAR				AML	AML		
	comp=N,5610µm,0.6s						
LMD	**Lutirano**	**1.37**	**352**	P	**Pb**	**20 24 46.4**	**-0.5**
LMD	**Lutirano**	**1.37**	**352**	P	**Pb**	**20 24 46.2**	**-0.7**
LMD				AML	AML		
	comp=N,4505µm,0.9s						
LMD				AML	AML		
	comp=E,3770µm,0.7s						
PP3	**Marolino**	**1.37**	**61**	P	**Pg**	**20 24 47.0**	**-0.9**
PP3				AML	AML		
	comp=N,15150µm,0.8s						
PP3				AML	AML		
	comp=N,15000µm,0.8s						
PP3				AML	AML		
	comp=E,14550µm,1.4s						
PP3				AML	AML		
	comp=E,14400µm,1.4s						
PESA	**Pesaro**	**1.37**	**27**	P	**Pg**	**20 24 47.4**	**-0.6**
PESA				AML	AML		
	comp=E,9640µm,0.6s						
PESA				AML	AML		
	comp=N,9705µm,1.4s						
MPPT	**Montemurlo**	**1.39**	**333**	P	**Pb**	**20 24 46.4**	**-1.0**
VCEL	**Villa Celiera**	**1.42**	**103**	AML	AML		
	comp=E,9365µm,0.9s						
VCEL				AML	AML		
	comp=N,7915µm,1.3s						
T0110	**Collepietro**	**1.43**	**110**	P	**Pb**	**20 24 47.6**	**-0.4**
T0110				AML	AML		
	comp=N,7125µm,1.0s						
T0110				AML	AML		
	comp=E,6330µm,1.3s						
LATB	**Latina**	**1.44**	**149**	P	**Pn**	**20 24 45.5**	**-1.6**
BRIS	**BRISIGHELLA**	**1.46**	**347**	P	**Pg**	**20 24 49.2**	**-0.5**
BRIS				AML	AML		
	comp=E,797µm,0.8s						
BRIS				AML	AML		
	comp=N,5095µm,0.6s						
BRIS				AML	AML		
	comp=E,3155µm,1.1s						
BRIS				AML	AML		
	comp=N,808µm,1.0s						
MTCR	**Monte La Croce**	**1.48**	**332**	P	**Pn**	**20 24 47.5**	**-0.4**
GUMA	**Gualdo di Mace**	**1.49**	**76**	⇑P	Pn	20 24 40.7	-7.1
GUMA				AML	AML		
	comp=N,18300µm,0.7s						
GUMA				AML	AML		
	comp=N,17800µm,0.8s						
GUMA				AML	AML		
	comp=E,19350µm,0.9s						
GUMA				AML	AML		
	comp=E,17250µm,0.9s						
VVLD	**Villa Vallelon**	**1.50**	**124**	P	**Pn**	**20 24 48.0**	**0.0**
VVLD				AML	AML		
	comp=N,3335µm,0.9s						
VVLD				AML	AML		
	comp=E,1990µm,1.2s						
GIUL	**Giuliano Di Ro**	**1.51**	**140**	P	**Pn**	**20 24 46.9**	**-1.3**
GIUL				AML	AML		
	comp=N,1960µm,1.5s						
GIUL				AML	AML		
	comp=E,1740µm,1.0s						
FNVD	**Fontana Vidola**	**1.57**	**337**	⇓P	**Pn**	**20 24 48.9**	**-0.2**
INTR	**Introdacqua**	**1.60**	**116**	P	**Pb**	**20 24 50.2**	**-0.8**
INTR				AML	AML		
	comp=N,4µm,1.6s						
INTR				AML	AML		
	comp=N,5360µm,1.6s						
INTR				AML	AML		
	comp=E,3µm,1.1s						
INTR				AML	AML		
	comp=E,2590µm,1.1s						
MAIM	**Mastiano**	**1.60**	**318**	P	**Pn**	**20 24 48.9**	**-0.6**
POFI	**Posta Fibreno**	**1.64**	**127**	P	**Pn**	**20 24 49.3**	**-0.7**
POFI				AML	AML		
	comp=E,1665µm,1.0s						
POFI				AML	AML		
	comp=N,1655µm,1.6s						
POFI				AML	AML		
	comp=N,1705µm,0.8s						
POFI				AML	AML		
	comp=E,1860µm,1.0s						
BDI	**Bagni Di Lucca**	**1.67**	**324**	P	**Pn**	**20 24 49.9**	**-0.5**
BDI				AML	AML		
	comp=E,1265µm,1.6s						
BDI				AML	AML		
	comp=N,504µm,1.6s						
BDI				AML	AML		
	comp=N,1148µm,0.6s						
BDI				AML	AML		
	comp=E,392µm,1.5s						
CARD	**Cardoso**	**1.69**	**321**	P	**Pn**	**20 24 50.3**	**-0.4**
CARD				AML	AML		
	comp=N,1144µm,0.7s						
CARD				AML	AML		
	comp=E,923µm,0.5s						
LIK	**San Giovanni I**	**1.70**	**135**	AML	AML		
	comp=E,3995µm,1.6s						
LIK				AML	AML		
	comp=N,4050µm,1.2s						
ZCCA	**Zocca**	**1.78**	**336**		**Pb**	**20 24 52.5**	**-1.5**
ZCCA	**Zocca**	**1.78**	**336**	AML	AML		
	comp=E,2295µm,1.2s						
ZCCA				AML	AML		
	comp=N,1865µm,1.2s						
ZCCA				AML	AML		
	comp=E,2440µm,1.2s						
ZCCA				AML	AML		
	comp=N,1920µm,1.1s						
VLC	**Villacollemand**	**1.84**	**322**		**Pn**	**20 24 52.3**	**-0.4**
CERA	**Filignano**	**1.90**	**126**	P	**Pb**	**20 24 55.2**	**-0.7**
MIDA	**Miranda**	**2.02**	**122**	P	**Pn**	**20 24 55.7**	**+0.5**
SMPL	**Sampolo**	**2.08**	**253**	P	**Pn**	**20 24 55.3**	**-0.8**
SMPL				AML	AML		
	comp=E,334µm,0.9s						
SMPL				AML	AML		
	comp=N,398µm,1.2s						
VAGA	**Valle Agricola**	**2.13**	**127**	P	**Pn**	**20 24 57.8**	**+1.0**
PGF	**Pioggiola**	**2.20**	**266**	*e*Pn	**Pn**	**20 24 57.3**	**-0.4**
PGF				*e*Sn	**Sn**	**20 25 20.6**	**-4.1**
	comp=N,562nm,0.7s						
PGF	**Pioggiola**	**2.20**	**266**	P	**Pn**	**20 24 57.5**	**-0.2**
BSSO	**Busso**	**2.28**	**120**	P	**Pb**	**20 25 00.3**	**-2.2**
PRMA	**PARMA**	**2.37**	**330**	Pn	**Pn**	**20 24 58.8**	**-1.1**
MSSA	**Maissana**	**2.39**	**313**	Pn	**Pn**	**20 25 00.5**	**+0.1**
BRJN	**Brijuni**	**2.54**	**30**	*e*Pn	**Pn**	**20 25 02.2**	**0.0**
BRJN				Sn	**Sn**	**20 25 30.7**	**-2.1**
BRJN	**Brijuni**	**2.54**	**30**	P	**Pn**	**20 25 02.4**	**+0.2**
PAOL	**Paolisi**	**2.58**	**130**		**Pn**	**20 25 03.6**	**+0.7**
DUGI	**Dugi Otok**	**2.59**	**60**	*e*Pn	**Pn**	**20 25 03.0**	**0.0**
DUGI				Sn	**Sn**	**20 25 31.6**	**-2.6**
TEOL	**Teolo**	**2.65**	**355**	Pn	**Pn**	**20 25 03.6**	**-0.2**
TEOL	**Teolo**	**2.65**	**355**	P	**Pn**	**20 25 03.9**	**+0.2**
TEOL				AML	AML		
	comp=N,2710µm,1.0s						
TEOL				AML	AML		
	comp=E,3005µm,0.7s						
VIRC	**Vir**	**2.74**	**54**	*e*Pn	**Pn**	**20 25 05.1**	**+0.1**
VIRC				Sn	**Sn**	**20 25 35.1**	**-2.8**
NVLJ	**Novalja**	**2.80**	**48**	*e*Pn	**Pn**	**20 25 05.8**	**0.0**
NVLJ				Sn	**Sn**	**20 25 37.0**	**-2.3**
SMRN	**Sveta Marina**	**2.80**	**34**	*e*Pn	**Pn**	**20 25 05.9**	**0.0**
SMRN				Sn	**Sn**	**20 25 36.9**	**-2.5**
ZIRJ	**Zirje**	**2.85**	**70**	*i* Pn	**Pn**	**20 25 06.7**	**+0.2**
ZIRJ				Sn	**Sn**	**20 25 37.9**	**-2.7**
RABC	**Rab**	**2.88**	**44**	*e*Pn	**Pn**	**20 25 07.6**	**+0.7**
RABC				Sn	**Sn**	**20 25 38.2**	**-3.0**
MORI	**Morici**	**2.96**	**66**	*e*Pn	**Pn**	**20 25 08.1**	**0.0**
MORI				Sn	**Sn**	**20 25 40.9**	**-2.5**
SGRT	**San Giovanni R**	**2.97**	**108**		**Pn**	**20 25 09.1**	**+0.8**
DGI	**Dorgali Grotta**	**2.98**	**217**	P	**Pn**	**20 25 07.7**	**-0.7**
ROVR	**Rover Verones**	**2.99**	**348**	⇓P	**Pn**	**20 25 08.7**	**0.0**
ROVR				AML	AML		
	comp=N,829µm,1.0s						
ROVR				AML	AML		
	comp=E,278µm,0.8s						
ROVR				AML	AML		
	comp=E,695µm,0.8s						
ROVR				AML	AML		
	comp=N,332µm,1.0s						
SALO	**Salr**	**3.08**	**341**	Pn	**Pn**	**20 25 07.7**	**-2.0**
CGRP	**Cima Grappa**	**3.16**	**358**	⇓P	**Pn**	**20 25 10.9**	**0.0**
CGRP				AML	AML		
	comp=N,1073µm,0.5s						
CGRP				AML	AML		
	comp=E,1370µm,0.6s						
RIY	**Rijeka**	**3.17**	**34**	*e*Pn	**Pn**	**20 25 11.3**	**+0.3**
RIY				*e*Sn	**Sn**	**20 25 41.8**	**-6.8**
RIY	**Rijeka**	**3.17**	**34**	*e*Pn	**Pn**	**20 25 11.4**	**+0.5**
RIY				Sn	**Sn**	**20 25 46.5**	**-2.1**
A250A	**Rusevo Krmpots**	**3.18**	**41**	*e*Pn	**Pn**	**20 25 12.2**	**+1.1**
A250A				Sn	**Sn**	**20 25 46.2**	**-2.6**
SKDS	**Skadanscina**	**3.18**	**27**	*e*Pn	**Pn**	**20 25 10.7**	**-0.5**
SKDS				*e*Sn	**Sn**	**20 25 42.6**	**-6.3**
SKDS	**Skadanscina**	**3.18**	**27**	*e*Pn	**Pn**	**20 25 09.8**	**-1.4**
SKDS	**Skadanscina**	**3.18**	**27**	*i* Pn	**Pn**	**20 25 10.6**	**-0.6**
SKDS				*i* Sn	**Sn**	**20 25 48.1**	**-0.8**
SKDS				IAML		20 25 49.2	
	comp=Z,361nm,0.7s						
MAGA	**Magasa**	**3.20**	**343**	P	**Pn**	**20 25 11.6**	**+0.1**
MAGA				AML	AML		
	comp=E,2050µm,0.6s						
MAGA				AML	AML		
	comp=N,1165µm,0.5s						
DOSS	**Dosso del Somm**	**3.21**	**350**	P	**Pn**	**20 25 12.0**	**+0.3**
DOSS				AML	AML		
	comp=N,680µm,1.5s						
DOSS				AML	AML		
	comp=E,617µm,1.3s						
DOSS				AML	AML		
	comp=E,652µm,1.1s						
DOSS				AML	AML		
	comp=N,630µm,1.3s						
TRI	**Trieste**	**3.25**	**23**	Pn	**Pn**	**20 25 11.1**	**-1.0**
TRI	**Trieste**	**3.25**	**23**	P	**Pn**	**20 25 11.1**	**-1.0**
TRI	**Trieste**	**3.25**	**23**	P	**Pn**	**20 25 11.3**	**-0.8**
TRI				AML	AML		
	comp=N,670µm,1.3s						
TRI				AML	AML		
	comp=E,636µm,0.8s						
UDBI	**Udbina**	**3.29**	**56**	*e*Pn	**Pn**	**20 25 13.2**	**+0.5**
UDBI				Sn	**Sn**	**20 25 48.5**	**-3.2**
LUSI	**Trento, Gardas**	**3.32**	**348**	AML	AML		
	comp=E,735µm,1.0s						
LUSI				AML	AML		
	comp=N,799µm,0.7s						
ZONE	**Zone**	**3.32**	**337**	P	**Pn**	**20 25 13.5**	**+0.5**
ZONE				AML	AML		
	comp=N,452µm,1.1s						
ZONE				AML	AML		
	comp=E,336µm,0.8s						
HVAR	**Hvar**	**3.32**	**81**	*e*Pn	**Pn**	**20 25 13.1**	**+0.1**
HVAR				Sn	**Sn**	**20 25 50.1**	**-2.2**
CTI	**Castel Tesino**	**3.33**	**356**	Pn	**Pn**	**20 25 13.4**	**+0.1**
CTI	**Castel Tesino**	**3.33**	**356**	P	**Pn**	**20 25 13.4**	**+0.1**
CTI	**Castel Tesino**	**3.33**	**356**	⇓P	**Pn**	**20 25 13.4**	**+0.1**
CTI				AML	AML		
	comp=N,775µm,0.3s						
CTI				AML	AML		
	comp=E,736µm,1.0s						
PLIT	**Plitvice**	**3.41**	**50**	*e*Pn	**Pn**	**20 25 15.5**	**+1.1**
PLIT				Sn	**Sn**	**20 25 52.9**	**-1.7**
MDI	**Monti di Nese**	**3.46**	**333**	P	**Pn**	**20 25 15.6**	**+0.6**
MDI				AML	AML		
	comp=N,294µm,1.2s						
MDI				AML	AML		
	comp=E,260µm,0.5s						
SABO	**M.te Sabotino**	**3.46**	**19**	P	**Pn**	**20 25 14.6**	**-0.4**
SABO				AML	AML		
	comp=E,6965µm,0.5s						
SABO				AML	AML		
	comp=N,4590µm,0.6s						
SABO				AML	AML		
	comp=E,1635µm,0.5s						
SABO				AML	AML		
	comp=N,1205µm,0.6s						
KIJV	**Kijevo**	**3.48**	**67**	*e*Pn	**Pn**	**20 25 16.4**	**+1.1**
KIJV				Sn	**Sn**	**20 25 54.0**	**-2.2**
MABI	**Malga Bissina**	**3.49**	**343**	P	**Pn**	**20 25 15.8**	**+0.3**
MABI				AML	AML		
	comp=N,182µm,0.5s						
MABI				AML	AML		
	comp=E,182µm,1.6s						
CEY	**Cerknica**	**3.50**	**30**	*e*Pn	**Pn**	**20 25 15.0**	**-0.4**
CEY	**Cerknica**	**3.50**	**30**	⇑*i*Pn	**Pn**	**20 25 15.1**	**-0.4**
SBF	**Sospel**	**3.50**	**291**	*e*Pn	**Pn**	**20 25 14.1**	**-1.4**
SBF				*e*Sn	**Sn**	**20 25 52.0**	**-4.7**
	comp=E,145nm,0.6s						
TURF	**col de Turini**	**3.56**	**292**	P	**Pn**	**20 25 16.3**	**-0.2**
VOJS	**Vojsko**	**3.58**	**22**	*i* Pn	**Pn**	**20 25 16.0**	**-0.8**
MPRI	**Monte Prat**	**3.59**	**11**	P	**Pn**	**20 25 16.6**	**-0.3**
MPRI				AML	AML		
	comp=E,1715µm,1.5s						
MPRI				AML	AML		
	comp=N,2870µm,0.5s						
LSTV	**Lastovo**	**3.63**	**88**	*e*Pn	**Pn**	**20 25 17.1**	**-0.1**
LSTV				Sn	**Sn**	**20 25 58.2**	**-1.6**
GEPF	**Gemona**	**3.65**	**13**	AML	AML		
	comp=E,464µm,0.8s						
GEPF				AML	AML		
	comp=N,450µm,0.5s						
BOJS	**Bojanci**	**3.65**	**39**	AML	AML		
	comp=N,1485µm,1.5s						

BOJS				AML	AML		
	comp=E,2085µm,1.1s						
VINO	Villanova	3.66	14	P	Pn	20 25 17.1	-0.5
VINO				AML	AML		
	comp=E,560µm,0.5s						
VINO				AML	AML		
	comp=N,794µm,0.7s						
ROBS	Robic	3.69	17	iPn	Pn	20 25 17.6	-0.5
SPIF	crte de Spivo	3.69	293	P	Pn	20 25 20.2	+1.9
CRNS	Crni Vrh	3.74	25	iPn	Pn	20 25 18.5	-0.3
MAKA	Makarska	3.75	80	ePn	Pn	20 25 19.0	+0.1
MAKA				Sn	Sn	20 26 00.1	-2.7
KOSI	Kohlern	3.76	354	AML	AML		
	comp=E,698µm,0.9s						
KOSI				AML	AML		
	comp=N,828µm,0.5s						
VSL	Villasalto	3.77	212	Pn	Pn	20 25 19.2	0.0
VSL	Villasalto	3.77	212	⇑P	Pn	20 25 18.9	-0.3
VSL				AML	AML		
	comp=E,263µm,0.7s						
VSL				AML	AML		
	comp=N,244µm,0.7s						
LJU	Ljubljana	3.79	28	ePn	Pn	20 25 19.7	+0.1
LJU				eSn	Sn	20 25 58.3	-5.6
LJU	Ljubljana	3.79	28	ePn	Pn	20 25 19.0	-0.5
LJU	Ljubljana	3.79	28	ePn	Pn	20 25 19.6	+0.1
LJU	Ljubljana	3.79	28	AML	AML		
	comp=N,4260µm,0.9s						
LJU				AML	AML		
	comp=E,4470µm,0.7s						
PTCC	Patocco-Chiusa	3.81	15	AML	AML		
	comp=N,347µm,0.7s						
PTCC				AML	AML		
	comp=E,444µm,0.9s						
MUGIO	Muggio	3.83	328	⇓P	Pn	20 25 20.5	+0.4
MUGIO				AML	AML		
	comp=E,152µm,0.6s						
MUGIO				AML	AML		
	comp=N,157µm,0.8s						
OZLJ	Ozalj	3.83	40	ePn	Pn	20 25 21.0	+0.9
OZLJ				Sn	Sn	20 26 03.1	-1.8
RICI	Ricice	3.86	77	ePn	Pn	20 25 20.9	+0.4
RICI				Sn	Sn	20 26 03.1	-2.5
ZOU	Zoufplan	3.90	10	P	Pn	20 25 21.1	-0.1
ZOU				AML	AML		
	comp=N,683µm,0.9s						
ZOU				AML	AML		
	comp=E,592µm,1.4s						
CGL	Cagliari Serpe	3.92	212	⇑P	Pn	20 25 20.9	-0.4
CGL				AML	AML		
	comp=E,326µm,0.7s						
CGL				AML	AML		
	comp=N,312µm,1.3s						
A251A	Rujevac	3.93	51	ePn	Pn	20 25 22.5	+1.1
A251A				Sn	Sn	20 26 04.0	-3.2
CUC	Castrocucco	3.98	132	Pn	Pn	20 25 24.4	+2.3
CRES	Cresnjev	3.99	38	⇑iPn	Pn	20 25 23.0	+0.8
SRKY	Kupres RS	4.02	69	ePn	Pn	20 25 25.3	+2.5
ABSI	Aberstueckl	4.03	354	⇓P	Pn	20 25 23.1	+0.1
ABSI				AML	AML		
	comp=E,1385µm,0.7s						
ABSI				AML	AML		
	comp=N,1047µm,0.9s						
ABTA	Abfaltersbach	4.04	5	ePn	Pn	20 25 23.6	+0.6
	comp=N,81nm,0.5s,SNR=58						
ABTA				eSn	Sn	20 26 11.2	+1.0
	comp=N,185nm,0.6s						
ABTA	Abfaltersbach	4.04	5		Pn	20 25 23.6	+0.6
ABTA					Sn	20 26 11.2	+1.0
LMR	La Mourre	4.05	281	ePn	Pn	20 25 21.6	-1.4
LMR				eSn	Sn	20 26 04.8	-5.4
	comp=N,50nm,0.5s						
MYKA	Terra Mystica	4.08	16	ePn	Pn	20 25 24.1	+0.5
	comp=N,20nm,0.5s,SNR=6.3						
MYKA				iSn	Sn	20 26 12.4	+1.2
	comp=N,75nm,0.5s						
MYKA	Terra Mystica	4.08	16		Pn	20 25 24.1	+0.5
MYKA					Sn	20 26 12.4	+1.2
MGRS	Mrkonjic Grad	4.09	64	ePn	Pn	20 25 25.8	+2.2
PRIJ	Prijedor	4.11	55	ePn	Pb	20 25 33.2	-0.4
MATE	Matera	4.11	119	⇑P	Pn	20 25 26.3	+2.4
SURF	Saint Ours	4.13	297	P	Pn	20 25 25.8	+1.4
TRIGF	Trigance	4.19	286	P	Pn	20 25 25.2	+0.1
TUE	Stuetta	4.19	334	Pn	Pn	20 25 25.9	+0.7
TUE	Stuetta	4.19	334	⇓P	Pn	20 25 26.3	+1.1
TUE				AML	AML		
	comp=N,209µm,0.9s						
TUE				AML	AML		
	comp=E,260µm,0.8s						
TUE				AML	AML		
	comp=E,208µm,0.8s						
TUE				AML	AML		
	comp=N,271µm,0.9s						
OBKA	Obir	4.21	25	iPn	Pn	20 25 25.1	-0.3
	comp=N,65nm,0.8s,SNR=13						
OBKA				eSn	Sn	20 26 15.0	+0.7
	comp=N,242nm,0.7s						
OBKA	Obir	4.21	25		Pn	20 25 25.1	-0.3
OBKA					Sn	20 26 15.0	+0.7
STON	Ston	4.22	86	ePn	Pn	20 25 25.3	-0.1
STON				eSn	Sn	20 26 09.4	-5.0
STON	Ston	4.22	86	ePn	Pn	20 25 25.3	-0.1
STON	Ston	4.22	86	ePn	Pn	20 25 25.4	0.0
STON				Sn	Sn	20 26 12.2	-2.3
FLAF	Flassans-sur-I	4.24	281	P	Pn	20 25 25.5	-0.2
MBDF	Montbardon	4.26	300	eP	Pn	20 25 26.5	+0.3
MBDF				eSn	Sn	20 26 10.4	-5.3
	comp=N,92nm,0.8s						
PTJ	Puntijarka	4.29	41	ePn	Pn	20 25 26.6	+0.2
PTJ				Sn	Sn	20 26 13.6	-2.6
BLY	Banja Luka	4.29	60	⇑iPn	Pn	20 25 28.0	+1.7
DAVOX	Davos/Dischmat	4.32	341	Pn	Pn	20 25 28.2	+1.3
	comp=N,11nm,0.3s,baz=166,slow=18,SNR=140						
DAVOX				Sn	Sn	20 26 16.7	-0.5
	comp=N,4.8nm,0.3s,baz=94,slow=21,SNR=4.4						
DAVOX				LR	LR	20 26 28.3	
	comp=N,57nm,21.5s,baz=104,slow=30						
DAVOX	Davos/Dischmat	4.32	341	⇑P	Pn	20 25 29.2	+2.3
OGDI	Digne	4.35	290	P	Pn	20 25 30.0	+2.7
FETA	Feichten	4.39	349	ePn	Pn	20 25 29.8	+1.9
	comp=N,76nm,0.8s,SNR=74						
FETA				iSn	Sn	20 26 20.1	+1.3
	comp=N,86nm,0.8s						
FETA	Feichten	4.39	349		Pn	20 25 29.8	+1.9
FETA					Sn	20 26 20.1	+1.3
KBA	Koelnbreinsper	4.46	12	ePn	Pn	20 25 29.6	+0.7
	comp=N,37nm,0.5s,SNR=30						
KBA				eSn	Sn	20 26 21.4	+0.7
	comp=N,64nm,0.4s						
KBA	Koelnbreinsper	4.46	12		Pn	20 25 29.6	+0.7
KBA					Sn	20 26 21.4	+0.7
KBA	Koelnbreinsper	4.46	12	P	Pn	20 25 29.6	+0.7
KBA						20 26 21.4	
BNI	Bardonecchia	4.47	303	Pn	Pn	20 25 29.3	+0.3
BNI	Bardonecchia	4.47	303	P	Pn	20 25 29.3	+0.3
BLAF	les Blancs	4.49	288	P	Pn	20 25 30.3	+1.2
MOSL	Moslavina	4.50	48	ePn	Pn	20 25 29.9	+0.6
MOSL				Sn	Sn	20 26 18.9	-2.3
LOBO	Lobor	4.52	39	ePn	Pn	20 25 29.4	-0.1
LOBO				Sn	Sn	20 26 19.4	-2.3
SOKA	Soboth	4.52	28	iPn	Pn	20 25 29.6	0.0
	comp=N,15nm,0.4s,SNR=11						
SOKA				iSn	Sn	20 26 22.2	+0.3
	comp=N,24nm,0.6s						
SOKA	Soboth	4.52	28		Pn	20 25 29.6	0.0
SOKA					Sn	20 26 22.2	+0.3
SQTA	Sankt Quirin	4.53	353	ePn	Pn	20 25 31.4	+1.6
	comp=N,71nm,0.5s,SNR=40						
SQTA				eSn	Sn	20 26 23.9	+1.6
	comp=N,66nm,0.4s						
SQTA	Sankt Quirin	4.53	353		Pn	20 25 31.4	+1.6
SQTA					Sn	20 26 23.9	+1.6
WTTA	Wattenberg	4.55	357	iPn	Pn	20 25 31.8	+1.8
	comp=N,33nm,0.4s,SNR=34						
WTTA				iSn	Sn	20 26 24.6	+1.9
	comp=N,241nm,0.8s						
WTTA	Wattenberg	4.55	357		Pn	20 25 31.8	+1.8
WTTA					Sn	20 26 24.6	+1.9
OGMO	Fort Saint-Gob	4.55	305	P	Pn	20 25 33.5	+3.5
DBRK	Dubrovnik	4.56	89	ePn	Pn	20 25 31.2	+1.1
DBRK				Sn	Sn	20 26 20.7	-2.1
ARTF	Artigues	4.59	283	P	Pn	20 25 33.4	+2.9
WATA	Walderalm	4.62	357	iPn	Pn	20 25 33.1	+2.1
	comp=N,80nm,0.6s,SNR=51						
WATA				iSn	Sn	20 26 28.0	+3.5
	comp=N,122nm,0.7s						
WATA	Walderalm	4.62	357		Pn	20 25 33.1	+2.1
WATA					Sn	20 26 28.1	+3.5
MOTA	Moosalm	4.66	353	ePn	Pn	20 25 33.5	+1.9
	comp=N,47nm,0.5s,SNR=22						
MOTA				iSn	Sn	20 26 28.4	+2.9
	comp=N,77nm,0.7s						
MOTA	Moosalm	4.66	353		Pn	20 25 33.5	+1.9
MOTA					Sn	20 26 28.4	+2.9
MOTA	Moosalm	4.66	353	P	Pn	20 25 33.5	+1.9
MOTA						20 26 28.4	
LPG	La Plagne	4.67	308	eP	Pn	20 25 33.4	+1.6
LPG				eSn	Sn	20 26 20.1	-5.8
	comp=N,46nm,0.6s						
KALN	Kalnik	4.69	42	ePn	Pn	20 25 32.2	+0.4
KALN				Sn	Sn	20 26 22.6	-3.4
LPL	La Plagne	4.69	308	eP	Pn	20 25 34.1	+2.0
LPL				eSn	Sn	20 26 20.6	-5.7
	comp=N,37nm,0.6s						
PLONS	Plons/SG	4.70	338	P	Pn	20 25 34.2	+2.1
TREB	Trebinje	4.70	88	ePn	Pn	20 25 33.1	+1.1
DAVA	Damuels	4.80	343	ePn	Pn	20 25 35.5	+2.1
	comp=N,38nm,0.6s,SNR=23						
DAVA				iSn	Sn	20 26 30.7	+1.9
	comp=N,57nm,0.5s						
DAVA	Damuels	4.80	343		Pn	20 25 35.5	+2.1
DAVA					Sn	20 26 30.7	+1.9
SMRF	Simiane la Rot	4.83	287	eP	Pn	20 25 34.3	+0.5
SMRF				eSn	Sn	20 26 24.5	-4.9
	comp=N,42nm,0.9s						
HCY	Herceg Novi	4.83	91	ePn	Pn	20 25 34.7	+0.9
HCY	Herceg Novi	4.83	91	⇓iPn	Pn	20 25 35.0	+1.2
HCY				iSn	Sn	20 26 31.0	+1.6
BRY	Bratogost	4.84	86	ePn	Pn	20 25 34.9	+0.9
BRY	Bratogost	4.84	86	⇑iPn	Pn	20 25 34.8	+0.8
BRY				iSn	Sn	20 26 31.1	+1.2
RETA	Reutte	4.84	350	iPn	Pn	20 25 35.8	+1.8
	comp=N,27nm,0.4s,SNR=32						
RETA				eSn	Sn	20 26 32.5	+2.7
	comp=N,26nm,0.5s						
RETA	Reutte	4.84	350		Pn	20 25 35.8	+1.8
RETA					Sn	20 26 32.5	+2.7
RSL	Roselend	4.85	309	P	Pn	20 25 38.0	+3.8
DOB	Doboj	4.88	64	ePn	Pb	20 25 42.1	-4.6
ORIF	Oris-en-Rattie	4.92	299	eP	Pn	20 25 36.9	+1.8
ORIF				eSn	Sn	20 26 26.1	-5.7
	comp=N,52nm,0.6s						
SENIN	Lac Senin/Sane	4.94	319	Pn	Pn	20 25 36.7	+1.3
A252A	Venje	5.03	55	ePn	Pn	20 25 36.6	0.0
A252A				Sn	Sn	20 26 31.0	-3.5
TIP	Timpagrande	5.07	133	⇓P	Pn	20 25 42.8	+5.6
TIP	Timpagrande	5.07	133	Pn	Pn	20 25 37.7	+0.6
BEHE	Becsehely	5.08	41	ePn	Pn	20 25 36.6	-0.6
BEHE	Becsehely	5.08	41	P	Pn	20 25 40.1	+2.8
BIOA	Bad Ischl, Aus	5.11	13	iPn	Pn	20 25 38.5	+0.9
	comp=N,29nm,0.4s,SNR=13						
BIOA				eSn	Sn	20 26 36.1	-0.2
	comp=N,102nm,0.6s						
BIOA	Bad Ischl, Aus	5.11	13		Pn	20 25 38.5	+0.9
BIOA					Sn	20 26 36.1	-0.2
UPM	Unac-Piva	5.12	82	ePn	Pn	20 25 40.3	+2.4
UPM	Unac-Piva	5.12	82	⇑iPn	Pn	20 25 39.0	+1.1
UPM				iSn	Sn	20 26 38.0	+1.2
CEME	Cevo	5.13	90	⇑iPn	Pn	20 25 38.9	+0.9
CEME				iSn	Sn	20 26 38.0	+1.0
BUM	Brajici-Budva	5.14	92	⇑iPn	Pn	20 25 39.2	+1.1
BUM				iSn	Sn	20 26 38.3	+1.1
NKME	Niksic	5.15	87	⇑iPn	Pn	20 25 39.5	+1.3
NKME				iSn	Sn	20 26 38.3	+1.0
NKY	Niksic	5.17	87	ePn	Pn	20 25 39.7	+1.1
NKY				iSn	Sn	20 26 39.3	+1.2
ARSA	Arzberg	5.18	28	ePn	Pn	20 25 38.4	-0.2
	comp=N,24nm,0.6s,SNR=9.4						
ARSA				eSn	Sn	20 26 36.5	-1.7
	comp=N,29nm,0.6s						
ARSA	Arzberg	5.18	28		Pn	20 25 38.5	-0.2
ARSA					Sn	20 26 36.5	-1.7
CLTB	Caltabellotta	5.23	169	Pn	Pn	20 25 37.3	-2.1
DRME	Dracevica, Mon	5.37	93	ePn	Pn	20 25 42.2	+1.0
DRME	Dracevica, Mon	5.37	93	⇑iPn	Pn	20 25 42.4	+1.2
DRME				iSn	Sn	20 26 44.2	+1.5
CEL	Celeste	5.37	145	Pn	Pn	20 25 45.5	+4.3
MOA	Molln	5.38	17	iPn	Pn	20 25 41.9	+0.6
	comp=N,12nm,0.2s,SNR=19						
MOA				eSn	Sn	20 26 42.5	-0.5
	comp=N,142nm,0.7s						
MOA	Molln	5.38	17		Pn	20 25 41.9	+0.6
MOA					Sn	20 26 42.5	-0.5
PDG	Podgorica	5.39	91	⇑P	Pn	20 25 43.1	+1.7
PDG	Podgorica	5.39	91	ePn	Pn	20 25 42.6	+1.1
PDG	Podgorica	5.39	91	Pn	Pn	20 25 42.3	+0.9
PDG	Podgorica	5.39	91	ePn	Pn	20 25 42.2	+0.7
TTG	Podgorica	5.39	91	⇑iPn	Pn	20 25 42.8	+1.3
TTG				iSn	Sn	20 26 44.6	+1.3
ULC	Ulcinj	5.45	96	⇓iPn	Pn	20 25 43.7	+1.4
ULC				iSn	Sn	20 26 46.1	+1.4
PLE	Pljevlja	5.47	81	⇑iPn	Pn	20 25 43.7	+0.9
PLE				iSn	Sn	20 26 47.1	+1.6
RUDO	Rudo	5.49	78	ePn	Pn	20 25 43.6	+0.8
KOVH	Kovagotottos	5.53	50	P	Pn	20 25 43.9	+0.5
BBLS	Lazići	5.55	76	ePn	Pn	20 25 43.5	-0.2
BBLS	Lazići	5.55	76	⇑iPn	Pn	20 25 43.8	+0.1
KOME	Kolasin	5.56	86	⇑iPn	Pn	20 25 45.2	+1.3
KOME				iSn	Sn	20 26 48.1	+0.6
SCTE	Santa Cesarea	5.56	116	Pn	Pn	20 25 43.8	0.0
VAE	Valguarnera	5.56	160	Pn	Pn	20 25 46.2	+2.3
	comp=N,6.3nm,0.9s,baz=7.8,slow=7.9,SNR=1.9						
OG35	Corcelles	5.66	308	P	Pn	20 25 47.1	+1.9
BLJ	Bijeljina	5.67	66	ePn	Pn	20 25 45.9	+0.5
VIVF	Saint-Julien-l	5.69	294	eP	Pn	20 25 45.8	+0.1
VIVF				eSn	Sn	20 26 44.4	-6.4
	comp=N,8.5nm,0.6s						
CABF	La Chapelle	5.72	315	eP	Pn	20 25 46.7	+0.7
CABF				eSn	Sn	20 26 44.8	-6.6
	comp=N,15nm,0.6s						
BRANT	Les Verrieres	5.75	319	P	Pn	20 25 50.7	+4.3
RAFF	Raffo Rosso	5.79	161	Pn	Pn	20 25 46.4	-0.6
IVA	Berane	5.83	86	⇑iPn	Pn	20 25 49.1	+1.4
IVA				iSn	Sn	20 26 55.6	+1.2
RONA	Rosalia, Austr	5.84	30	ePn	Pn	20 25 48.0	+0.3
	comp=N,8.5nm,0.3s,SNR=14						
RONA				eSn	Sn	20 26 52.8	-1.6
	comp=N,17nm,0.5s						
RONA	Rosalia, Austr	5.84	30		Pn	20 25 48.0	+0.3
RONA					Sn	20 26 52.8	-1.6
CONA	Conrad Observa	5.88	26	ePn	Pn	20 25 48.3	-0.1
	comp=N,17nm,0.6s,SNR=10						
CONA				eSn	Sn	20 26 54.2	-1.3
	comp=N,58nm,0.9s						
CONA	Conrad Observa	5.88	26		Pn	20 25 48.3	-0.1
CONA					Sn	20 26 54.2	-1.3
CHMF	Charmoille	5.89	322	P	Pn	20 25 49.9	+1.6
PVY	Plav	5.89	89	ePn	Pn	20 25 50.3	+1.8
PVY				iSn	Sn	20 26 56.6	+0.7
SJES	Sjenica	5.90	82	ePn	Pn	20 25 48.4	-0.2
SJES				eSn	Sn	20 26 47.6	-8.3
SJES	Sjenica	5.90	82	ePn	Pn	20 25 50.1	+1.5
MORH	Mrgy, Hungar	5.92	52	⇑P	Pn	20 25 52.5	+3.9
MORH	Mrgy, Hungar	5.92	52	ePn	Pn	20 25 48.5	-0.2
MORH	Mrgy, Hungar	5.92	52	P	Pn	20 25 51.1	+2.4
SOP	Sopron	5.93	32	P	Pn	20 25 49.5	+0.7
SSB	Saint Sauveur	5.93	298	Pn	Pn	20 25 47.9	-1.1
SSB	Saint Sauveur	5.93	298	P	Pn	20 25 47.9	-1.1
MPLH	Magyarpolny	5.95	40	P	Pn	20 25 50.2	+1.1
MPLH				S	Sn	20 26 57.1	+0.1
DIVS	Divibare	6.00	74	ePn	Pn	20 25 50.0	0.0
DIVS	Divibare	6.00	74	Pn	Pn	20 25 48.3	-1.7
DIVS	Divibare	6.00	74	ePn	Pn	20 25 48.1	-1.9
EGYH	Egyhazaskeszo	6.04	37	P	Pn	20 25 52.5	+2.2
TIR	Tirane	6.04	100	ePn	Pn	20 25 52.8	+2.4
LASF	Ste Croix	6.06	286	ePn	Pn	20 25 49.7	-1.0
LASF				eSn	Sn	20 26 53.0	-6.8
	comp=N,9.0nm,0.7s						
BOUC	Bouclans	6.07	320	P	Pn	20 25 54.2	+3.4
BFO	Black Forest	6.16	337	Pn	Pn	20 25 51.5	-0.5
BFO	Black Forest	6.16	337	eP	Pn	20 25 52.5	+0.4
FRGS	Fruska Gora	6.16	64	⇑P	Pn	20 25 53.0	+0.9
FRGS	Fruska Gora	6.16	64	ePn	Pn	20 25 51.5	-0.6
FRGS	Fruska Gora	6.16	64	⇑iPn	Pn	20 25 53.6	+1.5
HINF	Hinteralfeld	6.24	326	eP	Pn	20 25 53.3	+0.1
HINF				eSn	Sn	20 26 57.8	-6.5
	comp=N,58nm,0.6s						
GEC2	GERESS Array S	6.24	11	Pn	Pn	20 25 52.4	-0.9
GERES	GERESS Array B	6.24	11	Pn	Pn	20 25 52.6	-0.6
	comp=N,1.7nm,0.3s,baz=197,slow=15,SNR=29						
GERES				Sn	Sn	20 27 01.5	-2.9
	comp=N,5.5nm,0.3s,baz=200,slow=26,SNR=8.5						
GERES				Lg	Lg	20 27 40.2	
	baz=206,slow=30						
GERES				LR	LR	20 27 48.8	
	comp=N,107nm,21.8s,baz=205,slow=34						
	comp=N,2.5nm,0.3s						
CKRC	Cesky Krumlov	6.31	14	ePN	Pn	20 25 53.8	-0.4
CKRC				eSN	Sn	20 27 00.0	-6.0
TRUS	Trudelj	6.32	73	ePn	Pn	20 25 53.6	-0.7
CSKK	Cskako	6.43	42	P	Pn	20 25 58.2	+2.4
ECH	Echery	6.45	330	Pn	Pn	20 25 55.5	-0.5
ECH	Echery	6.45	330	P	Pn	20 25 55.5	-0.5
GRUS	Gruza	6.49	77	ePn	Pn	20 25 55.4	-1.2
KHC	Kasperske Hory	6.51	9	Pn	Pn	20 25 55.9	-0.9
KHC	Kasperske Hory	6.51	9	eP	Pn	20 25 56.1	-0.7
KHC				e		20 27 06.6	
KHC	Kasperske Hory	6.51	9	ePN	Pn	20 25 56.1	-0.7
KHC				ex	x	20 26 10.0	
KHC				PG	Pg	20 26 19.5	-6.6
KHC				x	x	20 26 45.5	
KHC				eSN	Sn	20 27 06.6	-4.2
ZST	Bratislava	6.56	32	eP	Pn	20 25 57.5	0.0
ZST				e		20 27 09.4	
ZST	Bratislava	6.56	32	ePN	Pn	20 25 57.5	0.0
ZST				eSN	Sn	20 27 09.4	-2.5
CDF	Champ du Feu	6.57	332	ePn	Pn	20 25 56.6	-1.2
CDF				eSn	Sn	20 27 05.7	-6.8
	comp=N,45nm,0.8s						
HAU	Haudompre	6.60	325	eP	Pn	20 25 58.1	0.0
HAU				eSn	Sn	20 27 06.3	-6.8
	comp=N,77nm,0.7s						
KEK	Kerkira	6.63	114	Pn	Pn	20 25 57.1	-1.4
SELS	Selova	6.73	83	ePn	Pn	20 26 00.5	+0.6
MODS	Modra-Piesok	6.77	32	eP	Pn	20 26 01.9	+1.5
MODS				e		20 27 13.8	
MODS	Modra-Piesok	6.77	32	ePN	Pn	20 26 01.9	+1.5
MODS				eSN	Sn	20 27 13.8	-3.4
SRO	Srobarova	6.78	39	eP	Pn	20 26 02.6	+2.1
SRO				e		20 27 14.8	
SRO	Srobarova	6.78	39	ePN	Pn	20 26 02.6	+2.1
SRO				eSN	Sn	20 27 14.8	-2.6
KBN	Korca	6.93	105	Pn	Pn	20 26 01.2	-1.5
KBN	Korca	6.93	105	P	Pn	20 26 01.2	-1.5
SMOL	Smolenice	6.94	32	eP	Pn	20 26 03.7	+0.9
SMOL				e		20 27 19.8	
SMOL	Smolenice	6.94	32	ePN	Pn	20 26 03.7	+0.9
SMOL				eSN	Sn	20 27 19.8	-1.7
GRFO	Grafenberg	6.99	356	Pn	Pn	20 26 01.3	-2.1
GRFO	Grafenberg	6.99	356	P	Pn	20 26 01.3	-2.1
GRA1	Grafenberg Arr	6.99	356	Pn	Pn	20 26 00.5	-2.9
GRF	Grafenberg Arr	6.99	356	P	Pn	20 26 00.5	-2.9
SMF	Signal de Mont	6.99	307	eP	Pn	20 26 04.6	+1.1
SMF				eSn	Sn	20 27 15.6	-7.1
	comp=N,47nm,0.7s						
KRUC	Moravsky	7.05	24	ePN	Pn	20 26 03.3	-1.0
MTLF	Montolieu	7.17	278	ePn	Pn	20 26 04.6	-1.3
MTLF				eSn	Sn	20 27 19.8	-7.3
	comp=N,18nm,0.6s						
BOVS	Bovan	7.18	79	⇑P	Pn	20 26 05.5	-0.5
BARS	Barje	7.25	86	ePn	Pn	20 26 07.8	+0.8
KEST	Kesra	7.27	197	Pn	Pn	20 26 09.9	+2.5
	comp=N,1.0nm,0.3s,baz=291,slow=6.2,SNR=27						
KEST				Sn	Sn	20 27 30.2	+0.5
	baz=344,slow=13						
KEST				LR	LR	20 29 00.1	
	comp=N,494nm,21.0s,baz=282,slow=38						
	comp=N,31nm,0.8s						
KEST	Kesra	7.27	197	Pn	Pn	20 26 05.7	-1.7
PAGF	Fort de Pagny	7.29	325	eP	Pn	20 26 09.1	+1.6
	baz=145						
PAGF				eSn	Sn	20 27 22.5	-7.5
	comp=N,65nm,1.0s						
FNA	Florina	7.30	102	Pn	Pn	20 26 06.3	-1.4
FNA	Florina	7.30	102	P	Pn	20 26 06.3	-1.4
JAVC	Velka Javorina	7.32	31	ePN	Pn	20 26 10.7	+2.7
LOR	Lormes	7.32	311	eP	Pn	20 26 08.8	+0.8
	baz=131						
LOR				eSn	Sn	20 27 23.3	-7.6
	comp=N,20nm,0.6s						
SFTF	Sexfontaines	7.33	321	eP	Pn	20 26 09.5	+1.4
	baz=141						
SFTF				eSn	Sn	20 27 23.7	-7.3
	comp=N,16nm,0.6s						
VRAC	Vranov	7.33	24	⇓P	Pn	20 26 07.2	-0.9
VRAC	Vranov	7.33	24	Pn	Pn	20 26 07.7	-0.4
	comp=N,0.8nm,0.3s,baz=209,slow=14,SNR=7.7						
VRAC				Sn	Sn	20 27 27.4	-3.6
	comp=N,1.3nm,0.3s,baz=238,slow=14,SNR=3.7						
VRAC				Lg	Lg	20 28 13.8	
	baz=159,slow=23						
VRAC				LR	LR	20 29 35.6	
	comp=N,606nm,19.1s,baz=217,slow=44						
	comp=N,12nm,0.8s						
VRAC	Vranov	7.33	24	ePN	Pn	20 26 07.9	-0.2
AVF	Avril sur Loir	7.36	307	eP	Pn	20 26 09.6	+1.2
AVF				eSn	Sn	20 27 24.1	-7.5
	comp=N,12nm,0.8s						
KOLL	Kolacno	7.39	35	ePN	Pn	20 26 10.1	+1.2
KOLL				eSN	Sn	20 27 30.4	-2.0
SSF	Saint Saulge	7.41	309	eP	Pn	20 26 10.0	+0.8
SSF				eSn	Sn	20 27 25.6	-7.3
	comp=N,19nm,0.7s						
PRVS	Prvonek	7.46	88	ePn	Pn	20 26 11.1	+1.1
PRU	Pruhonice	7.48	13	eP	Pn	20 26 10.8	+0.6
PRU				e		20 27 26.9	
PRU	Pruhonice	7.48	13	ePN	Pn	20 26 10.8	+0.6
PRU				eSN	Sn	20 27 26.9	-7.8
CAF	Calviac	7.49	290	eP	Pn	20 26 10.8	+0.4
CAF				eSn	Sn	20 27 28.0	-7.1
VYHS	Vyhne	7.51	37	eP	Pn	20 26 13.6	+3.0
VYHS				e		20 27 31.8	
VYHS	Vyhne	7.51	37	ePN	Pn	20 26 13.6	+3.0
VYHS				eSN	Sn	20 27 31.8	-3.8
BZS	Buzias	7.52	64	⇓P	Pn	20 26 12.6	+1.9
BZS	Buzias	7.52	64	⇓P	Pn	20 26 12.6	+1.9
NKC	Novy Kostel	7.52	2	eP	Pn	20 26 11.4	+0.7
NKC				e		20 27 31.9	
NKC	Novy Kostel	7.52	2	ePN	Pn	20 26 11.4	+0.7
NKC				eSN	Sn	20 27 31.9	-3.8
MEZF	Maizieres J'vi	7.54	322	eP	Pn	20 26 11.7	+0.7
	baz=142						
MEZF				eSn	Sn	20 27 28.7	-7.5
	comp=N,23nm,0.7s						
BGF	Bois d'Agland	7.55	304	eP	Pn	20 26 12.0	+0.9
BGF				eSn	Sn	20 27 29.1	-7.3
	comp=N,31nm,0.7s						
ZAGS	Zajecar	7.57	78	ePn	Pn	20 26 11.2	-0.2
SAVF	Savonnieres en	7.59	323	eP	Pn	20 26 13.2	+1.5
	baz=143						
SAVF				eSn	Sn	20 27 30.2	-7.2
	comp=N,6.7nm,0.5s						
PSZ	Piszkesteto	7.63	44	⇑P	Pn	20 26 15.8	+3.6
PSZ	Piszkesteto	7.63	44	Pn	Pn	20 26 11.0	-1.2
PSZ	Piszkesteto	7.63	44	⇑P	Pn	20 26 15.8	+3.6
PSZ	Piszkesteto	7.63	44	P	Pn	20 26 14.9	+2.7
PSZ				S	Sn	20 27 37.8	-0.7
BOSS	Bosilegrad	7.76	88	ePn	Pn	20 26 14.9	+0.9
SIRR	Siria	7.78	60	⇑P	Pn	20 26 16.7	+2.3
MAUC	Maruska	7.79	30	ePN	Pn	20 26 16.5	+2.0
MAUC				eSN	Sn	20 27 40.0	-2.4
TCF	Toulx Ste Croi	7.83	300	eP	Pn	20 26 16.7	+1.7
TCF				eSn	Sn	20 27 36.6	-6.8
	comp=N,1.8nm,0.4s						
RJF	Les Rejaudoux	7.96	292	eP	Pn	20 26 17.4	+0.6
RJF				eSn	Sn	20 27 39.0	-7.6
	comp=N,12nm,0.9s						
HYF	Humbligny	8.02	308	eP	Pn	20 26 19.9	+2.3
HYF				eSn	Sn	20 27 39.9	-8.1
WLF	Walferdange	8.03	332	dPn	Pn	20 26 17.9	+0.2
WLF				dSn	Sn	20 27 47.3	-0.8
MORC	Moravsky Berou	8.04	27	⇑P	Pn	20 26 20.2	+2.3
MORC	Moravsky Berou	8.04	27	Pn	Pn	20 26 16.3	-1.6
MORC	Moravsky Berou	8.04	27	⇑P	Pn	20 26 20.2	+2.3
MORC	Moravsky Berou	8.04	27	ePN	Pn	20 26 17.7	-0.2
KRLC	Kraliky	8.07	23	eP	Pn	20 26 17.5	-0.8
KRLC	Kraliky	8.07	23	ePN	Pn	20 26 17.5	-0.8
DPC	Dobruska-Polom	8.20	20	eP	Pn	20 26 18.6	-1.4
DPC	Dobruska-Polom	8.20	20	ePN	Pn	20 26 18.6	-1.4

GZR	Gura Zlata	8.23	67	⇑P	Pn	20 26 22.3	+1.8
BRG	Berggiesshubel	8.27	9	eP	Pn	20 26 21.2	+0.3
BRG				Amp		20 26 22.6	
	comp=Z,6.0nm,0.8s						
BRG				ex	x	20 26 36.4	
BRG				Amp		20 26 39.5	
	comp=Z,7.5nm,0.8s						
BRG				ex	x	20 27 50.1	
BRG				Amp		20 29 10.3	
	comp=Z,20nm,1.0s						
BRG				Amp		20 30 14.0	
	comp=Z,1.1nm,12.6s						
BRG				Amp		20 30 17.0	
	comp=N,0.7nm,12.6s						
BRG				Amp		20 30 20.0	
	comp=E,0.5nm,10.9s						
BRG	Berggiesshubel	8.27	9	eP	Pn	20 26 21.2	+0.3
BRG				e		20 27 50.1	
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,20nm,1.0s						
BRG				MLR	MLR		
	comp=Z,1µm,12.6s						
BRG				MLR	MLR		
	comp=N,690nm,12.6s						
BRG				MLR	MLR		
	comp=E,470nm,10.9s						
UPC	Upice	8.27	18	eP	Pn	20 26 19.7	-1.3
UPC	Upice	8.27	18	ePN	Pn	20 26 19.7	-1.3
KKB	Krupnik	8.29	92	i P	Pn	20 26 26.1	+4.8
VTS	Vitosha	8.31	87	⇑P	Pn	20 26 22.9	+1.2
VTS	Vitosha	8.31	87	Pn	Pn	20 26 20.7	-1.0
VTS	Vitosha	8.31	87	⇑P	Pn	20 26 22.9	+1.2
VTS	Vitosha	8.31	87	i P	Pn	20 26 22.7	+1.1
LIT	Litokhoron	8.33	105	Pn	Pn	20 26 20.8	-1.1
LIT	Litokhoron	8.33	105	P	Pn	20 26 20.8	-1.1
CHVC	Chvalec	8.35	18	ePN	Pn	20 26 20.1	-2.0
OSTC	Ostas	8.36	19	ePN	Pn	20 26 21.0	-1.3
LFF	La Frestale	8.41	289	eP	Pn	20 26 23.2	+0.3
LFF				eSn	Sn	20 27 50.5	-7.1
	comp=E,9.6nm,0.7s						
EPF	Esparros	8.54	276	eP	Pn	20 26 27.1	+2.3
EPF				eSn	Sn	20 27 53.0	-8.0
	comp=E,9.3nm,0.8s						
CLL	Collm	8.62	4	Pn	Pn	20 26 25.1	-0.6
CLL	Collm	8.62	4	P	Pn	20 26 25.1	-0.6
CLL	Collm	8.62	4	ePn	Pn	20 26 25.0	-0.7
CLL				i x	x	20 26 27.5	
	comp=Z,10.0nm,0.5s						
CLL				ePg	Pg	20 27 00.0	-6.4
CLL				ex	x	20 27 12.0	
CLL				eSn	Sn	20 27 59.0	-3.6
CLL				eSg	Sg	20 28 48.0	-10
	comp=Z,73nm,1.5s						
CLL				Lmax		20 29 00.0	
DRGR		8.66	58	⇑P	Pn	20 26 29.3	+2.9
DRGR		8.66	58	⇑P	Pn	20 26 29.3	+2.9
BHOU	Houvegnez	8.66	334	dPnPn	Pn	20 26 33.3	+6.9
MMB	Musomiste	8.81	93	i P	Pn	20 26 32.1	+3.6
BTNL	Ternell	8.83	335	dPn	Pn	20 26 27.3	-1.3
GIVF	Givet	8.87	329	eP	Pn	20 26 32.0	+2.8
GIVF				eSn	Sn	20 28 00.5	-8.4
	comp=Z,3.4nm,0.3s						
MEM	Membach	8.89	335	dx	x	20 26 42.0	
DOU	Dourbes	8.96	328	dPnPn	Pn	20 26 38.4	+8.0
DOU				dSn	Sn	20 28 09.1	-1.8
BCLA	Clavier	8.96	332	dSn	Sn	20 28 09.0	-2.0
MESR	Meseseni	8.96	57	⇑P	Pn	20 26 33.2	+2.8
BGES	Gesves	9.01	331	dPnPn	Pn	20 26 38.9	+7.8
BGES				dx	x	20 26 44.3	
BGES				dSn	Sn	20 28 12.5	+0.3
CRVS	Cervenica-Dubn	9.06	44	eP	Pn	20 26 33.5	+1.7
CRVS	Cervenica-Dubn	9.06	44	ePN	Pn	20 26 33.5	+1.7
BAIF	Baives	9.08	327	eP	Pn	20 26 35.2	+3.1
BAIF				eSn	Sn	20 28 05.2	-8.8
	comp=Z,6.8nm,0.7s						
ETSF	Etsaut	9.21	275	ePn	Pn	20 26 30.9	-3.1
ETSF				eSn	Sn	20 28 08.1	-9.3
	comp=Z,16nm,1.0s						
UZH	Uzhgorod	9.33	47	eP	Pn	20 26 46.9	+11
MFF	Saint Martin d	9.46	298	eP	Pn	20 26 38.6	+1.3
MFF				eSn	Sn	20 28 13.9	-9.5
	comp=Z,5.5nm,0.7s						
HUMR	Humele	9.61	75	⇑P	Pn	20 26 35.5	-3.8
VOIR		9.80	69	⇑P	Pn	20 26 48.0	+5.9
VOIR		9.80	69	⇑P	Pn	20 26 48.0	+6.0
KDZ	Kurdzhali	10.04	92	i P	Pn	20 26 55.8	+10
DOPR	Dopca	10.15	67	⇑P	Pn	20 26 42.6	-4.1
SZH	Strazhica	10.25	82	i P	Pn	20 26 51.1	+3.0
LDF	La Druitiere	10.29	309	eP	Pn	20 26 50.5	+1.8
LDF				eSn	Sn	20 28 34.2	-10
	comp=Z,0.5nm,0.3s						
MLR	Muntele Rosu	10.43	70	⇑P	Pn	20 26 53.5	+2.8
MLR	Muntele Rosu	10.43	70	Pn	Pn	20 26 51.6	+0.9
	comp=Z,0.2nm,0.3s,baz=277,slow=7.4,SNR=6.3						
MLR				LR	LR	20 32 16.4	
	comp=Z,368nm,19.2s,baz=257,slow=46						
	comp=Z,2.4nm,0.7s						
MLR	Muntele Rosu	10.43	70	Pn	Pn	20 26 50.8	+0.1
MLR	Muntele Rosu	10.43	70	⇑P	Pn	20 26 53.5	+2.8
BURAR	Bucovina Array	10.55	58	⇑P	Pn	20 26 54.7	+2.3
BURAR	Bucovina Array	10.55	58	Pn	Pn	20 26 54.0	+1.6
BURAR	Bucovina Array	10.55	58	⇑P	Pn	20 26 54.7	+2.3
BUR08	Bucovina Ar. S	10.55	58	Pn	Pn	20 26 51.4	-1.0
GRR	Gorron	10.62	307	eP	Pn	20 26 55.4	+2.2
BIZ	Bicaz	10.89	62	⇑P	Pn	20 26 59.5	+2.7
SGMF	Saint Gilles	11.59	303	eP	Pn	20 27 08.3	+1.9
QUIF	Quistinic	11.85	301	eP	Pn	20 27 12.5	+2.6
QUIF				eSn	Sn	20 29 11.2	-11
	comp=Z,0.9nm,0.4s						
ROSF	Rostrenen	12.06	303	eP	Pn	20 27 14.0	+1.1
ESDC	Sonseca Array	12.38	261	Pn	Pn	20 27 16.7	-0.7
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=6.4						
ESDC				LR	LR	20 31 51.6	
	comp=Z,160nm,18.7s,baz=81,slow=36						
	comp=Z,1.0nm,0.8s						
IDI	Anoyia	12.49	122	Pn	Pn	20 27 18.8	0.0
	comp=Z,0.1nm,0.3s,baz=24,slow=15,SNR=3.4						
IDI				Sn	Sn	20 29 39.8	+2.1
	comp=Z,0.1nm,0.3s,baz=41,slow=17,SNR=1.3						
IDI				LR	LR	20 32 24.2	
	comp=Z,49nm,21.3s,baz=254,slow=39						
	comp=Z,3.5nm,1.1s						
AKASG	Malin Array Be	14.25	50	Pn	Pn	20 27 43.7	+0.9
	comp=Z,0.4nm,0.3s,baz=243,slow=13,SNR=1.8						
AKASG				LR	LR	20 34 04.2	
	comp=Z,87nm,19.2s,baz=224,slow=41						
	comp=Z,0.2nm,0.3s						
AKBB	Malin Array Si	14.25	50	⇓eP	Pn	20 27 44.4	+1.6
PABE	Paberze	14.98	27	Pn	Pn	20 27 50.2	-2.4
ELL	Elmali	15.03	107		Pn	20 27 52.8	-0.8
ELL	Elmali	15.03	107	P	Pn	20 27 52.8	-0.8
ELL				pmax	pmax		
	comp=Z,48nm,1.1s						
NACGM	Naroch	15.57	33	⇓eP	Pn	20 27 59.1	-1.3
IIGN	Ignalina	15.68	31	eP	P	20 28 05.2	-0.6
MNK	Minsk	15.76	36	i P	Pn	20 28 01.3	-1.5
MNK				i S	Sn	20 30 56.6	-0.4
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,114nm,19.0s						
MNK				MLR	MLR		
	comp=Z,285nm,20.0s						
MNK				MLR	MLR		
	comp=E,23nm,18.0s						
MNK	Minsk	15.76	36	i P	Pn	20 28 01.3	-1.5
	comp=E,2.0nm,0.8s						
MNK				i P	Pn	20 28 01.3	-1.5
	comp=N,10.0nm,1.0s						
MNK				i P	Pn	20 28 01.3	-1.5
	comp=Z,10.0nm,0.7s,baz=226						
MNK				i PP	pP	20 28 09.8	-1.0
MNK				i S	Sn	20 30 56.7	-0.4
MNK				i SSS	SSS	20 31 24.1	
MNK				i LR	LR	20 33 52.4	
MNK				i LRM	MLR	20 34 54.0	
	comp=N,114nm,19.4s						
MNK				i LRM	MLR	20 35 02.2	
	comp=Z,285nm,20.2s						
MNK				i LRM	MLR	20 35 02.7	
	comp=E,23nm,18.5s						
ISAL	Salakas	15.80	31	eP	P	20 28 06.7	-0.5
ISAL				IAmb	IAmb	20 28 14.8	
	comp=Z,12nm,1.3s						
IDID	Didziasalis	15.85	32	eP	P	20 28 07.1	-0.6
IDID				IAmb	IAmb	20 28 11.6	
	comp=Z,5.8nm,1.0s						
EKA	Eskdalemuir Ar	16.00	327	Pn	Pn	20 28 05.4	-0.6
	baz=143,slow=13						
	comp=Z,2.2nm,0.8s						
MDT	Midelt	16.39	238	LR	LR	20 33 02.8	
	comp=Z,102nm,21.5s,baz=28,slow=32						
BRTR	Keskin Array B	16.57	93	Pn	Pn	20 28 13.1	-0.4
	comp=Z,0.1nm,0.3s,baz=284,slow=7.3,SNR=2.3						
BRTR				LR	LR	20 35 20.4	
	comp=Z,112nm,19.0s,baz=304,slow=40						
	comp=Z,0.5nm,0.3s						
HFS	Hagfors	17.47	3	P	Pn	20 28 22.9	-1.6
	comp=Z,0.1nm,0.3s,baz=148,slow=30,SNR=2.2						
HFS				LR	LR	20 36 11.3	
	comp=Z,137nm,18.1s,baz=186,slow=41						
	comp=Z,0.4nm,0.6s						
VSU	Vasula	18.27	25	deP	P	20 28 37.4	+3.0
VSU				pmax	pmax		
	comp=Z,25nm,0.9s						
VSU	Vasula	18.27	25	eP	P	20 28 33.9	-0.5
NB2	NORSAR Subarra	18.35	359	P	P	20 28 35.6	+0.2
	comp=Z,7.4nm,1.4s,baz=178,slow=11						
NOA	NORSAR Array B	18.35	359	P	Pn	20 28 34.2	-1.1
	baz=178,slow=11,SNR=7.1						
NOA				LR	LR	20 36 56.7	
	comp=Z,100nm,18.6s,baz=180,slow=42						
	comp=Z,1.3nm,1.0s						
NC405	NORSAR Array S	18.42	360		P	20 28 34.0	-2.1
OBN	Obninsk	20.24	44	P	P	20 28 56.1	0.0
	comp=Z,2.6nm,0.4s,baz=191,slow=5.3,SNR=5.2						
	comp=Z,2.6nm,0.4s						
OBN	Obninsk	20.24	44	P	Pn	20 28 56.5	-1.6
OBN	Obninsk	20.24	44	i P	P	20 28 56.0	0.0
OBN				pmax	pmax		
	comp=Z,20nm,1.2s						
OBN				MLR	MLR		
	comp=Z,115nm,15.0s						
VSR	Storozhevoye	20.32	56	eP	P	20 28 56.5	-0.5
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD	Divnogorie	20.34	57	eP	P	20 28 56.8	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORR	Voronezh	20.46	55	i P	P	20 28 58.9	+0.4
VORR				pmax	pmax		
	comp=Z,37nm,0.4s						
LPSR	Galich'ya Gora	20.56	52	eP	P	20 28 59.8	+0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
FIA0	FINESS Array S	20.57	19	P	P	20 28 58.7	-0.9
FIA0	FINESS Array S	20.57	19	P	P	20 28 58.7	-0.9
FINES	FINESS Array B	20.57	19	P	P	20 28 59.2	-0.4
	comp=Z,11nm,0.9s,baz=190,slow=9.7,SNR=22						
FINES				LR	LR	20 37 54.7	
	comp=Z,230nm,21.3s,baz=206,slow=40						
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	20.57	19	P	P	20 28 58.6	-0.9
FIA1	FINESS Array S	20.57	19	P	P	20 28 59.9	+0.3
MOS	Moscow	21.07	43	eP	P	20 29 04.8	-0.2
MOS				e		20 29 26.1	
MOS				pmax	pmax		
	comp=Z,37nm,0.8s						
VRH	Novokhopyorsk	21.89	57	eP	P	20 29 15.6	+1.8
VRH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KIV	Kislovodsk	22.32	76	eP	P	20 29 21.8	+3.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,26nm,14.0s						
KVAR	Kislovodsk Arr	22.32	76	LR	LR	20 39 05.6	
	comp=Z,71nm,18.9s,baz=263,slow=40						
ASF	Jabal al Asfar	22.34	110	P	P	20 29 20.6	+1.5
	comp=Z,0.7nm,0.4s,baz=307,slow=10,SNR=1.5						
	comp=Z,0.7nm,0.4s						
KBZ	Khabaz	22.50	77	P	P	20 29 21.1	+0.6
	comp=Z,2.7nm,0.8s,baz=290,slow=5.2,SNR=4.2						
KBZ				LR	LR	20 39 29.0	
	comp=Z,68nm,20.4s,baz=318,slow=40						
	comp=Z,2.7nm,0.8s						
KBZ	Khabaz	22.50	77	⇑eP	P	20 29 23.5	+3.0
ZEI	Tsey	23.38	79	eP	P	20 29 30.9	+1.0
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLMR	Klimovskoe	24.59	33	eP	P	20 29 39.8	-1.1
KLMR				pmax	pmax		
	comp=Z,46nm,1.1s						
KLMR	Klimovskoe	24.59	33	eP	P	20 29 39.8	-1.1
KLMR				AMP		20 29 44.7	
	comp=Z,46nm,1.1s						
GNI	Garni	24.62	85	P	P	20 29 41.5	0.0
	comp=Z,3.6nm,0.9s,baz=303,slow=5.9,SNR=3.7						
GNI				LR	LR	20 39 52.0	
	comp=Z,47nm,21.0s,baz=31,slow=38						
	comp=Z,3.6nm,0.9s						
GNI	Garni	24.62	85	⇑eP	P	20 29 46.3	+4.7
GNI				pmax	pmax		
	comp=Z,20nm,2.5s						
PRGR	Permogore	27.52	35	eP	P	20 30 10.9	+3.6
ARCES	ARCESS Array B	27.78	10	LR	LR	20 41 12.3	
	comp=Z,83nm,20.9s,baz=196,slow=37						
KIRV	Kirov	28.08	43	⇑eP	P	20 30 13.9	+1.6
JMIC	Jan Mayen	30.13	347	LR	LR	20 42 52.8	
	comp=Z,6.2nm,18.0s,baz=54,slow=37						
TOA0	Torodi Ar. Sit	30.78	200	P	P	20 30 36.5	-0.1
TOA0				IAmb	IAmb	20 30 40.1	
	comp=Z,7.1nm,1.0s						
TORD	Torodi Ar. Bea	30.78	200	P	P	20 30 37.5	+0.8
	comp=Z,3.9nm,0.9s,baz=9.6,slow=9.2,SNR=11						
TORD				PcP	PcP	20 33 35.1	+1.2
	comp=Z,0.3nm,0.4s,baz=350,slow=4.0,SNR=2.6						
TORD				LR	LR	20 43 49.9	
	comp=Z,37nm,19.0s,baz=19,slow=38						
	comp=Z,3.9nm,0.9s						
TORD	Torodi Ar. Bea	30.78	200	P	P	20 30 36.2	-0.5
AKTO	Aktyubinsk	32.14	60	LR	LR	20 46 14.2	
	comp=Z,52nm,18.5s,baz=293,slow=41						
ARU	Arti	32.50	49	LR	LR	20 44 27.4	
	comp=Z,88nm,18.0s,baz=254,slow=37						
ARU	Arti	32.50	49	P	P	20 30 49.5	-2.0
ARU	Arti	32.50	49	c iP	P	20 30 51.5	+0.1
ARU						20 31 55.6	
ARU						20 33 38.1	
ARU				S	S	20 36 07.5	+1.8
ARU				SS	SnSn	20 37 58.0	-1.1
ARU				pmax	pmax		
	comp=Z,18nm,1.3s						
ABKAR	Akbulak array	33.50	62	P	P	20 31 00.2	0.0
SVE	Sverdlovsk	33.67	48	eP	P	20 31 02.4	+0.7
SVE				pmax	pmax		
	comp=Z,15nm,1.0s						
DBIC	Dimbokro	38.86	207	LR	LR	20 48 56.0	
	comp=Z,115nm,19.1s,baz=5.5,slow=38						
BRVK	Borovoye	39.41	54	⇓eP	P	20 31 54.5	+3.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SFJD	Kangerlussuaq	40.98	328	P	P	20 32 03.2	-0.2
	comp=Z,8.4nm,1.0s,baz=91,slow=9.8,SNR=3.3						
	comp=Z,8.4nm,1.0s						
SFJD	Kangerlussuaq	40.98	328	IAmb	IAmb	20 32 04.3	
	comp=Z,8.8nm,0.9s						
KK31	Karatay Array	42.11	69	P	P	20 32 13.0	0.0
KK31	Karatay Array	42.11	69	P	P	20 32 13.0	0.0
KK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KKAR	Karatay Array	42.11	69	P	P	20 32 12.5	-0.5
KKAR	Karatay Array	42.11	69	P	P	20 32 11.8	-1.3
KKAR				IAmb	IAmb	20 32 39.7	
	comp=Z,2.9nm,1.2s						
KKAR	Karatay Array	42.11	69	P	P	20 32 12.5	-0.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GAR	Garm	43.53	74	P	P	20 32 23.5	-1.3
KURK	Kurchatov	44.97	56	⇓eP	P	20 32 38.5	+2.5
KURK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
AAK	Ala-Archa	45.00	68	LR	LR	20 54 55.2	
	comp=Z,86nm,19.7s,baz=206,slow=41						
AAK	Ala-Archa	45.00	68	⇑eP	P	20 32 39.9	+3.3
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
NRIK	Noril'sk	45.81	29	P	P	20 32 41.8	-0.5
	comp=Z,2.2nm,0.5s,baz=328,slow=1.9,SNR=2.7						
NRIK				LR	LR	20 54 21.6	
	comp=Z,74nm,19.1s,baz=244,slow=39						
	comp=Z,2.2nm,0.5s						
NRIK	Noril'sk	45.81	29	⇑eP	P	20 32 44.0	+1.7
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	47.65	50	P	P	20 32 56.4	-0.6
	comp=Z,0.6nm,0.6s,baz=290,slow=6.0,SNR=4.3						
ZALV				LR	LR	20 52 35.8	
	comp=Z,42nm,20.2s,baz=307,slow=36						
	comp=Z,0.6nm,0.6s						
ZALV	Zalesovo Beam	47.65	50	P	P	20 32 57.2	+0.2
ZALV	Zalesovo Beam	47.65	50	P	P	20 32 57.2	+0.2
MAKZ	Makanchi	48.37	60	P	P	20 33 02.7	0.0
MAKZ	Makanchi	48.37	60	P	P	20 33 02.7	0.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MK31	Makanchi Array	48.58	60	P	P	20 33 04.1	-0.2
MK31	Makanchi Array	48.58	60	deP	P	20 33 05.1	+0.8
MKAR	Makanchi Array	48.58	60	P	P	20 33 04.1	-0.2
	comp=Z,1.4nm,0.8s,baz=287,slow=5.9,SNR=16						
MKAR				PcP	PcP	20 34 30.0	+0.2
	comp=Z,0.6nm,1.0s,baz=286,slow=5.4,SNR=1.3						
MKAR				LR	LR	20 57 47.4	
	comp=Z,74nm,18.2s,baz=244,slow=41						
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	48.58	60	P	P	20 33 03.5	-0.7
FRB	Frobisher Bay	48.74	324	LR	LR	20 53 38.4	
	comp=Z,59nm,18.6s,baz=20,slow=36						
SCHQ	Schefferville	50.64	313	P	P	20 33 19.4	-0.6
	comp=Z,3.2nm,0.7s,baz=80,slow=7.7,SNR=6.7						
	comp=Z,3.2nm,0.7s						
SCHQ	Schefferville	50.64	313	P	P	20 33 19.3	-0.6
SCHQ				IAmb	IAmb	20 33 21.1	
	comp=Z,5.9nm,0.9s						
KNGR	Kungurtug, Tuv	56.12	50	⇓eP	P	20 34 03.1	+2.7
TIXI	Tiksi	57.62	20	P	P	20 34 11.1	+0.6
TIXI				IAmb	IAmb	20 34 14.1	
	comp=Z,4.5nm,1.1s						
TIXI	Tiksi	57.62	20	⇑eP	P	20 34 11.4	+1.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
LSZ	Lusaka	59.61	162	LR	LR	21 00 29.7	
	comp=Z,95nm,18.8s,baz=146,slow=36						
TSUM	Tsumeb	61.83	174	LR	LR	21 01 08.2	
	comp=Z,79nm,19.1s,baz=115,slow=36						
SONM	Songino Array	62.54	49	P	P	20 34 45.5	+0.8
	comp=Z,2.7nm,0.9s,baz=292,slow=8.5,SNR=12						
SONM				LR	LR	21 04 23.3	
	comp=Z,59nm,19.4s,baz=262,slow=38						
	comp=Z,2.7nm,0.9s						
SONM	Songino Array	62.54	49	P	P	20 34 45.3	+0.5
SONM				IAmb	IAmb	20 34 48.4	
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	62.88	49	⇓eP	P	20 34 48.7	+1.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
YAK	Yakutsk	64.24	28	P	P	20 34 55.1	-0.5
YAK	Yakutsk	64.24	28	⇓eP	P	20 34 56.4	+0.8
YAK				pmax	pmax		
	comp=Z,20nm,1.3s						
INK	Inuvik	66.31	347	LR	LR	21 09 27.0	
	comp=Z,39nm,18.3s,baz=64,slow=41						
YKA	Yellowknife Ar	66.74	336	P	P	20 35 12.2	+0.4
	comp=Z,2.0nm,0.7s,baz=41,slow=5.8,SNR=14						
YKA				LR	LR	21 04 08.3	
	comp=Z,47nm,19.1s,baz=7.5,slow=36						
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	66.74	336	i P	P	20 35 12.6	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
N49A	Columbus Grove	67.59	305	P	P	20 35 16.9	-0.6
BILL	Bilibino	67.88	10	i P	P	20 35 18.6	-0.3
BILL				i		20 35 46.2	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULM	Lac du Bonnet	68.08	319	P	P	20 35 20.4	0.0
	comp=Z,4.5nm,0.7s,baz=68,slow=3.9,SNR=6.3						
	comp=Z,4.5nm,0.7s						
ULM	Lac du Bonnet	68.08	319	P	P	20 35 19.9	-0.5
ULM				IAmb	IAmb	20 35 21.3	
	comp=Z,5.6nm,0.8s						
G40A	Rib Lake	68.35	312	P	P	20 35 22.5	+0.2
G40A				IAmb	IAmb	20 35 23.4	
	comp=Z,4.1nm,0.8s						
SEY	Seymchan	70.04	18	LR	LR	21 11 23.6	
	comp=Z,78nm,18.0s,baz=302,slow=40						
IMAR	Indian Mountai	71.06	354	P	P	20 35 40.1	+1.4
H21K	Melozitna Rive	71.31	353	P	P	20 35 39.9	-0.3
H21K				IAmb	IAmb	20 35 45.4	
	comp=Z,7.5nm,1.1s						
ILAR	Eielson Array	71.57	351	P	P	20 35 42.0	+0.4
	comp=Z,0.6nm,0.7s,baz=6.0,slow=6.9,SNR=7.2						
	comp=Z,0.6nm,0.7s						
T47A	Sharon Grove	71.82	304	P	P	20 35 43.0	-0.7
RIDG	Independent Ri	72.30	349	P	P	20 35 46.9	+0.8
RIDG				IAmb	IAmb	20 35 50.8	
	comp=Z,7.5nm,1.1s						
BCAR	Beaver Creek A	72.49	348	P	P	20 35 48.6	+1.3
L27K	Beaver Creek,	72.50	348	P	P	20 35 48.4	+1.1
P40A	Paris	73.11	308	P	P	20 35 50.8	-0.5
P40A				IAmb	IAmb	20 35 54.1	
	comp=Z,4.3nm,0.8s						
FVM	French Village	73.18	306	P	P	20 35 51.2	-0.5
FVM				IAmb	IAmb	20 35 55.1	
	comp=Z,5.8nm,0.9s						
FVM	French Village	73.18	306	P	P	20 35 51.3	-0.5
FVM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DHY	Denali Highway	73.26	350	P	P	20 35 52.1	+0.1
P33M	Teslin, Yukon	73.44	343	P	P	20 35 53.1	+0.1
CCM	Cathedral Cave	73.62	307	P	P	20 35 54.1	-0.2
CCM				IAmb	IAmb	20 35 57.0	
	comp=Z,5.7nm,0.8s						
CCM	Cathedral Cave	73.62	307	P	P	20 35 54.1	-0.2
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
P38A	Dawn	73.90	309	P	P	20 35 55.6	-0.4
PBMO	Poplar Bluff	73.98	305	P	P	20 35 54.6	-1.8
PBMO				IAmb	IAmb	20 35 59.8	
	comp=Z,6.1nm,0.8s						
R40A	Maddies Statio	74.06	308	P	P	20 35 56.4	-0.5
R40A				IAmb	IAmb	20 35 59.9	
	comp=Z,5.3nm,0.8s						
S39A	Bolivar	75.08	308	P	P	20 36 02.6	-0.3
S39A				IAmb	IAmb	20 36 03.8	
	comp=Z,3.9nm,0.8s						
CMAR	Chiang Mai Arr	75.55	78	P	P	20 36 05.2	-0.6
	comp=Z,0.3nm,0.3s,baz=299,slow=9.2,SNR=4.3						
	comp=Z,0.3nm,0.3s						
CMAR	Chiang Mai Arr	75.55	78	i P	P	20 36 09.0	+3.2
FCAR	Ozark Folk Cen	75.59	306	P	P	20 36 05.3	-0.5
FCAR				IAmb	IAmb	20 36 06.9	
	comp=Z,5.4nm,1.0s						
U40A	Yellville	75.71	306	P	P	20 36 06.4	-0.1
U40A				IAmb	IAmb	20 36 09.9	
	comp=Z,6.0nm,0.9s						
HHAR	Hobbs	76.40	307	P	P	20 36 09.8	-0.7
HHAR				IAmb	IAmb	20 36 13.0	
	comp=Z,4.9nm,0.9s						
X40A	Basin Creek Fa	76.97	305	P	P	20 36 13.8	+0.2
X40A				IAmb	IAmb	20 36 14.7	
	comp=Z,4.8nm,1.1s						
W39A	Magazine	77.05	306	P	P	20 36 14.1	-0.1
W39A				IAmb	IAmb	20 36 17.7	
	comp=Z,8.1nm,1.1s						
MIAR	Mount Ida	77.37	305	P	P	20 36 16.7	+0.7
MIAR	Mount Ida	77.37	305	P	P	20 36 16.7	+0.7
MIAR				pmax	pmax		
	comp=Z,13nm,1.2s						
X37A	Clayton	78.41	306	P	P	20 36 22.2	+0.5
X37A				IAmb	IAmb	20 36 25.8	
	comp=Z,5.4nm,0.7s						
BBB	Bella Bella	79.36	336	LR	LR	21 15 59.4	
	comp=Z,42nm,19.2s,baz=309,slow=39						
PDAR	Pinedale Array	80.00	320	P	P	20 36 30.9	+0.3
	comp=Z,1.6nm,0.9s,baz=63,slow=6.2,SNR=0.7						
	comp=Z,1.6nm,0.9s						
PETK	Petropavlovsk-	80.09	20	LR	LR	21 17 00.7	
	comp=Z,42nm,18.3s,baz=291,slow=40						

YSS	Yuzh-Sakhalins	80.64	32	⇓eP	P	20 36 36.6	+3.0
YSS				pmax	pmax		
	comp=Z,29nm,1.7s						
BMO	Blue Mountains	81.76	326	P	P	20 36 40.1	+0.4
BMO				IAmb	IAmb	20 36 41.4	
	comp=Z,5.4nm,0.9s						
BMO	Blue Mountains	81.76	326	P	P	20 36 40.2	+0.4
BMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	Asahikawa	82.92	33	LR	LR	21 15 58.6	
	comp=Z,51nm,20.4s,baz=352,slow=37						
ANMO	Albuquerque	84.42	313	ceP	P	20 36 56.1	+2.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	87.07	308	P	P	20 37 07.2	+0.2
	comp=Z,1.4nm,0.9s,baz=62,slow=3.0,SNR=8.6						
	comp=Z,1.4nm,0.9s						
MJAR	Matsushiro Arr	87.14	41	LR	LR	21 20 08.3	
	comp=Z,57nm,18.5s,baz=262,slow=38						
JHJ	Hachijo jima 2	90.66	42	LR	LR	21 21 29.9	
	comp=Z,36nm,18.9s,baz=292,slow=38						
ASAR	Alice Springs	128.85	88	PKP	PKPdf	20 43 28.3	-0.4
	comp=Z,0.2nm,0.6s,baz=323,slow=1.4,SNR=2.4						

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*IDC **30** 20:41:55.9±3.7, 8.°99S×120.°75E, h170km±34km, mb2.9/2, mbtmp3.4/6, Error ellipse: s-maj=91.8km s-min=8.4km az=51.0*

ISC 30 20:41:54.0±1.2**, 9.°2S**±0.°1×**120.°5E**±0.°2**, h150**km**, n6, σ2.s06**/9**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.27	109	P	Pn	20 42 44.1	-0.7
	30nm,0.3s,baz=200,slow=8.1,SNR=12						
BATI				S	Sn	20 43 26.1	+2.0
	30nm,0.5s,baz=5.3,slow=18,SNR=7.5						
KAPI	Kappang	4.18	349	P	Pn	20 42 55.7	-1.0
	5.5nm,0.2s,baz=185,slow=5.3,SNR=8.9						
KAPI				S	Sn	20 43 44.5	-1.0
	8.1nm,0.3s,baz=120,slow=22,SNR=8.9						
WRA	Warramunga Arr	17.13	130	P	P	20 45 44.4	+0.6
	0.3nm,0.5s,baz=307,slow=14,SNR=7.9						
WRA				S	S	20 48 44.3	-10
	0.4nm,0.5s,baz=304,slow=21,SNR=7.0						
ASAR	Alice Springs	19.29	140	P	Pn	20 46 09.6	-0.4
	0.3nm,0.6s,baz=316,slow=8.7,SNR=9.5						
ASAR				S	S	20 49 33.9	-3.9
	0.6nm,0.7s,baz=310,slow=22,SNR=6.4						
CMAR	Chiang Mai Arr	34.73	322	P	P	20 48 31.6	+1.7
	0.5nm,0.6s,baz=156,slow=7.6,SNR=4.6						
	0.5nm,0.6s						
MKAR	Makanchi Array	65.29	332	P	P	20 52 20.2	+0.5
	0.2nm,0.7s,baz=145,slow=7.3,SNR=2.1						
	0.2nm,0.7s						

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*ZUR **30** 20:46:08.7, 47.°64N×7.°35E, h11km±1km, MLh2.2/66, Error ellipse: s-maj=2.7km s-min=0.6km az=318.0*

*BGR **30** 20:46:09.3±0.4, 47.°61N×7.°35E, h10km, ML1.9/11, Error ellipse: s-maj=4.4km s-min=2.2km az=47.0*

*STR **30** 20:46:09.6±0.2, 48°N±1°×°±°, h5km±2km, MLv2.1/7, preliminary*

*LDG **30** 20:46:09.4±0.0, 47.°62N×7.°37E, h5km, Md2.7/2, Ml2.6/27, Error ellipse: s-maj=0.6km s-min=0.5km az=165.0*

*PRU **30** 20:46:16.6±0.0, 47.°78N×7.°69E, h0km*

ISC 30 20:46:09.3±0.8**, 47.°62N**±0.°01×**7.°34E**±0.°01**, h17**km±4km**, n134, σ1.s51**/219**, 24C-6D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATTE	Schuetzenmatte	0.17	114	Pg	Pg	20 46 12.6	-1.2
MATTE				Sg	Sg	20 46 15.4	-1.3
SBAJ2	Basel, St Joha	0.17	108	Sg	Sg	20 46 15.7	-1.2
SBAT	Basel-Tropenha	0.17	110	Sg	Sg	20 46 15.8	-1.1
SBIS2	Binningen	0.18	115	Pg	Pg	20 46 13.0	-0.9
SBIS2				Sg	Sg	20 46 16.2	-0.9
OTER2	Otterbach 2 (B	0.18	103	Pg	Pg	20 46 12.3	-1.7
OTER2				Sg	Sg	20 46 14.6	-2.5
SBAW	Basel, Wirtsch	0.19	112	Pg	Pg	20 46 13.2	-0.9
SBAW				Sg	Sg	20 46 16.5	-0.8
SRER	Reinach, Raine	0.21	122	⇓Pg	Pg	20 46 13.5	-0.8
SRER				Sg	Sg	20 46 17.0	-0.6
BOURR	Bourrignon	0.24	198	⇑Pg	Pg	20 46 14.3	-0.5
BOURR				Sg	Sg	20 46 18.1	-0.4
BOURR	Bourrignon	0.24	198	⇑iPg	Pg	20 46 14.3	-0.5
BOURR				Sg	Sg	20 46 18.1	-0.4
BOURR	Bourrignon	0.24	198	Sg	Sg	20 46 18.2	-0.4
BOURR	Bourrignon	0.24	198	⇑Pg	Pg	20 46 14.3	-0.5
SSCN	Schweizerhalle	0.24	111	Sg	Sg	20 46 17.4	-1.1
MTI02	Mont Terri, (H	0.27	206	⇑Pg	Pg	20 46 14.8	-0.4
SKAF	Kaiseraugst-Fr	0.27	107	Pg	Pg	20 46 14.2	-1.1
SKAF				Sg	Sg	20 46 18.0	-1.4
MTI03	Mont Terri (fr	0.27	205	Pg	Pg	20 46 15.1	-0.4
SFRA	Frenkendorf	0.28	115	Pg	Pg	20 46 14.5	-0.9
SFRA				Sg	Sg	20 46 18.5	-1.0
ENDD	Endenburg	0.29	70	⇑Pg	Pg	20 46 14.4	-1.2
SAIRA	Les Sairains D	0.36	209	⇑Pg	Pg	20 46 16.6	-0.3
SAIRA				Sg	Sg	20 46 21.9	-0.1
BALST	Balsthal	0.37	140	⇓Pg	Pg	20 46 16.4	-0.7
BALST				Sg	Sg	20 46 21.8	-0.6
BALST	Balsthal	0.37	140	⇓iPg	Pg	20 46 16.4	-0.7
BALST				Sg	Sg	20 46 21.8	-0.6
BALST	Balsthal	0.37	140	Sg	Sg	20 46 21.5	-0.8
BALST	Balsthal	0.37	140	⇓Pg	Pg	20 46 16.4	-0.7
HINF	Hinteralfeld	0.38	301	ePg	Pg	20 46 17.1	-0.2
HINF				eSg	Sg	20 46 22.5	-0.2
	61nm,0.4s						
ROTHE	Rothenfluh	0.42	110	⇑Pg	Pg	20 46 17.1	-0.8
ROTHE				Sg	Sg	20 46 23.0	-0.7
EMMET	Emmethof	0.49	111	⇑Pg	Pg	20 46 18.6	-0.6
VOGT	Vogtsburg - To	0.51	26	Sg	Sg	20 46 26.7	+0.1
KIZ	Kirchzarten	0.52	49	⇑Pg	Pg	20 46 18.3	-1.4
KIZ				Sg	Sg	20 46 25.1	-1.6
KIZ	Kirchzarten	0.52	49	⇑iPg	Pg	20 46 18.8	-0.9
KIZ				Sg	Sg	20 46 25.7	-0.9
FELD	Feldberg im Sc	0.52	60	⇑Pg	Pg	20 46 18.9	-0.9
FELD				Sg	Sg	20 46 25.7	-1.1
FELD	Feldberg im Sc	0.52	60	⇑Pg	Pg	20 46 18.9	-0.9
FELD				Sg	Sg	20 46 25.8	-0.9
SULZ	Cheisacher	0.53	100	Pg	Pg	20 46 18.9	-1.0
SULZ				Sg	Sg	20 46 26.1	-1.0
SULZ	Cheisacher	0.53	100	⇑Pg	Pg	20 46 18.9	-1.0
SULZ				Sg	Sg	20 46 26.3	-0.8
SULZ	Cheisacher	0.53	100	Sg	Sg	20 46 26.4	-0.7
SULZ	Cheisacher	0.53	100	Pg	Pg	20 46 19.0	-1.0
CHMF	Charmoille	0.60	232	⇑Pg	Pg	20 46 21.0	-0.2
CHMF	Charmoille	0.60	232	⇑Pg	Pg	20 46 21.0	-0.2
CHMF	Charmoille	0.60	232	⇑Pg	Pg	20 46 21.0	-0.2
CHMF				Sg	Sg	20 46 29.1	0.0
DAGMA	Lutertal, Dagm	0.60	130	Pg	Pg	20 46 20.7	-0.5
ECH	Echery	0.61	349	⇓Pg	Pg	20 46 21.0	-0.4
ECH	Echery	0.61	349	⇓Pg	Pg	20 46 21.0	-0.4
ECH				PmP		20 46 22.9	
ECH	Echery	0.61	349	Pg	Pg	20 46 21.0	-0.4
ECH				Sg	Sg	20 46 30.2	+0.6
BERGE	Lenzkirch (DE)	0.62	66	⇑Pg	Pg	20 46 20.7	-0.9
BERGE				Sg	Sg	20 46 29.0	-0.9
BERGE	Lenzkirch (DE)	0.62	66	⇑iPg	Pg	20 46 20.7	-0.9
BERGE				Sg	Sg	20 46 29.0	-0.9
WOLEN	Wohlen bei Ber	0.62	178	Pg	Pg	20 46 21.4	-0.3
METMA	Mettma DE	0.62	81	⇑Pg	Pg	20 46 20.5	-1.2
METMA				Sg	Sg	20 46 28.8	-1.2
METMA				SmS		20 46 32.3	
METMA	Mettma DE	0.62	81	⇑Pg	Pg	20 46 20.5	-1.2
METMA				Sg	Sg	20 46 28.7	-1.2
METMA				SmS		20 46 32.5	
HAU	Haudompre	0.77	300	ePg	Pg	20 46 24.2	-0.2
HAU	Haudompre	0.77	300	ePn	Pb	20 46 25.5	+1.2
HAU				eSg	Sg	20 46 34.8	+0.1
HAU				eSn	Sb	20 46 37.1	+2.6
	226nm,0.4s						
SLE	Schleitheim	0.79	79	⇑Pg	Pg	20 46 23.7	-1.1
SLE	Schleitheim	0.79	79	⇑Pg	Pg	20 46 23.7	-1.1
SLE				PmP		20 46 25.1	
SLE				eSg	Sg	20 46 34.8	-0.5
SLE				SmS		20 46 36.8	
SLE	Schleitheim	0.79	79	Sg	Sg	20 46 34.5	-0.8
SLE	Schleitheim	0.79	79	Pg	Pg	20 46 23.7	-1.1
CDF	Champ du Feu	0.79	357	ePg	Pg	20 46 24.6	-0.3
CDF				eSg	Sg	20 46 34.9	-0.5
	28nm,0.3s						
BOUC	Bouclans	0.82	244	Pg	Pg	20 46 25.1	-0.3
BOUC				Sg	Sb	20 46 37.6	+1.6
ZUR	Degenried	0.88	106	Pg	Pg	20 46 26.0	-0.5
ZUR	Degenried	0.88	106	Sg	Sg	20 46 37.8	-0.2
TORNY	Torny/Romont	0.89	197	Sg	Sg	20 46 38.7	+0.5
TORNY	Torny/Romont	0.89	197	Pg	Pg	20 46 26.3	-0.3
BRANT	Les Verrieres	0.90	221	⇑Pg	Pg	20 46 26.8	-0.1
BRANT	Les Verrieres	0.90	221	Sg	Sb	20 46 39.7	+1.4
BRANT	Les Verrieres	0.90	221	Pg	Pg	20 46 26.8	-0.1
BFO	Black Forest	0.97	43	Pg	Pg	20 46 27.2	-1.1
BFO	Black Forest	0.97	43	⇑Pg	Pg	20 46 27.2	-1.1
BFO				PmP		20 46 28.1	
BFO				Sg	Sg	20 46 40.3	-0.7
OPP	Oppenau	1.05	33	Pn	Pg	20 46 28.2	-1.4
OPP				Sg	Sg	20 46 42.9	-0.4
EMING	Emmingen-Lipti	1.05	74	Pg	Pg	20 46 28.9	-0.8
EMING				PmP		20 46 29.4	
EMING				Sg	Sb	20 46 43.2	+0.6
WILA	Wila	1.08	100	Pg	Pg	20 46 29.7	-0.6
WILA				PmP		20 46 30.1	
WILA				eSg	Sb	20 46 44.1	+0.6
WILA				SmS		20 46 45.1	
WALHA	Wallhausen, DE	1.21	83	Pn	Pg	20 46 31.2	-1.6
WALHA				Sn	Sg	20 46 47.1	-1.5
GUT	Gutenstein	1.28	69	Pg	Pg	20 46 32.8	-1.2
GUT				Sg	Sb	20 46 50.1	+1.0
GIMEL	St. Georges /	1.31	214	Sn	Sn	20 46 52.5	+2.5
GIMEL	St. Georges /	1.31	214	Pn	Pn	20 46 33.4	+0.5
CABF	La Chapelle	1.32	221	ePg	Pn	20 46 34.5	+1.4
CABF				eSg	Sb	20 46 52.5	+2.1
	21nm,0.2s						
ROMAN	Romanshorn, Fo	1.35	92	Pg	Pn	20 46 34.6	+1.2
ROMAN				Sg	Sn	20 46 52.7	+1.7
PAGF	Fort de Pagny	1.43	311	ePg	Pb	20 46 36.7	+1.2
PAGF				eSg	Sb	20 46 55.0	+1.5
	21nm,0.3s						
EMBD	Embd, Matterta	1.44	166	Sn	Sb	20 46 55.1	+1.2
EMBD	Embd, Matterta	1.44	166	Pn	Pn	20 46 35.2	+0.4
PEB	Petersbachel	1.47	10	Pn	Pn	20 46 34.9	-0.2
PEB				Sg	Sb	20 46 56.1	+1.6
TUBL	Tuebingen-Lenn	1.48	52	Sg	Sn	20 46 56.1	+2.1
PLONS	Plons/SG	1.50	112	ePg	Pg	20 46 37.8	-0.5
PLONS				eSg	Sg	20 46 57.4	-0.4
GALG	Neuhausen (Enz	1.51	39	Pn	Pn	20 46 34.4	-1.3
GALG				Pg	Pb	20 46 37.4	+0.5
GALG				Sg	Sb	20 46 57.3	+1.4
SFTF	Sexfontaines	1.66	292	ePg	Pb	20 46 40.4	+1.1
	baz=111						
SFTF				eSn	Sn	20 46 58.2	-0.2
SFTF				eSg	Sb	20 47 02.4	+2.5
	16nm,0.3s						
BRET	Bretten	1.66	32	Sg	Sg	20 47 01.9	-1.0
DAVA	Damuels	1.76	100	Pg	Pg	20 46 42.7	-0.5
	1.5nm,0.2s						
DAVA				Sg	Sg	20 47 05.5	-0.4
	9.8nm,0.2s						
MEZF	Maizieres J'vi	1.77	301	ePg	Pb	20 46 42.6	+1.3
	baz=120						
MEZF				eSn	Sn	20 47 00.7	-0.5
MEZF				eSg	Sb	20 47 05.8	+2.6
	29nm,0.4s						
SAVF	Savonnieres en	1.79	305	ePn	Pb	20 46 42.8	+1.2
	baz=124						
SAVF				eSn	Sn	20 47 01.3	-0.4
SAVF				eSg	Sb	20 47 06.2	+2.5
	29nm,0.4s						
IMS	Imsbach	2.01	10	Pg	Pg	20 46 47.1	-0.8
IMS				Sg	Sg	20 47 13.4	-0.7
RIVT	Riveris	2.12	350	Pg	Pb	20 46 48.9	+1.6
RIVT				Sg	Sg	20 47 16.8	-0.9
LPL	La Plagne	2.15	191	ePn	Pn	20 46 44.3	-0.2
LPL	La Plagne	2.15	191	ePg	Pb	20 46 49.7	+1.9
LPL				eSg	Sb	20 47 17.2	+3.0
	6.4nm,0.4s						
LPG	La Plagne	2.16	191	ePn	Pn	20 46 44.7	-0.1
LPG	La Plagne	2.16	191	ePg	Pb	20 46 50.0	+1.9
LPG				eSg	Sg	20 47 18.0	-0.9
	4.8nm,0.3s						
WLF	Walferdange	2.19	339	ePg	Pg	20 46 50.7	-0.7
WLF				eSg	Sg	20 47 20.4	+0.6
TOD	Tromm	2.21	26	Sg	Sg	20 47 19.9	-0.6
ABH	Alteburg	2.27	3	ePg	Pb	20 46 51.1	+1.3
SIND	Sindeldorf	2.29	40	Sg	Sg	20 47 21.5	-1.7
FETA	Feichten	2.38	103	ePg	Pg	20 46 54.2	-0.9
	0.5nm,0.3s						
FETA				eSg	Sg	20 47 24.5	-1.4
	1.8nm,0.5s						
LOR	Lormes	2.39	263	ePn	Pn	20 46 47.8	+0.1
	baz=82						
LOR	Lormes	2.39	263	ePg	Pg	20 46 54.6	-0.5
	baz=83						
LOR				eSg	Sb	20 47 24.5	+3.5
	12nm,0.2s,baz=82						
MILB	Miltenberg	2.56	30	Sg	Sg	20 47 30.9	-0.8
MOTA	Moosalm	2.57	95	ePg	Pg	20 46 57.5	-1.1
	0.3nm,0.1s						
MOTA				eSg	Sg	20 47 30.6	-1.3
	1.7nm,0.2s						
SMF	Signal de Mont	2.58	249	ePg	Pb	20 46 57.7	+2.6
SMF				eSg	Sg	20 47 31.1	-1.1
	10nm,0.3s						
SQTA	Sankt Quirin	2.66	97	ePg	Pg	20 46 59.3	-1.0
	1.3nm,0.2s						
SQTA				eSg	Sg	20 47 34.3	-0.4
	3.0nm,0.3s						
SSF	Saint Saulge	2.67	259	ePn	Pn	20 46 51.2	-0.3
SSF	Saint Saulge	2.67	259	ePg	Pb	20 46 59.3	+2.7
SSF				eSn	Sn	20 47 22.5	-0.8
SSF				eSg	Sb	20 47 33.0	+4.0
	7.3nm,0.4s						
AVF	Avril sur Loir	2.84	255	ePn	Pn	20 46 53.7	-0.2
AVF	Avril sur Loir	2.84	255	ePg	Pb	20 47 02.4	+2.8
AVF				eSg	Sg	20 47 39.1	-1.5
	2.3nm,0.2s						
ORIF	Oris-en-Rattie	2.88	201	ePn	Pn	20 46 54.5	-0.1
ORIF	Oris-en-Rattie	2.88	201	ePg	Pg	20 47 03.3	-1.3
ORIF				eSg	Sg	20 47 40.1	-1.9
	5.9nm,0.3s						
MBDF	Montbardon	2.92	188	ePn	Pn	20 46 55.0	-0.1
MBDF	Montbardon	2.92	188	ePg	Pb	20 47 03.6	+2.6
MBDF				eSg	Sg	20 47 41.5	-1.7
	1.3nm,0.2s						
WTTA	Wattenberg	2.94	95	ePn	Pn	20 46 58.1	+2.7
	1.7nm,0.4s						
WTTA				eSg	Sg	20 47 44.1	+0.4
	1.8nm,0.3s						
HYF	Humbligny	3.21	265	ePg	Pb	20 47 08.4	+2.6
HYF				eSg	Sg	20 47 51.1	-1.3
BGF	Bois d'Agland	3.25	253	ePn	Pn	20 46 59.2	-0.3
BGF	Bois d'Agland	3.25	253	ePg	Pg	20 47 10.0	-1.6
BGF				eSg	Sg	20 47 51.7	-1.9
	8.4nm,0.3s						
VIVF	Saint-Julien-l	3.33	215	ePn	Pn	20 47 00.3	-0.3
VIVF	Saint-Julien-l	3.33	215	ePg	Pg	20 47 11.3	-1.8
VIVF				eSg	Sg	20 47 54.3	-1.8
	5.6nm,0.3s						
TCF	Toulx Ste Croi	3.76	251	ePn	Pn	20 47 06.3	-0.2
TCF	Toulx Ste Croi	3.76	251	ePg	Pg	20 47 19.4	-1.9
TCF				eSn	Sn	20 47 48.5	-1.8
TCF				eSg	Sg	20 48 07.1	-2.8
	2.2nm,0.2s						
SMRF	Simiane la Rot	3.85	199	ePn	Pn	20 47 07.6	-0.1
SMRF	Simiane la Rot	3.85	199	ePg	Pg	20 47 20.7	-2.3
SMRF				eSn	Sn	20 47 50.3	-2.2
SMRF				eSg	Sg	20 48 09.8	-3.0
	0.2nm,0.2s						
NKC	Novy Kostel	4.26	50	ePG	Pg	20 47 29.0	-2.0
NKC				eSG	Sg	20 48 22.7	-3.5
	8.5nm,0.8s						
LASF	Ste Croix	4.30	216	ePn	Pn	20 47 12.8	-1.1
LASF	Ste Croix	4.30	216	ePg	Pg	20 47 29.9	-1.7
LASF				eSn	Sn	20 48 01.4	-2.2
LASF				eSg	Sg	20 48 24.7	-2.6
LMR	La Mourre	4.33	188	eSg	Sg	20 48 24.1	-4.1
	0.5nm,0.3s						
KHC	Kasperske Hory	4.42	68	ePG	Pg	20 47 30.9	-3.1
KHC				eSG	Sg	20 48 28.8	-2.5
	comp=Z,2.4nm,0.4s						
CAF	Calviac	4.54	236	ePn	Pn	20 47 17.3	0.0
CAF				eSg	Sg	20 48 32.6	-2.5
	0.5nm,0.2s						
LDF	La Druitiere	5.09	284	ePn	Pn	20 47 24.4	-0.4
LDF	La Druitiere	5.09	284	ePg	Pg	20 47 43.7	-3.1
LDF				eSg	Sg	20 48 49.7	-3.0
	1.1nm,0.2s						
MFF	Saint Martin d	5.21	261	ePn	Pn	20 47 26.1	-0.3
MFF	Saint Martin d	5.21	261	ePg	Pg	20 47 46.1	-3.0
MFF				eSg	Sg	20 48 53.0	-3.5
	0.4nm,0.2s						
CLL	Collm	5.22	43	e(Sg)	Sb	20 48 44.0	+1.6
LFF	La Frestale	5.30	242	eSn	Sn	20 48 25.1	-3.2
LFF				eSg	Sg	20 48 57.6	-1.8
	0.9nm,0.2s						
FLN	La Foliniere	5.36	285	ePn	Pn	20 47 28.1	-0.3
FLN	La Foliniere	5.36	285	ePg	Pg	20 47 48.7	-3.1
FLN				eSg	Sg	20 48 57.9	-3.2
	2.4nm,0.3s						
GRR	Gorron	5.56	281	ePn	Pn	20 47 31.0	-0.1
GRR				eSn	Sn	20 48 31.4	-3.1
GRR				eSg	Sg	20 49 03.8	-3.8
	0.8nm,0.2s						

RSNC 30 20:47:55.6±1.0**, 5.°27N**×**73.°73W, h147**km±4km**, ML3.1, Mw3.5, 3C-7D, Fault plane solution: NP1:**ϕs28.00000°, δ64.00000°, λ-82.00000°.**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	San Pablo de B	0.51	318	⇓eP	Pn	20 48 16.5	-0.3
SPBC				eS	Sn	20 48 32.7	-0.2
SPBC				i		20 48 34.2	
	comp=Z,664nm,0.3s						
CHIC	Chingaza	0.64	180	⇓eP	Pn	20 48 17.7	-0.2
CHIC				eS	Sn	20 48 34.5	-0.4
CHIC				i		20 48 36.4	
	comp=Z,128nm,0.2s						
ROSC	El Rosal	0.73	234	⇓eP	Pn	20 48 19.3	+0.8
ROSC				eS	Sn	20 48 37.1	+1.3
ROSC				i		20 48 40.8	
	comp=Z,626nm,0.4s						
RUSC	La Rusia	0.89	46	eP	Pn	20 48 19.9	+0.2
RUSC				eS	Sn	20 48 38.1	0.0
RUSC				i		20 48 40.6	
	comp=Z,121nm,0.4s						
VILC	Villavicencio,	1.15	178	⇓iP	Pn	20 48 21.0	-0.7
VILC				eS	Sn	20 48 41.1	-0.4
NORC	Norcasia	1.17	284	⇑eP	Pn	20 48 21.1	-0.6
NORC				eS	Sn	20 48 41.1	-0.5
NORC				i		20 48 43.2	
	comp=Z,260nm,0.2s						
BARC	Barichara	1.42	22	eP	Pn	20 48 23.7	-0.7
BARC				eS	Sn	20 48 44.9	-1.5
BARC				i		20 48 47.6	
	comp=Z,170nm,0.4s						
PTBC	PUERTO BERRIO,	1.45	330	eP	Pn	20 48 23.2	-1.3
PTBC				eS	Sn	20 48 45.9	-0.8
PTBC				i		20 48 47.4	
	comp=Z,92nm,0.2s						
BRRC	Barranca, Sant	1.82	0	eP	Pn	20 48 28.8	+0.2
BRRC				eS	Sn	20 48 53.7	-0.2
BRRC				i		20 48 56.3	
	comp=Z,87nm,0.2s						
ANIL	Santa Ana	1.84	245	⇑iP	Pn	20 48 28.6	-0.4
ANIL				eS	Sn	20 48 54.1	-0.5
ANIL				i		20 48 55.0	
	comp=Z,243nm,0.3s						
PTGC	Puerto Gaitan,	1.91	124	⇓eP	Pn	20 48 28.9	-0.7
PTGC				eS	Sn	20 48 54.6	-1.0
PTGC				i		20 48 58.4	
	comp=Z,223nm,0.2s						
PRAC	Prado	1.93	217	⇓iP	Pn	20 48 29.4	-0.5
PRAC				eS	Sn	20 48 55.5	-0.6
PRAC				i		20 48 57.0	
	comp=Z,363nm,0.3s						
HELC	Santa Helena	2.01	297	⇑eP	Pn	20 48 30.5	-0.6
HELC				eS	Sn	20 48 57.5	-0.7
HELC				i		20 48 59.8	
	comp=Z,88nm,0.3s						
ORTC	Ortega, Tolima	2.03	228	eP	Pn	20 48 30.2	-0.7
ORTC				eS	Sn	20 48 57.2	-1.0
ORTC				i		20 49 00.6	
	comp=Z,168nm,0.3s						
TAMC	Tame, Arauca	2.25	59	eP	Pn	20 48 33.5	0.0
TAMC				eS	Sn	20 49 02.1	-0.7
TAMC				i		20 49 04.3	
	comp=Z,105nm,0.3s						
PAMC	Pamplona, Colo	2.29	26	eP	Pn	20 48 34.9	+0.3
PAMC				eS	Sn	20 49 03.9	-0.6
PAMC				i		20 49 06.7	
	comp=Z,44nm,0.2s						
CBOC	Ciudad Bolivar	2.35	285	eP	Pn	20 48 34.5	-0.4
CBOC				eS	Sn	20 49 04.2	-1.0
CBOC				i		20 49 11.1	
	comp=Z,31nm,0.5s						
PLMC	San Jos del P	2.57	262	eP	Pn	20 48 37.7	+0.1
PLMC				eS	Sn	20 49 10.4	+0.6
PLMC				i		20 49 16.1	
	comp=Z,16nm,0.3s						
YOTC	Yotoco, Valle	2.91	244	eP	Pn	20 48 40.9	-0.9
YOTC				eS	Sn	20 49 16.4	-1.1
YOTC				i		20 49 20.3	
	comp=Z,13nm,0.6s						
GUVC	San Jose del G	2.92	158	eP	Pn	20 48 40.8	-1.1
GUVC				eS	Sn	20 49 15.7	-2.1
GUVC				i		20 49 18.1	
	comp=Z,121nm,0.2s						
OCAC	Ocana	2.98	8	eP	Pn	20 48 41.6	-1.1
OCAC				eS	Sn	20 49 18.9	-0.3
OCAC				i		20 49 29.3	
	comp=Z,200nm,0.2s						
DBBC	Dabeiba	3.02	305	eP	Pn	20 48 42.5	-0.6
DBBC				eS	Sn	20 49 16.2	-3.7
DBBC				i		20 49 21.4	
	comp=Z,281nm,0.5s						
UREC	San Jos de Ur	3.05	324	eP	Pn	20 48 40.8	-2.7
UREC				eS	Sn	20 49 17.2	-3.4
UREC				i		20 49 18.7	
	comp=Z,65nm,0.1s						
MACC	Macarena, Meta	3.11	182	⇓eP	Pn	20 48 42.4	-1.9
MACC				eS	Sn	20 49 18.6	-3.4
MACC				i		20 49 43.0	
	comp=Z,23nm,0.5s						
PCON	Cinco Dias	3.96	222	eP	Pn	20 48 55.1	-0.7
PCON				eS	Sn	20 49 36.3	-6.1
PCON				i		20 49 38.9	
	comp=Z,9.6nm,0.6s						

IDC 30 20:51:51.4±3.2**, 31.°07S**×**177.°79W, h0**km**, mb3.6**/3**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse: s-maj=70.6km s-min=37.0km az=115.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.31	209	Pn	Pn	20 53 51.4	-1.7
	0.3nm,0.3s,baz=298,slow=23,SNR=1.0						
URZ				Sn	Sn	20 55 29.6	+1.9
	0.5nm,0.3s,baz=118,slow=23,SNR=2.2						
	2.9nm,0.5s						
STKA	Stephens Creek	34.51	258	P	P	20 58 42.3	+0.9
	0.6nm,0.4s,baz=84,slow=7.0,SNR=3.2						
	0.6nm,0.4s						
ASAR	Alice Springs	43.26	268	P	P	20 59 54.6	-0.3
	0.4nm,0.6s,baz=104,slow=7.4,SNR=9.5						
	0.4nm,0.6s						
WRA	Warramunga Arr	44.31	273	P	P	21 00 02.9	-0.4
	0.4nm,0.4s,baz=112,slow=7.9,SNR=9.0						
	0.4nm,0.4s						
FINES	FINESS Array B	145.83	340	PKPbc	PKPdf	21 11 31.1	-0.2
	0.9nm,0.8s,baz=66,slow=4.7,SNR=5.3						

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*TUL **30** 20:52:43.1±0.8, 35.°67N±0.°02×97.°16W±0.°02, h5km±5km, ML2.6, mb_Lg2.3/29(NEIC), Error ellipse: s-maj=3.2km s-min=1.6km az=138.0*

NEIC 30 20:52:43.4±0.5**, 35.°67N**±0.°02×**97.°17W**±0.°02**, h8**km±2km**, Error ellipse: s-maj=3.3km s-min=1.7km az=138.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.03	236	Pg	Pg	20 52 44.2	-0.7
OK005				Sg	Sg	20 52 45.1	-0.8
OK009	Oakdale Elemen	0.23	247	Pg	Pg	20 52 47.7	-0.2
OK009				Sg	Sg	20 52 51.8	+0.8
OKCFA	Oklahoma City	0.34	223	Pg	Pg	20 52 50.2	+0.1

OKCSW	**OKLAHOMA CITY**	**0.34**	**220**		Pg	20 52 50.0	-0.1
FNO	**Franklin**	**0.45**	**205**	Pg	Pg	20 52 52.3	+0.1
TUL1	**Leonard**	**1.14**	**77**	Pg	Pg	20 53 04.2	-1.1
X34A	**Smith Ranch, M**	**1.20**	**207**		Pb	20 53 05.9	-0.4
X34A				IAmb_Lg		20 53 21.1	
	comp=Z,13nm,1.0s						
T35A	**Sooner Cattle**	**1.35**	**23**	Pn	Pn	20 53 08.3	-0.3
WMOK	**Wichita Mounta**	**1.62**	**235**		Pn	20 53 12.3	+0.1
WMOK				IAmb_Lg		20 53 37.2	
	comp=Z,12nm,0.7s						
U32A	**Winter Ranch,**	**1.65**	**296**		Pn	20 53 13.0	+0.3
X37A	**Clayton**	**1.82**	**126**		Pn	20 53 15.9	+0.8
X37A				IAmb_Lg		20 53 43.4	
	comp=Z,26nm,1.0s						
Z35A	**Perchaven, San**	**2.33**	**182**	IAmb_Lg		20 54 01.9	
	comp=Z,15nm,0.8s						
HHAR	**Hobbs**	**2.69**	**76**		Pn	20 53 27.0	+0.1
HHAR				IAmb_Lg		20 54 14.6	
	comp=Z,13nm,0.7s						
W39A	**Magazine**	**2.80**	**99**	IAmb_Lg		20 54 18.0	
	comp=Z,16nm,0.7s						
R32A	**Long Quarter,**	**3.01**	**336**	Pn	Pn	20 53 31.2	-0.2
KSU1	**Kansas State U**	**3.45**	**7**	IAmb_Lg		20 54 42.2	
	comp=Z,13nm,0.7s						
ABTX	**Abilene, Hawle**	**3.67**	**215**	IAmb_Lg		20 54 45.2	
	comp=Z,6.9nm,1.0s						
S39A	**Bolivar**	**3.69**	**56**	IAmb_Lg		20 54 49.8	
	comp=Z,7.3nm,0.7s						
WHAR	**Wooly Hollow**	**4.00**	**94**	IAmb_Lg		20 54 52.7	
	comp=Z,9.3nm,0.8s						
R40A	**Maddies Statio**	**4.71**	**55**	IAmb_Lg		20 55 13.2	
	comp=Z,5.6nm,0.7s						
CCM	**Cathedral Cave**	**5.31**	**62**	IAmb_Lg		20 55 30.5	
	comp=Z,7.2nm,0.8s						
JCT	**Junction City**	**5.63**	**204**	IAmb_Lg		20 55 54.0	
	comp=Z,6.9nm,0.7s						

IDC 30 20:57:34.2±1.7**, 5°.94S×129°.79E, h0^{km}, mb3.8**/1**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=60.6km s-min=25.2km az=86.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.25**	**16**	Pn	Pn	20 58 52.6	-1.5
	4.3nm,0.3s,baz=229,slow=23,SNR=8.4						
SIJI				Sn	Sn	20 59 58.5	+3.2
	5.8nm,0.3s,baz=267,slow=23,SNR=13						
	15nm,0.2s						
WRA	**Warramunga Arr**	**14.60**	**163**	Pn	Pn	21 01 02.0	-0.3
	0.5nm,0.3s,baz=344,slow=13,SNR=23						
WRA				Sn	Sn	21 03 30.1	-15
	0.6nm,0.3s,baz=344,slow=20,SNR=7.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**18.06**	**168**	P	Pn	21 01 46.8	-0.1
	0.3nm,0.3s,baz=348,slow=10.0,SNR=23						
ASAR				S	Sn	21 04 57.6	-12
	0.4nm,0.5s,baz=355,slow=27,SNR=3.1						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**67.23**	**327**	P	P	21 08 30.8	+0.2
	0.4nm,0.5s,baz=123,slow=5.7,SNR=8.6						
	0.4nm,0.5s						

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*IDC **30** 21:00:20.0±2.8, 34°.86S×179°.74W, h0^{km}, mb4.1/2, mbtmp4.1/3, ML3.8/1, MS3.2/1, Error ellipse: s-maj=67.3km s-min=43.8km az=127.0*
*WEL **30** 21:00:27.3±0.9, 35°S±8°×18°0W±1°4, h33^{km}, M4.0/14, mB5.1/2, ML4.3/20, MLv4.0/14, Mw(mB)4.4/2, Error ellipse: s-maj=0.0km s-min=0.0km az=114.7*
*NEIC **30** 21:00:33.5±1.8, 35°.42S±0°.09×179°.7E±0°.2, h74^{km}±9^{km}, mb4.4/9, Error ellipse: s-maj=24.0km s-min=2.2km az=123.0*
ISC 30 21:00:27.0±1.1**, 35°.14S**±0°.08×**179°.8W**±0°.1**, h39^{km}, n54, σ1^{s}.31**/63**, mb4.3**/6**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.84**	**211**	Pn	**Pn**	**21 01 10.1**	**+0.3**
MXZ	**Matakaoa Point**	**2.84**	**211**	P	**Pn**	**21 01 09.1**	**-0.8**
MXZ				S	**Sn**	**21 01 44.0**	**+1.2**
WMGZ	**Waiomatatini S**	**3.02**	**207**	P	**Pn**	**21 01 14.0**	**+1.7**
WMGZ				S	**Sn**	**21 01 49.4**	**+2.1**
PKGZ	**Pakihiroa**	**3.21**	**211**	P	**Pn**	**21 01 14.9**	**-0.2**
PKGZ				S	**Sn**	**21 01 52.4**	**+0.3**
HAZ	**Te Kaha**	**3.24**	**216**	P	**Pn**	**21 01 13.7**	**-1.6**
HAZ				S	**Sn**	**21 01 55.0**	**+2.4**
PUZ	**Puketiti**	**3.30**	**207**	P	**Pn**	**21 01 15.0**	**-1.2**
PUZ				S	**Sn**	**21 01 55.5**	**+1.3**
RUGZ	**Raukumara Rang**	**3.46**	**215**	P	**Pn**	**21 01 18.6**	**+0.2**
TWGZ	**Tauwhareparae**	**3.50**	**209**	P	**Pn**	**21 01 19.7**	**+0.7**
TWGZ				S	**Sn**	**21 02 01.0**	**+1.9**
CNGZ	**Carnagh Statio**	**3.69**	**205**	P	**Pn**	**21 01 21.8**	**+0.3**
CNGZ				S	**Sn**	**21 02 05.4**	**+1.8**
TKGZ	**Te Karaka**	**3.78**	**209**	S	**Sn**	**21 02 06.3**	**+0.4**
MWZ	**Matawai**	**3.83**	**213**	P	**Pn**	**21 01 23.4**	**0.0**
MWZ				S	**Sn**	**21 02 07.5**	**+0.4**
KUZ	**Kuaotunu**	**3.94**	**245**	P	**Pn**	**21 01 24.7**	**-0.3**
URZ	**Urewera**	**3.96**	**217**	Pn	**Pn**	**21 01 25.3**	**+0.1**
	5.0nm,0.3s,baz=122,slow=23,SNR=33						
URZ				Sn	**Sn**	**21 02 08.8**	**-1.6**
	3.5nm,0.3s,baz=310,slow=22,SNR=2.4						
	17nm,0.4s						
URZ	**Urewera**	**3.96**	**217**	P	**Pn**	**21 01 25.4**	**+0.1**
RIGZ	**Rimuhau**	**4.04**	**208**	P	**Pn**	**21 01 25.9**	**-0.6**
RIGZ				S	**Sn**	**21 02 12.7**	**+0.2**
SNGZ	**Shannon Statio**	**4.28**	**211**	P	**Pn**	**21 01 29.0**	**-0.7**
SNGZ				S	**Sn**	**21 02 18.6**	**+0.3**
MUGZ	**Murupara**	**4.30**	**218**	P	**Pn**	**21 01 29.7**	**-0.2**
MUGZ				S	**Sn**	**21 02 18.9**	**+0.1**
RTZ	**Ruatahuna**	**4.30**	**215**	P	**Pn**	**21 01 29.6**	**-0.4**
MKAZ	**Moumakai**	**4.50**	**243**	P	**Pn**	**21 01 33.4**	**+0.8**
TOZ	**Tahuroa Road**	**4.56**	**234**	P	**Pn**	**21 01 33.9**	**+0.5**
BKZ	**Black Stump Fm**	**4.97**	**215**	Pn	**Pn**	**21 01 38.5**	**-0.7**
BKZ	**Black Stump Fm**	**4.97**	**215**	P	**Pn**	**21 01 38.2**	**-1.0**
BKZ				S	**Sn**	**21 02 33.7**	**-1.7**
KWHZ	**Kaweka Forest**	**5.21**	**214**	P	**Pn**	**21 01 42.5**	**0.0**
KWHZ				S	**Sn**	**21 02 40.3**	**-1.0**
KAHZ	**Kahuranaki**	**5.33**	**208**	P	**Pn**	**21 01 40.8**	**-3.3**
KAHZ				S	**Sn**	**21 02 41.2**	**-3.0**
TMVZ	**Te Maari**	**5.33**	**221**	P	**Pn**	**21 01 43.4**	**-0.8**
TMVZ				S	**Sn**	**21 02 43.3**	**-1.0**
NTVZ	**North Tongarir**	**5.33**	**221**	P	**Pn**	**21 01 43.5**	**-0.7**
ETVZ	**East Tongariro**	**5.34**	**220**	P	**Pn**	**21 01 44.9**	**+0.6**
OTVZ	**Oturere**	**5.39**	**221**	P	Pn	21 01 49.7	+4.7
NNVZ	**North Ngauruho**	**5.39**	**221**	P	**Pn**	**21 01 44.4**	**-0.6**
SNVZ	**South Ngauruho**	**5.42**	**221**	P	**Pn**	**21 01 47.5**	**+2.1**
BHHZ	**Black Hill Sta**	**5.43**	**216**	P	**Pn**	**21 01 43.5**	**-2.0**
BHHZ				S	**Sn**	**21 02 45.8**	**-1.0**
MOVZ	**Moawhango**	**5.52**	**218**	P	**Pn**	**21 01 46.6**	**-0.1**
TUWZ	**Tuamarina**	**7.96**	**216**		**Pn**	**21 02 19.6**	**-0.5**
ONTNC	**Ouen Toro**	**17.53**	**313**	P	**P**	**21 04 31.6**	**+2.4**
ONTNC				IAmb	IAmb	21 04 37.4	
	comp=Z,16nm,0.8s						
BBOO	**Buckleboo**	**36.43**	**261**	P	**P**	**21 07 28.7**	**+0.7**
ASAR	**Alice Springs**	**41.56**	**273**	P	**P**	**21 08 09.9**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=113,slow=7.8,SNR=15						
	comp=Z,1.8nm,0.6s						
WR0	**Warramunga Arr**	**42.81**	**278**	P	**P**	**21 08 20.4**	**-0.9**
WB2	**Warramunga Arr**	**42.98**	**278**	P	**P**	**21 08 20.9**	**-1.7**
WB2				IAmb	IAmb	21 08 26.2	
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**42.98**	**278**	P	**P**	**21 08 21.5**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=118,slow=7.6,SNR=16						
	comp=Z,1.5nm,0.6s						
WRA	**Warramunga Arr**	**42.98**	**278**	P	**P**	**21 08 21.2**	**-1.5**
WB0	**Warramunga Arr**	**43.03**	**279**	P	**P**	**21 08 21.4**	**-1.6**
WB0				IAmb	IAmb	21 08 29.2	
	comp=Z,9.4nm,1.4s						
FORT	**Forrest**	**43.53**	**260**	P	**P**	**21 08 26.9**	**-0.1**
KNRA	**Kununurra**	**49.73**	**279**	P	**P**	**21 09 13.8**	**-1.8**
KNRA				IAmb	IAmb	21 09 17.6	
	comp=Z,9.9nm,1.4s						
QSPA	**South Pole Qui**	**54.98**	**180**	P	**P**	**21 09 54.9**	**+0.8**
GUMO	**Guam**	**58.90**	**319**	LR	LR	21 34 00.1	
	comp=Z,20nm,18.7s,baz=178,slow=34						
SNAA	**Sanae**	**73.46**	**179**	P	**P**	**21 11 56.8**	**+1.8**
SNAA				IAmb	IAmb	21 11 57.4	
	comp=Z,5.4nm,1.4s						
H03S2	**Juan Fernandez**	**79.13**	**124**	T	T	22 40 51.7	
	baz=233						
H03S1	**Juan Fernandez**	**79.14**	**124**	T	T	22 40 40.1	
	baz=233						
H03S3	**Juan Fernandez**	**79.15**	**124**	T	T	22 40 49.9	
	baz=233						
H03N3	**Juan Fernandez**	**79.35**	**123**	T	T	22 40 45.1	
	baz=237,slow=72,SNR=8.7						
H03N2	**Juan Fernandez**	**79.36**	**123**	T	T	22 40 46.1	
	baz=237,slow=72,SNR=7.1						
H03N1	**Juan Fernandez**	**79.37**	**123**	T	T	22 40 45.3	
	baz=237,slow=72,SNR=9.4						
FINES	**FINESS Array B**	**148.95**	**336**	PKPbc	**PKPbc**	**21 20 07.9**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=23,slow=4.5,SNR=9.7						
FINES	**FINESS Array B**	**148.95**	**336**		**PKPbc**	**21 20 07.6**	**-2.2**

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*JMA **30** 21:48:41.7±0.2, 25°N±2°×122°.3E±0°.5, h101^{km}±2^{km}, MV2.0/11, TAIWAN REGION*
*TAP **30** 21:48:42.2, 24°.93N×122°.37E, h94^{km}, ML2.9, C*
ISC 30 21:48:43.1±1.6**, 24°.78N**±0°.05×**122°.36E**±0°.03**, h95^{km}**±9^{km}**, n61, σ0^{s}.70**/116**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**304**	*e*P	**Pn**	**21 48 56.7**	**-0.9**
	baz=283						
TWB1				*e*S	**Sn**	**21 49 08.4**	**-0.1**
	baz=283						
NTC	**Toucheng**	**0.49**	**279**	*i* P	**Pn**	**21 48 57.8**	**-0.4**
	baz=262						
NTC				*e*S	**Sn**	**21 49 09.2**	**-0.3**
	baz=262						
TWC	**Suao**	**0.49**	**250**	*i* P	**Pn**	**21 48 58.0**	**-0.3**
	baz=235						
TWC				*e*S	**Sn**	**21 49 09.6**	**0.0**
	baz=235						
TIPB	**Shuangxi**	**0.52**	**291**	⇓*i*P	**Pn**	**21 48 58.2**	**-0.3**
	baz=275						
TIPB				*e*S	**Sn**	**21 49 10.1**	**+0.1**
	baz=275						
SXI1	**Grass Mountain**	**0.54**	**305**	*e*P	**Pn**	**21 48 58.1**	**-0.6**
	baz=290						
SXI1				*e*S	**Sn**	**21 49 10.4**	**0.0**
	baz=290						
NWF	**Wu-fen Shan**	**0.60**	**299**	*e*P	**Pn**	**21 48 58.9**	**-0.4**
	baz=285						
WFSB	**Wu-fen Shan**	**0.60**	**299**	*e*P	**Pn**	**21 48 58.9**	**-0.2**
	baz=285						
WFSB				*e*S	**Sn**	**21 49 11.5**	**+0.4**
	baz=285						
NDS	**Dongshan**	**0.60**	**256**	*i* P	**Pn**	**21 48 59.2**	**+0.1**
	baz=244						
NDS				*e*S	**Sn**	**21 49 11.2**	**0.0**
	baz=244						
EWUT	**Wuta**	**0.62**	**238**	P	**Pn**	**21 48 59.6**	**+0.2**
	baz=228						
EWUT				*e*S	**Sn**	**21 49 12.3**	**+0.8**
	baz=228						
JYNG	**Yonagunijimaku**	**0.63**	**122**	P	**Pn**	**21 48 59.3**	**-0.1**
JYNG				S	**Sn**	**21 49 12.5**	**+1.0**
TWE	**Neicheng**	**0.63**	**265**	*i* P	**Pn**	**21 48 59.2**	**-0.1**
	baz=251						
TWE				*e*S	**Sn**	**21 49 11.7**	**+0.1**
	baz=251						
YOJ	**Yonaguni jima**	**0.67**	**118**	*i* P	**Pn**	**21 48 59.9**	**+0.1**
	baz=128						
YOJ				*e*S	**Sn**	**21 49 13.7**	**+1.4**
	baz=128						
YOJ	**Yonaguni jima**	**0.67**	**118**	P	**Pn**	**21 48 59.8**	**+0.1**
YOJ				S	**Sn**	**21 49 13.4**	**+1.1**
FUSB	**Fushanzhiwuyua**	**0.70**	**268**	P	**Pn**	**21 48 59.8**	**-0.3**
	baz=257						
FUSB				*e*S	**Sn**	**21 49 12.1**	**-0.8**
	baz=257						
TWA	**Mucha**	**0.73**	**286**	*e*P	**Pn**	**21 49 00.1**	**-0.2**
	baz=274						
ENTT	**Nioudou**	**0.73**	**259**	*i* P	**Pn**	**21 49 00.5**	**+0.1**
	baz=248						
ENTT				*e*S	**Sn**	**21 49 14.1**	**+0.8**
	baz=248						
NWLT	**Wulai**	**0.78**	**270**	⇑*i*P	**Pn**	**21 49 00.4**	**-0.4**
	baz=259						
NWLT				*e*S	**Sn**	**21 49 13.2**	**-0.8**
	baz=259						
NDT	**Datong Townshi**	**0.79**	**257**	*e*P	**Pn**	**21 49 01.4**	**+0.5**
	baz=247						
NDT				*e*S	**Sn**	**21 49 15.4**	**+1.1**
	baz=247						
LATG	**Datong**	**0.80**	**252**	P	**Pn**	**21 49 01.4**	**+0.3**
	baz=243						
LATG				*e*S	**Sn**	**21 49 15.6**	**+1.1**
	baz=243						
YM01	**YM01**	**0.80**	**297**	*e*P	**Pn**	**21 49 00.6**	**-0.5**
	baz=287						
YM01				*e*S	**Sn**	**21 49 14.1**	**-0.4**
	baz=287						
YHNB	**Yeheng**	**0.90**	**263**	P	**Pn**	**21 49 02.1**	**0.0**
	baz=254						
YHNB				*e*S	**Sn**	**21 49 16.5**	**+0.1**
	baz=254						
TWS1	**Kuangyinshan**	**0.91**	**291**	P	**Pn**	**21 49 01.9**	**-0.3**
	baz=281						
TWS1				*e*S	**Sn**	**21 49 15.8**	**-0.6**
	baz=281						
ETL	**Fush Village**	**0.91**	**227**	*e*P	**Pn**	**21 49 02.0**	**-0.3**
	baz=222						
ETL				*e*S	**Sn**	**21 49 16.7**	**+0.1**
	baz=222						
NSK	**Sanguang**	**0.92**	**264**	*e*P	**Pn**	**21 49 02.2**	**-0.1**
	baz=254						
NSK				*e*S	**Sn**	**21 49 16.8**	**+0.1**
	baz=254						
NACB	**Ninganchiao**	**0.92**	**229**	*e*P	**Pn**	**21 49 01.8**	**-0.5**
	baz=223						
NACB				*e*S	**Sn**	**21 49 16.4**	**-0.3**
	baz=223						
NNSB	**Datong**	**0.95**	**249**	*e*P	**Pn**	**21 49 03.0**	**+0.2**
	baz=241						
NNSB				*e*S	**Sn**	**21 49 17.9**	**+0.4**
	baz=241						
NNS	**Nan Shan**	**0.96**	**249**	*e*P	**Pn**	**21 49 03.1**	**+0.3**
	baz=241						
NNS				*e*S	**Sn**	**21 49 18.1**	**+0.5**
	baz=241						
ETLH	**Xiulin Townshi**	**0.98**	**235**	*e*P	**Pn**	**21 49 02.8**	**-0.3**
	baz=228						
ETLH				*e*S	**Sn**	**21 49 17.8**	**-0.2**
	baz=228						
TWD	**Chiawan**	**0.98**	**225**	*e*P	**Pn**	**21 49 02.8**	**-0.2**
	baz=220						
TWD				*e*S	**Sn**	**21 49 18.1**	**+0.3**
	baz=220						
ETM	**Tongmen**	**1.13**	**224**	*e*P	**Pn**	**21 49 04.2**	**-0.4**
	baz=220						
ETM				*e*S	**Sn**	**21 49 20.5**	**-0.4**
	baz=220						
NFF	**Wufeng Townshi**	**1.14**	**263**	*e*P	**Pn**	**21 49 04.5**	**-0.3**
	baz=255						
NFF				*e*S	**Sn**	**21 49 20.7**	**-0.4**
	baz=255						
TEYL	**Yanliau Villag**	**1.14**	**217**	*e*P	**Pn**	**21 49 04.1**	**-0.7**
	baz=214						
TEYL				*e*S	**Sn**	**21 49 21.4**	**+0.4**
	baz=214						
FUSS	**Fushou**	**1.15**	**243**	*e*P	**Pn**	**21 49 05.2**	**+0.2**
	baz=237						
FUSS				*e*S	**Sn**	**21 49 21.7**	**+0.2**
	baz=237						
WHF	**Hehuan Shan**	**1.18**	**238**	*e*P	**Pn**	**21 49 05.7**	**0.0**
	baz=232						
WHF				*e*S	**Sn**	**21 49 22.5**	**-0.1**
	baz=232						
TWT	**Tachien**	**1.20**	**244**	*e*P	**Pn**	**21 49 06.3**	**+0.7**
	baz=238						
TWT				*e*S	**Sn**	**21 49 23.3**	**+0.8**
	baz=238						
TDCB	**Techi**	**1.21**	**245**	*e*P	**Pn**	**21 49 06.2**	**+0.5**
	baz=239						
TDCB				*e*S	**Sn**	**21 49 23.2**	**+0.4**
	baz=239						
LIOB	**Emei**	**1.23**	**264**	*e*P	**Pn**	**21 49 05.6**	**-0.2**
	baz=257						
LIOB				*e*S	**Sn**	**21 49 22.9**	**0.0**
	baz=257						
NSTT	**Nanjuang**	**1.24**	**263**	*e*P	**Pn**	**21 49 05.6**	**-0.3**
	baz=256						
NSTT				*e*S	**Sn**	**21 49 22.7**	**-0.5**
	baz=256						
ESL	**Shilin**	**1.28**	**221**	*e*P	**Pn**	**21 49 05.6**	**-0.8**
	baz=217						
ESL				*e*S	**Sn**	**21 49 22.8**	**-1.2**
	baz=217						
CHGB	**Renai**	**1.30**	**237**	*e*P	**Pn**	**21 49 07.2**	**+0.3**
	baz=232						
CHGB				*e*S	**Sn**	**21 49 24.9**	**+0.2**
	baz=232						
IRIF	**Iriomote-Funau**	**1.33**	**109**	P	**Pn**	**21 49 06.4**	**-0.5**
IRIF				*e*S	**Sn**	**21 49 25.5**	**+0.6**
OWD	**Renai**	**1.36**	**233**	*e*P	**Pn**	**21 49 07.4**	**0.0**
	baz=228						
OWD				*e*S	**Sn**	**21 49 25.5**	**-0.4**
	baz=228						
WUSB	**Renai**	**1.38**	**235**	*e*P	**Pn**	**21 49 08.0**	**+0.3**
	baz=231						
WHP	**Taichung City**	**1.38**	**249**	*e*P	**Pn**	**21 49 08.4**	**+0.7**
	baz=243						
WHP				*e*S	**Sn**	**21 49 26.9**	**+0.6**
	baz=243						
HATJ	**Hateruma jima**	**1.50**	**118**	P	**Pn**	**21 49 09.4**	**+0.3**
HATJ				S	**Sn**	**21 49 27.7**	**-1.1**
WCS	**Beigang Elemen**	**1.50**	**242**	*e*P	**Pn**	**21 49 09.9**	**+0.8**
	baz=237						
VWDT	**VWDT**	**1.51**	**228**	*e*P	**Pn**	**21 49 09.5**	**+0.3**
	baz=224						
VWDT				*e*S	**Sn**	**21 49 29.4**	**+0.4**
	baz=224						
HGSD	**Ruisui**	**1.54**	**214**	*e*P	**Pn**	**21 49 09.3**	**-0.3**
	baz=211						
EHY	**Hungye**	**1.58**	**217**	*e*P	**Pn**	**21 49 09.3**	**-0.8**
	baz=214						
EHY				*e*S	**Sn**	**21 49 29.1**	**-1.6**
	baz=214						
JKRS	**Kuro-shima**	**1.60**	**109**	P	**Pn**	**21 49 10.5**	**+0.2**
JKRS				*e*S	**Sn**	**21 49 31.4**	**+0.4**
SMLT	**Sun Moon Lake**	**1.60**	**236**	*e*P	**Pn**	**21 49 11.4**	**+0.9**
	baz=232						
SMLT				*e*S	**Sn**	**21 49 33.3**	**+2.1**
	baz=232						
SSLB	**Suanglung**	**1.62**	**233**	*e*P	**Pn**	**21 49 11.5**	**+0.9**
	baz=229						
SSLB				*e*S	**Sn**	**21 49 33.3**	**+1.8**
	baz=229						
TYC	**Yuchr**	**1.62**	**238**	*e*P	**Pn**	**21 49 11.7**	**+1.0**
	baz=233						
JIJ	**Ishigaki jima**	**1.68**	**104**	P	**Pn**	**21 49 11.0**	**-0.3**
JIJ				*e*S	**Sn**	**21 49 32.2**	**-0.5**
YULB	**Yu-li**	**1.69**	**215**	*e*P	**Pn**	**21 49 10.4**	**-1.1**
	baz=213						
YULB				*e*S	**Sn**	**21 49 31.6**	**-1.5**
	baz=213						
JISG	**Ishigakijimahi**	**1.79**	**96**	P	**Pn**	**21 49 12.6**	**-0.1**
JISG				*e*S	**Sn**	**21 49 35.1**	**-0.1**
FULB	**Fuli**	**1.85**	**212**	*e*P	**Pn**	**21 49 13.4**	**-0.2**
	baz=210						
FULB				*e*S	**Sn**	**21 49 37.3**	**+0.5**
	baz=210						
ALS	**Alishan**	**1.90**	**229**	*e*P	**Pn**	**21 49 15.5**	**+1.1**
	baz=225						
ALS				*e*S	**Sn**	**21 49 40.8**	**+2.5**
	baz=225						
CHKT	**Chengkung**	**1.91**	**209**	*e*P	**Pn**	**21 49 13.4**	**-0.9**
	baz=207						
CHKT				*e*S	**Sn**	**21 49 36.4**	**-1.5**
	baz=207						
EDH	**Donghe**	**2.04**	**208**	*e*P	**Pn**	**21 49 15.2**	**-0.8**
	baz=207						
EDH				*e*S	**Sn**	**21 49 39.7**	**-1.4**
	baz=207						
JTJ	**Tarama**	**2.14**	**93**	P	**Pn**	**21 49 17.2**	**0.0**
JTJ				*e*S	**Sn**	**21 49 43.9**	**+0.5**

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*SOF **30** 21:52:11.8, 41°.15N×24°.65E, h10^{km}, MD3.1*
*ISK **30** 21:52:12.5, 41°.15N×24°.66E, h6^{km}, ML3.1/20*
*ATH **30** 21:52:12.8, 41°.19N×24°.64E, h11^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=2.3km s-min=0.9km az=214.0*
*THE **30** 21:52:12.9, 41°.19N×24°.62E, h11^{km}, ML3.0/11, Error ellipse: s-maj=0.5km s-min=0.3km az=186.0*
*BEO **30** 21:52:13.6±0.7, 41°.14N×24°.64E, h10^{km}±2^{km}, ML3.0/7*
*DDA **30** 21:52:14.3±0.0, 41°.08N×24°.75E, h30^{km}±1^{km}, ML2.6*
ISC 30 21:52:13.4±0.8**, 41°.14N**±0°.02×**24°.64E**±0°.01**, h16^{km}**±6^{km}**, n104, σ1^{s}.26**/139**, 7C-9D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.17**	**214**	P	**Pg**	**21 52 17.7**	**-0.1**
KAVA				S	**Sg**	**21 52 20.5**	**0.0**
KAVA				AML	AML	21 52 20.8	
	comp=E,31602µm,0.1s						
KAVA				AML	AML	21 52 20.8	
	comp=N,41167µm,0.2s						
KAVA	**Kavala**	**0.17**	**214**	P	**Pg**	**21 52 17.6**	**-0.1**
KAVA				S	**Sg**	**21 52 20.6**	**0.0**
	comp=N,4µm,0.2s						
KVLA	**Kavala**	**0.28**	**223**	P	**Pg**	**21 52 19.5**	**0.0**
KVLA				S	**Sg**	**21 52 23.3**	**-0.2**
KVLA				AML	AML	21 52 23.8	
	comp=E,14417µm,0.3s						
KVLA				AML	AML	21 52 24.1	
	comp=N,6353µm,0.3s						
THAS	**Thassos island**	**0.54**	**174**	P	**Pb**	**21 52 24.2**	**-0.3**
THAS				S	**Sg**	**21 52 31.6**	**+0.3**
THAS	**Thassos island**	**0.54**	**174**	P	**Pb**	**21 52 24.2**	**-0.3**
THAS				S	**Sb**	**21 52 33.1**	**+1.2**
	comp=N,2µm,0.2s						
RZN	**Rozhen**	**0.55**	**6**	*i* P	**Pg**	**21 52 23.2**	**-1.2**
KOKK	**Kokkinochori,**	**0.58**	**237**	P	**Pg**	**21 52 24.5**	**-0.4**
KOKK				S	**Sg**	**21 52 32.7**	**+0.1**
KOKK	**Kokkinochori,**	**0.58**	**237**	P	**Pg**	**21 52 24.4**	**-0.5**
KOKK				S	**Sg**	**21 52 32.8**	**+0.1**
	comp=N,2µm,0.4s						
NVR	**Nevrokopi**	**0.62**	**290**	P	**Pg**	**21 52 24.0**	**-1.7**
NVR				S	**Sg**	**21 52 32.7**	**-1.2**
NVR				AML	AML	21 52 33.9	
	comp=E,1739µm,0.2s						
NVR				AML	AML	21 52 35.6	
	comp=N,1287µm,0.2s						
NVR	**Nevrokopi**	**0.62**	**290**	P	**Pg**	**21 52 24.0**	**-1.7**
NVR				S	**Sg**	**21 52 32.8**	**-1.2**
	comp=N,768nm,0.2s						
RDO	**Rodhopi**	**0.68**	**89**	P	**Pg**	**21 52 25.6**	**-1.1**
RDO				S	**Sg**	**21 52 34.8**	**-0.9**
RDO				AML	AML	21 52 39.0	
	comp=E,1751µm,0.3s						
RDO				AML	AML	21 52 39.0	
	comp=N,1919µm,0.3s						
RDO	**Rodhopi**	**0.68**	**89**	P	**Pg**	**21 52 25.7**	**-1.0**
RDO				S	**Sb**	**21 52 36.1**	**+0.1**
	comp=N,872nm,0.2s						
RDO	**Rodhopi**	**0.68**	**89**	PG	**Pg**	**21 52 25.7**	**-1.0**
RDO				SG	**Sg**	**21 52 35.1**	**-0.5**
KDZ	**Kurdzhali**	**0.77**	**49**	*i* P	**Pg**	**21 52 25.8**	**-2.7**
SRS	**Serrai**	**0.79**	**269**	*e*Pg	**Pg**	**21 52 27.8**	**-1.0**
SRS				*e*Sg	**Sg**	**21 52 39.0**	**-0.3**
SRS	**Serrai**	**0.79**	**269**	P	**Pg**	**21 52 27.4**	**-1.4**
SRS	**Serrai**	**0.79**	**269**	P	**Pg**	**21 52 27.5**	**-1.4**
SRS				S	**Sb**	**21 52 39.3**	**0.0**
	comp=N,2µm,0.2s						
MMB	**Musomiste**	**0.82**	**303**	*i* P	**Pg**	**21 52 27.7**	**-1.7**
OUR	**Ouranopolis**	**0.95**	**212**	P	**Pg**	**21 52 31.3**	**-0.4**
OUR	**Ouranopolis**	**0.95**	**212**	P	**Pg**	**21 52 31.4**	**-0.4**
OUR				S	**Sn**	**21 52 45.7**	**+0.5**
	comp=N,892nm,0.3s						
OUR	**Ouranopolis**	**0.95**	**212**	PG	**Pg**	**21 52 31.5**	**-0.3**
OUR				SG	**Sn**	**21 52 45.3**	**+0.1**
SMTH	**Samothraki Isl**	**0.95**	**134**	P	**Pg**	**21 52 31.3**	**-0.5**
SMTH				S	**Sn**	**21 52 45.0**	**-0.4**
SMTH				AML	AML	21 52 47.1	
	comp=N,1044µm,0.3s						
SMTH				AML	AML	21 52 47.5	
	comp=E,1299µm,0.3s						
SMTH	**Samothraki Isl**	**0.95**	**134**	P	**Pg**	**21 52 31.4**	**-0.5**
SMTH				S	**Sn**	**21 52 46.3**	**+0.9**
	comp=E,542nm,0.3s						
PLD	**Plovdiv**	**0.96**	**3**	*e*Pg	**Pg**	**21 52 31.2**	**-0.9**
PLD				*e*Sg	**Sb**	**21 52 44.4**	**+0.1**
PLD	**Plovdiv**	**0.96**	**3**	PG	**Pg**	**21 52 31.2**	**-0.9**
PLD	**Plovdiv**	**0.96**	**3**	*i* P	**Pg**	**21 52 31.2**	**-0.9**
SOH	**Sokhos**	**1.02**	**252**	P	**Pg**	**21 52 32.2**	**-1.1**
SOH	**Sokhos**	**1.02**	**252**	P	**Pg**	**21 52 32.2**	**-1.1**
SOH				S	**Sb**	**21 52 46.7**	**+0.7**
	comp=E,858nm,0.4s						
ALN	**Alexandroupoli**	**1.09**	**102**	P	**Pb**	**21 52 33.6**	**-0.3**
ALN	**Alexandroupoli**	**1.09**	**102**	P	**Pb**	**21 52 33.6**	**-0.3**
ALN	**Alexandroupoli**	**1.09**	**102**	PN	**Pg**	**21 52 33.8**	**-0.7**

ALN				SN	Sn	21 52 49.2	+0.4
DIM	Dimitrovgrad	1.13	36	i P	Pg	21 52 34.3	-0.9
PLG	Polygyros	1.19	230	P	Pn	21 52 34.7	-0.7
PLG	Polygyros	1.19	230	P	Pn	21 52 35.0	-0.4
PLG				S	Sg	21 52 51.6	-0.2
	comp=E,800nm,0.3s						
ENEZ	Enez	1.22	109	PN	Pg	21 52 36.1	-0.7
CAVK	Edirne/Enez-Ca	1.24	111	P	Pb	21 52 36.2	-0.2
CAVK				S	Sg	21 52 53.8	+0.3
CAVK				i AML	AML	21 52 58.0	
	comp=E,177nm,0.5s						
CAVK				i AML	AML	21 52 59.0	
	comp=E,225nm,0.5s						
HORT	Hortiatis	1.29	246	P	Pn	21 52 36.7	-0.1
HORT	Hortiatis	1.29	246	P	Pn	21 52 36.2	-0.6
HORT	Hortiatis	1.29	246	PN	Pg	21 52 37.7	-0.5
LIA	Limnos Island	1.31	161	P	Pn	21 52 37.0	0.0
KNT	Kendrikon	1.32	271	P	Pn	21 52 36.2	-0.9
KNT				S	Sb	21 52 54.0	-0.4
	comp=E,572nm,0.3s						
KNT	Kendrikon	1.32	271	PN	Pn	21 52 37.4	+0.3
GADA	Gvkgeada	1.35	134	PN	Pb	21 52 38.1	-0.2
GOKA	anakkale-Gk	1.35	134	P	Pb	21 52 38.0	-0.3
GOKA				S	Sn	21 52 56.1	+0.8
GOKA				i AML	AML	21 52 58.0	
	comp=E,453nm,0.5s						
KKB	Krupnik	1.38	302	i P	Pn	21 52 37.4	-0.6
PAIG	Paliouri	1.42	211	P	Pn	21 52 38.1	-0.4
PGB	Panagyurishte	1.45	346	i P	Pn	21 52 38.9	-0.2
ERIK	Erikli-Kesan	1.50	108	PN	Pb	21 52 40.1	-0.7
UKOP	Uzunkopru-Edir	1.50	90	PN	Pb	21 52 40.4	-0.5
VAY	Valandovo	1.57	277	ePn	Pb	21 52 41.5	-0.6
VAY				eSn	Sb	21 53 02.0	+0.3
KESN	Edirne-Kesan	1.58	101	P	Pn	21 52 41.0	0.0
KESN				S	Sn	21 53 01.5	+0.2
KESN				i AML	AML	21 53 07.0	
	comp=E,162nm,0.3s						
KESN				i AML	AML	21 53 10.0	
	comp=E,208nm,0.4s						
GELI	Tayfur-Gelibol	1.58	117	PN	Pb	21 52 41.5	-0.7
BOZC	Bozcaada	1.69	140	PN	Pn	21 52 42.8	+0.6
BOZC	Bozcaada	1.69	140	P	Pn	21 52 42.9	+0.6
BOZC				S	Sb	21 53 04.7	-0.3
BOZC				i AML	AML	21 53 09.0	
	comp=E,101nm,0.6s						
BOZC				i AML	AML	21 53 10.0	
	comp=E,98nm,0.7s						
GRG	Griva	1.70	265	P	Pn	21 52 41.6	-0.9
GRG	Griva	1.70	265	PN	Pn	21 52 43.4	+0.9
EDRB	Edirne	1.73	65	P	Pn	21 52 42.6	-0.3
EDRB	Edirne	1.73	65	PN	Pn	21 52 42.5	-0.3
VTS	Vitosha	1.81	325	ePg	Pb	21 52 46.2	-0.1
VTS				eSg	Sg	21 53 10.5	-1.2
VTS	Vitosha	1.81	325	i P	Pn	21 52 44.8	+0.7
EZN	Ezine	1.84	135	P	Pn	21 52 44.2	-0.1
EZN	Ezine	1.84	135	PN	Pn	21 52 44.8	+0.5
LIT	Litokhoron	1.94	238	P	Pn	21 52 45.2	-0.5
JMB	Yambol	1.97	47	eP	Pg	21 52 50.6	-0.5
KOCA	Canakkale, Ayv	2.00	145	P	Pn	21 52 47.6	+1.1
KOCA				S	Sn	21 53 03.5	-7.6
KOCA				i AML	AML	21 53 07.0	
	comp=E,60nm,0.2s						
KOCA				i AML	AML	21 53 09.0	
	comp=E,38nm,0.2s						
BAYC	CANAKKALE_Bayr	2.02	133	P	Pn	21 52 48.0	+1.2
BAYC				S	Sn	21 53 12.3	+0.6
BAYC				i AML	AML	21 53 14.0	
	comp=E,28nm,0.3s						
BAYC				i AML	AML	21 53 16.0	
	comp=E,33nm,0.2s						
MAR6	Marsite Statio	2.04	102	PN	Pn	21 52 48.1	+1.1
MAR3	Marsite Statio	2.05	100	PN	Pn	21 52 48.5	+1.3
GZKV	Gazikoy-Tekird	2.07	100	PN	Pn	21 52 48.6	+1.1
XOR	Xorichti	2.09	212	P	Pn	21 52 47.6	-0.2
BOSS	Bosilegrad	2.11	311	ePn	Pn	21 52 49.4	+1.4
BOSS				eSn	Sb	21 53 16.7	-0.5
NEO	Neokhori	2.13	211	P	Pn	21 52 47.9	-0.4
KRBG	Karabiga-Canak	2.15	109	PN	Pn	21 52 49.7	+1.1
MRMT	Marmara Adasi	2.30	103	PN	Pn	21 52 51.4	+0.6
MPEP	Malo Peshtene	2.31	343	i P	Pb	21 52 55.4	+0.7
PRVS	Prvonek	2.35	306	ePn	Pn	21 52 52.4	+1.0
PRVS				eSn	Sn	21 53 21.3	+1.3
BUHA	Balikesir, Bur	2.48	131	P	Pn	21 52 54.5	+1.4
BUHA				S	Sn	21 53 23.8	+0.7
BUHA				i AML	AML	21 53 24.0	
	comp=E,54nm,0.3s						
BUHA				i AML	AML	21 53 38.0	
	comp=E,31nm,0.6s						
FNA	Florina	2.50	263	ePn	Pn	21 52 53.7	+0.3
EDC	Edincik	2.57	107	PN	Pn	21 52 55.7	+1.3
BARS	Barje	2.69	309	ePn	Pn	21 52 56.6	+0.6
BARS	Barje	2.69	309	ePn	Pg	21 53 07.1	+2.1
BARS				eSn	Sn	21 53 28.1	-0.2
DKL	Dikili	2.70	139	PN	Pn	21 52 57.7	+1.6
VLAD	Vladila	2.86	357	⇑P	Pn	21 52 59.6	+1.2
URLA	Izmir	3.16	151	PN	Pn	21 53 03.5	+1.0
ZAGS	Zajecar	3.21	327	ePn	Pn	21 53 03.7	+0.6
BOVS	Bovan	3.31	320	⇑P	Pn	21 53 07.4	+2.9
BOVS	Bovan	3.31	320	ePn	Pn	21 53 05.4	+0.9
BOVS				eSn	Sn	21 53 44.9	+1.4
SELS	Selova	3.34	310	ePn	Pn	21 53 06.3	+1.3
IGT	Igoumenitsa	3.66	245	ePn	Pn	21 53 11.3	+1.9
GRUS	Gruza	3.99	315	ePn	Pn	21 53 13.8	-0.1
HERR	Herculane	4.08	337	⇓P	Pn	21 53 14.0	-1.1
MDVR	Moldovita	4.22	330	⇓P	Pn	21 53 17.4	+0.3
HARR	Harsova	4.29	33	⇑P	Pg	21 53 32.0	-3.6
VOIR		4.30	4	⇓P	Pn	21 53 19.3	+1.0
TIRR	Tirgusor	4.32	39	⇓P	Pg	21 53 34.5	-1.6
TIRR	Tirgusor	4.32	39	⇓P	Pg	21 53 34.5	-1.6
LOT	Lotru	4.35	352	⇑P	Pn	21 53 19.8	+0.8
MLR	Muntele Rosu	4.45	12	⇓P	Pn	21 53 25.3	+5.0
GZR	Gura Zlata	4.46	343	⇑P	Pn	21 53 21.3	+0.8
TPGR	Topolog	4.63	35	⇑P	Pb	21 53 37.2	+2.9
PLOR	Plostina	4.93	17	⇓P	Pn	21 53 29.4	+2.5
VRI	Vrincioaia	4.96	17	⇑P	Pn	21 53 29.1	+1.9
VLDR	Vladesti	5.33	27	⇓P	Pn	21 53 35.5	+3.3
TESR	Tescani	5.56	14	⇓P	Pn	21 53 38.1	+2.6

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*JMA **30** 21:57:45.6±0.1, 36°.6N±0°.5×138°.8E±0°.6, h154km±1km, MV3.7/40, NW GUNMA PREF*

*NEIC **30** 21:57:45.3±1.6, 36°.65N±0°.05×138°.75E±0°.06, h153km±4km, mb4.2/57, Error ellipse: s-maj=7.5km s-min=7.1km az=181.0*

*NIED **30** 21:57:45.6, 36°.63N×138°.75E, h154km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.60; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-0.42; $M_{r\theta}$1.01; $M_{\theta\phi}$-0.71; $M_{\phi r}$0.28; Fault plane solution: $M_0$1.37000×10^{15} NP1: ϕ_s187.00000°, δ30.00000°, λ32.00000°. NP2: ϕ_s69.00000°, δ75.00000°, λ117.00000°.*

*IDC **30** 21:57:45.1±0.5, 36°.67N×138°.58E, h153km±3km, mb3.5/21, mbtmp4.0/26, MS1.8/1 Error ellipse: s-maj=13.6km s-min=10.9km az=90.0*

ISC 30 21:57:45.2±0.6**, 36°.68N**±0°.04×**138°.72E**±0°.05**, h153**km±5km**,**
n127, σ1.^{s}03/145**, mb4.0**/49**, 9D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGK	Kuni	0.14	209	P	Pn	21 58 06.6	+0.8
JGK				S	Sn	21 58 22.5	+1.1
JKT	Katashina	0.43	79	P	Pn	21 58 07.3	+0.7
JKT				S	Sn	21 58 23.5	+0.5
MJAR	Matsushiro Arr	0.44	251	P	Pn	21 58 06.1	-0.5
	344nm,0.3s,baz=128,slow=3.3,SNR=1002						
MJAR				S	Sn	21 58 23.7	+0.8
	304nm,0.5s,baz=285,slow=5.9,SNR=7.0						
MAJO	Matsushiro	0.44	251		Pn	21 58 07.1	+0.5
MAJO				Sn	Sn	21 58 23.0	+0.1
MAT	Matsushiro	0.44	251	P	Pn	21 58 07.2	+0.6
MAT				S	Sn	21 58 23.1	+0.3
MJB9	Matsu-Tunnel	0.44	252		Pn	21 58 07.1	+0.5
MJB9					Sn	21 58 22.9	-0.1
JAG	Ashikaga	0.64	114	P	Pn	21 58 08.0	+0.4
JAG				S	Sn	21 58 25.1	+0.3
JRY	Ryogami san	0.68	168	i P	Pn	21 58 08.2	+0.3
JRY				eS	Sn	21 58 25.4	+0.1
JYN	Shimob	1.19	187	i P	Pn	21 58 12.1	0.0
JYN				S	Sn	21 58 32.7	+0.1
JNS	Sasagawa	1.23	23	⇓iP	Pn	21 58 13.3	+1.1
JYT	Yasato	1.27	111		Pn	21 58 12.3	-0.3
JYT					Sn	21 58 32.4	-1.2
JSZ	Suzu	1.33	305	⇓iP	Pn	21 58 14.1	+0.9
JSZ				⇓eS	Sn	21 58 35.8	+1.2
JSD	Sado	1.40	345	Pn	Pn	21 58 14.5	+0.6
JSD	Sado	1.40	345	⇓iP	Pn	21 58 14.7	+0.8
JSD				⇓eS	Sn	21 58 36.8	+0.8
JOD2	Odawara 2	1.45	168	P	Pn	21 58 13.9	-0.6
JFNN	Fujinakano	1.49	181	P	Pn	21 58 15.5	+0.7
JFT	Otama	1.54	57	P	Pn	21 58 16.8	+1.5
JGF	Kuroka	1.55	226		Pn	21 58 15.9	+0.4
JAW	Awa shima	1.82	13	⇓iP	Pn	21 58 19.6	+1.3
JAW				⇓eS	Sn	21 58 45.9	+2.0
JHG	Hegura jima	1.85	309	⇓P	Pn	21 58 19.5	+0.8
INU	Inuyama	1.92	227	Pn	Pn	21 58 20.0	+0.5
JYTA	Yamagatataniai	1.94	237	i P	Pn	21 58 20.7	+0.9
JYTA				S	Sn	21 58 47.2	+0.8
JKG	Kaga	1.97	259	⇓P	Pn	21 58 21.3	+1.2
JMM	Marumori	2.03	54	Pn	Pn	21 58 22.0	+1.3
JHJ	Hachijo jima 2	3.66	166	P	Pn	21 58 41.1	0.0
	269nm,0.3s,baz=201,slow=2.3,SNR=23						
JHJ				S	Sn	21 59 27.9	+3.4
	152nm,0.3s,baz=69,slow=23,SNR=1.6						
JHJ2	Mitsune	3.67	166	Pn	Pn	21 58 40.9	-0.4
JTM	Tenmabayashi	4.49	23	Pn	Pn	21 58 53.0	+1.2
JHS	Saijyo	4.86	251	Pn	Pn	21 58 57.7	+0.9
ERM	Erimo	6.33	31	Pn	Pn	21 59 15.4	-0.9
JTU	Tsushima	7.89	257	Pn	Pn	21 59 37.8	+0.7
ASAJ	Asahikawa	7.99	20	P	Pn	21 59 37.0	-1.3
	14nm,0.3s,baz=213,slow=11,SNR=48						
ASAJ				S	Sn	22 01 02.6	-4.7
	2.3nm,0.4s,baz=85,slow=29,SNR=1.2						
JKA	Kamikawa-asahi	7.99	21	Pn	Pn	21 59 37.5	-0.8
KSRS	Korea Array	8.67	278	P	Pn	21 59 46.3	-1.1
	2.4nm,0.9s,baz=93,slow=14,SNR=12						
KSRS				LR	LR	22 02 08.7	
	comp=Z,6.2nm,21.8s,baz=235,slow=31						
USA0B	Ussuriysk Arra	9.09	328	Pn	Pn	21 59 56.4	+3.5
USRK	Ussuriysk Ar.	9.09	328	P	Pn	21 59 53.4	+0.4
	3.8nm,0.7s,baz=152,slow=14,SNR=4.3						
USRK	Ussuriysk Ar.	9.09	328		Pn	21 59 51.6	-1.4
YSS	Yuzh-Sakhalins	10.69	15	Pn	Pn	22 00 12.4	-1.7
KLR	Kul'dur	13.53	340	P	Pn	22 00 49.5	-1.3
	0.9nm,0.3s,baz=147,slow=16,SNR=2.1						
PETK	Petropavlovsk-	21.11	33	P	P	22 02 17.8	+0.3
	3.7nm,1.1s,baz=219,slow=6.1,SNR=1.5						
	3.7nm,1.1s						
MA2	Magadan	24.20	15	P	P	22 02 47.0	-0.2
	11nm,0.5s,baz=197,slow=9.9,SNR=8.7						
	11nm,0.5s						
MA2	Magadan	24.20	15	P	P	22 02 48.1	+0.9
MA2				IAmb	IAmb	22 02 48.7	
	comp=Z,12nm,0.7s						
SONM	Songino Array	26.21	305	P	P	22 03 04.0	-1.7
	comp=Z,0.3nm,0.5s,baz=161,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.5s						
TIXI	Tiksi	35.41	355	P	P	22 04 25.7	-0.1
TIXI				IAmb	IAmb	22 04 26.3	
	comp=Z,6.3nm,1.5s						
FAKI	Fak Fak	39.86	190	P	P	22 05 03.6	-0.2
ZAA0	Zalesovo Array	40.56	313	P	P	22 05 08.9	-0.3
ZALV	Zalesovo Beam	40.56	313	P	P	22 05 09.5	+0.2
	comp=Z,1.3nm,0.3s,baz=101,slow=8.7,SNR=6.2						
ZALV				PcP	PcP	22 07 07.4	-1.0
	comp=Z,0.8nm,0.3s,baz=120,slow=3.5,SNR=4.5						
	comp=Z,1.3nm,0.3s						
ZALV	Zalesovo Beam	40.56	313	P	P	22 05 08.4	-0.9
MK31	Makanchi Array	42.48	302	P	P	22 05 25.3	+0.3
MKAR	Makanchi Array	42.48	302	P	P	22 05 24.0	-1.0
	comp=Z,0.7nm,0.5s,baz=82,slow=10.0,SNR=13						
MKAR				PcP	PcP	22 07 15.0	+0.1
	comp=Z,0.3nm,0.5s,baz=78,slow=6.7,SNR=2.8						
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	42.48	302	P	P	22 05 25.1	+0.1
MAKZ	Makanchi	42.69	302	P	P	22 05 26.4	-0.3
NRIK	Noril'sk	42.69	336	P	P	22 05 25.8	-0.6
	comp=Z,1.7nm,0.5s,baz=124,slow=7.6,SNR=2.7						
	comp=Z,1.7nm,0.5s						
NRIK	Noril'sk	42.69	336	P	P	22 05 26.4	0.0
NRIK				IAmb	IAmb	22 05 27.3	
	comp=Z,8.2nm,1.4s						
KURK	Kurchatov	44.45	308	P	P	22 05 39.3	-1.4
KURK				IAmb	IAmb	22 05 40.8	
	comp=Z,2.3nm,0.6s						
KDJ	Kajisay	46.96	297	P	P	22 05 59.7	-1.0
KDJ				IAmb	IAmb	22 06 02.1	
	comp=Z,3.7nm,0.9s						
MYKOM	Kota Tinggi	47.34	231	P	P	22 06 02.8	-1.0
BOOM	Boomskoye usch	47.76	297	P	P	22 06 06.1	-0.8
J20K	Nowinta River	47.81	33	P	P	22 06 06.9	+0.2
K20K	Telida	47.83	34	P	P	22 06 06.4	-0.6
K20K				IAmb	IAmb	22 06 26.0	
	comp=Z,8.6nm,1.5s						
IMAR	Indian Mountai	48.05	31	P	P	22 06 08.4	-0.2
KDAK	Kodiak Island	48.80	42	P	P	22 06 14.8	+0.5
	comp=Z,2.6nm,0.3s,baz=286,slow=3.4,SNR=13						
	comp=Z,2.6nm,0.3s						
KDAK	Kodiak Island	48.80	42	P	P	22 06 14.8	+0.5
BRVK	Borovoye	49.27	312	P	P	22 06 17.4	-0.7
BRVK				IAmb	IAmb	22 06 18.9	
	comp=Z,2.3nm,0.7s						
MLY	Manley	49.29	32	P	P	22 06 18.3	+0.2
COLD	Coldfoot	49.50	29	P	P	22 06 20.1	+0.5
H23K	Yukon River	49.77	31	P	P	22 06 23.0	+1.3
H23K				IAmb	IAmb	22 06 25.4	
	comp=Z,5.8nm,1.2s						
H24K	Noodor Dome	50.46	31	P	P	22 06 27.9	+1.0
H24K				IAmb	IAmb	22 06 43.9	
	comp=Z,4.9nm,1.5s						
CCB	Clear Creek Bu	50.56	32	P	P	22 06 27.5	-0.1
DHY	Denali Highway	50.87	34	P	P	22 06 31.1	+0.9
DHY				IAmb	IAmb	22 06 38.2	
	comp=Z,4.0nm,1.1s						
ILAR	Eielson Array	50.94	32	P	P	22 06 31.1	+0.7
	comp=Z,0.8nm,0.6s,baz=262,slow=4.9,SNR=9.6						
	comp=Z,0.8nm,0.6s						
ILAR	Eielson Array	50.94	32	P	P	22 06 30.8	+0.4
HDA	Harding Lake	50.94	33	P	P	22 06 30.5	0.0
HDA				IAmb	IAmb	22 06 31.8	
	comp=Z,6.5nm,1.4s						
KK31	Karatay Array	51.43	300	P	P	22 06 33.7	-0.8
KK31				IAmb	IAmb	22 06 35.7	
	comp=Z,4.1nm,1.2s						
KKAR	Karatay Array	51.43	300	P	P	22 06 34.5	+0.1
J25K	Salcha River,	51.60	32	P	P	22 06 35.7	+0.2
BMAR	Burnt Mountain	51.67	29	P	P	22 06 36.7	+0.7
RIDG	Independent Ri	51.93	33	P	P	22 06 37.9	-0.1
RIDG				IAmb	IAmb	22 06 54.0	
	comp=Z,7.1nm,1.5s						
SCRK	Sand Creek	52.28	33	P	P	22 06 40.5	0.0
SCRK				IAmb	IAmb	22 06 41.8	
	comp=Z,2.8nm,0.8s						
J26L	Joseph Creek	52.39	32	P	P	22 06 41.6	+0.3
GAR	Garm	52.89	295	P	P	22 06 45.6	+0.1
GAR				IAmb	IAmb	22 06 46.4	
	comp=Z,3.3nm,0.5s						
KNRA	Kununurra	52.92	192	P	P	22 06 45.7	+0.2
K27K	Chicken	53.10	33	P	P	22 06 47.0	+0.6
K27K				IAmb	IAmb	22 06 48.6	
	comp=Z,1.8nm,0.5s						
L27K	Beaver Creek,	53.37	34	P	P	22 06 49.7	+1.2
L27K				IAmb	IAmb	22 06 51.3	
	comp=Z,3.3nm,1.1s						
BCAR	Beaver Creek A	53.39	34	P	P	22 06 50.0	+1.3
M27K	Edge Creek, AK	53.48	35	P	P	22 06 51.3	+1.9
M27K				IAmb	IAmb	22 06 51.7	
	comp=Z,2.3nm,0.8s						
CHGR	Chuyangaron	53.86	295	P	P	22 06 52.1	-0.4
EPYK	Eagle Plains	54.89	29	P	P	22 07 01.3	+1.9
EPYK				IAmb	IAmb	22 07 02.2	
	comp=Z,7.7nm,0.9s						
ARU	Arti	55.19	318	P	P	22 07 01.6	0.0
ARU				IAmb	IAmb	22 07 02.6	
	comp=Z,10nm,1.4s						
INK	Inuvik	55.67	27	P	P	22 07 05.7	+0.8
	comp=Z,1.1nm,0.5s,baz=268,slow=4.2,SNR=3.9						
	comp=Z,1.1nm,0.5s						
M30M	Minto, Yukon	55.74	34	P	P	22 07 07.1	+1.6
WB0	Warramunga Arr	56.29	185	P	P	22 07 08.2	-1.7
WB0				IAmb	IAmb	22 07 10.7	
	comp=Z,7.8nm,1.1s						
WB2	Warramunga Arr	56.47	185	P	P	22 07 08.9	-2.2
WB2				IAmb	IAmb	22 07 14.7	
	comp=Z,6.8nm,1.2s						
WRA	Warramunga Arr	56.47	185	P	P	22 07 10.7	-0.5
	comp=Z,1.8nm,0.3s,baz=360,slow=7.5,SNR=79						
	comp=Z,1.8nm,0.3s						
WRA	Warramunga Arr	56.47	185	P	P	22 07 09.3	-1.8
WR0	Warramunga Arr	56.48	185	P	P	22 07 10.8	-0.3
WR0				IAmb	IAmb	22 07 14.2	
	comp=Z,7.3nm,1.4s						
ABKAR	Akbulak array	56.51	310	P	P	22 07 10.5	-0.6
A36M	Sachs Harbour	57.38	22	P	P	22 07 18.7	+1.8
C36M	Paulatuk	58.64	24	P	P	22 07 25.7	0.0
C36M				IAmb	IAmb	22 07 27.8	
	comp=Z,4.0nm,1.0s						
AS31	Alice Springs	60.20	185	P	P	22 07 35.9	-1.1
ASAR	Alice Springs	60.20	185	P	P	22 07 36.5	-0.5
	comp=Z,0.4nm,0.3s,baz=356,slow=4.9,SNR=17						
	comp=Z,0.4nm,0.3s						
SPB2	Spitsbergen Ar	60.44	348	P	P	22 07 38.4	+0.5
PSA00	Pilbara Seismi	60.62	200	P	P	22 07 38.7	-1.1
PSA00				IAmb	IAmb	22 08 05.2	
	comp=Z,5.8nm,1.4s						
EUNU	Eureka	60.84	8	P	P	22 07 41.1	+0.3
EUNU				IAmb	IAmb	22 07 45.8	
	comp=Z,9.4nm,1.4s						
ARCES	ARCESS Array B	63.55	339	P	P	22 07 59.2	+0.3
	comp=Z,5.8nm,0.4s,baz=50,slow=8.4,SNR=2.2						
YKA	Yellowknife Ar	65.18	29	P	P	22 08 09.8	+0.3
	comp=Z,0.4nm,0.5s,baz=302,slow=5.4,SNR=2.7						
	comp=Z,0.4nm,0.5s						
FORT	Forrest	67.85	190	P	P	22 08 26.9	+0.2
FIA1	FINESS Array S	68.10	331	P	P	22 08 27.8	-0.2
FIA1				IAmb	IAmb	22 08 56.1	
	comp=Z,2.7nm,0.9s						
FINES	FINESS Array B	68.10	331	P	P	22 08 27.8	-0.2
	comp=Z,0.7nm,0.3s,baz=46,slow=6.5,SNR=17						
	comp=Z,0.7nm,0.3s						
MORW	Morawa	68.79	201	P	P	22 08 32.9	+0.3
G03D	McMinnville, O	70.03	48	P	P	22 08 39.5	-0.6
H04A	Detroit Lake	70.96	48	P	P	22 08 46.1	+0.2
SUMG	Summit	71.02	359	P	P	22 08 46.5	+0.3
SUMG				IAmb	IAmb	22 08 47.8	
	comp=Z,3.9nm,0.7s						
AKASG	Malin Array Be	73.24	321	P	P	22 08 58.6	-0.7
	comp=Z,0.5nm,0.3s,baz=47,slow=5.9,SNR=6.4						
	comp=Z,0.5nm,0.3s						
NC405	NORSAR Array S	73.44	336	P	P	22 09 00.1	-0.2
HFS	Hagfors	73.50	335	P	P	22 09 00.6	0.0
	comp=Z,0.5nm,0.4s,baz=57,slow=10,SNR=2.3						
	comp=Z,0.5nm,0.4s						
NB2	NORSAR Subarra	73.66	336	P	P	22 09 01.5	-0.1
	comp=Z,1.9nm,0.6s,baz=42,slow=5.9						
NOA	NORSAR Array B	73.66	336	P	P	22 09 01.3	-0.3
	comp=Z,2.2nm,0.7s,baz=41,slow=6.0,SNR=11						
	comp=Z,2.2nm,0.7s						
BEKR	Beckworth	74.78	52	P	P	22 09 09.8	+1.2
DLMT	Dillon	76.09	43	P	P	22 09 18.0	+2.0
DLMT				IAmb	IAmb	22 09 18.9	
	comp=Z,3.1nm,0.9s						
NVAR	Mina Array Bea	76.91	52	P	P	22 09 22.2	+1.4
	comp=Z,0.9nm,0.8s,baz=289,slow=4.5,SNR=5.9						
	comp=Z,0.9nm,0.8s						
BURAR	Bucovina Array	77.23	320	P	P	22 09 22.5	+0.2
PDAR	Pinedale Array	79.43	44	P	P	22 09 35.8	+1.1
	comp=Z,0.5nm,0.6s,baz=288,slow=3.6,SNR=6.9						
	comp=Z,0.5nm,0.6s						
PDAR	Pinedale Array	79.43	44	P	P	22 09 36.0	+1.3
GERES	GERESS Array B	81.85	327	P	P	22 09 47.0	-0.2
	comp=Z,0.3nm,0.5s,baz=40,slow=7.7,SNR=3.9						
	comp=Z,0.3nm,0.5s						
EKA	Eskdalemuir Ar	82.72	339	P	P	22 09 51.2	-0.2
	comp=Z,0.1nm,0.3s,baz=28,slow=5.6,SNR=4.3						
	comp=Z,0.1nm,0.3s						
TXAR	Lajitas Array	92.03	51	P	P	22 10 38.1	+1.1
	comp=Z,0.1nm,0.4s,baz=286,slow=4.6,SNR=2.7						
	comp=Z,0.1nm,0.4s						
TXAR	Lajitas Array	92.03	51	P	P	22 10 38.6	+1.5

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*IDC **30** 21:59:11.0±1.5, 35°.53N×4°.01W, h0km, mb3.2/2, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=44.4km s-min=13.2km az=97.0*

*SFS **30** 21:59:11.0, 35°.50N×3°.70W, ML3.3, ALBORAN SUR*

*MDD **30** 21:59:11.8±0.3, 35°.52N×3°.78W, h0km, mb_Lg3.3/24, Error ellipse: s-maj=2.8km s-min=1.8km az=173.0*

*CNRM **30** 21:59:12.2, 35°.56N×3°.72W, h23km, ml3.6*

*INMG **30** 21:59:12.2±2.2, 35°.62N×3°.76W, h0km±6km, ML2.9, Error ellipse: s-maj=6.1km s-min=3.7km az=20.0*

*IGIL **30** 21:59:13.9, 35°.52N×3°.78W, h10km, ML2.7*

*LDG **30** 21:59:13.6, 35°.30N×3°.65W, h30km*

ISC 30 21:59:10.3±1.1**, 35°.56N**±0°.02×**3°.78W**±0°.02**, h4**km±8km**,**
n111, σ2.^{s}02/188**, 1C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.37	201	S	Sg	21 59 19.5	-2.7
PALE	Palemas	0.37	201	P	Sg	21 59 19.5	-2.7
PALE				S	Sb	21 59 24.8	-0.6
PVLZ	Peæn de	0.58	228	P	Pg	21 59 13.3	-8.1
PVLZ				S	Sb	21 59 32.0	+0.5
EALB	Alboran	0.71	58	Pg	Pg	21 59 24.5	+0.5
EALB				Sg	Sb	21 59 36.7	+1.3
EALB				i Vmb_Lg		21 59 39.3	
WMELI	Melilla	0.72	110	P	Pb	21 59 26.0	+0.7
WMELI				S	Sb	21 59 35.1	-0.3
EMEL	Melilla	0.72	111	Pg	Pb	21 59 25.9	+0.6
EMEL				Sg	Sg	21 59 33.7	+0.3
GOG	Mont Gurugu	0.72	118	P	Pb	21 59 25.7	+0.3
GOG				S	Sb	21 59 34.8	-0.9
AKLM	AKL	1.05	184	P	Pn	21 59 31.6	-0.2
AKLM				S	Sb	21 59 44.9	-0.2
CHAS	Isla Isabel II	1.16	109	P	Pg	21 59 32.4	-0.2
CHAS				S	Sg	21 59 46.7	-1.0
EMIJ	Mijas	1.29	321	Pg	Pn	21 59 34.7	-0.3
EMIJ				Sg	Sg	21 59 51.8	+0.1
EMIJ				i Vmb_Lg		21 59 58.1	
ELGU	Los Guajares,	1.31	5	Pg	Pn	21 59 35.2	-0.2
ELGU				Sg	Sg	21 59 51.8	-0.6
CEU	Ceuta	1.34	285	P	Pn	21 59 34.1	-1.6
CEU				S	Sb	21 59 49.3	-4.2
TAF	Taforalt	1.34	123	P	Pg	21 59 42.0	+6.0
TAF	Taforalt	1.34	123	P	Pn	21 59 35.3	-0.6
TAF				S	Sg	21 59 52.7	-0.7
ECEU	Ceuta	1.34	285	Pg	Pn	21 59 34.7	-1.1
ECEU				Sg	Sb	21 59 52.8	-0.8
ECEU				i Vmb_Lg		21 59 58.7	
CHEFC	Chefchaouen	1.36	251	P	Pg	21 59 37.3	+1.0
CHEFC	Chefchaouen	1.36	251	P	Pg	21 59 37.1	+0.8
CHEFC				S	Sn	21 59 56.3	+1.8
EBER	Berja	1.52	28	Pg	Pn	21 59 38.6	+0.3
EBER				Sg	Sg	22 00 02.1	+3.2
EBER				i Vmb_Lg		22 00 11.8	
EGOR	Sierra Gorda,	1.57	350	Pg	Pg	21 59 40.6	+0.2
EGOR				Sg	Sg	22 00 01.1	+0.3
EGOR				i Vmb_Lg		22 00 09.5	
JBK	JBK	1.58	141	P	Pg	21 59 43.0	+2.5
JBK	JBK	1.58	141	P	Pn	21 59 38.3	-0.9
JBK				S	Sn	21 59 58.2	-1.9
EJIF	Jimena Fronter	1.64	303	Pg	Pb	21 59 41.1	+0.1
EQUE	Quentar	1.66	9	Pg	Pg	21 59 42.5	+0.3
EQUE				Sg	Sn	22 00 01.5	-0.6
EQUE				i Vmb_Lg		22 00 13.7	
LIJA	Lijar	1.88	316	P	Pg	21 59 46.0	-0.3
LIJA				S	Sn	22 00 05.8	-1.7
ENIJ	Nijar	1.90	42	Pn	Pn	21 59 42.5	-0.9
ENIJ				Sn	Sn	22 00 05.4	-2.3
ENIJ				i Vmb_Lg		22 00 12.6	
LCRM	LCR	2.07	206	P	Pn	21 59 47.0	+1.0
LCRM	LCR	2.07	206	P	Pn	21 59 46.7	+0.8
LCRM				S	Sb	22 00 14.1	-0.6
EQES	Quesada	2.31	14	Pn	Pb	21 59 51.3	-1.2
EQES				Sn	Sb	22 00 21.0	-0.4
EQES				i Vmb_Lg		22 00 31.8	
EADA	Adamuz	2.68	346	Pn	Pb	21 59 57.1	-1.7
EADA				Sn	Sn	22 00 28.9	+1.8
EADA				i Vmb_Lg		22 00 37.3	
MD31	MD31	2.81	197	P	Pn	21 59 57.0	+1.0
MDT	Midelt	2.83	194	Pn	Pn	21 59 57.1	+0.9
	1.5nm,0.3s,baz=136,slow=11,SNR=63						
MDT				Sn	Sn	22 00 32.2	+1.4
	13nm,0.3s,baz=163,slow=11,SNR=11						
MDT				Lg	Lg	22 00 39.6	
	15nm,0.3s,baz=354,slow=7.7,SNR=4.0						
	4.2nm,0.3s						
MDT	Midelt	2.83	194	P	Pn	21 59 57.2	+0.9
MDT	Midelt	2.83	194	P	Pn	21 59 57.0	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ECAB	El Cabril	2.83	333	Pn	Pn	21 59 58.1	+1.8
ECAB				Sn	Sn	22 00 31.3	+0.4
ECAB				*i* Vmb_Lg		22 00 49.0	
ARNO	Arenosillo	2.84	304	P	Pn	21 59 58.6	+2.3
ARNO				S	Sn	22 00 31.9	+1.1
EZAR	Zarzadilla de	2.85	35	Pn	Pn	21 59 56.7	0.0
EZAR				Sn	Sn	22 00 30.8	-0.6
TDRA	Tendrara	2.90	150	P	Pn	21 59 57.5	+0.1
CART	Cartagena	3.01	47	P	Pn	21 59 58.9	+0.2
CART				S	Sn	22 00 31.3	-4.0
CART	Cartagena	3.01	47	P	Pn	21 59 58.3	-0.4
CART				S	Sn	22 00 31.1	-4.1
EMUR	La Murta	3.06	41	Pn	Pn	21 59 59.1	-0.3
EMUR				Sn	Sn	22 00 33.7	-2.6
EMUR				*i* Vmb_Lg		22 00 47.6	
ZHG	ZHG	3.17	229	P	Pn	22 00 00.8	-0.1
EMIN	Mina Concepcio	3.20	314	Pn	Pn	22 00 02.5	+1.1
EMIN				Sn	Sn	22 00 37.6	-2.4
ETOB	Tobarra	3.56	29	Pn	Pn	22 00 07.9	+1.6
ETOB				Sn	Sn	22 00 51.3	+2.5
EGRO	El Granado	3.58	305	Pn	Pn	22 00 07.4	+0.9
EGRO				Sn	Sn	22 00 48.8	-0.3
EGRO				*i* Vmb_Lg		22 00 49.0	
PVAQ	Vaqueiros	3.67	301	*e*Pn	Pn	22 00 09.3	+1.5
PVAQ				A	A	22 00 52.4	
	27nm,0.5s						
PVAQ	Vaqueiros	3.67	301	P	Sn	22 00 49.9	-1.5
PVAQ	Vaqueiros	3.67	301	P	Pn	22 00 09.1	+1.3
PVAQ	Vaqueiros	3.67	301	*e*Sn	Sn	22 00 50.3	-1.1
PVAQ	Vaqueiros	3.67	301	S	Sn	22 00 49.7	-1.7
PBAR	Barrancos	3.69	316	*e*Pn	Pn	22 00 10.1	+2.0
PBAR				*e*Sn	Sn	22 00 51.9	-0.2
PBAR				A	A	22 00 54.7	
	9.9nm,0.3s						
PBDV	Barranco-do-Ve	3.75	298	*e*Pn	Pn	22 00 10.4	+1.5
PBDV				*e*Sn	Sn	22 00 52.3	-1.1
PBDV				A	A	22 01 06.0	
	19nm,0.4s						
AVE	Averroes	3.76	234	P	Pn	22 00 10.3	+1.3
AVE				S	Sn	22 00 47.8	-5.9
PAB	San Pablo	4.00	354	Pn	Pn	22 00 15.7	+3.2
PAB				Sn	Sn	22 01 01.0	+1.2
PAB				Sg	Sg	22 01 16.8	-2.1
PAB				*i* Vmb_Lg		22 01 24.1	
FIGM	Figuig	4.01	148	P	Pn	22 00 13.9	+1.4
PBEJ	Beja	4.10	308	*e*Pn	Pn	22 00 16.1	+2.4
PBEJ				*e*Sn	Sn	22 01 01.7	-0.4
PBEJ				A	A	22 01 12.7	
	11nm,0.5s						
EBAD	Badajoz	4.11	322	Pn	Pn	22 00 14.7	+1.0
EBAD				Sn	Sn	22 01 00.6	-1.6
EBAD				*i* Vmb_Lg		22 01 09.0	
ESDC	Sonseca Array	4.11	358	Pn	Pn	22 00 16.8	+3.0
	0.7nm,0.3s,baz=179,slow=12,SNR=36						
ESDC				Sn	Sn	22 01 04.8	+2.4
	0.8nm,0.3s,baz=185,slow=16,SNR=4.2						
ESDC				Lg	Lg	22 01 22.9	
	1.9nm,0.3s,baz=183,slow=28,SNR=8.6						
	1.8nm,0.3s						
ESDC	Sonseca Array	4.11	358	Pn	Pn	22 00 14.7	+0.8
ESDC				Sn	Sn	22 01 04.0	+1.6
ESDC				Sg	Sg	22 01 18.6	-3.7
ESDC				*i* Vmb_Lg		22 01 29.2	
MESJ	Messejana	4.23	304	*e*P	Pn	22 00 16.9	+1.4
MESJ				*e*S	Sn	22 01 03.1	-2.2
MESJ				IAML		22 01 05.4	
	comp=E,14nm,0.5s						
MESJ	Messejana	4.23	304	*e*Pn	Pn	22 00 17.1	+1.6
MESJ				*e*Sn	Sn	22 01 04.0	-1.3
MESJ				A	A	22 01 05.3	
	comp=E,15nm,0.4s						
MORF	Marmelete	4.30	295	*e*P	Pn	22 00 18.0	+1.5
MORF	Marmelete	4.30	295	*e*Pn	Pn	22 00 18.4	+1.9
MORF				*e*Sn	Sn	22 01 06.5	-0.6
MORF				A	A	22 01 15.7	
	comp=E,13nm,0.2s						
PFVI	Vila Bisbo	4.37	293	*e*Pn	Pn	22 00 20.5	+3.1
PFVI				*e*Sn	Sn	22 01 07.1	-1.6
PFVI				A	A	22 01 12.8	
	comp=E,14nm,0.6s						
PFVI	Vila Bisbo	4.37	293	P	Pn	22 00 20.0	+2.7
PTEO	Sao Teotonio	4.45	298	*e*Pn	Pn	22 00 20.8	+2.3
PTEO				*e*Sn	Sn	22 01 10.1	-0.5
PTEO				A	A	22 01 25.4	
	comp=E,16nm,0.5s						
PESTR	Estremoz	4.49	318	*e*Pn	Pn	22 00 21.5	+2.5
PESTR				*e*Sn	Sn	22 01 10.8	-0.9
PESTR				A	A	22 01 37.5	
	comp=E,9.7nm,0.4s						
PESTR	Estremoz	4.49	318	P	Pn	22 00 20.9	+1.8
EVO	Evora	4.50	312	P	Pn	22 00 21.2	+2.0
EVO				S	Sn	22 01 11.0	-1.0
EVO	Evora	4.50	312	*e*Pn	Pn	22 00 21.2	+2.0
EVO				*e*Sn	Sn	22 01 11.0	-1.0
EVO				A	A	22 01 19.4	
	comp=E,15nm,0.5s						
PNCL	Nicolau / Gran	4.58	305⇑	*e*Pn	Pn	22 00 22.0	+1.7
PNCL				*e*Sn	Sn	22 01 13.0	-1.0
PNCL				A	A	22 01 26.6	
	comp=E,9.9nm,0.5s						
UCM	Universidad Co	4.76	5	P	Pn	22 00 24.9	+2.1
UCM				S	Sn	22 01 17.8	-0.5
PMRV	Marv??o	4.81	324	*e*Pn	Pn	22 00 25.4	+1.9
PMRV				*e*Sn	Sn	22 01 18.6	-1.1
PMRV				A	A	22 01 44.6	
	comp=E,12nm,0.4s						
EPLA	Plasencia	4.85	339	Pn	Pn	22 00 25.9	+1.9
EPLA				Sn	Sn	22 01 21.0	+0.4
EPLA				*i* Vmb_Lg		22 01 59.1	
PMTG	Montargil	4.98	316	*e*Pn	Pn	22 00 28.0	+2.2
PMTG				*e*Sn	Sn	22 01 23.0	-0.8
PMTG				A	A	22 01 23.8	
	comp=E,11nm,0.4s						
TZRR	Tazzarine	4.99	198	P	Pn	22 00 27.6	+1.5
GUD	Guadarrama	5.08	357	Pn	Pn	22 00 30.8	+3.5
GUD				*i* Vmb_Lg		22 02 01.9	
PACT	Alcochete	5.15	310	*e*Pn	Pn	22 00 31.0	+2.9
PACT				*e*Sn	Sn	22 01 28.8	+0.8
PACT				A	A	22 01 29.6	
	comp=E,29nm,0.8s						
PCBR	Castelo Branco	5.18	327	*e*Pn	Pn	22 00 31.1	+2.6
PCBR				*e*Sn	Sn	22 01 28.9	+0.2
PCBR				A	A	22 01 38.2	
	comp=E,9.5nm,0.5s						
OUZM	OUZ	5.27	209	P	Pn	22 00 32.1	+2.3
OUZM				S	Sn	22 01 32.0	+0.8
OUZM	OUZ	5.27	209	P	Pn	22 00 31.8	+1.9
EIBI	Ibiza	5.35	48	Pn	Pn	22 00 30.8	-0.1
EIBI				Sn	Sn	22 01 30.8	-2.1
EIBI				*i* Vmb_Lg		22 01 31.5	
ETOR	Torete	5.42	14	Pn	Pn	22 00 34.2	+2.3
ETOR				Sn	Sn	22 01 38.6	+3.8
ETOR				*i* Vmb_Lg		22 02 21.0	
OUK	Oukaimeden	5.53	219	P	Pn	22 00 33.9	+0.3
PMAFR	Mafra	5.55	309	*e*Pn	Pn	22 00 37.5	+3.9
PMAFR				*e*Sn	Sn	22 01 36.7	-1.0
ECOL	Islas Columbre	5.59	38	Pn	Pn	22 00 35.2	+1.1
ECOL				Sn	Sn	22 01 43.0	+4.2
PSBE	So Bento	5.61	316	*e*Pn	Pn	22 00 37.0	+2.5
PSBE				*e*Sn	Sn	22 01 38.0	-1.3
PSBE				A	A	22 01 49.1	
	comp=E,14nm,0.6s						
ZGR	Zagora	5.64	196	P	Pn	22 00 35.9	+0.9
MTE	Manteigas	5.67	329	*e*Pn	Pn	22 00 38.7	+3.3
MTE				*e*Sn	Sn	22 01 40.8	-0.1
MTE				A	A	22 02 20.1	
	comp=E,20nm,0.6s						
PCAS	Casmilo, Conde	5.84	322	*e*Pn	Pn	22 00 40.0	+2.4
PCAS				*e*Sn	Sn	22 01 43.0	-1.9
PCAS				A	A	22 02 26.8	
	comp=E,18nm,0.6s						
PVIS	Viseu	6.08	329	*e*Pn	Pn	22 00 44.3	+3.3
PVIS				*e*Sn	Sn	22 01 51.6	+0.6
PVIS				A	A	22 01 54.3	
	comp=E,5.0nm,0.8s						
MVO	Moncorvo	6.15	336	*e*Pn	Pn	22 00 45.1	+3.2
MVO				*e*Sn	Sn	22 01 52.0	-0.7
MVO				A	A	22 02 31.4	
	comp=E,11nm,0.5s						
TTIG	Tnine Tigouga,	6.35	219	P	Pn	22 00 43.0	-1.7
PVRL	Vila Real	6.49	333	*e*Pn	Pn	22 00 49.4	+2.9
PVRL				*e*Sn	Sn	22 01 59.0	-2.0
PVRL				A	A	22 02 01.6	
	comp=E,8.6nm,0.5s						
POLO	Lamas de Olo	6.60	333	*e*Pn	Pn	22 00 51.3	+3.1
POLO				*e*Sn	Sn	22 02 01.4	-2.5
POLO				A	A	22 02 15.4	
	comp=E,3.6nm,0.6s						
PBRG	Braganca	6.65	340	*e*Pn	Pn	22 00 51.3	+2.5
PBRG				*e*Sn	Sn	22 02 03.6	-1.4
PBRG				A	A	22 02 44.7	
	comp=E,4.1nm,0.6s						
ETOS	Mallorca	6.70	49	Pn	Pn	22 00 48.8	-0.6
ETOS				Sn	Sn	22 02 04.5	-1.8
ETOS				*i* Vmb_Lg		22 05 32.6	
ECAL	Calabor	6.78	341	Pn	Pn	22 00 52.8	+2.2
ECAL				Sn	Sn	22 02 06.9	-1.3
ECAL				*i* Vmb_Lg		22 05 40.7	
PCAB	Cabril	6.98	333	*e*Sn	Sn	22 02 10.8	-2.3
PCAB				A	A	22 02 59.8	
	comp=E,11nm,0.6s						
ELOB	Lobios	7.13	333	Pn	Pn	22 00 58.1	+2.7
ELOB				*i* Vmb_Lg		22 06 05.0	
PGAV	Gavieira, Arco	7.29	333	*e*Pn	Pn	22 01 00.5	+2.9
PGAV				*e*Sn	Sn	22 02 20.5	-0.4
PGAV				A	A	22 03 09.8	
	comp=E,6.8nm,0.6s						
ETSF	Etsaut	7.74	18	*e*Pn	Pn	22 01 07.0	+3.3
ETSF				*e*Sn	Sn	22 02 28.2	-3.6
	comp=E,0.3nm,0.2s						
SJPF	Ste Jean	7.80	14	*e*Pn	Pn	22 01 07.7	+3.2
SJPF				*e*Sn	Sn	22 02 29.7	-3.4
	comp=E,0.5nm,0.3s						
EARI	Arriondas	7.81	352	Pn	Pn	22 01 08.8	+4.2
EPF	Esparros	8.11	22	*e*Pn	Pn	22 01 11.0	+2.2
EPF				*e*Sn	Sn	22 02 36.7	-4.3
	comp=E,0.4nm,0.3s						
MTLF	Montolieu	9.04	29	*e*Pn	Pn	22 01 23.8	+2.2
MTLF				*e*Sn	Sn	22 02 58.1	-5.7
	comp=E,0.7nm,0.3s						
LASF	Ste Croix	10.33	32	*e*Pn	Pn	22 01 39.7	+0.5
LASF				*e*Sn	Sn	22 03 29.3	-6.0
	comp=E,0.6nm,0.5s						
CAF	Calviac	10.36	24	*e*Pn	Pn	22 01 39.8	+0.2
RJF	Les Rejaudoux	10.53	21	*e*Pn	Pn	22 01 42.6	+0.7
CLL	Collm	19.83	32	*e*P	P	22 03 42.0	+0.2
CLL				*e*x	x	22 03 48.0	
TORD	Torodi Ar. Bea	22.86	166	P	P	22 04 15.1	+0.4
	comp=E,0.7nm,0.8s,baz=344,slow=11,SNR=3.8						
	comp=E,0.7nm,0.8s						
MKAR	Makanchi Array	62.67	50	P	P	22 09 38.1	+2.1
	comp=E,0.2nm,0.7s,baz=280,slow=8.1,SNR=2.3						
	comp=E,0.2nm,0.7s						

HEL 30 21:59:13.1, 67°.95N×20°.47E, h0^{km}, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.05	278	*i* P	Pg	21 59 10.4	-3.7
KUA				*i* S	Sg	21 59 12.1	-2.6
KOVU	Salmi	0.30	337	*i* P	Pg	21 59 15.4	-3.5
RATU	Laukkuluspa	0.35	250	*i* P	Pg	21 59 12.6	-7.2
NIKU	Nikkaluokta	0.55	262	*i* P	Pg	21 59 16.5	-7.0
LANU	Lannavaara	0.58	79	*e*PB	Pg	21 59 23.4	-0.8
	baz=257						
LANU				*e*S	Sg	21 59 32.0	+0.2
KIF	Kilpisjarvi	1.07	6	*e*P	Pg	21 59 31.8	-1.8
KIF	Kilpisjarvi	1.07	6	*e*PN	Pg	21 59 33.1	-0.5
KIF				MSG		21 59 46.8	
	comp=Z,4.0nm,0.2s						
KIF				*e*SN	Sg	21 59 48.1	+0.7
HEF	Hetta	1.28	67	*e*P	Pg	21 59 33.7	-3.8
HEF	Hetta	1.28	67	*e*PN	Pg	21 59 36.0	-1.6
	baz=260						
HEF				MSG		21 59 51.7	
	comp=Z,2.3nm,0.2s						
HEF				*e*SN	Sn	21 59 55.6	-0.4
KLF	Kolari	1.52	116	*e*P	Pn	21 59 38.4	-3.1
	baz=306						
KLF				*e*SN	Sg	22 00 00.5	-1.3
TOF	Tornio	2.41	139	*e*PB	Pn	21 59 52.0	-1.7
	baz=313						
TOF				*e*SB	Sn	22 00 24.1	+0.3
TOF				MSG		22 00 24.4	
	comp=Z,2.5nm,0.2s						
ARA0	ARCESS Array S	2.43	47	*e*PG	Pn	21 59 54.6	+0.6
	baz=226						
ARA0				*e*SG	Sb	22 00 28.1	0.0
RNF	Rovaniemi	2.54	119	*e*P	Pn	21 59 53.8	-1.7
RNF				*e*SG	Sb	22 00 30.0	-1.1
KEV	Kevo	2.99	50	MSG		22 00 40.9	
	comp=Z,0.9nm,0.2s						
KEV				*e*SG	Sb	22 00 44.5	+0.5

UPP 30 22:00:04.7±0.1, 67°.19N×20°.67E, h0^{km}, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	212	P	Pg	22 00 06.4	+0.3
DUNU				S	Sg	22 00 07.6	+0.5
MASU	Masugnsbyn	0.58	61	P	Pg	22 00 15.8	0.0
MASU				S	Sg	22 00 23.7	+0.3
RATU	Laukkuluspa	0.76	328	P	Pg	22 00 19.0	-0.3
SALU	Saltoluokta	0.86	284	P	Pg	22 00 20.9	-0.3
ERTU	Ertsjaerv	0.87	136	P	Pg	22 00 20.7	-0.7
NIKU	Nikkaluokta	0.93	318	P	Pg	22 00 21.9	-0.6
LANU	Lannavaara	1.00	30	P	Pg	22 00 23.2	-0.7
SJUU	Sjulsmark	1.73	167	P	Pn	22 00 35.7	-0.2

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*SFS **30** 22:01:34.0, 35°.58N×3°.72W, ML3.0, ALBORAN SUR*
*CNRM **30** 22:01:34.9, 35°.57N×3°.70W, h19^{km}, ml2.6*
*MDD **30** 22:01:34.2±0.4, 35°.58N×3°.73W, h0^{km}, mb_Lg3.0/9, Error ellipse: s-maj=3.3km s-min=2.9km az=37.0*
*IGIL **30** 22:01:35.3, 35°.58N×3°.73W, h0^{km}*
*INMG **30** 22:01:36.0±2.0, 35°.60N×3°.67W, h14^{km}±11^{km}, ML2.2, Error ellipse: s-maj=7.2km s-min=4.6km az=86.0*

ISC 30 22:01:33.9±1.0, 35°.54N±0°.02×3°.72W±0°.02, h15^{km}±9^{km}, n43, σ1^{s}.49/76, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.36	209	P	Pg	22 01 42.0	+0.7
PALE	Palemas	0.36	209	P	Pb	22 01 42.1	0.0
PALE				S	Sb	22 01 47.8	+0.2
PVLZ	Peæn de	0.59	233	P	Pg	22 01 45.7	+0.2
PVLZ				S	Sg	22 01 53.5	0.0
WMELI	Melilla	0.67	109	P	Pn	22 01 48.6	-0.2
WMELI				S	Sb	22 01 57.1	+0.8
EMEL	Melilla	0.67	110	Pg	Pb	22 01 47.7	+0.5
EMEL				Sg	Sg	22 01 55.5	-0.2
GOG	Mont Gurugu	0.67	118	P	Pn	22 01 49.0	0.0
GOG	Mont Gurugu	0.67	118	P	Pn	22 01 48.8	-0.2
GOG				S	Sb	22 01 57.4	+0.8
EALB	Alboran	0.69	54	Pg	Pb	22 01 47.7	+0.1
EALB				Sg	Sb	22 01 58.1	+1.1
EALB				*i* Vmb_Lg		22 02 03.4	
AKLM	AKL	1.03	186	P	Pn	22 01 55.0	+1.1
AKLM				S	Sn	22 02 10.3	+2.2
CHAS	Isla Isabel II	1.11	108	P	Pb	22 01 54.7	-0.2
CHAS				S	Sb	22 02 08.8	-0.3
TAF	Taforalt	1.29	123	P	Pn	22 01 57.7	+0.2
ELGU	Los Guajares,	1.33	3	Pg	Pg	22 01 59.5	-0.1
ELGU				Sg	Sb	22 02 13.2	-2.4
ELGU				*i* Vmb_Lg		22 02 20.1	
CHEFC	Chefchaouen	1.39	253	P	Pg	22 02 00.7	+0.1
CHEFC				S	Sn	22 02 17.0	0.0
EBER	Berja	1.52	26	Pg	Pb	22 02 01.4	-0.4
EBER				Sg	Sn	22 02 19.6	-0.8
EBER				*i* Vmb_Lg		22 02 35.5	
JBK	JBK	1.53	141	P	Pn	22 02 01.0	+0.1
JBK	JBK	1.53	141	P	Pn	22 02 01.2	+0.3
JBK				S	Sn	22 02 19.4	-1.2
EGOR	Sierra Gorda,	1.60	349	Pg	Pb	22 02 03.4	+0.1
EGOR				Sg	Sg	22 02 24.5	-1.1
EGOR				*i* Vmb_Lg		22 02 31.9	
EQES	Quesada	2.32	13	Pg	Pb	22 02 14.7	-0.9
EQES				Sg	Sb	22 02 45.1	+1.0
EADA	Adamuz	2.71	346	Pn	Pn	22 02 19.5	+2.5
EADA				Pg	Pb	22 02 22.2	0.0
EADA				Sn	Sn	22 02 50.2	+0.5
EADA				Sg	Sg	22 02 58.1	-3.0
EADA				*i* Vmb_Lg		22 03 01.3	
MD31	MD31	2.80	198	P	Pb	22 02 21.3	-2.4
MD31				S	Sn	22 02 52.3	+0.6
ETOB	Tobarra	3.56	29	Pn	Pn	22 02 31.9	+3.2
ETOB				Sn	Sn	22 03 11.6	+1.1
EGRO	El Granado	3.63	304	Pn	Pn	22 02 29.9	+0.4
EGRO				Sn	Sn	22 03 10.1	-1.9
EGRO				*i* Vmb_Lg		22 04 51.4	
PVAQ	Vaqueiros	3.72	301	*e*Pn	Pn	22 02 31.7	+0.9
PVAQ				*e*Sn	Sn	22 03 13.1	-1.3
PVAQ				A	A	22 03 14.3	
	6.2nm,0.5s						
PBAR	Barrancos	3.74	316	*e*Pn	Pn	22 02 32.4	+1.3
PBAR				*e*Sn	Sn	22 03 14.7	-0.2
PBAR				A	A	22 03 15.6	
	2.6nm,0.7s						
PBDV	Barranco-do-Ve	3.80	298	*e*Pn	Pn	22 02 32.9	+1.0
PBDV				*e*Sn	Sn	22 03 14.8	-1.6
PBDV				A	A	22 03 20.2	
	3.5nm,0.4s						
MESJ	Messejana	4.28	304	*e*P	Pn	22 02 39.3	+0.8
MESJ	Messejana	4.28	304	*e*Pn	Pn	22 02 40.2	+1.7
MESJ				*e*Sn	Sn	22 03 26.5	-1.8
MESJ				A	A	22 03 34.2	
	3.3nm,0.5s						
MORF	Marmelete	4.35	295	*e*Sn	Sn	22 03 29.1	-0.9
MORF				A	A	22 03 51.6	
	3.6nm,0.6s						
PESTR	Estremoz	4.54	318	*e*Pn	Pn	22 02 44.1	+2.0
PESTR				*e*Sn	Sn	22 03 33.7	-0.9
PESTR				A	A	22 03 53.3	
	2.5nm,0.6s						
EVO	Evora	4.55	312	*e*Pn	Pn	22 02 43.8	+1.6
EVO				*e*Sn	Sn	22 03 33.5	-1.4
EVO				A	A	22 03 36.8	
	4.0nm,0.3s						
PNCL	Nicolau / Gran	4.63	305	*e*Pn	Pn	22 02 44.4	+1.0
PNCL				*e*Sn	Sn	22 03 35.4	-1.5
PNCL				A	A	22 03 36.5	
	2.1nm,0.8s						
PMRV	Marv??o	4.86	324	*e*Pn	Pn	22 02 48.4	+1.9
PMRV				*e*Sn	Sn	22 03 41.1	-1.4
PMTG	Montargil	5.03	316	*e*Pn	Pn	22 02 50.7	+1.9
PMTG				*e*Sn	Sn	22 03 45.0	-1.7
PMTG				A	A	22 03 47.5	
	3.1nm,0.5s						
PACT	Alcochete	5.20	310	*e*Sn	Sn	22 03 51.2	+0.3
PCBR	Castelo Branco	5.23	326	*e*Pn	Pn	22 02 53.8	+2.3
PCBR				*e*Sn	Sn	22 03 50.0	-1.5
PCBR				A	A	22 04 02.4	
	1.9nm,0.4s						
EIBI	Ibiza	5.33	48	Pn	Pn	22 02 53.5	+0.5
EIBI				Sn	Sn	22 03 51.3	-2.9
PSBE	So Bento	5.66	316	*e*Pn	Pn	22 02 59.3	+1.8
PSBE				*e*Sn	Sn	22 04 01.6	-0.6
PVIS	Viseu	6.13	329	*e*Pn	Pn	22 03 06.3	+2.4
MVO	Moncorvo	6.19	336	*e*Pn	Pn	22 03 07.4	+2.6
MVO				*e*Sn	Sn	22 04 14.4	-1.0
MVO				A	A	22 04 18.5	
	2.0nm,0.9s						
PVRL	Vila Real	6.53	333	*e*Pn	Pn	22 03 11.8	+2.3
POLO	Lamas de Olo	6.65	333	*e*Pn	Pn	22 03 13.3	+2.2
PBRG	Braganca	6.69	340	*e*Pn	Pn	22 03 15.4	+3.8
PGAV	Gavieira, Arco	7.34	332	*e*Pn	Pn	22 03 23.0	+2.4

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*IDC **30** 22:03:49.0±1.1, 35°.47N×3°.49W, h0^{km}, mb3.5/4, mbtmp3.4/8, ML3.4/4, Error ellipse: s-maj=34.3km s-min=14.4km az=109.0*
*CRAAG **30** 22:03:49.0, 35°.47N×3°.80W, Ml3.5*
*MDD **30** 22:03:49.1±0.4, 35°.47N×3°.81W, h1^{km}±2^{km}, mb_Lg3.6/25, Error ellipse: s-maj=3.3km s-min=2.0km az=175.0*
*CNRM **30** 22:03:49.9, 35°.55N×3°.73W, h24^{km}, ml3.7*
*SFS **30** 22:03:49.0, 35°.40N×3°.80W, h2^{km}, ML3.5, ALBORAN SUR*
*IGIL **30** 22:03:51.0, 35°.47N×3°.80W, h5^{km}, ML3.1*
*LDG **30** 22:03:51.4±0.3, 35°.43N×3°.73W, h10^{km}, Ml3.1/8, Error ellipse: s-maj=6.5km s-min=3.1km az=173.0*
*INMG **30** 22:03:51.2±1.9, 35°.69N×3°.75W, h0^{km}±6^{km}, MD3.6, ML3.1, Error ellipse: s-maj=5.5km s-min=5.0km az=146.0*

ISC 30 22:03:50.8±0.9, 35°.46N±0°.02×3°.78W±0°.02, h24^{km}±8^{km}, n135, σ2^{s}.22/225, mb3.4/4, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.28	209	P	Pb	22 03 57.1	-0.4
PALE				S	Sb	22 04 02.2	+0.3
PVLZ	Peæn de	0.52	237	P	Pb	22 04 00.9	-0.4
PVLZ				S	Sn	22 04 10.0	-0.6
GOG	Mont Gurugu	0.68	110	P	Pb	22 04 03.5	-0.6
GOG				S	Sb	22 04 12.3	-0.8
WMELI	Melilla	0.69	102	P	Pb	22 04 04.0	-0.1
WMELI				S	Sb	22 04 12.4	-0.9
AKLM	AKL	0.95	184	P	Pn	22 04 09.5	+0.8
AKLM				S	Sn	22 04 22.6	+1.1
CHAS	Isla Isabel II	1.13	104	P	Pn	22 04 10.2	-1.0
CHAS				S	Sn	22 04 24.6	-1.3
TAF	Taforalt	1.29	120	P	Pn	22 04 13.0	-0.3
TAF				S	Sn	22 04 29.1	-0.8
CHEFC	Chefchaouen	1.33	255	P	Pb	22 04 14.7	-0.4
CHEFC				S	Sb	22 04 34.2	+2.5
SMIR	Smir Dam	1.33	280	P	Pn	22 04 11.8	-2.1
SMIR				S	Sn	22 04 29.7	-1.1
EMIJ	Mijas	1.37	324	Pg	Pn	22 04 12.9	-1.6
EMIJ				Sg	Sn	22 04 29.5	-2.4
EMIJ				*i* Vmb_Lg		22 04 36.0	
CEU	Ceuta	1.37	289	P	Pn	22 04 11.8	-2.6
CEU				S	Sn	22 04 28.9	-3.0
ECEU	Ceuta	1.38	289	Pg	Pn	22 04 12.4	-2.1
ECEU				Sg	Sn	22 04 27.4	-4.6
ECEU				*i* Vmb_Lg		22 04 34.8	
ELGU	Los Guajares,	1.41	5	Pg	Pn	22 04 12.4	-2.7
ELGU				Sg	Sn	22 04 33.1	+0.1
JBK	JBK	1.50	138	P	Pn	22 04 15.9	-0.5
JBK				S	Sn	22 04 35.3	+0.1
EBER	Berja	1.61	26	Pg	Pn	22 04 15.5	-2.4
EBER				Sg	Sn	22 04 35.7	-2.3
EBER				*i* Vmb_Lg		22 04 51.0	
EGOR	Sierra Gorda,	1.67	351	Pn	Pn	22 04 18.6	-0.1
EGOR				Sn	Sn	22 04 36.7	-2.8
EGOR				*i* Vmb_Lg		22 04 52.2	
EJIF	Jimena Fronter	1.69	306	Pn	Pn	22 04 18.6	-0.3
EQUE	Quentar	1.77	9	Pn	Pn	22 04 19.6	-0.4
EQUE				Sn	Sn	22 04 40.8	-0.9
EQUE				*i* Vmb_Lg		22 04 51.6	
LIJA	Lijar	1.96	318	P	Pb	22 04 25.5	-0.3
LIJA				S	Sn	22 04 45.8	-0.7
ENIJ	Nijar	1.97	40	Pn	Pn	22 04 20.1	-2.6
ENIJ				Sn	Sn	22 04 42.9	-3.8
ENIJ				*i* Vmb_Lg		22 05 06.0	
LCRM	LCR	1.98	207	P	Pn	22 04 24.2	+1.2
LCRM				S	Sb	22 04 51.0	+0.4
CNIL	Conil	2.06	297	P	Pb	22 04 27.2	-0.3
GIBL	Gibalbin	2.24	308	S	Sn	22 04 46.4	-6.9
EQES	Quesada	2.41	13	Pn	Pn	22 04 29.5	+0.6
EQES				Sn	Sn	22 04 58.4	+0.8
EQES				*i* Vmb_Lg		22 05 02.4	
OTSS	Djebel Tessala	2.44	93	P	Pb	22 04 40.0	+5.9
USTO	Oran	2.64	83	P	Sn	22 05 02.0	-1.2
MD31	MD31	2.71	198	P	Pn	22 04 34.6	+1.7
MDT	Midelt	2.73	195	Pn	Pn	22 04 34.9	+1.7
	2.0nm,0.3s,baz=83,slow=17,SNR=5.5						
MDT				Sn	Sb	22 05 09.2	-2.8
	11nm,0.3s,baz=338,slow=19,SNR=6.9						
MDT				Lg	Lg	22 05 18.7	
	14nm,0.3s,baz=299,slow=22,SNR=6.2						
	5.5nm,0.3s						
MDT	Midelt	2.73	195	P	Pn	22 04 35.6	+2.4
MDT	Midelt	2.73	195	P	Pn	22 04 34.6	+1.5
EADA	Adamuz	2.78	347	Pn	Pn	22 04 33.6	-0.3
EADA				Sn	Sn	22 05 05.2	-1.5
EADA				*i* Vmb_Lg		22 05 15.2	
TDRA	Tendrara	2.81	149	P	Pn	22 04 37.0	+2.5
TDRA	Tendrara	2.81	149	P	Pn	22 04 35.0	+0.6
ARNO	Arenosillo	2.90	305	P	Pn	22 04 36.4	+1.0
ARNO				S	Sn	22 05 10.4	+1.0
ECAB	El Cabril	2.93	334	Pn	Pn	22 04 37.7	+1.8
ECAB				Sn	Sn	22 05 08.3	-2.0
ECAB				*i* Vmb_Lg		22 05 23.4	

EZAR	**Zarzadilla de**	**2.94**	**34**	Pn	**Pn**	**22 04 34.6**	**-1.4**
EZAR				Sn	**Sn**	**22 05 07.2**	**-3.4**
ODJA	**Bouhanifia**	**2.96**	**91**	P	**Pb**	**22 04 43.0**	**0.0**
CART	**Cartagena**	**3.08**	**46**	P	**Pn**	**22 04 37.1**	**-0.9**
CART				S	**Sn**	**22 05 10.4**	**-3.7**
CART	**Cartagena**	**3.08**	**46**	P	**Pn**	**22 04 35.8**	**-2.1**
CART				S	**Sn**	**22 05 10.2**	**-3.9**
ZHG	**ZHG**	**3.10**	**231**	P	**Pn**	**22 04 38.9**	**+0.5**
EMUR	**La Murta**	**3.13**	**40**	Pn	**Pn**	**22 04 37.2**	**-1.5**
EMUR				Sn	**Sn**	**22 05 10.3**	**-5.1**
EMIN	**Mina Concepcio**	**3.28**	**316**	Pn	**Pn**	**22 04 40.3**	**-0.4**
EMIN				Sn	**Sn**	**22 05 15.0**	**-3.9**
OJBR	**Djebel Berber**	**3.36**	**87**	P	**Sn**	**22 05 24.0**	**+2.9**
EGRO	**El Granado**	**3.64**	**306**	Pn	**Pn**	**22 04 48.1**	**+2.5**
EGRO				Sn	**Sn**	**22 05 24.8**	**-2.9**
OKGL	**Djebel Kef Gue**	**3.64**	**80**	P	**Sn**	**22 05 30.0**	**+2.1**
ETOB	**Tobarra**	**3.65**	**29**	Pn	**Pn**	**22 04 45.5**	**-0.3**
ETOB				*i* Vmb_Lg		22 04 48.3	
ETOB				Sn	**Sn**	**22 05 27.4**	**-0.7**
ETOB	**Tobarra**	**3.65**	**29**	*i* Vmb_Lg		22 04 48.3	
AVE	**Averroes**	**3.70**	**235**	P	**Pn**	**22 04 47.7**	**+1.2**
AVE				S	**Sn**	**22 05 25.4**	**-3.9**
PVAQ	**Vaqueiros**	**3.73**	**303**	*e*Pn	**Pn**	**22 04 47.0**	**+0.1**
PVAQ				*e*Sn	**Sn**	**22 05 28.3**	**-1.6**
PVAQ				A	A	22 05 30.2	
	48nm,0.3s						
PVAQ	**Vaqueiros**	**3.73**	**303**	P	**Pn**	**22 04 46.9**	**+0.1**
PVAQ				S	**Sn**	**22 05 27.8**	**-2.1**
PBAR	**Barrancos**	**3.77**	**317**	*e*Pn	**Pn**	**22 04 47.5**	**+0.1**
PBAR				*e*Sn	**Sn**	**22 05 29.8**	**-1.2**
PBAR				A	A	22 05 35.0	
	15nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**299**	*e*Pn	**Pn**	**22 04 48.3**	**+0.4**
PBDV				*e*Sn	**Sn**	**22 05 30.0**	**-1.8**
PBDV				A	A	22 05 38.7	
	34nm,0.4s						
FIGM	**Figuig**	**3.92**	**147**	P	**Pn**	**22 04 50.9**	**+1.2**
PAB	**San Pablo**	**4.11**	**354**	Pn	**Pn**	**22 04 51.7**	**-0.4**
PAB				Sn	**Sn**	**22 05 38.8**	**-0.7**
PAB				*i* Vmb_Lg		22 06 04.8	
PAB	**San Pablo**	**4.11**	**354**	P	**Pn**	**22 04 53.0**	**+0.9**
PBEJ	**Beja**	**4.17**	**309**	*e*Pn	**Pn**	**22 04 53.1**	**+0.2**
PBEJ				*e*Sn	**Sn**	**22 05 39.5**	**-1.3**
PBEJ				A	A	22 05 50.1	
	28nm,0.4s						
EBAD	**Badajoz**	**4.19**	**323**	Pn	**Pn**	**22 04 52.7**	**-0.4**
EBAD				Sn	**Sn**	**22 05 38.8**	**-2.5**
EBAD				*i* Vmb_Lg		22 05 44.5	
ESDC	**Sonseca Array**	**4.21**	**358**	Pn	**Pn**	**22 04 54.5**	**+1.0**
	1.7nm,0.3s,baz=179,slow=12,SNR=21						
ESDC				Sn	**Sn**	**22 05 40.7**	**-1.3**
	1.7nm,0.3s,baz=188,slow=22,SNR=4.4						
ESDC				Lg	Lg	22 05 57.0	
	4.2nm,0.3s,baz=186,slow=26,SNR=7.3						
	3.1nm,0.3s						
ESDC	**Sonseca Array**	**4.21**	**358**	Pn	**Pn**	**22 04 52.7**	**-0.8**
ESDC				Sn	**Sn**	**22 05 38.8**	**-3.2**
ESDC				Sg	**Sb**	**22 05 56.4**	**+1.7**
ESDC				*i* Vmb_Lg		22 06 06.7	
MESJ	**Messejana**	**4.29**	**305**	*e*P	**Pn**	**22 04 54.7**	**+0.1**
MESJ				*e*S	**Sn**	**22 05 41.3**	**-2.6**
MESJ				IAML		22 05 46.1	
	comp=N,28nm,0.3s						
MESJ	**Messejana**	**4.29**	**305**	*e*Pn	**Pn**	**22 04 54.9**	**+0.3**
MESJ				*e*Sn	**Sn**	**22 05 42.1**	**-1.8**
MESJ				A	A	22 05 49.7	
	comp=N,30nm,0.3s						
MORF	**Marmelete**	**4.34**	**297**	*e*P	**Pn**	**22 04 55.5**	**+0.2**
MORF				*e*S	**Sn**	**22 05 42.5**	**-2.8**
MORF				IAML		22 05 48.6	
	comp=N,44nm,0.3s						
MORF	**Marmelete**	**4.34**	**297**	*e*Pn	**Pn**	**22 04 55.6**	**+0.2**
MORF				*e*Sn	**Sn**	**22 05 44.0**	**-1.3**
MORF				A	A	22 05 55.8	
	comp=N,18nm,0.4s						
PFVI	**Vila Bisbo**	**4.41**	**294**	*e*Pn	**Pn**	**22 04 57.3**	**+1.1**
PFVI				*e*Sn	**Sn**	**22 05 46.0**	**-0.8**
PFVI				A	A	22 06 00.5	
	comp=N,23nm,0.6s						
PFVI	**Vila Bisbo**	**4.41**	**294**	P	**Pn**	**22 04 56.4**	**+0.2**
PTEO	**Sao Teotonio**	**4.50**	**299**	*e*Pn	**Pn**	**22 04 58.4**	**+1.0**
PTEO				*e*Sn	**Sn**	**22 05 48.0**	**-1.0**
PTEO				A	A	22 06 03.5	
	comp=N,24nm,0.5s						
PESTR	**Estremoz**	**4.57**	**319**	*e*Pn	**Pn**	**22 04 58.9**	**+0.4**
PESTR				*e*Sn	**Sn**	**22 05 48.7**	**-2.0**
PESTR				A	A	22 06 04.0	
	comp=N,20nm,0.7s						
PESTR	**Estremoz**	**4.57**	**319**	P	**Pn**	**22 04 58.8**	**+0.4**
PESTR	**Estremoz**	**4.57**	**319**	P	**Pn**	**22 04 58.9**	**+0.4**
EVO	**Evora**	**4.57**	**313**	P	**Pn**	**22 04 58.8**	**+0.3**
EVO				S	**Sn**	**22 05 48.7**	**-2.2**
EVO	**Evora**	**4.57**	**313**	*e*Pn	**Pn**	**22 04 58.8**	**+0.3**
EVO				*e*Sn	**Sn**	**22 05 48.5**	**-2.4**
EVO				A	A	22 05 57.3	
	comp=N,28nm,0.4s						
PNCL	**Nicolau / Gran**	**4.64**	**306**	*e*Pn	**Pn**	**22 04 59.5**	**+0.1**
PNCL				*e*Sn	**Sn**	**22 05 50.1**	**-2.5**
PNCL				A	A	22 05 53.5	
	comp=N,16nm,0.5s						
ECHE	**Chera**	**4.69**	**28**	Pn	**Pn**	**22 05 01.5**	**+1.4**
ECHE				*i* Vmb_Lg		22 06 36.0	
UCM	**Universidad Co**	**4.86**	**5**	P	**Pn**	**22 05 03.3**	**+0.8**
UCM				S	**Sn**	**22 05 57.2**	**-0.7**
TZRR	**Tazzarine**	**4.90**	**198**	P	**Pn**	**22 05 05.1**	**+2.0**
PMRV	**Marv??o**	**4.90**	**325**	*e*Pn	**Pn**	**22 05 03.1**	**+0.1**
PMRV				*e*Sn	**Sn**	**22 05 56.7**	**-2.2**
PMRV				A	A	22 06 30.6	
	comp=N,24nm,0.5s						
EPLA	**Plasencia**	**4.95**	**339**	Pn	**Pn**	**22 05 04.1**	**+0.5**
EPLA				Sn	**Sn**	**22 05 58.5**	**-1.7**
EPLA				*i* Vmb_Lg		22 06 25.9	
PMTG	**Montargil**	**5.06**	**317**	*e*Pn	**Pn**	**22 05 05.3**	**+0.2**
PMTG				*e*Sn	**Sn**	**22 06 00.2**	**-2.6**
PMTG				A	A	22 06 01.6	
	comp=N,21nm,0.4s						
OUZM	**OUZ**	**5.18**	**210**	P	**Pn**	**22 05 09.1**	**+2.1**
GUD	**Guadarrama**	**5.19**	**357**	Pn	**Pn**	**22 05 06.7**	**-0.3**
GUD				Pg	**Pb**	**22 05 23.3**	**+2.4**
GUD				Sn	**Sn**	**22 06 04.7**	**-1.5**
GUD				Sg	**Sb**	**22 06 27.9**	**+5.2**
PACT	**Alcochete**	**5.22**	**311**	*e*Pn	**Pn**	**22 05 08.4**	**+1.1**
PACT				*e*Sn	**Sn**	**22 06 06.5**	**-0.3**
PCBR	**Castelo Branco**	**5.27**	**327**	*e*Pn	**Pn**	**22 05 08.8**	**+0.8**
PCBR				*e*Sn	**Sn**	**22 06 06.5**	**-1.5**
PCBR				A	A	22 06 15.9	
	comp=N,13nm,0.5s						
EIBI	**Ibiza**	**5.42**	**47**	Pn	**Pn**	**22 05 10.8**	**+0.8**
EIBI				Sn	**Sn**	**22 06 06.7**	**-4.9**
EIBI				*i* Vmb_Lg		22 06 14.8	
EIBI	**Ibiza**	**5.42**	**47**	*i* Vmb_Lg		22 06 14.8	
PMST	**Lisbon--Monsan**	**5.42**	**309**	*e*Pn	**Pn**	**22 05 11.1**	**+1.0**
PMST				*e*Sn	**Sn**	**22 06 09.9**	**-1.8**
OUK	**Oukaimeden**	**5.45**	**220**	P	**Pn**	**22 05 11.4**	**+0.5**
ETOR	**Torete**	**5.52**	**14**	Pn	**Pn**	**22 05 13.4**	**+1.8**
ETOR				Sn	**Sn**	**22 06 12.9**	**-1.4**
ETOR				Sg	**Sb**	**22 06 37.3**	**+4.9**
ETOR				*i* Vmb_Lg		22 06 53.8	
ZGR	**Zagora**	**5.54**	**197**	P	**Pn**	**22 05 13.8**	**+1.8**
EMOS	**Mosqueruela**	**5.55**	**27**	Pn	**Pn**	**22 05 11.9**	**-0.2**
EMOS				Sn	**Sn**	**22 06 14.0**	**-1.2**
PMAFR	**Mafra**	**5.61**	**310**	*e*Pn	**Pn**	**22 05 13.7**	**+0.9**
PMAFR				*e*Sn	**Sn**	**22 06 13.8**	**-2.7**
PMAFR				A	A	22 06 15.6	
	comp=N,29nm,0.4s						
ECOL	**Islas Columbre**	**5.67**	**37**	Pn	**Pn**	**22 05 14.0**	**+0.4**
ECOL				Sn	**Sn**	**22 06 17.1**	**-0.8**
PSBE	**So Bento**	**5.69**	**317**	*e*Pn	**Pn**	**22 05 14.5**	**+0.7**
PSBE				*e*Sn	**Sn**	**22 06 16.8**	**-1.5**
PSBE				A	A	22 06 23.1	
	comp=N,19nm,0.5s						
MTE	**Manteigas**	**5.76**	**330**	*e*Pn	**Pn**	**22 05 15.6**	**+0.7**
MTE				*e*Sn	**Sn**	**22 06 17.6**	**-2.7**
MTE				A	A	22 06 56.0	
	comp=N,35nm,0.7s						
PCAS	**Casmilo, Conde**	**5.92**	**322**	*e*Pn	**Pn**	**22 05 17.6**	**+0.6**
PCAS				*e*Sn	**Sn**	**22 06 20.7**	**-3.3**
PCAS				A	A	22 07 04.3	
	comp=N,23nm,0.6s						
COI	**Coimbra**	**6.00**	**324**	*e*Pn	**Pn**	**22 05 18.8**	**+0.8**
COI				*e*Sn	**Sn**	**22 06 24.3**	**-1.6**
EAH	**EAH**	**6.16**	**234**	P	**Pn**	**22 05 20.1**	**-0.2**
PVIS	**Viseu**	**6.17**	**329**	*e*Pn	**Pn**	**22 05 21.2**	**+0.7**
PVIS				*e*Sn	**Sn**	**22 06 28.3**	**-2.0**
PVIS				A	A	22 07 06.8	
	comp=N,14nm,0.6s						
MVO	**Moncorvo**	**6.25**	**337**	*e*Pn	**Pn**	**22 05 22.8**	**+1.3**
MVO				*e*Sn	**Sn**	**22 06 29.9**	**-2.2**
MVO				A	A	22 07 09.4	
	comp=N,24nm,0.5s						
TTIG	**Tnine Tigouga,**	**6.27**	**220**	P	**Pn**	**22 05 21.0**	**-1.0**
ERTA	**Horta de San J**	**6.37**	**29**	Pn	**Pn**	**22 05 23.8**	**+0.6**
ERTA				*i* Vmb_Lg		22 09 09.5	
PVRL	**Vila Real**	**6.58**	**333**	*e*Pn	**Pn**	**22 05 26.8**	**+0.7**
PVRL				*e*Sn	**Sn**	**22 06 37.4**	**-3.0**
PVRL				A	A	22 06 39.6	
	comp=N,16nm,0.2s						
POLO	**Lamas de Olo**	**6.70**	**333**	*e*Pn	**Pn**	**22 05 28.5**	**+0.8**
POLO				*e*Sn	**Sn**	**22 06 39.0**	**-4.3**
POLO				A	A	22 06 45.9	
	comp=N,6.3nm,0.5s						
PBRG	**Braganca**	**6.75**	**341**	*e*Pn	**Pn**	**22 05 29.3**	**+0.9**
PBRG				*e*Sn	**Sn**	**22 06 41.6**	**-2.9**
PBRG				A	A	22 07 25.9	
	comp=N,8.5nm,0.6s						
ETOS	**Mallorca**	**6.77**	**49**	Pn	**Pn**	**22 05 27.9**	**-0.8**
ETOS				Sn	**Sn**	**22 06 41.4**	**-3.6**
ETOS				*i* Vmb_Lg		22 07 05.4	
PTO	**Porto**	**6.82**	**328**	*e*Pn	**Pn**	**22 05 30.1**	**+0.7**
PTO				*e*Sn	**Sn**	**22 06 42.8**	**-3.4**
ECAL	**Calabor**	**6.88**	**341**	Pn	**Pn**	**22 05 33.1**	**+2.9**
ECAL				Sn	**Sn**	**22 06 44.5**	**-3.1**
EPOB	**Poblet**	**7.01**	**31**	Pn	**Pn**	**22 05 31.5**	**-0.5**
PCAB	**Cabril**	**7.07**	**333**	*e*Pn	**Pn**	**22 05 33.8**	**+0.9**
PCAB				*e*Sn	**Sn**	**22 06 48.7**	**-3.8**
PCAB				A	A	22 07 31.8	
	comp=N,18nm,0.5s						
ELOB	**Lobios**	**7.22**	**334**	Pn	**Pn**	**22 05 34.7**	**-0.3**
ELOB				Sn	**Sn**	**22 06 51.8**	**-4.5**
ELOB				*i* Vmb_Lg		22 07 42.6	
PGAV	**Gavieira, Arco**	**7.39**	**333**	*e*Pn	**Pn**	**22 05 38.3**	**+1.1**
PGAV				*e*Sn	**Sn**	**22 06 56.0**	**-4.2**
PGAV				A	A	22 06 59.2	
	comp=N,9.6nm,0.4s						
EORO	**Oroz-Betelu**	**7.67**	**14**	Pn	**Pn**	**22 05 40.9**	**-0.2**
EORO				*i* Vmb_Lg		22 07 59.3	
ELAN	**Lanestosa**	**7.77**	**2**	Pn	**Pn**	**22 05 41.9**	**-0.5**
ETSF	**Etsaut**	**7.84**	**18**	*e*Pn	**Pn**	**22 05 44.6**	**+1.2**
ETSF				*e*Sn	**Sn**	**22 07 06.9**	**-4.4**
	comp=N,1.4nm,0.4s						
SJPF	**Ste Jean**	**7.90**	**14**	*e*Pn	**Pn**	**22 05 45.1**	**+1.0**
SJPF				*e*Sn	**Sn**	**22 07 08.2**	**-4.5**
	comp=N,2.5nm,0.4s						
EARI	**Arriondas**	**7.91**	**352**	Pn	**Pn**	**22 05 45.0**	**+0.7**
EARI				Sn	**Sn**	**22 07 08.3**	**-4.8**
EPF	**Esparros**	**8.21**	**22**	*e*Pn	**Pn**	**22 05 47.9**	**-0.5**
EPF	**Esparros**	**8.21**	**22**	*e*Pg	Pb	22 06 21.7	+9.5
EPF				*e*Sn	**Sn**	**22 07 15.6**	**-4.8**
	comp=N,1.5nm,0.4s						
MTLF	**Montolieu**	**9.13**	**29**	*e*Pn	**Pn**	**22 06 00.3**	**-0.8**
MTLF				*e*Sn	**Sn**	**22 07 37.7**	**-5.4**
	comp=N,1.3nm,0.5s						
LFF	**La Frestale**	**10.08**	**19**	*e*Pn	**Pn**	**22 06 13.5**	**-0.5**
LFF				*e*Sn	**Sn**	**22 08 00.3**	**-5.9**
	comp=N,0.7nm,0.3s						
CAF	**Calviac**	**10.46**	**23**	*e*Pn	**Pn**	**22 06 18.5**	**-0.7**
RJF	**Les Rejaudoux**	**10.63**	**21**	*e*Pn	**Pn**	**22 06 21.0**	**-0.5**
RJF				*e*Sn	**Sn**	**22 08 14.1**	**-5.6**
	comp=N,0.5nm,0.4s						
KEST	**Kesra**	**10.69**	**85**	Pn	**Pn**	**22 06 19.9**	**-2.6**
	comp=N,0.1nm,0.3s,baz=262,slow=22,SNR=1.8						
KEST				Sn	**Sn**	**22 08 15.9**	**-5.5**
	comp=N,0.1nm,0.3s,baz=200,slow=12,SNR=1.8						
	comp=N,1.3nm,0.7s						
LMR	**La Mourre**	**11.18**	**42**	*e*Pn	**Pn**	**22 06 28.3**	**-0.8**
MFF	**Saint Martin d**	**11.46**	**13**	*e*Pn	**Pn**	**22 06 32.6**	**-0.3**
PGF	**Pioggiola**	**12.19**	**51**	*e*Pn	**Pn**	**22 06 44.1**	**+1.1**
QUIF	**Quistinic**	**12.46**	**2**	*e*Pn	**Pn**	**22 06 46.4**	**-0.1**
QUIF				*e*Sn	**Sn**	**22 08 57.6**	**-6.8**
	comp=N,2.1nm,0.5s						
SGMF	**Saint Gilles**	**12.82**	**4**	*e*Pn	**Pn**	**22 06 51.2**	**-0.2**
ROSF	**Rostrenen**	**12.88**	**2**	*e*Pn	**Pn**	**22 06 52.0**	**-0.2**
ROSF				*e*Sn	**Sn**	**22 09 07.1**	**-7.5**
	comp=N,0.4nm,0.2s						
GRR	**Gorron**	**13.10**	**9**	*e*Pn	**Pn**	**22 06 54.7**	**-0.6**
GERES	**GERESS Array B**	**18.56**	**39**	P	**Pn**	**22 08 06.3**	**+0.1**
	comp=N,0.1nm,0.3s,baz=197,slow=20,SNR=2.4						
	comp=N,0.3nm,0.7s						
CLL	**Collm**	**19.92**	**32**	*i* P	**Pn**	**22 08 22.8**	**+0.5**
	comp=Z,5.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**22.76**	**166**	P	**P**	**22 08 52.6**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=349,slow=8.7,SNR=6.0						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**62.73**	**50**	P	**P**	**22 14 14.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=282,slow=6.1,SNR=4.1						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**76.28**	**41**	P	**P**	**22 15 38.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=289,slow=4.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**76.87**	**313**	P	**P**	**22 15 44.2**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=61,slow=7.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						

IDC 30 22:05:47.1±54.0**, 21°.78S**×**176°.40W, h0**km**, mb3.9**/3**,**
mbtmp3.9/3**, Error ellipse: s-maj=996.6km**
s-min=165.3km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.60**	**246**	P	P	22 13 10.3	-1.8
	1.0nm,0.5s,baz=110,slow=10,SNR=3.5						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**45.69**	**258**	P	P	22 14 10.2	+0.1
	0.4nm,0.4s,baz=92,slow=7.4,SNR=9.7						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**45.91**	**263**	P	P	22 14 12.6	+0.7
	1.3nm,0.4s,baz=98,slow=8.2,SNR=37						
	1.3nm,0.4s						

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*BJI **30** 22:27:28.0±0.0, 4°.27S×129°.74E, h20km, mb4.9/66, mB5.0/40, Ms4.3/19, Ms7 4.1/20*

*IDC **30** 22:27:29.9±0.4, 3°.96S×129°.44E, h0km, mb4.7/30, mbtmp4.7/34, ML4.4/3, MS3.9/42, Error ellipse: s-maj=13.9km s-min=10.1km az=67.0*

*MOS **30** 22:27:30.7±0.9, 3°.92S×129°.43E, h17km, mb5.2/36, Error ellipse: s-maj=11.2km s-min=5.4km az=113.0*

*NEIC **30** 22:27:32.3±2.3, 3°.90S±0°.05×129°.40E±0°.06, h10km±1km, mb5.1/135, Error ellipse: s-maj=9.7km s-min=8.5km az=118.0*

*DJA **30** 22:27:34.6±0.2, 4°S±2°×13°0E±°, h10km, M4.9/38, mb5.2/38, mB5.3/18, MLv5.1/19, Mw(mB)4.8/18, MwMwp4.7/3, Mwp5.0/3*

*GCMT **30** 22:27:36.3±0.2, 3°.92S±0°.01×129°.44E±0°.02, h18km, MW5.0/104, Moment Tensor Solution. s60,c83; s104,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.38±.12; $M_{\theta\theta}$-3.58±.08; $M_{\phi\phi}$0.19±.09; $M_{r\theta}$-0.02±.17; $M_{\theta\phi}$1.27±.06; $M_{\phi r}$-0.76±.24; Best double couple: $M_0$3.77000×10^{16} NP1:ϕ_s273.00000°,δ45.00000°, λ70.00000°. NP2:ϕ_s120.00000°,δ48.00000°,λ109.00000°. Principal axes: T 3.5660, Plg76.0000°, Azm101.0000°; N 0.3990, Plg14.0000°, Azm288.0000°; P -3.9740, Plg2.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 22:27:35.2±0.2**, 4°.00S**±0°.03×**129°.44E**±0°.04**, h36**km**, n468,**
σ**1ˢ.40**/435**, mb5.1**/145**, MS4.0**/45**, 29C-9D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.83**	**322**	P	**Pn**	**22 27 47.8**	**-2.5**
AAI	**Ambon**	**1.28**	**284**	P	**Pn**	**22 27 54.9**	**-1.7**
FAKI	**Fak Fak**	**3.00**	**69**	Pn	**Pn**	**22 28 20.7**	**+0.5**
FAKI	**Fak Fak**	**3.00**	**69**	P	**Pn**	**22 28 20.7**	**+0.5**
SIJI	**Sorong**	**3.60**	**30**	Pn	**Pn**	**22 28 27.8**	**-0.7**
	74nm,0.3s,baz=253,slow=4.8,SNR=206						
SIJI				Sn	**Sn**	**22 29 06.8**	**-3.1**
	168nm,0.3s,baz=270,slow=20,SNR=8.9						
SIJI				LR	LR	22 30 20.8	
	comp=Z,4μm,19.0s,baz=263,slow=48						
	223nm,0.3s						
SWI	**Sorong**	**3.60**	**30**	P	**Pn**	**22 28 27.6**	**-0.9**
LBMI	**Labuha**	**3.86**	**330**	P	**Pn**	**22 28 31.3**	**-0.8**
SANI	**Sanana**	**3.96**	**299**	P	**Pn**	**22 28 32.0**	**-1.4**
KMPI	**Kaimana, Papua**	**4.27**	**86**	P	**Pn**	**22 28 38.1**	**+0.5**
SAUI	**Saumlaki**	**4.37**	**155**	Pn	**Pn**	**22 28 40.1**	**+1.0**
SAUI	**Saumlaki**	**4.37**	**155**	P	**Pn**	**22 28 43.7**	**+4.6**
TNTI	**Ternate**	**5.17**	**336**	Pn	**Pn**	**22 28 48.8**	**-1.3**
TNTI	**Ternate**	**5.17**	**336**	P	**Pn**	**22 28 49.1**	**-1.0**
BBSI	**Bau Bau**	**7.01**	**258**	P	**Pn**	**22 29 19.4**	**+4.1**
	0.1nm262nm22nm,1.0s						
KMSI	**Cibinong**	**7.10**	**310**	P	**Pn**	**22 29 17.8**	**+1.2**
	2.2nm4μm301nm,0.5s						
SRPI	**Serui, Papua**	**7.11**	**73**	P	**Pn**	**22 29 16.5**	**-0.2**
	1.2nm2μm5μm240nm,0.6s						
BAKI	**Biak**	**7.22**	**67**	P	**Pn**	**22 29 18.0**	**-0.2**
	5μm707nm,0.6s						
LUWI	**Luwuk**	**7.28**	**294**	Pn	**Pn**	**22 29 17.8**	**-1.3**
LUWI	**Luwuk**	**7.28**	**294**	P	**Pn**	**22 29 19.1**	**0.0**
	0.9nm6μm276nm,0.9s						
SOEI	**Soe**	**7.69**	**222**	Pn	**Pn**	**22 29 26.2**	**+1.5**
SOEI	**Soe**	**7.69**	**222**	P	**Pn**	**22 29 28.0**	**+3.2**
	0.6nm105nm,0.9s						
GTOI	**Gorontalo**	**7.91**	**305**	P	**Pn**	**22 29 29.7**	**+2.0**
	822nm103nm,0.8s						
APSI	**Ampana**	**8.37**	**291**	P	**Pn**	**22 29 36.3**	**+2.3**
	2μm215nm,1.0s						
BATI	**Baumata**	**8.42**	**223**	Pn	**Pn**	**22 29 35.4**	**+0.6**
	4.7nm,0.3s,baz=83,slow=8.1,SNR=6.2						
BATI				Sn	**Sn**	**22 31 07.0**	**-1.7**
	baz=114,slow=12						
BATI				LR	LR	22 33 22.4	
	comp=Z,1μm,20.6s,baz=25,slow=42						
	39nm,0.6s						
BATI	**Baumata**	**8.42**	**223**	P	**Pn**	**22 29 38.5**	**+3.7**
	59nm,0.7s						
MMRI	**Maumere**	**8.51**	**237**	Pn	**Pn**	**22 29 37.2**	**+1.2**
MMRI	**Maumere**	**8.51**	**237**	P	Pn	22 29 42.1	+6.1
	113nm,1.5s						
SGSI	**Sangihe**	**8.58**	**333**	P	**Pn**	**22 29 36.6**	**-0.3**
	74nm,0.5s						
MRSI	**Marisa**	**8.71**	**301**	P	**Pn**	**22 29 39.6**	**+0.8**
	1μm106nm,0.9s						
MTN	**Manton Dam**	**8.95**	**169**	P	**Pn**	**22 29 44.0**	**+2.0**
	baz=9.0,SNR=12						
MTN	**Manton Dam**	**8.95**	**169**	Pn	**Pn**	**22 29 43.6**	**+1.6**
EDFI	**Ende, Flores**	**9.03**	**238**	P	Pn	22 29 48.0	+4.7
	52nm,1.6s						
KDU	**Kakadu**	**9.14**	**161**	P	**Pn**	**22 29 44.7**	**+0.1**
	baz=9.2,SNR=43						
BSSI	**Bau Bau, Buton**	**9.17**	**256**	P	**Pn**	**22 29 48.5**	**+3.5**
	102nm,0.8s						
BNSI	**Bone**	**9.32**	**267**	P	Pn	22 29 52.6	+5.5
	90nm,0.7s						
BKSI	**Bulukumba**	**9.38**	**262**	P	**Pn**	**22 29 51.9**	**+4.0**
	922nm109nm,0.7s						
SMPI	**Sarmi**	**9.47**	**78**	P	**Pn**	**22 29 50.4**	**+1.3**
	2μm52nm,1.2s						
SPSI	**Sidrap Palu**	**9.65**	**270**	P	**Pn**	**22 29 55.3**	**+3.7**
	1μm68nm,0.7s						
TTSI	**Tana Toraja**	**9.65**	**275**	P	**Pn**	**22 29 56.0**	**+4.4**
	1μm58nm,0.8s						
KAPI	**Kappang**	**9.71**	**264**	Pn	**Pn**	**22 29 54.9**	**+2.5**
	8.8nm,0.3s,baz=108,slow=5.8,SNR=77						
KAPI				LR	LR	22 33 07.9	
	comp=Z,522nm,20.8s,baz=83,slow=35						
KAPI	**Kappang**	**9.71**	**264**	Pn	**Pn**	**22 29 55.2**	**+2.7**
KAPI	**Kappang**	**9.71**	**264**	P	**Pn**	**22 29 55.2**	**+2.7**
TOLI2	**Tolitoli**	**10.03**	**300**	Pn	**Pn**	**22 29 56.4**	**-0.4**
MPSI	**Mapaga**	**10.46**	**294**	P	**Pn**	**22 30 07.1**	**+4.3**
	505nm31nm,0.9s						
GENI	**Genyem**	**10.80**	**83**	P	**Pn**	**22 30 08.4**	**+1.0**
KNRA	**Kununurra**	**11.62**	**183**	P	**Pn**	**22 30 20.5**	**+1.8**
	baz=12,SNR=12						
KNRA	**Kununurra**	**11.62**	**183**	Pn	**Pn**	**22 30 19.9**	**+1.2**
BKB	**Balikpapan**	**12.82**	**282**	Pn	**Pn**	**22 30 35.8**	**+0.8**
MYLDM	**Lahad Datu**	**14.23**	**310**		**P**	**22 30 57.7**	**-3.5**
BBKI	**Banjar Baru**	**14.58**	**272**	P	**P**	**22 31 02.4**	**-2.6**
	4μm82nm,0.6s						
SRBI	**Singaraja**	**14.72**	**253**	P	**P**	**22 31 05.8**	**-0.7**
	154nm,1.2s						
MTKI	**Muara Teweh, K**	**14.85**	**281**	P	**Pn**	**22 31 05.1**	**+2.5**
	60nm,1.0s						
ABJI	**Asem Bagus**	**15.59**	**255**	P	**P**	**22 31 17.7**	**+1.5**
	148nm,1.5s						
KMMI	**Kalianget**	**15.70**	**258**	P	**P**	**22 31 17.1**	**-0.3**
	124nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.83**	**253**		**Pn**	**22 31 15.3**	**-0.3**
JAGI				IAmb	IAmb	22 31 34.3	
	comp=Z,58nm,0.7s						
JAGI	**Jajag, Banyuwa**	**15.83**	**253**	P	**P**	**22 31 18.2**	**-0.8**
	comp=Z,81nm,0.8s						
BLJI	**Banyuglugur**	**16.20**	**256**	P	**P**	**22 31 26.0**	**+3.0**
	comp=Z,104nm,0.7s						
WB0	**Warramunga Arr**	**16.40**	**163**		**Pn**	**22 31 21.0**	**-1.8**
GMJI	**Gumukmas**	**16.46**	**254**	P	**P**	**22 31 28.7**	**+2.8**
	comp=Z,85nm,0.7s						
WRAB	**Tennant Creek**	**16.55**	**164**	Pn	**Pn**	**22 31 19.6**	**-5.0**
WRAB	**Tennant Creek**	**16.55**	**164**	⇑*i*P	**Pn**	**22 31 21.5**	**-3.1**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WRA	**Warramunga Arr**	**16.55**	**164**	Pn	**Pn**	**22 31 22.2**	**-2.5**
	comp=Z,1.1nm,0.3s,baz=348,slow=13,SNR=32						
WRA				Sn	**Sn**	**22 34 21.9**	**-5.6**
	comp=Z,1.1nm,0.3s,baz=344,slow=22,SNR=6.0						
WRA				LR	LR	22 38 26.1	
	comp=Z,553nm,19.0s,baz=10.0,slow=40						
	comp=Z,9.4nm,0.8s						
WRA	**Warramunga Arr**	**16.55**	**164**	Pn	**Pn**	**22 31 21.6**	**-3.0**
WRA	**Warramunga Arr**	**16.55**	**164**	*i* P	**Pn**	**22 31 21.7**	**-3.0**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WB2	**Warramunga Arr**	**16.55**	**164**	Pn	**Pn**	**22 31 21.7**	**-3.0**
WR0	**Warramunga Arr**	**16.63**	**163**	Pn	**Pn**	**22 31 22.7**	**-2.9**
COEN	**Coen**	**16.78**	**127**	P	**Pn**	**22 31 27.9**	**+0.3**
	baz=17,SNR=9.5						
COEN	**Coen**	**16.78**	**127**	Pn	**Pn**	**22 31 27.5**	**-0.1**
COEN				IAmb	IAmb	22 31 35.9	
	comp=Z,56nm,0.6s						
GRJI	**Gresik**	**17.13**	**260**	P	**P**	**22 31 38.4**	**+5.1**
	comp=Z,749nmcomp=Z,68nm,0.9s						
PBKI	**Pangkalan Bun**	**17.79**	**274**	P	**P**	**22 31 43.2**	**+2.6**
	comp=Z,102nm,0.9s						
PWJI	**Pagerwojo**	**17.99**	**256**	P	**P**	**22 31 44.2**	**+1.4**
	comp=Z,73nm,0.7s						
MANU	**Manus Island**	**18.00**	**84**	P	**P**	**22 31 43.1**	**+0.1**
PMG	**Port Moresby**	**18.39**	**108**	P	**P**	**22 31 47.2**	**-0.1**
	comp=Z,6.8nm,0.5s,baz=339,slow=20,SNR=1.4						
PMG				LR	LR	22 40 27.6	
	comp=Z,232nm,18.7s,baz=322,slow=42						
PMG	**Port Moresby**	**18.39**	**108**	P	**P**	**22 31 46.0**	**-1.2**
PMG	**Port Moresby**	**18.39**	**108**	*i* P	**Pn**	**22 31 52.7**	**+5.2**
STKI	**Sintang**	**18.40**	**282**	P	**Pn**	**22 31 50.4**	**+2.8**
QIS	**Mount Isa**	**19.20**	**150**	P	**Pn**	**22 31 56.7**	**-0.6**
	baz=19,SNR=30						
UGM	**Wanagama**	**19.21**	**257**	P	**Pn**	**22 31 57.2**	**-0.3**
MBWA	**Marble Bar**	**19.50**	**208**	P	**Pn**	**22 32 00.3**	**-0.4**
PSA00	**Pilbara Seismi**	**19.80**	**207**		**P**	**22 32 03.4**	**+0.7**
PSA00				IAmb	IAmb	22 32 06.2	
	comp=Z,90nm,1.0s						
KSM	**Kuching**	**19.88**	**286**	P	**P**	**22 32 04.2**	**+0.6**
KSM				IAmb	IAmb	22 32 12.2	
	comp=Z,121nm,1.3s						
AS31	**Alice Springs**	**20.02**	**168**	P	**P**	**22 32 05.3**	**+0.2**
ASAR	**Alice Springs**	**20.02**	**168**	P	**P**	**22 32 05.9**	**+0.8**
	comp=Z,17nm,0.5s,baz=349,slow=11,SNR=257						
ASAR				S	**S**	**22 35 46.9**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=338,slow=7.6,SNR=4.4						
ASAR				PcP	**PcP**	**22 36 19.6**	**-0.8**
	comp=Z,2.9nm,0.4s,baz=17,slow=1.8,SNR=4.8						
ASAR				ScP	**ScP**	**22 39 55.2**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=1.9,slow=2.8,SNR=4.5						
	comp=Z,17nm,0.5s						
ASAR	**Alice Springs**	**20.02**	**168**	P	**P**	**22 32 05.7**	**+0.6**
ASAR	**Alice Springs**	**20.02**	**168**	P	**P**	**22 32 05.7**	**+0.6**
MTSU	**Mount Surprise**	**20.23**	**135**	P	Pn	22 32 08.6	-0.9
	baz=20,SNR=49						
WRKA	**Warakurna**	**20.95**	**183**	P	Pn	22 32 16.4	-1.4
	baz=21,SNR=117						
LEM	**Lembang**	**21.91**	**262**	P	**P**	**22 32 26.5**	**+0.9**
	comp=Z,9.5nm,0.4s,baz=109,slow=18,SNR=4.5						
LEM				LR	LR	22 41 13.0	
	comp=Z,382nm,21.2s,baz=76,slow=38						
	comp=Z,9.5nm,0.4s						
KRVT	**Keravat (AS076**	**22.53**	**92**	P	**P**	**22 32 32.5**	**+0.4**
	comp=Z,70nm,0.8s,baz=266,slow=4.7,SNR=10						
	comp=Z,70nm,0.8s						
RABL	**Rabaul**	**22.66**	**91**	P	**P**	**22 32 33.1**	**-0.6**
CTA	**Charters Tower**	**22.89**	**136**	P	**P**	**22 32 35.3**	**-0.7**
	comp=Z,16nm,0.8s,baz=315,slow=10,SNR=12						

	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**22.89**	**136**	P	**P**	**22 32 35.7**	**-0.3**
CTAO				IAmb	IAmb	22 32 44.0	
	comp=Z,43nm,0.7s						
CTAO	**Charters Tower**	**22.89**	**136**	P	**P**	**22 32 35.7**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,43nm,0.7s						
GUMO	**Guam**	**23.23**	**41**	P	**P**	**22 32 37.8**	**-1.5**
	comp=Z,27nm,0.4s,baz=247,slow=1.9,SNR=1.9						
	comp=Z,27nm,0.4s						
GIRL	**Giralia**	**23.67**	**217**	P	**P**	**22 32 45.6**	**+2.0**
	baz=24,SNR=6.6						
GIRL	**Giralia**	**23.67**	**217**	P	**P**	**22 32 44.3**	**+0.7**
MYKOM	**Kota Tinggi**	**26.21**	**282**	P	**P**	**22 33 06.4**	**-0.6**
FORT	**Forrest**	**26.67**	**183**	P	**P**	**22 33 11.6**	**+0.8**
	baz=27,SNR=8.0						
FORT	**Forrest**	**26.67**	**183**	P	**P**	**22 33 09.8**	**-1.0**
FORT				IAmb	IAmb	22 33 47.4	
	comp=Z,55nm,0.8s						
MORW	**Morawa**	**27.99**	**206**	P	**P**	**22 33 22.7**	**-0.1**
	baz=28,SNR=4.8						
MORW	**Morawa**	**27.99**	**206**	P	**P**	**22 33 22.1**	**-0.6**
BKNI	**Bangkinang**	**28.70**	**278**	P	**P**	**22 33 29.9**	**+0.7**
SSLB	**Suanglung**	**28.83**	**344**	P	**P**	**22 33 28.6**	**-1.7**
SSLB				IAmb	IAmb	22 33 38.8	
	comp=Z,24nm,0.9s						
YOJ	**Yonaguni jima**	**28.97**	**348**	P	**P**	**22 33 30.2**	**-1.2**
YOJ	**Yonaguni jima**	**28.97**	**348**	P	**P**	**22 33 30.2**	**-1.2**
YOJ				pmax	pmax		
	comp=Z,281nm,2.0s						
BBOO	**Buckleboo**	**29.33**	**169**	P	**P**	**22 33 35.3**	**+0.7**
	baz=30,SNR=20						
BBOO	**Buckleboo**	**29.33**	**169**	P	**P**	**22 33 34.5**	**0.0**
BBOO				IAmb	IAmb	22 33 41.6	
	comp=Z,29nm,0.7s						
KLBR	**Kellerberrin**	**29.57**	**201**	P	**P**	**22 33 36.6**	**-0.1**
	baz=30,SNR=11						
EIDS	**Eidsvold**	**29.73**	**138**	P	**P**	**22 33 37.9**	**-0.3**
STKA	**Stephens Creek**	**29.99**	**159**	P	**P**	**22 33 40.3**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=338,slow=7.4,SNR=8.4						
STKA				LR	LR	22 46 30.0	
	comp=Z,432nm,21.4s,baz=339,slow=38						
	comp=Z,2.3nm,0.3s						
STKA	**Stephens Creek**	**29.99**	**159**	P	**P**	**22 33 40.8**	**+0.4**
	baz=30,SNR=6.1						
STKA	**Stephens Creek**	**29.99**	**159**	P	**P**	**22 33 40.5**	**+0.1**
STKA	**Stephens Creek**	**29.99**	**159**	P	**P**	**22 33 40.5**	**+0.1**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KULM	**Kulim**	**30.20**	**288**	P	**P**	**22 33 42.7**	**+0.2**
KULM				IAmb	IAmb	22 33 51.9	
	comp=Z,48nm,0.9s						
HTT	**Hallett**	**30.59**	**164**	P	**P**	**22 33 47.6**	**+1.8**
	baz=31,SNR=4.8						
JOW	**Kunigami**	**30.67**	**358**	P	**P**	**22 33 45.3**	**-1.2**
	comp=Z,7.5nm,0.5s,baz=154,slow=14,SNR=3.9						
JOW				LR	LR	22 45 26.4	
	comp=Z,108nm,21.8s,baz=116,slow=35						
	comp=Z,7.5nm,0.5s						
JOW	**Kunigami**	**30.67**	**358**	P	**P**	**22 33 46.4**	**-0.1**
JOW				IAmb	IAmb	22 33 53.4	
	comp=Z,26nm,0.7s						
HNR	**Honiara**	**30.76**	**102**	LR	LR	22 47 44.3	
	comp=Z,119nm,18.2s,baz=325,slow=40						
PSI	**Prapat**	**31.24**	**282**	P	**P**	**22 33 50.4**	**-1.4**
	comp=Z,20nm,0.8s,baz=90,slow=7.7,SNR=9.9						
	comp=Z,20nm,0.8s						
CMSA	**Cobar Meteorol**	**31.37**	**153**	P	**P**	**22 33 54.2**	**+1.6**
	baz=32,SNR=8.7						
GSI	**Gunungsitoli**	**32.28**	**279**	P	**P**	**22 33 60.0**	**-0.9**
JCJ	**Chichijima**	**33.27**	**21**	LR	LR	22 45 24.1	
	comp=Z,306nm,20.8s,baz=152,slow=32						
ARMA	**Armidale**	**33.61**	**144**	P	**P**	**22 34 13.6**	**+1.1**
ARMA				IAmb	IAmb	22 34 20.0	
	comp=Z,25nm,1.2s						
ARPS	**Mount Arapiles**	**34.55**	**162**	P	**P**	**22 34 21.7**	**+1.4**
	baz=35,SNR=8.5						
CAN	**Canberra**	**36.04**	**152**	P	**P**	**22 34 34.2**	**+1.0**
CAN				IAmb	IAmb	22 34 41.3	
	comp=Z,29nm,1.1s						
CAN	**Canberra**	**36.04**	**152**	P	**P**	**22 34 34.3**	**+1.0**
CAN				pmax	pmax		
	comp=Z,29nm,1.1s						
TOO	**Toolangi**	**36.50**	**158**	P	**P**	**22 34 39.3**	**+2.1**
	baz=37,SNR=5.3						
TOO	**Toolangi**	**36.50**	**158**	P	**P**	**22 34 38.9**	**+1.7**
TOO	**Toolangi**	**36.50**	**158**	P	**P**	**22 34 38.9**	**+1.7**
TOO				pmax	pmax		
	comp=Z,18nm,1.2s						
WHN	**Wuhan**	**37.25**	**338**	⇑P	**P**	**22 34 44.5**	**+0.9**
WHN				sP	**pwP**	**22 34 57.8**	**+0.3**
WHN				S	S	22 40 41.0	+13
CMAR	**Chiang Mai Arr**	**37.43**	**308**	P	**P**	**22 34 46.0**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=136,slow=7.2,SNR=24						
CMAR				PcP	**PcP**	**22 37 03.6**	**0.0**
	comp=Z,0.7nm,0.3s,baz=157,slow=2.9,SNR=1.3						
CMAR				LR	LR	22 52 38.8	
	comp=Z,61nm,18.2s,baz=135,slow=40						
	comp=Z,2.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.43**	**308**	P	**P**	**22 34 44.5**	**-0.7**
GYA	**Guiyang**	**37.45**	**325**	⇑P	**P**	**22 34 46.0**	**+0.5**
GYA				pP	pP	22 34 50.8	-4.0
GYA				pmax	pmax		
	comp=Z,14nm,0.6s						
CHTO	**Chiang Mai**	**37.63**	**308**	P	**P**	**22 34 47.4**	**+0.5**
CHTO				IAmb	IAmb	22 35 03.0	
	comp=Z,22nm,0.8s						
CHTO	**Chiang Mai**	**37.63**	**308**	P	**P**	**22 34 47.4**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,22nm,0.8s						
JHJ	**Hachijo jima 2**	**38.19**	**14**	LR	LR	22 48 48.8	
	comp=Z,430nm,18.9s,baz=142,slow=34						
KMI	**Kunming**	**38.87**	**320**	⇑P	**P**	**22 34 58.3**	**+0.8**
KMI				sP	sP	22 35 10.5	-0.9
KMI				pmax	pmax		
	comp=Z,30nm,1.5s						
JHS	**Saijyo**	**38.94**	**5**	P	**P**	**22 34 57.2**	**-0.6**
JHS				IAmb	IAmb	22 35 13.3	
	comp=Z,24nm,0.7s						
NAWB	**Namwon**	**39.26**	**357**	P	**P**	**22 35 00.4**	**+0.1**
INU	**Inuyama**	**39.78**	**10**	P	**P**	**22 35 03.9**	**-0.8**
JGF	**Kuroka**	**40.08**	**10**	P	**P**	**22 35 05.5**	**-1.8**
DZM	**Mont Dzumac**	**40.10**	**120**	P	**P**	**22 35 07.5**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=287,slow=14,SNR=2.4						
	comp=Z,2.5nm,0.5s						
TJN	**Taejon**	**40.21**	**357**	P	**P**	**22 35 07.3**	**-1.0**
TJN	**Taejon**	**40.21**	**357**	*de*P	**P**	**22 35 08.9**	**+0.6**
PZH	**PanZhiHua**	**40.47**	**320**	P	**P**	**22 35 11.5**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,90nm,5.8s						
MJAR	**Matsushiro Arr**	**41.15**	**11**	P	**P**	**22 35 14.5**	**-1.6**
	comp=Z,14nm,0.8s,baz=192,slow=9.3,SNR=35						
MJAR				PcP	**PcP**	**22 37 15.9**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=216,slow=6.0,SNR=1.3						
MJAR				LR	LR	22 50 55.3	
	comp=Z,147nm,19.6s,baz=196,slow=34						
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**41.15**	**11**	P	**P**	**22 35 14.3**	**-1.8**
MJAR	**Matsushiro Arr**	**41.15**	**11**	P	**P**	**22 35 14.3**	**-1.8**
MJAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	**41.15**	**11**	P	**P**	**22 35 14.2**	**-1.9**
MAJO				IAmb	IAmb	22 35 21.8	
	comp=Z,42nm,0.8s						
MAJO	**Matsushiro**	**41.15**	**11**	*ce*P	**P**	**22 35 14.7**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MJB9	**Matsu-Tunnel**	**41.16**	**11**	P	**P**	**22 35 14.4**	**-1.7**
MJB9				IAmb	IAmb	22 35 21.7	
	comp=Z,42nm,0.8s						
KSAR	**Wonju Array Be**	**41.25**	**358**	P	**P**	**22 35 15.8**	**-1.0**
KSAR	**Wonju Array Be**	**41.25**	**358**	P	**P**	**22 35 15.9**	**-1.0**
JYT	**Yasato**	**41.26**	**13**	P	**P**	**22 35 15.6**	**-1.3**
KSRS	**Korea Array**	**41.26**	**358**	P	**P**	**22 35 17.4**	**+0.5**
	comp=Z,4.4nm,0.9s,baz=185,slow=5.8,SNR=14						
KSRS				PcP	**PcP**	**22 37 14.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=185,slow=3.9,SNR=1.4						
KSRS				LR	LR	22 51 35.8	
	comp=Z,141nm,21.7s,baz=175,slow=35						
	comp=Z,4.4nm,0.9s						
KS19	**Wonju Array Si**	**41.31**	**358**	P	**P**	**22 35 16.6**	**-0.7**
LYN	**LuoYang**	**41.54**	**339**	⇓*i*P	**P**	**22 35 19.5**	**+0.2**
LYN				pP	pwP	22 35 31.8	-1.6
LYN				S	**S**	**22 41 37.3**	**+4.5**
LYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LYN				pmax	pmax		
	comp=Z,150nm,5.4s						
LYN				LR	LR		
	comp=Z,220nm,24.7s						
LYN				LR	LR		
	comp=Z,140nm,11.0s						
TIA	**Tai'an**	**41.63**	**345**	*e*P	**P**	**22 35 19.0**	**-1.0**
TIA				pmax	pmax		
	comp=Z,12nm,1.3s						
SEHB	**SEOHWA**	**42.07**	**359**	P	**P**	**22 35 23.9**	**+0.4**
SEHB				IAmb	IAmb	22 35 25.8	
	comp=Z,32nm,1.2s						
CD2	**Chengdu**	**42.50**	**327**	*e*P	**P**	**22 35 28.0**	**+0.8**
XAN	**Xi'an**	**42.50**	**334**	⇓*i*P	**P**	**22 35 26.8**	**-0.4**
XAN				pP	pP	22 35 33.8	-2.9
XAN				sP	pwP	22 35 40.0	-1.3
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,6.0s						
HNS	**HongShan**	**43.41**	**343**	⇑P	**P**	**22 35 33.8**	**-0.6**
HNS				pmax	pmax		
	comp=Z,27nm,1.2s						
BJT	**Baijiatuau**	**45.47**	**346**	IAmb	IAmb	22 35 52.1	
	comp=Z,29nm,1.1s						
BJI	**Beijing**	**45.49**	**346**	P	**P**	**22 35 50.8**	**-0.2**
BJI				pmax	pmax		
	comp=Z,23nm,1.2s						
JTM	**Tenmabayashi**	**45.82**	**12**	P	**P**	**22 35 51.5**	**-2.1**
MSHR	**Mys Shultsa**	**46.39**	**2**	⇑*e*P	**P**	**22 35 57.5**	**-0.5**
MSHR				pmax	pmax		
	comp=Z,28nm,1.7s						
LZH	**Lanzhou**	**46.52**	**331**	⇑P	**P**	**22 36 00.0**	**+0.6**
LZH				pP	pP	22 36 05.0	-3.9
LZH				sP	sP	22 36 08.0	-5.0
LZH				pmax	pmax		
	comp=Z,36nm,1.4s						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=Z,120nm,13.6s						
LZH				LR	LR		
	comp=Z,170nm,12.5s						
LZH				LR	LR		
	comp=Z,170nm,13.0s						
ERM	**Erimo**	**47.47**	**14**	⇑*e*P	**P**	**22 36 09.6**	**+3.1**
ERM				pmax	pmax		
	comp=Z,36nm,1.2s						
HHC	**Hu-ho-hao-te**	**47.54**	**342**	*e*P	**P**	**22 36 07.5**	**+0.3**
HHC				pmax	pmax		
	comp=Z,45nm,1.2s						
HHC				pmax	pmax		
	comp=Z,250nm,5.6s						
CN2	**Changchun**	**47.72**	**356**	*e*P	**P**	**22 36 07.5**	**-0.9**
CN2				*e*S	**S**	**22 42 57.3**	**-4.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,6.2s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,13.1s						
BTO	**Baotou**	**47.82**	**340**	*e*P	**P**	**22 36 12.5**	**+3.1**
BTO				S	**S**	**22 43 09.3**	**+5.3**
BTO				LR	LR		
	comp=Z,550nm,13.7s						
BTO				LR	LR		
	comp=Z,490nm,16.6s						
USA0B	**Ussuriysk Arra**	**48.03**	**2**	*c i*P	**P**	**22 36 10.8**	**0.0**
USRK	**Ussuriysk Ar.**	**48.03**	**2**	P	**P**	**22 36 11.1**	**+0.3**
	comp=Z,16nm,0.8s,baz=188,slow=6.9,SNR=30						
USRK				LR	LR	22 57 18.4	
	comp=Z,155nm,19.2s,baz=158,slow=37						
	comp=Z,16nm,0.8s						
MDJ	**Mudanjiang**	**48.40**	**0**	IAmb	IAmb	22 36 15.3	
	comp=Z,26nm,1.0s						
MDJ	**Mudanjiang**	**48.40**	**0**	P	**P**	**22 36 14.5**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,29nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
XLT	**XiLinHaoTe**	**49.17**	**347**	⇑*i*P	**P**	**22 36 19.3**	**-0.4**
XLT				pP	pP	22 36 24.0	-5.3
XLT				sP	pwP	22 36 26.0	-8.1
XLT				S	**S**	**22 43 22.5**	**-0.4**
XLT				pmax	pmax		
	comp=Z,37nm,1.1s						
XLT				pmax	pmax		
	comp=Z,170nm,3.5s						
ASAJ	**Asahikawa**	**49.34**	**12**	LR	LR	22 56 07.8	
	comp=Z,138nm,21.0s,baz=188,slow=35						
JKA	**Kamikawa-asahi**	**49.34**	**12**	IAmb	IAmb	22 36 22.6	
	comp=Z,30nm,1.0s						
LSA	**Lhasa**	**49.68**	**315**	P	**P**	**22 36 24.1**	**-0.2**
LSA				IAmb	IAmb	22 36 32.4	
	comp=Z,15nm,0.8s						
LSA	**Lhasa**	**49.68**	**315**	P	**P**	**22 36 24.1**	**-0.2**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA	**Lhasa**	**49.68**	**315**	P	**P**	**22 36 26.0**	**+1.7**
PALK	**Pallekele**	**49.91**	**283**	P	**P**	**22 36 26.2**	**+0.3**
	comp=Z,7.5nm,0.8s,baz=192,slow=19,SNR=2.0						
	comp=Z,7.5nm,0.8s						
PALK	**Pallekele**	**49.91**	**283**	P	**P**	**22 36 25.7**	**-0.2**
PALK	**Pallekele**	**49.91**	**283**	P	**P**	**22 36 25.7**	**-0.2**
PALK				pmax	pmax		
	comp=Z,80nm,1.7s						
TAPN	**Taplejung**	**50.91**	**310**	*e*P	**P**	**22 36 33.1**	**-0.4**
GTA	**Gaotai**	**51.10**	**331**	⇑P	**P**	**22 36 34.5**	**0.0**
GTA				pP	pP	22 36 39.8	-4.3
GTA				sP	sP	22 36 43.8	-4.6
GTA				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA				pmax	pmax		
	comp=Z,76nm,5.8s						
GTA				LR	LR		
	comp=Z,100nm,20.0s						
GTA				LR	LR		
	comp=Z,93nm,20.7s						
GTA				LR	LR		
	comp=Z,100nm,20.0s						
GOMU	**GeErMu**	**51.45**	**324**	P	**P**	**22 36 37.5**	**+0.1**
GOMU				pP	pP	22 36 40.5	-6.6
GOMU				sP	sP	22 36 45.3	-5.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,95nm,5.1s						
RAMN	**Ramite**	**51.56**	**309**	*e*P	**P**	**22 36 38.2**	**-0.1**
	comp=Z,39nm,0.6s						
KUR	**Kuril'sk**	**51.70**	**17**	⇓*e*P	**P**	**22 36 38.9**	**+0.2**
KUR				pmax	pmax		
	comp=Z,83nm,1.2s						
YSS	**Yuzh-Sakhalins**	**52.08**	**12**	*e*P	**P**	**22 36 45.1**	**+3.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
JIRN	**Jiri**	**52.23**	**310**	*e*P	**P**	**22 36 42.8**	**-0.6**
	comp=Z,36nm,0.8s						
GUN	**Gumba**	**52.59**	**310**	*e*P	**P**	**22 36 45.6**	**-0.5**
	comp=Z,49nm,0.7s						
PKI	**Pulchoki**	**52.79**	**309**	*e*P	**P**	**22 36 47.2**	**-0.3**
PKIN	**Phulchoki**	**52.80**	**309**	*e*P	**P**	**22 36 47.4**	**-0.1**
KLR	**Kul'dur**	**53.05**	**2**	LR	LR	22 57 13.7	
	comp=Z,104nm,21.9s,baz=186,slow=34						
KLR	**Kul'dur**	**53.05**	**2**	*c i*P	**P**	**22 36 48.6**	**0.0**
KLR				pmax	pmax		
	comp=Z,53nm,1.7s						
GKN	**Gorkha**	**53.59**	**309**	*e*P	**P**	**22 36 52.5**	**-0.8**
RPZ	**Rata Peaks**	**53.95**	**143**	LR	LR	23 00 20.2	
	comp=Z,130nm,20.6s,baz=292,slow=36						
DANN	**Dangsing**	**54.44**	**309**	*e*P	**P**	**22 36 58.8**	**-0.8**
	comp=Z,41nm,0.7s						
HYBB	**Hyderabad (bro**	**54.54**	**295**	*e*P	**P**	**22 36 59.1**	**-1.0**
GRNR	**Gornyy**	**54.88**	**5**	⇑*i*P	**P**	**22 37 02.7**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,230nm,16.0s						
GRNR				MLR	MLR		
	comp=N,120nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,80nm,16.0s						
PYUN	**Piuthan**	**54.92**	**309**	*e*P	**P**	**22 37 02.6**	**-0.4**
	comp=Z,86nm,1.1s						
URZ	**Urewera**	**55.14**	**135**	LR	LR	23 01 40.9	
	comp=Z,72nm,18.0s,baz=31,slow=37						
ULN	**Ulaanbaatar**	**55.26**	**342**	P	**P**	**22 37 05.0**	**+0.1**
ULN	**Ulaanbaatar**	**55.26**	**342**	*c i*P	**P**	**22 37 05.2**	**+0.2**
ULN				pmax	pmax		
	comp=Z,51nm,1.3s						
SONM	**Songino Array**	**55.44**	**341**	P	**P**	**22 37 06.1**	**-0.2**
	comp=Z,25nm,1.1s,baz=161,slow=7.9,SNR=74						
SONM				LR	LR	23 01 04.1	
	comp=Z,80nm,21.2s,baz=150,slow=36						
	comp=Z,25nm,1.1s						
SONM	**Songino Array**	**55.44**	**341**	P	**P**	**22 37 06.3**	**0.0**
SONM				IAmb	IAmb	22 37 08.4	
	comp=Z,34nm,1.2s						
SONM	**Songino Array**	**55.44**	**341**	P	**P**	**22 37 06.3**	**0.0**
SONM				pmax	pmax		
	comp=Z,34nm,1.2s						
ZEA	**Zeya**	**57.55**	**358**	*e*P	**P**	**22 37 21.5**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK	**Zakamensk**	**58.66**	**341**	*e*P	**P**	**22 37 28.6**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,24nm,1.3s						
AFI	**Afiamalu**	**58.76**	**104**	LR	LR	23 02 05.3	
	comp=Z,47nm,21.3s,baz=144,slow=35						
IRK	**Irkutsk**	**59.96**	**342**	*e*P	P	22 37 30.3	-7.5
IRK				pmax	pmax		
	comp=Z,58nm,2.5s						
MOY	**Mondy**	**60.52**	**340**	*e*P	**P**	**22 37 42.9**	**+1.1**
MOY				pmax	pmax		
	comp=Z,66nm,1.4s						
WMQ	**Urumqi**	**60.60**	**326**	*e*P	**P**	**22 37 43.0**	**+0.6**
WMQ				pP	pP	22 37 48.3	-3.9
WMQ				sP	pwP	22 37 56.8	0.0
WMQ				pmax	pmax		
	comp=Z,49nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
KNGR	**Kungurtug, Tuv**	**60.91**	**337**	⇓*e*P	**P**	**22 37 45.3**	**+0.8**
PEA0B	**Petropavlovsk-**	**61.67**	**19**	⇑*e*P	**P**	**22 37 49.5**	**+0.1**
PETK	**Petropavlovsk-**	**61.67**	**19**	P	**P**	**22 37 49.8**	**+0.4**
	comp=Z,12nm,1.0s,baz=207,slow=6.2,SNR=12						
PETK				LR	LR	23 00 44.6	
	comp=Z,63nm,21.8s,baz=210,slow=32						
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**61.67**	**19**	P	**P**	**22 37 49.5**	**+0.1**
PETK	**Petropavlovsk-**	**61.67**	**19**	P	**P**	**22 37 49.5**	**+0.1**
PET	**Petropavlovsk**	**61.91**	**20**	*e*P	**P**	**22 37 51.9**	**+0.9**
PET				*e*S	**S**	**22 46 13.7**	**+1.3**
PET				pmax	pmax		
	comp=Z,29nm,0.9s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
BOD	**Bodaibo**	**62.86**	**351**	*e*P	**P**	**22 37 57.9**	**+0.6**
BOD				pmax	pmax		
	comp=Z,45nm,1.4s						
ZSN	**Zaisan**	**64.44**	**328**	*i* P	**P**	**22 38 07.7**	**-0.3**
ZSN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZSN	**Zaisan**	**64.44**	**328**	*i* P	**P**	**22 38 07.7**	**-0.3**
	comp=Z,8.4nm,1.1s,baz=328						
NIL	**Nilore**	**64.86**	**310**	P	**P**	**22 38 10.0**	**-1.0**
NIL				IAmb	IAmb	22 38 33.1	
	comp=Z,11nm,0.9s						
NIL	**Nilore**	**64.86**	**310**	P	**P**	**22 38 10.0**	**-1.0**
NIL				pmax	pmax		
	comp=Z,11nm,1.0s						
UZB	**Uzynbulak**	**65.29**	**322**	*e*P	**P**	**22 38 13.3**	**-0.4**
UZB				pmax	pmax		
	comp=Z,17nm,1.3s						
UZB	**Uzynbulak**	**65.29**	**322**	*e*P	**P**	**22 38 13.4**	**-0.4**
	comp=Z,18nm,1.3s,baz=322						
MK31	**Makanchi Array**	**65.43**	**326**	P	**P**	**22 38 14.2**	**-0.2**
MK31	**Makanchi Array**	**65.43**	**326**	*c i*P	**P**	**22 38 14.2**	**-0.2**
MKAR	**Makanchi Array**	**65.43**	**326**	P	**P**	**22 38 14.3**	**-0.1**
	comp=Z,16nm,0.7s,baz=122,slow=7.9,SNR=127						
MKAR				LR	LR	23 07 00.7	
	comp=Z,37nm,21.5s,baz=121,slow=36						
	comp=Z,16nm,0.7s						
KSH	**Kashi**	**65.45**	**317**	P	**P**	**22 38 16.0**	**+1.2**
KSH				pP	pP	22 38 21.5	-3.3
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MA2	**Magadan**	**65.58**	**12**	LR	LR	23 05 53.8	
	comp=Z,90nm,19.5s,baz=224,slow=35						
MA2	**Magadan**	**65.58**	**12**	P	**P**	**22 38 15.5**	**+0.4**
MA2	**Magadan**	**65.58**	**12**	*d i*P	**P**	**22 38 16.3**	**+1.2**
MA2				pmax	pmax		
	comp=Z,48nm,1.7s						
MAKZ	**Makanchi**	**65.61**	**326**	P	**P**	**22 38 14.7**	**-0.9**
MAKZ	**Makanchi**	**65.61**	**326**	P	**P**	**22 38 14.7**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.0s						
SATY	**Saty**	**65.63**	**321**	*e*P	**P**	**22 38 15.9**	**0.0**
SATY				pmax	pmax		
	comp=Z,14nm,1.1s						
SATY	**Saty**	**65.63**	**321**	*e*P	**P**	**22 38 15.9**	**0.0**
	comp=Z,14nm,1.1s,baz=321						
ZHN	**Zhinishke**	**65.67**	**321**	*e*P	**P**	**22 38 15.6**	**-0.5**
ZHN	**Zhinishke**	**65.67**	**321**	*e*P	**P**	**22 38 15.6**	**-0.5**
	baz=321						
KPKS	**Kokpek**	**65.67**	**322**	*e*P	**P**	**22 38 16.0**	**-0.1**
KPKS				pmax	pmax		
	comp=Z,19nm,1.1s						
KPKS	**Kokpek**	**65.67**	**322**	*e*P	**P**	**22 38 16.1**	**-0.1**
	comp=Z,19nm,1.1s,baz=322						
YAK	**Yakutsk**	**65.84**	**0**	LR	LR	23 04 57.2	
	comp=Z,94nm,22.0s,baz=102,slow=34						
YAK	**Yakutsk**	**65.84**	**0**	P	**P**	**22 38 16.5**	**-0.2**
YAK	**Yakutsk**	**65.84**	**0**	*c i*P	**P**	**22 38 17.0**	**+0.3**
YAK				*e**PP	**sP**	**22 38 29.2**	**-1.2**
YAK				*e*		22 38 48.1	
YAK				*e*		22 40 41.8	
YAK				*e*S	**S**	**22 46 59.8**	**-1.0**
YAK				*e**SS	sS	22 47 27.6	+8.8
YAK				*e*		22 48 10.4	
YAK				*e*SS	**SS**	**22 51 17.6**	**+1.4**
YAK				*e*SSS	SSS	22 54 18.5	
YAK				pmax	pmax		
	comp=Z,129nm,1.1s						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,33nm,2.3s						
YAK				pmax	pmax		
	comp=N,21nm,2.3s						
YAK				pmax	pmax		
	comp=E,19nm,2.0s						
YAK				smax	smax		
	comp=N,31nm,2.3s						
YAK				smax	smax		
	comp=E,23nm,2.0s						
KDJ	**Kajisay**	**65.93**	**320**	IAmb	IAmb	22 38 33.5	
	comp=Z,10nm,0.7s						
MDOK	**Medeo**	**66.53**	**321**	*e*P	**P**	**22 38 21.6**	**-0.1**
MDOK				*e*S	**S**	**22 47 12.9**	**+2.6**
MDOK	**Medeo**	**66.53**	**321**	*e*P	**P**	**22 38 21.6**	**-0.1**
	baz=321						
MDOK				*e*S	**S**	**22 47 13.0**	**+2.6**
	baz=321						
TNSS	**Tian-Shan**	**66.53**	**321**	*e*P	**P**	**22 38 22.5**	**+0.4**
TNSS	**Tian-Shan**	**66.53**	**321**	*e*P	**P**	**22 38 22.5**	**+0.4**
	baz=321						
AAA	**Alma-Ata**	**66.64**	**321**	*e*P	**P**	**22 38 22.1**	**-0.2**
AAA				pmax	pmax		
	comp=Z,15nm,1.1s						
AAA	**Alma-Ata**	**66.64**	**321**	*e*P	**P**	**22 38 22.1**	**-0.2**
	comp=Z,15nm,1.1s,baz=321						
TDK	**Taldyqorghan**	**66.66**	**323**	*e*P	**P**	**22 38 22.0**	**-0.3**
TDK				pmax	pmax		
	comp=Z,24nm,1.3s						
TDK	**Taldyqorghan**	**66.66**	**323**	*e*P	**P**	**22 38 22.1**	**-0.3**
	comp=Z,24nm,1.3s,baz=323						
BOOM	**Boomskoye usch**	**66.90**	**320**	IAmb	IAmb	22 38 26.2	
	comp=Z,16nm,1.1s						
CHKK	**Chushkaly**	**66.92**	**321**	*e*P	**P**	**22 38 22.8**	**-1.2**
CHKK	**Chushkaly**	**66.92**	**321**	*e*P	**P**	**22 38 22.8**	**-1.2**
	baz=321						
TKM2	**Tokmak 2**	**67.33**	**320**	P	**P**	**22 38 26.9**	**0.0**

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          SNR=12
KUU   Kurty             67.35 321c iP    P       22 38 26.4 -0.3
KUU                                pmax  pmax
          comp=Z,24nm,1.1s
KUU   Kurty             67.35 321⇑iP     P       22 38 26.4 -0.3
          comp=Z,24nm,1.1s,baz=321
KBK   Karagaybulak      67.63 320  P     P       22 38 28.9 +0.2
          SNR=6.4
UCH   Uchtor            67.70 319  P     P       22 38 30.3 +0.7
          SNR=12
SHEM  Shemya Is, Ala    67.88  27  LR    LR      23 04 07.5
          comp=Z,149nm,21.1s,baz=235,slow=32
AAK   Ala-Archa         67.91 319  LR    LR      23 10 17.0
          comp=Z,50nm,21.1s,baz=118,slow=38
AAK   Ala-Archa         67.91 319  P     P       22 38 30.5  0.0
AAK                                IAmb  IAmb    22 38 32.2
          comp=Z,14nm,1.3s
AAK   Ala-Archa         67.91 319deP     P       22 38 31.2 +0.7
AAK                                pmax  pmax
          comp=Z,17nm,1.7s
AML   Almayashu         68.20 319  P     P       22 38 32.4 -0.2
          SNR=13
USP   Ospenovka         68.21 320  P     P       22 38 32.1 -0.1
          SNR=16
SGDS  Sogindy           68.21 320 eP     P       22 38 31.6 -0.6
SGDS  Sogindy           68.21 320 eP     P       22 38 31.7 -0.6
          baz=320
EKS2  Erkin-Say         68.39 319  P     P       22 38 33.8 +0.3
          SNR=11
KBL   Kabul             68.43 309  P     P       22 38 33.0 -1.0
KBL   Kabul             68.43 309  P     P       22 38 33.0 -1.0
KBL                                pmax  pmax
          comp=Z,5.0nm,0.7s
SEM   Semipalatinsk     68.66 329 eP     P       22 38 34.2 -0.9
SEM                                pmax  pmax
          comp=Z,16nm,1.3s
SEM   Semipalatinsk     68.66 329 eP     P       22 38 34.2 -0.9
          comp=Z,16nm,1.3s,baz=329
ZAA0  Zalesovo Array    68.66 334  P     P       22 38 33.9 -0.8
ZALV  Zalesovo Beam     68.66 334  P     P       22 38 34.1 -0.7
          comp=Z,34nm,1.0s,baz=108,slow=4.8,SNR=79
ZALV                               LR    LR      23 09 16.6
          comp=Z,42nm,20.9s,baz=128,slow=36
          comp=Z,34nm,1.0s
ZALV  Zalesovo Beam     68.66 334 i P    P       22 38 34.0 -0.7
ZALV                               pmax  pmax
          comp=Z,35nm,1.0s
SEY   Seymchan          68.98  11  LR    LR      23 07 32.3
          comp=Z,107nm,20.7s,baz=172,slow=35
SEY   Seymchan          68.98  11c iP    P       22 38 37.5 +1.0
SEY                                pmax  pmax
          comp=Z,80nm,1.3s
GAR   Garm              69.18 314  P     P       22 38 36.7 -1.8
GAR                                IAmb  IAmb    22 39 01.1
          comp=Z,14nm,0.7s
BTK   Batken            69.25 316  IAmb  IAmb    22 38 40.8
          comp=Z,32nm,1.7s
BTLS  Baital            69.34 321 eP     P       22 38 38.3 -0.8
BTLS  Baital            69.34 321 eP     P       22 38 38.4 -0.8
          baz=321
KURK  Kurchatov         69.69 328  P     P       22 38 40.8 -0.3
KURK  Kurchatov         69.69 328  P     P       22 38 40.8 -0.3
KURK                               pmax  pmax
          comp=Z,109nm,0.9s
CHGR  Chuyangaron       69.87 314  IAmb  IAmb    22 39 19.9
          comp=Z,15nm,0.7s
DZA   Taraz             70.10 318 eP     P       22 38 43.3 -0.6
DZA   Taraz             70.10 318 eP     P       22 38 43.4 -0.6
          baz=318
IUG   Iuzhnay           70.66 317 eP     P       22 38 47.1 -0.3
IUG   Iuzhnay           70.66 317 eP     P       22 38 47.2 -0.3
          baz=317
KK31  Karatay Array     70.74 318  IAmb  IAmb    22 38 49.4
          comp=Z,10nm,1.1s
KKAR  Karatay Array     70.74 318  P     P       22 38 46.8 -1.0
KKAR  Karatay Array     70.74 318  P     P       22 38 46.8 -1.0
BRZS  Berezniki         72.54 326c iP    P       22 38 58.2 -0.3
BRZS                               pmax  pmax
          comp=Z,15nm,1.3s
BRZS  Berezniki         72.54 326⇑iP     P       22 38 58.3 -0.3
          comp=Z,15nm,1.3s,baz=326
HRA   Herat             73.69 307  P     P       22 39 05.5 -0.4
HRA                                IAmb  IAmb    22 39 47.6
          comp=Z,25nm,1.9s
BRVK  Borovoye          75.32 328  P     P       22 39 14.3 -0.4
BRVK  Borovoye          75.32 328ceP     P       22 39 14.5 -0.2
BRVK                               pmax  pmax
          comp=Z,48nm,1.3s
VNDA  Vanda             75.47 173  P     P       22 39 15.1 -0.1
          comp=Z,2.1nm,0.5s,baz=319,slow=6.7,SNR=24
          comp=Z,2.1nm,0.5s
VNDA  Vanda             75.47 173  P     P       22 39 14.3 -0.8
VNDA  Vanda             75.47 173  P     P       22 39 14.3 -0.8
VNDA                               pmax  pmax
          comp=Z,5.0nm,0.7s
TIXI  Tiksi             75.51 360  LR    LR      23 13 07.7
          comp=Z,163nm,19.0s,baz=181,slow=36
TIXI  Tiksi             75.51 360  P     P       22 39 14.7 -0.7
TIXI                               IAmb  IAmb    22 39 16.9
          comp=Z,25nm,1.1s
TIXI  Tiksi             75.51 360  P     P       22 39 14.7 -0.7
TIXI                               pmax  pmax
          comp=Z,25nm,1.1s
BILL  Bilibino          76.34  13  P     P       22 39 20.4 +0.2
BILL  Bilibino          76.34  13 i P    P       22 39 20.4 +0.2
BILL                              i              22 39 29.6
BILL                              i              22 39 33.8
BILL                               pmax  pmax
          comp=Z,3.0nm,1.0s
BILL                               MLR   MLR
          comp=Z,87nm,18.0s
SBA   Scott Base        76.36 172  P     P       22 39 20.4 +0.2
SBA   Scott Base        76.36 172  P     P       22 39 20.4 +0.2
SBA                                pmax  pmax
          comp=Z,12nm,1.4s
MAW   Mawson            77.53 201  P     P       22 39 26.9  0.0
          comp=Z,1.8nm,0.6s,baz=71,slow=10,SNR=8.5
MAW                                LR    LR      23 11 33.6
          comp=Z,94nm,18.7s,baz=74,slow=34
          comp=Z,1.8nm,0.6s
MAW   Mawson            77.53 201  P     P       22 39 26.4 -0.4
          baz=78
MAW   Mawson            77.53 201  P     P       22 39 26.9  0.0
MAW   Mawson            77.53 201  P     P       22 39 26.9  0.0
MAW                                pmax  pmax
          comp=Z,6.0nm,1.8s
GEYT  Alibeck           77.87 310  P     P       22 39 29.1 -0.4
          comp=Z,1.5nm,0.5s,baz=68,slow=13,SNR=5.4
          comp=Z,1.5nm,0.5s
GEYT  Alibeck           77.87 310  P     P       22 39 28.9 -0.5
NRIK  Noril'sk          78.53 346  P     P       22 39 32.9 +0.4
          comp=Z,21nm,1.0s,baz=130,slow=5.5,SNR=32
NRIK                               LR    LR      23 17 23.2
          comp=Z,83nm,19.8s,baz=123,slow=38
          comp=Z,21nm,1.0s
NRIK  Noril'sk          78.53 346  P     P       22 39 32.8 +0.4
NRIK  Noril'sk          78.53 346  P     P       22 39 32.8 +0.4
NRIK                               pmax  pmax
          comp=Z,50nm,1.3s
ABKAR Akbulak array     79.83 321  P     P       22 39 39.2 -0.7
PPT   Papeete           80.22 107  LR    LR      23 11 31.0
          comp=Z,29nm,21.9s,baz=164,slow=33
SVE   Sverdlovsk        81.93 329deP     P       22 39 51.0  0.0
SVE                                pmax  pmax
          comp=Z,40nm,1.2s
ARU   Arti              82.88 328  P     P       22 39 54.9 -1.1
ARU                                IAmb  IAmb    22 40 02.9
          comp=Z,24nm,1.1s
ARU   Arti              82.88 328c iP    P       22 39 55.3 -0.6
ARU                                S     S       22 50 14.8 +2.9
ARU                                pmax  pmax
          comp=Z,25nm,1.3s
N16K  Nishlik Lake      84.59  28  P     P       22 40 05.8 +1.1
          baz=252
O17K  Koliganek Bris    85.19  29  P     P       22 40 08.6 +1.0
          baz=254
QSPA  South Pole Qui    85.96 180  LR    LR      23 18 23.6
          comp=Z,83nm,19.2s,baz=344,slow=36
QSPA  South Pole Qui    85.96 180  P     P       22 40 10.0 -1.6
QSPA                               IAmb  IAmb    22 40 12.4
          comp=Z,21nm,1.6s
N18K  Kilae Creek       86.01  28  IAmb  IAmb    22 40 15.1
          comp=Z,36nm,1.4s
N18K  Kilae Creek       86.01  28  P     P       22 40 13.4 +1.7
          baz=255
RAYN  Ar Rayn           86.03 294  P     P       22 40 12.0 -0.7
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RAYN                               IAmb  IAmb    22 40 20.0
          comp=Z,15nm,0.8s
RAYN  Ar Rayn           86.03 294  P     P       22 40 12.0 -0.7
RAYN                               pmax  pmax
          comp=Z,15nm,0.9s
SVW2  Sparrevohn        86.27  28  P     P       22 40 12.0 -1.0
SVW2                               IAmb  IAmb    22 40 15.3
          comp=Z,31nm,1.4s
OHAK  Old Harbor        86.48  32  P     P       22 40 14.9 +0.9
          baz=257
TTA   Tatalina          86.56  26  P     P       22 40 14.3 -0.2
TTA                                IAmb  IAmb    22 40 16.5
          comp=Z,30nm,1.4s
TTA   Tatalina          86.56  26  P     P       22 40 14.3 -0.2
TTA                                pmax  pmax
          comp=Z,30nm,1.4s
TTA   Tatalina          86.56  26  P     P       22 40 15.3 +0.9
          baz=254
N19K  Bonanza Creek     86.71  28  P     P       22 40 16.2 +0.9
          baz=256
L19K  White Mountain    86.88  27  P     P       22 40 16.2 +0.2
L19K                               IAmb  IAmb    22 40 18.2
          comp=Z,27nm,1.2s
L19K  White Mountain    86.88  27  P     P       22 40 16.9 +0.8
          baz=256
KDAK  Kodiak Island     86.97  32  LR    LR      23 15 09.2
          comp=Z,54nm,21.4s,baz=234,slow=33
M19K  Big River Lodg    87.02  27  IAmb  IAmb    22 40 32.8
          comp=Z,18nm,0.9s
M19K  Big River Lodg    87.02  27  P     P       22 40 17.6 +0.9
          baz=256
M20K  Styx River        87.60  28  P     P       22 40 20.7 +1.2
          baz=257
J20K  Nowinta River     87.69  25  IAmb  IAmb    22 40 35.2
          comp=Z,6.2nm,0.7s
KIRV  Kirov             88.19 329  P     P       22 40 22.3  0.0
          comp=Z,6.0nm,0.7s,baz=117,slow=8.0,SNR=4.3
          comp=Z,6.0nm,0.7s
KIRV  Kirov             88.19 329⇓eP     P       22 40 21.2 -1.1
CHUM  Lake Minchumin    88.40  26  P     P       22 40 24.4 +1.2
          baz=258
GNI   Garni             88.50 310  P     P       22 40 24.0 -0.5
          comp=Z,0.6nm,0.3s,baz=87,slow=12,SNR=1.2
          comp=Z,0.6nm,0.3s
GNI   Garni             88.50 310  P     P       22 40 22.4 -2.1
GNI   Garni             88.50 310⇑eP     P       22 40 24.4  0.0
GNI                                pmax  pmax
          comp=Z,11nm,1.7s
TRF   Thorofare Moun    89.20  26  P     P       22 40 27.0 -0.2
          baz=260
MLY   Manley            89.30  25  P     P       22 40 28.0 +0.5
          baz=259
PMR   Palmer            89.41  28  IAmb  IAmb    22 40 43.0
          comp=Z,9.7nm,1.2s
GEVA  Gevas             89.61 308  P     P       22 40 30.3 +0.6
GEVA                               IAmb  IAmb    22 40 37.1
          comp=Z,14nm,0.9s
KNK   Knik Glacier      89.70  28  P     P       22 40 29.7 +0.3
KNK                                IAmb  IAmb    22 40 35.9
          comp=Z,14nm,0.7s
RND   Reindeer          89.83  26  IAmb  IAmb    22 40 39.2
          comp=Z,13nm,0.8s
MCK   McKinley          89.85  26  IAmb  IAmb    22 40 31.7
          comp=Z,20nm,1.3s
MCK   McKinley          89.85  26  P     P       22 40 30.1  0.0
          baz=261
WAT1  Susitna Watana    89.88  27  P     P       22 40 30.5 +0.3
          baz=261
I23K  Minto, Yukon-K    89.90  25  IAmb  IAmb    22 40 31.4
          comp=Z,19nm,1.3s
I23K  Minto, Yukon-K    89.90  25  P     P       22 40 30.8 +0.6
          baz=260
COLD  Coldfoot          89.93  23  P     P       22 40 29.6 -0.8
COLD                               IAmb  IAmb    22 40 57.1
          comp=Z,9.2nm,0.4s
COLD  Coldfoot          89.93  23  P     P       22 40 31.6 +1.3
          baz=260
H23K  Yukon River       89.94  24  P     P       22 40 30.6 +0.2
          baz=260
KBZ   Khabaz            90.24 314  P     P       22 40 32.6 +0.4
          comp=Z,1.8nm,0.7s,baz=8.8,slow=3.4,SNR=2.5
          comp=Z,1.8nm,0.7s
KBZ   Khabaz            90.24 314⇑eP     P       22 40 32.6 +0.4
KBZ                                pmax  pmax
          comp=Z,3.0nm,1.2s
WRH   Wood River Hil    90.33  25  IAmb  IAmb    22 40 33.2
          comp=Z,27nm,1.8s
KIV   Kislovodsk        90.41 314 eP     P       22 40 34.8 +1.6
KIV                                pmax  pmax
          comp=Z,6.0nm,1.1s
TOLK  Toolik Lake Re    90.41  21  IAmb  IAmb    22 41 05.9
          comp=Z,30nm,1.9s
TOLK  Toolik Lake Re    90.41  21  P     P       22 40 33.5 +0.9
          baz=260
GURO  Guroymak-BITLI    90.44 308  IAmb  IAmb    22 40 41.0
          comp=Z,9.2nm,0.8s
DHY   Denali Highway    90.44  27  IAmb  IAmb    22 40 42.9
          comp=Z,6.5nm,0.9s
DHY   Denali Highway    90.44  27  P     P       22 40 33.5 +0.5
          baz=262
CCB   Clear Creek Bu    90.48  25  IAmb  IAmb    22 40 35.1
          comp=Z,11nm,1.2s
COLA  College           90.49  25⇑eP     P       22 40 34.5 +1.6
COLA                               pmax  pmax
          comp=Z,2.0nm,0.8s
PRGR  Permogore         90.55 332 eP     P       22 40 31.5 -1.8
H24K  Noodor Dome       90.62  24  IAmb  IAmb    22 40 42.8
          comp=Z,7.5nm,0.8s
H24K  Noodor Dome       90.62  24  P     P       22 40 34.1 +0.5
          baz=262
HDA   Harding Lake      90.81  26  P     P       22 40 33.1 -1.4
HDA                                IAmb  IAmb    22 40 39.6
          comp=Z,6.4nm,0.9s
M24K  Tolsona, Glenn    90.87  28  P     P       22 40 36.2 +1.3
          baz=263
ILAR  Eielson Array     90.89  25  P     P       22 40 33.1 -1.7
          comp=Z,1.1nm,0.7s,baz=268,slow=4.4,SNR=11
ILAR                               LR    LR      23 15 23.7
          comp=Z,48nm,22.0s,baz=267,slow=32
          comp=Z,1.1nm,0.7s
PAX   Paxson            91.29  27  IAmb  IAmb    22 40 38.9
          comp=Z,22nm,1.6s
PAX   Paxson            91.29  27  P     P       22 40 37.6 +0.8
          baz=264
J25K  Salcha River,     91.51  25  IAmb  IAmb    22 40 40.3
          comp=Z,11nm,1.6s
J25K  Salcha River,     91.51  25  P     P       22 40 37.7 -0.2
          baz=264
RIDG  Independent Ri    91.65  26  IAmb  IAmb    22 40 39.3
          comp=Z,18nm,1.4s
RIDG  Independent Ri    91.65  26  P     P       22 40 38.2 -0.3
          baz=264
SCRK  Sand Creek        92.05  26  IAmb  IAmb    22 40 42.2
          comp=Z,26nm,2.0s
SCRK  Sand Creek        92.05  26  P     P       22 40 40.1 -0.3
          baz=265
KMBO  Kilima Mbogo      92.11 269  P     P       22 40 42.0 +0.1
          comp=Z,2.0nm,0.7s,baz=32,slow=19
          comp=Z,2.0nm,0.7s
KMBO  Kilima Mbogo      92.11 269  P     P       22 40 41.2 -0.7
KMBO                               IAmb  IAmb    22 40 44.1
          comp=Z,8.1nm,1.3s
KMBO  Kilima Mbogo      92.11 269  P     P       22 40 41.2 -0.7
KMBO                               pmax  pmax
          comp=Z,8.0nm,1.3s
J26L  Joseph Creek      92.28  26  IAmb  IAmb    22 40 47.8
          comp=Z,6.2nm,0.8s
J26L  Joseph Creek      92.28  26  P     P       22 40 42.0 +0.6
          baz=266
M26K  Nabesna, AK       92.38  28  IAmb  IAmb    22 40 44.2
          comp=Z,27nm,2.0s
K27K  Chicken           92.90  26  P     P       22 40 45.2 +1.0
          baz=267
M27K  Edge Creek, AK    92.90  28  IAmb  IAmb    22 41 00.0
          comp=Z,4.6nm,0.7s
M27K  Edge Creek, AK    92.90  28  P     P       22 40 44.7 +0.3
          baz=267
L27K  Beaver Creek,     92.96  27  IAmb  IAmb    22 40 50.9
          comp=Z,6.8nm,0.7s
L27K  Beaver Creek,     92.96  27  P     P       22 40 45.3 +0.8
          baz=267
BCAR  Beaver Creek A    92.98  27  P     P       22 40 44.9 +0.3
EGAK  Eagle             93.33  25  P     P       22 40 46.6 +0.5
          baz=268
KLMR  Klimovskoe        93.42 331 eP     P       22 40 42.9 -3.7
KLMR                               pmax  pmax
          comp=Z,14nm,1.3s
KLMR  Klimovskoe        93.42 331 eP     P       22 40 43.0 -3.7
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KLMR                               AMP           22 40 45.8
          comp=Z,14nm,1.3s
I29M  Ogilvie Camp,     94.55  25  IAmb  IAmb    22 40 53.0
          comp=Z,15nm,1.1s
I29M  Ogilvie Camp,     94.55  25  P     P       22 40 51.7 -0.1
          baz=270
OBN   Obninsk           94.90 325 i P    P       22 40 50.6 -2.9
OBN                               i              22 44 41.1
OBN                                pmax  pmax
          comp=Z,4.0nm,0.8s
EPYK  Eagle Plains      95.18  24  P     P       22 40 54.8 +0.1
          baz=272
INK   Inuvik            96.30  22  P     P       22 40 58.5 -1.1
INK   Inuvik            96.30  22  P     P       22 40 58.5 -1.1
INK                                pmax  pmax
          comp=Z,16nm,1.4s
INK   Inuvik            96.30  22  P     P       22 40 59.0 -0.6
          baz=275
TROLL Troll, Antarti    96.91 194  pP    P       22 41 04.0 +1.4
BRTR  Keskin Array B    97.00 309  P     P       22 41 03.5 -0.2
          comp=Z,0.6nm,0.5s,baz=153,slow=1.6,SNR=2.1
          comp=Z,0.6nm,0.5s
BRTR  Keskin Array B    97.00 309  P     P       22 41 02.8 -0.9
BRTR  Keskin Array B    97.00 309  P     P       22 41 02.8 -0.9
BELA  Belgrano 2        97.77 183  IAmb  IAmb    22 41 13.5
          comp=Z,2.4nm,0.6s
SNAA  Sanae             98.43 194  Pdiff Pdif    22 41 10.0 +0.7
SPITS Spitsbergen Ar    98.53 349  LR    LR      23 35 12.0
          comp=Z,23nm,18.9s,baz=13,slow=41
ARCES ARCESS Array B    98.59 340  P     P       22 41 08.7 -1.3
          comp=Z,4.1nm,0.3s,baz=82,slow=6.6,SNR=1.7
ARCES                              LR    LR      23 32 10.6
          comp=Z,42nm,18.5s,baz=82,slow=39
DLBC  Dease Lake        98.91  32  LR    LR      23 24 42.5
          comp=Z,34nm,19.4s,baz=268,slow=35
C36M  Paulatuk          99.51  20  P     Pdif    22 41 14.0  0.0
          baz=284
AKASG Malin Array Be    99.55 321  P     Pdif    22 41 14.4 -0.2
          comp=Z,0.1nm,0.3s,baz=66,slow=3.1,SNR=1.8
AKASG                              LR    LR      23 31 22.0
          comp=Z,27nm,19.9s,baz=60,slow=38
          comp=Z,0.1nm,0.3s
LSZ   Lusaka            99.77 254  LR    LR      23 27 04.4
          comp=Z,42nm,18.1s,baz=133,slow=36
FINES FINESS Array B    99.88 332  P     Pdif    22 41 16.4 +0.5
          comp=Z,1.2nm,0.9s,baz=95,slow=12,SNR=2.3
FINES                              LR    LR      23 32 19.5
          comp=Z,44nm,18.3s,baz=76,slow=39
          comp=Z,1.2nm,0.9s
BOSA  Boshof           100.48 240  P     Pdif    22 41 20.2 +0.7
          comp=Z,1.4nm,0.9s,baz=107,slow=18,SNR=1.9
MLR   Muntele Rosu     102.30 316  P     Pdif    22 41 26.4 -0.7
          baz=83,slow=13
NOA   NORSAR Array B   106.87 333  Pdiff Pdif    22 41 48.4 +1.4
          comp=Z,0.5nm,0.7s,baz=65,slow=4.9,SNR=3.2
CLL   Collm            109.43 323 ePP    PP      22 46 30.0 -1.9
CLL                               eSP    SP      22 55 54.0 -0.8
CLL                               eSSS   SSS     23 06 18.0
CLL                               ex     x       23 10 12.0
GERES GERESS Array B   109.77 321  PKiKP PKiKP   22 46 04.2 +1.6
          comp=Z,0.4nm,0.6s,baz=31,slow=2.3,SNR=2.9
PDAR  Pinedale Array   115.16  44  PKP   PKPdf   22 46 13.4 +0.1
          comp=Z,0.1nm,0.4s,baz=289,slow=5.5,SNR=1.7
ANMO  Albuquerque      119.93  52c iPKIKP PKiKP  22 46 24.7 +1.9
ANMO                               pmax  pmax
          comp=Z,5.0nm,2.5s
ANMO  Albuquerque      119.93  52  P     PKiKP   22 46 24.2 +1.5
          baz=288
T25A  Trinidad         120.79  49  P     PKiKP   22 46 25.2 +0.8
          baz=290
MNTX  Cornudas Mount   121.74  55  PKPdf PKiKP   22 46 26.9 +0.7
MNTX  Cornudas Mount   121.74  55  P     PKiKP   22 46 27.3 +1.2
          baz=287
ESDC  Sonseca Array    124.97 317  PKP   PKiKP   22 46 32.7 +0.3
          comp=Z,0.2nm,0.8s,baz=35,slow=1.4,SNR=2.5
ESDC                               PP    PP      22 48 19.7 -0.8
          comp=Z,1.2nm,1.1s,baz=50,slow=7.6,SNR=5.3
TORD  Torodi Ar. Bea   127.63 283  PKP   PKPdf   22 46 37.1 -0.6
          comp=Z,1.4nm,0.7s,baz=81,slow=1.4,SNR=6.5
TORD  Torodi Ar. Bea   127.63 283  PKPdf PKPdf   22 46 36.5 -1.2
S39A  Bolivar          128.55  44  PKPdf PKPdf   22 46 38.7 -0.2
R40A  Maddies Statio   128.96  42  PKPdf PKPdf   22 46 39.3 -0.3
U40A  Yellville        129.53  45  PKPdf PKPdf   22 46 39.9 -0.9
MIAR  Mount Ida        129.88  47  P     PKiKP   22 46 43.8 +1.5
          baz=298
DBIC  Dimbokro         134.43 275  PKP   PKPdf   22 46 51.1 +0.5
          comp=Z,3.0nm,0.7s,baz=130,slow=7.4,SNR=1.6
BOAB  BOACO BROADBAN144.29  74  PKPdf PKPab   22 47 06.3 -0.2
AC02  Maricunga        144.47 151  PKPdf PKPbc   22 47 08.0 +0.3
ORTG  Ortega, Santa    144.82  78  PKPdf PKPab   22 47 08.5 -0.1
ACON  Acoyapa          144.85  75  PKPdf PKPbc   22 47 08.5 -0.1
LVC   Limon Verde      148.05 147  PKPbc PKiKP   22 47 19.2 -0.9
          comp=Z,9.4nm,0.5s,baz=272,slow=2.9,SNR=15
LVC   Limon Verde      148.05 147        PKPbc   22 47 17.6 -0.7
LVC   Limon Verde      148.05 147  PKP2  PKPbc   22 47 17.6 -0.7
PB07  IPOC Station P   148.19 144  PKPbc PKPbc   22 47 19.1 +0.6
TA01  Diego Aracena    148.91 142  PKPbc PKPbc   22 47 18.9 -1.2
ITAB  Concordia        148.91 177  PKPbc PKiKP   22 47 21.1 -0.2
CPUP  Villa Florida    149.15 168  PKPbc PKPbc   22 47 20.7 +0.2
          comp=Z,5.9nm,0.8s,baz=176,slow=3.7,SNR=4.6
CPUP  Villa Florida    149.15 168  PKPdf PKPdf   22 47 17.1 +0.7
CPUP  Villa Florida    149.15 168  PKIKP PKPdf   22 47 17.1 +0.7
NNA   Nana             149.42 122  PKPbc PKiKP   22 47 22.4 -0.3
          comp=Z,4.5nm,0.4s,baz=180,slow=5.8,SNR=1.9
ATAH  Atahualpa        150.10 112  PKPbc PKiKP   22 47 25.1 +0.4
          comp=Z,9.4nm,0.8s,baz=260,slow=1.7,SNR=12
OTAV  Otavalo          151.88  97  PKPdf PKPdf   22 47 21.8 +0.2
OTAV  Otavalo          151.88  97  PKIKP PKPdf   22 47 21.8 +0.2
LPAZ  La Paz           153.39 140  PKP   PKPdf   22 47 24.0 +0.1
          comp=Z,2.6nm,1.1s,baz=180,slow=2.0,SNR=5.9
LPAZ                               PKPbc PKPbc   22 47 30.8 -0.7
          comp=Z,3.4nm,0.6s,baz=192,slow=0.8,SNR=8.3
LPAZ  La Paz           153.39 140  PKPdf PKPdf   22 47 24.1 +0.2
LPAZ                                     PKiKP   22 47 32.7 +1.1
LPAZ                               PKPab PKPab   22 47 45.5 +2.0
LPAZ  La Paz           153.39 140  PKP2  PKPab   22 47 45.5 +2.0
LPAZ                                             23 47 24.1
ROSC  El Rosal         156.29  87  PKPab PKPab   22 47 56.5 +0.6
          comp=Z,8.7nm,0.5s,baz=248,slow=19,SNR=4.2
ROSC  El Rosal         156.29  87  PKPdf PKPdf   22 47 27.2 -0.5
ROSC                                     PKPab   22 47 56.1 +0.2
ROSC  El Rosal         156.29  87  PKP2  PKPab   22 47 56.1 +0.2
ROSC                                             23 47 27.2
SIV   San Ignacio      157.58 153  PKP   PKPdf   22 47 29.0 +0.2
          comp=Z,1.3nm,0.8s,baz=260,slow=6.3,SNR=4.2
SIV                                PKPab PKPab   22 48 01.2 +0.6
          comp=Z,2.3nm,0.5s,baz=226,slow=4.1,SNR=11
BDFB  Brasilia         160.32 187  PKP   PKPdf   22 47 33.0 +0.9
          comp=Z,1.5nm,0.5s,baz=195,slow=12,SNR=1.9
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MDD ***30*** *23:09:47.0±0.6, 33.°12N×17.°87W, h10km, Mb4.4/16, M_mb3.8/16, Error ellipse: s-maj=7.2km s-min=2.5km az=112.0*

INMG ***30*** *23:09:52.4±1.2, 33.°35N×17.°85W, h10km, MD3.2, ML3.3, Error ellipse: s-maj=8.6km s-min=4.2km az=96.0*

CNRM ***30*** *23:09:59.1, 33.°17N×16.°71W, h0km, ml3.3*

ISC 30 23:09:42.8±1.7, **33.°16N**±0.°08×**18.°05W**±0.°08, **h10km, n42, σ3.ˢ12**/59, **18C-3D, Madeira Islands region**

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Code  Station Name       Δ°   AZ°     Phase ID          Time        Res
                                     Op      ISC      h  m  s      ISC
PMOZ  Porto Moniz, M    0.79 115⇓iP      Pn       23 10 03.6 +3.5
PMOZ                            eS       Sb       23 10 10.4 +0.8
PMOZ                             A       A        23 10 16.2
          798nm,0.6s
PMOZ  Porto Moniz, M    0.79 115  P      Pn       23 10 04.0 +3.9
PMOZ                             S       Sn       23 10 15.1 +3.0
PMAR  Madeira           1.05 114⇓eP      Pn       23 10 07.0 +3.2
PMAR                            eS       Sn       23 10 18.0 -0.6
PMAR                             A       A        23 10 19.0
          1μm,0.2s
PMAR  Madeira           1.05 114  P      Pn       23 10 07.1 +3.3
PMAR                             S       Sn       23 10 18.2 -0.4
FUL   Funchal           1.10 118⇓eP      Pn       23 10 07.4 +3.1
FUL                             eS       Sn       23 10 19.1 -0.4
FUL                              A       A        23 10 20.4
          986nm,0.2s
PMPST Porto Santo, M    1.44  93⇑iP      Pn       23 10 10.9 +1.9
PMPST                           eS       Sb       23 10 25.1 -3.1
PMPST                            A       A        23 10 26.0
          348nm,0.6s
PMPS  Porto Santo       1.45  94⇑eP      Pn       23 10 11.0 +2.0
PMPS                            eS       Sb       23 10 24.9 -3.3
PMPS                             A       A        23 10 25.5
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	283nm,0.1s						
TBT	**Taburiente**	**4.47**	**178**	P	**Pn**	**23 10 53.4**	**+2.8**
TBT				⇑*i*Vmb_V		23 10 55.4	
	341nm,SNR=0.8						
TBT				S	**Sn**	**23 11 39.6**	**-3.1**
EHIG	**Higuera**	**4.60**	**177**	S	**Sn**	**23 11 43.9**	**-2.0**
CGUI	**Guimar, Teneri**	**5.02**	**164**	P	**Pn**	**23 11 01.4**	**+3.2**
CGUI				⇑*i*Vmb_V		23 11 02.8	
	213nm,SNR=0.4						
CGUI				S	**Sn**	**23 11 53.1**	**-3.3**
CRAJ	**Montana Rajada**	**5.04**	**165**	⇑*i*Vmb_V		23 11 01.9	
	467nm,SNR=0.6						
CRAJ				S	**Sn**	**23 11 58.5**	**+1.2**
EGOM	**La Gomera**	**5.04**	**172**	P	**Pn**	**23 11 00.5**	**+2.1**
EGOM				⇑*i*Vmb_V		23 11 02.8	
	459nm,SNR=1.4						
EGOM				S	**Sn**	**23 11 52.2**	**-4.5**
MACI	**Morro de la Ar**	**5.08**	**164**	P	**Pn**	**23 11 02.2**	**+3.1**
MACI				⇑*i*Vmb_V		23 11 04.0	
	187nm,SNR=0.3						
MACI				S	**Sn**	**23 11 55.2**	**-2.7**
CCAN	**Las Canadas**	**5.08**	**165**	P	**Pn**	**23 11 01.9**	**+2.6**
CCAN				⇑*i*Vmb_V		23 11 03.4	
	166nm,SNR=0.5						
CCAN				S	**Sn**	**23 11 53.7**	**-4.4**
CTAN	**El Hierro**	**5.39**	**180**	⇑*i*Vmb_V		23 11 07.7	
	340nm,SNR=0.8						
CTAN				S	**Sn**	**23 12 03.0**	**-2.5**
CTAD	**Las Tabladas,**	**5.40**	**180**	⇑*i*Vmb_V		23 11 09.5	
	479nm,SNR=0.6						
CTAD				S	**Sn**	**23 12 04.2**	**-1.3**
CCUM	**Cumbre, El Hie**	**5.40**	**180**	S	**Sn**	**23 12 03.1**	**-2.6**
CMCL	**Mercadel, El H**	**5.43**	**180**	S	**Sn**	**23 12 05.4**	**-1.3**
EOSO	**Osorio**	**5.51**	**156**	P	**Pn**	**23 11 08.7**	**+3.6**
EOSO				⇑*i*Vmb_V		23 11 08.7	
	380nm,SNR=1.2						
EOSO				S	**Sn**	**23 12 04.0**	**-4.6**
EFAM	**Famara**	**5.59**	**135**	P	**Pn**	**23 11 10.4**	**+4.5**
EFAM				⇑*i*Vmb_V		23 11 12.5	
	340nm,SNR=0.4						
EFAM				S	**Sn**	**23 12 07.6**	**-2.6**
CFUE	**Fuerteventura**	**5.72**	**141**	P	**Pn**	**23 11 11.3**	**+3.4**
CFUE				⇑*i*Vmb_V		23 11 11.7	
	567nm,SNR=2.7						
CFUE				S	**Sn**	**23 12 08.5**	**-5.1**
CGIN	**Giniginamar, F**	**6.01**	**144**	P	**Pn**	**23 11 15.3**	**+3.6**
CGIN				⇑*i*Vmb_V		23 11 17.0	
	620nm,SNR=1.7						
CGIN				S	**Sn**	**23 12 14.6**	**-6.0**
PFVI	**Vila Bisbo**	**8.53**	**60**	*e*P	**Pn**	**23 11 45.9**	**-0.4**
TTIG	**Tnine Tigouga,**	**8.58**	**105**	P	**Pn**	**23 11 49.8**	**+2.6**
TTIG				S	**Sn**	**23 13 17.4**	**-6.7**
PTEO	**Sao Teotonio**	**8.78**	**58**	*e*P	**Pn**	**23 11 52.2**	**+2.4**
PTEO				*e*S	Sn	23 13 17.4	-11
OUK	**Oukaimeden**	**8.85**	**100**	P	**Pn**	**23 11 55.1**	**+4.0**
OUK				S	Sn	23 13 22.3	-8.8
AVE	**Averroes**	**8.91**	**86**	P	**Pn**	**23 11 56.2**	**+4.6**
AVE				S	**Sn**	**23 13 28.9**	**-3.2**
PNCL	**Nicolau / Gran**	**9.19**	**55**	*e*P	**Pn**	**23 11 56.1**	**+0.8**
PNCL				*e*S	Sn	23 13 26.5	-12
PBDV	**Barranco-do-Ve**	**9.22**	**61**	*e*P	**Pn**	**23 11 57.9**	**+2.0**
MESJ	**Messejana**	**9.27**	**57**	*e*P	**Pn**	**23 11 57.0**	**+0.5**
PVAQ	**Vaqueiros**	**9.45**	**61**	*e*P	**Pn**	**23 12 01.1**	**+2.2**
PVAQ				*e*S	Sn	23 13 35.8	-9.3
ZHG	**ZHG**	**9.55**	**85**	P	**Pn**	**23 12 03.5**	**+3.0**
ZHG				S	Sn	23 13 37.3	-11
EGRO	**El Granado**	**9.67**	**60**	P	**Pn**	**23 12 04.1**	**+2.2**
EGRO				⇑*i*Vmb_V		23 12 05.9	
	84nm,SNR=1.2						
OUZM	**OUZ**	**9.84**	**100**	P	Pn	23 12 09.3	+4.8
OUZM				S	Sn	23 13 43.5	-12
PMTG	**Montargil**	**9.89**	**51**	*e*P	**Pn**	**23 12 04.4**	**-0.6**
EMIN	**Mina Concepcio**	**10.35**	**60**	P	**Pn**	**23 12 12.0**	**+0.7**
EMIN				⇑*i*Vmb_V		23 12 13.6	
	50nm,SNR=1.1						
EMIN				S	Sn	23 13 58.1	-9.3
EBAD	**Badajoz**	**10.54**	**55**	P	**Pn**	**23 12 15.2**	**+1.4**
EBAD				⇑*i*Vmb_V		23 12 18.2	
	35nm,SNR=0.7						
PMRV	**Marv??o**	**10.63**	**51**	*e*P	**Pn**	**23 12 14.6**	**-0.5**
PMRV				*e*S	Sn	23 14 01.3	-13
MD31	**MD31**	**11.16**	**88**	P	**Pn**	**23 12 26.1**	**+3.5**
MD31				S	Sn	23 14 16.3	-11
MDT	**Midelt**	**11.30**	**88**	P	**Pn**	**23 12 28.3**	**+3.9**
MDT				S	Sn	23 14 18.1	-13
AKLM	**AKL**	**11.88**	**80**	P	**Pn**	**23 12 35.4**	**+3.1**
AKLM				S	Sn	23 14 31.8	-13
EADA	**Adamuz**	**12.04**	**62**	P	**Pn**	**23 12 36.3**	**+1.8**
EADA				⇑*i*Vmb_V		23 12 38.3	
	32nm,SNR=0.9						

*IDC **30** 23:17:30.1±1.0, 22°.32N×144°.74E, h0^{km}, mb3.7/10, mbtmp3.8/12, ML3.7/2, Error ellipse: s-maj=37.2km s-min=18.6km az=85.0*

ISC 30 23:17:35.3±0.9**, 22°.3N**±0°.1×**144°.6E**±0°.2**, h33**^{km}**, n18,** σ**0^{s}.81**/13**, mb3.6**/9**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.22**	**336**	Pn	**Pn**	**23 18 52.0**	**+1.0**
	9.2nm,0.3s,baz=252,slow=20,SNR=1.4						
JCJ				Sn	**Sn**	**23 19 48.6**	**-1.5**
	10nm,0.3s,baz=206,slow=18,SNR=1.5						
	41nm,0.5s						
MJAR	**Matsushiro Arr**	**15.20**	**340**	Pn	**Pn**	**23 21 08.5**	**+1.0**
	0.1nm,0.3s,baz=99,slow=7.6,SNR=2.1						
	1.1nm,0.4s						
KSRS	**Korea Array**	**20.83**	**320**	P	Pn	23 22 16.0	-0.7
	0.5nm,0.4s,baz=152,slow=7.7,SNR=5.4						
	0.5nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**20.96**	**93**	T	T	23 44 14.7	
	baz=283,slow=74,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**20.96**	**93**	T	T	23 44 13.5	
	baz=283,slow=74,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**20.98**	**93**	T	T	23 44 09.6	
	baz=283,slow=74,SNR=6.2						
H11S3	**WAKE ISLAND Hy**	**21.04**	**96**	T	T	23 44 16.3	
	baz=283,slow=75						
H11S1	**WAKE ISLAND Hy**	**21.05**	**96**	T	T	23 44 15.7	
	baz=283						
H11S2	**WAKE ISLAND Hy**	**21.06**	**96**	T	T	23 44 16.3	
	baz=283,slow=75						
KLR	**Kul'dur**	**28.70**	**342**	P	**P**	**23 23 29.2**	**-0.1**
	1.0nm,0.5s,baz=151,slow=19,SNR=4.0						
	1.0nm,0.5s						
SONM	**Songino Array**	**39.70**	**319**	P	**P**	**23 25 04.5**	**-0.1**
	0.4nm,0.4s,baz=122,slow=7.6,SNR=2.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**43.21**	**194**	P	**P**	**23 25 33.2**	**-0.2**
	0.4nm,0.3s,baz=16,slow=8.7,SNR=14						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**46.91**	**193**	P	**P**	**23 26 02.9**	**+0.1**
	0.3nm,0.6s,baz=15,slow=12,SNR=4.6						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**55.24**	**312**	P	**P**	**23 27 05.4**	**+0.2**
	0.4nm,0.5s,baz=86,slow=8.6,SNR=7.8						
MKAR				PcP	**PcP**	**23 28 05.4**	**-0.5**
	0.3nm,0.6s,baz=86,slow=4.8,SNR=4.0						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**60.86**	**27**	P	**P**	**23 27 45.1**	**+0.8**
	0.2nm,0.6s,baz=244,slow=5.2,SNR=4.5						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**75.27**	**28**	P	**P**	**23 29 13.6**	**-1.1**
	0.4nm,0.6s,baz=286,slow=5.3,SNR=2.4						
	0.4nm,0.6s						
KBZ	**Khabaz**	**82.87**	**314**	P	**P**	**23 29 56.9**	**+0.3**
	1.9nm,0.8s,baz=111,slow=8.6,SNR=3.9						
	1.9nm,0.8s						
FINES	**FINESS Array B**	**83.17**	**335**	P	**P**	**23 29 57.5**	**-0.3**
	0.8nm,0.8s,baz=66,slow=4.2,SNR=9.5						
	0.8nm,0.8s						

*IDC **30** 23:35:23.4±1.2, 4°.02S×151°.05E, h0^{km}, mb3.6/3, mbtmp3.8/4, ML2.2/1, MS3.4/2, Error ellipse: s-maj=29.5km s-min=17.4km az=171.0*

*NEIC **30** 23:35:30.3±0.8, 4°.2S±0°.1×151°.17E±0°.07, h42^{km}±12^{km}, mb4.2/16, Error ellipse: s-maj=22.1km s-min=3.7km az=154.0*

ISC 30 23:35:29.2±1.0**, 4°.2S**±0°.1×**151°.09E**±0°.08**, h35**^{km}**, n27,** σ**0^{s}.75**/28**, mb4.1**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.95**	**99**	Pn	**Pn**	**23 35 46.2**	**+0.2**
	127nm,0.3s,baz=253,slow=1.2,SNR=39						
KRVT				Sn	**Sn**	**23 35 59.8**	**+1.4**
	265nm,0.3s,baz=253,slow=19,SNR=14						
RABL	**Rabaul**	**1.08**	**92**		**Pn**	**23 35 47.4**	**-0.4**
PMG	**Port Moresby**	**6.51**	**217**	Pn	**Pn**	**23 37 03.2**	**+0.6**
	3.1nm,0.3s,baz=335,slow=19,SNR=1.8						
PMG				Sn	**Sn**	**23 38 15.2**	**-0.3**
	3.4nm,0.3s,baz=37,slow=20,SNR=2.7						
	10nm,0.4s						
PMG	**Port Moresby**	**6.51**	**217**		**Pn**	**23 37 03.1**	**+0.6**
PMG				Sn	**Sn**	**23 38 16.2**	**+0.6**
WB0	**Warramunga Arr**	**22.48**	**225**	P	**P**	**23 40 25.7**	**-0.1**
WR0	**Warramunga Arr**	**22.51**	**224**	P	**P**	**23 40 25.8**	**-0.2**
WRAB	**Tennant Creek**	**22.62**	**225**	P	**P**	**23 40 26.8**	**-0.4**
WRAB				IAmb	IAmb	23 40 36.8	
	comp=Z,7.5nm,1.0s						
WB2	**Warramunga Arr**	**22.63**	**225**	P	**P**	**23 40 26.4**	**-0.9**
WRA	**Warramunga Arr**	**22.64**	**225**	P	**P**	**23 40 26.6**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=54,slow=9.9,SNR=17						
WRA				LR	LR	23 50 37.3	
	comp=Z,92nm,19.7s,baz=153,slow=40						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**22.64**	**225**	IAmb	IAmb	23 40 29.1	
	comp=Z,0.4nm,1.4s						
LIFNC	**LIFOU**	**22.80**	**138**	P	**P**	**23 40 27.8**	**-1.3**
DZM	**Mont Dzumac**	**23.21**	**141**	P	**P**	**23 40 33.2**	**-0.1**
DZM				IAmb	IAmb	23 40 39.4	
	comp=Z,6.9nm,1.2s						
ASAR	**Alice Springs**	**25.52**	**219**	P	**P**	**23 40 54.0**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=60,slow=8.8,SNR=11						
	comp=Z,0.9nm,0.7s						
AFI	**Afiamalu**	**37.88**	**107**	LR	LR	23 55 09.5	
	comp=Z,72nm,20.7s,baz=143,slow=31						
J20K	**Nowinta River**	**79.21**	**21**	P	**P**	**23 47 31.6**	**+1.2**
J20K				IAmb	IAmb	23 47 33.6	
	comp=Z,5.2nm,1.4s						
SML	**Sawmill**	**80.26**	**25**	P	**P**	**23 47 36.4**	**+0.2**
BPAW	**Bear Paw Mtn.**	**80.34**	**22**	P	**P**	**23 47 36.7**	**+0.2**
BPAW				IAmb	IAmb	23 47 53.2	
	comp=Z,7.5nm,1.4s						
GLI	**Glacier Island**	**80.36**	**26**	P	**P**	**23 47 37.0**	**+0.4**
IMAR	**Indian Mountai**	**80.36**	**20**	P	**P**	**23 47 37.3**	**+0.7**
SCM	**Sheep Creek Mo**	**80.69**	**25**	P	**P**	**23 47 38.4**	**-0.1**
MLY	**Manley**	**80.91**	**21**	P	**P**	**23 47 40.2**	**+0.6**
MLY				IAmb	IAmb	23 47 59.7	
	comp=Z,1.9nm,1.2s						
ILAR	**Eielson Array**	**82.22**	**22**	P	**P**	**23 47 44.8**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=243,slow=5.6,SNR=7.1						
	comp=Z,0.7nm,0.8s						
J25K	**Salcha River,**	**82.73**	**23**	P	**P**	**23 47 49.0**	**-0.2**
J25K				IAmb	IAmb	23 47 49.7	
	comp=Z,1.3nm,0.7s						
TOLK	**Toolik Lake Re**	**83.15**	**19**	P	**P**	**23 47 52.0**	**+0.7**
TOLK				IAmb	IAmb	23 48 08.8	
	comp=Z,7.4nm,1.4s						
J26L	**Joseph Creek**	**83.39**	**23**	P	**P**	**23 47 53.5**	**+0.8**
J26L				IAmb	IAmb	23 47 55.7	
	comp=Z,2.4nm,1.2s						
BCAR	**Beaver Creek A**	**83.55**	**25**	P	**P**	**23 47 53.5**	**0.0**
TORD	**Torodi Ar. Bea**	**148.49**	**288**	PKPbc	**PKPbc**	**23 55 13.1**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=84,slow=2.1,SNR=7.3						

*IDC **30** 23:39:26.6±0.8, 55°.99S×26°.02W, h0^{km}, mb4.3/7, mbtmp4.1/8, ML3.4/1, MS3.5/4, Error ellipse: s-maj=36.3km s-min=19.5km az=79.0*

*NEIC **30** 23:39:29.1±2.0, 56°.1S±0°.1×26°.2W±0°.1, h10^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=20.7km s-min=11.7km az=184.0*

ISC 30 23:39:28.5±0.5**, 56°.04S**±0°.09×**26°.11W**±0°.09**, h10**^{km}**, n50,** σ**1^{s}.13**/41**, mb4.5**/17**, MS3.6**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.20**	**282**	Pn	**Pn**	**23 41 01.1**	**+1.2**
VNA1	**Neumayer--Stat**	**16.58**	**159**	P	**P**	**23 43 24.8**	**+1.6**
VNA3	**Neumayer Olymp**	**16.80**	**162**	P	**P**	**23 43 24.9**	**-0.9**
VNA2	**Neumayer--Watz**	**16.98**	**159**	P	**P**	**23 43 27.1**	**-0.5**
	baz=321,slow=14						
SNAA	**Sanae**	**18.51**	**157**	P	**Pn**	**23 43 45.1**	**+0.4**
SNAA	**Sanae**	**18.51**	**157**	P	**P**	**23 43 44.4**	**-0.2**
	0.1nm,0.3s,baz=342,slow=14,SNR=2.5						
SNAA				S	Sn	23 46 52.6	-19
	1.2nm,1.0s,baz=300,slow=20,SNR=1.9						
	3.2nm,1.2s						
SNAA	**Sanae**	**18.51**	**157**	P	**Pn**	**23 43 45.4**	**+0.7**
TROLL	**Troll, Antarti**	**19.99**	**154**	P	**P**	**23 43 58.9**	**-1.9**
BELA	**Belgrano 2**	**22.14**	**185**	P	**P**	**23 44 22.5**	**-1.2**
DSPA	**Despedida**	**24.00**	**257**	P	**P**	**23 44 41.4**	**-1.6**
MG02	**Cerro Sombrero**	**25.00**	**259**	P	**P**	**23 44 52.1**	**+0.1**
MG03	**Isla Dawson**	**25.24**	**256**	P	**P**	**23 44 53.9**	**-0.4**
MG03				IAmb	IAmb	23 45 12.5	
	comp=Z,32nm,1.5s						
MG04	**Isla Riesco**	**26.25**	**258**	P	**P**	**23 45 03.4**	**0.0**
GO09	**Cerro Castillo**	**27.39**	**260**	P	**P**	**23 45 11.3**	**-2.5**
GO09				IAmb	IAmb	23 45 13.9	
	comp=Z,24nm,1.4s						
TRQA	**Tornquist**	**29.88**	**292**		**P**	**23 45 35.8**	**-0.2**
PLTB	**Pedras Altas**	**30.95**	**310**	P	**P**	**23 45 46.9**	**+1.4**
PLTB				IAmb	IAmb	23 45 52.2	
	comp=Z,14nm,1.3s						
QSPA	**South Pole Qui**	**34.21**	**180**	P	**P**	**23 46 13.6**	**-0.4**
	comp=Z,5.4nm,0.4s,baz=163,slow=11,SNR=95						
	comp=Z,5.4nm,0.4s						
QSPA	**South Pole Qui**	**34.21**	**180**		**P**	**23 46 14.2**	**+0.3**
QSPA				IAmb	IAmb	23 46 18.0	
	comp=Z,6.7nm,0.7s						
CPUP	**Villa Florida**	**37.26**	**310**	LR	LR	00 01 55.7	
	comp=Z,43nm,18.9s,baz=180,slow=36						
MT09	**Talagante**	**37.88**	**287**	P	**P**	**23 46 44.8**	**-0.8**
MT09				IAmb	IAmb	23 46 57.0	
	comp=Z,14nm,1.5s						
MT01	**Popeta**	**37.96**	**286**	P	**P**	**23 46 44.2**	**-1.8**
MT01				IAmb	IAmb	23 46 55.3	
	comp=Z,8.1nm,1.2s						
MT02	**Curacav**	**38.36**	**287**	P	**P**	**23 46 48.3**	**-1.2**
MT02				IAmb	IAmb	23 47 01.2	
	comp=Z,19nm,1.4s						
MAW	**Mawson**	**39.80**	**143**	P	**P**	**23 47 02.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=266,slow=16,SNR=1.3						
	comp=Z,0.7nm,0.6s						
CO02	**Combarbal**	**39.88**	**289**	P	**P**	**23 47 02.2**	**-0.1**
CO03	**El Pedregal**	**40.00**	**290**	P	**P**	**23 47 04.0**	**+0.6**
CO03				IAmb	IAmb	23 47 09.1	
	comp=Z,17nm,1.4s						
SUR	**Sutherland**	**40.05**	**74**	LR	LR	00 00 17.0	
	comp=Z,108nm,19.1s,baz=133,slow=31						
CO01	**Juntas del Tor**	**40.37**	**292**	P	**P**	**23 47 06.7**	**+0.1**
CO01				IAmb	IAmb	23 47 18.7	
	comp=Z,14nm,1.5s						
BOSA	**Boshof**	**45.38**	**75**	LR	LR	00 02 51.0	
	comp=Z,64nm,18.1s,baz=182,slow=31						
BOSA	**Boshof**	**45.38**	**75**	P	**P**	**23 47 49.3**	**+2.2**
SBA	**Scott Base**	**46.13**	**184**	P	**P**	**23 47 53.3**	**+1.0**
VNDA	**Vanda**	**46.61**	**182**	P	**P**	**23 47 56.0**	**0.0**
	comp=Z,0.9nm,0.5s,baz=180,slow=8.2,SNR=18						
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**46.61**	**182**	P	**P**	**23 47 56.5**	**+0.5**
H10S2	**ASCENSION HYDR**	**47.82**	**15**	T	T	00 40 56.1	
	baz=189						
H10S3	**ASCENSION HYDR**	**47.83**	**15**	T	T	00 40 39.5	
	baz=31						
H10N1	**ASCENSION HYDR**	**48.94**	**15**	T	T	00 41 37.5	
	baz=188						
H10N3	**ASCENSION HYDR**	**48.94**	**15**	T	T	00 42 18.0	
	baz=188						
H10N2	**ASCENSION HYDR**	**48.96**	**15**	T	T	00 42 04.0	
	baz=188						
TSUM	**Tsumeb**	**49.15**	**60**	LR	LR	00 05 06.9	
	comp=Z,51nm,19.6s,baz=140,slow=31						
LPAZ	**La Paz**	**50.87**	**304**	P	**P**	**23 48 30.3**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=71,slow=4.7,SNR=12						
	comp=Z,1.9nm,0.4s						
LPAZ	**La Paz**	**50.87**	**304**	P	**P**	**23 48 31.2**	**+1.0**
LPAZ				IAmb	IAmb	23 48 39.8	
	comp=Z,8.1nm,1.4s						
TOA0	**Torodi Ar. Sit**	**72.75**	**28**	P	**P**	**23 50 56.7**	**0.0**
TOA0				IAmb	IAmb	23 51 02.3	
	comp=Z,6.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**72.75**	**28**	P	**P**	**23 50 56.5**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=202,slow=6.3,SNR=16						
	comp=Z,0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**72.75**	**28**	P	**P**	**23 50 56.7**	**0.0**
TORD				IAmb	IAmb	23 51 03.8	
	comp=Z,3.9nm,1.3s						
LODK	**Lodwar**	**77.38**	**64**	P	**P**	**23 51 23.1**	**-0.6**
LODK				IAmb	IAmb	23 51 34.7	
	comp=Z,5.6nm,1.4s						
MQZ	**McQueen's Vall**	**79.37**	**194**	P	**P**	**23 51 34.8**	**+0.6**
RPZ	**Rata Peaks**	**79.56**	**193**	P	**P**	**23 51 37.1**	**+1.8**
KEST	**Kesra**	**96.27**	**28**	P	**P**	**23 52 54.5**	**-2.1**
	comp=Z,1.1nm,0.6s,baz=186,slow=9.2,SNR=1.9						
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**98.81**	**162**	P	**P**	**23 53 07.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=193,slow=3.6,SNR=2.2						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**150.12**	**86**	PKPbc	**PKPbc**	**23 59 16.9**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=197,slow=4.4,SNR=2.8						
ILAR	**Eielson Array**	**150.56**	**311**	PKPbc	**PKPbc**	**23 59 18.4**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=146,slow=1.6,SNR=18						

*IDC **30** 23:43:26.1±1.1, 6°.45N×72°.61W, h169^{km}±8^{km}, mbtmp4.5/2, Error ellipse: s-maj=112.1km s-min=7.6km az=133.0*

*NEIC **30** 23:43:26.6±2.5, 6°.94N±0°.06×73°.13W±0°.07, h157^{km}±10^{km}, mb4.4/5, Error ellipse: s-maj=10.4km s-min=7.7km az=122.0*

*RSNC **30** 23:43:27.4±0.9, 6°.80N×73°.14W, h148^{km}±3^{km}, ML3.7, Mw3.7, Fault plane solution: NP1:ϕ_s86.00000°, δ18.00000°, λ58.00000°.*

ISC 30 23:43:25.5±0.7**, 6°.84N**±0°.02×**73°.11W**±0°.03**, h158**^{km}±6^{km}**, n64,** σ**1^{s}.69**/107**, 6C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**198**	⇑*i*P	**Pn**	**23 43 47.3**	**+0.1**
BARC				*e*S	**Sn**	**23 44 02.2**	**-1.4**
BARC				*i*		23 44 05.4	
	comp=Z,1μm,0.5s						
PAMC	**Pamplona, Colo**	**0.64**	**39**	⇑*i*P	**Pn**	**23 43 50.1**	**+1.1**
PAMC				*e*S	**Sn**	**23 44 07.5**	**+0.4**
PAMC				*i*		23 44 09.4	
	comp=Z,839nm,0.5s						
BRRC	**Barranca, Sant**	**0.66**	**294**	⇑*i*P	**Pn**	**23 43 49.1**	**+0.5**
BRRC				*e*S	**Sn**	**23 44 06.0**	**-0.2**
BRRC				*i*		23 44 09.2	
	comp=Z,641nm,0.3s						
RUSC	**La Rusia**	**0.94**	**179**	*e*P	**Pn**	**23 43 51.3**	**+0.2**
RUSC				*e*S	**Sn**	**23 44 09.9**	**-0.8**
RUSC				*i*		23 44 11.0	
	comp=Z,728nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇑*i*P	**Pn**	**23 43 55.8**	**+1.4**
TAMC				*e*S	**Sn**	**23 44 17.5**	**+1.1**
TAMC				*i*		23 44 18.5	
	comp=Z,222nm,0.5s						
OCAC	**Ocana**	**1.41**	**351**	Pn	**Pn**	**23 43 55.2**	**+0.3**
OCAC				Sn	**Sn**	**23 44 17.6**	**+0.1**
OCAC	**Ocana**	**1.41**	**351**	⇑*i*P	**Pn**	**23 43 55.4**	**+0.5**
OCAC				*e*S	**Sn**	**23 44 17.4**	**-0.2**
OCAC				*i*		23 44 21.2	
	comp=Z,1μm,0.1s						
SPBC	**San Pablo de B**	**1.52**	**219**	*e*P	**Pn**	**23 43 56.1**	**+0.1**
SPBC				*e*S	**Sn**	**23 44 17.9**	**-1.5**
SPBC				*i*		23 44 20.7	
	comp=Z,901nm,0.3s						
NORC	**Norcasia**	**2.16**	**234**	*e*P	**Pn**	**23 44 03.1**	**0.0**
NORC				*e*S	**Sn**	**23 44 31.2**	**-0.8**
CHIC	**Chingaza**	**2.28**	**196**	⇓*e*P	**Pn**	**23 44 05.1**	**+0.3**
CHIC				*e*S	**Sn**	**23 44 34.5**	**-0.6**
CHIC				*i*		23 44 40.8	
	comp=Z,252nm,0.3s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**23 44 06.8**	**+1.5**
	comp=Z,280nm,0.5s,baz=83,slow=18,SNR=221						
ROSC				S	**Sn**	**23 44 38.4**	**+2.4**
	comp=Z,814nm,0.4s,baz=52,slow=20,SNR=15						
ROSC	**El Rosal**	**2.32**	**211**		**Pn**	**23 44 07.0**	**+1.7**
ROSC	**El Rosal**	**2.32**	**211**	⇓*e*P	**Pn**	**23 44 07.0**	**+1.7**
ROSC				*e*S	**Sn**	**23 44 38.1**	**+2.2**
ROSC				*i*		23 44 41.9	
	comp=Z,754nm,0.4s						
HELC	**Santa Helena**	**2.49**	**255**	*e*P	**Pn**	**23 44 07.6**	**+0.3**
HELC				*e*S	**Sn**	**23 44 39.7**	**+0.2**
HELC				*i*		23 44 47.3	
	comp=Z,124nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**23 44 07.4**	**-0.5**
UREC				⇑*e*S	**Sn**	**23 44 43.0**	**+2.3**
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P	**Pn**	**23 44 12.4**	**+2.6**
LL1C				*e*S	**Sn**	**23 44 47.3**	**+3.2**
LL1C				*i*		23 44 55.3	
	comp=Z,854nm,0.4s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**23 44 10.6**	**+0.1**
VILC				*e*S	**Sn**	**23 44 45.1**	**-0.1**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*e*P	**Pn**	**23 44 10.4**	**-0.2**
PTGC				*e*S	**Sn**	**23 44 43.5**	**-2.0**
LL6C	**La Loma 6 Bece**	**2.88**	**357**	*e*P	**Pn**	**23 44 12.1**	**+0.4**
LL6C				*e*S	**Sn**	**23 44 46.9**	**-0.8**
LL6C				*i*		23 45 01.1	
	comp=Z,110nm,0.5s						
LL5C	**La Loma 5 El P**	**2.96**	**348**	*e*P	**Pn**	**23 44 14.0**	**+1.4**
LL5C				*e*S	**Sn**	**23 44 51.1**	**+1.9**
LL5C				*i*		23 44 52.8	
	comp=Z,173nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**23 44 14.8**	**+0.9**
CBOC				*e*S	**Sn**	**23 44 51.5**	**+0.1**
CBOC				*i*		23 45 02.2	
	comp=Z,66nm,0.5s						
DBBC	**Dabeiba**	**3.09**	**274**	*e*P	**Pn**	**23 44 14.6**	**+0.3**
DBBC				*i*		23 44 55.3	
	comp=Z,704nm,0.8s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**23 44 16.6**	**+1.0**
	comp=Z,74nm,0.3s,baz=243,slow=11,SNR=26						
SDV				S	**Sn**	**23 44 54.5**	**-0.1**
	comp=Z,80nm,0.4s,baz=270,slow=20,SNR=21						
SDV	**Santo Domingo**	**3.19**	**50**		**Pn**	**23 44 16.6**	**+1.0**
SDV				Sn	**Sn**	**23 44 55.2**	**+0.6**
SDV	**Santo Domingo**	**3.19**	**50**	*e*P	**Pn**	**23 44 16.9**	**+1.3**
SDV				*e*S	**Sn**	**23 44 53.0**	**-1.6**
SDV				*i*		23 44 56.0	
	comp=Z,67nm,0.3s						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**23 44 17.3**	**+1.5**
ARGC				*e*S	**Sn**	**23 44 56.5**	**+1.6**
ARGC				*i*		23 45 05.1	
	comp=Z,75nm,0.4s						
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**23 44 18.1**	**+1.3**
ANIL				*e*S	**Sn**	**23 44 58.2**	**+1.6**
ANIL				*i*		23 45 03.3	
	comp=Z,614nm,0.3s						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**23 44 20.6**	**0.0**
PRAC				*e*S	**Sn**	**23 45 03.4**	**+0.1**
PRAC				*i*		23 45 09.4	
	comp=Z,252nm,0.5s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**23 44 21.2**	**+0.3**
ORTC				*e*S	**Sn**	**23 45 04.0**	**0.0**
ORTC				*i*		23 45 11.1	
	comp=Z,145nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**326**	Pn	**Pn**	**23 44 21.2**	**-0.5**
SJCC				Sn	**Sn**	**23 45 02.4**	**-3.1**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**23 44 21.0**	**-0.8**
SJCC				*e*S	**Sn**	**23 45 02.4**	**-3.1**
SJCC				*i*		23 45 16.9	
	comp=Z,105nm,0.7s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**23 44 22.8**	**+0.6**
PLMC				*e*S	**Sn**	**23 45 05.9**	**-0.2**
PLMC				*i*		23 45 10.7	
	comp=Z,59nm,0.2s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*P	Pn	23 44 29.6	+6.2
LCBC				*e*S	**Sn**	**23 45 07.6**	**-0.9**
LCBC				*i*		23 45 17.6	
	comp=Z,93nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*e*P	**Pn**	**23 44 27.5**	**-0.6**
CRJC				*e*S	**Sn**	**23 45 14.6**	**-2.4**
CRJC				*i*		23 45 19.0	
	comp=Z,97nm,0.2s						
GUVC	**San Jose del G**	**4.29**	**174**	*e*P	**Pn**	**23 44 28.8**	**-1.0**
GUVC				*e*S	**Sn**	**23 45 17.9**	**-2.0**
GUVC				*i*		23 45 24.8	
	comp=Z,178nm,0.2s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**23 44 28.5**	**-1.4**
YOTC				*e*S	**Sn**	**23 45 24.5**	**+4.4**
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**23 44 32.3**	**+0.6**
SMRC				*e*S	**Sn**	**23 45 19.7**	**-3.7**
SMRC				*i*		23 45 24.7	
	comp=Z,53nm,0.5s						
CAPC	**Capurgana**	**4.57**	**293**	*e*P	**Pn**	**23 44 31.6**	**-1.8**
CAPC				*e*S	**Sn**	**23 45 22.5**	**-3.9**
CAPC				*i*		23 45 26.7	

	comp=Z,47nm,0.2s						
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P	**Pn**	**23 44 34.1**	**-1.3**
MACC				*e*S	**Sn**	**23 45 24.6**	**-5.4**
MACC				*i*		23 45 31.4	
	comp=Z,46nm,0.5s						
BETC	**Betania**	**4.74**	**210**	*e*P	**Pn**	**23 44 34.2**	**-1.5**
BETC				*e*S	**Sn**	**23 45 27.0**	**-3.5**
BETC				*i*		23 45 35.0	
	comp=Z,44nm,0.8s						
URIC	**Uribia, Colomb**	**4.96**	**13**	Pn	**Pn**	**23 44 38.2**	**-0.3**
URIC				Sn	**Sn**	**23 45 33.4**	**-2.2**
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**23 44 37.2**	**-1.3**
URIC				*e*S	**Sn**	**23 45 32.0**	**-3.6**
GARC	**Garzon, Huila**	**5.20**	**207**	*e*P	**Pn**	**23 44 41.4**	**-0.5**
GARC				*e*S	**Sn**	**23 45 37.9**	**-3.7**
GARC				*i*		23 45 43.6	
	comp=Z,46nm,0.3s						
BAUV	**El Baul**	**5.43**	**67**	Pn	**Pn**	**23 44 43.6**	**-1.2**
BAUV				Sn	**Sn**	**23 45 43.5**	**-3.3**
PCON	**Cinco Dias**	**5.55**	**216**	*e*P	**Pn**	**23 44 48.1**	**+1.3**
PCON				*e*S	**Sn**	**23 45 49.3**	**-1.2**
FLOC	**Florencia**	**5.80**	**206**	*e*P	**Pn**	**23 44 49.4**	**-0.3**
FLOC				*e*S	**Sn**	**23 45 56.4**	**+0.6**
FLOC				*i*		23 45 59.3	
	comp=Z,13nm,0.7s						
MTDJ	**Mount Denham**	**12.12**	**340**	Pn	**Pn**	**23 46 16.1**	**+2.9**
DR12	**Loma Pena Alta**	**12.42**	**17**		**Pn**	**23 46 18.4**	**+1.4**
MLPR	**Magueyes Islan**	**12.55**	**28**	P	**P**	**23 46 23.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**12.55**	**27**	Pn	**Pn**	**23 46 20.3**	**+1.6**
ICMP	**Isla Caja de M**	**12.72**	**30**	Pn	**Pn**	**23 46 20.4**	**-0.4**
CELP	**Cerrillos**	**12.86**	**29**		**P**	**23 46 26.3**	**-1.1**
PDPR	**Patillas Dam,**	**13.09**	**31**	Pn	**Pn**	**23 46 25.4**	**-0.1**
GTBY	**Guantanamo Bay**	**13.16**	**352**	P	**P**	**23 46 30.9**	**+0.2**
HUMP	**Col San Antoni**	**13.28**	**32**	P	**P**	**23 46 32.1**	**0.0**
CDVI	**St. Croix**	**13.56**	**36**	Pn	**Pn**	**23 46 31.3**	**-0.3**
CUPR	**Culebra, Puert**	**13.71**	**33**	Pn	**Pn**	**23 46 32.2**	**-1.3**
SAML	**Samuel**	**18.54**	**148**	P	**P**	**23 47 28.2**	**-2.0**
PB10	**IPOC Station P**	**30.27**	**175**	P	**P**	**23 49 20.9**	**-0.8**
PB14	**IPOC Station P**	**31.38**	**175**	P	**P**	**23 49 35.1**	**+3.2**
PB14				IAmb	IAmb	23 49 45.7	
	comp=Z,12nm,1.1s						
LENM	**Lemitar**	**41.43**	**316**	P	**P**	**23 50 57.9**	**+1.0**
RWWY	**Rawlins**	**46.04**	**324**	P	**P**	**23 51 33.9**	**+0.2**
RWWY				IAmb	IAmb	23 51 34.7	
	comp=Z,16nm,0.5s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**00 02 55.3**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=112,slow=3.4,SNR=13						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**00 02 58.6**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=107,slow=2.8,SNR=19						

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*IDC **30** 23:47:27.6±1.4, 55°.99S×25°.90W, h0^{km}, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=48.0km s-min=33.2km az=43.0*

*NEIC **30** 23:47:30.0±1.3, 56°.1S±0°.1×26°.1W±0°.2, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=18.2km s-min=16.1km az=139.0*

ISC 30 23:47:29.8±0.9, 56°.0S±0°.1×26°.1W±0°.1, h10^{km}, n22, σ0^{s}.97/22, mb4.5/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.18**	**282**	Pn	**Pn**	**23 49 02.0**	**+1.0**
HOPE				Sn	**Sn**	**23 50 11.4**	**-0.2**
VNA1	**Neumayer--Stat**	**16.62**	**159**	P	**P**	**23 51 24.7**	**-0.2**
VNA3	**Neumayer Olymp**	**16.84**	**162**	P	**P**	**23 51 27.5**	**+0.1**
VNA2	**Neumayer--Watz**	**17.01**	**159**	P	**P**	**23 51 29.4**	**+0.1**
	baz=334,slow=7.6						
SNAA	**Sanae**	**18.54**	**157**	P	**Pn**	**23 51 49.2**	**+2.8**
SNAA	**Sanae**	**18.54**	**157**	P	**P**	**23 51 45.4**	**-0.9**
	baz=310,slow=16						
SNAA	**Sanae**	**18.54**	**157**	P	**P**	**23 51 45.8**	**-0.5**
PMSA	**Palmer Station**	**20.37**	**229**	P	**P**	**23 52 05.3**	**-0.8**
PMSA				IAmb	IAmb	23 52 16.7	
	comp=Z,24nm,0.8s						
BELA	**Belgrano 2**	**22.16**	**185**	P	**P**	**23 52 23.7**	**-1.7**
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**23 54 15.5**	**0.0**
QSPA				IAmb	IAmb	23 54 18.4	
	comp=Z,3.4nm,0.6s						
CO02	**Combarbal**	**39.85**	**289**	P	**P**	**23 55 03.6**	**+0.2**
CO02				IAmb	IAmb	23 55 07.5	
	comp=Z,32nm,1.4s						
GO02	**Mina Guanaco**	**44.00**	**296**	P	**P**	**23 55 38.1**	**+0.5**
GO02				IAmb	IAmb	23 55 49.7	
	comp=Z,23nm,1.5s						
LVC	**Limon Verde**	**45.79**	**299**	P	**P**	**23 55 51.9**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=121,slow=5.9,SNR=4.1						
	comp=Z,2.1nm,0.5s						
LVC	**Limon Verde**	**45.79**	**299**	IAmb	IAmb	23 56 03.8	
	comp=Z,9.7nm,1.4s						
PB04	**IPOC Station P**	**46.64**	**298**	P	**P**	**23 55 58.4**	**0.0**
PB09	**IPOC Station P**	**46.64**	**299**	P	**P**	**23 55 58.6**	**+0.1**
PB07	**IPOC Station P**	**47.02**	**299**	P	**P**	**23 56 01.0**	**-0.4**
LPAZ	**La Paz**	**50.84**	**304**	P	**P**	**23 56 31.7**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=162,slow=6.3,SNR=6.3						
	comp=Z,1.3nm,0.6s						
LPAZ	**La Paz**	**50.84**	**304**	P	**P**	**23 56 32.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**72.74**	**28**	P	**P**	**23 58 57.0**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=208,slow=6.3,SNR=5.8						
	comp=Z,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**72.74**	**28**	P	**P**	**23 58 58.4**	**+0.4**
TORD				IAmb	IAmb	23 58 59.2	
	comp=Z,4.2nm,1.4s						
ILAR	**Eielson Array**	**150.53**	**312**	PKPbc	**PKPbc**	**00 07 18.7**	**-1.5**
	comp=Z,1.2nm,1.0s,baz=98,slow=1.1,SNR=7.3						

DJA 30 23:50:56.6±0.3, 9°S±6°×11°8E±°, h117^{km}±4^{km}, M3.8/13, mb4.0/3, MLv3.7/13, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.58**	**256**	P	Pn	23 51 16.3	+1.5
PLAI				S	Sn	23 51 30.8	+2.3
WBSI	**Waikabubak, Su**	**1.40**	**133**	P	Pn	23 51 23.6	+0.9
BASI	**Baing, Sumba**	**2.67**	**125**	P	Pn	23 51 37.2	-1.3
SRBI	**Singaraja**	**3.16**	**281**	P	Pn	23 51 45.4	+0.5
IGBI	**Denpasar**	**3.17**	**267**	P	Pn	23 51 46.1	+1.1
BSSI	**Bau Bau, Buton**	**3.30**	**40**	P	Pn	23 51 46.6	-0.2
EDFI	**Ende, Flores**	**3.30**	**91**	P	Pn	23 51 47.4	+0.5
JAGI	**Jajag, Banyuwa**	**4.16**	**273**	P	Pn	23 51 57.4	-0.8
GMJI	**Gumukmas**	**4.87**	**275**	P	Pn	23 52 07.6	-0.2
BATI	**Baumata**	**5.45**	**106**	P	Pn	23 52 15.5	-0.2
	0.1nm12nm,1.4s						
SOEI	**Soe**	**5.94**	**101**	P	Pn	23 52 22.7	+0.4
	0.1nm13nm,0.7s						
PCJI	**Pacitan**	**7.11**	**273**	P	Pn	23 52 37.6	-0.5

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*CRAAG **30** 23:51:40.8, 36°.34N×3°.41E, Ml3.1*

*MDD **30** 23:51:41.9±1.3, 36°.35N×3°.54E, h0^{km}, Mb3.9/7, M_mb3.2/7, Error ellipse: s-maj=10.7km s-min=6.6km az=134.0*

ISC 30 23:51:42.3±1.2, 36°.34N±0°.05×3°.49E±0°.07, h18^{km}, n11, σ1^{s}.49/18, 6C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.19**	**193**	P	**Pg**	**23 51 45.7**	**-1.5**
ABMS	**Boumerdes**	**0.41**	**359**	P	**Pg**	**23 51 50.4**	**-0.3**
AKET	**Djebel Ketaf**	**0.43**	**133**	P	**Pg**	**23 51 51.0**	**-0.3**
ABA	**Alger-Bouzarea**	**0.59**	**322**	P	**Pg**	**23 51 52.9**	**-1.1**
EIBI	**Ibiza**	**3.17**	**328**	P	**Pn**	**23 52 32.2**	**+0.9**
EIBI				⇑*i*Vmb_V		23 52 42.2	
	199nm,SNR=1.5						
EIBI				S	**Sn**	**23 53 06.9**	**-1.8**
ETOS	**Mallorca**	**3.46**	**351**	P	**Pn**	**23 52 36.2**	**+0.9**
ETOS				⇑*i*Vmb_V		23 52 41.9	
	271nm,SNR=1.5						
ETOS				S	**Sn**	**23 53 14.8**	**-1.0**
EMUR	**La Murta**	**4.07**	**293**	P	**Pn**	**23 52 45.3**	**+1.7**
EMUR				⇑*i*Vmb_V		23 52 50.1	
	72nm,SNR=1.4						
EMUR				S	**Sn**	**23 53 29.0**	**-1.8**
ECOL	**Islas Columbre**	**4.18**	**329**	P	**Pn**	**23 52 45.9**	**+0.7**
ECOL				S	**Sn**	**23 53 32.7**	**-0.8**
ETOB	**Tobarra**	**4.62**	**301**	P	**Pn**	**23 52 52.7**	**+1.5**
ETOB				⇑*i*Vmb_V		23 52 59.2	
	75nm,SNR=1.2						
ETOB				S	**Sn**	**23 53 46.9**	**+2.4**
ECHE	**Chera**	**4.79**	**314**	P	**Pn**	**23 52 55.4**	**+1.8**
ECHE				⇑*i*Vmb_V		23 53 04.7	
	131nm,SNR=1.1						
ECHE				S	**Sn**	**23 53 49.2**	**+0.6**
EMOS	**Mosqueruela**	**5.08**	**323**	P	**Pn**	**23 52 58.7**	**+1.0**
EMOS				⇑*i*Vmb_V		23 53 02.6	
	108nm,SNR=1.7						
EMOS				S	**Sn**	**23 53 54.2**	**-1.8**

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*IDC **30** 23:59:22.2±3.6, 56°.69S×26°.07W, h0^{km}, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=127.7km s-min=51.4km az=171.0*

*NEIC **30** 23:59:27.5±1.7, 56°.0S±0°.1×26°.3W±0°.2, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=22.2km s-min=16.3km az=67.0*

ISC 30 23:59:26.8±0.9, 56°.0S±0°.1×26°.3W±0°.1, h10^{km}, n24, σ1^{s}.27/24, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.10**	**282**	Pn	**Pn**	**00 00 56.1**	**-0.8**
VNA1	**Neumayer--Stat**	**16.70**	**159**	P	**P**	**00 03 21.8**	**-0.9**
VNA3	**Neumayer Olymp**	**16.92**	**161**	P	**P**	**00 03 24.6**	**-0.6**
ESPZ	**Base Esperanza**	**17.07**	**232**	P	**Pn**	**00 03 26.4**	**+1.2**
ESPZ				IAmb	IAmb	00 03 30.6	
	comp=Z,41nm,1.0s						
VNA2	**Neumayer--Watz**	**17.09**	**159**	P	**P**	**00 03 26.8**	**-0.4**
	baz=318,slow=13						
SNAA	**Sanae**	**18.62**	**157**	P	**P**	**00 03 44.1**	**0.0**
SNAA	**Sanae**	**18.62**	**157**		**P**	**00 03 44.3**	**+0.2**
BELA	**Belgrano 2**	**22.22**	**185**		**P**	**00 04 21.7**	**-1.2**
MG02	**Cerro Sombrero**	**24.93**	**259**	P	**P**	**00 04 50.4**	**+0.6**
QSPA	**South Pole Qui**	**34.30**	**180**	P	**P**	**00 06 13.1**	**+0.1**
QSPA				IAmb	IAmb	00 06 13.9	
	comp=Z,6.2nm,0.6s						
GO02	**Mina Guanaco**	**43.91**	**296**	P	**P**	**00 07 35.7**	**+1.9**
GO02				IAmb	IAmb	00 07 38.7	
	comp=Z,7.7nm,0.8s						
SBA	**Scott Base**	**46.22**	**184**	P	**P**	**00 07 52.1**	**+0.9**
PB04	**IPOC Station P**	**46.55**	**298**	P	**P**	**00 07 54.7**	**0.0**
PB09	**IPOC Station P**	**46.56**	**299**	P	**P**	**00 07 56.4**	**+1.7**
PB09				IAmb	IAmb	00 08 08.3	
	comp=Z,9.1nm,1.2s						
VNDA	**Vanda**	**46.70**	**182**	P	**P**	**00 07 55.4**	**+0.4**
VNDA				IAmb	IAmb	00 08 09.7	
	comp=Z,2.2nm,1.1s						
PB07	**IPOC Station P**	**46.93**	**299**	P	**P**	**00 07 58.4**	**+0.8**
LPAZ	**La Paz**	**50.75**	**304**	P	**P**	**00 08 28.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=144,slow=3.1,SNR=5.9						
	comp=Z,0.9nm,0.5s						
LPAZ	**La Paz**	**50.75**	**304**	P	**P**	**00 08 29.0**	**+1.5**
ROSC	**El Rosal**	**72.22**	**309**	P	**P**	**00 10 49.0**	**-3.4**
ROSC				IAmb	IAmb	00 10 51.4	
	comp=Z,8.5nm,1.1s						
TOA0	**Torodi Ar. Sit**	**72.71**	**29**	P	**P**	**00 10 55.8**	**+1.0**
TOA0				IAmb	IAmb	00 11 10.8	
	comp=Z,1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.71**	**29**	P	**P**	**00 10 55.4**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=203,slow=6.4,SNR=5.6						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.71**	**29**	P	**P**	**00 10 55.9**	**+1.1**
TORD				IAmb	IAmb	00 10 58.1	
	comp=Z,2.6nm,1.4s						
BCIP	**Isla Barro Col**	**78.53**	**306**	P	**P**	**00 11 28.4**	**+0.3**
ILAR	**Eielson Array**	**150.44**	**312**	PKPbc	**PKPbc**	**00 19 15.1**	**-1.8**
	comp=Z,1.0nm,0.8s,baz=110,slow=1.6,SNR=9.4						

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*IDC **31** 00:31:34.5±33.0, 17°.99N×71°.05W, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=646.0km s-min=132.2km az=153.0*

*SSNC **31** 00:31:39.1±1.3, 18°.09N×71°.80W, h5^{km}, MD3.8, ML3.5, MW3.7*

*OSPL **31** 00:31:42.7±2.5, 18°.31N×71°.89W, h18^{km}±8^{km}, ML3.3*

ISC 31 00:31:40.6±1.5, 18°.33N±0°.04×71°.87W±0°.03, h9^{km}±11^{km}, n18, σ1^{s}.02/27, mb3.3/3, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOPE2	**Hotel El Peder**	**0.32**	**159**	*i* P	**Pb**	**00 31 48.1**	**-0.4**
LOPE2				*e*S	**Sb**	**00 31 53.8**	**0.0**
LOPE2				IAML		00 31 58.8	
	comp=Z,8μm,0.9s						
LONE2	**Loma La Sidra**	**0.43**	**59**	*i* P	**Pb**	**00 31 50.4**	**-0.1**
LONE2				*e*S	**Sb**	**00 31 58.7**	**+1.6**
LONE2				IAML		00 32 04.4	
	comp=Z,4μm,0.3s						
JAKH	**Jacmel**	**0.63**	**261**	*i* P	**Pg**	**00 31 53.0**	**+0.3**
JAKH				*e*S	**Sb**	**00 32 02.3**	**-0.3**
JAKH				IAML		00 32 10.0	
	comp=Z,836nm,0.5s						
SDDR	**Presa de Saban**	**0.85**	**40**	*e*P	**Pg**	**00 31 56.7**	**-0.2**
SDDR	**Presa de Saban**	**0.85**	**40**	*i* P	**Pb**	**00 31 57.0**	**-0.5**
SDDR				*e*S	**Sn**	**00 32 10.8**	**-0.5**
SDDR				IAML		00 32 19.1	
	comp=Z,688nm,0.4s						
LODA1	**ITESIL, Dajabo**	**1.21**	**7**	*i* P	**Pn**	**00 32 03.0**	**-0.8**
LODA1				*e*S	**Sb**	**00 32 19.3**	**-0.2**
LODA1				IAML		00 32 21.3	
	comp=Z,2μm,0.5s						
BANI	**BANI**	**1.43**	**87**	*i* P	**Pb**	**00 32 07.0**	**-0.5**
BANI				*e*S	**Sn**	**00 32 23.4**	**-2.5**
BANI				IAML		00 32 40.0	
	comp=Z,463nm,0.5s						
SDD	**Santo Domingo**	**1.86**	**86**	*i* P	**Pn**	**00 32 11.7**	**-0.8**
MASC	**Masc**	**2.89**	**310**	*e*P	**Pn**	**00 32 26.6**	**-0.2**
MASC				*e*S	**Sn**	**00 33 00.8**	**-0.8**
MASC				IAML		00 33 05.8	
	comp=E,54nm,0.5s						
MASC				IAML		00 33 06.7	
	comp=N,52nm,0.7s						
MASC	**Masc**	**2.89**	**310**	*i* P	**Pn**	**00 32 26.6**	**-0.2**
MASC				IAML		00 33 20.9	
	comp=Z,62nm,0.7s						
GTBY	**Guantanamo Bay**	**3.45**	**298**	*e*P	**Pn**	**00 32 34.0**	**-0.6**
GTBY				*e*S	**Sn**	**00 33 14.4**	**-1.2**
GTBY	**Guantanamo Bay**	**3.45**	**298**	*i* P	**Pn**	**00 32 34.5**	**0.0**
GTBY				IAML		00 33 29.1	
	comp=Z,29nm,0.6s						
MOAC	**Moa**	**3.73**	**309**	*e*P	Pn	00 32 32.9	-5.4
MOAC				*e*S	**Sn**	**00 33 21.4**	**-0.8**
MOAC				IAML		00 33 33.3	
	comp=N,80nm,0.3s						
MOAC				IAML		00 33 39.6	
	comp=E,28nm,0.3s						
RCC	**Rio Carpintero**	**3.98**	**295**	*e*P	**Pn**	**00 32 40.6**	**-1.2**
RCC				*e*S	**Sn**	**00 33 27.4**	**-1.2**
RCC				IAML		00 33 38.8	
	comp=N,34nm,0.5s						
RCC				IAML		00 33 41.1	
	comp=E,52nm,0.5s						
CRPR	**Cabo Rojo, PR**	**4.53**	**93**	*i* P	**Pn**	**00 32 50.0**	**+0.6**
PDAR	**Pinedale Array**	**40.09**	**316**	P	**P**	**00 39 17.6**	**+0.9**
	comp=E,0.3nm,0.6s,baz=112,slow=12,SNR=3.6						
	comp=E,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**44.96**	**306**	P	**P**	**00 39 58.8**	**+2.4**
	comp=E,0.3nm,0.7s,baz=102,slow=8.4,SNR=2.5						
	comp=E,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**53.07**	**337**	P	**P**	**00 40 58.1**	**+0.2**
	comp=E,0.6nm,0.8s,baz=117,slow=6.6,SNR=3.1						
	comp=E,0.6nm,0.8s						

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*NEIC **31** 00:38:31.8±1.7, 17°.7S±0°.1×178°.5W±0°.1, h580^{km}±8^{km}, mb4.1/50, Error ellipse: s-maj=19.1km s-min=14.8km az=151.0*

*IDC **31** 00:38:31.3±1.2, 17°.62S×178°.54W, h578^{km}±13^{km}, mb3.2/7, mbtmp4.2/10, Error ellipse: s-maj=32.4km s-min=12.8km az=149.0*

ISC 31 00:38:32.6±0.5, 17°.6S±0°.1×178°.57W±0°.08, h600^{km}, n84, σ1^{s}.24/85, mb4.0/32, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.23**	**267**	P	**P**	**00 39 52.2**	**-1.0**
	141nm,0.8s,baz=122,slow=5.3,SNR=80						
MSVF				S	**S**	**00 41 00.5**	**+1.7**
	14nm,1.0s,baz=13,slow=17,SNR=1.1						
MSVF	**Nonsavu**	**3.23**	**267**	P	**P**	**00 39 52.6**	**-0.5**
AFI	**Afiamalu**	**7.49**	**62**	P	**P**	**00 40 23.5**	**-3.8**
	41nm,0.5s,baz=133,slow=3.1,SNR=7.7						
AFI	**Afiamalu**	**7.49**	**62**	P	**P**	**00 40 23.8**	**-3.4**
NIUE	**Niue**	**8.34**	**102**	P	**P**	**00 40 33.9**	**-1.2**
MARNC	**Mare, Loyalty**	**13.21**	**251**	P	**P**	**00 41 21.4**	**-2.2**
LIFNC	**LIFOU**	**13.78**	**254**	P	**P**	**00 41 27.1**	**-2.2**
PINNC	**Pines Island,**	**14.05**	**247**	P	**P**	**00 41 30.9**	**-1.1**
PINNC	**Pines Island,**	**14.05**	**247**	P	P	00 41 51.0	+19
YATNC	**Mamie plateau,**	**14.39**	**250**	P	**P**	**00 41 35.4**	**+0.2**
OUENC	**Ouen Island, N**	**14.53**	**248**	P	**P**	**00 41 36.2**	**-0.3**
OUENC	**Ouen Island, N**	**14.53**	**248**	P	**P**	**00 41 35.7**	**-0.8**
DZM	**Mont Dzumac**	**14.79**	**250**	P	**P**	**00 41 37.4**	**-1.6**
	4.5nm,0.6s,baz=286,slow=23,SNR=7.6						
DZM	**Mont Dzumac**	**14.79**	**250**	P	**P**	**00 41 38.4**	**-0.6**
DZM	**Mont Dzumac**	**14.79**	**250**	P	**P**	**00 41 38.8**	**-0.2**
ONTNC	**Ouen Toro**	**14.84**	**249**	P	**P**	**00 41 39.7**	**+0.4**
OUZ	**Omahuta**	**18.89**	**200**	P	**P**	**00 42 16.9**	**+0.7**
LTZ	**Lake Taylor**	**26.29**	**195**	P	**P**	**00 43 20.6**	**-1.4**
EIDS	**Eidsvold**	**29.24**	**249**	P	**P**	**00 43 47.7**	**-0.1**
EIDS				IAmb	IAmb	00 43 48.6	
	comp=Z,6.2nm,0.9s						
MLZ	**Mavora Lakes**	**29.84**	**199**	P	**P**	**00 43 52.4**	**-0.4**
ARMA	**Armidale**	**29.97**	**239**	P	**P**	**00 43 54.9**	**+0.7**
ARMA				IAmb	IAmb	00 43 55.4	
	comp=Z,9.2nm,0.8s						
CTAO	**Charters Tower**	**33.35**	**260**	P	**P**	**00 44 22.7**	**-0.2**
CTAO				IAmb	IAmb	00 44 23.8	
	comp=Z,9.9nm,0.8s						
CAN	**Canberra**	**33.78**	**232**	P	**P**	**00 44 25.5**	**-0.8**
PMG	**Port Moresby**	**34.26**	**279**	P	**P**	**00 44 31.2**	**+0.7**
COEN	**Coen**	**36.95**	**270**	P	**P**	**00 44 54.0**	**+1.2**
TOO	**Toolangi**	**37.25**	**230**	P	**P**	**00 44 55.2**	**+0.3**
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**00 45 06.5**	**+0.2**
	comp=Z,8.3nm,0.5s,baz=93,slow=10,SNR=24						
	comp=Z,8.3nm,0.5s						
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**00 45 06.9**	**+0.6**
STKA				IAmb	IAmb	00 45 07.8	
	comp=Z,3.9nm,1.1s						
BBOO	**Buckleboo**	**43.43**	**241**	P	**P**	**00 45 44.1**	**+0.1**
BBOO				IAmb	IAmb	00 45 44.7	
	comp=Z,16nm,0.9s						
WR0	**Warramunga Arr**	**44.35**	**259**	P	**P**	**00 45 51.0**	**-0.3**
WR0				IAmb	IAmb	00 45 51.1	
	comp=Z,5.0nm,0.9s						
WB0	**Warramunga Arr**	**44.51**	**259**	P	**P**	**00 45 52.0**	**-0.5**
WB0				IAmb	IAmb	00 45 52.9	
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	**44.53**	**259**	P	**P**	**00 45 52.3**	**-0.4**
WRAB	**Tennant Creek**	**44.53**	**259**	P	**P**	**00 45 52.5**	**-0.2**
WRAB				IAmb	IAmb	00 45 53.1	
	comp=Z,10nm,0.6s						
WRA	**Warramunga Arr**	**44.54**	**259**	P	**P**	**00 45 52.2**	**-0.6**
	comp=Z,7.6nm,0.5s,baz=94,slow=7.0,SNR=208						
WRA				ScP	**ScP**	**00 50 21.0**	**+2.7**
	comp=Z,0.4nm,0.8s,baz=87,slow=6.2,SNR=4.8						
	comp=Z,7.6nm,0.5s						
WRA	**Warramunga Arr**	**44.54**	**259**	P	**P**	**00 45 52.1**	**-0.6**
ASAR	**Alice Springs**	**44.73**	**254**	P	**P**	**00 45 54.4**	**+0.2**
	comp=Z,69nm,0.5s,baz=88,slow=8.3,SNR=853						
ASAR				ScP	**ScP**	**00 50 22.1**	**+2.9**
	comp=Z,0.4nm,0.8s,baz=95,slow=4.6,SNR=2.6						
ASAR				S	**S**	**00 51 45.7**	**-3.0**
	comp=Z,0.2nm,0.4s,baz=85,slow=14,SNR=2.7						
FORT	**Forrest**	**50.01**	**244**	P	**P**	**00 46 33.0**	**-0.4**
FAKI	**Fak Fak**	**50.37**	**281**	P	**P**	**00 46 36.7**	**+0.4**
FAKI				IAmb	IAmb	00 46 55.6	
	comp=Z,6.8nm,0.9s						
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**00 46 36.5**	**+0.3**
PSA00	**Pilbara Seismi**	**57.84**	**255**	P	**P**	**00 47 28.6**	**0.0**
PSA00				IAmb	IAmb	00 47 29.2	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**57.84**	**255**	P	**P**	**00 47 28.1**	**-0.4**
PSA00				IAmb	IAmb	00 47 29.7	
	comp=Z,5.2nm,0.9s						
MBWA	**Marble Bar**	**58.01**	**256**	P	**P**	**00 47 29.6**	**-0.1**
MBWA				IAmb	IAmb	00 47 31.5	
	comp=Z,10.0nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.23**	**242**	P	**P**	**00 47 37.7**	**+0.1**
NWAO				IAmb	IAmb	00 47 39.6	
	comp=Z,9.6nm,1.1s						
MORW	**Morawa**	**60.47**	**246**	P	**P**	**00 47 46.2**	**+0.3**
SBA	**Scott Base**	**60.72**	**184**	P	**P**	**00 47 48.2**	**+1.5**
VNDA	**Vanda**	**60.74**	**185**	P	**P**	**00 47 47.1**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=342,slow=7.4,SNR=5.2						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**60.74**	**185**	P	**P**	**00 47 47.4**	**+0.6**
GIRL	**Giralia**	**62.84**	**253**	P	**P**	**00 48 02.3**	**+0.9**
UGM	**Wanagama**	**69.51**	**268**	P	**P**	**00 48 43.1**	**+0.3**
QSPA	**South Pole Qui**	**72.46**	**180**	P	**P**	**00 48 59.6**	**+0.4**
QSPA				IAmb	IAmb	00 49 00.3	
	comp=Z,4.9nm,0.9s						
GUVIX	**Guadalupe Vict**	**78.42**	**51**		pP	00 51 31.8	-5.2
BEKR	**Beckworth**	**78.76**	**42**	P	**P**	**00 49 34.6**	**+0.2**
PNTR	**Pine Nut**	**78.81**	**43**	P	**P**	**00 49 36.2**	**+1.4**
L04D	**Klamath Falls**	**78.91**	**39**	P	**P**	**00 49 36.4**	**+1.3**
L04D				IAmb	IAmb	00 49 53.8	
	comp=Z,5.3nm,1.1s						
GLA	**Glamis**	**78.97**	**50**	P	**P**	**00 49 32.9**	**-2.6**
GLA				IAmb	IAmb	00 49 43.7	
	comp=Z,7.8nm,0.7s						
YERR	**Yerington**	**78.99**	**43**	P	**P**	**00 49 36.9**	**+1.2**
YERR				IAmb	IAmb	00 49 37.6	
	comp=Z,2.4nm,0.6s						
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**00 49 38.5**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=222,slow=9.0,SNR=9.1						
	comp=Z,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**00 49 38.9**	**+1.5**
NV11	**Mina Array Sit**	**79.40**	**44**	P	**P**	**00 49 38.5**	**+0.6**
KVN	**Kaiserville**	**79.77**	**44**	P	**P**	**00 49 41.0**	**+1.2**
MOD	**Modoc Plateau**	**79.94**	**40**	P	**P**	**00 49 42.0**	**+1.4**
MOD				IAmb	IAmb	00 49 42.5	
	comp=Z,3.1nm,0.8s						
K05A	**Summer Lake**	**80.05**	**39**	P	**P**	**00 49 42.4**	**+1.2**
K05A				IAmb	IAmb	00 49 43.1	
	comp=Z,6.8nm,1.1s						
RSO	**Redoubt South**	**80.53**	**13**	P	**P**	**00 49 45.7**	**+2.5**
R11A	**Troy Canyon, C**	**81.08**	**45**	P	**P**	**00 49 47.5**	**+0.9**
I07A	**Izee**	**81.66**	**39**	P	**P**	**00 49 50.6**	**+1.3**
U15A	**North Rim**	**82.42**	**48**	P	**P**	**00 49 55.5**	**+2.0**
U15A				IAmb	IAmb	00 49 56.0	
	comp=Z,3.3nm,0.8s						
BELA	**Belgrano 2**	**82.50**	**173**	P	**P**	**00 49 52.3**	**-0.6**
BELA				IAmb	IAmb	00 49 53.2	
	comp=Z,6.9nm,0.9s						
G08A	**Pilot Rock**	**82.65**	**38**	P	**P**	**00 49 55.3**	**+0.9**
MTPU	**Mount Pierson**	**83.26**	**47**	P	**P**	**00 49 58.3**	**+0.4**
VRDI	**Verde Repeater**	**83.42**	**16**	P	**P**	**00 49 58.4**	**+0.5**
VRDI				IAmb	IAmb	00 50 09.2	
	comp=Z,4.4nm,1.2s						
N25K	**Chitina, Valde**	**83.44**	**16**	P	**P**	**00 49 58.6**	**+0.8**
N25K				IAmb	IAmb	00 49 59.1	
	comp=Z,2.4nm,0.7s						
GLB	**Gilahina Butte**	**83.50**	**16**	P	**P**	**00 49 58.4**	**+0.3**
TRF	**Thorofare Moun**	**83.73**	**12**	P	**P**	**00 49 59.5**	**+0.2**
TRF				IAmb	IAmb	00 50 00.5	
	comp=Z,3.9nm,0.9s						
ILAR	**Eielson Array**	**85.61**	**13**	P	**P**	**00 50 08.1**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=223,slow=5.2,SNR=4.1						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**85.61**	**13**	P	**P**	**00 50 08.6**	**+0.4**
TX31	**Lajitas Ar. Si**	**85.95**	**58**	P	**P**	**00 50 12.1**	**+1.3**
TX31				IAmb	IAmb	00 50 13.6	
	comp=Z,7.3nm,0.9s						
TX32	**Lajitas Array**	**85.95**	**58**	P	**P**	**00 50 12.2**	**+1.5**
TX32				IAmb	IAmb	00 50 13.6	
	comp=Z,2.5nm,0.9s						
TXAR	**Lajitas Array**	**85.95**	**58**	P	**P**	**00 50 11.5**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=215,slow=6.6,SNR=15						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**87.23**	**43**	P	**P**	**00 50 17.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=196,slow=3.3,SNR=8.4						
	comp=Z,0.7nm,0.6s						
SNAA	**Sanae**	**90.92**	**179**	P	**P**	**00 50 31.5**	**-1.6**
VNA3	**Neumayer Olymp**	**91.06**	**176**	P	**P**	**00 50 33.5**	**-0.2**
VNA2	**Neumayer--Watz**	**91.50**	**177**	P	**P**	**00 50 36.3**	**+0.7**
	baz=113,slow=0.2						
W41B	**Gary Mavity, V**	**97.01**	**55**		pP	00 53 03.2	-7.6
GERES	**GERESS Array B**	**147.27**	**345**	PKPbc	**PKiKP**	**00 57 10.7**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=90,slow=2.7,SNR=5.9						

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*IDC **31** 00:56:11.8±0.9, 31°.02S×177°.69W, h0^{km}, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=26.8km s-min=19.6km az=86.0*

*NEIC **31** 00:56:16.2±1.6, 31°.17S±0°.05×177°.8W±0°.2, h17^{km}±8^{km}, mb4.5/14, Error ellipse: s-maj=30.3km s-min=3.4km az=102.0*

ISC 31 00:56:14.5±0.7, 31°.13S±0°.06×177°.9W±0°.1, h10^{km}, n45, σ1^{s}.63/40, mb4.3/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.87**	**358**	Pn	**Pn**	**00 56 44.9**	**-1.6**
	67nm,0.3s,baz=82,slow=20,SNR=1.8						
RAO				Sn	**Sn**	**00 57 08.3**	**-1.9**
	61nm,0.3s,baz=273,slow=22,SNR=1.9						
RAO	**Raoul Island**	**1.87**	**358**	Pn	**Pn**	**00 56 46.5**	**0.0**
URZ	**Urewera**	**8.23**	**209**	Pn	Pn	00 58 09.4	-4.5
	0.2nm,0.3s,baz=123,slow=22,SNR=1.3						
URZ	**Urewera**	**8.23**	**209**	Pn	**Pn**	**00 58 12.8**	**-1.2**
URZ				Sn	**Sn**	**00 59 44.4**	**-2.6**
BKZ	**Black Stump Fm**	**9.26**	**208**	Pn	**Pn**	**00 58 27.0**	**-1.1**
BKZ				Sn	**Sn**	**01 00 08.4**	**-3.9**
BFZ	**Birch Farm**	**10.66**	**205**	Pn	**Pn**	**00 58 47.6**	**+0.3**
CMWZ	**Cape Campbell**	**12.37**	**209**	Pn	**Pn**	**00 59 10.8**	**+0.2**
THZ	**Tophouse**	**12.95**	**212**	Pn	**Pn**	**00 59 19.4**	**+0.8**
LTZ	**Lake Taylor**	**14.05**	**211**	Pn	**Pn**	**00 59 34.3**	**+0.8**
MQZ	**McQueen’s Vall**	**14.63**	**208**	Pn	**Pn**	**00 59 41.8**	**+0.3**
LBZ	**Lake Benmore**	**16.24**	**212**	P	**Pn**	**01 00 04.6**	**+1.9**
LBZ				IAmb	IAmb	01 00 12.8	
	comp=Z,53nm,1.4s						
ODZ	**Otahua Downs**	**16.56**	**210**	P	**P**	**01 00 11.7**	**+2.4**
ODZ				IAmb	IAmb	01 00 12.3	
	comp=Z,54nm,1.5s						
DZM	**Mont Dzumac**	**16.67**	**299**	*e*LR	LR	01 05 26.9	
	comp=Z,320nm,22.2s						
MLZ	**Mavora Lakes**	**17.95**	**214**		**Pn**	**01 00 24.6**	**+0.5**
MLZ				IAmb	IAmb	01 00 35.8	
	comp=Z,43nm,1.3s						
TBI	**Tubuai**	**26.36**	**80**	*e*LR	LR	01 07 55.6	
	comp=Z,82nm,25.8s						
PPT2	**Papeete2**	**28.98**	**69**	*e*LR	LR	01 09 15.3	
	comp=Z,52nm,22.2s						
CTA	**Charters Tower**	**34.04**	**280**	P	**P**	**01 03 00.3**	**+1.4**
	comp=Z,4.9nm,0.7s,baz=112,slow=7.7,SNR=2.5						
	comp=Z,4.9nm,0.7s						
CTAO	**Charters Tower**	**34.04**	**280**	P	**P**	**01 02 59.8**	**+0.9**
STKA	**Stephens Creek**	**34.44**	**258**	P	**P**	**01 03 02.8**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=97,slow=12,SNR=1.5						
	comp=Z,0.6nm,0.3s						
BBOO	**Buckleboo**	**38.90**	**255**	P	**P**	**01 03 40.1**	**-0.2**
ASAR	**Alice Springs**	**43.20**	**268**	P	**P**	**01 04 15.8**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=107,slow=7.2,SNR=16						
ASAR				ScP	**ScP**	**01 09 55.8**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=104,slow=3.9,SNR=6.3						
	comp=Z,1.1nm,0.6s						
WR0	**Warramunga Arr**	**44.07**	**273**	P	**P**	**01 04 22.9**	**0.0**
WR0				IAmb	IAmb	01 04 33.8	
	comp=Z,5.3nm,1.1s						
WB2	**Warramunga Arr**	**44.24**	**273**	P	**P**	**01 04 24.5**	**+0.2**
WB2				IAmb	IAmb	01 04 37.1	
	comp=Z,6.4nm,1.1s						
WRAB	**Tennant Creek**	**44.25**	**273**	P	**P**	**01 04 25.1**	**+0.8**
WRAB				IAmb	IAmb	01 04 42.5	
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**44.25**	**273**	P	**P**	**01 04 23.5**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=112,slow=7.9,SNR=44						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**44.25**	**273**	P	**P**	**01 04 23.9**	**-0.5**
WB0	**Warramunga Arr**	**44.28**	**273**	P	**P**	**01 04 24.8**	**+0.2**
FORT	**Forrest**	**45.98**	**256**	P	**P**	**01 04 37.8**	**-0.2**
FORT				IAmb	IAmb	01 04 54.2	
	comp=Z,8.5nm,0.9s						
SBA	**Scott Base**	**47.33**	**184**	P	**P**	**01 04 48.8**	**+1.0**
SBA				IAmb	IAmb	01 05 02.5	
	comp=Z,4.8nm,1.3s						
VNDA	**Vanda**	**47.39**	**186**	P	**P**	**01 04 48.6**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=250,slow=21,SNR=6.1						
	comp=Z,1.2nm,0.9s						
VNDA	**Vanda**	**47.39**	**186**	P	**P**	**01 04 48.9**	**+0.6**
QSPA	**South Pole Qui**	**58.99**	**180**	P	**P**	**01 06 14.4**	**+0.4**
	comp=Z,2.9nm,1.0s,baz=21,slow=3.4,SNR=6.3						
	comp=Z,2.9nm,1.0s						
QSPA	**South Pole Qui**	**58.99**	**180**	P	**P**	**01 06 13.7**	**-0.4**
QSPA				pwP	**pwP**	**01 06 24.3**	**+2.7**
VNA3	**Neumayer Olymp**	**77.58**	**176**	P	**P**	**01 08 08.5**	**-1.7**
H03S2	**Juan Fernandez**	**79.96**	**123**	T	T	02 37 44.5	
	baz=238						
H03S1	**Juan Fernandez**	**79.97**	**123**	T	T	02 37 35.9	
	baz=238						
H03S3	**Juan Fernandez**	**79.98**	**123**	T	T	02 37 43.1	
	baz=238						
H03N3	**Juan Fernandez**	**80.16**	**123**	T	T	02 37 54.8	
	baz=240						
H03N2	**Juan Fernandez**	**80.16**	**123**	T	T	02 38 01.6	
	baz=240						
H03N1	**Juan Fernandez**	**80.17**	**123**	T	T	02 37 51.5	
	baz=240						
NVAR	**Mina Array Bea**	**88.69**	**43**	P	**P**	**01 09 06.5**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=235,slow=6.3,SNR=2.5						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**145.87**	**340**	PKPbc	**PKPdf**	**01 15 51.1**	**-1.6**
	comp=Z,3.2nm,0.8s,baz=86,slow=2.7,SNR=8.8						
NOA	**NORSAR Array B**	**149.48**	**351**	PKPbc	**PKPdf**	**01 16 01.2**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=17,slow=4.3,SNR=2.3						
AKASG	**Malin Array Be**	**151.95**	**322**	PKPbc	**PKPdf**	**01 16 07.9**	**+5.0**
	comp=Z,0.4nm,0.5s,baz=50,slow=3.8,SNR=1.9						
TORD	**Torodi Ar. Bea**	**162.10**	**179**	PKPab	**PKPab**	**01 17 01.5**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=182,slow=4.1,SNR=2.0						

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*IDC **31** 00:57:45.1±1.1, 31°.08S×177°.37W, h0^{km}, mb4.0/6, mbtmp4.0/7, ML3.8/1, Error ellipse: s-maj=31.5km s-min=20.6km az=80.0*

*NEIC **31** 00:57:45.7±1.1, 31°.1S±0°.1×177°.1W±0°.2, h10^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=27.1km s-min=16.7km az=78.0*

ISC 31 00:57:50.0±0.8**, 31°.16S**±0°.07×**177°.4W**±0°.1**, h35^{km}, n33, σ1^{s}.60**/29**, mb4.3**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.96**	**346**	Pn	**Pn**	**00 58 19.0**	**-1.7**
	38nm,0.3s,baz=80,slow=23,SNR=0.9						
RAO				Sn	**Sn**	**00 58 45.3**	**+1.2**
	95nm,0.3s,baz=294,slow=23,SNR=1.7						
RAO				LR	LR	00 59 08.5	
	comp=Z,821nm,20.4s,baz=234,slow=44						
RAO	**Raoul Island**	**1.96**	**346**		**Pn**	**00 58 18.4**	**-2.3**
URZ	**Urewera**	**8.42**	**211**	Pn	Pn	00 59 42.7	-6.8
	2.2nm,0.3s,baz=289,slow=23,SNR=3.4						
URZ				Sn	**Sn**	**01 01 19.7**	**-3.5**
	2.0nm,0.3s,baz=116,slow=22,SNR=2.2						
RPZ	**Rata Peaks**	**15.53**	**213**	Pn	**Pn**	**01 01 25.4**	**-0.9**
	0.4nm,0.3s,baz=56,slow=22,SNR=2.1						
	9.9nm,0.8s						
RPZ	**Rata Peaks**	**15.53**	**213**	Pn	**Pn**	**01 01 26.5**	**+0.2**
RPZ				P	**P**	**01 01 30.2**	**-0.1**
RPZ				IAmb	IAmb	01 01 39.6	
	comp=Z,35nm,1.3s						
MLZ	**Mavora Lakes**	**18.16**	**215**		**P**	**01 02 00.1**	**+0.7**
MLZ				IAmb	IAmb	01 02 13.0	
	comp=Z,32nm,1.2s						
WHZ	**Wether Hill Ro**	**18.62**	**214**	P	**P**	**01 02 04.4**	**-0.1**
DCZ	**Deep Cove**	**18.70**	**216**	P	**Pn**	**01 02 06.0**	**+0.1**
KOUNC	**Koumac, New Ca**	**19.57**	**298**	P	**P**	**01 02 14.0**	**-1.0**
CTA	**Charters Tower**	**34.46**	**280**	P	**P**	**01 04 34.5**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=90,slow=10,SNR=1.5						
	comp=Z,2.7nm,0.6s						
CTAO	**Charters Tower**	**34.46**	**280**	P	**P**	**01 04 35.2**	**+0.6**
CTAO				IAmb	IAmb	01 04 51.1	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**39.29**	**255**	P	**P**	**01 05 16.9**	**+1.3**
BBOO				IAmb	IAmb	01 05 30.3	
	comp=Z,23nm,1.4s						
ASAR	**Alice Springs**	**43.62**	**267**	P	**P**	**01 05 51.4**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=107,slow=7.8,SNR=4.5						
ASAR				ScP	**ScP**	**01 11 32.7**	**+5.5**
	comp=Z,0.5nm,0.9s,baz=131,slow=2.8,SNR=3.0						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**43.62**	**267**	P	**P**	**01 05 51.1**	**-0.1**
WR0	**Warramunga Arr**	**44.49**	**273**	P	**P**	**01 05 58.6**	**+0.3**
WB2	**Warramunga Arr**	**44.66**	**273**	P	**P**	**01 06 00.1**	**+0.5**
WB2				IAmb	IAmb	01 06 06.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**44.67**	**273**	P	**P**	**01 05 59.5**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=111,slow=8.0,SNR=7.2						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**44.67**	**273**	IAmb	IAmb	01 06 08.1	
	comp=Z,0.2nm,1.0s						
WB0	**Warramunga Arr**	**44.70**	**273**	P	**P**	**01 05 59.8**	**-0.1**
WB0				IAmb	IAmb	01 06 14.6	
	comp=Z,4.0nm,0.8s						
FORT	**Forrest**	**46.38**	**256**	P	**P**	**01 06 13.8**	**+0.7**
VNDA	**Vanda**	**47.40**	**186**	P	**P**	**01 06 21.7**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=275,slow=13,SNR=2.0						
	comp=Z,0.4nm,0.7s						
QSPA	**South Pole Qui**	**58.96**	**180**	P	**P**	**01 07 46.9**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=323,slow=3.5,SNR=2.6						
	comp=Z,2.6nm,0.9s						
H03S2	**Juan Fernandez**	**79.60**	**123**	T	T	02 39 00.6	
	baz=235						
H03S1	**Juan Fernandez**	**79.61**	**123**	T	T	02 38 59.9	
	baz=235						
H03S3	**Juan Fernandez**	**79.61**	**123**	T	T	02 39 02.1	
	baz=235						
H03N3	**Juan Fernandez**	**79.79**	**123**	T	T	02 39 15.2	
	baz=241						
H03N2	**Juan Fernandez**	**79.79**	**123**	T	T	02 39 14.4	
	baz=241						
H03N1	**Juan Fernandez**	**79.81**	**123**	T	T	02 39 12.9	
	baz=241						
NVAR	**Mina Array Bea**	**88.43**	**42**	P	**P**	**01 10 38.5**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=242,slow=3.8,SNR=2.9						
	comp=Z,0.5nm,0.7s						
LPAZ	**La Paz**	**97.34**	**114**	P	**P**	**01 11 18.6**	**-2.3**
FINES	**FINESS Array B**	**146.04**	**340**	PKPbc	**PKPbc**	**01 17 25.5**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=64,slow=3.2,SNR=3.4						
AKASG	**Malin Array Be**	**152.23**	**322**	PKPbc	**PKPbc**	**01 17 41.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=51,slow=3.8,SNR=0.9						
TORD	**Torodi Ar. Bea**	**162.06**	**177**	PKPab	**PKPab**	**01 18 35.3**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=191,slow=2.9,SNR=2.9						

IDC 31 01:02:13.1±7.7**, 30°.29S×177°.97W, h0^{km}, mb3.4**/2**, mbtmp3.4**/2**, Error ellipse: s-maj=315.0km s-min=64.6km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.14**	**267**	P	P	01 10 16.2	+0.5
	0.2nm,0.5s,baz=104,slow=7.5,SNR=2.0						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**44.12**	**272**	P	P	01 10 22.8	-0.8
	0.2nm,0.3s,baz=111,slow=8.0,SNR=7.3						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**145.06**	**340**	PKPbc	PKPbc	01 21 50.5	-0.6
	0.5nm,0.6s,baz=48,slow=4.1,SNR=1.5						

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*IDC **31** 01:04:55.3±0.9, 31°.15S×177°.50W, h0^{km}, mb4.0/6, mbtmp4.0/9, ML3.7/3, MS3.4/6, Error ellipse: s-maj=28.2km s-min=22.2km az=111.0*

*NEIC **31** 01:04:56.6±1.7, 31°.25S±0°.07×177°.3W±0°.1, h21^{km}±5^{km}, mb4.6/5, Error ellipse: s-maj=17.6km s-min=10.5km az=91.0*

ISC 31 01:04:58.9±0.8**, 31°.20S**±0°.06×**177°.6W**±0°.1**, h27^{km}, n38, σ1^{s}.30**/32**, mb4.3**/9**, MS3.4**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.97**	**351**	Pn	**Pn**	**01 05 29.4**	**-1.1**
	100nm,0.3s,baz=96,slow=15,SNR=2.9						
RAO				Sn	**Sn**	**01 05 52.7**	**-1.6**
	176nm,0.3s,baz=32,slow=22,SNR=2.8						
RAO	**Raoul Island**	**1.97**	**351**	Pn	**Pn**	**01 05 29.9**	**-0.6**
RAO				Sn	**Sn**	**01 05 54.1**	**-0.3**
URZ	**Urewera**	**8.29**	**210**	Pn	**Pn**	**01 06 55.6**	**-1.7**
	0.8nm,0.3s,baz=301,slow=24,SNR=1.6						
URZ				Sn	**Sn**	**01 08 26.7**	**-3.4**
	2.4nm,0.3s,baz=124,slow=23,SNR=6.0						
	3.9nm,0.5s						
URZ	**Urewera**	**8.29**	**210**	Pn	**Pn**	**01 06 56.1**	**-1.2**
OUZ	**Omahuta**	**8.42**	**239**	Pn	Pn	01 07 05.4	+6.2
BKZ	**Black Stump Fm**	**9.31**	**210**	Pn	**Pn**	**01 07 09.7**	**-1.7**
MSVF	**Nonsavu**	**13.99**	**342**	LR	LR	01 11 59.7	
	comp=Z,147nm,19.1s,baz=181,slow=30						
OXZ	**Oxford**	**14.65**	**211**	Pn	**Pn**	**01 08 24.4**	**+0.1**
RPZ	**Rata Peaks**	**15.40**	**213**	Pn	**Pn**	**01 08 35.5**	**+1.2**
	0.5nm,0.3s,baz=9.6,slow=20,SNR=1.4						
	4.0nm,0.4s						
DZM	**Mont Dzumac**	**16.93**	**299**	Pn	**Pn**	**01 08 53.4**	**-0.7**
	0.2nm,0.3s,baz=32,slow=13,SNR=1.7						
DZM				LR	LR	01 14 23.1	
	comp=Z,326nm,18.0s,baz=202,slow=34						
	3.2nm,0.8s						
RAR	**Rarotonga**	**18.79**	**62**	LR	LR	01 17 16.8	
	comp=Z,37nm,18.4s,baz=261,slow=40						
PPT	**Papeete**	**28.78**	**68**	LR	LR	01 18 51.9	
	comp=Z,45nm,21.6s,baz=0.5,slow=29						
CTAO	**Charters Tower**	**34.30**	**280**	P	**P**	**01 11 44.5**	**+1.2**
STKA	**Stephens Creek**	**34.67**	**258**	P	**P**	**01 11 48.0**	**+1.7**
	4.2nm,1.1s,baz=102,slow=12,SNR=2.4						
STKA				LR	LR	01 25 05.3	
	comp=Z,149nm,18.5s,baz=197,slow=35						
	4.2nm,1.1s						
ASAR	**Alice Springs**	**43.45**	**268**	P	**P**	**01 13 00.6**	**+0.8**
	1.8nm,0.8s,baz=104,slow=7.2,SNR=16						
ASAR				PcP	**PcP**	**01 14 48.1**	**+0.3**
	0.3nm,0.3s,baz=110,slow=4.3,SNR=2.2						
ASAR				ScP	**ScP**	**01 18 40.2**	**+2.7**
	0.8nm,0.8s,baz=116,slow=3.9,SNR=5.1						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**43.45**	**268**	P	**P**	**01 13 00.3**	**+0.5**
WR0	**Warramunga Arr**	**44.33**	**273**	P	**P**	**01 13 06.7**	**-0.2**
WR0				IAmb	IAmb	01 13 23.1	
	comp=Z,4.2nm,0.9s						
WB2	**Warramunga Arr**	**44.50**	**273**	P	**P**	**01 13 08.6**	**+0.3**
WB2				IAmb	IAmb	01 13 09.7	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**44.51**	**273**	P	**P**	**01 13 08.9**	**+0.5**
	comp=Z,2.6nm,0.3s,baz=112,slow=7.8,SNR=74						
	comp=Z,2.6nm,0.3s						
WRA	**Warramunga Arr**	**44.51**	**273**	P	**P**	**01 13 07.8**	**-0.5**
WB0	**Warramunga Arr**	**44.53**	**273**	P	**P**	**01 13 08.9**	**+0.3**
WB0				IAmb	IAmb	01 13 24.7	
	comp=Z,7.0nm,0.9s						
RPN	**Rapa Nui**	**58.86**	**105**	LR	LR	01 34 01.9	
	comp=Z,28nm,20.0s,baz=175,slow=30						
QSPA	**South Pole Qui**	**58.91**	**180**	P	**P**	**01 14 56.8**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=89,slow=6.9,SNR=1.4						
	comp=Z,0.6nm,0.8s						
H03S2	**Juan Fernandez**	**79.71**	**123**	T	T	02 46 09.0	
	baz=237						
H03S1	**Juan Fernandez**	**79.72**	**123**	T	T	02 46 10.0	
	baz=237						
H03S3	**Juan Fernandez**	**79.73**	**123**	T	T	02 46 12.2	
	baz=237						
H03N3	**Juan Fernandez**	**79.90**	**123**	T	T	02 46 19.0	
	baz=240						
H03N2	**Juan Fernandez**	**79.91**	**123**	T	T	02 46 23.9	
	baz=240						
H03N1	**Juan Fernandez**	**79.92**	**123**	T	T	02 46 19.8	
	baz=240						
PETK	**Petropavlovsk-**	**86.68**	**345**	P	**P**	**01 17 40.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=144,slow=5.2,SNR=1.6						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**88.57**	**42**	P	**P**	**01 17 48.7**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=212,slow=6.4,SNR=1.5						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**88.57**	**42**	P	**P**	**01 17 46.8**	**-2.6**
MKAR	**Makanchi Array**	**118.58**	**310**	PKP	**PKiKP**	**01 23 44.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=90,slow=3.2,SNR=2.4						
FINES	**FINESS Array B**	**146.03**	**340**	PKPbc	**PKPab**	**01 24 36.0**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=47,slow=3.1,SNR=21						
FINES	**FINESS Array B**	**146.03**	**340**	PKPdf	**PKPab**	**01 24 35.8**	**-0.3**
NOA	**NORSAR Array B**	**149.60**	**352**	PKPbc	**PKiKP**	**01 24 46.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=15,slow=4.2,SNR=2.4						
AKASG	**Malin Array Be**	**152.16**	**322**	PKPbc	**PKiKP**	**01 24 52.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=52,slow=3.1,SNR=1.7						
TORD	**Torodi Ar. Bea**	**162.02**	**178**	PKPab	**PKPab**	**01 25 45.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=163,slow=3.7,SNR=1.6						

TRN 31 01:18:46.5, 13°.76N×58°.93W, h52^{km}, MD3.8, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSP	**Saint Philip**	**0.83**	**218**	*e*P	Pn	01 19 03.0	+0.9
BBSP				*e*S	Sn	01 19 15.9	+2.3
BBGH	**Gun Hill**	**0.87**	**225**	*e*P	Pn	01 19 04.6	+2.0
BBGH				*e*S	Sn	01 19 16.8	+2.3
BCHC	**Barbados, Cave**	**0.93**	**228**	*e*P	Pn	01 19 04.1	+0.7
BCHC	**Barbados, Cave**	**0.93**	**228**	*e*	Pn	01 19 15.4	+12
SLAC	**Saint Lucia, A**	**1.92**	**274**	*e*P	Pn	01 19 17.4	+0.6
SLAC				*e*S	Sn	01 19 40.5	+0.7
MCLT	**Moule a Chique**	**1.96**	**269**	*e*P	Pn	01 19 18.7	+1.3
MCLT				*e*S	Sn	01 19 41.0	+0.2
SLW	**Petit Monier**	**1.97**	**278**	*e*P	Pn	01 19 18.7	+1.1
SLW				*e*S	Sn	01 19 42.9	+1.7
MPOM	**Morne Pois Mar**	**2.00**	**290**	*e*P	Pn	01 19 19.0	+1.1
MPOM				*e*S	Sn	01 19 42.2	+0.5
SLBI	**Saint Lucia, B**	**2.01**	**278**	*e*P	Pn	01 19 18.4	+0.4
SLBI				*e*S	Sn	01 19 42.3	+0.3
SLCP	**Castries, St.**	**2.02**	**277**	*e*S	Sn	01 19 43.2	+0.9
SLB	**Belfond**	**2.06**	**272**	*e*P	Pn	01 19 20.2	+1.4
SLB				*e*S	Sn	01 19 45.7	+2.4
MVM	**Montagne Vaucl**	**2.07**	**293**	*e*P	Pn	01 19 20.1	+1.3
LPMF	**Morne Lapointe**	**2.14**	**292**	*e*P	Pn	01 19 20.7	+0.9
LPMF				*e*S	Sn	01 19 46.3	+1.1
ILAM	**Ilet Lapin Mar**	**2.14**	**298**	*e*P	Pn	01 19 21.1	+1.3
ILAM				*e*S	Sn	01 19 46.8	+1.6
ZAM	**Aeronautique**	**2.19**	**292**	*e*P	Pn	01 19 21.5	+0.9
ZAM				*e*S	Sn	01 19 47.9	+1.4
TRMF	**Trois Ilets**	**2.20**	**291**	*e*P	Pn	01 19 21.9	+1.2
TRMF				*e*S	Sn	01 19 48.8	+2.1
BIM	**Bigot**	**2.21**	**290**	*e*P	Pn	01 19 21.7	+0.9
BIM				*e*S	Sn	01 19 48.5	+1.5
SSV	**Crater Summit**	**2.25**	**259**	*e*P	Pn	01 19 24.1	+2.7
SSV				*e*S	Sn	01 19 50.0	+1.9
SVV	**Soufriere Volc**	**2.27**	**259**	*e*P	Pn	01 19 23.8	+2.1
SVV				*e*S	Sn	01 19 50.7	+2.2
SVOC	**Richmond Hill,**	**2.31**	**255**	*e*P	Pn	01 19 23.5	+1.2
SVOC				*e*S	Sn	01 19 51.3	+1.8
FDF	**Fort de France**	**2.36**	**294**	*e*P	Pn	01 19 24.6	+1.6
FDF				*e*S	Sn	01 19 51.6	+0.8
BAMF	**Morne Balai**	**2.40**	**296**	*e*P	Pn	01 19 25.0	+1.6
GBMF	**Grand Be**	**2.40**	**296**	*e*P	Pn	01 19 25.2	+1.7
CXM	**Morne La Croix**	**2.41**	**296**	*e*P	Pn	01 19 25.5	+1.8
PML	**Morne Lenard**	**2.41**	**295**	*e*P	Pn	01 19 25.7	+2.1
SVN	**Savane Anatole**	**2.42**	**297**	*e*P	Pn	01 19 25.8	+2.0
SVN				*e*S	Sn	01 19 55.1	+2.8
PCM	**Pelee Case Pet**	**2.45**	**296**	*e*P	Pn	01 19 25.8	+1.7
DLPL	**La Plaine**	**2.74**	**305**	*e*S	Sn	01 20 01.3	+1.3
GCMP	**Grenada, Carri**	**2.75**	**243**	*e*P	Pn	01 19 29.3	+1.1
GCMP				*e*S	Sn	01 20 00.6	+0.4
MDN	**Morne-Daniel**	**2.85**	**303**	*e*P	Pn	01 19 31.5	+2.0
MDN				*e*S	Sn	01 20 04.1	+1.5
TOSP	**Speyside**	**2.91**	**213**	*e*P	Pn	01 19 30.9	+0.5
TOSP				*e*S	Sn	01 20 05.0	+0.8
DSLB	**Salisbury**	**2.94**	**305**	*e*P	Pn	01 19 32.9	+2.2
DSLB				*e*S	Sn	01 20 05.3	+0.5
GRGR	**Grenville**	**3.12**	**239**	*e*P	Pn	01 19 34.8	+1.5
GRGR				*e*S	Sn	01 20 10.1	+0.8
TPR	**Prospect**	**3.14**	**215**	*e*	Pn	01 19 46.6	+13
MAGL	**Barre de l’ile**	**3.15**	**314**	*e*P	Pn	01 19 35.2	+1.5
MAGL				*e*S	Sn	01 20 10.6	+0.5
GRFF	**Grenada Fort F**	**3.23**	**238**	*e*P	Pn	01 19 36.0	+1.2
GRFF				*e*S	Sn	01 20 13.1	+1.1
TDBA	**Terre de Bas,**	**3.34**	**309**	*e*P	Pn	01 19 38.3	+1.9
TDBA				*e*S	Sn	01 20 15.3	+0.5
TBG	**Guadaloupe-3**	**3.35**	**309**	*e*P	Pn	01 19 37.7	+1.2
TBG				*e*S	Sn	01 20 15.5	+0.4
CBE	**Ff, Capester**	**3.46**	**312**	*e*P	Pn	01 19 40.0	+2.1
CBE				*e*S	Sn	01 20 19.3	+1.5
ABD	**La Joyeuse, An**	**3.66**	**318**	*e*P	Pn	01 19 41.7	+1.0
ABD				*e*S	Sn	01 20 23.3	+0.7
TRN	**Trinidad (W)**	**3.93**	**218**	*e*	Pn	01 19 46.5	+2.1
TRN	**Trinidad (W)**	**3.93**	**218**	*e*P	Pn	01 19 46.6	+2.2
TRN				*e*S	Sn	01 20 29.9	+0.6
ANBD	**Bethesda, Anti**	**4.26**	**320**	*e*P	Pn	01 19 50.6	+1.7
ANBD	**Bethesda, Anti**	**4.26**	**320**	*e*S	Sn	01 20 37.6	+0.1
MLYT	**Lee's Yard**	**4.31**	**313**	*e*P	Pn	01 19 52.8	+3.1
MLYT	**Lee's Yard**	**4.31**	**313**	*e*S	Sn	01 20 39.8	+1.1
BPA	**Boggy Peak**	**4.32**	**319**	*e*P	Pn	01 19 50.7	+1.0
BPA	**Boggy Peak**	**4.32**	**319**	*e*S	Sn	01 20 38.6	-0.3
MBFL	**Flemmings, Mon**	**4.34**	**314**	*e*P	Pn	01 19 52.1	+2.0
MBFL	**Flemmings, Mon**	**4.34**	**314**	*e*S	Sn	01 20 39.1	-0.4
ANWB	**Willy Bob**	**4.76**	**325**	*e*P	Pn	01 19 57.0	+1.2
ANWB	**Willy Bob**	**4.76**	**325**	*e*S	Sn	01 20 49.0	-0.7

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*IDC **31** 01:42:24.0±1.4, 58°.76N×156°.69W, h194^{km}±14^{km}, mb3.5/15, mbtmp4.1/20, MS2.4/1, Error ellipse: s-maj=17.6km s-min=10.3km az=5.0*

*ANF **31** 01:42:24.5±0.2, 58°.52N×156°.65W, h198^{km}±3^{km}, ML4.2/32, Error ellipse: s-maj=4.2km s-min=2.7km az=119.0*

*NEIC **31** 01:42:24.6±2.1, 58°.49N±0°.05×156°.6W±0°.1, h209^{km}±5^{km}, Error ellipse: s-maj=9.0km s-min=7.5km az=117.0*

*AEIC **31** 01:42:25±1.6, 58°.50N±0°.05×156°.7W±0°.1, h201^{km}±4^{km}, ML4.1, mb4.3/46(NEIC), ML3.9/56(NEIC), Error ellipse: s-maj=8.8km s-min=7.3km az=110.0*

ISC 31 01:42:24.3±0.6**, 58°.52N**±0°.04×**156°.69W**±0°.04**, h204^{km}**±6^{km}**, n403, σ1^{s}.19**/414**, mb4.2**/39**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELA	**Mount Kelaz**	**0.51**	**99**		**Pn**	**01 42 52.1**	**+0.1**
PLK5	**Peulik 5**	**0.53**	**191**		**Pn**	**01 42 52.5**	**+0.5**
ANCK	**Angle Creek**	**0.71**	**117**		**Pn**	**01 42 53.1**	**+0.3**
PLK1	**Peulik 1**	**0.72**	**176**		**Pn**	**01 42 53.2**	**+0.4**
KJL	**Kejulik**	**0.75**	**128**		**Pn**	**01 42 53.5**	**+0.5**
KCG	**Knife Ck. Glac**	**0.86**	**104**		**Pn**	**01 42 54.0**	**+0.3**
PLK3	**Peulik 3**	**0.86**	**165**		**Pn**	**01 42 54.2**	**+0.5**
PLK3					**S**	**01 43 17.2**	**+0.9**
CAHL	**Cahill**	**0.87**	**122**		**Pn**	**01 42 54.0**	**+0.3**
O18K	**Koktuh Hills**	**1.54**	**29**		**Pn**	**01 42 59.2**	**+0.5**
O18K					**S**	**01 43 25.2**	**0.0**
O18K	**Koktuh Hills**	**1.54**	**29**	P	**Pn**	**01 42 59.2**	**+0.5**
	baz=209						
O18K				S	**S**	**01 43 25.3**	**0.0**
	baz=209						
Q19K	**Cape Douglas,**	**1.64**	**74**		**Pn**	**01 42 59.9**	**+0.3**
Q19K	**Cape Douglas,**	**1.64**	**74**		**S**	**01 43 26.2**	**-0.6**
Q19K	**Cape Douglas,**	**1.64**	**74**	IAML		01 43 07.5	
	comp=N,1µm,0.7s						
Q19K	**Cape Douglas,**	**1.64**	**74**	P	**Pn**	**01 42 59.9**	**+0.3**
	baz=255,SNR=91						
AUW	**Augustine West**	**1.87**	**62**		**Pn**	**01 43 02.6**	**+0.9**
AUCH	**Augustine Cone**	**1.88**	**62**		**Pn**	**01 43 02.8**	**+0.9**
AUQ	**Augustine Qik’**	**1.89**	**62**		**Pn**	**01 43 02.9**	**+0.9**
AU22	**Augustine Moun**	**1.93**	**62**		**Pn**	**01 43 03.1**	**+0.8**
OPT	**Oil Point**	**2.12**	**56**		**Pn**	**01 43 05.0**	**+0.7**
N18K	**Kilae Creek**	**2.21**	**10**		**Pn**	**01 43 06.0**	**+0.8**
N18K					**S**	**01 43 37.8**	**+1.2**
N18K	**Kilae Creek**	**2.21**	**10**	IAML		01 43 38.7	
	comp=E,249nm,1.4s						
N18K	**Kilae Creek**	**2.21**	**10**	P	**Pn**	**01 43 06.0**	**+0.8**
	baz=190,SNR=62						
N18K				S	**S**	**01 43 37.3**	**+0.6**
	baz=190						
OHAK	**Old Harbor**	**2.24**	**124**		**Pn**	**01 43 05.4**	**-0.1**
OHAK	**Old Harbor**	**2.24**	**124**	IAML		01 43 36.5	
	comp=N,1µm,0.7s						
OHAK				IAML		01 43 37.2	
	comp=E,1µm,0.7s						
OHAK	**Old Harbor**	**2.24**	**124**	P	**Pn**	**01 43 05.4**	**-0.1**
	baz=306,SNR=71						
OHAK				S	**S**	**01 43 35.5**	**-1.6**
	baz=306						
Q20K	**Shuyak Island**	**2.25**	**86**	P	**Pn**	**01 43 06.6**	**+0.9**
	baz=268,SNR=104						
Q20K				S	**S**	**01 43 36.2**	**-1.2**
	baz=268						
KDAK	**Kodiak Island**	**2.30**	**107**	P	**Pn**	**01 43 05.9**	**-0.3**
	comp=E,200nm,0.3s,baz=4.6,slow=0.6,SNR=1659						
KDAK				S	**S**	**01 43 36.4**	**-1.9**
	comp=E,301nm,0.3s,baz=185,slow=22,SNR=7.7						
KDAK				LR	LR	01 43 54.8	
	comp=E,69nm,19.5s,baz=248,slow=38						
KDAK	**Kodiak Island**	**2.30**	**107**		**Pn**	**01 43 05.8**	**-0.4**
KDAK	**Kodiak Island**	**2.30**	**107**	IAML		01 43 39.8	
	comp=E,882nm,0.6s						
KDAK				IAML		01 43 40.4	
	comp=E,558nm,0.6s						
KDAK	**Kodiak Island**	**2.30**	**107**	P	**Pn**	**01 43 05.9**	**-0.3**
	baz=290						
SII	**Sitkinak Islan**	**2.39**	**144**		**Pn**	**01 43 07.0**	**-0.2**
SII					**S**	**01 43 39.0**	**-1.1**
SII	**Sitkinak Islan**	**2.39**	**144**	IAML		01 43 40.9	
	comp=N,2µm,0.6s						
SII	**Sitkinak Islan**	**2.39**	**144**	P	**Pn**	**01 43 07.0**	**-0.2**
	baz=326,SNR=19						
SII				S	**S**	**01 43 38.8**	**-1.3**
	baz=326						
N19K	**Bonanza Creek**	**2.56**	**25**		**Pn**	**01 43 10.0**	**+1.0**
N19K	**Bonanza Creek**	**2.56**	**25**	IAML		01 43 46.0	
	comp=E,242nm,1.2s						
N19K				IAML		01 43 47.4	
	comp=N,186nm,1.0s						
N19K	**Bonanza Creek**	**2.56**	**25**	P	**Pn**	**01 43 10.0**	**+1.0**
	baz=206,SNR=35						

N19K				S	S	01 43 44.5	+0.8
	baz=206						
O20K	Slope Mountain	2.61	51		Pn	01 43 10.4	+0.8
O20K					S	01 43 45.1	+0.5
O20K	Slope Mountain	2.61	51	P	Pn	01 43 10.1	+0.5
	baz=234,SNR=8.0						
O20K				S	S	01 43 44.5	-0.1
	baz=234						
SVW2	Sparrevohn	2.65	12		Pn	01 43 10.9	+0.9
SVW2					S	01 43 46.2	+1.0
VNHG	Veniaminof 1	2.67	211		Pn	01 43 10.7	+0.4
VNFG	Fog Glacier, M	2.72	216		Pn	01 43 11.5	+0.5
VNSG	Veniaminof 6	2.73	209		Pn	01 43 10.9	-0.1
CHIR	Chirikof Islan	2.77	167		Pn	01 43 10.6	-0.8
CHIR	Chirikof Islan	2.77	167	IAML		01 43 47.0	
	comp=E,997nm,0.5s						
CHIR				IAML		01 43 47.1	
	comp=N,1µm,0.5s						
CHIR	Chirikof Islan	2.77	167	P	Pn	01 43 10.6	-0.8
	baz=348,SNR=12						
CHIR				S	S	01 43 45.5	-2.1
	baz=348						
RDWB	Redoubt West	2.78	43		Pn	01 43 12.4	+0.7
RSO	Redoubt South	2.80	44		Pn	01 43 11.9	0.0
NCT	North Crescent	2.80	41		Pn	01 43 12.7	+0.9
HOM	Homer	2.84	64		S	01 43 48.3	-0.9
HOM	Homer	2.84	64	S	S	01 43 47.8	-1.3
	baz=247						
RDJH	Redoubt Jeurge	2.87	42		Pn	01 43 13.6	+0.9
DFR	Drift River	2.91	43		Pn	01 43 14.0	+0.9
CNPM	China Poot	3.00	68		Pn	01 43 14.5	+0.5
CNPM	China Poot	3.00	68	IAML		01 43 50.6	
	comp=N,849nm,0.7s						
CNPM				IAML		01 43 51.0	
	comp=E,806nm,0.6s						
BRLK	Bradley Lake	3.24	65	Pn	Pn	01 43 17.4	+0.4
BRLK				IAML		01 43 55.2	
	comp=N,788nm,0.8s						
BRLK				IAML		01 43 57.5	
	comp=E,512nm,0.6s						
BRSE	Bradley Lake S	3.30	66		Pn	01 43 17.6	0.0
BRSE	Bradley Lake S	3.30	66	P	Pn	01 43 18.1	+0.5
	baz=250,SNR=7.3						
BRSE				S	S	01 43 55.8	-3.1
	baz=250						
SPBG	Spurr Blockage	3.51	37		Pn	01 43 21.6	+1.5
SPU	Mount Spurr	3.55	39		Pn	01 43 21.0	+0.4
M19K	Big River Lodg	3.58	18		Pn	01 43 22.2	+1.3
M19K	Big River Lodg	3.58	18	P	Pn	01 43 22.1	+1.2
	baz=199,SNR=38						
M19K				S	S	01 44 06.1	+1.1
	baz=199						
CAPN	Captain Cook N	3.60	49		Pn	01 43 23.1	+1.9
CAPN	Captain Cook N	3.60	49	P	Pn	01 43 23.8	+2.6
	baz=233						
CAPN				S	S	01 44 05.8	+0.4
	baz=233						
SPCG	Spurr Capps Gl	3.64	38		Pn	01 43 22.6	+0.8
L19K	White Mountain	3.79	13		Pn	01 43 24.5	+1.0
L19K	White Mountain	3.79	13	IAML		01 44 12.2	
	comp=E,69nm,1.2s						
L19K	White Mountain	3.79	13	P	Pn	01 43 24.5	+1.0
	baz=194,SNR=78						
L19K				S	S	01 44 08.8	-0.7
	baz=194						
SDPT	Sand Point	3.79	215		Pn	01 43 23.5	-0.1
SDPT	Sand Point	3.79	215	IAML		01 44 10.7	
	comp=N,111nm,0.6s						
SDPT				IAML		01 44 18.8	
	comp=E,111nm,1.1s						
SDPT	Sand Point	3.79	215	P	Pn	01 43 23.2	-0.4
	baz=32						
SDPT				S	S	01 44 08.1	-1.5
	baz=32						
M20K	Styx River	3.81	26		Pn	01 43 24.6	+0.8
M20K	Styx River	3.81	26	P	Pn	01 43 24.7	+0.8
	baz=209,SNR=12						
SLKM	Skilak Lake	3.85	56		Pn	01 43 24.2	-0.1
STLK	Strandline Lak	3.86	37		Pn	01 43 25.0	+0.6
CHNA	Chernabura Isl	4.03	205	P	Pn	01 43 24.9	-1.6
	baz=23,SNR=7.6						
SEW	Seward	4.04	64		Pn	01 43 26.6	+0.1
SEW	Seward	4.04	64	P	Pn	01 43 26.6	+0.1
	baz=249,SNR=31						
SEW				S	S	01 44 10.8	-4.2
	baz=249						
CNBA	Chernabura Isl	4.04	205		Pn	01 43 24.9	-1.7
CNBA	Chernabura Isl	4.04	205	IAML		01 44 13.1	
	comp=N,131nm,0.5s						
CNBA				IAML		01 44 16.2	
	comp=E,80nm,0.7s						
O22K	Cooper Landing	4.06	58		Pn	01 43 27.2	+0.4
O22K	Cooper Landing	4.06	58	P	Pn	01 43 27.1	+0.3
	baz=243,SNR=14						
BLHA	Black Hill	4.07	228		Pn	01 43 27.4	+0.4
L20K	Farewell, AK	4.21	18		Pn	01 43 29.9	+1.2
L20K	Farewell, AK	4.21	18	P	Pn	01 43 29.9	+1.3
	baz=200,SNR=129						
PS4A	Pavlof South-4	4.26	224		Pn	01 43 30.4	+1.1
HAG	Hague Volcano	4.30	224		Pn	01 43 30.5	+0.6
RC01	Rabbit Creek A	4.36	51		Pn	01 43 30.3	-0.2
RC01	Rabbit Creek A	4.36	51	P	Pn	01 43 30.3	-0.2
	baz=236,SNR=9.7						
TT01	Tatalina	4.41	4		Pn	01 43 32.4	+1.2
TTA	Tatalina	4.44	4		Pn	01 43 32.6	+1.1
TTA	Tatalina	4.44	4	P	Pn	01 43 32.7	+1.1
	baz=184,SNR=65						
M22K	Willow	4.62	43		Pn	01 43 31.9	-1.8
PMR	Palmer	4.88	48		Pn	01 43 35.4	-1.7
PMR				IAML		01 44 32.0	
	comp=N,105nm,0.2s						
PMR				IAML		01 44 35.0	
	comp=E,154nm,0.5s						
PMR	Palmer	4.88	48	P	Pn	01 43 34.9	-2.1
	baz=234						
PPLA	Purkeypile	4.92	25		Pn	01 43 39.5	+1.8
PPLA	Purkeypile	4.92	25	P	Pn	01 43 39.0	+1.3
	baz=208,SNR=26						
K20K	Telida	5.02	14		Pn	01 43 39.6	+0.8
K20K	Telida	5.02	14	IAML		01 44 39.0	
	comp=E,36nm,1.7s						
K20K	Telida	5.02	14	P	Pn	01 43 39.7	+0.8
	baz=196,SNR=75						
CUT	Chulitna	5.03	36		Pn	01 43 38.8	-0.1
CUT	Chulitna	5.03	36	P	Pn	01 43 38.7	-0.3
	baz=222,SNR=13						
KNK	Knik Glacier	5.05	51		Pn	01 43 39.2	-0.1
KNK	Knik Glacier	5.05	51	P	Pn	01 43 39.3	-0.1
	baz=238,SNR=32						
GHO	Glory Hole Cre	5.07	47		Pn	01 43 37.5	-2.1
GHO				IAML		01 44 34.9	
	comp=N,178nm,0.8s						
FALS	False Pass	5.22	228	P	Pn	01 43 41.6	+0.1
	baz=43						
SML	Sawmill	5.32	48		Pn	01 43 40.7	-2.0
SML				IAML		01 44 39.6	
	comp=E,126nm,0.8s						
SML				IAML		01 44 40.2	
	comp=N,143nm,0.6s						
SML	Sawmill	5.32	48	P	Pn	01 43 40.5	-2.2
	baz=235,SNR=23						
CAST	Castle Rocks	5.40	23		Pn	01 43 44.3	+0.6
CAST	Castle Rocks	5.40	23	P	Pn	01 43 44.3	+0.6
	baz=206,SNR=55						
GLI	Glacier Island	5.40	60		Pn	01 43 42.7	-1.1
GLI	Glacier Island	5.40	60	P	Pn	01 43 42.7	-1.1
	baz=248,SNR=20						
ISLZ	Isanotski Laza	5.43	229		Pn	01 43 44.4	+0.2
Q23K	Middleton Isla	5.43	76		Pn	01 43 45.3	+1.3
MID	Middleton Isla	5.43	76		Pn	01 43 45.4	+1.2
HIN	Hinchinbrook I	5.53	66		Pn	01 43 45.5	+0.1
M23K	Glacier View	5.55	50		Pn	01 43 45.5	-0.2
M23K	Glacier View	5.55	50	P	Pn	01 43 45.4	-0.2
	baz=237,SNR=163						
FID	Port Fidalgo	5.64	62		Pn	01 43 45.8	-1.1
JPK	Jack Peak	5.70	59		Pn	01 43 47.2	-0.3
SCM	Sheep Creek Mo	5.73	51		Pn	01 43 46.3	-1.7
SCM	Sheep Creek Mo	5.73	51	P	Pn	01 43 48.0	0.0
	baz=238,SNR=222						
KTH	Kantishna Hill	5.77	27		Pn	01 43 47.7	-0.9
CHUM	Lake Minchumin	5.78	20		Pn	01 43 49.2	+0.6
CHUM	Lake Minchumin	5.78	20	P	Pn	01 43 49.4	+0.8
	baz=203,SNR=145						
J20K	Nowinta River	5.81	11		Pn	01 43 49.9	+1.0
J20K	Nowinta River	5.81	11	P	Pn	01 43 49.6	+0.7
	baz=193,SNR=98						
TRF	Thorofare Moun	5.84	29		Pn	01 43 48.5	-1.1
TRF	Thorofare Moun	5.84	29	P	Pn	01 43 48.3	-1.3
	baz=215,SNR=16						
WAT1	Susitna Watana	5.89	39	P	Pn	01 43 48.0	-2.0
	baz=226						
EYAK	Cordova Ski Ar	5.93	65		Pn	01 43 50.1	-0.4
EYAK	Cordova Ski Ar	5.93	65	P	Pn	01 43 49.9	-0.5
	baz=254,SNR=8.3						
WAT6	Susitna Watana	6.00	44	P	Pn	01 43 49.6	-2.0
	baz=231,SNR=31						
DIV	Divide	6.10	60		Pn	01 43 52.9	+0.2
KLU	Klutina	6.17	57		Pn	01 43 53.4	-0.3
KLU	Klutina	6.17	57	P	Pn	01 43 53.1	-0.6
	baz=245,SNR=156						
RND	Reindeer	6.21	35	Pn	Pn	01 43 52.5	-1.7
BPAW	Bear Paw Mtn.	6.23	24	Pn	Pn	01 43 53.5	-0.9
BPAW	Bear Paw Mtn.	6.23	24	P	Pn	01 43 53.7	-0.8
	baz=208,SNR=72						
GCSA	Galena City Sc	6.25	359	P	Pn	01 43 54.6	+0.1
	baz=179						
M24K	Tolsona, Glenn	6.34	51		Pn	01 43 55.4	-0.5
M24K	Tolsona, Glenn	6.34	51	P	Pn	01 43 55.3	-0.5
	baz=240,SNR=70						
MCK	McKinley	6.43	32	Pn	Pn	01 43 55.8	-1.2
MCK	McKinley	6.43	32	P	Pn	01 43 55.5	-1.5
	baz=219,SNR=8.4						
DHY	Denali Highway	6.45	41		Pn	01 43 55.1	-2.3
DHY	Denali Highway	6.45	41	P	Pn	01 43 55.3	-2.0
	baz=229,SNR=21						
PS12	TAPS Pump St12	6.50	58		Pn	01 43 57.8	-0.1
BMRM	Bremner River	6.58	63		Pn	01 43 58.6	-0.4
BMRM	Bremner River	6.58	63	P	Pn	01 43 58.0	-1.0
	baz=253,SNR=12						
HMT	Hamilton	6.60	69		Pn	01 43 59.5	+0.3
PS11	TAPS Pump St11	6.62	53		Pn	01 43 59.8	+0.4
AKSA	Akutan Strait	6.66	233		Pn	01 44 00.2	+0.2
NICHA	Nichawak Mount	6.72	70		Pn	01 44 01.5	+0.7
AKGG	Akutan Green G	6.74	234		Pn	01 44 01.6	+0.5
SUCK	Suckling Hills	6.79	71	Pn	Pn	01 44 01.1	-0.6
N25K	Chitina, Valde	6.80	58		Pn	01 44 01.7	-0.1
N25K	Chitina, Valde	6.80	58	P	Pn	01 44 01.8	-0.1
	baz=248,SNR=72						
HARP	HAARP	6.90	51		Pn	01 44 03.2	+0.1
HARP	HAARP	6.90	51	P	Pn	01 44 03.1	+0.1
	baz=240,SNR=27						
I21K	Tanana	7.04	16		Pn	01 44 05.0	+0.2
I21K	Tanana	7.04	16	P	Pn	01 44 05.2	+0.4
	baz=200,SNR=72						
GRIN	Grindle Hills	7.05	70		Pn	01 44 05.8	+0.7
PAX	Paxson	7.08	46		Pn	01 44 03.9	-1.5
PAX	Paxson	7.08	46	P	Pn	01 44 04.1	-1.3
	baz=236,SNR=40						
NEA2	Nenana	7.09	28		Pn	01 44 03.0	-2.6
NEA2	Nenana	7.09	28	P	Pn	01 44 02.8	-2.7
	baz=214,SNR=18						
GLB	Gilahina Butte	7.09	60		Pn	01 44 05.5	-0.1
KHIT	Khitrov Hills	7.11	69		Pn	01 44 06.1	+0.2
MLY	Manley	7.11	21		Pn	01 44 04.2	-1.6
MLY	Manley	7.11	21	P	Pn	01 44 04.2	-1.6
	baz=206,SNR=56						
VRDI	Verde Repeater	7.19	62		Pn	01 44 07.0	-0.1
UNV	Unalaska Valle	7.20	234		Pn	01 44 06.4	-0.6
UNV	Unalaska Valle	7.20	234	P	Pn	01 44 06.4	-0.6
	baz=46						
PS10	TAPS Pump St10	7.24	43		Pn	01 44 06.8	-0.6
WRH	Wood River Hil	7.25	31		Pn	01 44 05.0	-2.5
SNH	Sunshine Point	7.28	71	Pn	Pn	01 44 09.0	+1.0
WAX	Waxell Ridge	7.31	69		Pn	01 44 08.5	+0.1
H21K	Melozitna Rive	7.39	13		Pn	01 44 10.0	+0.6
H21K	Melozitna Rive	7.39	13	P	Pn	01 44 10.0	+0.6
	baz=196,SNR=56						
MCARA	McCarthy VSAT	7.44	62		Pn	01 44 10.5	+0.5
MCARA	McCarthy VSAT	7.44	62	P	Pn	01 44 10.3	+0.3
	baz=253,SNR=29						
CCB	Clear Creek Bu	7.46	31		Pn	01 44 07.4	-2.8
K24K	Donnelly Dome	7.47	40		Pn	01 44 09.8	-0.7
K24K	Donnelly Dome	7.47	40	P	Pn	01 44 09.2	-1.3
	baz=229,SNR=43						
I23K	Minto, Yukon-K	7.50	24		Pn	01 44 08.4	-2.3
I23K	Minto, Yukon-K	7.50	24	P	Pn	01 44 08.4	-2.3
	baz=211,SNR=19						
HDA	Harding Lake	7.52	34		Pn	01 44 08.6	-2.5
HDA	Harding Lake	7.52	34	P	Pn	01 44 08.8	-2.3
	baz=222,SNR=26						
ISLE	Juniper Island	7.58	68		Pn	01 44 12.6	+0.5
MDM	Murphy Dome	7.60	28		Pn	01 44 09.2	-2.9
IM03		7.62	9		Pn	01 44 12.8	+0.5
IMAR	Indian Mountai	7.62	9	Pn	Pn	01 44 12.8	+0.5
TCOL	CIGO, UAF Yank	7.62	30		Pn	01 44 11.3	-1.0
COLA	College	7.63	30		Pn	01 44 11.4	-1.0
PTPK	Patty Peak	7.64	64		Pn	01 44 13.6	+0.7
BAGL	Bagley Icefiel	7.69	69		Pn	01 44 14.2	+1.0
MESA	MESA	7.72	71		Pn	01 44 14.9	+1.1
MESA	MESA	7.72	71	P	Pn	01 44 14.7	+0.9
	baz=264,SNR=6.4						
MENT	Mentasta	7.74	50		Pn	01 44 13.5	-0.5
RIDG	Independent Ri	7.76	43		Pn	01 44 12.6	-1.5
RIDG	Independent Ri	7.76	43	P	Pn	01 44 12.5	-1.7
	baz=233,SNR=28						
M26K	Nabesna, AK	7.80	54		Pn	01 44 14.7	-0.1
M26K	Nabesna, AK	7.80	54	P	Pn	01 44 14.8	-0.1
	baz=246,SNR=143						
IL31		7.81	32		Pn	01 44 11.7	-3.0
ILAR	Eielson Array	7.81	32	P	Pn	01 44 11.6	-3.3
	comp=N,8.2nm,0.4s,baz=224,slow=13,SNR=98						
ILAR				S	S	01 45 33.7	-9.2
	comp=N,7.8nm,0.7s,baz=213,slow=17,SNR=12						
ILAR	Eielson Array	7.81	32		Pn	01 44 11.9	-2.9
YAH	Yahtse	7.84	70		Pn	01 44 16.3	+0.8
GRNC	Granite Creek	7.89	67		Pn	01 44 16.6	+0.5
POKR	Poker Plat Res	7.93	30	P	Pn	01 44 13.2	-3.2
	baz=217						
L26K	Log Cabin Wild	7.93	50		Pn	01 44 16.6	+0.1
L26K	Log Cabin Wild	7.93	50	P	Pn	01 44 16.0	-0.4
	baz=241,SNR=17						
BARN	Barnard Glacie	8.00	65		Pn	01 44 18.5	+1.0
H23K	Yukon River	8.05	21		Pn	01 44 16.1	-1.9
H23K	Yukon River	8.05	21	P	Pn	01 44 15.7	-2.2
	baz=208,SNR=25						
CTG	Chitna Glacier	8.13	66	P	Pn	01 44 19.8	+0.7
	baz=259,SNR=24						
CTGM	Chitina Glacie	8.13	66		Pn	01 44 19.8	+0.6
TABL	Table Mountain	8.14	70		Pn	01 44 20.5	+1.1
J25K	Salcha River,	8.15	37		Pn	01 44 17.0	-2.2
J25K	Salcha River,	8.15	37	P	Pn	01 44 16.7	-2.5
	baz=226,SNR=43						
SCRK	Sand Creek	8.20	43	Pn	Pn	01 44 17.8	-2.2
SCRK	Sand Creek	8.20	43	P	Pn	01 44 17.6	-2.4
	baz=234,SNR=26						
M27K	Edge Creek, AK	8.27	56		Pn	01 44 21.3	+0.3
M27K	Edge Creek, AK	8.27	56	P	Pn	01 44 21.2	+0.3
	baz=248,SNR=34						
LOGN	Logan Glacier	8.27	67		Pn	01 44 21.5	+0.6
SAMH	Samovar Hills	8.29	72		Pn	01 44 22.7	+1.5
H24K	Noodor Dome	8.41	26	Pn	Pn	01 44 19.3	-3.4
H24K	Noodor Dome	8.41	26	P	Pn	01 44 18.9	-3.7
	baz=213,SNR=9.1						
YUK2	White River	8.55	61		Pn	01 44 24.9	+0.4
PCA	Pinnacle	8.55	72		Pn	01 44 25.8	+1.2
PINM	Pinnacle	8.56	72	P	Pn	01 44 25.5	+0.9
	baz=266						
L27K	Beaver Creek,	8.57	52		Pn	01 44 24.7	0.0
L27K	Beaver Creek,	8.57	52	P	Pn	01 44 24.1	-0.6
	baz=244,SNR=30						
BC03		8.59	52		Pn	01 44 24.6	-0.2
BCAR	Beaver Creek A	8.59	52	Pn	Pn	01 44 24.3	-0.6
J26L	Joseph Creek	8.67	41	Pn	Pn	01 44 24.1	-2.0
J26L	Joseph Creek	8.67	41	P	Pn	01 44 24.2	-1.8
	baz=232,SNR=31						
YUK3	Moose Creek	8.72	61		Pn	01 44 27.2	+0.3
YUK3	Moose Creek	8.72	61	P	Pn	01 44 27.2	+0.3
	baz=255,SNR=32						
BVCY	Beaver Creek	8.73	57		Pn	01 44 27.1	+0.3
BVCY	Beaver Creek	8.73	57	P	Pn	01 44 27.0	+0.2
	baz=250,SNR=9.7						
BCPM	Bancas Point	8.86	73		Pn	01 44 28.4	-0.1
K27K	Chicken	8.93	46		Pn	01 44 28.1	-1.3
K27K	Chicken	8.93	46	P	Pn	01 44 28.0	-1.4
	baz=238						
YUK8	Steele Glacier	8.94	65	P	Pn	01 44 30.2	+0.4
	baz=259,SNR=29						
PNL	Peninsula	8.97	75	P	Pn	01 44 31.1	+1.1
	baz=270,SNR=21						
COLD	Coldfoot	9.22	16	Pn	Pn	01 44 32.0	-1.1
COLD	Coldfoot	9.22	16	P	Pn	01 44 32.1	-1.0
	baz=202,SNR=30						
YUK4	Talbot Arm	9.48	65	P	Pn	01 44 36.8	0.0
	baz=260,SNR=6.6						
YUK6	Outpost Mounta	9.56	68		Pn	01 44 38.2	+0.4
YUK6	Outpost Mounta	9.56	68	P	Pn	01 44 36.7	-1.1
	baz=263						
EGAK	Eagle	9.67	43		Pn	01 44 37.4	-1.5
EGAK	Eagle	9.67	43	P	Pn	01 44 37.1	-1.9
	baz=236,SNR=19						
YUK5	Granite Creek	9.83	67		Pn	01 44 41.8	+0.7
HYT	Haines Junctio	9.97	68		Pn	01 44 42.6	-0.3
HYT	Haines Junctio	9.97	68	P	Pn	01 44 43.0	0.0
	baz=265						
DAWY	Dawson	9.99	49		Pn	01 44 42.3	-0.8
DAWY	Dawson	9.99	49	P	Pn	01 44 42.5	-0.5
	baz=244,SNR=12						
N30M	Aishikik Lake	10.24	65	P	Pn	01 44 45.9	-0.5
	baz=262,SNR=21						
PLBC	Pleasant Camp	10.52	76	P	Pn	01 44 49.7	-0.3
	baz=273,SNR=6.4						
M30M	Minto, Yukon	10.59	59	Pn	Pn	01 44 51.1	+0.3
M30M	Minto, Yukon	10.59	59	P	Pn	01 44 50.9	0.0
	baz=256,SNR=18						
TOLK	Toolik Lake Re	10.63	14	Pn	Pn	01 44 52.0	+0.7
TOLK	Toolik Lake Re	10.63	14	P	Pn	01 44 51.8	+0.5
	baz=200						
O30N	Mendenhall	10.66	69	P	Pn	01 44 51.9	+0.2
	baz=267,SNR=6.7						
N31M	Braeburn, Yuko	10.87	65	Pn	Pn	01 44 55.1	+0.7
N31M	Braeburn, Yuko	10.87	65	P	Pn	01 44 54.8	+0.4
	baz=263,SNR=12						
I29M	Ogilvie Camp,	11.01	44		Pn	01 44 54.6	-1.6
I29M	Ogilvie Camp,	11.01	44	P	Pn	01 44 55.0	-1.2
	baz=240						
WHY	Whitehorse	11.25	70		Pn	01 44 59.7	+0.4
WHY	Whitehorse	11.25	70	P	Pn	01 44 59.5	+0.2
	baz=268,SNR=10						
M31M	Drury Creek, Y	11.62	62		Pn	01 45 04.9	+1.0
M31M	Drury Creek, Y	11.62	62	P	Pn	01 45 03.3	-0.7
	baz=261,SNR=18						
EPYK	Eagle Plains	12.09	41	P	Pn	01 45 07.8	-2.1
	baz=239,SNR=10						
FARO	Faro, Yukon	12.10	62	P	Pn	01 45 11.4	+1.3
	baz=262						
P33M	Teslin, Yukon	12.27	72	Pn	Pn	01 45 13.0	+0.7
P33M	Teslin, Yukon	12.27	72	P	Pn	01 45 13.6	+1.3
	baz=272,SNR=14						
MMPY	Sheldon Lake,	13.11	61	P	Pn	01 45 23.3	+0.5
	baz=263,SNR=26						
WRAK	Wrangell Islan	13.25	89	P	Pn	01 45 24.7	+0.3
WRAK	Wrangell Islan	13.25	89	P	Pn	01 45 26.1	+1.7
	baz=289,SNR=7.6						
S34M	Telegraph Cree	13.46	82	P	Pn	01 45 28.6	+1.5
	baz=283,SNR=8.5						
DLBC	Dease Lake	13.92	79	P	Pn	01 45 32.6	-0.2
	comp=N,3.3nm,0.7s,baz=270,slow=11,SNR=6.5						
DLBC				S	S	01 48 10.7	+3.4
	comp=N,1.4nm,0.5s,baz=125,slow=23,SNR=2.9						
DLBC	Dease Lake	13.92	79	P	Pn	01 45 33.8	+1.0
DLBC	Dease Lake	13.92	79	P	Pn	01 45 33.4	+0.6
	baz=282,SNR=7.8						
INK	Inuvik	14.16	37	P	Pn	01 45 33.2	-2.5
	comp=N,4.8nm,0.5s,baz=234,slow=12,SNR=23						
INK				S	S	01 48 08.2	-4.4
	comp=N,1.9nm,1.1s,baz=321,slow=18,SNR=1.7						
INK	Inuvik	14.16	37	Pn	Pn	01 45 33.5	-2.2
INK	Inuvik	14.16	37	P	Pn	01 45 32.8	-2.8
	baz=237,SNR=8.1						
TGTN	Hyland Airport	14.46	66	P	P	01 45 40.6	0.0
	baz=270						
SHEM	Shemya Is, Ala	17.39	263	P	P	01 46 13.9	+1.1
	comp=N,35nm,0.8s,baz=245,slow=21,SNR=3.6						
C36M	Paulatuk	17.70	39	P	P	01 46 14.0	-2.0
C36M	Paulatuk	17.70	39	P	P	01 46 12.9	-3.1
	baz=248						
BILL	Bilibino	18.86	316	P	P	01 46 28.3	-0.4
YKA	Yellowknife Ar	20.81	61	P	P	01 46 48.2	-1.3
	comp=N,6.3nm,0.6s,baz=277,slow=9.5,SNR=40						
	comp=N,6.3nm,0.6s						
YKA	Yellowknife Ar	20.81	61	P	P	01 46 49.8	+0.2
EDM	Edmonton	24.54	83	P	P	01 47 25.6	+0.7
SEY	Seymchan	24.73	302	P	P	01 47 25.9	-0.5
	comp=N,2.5nm,0.7s,baz=121,slow=9.6,SNR=6.2						
	comp=N,2.5nm,0.7s						
NEW	Newport	25.36	96	P	P	01 47 34.3	+1.9
	baz=309						
PETK	Petropavlovsk-	25.78	278	P	P	01 47 36.0	0.0
	comp=N,2.1nm,0.5s,baz=72,slow=12,SNR=13						
	comp=N,2.1nm,0.5s						
PETK	Petropavlovsk-	25.78	278	P	P	01 47 35.8	-0.2
F10A	Beach Ranch, E	26.80	101	P	P	01 47 46.2	+0.9
BOZ	Bozeman (W)	29.96	96	P	P	01 48 15.0	+1.7
	baz=312						
FLWY	Flagg Ranch	31.47	97	P	P	01 48 27.4	+0.6
FLWY				IAmb	IAmb	01 48 31.1	
	comp=Z,7.2nm,0.7s						
RLMT	Red Lodge	31.51	94	P	P	01 48 27.7	+0.6
RLMT	Red Lodge	31.51	94	P	P	01 48 29.2	+2.1
	baz=312						
FCC	Fort Churchill	31.53	62	P	P	01 48 27.5	+0.8
NVAR	Mina Array Bea	31.79	112	P	P	01 48 31.3	+1.7
	comp=Z,0.4nm,0.8s,baz=354,slow=8.2,SNR=3.9						
	comp=Z,0.4nm,0.8s						
LOHW	Long Hollow	31.85	97	P	P	01 48 29.1	-0.9
PD31	Pinedale Array	32.99	98	P	P	01 48 40.2	+0.3
PDAR	Pinedale Array	32.99	98	P	P	01 48 41.1	+1.2
	comp=Z,1.3nm,0.6s,baz=309,slow=4.8,SNR=15						
	comp=Z,1.3nm,0.6s						
PDAR	Pinedale Array	32.99	98	P	P	01 48 39.9	0.0
MDND	Maddock	34.79	82	P	P	01 48 57.4	+2.3
	baz=310						
RSSD	Black Hills	34.93	91	P	P	01 48 57.1	+0.5
RSSD				IAmb	IAmb	01 48 59.8	
	comp=Z,5.7nm,0.7s						
RSSD	Black Hills	34.93	91	P	P	01 48 58.6	+2.0
	baz=313						
SRU	San Rafael Swe	35.16	103	P	P	01 48 59.3	+0.7
SRU				IAmb	IAmb	01 49 02.5	
	comp=Z,8.1nm,0.8s						
ULM	Lac du Bonnet	35.22	76	P	P	01 48 59.8	+1.1
	comp=Z,4.5nm,0.7s,baz=300,slow=7.3,SNR=6.3						
	comp=Z,4.5nm,0.7s						
ULM	Lac du Bonnet	35.22	76	P	P	01 48 59.8	+1.1
ULM				IAmb	IAmb	01 49 01.8	
	comp=Z,5.2nm,0.8s						
O20A	White River Ci	35.57	99	P	P	01 49 02.5	+0.5
O20A				IAmb	IAmb	01 49 05.0	
	comp=Z,4.2nm,0.6s						
O20A	White River Ci	35.57	99	P	P	01 49 02.0	-0.1
	baz=318,SNR=5.4						
AGMN	Agassiz Nation	36.44	79	P	P	01 49 09.9	+0.8
AGMN				IAmb	IAmb	01 49 11.3	
	comp=Z,5.4nm,0.8s						
AGMN	Agassiz Nation	36.44	79	P	P	01 49 09.7	+0.6
	baz=310						
PV07	Paradox Valley	36.63	102	P	P	01 49 11.6	+0.6
PV13	Radium Mtn., P	36.75	102	P	P	01 49 12.7	+0.6
PV13				IAmb	IAmb	01 49 15.5	
	comp=Z,5.0nm,0.8s						
PV15	Paradox Valley	36.79	102	P	P	01 49 12.9	+0.5
PV15				IAmb	IAmb	01 49 15.6	
	comp=Z,5.9nm,0.7s						
MVCO	Mesa Verde	37.64	103	P	P	01 49 19.5	-0.1
	baz=320						
SDCO	Great Sand Dun	38.77	99	P	P	01 49 29.3	+0.2
SDCO	Great Sand Dun	38.77	99	P	P	01 49 29.9	+0.8
	baz=319,SNR=5.5						
EYMN	Ely	38.91	76	P	P	01 49 30.8	+1.0
EYMN	Ely	38.91	76	P	P	01 49 29.0	-0.7
	baz=311,SNR=6.7						
ECSD	EROS Data Cent	39.09	85	P	P	01 49 31.1	-0.2
	baz=314						
F36A	Milaca	39.24	80	P	P	01 49 33.5	+1.0
F36A				IAmb	IAmb	01 49 34.8	
	comp=Z,11nm,1.4s						
E38A	The Farm, Brul	39.76	78	P	P	01 49 37.9	+1.0
E38A				IAmb	IAmb	01 49 38.6	
	comp=Z,14nm,1.1s						
T25A	Trinidad	39.80	99	P	P	01 49 38.9	+1.4
	baz=320						
SPMN	Marine on St.	40.05	80	P	P	01 49 40.5	+1.4
SPMN				IAmb	IAmb	01 49 41.2	
	comp=Z,8.3nm,0.6s						
SPMN	Marine on St.	40.05	80	P	P	01 49 40.6	+1.4

	baz=313						
I37A	Lemond, Waseca	40.57	82	P	P	01 49 43.6	+0.1
G40A	Rib Lake	41.36	78	P	P	01 49 50.2	+0.3
G40A				IAmb	IAmb	01 49 51.9	
	comp=Z,9.2nm,0.7s						
KSU1	Kansas State U	42.41	90	P	P	01 49 58.9	+0.5
	baz=318						
N38A	Joes South For	42.94	86	P	P	01 50 04.1	+1.4
AMTX	Amarillo	42.94	99	P	P	01 50 04.8	+1.9
	baz=321						
JFWS	Jewell Farm	42.98	81	P	P	01 50 03.6	+0.7
JFWS				IAmb	IAmb	01 50 04.2	
	comp=Z,7.4nm,0.7s						
JFWS	Jewell Farm	42.98	81	P	P	01 50 03.4	+0.5
	baz=315						
I42A	Draeger Farm,	42.98	79	P	P	01 50 03.4	+0.4
I42A				IAmb	IAmb	01 50 04.9	
	comp=Z,9.2nm,0.9s						
L40A	Anamosa	43.08	83	P	P	01 50 04.0	+0.3
L40A				IAmb	IAmb	01 50 05.1	
	comp=Z,10nm,0.7s						
MSTX	Muleshoe	43.09	101	P	P	01 50 05.6	+1.5
	baz=322						
H43A	Windswept, Lux	43.16	78	P	P	01 50 04.2	-0.2
SPB2	Spitsbergen Ar	43.49	2	P	P	01 50 07.3	+0.7
MNTX	Cornudas Mount	43.55	105	P	P	01 50 09.7	+2.0
	baz=324						
WMOK	Wichita Mounta	44.56	96	P	P	01 50 16.9	+1.2
WMOK	Wichita Mounta	44.56	96	P	P	01 50 17.1	+1.4
	baz=321						
L44A	Lake County Fo	44.71	80	P	P	01 50 16.9	+0.2
	baz=316						
HDIL	Hopedale	45.17	83	P	P	01 50 20.2	-0.2
	baz=317						
ABTX	Abilene, Hawle	45.76	99	P	P	01 50 26.6	+1.5
	baz=322						
SCHQ	Schefferville	45.97	54	P	P	01 50 25.7	-0.7
	comp=Z,2.4nm,0.5s,baz=315,slow=8.3,SNR=7.6						
	comp=Z,2.4nm,0.5s						
CCM	Cathedral Cave	46.00	87	P	P	01 50 27.2	+0.3
	baz=318						
N47A	Urbana	46.80	80	P	P	01 50 33.2	+0.2
N47A				IAmb	IAmb	01 50 34.0	
	comp=Z,12nm,0.7s						
AAM	Ann Arbor	46.81	77	P	P	01 50 33.8	+0.7
	baz=316						
JCT	Junction City	47.38	101	P	P	01 50 38.9	+1.1
JCT	Junction City	47.38	101	P	P	01 50 38.9	+1.1
	baz=323						
PBMO	Poplar Bluff	47.38	87	P	P	01 50 38.1	+0.5
PBMO				IAmb	IAmb	01 50 39.3	
	comp=Z,7.6nm,0.8s						
WHTX	Lake Whitney,	47.40	97	P	P	01 50 38.9	+1.1
	baz=322						
O48B	Farmland	47.54	80	P	P	01 50 38.3	-0.5
	baz=318						
N49A	Columbus Grove	47.55	78	P	P	01 50 39.3	+0.5
N49A				IAmb	IAmb	01 50 40.0	
	comp=Z,8.1nm,0.7s						
BLO	Bloomington	47.63	82	P	P	01 50 39.9	+0.4
BLO				IAmb	IAmb	01 50 40.8	
	comp=Z,8.0nm,0.8s						
X40A	Basin Creek Fa	47.87	91	P	P	01 50 42.0	+0.6
	baz=321						
P49A	Miami Univ. Ec	48.30	80	P	P	01 50 44.1	-0.5
	baz=318						
ACSO	Alum Creek Sta	48.67	78	P	P	01 50 47.9	+0.5
	baz=318						
ERPA	Erie	48.81	74	P	P	01 50 49.0	+0.5
	baz=317						
M53A	WI Miller and	48.96	75	P	P	01 50 50.3	+0.7
	baz=318						
ALLY	Alegheny Colle	49.07	75	P	P	01 50 51.2	+0.8
ALLY				IAmb	IAmb	01 50 52.2	
	comp=Z,13nm,0.7s						
WVT	Waverly	49.24	85	P	P	01 50 52.2	+0.5
	baz=320						
Q51A	Peebles	49.38	79	P	P	01 50 52.7	-0.1
R50A	Paris	49.44	81	P	P	01 50 53.7	+0.5
R50A				IAmb	IAmb	01 50 54.6	
	comp=Z,5.9nm,0.8s						
P52A	Corning	49.55	78	P	P	01 50 54.0	-0.1
	baz=318						
O53A	New Philadelph	49.57	77	P	P	01 50 54.4	+0.2
	baz=318						
OXF	Oxford	49.65	88	P	P	01 50 55.4	+0.4
OXF	Oxford	49.65	88	P	P	01 50 55.3	+0.4
	baz=321						
LONY	Lake Ozonia	49.66	68	P	P	01 50 54.6	-0.2
	baz=317						
M55A	Ridgway	49.90	74	P	P	01 50 57.5	+0.7
L56A	Greenwood	50.02	72	P	P	01 50 58.1	+0.5
O54A	Avella	50.04	76	P	P	01 50 58.1	+0.3
O54A				IAmb	IAmb	01 50 59.3	
	comp=Z,7.7nm,0.6s						
MCWV	Mont Chateau	50.71	76	P	P	01 51 03.4	+0.6
	baz=319						
BINY	Binghamton	50.75	71	P	P	01 51 03.6	+0.5
	baz=318						
SWET	Sewanee	50.93	85	P	P	01 51 04.5	0.0
SWET				IAmb	IAmb	01 51 06.2	
	comp=Z,17nm,1.5s						
SSPA	Standing Stone	50.97	74	P	P	01 51 05.4	+0.7
	baz=318						
L59A	Walton	51.23	71	P	P	01 51 07.3	+0.6
L59A				IAmb	IAmb	01 51 08.6	
	comp=Z,11nm,0.9s						
KSRS	Korea Array	51.62	281	P	P	01 51 10.0	+0.4
	comp=Z,1.3nm,0.5s,baz=40,slow=7.2,SNR=7.8						
	comp=Z,1.3nm,0.5s						
PKME	Peaks-Kenny Pk	51.72	64	P	P	01 51 10.5	+0.3
	baz=318						
BLA	Blacksburg	52.26	79	P	P	01 51 14.4	0.0
	baz=320						
KMSC	Kings Mountain	53.38	81	P	P	01 51 23.2	+0.7
	baz=321						
SONM	Songino Array	54.09	304	P	P	01 51 28.5	+0.9
	comp=Z,2.4nm,0.5s,baz=44,slow=7.1,SNR=12						
	comp=Z,2.4nm,0.5s						
SONM	Songino Array	54.09	304	P	P	01 51 28.9	+1.2
ZALV	Zalesovo Beam	57.41	322	P	P	01 51 50.4	-0.5
	comp=Z,1.3nm,0.6s,baz=46,slow=7.1,SNR=5.3						
	comp=Z,1.3nm,0.6s						
FINES	FINESS Array B	60.35	358	P	P	01 52 10.0	-0.9
	comp=Z,0.7nm,0.6s,baz=32,slow=11,SNR=6.0						
	comp=Z,0.7nm,0.6s						
FINES	FINESS Array B	60.35	358	P	P	01 52 10.2	-0.8
NB2	NORSAR Subarra	60.40	7	P	P	01 52 10.7	-0.7
	comp=Z,0.8nm,0.6s,baz=353,slow=6.9						
NOA	NORSAR Array B	60.40	7	P	P	01 52 10.8	-0.6
	comp=Z,1.1nm,0.7s,baz=352,slow=6.8,SNR=8.9						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	64.36	319	P	P	01 52 37.6	-0.2
	comp=Z,0.6nm,0.5s,baz=43,slow=7.4,SNR=8.4						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	64.36	319	P	P	01 52 38.0	+0.1
WMQ	Urumqi	64.97	314	*e*P	P	01 52 44.8	+2.9
WMQ				pmax	pmax		
	comp=Z,20nm,0.8s						
AKASG	Malin Array Be	71.03	356	P	P	01 53 18.5	-0.9
	comp=Z,0.5nm,0.5s,baz=6.8,slow=5.7,SNR=2.4						
	comp=Z,0.5nm,0.5s						
GERES	GERESS Array B	72.71	7	P	P	01 53 28.6	-0.9
	comp=Z,0.5nm,0.7s,baz=350,slow=4.1,SNR=4.6						
	comp=Z,0.5nm,0.7s						
PZH	PanZhiHua	73.53	294	P	P	01 53 33.5	-1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,50nm,4.4s						
QSPA	South Pole Qui	148.31	180	PKPbc	PKPbc	02 01 45.2	+0.6
	comp=Z,2.3nm,0.8s,baz=355,slow=0.5,SNR=12						
QSPA	South Pole Qui	148.31	180	PKPdf	PKPbc	02 01 43.8	-0.8
BOSA	Boshof	150.07	357	PKPbc	PKPbc	02 01 48.8	-1.5
	comp=Z,1.3nm,0.9s,baz=354,slow=18,SNR=1.4						

*WEL **31** 01:50:00,45°.18S×167°.40E,h120^{km},ML4.6,Mw4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$5.08; M$_{\theta\theta}$-7.88; M$_{\phi\phi}$2.79; M$_{r\theta}$0.31; M$_{\theta\phi}$1.88; M$_{\phi r}$-4.89; Fault plane solution: M$_0$8.66000×10^{15} NP1: φ$_s$248.00000°,δ52.00000°,λ38.00000°. NP2: φ$_s$132.00000°,δ61.00000°,λ135.00000°. Principal axes: T -830.9900, Plg51.0000°, Azm95.0000°; N -70.3900, Plg38.0000°, Azm286.0000°; P 901.3800, Plg5.0000°, Azm192.0000°;*

*NEIC **31** 01:50:10.6±1.9,45°.09S±0°.07×167°.4E±0°.1,h117^{km}±5^{km}, mb4.3/7 Error ellipse: s-maj=15.5km s-min=5.4km az=122.0*

*IDC **31** 01:50:10.9±0.5,44°.94S×167°.43E,h121^{km}±4^{km},mb3.5/5, mbtmp4.1/7,MS3.5/2,Error ellipse: s-maj=17.9km s-min=9.9km az=159.0*

*NOU **31** 01:50:14.5,45°.05S×167°.97E,h150^{km},mb4.8/10,South Island, New Zealand*

ISC 31 01:50:09.5±0.5**,44°.94S**±0°.07×**167°.41E**±0°.07**,h106**^{km}**,n60,** σ**1^{s}.90**/63**,mb4.2**/9**,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.56	199		Pn	01 50 27.6	+1.3
DCZ				Sn	Sn	01 50 39.6	+0.8
MLZ	Mavora Lakes	0.66	130	Pn	Pn	01 50 29.5	+2.4
MLZ				Sn	Sn	01 50 43.5	+3.0
WHZ	Wether Hill Ro	1.03	158	Pn	Pn	01 50 31.7	+1.1
WHZ				Sn	Sn	01 50 46.3	-0.3
WKZ	Wanaka	1.15	85	Pn	Pn	01 50 35.3	+3.3
PYZ	Puysegur Point	1.33	202	Pn	Pn	01 50 33.8	-0.1
LBZ	Lake Benmore	2.06	75	Pn	Pn	01 50 45.4	+2.4
FOZ	Fox Glacier	2.23	52		Pn	01 50 48.1	+2.9
ODZ	Otahua Downs	2.30	94	Pn	Pn	01 50 47.9	+1.8
ODZ	Otahua Downs	2.30	94	P	Pn	01 50 48.2	+2.1
RPZ	Rata Peaks	2.89	66	P	Pn	01 50 55.8	+1.9
	256nm,0.4s,baz=226,slow=5.7,SNR=98						
RPZ				S	Sn	01 51 30.8	+2.7
	2μm,0.6s,baz=50,slow=20,SNR=12						
RPZ	Rata Peaks	2.89	66	P	Pn	01 50 56.4	+2.5
OXZ	Oxford	3.71	66	Pn	Pn	01 51 06.0	+1.3
MQZ	McQueen's Vall	3.96	74		Pn	01 51 09.8	+1.6
LTZ	Lake Taylor	4.13	60	Pn	Pn	01 51 12.0	+1.6
KHZ	Kahutara	5.11	63	Pn	Pn	01 51 25.6	+1.9
KHZ	Kahutara	5.11	63	P	Pn	01 51 26.3	+2.6
THZ	Tophouse	5.12	54	Pn	Pn	01 51 25.4	+1.6
QRZ	Quartz Range	5.57	44		Pn	01 51 32.5	+2.6
QRZ	Quartz Range	5.57	44	P	Pn	01 51 32.7	+2.7
NNZ	Nelson	5.74	52		Pn	01 51 35.0	+2.8
TUWZ	Tuamarina	5.93	56	Pn	Pn	01 51 36.1	+1.4
SNZO	South Karori	6.46	58	Pn	Pn	01 51 44.0	+2.1
SNZO	South Karori	6.46	58	P	Pn	01 51 44.0	+2.1
PLWZ	Palliser	6.65	62	Pn	Pn	01 51 45.5	+0.9
MSWZ	Moikau Station	6.73	61	Pn	Pn	01 51 46.5	+0.9
BFZ	Birch Farm	7.77	60	P	Pn	01 52 00.4	+0.7
HIZ	Hauiti	8.50	44	P	Pn	01 52 11.3	+1.7
BKZ	Black Stump Fm	8.88	53	P	Pn	01 52 16.4	+1.5
URZ	Urewera	9.86	51	P	Pn	01 52 28.1	-0.1
	8.8nm,0.3s,baz=121,slow=24,SNR=15						
URZ				S	Sn	01 54 10.0	-6.9
	14nm,0.5s,baz=322,slow=22,SNR=5.2						
URZ	Urewera	9.86	51	P	Pn	01 52 29.1	+0.9
OUZ	Omahuta	10.80	28	P	Pn	01 52 44.3	+3.4
STKA	Stephens Creek	23.95	294	LR	LR	02 02 42.6	
	comp=Z,108nm,18.1s,baz=192,slow=31						
ASAR	Alice Springs	34.51	297	P	P	01 56 48.1	+0.6
	0.6nm,0.6s,baz=130,slow=6.0,SNR=7.3						
ASAR				pP	pwP	01 57 14.0	-0.9
	0.6nm,0.9s,baz=134,slow=7.6,SNR=2.4						
ASAR				PcP	PcP	01 59 18.5	-1.7
	0.4nm,0.8s,baz=133,slow=3.9,SNR=2.4						
	0.6nm,0.6s						
ASAR	Alice Springs	34.51	297	P	P	01 56 47.6	+0.1
HNR	Honiara	35.96	347	LR	LR	02 10 22.4	
	comp=Z,84nm,19.8s,baz=138,slow=34						
WR0	Warramunga Arr	36.87	302	P	P	01 57 08.0	+0.4
WR0				IAmb	IAmb	01 57 16.0	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	36.99	301	P	P	01 57 09.8	+1.1
WB2				IAmb	IAmb	01 57 39.2	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	37.00	301	P	P	01 57 09.2	+0.4
	comp=Z,2.1nm,0.9s,baz=137,slow=7.8,SNR=13						
WRA				PcP	PcP	01 59 27.0	-0.6
	comp=Z,0.9nm,1.0s,baz=142,slow=3.0,SNR=3.7						
	comp=Z,2.1nm,0.9s						
WB0	Warramunga Arr	37.10	302	P	P	01 57 10.3	+0.7
WB0				IAmb	IAmb	01 57 14.7	
	comp=Z,3.9nm,1.1s						
H01W1	Cape Leeuwin H	41.39	265	T	T	02 41 44.2	
	baz=121,slow=75,SNR=22						
H01W2	Cape Leeuwin H	41.41	265	T	T	02 41 31.8	
	baz=121,slow=75,SNR=7.9						
H01W3	Cape Leeuwin H	41.41	265	T	T	02 41 50.0	
	baz=121,slow=75,SNR=14						
MTN	Manton Dam	44.44	305	P	P	01 58 11.6	+1.7
QSPA	South Pole Qui	45.19	180	P	P	01 58 15.8	+0.3
	comp=Z,1.4nm,0.9s,baz=148,slow=1.6,SNR=9.0						
QSPA				pP	pP	01 58 42.8	+2.5
	comp=Z,2.2nm,0.9s,baz=334,slow=3.8,SNR=3.5						
	comp=Z,1.4nm,0.9s						
QSPA	South Pole Qui	45.19	180	P	P	01 58 15.6	+0.1
QSPA				IAmb	IAmb	01 58 47.0	
	comp=Z,4.4nm,1.1s						
MAW	Mawson	54.41	207	P	P	01 59 24.8	-0.2
	comp=Z,0.5nm,0.4s,baz=258,slow=23,SNR=1.2						
	comp=Z,0.5nm,0.4s						
MAW	Mawson	54.41	207	P	P	01 59 24.6	-0.4
SNAA	Sanae	63.49	183	P	P	02 00 26.9	-0.9
SNAA				IAmb	IAmb	02 01 05.7	
	comp=Z,7.1nm,1.4s						
H08S2	Diego Garcia H	88.12	261	T	T	03 40 48.5	
	baz=135,slow=76,SNR=63						
H08S1	Diego Carcia H	88.14	261	T	T	03 41 14.5	
	baz=135,slow=76,SNR=46						
H08S3	Diego Garcia H	88.14	261	T	T	03 40 51.1	
	baz=135,slow=76,SNR=64						
CMAR	Chiang Mai Arr	88.51	298	P	P	02 02 50.2	+0.1
	comp=Z,1.7nm,0.8s,baz=151,slow=3.1,SNR=6.1						
CMAR				pP	pwP	02 03 21.1	+1.3
	comp=Z,0.4nm,0.3s,baz=140,slow=3.4,SNR=1.5						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	118.03	309	PKP	PKPdf	02 08 41.6	-1.5
	comp=Z,0.2nm,0.7s,baz=145,slow=3.5,SNR=3.9						
SPITS	Spitsbergen Ar	144.78	350	PKP	PKPbc	02 09 30.3	-1.3
	comp=Z,18nm,1.1s,baz=91,slow=4.3,SNR=10						
BRTR	Keskin Array B	145.79	278	PKPbc	PKPdf	02 09 35.6	+0.3
	comp=Z,1.4nm,0.8s,baz=129,slow=4.6,SNR=2.4						
BRTR				pPKPbc	pPKPab	02 10 07.2	+3.0
	comp=Z,6.5nm,0.8s,baz=176,slow=3.3,SNR=3.6						
TORD	Torodi Ar. Bea	146.05	206	PKPbc	PKPdf	02 09 35.9	-0.4
	comp=Z,5.7nm,0.8s,baz=160,slow=1.9,SNR=22						
TORD				pPKPbc	pPKPab	02 10 08.2	+1.8
	comp=Z,2.6nm,0.7s,baz=151,slow=1.9,SNR=5.1						
TORD	Torodi Ar. Bea	146.05	206	PKPdf	PKPdf	02 09 35.8	-0.5
ARCES	ARCESS Array B	148.82	335	PKPbc	PKPbc	02 09 42.4	-0.8
	comp=Z,15nm,0.4s,baz=38,slow=4.6,SNR=2.9						
ARCES				pPKPbc	pPKPab	02 10 14.8	0.0
	comp=Z,16nm,0.3s,baz=138,slow=13,SNR=3.4						
AKASG	Malin Array Be	151.63	297	PKPbc	PKPbc	02 09 49.9	-0.6
	comp=Z,0.6nm,0.4s,baz=58,slow=2.8,SNR=5.7						
AKASG				pPKPbc	sPKPdf	02 10 22.0	-2.0
	comp=Z,0.6nm,0.5s,baz=68,slow=3.5,SNR=1.6						
FINES	FINESS Array B	152.11	320	PKPbc	PKPbc	02 09 50.8	-0.5
	comp=Z,2.7nm,0.8s,baz=50,slow=3.0,SNR=8.7						

*IDC **31** 01:50:33.8±1.0,52°.24N×169°.42W,h0^{km},mb3.8/15, mbtmp3.8/17,ML3.4/2,MS3.5/2,Error ellipse: s-maj=28.2km s-min=16.8km az=167.0*

*AEIC **31** 01:50:38±2.2,52°.13N±0°.05×169°.34W±0°.10,h40^{km}±9^{km}, ML3.5,mb3.9/15(NEIC),ML3.9/6(NEIC),Error ellipse: s-maj=9.4km s-min=6.2km az=60.0*

*NEIC **31** 01:50:38.3±1.4,52°.13N±0°.09×169°.3W±0°.1,h48^{km}±22^{km}, Error ellipse: s-maj=13.5km s-min=9.7km az=154.0*

ISC 31 01:50:38.8±0.8**,52°.2N**±0°.1×**169°.32W**±0°.07**,h35**^{km}**,n131,** σ**1^{s}.29**/122**,mb3.9**/16**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.79	21		Pn	01 50 54.7	+1.3
NIKH	Nikolski High	0.79	21	P	Pn	01 50 54.8	+1.3
	baz=199						
OKFG	Magazine Ridge	1.46	35		Pn	01 51 04.6	+2.1
MSW	Makushin Switc	2.27	41		Pn	01 51 16.1	+2.3
MNAT	Makushin Natee	2.29	43		Pn	01 51 16.6	+2.6
UNV	Unalaska Valle	2.34	45		Pn	01 51 16.0	+1.3
UNV	Unalaska Valle	2.34	45	P	Pn	01 51 16.4	+1.7
	baz=226						
AKGG	Akutan Green G	2.81	44		Pn	01 51 23.9	+2.9
AKUT	Akutan	2.86	47	Pn	Pn	01 51 22.5	+0.7
AKUT				Sn	Sn	01 51 55.6	+0.7
AKUT				IAML		01 52 18.7	
	comp=E,170nm,1.1s						
KOFP	Korovin Flat P	2.94	273		Pn	01 51 23.7	+0.8
ATKA	Atka Island	3.00	271		Pn	01 51 23.9	+0.2
GSMY	Great Sitkin M	4.16	270		Pn	01 51 40.2	+0.6
GSTD	Great Sitkin T	4.21	270		Pn	01 51 41.1	+0.6
ADK	Adak	4.56	269	Pn	Pn	01 51 45.5	+0.4
ADK				IAML		01 52 56.6	
	comp=E,130nm,1.7s						
ADK				IAML		01 53 27.7	
	comp=E,114nm,3.7s						
KIWB	Kanaga Island	4.85	269		Pn	01 51 49.6	+0.4
SPIA	Saint Paul Isl	4.98	354		Pn	01 51 52.6	+1.6
TASE	Tanaga Southea	5.40	269		Pn	01 51 57.9	+1.1
O16K	Kokwok River B	9.69	36	P	Pn	01 52 54.9	-0.6
	baz=225						
SII	Sitkinak Islan	9.82	58	P	Pn	01 52 56.4	-1.0
	baz=250						
OHAK	Old Harbor	10.52	55	P	Pn	01 53 05.0	-1.8
	baz=248						
KDAK	Kodiak Island	11.09	53	Pn	Pn	01 53 14.6	+0.1
	comp=E,1.0nm,0.3s,baz=260,slow=8.2,SNR=18						
KDAK				Sn	Sn	01 55 13.3	-3.8
	comp=E,0.1nm,0.3s,baz=110,slow=18,SNR=1.1						
ANM	Nome	12.54	8	P	Pn	01 53 34.0	-0.4
	baz=191						
L19K	White Mountain	12.65	32	P	Pn	01 53 37.6	+1.7
	baz=224						
TTA	Tatalina	12.85	28	P	Pn	01 53 37.0	-1.7
	baz=219						
M20K	Styx River	13.04	36	P	Pn	01 53 40.0	-1.3
	baz=229						
SEW	Seward	13.54	47	P	Pn	01 53 47.3	-0.8
	baz=243						
J20K	Nowinta River	14.34	28	P	Pn	01 53 57.7	-1.2
	baz=220						
PMR	Palmer	14.41	42	P	Pn	01 53 59.3	-0.6
	baz=238						
KNK	Knik Glacier	14.59	43	P	Pn	01 54 01.0	-1.5
	baz=240						
CHUM	Lake Minchumin	14.67	31	P	Pn	01 54 02.9	-0.6
	baz=225						
Q23K	Middleton Isla	14.72	52	P	Pn	01 54 02.9	-1.2
	baz=250						
SML	Sawmill	14.84	42	P	Pn	01 54 05.3	-0.5
	baz=239						
GLI	Glacier Island	14.93	46	Pn	Pn	01 54 06.8	-0.2
GLI				IAmb	IAmb	01 54 24.9	
	comp=Z,4.3nm,0.6s						
GLI	Glacier Island	14.93	46	P	Pn	01 54 05.8	-1.2
	baz=244						
M23K	Glacier View	15.09	42	P	Pn	01 54 08.9	-0.1
	baz=240						
FID	Port Fidalgo	15.15	47	Pn	Pn	01 54 08.4	-1.5
FID				IAmb	IAmb	01 54 42.1	
	comp=Z,16nm,1.3s						
BPAW	Bear Paw Mtn.	15.25	32	Pn	Pn	01 54 11.3	+0.1
BPAW				IAmb	IAmb	01 54 17.7	
	comp=Z,6.1nm,0.8s						
BPAW	Bear Paw Mtn.	15.25	32	P	Pn	01 54 11.5	+0.4
	baz=227,SNR=6.7						
SCM	Sheep Creek Mo	15.27	42	Pn	Pn	01 54 10.7	-0.8
SCM	Sheep Creek Mo	15.27	42	P	Pn	01 54 10.9	-0.6
	baz=241						
EYAK	Cordova Ski Ar	15.40	48	Pn	Pn	01 54 12.6	-0.5
EYAK				IAmb	IAmb	01 54 38.6	
	comp=Z,20nm,1.4s						
EYAK	Cordova Ski Ar	15.40	48	P	Pn	01 54 12.3	-0.8
	baz=248						
WAT6	Susitna Watana	15.49	40	P	Pn	01 54 14.1	-0.3
	baz=238						
KLU	Klutina	15.71	45	Pn	Pn	01 54 15.6	-1.6
KLU	Klutina	15.71	45	P	Pn	01 54 16.1	-1.1
	baz=244,SNR=7.8						
I21K	Tanana	15.71	28	P	Pn	01 54 17.1	0.0
	baz=222						
H21K	Melozitna Rive	15.85	26	Pn	Pn	01 54 17.8	-1.0
H21K	Melozitna Rive	15.85	26	P	Pn	01 54 18.8	0.0
	baz=220						
IMAR	Indian Mountai	15.86	24	Pn	Pn	01 54 20.1	+1.1
M24K	Tolsona, Glenn	15.88	42	Pn	Pn	01 54 19.4	0.0
M24K				IAmb	IAmb	01 54 30.3	
	comp=Z,9.4nm,0.7s						
M24K	Tolsona, Glenn	15.88	42	P	Pn	01 54 19.1	-0.2
	baz=242						
DHY	Denali Highway	15.89	38	P	Pn	01 54 18.8	-0.9
	baz=237						
MLY	Manley	15.97	29	P	Pn	01 54 19.9	-0.6
	baz=225,SNR=6.3						
BMRM	Bremner River	16.08	47	P	Pn	01 54 21.5	-0.4
	baz=248						
NEA2	Nenana	16.20	32	P	Pn	01 54 22.6	-0.7
	baz=230						
N25K	Chitina, Valde	16.33	45	Pn	Pn	01 54 25.1	-0.1
N25K				IAmb	IAmb	01 54 26.3	
	comp=Z,5.2nm,0.5s						
N25K	Chitina, Valde	16.33	45	P	Pn	01 54 23.5	-1.7
	baz=246						
I23K	Minto, Yukon-K	16.48	31	P	Pn	01 54 26.2	-0.6
	baz=228						
PAX	Paxson	16.58	40	P	Pn	01 54 27.0	-1.4
	baz=240						
GLB	Gilahina Butte	16.62	46	Pn	Pn	01 54 28.1	-0.6
GLB				IAmb	IAmb	01 54 38.1	
	comp=Z,8.7nm,1.4s						
CCB	Clear Creek Bu	16.66	33	Pn	Pn	01 54 28.3	-0.8
VRDI	Verde Repeater	16.70	47	Pn	Pn	01 54 28.6	-1.2
VRDI				IAmb	IAmb	01 54 49.9	
	comp=Z,5.8nm,1.0s						
WAX	Waxell Ridge	16.72	50	Pn	Pn	01 54 29.3	-0.7
H23K	Yukon River	16.89	29	P	Pn	01 54 31.1	-0.9
	baz=226						
ISLE	Juniper Island	17.00	50	Pn	Pn	01 54 33.2	-0.5
ISLE				IAmb	IAmb	01 54 35.4	
	comp=Z,8.6nm,1.0s						
ILAR	Eielson Array	17.05	34	P	Pn	01 54 33.3	-0.7
	comp=Z,0.1nm,0.3s,baz=223,slow=10,SNR=5.6						
	comp=Z,0.4nm,0.6s						
POKR	Poker Plat Res	17.07	32	P	Pn	01 54 30.8	-3.6
	baz=231						
RIDG	Independent Ri	17.21	39	P	Pn	01 54 32.9	-3.3
	baz=239						
M26K	Nabesna, AK	17.35	44		Pn	01 54 37.4	-0.5
M26K	Nabesna, AK	17.35	44	P	Pn	01 54 33.6	-4.3
	baz=246						
H24K	Noodor Dome	17.40	30	P	Pn	01 54 35.9	-2.5
	baz=229						
L26K	Log Cabin Wild	17.46	42	P	Pn	01 54 37.0	-2.3
	baz=244						
J25K	Salcha River,	17.49	36	P	Pn	01 54 37.6	-2.0
	baz=236						
CTG	Chitna Glacier	17.58	49	P	Pn	01 54 39.4	-1.4
	baz=252						
SCRK	Sand Creek	17.66	38	P	Pn	01 54 39.6	-2.1
	baz=240						
COLD	Coldfoot	17.73	25	P	Pn	01 54 41.8	-0.7
	baz=221						
M27K	Edge Creek, AK	17.81	45	P	Pn	01 54 42.2	-1.4
	baz=248						
PINM	Pinnacle	17.87	52	P	Pn	01 54 42.4	-1.9
	baz=256						
J26L	Joseph Creek	18.09	37	P	Pn	01 54 45.1	-1.9
	baz=239,SNR=6.9						
L27K	Beaver Creek,	18.11	43	P	Pn	01 54 46.4	-0.8
	baz=246						
YUK3	Moose Creek	18.23	47	P	P	01 54 48.2	-0.7
	baz=251						
YUK8	Steele Glacier	18.41	49	P	P	01 54 49.8	-1.0
	baz=254						
K27K	Chicken	18.43	40	P	P	01 54 49.6	-1.1
	baz=243						
YUK4	Talbot Arm	18.94	49	P	P	01 54 56.4	-0.2
	baz=255						
TOLK	Toolik Lake Re	18.96	22	P	P	01 54 56.1	-0.5
	baz=220						
YUK6	Outpost Mounta	18.98	51	P	P	01 54 55.8	-1.3
	baz=256						
EGAK	Eagle	19.13	38	P	P	01 54 58.4	-0.1
	baz=242						
HYT	Haines Junctio	19.36	51	P	Pn	01 55 02.8	+0.4
	baz=258,SNR=12						
DAWY	Dawson	19.51	41	P	P	01 55 03.2	+0.5
	baz=246						
PLBC	Pleasant Camp	19.70	56	P	P	01 55 04.7	+0.1
	baz=263						
N30M	Aishikik Lake	19.70	49	P	P	01 55 04.6	-0.2
	baz=256,SNR=8.5						
PETK	Petropavlovsk-	19.93	286	P	P	01 55 06.9	-0.4

	comp=Z,1.0nm,0.3s,baz=86,slow=13,SNR=13						
	comp=Z,5.4nm,0.5s						
O30N	**Mendenhall**	**20.03**	**52**	P	**P**	**01 55 07.9**	**-0.4**
	baz=260,SNR=16						
M30M	**Minto, Yukon**	**20.11**	**46**	P	**P**	**01 55 08.3**	**-0.9**
	baz=254						
N31M	**Braeburn, Yuko**	**20.32**	**50**	P	**P**	**01 55 11.3**	**-0.2**
	baz=258						
WHY	**Whitehorse**	**20.60**	**52**	P	**P**	**01 55 14.5**	**0.0**
	baz=261,SNR=8.5						
M31M	**Drury Creek, Y**	**21.11**	**48**	P	**P**	**01 55 19.8**	**-0.2**
	baz=258						
EPYK	**Eagle Plains**	**21.49**	**36**	P	**P**	**01 55 23.9**	**-0.2**
	baz=245						
P33M	**Teslin, Yukon**	**21.56**	**54**	P	**P**	**01 55 24.1**	**-0.8**
	baz=264,SNR=5.2						
FARO	**Faro, Yukon**	**21.59**	**48**	P	**P**	**01 55 25.3**	**+0.1**
	baz=259						
MMPY	**Sheldon Lake,**	**22.62**	**48**	P	**P**	**01 55 34.8**	**-1.4**
	baz=260						
DLBC	**Dease Lake**	**22.93**	**59**	P	**P**	**01 55 37.1**	**-2.4**
	baz=271						
INK	**Inuvik**	**23.44**	**33**	P	**P**	**01 55 43.9**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=239,slow=8.8,SNR=15						
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**23.44**	**33**	P	**P**	**01 55 43.1**	**-1.3**
	baz=245						
YKA	**Yellowknife Ar**	**30.31**	**49**	P	**P**	**01 56 45.7**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=273,slow=8.1,SNR=8.4						
	comp=Z,0.8nm,0.5s						
YAK	**Yakutsk**	**33.29**	**311**	LR	LR	02 10 32.2	
	comp=Z,47nm,20.1s,baz=278,slow=36						
H11N2	**WAKE ISLAND Hy**	**37.37**	**219**	T	T	02 38 37.8	
	baz=24,slow=76,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**37.38**	**219**	T	T	02 38 37.9	
	baz=24,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**37.39**	**219**	T	T	02 38 32.0	
	baz=24,slow=76,SNR=5.7						
NVAR	**Mina Array Bea**	**37.63**	**91**	P	**P**	**01 57 51.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=298,slow=7.7,SNR=3.7						
	comp=Z,0.1nm,0.3s						
H11S1	**WAKE ISLAND Hy**	**38.55**	**218**	T	T	02 38 50.2	
	baz=23,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**38.57**	**218**	T	T	02 39 08.5	
	baz=23,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**38.57**	**218**	T	T	02 39 09.2	
	baz=23,slow=76,SNR=16						
PDAR	**Pinedale Array**	**40.40**	**79**	P	**P**	**01 58 14.6**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=282,slow=4.3,SNR=5.8						
	comp=Z,0.6nm,0.7s						
KSRS	**Korea Array**	**45.45**	**277**	P	**P**	**01 58 54.4**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=46,slow=8.7,SNR=2.4						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**51.40**	**301**	P	**P**	**01 59 39.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=38,slow=7.3,SNR=4.4						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**58.06**	**354**	P	**P**	**02 00 27.8**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=35,slow=8.0,SNR=1.7						
MKAR	**Makanchi Array**	**63.92**	**313**	P	**P**	**02 01 07.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=52,slow=6.3,SNR=5.0						
	comp=Z,0.3nm,0.5s						
KRVT	**Keravat (AS076**	**65.16**	**223**	LR	LR	02 26 19.7	
	comp=Z,49nm,18.6s,baz=140,slow=33						
FINES	**FINESS Array B**	**66.01**	**352**	P	**P**	**02 01 21.4**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=13,slow=9.1,SNR=11						
	comp=Z,1.7nm,0.6s						
NB2	**NORSAR Subarra**	**67.08**	**360**	P	**P**	**02 01 28.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=360,slow=6.5						
NOA	**NORSAR Array B**	**67.08**	**360**	P	**P**	**02 01 29.1**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=0.5,slow=6.3,SNR=6.3						
	comp=Z,0.9nm,0.7s						
AKASG	**Malin Array Be**	**76.25**	**348**	P	**P**	**02 02 23.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=14,slow=5.4,SNR=4.4						
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**76.68**	**283**	P	**P**	**02 02 27.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=24,slow=6.9,SNR=1.2						
	comp=Z,0.5nm,0.3s						
GERES	**GERESS Array B**	**79.27**	**358**	P	**P**	**02 02 41.0**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=355,slow=7.3,SNR=4.1						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**86.94**	**232**	P	**P**	**02 03 18.5**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=38,slow=6.4,SNR=2.5						
	comp=Z,0.5nm,0.9s						
ESDC	**Sonseca Array**	**87.58**	**11**	P	**P**	**02 03 23.6**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=344,slow=4.8,SNR=7.2						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**90.33**	**230**	P	**P**	**02 03 36.0**	**0.0**
	comp=Z,0.5nm,0.7s,baz=26,slow=4.5,SNR=2.7						
	comp=Z,0.5nm,0.7s						
H03N2	**Juan Fernandez**	**115.84**	**112**	T	T	04 16 20.6	
	baz=314						
H03N1	**Juan Fernandez**	**115.86**	**112**	T	T	04 16 10.9	
	baz=314						
H03N3	**Juan Fernandez**	**115.86**	**112**	T	T	04 16 20.3	
	baz=314						

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*SJA **31** 01:53:07.4±0.8,27°.57S×66°.54W,h11^{km}±4^{km},ML4.9, MW4.5*

*NEIC **31** 01:53:11.9±2.0,27°.60S±0°.06×66°.65W±0°.05,h31^{km}±3^{km}, mb4.7/30,Mwr4.4/23,Md4.7(SJA),Error ellipse: s-maj=8.2km s-min=5.8km az=178.0*

*VAO **31** 01:53:11.0±0.6,27°.80S×66°.74W,h27^{km},mb4.6*

*NEIC **31** 01:53:12.9,27°.58S×66°.65W,h30^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.05; M$_{\theta\theta}$5.93; M$_{\phi\phi}$-2.88; M$_{r\theta}$-0.99; M$_{\theta\phi}$1.15; M$_{\phi r}$1.88; Fault plane solution: M$_0$5.68000×10^{15} NP1:φ$_s$226.96000°, δ55.69000°,λ-147.52000°. NP2:φ$_s$117.21000°, δ63.66000°,λ-38.97000°. Principal axes: T 6.1468, Plg5.0000°, Azm174.0000°; N -1.0887, Plg44.0000°, Azm268.0000°; P -5.0581, Plg45.0000°, Azm79.0000°;*

*IDC **31** 01:53:15.1±2.3,27°.50S×66°.37W,h64^{km}±20^{km},mb3.9/10, mbtmp4.2/14,MS3.9/23 Error ellipse: s-maj=20.7km s-min=15.5km az=62.0*

ISC 31 01:53:08.9±1.2,**27°.56S**±0°.02×**66°.63W**±0°.03,**h12**^{km}±7^{km}, **n183,**σ**1^{s}.83**/193,**mb4.7**/19,**MS4.0**/19,**Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TINO	**Tinogasta**	**0.97**	**239**	*e*P	**Pg**	**01 53 27.0**	**-0.7**
TINO				*e*S	**Sg**	**01 53 39.8**	**-0.7**
FSA	**Cafayete**	**1.55**	**22**	*e*P	**Pn**	**01 53 36.7**	**+0.1**
FSA				*e*S	**Sn**	**01 53 55.5**	**-1.2**
ACLC	**CERRO LA CRUZ**	**1.88**	**189**	*e*P	**Pb**	**01 53 42.4**	**-1.0**
ACLC				*e*S	**Sg**	**01 54 10.7**	**+1.2**
ACLC				IAML		01 54 11.9	
	comp=Z,17μm,0.7s						
AC02	**Maricunga**	**2.34**	**287**	Pn	**Pn**	**01 53 49.2**	**+1.5**
AC02				Sn	**Sn**	**01 54 17.3**	**+0.7**
AC02	**Maricunga**	**2.34**	**287**	*e*P	**Pb**	**01 53 50.7**	**-0.6**
AC02				*e*S	**Sb**	**01 54 21.3**	**+0.9**
APLL	**PUNTA DE LOS L**	**2.83**	**178**	*e*P	**Pn**	**01 53 54.9**	**+1.0**
SLA	**San Lorenzo**	**3.00**	**20**	*e*P	**Pn**	**01 53 58.1**	**+1.6**
SLA				*e*S	**Sn**	**01 54 34.6**	**+2.2**
SLA				IAML		01 54 49.3	
	comp=Z,4μm,0.7s						
AVFE	**Valle Fertil**	**3.17**	**193**	*e*P	**Pn**	**01 53 59.9**	**+1.1**
AVFE				*e*S	**Sg**	**01 54 50.9**	**0.0**
AVFE				IAML		01 54 52.6	
	comp=Z,6μm,0.9s						
GO03	**Copiap**	**3.20**	**269**	Pn	**Pn**	**01 54 00.2**	**+1.1**
GO03					**Sb**	**01 54 45.6**	**+0.8**
GO03	**Copiap**	**3.20**	**269**	*e*P	**Pn**	**01 54 02.4**	**+3.2**
GO03				*e*S	**Sb**	**01 54 46.9**	**+2.1**
AC06	**Mina Casimiro**	**3.32**	**273**	Pn	**Pn**	**01 54 01.3**	**+0.6**
ACDV	**Cuesta del Vie**	**3.40**	**219**	*e*P	**Pn**	**01 54 04.5**	**+2.5**
ACDV				*e*S	**Sb**	**01 54 49.1**	**-1.4**
ACDV				IAML		01 55 10.6	
	comp=Z,2μm,1.3s						
GO02	**Mina Guanaco**	**3.57**	**311**	Pn	**Pn**	**01 54 06.0**	**+1.5**
ACHE	**Chepes**	**3.59**	**181**	*e*P	**Pn**	**01 54 05.8**	**+1.2**
AROD	**Rodeo**	**3.60**	**223**	*e*P	**Pn**	**01 54 07.9**	**+3.0**
AROD				*e*S	**Sg**	**01 55 05.1**	**+0.4**
ACCO	**Cerro Coronel**	**3.70**	**215**	*e*P	**Pn**	**01 54 08.7**	**+2.6**
ACCO				*e*S	**Sg**	**01 55 08.0**	**+0.3**
AC01	**Pan de Azucar**	**3.82**	**291**		**Pn**	**01 54 08.8**	**+1.3**
AC01	**Pan de Azucar**	**3.82**	**291**	*e*P	**Pn**	**01 54 08.8**	**+1.3**
AC01				*e*S	**Sb**	**01 55 04.8**	**+2.4**
AC01				*e*S	**Sg**	**01 55 05.1**	**-6.4**
LCO	**Las Campanas**	**3.87**	**247**	Pn	**Pn**	**01 54 09.9**	**+1.4**
CO01	**Juntas del Tor**	**3.88**	**231**	Pn	**Pn**	**01 54 09.4**	**+0.7**
CO01	**Juntas del Tor**	**3.88**	**231**	*e*P	**Pn**	**01 54 12.2**	**+3.5**
CO01				*e*S	**Sb**	**01 55 05.1**	**+0.6**
AC04	**Llanos de Chal**	**3.99**	**260**	Pn	**Pn**	**01 54 10.1**	**+0.3**
RTLL	**Cerro Villicun**	**4.09**	**203**	*e*P	**Pn**	**01 54 13.3**	**+2.0**
RTLL				*e*S	**Sg**	**01 55 17.9**	**-2.4**
TCA	**Tanti**	**4.16**	**155**	*e*P	**Pn**	**01 54 13.7**	**+1.4**
TCA				*e*S	**Sg**	**01 55 16.1**	**-6.5**
TCA				IAML		01 55 24.2	
	comp=Z,2μm,0.8s						
ZON	**Zonda**	**4.36**	**204**		**Pn**	**01 54 16.5**	**+1.5**
ZON	**Zonda**	**4.36**	**204**	*e*P	**Pn**	**01 54 17.3**	**+2.3**
ZON				*e*S	**Sb**	**01 55 20.6**	**+2.6**
ZON				IAML		01 55 28.2	
	comp=Z,697nm,0.7s						
HJA	**Humahuaca**	**4.47**	**15**	*e*P	**Pn**	**01 54 14.1**	**-2.7**
HJA				*e*S	**Sg**	**01 55 31.4**	**-1.1**
PB14	**IPOC Station P**	**4.48**	**310**	Pn	**Pn**	**01 54 18.5**	**+1.5**
GO04	**Tololo Observa**	**4.49**	**234**		**Pn**	**01 54 18.6**	**+1.6**
GO04	**Tololo Observa**	**4.49**	**234**	*e*P	**Pn**	**01 54 19.1**	**+2.1**
GO04				*e*S	**Sb**	**01 55 16.0**	**-6.1**
RTCV	**Cerro Valdivia**	**4.60**	**201**	*e*P	**Pn**	**01 54 16.1**	**-2.2**
RTCV				*e*P	Pb	01 54 21.6	-8.0
RTCV				*e*S	**Sb**	**01 55 27.6**	**+2.6**
CO05	**La Serena**	**4.68**	**239**		**Pn**	**01 54 20.3**	**+0.9**
AF01	**San Pedro de A**	**4.80**	**343**		**Pn**	**01 54 22.9**	**+1.6**
RTLS	**Leoncito**	**4.82**	**208**	*e*P	**Pn**	**01 54 24.4**	**+2.8**
RTLS				*e*S	**Sb**	**01 55 35.1**	**+3.5**
CO03	**El Pedregal**	**4.83**	**226**		**Pn**	**01 54 23.1**	**+1.6**
MRA	**San Martin**	**4.91**	**171**	*e*P	**Pn**	**01 54 23.6**	**+1.0**
MRA				*e*S	**Sb**	**01 55 37.1**	**+3.2**
PB15	**IPOC Station P**	**5.04**	**329**		**Pn**	**01 54 26.2**	**+1.7**
AUSP	**Uspallata**	**5.23**	**207**	*e*P	**Pn**	**01 54 29.9**	**+2.7**
AUSP				*e*S	**Sb**	**01 55 42.6**	**-0.7**
CO02	**Combarbal**	**5.27**	**225**		**Pn**	**01 54 27.8**	**+0.2**
CO02	**Combarbal**	**5.27**	**225**	*e*P	**Pn**	**01 54 28.5**	**+1.0**
CO02				*e*S	**Sn**	**01 55 35.1**	**+6.8**
LVC	**Limon Verde**	**5.34**	**337**	P	**Pn**	**01 54 32.7**	**+3.8**
	comp=Z,86nm,1.1s,baz=178,slow=9.2,SNR=30						
LVC				S	**Sn**	**01 55 35.2**	**+4.6**
	comp=Z,56nm,0.9s,baz=64,slow=7.9,SNR=1.5						
LVC	**Limon Verde**	**5.34**	**337**	Pn	**Pn**	**01 54 30.2**	**+1.3**
LVC	**Limon Verde**	**5.34**	**337**	*e*P	**Pn**	**01 54 31.7**	**+2.8**
PB10	**IPOC Station P**	**5.37**	**318**	Pn	**Pn**	**01 54 29.9**	**+1.0**
CO06	**Fray Jorge**	**5.37**	**233**		**Pn**	**01 54 28.2**	**-0.6**
PB06	**IPOC Station P**	**5.52**	**330**		**Pn**	**01 54 32.2**	**+1.1**
PB04	**IPOC Station P**	**6.11**	**328**		**Pn**	**01 54 39.8**	**+0.6**
VA03	**San Esteban**	**6.20**	**212**		**Pn**	**01 54 41.6**	**+1.3**
PB09	**IPOC Station P**	**6.21**	**337**		**Pn**	**01 54 42.6**	**+2.0**
VA06	**Catapilco**	**6.42**	**218**		**Pn**	**01 54 42.5**	**-0.8**
PB07	**IPOC Station P**	**6.52**	**332**		**Pn**	**01 54 47.4**	**+2.6**
PEL	**Peldehue**	**6.58**	**211**		**Pn**	**01 54 45.8**	**+0.3**
ROC1	**El Roble**	**6.60**	**214**		**Pn**	**01 54 45.7**	**-0.3**
MT03	**Universidad Ad**	**6.80**	**209**		**Pn**	**01 54 49.4**	**+0.9**
MT05	**Renca**	**6.81**	**210**		**Pn**	**01 54 48.9**	**+0.2**
MT02	**Curacav**	**6.89**	**213**		**Pn**	**01 54 48.9**	**-0.9**
PB02	**IPOC Station P**	**6.89**	**334**		**Pn**	**01 54 52.1**	**+2.2**
VA01	**Torpederas**	**6.96**	**217**	Pn	**Pn**	**01 54 49.2**	**-1.5**
LMEL	**Las Melosas**	**6.98**	**205**	Pn	**Pn**	**01 54 52.2**	**+1.0**
MT09	**Talagante**	**7.25**	**210**	Pn	**Pn**	**01 54 53.7**	**-1.1**
BO04	**La Punta**	**7.27**	**207**		**Pn**	**01 54 55.1**	**+0.1**
MT01	**Popeta**	**7.44**	**211**		**Pn**	**01 54 55.6**	**-1.7**
VA05	**Santo Domingo**	**7.44**	**214**		**Pn**	**01 54 55.7**	**-1.6**
TA01	**Diego Aracena**	**7.68**	**334**	Pn	**Pn**	**01 55 01.8**	**+1.2**
PB08	**IPOC Station P**	**7.74**	**342**		**Pn**	**01 55 02.4**	**+0.7**
BO01	**Tunca**	**7.81**	**208**	Pn	**Pn**	**01 55 01.2**	**-1.2**
PB11	**IPOC Station P**	**8.24**	**340**		**Pn**	**01 55 09.5**	**+1.0**
CPUP	**Villa Florida**	**8.39**	**84**	P	**Pn**	**01 55 10.3**	**0.0**
	comp=Z,6.4nm,0.3s,baz=266,slow=11,SNR=26						
CPUP				LR	LR	01 58 50.6	
	comp=Z,549nm,21.2s,baz=278,slow=41						
CPUP	**Villa Florida**	**8.39**	**84**	Pn	**Pn**	**01 55 10.6**	**+0.3**
CPUP	**Villa Florida**	**8.39**	**84**	*e*P	**Pn**	**01 55 10.6**	**+0.3**
GO05	**Huala**	**8.70**	**210**	Pn	**Pn**	**01 55 12.7**	**-1.9**
ITQB	**Itaqui**	**9.04**	**106**	Pn	**Pn**	**01 55 19.8**	**+0.6**
ITQB	**Itaqui**	**9.04**	**106**	*e*P	**Pn**	**01 55 20.1**	**+0.8**
ML02	**Panimavida**	**9.14**	**205**	Pn	**Pn**	**01 55 18.2**	**-2.4**
PB16	**IPOC Station P**	**9.56**	**343**	Pn	**Pn**	**01 55 29.1**	**+2.2**
TRQA	**Tornquist**	**11.17**	**161**	Pn	**Pn**	**01 55 48.1**	**-0.4**
LPAZ	**La Paz**	**11.30**	**353**	P	**Pn**	**01 55 53.6**	**+2.8**
	comp=Z,13nm,0.8s,baz=158,slow=10,SNR=46						
LPAZ				LR	LR	02 00 55.8	
	comp=Z,502nm,18.1s,baz=154,slow=41						
LPAZ	**La Paz**	**11.30**	**353**	Pn	**Pn**	**01 55 52.5**	**+1.7**
LPAZ	**La Paz**	**11.30**	**353**	*e*P	**Pn**	**01 55 52.8**	**+1.9**
PLTB	**Pedras Altas**	**12.07**	**113**	Pn	**Pn**	**01 56 00.7**	**-0.1**
PLTB	**Pedras Altas**	**12.07**	**113**	*e*P	**Pn**	**01 56 00.8**	**-0.1**
SIV	**San Ignacio**	**12.61**	**25**	P	**Pn**	**01 56 10.5**	**+2.3**
	comp=Z,2.9nm,0.5s,baz=197,slow=16,SNR=12						
SIV				S	**Sn**	**01 58 28.1**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=234,slow=8.5,SNR=1.4						
SIV				LR	LR	02 01 56.0	
	comp=Z,559nm,18.8s,baz=220,slow=42						
ITAB	**Concordia**	**12.88**	**92**	*e*P	**Pn**	**01 56 13.8**	**+1.9**
PTGB	**Pitanga**	**13.38**	**81**	*e*P	**Pn**	**01 56 20.1**	**+1.3**
TRCB	**Terra Rica**	**13.53**	**73**	*e*P	**Pn**	**01 56 22.8**	**+2.1**
PTLB	**Pontes e Lacer**	**13.91**	**32**	*e*P	**Pn**	**01 56 28.2**	**+2.2**
CNLB	**Canela**	**13.99**	**101**	*e*P	**Pn**	**01 56 25.8**	**-1.3**
LL04	**Puerto Octay**	**14.14**	**198**	Pn	Pn	01 56 24.1	-5.0
PCMB	**Pacaembu**	**15.18**	**70**	*e*P	**Pn**	**01 56 44.3**	**+1.1**
SALV	**Santo Antonio**	**15.41**	**43**	*e*P	**Pn**	**01 56 48.9**	**+2.7**
VILB	**Vilhena**	**15.73**	**24**	*e*P	**Pn**	**01 56 53.3**	**+2.9**
FRTB	**Fartura**	**15.97**	**79**	*e*P	**Pn**	**01 56 54.3**	**+0.7**
LL02	**Futaleuf**	**16.16**	**194**	Pn	**Pn**	**01 56 55.7**	**-0.1**
LL07	**Hotel Espejo d**	**16.23**	**198**	P	**Pn**	**01 56 56.5**	**-0.1**
GO07	**Milladeo Hill,**	**16.54**	**198**	P	**Pn**	**01 56 59.0**	**-1.6**
ITRB	**Iturama**	**16.82**	**66**	*e*P	**P**	**01 57 07.1**	**+0.6**
AY01	**Puyuhuapi**	**17.51**	**194**		**Pn**	**01 57 12.8**	**0.0**
ETMB	**Extrema**	**17.65**	**1**	*e*P	**P**	**01 57 17.9**	**+2.2**
RCLB	**Rio Claro- Sao**	**18.05**	**78**	*e*P	**P**	**01 57 21.5**	**+1.4**
NNA	**Nana**	**18.21**	**326**	LR	LR	02 03 24.3	
	comp=Z,131nm,21.1s,baz=150,slow=33						
VAO	**Valinhos**	**18.35**	**80**	*e*P	**P**	**01 57 24.2**	**+0.8**
PDRB	**Porto dos Gac**	**18.38**	**32**	*e*P	**Pn**	**01 57 25.1**	**+1.3**
COYC	**Coyhaique**	**18.50**	**192**	P	**P**	**01 57 24.1**	**-0.7**
COYC				IAmb	IAmb	01 57 28.4	
	comp=Z,26nm,0.8s						
PARB	**Paraibuna**	**19.42**	**82**	*e*P	**Pn**	**01 57 36.4**	**0.0**
IPMB	**Ipameri, GO**	**19.45**	**65**	*e*P	**P**	**01 57 36.7**	**+1.1**
CLDB	**Colider**	**19.47**	**34**	*e*P	**P**	**01 57 37.1**	**+1.3**
CZSB	**Cruzeiro do Su**	**20.55**	**343**	*e*P	Pn	01 57 50.8	+1.1
BDFB	**Brasilia**	**20.95**	**59**	P	**P**	**01 57 51.0**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=227,slow=11,SNR=3.9						
BDFB				LR	LR	02 06 34.1	
	comp=Z,215nm,21.7s,baz=153,slow=39						
	comp=Z,3.0nm,0.7s						
BDFB	**Brasilia**	**20.95**	**59**	P	**P**	**01 57 52.6**	**+0.7**
BDFB				IAmb	IAmb	01 57 60.0	
	comp=Z,27nm,0.9s						
BDFB	**Brasilia**	**20.95**	**59**	*e*P	**P**	**01 57 53.1**	**+1.3**
MAN01	**Angra dos Reis**	**21.02**	**82**	*e*P	**P**	**01 57 54.0**	**+1.4**
SNDB	**Serra Nova Dou**	**21.14**	**46**	*e*P	**P**	**01 57 54.3**	**+0.4**
VAS01	**Vassouras-RJ**	**21.66**	**81**	*e*P	**P**	**01 58 02.1**	**+2.6**
PEXB	**Peixe**	**23.05**	**52**	*e*P	**P**	**01 58 15.7**	**+1.4**
GO09	**Cerro Castillo**	**24.07**	**189**	P	**P**	**01 58 24.0**	**0.0**
GO09				IAmb	IAmb	01 58 28.1	
	comp=Z,38nm,1.1s						
JANB	**Januaria**	**24.18**	**64**	*e*P	**P**	**01 58 26.2**	**+0.9**
MG05	**Puerto Natales**	**24.49**	**189**	P	**P**	**01 58 27.4**	**-0.4**
MG05				IAmb	IAmb	01 58 28.6	
	comp=Z,24nm,0.8s						
MACA	**Manacapuru-AM**	**24.92**	**14**	*e*P	**P**	**01 58 32.8**	**+0.8**
SJMB	**Sao Joao De Ma**	**24.96**	**75**	*e*P	**P**	**01 58 32.6**	**+0.2**
SDBA	**SAO DESIDERIO**	**25.31**	**58**	*e*P	**P**	**01 58 36.4**	**+0.8**
GO10	**Punta Arenas**	**25.78**	**186**	P	**P**	**01 58 39.0**	**-0.5**
NAN01	**Guarapari, ES**	**26.24**	**74**	*e*P	**P**	**01 58 43.6**	**-0.4**
USHA	**Ushuaia**	**27.28**	**182**	P	**P**	**01 58 53.7**	**+0.7**
	comp=Z,5.5nm,1.0s,baz=326,slow=3.2,SNR=1.4						
	comp=Z,5.5nm,1.0s						
MALB	**Monte Alegre**	**28.17**	**27**	*e*P	**P**	**01 59 01.7**	**+0.4**
BOAV	**Boa Vista**	**30.36**	**12**	*e*P	**P**	**01 59 22.5**	**+1.8**
ROSC	**El Rosal**	**33.05**	**346**	LR	LR	02 14 45.6	
	comp=Z,285nm,18.3s,baz=224,slow=39						
NBMA	**Muriti-CE**	**33.16**	**58**	*e*P	**P**	**01 59 46.2**	**+0.7**
MDP	**Montagnes des**	**35.17**	**25**	LR	LR	02 14 57.8	
	comp=Z,59nm,19.7s,baz=202,slow=37						
RCBR	**Riachuelo**	**36.32**	**59**	LR	LR	02 15 10.8	
	comp=Z,126nm,19.1s,baz=352,slow=36						
SDV	**Santo Domingo**	**36.44**	**353**	*e*P	**P**	**02 00 14.9**	**+1.1**
PMSA	**Palmer Station**	**37.26**	**178**	LR	LR	02 15 46.1	
	comp=Z,158nm,20.5s,baz=342,slow=36						
CMIG	**Matias Romero**	**52.16**	**325**	LR	LR	02 20 11.7	
	comp=Z,414nm,21.1s,baz=142,slow=31						
BELA	**Belgrano 2**	**52.48**	**172**	P	**P**	**02 02 21.3**	**+0.1**
VNA3	**Neumayer Olymp**	**53.70**	**160**	P	**P**	**02 02 30.5**	**+0.2**
VNA1	**Neumayer--Stat**	**53.91**	**159**	P	**P**	**02 02 32.1**	**+0.4**
VNA1	**Neumayer--Stat**	**53.91**	**159**	ScP	**ScP**	**02 07 30.3**	**-4.7**
VNA2	**Neumayer--Watz**	**54.27**	**160**	P	**P**	**02 02 34.7**	**+0.2**
	baz=279,slow=9.0						
SNAA	**Sanae**	**55.90**	**160**	P	**P**	**02 02 46.2**	**0.0**
SNAA	**Sanae**	**55.90**	**160**	P	**P**	**02 02 46.0**	**-0.2**
TROLL	**Troll, Antarti**	**57.62**	**160**	P	**P**	**02 02 58.8**	**+0.3**
QSPA	**South Pole Qui**	**62.66**	**180**	LR	LR	02 31 22.5	
	comp=Z,94nm,20.2s,baz=152,slow=36						
QSPA	**South Pole Qui**	**62.66**	**180**	P	**P**	**02 03 33.3**	**+0.1**
JCT	**Junction City**	**65.84**	**329**	P	**P**	**02 03 54.2**	**-0.1**
JCT				IAmb	IAmb	02 03 58.7	
	comp=Z,5.2nm,0.7s						
WVT	**Waverly**	**66.43**	**341**	P	**P**	**02 03 55.9**	**-2.0**
LPIG	**La Paz**	**66.43**	**316**	LR	LR	02 29 12.1	
	comp=Z,194nm,18.3s,baz=192,slow=32						
T47A	**Sharon Grove**	**67.03**	**342**	P	**P**	**02 04 02.8**	**+1.1**
T47A				IAmb	IAmb	02 04 12.3	
	comp=Z,7.9nm,0.9s						
PBMO	**Poplar Bluff**	**67.80**	**340**	P	**P**	**02 04 04.9**	**-1.7**
PBMO				IAmb	IAmb	02 04 17.8	
	comp=Z,7.6nm,0.9s						
DBIC	**Dimbokro**	**68.65**	**70**	LR	LR	02 32 48.3	
	comp=Z,68nm,19.9s,baz=224,slow=35						
FVM	**French Village**	**68.91**	**340**	P	**P**	**02 04 12.3**	**-1.2**
FVM				IAmb	IAmb	02 04 17.4	
	comp=Z,10nm,1.2s						
CCM	**Cathedral Cave**	**69.23**	**339**	P	**P**	**02 04 14.0**	**-1.5**
CCM				IAmb	IAmb	02 04 26.2	
	comp=Z,5.9nm,0.8s						
S39A	**Bolivar**	**69.57**	**338**	P	**P**	**02 04 16.3**	**-1.3**
S39A				IAmb	IAmb	02 04 28.9	
	comp=Z,8.2nm,0.8s						
R40A	**Maddies Statio**	**69.77**	**339**	P	**P**	**02 04 17.1**	**-1.8**
R40A				IAmb	IAmb	02 04 27.2	
	comp=Z,5.4nm,1.1s						
N49A	**Columbus Grove**	**70.06**	**346**	P	**P**	**02 04 21.4**	**+0.8**
N49A				IAmb	IAmb	02 04 30.8	
	comp=Z,6.8nm,0.9s						
VNDA	**Vanda**	**71.27**	**190**	P	**P**	**02 04 28.1**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=141,slow=4.3,SNR=11						
VNDA				LR	LR	02 37 07.6	
	comp=Z,91nm,18.2s,baz=318,slow=37						
	comp=Z,2.7nm,1.0s						
VNDA	**Vanda**	**71.27**	**190**	P	**P**	**02 04 27.6**	**0.0**
ANMO	**Albuquerque**	**72.68**	**327**	LR	LR	02 36 08.3	
	comp=Z,56nm,20.1s,baz=152,slow=35						
ANMO	**Albuquerque**	**72.68**	**327**	P	**P**	**02 04 37.0**	**+0.1**
SUR	**Sutherland**	**73.81**	**118**	LR	LR	02 33 43.6	
	comp=Z,58nm,18.8s,baz=135,slow=33						
TSUM	**Tsumeb**	**76.40**	**105**	LR	LR	02 36 18.2	
	comp=Z,70nm,18.0s,baz=168,slow=34						
TORD	**Torodi Ar. Bea**	**77.56**	**68**	P	**P**	**02 05 02.4**	**-2.8**
	comp=Z,2.3nm,0.8s,baz=278,slow=6.1,SNR=13						
	comp=Z,2.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.56**	**68**	P	**P**	**02 05 02.8**	**-2.4**
TORD				IAmb	IAmb	02 05 11.9	
	comp=Z,5.6nm,0.9s						
MAW	**Mawson**	**77.95**	**162**	P	**P**	**02 05 06.0**	**-0.5**
	comp=Z,6.2nm,1.0s,baz=248,slow=7.7,SNR=6.8						
	comp=Z,6.2nm,1.0s						
MAW	**Mawson**	**77.95**	**162**	P	**P**	**02 05 06.6**	**+0.1**
BOSA	**Boshof**	**78.84**	**116**	P	**P**	**02 05 10.4**	**-1.9**
	comp=Z,3.5nm,0.9s,baz=236,slow=9.4,SNR=5.6						
	comp=Z,3.5nm,0.9s						
BOSA	**Boshof**	**78.84**	**116**	P	**P**	**02 05 10.7**	**-1.6**
PDAR	**Pinedale Array**	**80.37**	**329**	P	**P**	**02 05 19.2**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=120,slow=5.3,SNR=12						
PDAR				LR	LR	02 42 51.8	
	comp=Z,58nm,20.1s,baz=136,slow=37						
	comp=Z,1.6nm,0.9s						
PDAR	**Pinedale Array**	**80.37**	**329**	P	**P**	**02 05 19.6**	**-0.7**
NVAR	**Mina Array Bea**	**81.52**	**321**	P	**P**	**02 05 26.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=153,slow=7.8,SNR=5.6						
NVAR				LR	LR	02 38 05.6	
	comp=Z,133nm,20.8s,baz=96,slow=33						
	comp=Z,0.4nm,0.6s						
MDT	**Midelt**	**84.11**	**48**	LR	LR	02 41 22.8	
	comp=Z,71nm,18.9s,baz=228,slow=34						
LSZ	**Lusaka**	**87.22**	**106**	LR	LR	02 43 11.6	
	comp=Z,54nm,18.4s,baz=151,slow=34						
NEW	**Newport**	**88.00**	**329**	LR	LR	02 46 43.4	
	comp=Z,34nm,18.2s,baz=134,slow=36						
ESDC	**Sonseca Array**	**88.74**	**43**	P	**P**	**02 06 00.5**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=245,slow=5.1,SNR=4.4						
	comp=Z,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**97.57**	**340**	P	**P**	**02 06 41.4**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=130,slow=5.6,SNR=4.3						
YKA				LR	LR	02 53 29.5	
	comp=Z,50nm,21.8s,baz=328,slow=37						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**125.35**	**203**	PKP	**PKPdf**	**02 12 08.9**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=155,slow=2.5,SNR=12						
ASAR	**Alice Springs**	**125.35**	**203**		**PKPdf**	**02 12 07.9**	**-2.5**
WRA	**Warramunga Arr**	**128.60**	**206**	PKP	**PKPdf**	**02 12 15.7**	**-1.0**
	comp=Z,2.4nm,1.0s,baz=153,slow=1.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**146.32**	**31**	PKPbc	**PKPdf**	**02 12 47.6**	**-0.3**
	comp=Z,13nm,0.9s,baz=294,slow=4.4,SNR=36						
ZALV	**Zalesovo Beam**	**146.32**	**31**		**PKPdf**	**02 12 47.4**	**-0.5**
KSH	**Kashi**	**146.85**	**59**	PKPbc	**PKPdf**	**02 12 50.0**	**+0.5**
MKAR	**Makanchi Array**	**148.96**	**43**	PKPbc	**PKPbc**	**02 12 55.7**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=311,slow=2.5,SNR=40						
MKAR	**Makanchi Array**	**148.96**	**43**		**PKPdf**	**02 12 55.1**	**+2.5**
SONM	**Songino Array**	**159.04**	**13**	PKP	**PKPdf**	**02 13 05.7**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=4.9						
PZH	**PanZhiHua**	**169.58**	**93**	PKP	**PKPdf**	**02 13 18.0**	**+1.1**

IDC 31 02:11:04.0±4.8,**4°.39S**×**151°.17E,h0**^{km}**,mb3.0**/2, **mbtmp3.1**/2,**Error ellipse: s-maj=213.0km s-min=55.4km az=117.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.54**	**225**	P	P	02 16 06.3	+0.4
	0.4nm,0.7s,baz=51,slow=11,SNR=1.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**25.40**	**219**	P	P	02 16 33.2	-0.3
	0.4nm,0.8s,baz=53,slow=9.2,SNR=2.5						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.64**	**288**	PKPbc	PKPbc	02 30 53.6	-0.7
	0.1nm,0.4s,baz=90,slow=1.8,SNR=1.6						

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*GCG **31** 02:14:32.6±1.4,12°.14N×90°.00W,h197^{km}±79^{km},MD4.4*

*SNET **31** 02:14:35.4±2.0,12°.29N×89°.41W,h16^{km}±8^{km},ML4.4*

*UCR **31** 02:14:37.8±1.6,12°.45N×89°.46W,h18^{km}±12^{km},ML4.2, mb4.7(NEIC)*

*INET **31** 02:14:40.0±1.3,12°.58N×89°.21W,h10^{km}±19^{km},MW4.2*

*NEIC **31** 02:14:41.4±1.3,12°.62N±0°.07×89°.16W±0°.07,h43^{km}±7^{km}, mb4.7/294,Md4.5(SNET),Error ellipse: s-maj=12.0km s-min=8.0km az=223.0*

*IDC **31** 02:14:44.1±2.4,12°.80N×88°.89W,h70^{km}±21^{km},mb3.9/17, mbtmp4.2/19,MS3.6/15,Error ellipse: s-maj=27.4km s-min=10.9km az=50.0*

ISC 31 02:14:42.0±0.9,**12°.59N**±0°.05×**89°.22W**±0°.04,**h61**^{km}±8^{km}, **n515,**σ**1^{s}.23**/443,**mb4.6**/130,**1D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.90**	**353**	*e*P	**Pn**	**02 14 57.2**	**-1.6**
LALI	**Alcalda de L**	**0.90**	**353**	*e*P	**Pn**	**02 14 57.2**	**-1.6**
LALI	**Alcalda de L**	**0.90**	**353**	*e*P	**Pn**	**02 14 57.2**	**-1.6**
LALI				*e*S	**Sn**	**02 15 05.1**	**-6.1**
LFRS	**El Faro**	**1.04**	**8**	*e*P	**Pn**	**02 14 59.5**	**-1.2**
LFRS	**El Faro**	**1.04**	**8**	*e*P	**Pn**	**02 14 59.5**	**-1.2**
SJTE	**Alcalda de S**	**1.04**	**11**	*e*P	**Pn**	**02 14 59.6**	**-1.0**
SJTE	**Alcalda de S**	**1.04**	**11**	*e*P	**Pn**	**02 14 59.6**	**-1.0**
COEG	**Centro de Oper**	**1.07**	**18**	*e*P	**Pn**	**02 15 00.1**	**-1.1**
COEG				*e*S	**Sn**	**02 15 20.4**	**+5.1**
COEG				IAML		02 15 27.8	
	comp=Z,4μm,0.4s						
COEG	**Centro de Oper**	**1.07**	**18**	*e*P	**Pn**	**02 15 00.1**	**-1.1**
COEG				*e*S	**Sn**	**02 15 20.4**	**+5.1**
COEG				IAML		02 15 27.8	
	comp=Z,4μm,0.4s						
JAYA	**Jayaque - finc**	**1.08**	**348**	*e*P	**Pn**	**02 14 57.8**	**-3.5**
JAYA				IAML		02 15 20.1	
	comp=Z,4μm,0.5s						
JAYA	**Jayaque - finc**	**1.08**	**348**	*e*P	**Pn**	**02 14 57.8**	**-3.5**
JAYA				IAML		02 15 20.1	
	comp=Z,4μm,0.5s						
SNET	**Serv Nac Est T**	**1.09**	**359**		**Pn**	**02 14 59.8**	**-1.5**
SNET	**Serv Nac Est T**	**1.09**	**359**	*e*P	**Pn**	**02 15 00.0**	**-1.3**

SNET				IAML		02 15 32.8	
	comp=Z,3µm,0.4s						
SNET	Serv Nac Est T	1.09	359	eP	Pn	02 15 00.0	-1.3
SNET				IAML		02 15 32.8	
	comp=Z,3µm,0.4s						
SNET	Serv Nac Est T	1.09	359	eP	Pn	02 14 60.0	-1.3
UEES	Universidad Ev	1.12	359	eP	Pn	02 15 00.6	-1.2
UEES	Universidad Ev	1.12	359	eP	Pn	02 15 00.6	-1.2
COEB	Comit de Eme	1.12	36	eP	Pn	02 15 01.2	-0.7
COEB				IAML		02 15 27.6	
	comp=Z,4µm,0.5s						
COEB	Comit de Eme	1.12	36	eP	Pn	02 15 01.2	-0.7
COEB				IAML		02 15 27.6	
	comp=Z,4µm,0.5s						
COEB	Comit de Eme	1.12	36	eP	Pn	02 15 00.9	-0.9
BOQS	Boqueron	1.14	357	eP	Pn	02 15 01.1	-1.0
BOQS	Boqueron	1.14	357	eP	Pn	02 15 01.1	-1.0
PAVA	Las Pavas	1.15	14	iP	Pn	02 15 01.4	-0.8
PAVA				eS	Sn	02 15 21.9	+4.7
PAVA				IAML		02 15 29.6	
	comp=Z,8µm,0.6s						
PAVA	Las Pavas	1.15	14	iP	Pn	02 15 01.4	-0.8
PAVA				eS	Sn	02 15 21.9	+4.7
PAVA				IAML		02 15 29.6	
	comp=Z,8µm,0.6s						
PAVA	Las Pavas	1.15	14	eP	Pn	02 15 01.3	-0.8
PAVA				eS	Sn	02 15 14.8	-2.4
LBRS	Las Brisas	1.15	8	eP	Pn	02 15 02.6	+0.4
LBRS	Las Brisas	1.15	8	eP	Pn	02 15 02.6	+0.4
LFU	La Fuente	1.16	5	eP	Pn	02 15 01.6	-0.6
LFU	La Fuente	1.16	5	eP	Pn	02 15 01.6	-0.6
PQSS	Presa 15 de Se	1.21	32	eP	Pn	02 15 02.5	-0.3
PQSS	Presa 15 de Se	1.21	32	eP	Pn	02 15 02.5	-0.3
CEDA	San Andres	1.22	352	eP	Pn	02 15 02.0	-1.0
CEDA				eS	Sn	02 15 21.3	+2.6
CEDA				IAML		02 15 34.9	
	comp=Z,6µm,0.5s						
CEDA	San Andres	1.22	352	eP	Pn	02 15 02.0	-1.0
CEDA				eS	Sn	02 15 21.3	+2.6
CEDA				IAML		02 15 34.9	
	comp=Z,6µm,0.5s						
CEDA	San Andres	1.22	352	eP	Pn	02 15 01.5	-1.5
PACA	Pacayal	1.23	45	eP	Pn	02 15 03.0	-0.3
PACA	Pacayal	1.23	45	eP	Pn	02 15 03.0	-0.3
PACA	Pacayal	1.23	45	eP	Pn	02 15 02.8	-0.5
CEVE	Cerro Verde	1.29	342	iP	Pn	02 15 02.2	-2.0
CEVE				IAML		02 15 27.8	
	comp=Z,10µm,0.4s						
CEVE	Cerro Verde	1.29	342	iP	Pn	02 15 02.2	-2.0
CEVE				eS	Sn	02 15 26.2	+5.4
CEVE				IAML		02 15 27.8	
	comp=Z,10µm,0.4s						
SBLS	San Blas	1.30	342	eP	Pn	02 15 02.9	-1.5
SBLS	San Blas	1.30	342	eP	Pn	02 15 02.9	-1.5
RTR	El Retiro	1.36	342	eP	Pn	02 15 03.6	-1.5
RTR	El Retiro	1.36	342	eP	Pn	02 15 03.6	-1.5
NUBE	Las Nubes	1.41	337	eP	Pn	02 15 03.5	-2.2
NUBE				eS	Sn	02 15 25.4	+1.8
NUBE				IAML		02 15 27.3	
	comp=Z,5µm,0.5s						
NUBE	Las Nubes	1.41	337	eP	Pn	02 15 03.5	-2.2
NUBE				eS	Sn	02 15 25.4	+1.8
NUBE				IAML		02 15 27.3	
	comp=Z,5µm,0.5s						
LCND	La Caada	1.48	61	iP	Pn	02 15 05.7	-0.7
LCND				eS	Sn	02 15 28.0	+3.2
LCND				IAML		02 15 38.8	
	comp=Z,3µm,0.4s						
LCND	La Caada	1.48	61	iP	Pn	02 15 05.7	-0.7
LCND				eS	Sn	02 15 28.0	+3.2
LCND				IAML		02 15 38.8	
	comp=Z,3µm,0.4s						
CNCH	Conchagua	1.51	63	eP	Pn	02 15 06.0	-1.0
CNCH	Conchagua	1.51	63	eP	Pn	02 15 06.0	-1.0
CNCH	Conchagua	1.51	63	eP	Pn	02 15 06.0	-1.0
FAGO	Alcalda de S	1.54	44	eP	Pn	02 15 05.0	-2.3
CRIN	San Cristobal	2.12	87		Pn	02 15 13.9	-1.3
CRIN				Sn	Sn	02 15 37.5	-2.9
CRIN	San Cristobal	2.12	87	eP	Pn	02 15 14.5	-0.7
NBG	Las Nubes	2.27	331	eP	Pn	02 15 17.6	+0.2
NBG				eS	Sn	02 15 53.4	+9.0
TEL3	Telica 3	2.31	90	eP	Pn	02 15 16.3	-1.5
TELN	Telica	2.33	89	eP	Pn	02 15 18.1	+0.1
TGUH	Tegucigalpa,Un	2.39	52	Pn	Pn	02 15 16.7	-2.2
TGUH				Sn	Sn	02 15 44.4	-2.8
TGUH	Tegucigalpa,Un	2.39	52	eP	Pn	02 15 19.2	+0.4
FUG	Fuego 3	2.43	320	eP	Pn	02 15 17.6	-1.9
FUG				eS	Sn	02 15 51.1	+2.9
CNGN	Cerro Negro	2.46	92		Pn	02 15 17.9	-1.8
CNGN	Cerro Negro	2.46	92	eP	Pn	02 15 18.1	-1.7
MRL	Marmol	2.52	350	eP	Pn	02 15 21.7	+1.0
MRL				eS	Sn	02 16 02.9	+12
COPN	Copaltepe	2.60	99	eP	Pn	02 15 19.7	-1.9
HUEN		2.98	95	eP	Pn	02 15 25.5	-1.4
STG3	Santiaguito 3,	3.11	313	eP	Pn	02 15 27.5	-1.3
STG3				eS	Sn	02 16 03.0	-1.9
MATN	Matagalpa	3.23	84		Pn	02 15 28.2	-2.2
MATN	Matagalpa	3.23	84	eP	Pn	02 15 28.1	-2.2
BOAB	BOACO BROADBAN	3.47	92	Pn	Pn	02 15 31.3	-2.2
CONN	Concepcion	3.66	106	eP	Pn	02 15 34.6	-1.5
ACON	Acoyapa	4.00	98		Pn	02 15 38.3	-2.5
HZTE	Horizontes, Gu	4.01	117	Pn	Pn	02 15 39.7	-1.2
HZTE	Horizontes, Gu	4.01	117	iP	Pn	02 15 40.1	-0.8
HZTE	Horizontes, Gu	4.01	117	eP	Pn	02 15 40.4	-0.5
GBS3	Finca Las Img	4.10	116	eP	Pn	02 15 42.0	-0.3
LAPC	Finca la Perla	4.12	116	eP	Pn	02 15 41.6	-0.9
GB1A	Borinquen Arri	4.13	115	eP	Pn	02 15 42.6	-0.2
BUEV	Buena Vista	4.13	115	eP	Pn	02 15 42.5	-0.3
BUAI	Buenos Aires	4.17	114	eP	Pn	02 15 44.0	+0.8
GPS2	Hotel Rincn d	4.20	115	eP	Pn	02 15 43.0	-0.7
SAJU	San Juanillo,	4.25	126	eP	Pn	02 15 42.5	-1.8
ORTG	Ortega, Santa	4.30	121	Pn	Pn	02 15 43.0	-1.9
ORTG	Ortega, Santa	4.30	121	eP	Pn	02 15 44.2	-0.8
GUAI	GUAI	4.30	122	eP	Pn	02 15 44.0	-1.0
LIM1	Limonal	4.32	115	eP	Pn	02 15 45.0	-0.2
GUAB	Guayabo de Bag	4.33	115	eP	Pn	02 15 45.2	-0.2
COLC	Colonia	4.37	116	eP	Pn	02 15 45.6	-0.3
HORNC	Hornillas	4.37	115	eP	Pn	02 15 46.0	0.0
VMAR	Armenia, Volca	4.38	113	eP	Pn	02 15 45.3	-0.8
CUI	Cuipilapa	4.41	115	eP	Pn	02 15 46.0	-0.5
DUNO	Dulce Nombre,	4.42	124		Pn	02 15 45.3	-1.3
ACAL	Aguas Claras	4.53	115	⇓iP	Pn	02 15 48.5	+0.3
INDI	Punta indio, G	4.54	126	eP	Pn	02 15 46.5	-1.7
PTEN	Parque Tenorio	4.54	114	eP	Pn	02 15 48.2	-0.1
PTEN				eS	Sn	02 16 43.9	+4.0
CCIG	Comitan	4.63	323		Pn	02 15 48.0	-1.6
JTS	Las Juntas de	4.76	118	P	Pn	02 15 50.9	-0.4
	comp=Z,18nm,0.3s,baz=14,slow=19,SNR=30						
JTS				S	Sn	02 16 44.2	-1.1
	comp=Z,18nm,0.4s,baz=339,slow=14,SNR=1.3						
JTS	Las Juntas de	4.76	118	Pn	Pn	02 15 48.8	-2.5
JTS	Las Juntas de	4.76	118	eP	Pn	02 15 50.4	-0.9
JTS	Las Juntas de	4.76	118	eP	Pn	02 15 50.8	-0.4
CASO	Castillo	4.89	116	eP	Pn	02 15 53.1	+0.1
CEDE	Laguna Cedeo	4.89	115	eP	Pn	02 15 53.2	+0.1
FORC	Fortuna	4.93	115	eP	Pn	02 15 53.7	+0.1
LAFE	Finca La Fe, P	5.05	123	eP	Pn	02 15 53.8	-1.4
SRA1	San Ramn	5.27	118	eP	Pn	02 15 59.2	+0.9
JACO	JACO, Garabito	5.33	123		Pn	02 15 57.1	-2.0
JACO	JACO, Garabito	5.33	123	eP	Pn	02 15 58.5	-0.6
LCR2	La Lucha 2	5.84	118	eP	Pn	02 16 06.0	-0.2
RIMA	Rio Macho	5.95	118	Pn	Pn	02 16 05.8	-2.0
RIMA	Rio Macho	5.95	118	eP	Pn	02 16 07.5	-0.3
CDM	Cerro de Muert	6.14	119	eP	Pn	02 16 11.2	+0.6
BATAN	Batan	6.24	113		Pn	02 16 09.4	-2.1
PEZE	Perez Zeledon,	6.30	120		Pn	02 16 10.7	-1.8
SRBA	San Rafael, Bu	6.65	120		Pn	02 16 15.6	-1.6
SRBA	San Rafael, Bu	6.65	120	eP	Pn	02 16 17.5	+0.3
DRK0	Durika	6.73	119		Pn	02 16 16.0	-2.4
CMIG	Matias Romero	7.07	310	P	Pn	02 16 20.9	-2.0
	comp=Z,4.9nm,0.4s,baz=106,slow=11,SNR=16						
CMIG				S	Sn	02 17 44.0	+2.0
	comp=Z,16nm,0.6s,baz=26,slow=17,SNR=1.9						
PIRO	Carate, Puerto	7.12	125	eP	Pn	02 16 24.3	+0.7
CDITO	Canoas	7.40	122		Pn	02 16 26.6	-0.8
BRU2	Volcan	7.44	120	Pn	Pn	02 16 26.6	-1.6
PRVC	Isla de Provid	7.69	83	Pn	Pn	02 16 30.7	-0.7
TLIG	Tlapa	10.29	300	Pn	Pn	02 17 07.0	-0.1
SOR	Soroa	11.74	29	Pn	Pn	02 17 26.0	-0.7
MTDJ	Mount Denham	12.58	62	Pn	Pn	02 17 37.1	-1.2
MOIG	Morelia	13.48	303		Pn	02 17 51.1	+0.3
SJCC	San Jacinto, C	14.03	100	Pn	Pn	02 17 58.0	+0.2
SJCC	San Jacinto, C	14.03	100	eP	P	02 18 02.4	-1.5
CBOC	Ciudad Bolivar	14.64	116	eP	P	02 18 10.6	-0.3
PLMC	San Jos del P	14.88	120	eP	Pn	02 18 07.8	-1.2
HELC	Santa Helena	14.92	114	eP	P	02 18 14.7	+0.5
ARGC	Ariguani, Magd	14.93	99	eP	P	02 18 13.3	-0.6
YOTC	Yotoco, Valle	15.33	123	eP	P	02 18 17.4	-1.0
PTBC	PUERTO BERRIO,	15.74	111	eP	Pn	02 18 20.1	+0.1
NORC	Norcasia	15.79	115	eP	P	02 18 25.6	+2.2
ANIL	Santa Ana	15.85	119	eP	P	02 18 27.0	+2.7
POPC	Popayan, Colom	15.93	128	eP	P	02 18 27.0	+1.7
OCAC	Ocana	16.22	104	Pn	Pn	02 18 25.4	-0.8
OCAC	Ocana	16.22	104	eP	Pn	02 18 27.0	+0.8
SOTA	Rioblanco	16.24	129	eP	P	02 18 32.5	+3.5
ZAIG	Zacatecas	16.24	310	Pn	Pn	02 18 26.6	-0.1
PCON	Cinco Dias	16.28	128	eP	P	02 18 32.5	+3.0
ORTC	Ortega, Tolima	16.29	121	eP	Pn	02 18 27.0	+0.1
SPBC	San Pablo de B	16.46	113	eP	P	02 18 31.1	+0.2
ROSC	El Rosal	16.61	116	P	P	02 18 35.3	+2.4
	comp=Z,19nm,0.9s,baz=214,slow=2.5,SNR=11						
ROSC	El Rosal	16.61	116	Pn	Pn	02 18 30.4	-0.9
ROSC	El Rosal	16.61	116	eP	P	02 18 33.8	+0.9
DWPF	Disney Wildern	17.07	24	P	Pn	02 18 35.1	-1.4
	baz=206						
PAMC	Pamplona, Colo	17.08	106	eP	P	02 18 38.0	-0.3
CHIC	Chingaza	17.22	116	eP	P	02 18 40.7	+1.0
RUSC	La Rusia	17.25	111	eP	P	02 18 40.7	+0.6
833A	Chaparral WMA,	18.31	330	P	P	02 18 51.6	+0.4
833A	Chaparral WMA,	18.31	330	P	P	02 18 51.0	-0.2
	baz=147						
HKT	Hockley	18.33	341	P	P	02 18 51.7	+0.4
441A	DeRidder	18.44	349	P	P	02 18 52.3	-0.2
441A				IAmb	IAmb	02 19 02.9	
	comp=Z,30nm,0.9s						
SDV	Santo Domingo	18.62	100	P	P	02 18 54.1	-0.9
	comp=Z,12nm,0.6s,baz=298,slow=7.5,SNR=9.8						
SDV				LR	LR	02 28 19.2	
	comp=Z,123nm,18.5s,baz=298,slow=44						
SDV	Santo Domingo	18.62	100		P	02 18 54.4	-0.6
344A	Westbrook Farm	18.82	356	P	P	02 18 56.0	-0.8
344A				IAmb	IAmb	02 19 06.3	
	comp=Z,54nm,0.7s						
342A	Flagon Creek P	18.91	352	P	P	02 18 58.2	+0.5
342A				IAmb	IAmb	02 19 01.5	
	comp=Z,70nm,0.9s						
TIGA	Tifton	19.46	15	P	P	02 19 03.8	+0.1
TIGA	Tifton	19.46	15	P	P	02 19 03.1	-0.6
	baz=196,SNR=7.4						
VBMS	Vicksburg	19.57	357	P	P	02 19 05.6	+0.7
VBMS	Vicksburg	19.57	357	P	P	02 19 05.0	+0.1
	baz=176						
435B	Jarrell	19.69	338	P	P	02 19 06.8	+0.6
435B	Jarrell	19.69	338	P	P	02 19 06.6	+0.4
	baz=155						
NATX	Nacogdoches	19.73	346	P	P	02 19 07.7	+1.0
NATX				IAmb	IAmb	02 19 08.8	
	comp=Z,46nm,0.7s						
NATX	Nacogdoches	19.73	346	P	P	02 19 07.2	+0.6
	baz=164,SNR=7.2						
146A	Union	19.95	0	P	P	02 19 08.5	-0.6
146A				IAmb	IAmb	02 19 12.6	
	comp=Z,28nm,0.9s						
143A	Socs Landing,	20.12	355	P	P	02 19 11.4	+0.5
143A				IAmb	IAmb	02 19 18.2	
	comp=Z,31nm,0.9s						
237A	Washetta, Mont	20.25	344	P	P	02 19 12.3	0.0
237A				IAmb	IAmb	02 19 18.9	
	comp=Z,26nm,0.8s						
JCT	Junction City	20.32	333	P	P	02 19 13.4	+0.3
JCT				IAmb	IAmb	02 19 14.3	
	comp=Z,30nm,0.7s						
JCT	Junction City	20.32	333	P	P	02 19 13.4	+0.3
	baz=149,SNR=18						
152A	Waverly Hall	20.41	11	P	P	02 19 13.3	-0.7
152A				IAmb	IAmb	02 19 17.1	
	comp=Z,24nm,0.9s						
LRAL	Lakeview Retre	20.45	5	P	P	02 19 14.1	-0.4
LRAL				IAmb	IAmb	02 19 17.6	
	comp=Z,19nm,0.8s						
LRAL	Lakeview Retre	20.45	5	P	P	02 19 14.5	0.0
	baz=186,SNR=18						
Z47A	Carrollton	20.54	3	P	P	02 19 15.0	-0.4
Z47A				IAmb	IAmb	02 19 18.6	
	comp=Z,34nm,0.8s						
154A	Montrose	20.70	15	P	P	02 19 16.0	-1.2
154A				IAmb	IAmb	02 19 20.6	
	comp=Z,51nm,1.0s						
WHTX	Lake Whitney,	20.74	340	P	P	02 19 18.1	+0.4
WHTX	Lake Whitney,	20.74	340	P	P	02 19 18.1	+0.4
	baz=157,SNR=50						
Z41A	Richland Creek	20.83	352	P	P	02 19 19.2	+0.6
Z41A				IAmb	IAmb	02 19 26.6	
	comp=Z,39nm,0.9s						
Z41A	Richland Creek	20.83	352	P	P	02 19 19.4	+0.9
	baz=170						
Z51A	Franklin	20.96	9	P	P	02 19 20.0	0.0
Z51A				IAmb	IAmb	02 19 24.8	
	comp=Z,30nm,0.8s						
HPIG		21.02	315	P	P	02 19 20.8	-0.1
HPIG				IAmb	IAmb	02 19 23.8	
	comp=Z,20nm,0.9s						
BAUV	El Baul	21.11	98	P	P	02 19 20.1	-1.7
BAUV				IAmb	IAmb	02 19 27.4	
	comp=Z,21nm,0.7s						
Y45A	Yeager Farm, C	21.18	359	P	P	02 19 21.9	-0.4
Z38A	Mt. Pleasant	21.24	347	P	P	02 19 22.8	-0.1
Z38A				IAmb	IAmb	02 19 27.6	
	comp=Z,23nm,0.7s						
WLAR	White Oak Lake	21.30	351	P	P	02 19 23.6	0.0
Y49A	Blount Mountai	21.32	6	P	P	02 19 24.6	+0.7
Y49A				IAmb	IAmb	02 19 26.3	
	comp=Z,16nm,0.8s						
CCAR	Cane Creek	21.36	354	P	P	02 19 24.2	0.0
CCAR				IAmb	IAmb	02 19 29.2	
	comp=Z,37nm,0.8s						
GOGA	Godfrey	21.38	13	P	P	02 19 23.4	-1.1
GOGA				IAmb	IAmb	02 19 28.3	
	comp=Z,16nm,0.8s						
GOGA	Godfrey	21.38	13	P	P	02 19 25.1	+0.7
	baz=195,SNR=12						
TXAR	Lajitas Array	21.40	323	P	P	02 19 26.8	+1.9
	comp=Z,13nm,0.7s,baz=141,slow=10,SNR=96						
	comp=Z,13nm,0.7s						
Y52A	Lilburn	21.69	12	P	P	02 19 26.6	-1.2
OXF	Oxford	21.82	360	P	P	02 19 28.9	-0.3
OXF	Oxford	21.82	360	P	P	02 19 29.7	+0.5
	baz=179,SNR=21						
X48A	Hartselle	21.85	5	P	P	02 19 29.4	-0.1
Z35A	Perchaven, San	21.91	342	P	P	02 19 29.3	-0.9
NHSC	New Hope	22.03	21	P	P	02 19 31.2	-0.2
NHSC	New Hope	22.03	21	P	P	02 19 31.5	0.0
	baz=204,SNR=5.3						
X40A	Basin Creek Fa	22.05	352	P	P	02 19 31.8	+0.2
X40A				IAmb	IAmb	02 19 38.0	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	22.05	352	P	P	02 19 31.4	-0.2
	baz=170,SNR=12						
FPAL	Fort Paine	22.09	8	P	P	02 19 33.1	+0.9
FPAL				IAmb	IAmb	02 19 34.6	
	comp=Z,17nm,0.9s						
ABTX	Abilene, Hawle	22.11	336	P	P	02 19 32.4	0.0
ABTX				IAmb	IAmb	02 19 34.8	
	comp=Z,35nm,1.1s						
ABTX	Abilene, Hawle	22.11	336	P	P	02 19 31.8	-0.6
	baz=152,SNR=16						
MIAR	Mount Ida	22.21	350	P	P	02 19 33.6	+0.3
MIAR	Mount Ida	22.21	350	P	P	02 19 33.4	0.0
	baz=169,SNR=43						
UALR	University of	22.27	353	P	P	02 19 33.6	-0.4
UALR				IAmb	IAmb	02 19 38.0	
	comp=Z,37nm,1.1s						
PLAL	Pickwick Lake	22.32	2	P	P	02 19 33.5	-1.0
HODGE	Hodges	22.45	15	P	P	02 19 36.5	+0.5
HODGE				IAmb	IAmb	02 19 38.5	
	comp=Z,23nm,0.8s						
W45A	Hickory Valley	22.47	0	P	P	02 19 35.8	-0.4
W45A				IAmb	IAmb	02 19 44.8	
	comp=Z,25nm,0.8s						
X37A	Clayton	22.60	347		P	02 19 38.4	+0.8
X37A				IAmb	IAmb	02 19 41.5	
	comp=Z,32nm,0.8s						
W41B	Gary Mavity, V	22.65	354	P	P	02 19 38.4	+0.3
W41B				IAmb	IAmb	02 19 41.0	
	comp=Z,21nm,0.9s						
W41B	Gary Mavity, V	22.65	354	P	P	02 19 38.1	0.0
	baz=172,SNR=18						
SWET	Sewanee	22.72	7	P	P	02 19 38.9	+0.1
WHAR	Wooly Hollow	22.77	353	P	P	02 19 39.7	+0.3
WHAR				IAmb	IAmb	02 19 42.1	
	comp=Z,25nm,0.9s						
JSC	Jenkinsville	22.77	17	P	P	02 19 38.6	-0.8
JSC				IAmb	IAmb	02 19 45.1	
	comp=Z,23nm,1.2s						
W50A	Signal Mountai	22.79	8	P	P	02 19 39.3	-0.2
Y57A	Sumter	22.79	19	P	P	02 19 39.4	-0.2
W39A	Magazine	22.88	350	P	P	02 19 40.2	-0.2
	baz=168						
HBAR	Harrisburg	22.90	357	P	P	02 19 41.0	+0.4
W52A	Murphy	22.91	11	P	P	02 19 40.6	-0.2
Y58A	Scranton	22.93	21	P	P	02 19 41.0	0.0
BG3	Lake Jocassee	23.02	13	P	P	02 19 42.2	+0.3
BG3				IAmb	IAmb	02 19 44.0	
	comp=Z,17nm,1.0s						
PAULI	Pauline	23.13	16	P	P	02 19 43.9	+0.9
PAULI				IAmb	IAmb	02 19 46.6	
	comp=Z,19nm,1.0s						
V48A	Smith Brothers	23.15	5	P	P	02 19 43.0	-0.1
CPCT	Cooper Cave	23.15	10	P	P	02 19 43.0	-0.2
X34A	Smith Ranch, M	23.27	342		P	02 19 45.0	+0.7
GNAR	Gosnell	23.28	358	P	P	02 19 44.9	+0.5
FCAR	Ozark Folk Cen	23.35	354	P	P	02 19 45.5	+0.5
LNXT	Lenox	23.41	359	P	P	02 19 45.6	+0.1
PEBM	Pemiscott Bayo	23.43	359	P	P	02 19 45.2	-0.5
LCAR	Lake Charles	23.44	356	P	P	02 19 46.2	+0.4
LCAR				IAmb	IAmb	02 19 48.0	
	comp=Z,30nm,0.7s						
WVT	Waverly	23.47	3	P	P	02 19 45.9	-0.3
WVT	Waverly	23.47	3	P	P	02 19 46.2	0.0
	baz=183						
TKL	Tuckaleechee C	23.49	11	P	P	02 19 46.7	+0.3
	comp=Z,16nm,0.7s,baz=181,slow=12,SNR=39						
TKL				LR	LR	02 30 43.5	
	comp=Z,117nm,18.0s,baz=180,slow=41						
	comp=Z,16nm,0.7s						
TKL	Tuckaleechee C	23.49	11	P	P	02 19 46.9	+0.5
TKL				IAmb	IAmb	02 19 48.6	
	comp=Z,17nm,0.8s						
V51A	Loudon	23.52	10	P	P	02 19 46.8	+0.2
CLTN	Cedars of Leba	23.54	6	P	P	02 19 46.7	-0.2
CLTN				IAmb	IAmb	02 19 48.9	
	comp=Z,22nm,0.7s						
KMSC	Kings Mountain	23.56	16	P	P	02 19 48.0	+0.9
KMSC				IAmb	IAmb	02 19 48.9	
	comp=Z,20nm,0.7s						
KMSC	Kings Mountain	23.56	16	P	P	02 19 46.8	-0.2
	baz=199,SNR=9.3						
X58A	Rowland	23.64	21	P	P	02 19 48.1	+0.5
V53A	Saluda	23.70	13	IAmb	IAmb	02 19 51.5	
	comp=Z,25nm,1.1s						
WMOK	Wichita Mounta	23.70	340	P	P	02 19 47.3	-1.0
	baz=156,SNR=12						
U40A	Yellville	23.89	353	IAmb	IAmb	02 19 52.8	
	comp=Z,32nm,0.8s						
U40A	Yellville	23.89	353	P	P	02 19 49.8	-0.2
	baz=171,SNR=43						
TUL1	Leonard	23.96	347	P	P	02 19 49.9	-0.8
	baz=164,SNR=6.0						
W57A	Gilead	23.97	19	IAmb	IAmb	02 19 53.3	
	comp=Z,18nm,0.8s						
HHAR	Hobbs	23.97	351	IAmb	IAmb	02 19 52.4	
	comp=Z,11nm,0.8s						
U49A	Red Boiling Sp	24.02	7	IAmb	IAmb	02 19 52.6	
	comp=Z,18nm,0.8s						
MNTX	Cornudas Mount	24.14	325	P	P	02 19 52.6	+0.2
	baz=138,SNR=16						
V55A	Taylorsville	24.26	16	IAmb	IAmb	02 19 56.5	
	comp=Z,12nm,0.8s						
TZTN	Tazewell	24.39	11	P	P	02 19 53.9	-0.7
	baz=193						
MSTX	Muleshoe	24.61	332	IAmb	IAmb	02 19 58.0	
	comp=Z,25nm,1.0s						
MSTX	Muleshoe	24.61	332	P	P	02 19 56.3	-0.4
	baz=147,SNR=5.9						
V58A	Windy Hill, Pi	24.84	20	IAmb	IAmb	02 20 00.3	
	comp=Z,19nm,0.8s						
AMTX	Amarillo	24.91	335	IAmb	IAmb	02 20 01.4	
	comp=Z,42nm,1.1s						
AMTX	Amarillo	24.91	335	P	P	02 19 59.4	0.0
	baz=150						
U56A	King	24.95	17	IAmb	IAmb	02 20 04.0	
	comp=Z,19nm,0.9s						
T35A	Sooner Cattle	25.09	346	IAmb	IAmb	02 20 03.2	
	comp=Z,10nm,0.8s						
S39A	Bolivar	25.26	352	IAmb	IAmb	02 20 03.5	
	comp=Z,19nm,0.5s						
FVM	French Village	25.31	358	IAmb	IAmb	02 20 06.1	
	comp=Z,18nm,0.8s						
CCM	Cathedral Cave	25.42	356	P	P	02 20 04.3	+0.4
CCM	Cathedral Cave	25.42	356	P	P	02 20 03.9	-0.1
	baz=175						
R40A	Maddies Statio	25.74	354	IAmb	IAmb	02 20 11.2	
	comp=Z,26nm,0.8s						
BLA	Blacksburg	25.75	16	IAmb	IAmb	02 20 08.9	
	comp=Z,17nm,0.9s						
BLA	Blacksburg	25.75	16	P	P	02 20 06.1	-0.9
	baz=200						
R49A	Shelbyville	25.85	7	IAmb	IAmb	02 20 08.4	
	comp=Z,12nm,0.8s						
T57A	Hurt	25.90	18	IAmb	IAmb	02 20 10.7	
	comp=Z,15nm,0.9s						
121A	Cookes Peak, D	26.15	322	IAmb	IAmb	02 20 16.9	
	comp=Z,14nm,0.9s						
121A	Cookes Peak, D	26.15	322	P	P	02 20 10.6	-0.2
	baz=135,SNR=13						
T59A	Double "B" Far	26.44	21	IAmb	IAmb	02 20 15.6	
	comp=Z,24nm,0.8s						
BLO	Bloomington	26.58	5	IAmb	IAmb	02 20 15.1	
	comp=Z,8.3nm,0.8s						
Q51A	Peebles	26.84	10	IAmb	IAmb	02 20 18.0	
	comp=Z,18nm,0.8s						
R55A	Marlinton	26.84	16	IAmb	IAmb	02 20 18.3	
	comp=Z,11nm,0.9s						
P43A	Skaggs, Pawnee	26.94	359	IAmb	IAmb	02 20 19.5	
	comp=Z,20nm,0.8s						
P40A	Paris	26.95	355	IAmb	IAmb	02 20 18.6	
	comp=Z,20nm,0.7s						
P48A	Milroy	26.97	6	IAmb	IAmb	02 20 18.1	
	comp=Z,13nm,0.8s						
P46A	Rosedale	26.98	3	IAmb	IAmb	02 20 25.4	
	comp=Z,8.2nm,0.8s						
Q52A	Bidwell	26.98	12	IAmb	IAmb	02 20 19.2	
	comp=Z,12nm,0.8s						
P49A	Miami Univ. Ec	27.13	8	IAmb	IAmb	02 20 19.1	
	comp=Z,7.1nm,0.6s						
P49A	Miami Univ. Ec	27.13	8	P	P	02 20 18.1	-1.2
	baz=190						
ANMO	Albuquerque	27.19	328	P	P	02 20 21.9	+1.7
	comp=Z,0.9nm,0.7s,baz=144,slow=8.5,SNR=5.5						
	comp=Z,0.9nm,0.7s						
ANMO	Albuquerque	27.19	328	P	P	02 20 20.5	+0.3
	baz=141						
P38A	Dawn	27.20	353	IAmb	IAmb	02 20 22.4	
	comp=Z,17nm,0.6s						
KSU1	Kansas State U	27.21	347	P	P	02 20 19.9	-0.1
	baz=164,SNR=15						
R58B	Mineral	27.22	20	IAmb	IAmb	02 20 22.5	
	comp=Z,11nm,1.0s						
NNA	Nana	27.33	153	LR	LR	02 30 51.3	
	comp=Z,37nm,18.7s,baz=281,slow=35						
P51A	Williamsport	27.33	10	IAmb	IAmb	02 20 22.0	
	comp=Z,10nm,0.7s						
O44A	Mansfield	27.46	1	IAmb	IAmb	02 20 23.9	
	comp=Z,12nm,0.7s						
CBN	Corbin Frederi	27.61	20	P	P	02 20 23.5	0.0
	baz=205						
P52A	Corning	27.65	12	P	P	02 20 23.5	-0.5
	baz=195						
P53A	Whipple	27.67	13	IAmb	IAmb	02 20 26.3	
	comp=Z,20nm,0.9s						
CBKS	Cedar Bluff	27.74	342	P	P	02 20 24.1	-0.7
	baz=157						
SFIN	Lafayette	27.74	3	IAmb	IAmb	02 20 26.7	
	comp=Z,9.2nm,0.6s						
SFIN	Lafayette	27.74	3	P	P	02 20 24.4	-0.3
	baz=184						
O48B	Farmland	27.79	7	P	P	02 20 24.5	-0.7
	baz=188						
Q56A	Snyder Ridge,	27.81	17	IAmb	IAmb	02 20 28.5	
	comp=Z,11nm,1.1s						
O49A	Covington	27.82	8	IAmb	IAmb	02 20 26.0	
	comp=Z,9.9nm,0.8s						
HDIL	Hopedale	27.86	360	P	P	02 20 25.4	-0.4

	baz=180,SNR=7.0						
TUC	Tucson	27.87	318	P	P	02 20 26.3	+0.2
TUC				IAmb	IAmb	02 20 33.6	
	comp=Z,9.4nm,0.9s						
TUC	Tucson	27.87	318	P	P	02 20 27.1	+0.9
	baz=130						
T25A	Trinidad	27.98	333	IAmb	IAmb	02 20 30.4	
	comp=Z,9.1nm,0.7s						
T25A	Trinidad	27.98	333	P	P	02 20 27.4	+0.1
	baz=147,SNR=7.0						
ACSO	Alum Creek Sta	28.08	10	IAmb	IAmb	02 20 28.8	
	comp=Z,10nm,0.7s						
ACSO	Alum Creek Sta	28.08	10	P	P	02 20 27.5	-0.2
	baz=193,SNR=5.5						
O52A	Adamsville	28.18	12	IAmb	IAmb	02 20 29.8	
	comp=Z,12nm,0.7s						
MCWV	Mont Chateau	28.20	15	P	P	02 20 28.9	-0.1
	baz=200						
N38A	Joes South For	28.31	354	IAmb	IAmb	02 20 33.0	
	comp=Z,15nm,0.6s						
N47A	Urbana	28.35	6	IAmb	IAmb	02 20 30.4	
	comp=Z,10nm,0.8s						
O53A	New Philadelph	28.44	13	P	P	02 20 30.7	-0.3
	baz=196						
P57A	Homestead Farm	28.56	18	IAmb	IAmb	02 20 34.2	
	comp=Z,19nm,0.8s						
N49A	Columbus Grove	28.57	8	IAmb	IAmb	02 20 33.9	
	comp=Z,13nm,1.2s						
O54A	Avella	28.57	14	IAmb	IAmb	02 20 33.7	
	comp=Z,16nm,0.8s						
N35A	Tabor	28.72	350	IAmb	IAmb	02 20 39.9	
	comp=Z,19nm,0.7s						
SDMD	Soldier's Deli	28.87	20	IAmb	IAmb	02 20 37.1	
	comp=Z,9.1nm,0.7s						
SDCO	Great Sand Dun	28.97	333	P	P	02 20 35.7	-0.4
	baz=146						
214A	Organ Pipe Nat	29.01	315	P	P	02 20 36.6	+0.4
	baz=126						
N53A	Lisbon	29.05	13	IAmb	IAmb	02 20 37.4	
	comp=Z,12nm,0.8s						
W18A	Petrified Fore	29.12	324	P	P	02 20 37.7	+0.3
	baz=135						
SCIA	State Center	29.41	354	P	P	02 20 39.7	+0.1
	baz=172						
L48A	N Adams	29.54	7	IAmb	IAmb	02 20 42.3	
	comp=Z,9.9nm,0.7s						
S22A	4UR Ranch, Cre	29.58	331	P	P	02 20 41.9	+0.3
S22A	4UR Ranch, Cre	29.58	331	P	P	02 20 41.7	+0.2
	baz=143						
SSPA	Standing Stone	29.66	18	P	P	02 20 41.6	-0.2
	baz=203						
M53A	WI Miller and	29.69	13	IAmb	IAmb	02 20 43.1	
	comp=Z,12nm,0.8s						
M53A	WI Miller and	29.69	13	P	P	02 20 41.8	-0.3
	baz=197,SNR=5.1						
BGNE	Belgrade	29.75	346	P	P	02 20 42.2	-0.5
	baz=162						
MVCO	Mesa Verde	29.99	328	P	P	02 20 44.9	-0.1
	baz=140						
AAM	Ann Arbor	29.99	8	IAmb	IAmb	02 20 47.4	
	comp=Z,9.8nm,0.6s						
AAM	Ann Arbor	29.99	8	P	P	02 20 44.7	0.0
	baz=191						
K38A	Parkersburg	30.11	355	IAmb	IAmb	02 20 47.0	
	comp=Z,12nm,0.5s						
M55A	Ridgway	30.18	16	IAmb	IAmb	02 20 47.6	
	comp=Z,8.9nm,0.7s						
JFWS	Jewell Farm	30.23	358	P	P	02 20 46.9	+0.1
	baz=178,SNR=16						
WUAZ	Wupatki	30.36	322	P	P	02 20 48.2	-0.1
	baz=133						
OGNE	Ogallala	30.40	341	P	P	02 20 48.4	-0.1
	baz=155						
ERPA	Erie	30.50	14	P	P	02 20 49.2	0.0
	baz=198						
ISCO	Idaho Springs	30.73	335	P	P	02 20 51.8	+0.1
	baz=147						
PV11	David Mesa, Pa	31.01	329	IAmb	IAmb	02 20 58.4	
	comp=Z,5.8nm,0.7s						
WVNY	West Valley, N	31.11	15	IAmb	IAmb	02 20 55.7	
	comp=Z,18nm,0.8s						
PV23	Carpenter Ridg	31.20	329	P	P	02 20 56.3	+0.5
PV23				IAmb	IAmb	02 20 58.7	
	comp=Z,9.7nm,0.8s						
I40A	Norwalk	31.21	358	IAmb	IAmb	02 20 56.2	
	comp=Z,16nm,0.8s						
PDMCI	Parker Dam,Lak	31.31	318	P	P	02 20 56.6	+0.2
	baz=128						
PAL	Palisades	31.33	23	P	P	02 20 56.1	-0.4
	baz=210						
BINY	Binghamton	31.67	19	P	P	02 20 59.2	-0.4
	baz=205						
ECSD	EROS Data Cent	31.68	350	IAmb	IAmb	02 21 00.1	
	comp=Z,14nm,1.4s						
ECSD	EROS Data Cent	31.68	350	P	P	02 20 59.0	-0.6
	baz=166,SNR=7.8						
H43A	Windswept, Lux	31.79	2	IAmb	IAmb	02 21 01.7	
	comp=Z,14nm,0.7s						
BC3	Big Chuckawall	31.80	316	P	P	02 21 01.3	+0.3
	baz=125						
IRM	Iron Mountain	31.88	317	P	P	02 21 02.4	+0.8
	baz=126						
PHWY	Pilot Hill	31.94	337	IAmb	IAmb	02 21 04.2	
	comp=Z,7.1nm,1.0s						
O20A	White River Ci	32.15	332	IAmb	IAmb	02 21 16.5	
	comp=Z,8.3nm,0.8s						
O20A	White River Ci	32.15	332	P	P	02 21 03.9	-0.1
	baz=143						
BELC	Belle Mtn. Jos	32.37	316	P	P	02 21 06.0	+0.1
	baz=125						
GMRC	Granite Mounta	32.60	317	P	P	02 21 08.4	+0.4
	baz=126						
SPMN	Marine on St.	32.67	355	P	P	02 21 07.9	-0.3
	baz=173,SNR=21						
F42A	Maple Grove Fa	33.07	1	IAmb	IAmb	02 21 12.0	
	comp=Z,14nm,1.1s						
HEC	Hector,Ludlow	33.07	317	P	P	02 21 12.3	+0.2
	baz=125						
TUQ	Turquoise Moun	33.16	318	P	P	02 21 12.8	0.0
	baz=127						
SADO	Sadowa	33.21	13	LR	LR	02 34 40.9	
	comp=Z,90nm,20.4s,baz=189,slow=36						
SADO	Sadowa	33.21	13	IAmb	IAmb	02 21 13.4	
	comp=Z,12nm,0.7s						
DELO	Deloro Mine	33.33	15	IAmb	IAmb	02 21 14.8	
	comp=Z,8.5nm,0.9s						
F36A	Milaca	33.36	355	P	P	02 21 13.9	-0.4
F36A				IAmb	IAmb	02 21 18.7	
	comp=Z,7.4nm,0.9s						
COWI	Conover	33.40	0	P	P	02 21 14.6	0.0
K22A	Casper	33.50	337	IAmb	IAmb	02 21 22.3	
	comp=Z,12nm,1.2s						
K22A	Casper	33.50	337	P	P	02 21 16.3	+0.5
	baz=148						
SAML	Samuel	33.57	128	P	P	02 21 16.6	+0.1
GSC	Goldstone, Bar	33.66	317	P	P	02 21 17.5	+0.3
	baz=125						
FMP	Fort Macarthur	33.81	313	P	P	02 21 18.7	+0.3
	baz=122						
RSSD	Black Hills	33.90	341	P	P	02 21 19.6	+0.3
RSSD				IAmb	IAmb	02 21 21.4	
	comp=Z,7.6nm,0.7s						
RSSD	Black Hills	33.90	341	P	P	02 21 19.4	+0.1
	baz=153						
GWY	Greenwater Val	34.09	318	P	P	02 21 22.1	+1.2
EDW2	Edwards Air Fo	34.23	315	P	P	02 21 22.3	+0.2
	baz=123						
TPNV	Topopah Spring	34.28	320	P	P	02 21 22.8	+0.2
	baz=128						
LONY	Lake Ozonia	34.29	19	IAmb	IAmb	02 21 23.3	
	comp=Z,7.1nm,0.9s						
LONY	Lake Ozonia	34.29	19	P	P	02 21 22.6	+0.2
	baz=206						
LRMC	Laurel Mtn Rad	34.35	316	P	P	02 21 24.3	+1.1
	baz=124						
FURC	Furnace Creek,	34.38	319	P	P	02 21 24.3	+1.0
	baz=127						
S11A	Rachel	34.40	321	IAmb	IAmb	02 21 27.4	
	comp=Z,7.9nm,0.8s						
DUG	Dugway, Tooele	34.46	327	P	P	02 21 24.8	+0.7
	baz=136						
R11A	Troy Canyon, C	34.76	322	P	P	02 21 28.3	+1.6
	baz=130						
PDAR	Pinedale Array	34.85	333	P	P	02 21 26.8	-0.7
	comp=Z,0.6nm,0.5s,baz=123,slow=11,SNR=5.4						
PDAR				PcP	PcP	02 24 01.1	+1.6
	comp=Z,0.9nm,0.6s,baz=142,slow=5.0,SNR=6.6						
	comp=Z,0.6nm,0.5s						
ARVC	Arvin	34.94	315	P	P	02 21 29.4	+1.3
	baz=123						
GRAC	Grapevine Rang	35.02	319	IAmb	IAmb	02 21 32.6	
	comp=Z,7.1nm,0.7s						
GRAC	Grapevine Rang	35.02	319	P	P	02 21 30.2	+1.3
	baz=127						
CWC	Cottonwood Cre	35.16	317	P	P	02 21 31.2	+1.0
	baz=125						
EYMN	Ely	35.30	357	P	P	02 21 30.3	-0.7
	baz=176,SNR=5.5						
LPAZ	La Paz	35.47	143	P	P	02 21 34.4	+0.9
	comp=Z,1.2nm,0.7s,baz=332,slow=6.8,SNR=6.5						
	comp=Z,1.2nm,0.7s						
LPAZ	La Paz	35.47	143	IAmb	IAmb	02 04 44.5	
	comp=Z,3.3nm,0.6s						
VES	Vestal, Richgr	35.50	316	P	P	02 21 33.0	+0.1
	baz=123						
REDW	Red Top Meadow	35.90	333	IAmb	IAmb	02 21 40.4	
	comp=Z,9.6nm,0.8s						
AGMN	Agassiz Nation	36.03	352	P	P	02 21 36.8	-0.5
	baz=169,SNR=20						
TPAW	Teton Pass	36.05	333	IAmb	IAmb	02 21 45.1	
	comp=Z,9.9nm,1.1s						
PB12	IPOC Station P	36.17	149	IAmb	IAmb	02 04 58.7	
	comp=Z,10nm,0.6s						
MDND	Maddock	36.21	348	P	P	02 21 39.1	+0.3
	baz=163,SNR=8.4						
PB16	IPOC Station P	36.36	147	IAmb	IAmb	02 04 53.4	
	comp=Z,9.4nm,1.0s						
OMMB	Old Mammoth Mi	36.44	318	P	P	02 21 42.4	+1.1
NVAR	Mina Array Bea	36.48	320	P	P	02 21 43.7	+2.2
	comp=Z,5.0nm,0.9s,baz=137,slow=9.0,SNR=29						
NVAR				PcP	PcP	02 24 06.3	+2.0
	comp=Z,2.0nm,0.7s,baz=138,slow=3.8,SNR=9.5						
	comp=Z,5.0nm,0.9s						
LHV	Little Huntoon	36.49	320	IAmb	IAmb	02 21 45.5	
	comp=Z,8.0nm,0.8s						
RLMT	Red Lodge	36.66	336	IAmb	IAmb	02 21 46.2	
	comp=Z,5.1nm,0.9s						
RLMT	Red Lodge	36.66	336	P	P	02 21 43.4	+0.4
	baz=146,SNR=7.2						
VLDQ	Val d'Or	36.75	13	IAmb	IAmb	02 21 44.0	
	comp=Z,5.8nm,0.9s						
LATQ	La Tuque	37.32	18	IAmb	IAmb	02 21 49.5	
	comp=Z,12nm,0.7s						
HLID	Hailey	37.73	330	P	P	02 21 52.7	+0.6
	baz=137						
DGMT	Dagmar	37.88	344	P	P	02 21 53.6	+0.6
	baz=156						
ULM	Lac du Bonnet	37.95	353	P	P	02 21 52.4	-1.1
	comp=Z,12nm,0.6s,baz=172,slow=7.8,SNR=14						
ULM				LR	LR	02 39 52.8	
	comp=Z,100nm,20.4s,baz=166,slow=40						
	comp=Z,12nm,0.6s						
ULM	Lac du Bonnet	37.95	353	IAmb	IAmb	02 21 53.4	
	comp=Z,12nm,0.7s						
BOZ	Bozeman (W)	38.01	334	P	P	02 21 55.1	+0.8
	baz=143,SNR=5.8						
BEKR	Beckworth	38.61	320	P	P	02 22 01.3	+1.8
MSO	Missoula	39.97	333	P	P	02 22 10.9	+0.3
	baz=140						
BMO	Blue Mountains	40.11	329	P	P	02 22 12.1	+0.3
LVC	Limon Verde	40.25	150	LR	LR	02 38 30.6	
	comp=Z,60nm,18.0s,baz=250,slow=35						
F10A	Beach Ranch, E	40.86	330	P	P	02 22 18.2	+0.3
L04D	Klamath Falls	41.18	322	P	P	02 22 20.9	+0.2
	baz=126						
J04D	Umpqua Nationa	41.68	323	P	P	02 22 24.7	-0.1
	baz=127						
HOOD	Mount Hood Mea	42.71	326	IAmb	IAmb	02 22 36.1	
	comp=Z,11nm,0.9s						
EDM	Edmonton	44.86	340	IAmb	IAmb	02 22 51.2	
	comp=Z,16nm,1.0s						
SCHQ	Schefferville	45.66	18	P	P	02 22 55.5	-0.9
	comp=Z,16nm,0.7s,baz=219,slow=6.4,SNR=38						
SCHQ				PcP	PcP	02 24 32.5	-1.2
	comp=Z,2.3nm,0.7s,baz=235,slow=4.1,SNR=4.3						
	comp=Z,16nm,0.7s						
SCHQ	Schefferville	45.66	18	P	P	02 22 55.3	-1.1
SCHQ				PcP	PcP	02 24 34.3	+0.7
FCC	Fort Churchill	46.23	356	P	P	02 23 00.6	-0.2
FCC				IAmb	IAmb	02 23 05.6	
	comp=Z,9.2nm,0.8s						
H03N2	Juan Fernandez	46.81	168	T	T	03 13 22.6	
	baz=347,slow=76,SNR=4.8						
H03N1	Juan Fernandez	46.82	168	T	T	03 13 27.1	
	baz=347,slow=76,SNR=5.5						
H03N3	Juan Fernandez	46.83	168	T	T	03 13 24.8	
	baz=347,slow=76,SNR=6.3						
BDFB	Brasilia	49.48	123	P	P	02 23 27.0	+0.3
	comp=Z,2.8nm,0.8s,baz=298,slow=1.7,SNR=5.0						
	comp=Z,2.8nm,0.8s						
BDFB	Brasilia	49.48	123	P	P	02 23 27.3	+0.5
BDFB				IAmb	IAmb	02 23 45.3	
	comp=Z,6.2nm,1.1s						
CPUP	Villa Florida	49.58	141	P	P	02 23 26.9	-0.3
	comp=Z,2.5nm,1.0s,baz=38,slow=8.5,SNR=3.0						
	comp=Z,2.5nm,1.0s						
YKA	Yellowknife Ar	53.03	346	P	P	02 23 52.5	0.0
	comp=Z,9.5nm,0.8s,baz=147,slow=6.7,SNR=26						
YKA				PcP	PcP	02 25 02.0	+1.7
	comp=Z,0.8nm,0.6s,baz=145,slow=3.7,SNR=4.0						
	comp=Z,9.5nm,0.8s						
DLBC	Dease Lake	55.05	335	P	P	02 24 07.5	+0.1
	baz=129						
RCBR	Riachuelo	56.05	106	LR	LR	02 51 28.0	
	comp=Z,105nm,18.1s,baz=110,slow=40						
NUUK	Nuuk	57.73	18	*i* P	P	02 24 26.3	+0.1
NUUK				IAmb	IAmb	02 24 27.4	
	comp=Z,19nm,1.0s						
MMPY	Sheldon Lake,	58.18	339	P	P	02 24 29.7	+0.2
	baz=130						
N30M	Aishikik Lake	59.70	336	P	P	02 24 39.8	-0.2
	baz=123						
YUK6	Outpost Mounta	59.95	335	P	P	02 24 41.3	-0.7
	baz=121						
SFJD	Kangerlussuaq	60.06	16	LR	LR	02 51 42.1	
	comp=Z,65nm,18.2s,baz=220,slow=37						
SFJD	Kangerlussuaq	60.06	16	*e*P	P	02 24 42.0	-0.3
SFJD				IAmb	IAmb	02 24 49.7	
	comp=Z,19nm,1.3s						
M30M	Minto, Yukon	60.20	337	P	P	02 24 43.0	-0.5
	baz=124						
YUK8	Steele Glacier	60.71	335	P	P	02 24 46.5	-0.7
	baz=120						
DY2G	Dye2	60.97	18	*i* P	P	02 24 47.0	-1.9
DY2G				IAmb	IAmb	02 24 50.3	
	comp=Z,6.7nm,1.0s						
YUK3	Moose Creek	61.24	335	P	P	02 24 50.2	-0.6
	baz=120						
M27K	Edge Creek, AK	62.11	335	P	P	02 24 56.2	-0.3
	baz=118						
MCARA	McCarthy VSAT	62.14	334	P	P	02 24 56.0	-0.5
	baz=117						
L27K	Beaver Creek,	62.43	336	P	P	02 24 57.9	-0.6
	baz=119						
INK	Inuvik	62.56	343	LR	LR	02 59 22.3	
	comp=Z,43nm,18.0s,baz=136,slow=43						
INK	Inuvik	62.56	343	P	P	02 24 59.8	+0.7
INK				IAmb	IAmb	02 25 11.2	
	comp=Z,5.3nm,1.0s						
INK	Inuvik	62.56	343	P	P	02 24 58.5	-0.7
	baz=130						
M26K	Nabesna, AK	62.59	335	P	P	02 24 59.3	-0.3
	baz=118						
N25K	Chitina, Valde	62.91	334	P	P	02 25 01.4	-0.4
	baz=116						
K27K	Chicken	63.00	337	P	P	02 25 01.8	-0.4
	baz=119						
EGAK	Eagle	63.03	338	P	P	02 25 02.2	-0.2
	baz=120						
ANGG	Ammassalik, Gr	63.33	21	*i* P	P	02 25 01.3	-3.0
ANGG				IAmb	IAmb	02 27 37.4	
	comp=Z,2.4nm,0.6s						
KLU	Klutina	63.44	333	P	P	02 25 04.3	-1.0
	baz=114						
SCRK	Sand Creek	63.72	336	P	P	02 25 07.3	+0.2
	baz=117						
J26L	Joseph Creek	63.80	337	P	P	02 25 07.3	-0.3
	baz=118						
PAX	Paxson	63.87	335	P	P	02 25 07.6	-0.4
	baz=115						
RIDG	Independent Ri	63.95	336	P	P	02 25 08.1	-0.5
	baz=116						
SCM	Sheep Creek Mo	64.19	333	P	P	02 25 10.2	0.0
	baz=113						
M23K	Glacier View	64.35	333	P	P	02 25 10.9	-0.3
	baz=112						
K24K	Donnelly Dome	64.35	336	P	P	02 25 11.0	-0.1
	baz=115						
KNK	Knik Glacier	64.53	333	P	P	02 25 11.9	-0.5
	baz=112						
J25K	Salcha River,	64.54	337	P	P	02 25 11.8	-0.6
	baz=116						
ICESG	Greenland Ices	64.57	18	*i* P	P	02 25 11.2	-1.7
SML	Sawmill	64.62	333	P	P	02 25 12.6	-0.4
	baz=112						
WAT6	Susitna Watana	64.66	334	P	P	02 25 13.0	-0.3
	baz=113						
HDA	Harding Lake	65.07	336	P	P	02 25 15.8	0.0
	baz=114						
IL31		65.20	336	IAmb	IAmb	02 25 18.3	
	comp=Z,4.0nm,0.9s						
ILAR	Eielson Array	65.20	336	P	P	02 25 16.5	-0.1
	comp=Z,2.4nm,1.0s,baz=134,slow=4.2,SNR=16						
	comp=Z,2.4nm,1.0s						
KDAK	Kodiak Island	65.33	328	LR	LR	02 56 29.7	
	comp=Z,53nm,18.7s,baz=153,slow=38						
RND	Reindeer	65.45	335	P	P	02 25 19.1	+0.7
RND				IAmb	IAmb	02 25 20.0	
	comp=Z,7.2nm,0.8s						
BMAR	Burnt Mountain	65.54	340	P	P	02 25 19.6	+0.7
POKR	Poker Plat Res	65.56	337	P	P	02 25 18.5	-0.4
	baz=114						
NEA2	Nenana	65.99	336	P	P	02 25 21.5	-0.2
	baz=112						
H24K	Noodor Dome	66.02	337	P	P	02 25 21.6	-0.4
	baz=114						
TRF	Thorofare Moun	66.06	335	P	P	02 25 21.8	-0.7
	baz=111						
I23K	Minto, Yukon-K	66.32	336	IAmb	IAmb	02 25 25.3	
	comp=Z,5.2nm,0.8s						
I23K	Minto, Yukon-K	66.32	336	P	P	02 25 23.5	-0.3
	baz=112						
BPAW	Bear Paw Mtn.	66.58	335	IAmb	IAmb	02 25 26.6	
	comp=Z,3.9nm,0.7s						
BPAW	Bear Paw Mtn.	66.58	335	P	P	02 25 25.5	0.0
	baz=110						
M20K	Styx River	66.79	332	P	P	02 25 26.3	-0.7
	baz=107						
MLY	Manley	66.81	336	IAmb	IAmb	02 25 28.2	
	comp=Z,5.0nm,0.7s						
MLY	Manley	66.81	336	P	P	02 25 26.7	-0.4
	baz=111,SNR=9.6						
SUMG	Summit	66.89	15	P	P	02 25 27.9	+0.1
SUMG				IAmb	IAmb	02 25 30.8	
	comp=Z,6.1nm,1.1s						
SUMG	Summit	66.89	15	*i* P	P	02 25 27.4	-0.3
MG04	Isla Riesco	66.93	168	P	P	02 25 29.8	+2.1
CHUM	Lake Minchumin	67.06	335	P	P	02 25 28.3	-0.2
	baz=109						
N19K	Bonanza Creek	67.11	331	P	P	02 25 28.2	-0.9
	baz=106						
L20K	Farewell, AK	67.30	333	P	P	02 25 29.0	-1.1
	baz=107						
I21K	Tanana	67.36	336	P	P	02 25 29.2	-1.2
	baz=110						
M19K	Big River Lodg	67.37	332	P	P	02 25 29.8	-0.8
	baz=106						
COLD	Coldfoot	67.43	338	P	P	02 25 30.3	-0.5
	baz=112						
K20K	Telida	67.64	334	P	P	02 25 32.0	-0.3
	baz=107						
N18K	Kilae Creek	67.74	331	P	P	02 25 32.5	-0.5
	baz=104						
TOLK	Toolik Lake Re	67.76	340	P	P	02 25 32.7	-0.3
	baz=114						
H21K	Melozitna Rive	67.84	336	P	P	02 25 33.7	+0.2
	baz=109						
J20K	Nowinta River	67.92	335	P	P	02 25 33.7	-0.2
	baz=107						
TTA	Tatalina	68.37	333	P	P	02 25 35.7	-1.2
	baz=105						
DAG	Danmarks Havn	73.41	13	*i* P	P	02 26 06.0	-1.1
GAMB	Gambell	75.48	333	P	P	02 26 18.5	-0.8
	baz=91						
ESDC	Sonseca Array	78.46	52	P	P	02 26 35.5	-1.2
	comp=Z,0.7nm,0.8s,baz=286,slow=4.6,SNR=7.7						
	comp=Z,0.7nm,0.8s						
MDT	Midelt	78.81	59	LR	LR	02 58 51.9	
	comp=Z,44nm,18.4s,baz=326,slow=34						
SPITS	Spitsbergen Ar	80.92	12	LR	LR	03 04 04.1	
	comp=Z,46nm,18.7s,baz=260,slow=37						
NOA	NORSAR Array B	84.08	29	P	P	02 27 05.8	-0.2
	comp=Z,0.6nm,0.8s,baz=286,slow=5.0,SNR=3.5						
NOA				LR	LR	03 00 27.9	
	comp=Z,22nm,22.0s,baz=260,slow=33						
	comp=Z,0.6nm,0.8s						
HFS	Hagfors	85.51	29	LR	LR	03 01 07.4	
	comp=Z,34nm,22.0s,baz=260,slow=33						
TORD	Torodi Ar. Bea	88.06	77	P	P	02 27 25.2	-1.2
	comp=Z,0.8nm,0.7s,baz=295,slow=5.1,SNR=13						
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	88.06	77	P	P	02 27 25.6	-0.9
GERES	GERESS Array B	88.94	40	P	P	02 27 28.3	-1.8
	comp=Z,0.4nm,0.8s,baz=27,slow=3.3,SNR=4.6						
	comp=Z,0.4nm,0.8s						
FINES	FINESS Array B	90.60	26	P	P	02 27 37.8	+0.4
	comp=Z,0.8nm,0.9s,baz=250,slow=5.5,SNR=3.4						
	comp=Z,0.8nm,0.9s						
FINES	FINESS Array B	90.60	26	P	P	02 27 38.5	+1.1
NRIK	Noril'sk	98.25	1	LR	LR	03 14 17.5	
	comp=Z,50nm,20.3s,baz=48,slow=36						
BOSA	Boshof	117.31	116	PKP	PKiKP	02 33 22.1	+0.8
	comp=Z,2.2nm,0.7s,baz=188,slow=9.4,SNR=2.2						
SONM	Songino Array	118.26	348	PKP	PKiKP	02 33 23.9	+1.2
	comp=Z,1.2nm,0.7s,baz=15,slow=1.8,SNR=5.6						
SONM	Songino Array	118.26	348		PKPdf	02 33 23.1	+0.4
MKAR	Makanchi Array	120.40	7	PKP	PKiKP	02 33 27.6	+0.8
	comp=Z,0.2nm,0.4s,baz=305,slow=3.3,SNR=4.5						
MKAR	Makanchi Array	120.40	7		PKPdf	02 33 26.9	+0.2
LZH	Lanzhou	130.04	346	*e*PKP	PKiKP	02 33 47.5	+1.1
LZH				sPKP		02 34 03.8	
WRA	Warramunga Arr	137.65	254	PKP	PKiKP	02 34 01.7	-0.3
	comp=Z,1.3nm,0.8s,baz=90,slow=1.3,SNR=8.7						
ASAR	Alice Springs	137.72	249	PKP	PKiKP	02 34 01.7	-0.4
	comp=Z,0.9nm,0.8s,baz=101,slow=1.5,SNR=8.5						
ASAR	Alice Springs	137.72	249		PKPdf	02 34 00.5	+0.4
PZH	PanZhiHua	139.71	345	PKP	PKiKP	02 34 18.0	+12
CMAR	Chiang Mai Arr	148.12	345	PKPbc	PKPbc	02 34 21.5	-0.3
	comp=Z,9.5nm,0.8s,baz=336,slow=3.4,SNR=31						

IDC ***31*** *03:11:16.7±0.9, 3°.79S×131°.62E, h0km, mb4.2/5, mbtmp4.2/7, ML3.8/2, MS3.2/3, Error ellipse: s-maj=72.4km s-min=17.3km az=69.0*

DJA ***31*** *03:11:19.9±1.7, 4°S±4°×13°2E±°, h19km±17km, M4.4/7, mb5.0/4, mB5.3/1, MLv4.1/7, Mw(mB)4.8/1*

ISC 31 03:11:18.2±0.6**, 3°.74S**±0°.05×**131°.80E**±0°.06**, h10km, n33,** σ**1ˢ.58**/34**, mb4.2**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FAKI	Fak Fak	0.93	29	P	Pg	03 11 37.3	+1.1
FAKI				S	Sb	03 11 49.2	+0.2
FAKI	Fak Fak	0.93	29	P	Pb	03 11 37.9	+1.4
KMPI	Kaimana, Papua	1.91	88	P	Pn	03 11 51.6	+0.8
BNDI	Bandanaira	2.04	248	P	Pn	03 11 55.9	+3.2
MSAI	Masohi	2.89	278	P	Pn	03 12 05.9	+1.5
SIJI	Sorong	2.90	349	Pn	Pn	03 12 04.3	-0.3
	3.5nm,0.3s,baz=153,slow=22,SNR=15						
SIJI				Sn	Sn	03 12 36.6	-2.9
	26nm,0.3s,baz=256,slow=23,SNR=5.5						
SIJI				LR	LR	03 13 48.2	
	comp=Z,211nm,20.8s,baz=206,slow=52						
	7.3nm,0.2s						
SWI	Sorong	2.91	349	P	Pn	03 12 04.6	0.0
AAI	Ambon	3.60	271	P	Pn	03 12 16.6	+2.5
BAKI	Biak	5.00	60	P	Pn	03 12 34.1	+0.8
KDU	Kakadu	8.91	176	P	Pn	03 13 26.5	-0.7
SOEI	Soe	9.57	231	P	Pn	03 13 38.1	+1.8
	44nm,0.7s						
KNRA	Kununurra	12.23	194	P	Pn	03 14 10.9	-1.7
DAV	Davao City (W)	12.40	330	LR	LR	03 19 51.0	
	comp=Z,88nm,18.3s,baz=351,slow=42						
COEN	Coen	15.14	133	P	Pn	03 14 51.4	-0.9
WRAB	Tennant Creek	16.29	171	P	Pn	03 15 05.0	-2.2
WRA	Warramunga Arr	16.29	171	Pn	Pn	03 15 02.3	-5.1
	0.6nm,0.3s,baz=346,slow=13,SNR=21						
WRA				Sn	Sn	03 17 53.4	-15
	1.1nm,0.3s,baz=353,slow=23,SNR=8.7						
QIS	Mount Isa	18.36	156	P	Pn	03 15 33.2	0.0
ASAR	Alice Springs	19.91	174	P	P	03 15 50.4	+0.1
	1.0nm,0.3s,baz=352,slow=9.7,SNR=57						

ASAR				S	S	03 19 22.4	-12
	1.2nm,0.7s,baz=354,slow=23,SNR=5.2						
	7.1nm,0.6s						
PSA00	Pilbara Seismi	21.19	212	P	P	03 16 03.3	-0.8
WRKA	Warakurna	21.44	189	P	P	03 16 07.0	+0.2
CTA	Charters Tower	21.51	140	P	P	03 16 08.4	+0.9
	6.2nm,0.7s,baz=311,slow=8.9,SNR=6.1						
CTA				LR	LR	03 26 05.3	
	comp=Z,126nm,20.7s,baz=260,slow=41						
	6.2nm,0.7s						
OOD	Oodnadatta	24.21	172	P	P	03 16 35.3	+0.1
INKA	Innaminka	25.35	161	P	P	03 16 46.2	+0.7
MULG	Mulgathing	26.48	176	P	P	03 16 57.4	+1.6
FORT	Forrest	27.12	187	P	P	03 17 01.8	+0.2
LCRK	Leigh Creek	27.25	168	P	P	03 17 03.3	+0.6
STKA	Stephens Creek	29.46	163	P	P	03 17 22.2	-0.3
	1.7nm,0.4s,baz=347,slow=9.1,SNR=8.9						
	1.7nm,0.4s						
STKA	Stephens Creek	29.46	163	P	P	03 17 22.7	+0.2
MKAR	Makanchi Array	66.54	325	P	P	03 22 08.8	+0.3
	2.8nm,0.7s,baz=118,slow=8.5,SNR=29						
	2.8nm,0.7s						
ZALV	Zalesovo Beam	69.50	333	P	P	03 22 26.3	-0.6
	1.2nm,0.5s,baz=108,slow=9.5,SNR=4.3						
	1.2nm,0.5s						
VNDA	Vanda	75.45	174	P	P	03 23 01.6	-0.5
	0.9nm,0.7s,baz=309,slow=5.8,SNR=5.1						
	0.9nm,0.7s						
TORD	Torodi Ar. Bea	129.85	284	PKP	PKPdf	03 30 28.1	-1.0
	0.5nm,0.6s,baz=56,slow=2.6,SNR=3.5						
LPAZ	La Paz	152.00	136	PKPbc	PKPbc	03 31 16.1	+0.6
	0.9nm,0.7s,baz=237,slow=4.9,SNR=4.2						

IDC 31 03:22:07.3±1.7**, 7°.38S**×**128°.22E, h0^{km}, mb3.9**/1**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=62.6km s-min=29.4km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	7.14	25	Pn	Pn	03 23 53.6	+0.5
	2.2nm,0.3s,baz=182,slow=22,SNR=13						
SIJI				Sn	Sn	03 25 01.7	-13
	1.1nm,0.3s,baz=256,slow=23,SNR=1.5						
	7.1nm,0.2s						
WRA	Warramunga Arr	13.83	155	Pn	Pn	03 25 23.7	-1.1
	0.4nm,0.3s,baz=336,slow=14,SNR=17						
WRA				Sn	Sn	03 27 46.7	-13
	1.3nm,0.3s,baz=332,slow=22,SNR=12						
	1.4nm,0.8s						
ASAR	Alice Springs	17.09	162	P	P	03 26 08.9	-0.8
	0.3nm,0.3s,baz=345,slow=14,SNR=9.5						
	0.6nm,0.4s						
MKAR	Makanchi Array	67.59	328	P	P	03 33 05.7	-0.1
	0.6nm,0.5s,baz=126,slow=8.0,SNR=8.9						
	0.6nm,0.5s						

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*IDC **31** 03:26:42.8±7.8, 7°.28S×128°.18E, h112^{km}±72^{km}, mb3.4/3, mbtmp4.1/6, ML4.4/3, Error ellipse: s-maj=95.6km s-min=24.3km az=51.0*

*DJA **31** 03:26:45.6±0.7, 8°S±5°×12°8E±°, h221^{km}±30^{km}, M4.3/8, mb4.3/3, mB4.8/4, MLv4.4/8, Mw(mB)4.1/4*

ISC 31 03:26:45.8±0.9**, 7°.68S**±0°.07×**127°.97E**±0°.09**, h142^{km}, n12, σ2^{s}08**/15**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	4.20	240	P	Pn	03 27 49.3	+0.6
BATI	Baumata	4.94	239	P	Pn	03 28 00.3	+1.9
	14nm,0.3s,baz=116,slow=0.4,SNR=7.8						
BATI				S	Sn	03 28 55.0	+0.1
	104nm,0.4s,baz=125,slow=4.7,SNR=14						
	38nm,0.3s						
BATI	Baumata	4.94	239	P	Pn	03 27 59.5	+1.1
SANI	Sanana	5.93	340	P	Pn	03 28 13.0	+1.5
FAKI	Fak Fak	6.36	42	P	Pn	03 28 18.9	+1.5
	0.1nm877nm11nm,1.0s						
LBMI	Labuha	7.01	356	P	Pn	03 28 23.4	-2.6
	0.2nm1μm30nm,0.7s						
WRA	Warramunga Arr	13.67	154	P	Pn	03 29 54.6	+0.6
	3.1nm,0.3s,baz=327,slow=13,SNR=25						
WRA				S	Sn	03 32 21.4	-3.8
	4.9nm,0.5s,baz=320,slow=26,SNR=7.8						
	9.7nm,0.5s						
ASAR	Alice Springs	16.89	161	P	Pn	03 30 35.5	+1.6
	0.5nm,0.3s,baz=326,slow=10,SNR=8.4						
ASAR				S	S	03 33 39.5	-2.8
	3.1nm,0.7s,baz=318,slow=17,SNR=11						
	2.8nm,0.6s						
STKA	Stephens Creek	27.22	154	P	P	03 32 19.3	+2.8
	0.7nm,0.5s,baz=346,slow=8.9,SNR=3.7						
	0.7nm,0.5s						
MKAR	Makanchi Array	67.70	328	P	P	03 37 27.1	-0.7
	0.2nm,0.4s,baz=142,slow=4.9,SNR=2.1						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	71.31	335	P	P	03 37 48.4	-1.4
	0.8nm,0.6s,baz=114,slow=6.6,SNR=1.9						
	0.8nm,0.6s						
TORD	Torodi Ar. Bea	126.96	281	PKP	PKiKP	03 45 33.9	-0.6
	0.3nm,0.7s,baz=72,slow=3.3,SNR=2.2						

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*DNK **31** 03:41:31.4±0.9, 51°.22N×14°.94E, h0^{km}, ML2.0(UPP), Suspected explosion*

*IPEC **31** 03:41:33.4±0.3, 51°.48N×16°.27E, h1^{km}, ML2.6/5, Error ellipse: s-maj=2.0km s-min=1.1km az=41.0*

*UPP **31** 03:41:34.5±3.2, 51°.36N×14°.93E, h0^{km}, ML2.0, Suspected explosion*

*PRU **31** 03:41:34.2±0.0, 51°.45N×16°.22E, h0^{km}*

*VIE **31** 03:41:35.4±1.5, 51°.35N×16°.25E, h0^{km}, mb2.4/5, ml2.7/8, Error ellipse: s-maj=10.2km s-min=8.3km az=16.0 60 km WNW of Wroclaw Suspected Mining induced.*

ISC 31 03:41:32.2±0.8**, 51°.54N**±0°.03×**16°.29E**±0°.03**, h0^{km}, n41, σ1^{s}21**/77**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.69	180	ePg	Pg	03 41 45.6	+0.1
KSP				eSg	Sg	03 41 53.5	-1.0
CHVC	Chvalec	0.96	189	ePG	Pg	03 41 50.5	-0.1
CHVC				eSG	Sg	03 42 02.3	-0.8
	comp=Z,49nm,0.5s						
OSTC	Ostas	0.98	183	ePG	Pg	03 41 50.8	-0.3
OSTC				eSG	Sg	03 42 03.4	-0.4
	comp=Z,34nm,0.6s						
UPC	Upice	1.05	190	ePG	Pg	03 41 51.8	-0.5
UPC				eSG	Sg	03 42 04.7	-1.1
	comp=Z,78nm,0.4s						
DPC	Dobruska-Polom	1.19	179	ePG	Pg	03 41 54.6	-0.4
DPC				eSG	Sg	03 42 08.8	-1.6
	comp=Z,79nm,0.8s						
PVCC	Panska Ves	1.48	228	ePG	Pn	03 42 00.5	+0.3
PVCC				eSG	Sg	03 42 19.0	-0.9
	comp=Z,144nm,0.4s						
KRLC	Kraliky	1.50	168	ePG	Pn	03 42 00.0	-0.4
KRLC				eSG	Sg	03 42 19.7	-0.6
	comp=Z,42nm,0.5s						
BRG	Berggiesshubel	1.62	247	Pg	Pb	03 42 03.1	+0.1
BRG				Sg	Sn	03 42 23.3	-0.3
BRG				Amp		03 42 25.7	
	comp=Z,54nm,0.8s						
PRU	Pruhonice	1.91	216	ePG	Pb	03 42 07.2	-0.7
PRU				eSG	Sb	03 42 31.2	-1.0
	comp=Z,50nm,0.9s						
MORC	Moravsky Berou	1.93	155	ePn	Pn	03 42 06.5	+0.1
	baz=335						
MORC				eSg	Sb	03 42 32.5	-0.5
	comp=Z,30nm,0.6s,baz=335						
MORC	Moravsky Berou	1.93	155	ePN	Pn	03 42 06.5	+0.1
MORC				eSG	Sb	03 42 32.6	-0.5
OKC	Ostrava-Krasne	2.07	145	ePG	Pb	03 42 11.5	+0.8
OKC				eSG	Sg	03 42 38.2	-0.5
	comp=Z,34nm,0.6s						
CLL	Collm	2.07	265	ePg	Pb	03 42 11.0	+0.3
CLL				eSg	Sg	03 42 39.0	+0.2
	comp=Z,19nm,1.0s						
VRAC	Vranov	2.24	175	ePn	Pn	03 42 10.7	+0.1
	baz=355						
VRAC				eSg	Sb	03 42 41.6	-0.2
	comp=Z,27nm,0.7s,baz=355						
VRAC	Vranov	2.24	175	ePN	Pn	03 42 10.7	+0.1
VRAC				eSG	Sb	03 42 41.7	-0.1
TREC	Trest	2.30	193	ePG	Pb	03 42 14.5	-0.2
TREC				eSG	Sb	03 42 43.5	-0.2
	comp=Z,17nm,0.5s						
MAUC	Maruska	2.38	155	ePN	Pn	03 42 13.8	+1.2
MAUC				ePG	Pb	03 42 16.1	0.0
MAUC				eSG	Sg	03 42 48.5	-0.3
	comp=Z,66nm,0.9s						
KRUC	Moravsky	2.48	178	ePn	Pn	03 42 14.3	+0.5
	baz=358						
KRUC				eSg	Sb	03 42 49.3	+0.6
	comp=Z,24nm,0.8s,baz=358						
KRUC	Moravsky	2.48	178	ePN	Pn	03 42 14.3	+0.5
KRUC				eSG	Sb	03 42 49.4	+0.7
NKC	Novy Kostel	2.76	243	ePN	Pn	03 42 18.3	+0.5
NKC				ePG	Pb	03 42 23.8	+1.3
NKC				eSG	Sg	03 43 00.1	-0.8
	comp=Z,24nm,0.6s						
JAVC	Velka Javorina	2.82	161	ePN	Pn	03 42 19.3	+0.7
KHC	Kasperske Hory	2.97	217	ePN	Pn	03 42 20.8	+0.1
KHC				ePG	Pb	03 42 26.4	+0.4
KHC				eSN	Sn	03 42 56.0	-1.0
KHC				eSG	Sg	03 43 05.0	-2.6
	comp=Z,18nm,0.7s						
CKRC	Cesky Krumlov	3.00	206	ePN	Pn	03 42 21.5	+0.4
CKRC				ePG	Pb	03 42 27.5	+0.9
CKRC				eSG	Sb	03 43 05.7	+1.9
MODS	Modra-Piesok	3.23	168	ePG	Pg	03 42 33.8	-0.3
MODS				eSG	Sg	03 43 16.0	0.0
KOLL	Kolacno	3.26	155	ePG	Pg	03 42 34.9	+0.2
KOLL				eSG	Sg	03 43 14.1	-2.8
ZST	Bratislava	3.39	171	eSG	Sg	03 43 17.5	-3.4
CONA	Conrad Observa	3.62	185	ePn	Pn	03 42 30.3	+0.7
	comp=Z,0.1nm,0.1s						
CONA				eSn	Sn	03 43 15.6	+2.4
	comp=Z,3.8nm,0.3s						
RONA	Rosalia, Austr	3.84	180	ePn	Pn	03 42 33.3	+0.7
	comp=Z,0.7nm,0.2s						
RONA				eSn	Sn	03 43 18.0	-0.5
	comp=Z,2.9nm,0.3s						
MOA	Molln	3.92	200	ePn	Pn	03 42 34.2	+0.5
	comp=Z,1.0nm,0.2s						
MOA				eSn	Sn	03 43 21.4	+1.1
	comp=Z,6.5nm,0.5s						
BIOA	Bad Ischl, Aus	4.22	205	eSn	Sn	03 43 31.7	+3.9
	comp=Z,10nm,0.5s						
ARSA	Arzberg	4.32	187	ePn	Pn	03 42 39.2	0.0
	comp=Z,0.4nm,0.2s						
ARSA				eSg	Sg	03 43 51.0	0.0
	comp=Z,11nm,0.6s						
LUNU	Lund	4.44	339	P	Pn	03 42 41.6	+0.9
LUNU				S	Sn	03 43 32.7	-0.4
LUNU	Lund	4.44	339	P	Pn	03 42 41.6	+0.9
LUNU				S	Sn	03 43 32.7	-0.4
KBA	Koelnbreinsper	4.86	205	eSg	Sg	03 44 04.0	-4.3
	comp=Z,4.6nm,0.6s						
BJUU	Bjuv	4.94	338	S	Sn	03 43 43.5	-1.9
BJUU	Bjuv	4.94	338	S	Sn	03 43 43.5	-1.9
DEL	Delary	5.14	345	P	Pn	03 42 51.5	+1.1
DEL	Delary	5.14	345	P	Pn	03 42 51.5	+1.1
WTTA	Wattenberg	5.25	217	ePg	Pg	03 43 12.7	0.0
	comp=Z,0.5nm,0.2s						
WTTA				eSn	Sn	03 43 54.3	+1.0
	comp=Z,2.5nm,0.5s						
GNOU	Gnosjoe	5.95	347	P	Pn	03 43 03.2	+1.7
GNOU	Gnosjoe	5.95	347	P	Pn	03 43 03.2	+1.7

IDC 31 03:54:55.3±4.4**, 4°.29S**×**150°.56E, h88^{km}**±53^{km}**, mb2.9**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=72.3km s-min=33.1km az=133.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.46	91	P	Pn	03 55 21.2	+0.8
	42nm,0.3s,baz=286,slow=0.1,SNR=5.5						
KRVT				S	Sn	03 55 39.3	-0.2
	96nm,0.5s,baz=168,slow=23,SNR=4.8						
WRA	Warramunga Arr	22.18	224	P	P	03 59 43.9	-0.6
	0.3nm,0.5s,baz=50,slow=10,SNR=5.4						
	0.3nm,0.5s						
ASAR	Alice Springs	25.09	218	P	P	04 00 11.6	-0.4
	0.3nm,0.3s,baz=59,slow=8.9,SNR=5.6						
	0.3nm,0.3s						
TORD	Torodi Ar. Bea	148.03	288	PKPbc	PKPbc	04 14 31.9	+0.1
	0.7nm,1.1s,baz=65,slow=3.8,SNR=2.4						

NOU 31 04:15:48.3, 17°.19S×**167°.83E, h18^{km}, MLv4.7**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.63	147	P	Pg	04 16 01.3	+0.5
DVP	Devils Point	0.63	147	P	Pg	04 16 01.4	+0.6
RTV	Rentapao	0.83	137	P	Pg	04 16 04.4	-0.1
RTV	Rentapao	0.83	137	P	Pg	04 16 04.4	-0.1

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*IDC **31** 04:24:33.7±1.4, 0°.21S×97°.44E, h0^{km}, mb3.7/6, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=48.4km s-min=19.4km az=58.0*

*DJA **31** 04:24:35.1±1.2, 0°S±5°×9°7E±1°2, h19^{km}±8^{km}, M3.7/7, MLv3.7/7*

ISC 31 04:24:37.9±1.0**, 0°.08S**±0°.06×**97°.6E**±0°.1**, h25^{km}, n19, σ1^{s}54**/17**, mb3.8**/6**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	1.37	359	P	Pn	04 25 01.4	-0.1
GSI				Pg	Pb	04 25 03.7	+0.8
GSI				S	Sn	04 25 20.4	+1.5
SISI	Saibi	1.94	130	P	Pn	04 25 08.7	-0.6
SISI				S	Sn	04 25 33.6	+0.8
PPI	Padang Panjang	2.83	98	P	Pn	04 25 23.1	+1.7
PSI	Prapat	3.15	25	Pn	Pn	04 25 26.7	+0.6
	1.7nm,0.3s,baz=221,slow=6.4,SNR=5.9						
PSI				Sn	Sn	04 25 58.2	-4.8
	1.5nm,0.3s,baz=97,slow=11,SNR=5.2						
	3.9nm,0.3s						
KCSI	Kotacane, Aceh	3.58	3	P	Pn	04 25 31.5	-0.4
PPSI	Pulau Pagai	3.59	138	P	Pn	04 25 30.5	-1.5
CMAR	Chiang Mai Arr	18.47	4	P	Pn	04 28 52.2	0.0
	0.3nm,0.3s,baz=193,slow=12,SNR=5.3						
	0.8nm,0.3s						
H08S2	Diego Garcia H	26.13	253	T	T	04 56 53.1	
	baz=73,slow=74,SNR=42						
H08S3	Diego Garcia H	26.14	253	T	T	04 56 55.2	
	baz=73,slow=74,SNR=42						
H08S1	Diego Carcia H	26.15	253	T	T	04 56 57.7	
	baz=73,slow=74,SNR=55						
H01W3	Cape Leeuwin H	37.92	158	T	T	05 12 05.8	
	baz=334,slow=76,SNR=20						
H01W2	Cape Leeuwin H	37.93	158	T	T	05 12 06.7	
	baz=334,slow=76,SNR=24						
H01W1	Cape Leeuwin H	37.93	158	T	T	05 12 06.4	
	baz=334,slow=76,SNR=19						
WRA	Warramunga Arr	41.03	121	P	P	04 32 19.6	+0.1
	1.2nm,0.8s,baz=303,slow=8.7,SNR=6.9						
	1.2nm,0.8s						
ASAR	Alice Springs	42.32	126	P	P	04 32 29.6	-0.4
	0.4nm,0.7s,baz=308,slow=8.4,SNR=4.4						
	0.4nm,0.7s						
MKAR	Makanchi Array	48.57	346	P	P	04 33 19.6	+0.4
	1.2nm,0.6s,baz=155,slow=8.7,SNR=13						
	1.2nm,0.6s						
STKA	Stephens Creek	52.21	132	P	P	04 33 47.4	+0.4
	0.9nm,0.6s,baz=270,slow=9.1,SNR=1.4						
	0.9nm,0.6s						
ZALV	Zalesovo Beam	54.88	351	P	P	04 34 06.0	-0.1
	0.6nm,0.4s,baz=165,slow=6.2,SNR=3.7						
	0.6nm,0.4s						
BRTR	Keskin Array B	70.26	313	P	P	04 35 49.3	-0.2
	0.2nm,0.4s,baz=110,slow=9.0,SNR=2.3						
	0.2nm,0.4s						

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*IDC **31** 04:32:13.9±0.4, 55°.99S×26°.00W, h0^{km}, mb4.7/11, mbtmp4.6/12, ML4.2/1, MS4.0/18, Error ellipse: s-maj=22.8km s-min=14.5km az=54.0*

*NEIC **31** 04:32:15.6±1.2, 56°.04S±0°.10×26°.1W±0°.1, h10^{km}±1^{km}, mb4.9/58, Error ellipse: s-maj=17.4km s-min=11.9km az=197.0*

ISC 31 04:32:15.1±1.1**, 56°.13S**±0°.06×**26°.11W**±0°.06**, h10^{km}**±6^{km}**, n251, σ1^{s}11**/248**, mb4.8**/33**, MS3.9**/17**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.22	283	Pn	Pn	04 33 48.0	+1.0
HOPE					Sn	04 34 52.9	-5.1
ORCD	Orcadas	10.78	237		Pn	04 34 51.3	+1.9
VNA1	Neumayer--Stat	16.50	159	P	P	04 36 09.3	+0.3
VNA1				x	x	04 36 09.8	
VNA3	Neumayer Olymp	16.71	161	P	Pn	04 36 11.7	+2.7
VNA3	Neumayer Olymp	16.71	161	PcP	PcP	04 40 58.3	+0.9
VNA3				S	Sn	04 39 06.7	-7.8
VNA2	Neumayer--Watz	16.89	159	P	Pn	04 36 12.3	+1.0
	baz=315,slow=14						
VNA2	Neumayer--Watz	16.89	159	PcP	PcP	04 40 58.7	+1.1
VNA2				S	Sn	04 39 11.6	-7.1
SNAA	Sanae	18.42	157	P	Pn	04 36 31.7	+1.4
SNAA	Sanae	18.42	157	PcP	PcP	04 41 01.4	+1.2
SNAA				S	Sn	04 39 51.1	-4.8
SNAA	Sanae	18.42	157	P	Pn	04 36 31.8	+1.4
	0.8nm,0.3s,baz=308,slow=9.7,SNR=50						
SNAA				S	Sn	04 39 47.4	-8.5
	1.4nm,0.9s,baz=329,slow=18,SNR=1.3						
SNAA				PcP	PcP	04 41 01.0	+0.7
	2.3nm,0.6s,baz=222,slow=4.2,SNR=5.1						
SNAA				LR	LR	04 41 37.5	
	comp=Z,205nm,19.5s,baz=300,slow=30						
SNAA				ScP	ScP	04 44 35.2	-0.2
	1.9nm,1.0s,baz=297,slow=4.5,SNR=3.7						
	11nm,0.7s						
SNAA	Sanae	18.42	157		P	04 36 31.6	+1.3
SNAA					ScP	04 44 35.5	0.0
TROLL	Troll, Antarti	19.90	154	P	P	04 36 48.1	+1.6
TROLL				S	S	04 40 25.5	-4.8
PMSA	Palmer Station	20.30	229	LR	LR	04 43 54.0	
	comp=Z,258nm,18.9s,baz=75,slow=34						
PMSA	Palmer Station	20.30	229	P	P	04 36 52.6	+1.8
PMSA				IAmb	IAmb	04 36 57.8	
	comp=Z,48nm,0.8s						
PMSA	Palmer Station	20.30	229	eP	P	04 36 51.6	+0.8
BELA	Belgrano 2	22.04	185	P	P	04 37 09.3	-0.2
BELA				IAmb	IAmb	04 37 15.0	
	comp=Z,29nm,0.8s						
MG01	Puerto William	23.28	255	P	P	04 37 23.4	+0.8
MG01				IAmb	IAmb	04 37 34.9	
	comp=Z,30nm,0.8s						
DSPA	Despedida	23.98	257	P	P	04 37 28.9	-0.6
MG05	Puerto Natales	27.28	260	P	P	04 37 59.1	-0.2
COYC	Coyhaique	30.34	271	P	P	04 38 26.9	+0.3
PLTB	Pedras Altas	31.01	310	eP	P	04 38 33.3	+0.6
AY01	Puyuhuapi	31.36	272	P	P	04 38 34.5	-1.2
AY01				IAmb	IAmb	04 38 39.2	
	comp=Z,9.8nm,0.8s						
CPSB	Cacapava Do Su	32.12	312	eP	P	04 38 43.3	+0.9
QSPA	South Pole Qui	34.12	180	LR	LR	04 52 41.3	
	comp=Z,226nm,19.2s,baz=184,slow=36						
QSPA	South Pole Qui	34.12	180	P	P	04 39 00.1	+0.3
ITQB	Itaqui	34.12	308	eP	P	04 39 00.8	+0.9
ITAB	Concordia	34.40	316	eP	P	04 39 01.6	-0.8
VAO	Valinhos	36.49	327	eP	P	04 39 20.9	+0.4
PTGB	Pitanga	36.65	318	eP	P	04 39 21.0	-0.8
CPUP	Villa Florida	37.33	310	P	P	04 39 27.1	-0.4
	comp=Z,6.6nm,0.6s,baz=149,slow=8.1,SNR=16						
CPUP				PcP	PcP	04 41 46.5	0.0
	comp=Z,1.6nm,0.7s,baz=142,slow=4.8,SNR=2.2						
CPUP				LR	LR	04 56 22.2	
	comp=Z,195nm,18.6s,baz=156,slow=39						
	comp=Z,6.6nm,0.6s						
CPUP	Villa Florida	37.33	310	P	P	04 39 26.9	-0.6
CPUP	Villa Florida	37.33	310	eP	P	04 39 26.6	-0.9
MT09	Talagante	37.91	287	P	P	04 39 30.5	-2.1
MT09				IAmb	IAmb	04 39 35.1	
	comp=Z,27nm,1.4s						
MT01	Popeta	37.99	287	P	P	04 39 30.9	-2.1
PEL	Peldehue	38.24	288	P	P	04 39 34.1	-1.1
PEL				IAmb	IAmb	04 39 37.3	
	comp=Z,26nm,0.7s						
VA05	Santo Domingo	38.34	286	P	P	04 39 34.3	-1.7
VA05				IAmb	IAmb	04 39 38.2	
	comp=Z,18nm,0.7s						
MT02	Curacav	38.39	287	P	P	04 39 35.1	-1.3
MT02				IAmb	IAmb	04 39 38.4	
	comp=Z,14nm,0.7s						
ZON	Zonda	38.43	292	P	P	04 39 35.9	-0.9
ZON				IAmb	IAmb	04 39 44.0	
	comp=Z,14nm,0.8s						
VA03	San Esteban	38.46	288	P	P	04 39 36.9	-0.3
ROC1	El Roble	38.54	288	P	P	04 39 37.3	-0.7
ROC1				IAmb	IAmb	04 39 43.0	
	comp=Z,16nm,0.7s						
NAN01	Guarapari, ES	39.67	339	eP	P	04 39 47.6	+0.4
MAW	Mawson	39.72	143	P	P	04 39 48.8	+1.7
	comp=Z,9.2nm,0.7s,baz=228,slow=8.3,SNR=26						
MAW				PcP	PcP	04 41 53.9	+0.6
	comp=Z,3.7nm,0.7s,baz=254,slow=5.1,SNR=4.3						
MAW				LR	LR	04 55 42.4	
	comp=Z,158nm,19.2s,baz=254,slow=35						
	comp=Z,9.2nm,0.7s						
MAW	Mawson	39.72	143	P	P	04 39 48.6	+1.5
MAW					PcP	04 41 53.7	+0.4
CO02	Combarbal	39.91	290	P	P	04 39 48.3	-1.0
CO02				IAmb	IAmb	04 39 52.0	
	comp=Z,49nm,1.3s						
SUR	Sutherland	40.08	74	LR	LR	04 53 05.0	
	comp=Z,364nm,18.6s,baz=181,slow=31						
CO01	Juntas del Tor	40.41	292	P	P	04 39 53.2	-0.4
GO04	Tololo Observa	40.62	291	P	P	04 39 55.0	-0.3
GO04				IAmb	IAmb	04 40 01.4	
	comp=Z,19nm,0.8s						
LCO	Las Campanas	41.50	292	P	P	04 40 01.8	-0.8
LCO				IAmb	IAmb	04 40 05.5	
	comp=Z,22nm,0.9s						
AC04	Llanos de Chal	42.34	292	P	P	04 40 09.0	-0.1
GO03	Copiap	42.40	294	P	P	04 40 09.6	-0.1
GO03				IAmb	IAmb	04 40 09.6	
	comp=Z,24nm,0.8s						
AC02	Maricunga	42.46	295	P	P	04 40 10.8	+0.2
AC06	Mina Casimiro	42.65	294	P	P	04 40 10.8	-1.0
AC06				IAmb	IAmb	04 40 12.8	
	comp=Z,21nm,0.5s						
BDFB	Brasilia	43.74	329	P	P	04 40 19.9	-0.7
	comp=Z,1.5nm,0.5s,baz=226,slow=11,SNR=3.1						
	comp=Z,1.5nm,0.5s						
BDFB	Brasilia	43.74	329	P	P	04 40 20.6	-0.1
BDFB	Brasilia	43.74	329	eP	P	04 40 20.0	-0.7
GO02	Mina Guanaco	44.07	296	P	P	04 40 23.6	0.0
AF01	San Pedro de A	45.22	300	P	P	04 40 31.8	-1.0
BOSA	Boshof	45.41	75	P	P	04 40 33.0	-1.0
	comp=Z,3.8nm,0.7s,baz=192,slow=8.2,SNR=15						
BOSA				PcP	PcP	04 42 12.3	-0.7
	comp=Z,2.4nm,0.9s,baz=166,slow=4.2,SNR=2.3						
BOSA				LR	LR	04 56 19.8	
	comp=Z,411nm,19.0s,baz=192,slow=32						
	comp=Z,3.8nm,0.7s						
BOSA	Boshof	45.41	75	P	P	04 40 33.6	-0.3
PB15	IPOC Station P	45.64	298	P	P	04 40 35.7	-0.2
LVC	Limon Verde	45.87	299	LR	LR	05 03 32.5	
	comp=Z,102nm,18.0s,baz=158,slow=41						
LVC	Limon Verde	45.87	299	P	P	04 40 38.2	+0.3
LVC	Limon Verde	45.87	299	eP	P	04 40 39.0	+1.0
NBLA	Lagarto - SE	45.95	344	eP	P	04 40 37.5	-0.7
SDBA	SAO DESIDERIO	46.00	334	eP	P	04 40 38.2	-0.4
SBA	Scott Base	46.04	184	P	P	04 40 39.9	+1.7
SBA				IAmb	IAmb	04 40 41.5	
	comp=Z,6.7nm,0.7s						
SALV	Santo Antonio	46.05	319	eP	P	04 40 39.5	+0.5
NBPN	Ponto Novo - B	46.50	341	eP	P	04 40 42.2	-0.4
VNDA	Vanda	46.52	182	P	P	04 40 43.5	+1.5
	comp=Z,12nm,0.6s,baz=188,slow=6.5,SNR=74						
	comp=Z,12nm,0.6s						
VNDA	Vanda	46.52	182	P	P	04 40 43.2	+1.3
VNDA				IAmb	IAmb	04 40 44.3	
	comp=Z,14nm,0.7s						
PB09	IPOC Station P	46.72	299	P	P	04 40 44.4	0.0
PB07	IPOC Station P	47.09	299	P	P	04 40 47.2	-0.1
PEXB	Peixe	47.18	330	eP	P	04 40 47.5	-0.4
PB02	IPOC Station P	47.44	299	P	P	04 40 50.2	+0.2
PTLB	Pontes e Lacer	47.78	315	eP	P	04 40 52.5	0.0
SIV	San Ignacio	48.08	312	LR	LR	05 04 25.8	
	comp=Z,117nm,18.0s,baz=118,slow=40						
PB08	IPOC Station P	48.08	300	P	P	04 40 56.1	+0.8
PB08				IAmb	IAmb	04 40 59.3	
	comp=Z,15nm,0.8s						
SNDB	Serra Nova Dou	48.20	326	eP	P	04 40 55.7	0.0
LBTB	Lobatse	48.45	72	LR	LR	05 00 03.1	
	comp=Z,129nm,18.0s,baz=201,slow=34						

LBTB	Lobatse	48.45	72	P	P	04 40 57.4	-0.4
LBTB				IAmb	IAmb	04 40 58.5	
	comp=Z,11nm,0.8s						
PB11	IPOC Station P	48.65	300	P	P	04 40 59.3	-0.1
H10N1	ASCENSION HYDR	49.03	15	T	T	05 35 11.3	
	baz=195						
H10N3	ASCENSION HYDR	49.03	15	T	T	05 35 16.9	
	baz=195						
H10N2	ASCENSION HYDR	49.05	15	T	T	05 35 17.0	
	baz=195						
TSUM	Tsumeb	49.20	60	LR	LR	04 58 04.6	
	comp=Z,162nm,19.9s,baz=173,slow=32						
TSUM	Tsumeb	49.20	60	P	P	04 41 03.5	-0.1
PB16	IPOC Station P	49.80	301	P	P	04 41 08.1	-0.5
SMTB	Santa Maria do	50.09	332	*e*P	P	04 41 10.7	+0.5
PDRB	Porto dos Gac	50.38	320	*e*P	P	04 41 12.2	-0.2
VILB	Vilhena	50.47	315	*e*P	P	04 41 12.9	-0.2
CLDB	Colider	50.73	321	*e*P	P	04 41 14.7	-0.4
RCBR	Riachuelo	50.77	347	LR	LR	04 57 25.3	
	comp=Z,69nm,21.8s,baz=320,slow=30						
LPAZ	La Paz	50.92	304	P	P	04 41 17.7	+0.5
	comp=Z,18nm,0.6s,baz=152,slow=4.7,SNR=68						
	comp=Z,18nm,0.6s						
LPAZ	La Paz	50.92	304	P	P	04 41 16.1	-1.1
LPAZ	La Paz	50.92	304	*e*P	P	04 41 16.8	-0.5
PRPB	Parauapebas	53.26	330	*e*P	P	04 41 33.7	-0.2
MATP	Matopo	53.73	71	LR	LR	05 01 26.0	
	comp=Z,232nm,21.9s,baz=240,slow=33						
ETMB	Extrema	55.78	310	*e*P	P	04 41 52.1	-0.1
ITTB	Itaituba	56.77	324	*e*P	P	04 41 59.4	+0.1
LSZ	Lusaka	57.84	68	LR	LR	05 04 48.1	
	comp=Z,226nm,18.4s,baz=164,slow=34						
LSZ	Lusaka	57.84	68	P	P	04 42 06.8	-0.2
LSZ				IAmb	IAmb	04 42 24.3	
	comp=Z,13nm,1.2s						
MALB	Monte Alegre	58.67	326	*e*P	P	04 42 13.5	+0.9
MCPB	Macapa, AP	59.43	329	*e*P	P	04 42 19.0	+1.1
CZSB	Cruzeiro do Su	60.53	304	*e*P	P	04 42 24.8	-0.7
ATAH	Atahualpa	63.76	299	LR	LR	05 13 24.2	
	comp=Z,45nm,18.8s,baz=177,slow=39						
RPN	Rapa Nui	64.24	259	LR	LR	05 08 02.4	
	comp=Z,57nm,18.0s,baz=126,slow=33						
BOAV	Boa Vista	64.72	321	*e*P	P	04 42 53.1	-0.2
DBIC	Dimbokro	65.00	23	P	P	04 42 53.8	-1.3
	comp=Z,6.7nm,1.1s,baz=217,slow=7.3,SNR=2.2						
DBIC				LR	LR	05 05 27.1	
	comp=Z,137nm,19.1s,baz=168,slow=31						
	comp=Z,6.7nm,1.1s						
OTAV	Otavalo	70.21	303	P	P	04 43 28.0	-0.7
OTAV				IAmb	IAmb	04 43 34.8	
	comp=Z,5.1nm,0.8s						
OTAV	Otavalo	70.21	303	*e*P	P	04 43 30.9	+2.2
GARC	Garzon, Huila	70.56	306	*e*P	P	04 43 29.9	-0.7
SOTA	Rioblanco	71.02	305	*e*P	P	04 43 33.8	+0.1
PCON	Cinco Dias	71.10	306	*e*P	P	04 43 37.6	+3.4
POPC	Popayan, Colom	71.41	306	*e*P	P	04 43 34.7	-1.0
VILC	Villavicencio,	71.48	309	*e*P	P	04 43 36.6	+0.6
CHIC	Chingaza	71.96	309	*e*P	P	04 43 37.6	-1.6
ORTC	Ortega, Tolima	71.98	307	*e*P	P	04 43 37.6	-1.3
ROSC	El Rosal	72.40	309	P	P	04 43 42.7	+0.8
	comp=Z,2.0nm,0.4s,baz=222,slow=23,SNR=1.9						
ROSC				LR	LR	05 18 49.0	
	comp=Z,78nm,18.5s,baz=72,slow=39						
	comp=Z,2.0nm,0.4s						
YOTC	Yotoco, Valle	72.54	306	*e*P	P	04 43 40.5	-1.9
RUSC	La Rusia	72.81	310	*e*P	P	04 43 42.4	-2.0
TOA0	Torodi Ar. Sit	72.83	28	P	P	04 43 43.6	-0.2
TOA0				IAmb	IAmb	04 43 47.8	
	comp=Z,11nm,0.8s						
TORD	Torodi Ar. Bea	72.83	28	P	P	04 43 43.7	-0.2
	comp=Z,9.4nm,0.8s,baz=201,slow=6.5,SNR=55						
	comp=Z,9.4nm,0.8s						
TORD	Torodi Ar. Bea	72.83	28	P	P	04 43 43.6	-0.2
TORD				IAmb	IAmb	04 43 47.9	
	comp=Z,8.6nm,0.8s						
SPBC	San Pablo de B	73.02	309	*e*P	P	04 43 43.4	-1.8
NORC	Norcasia	73.29	309	*e*P	P	04 43 44.3	-2.4
BAUV	El Baul	73.53	316	P	P	04 43 48.0	0.0
PTBC	PUERTO BERRIO,	73.98	309	*e*P	P	04 43 47.2	-3.5
CBOC	Ciudad Bolivar	74.06	308	*e*P	P	04 43 49.1	-2.3
BIRV	Birongo	74.27	319	P	P	04 43 52.2	-0.2
BIRV				IAmb	IAmb	04 43 58.9	
	comp=Z,15nm,0.9s						
LCBC	Los crdobas,	76.88	309	*e*P	P	04 44 01.6	-5.7
SJCC	San Jacinto, C	77.30	310	P	P	04 44 09.7	0.0
SJCC				IAmb	IAmb	04 44 33.0	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	91.71	170	P	P	04 45 23.5	+0.8
	comp=Z,2.1nm,0.7s,baz=325,slow=3.0,SNR=6.4						
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	91.71	170	P	P	04 45 23.3	+0.6
ASAR	Alice Springs	98.72	162	P	P	04 45 54.8	-0.1
	comp=Z,1.3nm,0.7s,baz=190,slow=4.1,SNR=12						
	comp=Z,1.3nm,0.7s						
ASAR	Alice Springs	98.72	162	P	P	04 45 54.6	-0.2
WRA	Warramunga Arr	102.44	161	P	Pdif	04 46 11.5	+0.1
	comp=Z,0.6nm,0.8s,baz=188,slow=4.0,SNR=5.0						
PKME	Peaks-Kenny Pk	107.36	330	P	PKiKP	04 50 41.8	+1.0
	baz=156						
AMTX	Amarillo	110.92	302	P	PKiKP	04 50 48.7	+0.7
	baz=145						
109C	Camp Elliot, M	117.13	289	P	PKiKP	04 51 00.6	+0.7
	baz=141						
EYMN	Ely	117.17	317	P	PKiKP	04 51 00.7	+1.2
	baz=145						
GMRC	Granite Mounta	117.84	291	P	PKiKP	04 51 01.8	+0.5
	baz=141						
BBRC	Big Bear Solar	118.09	290	P	PKiKP	04 51 02.7	+0.7
	baz=141						
BFSC	Mount Baldy Ra	118.46	290	P	PKiKP	04 51 03.3	+0.7
	baz=140						
DUG	Dugway, Tooele	120.53	297	P	PKiKP	04 51 07.4	+0.9
	baz=140						
PDAR	Pinedale Array	120.90	302	PKP	PKPdf	04 51 05.9	-1.2
	comp=Z,0.3nm,0.5s,baz=143,slow=5.4,SNR=3.5						
HWUT	Hardware Ranch	120.99	299	PKPdf	PKPdf	04 51 07.2	-0.1
NVAR	Mina Array Bea	121.99	292	PKP	PKPdf	04 51 09.6	+0.2
	comp=Z,0.5nm,0.7s,baz=150,slow=3.6,SNR=5.5						
MOOW	Moose Ponds	122.21	301	PKPdf	PKiKP	04 51 10.0	+0.3
RLMT	Red Lodge	122.55	304	P	PKiKP	04 51 11.5	+1.1
	baz=139						
H17A	Grant Village	122.61	302	P	PKiKP	04 51 11.5	+0.9
	baz=139						
HLID	Hailey	123.85	299	P	PKiKP	04 51 14.0	+1.1
	baz=138						
BOZ	Bozeman (W)	124.01	302	P	PKiKP	04 51 13.3	+0.2
	baz=138						
FINES	FINESS Array B	124.18	27	PKP	PKPdf	04 51 12.2	-0.2
	comp=Z,1.2nm,0.6s,baz=132,slow=3.9,SNR=6.2						
FINES	FINESS Array B	124.18	27		PKPdf	04 51 12.5	+0.1
CMAR	Chiang Mai Arr	124.47	110	PKP	PKPdf	04 51 14.1	-0.3
	comp=Z,2.2nm,0.3s,baz=237,slow=3.9,SNR=6.0						
MSO	Missoula	126.00	302	P	PKiKP	04 51 17.5	+0.5
	baz=136						
J05D	Fort Rock, OR	127.06	294	P	PKiKP	04 51 20.1	+0.8
	baz=136						
I05D	Terrebonne, OR	127.86	295	P	PKiKP	04 51 21.2	+0.5
	baz=135						
ARCES	ARCESS Array B	130.80	21	PKP	PKPdf	04 51 24.9	0.0
	comp=Z,2.9nm,0.9s,baz=186,slow=1.2,SNR=2.6						
PZH	PanZhiHua	132.50	106	PKP	PKPdf	04 51 29.8	+0.2
MKAR	Makanchi Array	136.34	71	PKP	PKPdf	04 51 35.1	-1.0
	comp=Z,0.1nm,0.5s,baz=236,slow=1.6,SNR=2.7						
YKA	Yellowknife Ar	136.64	317	PKP	PKPdf	04 51 35.9	-0.1
	comp=Z,1.8nm,0.6s,baz=124,slow=2.6,SNR=16						
YKA				SKPbc	SKPbc	04 55 08.6	+0.3
	comp=Z,0.9nm,0.8s,baz=115,slow=1.6,SNR=5.5						
YKA	Yellowknife Ar	136.64	317	PKPdf	PKPdf	04 51 36.1	+0.1
CD2	Chengdu	137.05	104	PKP	PKPdf	04 51 38.0	+0.1
WRGLY	Wrigley	140.46	315	P	PKiKP	04 51 45.0	-0.5
	baz=119						
ZALV	Zalesovo Beam	141.86	63	PKiKP	PKiKP	04 51 49.8	+1.1
	comp=Z,1.3nm,0.6s,baz=228,slow=3.3,SNR=4.5						
FARO	Faro, Yukon	144.08	310	P	PKPdf	04 51 50.0	+0.4
	baz=114						
WHY	Whitehorse	144.08	307	P	PKPdf	04 51 50.0	+0.3
	baz=115						
M31M	Drury Creek, Y	144.51	310	P	PKPbc	04 51 49.1	+0.2
	baz=114						
A36M	Sachs Harbour	144.60	328	P	PKPbc	04 51 49.0	+0.1
	baz=107						
O30N	Mendenhall	144.67	307	P	PKPab	04 51 49.4	0.0
	baz=114,SNR=11						
N31M	Braeburn, Yuko	144.82	308	P	PKPab	04 51 49.9	-0.1
	baz=114,SNR=6.1						
HYT	Haines Junctio	145.32	307	P	PKPbc	04 51 51.7	-0.1
	baz=114,SNR=8.1						
N30M	Aishikik Lake	145.39	308	P	PKPab	04 51 52.4	+0.3
	baz=113,SNR=12						
M30M	Minto, Yukon	145.69	310	P	PKPdf	04 51 52.6	+0.3
	baz=112						
PNL	Peninsula	145.72	304	P	PKPbc	04 51 53.0	+0.1
	baz=114						
YUK6	Outpost Mounta	145.76	307	P	PKPdf	04 51 53.3	+0.5
	baz=113						
YUK4	Talbot Arm	146.04	307	P	PKPbc	04 51 54.1	0.0
	baz=112,SNR=12						
INK	Inuvik	146.25	320	PKPbc	PKPdf	04 51 53.5	+0.5
	comp=Z,15nm,0.8s,baz=99,slow=6.8,SNR=25						
INK				SKPbc	SKPbc	04 55 32.5	-0.4
	comp=Z,1.2nm,0.9s,baz=78,slow=2.4,SNR=2.3						
INK	Inuvik	146.25	320		PKPbc	04 51 54.5	+0.3
INK	Inuvik	146.25	320	P	PKPbc	04 51 54.1	-0.1
	baz=106						
YUK8	Steele Glacier	146.52	307	P	PKPbc	04 51 55.5	-0.1
	baz=112,SNR=8.0						
EPYK	Eagle Plains	146.90	316	P	PKPbc	04 51 56.0	-0.3
	baz=106						
YUK3	Moose Creek	147.00	307	P	PKPbc	04 51 56.3	-0.6
	baz=110						
CTG	Chitna Glacier	147.11	306	P	PKPbc	04 51 56.8	-0.3
	baz=111						
I29M	Ogilvie Camp,	147.24	314	P	PKPbc	04 51 57.0	-0.2
	baz=107						
DAWY	Dawson	147.30	312	P	PKPbc	04 51 57.0	-0.4
	baz=108						
BVCY	Beaver Creek	147.40	308	P	PKPbc	04 51 57.7	0.0
	baz=109						
M27K	Edge Creek, AK	147.83	308	P	PKPbc	04 51 58.6	-0.5
	baz=109,SNR=7.2						
L27K	Beaver Creek,	148.03	309	P	PKPbc	04 51 59.3	-0.2
	baz=108,SNR=10						
M26K	Nabesna, AK	148.34	308	P	PKPbc	04 51 59.7	-0.6
	baz=108						
K27K	Chicken	148.42	311	P	PKPbc	04 52 00.8	+0.5
	baz=106						
L26K	Log Cabin Wild	148.68	309	P	PKPbc	04 52 01.1	+0.1
	baz=107,SNR=9.9						
NRIK	Noril'sk	148.69	39	PKPbc	PKPbc	04 52 01.2	+0.3
	comp=Z,1.3nm,0.3s,baz=255,slow=2.2,SNR=6.2						
NRIK	Noril'sk	148.69	39	PKPdf	PKPdf	04 51 56.4	-0.7
EYAK	Cordova Ski Ar	149.00	303	P	PKPbc	04 52 02.3	+0.5
	baz=109						
J26L	Joseph Creek	149.17	311	P	PKPbc	04 52 02.7	+0.4
	baz=104						
SCRK	Sand Creek	149.22	310	P	PKPbc	04 52 02.6	+0.1
	baz=105,SNR=12						
KLU	Klutina	149.38	305	P	PKPbc	04 52 03.1	+0.1
	baz=108						
RIDG	Independent Ri	149.52	310	P	PKPbc	04 52 03.8	+0.5
	baz=104,SNR=21						
PAX	Paxson	149.59	308	P	PKPbc	04 52 03.3	-0.2
	baz=105,SNR=5.5						
M24K	Tolsona, Glenn	149.67	306	P	PKPbc	04 52 03.9	+0.2
	baz=106						
GLI	Glacier Island	149.73	304	P	PKPbc	04 52 03.7	0.0
	baz=108						
K24K	Donnelly Dome	149.94	310	P	PKPbc	04 52 04.4	+0.2
	baz=104						
J25K	Salcha River,	149.95	311	P	PKPbc	04 52 04.2	0.0
	baz=103,SNR=6.0						
SCM	Sheep Creek Mo	150.12	305	P	PKPbc	04 52 04.8	0.0
	baz=106						
SONM	Songino Array	150.13	86	PKPbc	PKPbc	04 52 05.4	+0.1
	comp=Z,2.9nm,0.7s,baz=222,slow=2.8,SNR=15						
SONM				PKPab	PKPab	04 52 11.7	+0.3
	comp=Z,2.0nm,0.6s,baz=224,slow=4.2,SNR=10.0						
SONM	Songino Array	150.13	86	PKPdf	PKPdf	04 52 00.1	-0.1
M23K	Glacier View	150.29	305	P	PKPbc	04 52 04.8	-0.3
	baz=106						
DHY	Denali Highway	150.46	308	P	PKPbc	04 52 05.8	+0.1
	baz=104,SNR=7.2						
WAT6	Susitna Watana	150.50	307	P	PKPbc	04 52 05.5	-0.2
	baz=104,SNR=8.8						
KNK	Knik Glacier	150.52	304	P	PKPbc	04 52 05.2	-0.5
	baz=106						
SML	Sawmill	150.57	305	P	PKPbc	04 52 05.7	-0.1
	baz=105						
HDA	Harding Lake	150.58	311	P	PKPbc	04 52 05.9	+0.3
	baz=102						
SEW	Seward	150.61	301	P	PKPbc	04 52 05.9	+0.1
	baz=108						
ILAR	Eielson Array	150.62	311	PKPbc	PKPbc	04 52 05.8	0.0
	comp=Z,13nm,0.9s,baz=130,slow=1.6,SNR=68						
PMR	Palmer	150.88	305	P	PKPbc	04 52 06.2	-0.2
	baz=105						
POKR	Poker Plat Res	150.92	312	P	PKPbc	04 52 05.8	-0.7
	baz=100						
WAT1	Susitna Watana	150.93	307	P	PKPbc	04 52 05.9	-0.7
	baz=104						
RC01	Rabbit Creek A	151.03	303	P	PKPbc	04 52 06.9	0.0
	baz=106						
COLA	College	151.05	311	P	PKPbc	04 52 06.6	-0.1
	baz=100						
TCOL	CIGO, UAF Yank	151.05	311	P	PKPbc	04 52 06.3	-0.4
	baz=100						
BRSE	Bradley Lake S	151.12	300	P	PKPbc	04 52 06.4	-0.7
	baz=108						
H24K	Noodor Dome	151.22	313	P	PKPbc	04 52 06.7	-0.5
	baz=99						
MCK	McKinley	151.29	309	P	PKPbc	04 52 07.5	+0.1
	baz=102,SNR=9.3						
M22K	Willow	151.38	305	P	PKPbc	04 52 07.7	+0.2
	baz=104						
KDAK	Kodiak Island	151.40	296	P	PKPbc	04 52 07.2	-0.5
	baz=110						
NEA2	Nenana	151.51	311	P	PKPbc	04 52 06.9	-0.9
	baz=100,SNR=14						
I23K	Minto, Yukon-K	151.73	312	P	PKPbc	04 52 07.8	-0.5
	baz=99						
SII	Sitkinak Islan	151.78	293	P	PKPbc	04 52 08.0	-0.7
	baz=111						
TRF	Thorofare Moun	151.83	308	P	PKPbc	04 52 08.4	-0.4
	baz=101						
H23K	Yukon River	151.90	313	P	PKPbc	04 52 08.5	-0.2
	baz=97						
TOLK	Toolik Lake Re	152.14	319	P	PKPbc	04 52 09.3	+0.1
	baz=92						
BPAW	Bear Paw Mtn.	152.25	309	P	PKPbc	04 52 09.2	-0.4
	baz=99,SNR=17						
MLY	Manley	152.29	311	P	PKPbc	04 52 09.5	-0.1
	baz=98						
Q19K	Cape Douglas,	152.29	298	P	PKPbc	04 52 09.1	-0.7
	baz=107						
COLD	Coldfoot	152.30	316	P	PKPbc	04 52 09.9	+0.3
	baz=94						
PPLA	Purkeypile	152.57	307	P	PKPbc	04 52 10.0	-0.5
	baz=101						
CAST	Castle Rocks	152.62	308	P	PKPbc	04 52 09.6	-0.8
	baz=100						
CHUM	Lake Minchumin	152.80	309	P	PKPbc	04 52 10.1	-0.7
	baz=99						
M20K	Styx River	152.80	304	P	PKPbc	04 52 10.3	-0.7
	baz=102						
I21K	Tanana	152.83	311	P	PKPbc	04 52 10.3	-0.4
	baz=96						
N19K	Bonanza Creek	153.20	302	P	PKPbc	04 52 11.1	-0.8
	baz=103						
H21K	Melozitna Rive	153.22	312	P	PKPbc	04 52 11.5	-0.2
	baz=95,SNR=6.3						
M19K	Big River Lodg	153.39	304	P	PKPbc	04 52 11.8	-0.3
	baz=101						
K20K	Telida	153.49	307	P	PKPbc	04 52 12.2	-0.1
	baz=98						
J20K	Nowinta River	153.63	309	P	PKPab	04 52 25.3	-0.1
	baz=97						
L19K	White Mountain	153.65	304	P	PKPab	04 52 26.6	+1.1
	baz=100						
N18K	Kilae Creek	153.84	301	P	PKPab	04 52 27.4	+0.9
	baz=102						
KSRS	Korea Array	154.46	126	PKPbc	PKPbc	04 52 15.4	+0.3
	comp=Z,0.4nm,0.3s,baz=204,slow=2.7,SNR=1.6						
KSRS				PKPab	sPKPab	04 52 29.2	-2.6
	comp=Z,0.7nm,0.4s,baz=206,slow=3.7,SNR=2.4						
MJAR	Matsushiro Arr	157.71	145	PKPab	PKPab	04 52 43.1	-0.5
	comp=Z,1.9nm,0.5s,baz=180,slow=4.7,SNR=5.6						

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*NEIC **31** 05:04:01.5±1.0, 53°.51N±0°.10×165°.19W±0°.09, h56^{km}±21^{km}, Error ellipse: s-maj=15.0km s-min=5.8km az=156.0*

AEIC 31 05:04:00±1.3**, 53°.54N**±0°.07×**165°.25W**±0°.08**, h59**^{km}±8^{km}**, ML3.5**/28**, Error ellipse: s-maj=11.2km s-min=6.1km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	Akutan Strait	0.65	336		Pn	05 04 15.0	+1.4
AKSA					Sn	05 04 25.5	+1.9
AKSA	Akutan Strait	0.65	336		Pn	05 04 14.9	+1.2
AKSA					Sn	05 04 25.6	+2.0
AKUT	Akutan	0.67	333		Pn	05 04 15.4	+1.5
AKUT					Sn	05 04 26.2	+2.3
AKBBA	Akutan Broad B	0.69	325		Pn	05 04 15.6	+1.5
AKBBA					Sn	05 04 26.8	+2.4
AKGG	Akutan Green G	0.79	327		Pn	05 04 17.1	+1.8
AKGG					Sn	05 04 29.1	+2.4
UNV	Unalaska Valle	0.81	293		Pn	05 04 16.8	+1.3
UNV					Sn	05 04 28.2	+1.3
MNAT	Makushin Natee	0.92	293		Pn	05 04 18.5	+1.6
MNAT					Sn	05 04 31.4	+2.0
MTBL	Makushin Table	0.95	298		Pn	05 04 19.4	+2.0
MSW	Makushin Switc	0.98	293		Pn	05 04 19.5	+1.7
MSW					Sn	05 04 33.6	+2.7
WESE	West Dahl East	1.01	23		Pn	05 04 19.8	+1.5
SSLW	Shishaldin Wes	1.40	28		Pn	05 04 24.4	+1.0
BRPK	Brown Peak	1.42	38		Pn	05 04 24.9	+1.3
ISLZ	Isanotski Laza	1.50	37		Pn	05 04 25.6	+0.9
OKFG	Magazine Ridge	1.59	266		Pn	05 04 27.8	+1.9
FALS	False Pass	1.71	39		Pn	05 04 28.7	+1.4
OKSO	Okmok South	1.75	265		Pn	05 04 30.4	+2.4
NIKH	Nikolski High	2.24	257		Pn	05 04 36.9	+2.3
SDPT	Sand Point	3.33	55		Pn	05 04 51.2	+1.8
SPIA	Saint Paul Isl	4.63	324	Pn	Pn	05 05 09.7	+2.5

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*IDC **31** 05:08:53.0±3.7, 11°.50S×166°.66E, h133^{km}±30^{km}, mb4.0/15, mbtmp4.3/15, Error ellipse: s-maj=23.8km s-min=15.3km az=118.0*

*NEIC **31** 05:08:56.5±1.9, 11°.46S±0°.09×166°.7E±0°.1, h161^{km}±6^{km}, mb4.4/39, Error ellipse: s-maj=20.7km s-min=12.5km az=91.0*

*NOU **31** 05:10:01.1, 16°.23S×167°.53E, h29^{km}, mb4.2/6, Vanuatu Islands*

ISC 31 05:08:55.3±0.5**, 11°.40S**±0°.06×**166°.6E**±0°.1**, h150**^{km}**, n79,** σ1^{s}.**19**/76**, mb4.4**/37**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	LIFOU	9.35	176	Pn	Pn	05 11 07.3	+0.7
KOUNC	Koumac, New Ca	9.37	194	Pn	Pn	05 11 09.6	+2.6
YATNC	Mamie plateau,	10.61	179	P	Pn	05 11 24.8	+1.5
DZM	Mont Dzumac	10.62	181	P	Pn	05 11 25.8	+2.2
	8.1nm,0.3s,baz=192,slow=15,SNR=42						
DZM				S	Sn	05 13 19.2	-1.8
	2.8nm,0.6s,baz=101,slow=20,SNR=1.6						
DZM	Mont Dzumac	10.62	181	Pn	Pn	05 11 25.9	+2.4
DZM	Mont Dzumac	10.62	181	P	Pn	05 11 26.3	+2.8
NOUC	Port Laguerre	10.65	182	P	Pn	05 11 27.6	+3.7
OUENC	Ouen Island, N	10.96	179	Pn	Pn	05 11 29.4	+1.4
OUENC	Ouen Island, N	10.96	179	P	Pn	05 11 31.4	+3.4
PINNC	Pines Island,	11.18	176	Pn	Pn	05 11 30.6	-0.3
PATS	Pohnpei	19.91	335	P	P	05 13 17.1	+1.7
EIDS	Eidsvold	20.23	224	P	P	05 13 19.7	+0.9
BKZ	Black Stump Fm	29.02	164	P	P	05 14 41.5	+0.4
BKZ				IAmb	IAmb	05 14 47.5	
	comp=Z,12nm,1.2s						
H11S2	WAKE ISLAND Hy	29.70	0	T	T	05 45 55.6	
	baz=181,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	29.70	0	T	T	05 45 55.6	
	baz=181,slow=76,SNR=4.2						
H11S1	WAKE ISLAND Hy	29.72	0	T	T	05 45 58.2	
	baz=181,slow=76,SNR=3.7						
THZ	Tophouse	30.75	171	P	P	05 14 56.9	+0.5
STKA	Stephens Creek	30.79	225	P	P	05 14 56.2	-0.6
	comp=Z,2.0nm,0.7s,baz=62,slow=11,SNR=3.5						
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	30.79	225	IAmb	IAmb	05 14 58.5	
	comp=Z,0.8nm,1.1s						
H11N1	WAKE ISLAND Hy	30.92	0	T	T	05 47 25.6	
	baz=182,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	30.92	1	T	T	05 47 21.0	
	baz=182,slow=76,SNR=5.2						
H11N2	WAKE ISLAND Hy	30.93	1	T	T	05 47 24.9	
	baz=182,slow=76,SNR=3.7						
WR0	Warramunga Arr	31.99	251	P	P	05 15 06.5	-1.1
WR0				IAmb	IAmb	05 15 06.9	
	comp=Z,4.8nm,1.1s						
WB0	Warramunga Arr	32.09	251	P	P	05 15 07.5	-1.0
WB0				IAmb	IAmb	05 15 08.3	
	comp=Z,8.5nm,0.8s						
WRAB	Tennant Creek	32.16	251	P	P	05 15 08.1	-0.9
WRAB				IAmb	IAmb	05 15 08.9	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	32.16	251	P	P	05 15 08.0	-1.1
WB2				IAmb	IAmb	05 15 08.9	
	comp=Z,7.7nm,1.1s						
WRA	Warramunga Arr	32.17	251	P	P	05 15 08.0	-1.2
	comp=Z,3.6nm,0.9s,baz=83,slow=8.4,SNR=21						
WRA				PcP	PcP	05 17 54.0	-0.7
	comp=Z,0.9nm,0.7s,baz=77,slow=3.5,SNR=6.8						
	comp=Z,3.6nm,0.9s						
WRA	Warramunga Arr	32.17	251	P	P	05 15 07.2	-1.9
ASAR	Alice Springs	33.41	244	P	P	05 15 18.6	-1.3
	comp=Z,2.6nm,0.7s,baz=74,slow=9.4,SNR=26						
ASAR				PcP	PcP	05 17 57.3	-0.7
	comp=Z,1.3nm,0.8s,baz=79,slow=2.4,SNR=8.7						
ASAR				ScP	ScP	05 21 29.6	+1.0
	comp=Z,1.1nm,0.9s,baz=104,slow=3.0,SNR=8.1						
	comp=Z,2.6nm,0.7s						
BBOO	Buckleboo	35.23	228	P	P	05 15 34.8	-0.6
BBOO				IAmb	IAmb	05 16 03.4	
	comp=Z,22nm,1.4s						
KNRA	Kununurra	37.02	259	P	P	05 15 50.2	-0.6
FORT	Forrest	40.55	236	P	P	05 16 19.5	-0.6
FORT				IAmb	IAmb	05 16 20.2	
	comp=Z,11nm,0.8s						
SOEI	Soe	41.64	268	P	P	05 16 29.6	+0.2
SOEI				IAmb	IAmb	05 16 57.0	
	comp=Z,14nm,0.7s						
PSA00	Pilbara Seismi	45.83	251	P	P	05 17 02.2	-0.4
PSA00				IAmb	IAmb	05 17 03.3	
	comp=Z,9.7nm,1.3s						
KAPI	Kappang	46.77	274	P	P	05 17 09.8	-0.2
	comp=Z,10nm,0.7s,baz=92,slow=11,SNR=5.6						
	comp=Z,10nm,0.7s						
KAPI	Kappang	46.77	274	IAmb	IAmb	05 17 10.5	
	comp=Z,31nm,1.3s						
JHS	Saijyo	56.01	327	P	P	05 18 18.7	+0.3
ERM	Erimo	57.36	339	P	P	05 18 29.0	+1.3
JKA	Kamikawa-asahi	59.41	340	P	P	05 18 42.9	+1.0
ASAJ	Asahikawa	59.41	340	P	P	05 18 42.9	+1.0
	comp=Z,9.9nm,0.6s,baz=213,slow=8.0,SNR=6.4						
	comp=Z,9.9nm,0.6s						
KSRS	Korea Array	60.65	325	P	P	05 18 51.1	+0.6
	comp=Z,1.6nm,0.5s,baz=134,slow=7.1,SNR=11						
	comp=Z,1.6nm,0.5s						
KSRS	Korea Array	60.65	325	P	P	05 18 51.1	+0.6
USRK	Ussuriysk Ar.	63.65	333	P	P	05 19 11.0	+0.7
	comp=Z,4.8nm,0.9s,baz=153,slow=6.4,SNR=5.2						
	comp=Z,4.8nm,0.9s						
VNDA	Vanda	66.16	181	P	P	05 19 25.7	-0.5
	comp=Z,0.9nm,0.7s,baz=326,slow=7.0,SNR=5.6						
	comp=Z,0.9nm,0.7s						
SBA	Scott Base	66.45	180	P	P	05 19 29.0	+1.0
SBA				IAmb	IAmb	05 19 29.4	
	comp=Z,5.4nm,0.9s						
CMAR	Chiang Mai Arr	73.04	293	P	P	05 20 10.2	+0.8
	comp=Z,7.1nm,0.7s,baz=127,slow=4.7,SNR=26						
	comp=Z,7.1nm,0.7s						
CMAR	Chiang Mai Arr	73.04	293	P	P	05 20 09.5	+0.2
CHTO	Chiang Mai	73.15	294	P	P	05 20 09.2	-0.9
CHTO				IAmb	IAmb	05 20 10.9	
	comp=Z,7.0nm,0.8s						
SEY	Seymchan	74.92	353	P	P	05 20 19.6	+0.3
	comp=Z,1.1nm,0.4s,baz=139,slow=4.8,SNR=3.6						
	comp=Z,1.1nm,0.4s						
QSPA	South Pole Qui	78.61	180	P	P	05 20 39.4	-0.9
ULN	Ulaanbaatar	79.09	324	P	P	05 20 43.2	0.0
ULN				IAmb	IAmb	05 20 44.8	
	comp=Z,7.2nm,0.8s						
BILL	Bilibino	79.23	360	P	P	05 20 43.0	-0.3
BILL				IAmb	IAmb	05 20 44.6	
	comp=Z,5.3nm,0.7s						
SONM	Songino Array	79.46	323	P	P	05 20 45.2	0.0
	comp=Z,2.0nm,0.7s,baz=150,slow=6.5,SNR=10						
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	79.46	323	P	P	05 20 44.6	-0.5

N25K	Chitina, Valde	82.16	21	P	P	05 20 56.6	-2.6
N25K				IAmb	IAmb	05 21 01.8	
	comp=Z,12nm,1.4s						
I21K	Tanana	82.39	16	P	P	05 21 00.0	-0.1
I21K				IAmb	IAmb	05 21 01.9	
	comp=Z,8.0nm,1.3s						
WRH	Wood River Hil	82.99	18	P	P	05 21 02.9	-0.4
WRH				IAmb	IAmb	05 21 04.8	
	comp=Z,8.1nm,1.2s						
CCB	Clear Creek Bu	83.20	18	P	P	05 21 03.6	-0.7
M26K	Nabesna, AK	83.25	21	P	P	05 21 04.8	+0.1
M26K				IAmb	IAmb	05 21 06.3	
	comp=Z,11nm,1.2s						
HDA	Harding Lake	83.30	18	P	P	05 21 04.8	-0.1
HDA				IAmb	IAmb	05 21 05.5	
	comp=Z,4.9nm,0.6s						
IL31		83.57	18	P	P	05 21 05.2	-1.0
ILAR	Eielson Array	83.57	18	P	P	05 21 05.6	-0.6
	comp=Z,1.5nm,0.6s,baz=253,slow=4.7,SNR=43						
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	83.57	18	P	P	05 21 06.6	+0.3
DOT	Dot Lake	83.71	20	P	P	05 21 07.4	+0.4
DOT				IAmb	IAmb	05 21 08.6	
	comp=Z,8.9nm,1.2s						
J25K	Salcha River,	83.94	19	P	P	05 21 08.8	+0.6
J25K				IAmb	IAmb	05 21 09.5	
	comp=Z,19nm,1.4s						
SCRK	Sand Creek	83.95	20	P	P	05 21 08.8	+0.4
SCRK				IAmb	IAmb	05 21 10.0	
	comp=Z,7.9nm,1.2s						
EGAK	Eagle	85.41	20	P	P	05 21 16.2	+0.8
NVAR	Mina Array Bea	85.59	50	P	P	05 21 18.0	+0.7
	comp=Z,0.9nm,0.8s,baz=230,slow=9.9,SNR=7.1						
	comp=Z,0.9nm,0.8s						
ZALV	Zalesovo Beam	94.34	324	P	P	05 21 56.0	-1.7
	comp=Z,1.6nm,0.6s,baz=107,slow=5.0,SNR=5.8						
	comp=Z,1.6nm,0.6s						
MK31	Makanchi Array	94.36	317	P	P	05 21 57.8	-0.2
MKAR	Makanchi Array	94.36	317	P	P	05 21 57.8	-0.2
	comp=Z,7.3nm,0.6s,baz=90,slow=6.4,SNR=80						
MKAR	Makanchi Array	94.36	317	P	P	05 21 57.4	-0.6
MAKZ	Makanchi	94.58	317	P	P	05 21 58.2	-0.8
YKA	Yellowknife Ar	94.89	27	P	P	05 21 58.9	-1.1
	comp=Z,0.3nm,0.5s,baz=258,slow=4.9,SNR=6.2						
	comp=Z,0.3nm,0.5s						
ARCES	ARCESS Array B	116.89	346	PKP	PKPdf	05 27 20.8	-0.7
	comp=Z,0.8nm,0.4s,baz=0.0,slow=0.3,SNR=2.1						
FINES	FINESS Array B	122.41	339	PKP	PKPdf	05 27 31.8	-0.5
	comp=Z,0.4nm,0.3s,baz=164,slow=36,SNR=1.9						
GERES	GERESS Array B	136.40	334	PKP	PKPdf	05 28 00.2	+0.8
	comp=Z,0.4nm,0.6s,baz=75,slow=1.5,SNR=4.1						
KEST	Kesra	148.21	323	PKPbc	PKPbc	05 28 24.0	-0.1
	comp=Z,2.5nm,0.6s,baz=300,slow=4.0,SNR=6.4						
ESDC	Sonseca Array	150.62	345	PKPbc	PKPbc	05 28 29.2	-0.7
	comp=Z,1.1nm,0.8s,baz=5.7,slow=2.2,SNR=8.5						
ESDC				PKPab	PKPab	05 28 37.7	+0.6
	comp=Z,0.9nm,0.6s,baz=12,slow=4.2,SNR=8.9						

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*SOME **31** 05:11:03.8, 39°.47N×74°.67E, h10^{km}*
*NNC **31** 05:11:08.4±4.4, 39°.52N×75°.53E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=31.0km s-min=21.4km az=164.0*
*KRNET **31** 05:11:10.9±0.1, 39°.52N×75°.57E, mb3.0*
ISC 31 05:11:12.9±1.4**, 39°.62N**±0°.06×**75°.46E**±0°.04**, h10^{km}, n38, σ2^{s}60**/64**, 16C-15D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	2.40	339	⇓iP	Pb	05 11 54.7	-1.6
	baz=38						
ARLS				⇓iS	Sb	05 12 27.0	+1.0
	baz=38						
ULHL	Ulahol	2.69	12	⇑iP	Pn	05 11 58.1	+1.7
	baz=10.0						
ULHL				⇑iS	Sb	05 12 33.2	-1.1
	baz=10.0						
UCH	Uchtor	2.70	345	⇓iP	Pn	05 11 59.0	+2.2
	baz=44						
UCH				⇓iS	Sb	05 12 34.6	-0.3
	baz=44						
KDJ	Kajisay	2.82	27	⇓iP	Pb	05 12 00.1	-3.5
	baz=25						
KDJ				⇓iS	Sb	05 12 36.0	-2.2
	baz=25						
DRK	Karamyk	2.83	268	⇑eP	Pb	05 12 00.5	-3.3
	baz=70						
DRK				⇑iS	Sb	05 12 36.9	-1.8
	baz=70						
BOOM	Boomskoye usch	2.89	7	⇑eP	Pb	05 12 01.6	-3.0
	baz=5.0						
BOOM				⇑iS	Sb	05 12 38.7	-1.4
	baz=5.0						
KBK	Karagaybulak	3.06	353	⇑eP	Pb	05 12 04.3	-3.2
	baz=52						
KBK				⇑iS	Sb	05 12 43.1	-1.8
	baz=52						
AAK	Ala-Archa	3.10	347	⇑eP	Pb	05 12 05.0	-3.2
	baz=46						
AAK				⇑iS	Sb	05 12 44.2	-2.0
	baz=46						
TKM2	Tokmak 2	3.30	2	⇓Pn	Pn	05 12 06.9	+2.0
	4.6nm,0.5s						
TKM2				⇓Lg	Lg	05 12 56.4	
	15nm,0.6s						
TKM2	Tokmak 2	3.30	2	⇑eP	Pn	05 12 07.1	+2.3
	baz=0.0						
TKM2				⇑iS	Sn	05 12 48.6	+4.4
	baz=0.0						
CHMS	Chumysh	3.42	351	⇓Pg	Pb	05 12 14.6	+1.1
	9.8nm,0.8s						
CHMS				⇑Lg	Lg	05 13 00.8	
	8.8nm,0.7s						
ARK	Arkit	3.43	310	⇑iP	Pn	05 12 09.6	+3.0
	baz=11						
ARK				⇑iS	Sn	05 12 52.3	+4.9
	baz=11						
KST	Kastek	3.44	6	eP	Pb	05 12 11.4	-2.6
	5.4nm,0.4s						
KST				eS	Sb	05 12 59.6	+3.8
	10nm,0.6s						
MRKS	Merke	3.55	332	eP	Pn	05 12 07.0	-1.2
	1.7nm,0.6s						
MRKS				eS	Sn	05 12 52.3	+2.2
	5.8nm,0.3s						
MTBS	Maitube	3.58	11	eP	Pb	05 12 16.0	-0.4
	3.4nm,0.3s						
MTBS				eS	Sg	05 13 07.7	-0.2
	9.5nm,0.3s						
MTBS	Maitube	3.58	11	Pg	Pb	05 12 12.4	-4.0
	3.6nm,0.2s						
MTBS				Lg	Lg	05 13 07.1	
	8.9nm,0.3s						
TNSS	Tian-Shan	3.59	18	eP	Pb	05 12 17.1	+0.3
	125nm,0.4s						
TNSS				eS	Sg	05 13 09.5	+1.3
	4.5nm,0.6s						
TNSS	Tian-Shan	3.59	18	Pg	Pb	05 12 13.1	-3.6
	125nm,0.4s						
TNSS				Lg	Lg	05 13 09.0	
	4.5nm,0.6s						
BTK	Batken	3.60	278	⇓iP	Pn	05 12 11.8	+2.9
	baz=80						
BTK				⇓iS	Sn	05 12 55.4	+3.9
	baz=80						
MDOK	Medeo	3.73	18	eP	Pb	05 12 18.2	-0.8
	1.9nm,0.4s						
MDOK				eS	Sg	05 13 11.7	-1.1
	5.9nm,0.5s						
TRKS	Terek-Say	3.80	301	⇓iP	Pn	05 12 14.3	+2.6
	baz=1.0						
TRKS				⇓iS	Sn	05 12 59.7	+3.1
	baz=1.0						
SGDS	Sogindy	3.88	351	eP	Pb	05 12 19.7	-1.7
	1.2nm,0.3s						
SGDS				eS	Sb	05 13 14.2	+5.8
	7.6nm,0.4s						
SGDS	Sogindy	3.88	351	Pg	Pb	05 12 17.7	-3.7
	1.1nm,0.3s						
SGDS				Lg	Lg	05 13 16.8	
	7.2nm,0.7s						
KRBS	Karabastau	4.07	2	eP	Pb	05 12 24.7	-0.1
	1.8nm,0.5s						
KRBS				eS	Sg	05 13 22.7	-1.0
	4.8nm,0.8s						
KRBS	Karabastau	4.07	2	Pg	Pb	05 12 21.1	-3.7
	3.3nm,0.7s						
KRBS				Lg	Lg	05 13 21.7	
	4.8nm,0.8s						
SATY	Saty	4.09	32	eP	Pg	05 12 27.8	-3.4
	1.8nm,0.4s						
SATY				eS	Sg	05 13 28.0	+3.9
	6.1nm,0.7s						
SATY	Saty	4.09	32	Pg	Pb	05 12 24.4	-0.7
	2.6nm,0.4s						
SATY				Lg	Lg	05 13 28.2	
	3.9nm,0.1s						
KTBS	Karatobe	4.19	12	eP	Pb	05 12 26.9	+0.2
	0.7nm,0.4s						
KTBS				eS	Sg	05 13 26.4	-0.9
	12nm,0.6s						
KUU	Kurty	4.32	8	eP	Pb	05 12 30.5	+1.6
	1.8nm,0.6s						
KUU				eS	Sg	05 13 32.8	+1.3
	6.5nm,0.4s						
KUU	Kurty	4.32	8	Pg	Pb	05 12 25.7	-3.2
	2.0nm,0.3s						
KUU				Lg	Lg	05 13 29.9	
	6.5nm,0.4s						
UZB	Uzynbulak	4.42	36	Pg	Pb	05 12 31.1	+0.3
	3.8nm,0.4s						
UZB				Lg	Lg	05 13 39.7	
	3.9nm,0.4s						
KPKS	Kokpek	4.54	31	eP	Pg	05 12 35.2	-4.6
	2.2nm,0.2s						
KPKS				eS	Sg	05 13 40.6	+2.0
	5.8nm,0.5s						
PDGK	Podgornoye	4.78	38	Pg	Pb	05 12 35.8	-1.1
	0.8nm,0.3s						
PDGK				Lg	Lg	05 13 47.7	
	2.5nm,0.4s						
IUG	Iuzhnay	4.83	303	eP	Pn	05 12 25.2	-0.6
	77nm,0.2s						
IUG				eS	Sn	05 13 23.5	+1.7
	12nm,0.5s						
KK31	Karatay Array	5.09	315	⇓Pg	Pb	05 12 44.2	+2.0
	0.8nm,0.6s,baz=131,slow=16,SNR=4.4						
KK31				⇑Sn	Sn	05 13 29.8	+1.6
	0.5nm,0.3s						
KK31				⇓Lg	Lg	05 13 51.1	
	1.6nm,0.5s,baz=132,slow=28						
KTMS	Ketmen	5.30	42	Pg	Pb	05 12 46.7	+1.1
	0.4nm,0.3s						
KTMS				Lg	Lg	05 14 06.0	
	1.0nm,0.2s						
BTLS	Baital	5.51	350	eP	Pb	05 12 49.6	+0.3
	0.8nm,0.5s						
BTLS				eS	Sg	05 14 05.4	-4.5
	2.6nm,1.0s						
BTLS	Baital	5.51	350	Pg	Pb	05 12 47.6	-1.7
	1.4nm,0.7s						
BTLS				Lg	Lg	05 14 07.2	
	2.6nm,0.8s						

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*IDC **31** 05:14:43.6±1.5, 7°.63N×72°.01W, h0^{km}, mb3.5/3, mbtmp3.6/4, ML2.3/1, Error ellipse: s-maj=44.9km s-min=20.0km az=107.0*
*RSNC **31** 05:14:46.9±1.1, 7°.51N×72°.01W, h0^{km}±4^{km}, ML3.3, Mw3.6*
*FUNV **31** 05:14:46.8, 7°.50N×71°.99W, h3^{km}, MW3.9*
ISC 31 05:14:47.2±1.5**, 7°.49N**±0°.03×**71°.88W**±0°.03**, h22^{km}**±13^{km}**, n34, σ1^{s}38**/58**, mb3.5**/3**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMC	Tame, Arauca	1.05	175	⇑iP	Pn	05 15 06.5	-0.2
TAMC				eS	Sn	05 15 21.7	+0.9
TAMC				i		05 15 25.7	
	comp=Z,619nm,0.2s						
BARC	Barichara	1.57	235	eP	Pn	05 15 12.2	-1.8
BARC				eS	Sn	05 15 33.6	-0.2
BARC				i		05 15 35.3	
	comp=Z,246nm,0.3s						
OCAC	Ocana	1.60	298	eP	Pn	05 15 12.8	-1.6
OCAC				eS	Sn	05 15 33.8	-0.7
OCAC				i		05 15 43.3	
	comp=Z,1μm,0.6s						
BRRC	Barranca, Sant	1.85	258	eP	Pn	05 15 17.4	-0.3
BRRC				eS	Sn	05 15 40.3	-0.1
BRRC				i		05 15 45.3	
	comp=Z,173nm,0.4s						
SDV	Santo Domingo	1.86	42	eP	Pb	05 15 20.2	-0.4
SDV				eS	Sb	05 15 45.7	+2.2
SDV				i		05 15 49.6	
	comp=Z,367nm,0.4s						
RUSC	La Rusia	1.99	217	eP	Pn	05 15 20.7	+0.8
RUSC				eS	Sn	05 15 45.9	+1.5
RUSC				i		05 15 55.3	
	comp=Z,175nm,0.8s						
LL6C	La Loma 6 Bece	2.62	328	eP	Pn	05 15 27.6	-0.6
LL6C				eS	Sn	05 16 00.9	+1.6
MCQV	Machiques	2.62	346	eP	Pn	05 15 28.3	0.0
MCQV				eS	Sn	05 16 00.1	+0.7
SPBC	San Pablo de B	2.84	230	eP	Pn	05 15 31.5	+0.1
SPBC				eS	Sn	05 16 07.5	+2.5
SPBC				i		05 16 15.7	
	comp=Z,109nm,0.3s						
PTGC	Puerto Gaitan,	3.28	184	eP	Pn	05 15 37.1	-0.2
PTGC				eS	Sb	05 16 25.6	+1.2
ARGC	Ariguani, Magd	3.31	315	eP	Pn	05 15 37.3	-0.5
ARGC				eS	Sn	05 16 17.6	+1.1
CHIC	Chingaza	3.39	213	eP	Pn	05 15 39.6	+0.5
NORC	Norcasia	3.53	237	eP	Pn	05 15 39.8	-1.1
NORC				eS	Sn	05 16 25.3	+3.3
NORC				i		05 16 31.6	
	comp=Z,85nm,0.3s						
ROSC	El Rosal	3.58	223	Pn	Pn	05 15 42.7	+0.9
	comp=Z,5.5nm,0.3s,baz=84,slow=13,SNR=45						
ROSC				Lg	Lg	05 16 36.7	
	comp=Z,8.9nm,0.3s,baz=81,slow=17,SNR=2.1						
	comp=Z,31nm,0.6s						
DABV	Dabajuro	3.62	20	eP	Pn	05 15 43.5	+1.4
DABV				eS	Sn	05 16 24.8	+0.6
CRJC	Cerrejon, Guaj	3.64	344	eP	Pn	05 15 41.7	-0.7
CRJC				eS	Sn	05 16 26.0	+1.2
SIQV	Siquisique	3.75	33	eP	Pn	05 15 45.8	+2.0
SIQV				eS	Sn	05 16 28.9	+1.7
HELC	Santa Helena	3.84	251	eP	Pn	05 15 45.1	-0.3
HELC				eS	Sn	05 16 31.4	+1.3
HELC				i		05 16 42.9	
	comp=Z,55nm,0.4s						
SJCC	San Jacinto, C	4.04	306	eP	Pn	05 15 47.7	-0.1
SJCC				eS	Sn	05 16 37.3	+2.7
BAUV	El Baul	4.07	69	eP	Pn	05 15 48.8	+0.6
BAUV				eS	Sn	05 16 36.8	+1.6
MAPV	Macapo	4.11	55	eP	Pn	05 15 50.4	+1.7
MAPV				eS	Sn	05 16 37.2	+1.0
CBOC	Ciudad Bolivar	4.41	249	eP	Pn	05 15 54.8	+1.8
JACV	Jacura	4.67	40	eP	Pn	05 15 58.1	+1.6
JACV				eS	Sn	05 16 50.3	+0.2
PRAC	Prado	4.80	219	eP	Pn	05 15 58.0	-0.2
ORTC	Ortega, Tolima	4.88	223	eP	Pn	05 15 58.7	-0.7
BENV	Beln	4.89	60	eP	Pn	05 16 01.1	+1.5
BENV				eS	Sn	05 16 56.0	+0.4
CACV	CAICARA DEL OR	5.30	89	eP	Pb	05 16 13.7	-5.5
CACV				eS	Sb	05 17 18.6	-3.8
YOTC	Yotoco, Valle	5.64	232	eP	Pn	05 16 10.1	+0.1
CARV	Caracas	5.74	58	eP	Pn	05 16 12.5	+1.3
CARV				eS	Sn	05 17 15.6	-0.9
MERV	Las Mercedes	5.80	72	eP	Pn	05 16 13.2	+1.2
MERV				eS	Sn	05 17 17.0	-0.9
BIRV	Birongo	6.29	61	eP	Pn	05 16 19.8	+1.1
BIRV				eS	Sn	05 17 28.6	-1.4
LPAZ	La Paz	23.92	171	P	P	05 20 01.4	+1.0
	comp=Z,1.0nm,0.6s,baz=322,slow=17,SNR=7.7						
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	63.07	339	P	P	05 25 11.4	-1.1
	comp=Z,0.8nm,0.7s,baz=128,slow=7.0,SNR=6.9						
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	76.88	335	P	P	05 26 36.3	-1.1
	comp=Z,0.2nm,0.8s,baz=94,slow=3.9,SNR=1.9						
	comp=Z,0.2nm,0.8s						

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*KEA **31** 05:23:41.2, 25°.76N×122°.28E, h21^{km}, MS6.7/4*
*BJI **31** 05:23:46.5±0.0, 25°.45N×122°.48E, h245^{km}, mb5.7/75, mB6.0/55*
*TAP **31** 05:23:46.4, 25°.49N×122°.68E, h257^{km}, ML6.9, C*
*MOS **31** 05:23:46.0±0.8, 25°.58N×122°.54E, h253^{km}, mb5.9/86, MS5.1/12, Error ellipse: s-maj=5.7km s-min=3.6km az=111.4*
*NEIC **31** 05:23:47.1, 25°.56N×122°.54E, h245^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-3.10; $M_{\theta\theta}$0.11; $M_{\phi\phi}$2.98; $M_{r\theta}$-0.07; $M_{\theta\phi}$-1.19; $M_{\phi r}$1.55; Fault plane solution: $M_0$3.61000×10^{18} NP1:ϕ_s331.71000°, δ33.35000°, λ-103.75000°. NP2:ϕ_s168.03000°, δ57.72000°, λ-81.11000°. Principal axes: T 3.7341, Plg12.0000°, Azm252.0000°; N -0.2525, Plg8.0000°, Azm343.0000°; P -3.4816, Plg76.0000°, Azm104.0000°;*
*NEIC **31** 05:23:47.3±2.0, 25°.56N±0°.07×122°.55E±0°.07, h246^{km}±3^{km}, mb5.9/580, Mwb6.3/49, Mwc6.3/103, Mww6.4 Error ellipse: s-maj=10.1km s-min=8.8km az=150.0*
*NIED **31** 05:23:48.5, 25°.45N×122°.51E, h236^{km}, MW6.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.52; $M_{\theta\theta}$0.42; $M_{\phi\phi}$2.10; $M_{r\theta}$-0.38; $M_{\theta\phi}$-0.69; $M_{\phi r}$1.85; Fault plane solution: $M_0$3.08000×10^{18} NP1: ϕ_s336.00000°, δ26.00000°, λ-98.00000°. NP2: ϕ_s165.00000°, δ64.00000°, λ-86.00000°.*
*IDC **31** 05:23:48.4±0.4, 25°.54N×122°.57E, h265^{km}±3^{km}, mb5.2/37, mbtmp5.8/43 Error ellipse: s-maj=6.4km s-min=4.7km az=79.0*
*JMA **31** 05:23:48.5±0.3, 25°N±2°×122°.5E±0°.8, h236^{km}±3^{km}, MD6.2/19, MW6.3/19, NW OFF ISHIGAKIJIMA IS*
JMA Felt III J1 at NW OFF ISHIGAKIJIMA IS .
*GCMT **31** 05:23:51.3±0.0, 25°.42N×122°.35E, h250^{km}, MW6.4/170, Moment Tensor Solution. s164,c431; s170,c711; Duration: 3^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}-3.70±.01; $M_{\theta\theta}$0.04±.02; $M_{\phi\phi}$3.67±.02; $M_{r\theta}$-0.46±.02; $M_{\theta\phi}$-0.96±.02; $M_{\phi r}$2.03±.02; Best double couple: $M_0$4.33700×10^{18} NP1:ϕ_s345.00000°, δ31.00000°, λ-91.00000°. NP2:ϕ_s167.00000°, δ59.00000°, λ-89.00000°. Principal axes: T 4.4410, Plg14.0000°, Azm256.0000°; N -0.2020, Plg0.0000°, Azm346.0000°; P -4.2330, Plg76.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **31** 05:23:53, 25°.37N×122°.63E, h250^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}-3.48; $M_{\theta\theta}$0.25; $M_{\phi\phi}$3.23; $M_{r\theta}$-0.29; $M_{\theta\phi}$-1.58; $M_{\phi r}$2.23; Fault plane solution: $M_0$4.34000×10^{18} NP1: ϕ_s327.00000°, δ31.00000°, λ-106.00000°. NP2: ϕ_s166.00000°, δ61.00000°, λ-80.00000°. Principal axes: T 4.5018, Plg15.0000°, Azm249.0000°; N -0.3383, Plg8.0000°, Azm341.0000°; P -4.1635, Plg73.0000°, Azm98.0000°;*
*NEIC **31** 05:24:04.2, 25°.30N×122°.19E, h253^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-3.54; $M_{\theta\theta}$0.04; $M_{\phi\phi}$3.50; $M_{r\theta}$-0.32; $M_{\theta\phi}$-1.12; $M_{\phi r}$1.74; Fault plane solution: $M_0$4.09000×10^{18} NP1:ϕ_s166.33000°, δ57.82000°, λ-86.95000°. NP2:ϕ_s340.61000°, δ32.31000°, λ-94.84000°. Principal axes: T 4.2304, Plg13.0000°, Azm254.0000°; N -0.2830, Plg3.0000°, Azm345.0000°; P -3.9474, Plg77.0000°, Azm86.0000°;*
ISC 31 05:23:47.6±0.2**, 25°.49N**±0°.02×**122°.50E**±0°.02**, h255^{km}**±1^{km}**, h255^{km}:pP-P, n2298, σ1^{s}79**/2800**, mb5.8**/523**, 181C-793D, Fault plane solution: NP1:**ϕ_s11.60885°**,** δ34.52523°**,** λ-39.77435°. **NP2:**ϕ_s136.05132°**,** δ68.74008°**,** λ-117.86639°. **Principal axes:** T Plg19.0366°, Azm246.5161°**;** N Plg25.8236°, Azm146.9041°**;** P Plg57.0310°**,** Azm8.6533°**; Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.67	224	⇓iP	Pn	05 24 21.1	-0.6
	baz=236						
TWB1				i S	S	05 24 46.1	-2.3
	baz=236						
SXI1	Grass Mountain	0.69	235	⇓iP	Pn	05 24 21.3	-0.6
	baz=240						
TNOU	National Taiwa	0.74	243	⇓iP	Pn	05 24 21.6	-0.3
	baz=254						
TNOU				i S	S	05 24 46.8	-2.1
	baz=254						
NWF	Wu-fen Shan	0.77	238	⇓iP	Pn	05 24 21.8	-0.5
	baz=251						
NWF				eS	S	05 24 48.6	-0.7
	baz=251						
WFSB	Wu-fen Shan	0.77	238	⇓iP	Pn	05 24 21.8	-0.3
	baz=233						
TIPB	Shuangxi	0.80	230	⇓iP	Pn	05 24 21.6	-0.6
	baz=238						
TIPB				S	S	05 24 47.8	-1.7
	baz=238						
NWRT	Kuosheng	0.81	250	⇓iP	Pn	05 24 21.9	-0.3
	baz=254						
EGS		0.82	219	⇓iP	Pn	05 24 21.5	-0.8
	baz=227						
EGS				eS	S	05 24 48.0	-1.6
	baz=227						
TWY	Chenhua	0.84	256	⇓iP	Pn	05 24 22.5	+0.1
	baz=267						
TWY				i S	S	05 24 48.0	-1.6
	baz=267						
NSM	Shimen	0.85	257	⇓iP	Pn	05 24 22.6	+0.2
	baz=268						
NTC	Toucheng	0.88	224	⇓iP	Pn	05 24 21.7	-0.9
	baz=222						
NTC				S	S	05 24 47.9	-2.1
	baz=222						
YM08	YM08	0.88	250	⇓iP	Pn	05 24 22.0	-0.6
	baz=263						
YM08				eS	S	05 24 47.7	-2.4
	baz=263						
YM01	YM01	0.91	248	⇓iP	Pn	05 24 22.2	-0.5
	baz=261						
YM01				eS	S	05 24 48.8	-1.6
	baz=261						
ANP	Anpu	0.94	252	⇓iP	Pn	05 24 22.3	-0.7
	baz=254						
NHY	Taipei	0.95	242	eP	Pn	05 24 22.4	-0.6
	baz=242						
NHY				eS	S	05 24 50.1	-0.6
	baz=242						
TWA	Mucha	0.97	239	⇓iP	Pn	05 24 22.3	-0.8
	baz=239						
TWA				eS	S	05 24 50.3	-0.7
	baz=239						
ILA	Ilan	0.99	224	⇓P	Pn	05 24 22.4	-0.8
	baz=222						
ILA				eS	S	05 24 50.2	-0.9
	baz=222						
TAP1	Taipei	0.99	243	P	Pn	05 24 22.6	-0.6
	baz=256						
TAP1				eS	S	05 24 49.3	-1.7
	baz=256						
NTST	Danshui	1.00	252	⇓iP	Pn	05 24 22.9	-0.3
	baz=255						
NTST				eS	S	05 24 50.5	-0.7
	baz=255						
TAP	Taipei	1.00	244	⇓P	Pn	05 24 22.5	-0.7
	baz=256						
TAP				S	S	05 24 49.9	-1.3
	baz=256						
NHDH	Xindian Distri	1.03	240	⇓P	Pn	05 24 22.6	-0.8
	baz=253						
NHDH				S	S	05 24 49.2	-2.2
	baz=253						
TATO	Taipei	1.05	241	Pn	Pn	05 24 22.5	-1.0
TATO	Taipei	1.05	241	P	Pn	05 24 22.9	-0.6
TATO	Taipei	1.05	241	⇓iP	Pn	05 24 22.7	-0.7
	baz=252						
TATO				i S	S	05 24 49.4	-2.3
	baz=252						
TWS1	Kuangyinshan	1.05	249	⇓iP	Pn	05 24 23.1	-0.3
	baz=260						
TWS1				S	S	05 24 50.2	-1.5
	baz=260						
TWC	Suao	1.05	214	⇓iP	Pn	05 24 22.3	-1.2
	baz=222						
TWC				eS	S	05 24 48.6	-3.2
	baz=222						
TWE	Neicheng	1.07	225	⇓P	Pn	05 24 22.6	-1.1
	baz=226						
TWE				eS	S	05 24 50.7	-1.3
	baz=226						
BACT	New Taipei Cit	1.07	243	⇓P	Pn	05 24 22.9	-0.7
	baz=243						
BACT				eS	S	05 24 50.7	-1.2
	baz=243						
FUSB	Fushanzhiwuyua	1.10	229	⇓iP	Pn	05 24 22.9	-1.0

	baz=237						
FUSB				*i* S	S	05 24 49.7	-2.7
	baz=237						
JYNG	**Yonagunijimaku**	1.11	159	⇓P	Pn	05 24 22.5	-1.4
JYNG				⇓S	S	05 24 49.4	-3.0
JYNG	**Yonagunijimaku**	1.11	159	A	A	05 24 22.5	
	comp=E,419nm,6.9s,comp=E,390nm,1.7s						
NDS	**Dongshan**	1.11	220	⇓P	Pn	05 24 23.0	-0.9
	baz=222						
NDS				S	S	05 24 50.2	-2.2
	baz=222						
YOJ	**Yonaguni jima**	1.12	155	Pn	Pn	05 24 22.3	-1.6
YOJ	**Yonaguni jima**	1.12	155	P	Pn	05 24 22.3	-1.6
YOJ	**Yonaguni jima**	1.12	155	P	Pn	05 24 22.8	-1.1
YOJ	**Yonaguni jima**	1.12	155	⇓*i*P	Pn	05 24 22.6	-1.3
	baz=165						
YOJ				*i* S	S	05 24 49.3	-3.3
	baz=165						
YOJ	**Yonaguni jima**	1.12	155	⇓P	Pn	05 24 22.6	-1.3
YOJ				⇓*e*S	S	05 24 49.6	-2.9
YOJ	**Yonaguni jima**	1.12	155	A	A	05 24 22.6	
	comp=E,460nm,5.4s,comp=E,489nm,1.3s						
YOJ	**Yonaguni jima**	1.12	155	⇓P	Pn	05 24 22.6	-1.3
NWLT	**Wulai**	1.15	232	⇓P	Pn	05 24 23.1	-1.0
	baz=238						
NWLT				S	S	05 24 50.0	-2.8
	baz=238						
NTY	**Taoyuan**	1.19	246	⇓*i*P	Pn	05 24 23.8	-0.5
	baz=255						
NTY				*i* S	S	05 24 51.7	-1.5
	baz=255						
ENTT	**Nioudou**	1.20	225	⇓*i*P	Pn	05 24 23.6	-0.8
	baz=227						
ENTT				*e*S	S	05 24 51.5	-1.9
	baz=227						
EWUT	**Wuta**	1.23	212	⇓*i*P	Pn	05 24 23.9	-0.7
	baz=224						
EWUT				*i* S	S	05 24 51.4	-2.2
	baz=224						
NDT	**Datong Townshi**	1.26	226	⇓*e*P	Pn	05 24 23.7	-1.1
	baz=224						
NDT				*e*S	S	05 24 51.4	-2.6
	baz=224						
ENA	**Nanau**	1.26	213	⇓*i*P	Pn	05 24 24.1	-0.7
	baz=219						
LATG	**Datong**	1.30	223	⇓*i*P	Pn	05 24 24.6	-0.6
	baz=237						
NCU	**National Centr**	1.30	247	⇓*i*P	Pn	05 24 24.5	-0.5
	baz=255						
NCU				*i* S	S	05 24 52.4	-2.0
	baz=255						
NCUH	**Zhongli**	1.30	247	⇓*i*P	Pn	05 24 24.6	-0.4
	baz=254						
NCUH				*i* S	S	05 24 52.8	-1.7
	baz=254						
YHNB	**Yeheng**	1.30	232	Pn	Pn	05 24 24.4	-0.8
YHNB	**Yeheng**	1.30	232	P	Pn	05 24 25.3	+0.1
YHNB	**Yeheng**	1.30	232	⇓*i*P	Pn	05 24 24.1	-1.1
	baz=236						
YHNB				*e*S	S	05 24 51.8	-3.0
	baz=236						
NSK	**Sanguang**	1.31	232	⇓*i*P	Pn	05 24 24.2	-1.0
	baz=237						
NSK				*i* S	S	05 24 51.9	-3.0
	baz=237						
EHP	**Heping Village**	1.36	211	*e*P	Pn	05 24 24.8	-0.7
	baz=216						
EHP				S	S	05 24 53.5	-1.8
	baz=216						
NHW	**Xinwu Township**	1.40	250	⇓*i*P	Pn	05 24 25.4	-0.3
	baz=253						
NHW				*i* S	S	05 24 54.6	-1.1
	baz=253						
NNS	**Nan Shan**	1.46	225	⇓*i*P	Pn	05 24 25.6	-0.7
	baz=225						
NNS				S	S	05 24 54.4	-2.4
	baz=225						
NNSB	**Datong**	1.46	224	⇓*i*P	Pn	05 24 25.7	-0.6
	baz=225						
NNSB				S	S	05 24 54.6	-2.2
	baz=225						
NJD	**Zhudong**	1.48	240	⇓P	Pn	05 24 25.9	-0.5
	baz=237						
NJD				S	S	05 24 55.0	-1.8
	baz=237						
NFF	**Wufeng Townshi**	1.52	236	⇓*i*P	Pn	05 24 25.6	-1.0
	baz=237						
NFF				*e*S	S	05 24 54.2	-3.1
	baz=237						
HSN1	**Hsinchu**	1.52	243	⇓*i*P	Pn	05 24 26.1	-0.4
	baz=253						
HSN1				S	S	05 24 55.2	-2.0
	baz=253						
SBCB	**Hsinchu**	1.54	244	⇓*i*P	Pn	05 24 26.3	-0.4
	baz=253						
SBCB				S	S	05 24 55.9	-1.7
	baz=253						
ETL	**Fush Village**	1.54	211	⇓P	Pn	05 24 25.6	-1.3
	baz=224						
ETL				S	S	05 24 55.0	-2.7
	baz=224						
NACB	**Ninganchiao**	1.54	212	Pn	Pn	05 24 25.7	-1.2
NACB	**Ninganchiao**	1.54	212	⇓*i*P	Pn	05 24 25.5	-1.3
	baz=224						
HSN	**Hsinchu**	1.55	244	⇓*i*P	Pn	05 24 26.0	-0.7
	baz=253						
HSN				*i* S	S	05 24 55.3	-2.3
	baz=253						
ETLH	**Xiulin Townshi**	1.57	216	⇓*i*P	Pn	05 24 26.1	-1.0
	baz=222						
ETLH				*i* S	S	05 24 55.4	-2.9
	baz=222						
LIOB	**Emei**	1.59	238	⇓*i*P	Pn	05 24 26.5	-0.6
	baz=237						
LIOB				*e*S	S	05 24 56.0	-2.2
	baz=237						
IRIF	**Iriomote-Funau**	1.60	136	⇓P	Pn	05 24 26.1	-1.1
IRIF				⇓*e*S	S	05 24 55.3	-3.1
IRIF	**Iriomote-Funau**	1.60	136	A	A	05 24 26.1	
	comp=E,714nm,1.8s,comp=E,1µm,1.2s						
NSTT	**Nanjuang**	1.60	238	⇓*i*P	Pn	05 24 26.5	-0.7
	baz=238						
NSTT				S	S	05 24 55.6	-2.8
	baz=238						
TWD	**Chiawan**	1.62	211	⇓*i*P	Pn	05 24 26.2	-1.3
	baz=223						
TWD				S	S	05 24 55.6	-3.2
	baz=223						
NJN	**Zhunan**	1.68	242	⇓*i*P	Pn	05 24 27.5	-0.3
	baz=250						
NJN				*e*S	S	05 24 57.5	-1.9
	baz=250						
FUSS	**Fushou**	1.68	223	⇓*i*P	Pn	05 24 28.0	-0.2
	baz=223						
FUSS				*i* S	S	05 24 58.2	-1.9
	baz=223						
HWA	**Hwalien**	1.71	209	⇓*i*P	Pn	05 24 27.5	-0.6
	baz=214						
HWA				S	S	05 24 58.1	-1.9
	baz=214						
TWT	**Tachien**	1.72	225	⇓*i*P	Pn	05 24 28.1	-0.2
	baz=228						
TWT				S	S	05 24 58.4	-2.1
	baz=228						
TDCB	**Techi**	1.73	225	⇓*i*P	Pn	05 24 28.1	-0.4
	baz=227						
TDCB				*e*S	S	05 24 57.4	-3.2
	baz=227						
WHF	**Hehuan Shan**	1.75	220	⇓*i*P	Pn	05 24 28.5	-0.4
	baz=220						
WHF				*i* S	S	05 24 58.6	-2.8
	baz=220						
ETM	**Tongmen**	1.77	211	⇓*i*P	Pn	05 24 27.2	-1.4
	baz=221						
TEYL	**Yanliau Villag**	1.81	207	⇓*i*P	Pn	05 24 28.0	-0.9
	baz=218						
TEYL				*e*S	S	05 24 59.2	-2.3
	baz=218						
NMLH	**Miaoli**	1.82	239	⇓P	Pn	05 24 28.6	-0.4
	baz=242						
NMLH				*i* S	S	05 24 59.8	-1.8
	baz=242						
JKRS	**Kuro-shima**	1.85	132	P	Pn	05 24 28.6	-0.7
JKRS				S	S	05 24 59.0	-3.1
JKRS	**Kuro-shima**	1.85	132	A	A	05 24 28.6	
	comp=E,899nm,2.1s,comp=E,938nm,2.8s						
HATJ	**Hateruma jima**	1.85	140	⇓P	Pn	05 24 28.6	-0.7
HATJ				⇓*e*S	S	05 24 59.4	-2.8
HATJ	**Hateruma jima**	1.85	140	A	A	05 24 28.6	
	comp=E,914nm,3.3s,comp=E,920nm,1.7s						
WHP	**Taichung City**	1.86	230	⇓*i*P	Pn	05 24 29.0	-0.4
	baz=234						
WHP				*e*S	S	05 24 59.0	-3.3
	baz=234						
CHGB	**Renai**	1.86	221	⇓*i*P	Pn	05 24 29.6	0.0
	baz=221						
CHGB				*i* S	S	05 25 00.3	-2.5
	baz=221						
JIJ	**Ishigaki jima**	1.86	127	⇓P	Pn	05 24 28.4	-1.0
JIJ				⇓S	S	05 24 58.0	-4.2
JIJ	**Ishigaki jima**	1.86	127	A	A	05 24 28.4	
	comp=E,391nm,1.2s,comp=E,334nm,0.9s						
JISG	**Ishigakijimahi**	1.87	118	⇓P	Pn	05 24 28.5	-0.9
JISG				⇓S	S	05 24 58.9	-3.5
JISG	**Ishigakijimahi**	1.87	118	A	A	05 24 28.5	
	comp=E,592nm,1.1s,comp=E,442nm,0.4s						
NSY	**Sanyi**	1.91	236	⇓*i*P	Pn	05 24 29.6	-0.1
	baz=244						
NSY				S	S	05 25 01.2	-1.8
	baz=244						
ESL	**Shilin**	1.93	210	⇓*i*P	Pn	05 24 28.4	-1.5
	baz=215						
ESL				*e*S	S	05 24 59.1	-4.2
	baz=215						
TWQ1	**Liyutan**	1.94	234	⇓*i*P	Pn	05 24 29.6	-0.4
	baz=238						
TWQ1				S	S	05 25 01.0	-2.4
	baz=238						
OWD	**Renai**	1.94	219	⇓*i*P	Pn	05 24 30.0	-0.2
	baz=222						
OWD				*e*S	S	05 25 00.6	-3.3
	baz=222						
WUSB	**Renai**	1.95	220	⇓*i*P	Pn	05 24 30.1	-0.2
	baz=221						
WUSB				S	S	05 25 01.5	-2.4
	baz=221						
TEGC	**Jichi Village**	1.98	206	P	Pn	05 24 29.4	-0.9
	baz=204						
TEGC				*e*S	S	05 25 02.6	-1.4
	baz=204						
WCS	**Beigang Elemen**	2.03	226	⇓*i*P	Pn	05 24 30.4	-0.4
	baz=234						
WCS				*i* S	S	05 25 02.1	-2.7
	baz=234						
WPL	**Puli Township**	2.03	224	⇓*i*P	Pn	05 24 30.4	-0.4
	baz=232						
WPL				*e*S	S	05 25 02.3	-2.6
	baz=232						
WDJ	**Dajia District**	2.03	236	⇓*i*P	Pn	05 24 30.8	-0.1
	baz=243						
WDJ				S	S	05 25 03.0	-2.0
	baz=243						
DPDB	**Guoxing**	2.04	225	⇓*i*P	Pn	05 24 30.6	-0.4
	baz=233						
DPDB				*e*S	S	05 25 01.9	-3.2
	baz=233						
EGFH	**Guangfu**	2.06	209	⇓*i*P	Pn	05 24 29.5	-1.6
	baz=218						
EGFH				*e*S	S	05 25 01.8	-3.6
	baz=218						
VWDT	**VWDT**	2.12	216	⇓*i*P	Pn	05 24 31.9	+0.2
	baz=214						
VWDT				S	S	05 25 04.4	-2.0
	baz=214						
TCU	**Taichung**	2.13	232	⇓*i*P	Pn	05 24 31.6	-0.1
	baz=242						
TCU				S	S	05 25 04.7	-1.8
	baz=242						
SMLT	**Sun Moon Lake**	2.16	223	⇓*i*P	Pn	05 24 31.8	-0.4
	baz=226						
SMLT				*i* S	S	05 25 05.2	-2.1
	baz=226						
JTJ	**Tarama**	2.17	112	P	Pn	05 24 31.6	-0.4
JTJ				S	S	05 25 04.1	-3.0
JTJ	**Tarama**	2.17	112	A	A	05 24 31.6	
	comp=E,586nm,2.9s,comp=E,479nm,3.3s						
TYC	**Yuchr**	2.17	224	⇓*i*P	Pn	05 24 31.7	-0.4
	baz=234						
TYC				S	S	05 25 04.8	-2.4
	baz=234						
WWF	**Wufeng**	2.18	229	⇓*i*P	Pn	05 24 32.0	-0.2
	baz=240						
WWF				S	S	05 25 05.7	-1.7
	baz=240						
SSLB	**Suanglung**	2.20	220	Pn	Pn	05 24 32.0	-0.5
SSLB	**Suanglung**	2.20	220	P	Pn	05 24 32.4	0.0
SSLB	**Suanglung**	2.20	220	⇓*i*P	Pn	05 24 32.0	-0.5
	baz=224						
SSLB				*e*S	S	05 25 03.8	-4.1
	baz=224						
HGSD	**Ruisui**	2.22	206	⇓*i*P	Pn	05 24 31.9	-0.6
	baz=216						
HGSD				*e*S	S	05 25 06.1	-1.9
	baz=216						
EHY	**Hungye**	2.25	209	⇓*i*P	Pn	05 24 31.1	-1.7
	baz=216						
EHY				*e*S	S	05 25 05.2	-3.4
	baz=216						
WCHH	**Zhanghua**	2.25	232	⇓*i*P	Pn	05 24 32.6	-0.3
	baz=240						
WCHH				S	S	05 25 07.0	-1.6
	baz=240						
WNT1	**Nantou City**	2.28	227	⇓*i*P	Pn	05 24 32.9	-0.2
	baz=230						
WNT1				S	S	05 25 06.7	-2.5
	baz=230						
WNT	**Mingjian**	2.30	226	⇓*i*P	Pn	05 24 33.1	-0.3
	baz=229						
WNT				*i* S	S	05 25 07.8	-1.6
	baz=229						
WJS	**Zhushan**	2.31	225	⇓*i*P	Pn	05 24 33.2	-0.3
	baz=234						
WJS				*i* S	S	05 25 07.8	-1.9
	baz=234						
WYL	**Yuanlin Townsh**	2.31	229	*e*P	Pn	05 24 32.9	-0.6
	baz=240						
WYL				*e*S	S	05 25 07.7	-2.0
	baz=240						
YULB	**Yu-li**	2.36	208	Pn	Pn	05 24 32.4	-1.5
YULB	**Yu-li**	2.36	208	⇓*i*P	Pn	05 24 32.2	-1.7
	baz=215						
YULB				S	S	05 25 04.8	-5.7
	baz=215						
ECBN	**Changbin**	2.36	204	P	Pn	05 24 33.0	-1.0
	baz=205						
TWF1	**Yuli**	2.39	208	⇓P	Pn	05 24 32.6	-1.6
	baz=214						
TWF1				*e*S	S	05 25 08.7	-2.4
	baz=214						
MATB	**Ma-tsu**	2.40	287	⇓*i*P	Pn	05 24 34.0	-0.2
	baz=285						
MATB				*e*S	S	05 25 08.3	-2.7
	baz=285						
MSUT	**Lienchiang**	2.42	287	⇓*i*P	Pn	05 24 34.1	-0.3
	baz=285						
MSUT				*e*S	S	05 25 09.2	-2.2
	baz=285						
YUS	**Yu-Shan**	2.44	216	⇓*i*P	Pn	05 24 35.1	-0.1
	baz=217						
YUS				*e*S	S	05 25 11.2	-1.6
	baz=217						
WRL	**Guolierlin Hig**	2.49	231	⇓*e*P	Pn	05 24 34.8	-0.4
	baz=229						
WRL				S	S	05 25 11.2	-1.7
	baz=229						
ALS	**Alishan**	2.50	218	⇓*i*P	Pn	05 24 35.4	-0.3
	baz=228						
ALS				*i* S	S	05 25 11.5	-2.0
	baz=228						
CHN5	**Tsauling**	2.51	222	⇓*i*P	Pn	05 24 35.1	-0.3
	baz=225						
CHN5				S	S	05 25 11.2	-2.1
	baz=225						
JIRB	**Irabujima**	2.51	105	P	Pn	05 24 34.8	-0.5
JIRB				*e*S	S	05 25 09.6	-3.4
JIRB	**Irabujima**	2.51	105	A	A	05 24 34.8	
	comp=E,255nm,4.4s,comp=E,335nm,3.5s						
WGK	**Gukeng**	2.52	225	⇓*i*P	Pn	05 24 35.3	-0.1
	baz=233						
WGK				*i* S	S	05 25 12.2	-1.0
	baz=233						
XPSS	**Dashiqiu**	2.52	305	⇓*i*P	Pn	05 24 35.3	-0.1
	baz=302						
XPSS				S	S	05 25 11.7	-1.5
	baz=302						
WDLH	**Douliu**	2.53	225	⇓*i*P	Pn	05 24 35.5	-0.1
	baz=233						
WDLH				*e*S	S	05 25 11.9	-1.6
	baz=233						
FULB	**Fuli**	2.53	206	⇓*i*P	Pn	05 24 34.7	-0.9
	baz=206						
FULB				*e*S	S	05 25 11.6	-2.0
	baz=206						
JIKM	**Ikemajima**	2.55	102	P	Pn	05 24 35.5	-0.2
JIKM				S	S	05 25 11.2	-2.6
JIKM	**Ikemajima**	2.55	102	A	A	05 24 35.5	
	comp=E,336nm,2.2s,comp=E,428nm,2.1s						
WTCT	**Ta-ch'eng**	2.59	232	⇓*i*P	Pn	05 24 35.7	-0.5
	baz=239						
WTCT				S	S	05 25 12.8	-1.7
	baz=239						
CHKT	**Chengkung**	2.59	204	⇓*i*P	Pn	05 24 35.2	-1.0
	baz=205						
CHKT				*e*S	S	05 25 12.3	-2.4
	baz=205						
JMJ	**Miyako jima 2**	2.62	104	P	Pn	05 24 37.6	+1.2
JMJ	**Miyako jima 2**	2.62	104	⇑*e*P	Pn	05 24 37.0	+0.5
	baz=106						
WTK	**Tuku**	2.63	227	⇓*i*P	Pn	05 24 36.4	-0.2
	baz=230						
WTK				S	S	05 25 13.8	-1.5
	baz=230						
ECS	**Chishang**	2.65	206	⇓*e*P	Pn	05 24 35.7	-1.2
	baz=208						
ELDTW	**Lidau**	2.66	211	⇓*i*P	Pn	05 24 36.4	-0.6
	baz=212						
WMLT	**Mailiao**	2.67	231	*e*P	Pn	05 24 36.5	-0.5
	baz=239						
WMLT				*e*S	S	05 25 13.7	-2.2
	baz=239						
JMJ2	**Miyako jima3**	2.67	106	P	Pn	05 24 36.9	0.0
JMJ2				S	S	05 25 14.3	-1.7
JMJ2	**Miyako jima3**	2.67	106	A	A	05 24 36.9	
	comp=E,268nm,3.8s,comp=E,410nm,2.3s						
CHN2	**Minshiung**	2.68	224	⇓P	Pn	05 24 37.1	0.0
	baz=223						
CHN2				S	S	05 25 14.5	-1.7
	baz=223						
LYJJ	**Jianjiangzhen**	2.68	294	⇓*i*P	Pn	05 24 37.0	0.0
	baz=292						
LYJJ				S	S	05 25 14.3	-1.9
	baz=292						
EDH	**Donghe**	2.73	204	⇓*i*P	Pn	05 24 36.5	-1.2
	baz=211						
EDH				*e*S	S	05 25 15.1	-2.2
	baz=211						
JOGS	**Gusukube**	2.73	105	P	Pn	05 24 37.8	+0.2
JOGS				*e*S	S	05 25 15.7	-1.5
JOGS	**Gusukube**	2.73	105	A	A	05 24 37.8	
	comp=E,279nm,1.7s,comp=E,422nm,3.3s						
CHY	**Chiayi**	2.74	224	⇓*e*P	Pn	05 24 37.4	-0.3
	baz=224						
CHY				S	S	05 25 15.1	-2.2
	baz=224						
TPUB	**Ta-pu**	2.77	218		Pn	05 24 37.6	-0.4
TPUB	**Ta-pu**	2.77	218	P	Pn	05 24 38.0	0.0
WSF	**Szhu**	2.77	229	⇓*i*P	Pn	05 24 37.7	-0.4
	baz=228						
WSF				S	S	05 25 16.4	-1.5
	baz=228						
STYH	**Taoyuan**	2.79	215	⇓*i*P	Pn	05 24 37.7	-0.6
	baz=218						
STYH				S	S	05 25 15.9	-2.4
	baz=218						
VWUC	**VWUC**	2.81	260	⇓*e*P	Pn	05 24 37.6	-0.7
	baz=261						
VWUC				*e*S	S	05 25 15.1	-3.4
	baz=261						
STYT	**Tauyuan**	2.81	215	⇓*i*P	Pn	05 24 38.4	-0.1
	baz=218						
STYT				S	S	05 25 16.0	-2.8
	baz=218						
WTP	**Ta-pu**	2.82	218	⇓*i*P	Pn	05 24 38.3	-0.3
	baz=220						
WTP				*i* S	S	05 25 16.3	-2.6
	baz=220						
LONT	**Longtian**	2.86	206	⇓*e*P	Pn	05 24 37.5	-1.5
	baz=209						
LONT				*e*S	S	05 25 16.7	-3.0
	baz=209						
TWK	**Hsinying**	2.87	220	⇓*i*P	Pn	05 24 38.9	-0.3
	baz=219						
TWK				S	S	05 25 17.8	-2.2
	baz=219						
SNST	**Tainan City**	2.90	219	⇓P	Pn	05 24 39.2	-0.2
	baz=219						
SNST				S	S	05 25 18.1	-2.4
	baz=219						
CHN1	**Nanshi**	2.91	219	⇓*i*P	Pn	05 24 39.3	-0.2
	baz=218						
CHN1				S	S	05 25 18.8	-2.0
	baz=218						
ICHU	**Yijhu**	2.93	224	⇓*i*P	Pn	05 24 39.5	-0.2
	baz=222						
ICHU				*e*S	S	05 25 18.7	-2.2
	baz=222						
LDUT	**Ludao**	2.96	199	⇓*i*P	Pn	05 24 38.9	-1.1
	baz=203						
LDUT				*e*S	S	05 25 18.3	-3.2
	baz=203						
TWG	**Pinlang**	2.96	206	Pn	Pn	05 24 38.9	-1.1
TWG	**Pinlang**	2.96	206	⇓P	Pn	05 24 38.4	-1.7
	baz=209						
TWG				S	S	05 25 18.9	-2.7
	baz=209						
TWGBT	**Beinan**	2.96	206	⇓*e*P	Pn	05 24 38.2	-1.8
	baz=209						
SGST	**Jiashian**	2.97	217	⇓*i*P	Pn	05 24 39.3	-0.8
	baz=223						
SGST				*i* S	S	05 25 18.9	-2.8
	baz=223						
CHN8	**Yiju**	2.98	225	⇓*i*P	Pn	05 24 40.0	-0.3
	baz=232						
CHN8				*i* S	S	05 25 20.8	-1.1
	baz=232						
TTN	**Taitung**	2.99	205	*e*P	Pn	05 24 39.6	-0.7
	baz=209						
SLGT	**Liugui**	3.00	215	⇓*e*P	Pn	05 24 40.9	+0.4
	baz=215						
SLGT				S	S	05 25 20.6	-1.8
	baz=215						
CHN3	**Shinhua**	3.09	219	⇓P	Pn	05 24 42.1	+0.7
	baz=228						
CHN3				S	S	05 25 24.1	-0.1
	baz=228						
PTMZ	**Houxiangcun**	3.09	262	⇓*e*P	Pn	05 24 40.9	-0.5
	baz=263						
PTMZ				*e*S	S	05 25 21.0	-3.0
	baz=263						
SCLT	**Jiali**	3.12	223	⇓P	Pn	05 24 41.9	+0.1
	baz=220						
SCLT				S	S	05 25 23.6	-1.0
	baz=220						
SHHT	**Tainan City**	3.14	219	⇓P	Pn	05 24 42.8	+0.7
	baz=228						
SHHT				*e*S	S	05 25 25.3	+0.2
	baz=228						
SCST	**Cishan**	3.17	216	⇓P	Pn	05 24 42.9	+0.6
	baz=213						
SCST				S	S	05 25 24.8	-0.9
	baz=213						
MHZQ	**Yeshan**	3.19	282	⇓P	Pn	05 24 42.1	-0.2
	baz=281						
MHZQ				*e*S	S	05 25 23.5	-2.4
	baz=281						
TAI1	**Yung-k'ang**	3.20	221	⇓P	Pn	05 24 43.2	+0.6
	baz=224						
TAI1				S	S	05 25 25.1	-1.0
	baz=224						
ECL	**Taimali**	3.21	206	*e*P	Pn	05 24 41.1	-1.6
	baz=213						
ECL				*e*S	S	05 25 23.0	-3.4
	baz=213						
SSD	**Sandimen**	3.22	212	⇓*i*P	Pn	05 24 43.1	+0.2
	baz=208						
SSD				S	S	05 25 24.1	-2.5
	baz=208						
TSMG	**Majia**	3.25	212	⇓*i*P	Pn	05 24 43.4	+0.3
	baz=209						
TSMG				S	S	05 25 24.6	-2.6
	baz=209						
TAI	**Tainan**	3.25	221	*e*P	Pn	05 24 43.8	+0.6
	baz=224						
TWM1	**Shoushan**	3.26	216	⇓*i*P	Pn	05 24 44.3	+1.0

	baz=213						
TWM1				*e*S	**S**	**05 25 26.3**	**-1.2**
	baz=213						
PNG	**Penghu**	**3.29**	**235**	⇓*i*P	**Pn**	**05 24 42.9**	**-0.7**
	baz=237						
PNG				S	**S**	**05 25 25.3**	**-2.8**
	baz=237						
SGLT	**Jiouru**	**3.31**	**214**	⇓P	**Pn**	**05 24 44.9**	**+1.1**
	baz=211						
SGLT				*e*S	**S**	**05 25 28.5**	**+0.1**
	baz=211						
PHUB	**P'eng-hu**	**3.31**	**234**	⇓*i*P	**Pn**	**05 24 43.1**	**-0.8**
	baz=236						
PHUB				S	**S**	**05 25 24.3**	**-4.2**
	baz=236						
TSPT	**Pingtung City**	**3.34**	**214**	⇓P	**Pn**	**05 24 45.4**	**+1.1**
	baz=217						
TSPT				*e*S	**S**	**05 25 29.1**	**-0.1**
	baz=217						
SNJT	**Kaohsiung City**	**3.37**	**216**	*e*P	**Pn**	**05 24 44.3**	**-0.1**
	baz=219						
WDGT	**Dungji**	**3.41**	**230**	⇓*i*P	**Pn**	**05 24 44.5**	**-0.5**
	baz=227						
WDGT				*i* S	**S**	**05 25 27.6**	**-2.8**
	baz=227						
EAST	**Anshuo**	**3.44**	**206**	⇓P	**Pn**	**05 24 44.7**	**-0.7**
	baz=216						
TAW	**Tawu**	**3.44**	**206**	P	**Pn**	**05 24 44.5**	**-0.9**
	baz=209						
TAW				*e*S	**S**	**05 25 28.4**	**-2.8**
	baz=209						
SSPT	**Xinbi**	**3.47**	**211**	⇓*i*P	**Pn**	**05 24 46.1**	**+0.4**
	baz=209						
SSPT				*e*S	**S**	**05 25 30.0**	**-1.7**
	baz=209						
KAU	**Kaohsiung**	**3.53**	**215**	⇓*e*P	**Pn**	**05 24 46.9**	**+0.6**
	baz=218						
KAU				S	**S**	**05 25 31.0**	**-1.9**
	baz=218						
LAY	**Lan-yu**	**3.54**	**194**	⇓*e*P	**Pn**	**05 24 46.2**	**-0.3**
	baz=196						
SCZT	**Fangliau**	**3.55**	**209**	⇓P	**Pn**	**05 24 46.5**	**0.0**
	baz=212						
SCZT				*e*S	**S**	**05 25 29.4**	**-3.8**
	baz=212						
LYUB	**Lan-yu**	**3.57**	**194**	⇓*i*P	**Pn**	**05 24 46.0**	**-0.8**
	baz=196						
QZH	**Quanzhou**	**3.58**	**262**	⇓*i*Pn	**Pn**	**05 24 46.3**	**-0.6**
QZH				sPn	**sPn**	**05 25 25.5**	**-7.4**
QZH				Sn	**S**	**05 25 30.5**	**-3.3**
QZH				smax	smax		
	comp=N,35µm,1.5s						
QZH				smax	smax		
	comp=E,28µm,1.4s						
QZH				LR	LR		
	comp=N,210µm,1.6s						
QZH				LR	LR		
	comp=E,674µm,5.7s						
QZH				LR	LR		
	comp=Z,525µm,7.4s						
QZH	**Quanzhou**	**3.58**	**262**	⇓*i*P	**Pn**	**05 24 46.2**	**-0.6**
QZH				sP		05 25 25.5	
QZH				S	**S**	**05 25 30.5**	**-3.3**
QZH				smax	smax		
	comp=Z,35µm,1.5s						
QZH				smax	smax		
	comp=Z,28µm,1.4s						
QZH				LR	LR		
	comp=Z,674µm,5.7s						
QZH				LR	LR		
	comp=Z,525µm,7.4s						
SLIU	**Shizi**	**3.61**	**206**	⇓*e*P	**Pn**	**05 24 47.2**	**0.0**
	baz=209						
SLIU				*e*S	**S**	**05 25 32.1**	**-2.4**
	baz=209						
WLCH	**Liuqiu**	**3.68**	**212**	⇓P	**Pn**	**05 24 49.1**	**+1.1**
	baz=215						
WLCH				S	**S**	**05 25 34.9**	**-1.0**
	baz=215						
TWP	**Hsiaoliuchiu**	**3.69**	**212**	⇓P	**Pn**	**05 24 49.1**	**+1.0**
	baz=215						
TWP				*e*S	**S**	**05 25 35.7**	**-0.4**
	baz=215						
SMST	**Manzhou Townsh**	**3.77**	**204**	⇓*e*P	**Pn**	**05 24 49.3**	**+0.2**
	baz=208						
HEN	**Hengchun**	**3.82**	**205**	⇓*e*P	**Pn**	**05 24 49.8**	**+0.2**
	baz=213						
HEN				*e*S	**S**	**05 25 35.7**	**-3.3**
	baz=213						
KNM	**Kinmen**	**3.84**	**255**	⇓*e*P	**Pn**	**05 24 50.6**	**+0.8**
	baz=256						
KNM				*e*S	**S**	**05 25 38.4**	**-0.8**
	baz=256						
TWK1	**Hengchun**	**3.85**	**204**	⇓*i*P	**Pn**	**05 24 50.2**	**+0.1**
	baz=207						
TWK1				S	**S**	**05 25 35.7**	**-3.9**
	baz=207						
TWKBT	**Hengchun**	**3.85**	**204**	⇓*i*P	**Pn**	**05 24 50.2**	**+0.2**
	baz=207						
SNW	**Nanwan**	**3.86**	**205**	*e*P	**Pn**	**05 24 50.8**	**+0.7**
	baz=208						
TSEB	**Hengchuen, Pin**	**3.86**	**203**	⇓P	**Pn**	**05 24 50.6**	**+0.5**
	baz=211						
TSEB				*e*S	**S**	**05 25 36.9**	**-2.9**
	baz=211						
KNMB	**Chin-men Tao**	**3.87**	**256**	Pn	**Pn**	**05 24 49.3**	**-0.8**
KNMB	**Chin-men Tao**	**3.87**	**256**	⇓*e*P	**Pn**	**05 24 49.3**	**-0.8**
	baz=256						
JKE	**Kume jima 2**	**3.95**	**77**	P	**Pn**	**05 24 49.9**	**-1.2**
JKE				*e*S	**S**	**05 25 38.5**	**-2.9**
AXDP	**Jialang**	**4.14**	**263**	⇑*i*P	**Pn**	**05 24 53.3**	**-0.1**
	baz=263						
AXDP				*e*S	**S**	**05 25 42.8**	**-2.8**
	baz=263						
JAGN	**Aguni-jima**	**4.41**	**75**	P	**Pn**	**05 24 54.8**	**-1.6**
JAGN				*e*S	**S**	**05 25 47.0**	**-4.1**
JAGN	**Aguni-jima**	**4.41**	**75**	A	A	05 24 54.8	
	comp=Z,35nm,5.3s,comp=Z,52nm,4.6s						
SXFK	**Yanhouchang**	**4.46**	**283**	⇓*e*P	**Pn**	**05 24 57.0**	**-0.1**
	baz=281						
SXFK				*e*S	**S**	**05 25 49.2**	**-3.3**
	baz=281						
ZPLA	**Ao Xicun**	**4.59**	**251**	⇑*i*P	**Pn**	**05 24 58.2**	**-0.4**
	baz=252						
JJT3	**Tamagusuku3**	**4.81**	**81**	P	**Pn**	**05 25 00.2**	**-1.0**
JJT3				*e*S	**S**	**05 25 56.8**	**-3.1**
JJT3	**Tamagusuku3**	**4.81**	**81**	A	A	05 25 00.2	
	comp=Z,101nm,3.3s,comp=Z,77nm,3.9s						
JNTH	**Nagotoyohara**	**5.07**	**77**	A	A	05 25 05.2	
	comp=Z,31nm,3.7s,comp=Z,24nm,4.6s						
JIH	**Iheya**	**5.14**	**71**	A	A	05 25 06.1	
	comp=Z,16nm,8.4s,comp=Z,26nm,3.9s						
JIH	**Iheya**	**5.14**	**71**	P	**Pn**	**05 25 03.2**	**-2.1**
JOW	**Kunigami**	**5.36**	**74**	P	**Pn**	**05 25 05.7**	**-2.3**
	comp=Z,4µm,0.3s,baz=189,slow=8.9,SNR=155						
JOW				S	**S**	**05 26 04.6**	**-7.5**
	comp=Z,3µm,0.3s,baz=301,slow=28,SNR=7.6						
JOW	**Kunigami**	**5.36**	**74**	P	**Pn**	**05 25 08.0**	**+0.1**
JOW	**Kunigami**	**5.36**	**74**	⇑*e*P	**Pn**	**05 25 05.7**	**-2.3**
	baz=75						
JOW	**Kunigami**	**5.36**	**74**	A	A	05 25 08.8	
	comp=Z,27nm,9.6s,comp=Z,24nm,4.8s						
JOW	**Kunigami**	**5.36**	**74**	⇑P	**Pn**	**05 25 05.7**	**-2.3**
JYRO	**Yoronjima**	**5.56**	**73**	A	A	05 25 11.3	
	comp=Z,17nm,5.0s,comp=Z,26nm,4.5s						
JYRO	**Yoronjima**	**5.56**	**73**	P	**Pn**	**05 25 07.8**	**-2.6**
SSE	**Sheshan**	**5.71**	**349**	P	**Pn**	**05 25 12.5**	**+0.3**
SSE				S	**S**	**05 26 17.3**	**-2.5**
SSE				pmax	pmax		
	comp=Z,100nm,1.2s						
SSE				pmax	pmax		
	comp=Z,6µm,8.8s						
SSE				LR	LR		
	comp=N,9µm,11.1s						
SSE				LR	LR		
	comp=E,6µm,12.2s						
SSE	**Sheshan**	**5.71**	**349**	P	**Pn**	**05 25 12.4**	**+0.3**
SSE				S	**S**	**05 26 17.3**	**-2.5**
SSE				pmax	pmax		
	comp=E,100nm,1.2s						
SSE				pmax	pmax		
	comp=E,6µm,8.8s						
SSE				LR	LR		
	comp=E,9µm,11.1s						
SSE				LR	LR		
	comp=E,16µm,12.2s						
SSE				LR	LR		
	comp=E,8µm,9.2s						
JTK	**Tokunoshima**	**6.21**	**67**	P	**Pn**	**05 25 15.0**	**-3.4**
JAMN	**Amaminishikomi**	**6.56**	**64**	P	**Pn**	**05 25 19.2**	**-3.6**
JAM	**Amami Oshima**	**6.98**	**64**	A	A	05 25 29.3	
	comp=E,2.0nm,7.9s						
JTAJ	**Takarajima**	**6.99**	**57**	A	A	05 25 29.6	
	comp=E,19nm,3.2s,comp=E,17nm,4.8s						
JZK	**Kikaishima**	**7.24**	**65**	A	A	05 25 32.7	
	comp=E,31nm,5.4s,comp=E,32nm,3.9s						
NJ2	**Nanjing**	**7.28**	**335**	⇑P	**Pn**	**05 25 32.3**	**+0.5**
NJ2				S	**S**	**05 27 00.0**	**+4.4**
NJ2				pmax	pmax		
	comp=Z,260nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,4µm,3.9s						
NJ2				smax	smax		
	comp=N,2µm,1.6s						
NJ2				smax	smax		
	comp=E,1µm,1.7s						
NJ2				LR	LR		
	comp=N,27µm,6.5s						
NJ2				LR	LR		
	comp=E,43µm,9.8s						
NJ2				LR	LR		
	comp=Z,15µm,6.5s						
SIPP	**Brgy, Tapao**	**7.76**	**195**	⇑*e*P	**Pn**	**05 25 38.9**	**+0.8**
JNN	**Nakanoshima**	**7.84**	**55**	A	A	05 25 40.5	
	comp=Z,16nm,4.4s,comp=Z,17nm,5.9s						
JMZ	**Minamidaito 2**	**7.88**	**86**	A	A	05 25 40.7	
	comp=Z,31nm,3.7s,comp=Z,42nm,3.5s						
JKDJ	**Kitadaitoujima**	**7.95**	**85**	A	A	05 25 41.5	
	comp=Z,32nm,3.4s,comp=Z,36nm,2.8s						
HKC	**Hong Kong Obse**	**8.25**	**249**	⇑P	**Pn**	**05 25 45.0**	**+0.9**
HKPS	**Hong Kong Po S**	**8.29**	**249**	Pn	**Pn**	**05 25 44.3**	**-0.3**
HKPS	**Hong Kong Po S**	**8.29**	**249**	⇑*e*P	**Pn**	**05 25 44.7**	**+0.1**
	baz=249						
JKC	**Kuchinoerabu**	**8.41**	**52**	A	A	05 25 47.8	
	comp=Z,12nm,11.9s,comp=Z,15nm,5.9s						
JYAK	**Yakushimahirau**	**8.52**	**54**	A	A	05 25 49.1	
	comp=Z,6.0nm,8.6s,comp=Z,6.0nm,4.1s						
WHN	**Wuhan**	**8.79**	**307**	⇑P	**Pn**	**05 25 51.5**	**+0.7**
WHN				S	**S**	**05 27 23.0**	**-7.3**
WHN				pmax	pmax		
	comp=Z,2µm,1.1s						
WHN				LR	LR		
	comp=N,98µm,5.3s						
WHN				LR	LR		
	comp=E,46µm,5.5s						
WHN				LR	LR		
	comp=Z,70µm,7.1s						
WHN	**Wuhan**	**8.79**	**307**	⇑P	**Pn**	**05 25 51.4**	**+0.7**
WHN				S	**S**	**05 27 23.1**	**-7.3**
WHN				pmax	pmax		
	comp=Z,2µm,1.1s						
WHN				LR	LR		
	comp=Z,98µm,5.3s						
WHN				LR	LR		
	comp=Z,46µm,5.5s						
WHN				LR	LR		
	comp=Z,70µm,7.1s						
JSJ	**Shimokoshiki**	**8.85**	**44**	A	A	05 25 53.4	
	comp=Z,9.0nm,3.0s,comp=Z,13nm,4.0s						
MCO	**Taipa Grande**	**8.85**	**250**	P	**Pn**	**05 25 53.0**	**+1.3**
JMTN	**Minamitane**	**8.89**	**55**	A	A	05 25 53.9	
	comp=Z,9.0nm,11.6s,comp=Z,7.0nm,11.2s						
CNSH	**ChangSha**	**8.96**	**290**	⇑P	**Pn**	**05 25 53.0**	**0.0**
CNSH				S	**S**	**05 27 31.2**	**-3.2**
CNSH				smax	smax		
	comp=Z,5µm,1.7s						
CNSH				smax	smax		
	comp=Z,3µm,1.5s						
CNSH				LR	LR		
	comp=Z,50µm,4.8s						
CNSH				LR	LR		
	comp=Z,48µm,4.0s						
JFU	**Fukue jima 2**	**8.99**	**36**	A	A	05 25 55.3	
	comp=Z,18nm,5.5s,comp=Z,11nm,6.2s						
JTN	**Tanegashima 3**	**9.09**	**54**	A	A	05 25 56.4	
	comp=Z,9.0nm,9.5s,comp=Z,7.0nm,9.5s						
JSU	**Suzuyama**	**9.21**	**48**	Pn	**Pn**	**05 25 55.8**	**-0.5**
JSU	**Suzuyama**	**9.21**	**48**	A	A	05 25 58.0	
	comp=Z,7.0nm,3.7s,comp=Z,7.0nm,5.8s						
JSU	**Suzuyama**	**9.21**	**48**	⇑P	**Pn**	**05 25 55.7**	**-0.5**
JTSR	**Tashiro 2**	**9.33**	**51**	A	A	05 25 59.5	
	comp=Z,6.0nm,4.5s,comp=Z,6.0nm,5.3s						
NGSJ	**Nagasakinomoza**	**9.56**	**40**	A	A	05 26 02.5	
	comp=Z,22nm,4.8s,comp=Z,20nm,5.1s						
JHD	**Hondo**	**9.64**	**42**	A	A	05 26 03.6	
	comp=Z,14nm,4.2s,comp=Z,16nm,5.4s						
JZO	**Okuchi**	**9.71**	**45**	A	A	05 26 04.4	
	comp=Z,10.0nm,5.3s,comp=Z,9.0nm,5.4s						
JNAR	**Kushima--Naru**	**9.78**	**50**	A	A	05 26 05.3	
	comp=Z,9.0nm,8.2s,comp=Z,9.0nm,4.7s						
JTZ	**Takazaki**	**9.88**	**48**	A	A	05 26 06.6	
	comp=Z,6.0nm,5.3s,comp=Z,6.0nm,3.8s						
JNKG	**Nichinankitago**	**9.93**	**50**	A	A	05 26 07.2	
	comp=Z,8.0nm,5.3s,comp=Z,9.0nm,5.5s						
PCPH	**Palayan**	**9.96**	**188**	⇑*e*P	**Pn**	**05 26 05.6**	**-0.2**
PCPH				*e*S	**S**	**05 27 57.1**	**-0.9**
JUR	**Ureshino**	**9.98**	**39**	A	A	05 26 07.9	
	comp=Z,16nm,3.1s,comp=Z,21nm,4.9s						
JIU3	**Izumi3**	**10.12**	**44**	A	A	05 26 09.6	
	comp=Z,9.0nm,5.0s,comp=Z,11nm,4.6s						
JTA	**Tamana**	**10.23**	**41**	A	A	05 26 11.1	
	comp=Z,8.0nm,4.9s,comp=Z,8.0nm,3.5s						
JII	**Iki**	**10.39**	**36**	A	A	05 26 13.2	
	comp=Z,18nm,4.7s,comp=Z,10.0nm,6.6s						
JFI	**Itaya**	**10.48**	**39**	A	A	05 26 14.2	
	comp=Z,14nm,4.4s,comp=Z,9.0nm,5.1s						
JNU	**Nakatsue**	**10.55**	**42**	P	**Pn**	**05 26 13.1**	**+0.1**
	comp=Z,391nm,0.7s,baz=205,slow=6.7,SNR=42						
JNU				S	**S**	**05 28 09.2**	**-2.1**
	comp=Z,112nm,0.7s,baz=78,slow=22,SNR=1.3						
JKIT	**Kitakata**	**10.58**	**46**	A	A	05 26 15.4	
	comp=Z,6.0nm,3.6s,comp=Z,7.0nm,8.4s						
JTSM	**Tsushimamitsus**	**10.65**	**32**	A	A	05 26 16.4	
	comp=Z,14nm,5.1s,comp=Z,8.0nm,2.2s						
NAWB	**Namwon**	**10.76**	**22**	Pn	**Pn**	**05 26 17.0**	**+1.4**
JTU	**Tsushima**	**10.81**	**32**	Pn	**Pn**	**05 26 17.1**	**+0.9**
JTU	**Tsushima**	**10.81**	**32**	A	A	05 26 18.4	
	comp=Z,8.0nm,4.8s,comp=Z,9.0nm,2.4s						
JTU	**Tsushima**	**10.81**	**32**	⇑P	**Pn**	**05 26 17.9**	**+1.8**
GULI	**GuiLin**	**10.97**	**272**	⇑P	**Pn**	**05 26 16.5**	**-1.9**
GULI				S	**S**	**05 28 16.3**	**-5.0**
GULI				LR	LR		
	comp=N,41µm,8.7s						
GULI				LR	LR		
	comp=E,29µm,10.3s						
GULI				LR	LR		
	comp=Z,30µm,12.5s						
GULI	**GuiLin**	**10.97**	**272**	⇑P	**Pn**	**05 26 16.4**	**-1.9**
GULI				S	**S**	**05 28 16.3**	**-5.0**
GULI				LR	LR		
	comp=Z,41µm,8.7s						
GULI				LR	LR		
	comp=Z,29µm,10.3s						
GULI				LR	LR		
	comp=Z,30µm,12.5s						
JSKE	**Saikikamae**	**10.98**	**46**	A	A	05 26 20.5	
	comp=Z,6.0nm,6.2s,comp=Z,7.0nm,8.2s						
JUS	**Usuki**	**11.05**	**45**	A	A	05 26 21.5	
	comp=Z,5.0nm,4.6s,comp=Z,4.0nm,6.6s						
JKI	**Kunimi**	**11.32**	**42**	A	A	05 26 24.8	
	comp=Z,10.0nm,3.8s,comp=Z,11nm,3.2s						
LQP	**Lukban**	**11.35**	**185**	⇑*e*P	**Pn**	**05 26 23.2**	**-0.2**
TGY	**Tagaytay City**	**11.42**	**188**	P	**Pn**	**05 26 24.5**	**+0.4**
	comp=Z,4µm,0.8s,baz=356,slow=3.8,SNR=39						
TGY	**Tagaytay City**	**11.42**	**188**	⇓*e*P	**P**	**05 26 27.8**	**+0.2**
JTY	**Toyota**	**11.47**	**38**	A	A	05 26 26.8	
	comp=Z,13nm,5.2s,comp=Z,8.0nm,4.4s						
GQP	**Guinayangan**	**11.52**	**180**	⇑*e*P	**Pn**	**05 26 25.3**	**0.0**
TJN	**Taejon**	**11.63**	**20**		**Pn**	**05 26 27.9**	**+1.5**
TJN	**Taejon**	**11.63**	**20**	P	**Pn**	**05 26 27.9**	**+1.5**
TJN	**Taejon**	**11.63**	**20**	P	**Pn**	**05 26 26.9**	**+0.6**
TIA	**Tai'an**	**11.64**	**338**	P	**Pn**	**05 26 28.0**	**+1.4**
TIA				pmax	pmax		
	comp=Z,150nm,0.8s						
TIA				pmax	pmax		
	comp=Z,780nm,4.2s						
TIA				LR	LR		
	comp=Z,10µm,8.5s						
TIA				LR	LR		
	comp=Z,20µm,9.3s						
TIA				LR	LR		
	comp=Z,10µm,8.5s						
JKD	**Kudamatsu**	**11.79**	**41**	A	A	05 26 30.8	
	comp=Z,9.0nm,4.6s,comp=Z,8.0nm,3.9s						
JNA	**Nagahama**	**11.83**	**45**	A	A	05 26 31.3	
	comp=Z,4.0nm,5.2s,comp=Z,4.0nm,4.2s						
JHGM	**Hagimishima**	**11.90**	**37**	A	A	05 26 32.2	
	comp=Z,17nm,4.4s,comp=Z,13nm,3.6s						
PGP	**Puerto Galera**	**12.01**	**187**	⇑*e*P	**Pn**	**05 26 31.6**	**+0.2**
JHIK	**Hikimi**	**12.16**	**40**	A	A	05 26 35.4	
	comp=Z,20nm,4.1s,comp=Z,16nm,4.7s						
JHM	**Kurahashi**	**12.25**	**43**	A	A	05 26 36.5	
	comp=Z,4.0nm,6.1s,comp=Z,4.0nm,5.3s						
KSCHJ	**Chungju**	**12.28**	**21**	P	**Pn**	**05 26 35.1**	**+0.7**
ENH	**Enshi**	**12.46**	**295**	P	**P**	**05 26 37.9**	**-1.1**
INCN	**Inchon**	**12.46**	**15**		**P**	**05 26 38.0**	**-1.0**
INCN	**Inchon**	**12.46**	**15**	P	**P**	**05 26 38.0**	**-1.0**
INCN	**Inchon**	**12.46**	**15**	P	**P**	**05 26 39.6**	**+0.6**
INCN	**Inchon**	**12.46**	**15**	P	**Pn**	**05 26 37.5**	**+0.7**
INCN	**Inchon**	**12.46**	**15**	⇓P	**Pn**	**05 26 36.1**	**-0.6**
LYN	**LuoYang**	**12.53**	**318**	⇑*i*P	**P**	**05 26 39.0**	**-0.8**
LYN				S	**S**	**05 28 56.0**	**-0.9**
LYN				pmax	pmax		
	comp=Z,310nm,1.1s						
LYN				pmax	pmax		
	comp=Z,5µm,1.9s						
LYN	**LuoYang**	**12.53**	**318**	⇑*i*P	**P**	**05 26 38.9**	**-0.8**
LYN				S	**S**	**05 28 56.0**	**-0.9**
LYN				pmax	pmax		
	comp=Z,310nm,1.1s						
LYN				pmax	pmax		
	comp=Z,5µm,1.9s						
JHT	**Toyohira**	**12.54**	**41**	A	A	05 26 40.1	
	comp=Z,6.0nm,4.3s,comp=Z,6.0nm,6.2s						
KSRS	**Korea Array**	**12.79**	**20**	P	**Pn**	**05 26 40.5**	**-0.2**
	comp=Z,117nm,0.7s,baz=200,slow=11,SNR=162						
KSRS				S	**S**	**05 28 57.0**	**-5.8**
	comp=Z,31nm,1.1s,baz=196,slow=12,SNR=0.6						
KSRS				ScP	**ScP**	**05 35 02.8**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=107,slow=41,SNR=1.1						
KSRS	**Korea Array**	**12.79**	**20**		**Pn**	**05 26 40.5**	**-0.2**
HJU	**Haeju**	**12.81**	**12**	P	**Pn**	**05 26 41.4**	**+0.4**
HJU				pP	**P**	**05 26 46.5**	**+3.7**
HJU				S	**S**	**05 29 04.0**	**+0.6**
HJU				AMS	AMS		
	comp=N,39µm,5.0s						
HJU				AMS	AMS		
	comp=E,62µm,7.8s						
HJU				AMS	AMS		
	comp=Z,23µm,2.9s						
MRT2	**Murotomisaki 2**	**12.83**	**49**	A	A	05 26 43.8	
	comp=Z,3.0nm,6.0s,comp=Z,3.0nm,6.9s						
JMN	**Monobe**	**12.85**	**48**	⇑P	**Pn**	**05 26 40.6**	**-1.0**
JMN				⇑S	**S**	**05 28 56.6**	**-7.8**
JGT2	**ShimaneMisato**	**12.87**	**40**	A	A	05 26 44.3	
	comp=Z,8.0nm,6.8s,comp=Z,6.0nm,4.1s						
JJG	**Jouge**	**12.97**	**43**	A	A	05 26 45.5	
	comp=Z,5.0nm,7.7s,comp=Z,4.0nm,5.1s						
JHS	**Saijyo**	**13.18**	**42**	P	**Pn**	**05 26 44.1**	**-1.5**
JHS	**Saijyo**	**13.18**	**42**	A	A	05 26 48.2	
	comp=Z,8.0nm,3.7s,comp=Z,6.0nm,4.1s						
JHS	**Saijyo**	**13.18**	**42**	⇑P	**Pn**	**05 26 43.2**	**-2.4**
JHS				⇑S	**S**	**05 29 10.1**	**-1.9**
JJS	**Sakaide**	**13.28**	**46**	A	A	05 26 49.4	
	comp=Z,4.0nm,1.2s,comp=Z,4.0nm,1.1s						
QIZ	**Qiongzhong**	**13.36**	**244**	P	**P**	**05 26 49.6**	**+0.4**
QIZ	**Qiongzhong**	**13.36**	**244**	⇑*i*P	**P**	**05 26 49.5**	**+0.4**
QIZ				S	**S**	**05 29 16.5**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,1µm,1.5s						
QIZ				pmax	pmax		
	comp=Z,28µm,9.6s						
QIZ				LR	LR		
	comp=N,36µm,13.5s						
QIZ				LR	LR		
	comp=E,40µm,15.1s						
QIZ				LR	LR		
	comp=Z,43µm,13.5s						
QIZ	**Qiongzhong**	**13.36**	**244**	⇑*i*P	**P**	**05 26 49.6**	**+0.4**
QIZ				S	**S**	**05 29 16.5**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,1µm,1.5s						
QIZ				pmax	pmax		
	comp=Z,28µm,9.6s						
QIZ				LR	LR		
	comp=Z,36µm,13.5s						
QIZ				LR	LR		
	comp=Z,40µm,15.1s						
QIZ				LR	LR		
	comp=Z,43µm,13.5s						
QIZ	**Qiongzhong**	**13.36**	**244**	P	**P**	**05 26 49.8**	**+0.7**
JISK	**Izumosakaura**	**13.38**	**39**	A	A	05 26 50.6	
	comp=Z,6.0nm,5.0s,comp=Z,7.0nm,3.7s						
DL2	**Dalian**	**13.40**	**357**	P	**P**	**05 26 49.3**	**0.0**
DL2				sP		05 27 51.2	
DL2				S	**S**	**05 29 17.2**	**+0.5**
DL2				pmax	pmax		
	comp=Z,550nm,0.6s						
DL2				pmax	pmax		
	comp=Z,3µm,3.7s						
HNS	**HongShan**	**13.60**	**333**	⇓P	**P**	**05 26 52.0**	**+0.4**
HNS				sP		05 27 55.8	
HNS				S	**S**	**05 29 25.0**	**+3.8**
HNS				pmax	pmax		
	comp=Z,1µm,1.2s						
HNS				LR	LR		
	comp=N,7µm,10.6s						
HNS				LR	LR		
	comp=E,19µm,9.2s						
HNS				LR	LR		
	comp=Z,9µm,12.7s						
HNS	**HongShan**	**13.60**	**333**	⇓P	**P**	**05 26 51.9**	**+0.4**
HNS				sP		05 27 55.8	
HNS				S	**S**	**05 29 25.1**	**+3.8**
HNS				pmax	pmax		
	comp=Z,1µm,1.2s						
HNS				LR	LR		
	comp=Z,7µm,10.6s						
HNS				LR	LR		
	comp=Z,19µm,9.2s						
HNS				LR	LR		
	comp=Z,9µm,12.7s						
PYAG	**Pyongyang**	**13.80**	**11**	P	**P**	**05 26 54.2**	**+0.4**
PYAG				pP	Pn	05 26 58.4	+5.3
PYAG				S	**S**	**05 29 24.6**	**-1.2**
PYAG				AMS	AMS		
	comp=N,6µm,3.1s						
PYAG				AMS	AMS		
	comp=E,14µm,7.2s						
PYAG				AMS	AMS		
	comp=Z,7µm,3.3s						
RCP	**Roxas**	**13.86**	**179**	⇑*e*P	**P**	**05 26 55.5**	**+0.8**
GYA	**Guiyang**	**14.28**	**277**	⇑*i*P	**P**	**05 27 00.5**	**+1.1**
GYA				S	**S**	**05 29 34.3**	**-2.9**
GYA				pmax	pmax		
	comp=Z,910nm,1.4s						
GYA				pmax	pmax		
	comp=Z,16µm,5.6s						
GYA				LR	LR		
	comp=N,45µm,8.8s						
GYA				LR	LR		
	comp=E,22µm,7.2s						
GYA				LR	LR		
	comp=Z,30µm,15.1s						
GYA	**Guiyang**	**14.28**	**277**	⇑*i*P	**P**	**05 27 00.4**	**+1.1**
GYA				S	**S**	**05 29 34.3**	**-2.9**
GYA				pmax	pmax		
	comp=Z,910nm,1.4s						
GYA				pmax	pmax		
	comp=Z,16µm,5.6s						
GYA				LR	LR		
	comp=Z,45µm,8.8s						
GYA				LR	LR		
	comp=Z,22µm,7.2s						
GYA				LR	LR		
	comp=Z,30µm,15.1s						
XAN	**Xi'an**	**14.54**	**309**	P	**Pn**	**05 27 02.5**	**+0.5**
XAN				pP	P	05 27 10.0	+7.9
XAN				sP		05 27 13.0	
XAN				S	**S**	**05 29 41.3**	**-1.5**
XAN				pmax	pmax		
	comp=Z,400nm,1.0s						
XAN				pmax	pmax		
	comp=Z,9µm,11.0s						
XAN				LR	LR		
	comp=N,26µm,7.6s						
XAN				LR	LR		
	comp=E,27µm,8.2s						
XAN				LR	LR		
	comp=Z,18µm,8.2s						

Code	Name	Dist	Az	Phase	Phase	Time	Res
XAN	**Xi'an**	**14.54**	**309**	P	**Pn**	**05 27 02.6**	**+0.5**
XAN				S	**S**	**05 29 41.2**	**-1.5**
XAN				pmax	pmax		
	comp=Z,400nm,1.0s						
XAN				pmax	pmax		
	comp=Z,9µm,11.0s						
XAN				LR	LR		
	comp=Z,26µm,7.6s						
XAN				LR	LR		
	comp=Z,27µm,8.2s						
XAN				LR	LR		
	comp=Z,18µm,8.2s						
SUJ	**Sinuiju**	**14.67**	**6**	P	**P**	**05 27 03.2**	**-0.2**
SUJ				pP	**Pn**	**05 27 06.1**	**+2.6**
SUJ				S	**S**	**05 29 43.0**	**-2.4**
SUJ				AMS	AMS		
	comp=N,4µm,7.8s						
SUJ				AMS	AMS		
	comp=E,4µm,7.8s						
SUJ				AMS	AMS		
	comp=Z,827nm,1.8s						
TIY	**Taiyuan**	**14.89**	**327**	⇓P	**Pn**	**05 27 07.5**	**+1.3**
TIY				S	**S**	**05 29 48.3**	**-2.2**
TIY				pmax	pmax		
	comp=Z,130nm,0.8s						
TIY				LR	LR		
	comp=N,16µm,8.6s						
TIY				LR	LR		
	comp=E,9µm,12.4s						
TIY				LR	LR		
	comp=Z,6µm,9.6s						
TIY	**Taiyuan**	**14.89**	**327**	⇓P	**Pn**	**05 27 07.6**	**+1.3**
TIY				S	**S**	**05 29 48.3**	**-2.2**
TIY				pmax	pmax		
	comp=Z,130nm,0.8s						
TIY				LR	LR		
	comp=Z,16µm,8.6s						
TIY				LR	LR		
	comp=Z,9µm,12.4s						
TIY				LR	LR		
	comp=Z,6µm,9.6s						
HHU	**Hamhung**	**15.00**	**15**	P	**Pn**	**05 27 07.5**	**0.0**
HHU				pP	P	05 27 14.4	+7.4
HHU				S	**S**	**05 29 52.7**	**0.0**
HHU				AMS	AMS		
HHU				AMS	AMS		
HHU				AMS	AMS		
LLP	**Lapu-Lapu**	**15.15**	**174**	⇑*e*P	**Pn**	**05 27 10.0**	**+0.4**
LLP				*e*S	**S**	**05 29 57.7**	**+1.3**
BJT	**Baijiatuau**	**15.43**	**341**	P	**Pn**	**05 27 12.5**	**-0.1**
BJT	**Baijiatuau**	**15.43**	**341**	P	**Pn**	**05 27 12.5**	**-0.1**
BJT				pmax	pmax		
	comp=Z,2µm,1.8s						
BJI	**Beijing**	**15.45**	**341**	P	**Pn**	**05 27 12.5**	**-0.3**
BJI				S	**S**	**05 30 04.9**	**+3.0**
BJI				pmax	pmax		
	comp=Z,270nm,0.7s						
BJI				pmax	pmax		
	comp=Z,3µm,3.6s						
TBP	**Tagbilaran**	**15.77**	**175**	⇑*i*P	**Pn**	**05 27 17.6**	**+0.7**
TBP				*i* S	**S**	**05 30 08.4**	**-0.2**
INU	**Inuyama**	**15.90**	**48**	P	**P**	**05 27 16.5**	**-0.5**
INU				IAmb	IAmb	05 27 24.5	
	comp=Z,256nm,0.6s						
INU	**Inuyama**	**15.90**	**48**	P	**Pn**	**05 27 18.2**	**-0.1**
INU	**Inuyama**	**15.90**	**48**	⇓P	**P**	**05 27 16.6**	**-0.5**
PPR	**Puerto Princes**	**16.03**	**194**	⇑*e*P	**Pn**	**05 27 19.7**	**-0.3**
SNPH	**Sibulan**	**16.07**	**177**	*e*P	**Pn**	**05 27 20.6**	**0.0**
JGF	**Kuroka**	**16.27**	**48**	IAmb	IAmb	05 27 27.0	
	comp=Z,214nm,0.6s						
JGF	**Kuroka**	**16.27**	**48**	⇓P	**P**	**05 27 20.1**	**-1.0**
SNY	**Shenyang**	**16.32**	**3**	⇓P	**P**	**05 27 21.6**	**+0.1**
SNY				sP	**sP**	**05 28 28.6**	**-5.0**
SNY				S	**S**	**05 30 18.5**	**-0.7**
SNY				pmax	pmax		
	comp=Z,360nm,1.6s						
SNY				pmax	pmax		
	comp=Z,2µm,6.1s						
SNY				LR	LR		
	comp=Z,8µm,12.5s						
SNY				LR	LR		
	comp=Z,14µm,14.7s						
SNY				LR	LR		
	comp=Z,46µm,17.7s						
DCPH	**Dipolog City**	**16.83**	**177**	⇑*e*P	**Pn**	**05 27 28.9**	**-0.5**
JHJ	**Hachijo jima 2**	**16.87**	**59**	P	**P**	**05 27 27.5**	**-0.1**
	comp=Z,898nm,1.0s,baz=233,slow=7.1,SNR=7.3						
JHJ2	**Mitsune**	**16.89**	**59**	P	**P**	**05 27 26.7**	**-1.2**
JHJ2	**Mitsune**	**16.89**	**59**	P	**Pn**	**05 27 30.8**	**+0.8**
JHJ2	**Mitsune**	**16.89**	**59**	⇑P	**Pn**	**05 27 30.6**	**+0.7**
MAJO	**Matsushiro**	**17.37**	**47**	P	**P**	**05 27 33.3**	**+0.2**
MAJO				IAmb	IAmb	05 28 19.3	
	comp=Z,726nm,1.6s						
MAJO	**Matsushiro**	**17.37**	**47**	P	**P**	**05 27 33.3**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,726nm,1.7s						
MAJO	**Matsushiro**	**17.37**	**47**	⇓P	**P**	**05 27 32.1**	**-1.0**
MJB9	**Matsu-Tunnel**	**17.37**	**47**	IAmb	IAmb	05 28 19.3	
	comp=Z,689nm,1.6s						
MJAR	**Matsushiro Arr**	**17.37**	**47**	P	**P**	**05 27 32.5**	**-0.6**
	comp=Z,71nm,0.7s,baz=230,slow=8.4,SNR=93						
MJAR				ScP	**ScP**	**05 35 12.7**	**+0.9**
	comp=Z,18nm,1.0s,baz=237,slow=2.0,SNR=8.2						
CD2	**Chengdu**	**17.38**	**292**	⇑P	**P**	**05 27 33.8**	**+0.6**
CD2				sP	sP	05 28 40.5	-5.3
CD2				S	**S**	**05 30 40.0**	**-0.7**
CD2				pmax	pmax		
	comp=Z,370nm,0.7s						
CD2				pmax	pmax		
	comp=Z,10µm,7.8s						
CD2				LR	LR		
	comp=E,18µm,7.4s						
CD2				LR	LR		
	comp=Z,21µm,8.2s						
BIPH	**Bislig**	**17.60**	**167**	⇑*e*P	**P**	**05 27 33.6**	**-2.1**
JCJ	**Chichijima**	**17.73**	**81**	P	**P**	**05 27 37.0**	**-0.1**
	comp=Z,216nm,0.4s,baz=256,slow=8.1,SNR=18						
JCJ				S	**S**	**05 30 46.5**	**-1.1**
	comp=Z,48nm,0.5s,baz=274,slow=20,SNR=1.2						
JCJ	**Chichijima**	**17.73**	**81**	P	**P**	**05 27 37.2**	**+0.2**
JCJ	**Chichijima**	**17.73**	**81**	P	**P**	**05 27 37.2**	**+0.2**
JCJ	**Chichijima**	**17.73**	**81**	⇑P	**P**	**05 27 36.8**	**-0.2**
HHC	**Hu-ho-hao-te**	**17.82**	**332**	*e*P	**P**	**05 27 39.0**	**+1.0**
HHC				sP	sP	05 28 47.3	-3.3
HHC				S	**S**	**05 30 48.8**	**-0.6**
HHC				pmax	pmax		
	comp=Z,350nm,1.1s						
HHC				pmax	pmax		
	comp=Z,7µm,6.2s						
KMI	**Kunming**	**17.87**	**273**	⇑P	**Pn**	**05 27 40.5**	**-1.3**
KMI				sP	sP	05 28 44.0	-7.4
KMI				S	**S**	**05 30 47.7**	**-3.2**
KMI				pmax	pmax		
	comp=Z,1µm,0.9s						
KMI				pmax	pmax		
	comp=Z,10µm,6.3s						
KMI				LR	LR		
	comp=Z,28µm,10.6s						
KMI				LR	LR		
	comp=Z,15µm,10.8s						
KMI				LR	LR		
	comp=Z,14µm,13.0s						
CTBH	**Cotabato--PC H**	**18.24**	**174**	⇓*e*P	**P**	**05 27 43.9**	**+1.2**
JSD	**Sado**	**18.30**	**43**	P	**P**	**05 27 42.4**	**-0.7**
BTO	**Baotou**	**18.32**	**328**	*e*P	**Pn**	**05 27 45.8**	**-0.9**
BTO				S	**S**	**05 30 55.8**	**-3.4**
BTO				LR	LR		
	comp=Z,38µm,10.0s						
BTO				LR	LR		
	comp=Z,31µm,9.9s						
CN2	**Changchun**	**18.43**	**7**	⇓*i*P	**P**	**05 27 44.0**	**-0.3**
CN2				sP	sP	05 28 54.5	-2.5
CN2				*e*S	**S**	**05 30 57.8**	**-3.3**
CN2				PcP	**PcP**	**05 32 02.0**	**-0.9**
CN2				ScP	**ScP**	**05 35 11.3**	**-2.6**
CN2				pmax	pmax		
	comp=Z,370nm,1.2s						
CN2				pmax	pmax		
	comp=Z,2µm,10.0s						
CN2	**Changchun**	**18.43**	**7**	⇓*i*P	**P**	**05 27 44.1**	**-0.3**
CN2				sP	sP	05 28 54.4	-2.6
CN2				S	**S**	**05 30 57.7**	**-3.3**
CN2				PcP	**PcP**	**05 32 01.9**	**-0.9**
CN2				ScP	**ScP**	**05 35 11.2**	**-2.6**
CN2				pmax	pmax		
	comp=Z,370nm,1.2s						
CN2				pmax	pmax		
	comp=Z,2µm,10.0s						
MSHR	**Mys Shultsa**	**18.48**	**21**	*de*P	**P**	**05 27 45.3**	**+0.4**
MSHR				pmax	pmax		
	comp=Z,356nm,2.5s						
KCP	**Kidapawan**	**18.54**	**172**	⇓*e*P	**Pn**	**05 27 48.1**	**-1.4**
DAV	**Davao City (W)**	**18.55**	**170**	P	**P**	**05 27 46.0**	**+0.1**
	comp=Z,701nm,0.5s,baz=43,slow=8.1,SNR=3.7						
DAV				S	**S**	**05 31 03.7**	**-0.2**
	comp=Z,161nm,0.4s,baz=229,slow=22,SNR=1.6						
DAV	**Davao City (W)**	**18.55**	**170**	P	**P**	**05 27 45.6**	**-0.4**
DAV	**Davao City (W)**	**18.55**	**170**	P	**Pn**	**05 27 47.9**	**-1.7**
JYT	**Yasato**	**18.55**	**51**	P	**P**	**05 27 43.0**	**-2.8**
JYT	**Yasato**	**18.55**	**51**	⇑P	**P**	**05 27 42.7**	**-3.1**
PZH	**PanZhiHua**	**18.69**	**278**	P	**P**	**05 27 48.5**	**+1.0**
PZH				sP	**sP**	**05 28 55.8**	**-4.5**
PZH				S	**S**	**05 31 03.9**	**-2.9**
PZH				PcP	**PcP**	**05 32 01.7**	**-2.1**
PZH				ScS	**ScS**	**05 38 59.8**	**+3.2**
PZH				pmax	pmax		
	comp=Z,710nm,1.0s						
PZH				pmax	pmax		
	comp=Z,3µm,3.5s						
PZH				LR	LR		
	comp=Z,18µm,12.2s						
PZH				LR	LR		
	comp=Z,13µm,10.8s						
PZH				LR	LR		
	comp=Z,14µm,12.4s						
XLT	**XiLinHaoTe**	**19.10**	**346**	⇓*i*P	**P**	**05 27 51.3**	**-0.4**
XLT				sP	sP	05 29 05.1	+0.6
XLT				S	**S**	**05 31 13.3**	**-1.1**
XLT				PcP	**PcP**	**05 32 01.6**	**-2.5**
XLT				pmax	pmax		
	comp=Z,250nm,1.7s						
XLT				pmax	pmax		
	comp=Z,4µm,3.6s						
XLT				LR	LR		
	comp=Z,10µm,12.7s						
XLT				LR	LR		
	comp=Z,10µm,13.5s						
LZH	**Lanzhou**	**19.16**	**308**	⇓P	**P**	**05 27 53.5**	**+0.9**
LZH				sP	sP	05 29 03.6	-2.0
LZH				S	**S**	**05 31 11.0**	**-5.0**
LZH				PcP	**PcP**	**05 32 09.5**	**+5.0**
LZH				pmax	pmax		
	comp=Z,1µm,1.3s						
LZH				pmax	pmax		
	comp=Z,5µm,4.5s						
LZH				LR	LR		
	comp=Z,17µm,12.5s						
LZH				LR	LR		
	comp=Z,14µm,12.6s						
LZH				LR	LR		
	comp=Z,16µm,14.7s						
VLA	**Vladivostok**	**19.20**	**21**	*d i*P	**P**	**05 27 52.4**	**-0.2**
VLA				pmax	pmax		
	comp=Z,188nm,1.1s						
JMM	**Marumori**	**19.82**	**47**	IAmb	IAmb	05 28 02.7	
	comp=Z,344nm,0.7s						
MDJ	**Mudanjiang**	**19.93**	**15**	P	**P**	**05 28 00.0**	**-0.4**
MDJ				pP	pP	05 28 41.3	+0.7
MDJ				sP	sP	05 29 11.0	-2.5
MDJ				S	**S**	**05 31 31.8**	**+1.5**
MDJ				ScP	**ScP**	**05 35 18.0**	**+0.8**
MDJ				PcS	**PcS**	**05 35 43.3**	**+0.4**
MDJ	**Mudanjiang**	**19.93**	**15**	ScS	ScS	05 39 01.0	+1.2
MDJ				pmax	pmax		
	comp=Z,480nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,2µm,4.7s						
MDJ	**Mudanjiang**	**19.93**	**15**	P	**P**	**05 28 00.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**20.20**	**20**	*d i*P	**P**	**05 28 02.4**	**-0.9**
USRK	**Ussuriysk Ar.**	**20.20**	**20**	P	**P**	**05 28 02.5**	**-0.8**
	comp=Z,65nm,0.7s,baz=205,slow=9.6,SNR=51						
USRK				pP	**pP**	**05 28 45.8**	**+2.2**
	comp=Z,55nm,1.0s,baz=257,slow=17,SNR=1.3						
	comp=Z,65nm,0.7s						
USRK	**Ussuriysk Ar.**	**20.20**	**20**	P	**P**	**05 28 02.7**	**-0.6**
MYLDM	**Lahad Datu**	**20.55**	**191**	⇑P	**P**	**05 28 08.5**	**+1.1**
BNX	**BinXian**	**20.59**	**10**	⇑P	**P**	**05 28 06.0**	**-1.5**
BNX				sP	sP	05 29 10.0	-11
BNX				S	S	05 31 30.3	-12
BNX				PcS	PcS	05 35 55.5	+11
BNX				pmax	pmax		
	comp=Z,890nm,1.6s						
BNX				pmax	pmax		
	comp=Z,3µm,5.5s						
BNX				LR	LR		
	comp=N,13µm,9.5s						
BNX				LR	LR		
	comp=E,9µm,9.7s						
BNX				LR	LR		
	comp=Z,15µm,9.9s						
BNX	**BinXian**	**20.59**	**10**	⇑P	**P**	**05 28 05.9**	**-1.5**
BNX				S	S	05 31 30.2	-12
BNX				pmax	pmax		
	comp=Z,890nm,1.6s						
BNX				pmax	pmax		
	comp=Z,3µm,5.5s						
BNX				LR	LR		
	comp=Z,13µm,9.5s						
BNX				LR	LR		
	comp=Z,9µm,9.7s						
BNX				LR	LR		
	comp=Z,15µm,9.9s						
SPMM	**Sapulut**	**21.46**	**197**	P	**P**	**05 28 17.0**	**+0.6**
JTM	**Tenmabayashi**	**21.72**	**41**	P	**P**	**05 28 13.9**	**-4.6**
JTM	**Tenmabayashi**	**21.72**	**41**	⇑P	**P**	**05 28 15.1**	**-3.4**
SGSI	**Sangihe**	**21.87**	**172**	P	**P**	**05 28 17.6**	**-2.6**
	comp=Z,10µmcomp=Z,1µm,0.6s						
TEY	**Ternei**	**22.59**	**27**	⇑*e*P	**P**	**05 28 24.3**	**-2.1**
TEY				*e*		05 29 11.3	
TEY				*e*S	**S**	**05 32 17.4**	**+3.0**
TEY				pmax	pmax		
	comp=N,30nm,1.2s						
TEY				pmax	pmax		
	comp=Z,60nm,1.2s						
TEY				pmax	pmax		
	comp=E,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,4µm,11.8s						
TEY				pmax	pmax		
	comp=N,3µm,11.7s						
TEY				pmax	pmax		
	comp=E,2µm,10.4s						
TEY				smax	smax		
	comp=N,6µm,15.6s						
TEY				smax	smax		
	comp=E,3µm,14.0s						
TEY				MLR	MLR		
	comp=N,2µm,10.0s						
TEY				MLR	MLR		
	comp=Z,2µm,15.0s						
CHTO	**Chiang Mai**	**22.79**	**258**	P	**P**	**05 28 29.0**	**+0.5**
CHTO	**Chiang Mai**	**22.79**	**258**	P	**P**	**05 28 29.0**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,611nm,1.1s						
CHTO	**Chiang Mai**	**22.79**	**258**	P	**P**	**05 28 29.3**	**+0.7**
CHTO				P	**P**	**05 28 29.3**	**+0.7**
CHTO	**Chiang Mai**	**22.79**	**258**	P	**P**	**05 28 29.1**	**+0.6**
CHTO	**Chiang Mai**	**22.79**	**258**	⇑P	**P**	**05 28 28.8**	**+0.3**
CM31	**Chiang Mai Arr**	**22.92**	**257**	P	**P**	**05 28 30.2**	**+0.5**
CM31				IAmb	IAmb	05 28 35.8	
	comp=Z,435nm,1.2s						
CM31	**Chiang Mai Arr**	**22.92**	**257**	P	**P**	**05 28 30.6**	**+0.8**
	SNR=105						
CM31				P	**P**	**05 28 30.6**	**+0.8**
	SNR=105						
CMAR	**Chiang Mai Arr**	**22.92**	**257**	P	**P**	**05 28 30.2**	**+0.5**
	comp=Z,120nm,0.8s,baz=59,slow=7.6,SNR=177						
CMAR				PcP	**PcP**	**05 32 12.2**	**+0.4**
	comp=Z,31nm,0.5s,baz=26,slow=0.8,SNR=15						
CMAR				ScP	**ScP**	**05 35 25.6**	**+0.4**
	comp=Z,3.8nm,0.4s,baz=8.7,slow=1.9,SNR=2.8						
	comp=Z,120nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.92**	**257**	P	**P**	**05 28 30.2**	**+0.5**
CMAR					**PcP**	**05 32 12.6**	**+0.8**
JEW	**Eniwo**	**23.27**	**37**	⇓P	**P**	**05 28 31.0**	**-1.6**
GTA	**Gaotai**	**23.56**	**312**	⇓P	**P**	**05 28 35.0**	**-0.5**
GTA				PP	**pP**	**05 29 20.6**	**-0.3**
GTA				sP	sP	05 29 54.6	+1.2
GTA				PcP	**PcP**	**05 32 14.6**	**+1.6**
GTA				S	**S**	**05 32 28.2**	**-2.3**
GTA				SS	SS	05 33 51.8	-28
GTA				pmax	pmax		
	comp=Z,70nm,1.4s						
GTA				pmax	pmax		
	comp=Z,2µm,8.4s						
GTA				LR	LR		
	comp=Z,10µm,15.3s						
GTA				LR	LR		
	comp=Z,23µm,12.7s						
GTA				LR	LR		
	comp=Z,32µm,17.5s						
ERM	**Erimo**	**23.71**	**41**	P	**P**	**05 28 34.1**	**-2.5**
ERM	**Erimo**	**23.71**	**41**	*de*P	**P**	**05 28 34.7**	**-1.9**
ERM				pmax	pmax		
	comp=Z,312nm,1.7s						
ERM	**Erimo**	**23.71**	**41**	P	**P**	**05 28 35.7**	**-0.9**
ERM	**Erimo**	**23.71**	**41**	⇓P	**P**	**05 28 34.8**	**-1.9**
LKP	**Lekhapani**	**23.93**	**280**	*e*P	**P**	**05 28 39.3**	**+0.5**
LKP				IAmb	IAmb	05 28 43.5	
	comp=Z,303nm,0.8s						
GUMO	**Guam**	**24.13**	**115**	P	**P**	**05 28 41.1**	**+0.3**
	comp=Z,1µm,0.9s,baz=210,slow=3.1,SNR=80						
	comp=Z,1µm,0.9s						
GUMO	**Guam**	**24.13**	**115**	P	**P**	**05 28 41.0**	**+0.3**
GUMO	**Guam**	**24.13**	**115**	P	**P**	**05 28 41.4**	**+0.7**
GUMO	**Guam**	**24.13**	**115**	⇓P	**P**	**05 28 40.9**	**+0.2**
TOLI2	**Tolitoli**	**24.29**	**184**	P	**P**	**05 28 42.5**	**+0.3**
GTOI	**Gorontalo**	**24.71**	**179**	P	**P**	**05 28 44.6**	**-1.4**
	comp=Z,7µmcomp=Z,5µmcomp=Z,219nm,0.9s						
ASAJ	**Asahikawa**	**24.74**	**36**	P	**P**	**05 28 45.6**	**-0.3**
	comp=Z,108nm,0.6s,baz=226,slow=8.0,SNR=27						
	comp=Z,108nm,0.6s						
JKA	**Kamikawa-asahi**	**24.74**	**36**	P	**P**	**05 28 44.4**	**-1.6**
JKA				IAmb	IAmb	05 28 56.8	
	comp=Z,387nm,1.2s						
DIBR	**DIBRUGARH**	**24.76**	**281**	*e*P	**P**	**05 28 46.6**	**+0.3**
DIBR				*i* x	x	05 29 38.7	
KLR	**Kul'dur**	**24.78**	**15**	P	**P**	**05 28 46.3**	**+0.1**
	comp=Z,154nm,0.8s,baz=224,slow=9.1,SNR=150						
KLR				PcP	**PcP**	**05 32 15.7**	**+0.4**
	comp=Z,54nm,0.9s,baz=126,slow=6.1,SNR=4.8						
KLR				ScP	**ScP**	**05 35 29.6**	**-0.1**
	comp=Z,13nm,0.7s,baz=157,slow=2.3,SNR=4.4						
	comp=Z,154nm,0.8s						
KMSI	**Cibinong**	**24.81**	**176**	P	**P**	**05 28 47.3**	**+0.5**
	comp=Z,640nm,0.9s						
MRSI	**Marisa**	**24.87**	**181**	P	**P**	**05 28 47.4**	**0.0**
	comp=Z,17µmcomp=Z,11µmcomp=Z,836nm,1.4s						
SBUM	**Sibu**	**24.95**	**205**	P	**P**	**05 28 48.0**	**-0.1**
SBUM				IAmb	IAmb	05 28 50.8	
	comp=Z,482nm,1.1s						
SBUM	**Sibu**	**24.95**	**205**	P	**P**	**05 28 49.0**	**+0.9**
TNTI	**Ternate**	**25.02**	**168**	P	**P**	**05 28 48.9**	**+0.2**
TNTI	**Ternate**	**25.02**	**168**	P	**P**	**05 28 49.2**	**+0.5**
	comp=Z,11µmcomp=Z,9µmcomp=Z,788nm,1.0s						
TNTI	**Ternate**	**25.02**	**168**	P	**P**	**05 28 49.6**	**+0.9**
TNTI	**Ternate**	**25.02**	**168**	⇓P	**P**	**05 28 48.9**	**+0.2**
MPSI	**Mapaga**	**25.13**	**186**	P	**P**	**05 28 50.2**	**+0.5**
	comp=Z,19µmcomp=Z,4µmcomp=Z,191nm,1.0s						
MOKO	**MOKOCHONG**	**25.17**	**278**	*e*P	**P**	**05 28 49.8**	**-0.4**
MOKO				IAmb	IAmb	05 28 54.9	
	comp=Z,123nm,0.7s						
ULN	**Ulaanbaatar**	**25.45**	**335**	P	**P**	**05 28 52.2**	**-0.3**
ULN				IAmb	IAmb	05 28 58.9	
	comp=Z,357nm,0.9s						
ULN	**Ulaanbaatar**	**25.45**	**335**	*d i*P	**P**	**05 28 52.0**	**-0.4**
ULN				pmax	pmax		
	comp=Z,274nm,1.3s						
ULN	**Ulaanbaatar**	**25.45**	**335**	P	**P**	**05 28 52.4**	**0.0**
ULN	**Ulaanbaatar**	**25.45**	**335**	⇓P	**P**	**05 28 52.2**	**-0.3**
SONM	**Songino Array**	**25.67**	**334**	P	**P**	**05 28 54.2**	**-0.2**
	comp=Z,320nm,0.8s,baz=146,slow=9.3,SNR=664						
SONM				ScP	**ScP**	**05 35 32.3**	**-0.2**
	comp=Z,17nm,1.0s,baz=165,slow=7.1,SNR=4.7						
SONM				P3KPbc		06 01 46.6	
	comp=Z,0.4nm,0.4s,baz=320,slow=4.4,SNR=6.4						
	comp=Z,320nm,0.8s						
SONM	**Songino Array**	**25.67**	**334**	P	**P**	**05 28 54.1**	**-0.3**
ITAN	**ITANAGAR**	**25.83**	**280**	*e*P	**P**	**05 28 56.7**	**+0.8**
ITAN				IAmb	IAmb	05 29 01.9	
	comp=Z,299nm,0.7s						
IMP	**Imphal**	**25.84**	**275**	*e*P	**P**	**05 28 55.2**	**-0.9**
IMP				*i* x	x	05 29 49.6	
GOMU	**GeErMu**	**25.97**	**301**	P	**P**	**05 28 58.8**	**+1.2**
GOMU				PP	**pP**	**05 29 45.8**	**-1.2**
GOMU				S	**S**	**05 33 15.0**	**+5.9**
GOMU				pmax	pmax		
	comp=Z,130nm,0.8s						
GOMU				LR	LR		
	comp=N,5µm,8.9s						
GOMU				LR	LR		
	comp=E,4µm,9.8s						
GOMU				LR	LR		
	comp=Z,6µm,9.2s						
GOMU	**GeErMu**	**25.97**	**301**	P	**P**	**05 28 58.7**	**+1.2**
GOMU				S	**S**	**05 33 15.1**	**+5.9**
GOMU				pmax	pmax		
	comp=Z,130nm,0.8s						
GOMU				LR	LR		
	comp=Z,5µm,8.9s						
GOMU				LR	LR		
	comp=Z,4µm,9.8s						
GOMU				LR	LR		
	comp=Z,6µm,9.2s						
APSI	**Ampana**	**26.26**	**182**	P	**P**	**05 28 59.7**	**-0.1**
	comp=Z,7µmcomp=Z,7µmcomp=Z,730nm,1.6s						
SMKI	**Samarinda**	**26.29**	**192**	P	**P**	**05 29 02.7**	**+2.6**
	comp=Z,21µmcomp=Z,15µmcomp=Z,1µm,1.6s						
LUWI	**Luwuk**	**26.38**	**179**	P	**P**	**05 29 00.1**	**-0.8**
	comp=Z,11µmcomp=Z,7µmcomp=Z,440nm,1.4s						
LUWI	**Luwuk**	**26.38**	**179**	P	**P**	**05 29 01.6**	**+0.7**
LUWI	**Luwuk**	**26.38**	**179**	⇓P	**P**	**05 29 00.7**	**-0.2**
LBMI	**Labuha**	**26.42**	**169**	P	**P**	**05 29 01.0**	**-0.3**
	comp=Z,9µmcomp=Z,9µmcomp=Z,854nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**26.51**	**40**	*e*P	**P**	**05 29 01.8**	**0.0**
YUK				*e**PP	**pP**	**05 29 49.6**	**-1.8**
YUK				*e*S	**S**	**05 33 17.5**	**+0.9**
YUK				pmax	pmax		
	comp=Z,557nm,1.3s						
YUK				pmax	pmax		
	comp=N,379nm,1.0s						
YUK				pmax	pmax		
	comp=E,593nm,1.1s						
YUK				pmax	pmax		
	comp=Z,833nm,1.1s						
YUK				smax	smax		
	comp=N,714nm,1.3s						
YUK				smax	smax		
	comp=E,2µm,2.6s						
KSM	**Kuching**	**26.61**	**208**	P	**P**	**05 29 02.8**	**-0.2**
KSM	**Kuching**	**26.61**	**208**	P	**P**	**05 29 04.0**	**+1.0**
KSM	**Kuching**	**26.61**	**208**	P	**P**	**05 29 03.6**	**+0.6**
KSM	**Kuching**	**26.61**	**208**	⇑P	**P**	**05 29 03.2**	**+0.2**
TEZP	**TEZPUR**	**26.68**	**279**	*e*P	**P**	**05 29 04.0**	**+0.4**
TEZP				IAmb	IAmb	05 29 10.2	
	comp=Z,240nm,0.9s						
TEZP				*i* x	x	05 29 52.9	
YSS	**Yuzh-Sakhalins**	**26.80**	**32**	P	**P**	**05 29 03.6**	**-0.7**
YSS	**Yuzh-Sakhalins**	**26.80**	**32**	κ *i*P	**P**	**05 29 03.3**	**-1.0**
YSS				*e**SP	**sP**	**05 30 25.7**	**+1.9**
YSS				pmax	pmax		
	comp=Z,320nm,0.8s						
YSS				pmax	pmax		
	comp=Z,600nm,2.0s						
YSS				MLR	MLR		
	comp=N,3µm,12.0s						
YSS				MLR	MLR		
	comp=Z,2µm,12.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
YSS	**Yuzh-Sakhalins**	**26.80**	**32**	P	**P**	**05 29 04.4**	**+0.1**
YSS	**Yuzh-Sakhalins**	**26.80**	**32**	⇓P	**P**	**05 29 03.4**	**-0.9**
AZL	**Aizawl**	**27.13**	**273**	*e*P	**P**	**05 29 07.5**	**-0.2**
AZL				IAmb	IAmb	05 29 08.1	
	comp=Z,124nm,0.9s						
AZL				*i* x	x	05 29 55.8	
BKB	**Balikpapan**	**27.14**	**192**	P	**P**	**05 29 06.9**	**-0.8**
	comp=Z,19µmcomp=Z,12µmcomp=Z,948nm,0.8s						
BKB	**Balikpapan**	**27.14**	**192**	P	**P**	**05 29 08.0**	**+0.3**
MTKI	**Muara Teweh, K**	**27.29**	**197**	P	**P**	**05 29 09.1**	**+0.1**
	comp=Z,8µmcomp=Z,8µmcomp=Z,565nm,0.9s						
CIT	**Chita**	**27.36**	**348**	*e*P	**P**	**05 29 08.2**	**-1.1**
CIT				*e*		05 29 57.2	
CIT				*e*		05 32 22.0	
CIT				*e*S	**S**	**05 33 28.9**	**-0.9**

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CIT                                 pmax     pmax
      comp=Z,846nm,2.1s
GRNR  Gornyy           27.42  19⇓iP    P        05 29 09.5 -0.3
GRNR                              e             05 29 58.9
GRNR                              eS    S        05 33 33.5 +2.7
GRNR                                pmax     pmax
      comp=N,20nm,0.6s
GRNR                                pmax     pmax
      comp=Z,30nm,0.6s
GRNR                                smax     smax
      comp=N,4.0nm,0.7s
GRNR                                MLR      MLR
      comp=E,2µm,11.0s
GRNR                                MLR      MLR
      comp=N,3µm,13.0s
GRNR                                MLR      MLR
      comp=Z,3µm,11.0s
STKI  Sintang          27.43 205    P        P        05 29 11.4 +1.2
      comp=Z,11µmcomp=Z,266nm,0.9s
SWI   Sorong           27.53 161    P        P        05 29 10.8 -0.4
      comp=Z,14µmcomp=Z,3µmcomp=Z,216nm,0.8s
SIJI  Sorong           27.54 161    P        P        05 29 10.8 -0.4
      comp=Z,117nm,0.7s,baz=348,slow=8.0,SNR=30
      comp=Z,117nm,0.7s
SANI  Sanana           27.58 172    P        P        05 29 10.7 -0.9
      comp=Z,14µmcomp=Z,11µmcomp=Z,1µm,0.6s
SANI  Sanana           27.58 172  ⇓P        P        05 29 10.6 -0.9
GUWA  GUWAHATI         27.71 278  eP        P        05 29 12.3 -0.4
GUWA                                IAmb     IAmb     05 29 18.3
      comp=Z,176nm,0.9s
LSA   Lhasa            28.05 286    P        P        05 29 17.3 +1.0
LSA                                 S        S        05 33 43.0 +0.9
LSA                                 pmax     pmax
      comp=Z,26nm,0.7s
LSA                                 LR       LR
      comp=N,10µm,17.4s
LSA                                 LR       LR
      comp=E,27µm,13.9s
LSA                                 LR       LR
      comp=Z,14µm,13.2s
LSA   Lhasa            28.05 286    P        P        05 29 17.5 +1.2
LSA                                 P        P        05 29 17.5 +1.2
LSA   Lhasa            28.05 286    P        P        05 29 16.9 +0.7
LSA   Lhasa            28.05 286    P        P        05 29 17.2 +1.0
LSA                                 ScP      ScP      05 35 42.2 +1.8
UGL   Uglegorsk        28.07  28  eP        P        05 29 18.6 +3.1
UGL                               e                   05 30 10.2
UGL                                 pmax     pmax
      comp=Z,300nm,1.2s
BELO  BELONIA          28.34 272  eP        P        05 29 13.2 -5.1
KUR   Kuril'sk         28.37  40  eP        P        05 29 16.3 -2.0
KUR                               e                   05 32 23.0
KUR                                 S        S        05 33 45.1 -0.7
KUR                                 pmax     pmax
      comp=Z,483nm,1.3s
KUR                                 pmax     pmax
      comp=Z,5µm,19.4s
KUR                                 MLR      MLR
      comp=Z,3µm,15.0s
AGT   Agartala         28.41 273  eP        P        05 29 19.3 +0.4
AGT                                 IAmb     IAmb     05 29 25.4
      comp=Z,311nm,0.8s
ZEA   Zeya             28.44   6  eP        P        05 29 18.7 -0.1
ZEA                               e*PP      pP       05 30 12.7 +3.9
ZEA                               eS        S        05 33 47.7 +1.0
ZEA                                 pmax     pmax
      comp=E,200nm,2.5s
ZEA                                 pmax     pmax
      comp=N,700nm,2.9s
ZEA                                 pmax     pmax
      comp=Z,900nm,2.2s
ZEA                                 pmax     pmax
      comp=E,60nm,0.8s
ZEA                                 pmax     pmax
      comp=N,130nm,1.0s
ZEA                                 pmax     pmax
      comp=Z,350nm,1.0s
ZEA                                 smax     smax
      comp=N,3µm,16.7s
ZEA                                 MLR      MLR
      comp=E,2µm,11.0s
ZEA                                 MLR      MLR
      comp=N,3µm,12.0s
ZEA                                 MLR      MLR
      comp=Z,3µm,14.0s
TTSI  Tana Toraja      28.48 186    P        P        05 29 19.3 -0.3
      comp=Z,8µmcomp=Z,3µmcomp=Z,127nm,1.2s
JRMM  Jerantut         28.83 225    P        P        05 29 24.0 +1.3
ZAK   Zakamensk        28.94 334  eP        P        05 29 21.9 -1.5
KULM  Kulim            29.01 230    P        P        05 29 25.5 +1.2
KULM  Kulim            29.01 230    P        P        05 29 26.0 +1.7
KULM  Kulim            29.01 230  ⇑P        P        05 29 25.5 +1.2
MSAI  Masohi           29.33 167    P        P        05 29 27.0 -0.1
      comp=Z,1µmcomp=Z,136nm,0.8s
IPM   Ipoh             29.34 228    P        P        05 29 28.0 +0.7
IPM   Ipoh             29.34 228    P        P        05 29 28.3 +1.1
IPM   Ipoh             29.34 228  ⇑P        P        05 29 27.9 +0.7
SPSI  Sidrap Palu      29.40 186    P        P        05 29 27.2 -0.4
      comp=Z,7µmcomp=Z,2µmcomp=Z,141nm,1.6s
AAI   Ambon            29.52 168    P        P        05 29 28.7 -0.1
      comp=Z,10µmcomp=Z,8µmcomp=Z,654nm,0.7s
MYKOM Kota Tinggi      29.63 220    IAmb     IAmb     05 29 35.9
      comp=Z,257nm,0.8s
MYKOM Kota Tinggi      29.63 220    P        P        05 29 32.0 +2.2
TYV   Tymovskoe        29.69  26  eP        P        05 29 30.9 +1.1
TYV                                 pmax     pmax
      comp=Z,20nm,1.5s
TYV                                 pmax     pmax
      comp=Z,300nm,4.3s
BBKI  Banjar Baru      29.72 196    P        P        05 29 31.0 +0.5
      comp=Z,6µmcomp=Z,12µmcomp=Z,418nm,1.6s
FAKI  Fak Fak          29.78 160    P        P        05 29 30.1 -0.9
FAKI  Fak Fak          29.78 160    P        P        05 29 30.6 -0.4
      comp=Z,10µmcomp=Z,7µmcomp=Z,522nm,1.0s
FAKI  Fak Fak          29.78 160    P        P        05 29 31.2 +0.2
FAKI  Fak Fak          29.78 160  ⇓P        P        05 29 30.6 -0.4
BNSI  Bone             29.80 185    P        P        05 29 31.7 +0.5
      comp=Z,2µmcomp=Z,91nm,1.5s
PBKI  Pangkalan Bun    29.93 202    P        P        05 29 32.0 -0.3
      comp=Z,5µmcomp=Z,450nm,1.0s
TPRI  Tanjung Pinang   29.96 218    P        P        05 29 33.6 +1.0
IRK   Irkutsk          30.08 337  eP        P        05 29 32.0 -1.3
IRK                               eS        S        05 34 11.5 -0.9
IRK                                 pmax     pmax
      comp=Z,614nm,1.6s
SRPI  Serui, Papua     30.28 152    P        P        05 29 36.3 +0.9
      comp=Z,8µmcomp=Z,6µmcomp=Z,555nm,1.0s
GTK   Tadong           30.36 281  eP        P        05 29 38.4 +2.1
GTK                                 IAmb     IAmb     05 29 43.0
      comp=Z,128nm,0.7s
KAPI  Kappang          30.44 185    P        P        05 29 35.5 -1.3
KAPI                                IAmb     IAmb     05 29 46.1
      comp=Z,704nm,1.8s
KAPI  Kappang          30.44 185    P        P        05 29 35.5 -1.3
KAPI                                pmax     pmax
      comp=Z,704nm,1.8s
KAPI  Kappang          30.44 185    P        P        05 29 36.8  0.0
KAPI                                P        P        05 29 36.8  0.0
KAPI  Kappang          30.44 185    P        P        05 29 37.2 +0.4
KAPI  Kappang          30.44 185  ⇑P        P        05 29 35.9 -0.9
KAPI  Kappang          30.44 185    P        P        05 29 35.7 -1.0
KAPI                                ScP      ScP      05 35 52.4 +4.8
BNDI  Bandanaira       30.68 165    P        P        05 29 40.2 +1.2
BNDI  Bandanaira       30.68 165  ⇓P        P        05 29 40.3 +1.4
BKSI  Bulukumba        30.71 185    P        P        05 29 39.1 -0.1
      comp=Z,10µmcomp=Z,1µmcomp=Z,107nm,0.9s
BBSI  Bau Bau          30.79 180    P        P        05 29 40.2 +0.3
      comp=Z,625nmcomp=Z,70nm,1.0s
NKL   Nikolayevsk      30.82  22  eP        P        05 29 39.3 -0.4
NKL                                 pmax     pmax
      comp=N,10.0nm,0.9s
NKL                                 pmax     pmax
      comp=E,4.0nm,0.9s
NKL                                 pmax     pmax
      comp=Z,112nm,1.8s
NKL                                 pmax     pmax
      comp=Z,304nm,6.6s
NKL                                 MLR      MLR
      comp=E,66nm,11.0s
NKL                                 MLR      MLR
      comp=N,8.0nm,20.0s
NKL                                 MLR      MLR
      comp=Z,3µm,16.0s
MOY   Mondy            30.85 334  eP        P        05 29 39.4 -0.8
MOY                                 pmax     pmax
      comp=Z,369nm,2.2s
```

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KMPI  Kaimana, Papua   30.95 158    P        P        05 29 41.5 +0.2
DSRI  Dabo             31.09 217    P        P        05 29 43.3 +0.8
      comp=Z,7µmcomp=Z,1µmcomp=Z,59nm,1.1s
TAPN  Taplejung        31.15 281  eP        P        05 29 43.9 +0.5
      comp=Z,439nm,0.9s
TPI   Tanjungpandan    31.55 209    P        P        05 29 47.2 +0.7
      comp=Z,2µmcomp=Z,193nm,1.4s
KNGR  Kungurtug, Tuv   31.59 329deP       P        05 29 46.0 -0.6
LHMI  Lhok Sumawe      31.70 235    IAmb     IAmb     05 29 51.0
      comp=Z,492nm,1.2s
LHMI  Lhok Sumawe      31.70 235    P        P        05 29 48.0 +0.1
      comp=Z,27µmcomp=Z,347nm,1.0s
LHMI  Lhok Sumawe      31.70 235    P        P        05 29 49.0 +1.1
PPBI  Pangkal Pinang   31.73 212    P        P        05 29 48.8 +0.7
      comp=Z,207nm,1.6s
TSI   Tuntungan        31.73 230    P        P        05 29 50.3 +2.1
      comp=Z,27µmcomp=Z,7µmcomp=Z,428nm,1.0s
PSI   Prapat           31.99 229    P        P        05 29 51.6 +1.1
      comp=Z,101nm,0.7s,baz=14,slow=5.4,SNR=57
PSI                                 PcP      PcP      05 32 34.8 +0.7
      comp=Z,51nm,0.7s,baz=2.0,slow=7.1,SNR=6.8
PSI                                 ScP      ScP      05 35 52.0 -1.0
      comp=Z,21nm,0.8s,baz=352,slow=4.1,SNR=5.3
      comp=Z,101nm,0.7s
RPSI  Rantau Prapat    32.07 229    P        P        05 29 51.6 +0.6
RPSI                                         ScP      05 35 52.0 -1.1
RGRI  Rengat           32.24 220    P        P        05 29 58.8 +6.2
KCSI  Kotacane, Aceh   32.27 231    P        P        05 29 52.5 -0.4
      comp=Z,1µmcomp=Z,77nm,0.9s
JIRN  Jiri             32.48 282  eP        P        05 29 55.3 +0.3
BKNI  Bangkinang       32.48 223    P        P        05 29 55.6 +0.9
      comp=Z,17µmcomp=Z,10µmcomp=Z,982nm,1.1s
BKNI  Bangkinang       32.48 223    P        P        05 29 55.9 +1.2
BKNI  Bangkinang       32.48 223  ⇑P        P        05 29 56.0 +1.2
JMBI  JAMBI            32.56 217    P        P        05 29 58.4 +3.1
      comp=Z,7µmcomp=Z,883nm,0.9s
BWJI  Bawean           32.59 198    P        P        05 29 56.0 +0.5
      comp=Z,6µmcomp=Z,12µmcomp=Z,1µm,1.0s
GUN   Gumba            32.73 282  eP        P        05 29 57.4 +0.3
      comp=Z,399nm,0.8s
GENI  Genyem           32.75 146    P        P        05 29 57.1 +0.1
      comp=Z,6µmcomp=Z,390nm,1.1s
GENI  Genyem           32.75 146    P        P        05 29 58.0 +1.0
GENI  Genyem           32.75 146  ⇓P        P        05 29 57.4 +0.5
BOD   Bodaibo          32.87 352  eP        P        05 29 55.8 -1.7
BOD                                 pmax     pmax
      comp=Z,171nm,2.0s
PKI   Pulchoki         33.17 282  eP        P        05 30 00.7 -0.3
PKIN  Phulchoki        33.18 282  eP        P        05 30 00.8 -0.2
KMMI  Kalianget        33.39 196    P        P        05 30 02.1 -0.4
      comp=Z,7µmcomp=Z,717nm,0.7s
DMN   Daman            33.44 282  eP        P        05 30 03.1 -0.1
UWJI  Ujung Watu       33.65 201    P        P        05 30 05.6 +0.9
      comp=Z,6µmcomp=Z,507nm,1.3s
WMQ   Urumqi           33.65 312    P        P        05 30 04.8 +0.2
WMQ                                 pP       pP       05 30 54.8 -0.6
WMQ                                 PP       PnPn     05 31 33.8 +6.6
WMQ                                 PcP      PcP      05 32 41.0 +2.8
WMQ                                 S        S        05 35 08.0 -0.1
WMQ                                 ScP      ScP      05 36 06.5 +8.2
WMQ                                 sS       sS       05 36 43.5 +4.3
WMQ                                 pmax     pmax
      comp=Z,75nm,0.9s
WMQ                                 pmax     pmax
      comp=Z,10.0nm,3.6s
WMQ                                 LR       LR
      comp=N,8µm,17.7s
WMQ                                 LR       LR
      comp=E,5µm,14.1s
WMQ                                 LR       LR
      comp=Z,4µm,15.9s
WMQ   Urumqi           33.65 312    P        P        05 30 04.7 +0.2
WMQ                                 pP       pP       05 30 54.8 -0.6
WMQ                                 PP       PnPn     05 31 31.2 +4.0
WMQ                                 PcP      PcP      05 32 41.0 +2.8
WMQ                                 S        S        05 35 07.9 -0.1
WMQ                                 sS       sS       05 36 43.5 +4.3
WMQ                                 SS       SS       05 37 31.4  -13
WMQ                                 pmax     pmax
      comp=Z,75nm,0.9s
WMQ                                 LR       LR
      comp=Z,8µm,17.7s
WMQ                                 LR       LR
      comp=Z,5µm,14.1s
WMQ                                 LR       LR
      comp=Z,4µm,15.9s
GRJI  Gresik           33.65 198    P        P        05 30 05.5 +0.8
      comp=Z,5µmcomp=Z,407nm,1.1s
TBJI  Tambak Boyo      33.74 199    P        P        05 30 06.2 +0.7
      comp=Z,5µmcomp=Z,9µmcomp=Z,935nm,1.3s
GKN   Gorkha           33.82 283  eP        P        05 30 06.2 -0.1
      comp=Z,492nm,1.1s
MMRI  Maumere          33.92 180    P        P        05 30 04.2 -2.8
      comp=Z,9µmcomp=Z,8µmcomp=Z,776nm,1.1s
MMRI  Maumere          33.92 180    P        P        05 30 07.3 +0.3
MMRI  Maumere          33.92 180  ⇓P        P        05 30 06.6 -0.4
GSI   Gunungsitoli     33.99 229    IAmb     IAmb     05 30 13.0
      comp=Z,168nm,0.4s
GSI   Gunungsitoli     33.99 229    P        P        05 30 06.4 -1.3
      comp=Z,172nm,0.5s
GSI   Gunungsitoli     33.99 229    P        P        05 30 07.9 +0.2
GSI   Gunungsitoli     33.99 229  ⇑P        P        05 30 07.1 -0.6
EDFI  Ende, Flores     34.04 181    P        P        05 30 06.8 -1.4
      comp=Z,3µmcomp=Z,250nm,0.7s
ABJI  Asem Bagus       34.05 195    P        P        05 30 08.7 +0.6
      comp=Z,6µmcomp=Z,282nm,1.1s
SRBI  Singaraja        34.12 193    P        P        05 30 09.0 +0.3
      comp=Z,8µmcomp=Z,7µmcomp=Z,372nm,0.7s
BWNR  Bhubaneshwar     34.12 269  eP        P        05 30 10.2 +1.4
BLJI  Banyuglugur      34.15 196    P        P        05 30 09.3 +0.3
      comp=Z,9µmcomp=Z,8µmcomp=Z,811nm,0.6s
KRJI  Kerinci          34.16 220    P        P        05 30 09.2  0.0
      comp=Z,11µmcomp=Z,17µmcomp=Z,1µm,1.3s
SAUI  Saumlaki         34.35 164    P        P        05 30 10.7  0.0
SMRI  Semarang         34.40 202    P        P        05 30 12.8 +1.6
      comp=Z,10µmcomp=Z,500nm,1.4s
SMRI  Semarang         34.40 202    P        P        05 30 12.5 +1.3
SMRI  Semarang         34.40 202  ⇓P        P        05 30 12.8 +1.6
PLAI  Plampang         34.42 188    P        P        05 30 11.7 +0.4
      comp=Z,7µmcomp=Z,5µmcomp=Z,421nm,1.0s
PLAI  Plampang         34.42 188    P        P        05 30 11.0 -0.3
VLK   Valmikinagar     34.56 282  eP        P        05 30 13.5 +1.1
DANN  Dangsing         34.56 284  eP        P        05 30 13.1 +0.3
      comp=Z,294nm,0.6s
MASI  Maura Aman, Be   34.58 218    P        P        05 30 15.1 +2.3
      comp=Z,108µmcomp=Z,10µmcomp=Z,754nm,1.6s
DNP   Denpasar         34.69 193    P        P        05 30 15.1 +1.5
      comp=Z,35µmcomp=Z,2µm,1.3s
GMJI  Gumukmas         34.70 196    P        P        05 30 13.7  0.0
      comp=Z,7µmcomp=Z,607nm,1.7s
KLI   Kotabumi         34.70 212    P        P        05 30 14.7 +1.0
      comp=Z,10µmcomp=Z,583nm,1.2s
MDSI  Maura Dua        34.70 213    P        P        05 30 14.0 +0.3
      comp=Z,7µmcomp=Z,2µmcomp=Z,183nm,0.8s
JAGI  Jajag, Banyuwa   34.72 195    P        P        05 30 15.4 +1.5
      comp=Z,3µmcomp=Z,240nm,1.0s
JAGI  Jajag, Banyuwa   34.72 195    P        P        05 30 14.8 +0.9
JAGI  Jajag, Banyuwa   34.72 195  ⇑P        P        05 30 15.4 +1.5
IGBI  Denpasar         34.84 193    P        P        05 30 15.9 +1.0
      comp=Z,8µmcomp=Z,588nm,0.8s
PWJI  Pagerwojo        34.90 199    P        P        05 30 15.3 -0.1
      comp=Z,7µmcomp=Z,565nm,1.1s
BLSI  Bandar Lampung   34.95 211    P        P        05 30 16.8 +0.9
      comp=Z,342nm,0.7s
SISI  Saibi            34.98 224    P        P        05 30 17.1 +1.0
      comp=Z,3µmcomp=Z,342nm,1.0s
WOJI  Wonogiri, Jawa   34.99 200    P        P        05 30 16.6 +0.4
      comp=Z,5µmcomp=Z,4µmcomp=Z,395nm,1.7s
SOEI  Soe              35.07 177    IAmb     IAmb     05 30 43.9
      comp=Z,245nm,0.7s
SOEI  Soe              35.07 177    P        P        05 30 16.5 -0.5
      comp=Z,345nm,0.6s
SOEI  Soe              35.07 177    P        P        05 30 17.1 +0.1
SOEI  Soe              35.07 177  ⇓P        P        05 30 16.7 -0.3
YOGI  Yogyakarta       35.17 201    P        P        05 30 18.5 +0.8
      comp=Z,6µmcomp=Z,9µmcomp=Z,652nm,1.6s
UGM   Wanagama         35.19 201    P        P        05 30 18.8 +0.9
      comp=Z,8µmcomp=Z,11µmcomp=Z,824nm,1.5s
UGM   Wanagama         35.19 201    P        P        05 30 19.2 +1.3
KPJI  Karang Pucung    35.19 204    P        P        05 30 19.1 +1.2
      comp=Z,10µmcomp=Z,7µmcomp=Z,422nm,1.6s
LWLI  Liwa             35.22 213    P        P        05 30 18.8 +0.5
      comp=Z,6µmcomp=Z,314nm,0.7s
SBJI  Serang           35.22 209    P        P        05 30 20.0 +1.9
      comp=Z,19µmcomp=Z,762nm,1.4s
LEM   Lembang          35.23 206    P        P        05 30 19.1 +0.7
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      comp=Z,171nm,0.9s,baz=59,slow=5.5,SNR=20
      comp=Z,171nm,0.9s
PCJI  Pacitan          35.25 200    P        P        05 30 19.1 +0.7
      comp=Z,7µmcomp=Z,3µmcomp=Z,221nm,1.6s
PYUN  Piuthan          35.26 283  eP        P        05 30 19.0 +0.3
      comp=Z,311nm,0.7s
DBJI  Dramaga          35.34 208    P        P        05 30 20.8 +1.6
      comp=Z,14µmcomp=Z,898nm,1.6s
KASI  Kota Agung       35.44 212    P        P        05 30 20.8 +0.7
      comp=Z,14µmcomp=Z,208nm,1.4s
BATI  Baumata          35.50 178    P        P        05 30 19.1 -1.3
      comp=Z,400nm,0.6s,baz=287,slow=1.8,SNR=22
BATI                                S        S        05 35 28.4 -8.2
      comp=Z,117nm,1.0s,baz=81,slow=20,SNR=6.8
BATI                                ScS      ScS      05 40 09.4 -1.4
      comp=Z,21nm,0.5s,baz=54,slow=19,SNR=1.2
      comp=Z,400nm,0.6s
BATI  Baumata          35.50 178    P        P        05 30 19.2 -1.3
      comp=Z,5µmcomp=Z,3µmcomp=Z,334nm,0.6s
BASI  Baing, Sumba     35.54 183    P        P        05 30 23.0 +2.2
      comp=Z,4µmcomp=Z,6µmcomp=Z,469nm,0.6s
PPSI  Pulau Pagai      35.55 221    P        P        05 30 22.0 +1.0
      comp=Z,9µmcomp=Z,675nm,1.4s
VAR   Varanasi         35.58 278  eP        P        05 30 22.0 +0.9
JHSG  JHARSUGUGA       35.59 272  eP        P        05 30 22.3 +1.0
SKJI  Sukabumi         35.83 208    P        P        05 30 29.8 +6.5
CNJI  Cibinong         35.87 207    P        P        05 30 24.8 +1.2
      comp=Z,4µmcomp=Z,274nm,1.0s
SKR   Severo-Kuril's   36.00  37  eP        P        05 30 21.3 -3.1
SKR                               e*PP      sP       05 31 45.4 +0.3
SKR                               eS        S        05 35 45.1 +1.5
SKR                               eSS       SS       05 37 18.5  -74
SKR                                 pmax     pmax
      comp=Z,77nm,0.8s
SKR                                 pmax     pmax
      comp=Z,700nm,5.0s
SKR                                 MLR      MLR
      comp=Z,2µm,16.0s
SKR                                 MLR      MLR
      comp=Z,2µm,19.0s
MANU  Manus Island     36.45 135    P        P        05 30 27.9 -0.8
RAGD  RAYAGADA         36.54 268  eP        P        05 30 30.5 +1.1
ALBI  Allahabad        36.66 279  eP        P        05 30 30.5 +0.2
YAK   Yakutsk          36.85   6    P        P        05 30 30.3 -1.1
      comp=Z,76nm,0.5s,baz=213,slow=0.6,SNR=23
YAK                                 S        S        05 35 51.6 -4.6
      comp=Z,6.1nm,0.4s,baz=136,slow=1.2,SNR=1.0
      comp=Z,76nm,0.5s
YAK   Yakutsk          36.85   6    P        P        05 30 30.6 -0.7
YAK   Yakutsk          36.85   6d iP       P        05 30 30.3 -1.1
YAK                               e*PP      pP       05 31 22.9  0.0
YAK                               e                   05 32 02.2
YAK                               e                   05 32 48.6
YAK                               eS        S        05 35 55.7 -0.5
YAK                               e*SS      sS       05 37 31.1 +2.8
YAK                               e                   05 40 17.1
YAK                                 pmax     pmax
      comp=Z,378nm,1.1s
YAK                                 pmax     pmax
      comp=N,155nm,1.1s
YAK                                 pmax     pmax
      comp=E,68nm,1.3s
YAK                                 pmax     pmax
      comp=Z,459nm,2.2s
YAK                                 pmax     pmax
      comp=N,366nm,1.9s
YAK                                 pmax     pmax
      comp=E,201nm,2.2s
YAK                                 smax     smax
      comp=E,484nm,2.8s
YAK                                 smax     smax
      comp=N,419nm,1.6s
YAK   Yakutsk          36.85   6  ⇓P        P        05 30 30.4 -1.0
ZSN   Zaisan           36.86 316d iP       P        05 30 31.3 -0.4
ZSN                               e*PP      pP       05 31 26.0 +2.7
ZSN                               eS        S        05 35 55.9 -0.9
ZSN   Zaisan           36.86 316⇓iP       P        05 30 31.3 -0.4
      baz=316
ZSN                               epP       pP       05 31 26.1 +2.7
      baz=316
ZSN                               eS        S        05 35 55.9 -0.9
      baz=316
BLSP  Bilaspur         36.99 273  eP        P        05 30 33.1  0.0
LGTI  Lohaghat         37.55 286  eP        P        05 30 39.8 +2.1
PTH   Pithoragarh      37.57 286  eP        P        05 30 38.6 +0.5
PEA0B Petropavlovsk-   38.12  34deP       P        05 30 39.9 -2.3
PETK  Petropavlovsk-   38.12  34    P        P        05 30 40.8 -1.3
      comp=N,12nm,0.7s,baz=197,slow=1.5,SNR=15
MK31  Makanchi Array   38.26 314    P        P        05 30 43.4 -0.1
MK31  Makanchi Array   38.26 314    P        P        05 30 43.4 -0.1
MK31                                pmax     pmax
      comp=Z,132nm,0.6s
MKAR  Makanchi Array   38.26 314    P        P        05 30 43.2 -0.3
      comp=Z,178nm,0.6s,baz=99,slow=9.7,SNR=582
MKAR                                pP       pP       05 31 36.7 +1.3
      comp=Z,89nm,0.7s,baz=101,slow=10,SNR=3.4
MKAR                                ScP      ScP      05 36 14.7 -0.5
      comp=Z,41nm,1.0s,baz=102,slow=5.6,SNR=4.1
MKAR                                ScS      ScS      05 40 29.2 +3.6
      comp=Z,4.4nm,0.8s,baz=102,slow=11,SNR=4.8
MKAR                                P3KPbc            06 00 54.1
      comp=Z,0.5nm,0.6s,baz=296,slow=3.0,SNR=4.7
MKAR                                PKPPKP   P'P'df   06 03 06.2  -17
      comp=Z,0.8nm,0.9s,baz=20,slow=3.9,SNR=3.6
      comp=Z,178nm,0.6s
MAKZ  Makanchi         38.47 314    P        P        05 30 44.9 -0.2
MAKZ  Makanchi         38.47 314  ⇓P        P        05 30 45.0 -0.2
MAKZ  Makanchi         38.47 314  ⇓P        P        05 30 45.1 -0.1
MAKZ                                pP       pP       05 31 37.5 +0.3
MAKZ                                sP       sP       05 32 07.5 +1.1
MAKZ                                ScP      ScP      05 36 15.2 -0.7
PET   Petropavlovsk    38.57  35    P        P        05 30 44.7 -1.2
PET   Petropavlovsk    38.57  35  eP        P        05 30 44.6 -1.2
PET                               e*PP      pP       05 31 37.4 -0.4
PET                               e*SP      sP       05 32 08.2 +1.2
PET                               e                   05 32 52.1
PET                               eS        S        05 36 19.9 -2.3
PET                               e*SS      sS       05 37 55.5 +0.7
PET                                 pmax     pmax
      comp=Z,154nm,1.3s
PET                                 pmax     pmax
      comp=Z,2µm,18.4s
PET                                 pmax     pmax
      comp=Z,1µm,17.9s
PET                                 MLR      MLR
      comp=Z,2µm,16.0s
PET                                 MLR      MLR
      comp=Z,2µm,14.0s
PET   Petropavlovsk    38.57  35    P        P        05 30 46.1 +0.3
PET   Petropavlovsk    38.57  35  ⇓P        P        05 30 44.5 -1.4
PATS  Pohnpei          38.89 112    P        P        05 30 49.6 +0.6
MTN   Manton Dam       39.02 167    P        P        05 30 49.2 -0.7
MTN   Manton Dam       39.02 167  ⇓P        P        05 30 48.8 -1.1
KDU   Kakadu           39.17 164    P        P        05 30 50.7 -0.5
KDU   Kakadu           39.17 164  ⇓P        P        05 30 50.3 -0.9
PDGK  Podgornoye       39.20 308    P        P        05 30 51.3 -0.1
XMI   Christmas Isla   39.30 207    P        P        05 30 53.1 +0.8
MA2   Magadan          39.33  22    P        P        05 30 50.9 -1.2
MA2   Magadan          39.33  22ceP       P        05 30 51.3 -0.8
MA2                                 pmax     pmax
      comp=Z,217nm,2.5s
MA2   Magadan          39.33  22    P        P        05 30 52.8 +0.8
MA2   Magadan          39.33  22  ⇓P        P        05 30 51.3 -0.8
MA2   Magadan          39.33  22    P        P        05 30 51.5 -0.5
MA2                                 pP       pP       05 31 45.1 +0.9
MA2                                 sP       sP       05 32 15.1 +1.7
MA2                                 ScP      ScP      05 36 19.5 +0.6
XMIS  Christmas Isla   39.34 207    P        P        05 30 53.4 +0.8
UZB   Uzynbulak        39.50 308d iP       P        05 30 54.1 +0.2
UZB                               eS        S        05 36 36.2 -0.5
UZB   Uzynbulak        39.50 308⇓iP       P        05 30 54.1 +0.2
      comp=Z,98nm,1.0s,baz=308
UZB                               eS        S        05 36 36.3 -0.5
      baz=308
JHNI  Jhansi           39.55 280  eP        P        05 30 52.7 -1.6
KPKS  Kokpek           39.81 308d iP       P        05 30 56.4  0.0
KPKS                              eS        S        05 36 40.5 -0.7
KPKS                                pmax     pmax
      comp=Z,102nm,0.7s
KPKS  Kokpek           39.81 308⇓iP       P        05 30 56.4  0.0
      comp=Z,102nm,0.7s,baz=308
KPKS                              eS        S        05 36 40.6 -0.7
      baz=308
PRZ   Przheval'sk      39.82 306    P        P        05 30 57.8 +1.3
PRZ                                 IAmb     IAmb     05 31 01.2
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      comp=Z,224nm,0.7s
PRZ   Przheval'sk       39.82 306   P       P        05 30 57.8 +1.3
PRZ                                 pmax    pmax
      comp=Z,224nm,0.7s
ZAA0  Zalesovo Array    39.83 326   IAmb    IAmb     05 30 58.1
      comp=Z,257nm,0.6s
ZALV  Zalesovo Beam     39.83 326   P       P        05 30 55.1 -1.1
      comp=Z,244nm,0.5s,baz=111,slow=8.2,SNR=340
ZALV                                PcP     PcP      05 32 56.1 -0.6
      comp=Z,22nm,0.5s,baz=101,slow=3.9,SNR=1.9
ZALV                                ScP     ScP      05 36 19.7 -1.3
      comp=Z,30nm,1.0s,baz=111,slow=3.9,SNR=4.1
ZALV                                ScS     ScS      05 40 38.5 +4.1
      comp=Z,3.1nm,0.6s,baz=121,slow=14,SNR=3.9
      comp=Z,244nm,0.5s
ZALV  Zalesovo Beam     39.83 326   P       P        05 30 55.2 -1.0
SATY  Saty              39.92 307d iP       P        05 30 57.8 +0.5
SATY                              i S       S        05 36 42.9 -0.1
SATY                                pmax    pmax
      comp=Z,74nm,0.8s
SATY  Saty              39.92 307⇓iP       P        05 30 57.9 +0.5
      comp=Z,74nm,0.8s,baz=307
SATY                              i S       S        05 36 42.9 -0.1
      baz=307
ZHN   Zhinishke         39.92 308  eP       P        05 30 57.3  0.0
ZHN   Zhinishke         39.92 308  eP       P        05 30 57.4  0.0
      baz=308
VJD   Vijayawada        39.94 265  eP       P        05 30 59.1 +1.5
TDK   Taldyqorghan      40.35 310d iP       P        05 31 01.3 +0.7
TDK                                eS       S        05 36 49.1 +0.1
TDK                                 pmax    pmax
      comp=Z,234nm,0.6s
TDK   Taldyqorghan      40.35 310⇓iP       P        05 31 01.4 +0.7
      comp=Z,234nm,0.6s,baz=310
TDK                                eS       S        05 36 49.2 +0.1
      baz=310
AYAN  Aya Nagar         40.36 285  eP       P        05 31 00.5 -0.4
SONA  Sohna             40.43 284  eP       P        05 31 01.7 +0.2
KDJ   Kajisay           40.65 306   IAmb    IAmb     05 31 07.0
      comp=Z,250nm,0.6s
BHK   Bhakra            40.72 289  eP       P        05 31 05.5 +1.7
SEM   Semipalatinsk     40.80 319d iP       P        05 31 03.8 -0.7
SEM                                 pmax    pmax
      comp=Z,176nm,0.6s
SEM   Semipalatinsk     40.80 319⇓iP       P        05 31 03.8 -0.7
      comp=Z,176nm,0.6s,baz=319
MDOK  Medeo             40.92 307  i P      P        05 31 06.1 +0.6
MDOK                               i S      S        05 36 57.5 -0.2
MDOK  Medeo             40.92 307  i P      P        05 31 06.2 +0.6
      baz=307
MDOK                               i S      S        05 36 57.6 -0.2
      baz=307
KUDL  Kundal            40.96 284  eP       P        05 31 05.1 -0.8
TNSS  Tian-Shan         40.97 307  i P      P        05 31 07.1 +0.9
TNSS  Tian-Shan         40.97 307  i P      P        05 31 07.2 +0.9
      baz=307
AAA   Alma-Ata          41.02 307⇓eP       P        05 31 07.1 +0.8
      comp=Z,175nm,0.6s,baz=307
AAA                                eS       S        05 36 59.2 +0.1
      baz=307
CHKK  Chushkaly         41.09 308⇓iP       P        05 31 06.8 +0.1
CHKK  Chushkaly         41.09 308⇓iP       P        05 31 06.8 +0.1
      baz=308
WAKE  Wake Island       41.15  89   P       P        05 31 07.4  0.0
WAKE                                IAmb    IAmb     05 31 16.6
      comp=Z,605nm,1.4s
WAKE  Wake Island       41.15  89   P       P        05 31 08.4 +0.9
WAKE  Wake Island       41.15  89  ⇑P       P        05 31 07.5  0.0
WAKE  Wake Island       41.15  89   P       P        05 31 07.3 -0.1
KSH   Kashi             41.22 302   P       P        05 31 12.0 +4.1
KSH                                 pP      pP       05 32 06.5 +5.9
KSH                                 PcP     PcP      05 33 03.0 +1.3
KSH                                 ScP     ScP      05 36 33.5 +6.6
KSH                                 S       S        05 37 10.0 +7.8
KSH                                 sS      sS       05 38 42.0 +6.4
KSH                                 ScS     ScS      05 40 46.0 +2.2
KSH                                 pmax    pmax
      comp=Z,220nm,0.8s
KSH                                 pmax    pmax
      comp=Z,2µm,7.9s
KSH                                 LR      LR
      comp=N,6µm,14.1s
KSH                                 LR      LR
      comp=E,3µm,16.8s
KSH                                 LR      LR
      comp=Z,7µm,14.8s
KSH   Kashi             41.22 302   P       P        05 31 12.1 +4.1
KSH                                 pP      pP       05 32 06.4 +5.8
KSH                                 ScP     ScP      05 36 33.6 +6.6
KSH                                 S       S        05 37 05.0 +2.8
KSH                                 sS      sS       05 38 42.0 +6.4
KSH                                 pmax    pmax
      comp=Z,220nm,0.8s
KSH                                 pmax    pmax
      comp=Z,1µm,9.8s
KSH                                 LR      LR
      comp=Z,6µm,14.1s
KSH                                 LR      LR
      comp=Z,3µm,16.8s
KSH                                 LR      LR
      comp=Z,7µm,14.8s
RABL  Rabaul            41.22 131   P       P        05 31 08.7 +0.6
RABL  Rabaul            41.22 131   P       P        05 31 09.4 +1.3
H11N1 WAKE ISLAND Hy    41.24  89   P       P        05 31 08.4 +0.4
      baz=272,slow=10,SNR=14
H11N1                               T       T        06 14 53.6
      baz=283,slow=74,SNR=4.6
H11N2 WAKE ISLAND Hy    41.24  89   P       P        05 31 08.6 +0.6
      baz=272,slow=10,SNR=16
H11N2                               T       T        06 15 13.6
      baz=283,slow=74,SNR=5.5
THN   Thein Dam         41.26 291  eP       P        05 31 08.8 +0.6
H11N3 WAKE ISLAND Hy    41.26  89   P       P        05 31 09.0 +0.9
      baz=272,slow=10,SNR=24
H11N3                               T       T        06 15 10.3
      baz=283,slow=74,SNR=5.0
ULHL  Ulahol            41.35 306   P       P        05 31 12.5 +3.3
      SNR=9.9
KNRA  Kununurra         41.37 171   P       P        05 31 08.8 -0.3
KNRA                                IAmb    IAmb     05 31 14.7
      comp=Z,372nm,0.7s
KNRA  Kununurra         41.37 171   P       P        05 31 08.9 -0.3
H11S3 WAKE ISLAND Hy    41.41  91   P       P        05 31 09.1 -0.3
      baz=243,slow=7.6,SNR=4.6
H11S1 WAKE ISLAND Hy    41.42  91   P       P        05 31 08.7 -0.8
      baz=243,slow=7.6,SNR=6.2
H11S2 WAKE ISLAND Hy    41.43  91   P       P        05 31 09.2 -0.3
      baz=243,slow=7.6,SNR=3.9
HYBB  Hyderabad (bro    41.53 268  eP       P        05 31 11.2 +0.6
HYBB                                IVmB_BB          05 31 16.2
      comp=Z,907nm,1.9s
HYBB                               epP      pP       05 32 02.9 -0.5
HYBB                               esP      sP       05 32 32.4 +0.1
HYBB                               ePP      PP       05 32 48.2 -4.2
HYBB                               ePcP     PcP      05 33 00.8 -2.1
HYBB                               eScP     ScP      05 36 28.2 -0.3
HYBB                               eS       S        05 37 07.5 +0.3
HYBB                               esS      sS       05 38 37.8 -2.9
HYBB                               eSS      SS       05 40 28.0 +5.1
KUU   Kurty             41.56 308d iP       P        05 31 10.8 +0.3
KUU                               i *PP     pP       05 32 06.6 +3.4
KUU                               i S       S        05 37 06.7 -0.2
KUU                                 pmax    pmax
      comp=Z,213nm,0.6s
KUU   Kurty             41.56 308⇓iP       P        05 31 10.9 +0.3
      comp=Z,213nm,0.6s,baz=308
KUU                               i pP      pP       05 32 06.7 +3.4
      baz=308
KUU                               i S       S        05 37 06.7 -0.2
      baz=308
KHET  Khetri            41.57 284  eP       P        05 31 10.4 -0.4
KURK  Kurchatov         41.88 319   P       P        05 31 12.6 -0.4
KURK                                IAmb    IAmb     05 31 21.9
      comp=Z,541nm,1.2s
KURK  Kurchatov         41.88 319   P       P        05 31 12.2 -0.8
KURK                                S       S        05 37 10.3 -1.0
KURK  Kurchatov         41.88 319   P       P        05 31 12.5 -0.4
KURK                                P       P        05 31 12.5 -0.4
KURK  Kurchatov         41.88 319  ⇓P       P        05 31 12.4 -0.6
KURK  Kurchatov         41.88 319  ⇓P       P        05 31 12.6 -0.4
KURK                                pP      pP       05 32 05.8  0.0
KURK                                ScP     ScP      05 36 33.8 +4.6
KURBB Kurchatov Arra    41.91 319   P       P        05 31 12.2 -1.0
      comp=Z,188nm,0.8s,baz=113,slow=8.7,SNR=388
KURBB                               ScP     ScP      05 36 28.1 -1.2
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      comp=Z,3.9nm,0.8s,baz=25,slow=28,SNR=1.3
KURBB                               S       S        05 37 10.3 -1.4
      comp=Z,55nm,1.2s,baz=113,slow=13,SNR=7.9
      comp=Z,188nm,0.8s
KURBB Kurchatov Arra    41.91 319   P       P        05 31 12.0 -1.2
TKM2  Tokmak 2          41.93 307   P       P        05 31 14.6 +0.9
      SNR=14
TKM2  Tokmak 2          41.93 307  i P      P        05 31 13.7 -0.1
TKM2                                pmax    pmax
      comp=Z,382nm,0.6s
JMU   Jammu             41.93 291  eP       P        05 31 16.9 +3.3
AKL   Akola             41.96 273  eP       P        05 31 15.4 +1.4
PMG   Port Moresby      42.19 142   P       P        05 31 16.1 +0.3
PMG   Port Moresby      42.19 142d iP       P        05 31 16.2 +0.4
PMG   Port Moresby      42.19 142   P       P        05 31 17.1 +1.3
PMG   Port Moresby      42.19 142   P       P        05 31 16.7 +0.9
PMG   Port Moresby      42.19 142  ⇓P       P        05 31 16.3 +0.4
PMG   Port Moresby      42.19 142   P       P        05 31 16.3 +0.4
SEY   Seymchan          42.35  20d iP       P        05 31 16.6 +0.1
SEY                                 pmax    pmax
      comp=Z,105nm,1.3s
KBK   Karagaybulak      42.36 306   P       P        05 31 18.0 +0.8
      SNR=158
CHMS  Chumysh           42.55 307   P       P        05 31 19.2 +0.6
      SNR=110
CHMS  Chumysh           42.55 307   P       P        05 31 18.6  0.0
UCH   Uchtor            42.62 305   P       P        05 31 21.0 +1.4
      SNR=497
AAK   Ala-Archa         42.69 306   P       P        05 31 20.5 +0.7
      SNR=82
AAK   Ala-Archa         42.69 306   P       P        05 31 20.5 +0.7
AAK   Ala-Archa         42.69 306   P       P        05 31 20.5 +0.7
AAK                                 pmax    pmax
      comp=Z,93nm,0.7s
AAK   Ala-Archa         42.69 306   P       P        05 31 20.7 +0.9
AAK                                 P       P        05 31 20.7 +0.9
AAK   Ala-Archa         42.69 306  i P      P        05 31 20.1 +0.3
      SNR=91
AAK   Ala-Archa         42.69 306  ⇓P       P        05 31 20.4 +0.7
AAK   Ala-Archa         42.69 306   P       P        05 31 20.4 +0.6
AAK                                 pP      pP       05 32 15.7 +2.9
AAK                                 ScP     ScP      05 36 37.5 +4.6
SGDS  Sogindy           42.71 307d iP       P        05 31 19.9 +0.1
SGDS                               eS       S        05 37 23.1 -0.6
SGDS  Sogindy           42.71 307⇓iP       P        05 31 19.9 +0.1
      baz=307
SGDS                               eS       S        05 37 23.1 -0.6
      baz=307
USP   Ospenovka         42.77 307   P       P        05 31 20.7 +0.4
      SNR=58
AJM   Ajmer             42.83 282  eP       P        05 31 20.7 -0.4
LATR  Latur             43.02 270  eP       P        05 31 23.4 +0.8
AML   Almayashu         43.21 305   P       P        05 31 25.4 +1.2
      SNR=34
AML   Almayashu         43.21 305   P       P        05 31 25.5 +1.2
AML   Almayashu         43.21 305  i P      P        05 31 25.1 +0.9
      SNR=45
EKS2  Erkin-Say         43.22 306   P       P        05 31 24.3 +0.3
      SNR=101
NIL   Nilore            43.27 293   P       P        05 31 23.6 -0.7
NIL   Nilore            43.27 293   P       P        05 31 23.7 -0.7
NIL                                 pmax    pmax
      comp=Z,163nm,0.8s
NIL   Nilore            43.27 293   P       P        05 31 25.5 +1.1
BTLS  Baital            43.38 309d iP       P        05 31 25.1  0.0
BTLS  Baital            43.38 309⇓iP       P        05 31 25.1  0.0
      baz=309
PALK  Pallekele         43.76 253   P       P        05 31 29.3 +0.8
      comp=Z,40nm,0.7s,baz=161,slow=9.0,SNR=19
      comp=Z,40nm,0.7s
PALK  Pallekele         43.76 253   P       P        05 31 29.6 +1.1
PALK  Pallekele         43.76 253   P       P        05 31 29.6 +1.1
PALK                                pmax    pmax
      comp=Z,83nm,0.8s
PALK  Pallekele         43.76 253   P       P        05 31 29.9 +1.3
PALK  Pallekele         43.76 253  ⇑P       P        05 31 29.8 +1.2
PALK  Pallekele         43.76 253   P       P        05 31 29.4 +0.8
SALM  Salem             43.98 260  eP       P        05 31 31.9 +1.6
COEN  Coen              44.08 150   P       P        05 31 31.7 +0.8
COEN                                IAmb    IAmb     05 31 37.7
      comp=Z,397nm,0.8s
COEN  Coen              44.08 150   P       P        05 31 31.9 +1.0
COEN  Coen              44.08 150  ⇓P       P        05 31 31.6 +0.6
COCO  West Island       45.03 217   P       P        05 31 39.6 +1.2
COCO  West Island       45.03 217   P       P        05 31 39.6 +1.2
COCO                                pmax    pmax
      comp=Z,2µm,1.6s
OTUK  Ortayu            45.14 314   P       P        05 31 38.3 -0.7
KOD   Kodaikanal        45.23 259  eP       P        05 31 41.9 +1.4
BRZS  Berezniki         45.31 316d iP       P        05 31 40.1 -0.1
BRZS                               eS       S        05 38 00.3 -0.7
BRZS  Berezniki         45.31 316⇓iP       P        05 31 40.2 -0.1
      baz=316
BRZS                               eS       S        05 38 00.3 -0.7
      baz=316
KAD   Karad             45.52 270  eP       P        05 31 42.6 +0.2
GAR   Garm              45.57 300   IAmb    IAmb     05 31 45.8
      comp=Z,455nm,0.7s
KK31  Karatay Array     45.65 306   P       P        05 31 42.9 -0.1
KKAR  Karatay Array     45.65 306   P       P        05 31 43.0  0.0
KKAR  Karatay Array     45.65 306   P       P        05 31 43.0  0.0
KKAR  Karatay Array     45.65 306   P       P        05 31 43.0  0.0
KKAR                                pmax    pmax
      comp=Z,98nm,0.5s
KKAR  Karatay Array     45.65 306  ⇓P       P        05 31 43.0  0.0
IUG   Iuzhnay           45.93 305d iP       P        05 31 45.8 +0.5
IUG                               i S       S        05 38 09.9 -0.3
IUG   Iuzhnay           45.93 305⇓iP       P        05 31 45.9 +0.5
      baz=305
IUG                               i S       S        05 38 09.9 -0.3
      baz=305
BHV   Bhavnagar         46.07 276  eP       P        05 31 47.3 +0.7
PCHI  Peechi            46.10 260⇑eP       P        05 31 47.4 +0.5
PCHI                               eS       S        05 38 14.8 +1.7
BOM   Bombay            46.26 272  eP       P        05 31 48.7 +0.7
TIXI  Tiksi             46.34   3   S       S        05 38 12.3 -2.6
      comp=Z,6.5nm,0.7s,baz=270,slow=23,SNR=10
TIXI  Tiksi             46.34   3   P       P        05 31 47.1 -0.7
TIXI                                IAmb    IAmb     05 31 56.6
      comp=Z,568nm,0.7s
TIXI  Tiksi             46.34   3   P       P        05 31 47.1 -0.7
TIXI                                pmax    pmax
      comp=Z,568nm,0.7s
TIXI  Tiksi             46.34   3  ⇓P       P        05 31 46.7 -1.1
TIXI  Tiksi             46.34   3   P       P        05 31 47.0 -0.9
TAS   Tashkent          46.43 304   P       P        05 31 49.4 +0.3
TAS                                 IAmb    IAmb     05 31 55.8
      comp=Z,296nm,0.6s
TAS   Tashkent          46.43 304   P       P        05 31 49.4 +0.3
TAS                                 pmax    pmax
      comp=Z,296nm,0.6s
MBWA  Marble Bar        46.45 184   P       P        05 31 48.1 -1.2
MBWA  Marble Bar        46.45 184   P       P        05 31 48.4 -0.9
MBWA  Marble Bar        46.45 184   P       P        05 31 48.4 -0.9
MBWA  Marble Bar        46.45 184  ⇑P       P        05 31 48.1 -1.2
MBWA  Marble Bar        46.45 184   P       P        05 31 48.2 -1.2
MBWA                                pP      pwP      05 32 49.0 +2.6
MBWA                                ScP     ScP      05 36 47.7 -0.6
WB0   Warramunga Arr    46.45 164   IAmb    IAmb     05 31 53.3
      comp=Z,414nm,0.8s
CHGR  Chuyangaron       46.47 300   IAmb    IAmb     05 31 56.5
      comp=Z,437nm,0.7s
WRAB  Tennant Creek     46.60 165   P       P        05 31 50.6 +0.1
WRAB  Tennant Creek     46.60 165d iP       P        05 31 50.4 -0.1
WRAB                              i *PP     pwP      05 32 46.8 -1.2
WRAB  Tennant Creek     46.60 165   P       P        05 31 50.8 +0.3
WRAB  Tennant Creek     46.60 165  ⇓P       P        05 31 50.5 -0.1
WRAB  Tennant Creek     46.60 165  ⇓P       P        05 31 50.6 +0.1
WRA   Warramunga Arr    46.60 165   P       P        05 31 50.3 -0.3
      comp=Z,232nm,0.7s,baz=347,slow=8.6,SNR=361
WRA                                 pP      pP       05 32 45.3 +1.8
      comp=Z,116nm,1.1s,baz=346,slow=8.2,SNR=1.8
WRA                                 PcP     PcP      05 33 20.8 +0.6
      comp=Z,42nm,0.7s,baz=348,slow=3.5,SNR=1.8
WRA                                 S       S        05 38 17.6 -2.2
      comp=Z,86nm,1.0s,baz=342,slow=14,SNR=23
WRA                                 PKPPKP  P'P'df   06 02 43.6  -24
      comp=Z,4.2nm,1.2s,baz=138,slow=2.3,SNR=4.9
WRA                                 P4KPbc           06 09 30.8
      comp=Z,1.4nm,0.8s,baz=349,slow=4.6,SNR=8.1
      comp=Z,232nm,0.7s
WRA   Warramunga Arr    46.60 165   P       P        05 31 49.6 -1.0
WB2   Warramunga Arr    46.60 165   P       P        05 31 50.6  0.0
WB2                                 IAmb    IAmb     05 31 51.7
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      comp=Z,346nm,0.8s
KBL   Kabul             46.70 294   P       P        05 31 52.0 +0.5
KBL   Kabul             46.70 294   P       P        05 31 52.0 +0.5
KBL   Kabul             46.70 294   P       P        05 31 52.4 +0.8
      SNR=117
KBL                                 P       P        05 31 52.4 +0.8
      SNR=117
PSA00 Pilbara Seismi    46.85 183   P       P        05 31 51.2 -1.2
PSA00                               IAmb    IAmb     05 31 56.5
      comp=Z,797nm,1.6s
PSA00 Pilbara Seismi    46.85 183   P       P        05 31 51.5 -1.0
SMY   Shemya            47.07  41   P       P        05 31 54.2 +0.4
SMY   Shemya            47.07  41   P       P        05 31 54.2 +0.4
SMY                                 pmax    pmax
      comp=Z,330nm,1.3s
SMY   Shemya            47.07  41  ⇑P       P        05 31 54.6 +0.8
BRVK  Borovoye          47.51 320   P       P        05 31 56.9 -0.3
BRVK  Borovoye          47.51 320   P       P        05 31 56.9 -0.3
BRVK                                pmax    pmax
      comp=Z,215nm,0.8s
BRVK  Borovoye          47.51 320   P       P        05 31 57.2  0.0
BRVK  Borovoye          47.51 320  ⇓P       P        05 31 57.0 -0.3
BRVK  Borovoye          47.51 320   P       P        05 31 57.0 -0.3
BRVK                                pP      pP       05 32 54.1 +2.7
BRVK                                sP      PcP      05 33 22.2 -0.8
BRVK                                ScP     ScP      05 36 51.6 -0.8
MTSU  Mount Surprise    48.28 152   P       P        05 32 04.8 +1.3
NRIK  Noril'sk          48.47 344   P       P        05 32 03.2 -1.0
      comp=Z,151nm,0.8s,baz=123,slow=8.1,SNR=106
NRIK                                S       S        05 38 44.5 -0.4
      comp=Z,26nm,1.0s,baz=228,slow=23,SNR=9.2
      comp=Z,151nm,0.8s
NRIK  Noril'sk          48.47 344   P       P        05 32 03.3 -1.0
GIRL  Giralia           48.51 190   IAmb    IAmb     05 32 11.3
      comp=Z,814nm,1.4s
GIRL  Giralia           48.51 190   P       P        05 32 05.3 +0.2
GIRL  Giralia           48.51 190  ⇓P       P        05 32 05.5 +0.3
QIS   Mount Isa         48.70 158   P       P        05 32 06.9 +0.3
BILL  Bilibino          50.06  20   P       P        05 32 16.1 -0.2
BILL  Bilibino          50.06  20c iP       P        05 32 15.8 -0.5
BILL                               e                 05 34 12.8
BILL                               i S      S        05 39 07.6 +0.6
BILL                                pmax    pmax
      comp=Z,242nm,1.3s
BILL                                MLR     MLR
      comp=Z,3µm,16.0s
BILL  Bilibino          50.06  20   P       P        05 32 16.1 -0.2
BILL                                pP      pP       05 33 12.5 +1.6
ASAR  Alice Springs     50.10 166   P       P        05 32 17.4 +0.2
      comp=Z,115nm,0.5s,baz=347,slow=6.8,SNR=753
ASAR                                PcP     PcP      05 33 33.0 +0.3
      comp=Z,54nm,0.6s,baz=345,slow=2.8,SNR=6.7
ASAR                                ScP     ScP      05 37 02.1 -1.7
      comp=Z,13nm,1.0s,baz=344,slow=5.4,SNR=4.1
ASAR                                S       S        05 39 08.8 +0.1
      comp=Z,33nm,0.8s,baz=354,slow=22,SNR=15
ASAR                                PKPPKP  P'P'df   06 02 41.9  -21
      comp=Z,0.9nm,0.8s,baz=141,slow=2.7,SNR=4.8
ASAR                                P4KPbc           06 09 48.1
      comp=Z,3.8nm,0.7s,baz=346,slow=3.9,SNR=28
      comp=Z,115nm,0.5s
ASAR  Alice Springs     50.10 166   P       P        05 32 17.5 +0.4
HNR   Honiara           50.34 129   P       P        05 32 19.6 +0.6
HNR   Honiara           50.34 129   P       P        05 32 19.6 +0.6
HNR                                 pmax    pmax
      comp=Z,883nm,1.1s
HNR   Honiara           50.34 129   P       P        05 32 20.2 +1.1
HNR   Honiara           50.34 129  ⇓P       P        05 32 19.1 +0.1
WRKA  Warakurna         50.54 173   P       P        05 32 20.9 +0.5
WRKA  Warakurna         50.54 173  ⇓P       P        05 32 20.7 +0.3
CTA   Charters Tower    50.85 151   P       P        05 32 23.7 +1.0
CTAO  Charters Tower    50.85 151   P       P        05 32 23.4 +0.6
CTAO                                IAmb    IAmb     05 32 29.3
      comp=Z,594nm,1.3s
CTAO  Charters Tower    50.85 151   P       P        05 32 23.4 +0.6
CTAO                                pmax    pmax
      comp=Z,594nm,1.3s
CTAO  Charters Tower    50.85 151   P       P        05 32 23.8 +1.0
CTAO  Charters Tower    50.85 151  ⇓P       P        05 32 23.4 +0.6
CTAO  Charters Tower    50.85 151   P       P        05 32 23.4 +0.6
CTAO                                pP      pP       05 33 22.0 +4.5
ADK   Adak              52.48  43   P       P        05 32 33.4 -1.1
ADK   Adak              52.48  43   P       P        05 32 33.4 -1.1
ADK                                 pmax    pmax
      comp=Z,185nm,1.1s
ADK   Adak              52.48  43   P       P        05 32 34.1 -0.4
ADK   Adak              52.48  43  ⇓P       P        05 32 34.0 -0.4
GSTR  Great Sitkin T    52.89  43   P       P        05 32 37.0 -0.5
MIDW  Midway            53.24  73   P       P        05 32 40.5 +0.2
MIDW                                IAmb    IAmb     05 32 42.1
      comp=Z,413nm,1.2s
MIDW  Midway            53.24  73   P       P        05 32 41.0 +0.7
MIDW  Midway            53.24  73  ⇓P       P        05 32 40.8 +0.5
AB31  Akbulak array     53.40 314  i P      P        05 32 41.1 -0.1
ABKAR Akbulak array     53.40 314   P       P        05 32 41.3 +0.1
ABKAR                               IAmb    IAmb     05 32 47.4
      comp=Z,358nm,0.9s
ABKAR Akbulak array     53.40 314  ⇓P       P        05 32 41.3 +0.1
SVE   Sverdlovsk        53.72 323ceP        P        05 32 43.2 -0.1
SVE                                e                 05 33 37.5
SVE                                e                 05 34 47.5
SVE                                eS       S        05 39 55.6 -1.4
SVE                                e                 05 41 29.7
SVE                                e                 05 43 41.8
SVE                                 pmax    pmax
      comp=Z,358nm,0.7s
KAAM  Kaadhehdhoo       53.80 250   P       P        05 32 46.2 +1.6
KAAM                                IAmb    IAmb     05 32 51.5
      comp=Z,207nm,0.8s
KAAM  Kaadhehdhoo       53.80 250   P       P        05 32 46.5 +1.9
ATKA  Atka Island       54.04  43   P       P        05 32 46.4 +0.7
ATKA  Atka Island       54.04  43  ⇓P       P        05 32 46.8 +1.0
TARA  Tarawa            54.15 108   P       P        05 32 47.2 +0.1
TARA                                IAmb    IAmb     05 32 49.1
      comp=Z,573nm,1.6s
TARA  Tarawa            54.15 108   P       P        05 32 48.2 +1.1
OOD   Oodnadatta        54.48 166   P       P        05 32 49.7 +0.6
MORW  Morawa            54.60 187   P       P        05 32 49.4 -0.6
MORW  Morawa            54.60 187   P       P        05 32 49.8 -0.2
MORW  Morawa            54.60 187  ⇑P       P        05 32 49.4 -0.6
AKTO  Aktyubinsk        54.69 315   P       P        05 32 50.2 -0.3
      comp=Z,32nm,0.7s,baz=90,slow=7.5,SNR=92
AKTO                                S       S        05 40 08.3 -1.9
      comp=Z,3.5nm,0.9s,baz=308,slow=18,SNR=2.1
      comp=Z,32nm,0.7s
ARU   Arti              54.80 322   S       S        05 40 07.2 -4.3
      comp=Z,7.7nm,0.2s,baz=275,slow=10,SNR=1.4
ARU   Arti              54.80 322   P       P        05 32 50.2 -0.9
ARU   Arti              54.80 322d iP       P        05 32 50.4 -0.7
ARU                                                  05 33 47.7
ARU                                 *PP     PcP      05 33 50.6 +0.5
ARU                                                  05 34 57.5
ARU                                 PPP     PPP      05 36 14.8
ARU                                 S       S        05 40 11.7 +0.2
ARU                                                  05 42 08.9
ARU                                 SS      SS       05 43 58.5 +0.2
ARU                                 SSS     SSS      05 46 23.4
ARU                                 pmax    pmax
      comp=Z,272nm,0.6s
ARU   Arti              54.80 322  ⇓P       P        05 32 50.5 -0.7
ARU   Arti              54.80 322   P       P        05 32 50.6 -0.6
ARU                                 pP      pP       05 33 46.3 -0.6
GEYT  Alibeck           55.18 300   P       P        05 32 55.2 +1.0
      comp=Z,73nm,0.8s,baz=167,slow=4.0,SNR=47
GEYT                                PcP     PcP      05 33 52.7 +0.7
      comp=Z,118nm,1.0s,baz=174,slow=4.3,SNR=7.8
      comp=Z,73nm,0.8s
RK1H  Rockhampton Ha    55.65 149   P       P        05 32 58.1 +0.6
INKA  Innaminka         55.76 160   P       P        05 32 59.3 +1.0
QLP   Quilpie           55.85 156   P       P        05 32 59.3 +0.4
QLP   Quilpie           55.85 156  ⇓P       P        05 32 59.0  0.0
BLDU  Ballidu           56.06 186   P       P        05 33 00.3  0.0
FORT  Forrest           56.20 174   IAmb    IAmb     05 33 58.8
      comp=Z,284nm,0.8s
FORT  Forrest           56.20 174   P       P        05 33 01.9 +0.6
FORT  Forrest           56.20 174  ⇓P       P        05 33 01.4 +0.1
MULG  Mulgathing        56.55 168   P       P        05 33 04.3 +0.5
SPIA  Saint Paul Isl    56.68  37   P       P        05 33 04.3 -0.1
      baz=266
GAMB  Gambell           56.77  29   P       P        05 33 05.4 +0.5
      baz=260,SNR=6.3
GAMB                                S       S        05 40 42.6 +5.4
      baz=260
KLBR  Kellerberrin      56.94 185   P       P        05 33 06.2 -0.3
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NIKH  Nikolski High      57.33  42   IAmb    IAmb     05 33 19.6
                         comp=Z,425nm,1.2s
NIKH  Nikolski High      57.33  42   P       P        05 33 08.5 -0.5
                         baz=270
JLN   Jalan Bani Buh     57.34 281   P       P        05 33 11.8 +2.1
JLN                                  P       P        05 33 14.0 +4.3
                         SNR=10
MUN   Mundaring          57.46 186   P       P        05 33 10.6 +0.5
MTKN  Mount Kenneth      57.46 187   P       P        05 33 11.7 +1.6
RMQ   Roma               57.55 152   P       P        05 33 12.2 +1.3
WBK   Wadi Bani Khal     57.60 282   P       P        05 33 14.0 +2.5
                         SNR=8.5
EIDS  Eidsvold           57.61 149   P       P        05 33 11.3  0.0
EIDS  Eidsvold           57.61 149   P       P        05 33 11.8 +0.5
EIDS  Eidsvold           57.61 149  ⇓P       P        05 33 11.5 +0.2
LCRK  Leigh Creek        57.62 164   P       P        05 33 11.9 +0.6
WSAR  Wadi Sarin         57.72 282   P       P        05 33 13.8 +1.5
                         comp=Z,49nm,0.9s,baz=133,slow=7.5,SNR=14
WSAR                                 PcP     PcP      05 34 03.8 +1.6
                         comp=Z,56nm,1.0s,baz=137,slow=2.9,SNR=5.4
                         comp=Z,49nm,0.9s
WSAR  Wadi Sarin         57.72 282   P       P        05 33 14.7 +2.4
                         SNR=14
SQUM  Sultan Qaboos      58.02 283   P       P        05 33 21.9 +7.5
BIDO  Bidbid             58.09 283   P       P        05 33 18.1 +3.3
BIDO                                 P       P        05 33 18.1 +3.3
BIDO                                 P       P        05 33 19.0 +4.2
                         SNR=21
BIDO                                 P       P        05 33 19.0 +4.2
                         SNR=21
SMDO  Samad              58.28 282   P       P        05 33 18.8 +2.5
SMDO                                 P       P        05 33 20.0 +3.7
                         SNR=16
NWAO  Narrogin (SRO)     58.31 185   P       P        05 33 16.2 +0.3
NWAO  Narrogin (SRO)     58.31 185   P       P        05 33 16.3 +0.3
NWAO                                 pmax    pmax
                         comp=Z,925nm,1.5s
NWAO  Narrogin (SRO)     58.31 185   P       P        05 33 16.3 +0.3
NWAO  Narrogin (SRO)     58.31 185   P       P        05 33 16.0  0.0
NWAO  Narrogin (SRO)     58.31 185   P       P        05 33 16.1 +0.2
JMDO  Jabal Madar        58.43 282   P       P        05 33 19.4 +2.2
                         SNR=12
JMDO                                 P       P        05 33 19.4 +2.2
                         SNR=12
DGAR  Diego Garcia       58.62 243   P       P        05 33 19.2 +0.7
DGAR  Diego Garcia       58.62 243 deP       P        05 33 19.6 +1.1
DGAR                                 pmax    pmax
                         comp=Z,359nm,1.0s
DGAR  Diego Garcia       58.62 243   P       P        05 33 23.7 +5.2
TNA   Tin City           58.64  27   IAmb    IAmb     05 33 25.3
                         comp=Z,499nm,1.7s
TNA   Tin City           58.64  27   P       P        05 33 18.4 +0.5
                         baz=263,SNR=18
TNA                                  S       S        05 41 06.3 +5.0
                         baz=263
TNA   Tin City           58.64  27  ⇓P       P        05 33 18.4 +0.5
UNV   Unalaska Valle     58.73  41   P       P        05 33 18.4 -0.2
                         baz=271
HOQ   Hoqain             58.79 283   P       P        05 33 21.8 +2.1
                         SNR=34
HOQ                                  P       P        05 33 21.8 +2.1
                         SNR=34
MHTO  MHTO               58.97 280   P       P        05 33 22.7 +1.8
                         SNR=15
MHTO                                 P       P        05 33 22.7 +1.8
                         SNR=15
BANOM Banah              59.03 286   P       P        05 33 24.3 +3.0
                         SNR=5.6
BANOM                                P       P        05 33 24.3 +3.0
                         SNR=5.6
BANOM Banah              59.03 286 i P       P        05 33 22.8 +1.4
                         SNR=9.9
BSY   Bisya              59.12 282   P       P        05 33 24.1 +2.1
                         SNR=12
SOHO  SOHO               59.32 284   P       P        05 33 24.9 +1.7
SOHO  SOHO               59.32 284 i P       P        05 33 24.1 +0.9
                         SNR=27
UOSS  Minazif            59.38 285   P       P        05 33 27.0 +3.3
UOSS                                 P       P        05 33 28.0 +4.3
UOSS  Minazif            59.38 285   P       P        05 33 24.7 +1.0
UOSS  Minazif            59.38 285  ⇓P       P        05 33 24.0 +0.3
BBOO  Buckleboo          59.40 167   P       P        05 33 23.2 -0.2
BBOO  Buckleboo          59.40 167   P       P        05 33 23.5  0.0
HATD  Hatta, Dubai       59.48 285   P       P        05 33 27.1 +2.7
                         SNR=11
HATD                                 P       P        05 33 27.1 +2.7
                         SNR=11
HATD  Hatta, Dubai       59.48 285 i P       P        05 33 26.0 +1.6
                         SNR=12
ARQ   Araqi              59.55 283   P       P        05 33 26.4 +1.5
ARQ                                  P       P        05 33 26.4 +1.5
ARQ                                  P       P        05 33 29.0 +4.1
                         SNR=16
ARQ                                  P       P        05 33 29.0 +4.1
                         SNR=16
ASHO  Ashiyiah           59.58 285   P       P        05 33 27.4 +2.3
                         SNR=14
ASHO                                 P       P        05 33 27.4 +2.3
                         SNR=14
ASHO  Ashiyiah           59.58 285 i P       P        05 33 26.7 +1.6
                         SNR=8.7
ANM   Nome               59.62  28   P       P        05 33 25.5 +0.9
ANM   Nome               59.62  28   P       P        05 33 25.5 +0.9
ANM                                  pmax    pmax
                         comp=Z,791nm,1.8s
ANM   Nome               59.62  28   P       P        05 33 25.5 +0.9
                         baz=266,SNR=11
ANM                                  S       S        05 41 19.6 +5.6
                         baz=266
DQM   DQM                59.67 279   P       P        05 33 27.1 +1.3
                         SNR=9.0
NAZ   Nazwa, Dubai       59.84 285   P       P        05 33 29.3 +2.5
                         SNR=9.5
KIRV  Kirov              59.85 325d iP       P        05 33 25.5 -0.7
STKA  Stephens Creek     59.89 161   P       P        05 33 26.8 -0.1
                         comp=Z,103nm,0.6s,baz=340,slow=7.6,SNR=148
STKA                                 PKPPKP  P'P'df   06 02 58.4  +10
                         comp=Z,1.7nm,0.6s,baz=140,slow=8.5,SNR=3.6
                         comp=Z,103nm,0.6s
STKA  Stephens Creek     59.89 161   P       P        05 33 26.4 -0.4
STKA  Stephens Creek     59.89 161   P       P        05 33 26.6 -0.2
WHYH  Whyalla            59.94 165   P       P        05 33 27.4 +0.3
FAQ   Al Faqa, Dubai     59.97 285   P       P        05 33 29.7 +2.0
                         SNR=7.6
FAQ   Al Faqa, Dubai     59.97 285 i P       P        05 33 29.1 +1.4
                         SNR=13
RKGY  Rocky Gully        60.00 185   P       P        05 33 28.5 +1.0
NAPP  Napperby           60.22 165   P       P        05 33 29.9 +0.9
ASUD  Al Ashush, Dub     60.23 285   P       P        05 33 31.9 +2.5
                         SNR=6.6
ASUD  Al Ashush, Dub     60.23 285   P       P        05 33 30.5 +1.1
FALS  False Pass         60.50  40   P       P        05 33 27.1 -3.6
                         baz=273
HTT   Hallett            60.64 164   P       P        05 33 32.5 +0.6
HTT   Hallett            60.64 164  ⇓P       P        05 33 32.3 +0.4
RDOG  Red Dog Mine       60.87  25   P       P        05 33 30.0 -3.0
                         baz=266
RDOG                                 S       S        05 41 31.9 +2.1
                         baz=266
CMSA  Cobar Meteorol     60.88 157   P       P        05 33 34.7 +1.2
UMZA  Um Al Zommool      60.93 283   P       P        05 33 36.2 +2.0
KOUNC Koumac, New Ca     61.17 135   P       P        05 33 37.3 +1.6
KOUNC Koumac, New Ca     61.17 135  ⇑P       P        05 33 36.8 +1.2
PRGR  Permogore          61.70 328 ⇓iP       P        05 33 38.0 -0.6
PRGR                                eS       S        05 41 39.3 -1.1
PRGR                                e                 05 43 07.5
MZWR  Madinat Zayed      61.75 284   P       P        05 33 41.6 +2.0
MZWR                                 P       P        05 33 41.6 +2.0
DVP   Devils Point       61.82 129   P       P        05 33 41.4 +1.4
GHSS  Government Hou     61.99 165   P       P        05 33 41.8 +1.0
SHAO  Shalim             62.01 278   P       P        05 33 43.5 +2.0
SHAO  Shalim             62.01 278 i P       P        05 33 43.4 +2.0
                         SNR=5.3
TWOA  Tennyson Woods     62.09 165   P       P        05 33 42.3 +0.8
SDPT  Sand Point         62.15  39   IAmb    IAmb     05 33 43.9
                         comp=Z,198nm,0.6s
SDPT  Sand Point         62.15  39   P       P        05 33 39.4 -2.2
                         baz=275,SNR=8.8
SDPT                                 S       S        05 41 48.6 +2.5
                         baz=275
ARMA  Armidale           62.20 152   P       P        05 33 43.7 +1.2
ARMA                                 IAmb    IAmb     05 33 49.9
                         comp=Z,180nm,0.9s
ARMA  Armidale           62.20 152   P       P        05 33 44.2 +1.7
ARMA  Armidale           62.20 152  ⇑P       P        05 33 43.5 +1.0

MAK   Makhachkala        62.46 307  eP       P        05 33 43.4 -0.6
MAK                                 e*PP     pP       05 34 39.5 -1.8
MAK                                 e*SP     sP       05 35 07.0 -2.0
MAK                                 e                 05 36 01.2
MAK                                 eS       S        05 41 50.6 +0.2
MAK                                 eSS      SS       05 46 05.2 +6.3
MAK                                  pmax    pmax
                         comp=Z,216nm,1.0s
GHWR  Ruwais             62.57 285   P       P        05 33 46.9 +1.9
CHNA  Chernabura Isl     62.70  40   P       P        05 33 44.6 -0.8
                         baz=276,SNR=10
CNBA  Chernabura Isl     62.71  40   P       P        05 33 44.5 -0.9
CNBA                                 IAmb    IAmb     05 33 55.8
                         comp=Z,342nm,1.1s
DMTO  DMTO               62.72 278   P       P        05 33 48.1 +2.0
DOK   Doka               63.15 279   P       P        05 33 50.2 +1.3
                         SNR=7.5
A21K  Barrow             63.17  21   P       P        05 33 48.7 +0.5
                         baz=270,SNR=12
A21K                                 S       S        05 41 57.6 -0.8
                         baz=270
KHOR  Al-Khor Airpor     63.27 287   P       P        05 33 51.3 +1.7
LIFNC LIFOU              63.27 132   P       P        05 33 50.5 +1.0
GCSA  Galena City Sc     63.27  28   P       P        05 33 49.4 +0.5
                         baz=273,SNR=22
GCSA                                 S       S        05 42 05.2 +5.5
                         baz=273
JOHN  Johnston Islan     63.43  83   P       P        05 33 51.3 +0.5
JOHN  Johnston Islan     63.43  83   P       P        05 33 51.4 +0.6
RBK   Rabkut             63.46 278   P       P        05 33 52.9 +1.9
                         SNR=13
RBK                                  P       P        05 33 52.9 +1.9
NOUC  Port Laguerre      63.59 134   P       P        05 33 52.9 +1.3
NOUC  Port Laguerre      63.59 134   P       P        05 33 52.3 +0.7
NOUC                                 pP      pP       05 34 48.4 -0.4
NOUC                                 sP      sP       05 35 14.1 -2.2
GROC  Groznyy            63.65 307  eP       P        05 33 51.7 -0.1
GROC                                e                 05 34 23.1
GROC                                e*SP     sP       05 35 19.4 +2.4
GROC                                eS       S        05 42 04.8 -0.3
GROC                                 pmax    pmax
                         comp=Z,122nm,0.8s
DZM   Mont Dzumac        63.66 134   P       P        05 33 53.1 +1.0
DZM                                  IAmb    IAmb     05 33 54.6
                         comp=Z,360nm,1.1s
DZM   Mont Dzumac        63.66 134   P       P        05 33 53.3 +1.1
DZM   Mont Dzumac        63.66 134  ⇓P       P        05 33 53.2 +1.0
DZM   Mont Dzumac        63.66 134   P       P        05 33 53.3 +1.1
DZM                                  sP      sP       05 35 18.6 +1.8
SHMA  Al-Shehemyia       63.67 288   P       P        05 33 57.0 +4.8
WHFO  Wadi Hawf          63.70 278   P       P        05 33 52.7 +0.1
                         SNR=8.2
TTA   Tatalina           63.78  30   P       P        05 33 53.0 +0.5
                         baz=275,SNR=82
TTA                                  S       S        05 42 09.3 +3.0
                         baz=275
TTA   Tatalina           63.78  30  ⇓P       P        05 33 53.2 +0.7
ONTNC Ouen Toro          63.83 134   IAmb    IAmb     05 33 58.5
                         comp=Z,301nm,1.2s
ONTNC Ouen Toro          63.83 134   P       P        05 33 55.0 +1.8
ONTNC Ouen Toro          63.83 134  ⇑P       P        05 33 54.0 +0.8
YATNC Mamie plateau,     63.94 134   P       P        05 33 55.7 +1.8
N18K  Kilae Creek        64.06  33   IAmb    IAmb     05 33 56.8
                         comp=Z,273nm,1.7s
N18K  Kilae Creek        64.06  33   P       P        05 33 55.1 +0.9
                         baz=276,SNR=22
N18K                                 S       S        05 42 13.8 +4.1
                         baz=276
SMRA  Abu-Samra          64.12 286   P       P        05 33 56.9 +1.8
OUENC Ouen Island, N     64.16 134   P       P        05 33 57.0 +1.7
SVW2  Sparrevohn         64.16  32   IAmb    IAmb     05 34 02.5
                         comp=Z,673nm,2.0s
MARNC Mare, Loyalty      64.29 132   P       P        05 33 57.8 +1.7
MARNC Mare, Loyalty      64.29 132  ⇑P       P        05 33 56.9 +0.7
ABTO  Aybut              64.32 278   P       P        05 33 57.4 +0.8
                         SNR=11
NTLH  Newcastle Hard     64.38 153   P       P        05 33 59.0 +2.5
L19K  White Mountain     64.39  31   IAmb    IAmb     05 34 03.5
                         comp=Z,165nm,0.8s
L19K  White Mountain     64.39  31   P       P        05 33 57.4 +1.0
                         baz=276,SNR=72
L19K                                 S       S        05 42 16.0 +2.2
                         baz=276
MGCD  Mangrove Creek     64.41 154   P       P        05 33 59.2 +2.5
NTLS  Newcastle Soft     64.44 153   P       P        05 33 59.4 +2.5
O18K  Koktuh Hills       64.49  34   IAmb    IAmb     05 34 04.5
                         comp=Z,186nm,0.8s
O18K  Koktuh Hills       64.49  34   P       P        05 33 58.0 +1.0
                         baz=277
O18K                                 S       S        05 42 16.6 +1.6
                         baz=277
J20K  Nowinta River      64.50  29   P       P        05 33 58.3 +1.3
                         baz=276,SNR=108
J20K                                 S       S        05 42 19.0 +4.1
                         baz=276
P18K  Big Mountain,      64.54  34   P       P        05 33 57.7 +0.3
                         baz=277
P18K                                 S       S        05 42 17.7 +2.1
                         baz=277
ARPS  Mount Arapiles     64.55 163   P       P        05 33 57.8 +0.2
K20K  Telida             64.62  30   P       P        05 33 58.9 +1.2
K20K  Telida             64.62  30   P       P        05 33 59.0 +1.3
                         baz=276,SNR=105
K20K                                 S       S        05 42 20.5 +4.1
                         baz=276
M19K  Big River Lodg     64.64  31   IAmb    IAmb     05 34 08.9
                         comp=Z,165nm,1.0s
M19K  Big River Lodg     64.64  31   P       P        05 33 59.3 +1.4
                         baz=277,SNR=59
M19K                                 S       S        05 42 21.4 +4.7
                         baz=277
FUNA  Funafuti           64.67 114   P       P        05 33 59.4 +0.6
FUNA  Funafuti           64.67 114   P       P        05 34 00.3 +1.5
PINNC Pines Island,      64.69 134   IAmb    IAmb     05 34 04.0
                         comp=Z,199nm,0.8s
PINNC Pines Island,      64.69 134   P       P        05 34 00.1 +1.3
KLMR  Klimovskoe         64.71 327  eP       P        05 33 56.0 -2.3
KLMR                                e*PP     pP       05 34 55.7 -0.3
KLMR                                eS       S        05 42 13.9 -3.6
KLMR                                 pmax    pmax
                         comp=Z,654nm,1.0s
KLMR  Klimovskoe         64.71 327  eP       P        05 33 56.1 -2.3
KLMR                                 AMP              05 34 04.6
                         comp=Z,654nm,1.0s
KLMR                                epP      pP       05 34 55.7 -0.3
KLMR                                eS       S        05 42 13.9 -3.6
KLMR                                eS       S        05 42 13.9 -3.6
N19K  Bonanza Creek      64.73  33   P       P        05 33 59.7 +1.0
                         baz=277,SNR=40
N19K                                 S       S        05 42 22.4 +4.4
                         baz=277
SYDH  Sydney Hard Ro     64.75 154   P       P        05 34 00.7 +1.8
L20K  Farewell, AK       64.81  31   P       P        05 34 00.2 +1.1
                         baz=277,SNR=46
L20K                                 S       S        05 42 23.7 +4.9
                         baz=277
CHIR  Chirikof Islan     64.83  38   IAmb    IAmb     05 34 09.5
                         comp=Z,158nm,1.0s
CHIR  Chirikof Islan     64.83  38   P       P        05 33 59.2 +0.1
                         baz=279
CHIR                                 S       S        05 42 21.5 +2.4
                         baz=279
O19K  Port Alsworth      64.89  33   IAmb    IAmb     05 34 10.0
                         comp=Z,241nm,1.2s
O19K  Port Alsworth      64.89  33   P       P        05 34 00.2 +0.7
                         baz=278
O19K                                 S       S        05 42 23.8 +4.1
                         baz=278
H21K  Melozitna Rive     64.91  27   IAmb    IAmb     05 34 10.4
                         comp=Z,256nm,0.9s
H21K  Melozitna Rive     64.91  27   P       P        05 34 00.4 +0.8
                         baz=276,SNR=261
H21K                                 S       S        05 42 24.7 +4.8
                         baz=276
VRH   Novokhopyorsk      64.93 317  eP       P        05 33 58.9 -1.0
VRH                                 eS       S        05 42 17.8 -2.7
VRH                                  pmax    pmax
                         comp=Z,380nm,0.8s
VRH                                  pmax    pmax
                         comp=Z,450nm,0.8s
VRH                                  smax    smax
                         comp=N,1µm,1.8s
GNI   Garni              65.06 304   P       P        05 34 01.6 +0.4
GNI   Garni              65.06 304d iP       P        05 34 01.9 +0.7
GNI                                  pmax    pmax

                         comp=Z,159nm,1.7s
GNI   Garni              65.06 304   P       P        05 34 03.5 +2.3
GNI                                  P       P        05 34 03.5 +2.3
GNI   Garni              65.06 304   P       P        05 34 01.8 +0.6
GNI   Garni              65.06 304  ⇓P       P        05 34 02.2 +1.0
ZEI   Tsey               65.09 307  eP       P        05 33 58.7 -2.7
ZEI                                  pmax    pmax
                         comp=Z,158nm,1.0s
GOF   Gofitskoye         65.22 310⇑eP       P        05 34 02.0 +0.1
GOF                                 eS       S        05 42 27.0 +2.7
GOF                                  pmax    pmax
                         comp=Z,151nm,0.8s
GOF                                  smax    smax
                         comp=E,195nm,1.5s
GOF                                  smax    smax
                         comp=N,200nm,1.4s
M20K  Styx River         65.23  31   P       P        05 34 03.1 +1.3
                         baz=278
M20K                                 S       S        05 42 28.7 +4.6
                         baz=278
I21K  Tanana             65.31  28   IAmb    IAmb     05 34 09.4
                         comp=Z,168nm,0.8s
I21K  Tanana             65.31  28   P       P        05 34 03.3 +1.2
                         baz=277,SNR=144
I21K                                 S       S        05 42 31.1 +6.4
                         baz=277
CHUM  Lake Minchumin     65.33  29   P       P        05 34 03.5 +1.2
                         baz=278,SNR=32
CHUM                                 S       S        05 42 29.7 +4.7
                         baz=278
Q19K  Cape Douglas,      65.41  35   P       P        05 34 02.1 -0.8
                         baz=279,SNR=11
Q19K                                 S       S        05 42 28.7 +2.5
                         baz=279
CAN   Canberra           65.47 156   P       P        05 34 04.7 +1.1
CAN   Canberra           65.47 156  ⇓P       P        05 34 04.4 +0.8
CAN   Canberra           65.47 156   P       P        05 34 04.5 +0.8
CAST  Castle Rocks       65.50  30   P       P        05 34 04.0 +0.6
CAST                                 IAmb    IAmb     05 34 10.8
                         comp=Z,178nm,0.7s
CAST  Castle Rocks       65.50  30   P       P        05 34 04.1 +0.6
                         baz=278,SNR=67
SII   Sitkinak Islan     65.50  37   IAmb    IAmb     05 34 13.1
                         comp=Z,195nm,0.7s
SII   Sitkinak Islan     65.50  37   P       P        05 34 03.4 -0.2
                         baz=280,SNR=9.8
SII                                  S       S        05 42 29.7 +2.3
                         baz=280
SII   Sitkinak Islan     65.50  37   P       P        05 34 04.0 +0.4
PPLA  Purkeypile         65.53  30   P       P        05 34 04.4 +0.6
                         baz=278,SNR=56
PPLA                                 S       S        05 42 30.6 +2.8
                         baz=278
SOCY  Socotra            65.58 272   P       P        05 34 03.9 -1.0
SOCY                                 IAmb    IAmb     05 34 09.2
                         comp=Z,233nm,0.7s
SOCY  Socotra            65.58 272   P       P        05 34 03.8 -1.0
                         SNR=6.8
SOCY  Socotra            65.58 272  ⇑P       P        05 34 03.6 -1.2
CNB   Canberra Magne     65.60 156   P       P        05 34 05.5 +1.1
KBZ   Khabaz             65.60 308   P       P        05 34 04.5 +0.1
                         comp=Z,92nm,0.8s,baz=79,slow=4.6,SNR=67
KBZ                                  PKPPKP  P'P'df   06 02 46.2 +2.0
                         comp=Z,3.4nm,1.1s,baz=272,slow=8.9,SNR=4.9
                         comp=Z,92nm,0.8s
KBZ   Khabaz             65.60 308d iP       P        05 34 04.5 +0.1
KBZ                                  pmax    pmax
                         comp=Z,143nm,0.9s
AKH   Akhalkalaki        65.69 306  ⇑P       P        05 34 05.4 +0.1
KIV   Kislovodsk         65.70 309  ⇑P       P        05 34 05.0 -0.2
KIV   Kislovodsk         65.70 309   P       P        05 34 05.5 +0.3
KIV                                  IAmb    IAmb     05 34 12.3
                         comp=Z,252nm,0.9s
KIV   Kislovodsk         65.70 309  eP       P        05 34 05.4 +0.3
KIV                                 e*PP     pP       05 35 03.8 +0.7
KIV                                 e                 05 36 34.1
KIV                                 eS       S        05 42 29.8 -0.6
KIV                                 eSS      SS       05 46 46.5 -3.0
KIV                                  pmax    pmax
                         comp=Z,316nm,1.1s
KIV                                  pmax    pmax
                         comp=Z,242nm,4.1s
KIV                                  MLR     MLR
                         comp=Z,1µm,17.0s
KIV   Kislovodsk         65.70 309   P       P        05 34 05.8 +0.6
KIV                                  P       P        05 34 05.8 +0.6
KIV   Kislovodsk         65.70 309 i P       P        05 34 05.7 +0.6
                         SNR=34
KIV   Kislovodsk         65.70 309   P       P        05 34 05.5 +0.3
KIV                                  pP      pP       05 35 03.8 +0.7
COLD  Coldfoot           65.75  25   IAmb    IAmb     05 34 12.7
                         comp=Z,352nm,1.7s
COLD  Coldfoot           65.75  25   P       P        05 34 05.7 +0.8
                         baz=278,SNR=20
COLD                                 S       S        05 42 32.3 +2.4
                         baz=278
O20K  Slope Mountain     65.75  33   P       P        05 34 04.6 -0.5
                         baz=279,SNR=14
O20K                                 S       S        05 42 32.0 +1.7
                         baz=279
TOLK  Toolik Lake Re     65.78  24   IAmb    IAmb     05 34 12.5
                         comp=Z,181nm,0.9s
TOLK  Toolik Lake Re     65.78  24   P       P        05 34 06.0 +0.8
                         baz=278,SNR=111
TOLK                                 S       S        05 42 33.7 +3.3
                         baz=278
MLY   Manley             65.85  28   IAmb    IAmb     05 34 16.3
                         comp=Z,140nm,0.8s
MLY   Manley             65.85  28   P       P        05 34 06.6 +1.0
                         baz=279,SNR=281
MLY                                  S       S        05 42 36.5 +5.1
                         baz=279
LVZ   Lovozero           65.86 336   P       P        05 34 05.3 -0.4
LVZ                                  IAmb    IAmb     05 34 15.8
                         comp=Z,254nm,1.0s
LVZ   Lovozero           65.86 336⇑eP       P        05 34 05.5 -0.2
LVZ                                  pmax    pmax
                         comp=Z,190nm,1.3s
LVZ   Lovozero           65.86 336  ⇓P       P        05 34 05.0 -0.6
LVZ                                 ⇓P       P        05 34 05.2 -0.5
LVZ   Lovozero           65.86 336   P       P        05 34 05.0 -0.6
BRAT  Ballarat           65.86 161   P       P        05 34 07.1 +1.2
OHAK  Old Harbor         65.88  36   P       P        05 34 05.7 -0.2
OHAK                                 IAmb    IAmb     05 34 15.6
                         comp=Z,243nm,1.3s
OHAK  Old Harbor         65.88  36   P       P        05 34 05.7 -0.2
                         baz=280,SNR=13
OHAK                                 S       S        05 42 32.5 +0.7
                         baz=280
BPAW  Bear Paw Mtn.      65.88  29   IAmb    IAmb     05 34 16.3
                         comp=Z,146nm,0.8s
BPAW  Bear Paw Mtn.      65.88  29   P       P        05 34 06.7 +0.8
                         baz=279,SNR=155
BPAW                                 S       S        05 42 34.8 +3.0
                         baz=279
KTH   Kantishna Hill     66.00  29   IAmb    IAmb     05 34 16.8
                         comp=Z,151nm,0.9s
Q20K  Shuyak Island      66.11  35   P       P        05 34 06.6 -0.7
                         baz=280,SNR=14
Q20K                                 S       S        05 42 34.7 +0.2
                         baz=280
KDAK  Kodiak Island      66.15  36   P       P        05 34 07.2 -0.4
KDAK                                 IAmb    IAmb     05 34 14.1
                         comp=Z,456nm,1.4s
KDAK  Kodiak Island      66.15  36   P       P        05 34 07.2 -0.4
KDAK                                 pmax    pmax
                         comp=Z,456nm,1.4s
KDAK  Kodiak Island      66.15  36   P       P        05 34 07.6  0.0
                         baz=280
KDAK                                 S       S        05 42 35.4 +0.3
                         baz=280
KDAK  Kodiak Island      66.15  36  ⇓P       P        05 34 07.6  0.0
KDAK                                 pP      pP       05 35 09.6 +4.0
KDAK                                 sP      sP       05 35 37.5 +4.3
H23K  Yukon River        66.22  27   P       P        05 34 09.3 +1.4
                         baz=279,SNR=370
H23K                                 S       S        05 42 40.8 +5.0
                         baz=279
TRF   Thorofare Moun     66.29  29   IAmb    IAmb     05 34 17.7
                         comp=Z,595nm,1.8s
TRF   Thorofare Moun     66.29  29   P       P        05 34 08.5 -0.2
                         baz=280,SNR=80
TRF                                  S       S        05 42 38.1 +1.1
                         baz=280
HOM   Homer              66.31  34   P       P        05 34 08.0 -0.6
                         baz=280
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TOO	**Toolangi**	66.34	160	P	P	05 34 09.8	+0.7
TOO				IAmb	IAmb	05 34 12.7	
	comp=Z,174nm,0.6s						
TOO	**Toolangi**	66.34	160	P	P	05 34 09.8	+0.7
TOO				pmax	pmax		
	comp=Z,174nm,0.6s						
TOO	**Toolangi**	66.34	160	P	P	05 34 09.8	+0.7
TOO	**Toolangi**	66.34	160	⇓P	P	05 34 09.7	+0.7
TOO				⇓P	P	05 34 09.8	+0.7
TOO				⇓P	P	05 34 12.1	+3.0
CAPN	**Captain Cook N**	66.35	32	P	P	05 34 09.5	+0.7
	baz=280						
LPSR	**Galich'ya Gora**	66.37	319	eP	P	05 34 08.2	-0.9
LPSR				eS	S	05 42 34.9	-3.0
LPSR				pmax	pmax		
	comp=Z,470nm,0.8s						
LPSR				pmax	pmax		
	comp=Z,510nm,0.8s						
LPSR				smax	smax		
	comp=N,560nm,2.2s						
APA	**Apatity**	66.38	335	⇓iP	P	05 34 07.7	-1.2
APA				i *PP	pP	05 35 03.0	-3.9
APA				i		05 36 44.0	
APA				pmax	pmax		
	comp=Z,254nm,0.8s						
VORR	**Voronezh**	66.38	318	eP	P	05 34 08.8	-0.4
VORR				e*PP	pP	05 35 10.3	+3.1
VORR				eS	S	05 42 36.6	-1.5
VORR				pmax	pmax		
	comp=Z,450nm,0.7s						
VORR				pmax	pmax		
	comp=Z,450nm,0.6s						
VORR				smax	smax		
	comp=N,670nm,1.3s						
MLBS	**Spotswood, Mel**	66.40	161	P	P	05 34 12.4	+3.1
I23K	**Minto, Yukon-K**	66.41	27	P	P	05 34 09.8	+0.8
	baz=280,SNR=105						
I23K				S	S	05 42 40.0	+2.1
	baz=280						
CHVG	**Ch'k'valeri**	66.41	308	⇑P	P	05 34 09.4	-0.2
VORD	**Divnogorie**	66.47	317	eP	P	05 34 09.5	-0.3
VORD				pmax	pmax		
	comp=Z,250nm,0.9s						
CUT	**Chulitna**	66.48	30	IAmb	IAmb	05 34 16.1	
	comp=Z,216nm,0.7s						
CUT	**Chulitna**	66.48	30	P	P	05 34 09.4	-0.2
	baz=280,SNR=36						
CUT				S	S	05 42 39.7	+0.9
	baz=280						
VSR	**Storozhevoye**	66.50	317	eP	P	05 34 09.2	-0.8
VSR				eS	S	05 42 34.9	-4.6
VSR				pmax	pmax		
	comp=Z,460nm,1.2s						
VSR				pmax	pmax		
	comp=Z,630nm,1.2s						
VSR				smax	smax		
	comp=N,690nm,2.1s						
MOS	**Moscow**	66.51	322	eP	P	05 34 05.1	-4.8
MOS				e*PP	pP	05 35 06.0	-1.9
MOS				e		05 36 35.0	
MOS				eS	S	05 42 33.3	-6.1
MOS				e		05 43 34.9	
MOS				pmax	pmax		
	comp=Z,860nm,1.4s						
MOS				pmax	pmax		
	comp=Z,2µm,2.1s						
MOS				smax	smax		
	comp=E,2µm,3.3s						
MOS				smax	smax		
	comp=N,3µm,3.2s						
GEXS	**Deakin Univers**	66.57	161	P	P	05 34 11.9	+1.5
LHI	**Lord Howe Isla**	66.59	146	IAmb	IAmb	05 34 13.5	
	comp=Z,425nm,1.3s						
LHI	**Lord Howe Isla**	66.59	146	P	P	05 34 12.1	+1.4
LHI	**Lord Howe Isla**	66.59	146	⇓P	P	05 34 12.3	+1.7
LHI				⇑P	P	05 34 12.7	+2.0
NEA2	**Nenana**	66.62	28	P	P	05 34 11.0	+0.5
	baz=280,SNR=300						
NEA2				S	S	05 42 42.5	+1.9
	baz=280						
BRLK	**Bradley Lake**	66.66	33	IAmb	IAmb	05 34 21.4	
	comp=Z,292nm,1.2s						
M22K	**Willow**	66.67	31	P	P	05 34 10.4	-0.4
	baz=280,SNR=44						
M22K				S	S	05 42 39.4	-1.7
	baz=280						
BRSE	**Bradley Lake S**	66.74	33	P	P	05 34 10.4	-0.9
	baz=281,SNR=38						
BRSE				S	S	05 42 41.0	-1.2
	baz=281						
MCK	**McKinley**	66.84	29	IAmb	IAmb	05 34 18.7	
	comp=Z,138nm,0.8s						
MCK	**McKinley**	66.84	29	P	P	05 34 11.8	-0.1
	baz=281,SNR=73						
MCK				S	S	05 42 45.1	+1.8
	baz=281						
H24K	**Noodor Dome**	66.89	27	IAmb	IAmb	05 34 23.2	
	comp=Z,212nm,0.8s						
H24K	**Noodor Dome**	66.89	27	P	P	05 34 13.4	+1.1
	baz=281,SNR=128						
H24K				S	S	05 42 47.7	+3.8
	baz=281						
MDM	**Murphy Dome**	66.91	28	P	P	05 34 12.9	+0.5
BATM	**Batumi**	66.96	306	⇑P	P	05 34 12.8	-0.2
RC01	**Rabbit Creek A**	66.97	32	P	P	05 34 12.1	-0.7
	baz=281,SNR=22						
RC01				S	S	05 42 44.4	-0.5
	baz=281						
WRH	**Wood River Hil**	67.06	28	IAmb	IAmb	05 34 24.7	
	comp=Z,182nm,1.1s						
TCOL	**CIGO, UAF Yank**	67.08	28	IAmb	IAmb	05 34 21.3	
	comp=Z,122nm,0.7s						
TCOL	**CIGO, UAF Yank**	67.08	28	P	P	05 34 13.4	+0.1
	baz=281,SNR=32						
TCOL				S	S	05 42 47.4	+1.4
	baz=281						
COLA	**College**	67.08	28	P	P	05 34 13.5	+0.2
COLA				IAmb	IAmb	05 34 21.3	
	comp=Z,125nm,0.7s						
COLA	**College**	67.08	28	P	P	05 34 13.5	+0.2
COLA	**College**	67.08	28	P	P	05 34 13.6	+0.2
	baz=281						
COLA				S	S	05 42 47.7	+1.7
	baz=281						
COLA	**College**	67.08	28	⇓P	P	05 34 13.5	+0.2
COLA	**College**	67.08	28	P	P	05 34 13.6	+0.2
COLA				pP	pP	05 35 16.3	+4.8
COLA				sP	sP	05 35 39.4	+0.3
O22K	**Cooper Landing**	67.10	32	P	P	05 34 13.1	-0.4
	baz=281,SNR=12						
O22K				S	S	05 42 47.5	+1.2
	baz=281						
HOPEN	**Hopen**	67.15	345	⇓iP	P	05 34 13.7	+0.1
HOPEN				eS	S	05 42 46.6	+0.2
PMR	**Palmer**	67.16	31	IAmb	IAmb	05 34 19.4	
	comp=Z,131nm,0.7s						
PMR	**Palmer**	67.16	31	P	P	05 34 13.6	-0.3
	baz=281,SNR=51						
PMR				S	S	05 42 47.1	+0.1
	baz=281						
WAT1	**Susitna Watana**	67.18	30	P	P	05 34 13.5	-0.6
	baz=281						
WAT1				S	S	05 42 48.4	+1.0
	baz=281						
POKR	**Poker Plat Res**	67.21	27	IAmb	IAmb	05 34 21.6	
	comp=Z,271nm,0.9s						
POKR	**Poker Plat Res**	67.21	27	P	P	05 34 14.5	+0.3
	baz=281,SNR=179						
POKR				S	S	05 42 51.3	+3.6
	baz=281						
GHO	**Glory Hole Cre**	67.22	31	IAmb	IAmb	05 34 20.3	
	comp=Z,121nm,0.7s						
OBN	**Obninsk**	67.22	322	⇓P	P	05 34 13.9	-0.5
OBN	**Obninsk**	67.22	322	P	P	05 34 13.6	-0.8
OBN				IAmb	IAmb	05 34 21.5	
	comp=Z,389nm,1.2s						
OBN	**Obninsk**	67.22	322	d iP	P	05 34 13.4	-1.0
OBN				i S	S	05 42 45.7	-2.3
OBN				pmax	pmax		
	comp=Z,479nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,16.0s						
SEW	**Seward**	67.31	33	IAmb	IAmb	05 34 24.0	
	comp=Z,162nm,0.9s						
SEW	**Seward**	67.31	33	P	P	05 34 14.4	-0.4
	baz=282,SNR=24						
SEW				S	S	05 42 50.7	+1.9
	baz=282						
SML	**Sawmill**	67.49	31	IAmb	IAmb	05 34 22.1	
	comp=Z,196nm,0.7s						
SML	**Sawmill**	67.49	31	P	P	05 34 16.1	0.0
	baz=282,SNR=35						
SML				S	S	05 42 52.2	+1.1
	baz=282						
ILAR	**Eielson Array**	67.51	28	P	P	05 34 15.1	-1.0
	comp=Z,28nm,0.5s,baz=264,slow=5.4,SNR=359						
ILAR				S	S	05 42 46.1	-5.0
	comp=Z,0.9nm,1.0s,baz=275,slow=13,SNR=2.6						
ILAR				PKPPKP	P'P'df	06 02 33.8	-8.4
	comp=Z,7.8nm,1.1s,baz=86,slow=1.7,SNR=8.6						
	comp=Z,28nm,0.5s						
ILAR	**Eielson Array**	67.51	28	P	P	05 34 14.7	-1.4
KNK	**Knik Glacier**	67.51	31	P	P	05 34 16.2	0.0
KNK				IAmb	IAmb	05 34 26.5	
	comp=Z,193nm,0.9s						
KNK	**Knik Glacier**	67.51	31	P	P	05 34 16.2	0.0
	baz=282,SNR=39						
KNK				S	S	05 42 52.8	+1.4
	baz=282						
HDA	**Harding Lake**	67.56	28	P	P	05 34 15.6	-0.8
	baz=282,SNR=113						
HDA				S	S	05 42 52.3	+0.5
	baz=282						
HDA				S	S	05 42 52.3	+0.5
	baz=282						
WAT6	**Susitna Watana**	67.60	30	P	P	05 34 16.8	-0.1
	baz=282,SNR=70						
WAT6				S	S	05 42 53.3	+0.7
	baz=282						
DHY	**Denali Highway**	67.66	29	IAmb	IAmb	05 34 23.3	
	comp=Z,135nm,0.6s						
DHY	**Denali Highway**	67.66	29	P	P	05 34 16.7	-0.5
	baz=282,SNR=110						
DHY				S	S	05 42 54.4	+1.2
	baz=282						
M23K	**Glacier View**	67.77	31	P	P	05 34 17.6	-0.1
	baz=282,SNR=30						
M23K				S	S	05 42 54.0	-0.4
	baz=282						
SOC	**Sochi**	67.88	309	eP	P	05 34 17.1	-1.7
SOC				e*PP	pP	05 35 17.4	+0.4
SOC				e*SP	sP	05 35 47.0	+2.5
SOC				e		05 36 49.1	
SOC				ePPP	PPP	05 38 30.9	
SOC				eS	S	05 42 53.7	-2.5
SOC				eSS	SS	05 47 19.8	-3.1
SOC				pmax	pmax		
	comp=Z,112nm,0.8s						
SCM	**Sheep Creek Mo**	67.95	31	P	P	05 34 19.3	+0.4
	baz=283,SNR=109						
SCM				S	S	05 42 58.6	+2.0
	baz=283						
J25K	**Salcha River,**	68.18	28	P	P	05 34 18.9	-1.4
	baz=283,SNR=80						
J25K				S	S	05 42 60.0	+0.8
	baz=283						
K24K	**Donnelly Dome**	68.19	29	P	P	05 34 19.9	-0.5
	baz=283,SNR=270						
K24K				S	S	05 43 00.9	+1.5
	baz=283						
KEV	**Kevo**	68.22	338	P	P	05 34 19.7	-0.6
KEV				IAmb	IAmb	05 34 29.0	
	comp=Z,216nm,0.9s						
KEV	**Kevo**	68.22	338	P	P	05 34 19.7	-0.6
KEV				pmax	pmax		
	comp=Z,216nm,0.9s						
KEV	**Kevo**	68.22	338	⇓P	P	05 34 20.0	-0.3
KEV	**Kevo**	68.22	338	P	P	05 34 20.0	-0.3
GLI	**Glacier Island**	68.28	32	IAmb	IAmb	05 34 30.6	
	comp=Z,217nm,0.9s						
GLI	**Glacier Island**	68.28	32	P	P	05 34 20.9	0.0
	baz=283,SNR=53						
GLI				S	S	05 43 01.4	+1.1
	baz=283						
M24K	**Tolsona, Glenn**	68.42	30	P	P	05 34 22.6	+0.8
	baz=284,SNR=130						
M24K				S	S	05 43 04.6	+2.5
	baz=284						
SPA0	**Spitsbergen Ar**	68.47	348	⇓iP	P	05 34 21.4	-0.4
SPA0				IVmB_BB		05 34 26.9	
	comp=Z,4µm,2.0s						
SPA0				eS	S	05 43 01.5	-0.7
KTUT	**Trabzon**	68.52	306	⇑P	P	05 34 22.1	-0.6
PAX	**Paxson**	68.53	29	P	P	05 34 22.5	0.0
	baz=284,SNR=99						
PAX				S	S	05 43 05.2	+1.8
	baz=284						
FID	**Port Fidalgo**	68.60	32	IAmb	IAmb	05 34 32.5	
	comp=Z,185nm,1.0s						
RIDG	**Independent Ri**	68.61	29	IAmb	IAmb	05 34 30.1	
	comp=Z,357nm,1.3s						
RIDG	**Independent Ri**	68.61	29	P	P	05 34 22.4	-0.6
	baz=284,SNR=92						
RIDG				S	S	05 43 04.2	-0.1
	baz=284						
HIN	**Hinchinbrook I**	68.67	32	IAmb	IAmb	05 34 29.6	
	comp=Z,169nm,0.8s						
KLU	**Klutina**	68.68	31	IAmb	IAmb	05 34 29.7	
	comp=Z,159nm,0.7s						
KLU	**Klutina**	68.68	31	P	P	05 34 23.8	+0.3
	baz=284,SNR=99						
KLU				S	S	05 43 07.0	+1.7
	baz=284						
ARA0	**ARCESS Array S**	68.78	338	eP	P	05 34 23.5	-0.4
ARA0				e		05 34 23.5	
ARA0				⇓iP	P	05 34 23.6	-0.2
ARCES	**ARCESS Array B**	68.78	338	P	P	05 34 23.5	-0.4
	comp=Z,48nm,0.8s,baz=77,slow=8.5,SNR=21						
HARP	**HAARP**	68.81	30	P	P	05 34 24.7	+0.5
	baz=284,SNR=65						
HARP				S	S	05 43 10.1	+3.5
	baz=284						
SCRK	**Sand Creek**	68.92	28	P	P	05 34 24.7	-0.3
	baz=285,SNR=179						
SCRK				S	S	05 43 09.2	+1.1
	baz=285						
J26L	**Joseph Creek**	68.97	28	IAmb	IAmb	05 34 31.3	
	comp=Z,164nm,0.8s						
J26L	**Joseph Creek**	68.97	28	P	P	05 34 24.9	-0.3
	baz=285,SNR=216						
J26L				S	S	05 43 10.2	+1.7
	baz=285						
DOT	**Dot Lake**	68.97	29	P	P	05 34 24.6	-0.6
DOT				IAmb	IAmb	05 34 34.6	
	comp=Z,136nm,0.8s						
Q23K	**Middleton Isla**	68.99	33	P	P	05 34 25.2	-0.1
	baz=285						
KBS	**Kingsbay**	68.99	349	P	P	05 34 23.1	-1.9
KBS	**Kingsbay**	68.99	349	⇓eP	P	05 34 23.6	-1.4
KBS				pmax	pmax		
	comp=Z,136nm,1.7s						
KBS	**Kingsbay**	68.99	349	eP	P	05 34 24.6	-0.4
KBS	**Kingsbay**	68.99	349	⇓iP	P	05 34 24.3	-0.7
KBS				eS	S	05 43 08.0	-0.2
KBS	**Kingsbay**	68.99	349	⇓P	P	05 34 24.5	-0.5
EYAK	**Cordova Ski Ar**	69.00	32	IAmb	IAmb	05 34 35.6	
	comp=Z,154nm,0.8s						
EYAK	**Cordova Ski Ar**	69.00	32	P	P	05 34 25.9	+0.6
	baz=285,SNR=22						
EYAK				S	S	05 43 09.7	+1.0
	baz=285						
MSVF	**Nonsavu**	69.04	123	P	P	05 34 27.2	+0.9
MSVF				IAmb	IAmb	05 34 34.8	
	comp=Z,301nm,0.9s						
MSVF	**Nonsavu**	69.04	123	d iP	P	05 34 27.8	+1.5
MSVF				pmax	pmax		
	comp=Z,416nm,1.3s						
MSVF	**Nonsavu**	69.04	123	P	P	05 34 27.5	+1.2
MSVF	**Nonsavu**	69.04	123	⇓P	P	05 34 27.9	+1.6
HAMF	**Hammerfest**	69.07	339	⇓iP	P	05 34 25.0	-0.5
HAMF				IVmB_BB		05 34 30.5	
	comp=Z,2µm,1.8s						
HAMF				eS	S	05 43 07.1	-2.2
HSPB	**Hornsund (broa**	69.07	347	eP	P	05 34 25.2	-0.3
HSPB				ePcP	PcP	05 34 47.0	-0.7
HSPB				epP	pP	05 35 24.7	+0.7
HSPB				eS	S	05 43 11.7	+2.6
HSPB				eL	L	06 10 29.0	
	comp=Z,4µm,17.1s						
HSPB	**Hornsund (broa**	69.07	347	⇓iP	P	05 34 25.1	-0.4
RAYN	**Ar Rayn**	69.11	287	P	P	05 34 26.6	-0.2
RAYN	**Ar Rayn**	69.11	287	P	P	05 34 26.6	-0.2
RAYN				pmax	pmax		
	comp=Z,174nm,1.4s						
RAYN	**Ar Rayn**	69.11	287	P	P	05 34 27.2	+0.4
RAYN	**Ar Rayn**	69.11	287	i P	P	05 34 26.8	+0.1
	SNR=13						
RAYN	**Ar Rayn**	69.11	287	P	P	05 34 26.6	-0.2
RAYN				pP	pP	05 35 25.1	-0.1
ANN	**Anapa**	69.15	311	d iP	P	05 34 25.8	-0.7
ANN				e*PP	pP	05 35 27.0	+2.0
ANN				i S	S	05 43 09.2	-1.9
ANN				pmax	pmax		
	comp=Z,449nm,1.2s						
ANN				pmax	pmax		
	comp=E,130nm,1.3s						
ANN				pmax	pmax		
	comp=N,46nm,0.7s						
BJO1	**Bjornoya**	69.18	344	eP	P	05 34 26.2	+0.1
BJO1				IVmB_BB		05 35 28.5	
	comp=Z,2µm,3.3s						
BJO1				eS	S	05 43 12.5	+2.0
BJO1				IVMs_BB	IVMs_BB	06 09 14.7	
	comp=Z,2µm,4.2s						
N25K	**Chitina, Valde**	69.27	31	IAmb	IAmb	05 34 36.0	
	comp=Z,136nm,0.7s						
N25K	**Chitina, Valde**	69.27	31	P	P	05 34 27.6	+0.6
	baz=285,SNR=53						
N25K				S	S	05 43 13.6	+1.6
	baz=285						
MENT	**Mentasta**	69.31	29	IAmb	IAmb	05 34 38.1	
	comp=Z,206nm,0.9s						
PUL	**Pulkovo**	69.40	327	deP	P	05 34 27.6	-0.2
PUL				pmax	pmax		
	comp=Z,670nm,0.8s						
PUL	**Pulkovo**	69.40	327	⇓P	P	05 34 27.9	+0.1
BMRM	**Bremner River**	69.43	31	IAmb	IAmb	05 34 37.4	
	comp=Z,169nm,0.8s						
BMRM	**Bremner River**	69.43	31	P	P	05 34 28.2	+0.1
	baz=285,SNR=44						
BMRM				S	S	05 43 14.7	+0.7
	baz=285						
L26K	**Log Cabin Wild**	69.45	29	P	P	05 34 28.6	+0.5
	baz=286,SNR=90						
L26K				S	S	05 43 16.7	+2.6
	baz=286						
DGTI	**Dogotuki**	69.49	120	P	P	05 34 30.5	+1.5
KNTN	**Kanton**	69.53	104	P	P	05 34 30.0	+0.7
NFK	**Norfolk Island**	69.60	138	P	P	05 34 28.7	-0.7
GLB	**Gilahina Butte**	69.67	31	IAmb	IAmb	05 34 36.0	
	comp=Z,202nm,0.7s						
KTK1	**Kautokeino**	69.71	338	⇓iP	P	05 34 29.1	-0.4
KTK1				IVmB_BB		05 34 34.6	
	comp=Z,3µm,2.0s						
KTK1				eS	S	05 43 14.1	-2.8
K27K	**Chicken**	69.72	28	IAmb	IAmb	05 34 37.1	
	comp=Z,198nm,0.8s						
K27K	**Chicken**	69.72	28	P	P	05 34 30.6	+0.9
	baz=286						
K27K				S	S	05 43 19.1	+2.0
	baz=286						
HMT	**Hamilton**	69.77	32	IAmb	IAmb	05 34 36.4	
	comp=Z,150nm,0.8s						
M26K	**Nabesna, AK**	69.78	30	P	P	05 34 30.7	+0.6
	baz=286,SNR=249						
M26K				S	S	05 43 20.6	+2.7
	baz=286						
EGAK	**Eagle**	69.89	27	P	P	05 34 30.6	0.0
EGAK				IAmb	IAmb	05 34 37.2	
	comp=Z,172nm,0.8s						
EGAK	**Eagle**	69.89	27	P	P	05 34 30.6	0.0
	baz=287						
EGAK				S	S	05 43 21.3	+2.3
	baz=287						
VRDI	**Verde Repeater**	69.90	31	IAmb	IAmb	05 34 41.1	
	comp=Z,154nm,0.9s						
MCARA	**McCarthy VSAT**	70.05	31	P	P	05 34 32.4	+0.7
	baz=287,SNR=61						
MCARA				S	S	05 43 22.7	+1.6
	baz=287						
L27K	**Beaver Creek,**	70.10	29	P	P	05 34 33.2	+1.1
	baz=287,SNR=289						
L27K				S	S	05 43 25.3	+3.6
	baz=287						
GLAD	**Gladstone**	70.25	160	P	P	05 34 33.7	+0.6
M27K	**Edge Creek, AK**	70.29	30	P	P	05 34 33.8	+0.5
	baz=287,SNR=101						
M27K				S	S	05 43 25.7	+1.6
	baz=287						
BGLC	**Bering Glacier**	70.29	32	P	P	05 34 34.0	+0.8
	baz=287						
TGL	**Tana Glacier**	70.33	31	IAmb	IAmb	05 34 40.2	
	comp=Z,208nm,0.9s						
WAX	**Waxell Ridge**	70.40	32	IAmb	IAmb	05 34 40.8	
	comp=Z,190nm,0.7s						
CORO	**Coronation Par**	70.41	161	P	P	05 34 35.3	+1.3
JETT	**Jettan, Norway**	70.48	339	⇓iP	P	05 34 34.1	-0.2
SNH	**Sunshine Point**	70.49	32	IAmb	IAmb	05 34 41.6	
	comp=Z,206nm,0.8s						
ISLE	**Juniper Island**	70.60	31	IAmb	IAmb	05 34 43.3	
	comp=Z,129nm,0.6s						
BVCY	**Beaver Creek**	70.72	29	P	P	05 34 36.8	+1.0
	baz=288,SNR=35						
BVCY				S	S	05 43 31.4	+2.5
	baz=288						
BARN	**Barnard Glacie**	70.78	31	IAmb	IAmb	05 34 43.5	
	comp=Z,170nm,0.8s						
DAWY	**Dawson**	70.83	27	IAmb	IAmb	05 34 43.4	
	comp=Z,233nm,0.8s						
DAWY	**Dawson**	70.83	27	P	P	05 34 36.9	+0.4
	baz=289,SNR=268						
DAWY				S	S	05 43 33.2	+3.1
	baz=289						
DAWY	**Dawson**	70.83	27	⇓P	P	05 34 36.9	+0.4
DAWY				⇓P	P	05 34 37.0	+0.5
I29M	**Ogilvie Camp,**	70.85	26	IAmb	IAmb	05 34 43.5	
	comp=Z,273nm,1.3s						
I29M	**Ogilvie Camp,**	70.85	26	P	P	05 34 36.9	+0.3
	baz=289,SNR=121						
I29M				S	S	05 43 33.7	+3.4
	baz=289						
MESA	**MESA**	70.91	32	P	P	05 34 37.2	0.0
MESA				IAmb	IAmb	05 34 48.1	
	comp=Z,276nm,1.2s						
MESA	**MESA**	70.91	32	P	P	05 34 37.8	+0.6
	baz=288,SNR=13						
FINES	**FINESS Array B**	70.93	330	P	P	05 34 36.5	-0.4
	comp=Z,195nm,0.6s,baz=64,slow=5.8,SNR=401						
FINES				S	S	05 43 29.5	-1.6
	comp=Z,4.7nm,0.9s,baz=91,slow=13,SNR=3.1						
	comp=Z,195nm,0.6s						
TRO	**Tromso**	70.94	339	⇓iP	P	05 34 35.9	-0.9
TRO				eS	S	05 43 30.1	-0.8
CTG	**Chitna Glacier**	70.96	31	P	P	05 34 38.1	+0.7
	baz=288,SNR=146						
CTG				S	S	05 43 32.4	+0.6
	baz=288						
YUK3	**Moose Creek**	71.10	30	P	P	05 34 38.7	+0.4
	baz=289,SNR=66						
YUK3				S	S	05 43 35.2	+1.6
	baz=289						
TOKA	**Tokat**	71.11	306	IAmb	IAmb	05 34 44.9	
	comp=Z,346nm,1.6s						
EPYK	**Eagle Plains**	71.12	25	P	P	05 34 38.0	-0.1
	baz=290,SNR=189						
EPYK				S	S	05 43 34.9	+1.5
	baz=290						
LOGN	**Logan Glacier**	71.16	31	IAmb	IAmb	05 34 51.1	
	comp=Z,204nm,0.7s						
NOR	**Nord**	71.17	354	⇓iP	P	05 34 37.3	-0.8
NOR				IAmb	IAmb	05 34 43.3	
	comp=Z,62nm,1.1s						
J29M	**Klondike Camp**	71.19	27	P	P	05 34 39.7	+1.0
	baz=290,SNR=20						
J29M				S	S	05 43 37.6	+3.4
	baz=290						
MOO	**Moorlands**	71.33	161	P	P	05 34 40.5	+0.9
SIM	**Simferopol'**	71.37	311	eP	P	05 34 39.1	-0.9
SIM				e*PP	pP	05 35 40.0	+1.1
SIM				eS	S	05 43 34.7	-2.1
SIM				pmax	pmax		
	comp=Z,348nm,1.2s						
MSEY	**Mahe Island**	71.52	255	P	P	05 34 44.0	+2.6
MSEY				P	P	05 34 45.8	+4.4
VSU	**Vasula**	71.56	327	d iP	P	05 34 40.5	-0.2
VSU	**Vasula**	71.56	327	eP	P	05 34 40.6	-0.2
VSU	**Vasula**	71.56	327	⇓P	P	05 34 40.6	-0.1
VSU				⇓P	P	05 34 40.7	-0.1

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VSU                                ⇑P     P        05 34 42.0 +1.2
VSU                                ⇓P     P        05 34 43.1 +2.4
INK   Inuvik              71.57  22  S      S        05 43 37.2 -1.0
      comp=Z,18nm,1.2s,baz=244,slow=14,SNR=16
INK                                 PKPPKP          06 02 26.8
      comp=Z,4.2nm,1.2s,baz=143,slow=7.7,SNR=5.7
INK   Inuvik              71.57  22  P      P        05 34 40.2 -0.5
INK                                  IAmb   IAmb     05 34 47.2
      comp=Z,278nm,0.9s
INK   Inuvik              71.57  22  P      P        05 34 40.2 -0.5
INK                                  pmax   pmax
      comp=Z,278nm,0.9s
INK   Inuvik              71.57  22  P      P        05 34 40.7  0.0
      baz=292,SNR=192
INK                                  S      S        05 43 39.5 +1.3
      baz=292
YUK8  Steele Glacier      71.58  30  P      P        05 34 41.9 +0.7
      baz=289,SNR=41
YUK8                                 S      S        05 43 41.1 +2.0
      baz=289
DIKM  Dikmen              71.58 308 ⇑P      P        05 34 41.7 +0.4
LKBA  Tubou, Lakemba      71.74 121  P      P        05 34 43.6 +1.1
PINM  Pinnacle            71.75  32  P      P        05 34 43.0 +1.0
      baz=289,SNR=51
PINM                                 S      S        05 43 43.3 +2.6
      baz=289
TAU   Tasmania Unive      71.80 161  P      P        05 34 43.1 +0.8
TAU                                  IAmb   IAmb     05 34 44.5
      comp=Z,311nm,1.2s
TAU   Tasmania Unive      71.80 161  P      P        05 34 43.1 +0.8
TAU                                  pmax   pmax
      comp=Z,311nm,1.2s
TAU   Tasmania Unive      71.80 161  P      P        05 34 43.6 +1.3
TAU   Tasmania Unive      71.80 161  P      P        05 34 43.2 +0.9
KIP   Kipapa              72.00  74  P      P        05 34 43.1 -1.0
KIP   Kipapa              72.00  74ceP      P        05 34 44.0 -0.1
KIP                                  pmax   pmax
      comp=Z,90nm,0.7s
KIP   Kipapa              72.00  74  P      P        05 34 45.2 +1.1
YUK4  Talbot Arm          72.07  30  P      P        05 34 44.8 +0.7
      baz=290,SNR=42
MNK   Minsk               72.23 322 i P     P        05 34 44.9 +0.1
MNK                                 i                05 35 01.2
MNK                                 i *PP   pP       05 35 47.0 +3.1
MNK                                 i *SP   sP       05 36 07.1 -4.1
MNK                                 i                05 37 30.9
MNK                                 i PPP   PPP      05 39 08.1
MNK                                 i S     S        05 43 43.8 -2.4
MNK                                 i SS    SS       05 48 32.9 +4.0
MNK                                  pmax   pmax
      comp=E,30nm,1.3s
MNK                                  pmax   pmax
      comp=Z,222nm,1.0s
MNK                                  pmax   pmax
      comp=N,58nm,1.1s
MNK                                  MLR    MLR
      comp=Z,2µm,19.0s
MNK                                  MLR    MLR
      comp=N,976nm,20.0s
MNK                                  MLR    MLR
      comp=E,184nm,18.0s
MNK   Minsk               72.23 322 i P     P        05 34 45.0 +0.1
      comp=E,30nm,1.3s
MNK                                 i P     P        05 34 45.0 +0.1
      comp=N,58nm,1.1s
MNK                                 i P     P        05 34 45.0 +0.1
      comp=Z,222nm,1.0s,baz=251
MNK                                 i pP    pP       05 35 47.0 +3.1
MNK                                 i sP    sP       05 36 07.1 -4.1
MNK                                 i PP    PP       05 37 31.0 +2.3
MNK                                 i PPP   PPP      05 39 08.1
MNK                                 i S     S        05 43 43.8 -2.4
MNK                                 i sS    sS       05 45 32.7 +2.5
MNK                                 i SS    SS       05 48 32.9 +4.0
MNK                                 i SSS   SSS      05 51 54.9
MNK                                 i LQ    LQ       05 58 50.2
MNK                                 i LR    LR       06 03 30.1
MNK                                 i LRM   MLR      06 11 38.8
      comp=Z,2µm,19.0s
MNK                                 i LRM   MLR      06 11 43.9
      comp=N,976nm,19.7s
MNK                                 i LRM   MLR      06 11 50.5
      comp=E,184nm,18.4s
PNL   Peninsula           72.30  32  P      P        05 34 46.0 +0.8
      baz=290,SNR=33
PNL                                  S      S        05 43 49.2 +2.4
      baz=290
YUK6  Outpost Mounta      72.34  30  P      P        05 34 46.8 +1.1
      baz=291,SNR=48
YUK6                                 S      SKiKP    05 43 51.0 -3.0
      baz=291
BZK   Bozkurt             72.38 309 ⇓P      P        05 34 45.0 -0.9
M30M  Minto, Yukon        72.45  28  IAmb   IAmb     05 34 53.8
      comp=Z,313nm,1.1s
M30M  Minto, Yukon        72.45  28  P      P        05 34 47.3 +1.2
      baz=291,SNR=136
M30M                                 S      S        05 43 51.3 +2.7
      baz=291
A36M  Sachs Harbour       72.53  18  IAmb   IAmb     05 34 52.4
      comp=Z,270nm,0.9s
A36M  Sachs Harbour       72.53  18  P      P        05 34 45.8 -0.5
      baz=299,SNR=33
A36M                                 S      S        05 43 49.0  0.0
      baz=299
IDID  Didziasalis         72.58 323 eP      P        05 34 47.2 +0.3
AKASG Malin Array Be      72.69 318  P      P        05 34 46.6 -1.0
      comp=Z,59nm,0.6s,baz=57,slow=7.0,SNR=150
AKASG                                pP     pP       05 35 48.4 +1.6
      comp=Z,28nm,0.8s,baz=57,slow=6.2,SNR=1.8
AKASG                                S      S        05 43 49.8 -1.8
      comp=Z,0.5nm,0.4s,baz=60,slow=11,SNR=5.0
      comp=Z,59nm,0.6s
AKASG Malin Array Be      72.69 318  IAmb   IAmb     05 34 52.8
      comp=Z,319nm,1.2s
AKBB  Malin Array Si      72.69 318d iP     P        05 34 46.5 -1.2
NACGM Naroch              72.70 323 i P     P        05 34 47.7  0.0
N30M  Aishikik Lake       72.73  30  P      P        05 34 48.7 +0.9
      baz=292,SNR=65
N30M                                 S      SKiKP    05 43 53.7 -0.7
      baz=292
HYT   Haines Junctio      72.77  30  P      P        05 34 49.2 +1.0
      baz=291,SNR=63
HYT                                  S      SKiKP    05 43 55.9 +1.3
      baz=291
ISAL  Salakas             72.83 324 eP      P        05 34 48.5 +0.1
STEI  Steigen             72.85 338⇓iP      P        05 34 47.4 -0.8
STEI                                 IVmB_BB         05 34 53.0
      comp=Z,3µm,2.0s
STEI                                eS      S        05 43 50.8 -1.9
IIGN  Ignalina            72.85 324 eP      P        05 34 48.8 +0.3
MTSE  Matsula             72.91 327 eP      P        05 34 48.7  0.0
RAF   Rauma               73.03 330 eP      P        05 34 49.6 +0.1
FAUS  Fauske              73.07 337⇓iP      P        05 34 48.8 -0.7
FAUS                                 IVmB_BB         05 34 54.2
      comp=Z,3µm,1.8s
FAUS                                eS      SKiKP    05 43 53.6 -1.0
N31M  Braeburn, Yuko      73.30  29  IAmb   IAmb     05 35 01.8
      comp=Z,328nm,1.1s
N31M  Braeburn, Yuko      73.30  29  P      P        05 34 52.0 +0.9
      baz=292,SNR=69
N31M                                 S      S        05 44 00.1 +2.0
      baz=292
LOF   Lofoten             73.33 338⇓iP      P        05 34 49.8 -1.3
LOF                                  IVmB_BB         05 34 55.2
      comp=Z,2µm,2.4s
LOF                                 eS      S        05 43 58.6 +0.5
BR131 Keskin Array S      73.36 306  IAmb   IAmb     05 34 58.0
      comp=Z,404nm,1.2s
BR131 Keskin Array S      73.36 306d iP     P        05 34 51.4 -0.6
BR131 Keskin Array S      73.36 306  P      P        05 34 52.0  0.0
      SNR=78
BRTR  Keskin Array B      73.36 306  P      P        05 34 51.5 -0.6
      comp=Z,46nm,0.6s,baz=100,slow=4.6,SNR=72
BRTR                                 pP     pP       05 35 54.6 +3.3
      comp=Z,62nm,0.9s,baz=100,slow=5.5,SNR=4.5
      comp=Z,46nm,0.6s
O30N  Mendenhall          73.43  30  P      P        05 34 52.7 +0.8
      baz=292,SNR=54
O30N                                 S      S        05 44 02.8 +3.2
      baz=292
HWQ   Hawqa               73.45 300 eP      P        05 34 51.3 -1.2
KHLH  Kahului Airpor      73.57  74  IAmb   IAmb     05 34 58.3
      comp=Z,143nm,0.8s
M31M  Drury Creek, Y      73.62  28  P      P        05 34 53.5 +0.5
      baz=294,SNR=100
M31M                                 S      S        05 44 05.1 +3.4
      baz=294
PURM  Purcari             73.68 314 ⇓P      P        05 34 52.6 -0.9
BHL   Bhannes             73.80 300 eP      P        05 34 53.0 -1.6
PLBC  Pleasant Camp       73.81  31  P      P        05 34 54.8 +0.8
      baz=293,SNR=43
PLBC                                 S      S        05 44 03.9 +0.1
      baz=293
VSVD  Vaisvydziai         73.84 325 eP      P        05 34 54.1 -0.2
MOR8  Moi Rana            73.91 336⇓iP      P        05 34 52.6 -1.8
MOR8                                eS      SKiKP    05 43 59.2 +3.2
SHBL  Chebaa              73.92 300 eP      P        05 34 54.6 -0.7
ANTO  Ankara              73.93 307  P      P        05 34 55.2  0.0
ANTO                                 IAmb   IAmb     05 35 01.0
      comp=Z,457nm,1.4s
ANTO  Ankara              73.93 307  P      P        05 34 55.2  0.0
ANTO                                 pmax   pmax
      comp=Z,457nm,1.4s
ANTO  Ankara              73.93 307  P      P        05 34 58.2 +3.0
BR231 Keskin MP Arra      73.95 307  IAmb   IAmb     05 35 01.4
      comp=Z,325nm,1.3s
PABE  Paberze             74.00 324 eP      P        05 34 55.1 -0.1
WHY   Whitehorse          74.03  30  P      P        05 34 56.4 +0.9
      baz=294,SNR=74
WHY                                  S      S        05 44 09.4 +3.0
      baz=294
FARO  Faro, Yukon         74.06  28  P      P        05 34 56.1 +0.6
      baz=294,SNR=152
FARO                                 S      S        05 44 07.6 +1.0
      baz=294
SLIT  Slitere, Latvi      74.06 327 eP      P        05 34 54.6 -0.9
SORM  Soroca              74.10 316 ⇑P      P        05 34 54.9 -0.9
AAL   Aland               74.17 330 eP      P        05 34 55.0 -1.1
C36M  Paulatuk            74.18  20  P      P        05 34 55.3 -0.6
      baz=300,SNR=144
C36M                                 S      S        05 44 05.5 -2.0
      baz=300
KIS   Kishinev            74.20 315⇓iP      P        05 34 55.0 -1.5
      comp=Z,110nm,2.0s
KIS                                ⇑ipP     pP       05 35 52.0 -3.8
KIS   Kishinev            74.20 315d iP     P        05 34 55.0 -1.5
KIS                                 i *PP   pP       05 35 52.0 -3.8
KIS                                 i S     S        05 44 05.0 -3.6
KIS                                  pmax   pmax
      comp=Z,110nm,2.0s
KIS                                  MLR    MLR
      comp=Z,2µm,20.5s
KONS  Konsvik             74.23 337 eP      P        05 34 55.7 -0.6
MILM  Milestii Mici       74.23 315⇓iP      P        05 34 55.0 -1.7
      comp=Z,230nm,1.5s
MILM                                i pP    pP       05 35 50.0 -6.0
MILM                                i S     S        05 44 05.0 -3.9
      comp=Z,490nm,2.7s
MILM  Milestii Mici       74.23 315 ⇑P      P        05 34 55.9 -0.7
MILM  Milestii Mici       74.23 315d iP     P        05 34 55.0 -1.7
MILM                                i *PP   pP       05 35 50.0 -6.0
MILM                                i S     S        05 44 05.0 -3.9
MILM                                e                05 44 44.0
MILM                                 pmax   pmax
      comp=Z,230nm,1.5s
MILM                                 smax   smax
      comp=N,500nm,2.7s
MILM                                 MLR    MLR
      comp=Z,1µm,15.0s
SKAG  Skagway             74.30  31  IAmb   IAmb     05 35 08.2
      comp=Z,275nm,1.0s
SKAG  Skagway             74.30  31  P      P        05 34 57.8 +1.0
      baz=294,SNR=80
SKAG                                 S      S        05 44 11.3 +2.2
      baz=294
STOK  Stokkvaagen         74.34 337 eP      P        05 34 56.5 -0.5
KHLU  Kahalu`u            74.51  75  IAmb   IAmb     05 35 00.3
      comp=Z,234nm,1.3s
HUH   Hualalai            74.53  75  IAmb   IAmb     05 35 00.8
      comp=Z,403nm,1.7s
LEOM  Leova               74.75 314 ⇑P      P        05 34 59.3 -0.4
POHA  Pohakuloa           74.77  75  P      P        05 35 01.3 +0.8
POHA                                 IAmb   IAmb     05 35 07.8
      comp=Z,161nm,0.8s
POHA  Pohakuloa           74.77  75  P      P        05 35 01.5 +1.0
MMPY  Sheldon Lake,       74.77  27  P      P        05 35 00.1 +0.5
      baz=296,SNR=53
MMPY                                 S      S        05 44 15.2 +0.7
      baz=296
MLOA  Mauna Loa Obse      74.81  75  IAmb   IAmb     05 35 11.4
      comp=Z,162nm,0.9s
TLCR                      74.84 313 ⇓P      P        05 34 59.9 -0.3
PBUR  Paburge             74.87 325 eP      P        05 34 60.0 -0.2
HMH   Humu‘ula Sheep      74.87  75  IAmb   IAmb     05 35 11.9
      comp=Z,360nm,1.4s
BESE  Bessie Mountai      74.88  32  IAmb   IAmb     05 35 12.7
      comp=Z,190nm,1.1s
JURR  Jurilovca           74.95 313 ⇑P      P        05 35 00.8  0.0
SUW   Suwalki             74.98 323 eP      P        05 35 00.3 -0.5
SUW                                 ePcP    PcP      05 35 12.7 -0.7
SUW                                 epP     pP       05 35 58.9 -1.4
SUW                                 eS      S        05 44 14.4 -2.5
SUW                                 eL      L        06 13 04.6
      comp=Z,3µm,19.2s
SUW   Suwalki             74.98 323 eP      P        05 35 00.2 -0.6
VASR  Vaslui              74.99 315 ⇑P      P        05 35 00.7 -0.3
MLH   Mauna Loa           74.99  75  IAmb   IAmb     05 35 13.7
      comp=Z,194nm,0.8s
AFI   Afiamalu            75.01 114  P      P        05 35 03.7 +2.0
AFI                                  IAmb   IAmb     05 35 04.8
      comp=Z,284nm,1.4s
AFI   Afiamalu            75.01 114  P      P        05 35 03.7 +2.0
AFI                                  pmax   pmax
      comp=Z,284nm,1.4s
AFI   Afiamalu            75.01 114  P      P        05 35 03.2 +1.5
HLP   Hilina Pali         75.14  76  IAmb   IAmb     05 35 04.9
      comp=Z,308nm,1.0s
P33M  Teslin, Yukon       75.14  30  IAmb   IAmb     05 35 09.1
      comp=Z,317nm,1.4s
P33M  Teslin, Yukon       75.14  30  P      P        05 35 02.4 +0.6
      baz=295,SNR=89
P33M                                 S      S        05 44 20.0 +1.3
      baz=295
DRBR  Darabani            75.16 317 ⇓P      P        05 35 00.9 -1.1
PUH   Pauahi              75.19  75  IAmb   IAmb     05 35 14.2
      comp=Z,276nm,1.0s
SCTR  Scanteiesti         75.20 314 ⇓P      P        05 35 02.3  0.0
VARL  Varlezi             75.22 314 ⇑P      P        05 35 02.1 -0.2
TPGR  Topolog             75.22 313 ⇓P      P        05 35 02.0 -0.4
BIR   Birlad              75.23 314 ⇑P      P        05 35 02.2 -0.2
JIS   Juneau Island       75.23  32  IAmb   IAmb     05 35 09.9
      comp=Z,177nm,0.9s
CSS   Mathiatis           75.23 302  IAmb   IAmb     05 35 08.3
      comp=Z,244nm,0.8s
DAG   Danmarks Havn       75.26 351 i P     P        05 35 00.8 -1.3
DAG                                  IAmb   IAmb     05 35 09.9
      comp=Z,62nm,0.8s
SIT   Sitka               75.27  34  IAmb   IAmb     05 35 10.1
      comp=Z,242nm,1.0s
SIT   Sitka               75.27  34  P      P        05 35 03.5 +1.1
      baz=294,SNR=25
SIT                                  S      S        05 44 21.9 +2.0
      baz=294
CFR   Carcaliu            75.29 313 ⇑P      P        05 35 01.9 -0.8
TIRR  Tirgusor            75.37 312 ⇑P      P        05 35 02.6 -0.6
TIRR  Tirgusor            75.37 312  IAmb   IAmb     05 35 09.0
      comp=Z,361nm,1.1s
SCHL  Schela              75.38 314 ⇑P      P        05 35 03.1 -0.1
UPP   Uppsala             75.38 330 eP      P        05 35 02.5 -0.5
SLCR  Slobozia Conac      75.38 314 ⇑P      P        05 35 03.5 +0.2
IZVR  Izvoarele           75.40 314 ⇑P      P        05 35 03.4  0.0
GHRR                      75.44 314 ⇑P      P        05 35 04.2 +0.5
TUDR                      75.45 314 ⇑P      P        05 35 03.9 +0.3
MFTR  Murfatlar           75.47 312 ⇑P      P        05 35 04.0 +0.3
MANR  Mangalia            75.48 312 ⇑P      P        05 35 04.1 +0.2
NSS   Namsos              75.59 335⇓iP      P        05 35 02.9 -1.2
NSS                                  IVmB_BB         05 35 08.3
      comp=Z,2µm,2.7s
NSS                                 eS      S        05 44 20.5 -2.7
HARR  Harsova             75.61 313 ⇑P      P        05 35 04.9 +0.4
BORA  Eskisehir           75.61 307  IAmb   IAmb     05 35 10.2
      comp=Z,189nm,1.1s
PANC  Panciu              75.68 314 ⇑P      P        05 35 05.5 +0.5
TESR  Tescani             75.77 315 ⇓P      P        05 35 05.1 -0.4
ODBI  Odobesti            75.78 314 ⇑P      P        05 35 06.3 +0.7
PSN   Preselentsi         75.81 312 i P     P        05 35 06.1 +0.4
ATD   Arta Tunnel         75.87 276  P      P        05 35 09.6 +2.9
      SNR=7.7
ATD   Arta Tunnel         75.87 276 eP      P        05 35 07.2 +0.5
ATD   Arta Tunnel         75.87 276 eP      P        05 35 07.2 +0.5
ICOR  Ion Corvin          75.90 312 ⇑P      P        05 35 07.0 +0.8
BIZ   Bicaz               75.95 315 ⇓P      P        05 35 06.4 -0.1
VRI   Vrincioaia          75.96 314 ⇓P      P        05 35 06.8 +0.2
GRER                      75.98 314 ⇑P      P        05 35 07.0 +0.4
PLOR  Plostina            76.01 314 ⇑P      P        05 35 07.4 +0.5
BISRR Bisoca              76.09 314 ⇑P      P        05 35 07.9 +0.5
LVV   L'vov               76.12 319 eP      P        05 35 07.0 -0.4
LVV                                 e                05 36 04.1
LVV                                 e                05 39 48.3
LVV                                 eS      S        05 44 25.8 -3.8
LVV                                 e                05 49 34.7
LVV                                 e                05 52 50.1
LVV                                  pmax   pmax
      comp=Z,300nm,1.7s
PGOR  Pogoanele           76.15 313 ⇑P      P        05 35 07.9 +0.2
ISK   Istanbul-Kandi      76.17 309  P      P        05 35 07.0 -0.8
BURAR Bucovina Array      76.25 316 ⇑P      P        05 35 08.8 +0.4
COVR  Voineasa-Covas      76.30 314 ⇑P      P        05 35 07.9 -0.6
ISP   Isparta             76.31 305  IAmb   IAmb     05 35 13.8
      comp=Z,287nm,1.3s
ISR   Istrita             76.36 314 ⇑P      P        05 35 09.9 +1.0
NEHR  Nehoiu              76.40 314 ⇑P      P        05 35 10.0 +0.9
VIKU  Vikbolandet         76.41 329 eP      P        05 35 08.4 -0.3
LEHL  Lehliu              76.42 313 ⇑P      P        05 35 08.8 -0.3
PRD   Provadia            76.52 311 i P     P        05 35 08.7 -1.0
TGTN  Hyland Airport      76.53  28  P      P        05 35 10.0 +0.4
      baz=299,SNR=32
TGTN                                 S      S        05 44 33.6 -0.1
      baz=299
MLR   Muntele Rosu        76.61 314 ⇓P      P        05 35 10.0 -0.4
MLR   Muntele Rosu        76.61 314  IAmb   IAmb     05 35 16.4
      comp=Z,369nm,1.3s
SECR                      76.70 314 ⇑P      P        05 35 11.7 +0.9
DOPR  Dopca               76.78 315 ⇓P      P        05 35 11.5 +0.3
TBLU  Trondheim           76.89 335⇓iP      P        05 35 10.2 -1.2
TBLU                                 IVmB_BB         05 35 15.5
      comp=Z,3µm,1.8s
TBLU                                eS      S        05 44 31.7 -5.6
S34M  Telegraph Cree      76.94  32  P      P        05 35 12.7 +0.8
      baz=297,SNR=38
S34M                                 S      S        05 44 42.1 +4.0
      baz=297
RAZG  Razgrad             76.98 312 ⇑P      P        05 35 11.9 -0.4
WTLY  Watson Lake, Y      76.98  29  P      P        05 35 12.6 +0.6
      baz=299
ARCR  ARCALIA             77.00 316 ⇑P      P        05 35 12.5 +0.1
WRAK  Wrangell Islan      77.03  33  P      P        05 35 12.9 +0.6
      baz=296,SNR=32
WRAK                                 S      S        05 44 42.2 +3.2
      baz=296
CRAG  Craig               77.06  34  P      P        05 35 13.3 +0.9
      baz=296,SNR=15
CRAG                                 S      S        05 44 42.4 +3.0
      baz=296
SGRR  Singureni           77.08 313 ⇑P      P        05 35 12.0 -0.8
BEL   Belsk               77.19 321 eP      P        05 35 13.5 +0.2
BEL                                 eS      S        05 44 41.3 +0.3
VOIR                      77.21 314 ⇑P      P        05 35 13.4 -0.3
DLBC  Dease Lake          77.22  31  P      P        05 35 14.5 +1.1
      baz=298,SNR=85
DLBC                                 S      S        05 44 45.2 +3.9
      baz=298
BMR   Baia Mare           77.30 317 ⇓P      P        05 35 14.8 +0.8
OUZ   Omahuta             77.35 139  IAmb   IAmb     05 35 22.3
      comp=Z,389nm,1.5s
JMB   Yambol              77.35 311 i P     P        05 35 14.9 +0.5
MDB   Medias              77.36 315 ⇑P      P        05 35 14.4  0.0
KULA  Kula-Manisa         77.41 307  P      P        05 35 14.0 -0.9
NC303 NORSAR Array S      77.47 332  IAmb   IAmb     05 35 23.0
      comp=Z,341nm,1.1s
SZH   Strazhica           77.48 312 i P     P        05 35 14.9 -0.2
EDRB  Edirne              77.48 310  P      P        05 35 14.7 -0.4
STFAR Stefanesti-Arg      77.49 314 ⇑P      P        05 35 14.5 -0.7
DBG   Daneborg            77.52 350⇓iP      P        05 35 13.9 -0.8
DBG                                  IAmb   IAmb     05 35 19.5
      comp=Z,177nm,1.5s
KOLS  Kolonicke sedl      77.53 318 eP      P        05 35 15.2 -0.1
KOLS  Kolonicke sedl      77.53 318 eP      P        05 35 15.2 -0.1
BALB  Balikesir           77.54 308  IAmb   IAmb     05 35 21.1
      comp=Z,248nm,1.3s
WRGLY Wrigley             77.59  25  P      P        05 35 15.4 +0.1
      baz=302,SNR=5.7
WRGLY                                S      S        05 44 46.8 +1.9
      baz=302
COPA  Copaceanca          77.61 313 ⇑P      P        05 35 15.0 -0.8
HUMR  Humele              77.61 313 ⇑P      P        05 35 15.7 -0.1
CJR   Cluj-Napoca         77.62 316 ⇑P      P        05 35 16.9 +1.0
CBBR  Cluj-Babes-Bol      77.63 316 ⇑P      P        05 35 16.6 +0.7
NB2   NORSAR Subarra      77.63 332  P      P        05 35 14.6 -1.0
      comp=Z,362nm,1.2s,baz=62,slow=5.6
NB2   NORSAR Subarra      77.63 332  P      P        05 35 14.6 -1.0
      baz=62,slow=5.6
NOA   NORSAR Array B      77.63 332  P      P        05 35 14.7 -0.9
      comp=Z,51nm,0.6s,baz=54,slow=5.5,SNR=165
NOA                                  pP     pP       05 36 19.2 +3.7
      comp=Z,56nm,0.9s,baz=58,slow=5.7,SNR=4.4
NOA                                  PKKPbc PKKPbc   05 54 15.7 -1.9
      comp=Z,1.1nm,0.6s,baz=241,slow=2.4,SNR=4.2
      comp=Z,51nm,0.6s
UZH   Uzhgorod            77.64 318c iP     P        05 35 15.5 -0.4
UZH                                 e*PP    pP       05 36 18.5 +2.8
UZH                                 e*SP    sP       05 36 40.5 -2.4
UZH                                 i S     S        05 44 45.0 -1.0
UZH                                  pmax   pmax
      comp=Z,16nm,0.8s
NC602 NORSAR Array S      77.65 332⇓iP      P        05 35 14.6 -1.1
NC602                                IVmB_BB         05 35 19.9
      comp=Z,2µm,1.8s
NC602                               eS      S        05 44 43.5 -2.1
T35M  Bob Quinn           77.80  32  P      P        05 35 17.7 +1.1
      baz=298,SNR=34
T35M                                 S      S        05 44 53.4 +6.0
      baz=298
MESR  Meseseni            77.85 316 ⇑P      P        05 35 16.8 -0.3
NAO01 NORSAR Array S      77.87 332  IAmb   IAmb     05 35 24.9
      comp=Z,257nm,1.0s
JMIC  Jan Mayen           77.88 345⇓iP      P        05 35 16.8 +0.1
JMIC                                eS      S        05 44 49.0 +1.2
TULEG Thule               77.97   3  IAmb   IAmb     05 35 25.8
      comp=Z,205nm,1.2s
TULEG Thule               77.97   3 i P     P        05 35 16.4 -0.8
DOMB  Dombas              77.99 334⇓iP      P        05 35 17.1 -0.5
DOMB                                 IVmB_BB         05 35 20.1
      comp=Z,2µm,0.4s
DOMB                                eS      S        05 44 46.8 -2.6
CRVS  Cervenica-Dubn      78.03 319 eP      P        05 35 18.3 +0.2
CRVS                                 pmax   pmax
      comp=Z,811nm,1.8s
CRVS  Cervenica-Dubn      78.03 319 eP      P        05 35 18.2 +0.2
CRVS                                epP     pP       05 36 19.7 +1.7
LOT   Lotru               78.03 315 ⇑P      P        05 35 17.9 -0.4
DRGR                      78.15 316 ⇑P      P        05 35 18.1 -0.7
VLAD  Vladila             78.21 313 ⇑P      P        05 35 18.7 -0.3
YER   Yerkesik            78.22 305  P      P        05 35 18.9 -0.5
MOL   Molde               78.30 335⇓iP      P        05 35 19.1 -0.1
MOL                                  IVmB_BB         05 35 24.4
      comp=Z,3µm,1.7s
MOL                                 eS      S        05 44 50.8 -1.7
ENEZ  Enez                78.33 310  P      P        05 35 19.2 -0.6
ALN   Alexandroupoli      78.34 310  P      P        05 35 18.8 -1.1
DEV   Deva                78.40 315 ⇓P      P        05 35 20.6 +0.4
OSL   Oslo                78.41 331⇓iP      P        05 35 19.3 -0.5
H02S1 DAWSON INLET T      78.41  36  P      P        05 35 19.7 -0.2
      SNR=68
NIE   Niedzica            78.50 319 eP      P        05 35 21.2 +0.6
NIE                                 ePcP    PcP      05 35 26.2 -2.6
NIE                                 eS      S        05 44 54.4 -0.9
GKP   Gorka Klasztor      78.51 324 eP      P        05 35 20.4 -0.1
GKP                                 eS      S        05 44 54.2 -0.8
GKP                                 eL      L        06 14 54.9
      comp=Z,4µm,18.9s
GKP   Gorka Klasztor      78.51 324 eP      P        05 35 20.2 -0.3
EZN   Ezine               78.57 309  P      P        05 35 20.2 -0.9
RDO   Rodhopi             78.59 310  P      P        05 35 20.3 -0.9
BLCB  Balcova             78.63 307  P      P        05 35 20.7 -0.8
GZR   Gura Zlata          78.69 315 ⇑P      P        05 35 21.6 -0.2
DEL   Delary              78.71 328 eP      P        05 35 20.9 -0.6
SRE   Strehaia            78.72 314 ⇑P      P        05 35 21.7 -0.2
AKN   Aaknes              78.73 334⇓iP      P        05 35 21.5 -0.1
AKN                                 eS      S        05 44 56.4 -0.8
PLD   Plovdiv             78.78 311 i P     P        05 35 22.4 +0.2
KECS  Kecovo              78.79 318 eP      P        05 35 22.2  0.0
KECS                                 pmax   pmax
      comp=Z,141nm,1.3s
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KECS	Kecovo	78.79	318	eP	P	05 35 22.2	0.0
PRK	Paraskevi	78.84	308	P	P	05 35 22.7	+0.1
SMTH	Samothraki Isl	78.87	309	P	P	05 35 21.4	-1.4
DAT	Datca	78.90	305	P	P	05 35 21.6	-1.5
MPEP	Malo Peshtene	78.91	313	i P	P	05 35 23.3	+0.4
DESE	Dese	78.92	277	eP	P	05 35 23.2	-0.6
DESE	Dese	78.92	277	eP	P	05 35 23.2	-0.6
RZN	Rozhen	78.94	311	i P	P	05 35 23.1	-0.3
PGB	Panagyurishte	78.96	312	i P	P	05 35 23.3	0.0
BODT	Bodrum	78.96	306	P	P	05 35 22.4	-1.0
SIRR	Siria	79.03	316	⇑P	P	05 35 23.4	-0.1
SKAR	Skarslia	79.03	333	⇓iP	P	05 35 23.1	-0.3
SKAR				IVmB_BB		05 35 28.5	
	comp=Z,2µm,2.0s						
SKAR				eS	S	05 45 00.1	-0.3
KONO	Kongsberg	79.04	332	P	P	05 35 22.9	-0.4
KONO	Kongsberg	79.04	332	P	P	05 35 22.9	-0.4
KONO				pmax	pmax		
	comp=Z,91nm,1.1s						
KONO	Kongsberg	79.04	332	⇓iP	P	05 35 22.3	-1.0
KONO				IVmB_BB		05 35 27.9	
	comp=Z,1µm,1.8s						
KONO				eS	S	05 44 57.7	-2.8
SMG	Samos	79.05	306	P	P	05 35 22.8	-1.0
PUNG	Punghina	79.06	314	⇑P	P	05 35 23.7	0.0
LANS	Liptovska Anna	79.11	319	eP	P	05 35 24.7	+0.8
LANS				pmax	pmax		
	comp=Z,65nm,1.4s						
LANS	Liptovska Anna	79.11	319	eP	P	05 35 24.7	+0.8
HERR	Herculane	79.14	315	⇓P	P	05 35 24.0	-0.1
BZS	Buzias	79.33	315	⇑P	P	05 35 24.9	-0.2
CHOS	Chios island	79.34	307	P	P	05 35 23.9	-1.6
LIA	Limnos Island	79.35	309	P	P	05 35 26.4	+1.1
KAVA	Kavala	79.36	310	P	P	05 35 24.5	-0.9
THAS	Thassos island	79.38	310	P	P	05 35 24.0	-1.5
PSZ	Piszkesteto	79.40	318	⇑P	P	05 35 24.7	-0.8
PSZ	Piszkesteto	79.40	318	IAmb	IAmb	05 35 32.6	
	comp=Z,337nm,1.5s						
PSZ	Piszkesteto	79.40	318	P	P	05 35 25.3	-0.3
GRNB	Grenville Isla	79.44	35	IAmb	IAmb	05 35 32.5	
	comp=Z,406nm,1.7s						
BSZH	Besenyszg	79.44	317	⇑P	P	05 35 24.9	-0.8
BSZH	Besenyszg	79.44	317	P	P	05 35 25.9	+0.2
BLKB	Belogradchik	79.50	313	⇓P	P	05 35 25.6	-0.6
VTS	Vitosha	79.55	312	⇓P	P	05 35 26.8	+0.2
VTS	Vitosha	79.55	312	i P	P	05 35 26.9	+0.3
OKC	Ostrava-Krasne	79.57	320	eP	P	05 35 25.9	-0.4
OKC				e		05 36 21.9	
OKC	Ostrava-Krasne	79.57	320	eP	P	05 35 25.9	-0.4
OKC				ex	x	05 36 21.9	
OKC				eS	S	05 44 54.0	-12
HYA	Hoyanger	79.62	334	⇓iP	P	05 35 26.0	-0.4
MMB	Musomiste	79.65	311	i P	P	05 35 26.5	-0.5
NVR	Nevrokopi	79.66	311	P	P	05 35 26.0	-1.1
RER	Riviere de l'E	79.67	241	IAmb	IAmb	05 35 33.2	
	comp=Z,232nm,0.9s						
RER	Riviere de l'E	79.67	241	P	P	05 35 28.6	+1.3
KARP	Karpathos	79.68	304	P	P	05 35 26.3	-1.0
KARP	Karpathos	79.68	304	IAmb	IAmb	05 35 32.7	
	comp=Z,397nm,1.2s						
VYHS	Vyhne	79.77	319	eP	P	05 35 28.0	+0.5
VYHS				pmax	pmax		
	comp=Z,108nm,0.8s						
VYHS	Vyhne	79.77	319	eP	P	05 35 28.0	+0.5
VYHS				epP	pP	05 36 28.5	+0.8
KOKK	Kokkinochori,	79.79	310	P	P	05 35 26.7	-1.0
COP	Copenhagen	79.80	327	i P	P	05 35 27.3	-0.1
COP				IAmb	IAmb	05 35 35.8	
	comp=Z,439nm,0.8s						
FOO	Floro	79.83	334	⇓iP	P	05 35 26.8	-0.6
FOO				IVmB_BB		05 35 32.6	
	comp=Z,2µm,1.4s						
FOO				eS	S	05 45 06.7	-1.9
MORC	Moravsky Berou	79.94	320	⇑P	P	05 35 28.0	-0.5
MORC	Moravsky Berou	79.94	320	⇓iP	P	05 35 28.3	-0.1
MORC				epP	pP	05 36 27.8	-0.8
MORC				eS	S	05 45 07.9	-2.5
SRS	Serrai	79.94	311	P	P	05 35 27.3	-1.3
MAUC	Maruska	79.97	320	eP	P	05 35 28.8	+0.2
MAUC				ex	x	05 36 24.5	
MAUC				eS	S	05 45 02.4	-8.3
KKB	Krupnik	79.97	312	i P	P	05 35 28.4	-0.3
KOLL	Kolacno	79.99	319	eP	P	05 35 29.4	+0.8
KOLL				epP	pP	05 36 29.6	+0.7
OUR	Ouranopolis	80.00	310	P	P	05 35 27.8	-1.0
OVD	Ostervraa, Den	80.01	329	IAmb	IAmb	05 35 34.8	
	comp=Z,404nm,1.1s						
LLD	Lille Linde	80.08	327	eP	P	05 35 28.9	-0.1
LLD				IAmb	IAmb	05 35 37.1	
	comp=Z,158nm,0.8s						
BUD	Budapest	80.12	318	P	P	05 35 29.1	-0.2
BUD				PP	pP	05 36 29.1	-0.5
BOVS	Bovan	80.13	314	⇑P	P	05 35 29.0	-0.5
XMAS	Kiritimati	80.14	92	P	P	05 35 31.8	+1.7
XMAS				IAmb	IAmb	05 35 32.7	
	comp=Z,212nm,1.1s						
XMAS	Kiritimati	80.14	92	P	P	05 35 31.5	+1.5
KSP	Ksiaz	80.15	322	eP	P	05 35 29.6	+0.2
KSP				ePcP	PcP	05 35 34.0	-1.9
KSP				eS	S	05 45 10.3	-2.1
KSP				eL	L	06 14 55.4	
	comp=Z,2µm,24.0s						
ODD1	Odda	80.16	333	eP	P	05 35 28.8	-0.6
SOH	Sokhos	80.23	311	P	P	05 35 28.6	-1.5
KRLC	Kraliky	80.24	321	eP	P	05 35 29.8	-0.2
KRLC				e		05 36 28.3	
KRLC				eS	S	05 45 08.3	-5.2
KRLC	Kraliky	80.24	321	eP	P	05 35 29.8	-0.2
KRLC				epP	pP	05 36 28.3	-2.0
KRLC				eS	S	05 45 08.3	-5.2
SUE	Sulen	80.25	334	⇓iP	P	05 35 29.4	-0.3
SUE				eS	S	05 45 12.5	-0.5
HOMB	Homborsund	80.27	331	⇓iP	P	05 35 28.9	-0.9
HOMB				IVmB_BB		05 35 34.2	
	comp=Z,1µm,2.3s						
HOMB				eS	S	05 45 09.7	-3.5
JAVC	Velka Javorina	80.29	320	⇓iP	P	05 35 31.5	+1.2
JAVC				epP	pP	05 36 30.0	-0.6
JAVC				eS	S	05 45 14.5	+0.4
OSTC	Ostas	80.33	322	eP	P	05 35 29.9	-0.5
OSTC				ex	x	05 36 28.3	
OSTC				eS	S	05 45 11.7	-2.7
DPC	Dobruska-Polom	80.37	321	eP	P	05 35 30.6	-0.1
DPC				e		05 36 28.3	
DPC				eS	S	05 45 06.2	-8.6
DPC	Dobruska-Polom	80.37	321	eP	P	05 35 30.6	-0.1
DPC				epP	pP	05 36 28.3	-2.7
DPC				eS	S	05 45 06.2	-8.6
PAIG	Paliouri	80.39	310	P	P	05 35 29.5	-1.4
SRO	Srobarova	80.39	318	eP	P	05 35 31.2	+0.4
SRO	Srobarova	80.39	318	eP	P	05 35 31.2	+0.4
KNT	Kendrikon	80.40	311	P	P	05 35 29.7	-1.3
CHVC	Chvalec	80.41	322	eP	P	05 35 30.7	-0.1
CHVC				ex	x	05 36 28.3	
CHVC				eS	S	05 45 09.0	-6.2
ASK	Askoy	80.42	333	⇓iP	P	05 35 30.1	-0.5
BER	Bergen	80.42	333	⇓iP	P	05 35 30.3	-0.3
BER				IVmBBB		05 35 36.1	
	comp=Z,2µm,0.9s						
BER				eS	S	05 45 13.5	-1.2
UPC	Upice	80.47	322	eP	P	05 35 31.0	-0.1
UPC				eS	S	05 45 16.4	+0.6
UPC	Upice	80.47	322	eP	P	05 35 31.0	-0.1
UPC				ex	x	05 36 20.6	
UPC				eS	S	05 45 16.4	+0.6
HORT	Hortiatis	80.50	310	P	P	05 35 29.9	-1.7
BLS5	Blasjo	80.51	332	⇓iP	P	05 35 30.7	-0.5
BLS5				eS	S	05 45 17.1	+1.3
SBV	Sambava	80.54	250	P	P	05 35 32.5	+0.4
	SNR=5.7						
SBV	Sambava	80.54	250	P	P	05 35 37.0	+4.9
AAE	Adis Abeba	80.55	276	⇓eP	P	05 35 34.6	+2.1
AAE	Adis Abeba	80.55	276	⇓eP	P	05 35 34.6	+2.1
ZKR	Zakros	80.56	304	P	P	05 35 31.1	-0.8
THE	Thessaloniki	80.58	310	P	P	05 35 30.2	-1.7
SMOL	Smolenice	80.60	319	eP	P	05 35 32.7	+0.8
SMOL				pmax	pmax		
	comp=Z,92nm,1.3s						
SMOL	Smolenice	80.60	319	eP	P	05 35 32.7	+0.8
SMOL				epP	pP	05 36 33.9	+1.7
SANT	Santorini	80.60	306	⇑P	P	05 35 30.6	-1.6
SANT	Santorini	80.60	306	P	P	05 35 29.6	-2.6
SANT	Santorini	80.60	306	IAmb	IAmb	05 36 35.2	
	comp=Z,214nm,1.1s						
GOET	G??ttrup	80.61	329	IAmb	IAmb	05 35 38.9	
	comp=Z,196nm,0.7s						
THR3	Thira Island,	80.63	306	P	P	05 35 30.6	-1.6
CSKK	Cskako	80.63	318	P	P	05 35 31.3	-0.8
KYMI	Kymi, Euboea I	80.64	308	P	P	05 35 30.7	-1.6
KARY	Karystos	80.65	308	P	P	05 35 30.9	-1.4
FRGS	Fruska Gora	80.68	316	⇓iP	P	05 35 32.0	-0.4
FURI	Furi	80.68	275	eP	P	05 35 35.5	+2.1
FURI	Furi	80.68	275	eP	P	05 35 35.5	+2.1
QRZ	Quartz Range	80.68	144	IAmb	IAmb	05 35 39.0	
	comp=Z,155nm,0.7s						
VRAC	Vranov	80.71	320	⇓iP	P	05 35 32.8	+0.3
VRAC				epP	pP	05 36 30.8	-2.0
VRAC				eS	S	05 45 16.5	-1.8
MODS	Modra-Piesok	80.75	319	eP	P	05 35 33.0	+0.3
MODS				pmax	pmax		
	comp=Z,534nm,1.7s						
MODS	Modra-Piesok	80.75	319	eP	P	05 35 33.0	+0.3
MODS				epP	pP	05 36 33.9	+0.8
SNART	Snartemo	80.80	331	⇓iP	P	05 35 32.2	-0.5
SNART				i S	S	05 45 14.1	-4.7
GRG	Griva	80.83	311	P	P	05 35 31.9	-1.4
MORH	Mrgy, Hungar	80.93	317	⇓iP	P	05 35 33.3	-0.4
MORH	Mrgy, Hungar	80.93	317	P	P	05 35 33.2	-0.4
MORH				PP	pP	05 36 34.2	+0.2
ZST	Bratislava	80.94	319	eP	P	05 35 33.8	+0.2
ZST				pmax	pmax		
	comp=Z,1µm,2.5s						
ZST	Bratislava	80.94	319	eP	P	05 35 33.8	+0.2
ZST				epP	pP	05 36 38.1	+4.1
KRUC	Moravsky	80.94	320	⇓iP	P	05 35 33.7	0.0
KRUC				epP	pP	05 36 32.3	-1.7
KRUC				eS	S	05 45 19.3	-1.4
MUD	Monsted U'grnd	80.95	329	⇓iP	P	05 35 33.4	-0.1
MUD				IAmb	IAmb	05 35 42.0	
	comp=Z,188nm,1.1s						
XOR	Xorichti	80.97	309	P	P	05 35 32.1	-1.9
NEO	Neokhori	80.97	309	P	P	05 35 32.1	-1.9
DION	Dionisos Attik	80.99	308	P	P	05 35 31.7	-2.5
SCO	Scoresbysund	81.03	349		pP	05 36 33.9	-0.2
SCO	Scoresbysund	81.03	349	⇓iP	P	05 35 33.7	0.0
SCO				IAmb	IAmb	05 35 39.8	
	comp=Z,299nm,1.6s						
DIVS	Divibare	81.04	315	⇓iP	P	05 35 33.7	-0.7
TIH	Tihany	81.07	318	P	P	05 35 34.7	+0.3
TEKS	Tekeris	81.13	315	⇓iP	P	05 35 33.5	-1.3
KMY	Karmoy	81.14	332	i P	P	05 35 33.7	-0.7
KMY				IVmBBB		05 35 40.1	
	comp=Z,2µm,1.4s						
LIT	Litokhoron	81.14	310	P	P	05 35 33.4	-1.5
ATHU	Athens Univers	81.14	308	P	P	05 35 32.1	-2.9
MPLH	Magyarpolny	81.16	318	P	P	05 35 34.3	-0.6
MPLH				PP	pP	05 36 34.9	-0.4
EGYH	Egyhazaskeszo	81.17	318	P	P	05 35 34.7	-0.2
VLY	Voula,Athens	81.19	308	P	P	05 35 32.7	-2.5
ATH	Athens Observa	81.19	308	P	P	05 35 32.9	-2.3
FOZ	Fox Glacier	81.26	147	IAmb	IAmb	05 35 40.7	
	comp=Z,209nm,0.8s						
PVCC	Panska Ves	81.26	322	eP	P	05 35 35.6	+0.3
PVCC				e		05 36 32.2	
PVCC				eS	S	05 45 19.9	-4.0
PVCC	Panska Ves	81.26	322	eP	P	05 35 35.6	+0.3
PVCC				epP	pP	05 36 32.2	-3.5
PVCC				eS	S	05 45 19.9	-4.0
YKA	Yellowknife Ar	81.31	23	P	P	05 35 35.0	-0.2
	comp=Z,100nm,0.6s,baz=312,slow=5.0,SNR=552						
YKA				pP	pP	05 36 37.3	+1.6
	comp=Z,45nm,0.9s,baz=312,slow=4.9,SNR=2.7						
YKA				S	S	05 45 22.8	-1.1
	comp=Z,3.7nm,0.9s,baz=315,slow=8.0,SNR=5.7						
YKA				PKKPbc	PKKPbc	05 54 06.1	-3.5
	comp=Z,6.3nm,0.6s,baz=127,slow=2.5,SNR=38						
YKA				PKPPKP	P'P'df	06 02 11.8	-5.9
	comp=Z,1.4nm,0.7s,baz=151,slow=2.3,SNR=6.7						
	comp=Z,100nm,0.6s						
KOVH	Kovagotottos	81.32	317	P	P	05 35 35.5	-0.2
KOVH				PP	pP	05 36 36.1	0.0
SUMG	Summit	81.33	354	IAmb	IAmb	05 35 42.1	
	comp=Z,398nm,1.5s						
SUMG	Summit	81.33	354	⇓iP	P	05 35 35.6	-0.2
SUMG				IAmb	IAmb	05 35 41.6	
	comp=Z,454nm,1.6s						
KSTL	Kastelli Herak	81.34	305	P	P	05 35 33.9	-2.1
TREC	Trest	81.35	321	eP	P	05 35 36.1	+0.3
TREC				eS	S	05 45 23.5	-1.4
TREC	Trest	81.35	321	eP	P	05 35 36.1	+0.3
TREC				epP	pP	05 36 30.9	-5.4
TREC				eS	S	05 45 23.5	-1.4
ATAL	Atalanti	81.37	309	P	P	05 35 33.6	-2.6
LKR	Lokris	81.41	309	P	P	05 35 32.9	-3.4
NNZ	Nelson	81.42	144	IAmb	IAmb	05 35 44.3	
	comp=Z,151nm,0.8s						
SJES	Sjenica	81.43	314	⇓iP	P	05 35 36.5	0.0
BRG	Berggiesshubel	81.44	323	⇓iP	P	05 35 36.1	-0.1
BRG				Amp		05 35 43.0	
	comp=Z,123nm,1.0s						
BRG				ex	x	05 35 57.0	
BRG				Amp		05 35 59.6	
	comp=Z,32nm,0.7s						
BRG				pP	pP	05 36 38.7	+2.0
BRG				Amp		05 36 40.6	
	comp=Z,46nm,1.3s						
BRG	Berggiesshubel	81.44	323	SS	SS	05 50 49.0	+1.7
BRG				PKKP		05 54 08.5	
BRG				Amp		05 54 11.0	
	comp=Z,4.0nm,0.8s						
BRG				Amp		06 16 47.0	
	comp=Z,3.1nm,16.7s						
BRG				Amp		06 16 50.0	
	comp=N,1.8nm,16.2s						
BRG				Amp		06 16 52.0	
	comp=E,2.0nm,17.4s						
BRG	Berggiesshubel	81.44	323	⇓iP	P	05 35 36.1	-0.1
BRG						05 36 38.6	
BRG				S	S	05 45 25.0	-0.7
BRG				SS	SS	05 50 49.0	+1.7
BRG						05 54 08.5	
BRG				pmax	pmax		
	comp=Z,123nm,1.0s						
BRG				pmax	pmax		
	comp=Z,33nm,0.7s						
BRG				pmax	pmax		
	comp=Z,46nm,1.3s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRG				MLR	MLR		
	comp=Z,3µm,16.7s						
BRG				MLR	MLR		
	comp=N,2µm,16.2s						
BRG				MLR	MLR		
	comp=E,2µm,17.4s						
IDI	Anoyia	81.48	305	P	P	05 35 35.0	-1.8
SOP	Sopron	81.50	319	P	P	05 35 37.1	+0.5
SOP				PP	pP	05 36 37.0	-0.1
BBLS	Lazići	81.52	315	⇓iP	P	05 35 36.6	-0.3
KZN	Kozani	81.54	311	P	P	05 35 35.5	-1.6
PRU	Pruhonice	81.55	322	eP	P	05 35 36.7	-0.1
PRU				e		05 36 34.8	
PRU				eS	S	05 45 19.8	-7.0
PRU	Pruhonice	81.55	322	eP	P	05 35 36.7	-0.1
PRU				epP	pP	05 36 34.8	-2.5
PRU				eS	S	05 45 19.8	-7.0
THZ	Tophouse	81.55	144	IAmb	IAmb	05 35 43.0	
	comp=Z,136nm,0.7s						
FNA	Florina	81.60	311	P	P	05 35 35.5	-1.9
FNA	Florina	81.60	311	IAmb	IAmb	05 35 42.0	
	comp=Z,270nm,1.7s						
RONA	Rosalia, Austr	81.65	319	i P	P	05 35 37.2	-0.3
	comp=Z,44nm,1.6s,SNR=22						
RONA				eP	PP	05 38 47.8	+0.3
	comp=Z,23nm,1.2s						
RONA				eS	S	05 45 31.5	+3.4
	comp=Z,5.0nm,1.0s						
RONA				eP	PKKPdf	05 54 02.6	+5.5
	comp=Z,2.3nm,0.6s						
IVA	Berane	81.66	314	⇓iP	P	05 35 37.6	-0.1
RUDO	Rudo	81.66	314	eP	P	05 35 36.5	-1.1
THL	Klokotos Trika	81.70	310	P	P	05 35 35.2	-2.6
BKZ	Black Stump Fm	81.73	141	IAmb	IAmb	05 35 39.6	
	comp=Z,230nm,1.2s						
BKZ	Black Stump Fm	81.73	141	P	P	05 35 38.5	+0.7
CLL	Collm	81.73	323	IAmb	IAmb	05 35 43.4	
	comp=Z,305nm,1.4s						
CLL	Collm	81.73	323	⇓iP	P	05 35 37.4	-0.3
CLL				e*PP	pP	05 36 38.0	-0.2
CLL				eS	S	05 45 24.0	-4.6
CLL				pmax	pmax		
	comp=Z,125nm,0.6s						
CLL	Collm	81.73	323	⇓iP	P	05 35 37.4	-0.3
	comp=Z,125nm,0.6s						
CLL				epP	pP	05 36 38.0	-0.2
CLL				ePP	PP	05 38 52.0	+4.0
CLL				epPP		05 39 40.0	
CLL				epPPP		05 41 34.0	
CLL				ex	x	05 43 24.0	
CLL				eS	S	05 45 24.0	-4.6
	comp=N,2µm,22.4s						
CLL				eS	S	05 45 24.0	-4.6
	comp=E,3µm,28.1s						
CLL				eS	S	05 45 24.0	-4.6
	comp=Z,1µm,26.2s						
CLL				eSP	SPn	05 46 17.0	0.0
CLL				ePS		05 46 51.0	
CLL				esS	sS	05 47 24.0	+9.0
CLL				eSS	SS	05 50 50.0	-1.6
CLL				esSS		05 52 48.0	
CLL				ePKKPbc	PKKPbc	05 54 07.0	-1.2
CLL				ex	x	05 55 18.0	
CLL				ex	x	05 56 30.0	
CLL				ePKPPKPdf		06 02 14.0	
CLL				LmH		06 15 00.0	
	comp=N,2µm,20.7s						
CLL				LmH		06 15 00.0	
	comp=E,3µm,21.4s						
CLL				LmV		06 17 00.0	
	comp=Z,2µm,19.1s						
PVY	Plav	81.74	313	⇓iP	P	05 35 37.5	-0.6
PLE	Pljevlja	81.78	314	⇓iP	P	05 35 37.9	-0.4
PYZ	Puysegur Point	81.79	151	P	P	05 35 39.6	+1.7
CONA	Conrad Observa	81.80	319	i P	P	05 35 38.5	+0.3
	comp=Z,111nm,1.4s,SNR=69						
CONA				eP	pP	05 36 38.4	-0.4
	comp=Z,61nm,1.4s						
CONA				eS	S	05 45 34.6	+4.9
	comp=Z,6.7nm,1.2s						
CONA				eP	PKKPbc	05 54 07.6	-0.4
	comp=Z,3.0nm,0.5s						
KRND	KRANIDI	81.85	307	P	P	05 35 34.7	-3.9
MAKR	Makrakomi, Fth	81.86	309	P	P	05 35 36.7	-2.0
KOME	Kolasin	81.91	314	⇓iP	P	05 35 38.9	-0.1
BEHE	Becsehely	81.95	318	⇓iP	P	05 35 39.0	0.0
BEHE	Becsehely	81.95	318	P	P	05 35 37.3	-1.7
KPRO	Kipourio	81.98	310	P	P	05 35 37.4	-2.0
UPNV	Upernavik	81.98	360	⇓iP	P	05 35 38.3	-0.3
UPNV				IAmb	IAmb	05 35 45.1	
	comp=Z,163nm,0.9s						
RPZ	Rata Peaks	82.01	147	P	P	05 35 39.5	+0.4
PENT	Pentalofos	82.02	311	P	P	05 35 37.6	-2.0
KBN	Korca	82.07	311	P	P	05 35 38.3	-1.5
KBN	Korca	82.07	311	IAmb	IAmb	05 35 45.2	
	comp=Z,159nm,0.8s						
LBZ	Lake Benmore	82.07	148	IAmb	IAmb	05 35 47.0	
	comp=Z,206nm,1.0s						
IMMV	Iera Moni Meta	82.07	305	P	P	05 35 38.7	-1.2
EVR	Evrytania	82.13	309	P	P	05 35 38.1	-2.1
UPM	Unac-Piva	82.15	314	eP	P	05 35 39.6	-0.7
UPM	Unac-Piva	82.15	314	⇓iP	P	05 35 39.6	-0.7
GUR	Goura	82.18	308	P	P	05 35 37.8	-2.7
ANX	Ano Chora	82.19	309	P	P	05 35 38.8	-1.7
OXZ	Oxford	82.22	146	IAmb	IAmb	05 35 48.1	
	comp=Z,337nm,1.6s						
CKRC	Cesky Krumlov	82.26	321	eP	P	05 35 40.6	0.0
CKRC				ex	x	05 36 38.7	
CKRC				eS	S	05 45 33.8	-0.4
GVDS	Gavdos	82.26	305	P	P	05 35 39.6	-1.2
GVD	Gavdhos	82.26	305	P	P	05 35 39.2	-1.6
NKY	Niksic	82.27	314	⇓iP	P	05 35 40.6	-0.3
KLV	Kalavryta, Ach	82.27	308	P	P	05 35 38.5	-2.4
EFP	Efpalio	82.28	309	P	P	05 35 38.9	-1.9
PDG	Podgorica	82.28	313	⇓iP	P	05 35 40.1	-0.6
TTG	Podgorica	82.28	313	⇓iP	P	05 35 40.2	-0.5
KOGS	Kog	82.28	318	i P	P	05 35 40.0	-0.7
KOGS				i pP	pP	05 36 42.0	+0.7
KOGS				i pPP		05 39 46.6	
KOGS				eSKSac	S	05 45 31.2	-3.2
KOGS				e		05 46 22.5	
KOGS				i SS	SS	05 51 03.2	+3.2
KOGS				e		05 57 17.3	
VLI	Veliai	82.29	307	P	P	05 35 37.9	-3.1
LAKA	Lakka	82.31	309	P	P	05 35 39.1	-2.0
NKME	Niksic	82.32	314	⇓iP	P	05 35 40.6	-0.4
ARSA	Arzberg	82.33	319	i P	P	05 35 40.8	-0.2
	comp=Z,69nm,1.2s,SNR=24						
ARSA				eP	PKKPbc	05 54 06.8	+0.1
	comp=Z,7.0nm,0.6s						
KHZ	Kahutara	82.34	144	P	P	05 35 40.6	-0.3
KHZ				IAmb	IAmb	05 35 46.7	
	comp=Z,152nm,0.7s						
TIR	Tirane	82.37	312	P	P	05 35 40.7	-0.6
TIR	Tirane	82.37	312	IAmb	IAmb	05 35 47.9	
	comp=Z,224nm,1.0s						
KNDR	Palaiochora Ch	82.39	305	P	P	05 35 40.4	-1.1
ANKY	Antikythira Is	82.40	306	P	P	05 35 42.2	+0.7
KTHA	Kythira Island	82.40	306	P	P	05 35 40.9	-0.7
DRME	Dracevica, Mon	82.44	313	⇓iP	P	05 35 41.1	-0.5
DRME	Dracevica, Mon	82.44	313	⇓iP	P	05 35 41.2	-0.4
KTHR	Kythira	82.44	306	P	P	05 35 39.0	-2.8
CEME	Cevo	82.44	314	⇓iP	P	05 35 41.1	-0.6
PVO	Paravola	82.46	309	P	P	05 35 40.3	-1.5
JAN	Janina	82.46	310	P	P	05 35 39.4	-2.4
ULC	Ulcinj	82.50	313	⇓iP	P	05 35 41.1	-0.9
KHC	Kasperske Hory	82.52	321	eP	P	05 35 41.7	-0.2
KHC				eS	S	05 45 36.4	-0.5
KHC	Kasperske Hory	82.52	321	eP	P	05 35 41.7	-0.2
KHC				ex	x	05 35 56.5	
KHC				ex	x	05 36 34.2	
KHC				eS	S	05 45 36.4	-0.5
BLY	Banja Luka	82.52	316	⇓iP	P	05 35 41.7	-0.3
BRY	Bratogost	82.53	314	eP	P	05 35 41.4	-0.8
BRY	Bratogost	82.53	314	⇓iP	P	05 35 41.5	-0.8
BUM	Brajici-Budva	82.57	313	⇓iP	P	05 35 41.6	-0.8
NKC	Novy Kostel	82.58	323	eP	P	05 35 41.5	-0.7
NKC				e		05 36 38.7	
NKC				eS	S	05 45 33.5	-3.9
NKC	Novy Kostel	82.58	323	eP	P	05 35 41.5	-0.7
NKC				epP	pP	05 36 38.7	-4.2
NKC				eS	S	05 45 33.5	-3.9
GERES	GERESS Array B	82.59	321	P	P	05 35 41.9	-0.6
	comp=Z,66nm,0.8s,baz=64,slow=6.1,SNR=158						
GERES				pP	pP	05 36 45.8	+2.7
	comp=Z,21nm,0.8s,baz=61,slow=6.3,SNR=2.9						
GERES				PKKPbc	PKKPbc	05 54 05.0	-1.3
	comp=Z,4.1nm,0.6s,baz=230,slow=2.5,SNR=21						
GERES				PKPPKP	P'P'df	06 02 10.2	-4.7
	comp=Z,0.3nm,0.4s,baz=151,slow=3.0,SNR=3.7						
	comp=Z,66nm,0.8s						
BFZ	Birch Farm	82.61	142	IAmb	IAmb	05 35 43.3	
	comp=Z,329nm,1.3s						
BFZ	Birch Farm	82.61	142	P	P	05 35 42.6	+0.3
DRO	Drossia	82.62	308	P	P	05 35 41.4	-1.3
MGRS	Mrkonjic Grad	82.74	316	⇓iP	P	05 35 43.4	+0.2
HCY	Herceg Novi	82.77	314	eP	P	05 35 42.2	-1.1
HCY	Herceg Novi	82.77	314	⇓iP	P	05 35 42.5	-0.8
MOA	Molln	82.77	320	i P	P	05 35 43.4	+0.2
	comp=Z,85nm,0.6s,SNR=60						
MOA				eP	pP	05 36 43.1	-0.8
	comp=Z,96nm,1.9s						
MQZ	McQueen's Vall	82.80	146	IAmb	IAmb	05 35 44.8	
	comp=Z,320nm,1.3s						
ITM	Ithomi	82.81	308	P	P	05 35 41.9	-1.8
ITM	Ithomi	82.81	308	IAmb	IAmb	05 35 47.5	
	comp=Z,191nm,0.7s						
IGT	Igoumenitsa	82.88	310	P	P	05 35 42.2	-1.7
SOKA	Soboth	82.90	319	i P	P	05 35 43.7	-0.3
	comp=Z,144nm,1.2s,SNR=48						
SOKA				eP	pP	05 36 44.8	+0.1
	comp=Z,34nm,0.9s						
SOKA				eS	S	05 45 44.0	+3.2
	comp=Z,1.7nm,0.6s						
SOKA				eP	PKKPbc	05 54 06.1	+0.6
	comp=Z,3.2nm,0.6s						
TSLK	Tsoukalades, L	82.97	310	P	P	05 35 42.4	-2.0
LKD2	Lefkada island	82.99	310	P	P	05 35 43.0	-1.5

NYDR	Nydri-Lefkada	83.00	310	P	P	05 35 42.9	-1.6
VLO	Vlora	83.02	312	IAmb	IAmb	05 35 50.4	
	comp=Z,151nm,0.6s						
CRES	Cresnjev	83.07	318	⇓*i*P	P	05 35 44.4	-0.4
EVGI	Lefkada island	83.07	309	P	P	05 35 43.2	-1.7
PYL	PYLOS	83.07	307	P	P	05 35 42.5	-2.5
STON	Ston	83.08	314	⇓*i*P	P	05 35 43.6	-1.3
LRW	Lerwick	83.12	335	*e*P	P	05 35 43.4	-1.3
LRW				IAmb	IAmb	05 35 52.7	
	comp=Z,225nm,1.1s						
KEK	Kerkira	83.16	311	P	P	05 35 43.8	-1.6
KEK	Kerkira	83.16	311	IAmb	IAmb	05 35 50.1	
	comp=Z,219nm,1.4s						
NUUG	Nuugaatsiaq	83.19	359	*i* P	P	05 35 44.6	-0.2
NUUG				IAmb	IAmb	05 35 50.8	
	comp=Z,85nm,1.0s						
FSK	Fiskardo	83.20	309	P	P	05 35 44.3	-1.3
BIOA	Bad Ischl, Aus	83.22	320	*i* P	P	05 35 45.7	+0.1
	comp=Z,164nm,1.3s,SNR=24						
BIOA				*e*P	pP	05 36 46.1	-0.1
	comp=Z,57nm,1.5s						
BIOA				*e*P	PP	05 39 00.5	+0.2
	comp=Z,42nm,1.3s						
BIOA				*e*S	S	05 45 47.0	+3.1
	comp=Z,1.0nm,0.3s						
BIOA				*e*P	PKKPbc	05 54 04.9	+0.1
	comp=Z,2.9nm,0.5s						
OBKA	Obir	83.28	319	*i* P	P	05 35 45.3	-0.6
	comp=Z,86nm,0.8s,SNR=33						
OBKA				*e*P	PP	05 38 54.8	-6.0
	comp=Z,29nm,1.1s						
OBKA				*e*S	S	05 45 43.9	-0.8
	comp=Z,0.7nm,0.4s						
OBKA				*e*P	PKKPbc	05 54 04.8	+0.1
	comp=Z,4.1nm,0.7s						
VLS	Valsamata	83.31	309	P	P	05 35 44.6	-1.6
PSDA	Pessada-Kefalo	83.35	309	P	P	05 35 44.6	-1.7
BOJS	Bojanci	83.35	317	*i* P	P	05 35 46.1	-0.1
BOJS				*e*pP	pP	05 36 47.4	+0.5
BOJS				*e*PP	PP	05 38 57.6	-3.8
BOJS				*e*pPP		05 39 54.5	
BOJS				*e*sS	sS	05 47 34.3	+2.2
KEF4	Livadi, Kephal	83.39	309	P	P	05 35 45.2	-1.3
KEF3	Kipouria, Keph	83.47	309	P	P	05 35 45.3	-1.6
LJU	Ljubljana	83.52	318	⇓*i*P	P	05 35 46.4	-0.7
LJU	Ljubljana	83.52	318	*i* P	P	05 35 46.6	-0.5
LJU				*e*pP	pP	05 36 48.0	+0.2
LJU				*i* pPP		05 39 56.0	
LJU				*e*SKSac	SKSac	05 45 44.6	-0.3
LJU				*e*		05 46 38.9	
LJU				*e*SS	SS	05 51 21.7	+3.4
LJU				*e*		05 57 52.1	
GRFO	Grafenberg	83.55	322	P	P	05 35 47.1	0.0
GRFO	Grafenberg	83.55	322	P	P	05 35 47.1	0.0
GRFO				pmax	pmax		
	comp=Z,627nm,1.7s						
KBA	Koelnbreinsper	83.70	319	*i* P	P	05 35 47.5	-0.6
	comp=Z,79nm,0.7s,SNR=44						
KBA				*e*P	pP	05 36 47.9	-1.0
	comp=Z,36nm,0.9s						
KBA				*e*P	PP	05 39 05.9	+1.5
	comp=Z,47nm,1.4s						
KBA				*e*S	S	05 45 48.9	-0.2
	comp=Z,19nm,1.8s						
KBA				*e*P	PKKPbc	05 54 03.2	-0.6
	comp=Z,2.6nm,0.5s						
CEY	Cerknica	83.73	318	⇓*i*P	P	05 35 47.5	-0.7
MYKA	Terra Mystica	83.75	319	*i* P	P	05 35 47.4	-0.9
	comp=Z,52nm,0.7s,SNR=23						
MYKA				*e*S	S	05 45 44.7	-4.7
	comp=Z,1.5nm,0.4s						
MYKA				*e*P	PKKPbc	05 54 05.4	+1.9
	comp=Z,6.6nm,0.6s						
SCTE	Santa Cesarea	83.90	312	IAmb	IAmb	05 35 54.0	
	comp=Z,373nm,1.5s						
SKDS	Skadanscina	84.08	318	⇓*i*P	P	05 35 49.0	-0.9
TRI	Trieste	84.15	318	IAmb	IAmb	05 35 56.1	
	comp=Z,186nm,1.4s						
OZB	Mount Ozzard	84.34	38	IAmb	IAmb	05 35 58.2	
	comp=Z,154nm,1.0s						
ABTA	Abfaltersbach	84.36	320	*i* P	P	05 35 50.0	-1.4
	comp=Z,72nm,0.8s,SNR=40						
ABTA				*e*P	pP	05 36 50.2	-2.1
	comp=Z,55nm,1.5s						
ABTA				*e*S	S	05 45 49.1	-6.4
	comp=Z,15nm,1.5s						
ABTA				*e*P	PKKPbc	05 54 02.8	+0.6
	comp=Z,4.1nm,0.7s						
WATA	Walderalm	84.59	320	*i* P	P	05 35 52.2	-0.4
	comp=Z,49nm,0.6s,SNR=27						
WATA				*e*P	pP	05 36 52.8	-0.7
	comp=Z,55nm,1.2s						
WATA				*e*P	PP	05 39 10.8	-0.8
	comp=Z,47nm,1.4s						
WATA				*e*S	S	05 45 59.2	+1.4
	comp=Z,20nm,1.6s						
WATA				*e*P	PKKPbc	05 54 02.6	+0.9
	comp=Z,6.7nm,0.8s						
WTTA	Wattenberg	84.60	320	*i* P	P	05 35 51.9	-0.8
	comp=Z,101nm,0.9s,SNR=49						
WTTA				*e*P	PP	05 39 12.5	+0.9
	comp=Z,50nm,1.6s						
WTTA				*e*S	S	05 45 50.6	-7.4
	comp=Z,49nm,2.2s						
WTTA				*e*P	PKKPbc	05 54 02.6	+0.9
	comp=Z,3.2nm,0.7s						
SOEG	Soedalen	84.61	350	⇓*i*P	P	05 35 51.3	-0.7
SOEG				IAmb	IAmb	05 36 02.6	
	comp=Z,56nm,0.7s						
ICESG	Greenland Ices	84.80	354	⇓*i*P	P	05 35 52.6	-0.8
ICESG				IAmb	IAmb	05 35 59.3	
	comp=Z,142nm,1.0s						
MOTA	Moosalm	84.86	321	*i* P	P	05 35 53.1	-0.8
	comp=Z,50nm,1.0s,SNR=21						
MOTA				*e*P	pP	05 36 54.1	-0.8
	comp=Z,50nm,1.2s						
MOTA				*e*P	PP	05 39 12.4	-1.3
	comp=Z,17nm,1.0s						
MOTA				*e*S	S	05 45 51.8	-8.7
MOTA				*e*P	PKKPbc	05 54 01.6	+0.5
	comp=Z,7.4nm,0.6s						
SQTA	Sankt Quirin	84.87	320	*i* P	P	05 35 53.1	-0.9
	comp=Z,70nm,1.2s,SNR=36						
SQTA				*e*P	pP	05 36 54.3	-0.6
	comp=Z,94nm,1.7s						
SQTA				*e*P	PP	05 39 14.8	+1.1
	comp=Z,30nm,1.6s						
SQTA				*e*S	S	05 45 51.3	-9.2
	comp=Z,10nm,1.0s						
SQTA				*e*P	PKKPbc	05 54 03.0	+1.9
	comp=Z,4.1nm,0.4s						
RETA	Reutte	84.98	321	*i* P	P	05 35 54.2	-0.3
	comp=Z,20nm,0.6s,SNR=9.2						
RETA				*e*P	pP	05 36 55.0	-0.4
	comp=Z,41nm,1.4s						
RETA				*e*P	PP	05 39 13.8	-0.8
	comp=Z,22nm,1.3s						
RETA				*e*S	S	05 46 03.6	+2.1
	comp=Z,14nm,1.4s						
MLA1	Latheron	85.19	335	*e*P	P	05 35 54.1	-1.0
FETA	Feichten	85.25	320	*i* P	P	05 35 55.3	-0.6
	comp=Z,50nm,1.2s,SNR=22						
FETA				*e*P	pP	05 36 56.3	-0.6
	comp=Z,45nm,1.3s						
FETA				*e*P	PP	05 39 15.7	-1.2
	comp=Z,20nm,1.3s						
FETA				*e*S	S	05 45 56.9	-7.5
	comp=Z,24nm,2.0s						
FETA				*e*P	PKKPbc	05 54 02.7	+2.5
	comp=Z,11nm,1.2s						
BIGH	Upper Bighouse	85.27	335	*e*P	P	05 35 54.7	-0.8
BIGH				IAmb	IAmb	05 36 00.8	
	comp=Z,192nm,1.6s						
LLLB	Lillooet	85.36	35	IAmb	IAmb	05 36 04.6	
	comp=Z,273nm,1.4s						
C03A	Quillayute Air	85.41	38	IAmb	IAmb	05 36 04.6	
	comp=Z,225nm,1.3s						
ILULI	Ilulissat	85.46	358	⇓*i*P	P	05 35 55.7	-0.6
ILULI				IAmb	IAmb	05 36 04.1	
	comp=Z,146nm,1.0s						
ABPO	Ambohimpanom	85.48	247	P	P	05 35 58.0	+0.6
ABPO				IAmb	IAmb	05 36 03.0	
	comp=Z,160nm,0.8s						
ABPO	Ambohimpanom	85.48	247	P	P	05 35 58.0	+0.6
ABPO				pmax	pmax		
	comp=Z,160nm,0.8s						
TEOL	Teolo	85.59	319	IAmb	IAmb	05 36 03.2	
	comp=Z,129nm,0.8s						
DAVA	Damuels	85.59	321	*i* P	P	05 35 57.2	-0.4
	comp=Z,53nm,1.6s,SNR=26						
DAVA				*e*P	pP	05 36 58.0	-0.6
	comp=Z,50nm,0.9s						
DAVA				*e*P	PP	05 39 19.4	-0.2
	comp=Z,23nm,1.2s						
DAVA				*e*P	PKKPbc	05 54 01.6	+2.2
	comp=Z,6.5nm,0.6s						
BTNL	Ternell	85.77	325	*d*P	P	05 35 56.9	-1.3
BTNL				*d*pP	pP	05 36 59.0	-0.3
MEM	Membach	85.81	325	*d*P	P	05 35 57.8	-0.5
	comp=Z,58nm,0.8s						
MEM				*d*pP	pP	05 36 59.8	+0.3
DAVOX	Davos/Dischmat	85.87	321	PKKPbc	PKKPbc	05 53 59.0	+0.2
	comp=Z,5.1nm,0.5s,baz=280,slow=3.7,SNR=8.8						
BEBN	Eben Emael	85.88	325	*d*P	P	05 35 58.1	-0.6
BEBN				*d*PcP	PcP	05 36 00.7	-0.3
BEBN				*d*pP	pP	05 36 60.0	+0.3
BFO	Black Forest	85.88	322	P	P	05 35 57.5	-1.3
BFO				IAmb	IAmb	05 36 04.4	
	comp=Z,425nm,1.8s						
BFO	Black Forest	85.88	322	P	P	05 35 57.5	-1.3
BFO				pmax	pmax		
	comp=Z,425nm,1.8s						
B04A	Port Angeles	85.94	38	IAmb	IAmb	05 36 06.7	
	comp=Z,310nm,1.6s						
LODK	Lodwar	85.96	272	IAmb	IAmb	05 36 06.6	
	comp=Z,204nm,1.4s						
LODK	Lodwar	85.96	272	P	P	05 36 01.3	+1.4
	SNR=32						
LODK	Lodwar	85.96	272	*e*P	P	05 36 00.7	+0.8
LODK	Lodwar	85.96	272	*e*P	P	05 36 00.7	+0.8
BHOU	Houvegnez	85.97	325	*d*P	P	05 35 59.2	0.0
	comp=Z,61nm,1.2s						
KIBK	Kibwezi	85.99	266	IAmb	IAmb	05 36 06.6	
	comp=Z,252nm,1.4s						
KIBK	Kibwezi	85.99	266	P	P	05 36 01.3	+1.3
	SNR=42						
LINV	Loch Inver, As	86.00	335	*e*P	P	05 35 57.5	-1.5
LINV				IAmb	IAmb	05 36 04.0	
	comp=Z,58nm,1.2s						
NRCA	Norcia	86.03	316	IAmb	IAmb	05 36 06.6	
	comp=Z,242nm,1.2s						
BSTI	Sart Tilman	86.06	325	*d*P	P	05 35 59.7	+0.1
	comp=Z,24nm,0.8s						
BSTI				*d*pP	pP	05 37 00.2	-0.5
NLWA	Neilton Lookou	86.11	39	IAmb	IAmb	05 36 07.8	
	comp=Z,149nm,1.1s						
SALO	Salr	86.13	319	IAmb	IAmb	05 36 05.8	
	comp=Z,109nm,0.8s						
MURB	Monte Urbino	86.17	317	IAmb	IAmb	05 36 08.0	
	comp=Z,216nm,0.9s						
KMBO	Kilima Mbogo	86.19	267	P	P	05 36 01.6	+0.4
	comp=Z,31nm,0.8s,baz=41,slow=7.7,SNR=48						
KMBO				pP	pP	05 37 04.1	+1.8
	comp=Z,43nm,1.2s,baz=28,slow=6.3,SNR=3.3						
	comp=Z,31nm,0.8s						
KMBO	Kilima Mbogo	86.19	267	P	P	05 36 01.9	+0.8
KMBO				IAmb	IAmb	05 36 07.9	
	comp=Z,213nm,1.3s						
KMBO	Kilima Mbogo	86.19	267	P	P	05 36 02.6	+1.4
KMBO	Kilima Mbogo	86.19	267	⇓*e*P	P	05 36 01.9	+0.8
KMBO	Kilima Mbogo	86.19	267	⇓*e*P	P	05 36 01.9	+0.8
KMBO	Kilima Mbogo	86.19	267	P	P	05 36 01.3	+0.1
EDU	Dundee	86.24	333	*e*P	P	05 35 59.4	-0.9
BCLA	Clavier	86.29	325	*b*P	P	05 36 00.3	-0.4
	comp=Z,46nm,1.5s						
WLF	Walferdange	86.29	324	*d*P	P	05 36 01.0	+0.2
	comp=Z,174nm,0.8s						
WLF				*d*pP	pP	05 37 01.5	-0.4
WISH	Wishkah	86.32	39	IAmb	IAmb	05 36 12.7	
	comp=Z,180nm,0.9s						
BGES	Gesves	86.42	325	*d*P	P	05 36 00.9	-0.5
	comp=Z,47nm,1.2s						
BGES				*d*pP	pP	05 37 06.3	+3.8
D03D	Eldon	86.47	38	P	P	05 36 03.0	+1.4
	baz=305,SNR=82						
RCHB	Rochefort	86.48	325	*d*P	P	05 36 01.0	-0.7
	comp=Z,88nm,1.0s						
RCHB				*d*pP	pP	05 37 03.0	+0.2
KAC	Achnashellach	86.49	335	*e*P	P	05 36 00.3	-1.2
ESY	Stoneypath	86.50	333	*e*P	P	05 36 00.7	-0.9
ZCCA	Zocca	86.55	318	IAmb	IAmb	05 37 09.7	
	comp=Z,303nm,1.3s						
ECH	Echery	86.59	323	IAmb	IAmb	05 36 08.5	
	comp=Z,190nm,1.5s						
LEWI	Lewis, Hebride	86.63	336	*e*P	P	05 36 00.2	-2.0
LEWI				IAmb	IAmb	05 36 06.9	
	comp=Z,199nm,1.8s						
BMRD	Maredsous	86.64	325	*d*P	P	05 36 02.1	-0.2
	comp=Z,77nm,1.0s						
KPL	Plockton	86.74	335	*e*P	P	05 36 02.4	-0.3
KPL				IAmb	IAmb	05 36 07.5	
	comp=Z,47nm,1.1s						
E03A	Lebam	86.76	39	IAmb	IAmb	05 36 10.6	
	comp=Z,186nm,0.9s						
SNF	Seneffe	86.76	326	*d*P	P	05 36 02.7	-0.3
	comp=Z,66nm,1.1s						
EBL	Broad Law	86.78	333	*e*P	P	05 36 01.7	-1.3
B06A	Marblemount	86.78	37	IAmb	IAmb	05 36 07.7	
	comp=Z,180nm,0.9s						
D04E	Lakebay	86.85	38	P	P	05 36 05.0	+1.5
	baz=305,SNR=20						
DOU	Dourbes	86.85	325	*d*P	P	05 36 02.8	-0.6
	comp=Z,79nm,1.0s						
DOU				*d*PcP	PcP	05 36 05.7	+0.4
DOU				*d*pP	pP	05 37 04.8	+0.2
EDMD	Edmundbyers	86.95	331	*e*P	P	05 36 02.8	-1.0
EDMD				IAmb	IAmb	05 36 11.7	
	comp=Z,75nm,0.7s						
LATE	Laterza	86.97	316	IAmb	IAmb	05 36 09.3	
	comp=Z,350nm,1.5s						
EAB	Aberfoyle	87.03	333	*e*P	P	05 36 04.4	+0.3
ESK	Eskdalemuir	87.15	332	P	P	05 36 03.4	-1.4
ESK					pP	05 37 05.6	-0.4
ESK	Eskdalemuir	87.15	332	P	P	05 36 03.4	-1.4
ESK				*PP	pP	05 37 05.6	-0.4
ESK				pmax	pmax		
	comp=Z,156nm,1.4s						
VOI	Vohitsoka	87.22	244	P	P	05 36 07.8	+2.0
	SNR=8.9						
VOI	Vohitsoka	87.22	244	P	P	05 36 08.6	+2.9
E04D	Cinebar	87.32	39	IAmb	IAmb	05 36 13.4	
	comp=Z,160nm,1.0s						
E04D	Cinebar	87.32	39	P	P	05 36 07.0	+1.3
	baz=305,SNR=32						
F04D	Rainier, OR	87.33	39	P	P	05 36 07.2	+1.4
	baz=305,SNR=14						
PGBU	Gleniffberbraes	87.34	333	*e*P	P	05 36 03.4	-2.2
PGBU				IAmb	IAmb	05 36 10.7	
	comp=Z,229nm,1.4s						
LAWE	Loch Awe, Argy	87.40	334	*e*P	P	05 36 03.8	-2.1
LAWE				IAmb	IAmb	05 36 10.8	
	comp=Z,28nm,1.0s						
SFJD	Kangerlussuaq	87.66	357	P	P	05 36 05.9	-1.0
SFJD	Kangerlussuaq	87.66	357	P	P	05 36 05.9	-1.0
SFJD				pmax	pmax		
	comp=Z,692nm,2.0s						
SFJD	Kangerlussuaq	87.66	357	⇓*i*P	P	05 36 05.9	-1.0
SFJD				IAmb	IAmb	05 36 12.8	
	comp=Z,148nm,1.2s						
G03D	McMinnville, O	87.68	40	IAmb	IAmb	05 36 15.2	
	comp=Z,129nm,0.8s						
G03D	McMinnville, O	87.68	40	P	P	05 36 08.7	+1.3
	baz=305,SNR=20						
LBWR	Ladybower, Pea	87.80	330	*e*P	P	05 36 07.2	-0.7
LBWR				IAmb	IAmb	05 36 15.1	
	comp=Z,275nm,1.1s						
EDM	Edmonton	87.89	30	IAmb	IAmb	05 36 15.3	
	comp=Z,244nm,1.1s						
ANGG	Ammassalik, Gr	87.91	352	*e*P	P	05 36 06.1	-2.0
ANGG				IAmb	IAmb	05 36 15.5	
	comp=Z,67nm,0.9s						
DY2G	Dye2	87.93	356	⇓*i*P	P	05 36 08.0	-0.6
DY2G				IAmb	IAmb	05 36 14.8	
	comp=Z,213nm,0.8s						
I02E	Swisshome, OR	87.96	41	IAmb	IAmb	05 36 16.1	
	comp=Z,122nm,0.8s						
I02E	Swisshome, OR	87.96	41	P	P	05 36 10.0	+1.2
	baz=304,SNR=10						
I02E				S	S	05 46 36.2	+6.2
	baz=304						
COR	Corvallis	88.01	41	P	P	05 36 10.4	+1.4
COR	Corvallis	88.01	41	P	P	05 36 10.4	+1.4
COR				pmax	pmax		
	comp=Z,310nm,0.9s						
B08A	Colville Reser	88.03	36	IAmb	IAmb	05 36 16.4	
	comp=Z,173nm,0.8s						
STNC	Stoke	88.22	330	*e*P	P	05 36 09.5	-0.4
STNC				IAmb	IAmb	05 36 17.1	
	comp=Z,258nm,1.3s						
F05D	White Salmon	88.33	39	P	P	05 36 11.4	+0.9
	baz=306,SNR=14						
F05D				S	S	05 46 37.9	+4.4
	baz=306						
H04D	Lebanon	88.38	41	P	P	05 36 12.1	+1.4
	baz=305,SNR=31						
H04D				S	S	05 46 38.6	+4.6
	baz=305						
J01E	Myrtle Point	88.44	42	IAmb	IAmb	05 36 21.4	
	comp=Z,224nm,1.1s						
J01E	Myrtle Point	88.44	42	P	P	05 36 12.4	+1.4
	baz=304,SNR=17						
J01E				S	S	05 46 39.6	+5.1
	baz=304						
IOMK	Kirk Michael	88.45	332	*e*P	P	05 36 11.4	+0.5
IOMK				IAmb	IAmb	05 36 18.2	
	comp=Z,84nm,0.9s						
I03D	Drain, OR	88.49	41	P	P	05 36 12.6	+1.3
	baz=304,SNR=26						
I03D				S	S	05 46 40.6	+5.6
	baz=304						
CLGH	Cloghs, Cushen	88.52	333	*e*P	P	05 36 10.9	-0.2
CLGH				IAmb	IAmb	05 36 15.5	
	comp=Z,70nm,1.3s						
RAR	Rarotonga	88.55	114	P	P	05 36 11.8	-0.1
RAR				IAmb	IAmb	05 36 20.1	
	comp=Z,287nm,1.6s						
RAR	Rarotonga	88.55	114	P	P	05 36 11.8	-0.1
RAR				pmax	pmax		
	comp=Z,287nm,1.7s						
RAR	Rarotonga	88.55	114	P	P	05 36 13.4	+1.5
WIM	Isle of Man	88.58	332	*e*P	P	05 36 10.5	-1.0
G05D	Wamic, OR	88.79	39	P	P	05 36 13.9	+1.2
	baz=306,SNR=28						
G05D				S	S	05 46 41.2	+3.3
	baz=306						
FOEL	Foel Wylfa	88.80	331	*e*P	P	05 36 12.1	-0.5
FOEL				IAmb	IAmb	05 36 20.1	
	comp=Z,157nm,1.0s						
E07A	Sunnyside	88.83	38	IAmb	IAmb	05 36 24.3	
	comp=Z,218nm,1.0s						
K02D	Willamette Mer	88.86	42	P	P	05 36 14.1	+0.9
	baz=304,SNR=12						
K02D				S	S	05 46 42.8	+4.0
	baz=304						
DBO	Dodson Butte	88.88	42	IAmb	IAmb	05 36 24.0	
	comp=Z,103nm,0.9s						
HLM1	Long Mynd	88.91	330	*e*P	P	05 36 12.3	-0.8
HLM1				IAmb	IAmb	05 36 20.4	
	comp=Z,51nm,0.8s						
C09A	Chrisman Ranch	88.94	36	IAmb	IAmb	05 36 20.7	
	comp=Z,143nm,0.8s						
I04A	Tendick Farm,	88.99	41	P	P	05 36 14.6	+0.8
	baz=305,SNR=56						
I04A				S	S	05 46 42.2	+2.4
	baz=305						
WPS	Cemaes, Angles	89.02	331	*e*P	P	05 36 12.0	-1.5
D08A	Wollman Farm,	89.04	37	IAmb	IAmb	05 36 21.2	
	comp=Z,114nm,0.8s						
WLF1	Llynfaes	89.05	331	*e*P	P	05 36 12.6	-1.1
WLF1				IAmb	IAmb	05 36 21.6	
	comp=Z,212nm,0.9s						
YLL	Llanberis	89.06	331	*e*P	P	05 36 14.2	+0.4
STRD	Stroud	89.08	329	*e*P	P	05 36 12.8	-1.0
STRD				IAmb	IAmb	05 36 15.9	
	comp=Z,140nm,0.8s						
HAWA	Hanford	89.11	38	IAmb	IAmb	05 36 21.8	
	comp=Z,187nm,0.9s						
YRC	Rhoscolyn	89.16	331	*e*P	P	05 36 13.0	-1.2
KSXB	Camp Six Broad	89.22	43	IAmb	IAmb	05 36 22.6	
	comp=Z,215nm,1.3s						
L02F	Cave Junction	89.24	43	P	P	05 36 16.0	+1.1
	baz=304,SNR=10						
L02F				S	S	05 46 46.5	+4.3
	baz=304						
NEW	Newport	89.25	35	IAmb	IAmb	05 36 22.2	
	comp=Z,176nm,1.1s						
NEW	Newport	89.25	35	P	P	05 36 15.7	+0.8
	baz=309,SNR=157						
NEW				S	S	05 46 45.2	+3.1
	baz=309						
I05D	Terrebonne, OR	89.30	40	P	P	05 36 16.3	+1.1
	baz=306,SNR=58						
I05D				S	S	05 46 48.3	+5.5
	baz=306						
E08A	Dider Farm, El	89.31	37	IAmb	IAmb	05 36 22.7	
	comp=Z,121nm,0.9s						
MCH1	Michaelchurch	89.32	330	*e*P	P	05 36 14.2	-0.8
MCH1				IAmb	IAmb	05 36 17.0	
	comp=Z,88nm,0.8s						
CLF	Chambon-Foret	89.33	325	P	P	05 36 15.4	+0.2
CLF				IAmb	IAmb	05 36 21.9	
	comp=Z,123nm,1.2s						
CLF					pP	05 37 16.6	-0.1
MONM	Monmouth	89.34	330	*e*P	P	05 36 13.1	-1.9
MONM				IAmb	IAmb	05 36 21.4	
	comp=Z,127nm,1.3s						
J04D	Umpqua Nationa	89.49	41	P	P	05 36 17.5	+1.2
	baz=305,SNR=77						
J04D				S	S	05 46 49.2	+4.4
	baz=305						
KRPM	Rodgers	89.50	44	IAmb	IAmb	05 36 27.1	
	comp=Z,117nm,0.9s						
JCC	Jacoby Creek,	89.69	44	IAmb	IAmb	05 36 24.7	
	comp=Z,120nm,1.0s						
SSB	Saint Sauveur	89.78	321	IAmb	IAmb	05 36 23.6	
	comp=Z,136nm,1.1s						
E09A	Wood Farm, Sta	89.80	37	IAmb	IAmb	05 36 25.0	
	comp=Z,234nm,1.2s						
KHMM	Horse Mountain	89.84	44	IAmb	IAmb	05 36 25.8	
	comp=Z,228nm,1.6s						
L04D	Klamath Falls	89.96	42	P	P	05 36 19.4	+1.0
	baz=305,SNR=65						
L04D				S	S	05 46 51.4	+2.3
	baz=305						
J05D	Fort Rock, OR	89.98	41	P	P	05 36 19.7	+1.2
	baz=306,SNR=83						
J05D				S	S	05 46 52.2	+3.0
	baz=306						
K04D	Chiloquin, OR	90.06	42	P	P	05 36 19.8	+0.9
	baz=306,SNR=29						
K04D				S	S	05 46 52.6	+2.7
	baz=306						
G08A	Pilot Rock	90.10	38	IAmb	IAmb	05 36 26.7	
	comp=Z,146nm,1.4s						
WALA	Waterton Lakes	90.38	33	IAmb	IAmb	05 36 27.7	
	comp=Z,222nm,1.1s						
NUUK	Nuuk	90.52	357	⇓*i*P	P	05 36 19.5	-0.8
NUUK				IAmb	IAmb	05 36 25.4	
	comp=Z,451nm,2.0s						
KCPM	Cahto Peak	90.60	45	IAmb	IAmb	05 36 41.8	
	comp=Z,154nm,1.5s						
JTMT	Jette	91.05	34	IAmb	IAmb	05 36 33.8	
	comp=Z,97nm,0.9s						
HOPS	Hopland Field	91.32	45	IAmb	IAmb	05 36 26.8	
	comp=Z,157nm,1.5s						
MOD	Modoc Plateau	91.35	42	IAmb	IAmb	05 36 35.5	
	comp=Z,221nm,1.1s						
J08A	Circle Bar Ran	91.55	40	IAmb	IAmb	05 36 37.1	
	comp=Z,145nm,0.9s						
MSO	Missoula	91.83	35	IAmb	IAmb	05 36 33.6	
	comp=Z,118nm,1.1s						
MSO	Missoula	91.83	35	P	P	05 36 27.2	+0.3
	baz=311,SNR=44						
MSO				S	S	05 47 06.0	+0.4
	baz=311						
MBAR	Mbarara	91.85	270	P	P	05 36 28.2	+0.5
MBAR	Mbarara	91.85	270	P	P	05 36 28.2	+0.5
MBAR				pmax	pmax		
	comp=Z,102nm,1.5s						
MBAR	Mbarara	91.85	270	P	P	05 36 28.8	+1.1
MBAR	Mbarara	91.85	270	*e*P	P	05 36 28.0	+0.3
MBAR	Mbarara	91.85	270	*e*P	P	05 36 28.0	+0.3
MCCM	Marconi Confer	91.93	46	IAmb	IAmb	05 36 37.2	
	comp=Z,89nm,0.9s						
CASY	Casey	91.93	185	P	P	05 36 26.9	+0.4
CASY				IAmb	IAmb	05 36 32.4	
	comp=Z,232nm,1.7s						
WVOR	Wild Horse Val	92.02	40	IAmb	IAmb	05 36 35.5	
	comp=Z,122nm,1.1s						

KEST	**Kesra**	**92.31**	**312**	P	**P**	**05 36 29.2**	**-0.1**
	comp=Z,43nm,0.7s,baz=325,slow=1.8,SNR=38						
	comp=Z,43nm,0.7s						
KEST	**Kesra**	**92.31**	**312**	IAmb	IAmb	05 36 37.8	
	comp=Z,116nm,1.1s						
KEST	**Kesra**	**92.31**	**312**	P	**P**	**05 36 29.7**	**+0.3**
	SNR=44						
BEKR	**Beckworth**	**92.53**	**43**	IAmb	IAmb	05 36 40.4	
	comp=Z,124nm,1.0s						
MFID	**Camas Ranch**	**93.02**	**38**	IAmb	IAmb	05 36 43.1	
	comp=Z,80nm,1.0s						
MPK	**Martis Peak**	**93.07**	**44**	IAmb	IAmb	05 36 37.2	
	comp=Z,97nm,0.9s						
CMAH	**Djebel Manchou**	**93.09**	**313**	P	**P**	**05 36 32.4**	**-0.5**
NRS	**Narsarsuaq**	**93.11**	**354**	IAmb	IAmb	05 37 38.3	
	comp=Z,140nm,1.5s						
NRS	**Narsarsuaq**	**93.11**	**354**	*e*P	**P**	**05 36 30.5**	**-1.8**
NRS				IAmb	IAmb	05 36 37.6	
	comp=Z,115nm,1.5s						
EMB	**Emerald Bay**	**93.22**	**44**	IAmb	IAmb	05 36 38.2	
	comp=Z,111nm,0.9s						
PAHR	**Pah Rah Range**	**93.22**	**43**	IAmb	IAmb	05 36 44.7	
	comp=Z,115nm,1.0s						
ABSA	**Djebel Ababsia**	**93.26**	**313**	P	**P**	**05 36 33.9**	**+0.2**
IVI	**Ivigtut**	**93.29**	**355**	IAmb	IAmb	05 36 40.4	
	comp=Z,205nm,1.7s						
IVI	**Ivigtut**	**93.29**	**355**	*e*P	**P**	**05 36 32.1**	**-1.1**
IVI				IAmb	IAmb	05 36 34.8	
	comp=Z,38nm,0.7s						
VCNR	**Virginia City**	**93.31**	**43**	IAmb	IAmb	05 36 44.7	
	comp=Z,69nm,0.8s						
PNTR	**Pine Nut**	**93.46**	**44**	IAmb	IAmb	05 36 45.1	
	comp=Z,125nm,0.8s						
DLMT	**Dillon**	**93.50**	**35**	IAmb	IAmb	05 36 42.0	
	comp=Z,109nm,0.9s						
CMB	**Columbia Colle**	**93.59**	**45**	IAmb	IAmb	05 36 45.5	
	comp=Z,113nm,1.0s						
CKFL	**Kef-Lekhel**	**93.69**	**313**	P	**P**	**05 36 34.5**	**-1.2**
HLID	**Hailey**	**93.71**	**38**	P	**P**	**05 36 37.0**	**+1.2**
	baz=311,SNR=78						
HLID				S	**S**	**05 47 26.7**	**+4.2**
	baz=311						
BOZ	**Bozeman (W)**	**93.85**	**35**	P	**P**	**05 36 36.6**	**+0.3**
	baz=313,SNR=46						
BOZ				S	**S**	**05 47 24.9**	**+1.4**
	baz=313						
BMN	**Battle Mountai**	**94.09**	**41**	IAmb	IAmb	05 36 48.3	
	comp=Z,107nm,1.1s						
DFRA	**Djebel Bou Aff**	**94.15**	**314**	P	**P**	**05 36 38.1**	**+0.3**
PMPB	**Monarch Peak**	**94.39**	**46**	IAmb	IAmb	05 36 47.8	
	comp=Z,80nm,0.8s						
RYN	**Ryan**	**94.41**	**43**	IAmb	IAmb	05 36 43.8	
	comp=Z,58nm,0.8s						
KVN	**Kaiserville**	**94.41**	**43**	IAmb	IAmb	05 36 50.0	
	comp=Z,85nm,1.0s						
YHL	**Hebgen Lake**	**94.58**	**35**	IAmb	IAmb	05 36 47.2	
	comp=Z,94nm,1.4s						
MDPB	**Devils Postpil**	**94.66**	**44**	IAmb	IAmb	05 36 50.9	
	comp=Z,76nm,1.2s						
NVAR	**Mina Array Bea**	**94.67**	**43**	P	**P**	**05 36 40.6**	**+0.3**
	comp=Z,28nm,0.7s,baz=290,slow=4.9,SNR=146						
NVAR				pP	**pP**	**05 37 45.3**	**+3.3**
	comp=Z,11nm,0.8s,baz=291,slow=5.7,SNR=2.4						
NVAR				PKKPbc	**PKKPbc**	**05 53 37.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=97,slow=2.0,SNR=5.1						
NVAR				PKPPKP	P'P'df	06 01 30.6	-22
	comp=Z,0.5nm,0.8s,baz=195,slow=3.6,SNR=4.0						
	comp=Z,28nm,0.7s						
NV11	**Mina Array Sit**	**94.76**	**43**	IAmb	IAmb	05 36 42.9	
	comp=Z,84nm,1.5s						
MLAC	**Mammoth, Mammo**	**94.82**	**44**	P	**P**	**05 36 41.9**	**+0.9**
	baz=307,SNR=21						
YMR	**Madison River**	**94.82**	**35**	IAmb	IAmb	05 36 47.5	
	comp=Z,134nm,1.6s						
Q09A	**Carvers**	**95.11**	**43**	IAmb	IAmb	05 36 48.5	
	comp=Z,52nm,0.9s						
YPP	**Pitchstone Pla**	**95.18**	**35**	IAmb	IAmb	05 36 54.1	
	comp=Z,101nm,1.6s						
LKWY	**Lake**	**95.19**	**35**	IAmb	IAmb	05 36 54.4	
	comp=Z,68nm,1.0s						
H17A	**Grant Village**	**95.21**	**35**	IAmb	IAmb	05 36 51.4	
	comp=Z,123nm,1.4s						
H17A	**Grant Village**	**95.21**	**35**	P	**P**	**05 36 45.0**	**+2.3**
	baz=314,SNR=24						
VOG	**Valley Oaks Go**	**95.26**	**46**	P	**P**	**05 36 42.4**	**-0.3**
	baz=307						
DGMT	**Dagmar**	**95.34**	**29**	IAmb	IAmb	05 36 49.2	
	comp=Z,91nm,1.0s						
DGMT	**Dagmar**	**95.34**	**29**	P	**P**	**05 36 43.2**	**+0.3**
	baz=319						
DGMT	**Dagmar**	**95.34**	**29**	S	**S**	**05 47 37.4**	**+1.3**
	baz=319						
FLWY	**Flagg Ranch**	**95.36**	**35**	IAmb	IAmb	05 36 51.3	
	comp=Z,140nm,1.6s						
RLMT	**Red Lodge**	**95.38**	**34**	IAmb	IAmb	05 36 50.3	
	comp=Z,116nm,1.6s						
RLMT	**Red Lodge**	**95.38**	**34**	P	**P**	**05 36 43.8**	**+0.4**
	baz=315,SNR=29						
RLMT				S	**S**	**05 47 40.4**	**+3.4**
	baz=315						
SMMC	**Simmler**	**95.45**	**47**	P	**P**	**05 36 44.6**	**+0.9**
	baz=306						
TIN	**Tinemaha, Big**	**95.55**	**45**	P	**P**	**05 36 44.8**	**+0.6**
	baz=308,SNR=7.6						
MOOW	**Moose Ponds**	**95.57**	**36**	IAmb	IAmb	05 36 51.8	
	comp=Z,98nm,1.9s						
VES	**Vestal, Richgr**	**95.74**	**46**	P	**P**	**05 36 44.4**	**-0.5**
	baz=307,SNR=27						
LAO	**LASA Array**	**95.74**	**31**	P	**P**	**05 36 45.0**	**+0.3**
	baz=317						
PKM	**Mcpherson Peak**	**95.83**	**47**	P	**P**	**05 36 46.0**	**+0.4**
	baz=307,SNR=17						
CWC	**Cottonwood Cre**	**96.02**	**45**	P	**P**	**05 36 46.3**	**-0.1**
	baz=308						
BCW	**Bitter Crk WRg**	**96.06**	**47**	IAmb	IAmb	05 36 57.4	
	comp=Z,90nm,1.1s						
GRAC	**Grapevine Rang**	**96.13**	**44**	P	**P**	**05 36 47.3**	**+0.5**
	baz=308,SNR=25						
SBC	**Santa Barbara**	**96.16**	**47**	P	**P**	**05 36 47.8**	**+1.0**
	baz=307						
ISA	**Isabella, Lake**	**96.24**	**46**	P	**P**	**05 36 46.4**	**-0.9**
	baz=308,SNR=14						
ARVC	**Arvin**	**96.33**	**46**	P	**P**	**05 36 47.5**	**-0.1**
	baz=307,SNR=9.0						
R11A	**Troy Canyon, C**	**96.39**	**42**	IAmb	IAmb	05 36 55.5	
	comp=Z,100nm,1.9s						
R11A	**Troy Canyon, C**	**96.39**	**42**	P	**P**	**05 36 48.5**	**+0.4**
	baz=310,SNR=37						
SCZ2	**Santa Cruz Isl**	**96.47**	**48**	P	**P**	**05 36 48.0**	**-0.3**
	baz=307						
OSI	**Osito Audit: C**	**96.71**	**47**	P	**P**	**05 36 50.0**	**+0.6**
	baz=307						
S11A	**Rachel**	**96.73**	**43**	IAmb	IAmb	05 36 59.8	
	comp=Z,78nm,1.2s						
FURC	**Furnace Creek,**	**96.78**	**44**	P	**P**	**05 36 49.8**	**+0.3**
	baz=309,SNR=31						
DUG	**Dugway, Tooele**	**96.83**	**39**	IAmb	IAmb	05 36 58.8	
	comp=Z,89nm,1.7s						
DUG	**Dugway, Tooele**	**96.83**	**39**	P	**P**	**05 36 50.6**	**+0.7**
	baz=312,SNR=30						
DUG				S	**S**	**05 47 53.2**	**+3.7**
	baz=312						
CCAC	**Calif City Air**	**96.85**	**46**	IAmb	IAmb	05 37 00.6	
	comp=Z,50nm,0.9s						
TPNV	**Topopah Spring**	**96.86**	**44**	IAmb	IAmb	05 36 56.2	
	comp=Z,69nm,1.3s						
TPNV	**Topopah Spring**	**96.86**	**44**	P	**P**	**05 36 50.6**	**+0.4**
	baz=309,SNR=44						
LRMC	**Laurel Mtn Rad**	**96.86**	**45**	P	**P**	**05 36 50.5**	**+0.3**
	baz=308,SNR=9.8						
BW06	**Boulder Array**	**96.87**	**36**	P	**P**	**05 36 49.8**	**-0.4**
	baz=314,SNR=9.0						
PDAR	**Pinedale Array**	**96.87**	**36**	P	**P**	**05 36 49.5**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=5.1,slow=0.8,SNR=21						
PDAR				PKKPbc	**PKKPbc**	**05 53 27.9**	**-3.2**
	comp=Z,1.2nm,0.5s,baz=110,slow=6.0,SNR=9.6						
	comp=Z,2.3nm,0.6s						
SNCC	**San Nicolas Is**	**96.99**	**48**	P	**P**	**05 36 50.7**	**0.0**
	baz=307						
EDW2	**Edwards Air Fo**	**97.03**	**46**	P	Pdif	05 36 51.1	+0.2
	baz=308,SNR=9.8						
QSM	**Queen of Sheba**	**97.08**	**45**	IAmb	IAmb	05 36 53.0	
	comp=Z,102nm,1.5s						
DECC	**Green Verdugo**	**97.18**	**47**	P	Pdif	05 36 51.6	0.0
	baz=308						
ULM	**Lac du Bonnet**	**97.28**	**24**	P	**P**	**05 36 50.9**	**-0.6**
	comp=Z,18nm,1.0s,baz=317,slow=5.4,SNR=10						
ULM				PKKPbc	**PKKPbc**	**05 53 26.5**	**-3.6**
	comp=Z,3.1nm,0.4s,baz=103,slow=3.5,SNR=3.8						
	comp=Z,18nm,1.0s						
SHOC	**Shoshone, Teco**	**97.50**	**44**	P	Pdif	05 36 53.4	+0.5
	baz=309						
GSC	**Goldstone, Bar**	**97.54**	**45**	IAmb	IAmb	05 37 01.0	
	comp=Z,147nm,1.9s						
GSC	**Goldstone, Bar**	**97.54**	**45**	P	Pdif	05 36 53.6	+0.4
	baz=308,SNR=24						
FMP	**Fort Macarthur**	**97.54**	**47**	P	Pdif	05 36 53.4	+0.3
	baz=307						
BFSC	**Mount Baldy Ra**	**97.64**	**46**	P	**P**	**05 36 53.4**	**-0.3**
	baz=308						
CIS	**Catalina Islan**	**97.64**	**48**	P	**P**	**05 36 53.5**	**-0.1**
	baz=307						
RRX	**Edison Barstow**	**97.68**	**46**	P	Pdif	05 36 54.3	+0.6
	baz=308						
MDND	**Maddock**	**97.78**	**27**	P	**P**	**05 36 53.4**	**-0.4**
	baz=322						
SCI2	**San Clemente I**	**97.81**	**48**	P	**P**	**05 36 53.8**	**-0.5**
	baz=307						
TUQ	**Turquoise Moun**	**98.02**	**45**	Pdiff	Pdif	05 36 55.9	+0.5
	baz=309						
TUQ				S	**S**	**05 48 00.9**	**+1.2**
	baz=309						
TCRU	**Three Creeks R**	**98.09**	**40**	IAmb	IAmb	05 37 02.6	
	comp=Z,61nm,1.5s						
BBRC	**Big Bear Solar**	**98.10**	**46**	Pdiff	**P**	**05 36 55.8**	**-0.1**
	baz=308						
HEC	**Hector,Ludlow**	**98.13**	**45**	Pdiff	Pdif	05 36 56.2	+0.4
	baz=309						
ELS	**Elsinore Mount**	**98.15**	**47**	IAmb	IAmb	05 37 01.8	
	comp=Z,98nm,1.9s						
ESDC	**Sonseca Array**	**98.19**	**321**	P	**P**	**05 36 54.9**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=28,slow=3.7,SNR=16						
ESDC				pP	**pP**	**05 37 57.8**	**0.0**
	comp=Z,6.3nm,1.1s,baz=26,slow=3.9,SNR=5.3						
ESDC				PP	PP	05 40 50.1	-8.1
	comp=Z,6.4nm,0.9s,baz=46,slow=8.1,SNR=7.2						
ESDC				PKKPbc	**PKKPbc**	**05 53 25.9**	**-1.4**
	comp=Z,3.0nm,0.8s,baz=250,slow=2.3,SNR=11						
	comp=Z,2.2nm,0.8s						
ESDC	**Sonseca Array**	**98.19**	**321**	P	**P**	**05 36 54.4**	**-1.5**
ESDC					**pP**	**05 37 55.4**	**-2.4**
PBRG	**Braganca**	**98.23**	**324**	*e*Pdif	Pdif	05 36 59.1	+3.0
PBRG				*e*pP	pP	05 37 56.1	-1.9
PBRG				*i* LQ	LQ	05 41 51.7	
E28A	**Huff**	**98.32**	**29**	IAmb	IAmb	05 37 02.9	
	comp=Z,75nm,1.4s						
MURC	**Murrieta**	**98.33**	**47**	Pdiff	**P**	**05 36 56.5**	**-0.2**
	baz=308						
K22A	**Casper**	**98.53**	**34**	IAmb	IAmb	05 37 02.8	
	comp=Z,78nm,1.9s						
K22A	**Casper**	**98.53**	**34**	P	Pdif	05 36 57.4	-0.2
	baz=316						
K22A	**Casper**	**98.53**	**34**	Pdiff	Pdif	05 36 57.3	-0.3
	baz=316						
GMRC	**Granite Mounta**	**98.59**	**45**	Pdiff	**P**	**05 36 58.2**	**+0.3**
	baz=309						
MTPU	**Mount Pierson**	**98.62**	**41**	IAmb	IAmb	05 37 05.3	
	comp=Z,68nm,1.6s						
RSSD	**Black Hills**	**98.68**	**32**	P	Pdif	05 36 58.0	-0.2
RSSD	**Black Hills**	**98.68**	**32**	P	Pdif	05 36 58.0	-0.2
RSSD				pmax	pmax		
	comp=Z,19nm,0.9s						
RSSD	**Black Hills**	**98.68**	**32**	P	Pdif	05 36 58.2	0.0
	baz=319						
RSSD	**Black Hills**	**98.68**	**32**	Pdiff	Pdif	05 36 58.2	0.0
	baz=319						
PFO	**Pinyon Flats O**	**98.81**	**46**	P	**P**	**05 36 59.3**	**+0.4**
PFO				IAmb	IAmb	05 37 00.7	
	comp=Z,45nm,1.3s						
PFO	**Pinyon Flats O**	**98.81**	**46**	P	**P**	**05 36 59.3**	**+0.4**
PFO				pmax	pmax		
	comp=Z,45nm,1.3s						
PFO	**Pinyon Flats O**	**98.81**	**46**	Pdiff	**P**	**05 36 59.1**	**+0.2**
	baz=309						
TPFO	**Pinon Flats**	**98.81**	**46**	Pdiff	**P**	**05 36 59.3**	**+0.3**
	baz=309						
109C	**Camp Elliot, M**	**98.83**	**47**	IAmb	IAmb	05 37 05.6	
	comp=Z,84nm,1.7s						
109C	**Camp Elliot, M**	**98.83**	**47**	Pdiff	**P**	**05 36 59.1**	**+0.2**
	baz=308						
MVO	**Moncorvo**	**98.84**	**324**	*e*Pdif	**P**	**05 37 00.0**	**+1.2**
MVO				*e*pP	**pP**	**05 38 00.7**	**-0.1**
MVO				*i* LQ	LQ	05 41 57.5	
MVO				*e*SKSac	**SKSac**	**05 47 13.6**	**+1.3**
MVO				*e*SS	**SS**	**05 55 00.4**	**+2.6**
BELC	**Belle Mtn. Jos**	**98.87**	**46**	Pdiff	Pdif	05 36 59.2	0.0
	baz=309						
AGMN	**Agassiz Nation**	**98.90**	**25**	P	Pdif	05 36 57.8	-1.0
	baz=326						
AGMN	**Agassiz Nation**	**98.90**	**25**	Pdiff	Pdif	05 36 57.6	-1.3
	baz=326						
PGAV	**Gavieira, Arco**	**98.92**	**325**	*e*Pdif	**P**	**05 36 59.3**	**+0.1**
PGAV				*e*pP	**pP**	**05 37 58.9**	**-2.2**
PGAV	**Gavieira, Arco**	**98.92**	**325**	*e*PP	**PP**	**05 41 02.6**	**-1.0**
PGAV				*i* LQ	LQ	05 41 53.3	
PGAV				*e*SKSac	**SKSac**	**05 47 13.2**	**+0.5**
PGAV				*e*SS	**SS**	**05 55 09.2**	**+10**
PKCU	**Pink Cliffs**	**98.94**	**41**	IAmb	IAmb	05 37 06.8	
	comp=Z,84nm,1.9s						
PCAB	**Cabril**	**98.98**	**325**	*e*Pdif	Pdif	05 36 59.0	-0.4
PCAB				*e*pP	pP	05 38 01.1	-0.2
PCAB				*i* LQ	LQ	05 42 02.0	
POLO	**Lamas de Olo**	**99.10**	**324**	*e*Pdif	**Pdif**	**05 36 59.3**	**-0.7**
POLO				*e*pP	**pP**	**05 38 01.0**	**-0.9**
POLO	**Lamas de Olo**	**99.10**	**324**	*e*PP	**PP**	**05 41 04.7**	**-0.3**
POLO				*i* LQ	LQ	05 41 58.0	
NEE2	**Needles Airpor**	**99.27**	**44**	Pdiff	**Pdif**	**05 37 00.8**	**+0.1**
	baz=310						
MONP2	**Monument Peak**	**99.28**	**47**	Pdiff	**Pdif**	**05 37 01.2**	**+0.1**
	baz=308						
IRM	**Iron Mountain**	**99.32**	**45**	Pdiff	**Pdif**	**05 37 01.4**	**+0.3**
	baz=310						
O20A	**White River Ci**	**99.42**	**37**	Pdiff	**Pdif**	**05 37 01.5**	**-0.1**
	baz=315						
BC3	**Big Chuckawall**	**99.44**	**46**	Pdiff	**Pdif**	**05 37 02.1**	**+0.4**
	baz=309						
SCHQ	**Schefferville**	**99.61**	**5**	P	**Pdif**	**05 37 01.3**	**-0.5**
	comp=Z,8.6nm,0.8s,baz=350,slow=3.1,SNR=9.9						
SCHQ				PP	**PP**	**05 41 00.6**	**-7.6**
	comp=Z,5.2nm,0.7s,baz=335,slow=7.6,SNR=5.1						
SCHQ				PKKPbc	**PKKPbc**	**05 53 20.3**	**-3.6**
	comp=Z,8.5nm,0.6s,baz=135,slow=1.3,SNR=17						
	comp=Z,8.6nm,0.8s						
PVIS	**Viseu**	**99.62**	**324**	*e*Pdif	**Pdif**	**05 37 04.2**	**+1.9**
PVIS				*e*pPdif	**pP**	**05 38 03.4**	**-0.8**
PVIS	**Viseu**	**99.62**	**324**	*e*PP	**PP**	**05 41 08.4**	**-0.5**
PVIS				*i* LQ	LQ	05 42 08.1	
IKP	**In-Ko-Pah, Jac**	**99.63**	**47**	Pdiff	**Pdif**	**05 37 02.9**	**+0.4**
	baz=309						
B35A	**Bob, Littlefor**	**99.64**	**24**	P	**Pdif**	**05 37 01.7**	**-0.4**
	baz=327						
SWSC	**Sam W. Stewart**	**99.65**	**47**	Pdiff	**Pdif**	**05 37 02.7**	**+0.2**
	baz=309						
MTE	**Manteigas**	**99.66**	**324**	*e*Pdif	**Pdif**	**05 37 03.7**	**+1.2**
MTE				*e*pPdif	**pP**	**05 38 02.1**	**-2.3**
MTE	**Manteigas**	**99.66**	**324**	*e*PP	**PP**	**05 41 10.7**	**+1.5**
MTE				*i* LQ	LQ	05 42 04.4	
MTE				*e*SKSac	**SKSac**	**05 47 16.2**	**-0.1**
MTE				*e*SS	**SS**	**05 55 19.4**	**+10**
PDMCI	**Parker Dam,Lak**	**99.86**	**45**	Pdiff	**Pdif**	**05 37 03.7**	**+0.3**
	baz=310						
PCBR	**Castelo Branco**	**100.02**	**323**	*e*Pdif	**Pdif**	**05 37 04.3**	**+0.3**
PCBR				*e*pPdif	**pPdif**	**05 38 05.6**	**-0.3**
PCBR	**Castelo Branco**	**100.02**	**323**	*e*PP	**PP**	**05 41 14.2**	**+2.3**
PCBR				*i* LQ	LQ	05 42 06.5	
N23A	**Red Feather La**	**100.10**	**35**	Pdiff	**Pdif**	**05 37 05.0**	**+0.3**
	baz=317						
GLA	**Glamis**	**100.22**	**46**	Pdiff	**Pdif**	**05 37 05.8**	**+0.6**
	baz=310						
COI	**Coimbra**	**100.26**	**324**	*e*Pdif	**Pdif**	**05 37 07.9**	**+2.9**
COI				*e*pPdif	**pPdif**	**05 38 06.7**	**-0.3**
COI	**Coimbra**	**100.26**	**324**	*e*PP	**PP**	**05 41 16.3**	**+2.6**
COI				*i* LQ	LQ	05 42 08.6	
PMRV	**Marv??o**	**100.27**	**323**	*e*Pdif	**Pdif**	**05 37 03.9**	**-1.2**
PMRV				*e*pPdif	**pPdif**	**05 38 05.8**	**-1.3**
PMRV	**Marv??o**	**100.27**	**323**	*e*PP	**PP**	**05 41 17.0**	**+3.2**
PMRV				*i* LQ	LQ	05 42 07.5	
PMRV				*e*SKSac	**SKSac**	**05 47 19.5**	**+0.3**
PCAS	**Casmilo, Conde**	**100.42**	**324**	*e*Pdif	**Pdif**	**05 37 06.3**	**+0.5**
PCAS				*e*pPdif	**pPdif**	**05 38 06.7**	**-1.0**
PCAS	**Casmilo, Conde**	**100.42**	**324**	*e*PP	**PP**	**05 41 17.2**	**+2.3**
PCAS				*i* LQ	LQ	05 42 10.2	
F33A	**5 Mile Ranch,**	**100.74**	**26**	P	**Pdif**	**05 37 07.0**	**-0.1**
	baz=325						
PESTR	**Estremoz**	**100.77**	**323**	*e*Pdif	**Pdif**	**05 37 10.8**	**+3.4**
PESTR				*e*pPdif	**pPdif**	**05 38 07.3**	**-2.0**
PESTR	**Estremoz**	**100.77**	**323**	*e*PP	**PP**	**05 41 18.2**	**+0.6**
PESTR				*i* LQ	LQ	05 42 10.7	
EYMN	**Ely**	**100.78**	**22**	Pdiff	**Pdif**	**05 37 06.2**	**-1.0**
	baz=329						
WUAZ	**Wupatki**	**100.79**	**42**	Pdiff	**Pdif**	**05 37 08.3**	**+0.6**
	baz=312						
PSBE	**So Bento**	**100.96**	**324**	*e*Pdif	**Pdif**	**05 37 09.6**	**+1.3**
PSBE				*e*pPdif	**pPdif**	**05 38 09.1**	**-1.1**
PSBE				*i* LQ	LQ	05 42 13.9	
PMTG	**Montargil**	**100.97**	**323**	*e*Pdif	**Pdif**	**05 37 08.4**	**+0.1**
PMTG				*e*pPdif	**pPdif**	**05 38 07.9**	**-2.3**
PMTG	**Montargil**	**100.97**	**323**	*e*PP	**PP**	**05 41 19.5**	**+0.4**
PMTG				*i* LQ	LQ	05 42 13.9	
ISCO	**Idaho Springs**	**101.07**	**36**	Pdiff	**Pdif**	**05 37 09.1**	**0.0**
	baz=317						
EVO	**Evora**	**101.24**	**323**	*e*Pdif	**Pdif**	**05 37 08.4**	**-1.1**
EVO				*e*pPdif	**pPdif**	**05 38 08.5**	**-2.9**
EVO	**Evora**	**101.24**	**323**	*e*PP	**PP**	**05 41 19.9**	**-1.2**
EVO				*i* LQ	LQ	05 42 14.9	
MVCO	**Mesa Verde**	**101.33**	**39**	Pdiff	**Pdif**	**05 37 10.6**	**+0.4**
	baz=314						
PACT	**Alcochete**	**101.52**	**323**	*e*Pdif	**Pdif**	**05 37 11.2**	**+0.5**
PACT				*e*pPdif	**pPdif**	**05 38 11.4**	**-1.2**
PACT	**Alcochete**	**101.52**	**323**	*e*PP	**PP**	**05 41 21.8**	**-1.3**
PACT				*i* LQ	LQ	05 42 25.3	
PBEJ	**Beja**	**101.52**	**322**	*e*pPdif	pPdif	05 38 17.0	+4.3
PBEJ	**Beja**	**101.52**	**322**	*e*PP	**PP**	**05 41 23.8**	**+0.6**
PBEJ				*i* LQ	LQ	05 42 56.6	
PMAFR	**Mafra**	**101.63**	**324**	*e*Pdif	**Pdif**	**05 37 12.6**	**+1.4**
PMAFR				*e*pPdif	**pPdif**	**05 38 10.8**	**-2.3**
PMAFR	**Mafra**	**101.63**	**324**	*e*PP	**PKiKP**	**05 41 31.7**	**-1.7**
PMAFR				*i* LQ	LQ	05 42 18.1	
LIS	**Lisbon**	**101.73**	**323**	*e*pPdif	**pPdif**	**05 38 11.3**	**-2.3**
LIS				*e*PP	**PP**	**05 41 25.3**	**+0.6**
PNCL	**Nicolau / Gran**	**101.83**	**323**	*e*Pdif	**Pdif**	**05 37 12.9**	**+0.8**
PNCL				*e*pPdif	**pPdif**	**05 38 11.2**	**-2.8**
PNCL	**Nicolau / Gran**	**101.83**	**323**	*e*PP	**PP**	**05 41 24.8**	**-0.7**
PNCL				*i* LQ	LQ	05 42 21.3	
MESJ	**Messejana**	**101.85**	**322**	*e*Pdif	**Pdif**	**05 37 12.3**	**+0.2**
MESJ				*e*pPdif	**pPdif**	**05 38 11.8**	**-2.3**
MESJ				*e*PP	**PP**	**05 41 26.3**	**+0.6**
MESJ				*e*SKSac	**SKSac**	**05 47 27.7**	**+0.9**
MESJ	**Messejana**	**101.85**	**322**	*e*Pdif	**Pdif**	**05 37 12.0**	**-0.2**
MESJ				*e*pPdif	**pPdif**	**05 38 12.8**	**-1.3**
MESJ	**Messejana**	**101.85**	**322**	*e*PP	**PP**	**05 41 23.7**	**-2.0**
MESJ				*i* LQ	LQ	05 42 20.2	
PVAQ	**Vaqueiros**	**101.88**	**322**	*e*Pdif	**Pdif**	**05 37 13.5**	**+1.2**
PVAQ				*e*pPdif	**pPdif**	**05 38 13.1**	**-1.2**
PVAQ	**Vaqueiros**	**101.88**	**322**	*e*PP	**PP**	**05 41 24.1**	**-1.8**
PVAQ				*i* LQ	LQ	05 42 19.7	
PVAQ				*e*SKSac	**SKSac**	**05 47 27.8**	**+0.8**
S22A	**4UR Ranch, Cre**	**101.89**	**38**	Pdiff	**Pdif**	**05 37 13.3**	**+0.5**
	baz=316						
Q24A	**Divide**	**101.93**	**36**	Pdiff	**Pdif**	**05 37 12.6**	**-0.4**
	baz=317						
OGNE	**Ogallala**	**102.04**	**33**	Pdiff	**Pdif**	**05 37 12.6**	**-0.5**
	baz=320						
W18A	**Petrified Fore**	**102.04**	**42**	Pdiff	**Pdif**	**05 37 13.7**	**+0.3**
	baz=313						
PBDV	**Barranco-do-Ve**	**102.11**	**322**	*e*Pdif	**Pdif**	**05 37 13.6**	**+0.2**
PBDV				*e*pPdif	**pPdif**	**05 38 15.7**	**+0.4**
PBDV	**Barranco-do-Ve**	**102.11**	**322**	*e*PP	**PKiKP**	**05 41 30.5**	**-3.9**
PBDV				*i* LQ	LQ	05 42 22.3	
214A	**Organ Pipe Nat**	**102.23**	**46**	Pdiff	**Pdif**	**05 37 14.5**	**+0.4**
	baz=311						
ECSD	**EROS Data Cent**	**102.33**	**28**	Pdiff	**Pdif**	**05 37 13.3**	**-0.9**
	baz=324						
PTEO	**Sao Teotonio**	**102.34**	**322**	*e*pPdif	pPdif	05 38 20.9	+4.6
MORF	**Marmelete**	**102.47**	**322**	*e*pPdif	**pPdif**	**05 38 14.6**	**-2.4**
MORF				*e*PP	**PP**	**05 41 30.8**	**+0.5**
MORF				*e*SKSac	**SKSac**	**05 47 30.5**	**+0.6**
MORF	**Marmelete**	**102.47**	**322**	*e*Pdif	**Pdif**	**05 37 14.7**	**-0.3**
MORF				*e*pPdif	**pPdif**	**05 38 16.5**	**-0.5**
MORF	**Marmelete**	**102.47**	**322**	*e*PP	**PKiKP**	**05 41 35.4**	**+0.3**
SPMN	**Marine on St.**	**102.62**	**25**	Pdiff	**Pdif**	**05 37 14.5**	**-0.9**
	baz=328						
SDCO	**Great Sand Dun**	**102.62**	**37**	Pdiff	**Pdif**	**05 37 16.2**	**+0.2**
	baz=317						
PFVI	**Vila Bisbo**	**102.69**	**322**	*e*Pdif	**Pdif**	**05 37 18.6**	**+2.7**
PFVI				*e*pPdif	**pPdif**	**05 38 17.2**	**-0.7**
PFVI	**Vila Bisbo**	**102.69**	**322**	*e*PP	**PKiKP**	**05 41 34.0**	**-1.4**
PFVI				*i* LQ	LQ	05 42 30.4	
MAW	**Mawson**	**102.72**	**200**	P	**Pdif**	**05 37 14.9**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=75,slow=4.4,SNR=7.9						
MAW				PKKPbc	**PKKPbc**	**05 53 12.6**	**-3.2**
	comp=Z,2.2nm,0.5s,baz=206,slow=6.0,SNR=3.5						
KSCO	**Kaye Shedlock’**	**103.21**	**35**	Pdiff	**Pdif**	**05 37 18.1**	**-0.3**
	baz=319						
TUC	**Tucson**	**103.29**	**44**	Pdiff	**Pdif**	**05 37 19.0**	**+0.2**
	baz=312						
T25A	**Trinidad**	**103.66**	**37**	Pdiff	**Pdif**	**05 37 20.5**	**0.0**
	baz=317						
ANMO	**Albuquerque**	**104.09**	**40**	Pdiff	**Pdif**	**05 37 22.3**	**-0.2**
	baz=316						
CBKS	**Cedar Bluff**	**104.81**	**33**	Pdiff	**Pdif**	**05 37 26.7**	**+1.2**
	baz=321						
SCIA	**State Center**	**105.25**	**27**	Pdiff	**Pdif**	**05 37 26.6**	**-0.6**
	baz=327						
VNDA	**Vanda**	**105.41**	**172**	Pdiff	**Pdif**	**05 37 26.9**	**0.0**
	comp=Z,1.7nm,1.0s,baz=302,slow=3.5,SNR=4.6						
VNDA				PKiKP	**PKiKP**	**05 41 38.3**	**-0.8**
	comp=Z,3.6nm,0.9s,baz=313,slow=4.4,SNR=4.1						
VNDA				PKKPbc	**PKKPbc**	**05 53 07.2**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=168,slow=1.6,SNR=9.8						
BOSA	**Boshof**	**107.70**	**246**	Pdiff	**Pdif**	**05 37 39.2**	**+0.7**
	comp=Z,5.1nm,0.9s,baz=126,slow=0.7,SNR=4.8						
BOSA				PKiKP	**PKiKP**	**05 41 44.0**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=92,slow=1.5,SNR=9.6						
WMOK	**Wichita Mounta**	**108.46**	**35**	PKiKP	**PKiKP**	**05 41 44.9**	**-1.3**
	baz=321						
S39A	**Bolivar**	**108.71**	**29**	P	**PKiKP**	**05 41 45.0**	**-1.6**
	baz=326						
O48B	**Farmland**	**109.70**	**22**	PKiKP	**PKiKP**	**05 41 49.8**	**+1.5**
	baz=334						
TXAR	**Lajitas Array**	**109.75**	**42**	PKiKP	**PKiKP**	**05 41 48.2**	**-0.6**
PMPST	**Porto Santo, M**	**109.80**	**324**	*e*Pdif	**Pdif**	**05 37 52.8**	**+5.1**
PMPST				*e*pPdif	**pPdif**	**05 38 50.6**	**+1.0**
PMPST	**Porto Santo, M**	**109.80**	**324**	*e*PP	**PP**	**05 42 25.0**	**+1.0**
PMPST				*i* LQ	LQ	05 43 23.6	
PMPS	**Porto Santo**	**109.82**	**324**	*i* LQ	LQ	05 43 21.8	
U40A	**Yellville**	**110.03**	**30**	PKiKP	**PKiKP**	**05 41 50.5**	**+1.4**
	baz=326						
PMAR	**Madeira**	**110.38**	**324**	*e*Pdif	**Pdif**	**05 37 51.3**	**+0.8**
PMAR				*e*pPdif	**pPdif**	**05 38 55.8**	**+3.4**
PMAR	**Madeira**	**110.38**	**324**	*e*PP	**PP**	**05 42 30.9**	**+2.5**
PMAR				*i* LQ	LQ	05 43 25.5	
PMOZ	**Porto Moniz, M**	**110.45**	**324**	*e*Pdif	**Pdif**	**05 37 52.1**	**+1.4**
PMOZ				*e*pPdif	**pPdif**	**05 38 52.5**	**-0.1**
PMOZ	**Porto Moniz, M**	**110.45**	**324**	*e*PP	**PP**	**05 42 31.0**	**+2.2**
PMOZ				*i* LQ	LQ	05 43 27.4	
PMOZ				*e*SKSac	**SKSac**	**05 48 13.3**	**+8.1**
W39A	**Magazine**	**110.56**	**31**	PKiKP	**PKiKP**	**05 41 52.3**	**+2.2**
	baz=325						
TOA0	**Torodi Ar. Sit**	**110.74**	**297**	P	**PKiKP**	**05 41 50.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**110.74**	**297**	Pdiff	**Pdif**	**05 37 51.9**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=46,slow=5.2,SNR=3.6						
TORD				PKiKP	**PKiKP**	**05 41 49.8**	**-1.1**
	comp=Z,7.1nm,0.5s,baz=48,slow=2.2,SNR=38						
TORD				PKKPbc	**PKKPbc**	**05 52 47.9**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=228,slow=1.8,SNR=5.2						
JCT	**Junction City**	**111.17**	**39**	PKiKP	**PKiKP**	**05 41 49.7**	**-1.7**
	baz=320						
MIAR	**Mount Ida**	**111.19**	**31**	PKiKP	**PKiKP**	**05 41 50.8**	**-0.5**
	baz=325						
P52A	**Corning**	**111.26**	**20**	PKiKP	**PKiKP**	**05 41 50.1**	**-1.2**
	baz=336						
MCWV	**Mont Chateau**	**111.92**	**18**	PKiKP	**PKiKP**	**05 41 51.7**	**-0.8**
	baz=338						
PAL	**Palisades**	**112.11**	**13**	PKiKP	**PKiKP**	**05 41 56.2**	**+3.4**
	baz=344						
435B	**Jarrell**	**112.16**	**37**	PKiKP	**PKiKP**	**05 41 53.1**	**-0.2**
	baz=321						
WVT	**Waverly**	**112.35**	**26**	PKiKP	**PKiKP**	**05 41 56.0**	**+2.6**
	baz=331						
SUR	**Sutherland**	**112.52**	**244**	P	**PKiKP**	**05 41 53.3**	**-0.7**
833A	**Chaparral WMA,**	**113.03**	**40**	PKiKP	**PKiKP**	**05 41 55.1**	**+0.2**
	baz=319						
ZAIG	**Zacatecas**	**115.12**	**46**		**PKPdf**	**05 41 59.5**	**0.0**
QSPA	**South Pole Qui**	**115.27**	**180**	PKP	**PKPdf**	**05 41 56.9**	**-1.2**
	comp=Z,14nm,0.8s,baz=266,slow=18,SNR=19						
QSPA	**South Pole Qui**	**115.27**	**180**		**PKPdf**	**05 41 57.2**	**-0.9**
LRAL	**Lakeview Retre**	**115.38**	**27**	PKiKP	**PKPdf**	**05 42 00.7**	**+1.3**

	baz=331						
GOGA	Godfrey	116.43	24	PKiKP	PKiKP	05 42 02.7	+1.3
	baz=334						
NHSC	New Hope	117.86	21	PKiKP	PKPdf	05 42 02.7	-1.4
	baz=337						
TIGA	Tifton	118.14	25	PKiKP	PKiKP	05 42 07.1	+2.4
	baz=333						
DBIC	Dimbokro	119.69	295	PKP	PKPdf	05 42 07.3	-0.8
	comp=Z,24nm,0.5s,baz=79,slow=1.5,SNR=36						
DBIC				pPKP	pPKPdf	05 43 14.5	+1.7
	comp=Z,14nm,0.8s,baz=76,slow=5.8,SNR=2.6						
DBIC				PKKPbc	PKKPab	05 52 20.8	-1.7
	comp=Z,9.2nm,0.8s,baz=233,slow=3.0,SNR=9.3						
DBIC	Dimbokro	119.69	295		PKPdf	05 42 06.7	-1.4
KIC	Kosan Boka	119.77	294	ePKIKP	PKPdf	05 42 07.4	-0.9
	comp=Z,100nm,0.5s						
TIC	Toumodi	119.84	295	ePKIKP	PKPdf	05 42 07.4	-1.0
	comp=Z,78nm,0.5s						
LIC	Lamto	120.08	294	ePKIKP	PKPdf	05 42 07.2	-1.6
	comp=Z,137nm,1.3s						
BBSR	BB Station	122.06	7		PKPdf	05 42 11.0	-1.2
TROLL	Troll, Antarti	123.17	199	PKPdf	PKiKP	05 42 13.4	0.0
CMIG	Matias Romero	124.18	45	PKP	PKPdf	05 42 15.8	-0.8
	comp=Z,9.3nm,0.8s,baz=311,slow=2.4,SNR=10						
SNAA	Sanae	124.85	198	PKKPab	PKKPab	05 51 57.0	+0.9
SNAA	Sanae	124.85	198	PKPdf	PKPdf	05 42 15.9	-0.4
SNAA	Sanae	124.85	198	PKP	PKPdf	05 42 15.3	-1.1
	comp=Z,22nm,0.9s,baz=153,slow=3.4,SNR=27						
VNA2	Neumayer--Watz	126.50	198	PKPdf	PKPdf	05 42 19.5	+0.1
	baz=88,slow=1.6						
VNA1	Neumayer--Stat	126.88	198	PKPdf	PKPdf	05 42 20.2	+0.1
VNA3	Neumayer Olymp	126.96	197	PKPdf	PKPdf	05 42 20.1	-0.3
TGUH	Tegucigalpa,Un	131.15	40	eP	PKPdf	05 42 29.3	-0.8
SDDR	Presa de Saban	133.81	18	eP	PKPdf	05 42 32.2	-2.7
SJG	San Juan	135.85	12	eP	PKPpre	05 42 34.2	
MLYT	Lee's Yard	137.80	7	e	PKiKP	05 42 45.2	+0.8
BRU2	Volcan	138.02	39	eP	PKiKP	05 42 44.8	-0.4
ABD	La Joyeuse, An	138.11	6	eP	PKPpre	05 42 33.5	
H05N1	Guadeloupe/Mar	138.30	5	PKP	PKPdf	05 42 42.3	-1.0
	SNR=16						
TDBA	Terre de Bas,	138.72	6	eP	PKPpre	05 42 33.5	
BCIP	Isla Barro Col	139.26	35	eP	PKPpre	05 42 36.1	
UPA	Univ. de Panam	139.58	35	eP	PKPdf	05 42 41.9	-3.8
FDF	Fort de France	139.86	5	eP	PKPpre	05 42 40.5	
BIM	Bigot	140.09	5	eP	PKPpre	05 42 42.4	
SMRC	Santa Marta, M	140.09	26	eP	PKPpre	05 42 41.9	
MPOM	Morne Pois Mar	140.17	5	eP	PKPpre	05 42 33.5	
AZU	Azuero	140.18	37	eP	PKPdf	05 42 47.6	+0.9
CACAO	El Cacao, Vera	140.23	38	eP	PKPdf	05 42 44.8	-2.1
PMSA	Palmer Station	140.49	176	PKhKP	PKPpre	05 42 41.9	
	comp=Z,16nm,0.8s,baz=344,slow=0.4,SNR=5.9						
PMSA				SKPbc	SKPbc	05 45 58.3	+0.7
	comp=Z,24nm,0.9s,baz=240,slow=5.0,SNR=6.3						
PMSA	Palmer Station	140.49	176		PKPdf	05 42 43.6	-2.1
SLBI	Saint Lucia, B	140.58	5	eP	PKPpre	05 42 40.5	
CRJC	Cerrejon, Guaj	140.74	24	eP	PKPdf	05 42 42.8	-5.1
SJCC	San Jacinto, C	140.84	28	eP	PKPpre	05 42 41.9	
CAPC	Capurgana	140.96	32	eP	PKPpre	05 42 41.9	
ARGC	Ariguani, Magd	141.27	27	eP	PKPdf	05 42 45.7	-3.0
BBGH	Gun Hill	141.55	3	eP	PKPpre	05 42 38.6	
LL6C	La Loma 6 Bece	141.77	26	eP	PKPdf	05 42 45.7	-3.9
LL1C	La Loma 1 Cana	141.83	26	eP	PKPdf	05 42 49.6	-0.1
PTAC	Punta Ardita,	142.02	34	eP	PKPpre	05 42 45.7	
GCMP	Grenada, Carri	142.06	6	eP	PKPdf	05 42 46.7	-3.4
GRGR	Grenville	142.39	7	eP	PKPpre	05 42 42.8	
UREC	San Jos de Ur	142.59	30	eP	PKPpre	05 42 44.8	
DBBC	Dabeiba	142.92	32	eP	PKPpre	05 42 47.6	
SOLC	Bahia Solano	143.01	34	eP	PKPab	05 42 47.6	0.0
OCAC	Ocana	143.11	27	eP	PKPab	05 42 46.7	-1.6
TOSP	Speyside	143.32	5	eP	PKiKP	05 42 56.3	+0.6
SDV	Santo Domingo	143.52	22	PKP	PKPab	05 42 50.2	+0.3
	comp=Z,124nm,0.7s,baz=344,slow=2.5,SNR=65						
SDV	Santo Domingo	143.52	22		PKPab	05 42 49.8	-0.1
SDV	Santo Domingo	143.52	22	eP	PKPab	05 42 48.6	-1.3
SDV	Santo Domingo	143.52	22	eP	PKPab	05 42 50.4	+0.5
TRN	Trinidad (W)	143.88	7	eP	PKPab	05 42 47.9	-3.2
HELC	Santa Helena	143.96	32	eP	PKPab	05 42 50.5	-1.3
BRRC	Barranca, Sant	143.97	28	eP	PKPab	05 42 51.5	+0.1
CBOC	Ciudad Bolivar	144.01	33	eP	PKPab	05 42 50.5	-1.3
PTBC	PUERTO BERRIO,	144.15	30	eP	PKPbc	05 42 52.5	-0.1
PAMC	Pamplona, Colo	144.18	26	eP	PKPab	05 42 51.5	-1.3
BARC	Barichara	144.65	28	eP	PKPab	05 42 53.4	-0.9
PLMC	San Jos del P	144.71	34	eP	PKPab	05 42 53.4	-0.9
CNOCA	NORCASIA, CALD	144.82	31	eP	PKPbc	05 42 52.5	-2.2
NORC	Norcasia	144.82	31	eP	PKPbc	05 42 52.5	-2.2
MALC	Bahia Malaga	144.92	36	eP	PKPbc	05 42 53.4	-1.5
NIZA	Niza - Manizal	144.98	32	eP	PKPbc	05 42 55.4	-0.1
SPBC	San Pablo de B	145.11	30	eP	PKPdf	05 42 54.4	-1.2
GR1C	Gorgona, Isla	145.31	38	eP	PKPdf	05 42 54.4	-1.4
RUSC	La Rusia	145.32	28	eP	PKPdf	05 42 54.4	-2.1
TAMC	Tame, Arauca	145.36	26	eP	PKPdf	05 42 55.4	-0.6
TAMC	Tame, Arauca	145.36	26	eP	PKPdf	05 42 54.4	-1.6
YOTC	Yotoco, Valle	145.47	35	eP	PKPdf	05 42 55.4	-0.9
YOTC	Yotoco, Valle	145.47	35	eP	PKPdf	05 42 54.4	-1.9
ANIL	Santa Ana	145.50	33	eP	PKPdf	05 42 54.4	-2.2
CROSA	EL ROSAL, CUND	145.70	31	eP	PKiKP	05 43 01.1	0.0
ROSC	El Rosal	145.71	31	PKPbc	PKPdf	05 42 56.8	-0.3
	comp=Z,113nm,0.8s,baz=87,slow=0.7,SNR=102						
ROSC	El Rosal	145.71	31	eP	PKPdf	05 42 56.3	-0.7
TUMC	Tumaco	145.95	40	eP	PKPdf	05 42 54.4	-2.5
ORTC	Ortega, Tolima	146.08	33	eP	PKPdf	05 42 57.3	+0.1
CHIC	Chingaza	146.17	30	eP	PKPdf	05 42 58.3	+0.4
CGR1C	Isla Gorgona,	146.39	35	eP	PKPdf	05 42 53.4	-4.2
PRAC	Prado	146.43	33	eP	PKPdf	05 42 58.3	+0.4
POPC	Popayan, Colom	146.51	36	eP	PKPdf	05 42 58.3	+0.1
MARP	Paez Belalcaza	146.64	35	eP	PKPdf	05 42 58.3	-0.2
PCON	Cinco Dias	146.84	36	eP	PKPdf	05 42 59.2	+0.1
SOTA	Rioblanco	146.88	37	eP	PKPbc	05 43 01.1	-0.3
BETC	Betania	147.04	34	eP	PKPbc	05 43 02.1	+0.8
CMBC	Cumbal	147.19	40	eP	PKPbc	05 43 02.1	-0.1
CCUFI	Cufio, Nario	147.23	39	eP	PKPbc	05 43 02.1	-0.2
GCUF	Volcan Galeras	147.23	39	eP	PKPbc	05 43 01.1	-1.2
PTGC	Puerto Gaitan,	147.25	28	eP	PKPdf	05 42 58.3	-0.9
CPAS1	Pasto	147.27	39	eP	PKPbc	05 43 01.1	-1.2
HOPE	Hope Point	147.29	203		PKPbc	05 42 59.6	-0.9
HOPE	Hope Point	147.29	203	PKP2	PKPbc	05 42 59.7	-0.9
OTAV	Otavalo	147.38	42		PKPdf	05 43 00.3	+0.4
OTAV	Otavalo	147.38	42	PKIKP	PKPdf	05 43 00.3	+0.4
OTAV	Otavalo	147.38	42	eP	PKPdf	05 42 56.3	-3.6
OTAV	Otavalo	147.38	42	eP	PKPdf	05 42 57.9	-2.0
GARC	Garzon, Huila	147.43	35	eP	PKPbc	05 43 02.1	-0.5
CFLOR	Florencia	147.86	36	eP	PKPdf	05 43 01.1	+1.0
FLOC	Florencia	147.86	36	eP	PKPdf	05 43 00.2	0.0
MACC	Macarena, Meta	148.29	32	eP	PKPdf	05 43 00.2	-0.7
GUVC	San Jose del G	148.51	30	eP	PKPdf	05 43 01.1	-0.1
MDP	Montagnes des	149.23	351	PKP	PKPdf	05 43 02.2	-0.2
	comp=Z,48nm,0.8s,baz=198,slow=1.0,SNR=49						
MDP				PKPbc	PKPbc	05 43 05.5	-1.4
	comp=Z,106nm,0.7s,baz=12,slow=2.4,SNR=18						
USHA	Ushuaia	149.60	167	PKP	PKPdf	05 43 01.6	0.0
	comp=Z,11nm,0.9s,baz=66,slow=2.9,SNR=4.3						
USHA				PKPbc	PKPbc	05 43 04.8	-1.6
	comp=Z,144nm,0.8s,baz=257,slow=1.1,SNR=23						
RCBR	Riachuelo	151.55	310	PKPbc	PKPbc	05 43 12.1	-0.3
	comp=Z,35nm,0.4s,baz=163,slow=2.9,SNR=5.4						
RCBR	Riachuelo	151.55	310		PKPdf	05 43 08.6	+2.6
RCBR	Riachuelo	151.55	310	eP	PKPdf	05 43 04.7	-1.3
BOAV	Boa Vista	152.13	6	eP	PKPdf	05 43 05.4	-1.4
NBMO	Morrinhos-CE	152.29	320	eP	PKPdf	05 43 05.5	-1.5
NBRF	Rio Formoso -	152.93	304	eP	PKPdf	05 43 06.4	-1.5
ATAH	Atahualpa	152.96	51	PKP	PKPdf	05 43 09.2	+0.6
	comp=Z,26nm,1.2s,baz=18,slow=3.3,SNR=4.3						
ATAH				PKPbc	PKiKP	05 43 17.1	+1.0
	comp=Z,40nm,0.9s,baz=339,slow=4.4,SNR=12						
NBCA	Caruaru-PE	153.29	306	eP	PKPdf	05 43 07.5	-1.0
NBPB	Pedra_Branca-C	153.77	316	eP	PKPdf	05 43 06.8	-2.4
EFI	East Falkland	153.85	179	PKPdf	PKPdf	05 43 06.4	-1.7
EFI					PKiKP	05 43 17.2	+0.9
EFI	East Falkland	153.85	179	PKIKP	PKPdf	05 43 06.4	-1.7
NBPS	Pedro II - PI	153.97	321	eP	PKPdf	05 43 07.1	-2.5
ROSB	Rosrio	154.11	328	eP	PKPdf	05 43 07.9	-1.7
NBAN	Anadia - AL	154.43	304	eP	PKPdf	05 43 09.2	-0.9
MCPB	Macapa, AP	154.47	347	eP	PKPdf	05 43 08.6	-1.6
NBMA	Muriti-CE	154.61	312	eP	PKPdf	05 43 09.7	-0.7
TMAB	Tom-Au,PA,Br	155.29	337	eP	PKPdf	05 43 10.2	-1.1
TBTG	Tabatinga, AM	155.70	31	eP	PKPdf	05 43 09.9	-1.9
MALB	Monte Alegre	156.30	352	eP	PKPdf	05 43 10.8	-1.8
NBLA	Lagarto - SE	156.42	304	eP	PKPdf	05 43 11.5	-1.2
COYC	Coyhaique	156.78	153		PKPdf	05 43 12.3	0.0
CZSB	Cruzeiro do Su	157.15	42	eP	PKPdf	05 43 12.0	-1.7
NNA	Nana	157.33	57	PKP	PKPdf	05 43 14.6	+0.7
	comp=Z,3.6nm,0.5s,baz=237,slow=16,SNR=1.5						
NNA				PKPab	PKPab	05 43 46.2	-0.3
	comp=Z,28nm,0.7s,baz=350,slow=5.0,SNR=6.8						
MACA	Manacapuru-AM	157.59	8	eP	PKPdf	05 43 12.7	-1.5
NBPN	Ponto Novo - B	158.08	309	eP	PKPdf	05 43 13.3	-1.5
ITTB	Itaituba	158.93	355	eP	PKPdf	05 43 14.2	-1.6
PRPB	Parauapebas	159.43	338	eP	PKPdf	05 43 15.3	-1.2
GDU01	Guandu, BA	159.48	301	eP	PKPdf	05 43 16.4	-0.1
CMC01	Camacan, BA	160.39	297	eP	PKPdf	05 43 16.9	-0.5
SMTB	Santa Maria do	160.96	329	eP	PKPdf	05 43 16.9	-1.2
GUA01	Guaratinga, BA	161.27	295	eP	PKPdf	05 43 17.5	-0.9
NAN01	Guarapari, ES	162.16	292	eP	PKPdf	05 43 18.6	-0.6
ETMB	Extrema	162.35	30	eP	PKPdf	05 43 19.1	-0.4
SDBA	SAO DESIDERIO	162.38	315	eP	PKPdf	05 43 18.6	-1.0
SAML	Samuel	162.69	19	PKPdf	PKPdf	05 43 19.0	-0.9
SAML					PKPab	05 44 07.9	-1.7
SAML	Samuel	162.69	19	PKP2	PKPab	05 44 07.9	-1.7
SAML						06 43 19.0	
RIB01	Linhares ES	163.04	288	eP	PKPdf	05 43 19.1	-0.9
SJMB	Sao Joao De Ma	163.45	291	eP	PKPdf	05 43 19.7	-0.8
ALF01	Guarapari-ES	163.82	284	eP	PKPdf	05 43 20.8	+0.1
JANB	Januaria	163.87	308	eP	PKPdf	05 43 19.7	-1.3
PEXB	Peixe	164.10	325	eP	PKPdf	05 43 19.1	-2.1
CAM01	Campos-RJ	165.03	281	eP	PKPdf	05 43 20.7	-1.0
DIAM	Diamantina, MG	165.31	296	eP	PKPdf	05 43 20.1	-2.2
SNDB	Serra Nova Dou	165.34	335	eP	PKPdf	05 43 22.4	+0.2
CLDB	Colider	165.37	353	eP	PKPdf	05 43 21.9	-0.4
DUB01	Friburgo-RJ	165.74	281	eP	PKPdf	05 43 21.9	-0.5
PDRB	Porto dos Gac	166.18	357	eP	PKPdf	05 43 22.4	-0.5
LPAZ	La Paz	166.50	49	PKP	PKPdf	05 43 24.4	+0.5
	comp=Z,44nm,1.1s,baz=14,slow=3.0,SNR=59						
LPAZ				PKPab	PKPab	05 44 25.9	-1.3
	comp=Z,32nm,1.0s,baz=323,slow=4.2,SNR=6.5						
LPAZ	La Paz	166.50	49	eP	PKPdf	05 43 24.3	+0.5
LPAZ	La Paz	166.50	49	eP	PKPdf	05 43 23.0	-0.9
VAS01	Vassouras-RJ	166.75	281	eP	PKPdf	05 43 21.5	-1.7
BDFB	Brasilia	166.78	316	PKP	PKPdf	05 43 23.0	-0.4
	comp=Z,21nm,0.9s,baz=23,slow=3.3,SNR=16						
BDFB				PKPab	PKPab	05 44 26.5	-1.3
	comp=Z,20nm,0.7s,baz=82,slow=6.5,SNR=8.4						
BDFB	Brasilia	166.78	316	eP	PKPdf	05 43 23.0	-0.4
CO03	El Pedregal	167.21	118		PKPdf	05 43 21.4	-1.9
VILB	Vilhena	167.27	12	eP	PKPdf	05 43 23.0	-0.8
MAN01	Angra dos Reis	167.37	279	eP	PKPdf	05 43 22.4	-1.2
BSCB	Bom Sucesso	167.48	288	eP	PKPdf	05 43 22.5	-1.3
IPMB	Ipameri, GO	168.59	309	eP	PKPdf	05 43 24.1	-0.5
NBRS	Nobres	168.77	351	eP	PKPdf	05 43 23.6	-1.1
ARAG	Araguaiana, MT	168.91	330	eP	PKPdf	05 43 23.6	-1.1
PARB	Paraibuna	168.97	279	eP	PKPdf	05 43 23.2	-1.5
LVC	Limon Verde	169.19	77	PKP	PKPdf	05 43 25.5	+0.3
	comp=Z,14nm,1.1s,baz=180,slow=2.2,SNR=7.9						
LVC				PKPab	PKPab	05 44 37.1	-1.8
	comp=Z,10nm,0.7s,baz=259,slow=3.9,SNR=6.1						
LVC	Limon Verde	169.19	77		PKPdf	05 43 26.3	+1.0
LVC	Limon Verde	169.19	77	PKIKP	PKPdf	05 43 26.3	+1.0
LVC	Limon Verde	169.19	77	eP	PKPdf	05 43 23.5	-1.8
DVLD	Doverlandia	169.88	329	eP	PKPdf	05 43 23.8	-1.6
PTLB	Pontes e Lacer	169.90	9	eP	PKPdf	05 43 23.9	-1.4
SIV	San Ignacio	169.98	20	PKP	PKPdf	05 43 25.4	0.0
	comp=Z,19nm,1.0s,baz=274,slow=0.4,SNR=38						
SIV				PKPab	PKPab	05 44 40.4	-1.4
	comp=Z,24nm,0.9s,baz=325,slow=3.4,SNR=9.8						
VAO	Valinhos	170.07	282	eP	PKPdf	05 43 24.6	-0.8
SALV	Santo Antonio	170.31	350	eP	PKPdf	05 43 24.6	-1.0
RCLB	Rio Claro- Sao	170.38	286	eP	PKPdf	05 43 25.2	-0.4
PET01	Itanhaem-SP	170.64	275	eP	PKPdf	05 43 25.2	-0.4
BB19B	Bebedouro	170.65	296	eP	PKPdf	05 43 24.8	-1.0
ITRB	Iturama	171.25	310	eP	PKPdf	05 43 25.5	-0.6
PP1B	Ponte de Pedra	171.78	342	eP	PKPdf	05 43 26.0	-0.3
TER01	Tubaro-SC	171.94	246	eP	PKPdf	05 43 25.2	-0.9
TIJ01	Guaruva-PR	172.32	269	eP	PKPdf	05 43 26.8	+0.3
FRTB	Fartura	172.46	285	eP	PKPdf	05 43 26.8	+0.3
PLTB	Pedras Altas	172.87	208	eP	PKPdf	05 43 25.7	-0.7
CNLB	Canela	172.97	236	eP	PKPdf	05 43 26.3	-0.3
PCMB	Pacaembu	173.09	303	eP	PKPdf	05 43 26.8	0.0
CPSB	Cacapava Do Su	173.93	215	eP	PKPdf	05 43 26.3	-0.6
AQDB	Aquidauana	174.74	341	eP	PKPdf	05 43 25.9	-1.5
TRCB	Terra Rica	174.81	300	eP	PKPdf	05 43 27.9	+0.5
ITAB	Concordia	174.88	249	eP	PKPdf	05 43 27.9	+0.7
ITQB	Itaqui	175.76	190	eP	PKPdf	05 43 27.4	0.0
MCR1	Marechal Candi	176.69	287	eP	PKPdf	05 43 26.0	-1.8
CPUP	Villa Florida	179.15	190	PKP	PKPdf	05 43 27.4	-0.5
	comp=Z,28nm,1.3s,baz=354,slow=1.2,SNR=8.2						
CPUP				PKPab	PKPab	05 45 21.5	
	comp=Z,14nm,0.9s,baz=121,slow=4.0,SNR=12						
CPUP				SKP		05 46 30.7	
	comp=Z,18nm,1.0s,baz=15,slow=4.1,SNR=3.1						
CPUP	Villa Florida	179.15	190	eP	PKPdf	05 43 28.5	+0.5

NEIC ***31*** *05:35:33.3±1.1, 12°.18N±0°.07×140°.4E±0°.1, h51^{km}±8^{km}, mb4.6/17 Error ellipse: s-maj=16.2km s-min=9.4km az=113.0*

IDC ***31*** *05:35:36.5±3.0, 12°.11N×140°.47E, h94^{km}±30^{km}, mb3.9/15, mbtmp4.2/16, Error ellipse: s-maj=22.1km s-min=15.4km az=95.0*

ISC 31 05:35:32.7±0.5**, 12°.16N**±0°.08×**140°.29E**±0°.08**, h50**^{km}**, n35, σ0.97**/35**, mb4.3**/21**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.69	72	P	Pn	05 36 41.9	+1.0
	48nm,0.4s,baz=249,slow=4.7,SNR=9.2						
GUMO				S	Sn	05 37 35.8	+1.8
	88nm,0.8s,baz=212,slow=22,SNR=1.2						
GUMO	Guam	4.69	72	Pn	Pn	05 36 40.4	-0.5
FAKI	Fak Fak	16.98	209	Pn	Pn	05 39 26.8	0.0
FAKI				IAmb	IAmb	05 39 35.0	
	comp=Z,82nm,1.2s						
PATS	Pohnpei	18.54	105		P	05 39 44.1	-1.2
TOLI2	Tolitoli	22.24	242	P	P	05 40 25.5	0.0
TOLI2				IAmb	IAmb	05 40 38.5	
	comp=Z,31nm,1.0s						
MJAR	Matsushiro Arr	24.35	356	P	P	05 40 45.6	-0.4
	comp=Z,1.1nm,0.4s,baz=5.1,slow=7.4,SNR=2.5						
	comp=Z,1.1nm,0.4s						
KSRS	Korea Array	27.52	338	P	P	05 41 14.4	-0.1
	comp=Z,0.5nm,0.3s,baz=152,slow=11,SNR=4.3						
	comp=Z,0.5nm,0.3s						
WB0	Warramunga Arr	32.25	190	P	P	05 41 57.3	+0.7
WR0	Warramunga Arr	32.41	190	P	P	05 42 01.2	+3.1
WRA	Warramunga Arr	32.43	190	P	P	05 41 56.9	-1.3
	comp=Z,2.2nm,0.8s,baz=3.6,slow=9.5,SNR=2.2						
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	36.15	190	P	P	05 42 30.4	0.0
	comp=Z,1.1nm,0.7s,baz=18,slow=12,SNR=1.7						
	comp=Z,1.1nm,0.7s						
KLR	Kul'dur	37.63	351	P	P	05 42 42.8	+0.1
	comp=Z,8.4nm,0.9s,baz=150,slow=7.8,SNR=12						
	comp=Z,8.4nm,0.9s						
EIDS	Eidsvold	38.75	164	P	P	05 42 52.2	-0.2
CMAR	Chiang Mai Arr	40.30	284	P	P	05 43 07.2	+1.7
	comp=Z,1.1nm,0.4s,baz=89,slow=5.8,SNR=5.9						
	comp=Z,1.1nm,0.4s						
STKA	Stephens Creek	43.80	178	P	P	05 43 32.2	-1.5
	comp=Z,4.0nm,0.7s,baz=31,slow=16,SNR=2.9						
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	43.80	178	IAmb	IAmb	05 43 39.0	
	comp=Z,2.5nm,0.9s						
FORT	Forrest	44.28	195	P	P	05 43 37.6	+0.1
BBOO	Buckleboo	44.90	185	P	P	05 43 42.1	-0.4
SONM	Songino Array	45.45	328	P	P	05 43 47.3	+0.3
	comp=Z,1.2nm,0.6s,baz=152,slow=6.5,SNR=3.4						
	comp=Z,1.2nm,0.6s						
CAN	Canberra	47.93	170	P	P	05 44 06.4	+0.1
MKAR	Makanchi Array	59.47	317	P	P	05 45 30.5	0.0
	comp=Z,2.5nm,1.0s,baz=95,slow=8.9,SNR=4.5						
	comp=Z,2.5nm,1.0s						
ZALV	Zalesovo Beam	60.24	326	P	P	05 45 35.3	-0.4
	comp=Z,1.3nm,0.6s,baz=96,slow=7.4,SNR=3.2						
	comp=Z,1.3nm,0.6s						
KURK	Kurchatov	62.84	321	P	P	05 45 53.5	+0.2
KURBB	Kurchatov Arra	62.87	321	P	P	05 45 53.6	+0.2
	comp=Z,6.4nm,0.9s,baz=104,slow=7.1,SNR=24						
	comp=Z,6.4nm,0.9s						
NRIK	Noril'sk	66.06	342	P	P	05 46 14.2	+0.2
	comp=Z,1.2nm,0.4s,baz=146,slow=13,SNR=2.4						
	comp=Z,1.2nm,0.4s						
MLY	Manley	70.22	25	P	P	05 46 40.3	+0.1
MLY				IAmb	IAmb	05 46 55.7	
	comp=Z,5.3nm,1.0s						
TOLK	Toolik Lake Re	71.55	21	P	P	05 46 48.5	+0.2
TOLK				IAmb	IAmb	05 47 08.0	
	comp=Z,5.9nm,0.8s						
IL31		71.77	26	P	P	05 46 49.0	-0.5
ILAR	Eielson Array	71.77	26	P	P	05 46 48.0	-1.6
	comp=Z,1.1nm,0.6s,baz=247,slow=5.8,SNR=14						
	comp=Z,1.1nm,0.6s						
ABKAR	Akbulak array	74.60	318	P	P	05 47 06.5	-0.1
DAWY	Dawson	74.92	27	P	P	05 47 08.1	-0.1
DAWY				IAmb	IAmb	05 47 20.1	
	comp=Z,6.9nm,1.1s						
EPYK	Eagle Plains	76.14	24	P	P	05 47 15.0	-0.1
EPYK				IAmb	IAmb	05 47 34.7	
	comp=Z,6.8nm,1.1s						
YKA	Yellowknife Ar	86.16	27	P	P	05 48 07.3	-1.0
	comp=Z,0.7nm,0.5s,baz=290,slow=4.7,SNR=7.8						
	comp=Z,0.7nm,0.5s						
ARCES	ARCESS Array B	87.04	341	P	P	05 48 12.0	-0.5
	comp=Z,2.1nm,0.8s,baz=40,slow=7.4,SNR=1.9						
FINES	FINESS Array B	90.53	334	P	P	05 48 27.8	-1.3
	comp=Z,2.8nm,0.6s,baz=77,slow=5.0,SNR=8.7						
	comp=Z,2.8nm,0.6s						

OSPL ***31*** *05:50:19.8±0.8, 18°.43N×67°.49W, h29^{km}±999^{km}, ML2.1*

RSPR 31 05:50:19.7, 18°.46N×67°.56W, h17^{km}**, MD2.5**/11**, 10C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.11	130	⇓eP	Pb	05 50 23.4	0.0
IDE	Isla Desecheo	0.11	130	eS	Sg	05 50 26.2	+0.3
AGPR	Aguadilla, PR	0.43	88	⇑eP	Pg	05 50 27.8	-0.6
AGPR	Aguadilla, PR	0.43	88	eS	Sg	05 50 34.2	-0.2
AGPR	Aguadilla, PR	0.43	88		Pg	05 50 27.8	-0.6
AGPR					Sg	05 50 34.2	-0.2
AGPR	Aguadilla, PR	0.43	88	IAML		05 50 34.9	
	comp=N,394nm,0.2s						
AGPR				IAML		05 50 34.9	
	comp=E,332nm,0.1s						
AGPR	Aguadilla, PR	0.43	88	iP	Pg	05 50 27.9	-0.6
AGPR				eS	Sg	05 50 32.7	-1.7
AGPR				IAML		05 50 35.4	
	comp=Z,201nm,0.1s						
PRSN	Puerto Rico Se	0.46	121	⇑eP	Pg	05 50 28.2	-0.9
PRSN				eS	Sg	05 50 34.9	-0.4
PRSN	Puerto Rico Se	0.46	121		Pg	05 50 28.2	-0.9
PRSN					Sg	05 50 34.9	-0.4
PRSN	Puerto Rico Se	0.46	121	IAML		05 50 35.5	
	comp=N,964nm,0.3s						
PRSN				IAML		05 50 36.7	
	comp=E,777nm,0.2s						
LSP	Las Mesas	0.53	122	⇑eP	Pg	05 50 29.5	-0.8
LSP	Las Mesas	0.53	122	eS	Sg	05 50 37.4	-0.1
CRPR	Cabo Rojo, PR	0.62	136	⇑eP	Pg	05 50 30.5	-1.5
CRPR	Cabo Rojo, PR	0.62	136	eS	Sg	05 50 38.9	-1.4
CRPR	Cabo Rojo, PR	0.62	136		Pg	05 50 30.5	-1.5
CRPR					Sg	05 50 38.9	-1.4
CRPR	Cabo Rojo, PR	0.62	136	iP	Pg	05 50 30.5	-1.5
CRPR				eS	Sg	05 50 37.8	-2.4
CRPR				IAML		05 50 41.1	
	comp=Z,103nm,0.3s						
MLPR	Magueyes Islan	0.69	134	⇑eP	Pb	05 50 31.5	-1.7
MLPR	Magueyes Islan	0.69	134	eS	Sg	05 50 40.8	-1.7
MLPR	Magueyes Islan	0.69	134		Pb	05 50 31.5	-1.7
MLPR					Sg	05 50 40.8	-1.7
AOPR	Arecibo Observ	0.77	98	⇑eP	Pb	05 50 33.0	-1.7
AOPR	Arecibo Observ	0.77	98	eS	Sb	05 50 43.4	-1.6
AOPR	Arecibo Observ	0.77	98		Pb	05 50 33.0	-1.7
AOPR					Sb	05 50 43.4	-1.6
AOPR	Arecibo Observ	0.77	98	IAML		05 50 44.9	
	comp=N,154nm,0.2s						
AOPR				IAML		05 50 54.1	
	comp=E,297nm,0.3s						
GBPR	Guanica, Bosqu	0.80	126	⇑eP	Pb	05 50 33.4	-1.8
GBPR				eS	Sb	05 50 43.6	-2.2
UUPR	Utuado, UPR, P	0.82	104	⇑eP	Pb	05 50 33.4	-2.1
UUPR	Utuado, UPR, P	0.82	104	eS	Sb	05 50 43.6	-2.8
UUPR	Utuado, UPR, P	0.82	104		Pb	05 50 33.4	-2.1
UUPR					Sb	05 50 43.6	-2.8
EMPR	Esperanza - Ma	0.98	89	⇑eP	Pb	05 50 36.4	-1.8
EMPR	Esperanza - Ma	0.98	89	eS	Sb	05 50 50.9	+0.1
EMPR	Esperanza - Ma	0.98	89		Pb	05 50 36.4	-1.8
EMPR					Sb	05 50 50.9	+0.1
EMPR	Esperanza - Ma	0.98	89	IAML		05 50 53.3	
	comp=N,141nm,0.2s						
OBIP	Obispado Ponce	0.99	114	⇑eP	Pb	05 50 36.1	-2.4
OBIP	Obispado Ponce	0.99	114	eS	Sb	05 50 48.3	-3.0
OBIP	Obispado Ponce	0.99	114		Pb	05 50 36.1	-2.4
OBIP					Sb	05 50 48.3	-3.0
CELP	Cerrillos	1.01	112		Pb	05 50 36.9	-1.8
CELP				IAML		05 50 51.2	
	comp=E,86nm,0.5s						
SJG	San Juan	1.38	104	Pn	Pn	05 50 43.2	-1.0
SJG				IAML		05 51 03.9	
	comp=E,118nm,0.4s						
SJG				IAML		05 51 04.1	
	comp=E,129nm,0.3s						
GCPR	Guaynabo City	1.41	96	Pn	Pn	05 50 43.6	-1.0
GCPR				IAML		05 51 04.6	
	comp=E,59nm,0.2s						
GCPR				IAML		05 51 05.3	
	comp=N,59nm,0.3s						
PDPR	Patillas Dam,	1.52	106	Pn	Pn	05 50 45.2	-1.0
PDPR				IAML		05 51 04.8	
	comp=E,77nm,2.4s						
CBYP	Canovanas	1.63	96	Pn	Pn	05 50 46.9	-0.8
HUMP	Col San Antoni	1.66	101	Pn	Pn	05 50 46.9	-1.0
HUMP				IAML		05 51 10.4	
	comp=N,50nm,0.3s						
DR12	Loma Pena Alta	1.76	281	Pn	Pn	05 50 48.7	-0.8

INET ***31*** *05:59:41.9±1.2, 12°.23N×87°.46W, h15^{km}±7^{km}, MW4.2*

SNET ***31*** *05:59:43.0±1.6, 12°.29N×87°.61W, h24^{km}±9^{km}, ML3.7*

UCR ***31*** *05:59:43.0±1.6, 12°.28N×87°.62W, h24^{km}±10^{km}, ML3.7*

ISC 31 05:59:41.4±1.4**, 12°.22N**±0°.05×**87°.48W**±0°.03**, h27**^{km}±13^{km}**, n42, σ0.93**/65**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.63	41	eP	Pn	05 59 55.0	+0.4
CRIN				eS	Sn	06 00 05.9	+2.1
TELN	Telica	0.74	59	eP	Pb	05 59 56.2	+0.6
CNGN	Cerro Negro	0.81	70	eP	Pn	05 59 57.7	+0.7
CNGN				eS	Sn	06 00 08.8	+0.7
COPN	Copaltepe	0.87	93	eP	Pb	05 59 57.8	0.0
CNCH	Conchagua	1.10	342	eP	Pn	06 00 01.2	0.0
CNCH				eS	Sb	06 00 15.7	-0.2
CNCH				IAML		06 00 18.7	
	comp=Z,8μm,0.3s						
CNCH	Conchagua	1.10	342	eP	Pn	06 00 01.2	0.0
CNCH				eS	Sb	06 00 15.7	-0.2
CNCH				IAML		06 00 18.7	
	comp=Z,8μm,0.3s						
CNCH	Conchagua	1.10	342	eP	Pn	06 00 01.1	0.0
CNCH				eS	Sb	06 00 15.0	-1.0
LCND	La Caada	1.15	340	eP	Pn	06 00 01.7	0.0
LCND				eS	Sn	06 00 16.7	+0.1
LCND				IAML		06 00 18.5	
	comp=Z,5μm,0.4s						
LCND	La Caada	1.15	340	eP	Pn	06 00 01.7	0.0
LCND				eS	Sn	06 00 16.7	+0.1
LCND				IAML		06 00 18.5	
	comp=Z,5μm,0.4s						
MGAN	Managua	1.20	93	eP	Pn	06 00 02.4	0.0
BRAN	Las Pilas	1.21	66	eP	Pn	06 00 00.8	-1.6
BRAN				eS	Sn	06 00 15.4	-2.6
WILN	Americas 2	1.26	93	eP	Pn	06 00 03.1	-0.1
HUEN		1.28	85	eP	Pn	06 00 03.4	-0.1
HUEN				eS	Sn	06 00 20.2	+0.4
MASN	Masaya	1.32	100	eS	Sn	06 00 20.7	0.0
VSM	San Miguel	1.43	327	eP	Pn	06 00 06.4	+0.7
VSM	San Miguel	1.43	327	eP	Pn	06 00 06.4	+0.7
PACA	Pacayal	1.49	326	eP	Pn	06 00 06.8	+0.4
PACA				eS	Sn	06 00 26.2	+1.1
PACA	Pacayal	1.49	326	eP	Pn	06 00 06.8	+0.4
PACA				eS	Sn	06 00 26.2	+1.1
PACA	Pacayal	1.49	326	eP	Pn	06 00 06.7	+0.2
COEB	Comit de Eme	1.63	321	eP	Pn	06 00 09.4	+1.0
COEB				eS	Sn	06 00 28.9	+0.2
COEB				IAML		06 00 34.4	
	comp=Z,511nm,0.4s						
COEB	Comit de Eme	1.63	321	eP	Pn	06 00 09.4	+1.0
COEB				eS	Sn	06 00 28.9	+0.2
COEB				IAML		06 00 34.4	
	comp=Z,511nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MATN	Matagalpa	1.67	65	eP	Pn	06 00 07.5	-1.4
TGUH	Tegucigalpa,Un	1.83	6	eP	Pn	06 00 11.5	+0.2
TGUH	Tegucigalpa,Un	1.83	6	eP	Pn	06 00 11.5	+0.2
TGUH	Tegucigalpa,Un	1.83	6	eP	Pn	06 00 11.4	+0.2
SCLA	Alcaldia de Sa	1.91	320	eP	Pn	06 00 13.1	+0.9
SCLA				eS	Sn	06 00 36.6	+1.2
SCLA	Alcaldia de Sa	1.91	320	eP	Pn	06 00 13.1	+0.9
SCLA				eS	Sn	06 00 36.6	+1.2
COEG	Centro de Oper	1.95	316	eP	Pn	06 00 12.9	+0.2
COEG				eS	Sn	06 00 36.0	-0.4
COEG				IAML		06 00 39.9	
	comp=Z,430nm,0.4s						
COEG	Centro de Oper	1.95	316	eP	Pn	06 00 12.9	+0.2
COEG				eS	Sn	06 00 36.0	-0.4
COEG				IAML		06 00 39.9	
	comp=Z,430nm,0.4s						
SJTE	Alcalda de S	2.04	313	eP	Pn	06 00 14.0	+0.1
SJTE				eS	Sn	06 00 37.7	-0.9
SJTE				IAML		06 00 38.9	
	comp=Z,270nm,0.3s						
SJTE	Alcalda de S	2.04	313	eP	Pn	06 00 14.0	+0.1
SJTE				eS	Sn	06 00 37.7	-0.9
SJTE				IAML		06 00 38.9	
	comp=Z,270nm,0.3s						
LFRS	El Faro	2.08	312	eP	Pn	06 00 14.9	+0.3
LFRS	El Faro	2.08	312	eP	Pn	06 00 14.9	+0.3
HZTE	Horizontes, Gu	2.38	129	eP	Pn	06 00 19.7	+1.2
JAYA	Jayaque - finc	2.39	307	eP	Pn	06 00 17.8	-1.1
JAYA				eS	Sn	06 00 44.9	-2.6
JAYA				IAML		06 00 46.5	
	comp=Z,475nm,0.2s						
JAYA	Jayaque - finc	2.39	307	eP	Pn	06 00 17.8	-1.1
JAYA				eS	Sn	06 00 44.9	-2.6
JAYA				IAML		06 00 46.5	
	comp=Z,475nm,0.2s						
CEVE	Cerro Verde	2.63	308	eP	Pn	06 00 23.4	+1.1
CEVE	Cerro Verde	2.63	308	eP	Pn	06 00 23.4	+1.1
NUBE	Las Nubes	2.80	307	eP	Pn	06 00 25.2	+0.7
NUBE				eS	Sn	06 00 57.0	-0.5
NUBE	Las Nubes	2.80	307	eP	Pn	06 00 25.2	+0.7
NUBE				eS	Sn	06 00 57.0	-0.5
DUNO	Dulce Nombre,	2.88	137	eP	Pn	06 00 25.8	+0.2
LAFE	Finca La Fe, P	3.48	133	eP	Pn	06 00 34.1	+0.3

IDC 31 06:08:25.1±8.1**, 10°.93N×137°.79E, h0^{km}, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=363.7km s-min=32.2km az=75.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.87	186	P	P	06 14 42.5	-0.9
	0.4nm,0.8s,baz=4.1,slow=9.5,SNR=5.0						
	0.4nm,0.8s						
ASAR	Alice Springs	34.59	186	P	P	06 15 16.7	+0.7
	0.2nm,0.4s,baz=18,slow=11,SNR=5.8						
	0.2nm,0.4s						
MKAR	Makanchi Array	58.73	319	P	P	06 18 24.8	-0.1
	0.8nm,1.0s,baz=91,slow=7.8,SNR=3.0						
	0.8nm,1.0s						

INET ***31*** *06:12:51.4±2.2, 9°.41N×84°.29W, h15^{km}±8^{km}, MW4.1*
UCR ***31*** *06:12:51.7±1.7, 9°.37N×84°.29W, h32^{km}±2^{km}, MW4.4*
NEIC ***31*** *06:12:51.8±2.0, 9°.38N±0°.05×84°.34W±0°.04, h35^{km}±16^{km}, mb4.3/18, ML4.5(UCR), Error ellipse: s-maj=8.1km s-min=5.3km az=208.0*
ISC 31 06:12:51.1±1.1**, 9°.36N**±0°.04×**84°.31W**±0°.03**, h33^{km}**±5^{km}**, n72, σ0^{s}.93**/85**, mb4.2**/10**, 8C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.45	104	eP	Pb	06 13 01.2	+0.2
EDDO				eS	Sn	06 13 08.6	+0.2
JACO	JACO, Garabito	0.46	311		Pb	06 13 01.3	+0.2
JACO	JACO, Garabito	0.46	311	eP	Pb	06 13 01.2	+0.2
LCR2	La Lucha 2	0.48	39	eP	Pb	06 13 01.4	-0.3
LCR2				eS	Sb	06 13 08.9	+0.1
CDM	Cerro de Muert	0.57	70	eP	Pb	06 13 03.0	-0.2
CDM	Cerro de Muert	0.57	70	eP	Pb	06 13 03.1	-0.1
CDM				eS	Sn	06 13 12.2	+0.3
RIMA	Rio Macho	0.60	48		Pb	06 13 03.0	-0.5
RIMA	Rio Macho	0.60	48	eP	Pb	06 13 02.9	-0.5
RIMA	Rio Macho	0.60	48	eP	Pb	06 13 02.9	-0.5
RIMA				eS	Sb	06 13 11.3	-0.6
PEZE	Perez Zeledon,	0.63	88		Pb	06 13 03.5	-0.4
PEZE	Perez Zeledon,	0.63	88	eP	Pb	06 13 03.4	-0.4
PEZE	Perez Zeledon,	0.63	88	eP	Pb	06 13 03.4	-0.4
PEZE				eS	Sn	06 13 12.8	+0.1
HDC	Heredia	0.67	17		Pb	06 13 04.4	-0.1
HDC	Heredia	0.67	17	eP	Pb	06 13 04.2	-0.3
HDC				eS	Sb	06 13 13.7	+0.1
HDC3	Heredia 3	0.67	17	eP	Pb	06 13 04.4	-0.2
HDC3				eS	Sn	06 13 14.3	+0.5
LAFE	Finca La Fe, P	0.74	307	eP	Pn	06 13 05.4	+0.1
LAFE				eS	Sn	06 13 16.2	+0.8
SRA1	San Ramn	0.74	347	eP	Pn	06 13 04.8	-0.6
CVTR	Volcan Turrial	0.85	40		Pn	06 13 07.1	-0.1
EDPN	Palmar Norte	0.93	115	⇑iP	Pn	06 13 08.2	+0.3
EDPN				eS	Sb	06 13 21.3	+0.4
SRBA	San Rafael, Bu	0.95	98		Pn	06 13 08.6	+0.4
EDBA	Buenos Aires	1.04	101	⇑eP	Pn	06 13 09.3	-0.2
EDBA				eS	Sn	06 13 22.8	-0.2
DRK0	Durika	1.06	95		Pb	06 13 11.2	+0.1
DRK0	Durika	1.06	95	eP	Pb	06 13 11.1	+0.1
JTS	Las Juntas de	1.12	326	Pn	Pn	06 13 10.6	0.0
JTS	Las Juntas de	1.12	326	eP	Pn	06 13 10.4	-0.1
JTS	Las Juntas de	1.12	326	eP	Pn	06 13 10.5	0.0
FORC	Fortuna	1.15	342	⇑iP	Pn	06 13 11.7	+0.7
FORC				i S	Sb	06 13 28.5	+1.2
BATAN	Batan	1.18	51		Pn	06 13 12.0	+0.7
CEDE	Laguna Cedeo	1.18	341	⇑iP	Pn	06 13 12.4	+0.9
PIRO	Carate, Puerto	1.35	135	eP	Pn	06 13 13.7	-0.1
DUNO	Dulce Nombre,	1.37	302		Pn	06 13 13.7	-0.2
DUNO	Dulce Nombre,	1.37	302	eP	Pn	06 13 13.6	-0.4
DUNO				eS	Sn	06 13 30.5	-0.5
EDSV	San Vito	1.43	112	eP	Pn	06 13 15.6	+0.7
ORTG	Ortega, Santa	1.51	311	Pn	Pn	06 13 15.9	0.0
ORTG	Ortega, Santa	1.51	311	eP	Pn	06 13 15.9	0.0
ORTG				eS	Sn	06 13 34.2	-0.2
CUI	Cuipilapa	1.54	327	⇑iP	Pn	06 13 17.0	+0.6
COLC	Colonia	1.57	326	⇑iP	Pn	06 13 17.3	+0.6
HORNC	Hornillas	1.59	328	⇑iP	Pn	06 13 17.6	+0.5
GUAB	Guayabo de Bag	1.61	326	⇑iP	Pn	06 13 17.9	+0.5
CDITO	Canoas	1.62	119		Pn	06 13 17.5	+0.1
RGM0	Gandoca	1.70	82		Pn	06 13 20.4	+1.9
RGM0	Gandoca	1.70	82	eP	Pn	06 13 20.3	+1.9
BRU2	Volcan	1.70	109	Pn	Pn	06 13 18.9	+0.3
GPS2	Hotel Rincn d	1.72	324	i P	Pn	06 13 19.5	+0.6
HZTE	Horizontes, Gu	1.84	317	Pn	Pn	06 13 21.4	+0.9
HZTE	Horizontes, Gu	1.84	317	eP	Pn	06 13 21.4	+0.9
ACON	Acoyapa	2.73	342		Pn	06 13 33.1	+0.5
ACON	Acoyapa	2.73	342	eP	Pn	06 13 33.1	+0.5
BOAB	BOACO BROADBAN	3.34	337	Pn	Pn	06 13 41.3	+0.1
MATN	Matagalpa	3.88	336	Pn	Pn	06 13 47.0	-1.6
BCIP	Isla Barro Col	4.42	92	Pn	Pn	06 13 56.1	+0.1
BCIP	Isla Barro Col	4.42	92	eP	Pn	06 13 56.9	+1.0
COEB	Comit de Eme	5.83	315	eP	Pn	06 14 17.4	+1.9
SJCC	San Jacinto, C	9.02	86	Pn	Pn	06 15 01.1	+1.9
TLIG	Tlapa	16.07	302	P	P	06 16 40.4	+2.4
553A	Crawfordville	20.72	360	P	P	06 17 30.2	+1.4
352A	Blakely	22.02	359	P	P	06 17 42.8	0.0
344A	Westbrook Farm	22.78	346	P	P	06 17 51.2	+0.3
152A	Waverly Hall	23.20	359	P	P	06 17 56.0	+0.8
152A				IAmb	IAmb	06 17 56.4	
	comp=Z,7.7nm,0.6s						
LRAL	Lakeview Retre	23.69	354	P	P	06 18 00.1	+0.1
GOGA	Godfrey	23.95	2	P	P	06 18 02.1	-0.3
GOGA				IAmb	IAmb	06 18 20.1	
	comp=Z,12nm,1.5s						
Y52A	Lilburn	24.39	1	P	P	06 18 06.5	0.0
Y52A				IAmb	IAmb	06 18 07.5	
	comp=Z,18nm,1.2s						
HODGE	Hodges	24.82	4	P	P	06 18 09.9	-0.5
HODGE				IAmb	IAmb	06 18 11.9	
	comp=Z,14nm,1.3s						
FPAL	Fort Paine	25.09	357	P	P	06 18 13.8	+1.0
FPAL				IAmb	IAmb	06 18 15.2	
	comp=Z,4.0nm,0.8s						
MIAR	Mount Ida	26.47	343	P	P	06 18 25.6	+0.3
WHAR	Wooly Hollow	26.82	345	P	P	06 18 27.4	-1.0
WHAR				IAmb	IAmb	06 18 52.9	
	comp=Z,9.3nm,1.4s						
S51A	Beattyville	28.16	1	P	P	06 18 40.1	-0.3
CCM	Cathedral Cave	29.24	349	P	P	06 18 48.3	-1.8
CCM				IAmb	IAmb	06 18 49.4	
	comp=Z,3.4nm,0.7s						
P40A	Paris	30.83	348	P	P	06 19 01.8	-2.3
P40A				IAmb	IAmb	06 19 02.3	
	comp=Z,2.4nm,0.5s						
L40A	Anamosa	33.13	351	P	P	06 19 21.6	-2.7
ECSD	EROS Data Cent	35.88	345	P	P	06 19 45.8	-2.3
ECSD				IAmb	IAmb	06 19 47.3	
	comp=Z,3.9nm,1.3s						
F36A	Milaca	37.22	349	P	P	06 19 56.5	-2.9
F36A				IAmb	IAmb	06 19 57.0	
	comp=Z,3.5nm,0.7s						

CRAAG ***31*** *06:13:03.3, 36°.35N×3°.43E, Ml3.3*
MDD ***31*** *06:13:04.9±1.2, 36°.37N×3°.47E, h0^{km}, Mb4.0/11, M_mb3.3/11, Error ellipse: s-maj=11.7km s-min=5.3km az=136.0*
ISC 31 06:13:03.9±1.6**, 36°.31N**±0°.05×**3°.43E**±0°.07**, h15^{km}**±13^{km}**, n15, σ1^{s}.56**/18**, 9C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.15	178	P	Pb	06 13 08.2	-0.3
ABMS	Boumerdes	0.44	5	P	Pg	06 13 12.6	-0.2
AKET	Djebel Ketaf	0.45	126	P	Pb	06 13 13.9	+0.3
ABA	Alger-Bouzarea	0.59	327	P	Pb	06 13 15.4	-0.5
OJBR	Djebel Berber	2.61	255	P	Pg	06 13 59.0	+5.0
EIBI	Ibiza	3.18	329	P	Pn	06 13 54.7	+1.3
EIBI				⇑iVmb_V		06 13 56.8	
	368nm,SNR=1.7						
EIBI				S	Sn	06 14 29.8	-1.3
ETOS	Mallorca	3.49	352	P	Pn	06 13 58.2	+0.6
ETOS				⇑iVmb_V		06 13 59.8	
	190nm,SNR=1.5						
ETOS				S	Sn	06 14 35.3	-3.3
OTSS	Djebel Tessala	3.59	255	P	Pn	06 13 58.0	-1.1
AFON	Font Roja	3.94	308	P	Pn	06 14 02.9	-1.1
AFON				⇑iVmb_V		06 14 05.6	
	214nm,SNR=1.1						
EMUR	La Murta	4.04	294	P	Pn	06 14 06.4	+1.2
EMUR				⇑iVmb_V		06 14 10.2	
	73nm,SNR=0.9						
ETOB	Tobarra	4.60	302	P	Pn	06 14 14.3	+1.4
ETOB				⇑iVmb_V		06 14 17.0	
	100nm,SNR=1.1						
ETOB				S	Sn	06 15 08.5	+2.4
ECHE	Chera	4.78	315	P	Pn	06 14 16.5	+1.1
ECHE				⇑iVmb_V		06 14 18.5	
	248nm,SNR=1.7						
EMOS	Mosqueruela	5.08	324	P	Pn	06 14 20.7	+1.0
EMOS				⇑iVmb_V		06 14 21.9	
	131nm,SNR=0.9						
EMOS				S	Sn	06 15 17.7	-0.5
EJON	La Jonquera	6.15	356	P	Pn	06 14 35.3	+1.1
EJON				⇑iVmb_V		06 14 38.6	
	163nm,SNR=0.9						
ETOR	Torete	6.22	318	P	Pn	06 14 37.3	+2.0
ETOR				⇑iVmb_V		06 14 41.0	
	59nm,SNR=0.8						

TAP ***31*** *06:21:00.1, 22°.12N×121°.98E, h21^{km}, ML3.3, D*
JMA ***31*** *06:21:01.4±0.5, 22°N±2°×12°2E±°, h54^{km}, MV3.6/12, TAIWAN REGION*
ISC 31 06:21:00.5±1.2**, 22°.10N**±0°.04×**122°.00E**±0°.03**, h25^{km}**±11^{km}**, n87, σ0^{s}.66**/169**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu baz=252	0.40	256	P	Pb	06 21 09.3	+0.3
LYUB	baz=252			S	Sb	06 21 15.5	+0.7
LAY	Lan-yu baz=258	0.42	262	P	Pb	06 21 09.0	-0.4
LAY	baz=258			S	Sb	06 21 15.4	-0.1
LDUT	Ludao baz=319	0.75	319	P	Pb	06 21 14.3	-0.7
LDUT	baz=319			S	Sb	06 21 24.5	-0.3
TTN	Taitung baz=309	1.02	310	eP	Pn	06 21 19.1	-0.2
TTN	baz=309			eS	Sb	06 21 33.1	+0.5
TSEB	Hengchuen, Pin baz=258	1.04	259	eP	Pb	06 21 20.2	+0.3
TSEB	baz=258			eS	Sn	06 21 34.7	+1.4
TAW	Tawu baz=283	1.05	284	eP	Pn	06 21 18.9	-0.8
TAW	baz=283			eS	Sb	06 21 32.5	-0.9
EDH	Donghe baz=323	1.08	324	P	Pn	06 21 19.2	-0.9
EDH	baz=323			S	Sb	06 21 33.2	-1.1
SMST	Manzhou Townsh baz=264	1.08	266	eP	Pn	06 21 19.5	-0.7
SMST	baz=264			eS	Sb	06 21 33.7	-0.6
ECL	Taimali baz=296	1.09	297	eP	Pn	06 21 19.8	-0.4
ECL	baz=296			eS	Sb	06 21 34.6	+0.2
EAST	Anshuo baz=284	1.10	285	P	Pn	06 21 19.6	-0.8
EAST	baz=284			eS	Sb	06 21 34.4	-0.6
TWGBT	Beinan baz=309	1.11	310	eP	Pn	06 21 20.3	-0.2
TWGBT	baz=309			eS	Sb	06 21 35.3	+0.2
TWKBT	Hengchun baz=260	1.11	262	P	Pn	06 21 20.5	-0.1
TWKBT	baz=260			S	Sn	06 21 35.3	+0.2
TWG	Pinlang baz=309	1.12	310	eP	Pn	06 21 20.3	-0.4
TWG	baz=309			eS	Sb	06 21 35.3	0.0
SLIU	Shizi baz=275	1.12	276	P	Pn	06 21 19.9	-0.7
SLIU	baz=275			eS	Sb	06 21 35.0	-0.4
TWK1	Hengchun baz=260	1.12	262	eP	Pn	06 21 20.5	-0.2
TWK1	baz=260			eS	Sn	06 21 35.4	+0.1
LONT	Longtian baz=314	1.14	315	eP	Pn	06 21 21.3	+0.4
LONT	baz=314			eS	Sb	06 21 36.0	+0.2
HEN	Hengchun baz=264	1.17	266	eP	Pn	06 21 21.5	+0.1
HEN	baz=264			eS	Sn	06 21 37.0	+0.4
FULB	Fuli baz=329	1.27	329	P	Pn	06 21 22.4	-0.5
FULB	baz=329			eS	Sn	06 21 39.2	+0.1
SCZT	Fangliau baz=281	1.31	282	eP	Pn	06 21 23.1	-0.1
SCZT	baz=281			eS	Sn	06 21 40.3	+0.4
MASBT	Mashibuluo baz=291	1.36	292	eP	Pn	06 21 23.9	-0.1
MASBT	baz=291			eS	Sn	06 21 41.5	+0.1
SSPT	Xinbi baz=285	1.38	286	eP	Pn	06 21 24.5	+0.2
SSPT	baz=285			eS	Sn	06 21 42.1	+0.4
TSMG	Majia baz=295	1.39	296	eP	Pn	06 21 24.3	-0.1
TSMG	baz=295			eS	Sn	06 21 42.0	0.0
ELDTW	Lidau baz=320	1.41	320	eP	Pn	06 21 24.5	-0.3
ELDTW	baz=320			eS	Sn	06 21 42.1	-0.6
SSD	Sandimen baz=296	1.42	297	eP	Pn	06 21 24.2	-0.5
SSD	baz=296			eS	Sn	06 21 42.4	-0.4
YULB	Yu-li baz=333	1.44	333	P	Pn	06 21 24.7	-0.4
YULB	baz=333			S	Sn	06 21 44.3	+1.1
HGSD	Ruisui baz=339	1.48	339	eP	Pn	06 21 25.5	-0.2
HGSD	baz=339			eS	Sn	06 21 43.6	-0.7
EHY	Hungye baz=336	1.53	336	P	Pn	06 21 26.2	-0.1
EHY	baz=336			S	Sn	06 21 46.1	+0.6
STYH	Taoyuan baz=313	1.55	313	eS	Sn	06 21 46.9	+0.9
SCST	Cishan baz=299	1.60	300	eP	Pn	06 21 27.2	0.0
SCST	baz=299			eS	Sn	06 21 47.6	+0.6
SGST	Jiashian baz=306	1.63	307	eP	Pn	06 21 27.7	0.0
SGST	baz=306			eS	Sn	06 21 47.7	-0.3
EGFH	Guangfu baz=341	1.65	341	eP	Pn	06 21 28.0	+0.1
EGFH	baz=341			eS	Sn	06 21 48.7	+0.4
YUS	Yu-Shan baz=325	1.69	325	eP	Pn	06 21 29.3	+0.4
YUS	baz=325			eS	Sn	06 21 49.3	-0.7
WTP	Ta-pu baz=311	1.71	312	eP	Pb	06 21 30.8	-0.6
WTP	baz=311			eS	Sn	06 21 50.8	+0.8
CHN1	Nanshi baz=308	1.73	309	eP	Pn	06 21 29.1	-0.1
CHN1	baz=308			eS	Sn	06 21 50.8	+0.2
SNST	Tainan City baz=308	1.78	309	eP	Pn	06 21 29.9	+0.1
SNST	baz=308			eS	Sn	06 21 51.9	+0.3
SHHT	Tainan City baz=300	1.78	301	eP	Pn	06 21 29.9	+0.1
SHHT	baz=300			eS	Sb	06 21 53.5	-0.9
ESL	Shilin baz=343	1.78	343	eP	Pn	06 21 29.9	+0.1
ESL	baz=343			eS	Sn	06 21 51.5	-0.3
ALS	Alishan baz=322	1.78	322	eP	Pn	06 21 31.1	+1.0
ALS	baz=322			eS	Sn	06 21 51.9	-0.3
TWK	Hsinying baz=309	1.81	310	eP	Pn	06 21 30.3	0.0
TWK	baz=309			eS	Sn	06 21 52.2	-0.4
VWDT	VWDT baz=334	1.82	334	eP	Pn	06 21 31.2	+0.8
VWDT	baz=334			eS	Sn	06 21 53.2	+0.5
CHN5	Tsauling baz=320	1.92	321	eP	Pn	06 21 32.0	+0.2
CHN5	baz=320			eS	Sn	06 21 55.1	-0.2
SSLB	Suanglung baz=330	1.94	330	eP	Pn	06 21 32.2	+0.3
SSLB	baz=330			eS	Sn	06 21 56.4	+0.9
OWD	Renai baz=337	1.99	338	eP	Pn	06 21 33.0	+0.1
OWD	baz=337			eS	Sn	06 21 58.1	+1.0
TWD	Chiawan baz=349	2.00	349	eP	Pn	06 21 32.4	-0.5
TWD	baz=349			eS	Sn	06 21 57.8	+0.7
SMLT	Sun Moon Lake baz=330	2.04	330	eP	Pn	06 21 35.0	+1.5
SMLT	baz=330			eS	Sn	06 21 57.5	-0.8
WUSB	Renai baz=336	2.05	337	eP	Pn	06 21 33.5	-0.1
WUSB	baz=336			eS	Sn	06 21 58.9	+0.4
CHGB	Renai baz=338	2.09	339	eP	Pn	06 21 34.6	+0.4
CHGB	baz=338			eS	Sn	06 21 59.6	-0.1
NACB	Ninganchiao baz=350	2.10	350	eP	Pn	06 21 33.9	-0.2
NACB	baz=350			eS	Sn	06 21 59.6	+0.2
WHF	Hehuan Shan baz=342	2.14	342	eP	Pn	06 21 35.2	0.0
WHF	baz=342			eS	Sn	06 22 00.5	-0.7
ETLH	Xiulin Townshi baz=347	2.15	347	eP	Pn	06 21 34.5	-0.4
ETLH	baz=347			eS	Sn	06 22 01.1	+0.2
WSL	Shuilin Townsh baz=310	2.16	311	eP	Pn	06 21 35.3	+0.3
WSL	baz=310			eS	Sn	06 22 02.8	+1.8
WCS	Beigang Elemen baz=332	2.19	333	eP	Pn	06 21 35.0	-0.4
WCS	baz=332			eS	Sn	06 22 02.9	+1.2
FUSS	Fushou baz=342	2.25	342	eP	Pn	06 21 36.7	+0.3
FUSS	baz=342			eS	Sn	06 22 02.6	-0.9
TWT	Tachien baz=340	2.27	341	eP	Pn	06 21 36.6	-0.1
ENA	Nanau baz=354	2.33	354	eP	Pn	06 21 37.2	-0.1
ENA	baz=354			eS	Sn	06 22 05.6	+0.5
EWUT	Wuta baz=355	2.34	355	eP	Pn	06 21 37.7	+0.2
EWUT	baz=355			eS	Sn	06 22 06.2	+0.7
WHP	Taichung City baz=336	2.37	336	eP	Pn	06 21 40.0	+2.0
NNSB	Datong baz=346	2.38	346	eP	Pn	06 21 39.1	+0.9
NNSB	baz=346			eS	Sn	06 22 06.7	0.0
WDGT	Dungji baz=297	2.45	299	eP	Pn	06 21 38.9	0.0
WDGT	baz=297			eS	Sn	06 22 07.9	-0.2
LATG	Datong baz=350	2.46	350	eP	Pn	06 21 40.4	+1.1
LATG	baz=350			eS	Sn	06 22 09.0	+0.4
TWC	Suao baz=357	2.50	357	eP	Pn	06 21 40.6	+1.0
TWC	baz=357			eS	Sn	06 22 10.1	+0.7
YOJ	Yonaguni jima baz=21	2.53	21	eP	Pn	06 21 40.3	+0.3
YOJ	baz=21			eS	Sn	06 22 10.8	+0.7
YOJ	Yonaguni jima	2.53	21	P	Pn	06 21 41.2	+1.1
YOJ				eS	Sn	06 22 10.9	+0.8
NDS	Dongshan baz=354	2.53	354	eP	Pn	06 21 40.6	+0.5
NDS	baz=354			eS	Sn	06 22 10.6	+0.3
ENTT	Nioudou baz=351	2.56	351	eP	Pn	06 21 40.6	+0.1
ENTT	baz=351			eS	Sn	06 22 10.9	+0.1
HATJ	Hateruma jima	2.56	40	P	Pn	06 21 41.4	+0.9
HATJ				S	Sn	06 22 10.5	-0.4
VCHM	Qimei baz=294	2.62	295	eP	Pn	06 21 41.2	0.0
VCHM	baz=294			eS	Sn	06 22 12.5	+0.2
YHNB	Yeheng baz=347	2.62	347	eP	Pn	06 21 41.7	+0.3

YHNB				eS	Sn	06 22 13.1	+0.6
	baz=347						
NSK	Sanguang	2.63	347	eP	Pn	06 21 41.9	+0.4
	baz=347						
NSK				eS	Sn	06 22 13.9	+1.2
	baz=347						
PHUB	P'eng-hu	2.64	303	eP	Pn	06 21 42.4	+0.7
	baz=302						
PHUB				eS	Sn	06 22 13.1	+0.1
	baz=302						
NFF	Wufeng Townshi	2.65	342	eP	Pn	06 21 41.9	+0.1
	baz=342						
NFF				eS	Sn	06 22 14.0	+0.9
	baz=342						
FUSB	Fushanzhiwuyua	2.67	352	eP	Pn	06 21 42.7	+0.5
	baz=352						
FUSB				eS	Sn	06 22 14.5	+0.7
	baz=352						
PNG	Penghu	2.69	303	eP	Pn	06 21 42.5	+0.3
	baz=302						
PNG				eS	Sn	06 22 13.9	-0.1
	baz=302						
LIOB	Emei	2.69	341	eP	Pn	06 21 43.0	+0.7
	baz=340						
LIOB				eS	Sn	06 22 13.7	-0.4
	baz=340						
NWLT	Wulai	2.70	350	eP	Pn	06 21 43.0	+0.5
	baz=350						
NWLT				eS	Sn	06 22 14.8	+0.4
	baz=350						
EGS		2.73	359	eP	Pn	06 21 44.4	+1.5
	baz=359						
EGS				eS	Sn	06 22 14.8	-0.3
	baz=359						
IRIF	Iriomote-Funau	2.73	35	P	Pn	06 21 43.8	+0.9
IRIF				S	Sn	06 22 15.1	0.0
JKRS	Kuro-shima	2.82	41	P	Pn	06 21 45.0	+0.9
JKRS				S	Sn	06 22 16.8	-0.4
TIPB	Shuangxi	2.86	357	eP	Pn	06 21 45.9	+1.3
	baz=357						
TIPB				eS	Sn	06 22 18.1	-0.3
	baz=357						
SXI1	Grass Mountain	2.98	358	eP	Pn	06 21 46.7	+0.4
	baz=358						
SXI1				eS	Sn	06 22 22.1	+0.7
	baz=358						
JIJ	Ishigaki jima	2.99	41	eP	Pn	06 21 46.9	+0.5
JIJ				S	Sn	06 22 20.0	-1.5
JISG	Ishigakijimahi	3.26	40	P	Pn	06 21 50.6	+0.5
JISG				S	Sn	06 22 27.4	-0.7
JTJ	Tarama	3.54	44	P	Pn	06 21 54.5	+0.5
JTJ				S	Sn	06 22 33.9	-1.2
VWUC	VWUC	3.71	321	eP	Pn	06 21 56.5	+0.3
	baz=320						
VWUC				eS	Sn	06 22 39.0	-0.2
	baz=320						
JIRB	Irabujima	3.98	46	eS	Sn	06 22 45.0	-0.9
JMJ2	Miyako jima3	4.03	49	S	Sn	06 22 46.2	-1.0
MATB	Ma-tsu	4.45	335	eP	Pn	06 22 08.7	+2.3
	baz=334						
MATB				eS	Sn	06 22 56.1	-1.3
	baz=334						

*NEIC **31** 06:30:22.0±2.2, 6°.86N±0°.06×73°.05W±0°.07, h149^{km}±6^{km}, mb4.4/44, Error ellipse: s-maj=9.9km s-min=8.8km az=105.0*

*IDC **31** 06:30:22.1±0.7, 6°.80N×73°.00W, h158^{km}±7^{km}, mb3.6/12, mbtmp4.1/14, Error ellipse: s-maj=15.6km s-min=7.4km az=125.0*

*RSNC **31** 06:30:23.3±0.9, 6°.82N×73°.17W, h149^{km}±3^{km}, ML4.3, Mw4.3, Fault plane solution: NP1:φs38.00000°, δ33.00000°, λ10.00000°.*

ISC 31 06:30:22.1±0.6**, 6°.84N**±0°.03×**73°.14W**±0°.03**, h156**^{km}±5^{km}**, n115,** σ1ˢ**43**/140**, mb4.4**/31**, 6C-9D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	190	⇓eP	Pn	06 30 43.5	0.0
	comp=Z,8µm,0.3s						
BARC				eS	Sn	06 30 58.8	-1.1
BARC				i		06 31 01.3	
	comp=Z,8µm,0.3s						
BRRC	Barranca, Sant	0.63	295	⇑iP	Pn	06 30 45.3	+0.5
	comp=Z,5µm,0.2s						
BRRC				eS	Sn	06 31 01.8	-0.3
BRRC				i		06 31 06.4	
	comp=Z,5µm,0.2s						
PAMC	Pamplona, Colo	0.66	41	⇑eP	Pn	06 30 46.3	+0.7
PAMC				eS	Sn	06 31 03.6	+0.1
PAMC				i		06 31 05.9	
	comp=Z,4µm,0.7s						
RUSC	La Rusia	0.94	177	⇓eP	Pn	06 30 47.4	-0.2
RUSC				eS	Sn	06 31 06.2	-0.9
RUSC				i		06 31 07.4	
	comp=Z,4µm,0.3s						
PTBC	PUERTO BERRIO,	1.34	257	⇓eP	Pn	06 30 49.9	-0.7
PTBC				eS	Sn	06 31 11.2	-1.1
PTBC				i		06 31 13.9	
	comp=Z,2µm,0.1s						
TAMC	Tame, Arauca	1.40	107	⇑iP	Pn	06 30 51.9	+0.8
TAMC				eS	Sn	06 31 13.5	+0.1
OCAC	Ocana	1.40	353		Pn	06 30 51.4	+0.2
OCAC	Ocana	1.40	353	⇑iP	Pn	06 30 51.5	+0.2
OCAC				eS	Sn	06 31 13.8	0.0
OCAC				i		06 31 17.1	
	comp=Z,6µm,0.2s						
SPBC	San Pablo de B	1.50	218	eP	Pn	06 30 52.2	-0.1
SPBC				eS	Sn	06 31 14.4	-1.0
SPBC				i		06 31 19.4	
	comp=Z,4µm,0.1s						
NORC	Norcasia	2.14	234	eP	Pn	06 30 59.0	-0.3
	comp=Z,2µm,0.2s						
NORC				eS	Sn	06 31 27.4	-0.5
NORC				i		06 31 33.2	
	comp=Z,2µm,0.2s						
CHIC	Chingaza	2.27	195	eP	Pn	06 31 01.3	+0.1
CHIC				eS	Sn	06 31 31.0	-0.4
CHIC				i		06 31 41.1	
	comp=Z,1µm,0.4s						
ROSC	El Rosal	2.31	211	P	Pn	06 31 03.2	+1.6
	comp=Z,2µm,0.4s,baz=278,slow=17,SNR=1805						
ROSC				S	Sn	06 31 33.1	+1.1
	comp=Z,2µm,0.3s,baz=93,slow=21,SNR=6.8						
ROSC	El Rosal	2.31	211		Pn	06 31 03.0	+1.4
ROSC	El Rosal	2.31	211	⇓eP	Pn	06 31 03.0	+1.4
ROSC				eS	Sn	06 31 33.1	+1.1
ROSC				i		06 31 38.2	
	comp=Z,4µm,0.4s						
HELC	Santa Helena	2.46	255	eP	Pn	06 31 03.1	-0.3
HELC				eS	Sn	06 31 34.2	-1.0
HELC				i		06 31 43.8	
	comp=Z,1µm,0.4s						
UREC	San Jos de Ur	2.54	291	eP	Pn	06 31 03.1	-0.9
UREC				eS	Sn	06 31 34.1	-2.4
UREC				i		06 31 41.8	
	comp=Z,1µm,0.3s						
LL1C	La Loma 1 Cana	2.72	351	eP	Pn	06 31 08.2	+2.1
LL1C				eS	Sn	06 31 42.8	+2.5
PTGC	Puerto Gaitan,	2.81	159	⇓eP	Pn	06 31 06.6	-0.8
PTGC				eS	Sn	06 31 39.7	-2.7
PTGC				i		06 31 44.9	
	comp=Z,1µm,0.3s						
LL6C	La Loma 6 Bece	2.88	357	eP	Pn	06 31 08.0	-0.2
LL6C				eS	Sn	06 31 43.4	-0.6
LL6C				i		06 31 57.4	
	comp=Z,529nm,0.5s						
LL5C	La Loma 5 El P	2.95	349	eP	Pn	06 31 10.0	+0.9
LL5C				eS	Sn	06 31 46.2	+0.7
LL5C				i		06 31 47.6	
	comp=Z,877nm,0.6s						
CBOC	Ciudad Bolivar	3.02	251	eP	Pn	06 31 10.6	+0.5
CBOC				eS	Sn	06 31 47.8	+0.6
CBOC				i		06 31 58.5	
	comp=Z,412nm,0.5s						
DBBC	Dabeiba	3.05	273	⇑iP	Pn	06 31 10.8	+0.4
DBBC				eS	Sn	06 31 47.1	-0.8
ARGC	Ariguani, Magd	3.19	340	⇓eP	Pn	06 31 13.4	+1.2
ARGC				eS	Sn	06 31 52.1	+1.1
ARGC				i		06 32 01.5	
	comp=Z,383nm,0.3s						
SDV	Santo Domingo	3.21	51	P	Pn	06 31 12.9	+0.4
	comp=Z,666nm,0.4s,baz=192,slow=3.3,SNR=185						
SDV				S	Sn	06 31 49.9	-1.7
	comp=Z,472nm,0.5s,baz=60,slow=22,SNR=18						
SDV	Santo Domingo	3.21	51	Pn	Pn	06 31 12.8	+0.3
SDV	Santo Domingo	3.21	51	⇑eP	Pn	06 31 12.8	+0.3
SDV				eS	Sn	06 31 50.4	-1.2
ANIL	Santa Ana	3.24	224	eP	Pn	06 31 13.7	+0.6
ANIL				eS	Sn	06 31 54.1	+1.6
PRAC	Prado	3.56	209	eP	Pn	06 31 16.3	-0.6
PRAC				eS	Sn	06 31 59.5	+0.1
ORTC	Ortega, Tolima	3.59	216	eP	Pn	06 31 17.5	+0.2
ORTC				eS	Sn	06 32 00.0	-0.1
ORTC				i		06 32 07.3	
	comp=Z,940nm,0.4s						
SJCC	San Jacinto, C	3.65	327	Pn	Pn	06 31 17.2	-0.8
SJCC	San Jacinto, C	3.65	327	eP	Pn	06 31 17.0	-1.0
SJCC				eS	Sn	06 31 58.6	-2.9
SJCC				i		06 32 13.4	
	comp=Z,418nm,0.3s						
PLMC	San Jos del P	3.67	239	eP	Pn	06 31 18.7	+0.4
PLMC				eS	Sn	06 32 01.6	-0.4
PLMC				i		06 32 05.5	
	comp=Z,395nm,0.4s						
CRJC	Cerrejon, Guaj	4.16	3	eP	Pn	06 31 23.8	-1.0
CRJC				eS	Sn	06 32 10.4	-3.1
CRJC				i		06 32 22.1	
	comp=Z,488nm,0.2s						
YOTC	Yotoco, Valle	4.27	229	eP	Pn	06 31 26.1	-0.1
YOTC				eS	Sn	06 32 15.2	-0.9
YOTC				i		06 32 28.6	
	comp=Z,115nm,0.8s						
SOLC	Bahia Solano	4.29	262	eP	Pn	06 31 26.4	+0.2
GUVC	San Jose del G	4.30	173	⇓eP	Pn	06 31 25.0	-1.4
GUVC				eS	Sn	06 32 14.5	-2.1
GUVC				i		06 32 21.2	
	comp=Z,863nm,0.3s						
CAPC	Capurgana	4.54	293	eP	Pn	06 31 27.1	-2.5
CAPC				eS	Sn	06 32 16.3	-5.9
CAPC				i		06 32 23.1	
	comp=Z,222nm,0.5s						
PIZC	Pizarro, Choco	4.59	246	eP	Pn	06 31 30.4	+0.1
PIZC				eS	Sn	06 32 23.9	+0.5
PIZC				i		06 32 38.9	
	comp=Z,208nm,0.6s						
PTAC	Punta Ardita,	4.65	274	eP	Pn	06 31 28.6	-2.4
PTAC				eS	Sn	06 32 24.1	-0.6
PTAC				i		06 32 32.1	
	comp=Z,353nm,0.1s						
BETC	Betania	4.73	209	eP	Pn	06 31 30.6	-1.4
BETC				eS	Sn	06 32 20.6	-6.1
BETC				i		06 32 34.4	
	comp=Z,185nm,0.5s						
MARP	Paez Belalcaza	4.86	215	eP	Pn	06 31 34.2	+0.1
URIC	Uribia, Colomb	4.96	13		Pn	06 31 33.9	-1.2
URIC	Uribia, Colomb	4.96	13	eP	Pn	06 31 33.9	-1.2
URIC				eS	Sn	06 32 28.4	-3.8
URIC				i		06 32 32.4	
	comp=Z,165nm,0.8s						
MALC	Bahia Malaga	5.03	236	eP	Pn	06 31 37.5	+1.4
MALC				eS	Sn	06 32 34.4	+0.5
MALC				i		06 32 49.2	
	comp=Z,130nm,0.6s						
GARC	Garzon, Huila	5.18	207	eP	Pn	06 31 37.4	-1.0
GARC				eS	Sn	06 32 34.3	-3.6
GARC				i		06 32 38.2	
	comp=Z,310nm,0.3s						
BAUV	El Baul	5.46	67	Pn	Pn	06 31 39.5	-2.3
PCON	Cinco Dias	5.54	216	eP	Pn	06 31 44.0	+0.7
PCON				i		06 32 49.9	
	comp=Z,104nm,0.4s						
POPC	Popayan, Colom	5.54	220	⇓eP	Pn	06 31 43.1	+0.1
POPC				eS	Sn	06 32 42.8	-3.4
FLOC	Florencia	5.79	206	eP	Pn	06 31 45.9	-0.3
FLOC				eS	Sn	06 32 50.8	-1.2
FLOC				i		06 32 57.5	
	comp=Z,92nm,0.4s						
SOTA	Rioblanco	5.81	217	⇓eP	Pn	06 31 48.3	+1.4
SOTA				eS	Sn	06 32 52.2	-1.0
SOTA				i		06 33 05.0	
	comp=Z,79nm,0.5s						
BCIP	Isla Barro Col	7.03	290	Pn	Pn	06 32 01.0	-1.5
BIRV	Birongo	7.69	62	Pn	Pn	06 32 09.1	-2.3
OTAV	Otavalo	8.43	219	Pn	Pn	06 32 21.5	-0.2
HOJ	Hope	11.64	343	i P	Pn	06 33 05.2	+1.6
CMJ	Castle Mountai	11.66	345	i P	Pn	06 33 05.8	+1.9
GWJ	Greenwich	11.70	343	i P	Pn	06 33 04.9	+0.4
GWJ				i S	Sn	06 34 57.8	-16
STH	Stony Hill	11.73	343	i P	Pn	06 33 06.9	+2.2
MTDJ	Mount Denham	12.10	340	Pn	Pn	06 33 10.9	+1.3
JTS	Las Juntas de	12.18	287	P	Pn	06 33 13.4	+2.8
	comp=Z,2.9nm,0.7s,baz=0.2,slow=23,SNR=2.8						
TRN	Trinidad (W)	12.20	71	eP	Pn	06 33 10.2	-0.6
SDDR	Presa de Saban	12.20	8	Pn	Pn	06 33 11.7	+0.8
DR12	Loma Pena Alta	12.43	17		Pn	06 33 12.4	-1.4
CELP	Cerrillos	12.87	29	Pn	Pn	06 33 18.1	-1.3
PDPR	Patillas Dam,	13.10	31	Pn	Pn	06 33 21.4	-0.9
SJG	San Juan	13.11	31	P	Pn	06 33 21.4	-1.1
	comp=Z,4.1nm,0.3s,baz=207,slow=16,SNR=5.3						
CDVI	St. Croix	13.58	36	Pn	Pn	06 33 28.4	0.0
STVI	Saint Thomas	13.95	34	Pn	Pn	06 33 31.8	-1.4
FDF	Fort de France	14.14	55		Pn	06 33 36.1	+0.4
LPAZ	La Paz	23.51	168	P	P	06 35 18.4	-0.3
	comp=Z,0.6nm,0.3s,baz=330,slow=2.7,SNR=7.0						
	comp=Z,0.6nm,0.3s						
LPAZ	La Paz	23.51	168	P	P	06 35 18.5	-0.3
LPAZ					pP	06 35 49.6	+0.5
PLAL	Pickwick Lake	31.20	336	IAmb	IAmb	06 36 29.3	
	comp=Z,8.7nm,0.9s						
T47A	Sharon Grove	32.60	339	IAmb	IAmb	06 36 41.2	
	comp=Z,7.5nm,0.7s						
R50A	Paris	32.90	344	IAmb	IAmb	06 36 44.6	
	comp=Z,9.1nm,1.0s						
X40A	Basin Creek Fa	32.97	329	IAmb	IAmb	06 36 43.8	
	comp=Z,2.8nm,0.8s						
BDFB	Brasilia	33.44	132	P	P	06 36 45.5	-1.0
	comp=Z,1.2nm,0.4s,baz=286,slow=6.5,SNR=4.6						
	comp=Z,1.2nm,0.4s						
BDFB	Brasilia	33.44	132	IAmb	IAmb	06 37 10.6	
	comp=Z,5.8nm,1.4s						
PBMO	Poplar Bluff	33.72	335	IAmb	IAmb	06 36 50.7	
	comp=Z,11nm,0.8s						
FCAR	Ozark Folk Cen	33.75	332	IAmb	IAmb	06 36 50.3	
	comp=Z,7.2nm,1.1s						
SIUC	Southern Illin	34.03	337	IAmb	IAmb	06 36 53.2	
	comp=Z,8.6nm,0.6s						
FVM	French Village	34.74	336	IAmb	IAmb	06 36 59.5	
	comp=Z,17nm,1.2s						
CCM	Cathedral Cave	35.15	335	P	P	06 37 01.5	+0.7
N47A	Urbana	35.70	344	IAmb	IAmb	06 37 08.0	
	comp=Z,12nm,1.1s						
S39A	Bolivar	35.77	332	IAmb	IAmb	06 37 08.1	
	comp=Z,3.5nm,0.7s						
R40A	Maddies Statio	35.78	334	IAmb	IAmb	06 37 07.6	
	comp=Z,13nm,1.4s						
HDIL	Hopedale	36.55	339	P	P	06 37 13.0	+0.3
P40A	Paris	36.73	335	IAmb	IAmb	06 37 15.5	
	comp=Z,7.0nm,0.8s						
SADO	Sadowa	38.14	353	P	P	06 37 27.1	+1.0
	comp=Z,2.8nm,0.5s,baz=198,slow=11						
	comp=Z,2.8nm,0.5s						
K43A	Burlington	38.16	342	IAmb	IAmb	06 37 27.2	
	comp=Z,6.7nm,0.7s						
MNTX	Cornudas Mount	38.95	314	P	P	06 37 33.3	+0.2
JFWS	Jewell Farm	38.97	340	P	P	06 37 32.9	-0.2
ECSD	EROS Data Cent	42.12	334	P	P	06 37 58.9	0.0
PV13	Radium Mtn., P	44.88	319	P	P	06 38 23.1	+1.8
AGMN	Agassiz Nation	45.60	339	P	P	06 38 26.7	+0.1
AGMN				IAmb	IAmb	06 38 27.6	
	comp=Z,3.6nm,0.6s						
MDND	Maddock	46.67	336	IAmb	IAmb	06 38 36.9	
	comp=Z,13nm,0.8s						
RDMU	Red Mountain	46.75	322	IAmb	IAmb	06 38 36.5	
	comp=Z,10nm,0.6s						
P17A	Butcher Ranch,	46.86	320	P	P	06 38 38.9	+2.1
ULM	Lac du Bonnet	47.26	340	P	P	06 38 39.4	-0.1
	comp=Z,5.6nm,0.5s,baz=145,slow=7.1,SNR=9.9						
	comp=Z,5.6nm,0.5s						
ULM	Lac du Bonnet	47.26	340	P	P	06 38 39.6	+0.1
ULM				IAmb	IAmb	06 38 40.6	
	comp=Z,14nm,1.3s						
PDAR	Pinedale Array	48.05	324	P	P	06 38 46.3	+0.3
	comp=Z,0.6nm,0.5s,baz=131,slow=8.6,SNR=5.8						
	comp=Z,0.6nm,0.5s						
SCHQ	Schefferville	48.12	5	P	P	06 38 46.7	+0.6
	comp=Z,7.1nm,0.8s,baz=185,slow=7.0,SNR=7.4						
	comp=Z,7.1nm,0.8s						
NVAR	Mina Array Bea	51.46	315	P	P	06 39 12.3	+0.5
	comp=Z,0.5nm,0.8s,baz=106,slow=6.1,SNR=3.7						
	comp=Z,0.5nm,0.8s						
MFID	Camas Ranch	52.20	321	IAmb	IAmb	06 39 18.9	
	comp=Z,4.1nm,1.1s						
EDM	Edmonton	56.60	332	IAmb	IAmb	06 39 49.3	
	comp=Z,7.3nm,1.1s						
FRB	Frobisher Bay	56.90	2	P	P	06 39 49.8	-0.5
	comp=Z,1.6nm,0.5s,baz=48,slow=6.6,SNR=2.2						
	comp=Z,1.6nm,0.5s						
YKA	Yellowknife Ar	63.24	340	P	P	06 40 33.8	+0.2
	comp=Z,2.4nm,0.5s,baz=132,slow=6.7,SNR=47						
	comp=Z,2.4nm,0.5s						
YKA	Yellowknife Ar	63.24	340	P	P	06 40 33.2	-0.4
DLBC	Dease Lake	67.30	331	P	P	06 41 01.2	+1.3
	comp=Z,0.7nm,0.4s,baz=134,slow=16,SNR=2.2						
	comp=Z,0.7nm,0.4s						
SUMG	Summit	68.97	11	P	P	06 41 10.0	-0.5
SUMG				IAmb	IAmb	06 41 11.6	
	comp=Z,5.5nm,0.7s						
SUMG	Summit	68.97	11	i P	P	06 41 10.0	-0.5
INK	Inuvik	73.01	340	P	P	06 41 34.6	+0.2
	comp=Z,1.0nm,0.6s,baz=91,slow=3.6,SNR=7.3						
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	76.94	335	P	P	06 41 57.2	+0.1
	comp=Z,0.3nm,0.6s,baz=93,slow=4.2,SNR=2.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	06 48 58.2	-0.6
	comp=Z,0.2nm,0.4s,baz=267,slow=3.1,SNR=1.9						
ASAR	Alice Springs	149.11	234	PKP	PKPdf	06 49 48.4	-0.1
	comp=Z,2.1nm,0.7s,baz=115,slow=3.7,SNR=15						
ASAR				PKPbc	PKPbc	06 49 52.0	-0.9
	comp=Z,2.0nm,0.7s,baz=119,slow=3.5,SNR=28						
WRA	Warramunga Arr	150.33	241	PKPbc	PKPbc	06 49 55.1	-0.8
	comp=Z,1.1nm,0.4s,baz=106,slow=2.9,SNR=37						
WRA	Warramunga Arr	150.33	241		PKPbc	06 49 55.2	-0.7

*CRAAG **31** 06:43:09.8, 36°.34N×3°.47E, Ml2.9*

*MDD **31** 06:43:12.4±1.8, 36°.45N×3°.44E, h0^{km}, Mb4.0/6, M_mb3.3/6, Error ellipse: s-maj=15.9km s-min=6.8km az=135.0*

ISC 31 06:43:11.0±1.2**, 36°.35N**±0°.08×**3°.47E**±0°.10**, h18**^{km}**, n7,** σ1ˢ**75**/10**, 5C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.19	188	P	Pg	06 43 15.2	-0.7
AKET	Djebel Ketaf	0.45	132	P	Pg	06 43 20.0	-0.2
EIBI	Ibiza	3.16	328	P	Pn	06 44 01.9	+2.0
EIBI				⇑iVmb_V		06 44 02.8	
	235nm,SNR=1.2						
EIBI				S	Sn	06 44 35.7	-1.4
ETOS	Mallorca	3.46	352	P	Pn	06 44 04.7	+0.8
ETOS				⇑iVmb_V		06 44 06.3	
	205nm,SNR=1.4						
ETOS				S	Sn	06 44 42.5	-1.9
ETOB	Tobarra	4.60	301	P	Pn	06 44 19.9	+0.1
ETOB				⇑iVmb_V		06 44 21.0	
	65nm,SNR=0.9						
ECHE	Chera	4.77	314	P	Pn	06 44 24.9	+2.9
ECHE				⇑iVmb_V		06 44 26.6	
	112nm,SNR=0.6						
EMOS	Mosqueruela	5.07	324	P	Pn	06 44 27.2	+0.9
EMOS				⇑iVmb_V		06 44 27.9	
	159nm,SNR=1.3						
EMOS				S	Sn	06 45 23.2	-1.2

*IDC **31** 06:53:39.5±1.3, 53°.09N×160°.33E, h0^{km}, mb3.6/5, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=34.7km s-min=15.3km az=171.0*

*KRSC **31** 06:53:46.4±0.9, 53°.15N×159°.99E, h56^{km}±8^{km}, ML4.2*

ISC 31 06:53:47.6±0.9**, 53°.11N**±0°.04×**159°.99E**±0°.05**, h55**^{km}±6^{km}**, n44,** σ1ˢ**15**/59**, mb3.5**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.02	126	eP	Pn	06 53 56.1	+0.3
SPN				eS	Sn	06 54 02.2	+0.6
NLC	Nalytchevo	0.39	279	eP	Pn	06 53 58.2	+0.3
NLC				eS	Sn	06 54 05.9	+0.5
SDLR	Sedlovina	0.69	284	eP	Pn	06 54 01.5	+0.1
SDLR				eS	Sn	06 54 11.9	+0.4
UGLR	Uglovaya	0.71	278	eP	Pn	06 54 02.2	+0.5
UGLR				eS	Sn	06 54 13.0	+1.0
SMAR	Somma	0.73	282	eP	Pn	06 54 02.0	-0.1
SMAR				eS	Sn	06 54 12.8	+0.1
DALK	Dalny	0.75	264	eP	Pn	06 54 02.1	0.0
DALK				eS	Sn	06 54 12.5	-0.2
AVH	Avacha	0.77	282	eP	Pn	06 54 02.9	+0.5
AVH				eS	Sn	06 54 13.9	+0.6
KRER	Koryakskii	0.77	285	eP	Pn	06 54 02.8	+0.2
KRER				eS	Sn	06 54 14.0	+0.4
PET	Petropavlovsk	0.81	264	eP	Pn	06 54 02.9	0.0
PET				eS	Sn	06 54 13.9	-0.2
KOK	Koryaka	0.83	283	eP	Pn	06 54 03.5	+0.2
KRX	Arik	0.84	288	eP	Pn	06 54 03.4	-0.1
KRX				eS	Sn	06 54 14.4	-0.7
KII	Karymskiy	0.98	341	eP	Pn	06 54 05.3	+0.1
KII				eS	Sn	06 54 17.4	-0.8
RUS	Russkaya	1.13	233	eP	Pn	06 54 07.0	0.0
RUS				eS	Sn	06 54 21.2	-0.3
KRMR	Karymshinskiy	1.16	257	eP	Pn	06 54 07.7	+0.2
KRMR				eS	Sn	06 54 22.4	+0.1
MTVR	Mutnovka	1.27	241	eP	Pn	06 54 09.6	+0.5
MTVR				eS	Sn	06 54 25.1	0.0
GRL	Gorelyy	1.29	245	eP	Pn	06 54 10.2	+0.8
GRL				eS	Sn	06 54 26.3	+0.6
GNL	Ganaly	1.36	296	eP	Pn	06 54 10.5	+0.2
GNL				eS	Sn	06 54 27.9	+0.6
PETK	Petropavlovsk-	1.38	271	Pg	Pn	06 54 10.2	-0.3
	86nm,0.3s,baz=90,slow=18,SNR=911						
PETK				Lg	Lg	06 54 29.2	
	77nm,0.3s,baz=25,slow=21,SNR=4.6						
ASAK	Asacha	1.47	241	eP	Pn	06 54 12.9	+1.2
ASAK				eS	Sn	06 54 32.0	+2.1
APC	Apacha	1.72	265	eP	Pn	06 54 16.1	+1.0
APC				eS	Sn	06 54 37.6	+1.7
KDTR	Khodutka, Kamc	1.75	223	eP	Pn	06 54 16.3	+0.8
KDTR				eS	Sn	06 54 37.5	+0.8
MKZ	Mys Kozlova	1.78	35	eP	Pn	06 54 15.1	-0.7
MKZ				eS	Sn	06 54 35.6	-1.7
TUMD	Tumrok D	2.11	6	eP	Pn	06 54 20.9	+0.5
TUMD				eS	Sn	06 54 43.7	-1.8
MIPR	Malaya Ipel'ka	2.14	248	eP	Pn	06 54 22.3	+1.5
TUMR	Tumrok	2.18	2	eP	Pn	06 54 22.7	+1.3
KMNR	Kamenistaya	2.65	3	eP	Pn	06 54 29.8	+1.9
ESO	Esso	2.92	346	eP	Pn	06 54 34.3	+2.8
KBTR	Krutoberegovo	3.51	27	eP	Pn	06 54 41.9	+2.4
KBG	Krutoberegovo	3.52	25	eS	Sn	06 55 23.7	+3.7
BDR	Baidarnaya	3.53	11	eP	Pn	06 54 42.7	+2.7
SMKR	Semkarok	3.58	13	eP	Pn	06 54 42.1	+1.5
SRKR	Sorokina	3.61	10	eP	Pn	06 54 40.8	-0.2
KLR	Kul'dur	18.07	269	P	Pn	06 57 55.5	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=2.2						
	0.5nm,0.4s						
MJAR	Matsushiro Arr	22.51	231	P	P	06 58 42.4	-0.1
	1.9nm,0.7s,baz=22,slow=12,SNR=6.0						
	1.9nm,0.7s						
H11N2	WAKE ISLAND Hy	33.75	168	T	T	07 36 20.5	
	baz=353,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	33.76	168	T	T	07 36 04.8	
	baz=353,slow=76,SNR=61						
H11N1	WAKE ISLAND Hy	33.76	168	T	T	07 36 08.1	
	baz=353,slow=76,SNR=64						
H11S1	WAKE ISLAND Hy	34.93	169	T	T	07 37 44.9	
	baz=352,slow=76,SNR=10.0						
H11S3	WAKE ISLAND Hy	34.94	169	T	T	07 37 38.7	
	baz=352,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	34.95	169	T	T	07 37 46.7	
	baz=352,slow=76,SNR=8.0						
YKA	Yellowknife Ar	43.19	43	P	P	07 01 42.1	-0.4
	0.3nm,0.5s,baz=298,slow=7.3,SNR=4.5						
	0.3nm,0.5s						
MKAR	Makanchi Array	48.09	296	P	P	07 02 20.4	-1.1
	0.3nm,0.5s,baz=50,slow=8.0,SNR=2.9						
	0.3nm,0.5s						
WRA	Warramunga Arr	76.07	205	P	P	07 05 28.7	-0.3
	0.2nm,0.7s,baz=4.6,slow=9.1,SNR=1.9						
	0.2nm,0.7s						
ESDC	Sonseca Array	86.55	348	P	P	07 06 23.4	-1.2
	1.1nm,1.0s,baz=7.1,slow=5.9,SNR=4.5						
	1.1nm,1.0s						

*IDC **31** 07:36:25.7±1.5, 39°.35N×138°.13E, h231km±17km, mb3.1/6, mbtmp3.6/8, Error ellipse: s-maj=29.1km s-min=17.6km az=89.0*

*JMA **31** 07:36:25.7±0.2, 39°.3N±0°.6×13°8E±°, h236km±2km, MV2.9/39, EASTERN SEA OF JAPAN*

ISC 31 07:36:25.8±0.8**, 39°.31N**±0°.06×**138°.24E**±0°.09**, h235**km±8km**, n23,** σ**0s.61**/28**, mb3.2**/7**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAW	**Awa shima**	**1.16**	**137**	P	**Pn**	**07 36 59.9**	**-0.3**
JSD	**Sado**	**1.27**	**179**	P	**Pn**	**07 37 00.9**	**-0.1**
JSD				*e*S	**S**	**07 37 28.4**	**-0.2**
JYK	**Kaneyama**	**1.69**	**103**	P	**Pn**	**07 37 04.4**	**+0.1**
JYK				S	**S**	**07 37 34.9**	**+0.5**
JNS	**Sasagawa**	**1.71**	**150**	P	**Pn**	**07 37 04.4**	**-0.1**
JRG	**Rokugo**	**1.86**	**86**	P	**Pn**	**07 37 05.9**	**+0.2**
JRG				S	**S**	**07 37 37.2**	**+0.3**
JIW	**Iwasaki**	**1.87**	**46**	P	**Pn**	**07 37 05.9**	**+0.1**
JIW				S	**S**	**07 37 37.4**	**+0.2**
JSZ	**Suzu**	**1.98**	**201**	P	**Pn**	**07 37 07.1**	**+0.2**
JMM	**Marumori**	**2.46**	**125**	*e*P	**Pn**	**07 37 11.9**	**+0.3**
JOMM	**Oshimamatsumae**	**2.59**	**31**	P	**Pn**	**07 37 13.0**	**+0.1**
JANG	**Nango**	**2.74**	**66**	*e*P	**Pn**	**07 37 15.1**	**+0.6**
MJAR	**Matsushiro Arr**	**2.76**	**181**	P	**Pn**	**07 37 15.7**	**+0.8**
	3.4nm,0.4s,baz=359,slow=12,SNR=11						
JFK	**Kawauchi**	**2.83**	**132**	*e*P	**Pn**	**07 37 14.8**	**-0.8**
JFK				*e*S	**S**	**07 37 52.9**	**-1.8**
JOSM	**Okushiri--Mats**	**2.93**	**18**	*e*P	**Pn**	**07 37 16.3**	**-0.2**
JRY	**Ryogami san**	**3.33**	**171**	*e*P	**Pn**	**07 37 21.4**	**+0.3**
ASAJ	**Asahikawa**	**5.81**	**33**	P	**Pn**	**07 37 50.3**	**-0.7**
	14nm,0.6s,baz=229,slow=14,SNR=14						
MKAR	**Makanchi Array**	**40.81**	**299**	P	**P**	**07 43 43.5**	**-0.8**
	0.2nm,0.5s,baz=66,slow=8.1,SNR=1.7						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**42.64**	**306**	P	**P**	**07 43 58.1**	**-0.8**
	0.4nm,0.4s,baz=80,slow=8.0,SNR=4.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**59.05**	**184**	P	**P**	**07 46 01.4**	**+0.2**
	0.3nm,0.5s,baz=359,slow=7.1,SNR=6.9						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**60.98**	**338**	P	**P**	**07 46 13.7**	**0.0**
	1.8nm,0.9s,baz=49,slow=8.5,SNR=1.8						
FINES	**FINESS Array B**	**65.63**	**331**	P	**P**	**07 46 44.1**	**-0.1**
	0.7nm,0.3s,baz=58,slow=4.7,SNR=4.6						
	0.7nm,0.3s						
NB2	**NORSAR Subarra**	**71.11**	**336**	P	**P**	**07 47 18.4**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**71.11**	**336**	P	**P**	**07 47 18.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=41,slow=6.0,SNR=4.6						
	comp=Z,0.9nm,0.6s						
PDAR	**Pinedale Array**	**77.82**	**44**	P	**P**	**07 47 58.3**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=285,slow=7.0,SNR=2.4						
	comp=Z,0.2nm,0.4s						

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*IDC **31** 07:44:07.3±1.1, 14°.44S×166°.32E, h0km, mb3.8/5, mbtmp3.9/7, ML4.8/2, Error ellipse: s-maj=36.6km s-min=23.3km az=146.0*

*NEIC **31** 07:44:09.9±1.3, 14°.56S±0°.09×166°.4E±0°.1, h10km±1km, mb4.6/11, Error ellipse: s-maj=23.0km s-min=5.8km az=309.0*

*NOU **31** 07:44:12.2, 14°.81S×166°.35E, h0km, mb4.4/11, Vanuatu Islands*

ISC 31 07:44:12.1±0.8**, 14°.68S**±0°.09×**166°.38E**±0°.09**, h28**km**, n33,** σ**1s.28**/34**, mb4.4**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.50**	**150**	P	**Pn**	**07 45 06.4**	**+1.7**
LIFNC	**LIFOU**	**6.12**	**172**	Pn	**Pn**	**07 45 41.3**	**+0.5**
KOUNC	**Koumac, New Ca**	**6.17**	**199**		**Pn**	**07 45 42.8**	**+1.3**
KOUNC	**Koumac, New Ca**	**6.17**	**199**	P	**Pn**	**07 45 42.8**	**+1.3**
MARNC	**Mare, Loyalty**	**6.95**	**167**	Pn	**Pn**	**07 45 53.2**	**+1.0**
DZM	**Mont Dzumac**	**7.36**	**180**	Pn	**Pn**	**07 45 58.8**	**+0.9**
	5.5nm,0.3s,baz=354,slow=9.8,SNR=60						
DZM				Sn	**Sn**	**07 47 17.2**	**-3.3**
	baz=284,slow=21						
	13nm,0.4s						
DZM	**Mont Dzumac**	**7.36**	**180**	P	**Pn**	**07 45 58.8**	**+0.9**
YATNC	**Mamie plateau,**	**7.36**	**176**	P	**Pn**	**07 45 57.8**	**0.0**
NOUC	**Port Laguerre**	**7.39**	**181**	P	**Pn**	**07 46 00.4**	**+2.2**
ONTNC	**Ouen Toro**	**7.59**	**179**		**Pn**	**07 46 02.3**	**+1.4**
ONTNC	**Ouen Toro**	**7.59**	**179**	P	**Pn**	**07 46 02.8**	**+1.8**
OUENC	**Ouen Island, N**	**7.71**	**177**	Pn	**Pn**	**07 46 02.7**	**+0.1**
OUENC	**Ouen Island, N**	**7.71**	**177**	P	**Pn**	**07 46 03.7**	**+1.0**
PINNC	**Pines Island,**	**7.96**	**173**	Pn	**Pn**	**07 46 07.4**	**+1.4**
MSVF	**Nonsavu**	**11.62**	**107**	Pn	**Pn**	**07 46 55.5**	**-0.8**
	0.3nm,0.3s,baz=198,slow=22,SNR=7.4						
	3.9nm,0.8s						
CTAO	**Charters Tower**	**19.94**	**251**	P	**Pn**	**07 48 42.8**	**-1.1**
CTAO				IAmb	IAmb	07 48 45.6	
	comp=Z,34nm,1.5s						
BKZ	**Black Stump Fm**	**25.97**	**162**	P	**P**	**07 49 43.0**	**+0.5**
STKA	**Stephens Creek**	**28.38**	**229**	P	**P**	**07 50 06.3**	**+2.1**
	comp=Z,0.7nm,0.4s,baz=39,slow=8.1,SNR=3.6						
	comp=Z,0.7nm,0.4s						
WB0	**Warramunga Arr**	**30.94**	**256**	P	**P**	**07 50 25.7**	**-1.3**
WRA	**Warramunga Arr**	**31.00**	**256**	P	**P**	**07 50 26.2**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=84,slow=7.9,SNR=2.5						
	comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**31.89**	**249**	P	**P**	**07 50 34.0**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=75,slow=9.1,SNR=12						
	comp=Z,0.5nm,0.6s						
FORT	**Forrest**	**38.59**	**239**	P	**P**	**07 51 32.9**	**0.0**
FORT				IAmb	IAmb	07 51 36.1	
	comp=Z,10nm,1.0s						
VNDA	**Vanda**	**62.90**	**181**	P	**P**	**07 54 35.5**	**+0.1**
SBA	**Scott Base**	**63.19**	**180**	P	**P**	**07 54 38.1**	**+0.8**
SBA				IAmb	IAmb	07 54 48.0	
	comp=Z,3.8nm,1.4s						
QSPA	**South Pole Qui**	**75.35**	**180**	P	**P**	**07 55 53.7**	**+0.8**
QSPA				IAmb	IAmb	07 56 00.4	
	comp=Z,13nm,1.5s						
TRF	**Thorofare Moun**	**84.75**	**18**	P	**P**	**07 56 42.8**	**-0.7**
TRF				IAmb	IAmb	07 57 04.9	
	comp=Z,8.0nm,1.4s						
WAX	**Waxell Ridge**	**85.14**	**23**	P	**P**	**07 56 46.0**	**+0.6**
I21K	**Tanana**	**85.58**	**16**	P	**P**	**07 56 47.4**	**0.0**
I21K				IAmb	IAmb	07 56 49.1	
	comp=Z,4.8nm,0.9s						
IMAR	**Indian Mountai**	**85.74**	**15**	P	**P**	**07 56 48.6**	**+0.4**
ILAR	**Eielson Array**	**86.74**	**18**	P	**P**	**07 56 52.1**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=235,slow=4.7,SNR=18						
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**86.74**	**18**	P	**P**	**07 56 52.7**	**-0.5**
J25K	**Salcha River,**	**87.10**	**19**	P	**P**	**07 56 55.5**	**+0.5**
J25K				IAmb	IAmb	07 56 56.5	
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**87.89**	**49**	P	**P**	**07 56 58.7**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=232,slow=6.8,SNR=2.0						
	comp=Z,0.3nm,0.7s						

IDC 31 08:05:38.1±2.5**, 53°.62N**×**86°.93E, h0**km**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=23.0km s-min=13.1km az=74.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**285**	*i*		08 13 50.0	
	baz=102,slow=326,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.30**	**285**	Pg	Pg	08 06 01.2	-1.7
	1.2nm,0.3s,baz=101,slow=15,SNR=8.8						
ZALV				Lg	Lg	08 06 20.1	
	1.9nm,0.3s,baz=108,slow=28,SNR=16						
KURBB	**Kurchatov Arra**	**5.98**	**243**	Pn	Pn	08 07 09.3	+1.5
	baz=59,slow=14,SNR=4.6						
KURBB				Lg	Lg	08 08 46.1	
	baz=61,slow=33,SNR=4.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.46**	**205**	Pn	Pn	08 07 29.3	+1.2
	0.1nm,0.3s,baz=22,slow=12,SNR=6.8						
MKAR				Sn	Sn	08 08 53.4	+0.1
	0.1nm,0.3s,baz=26,slow=26,SNR=3.0						
MKAR				Lg	Lg	08 09 33.1	
	baz=22,slow=32,SNR=5.1						
	0.2nm,0.3s						

KRSC 31 08:07:17.3±0.8**, 55°.13N**×**162°.28E, h59**km±19km**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.66**	**210**	*e*P	Pn	08 07 32.6	+1.7
MKZ				*e*S	Sn	08 07 42.5	+1.6
TUMD	**Tumrok D**	**1.08**	**275**	*e*P	Pn	08 07 37.7	+1.3
TUMD				*e*S	Sn	08 07 51.7	+1.1
KBTR	**Krutoberegovo**	**1.13**	**15**	*e*P	Pn	08 07 38.6	+1.6
KBTR				*e*S	Sn	08 07 53.8	+2.2
KBG	**Krutoberegovo**	**1.16**	**12**	*e*P	Pn	08 07 38.9	+1.6
KBG				*e*S	Sn	08 07 55.2	+2.9
BZGR	**Bezymyannyi-Gr**	**1.22**	**313**	*e*P	Pn	08 07 39.9	+1.6
BZGR				*e*S	Sn	08 07 56.3	+2.4
ZLN	**Zelenaya**	**1.23**	**317**	*e*P	Pn	08 07 40.0	+1.6
ZLN				*e*S	Sn	08 07 54.9	+0.8
TUMR	**Tumrok**	**1.24**	**278**	*e*P	Pn	08 07 40.2	+1.7
TUMR				*e*S	Sn	08 07 56.3	+1.9
BZWR	**Bezymyannyi-We**	**1.32**	**310**	*e*P	Pn	08 07 41.6	+1.9
KMNR	**Kamenistaya**	**1.33**	**299**	*e*P	Pn	08 07 41.4	+1.7
KMNR				*e*S	Sn	08 07 56.6	+0.1
KIRR	**Kirishev**	**1.38**	**308**	*e*P	Pn	08 07 41.6	+1.1
KIRR				*e*S	Sn	08 07 56.9	-1.0
KPT	**Kopyto**	**1.44**	**307**	*e*P	Pn	08 07 43.3	+2.0
KRSR	**Krestovskiy**	**1.47**	**319**	*e*P	Pn	08 07 43.2	+1.6
KRSR				*e*S	Sn	08 08 01.3	+1.5
KLY	**Klyuchi**	**1.51**	**323**	*e*P	Pn	08 07 42.6	+0.6
KLY				*e*S	Sn	08 08 00.1	-0.5
SMKR	**Semkarok**	**1.53**	**343**	*e*P	Pn	08 07 44.5	+2.1
SMKR				*e*S	Sn	08 08 03.8	+2.4
BDR	**Baidarnaya**	**1.57**	**338**	*e*P	Pn	08 07 45.2	+2.2
BDR				*e*S	Sn	08 08 05.0	+2.7
SRKR	**Sorokina**	**1.66**	**338**	*e*P	Pn	08 07 45.9	+1.8
SRKR				*e*S	Sn	08 08 07.2	+2.8
KOZ	**Kozyrevsk**	**1.66**	**305**	P	Pn	08 07 46.8	+2.7
KII	**Karymskiy**	**1.98**	**238**	*e*P	Pn	08 07 50.9	+2.4
KII				*e*S	Sn	08 08 14.3	+2.1
BKI	**Bering**	**2.12**	**86**	*e*P	Pn	08 07 52.4	+2.1
BKI				*e*S	Sn	08 08 16.0	+0.6
ESO	**Esso**	**2.19**	**293**	*e*P	Pn	08 07 54.6	+3.3
ESO				*e*S	Sn	08 08 19.5	+2.2
SPN	**Mys Shipunski**	**2.43**	**214**	*e*P	Pn	08 07 56.1	+1.5
SPN				*e*S	Sn	08 08 24.3	+1.2
NLC	**Nalytchevo**	**2.61**	**223**	*e*P	Pn	08 07 59.5	+2.5
NLC				*e*S	Sn	08 08 30.4	+2.9
SDLR	**Sedlovina**	**2.72**	**229**	*e*P	Pn	08 08 01.6	+2.9
SDLR				*e*S	Sn	08 08 33.8	+3.3
KRER	**Koryakskii**	**2.76**	**230**	*e*P	Pn	08 08 02.2	+2.9
KRER				*e*S	Sn	08 08 37.4	+5.8
SMAR	**Somma**	**2.77**	**229**	*e*P	Pn	08 08 02.3	+2.9
SMAR				*e*S	Sn	08 08 34.7	+3.0
KRX	**Arik**	**2.77**	**232**	*e*P	Pn	08 08 03.4	+4.0
AVH	**Avacha**	**2.80**	**230**	*e*P	Pn	08 08 03.1	+3.5
UGLR	**Uglovaya**	**2.80**	**228**	*e*P	Pn	08 08 02.7	+3.0
UGLR				*e*S	Sn	08 08 36.1	+3.8
KOK	**Koryaka**	**2.82**	**231**	*e*P	Pn	08 08 03.0	+3.0
GNL	**Ganaly**	**2.92**	**242**	*e*P	Pn	08 08 04.4	+3.1
DALK	**Dalny**	**2.96**	**226**	*e*P	Pn	08 08 04.6	+2.9
DALK				*e*S	Sn	08 08 38.6	+2.7
PET	**Petropavlovsk**	**3.00**	**227**	*e*P	Pn	08 08 05.5	+3.1
PET				*e*S	Sn	08 08 39.4	+2.3
KRMR	**Karymshinskiy**	**3.36**	**229**	*e*P	Pn	08 08 10.8	+3.5
KRMR				*e*S	Sn	08 08 50.3	+4.4
RUS	**Russkaya**	**3.50**	**221**	*e*P	Pn	08 08 11.6	+2.4
RUS				*e*S	Sn	08 08 51.8	+2.4
GRL	**Gorelyy**	**3.59**	**226**	*e*P	Pn	08 08 14.5	+4.0
GRL				*e*S	Sn	08 08 53.4	+1.7
MTVR	**Mutnovka**	**3.59**	**224**	*e*P	Pn	08 08 14.0	+3.4
MTVR				*e*S	Sn	08 08 54.8	+2.9
APC	**Apacha**	**3.74**	**236**	*e*P	Pn	08 08 16.5	+4.0
ASAK	**Asacha**	**3.78**	**225**	*e*P	Pn	08 08 16.7	+3.5
ASAK				*e*S	Sn	08 09 01.0	+4.6
KDTR	**Khodutka, Kamc**	**4.17**	**219**	*e*P	Pn	08 08 20.5	+2.2
KDTR				*e*S	Sn	08 09 05.6	0.0

IDC 31 08:08:22.2±3.6**, 55°.64N**×**86°.21E, h0**km**, mbtmp2.7**/2**, ML2.1**/2**, Error ellipse: s-maj=29.2km s-min=26.5km az=18.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**206**	*i*		08 20 10.0	
	0.1nm,0.8s,baz=24,slow=324,SNR=6.8						
ZALV	**Zalesovo Beam**	**1.87**	**206**	Pn	Pn	08 08 55.1	-0.4
	2.6nm,0.3s,baz=27,slow=29,SNR=14						
ZALV				Lg	Lg	08 09 21.6	
	2.5nm,0.3s,baz=23,slow=28,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.82**	**226**	Pn	Pn	08 10 03.3	-0.2
	baz=42,slow=14,SNR=2.0						
KURBB				Lg	Lg	08 11 59.8	
	baz=45,slow=30,SNR=4.2						
	0.2nm,0.2s						
MKAR	**Makanchi Array**	**9.19**	**197**	Pn	Pn	08 10 36.2	+0.2
	baz=19,slow=6.1,SNR=1.2						
	0.2nm,0.8s						

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*IDC **31** 08:11:14.3±4.6, 2°.51S×151°.89E, h0km, mb3.8/2, mbtmp3.8/2, MS3.5/1, Error ellipse: s-maj=193.2km s-min=53.7km az=113.0*

*NEIC **31** 08:11:23.8±1.5, 2°.9S±0°.2×151°.8E±0°.1, h58km±8km, mb4.3/11, Error ellipse: s-maj=29.3km s-min=13.8km az=167.0*

ISC 31 08:11:20.1±1.2**, 2°.8S**±0°.2×**151°.8E**±0°.2**, h35**km**, n17,** σ**1s.14**/16**, mb4.1**/9**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**20.63**	**275**	LR	LR	08 24 00.5	
	comp=Z,133nm,20.5s,baz=72,slow=37						
WB0	**Warramunga Arr**	**24.00**	**224**	P	**P**	**08 16 31.5**	**-0.3**
WB0				IAmb	IAmb	08 16 52.3	
	comp=Z,8.3nm,1.4s						
WR0	**Warramunga Arr**	**24.02**	**223**	P	**P**	**08 16 33.4**	**+1.5**
WR0				IAmb	IAmb	08 17 00.7	
	comp=Z,8.8nm,1.5s						
WB2	**Warramunga Arr**	**24.14**	**224**	P	**P**	**08 16 35.0**	**+1.9**
WB2				IAmb	IAmb	08 16 47.8	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**24.15**	**224**	P	**P**	**08 16 34.9**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=48,slow=9.3,SNR=14						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**24.15**	**224**	P	**P**	**08 16 34.6**	**+1.4**
AS31	**Alice Springs**	**27.07**	**218**	P	**P**	**08 16 59.7**	**+0.1**
ASAR	**Alice Springs**	**27.07**	**218**	P	**P**	**08 17 00.7**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=52,slow=8.2,SNR=14						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**27.07**	**218**	P	**P**	**08 16 59.7**	**+0.1**
FUNA	**Funafuti**	**27.82**	**103**	P	**P**	**08 17 06.5**	**+0.1**
BBOO	**Buckleboo**	**33.36**	**205**	P	**P**	**08 17 55.0**	**0.0**
FORT	**Forrest**	**35.80**	**216**	P	**P**	**08 18 15.9**	**-0.3**
FORT				IAmb	IAmb	08 18 39.0	
	comp=Z,16nm,1.2s						
MORW	**Morawa**	**42.91**	**229**	P	**P**	**08 19 14.4**	**-1.2**
MORW				IAmb	IAmb	08 19 30.5	
	comp=Z,10nm,1.4s						
VNDA	**Vanda**	**74.90**	**178**	P	**P**	**08 22 56.0**	**-0.9**
VNDA				IAmb	IAmb	08 23 17.4	
	comp=Z,2.2nm,1.3s						
BRVK	**Borovoye**	**87.10**	**323**	P	**P**	**08 24 02.8**	**+0.5**
BRVK				IAmb	IAmb	08 24 07.7	
	comp=Z,4.5nm,0.7s						
QSPA	**South Pole Qui**	**87.19**	**180**	P	**P**	**08 24 03.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**148.71**	**291**	PKPbc	**PKPbc**	**08 31 03.6**	**-1.2**
	comp=Z,0.5nm,1.0s,baz=77,slow=2.4,SNR=1.8						

NNC 31 08:22:26.2±2.6**, 50°.91N**×**73°.59E, h0**km**, mb3.0, mpv2.7, 3C-4D, Error ellipse: s-maj=23.8km s-min=17.6km az=153.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTUK	**Ortayu**	**2.79**	**197**	⇓Pg	Pb	08 23 16.2	-0.6
	2.3nm,0.8s						
OTUK				⇓Lg	Lg	08 23 53.8	
	4.9nm,0.6s						
KURBB	**Kurchatov Arra**	**3.15**	**93**	⇑Pg	Pg	08 23 25.8	-0.7
	1.8nm,0.5s,baz=287,slow=15						
KURBB				⇑Lg	Lg	08 24 04.7	
	22nm,0.8s,baz=285,slow=30						
KURK	**Kurchatov**	**3.20**	**92**	⇓Pg	Pb	08 23 23.6	-0.2
	2.2nm,1.0s						
KURK				⇑Lg	Lg	08 24 07.2	
	12nm,0.8s						
MAKZ	**Makanchi**	**6.89**	**123**	⇓Lg	Lg	08 26 06.3	
	3.1nm,0.7s						
MK31	**Makanchi Array**	**7.07**	**122**	Lg	Lg	08 26 10.3	
	2.1nm,0.7s,baz=312,slow=28,SNR=7.3						

IDC 31 08:24:48.9±5.8**, 3°.54S**×**139°.53E, h0**km**, mb3.6**/2**, mbtmp3.7**/3**, ML4.0**/1**, Error ellipse: s-maj=227.8km s-min=32.3km az=87.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.07**	**197**	P	Pn	08 28 47.3	-1.9
	0.6nm,0.3s,baz=12,slow=12,SNR=11						
WRA				S	Sn	08 32 04.7	+4.9
	0.6nm,0.5s,baz=11,slow=23,SNR=2.7						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**20.73**	**195**	P	P	08 29 32.1	+0.8
	2.4nm,0.5s,baz=26,slow=9.1,SNR=38						
ASAR				S	S	08 33 20.1	-3.8
	0.5nm,0.8s,baz=21,slow=26,SNR=2.3						
	2.4nm,0.5s						
MKAR	**Makanchi Array**	**70.94**	**322**	P	P	08 36 08.3	0.0
	0.2nm,0.5s,baz=98,slow=6.5,SNR=4.1						
	0.2nm,0.5s						

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*SSNC **31** 08:28:12.2±2.7, 18°.26N×71°.93W, h5km±36km, MD3.6, ML3.5*

ISC 31 08:28:14.7±1.2**, 18°.4N**±0°.1×**71°.91W**±0°.05**, h35**km**, n13,** σ**2s.01**/19**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**0.82**	**46**	*i* P	**Pn**	**08 28 27.5**	**-2.4**
SDDR				*e*S	**Sn**	**08 28 42.7**	**+1.8**
MASC	**Masc**	**2.81**	**309**	*e*P	**Pn**	**08 28 57.3**	**+0.2**
MASC				*e*S	**Sn**	**08 29 28.7**	**-1.0**
GTBY	**Guantanamo Bay**	**3.38**	**297**	*e*P	**Pn**	**08 29 04.6**	**-0.4**
GTBY				*e*S	**Sn**	**08 29 46.9**	**+3.0**
MOAC	**Moa**	**3.64**	**308**	*e*P	**Pn**	**08 29 10.0**	**+1.4**
MOAC				*e*S	**Sn**	**08 29 54.2**	**+3.8**
MOAC				IAML		08 30 01.3	
	comp=E,24nm,0.6s						
MOAC				IAML		08 30 04.1	
	comp=N,64nm,0.5s						
RCC	**Rio Carpintero**	**3.91**	**294**	*e*P	**Pn**	**08 29 11.5**	**-0.8**
RCC				*e*S	**Sn**	**08 29 58.2**	**+1.3**
RCC				IAML		08 30 12.3	
	comp=E,50nm,0.5s						
RCC				IAML		08 30 12.5	
	comp=N,34nm,0.4s						
GWJ	**Greenwich**	**4.59**	**267**	*i* P	**Pn**	**08 29 22.4**	**+0.7**
HOJ	**Hope**	**4.61**	**266**	*i* P	**Pn**	**08 29 23.0**	**+1.0**
STH	**Stony Hill**	**4.66**	**267**	*i* P	**Pn**	**08 29 22.5**	**-0.2**
LMGC	**Las Mercedes**	**5.08**	**290**	*e*P	**Pn**	**08 29 26.8**	**-1.6**
LMGC				*e*S	**Sn**	**08 30 24.1**	**-1.8**
LMGC				IAML		08 30 34.8	
	comp=N,16nm,0.5s						
LMGC				IAML		08 30 36.7	
	comp=E,20nm,0.6s						
MGV	**Manicaragua**	**8.42**	**297**	*e*P	**Pn**	**08 30 10.0**	**-4.3**
MBFL	**Flemmings, Mon**	**9.40**	**99**	*e*	**Pn**	**08 30 27.9**	**+0.2**
BPA	**Boggy Peak**	**9.68**	**96**	*e*	**Pn**	**08 30 30.9**	**-0.7**
ANBD	**Bethesda, Anti**	**9.77**	**96**	*e*	**Pn**	**08 30 33.2**	**+0.5**

IDC 31 08:38:08.6±3.5**, 55°.60N**×**86°.18E, h0**km**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=28.4km s-min=26.3km az=34.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**206**	*i*		08 50 20.0	
	baz=24,slow=326,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.83**	**206**	Pg	Pn	08 38 40.9	-0.4
	4.0nm,0.3s,baz=27,slow=17,SNR=16						
ZALV				Lg	Lg	08 39 07.2	
	2.7nm,0.3s,baz=23,slow=25,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.78**	**226**	Pn	Pn	08 39 49.3	0.0
	0.1nm,0.3s,baz=41,slow=14,SNR=5.3						
KURBB				Lg	Lg	08 41 44.0	
	baz=47,slow=32,SNR=4.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**9.15**	**197**	Pn	Pn	08 40 22.0	+0.3
	0.1nm,0.3s,baz=17,slow=12,SNR=3.1						
MKAR				Lg	Lg	08 42 53.8	
	baz=22,slow=29,SNR=2.0						
	0.2nm,0.4s						

IDC 31 08:59:59.8±2.3**, 52°.25N**×**35°.34E, h0**km**, mbtmp3.0**/3**, ML2.8**/4**, Error ellipse: s-maj=28.9km s-min=11.0km az=128.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBN	**Obninsk**	**2.96**	**14**	Pn	Pn	09 00 47.3	-0.7
	1.9nm,0.3s,baz=267,slow=19,SNR=3.9						
OBN				Lg	Lg	09 01 27.9	
	1.8nm,0.3s,baz=122,slow=24,SNR=8.2						
	4.8nm,0.3s						
AKASG	**Malin Array Be**	**4.12**	**250**	Pn	Pn	09 01 02.9	-1.1
	1.5nm,0.3s,baz=59,slow=16,SNR=3.5						
AKASG				Pg	Pb	09 01 11.8	-1.4
	1.5nm,0.3s,baz=63,slow=15,SNR=4.4						
AKASG				Sn	Sn	09 01 51.1	-1.8
	1.3nm,0.3s,baz=59,slow=27,SNR=2.0						
AKASG				Lg	Lg	09 02 07.8	
	2.8nm,0.3s,baz=63,slow=27,SNR=5.7						
	0.3nm,0.3s						
I43RU	**DUBNA INFRASON**	**4.62**	**13**	*i*		09 27 10.0	
	0.2nm,0.7s,baz=197,slow=329,SNR=9.4						
FINES	**FINESS Array B**	**10.51**	**335**	Pn	Pn	09 02 26.9	-4.6
	0.2nm,0.3s,baz=147,slow=13,SNR=6.3						
FINES				Sn	Sn	09 04 21.7	-8.1
	0.2nm,0.3s,baz=144,slow=24,SNR=1.9						
	1.0nm,0.7s						
ARCES	**ARCESS Array B**	**17.95**	**349**	Pn	Pn	09 04 05.0	-5.5
	0.1nm,0.3s,baz=159,slow=10,SNR=2.4						
I37NO	**I37NO**	**18.64**	**341**	*i*		10 51 40.0	
	baz=151,slow=318,SNR=5.3						

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*IDC **31** 09:01:25.9±1.4, 21°.17N×121°.74E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=123.7km s-min=20.4km az=66.0*

ISC 31 09:01:33.5±1.4**, 21°.2N**±0°.3×**121°.7E**±0°.7**, h60**km**, n6,** σ**1s.24**/6**, mb3.4**/6**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.86**	**318**	P	**P**	**09 09 09.1**	**-0.5**
	0.2nm,0.5s,baz=116,slow=8.5,SNR=2.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**42.68**	**162**	P	**P**	**09 09 24.5**	**-0.1**
	0.8nm,0.9s,baz=340,slow=9.1,SNR=4.4						
	0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**43.05**	**329**	P	**P**	**09 09 28.9**	**+1.7**
	0.4nm,0.3s,baz=123,slow=10,SNR=2.3						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**44.74**	**322**	P	**P**	**09 09 41.4**	**+0.5**
	0.2nm,0.6s,baz=124,slow=6.8,SNR=2.7						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**46.11**	**164**	P	**P**	**09 09 52.1**	**+0.1**
	0.2nm,0.4s,baz=340,slow=6.5,SNR=6.6						
	0.2nm,0.4s						
NRIK	**Noril'sk**	**52.44**	**345**	P	**P**	**09 10 38.6**	**-1.0**
	2.6nm,0.3s,baz=131,slow=9.3,SNR=4.6						
	2.6nm,0.3s						

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*SFS **31** 09:03:28.0, 35°.59N×3°.75W, ML3.1, ALBORAN SUR*

*MDD **31** 09:03:28.5±0.4, 35°.59N×3°.76W, h0km, mb_Lg3.1/22, Error ellipse: s-maj=3.6km s-min=2.2km az=179.0*

*INMG **31** 09:03:29.6±1.9, 35°.70N×3°.68W, h2km±7km, ML2.8, Error ellipse: s-maj=4.4km s-min=4.1km az=97.0*

*IGIL **31** 09:03:29.9, 35°.59N×3°.76W, h0km, ML2.8*

*CNRM **31** 09:03:29.9, 35°.63N×3°.75W, h21km, ml3.3*

ISC 31 09:03:29.7±1.2**, 35°.63N**±0°.02×**3°.71W**±0°.02**, h21**km±4km**, n83,** σ**1s.36**/136**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.46**	**204**	P	**Pn**	**09 03 42.0**	**+0.9**

PALE	Palemas	0.46	204	P	Pb	09 03 39.3	+0.3
PALE				S	Sb	09 03 45.7	+0.4
EALB	Alboran	0.63	61	Pg	Pb	09 03 42.4	+0.2
EALB				Sg	Sb	09 03 51.1	+0.5
EALB				*i* Vmb_Lg		09 03 53.3	
PVLZ	Peæn de	0.66	226	P	Pb	09 03 42.6	0.0
PVLZ				S	Sb	09 03 50.1	-1.4
WMELI	Melilla	0.70	117	P	Pb	09 03 43.0	-0.2
WMELI				S	Sb	09 03 52.4	-0.1
EMEL	Melilla	0.70	118	Pg	Pb	09 03 43.2	-0.1
EMEL				Sg	Sb	09 03 52.1	-0.4
GOG	Mont Gurugu	0.72	125	P	Pb	09 03 44.0	+0.4
GOG	Mont Gurugu	0.72	125	P	Pb	09 03 43.4	-0.2
GOG				S	Sb	09 03 53.8	+0.8
AKLM	AKL	1.13	186	P	Pb	09 03 53.0	+2.4
CHAS	Isla Isabel II	1.14	113	P	Pn	09 03 49.1	-1.3
CHAS				S	Sb	09 04 04.4	-0.7
ELGU	Los Guajares,	1.23	3	Pg	Pn	09 03 50.7	-1.2
ELGU				Sg	Sn	09 04 06.4	-1.5
ELGU				*i* Vmb_Lg		09 04 10.8	
EMIJ	Mijas	1.26	318	Pg	Pn	09 03 50.9	-1.3
EMIJ				Sg	Sn	09 04 07.0	-1.6
EMIJ				*i* Vmb_Lg		09 04 08.7	
TAF	Taforalt	1.34	127	P	Pn	09 03 53.4	+0.1
TAF	Taforalt	1.34	127	P	Pn	09 03 53.4	+0.1
SMIR	Smir Dam	1.36	273	P	Pn	09 03 52.0	-1.4
SMIR	Smir Dam	1.36	273	P	Pn	09 03 51.5	-2.0
CEU	Ceuta	1.38	282	P	Pn	09 03 51.3	-2.4
CEU				S	Sn	09 04 07.5	-3.7
ECEU	Ceuta	1.38	282	Pg	Pn	09 03 52.4	-1.3
ECEU				Sg	Sn	09 04 10.0	-1.3
ECEU				*i* Vmb_Lg		09 04 12.3	
EBER	Berja	1.43	28	Pg	Pn	09 03 54.1	-0.5
EBER				Sg	Sn	09 04 13.1	+0.3
EBER				*i* Vmb_Lg		09 04 22.1	
CHEFC	Chefchaouen	1.43	249	P	Pb	09 03 55.2	-0.5
CHEFC	Chefchaouen	1.43	249	P	Pb	09 03 55.2	-0.5
CHEFC				S	Sn	09 04 12.3	-0.4
EGOR	Sierra Gorda,	1.51	348	Pg	Pn	09 03 55.3	-0.4
EGOR				Sg	Sn	09 04 14.6	-0.1
EGOR				*i* Vmb_Lg		09 04 22.2	
EQUE	Quentar	1.58	8	Pn	Pn	09 03 56.7	0.0
EQUE				Sn	Sn	09 04 17.0	+0.4
EQUE				*i* Vmb_Lg		09 04 20.7	
JBK	JBK	1.60	144	P	Pn	09 03 56.9	-0.1
JBK				S	Sn	09 04 16.8	-0.3
EJIF	Jimena Fronter	1.64	300	Pn	Pn	09 03 57.4	+0.1
ENIJ	Nijar	1.81	42	Pn	Pn	09 03 59.1	-0.6
ENIJ				Sn	Sb	09 04 24.5	+0.1
ENIJ				*i* Vmb_Lg		09 04 29.5	
ESPR	Espera	2.12	306	Pn	Pn	09 04 04.5	+0.5
ESPR				Sn	Sn	09 04 30.9	+1.2
ESPR				*i* Vmb_Lg		09 04 40.6	
LCRM	LCR	2.16	206	P	Pb	09 04 11.0	+2.8
LCRM	LCR	2.16	206	S	Sb	09 04 34.5	-0.1
EQES	Quesada	2.23	13	Pn	Pn	09 04 07.1	+1.6
EQES				Sn	Sn	09 04 34.5	+2.1
EQES				*i* Vmb_Lg		09 04 38.4	
IFR	Ifrane	2.41	209	P	Pn	09 04 06.7	-1.4
IFR				S	Sn	09 04 37.9	+0.8
EADA	Adamuz	2.62	345	Pn	Pn	09 04 11.1	+0.2
EADA				Sn	Sn	09 04 43.4	+1.4
EADA				Sg	Sb	09 04 47.9	+0.1
EADA				*i* Vmb_Lg		09 04 53.0	
ECAB	El Cabril	2.79	331	Pn	Pn	09 04 13.6	+0.4
ECAB				Sn	Sn	09 04 47.1	+0.8
ECAB				*i* Vmb_Lg		09 05 04.6	
MD31	MD31	2.89	198	P	Pn	09 04 16.2	+1.6
MDT	Midelt	2.91	195	P	Pb	09 04 18.3	-2.7
MDT	Midelt	2.91	195	P	Pb	09 04 18.3	-2.7
CART	Cartagena	2.93	47	P	Pn	09 04 13.5	-1.5
CART				S	Sn	09 04 43.3	-6.2
TDRA	Tendrara	2.94	151	P	Pn	09 04 16.7	+1.3
TDRA				S	Sn	09 04 51.9	+1.7
EMUR	La Murta	2.97	41	Pn	Pn	09 04 16.1	+0.5
EMUR				Sn	Sn	09 04 49.6	-0.9
EMUR				*i* Vmb_Lg		09 04 50.3	
EMIN	Mina Concepcio	3.19	313	Pn	Pn	09 04 18.4	-0.3
EMIN				Sn	Sn	09 04 54.6	-1.5
EMIN				*i* Vmb_Lg		09 04 59.4	
ZHG	ZHG	3.26	229	P	Pn	09 04 20.1	+0.5
ETOB	Tobarra	3.47	29	Pn	Pn	09 04 24.1	+1.5
ETOB				Sn	Sn	09 05 04.3	+1.3
ETOB				*i* Vmb_Lg		09 05 16.7	
EGRO	El Granado	3.58	303	Pn	Pn	09 04 24.0	+0.1
EGRO				Sn	Sn	09 05 05.2	-0.3
EGRO				*i* Vmb_Lg		09 05 09.8	
PVAQ	Vaqueiros	3.68	300	*e*Pn	Pn	09 04 25.9	+0.6
PVAQ				*e*Sn	Sn	09 05 09.3	+1.3
PVAQ				A	A	09 05 10.7	
	25nm,0.6s						
PVAQ	Vaqueiros	3.68	300	P	Pn	09 04 26.0	+0.6
PVAQ				S	Sn	09 05 08.7	+0.7
PBAR	Barrancos	3.68	315	*e*Pn	Pn	09 04 26.1	+0.8
PBAR				*e*Sn	Sn	09 05 09.3	+1.2
PBDV	Barranco-do-Ve	3.76	297	*e*Pn	Pn	09 04 27.4	+0.9
PBDV				*e*Sn	Sn	09 05 10.5	+0.4
PBDV				A	A	09 05 11.9	
	13nm,0.6s						
PAB	San Pablo	3.94	353	Pn	Pn	09 04 29.3	+0.3
PAB				Sn	Sn	09 05 14.1	-0.5
PAB				*i* Vmb_Lg		09 05 28.6	
PCVE	Castro Verde	4.01	301	*e*Pn	Pn	09 04 31.2	+1.3
PCVE				*e*Sn	Sn	09 05 15.6	-0.6
PCVE				A	A	09 05 22.8	
	17nm,0.5s						
ESDC	Sonseca Array	4.04	357	Pn	Pn	09 04 30.2	-0.1
ESDC				Sn	Sn	09 05 17.7	+0.6
ESDC				*i* Vmb_Lg		09 05 36.3	
FIGM	Figuig	4.04	149	P	Pn	09 04 33.0	+2.5
EBAD	Badajoz	4.08	321	Pn	Pn	09 04 30.0	-0.9
EBAD				Sn	Sn	09 05 17.6	-0.4
EBAD				*i* Vmb_Lg		09 05 21.4	
PBEJ	Beja	4.10	307	*e*Pn	Pn	09 04 33.0	+1.9
PBEJ				*e*Sn	Sn	09 05 18.0	-0.4
PBEJ				A	A	09 05 22.5	
	9.9nm,0.4s						
MESJ	Messejana	4.24	303	*e*P	Pn	09 04 33.6	+0.6
MESJ				*e*S	Sn	09 05 20.3	-1.5
MESJ				IAML		09 05 25.9	
	comp=N,17nm,0.3s						
MESJ	Messejana	4.24	303	*e*Pn	Pn	09 04 33.7	+0.7
MESJ				*e*Sn	Sn	09 05 21.6	-0.2
MESJ				A	A	09 05 30.0	
	comp=N,14nm,0.4s						
MORF	Marmelete	4.31	294	*e*Pn	Pn	09 04 36.0	+1.9
MORF				*e*Sn	Sn	09 05 24.2	+0.4
MORF				A	A	09 05 26.3	
	comp=N,7.3nm,0.2s						
PFVI	Vila Bisbo	4.39	291	*e*Pn	Pn	09 04 36.9	+1.8
PFVI				*e*Sn	Sn	09 05 24.8	-0.8
PFVI				A	A	09 05 42.5	
	comp=N,14nm,0.6s						
PTEO	Sao Teotonio	4.46	297	*e*Sn	Sn	09 05 28.1	+0.8
PTEO				A	A	09 05 32.2	
	comp=N,12nm,0.3s						
PESTR	Estremoz	4.47	317	*e*Pn	Pn	09 04 37.6	+1.4
PESTR				*e*Sn	Sn	09 05 27.1	-0.5
PESTR				A	A	09 06 04.0	
	comp=N,8.4nm,0.6s						
PESTR	Estremoz	4.47	317	P	Pn	09 04 36.7	+0.5
EVO	Evora	4.49	311	*e*Pn	Pn	09 04 37.7	+1.2
EVO				*e*Sn	Sn	09 05 27.1	-1.0
EVO				A	A	09 05 31.1	
	comp=N,12nm,0.4s						
PNCL	Nicolau / Gran	4.58	304	*e*Pn	Pn	09 04 38.4	+0.6
PNCL				*e*Sn	Sn	09 05 30.5	+0.1
PNCL				A	A	09 05 32.8	
	comp=N,8.2nm,0.3s						
PMRV	Marv??o	4.78	323	*e*Pn	Pn	09 04 42.2	+1.6
PMRV				*e*Sn	Sn	09 05 36.2	+0.8
PMRV				A	A	09 06 11.1	
	comp=N,8.8nm,0.6s						
EPLA	Plasencia	4.80	338	Sn	Sn	09 05 36.3	+0.4
PMTG	Montargil	4.97	315	*e*Pn	Pn	09 04 44.3	+1.3
PMTG				*e*Sn	Sn	09 05 39.7	-0.1
PMTG				A	A	09 05 43.5	
	comp=N,6.8nm,0.3s						
GUD	Guadarrama	5.01	356	Pn	Pn	09 04 43.7	-0.1
GUD				Sn	Sn	09 05 41.6	+0.4
PACT	Alcochete	5.15	309	*e*Pn	Pn	09 04 46.7	+1.2
PACT				*e*Sn	Sn	09 05 44.7	+0.5
PCBR	Castelo Branco	5.15	326	*e*Pn	Pn	09 04 47.5	+1.9
PCBR				*e*Sn	Sn	09 05 44.4	+0.1
PCBR				A	A	09 05 46.4	
	comp=N,9.7nm,0.5s						
ETOR	Torete	5.34	14	Pn	Pn	09 04 45.9	-2.3
OUZM	OUZ	5.36	209	P	Pn	09 04 54.0	+5.4
OUZM	OUZ	5.36	209	P	Pn	09 04 54.0	+5.4
PSBE	So Bento	5.59	315	*e*Pn	Pn	09 04 53.6	+1.9
OUK	Oukaimeden	5.62	219	P	Pn	09 04 51.9	-0.5
MTE	Manteigas	5.64	329	*e*Pn	Pn	09 04 53.9	+1.6
MTE				*e*Sn	Sn	09 05 57.6	+1.2
MTE				A	A	09 06 07.7	
	comp=N,8.6nm,0.4s						
PCAS	Casmilo, Conde	5.81	321	*e*Pn	Pn	09 04 56.6	+1.9
PCAS				*e*Sn	Sn	09 05 59.2	-1.5
PCAS				A	A	09 06 02.7	
	comp=N,5.3nm,0.6s						
PVIS	Viseu	6.05	328	*e*Pn	Pn	09 04 59.7	+1.7
MVO	Moncorvo	6.10	336	*e*Pn	Pn	09 05 00.5	+1.8
MVO				*e*Sn	Sn	09 06 06.7	-1.3
MVO				A	A	09 06 09.8	
	comp=N,7.0nm,0.5s						
TTIG	Tnine Tigouga,	6.44	219	P	Pn	09 05 01.8	-1.6
PVRL	Vila Real	6.45	332	*e*Pn	Pn	09 05 06.1	+2.7
POLO	Lamas de Olo	6.56	332	*e*Pn	Pn	09 05 07.0	+1.9
POLO				*e*Sn	Sn	09 06 16.9	-2.4
POLO				A	A	09 06 20.9	
	comp=N,2.8nm,0.4s						
PBRG	Braganca	6.60	340	*e*Pn	Pn	09 05 07.3	+1.8
ECAL	Calabor	6.72	340	Pn	Pn	09 05 07.4	+0.2
ECAL				Sn	Sn	09 06 22.7	-0.6
ECAL				*i* Vmb_Lg		09 06 26.3	
PGAV	Gavieira, Arco	7.25	332	*e*Pn	Pn	09 05 16.9	+2.4

IDC 31 09:33:30.8±3.2, 15°.74S×177°.62W, h426^{km}±29^{km}, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=160.7km s-min=26.4km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.59	244	P	P	09 34 50.1	+0.1
	96nm,0.8s,baz=351,slow=22,SNR=64						
WRA	Warramunga Arr	45.80	257	P	P	09 41 14.3	+1.4
	0.3nm,0.7s,baz=95,slow=6.7,SNR=1.7						
	0.3nm,0.7s						
ASAR	Alice Springs	46.13	252	P	P	09 41 14.8	-0.7
	0.7nm,0.4s,baz=85,slow=8.4,SNR=21						
	0.7nm,0.4s						
ILAR	Eielson Array	83.62	13	P	P	09 45 12.1	-0.6
	1.0nm,0.9s,baz=230,slow=6.2,SNR=7.4						
	1.0nm,0.9s						
PDAR	Pinedale Array	85.27	43	P	P	09 45 22.3	+0.7
	0.3nm,0.5s,baz=264,slow=5.0,SNR=3.5						
	0.3nm,0.5s						

IDC ***31*** *09:33:42.9±0.9, 31°.43N×128°.59E, h0^{km}, mb3.4/8, mbtmp3.4/11, ML3.2/3, Error ellipse: s-maj=26.1km s-min=15.8km az=89.0*

JMA ***31*** *09:33:42.1±0.4, 31°.4N±0°.9×12°9E±°, h10^{km}±3^{km}, MV3.6/20, SW OFF KYUSHU*

NIED ***31*** *09:33:42.1, 31°.35N×128°.72E, h10^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.70; $M_{\theta\theta}$4.51; $M_{\phi\phi}$-1.81; $M_{r\theta}$-0.99; $M_{\theta\phi}$0.23; $M_{\phi r}$-1.01; Fault plane solution: $M_0$4.04000×10^{14} NP1: ϕ_s297.00000°, δ46.00000°, λ-45.00000°. NP2: ϕ_s62.00000°, δ60.00000°, λ-126.00000°.*

ISC 31 09:33:43.8±0.8, 31°.43N±0°.05×128°.85E±0°.07, h10^{km}, n17, σ1^s.14/19, mb3.5/8, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.78	71	P	Pb	09 33 59.0	-0.4
JSJ				*e*S	Sb	09 34 10.7	+0.6
JFU	Fukue jima 2	1.23	356	*e*P	Pn	09 34 06.0	-1.0
JSU	Suzuyama	1.37	86	P	Pb	09 34 09.5	-0.1
JNN	Nakanoshima	1.81	151	*e*P	Pn	09 34 13.2	-1.9
JYAK	Yakushimahirau	1.85	129	*e*P	Pn	09 34 14.3	-1.3
JTN	Tanegashima 3	1.98	112	*e*P	Pn	09 34 17.5	+0.1
JNU	Nakatsue	2.41	45	Pn	Pb	09 34 27.8	+0.5
	9.4nm,0.3s,baz=303,slow=4.4,SNR=15						
JNU				Sn	Sg	09 34 59.5	-1.7
	6.2nm,0.3s,baz=174,slow=23,SNR=4.1						
	32nm,0.5s						
JOW	Kunigami	4.61	186	Pn	Pn	09 34 55.6	+2.1
	0.9nm,0.3s,baz=122,slow=25,SNR=3.5						
	4.0nm,0.5s						
KSRS	Korea Array	6.06	353	Pn	Pn	09 35 15.0	+1.5
	1.6nm,0.3s,baz=175,slow=14,SNR=10						
KSRS				Lg	Lg	09 36 53.6	
	1.3nm,0.3s,baz=172,slow=30,SNR=6.0						
	2.3nm,0.5s						
SONM	Songino Array	23.70	320	P	P	09 38 55.0	-0.8
	0.9nm,0.8s,baz=138,slow=12,SNR=4.5						
	0.9nm,0.8s						
MKAR	Makanchi Array	38.66	307	P	P	09 41 07.4	-0.2
	0.5nm,0.9s,baz=94,slow=10,SNR=2.5						
	0.5nm,0.9s						
WRA	Warramunga Arr	51.35	173	P	P	09 42 48.3	-0.3
	0.3nm,0.9s,baz=357,slow=8.0,SNR=1.7						
	0.3nm,0.9s						
ASAR	Alice Springs	54.99	174	P	P	09 43 16.7	+1.3
	0.4nm,0.8s,baz=4.7,slow=13,SNR=9.2						
	0.4nm,0.8s						
ILAR	Eielson Array	59.64	30	P	P	09 43 47.9	+0.2
	0.2nm,0.6s,baz=291,slow=7.6,SNR=1.8						
	0.2nm,0.6s						
FINES	FINESS Array B	68.64	330	P	P	09 44 46.5	-0.4
	0.6nm,0.5s,baz=165,slow=5.8,SNR=4.5						
	0.6nm,0.5s						
NVAR	Mina Array Bea	86.53	46	P	P	09 46 28.7	+1.1
	0.2nm,0.5s,baz=316,slow=5.0,SNR=2.5						
	0.2nm,0.5s						
PDAR	Pinedale Array	88.78	39	P	P	09 46 38.9	+0.6
	0.2nm,0.4s,baz=279,slow=1.7,SNR=1.8						
	0.2nm,0.4s						

IDC 31 10:00:24.0±2.2, 25°.83N×140°.80E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=112.5km s-min=25.5km az=80.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.93	188	P	P	10 08 49.0	+0.2
	0.1nm,0.2s,baz=6.4,slow=7.6,SNR=6.6						
	0.1nm,0.2s						
ASAR	Alice Springs	49.66	188	P	P	10 09 16.9	-0.8
	0.3nm,0.9s,baz=16,slow=6.9,SNR=2.0						
	0.3nm,0.9s						
MKAR	Makanchi Array	50.33	310	P	P	10 09 22.5	-0.1
	0.5nm,0.6s,baz=91,slow=9.1,SNR=5.6						
	0.5nm,0.6s						
ARCES	ARCESS Array B	74.32	341	P	P	10 12 02.4	-0.6
	1.6nm,0.8s,baz=57,slow=9.8,SNR=1.8						
FINES	FINESS Array B	78.52	334	P	P	10 12 27.6	+0.7
	0.5nm,0.5s,baz=59,slow=12,SNR=3.9						
	0.5nm,0.5s						

BJI ***31*** *10:03:55.6±0.0, 47°.76N×154°.52E, h10^{km}, mb5.6/82, mB5.8/76, Ms5.9/96, Ms7 5.8/90*

IDC ***31*** *10:03:57.6±0.4, 47°.58N×154°.23E, h0^{km}, mb5.0/34, mbtmp5.1/39, ML4.2/4, MS5.4/81, Error ellipse: s-maj=12.8km s-min=8.8km az=113.0*

JMA ***31*** *10:03:59.0±1.3, 47°N±8°×15°5E±°, h30^{km}, MD6.1/17, MW5.9/17, FAR FIELD*

MOS ***31*** *10:03:58.3±0.9, 47°.53N×154°.24E, h17^{km}, mb5.6/103, MS5.7/63, Error ellipse: s-maj=5.0km s-min=3.2km az=81.9*

NIED ***31*** *10:03:59.0, 47°.18N×154°.84E, h30^{km}, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.90; $M_{\theta\theta}$8.71; $M_{\phi\phi}$-4.82; $M_{r\theta}$1.03; $M_{\theta\phi}$1.35; $M_{\phi r}$0.96; Fault plane solution: $M_0$7.20000×10^{17} NP1: ϕ_s126.00000°, δ65.00000°, λ-19.00000°. NP2: ϕ_s224.00000°, δ73.00000°, λ-154.00000°.*

NEIC ***31*** *10:03:59.4, 47°.56N×154°.40E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.51; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-3.99; $M_{r\theta}$1.01; $M_{\theta\phi}$-1.63; $M_{\phi r}$1.82; Fault plane solution: $M_0$4.61000×10^{17} NP1: ϕ_s189.50000°, δ32.07000°, λ76.99000°. NP2: ϕ_s24.75000°, δ58.84000°, λ98.03000°. Principal axes: T 4.0516, Plg75.0000°, Azm317.0000°; N 0.9603, Plg7.0000°, Azm201.0000°; P -5.0119, Plg13.0000°, Azm109.0000°;*

NEIC ***31*** *10:04:00.5±1.6, 47°.55N±0°.07×154°.36E±0°.10, h18^{km}±2^{km}, mb5.5/688, Ms_20 5.4/386, Mwb5.7/84, Mww5.9 Error ellipse: s-maj=12.8km s-min=6.7km az=141.0*

SKHL ***31*** *10:04:00.2±0.3, 47°.30N×154°.70E, h53^{km}±4^{km}, mb6.3/5, mbv6.1/11, ms5.9/12, msh6.1/5*

GCMT ***31*** *10:04:04.5±0.1, 47°.58N±0°.01×154°.49E±0°.01, h28^{km}, MW5.9/167, Moment Tensor Solution. s149,c307; s167,c519; Duration: 2^s.1 Moment tensor: Scale 10^{18} Nm; M_{rr}0.68±.01; $M_{\theta\theta}$-0.10±.01; $M_{\phi\phi}$-0.57±.01; $M_{r\theta}$0.10±.01; $M_{\theta\phi}$-0.34±.00; $M_{\phi r}$0.31±.01; Best double couple: $M_0$0.78500×10^{18} NP1: ϕ_s213.00000°, δ33.00000°, λ98.00000°. NP2: ϕ_s23.00000°, δ57.00000°, λ85.00000°. Principal axes: T 0.7520, Plg77.0000°, Azm276.0000°; N 0.0660, Plg4.0000°, Azm26.0000°; P -0.8170, Plg12.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***31*** *10:04:07, 47°.35N×154°.51E, h24^{km}, Moment Tensor Solution. Duration: 16^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}5.54; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-5.16; $M_{r\theta}$1.60; $M_{\theta\phi}$-2.93; $M_{\phi r}$4.35; Fault plane solution: $M_0$7.67000×10^{17} NP1: ϕ_s210.00000°, δ26.00000°, λ97.00000°. NP2: ϕ_s22.00000°, δ64.00000°, λ86.00000°. Principal axes: T 7.1297, Plg71.0000°, Azm284.0000°; N 0.9865, Plg3.0000°, Azm23.0000°; P -8.1161, Plg19.0000°, Azm115.0000°;*

ISC 31 10:04:01.0±0.4**, 47°.55N**±0°.03×**154°.27E**±0°.03**, h21^{km}**±3^{km}**, h21^{km}:pP-P, n2261, σ1^s.60**/2483**, mb5.5**/564**, MS5.5**/325**, 663C-105D, Fault plane solution: NP1:**ϕ_s37.55979°, δ55.47838°, λ97.88532°. **NP2:**ϕ_s203.82643°, δ35.30154°, λ78.72023°. **Principal axes:** T Plg77.9087°, Azm335.1479°; N Plg6.4902°, Azm213.0718°; P Plg10.1576°, Azm121.9039°; **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.36	20	PN	Pn	10 04 53.0	+0.9
SKR				S	Sn	10 05 31.6	+0.3
SKR	Severo-Kuril's	3.36	20	*i* P	Pn	10 04 52.8	+0.7
SKR				AMB	AMB	10 04 59.9	
	3μm,0.7s						
SKR				*i* S	Sn	10 05 32.0	+0.7
SKR				A	A	10 05 54.5	
	10μm,0.8s						
SKR				A	A	10 05 54.5	
	13μm,0.8s						
SKR				AMS	AMS	10 06 23.2	
	26μm,11.0s						
SKR				AMS	AMS	10 06 23.2	
	41μm,11.0s						
SKR				AMS	AMS	10 06 23.2	
	55μm,11.0s						
PAU	Pauzhetka	4.26	22	PN	Pn	10 05 05.1	+0.7
PAU	Pauzhetka	4.26	22	*e*P	Pn	10 05 05.4	+1.0
PAU				*e*S	Sn	10 05 54.4	+1.0
PAU				A	A	10 06 08.0	
	13μm,0.8s						
PAU				A	A	10 06 08.0	
	13μm,0.8s						
PAU				AMS	AMS	10 06 48.6	
	52μm,14.0s						
PAU				AMS	AMS	10 06 48.6	
	60μm,14.0s						
PAU				AMS	AMS	10 06 48.6	
	69μm,14.0s						
KDTR	Khodutka, Kamc	4.93	29	PN	Pn	10 05 13.0	-0.6
MIPR	Malaya Ipel'ka	5.00	18	PN	Pn	10 05 16.0	+1.4
MIPR				S	Sn	10 06 16.2	+4.5
KUR	Kuril'sk	5.00	245*d*	*i*PN	Pn	10 05 16.8	+2.2
KUR				*i* S	Sn	10 06 16.8	+5.1
KUR				pmax	pmax		
	comp=Z,2μm,0.6s						
KUR				pmax	pmax		
	comp=E,914nm,0.4s						
KUR				pmax	pmax		
	comp=N,477nm,0.3s						
KUR				pmax	pmax		
	comp=Z,10μm,7.1s						
KUR				smax	smax		
	comp=N,14μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
KUR				smax	smax		
	comp=N,133μm,16.7s						
KUR				smax	smax		
	comp=E,72μm,13.2s						
KUR				MLR	MLR		
	comp=Z,28μm,10.0s						
KUR	Kuril'sk	5.00	245	*i* P	Pn	10 05 16.5	+1.9
KUR				AMB	AMB	10 05 32.5	
	comp=Z,480nm,0.5s						
KUR				AMB	AMB	10 05 32.5	
	comp=Z,910nm,0.5s						
KUR				AMB	AMB	10 05 32.5	
	comp=Z,2μm,0.5s						
KUR				*i* S	Sn	10 06 13.8	+2.1
KUR				A	A	10 06 41.2	
	comp=Z,14μm,0.5s						
KUR				A	A	10 06 41.2	
	comp=Z,3μm,0.5s						
KUR				AMS	AMS	10 06 58.4	
	comp=Z,66μm,13.0s						
KUR				AMS	AMS	10 06 58.4	
	comp=Z,96μm,13.0s						
KUR				AMS	AMS	10 06 58.4	
	comp=Z,58μm,13.0s						
ASAK	Asacha	5.38	24	PN	Pn	10 05 20.7	+0.8
MTVR	Mutnovka	5.54	26	PN	Pn	10 05 22.2	-0.1
GRL	Gorelyy	5.57	25	PN	Pn	10 05 23.7	+1.1
RUS	Russkaya	5.60	28	PN	Pn	10 05 21.6	-1.3
KRMR	Karymshinskiy	5.84	24	PN	Pn	10 05 26.6	+0.5
PET	Petropavlovsk	6.16	26		Pn	10 05 29.3	-1.2
PET	Petropavlovsk	6.16	26	PN	Pn	10 05 30.7	+0.2
PET	Petropavlovsk	6.16	26	P	Pn	10 05 30.8	+0.2
PET	Petropavlovsk	6.16	26	*e*P	Pn	10 05 30.2	-0.3
PET				AMB	AMB	10 05 35.4	
	comp=Z,1μm,6.0s						
PET				AMB	AMB	10 05 43.1	
	comp=Z,900nm,0.8s						
PET				*e*S	Sn	10 06 38.3	-1.9
PET				A	A	10 07 07.2	
	comp=Z,8μm,1.0s						
PET				AMS	AMS	10 08 51.0	
	comp=Z,20μm,16.0s						
UGLR	Uglovaya	6.37	26	PN	Pn	10 05 34.2	+0.7
SHO	Shikotan	6.38	237*c*	*i*PN	Pn	10 05 32.5	-1.0
SHO				pmax	pmax		
	comp=Z,977nm,3.2s						
SHO				pmax	pmax		
	comp=Z,671nm,0.4s						
SHO				MLR	MLR		
	comp=Z,20μm,15.0s						
SHO				MLR	MLR		
	comp=E,42μm,16.0s						
SHO				MLR	MLR		
	comp=N,29μm,14.0s						
SHO	Shikotan	6.38	237	*i* P	Pn	10 05 32.8	-0.7
SHO				AMB	AMB	10 05 45.5	
	comp=N,980nm,3.2s						
SHO				AMB	AMB	10 05 52.6	
	comp=N,670nm,0.3s						
SHO				*e*S	Sn	10 06 45.6	0.0
SHO				A	A	10 06 54.7	
	comp=N,6μm,1.0s						
SHO				A	A	10 06 54.7	
	comp=N,2μm,1.0s						
SHO				AMS	AMS	10 08 16.9	
	comp=N,46μm,16.0s						
SHO				AMS	AMS	10 08 16.9	
	comp=N,44μm,16.0s						
SHO				AMS	AMS	10 08 16.9	
	comp=N,25μm,16.0s						
KOK	Koryaka	6.39	24	PN	Pn	10 05 34.9	+1.1
AVH	Avacha	6.39	25	PN	Pn	10 05 34.9	+1.1
SMAR	Somma	6.41	25	PN	Pn	10 05 35.1	+0.9
KRER	Koryakskii	6.43	25	PN	Pn	10 05 35.7	+1.2
SDLR	Sedlovina	6.45	25	PN	Pn	10 05 34.5	-0.1
KRX	Arik	6.45	24	PN	Pn	10 05 35.8	+1.1

YUK	**Yuzh-Kuril'sk**	**6.85 242**	*d i*PN	**Pn**	**10 05 41.8**	**+1.8**
YUK			*e*S	**Sn**	**10 07 00.3**	**+3.1**
YUK			pmax	pmax		
	comp=Z,2µm,0.4s					
YUK			pmax	pmax		
	comp=N,853nm,0.2s					
YUK			pmax	pmax		
	comp=E,885nm,0.6s					
YUK			pmax	pmax		
	comp=Z,5µm,1.5s					
YUK			smax	smax		
	comp=N,13µm,2.4s					
YUK			smax	smax		
	comp=E,12µm,1.4s					
YUK			MLR	MLR		
	comp=Z,46µm,16.0s					
YUK			MLR	MLR		
	comp=N,29µm,15.0s					
YUK			MLR	MLR		
	comp=E,48µm,12.0s					
YUK	**Yuzh-Kuril'sk**	**6.85 242**	*i* P	**Pn**	**10 05 41.8**	**+1.8**
YUK			AMB	AMB	10 05 48.7	
	comp=E,850nm,0.3s					
YUK			AMB	AMB	10 05 48.7	
	comp=E,890nm,0.3s					
YUK			AMB	AMB	10 05 48.7	
	comp=E,2µm,0.3s					
YUK			AMB	AMB	10 05 51.9	
	comp=E,5µm,2.0s					
YUK			*e*S	**Sn**	**10 06 59.6**	**+2.4**
YUK			A	A	10 07 19.0	
	comp=E,13µm,2.4s					
YUK			A	A	10 07 19.0	
	comp=E,12µm,2.4s					
YUK			AMS	AMS	10 08 23.0	
	comp=E,30µm,16.0s					
YUK			AMS	AMS	10 08 23.0	
	comp=E,48µm,16.0s					
YUK			AMS	AMS	10 08 23.0	
	comp=E,46µm,16.0s					
RUSJ	**Misakicho**	**7.18 245**	⇓*i*PN	**Pn**	**10 05 47.1**	**+2.5**
RUSJ			*e*S	**Sn**	**10 07 10.3**	**+4.8**
GLVR	**Golovnino**	**7.22 241**	*e*PN	**Pn**	**10 05 46.2**	**+1.1**
GLVR			pmax	pmax		
	comp=Z,3µm,2.0s					
GLVR			pmax	pmax		
	comp=N,1µm,0.4s					
GLVR			pmax	pmax		
	comp=Z,1µm,0.4s					
GLVR			pmax	pmax		
	comp=E,394nm,0.2s					
GLVR			MLR	MLR		
	comp=Z,26µm,10.0s					
GLVR	**Golovnino**	**7.22 241**	*e*P	**Pn**	**10 05 46.2**	**+1.1**
GLVR			AMB	AMB	10 06 06.1	
	comp=Z,3µm,2.0s					
GLVR			AMB	AMB	10 06 09.4	
	comp=Z,1µm,0.3s					
GLVR			*e*S	**Sn**	**10 07 07.1**	**+0.7**
GLVR			A	A	10 07 32.5	
	comp=Z,10µm,2.0s					
GLVR			A	A	10 07 32.5	
	comp=Z,12µm,2.0s					
GLVR			AMS	AMS	10 08 41.0	
	comp=Z,27µm,10.0s					
NEM2	**Nemuro 2**	**7.31 238**	*e*P	**Pn**	**10 05 45.1**	**-1.2**
NEM2			*e*S	**Sn**	**10 07 03.1**	**-5.5**
NEM2	**Nemuro 2**	**7.31 238**	A	A	10 05 45.1	
	comp=Z,17nm,2.5s,comp=Z,20nm,4.5s					
NMR	**Nemuro--Hokkai**	**7.32 238**	⇓*i*PN	**Pn**	**10 05 45.6**	**-0.8**
NMR	**Nemuro--Hokkai**	**7.32 238**	*i* P	**Pn**	**10 05 46.0**	**-0.4**
NMR			*e*S	**Sn**	**10 07 07.9**	**-0.8**
JRA	**Rausu**	**7.35 244**	*e*P	**Pn**	**10 05 48.8**	**+2.0**
JRA			*e*S	**Sn**	**10 07 14.8**	**+5.3**
JRA	**Rausu**	**7.35 244**	A	A	10 05 48.8	
	comp=Z,35nm,2.9s,comp=Z,23nm,5.0s					
JNSB	**Nemuroshibetsu**	**7.51 243**	A	A	10 05 48.0	
	comp=Z,55nm,3.7s,comp=Z,55nm,3.3s					
JNK	**Nakash**	**7.78 243**	*e*P	**Pn**	**10 05 53.7**	**+0.8**
JNK	**Nakash**	**7.78 243**	A	A	10 05 53.7	
	comp=Z,15nm,13.8s,comp=Z,15nm,5.7s					
JKHN	**Kushirohamanak**	**7.82 238**	A	A	10 05 51.7	
	comp=Z,24nm,9.4s,comp=Z,27nm,2.4s					
YSS	**Yuzh-Sakhalins**	**7.86 270**	Pn	**Pn**	**10 05 57.1**	**+3.2**
YSS	**Yuzh-Sakhalins**	**7.86 270**	κ *i*PN	**Pn**	**10 05 58.3**	**+4.4**
YSS			*e*S	**Sn**	**10 07 26.5**	**+4.4**
YSS			pmax	pmax		
	comp=E,2µm,3.2s					
YSS			pmax	pmax		
	comp=Z,3µm,3.2s					
YSS			pmax	pmax		
	comp=Z,520nm,0.6s					
YSS			smax	smax		
	comp=N,340nm,0.5s					
YSS			MLR	MLR		
	comp=E,40µm,17.0s					
YSS			MLR	MLR		
	comp=Z,68µm,17.0s					
YSS	**Yuzh-Sakhalins**	**7.86 270**	*i* P	**Pn**	**10 05 58.0**	**+4.1**
YSS			*i* P	**Pn**	**10 05 58.0**	**+4.1**
YSS			AMB	AMB	10 06 00.0	
	comp=Z,2µm,3.2s					
YSS			AMB	AMB	10 06 00.0	
	comp=Z,3µm,3.2s					
YSS			AMB	AMB	10 06 00.3	
	comp=Z,520nm,0.5s					
YSS			*e*S	**Sn**	**10 07 26.0**	**+3.9**
YSS			A	A	10 07 30.0	
	comp=Z,340nm,0.5s					
YSS			A	A	10 07 30.0	
	comp=Z,270nm,0.5s					
YSS			AMS	AMS	10 08 47.0	
	comp=Z,41µm,17.0s					
YSS			AMS	AMS	10 08 47.0	
	comp=Z,68µm,17.0s					
JTKR	**Abashiri--Toko**	**8.08 247**	*e*P	**Pn**	**10 05 59.4**	**+2.5**
JTKR			*e*S	**Sn**	**10 07 32.5**	**+5.0**
JTKR	**Abashiri--Toko**	**8.08 247**	A	A	10 05 59.4	
	comp=Z,6.0nm,4.2s,comp=Z,7.0nm,5.6s					
JAK	**Akkeshi**	**8.14 239**	*e*P	**Pn**	**10 05 56.6**	**-1.1**
JAK			*e*S	**Sn**	**10 07 24.9**	**-4.2**
JAK	**Akkeshi**	**8.14 239**	A	A	10 05 56.6	
	comp=Z,21nm,3.5s,comp=Z,24nm,3.1s					
UGL	**Uglegorsk**	**8.28 285**	*de*PN	Pn	10 06 04.6	+5.0
UGL			*e*S	**Sn**	**10 07 39.1**	**+6.7**
UGL			pmax	pmax		
	comp=Z,6µm,4.0s					
UGL			pmax	pmax		
	comp=Z,605nm,0.7s					
UGL			smax	smax		
	comp=E,13µm,5.5s					
UGL			smax	smax		
	comp=N,5µm,8.0s					
UGL			MLR	MLR		
	comp=Z,77µm,14.5s					
UGL			MLR	MLR		
	comp=E,73µm,14.0s					
UGL			MLR	MLR		
	comp=N,53µm,14.0s					
UGL	**Uglegorsk**	**8.28 285**	*e*P	**Pn**	**10 06 04.0**	**+4.4**
UGL			AMB	AMB	10 06 09.0	
	comp=N,6µm,4.0s					
UGL			AMB	AMB	10 06 19.0	
	comp=N,750nm,0.6s					
UGL			*e*S	**Sn**	**10 07 37.1**	**+4.7**
UGL			A	A	10 07 54.0	
	comp=N,5µm,6.0s					
UGL			A	A	10 07 54.0	
	comp=N,13µm,6.0s					
UGL			AMS	AMS	10 09 24.5	
	comp=N,53µm,14.0s					
UGL			AMS	AMS	10 09 24.5	
	comp=N,73µm,14.0s					
UGL			AMS	AMS	10 09 24.5	
	comp=N,77µm,14.0s					
TYV	**Tymovskoe**	**8.29 298**	*e*PN	Pn	10 06 04.8	+5.0
TYV			pmax	pmax		
	comp=Z,16nm,0.8s					
TYV			pmax	pmax		
	comp=Z,500nm,2.3s					
TYV			MLR	MLR		
	comp=Z,60µm,16.0s					
TYV			MLR	MLR		
	comp=N,41µm,14.0s					
TYV			MLR	MLR		
	comp=E,51µm,14.0s					
TYV	**Tymovskoe**	**8.29 298**	*e*P	**Pn**	**10 06 04.4**	**+4.6**
TYV			AMB	AMB	10 06 05.1	
	comp=E,20nm,0.8s					
TYV			AMB	AMB	10 06 05.3	
	comp=E,500nm,2.3s					
TYV			*e*S	**Sn**	**10 07 36.7**	**+3.9**
TYV			A	A	10 07 37.6	
	comp=E,70nm,0.6s					
TYV			A	A	10 07 37.6	
	comp=E,30nm,0.6s					
TYV			A	A	10 07 40.0	
	comp=E,500nm,3.5s					
TYV			A	A	10 07 40.0	
	comp=E,900nm,3.5s					
TYV			AMS	AMS	10 09 43.0	
	comp=E,41µm,14.0s					
TYV			AMS	AMS	10 09 43.0	
	comp=E,51µm,14.0s					
TYV			AMS	AMS	10 09 43.0	
	comp=E,61µm,14.0s					
MKZ	**Mys Kozlova**	**8.44 31**	PN	**Pn**	**10 05 59.5**	**-2.3**
JSE	**Soyaes**	**8.50 257**	A	A	10 06 02.8	
	comp=E,9.0nm,3.7s,comp=E,9.0nm,4.1s					
JAR	**Ashorobuto**	**8.52 244**	*e*P	**Pn**	**10 06 04.0**	**+1.1**
JAR	**Ashorobuto**	**8.52 244**	A	A	10 06 04.0	
	comp=E,6.0nm,4.9s,comp=E,14nm,5.3s					
TUMR	**Tumrok**	**8.57 23**	PN	**Pn**	**10 06 05.1**	**+1.4**
JOB	**Onbets**	**8.70 242**	*e*S	**Sn**	**10 07 37.8**	**-5.1**
JOB	**Onbets**	**8.70 242**	A	A	10 07 37.8	
	comp=E,19nm,4.2s,comp=E,26nm,3.0s					
ESO	**Esso**	**8.82 16**	PN	**Pn**	**10 06 10.6**	**+3.5**
ESO	**Esso**	**8.82 16**	*e*P	**Pn**	**10 06 10.6**	**+3.5**
JWK2	**Keihoku**	**8.83 260**	*e*P	Pn	10 06 13.9	+6.7
JWK2	**Keihoku**	**8.83 260**	A	A	10 06 13.9	
	comp=E,28nm,3.6s,comp=E,17nm,4.7s					
JKA	**Kamikawa-asahi**	**8.84 251**	Pn	**Pn**	**10 06 07.7**	**+0.3**
JKA	**Kamikawa-asahi**	**8.84 251**	*e*P	**Pn**	**10 06 07.7**	**+0.3**
ASAJ	**Asahikawa**	**8.84 251**	Pn	**Pn**	**10 06 11.2**	**+3.8**
	comp=E,9.7nm,0.3s,baz=82,slow=14,SNR=110					
ASAJ			Sn	**Sn**	**10 07 53.5**	**+7.2**
	baz=275,slow=32					
ASAJ			LR	LR	10 09 27.2	
	comp=E,40µm,18.3s,baz=66,slow=37					
ASAJ	**Asahikawa**	**8.84 251**	PN	**Pn**	**10 06 07.7**	**+0.3**
ASAJ	**Asahikawa**	**8.84 251**	A	A	10 06 06.8	
	comp=E,6.0nm,16.2s,comp=E,6.0nm,16.1s					
JKK2	**Kamakawa 2**	**8.86 250**	*e*P	**Pn**	**10 06 10.6**	**+3.0**
JKK2	**Kamakawa 2**	**8.86 250**	A	A	10 06 10.6	
	comp=E,5.0nm,5.0s,comp=E,6.0nm,2.6s					
JCH	**Churui**	**9.16 241**	*e*P	**Pn**	**10 06 10.5**	**-1.2**
JCH			*e*S	**Sn**	**10 07 46.3**	**-7.7**
JCH	**Churui**	**9.16 241**	A	A	10 06 10.5	
	comp=E,11nm,6.8s,comp=E,17nm,3.2s					
JSS	**Shosan**	**9.20 255**	A	A	10 06 11.9	
	comp=E,36nm,4.5s,comp=E,15nm,15.0s					
JRR	**Rishiri**	**9.28 260**	A	A	10 06 13.5	
	comp=E,47nm,3.9s,comp=E,40nm,3.3s					
JFR	**Furan**	**9.31 246**	A	A	10 06 12.5	
	comp=E,7.0nm,8.0s,comp=E,8.0nm,4.7s					
JRBN	**Rebuntou**	**9.36 262**	A	A	10 06 19.7	
	comp=E,7.0nm,18.4s,comp=E,6.0nm,16.0s					
JAB	**Ashibetsu**	**9.37 249**	*e*P	**Pn**	**10 06 17.9**	**+3.3**
JAB	**Ashibetsu**	**9.37 249**	A	A	10 06 17.9	
	comp=E,9.0nm,4.4s,comp=E,11nm,4.6s					
OKH	**Okha**	**9.38 314**	*d i*PN	Pn	10 06 19.9	+5.2
OKH			pmax	pmax		
	comp=Z,2µm,10.8s					
OKH			MLR	MLR		
	comp=Z,37µm,16.0s					
OKH			MLR	MLR		
	comp=N,36µm,13.0s					
OKH			MLR	MLR		
	comp=E,63µm,15.0s					
OKH	**Okha**	**9.38 314**	*i* P	Pn	10 06 19.9	+5.2
OKH			AMB	AMB	10 06 35.9	
	comp=E,2µm,11.0s					
OKH			*e*S	**Sn**	**10 08 03.9**	**+4.5**
OKH			AMS	AMS	10 10 35.7	
	comp=E,36µm,15.0s					
OKH			AMS	AMS	10 10 35.7	
	comp=E,63µm,15.0s					
OKH			AMS	AMS	10 10 35.7	
	comp=E,37µm,15.0s					
JTHR	**Tokachihiroo**	**9.39 240**	A	A	10 06 12.7	
	comp=E,31nm,3.5s,comp=E,31nm,4.1s					
JHR	**Hokuryu**	**9.57 251**	A	A	10 06 16.5	
	comp=E,17nm,3.9s,comp=E,12nm,5.0s					
JEM	**Erimo**	**9.64 239**	A	A	10 06 16.0	
	comp=E,29nm,3.8s,comp=E,31nm,3.7s					
ERM	**Erimo**	**9.64 239**	Pn	**Pn**	**10 06 18.9**	**+0.5**
ERM	**Erimo**	**9.64 239**	PN	**Pn**	**10 06 18.9**	**+0.5**
ERM	**Erimo**	**9.64 239**	P	**Pn**	**10 06 18.4**	**+0.1**
JBT2	**Biratori 2**	**9.66 245**	A	A	10 06 17.0	
	comp=E,9.0nm,3.3s,comp=E,10.0nm,5.8s					
JNBK	**Urakawa-nobuka**	**9.72 241**	*e*P	**Pn**	**10 06 17.8**	**-1.6**
JNBK	**Urakawa-nobuka**	**9.72 241**	A	A	10 06 17.8	
	comp=E,22nm,2.8s,comp=E,22nm,3.5s					
JSHD	**Hidakashinhida**	**9.81 243**	A	A	10 06 18.7	
	comp=E,30nm,2.4s,comp=E,31nm,2.9s					
JISS	**Ishikarishitsu**	**9.99 249**	A	A	10 06 21.9	
	comp=E,17nm,5.1s,comp=E,18nm,3.1s					
JIAM	**Iburiatsuma**	**10.02 245**	A	A	10 06 21.8	
	comp=E,22nm,3.3s,comp=E,31nm,5.2s					
KBTR	**Krutoberegovo**	**10.15 28**	PN	**Pn**	**10 06 24.1**	**-1.1**
KBG	**Krutoberegovo**	**10.15 28**	PN	**Pn**	**10 06 26.1**	**+0.9**
JEW	**Eniwo**	**10.20 247**	Pn	**Pn**	**10 06 26.3**	**+0.3**
JEW	**Eniwo**	**10.20 247**	A	A	10 06 24.4	
	comp=E,19nm,3.3s,comp=E,17nm,3.2s					
NKL	**Nikolayevsk**	**10.33 308**	*e*PN	**Pn**	**10 06 28.1**	**+0.4**
NKL			pmax	pmax		
	comp=E,4.0nm,0.5s					
NKL			pmax	pmax		
	comp=N,1.0nm,0.7s					
NKL			pmax	pmax		
	comp=Z,313nm,1.4s					
NKL	**Nikolayevsk**	**10.33 308**	*e*P	**Pn**	**10 06 31.4**	**+3.7**
NKL			AMB	AMB	10 06 36.0	
	comp=Z,3µm,2.0s					
NKL			*e*S	**Sn**	**10 08 25.0**	**+2.4**
NKL			AMS	AMS	10 10 23.2	
	comp=Z,40µm,15.0s					
NKL			AMS	AMS	10 10 23.2	
	comp=Z,15µm,15.0s					
NKL			AMS	AMS	10 10 23.2	
	comp=Z,24µm,15.0s					
JSK	**Shakotan**	**10.56 252**	A	A	10 06 29.6	
	comp=Z,6.0nm,5.4s,comp=Z,5.0nm,5.2s					
BKI	**Bering**	**10.58 39**	PN	**Pn**	**10 06 29.9**	**-1.2**
JNB	**Noboribetsu**	**10.65 246**	A	A	10 06 30.3	
	comp=Z,4.0nm,10.4s,comp=Z,5.0nm,5.9s					
JKB	**Kayabe**	**10.98 244**	A	A	10 06 34.4	
	comp=Z,10.0nm,3.4s,comp=Z,9.0nm,3.9s					
JAHD	**Aomorihigashid**	**11.18 241**	A	A	10 06 36.6	
	comp=Z,10.0nm,4.4s,comp=Z,13nm,2.0s					
JYM2	**Yakumo 2**	**11.26 246**	A	A	10 06 38.4	
	comp=Z,4.0nm,3.7s,comp=Z,4.0nm,6.2s					
JOT	**Ohata**	**11.27 242**	A	A	10 06 38.0	
	comp=Z,6.0nm,2.9s,comp=Z,7.0nm,2.8s					
JARK	**Aomorirokkasho**	**11.32 239**	A	A	10 06 38.4	
	comp=Z,6.0nm,5.4s,comp=Z,6.0nm,2.4s					
JHST	**Hiyamasetana**	**11.40 249**	A	A	10 06 40.5	
	comp=Z,6.0nm,7.0s,comp=Z,7.0nm,2.5s					
JSR	**Shiriuchi**	**11.56 244**	A	A	10 06 42.1	
	comp=Z,5.0nm,3.7s,comp=Z,4.0nm,4.3s					
JTM	**Tenmabayashi**	**11.63 239**	Pn	**Pn**	**10 06 43.2**	**-2.4**
JTM	**Tenmabayashi**	**11.63 239**	A	A	10 06 42.5	
	comp=Z,7.0nm,4.3s,comp=Z,6.0nm,4.5s					
JANG	**Nango**	**11.65 237**	*e*P	**Pn**	**10 06 41.8**	**-4.0**
JANG			*e*S	Sn	10 08 43.4	-12
JTH	**Tanohata**	**11.75 234**	*e*S	Sn	10 08 41.9	-16
JSI2	**Shiura 2**	**11.85 242**	A	A	10 06 45.7	
	comp=Z,10.0nm,2.6s,comp=Z,7.0nm,6.6s					
GRNR	**Gornyy**	**12.12 292**	⇑*i*PN	Pn	10 06 57.4	+5.2
GRNR			*e*S	Sn	10 09 18.2	+12
GRNR			pmax	pmax		
	comp=N,9.0nm,0.5s					
GRNR			pmax	pmax		
	comp=E,20nm,0.4s					
GRNR			pmax	pmax		
	comp=Z,20nm,0.5s					
GRNR			smax	smax		
	comp=N,8.0nm,0.5s					
GRNR			MLR	MLR		
	comp=E,23µm,15.0s					
GRNR			MLR	MLR		
	comp=N,6µm,16.0s					
GRNR			MLR	MLR		
	comp=Z,31µm,15.0s					
GRNR	**Gornyy**	**12.12 292**	*i* P	Pn	10 06 57.1	+4.9
GRNR			AMB	AMB	10 06 58.7	
	comp=Z,10.0nm,0.4s					
GRNR			AMB	AMB	10 06 58.7	
	comp=Z,20nm,0.4s					
GRNR			AMB	AMB	10 06 58.7	
	comp=Z,40nm,0.4s					
GRNR			AMS	AMS	10 12 03.5	
	comp=Z,10µm,15.0s					
GRNR			AMS	AMS	10 12 03.5	
	comp=Z,23µm,15.0s					
GRNR			AMS	AMS	10 12 03.5	
	comp=Z,31µm,15.0s					
JHHS	**Hirosakihyakuz**	**12.14 240**	A	A	10 06 49.3	
	comp=Z,16nm,2.9s,comp=Z,20nm,3.0s					
MA2	**Magadan**	**12.22 352**	Pn	**Pn**	**10 06 56.0**	**+2.5**
	comp=Z,78nm,0.8s,baz=162,slow=9.1,SNR=41					
MA2			Sn	**Sn**	**10 09 06.6**	**-2.5**
	baz=140,slow=20					
MA2			LR	LR	10 12 13.9	
	comp=Z,34µm,18.3s,baz=170,slow=41					
MA2	**Magadan**	**12.22 352**	Pn	**Pn**	**10 06 51.5**	**-2.1**
MA2	**Magadan**	**12.22 352**	P	**Pn**	**10 06 55.4**	**+1.8**
JAH	**Hinai**	**12.27 238**	A	A	10 06 50.9	
	comp=Z,4.0nm,5.1s,comp=Z,6.0nm,5.7s					
JSZI	**Iwateshizukuis**	**12.39 236**	A	A	10 06 52.2	
	comp=Z,11nm,2.4s,comp=Z,9.0nm,3.9s					
TEY	**Ternei**	**12.48 265**	⇑*e*PN	**Pn**	**10 06 59.7**	**+2.6**
TEY			pmax	pmax		
	comp=N,10.0nm,1.0s					
TEY			pmax	pmax		
	comp=Z,20nm,1.2s					
TEY	**Ternei**	**12.48 265**	*e*P	**Pn**	**10 06 59.0**	**+1.9**
TEY			AMB	AMB	10 07 00.8	
	comp=Z,10.0nm,1.0s					
TEY			AMB	AMB	10 07 00.8	
	comp=Z,20nm,1.0s					
TEY			AMB	AMB	10 07 09.8	
	comp=Z,4µm,8.0s					
TEY			*e*S	**Sn**	**10 09 14.5**	**-0.8**
TEY			A	A	10 09 25.7	
	comp=Z,4µm,8.0s					
TEY			A	A	10 09 25.7	
	comp=Z,1µm,8.0s					
TEY			AMS	AMS	10 11 30.0	
	comp=Z,9µm,16.0s					
TEY			AMS	AMS	10 11 30.0	
	comp=Z,18µm,16.0s					
TEY			AMS	AMS	10 11 30.0	
	comp=Z,20µm,16.0s					
JNTW	**Noshirotokiwa**	**12.49 240**	A	A	10 06 58.8	
	comp=Z,17nm,4.1s,comp=Z,15nm,4.0s					
JRG	**Rokugo**	**12.81 235**	A	A	10 07 03.6	
	comp=Z,4.0nm,5.3s,comp=Z,4.0nm,4.5s					
KHBR	**Khabarovsk**	**12.90 281**	*e*P	**Pn**	**10 07 05.3**	**+2.5**
KHBR			AMB	AMB	10 07 14.2	
	comp=Z,30nm,0.6s					
JYW	**Yuwa**	**12.95 237**	A	A	10 07 05.6	
	comp=Z,7.0nm,2.5s,comp=Z,10.0nm,3.1s					
JOFO	**Osakifurukawao**	**13.22 232**	A	A	10 07 08.6	
	comp=Z,14nm,4.0s,comp=Z,13nm,3.0s					
JOG3	**Oga3**	**13.36 241**	A	A	10 07 05.6	
	comp=Z,5.0nm,6.2s,comp=Z,5.0nm,3.2s					
JYYZ	**Yamagatayuza**	**13.47 236**	A	A	10 07 12.0	
	comp=Z,9.0nm,3.7s,comp=Z,9.0nm,5.6s					
SHEM	**Shemya Is, Ala**	**13.72 60**	Pn	**Pn**	**10 07 11.7**	**-2.2**
	comp=Z,7.6nm,0.3s,baz=102,slow=1.9,SNR=10					
SHEM			Sn	Sn	10 09 35.9	-10
	comp=Z,26nm,0.3s,baz=189,slow=23,SNR=9.1					
SHEM			LR	LR	10 12 53.4	
	comp=Z,7µm,19.6s,baz=268,slow=39					
	comp=Z,59nm,0.6s					
SMY	**Shemya**	**13.72 60**	Pn	**Pn**	**10 07 11.4**	**-2.6**
SMY	**Shemya**	**13.72 60**	P	**Pn**	**10 07 11.4**	**-2.6**
JMM	**Marumori**	**13.83 230**		**Pn**	**10 07 12.7**	**-3.0**
JYA	**Atsumi**	**13.88 235**	A	A	10 07 17.4	
	comp=Z,3.0nm,2.5s,comp=Z,3.0nm,4.9s					
JYS	**Shirataka**	**13.96 233**	A	A	10 07 18.1	
	comp=Z,4.0nm,2.7s,comp=Z,4.0nm,7.1s					
KLR	**Kul'dur**	**15.05 285**	Pn	**P**	**10 07 34.9**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=94,slow=14,SNR=35					
KLR			LR	LR	10 13 41.7	
	comp=Z,37µm,18.1s,baz=92,slow=39					
JSD	**Sado**	**15.09 237**	Pn	**Pn**	**10 07 30.9**	**-1.8**
JSD			IAmb	IAmb	10 07 41.2	
	comp=Z,184nm,0.7s					
JYT	**Yasato**	**15.39 228**	Pn	**Pn**	**10 07 34.9**	**-1.8**
SEY	**Seymchan**	**15.45 357**	Pn	**Pn**	**10 07 36.9**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=162,slow=8.7,SNR=18					
SEY			LR	LR	10 14 26.9	
	comp=Z,16µm,18.5s,baz=172,slow=41					
	comp=Z,7.4nm,0.6s					
USRK	**Ussuriysk Ar.**	**15.86 266**	Pn	**Pn**	**10 07 43.5**	**+0.7**
	comp=Z,5.6nm,0.3s,baz=74,slow=11,SNR=50					
USRK			LR	LR	10 13 47.5	
	comp=Z,28µm,18.5s,baz=70,slow=37					
	comp=Z,46nm,0.6s					
USA0B	**Ussuriysk Arra**	**15.86 266**	Pn	**Pn**	**10 07 42.7**	**-0.1**
USA0B	**Ussuriysk Arra**	**15.86 266**	P	**Pn**	**10 07 42.7**	**-0.1**
USA0B			pmax	pmax		
	comp=Z,73nm,0.7s					
MJB9	**Matsu-Tunnel**	**16.19 233**		**Pn**	**10 07 44.8**	**-2.3**
MJB9			IAmb	IAmb	10 07 54.1	
	comp=Z,524nm,1.6s					
MAJO	**Matsushiro**	**16.19 233**	Pn	**Pn**	**10 07 44.7**	**-2.4**
MAJO			IAmb	IAmb	10 07 54.2	
	comp=Z,509nm,1.6s					
MAJO	**Matsushiro**	**16.19 233**	P	**Pn**	**10 07 44.7**	**-2.4**
MAJO			pmax	pmax		
	comp=Z,509nm,1.6s					
MJAR	**Matsushiro Arr**	**16.19 233**	Pn	**Pn**	**10 07 44.7**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=31,slow=12,SNR=37					
MJAR			LR	LR	10 14 35.0	
	comp=Z,8µm,20.4s,baz=25,slow=39					
	comp=Z,23nm,0.9s					
MJAR	**Matsushiro Arr**	**16.19 233**		**Pn**	**10 07 44.9**	**-2.2**
MJAR	**Matsushiro Arr**	**16.19 233**	P	**Pn**	**10 07 44.9**	**-2.2**
MJAR			pmax	pmax		
	comp=Z,181nm,1.5s					
VLA	**Vladivostok**	**16.33 263**	*e*P	**Pn**	**10 07 47.1**	**-1.7**
VLA	**Vladivostok**	**16.33 263**	*e*P	**Pn**	**10 07 47.1**	**-1.7**
MSHR	**Mys Shultsa**	**17.04 262**	*i* P	**Pn**	**10 07 57.1**	**-0.7**
MDJ	**Mudanjiang**	**17.35 269**		**P**	**10 08 02.0**	**-0.8**
MDJ	**Mudanjiang**	**17.35 269**	P	**P**	**10 08 02.0**	**-0.8**
MDJ			S	**Sn**	**10 11 15.0**	**+1.1**
MDJ			sS	S	10 11 19.3	-2.9
MDJ			ScS	**ScS**	**10 20 00.0**	**+3.9**
MDJ			pmax	pmax		
	comp=Z,57nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,3µm,10.3s					
MDJ			LR	LR		
	comp=Z,20µm,17.2s					
MDJ			LR	LR		
	comp=Z,19µm,17.8s					
MDJ			LR	LR		
	comp=Z,36µm,17.1s					
MDJ	**Mudanjiang**	**17.35 269**	P	**P**	**10 08 02.2**	**-0.6**
JGF	**Kuroka**	**17.35 233**	Pn	**Pn**	**10 08 00.8**	**-0.9**
INU	**Inuyama**	**17.72 233**	Pn	**Pn**	**10 08 05.6**	**-0.7**
INU	**Inuyama**	**17.72 233**	P	**P**	**10 08 06.7**	**-0.3**
JHJ	**Hachijo jima 2**	**18.11 222**	LR	LR	10 14 05.4	
	comp=Z,4µm,21.3s,baz=48,slow=34					
ZEA	**Zeya**	**18.15 300**	*e*P	**P**	**10 08 12.3**	**+0.7**
ZEA			*e*S	**Sn**	**10 11 23.1**	**-10**
ZEA			pmax	pmax		
	comp=E,3µm,9.0s					
ZEA			pmax	pmax		
	comp=N,1µm,5.1s					
ZEA			pmax	pmax		
	comp=Z,4µm,9.1s					
ZEA			smax	smax		
	comp=N,3µm,14.3s					
ZEA			MLR	MLR		
	comp=E,16µm,17.0s					
ZEA			MLR	MLR		
	comp=N,6µm,14.0s					
ZEA			MLR	MLR		
	comp=Z,20µm,16.0s					
ZEA	**Zeya**	**18.15 300**	*e*P	**P**	**10 08 14.9**	**+3.3**
ZEA			AMB	AMB	10 08 21.9	
	comp=Z,3µm,9.0s					
ZEA			AMB	AMB	10 08 21.9	
	comp=Z,4µm,9.0s					
ZEA			AMS	AMS	10 15 56.0	
	comp=Z,6µm,17.0s					

ZEA				AMS	AMS	10 15 56.0	
	comp=Z,17µm,17.0s						
ZEA				AMS	AMS	10 15 56.0	
	comp=Z,20µm,17.0s						
KROS	Kirovskiy	18.43	302	*e*P	Pn	10 08 18.5	+3.7
KROS				AMB	AMB	10 08 18.9	
	comp=Z,50nm,0.8s						
KROS				AMB	AMB	10 08 18.9	
	comp=Z,120nm,0.8s						
KROS				AMB	AMB	10 08 18.9	
	comp=Z,170nm,0.8s						
KIWB	Kanaga Island	18.92	66	P	P	10 08 17.1	-2.9
ADK	Adak	19.21	66	P	P	10 08 20.4	-2.8
ADK	Adak	19.21	66	P	P	10 08 20.4	-2.8
ADK				pmax	pmax		
	comp=Z,121nm,1.3s						
YAK	Yakutsk	20.09	325	P	P	10 08 31.6	-1.2
	comp=Z,8.3nm,0.3s,baz=91,slow=0.8,SNR=2.4						
YAK				S	S	10 12 15.7	-1.6
	comp=Z,10nm,0.4s,baz=338,slow=22,SNR=2.0						
YAK				LR	LR	10 16 26.6	
	comp=Z,12µm,18.6s,baz=134,slow=37						
	comp=Z,8.3nm,0.3s						
YAK	Yakutsk	20.09	325	P	P	10 08 32.8	0.0
YAK	Yakutsk	20.09	325	*e*P	Pn	10 08 35.1	+0.5
YAK				*e**PP	sP	10 08 43.7	+2.8
YAK				*e*		10 08 52.7	
YAK				*e*S	Sn	10 12 18.9	-1.0
YAK				*e*SS	SnSn	10 12 37.1	+2.9
YAK				*e*		10 12 51.6	
YAK				*e*		10 20 01.0	
YAK				pmax	pmax		
	comp=Z,196nm,0.9s						
YAK				pmax	pmax		
	comp=N,65nm,1.1s						
YAK				pmax	pmax		
	comp=E,101nm,1.3s						
YAK				pmax	pmax		
	comp=Z,521nm,1.5s						
YAK				pmax	pmax		
	comp=N,327nm,1.7s						
YAK				pmax	pmax		
	comp=E,411nm,1.9s						
YAK				smax	smax		
	comp=E,1µm,2.9s						
YAK				smax	smax		
	comp=N,447nm,2.2s						
YAK				MLR	MLR		
	comp=Z,21µm,13.0s						
YAK				MLR	MLR		
	comp=E,7µm,12.0s						
YAK				MLR	MLR		
	comp=N,12µm,12.0s						
YAK	Yakutsk	20.09	325	*e*P	Pn	10 08 35.1	+0.5
JHS	Saijyo	20.17	239	P	P	10 08 34.1	+0.2
CN2	Changchun	20.43	270	*e*P	P	10 08 34.8	-1.8
CN2				*e*S	S	10 12 13.8	-10
CN2				pmax	pmax		
	comp=N,20nm,0.5s						
CN2				pmax	pmax		
	comp=N,2µm,15.0s						
CN2				LR	LR		
	comp=N,15µm,16.0s						
CN2				LR	LR		
	comp=N,21µm,16.0s						
CN2				LR	LR		
	comp=N,27µm,16.0s						
HHU	Hamhung	20.70	258	P	Pn	10 08 40.5	-1.4
HHU				pP	pP	10 08 44.4	-0.6
HHU				S	Sn	10 12 31.8	-2.9
HHU				AmB			
	comp=Z,608nm,1.8s						
HHU				AMS	AMS		
	comp=N,8µm,13.0s						
HHU				AMS	AMS		
	comp=E,7µm,11.7s						
HHU				AMS	AMS		
	comp=Z,7µm,12.2s						
ATKA	Atka Island	20.75	65	P	Pn	10 08 42.0	-0.4
SEHB	SEOHWA	21.11	253	P	P	10 08 44.9	+0.9
SEHB				IAmb	IAmb	10 08 56.2	
	comp=Z,211nm,1.1s						
BILL	Bilibino	21.44	12	P	P	10 08 45.3	-2.0
BILL				IAMs_20	IAMs_20	10 17 49.5	
	comp=Z,17µm,18.0s						
BILL	Bilibino	21.44	12	*d* *i*P	P	10 08 45.4	-1.9
BILL				*e*		10 09 07.2	
BILL				*i* S	S	10 12 42.5	-1.3
BILL				pmax	pmax		
	comp=Z,70nm,1.2s						
BILL				MLR	MLR		
	comp=Z,14µm,17.0s						
KSRS	Korea Array	21.79	252	P	P	10 08 52.5	+1.2
	comp=Z,129nm,0.7s,baz=60,slow=10.0,SNR=475						
KSRS				S	Sn	10 13 00.3	-0.7
	comp=Z,1.4nm,0.7s,baz=341,slow=1.6,SNR=2.1						
KSRS				LR	LR	10 17 07.5	
	comp=Z,13µm,18.4s,baz=55,slow=36						
	comp=Z,129nm,0.7s						
KS19	Wonju Array Si	21.80	252	P	P	10 08 52.1	+0.7
KS19				IAmb	IAmb	10 08 53.9	
	comp=Z,118nm,0.8s						
KSAR	Wonju Array Be	21.82	252	P	P	10 08 52.4	+0.8
KSAR	Wonju Array Be	21.82	252	P	P	10 08 52.4	+0.8
KSAR	Wonju Array Be	21.82	252	*e*P	P	10 08 52.4	+0.8
KSCHJ	Chungju	22.10	251	P	P	10 08 55.9	+1.3
KSCHJ				IAmb	IAmb	10 08 57.9	
	comp=Z,196nm,0.7s						
PYAG	Pyongyang	22.32	258	P	P	10 08 57.5	+0.5
PYAG				sP	sP	10 09 06.3	+1.5
PYAG				S	S	10 13 02.6	+1.4
PYAG				AmB			
	comp=Z,386nm,0.8s						
PYAG				AMS	AMS		
	comp=N,7µm,13.7s						
PYAG				AMS	AMS		
	comp=E,6µm,11.8s						
PYAG				AMS	AMS		
	comp=Z,5µm,10.2s						
JCJ	Chichijima	22.51	209	LR	LR	10 18 23.2	
	comp=Z,862nm,19.6s,baz=16,slow=38						
INCN	Inchon	22.61	254	P	P	10 09 00.9	+0.8
INCN				IAmb	IAmb	10 09 04.3	
	comp=Z,239nm,1.1s						
INCN	Inchon	22.61	254	IAMs_20	IAMs_20	10 17 20.7	
	comp=Z,13µm,19.0s						
INCN	Inchon	22.61	254	P	P	10 09 00.9	+0.8
INCN				pmax	pmax		
	comp=Z,239nm,1.1s						
INCN				MLR	MLR		
	comp=Z,13µm,19.0s						
INCN	Inchon	22.61	254	P	P	10 09 01.2	+1.1
INCN				P	P	10 09 01.2	+1.1
INCN	Inchon	22.61	254	P	P	10 09 01.4	+1.3
SUJ	Sinuiju	22.64	262	P	P	10 08 59.8	-0.6
SUJ				sP	sP	10 09 08.9	+0.7
SUJ				S	S	10 13 05.6	-1.3
SUJ				AmB			
	comp=Z,3µm,4.4s						
SUJ				AMS	AMS		
	comp=N,20µm,14.2s						
SUJ				AMS	AMS		
	comp=E,20µm,14.6s						
SUJ				AMS	AMS		
	comp=Z,21µm,14.7s						
JTU	Tsushima	22.71	244	P	P	10 09 02.1	+0.9
JTU				IAmb	IAmb	10 09 05.8	
	comp=Z,178nm,1.1s						
TJN	Taejon	22.79	250	P	P	10 09 02.9	+0.9
TJN	Taejon	22.79	250	P	P	10 09 02.9	+0.9
TJN				pmax	pmax		
	comp=Z,803nm,0.9s						
TJN	Taejon	22.79	250	P	P	10 09 03.4	+1.4
JNU	Nakatsue	22.81	239	P	P	10 09 02.3	+0.1
	comp=Z,67nm,0.9s,baz=48,slow=7.1,SNR=19						
JNU				LR	LR	10 18 31.5	
	comp=Z,9µm,18.2s,baz=42,slow=38						
	comp=Z,67nm,0.9s						
JNU	Nakatsue	22.81	239	P	P	10 09 02.6	+0.3
JNU	Nakatsue	22.81	239	P	P	10 09 03.2	+1.0
HIA	Hailar	22.87	287	P	P	10 09 01.8	-1.0
HIA	Hailar	22.87	287	IAMs_20	IAMs_20	10 18 25.2	
	comp=Z,21µm,18.0s						
HIA	Hailar	22.87	287	P	P	10 09 01.8	-1.0
HIA				pmax	pmax		
	comp=Z,141nm,1.7s						
HIA				MLR	MLR		
	comp=Z,21µm,18.0s						
HJU	Haeju	22.89	256	P	P	10 09 03.5	+0.5
HJU				sP	sP	10 09 12.6	+1.7
HJU				S	S	10 13 13.3	+1.9
HJU				AmB			
	comp=Z,3µm,3.0s						
HJU				AMS	AMS		
	comp=N,3µm,9.4s						
HJU				AMS	AMS		
	comp=E,1µm,4.8s						
HJU				AMS	AMS		
	comp=Z,866nm,3.2s						
NAWB	Namwon	23.37	249	P	P	10 09 07.6	-0.3
NAWB				IAmb	IAmb	10 09 12.8	
	comp=Z,216nm,1.5s						
SPIA	Saint Paul Isl	23.46	53	P	P	10 09 08.3	-0.2
	baz=261						
SPIA				S	S	10 13 23.3	+2.7
	baz=261						
NIKH	Nikolski High	24.00	63	P	P	10 09 14.0	+0.2
	baz=272						
JSU	Suzuyama	24.23	237	P	P	10 09 15.2	-1.0
GAMB	Gambell	24.71	36	P	P	10 09 18.7	-1.4
GAMB				IAmb	IAmb	10 09 29.8	
	comp=Z,108nm,1.0s						
GAMB	Gambell	24.71	36	P	P	10 09 20.4	+0.3
	baz=245,SNR=6.9						
GAMB				S	S	10 13 42.1	+1.6
	baz=245						
DL2	Dalian	25.15	262	P	P	10 09 25.8	+1.4
DL2				S	S	10 13 47.0	-1.1
DL2				pmax	pmax		
	comp=Z,67nm,1.1s						
DL2				pmax	pmax		
	comp=Z,2µm,5.2s						
DL2				LR	LR		
	comp=Z,10µm,13.6s						
DL2				LR	LR		
	comp=Z,5µm,17.1s						
DL2				LR	LR		
	comp=Z,10µm,15.5s						
UNV	Unalaska Valle	25.38	61	P	P	10 09 26.8	+0.5
	baz=272						
BOD	Bodaibo	26.10	308	*e*P	P	10 09 34.1	+1.3
BOD				pmax	pmax		
	comp=Z,71nm,1.7s						
BOD	Bodaibo	26.10	308	*e*P	P	10 09 34.1	+1.3
CIT	Chita	26.41	295	*e*P	P	10 09 24.4	-11
CIT				*e*		10 10 23.4	
CIT				*e*		10 14 03.5	
CIT				*e*		10 20 24.3	
XLT	XiLinHaoTe	26.73	276	*e*P	P	10 09 37.5	-1.3
XLT				pP	pP	10 09 42.3	-2.5
XLT				sP	sP	10 09 46.8	-0.2
XLT				PP	PnPn	10 10 21.0	+1.0
XLT				S	S	10 14 08.5	-4.6
XLT				pmax	pmax		
	comp=Z,31nm,0.9s						
XLT				pmax	pmax		
	comp=Z,1µm,11.6s						
XLT				LR	LR		
	comp=Z,12µm,19.4s						
TNA	Tin City	26.93	34	P	P	10 09 38.4	-1.8
TNA	Tin City	26.93	34	P	P	10 09 41.3	+1.1
	baz=246,SNR=5.9						
TNA				S	S	10 14 18.8	+3.1
	baz=246						
TIXI	Tiksi	26.93	343	P	P	10 09 38.6	-1.6
	comp=Z,4.6nm,0.6s,baz=90,slow=22,SNR=7.1						
TIXI				PcP	PcP	10 13 01.5	0.0
	comp=Z,7.0nm,0.6s,baz=92,slow=21,SNR=4.4						
TIXI				LR	LR	10 21 33.2	
	comp=Z,17µm,18.5s,baz=180,slow=39						
	comp=Z,4.6nm,0.6s						
TIXI	Tiksi	26.93	343	P	P	10 09 38.5	-1.7
FALS	False Pass	27.15	59	P	P	10 09 38.8	-3.5
FALS	False Pass	27.15	59	P	P	10 09 43.1	+0.8
	baz=272						
ANM	Nome	27.58	37	P	P	10 09 46.4	+0.3
ANM				IAmb	IAmb	10 09 56.0	
	comp=Z,123nm,1.4s						
ANM	Nome	27.58	37	P	P	10 09 46.4	+0.3
ANM				pmax	pmax		
	comp=Z,123nm,1.4s						
ANM	Nome	27.58	37	P	P	10 09 47.2	+1.2
	baz=251,SNR=6.7						
ANM				S	S	10 14 29.0	+3.0
	baz=251						
BJI	Beijing	28.28	269	P	P	10 09 52.5	-0.1
BJI				pmax	pmax		
	comp=Z,860nm,5.7s						
BJI				LR	LR		
	comp=Z,10µm,15.7s						
BJI				LR	LR		
	comp=Z,16µm,17.1s						
BJI				LR	LR		
	comp=Z,25µm,16.1s						
BJT	Baijiatuau	28.29	269	P	P	10 09 52.2	-0.5
BJT	Baijiatuau	28.29	269	P	P	10 09 52.2	-0.5
BJT				pmax	pmax		
	comp=Z,29nm,1.0s						
BJT				MLR	MLR		
	comp=Z,17µm,18.0s						
SDPT	Sand Point	28.82	57	P	P	10 09 56.4	-0.8
SDPT				IAmb	IAmb	10 10 17.8	
	comp=Z,80nm,1.0s						
SDPT	Sand Point	28.82	57	P	P	10 09 57.7	+0.6
	baz=273						
JOW	Kunigami	29.03	234	P	P	10 09 58.4	-1.0
	comp=Z,16nm,0.6s,baz=360,slow=28,SNR=4.3						
	comp=Z,16nm,0.6s						
JOW	Kunigami	29.03	234	P	P	10 09 57.0	-2.4
JOW				IAmb	IAmb	10 10 02.6	
	comp=Z,145nm,1.7s						
JOW	Kunigami	29.03	234	P	P	10 10 01.2	+1.8
MIDW	Midway	29.30	121	IAMs_20	IAMs_20	10 19 38.8	
	comp=Z,9µm,19.0s						
CHNA	Chernabura Isl	29.36	58	P	P	10 10 02.5	+0.4
	baz=275						
CNBA	Chernabura Isl	29.36	58	IAMs_20	IAMs_20	10 22 08.7	
	comp=Z,8µm,20.0s						
H11N2	WAKE ISLAND Hy	29.59	155	T	T	10 41 16.8	
	baz=342,slow=74						
H11N1	WAKE ISLAND Hy	29.61	155	T	T	10 41 18.1	
	baz=342,slow=74						
H11N3	WAKE ISLAND Hy	29.61	155	T	T	10 41 11.6	
	baz=342						
TIA	Tai'an	29.61	261	P	P	10 10 05.0	+0.5
TIA				pP	sP	10 10 13.5	+0.7
TIA				S	S	10 14 58.0	-0.6
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
TIA				pmax	pmax		
	comp=Z,1µm,4.1s						
TIA				LR	LR		
	comp=Z,4µm,14.9s						
TIA				LR	LR		
	comp=Z,14µm,15.0s						
TIA				LR	LR		
	comp=Z,10µm,15.7s						
RDOG	Red Dog Mine	29.72	31	P	P	10 10 02.4	-2.7
RDOG				IAmb	IAmb	10 10 25.0	
	comp=Z,171nm,1.8s						
RDOG	Red Dog Mine	29.72	31	P	P	10 10 02.6	-2.6
	baz=248,SNR=5.9						
RDOG				S	S	10 14 58.6	-1.1
	baz=248						
WAKE	Wake Island	29.95	156	IAMs_20	IAMs_20	10 19 37.1	
	comp=Z,7µm,19.0s						
SSE	Sheshan	30.12	249	P	P	10 10 09.0	0.0
SSE				S	S	10 15 08.5	+2.0
SSE				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,710nm,5.4s						
SSE				LR	LR		
	comp=Z,4µm,20.2s						
SSE				LR	LR		
	comp=Z,2µm,18.2s						
HNS	HongShan	30.59	265	⇑P	P	10 10 13.8	+0.7
HNS				S	S	10 15 13.5	-0.3
HNS				pmax	pmax		
	comp=Z,78nm,0.7s						
HNS				pmax	pmax		
	comp=Z,1µm,6.6s						
HNS				LR	LR		
	comp=Z,7µm,15.5s						
HNS				LR	LR		
	comp=Z,13µm,16.3s						
HNS				LR	LR		
	comp=Z,14µm,20.4s						
H11S1	WAKE ISLAND Hy	30.70	156	T	T	10 42 37.3	
	baz=343,slow=76,SNR=9281						
H11S3	WAKE ISLAND Hy	30.71	156	T	T	10 42 38.0	
	baz=343,slow=76,SNR=6918						
H11S2	WAKE ISLAND Hy	30.72	156	T	T	10 42 37.3	
	baz=343,slow=76,SNR=5991						
NJ2	Nanjing	30.99	253	⇑P	P	10 10 17.5	+0.9
NJ2				pP	pP	10 10 22.5	-0.2
NJ2				S	S	10 15 22.3	+2.2
NJ2				sS	sS	10 15 31.8	+2.1
NJ2				pmax	pmax		
	comp=Z,43nm,1.0s						
NJ2				LR	LR		
	comp=Z,10µm,15.2s						
NJ2				LR	LR		
	comp=Z,10µm,16.2s						
NJ2				LR	LR		
	comp=Z,16µm,16.2s						
HHC	Hu-ho-hao-te	31.03	273	*e*P	P	10 10 17.0	-0.1
HHC				PP	PnPn	10 11 19.0	+0.7
HHC				S	S	10 15 17.0	-3.8
HHC				SS	SnSn	10 17 09.3	+7.4
HHC				pmax	pmax		
	comp=Z,110nm,0.9s						
HHC				pmax	pmax		
	comp=Z,900nm,7.1s						
HHC				LR	LR		
	comp=Z,9µm,14.0s						
HHC				LR	LR		
	comp=Z,21µm,12.9s						
HHC				LR	LR		
	comp=Z,28µm,13.3s						
GCSA	Galena City Sc	31.16	39	P	P	10 10 16.3	-1.5
	baz=260						
GCSA				S	S	10 15 19.9	-2.3
	baz=260						
N18K	Kilae Creek	31.20	47	P	P	10 10 15.6	-2.7
N18K				IAMs_20	IAMs_20	10 24 47.4	
	comp=Z,6µm,18.0s						
N18K	Kilae Creek	31.20	47	P	P	10 10 18.8	+0.5
	baz=268,SNR=5.7						
N18K				S	S	10 15 24.5	+1.5
	baz=268						
TTA	Tatalina	31.30	42	P	P	10 10 18.8	-0.4
TTA	Tatalina	31.30	42	P	P	10 10 18.8	-0.4
TTA				pmax	pmax		
	comp=Z,20nm,1.0s						
TTA	Tatalina	31.30	42	P	P	10 10 18.6	-0.6
	baz=264,SNR=10						
TTA				S	S	10 15 23.7	-0.9
	baz=264						
SVW2	Sparrevohn	31.37	46	P	P	10 10 19.7	-0.1
ULN	Ulaanbaatar	31.39	288	P	P	10 10 19.1	-1.1
ULN	Ulaanbaatar	31.39	288	P	P	10 10 19.1	-1.1
ULN				pmax	pmax		
	comp=Z,20nm,1.1s						
ULN				MLR	MLR		
	comp=Z,17µm,18.0s						
ULN	Ulaanbaatar	31.39	288	P	P	10 10 19.6	-0.7
ULN				P	P	10 10 19.6	-0.7
P18K	Big Mountain,	31.52	49	P	P	10 10 18.9	-2.2
P18K	Big Mountain,	31.52	49	P	P	10 10 21.1	0.0
	baz=271						
P18K				S	S	10 15 29.5	+1.5
	baz=271						
CHIR	Chirikof Islan	31.52	56	IAMs_20	IAMs_20	10 23 25.8	
	comp=Z,9µm,20.0s						
CHIR	Chirikof Islan	31.52	56	P	P	10 10 21.9	+0.8
	baz=276						
O18K	Koktuh Hills	31.53	48	P	P	10 10 19.3	-1.9
O18K	Koktuh Hills	31.53	48	P	P	10 10 21.3	+0.2
	baz=270						
O18K				S	S	10 15 28.7	+0.6
	baz=270						
L19K	White Mountain	31.77	44	P	P	10 10 21.6	-1.7
L19K	White Mountain	31.77	44	P	P	10 10 23.5	+0.2
	baz=266,SNR=6.9						
L19K				S	S	10 15 33.0	+1.1
	baz=266						
SONM	Songino Array	31.82	289	P	P	10 10 23.4	-0.6
	comp=Z,5.4nm,0.6s,baz=64,slow=9.2,SNR=32						
SONM				PcP	PcP	10 13 14.4	-0.1
	comp=Z,7.0nm,0.8s,baz=97,slow=2.0,SNR=6.4						
SONM				ScP	ScP	10 16 55.2	-1.3
	comp=Z,1.0nm,0.7s,baz=72,slow=4.7,SNR=3.6						
SONM				LR	LR	10 24 16.4	
	comp=Z,17µm,19.0s,baz=72,slow=38						
	comp=Z,5.4nm,0.6s						
SONM	Songino Array	31.82	289	P	P	10 10 23.0	-1.0
N19K	Bonanza Creek	31.89	46	P	P	10 10 21.9	-2.6
N19K	Bonanza Creek	31.89	46	P	P	10 10 25.1	+0.6
	baz=269						
N19K				S	S	10 15 35.8	+1.9
	baz=269						
TIY	Taiyuan	31.97	268	P	P	10 10 27.0	+1.7
TIY				S	S	10 15 33.0	-2.5
TIY				SS	SnSn	10 17 31.0	+6.3
TIY				pmax	pmax		
	comp=Z,36nm,0.5s						
TIY				pmax	pmax		
	comp=Z,890nm,5.5s						
TIY				LR	LR		
	comp=Z,6µm,16.5s						
TIY				LR	LR		
	comp=Z,13µm,16.5s						
TIY				LR	LR		
	comp=Z,17µm,15.8s						
O19K	Port Alsworth	31.97	48	P	P	10 10 23.8	-1.2
O19K	Port Alsworth	31.97	48	P	P	10 10 25.7	+0.7
	baz=270						
O19K				S	S	10 15 37.8	+2.9
	baz=270						
M19K	Big River Lodg	31.97	44	P	P	10 10 24.5	-0.6
M19K	Big River Lodg	31.97	44	P	P	10 10 25.5	+0.4
	baz=267						
M19K				S	S	10 15 37.9	+2.8
	baz=267						
IRK	Irkutsk	32.02	297	*e*P	P	10 10 21.1	-4.5
IRK				pmax	pmax		
	comp=Z,66nm,3.3s						
BTO	Baotou	32.18	274	*e*P	P	10 10 27.3	+0.1
BTO				S	S	10 15 40.0	+1.1
BTO				LR	LR		
	comp=Z,25µm,14.5s						
BTO				LR	LR		
	comp=Z,26µm,18.8s						
K20K	Telida	32.22	42	P	P	10 10 26.1	-1.1
K20K	Telida	32.22	42	P	P	10 10 27.4	+0.2
	baz=265,SNR=13						
K20K				S	S	10 15 40.4	+1.7
	baz=265						
SII	Sitkinak Islan	32.24	54	IAMs_20	IAMs_20	10 23 34.9	
	comp=Z,11µm,21.0s						
SII	Sitkinak Islan	32.24	54	P	P	10 10 27.4	0.0
	baz=276						
L20K	Farewell, AK	32.24	43	P	P	10 10 27.7	+0.3
	baz=267						
L20K				S	S	10 15 41.5	+2.3
	baz=267						
J20K	Nowinta River	32.26	40	P	P	10 10 27.0	-0.5
J20K				IAmb	IAmb	10 10 52.6	
	comp=Z,56nm,1.3s						
J20K				IAMs_20	IAMs_20	10 25 46.4	
	comp=Z,7µm,20.0s						
J20K	Nowinta River	32.26	40	P	P	10 10 28.2	+0.7
	baz=264,SNR=19						
J20K				S	S	10 15 39.9	+0.6
	baz=264						
Q19K	Cape Douglas,	32.35	50	P	P	10 10 26.5	-1.9
Q19K				IAmb	IAmb	10 10 48.8	
	comp=Z,111nm,1.6s						
Q19K				IAMs_20	IAMs_20	10 25 30.7	
	comp=Z,6µm,18.0s						
Q19K	Cape Douglas,	32.35	50	P	P	10 10 27.6	-0.8
	baz=273						
M20K	Styx River	32.57	44	P	P	10 10 28.9	-1.5
M20K				IAmb	IAmb	10 10 40.9	
	comp=Z,114nm,1.9s						
M20K	Styx River	32.57	44	P	P	10 10 30.2	-0.1
	baz=268						
M20K				S	S	10 15 46.1	+1.7

	baz=268						
IMAR	Indian Mountai	32.66	37	P	P	10 10 28.7	-2.2
OHAK	Old Harbor	32.66	53	P	P	10 10 31.1	0.0
	baz=276						
OHAK				S	S	10 15 42.1	-3.7
	baz=276						
RSO	Redoubt South	32.75	47	P	P	10 10 29.7	-2.3
O20K	Slope Mountain	32.82	48	P	P	10 10 33.0	+0.4
	baz=272						
O20K				S	S	10 15 45.2	-3.1
	baz=272						
A21K	Barrow	32.94	27	IAMs_20	IAMs_20	10 24 40.7	
	comp=Z,9µm,21.0s						
A21K	Barrow	32.94	27	P	P	10 10 33.6	+0.3
	baz=250						
A21K				S	S	10 15 50.0	+0.2
	baz=250						
KDAK	Kodiak Island	32.99	52	LR	LR	10 23 22.2	
	comp=Z,9µm,21.7s,baz=273,slow=35						
KDAK	Kodiak Island	32.99	52	P	P	10 10 33.4	-0.5
KDAK	Kodiak Island	32.99	52	IAMs_20	IAMs_20	10 23 32.6	
	comp=Z,12µm,22.0s						
KDAK	Kodiak Island	32.99	52	P	P	10 10 33.4	-0.5
KDAK				pmax	pmax		
	comp=Z,37nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,12µm,22.0s						
KDAK	Kodiak Island	32.99	52	P	P	10 10 33.6	-0.3
	baz=275						
H21K	Melozitna Rive	33.00	37	P	P	10 10 34.7	+0.7
H21K				IAmb	IAmb	10 10 45.1	
	comp=Z,72nm,1.3s						
H21K	Melozitna Rive	33.00	37	P	P	10 10 34.7	+0.7
	baz=263,SNR=32						
H21K				S	S	10 15 50.3	-0.5
	baz=263						
Q20K	Shuyak Island	33.02	50	P	P	10 10 34.1	-0.1
	baz=274						
CHUM	Lake Minchumin	33.04	41	P	P	10 10 35.3	+1.0
	baz=266,SNR=5.4						
CHUM				S	S	10 15 53.3	+1.8
	baz=266						
PPLA	Purkeypile	33.04	43	P	P	10 10 34.8	+0.3
PPLA				IAmb	IAmb	10 10 45.5	
	comp=Z,121nm,1.3s						
PPLA	Purkeypile	33.04	43	P	P	10 10 36.0	+1.5
	baz=268,SNR=18						
PPLA				S	S	10 15 53.3	+1.4
	baz=268						
ZAK	Zakamensk	33.06	294	*e*P	P	10 10 34.2	-0.6
ZAK				pmax	pmax		
	comp=Z,20nm,1.7s						
SPU	Mount Spurr	33.08	46	P	P	10 10 33.2	-1.6
CAST	Castle Rocks	33.11	42	P	P	10 10 33.9	-1.1
CAST	Castle Rocks	33.11	42	P	P	10 10 35.5	+0.5
	baz=267						
I21K	Tanana	33.29	38	P	P	10 10 36.8	+0.3
I21K	Tanana	33.29	38	P	P	10 10 37.5	+1.1
	baz=264,SNR=22						
I21K				S	S	10 15 55.9	+0.6
	baz=264						
HOM	Homer	33.34	48	P	P	10 10 36.4	-0.6
	baz=273						
CAPN	Captain Cook N	33.53	46	P	P	10 10 38.1	-0.5
	baz=272						
CAPN				S	S	10 16 00.1	+1.0
	baz=272						
CNPM	China Poot	33.55	49	P	P	10 10 39.1	+0.2
CNPM				IAMs_20	IAMs_20	10 25 54.5	
	comp=Z,6µm,20.0s						
BPAW	Bear Paw Mtn.	33.63	40	P	P	10 10 40.2	+0.6
BPAW				IAMs_20	IAMs_20	10 26 47.8	
	comp=Z,7µm,20.0s						
BPAW	Bear Paw Mtn.	33.63	40	P	P	10 10 40.5	+1.0
	baz=267,SNR=11						
BPAW				S	S	10 16 02.0	+1.2
	baz=267						
KTH	Kantishna Hill	33.64	41	P	P	10 10 40.3	+0.6
LYN	LuoYang	33.68	263⇑	*i*P	P	10 10 41.0	+0.7
LYN				pP	sP	10 10 49.5	+0.9
LYN				S	S	10 16 01.8	-0.3
LYN				pmax	pmax		
	comp=Z,70nm,1.4s						
LYN				pmax	pmax		
	comp=Z,2µm,5.7s						
LYN				LR	LR		
	comp=Z,13µm,14.3s						
LYN				LR	LR		
	comp=Z,14µm,14.5s						
LYN				LR	LR		
	comp=Z,14µm,15.1s						
BRSE	Bradley Lake S	33.79	48	P	P	10 10 41.3	+0.4
	baz=274						
BRSE				S	S	10 15 59.7	-3.5
	baz=274						
MLY	Manley	33.80	39	P	P	10 10 41.3	+0.3
MLY	Manley	33.80	39	P	P	10 10 41.8	+0.8
	baz=266,SNR=23						
MLY				S	S	10 16 05.6	+2.2
	baz=266						
CUT	Chulitna	33.92	43	IAmb	IAmb	10 11 18.6	
	comp=Z,70nm,1.1s						
CUT	Chulitna	33.92	43	P	P	10 10 41.8	-0.1
	baz=270						
CUT				S	S	10 16 04.0	-1.1
	baz=270						
TRF	Thorofare Moun	33.92	42	P	P	10 10 42.9	+0.6
	baz=269,SNR=10						
TRF				S	S	10 16 05.3	-0.2
	baz=269						
M22K	Willow	34.00	45	P	P	10 10 43.5	+0.9
	baz=271						
M22K				S	S	10 16 06.0	-0.4
	baz=271						
MOY	Mondy	34.13	297	*e*P	P	10 10 43.8	-0.3
MOY				pmax	pmax		
	comp=Z,29nm,1.5s						
MOY	Mondy	34.13	297	*e*P	P	10 10 43.8	-0.3
RC01	Rabbit Creek A	34.21	46	IAMs_20	IAMs_20	10 26 59.8	
	comp=Z,6µm,21.0s						
RC01	Rabbit Creek A	34.21	46	P	P	10 10 43.7	-0.8
	baz=273						
RC01				S	S	10 16 07.3	-2.4
	baz=273						
COLD	Coldfoot	34.23	35	P	P	10 10 45.3	+0.7
	baz=263						
COLD				S	S	10 16 11.0	+1.2
	baz=263						
O22K	Cooper Landing	34.25	47	IAMs_20	IAMs_20	10 26 53.9	
	comp=Z,9µm,20.0s						
O22K	Cooper Landing	34.25	47	P	P	10 10 45.4	+0.6
	baz=274						
O22K				S	S	10 16 06.3	-3.9
	baz=274						
TATO	Taipei	34.33	241	IAMs_20	IAMs_20	10 23 52.6	
	comp=Z,6µm,22.0s						
H23K	Yukon River	34.35	37	IAmb	IAmb	10 10 55.9	
	comp=Z,75nm,1.2s						
H23K	Yukon River	34.35	37	P	P	10 10 47.1	+1.3
	baz=266,SNR=38						
H23K				S	S	10 16 13.5	+1.6
	baz=266						
I23K	Minto, Yukon-K	34.39	39	IAmb	IAmb	10 10 56.7	
	comp=Z,64nm,1.4s						
I23K	Minto, Yukon-K	34.39	39	P	P	10 10 47.0	+1.0
	baz=267,SNR=21						
I23K				S	S	10 16 12.9	+0.5
	baz=267						
SEW	Seward	34.41	48	P	P	10 10 45.0	-1.3
	baz=274						
SEW				S	S	10 16 07.7	-5.0
	baz=274						
PMR	Palmer	34.48	45	P	P	10 10 47.4	+0.6
PMR	Palmer	34.48	45	P	P	10 10 47.4	+0.6
PMR				pmax	pmax		
	comp=Z,46nm,1.4s						
PMR	Palmer	34.48	45	P	P	10 10 46.3	-0.5
	baz=272						
PMR				S	S	10 16 11.4	-2.3
	baz=272						
NEA2	Nenana	34.49	40	P	P	10 10 47.7	+0.7
NEA2	Nenana	34.49	40	P	P	10 10 47.7	+0.7
	baz=268,SNR=26						
NEA2				S	S	10 16 14.2	+0.2
	baz=268						
MCK	McKinley	34.53	41	IAmb	IAmb	10 10 59.9	
	comp=Z,110nm,1.4s						
MCK				IAMs_20	IAMs_20	10 26 58.4	
	comp=Z,6µm,19.0s						
MCK	McKinley	34.53	41	P	P	10 10 47.7	+0.3
	baz=269,SNR=15						
MCK				S	S	10 16 13.2	-1.5
	baz=269						
RND	Reindeer	34.56	42	IAmb	IAmb	10 11 05.6	
	comp=Z,54nm,1.0s						
YHNB	Yeheng	34.63	240	IAMs_20	IAMs_20	10 24 13.6	
	comp=Z,7µm,20.0s						
TOLK	Toolik Lake Re	34.65	32	P	P	10 10 49.3	+1.0
TOLK				IAmb	IAmb	10 10 51.5	
	comp=Z,127nm,1.4s						
TOLK	Toolik Lake Re	34.65	32	P	P	10 10 49.4	+1.1
	baz=262,SNR=46						
TOLK				S	S	10 16 16.5	+0.1
	baz=262						
WAT1	Susitna Watana	34.71	43	P	P	10 10 48.6	-0.3
	baz=271						
WAT1				S	S	10 16 14.7	-2.7
	baz=271						
GUMO	Guam	34.76	196	LR	LR	10 23 15.4	
	comp=Z,2µm,19.5s,baz=26,slow=33						
KNK	Knik Glacier	34.81	45	IAMs_20	IAMs_20	10 24 44.7	
	comp=Z,6µm,21.0s						
KNK	Knik Glacier	34.81	45	P	P	10 10 49.5	-0.3
	baz=273,SNR=7.9						
KNK				S	S	10 16 19.0	+0.1
	baz=273						
SML	Sawmill	34.85	44	P	P	10 10 49.5	-0.6
SML	Sawmill	34.85	44	P	P	10 10 50.4	+0.2
	baz=273,SNR=20						
SML				S	S	10 16 17.6	-2.0
	baz=273						
NACB	Ninganchiao	34.88	240	IAMs_20	IAMs_20	10 26 32.1	
	comp=Z,6µm,19.0s						
WHN	Wuhan	34.90	255 ⇑	P	P	10 10 51.3	+0.5
WHN				S	S	10 16 17.3	-3.5
WHN				pmax	pmax		
	comp=Z,130nm,0.5s						
WHN				pmax	pmax		
	comp=Z,2µm,4.4s						
WHN				LR	LR		
	comp=Z,6µm,13.3s						
WHN				LR	LR		
	comp=Z,11µm,12.5s						
WHN				LR	LR		
	comp=Z,18µm,14.1s						
WRH	Wood River Hil	34.91	40	IAmb	IAmb	10 11 16.4	
	comp=Z,68nm,1.3s						
TCOL	CIGO, UAF Yank	35.01	39	IAmb	IAmb	10 11 01.8	
	comp=Z,60nm,0.9s						
TCOL	CIGO, UAF Yank	35.01	39	P	P	10 10 52.3	+0.9
	baz=269,SNR=17						
TCOL				S	S	10 16 20.4	-1.5
	baz=269						
COLA	College	35.02	39	P	P	10 10 52.5	+1.1
COLA				IAmb	IAmb	10 11 01.8	
	comp=Z,60nm,0.9s						
COLA	College	35.02	39*c*	*i*P	P	10 10 52.2	+0.7
COLA				pmax	pmax		
	comp=Z,78nm,1.2s						
COLA				MLR	MLR		
	comp=Z,5µm,18.0s						
COLA	College	35.02	39	P	P	10 10 52.2	+0.7
	baz=269						
COLA				S	S	10 16 22.6	+0.6
	baz=269						
CCB	Clear Creek Bu	35.03	39	IAmb	IAmb	10 11 16.6	
	comp=Z,72nm,1.3s						
H24K	Noodor Dome	35.04	37	IAmb	IAmb	10 11 16.4	
	comp=Z,71nm,1.4s						
H24K	Noodor Dome	35.04	37	P	P	10 10 52.9	+1.1
	baz=267,SNR=24						
H24K				S	S	10 16 25.0	+2.5
	baz=267						
WAT6	Susitna Watana	35.09	43	P	P	10 10 52.2	-0.1
	baz=272,SNR=8.5						
WAT6				S	S	10 16 21.9	-1.6
	baz=272						
M23K	Glacier View	35.13	44	P	P	10 10 52.2	-0.4
	baz=273						
M23K				S	S	10 16 24.9	+0.9
	baz=273						
POKR	Poker Plat Res	35.20	39	IAmb	IAmb	10 10 55.5	
	comp=Z,74nm,0.9s						
POKR				IAMs_20	IAMs_20	10 27 58.2	
	comp=Z,5µm,18.0s						
POKR	Poker Plat Res	35.20	39	P	P	10 10 54.1	+1.0
	baz=269,SNR=11						
POKR				S	S	10 16 24.2	-0.7
	baz=269						
DHY	Denali Highway	35.24	42	P	P	10 10 53.4	-0.3
DHY				IAmb	IAmb	10 11 11.7	
	comp=Z,72nm,1.2s						
DHY				IAMs_20	IAMs_20	10 27 58.2	
	comp=Z,7µm,20.0s						
DHY	Denali Highway	35.24	42	P	P	10 10 53.3	-0.3
	baz=272,SNR=16						
DHY				S	S	10 16 23.2	-2.6
	baz=272						
SCM	Sheep Creek Mo	35.32	44	IAmb	IAmb	10 11 03.2	
	comp=Z,60nm,0.9s						
SCM	Sheep Creek Mo	35.32	44	P	P	10 10 54.1	-0.1
	baz=274,SNR=7.4						
SCM				S	S	10 16 26.1	-0.9
	baz=274						
HDA	Harding Lake	35.40	40	P	P	10 10 54.4	-0.5
	baz=270,SNR=23						
HDA				S	S	10 16 25.5	-2.5
	baz=270						
HDA				S	S	10 16 25.5	-2.5
	baz=270						
IL31		35.43	39	P	P	10 10 55.0	0.0
IL31				IAmb	IAmb	10 11 26.6	
	comp=Z,142nm,1.8s						
ILAR	Eielson Array	35.43	39	P	P	10 10 55.0	0.0
	comp=Z,13nm,1.0s,baz=257,slow=7.8,SNR=67						
ILAR				LR	LR	10 27 10.4	
	comp=Z,3µm,19.3s,baz=262,slow=39						
	comp=Z,13nm,1.0s						
ILAR	Eielson Array	35.43	39	P	P	10 10 54.8	-0.3
ILAR	Eielson Array	35.43	39	P	P	10 10 54.8	-0.3
GLI	Glacier Island	35.51	46	IAMs_20	IAMs_20	10 28 10.2	
	comp=Z,7µm,20.0s						
GLI	Glacier Island	35.51	46	P	P	10 10 56.7	+0.9
	baz=275						
GLI				S	S	10 16 28.1	-1.6
	baz=275						
SSLB	Suanglung	35.55	240	IAMs_20	IAMs_20	10 24 42.9	
	comp=Z,10µm,22.0s						
SSLB	Suanglung	35.55	240	P	P	10 10 56.4	-0.1
YULB	Yu-li	35.65	239	P	P	10 10 56.4	-1.0
YULB				IAMs_20	IAMs_20	10 24 59.6	
	comp=Z,7µm,21.0s						
FID	Port Fidalgo	35.82	46	IAMs_20	IAMs_20	10 28 18.0	
	comp=Z,6µm,19.0s						
M24K	Tolsona, Glenn	35.84	44	IAmb	IAmb	10 11 54.3	
	comp=Z,79nm,1.1s						
M24K				IAMs_20	IAMs_20	10 28 04.2	
	comp=Z,6µm,19.0s						
M24K	Tolsona, Glenn	35.84	44	P	P	10 10 59.5	+0.8
	baz=274,SNR=6.6						
M24K				S	S	10 16 35.8	+0.9
	baz=274						
K24K	Donnelly Dome	35.93	41	P	P	10 10 59.2	-0.2
	baz=272,SNR=17						
K24K				S	S	10 16 34.4	-1.8
	baz=272						
KLU	Klutina	36.02	45	IAMs_20	IAMs_20	10 25 21.7	
	comp=Z,6µm,22.0s						
KLU	Klutina	36.02	45	P	P	10 11 00.6	+0.4
	baz=275,SNR=9.5						
KLU				S	S	10 16 38.6	+1.0
	baz=275						
J25K	Salcha River,	36.08	40	P	P	10 11 00.1	-0.7
	baz=271,SNR=18						
J25K				S	S	10 16 36.6	-2.0
	baz=271						
QZH	Quanzhou	36.09	244⇑	*i*P	P	10 11 02.3	+1.2
QZH				PP	PP	10 12 24.0	+0.7
QZH				S	S	10 16 42.0	+2.7
QZH				pmax	pmax		
	comp=Z,70nm,1.4s						
QZH				pmax	pmax		
	comp=Z,1µm,5.1s						
QZH				LR	LR		
	comp=Z,2µm,15.1s						
QZH				LR	LR		
	comp=Z,4µm,15.3s						
QZH				LR	LR		
	comp=Z,6µm,14.7s						
PAX	Paxson	36.11	42	P	P	10 11 00.3	-0.7
PAX	Paxson	36.11	42	P	P	10 11 00.3	-0.7
PAX				pmax	pmax		
	comp=Z,50nm,1.5s						
PAX	Paxson	36.11	42	P	P	10 11 01.0	-0.1
	baz=274,SNR=11						
PAX				S	S	10 16 38.5	-0.5
	baz=274						
TPUB	Ta-pu	36.11	240	P	P	10 11 01.2	-0.1
TPUB				IAmb	IAmb	10 11 48.5	
	comp=Z,44nm,0.9s						
TPUB				IAMs_20	IAMs_20	10 25 11.8	
	comp=Z,10µm,22.0s						
TPUB	Ta-pu	36.11	240	P	P	10 11 02.6	+1.3
DIV	Divide	36.12	45	IAmb	IAmb	10 11 10.1	
	comp=Z,37nm,0.7s						
EYAK	Cordova Ski Ar	36.20	46	P	P	10 11 01.6	-0.1
	baz=277						
EYAK				S	S	10 16 41.9	+1.7
	baz=277						
TWG	Pinlang	36.23	239	P	P	10 11 01.6	-0.7
TWG				IAMs_20	IAMs_20	10 25 06.7	
	comp=Z,7µm,22.0s						
HARP	HAARP	36.30	43	P	P	10 11 02.9	+0.4
	baz=275						
HARP				S	S	10 16 43.6	+1.8
	baz=275						
RIDG	Independent Ri	36.35	41	IAMs_20	IAMs_20	10 27 54.5	
	comp=Z,6µm,18.0s						
RIDG	Independent Ri	36.35	41	P	P	10 11 02.6	-0.3
	baz=273,SNR=13						
RIDG				S	S	10 16 41.0	-1.6
	baz=273						
XAN	Xi'an	36.37	265	P	P	10 11 03.8	+0.3
XAN				pP	pP	10 11 09.0	-0.6
XAN				sP	sP	10 11 12.8	+1.0
XAN				PP	PP	10 12 31.0	+4.7
XAN				S	S	10 16 41.8	-1.7
XAN				sS	sS	10 16 57.5	+4.3
XAN				pmax	pmax		
	comp=Z,100nm,1.4s						
XAN				pmax	pmax		
	comp=Z,1µm,4.3s						
XAN				LR	LR		
	comp=Z,19µm,13.7s						
XAN				LR	LR		
	comp=Z,15µm,15.3s						
XAN				LR	LR		
	comp=Z,22µm,13.7s						
N25K	Chitina, Valde	36.63	45	P	P	10 11 05.4	-0.1
	baz=276						
N25K				S	S	10 16 47.8	+0.7
	baz=276						
BMRM	Bremner River	36.71	46	IAMs_20	IAMs_20	10 26 37.9	
	comp=Z,8µm,22.0s						
BMRM	Bremner River	36.71	46	P	P	10 11 06.1	0.0
	baz=277						
BMRM				S	S	10 16 48.8	+0.7
	baz=277						
SCRK	Sand Creek	36.71	41	P	P	10 11 05.7	-0.4
	baz=273,SNR=17						
SCRK				S	S	10 16 46.3	-2.0
	baz=273						
J26L	Joseph Creek	36.87	40	P	P	10 11 06.9	-0.5
J26L				IAMs_20	IAMs_20	10 27 33.3	
	comp=Z,5µm,19.0s						
J26L	Joseph Creek	36.87	40	P	P	10 11 06.6	-0.8
	baz=273,SNR=9.2						
J26L				S	S	10 16 49.8	-0.8
	baz=273						
HMT	Hamilton	36.96	47	IAMs_20	IAMs_20	10 29 08.6	
	comp=Z,8µm,19.0s						
GLB	Gilahina Butte	37.03	45	P	P	10 11 08.0	-0.8
GLB				IAMs_20	IAMs_20	10 28 55.5	
	comp=Z,5µm,19.0s						
L26K	Log Cabin Wild	37.07	42	IAMs_20	IAMs_20	10 29 12.7	
	comp=Z,7µm,18.0s						
L26K	Log Cabin Wild	37.07	42	P	P	10 11 10.2	+1.0
	baz=275,SNR=14						
L26K				S	S	10 16 52.8	-0.8
	baz=275						
VRDI	Verde Repeater	37.23	45	IAMs_20	IAMs_20	10 26 54.7	
	comp=Z,7µm,22.0s						
SUCK	Suckling Hills	37.24	47	IAMs_20	IAMs_20	10 28 50.9	
	comp=Z,5µm,19.0s						
M26K	Nabesna, AK	37.30	43	P	P	10 11 10.6	-0.5
M26K				IAmb	IAmb	10 11 23.2	
	comp=Z,65nm,1.1s						
M26K				IAMs_20	IAMs_20	10 27 49.6	
	comp=Z,5µm,20.0s						
M26K	Nabesna, AK	37.30	43	P	P	10 11 12.4	+1.3
	baz=276,SNR=24						
M26K				S	S	10 16 57.8	+0.7
	baz=276						
CNSH	ChangSha	37.38	254 ⇑	P	P	10 11 09.3	-2.8
CNSH				S	S	10 16 53.8	-5.1
CNSH				pmax	pmax		
	comp=Z,2µm,3.7s						
CNSH				LR	LR		
	comp=Z,8µm,19.4s						
CNSH				LR	LR		
	comp=Z,9µm,15.7s						
CNSH				LR	LR		
	comp=Z,11µm,16.1s						
MCARA	McCarthy VSAT	37.41	45	P	P	10 11 11.2	-0.7
MCARA				IAmb	IAmb	10 11 47.2	
	comp=Z,128nm,1.7s						
MCARA	McCarthy VSAT	37.41	45	P	P	10 11 11.3	-0.7
	baz=278						
MCARA				S	S	10 17 00.9	+2.2
	baz=278						
BGLC	Bering Glacier	37.47	47	P	P	10 11 11.1	-1.3
	baz=279						
K27K	Chicken	37.55	40	S	S	10 17 00.8	0.0
	baz=275						
TGL	Tana Glacier	37.59	46	IAmb	IAmb	10 11 32.7	
	comp=Z,124nm,1.4s						
TGL				IAMs_20	IAMs_20	10 26 37.5	
	comp=Z,7µm,22.0s						
WAX	Waxell Ridge	37.63	46	IAMs_20	IAMs_20	10 28 33.4	
	comp=Z,5µm,20.0s						
L27K	Beaver Creek,	37.76	42	IAmb	IAmb	10 11 33.8	
	comp=Z,127nm,1.4s						
L27K				IAMs_20	IAMs_20	10 28 50.8	
	comp=Z,6µm,19.0s						
L27K	Beaver Creek,	37.76	42	P	P	10 11 16.3	+1.3
	baz=276,SNR=33						
L27K				S	S	10 17 05.6	+1.6
	baz=276						
BCAR	Beaver Creek A	37.78	42	P	P	10 11 15.3	+0.2
M27K	Edge Creek, AK	37.82	43	IAmb	IAmb	10 11 34.4	
	comp=Z,124nm,1.4s						
M27K				IAMs_20	IAMs_20	10 29 11.5	
	comp=Z,6µm,20.0s						
M27K	Edge Creek, AK	37.82	43	P	P	10 11 17.0	+1.4
	baz=277,SNR=7.0						
M27K				S	S	10 17 06.6	+1.4
	baz=277						
ISLE	Juniper Island	37.86	46	IAmb	IAmb	10 11 27.4	
	comp=Z,90nm,1.1s						
ISLE				IAMs_20	IAMs_20	10 28 30.4	
	comp=Z,7µm,20.0s						
EGAK	Eagle	37.88	39	P	P	10 11 15.8	-0.1
EGAK				IAMs_20	IAMs_20	10 29 40.1	
	comp=Z,5µm,18.0s						
EGAK	Eagle	37.88	39	P	P	10 11 16.1	+0.2
	baz=275,SNR=49						
EGAK				S	S	10 17 06.2	+0.5
	baz=275						
BARN	Barnard Glacie	38.11	45	P	P	10 11 16.9	-1.3
BARN				IAMs_20	IAMs_20	10 27 41.1	
	comp=Z,5µm,20.0s						
MESA	MESA	38.12	47	P	P	10 11 19.2	+1.0
	baz=280						
MESA				S	S	10 17 12.6	+2.7
	baz=280						
GRNC	Granite Creek	38.12	46	IAmb	IAmb	10 11 29.4	
	comp=Z,168nm,1.4s						
GRNC				IAMs_20	IAMs_20	10 28 39.3	
	comp=Z,5µm,20.0s						
YAH	Yahtse	38.19	46	IAmb	IAmb	10 11 30.8	
	comp=Z,68nm,0.9s						
YAH				IAMs_20	IAMs_20	10 27 26.1	

	comp=Z,8µm,21.0s						
CTG	Chitna Glacier	38.28	45	P	P	10 11 20.4	+0.9
	baz=280,SNR=14						
CTG				S	S	10 17 13.5	+1.3
	baz=280						
BVCY	Beaver Creek	38.28	43	P	P	10 11 20.3	+1.0
	baz=278,SNR=6.8						
BVCY				S	S	10 17 14.8	+2.8
	baz=278						
CTGM	Chitina Glacie	38.28	45	IAmb	IAmb	10 11 49.3	
	comp=Z,58nm,0.9s						
ENH	Enshi	38.29	260	IAMs_20	IAMs_20	10 29 15.3	
	comp=Z,5µm,19.0s						
LOGN	Logan Glacier	38.47	45	IAMs_20	IAMs_20	10 27 16.5	
	comp=Z,6µm,22.0s						
TABL	Table Mountain	38.47	46	IAMs_20	IAMs_20	10 27 25.5	
	comp=Z,7µm,21.0s						
NRIK	Noril'sk	38.49	328	P	P	10 11 20.8	-0.2
	comp=Z,1.7nm,0.3s,baz=85,slow=8.3,SNR=6.3						
NRIK				LR	LR	10 28 31.3	
	comp=Z,10µm,18.9s,baz=80,slow=38						
	comp=Z,1.7nm,0.3s						
YUK3	Moose Creek	38.57	44	P	P	10 11 23.1	+1.1
	baz=279,SNR=6.5						
YUK3				S	S	10 17 17.2	+0.6
	baz=279						
LZH	Lanzhou	38.65	272	⇑P	P	10 11 24.0	+1.1
LZH				S	S	10 17 16.8	-1.6
LZH				sS	sS	10 17 33.5	+5.4
LZH				SS	SnSn	10 20 01.0	-5.8
LZH				pmax	pmax		
	comp=Z,130nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,5.4s						
LZH				LR	LR		
	comp=Z,12µm,14.0s						
LZH				LR	LR		
	comp=Z,15µm,13.6s						
LZH				LR	LR		
	comp=Z,15µm,15.9s						
DAWY	Dawson	38.72	40	P	P	10 11 23.8	+0.8
DAWY	Dawson	38.72	40	P	P	10 11 23.7	+0.6
	baz=277,SNR=16						
DAWY				S	S	10 17 18.9	+0.4
	baz=277						
PINM	Pinnacle	38.97	46	P	P	10 11 24.9	-0.3
	baz=281						
PINM				S	S	10 17 23.6	+1.2
	baz=281						
YUK8	Steele Glacier	38.98	45	P	P	10 11 25.1	-0.4
	baz=280						
YUK8				S	S	10 17 23.3	+0.3
	baz=280						
I29M	Ogilvie Camp,	39.03	38	P	P	10 11 25.8	+0.3
I29M	Ogilvie Camp,	39.03	38	P	P	10 11 26.2	+0.7
	baz=276,SNR=34						
I29M				S	S	10 17 23.3	+0.2
	baz=276						
J29M	Klondike Camp	39.18	39	IAMs_20	IAMs_20	10 30 39.3	
	comp=Z,5µm,19.0s						
J29M	Klondike Camp	39.18	39	P	P	10 11 27.6	+0.7
	baz=278						
J29M				S	S	10 17 25.4	-0.1
	baz=278						
PNL	Peninsula	39.48	47	P	P	10 11 30.7	+1.2
	baz=283						
PNL				S	S	10 17 30.9	+0.9
	baz=283						
YUK4	Talbot Arm	39.50	44	P	P	10 11 30.2	+0.4
	baz=281						
EPYK	Eagle Plains	39.56	36	P	P	10 11 31.2	+1.2
	baz=277,SNR=37						
EPYK				S	S	10 17 31.2	+0.1
	baz=277						
GTA	Gaotai	39.62	279	⇑P	P	10 11 31.0	0.0
GTA				PP	PnPn	10 13 09.8	+4.7
GTA				PcP	PcP	10 13 38.8	+1.1
GTA				S	S	10 17 30.0	-2.9
GTA				sS	sS	10 17 48.3	+5.7
GTA				SS	SS	10 20 22.5	-5.5
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA				pmax	pmax		
	comp=Z,750nm,5.8s						
GTA				LR	LR		
	comp=Z,7µm,16.4s						
GTA				LR	LR		
	comp=Z,9µm,16.4s						
GTA				LR	LR		
	comp=Z,10µm,18.5s						
YUK6	Outpost Mounta	39.71	45	P	P	10 11 31.5	-0.1
	baz=282						
YUK6				S	S	10 17 35.5	+1.6
	baz=282						
M30M	Minto, Yukon	40.12	42	P	P	10 11 33.7	-1.0
M30M				IAMs_20	IAMs_20	10 29 54.2	
	comp=Z,7µm,20.0s						
M30M	Minto, Yukon	40.12	42	P	P	10 11 35.8	+1.1
	baz=281,SNR=17						
M30M				S	S	10 17 42.4	+2.8
	baz=281						
HYT	Haines Junctio	40.15	45	P	P	10 11 35.0	-0.1
HYT				IAmb	IAmb	10 11 54.0	
	comp=Z,150nm,1.8s						
HYT	Haines Junctio	40.15	45	P	P	10 11 36.6	+1.5
	baz=283,SNR=8.7						
HYT				S	S	10 17 41.3	+1.1
	baz=283						
N30M	Aishikik Lake	40.21	44	P	P	10 11 36.0	+0.5
	baz=282						
N30M				S	S	10 17 43.1	+2.1
	baz=282						
KWAJ	Kwajalein Atol	40.25	159	IAMs_20	IAMs_20	10 24 18.0	
	comp=Z,6µm,21.0s						
INK	Inuvik	40.55	33	P	P	10 11 39.3	+1.2
INK	Inuvik	40.55	33	P	P	10 11 39.3	+1.2
INK				pmax	pmax		
	comp=Z,33nm,0.8s						
INK	Inuvik	40.55	33	P	P	10 11 39.2	+1.2
	baz=277,SNR=36						
INK				S	S	10 17 47.3	+1.6
	baz=277						
PATS	Pohnpei	40.72	174	IAMs_20	IAMs_20	10 26 04.9	
	comp=Z,4µm,19.0s						
HKPS	Hong Kong Po S	40.80	246	IAMs_20	IAMs_20	10 30 60.0	
	comp=Z,6µm,18.0s						
N31M	Braeburn, Yuko	40.82	44	P	P	10 11 39.0	-1.5
N31M	Braeburn, Yuko	40.82	44	P	P	10 11 42.6	+2.1
	baz=283,SNR=19						
N31M				S	S	10 17 52.5	+2.5
	baz=283						
O30N	Mendenhall	40.84	45	P	P	10 11 42.3	+1.7
	baz=284,SNR=8.8						
O30N				S	S	10 17 54.4	+4.1
	baz=284						
PLBC	Pleasant Camp	41.03	47	P	P	10 11 43.9	+1.7
	baz=285,SNR=6.7						
PLBC				S	S	10 17 58.6	+5.5
	baz=285						
M31M	Drury Creek, Y	41.29	42	P	P	10 11 46.1	+1.7
	baz=283,SNR=26						
M31M				S	S	10 18 01.2	+4.2
	baz=283						
SKAG	Skagway	41.54	47	P	P	10 11 45.5	-0.8
SKAG				IAmb	IAmb	10 12 05.8	
	comp=Z,146nm,1.7s						
SKAG	Skagway	41.54	47	P	P	10 11 48.2	+1.8
	baz=286,SNR=5.9						
SKAG				S	S	10 18 03.2	+2.6
	baz=286						
CD2	Chengdu	41.73	265	P	P	10 11 49.0	+0.6
CD2				sP	pP	10 11 54.3	-0.3
CD2				PP	PnPn	10 13 28.3	-1.6
CD2				PcS	PcS	10 17 37.0	+0.8
CD2				S	S	10 18 05.3	+1.0
CD2				LR	LR		
	comp=Z,8µm,14.3s						
CD2				LR	LR		
	comp=Z,16µm,16.1s						
FARO	Faro, Yukon	41.76	42	P	P	10 11 49.3	+1.1
	baz=284,SNR=18						
FARO				S	S	10 18 07.2	+3.3
	baz=284						
SIT	Sitka	42.25	50	P	P	10 11 52.7	+0.5
SIT	Sitka	42.25	50	P	P	10 11 52.7	+0.5
SIT				pmax	pmax		
	comp=Z,99nm,1.6s						
SIT	Sitka	42.25	50	P	P	10 11 52.4	+0.2
	baz=288						
SIT				S	S	10 18 16.9	+5.8
	baz=288						
P33M	Teslin, Yukon	42.55	45	P	P	10 11 56.0	+1.3
P33M	Teslin, Yukon	42.55	45	P	P	10 11 56.3	+1.6
	baz=287,SNR=19						
P33M				S	S	10 18 18.4	+2.7
	baz=287						
MMPY	Sheldon Lake,	42.60	41	P	P	10 11 56.7	+1.6
	baz=285,SNR=18						
MMPY				S	S	10 18 19.7	+3.4
	baz=285						
GYA	Guiyang	42.66	258	⇑iP	P	10 11 56.8	+0.8
GYA				PP	PP	10 13 37.8	+2.8
GYA				S	S	10 18 18.5	+0.4
GYA				sS	sS	10 18 32.5	+4.6
GYA				SS	SS	10 21 25.8	-2.7
GYA				pmax	pmax		
	comp=Z,150nm,1.0s						
GYA				pmax	pmax		
	comp=Z,2µm,3.5s						
GYA				LR	LR		
	comp=Z,5µm,14.7s						
GYA				LR	LR		
	comp=Z,7µm,16.5s						
GYA				LR	LR		
	comp=Z,5µm,18.7s						
JOHN	Johnston Islan	42.76	124	IAMs_20	IAMs_20	10 25 46.3	
	comp=Z,5µm,20.0s						
A36M	Sachs Harbour	42.78	27	IAmb	IAmb	10 11 59.7	
	comp=Z,76nm,0.8s						
A36M	Sachs Harbour	42.78	27	P	P	10 11 57.8	+1.5
	baz=280,SNR=12						
A36M				S	S	10 18 21.7	+3.1
	baz=280						
C36M	Paulatuk	43.73	31	P	P	10 12 04.5	+0.5
C36M				IAMs_20	IAMs_20	10 33 31.7	
	comp=Z,4µm,20.0s						
C36M	Paulatuk	43.73	31	P	P	10 12 05.2	+1.2
	baz=284,SNR=24						
C36M				S	S	10 18 32.4	-0.2
	baz=284						
CRAG	Craig	43.95	52	P	P	10 12 05.5	-0.4
	baz=291						
CRAG				S	S	10 18 42.4	+6.4
	baz=291						
WRAK	Wrangell Islan	44.01	50	IAMs_20	IAMs_20	10 28 54.1	
	comp=Z,4µm,20.0s						
WRAK	Wrangell Islan	44.01	50	P	P	10 12 07.5	+1.1
	baz=291						
WRAK				S	S	10 18 42.5	+5.5
	baz=291						
S34M	Telegraph Cree	44.10	48	P	P	10 12 08.6	+1.4
	baz=290						
S34M				S	S	10 18 43.7	+5.3
	baz=290						
TGTN	Hyland Airport	44.26	42	P	P	10 12 09.3	+0.8
	baz=289						
TGTN				S	S	10 18 43.7	+2.9
	baz=289						
DLBC	Dease Lake	44.47	47	LR	LR	10 34 01.5	
	comp=Z,4µm,18.3s,baz=304,slow=41						
DLBC	Dease Lake	44.47	47	P	P	10 12 10.7	+0.4
DLBC				IAmb	IAmb	10 12 22.1	
	comp=Z,88nm,1.5s						
DLBC	Dease Lake	44.47	47	P	P	10 12 12.3	+2.1
	baz=290,SNR=11						
DLBC				S	S	10 18 48.8	+4.9
	baz=290						
WTLY	Watson Lake, Y	44.49	44	P	P	10 12 11.6	+1.3
	baz=290						
GOMU	GeErMu	44.68	278	P	P	10 12 12.3	-0.3
GOMU				pP	pP	10 12 15.3	-3.5
GOMU				sP	sP	10 12 20.0	-1.2
GOMU				PP	PcP	10 13 55.3	+0.5
GOMU				S	S	10 18 49.5	+1.5
GOMU				pmax	pmax		
	comp=Z,20nm,0.7s						
GOMU				LR	LR		
	comp=Z,10µm,14.1s						
GOMU				LR	LR		
	comp=Z,5µm,14.3s						
GOMU				LR	LR		
	comp=Z,8µm,14.3s						
T35M	Bob Quinn	44.88	49	P	P	10 12 15.8	+2.4
	baz=292,SNR=14						
T35M				S	S	10 18 55.6	+5.8
	baz=292						
WMQ	Urumqi	45.37	291	eP	P	10 12 17.8	+0.2
WMQ				pP	pP	10 12 25.5	+1.7
WMQ				PcP	PcP	10 13 57.0	+0.3
WMQ				ScP	ScP	10 17 48.5	+0.5
WMQ				S	S	10 19 04.5	+7.2
WMQ				ScS	ScS	10 22 11.8	-1.0
WMQ				pmax	pmax		
	comp=Z,32nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,700nm,4.7s						
WMQ				LR	LR		
	comp=Z,19µm,15.5s						
WMQ				LR	LR		
	comp=Z,16µm,16.3s						
WMQ				LR	LR		
	comp=Z,13µm,17.9s						
ZSN	Zaisan	45.41	297	c iP	P	10 12 16.7	-1.1
ZSN	Zaisan	45.41	297	⇑iP	P	10 12 16.7	-1.1
	baz=297						
WRGLY	Wrigley	45.80	39	P	P	10 12 22.2	+1.6
	baz=290						
WRGLY				S	S	10 19 05.5	+2.7
	baz=290						
QIZ	Qiongzhong	45.89	247	IAMs_20	IAMs_20	10 33 44.8	
	comp=Z,6µm,18.0s						
QIZ	Qiongzhong	45.89	247	P	P	10 12 23.3	+1.5
QIZ				PP	PP	10 14 12.0	+2.6
QIZ				S	S	10 19 09.0	+4.0
QIZ				SS	SS	10 22 25.0	-4.6
QIZ				pmax	pmax		
	comp=Z,27nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,1µm,8.2s						
QIZ				LR	LR		
	comp=Z,5µm,14.3s						
QIZ				LR	LR		
	comp=Z,3µm,14.3s						
QIZ				LR	LR		
	comp=Z,6µm,15.9s						
QIZ	Qiongzhong	45.89	247	P	P	10 12 23.3	+1.5
PZH	PanZhiHua	45.91	262	P	P	10 12 22.5	+0.4
PZH				pP	pP	10 12 25.3	-3.0
PZH				PP	PP	10 14 07.5	-2.2
PZH				PcS	PcS	10 17 53.5	0.0
PZH				S	S	10 19 02.0	-3.4
PZH				pmax	pmax		
	comp=Z,80nm,0.7s						
PZH				pmax	pmax		
	comp=Z,1µm,6.7s						
PZH				LR	LR		
	comp=Z,7µm,14.1s						
PZH				LR	LR		
	comp=Z,3µm,14.3s						
PZH				LR	LR		
	comp=Z,7µm,14.7s						
KMI	Kunming	46.16	260	⇑P	P	10 12 25.0	+0.8
KMI				sP	sP	10 12 35.0	+2.2
KMI				PP	PP	10 14 13.0	+0.5
KMI				S	S	10 19 03.5	-5.8
KMI				SS	ScS	10 22 24.3	+5.6
KMI				pmax	pmax		
	comp=Z,110nm,1.1s						
KMI				pmax	pmax		
	comp=Z,2µm,4.3s						
KMI				LR	LR		
	comp=Z,9µm,18.0s						
KMI				LR	LR		
	comp=Z,5µm,18.6s						
KMI				LR	LR		
	comp=Z,4µm,18.8s						
KIP	Kipapa	46.23	107	IAMs_20	IAMs_20	10 28 23.9	
	comp=Z,7µm,20.0s						
GRNB	Grenville Isla	46.27	53	IAmb	IAmb	10 12 47.6	
	comp=Z,36nm,0.9s						
SEM	Semipalatinsk	46.79	302	c iP	P	10 12 26.7	-2.1
SEM				pmax	pmax		
	comp=Z,46nm,1.2s						
SEM				MLR	MLR		
	comp=Z,8µm,15.0s						
SEM	Semipalatinsk	46.79	302	⇑iP	P	10 12 26.8	-2.1
	comp=Z,46nm,1.2s,baz=302						
SEM				LR	LR	10 32 04.9	
	comp=Z,8µm,14.9s,baz=302						
DAV	Davao City (W)	47.18	221	LR	LR	10 31 59.0	
	comp=Z,607nm,21.6s,baz=20,slow=36						
MK31	Makanchi Array	47.27	297	P	P	10 12 31.4	-1.0
MK31				IAmb	IAmb	10 12 32.6	
	comp=Z,32nm,0.7s						
MK31	Makanchi Array	47.27	297	i P	P	10 12 30.5	-2.0
MK31				pmax	pmax		
	comp=Z,29nm,0.6s						
MKAR	Makanchi Array	47.27	297	P	P	10 12 31.4	-1.1
	comp=Z,31nm,0.6s,baz=69,slow=8.1,SNR=263						
MKAR				PcP	PcP	10 14 04.0	+0.7
	comp=Z,3.8nm,0.6s,baz=64,slow=2.3,SNR=1.6						
MKAR				LR	LR	10 33 48.1	
	comp=Z,5µm,18.6s,baz=42,slow=38						
	comp=Z,31nm,0.6s						
MAKZ	Makanchi	47.46	297	P	P	10 12 32.9	-1.0
MAKZ				IAmb	IAmb	10 12 41.7	
	comp=Z,98nm,1.6s						
MAKZ	Makanchi	47.46	297	P	P	10 12 32.9	-1.0
MAKZ				pmax	pmax		
	comp=Z,98nm,1.6s						
MAKZ				MLR	MLR		
	comp=Z,12µm,19.0s						
KURK	Kurchatov	47.58	303	P	P	10 12 33.6	-1.1
KURK	Kurchatov	47.58	303	P	P	10 12 33.6	-1.1
KURK				pmax	pmax		
	comp=Z,67nm,0.8s						
KURK				MLR	MLR		
	comp=Z,19µm,19.0s						
KURK	Kurchatov	47.58	303	P	P	10 12 33.7	-1.0
KURBB	Kurchatov Arra	47.67	303	LR	LR	10 33 58.5	
	comp=Z,17µm,18.6s,baz=47,slow=38						
KURBB	Kurchatov Arra	47.67	303	P	P	10 12 33.5	-1.9
BBB	Bella Bella	48.00	54	IAmb	IAmb	10 12 52.6	
	comp=Z,75nm,1.4s						
YKA	Yellowknife Ar	49.81	37	P	P	10 12 52.4	+0.7
	comp=Z,18nm,1.0s,baz=298,slow=7.5,SNR=62						
YKA				PcP	PcP	10 14 12.4	+0.3
	comp=Z,8.5nm,1.0s,baz=301,slow=4.1,SNR=7.6						
	comp=Z,18nm,1.0s						
RES	Resolute Bay	49.82	19	LR	LR	10 36 16.5	
	comp=Z,5µm,20.2s,baz=310,slow=39						
RES	Resolute Bay	49.82	19	P	P	10 12 52.1	+0.5
RES				IAmb	IAmb	10 12 56.5	
	comp=Z,77nm,1.5s						
RES	Resolute Bay	49.82	19	P	P	10 12 52.1	+0.5
RES				pmax	pmax		
	comp=Z,77nm,1.5s						
TDK	Taldyqorghan	50.52	297	eP	P	10 12 57.0	-0.3
TDK				eS	S	10 20 06.8	-3.3
TDK				pmax	pmax		
	comp=Z,64nm,0.6s						
TDK				MLR	MLR		
	comp=Z,9µm,13.0s						
TDK	Taldyqorghan	50.52	297	eP	P	10 12 57.1	-0.3
	comp=Z,64nm,0.6s,baz=297						
TDK				eS	S	10 20 06.8	-3.3
	baz=297						
TDK				LR	LR	10 35 11.7	
	comp=Z,9µm,13.4s,baz=297						
PDGK	Podgornoye	50.75	295	P	P	10 12 58.0	-1.2
BRVK	Borovoye	51.00	309	P	P	10 12 59.5	-1.3
BRVK	Borovoye	51.00	309	P	P	10 12 59.7	-1.1
BRVK	Borovoye	51.00	309	P	P	10 12 59.9	-0.9
BRVK				P	P	10 12 59.9	-0.9
NOR	Nord	51.01	358	i P	P	10 12 59.4	-1.1
NOR				IAmb	IAmb	10 13 04.8	
	comp=Z,25nm,1.7s						
UZB	Uzynbulak	51.13	295	c iP	P	10 13 01.3	-0.8
UZB	Uzynbulak	51.13	295	⇑iP	P	10 13 01.3	-0.8
	baz=295						
KPKS	Kokpek	51.17	295	c iP	P	10 13 01.5	-0.8
KPKS				i S	S	10 20 18.1	-1.1
KPKS				pmax	pmax		
	comp=Z,29nm,1.6s						
KPKS	Kokpek	51.17	295	⇑iP	P	10 13 01.6	-0.8
	comp=Z,30nm,1.6s,baz=295						
KPKS				i S	S	10 20 18.1	-1.1
	baz=295						
BRZS	Berezniki	51.26	305	c iP	P	10 13 01.4	-1.4
BRZS				pmax	pmax		
	comp=Z,28nm,1.2s						
BRZS	Berezniki	51.26	305	⇑iP	P	10 13 01.5	-1.4
	comp=Z,28nm,1.2s,baz=305						
ZHN	Zhinishke	51.48	295	eP	P	10 13 04.1	-0.6
ZHN	Zhinishke	51.48	295	eP	P	10 13 04.2	-0.6
	baz=295						
SATY	Saty	51.56	295	c iP	P	10 13 04.8	-0.5
SATY	Saty	51.56	295	⇑iP	P	10 13 04.8	-0.5
	baz=295						
KRVT	Keravat (AS076	51.67	183	P	P	10 13 06.4	+0.2
	comp=Z,7.5nm,0.3s,baz=284,slow=2.1,SNR=13						
KRVT				LR	LR	10 37 00.6	
	comp=Z,696nm,18.0s,baz=139,slow=38						
	comp=Z,7.5nm,0.3s						
KBS	Kingsbay	51.83	351	IAMs_20	IAMs_20	10 33 44.7	
	comp=Z,5µm,22.0s						
KBS	Kingsbay	51.83	351	eP	P	10 13 05.6	-1.0
CLRS	Cowichan Lake	51.87	56	P	P	10 13 07.0	-0.4
CLRS				IAmb	IAmb	10 13 23.9	
	comp=Z,75nm,1.5s						
SPA0	Spitsbergen Ar	51.96	350	eP	P	10 13 08.3	+0.6
SPITS	Spitsbergen Ar	51.96	350	LR	LR	10 37 09.5	
	comp=Z,4µm,18.1s,baz=7.5,slow=38						
CHKK	Chushkaly	51.99	296	c iP	P	10 13 07.1	-1.3
CHKK	Chushkaly	51.99	296	⇑iP	P	10 13 07.1	-1.3
	baz=296						
SWI	Sorong	52.23	210	P	P	10 13 10.1	-0.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,50nm,1.8s						
SIJI	Sorong	52.24	210	P	P	10 13 10.6	+0.2
	comp=Z,9.0nm,0.5s,baz=12,slow=9.4,SNR=14						
SIJI				LR	LR	10 32 14.5	
	comp=Z,1µm,21.5s,baz=16,slow=32						
	comp=Z,9.0nm,0.5s						
MDOK	Medeo	52.33	296	i P	P	10 13 10.3	-0.8
MDOK				MLR	MLR		
	comp=Z,11µm,16.0s						
MDOK	Medeo	52.33	296	i P	P	10 13 10.4	-0.8
	baz=296						
MDOK				LR	LR	10 35 22.9	
	comp=Z,11µm,16.0s,baz=296						
KUU	Kurty	52.36	297	c iP	P	10 13 09.7	-1.5
KUU				eS	S	10 20 34.4	-1.1
KUU				pmax	pmax		
	comp=Z,27nm,1.0s						
KUU				MLR	MLR		
	comp=Z,7µm,14.0s						
KUU	Kurty	52.36	297	⇑iP	P	10 13 09.7	-1.5
	comp=Z,27nm,1.0s,baz=297						
KUU				eS	S	10 20 34.4	-1.1
	baz=297						
KUU				LR	LR	10 35 24.0	
	comp=Z,7µm,14.4s,baz=297						
AAA	Alma-Ata	52.39	296	eP	P	10 13 11.1	-0.4
	baz=296						
AAA				LR	LR	10 36 07.1	
	comp=Z,18µm,17.2s,baz=296						
TNSS	Tian-Shan	52.47	296	eP	P	10 13 11.8	-0.6
TNSS	Tian-Shan	52.47	296	eP	P	10 13 11.9	-0.6
	baz=296						
B04A	Port Angeles	52.63	57	IAmb	IAmb	10 13 30.5	
	comp=Z,102nm,1.7s						
NLWA	Neilton Lookou	52.78	58	IAmb	IAmb	10 13 31.2	
	comp=Z,119nm,1.7s						
CHTO	Chiang Mai	53.07	257	P	P	10 13 18.3	+1.7
BTLS	Baital	53.11	299	c iP	P	10 13 15.3	-1.3
BTLS	Baital	53.11	299	⇑iP	P	10 13 15.3	-1.3
	baz=299						
D03D	Eldon	53.15	57	P	P	10 13 17.5	+0.6
	baz=303,SNR=18						
D03D				S	S	10 20 48.4	+2.4
	baz=303						
SHL	Shillong	53.18	269	P	P	10 13 17.8	+0.2
SHL	Shillong	53.18	269	P	P	10 13 17.8	+0.2
SHL				pmax	pmax		
	comp=Z,83nm,0.7s						
SHL	Shillong	53.18	269	eP	P	10 13 18.0	+0.4
SHL				IAmb	IAmb	10 13 19.4	
	comp=Z,56nm,0.6s						
SHL	Shillong	53.18	269	P	P	10 13 18.2	+0.6
	SNR=36						

TULEG	Thule	53.19	12	IAMs_20	IAMs_20	10 39 50.9	
	comp=Z,5μm,18.0s						
TULEG	Thule	53.19	12	*i* P	P	10 13 18.0	+1.3
CM31	Chiang Mai Arr	53.32	257	IAmb	IAmb	10 13 22.7	
	comp=Z,89nm,1.2s						
CM31	Chiang Mai Arr	53.32	257	P	P	10 13 20.4	+1.9
	SNR=18						
CMAR	Chiang Mai Arr	53.32	257	P	P	10 13 20.1	+1.5
	comp=Z,18nm,0.8s,baz=34,slow=7.2,SNR=91						
CMAR				ScP	ScP	10 18 24.2	+2.1
	comp=Z,1.0nm,0.3s,baz=20,slow=2.9,SNR=4.5						
CMAR				LR	LR	10 37 09.2	
	comp=Z,5μm,19.6s,baz=45,slow=37						
	comp=Z,18nm,0.8s						
CMAR	Chiang Mai Arr	53.32	257	P	P	10 13 19.0	+0.5
ULHL	Ulahol	53.34	295	P	P	10 13 18.3	-0.3
	SNR=19						
TKM2	Tokmak 2	53.35	296	P	P	10 13 18.0	-0.7
	SNR=23						
TKM2	Tokmak 2	53.35	296	*i* P	P	10 13 17.6	-1.1
TKM2				pmax	pmax		
	comp=Z,17nm,0.9s						
LBMI	Labuha	53.37	214	P	P	10 13 19.9	+1.1
	comp=Z,2μmcomp=Z,1μmcomp=Z,36nm,0.8s						
B06A	Marblemount	53.52	55	IAmb	IAmb	10 13 36.6	
	comp=Z,80nm,1.5s						
D04E	Lakebay	53.52	57	P	P	10 13 20.8	+1.2
	baz=303						
SGDS	Sogindy	53.64	297	*c* *i*P	P	10 13 20.0	-0.6
SGDS				*e*S	S	10 20 52.0	-1.0
SGDS				pmax	pmax		
	comp=Z,27nm,1.4s						
SGDS	Sogindy	53.64	297	⇑*i*P	P	10 13 20.0	-0.6
	comp=Z,27nm,1.4s,baz=297						
SGDS				*e*S	S	10 20 52.1	-1.0
	baz=297						
SVE	Sverdlovsk	53.78	317	*e*P	P	10 13 21.8	+0.4
SVE				*e*S	S	10 20 55.2	+0.9
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
SVE				MLR	MLR		
	comp=Z,8μm,15.0s						
SVE	Sverdlovsk	53.78	317	*e*P	P	10 13 21.8	+0.4
CHMS	Chumysh	53.82	297	P	P	10 13 22.0	+0.1
	SNR=7.1						
CHMS	Chumysh	53.82	297	P	P	10 13 20.5	-1.5
USP	Ospenovka	53.82	297	P	P	10 13 21.7	-0.2
	SNR=56						
FAKI	Fak Fak	53.84	208	P	P	10 13 21.7	-0.6
FAKI	Fak Fak	53.84	208	P	P	10 13 22.2	-0.1
	comp=Z,3μmcomp=Z,1μmcomp=Z,45nm,1.6s						
FAKI	Fak Fak	53.84	208	P	P	10 13 23.0	+0.7
KBK	Karagaybulak	53.90	296	P	P	10 13 22.9	+0.2
	SNR=10						
D05A	Enumclaw	53.96	57	P	P	10 13 22.3	-0.5
D05A				IAmb	IAmb	10 13 40.0	
	comp=Z,75nm,1.3s						
E04D	Cinebar	53.98	58	IAmb	IAmb	10 13 40.1	
	comp=Z,97nm,1.4s						
E04D	Cinebar	53.98	58	P	P	10 13 23.9	+0.9
	baz=304,SNR=7.0						
E04D				S	S	10 20 59.4	+2.0
	baz=304						
F04D	Rainier, OR	53.99	59	P	P	10 13 23.4	+0.3
	baz=304						
F04D				S	S	10 20 59.0	+1.5
	baz=304						
GTOI	Gorontalo	54.05	220	P	P	10 13 24.0	+0.3
	comp=Z,678nmcomp=Z,21nm,1.6s						
AAK	Ala-Archa	54.18	296	P	P	10 13 24.9	+0.1
	SNR=20						
AAK	Ala-Archa	54.18	296	LR	LR	10 37 57.3	
	comp=Z,9μm,18.7s,baz=44,slow=38						
AAK	Ala-Archa	54.18	296	P	P	10 13 24.1	-0.7
AAK	Ala-Archa	54.18	296	*c* *e*P	P	10 13 24.3	-0.4
AAK				pmax	pmax		
	comp=Z,25nm,0.8s						
AAK				MLR	MLR		
	comp=Z,7μm,15.0s						
AAK	Ala-Archa	54.18	296	P	P	10 13 24.5	-0.2
AAK				P	P	10 13 24.5	-0.2
AAK	Ala-Archa	54.18	296	*e*P	P	10 13 24.3	-0.4
AAK	Ala-Archa	54.18	296	*i* P	P	10 13 23.9	-0.9
	SNR=21						
G03D	McMinnville, O	54.33	60	P	P	10 13 26.4	+0.9
	baz=304						
G03D				S	S	10 21 03.3	+1.2
	baz=304						
UCH	Uchtor	54.41	296	P	P	10 13 26.4	-0.3
	SNR=6.3						
F04A	Amboy	54.42	58	P	P	10 13 26.9	+0.7
F04A				IAmb	IAmb	10 13 42.7	
	comp=Z,122nm,1.9s						
EKS2	Erkin-Say	54.60	297	P	P	10 13 27.4	-0.3
	SNR=23						
I02E	Swisshome, OR	54.61	61	P	P	10 13 27.8	+0.2
	baz=305						
I02E				S	S	10 21 08.0	+2.1
	baz=305						
TOLI2	Tolitoli	54.62	223	P	P	10 13 28.3	+0.4
MRSI	Marisa	54.66	221	P	P	10 13 28.6	+0.4
	comp=Z,3μmcomp=Z,4μmcomp=Z,134nm,1.5s						
SLGI	Shiliguri	54.78	272	*e*P	P	10 13 30.5	+1.4
B08A	Colville Reser	54.80	55	P	P	10 13 29.3	+0.3
B08A				IAmb	IAmb	10 13 39.8	
	comp=Z,38nm,1.1s						
TAPN	Taplejung	54.84	273	*e*P	P	10 13 30.7	+0.8
	comp=Z,330nm,0.9s						
ARU	Arti	54.95	318	P	P	10 13 28.6	-1.3
ARU	Arti	54.95	318	*c* *i*P	P	10 13 28.2	-1.7
ARU						10 14 29.9	
ARU						10 15 28.8	
ARU				PPP	PPP	10 16 40.6	
ARU				S	S	10 21 07.8	-2.4
ARU						10 23 19.2	
ARU				SSS	SSS	10 26 53.5	
ARU				pmax	pmax		
	comp=Z,37nm,1.3s						
ARU				MLR	MLR		
	comp=Z,7μm,20.0s						
AML	Almayashu	54.96	296	P	P	10 13 30.7	0.0
	SNR=19						
AML	Almayashu	54.96	296	P	P	10 13 31.0	+0.3
AML	Almayashu	54.96	296	*i* P	P	10 13 30.0	-0.7
	SNR=19						
F05D	White Salmon	55.00	58	P	P	10 13 30.8	+0.4
	baz=305						
F05D				S	S	10 21 12.0	+0.9
	baz=305						
H04D	Lebanon	55.03	60	P	P	10 13 30.9	+0.3
	baz=305						
H04D				S	S	10 21 14.0	+2.5
	baz=305						
KSH	Kashi	55.08	293	P	P	10 13 35.3	+4.1
KSH				sP	sP	10 13 43.5	+3.7
KSH				PcP	PcP	10 14 37.5	+5.0
KSH				S	S	10 21 22.8	+10
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,820nm,7.6s						
KSH				LR	LR		
	comp=Z,8μm,19.2s						
KSH				LR	LR		
	comp=Z,10μm,16.8s						
KSH				LR	LR		
	comp=Z,18μm,18.6s						
J01E	Myrtle Point	55.10	62	P	P	10 13 31.9	+0.7
	baz=305						
J01E				S	S	10 21 13.7	+1.2
	baz=305						
I03D	Drain, OR	55.14	61	P	P	10 13 33.1	+1.7
	baz=305,SNR=6.5						
I03D				S	S	10 21 15.8	+2.7
	baz=305						
SANI	Sanana	55.25	215	P	P	10 13 31.6	-0.9
	comp=Z,3μmcomp=Z,1μmcomp=Z,68nm,1.3s						
SANI	Sanana	55.25	215	P	P	10 13 32.7	+0.2
G05D	Wamic, OR	55.45	59	P	P	10 13 34.5	+0.8
	baz=305						
G05D				S	S	10 21 18.8	+1.6
	baz=305						
E07A	Sunnyside	55.53	57	IAmb	IAmb	10 13 51.0	
	comp=Z,60nm,1.3s						
K02D	Willamette Mer	55.53	62	P	P	10 13 35.8	+1.3
	baz=306,SNR=6.0						
K02D				S	S	10 21 22.1	+3.6
	baz=306						
DBO	Dodson Butte	55.54	62	IAmb	IAmb	10 13 51.9	
	comp=Z,65nm,1.4s						
I04A	Tendick Farm,	55.64	61	P	P	10 13 35.9	+0.8
	baz=306,SNR=16						
I04A				S	S	10 21 22.0	+2.1
	baz=306						
LUWI	Luwuk	55.65	219	P	P	10 13 36.4	+1.0
	comp=Z,5μmcomp=Z,99nm,1.4s						
LUWI	Luwuk	55.65	219	P	P	10 13 34.9	-0.5
JIRN	Jiri	55.67	275	*e*P	P	10 13 36.8	+0.9
	comp=Z,276nm,0.6s						
C09A	Chrisman Ranch	55.70	55	IAmb	IAmb	10 13 46.1	
	comp=Z,50nm,1.3s						
MPSI	Mapaga	55.71	223	P	P	10 13 35.5	-0.3
	comp=Z,3μmcomp=Z,1μmcomp=Z,30nm,1.8s						
GUN	Gumba	55.71	275	*e*P	P	10 13 36.9	+0.7
	comp=Z,172nm,0.5s						
D08A	Wollman Farm,	55.77	56	P	P	10 13 35.1	-0.8
HAWA	Hanford	55.80	57	P	P	10 13 35.7	-0.5
HAWA				IAmb	IAmb	10 13 52.9	
	comp=Z,96nm,1.8s						
RAMN	Ramite	55.85	274	*e*P	P	10 13 37.8	+0.7
	comp=Z,548nm,0.7s						
DAG	Danmarks Havn	55.87	358	⇑*i*P	P	10 13 34.9	-1.3
DAG				IAmb	IAmb	10 13 52.1	
	comp=Z,73nm,1.9s						
L02F	Cave Junction	55.92	63	P	P	10 13 37.9	+0.8
	baz=306						
L02F				S	S	10 21 26.7	+3.1
	baz=306						
I05D	Terrebonne, OR	55.95	60	P	P	10 13 38.3	+0.9
	baz=306,SNR=10						
I05D				S	S	10 21 24.6	+0.6
	baz=306						
HUMO	Hull Mountain	56.01	62	IAmb	IAmb	10 13 55.1	
	comp=Z,69nm,1.4s						
HUMO				IAMs_20	IAMs_20	10 33 35.6	
	comp=Z,3μm,22.0s						
APSI	Ampana	56.02	221	P	P	10 13 37.6	-0.4
	comp=Z,1μmcomp=Z,91nm,1.4s						
NEW	Newport	56.06	54	P	P	10 13 38.2	+0.1
	baz=305,SNR=19						
NEW				S	S	10 21 24.9	-0.4
	baz=305						
J04D	Umpqua Nationa	56.14	61	P	P	10 13 39.3	+0.4
	baz=306,SNR=15						
J04D				S	S	10 21 28.6	+1.8
	baz=306						
PKI	Pulchoki	56.25	275	*e*P	P	10 13 40.6	+0.6
	comp=Z,116nm,0.5s						
PKIN	Phulchoki	56.26	275	*e*P	P	10 13 40.7	+0.7
	comp=Z,120nm,0.5s						
KK31	Karatay Array	56.30	299	P	P	10 13 39.0	-0.9
KK31	Karatay Array	56.30	299	P	P	10 13 39.0	-0.9
KK31				pmax	pmax		
	comp=Z,14nm,0.9s						
KKAR	Karatay Array	56.30	299	P	P	10 13 39.0	-0.9
KKAR	Karatay Array	56.30	299	P	P	10 13 39.0	-0.9
KKAR				pmax	pmax		
	comp=Z,14nm,0.9s						
LVZ	Lovozero	56.34	337	*c* *e*P	P	10 13 40.3	+0.5
LVZ				pmax	pmax		
	comp=Z,38nm,1.7s						
LVZ				MLR	MLR		
	comp=Z,9μm,18.0s						
DMN	Daman	56.43	276	*e*P	P	10 13 42.3	+1.1
	comp=Z,320nm,0.6s						
GKN	Gorkha	56.49	276	*e*P	P	10 13 42.4	+0.8
	comp=Z,211nm,0.5s						
E09A	Wood Farm, Sta	56.52	56	IAmb	IAmb	10 13 58.5	
	comp=Z,54nm,1.2s						
KHMM	Horse Mountain	56.56	64	IAmb	IAmb	10 13 59.4	
	comp=Z,99nm,1.5s						
L04D	Klamath Falls	56.63	62	P	P	10 13 43.3	+0.9
	baz=306,SNR=12						
L04D				S	S	10 21 36.5	+3.3
	baz=306						
J05D	Fort Rock, OR	56.63	60	P	P	10 13 43.7	+1.4
	baz=306,SNR=22						
J05D				S	S	10 21 35.6	+2.4
	baz=306						
YBH	Yreka Blue Hor	56.67	63	LR	LR	10 33 34.9	
	comp=Z,2μm,21.9s,baz=310,slow=31						
YBH	Yreka Blue Hor	56.67	63	IAmb	IAmb	10 14 00.1	
	comp=Z,53nm,1.2s						
K04D	Chiloquin, OR	56.72	61	P	P	10 13 43.8	+0.8
	baz=306						
K04D				S	S	10 21 37.6	+3.2
	baz=306						
BRLS	Borolday	56.75	299	*e*P	P	10 13 43.5	+0.5
BRLS	Borolday	56.75	299	*e*P	P	10 13 43.5	+0.5
	baz=299						
G08A	Pilot Rock	56.77	57	P	P	10 13 43.8	+0.6
DANN	Dangsing	56.86	277	*e*P	P	10 13 45.4	+1.1
	comp=Z,270nm,0.5s						
HAMF	Hammerfest	56.87	342	*e*P	P	10 13 43.4	+0.1
APA	Apatity	56.91	337	⇓*i*P	P	10 13 41.3	-2.4
APA				*i* SSS	SSS	10 13 46.0	
APA				*i*		10 14 47.0	
APA				*i* PPP	PPP	10 17 09.0	
APA				*i* S	S	10 21 32.0	-3.9
APA				*i* PS	PnS	10 21 48.0	+0.4
APA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HNR	Honiara	56.95	173	LR	LR	10 36 06.0	
	comp=Z,3μm,19.7s,baz=353,slow=34						
HNR	Honiara	56.95	173	P	P	10 13 43.0	-1.6
HNR	Honiara	56.95	173	IAMs_20	IAMs_20	10 35 25.5	
	comp=Z,3μm,19.0s						
HNR	Honiara	56.95	173	P	P	10 13 43.0	-1.6
HNR				pmax	pmax		
	comp=Z,100nm,1.1s						
PMG	Port Moresby	57.05	188	LR	LR	10 34 54.5	
	comp=Z,2μm,21.6s,baz=356,slow=32						
PRGR	Permogore	57.12	327	*e*P	P	10 13 45.0	-0.3
IUG	Iuzhnay	57.16	298	*c* *i*P	P	10 13 45.7	-0.3
IUG				*e*S	S	10 21 39.8	-0.2
IUG	Iuzhnay	57.16	298	⇑*i*P	P	10 13 45.7	-0.3
	baz=298						
IUG				*e*S	S	10 21 39.9	-0.2
	baz=298						
I07A	Izee	57.17	59	IAmb	IAmb	10 14 03.3	
	comp=Z,110nm,1.7s						
WALA	Waterton Lakes	57.32	51	IAmb	IAmb	10 13 58.2	
	comp=Z,71nm,1.2s						
F10A	Beach Ranch, E	57.35	56	P	P	10 13 46.3	-1.0
ARA0	ARCESS Array S	57.35	341	*e*P	P	10 13 46.0	-0.9
ARCES	ARCESS Array B	57.35	341	P	P	10 13 46.6	-0.3
	comp=Z,8.0nm,0.4s,baz=34,slow=8.2,SNR=0.7						
ARCES				LR	LR	10 42 07.4	
	comp=Z,9μm,20.8s,baz=35,slow=40						
VLK	Valmikinagar	57.46	276	*e*P	P	10 13 49.0	+0.9
PYUN	Piuthan	57.54	277	*e*P	P	10 13 49.8	+0.8
KIRV	Kirov	57.61	323	LR	LR	10 40 14.6	
	comp=Z,4μm,20.3s,baz=42,slow=38						
DRK	Karamyk	57.69	295	P	P	10 13 49.8	-0.2
DRK				IAmb	IAmb	10 13 52.2	
	comp=Z,42nm,0.9s						
SBUM	Sibu	57.74	232	P	P	10 13 51.2	+1.0
SBUM				IAMs_20	IAMs_20	10 38 31.7	
	comp=Z,3μm,21.0s						
BMO	Blue Mountains	57.97	57	IAmb	IAmb	10 14 02.4	
	comp=Z,103nm,1.6s						
MOD	Modoc Plateau	58.01	61	P	P	10 13 52.1	0.0
MOD				IAmb	IAmb	10 14 09.2	
	comp=Z,55nm,1.2s						
MOD				IAMs_20	IAMs_20	10 35 06.6	
	comp=Z,2μm,21.0s						
HOPS	Hopland Field	58.10	66	IAMs_20	IAMs_20	10 32 34.0	
	comp=Z,3μm,22.0s						
UPNV	Upernavik	58.11	10	*i* P	P	10 13 51.3	-0.8
UPNV				IAmb	IAmb	10 14 00.5	
	comp=Z,57nm,1.1s						
J08A	Circle Bar Ran	58.20	59	IAmb	IAmb	10 14 10.8	
	comp=Z,55nm,1.3s						
KTK1	Kautokeino	58.27	341	*e*P	P	10 13 53.7	+0.4
KNTN	Kanton	58.30	139	IAMs_20	IAMs_20	10 35 07.1	
	comp=Z,3μm,20.0s						
DBG	Daneborg	58.38	358	⇑*i*P	P	10 13 52.3	-1.7
DBG				IAmb	IAmb	10 13 55.0	
	comp=Z,552nm,3.9s						
JETT	Jettan, Norway	58.41	343	*e*P	P	10 13 54.7	+0.3
BOK	Bokaro	58.42	272	*e*P	P	10 13 56.2	+1.2
BOK				IAmb	IAmb	10 14 01.6	
	comp=Z,39nm,1.0s						
PTH	Pithoragarh	58.46	281	*e*P	P	10 13 55.0	-0.4
LGTI	Lohaghat	58.50	280	*e*P	P	10 13 55.8	+0.4
AB31	Akbulak array	58.52	310	P	P	10 13 54.2	-1.1
ABKAR	Akbulak array	58.52	310	P	P	10 13 54.8	-0.6
ABKAR				IAmb	IAmb	10 14 03.5	
	comp=Z,56nm,1.4s						
PLID	Pearl Lake	58.57	56	P	P	10 13 55.9	-0.2
PLID				IAMs_20	IAMs_20	10 35 01.3	
	comp=Z,3μm,22.0s						
TRO	Tromso	58.64	343	*e*P	P	10 13 56.6	+0.8
MSO	Missoula	58.65	53	P	P	10 13 57.1	+0.7
MSO				IAmb	IAmb	10 14 07.6	
	comp=Z,62nm,1.1s						
MSO	Missoula	58.65	53	P	P	10 13 57.2	+0.7
	baz=308						
MSO				S	S	10 22 00.3	+0.7
	baz=308						
WVOR	Wild Horse Val	58.67	60	P	P	10 13 56.6	-0.1
WVOR				IAmb	IAmb	10 14 13.7	
	comp=Z,69nm,1.4s						
WVOR	Wild Horse Val	58.67	60	P	P	10 13 56.6	-0.1
WVOR				pmax	pmax		
	comp=Z,69nm,1.4s						
ORV	Oroville	58.72	64	IAmb	IAmb	10 14 13.0	
	comp=Z,55nm,1.6s						
TTSI	Tana Toraja	58.73	221	P	P	10 13 57.5	+0.3
	comp=Z,14nm,1.3s						
AKTO	Aktyubinsk	58.78	312	LR	LR	10 41 33.9	
	comp=Z,4μm,18.7s,baz=44,slow=38						
BEKR	Beckworth	59.22	63	P	P	10 14 00.2	-0.4
BEKR				IAmb	IAmb	10 14 17.8	
	comp=Z,30nm,1.1s						
MTKI	Muara Teweh, K	59.23	228	P	P	10 14 02.4	+1.8
DDI	Dehra Dun	59.40	283	*e*P	P	10 14 02.9	+1.1
DDI				IAmb	IAmb	10 14 04.8	
	comp=Z,213nm,1.0s						
SPSI	Sidrap Palu	59.57	221	P	P	10 14 03.1	+0.1
	comp=Z,1μmcomp=Z,63nm,1.6s						
THN	Thein Dam	59.58	286	*e*P	P	10 14 02.4	-0.5
KSM	Kuching	59.59	234	P	P	10 14 02.2	-0.9
KSM	Kuching	59.59	234	P	P	10 14 04.7	+1.6
NUUG	Nuugaatsiaq	59.62	10	*i* P	P	10 14 02.1	-0.4
MFID	Camas Ranch	59.70	58	P	P	10 14 03.5	-0.3
MFID				IAmb	IAmb	10 14 20.6	
	comp=Z,85nm,1.6s						
BHK	Bhakra	59.77	285	*e*P	P	10 14 04.5	+0.2
MPK	Martis Peak	59.77	64	IAmb	IAmb	10 14 22.0	
	comp=Z,63nm,1.3s						
BNSI	Bone	59.81	220	P	P	10 14 06.2	+1.6
	comp=Z,2μmcomp=Z,53nm,1.4s						
CHGR	Chuyangaron	59.81	296	P	P	10 14 03.8	-0.8
CHGR	Chuyangaron	59.81	296	P	P	10 14 03.8	-0.8
CHGR				pmax	pmax		
	comp=Z,64nm,0.7s						
KLMR	Klimovskoe	59.83	329	*e*P	P	10 14 03.0	-1.1
KLMR				*e*S	S	10 22 10.4	-3.6
KLMR				*e*SS	SS	10 26 12.3	+2.9
KLMR				pmax	pmax		
	comp=Z,46nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,5μm,15.0s						
KLMR	Klimovskoe	59.83	329	*e*P	P	10 14 03.1	-1.1
KLMR				AMP		10 14 08.2	
	comp=Z,46nm,1.1s						
KLMR				*e*S	S	10 22 10.4	-3.6
KLMR				*e*S	S	10 22 10.4	-3.6
KLMR				*e*SS	SS	10 26 12.3	+2.9
KLMR				*e*SS	SS	10 26 12.3	+2.9
KLMR				LQ	LQ	10 35 18.0	
KLMR				LQ	LQ	10 35 18.0	
KLMR				LR	LR	10 40 34.5	
KLMR				AMP		10 45 08.0	
	comp=Z,5μm,14.7s						
SUMG	Summit	59.84	4	P	P	10 14 05.3	+0.6
SUMG	Summit	59.84	4	P	P	10 14 05.3	+0.6
SUMG				pmax	pmax		
	comp=Z,152nm,1.0s						
SUMG				MLR	MLR		
	comp=Z,6μm,20.0s						
SUMG	Summit	59.84	4	*i* P	P	10 14 05.5	+0.9
SUMG				IAmb	IAmb	10 14 08.9	
	comp=Z,116nm,0.9s						
JMU	Jammu	59.93	287	*e*P	P	10 14 04.7	-0.6
EMB	Emerald Bay	59.93	64	IAmb	IAmb	10 14 22.4	
	comp=Z,32nm,1.1s						
VCNR	Virginia City	60.01	63	IAmb	IAmb	10 14 22.9	
	comp=Z,60nm,1.4s						
EGMT	Eagleton	60.14	50	IAMs_20	IAMs_20	10 38 13.4	
	comp=Z,3μm,22.0s						
FCC	Fort Churchill	60.16	34	P	P	10 14 06.8	+0.4
FCC				IAmb	IAmb	10 14 08.2	
	comp=Z,68nm,1.3s						
FCC	Fort Churchill	60.16	34	P	P	10 14 06.8	+0.4
FCC				pmax	pmax		
	comp=Z,68nm,1.3s						
ALBI	Allahabad	60.16	276	*e*P	P	10 14 06.2	-0.9
PNTR	Pine Nut	60.16	64	IAmb	IAmb	10 14 25.7	
	comp=Z,30nm,0.7s						
SRIT	Nakonsritamara	60.22	248	P	P	10 14 09.1	+1.6
SRIT				IAmb	IAmb	10 14 10.0	
	comp=Z,36nm,0.7s						
CMB	Columbia Colle	60.35	65	IAmb	IAmb	10 14 24.9	
	comp=Z,59nm,1.5s						
NIL	Nilore	60.40	289	P	P	10 14 07.8	-0.8
NIL	Nilore	60.40	289	P	P	10 14 07.8	-0.8
NIL				pmax	pmax		
	comp=Z,118nm,0.9s						
NIL				MLR	MLR		
	comp=Z,12μm,20.0s						
HLID	Hailey	60.41	57	IAmb	IAmb	10 14 26.5	
	comp=Z,38nm,1.1s						
HLID				IAMs_20	IAMs_20	10 44 39.9	
	comp=Z,2μm,19.0s						
HLID	Hailey	60.41	57	P	P	10 14 09.6	+0.9
	baz=309,SNR=41						
HLID				S	S	10 22 24.7	+2.3
	baz=309						
MCMT	McKenzie Canyo	60.49	55	P	P	10 14 09.8	+0.5
BCYI	Bear Canyon	60.51	55	P	P	10 14 09.2	-0.3
KAPI	Kappang	60.52	220	P	P	10 14 09.5	+0.1
	comp=Z,18nm,0.4s,baz=107,slow=1.6,SNR=9.9						
KAPI				LR	LR	10 41 41.8	
	comp=Z,468nm,20.2s,baz=26,slow=37						
	comp=Z,18nm,0.4s						
KAPI	Kappang	60.52	220	P	P	10 14 10.1	+0.7
KAPI	Kappang	60.52	220	P	P	10 14 10.1	+0.7
KAPI				pmax	pmax		
	comp=Z,99nm,1.3s						
KAPI	Kappang	60.52	220	P	P	10 14 10.6	+1.2
BKSI	Bulukumba	60.63	220	P	P	10 14 10.4	+0.2
	comp=Z,775nmcomp=Z,34nm,0.9s						
BOZ	Bozeman (W)	60.67	53	P	P	10 14 09.8	-0.7
BOZ	Bozeman (W)	60.67	53	P	P	10 14 09.8	-0.7
BOZ				pmax	pmax		
	comp=Z,82nm,1.1s						
BOZ	Bozeman (W)	60.67	53	P	P	10 14 11.5	+1.0
	baz=309,SNR=77						
BOZ				S	S	10 22 26.5	+0.8
	baz=309						
BMN	Battle Mountai	60.75	61	IAmb	IAmb	10 14 28.1	
	comp=Z,55nm,1.1s						
STEI	Steigen	60.81	344	*e*P	P	10 14 10.8	+0.1
BWNR	Bhubaneshwar	60.85	269	*e*P	P	10 14 11.9	+0.2
LOF	Lofoten	60.95	344	*e*P	P	10 14 12.0	+0.2
KVN	Kaiserville	61.09	63	P	P	10 14 13.9	+0.5
KVN				IAmb	IAmb	10 14 31.1	
	comp=Z,64nm,1.3s						
KVN	Kaiserville	61.09	63	P	P	10 14 13.9	+0.5
KVN				pmax	pmax		
	comp=Z,65nm,1.3s						
RYN	Ryan	61.11	63	IAmb	IAmb	10 14 30.4	
	comp=Z,39nm,1.3s						
DGPR	DIGLIPUR	61.11	257	*e*P	P	10 14 14.8	+1.3
DGPR				IAmb	IAmb	10 14 20.3	
	comp=Z,115nm,1.0s						
JMIC	Jan Mayen	61.12	354	LR	LR	10 38 27.5	
	comp=Z,2μm,21.6s,baz=20,slow=34						
FAUS	Fauske	61.27	343	⇑*i*P	P	10 14 13.5	-0.4
NVAR	Mina Array Bea	61.37	63	P	P	10 14 16.4	+1.0
	comp=Z,5.3nm,0.6s,baz=301,slow=7.2,SNR=37						
NVAR				LR	LR	10 35 53.8	
	comp=Z,1μm,22.0s,baz=301,slow=31						
	comp=Z,5.3nm,0.6s						
NVAR	Mina Array Bea	61.37	63	P	P	10 14 15.5	+0.2

SONA	**Sohna**	**61.38**	**282**	*e*P	**P**	**10 14 15.7**	**+0.4**
YHL	**Hebgen Lake**	**61.39**	**54**	P	**P**	**10 14 15.3**	**-0.2**
MDPB	**Devils Postpil**	**61.40**	**65**	P	**P**	**10 14 14.0**	**-1.7**
MDPB				IAmb	IAmb	10 14 32.4	
	comp=Z,50nm,1.6s						
BBKI	**Banjar Baru**	**61.43**	**226**	P	**P**	**10 14 16.3**	**+0.6**
	comp=Z,41nm,0.8s						
NV11	**Mina Array Sit**	**61.45**	**63**	P	**P**	**10 14 15.6**	**-0.3**
OMMB	**Old Mammoth Mi**	**61.46**	**64**	P	**P**	**10 14 14.3**	**-1.8**
OMMB				IAmb	IAmb	10 14 49.8	
	comp=Z,52nm,1.9s						
XMAS	**Kiritimati**	**61.54**	**122**	IAMs_20	IAMs_20	10 32 17.0	
	comp=Z,3µm,22.0s						
MLAC	**Mammoth, Mammo**	**61.55**	**64**	P	**P**	**10 14 17.4**	**+0.8**
	baz=310						
GCMT	**Greycliff**	**61.61**	**52**	P	**P**	**10 14 16.8**	**0.0**
ELK	**Elko**	**61.72**	**60**	LR	LR	10 38 13.4	
	comp=Z,2µm,21.5s,baz=323,slow=33						
ELK	**Elko**	**61.72**	**60**	P	**P**	**10 14 17.9**	**+0.2**
ELK	**Elko**	**61.72**	**60**	P	**P**	**10 14 17.9**	**+0.2**
ELK				pmax	pmax		
	comp=Z,32nm,1.4s						
YNR	**Norris Junctio**	**61.75**	**54**	P	**P**	**10 14 18.4**	**+0.6**
YNR				IAmb	IAmb	10 14 35.9	
	comp=Z,42nm,1.0s						
KUDL	**Kundal**	**61.85**	**282**	*e*P	**P**	**10 14 18.2**	**-0.2**
PAGB	**Antelope Grade**	**61.90**	**67**	IAmb	IAmb	10 14 35.4	
	comp=Z,56nm,1.3s						
LKWY	**Lake**	**62.00**	**54**	IAmb	IAmb	10 14 40.4	
	comp=Z,61nm,1.1s						
LKWY				IAMs_20	IAMs_20	10 41 16.0	
	comp=Z,3µm,20.0s						
H17A	**Grant Village**	**62.02**	**54**	P	**P**	**10 14 22.1**	**+2.4**
	baz=310,SNR=33						
H17A				S	**S**	**10 22 49.2**	**+6.2**
	baz=310						
COEN	**Coen**	**62.03**	**192**	P	**P**	**10 14 20.5**	**+0.9**
ILULI	**Ilulissat**	**62.05**	**10**	*i* P	**P**	**10 14 18.1**	**-1.1**
VOG	**Valley Oaks Go**	**62.05**	**66**	P	**P**	**10 14 20.6**	**+0.9**
	baz=310						
VOG				S	**S**	**10 22 43.5**	**+0.4**
	baz=310						
BLSP	**Bilaspur**	**62.08**	**273**	*e*P	**P**	**10 14 19.6**	**-0.5**
KULM	**Kulim**	**62.13**	**245**	P	**P**	**10 14 21.4**	**+1.0**
KULM				IAmb	IAmb	10 14 24.4	
	comp=Z,69nm,1.3s						
KULM				IAMs_20	IAMs_20	10 39 53.2	
	comp=Z,3µm,22.0s						
FLWY	**Flagg Ranch**	**62.15**	**54**	IAmb	IAmb	10 14 39.4	
	comp=Z,44nm,0.9s						
SCO	**Scoresbysund**	**62.25**	**359**	P	**P**	**10 14 20.3**	**-0.1**
SCO				IAmb	IAmb	10 14 22.0	
	comp=Z,40nm,1.0s						
SCO				IAMs_20	IAMs_20	10 44 31.6	
	comp=Z,2µm,18.0s						
SCO	**Scoresbysund**	**62.25**	**359**	P	**P**	**10 14 20.3**	**-0.1**
SCO				pmax	pmax		
	comp=Z,40nm,1.0s						
SCO				MLR	MLR		
	comp=Z,2µm,18.0s						
SCO	**Scoresbysund**	**62.25**	**359**	*i* P	**P**	**10 14 21.1**	**+0.6**
SCO				IAmb	IAmb	10 14 21.7	
	comp=Z,41nm,1.0s						
RLMT	**Red Lodge**	**62.26**	**53**	IAMs_20	IAMs_20	10 46 25.7	
	comp=Z,2µm,18.0s						
RLMT	**Red Lodge**	**62.26**	**53**	P	**P**	**10 14 22.6**	**+1.4**
	baz=310,SNR=81						
RLMT				S	**S**	**10 22 48.6**	**+2.6**
	baz=310						
JHNI	**Jhansi**	**62.26**	**278**	*e*P	**P**	**10 14 20.8**	**-0.4**
TIN	**Tinemaha, Big**	**62.29**	**65**	P	**P**	**10 14 22.0**	**+0.5**
	baz=310						
SMMC	**Simmler**	**62.32**	**67**	P	**P**	**10 14 22.6**	**+1.0**
	baz=310						
SMMC				S	**S**	**10 22 48.4**	**+1.8**
	baz=310						
MOOW	**Moose Ponds**	**62.34**	**55**	IAmb	IAmb	10 14 40.3	
	comp=Z,50nm,1.2s						
PBKI	**Pangkalan Bun**	**62.38**	**230**	P	**P**	**10 14 23.2**	**+1.1**
TPAW	**Teton Pass**	**62.39**	**55**	P	**P**	**10 14 21.7**	**-0.6**
KONS	**Konsvik**	**62.46**	**344**	*e*P	**P**	**10 14 18.7**	**-3.3**
HVU	**Hansel Valley**	**62.47**	**57**	IAmb	IAmb	10 14 39.8	
	comp=Z,41nm,1.3s						
MOR8	**Moi Rana**	**62.49**	**343**⇑	*i*P	**P**	**10 14 20.2**	**-2.0**
KBL	**Kabul**	**62.50**	**292**	P	**P**	**10 14 22.1**	**-0.9**
KBL				IAmb	IAmb	10 14 23.8	
	comp=Z,42nm,0.8s						
KBL	**Kabul**	**62.50**	**292**	P	**P**	**10 14 22.1**	**-0.9**
KBL				pmax	pmax		
	comp=Z,42nm,0.9s						
LOHW	**Long Hollow**	**62.51**	**55**	P	**P**	**10 14 23.3**	**+0.3**
LCH	**Last Change Ra**	**62.53**	**64**	P	**P**	**10 14 22.0**	**-1.1**
LCH				IAmb	IAmb	10 14 39.9	
	comp=Z,36nm,1.4s						
IPM	**Ipoh**	**62.53**	**244**	P	**P**	**10 14 23.7**	**+0.5**
IPM				IAMs_20	IAMs_20	10 42 21.0	
	comp=Z,2µm,19.0s						
IPM	**Ipoh**	**62.53**	**244**	P	**P**	**10 14 24.1**	**+0.9**
VES	**Vestal, Richgr**	**62.55**	**66**	P	**P**	**10 14 22.8**	**-0.2**
	baz=310,SNR=8.9						
STOK	**Stokkvaagen**	**62.63**	**343**	*e*P	**P**	**10 14 23.8**	**+0.7**
DGMT	**Dagmar**	**62.68**	**47**	P	**P**	**10 14 24.2**	**+0.4**
DGMT	**Dagmar**	**62.68**	**47**	P	**P**	**10 14 24.4**	**+0.7**
	baz=312,SNR=6.1						
DGMT				S	**S**	**10 22 53.5**	**+2.6**
	baz=312						
DGMT	**Dagmar**	**62.68**	**47**	P	**P**	**10 14 24.5**	**+0.7**
	baz=312,SNR=6.1						
DGMT				S	**S**	**10 22 53.1**	**+2.3**
	baz=312						
PKM	**Mcpherson Peak**	**62.71**	**67**	P	**P**	**10 14 25.2**	**+0.8**
	baz=311						
PKM				S	**S**	**10 22 53.7**	**+1.8**
	baz=311						
MMRI	**Maumere**	**62.73**	**216**	P	**P**	**10 14 25.5**	**+1.1**
	comp=Z,4µmcomp=Z,70nm,1.2s						
MMRI	**Maumere**	**62.73**	**216**	P	**P**	**10 14 23.7**	**-0.7**
CWC	**Cottonwood Cre**	**62.78**	**65**	P	**P**	**10 14 26.0**	**+1.2**
	baz=310						
CWC				S	**S**	**10 22 54.5**	**+1.9**
	baz=310						
LAO	**LASA Array**	**62.84**	**50**	IAMs_20	IAMs_20	10 46 39.0	
	comp=Z,3µm,18.0s						
LAO	**LASA Array**	**62.84**	**50**	P	**P**	**10 14 25.9**	**+1.0**
	baz=311						
LAO				S	**S**	**10 22 56.6**	**+3.7**
	baz=311						
LAO	**LASA Array**	**62.84**	**50**	P	**P**	**10 14 25.7**	**+0.8**
	baz=311						
LAO				S	**S**	**10 22 57.3**	**+4.4**
	baz=311						
GRAC	**Grapevine Rang**	**62.86**	**64**	P	**P**	**10 14 26.3**	**+1.2**
	baz=310						
GRAC				S	**S**	**10 22 55.9**	**+2.5**
	baz=310						
BGU	**Big Grassy Mou**	**62.88**	**58**	P	**P**	**10 14 25.5**	**+0.1**
SOEI	**Soe**	**62.97**	**214**	P	**P**	**10 14 27.0**	**+0.9**
	comp=Z,2µmcomp=Z,65nm,1.4s						
SOEI	**Soe**	**62.97**	**214**	P	**P**	**10 14 25.8**	**-0.3**
ISA	**Isabella, Lake**	**63.04**	**66**	P	**P**	**10 14 25.7**	**-0.7**
ISA				IAmb	IAmb	10 14 42.9	
	comp=Z,57nm,1.8s						
ISA	**Isabella, Lake**	**63.04**	**66**	P	**P**	**10 14 25.7**	**-0.7**
ISA				pmax	pmax		
	comp=Z,57nm,1.8s						
ISA	**Isabella, Lake**	**63.04**	**66**	P	**P**	**10 14 27.0**	**+0.6**
	baz=311						
ISA				S	**S**	**10 22 55.8**	**+0.1**
	baz=311						
KDU	**Kakadu**	**63.05**	**204**	P	**P**	**10 14 28.8**	**+2.4**
R11A	**Troy Canyon, C**	**63.05**	**62**	P	**P**	**10 14 25.9**	**-0.7**
R11A				IAmb	IAmb	10 14 44.0	
	comp=Z,59nm,1.4s						
R11A	**Troy Canyon, C**	**63.05**	**62**	P	**P**	**10 14 27.0**	**+0.4**
	baz=311,SNR=21						
R11A				S	**S**	**10 22 56.7**	**+0.6**
	baz=311						
EDFI	**Ende, Flores**	**63.06**	**217**	P	**P**	**10 14 26.4**	**-0.3**
	comp=Z,614nmcomp=Z,23nm,1.5s						
SBC	**Santa Barbara**	**63.06**	**68**	S	**S**	**10 22 57.8**	**+1.9**
	baz=311						
RAGD	**RAYAGADA**	**63.17**	**270**	*e*P	**P**	**10 14 28.1**	**+0.7**
ARVC	**Arvin**	**63.17**	**67**	P	**P**	**10 14 27.1**	**-0.1**
	baz=311						
ICESG	**Greenland Ices**	**63.22**	**6**⇑	*i*P	**P**	**10 14 27.6**	**+0.2**
ICESG				IAmb	IAmb	10 14 31.5	
	comp=Z,126nm,1.0s						
SCZ2	**Santa Cruz Isl**	**63.40**	**68**	P	**P**	**10 14 28.6**	**-0.2**
	baz=311						
DUG	**Dugway, Tooele**	**63.48**	**59**	P	**P**	**10 14 30.4**	**+1.0**
	baz=311,SNR=34						
DUG				S	**S**	**10 23 06.1**	**+4.8**
	baz=311						
FURC	**Furnace Creek,**	**63.51**	**64**	P	**P**	**10 14 29.8**	**+0.5**
	baz=311,SNR=18						
FURC				S	**S**	**10 23 02.8**	**+1.5**
	baz=311						
TPNV	**Topopah Spring**	**63.56**	**63**	IAmb	IAmb	10 14 46.7	
	comp=Z,64nm,1.2s						
TPNV				IAMs_20	IAMs_20	10 36 11.6	
	comp=Z,2µm,22.0s						
TPNV	**Topopah Spring**	**63.56**	**63**	P	**P**	**10 14 30.2**	**+0.2**
	baz=311,SNR=24						
TPNV				S	**S**	**10 23 05.4**	**+2.9**
	baz=311						
OSI	**Osito Audit: C**	**63.57**	**67**	P	**P**	**10 14 29.9**	**0.0**
	baz=311						
OSI				S	**S**	**10 23 04.2**	**+1.9**
	baz=311						
MTN	**Manton Dam**	**63.57**	**205**	IAmb	IAmb	10 15 03.6	
	comp=Z,24nm,0.9s						
MTN	**Manton Dam**	**63.57**	**205**	P	**P**	**10 14 31.0**	**+1.1**
BW06	**Boulder Array**	**63.64**	**55**	P	**P**	**10 14 30.5**	**0.0**
BW06	**Boulder Array**	**63.64**	**55**	P	**P**	**10 14 31.1**	**+0.6**
	baz=311,SNR=35						
BW06				S	**S**	**10 23 04.9**	**+1.5**
	baz=311						
PD31	**Pinedale Array**	**63.64**	**55**	P	**P**	**10 14 30.8**	**+0.3**
PDAR	**Pinedale Array**	**63.64**	**55**	P	**P**	**10 14 31.1**	**+0.6**
	comp=Z,23nm,1.1s,baz=304,slow=2.9,SNR=78						
PDAR				LR	LR	10 40 38.2	
	comp=Z,1µm,21.9s,baz=334,slow=35						
	comp=Z,23nm,1.1s						
FINES	**FINESS Array B**	**63.65**	**335**	P	**P**	**10 14 29.0**	**-0.9**
	comp=Z,29nm,0.5s,baz=36,slow=7.4,SNR=98						
FINES				LR	LR	10 46 49.4	
	comp=Z,6µm,18.3s,baz=30,slow=40						
	comp=Z,29nm,0.5s						
FINES	**FINESS Array B**	**63.65**	**335**	P	**P**	**10 14 29.0**	**-0.9**
LRMC	**Laurel Mtn Rad**	**63.65**	**66**	P	**P**	**10 14 31.5**	**+1.0**
	baz=311						
LRMC				S	**S**	**10 23 04.7**	**+1.2**
	baz=311						
EDW2	**Edwards Air Fo**	**63.85**	**66**	P	**P**	**10 14 31.9**	**+0.2**
	baz=311,SNR=7.8						
EDW2				S	**S**	**10 23 06.5**	**+0.6**
	baz=311						
PSUT	**Pine Spring**	**63.96**	**61**	IAmb	IAmb	10 14 49.4	
	comp=Z,69nm,1.6s						
SNCC	**San Nicolas Is**	**63.96**	**69**	P	**P**	**10 14 32.5**	**+0.1**
	baz=311						
PRN	**Pahroc Range**	**63.99**	**62**	P	**P**	**10 14 32.7**	**0.0**
PRN				IAmb	IAmb	10 14 50.6	
	comp=Z,96nm,1.7s						
JLU	**Jordanelle**	**64.00**	**58**	IAmb	IAmb	10 14 50.0	
	comp=Z,63nm,1.3s						
FRB	**Frobisher Bay**	**64.03**	**20**	LR	LR	10 44 58.3	
	comp=Z,4µm,20.9s,baz=328,slow=38						
DECC	**Green Verdugo**	**64.05**	**67**	P	**P**	**10 14 33.0**	**0.0**
	baz=311						
DECC				S	**S**	**10 23 08.2**	**0.0**
	baz=311						
NLU	**North Lily Min**	**64.07**	**59**	P	**P**	**10 14 32.1**	**-1.3**
NLU				IAmb	IAmb	10 14 50.9	
	comp=Z,43nm,1.0s						
AJM	**Ajmer**	**64.18**	**282**	*e*P	**P**	**10 14 34.2**	**+0.2**
PASC	**Pasadena Art C**	**64.19**	**67**	P	**P**	**10 14 32.8**	**-1.2**
PASC				IAmb	IAmb	10 14 50.1	
	comp=Z,61nm,1.6s						
SFJD	**Kangerlussuaq**	**64.22**	**11**	LR	LR	10 44 30.3	
	comp=Z,6µm,20.0s,baz=343,slow=38						
SFJD	**Kangerlussuaq**	**64.22**	**11**	P	**P**	**10 14 33.8**	**+0.2**
SFJD	**Kangerlussuaq**	**64.22**	**11**	P	**P**	**10 14 33.8**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,18nm,0.9s						
SFJD				MLR	MLR		
	comp=Z,6µm,20.0s						
SFJD	**Kangerlussuaq**	**64.22**	**11**	*i* P	**P**	**10 14 33.8**	**+0.2**
SFJD				IAmb	IAmb	10 14 37.0	
	comp=Z,38nm,1.3s						
MOS	**Moscow**	**64.22**	**326**	*e*P	**P**	**10 14 31.3**	**-2.5**
MOS				*e*		10 15 05.7	
MOS				*e*S	**S**	**10 23 07.0**	**-2.7**
MOS				pmax	pmax		
	comp=Z,55nm,1.1s						
MOS	**Moscow**	**64.22**	**326**	*e*P	**P**	**10 14 33.5**	**-0.3**
SHOC	**Shoshone, Teco**	**64.24**	**64**	P	**P**	**10 14 34.6**	**+0.3**
	baz=311,SNR=5.5						
SHOC				S	**S**	**10 23 12.1**	**+1.5**
	baz=311						
MPU	**Maple Canyon**	**64.28**	**58**	IAmb	IAmb	10 14 52.4	
	comp=Z,39nm,1.1s						
GSC	**Goldstone, Bar**	**64.31**	**65**	IAmb	IAmb	10 14 51.2	
	comp=Z,35nm,1.3s						
GSC	**Goldstone, Bar**	**64.31**	**65**	P	**P**	**10 14 34.7**	**-0.1**
	baz=311,SNR=7.9						
GSC				S	**S**	**10 23 13.0**	**+1.4**
	baz=311						
DSRI	**Dabo**	**64.40**	**238**	P	**P**	**10 14 36.5**	**+1.1**
	comp=Z,3µmcomp=Z,5µmcomp=Z,24nm,1.4s						
FMP	**Fort Macarthur**	**64.43**	**67**	P	**P**	**10 14 34.8**	**-0.7**
	baz=312						
FMP				S	**S**	**10 23 13.8**	**+1.0**
	baz=312						
NSS	**Namsos**	**64.44**	**343**	*e*P	**P**	**10 14 35.2**	**+0.2**
RRX	**Edison Barstow**	**64.47**	**66**	P	**P**	**10 14 35.5**	**-0.2**
	baz=312						
RRX				S	**S**	**10 23 13.6**	**+0.2**
	baz=312						
BFSC	**Mount Baldy Ra**	**64.48**	**67**	P	**P**	**10 14 36.0**	**0.0**
	baz=312,SNR=5.3						
BFSC				S	**S**	**10 23 13.7**	**-0.1**
	baz=312						
SOEG	**Soedalen**	**64.49**	**2**	*i* P	**P**	**10 14 36.0**	**+0.7**
SOEG				IAmb	IAmb	10 14 36.4	
	comp=Z,63nm,1.2s						
BHPL	**Bhopal**	**64.50**	**277**	*e*P	**P**	**10 14 36.6**	**+0.4**
BHPL				IAmb	IAmb	10 14 39.0	
	comp=Z,147nm,0.9s						
SHPR	**Sheep Range**	**64.52**	**63**	P	**P**	**10 14 36.7**	**+0.5**
SHPR				IAmb	IAmb	10 14 53.2	
	comp=Z,43nm,1.3s						
TPI	**Tanjungpandan**	**64.56**	**234**	P	**P**	**10 14 37.5**	**+1.1**
	comp=Z,711nmcomp=Z,21nm,1.7s						
CIS	**Catalina Islan**	**64.56**	**68**	P	**P**	**10 14 36.0**	**-0.4**
	baz=312						
CIS				S	**S**	**10 23 16.9**	**+2.3**
	baz=312						
TCRU	**Three Creeks R**	**64.74**	**60**	P	**P**	**10 14 38.0**	**+0.3**
SCI2	**San Clemente I**	**64.75**	**68**	P	**P**	**10 14 37.9**	**+0.3**
	baz=312						
SCI2				S	**S**	**10 23 19.1**	**+2.1**
	baz=312						
TUQ	**Turquoise Moun**	**64.76**	**65**	P	**P**	**10 14 37.7**	**0.0**
	baz=312,SNR=6.7						
TUQ				S	**S**	**10 23 19.4**	**+2.2**
	baz=312						
PPBI	**Pangkal Pinang**	**64.90**	**235**	P	**P**	**10 14 39.7**	**+1.0**
	comp=Z,28µmcomp=Z,39nm,0.6s						
CCUT	**Cedar City**	**64.90**	**61**	IAmb	IAmb	10 14 55.9	
	comp=Z,59nm,1.3s						
HEC	**Hector,Ludlow**	**64.91**	**65**	P	**P**	**10 14 39.0**	**+0.3**
	baz=312,SNR=8.1						
HEC				S	**S**	**10 23 20.0**	**+1.0**
	baz=312						
BBRC	**Big Bear Solar**	**64.92**	**66**	P	**P**	**10 14 38.5**	**-0.5**
	baz=312						
BBRC				S	**S**	**10 23 20.5**	**+1.1**
	baz=312						
KMMI	**Kalianget**	**64.97**	**225**	P	**P**	**10 14 40.4**	**+1.3**
	comp=Z,30nm,1.9s						
TMUT	**Trail Mountain**	**65.00**	**59**	IAmb	IAmb	10 14 57.1	
	comp=Z,45nm,1.1s						
ELS	**Elsinore Mount**	**65.01**	**67**	P	**P**	**10 14 39.3**	**-0.1**
ELS				IAmb	IAmb	10 14 55.7	
	comp=Z,41nm,1.2s						
SZCU	**Shurtz Canyon**	**65.03**	**61**	IAmb	IAmb	10 14 56.5	
	comp=Z,44nm,1.3s						
RDMU	**Red Mountain**	**65.09**	**57**	P	**P**	**10 14 40.0**	**0.0**
OBN	**Obninsk**	**65.09**	**326**	*ce*P	**P**	**10 14 38.0**	**-1.4**
OBN				*e*S	**S**	**10 23 21.7**	**+1.4**
OBN				*e*SS	**SS**	**10 27 36.0**	**+4.3**
OBN				pmax	pmax		
	comp=Z,59nm,1.7s						
OBN				MLR	MLR		
	comp=Z,4µm,18.0s						
OBN	**Obninsk**	**65.09**	**326**	*e*P	**P**	**10 14 38.0**	**-1.4**
PSI	**Prapat**	**65.14**	**245**	P	**P**	**10 14 41.3**	**+0.8**
	comp=Z,10nm,0.7s,baz=318,slow=22,SNR=7.7						
PSI				LR	LR	10 46 33.9	
	comp=Z,2µm,18.3s,baz=28,slow=39						
	comp=Z,10nm,0.7s						
P17A	**Butcher Ranch,**	**65.16**	**58**	P	**P**	**10 14 40.4**	**0.0**
MURC	**Murrieta**	**65.19**	**67**	P	**P**	**10 14 40.3**	**-0.2**
	baz=312						
MURC				S	**S**	**10 23 23.6**	**+1.2**
	baz=312						
RAF	**Rauma**	**65.19**	**337**	*e*P	**P**	**10 14 39.8**	**-0.2**
DY2G	**Dye2**	**65.22**	**9**	*i* P	**P**	**10 14 40.1**	**-0.4**
DY2G				IAmb	IAmb	10 14 44.2	
	comp=Z,183nm,1.8s						
MTPU	**Mount Pierson**	**65.27**	**60**	IAmb	IAmb	10 14 58.8	
	comp=Z,61nm,1.5s						
Q16A	**Castle Valley**	**65.28**	**59**	IAmb	IAmb	10 14 58.9	
	comp=Z,56nm,1.2s						
SRBI	**Singaraja**	**65.29**	**223**	P	**P**	**10 14 41.9**	**+0.8**
	comp=Z,3µmcomp=Z,89nm,1.2s						
GMRC	**Granite Mounta**	**65.35**	**65**	P	**P**	**10 14 42.1**	**+0.4**
	baz=312,SNR=9.2						
GMRC				S	**S**	**10 23 25.9**	**+1.4**
	baz=312						
MDND	**Maddock**	**65.36**	**45**	P	**P**	**10 14 41.8**	**+0.4**
	baz=314						
MDND				S	**S**	**10 23 26.5**	**+2.5**
	baz=314						
K22A	**Casper**	**65.38**	**53**	P	**P**	**10 14 42.4**	**+0.6**
	baz=313,SNR=19						
K22A				S	**S**	**10 23 23.6**	**-1.1**
	baz=313						
K22A	**Casper**	**65.38**	**53**	P	**P**	**10 14 41.9**	**+0.1**
	baz=313,SNR=19						
K22A				S	**S**	**10 23 26.8**	**+2.0**
	baz=313						
ULM	**Lac du Bonnet**	**65.40**	**42**	P	**P**	**10 14 41.6**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=326,slow=9.0,SNR=6.6						
ULM				LR	LR	10 44 06.8	
	comp=Z,3µm,21.1s,baz=320,slow=37						
	comp=Z,6.1nm,0.7s						
ABJI	**Asem Bagus**	**65.49**	**224**	P	**P**	**10 14 43.6**	**+1.1**
	comp=Z,52nm,1.1s						
PFO	**Pinyon Flats O**	**65.64**	**66**	LR	LR	10 37 20.2	
	comp=Z,2µm,21.9s,baz=298,slow=30						
PFO	**Pinyon Flats O**	**65.64**	**66**	P	**P**	**10 14 43.4**	**-0.2**
PFO	**Pinyon Flats O**	**65.64**	**66**	IAMs_20	IAMs_20	10 36 33.7	
	comp=Z,2µm,21.0s						
PFO	**Pinyon Flats O**	**65.64**	**66**	P	**P**	**10 14 43.4**	**-0.2**
PFO				pmax	pmax		
	comp=Z,29nm,1.4s						
PFO	**Pinyon Flats O**	**65.64**	**66**	P	**P**	**10 14 44.2**	**+0.7**
	baz=312						
PFO				S	**S**	**10 23 29.1**	**+1.1**
	baz=312						
TPFO	**Pinon Flats**	**65.65**	**66**	P	**P**	**10 14 43.4**	**-0.2**
	baz=312						
TPFO				S	**S**	**10 23 29.2**	**+1.1**
	baz=312						
RWWY	**Rawlins**	**65.66**	**54**	IAmb	IAmb	10 15 00.4	
	comp=Z,59nm,1.2s						
BELC	**Belle Mtn. Jos**	**65.67**	**66**	P	**P**	**10 14 44.1**	**+0.4**
	baz=312						
BELC				S	**S**	**10 23 28.9**	**+0.5**
	baz=312						
RSSD	**Black Hills**	**65.70**	**51**	P	**P**	**10 14 44.0**	**+0.1**
RSSD	**Black Hills**	**65.70**	**51**	IAMs_20	IAMs_20	10 42 42.9	
	comp=Z,3µm,21.0s						
RSSD	**Black Hills**	**65.70**	**51**	P	**P**	**10 14 44.0**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,145nm,1.5s						
RSSD	**Black Hills**	**65.70**	**51**	P	**P**	**10 14 44.4**	**+0.5**
	baz=313,SNR=56						
RSSD				S	**S**	**10 23 29.8**	**+1.0**
	baz=313						
RSSD	**Black Hills**	**65.70**	**51**	P	**P**	**10 14 44.1**	**+0.2**
	baz=313						
RSSD				S	**S**	**10 23 30.6**	**+1.8**
	baz=313						
E28A	**Huff**	**65.71**	**47**	P	**P**	**10 14 44.4**	**+0.7**
	baz=314						
E28A				S	**S**	**10 23 29.6**	**+1.2**
	baz=314						
109C	**Camp Elliot, M**	**65.72**	**67**	P	**P**	**10 14 43.7**	**-0.1**
	baz=312						
109C				S	**S**	**10 23 28.4**	**-0.4**
	baz=312						
BKNI	**Bangkinang**	**65.82**	**241**	P	**P**	**10 14 45.4**	**+0.7**
	comp=Z,8µmcomp=Z,110nm,0.8s						
BKNI	**Bangkinang**	**65.82**	**241**	P	**P**	**10 14 46.6**	**+1.9**
VSU	**Vasula**	**65.87**	**333**	*e*P	**P**	**10 14 43.8**	**-0.6**
VRH	**Novokhopyorsk**	**65.90**	**320**	*e*P	**P**	**10 14 43.9**	**-0.8**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
VRH				MLR	MLR		
	comp=Z,7µm,16.0s						
UWJI	**Ujung Watu**	**65.92**	**228**	P	**P**	**10 14 46.3**	**+1.1**
	comp=Z,4µmcomp=Z,132nm,1.4s						
TBLU	**Trondheim**	**65.92**	**343**⇑	*i*P	**P**	**10 14 43.2**	**-1.4**
MTSU	**Mount Surprise**	**65.99**	**190**	P	**P**	**10 14 46.5**	**+0.9**
NEE2	**Needles Airpor**	**66.00**	**64**	P	**P**	**10 14 45.7**	**0.0**
	baz=312						
NEE2				S	**S**	**10 23 34.1**	**+1.9**
	baz=312						
LPSR	**Galich'ya Gora**	**66.04**	**323**	*e*P	**P**	**10 14 44.9**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
LPSR				MLR	MLR		
	comp=Z,5µm,14.0s						
IRM	**Iron Mountain**	**66.09**	**65**	P	**P**	**10 14 46.6**	**+0.3**
	baz=312,SNR=13						
IRM				S	**S**	**10 23 34.2**	**+0.9**
	baz=312						
BAR	**Barrett**	**66.13**	**67**	IAmb	IAmb	10 15 02.7	
	comp=Z,38nm,1.4s						
O20A	**White River Ci**	**66.13**	**56**	IAmb	IAmb	10 15 03.4	
	comp=Z,52nm,1.2s						
O20A	**White River Ci**	**66.13**	**56**	P	**P**	**10 14 47.1**	**+0.4**
	baz=313,SNR=11						
O20A				S	**S**	**10 23 36.1**	**+2.0**
	baz=313						
MONP2	**Monument Peak**	**66.14**	**67**	P	**P**	**10 14 46.1**	**-0.8**
	baz=312						
MONP2				S	**S**	**10 23 34.6**	**+0.2**
	baz=312						
W13A	**Hualapai Mount**	**66.22**	**64**	P	**P**	**10 14 46.5**	**-0.9**
BC3	**Big Chuckawall**	**66.23**	**66**	P	**P**	**10 14 47.2**	**-0.1**
	baz=312,SNR=7.0						
BC3				S	**S**	**10 23 35.6**	**+0.3**
	baz=312						
U15A	**North Rim**	**66.29**	**62**	P	**P**	**10 14 47.0**	**-0.8**
U15A				IAmb	IAmb	10 15 05.7	
	comp=Z,38nm,1.1s						
AAL	**Aland**	**66.37**	**337**	*e*P	**P**	**10 14 47.2**	**-0.4**
SWSC	**Sam W. Stewart**	**66.49**	**66**	P	**P**	**10 14 48.4**	**-0.5**
	baz=312						
SWSC				S	**S**	**10 23 41.2**	**+3.1**
	baz=312						
IKP	**In-Ko-Pah, Jac**	**66.50**	**67**	P	**P**	**10 14 48.2**	**-0.8**
	baz=312						
IKP				S	**S**	**10 23 40.0**	**+1.5**
	baz=312						
AKL	**Akola**	**66.52**	**275**	*e*P	**P**	**10 14 49.1**	**-0.1**
MTSE	**Matsula**	**66.54**	**334**	*e*P	**P**	**10 14 48.3**	**-0.4**
PDMCI	**Parker Dam,Lak**	**66.60**	**64**	P	**P**	**10 14 49.5**	**0.0**
	baz=313,SNR=6.4						
PDMCI				S	**S**	**10 23 41.9**	**+2.4**
	baz=313						
VORR	**Voronezh**	**66.62**	**322**	*e*P	**P**	**10 14 51.2**	**+1.9**
VORR				pmax	pmax		
	comp=Z,100nm,0.5s						
YUH	**Yuha Desert**	**66.62**	**67**	IAmb	IAmb	10 15 05.7	
	comp=Z,47nm,1.6s						
SMRI	**Semarang**	**66.71**	**228**	P	**P**	**10 14 51.4**	**+1.0**
	comp=Z,91nm,1.5s						
SMRI	**Semarang**	**66.71**	**228**	P	**P**	**10 14 51.6**	**+1.2**
BLYC	**Blythe**	**66.74**	**65**	IAmb	IAmb	10 15 07.1	
	comp=Z,80nm,1.6s						
NUUK	**Nuuk**	**66.75**	**12**	*i* P	**P**	**10 14 50.0**	**+0.1**
NUUK				IAmb	IAmb	10 14 53.9	
	comp=Z,122nm,1.8s						
ISOG	**Isortoq, Green**	**66.77**	**6**	*i* P	**P**	**10 14 49.9**	**-0.2**
ISOG				IAmb	IAmb	10 14 55.5	

	comp=Z,25nm,0.7s						
ANGG	**Ammassalik, Gr**	**66.79**	**5**	*i* P	**P**	**10 14 49.6**	**-0.6**
ANGG				IAmb	IAmb	10 14 58.6	
	comp=Z,132nm,1.8s						
AGMN	**Agassiz Nation**	**66.81**	**43**	IAmb	IAmb	10 15 05.8	
	comp=Z,52nm,1.4s						
AGMN				IAMs_20	IAMs_20	10 43 27.9	
	comp=Z,3µm,22.0s						
AGMN	**Agassiz Nation**	**66.81**	**43**	P	**P**	**10 14 50.8**	**+0.2**
	baz=316,SNR=7.9						
AGMN				S	**S**	**10 23 41.7**	**+0.2**
	baz=316						
AGMN	**Agassiz Nation**	**66.81**	**43**	P	**P**	**10 14 50.6**	**0.0**
	baz=316,SNR=7.9						
AGMN				S	**S**	**10 23 42.8**	**+1.3**
	baz=316						
HRA	**Herat**	**66.81**	**296**	P	**P**	**10 14 50.8**	**-0.4**
HRA				IAmb	IAmb	10 14 52.5	
	comp=Z,43nm,1.3s						
PWJI	**Pagerwojo**	**66.86**	**227**	P	**P**	**10 14 51.2**	**-0.1**
	comp=Z,122nm,1.2s						
GEYT	**Alibeck**	**66.87**	**301**	P	**P**	**10 14 51.3**	**+0.1**
	comp=Z,6.9nm,0.5s,baz=60,slow=5.8,SNR=6.4						
	comp=Z,6.9nm,0.5s						
PV10	**Paradox Valley**	**66.87**	**58**	P	**P**	**10 14 51.2**	**-0.4**
PHWY	**Pilot Hill**	**66.88**	**54**	P	**P**	**10 14 50.3**	**-1.3**
PHWY				IAmb	IAmb	10 15 08.9	
	comp=Z,46nm,1.6s						
N23A	**Red Feather La**	**66.89**	**54**	P	**P**	**10 14 50.8**	**-0.9**
N23A				IAmb	IAmb	10 15 11.2	
	comp=Z,52nm,1.1s						
N23A	**Red Feather La**	**66.89**	**54**	P	**P**	**10 14 52.4**	**+0.7**
	baz=314,SNR=20						
N23A				S	**S**	**10 23 45.3**	**+1.9**
	baz=314						
KNRA	**Kununurra**	**66.96**	**207**	P	**P**	**10 14 51.8**	**0.0**
KNRA	**Kununurra**	**66.96**	**207**	P	**P**	**10 14 52.2**	**+0.4**
VSR	**Storozhevoye**	**66.97**	**322**	*e*P	**P**	**10 14 50.9**	**-0.7**
VSR				pmax	pmax		
	comp=Z,40nm,1.2s						
VSR				MLR	MLR		
	comp=Z,8µm,21.0s						
VJD	**Vijayawada**	**66.98**	**270**	*e*P	**P**	**10 14 52.6**	**+0.6**
GLA	**Glamis**	**67.03**	**66**	P	**P**	**10 14 52.1**	**-0.2**
	baz=313						
GLA				S	**S**	**10 23 46.8**	**+2.1**
	baz=313						
PV07	**Paradox Valley**	**67.06**	**58**	IAmb	IAmb	10 15 10.0	
	comp=Z,71nm,1.4s						
MOL	**Molde**	**67.06**	**344**	*e*P	**P**	**10 14 52.4**	**+0.4**
D32B	**Dogwood Acres,**	**67.10**	**45**	P	**P**	**10 14 52.9**	**+0.4**
	baz=316						
D32B				S	**S**	**10 23 45.2**	**+0.1**
	baz=316						
VORD	**Divnogorie**	**67.11**	**322**	*e*P	**P**	**10 14 51.7**	**-0.7**
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
PV15	**Paradox Valley**	**67.22**	**58**	IAmb	IAmb	10 15 11.0	
	comp=Z,48nm,1.1s						
DOMB	**Dombas**	**67.25**	**343**	⇑*i*P	**P**	**10 14 52.7**	**-0.6**
WUAZ	**Wupatki**	**67.45**	**62**	P	**P**	**10 14 56.0**	**+0.8**
WUAZ				IAmb	IAmb	10 15 13.0	
	comp=Z,53nm,1.2s						
WUAZ				IAMs_20	IAMs_20	10 39 09.5	
	comp=Z,2µm,22.0s						
WUAZ	**Wupatki**	**67.45**	**62**	P	**P**	**10 14 55.6**	**+0.5**
	baz=313,SNR=13						
WUAZ				S	**S**	**10 23 52.9**	**+2.9**
	baz=313						
SMCO	**Snowmass**	**67.50**	**56**	P	**P**	**10 14 55.7**	**0.0**
SMCO				IAmb	IAmb	10 15 13.2	
	comp=Z,43nm,0.9s						
NC303	**NORSAR Array S**	**67.52**	**342**	IAmb	IAmb	10 15 13.0	
	comp=Z,33nm,1.2s						
AKN	**Aaknes**	**67.53**	**344**	*e*P	**P**	**10 14 55.3**	**+0.3**
Y14A	**Wickenburg**	**67.54**	**64**	IAmb	IAmb	10 15 12.3	
	comp=Z,54nm,1.4s						
NB201	**NORSAR Array S**	**67.69**	**342**	P	**P**	**10 14 56.1**	**0.0**
CTA	**Charters Tower**	**67.71**	**188**	P	**P**	**10 14 56.2**	**-0.3**
	comp=Z,18nm,1.0s,baz=6.2,slow=5.1,SNR=10						
CTA				LR	LR	10 41 22.6	
	comp=Z,908nm,21.5s,baz=12,slow=33						
	comp=Z,18nm,1.0s						
CTA	**Charters Tower**	**67.71**	**188**	P	**P**	**10 14 57.3**	**+0.7**
CTAO	**Charters Tower**	**67.71**	**188**	P	**P**	**10 14 57.2**	**+0.7**
NB2	**NORSAR Subarra**	**67.72**	**342**	P	**P**	**10 14 55.9**	**-0.4**
	comp=Z,214nm,2.0s,baz=29,slow=6.5						
NB2	**NORSAR Subarra**	**67.72**	**342**	P	**P**	**10 14 55.9**	**-0.4**
	baz=29,slow=6.5						
NOA	**NORSAR Array B**	**67.72**	**342**	P	**P**	**10 14 56.1**	**-0.1**
	comp=Z,6.6nm,0.6s,baz=26,slow=6.3,SNR=49						
NOA				LR	LR	10 50 27.3	
	comp=Z,4µm,18.4s,baz=25,slow=41						
	comp=Z,6.6nm,0.6s						
B35A	**Bob, Littlefor**	**67.74**	**42**	P	**P**	**10 14 56.5**	**-0.1**
	baz=317						
B35A				S	**S**	**10 23 52.1**	**-0.6**
	baz=317						
HYB	**Hyderabad**	**67.76**	**272**	*e*P	**P**	**10 14 57.4**	**+0.2**
HYB				IAmb	IAmb	10 14 59.7	
	comp=Z,29nm,0.5s						
HYBB	**Hyderabad (bro**	**67.76**	**272**	*e*P	**P**	**10 14 57.2**	**0.0**
HYBB				IVmB_BB		10 14 58.4	
	comp=Z,719nm,2.7s						
HYBB				*e*PP	**PP**	**10 17 28.6**	**+2.0**
HYBB				*e*S	**S**	**10 23 53.5**	**-0.4**
HYBB				IVMs_BB	IVMs_BB	10 47 55.1	
	comp=Z,683nm,15.1s						
NBO00	**NORSAR Array S**	**67.82**	**342**	P	**P**	**10 14 55.5**	**-1.4**
ISCO	**Idaho Springs**	**67.83**	**55**	P	**P**	**10 14 58.4**	**+0.8**
ISCO				IAmb	IAmb	10 15 15.6	
	comp=Z,62nm,1.1s						
ISCO				IAMs_20	IAMs_20	10 50 20.3	
	comp=Z,2µm,18.0s						
ISCO	**Idaho Springs**	**67.83**	**55**	P	**P**	**10 14 58.4**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,62nm,1.2s						
ISCO	**Idaho Springs**	**67.83**	**55**	P	**P**	**10 14 58.8**	**+1.1**
	baz=314,SNR=43						
ISCO				S	**S**	**10 23 56.2**	**+1.4**
	baz=314						
ISCO	**Idaho Springs**	**67.83**	**55**	P	**P**	**10 14 58.5**	**+0.8**
	baz=314,SNR=43						
ISCO				S	**S**	**10 23 56.1**	**+1.3**
	baz=314						
113A	**Mohawk Valley,**	**67.87**	**65**	IAmb	IAmb	10 15 13.9	
	comp=Z,43nm,1.5s						
SLIT	**Slitere, Latvi**	**67.89**	**334**	*e*P	**P**	**10 14 57.3**	**0.0**
NC602	**NORSAR Array S**	**67.92**	**341**	⇑*i*P	**P**	**10 14 57.1**	**-0.3**
NAO01	**NORSAR Array S**	**67.97**	**342**	P	**P**	**10 14 57.8**	**+0.1**
HFS	**Hagfors**	**67.98**	**340**	LR	LR	10 50 02.7	
	comp=Z,6µm,18.3s,baz=19,slow=41						
LEM	**Lembang**	**67.98**	**231**	P	**P**	**10 14 58.5**	**-0.1**
	comp=Z,15nm,0.4s,baz=163,slow=10,SNR=4.1						
LEM				LR	LR	10 44 26.2	
	comp=Z,714nm,21.3s,baz=24,slow=36						
	comp=Z,15nm,0.4s						
MVCO	**Mesa Verde**	**67.98**	**59**	IAMs_20	IAMs_20	10 40 32.8	
	comp=Z,2µm,21.0s						
MVCO	**Mesa Verde**	**67.98**	**59**	P	**P**	**10 14 59.0**	**+0.4**
	baz=314,SNR=9.5						
MVCO				S	**S**	**10 23 58.5**	**+2.0**
	baz=314						
BORG	**Borgarnes**	**67.99**	**358**	LR	LR	10 44 39.8	
	comp=Z,2µm,20.2s,baz=357,slow=36						
BORG	**Borgarnes**	**67.99**	**358**	P	**P**	**10 14 57.8**	**0.0**
BORG	**Borgarnes**	**67.99**	**358**	IAMs_20	IAMs_20	10 43 57.4	
	comp=Z,2µm,21.0s						
BORG	**Borgarnes**	**67.99**	**358**	P	**P**	**10 14 57.8**	**0.0**
BORG				pmax	pmax		
	comp=Z,107nm,1.3s						
SUSD	**Miller**	**68.08**	**48**	P	**P**	**10 14 58.1**	**-0.7**
	baz=316						
SUSD				S	**S**	**10 23 56.2**	**-0.8**
	baz=316						
X16A	**Lo Mia Camp, P**	**68.16**	**63**	P	**P**	**10 14 59.1**	**-0.6**
X16A				IAmb	IAmb	10 15 17.6	
	comp=Z,40nm,1.2s						
AFI	**Afiamalu**	**68.29**	**144**	LR	LR	10 40 30.0	
	comp=Z,3µm,20.1s,baz=331,slow=32						
AFI	**Afiamalu**	**68.29**	**144**	IAMs_20	IAMs_20	10 39 37.7	
	comp=Z,3µm,20.0s						
KOUNC	**Koumac, New Ca**	**68.38**	**170**	IAMs_20	IAMs_20	10 40 17.0	
	comp=Z,4µm,20.0s						
F33A	**5 Mile Ranch,**	**68.38**	**45**	IAmb	IAmb	10 15 17.9	
	comp=Z,23nm,0.8s						
F33A	**5 Mile Ranch,**	**68.38**	**45**	P	**P**	**10 15 00.8**	**+0.2**
	baz=317,SNR=15						
F33A				S	**S**	**10 24 00.3**	**-0.2**
	baz=317						
MSVF	**Nonsavu**	**68.40**	**156**	LR	LR	10 39 17.0	
	comp=Z,3µm,21.3s,baz=348,slow=31						
MSVF	**Nonsavu**	**68.40**	**156**	IAMs_20	IAMs_20	10 39 06.4	
	comp=Z,3µm,20.0s						
FOO	**Floro**	**68.42**	**345**	⇑*i*P	**P**	**10 15 00.1**	**-0.4**
IDID	**Didziasalis**	**68.43**	**331**	*e*P	**P**	**10 15 01.5**	**+0.8**
IIGN	**Ignalina**	**68.57**	**331**	*e*P	**P**	**10 15 02.6**	**+1.0**
S22A	**4UR Ranch, Cre**	**68.57**	**57**	P	**P**	**10 15 03.2**	**+0.9**
	baz=314,SNR=28						
S22A				S	**S**	**10 24 06.9**	**+3.3**
	baz=314						
HYA	**Hoyanger**	**68.61**	**344**	⇑*i*P	**P**	**10 15 01.9**	**+0.1**
SKAR	**Skarslia**	**68.65**	**343**	⇑*i*P	**P**	**10 15 01.9**	**-0.2**
Q24A	**Divide**	**68.67**	**55**	P	**P**	**10 15 02.9**	**-0.1**
	baz=314						
Q24A				S	**S**	**10 24 06.6**	**+1.8**
	baz=314						
VIKU	**Vikbolandet**	**68.68**	**338**	*e*P	**P**	**10 15 02.2**	**-0.1**
W18A	**Petrified Fore**	**68.70**	**61**	IAmb	IAmb	10 15 20.1	
	comp=Z,31nm,1.1s						
W18A	**Petrified Fore**	**68.70**	**61**	P	**P**	**10 15 03.8**	**+0.8**
	baz=314,SNR=7.3						
W18A				S	**S**	**10 24 07.8**	**+2.8**
	baz=314						
MNK	**Minsk**	**68.71**	**330**	*i* P	**P**	**10 15 03.7**	**+1.3**
MNK				*i*		10 15 28.1	
MNK				*i*		10 17 35.5	
MNK				*i* PPP	PPP	10 19 15.4	
MNK				*i* S	**S**	**10 24 03.0**	**-1.0**
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,32nm,0.9s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK				MLR	MLR		
	comp=E,642nm,20.0s						
MNK				MLR	MLR		
	comp=Z,5µm,20.0s						
MNK	**Minsk**	**68.71**	**330**	*i* P	**P**	**10 15 03.8**	**+1.3**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**10 15 03.8**	**+1.3**
	comp=N,12nm,0.9s						
MNK				*i* P	**P**	**10 15 03.8**	**+1.3**
	comp=Z,32nm,0.9s,baz=36						
MNK				*i* PcP	**PcP**	**10 15 28.1**	**+1.0**
MNK				*i* PP	**PP**	**10 17 35.5**	**+1.9**
MNK				*i* PPP	PPP	10 19 15.4	
MNK				*i* S	**S**	**10 24 03.1**	**-1.0**
MNK				*i* SS	SS	10 29 11.8	+44
MNK				*i* SSS	SSS	10 32 14.8	
MNK				*i* LQ	LQ	10 40 26.7	
MNK				*i* LR	LR	10 44 20.6	
MNK				*i* LRM	MLR	10 47 49.9	
	comp=E,642nm,20.2s						
MNK				*i* LRM	MLR	10 47 49.9	
	comp=N,2µm,20.2s						
MNK				*i* LRM	MLR	10 47 49.9	
	comp=Z,5µm,20.2s						
NACGM	**Naroch**	**68.75**	**331**	⇓*i*P	**P**	**10 15 04.2**	**+1.5**
	baz=35						
OSL	**Oslo**	**68.82**	**341**	*e*P	**P**	**10 15 03.2**	**+0.2**
SUE	**Sulen**	**68.97**	**345**	⇑*i*P	**P**	**10 15 04.4**	**+0.4**
X18A	**Snowflake**	**68.98**	**62**	IAmb	IAmb	10 15 22.7	
	comp=Z,77nm,1.5s						
OGNE	**Ogallala**	**68.98**	**52**	P	**P**	**10 15 04.1**	**-0.5**
OGNE				IAMs_20	IAMs_20	10 49 52.6	
	comp=Z,2µm,18.0s						
OGNE	**Ogallala**	**68.98**	**52**	P	**P**	**10 15 05.1**	**+0.6**
	baz=315,SNR=11						
OGNE				S	**S**	**10 24 08.9**	**+0.9**
	baz=315						
OGNE	**Ogallala**	**68.98**	**52**	P	**P**	**10 15 04.9**	**+0.4**
	baz=315,SNR=11						
OGNE				S	**S**	**10 24 10.2**	**+2.3**
	baz=315						
214A	**Organ Pipe Nat**	**69.02**	**65**	P	**P**	**10 15 04.4**	**-0.4**
214A				IAmb	IAmb	10 15 22.4	
	comp=Z,72nm,1.6s						
214A	**Organ Pipe Nat**	**69.02**	**65**	P	**P**	**10 15 05.0**	**+0.2**
	baz=314,SNR=7.9						
214A				S	**S**	**10 24 11.2**	**+2.7**
	baz=314						
EYMN	**Ely**	**69.05**	**41**	IAMs_20	IAMs_20	10 50 40.1	
	comp=Z,2µm,18.0s						
EYMN	**Ely**	**69.05**	**41**	P	**P**	**10 15 04.3**	**-0.5**
	baz=319						
EYMN				S	**S**	**10 24 06.6**	**-1.8**
	baz=319						
QIS	**Mount Isa**	**69.06**	**195**	P	**P**	**10 15 05.4**	**+0.4**
MAK	**Makhachkala**	**69.14**	**311**	*e*P	**P**	**10 15 02.0**	**-3.3**
MAK				*e*PPP	PPP	10 19 14.0	
MAK				*e*S	**S**	**10 24 05.3**	**-4.2**
MAK				pmax	pmax		
	comp=Z,276nm,1.6s						
MAK				MLR	MLR		
	comp=Z,9µm,18.0s						
PABE	**Paberze**	**69.16**	**332**	IAmb	IAmb	10 15 06.6	
	comp=Z,54nm,1.0s						
PABE	**Paberze**	**69.16**	**332**	*e*P	**P**	**10 15 05.3**	**+0.1**
KONO	**Kongsberg**	**69.33**	**342**	P	**P**	**10 15 06.0**	**-0.2**
KONO				IAmb	IAmb	10 15 08.0	
	comp=Z,54nm,1.3s						
KONO	**Kongsberg**	**69.33**	**342**	P	**P**	**10 15 06.0**	**-0.2**
KONO				pmax	pmax		
	comp=Z,54nm,1.3s						
KONO	**Kongsberg**	**69.33**	**342**	⇑*i*P	**P**	**10 15 06.5**	**+0.2**
SDCO	**Great Sand Dun**	**69.33**	**56**	IAmb	IAmb	10 15 24.8	
	comp=Z,95nm,1.7s						
SDCO				IAMs_20	IAMs_20	10 49 32.9	
	comp=Z,2µm,18.0s						
SDCO	**Great Sand Dun**	**69.33**	**56**	P	**P**	**10 15 07.6**	**+0.6**
	baz=315,SNR=24						
SDCO				S	**S**	**10 24 15.2**	**+2.7**
	baz=315						
SDCO	**Great Sand Dun**	**69.33**	**56**	P	**P**	**10 15 07.1**	**+0.1**
	baz=315,SNR=24						
SDCO				S	**S**	**10 24 15.1**	**+2.5**
	baz=315						
PBUR	**Paburge**	**69.36**	**334**	*e*P	**P**	**10 15 03.5**	**-2.9**
ASK	**Askoy**	**69.43**	**344**	*e*P	**P**	**10 15 07.2**	**+0.4**
K31A	**O'Neill**	**69.49**	**49**	P	**P**	**10 15 07.9**	**+0.3**
K31A	**O'Neill**	**69.49**	**49**	P	**P**	**10 15 07.8**	**+0.2**
	baz=316						
K31A				S	**S**	**10 24 13.0**	**-0.8**
	baz=316						
BER	**Bergen**	**69.50**	**344**	*e*P	**P**	**10 15 07.6**	**+0.4**
WR0	**Warramunga Arr**	**69.50**	**200**	P	**P**	**10 15 07.1**	**-0.6**
WR0				IAmb	IAmb	10 15 10.0	
	comp=Z,66nm,1.2s						
WRAB	**Tennant Creek**	**69.52**	**200**	P	**P**	**10 15 07.1**	**-0.7**
WRAB	**Tennant Creek**	**69.52**	**200**	IAMs_20	IAMs_20	10 48 46.0	
	comp=Z,2µm,19.0s						
WRAB	**Tennant Creek**	**69.52**	**200**	P	**P**	**10 15 07.1**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,115nm,1.4s						
WRAB				MLR	MLR		
	comp=Z,2µm,19.0s						
WRAB	**Tennant Creek**	**69.52**	**200**	P	**P**	**10 15 08.1**	**+0.3**
WB2	**Warramunga Arr**	**69.53**	**200**	P	**P**	**10 15 07.0**	**-0.9**
WRA	**Warramunga Arr**	**69.53**	**200**	P	**P**	**10 15 07.5**	**-0.4**
	comp=Z,26nm,1.0s,baz=18,slow=6.3,SNR=55						
WRA				LR	LR	10 44 33.8	
	comp=Z,913nm,21.1s,baz=9.5,slow=35						
	comp=Z,26nm,1.0s						
WRA	**Warramunga Arr**	**69.53**	**200**	P	**P**	**10 15 07.3**	**-0.6**
WRA	**Warramunga Arr**	**69.53**	**200**	*i* P	**P**	**10 15 07.5**	**-0.4**
WRA				pmax	pmax		
	comp=Z,25nm,1.0s						
F36A	**Milaca**	**69.68**	**44**	IAmb	IAmb	10 15 24.4	
	comp=Z,50nm,1.7s						
F36A	**Milaca**	**69.68**	**44**	P	**P**	**10 15 07.0**	**-1.7**
	baz=318						
F36A				S	**S**	**10 24 14.9**	**-0.9**
	baz=318						
ODD1	**Odda**	**69.69**	**343**	*e*P	**P**	**10 15 08.8**	**+0.2**
ECSD	**EROS Data Cent**	**69.76**	**47**	P	**P**	**10 15 08.4**	**-0.9**
ECSD				IAmb	IAmb	10 15 26.2	
	comp=Z,48nm,1.1s						
ECSD	**EROS Data Cent**	**69.76**	**47**	IAMs_20	IAMs_20	10 44 27.2	
	comp=Z,3µm,22.0s						
ECSD	**EROS Data Cent**	**69.76**	**47**	P	**P**	**10 15 09.3**	**0.0**
	baz=317,SNR=39						
ECSD				S	**S**	**10 24 15.1**	**-1.8**
	baz=317						
ECSD	**EROS Data Cent**	**69.76**	**47**	P	**P**	**10 15 09.0**	**-0.2**
	baz=317,SNR=39						
ECSD				S	**S**	**10 24 15.4**	**-1.5**
	baz=317						
GOF	**Gofitskoye**	**69.81**	**315**	⇑*e*P	**P**	**10 15 10.4**	**+0.9**
GROC	**Groznyy**	**69.83**	**312**	*e*P	**P**	**10 15 07.6**	**-2.0**
GROC				*e*		10 15 30.2	
GROC				*e*		10 17 44.4	
GROC				pmax	pmax		
	comp=Z,14nm,0.4s						
TUC	**Tucson**	**70.01**	**64**	P	**P**	**10 15 10.5**	**-0.5**
TUC	**Tucson**	**70.01**	**64**	P	**P**	**10 15 10.5**	**-0.5**
TUC				pmax	pmax		
	comp=Z,24nm,1.2s						
TUC	**Tucson**	**70.01**	**64**	P	**P**	**10 15 11.5**	**+0.4**
	baz=314						
TUC				S	**S**	**10 24 22.6**	**+2.2**
	baz=314						
E38A	**The Farm, Brul**	**70.03**	**42**	S	**S**	**10 24 19.5**	**-0.4**
	baz=319						
KSCO	**Kaye Shedlock’**	**70.03**	**54**	P	**P**	**10 15 11.3**	**+0.2**
KSCO				IAmb	IAmb	10 15 28.6	
	comp=Z,58nm,1.2s						
KSCO	**Kaye Shedlock’**	**70.03**	**54**	S	**S**	**10 24 21.0**	**+0.5**
	baz=316						
KSCO	**Kaye Shedlock’**	**70.03**	**54**	P	**P**	**10 15 11.2**	**0.0**
	baz=316						
KSCO				S	**S**	**10 24 21.6**	**+1.1**
	baz=316						
IVI	**Ivigtut**	**70.09**	**11**	P	**P**	**10 15 11.5**	**+0.6**
IVI				IAmb	IAmb	10 15 27.3	
	comp=Z,48nm,1.2s						
IVI	**Ivigtut**	**70.09**	**11**	*e*P	**P**	**10 15 11.6**	**+0.8**
IVI				IAmb	IAmb	10 15 13.7	
	comp=Z,45nm,1.1s						
DZM	**Mont Dzumac**	**70.16**	**168**	LR	LR	10 41 55.9	
	comp=Z,4µm,20.2s,baz=8.5,slow=32						
POO	**Poona**	**70.16**	**276**	*e*P	**P**	**10 15 12.8**	**+0.7**
POO				IAmb	IAmb	10 15 18.3	
	comp=Z,69nm,1.1s						
POO	**Poona**	**70.16**	**276**	*e*P	**P**	**10 15 10.0**	**-2.1**
BLS5	**Blasjo**	**70.18**	**343**	*e*P	**P**	**10 15 12.1**	**+0.6**
T25A	**Trinidad**	**70.37**	**56**	IAmb	IAmb	10 15 31.0	
	comp=Z,74nm,1.2s						
T25A	**Trinidad**	**70.37**	**56**	P	**P**	**10 15 13.6**	**+0.3**
	baz=315,SNR=20						
T25A				S	**S**	**10 24 25.9**	**+1.2**
	baz=315						
NRS	**Narsarsuaq**	**70.48**	**10**	*i* P	**P**	**10 15 13.8**	**+0.5**
NRS				IAmb	IAmb	10 15 15.7	
	comp=Z,129nm,1.9s						
SPMN	**Marine on St.**	**70.49**	**44**	P	**P**	**10 15 13.8**	**+0.1**
SPMN				IAmb	IAmb	10 15 15.0	
	comp=Z,44nm,1.4s						
SPMN	**Marine on St.**	**70.49**	**44**	P	**P**	**10 15 13.8**	**+0.1**
	baz=319,SNR=5.7						
SPMN				S	**S**	**10 24 25.1**	**-0.3**
	baz=319						
SPMN	**Marine on St.**	**70.49**	**44**	P	**P**	**10 15 13.5**	**-0.2**
	baz=319,SNR=5.7						
SPMN				S	**S**	**10 24 25.1**	**-0.3**
	baz=319						
KMY	**Karmoy**	**70.61**	**344**	⇑*i*P	**P**	**10 15 14.8**	**+0.7**
SUW	**Suwalki**	**70.67**	**332**	*e*P	**P**	**10 15 13.6**	**-0.9**
SUW				*e*L	L	10 48 28.7	
	comp=Z,4µm,21.6s						
SUW	**Suwalki**	**70.67**	**332**	*e*P	**P**	**10 15 14.2**	**-0.3**
BGNE	**Belgrade**	**70.68**	**49**	IAmb	IAmb	10 15 30.4	
	comp=Z,58nm,1.1s						
BGNE	**Belgrade**	**70.68**	**49**	P	**P**	**10 15 14.4**	**-0.5**
	baz=317						
BGNE				S	**S**	**10 24 25.5**	**-2.3**
	baz=317						
ANMO	**Albuquerque**	**70.75**	**59**	LR	LR	10 42 44.5	
	comp=Z,2µm,21.6s,baz=322,slow=33						
ANMO	**Albuquerque**	**70.75**	**59**	P	**P**	**10 15 15.8**	**+0.2**
ANMO	**Albuquerque**	**70.75**	**59**	IAMs_20	IAMs_20	10 41 24.6	
	comp=Z,2µm,21.0s						
ANMO	**Albuquerque**	**70.75**	**59**	*i* P	**P**	**10 15 15.6**	**0.0**
ANMO				pmax	pmax		
	comp=Z,20nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**70.75**	**59**	P	**P**	**10 15 16.4**	**+0.7**
	baz=315,SNR=24						
ANMO				S	**S**	**10 24 32.6**	**+3.6**
	baz=315						
ANMO	**Albuquerque**	**70.75**	**59**	P	**P**	**10 15 16.2**	**+0.6**
	baz=315						
ANMO				S	**S**	**10 24 31.8**	**+2.7**
	baz=315						
KAD	**Karad**	**70.80**	**275**	*e*P	**P**	**10 15 16.1**	**+0.2**
KVAR	**Kislovodsk Arr**	**70.80**	**315**	LR	LR	10 50 28.2	
	comp=Z,6µm,18.5s,baz=284,slow=39						
KIV	**Kislovodsk**	**70.80**	**315**	⇑P	**P**	**10 15 17.0**	**+1.3**
KIV	**Kislovodsk**	**70.80**	**315**	P	**P**	**10 15 16.3**	**+0.6**
KIV				IAmb	IAmb	10 15 26.7	
	comp=Z,39nm,1.0s						
KIV	**Kislovodsk**	**70.80**	**315**	*e*P	**P**	**10 15 15.7**	**0.0**
KIV				*e*PPP	PPP	10 19 35.2	
KIV				*e*S	**S**	**10 24 28.4**	**-0.8**
KIV				*e*SS	**SS**	**10 29 02.2**	**+1.5**
KIV				pmax	pmax		
	comp=Z,39nm,1.0s						
KIV				MLR	MLR		
	comp=Z,5µm,18.0s						
KIV	**Kislovodsk**	**70.80**	**315**	*e*P	**P**	**10 15 15.7**	**0.0**
KIV	**Kislovodsk**	**70.80**	**315**	*i* P	**P**	**10 15 15.5**	**-0.2**
	SNR=18						
HOMB	**Homborsund**	**70.82**	**342**	⇑*i*P	**P**	**10 15 15.8**	**+0.5**
KBZ	**Khabaz**	**70.87**	**314**	P	**P**	**10 15 16.8**	**+0.9**
	comp=Z,20nm,0.6s,baz=104,slow=3.4,SNR=38						
KBZ				LR	LR	10 50 06.7	
	comp=Z,8µm,19.3s,baz=30,slow=39						
	comp=Z,20nm,0.6s						
SHA1	**Shidzhatmaz**	**70.98**	**315**	*c i*P	**P**	**10 15 16.2**	**-0.7**
D41A	**Chassel**	**71.01**	**40**	S	**S**	**10 24 29.2**	**-2.1**
	baz=320						
SNART	**Snartemo**	**71.03**	**342**	⇑*i*P	**P**	**10 15 16.8**	**+0.1**
ZEI	**Tsey**	**71.08**	**313**	*e*P	**P**	**10 15 16.7**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,14nm,0.9s						
Y22D	**IRIS PASSCAL I**	**71.09**	**60**	IAMs_20	IAMs_20	10 41 22.7	
	comp=Z,3µm,22.0s						
Y22D	**IRIS PASSCAL I**	**71.09**	**60**	P	**P**	**10 15 18.4**	**+0.8**
	baz=315						
Y22D				S	**S**	**10 24 38.3**	**+5.3**
	baz=315						
I37A	**Lemond, Waseca**	**71.12**	**45**	P	**P**	**10 15 17.4**	**-0.1**
I37B	**Waseca**	**71.12**	**45**	P	**P**	**10 15 18.0**	**+0.5**
	baz=319,SNR=15						
I37B				S	**S**	**10 24 33.2**	**+0.5**
	baz=319						
Y22A	**Socorro**	**71.16**	**60**	P	**P**	**10 15 19.1**	**+1.0**
	baz=315,SNR=16						
L34A	**Svendsen Farm,**	**71.18**	**48**	P	**P**	**10 15 17.5**	**-0.4**
L34A	**Svendsen Farm,**	**71.18**	**48**	P	**P**	**10 15 17.7**	**-0.2**
	baz=318,SNR=11						
L34A				S	**S**	**10 24 31.8**	**-1.7**
	baz=318						
DEL	**Delary**	**71.20**	**338**	*e*P	**P**	**10 15 17.6**	**-0.1**
AKASG	**Malin Array Be**	**71.31**	**327**	P	**P**	**10 15 18.1**	**-0.4**
	comp=Z,7.1nm,0.4s,baz=35,slow=6.7,SNR=44						
AKASG				LR	LR	10 48 29.6	
	comp=Z,5µm,20.6s,baz=29,slow=38						
	comp=Z,7.1nm,0.4s						
AKASG	**Malin Array Be**	**71.31**	**327**	P	**P**	**10 15 18.5**	**0.0**
AKASG	**Malin Array Be**	**71.31**	**327**	P	**P**	**10 15 18.5**	**0.0**
AKASG				pmax	pmax		
	comp=Z,16nm,1.1s						
AKBB	**Malin Array Si**	**71.31**	**327**	P	**P**	**10 15 17.7**	**-0.8**
AKBB				IAmb	IAmb	10 15 22.7	
	comp=Z,43nm,1.1s						
AKBB	**Malin Array Si**	**71.31**	**327**	P	**P**	**10 15 17.7**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,43nm,1.2s						
OVD	**Ostervraa, Den**	**71.32**	**340**	*i* P	**P**	**10 15 19.4**	**+1.0**
COWI	**Conover**	**71.50**	**41**	IAMs_20	IAMs_20	10 52 23.0	
	comp=Z,2µm,18.0s						
COWI	**Conover**	**71.50**	**41**	P	**P**	**10 15 18.9**	**-0.9**
	baz=320						
COWI				S	**S**	**10 24 35.9**	**-1.2**

	baz=320						
N33A	J Bar K, Exete	71.53	50	P	P	10 15 18.9	-1.2
N33A				IAmb	IAmb	10 15 35.6	
	comp=Z,56nm,1.2s						
N33B	J Bar K, Exete	71.53	50	S	S	10 24 34.8	-2.9
	baz=317						
G40A	Rib Lake	71.66	42	IAmb	IAmb	10 15 23.5	
	comp=Z,45nm,1.6s						
G40A	Rib Lake	71.66	42	S	S	10 24 37.1	-1.9
	baz=320						
121A	Cookes Peak, D	71.66	62	IAmb	IAmb	10 15 38.6	
	comp=Z,49nm,1.2s						
121A	Cookes Peak, D	71.66	62	P	P	10 15 22.3	+1.1
	baz=315,SNR=12						
121A				S	S	10 24 40.5	+0.8
	baz=315						
121A	Cookes Peak, D	71.66	62	P	P	10 15 22.0	+0.8
	baz=315,SNR=12						
121A				S	S	10 24 42.7	+3.0
	baz=315						
CBKS	Cedar Bluff	71.74	52	P	P	10 15 20.6	-0.7
CBKS				IAmb	IAmb	10 15 37.2	
	comp=Z,46nm,1.1s						
CBKS				IAMs_20	IAMs_20	10 51 46.6	
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	71.74	52	P	P	10 15 20.7	-0.7
CBKS				pmax	pmax		
	comp=Z,46nm,1.2s						
CBKS				MLR	MLR		
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	71.74	52	P	P	10 15 20.9	-0.5
	baz=317						
CBKS				S	S	10 24 38.3	-1.8
	baz=317						
CBKS	Cedar Bluff	71.74	52	P	P	10 15 20.7	-0.7
	baz=317						
CBKS				S	S	10 24 38.6	-1.6
	baz=317						
GOET	G??ttrup	71.80	341	*e*P	P	10 15 21.2	-0.1
GOET				IAmb	IAmb	10 15 22.0	
	comp=Z,823nm,2.1s						
F42A	Maple Grove Fa	72.21	41	P	P	10 15 23.8	-0.2
F42A	Maple Grove Fa	72.21	41	S	S	10 24 44.4	-0.8
	baz=321						
HSIG		72.21	66	P	P	10 15 22.9	-1.4
E43A	Lone Tree Farm	72.22	40	P	P	10 15 22.8	-1.3
E43A	Lone Tree Farm	72.22	40	P	P	10 15 24.0	-0.1
	baz=321,SNR=6.4						
E43A				S	S	10 24 41.7	-3.7
	baz=321						
SCHQ	Schefferville	72.26	24	P	P	10 15 24.7	+0.5
	comp=Z,18nm,0.9s,baz=337,slow=5.1,SNR=16						
SCHQ				LR	LR	10 53 30.7	
	comp=Z,2µm,18.0s,baz=350,slow=41						
	comp=Z,18nm,0.9s						
SCHQ	Schefferville	72.26	24	IAmb	IAmb	10 15 40.0	
	comp=Z,132nm,1.9s						
COP	Copenhagen	72.26	338	*i* P	P	10 15 23.6	-0.5
COP				IAmb	IAmb	10 15 27.4	
	comp=Z,96nm,0.8s						
AKH	Akhalkalaki	72.30	312	⇑P	P	10 15 26.6	+1.7
MUD	Monsted U'grnd	72.34	341	*i* P	P	10 15 25.1	+0.5
MUD				IAmb	IAmb	10 15 25.5	
	comp=Z,33nm,1.0s						
N35A	Tabor	72.37	48	IAmb	IAmb	10 15 40.2	
	comp=Z,37nm,0.7s						
N35A	Tabor	72.37	48	P	P	10 15 24.9	-0.1
	baz=318,SNR=6.0						
N35A				S	S	10 24 44.9	-2.3
	baz=318						
K38A	Parkersburg	72.45	45	P	P	10 15 25.4	-0.1
	baz=319						
K38A				S	S	10 24 47.0	-1.1
	baz=319						
SOC	Sochi	72.49	316*c*	*i*P	P	10 15 25.2	-0.5
SOC				*e*		10 18 03.1	
SOC				*e*PPP	PPP	10 19 45.0	
SOC				*e*S	S	10 24 49.1	+0.6
SOC				pmax	pmax		
	comp=Z,20nm,0.6s						
SOC				MLR	MLR		
	comp=Z,7µm,20.0s						
SOC	Sochi	72.49	316	*e*P	P	10 15 25.2	-0.5
I40A	Norwalk	72.52	43	IAmb	IAmb	10 15 27.8	
	comp=Z,68nm,1.5s						
I40A	Norwalk	72.52	43	P	P	10 15 25.7	-0.3
	baz=320,SNR=7.4						
I40A				S	S	10 24 47.0	-1.9
	baz=320						
R32A	Long Quarter,	72.57	52	S	S	10 24 46.4	-3.3
	baz=317						
GNI	Garni	72.61	311	LR	LR	10 51 13.0	
	comp=Z,9µm,19.1s,baz=26,slow=39						
GNI	Garni	72.61	311	P	P	10 15 27.1	+0.4
GNI				IAmb	IAmb	10 15 55.3	
	comp=Z,89nm,1.3s						
GNI	Garni	72.61	311*c*	*i*P	P	10 15 27.4	+0.7
GNI				pmax	pmax		
	comp=Z,76nm,1.7s						
GNI				MLR	MLR		
	comp=Z,10µm,17.0s						
GNI	Garni	72.61	311	P	P	10 15 27.2	+0.5
ANN	Anapa	72.61	318	*e*P	P	10 15 26.2	-0.2
ANN				pmax	pmax		
	comp=Z,98nm,1.2s						
LLD	Lille Linde	72.63	338	*i* P	P	10 15 26.0	-0.3
LLD				IAmb	IAmb	10 15 29.2	
	comp=Z,76nm,0.9s						
EIDS	Eidsvold	72.64	183	P	P	10 15 25.0	-1.6
EIDS				IAmb	IAmb	10 15 29.0	
	comp=Z,50nm,1.4s						
EIDS	Eidsvold	72.64	183	P	P	10 15 28.4	+1.8
SCIA	State Center	72.79	46	IAMs_20	IAMs_20	10 45 40.3	
	comp=Z,3µm,22.0s						
SCIA	State Center	72.79	46	P	P	10 15 27.8	+0.3
	baz=319,SNR=6.1						
SCIA				S	S	10 24 50.5	-1.5
	baz=319						
SCIA	State Center	72.79	46	P	P	10 15 27.4	-0.1
	baz=319,SNR=6.1						
SCIA				S	S	10 24 50.0	-2.0
	baz=319						
BATM	Batumi	73.05	314	⇑P	P	10 15 29.9	+0.8
GKP	Gorka Klasztor	73.12	335	*e*P	P	10 15 29.3	0.0
KSU1	Kansas State U	73.18	50	P	P	10 15 29.2	-0.7
KSU1				IAmb	IAmb	10 15 44.0	
	comp=Z,28nm,0.8s						
KSU1	Kansas State U	73.18	50	P	P	10 15 28.6	-1.3
	baz=318,SNR=6.2						
KSU1				S	S	10 24 50.4	-6.1
	baz=318						
KSU1	Kansas State U	73.18	50	P	P	10 15 28.5	-1.4
	baz=318,SNR=6.2						
KSU1				S	S	10 24 53.3	-3.2
	baz=318						
AS31	Alice Springs	73.22	199	P	P	10 15 30.4	+0.2
ASAR	Alice Springs	73.22	199	P	P	10 15 30.8	+0.6
	comp=Z,33nm,1.0s,baz=9.5,slow=6.0,SNR=184						
ASAR				LR	LR	10 46 49.4	
	comp=Z,814nm,20.5s,baz=16,slow=35						
	comp=Z,33nm,1.0s						
ASAR	Alice Springs	73.22	199	P	P	10 15 29.7	-0.5
I42A	Draeger Farm,	73.31	42	P	P	10 15 29.9	-0.7
	baz=321,SNR=6.2						
I42A				S	S	10 24 55.3	-2.5
	baz=321						
LINV	Loch Inver, As	73.31	349	*e*P	P	10 15 30.4	+0.1
LINV				IAmb	IAmb	10 15 33.0	
	comp=Z,110nm,1.6s						
H43A	Windswept, Lux	73.37	41	S	S	10 24 56.1	-2.4
	baz=321						
E46A	Sault Ste Mari	73.37	38	IAmb	IAmb	10 15 45.6	
	comp=Z,98nm,1.9s						
E46A	Sault Ste Mari	73.37	38	S	S	10 24 53.4	-5.0
	baz=323						
JFWS	Jewell Farm	73.44	44	P	P	10 15 30.5	-0.9
JFWS	Jewell Farm	73.44	44	IAMs_20	IAMs_20	10 51 58.5	
	comp=Z,3µm,19.0s						
JFWS	Jewell Farm	73.44	44	P	P	10 15 30.5	-0.9
JFWS				pmax	pmax		
	comp=Z,37nm,1.5s						
JFWS				MLR	MLR		
	comp=Z,3µm,19.0s						
JFWS	Jewell Farm	73.44	44	P	P	10 15 30.7	-0.7
	baz=320						
JFWS				S	S	10 24 56.4	-3.0
	baz=320						
JFWS	Jewell Farm	73.44	44	P	P	10 15 30.6	-0.9
	baz=320						
JFWS				S	S	10 24 58.2	-1.1
	baz=320						
AMTX	Amarillo	73.53	56	P	P	10 15 31.2	-0.9
AMTX				IAmb	IAmb	10 15 49.6	
	comp=Z,43nm,0.9s						
AMTX				IAMs_20	IAMs_20	10 43 53.1	
	comp=Z,2µm,22.0s						
AMTX	Amarillo	73.53	56	P	P	10 15 32.8	+0.6
	baz=317,SNR=11						
AMTX				S	SKiKP	10 25 01.4	+0.4
	baz=317						
AMTX	Amarillo	73.53	56	P	P	10 15 32.0	-0.2
	baz=317						
AMTX				S	SKiKP	10 25 02.5	+1.4
	baz=317						
MSTX	Muleshoe	73.57	58	P	P	10 15 31.7	-0.7
MSTX				IAmb	IAmb	10 15 49.7	
	comp=Z,47nm,1.1s						
MSTX	Muleshoe	73.57	58	P	P	10 15 32.4	0.0
	baz=317,SNR=14						
MSTX				S	S	10 25 02.9	+1.6
	baz=317						
MSTX	Muleshoe	73.57	58	P	P	10 15 32.5	0.0
	baz=317,SNR=14						
MSTX				S	S	10 25 03.2	+1.9
	baz=317						
PALK	Pallekele	73.58	263	P	P	10 15 32.8	+0.2
	comp=Z,27nm,0.8s,baz=132,slow=4.8,SNR=8.6						
PALK				LR	LR	10 52 44.9	
	comp=Z,1µm,18.2s,baz=144,slow=40						
	comp=Z,27nm,0.8s						
PALK	Pallekele	73.58	263	IAmb	IAmb	10 15 33.8	
	comp=Z,29nm,0.8s						
PALK	Pallekele	73.58	263	P	P	10 15 32.9	+0.2
PALK				pmax	pmax		
	comp=Z,29nm,0.8s						
PALK	Pallekele	73.58	263	P	P	10 15 32.8	+0.2
KOD	Kodaikanal	73.62	267	*e*x	x	10 15 29.8	
N38A	Joes South For	73.62	47	IAmb	IAmb	10 15 47.9	
	comp=Z,51nm,0.8s						
N38A	Joes South For	73.62	47	P	P	10 15 32.3	-0.2
	baz=319,SNR=7.5						
N38A				S	SKiKP	10 24 59.7	-1.2
	baz=319						
L40A	Anamosa	73.64	45	IAmb	IAmb	10 15 33.3	
	comp=Z,56nm,1.2s						
L40A	Anamosa	73.64	45	P	P	10 15 32.1	-0.4
	baz=320,SNR=13						
MNTX	Cornudas Mount	73.69	61	P	P	10 15 33.4	+0.3
	baz=316,SNR=20						
MNTX	Cornudas Mount	73.69	61	P	P	10 15 33.2	+0.2
	baz=316,SNR=20						
MNTX				S	S	10 25 05.3	+2.8
	baz=316						
SORM	Soroca	73.74	326	⇑P	P	10 15 33.1	+0.1
G45A	Suttons Bay	73.85	40	IAmb	IAmb	10 15 35.0	
	comp=Z,87nm,1.4s						
G45A	Suttons Bay	73.85	40	S	SKiKP	10 25 01.4	+0.3
	baz=322						
G45A				S	SKiKP	10 25 01.4	+0.3
	baz=322						
RMQ	Roma	73.86	185	P	P	10 15 34.6	+0.8
MDO	Dochfour	73.88	348	*e*P	P	10 15 33.8	+0.2
LVV	L'vov	73.92	329	⇓*i*P	P	10 15 33.5	-0.6
LVV				*e*		10 15 54.5	
LVV				*e*		10 18 21.4	
LVV				*e*		10 20 01.6	
LVV				*e*S	SKiKP	10 25 02.0	+0.9
LVV				*e*		10 25 42.5	
LVV				*e*		10 32 57.5	
LVV				pmax	pmax		
	comp=Z,1µm,1.4s						
LVV				MLR	MLR		
	comp=E,2µm,18.0s						
LVV				MLR	MLR		
	comp=N,4µm,19.0s						
LVV				MLR	MLR		
	comp=Z,4µm,19.0s						
KAC	Achnashellach	73.95	349	*e*P	P	10 15 34.1	0.0
SIM	Simferopol'	73.96	320	*e*P	P	10 15 33.8	-0.6
SIM				pmax	pmax		
	comp=Z,48nm,0.8s						
SIM				MLR	MLR		
	comp=Z,1µm,17.1s						
KPL	Plockton	74.15	349	*e*P	P	10 15 35.4	+0.1
KPL				IAmb	IAmb	10 15 36.5	
	comp=Z,44nm,0.9s						
PCHI	Peechi	74.16	268	*e*P	P	10 15 34.8	-1.2
PCHI				*e*S	S	10 25 14.9	+6.8
QLP	Quilpie	74.34	189	P	P	10 15 37.3	+0.7
P38A	Dawn	74.36	48	P	P	10 15 36.6	-0.2
P38A				IAmb	IAmb	10 15 51.9	
	comp=Z,34nm,0.9s						
P38A	Dawn	74.36	48	P	P	10 15 36.6	-0.2
	baz=319,SNR=22						
P38A				S	S	10 25 06.7	-3.1
	baz=319						
L42A	Oliver, Polo	74.42	44	IAmb	IAmb	10 15 37.6	
	comp=Z,54nm,1.2s						
L42A	Oliver, Polo	74.42	44	P	P	10 15 36.6	-0.5
	baz=321,SNR=8.1						
L42A				S	S	10 25 07.2	-3.2
	baz=321						
PURM	Purcari	74.46	324	⇑P	P	10 15 37.9	+0.7
KIS	Kishinev	74.49	325	⇑*i*P	P	10 15 37.0	-0.4
	comp=Z,80nm,1.1s						
KIS	Kishinev	74.49	325	*e*PcP	PcP	10 15 47.0	-4.9
KIS				*e*S	S	10 25 06.0	-5.0
KIS				*e*L	L	10 44 31.0	
KIS				LRM	MLR	10 52 51.0	
	comp=Z,2µm,12.0s						
KIS	Kishinev	74.49	325*c*	*i*P	P	10 15 37.0	-0.4
KIS				*e*S	S	10 25 06.0	-5.0
KIS				pmax	pmax		
	comp=Z,80nm,1.1s						
KIS				MLR	MLR		
	comp=Z,2µm,14.0s						
KIS				MLR	MLR		
	comp=N,2µm,12.0s						
K43A	Burlington	74.50	43	P	P	10 15 37.1	-0.4
K43A				IAmb	IAmb	10 15 38.2	
	comp=Z,55nm,1.2s						
K43A	Burlington	74.50	43	P	P	10 15 37.2	-0.4
	baz=321,SNR=12						
K43A				S	S	10 25 09.3	-1.9
	baz=321						
MILM	Milestii Mici	74.56	325	⇑*i*P	P	10 15 37.0	-0.8
	comp=Z,740nm,2.7s						
MILM	Milestii Mici	74.56	325	*e*PcP	PcP	10 15 47.0	-5.2
MILM				*i* S	S	10 25 07.0	-4.7
	comp=Z,800nm,8.4s						
MILM	Milestii Mici	74.56	325	⇑P	P	10 15 38.2	+0.4
MILM	Milestii Mici	74.56	325*c*	*i*P	P	10 15 37.0	-0.8
MILM				*i*		10 15 47.0	
MILM				*i* S	S	10 25 07.0	-4.7
MILM				*e*PS	PnS	10 25 50.0	+3.2
MILM				pmax	pmax		
	comp=Z,740nm,2.7s						
MILM				smax	smax		
	comp=N,800nm,8.4s						
MILM				MLR	MLR		
	comp=Z,6µm,14.0s						
MILM				MLR	MLR		
	comp=N,4µm,13.5s						
VLDQ	Val d'Or	74.65	33	IAmb	IAmb	10 15 39.0	
	comp=Z,56nm,1.1s						
INVG	Invergeldie, C	74.82	348	*e*P	P	10 15 39.1	0.0
KOPT	Kop Dagi	74.84	313	IAmb	IAmb	10 16 04.0	
	comp=Z,53nm,1.3s						
GEVA	Gevas	74.85	311	IAmb	IAmb	10 15 43.5	
	comp=Z,74nm,1.6s						
N41A	Harden Midland	74.85	46	P	P	10 15 39.6	-0.1
	baz=320,SNR=13						
N41A				S	S	10 25 13.3	-2.0
	baz=320						
T35B	Sooner Cattle	74.86	52	P	P	10 15 39.4	-0.3
	baz=319,SNR=5.1						
T35B				S	S	10 25 11.8	-3.7
	baz=319						
EAB	Aberfoyle	75.09	348	*e*P	P	10 15 41.1	+0.4
L44A	Lake County Fo	75.10	43	IAmb	IAmb	10 15 42.6	
	comp=Z,82nm,1.5s						
L44A				IAMs_20	IAMs_20	10 53 43.4	
	comp=Z,3µm,19.0s						
L44A	Lake County Fo	75.10	43	P	P	10 15 40.7	-0.3
	baz=322						
L44A				S	S	10 25 14.9	-3.0
	baz=322						
MBWA	Marble Bar	75.11	213	P	P	10 15 41.4	+0.2
MBWA				IAmb	IAmb	10 15 44.0	
	comp=Z,98nm,1.6s						
MBWA	Marble Bar	75.11	213	P	P	10 15 41.7	+0.5
LAWE	Loch Awe, Argy	75.17	348	*e*P	P	10 15 41.0	-0.2
LAWE				IAmb	IAmb	10 15 41.8	
	comp=Z,46nm,0.8s						
P40A	Paris	75.17	47	IAmb	IAmb	10 15 57.3	
	comp=Z,107nm,1.4s						
P40A	Paris	75.17	47	P	P	10 15 41.4	-0.1
	baz=320,SNR=20						
P40A				S	S	10 25 16.2	-2.7
	baz=320						
VASR	Vaslui	75.19	325	⇑P	P	10 15 42.1	+0.7
GURO	Guroymak-BITLI	75.19	311	IAmb	IAmb	10 15 45.7	
	comp=Z,74nm,1.6s						
WMOK	Wichita Mounta	75.25	55	P	P	10 15 41.8	-0.3
WMOK	Wichita Mounta	75.25	55	P	P	10 15 41.8	-0.3
WMOK				pmax	pmax		
	comp=Z,26nm,1.0s						
WMOK	Wichita Mounta	75.25	55	P	P	10 15 42.1	+0.1
	baz=318,SNR=16						
WMOK				S	S	10 25 19.8	-0.1
	baz=318						
WMOK	Wichita Mounta	75.25	55	P	P	10 15 42.2	+0.1
	baz=318,SNR=16						
WMOK				S	S	10 25 19.5	-0.4
	baz=318						
KOLS	Kolonicke sedl	75.28	330	*e*P	P	10 15 42.3	+0.3
KOLS				pmax	pmax		
	comp=Z,52nm,1.0s						
KOLS	Kolonicke sedl	75.28	330	*e*P	P	10 15 42.3	+0.3
BUR08	Bucovina Ar. S	75.33	327	P	P	10 15 42.5	+0.1
BUR08				IAmb	IAmb	10 15 43.8	
	comp=Z,40nm,1.1s						
BURAR	Bucovina Array	75.35	327	⇑P	P	10 15 42.8	+0.3
BURAR	Bucovina Array	75.35	327	P	P	10 15 42.5	-0.1
BURAR				IAmb	IAmb	10 15 43.7	
	comp=Z,36nm,0.7s						
PSA00	Pilbara Seismi	75.45	213	P	P	10 15 43.3	+0.2
PSA00				IAmb	IAmb	10 15 46.1	
	comp=Z,124nm,1.8s						
PSA00	Pilbara Seismi	75.45	213	P	P	10 15 43.9	+0.8
PGBU	Glenifferbraes	75.48	348	*e*P	P	10 15 42.5	-0.4
PGBU				IAmb	IAmb	10 15 44.3	
	comp=Z,93nm,1.0s						
NIE	Niedzica	75.53	331	*e*P	P	10 15 44.2	+0.8
NIE				*e*L	L	10 53 25.1	
	comp=Z,3µm,18.0s						
UZH	Uzhgorod	75.53	329	*e*P	P	10 15 41.5	-1.9
UZH				*e*		10 15 49.8	
UZH				*i*		10 16 04.0	
UZH				*i*		10 18 32.0	
UZH				*e*PPP	PPP	10 20 17.5	
UZH				*i* S	S	10 25 16.8	-5.7
UZH				*e*PS	PnS	10 25 58.0	-1.3
UZH				*i* SS	SS	10 30 11.5	-0.7
UZH				MLR	MLR		
	comp=N,850nm,18.0s						
UZH				MLR	MLR		
	comp=E,420nm,18.0s						
UZH				MLR	MLR		
	comp=Z,410nm,18.0s						
KSP	Ksiaz	75.53	334	*e*P	P	10 15 43.6	+0.3
KSP				*e*L	L	10 54 38.6	
	comp=Z,10µm,20.0s						
CRVS	Cervenica-Dubn	75.58	330	*e*P	P	10 15 44.0	+0.3
CRVS				pmax	pmax		
	comp=Z,55nm,1.0s						
CRVS	Cervenica-Dubn	75.58	330	*e*P	P	10 15 44.0	+0.3
BIZ	Bicaz	75.58	326	⇑P	P	10 15 44.1	+0.4
FNO	Franklin	75.62	53		P	10 15 43.6	-0.6
J47A	Sunmer	75.65	40	P	P	10 15 44.5	+0.3
	baz=323,SNR=11						
J47A				P	P	10 15 44.5	+0.3
	baz=323,SNR=11						
J47A				S	S	10 25 23.3	-0.7
	baz=323						
J47A				S	S	10 25 23.3	-0.7
	baz=323						
M44A	Midewin, Midew	75.66	43	IAmb	IAmb	10 15 45.9	
	comp=Z,112nm,1.5s						
M44A	Midewin, Midew	75.66	43	P	P	10 15 44.0	-0.2
	baz=322,SNR=7.3						
M44A				S	S	10 25 19.9	-4.2
	baz=322						
HDIL	Hopedale	75.72	45	IAMs_20	IAMs_20	10 53 20.8	
	comp=Z,3µm,19.0s						
HDIL	Hopedale	75.72	45	P	P	10 15 44.5	-0.1
	baz=321,SNR=18						
HDIL				S	S	10 25 23.4	-1.5
	baz=321						
HDIL	Hopedale	75.72	45	P	P	10 15 44.5	-0.1
	baz=321,SNR=18						
HDIL				S	S	10 25 22.9	-2.0
	baz=321						
VLDR	Vladesti	75.73	324	⇑P	P	10 15 44.8	+0.2
TESR	Tescani	75.73	326	⇑P	P	10 15 44.5	-0.1
ESK	Eskdalemuir	75.77	347	IAMs_20	IAMs_20	10 54 37.4	
	comp=Z,2µm,19.0s						
VARL	Varlezi	75.78	325	⇑P	P	10 15 45.3	+0.5
OSTC	Ostas	75.81	334	*e*P	P	10 15 45.4	+0.4
OSTC				*e*S	S	10 25 20.7	-4.9
OSTC				AMS	AMS	10 54 00.0	
	comp=Z,9µm,19.0s						
GHRR		75.82	325	⇑P	P	10 15 46.2	+1.1
CHVC	Chvalec	75.83	334	*e*P	P	10 15 45.3	+0.2
CHVC				AMS	AMS	10 54 40.0	
	comp=Z,10µm,18.4s						
OKC	Ostrava-Krasne	75.85	332	*e*P	P	10 15 45.5	+0.3
OKC				*e*S	S	10 25 15.2	-11
OKC				MLR	MLR		
	comp=Z,8µm,15.9s						
OKC	Ostrava-Krasne	75.85	332	*e*P	P	10 15 45.5	+0.3
OKC				*e*S	S	10 25 15.2	-11
OKC				AMS	AMS	10 54 40.0	
	comp=Z,8µm,15.9s						
X34A	Smith Ranch, M	75.87	54	IAmb	IAmb	10 16 03.3	
	comp=Z,57nm,1.3s						
SCTR	Scanteiesti	75.91	324	⇑P	P	10 15 46.2	+0.6
UPC	Upice	75.91	334	*e*P	P	10 15 46.0	+0.4
UPC				*e*S	S	10 25 16.8	-10
UPC				MLR	MLR		
	comp=Z,11µm,18.9s						
UPC	Upice	75.91	334	*e*P	P	10 15 46.0	+0.4
UPC				*e*S	S	10 25 16.8	-10
UPC				AMS	AMS	10 54 40.0	
	comp=Z,11µm,18.9s						
BMR	Baia Mare	75.92	328	⇓P	P	10 15 46.6	+0.9
INKA	Innaminka	75.93	192	P	P	10 15 48.2	+2.5
S39A	Bolivar	75.94	49	P	P	10 15 44.4	-1.6
S39A				IAmb	IAmb	10 16 01.5	
	comp=Z,61nm,1.6s						
S39A	Bolivar	75.94	49	P	P	10 15 44.7	-1.2
	baz=320,SNR=14						
S39A				S	S	10 25 23.1	-4.3
	baz=320						
WRKA	Warakurna	75.95	204	P	P	10 15 45.9	0.0
I49A	Point Hope	75.95	39	P	P	10 15 44.6	-1.3
I49A				IAmb	IAmb	10 15 54.2	
	comp=Z,29nm,0.9s						
I49A	Point Hope	75.95	39	S	S	10 25 24.8	-2.5
	baz=324						
I49A				S	S	10 25 24.8	-2.5
	baz=324						
DPC	Dobruska-Polom	75.96	334	*e*P	P	10 15 46.2	+0.3
DPC				*e*S	S	10 25 15.9	-11
DPC				MLR	MLR		
	comp=Z,10µm,18.7s						
DPC	Dobruska-Polom	75.96	334	*e*P	P	10 15 46.2	+0.3
DPC				*e*S	S	10 25 15.9	-11
DPC				AMS	AMS	10 54 00.0	
	comp=Z,10µm,18.7s						
L46A	Eue Claire	75.97	42	IAmb	IAmb	10 15 47.1	
	comp=Z,41nm,1.0s						
TLCR		75.98	324	⇑P	P	10 15 46.4	+0.3
TUL1	Leonard	76.00	52	IAMs_20	IAMs_20	10 53 50.3	
	comp=Z,2µm,19.0s						
TUL1	Leonard	76.00	52	P	P	10 15 46.1	-0.2
	baz=319,SNR=15						
TUL1				S	S	10 25 26.1	-2.0

	baz=319						
TUL1	Leonard	76.00	52	P	P	10 15 46.1	-0.2
	baz=319,SNR=15						
TUL1				S	S	10 25 27.7	-0.4
	baz=319						
R40A	Maddies Statio	76.01	48	IAmb	IAmb	10 16 01.1	
	comp=Z,28nm,0.7s						
R40A	Maddies Statio	76.01	48	P	P	10 15 45.9	-0.4
	baz=320,SNR=13						
R40A				S	S	10 25 24.3	-3.9
	baz=320						
LANS	Liptovska Anna	76.03	331	*e*P	P	10 15 47.5	+1.2
LANS				pmax	pmax		
	comp=Z,53nm,1.3s						
LANS	Liptovska Anna	76.03	331	*e*P	P	10 15 47.5	+1.2
CLL	Collm	76.06	336	⇑*i*P	P	10 15 46.5	+0.1
CLL				*e*S	S	10 25 24.0	-4.2
CLL				pmax	pmax		
	comp=Z,95nm,0.7s						
CLL				MLR	MLR		
	comp=Z,5µm,20.6s						
CLL	Collm	76.06	336	⇑*i*P	P	10 15 46.5	+0.1
	comp=Z,95nm,0.7s						
CLL				*e*PP	PP	10 18 35.0	-1.4
CLL				*e*PPP	PPP	10 20 24.0	
CLL				*e*S	S	10 25 24.0	-4.2
CLL				*e*SKSac	SKSac	10 25 55.0	-0.6
CLL				*e*PPS	PPS	10 26 18.0	
CLL				*e*SS	SS	10 30 24.0	+4.0
CLL				*e*(SSS)		10 34 18.0	
CLL				Lm	MLR	10 51 00.0	
	comp=Z,5µm,20.6s						
KRLC	Kraliky	76.06	333	*e*P	P	10 15 46.7	+0.2
KRLC				MLR	MLR		
	comp=Z,9µm,17.9s						
KRLC	Kraliky	76.06	333	*e*P	P	10 15 46.7	+0.2
KRLC				*e*S	S	10 25 16.3	-12
KRLC				AMS	AMS	10 53 40.0	
	comp=Z,9µm,17.9s						
DIKM	Dikmen	76.06	318	⇑P	P	10 15 48.2	+1.6
PANC	Panciu	76.07	325	⇑P	P	10 15 47.5	+0.9
MORC	Moravsky Berou	76.09	333	⇑P	P	10 15 47.3	+0.6
MORC	Moravsky Berou	76.09	333	P	P	10 15 46.2	-0.5
MORC				IAmb	IAmb	10 15 48.5	
	comp=Z,75nm,1.1s						
MORC	Moravsky Berou	76.09	333	P	P	10 15 46.2	-0.5
MORC				pmax	pmax		
	comp=Z,75nm,1.1s						
MORC	Moravsky Berou	76.09	333	*e*P	P	10 15 47.2	+0.5
LPIG	La Paz	76.10	70	LR	LR	10 43 54.9	
	comp=Z,585nm,21.8s,baz=318,slow=32						
ARCR	ARCALIA	76.11	327	⇑P	P	10 15 47.6	+0.8
NEWG	New Galloway	76.11	347	*e*P	P	10 15 46.1	-0.5
NEWG				IAmb	IAmb	10 15 47.6	
	comp=Z,28nm,1.1s						
BRG	Berggiesshubel	76.19	335	*i* P	P	10 15 47.3	+0.1
BRG				Amp		10 15 49.1	
	comp=Z,37nm,1.0s						
BRG				*e*x	x	10 15 56.8	
BRG				Amp		10 16 00.9	
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	76.19	335	*i* P	P	10 15 47.2	+0.1
BRG				*e*		10 15 56.7	
BRG				S	S	10 25 24.0	-5.7
BRG				pmax	pmax		
	comp=Z,37nm,1.0s						
VRI	Vrincioaia	76.24	325	⇑P	P	10 15 47.8	+0.3
CFR	Carcaliu	76.26	324	⇑P	P	10 15 47.8	+0.2
KECS	Kecovo	76.27	330	*e*P	P	10 15 48.1	+0.5
KECS	Kecovo	76.27	330	*e*P	P	10 15 48.1	+0.5
PLOR	Plostina	76.28	325	⇑P	P	10 15 48.3	+0.5
JURR	Jurilovca	76.30	323	⇑P	P	10 15 48.7	+0.9
PVCC	Panska Ves	76.32	335	*e*P	P	10 15 48.3	+0.4
PVCC				MLR	MLR		
	comp=Z,6µm,17.6s						
PVCC	Panska Ves	76.32	335	*e*P	P	10 15 48.3	+0.4
PVCC				AMS	AMS	10 53 00.0	
	comp=Z,6µm,17.6s						
P43A	Skaggs, Pawnee	76.33	45	P	P	10 15 47.1	-1.0
P43A				IAmb	IAmb	10 16 03.2	
	comp=Z,119nm,1.8s						
P43A	Skaggs, Pawnee	76.33	45	P	P	10 15 47.7	-0.4
	baz=321,SNR=5.5						
P43A				S	S	10 25 28.3	-3.3
	baz=321						
ABTX	Abilene, Hawle	76.33	57	P	P	10 15 48.2	-0.1
ABTX				IAmb	IAmb	10 15 50.5	
	comp=Z,55nm,1.5s						
ABTX	Abilene, Hawle	76.33	57	P	P	10 15 48.5	+0.1
	baz=318,SNR=9.4						
ABTX				S	S	10 25 30.4	-1.6
	baz=318						
ABTX	Abilene, Hawle	76.33	57	P	P	10 15 48.4	+0.1
	baz=318,SNR=9.4						
ABTX				S	S	10 25 31.0	-0.9
	baz=318						
MAUC	Maruska	76.37	332	*e*P	P	10 15 48.9	+0.7
MAUC				AMS	AMS	10 54 50.0	
	comp=Z,16µm,17.2s						
BZK	Bozkurt	76.39	318	⇑P	P	10 15 48.5	+0.1
BANOM	Banah	76.39	293	P	P	10 15 49.1	+0.4
	SNR=9.5						
BANOM	Banah	76.39	293	*i* P	P	10 15 48.8	0.0
	SNR=26						
SHME	Shamm	76.40	294	*i* P	P	10 15 48.3	-0.4
	SNR=12						
TPGR	Topolog	76.41	324	⇑P	P	10 15 48.8	+0.3
O44A	Mansfield	76.43	44	P	P	10 15 48.5	-0.1
O44A				IAmb	IAmb	10 15 58.2	
	comp=Z,123nm,1.8s						
O44A	Mansfield	76.43	44	P	P	10 15 48.5	-0.1
	baz=322,SNR=5.7						
O44A				S	S	10 25 31.1	-1.6
	baz=322						
COVR	Voineasa-Covas	76.46	326	⇑P	P	10 15 49.5	+0.7
BISRR	Bisoca	76.51	325	⇑P	P	10 15 50.3	+1.1
TOKA	Tokat	76.55	316	IAmb	IAmb	10 15 54.0	
	comp=Z,76nm,1.3s						
GRER		76.55	325	⇑P	P	10 15 49.2	-0.1
SLBS	Sierra La Lagu	76.63	70	IAMs_20	IAMs_20	10 46 28.9	
	comp=Z,2µm,21.0s						
DOPR	Dopca	76.67	326	⇑P	P	10 15 50.9	+0.9
HHAR	Hobbs	76.69	50	P	P	10 15 49.8	-0.5
HHAR				IAmb	IAmb	10 16 06.7	
	comp=Z,37nm,1.1s						
HHAR	Hobbs	76.69	50	P	P	10 15 49.3	-1.0
	baz=320						
HHAR				S	S	10 25 32.9	-2.8
	baz=320						
CJR	Cluj-Napoca	76.70	328	⇑P	P	10 15 50.7	+0.5
CCM	Cathedral Cave	76.71	48	P	P	10 15 49.7	-0.6
CCM	Cathedral Cave	76.71	48	IAMs_20	IAMs_20	10 50 06.0	
	comp=Z,2µm,20.0s						
CCM	Cathedral Cave	76.71	48	P	P	10 15 49.7	-0.6
CCM				pmax	pmax		
	comp=Z,23nm,0.9s						
CCM				MLR	MLR		
	comp=Z,2µm,20.0s						
CCM	Cathedral Cave	76.71	48	P	P	10 15 50.0	-0.3
	baz=321,SNR=13						
CCM				S	S	10 25 33.2	-2.7
	baz=321						
CCM	Cathedral Cave	76.71	48	P	P	10 15 49.9	-0.4
	baz=321						
CCM				S	S	10 25 33.9	-2.0
	baz=321						
TIRR	Tirgusor	76.74	323	⇑P	P	10 15 50.4	0.0
TIRR	Tirgusor	76.74	323	⇑P	P	10 15 50.4	0.0
TIRR	Tirgusor	76.74	323	P	P	10 15 50.5	+0.1
TIRR	Tirgusor	76.74	323	P	P	10 15 50.5	+0.1
TIRR				pmax	pmax		
	comp=Z,122nm,0.9s						
HARR	Harsova	76.75	324	⇑P	P	10 15 50.7	+0.3
SLM	Saint Louis	76.76	47	IAmb	IAmb	10 15 51.7	
	comp=Z,70nm,1.3s						
SLM	Saint Louis	76.76	47	S	S	10 25 35.5	-0.9
	baz=321						
NEHR	Nehoiu	76.78	325	⇑P	P	10 15 51.6	+1.0
SADO	Sadowa	76.78	36	LR	LR	10 53 59.7	
	comp=Z,2µm,18.2s,baz=352,slow=39						
SADO	Sadowa	76.78	36	P	P	10 15 50.3	-0.3
VRAC	Vranov	76.80	333	⇑P	P	10 15 51.1	+0.5
VRAC	Vranov	76.80	333	LR	LR	10 54 35.0	
	comp=Z,9µm,18.9s,baz=22,slow=40						
VRAC	Vranov	76.80	333	*e*P	P	10 15 51.4	+0.8
PRU	Pruhonice	76.81	335	*e*P	P	10 15 51.1	+0.5
PRU				MLR	MLR		
	comp=Z,7µm,17.6s						
PRU	Pruhonice	76.81	335	*e*P	P	10 15 51.1	+0.5
PRU				*e*S	S	10 25 23.7	-13
PRU				AMS	AMS	10 53 00.0	
	comp=Z,7µm,17.6s						
VYHS	Vyhne	76.81	331	*e*P	P	10 15 51.3	+0.6
VYHS				pmax	pmax		
	comp=Z,32nm,1.2s						
VYHS	Vyhne	76.81	331	*e*P	P	10 15 51.3	+0.6
HPK	Haverah Park	76.82	346	*e*P	P	10 15 51.1	+0.5
HPK				IAmb	IAmb	10 15 51.6	
	comp=Z,140nm,1.0s						
TLBR	Topalu	76.82	324	⇑P	P	10 15 51.4	+0.6
OOD	Oodnadatta	76.84	197	P	P	10 15 52.5	+1.6
WSAR	Wadi Sarin	76.86	290	LR	LR	10 54 46.7	
	comp=Z,4µm,18.6s,baz=43,slow=40						
MLR	Muntele Rosu	76.86	325	⇑P	P	10 15 51.6	+0.4
MLR	Muntele Rosu	76.86	325	LR	LR	10 53 37.9	
	comp=Z,4µm,18.8s,baz=40,slow=39						
MLR	Muntele Rosu	76.86	325	P	P	10 15 51.4	+0.2
MLR	Muntele Rosu	76.86	325	P	P	10 15 51.4	+0.2
MLR				pmax	pmax		
	comp=Z,61nm,0.7s						
JAVC	Velka Javorina	76.86	332	*e*P	P	10 15 52.4	+1.4
L48A	N Adams	76.86	41	IAmb	IAmb	10 15 52.5	
	comp=Z,111nm,1.6s						
L48A	N Adams	76.86	41	P	P	10 15 51.0	-0.1
	baz=324,SNR=8.0						
L48A				P	P	10 15 51.0	-0.1
	baz=324,SNR=8.0						
L48A				S	S	10 25 34.3	-3.1
	baz=324						
L48A				S	S	10 25 34.3	-3.1
	baz=324						
KOLL	Kolacno	76.87	332	*e*P	P	10 15 52.1	+1.1
MASF	Masafi	76.88	293	P	P	10 15 51.8	+0.3
	SNR=5.1						
MGMO	Mountain Grove	76.89	49	P	P	10 15 50.6	-0.7
MGMO				IAmb	IAmb	10 16 05.8	
	comp=Z,76nm,1.8s						
MSFE	Esma-Masafi	76.89	293	*i* P	P	10 15 51.6	0.0
	SNR=8.4						
SFIN	Lafayette	76.90	44	P	P	10 15 51.3	0.0
SFIN				IAmb	IAmb	10 15 52.4	
	comp=Z,48nm,1.2s						
SFIN	Lafayette	76.90	44	P	P	10 15 51.2	0.0
	baz=322,SNR=8.7						
SFIN				S	S	10 25 34.4	-3.4
	baz=322						
SFIN	Lafayette	76.90	44	P	P	10 15 50.9	-0.4
	baz=322,SNR=8.7						
SFIN				S	S	10 25 34.4	-3.4
	baz=322						
AAM	Ann Arbor	76.92	40	IAMs_20	IAMs_20	10 51 00.3	
	comp=Z,2µm,21.0s						
AAM	Ann Arbor	76.92	40	P	P	10 15 50.4	-1.0
	baz=324						
ISR	Istrita	76.94	325	⇑P	P	10 15 52.5	+1.0
LATQ	La Tuque	76.94	31	P	P	10 15 51.2	-0.2
HPIG		76.95	64	IAmb	IAmb	10 16 08.6	
	comp=Z,70nm,1.6s						
DRGR		76.95	328	⇑P	P	10 15 52.0	+0.3
PSZ	Piszkesteto	76.96	330	⇓P	P	10 15 51.2	-0.4
PSZ	Piszkesteto	76.96	330	IAmb	IAmb	10 15 53.0	
	comp=Z,36nm,0.9s						
PSZ	Piszkesteto	76.96	330	P	P	10 15 52.2	+0.5
MFTR	Murfatlar	76.97	323	⇑P	P	10 15 52.2	+0.6
BIDO	Bidbid	76.97	290	P	P	10 15 53.6	+1.6
	SNR=6.6						
K50A	Casco	76.98	39	S	S	10 25 37.2	-1.4
	baz=324						
K50A				S	S	10 25 37.2	-1.4
	baz=324						
KRUC	Moravsky	77.08	333	*e*P	P	10 15 52.8	+0.6
WIM	Isle of Man	77.12	347	*e*P	P	10 15 52.4	+0.1
JLN	Jalan Bani Buh	77.14	289	P	P	10 15 54.4	+1.5
	SNR=7.8						
Z35A	Perchaven, San	77.14	55	S	S	10 25 38.6	-2.1
	baz=319						
N47A	Urbana	77.14	42	P	P	10 15 52.0	-0.6
N47A				IAmb	IAmb	10 15 54.1	
	comp=Z,58nm,1.2s						
N47A	Urbana	77.14	42	P	P	10 15 52.1	-0.6
	baz=323,SNR=11						
N47A				P	P	10 15 52.1	-0.6
	baz=323,SNR=11						
N47A				S	S	10 25 36.8	-3.7
	baz=323						
N47A				S	S	10 25 36.8	-3.7
	baz=323						
Q44A	Meyer Farm, Va	77.14	46	S	S	10 25 39.7	-0.8
	baz=322						
TREC	Trest	77.15	334	*e*P	P	10 15 53.2	+0.6
TREC				MLR	MLR		
	comp=Z,8µm,18.7s						
TREC	Trest	77.15	334	*e*P	P	10 15 53.2	+0.6
TREC				AMS	AMS	10 55 20.0	
	comp=Z,8µm,18.7s						
UOSS	Minazif	77.16	293	P	P	10 15 52.0	-1.0
UOSS	Minazif	77.16	293	IAMs_20	IAMs_20	10 53 01.9	
	comp=Z,3µm,22.0s						
UOSS	Minazif	77.16	293	P	P	10 15 53.1	0.0
UOSS	Minazif	77.16	293	*i* P	P	10 15 52.0	-1.0
	SNR=15						
FVM	French Village	77.17	47	P	P	10 15 52.5	-0.4
FVM	French Village	77.17	47	P	P	10 15 52.5	-0.4
FVM				pmax	pmax		
	comp=Z,21nm,0.7s						
FVM	French Village	77.17	47	P	P	10 15 52.8	-0.1
	baz=321,SNR=11						
FVM				S	S	10 25 39.1	-1.8
	baz=321						
NKC	Novy Kostel	77.18	336	*e*P	P	10 15 53.0	+0.2
NKC				MLR	MLR		
	comp=Z,6µm,14.4s						
NKC	Novy Kostel	77.18	336	*e*P	P	10 15 53.0	+0.2
NKC				AMS	AMS	10 57 40.0	
	comp=Z,6µm,14.4s						
U40A	Yellville	77.20	50	IAMs_20	IAMs_20	10 50 46.1	
	comp=Z,3µm,21.0s						
U40A	Yellville	77.20	50	P	P	10 15 52.8	-0.3
	baz=320,SNR=50						
U40A				P	P	10 15 52.8	-0.3
	baz=320,SNR=50						
U40A				S	S	10 25 37.8	-3.4
	baz=320						
U40A				S	S	10 25 37.8	-3.4
	baz=320						
U40A	Yellville	77.20	50	P	P	10 15 52.6	-0.5
	baz=320,SNR=50						
U40A				S	S	10 25 38.4	-2.8
	baz=320						
X37A	Clayton	77.22	52		P	10 15 52.8	-0.4
X37A	Clayton	77.22	52	P	P	10 15 53.2	0.0
	baz=319						
X37A				S	S	10 25 35.9	-5.5
	baz=319						
SMOL	Smolenice	77.24	332	*e*P	P	10 15 54.3	+1.2
SMOL				pmax	pmax		
	comp=Z,24nm,0.8s						
SMOL	Smolenice	77.24	332	*e*P	P	10 15 54.3	+1.2
VOIR		77.24	326	⇑P	P	10 15 53.7	+0.4
ICOR	Ion Corvin	77.27	324	⇑P	P	10 15 53.9	+0.6
HATD	Hatta, Dubai	77.29	293	P	P	10 15 54.3	+0.5
	SNR=24						
HATD	Hatta, Dubai	77.29	293	*i* P	P	10 15 53.9	+0.1
	SNR=26						
TRQ	Mont Tremblant	77.30	32	IAmb	IAmb	10 15 54.6	
	comp=Z,54nm,1.2s						
SMDO	Samad	77.36	290	P	P	10 15 55.6	+1.3
	SNR=7.9						
BSZH	Besenyszg	77.37	330	P	P	10 15 54.8	+1.0
LBWR	Ladybower, Pea	77.37	346	*e*P	P	10 15 53.8	0.0
LBWR				IAmb	IAmb	10 15 55.2	
	comp=Z,140nm,1.1s						
MODS	Modra-Piesok	77.41	332	*e*P	P	10 15 55.1	+1.0
MODS				pmax	pmax		
	comp=Z,110nm,1.1s						
MODS	Modra-Piesok	77.41	332	*e*P	P	10 15 55.1	+1.0
MTUR	Matau	77.42	326	⇓P	P	10 15 54.1	-0.2
SULR		77.42	325	⇑P	P	10 15 54.5	+0.4
ASHO	Ashiyiah	77.44	293	P	P	10 15 55.4	+0.8
	SNR=15						
ASHO	Ashiyiah	77.44	293	*i* P	P	10 15 54.2	-0.5
	SNR=20						
HOQ	Hoqain	77.45	291	P	P	10 15 55.7	+1.0
	SNR=9.1						
P46A	Rosedale	77.45	44	IAmb	IAmb	10 15 55.6	
	comp=Z,56nm,0.9s						
P46A	Rosedale	77.45	44	P	P	10 15 54.4	-0.1
	baz=322,SNR=20						
NAZ	Nazwa, Dubai	77.47	293	P	P	10 15 55.5	+0.7
	SNR=7.3						
NAZ	Nazwa, Dubai	77.47	293	*i* P	P	10 15 54.7	0.0
	SNR=8.5						
PSN	Preselentsi	77.48	323	*i* P	P	10 15 55.5	+1.0
SOHO	SOHO	77.54	292	*i* P	P	10 15 54.9	-0.3
	SNR=16						
SRO	Srobarova	77.57	331	*e*P	P	10 15 56.2	+1.2
SRO				pmax	pmax		
	comp=Z,52nm,0.7s						
SRO	Srobarova	77.57	331	*e*P	P	10 15 56.2	+1.2
DELO	Deloro Mine	77.59	35	P	P	10 15 54.7	-0.4
DELO				IAmb	IAmb	10 16 10.1	
	comp=Z,98nm,1.9s						
W39A	Magazine	77.60	51	IAmb	IAmb	10 16 12.3	
	comp=Z,46nm,1.3s						
W39A	Magazine	77.60	51	P	P	10 15 55.1	-0.3
	baz=320,SNR=8.0						
W39A				S	S	10 25 43.6	-2.0
	baz=320						
W39A	Magazine	77.60	51	P	P	10 15 54.8	-0.6
	baz=320,SNR=8.0						
W39A				S	S	10 25 44.2	-1.4
	baz=320						
ZST	Bratislava	77.62	332	*e*P	P	10 15 56.5	+1.3
ZST				pmax	pmax		
	comp=Z,697nm,2.4s						
ZST	Bratislava	77.62	332	*e*P	P	10 15 56.5	+1.3
LMQ	La Malbaie	77.62	29	IAmb	IAmb	10 16 13.2	
	comp=Z,60nm,1.2s						
BUD	Budapest	77.63	331	P	P	10 15 56.4	+1.1
ARMA	Armidale	77.65	182	IAmb	IAmb	10 15 59.2	
	comp=Z,74nm,1.4s						
ARMA	Armidale	77.65	182	P	P	10 15 57.8	+2.3
FAQ	Al Faqa, Dubai	77.68	293	P	P	10 15 56.0	0.0
	SNR=6.1						
FAQ	Al Faqa, Dubai	77.68	293	*i* P	P	10 15 55.8	-0.2
	SNR=21						
SIRR	Siria	77.78	329	⇑P	P	10 15 56.5	+0.3
N49A	Columbus Grove	77.80	41	IAmb	IAmb	10 15 57.6	
	comp=Z,59nm,1.4s						
N49A	Columbus Grove	77.80	41	P	P	10 15 55.8	-0.5
	baz=324,SNR=8.6						
N49A				P	P	10 15 55.8	-0.5
	baz=324,SNR=8.6						
N49A				S	S	10 25 44.5	-3.0
	baz=324						
N49A				S	S	10 25 44.5	-3.0
	baz=324						
JMDO	Jabal Madar	77.82	290	P	P	10 15 57.6	+0.8
	SNR=7.9						
JCT	Junction City	77.83	58	IAmb	IAmb	10 16 13.9	
	comp=Z,32nm,0.9s						
JCT				IAMs_20	IAMs_20	10 46 31.2	
	comp=Z,2µm,21.0s						
JCT	Junction City	77.83	58	P	P	10 15 56.6	-0.2
	baz=318,SNR=19						
JCT				S	S	10 25 47.5	-0.9
	baz=318						
JCT	Junction City	77.83	58	P	P	10 15 56.8	0.0
	baz=318,SNR=19						
JCT				S	S	10 25 47.4	-0.9
	baz=318						
KHC	Kasperske Hory	77.85	335	*e*P	P	10 15 57.4	+0.8
KHC				*e*		10 16 10.5	
KHC				*e*S	S	10 25 43.8	-4.2
KHC				MLR	MLR		
	comp=Z,8µm,17.8s						
KHC	Kasperske Hory	77.85	335	*e*P	P	10 15 57.4	+0.8
KHC				*e*x	x	10 16 10.5	
KHC				*e*S	S	10 25 43.8	-4.2
KHC				AMS	AMS	10 53 50.0	
	comp=Z,8µm,17.8s						
O48B	Farmland	77.89	42	P	P	10 15 55.7	-1.2
	baz=323,SNR=18						
O48B				S	S	10 25 45.9	-2.7
	baz=323						
O48B	Farmland	77.89	42	P	P	10 15 56.4	-0.4
	baz=323,SNR=18						
O48B				S	S	10 25 45.2	-3.4
	baz=323						
M50A	Fremont	77.91	40	P	P	10 15 57.0	0.0
	baz=324						
M50A				P	P	10 15 57.0	0.0
	baz=324						
M50A				S	S	10 25 47.0	-1.8
	baz=324						
M50A				S	S	10 25 47.0	-1.8
	baz=324						
CKRC	Cesky Krumlov	77.92	334	*e*P	P	10 15 57.0	+0.1
CKRC				*e*S	S	10 25 40.5	-8.2
FCAR	Ozark Folk Cen	77.93	50	P	P	10 15 56.6	-0.6
FCAR				IAmb	IAmb	10 16 11.8	
	comp=Z,38nm,0.7s						
ASUD	Al Ashush, Dub	77.94	293	P	P	10 15 57.9	+0.6
	SNR=5.3						
ASUD	Al Ashush, Dub	77.94	293	*i* P	P	10 15 57.7	+0.4
	SNR=10						
S44A	Carbondale	77.98	47	IAmb	IAmb	10 15 59.4	
	comp=Z,102nm,1.6s						
S44A	Carbondale	77.98	47	P	P	10 15 57.4	0.0
	baz=322,SNR=14						
S44A				S	S	10 25 47.5	-2.1
	baz=322						
CSKK	Cskako	77.98	331	P	P	10 15 58.0	+0.8
GRFO	Grafenberg	78.01	336	P	P	10 15 58.0	+0.6
GRFO	Grafenberg	78.01	336	P	P	10 15 58.0	+0.6
GRFO				pmax	pmax		
	comp=Z,89nm,0.6s						
GRFO				MLR	MLR		
	comp=Z,4µm,20.0s						
WHTX	Lake Whitney,	78.03	56	P	P	10 15 57.2	-0.6
WHTX				IAmb	IAmb	10 16 15.1	
	comp=Z,47nm,1.0s						
WHTX	Lake Whitney,	78.03	56	P	P	10 15 57.8	0.0
	baz=319,SNR=7.1						
WHTX				S	S	10 25 49.2	-1.2
	baz=319						
WHTX	Lake Whitney,	78.03	56	P	P	10 15 58.0	+0.1
	baz=319,SNR=7.1						
WHTX				S	S	10 25 49.4	-1.0
	baz=319						
GEC2	GERESS Array S	78.08	335	IAmb	IAmb	10 15 58.8	
	comp=Z,30nm,0.7s						
GERES	GERESS Array B	78.08	335	P	P	10 15 58.2	+0.3
	comp=Z,19nm,0.6s,baz=44,slow=5.9,SNR=56						
GERES				LR	LR	10 54 36.3	
	comp=Z,9µm,18.5s,baz=20,slow=39						
	comp=Z,19nm,0.6s						
GERES	GERESS Array B	78.08	335	P	P	10 15 57.5	-0.3
ALNE	Al Ain	78.08	292	P	P	10 15 58.9	+0.7
	SNR=12						
ALNE	Al Ain	78.08	292	*i* P	P	10 15 58.4	+0.1
	SNR=11						
PBMO	Poplar Bluff	78.11	48	IAmb	IAmb	10 16 00.2	
	comp=Z,109nm,1.5s						
PBMO	Poplar Bluff	78.11	48	P	P	10 15 58.2	0.0
	baz=321,SNR=23						
PBMO				S	S	10 25 49.4	-1.6
	baz=321						
FOEL	Foel Wylfa	78.11	346	*e*P	P	10 15 57.9	0.0
FOEL				IAmb	IAmb	10 15 58.8	
	comp=Z,50nm,0.9s						
ARQ	Araqi	78.12	291	P	P	10 15 59.5	+1.0
	SNR=9.0						
BSY	Bisya	78.12	291	P	P	10 15 59.3	+0.9
	SNR=9.3						
BLO	Bloomington	78.12	44	IAmb	IAmb	10 16 13.6	
	comp=Z,23nm,0.7s						
GZR	Gura Zlata	78.13	327	⇑P	P	10 15 58.2	0.0
ELMS	Elmsett, Ipswi	78.13	344	*e*P	P	10 15 58.6	+0.6
ELMS				IAmb	IAmb	10 15 59.1	
	comp=Z,94nm,0.7s						
AJN	Ajban	78.19	293	P	P	10 15 58.5	-0.3
	SNR=5.1						
AJN	Ajban	78.19	293	*i* P	P	10 15 58.7	-0.1
	SNR=5.3						
PRD	Provadia	78.20	323	*i* P	P	10 15 59.2	+0.7
MIAR	Mount Ida	78.21	51	P	P	10 15 58.0	-0.8
MIAR	Mount Ida	78.21	51	P	P	10 15 58.0	-0.8

MIAR				pmax	pmax		
	comp=Z,24nm,0.9s						
MIAR	**Mount Ida**	**78.21**	**51**	P	**P**	**10 15 58.6**	**-0.1**
	baz=320,SNR=17						
MIAR				S	**S**	**10 25 49.9**	**-2.3**
	baz=320						
MIAR	**Mount Ida**	**78.21**	**51**	P	**P**	**10 15 58.6**	**-0.1**
	baz=320,SNR=17						
MIAR				S	**S**	**10 25 50.7**	**-1.5**
	baz=320						
J54A	**Appleton**	**78.23**	**37**	S	**S**	**10 25 48.3**	**-3.8**
	baz=326						
J54A				S	**S**	**10 25 48.3**	**-3.8**
	baz=326						
EGYH	**Egyhazaskeszo**	**78.24**	**332**	P	**P**	**10 15 59.9**	**+1.3**
CONA	**Conrad Observa**	**78.25**	**333**	*i* P	**P**	**10 15 59.9**	**+1.1**
	comp=Z,22nm,0.6s,SNR=17						
SOP	**Sopron**	**78.25**	**332**	P	**P**	**10 15 59.6**	**+0.9**
RAZG	**Razgrad**	**78.25**	**324**	⇑P	**P**	**10 15 59.1**	**+0.2**
MNTQ	**Montreal, Queb**	**78.26**	**32**	IAmb	IAmb	10 16 14.1	
	comp=Z,91nm,1.9s						
COPA	**Copaceanca**	**78.28**	**325**	⇑P	**P**	**10 15 59.0**	**+0.1**
LCAR	**Lake Charles**	**78.29**	**49**	P	**P**	**10 15 58.0**	**-1.2**
LCAR	**Lake Charles**	**78.29**	**49**	P	**P**	**10 15 58.8**	**-0.4**
	baz=321,SNR=8.2						
LCAR				S	**S**	**10 25 50.5**	**-2.5**
	baz=321						
WHAR	**Wooly Hollow**	**78.31**	**50**	P	**P**	**10 15 58.4**	**-0.9**
WHAR				IAmb	IAmb	10 16 09.7	
	comp=Z,100nm,1.5s						
RONA	**Rosalia, Austr**	**78.32**	**332**	*i* P	**P**	**10 16 00.2**	**+1.1**
	comp=Z,32nm,0.8s,SNR=28						
O49A	**Covington**	**78.32**	**42**	IAmb	IAmb	10 16 00.4	
	comp=Z,45nm,1.2s						
O49A	**Covington**	**78.32**	**42**	P	**P**	**10 15 59.1**	**-0.2**
	baz=324,SNR=7.6						
O49A				P	**P**	**10 15 59.1**	**-0.2**
	baz=324,SNR=7.6						
O49A				S	**S**	**10 25 50.3**	**-2.9**
	baz=324						
O49A				S	**S**	**10 25 50.3**	**-2.9**
	baz=324						
PECO	**Prince Edward**	**78.33**	**35**	IAmb	IAmb	10 16 14.0	
	comp=Z,82nm,1.8s						
BR131	**Keskin Array S**	**78.34**	**317**	IAmb	IAmb	10 16 01.4	
	comp=Z,78nm,1.1s						
BR131	**Keskin Array S**	**78.34**	**317**	*c i*P	**P**	**10 16 00.0**	**+0.5**
BR131	**Keskin Array S**	**78.34**	**317**	P	**P**	**10 16 00.4**	**+0.8**
	SNR=24						
BRTR	**Keskin Array B**	**78.34**	**317**	P	**P**	**10 16 00.1**	**+0.5**
	comp=Z,36nm,0.9s,baz=60,slow=3.4,SNR=74						
	comp=Z,36nm,0.9s						
BRTR	**Keskin Array B**	**78.34**	**317**	P	**P**	**10 15 59.8**	**+0.2**
BZS	**Buzias**	**78.35**	**328**	⇑P	**P**	**10 15 59.2**	**-0.1**
BEBN	**Eben Emael**	**78.37**	**340**	*d*P	**P**	**10 15 59.7**	**+0.4**
	comp=Z,77nm,0.9s						
MPLH	**Magyarpolny**	**78.39**	**331**	P	**P**	**10 15 59.9**	**+0.4**
P48A	**Milroy**	**78.40**	**43**	IAmb	IAmb	10 16 00.7	
	comp=Z,65nm,1.2s						
P48A	**Milroy**	**78.40**	**43**	P	**P**	**10 15 59.6**	**-0.2**
	baz=323,SNR=11						
P48A				P	**P**	**10 15 59.6**	**-0.2**
	baz=323,SNR=11						
HLM1	**Long Mynd**	**78.42**	**346**	*e*P	**P**	**10 15 59.8**	**+0.2**
HLM1				IAmb	IAmb	10 16 00.8	
	comp=Z,26nm,0.9s						
W41B	**Gary Mavity, V**	**78.42**	**50**	P	**P**	**10 15 59.0**	**-0.9**
W41B				IAmb	IAmb	10 16 16.7	
	comp=Z,47nm,1.1s						
W41B	**Gary Mavity, V**	**78.42**	**50**	P	**P**	**10 15 59.4**	**-0.5**
	baz=321,SNR=22						
W41B				S	**S**	**10 25 52.1**	**-2.4**
	baz=321						
W41B	**Gary Mavity, V**	**78.42**	**50**	P	**P**	**10 15 59.7**	**-0.2**
	baz=321,SNR=22						
W41B				S	**S**	**10 25 53.2**	**-1.3**
	baz=321						
Z38A	**Mt. Pleasant**	**78.44**	**53**	S	**S**	**10 25 51.8**	**-2.9**
	baz=320						
D62A	**Allapoint, All**	**78.45**	**29**	P	**P**	**10 15 59.7**	**-0.2**
D62A				IAmb	IAmb	10 16 01.4	
	comp=Z,60nm,1.5s						
D62A	**Allapoint, All**	**78.45**	**29**	P	**P**	**10 15 59.6**	**-0.2**
	baz=332,SNR=5.6						
D62A				P	**P**	**10 15 59.6**	**-0.2**
	baz=332,SNR=5.6						
MEM	**Membach**	**78.47**	**340**	*d*P	**P**	**10 16 00.2**	**+0.3**
	comp=Z,60nm,1.0s						
MEM				*d*PcP	**PcP**	**10 16 08.1**	**-0.9**
BMNY	**Brushton-Moira**	**78.50**	**33**	P	**P**	**10 15 59.5**	**-0.7**
	baz=329,SNR=7.6						
BMNY				S	**S**	**10 25 50.6**	**-4.4**
	baz=329						
M52A	**Chesterland**	**78.53**	**39**	IAmb	IAmb	10 16 01.9	
	comp=Z,75nm,1.2s						
M52A	**Chesterland**	**78.53**	**39**	P	**P**	**10 16 00.0**	**-0.4**
	baz=325,SNR=8.1						
M52A				P	**P**	**10 16 00.0**	**-0.4**
	baz=325,SNR=8.1						
M52A				S	**S**	**10 25 53.5**	**-2.0**
	baz=325						
M52A				S	**S**	**10 25 53.5**	**-2.0**
	baz=325						
PARMO	**Parma**	**78.54**	**48**	P	**P**	**10 16 00.2**	**-0.3**
J55A	**Hilton**	**78.56**	**36**	P	**P**	**10 16 00.3**	**-0.2**
J55A	**Hilton**	**78.56**	**36**	P	**P**	**10 16 00.0**	**-0.5**
	baz=327						
J55A				P	**P**	**10 16 00.0**	**-0.5**
	baz=327						
J55A				S	**S**	**10 25 51.0**	**-4.7**
	baz=327						
J55A				S	**S**	**10 25 51.0**	**-4.7**
	baz=327						
N51A	**Ashland**	**78.60**	**40**	IAmb	IAmb	10 16 01.9	
	comp=Z,98nm,1.4s						
N51A	**Ashland**	**78.60**	**40**	P	**P**	**10 16 00.7**	**-0.1**
	baz=325,SNR=10						
N51A				P	**P**	**10 16 00.7**	**-0.1**
	baz=325,SNR=10						
ANTO	**Ankara**	**78.61**	**318**	P	**P**	**10 16 01.7**	**+0.7**
ANTO				IAMs_20	IAMs_20	10 56 19.5	
	comp=Z,3µm,20.0s						
ANTO	**Ankara**	**78.61**	**318**	P	**P**	**10 16 01.7**	**+0.7**
ERPA	**Erie**	**78.63**	**38**	P	**P**	**10 16 00.9**	**-0.1**
ERPA				IAmb	IAmb	10 16 17.9	
	comp=Z,89nm,1.3s						
ERPA				IAMs_20	IAMs_20	10 52 29.7	
	comp=Z,2µm,20.0s						
ERPA	**Erie**	**78.63**	**38**	S	**S**	**10 25 53.8**	**-2.7**
	baz=326						
ERPA	**Erie**	**78.63**	**38**	P	**P**	**10 16 00.7**	**-0.2**
	baz=326						
ERPA				S	**S**	**10 25 52.8**	**-3.7**
	baz=326						
BR231	**Keskin MP Arra**	**78.64**	**318**	P	**P**	**10 16 01.8**	**+0.6**
X40A	**Basin Creek Fa**	**78.64**	**51**	P	**P**	**10 16 00.9**	**-0.3**
X40A	**Basin Creek Fa**	**78.64**	**51**	P	**P**	**10 16 00.8**	**-0.3**
	baz=321,SNR=12						
X40A				P	**P**	**10 16 00.8**	**-0.3**
	baz=321,SNR=12						
X40A				S	**S**	**10 25 54.3**	**-2.5**
	baz=321						
X40A				S	**S**	**10 25 54.3**	**-2.5**
	baz=321						
X40A	**Basin Creek Fa**	**78.64**	**51**	P	**P**	**10 16 00.8**	**-0.3**
	baz=321,SNR=12						
X40A				S	**S**	**10 25 54.8**	**-2.0**
	baz=321						
LONY	**Lake Ozonia**	**78.66**	**33**	IAMs_20	IAMs_20	10 53 54.4	
	comp=Z,2µm,20.0s						
LONY	**Lake Ozonia**	**78.66**	**33**	P	**P**	**10 16 00.2**	**-0.9**
	baz=329						
LONY				S	**S**	**10 25 52.9**	**-3.9**
	baz=329						
P49A	**Miami Univ. Ec**	**78.67**	**43**	IAmb	IAmb	10 16 02.9	
	comp=Z,92nm,1.4s						
P49A				IAMs_20	IAMs_20	10 50 32.4	
	comp=Z,2µm,21.0s						
P49A	**Miami Univ. Ec**	**78.67**	**43**	P	**P**	**10 16 00.8**	**-0.4**
	baz=324,SNR=9.9						
P49A				S	S	10 25 47.6	-9.4
	baz=324						
P49A	**Miami Univ. Ec**	**78.67**	**43**	P	**P**	**10 16 01.0**	**-0.2**
	baz=324,SNR=9.9						
P49A				S	**S**	**10 25 54.8**	**-2.2**
	baz=324						
HERR	**Herculane**	**78.70**	**327**	⇑P	**P**	**10 16 01.2**	**-0.1**
BHOU	**Houvegnez**	**78.71**	**340**	*d*P	**P**	**10 16 01.9**	**+0.7**
	comp=Z,32nm,1.1s						
SZH	**Strazhica**	**78.73**	**324**	*i* P	**P**	**10 16 00.9**	**-0.6**
WCNY	**West Carthage**	**78.80**	**34**	P	**P**	**10 16 01.1**	**-0.8**
	baz=328,SNR=6.6						
WCNY				S	**S**	**10 25 53.5**	**-4.7**
	baz=328						
MOA	**Molln**	**78.80**	**334**	*i* P	**P**	**10 16 02.6**	**+0.8**
	comp=Z,19nm,0.7s,SNR=6.5						
BCLA	**Clavier**	**78.81**	**340**	*d*P	**P**	**10 16 02.3**	**+0.6**
	comp=Z,30nm,1.1s						
BCLA				*d*PcP	**PcP**	**10 16 09.8**	**-0.7**
T45B	**Paducah**	**78.81**	**47**	S	**S**	**10 25 57.4**	**-1.1**
	baz=322						
MDUB	**Mudurnu**	**78.84**	**319**	P	**P**	**10 16 02.5**	**+0.2**
FRNY	**Flat Rock**	**78.84**	**33**	P	**P**	**10 16 01.1**	**-0.9**
FRNY	**Flat Rock**	**78.84**	**33**	S	**S**	**10 25 53.5**	**-5.1**
	baz=329						
MORH	**Mrgy, Hungar**	**78.86**	**330**	⇑P	**P**	**10 16 02.0**	**-0.1**
MORH	**Mrgy, Hungar**	**78.86**	**330**	⇑*i*P	**P**	**10 16 01.7**	**-0.4**
MORH	**Mrgy, Hungar**	**78.86**	**330**	P	**P**	**10 16 01.5**	**-0.6**
435B	**Jarrell**	**78.87**	**56**	P	**P**	**10 16 01.8**	**-0.6**
	baz=319						
435B				S	**S**	**10 25 58.8**	**-0.6**
	baz=319						
ACSO	**Alum Creek Sta**	**78.89**	**41**	P	**P**	**10 16 02.6**	**+0.2**
ACSO				IAmb	IAmb	10 16 03.7	
	comp=Z,104nm,1.5s						
ACSO				IAMs_20	IAMs_20	10 55 53.6	
	comp=Z,3µm,20.0s						
ACSO	**Alum Creek Sta**	**78.89**	**41**	S	**S**	**10 25 57.4**	**-2.0**
	baz=325						
ACSO	**Alum Creek Sta**	**78.89**	**41**	P	**P**	**10 16 02.2**	**-0.2**
	baz=325						
ACSO				S	**S**	**10 25 56.0**	**-3.3**
	baz=325						
BGES	**Gesves**	**78.89**	**340**	*d*P	**P**	**10 16 02.6**	**+0.4**
	comp=Z,27nm,1.1s						
M53A	**WI Miller and**	**78.90**	**39**	P	**P**	**10 16 02.5**	**0.0**
M53A				IAMs_20	IAMs_20	10 51 44.9	
	comp=Z,3µm,20.0s						
M53A	**WI Miller and**	**78.90**	**39**	P	**P**	**10 16 02.5**	**0.0**
	baz=326,SNR=17						
M53A				S	**S**	**10 25 56.1**	**-3.4**
	baz=326						
MHTO	**MHTO**	**78.90**	**289**	P	**P**	**10 16 03.9**	**+1.1**
	SNR=20						
J56A	**Wolcott**	**78.93**	**35**	P	**P**	**10 16 01.8**	**-0.7**
	baz=328,SNR=5.4						
J56A				P	**P**	**10 16 01.8**	**-0.7**
	baz=328,SNR=5.4						
J56A				S	**S**	**10 25 55.3**	**-4.4**
	baz=328						
J56A				S	**S**	**10 25 55.3**	**-4.4**
	baz=328						
MCH1	**Michaelchurch**	**78.94**	**346**	*e*P	**P**	**10 16 02.4**	**-0.1**
MCH1				IAmb	IAmb	10 16 05.0	
	comp=Z,309nm,2.0s						
237A	**Washetta, Mont**	**78.94**	**54**	IAmb	IAmb	10 16 19.9	
	comp=Z,41nm,1.2s						
237A	**Washetta, Mont**	**78.94**	**54**	P	**P**	**10 16 03.3**	**+0.4**
	baz=320						
HBAR	**Harrisburg**	**78.94**	**49**	S	**S**	**10 25 59.0**	**-1.0**
	baz=321						
GNAR	**Gosnell**	**78.95**	**48**	P	**P**	**10 16 01.8**	**-1.0**
SNF	**Seneffe**	**78.95**	**341**	*d*P	**P**	**10 16 02.9**	**+0.4**
	comp=Z,33nm,0.9s						
ALLY	**Alegheny Colle**	**78.95**	**38**	P	**P**	**10 16 02.4**	**-0.4**
ARSA	**Arzberg**	**78.96**	**333**	*i* P	**P**	**10 16 03.6**	**+1.0**
	comp=Z,12nm,0.7s,SNR=17						
WVNY	**West Valley, N**	**78.96**	**37**	P	**P**	**10 16 02.6**	**-0.2**
WVNY				IAmb	IAmb	10 16 04.0	
	comp=Z,70nm,1.3s						
WVNY	**West Valley, N**	**78.96**	**37**	P	**P**	**10 16 02.4**	**-0.4**
	baz=327,SNR=7.3						
WVNY				S	**S**	**10 25 57.1**	**-3.0**
	baz=327						
LCRK	**Leigh Creek**	**78.97**	**194**	P	**P**	**10 16 04.7**	**+2.0**
MMNY	**Mt. Morris Dam**	**78.97**	**36**	P	**P**	**10 16 02.6**	**-0.2**
STRD	**Stroud**	**79.01**	**345**	*e*P	**P**	**10 16 03.2**	**+0.4**
STRD				IAmb	IAmb	10 16 04.2	
	comp=Z,105nm,1.0s						
PUNG	**Punghina**	**79.02**	**327**	⇑P	**P**	**10 16 02.8**	**-0.3**
BMRD	**Maredsous**	**79.04**	**341**	*d*P	**P**	**10 16 03.5**	**+0.4**
	comp=Z,38nm,1.1s						
MDVR	**Moldovita**	**79.04**	**328**	⇑P	**P**	**10 16 02.9**	**-0.4**
MONM	**Monmouth**	**79.06**	**346**	*e*P	**P**	**10 16 03.3**	**+0.2**
MONM				IAmb	IAmb	10 16 06.7	
	comp=Z,140nm,1.3s						
RCHB	**Rochefort**	**79.07**	**340**	*d*P	**P**	**10 16 03.0**	**-0.2**
	comp=Z,27nm,1.1s						
CMSA	**Cobar Meteorol**	**79.10**	**187**	P	**P**	**10 16 04.8**	**+1.4**
BIOA	**Bad Ischl, Aus**	**79.13**	**334**	*i* P	**P**	**10 16 04.4**	**+0.8**
	comp=Z,28nm,0.6s,SNR=6.8						
JMB	**Yambol**	**79.14**	**323**	*i* P	**P**	**10 16 04.1**	**+0.4**
PQI	**Presque Isle**	**79.15**	**28**	IAMs_20	IAMs_20	10 52 59.1	
	comp=Z,2µm,21.0s						
KOVH	**Kovagotottos**	**79.16**	**331**	P	**P**	**10 16 03.5**	**-0.3**
F62A	**Pittston Farm,**	**79.19**	**30**	P	**P**	**10 16 04.1**	**+0.1**
	baz=331						
F62A				P	**P**	**10 16 04.1**	**+0.1**
	baz=331						
F62A				S	**S**	**10 26 00.9**	**-1.4**
	baz=331						
F62A				S	**S**	**10 26 00.9**	**-1.4**
	baz=331						
SWN1	**Swindon**	**79.20**	**345**	*e*P	**P**	**10 16 03.7**	**-0.2**
SWN1				IAmb	IAmb	10 16 07.1	
	comp=Z,238nm,1.0s						
BATG	**Bathurst New B**	**79.22**	**27**	P	**P**	**10 16 04.5**	**+0.4**
BATG				IAmb	IAmb	10 16 05.6	
	comp=Z,49nm,1.3s						
JRN	**Qarnain Island**	**79.24**	**295**	P	**P**	**10 16 03.7**	**-0.8**
BEHE	**Becsehely**	**79.25**	**332**	⇑*i*P	**P**	**10 16 04.6**	**+0.3**
DOU	**Dourbes**	**79.27**	**341**	*d*P	**P**	**10 16 04.5**	**+0.2**
	comp=Z,18nm,1.1s						
DOU				*d*pP	**pP**	**10 16 07.2**	**-3.6**
DOU				*d*PcP	**PcP**	**10 16 11.7**	**-0.8**
ISK	**Istanbul-Kandi**	**79.28**	**321**	P	**P**	**10 16 04.1**	**-0.4**
WLF	**Walferdange**	**79.32**	**340**	*d*P	**P**	**10 16 04.4**	**-0.2**
NCB	**Newcomb**	**79.35**	**33**	P	**P**	**10 16 04.8**	**-0.1**
	baz=329						
NCB				S	**S**	**10 25 59.4**	**-4.8**
	baz=329						
N53A	**Lisbon**	**79.36**	**39**	P	**P**	**10 16 04.7**	**-0.2**
N53A				IAmb	IAmb	10 16 06.3	
	comp=Z,76nm,1.2s						
N53A	**Lisbon**	**79.36**	**39**	P	**P**	**10 16 05.1**	**+0.1**
	baz=326,SNR=16						
N53A				P	**P**	**10 16 05.1**	**+0.1**
	baz=326,SNR=16						
N53A				S	**S**	**10 26 00.3**	**-4.0**
	baz=326						
N53A				S	**S**	**10 26 00.3**	**-4.0**
	baz=326						
STU	**Stuttgart**	**79.39**	**337**	IAmb	IAmb	10 16 06.1	
	comp=Z,46nm,1.0s						
FRGS	**Fruska Gora**	**79.39**	**329**	⇑P	**P**	**10 16 05.3**	**+0.3**
FRGS	**Fruska Gora**	**79.39**	**329**	⇑*i*P	**P**	**10 16 05.0**	**-0.1**
UMZA	**Um Al Zommool**	**79.43**	**292**	P	**P**	**10 16 05.8**	**+0.2**
KOGS	**Kog**	**79.44**	**332**	*i* P	**P**	**10 16 05.3**	**0.0**
KOGS				IAMb		10 16 06.2	
	comp=Z,22nm,0.8s						
KOGS				*e*S	**S**	**10 26 04.3**	**-0.7**
R49A	**Shelbyville**	**79.46**	**44**	IAmb	IAmb	10 16 08.0	
	comp=Z,65nm,1.5s						
R49A	**Shelbyville**	**79.46**	**44**	P	**P**	**10 16 06.0**	**+0.4**
	baz=324,SNR=5.9						
R49A				P	**P**	**10 16 06.0**	**+0.4**
	baz=324,SNR=5.9						
R49A				S	**S**	**10 26 04.8**	**-0.6**
	baz=324						
R49A				S	**S**	**10 26 04.8**	**-0.6**
	baz=324						
P51A	**Williamsport**	**79.46**	**42**	P	**P**	**10 16 05.0**	**-0.5**
P51A				IAmb	IAmb	10 16 21.9	
	comp=Z,45nm,1.1s						
P51A	**Williamsport**	**79.46**	**42**	P	**P**	**10 16 05.4**	**-0.2**
	baz=325,SNR=5.9						
P51A				P	**P**	**10 16 05.4**	**-0.2**
	baz=325,SNR=5.9						
P51A				S	**S**	**10 26 04.2**	**-1.2**
	baz=325						
P51A				S	**S**	**10 26 04.2**	**-1.2**
	baz=325						
J58A	**Remsen**	**79.47**	**34**	P	**P**	**10 16 05.1**	**-0.5**
	baz=328,SNR=6.4						
J58A				P	**P**	**10 16 05.1**	**-0.5**
	baz=328,SNR=6.4						
J58A				S	**S**	**10 26 00.7**	**-4.8**
	baz=328						
J58A				S	**S**	**10 26 00.7**	**-4.8**
	baz=328						
O52A	**Adamsville**	**79.49**	**40**	P	**P**	**10 16 05.2**	**-0.5**
O52A				IAmb	IAmb	10 16 06.8	
	comp=Z,46nm,0.8s						
O52A	**Adamsville**	**79.49**	**40**	P	**P**	**10 16 05.8**	**+0.1**
	baz=325,SNR=16						
O52A				P	**P**	**10 16 05.8**	**+0.1**
	baz=325,SNR=16						
MPEP	**Malo Peshtene**	**79.50**	**326**	*i* P	**P**	**10 16 06.4**	**+0.7**
K57A	**Scipio Center**	**79.53**	**35**	IAmb	IAmb	10 16 21.8	
	comp=Z,80nm,1.9s						
K57A	**Scipio Center**	**79.53**	**35**	S	**S**	**10 26 02.0**	**-4.0**
	baz=328						
KHOR	**Al-Khor Airpor**	**79.55**	**296**	P	**P**	**10 16 06.7**	**+0.4**
MULG	**Mulgathing**	**79.58**	**198**	P	**P**	**10 16 06.4**	**+0.4**
T47A	**Sharon Grove**	**79.58**	**46**	P	**P**	**10 16 06.2**	**0.0**
T47A	**Sharon Grove**	**79.58**	**46**	P	**P**	**10 16 06.9**	**+0.6**
	baz=323,SNR=13						
T47A				S	**S**	**10 26 07.2**	**+0.4**
	baz=323						
G62A	**West of Eustis**	**79.59**	**30**	IAmb	IAmb	10 16 24.5	
	comp=Z,75nm,1.4s						
G62A	**West of Eustis**	**79.59**	**30**	P	**P**	**10 16 06.8**	**+0.6**
	baz=331,SNR=7.2						
G62A				P	**P**	**10 16 06.8**	**+0.6**
	baz=331,SNR=7.2						
G62A				S	**S**	**10 26 05.6**	**-1.1**
	baz=331						
G62A				S	**S**	**10 26 05.6**	**-1.1**
	baz=331						
EDRB	**Edirne**	**79.59**	**323**	P	**P**	**10 16 06.4**	**+0.2**
Z41A	**Richland Creek**	**79.61**	**52**	S	**S**	**10 26 05.8**	**-1.3**
	baz=321						
Z41A				S	**S**	**10 26 05.8**	**-1.3**
	baz=321						
Z41A	**Richland Creek**	**79.61**	**52**	P	**P**	**10 16 06.2**	**-0.2**
	baz=321						
Z41A				S	**S**	**10 26 05.4**	**-1.7**
	baz=321						
L56A	**Greenwood**	**79.61**	**36**	P	**P**	**10 16 04.9**	**-1.5**
L56A				IAmb	IAmb	10 16 09.1	
	comp=Z,127nm,1.9s						
L56A	**Greenwood**	**79.61**	**36**	P	**P**	**10 16 06.4**	**0.0**
	baz=327,SNR=6.8						
L56A				P	**P**	**10 16 06.4**	**0.0**
	baz=327,SNR=6.8						
L56A				S	**S**	**10 26 03.3**	**-3.7**
	baz=327						
L56A				S	**S**	**10 26 03.3**	**-3.7**
	baz=327						
SOKA	**Soboth**	**79.62**	**333**	*i* P	**P**	**10 16 06.7**	**+0.3**
	comp=Z,22nm,0.7s,SNR=32						
CCAR	**Cane Creek**	**79.64**	**51**	P	**P**	**10 16 05.8**	**-0.8**
CCAR				IAmb	IAmb	10 16 09.2	
	comp=Z,124nm,1.6s						
F63A	**Nahmakanta, Br**	**79.65**	**29**	S	**S**	**10 26 03.2**	**-4.0**
	baz=332						
F63A				S	**S**	**10 26 03.2**	**-4.0**
	baz=332						
O53A	**New Philadelph**	**79.65**	**40**	P	**P**	**10 16 06.2**	**-0.4**
O53A				IAmb	IAmb	10 16 07.7	
	comp=Z,45nm,0.9s						
O53A				IAMs_20	IAMs_20	10 51 21.7	
	comp=Z,3µm,21.0s						
O53A	**New Philadelph**	**79.65**	**40**	P	**P**	**10 16 06.4**	**-0.2**
	baz=326,SNR=15						
O53A				S	**S**	**10 26 04.1**	**-3.3**
	baz=326						
GROS	**Grobnik**	**79.67**	**332**	*i* P	**P**	**10 16 06.7**	**+0.1**
GROS				IAMb		10 16 07.7	
	comp=Z,36nm,1.0s						
833A	**Chaparral WMA,**	**79.68**	**59**	P	**P**	**10 16 05.9**	**-1.0**
833A	**Chaparral WMA,**	**79.68**	**59**	S	**S**	**10 26 08.2**	**+0.2**
	baz=319						
833A	**Chaparral WMA,**	**79.68**	**59**	P	**P**	**10 16 06.8**	**-0.1**
	baz=319						
833A				S	**S**	**10 26 09.0**	**+1.0**
	baz=319						
J59A	**Piesco**	**79.68**	**34**	P	**P**	**10 16 05.1**	**-1.6**
	baz=329,SNR=5.9						
J59A				P	**P**	**10 16 05.1**	**-1.6**
	baz=329,SNR=5.9						
J59A				S	**S**	**10 26 03.4**	**-4.2**
	baz=329						
J59A				S	**S**	**10 26 03.4**	**-4.2**
	baz=329						
M55A	**Ridgway**	**79.68**	**38**	P	**P**	**10 16 06.5**	**-0.2**
M55A				IAmb	IAmb	10 16 08.2	
	comp=Z,97nm,1.4s						
M55A	**Ridgway**	**79.68**	**38**	P	**P**	**10 16 06.8**	**+0.1**
	baz=327,SNR=13						
M55A				P	**P**	**10 16 06.8**	**+0.1**
	baz=327,SNR=13						
M55A				S	**S**	**10 26 05.1**	**-2.6**
	baz=327						
M55A				S	**S**	**10 26 05.1**	**-2.6**
	baz=327						
Q51A	**Peebles**	**79.71**	**42**	IAmb	IAmb	10 16 08.2	
	comp=Z,113nm,1.4s						
Q51A	**Peebles**	**79.71**	**42**	P	**P**	**10 16 06.8**	**-0.1**
	baz=324,SNR=17						
Q51A				P	**P**	**10 16 06.8**	**-0.1**
	baz=324,SNR=17						
Q51A				S	**S**	**10 26 05.7**	**-2.3**
	baz=324						
Q51A				S	**S**	**10 26 05.7**	**-2.3**
	baz=324						
SHMA	**Al-Shehemyia**	**79.71**	**297**	P	**P**	**10 16 06.9**	**-0.2**
F64A	**Sherman**	**79.75**	**29**	S	**S**	**10 26 04.2**	**-4.1**
	baz=332						
F64A				S	**S**	**10 26 04.2**	**-4.1**
	baz=332						
P52A	**Corning**	**79.75**	**41**	P	**P**	**10 16 06.2**	**-0.9**
P52A				IAmb	IAmb	10 16 08.0	
	comp=Z,71nm,1.4s						
P52A				IAMs_20	IAMs_20	10 57 09.5	
	comp=Z,2µm,19.0s						
P52A	**Corning**	**79.75**	**41**	P	**P**	**10 16 06.5**	**-0.7**
	baz=325,SNR=5.8						
P52A				S	**S**	**10 26 06.4**	**-2.1**
	baz=325						
NATX	**Nacogdoches**	**79.75**	**54**	IAMs_20	IAMs_20	10 49 55.9	
	comp=Z,2µm,21.0s						
NATX	**Nacogdoches**	**79.75**	**54**	P	**P**	**10 16 08.1**	**+0.9**
	baz=320,SNR=9.0						
NATX				S	**S**	**10 26 07.9**	**-0.9**
	baz=320						
NATX	**Nacogdoches**	**79.75**	**54**	P	**P**	**10 16 07.8**	**+0.5**
	baz=320,SNR=9.0						
NATX				S	**S**	**10 26 08.0**	**-0.7**
	baz=320						
KBA	**Koelnbreinsper**	**79.77**	**334**	*i* P	**P**	**10 16 08.4**	**+1.1**
	comp=Z,49nm,0.5s,SNR=64						
MCVT	**Middlebury Col**	**79.82**	**33**	S	**S**	**10 26 05.6**	**-3.5**
	baz=330						
R50A	**Paris**	**79.86**	**43**	P	**P**	**10 16 07.3**	**-0.4**
R50A	**Paris**	**79.86**	**43**	P	**P**	**10 16 08.2**	**+0.4**
	baz=324,SNR=10.0						
R50A				P	**P**	**10 16 08.2**	**+0.4**
	baz=324,SNR=10.0						
R50A				S	**S**	**10 26 08.2**	**-1.4**
	baz=324						
R50A				S	**S**	**10 26 08.2**	**-1.4**
	baz=324						
SAKB	**Bahrain**	**79.88**	**297**	P	**P**	**10 16 08.7**	**+0.7**
STKA	**Stephens Creek**	**79.88**	**191**	P	**P**	**10 16 07.6**	**+0.1**
	comp=Z,7.6nm,1.1s,baz=323,slow=7.5,SNR=8.6						
STKA				LR	LR	10 52 35.6	
	comp=Z,1µm,19.4s,baz=16,slow=36						
	comp=Z,7.6nm,1.1s						
STKA	**Stephens Creek**	**79.88**	**191**	P	**P**	**10 16 07.7**	**+0.1**
STKA	**Stephens Creek**	**79.88**	**191**	P	**P**	**10 16 07.7**	**+0.1**
STKA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
STKA	**Stephens Creek**	**79.88**	**191**	P	**P**	**10 16 10.4**	**+2.8**
WVT	**Waverly**	**79.91**	**47**	P	**P**	**10 16 08.3**	**+0.2**
WVT	**Waverly**	**79.91**	**47**	IAMs_20	IAMs_20	10 49 45.8	
	comp=Z,3µm,22.0s						
WVT	**Waverly**	**79.91**	**47**	P	**P**	**10 16 08.3**	**+0.2**
WVT				pmax	pmax		
	comp=Z,23nm,1.0s						

WVT	Waverly	79.91	47	P	P	10 16 08.2	+0.2
	baz=323,SNR=14						
WVT				S	S	10 26 09.4	-0.9
	baz=323						
WVT	Waverly	79.91	47	P	P	10 16 07.9	-0.2
	baz=323						
WVT				S	S	10 26 09.6	-0.7
	baz=323						
OBKA	Obir	79.92	333	*i* P	P	10 16 08.3	+0.2
	comp=Z,12nm,0.6s,SNR=7.7						
RAR	Rarotonga	79.93	137	LR	LR	10 45 58.3	
	comp=Z,2µm,19.8s,baz=326,slow=32						
H62A	Milan	79.94	31	IAmb	IAmb	10 16 09.9	
	comp=Z,66nm,1.3s						
H62A	Milan	79.94	31	P	P	10 16 06.4	-1.6
	baz=331,SNR=6.3						
H62A				P	P	10 16 06.4	-1.6
	baz=331,SNR=6.3						
H62A				S	S	10 26 07.1	-3.2
	baz=331						
H62A				S	S	10 26 07.1	-3.2
	baz=331						
GHWR	Ruwais	79.94	294	P	P	10 16 08.3	0.0
LBNH	Lisbon	79.96	32	IAMs_20	IAMs_20	10 56 51.6	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	79.96	32	P	P	10 16 08.1	0.0
	baz=330						
LBNH				S	S	10 26 09.6	-0.9
	baz=330						
PKME	Peaks-Kenny Pk	79.97	30	IAMs_20	IAMs_20	10 54 19.0	
	comp=Z,3µm,20.0s						
PKME	Peaks-Kenny Pk	79.97	30	S	S	10 26 08.1	-2.5
	baz=332						
PKME	Peaks-Kenny Pk	79.97	30	P	P	10 16 08.4	+0.2
	baz=332						
PKME				S	S	10 26 07.9	-2.6
	baz=332						
W45A	Hickory Valley	80.00	48	P	P	10 16 08.0	-0.5
W45A				IAmb	IAmb	10 16 25.2	
	comp=Z,62nm,1.1s						
W45A	Hickory Valley	80.00	48	P	P	10 16 08.9	+0.4
	baz=322,SNR=6.2						
W45A				S	S	10 26 09.7	-1.6
	baz=322						
BFO	Black Forest	80.02	338	P	P	10 16 08.4	0.0
BFO				IAmb	IAmb	10 16 10.6	
	comp=Z,62nm,1.1s						
BFO	Black Forest	80.02	338	P	P	10 16 08.4	0.0
BFO				pmax	pmax		
	comp=Z,62nm,1.1s						
BFO				MLR	MLR		
	comp=Z,4µm,21.0s						
TEKS	Tekeris	80.02	329	⇑*i*P	P	10 16 07.7	-0.8
PGB	Panagyurishte	80.03	325	*i* P	P	10 16 08.9	+0.3
WATA	Walderalm	80.05	335	*i* P	P	10 16 09.5	+0.7
	comp=Z,16nm,0.4s,SNR=28						
ACCN	Adirondack Com	80.06	33	P	P	10 16 08.1	-0.7
ACCN	Adirondack Com	80.06	33	P	P	10 16 08.3	-0.5
	baz=329,SNR=6.8						
ACCN				S	S	10 26 07.8	-3.9
	baz=329						
O54A	Avella	80.07	39	P	P	10 16 08.8	0.0
	baz=326						
O54A				P	P	10 16 08.8	0.0
	baz=326						
O54A				S	S	10 26 10.9	-0.9
	baz=326						
O54A				S	S	10 26 10.9	-0.9
	baz=326						
MYKA	Terra Mystica	80.09	334	*i* P	P	10 16 09.1	+0.2
	comp=Z,6.3nm,0.4s,SNR=6.6						
WTTA	Wattenberg	80.10	335	*i* P	P	10 16 10.0	+0.9
	comp=Z,67nm,0.6s,SNR=47						
RETA	Reutte	80.14	336	*i* P	P	10 16 09.9	+0.7
	comp=Z,32nm,0.8s,SNR=26						
HTL	Hartland	80.15	347	*e*P	P	10 16 09.0	0.0
HTL				IAmb	IAmb	10 16 10.1	
	comp=Z,51nm,0.9s						
MOTA	Moosalm	80.18	336	*i* P	P	10 16 10.1	+0.6
	comp=Z,40nm,0.6s,SNR=54						
BINY	Binghamton	80.19	35	P	P	10 16 09.1	-0.3
BINY				IAMs_20	IAMs_20	10 53 00.7	
	comp=Z,2µm,21.0s						
BINY	Binghamton	80.19	35	P	P	10 16 08.9	-0.6
	baz=328						
BINY				S	S	10 26 09.9	-3.1
	baz=328						
BINY	Binghamton	80.19	35	P	P	10 16 08.9	-0.6
	baz=328						
BINY				S	S	10 26 10.5	-2.6
	baz=328						
735A	Kenedy	80.19	58	S	S	10 26 15.1	+1.6
	baz=319						
PLD	Plovdiv	80.19	324	*i* P	P	10 16 10.5	+1.0
P53A	Whipple	80.20	40	IAmb	IAmb	10 16 10.8	
	comp=Z,62nm,1.4s						
P53A	Whipple	80.20	40	P	P	10 16 09.8	+0.2
	baz=326,SNR=7.7						
P53A				P	P	10 16 09.8	+0.2
	baz=326,SNR=7.7						
P53A				S	S	10 26 10.9	-2.4
	baz=326						
P53A				S	S	10 26 10.9	-2.4
	baz=326						
Q52A	Bidwell	80.24	41	P	P	10 16 07.9	-1.9
Q52A				IAmb	IAmb	10 16 11.6	
	comp=Z,73nm,1.4s						
Q52A	Bidwell	80.24	41	P	P	10 16 08.4	-1.4
	baz=325,SNR=9.7						
Q52A				P	P	10 16 08.4	-1.4
	baz=325,SNR=9.7						
Q52A				S	S	10 26 12.5	-1.1
	baz=325						
Q52A				S	S	10 26 12.5	-1.1
	baz=325						
CRES	Cresnjev	80.25	332	⇑*i*P	P	10 16 09.4	-0.3
DIVS	Divibare	80.25	328	IAmb	IAmb	10 16 10.8	
	comp=Z,61nm,1.1s						
DIVS	Divibare	80.25	328	⇑*i*P	P	10 16 09.5	-0.3
SQTA	Sankt Quirin	80.26	335	*i* P	P	10 16 10.7	+0.8
	comp=Z,28nm,0.7s,SNR=33						
MZR	Muzera	80.27	293	P	P	10 16 10.5	+0.3
	SNR=11						
MZR	Muzera	80.27	293	*i* P	P	10 16 10.2	0.0
	SNR=60						
HNH	Hanover	80.29	32	IAMs_20	IAMs_20	10 54 14.4	
	comp=Z,3µm,22.0s						
KDZ	Kurdzhali	80.30	324	*i* P	P	10 16 10.8	+0.8
VTS	Vitosha	80.33	326	⇑P	P	10 16 10.6	+0.2
VTS	Vitosha	80.33	326	*i* P	P	10 16 10.9	+0.5
LJU	Ljubljana	80.34	333	⇑*i*P	P	10 16 09.1	-1.1
HCNY	Howe Caverns	80.38	34	S	S	10 26 11.3	-3.6
	baz=329						
OXF	Oxford	80.40	49	IAmb	IAmb	10 16 26.6	
	comp=Z,89nm,1.2s						
OXF				IAMs_20	IAMs_20	10 55 37.7	
	comp=Z,2µm,18.0s						
OXF	Oxford	80.40	49	P	P	10 16 10.6	-0.1
	baz=322						
OXF				S	S	10 26 13.6	-1.8
	baz=322						
ECH	Echery	80.42	338	P	P	10 16 11.1	+0.5
ECH				IAmb	IAmb	10 16 12.2	
	comp=Z,54nm,1.0s						
ECH	Echery	80.42	338	P	P	10 16 11.1	+0.5
ECH				pmax	pmax		
	comp=Z,54nm,1.0s						
ECH				MLR	MLR		
	comp=Z,4µm,20.0s						
RAO	Raoul Island	80.45	156	LR	LR	10 46 12.5	
	comp=Z,3µm,20.7s,baz=352,slow=32						
M57A	Sunshine Farm,	80.46	37	P	P	10 16 10.9	0.0
M57A	Sunshine Farm,	80.46	37	P	P	10 16 10.7	-0.2
	baz=328,SNR=7.6						
M57A				P	P	10 16 10.7	-0.2
	baz=328,SNR=7.6						
M57A				S	S	10 26 12.6	-3.3
	baz=328						
M57A				S	S	10 26 12.6	-3.3
	baz=328						
WVL	Waterville	80.46	30	P	P	10 16 10.6	-0.2
WVL				IAmb	IAmb	10 16 26.7	
	comp=Z,90nm,1.6s						
WVL				IAMs_20	IAMs_20	10 52 35.0	
	comp=Z,2µm,22.0s						
WVL	Waterville	80.46	30	P	P	10 16 11.2	+0.4
	baz=332						
I62A	Tamworth	80.48	32	S	S	10 26 13.9	-2.1
	baz=331						
I62A				S	S	10 26 13.9	-2.1
	baz=331						
HKT	Hockley	80.48	56	P	P	10 16 10.2	-0.9
HKT	Hockley	80.48	56	IAMs_20	IAMs_20	10 52 47.1	
	comp=Z,1µm,21.0s						
HKT	Hockley	80.48	56	*i* P	P	10 16 09.7	-1.4
HKT				pmax	pmax		
	comp=Z,24nm,1.8s						
HKT				MLR	MLR		
	comp=Z,1µm,18.0s						
RZN	Rozhen	80.54	324	*i* P	P	10 16 11.8	+0.2
L59A	Walton	80.56	35	IAmb	IAmb	10 16 28.2	
	comp=Z,98nm,1.8s						
L59A	Walton	80.56	35	P	P	10 16 11.2	-0.4
	baz=329,SNR=5.2						
L59A				P	P	10 16 11.2	-0.4
	baz=329,SNR=5.2						
L59A				S	S	10 26 14.0	-3.1
	baz=329						
L59A				S	S	10 26 14.0	-3.1
	baz=329						
DAVA	Damuels	80.57	336	*i* P	P	10 16 12.2	+0.6
	comp=Z,37nm,0.9s,SNR=15						
FETA	Feichten	80.58	336	*i* P	P	10 16 12.3	+0.7
	comp=Z,22nm,0.9s,SNR=30						
I63A	Otisfield	80.60	31	S	S	10 26 17.2	0.0
	baz=331						
I63A				S	S	10 26 17.2	0.0
	baz=331						
U49A	Red Boiling Sp	80.60	45	IAmb	IAmb	10 16 13.1	
	comp=Z,71nm,1.4s						
U49A	Red Boiling Sp	80.60	45	P	P	10 16 12.1	+0.4
	baz=324,SNR=14						
U49A				S	S	10 26 17.0	-0.5
	baz=324						
TRY	Troy	80.62	34	IAMs_20	IAMs_20	10 55 03.3	
	comp=Z,2µm,21.0s						
T50A	Nancy	80.64	44	IAmb	IAmb	10 16 13.4	
	comp=Z,95nm,1.4s						
T50A	Nancy	80.64	44	P	P	10 16 12.1	+0.1
	baz=324						
T50A				P	P	10 16 12.1	+0.1
	baz=324						
T50A				S	S	10 26 17.0	-0.9
	baz=324						
T50A				S	S	10 26 17.0	-0.9
	baz=324						
BLY	Banja Luka	80.64	331	⇑*i*P	P	10 16 11.3	-0.5
CEY	Cerknica	80.65	333	⇑*i*P	P	10 16 11.5	-0.4
CEY	Cerknica	80.65	333	*i* P	P	10 16 11.6	-0.4
CEY				IAMb		10 16 13.1	
	comp=Z,31nm,1.1s						
BBLS	Lazići	80.66	329	⇑*i*P	P	10 16 12.3	+0.3
CLTN	Cedars of Leba	80.67	46	P	P	10 16 11.9	-0.2
CLTN				IAmb	IAmb	10 16 13.6	
	comp=Z,46nm,1.2s						
RDO	Rodhopi	80.67	323	P	P	10 16 12.4	+0.4
ALN	Alexandroupoli	80.67	323	P	P	10 16 11.8	-0.3
ALN	Alexandroupoli	80.67	323	IAmb	IAmb	10 16 14.0	
	comp=Z,76nm,1.1s						
PLAL	Pickwick Lake	80.70	47	IAmb	IAmb	10 16 13.9	
	comp=Z,66nm,1.6s						
PLAL				IAMs_20	IAMs_20	10 55 36.6	
	comp=Z,2µm,19.0s						
V48A	Smith Brothers	80.71	46	P	P	10 16 11.6	-0.7
V48A	Smith Brothers	80.71	46	P	P	10 16 12.6	+0.2
	baz=323,SNR=9.4						
V48A				S	S	10 26 17.4	-1.3
	baz=323						
S51A	Beattyville	80.72	43	P	P	10 16 12.2	-0.2
S51A				IAmb	IAmb	10 16 13.6	
	comp=Z,121nm,1.8s						
S51A	Beattyville	80.72	43	P	P	10 16 12.7	+0.3
	baz=324,SNR=9.8						
S51A				P	P	10 16 12.7	+0.3
	baz=324,SNR=9.8						
S51A				S	S	10 26 18.2	-0.5
	baz=324						
S51A				S	S	10 26 18.2	-0.5
	baz=324						
MCWV	Mont Chateau	80.73	39	P	P	10 16 11.8	-0.7
MCWV				IAmb	IAmb	10 16 14.1	
	comp=Z,98nm,1.4s						
MCWV	Mont Chateau	80.73	39	P	P	10 16 13.2	+0.7
	baz=326,SNR=8.4						
MCWV				S	S	10 26 18.6	-0.2
	baz=326						
MCWV	Mont Chateau	80.73	39	P	P	10 16 12.9	+0.5
	baz=326,SNR=8.4						
MCWV				S	S	10 26 18.3	-0.5
	baz=326						
SSPA	Standing Stone	80.74	38	P	P	10 16 11.7	-0.8
SSPA				IAmb	IAmb	10 16 16.4	
	comp=Z,97nm,1.8s						
SSPA	Standing Stone	80.74	38	IAMs_20	IAMs_20	10 53 54.4	
	comp=Z,1µm,19.0s						
SSPA	Standing Stone	80.74	38	P	P	10 16 12.5	0.0
	baz=327,SNR=7.7						
SSPA	Standing Stone	80.74	38	P	P	10 16 12.0	-0.4
	baz=327						
SSPA				S	S	10 26 17.4	-1.4
	baz=327						
ENEZ	Enez	80.77	323	P	P	10 16 12.9	+0.4
143A	Socs Landing,	80.78	51	S	S	10 26 18.1	-1.4
	baz=321						
Y45A	Yeager Farm, C	80.84	49	IAmb	IAmb	10 16 23.3	
	comp=Z,71nm,1.0s						
Y45A	Yeager Farm, C	80.84	49	S	S	10 26 19.2	-0.9
	baz=322						
Q54A	Coxs Mills	80.86	40	IAmb	IAmb	10 16 14.7	
	comp=Z,105nm,1.4s						
Q54A	Coxs Mills	80.86	40	P	P	10 16 13.5	+0.4
	baz=326,SNR=10						
Q54A				P	P	10 16 13.5	+0.4
	baz=326,SNR=10						
Q54A				S	S	10 26 18.7	-1.4
	baz=326						
Q54A				S	S	10 26 18.7	-1.4
	baz=326						
RUDO	Rudo	80.89	329	*e*P	P	10 16 12.8	-0.4
R53A	Hurricane	80.90	41	P	P	10 16 13.1	-0.3
R53A				IAmb	IAmb	10 16 14.8	
	comp=Z,55nm,1.2s						
R53A	Hurricane	80.90	41	P	P	10 16 13.8	+0.4
	baz=325,SNR=7.8						
R53A				P	P	10 16 13.8	+0.4
	baz=325,SNR=7.8						
MGRS	Mrkonjic Grad	80.97	330	*e*P	P	10 16 14.4	+0.8
SJES	Sjenica	80.98	328	⇑*i*P	P	10 16 13.8	0.0
MMB	Musomiste	81.02	325	*i* P	P	10 16 14.5	+0.6
KKB	Krupnik	81.03	325	*i* P	P	10 16 14.7	+0.7
DAVOX	Davos/Dischmat	81.03	336	LR	LR	10 57 34.7	
	comp=Z,4µm,18.4s,baz=28,slow=40						
N58A	Sunbury	81.05	37	IAmb	IAmb	10 16 30.2	
	comp=Z,50nm,1.4s						
N58A	Sunbury	81.05	37	P	P	10 16 14.0	-0.1
	baz=328,SNR=7.9						
N58A				P	P	10 16 14.0	-0.1
	baz=328,SNR=7.9						
N58A				S	S	10 26 18.0	-4.0
	baz=328						
N58A				S	S	10 26 18.0	-4.0
	baz=328						
EMMW	East Machias	81.07	29	IAMs_20	IAMs_20	10 57 30.0	
	comp=Z,3µm,19.0s						
PLE	Pljevlja	81.13	328	⇑*i*P	P	10 16 14.5	-0.1
NVR	Nevrokopi	81.17	325	P	P	10 16 14.6	-0.1
CTI	Castel Tesino	81.20	335	P	P	10 16 14.7	-0.3
CTI	Castel Tesino	81.20	335	P	P	10 16 14.7	-0.3
CTI				pmax	pmax		
	comp=Z,22nm,0.8s						
KAVA	Kavala	81.21	324	P	P	10 16 14.8	-0.1
L61B	Northampton	81.23	33	IAMs_20	IAMs_20	10 56 55.2	
	comp=Z,3µm,21.0s						
L61B	Northampton	81.23	33	P	P	10 16 14.8	-0.2
	baz=330						
L61B				S	S	10 26 22.2	-1.7
	baz=330						
SMTH	Samothraki Isl	81.25	323	P	P	10 16 14.6	-0.5
NPNY	Mohonk Preserv	81.28	34	S	S	10 26 20.7	-3.7
	baz=329						
342B	Flagon Creek P	81.32	53	S	S	10 26 25.9	+0.8
	baz=321						
UNH	University of	81.33	32	S	S	10 26 23.6	-1.3
	baz=331						
441A	DeRidder	81.33	54	S	S	10 26 22.5	-2.8
	baz=321						
IVA	Berane	81.35	328	⇑*i*P	P	10 16 15.6	-0.2
UPM	Unac-Piva	81.41	329	*e*P	P	10 16 15.6	-0.6
UPM	Unac-Piva	81.41	329	⇑*i*P	P	10 16 15.2	-1.0
THAS	Thassos island	81.46	324	P	P	10 16 15.8	-0.4
FORT	Forrest	81.46	203	P	P	10 16 16.6	+0.5
FORT				IAmb	IAmb	10 16 17.7	
	comp=Z,36nm,0.8s						
FORT	Forrest	81.46	203	P	P	10 16 16.1	0.0
TUE	Stuetta	81.46	336	P	P	10 16 17.2	+0.8
EZN	Ezine	81.46	322	P	P	10 16 16.2	0.0
SRS	Serrai	81.47	325	P	P	10 16 15.9	-0.4
QUA2	Belchertown	81.50	33	IAMs_20	IAMs_20	10 57 12.5	
	comp=Z,3µm,20.0s						
JSA	Saint Aubin	81.50	345	*e*P	P	10 16 16.8	+0.5
JSA				IAmb	IAmb	10 16 18.8	
	comp=Z,120nm,1.2s						
KOME	Kolasin	81.50	328	⇑*i*P	P	10 16 14.6	-2.0
Q56A	Snyder Ridge,	81.53	39	IAmb	IAmb	10 16 18.1	
	comp=Z,59nm,1.4s						
Q56A	Snyder Ridge,	81.53	39	P	P	10 16 17.0	+0.3
	baz=327,SNR=7.9						
Q56A				P	P	10 16 17.0	+0.3
	baz=327,SNR=7.9						
Q56A				S	S	10 26 25.1	-2.0
	baz=327						
Q56A				S	S	10 26 25.1	-2.0
	baz=327						
KULA	Kula-Manisa	81.56	320	P	P	10 16 17.0	+0.1
PAGS	Pennsylvania G	81.56	37	IAmb	IAmb	10 16 17.8	
	comp=Z,60nm,1.2s						
KOKK	Kokkinochori,	81.57	324	P	P	10 16 16.4	-0.4
SWET	Sewanee	81.57	46	P	P	10 16 16.5	-0.4
HWQ	Hawqa	81.59	313	*e*P	P	10 16 17.4	+0.1
HRV	Adam Dziewonsk	81.59	32	IAMs_20	IAMs_20	10 54 52.0	
	comp=Z,2µm,21.0s						
HRV	Adam Dziewonsk	81.59	32	P	P	10 16 16.6	-0.3
	baz=331						
HRV				S	S	10 26 26.7	-0.9
	baz=331						
WHYH	Whyalla	81.61	194	P	P	10 16 17.4	+0.6
VBMS	Vicksburg	81.62	51	IAmb	IAmb	10 16 35.1	
	comp=Z,65nm,1.0s						
VBMS				IAMs_20	IAMs_20	10 58 30.3	
	comp=Z,2µm,18.0s						
VBMS	Vicksburg	81.62	51	P	P	10 16 17.7	+0.4
	baz=322						
VBMS				S	S	10 26 28.9	+0.7
	baz=322						
VBMS	Vicksburg	81.62	51	P	P	10 16 17.3	0.0
	baz=322						
VBMS				S	S	10 26 28.1	-0.2
	baz=322						
S54A	Dingess, Beckl	81.62	41	P	P	10 16 17.5	+0.2
	baz=326,SNR=7.0						
S54A				P	P	10 16 17.5	+0.2
	baz=326,SNR=7.0						
S54A				S	S	10 26 26.5	-1.7
	baz=326						
S54A				S	S	10 26 26.5	-1.7
	baz=326						
TZTN	Tazewell	81.63	44	P	P	10 16 17.0	-0.3
TZTN				IAmb	IAmb	10 16 36.6	
	comp=Z,60nm,1.3s						
TZTN				IAMs_20	IAMs_20	10 56 47.2	
	comp=Z,2µm,19.0s						
TZTN	Tazewell	81.63	44	P	P	10 16 16.6	-0.7
	baz=325,SNR=8.8						
TZTN				S	S	10 26 27.4	-0.9
	baz=325						
TZTN	Tazewell	81.63	44	P	P	10 16 17.0	-0.3
	baz=325,SNR=8.8						
TZTN				S	S	10 26 28.0	-0.3
	baz=325						
X48A	Hartselle	81.63	47	P	P	10 16 16.8	-0.4
	baz=323,SNR=7.7						
X48A				S	S	10 26 26.6	-1.7
	baz=323						
BBOO	Buckleboo	81.65	195	P	P	10 16 16.9	-0.2
P57A	Homestead Farm	81.65	38	P	P	10 16 17.1	-0.2
P57A	Homestead Farm	81.65	38	P	P	10 16 17.5	+0.2
	baz=327,SNR=6.0						
P57A				P	P	10 16 17.5	+0.2
	baz=327,SNR=6.0						
P57A				S	S	10 26 26.8	-1.5
	baz=327						
P57A				S	S	10 26 26.8	-1.5
	baz=327						
NAPP	Napperby	81.66	194	P	P	10 16 17.9	+0.8
ODNJ	Ogdensburg	81.68	35	S	S	10 26 24.4	-4.1
	baz=329						
KNT	Kendrikon	81.70	325	P	P	10 16 17.7	+0.1
CLF	Chambon-Foret	81.74	341	IAmb	IAmb	10 16 19.2	
	comp=Z,37nm,0.9s						
R55A	Marlinton	81.75	40	IAmb	IAmb	10 16 19.5	
	comp=Z,67nm,1.2s						
R55A	Marlinton	81.75	40	P	P	10 16 17.9	0.0
	baz=326,SNR=13						
R55A				P	P	10 16 17.9	0.0
	baz=326,SNR=13						
R55A				S	S	10 26 27.8	-1.8
	baz=326						
R55A				S	S	10 26 27.8	-1.8
	baz=326						
TRNY	Table Rock, Ra	81.77	35	P	P	10 16 17.9	-0.1
TRNY				IAmb	IAmb	10 16 19.6	
	comp=Z,70nm,1.4s						
NKME	Niksic	81.78	328	⇑*i*P	P	10 16 17.0	-1.0
WES	Weston	81.79	32	IAmb	IAmb	10 16 33.6	
	comp=Z,82nm,1.6s						
WES				IAMs_20	IAMs_20	10 55 08.1	
	comp=Z,2µm,21.0s						
LUPA	Lehigh Univers	81.79	36	IAmb	IAmb	10 16 19.2	
	comp=Z,43nm,1.3s						
BRY	Bratogost	81.81	329	⇑*i*P	P	10 16 17.3	-0.9
BRY	Bratogost	81.81	329	⇑*i*P	P	10 16 17.3	-0.9
SOH	Sokhos	81.82	325	P	P	10 16 17.6	-0.6
TEOL	Teolo	81.82	334	P	P	10 16 17.6	-0.5
V51A	Loudon	81.85	45	IAmb	IAmb	10 16 19.7	
	comp=Z,34nm,1.1s						
V51A	Loudon	81.85	45	P	P	10 16 18.0	-0.4
	baz=324,SNR=10						
V51A				S	S	10 26 29.6	-0.9
	baz=324						
LIA	Limnos Island	81.87	323	P	P	10 16 18.3	-0.1
W50A	Signal Mountai	81.88	46	P	P	10 16 18.9	+0.2
	baz=324,SNR=8.1						
W50A				S	S	10 26 29.6	-1.4
	baz=324						
MVL	Millersville	81.91	37	P	P	10 16 18.7	+0.1
MVL				IAmb	IAmb	10 16 33.8	
	comp=Z,113nm,1.9s						
SALO	Salr	81.92	335	P	P	10 16 18.7	0.0
SALO				IAmb	IAmb	10 16 19.8	
	comp=Z,60nm,0.9s						
PDG	Podgorica	81.97	328	⇑P	P	10 16 18.6	-0.3
PDG	Podgorica	81.97	328	IAmb	IAmb	10 16 19.6	
	comp=Z,60nm,0.9s						
PDG	Podgorica	81.97	328	⇑*i*P	P	10 16 18.4	-0.5
TTG	Podgorica	81.97	328	⇑*i*P	P	10 16 18.1	-0.8
UCCT	U. Connecticut	81.97	33	IAmb	IAmb	10 16 20.3	
	comp=Z,45nm,1.3s						
PRK	Paraskevi	81.97	322	P	P	10 16 19.2	+0.2
CEME	Cevo	81.98	328	⇑*i*P	P	10 16 18.2	-0.9
OUR	Ouranopolis	81.98	324	P	P	10 16 18.4	-0.6
PPT	Papeete	82.00	127	LR	LR	10 46 10.1	
	comp=Z,3µm,20.3s,baz=326,slow=31						
PAL	Palisades	82.01	35	IAmb	IAmb	10 16 21.8	
	comp=Z,78nm,1.6s						
PAL	Palisades	82.01	35	P	P	10 16 18.7	-0.4
	baz=329						
PAL				S	S	10 26 33.8	+1.8
	baz=329						
BHL	Bhannes	82.03	313	*e*P	P	10 16 18.7	-0.8
TREB	Trebinje	82.03	329	⇑*i*P	P	10 16 18.0	-1.3
BRNJ	Basking Ridge	82.03	35	S	S	10 26 30.8	-1.4
	baz=329						
146A	Union	82.05	50	P	P	10 16 20.4	+0.9
	baz=322,SNR=5.4						
146A				S	S	10 26 32.2	-0.5
	baz=322						
SENIN	Lac Senin/Sane	82.10	338	P	P	10 16 20.4	+0.6
344A	Westbrook Farm	82.11	51	IAmb	IAmb	10 16 40.4	
	comp=Z,31nm,0.9s						
344A	Westbrook Farm	82.11	51	S	S	10 26 34.0	+0.7

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                baz=322
HORT   Hortiatis           82.11 325   P         P         10 16 18.9 -0.9
Z47A   Carrollton          82.11  49   IAmb      IAmb      10 16 35.2
                comp=Z,33nm,0.8s
Z47A   Carrollton          82.11  49   P         P         10 16 20.2 +0.4
                baz=323,SNR=6.1
Z47A                                   S         S         10 26 30.7 -2.6
                baz=323
BRYW   Bryant College      82.11  33   IAMs_20   IAMs_20   10 57 57.8
                comp=Z,2µm,20.0s
YLE    Yale                82.12  34   IAMs_20   IAMs_20   10 55 58.9
                comp=Z,2µm,19.0s
STON   Ston                82.12 329⇑iP          P         10 16 18.3 -1.4
SIGR   SIGRI               82.17 322   P         P         10 16 19.0 -1.0
CPNY   Central Park        82.18  35   IAmb      IAmb      10 16 22.6
                comp=Z,87nm,1.5s
V52A   Sevierville         82.18  44   P         P         10 16 20.1 -0.1
V52A                                   IAmb      IAmb      10 16 22.4
                comp=Z,87nm,1.4s
V52A   Sevierville         82.18  44   P         P         10 16 20.3 +0.2
                baz=325,SNR=13
V52A                                   S         S         10 26 32.6 -1.4
                baz=325
PHP    Peshkopia           82.18 327   P         P         10 16 19.6 -0.5
DRME   Dracevica, Mon      82.20 328⇑iP          P         10 16 19.8 -0.4
DRME   Dracevica, Mon      82.20 328⇑iP          P         10 16 19.8 -0.4
SDMD   Soldier's Deli      82.20  37   P         P         10 16 20.1  0.0
                baz=328
SDMD                                   S         S         10 26 32.0 -2.1
                baz=328
BUM    Brajici-Budva       82.21 328⇑iP          P         10 16 19.5 -0.8
HCY    Herceg Novi         82.22 329  eP         P         10 16 19.2 -1.0
HCY    Herceg Novi         82.22 329⇑iP          P         10 16 19.2 -1.0
TUPA   Temple Univers      82.23  36   P         P         10 16 20.2 -0.1
                baz=329,SNR=5.1
PANJ   Princeton           82.24  36   P         P         10 16 20.6 +0.2
                baz=329
PANJ                                   S         S         10 26 31.1 -3.3
                baz=329
TKL    Tuckaleechee C      82.25  44   LR        LR        10 57 34.4
                comp=Z,3µm,18.2s,baz=334,slow=39
TKL    Tuckaleechee C      82.25  44   IAmb      IAmb      10 16 22.4
                comp=Z,91nm,1.6s
TKL    Tuckaleechee C      82.25  44   P         P         10 16 20.6 +0.1
                baz=325,SNR=14
TKL                                    S         S         10 26 33.3 -1.3
                baz=325
WUPA   West Chester U      82.26  36   P         P         10 16 19.7 -0.7
FPAL   Fort Paine          82.27  46   P         P         10 16 20.1 -0.6
FPAL                                   IAmb      IAmb      10 16 21.7
                comp=Z,52nm,1.2s
CSS    Mathiatis           82.32 315   P         P         10 16 20.5 -0.4
CSS                                    IAmb      IAmb      10 16 24.7
                comp=Z,47nm,0.7s
GEDE   Greenville          82.35  36   S         S         10 26 31.7 -3.8
                baz=328
BLCB   Balcova             82.37 321   P         P         10 16 20.8 -0.3
ULC    Ulcinj              82.38 328⇑iP          P         10 16 20.3 -0.8
Y49A   Blount Mountai      82.42  47   IAmb      IAmb      10 16 36.5
                comp=Z,23nm,0.8s
Y49A   Blount Mountai      82.42  47   P         P         10 16 21.3 -0.2
                baz=324,SNR=8.7
Y49A                                   S         S         10 26 33.7 -2.8
                baz=324
SHBL   Chebaa              82.43 312  eP         P         10 16 21.1 -0.6
U54A   Nelsons Funny       82.45  42   IAmb      IAmb      10 16 23.0
                comp=Z,62nm,1.2s
U54A   Nelsons Funny       82.45  42   P         P         10 16 21.9 +0.3
                baz=326,SNR=8.4
U54A                                   P         P         10 16 21.9 +0.3
                baz=326,SNR=8.4
U54A                                   S         S         10 26 35.8 -1.0
                baz=326
U54A                                   S         S         10 26 35.8 -1.0
                baz=326
PAIG   Paliouri            82.45 324   P         P         10 16 20.9 -0.6
ELL    Elmali              82.47 318   P         P         10 16 21.9 +0.1
ELL    Elmali              82.47 318   P         P         10 16 21.9 +0.1
ELL                                    pmax      pmax
                comp=Z,140nm,0.8s
BLA    Blacksburg          82.51  41   P         P         10 16 21.8 -0.1
BLA                                    IAmb      IAmb      10 16 38.9
                comp=Z,40nm,1.0s
BLA                                    IAMs_20   IAMs_20   10 56 51.4
                comp=Z,2µm,19.0s
BLA    Blacksburg          82.51  41   P         P         10 16 21.8 -0.1
BLA                                    pmax      pmax
                comp=Z,40nm,1.0s
BLA                                    MLR       MLR
                comp=Z,2µm,19.0s
BLA    Blacksburg          82.51  41   P         P         10 16 22.3 +0.4
                baz=326,SNR=9.4
BLA    Blacksburg          82.51  41   P         P         10 16 21.8 -0.1
                baz=326,SNR=9.4
BLA                                    S         S         10 26 37.4  0.0
                baz=326
SHAO   Shalim              82.57 288   P         P         10 16 22.5 +0.1
X51A   Calhoun             82.61  46   IAmb      IAmb      10 16 25.1
                comp=Z,117nm,1.9s
FNA    Florina             82.61 326   P         P         10 16 21.7 -0.7
FNA    Florina             82.61 326   P         P         10 16 21.9 -0.5
FNA                                    IAmb      IAmb      10 16 23.1
                comp=Z,32nm,0.9s
FNA    Florina             82.61 326   P         P         10 16 21.9 -0.5
FNA                                    pmax      pmax
                comp=Z,32nm,0.9s
W52A   Murphy              82.63  45   P         P         10 16 22.7 +0.2
W52A                                   IAmb      IAmb      10 16 24.6
                comp=Z,52nm,1.5s
CAN    Canberra            82.63 184   IAMs_20   IAMs_20   10 50 13.9
                comp=Z,3µm,19.0s
V53A   Saluda              82.69  44   P         P         10 16 23.2 +0.4
                baz=325,SNR=9.5
V53A                                   P         P         10 16 23.2 +0.4
                baz=325,SNR=9.5
TIR    Tirane              82.69 327  ⇑P         P         10 16 22.2 -0.5
TIR    Tirane              82.69 327   P         P         10 16 22.6 -0.1
TIR    Tirane              82.69 327   P         P         10 16 22.0 -0.7
TIR    Tirane              82.69 327   P         P         10 16 22.0 -0.7
TIR                                    pmax      pmax
                comp=Z,61nm,0.7s
S57A   Dark Hollow, R      82.70  40   IAmb      IAmb      10 16 38.7
                comp=Z,73nm,1.7s
S57A   Dark Hollow, R      82.70  40   P         P         10 16 23.0 +0.2
                baz=327,SNR=5.4
S57A                                   P         P         10 16 23.0 +0.2
                baz=327,SNR=5.4
LIT    Litokhoron          82.77 325   P         P         10 16 22.2 -0.9
LIT    Litokhoron          82.77 325   P         P         10 16 22.3 -0.9
LIT    Litokhoron          82.77 325   P         P         10 16 22.3 -0.9
LIT                                    pmax      pmax
                comp=Z,142nm,2.0s
CHOS   Chios island        82.78 322   P         P         10 16 23.1 -0.2
LRAL   Lakeview Retre      82.79  48   P         P         10 16 23.2 -0.1
LRAL                                   IAMs_20   IAMs_20   10 53 51.9
                comp=Z,2µm,21.0s
LRAL   Lakeview Retre      82.79  48   P         P         10 16 23.1 -0.3
                baz=323,SNR=5.9
LRAL   Lakeview Retre      82.79  48   P         P         10 16 22.6 -0.7
                baz=323,SNR=5.9
LRAL                                   S         S         10 26 38.0 -2.1
                baz=323
MMAI   Mount Meron Ar      82.87 312   LR        LR        10 58 29.9
                comp=Z,9µm,18.2s,baz=194,slow=40
YER    Yerkesik            82.87 319   P         P         10 16 24.4 +0.6
KZN    Kozani              82.88 325   P         P         10 16 22.8 -1.0
KBN    Korca               82.98 326   P         P         10 16 23.7 -0.6
KBN    Korca               82.98 326   P         P         10 16 24.0 -0.3
KBN                                    IAmb      IAmb      10 16 29.4
                comp=Z,41nm,1.0s
KBN    Korca               82.98 326   P         P         10 16 24.0 -0.3
KBN                                    pmax      pmax
                comp=Z,41nm,1.0s
R58B   Mineral             82.99  39   P         P         10 16 23.6 -0.7
                baz=327,SNR=6.7
R58B                                   P         P         10 16 23.6 -0.7
                baz=327,SNR=6.7
SKY    Skiros Island       83.00 323   P         P         10 16 23.9 -0.4
CBN    Corbin Frederi      83.00  38   P         P         10 16 23.9 -0.4
                baz=328
CBN                                    S         S         10 26 40.3 -1.8
                baz=328
SMG    Samos               83.02 321   P         P         10 16 23.8 -0.7
AKAS   Kas                 83.03 318   P         P         10 16 24.0 -0.7
DOK    Doka                83.09 290   P         P         10 16 25.2 +0.1
XOR    Xorichti            83.13 324   P         P         10 16 23.8 -1.2
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NEO    Neokhori            83.17 324   P         P         10 16 24.2 -1.0
CASEE  Lake Jocassee       83.18  44   P         P         10 16 26.0 +0.6
                baz=325,SNR=14
T57A   Hurt                83.20  40   P         P         10 16 24.2 -1.2
T57A                                   IAmb      IAmb      10 16 26.8
                comp=Z,45nm,1.4s
T57A   Hurt                83.20  40   P         P         10 16 24.9 -0.6
                baz=327,SNR=8.2
T57A                                   P         P         10 16 24.9 -0.6
                baz=327,SNR=8.2
JSRW   J. Sargeant Re      83.22  39   P         P         10 16 25.2 -0.2
DMTO   DMTO                83.23 289   P         P         10 16 25.8  0.0
U56A   King                83.24  42   P         P         10 16 25.5 -0.2
U56A                                   IAmb      IAmb      10 16 27.1
                comp=Z,64nm,1.4s
U56A   King                83.24  42   P         P         10 16 25.9 +0.2
                baz=326
U56A                                   P         P         10 16 25.9 +0.2
                baz=326
V55A   Taylorsville        83.28  42   IAmb      IAmb      10 16 27.1
                comp=Z,42nm,1.4s
V55A   Taylorsville        83.28  42   P         P         10 16 25.0 -0.9
                baz=326,SNR=5.6
V55A                                   P         P         10 16 25.0 -0.9
                baz=326,SNR=5.6
KPRO   Kipourio            83.34 325   P         P         10 16 25.0 -1.2
BODT   Bodrum              83.36 320   P         P         10 16 25.7 -0.6
KYMI   Kymi, Euboea I      83.39 323   P         P         10 16 25.0 -1.4
THL    Klokotos Trika      83.42 325   P         P         10 16 24.6 -1.9
LSK    Leskovik            83.46 326   P         P         10 16 26.8  0.0
MURB   Monte Urbino        83.47 333   P         P         10 16 27.4 +0.7
Z51A   Franklin            83.47  47   IAmb      IAmb      10 16 42.0
                comp=Z,33nm,0.8s
Z51A   Franklin            83.47  47   P         P         10 16 26.6 -0.3
                baz=324,SNR=7.4
BNI    Bardonecchia        83.48 338   IAmb      IAmb      10 16 39.2
                comp=Z,41nm,1.1s
DAT    Datca               83.52 320   P         P         10 16 26.3 -0.9
Y52A   Lilburn             83.56  45   IAmb      IAmb      10 16 29.5
                comp=Z,48nm,1.3s
Y52A   Lilburn             83.56  45   P         P         10 16 27.1 -0.3
                baz=325,SNR=7.6
Y52A                                   P         P         10 16 27.1 -0.3
                baz=325,SNR=7.6
OSSC   Osservatorio P      83.62 334   P         P         10 16 27.3 -0.2
OSSC                                   IAmb      IAmb      10 16 29.5
                comp=Z,51nm,1.2s
MORW   Morawa              83.67 213   P         P         10 16 28.1 +0.4
NRCA   Norcia              83.67 332   P         P         10 16 28.6 +0.7
ARG    Arkhangelos         83.71 319   P         P         10 16 28.0  0.0
KARY   Karystos            83.76 322   P         P         10 16 27.4 -0.9
ATAL   Atalanti            83.77 324   P         P         10 16 27.0 -1.3
SGRT   San Giovanni R      83.78 330   IAmb      IAmb      10 16 28.5
                comp=Z,31nm,1.0s
JAN    Janina              83.79 326   P         P         10 16 27.5 -1.0
SSB    Saint Sauveur       83.81 339   P         P         10 16 28.5  0.0
SSB                                    IAmb      IAmb      10 16 30.0
                comp=Z,34nm,0.8s
SSB    Saint Sauveur       83.81 339   P         P         10 16 28.5  0.0
SSB                                    pmax      pmax
                comp=Z,34nm,0.8s
KMSC   Kings Mountain      83.81  43   P         P         10 16 28.4 -0.2
KMSC   Kings Mountain      83.81  43   P         P         10 16 28.6  0.0
                baz=326,SNR=8.8
KMSC   Kings Mountain      83.81  43   P         P         10 16 28.3 -0.2
                baz=326,SNR=8.8
LKR    Lokris              83.82 324   P         P         10 16 26.2 -2.4
WHFO   Wadi Hawf           83.83 290   P         P         10 16 28.7 -0.3
PAULI  Pauline             83.85  43   P         P         10 16 28.9 +0.1
PAULI                                  IAmb      IAmb      10 16 29.9
                comp=Z,31nm,1.2s
PAULI  Pauline             83.85  43   P         P         10 16 28.7 -0.1
                baz=326,SNR=5.5
MAKR   Makrakomi, Fth      83.85 324   P         P         10 16 27.3 -1.5
SRN    Sarande             83.92 326   P         P         10 16 28.3 -0.7
DION   Dionisos Attik      83.93 323   P         P         10 16 27.9 -1.3
T59A   Double "B" Far      83.96  39   P         P         10 16 28.9 -0.4
T59A                                   IAmb      IAmb      10 16 31.0
                comp=Z,39nm,1.1s
T59A   Double "B" Far      83.96  39   P         P         10 16 29.5 +0.2
                baz=328,SNR=7.3
T59A                                   P         P         10 16 29.5 +0.2
                baz=328,SNR=7.3
PTL    Penteli             83.98 323   P         P         10 16 27.8 -1.7
250A   Grady               84.00  48   P         P         10 16 29.4 -0.2
250A   Grady               84.00  48   P         P         10 16 30.1 +0.5
                baz=324,SNR=22
EVR    Evrytania           84.06 325   P         P         10 16 28.8 -1.1
ATHU   Athens Univers      84.08 323   P         P         10 16 28.4 -1.6
IGT    Igoumenitsa         84.10 326   P         P         10 16 29.3 -0.7
ATH    Athens Observa      84.11 323   P         P         10 16 28.9 -1.1
VILL   Villia              84.11 323   P         P         10 16 28.6 -1.5
APE    Apeiranthos         84.12 321   P         P         10 16 27.9 -2.3
HODGE  Hodges              84.12  44   P         P         10 16 29.1 -1.1
HODGE  Hodges              84.12  44   P         P         10 16 30.8 +0.5
                baz=326,SNR=14
KEK    Kerkira             84.14 326   P         P         10 16 29.5 -0.7
KEK    Kerkira             84.14 326   P         P         10 16 29.6 -0.7
KEK                                    IAmb      IAmb      10 16 31.5
                comp=Z,57nm,1.2s
VLY    Voula,Athens        84.18 323   P         P         10 16 27.7 -2.7
152A   Waverly Hall        84.22  47   P         P         10 16 29.9 -0.8
152A                                   IAmb      IAmb      10 16 32.5
                comp=Z,61nm,1.6s
152A   Waverly Hall        84.22  47   P         P         10 16 30.5 -0.2
                baz=324,SNR=8.7
GOGA   Godfrey             84.22  45   P         P         10 16 30.0 -0.7
GOGA   Godfrey             84.22  45   P         P         10 16 30.0 -0.7
GOGA                                   pmax      pmax
                comp=Z,93nm,1.9s
GOGA   Godfrey             84.22  45   P         P         10 16 30.7  0.0
                baz=325
GOGA                                   S         S         10 26 52.4 -2.2
                baz=325
BRAL   Brewton             84.25  49   IAMs_20   IAMs_20   10 58 17.8
                comp=Z,3µm,20.0s
BRAL   Brewton             84.25  49   P         P         10 16 31.3 +0.4
                baz=323
BRAL                                   S         S         10 26 56.6 +1.6
                baz=323
V58A   Windy Hill, Pi      84.27  41   P         P         10 16 30.5 -0.4
V58A   Windy Hill, Pi      84.27  41   P         P         10 16 30.6 -0.3
                baz=327,SNR=7.6
V58A                                   P         P         10 16 30.6 -0.3
                baz=327,SNR=7.6
ANX    Ano Chora           84.30 324   P         P         10 16 29.3 -1.8
LTK    Loutraki            84.37 323   P         P         10 16 29.1 -2.3
U59A   Littleton           84.38  40   P         P         10 16 30.9 -0.5
U59A                                   IAmb      IAmb      10 16 46.5
                comp=Z,30nm,1.1s
W57A   Gilead              84.41  42   P         P         10 16 30.8 -0.8
W57A                                   IAmb      IAmb      10 16 48.5
                comp=Z,38nm,1.1s
W57A   Gilead              84.41  42   P         P         10 16 31.5 -0.1
                baz=326,SNR=7.0
W57A                                   P         P         10 16 31.5 -0.1
                baz=326,SNR=7.0
PVO    Paravola            84.43 325   P         P         10 16 31.1 -0.6
EFP    Efpalio             84.44 324   P         P         10 16 31.0 -0.8
JSC    Jenkinsville        84.55  43   P         P         10 16 31.9 -0.5
JSC                                    IAmb      IAmb      10 16 33.2
                comp=Z,20nm,0.9s
JSC    Jenkinsville        84.55  43   P         P         10 16 31.9 -0.5
JSC                                    pmax      pmax
                comp=Z,20nm,0.9s
JSC    Jenkinsville        84.55  43   P         P         10 16 32.3  0.0
                baz=326,SNR=6.2
ABTO   Aybut               84.55 290   P         P         10 16 32.6 -0.1
LAKA   Lakka               84.58 324   P         P         10 16 31.3 -1.2
BIRD   Birdtown, Kers      84.62  43   P         P         10 16 32.5 -0.2
BIRD                                   IAmb      IAmb      10 16 34.1
                comp=Z,64nm,1.3s
BIRD   Birdtown, Kers      84.62  43   P         P         10 16 33.1 +0.4
                baz=326,SNR=9.0
LKD2   Lefkada island      84.62 325   P         P         10 16 31.7 -1.0
EPID   Epidavros           84.66 323   P         P         10 16 30.5 -2.4
ARPS   Mount Arapiles      84.68 190   P         P         10 16 35.9 +3.3
KLV    Kalavryta, Ach      84.68 324   P         P         10 16 31.8 -1.2
KARP   Karpathos           84.69 319   P         P         10 16 32.0 -1.1
KARP   Karpathos           84.69 319   P         P         10 16 32.1 -1.0
GUR    Goura               84.69 324   P         P         10 16 31.6 -1.6
RAYN   Ar Rayn             84.73 299   P         P         10 16 33.8 +0.3
RAYN   Ar Rayn             84.73 299   P         P         10 16 33.8 +0.3
RAYN                                   pmax      pmax
                comp=Z,220nm,2.0s
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RAYN                                   MLR       MLR
                comp=Z,4µm,19.0s
RAYN   Ar Rayn             84.73 299   P         P         10 16 33.9 +0.4
RAYN   Ar Rayn             84.73 299  iP         P         10 16 33.8 +0.3
                SNR=30
EVGI   Lefkada island      84.77 325   P         P         10 16 32.6 -0.8
BLDU   Ballidu             84.83 212   P         P         10 16 33.6 +0.1
KRND   KRANIDI             84.84 323   P         P         10 16 30.9 -2.9
DRO    Drossia             84.93 324   P         P         10 16 34.1 -0.2
RLS    Riolos of Patr      84.94 324   P         P         10 16 33.8 -0.4
FSK    Fiskardo            84.94 325   P         P         10 16 33.8 -0.5
154A   Montrose            85.05  46   P         P         10 16 35.2 +0.3
                baz=325,SNR=5.4
352A   Blakely             85.07  47   P         P         10 16 35.6 +0.5
                baz=324,SNR=8.3
TOO    Toolangi            85.11 187   P         P         10 16 37.1 +2.3
HAW    Hawthorne Fire      85.15  44   P         P         10 16 35.9 +0.5
                baz=326,SNR=9.5
VLS    Valsamata           85.18 325   P         P         10 16 34.0 -1.5
X58A   Rowland             85.20  42   P         P         10 16 36.0 +0.3
                baz=327
X58A                                   P         P         10 16 36.0 +0.3
                baz=327
BRAT   Ballarat            85.23 188   P         P         10 16 36.3 +1.0
PSDA   Pessada-Kefalo      85.23 325   P         P         10 16 34.9 -0.8
KEF3   Kipouria, Keph      85.25 325   P         P         10 16 34.9 -0.9
CNNC   Cliffs of the       85.28  40   IAMs_20   IAMs_20   10 59 22.6
                comp=Z,3µm,20.0s
CNNC   Cliffs of the       85.28  40   P         P         10 16 36.1 +0.1
                baz=328
CUC    Castrocucco         85.33 329   P         P         10 16 35.4 -0.8
KLBR   Kellerberrin        85.35 211   P         P         10 16 37.3 +1.2
451A   Vernon              85.36  49   P         P         10 16 35.1 -1.3
451A   Vernon              85.36  49   S         S         10 27 07.6 +1.6
                baz=324
ZKR    Zakros              85.47 320   P         P         10 16 36.5 -0.5
VLI    Veliai              85.50 323   P         P         10 16 33.9 -3.2
ITM    Ithomi              85.51 324   P         P         10 16 36.0 -1.2
ITM    Ithomi              85.51 324   P         P         10 16 36.1 -1.1
TIP    Timpagrande         85.72 328   P         P         10 16 38.3  0.0
FRMA   Ierapetra Chan      85.77 320   P         P         10 16 37.7 -0.7
TIGA   Tifton              85.77  47   P         P         10 16 38.3 -0.2
                baz=325,SNR=6.9
TIGA                                   S         S         10 27 11.1 +1.0
                baz=325
TIGA   Tifton              85.77  47   P         P         10 16 39.1 +0.6
                baz=325,SNR=6.9
TIGA                                   S         S         10 27 11.2 +1.1
                baz=325
PYL    PYLOS               85.83 324   P         P         10 16 37.2 -1.5
KTHA   Kythira Island      85.85 322   P         P         10 16 37.1 -1.7
KTHR   Kythira             85.87 322   P         P         10 16 37.0 -1.9
IDI    Anoyia              85.90 321   P         P         10 16 37.0 -2.2
IDI    Anoyia              85.90 321   P         P         10 16 38.0 -1.2
NHSC   New Hope            86.03  43   IAMs_20   IAMs_20   10 55 02.6
                comp=Z,3µm,21.0s
NHSC   New Hope            86.03  43   P         P         10 16 39.9 +0.1
                baz=326
ANKY   Antikythira Is      86.08 322   P         P         10 16 38.5 -1.5
IMMV   Iera Moni Meta      86.14 321   P         P         10 16 38.7 -1.6
553A   Crawfordville       86.37  48   S         S         10 27 16.9 +1.0
                baz=325
KNDR   Palaiochora Ch      86.46 321   P         P         10 16 40.8 -1.0
UNM    Universidad Na      86.57  65   IAMs_20   IAMs_20   10 52 02.0
                comp=Z,2µm,18.0s
GVDS   Gavdos              86.62 321   P         P         10 16 41.5 -1.2
GVD    Gavdhos             86.63 321   P         P         10 16 41.5 -1.2
NWAO   Narrogin (SRO)      86.74 210   P         P         10 16 43.1 +0.1
NWAO   Narrogin (SRO)      86.74 210   P         P         10 16 43.1 +0.1
NWAO                                   pmax      pmax
                comp=Z,133nm,1.8s
NWAO   Narrogin (SRO)      86.74 210   P         P         10 16 43.4 +0.5
URZ    Urewera             87.83 162   LR        LR        10 48 56.3
                comp=Z,2µm,21.7s,baz=31,slow=31
URZ    Urewera             87.83 162   IAMs_20   IAMs_20   10 48 44.9
                comp=Z,2µm,20.0s
VSL    Villasalto          87.87 334   P         P         10 16 48.6  0.0
VSL                                    IAmb      IAmb      10 17 06.8
                comp=Z,51nm,1.5s
656A   Willston            87.98  47   P         P         10 16 48.8 -0.5
656A   Willston            87.98  47   P         P         10 16 49.3  0.0
                baz=326,SNR=7.4
656A                                   S         S         10 27 33.6 +2.1
                baz=326
VAE    Valguarnera         88.07 329   LR        LR        11 00 43.4
                comp=Z,5µm,18.0s,baz=13,slow=39
BKZ    Black Stump Fm      88.58 163   IAMs_20   IAMs_20   10 51 38.7
                comp=Z,2µm,21.0s
BKZ    Black Stump Fm      88.58 163   P         P         10 16 51.8 +0.1
PBRG   Braganca            89.45 346  eP         P         10 16 55.3 -0.8
                comp=Z,27nm,1.6s
PGAV   Gavieira, Arco      89.53 347  eP         P         10 16 56.1 -0.5
                comp=Z,39nm,1.9s
PGAV   Gavieira, Arco      89.53 347  eS         S         10 27 52.0 +6.0
PGAV   Gavieira, Arco      89.53 347  eLR        LR        10 47 01.3
                comp=Z,1µm,18.0s
DWPF   Disney Wildern      89.56  47   IAMs_20   IAMs_20   11 00 14.5
                comp=Z,2µm,20.0s
DWPF   Disney Wildern      89.56  47   S         S         10 27 46.2 -0.3
                baz=326
MOO    Moorlands           89.83 185   P         P         10 16 58.9 +1.5
POLO   Lamas de Olo        90.04 347  eP         P         10 16 58.4 -0.5
                comp=Z,19nm,1.4s
MVO    Moncorvo            90.12 346  eP         P         10 16 58.4 -0.9
                comp=Z,23nm,1.3s
MVO    Moncorvo            90.12 346  eS         S         10 27 55.4 +4.0
MVO    Moncorvo            90.12 346  eLR        LR        10 47 47.5
                comp=Z,2µm,20.0s
PVRL   Vila Real           90.12 347  eP         P         10 16 59.0 -0.2
                comp=Z,34nm,1.2s
TAU    Tasmania Unive      90.29 185   P         P         10 17 02.1 +2.6
SNZO   South Karori        90.32 165   IAMs_20   IAMs_20   10 50 15.7
                comp=Z,2µm,21.0s
THZ    Tophouse            90.45 166   IAMs_20   IAMs_20   10 50 39.4
                comp=Z,3µm,21.0s
PVIS   Viseu               90.70 347  eP         P         10 17 01.7 -0.2
                comp=Z,27nm,2.0s
MTE    Manteigas           90.95 346  eP         P         10 17 02.6 -0.5
                comp=Z,23nm,2.0s
MTE    Manteigas           90.95 346  eS         S         10 28 03.6 +4.5
MTE    Manteigas           90.95 346  eLR        LR        10 48 28.5
                comp=Z,2µm,18.0s
MTE    Manteigas           90.95 346   IAMs_20   IAMs_20   11 03 40.2
                comp=Z,2µm,18.0s
ESBB   Sonseca Array       91.02 343   P         P         10 17 02.6 -0.8
ESDC   Sonseca Array       91.02 343   P         P         10 17 02.7 -0.8
                comp=Z,7.7nm,1.0s,baz=3.1,slow=4.4,SNR=35
ESDC                                   LR        LR        11 04 43.1
                comp=Z,3µm,18.1s,baz=21,slow=40
                comp=Z,7.7nm,1.0s
PAB    San Pablo           91.22 344   P         P         10 17 03.6 -0.8
PAB    San Pablo           91.22 344   P         P         10 17 03.6 -0.8
PAB                                    pmax      pmax
                comp=Z,13nm,1.2s
COI    Coimbra             91.28 347  eP         P         10 17 06.7 +2.2
COI    Coimbra             91.28 347   IAMs_20   IAMs_20   11 05 33.7
                comp=Z,2µm,18.0s
KEST   Kesra               91.34 332   P         P         10 17 05.2 +0.2
                comp=Z,21nm,1.0s,baz=246,slow=1.8,SNR=14
KEST                                   LR        LR        11 02 25.2
                comp=Z,5µm,20.0s,baz=322,slow=38
                comp=Z,21nm,1.0s
KEST   Kesra               91.34 332   P         P         10 17 03.8 -1.3
KEST                                   IAmb      IAmb      10 17 06.5
                comp=Z,34nm,1.1s
PCAS   Casmilo, Conde      91.44 347  eP         P         10 17 04.3 -1.0
PCBR   Castelo Branco      91.48 346  eP         P         10 17 05.0 -0.5
                comp=Z,19nm,1.7s
PMRV   Marv??o             91.87 346  eP         P         10 17 08.4 +1.0
                comp=Z,20nm,1.7s
PMRV   Marv??o             91.87 346  eLR        LR        10 48 41.6
                comp=Z,3µm,20.0s
PSBE   So Bento            92.01 347  eP         P         10 17 09.0 +1.0
RPZ    Rata Peaks          92.08 168   LR        LR        10 53 56.4
                comp=Z,2µm,20.3s,baz=346,slow=33
PMTG   Montargil           92.36 346  eP         P         10 17 09.2 -0.4
                comp=Z,17nm,1.5s
CART   Cartagena           92.41 341   IAMs_20   IAMs_20   11 01 57.1
                comp=Z,2µm,21.0s
PESTR  Estremoz            92.45 346  eP         P         10 17 10.1  0.0
PMAFR  Mafra               92.63 347  eP         P         10 17 11.9 +1.0
PACT   Alcochete           92.75 347  eP         P         10 17 14.0 +2.6
LIS    Lisbon              92.85 347  eP         P         10 17 12.4 +0.6
LIS                                    IAMs_20   IAMs_20   11 09 00.0
                comp=Z,3µm,29.5s
```

LIS	Lisbon	92.85	347	*e*P	P	10 17 12.4	+0.6
EVO	Evora	92.85	346	*e*P	P	10 17 12.3	+0.4
	comp=Z,24nm,1.4s						
BBSR	BB Station	93.08	32	IAMs_20	IAMs_20	11 06 33.0	
	comp=Z,2μm,19.0s						
PBEJ	Beja	93.32	346	*e*P	P	10 17 14.1	0.0
	comp=Z,24nm,1.7s						
PNCL	Nicolau / Gran	93.34	346	*e*P	P	10 17 13.4	-0.7
MESJ	Messejana	93.56	346	*e*P	P	10 17 15.7	+0.6
MESJ				*e*SKSac	SKSac	10 27 50.3	+2.0
MESJ				IAMs_20	IAMs_20	11 07 02.4	
	comp=Z,3μm,16.7s						
MESJ	Messejana	93.56	346	*e*P	P	10 17 15.1	0.0
	comp=Z,26nm,1.5s						
MESJ	Messejana	93.56	346	*e*P	P	10 17 15.7	+0.6
MESJ				*e*		10 27 50.3	
PCVE	Castro Verde	93.73	346	*e*P	P	10 17 15.9	-0.1
	comp=Z,28nm,1.6s						
PVAQ	Vaqueiros	93.90	346	*e*P	P	10 17 15.2	-1.5
PVAQ	Vaqueiros	93.90	346	*e*LR	LR	10 49 52.9	
	comp=Z,3μm,20.0s						
PBDV	Barranco-do-Ve	94.09	346	*e*P	P	10 17 21.4	+3.7
MORF	Marmelete	94.15	346	*e*P	P	10 17 18.4	+0.5
MORF				IAMs_20	IAMs_20	11 07 17.9	
	comp=Z,3μm,15.3s						
MORF	Marmelete	94.15	346	*e*P	P	10 17 18.0	+0.1
	comp=Z,42nm,1.8s						
MORF	Marmelete	94.15	346	*e*P	P	10 17 18.4	+0.5
PFVI	Vila Bisbo	94.35	347	*e*P	P	10 17 20.8	+2.0
ATD	Arta Tunnel	95.53	294	LR	LR	11 06 00.4	
	comp=Z,7μm,18.3s,baz=29,slow=39						
SNET	Serv Nac Est T	96.94	61	IAMs_20	IAMs_20	10 54 56.5	
	comp=Z,1μm,21.0s						
MDT	Midelt	97.78	342	LR	LR	11 06 13.8	
	comp=Z,1μm,21.5s,baz=32,slow=38						
TGUH	Tegucigalpa,Un	97.80	59	IAMs_20	IAMs_20	11 04 46.2	
	comp=Z,1μm,22.0s						
GTBY	Guantanamo Bay	99.54	46	IAMs_20	IAMs_20	11 09 14.6	
	comp=Z,1μm,19.0s						
PMOZ	Porto Moniz, M	99.63	353	*e*LR	LR	10 51 55.5	
	comp=Z,707nm,20.0s						
MTDJ	Mount Denham	99.76	49	IAMs_20	IAMs_20	11 08 22.5	
	comp=Z,1μm,20.0s						
GRTK	Grand Turk	100.06	42	IAMs_20	IAMs_20	11 08 31.3	
	comp=Z,2μm,19.0s						
FURI	Furi	100.14	295	IAMs_20	IAMs_20	11 09 38.8	
	comp=Z,2μm,20.0s						
SDDR	Presa de Saban	102.18	44	IAMs_20	IAMs_20	11 09 32.5	
	comp=Z,2μm,20.0s						
SJG	San Juan	105.26	40	IAMs_20	IAMs_20	11 13 46.0	
	comp=Z,1μm,20.0s						
ANWB	Willy Bob	107.47	36	IAMs_20	IAMs_20	11 07 00.4	
	comp=Z,1μm,21.0s						
ABD	La Joyeuse, An	108.67	36	IAMs_20	IAMs_20	11 13 37.1	
	comp=Z,1μm,19.0s						
GDSD	La Dsirade Is	108.98	36	IAMs_20	IAMs_20	11 07 33.4	
	comp=Z,1μm,22.0s						
CBE	Ff, Capester	108.99	37	IAMs_20	IAMs_20	11 15 15.5	
	comp=Z,1μm,19.0s						
HATO	Hato, Curacao	109.17	45	IAMs_20	IAMs_20	11 17 19.8	
	comp=Z,1μm,20.0s						
TDBA	Terre de Bas,	109.17	37	IAMs_20	IAMs_20	11 12 27.4	
	comp=Z,1μm,20.0s						
FDF	Fort de France	110.38	37	IAMs_20	IAMs_20	11 08 42.4	
	comp=Z,1μm,21.0s						
BIM	Bigot	110.61	37	IAMs_20	IAMs_20	11 08 36.5	
	comp=Z,1μm,22.0s						
MPOM	Morne Pois Mar	110.76	37	IAMs_20	IAMs_20	11 08 52.4	
	comp=Z,1μm,22.0s						
SDV	Santo Domingo	111.18	48	IAMs_20	IAMs_20	11 09 53.2	
	comp=Z,1μm,22.0s						
GRGR	Grenville	112.51	38	IAMs_20	IAMs_20	11 10 31.0	
	comp=Z,1μm,20.0s						
TORD	Torodi Ar. Bea	114.80	330	PKP	PKiKP	10 22 39.4	-0.8
	comp=Z,2.4nm,0.5s,baz=10,slow=1.8,SNR=24						
TORD				PKKPbc	PKKPbc	10 33 16.3	+1.0
	comp=Z,0.8nm,0.8s,baz=229,slow=1.8,SNR=3.8						
KOWA	Kowa	115.25	337	IAMs_20	IAMs_20	11 22 31.2	
	comp=Z,1μm,20.0s						
BOAV	Boa Vista	121.69	42	*e*P	PKiKP	10 22 54.8	+1.2
DBIC	Dimbokro	122.94	335	PKP	PKPdf	10 22 54.1	-1.6
	comp=Z,8.5nm,0.7s,baz=4.1,slow=2.0,SNR=9.8						
CZSB	Cruzeiro do Su	123.81	61	*e*P	PKiKP	10 22 58.8	+1.1
VNDA	Vanda	124.88	178	PKP	PKPdf	10 22 56.8	-0.7
	comp=Z,1.5nm,0.9s,baz=334,slow=3.4,SNR=5.9						
VNDA	Vanda	124.88	178	PKPdf	PKiKP	10 22 57.5	-0.3
VNDA	Vanda	124.88	178	PKIKP	PKiKP	10 22 57.5	-0.3
SBA	Scott Base	125.37	177	PKPdf	PKPdf	10 22 57.8	-0.6
SBA	Scott Base	125.37	177	PKIKP	PKPdf	10 22 57.8	-0.6
MACA	Manacapuru-AM	126.49	45	*e*P	PKiKP	10 23 03.5	+0.5
MCPB	Macapa, AP	127.72	34	*e*P	PKiKP	10 23 05.9	+0.4
ETMB	Extrema	129.23	56	*e*P	PKiKP	10 23 08.4	0.0
ITTB	Itaituba	129.84	40	*e*P	PKiKP	10 23 09.6	-0.1
SAML	Samuel	130.16	52	IAMs_20	IAMs_20	11 27 23.2	
	comp=Z,641nm,21.0s						
LPAZ	La Paz	133.27	63	PKP	PKiKP	10 23 16.7	-0.5
	comp=Z,1.4nm,0.6s,baz=355,slow=6.5,SNR=9.7						
LPAZ	La Paz	133.27	63	PKPdf	PKPdf	10 23 15.5	-0.5
LPAZ	La Paz	133.27	63	PKIKP	PKPdf	10 23 15.5	-0.5
LPAZ	La Paz	133.27	63	*e*P	PKPdf	10 23 16.0	-0.1
LBTB	Lobatse	133.90	281	PKPdf	PKPdf	10 23 14.0	-2.4
LBTB	Lobatse	133.90	281	PKIKP	PKPdf	10 23 14.0	-2.4
PRPB	Parauapebas	133.91	34	*e*P	PKiKP	10 23 17.7	-0.2
PB16	IPOC Station P	134.00	66	PKPdf	PKPdf	10 23 16.7	-0.6
NBPS	Pedro II - PI	134.93	22	*e*P	PKiKP	10 23 19.4	-0.7
VILB	Vilhena	135.10	51	*e*P	PKiKP	10 23 19.4	-0.9
PDRB	Porto dos Gac	135.73	46	*e*P	PKiKP	10 23 20.7	-0.9
NBPB	Pedra_Branca-C	136.49	20	*e*P	PKiKP	10 23 21.9	-1.3
BOSA	Boshof	136.50	277	PKP	PKPdf	10 23 20.7	-0.5
	comp=Z,2.1nm,0.6s,baz=40,slow=4.6,SNR=4.5						
BOSA	Boshof	136.50	277		PKPdf	10 23 20.2	-1.0
SMTB	Santa Maria do	137.21	33	*e*P	PKiKP	10 23 24.0	-0.7
QSPA	South Pole Qui	137.29	180	IAMs_20	IAMs_20	11 22 42.2	
	comp=Z,1μm,19.0s						
RCBR	Riachuelo	137.52	15	*e*P	PKiKP	10 23 24.6	-0.8
H03N2	Juan Fernandez	137.97	90	T	T	12 56 57.8	
	baz=309,slow=77,SNR=156						
H03N1	Juan Fernandez	137.98	90	T	T	12 56 59.2	
	baz=309,slow=77,SNR=309						
H03N3	Juan Fernandez	137.98	90	T	T	12 56 59.3	
	baz=309,slow=77,SNR=128						
SNDB	Serra Nova Dou	138.56	40	*e*P	PKiKP	10 23 25.9	-1.4
SALV	Santo Antonio	139.91	48	*e*P	PKPdf	10 23 28.0	+0.4
NBPN	Ponto Novo - B	141.43	23	*e*P	PKPdf	10 23 31.1	+0.6
NBLA	Lagarto - SE	142.17	20	*e*P	PKPdf	10 23 32.6	+0.8
BDFB	Brasilia	143.23	38	PKhKP	PKPpre	10 23 30.1	
	comp=Z,8.9nm,0.7s,baz=312,slow=4.1,SNR=14						
BDFB	Brasilia	143.23	38	PKPdf	PKPbc	10 23 30.5	-0.1
BDFB	Brasilia	143.23	38	PKIKP	PKPbc	10 23 30.5	-0.2
BDFB	Brasilia	143.23	38	*e*P	PKPdf	10 23 32.1	-1.6
ZON	Zonda	143.74	80	PKPdf	PKPbc	10 23 32.1	+0.4
ZON	Zonda	143.74	80	PKIKP	PKPbc	10 23 32.1	+0.4
JANB	Januaria	144.12	32	*e*P	PKPdf	10 23 35.5	+0.3
ML02	Panimavida	144.38	88	PKPdf	PKPab	10 23 32.8	-0.4
IPMB	Ipameri, GO	145.23	40	*e*P	PKPdf	10 23 37.2	+0.1
ITRB	Iturama	145.76	44	*e*P	PKPab	10 23 38.4	-0.4
CMC01	Camacan, BA	145.93	24	*e*P	PKPab	10 23 38.9	-0.4
LL04	Puerto Octay	146.32	96	PKPdf	PKPbc	10 23 38.6	-0.8
PCMB	Pacaembu	146.94	47	*e*P	PKPdf	10 23 40.3	+0.4
GUA01	Guaratinga, BA	147.01	25	*e*P	PKPbc	10 23 40.6	-1.5
TRCB	Terra Rica	147.23	50	*e*P	PKPdf	10 23 40.9	+0.5
CPUP	Villa Florida	147.39	61	PKPbc	PKPbc	10 23 42.4	-0.4
	comp=Z,9.1nm,0.8s,baz=329,slow=6.3,SNR=10						
CPUP	Villa Florida	147.39	61	*e*P	PKPdf	10 23 41.0	+0.6
LL02	Futaleuf	147.68	100		PKPbc	10 23 43.2	0.0
NAN01	Guarapari, ES	148.10	27	*e*P	PKPdf	10 23 42.5	+0.7
SJMB	Sao Joao De Ma	148.58	29	*e*P	PKPdf	10 23 43.4	+0.8
PTGB	Pitanga	149.09	52	*e*P	PKPdf	10 23 44.0	+0.6
FRTB	Fartura	149.24	47	*e*P	PKPdf	10 23 44.3	+0.7
BELA	Belgrano 2	149.37	176	PKPbc	PKPbc	10 23 45.3	-1.3
RIB01	Linhares ES	149.40	28	*e*P	PKPdf	10 23 44.4	+0.5
RCLB	Rio Claro- Sao	149.42	42	*e*P	PKPdf	10 23 44.7	+0.8
MG05	Puerto Natales	149.83	115		PKiKP	10 23 49.0	-0.3
ITQB	Itaqui	150.25	64		PKPbc	10 23 49.8	-0.3
ITQB	Itaqui	150.25	64	*e*P	PKPdf	10 23 45.6	+0.7
ITAB	Concordia	151.06	55		PKiKP	10 23 52.2	-0.5
ITAB				PKPab	pPKPbc	10 23 59.4	+0.5
PARB	Paraibuna	151.08	40	*e*P	PKPdf	10 23 47.2	+0.7
PET01	Itanhaem-SP	151.15	44	*e*P	PKPdf	10 23 47.2	+0.8
TIJ01	Guaruva-PR	151.18	48	*e*P	PKPdf	10 23 47.4	+0.7
DUB01	Friburgo-RJ	151.27	34	*e*P	PKPdf	10 23 47.7	+0.9
CAM01	Campos-RJ	151.30	32	*e*P	PKPdf	10 23 47.2	+0.5
MAN01	Angra dos Reis	151.36	37	*e*P	PKPdf	10 23 47.1	+0.2
TROLL	Troll, Antarti	152.20	198	PKPab	PKPab	10 24 04.6	+1.2
TROLL	Troll, Antarti	152.20	198	PKPdf	PKPdf	10 23 47.3	+0.5
CPSB	Cacapava Do Su	152.69	61	*e*P	PKPdf	10 23 49.3	+0.7
PMSA	Palmer Station	153.18	144	*e*P	PKPdf	10 23 48.7	+0.5
CNLB	Canela	153.38	56	*e*P	PKPdf	10 23 50.1	+0.3
SNAA	Sanae	153.54	196	PKPdf	PKPdf	10 23 45.9	-2.8
SNAA	Sanae	153.54	196	PP	PP	10 27 44.0	+0.5
SNAA	Sanae	153.54	196	PKPdf	PKPdf	10 23 48.9	+0.2
SNAA				PKPab	PKPab	10 24 08.6	-0.4
SNAA	Sanae	153.54	196	PKP2	PKPab	10 24 08.6	-0.4
SNAA						11 23 48.9	
PLTB	Pedras Altas	153.56	63	*e*P	PKPdf	10 23 50.4	+0.5
VNA2	Neumayer--Watz	154.97	194	PKPab	PKPab	10 24 14.7	-0.3
VNA2	Neumayer--Watz	154.97	194	PKPdf	PKPdf	10 23 49.7	-0.9
	baz=144,slow=0.7						
VNA3	Neumayer Olymp	155.04	192	PKPab	PKPab	10 24 15.0	-0.3
VNA3	Neumayer Olymp	155.04	192	PKPdf	PKPdf	10 23 49.4	-1.3
VNA3	Neumayer Olymp	155.04	192	PP	PP	10 27 51.8	0.0
VNA1	Neumayer--Stat	155.36	194	PKPab	PKPab	10 24 16.5	-0.2
VNA1	Neumayer--Stat	155.36	194	PKPdf	PKPdf	10 23 50.3	-0.8

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*DJA **31** 10:06:53.8±1.2, 2°N±6°×12°8E±1°2, h138^{km}±7^{km}, M3.7/7, mb4.0/1, mB4.0/1, MLv3.5/7, Mw(mB)3.0/1*

*IDC **31** 10:06:54.7±4.8, 2°05N×128°03E, h160^{km}±54^{km}, mb3.6/5, mbtmp4.0/6, MS4.1/1, Error ellipse: s-maj=92.3km s-min=17.2km az=71.0*

*NEIC **31** 10:06:54.1±0.6, 2°2N±0°1×128°3E±0°1, h150^{km}±10^{km}, mb4.2/13, Error ellipse: s-maj=22.3km s-min=14.8km az=62.0*

ISC 31 10:06:53.6±0.9, **2°2N**±0°1×**128°23E**±0°09, **h150**^{km}, **n25**, σ**1^{s}26**/24, **mb4.2**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.69	211	Pn	Pn	10 07 26.1	+0.9
LBMI	Labuha	2.94	194	P	Pn	10 07 40.1	-0.2
SIJI	Sorong	4.32	135	P	Pn	10 07 58.6	+0.5
	7.1nm,0.3s,baz=311,slow=15,SNR=8.3						
SIJI				S	Sn	10 08 51.6	+3.2
	4.4nm,0.7s,baz=196,slow=22,SNR=1.1						
SANI	Sanana	4.81	208	P	Pn	10 08 02.9	-1.6
GTOI	Gorontalo	5.46	253	P	Pn	10 08 14.9	+1.8
FAKI	Fak Fak	6.50	142	Pn	Pn	10 08 28.4	+1.2
TOLI2	Tolitoli	7.53	262	Pn	Pn	10 08 41.2	+0.4
BATI	Baumata	13.16	200	LR	LR	10 15 05.5	
	comp=Z,757nm,19.7s,baz=239,slow=38						
MTN	Manton Dam	15.25	169	Pn	Pn	10 10 20.6	-0.7
MTN				IAmb	IAmb	10 10 20.6	
	comp=Z,16nm,1.3s						
KNRA	Kununurra	17.80	178	P	P	10 10 51.0	+0.2
KNRA				IAmb	IAmb	10 10 51.7	
	comp=Z,9.4nm,0.8s						
WB0	Warramunga Arr	22.68	165	P	P	10 11 41.6	-1.0
WB0				IAmb	IAmb	10 11 41.7	
	comp=Z,7.8nm,0.6s						
WRAB	Tennant Creek	22.83	165	P	P	10 11 43.1	-0.9
WRA	Warramunga Arr	22.84	165	P	P	10 11 43.0	-1.1
	comp=Z,3.9nm,0.4s,baz=345,slow=10,SNR=136						
	comp=Z,3.9nm,0.4s						
WRA	Warramunga Arr	22.84	165	P	P	10 11 41.9	-2.1
WB2	Warramunga Arr	22.84	165	P	P	10 11 43.2	-0.8
WR0	Warramunga Arr	22.90	165	P	P	10 11 43.9	-0.8
WR0				IAmb	IAmb	10 11 44.0	
	comp=Z,5.3nm,0.5s						
AS31	Alice Springs	26.32	168	P	P	10 12 14.9	-0.8
ASAR	Alice Springs	26.32	168	P	P	10 12 14.5	-1.2
	comp=Z,0.4nm,0.4s,baz=351,slow=7.7,SNR=21						
	comp=Z,0.4nm,0.4s						
BBOO	Buckleboo	35.63	169	P	P	10 13 36.4	-0.8
STKA	Stephens Creek	36.22	161	P	P	10 13 41.4	-0.8
	comp=Z,1.7nm,0.4s,baz=323,slow=8.7,SNR=13						
	comp=Z,1.7nm,0.4s						
SONM	Songino Array	49.20	341	P	P	10 15 27.2	+0.6
	comp=Z,0.7nm,0.8s,baz=147,slow=8.6,SNR=1.1						
	comp=Z,0.7nm,0.8s						
SONM	Songino Array	49.20	341	IAmb	IAmb	10 15 30.7	
	comp=Z,5.3nm,1.4s						
MK31	Makanchi Array	59.64	325	P	P	10 16 42.9	+0.9
MK31				IAmb	IAmb	10 17 12.0	
	comp=Z,5.7nm,1.4s						
MKAR	Makanchi Array	59.64	325	P	P	10 16 42.4	+0.4
	comp=Z,1.4nm,0.5s,baz=114,slow=8.5,SNR=6.3						
	comp=Z,1.4nm,0.5s						
KURK	Kurchatov	63.80	327	P	P	10 17 09.0	-0.8
KURK				IAmb	IAmb	10 17 11.7	
	comp=Z,4.9nm,1.1s						

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*JMA **31** 10:14:09.7±0.1, 27°0N±0°4×130°3E±0°4, h60^{km}, MV3.5/26, NEAR MINAMI-DAITOJIMA IS*

*IDC **31** 10:14:12.0±1.5, 26°39N×129°77E, h0^{km}, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=38.3km s-min=21.8km az=37.0*

ISC 31 10:14:06.8±1.4, **26°98N**±0°03×**130°29E**±0°04, **h6**^{km}±11^{km}, **n24**, σ**1^{s}48**/40, **mb3.4**/3, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	1.36	348	P	Pg	10 14 33.5	+0.6
JKDJ	Kitadaitoujima	1.37	138	*i* P	Pg	10 14 33.0	-0.1
JKDJ				S	Sg	10 14 50.5	-0.3
JMZ	Minamidaito 2	1.43	144	P	Pn	10 14 33.5	+0.3
JMZ				S	Sg	10 14 50.9	-1.9
JTK	Tokunoshima	1.43	304	*i* P	Pn	10 14 34.0	+0.7
JTK				*e*S	Sg	10 14 52.0	-0.9
JAM	Amami Oshima	1.55	337	P	Pn	10 14 35.6	+0.7
JAM				S	Sn	10 14 54.2	-1.1
JOKE	Okinoerabujima	1.57	284	*i* P	Pn	10 14 36.0	+0.7
JOKE				S	Sn	10 14 54.8	-1.1
JAMN	Amaminishikomi	1.60	322	*i* P	Pn	10 14 36.1	+0.5
JAMN				*e*S	Sn	10 14 54.9	-1.6
JYRO	Yoronjima	1.64	272	*i* P	Pn	10 14 36.8	+0.7
JYRO				*e*S	Sn	10 14 56.2	-1.2
JOW	Kunigami	1.80	266	Pn	Pn	10 14 39.2	+0.8
	38nm,0.3s,baz=123,slow=30,SNR=274						
JOW				Sn	Sn	10 14 58.0	-3.5
	51nm,0.3s,baz=162,slow=20,SNR=20						
JOW	Kunigami	1.80	266	*i* P	Pn	10 14 39.2	+0.8
JOW				*e*S	Sn	10 15 00.3	-1.3
JIH	Iheya	2.07	272	P	Pn	10 14 43.1	+1.1
JIH				*e*S	Sn	10 15 07.6	-0.5
JNTH	Nagotoyohara	2.08	258	P	Pn	10 14 42.6	+0.4
JNTH				S	Sn	10 15 06.2	-2.1
JTAJ	Takarajima	2.37	336	P	Pn	10 14 46.5	+0.4
JTAJ				S	Sn	10 15 13.0	-2.5
JJT3	Tamagusuku3	2.39	250	P	Pn	10 14 47.4	+0.9
JJT3				*e*S	Sn	10 15 15.1	-1.0
JAGN	Aguni-jima	2.75	263	P	Pn	10 14 52.0	+0.6
JAGN				S	Sn	10 15 23.7	-1.2
JNN	Nakanoshima	2.87	353	*e*P	Pn	10 14 53.9	+0.8
JNN				S	Sn	10 15 25.8	-2.2
JKE	Kume jima 2	3.20	259	P	Pn	10 14 58.6	+1.0
JKE				*e*S	Sn	10 15 33.5	-2.6
JYAK	Yakushimahirau	3.25	3	S	Sn	10 15 35.5	-1.9
JMTN	Minamitane	3.45	9	P	Pn	10 15 01.9	+0.8
JMTN				*e*S	Sn	10 15 41.2	-0.9
JKC	Kuchinoerabu	3.47	359	*e*S	Sn	10 15 40.1	-2.6
JTN	Tanegashima 3	3.71	9	*e*S	Sn	10 15 47.8	-0.9
WRA	Warramunga Arr	46.81	175	P	P	10 22 38.2	+0.7
	0.4nm,0.8s,baz=357,slow=8.4,SNR=2.0						
	0.4nm,0.8s						
ASAR	Alice Springs	50.47	176	P	P	10 23 08.2	+2.6
	0.4nm,0.9s,baz=12,slow=9.6,SNR=5.7						
	0.4nm,0.9s						
YKA	Yellowknife Ar	77.06	26	P	P	10 26 10.9	+10
	0.2nm,0.6s,baz=302,slow=5.3,SNR=1.9						
	0.2nm,0.6s						

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*NEIC **31** 10:22:25.8±1.9, 21°3S±0°1×178°6W±0°1, h551^{km}±6^{km}, mb4.4/97, Error ellipse: s-maj=18.3km s-min=16.4km az=96.0*

*IDC **31** 10:22:27.0±1.3, 21°21S×178°66W, h569^{km}±13^{km}, mb3.7/18, mbtmp4.6/20, Error ellipse: s-maj=15.9km s-min=11.7km az=139.0*

ISC 31 10:22:24.8±0.4, **21°36S**±0°08×**178°61W**±0°08, **h550**^{km}, **n187**, σ**1^{s}21**/210, **mb4.4**/64, **10C-1D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.79	318	P	P	10 23 56.5	+3.3
	51nm,0.5s,baz=94,slow=23,SNR=77						
MSVF	Nonsavu	4.79	318		P	10 23 56.1	+3.0
MARNC	Mare, Loyalty	12.45	267	P	P	10 25 08.0	-0.1
DZM	Mont Dzumac	13.91	264	P	P	10 25 24.7	+1.4
	2.0nm,0.3s,baz=131,slow=12,SNR=13						
DZM	Mont Dzumac	13.91	264	P	P	10 25 24.0	+0.7
URZ	Urewera	17.24	191	P	P	10 25 55.1	-0.4
	14nm,0.6s,baz=121,slow=24,SNR=12						
URZ				S	S	10 28 41.2	-6.1
	12nm,0.8s,baz=121,slow=23,SNR=2.2						
URZ	Urewera	17.24	191	P	P	10 25 56.0	+0.4
BKZ	Black Stump Fm	18.24	192	P	P	10 26 04.9	+0.1
QRZ	Quartz Range	20.81	199	P	P	10 26 30.0	+2.0
THZ	Tophouse	21.56	197	P	P	10 26 36.1	+1.2
THZ				IAmb	IAmb	10 26 51.4	
	comp=Z,6.8nm,0.6s						
RPZ	Rata Peaks	23.89	199	P	P	10 26 58.1	+2.5
	comp=Z,12nm,0.6s,baz=356,slow=3.9,SNR=5.6						
	comp=Z,12nm,0.6s						
EIDS	Eidsvold	28.08	256	P	P	10 27 33.6	+0.9
EIDS				IAmb	IAmb	10 27 34.5	
	comp=Z,6.1nm,0.6s						
ARMA	Armidale	28.19	245	P	P	10 27 35.9	+2.1
ARMA				IAmb	IAmb	10 27 36.7	
	comp=Z,11nm,1.1s						
CTA	Charters Tower	32.85	266	P	P	10 28 14.7	+0.9
	comp=Z,7.0nm,0.3s,baz=94,slow=10,SNR=13						
	comp=Z,7.0nm,0.3s						
CTAO	Charters Tower	32.85	266	P	P	10 28 15.0	+1.1
TOO	Toolangi	34.94	234	P	P	10 28 32.4	+1.3
TOO				IAmb	IAmb	10 28 38.0	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	36.91	245	P	P	10 28 48.7	+1.2
	comp=Z,4.9nm,0.9s,baz=94,slow=12,SNR=8.8						
STKA				ScP	ScP	10 33 47.9	-1.1
	comp=Z,1.8nm,0.8s,baz=90,slow=1.0,SNR=3.7						
	comp=Z,4.9nm,0.9s						
STKA	Stephens Creek	36.91	245	P	P	10 28 48.2	+0.8
COEN	Coen	37.08	275	P	P	10 28 49.9	+0.8
BBOO	Buckleboo	41.66	244	P	P	10 29 26.3	+0.6
BBOO				IAmb	IAmb	10 29 31.3	
	comp=Z,24nm,1.4s						
WR0	Warramunga Arr	43.74	263	P	P	10 29 41.6	-0.5
WR0				IAmb	IAmb	10 29 45.0	
	comp=Z,5.7nm,0.7s						
AS31	Alice Springs	43.77	258	P	P	10 29 42.8	+0.4
ASAR	Alice Springs	43.78	258	P	P	10 29 42.6	+0.2
	comp=Z,13nm,0.8s,baz=98,slow=7.7,SNR=180						
ASAR				PcP	PcP	10 31 16.6	-0.4
	comp=Z,2.8nm,0.7s,baz=99,slow=4.1,SNR=11						
ASAR				ScP	ScP	10 34 16.0	-0.3
	comp=Z,1.0nm,0.6s,baz=107,slow=4.7,SNR=7.3						
ASAR				S	S	10 35 30.1	-3.4
	comp=Z,2.9nm,1.1s,baz=93,slow=15,SNR=12						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	43.78	258	P	P	10 29 42.8	+0.4
WB0	Warramunga Arr	43.91	263	P	P	10 29 43.2	-0.2
WB2	Warramunga Arr	43.92	263	P	P	10 29 43.3	-0.2
WB2				IAmb	IAmb	10 29 44.1	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	43.92	263	P	P	10 29 43.5	-0.1
WRAB				IAmb	IAmb	10 29 44.0	
	comp=Z,13nm,0.8s						
WRA	Warramunga Arr	43.93	263	P	P	10 29 43.2	-0.4
	comp=Z,9.4nm,0.8s,baz=96,slow=5.5,SNR=55						
WRA				ScP	ScP	10 34 16.9	-0.2
	comp=Z,1.0nm,0.3s,baz=91,slow=4.0,SNR=34						
WRA				S	S	10 35 31.1	-4.5
	comp=Z,1.4nm,0.9s,baz=100,slow=18,SNR=5.3						
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	43.93	263	P	P	10 29 43.4	-0.2
FORT	Forrest	48.44	247	P	P	10 30 18.2	+0.6
MTN	Manton Dam	48.61	272	P	P	10 30 19.2	+0.1
KNRA	Kununurra	50.04	267	P	P	10 30 29.9	+0.3
KNRA				IAmb	IAmb	10 30 30.1	
	comp=Z,12nm,0.8s						
SIJI	Sorong	52.92	286	P	P	10 30 50.5	0.0
	comp=Z,42nm,0.8s,baz=71,slow=4.6,SNR=13						
	comp=Z,42nm,0.8s						
SOEI	Soe	55.97	273	P	P	10 31 13.3	+1.4
PSA00	Pilbara Seismi	56.93	258	P	P	10 31 18.2	-0.1
SBA	Scott Base	56.98	184	P	P	10 31 20.3	+2.6
VNDA	Vanda	57.01	185	P	P	10 31 20.3	+2.5
	comp=Z,1.7nm,0.7s,baz=341,slow=8.7,SNR=8.8						
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	57.01	185	P	P	10 31 20.4	+2.5
MBWA	Marble Bar	57.12	258	P	P	10 31 19.5	-0.2
MBWA				IAmb	IAmb	10 31 20.2	
	comp=Z,18nm,0.7s						
TOLI2	Tolitoli	63.23	283	P	P	10 32 00.0	-0.2
TOLI2				IAmb	IAmb	10 32 01.4	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	68.71	180	P	P	10 32 35.2	+1.7
JOW	Kunigami	70.29	311	P	P	10 32 43.5	+0.1
	comp=Z,8.9nm,0.8s,baz=129,slow=9.7,SNR=5.6						
	comp=Z,8.9nm,0.8s						
JOW	Kunigami	70.29	311	IAmb	IAmb	10 32 44.8	
	comp=Z,14nm,1.0s						
MJAR	Matsushiro Arr	70.57	324	P	P	10 32 44.2	-0.7
	comp=Z,4.3nm,0.8s,baz=172,slow=5.1,SNR=6.6						
	comp=Z,4.3nm,0.8s						
MJAR	Matsushiro Arr	70.57	324	IAmb	IAmb	10 32 44.9	
	comp=Z,4.3nm,1.1s						
JSU	Suzuyama	71.74	316	P	P	10 32 51.4	-0.5
JSU				IAmb	IAmb	10 32 53.1	
	comp=Z,18nm,1.1s						
JHS	Saijyo	72.39	320	P	P	10 32 55.9	+0.4
KSM	Kuching	72.97	278	P	P	10 32 59.9	+0.5
KSM				IAmb	IAmb	10 33 00.5	
	comp=Z,18nm,0.9s						
YULB	Yu-li	73.50	304	P	P	10 33 00.5	-1.7
TPUB	Ta-pu	73.97	303	P	P	10 33 03.7	-1.1
SSLB	Suanglung	73.98	304	P	P	10 33 04.0	-0.9
SSLB				IAmb	IAmb	10 33 05.0	
	comp=Z,16nm,1.0s						
KSRS	Korea Array	77.16	319	P	P	10 33 22.9	+0.7
	comp=Z,1.2nm,0.7s,baz=129,slow=6.8,SNR=7.5						
	comp=Z,1.2nm,0.7s						
KSAR	Wonju Array Be	77.17	319	P	P	10 33 21.8	-0.5
BELA	Belgrano 2	78.78	173	P	P	10 33 30.6	+0.3
USRK	Ussuriysk Ar.	79.36	326	P	P	10 33 34.4	+0.6
	comp=Z,10.0nm,0.9s,baz=122,slow=2.5,SNR=14						
	comp=Z,10.0nm,0.9s						
NJ2	Nanjing	80.00	310	*e*P	P	10 33 33.5	-3.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YBH	Yreka Blue Hor	81.31	39	P	P	10 33 44.9	+0.7
	comp=Z,4.0nm,0.9s,baz=259,slow=5.2,SNR=5.3						
	comp=Z,4.0nm,0.9s						
YBH	Yreka Blue Hor	81.31	39	IAmb	IAmb	10 33 46.3	
	comp=Z,13nm,1.3s						
QSM	Queen of Sheba	81.59	46	P	P	10 33 46.2	+0.6
LCH	Last Change Ra	81.78	45	P	P	10 33 46.5	-0.2
NVAR	Mina Array Bea	82.04	44	P	P	10 33 48.4	+0.3
	comp=Z,1.1nm,0.5s,baz=224,slow=7.9,SNR=19						
	comp=Z,1.1nm,0.5s						
TPH	Tonopah	82.53	44	P	P	10 33 51.3	+0.7
CN2	Changchun	82.64	323	*e*P	P	10 33 50.8	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
IPM	Ipoh	82.68	278	P	P	10 33 51.9	+0.2
K05A	Summer Lake	82.99	39	P	P	10 33 54.1	+1.3
K05A				IAmb	IAmb	10 33 54.9	
	comp=Z,11nm,1.0s						
O18K	Koktuh Hills	83.16	12	P	P	10 33 52.5	-0.5
O18K				IAmb	IAmb	10 33 53.6	
	comp=Z,13nm,0.8s						
Y14A	Wickenburg	83.17	50	P	P	10 33 54.1	+0.4
PRN	Pahroc Range	83.60	46	P	P	10 33 56.2	+0.3
PINE	Pine Mountain	83.61	38	P	P	10 33 56.2	+0.4
PINE				IAmb	IAmb	10 33 57.9	
	comp=Z,16nm,1.1s						
TUC	Tucson	83.95	52	P	P	10 33 58.8	+1.2
WVOR	Wild Horse Val	84.15	40	P	P	10 33 58.9	+0.4
X16A	Lo Mia Camp, P	84.53	50	P	P	10 34 00.8	+0.2
I07A	Izee	84.61	38	P	P	10 34 01.1	+0.5
I07A				IAmb	IAmb	10 34 02.5	
	comp=Z,7.4nm,1.1s						
319A	Douglas	84.61	53	P	P	10 34 01.7	+0.7
319A				IAmb	IAmb	10 34 03.5	
	comp=Z,6.4nm,0.9s						
J08A	Circle Bar Ran	84.79	39	P	P	10 34 01.7	+0.2
U15A	North Rim	84.96	48	P	P	10 34 03.3	+0.5
D05A	Enumclaw	85.12	35	P	P	10 34 03.8	+0.8
D05A				IAmb	IAmb	10 34 05.0	
	comp=Z,15nm,1.2s						
CBB	Campbell River	85.24	31	P	P	10 34 04.3	+0.9

CBB				IAmb	IAmb	10 34 05.1	
	comp=Z,8.9nm,1.2s						
PKCU	Pink Cliffs	85.47	47	P	P	10 34 05.8	+0.5
PKCU				IAmb	IAmb	10 34 07.6	
	comp=Z,17nm,1.3s						
G08A	Pilot Rock	85.64	38	P	P	10 34 05.3	-0.3
G08A				IAmb	IAmb	10 34 07.2	
	comp=Z,5.8nm,0.9s						
MTPU	Mount Pierson	85.86	47	P	P	10 34 08.6	+1.5
M22K	Willow	85.92	13	P	P	10 34 06.1	-0.2
HAWA	Hanford	85.97	37	P	P	10 34 07.0	0.0
HAWA				IAmb	IAmb	10 34 08.7	
	comp=Z,10nm,1.1s						
BMO	Blue Mountains	86.34	39	P	P	10 34 09.2	+0.3
F10A	Beach Ranch, E	87.03	38	P	P	10 34 11.9	-0.2
PLID	Pearl Lake	87.24	39	P	P	10 34 13.8	+0.5
PLID				IAmb	IAmb	10 34 14.5	
	comp=Z,11nm,1.4s						
B08A	Colville Reser	87.26	35	P	P	10 34 12.9	-0.1
B08A				IAmb	IAmb	10 34 13.9	
	comp=Z,5.5nm,0.9s						
HLID	Hailey	87.34	41	P	P	10 34 14.0	+0.2
J20K	Nowinta River	87.36	10	P	P	10 34 12.6	-0.5
J20K				IAmb	IAmb	10 34 13.5	
	comp=Z,6.8nm,1.1s						
KTH	Kantishna Hill	87.38	12	P	P	10 34 11.9	-1.4
KTH				IAmb	IAmb	10 34 12.5	
	comp=Z,7.5nm,0.9s						
TRF	Thorofare Moun	87.41	12	P	P	10 34 12.4	-1.2
SRU	San Rafael Swe	87.53	46	P	P	10 34 14.5	-0.3
SRU				IAmb	IAmb	10 34 16.0	
	comp=Z,6.3nm,1.2s						
RND	Reindeer	87.66	13	P	P	10 34 14.0	-0.7
MNTX	Cornudas Mount	87.71	55	P	P	10 34 14.1	-1.5
TX31	Lajitas Ar. Si	87.99	58	P	P	10 34 18.2	+1.2
TX32	Lajitas Array	87.99	58	P	P	10 34 18.0	+0.9
TX32				IAmb	IAmb	10 34 19.2	
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	87.99	58	P	P	10 34 17.7	+0.7
	comp=Z,2.5nm,0.9s,baz=217,slow=7.1,SNR=22						
	comp=Z,2.5nm,0.9s						
M27K	Edge Creek, AK	88.39	16	P	P	10 34 18.1	-0.1
I21K	Tanana	88.66	11	P	P	10 34 18.7	-0.5
MLY	Manley	88.75	11	P	P	10 34 18.1	-1.5
MLY				IAmb	IAmb	10 34 19.0	
	comp=Z,3.3nm,0.6s						
DOT	Dot Lake	88.94	15	P	P	10 34 19.7	-0.8
DOT				IAmb	IAmb	10 34 20.9	
	comp=Z,7.4nm,1.1s						
HDA	Harding Lake	88.95	13	P	P	10 34 19.7	-0.9
HDA				IAmb	IAmb	10 34 20.4	
	comp=Z,7.7nm,1.2s						
H21K	Melozitna Rive	88.95	10	P	P	10 34 20.2	-0.3
H21K				IAmb	IAmb	10 34 22.5	
	comp=Z,4.5nm,1.1s						
MCMT	McKenzie Canyo	88.97	40	P	P	10 34 21.8	+0.3
CCB	Clear Creek Bu	88.98	13	P	P	10 34 19.5	-1.2
AHID	Auburn Hatcher	88.99	43	P	P	10 34 21.0	-0.5
AHID				IAmb	IAmb	10 34 23.6	
	comp=Z,5.2nm,1.1s						
IMAR	Indian Mountai	89.10	10	P	P	10 34 20.2	-1.0
MDM	Murphy Dome	89.17	12	P	P	10 34 20.3	-1.3
SCRK	Sand Creek	89.23	15	P	P	10 34 21.7	-0.3
SCRK				IAmb	IAmb	10 34 22.5	
	comp=Z,3.4nm,1.0s						
IL31		89.28	13	P	P	10 34 20.9	-1.1
IL31				IAmb	IAmb	10 34 21.8	
	comp=Z,4.8nm,1.0s						
ILAR	Eielson Array	89.28	13	P	P	10 34 20.6	-1.5
	comp=Z,1.4nm,0.5s,baz=216,slow=5.1,SNR=22						
	comp=Z,1.4nm,0.5s						
ILAR	Eielson Array	89.28	13	P	P	10 34 20.8	-1.2
REDW	Red Top Meadow	89.45	42	P	P	10 34 23.1	-0.5
REDW				IAmb	IAmb	10 34 25.1	
	comp=Z,6.6nm,1.1s						
J25K	Salcha River,	89.47	14	P	P	10 34 22.4	-0.6
J25K				IAmb	IAmb	10 34 23.5	
	comp=Z,5.3nm,1.2s						
SNOW	Snow King Moun	89.56	42	P	P	10 34 24.2	0.0
SNOW				IAmb	IAmb	10 34 25.7	
	comp=Z,6.1nm,1.1s						
LOHW	Long Hollow	89.73	42	P	P	10 34 25.3	+0.3
LOHW				IAmb	IAmb	10 34 26.2	
	comp=Z,4.7nm,1.2s						
J26L	Joseph Creek	89.78	14	P	P	10 34 24.6	+0.1
CMAR	Chiang Mai Arr	89.87	290	P	P	10 34 26.7	+0.8
	comp=Z,5.9nm,0.9s,baz=131,slow=2.9,SNR=31						
	comp=Z,5.9nm,0.9s						
CMAR	Chiang Mai Arr	89.87	290	P	P	10 34 25.8	-0.1
M30M	Minto, Yukon	89.96	18	P	P	10 34 25.2	-0.1
M30M				IAmb	IAmb	10 34 26.6	
	comp=Z,9.3nm,1.2s						
BW06	Boulder Array	89.97	43	P	P	10 34 25.0	-1.1
BW06				IAmb	IAmb	10 34 26.9	
	comp=Z,6.0nm,1.2s						
PD31	Pinedale Array	89.97	43	P	P	10 34 25.9	-0.3
PD31				IAmb	IAmb	10 34 26.9	
	comp=Z,5.5nm,1.2s						
PDAR	Pinedale Array	89.97	43	P	P	10 34 25.9	-0.3
	comp=Z,1.9nm,0.9s,baz=204,slow=3.3,SNR=14						
	comp=Z,1.9nm,0.9s						
PDAR	Pinedale Array	89.97	43	P	P	10 34 25.3	-0.8
YHL	Hebgen Lake	90.00	41	P	P	10 34 26.1	-0.2
YHL				IAmb	IAmb	10 34 28.4	
	comp=Z,6.3nm,1.3s						
SDCO	Great Sand Dun	90.34	49	P	P	10 34 28.1	+0.1
EGAK	Eagle	90.58	15	P	P	10 34 27.8	-0.3
SONM	Songino Array	96.03	319	P	P	10 34 53.5	0.0
	comp=Z,0.4nm,0.3s,baz=77,slow=3.1,SNR=2.2						
	comp=Z,0.4nm,0.3s						
MKAR	Makanchi Array	111.37	313	PKiKP	PKiKP	10 39 54.8	-1.8
	comp=Z,0.6nm,0.8s,baz=75,slow=2.2,SNR=5.4						
ARCES	ARCESS Array B	129.66	349	PKP	PKPdf	10 40 30.0	-0.9
	comp=Z,9.9nm,0.3s,baz=48,slow=1.3,SNR=0.8						
FINES	FINESS Array B	136.43	343	SKPbc	SKPbc	10 43 22.9	-1.8
	comp=Z,2.5nm,0.7s,baz=349,slow=3.9,SNR=5.5						
LODK	Lodwar	142.48	246		PKPdf	10 40 53.9	-2.4
AKASG	Malin Array Be	143.48	330	PKP	PKPab	10 40 53.8	-1.6
	comp=Z,11nm,0.6s,baz=41,slow=4.9,SNR=44						
AKBB	Malin Array Si	143.48	330		PKPab	10 40 53.9	-1.5
BR131	Keskin Array S	146.99	311		PKPdf	10 41 05.5	+2.1
BRTR	Keskin Array B	146.99	311	PKPbc	PKPdf	10 41 05.6	+2.1
	comp=Z,3.3nm,0.7s,baz=135,slow=4.1,SNR=11						
BRTR	Keskin Array B	146.99	311		PKPdf	10 41 05.5	+2.1
BRTR				PKPab	PKPab	10 41 10.2	+0.5
BUR08	Bucovina Ar. S	147.51	329	PKPbc	PKPbc	10 41 07.3	-0.1
BUR08				PKPab	PKPab	10 41 12.0	+0.6
BURAR	Bucovina Array	147.52	329		PKPbc	10 41 07.2	-0.2
KOLS	Kolonicke sedl	147.84	334	*e*PKP	PKPbc	10 41 08.8	+0.7
TIRR	Tirgusor	147.93	322	PKPbc	PKPbc	10 41 08.2	-0.3
CRVS	Cervenica-Dubn	148.19	335	*e*PKP	PKPbc	10 41 08.5	-0.5
KSP	Ksiaz	148.34	342	*e*PKP	PKPbc	10 41 09.0	-0.3
MDUB	Mudurnu	148.34	314		PKPbc	10 41 09.3	-0.5
OSTC	Ostas	148.62	342	⇑*e*PKP	PKPbc	10 41 09.9	-0.1
MLR	Muntele Rosu	148.63	326		PKPbc	10 41 09.8	-0.6
LANS	Liptovska Anna	148.76	337	*e*PKP	PKPbc	10 41 11.0	+0.6
CLL	Collm	148.76	346		PKPbc	10 41 09.7	-0.6
CLL				PKPab	PKPab	10 41 15.7	-0.6
CLL	Collm	148.76	346	⇓*i*PKPbc	PKPbc	10 41 09.7	-0.6
	comp=Z,16nm,1.0s						
CLL				*i* PKiKP	PKiKP	10 41 12.3	+1.0
	comp=Z,4.0nm,0.8s						
CLL				⇑*i*PKPab	PKPab	10 41 15.4	-0.9
	comp=Z,7.0nm,0.9s						
CLL				*e*pPKPab	pPKPab	10 43 23.0	+4.0
CLL				*e*x	x	10 43 26.0	
DPC	Dobruska-Polom	148.77	341	⇑*e*PKP	PKPbc	10 41 10.2	-0.2
DPC				*e*PKPAB	PKPab	10 41 15.9	-0.5
KRLC	Kraliky	148.87	341	⇑*e*PKP	PKPbc	10 41 10.4	-0.3
KRLC				*e*PKPAB	PKPab	10 41 16.5	-0.4
MORC	Moravsky Berou	148.89	340	PKPdf	PKPdf	10 41 04.2	-1.9
MORC					PKPbc	10 41 10.2	-0.6
MORC				PKPab	PKPab	10 41 16.8	-0.1
MORC	Moravsky Berou	148.89	340	*e*PKP	PKPbc	10 41 09.7	-1.1
MORC				*e*		10 41 16.5	
BRG	Berggiesshubel	148.94	345	*e*PKP	PKPbc	10 41 10.6	-0.2
BRG				Amp		10 41 12.2	
	comp=Z,19nm,1.4s						
BRG				*e*x	x	10 41 16.9	
BRG				Amp		10 41 17.7	
	comp=Z,7.4nm,1.1s						
BRG				Amp		10 55 07.0	
	comp=Z,6.7nm,17.0s						
BRG				Amp		10 55 10.0	
	comp=E,2.0nm,17.9s						
BRG				Amp		10 55 12.0	
	comp=N,3.8nm,17.3s						
PVCC	Panska Ves	149.10	344	⇑*e*PKP	PKPbc	10 41 11.0	-0.2
BORA	Eskisehir	149.12	313		PKPbc	10 41 11.0	-0.7
MAUC	Maruska	149.15	339	⇑*e*PKP	PKPbc	10 41 11.4	0.0
VYHS	Vyhne	149.53	337	*e*PKP	PKPbc	10 41 12.2	-0.1
VYHS				*e*		10 41 19.5	
PRU	Pruhonice	149.60	343	⇑*e*PKP	PKPbc	10 41 11.9	-0.5
VRAC	Vranov	149.60	340	*e*PKP	PKPbc	10 41 11.6	-0.8
KOLL	Kolacno	149.62	337	*e*PKP	PKPbc	10 41 12.5	0.0
JAVC	Velka Javorina	149.64	339	*e*PKP	PKPbc	10 41 12.9	+0.3
KRUC	Moravsky	149.88	340	*e*PKP	PKPbc	10 41 12.6	-0.5
KRUC				*e*		10 41 20.6	
NKC	Novy Kostel	149.89	346	⇑*e*PKP	PKPbc	10 41 12.8	-0.3
MODS	Modra-Piesok	150.19	338	*e*PKP	PKPbc	10 41 13.9	+0.1
MODS				*e*		10 41 23.3	
KHC	Kasperske Hory	150.64	344		PKPbc	10 41 13.7	-1.2
KHC				PKPab	PKPab	10 41 24.4	+0.1
KHC	Kasperske Hory	150.64	344	⇑*e*PKP	PKPbc	10 41 13.6	-1.3
KHC				*e*PKPAB	PKPab	10 41 24.1	-0.1
CKRC	Cesky Krumlov	150.72	342	⇑*e*PKP	PKPbc	10 41 14.7	-0.4
GEC2	GERESS Array S	150.87	343	PKPdf	PKPdf	10 41 07.8	-1.5
GEC2					PKPbc	10 41 15.2	-0.3
GEC2				PKPab	PKPab	10 41 24.7	-0.6
GERES	GERESS Array B	150.87	343	PKPbc	PKPbc	10 41 14.6	-0.9
	comp=N,4.8nm,0.8s,baz=58,slow=3.3,SNR=28						
GERES	GERESS Array B	150.87	343		PKPbc	10 41 14.4	-1.0
GERES				PKPab	PKPab	10 41 25.0	-0.3
CONA	Conrad Observa	151.05	340	*e*P	PKPbc	10 41 15.5	-0.4
	comp=N,7.7nm,0.8s						
RONA	Rosalia, Austr	151.10	339	*e*P	PKPbc	10 41 15.5	-0.5
	comp=N,13nm,0.9s						
RDO	Rodhopi	151.61	319	PKPdf	PKPdf	10 41 09.2	-1.2
RDO					PKPbc	10 41 15.9	-1.4
RDO				PKPab	PKPab	10 41 28.3	-0.2
SOKA	Soboth	152.41	339	*e*P	PKPbc	10 41 17.9	-1.1
	comp=N,5.7nm,1.0s						
KBA	Koelnbreinsper	152.57	342	*e*P	PKPbc	10 41 19.0	-0.5
	comp=N,3.4nm,0.7s						
DIVS	Divibare	152.58	330	PKPdf	PKPdf	10 41 09.7	-2.2
DIVS					PKPbc	10 41 18.5	-1.0
DIVS				PKPab	PKPab	10 41 30.2	-2.4
WTTA	Wattenberg	152.86	345	*e*P	PKPbc	10 41 19.7	-0.4
	comp=N,5.3nm,0.7s						
MOTA	Moosalm	152.91	345	*e*P	PKPbc	10 41 19.3	-0.9
	comp=N,5.1nm,0.8s						
SQTA	Sankt Quirin	153.00	345	*e*P	PKPbc	10 41 19.8	-0.5
	comp=N,6.5nm,1.0s						
ABTA	Abfaltersbach	153.11	343	*e*P	PKPbc	10 41 19.3	-1.2
	comp=N,6.8nm,1.0s						
FETA	Feichten	153.30	346	*e*P	PKPbc	10 41 20.4	-0.7
	comp=N,5.3nm,0.9s						
LIT	Litokhoron	154.08	321	PKPdf	PKPdf	10 41 10.9	-3.2
LIT					PKPab	10 41 38.2	-0.9
ESDC	Sonseca Array	161.18	13	PKPab	PKPab	10 42 09.1	-0.9
	comp=N,1.6nm,1.0s,baz=329,slow=3.4,SNR=8.1						
ESDC	Sonseca Array	161.18	13	PKPdf	PKPdf	10 41 20.7	-2.1
ESDC					PKPab	10 42 09.4	-0.5
TORD	Torodi Ar. Bea	171.83	182	PKP	PKPdf	10 41 29.7	-1.8
	comp=N,1.6nm,1.0s,baz=244,slow=0.3,SNR=5.4						
TORD	Torodi Ar. Bea	171.83	182	PKPab	PKPab	10 42 57.0	-0.4

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*IDC **31** 10:25:32.4±1.9, 46°.86N×153°.39E, h0^{km}, mb3.6/5, mbtmp3.7/7, ML3.2/2, Error ellipse: s-maj=46.4km s-min=34.0km az=113.0*

*SKHL **31** 10:25:40.1±0.4, 46°.20N×153°.10E, h57^{km}±8^{km}, mb4.6/4*

ISC 31 10:25:38.8±1.5**, 46°.7N**±0°.2×**152°.8E**±0°.2**, h35**^{km}**, n19, σ1**^{s}**48**/15**, mb3.7**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.73	249	*e*P	Pn	10 26 36.2	+2.4
KUR				AMB	AMB	10 26 41.8	
	40nm,0.2s						
KUR				*e*S	Sn	10 27 18.0	+1.5
KUR				A	A	10 27 36.6	
	90nm,0.5s						
KUR				A	A	10 27 36.6	
	170nm,0.5s						
SKR	Severo-Kuril's	4.58	27	*e*P	Pn	10 26 52.8	+7.3
SKR				AMB	AMB	10 26 53.5	
	30nm,0.3s						
SHO	Shikotan	5.06	239	*e*P	Pn	10 26 52.5	+0.5
SHO				AMB	AMB	10 26 56.8	
	30nm,0.3s						
SHO				*e*S	Sn	10 27 47.0	-2.2
SHO				A	A	10 27 59.8	
	40nm,0.3s						
SHO				A	A	10 27 59.8	
	60nm,0.3s						
YUK	Yuzh-Kuril'sk	5.56	244	*e*P	Pn	10 27 00.8	+1.9
YUK				AMB	AMB	10 27 05.4	
	50nm,0.6s						
YUK				*e*S	Sn	10 28 01.1	-0.3
YUK				A	A	10 28 15.1	
	110nm,0.5s						
YUK				A	A	10 28 15.1	
	30nm,0.5s						
GLVR	Golovnino	5.92	243	*e*P	Pn	10 27 04.8	+0.9
NMR	Nemuro--Hokkai	6.00	239	*i* P	Pn	10 27 05.6	+0.6
NMR				*e*S	Sn	10 28 10.0	-2.4
ASAJ	Asahikawa	7.63	254	Pn	Pn	10 27 32.0	+4.7
	0.4nm,0.3s,baz=101,slow=14,SNR=5.5						
	4.8nm,0.6s						
USRK	Ussuriysk Ar.	14.82	268	Pn	P	10 29 10.6	-0.5
	0.4nm,0.3s,baz=77,slow=10,SNR=6.8						
	1.0nm,0.4s						
KSRS	Korea Array	20.57	252	P	Pn	10 30 17.0	+0.2
	0.7nm,0.5s,baz=63,slow=9.9,SNR=2.6						
	0.7nm,0.5s						
H11N2	WAKE ISLAND Hy	29.24	152	T	T	11 02 55.4	
	baz=340,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	29.25	152	T	T	11 02 46.5	
	baz=340,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	29.25	152	T	T	11 02 41.6	
	baz=340,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	30.32	153	T	T	11 03 59.0	
	baz=341,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	30.33	153	T	T	11 04 25.5	
	baz=341,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	30.34	153	T	T	11 03 55.5	
	baz=341,slow=76,SNR=22						
MKAR	Makanchi Array	46.80	297	P	P	10 34 04.0	-0.7
	0.2nm,0.4s,baz=66,slow=7.5,SNR=3.5						
MKAR				PcP	PcP	10 35 37.6	+0.2
	0.3nm,0.7s,baz=58,slow=3.6,SNR=3.1						
	0.2nm,0.4s						
FINES	FINESS Array B	64.03	335	P	P	10 36 08.0	-0.3
	0.7nm,0.4s,baz=23,slow=7.5,SNR=2.3						
	0.7nm,0.4s						
AKASG	Malin Array Be	71.50	326	P	P	10 36 54.9	-0.6
	0.7nm,0.4s,baz=35,slow=6.4,SNR=3.2						
	0.7nm,0.4s						
ASAR	Alice Springs	72.06	198	P	P	10 36 60.0	+0.9
	0.2nm,0.6s,baz=14,slow=5.4,SNR=2.2						
	0.2nm,0.6s						

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*NEIC **31** 10:49:35.5±2.2, 31°.78N±0°.05×132°.57E±0°.09, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=12.4km s-min=8.5km az=101.0*

*IDC **31** 10:49:41.8±0.8, 30°.64N×132°.72E, h0^{km}, mb3.8/8, mbtmp3.8/12, ML3.4/4, Error ellipse: s-maj=30.2km s-min=16.1km az=95.0*

*JMA **31** 10:49:44.2±0.2, 30°.6N±0°.5×132°.8E±0°.9, h74^{km}, MV3.5/13, N PHILIPPINE BASIN*

ISC 31 10:49:45.7±0.7**, 30°.61N**±0°.05×**132°.67E**±0°.07**, h25**^{km}**, n35, σ0**^{s}**66**/34**, mb4.1**/11**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	1.46	272	P	Pn	10 50 10.5	0.0
JTN				S	Sb	10 50 30.2	-0.1
JNAR	Kushima--Naru	1.51	308	P	Pn	10 50 11.3	+0.1
JNAR				S	Sb	10 50 31.9	0.0
JNKG	Nichinankitago	1.53	314	P	Pn	10 50 11.6	+0.1
JNKG				S	Sb	10 50 31.7	-0.7
JMTN	Minamitane	1.54	263	P	Pn	10 50 12.0	+0.4
JMTN				S	Sb	10 50 32.5	-0.2
JTSR	Tashiro 2	1.60	291	P	Pn	10 50 12.5	0.0
JNN	Nakanoshima	2.54	253	*e*P	Pn	10 50 25.7	+0.4
JNU	Nakatsue	2.94	329	Sn	Sn	10 51 06.1	+0.7
	27nm,0.3s,baz=73,slow=22,SNR=1.5						
JMZ	Minamidaito 2	4.94	195	Pn	Pn	10 51 04.3	+6.0
JOW	Kunigami	5.39	227	Pn	Pn	10 51 04.7	+0.1
	7.8nm,0.3s,baz=115,slow=29,SNR=70						
JOW				Sn	Sn	10 52 03.6	-2.2
	4.3nm,0.3s,baz=86,slow=29,SNR=7.0						
	14nm,0.3s						
JOW	Kunigami	5.39	227		Pn	10 51 05.0	+0.5
MJAR	Matsushiro Arr	7.51	36	Pn	Pn	10 51 32.5	-1.2
	0.2nm,0.3s,baz=205,slow=9.2,SNR=9.7						
	2.0nm,0.4s						
KSRS	Korea Array	7.88	331	Pn	Pn	10 51 38.6	-0.2
	0.3nm,0.3s,baz=143,slow=17,SNR=2.4						
KSRS				Sn	Sn	10 53 08.5	+1.3
	0.4nm,0.3s,baz=148,slow=28,SNR=4.5						
KLR	Kul'dur	18.62	358	P	P	10 54 00.8	-0.4
	0.1nm,0.3s,baz=150,slow=14,SNR=4.5						
	1.8nm,0.8s						
H11N2	WAKE ISLAND Hy	32.70	101	T	T	11 30 31.4	
	baz=296,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy	32.70	101	T	T	11 30 33.0	
	baz=296,slow=75,SNR=5.0						
H11N3	WAKE ISLAND Hy	32.71	101	T	T	11 30 32.4	
	baz=296,slow=75,SNR=6.7						
KNRA	Kununurra	46.17	185	P	P	10 58 09.6	+1.1
KNRA				IAmb	IAmb	10 58 11.1	
	comp=Z,5.3nm,1.0s						
WB0	Warramunga Arr	50.11	178	P	P	10 58 39.1	+0.2
WB0				IAmb	IAmb	10 58 58.8	
	comp=Z,8.2nm,1.5s						
WB2	Warramunga Arr	50.28	178	P	P	10 58 41.4	+1.2
WB2				IAmb	IAmb	10 59 05.5	
	comp=Z,8.8nm,1.4s						
WRA	Warramunga Arr	50.28	178	P	P	10 58 40.2	0.0
	comp=Z,0.7nm,0.8s,baz=356,slow=7.9,SNR=4.6						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	50.28	178	P	P	10 58 40.2	0.0
WRA	Warramunga Arr	50.28	178	IAmb	IAmb	10 58 44.1	
	comp=Z,0.2nm,1.4s						
WR0	Warramunga Arr	50.30	178	P	P	10 58 40.4	0.0
WR0				IAmb	IAmb	10 58 56.7	
	comp=Z,8.1nm,1.4s						
AS31	Alice Springs	53.97	179	P	P	10 59 07.8	+0.2
ASAR	Alice Springs	53.98	179	P	P	10 59 07.8	+0.1
	comp=Z,0.5nm,0.7s,baz=10,slow=12,SNR=10						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	53.98	179	P	P	10 59 07.8	+0.1
ILAR	Eielson Array	58.73	30	P	P	10 59 40.5	-0.6
	comp=Z,0.4nm,0.7s,baz=280,slow=6.5,SNR=7.7						
	comp=Z,0.4nm,0.7s						
FORT	Forrest	61.20	185	P	P	10 59 59.0	+0.7
STKA	Stephens Creek	62.72	171	P	P	11 00 08.8	+0.3
	comp=Z,1.4nm,0.7s,baz=326,slow=8.0,SNR=4.2						
	comp=Z,1.4nm,0.7s						
STKA	Stephens Creek	62.72	171	P	P	11 00 08.8	+0.3
STKA	Stephens Creek	62.72	171	IAmb	IAmb	11 00 09.2	
	comp=Z,2.5nm,1.5s						
FINES	FINESS Array B	70.98	331	P	P	11 01 00.7	-0.2
	comp=Z,0.7nm,0.4s,baz=72,slow=8.9,SNR=2.4						
	comp=Z,0.7nm,0.4s						
YKA	Yellowknife Ar	72.90	27	P	P	11 01 11.9	-0.5
	comp=Z,0.8nm,0.9s,baz=293,slow=5.3,SNR=5.8						
	comp=Z,0.8nm,0.9s						
AKASG	Malin Array Be	74.72	320				
	comp=Z,0.4nm,0.4s						
NVAR	Mina Array Bea	84.67	48	P	P	11 02 18.0	+0.2
	comp=Z,0.5nm,0.6s,baz=302,slow=5.6,SNR=8.3						
	comp=Z,0.5nm,0.6s						

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*JMA **31** 10:49:48.4±0.0, 32°.97N±0°.08×132°.5E±0°.1, h32^{km}, MV3.7/39, SW EHIME PREF*

JMA Felt II J1 at SW EHIME PREF .

ISC 31 10:49:47.2±0.9**, 32°.91N**±0°.06×**132°.54E**±0°.04**, h33**^{km}**, n25, σ1**^{s}**54**/30**, 6D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTO	Tosashimizu	0.23	102	*i* P	Pb	10 49 55.3	+1.3
JTO				S	Sb	10 50 00.3	+1.6
UWA2	Uwa jima 2	0.31	13	⇓*i*P	Pb	10 49 55.3	+0.1
UWA2				⇓S	Sb	10 50 00.2	-0.4
JSKE	Saikikamae	0.55	259	*i* P	Pn	10 49 59.4	+0.8
JSKE				S	Sn	10 50 07.6	+0.9
JKU	Kubokawa	0.59	47	*i* P	Pn	10 49 59.8	+0.5
JKU				S	Sb	10 50 07.8	+0.2
JNA	Nagahama	0.65	355	⇓*i*P	Pn	10 49 60.0	-0.1
JNA				⇓S	Sn	10 50 08.2	-1.0
JUS	Usuki	0.68	284	*i* P	Pn	10 50 00.8	+0.3
JUS				S	Sn	10 50 10.4	+0.5
JET	Tanbara	0.97	26	*i* P	Pn	10 50 04.8	+0.3
JHM	Kurahashi	1.23	360	⇓*i*P	Pn	10 50 08.8	+0.8
JHM				⇓S	Sn	10 50 24.4	+0.9
JMN	Monobe	1.39	53	Pn	Pn	10 50 12.2	+1.9
JNU	Nakatsue	1.41	279	Pn	Pn	10 50 09.1	-1.5
JHS	Saijyo	2.14	13	Pn	Pn	10 50 23.6	+3.0
JTU	Tsushima	3.08	303	Pn	Pn	10 50 34.1	+0.7
INU	Inuyama	4.44	56	Pn	Pn	10 50 54.1	+1.9
JGF	Kuroka	4.81	55	Pn	Pn	10 50 57.8	+0.5
KSRS	Korea Array	5.91	321				
	1.0nm,0.5s						
MJB9	Matsu-Tunnel	5.91	51	Pn	Pn	10 51 11.1	-1.3
MAJO	Matsushiro	5.91	51	Pn	Pn	10 51 11.4	-1.0
MJAR	Matsushiro Arr	5.91	51		Pn	10 51 11.7	-0.7
KSAR	Wonju Array Be	5.92	321	Pn	Pn	10 51 16.0	+3.5
KS19	Wonju Array Si	5.97	321	Pn	Pn	10 51 15.4	+2.2
SEHB	SEOHWA	6.39	328	Pn	Pn	10 51 21.2	+2.3
DOT	Dot Lake	58.20	31	IAmb	IAmb	10 59 50.5	
	comp=Z,1.5nm,0.8s						
DOT	Dot Lake	58.20	31	P	P	10 59 35.9	-1.8
MCARA	McCarthy VSAT	59.12	34	P	P	10 59 41.4	-2.8
FINES	FINESS Array B	68.92	330	P	P	11 00 48.0	-0.4

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*ANF **31** 10:54:09.5±0.2, 35°.70N×97°.14W, h5^{km}, ML3.6/9, Error ellipse: s-maj=2.7km s-min=1.8km az=146.0*

*TUL **31** 10:54:09.4±1.2, 35°.65N±0°.03×97°.16W±0°.03, h6^{km}±7^{km}, ML3.3, mb_Lg3.1/92(NEIC), Error ellipse: s-maj=5.4km s-min=0.6km az=142.0*

*NEIC **31** 10:54:09.8±1.3, 35°.66N±0°.03×97°.16W±0°.03, h7^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=1.9km az=140.0*

ISC 31 10:54:09.6±0.9**, 35°.68N**±0°.03×**97°.14W**±0°.02**, h5**^{km}±7^{km}**, n91, σ0**^{s}**76**/91**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.05	236	Pg	Pg	10 54 10.6	-0.2
OK005				Sg	Sg	10 54 11.5	-0.3
ADOK	Arcadia Dam	0.19	261	Pg	Pg	10 54 13.3	0.0
ADOK				Sg	Sg	10 54 16.2	+0.4
OK009	Oakdale Elemen	0.25	246	Pg	Pg	10 54 14.4	0.0
OKCFA	Oklahoma City	0.37	224	Pg	Pg	10 54 16.4	-0.3
OKCFA				Sg	Sg	10 54 21.5	+0.1
OKCFA	Oklahoma City	0.37	224	P	Pg	10 54 16.4	-0.3
	baz=43,SNR=79						
OKCFA				S	Sg	10 54 21.6	+0.1
	baz=43						
OKCSW	OKLAHOMA CITY	0.37	221	Pg	Pg	10 54 16.4	-0.3
OKCSW				Sg	Sg	10 54 21.5	0.0
FNO	Franklin	0.47	207	Pg	Pg	10 54 18.4	-0.3
FNO				Sg	Sg	10 54 24.9	+0.1
TUL1	Leonard	1.12	78	Pg	Pg	10 54 30.2	-0.9
TUL1	Leonard	1.12	78	P	Pg	10 54 30.2	-0.9
	baz=258						
TUL1				S	Sg	10 54 45.9	+0.3
	baz=258						
TUL1	Leonard	1.12	78	P	Pg	10 54 30.2	-0.9
	baz=258						
TUL1				S	Sg	10 54 45.9	+0.3
	baz=258						
X34A	Smith Ranch, M	1.22	208		Pg	10 54 32.1	-0.8
T35A	Sooner Cattle	1.33	22		Pn	10 54 34.2	-0.7
T35B	Sooner Cattle	1.33	22	P	Pn	10 54 34.4	-0.5
	baz=203,SNR=62						
T35B				S	Sb	10 54 53.0	+0.5
	baz=203						
WMOK	Wichita Mounta	1.64	235		Pn	10 54 38.5	-0.7
WMOK	Wichita Mounta	1.64	235	P	Pn	10 54 38.3	-0.8
	baz=54,SNR=201						
WMOK	Wichita Mounta	1.64	235	P	Pn	10 54 38.4	-0.8
	baz=54						
WMOK				S	Sb	10 55 00.2	-1.1
	baz=54						
U32A	Winter Ranch,	1.66	295		Pn	10 54 39.7	+0.3

U32A	Winter Ranch,	1.66	295	P	Pn	10 54 39.7	+0.3
	baz=115						
U32A				S	Sg	10 55 02.5	-0.4
	baz=115						
X37A	Clayton	1.81	126		Pn	10 54 41.6	+0.1
X37A				IAmb_Lg		10 55 09.5	
	comp=Z,114nm,0.8s						
X37A	Clayton	1.81	126	P	Pn	10 54 41.9	+0.4
	baz=307,SNR=90						
X37A				Sb	Sg	10 55 07.9	0.0
	baz=307						
Z35A	Perchaven, San	2.35	182		Pn	10 54 49.2	+0.4
Z35A	Perchaven, San	2.35	182	P	Pn	10 54 49.2	+0.4
	baz=1.9,SNR=21						
Z35A				S	Sb	10 55 20.9	-0.7
	baz=1.9						
HHAR	Hobbs	2.67	76		Pn	10 54 53.3	+0.1
W39A	Magazine	2.79	99		Pn	10 54 55.0	+0.1
W39A				IAmb_Lg		10 55 44.9	
	comp=Z,61nm,0.9s						
W39A	Magazine	2.79	99	P	Pn	10 54 55.2	+0.4
	baz=281,SNR=8.3						
W39A				S	Sn	10 55 29.3	+0.5
	baz=281						
W39A	Magazine	2.79	99	P	Pn	10 54 55.2	+0.4
	baz=281						
W39A				S	Sn	10 55 29.4	+0.5
	baz=281						
Z38A	Mt. Pleasant	3.00	143		Pn	10 54 57.5	-0.4
Z38A				IAmb_Lg		10 55 51.2	
	comp=Z,53nm,0.9s						
R32A	Long Quarter,	3.01	336	Pn	Pn	10 54 58.5	+0.6
MIAR	Mount Ida	3.13	110		Pn	10 54 59.2	-0.4
KSU1	Kansas State U	3.44	7	Pn	Pn	10 55 03.7	-0.1
KSU1				IAmb_Lg		10 56 01.2	
	comp=Z,36nm,0.8s						
U40A	Yellville	3.54	78		Pn	10 55 04.5	-0.8
S39A	Bolivar	3.67	56		Pn	10 55 05.7	-1.3
S39A	Bolivar	3.67	56	P	Pn	10 55 07.5	+0.5
	baz=238,SNR=13						
ABTX	Abilene, Hawle	3.69	215	Pn	Pn	10 55 05.3	-2.0
ABTX				IAmb_Lg		10 56 07.3	
	comp=Z,36nm,0.8s						
WHTX	Lake Whitney,	3.69	184		Pn	10 55 05.8	-1.5
WHTX	Lake Whitney,	3.69	184	Sb	Sb	10 56 02.0	+1.7
	baz=3.8						
X40A	Basin Creek Fa	3.73	107		Pn	10 55 06.9	-0.9
CBKS	Cedar Bluff	3.75	327	Pn	Pn	10 55 06.1	-2.0
CBKS				IAmb_Lg		10 56 15.3	
	comp=Z,38nm,0.7s						
CBKS	Cedar Bluff	3.75	327	Pb	Pb	10 55 17.9	+1.6
	baz=146						
CBKS				Sb	Sg	10 56 08.8	-1.2
	baz=146						
AMTX	Amarillo	3.80	259		Pn	10 55 08.0	-0.8
AMTX				IAmb_Lg		10 56 16.5	
	comp=Z,31nm,0.8s						
237A	Washetta, Mont	3.83	163		Pn	10 55 08.8	-0.5
WLAR	White Oak Lake	3.87	120	IAmb_Lg		10 56 15.5	
	comp=Z,39nm,0.9s						
WHAR	Wooly Hollow	3.98	94		Pn	10 55 11.1	-0.2
WHAR				IAmb_Lg		10 56 18.0	
	comp=Z,36nm,0.8s						
W41B	Gary Mavity, V	4.03	96		Pn	10 55 12.5	+0.6
W41B				IAmb_Lg		10 56 17.2	
	comp=Z,38nm,0.7s						
W41B	Gary Mavity, V	4.03	96	P	Pn	10 55 12.3	+0.4
	baz=278,SNR=34						
W41B	Gary Mavity, V	4.03	96	P	Pn	10 55 12.4	+0.4
	baz=278						
W41B				S	Sn	10 55 59.6	+0.1
	baz=278						
UALR	University of	4.03	102	Pn	Pn	10 55 13.0	+1.1
UALR				IAmb_Lg		10 56 24.4	
	comp=Z,48nm,0.8s						
FCAR	Ozark Folk Cen	4.08	86		Pn	10 55 12.6	-0.2
FCAR				IAmb_Lg		10 56 24.9	
	comp=Z,42nm,0.7s						
MGMO	Mountain Grove	4.20	68	Pn	Pn	10 55 14.2	-0.1
MGMO				IAmb_Lg		10 56 24.5	
	comp=Z,42nm,0.8s						
Z41A	Richland Creek	4.32	123	IAmb_Lg		10 56 33.7	
	comp=Z,27nm,0.8s						
Z41A	Richland Creek	4.32	123	S	Sn	10 56 06.4	-0.4
	baz=305						
R40A	Maddies Statio	4.69	55		Pn	10 55 20.4	-0.6
CCAR	Cane Creek	4.76	110	IAmb_Lg		10 56 50.2	
	comp=Z,52nm,1.1s						
P38A	Dawn	4.87	35	Pn	Pn	10 55 22.7	-0.8
P38A				IAmb_Lg		10 56 54.6	
	comp=Z,34nm,0.8s						
435B	Jarrell	4.90	184	IAmb_Lg		10 56 57.2	
	comp=Z,36nm,0.8s						
MSTX	Muleshoe	4.94	251		Pn	10 55 24.2	-0.3
N33A	J Bar K, Exete	5.05	357	Pn	Pn	10 55 25.6	-0.4
CCM	Cathedral Cave	5.29	62	Pn	Pn	10 55 29.6	+0.4
CCM				IAmb_Lg		10 57 11.4	
	comp=Z,28nm,0.7s						
N35A	Tabor	5.30	12	Pn	Pn	10 55 30.3	+0.8
KSCO	Kaye Shedlock'	5.49	309	IAmb_Lg		10 57 13.4	
	comp=Z,48nm,1.2s						
PBMO	Poplar Bluff	5.54	77	Pn	Pn	10 55 33.3	+0.6
PBMO				IAmb_Lg		10 57 11.5	
	comp=Z,23nm,0.8s						
P40A	Paris	5.58	45	IAmb_Lg		10 57 13.9	
	comp=Z,45nm,0.8s						
JCT	Junction City	5.65	204	Pn	Pn	10 55 33.1	-1.1
BGNE	Belgrade	5.77	352	Pn	Pn	10 55 36.1	+0.2
BGNE				IAmb_Lg		10 57 26.0	
	comp=Z,39nm,0.8s						
GNAR	Gosnell	5.80	85	IAmb_Lg		10 57 18.9	
	comp=Z,39nm,0.8s						
FVM	French Village	5.86	65	Pn	Pn	10 55 37.2	+0.2
N38A	Joes South For	5.96	30	Pn	Pn	10 55 39.4	+0.9
T25A	Trinidad	6.04	286	Pn	Pn	10 55 39.0	-0.8
T25A				IAmb_Lg		10 57 30.3	
	comp=Z,35nm,0.8s						
OXF	Oxford	6.45	98	Pn	Pn	10 55 45.4	+0.2
OGNE	Ogallala	6.51	325	Pn	Pn	10 55 45.8	-0.4
OGNE				IAmb_Lg		10 57 36.0	
	comp=Z,31nm,0.8s						
W45A	Hickory Valley	6.52	92	IAmb_Lg		10 57 42.9	
	comp=Z,27nm,0.7s						
S44A	Carbondale	6.65	70	IAmb_Lg		10 57 50.2	
	comp=Z,24nm,0.8s						
SDCO	Great Sand Dun	7.02	290		Pn	10 55 54.0	+0.6
SDCO				IAmb_Lg		10 57 53.7	
	comp=Z,17nm,1.2s						
Q24A	Divide	7.17	300	IAmb_Lg		10 58 06.5	
	comp=Z,22nm,0.8s						
Q44A	Meyer Farm, Va	7.23	61	IAmb_Lg		10 58 07.6	
	comp=Z,28nm,0.8s						
PLAL	Pickwick Lake	7.44	93	Pn	Pn	10 55 58.0	-0.9
833A	Chaparral WMA,	7.58	195	Pn	Pn	10 56 01.7	+1.0
833A				IAmb_Lg		10 58 13.7	
	comp=Z,15nm,0.9s						
ISCO	Idaho Springs	7.87	304	Pn	Pn	10 56 03.9	-1.0
MNTX	Cornudas Mount	7.93	242	Pn	Pn	10 56 04.4	-1.2
ECSD	EROS Data Cent	8.05	3	Pn	Pn	10 56 07.2	0.0
ECSD				IAmb_Lg		10 58 26.4	
	comp=Z,13nm,1.1s						
O44A	Mansfield	8.18	54	IAmb_Lg		10 58 34.4	
	comp=Z,20nm,0.8s						
Y22D	IRIS PASSCAL I	8.19	262	IAmb_Lg		10 58 51.6	
	comp=Z,18nm,0.9s						
X48A	Hartselle	8.37	96	Pn	Pn	10 56 10.0	-1.5
L42A	Oliver, Polo	8.59	40	Pn	Pn	10 56 16.1	+1.5
L42A				IAmb_Lg		10 58 44.9	
	comp=Z,25nm,0.8s						
PHWY	Pilot Hill	8.60	313	Pn	Pn	10 56 14.0	-1.0
N23A	Red Feather La	8.66	310	Pn	Pn	10 56 16.2	+0.4
N23A				IAmb_Lg		10 58 49.1	
	comp=Z,21nm,0.9s						
I37A	Lemond, Waseca	8.80	18	IAmb_Lg		10 58 59.9	
	comp=Z,24nm,0.9s						
JFWS	Jewell Farm	8.98	34	IAmb_Lg		10 59 05.0	
	comp=Z,24nm,0.7s						
Y49A	Blount Mountai	9.01	99	Pn	Pn	10 56 19.8	-0.7
I40A	Norwalk	9.61	29	IAmb_Lg		10 59 21.2	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	9.95	330	IAmb_Lg		10 59 43.5	
	comp=Z,9.1nm,1.1s						

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*MAN **31** 11:32:15.0, 9°.43N×126°.07E, h21^{km}, mb5.6, ML4.6, MS4.9,*

Hypocentre not reviewed by the ISC

MAN INTENSITY IV - CANTILAN & CARRASCAL SURIGAO DEL SUR; TANDAG CITY; INTENSITY III - CARMEN SURIGAO DEL SUR; INTENSITY II - LANUZA SURIGAO DEL SUR; SURIGAO CITY; INTENSITY I - CORTES SURIGAO DEL SUR.

*NEIC **31** 11:32:15.7±1.6, 9°.48N±0°.07×126°.1E±0°.1, h60^{km}±6^{km}, mb4.6/67, Error ellipse: s-maj=14.6km s-min=10.4km az=85.0*

*DJA **31** 11:32:15.0±0.7, 10°N±4°×12°6E±°, h61^{km}±5^{km}, M5.0/45, mB5.4/14, mb4.8/45, MLv5.4/4, Mw(mB)4.8/14*

*IDC **31** 11:32:16.8±1.6, 9°.43N×126°.14E, h79^{km}±14^{km}, mb4.0/18, mbtmp4.4/23, MS3.7/8, Error ellipse: s-maj=21.1km s-min=8.9km az=80.0*

ISC 31 11:32:14.9±0.7, **9°.45N**±0°.03×**126°.24E**±0°.05, **h58**^{km}±6^{km}, **n222**, σ1§**67**/237, **mb4.5**/57, **MS3.7**/8, **17C-11D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	General Luna,	0.35	342	⇓eP	Pn	11 32 23.1	-2.2
GLSP				eS	Sn	11 32 30.1	-2.7
BUTP	Butuan	0.77	232	⇑eP	Pn	11 32 27.9	-2.0
BUTP				eS	Sn	11 32 39.1	-1.8
BIPH	Bislig	1.26	174	⇑iP	Pn	11 32 34.7	-1.6
BIPH				iS	Sn	11 32 50.8	-1.5
MSLP	Maasin	1.52	297	⇓eP	Pn	11 32 39.5	-0.3
MSLP				eS	Sn	11 33 01.3	+2.7
BUKP	Musuan	1.94	217	⇓eP	Pn	11 32 45.7	+0.1
BUKP				eS	Sn	11 33 10.6	+1.7
OCLP	Ormoc	2.26	315	⇓eP	Pn	11 32 51.4	+1.5
OCLP				eS	Sn	11 33 19.8	+3.1
TBP	Tagbilaran	2.35	276	⇑iP	Pn	11 32 50.6	-0.5
TBP				iS	Sn	11 33 18.5	-0.4
LLP	Lapu-Lapu	2.40	291	⇑iP	Pn	11 32 52.0	+0.3
LLP				iS	Sn	11 33 21.0	+0.9
DAV	Davao City (W)	2.45	195	P	Pn	11 32 53.9	+1.5
	691nm,0.3s,baz=38,slow=1.9,SNR=14						
DAV				S	Sn	11 33 28.1	+6.9
	871nm,0.5s,baz=174,slow=23,SNR=2.0						
DAV				LR	LR	11 34 16.0	
	comp=Z,3μm,20.2s,baz=326,slow=49						
DAV	Davao City (W)	2.45	195	P	Pn	11 32 54.3	+1.8
MATI	Mati	2.48	180	⇓eP	Pn	11 32 54.6	+1.7
MATI				eS	Sn	11 33 25.8	+3.6
KCP	Kidapawan	2.67	205	⇓eP	Pn	11 32 56.0	+0.4
KCP				iS	Sn	11 33 30.0	+3.2
CTBH	Cotabato--PC H	2.96	222	⇓iP	Pn	11 32 59.4	-0.1
CTBH				iS	Sn	11 33 19.2	-15
SNPH	Sibulan	2.96	268	⇓iP	Pn	11 32 59.4	-0.1
SNPH				iS	Sn	11 33 33.1	-0.8
DCPH	Dipolog City	2.97	253	⇑eP	Pn	11 33 00.9	+1.3
DCPH				eS	Sn	11 33 33.0	-1.1
PAGZ	Pagadian	3.24	241	⇓eP	Pn	11 33 04.0	+0.8
PAGZ				eS	Sn	11 33 43.4	+2.8
DDMP	Don Marcelino,	3.36	189	⇑eP	Pn	11 33 04.5	-0.5
DDMP				eS	Sn	11 33 45.1	+1.5
CNOP	Candoni, Negro	3.57	276	⇑eP	Pn	11 33 08.4	+0.6
CNOP				eS	Sn	11 33 48.4	-0.3
GSPH	General Santos	3.57	201	⇓iP	Pn	11 33 08.7	+0.7
GSPH				iS	Sn	11 33 53.3	+4.3
GUIM	Jordan	3.78	288	⇑eP	Pn	11 33 10.8	+0.2
GUIM				eS	Sn	11 33 55.4	+1.5
RCP	Roxas	4.03	302	⇑eP	Pn	11 33 15.4	+1.4
RCP				eS	Sn	11 34 00.6	+0.6
PVCP	Virac	4.60	334	⇑eP	Pn	11 33 23.1	+1.2
PVCP				eS	Sn	11 34 18.9	+4.8
SGSI	Sangihe	5.76	187	P	Pn	11 33 38.7	+0.8
	3.5nm7μm456nm,0.7s						
SJMP	San Jose	5.85	301	⇑eP	Pn	11 33 41.1	+2.0
BOAC	Boac	5.87	313	⇑eP	Pn	11 33 42.1	+2.7
JCNP	Jose Panganiba	5.93	325	⇑eP	Pn	11 33 40.5	+0.4
JCNP				eS	Sn	11 34 46.9	+0.1
LQP	Lukban	6.53	316	⇑eP	Pn	11 33 50.9	+2.3
TGY	Tagaytay City	6.95	312	P	Pn	11 33 55.7	+1.5
	190nm,0.3s,baz=42,slow=17,SNR=1.2						
LUBP	Lubang	7.25	307	⇑eP	Pn	11 33 57.5	-0.8
BALP	Baler	7.74	324	⇑eP	Pn	11 34 07.2	+2.3
BALP				eS	Sn	11 35 27.0	-4.2
SMPP	San Manuel, Pa	8.59	321	⇑eP	Pn	11 34 18.0	+1.4
TNTI	Ternate	8.69	172	Pn	Pn	11 34 19.4	+1.4
TNTI	Ternate	8.69	172	P	Pn	11 34 19.6	+1.6
	62nm,0.7s						
MYLDM	Lahad Datu	8.76	242	Pn	Pn	11 34 18.4	-0.6
KMSI	Cibinong	9.09	194	P	Pn	11 34 26.8	+3.3
	114nm,0.6s						
GTOI	Gorontalo	9.32	200	P	Pn	11 34 25.8	-0.8
	910nm122nm,0.7s						
APYP	Conner	9.67	330	⇓eP	Pn	11 34 32.0	+0.6
APYP				eS	Sn	11 36 15.4	-3.2
MRSI	Marisa	9.88	206	P	Pn	11 34 36.2	+1.9
	693nm55nm,0.8s						
TOLI2	Tolitoli	9.90	214	Pn	Pn	11 34 33.5	-1.0
TOLI2	Tolitoli	9.90	214	P	Pn	11 34 37.0	+2.5
	16nm,0.8s						
LBMI	Labuha	10.10	173	P	Pn	11 34 37.4	+0.2
	689nm45nm,1.2s						
LUWI	Luwuk	10.97	199		Pn	11 34 47.6	-1.6
LUWI	Luwuk	10.97	199	P	Pn	11 34 51.4	+2.2
	3μm164nm,0.7s						
LUWI	Luwuk	10.97	199	P	Pn	11 34 53.2	+4.0
APSI	Ampana	11.26	204	P	Pn	11 34 56.2	+3.1
	532nm57nm,0.8s						
SIJI	Sorong	11.40	154	P	Pn	11 34 57.4	+2.3
	15nm,0.5s,baz=323,slow=12,SNR=5.6						
SIJI				S	Sn	11 36 54.8	-6.4
	5.4nm,0.2s,baz=204,slow=19,SNR=2.0						
SANI	Sanana	11.42	181	P	Pn	11 34 52.4	-3.0
SANI	Sanana	11.42	181	P	Pn	11 34 53.1	-2.3
SMKI	Samarinda	13.32	223	P	P	11 35 25.6	-3.5
	137nm,0.5s						
TTSI	Tana Toraja	13.96	208	P	Pn	11 35 32.5	+2.6
	44nm,0.8s						
BKB	Balikpapan	14.13	222	P	Pn	11 35 34.0	+1.8
	117nm,0.6s						
YULB	Yu-li	14.65	342	Pn	Pn	11 35 40.0	+1.0
TPUB	Ta-pu	14.79	339	Pn	Pn	11 35 40.5	-0.2
TPUB	Ta-pu	14.79	339	P	P	11 35 45.7	+0.3
SPSI	Sidrap Palu	14.80	206	P	Pn	11 35 42.5	+1.6
	606nm35nm,1.0s						
BNSI	Bone	15.05	204	P	P	11 35 46.9	-1.4
	2μm67nm,1.7s						
SSLB	Suanglung	15.13	341	P	P	11 35 50.0	+0.8
YOJ	Yonaguni jima	15.25	349	P	P	11 35 49.4	-1.1
KAPI	Kappang	15.75	204	P	Pn	11 35 54.7	+1.5
	18nm,0.8s,baz=36,slow=8.4,SNR=7.4						
KAPI				LR	LR	11 43 47.2	
	comp=Z,197nm,18.0s,baz=272,slow=44						
KAPI	Kappang	15.75	204	Pn	Pn	11 35 54.0	+0.8
BKSI	Bulukumba	15.88	203	P	P	11 35 57.2	-0.4
	24nm,0.9s						
BBKI	Banjar Baru	17.13	222	P	P	11 36 14.2	+2.8
	2μm17nm,0.5s						
JOW	Kunigami	17.40	6	P	P	11 36 15.0	+0.7
	5.6nm,0.6s,baz=69,slow=23,SNR=3.7						
JOW				LR	LR	11 42 55.0	
	comp=Z,161nm,18.6s,baz=313,slow=37						
JOW	Kunigami	17.40	6	P	P	11 36 19.1	+4.8
KSM	Kuching	17.71	244		Pn	11 36 16.0	-1.7
EDFI	Ende, Flores	18.63	194	P	Pn	11 36 29.2	+0.3
	12nm,0.8s						
SOEI	Soe	19.17	186	P	P	11 36 34.6	+0.5
SOEI	Soe	19.17	186	P	Pn	11 36 36.8	+1.4
	108nm,1.4s						
SOEI	Soe	19.17	186	P	Pn	11 36 36.9	+1.5
BATI	Baumata	19.69	188	P	P	11 36 40.4	+0.8
	81nm,0.7s,baz=270,slow=6.1,SNR=9.6						
BATI	Baumata	19.69	188	P	Pn	11 36 41.2	-0.2
	76nm,0.8s						
PLAI	Plampang	20.01	205	P	Pn	11 36 44.8	-0.4
	64nm,0.8s						
KMMI	Kalianget	20.44	217	P	Pn	11 36 50.1	-0.2
	48nm,1.1s						
SRBI	Singaraja	20.59	213	P	Pn	11 36 51.4	-0.6
	42nm,0.8s						
UWJI	Ujung Watu	21.92	225	P	P	11 37 05.9	+2.3
	3μm78nm,2.0s						
MTN	Manton Dam	22.67	168	P	P	11 37 11.1	-0.5
	baz=22,SNR=33						
MTN	Manton Dam	22.67	168	P	P	11 37 11.6	0.0
MTN				IAmb	IAmb	11 37 16.8	
	comp=Z,48nm,1.2s						
KDU	Kakadu	22.84	164	P	P	11 37 12.9	-0.5
	baz=22,SNR=18						
KDU	Kakadu	22.84	164	P	P	11 37 13.6	+0.2
JCJ	Chichijima	23.14	39	LR	LR	11 45 15.5	
	comp=Z,128nm,20.8s,baz=322,slow=34						
NJ2	Nanjing	23.51	344	eP	P	11 37 29.0	+9.2
NJ2				pmax	pmax		
	comp=Z,110nm,0.5s						
MYKOM	Kota Tinggi	23.52	252	P	P	11 37 19.2	-0.9
MYKOM				IAmb	IAmb	11 37 23.9	
	comp=Z,12nm,1.0s						
KNRA	Kununurra	25.09	174	P	P	11 37 34.3	+0.1
	baz=25,SNR=17						
KNRA	Kununurra	25.09	174	P	P	11 37 34.2	-0.1
KNRA	Kununurra	25.09	174	P	P	11 37 34.5	+0.3
IPM	Ipoh	25.50	261	P	P	11 37 36.9	-1.3
IPM				IAmb	IAmb	11 37 50.7	
	comp=Z,13nm,0.9s						
MDSI	Maura Dua	25.98	239	P	P	11 37 44.3	+1.9
	comp=Z,8.5nm,1.4s						
INU	Inuyama	27.60	19	P	P	11 37 55.5	-1.3
INU				IAmb	IAmb	11 37 57.9	
	comp=Z,8.4nm,0.8s						
KSAR	Wonju Array Be	27.91	3	P	P	11 37 59.2	-0.3
CMAR	Chiang Mai Arr	27.93	292	P	P	11 37 59.5	-0.5
	comp=Z,0.6nm,0.4s,baz=103,slow=6.6,SNR=4.5						
	comp=Z,0.6nm,0.4s						
CMAR	Chiang Mai Arr	27.93	292	P	P	11 37 58.5	-1.4
KSRS	Korea Array	27.93	3	P	P	11 37 59.8	+0.1
	comp=Z,2.0nm,0.5s,baz=183,slow=10,SNR=15						
KSRS				LR	LR	11 47 45.3	
	comp=Z,72nm,21.8s,baz=235,slow=33						
	comp=Z,2.0nm,0.5s						
PSI	Prapat	27.93	258	LR	LR	11 50 59.3	
	comp=Z,193nm,18.1s,baz=335,slow=40						
KS19	Wonju Array Si	27.97	3	P	P	11 37 58.2	-1.9
CHTO	Chiang Mai	28.02	292	P	P	11 38 00.1	-0.7
COEN	Coen	28.69	144	P	P	11 38 07.5	+0.8
COEN				IAmb	IAmb	11 38 36.7	
	comp=Z,17nm,1.0s						
COEN	Coen	28.69	144	P	P	11 38 06.6	-0.1
PZH	PanZhiHua	28.73	309	P	P	11 38 07.3	+0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	Matsushiro Arr	29.08	20	P	P	11 38 09.2	-0.8
	comp=Z,3.2nm,0.9s,baz=181,slow=10,SNR=4.6						
MJAR				LR	LR	11 51 31.0	
	comp=Z,148nm,18.2s,baz=308,slow=40						
	comp=Z,3.2nm,0.9s						
MJAR	Matsushiro Arr	29.08	20	IAmb	IAmb	11 38 12.6	
	comp=Z,4.0nm,1.2s						
KRVT	Keravat (AS076	29.11	117	P	P	11 38 11.9	+1.4
	comp=Z,11nm,0.8s,baz=303,slow=8.7,SNR=2.4						
	comp=Z,11nm,0.8s						
XAN	Xi'an	29.19	330	P	P	11 38 20.5	+9.4
XAN				pP	pP	11 38 26.8	+1.3
XAN				sP	sP	11 38 30.5	-1.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WB0	Warramunga Arr	30.12	165	P	P	11 38 18.5	-0.9
WB0				IAmb	IAmb	11 38 19.8	
	comp=Z,10nm,1.2s						
WRAB	Tennant Creek	30.27	165	P	P	11 38 19.8	-0.8
WRAB				IAmb	IAmb	11 38 22.7	
	comp=Z,12nm,1.3s						
WRAB	Tennant Creek	30.27	165	P	P	11 38 20.3	-0.3
WRA	Warramunga Arr	30.27	165	P	P	11 38 19.9	-0.8
	comp=Z,2.3nm,0.6s,baz=343,slow=10.0,SNR=27						
WRA				PcP	PcP	11 41 21.3	+1.0
	comp=Z,0.5nm,0.7s,baz=36,slow=4.0,SNR=2.1						
WRA				S	S	11 43 12.0	-4.7
	comp=Z,0.2nm,0.7s,baz=51,slow=33,SNR=4.6						
	comp=Z,2.3nm,0.6s						
WRA	Warramunga Arr	30.27	165	P	P	11 38 20.5	-0.2
WB2	Warramunga Arr	30.28	165	P	P	11 38 20.1	-0.6
WB2				IAmb	IAmb	11 38 22.8	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	30.34	164	P	P	11 38 20.8	-0.5
WR0				IAmb	IAmb	11 38 23.0	
	comp=Z,6.9nm,0.9s						
MBWA	Marble Bar	31.08	192	P	P	11 38 27.7	0.0
MBWA				IAmb	IAmb	11 38 28.4	
	comp=Z,8.8nm,0.8s						
PSA00	Pilbara Seismi	31.46	191	P	P	11 38 30.9	-0.2
PSA00				IAmb	IAmb	11 38 32.3	
	comp=Z,20nm,0.9s						
QIS	Mount Isa	32.59	156	P	P	11 38 41.0	-0.1
	baz=32,SNR=11						
MTSU	Mount Surprise	32.71	147	P	P	11 38 42.6	+0.5
	baz=32,SNR=10.0						
MTSU	Mount Surprise	32.71	147	P	P	11 38 42.6	+0.5
AS31	Alice Springs	33.75	167	P	P	11 38 50.5	-0.7
ASAR	Alice Springs	33.75	167	P	P	11 38 50.8	-0.4
	comp=Z,2.7nm,0.4s,baz=350,slow=7.2,SNR=77						
ASAR				PcP	PcP	11 41 29.7	-0.1
	comp=Z,0.6nm,0.7s,baz=342,slow=2.5,SNR=2.2						
ASAR				S	S	11 44 08.0	-2.8
	comp=Z,0.4nm,0.7s,baz=8.3,slow=22,SNR=4.1						
ASAR				ScP	ScP	11 45 08.6	-1.1
	comp=Z,1.7nm,1.0s,baz=357,slow=2.6,SNR=7.2						
ASAR				LR	LR	11 53 18.9	
	comp=Z,142nm,18.8s,baz=285,slow=37						
	comp=Z,2.7nm,0.4s						
HHC	Hu-ho-hao-te	33.87	340	eP	P	11 38 55.0	+2.8
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,320nm,7.0s						
WRKA	Warakurna	34.33	177	P	P	11 38 56.7	+0.5
	baz=34,SNR=43						
USRK	Ussuriysk Ar.	34.98	7	P	P	11 39 01.5	0.0
	comp=Z,11nm,0.8s,baz=196,slow=6.8,SNR=14						
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	34.98	7	P	P	11 39 01.3	-0.2
USA0B	Ussuriysk Arra	34.98	7	P	P	11 39 02.7	+1.1
USA0B				IAmb	IAmb	11 39 03.6	
	comp=Z,12nm,0.9s						
MDJ	Mudanjiang	35.16	4	P	P	11 39 04.3	+1.2
MDJ				IAmb	IAmb	11 39 05.4	
	comp=Z,13nm,1.1s						
MDJ	Mudanjiang	35.16	4	P	P	11 39 04.3	+1.2
MDJ				pP	pP	11 39 19.8	+2.8
MDJ				S	S	11 44 31.0	-1.1
MDJ				sS	sS	11 44 57.5	+0.7
MDJ	Mudanjiang	35.16	4	ScS	ScS	11 49 21.0	+2.8
MDJ				pmax	pmax		
	comp=Z,15nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.4s						
MDJ				LR	LR		
	comp=N,170nm,8.0s						
MDJ				LR	LR		
	comp=E,180nm,10.7s						
MDJ				LR	LR		
	comp=Z,470nm,13.5s						
SHL	Shillong	36.33	301	P	P	11 39 13.0	-0.6
SHL				IAmb	IAmb	11 39 26.2	
	comp=Z,14nm,0.9s						
JKA	Kamikawa-asahi	37.35	20	P	P	11 39 22.4	+0.6
OOD	Oodnadatta	38.13	166	P	P	11 39 28.9	+0.3
MORW	Morawa	39.53	194	P	P	11 39 40.6	+0.4
	baz=39,SNR=5.5						
MORW	Morawa	39.53	194	P	P	11 39 40.6	+0.4
MORW				IAmb	IAmb	11 39 41.2	
	comp=Z,10.0nm,0.8s						
MORW	Morawa	39.53	194	P	P	11 39 40.7	+0.4
FORT	Forrest	40.03	178	P	P	11 39 45.0	+0.6
	baz=40,SNR=15						
FORT	Forrest	40.03	178	P	P	11 39 43.1	-1.3
FORT	Forrest	40.03	178	P	P	11 39 45.7	+1.3
H11S3	WAKE ISLAND Hy	40.19	73	T	T	12 22 46.9	
	baz=262,slow=75,SNR=292						
H11S1	WAKE ISLAND Hy	40.21	73	T	T	12 22 53.0	
	baz=262,slow=75,SNR=182						
MULG	Mulgathing	40.21	169	P	P	11 39 46.9	+1.0
H11S2	WAKE ISLAND Hy	40.21	73	T	T	12 22 48.2	
	baz=262,slow=75,SNR=254						
H11N1	WAKE ISLAND Hy	40.55	71	T	T	12 23 15.2	
	baz=265,slow=74,SNR=138						
H11N2	WAKE ISLAND Hy	40.56	71	T	T	12 23 25.6	
	baz=265,slow=74,SNR=76						
H11N3	WAKE ISLAND Hy	40.57	71	T	T	12 23 26.5	
	baz=265,slow=74,SNR=130						
BLDU	Ballidu	40.87	193	P	P	11 39 51.2	-0.1
	baz=41,SNR=6.4						
LCRK	Leigh Creek	41.30	164	P	P	11 39 56.3	+1.4
KLBR	Kellerberrin	41.60	191	P	P	11 39 58.2	+0.8

	baz=41,SNR=5.7						
SONM	Songino Array	41.78	340	P	P	11 39 59.1	+0.3
	comp=Z,0.3nm,0.3s,baz=221,slow=9.7,SNR=2.0						
	comp=Z,0.3nm,0.3s						
MUN	Mundaring	42.29	193	P	P	11 40 03.3	+0.4
	baz=42,SNR=5.1						
NWAO	Narrogin (SRO)	43.00	191	P	P	11 40 09.2	+0.6
NWAO				IAmb	IAmb	11 40 10.8	
	comp=Z,15nm,0.8s						
NWAO	Narrogin (SRO)	43.00	191	P	P	11 40 09.8	+1.1
BBOO	Buckleboo	43.05	168	P	P	11 40 09.8	+0.7
	baz=43,SNR=93						
BBOO	Buckleboo	43.05	168	P	P	11 40 10.0	+0.9
BBOO	Buckleboo	43.05	168	P	P	11 40 10.2	+1.1
STKA	Stephens Creek	43.64	161	P	P	11 40 13.6	-0.2
	comp=Z,6.4nm,0.5s,baz=336,slow=7.7,SNR=22						
	comp=Z,6.4nm,0.5s						
STKA	Stephens Creek	43.64	161	P	P	11 40 13.9	+0.1
	baz=43,SNR=15						
STKA	Stephens Creek	43.64	161	P	P	11 40 14.0	+0.1
STKA	Stephens Creek	43.64	161	P	P	11 40 14.3	+0.5
NAPP	Napperby	43.88	166	P	P	11 40 17.1	+1.3
HTT	Hallett	44.31	165	P	P	11 40 20.3	+1.0
	baz=44,SNR=22						
HTT	Hallett	44.31	165	P	P	11 40 20.5	+1.2
CMSA	Cobar Meteorol	44.81	156	P	P	11 40 24.4	+1.2
TWOA	Tennyson Woods	45.75	166	P	P	11 40 32.3	+1.7
WMQ	Urumqi	47.85	323	*e*P	P	11 40 49.5	+2.4
WMQ				LR	LR		
	comp=Z,190nm,18.3s						
ARPS	Mount Arapiles	48.25	163	P	P	11 40 51.2	+1.1
	baz=48,SNR=12						
ARPS	Mount Arapiles	48.25	163	P	P	11 40 51.5	+1.4
CNB	Canberra Magne	49.59	155	P	P	11 41 03.4	+2.9
	baz=49,SNR=4.9						
CNB	Canberra Magne	49.59	155	P	P	11 41 03.8	+3.3
TOO	Toolangi	50.13	160	P	P	11 41 06.2	+1.8
	baz=50,SNR=3.6						
TOO	Toolangi	50.13	160	P	P	11 41 06.5	+2.1
TOO				IAmb	IAmb	11 41 16.6	
	comp=Z,11nm,1.1s						
TOO	Toolangi	50.13	160	P	P	11 41 06.9	+2.4
DZM	Mont Dzumac	50.36	129	P	P	11 41 04.5	-2.0
PETK	Petropavlovsk-	50.40	24	P	P	11 41 07.7	+1.4
	comp=Z,4.1nm,0.5s,baz=207,slow=5.0						
	comp=Z,4.1nm,0.5s						
YAK	Yakutsk	52.55	2	P	P	11 41 22.4	+0.2
MK31	Makanchi Array	52.66	323	P	P	11 41 22.4	-1.0
MKAR	Makanchi Array	52.66	323	P	P	11 41 22.6	-0.8
	comp=Z,1.3nm,0.5s,baz=120,slow=7.5,SNR=17						
	comp=Z,1.3nm,0.5s						
MKAR	Makanchi Array	52.66	323	P	P	11 41 22.4	-0.9
MAKZ	Makanchi	52.85	323	P	P	11 41 23.9	-0.9
MAKZ				IAmb	IAmb	11 41 49.4	
	comp=Z,3.0nm,0.8s						
KDJ	Kajisay	53.85	316	P	P	11 41 30.3	-2.1
KDJ				IAmb	IAmb	11 41 47.9	
	comp=Z,3.2nm,0.7s						
NIL	Nilore	54.17	305	P	P	11 41 33.1	-1.6
ZAA0	Zalesovo Array	55.33	332	P	P	11 41 40.7	-1.9
ZALV	Zalesovo Beam	55.33	332	P	P	11 41 40.1	-2.6
	comp=Z,0.6nm,0.3s,baz=125,slow=6.5,SNR=2.4						
	comp=Z,0.6nm,0.3s						
ZALV	Zalesovo Beam	55.33	332	P	P	11 41 40.8	-1.8
KURK	Kurchatov	56.73	326	P	P	11 41 52.0	-0.6
KURK				IAmb	IAmb	11 42 13.3	
	comp=Z,5.0nm,0.9s						
GAR	Garm	57.79	310	P	P	11 41 59.7	-0.8
CHGR	Chuyangaron	58.58	310	P	P	11 42 04.5	-1.5
KK31	Karatay Array	58.80	315	P	P	11 42 06.3	-1.2
KK31				IAmb	IAmb	11 42 20.6	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	58.80	315	P	P	11 42 06.4	-1.0
TIXI	Tiksi	62.17	1	P	P	11 42 29.8	0.0
BRVK	Borovoye	62.39	326	P	P	11 42 30.9	-0.8
BRVK				IAmb	IAmb	11 42 32.3	
	comp=Z,5.1nm,1.1s						
BILL	Bilibino	64.20	16	P	P	11 42 44.0	+0.7
BILL				IAmb	IAmb	11 42 58.2	
	comp=Z,3.3nm,0.9s						
NNZ	Nelson	66.47	143	P	P	11 42 59.8	+1.4
THZ	Tophouse	66.53	144	P	P	11 42 59.9	+1.1
RPZ	Rata Peaks	66.72	146	P	P	11 43 01.0	+1.0
BKZ	Black Stump Fm	67.18	140	P	P	11 43 03.0	0.0
ABKAR	Akbulak array	67.48	320	P	P	11 43 03.8	-1.0
UNV	Unalaska Valle	69.06	36	P	P	11 43 14.9	+0.4
O18K	Koktuh Hills	76.14	31	P	P	11 43 57.8	+1.3
O18K				IAmb	IAmb	11 43 59.2	
	comp=Z,12nm,0.9s						
I21K	Tanana	78.03	25	P	P	11 44 08.8	+1.8
I21K				IAmb	IAmb	11 44 09.7	
	comp=Z,5.0nm,0.8s						
BPAW	Bear Paw Mtn.	78.41	26	P	P	11 44 10.3	+1.1
BPAW				IAmb	IAmb	11 44 11.2	
	comp=Z,4.3nm,0.8s						
MLY	Manley	78.55	25	P	P	11 44 11.1	+1.1
MLY				IAmb	IAmb	11 44 11.8	
	comp=Z,3.2nm,0.7s						
H23K	Yukon River	79.08	25	P	P	11 44 13.7	+0.9
I23K	Minto, Yukon-K	79.14	25	P	P	11 44 14.1	+1.0
NEA2	Nenana	79.25	26	P	P	11 44 14.2	+0.4
NEA2				IAmb	IAmb	11 44 16.2	
	comp=Z,3.9nm,0.8s						
H24K	Noodor Dome	79.76	25	P	P	11 44 18.1	+1.5
CCB	Clear Creek Bu	79.80	26	P	P	11 44 17.0	+0.3
HDA	Harding Lake	80.17	26	P	P	11 44 18.4	-0.3
HDA				IAmb	IAmb	11 44 19.3	
	comp=Z,3.1nm,0.7s						
ILAR	Eielson Array	80.19	26	P	P	11 44 18.1	-0.8
	comp=Z,1.0nm,0.7s,baz=247,slow=5.9,SNR=14						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	80.19	26	P	P	11 44 19.6	+0.8
KLMR	Klimovskoe	80.22	330	*e*P	P	11 44 17.1	-1.9
KLMR				AMP		11 44 34.1	
	comp=Z,8.0nm,0.9s						
L27K	Beaver Creek,	82.53	27	P	P	11 44 32.5	+1.2
BCAR	Beaver Creek A	82.55	27	P	P	11 44 31.8	+0.4
EGAK	Eagle	82.64	26	P	P	11 44 32.6	+0.9
BARN	Barnard Glacie	82.83	29	P	P	11 44 32.2	-0.9
BARN				IAmb	IAmb	11 44 36.6	
	comp=Z,6.8nm,0.6s						
CTGM	Chitina Glacie	83.00	29	P	P	11 44 33.2	-0.7
CTGM				IAmb	IAmb	11 44 37.2	
	comp=Z,8.7nm,0.7s						
EPYK	Eagle Plains	84.24	24	P	P	11 44 40.5	+0.5
EPYK				IAmb	IAmb	11 44 42.4	
	comp=Z,6.8nm,1.1s						
M30M	Minto, Yukon	84.89	27	P	P	11 44 44.0	+0.6
M30M				IAmb	IAmb	11 44 46.3	
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	84.95	340	P	P	11 44 42.7	-0.8
	comp=Z,2.5nm,0.7s,baz=81,slow=7.5,SNR=4.0						
	comp=Z,2.5nm,0.7s						
FINES	FINESS Array B	86.60	332	P	P	11 44 50.2	-1.6
	comp=Z,1.0nm,0.4s,baz=54,slow=3.3,SNR=4.0						
	comp=Z,1.0nm,0.4s						
VNDA	Vanda	89.12	173	P	P	11 45 04.2	+0.8
	comp=Z,1.8nm,0.6s,baz=313,slow=6.4,SNR=11						
	comp=Z,1.8nm,0.6s						
VNDA	Vanda	89.12	173	P	P	11 45 05.0	+1.5
VNDA				IAmb	IAmb	11 45 07.4	
	comp=Z,2.0nm,0.7s						
DAG	Danmarks Havn	91.56	352	*i* P	P	11 45 14.0	-0.9
NOA	NORSAR Array B	93.48	334	P	P	11 45 23.2	-1.0
	comp=Z,0.3nm,0.7s,baz=66,slow=4.4,SNR=2.1						
	comp=Z,0.3nm,0.7s						
YKA	Yellowknife Ar	94.52	24	P	P	11 45 27.6	-1.2
	comp=Z,1.7nm,0.8s,baz=302,slow=4.9,SNR=12						
	comp=Z,1.7nm,0.8s						
CLL	Collm	96.74	324	*e*P	P	11 45 39.0	-0.2
CLL				Lm	MLR	12 33 00.0	
	comp=Z,100nm,21.3s						
TORD	Torodi Ar. Bea	120.54	291	PKP	PKPdf	11 50 59.5	-1.6
	comp=Z,0.6nm,0.6s,baz=47,slow=1.8,SNR=6.2						

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*NEIC **31** 11:51:31.9±0.5, 14°.8S±0°.2×167°.2E±0°.1, h60^{km}±12^{km}, mb4.1/8, Error ellipse: s-maj=23.2km s-min=16.8km az=149.0*

*IDC **31** 11:51:34.0±7.5, 14°.99S×167°.30E, h97^{km}±67^{km}, mb3.8/4, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=55.3km s-min=50.4km az=152.0*

*NOU **31** 11:51:36.5, 15°.01S×167°.43E, h102^{km}, MLv4.5/14, Vanuatu Islands*

ISC 31 11:51:37.5±1.4**, 15°.2S**±0°.1×**167°.3E**±0°.2**, h129^{km}, n29, σ1^{s}11**/30**, mb4.0**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.69	162	P	Pn	11 52 20.0	-0.2
LIFNC	LIFOU	5.60	181	Pn	Pn	11 52 58.3	-0.3
KOUNC	Koumac, New Ca	6.09	208	Pn	Pn	11 53 03.3	-2.0
KOUNC	Koumac, New Ca	6.09	208	P	Pn	11 53 06.1	+0.8
MARNC	Mare, Loyalty	6.33	174	Pn	Pn	11 53 06.9	-1.6
MARNC	Mare, Loyalty	6.33	174	P	Pn	11 53 09.6	+1.1
	0.5nm,1.3s						
YATNC	Mamie plateau,	6.88	183	P	Pn	11 53 15.4	-0.6
DZM	Mont Dzumac	6.93	187	P	Pn	11 53 16.1	-0.7
	1.4nm,0.3s,baz=12,slow=20,SNR=34						
DZM				S	Sn	11 54 33.5	-0.8
	7.8nm,0.3s,baz=141,slow=23,SNR=8.8						
	8.1nm,0.7s						
DZM	Mont Dzumac	6.93	187		Pn	11 53 16.3	-0.4
DZM	Mont Dzumac	6.93	187	P	Pn	11 53 16.5	-0.2
NOUC	Port Laguerre	6.98	188	P	Pn	11 53 18.9	+1.6
ONTNC	Ouen Toro	7.17	186	Pn	Pn	11 53 17.4	-2.4
ONTNC	Ouen Toro	7.17	186	P	Pn	11 53 21.5	+1.7
OUENC	Ouen Island, N	7.24	183	Pn	Pn	11 53 21.2	+0.4
OUENC	Ouen Island, N	7.24	183	P	Pn	11 53 22.9	+2.1
PINNC	Pines Island,	7.42	179	Pn	Pn	11 53 23.4	+0.2
PINNC	Pines Island,	7.42	179	P	Pn	11 53 23.4	+0.2
STKA	Stephens Creek	28.75	230	P	P	11 57 24.4	+1.3
	1.8nm,0.3s,baz=51,slow=9.7,SNR=12						
	1.8nm,0.3s						
WR0	Warramunga Arr	31.58	256	P	P	11 57 47.7	-0.4
WR0				IAmb	IAmb	11 58 13.8	
	comp=Z,4.0nm,1.1s						
WB0	Warramunga Arr	31.70	257	P	P	11 57 48.9	-0.4
WB0				IAmb	IAmb	11 57 53.3	
	comp=Z,7.4nm,1.3s						
WB2	Warramunga Arr	31.75	257	P	P	11 57 49.1	-0.6
WB2				IAmb	IAmb	11 58 14.1	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	31.77	257	P	P	11 57 49.0	-0.8
	comp=Z,0.6nm,0.7s,baz=84,slow=9.1,SNR=7.2						
	comp=Z,0.6nm,0.7s						
WRA	Warramunga Arr	31.77	257	P	P	11 57 49.2	-0.6
AS31	Alice Springs	32.56	250	P	P	11 57 56.8	0.0
AS31				IAmb	IAmb	11 57 57.6	
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	32.56	250	P	P	11 57 56.5	-0.3
	comp=Z,2.0nm,0.7s,baz=81,slow=9.2,SNR=35						
	comp=Z,2.0nm,0.7s						
BBOO	Buckleboo	33.36	233	P	P	11 58 04.8	+1.3
FORT	Forrest	39.12	240	P	P	11 58 53.6	+1.1
MKAR	Makanchi Array	97.53	316	P	P	12 04 56.9	-0.2
	comp=Z,0.2nm,0.4s,baz=101,slow=5.3,SNR=2.6						
	comp=Z,0.2nm,0.4s						
TORD	Torodi Ar. Bea	165.91	264	PKP	PKPdf	12 11 27.1	-0.9
	comp=Z,0.2nm,0.6s,baz=90,slow=1.4,SNR=1.6						

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*NNC **31** 12:01:56.8±2.9, 44°.25N×83°.07E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=23.9km s-min=10.5km az=128.0*

*SOME **31** 12:01:59.1, 44°.30N×83°.00E, h20^{km}*

ISC 31 12:01:56.6±2.0**, 44°.18N**±0°.09×**83°.10E**±0°.08**, h10^{km}, n11, σ1^{s}72**/16**, 4C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	2.38	275	*e*P	Pg	12 02 42.2	-0.1
	2.7nm,0.7s						
DJR				*e*S	Sg	12 03 12.6	-0.6
	5.7nm,0.3s						
DJR	Jarkent	2.38	275	Pg	Pg	12 02 41.3	-1.0
	6.4nm,0.4s						
DJR				Lg	Lg	12 03 12.4	
	5.7nm,0.3s						
MK31	Makanchi Array	2.67	348	⇑Pg	Pb	12 02 44.5	0.0
	0.1nm,0.2s,baz=163,slow=16,SNR=34						
MK31				⇑Lg	Lg	12 03 18.4	
	0.6nm,0.2s,baz=158,slow=27,SNR=14						
PDGK	Podgornoye	2.75	253	Pg	Pg	12 02 47.9	-1.4
	0.6nm,0.2s						
PDGK				Lg	Lg	12 03 23.3	
	4.7nm,0.6s						
PDGK	Podgornoye	2.75	253	⇑Pg	Pb	12 02 46.9	+0.9
	0.3nm,0.3s						
PDGK				⇑Lg	Lg	12 03 22.9	
	4.3nm,0.4s						
KAPS	Kapalarasan	2.89	294	*e*P	Pb	12 02 49.3	+1.1
	1.2nm,0.4s						
KAPS				*e*S	Sb	12 03 25.4	+1.9
	4.2nm,0.5s						
KAPS	Kapalarasan	2.89	294	Pg	Pb	12 02 49.0	+0.8
	1.6nm,0.4s						
KAPS				Lg	Lg	12 03 25.3	
	3.7nm,0.4s						
KPKS	Kokpek	3.28	259	*e*P	Pb	12 02 56.5	+1.6
	1.9nm,0.2s						
KPKS				*e*S	Sb	12 03 37.6	+2.8
	19nm,0.4s						
ZSN	Zaisan	3.49	20	*e*P	Pb	12 02 59.3	+0.8
	2.4nm,0.2s						
ZSN				*e*S	Sb	12 03 42.3	+1.3
	2.9nm,0.4s						
KTBS	Karatobe	4.66	266	*e*P	Pg	12 03 23.4	-2.5
	2.0nm,0.7s						
KTBS				*e*S	Sg	12 04 24.0	-2.1
	3.3nm,0.5s						
KTBS	Karatobe	4.66	266	Pg	Pg	12 03 23.4	-2.5
	2.0nm,0.7s						
KTBS				Lg	Lg	12 04 24.0	
	3.3nm,0.5s						

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*SKHL **31** 12:06:41.4±0.4, 45°.50N×155°.40E, h43^{km}±6^{km}, mb4.7/3*

*IDC **31** 12:06:44.3±1.8, 47°.22N×154°.27E, h0^{km}, mb3.7/5, mbtmp3.7/6, ML2.6/1, Error ellipse: s-maj=49.9km s-min=25.2km az=151.0*

ISC 31 12:06:44.2±1.5**, 45°.5N**±0°.4×**155°.0E**±0°.1**, h10^{km}, n17, σ0^{s}72**/13**, mb3.9**/5**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	5.01	269	*i* P	Pn	12 07 59.1	-0.3
KUR				AMB	AMB	12 08 00.0	
	50nm,0.4s						
KUR				*i* S	Sn	12 08 57.0	-0.2
KUR				A	A	12 09 02.1	
	70nm,0.3s						
KUR				A	A	12 09 02.1	
	40nm,0.3s						
SHO	Shikotan	6.03	257	*e*P	Pn	12 08 12.9	-0.5
SHO				AMB	AMB	12 08 15.8	
	30nm,0.4s						
SHO				*e*S	Sn	12 09 21.5	-1.0
SHO				A	A	12 09 29.2	
	40nm,0.2s						
SHO				A	A	12 09 29.2	
	20nm,0.2s						
YUK	Yuzh-Kuril'sk	6.65	260	*e*P	Pn	12 08 22.0	+0.1
YUK				AMB	AMB	12 08 24.2	
	30nm,0.4s						
YUK				*e*S	Sn	12 09 37.8	+0.1
YUK				A	A	12 09 39.5	
	160nm,0.5s						
YUK				A	A	12 09 39.5	
	170nm,0.5s						
NMR	Nemuro--Hokkai	6.95	255	*e*P	Pn	12 08 26.1	0.0
NMR				*e*S	Sn	12 09 44.3	-0.9
GLVR	Golovnino	6.97	258	*e*P	Pn	12 08 26.6	+0.3
GLVR				*e*S	Sn	12 09 45.7	+0.1
PETK	Petropavlovsk-	7.79	12	Pn	Pn	12 08 16.2	-21
	0.6nm,0.3s,baz=185,slow=11,SNR=10.0						
	2.5nm,0.5s						
KSRS	Korea Array	21.73	258	P	P	12 11 37.2	+1.7
	0.7nm,0.6s,baz=56,slow=11,SNR=2.1						
	0.7nm,0.6s						
H11N2	WAKE ISLAND Hy	27.57	155	T	T	12 44 42.5	
	baz=341,slow=74,SNR=3.9						
H11N1	WAKE ISLAND Hy	27.58	155	T	T	12 44 40.7	
	baz=341						
H11N3	WAKE ISLAND Hy	27.58	155	T	T	12 44 43.7	
	baz=341,slow=74,SNR=3.0						
H11S1	WAKE ISLAND Hy	28.67	156	T	T	12 46 08.1	
	baz=343						
H11S3	WAKE ISLAND Hy	28.68	156	T	T	12 46 09.9	
	baz=343						
H11S2	WAKE ISLAND Hy	28.68	156	T	T	12 46 09.3	
	baz=343						
KURBB	Kurchatov Arra	49.20	305	P	P	12 15 23.9	-8.4
	1.2nm,0.7s,baz=65,slow=8.1,SNR=6.0						
	1.2nm,0.7s						
CMAR	Chiang Mai Arr	53.36	259	P	P	12 16 03.7	-0.2
	0.5nm,0.3s,baz=35,slow=8.1,SNR=5.1						
	0.5nm,0.3s						
NVAR	Mina Array Bea	61.85	63	P	P	12 17 03.4	-0.4
	0.4nm,0.6s,baz=287,slow=6.9,SNR=4.5						
	0.4nm,0.6s						
FINES	FINESS Array B	65.68	336	P	P	12 17 19.3	-9.0
	1.3nm,0.5s,baz=53,slow=9.8,SNR=5.2						
	1.3nm,0.5s						

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*IDC **31** 12:06:41.4±2.1, 11°.56S×119°.47E, h0^{km}, mb4.1/2, mbtmp4.4/5, ML4.4/3, MS3.3/1, Error ellipse: s-maj=56.8km s-min=25.2km az=64.0*

*DJA **31** 12:06:47.4±0.5, 11°S±3°×12°0E±°, h39^{km}±10^{km}, M4.9/19, mB5.5/11, mb4.8/15, MLv4.9/19, Mw(mB)5.0/11*

ISC 31 12:06:45.6±0.6**, 11°.42S**±0°.05×**119°.72E**±0°.06**, h21^{km}, n55, σ1^{s}13**/59**, mb4.2**/4**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.46	35	P	Pn	12 07 11.7	+0.9
BASI				S	Sn	12 07 29.7	+0.4
WBSI	Waikabubak, Su	1.80	350	P	Pb	12 07 16.7	-1.2
WBSI				S	Sn	12 07 37.8	+0.1
PLAI	Plampang	3.21	323	P	Pn	12 07 36.1	+1.3
PLAI	Plampang	3.21	323	P	Pn	12 07 36.5	+1.7
EDFI	Ende, Flores	3.29	36	P	Pn	12 07 36.1	0.0
MMRI	Maumere	3.72	42	P	Pn	12 07 41.8	-0.1
MMRI	Maumere	3.72	42	P	Pn	12 07 42.2	+0.3
BATI	Baumata	4.06	73	Pn	Pn	12 07 48.5	+1.9
	55nm,0.3s,baz=269,slow=6.7,SNR=30						
BATI				Sn	Sn	12 08 31.9	-1.6
	71nm,0.3s,baz=58,slow=23,SNR=13						
	112nm,0.3s						
BATI	Baumata	4.06	73	P	Pn	12 07 47.9	+1.3
SOEI	Soe	4.77	70	P	Pn	12 07 58.3	+1.9
IGBI	Denpasar	5.19	299	P	Pn	12 08 01.9	-0.2
DNP	Denpasar	5.21	301	P	Pn	12 08 03.6	+1.2
	24nm56μm1μm,0.7s						
BSSI	Bau Bau, Buton	5.30	8	P	Pn	12 08 05.2	+1.6
SRBI	Singaraja	5.54	306	P	Pn	12 08 07.9	+1.0
	1.1nm81nm,0.7s						
BKSI	Bulukumba	6.07	4	P	Pn	12 08 16.0	+1.8
	0.4nm1μm83nm,0.6s						
JAGI	Jajag, Banyuwa	6.22	298	P	Pn	12 08 15.3	-0.9
	2.0nm10μm248nm,0.6s						
JAGI	Jajag, Banyuwa	6.22	298	P	Pn	12 08 15.0	-1.2
KAPI	Kappang	6.37	0	Pn	Pn	12 08 19.7	+1.5
	3.2nm,0.3s,baz=204,slow=10.0,SNR=2.3						
KAPI				Sn	Sn	12 09 27.8	-2.6
	11nm,0.3s,baz=302,slow=19,SNR=7.2						
	12nm,0.4s						
ABJI	Asem Bagus	6.50	303	P	Pn	12 08 21.2	+1.1
	1.1nm80nm,0.9s						
GMJI	Gumukmas	6.93	296	P	Pn	12 08 25.2	-0.8
	0.7nm2μm64nm,1.1s						
BLJI	Banyuglugur	7.06	301	P	Pn	12 08 28.1	+0.3
	0.9nm3μm76nm,0.5s						
KMMI	Kalianget	7.15	307	P	Pn	12 08 30.3	+1.3
	0.2nm34nm,0.7s						
PCJI	Pacitan	9.01	290	P	Pn	12 08 53.3	-1.2
	86nm,1.1s						
BBKI	Banjar Baru	9.27	328	P	Pn	12 08 58.9	+0.8
MBWA	Marble Bar	9.68	180	P	Pn	12 09 03.4	-0.4
UGM	Wanagama	9.71	290	P	Pn	12 09 06.0	+1.8
KNRA	Kununurra	9.76	117	P	Pn	12 09 04.7	-0.2
PSA00	Pilbara Seismi	10.10	179	P	Pn	12 09 09.4	-0.1
MTN	Manton Dam	11.25	98	P	Pn	12 09 25.6	+0.3
GIRL	Giralia	12.33	204	P	Pn	12 09 39.9	-0.1
KDU	Kakadu	12.54	97	P	Pn	12 09 43.5	+0.6
LBMI	Labuha	13.21	36	P	Pn	12 09 53.5	+1.4
	372nm18nm,0.8s						
XMI	Christmas Isla	13.81	273	P	Pn	12 09 59.9	-0.4
FAKI	Fak Fak	15.02	57	P	Pn	12 10 18.3	+1.5
	48nm,0.9s						
FAKI	Fak Fak	15.02	57	P	Pn	12 10 15.0	-1.8
WRA	Warramunga Arr	16.42	123	Pn	Pn	12 10 32.0	-2.9
	1.0nm,0.3s,baz=291,slow=13,SNR=68						
WRA				Sn	Sn	12 13 21.9	-15
	1.4nm,0.3s,baz=294,slow=23,SNR=9.6						
WRA				LR	LR	12 16 59.8	
	comp=Z,109nm,19.9s,baz=204,slow=37						
WRAB	Tennant Creek	16.43	123	P	Pn	12 10 33.0	-2.0
MORW	Morawa	17.89	191	P	Pn	12 10 52.9	-0.4
ASAR	Alice Springs	18.18	134	P	Pn	12 10 56.6	-0.3
	1.2nm,0.3s,baz=317,slow=13,SNR=161						
ASAR				S	Sn	12 14 05.4	-14
	1.7nm,0.6s,baz=316,slow=26,SNR=8.7						
	17nm,0.8s						
BLDU	Ballidu	19.30	188	P	Pn	12 11 11.2	+0.8
	10nm,0.7s						
KLBR	Kellerberrin	20.16	185	P	P	12 11 19.2	+0.6
KRJI	Kerinci	20.34	296	P	P	12 11 21.3	+0.4
	17μm153nm,1.0s						
FORT	Forrest	20.76	159	P	P	12 11 26.0	+0.8
QIS	Mount Isa	21.15	118	P	P	12 11 30.4	+0.9
GENI	Genyem	22.09	68	P	P	12 11 39.2	-0.5
OOD	Oodnadatta	22.13	140	P	P	12 11 39.5	-0.5
MULG	Mulgathing	23.02	147	P	P	12 11 49.3	0.0
LCRK	Leigh Creek	25.56	141	P	P	12 12 13.5	+0.3
BBOO	Buckleboo	26.05	147	P	P	12 12 17.5	-0.1
NAPP	Napperby	27.48	145	P	P	12 12 31.0	+0.5
	10.0nm,0.9s						
HTT	Hallett	28.10	144	P	P	12 12 36.4	+0.3
STKA	Stephens Creek	28.66	139	P	P	12 12 40.6	-0.5
	2.3nm,0.5s,baz=309,slow=11,SNR=9.2						
	2.3nm,0.5s						
STKA	Stephens Creek	28.66	139	P	P	12 12 41.0	-0.1
	1.8nm,1.8s						
ARPS	Mount Arapiles	32.16	145	P	P	12 13 12.3	+0.4
	8.2nm,0.8s						
SONM	Songino Array	60.17	350	P	P	12 16 51.3	-0.6
	0.6nm,0.6s,baz=152,slow=6.7,SNR=3.7						
	0.6nm,0.6s						

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*IDC **31** 12:13:08.3±0.8, 36°.35N×77°.45E, h0^{km}, mb3.8/9, mbtmp3.8/11, ML2.9/2, Error ellipse: s-maj=21.6km s-min=18.1km az=63.0*

*SOME **31** 12:13:16.7, 37°.37N×76°.07E, h15^{km}*

*NEIC **31** 12:13:19.5±2.6, 36°.46N±0°.08×77°.6E±0°.1, h94^{km}±2^{km}, mb4.0/22, ML4.4(BJI), Error ellipse: s-maj=13.8km s-min=10.9km az=122.0*

*NNC **31** 12:13:20.1±3.4, 36°.69N×77°.18E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=27.0km s-min=23.0km az=173.0*

*BJI **31** 12:13:21.3±0.0, 36°.51N×77°.96E, h96^{km}, mb4.1/13, mB4.2/11*

ISC 31 12:13:18.5±0.5**, 36°.35N**±0°.04×**77°.74E**±0°.05**, h96^{km}, n106, σ2^{s}20**/110**, mb4.0**/20**, 6C-8D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	3.46	337	P	Pn	12 14 11.0	+0.6
KSH				S	Sn	12 14 48.3	-2.2
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,2μm,0.4s						
CHCP	Chirah Chowk	4.55	235	P	Pn	12 14 28.6	+3.5
NIL	Nilore	4.56	235	Pn	Pn	12 14 27.3	+2.0
BHK	Bhakra	5.04	193	*e*PN	Pn	12 14 32.0	+0.2
BHK				*e*SN	Sn	12 15 25.2	-3.6
CEP	Cherat	5.40	244	P	Pn	12 14 38.3	+1.5
CEP				S	Sn	12 15 37.0	-0.8
DRK	Karamyk	5.64	305		Pn	12 14 40.7	+0.6
KDJ	Kajisay	5.79	356	Pn	Pn	12 14 42.1	+0.1
ULHL	Ulahol	6.00	349	P	Pn	12 14 47.6	+2.7
	SNR=14						
THW	Thamme Wali	6.09	236	P	Pn	12 14 47.4	+1.4
SARP	Sargodha	6.10	225	P	Pn	12 14 48.0	+1.9
UCH	Uchtor	6.38	338	P	Pn	12 14 52.3	+2.0
	SNR=65						
GAR	Garm	6.45	296		Pn	12 14 52.0	+1.0
AML	Almayashu	6.57	333	P	Pn	12 14 55.5	+2.6
	SNR=12						
KBK	Karagaybulak	6.66	342	P	Pn	12 14 56.2	+2.4
	SNR=11						
TNSS	Tian-Shan	6.71	355	*e*P	Pn	12 15 03.3	+8.6
	12nm,0.5s						

TNSS				*e*S	Sn	12 16 21.1	+11
	47nm,0.9s						
AAK	**Ala-Archa**	**6.76**	**339**	P	**Pn**	**12 14 57.8**	**+2.5**
	SNR=20						
AAK	**Ala-Archa**	**6.76**	**339**	Pn	**Pn**	**12 14 57.6**	**+2.4**
	9.6nm,0.3s,baz=151,slow=9.6,SNR=37						
AAK				Sn	**Sn**	**12 16 08.6**	**-2.2**
	3.9nm,0.3s,baz=249,slow=3.7,SNR=4.0						
AAK	**Ala-Archa**	**6.76**	**339**	Pn	**Pn**	**12 14 53.7**	**-1.5**
TKM2	**Tokmak 2**	**6.77**	**347**	P	**Pn**	**12 14 57.5**	**+2.1**
	SNR=19						
TKM2	**Tokmak 2**	**6.77**	**347**	⇑P	**Pn**	**12 14 57.3**	**+1.9**
	4.4nm,0.4s						
TKM2				⇑S	**Sn**	**12 16 10.5**	**-0.5**
	32nm,0.7s						
KST	**Kastek**	**6.82**	**349**	*e*P	Pn	12 15 04.7	+8.7
	8.7nm,0.5s						
KST				*e*S	Sn	12 16 23.6	+11
	77nm,0.8s						
MDOK	**Medeo**	**6.83**	**356**	*e*P	Pn	12 15 05.6	+9.5
	22nm,0.7s						
MDOK				*e*S	Sn	12 16 24.9	+13
	67nm,0.9s						
MDOK	**Medeo**	**6.83**	**356**	⇓P	**Pn**	**12 14 57.9**	**+1.8**
	37nm,0.6s						
MDOK				⇑S	**Sn**	**12 16 12.7**	**+0.4**
	58nm,0.6s						
MTBS	**Maitube**	**6.85**	**352**	*e*P	Pn	12 15 05.0	+8.7
	22nm,0.4s						
MTBS				*e*S	Sn	12 16 24.0	+11
	44nm,0.6s						
FRU1	**Bishkek**	**6.88**	**341**	Pn	**Pn**	**12 14 55.3**	**-1.5**
CHMS	**Chumysh**	**7.03**	**342**	P	**Pn**	**12 15 02.7**	**+3.9**
	SNR=5.8						
CHMS	**Chumysh**	**7.03**	**342**	⇓P	**Pn**	**12 15 00.5**	**+1.7**
	4.4nm,0.3s						
CHMS				⇓S	**Sn**	**12 16 14.4**	**-2.6**
	76nm,1.2s						
PDGK	**Podgornoye**	**7.10**	**10**	⇓P	**Pn**	**12 15 00.7**	**+0.9**
	255nm,0.4s						
PDGK				⇑S	**Sn**	**12 16 23.0**	**+4.0**
	306nm,1.0s						
CHGR	**Chuyangaron**	**7.20**	**291**	Pn	**Pn**	**12 15 01.7**	**+0.5**
MRKS	**Merke**	**7.28**	**333**	*e*P	Pn	12 15 07.4	+5.3
	3.2nm,0.5s						
MRKS				*e*S	**Sn**	**12 16 28.3**	**+5.1**
	42nm,0.5s						
KBL	**Kabul**	**7.32**	**258**	Pn	**Pn**	**12 15 03.7**	**+0.7**
USP	**Ospenovka**	**7.34**	**341**	P	**Pn**	**12 15 07.2**	**+4.1**
	SNR=5.7						
KTBS	**Karatobe**	**7.40**	**354**	*e*P	Pn	12 15 14.9	+11
	6.5nm,0.6s						
KTBS				*e*S	Sn	12 16 41.4	+15
	57nm,0.7s						
SGDS	**Sogindy**	**7.49**	**342**	*e*P	Pn	12 15 13.7	+8.8
	2.1nm,0.2s						
SGDS				*e*S	Sn	12 16 39.4	+11
	18nm,1.3s						
KRBS	**Karabastau**	**7.51**	**348**	*e*P	Pn	12 15 16.7	+11
	5.0nm,0.4s						
KRBS				*e*S	Sn	12 16 44.3	+16
	42nm,0.7s						
KUU	**Kurty**	**7.61**	**352**	*e*P	Pn	12 15 19.5	+13
	4.6nm,0.2s						
KUU				*e*S	Sn	12 16 49.3	+18
	59nm,0.8s						
IUG	**Iuzhnay**	**8.32**	**316**	*e*P	**Pn**	**12 15 20.8**	**+4.4**
	382nm,0.3s						
IUG				*e*S	**Sn**	**12 16 51.3**	**+2.7**
	136nm,0.5s						
KK31	**Karatay Array**	**8.74**	**323**		**Pn**	**12 15 23.1**	**+1.0**
KK31	**Karatay Array**	**8.74**	**323**	P	**Pn**	**12 15 21.4**	**-0.6**
	1.9nm,0.3s,baz=136,slow=14,SNR=59						
KK31				⇑S	**Sn**	**12 16 55.5**	**-3.3**
	9.5nm,0.5s,baz=134,slow=22,SNR=7.2						
KKAR	**Karatay Array**	**8.74**	**323**	Pn	**Pn**	**12 15 21.9**	**-0.1**
KKAR	**Karatay Array**	**8.74**	**323**		**Pn**	**12 15 23.1**	**+1.1**
DANN	**Dangsing**	**9.46**	**146**	*e*P	**Pn**	**12 15 30.1**	**-2.1**
GKN	**Gorkha**	**10.16**	**143**	*e*P	**Pn**	**12 15 40.2**	**-1.4**
WMQ	**Urumqi**	**10.66**	**43**	P	**Pn**	**12 15 46.8**	**-1.4**
WMQ				S	**Sn**	**12 17 37.0**	**-8.6**
DMN	**Daman**	**10.72**	**142**	*e*P	**Pn**	**12 15 47.0**	**-2.3**
JHNI	**Jhansi**	**10.87**	**176**	*e*P	**Pn**	**12 15 48.9**	**-2.2**
JHNI				*e*S	Sn	12 17 41.6	-9.2
GUN	**Gumba**	**10.88**	**138**	*e*P	**Pn**	**12 15 51.3**	**-0.2**
PKIN	**Phulchoki**	**10.89**	**141**	*e*P	**Pn**	**12 15 50.0**	**-1.6**
PKI	**Pulchoki**	**10.90**	**141**	*e*P	**Pn**	**12 15 49.7**	**-2.2**
MAKZ	**Makanchi**	**10.92**	**16**	Pn	**Pn**	**12 15 50.4**	**-1.2**
MAKZ	**Makanchi**	**10.92**	**16**	⇓P	**Pn**	**12 15 52.8**	**+1.1**
	64nm,0.4s						
MK31	**Makanchi Array**	**10.97**	**17**		**Pn**	**12 15 51.2**	**-1.1**
MK31	**Makanchi Array**	**10.97**	**17**	P	**Pn**	**12 15 53.1**	**+0.7**
	14nm,0.3s,baz=198,slow=13,SNR=824						
MKAR	**Makanchi Array**	**10.97**	**17**	Pn	**Pn**	**12 15 51.2**	**-1.2**
	19nm,0.3s,baz=201,slow=12,SNR=319						
MKAR				Sn	**Sn**	**12 17 45.7**	**-7.4**
	11nm,0.3s,baz=199,slow=18,SNR=17						
MKAR	**Makanchi Array**	**10.97**	**17**	Pn	**Pn**	**12 15 51.4**	**-1.0**
JIRN	**Jiri**	**11.24**	**138**	*e*P	**Pn**	**12 15 55.2**	**-1.2**
RAMN	**Ramite**	**12.03**	**139**	*e*P	**Pn**	**12 16 03.5**	**-3.3**
TAPN	**Taplejung**	**12.33**	**134**	*e*P	**Pn**	**12 16 09.2**	**-1.8**
BHPL	**Bhopal**	**13.07**	**181**	*e*P	**Pn**	**12 16 18.8**	**-1.6**
GOMU	**GeErMu**	**13.78**	**86**	P	**Pn**	**12 16 30.8**	**+0.8**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,72nm,8.5s						
KURBB	**Kurchatov Arra**	**14.28**	**2**	Pn	**Pn**	**12 16 32.3**	**-3.7**
	baz=183,slow=12,SNR=4.1						
	0.8nm,0.5s						
KURK	**Kurchatov**	**14.38**	**2**	Pn	**Pn**	**12 16 37.3**	**+0.1**
BRVK	**Borovoye**	**17.51**	**345**		**P**	**12 17 13.9**	**-2.2**
GTA	**Gaotai**	**17.69**	**73**	⇓P	**Pn**	**12 17 20.8**	**+2.1**
GTA				pP	pP	12 17 40.3	+3.0
GTA				sP	sP	12 17 54.0	+4.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,69nm,6.5s						
GTA				LR	LR		
	comp=N,90nm,16.4s						
GTA				LR	LR		
	comp=E,170nm,16.0s						
GTA				LR	LR		
	comp=Z,94nm,17.4s						
ZAA0	**Zalesovo Array**	**18.27**	**13**	P	**P**	**12 17 23.3**	**-1.1**
ZAA0				IAmb	IAmb	12 17 45.9	
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**18.27**	**13**	P	**P**	**12 17 24.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=209,slow=10.0,SNR=11						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**18.27**	**13**		**P**	**12 17 23.3**	**-1.1**
AB31	**Akbulak array**	**18.30**	**320**	⇓P	**Pn**	**12 17 27.0**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=125,slow=12,SNR=28						
AB31				⇓S	**S**	**12 20 45.9**	**-2.7**
	comp=Z,1.5nm,0.7s						
ABKAR	**Akbulak array**	**18.30**	**320**	P	**P**	**12 17 23.7**	**-1.0**
AKTO	**Aktyubinsk**	**20.00**	**321**	P	**P**	**12 17 44.0**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=147,slow=8.0,SNR=7.8						
AKTO				S	**S**	**12 21 21.1**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=135,slow=20,SNR=2.0						
AKTO	**Aktyubinsk**	**20.00**	**321**	⇑P	Pn	12 17 47.4	+1.5
	comp=Z,3.8nm,1.0s						
LZH	**Lanzhou**	**21.05**	**83**	*e*P	**P**	**12 17 56.3**	**+1.4**
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				LR	LR		
	comp=Z,180nm,14.4s						
LZH				LR	LR		
	comp=Z,120nm,13.0s						
LZH				LR	LR		
	comp=Z,160nm,15.4s						
WSAR	**Wadi Sarin**	**21.06**	**237**	P	**P**	**12 17 52.9**	**-2.0**
	comp=Z,6.2nm,1.0s,baz=135,slow=15,SNR=2.0						
	comp=Z,6.2nm,1.0s						
ARU	**Arti**	**23.89**	**333**	P	**P**	**12 18 23.5**	**+0.5**
ARU				IAmb	IAmb	12 18 54.6	
	comp=Z,2.9nm,0.6s						
SONM	**Songino Array**	**24.02**	**53**	P	**P**	**12 18 26.5**	**+2.0**
	comp=Z,3.9nm,0.6s,baz=248,slow=9.8,SNR=24						
	comp=Z,3.9nm,0.6s						
SONM	**Songino Array**	**24.02**	**53**	P	**P**	**12 18 25.8**	**+1.3**
SONM				IAmb	IAmb	12 18 28.7	
	comp=Z,4.1nm,1.1s						
ULN	**Ulaanbaatar**	**24.45**	**53**	P	**P**	**12 18 29.1**	**+0.7**
ULN				IAmb	IAmb	12 18 32.5	
	comp=Z,7.9nm,1.0s						
CHTO	**Chiang Mai**	**25.56**	**127**	P	**P**	**12 18 38.5**	**0.0**
CHTO				IAmb	IAmb	12 18 46.8	
	comp=Z,7.1nm,1.3s						
CMAR	**Chiang Mai Arr**	**25.82**	**128**	P	**P**	**12 18 43.5**	**+2.6**
	comp=Z,2.9nm,0.7s,baz=305,slow=11,SNR=23						
	comp=Z,2.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**25.82**	**128**	P	**P**	**12 18 42.1**	**+1.2**
FINES	**FINESS Array B**	**40.70**	**325**	P	**P**	**12 20 48.6**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=116,slow=13,SNR=2.5						
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**40.70**	**325**	P	**P**	**12 20 51.2**	**+2.0**
KHC	**Kasperske Hory**	**47.46**	**307**	P	**P**	**12 21 41.6**	**-1.8**
KHC				IAmb	IAmb	12 21 55.9	
	comp=Z,4.3nm,1.4s						
CLL	**Collm**	**47.49**	**310**	*e*P	**P**	**12 21 46.0**	**+2.4**
NC405	**NORSAR Array S**	**47.53**	**323**	P	**P**	**12 21 42.4**	**-1.4**
NB2	**NORSAR Subarra**	**47.78**	**323**	P	**P**	**12 21 47.1**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**47.78**	**323**	P	**P**	**12 21 46.3**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=90,slow=7.5,SNR=1.4						
	comp=Z,0.3nm,0.5s						
NC204	**NORSAR Array S**	**47.99**	**323**	P	**P**	**12 21 45.2**	**-2.2**
EUNU	**Eureka**	**63.51**	**357**	P	**P**	**12 23 38.6**	**+0.7**
EUNU				IAmb	IAmb	12 24 06.2	
	comp=Z,3.4nm,1.1s						
PSA00	**Pilbara Seismi**	**70.02**	**138**	P	**P**	**12 24 20.0**	**+0.1**
PSA00				IAmb	IAmb	12 24 28.7	
	comp=Z,3.1nm,1.4s						
IMAR	**Indian Mountai**	**70.57**	**20**	P	**P**	**12 24 23.4**	**+0.7**
TOA0	**Torodi Ar. Sit**	**71.15**	**273**	P	**P**	**12 24 27.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**71.15**	**273**	P	**P**	**12 24 27.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=47,slow=5.7,SNR=8.2						
	comp=Z,0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**71.15**	**273**	P	**P**	**12 24 26.9**	**-0.2**
I21K	**Tanana**	**71.66**	**20**	P	**P**	**12 24 30.2**	**+0.8**
I21K				IAmb	IAmb	12 24 36.0	
	comp=Z,2.5nm,1.1s						
J20K	**Nowinta River**	**71.80**	**21**	P	**P**	**12 24 31.7**	**+1.4**
J20K				IAmb	IAmb	12 24 54.7	
	comp=Z,6.7nm,1.4s						
H24K	**Noodor Dome**	**72.22**	**18**	P	**P**	**12 24 33.7**	**+0.9**
IL31		**73.33**	**18**	P	**P**	**12 24 39.2**	**+0.1**
IL31				IAmb	IAmb	12 24 43.7	
	comp=Z,1.8nm,0.5s						
ILAR	**Eielson Array**	**73.33**	**18**	P	**P**	**12 24 39.0**	**-0.3**
DHY	**Denali Highway**	**74.57**	**20**	P	**P**	**12 24 47.6**	**+0.9**
DHY				IAmb	IAmb	12 25 06.8	
	comp=Z,5.6nm,1.5s						
RIDG	**Independent Ri**	**74.69**	**18**	P	**P**	**12 24 47.5**	**+0.2**
SCRK	**Sand Creek**	**74.70**	**18**	P	**P**	**12 24 47.8**	**+0.4**
WRA	**Warramunga Arr**	**77.41**	**126**	P	**P**	**12 25 06.5**	**+3.2**
	comp=Z,0.2nm,0.8s,baz=309,slow=9.1,SNR=18						
	comp=Z,0.2nm,0.8s						
WRA	**Warramunga Arr**	**77.41**	**126**	IAmb	IAmb	12 25 06.7	
	comp=Z,0.1nm,0.8s						
ASAR	**Alice Springs**	**79.83**	**129**	P	**P**	**12 25 19.8**	**+3.3**
	comp=Z,0.8nm,1.2s,baz=321,slow=5.5,SNR=3.2						
	comp=Z,0.8nm,1.2s						
YKA	**Yellowknife Ar**	**81.00**	**6**	P	**P**	**12 25 23.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=342,slow=5.6,SNR=5.2						
	comp=Z,0.2nm,0.3s						

IDC ***31*** *12:30:59.2±1.2, 56°.51N×157°.94W, h0^{km}, mb3.8/8, mbtmp3.8/11, ML3.5/3, MS3.7/2, Error ellipse: s-maj=31.8km s-min=16.5km az=163.0*

AEIC ***31*** *12:31:02±1.8, 57°.07N±0°.03×157°.99W±0°.05, h16^{km}±4^{km}, ML4.1, mb4.3/28(NEIC), ML4.2/36(NEIC), Error ellipse: s-maj=4.8km s-min=3.9km az=153.0*

NEIC ***31*** *12:31:02.7±1.8, 57°.06N±0°.04×158°.05W±0°.07, h20^{km}±2^{km}, Error ellipse: s-maj=6.2km s-min=4.0km az=129.0*

ISC 31 12:31:02.1±1.2, **57°.00N**±0°.03×**157°.92W**±0°.03, **h11**^{km}±8^{km}, **n244**, σ1§**28**/257, **mb4.2**/25, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANNW	**Aniakchak Nort**	**0.16**	**259**		**Pb**	**12 31 06.7**	**-0.5**
ANPB	**Aniakchak Plen**	**0.28**	**225**		**Pg**	**12 31 08.3**	**+0.6**
PLBL	**Peulik Blue Cr**	**0.92**	**40**		**Pn**	**12 31 20.2**	**-0.8**
PLBL					**Sn**	**12 31 34.2**	**-0.1**
VNHG	**Veniaminof 1**	**1.04**	**222**		**Pb**	**12 31 21.8**	**-0.3**
PLK1	**Peulik 1**	**1.07**	**41**		**Pg**	**12 31 22.8**	**+0.1**
PLK3	**Peulik 3**	**1.13**	**52**		**Pg**	**12 31 23.9**	**0.0**
PLK3					**Sg**	**12 31 39.4**	**+0.9**
PLK5	**Peulik 5**	**1.15**	**29**		**Pg**	**12 31 23.8**	**-0.3**
VNFG	**Fog Glacier, M**	**1.15**	**232**		**Pb**	**12 31 24.0**	**0.0**
KJL	**Kejulik**	**1.65**	**49**		**Pb**	**12 31 31.5**	**-1.0**
CHIR	**Chirikof Islan**	**1.74**	**132**		**Pn**	**12 31 33.1**	**+0.9**
CHIR				IAML		12 32 00.3	
	comp=E,3µm,1.0s						
CHIR				IAML		12 32 03.6	
	comp=N,3µm,1.1s						
CHIR	**Chirikof Islan**	**1.74**	**132**		**Sb**	**12 31 56.3**	**+0.5**
CHIR	**Chirikof Islan**	**1.74**	**132**	P	**Pn**	**12 31 32.6**	**+0.5**
	baz=314,SNR=19						
CHIR				S	**Sb**	**12 31 57.0**	**+1.2**
	baz=314						
CAHL	**Cahill**	**1.77**	**52**		**Pb**	**12 31 33.4**	**-1.1**
ANCK	**Angle Creek**	**1.78**	**46**		**Pb**	**12 31 33.5**	**-1.1**
SII	**Sitkinak Islan**	**2.10**	**101**		**Pn**	**12 31 37.7**	**+0.4**
SII				IAML		12 32 12.1	
	comp=N,2µm,0.9s						
SII	**Sitkinak Islan**	**2.10**	**101**		**Sb**	**12 32 05.8**	**-0.6**
SII	**Sitkinak Islan**	**2.10**	**101**	P	**Pn**	**12 31 37.8**	**+0.6**
	baz=284,SNR=24						
SII				S	**Sb**	**12 32 07.1**	**+0.8**
	baz=284						
SDPT	**Sand Point**	**2.19**	**222**		**Pn**	**12 31 38.3**	**0.0**
SDPT	**Sand Point**	**2.19**	**222**		**Sn**	**12 32 05.7**	**+0.4**
SDPT	**Sand Point**	**2.19**	**222**	IAML		12 32 13.3	
	comp=N,1µm,1.5s						
SDPT				IAML		12 32 15.6	
	comp=E,2µm,1.1s						
SDPT	**Sand Point**	**2.19**	**222**	P	**Pn**	**12 31 37.8**	**-0.5**
	baz=38						
CHNA	**Chernabura Isl**	**2.37**	**204**	P	**Pn**	**12 31 41.0**	**+0.2**
	baz=21,SNR=24						
CNBA	**Chernabura Isl**	**2.38**	**204**		**Pn**	**12 31 40.9**	**0.0**
CNBA				IAML		12 32 22.3	
	comp=E,1µm,1.2s						
CNBA				IAML		12 32 25.1	
	comp=N,1µm,0.7s						
OHAK	**Old Harbor**	**2.54**	**83**		**Pn**	**12 31 43.3**	**+0.1**
OHAK				IAML		12 32 23.8	
	comp=N,681nm,1.1s						
OHAK	**Old Harbor**	**2.54**	**83**	P	**Pn**	**12 31 43.1**	**-0.1**
	baz=268,SNR=34						
OHAK				S	**Sn**	**12 32 15.4**	**+1.3**
	baz=268						
BLHA	**Black Hill**	**2.65**	**242**		**Pn**	**12 31 45.2**	**+0.5**
P18K	**Big Mountain,**	**2.79**	**30**	Pn	**Pn**	**12 31 45.3**	**-1.4**
P18K					**Sn**	**12 32 18.1**	**-2.3**
P18K				IAML		12 32 27.7	
	comp=E,559nm,0.8s						
P18K	**Big Mountain,**	**2.79**	**30**	P	**Pn**	**12 31 45.3**	**-1.4**
	baz=213,SNR=28						
Q19K	**Cape Douglas,**	**2.99**	**48**		**Pn**	**12 31 48.5**	**-0.9**
Q19K				IAML		12 32 46.9	
	comp=N,884nm,1.0s						
Q19K	**Cape Douglas,**	**2.99**	**48**	P	**Pn**	**12 31 48.4**	**-1.1**
	baz=232,SNR=13						
Q19K				S	**Sn**	**12 32 27.2**	**+1.9**
	baz=232						
KDAK	**Kodiak Island**	**3.00**	**73**	Pn	**Pn**	**12 31 50.1**	**+0.7**
	comp=N,16nm,0.3s,baz=218,slow=3.3,SNR=183						
KDAK				Sn	**Sb**	**12 32 28.9**	**-3.0**
	comp=N,10nm,0.3s,baz=131,slow=12,SNR=5.4						
	comp=N,58nm,0.4s						
KDAK	**Kodiak Island**	**3.00**	**73**		**Pn**	**12 31 49.6**	**+0.2**
KDAK	**Kodiak Island**	**3.00**	**73**	P	**Pn**	**12 31 49.5**	**0.0**
	baz=258						
KDAK				S	**Sn**	**12 32 26.6**	**+1.3**
	baz=258						
O18K	**Koktuh Hills**	**3.20**	**25**		**Pn**	**12 31 51.1**	**-1.2**
O18K				IAML		12 32 42.4	
	comp=N,557nm,0.8s						
O18K				IAML		12 32 44.7	
	comp=E,483nm,0.9s						
O18K	**Koktuh Hills**	**3.20**	**25**	P	**Pn**	**12 31 51.2**	**-1.1**
	baz=209,SNR=18						
O18K				Sb	**Sb**	**12 32 39.0**	**+1.2**
	baz=209						
Q20K	**Shuyak Island**	**3.37**	**59**	P	**Pn**	**12 31 55.2**	**+0.6**
	baz=245						
Q20K				Sb	**Sb**	**12 32 45.9**	**+3.1**
	baz=245						
FALS	**False Pass**	**3.76**	**238**	Pn	**Pn**	**12 31 59.3**	**-0.7**
N18K	**Kilae Creek**	**3.84**	**15**		**Pn**	**12 31 59.9**	**-1.3**
N18K				IAML		12 33 12.0	
	comp=N,304nm,0.6s						
N18K				IAML		12 33 13.8	
	comp=E,326nm,1.3s						
N18K	**Kilae Creek**	**3.84**	**15**	P	**Pn**	**12 31 59.8**	**-1.3**
	baz=198,SNR=16						
N18K				Sb	**Sb**	**12 32 57.8**	**+1.5**
	baz=198						
O20K	**Slope Mountain**	**4.16**	**40**		**Pn**	**12 32 06.0**	**+0.5**
O20K	**Slope Mountain**	**4.16**	**40**	P	**Pn**	**12 32 05.0**	**-0.4**
	baz=225,SNR=6.1						
O20K				Sb	**Sb**	**12 33 07.9**	**+2.6**
	baz=225						
N19K	**Bonanza Creek**	**4.22**	**24**	Pn	**Pn**	**12 32 04.8**	**-1.5**
N19K				IAML		12 33 12.6	
	comp=E,358nm,0.9s						
N19K				IAML		12 33 33.4	
	comp=N,292nm,1.1s						
N19K	**Bonanza Creek**	**4.22**	**24**	P	**Pn**	**12 32 05.5**	**-0.8**
	baz=207,SNR=17						
N19K				Sb	**Sb**	**12 33 09.8**	**+2.5**
	baz=207						
HOM	**Homer**	**4.25**	**49**	Pn	**Pn**	**12 32 06.2**	**-0.4**
HOM	**Homer**	**4.25**	**49**	Sb	**Sb**	**12 33 10.8**	**+2.8**
	baz=234						
SVW2	**Sparrevohn**	**4.29**	**15**	Pn	**Pn**	**12 32 05.4**	**-1.8**
SVW2				IAML		12 33 19.9	
	comp=N,222nm,0.7s						
SVW2				IAML		12 33 21.5	
	comp=E,280nm,1.8s						
CNPM	**China Poot**	**4.35**	**52**		**Pn**	**12 32 07.8**	**-0.2**
RED	**Redoubt Volcan**	**4.36**	**36**		**Pn**	**12 32 08.4**	**+0.2**
RDWB	**Redoubt West**	**4.39**	**35**		**Pn**	**12 32 08.5**	**-0.2**
RSO	**Redoubt South**	**4.39**	**36**		**Pn**	**12 32 07.7**	**-1.1**
NCT	**North Crescent**	**4.42**	**34**		**Pn**	**12 32 09.4**	**+0.3**
RDJH	**Redoubt Jeurge**	**4.48**	**34**		**Pn**	**12 32 09.7**	**-0.3**
DFR	**Drift River**	**4.52**	**35**		**Pn**	**12 32 10.0**	**-0.5**
BRLK	**Bradley Lake**	**4.63**	**50**		**Pn**	**12 32 11.1**	**-0.7**
BRSE	**Bradley Lake S**	**4.67**	**51**	Sb	**Sb**	**12 33 23.5**	**+3.2**
	baz=238						
CKL	**Chakachamna La**	**5.10**	**32**		**Pn**	**12 32 18.4**	**0.0**
SPU	**Mount Spurr**	**5.17**	**33**		**Pn**	**12 32 18.9**	**-0.4**
M19K	**Big River Lodg**	**5.24**	**19**		**Pn**	**12 32 19.6**	**-0.6**
M19K	**Big River Lodg**	**5.24**	**19**	P	**Pn**	**12 32 19.3**	**-0.9**
	baz=202						
M19K				Sb	**Sb**	**12 33 39.3**	**+2.9**
	baz=202						
SLKM	**Skilak Lake**	**5.33**	**46**		**Pn**	**12 32 22.2**	**+0.6**
SEW	**Seward**	**5.42**	**51**		**Pn**	**12 32 22.8**	**+0.1**
L19K	**White Mountain**	**5.43**	**15**		**Pn**	**12 32 21.8**	**-1.1**
L19K	**White Mountain**	**5.43**	**15**	P	**Pn**	**12 32 21.3**	**-1.6**
	baz=198,SNR=19						
M20K	**Styx River**	**5.47**	**25**		**Pn**	**12 32 23.0**	**-0.6**
M20K	**Styx River**	**5.47**	**25**	P	**Pn**	**12 32 22.8**	**-0.7**
	baz=209,SNR=17						
STLK	**Strandline Lak**	**5.49**	**32**		**Pn**	**12 32 23.6**	**-0.2**
O22K	**Cooper Landing**	**5.51**	**47**	Pn	**Pn**	**12 32 24.3**	**+0.3**
L20K	**Farewell, AK**	**5.86**	**19**		**Pn**	**12 32 28.3**	**-0.6**
L20K	**Farewell, AK**	**5.86**	**19**	P	**Pn**	**12 32 27.6**	**-1.3**
	baz=203,SNR=17						
RC01	**Rabbit Creek A**	**5.89**	**42**	Pn	**Pn**	**12 32 28.4**	**-0.7**
TT01	**Tatalina**	**6.00**	**8**		**Pn**	**12 32 29.6**	**-1.1**
TTA	**Tatalina**	**6.03**	**8**	Pn	**Pn**	**12 32 29.4**	**-1.8**
TTA	**Tatalina**	**6.03**	**8**	P	**Pn**	**12 32 29.4**	**-1.8**
	baz=190,SNR=15						
M22K	**Willow**	**6.21**	**37**	Pn	**Pn**	**12 32 31.7**	**-1.9**
M22K	**Willow**	**6.21**	**37**	P	**Pn**	**12 32 33.3**	**-0.3**
	baz=224						
PMR	**Palmer**	**6.44**	**41**		**Pn**	**12 32 33.1**	**-3.6**
PMR	**Palmer**	**6.44**	**41**	P	**Pn**	**12 32 36.3**	**-0.4**
	baz=229						
KNK	**Knik Glacier**	**6.57**	**44**	Pn	**Pn**	**12 32 38.4**	**-0.2**
KNK	**Knik Glacier**	**6.57**	**44**	P	**Pn**	**12 32 38.1**	**-0.4**
	baz=232						
PPLA	**Purkeypile**	**6.58**	**24**		**Pn**	**12 32 36.9**	**-1.8**
PPLA	**Purkeypile**	**6.58**	**24**	P	**Pn**	**12 32 38.2**	**-0.5**
	baz=209,SNR=7.2						
GHO	**Glory Hole Cre**	**6.63**	**40**		**Pn**	**12 32 37.0**	**-2.5**
CUT	**Chulitna**	**6.66**	**32**		**Pn**	**12 32 39.2**	**-0.6**
CUT	**Chulitna**	**6.66**	**32**	P	**Pn**	**12 32 38.7**	**-1.0**
	baz=219						
K20K	**Telida**	**6.66**	**15**		**Pn**	**12 32 37.7**	**-2.1**
K20K	**Telida**	**6.66**	**15**	P	**Pn**	**12 32 38.1**	**-1.7**
	baz=199,SNR=7.1						
SPIA	**Saint Paul Isl**	**6.72**	**277**	Pn	**Pn**	**12 32 39.9**	**-0.7**
GLI	**Glacier Island**	**6.82**	**51**	P	**Pn**	**12 32 41.0**	**-0.9**
	baz=240						
SML	**Sawmill**	**6.87**	**41**	Pn	**Pn**	**12 32 41.0**	**-1.6**
SML	**Sawmill**	**6.87**	**41**	P	**Pn**	**12 32 41.5**	**-1.2**
	baz=230						
FID	**Port Fidalgo**	**7.02**	**53**		**Pn**	**12 32 43.8**	**-0.9**
CAST	**Castle Rocks**	**7.06**	**22**		**Pn**	**12 32 44.2**	**-1.1**
CAST	**Castle Rocks**	**7.06**	**22**	P	**Pn**	**12 32 44.2**	**-1.1**
	baz=207,SNR=8.4						
SCM	**Sheep Creek Mo**	**7.26**	**44**		**Pn**	**12 32 47.0**	**-1.0**
EYAK	**Cordova Ski Ar**	**7.26**	**56**	Pn	**Pn**	**12 32 47.7**	**-0.2**
EYAK	**Cordova Ski Ar**	**7.26**	**56**	P	**Pn**	**12 32 47.1**	**-0.8**
	baz=246						
KTH	**Kantishna Hill**	**7.43**	**25**		**Pn**	**12 32 48.6**	**-1.8**
J20K	**Nowinta River**	**7.44**	**13**		**Pn**	**12 32 49.4**	**-1.0**
J20K	**Nowinta River**	**7.44**	**13**	P	**Pn**	**12 32 48.8**	**-1.6**
	baz=196						
CHUM	**Lake Minchumin**	**7.44**	**20**		**Pn**	**12 32 49.6**	**-0.8**
CHUM	**Lake Minchumin**	**7.44**	**20**	P	**Pn**	**12 32 49.0**	**-1.4**
	baz=205,SNR=6.6						
TRF	**Thorofare Moun**	**7.50**	**27**		**Pn**	**12 32 49.5**	**-1.9**
TRF	**Thorofare Moun**	**7.50**	**27**	P	**Pn**	**12 32 51.0**	**-0.4**
	baz=214,SNR=13						
WAT1	**Susitna Watana**	**7.50**	**35**	P	**Pn**	**12 32 51.3**	**0.0**
	baz=223						
DIV	**Divide**	**7.50**	**51**	Pn	**Pn**	**12 32 50.4**	**-1.0**
WAT6	**Susitna Watana**	**7.59**	**38**	P	**Pn**	**12 32 51.7**	**-1.0**
	baz=228						
KLU	**Klutina**	**7.62**	**49**		**Pn**	**12 32 53.2**	**+0.2**
KLU	**Klutina**	**7.62**	**49**	P	**Pn**	**12 32 52.9**	**-0.1**
	baz=240						
RND	**Reindeer**	**7.85**	**31**		**Pn**	**12 32 53.4**	**-2.8**
M24K	**Tolsona, Glenn**	**7.86**	**44**	Pn	**Pn**	**12 32 55.3**	**-0.9**
M24K	**Tolsona, Glenn**	**7.86**	**44**	P	**Pn**	**12 32 58.0**	**+1.8**
	baz=235						
BPAW	**Bear Paw Mtn.**	**7.90**	**23**		**Pn**	**12 32 55.6**	**-1.2**
BPAW	**Bear Paw Mtn.**	**7.90**	**23**	P	**Pn**	**12 32 55.9**	**-0.8**
	baz=209,SNR=11						
BMRM	**Bremner River**	**7.94**	**54**	Pn	**Pn**	**12 32 56.3**	**-1.1**
BMRM	**Bremner River**	**7.94**	**54**	P	**Pn**	**12 32 58.5**	**+1.1**
	baz=246						
DHY	**Denali Highway**	**8.05**	**36**		**Pn**	**12 32 58.4**	**-0.6**
DHY	**Denali Highway**	**8.05**	**36**	P	**Pn**	**12 32 58.7**	**-0.3**
	baz=226						
MCK	**McKinley**	**8.08**	**30**		**Pn**	**12 32 59.6**	**+0.3**
MCK	**McKinley**	**8.08**	**30**	P	**Pn**	**12 32 58.9**	**-0.4**
	baz=218						
N25K	**Chitina, Valde**	**8.23**	**50**	P	**Pn**	**12 33 01.8**	**+0.5**
	baz=242						
ANM	**Nome**	**8.41**	**337**		**Pn**	**12 33 03.3**	**-0.5**
ANM	**Nome**	**8.41**	**337**	P	**Pn**	**12 33 02.8**	**-1.0**
	baz=151						
HARP	**HAARP**	**8.42**	**45**	P	**Pn**	**12 33 03.6**	**-0.3**
	baz=236						
WAX	**Waxell Ridge**	**8.57**	**60**	Pn	**Pn**	**12 33 06.7**	**+0.7**
PAX	**Paxson**	**8.64**	**41**		**Pn**	**12 33 05.6**	**-1.3**
PAX	**Paxson**	**8.64**	**41**	P	**Pn**	**12 33 06.1**	**-0.9**
	baz=232						
I21K	**Tanana**	**8.69**	**17**		**Pn**	**12 33 07.2**	**-0.5**
I21K	**Tanana**	**8.69**	**17**	P	**Pn**	**12 33 07.1**	**-0.5**
	baz=202,SNR=7.2						
NEA2	**Nenana**	**8.75**	**26**		**Pn**	**12 33 06.5**	**-1.9**
NEA2	**Nenana**	**8.75**	**26**	P	**Pn**	**12 33 06.9**	**-1.6**
	baz=214						
MLY	**Manley**	**8.77**	**20**		**Pn**	**12 33 07.3**	**-1.5**
MLY	**Manley**	**8.77**	**20**	P	**Pn**	**12 33 07.7**	**-1.1**
	baz=207						
MCARA	**McCarthy VSAT**	**8.81**	**54**	P	**Pn**	**12 33 08.1**	**-1.2**
	baz=247						
WRH	**Wood River Hil**	**8.90**	**29**	Pn	**Pn**	**12 33 07.5**	**-2.9**
MESA	**MESA**	**8.93**	**62**	Pn	**Pn**	**12 33 09.9**	**-1.1**
H21K	**Melozitna Rive**	**9.03**	**14**		**Pn**	**12 33 10.8**	**-1.4**
H21K	**Melozitna Rive**	**9.03**	**14**	P	**Pn**	**12 33 09.7**	**-2.5**
	baz=198,SNR=11						
YAH	**Yahtse**	**9.07**	**61**	Pn	**Pn**	**12 33 13.6**	**+0.6**
K24K	**Donnelly Dome**	**9.08**	**36**	P	**Pn**	**12 33 12.9**	**0.0**
	baz=227						

CCB	**Clear Creek Bu**	**9.11**	**29**		**Pn**	**12 33 15.2**	**+1.8**
I23K	**Minto, Yukon-K**	**9.16**	**23**		**Pn**	**12 33 13.5**	**-0.5**
I23K	**Minto, Yukon-K**	**9.16**	**23**	P	**Pn**	**12 33 12.1**	**-1.8**
	baz=211						
HDA	**Harding Lake**	**9.16**	**31**		**Pn**	**12 33 13.4**	**-0.6**
HDA	**Harding Lake**	**9.16**	**31**	P	**Pn**	**12 33 13.4**	**-0.6**
	baz=221,SNR=7.0						
GRNC	**Granite Creek**	**9.17**	**59**		**Pn**	**12 33 14.9**	**+0.6**
IM03		**9.23**	**11**		**Pn**	**12 33 13.7**	**-1.3**
IMAR	**Indian Mountai**	**9.23**	**11**		**Pn**	**12 33 13.9**	**-1.1**
MDM	**Murphy Dome**	**9.26**	**26**		**Pn**	**12 33 13.9**	**-1.5**
M26K	**Nabesna, AK**	**9.27**	**48**		**Pn**	**12 33 17.2**	**+1.6**
M26K	**Nabesna, AK**	**9.27**	**48**	P	**Pn**	**12 33 14.9**	**-0.7**
	baz=241						
TCOL	**CIGO, UAF Yank**	**9.28**	**28**	Pn	**Pn**	**12 33 13.9**	**-1.7**
RIDG	**Independent Ri**	**9.35**	**38**	Pn	**Pn**	**12 33 16.9**	**+0.2**
RIDG	**Independent Ri**	**9.35**	**38**	P	**Pn**	**12 33 16.8**	**+0.2**
	baz=230						
TABL	**Table Mountain**	**9.38**	**61**		**Pn**	**12 33 18.0**	**+0.8**
CTG	**Chitna Glacier**	**9.43**	**58**	P	**Pn**	**12 33 18.6**	**+0.8**
	baz=253						
CTGM	**Chitina Glacie**	**9.43**	**58**		**Pn**	**12 33 17.7**	**-0.2**
IL31		**9.46**	**30**		**Pn**	**12 33 16.5**	**-1.5**
ILAR	**Eielson Array**	**9.46**	**30**	Pn	**Pn**	**12 33 16.9**	**-1.2**
	comp=E,0.2nm,0.3s,baz=217,slow=13,SNR=13						
ILAR				LR	LR	12 37 03.5	
	comp=E,157nm,21.0s,baz=258,slow=37						
	comp=E,1.1nm,0.8s						
ILAR	**Eielson Array**	**9.46**	**30**	Pn	**Pn**	**12 33 16.7**	**-1.3**
L26K	**Log Cabin Wild**	**9.46**	**44**		**Pn**	**12 33 19.8**	**+1.7**
L26K	**Log Cabin Wild**	**9.46**	**44**	P	**Pn**	**12 33 18.0**	**-0.1**
	baz=237						
LOGN	**Logan Glacier**	**9.55**	**59**	Pn	**Pn**	**12 33 17.6**	**-1.9**
DOT	**Dot Lake**	**9.56**	**40**	Pn	**Pn**	**12 33 22.5**	**+3.0**
POKR	**Poker Plat Res**	**9.59**	**28**	Pn	**Pn**	**12 33 17.7**	**-2.1**
POKR	**Poker Plat Res**	**9.59**	**28**	P	**Pn**	**12 33 18.0**	**-1.8**
	baz=217						
GAMB	**Gambell**	**9.61**	**321**	P	**Pn**	**12 33 16.8**	**-3.3**
	baz=129						
H23K	**Yukon River**	**9.71**	**21**		**Pn**	**12 33 21.2**	**-0.3**
H23K	**Yukon River**	**9.71**	**21**	P	**Pn**	**12 33 20.9**	**-0.7**
	baz=208,SNR=16						
PINM	**Pinnacle**	**9.74**	**64**	P	**Pn**	**12 33 20.3**	**-1.7**
	baz=259						
J25K	**Salcha River,**	**9.78**	**33**		**Pn**	**12 33 21.5**	**-1.0**
J25K	**Salcha River,**	**9.78**	**33**	P	**Pn**	**12 33 21.7**	**-0.8**
	baz=225						
SCRK	**Sand Creek**	**9.79**	**39**	Pn	**Pn**	**12 33 22.1**	**-0.7**
SCRK	**Sand Creek**	**9.79**	**39**	P	**Pn**	**12 33 22.6**	**-0.1**
	baz=231						
TNA	**Tin City**	**9.83**	**335**	Pn	**Pn**	**12 33 22.3**	**-0.9**
TNA	**Tin City**	**9.83**	**335**	P	**Pn**	**12 33 22.1**	**-1.0**
	baz=146						
BCPM	**Bancas Point**	**10.02**	**65**	Pn	**Pn**	**12 33 24.7**	**-1.1**
L27K	**Beaver Creek,**	**10.07**	**46**		**Pn**	**12 33 26.3**	**-0.2**
L27K	**Beaver Creek,**	**10.07**	**46**	P	**Pn**	**12 33 25.3**	**-1.2**
	baz=240						
H24K	**Noodor Dome**	**10.07**	**24**		**Pn**	**12 33 25.5**	**-1.0**
H24K	**Noodor Dome**	**10.07**	**24**	P	**Pn**	**12 33 23.9**	**-2.6**
	baz=213						
BC03		**10.09**	**46**		**Pn**	**12 33 26.2**	**-0.5**
PNL	**Peninsula**	**10.10**	**67**		**Pn**	**12 33 25.8**	**-1.1**
PNL	**Peninsula**	**10.10**	**67**	P	**Pn**	**12 33 26.3**	**-0.6**
	baz=263						
YUK3	**Moose Creek**	**10.10**	**54**	P	**Pn**	**12 33 26.1**	**-1.0**
	baz=250						
YUK8	**Steele Glacier**	**10.26**	**58**	P	**Pn**	**12 33 26.9**	**-2.3**
	baz=254						
J26L	**Joseph Creek**	**10.27**	**37**		**Pn**	**12 33 27.9**	**-1.4**
J26L	**Joseph Creek**	**10.27**	**37**	P	**Pn**	**12 33 30.1**	**+0.8**
	baz=230						
K27K	**Chicken**	**10.49**	**41**	P	**Pn**	**12 33 32.3**	**0.0**
	baz=235						
COLD	**Coldfoot**	**10.87**	**16**		**Pn**	**12 33 36.2**	**-1.2**
COLD	**Coldfoot**	**10.87**	**16**	P	**Pn**	**12 33 36.9**	**-0.5**
	baz=203,SNR=8.9						
EGAK	**Eagle**	**11.26**	**39**	P	**Pn**	**12 33 40.4**	**-2.3**
	baz=234						
DAWY	**Dawson**	**11.52**	**44**	P	**Pn**	**12 33 45.8**	**-0.4**
	baz=241						
BMAR	**Burnt Mountain**	**12.14**	**25**	Pn	**Pn**	**12 33 52.6**	**-2.2**
TOLK	**Toolik Lake Re**	**12.27**	**14**		**Pn**	**12 33 54.9**	**-1.8**
TOLK	**Toolik Lake Re**	**12.27**	**14**	P	**Pn**	**12 33 56.9**	**+0.3**
	baz=202						
INK	**Inuvik**	**15.79**	**34**	Pn	**P**	**12 34 47.5**	**-0.4**
	comp=E,0.1nm,0.3s,baz=223,slow=21,SNR=2.4						
	comp=E,1.6nm,0.7s						
INK	**Inuvik**	**15.79**	**34**	Pn	**Pn**	**12 34 42.6**	**-1.4**
CBB	**Campbell River**	**20.43**	**96**	P	**P**	**12 35 38.1**	**-0.9**
YKA	**Yellowknife Ar**	**22.16**	**58**	P	**P**	**12 35 57.3**	**-0.3**
	comp=E,3.5nm,0.9s,baz=271,slow=9.6,SNR=28						
YKA				PcP	**PcP**	**12 39 53.8**	**-0.1**
	comp=E,0.5nm,0.6s,baz=286,slow=2.0,SNR=9.0						
	comp=E,3.5nm,0.9s						
YKA	**Yellowknife Ar**	**22.16**	**58**	P	**P**	**12 35 56.3**	**-1.2**
EDM	**Edmonton**	**25.42**	**79**	P	**P**	**12 36 30.1**	**+0.7**
PAHR	**Pah Rah Range**	**30.37**	**108**	P	**P**	**12 37 12.5**	**-1.4**
PAHR				IAmb	IAmb	12 37 17.5	
	comp=Z,4.1nm,1.1s						
PNTR	**Pine Nut**	**30.72**	**109**	P	**P**	**12 37 16.6**	**-0.5**
ELK	**Elko**	**31.81**	**102**	P	**P**	**12 37 26.3**	**-0.4**
NVAR	**Mina Array Bea**	**31.88**	**109**	P	**P**	**12 37 28.1**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=300,slow=8.8,SNR=14						
NVAR	**Mina Array Bea**	**31.88**	**109**	P	**P**	**12 37 25.6**	**-1.8**
OMMB	**Old Mammoth Mi**	**32.14**	**110**	P	**P**	**12 37 29.6**	**-0.1**
OMMB				IAmb	IAmb	12 37 33.8	
	comp=Z,7.4nm,1.4s						
TPH	**Tonopah**	**32.71**	**108**	P	**P**	**12 37 33.8**	**-0.8**
FCC	**Fort Churchill**	**32.85**	**60**	P	**P**	**12 37 35.9**	**+0.5**
LCH	**Last Change Ra**	**33.12**	**109**	P	**P**	**12 37 38.9**	**+0.7**
LCH				IAmb	IAmb	12 37 42.3	
	comp=Z,4.8nm,1.5s						
R11A	**Troy Canyon, C**	**33.36**	**106**	P	**P**	**12 37 40.9**	**+0.6**
BW06	**Boulder Array**	**33.49**	**94**	P	**P**	**12 37 40.8**	**-0.6**
PD31	**Pinedale Array**	**33.49**	**94**	P	**P**	**12 37 41.9**	**+0.5**
PDAR	**Pinedale Array**	**33.49**	**94**	P	**P**	**12 37 40.6**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=316,slow=4.1,SNR=5.4						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**33.49**	**94**	P	**P**	**12 37 42.3**	**+0.9**
ISA	**Isabella, Lake**	**33.91**	**112**	P	**P**	**12 37 44.1**	**-0.8**
ISA				IAmb	IAmb	12 38 06.2	
	comp=Z,1.7nm,0.7s						
TPNV	**Topopah Spring**	**34.06**	**108**	P	**P**	**12 37 45.6**	**-0.8**
TPNV	**Topopah Spring**	**34.06**	**108**	P	**P**	**12 37 48.0**	**+1.6**
	baz=320,SNR=6.9						
PRN	**Pahroc Range**	**34.35**	**106**	P	**P**	**12 37 49.5**	**+0.7**
PRN				IAmb	IAmb	12 37 52.4	
	comp=Z,5.4nm,1.0s						
GWY	**Greenwater Val**	**34.43**	**109**	P	**P**	**12 37 49.0**	**-0.6**
GWY				IAmb	IAmb	12 37 52.4	
	comp=Z,3.1nm,0.8s						
QSM	**Queen of Sheba**	**34.50**	**110**	P	**P**	**12 37 49.8**	**-0.1**
QSM				IAmb	IAmb	12 37 54.2	
	comp=Z,2.5nm,0.8s						
TMUT	**Trail Mountain**	**35.01**	**100**	P	**P**	**12 37 52.2**	**-2.4**
TMUT				IAmb	IAmb	12 38 01.4	
	comp=Z,3.9nm,1.4s						
MSU	**Marysvale**	**35.05**	**102**	P	**P**	**12 37 53.4**	**-1.6**
RWWY	**Rawlins**	**35.50**	**93**	P	**P**	**12 37 57.5**	**-1.4**
RWWY				IAmb	IAmb	12 38 00.2	
	comp=Z,8.8nm,1.3s						
SRU	**San Rafael Swe**	**35.51**	**100**	P	**P**	**12 37 58.0**	**-0.9**
SRU				IAmb	IAmb	12 38 18.8	
	comp=Z,2.9nm,0.7s						
RSSD	**Black Hills**	**35.61**	**88**	P	**P**	**12 37 58.9**	**-0.9**
RSSD				IAmb	IAmb	12 38 04.5	
	comp=Z,3.7nm,0.7s						
KHLH	**Kahului Airpor**	**36.07**	**178**	P	**P**	**12 38 04.1**	**+0.6**
IRM	**Iron Mountain**	**36.79**	**110**	P	**P**	**12 38 11.1**	**+1.5**
	baz=322,SNR=5.4						
AGMN	**Agassiz Nation**	**37.42**	**76**	P	**P**	**12 38 14.9**	**+0.1**
AGMN				IAmb	IAmb	12 38 15.7	
	comp=Z,4.5nm,0.8s						
BLYC	**Blythe**	**37.43**	**110**	P	**P**	**12 38 13.8**	**-1.2**
BLYC				IAmb	IAmb	12 38 17.8	
	comp=Z,4.5nm,0.7s						
KSRS	**Korea Array**	**51.26**	**281**	P	**P**	**12 40 04.9**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=46,slow=5.2,SNR=4.1						
	comp=Z,1.0nm,0.8s						
JNU	**Nakatsue**	**52.90**	**275**	LR	LR	13 02 15.6	
	comp=Z,195nm,21.7s,baz=284,slow=35						
ARCES	**ARCESS Array B**	**53.74**	**359**	P	**P**	**12 40 26.5**	**+2.9**
	comp=Z,1.2nm,0.6s,baz=46,slow=8.7,SNR=17						
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	**53.74**	**359**	P	**P**	**12 40 21.1**	**-2.5**
SONM	**Songino Array**	**54.41**	**304**	P	**P**	**12 40 29.6**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=49,slow=7.5,SNR=7.6						
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**54.41**	**304**	P	**P**	**12 40 26.9**	**-2.0**
HHC	**Hu-ho-hao-te**	**57.21**	**296**	*e*P	**P**	**12 40 50.0**	**+1.0**
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,93nm,6.2s						
HHC				LR	LR		
	comp=N,230nm,13.3s						
HHC				LR	LR		
	comp=E,230nm,14.6s						
HHC				LR	LR		
	comp=Z,360nm,14.6s						
MKAR	**Makanchi Array**	**65.08**	**319**	P	**P**	**12 41 44.1**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=44,slow=8.6,SNR=3.0						
	comp=Z,0.2nm,0.6s						
WMQ	**Urumqi**	**65.55**	**314**	*e*P	P	12 41 49.0	+3.7
AKASG	**Malin Array Be**	**72.50**	**355**	P	**P**	**12 42 27.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=6.4,slow=5.4,SNR=2.8						
PZH	**PanZhiHua**	**73.53**	**293**	P	**P**	**12 42 38.0**	**+3.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,7.2s						
ESDC	**Sonseca Array**	**81.21**	**20**	P	**P**	**12 43 17.4**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=342,slow=7.5,SNR=3.2						
	comp=Z,0.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**81.64**	**291**	P	**P**	**12 43 19.9**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=7.3,slow=5.7,SNR=5.5						
	comp=Z,0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**81.64**	**291**	P	**P**	**12 43 18.8**	**-1.5**

TAP 31 12:35:10.4,24°.40N×121°.79E,h12^{km},ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.04**	**348**	*i* P	Pg	12 35 12.9	+0.2
	baz=347						
EWUT				S	Sg	12 35 14.2	-0.1
	baz=347						
ENA	**Nanau**	**0.05**	**299**	*i* P	Pg	12 35 13.0	+0.3
	baz=301						
ENA				*i* S	Sg	12 35 14.3	-0.1
	baz=301						
TWC	**Suao**	**0.21**	**15**	S	Sg	12 35 18.3	+0.2
	baz=11						
NDS	**Dongshan**	**0.24**	**344**	*e*P	Pg	12 35 16.0	+0.6
	baz=344						
NDS				S	Sg	12 35 19.1	+0.3
	baz=344						
LATG	**Datong**	**0.27**	**299**	*e*P	Pb	12 35 16.9	-0.5
	baz=298						
ETL	**Fush Village**	**0.29**	**212**	P	Pg	12 35 16.6	+0.3
	baz=212						
ETL				S	Sg	12 35 21.1	+0.9
	baz=212						
NACB	**Ninganchiao**	**0.29**	**218**	*e*P	Pg	12 35 16.8	+0.5
	baz=208						
NACB				*e*S	Sg	12 35 20.8	+0.5
	baz=208						
ENTT	**Nioudou**	**0.31**	**319**	*e*P	Pb	12 35 17.6	-0.3
	baz=320						
NDT	**Datong Townshi**	**0.32**	**308**	*e*P	Pb	12 35 17.7	-0.3
	baz=308						
TWE	**Neicheng**	**0.33**	**341**	*e*P	Pg	12 35 17.3	+0.2
	baz=343						
ETLH	**Xiulin Townshi**	**0.34**	**235**	*e*P	Pg	12 35 17.9	+0.6
	baz=235						
TWD	**Chiawan**	**0.37**	**209**	*e*P	Pg	12 35 18.1	+0.3
	baz=207						
TWD				*e*S	Sg	12 35 23.2	+0.5
	baz=207						
NNSB	**Datong**	**0.37**	**274**	*e*P	Pb	12 35 18.6	-0.4
	baz=274						
NNSB				*e*S	Sb	12 35 24.2	-0.6
	baz=274						
NNS	**Nan Shan**	**0.38**	**275**	*e*P	Pg	12 35 18.0	0.0
	baz=275						
YHNB	**Yeheng**	**0.46**	**305**	*e*P	Pg	12 35 19.8	+0.3
	baz=305						
NSK	**Sanguang**	**0.48**	**305**	*e*P	Pb	12 35 20.6	-0.2
	baz=305						
ETM	**Tongmen**	**0.51**	**212**	*e*P	Pg	12 35 20.3	-0.1
	baz=208						
FUSS	**Fushou**	**0.52**	**253**	*e*P	Pb	12 35 22.0	+0.4
	baz=253						
CHGB	**Renai**	**0.66**	**239**	*e*P	Pb	12 35 24.0	+0.1
	baz=239						
ESL	**Shilin**	**0.67**	**209**	*e*P	Pg	12 35 22.7	-0.7
	baz=208						
OWD	**Renai**	**0.72**	**231**	*e*S	Sg	12 35 34.0	+0.3
	baz=225						
WUSB	**Renai**	**0.74**	**236**	*e*P	Pb	12 35 25.0	-0.2
	baz=236						
VWDT	**VWDT**	**0.88**	**223**	*e*P	Pg	12 35 26.4	-0.9
	baz=222						

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*NNC **31** 13:02:59.0±2.1,39°.29N×80°.87E,h0^{km},mb3.7,mpv3.3, Error ellipse: s-maj=26.0km s-min=13.8km az=66.0*

SOME 31 13:03:03.2,39°.53N×81°.07E,h5^{km},1C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**3.92**	**338**	*e*P	Pg	13 04 16.4	-2.0
	1.7nm,0.2s						
UZB				*e*S	Sg	13 05 09.2	-0.1
	5.7nm,0.4s						
UZB	**Uzynbulak**	**3.92**	**338**	Pg	Pb	13 04 14.3	+1.4
	3.0nm,0.3s						
UZB				Lg	Lg	13 05 09.2	
	7.7nm,0.5s						
KTMS	**Ketmen**	**3.95**	**352**	*e*P	Pg	13 04 16.6	-2.2
	1.9nm,0.3s						
KTMS				*e*S	Sg	13 05 09.4	-0.5
	7.9nm,0.4s						
PDGK	**Podgornoye**	**3.97**	**343**	Pg	Pb	13 04 13.7	-0.1
	1.9nm,0.7s						
PDGK				Lg	Lg	13 05 08.2	
	4.9nm,0.6s						
PDGK	**Podgornoye**	**3.97**	**343**	⇓Pg	Pb	13 04 14.0	+0.3
	3.2nm,0.6s						
PDGK				⇑Lg	Lg	13 05 12.5	
	6.0nm,0.5s						
SATY	**Saty**	**4.05**	**331**	*e*P	Pg	13 04 18.8	-2.1
	1.6nm,0.2s						
SATY				*e*S	Sg	13 05 13.3	-0.1
	12nm,0.6s						
SATY	**Saty**	**4.05**	**331**	Pg	Pb	13 04 16.4	+1.3
	2.1nm,0.1s						
SATY				Lg	Lg	13 05 12.9	
	12nm,0.6s						
KPKS	**Kokpek**	**4.32**	**336**	*e*P	Pg	13 04 24.0	-1.9
	4.1nm,0.6s						
KPKS				*e*S	Sg	13 05 22.2	+0.3
	16nm,0.5s						
KURS	**Kuram**	**4.51**	**332**	*e*P	Pg	13 04 26.9	-2.7
	1.8nm,0.4s						
KURS				*e*S	Sg	13 05 27.1	-1.0
	5.6nm,0.3s						
KURS	**Kuram**	**4.51**	**332**	Pg	Pb	13 04 24.2	+1.3
	2.2nm,0.6s						
KURS				Lg	Lg	13 05 26.4	
	5.0nm,0.6s						
TNSS	**Tian-Shan**	**4.68**	**320**	*e*P	Pg	13 04 29.9	-2.9
	1.5nm,0.8s						
TNSS				*e*S	Sg	13 05 32.5	-1.0
	2.2nm,0.5s						
TNSS	**Tian-Shan**	**4.68**	**320**	Pg	Pb	13 04 27.1	+1.1
	2.8nm,0.5s						
TNSS				Lg	Lg	13 05 31.5	
	2.2nm,0.5s						
MDOK	**Medeo**	**4.72**	**321**	⇓Pg	Pb	13 04 25.6	-1.0
	1.5nm,0.5s						
MDOK				Lg	Lg	13 05 31.8	
	4.3nm,0.5s						
DJR	**Jarkent**	**4.89**	**349**	*e*P	Pb	13 04 32.8	+3.4
	0.7nm,0.2s						
DJR				*e*S	Sg	13 05 37.1	-3.1
	3.6nm,0.3s						

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*IDC **31** 13:05:31.1±3.1,8°.46S×74°.97W,h58^{km}±35^{km},mb3.7/5, mbtmp3.9/8,ML3.4/3,MS2.8/2,Error ellipse: s-maj=28.6km s-min=13.2km az=59.0*

*NEIC **31** 13:05:34.3±1.7,8°.39S±0°.05×74°.9W±0°.1,h79^{km}±8^{km}, mb4.1/14,Error ellipse: s-maj=16.8km s-min=6.0km az=71.0*

ISC 31 13:05:30.8±0.6,**8°.40S**±0°.06×**74°.92W**±0°.08,**h50^{km},n23,** σ**0^{s}.74**/24,**mb4.1**/10,**Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.67**	**290**	P	**Pn**	**13 06 25.3**	**-0.1**
	7.8nm,0.3s,baz=119,slow=3.9,SNR=23						
ATAH				S	**Sn**	**13 07 07.7**	**+0.1**
	32nm,0.5s,baz=322,slow=19,SNR=4.1						
ATAH				LR	LR	13 08 12.5	
	comp=Z,158nm,18.6s,baz=125,slow=44						
	26nm,0.5s						
NNA	**Nana**	**4.04**	**208**	P	**Pn**	**13 06 29.9**	**-0.3**
	2.2nm,0.3s,baz=299,slow=10,SNR=2.0						
NNA				S	**Sn**	**13 07 15.3**	**-1.0**
	49nm,0.4s,baz=9.2,slow=23,SNR=7.7						
NNA				LR	LR	13 08 16.8	
	comp=Z,108nm,19.0s,baz=43,slow=42						
	4.5nm,0.3s						
LPAZ	**La Paz**	**10.27**	**140**	P	**Pn**	**13 07 56.4**	**+0.3**
	0.1nm,0.3s,baz=310,slow=12,SNR=2.3						
	0.7nm,0.5s						
PB16	**IPOC Station P**	**11.19**	**153**	Pn	**Pn**	**13 08 09.8**	**+1.1**
SJCC	**San Jacinto, C**	**18.18**	**359**	P	**Pn**	**13 09 40.8**	**+1.1**
SJCC				IAmb	IAmb	13 09 57.5	
	comp=Z,8.8nm,1.0s						
BAUV	**El Baul**	**18.54**	**22**	P	**P**	**13 09 42.8**	**-0.6**
BAUV				IAmb	IAmb	13 09 47.9	
	comp=Z,8.9nm,0.7s						
CPUP	**Villa Florida**	**24.43**	**139**	P	**P**	**13 10 44.0**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=319,slow=8.8,SNR=4.0						
	comp=Z,1.9nm,0.7s						
CUPR	**Culebra, Puert**	**28.19**	**20**	P	**P**	**13 11 18.3**	**-0.5**
PLTB	**Pedras Altas**	**30.55**	**142**	P	**P**	**13 11 39.4**	**-0.4**
PLTB				IAmb	IAmb	13 11 58.6	
	comp=Z,2.1nm,0.8s						
DBIC	**Dimbokro**	**71.43**	**80**	P	**P**	**13 16 46.3**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=279,slow=5.3,SNR=7.0						
	comp=Z,1.5nm,0.3s						
DBIC	**Dimbokro**	**71.43**	**80**	IAmb	IAmb	13 16 51.7	
	comp=Z,8.9nm,1.1s						
BELA	**Belgrano 2**	**72.46**	**172**	P	**P**	**13 16 52.2**	**+0.6**
KOWA	**Kowa**	**73.89**	**72**	P	**P**	**13 17 01.0**	**-0.1**
KOWA				IAmb	IAmb	13 17 10.9	
	comp=Z,3.6nm,1.4s						
SNAA	**Sanae**	**76.47**	**162**	P	**P**	**13 17 15.7**	**+0.6**
SNAA				IAmb	IAmb	13 17 29.7	
	comp=Z,6.5nm,1.5s						
YKA	**Yellowknife Ar**	**77.00**	**342**	P	**P**	**13 17 17.7**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=137,slow=6.4,SNR=5.5						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**77.00**	**342**	P	**P**	**13 17 16.7**	**-1.2**
TOA0	**Torodi Ar. Sit**	**79.03**	**75**	P	**P**	**13 17 29.2**	**-1.0**
TOA0				IAmb	IAmb	13 17 35.8	
	comp=Z,7.1nm,1.5s						
TORD	**Torodi Ar. Bea**	**79.03**	**75**	P	**P**	**13 17 29.9**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=258,slow=4.0,SNR=7.8						
	comp=Z,1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**79.03**	**75**	P	**P**	**13 17 29.2**	**-1.1**
TORD				IAmb	IAmb	13 17 30.4	
	comp=Z,1.4nm,0.7s						
ESDC	**Sonseca Array**	**80.97**	**48**	P	**P**	**13 17 41.1**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=249,slow=5.4,SNR=2.6						
	comp=Z,0.4nm,0.7s						
QSPA	**South Pole Qui**	**81.71**	**180**	P	**P**	**13 17 44.8**	**+0.9**
QSPA				IAmb	IAmb	13 18 03.3	
	comp=Z,5.3nm,1.4s						
BCAR	**Beaver Creek A**	**87.26**	**335**	P	**P**	**13 18 12.2**	**+0.4**
WRA	**Warramunga Arr**	**139.72**	**225**	PKP	**PKPdf**	**13 24 53.5**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=126,slow=2.0,SNR=7.0						

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*IDC **31** 13:17:14.7±0.9,30°.42S×177°.63W,h0^{km},mb4.3/6, mbtmp4.3/7,ML3.7/1,MS3.6/14,Error ellipse: s-maj=27.6km s-min=19.3km az=125.0*

*NEIC **31** 13:17:20.8±2.4,30°.22S±0°.08×177°.6W±0°.2,h35^{km}±1^{km}, mb4.5/15,Error ellipse: s-maj=22.9km s-min=11.4km az=251.0*

ISC 31 13:17:20.6±0.6,**30°.30S**±0°.06×**177°.8W**±0°.1,**h35^{km},n64,** σ**1^{s}.59**/48,**mb4.5**/13,**MS3.8**/10,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.05**	**353**	Pn	**Pn**	**13 17 39.7**	**+1.0**
	571nm,0.3s,baz=44,slow=23,SNR=29						
RAO				Sn	**Sn**	**13 17 52.2**	**+0.1**
	3µm,0.3s,baz=103,slow=21,SNR=18						
RAO				LR	LR	13 18 11.9	
	comp=Z,841nm,21.9s,baz=203,slow=48						
RAO	**Raoul Island**	**1.05**	**353**	Pn	**Pn**	**13 17 39.4**	**+0.6**
RAO					**Sn**	**13 17 51.4**	**-0.8**
URZ	**Urewera**	**9.00**	**207**	Pn	**Pn**	**13 19 25.4**	**-2.5**
	0.7nm,0.3s,baz=121,slow=24,SNR=8.3						
URZ				Sn	**Sn**	**13 21 05.5**	**-2.5**
	3.3nm,0.3s,baz=303,slow=23,SNR=5.2						
	5.5nm,0.6s						
URZ	**Urewera**	**9.00**	**207**	Pn	**Pn**	**13 19 24.8**	**-3.2**
BKZ	**Black Stump Fm**	**10.02**	**206**	Pn	**Pn**	**13 19 38.0**	**-4.1**
NIUE	**Niue**	**13.25**	**34**	Pn	**Pn**	**13 20 22.6**	**-3.7**
RPZ	**Rata Peaks**	**16.07**	**210**	LR	LR	13 27 07.9	
	comp=Z,144nm,20.9s,baz=50,slow=37						
DZM	**Mont Dzumac**	**16.34**	**296**	LR	LR	13 26 07.7	
	comp=Z,265nm,18.0s,baz=114,slow=32						
AFI	**Afiamalu**	**17.22**	**20**	LR	LR	13 26 19.5	
	comp=Z,89nm,21.7s,baz=226,slow=32						
RAR	**Rarotonga**	**18.55**	**65**	LR	LR	13 26 08.2	
	comp=Z,69nm,20.8s,baz=264,slow=29						
PPT	**Papeete**	**28.64**	**70**	LR	LR	13 34 24.1	
	comp=Z,56nm,18.1s,baz=282,slow=36						
CTA	**Charters Tower**	**33.97**	**279**	P	**P**	**13 24 02.1**	**+1.2**
	3.1nm,0.5s,baz=103,slow=12,SNR=7.3						
CTA				LR	LR	13 36 51.7	
	comp=Z,141nm,18.1s,baz=83,slow=34						
	3.1nm,0.5s						
CTAO	**Charters Tower**	**33.97**	**279**	P	**P**	**13 24 00.5**	**-0.4**
STKA	**Stephens Creek**	**34.69**	**257**	P	**P**	**13 24 08.6**	**+1.5**
	9.5nm,0.8s,baz=91,slow=10.0,SNR=18						
STKA				LR	LR	13 36 50.7	
	comp=Z,200nm,18.3s,baz=177,slow=34						
	9.5nm,0.8s						
STKA	**Stephens Creek**	**34.69**	**257**	P	**P**	**13 24 08.7**	**+1.6**
STKA				IAmb	IAmb	13 24 10.4	
	comp=Z,2.5nm,0.9s						
PMG	**Port Moresby**	**38.73**	**295**	LR	LR	13 38 43.6	
	comp=Z,98nm,18.6s,baz=250,slow=33						
BBOO	**Buckleboo**	**39.18**	**254**	P	**P**	**13 24 45.7**	**+0.5**
BBOO				IAmb	IAmb	13 25 06.9	
	comp=Z,8.3nm,1.0s						
AS31	**Alice Springs**	**43.30**	**267**	P	**P**	**13 25 18.6**	**-0.7**
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**13 25 18.8**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=108,slow=8.2,SNR=20						
ASAR				ScP	**ScP**	**13 31 00.8**	**+4.2**
	comp=Z,0.4nm,0.8s,baz=113,slow=3.8,SNR=4.3						
ASAR				LR	LR	13 42 49.1	
	comp=Z,137nm,18.7s,baz=172,slow=35						
	comp=Z,2.0nm,0.6s						
WR0	**Warramunga Arr**	**44.10**	**272**	P	**P**	**13 25 25.1**	**-0.6**
WR0				IAmb	IAmb	13 25 27.2	
	comp=Z,6.6nm,1.1s						
WB2	**Warramunga Arr**	**44.27**	**272**	P	**P**	**13 25 26.4**	**-0.6**
WRAB	**Tennant Creek**	**44.28**	**272**	P	**P**	**13 25 26.1**	**-1.0**
WRAB				IAmb	IAmb	13 25 51.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**44.28**	**272**	P	**P**	**13 25 26.6**	**-0.6**
	comp=Z,2.4nm,0.3s,baz=110,slow=8.2,SNR=133						
WRA				LR	LR	13 42 12.2	
	comp=Z,192nm,18.3s,baz=46,slow=34						
	comp=Z,2.4nm,0.3s						
WRA	**Warramunga Arr**	**44.28**	**272**	P	**P**	**13 25 26.1**	**-1.1**
WB0	**Warramunga Arr**	**44.30**	**272**	P	**P**	**13 25 26.7**	**-0.6**
WB0				IAmb	IAmb	13 25 28.8	
	comp=Z,5.1nm,0.6s						
KNRA	**Kununurra**	**50.88**	**274**	P	**P**	**13 26 18.0**	**-0.4**
KNRA				IAmb	IAmb	13 26 20.2	
	comp=Z,8.5nm,1.1s						
CASY	**Casey**	**55.32**	**208**	P	**P**	**13 26 50.5**	**+0.2**
GUMO	**Guam**	**56.54**	**315**	LR	LR	13 48 45.8	
	comp=Z,72nm,20.0s,baz=39,slow=33						
RPN	**Rapa Nui**	**59.28**	**105**	LR	LR	13 47 27.9	
	comp=Z,27nm,21.9s,baz=178,slow=31						
QSPA	**South Pole Qui**	**59.81**	**180**	P	**P**	**13 27 24.3**	**+2.1**
QSPA				IAmb	IAmb	13 27 42.5	

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             comp=Z,5.9nm,0.9s
DAV    Davao City (W)    65.75 295  LR     LR      13 53 37.3
             comp=Z,67nm,21.6s,baz=152,slow=33
BELA   Belgrano 2        69.86 172  P      P       13 28 28.5 +1.2
BELA                                IAmb   IAmb    13 28 46.5
             comp=Z,5.4nm,1.0s
MAW    Mawson            72.47 201  LR     LR      13 58 30.9
             comp=Z,68nm,18.1s,baz=88,slow=34
MAW    Mawson            72.47 201  P      P       13 28 44.6 +1.5
TROLL  Troll, Antarti    77.98 180  P      P       13 29 16.6 +1.6
SNAA   Sanae             78.25 178  P      P       13 29 17.7 +1.3
SNAA   Sanae             78.25 178  P      P       13 29 17.3 +0.9
SNAA                                IAmb   IAmb    13 29 25.1
             comp=Z,5.4nm,1.2s
VNA3   Neumayer Olymp    78.40 176  P      P       13 29 18.3 +1.1
VNA2   Neumayer--Watz    78.83 177  P      P       13 29 21.7 +2.2
             baz=167,slow=4.0
VNA1   Neumayer--Stat    79.06 176  P      P       13 29 22.6 +1.8
H03S2  Juan Fernandez    80.36 123  T      T       14 58 49.1
             baz=237,SNR=15
H03S1  Juan Fernandez    80.38 123  T      T       14 58 48.8
             baz=237,SNR=16
H03S3  Juan Fernandez    80.38 123  T      T       14 59 08.5
             baz=237
H03N3  Juan Fernandez    80.56 123  T      T       14 58 55.5
             baz=242,slow=73,SNR=12
H03N2  Juan Fernandez    80.56 123  T      T       14 59 04.6
             baz=242,slow=73,SNR=18
H03N1  Juan Fernandez    80.57 123  T      T       14 58 52.4
             baz=242,slow=73,SNR=20
NVAR   Mina Array Bea    88.03  43  P      P       13 30 07.9 +0.4
             comp=Z,1.1nm,0.9s,baz=227,slow=9.5,SNR=7.7
             comp=Z,1.1nm,0.9s
ILAR   Eielson Array     97.78  13  P      Pdif    13 30 51.4 -0.1
             comp=Z,0.3nm,0.8s,baz=192,slow=8.0,SNR=2.5
             comp=Z,0.3nm,0.8s
MKAR   Makanchi Array   117.85 310  PKP    PKPdf   13 36 01.5 -1.6
             comp=Z,0.5nm,0.8s,baz=248,slow=0.8,SNR=2.9
KURK   Kurchatov        121.11 314         PKPdf   13 36 08.8 -0.3
KURBB  Kurchatov Arra   121.15 314  PKP    PKPdf   13 36 08.8 -0.4
             comp=Z,0.9nm,0.6s,baz=110,slow=1.9,SNR=12
H10N3  ASCENSION HYDR138.82 154  T      T       16 12 37.5
             baz=203,slow=75,SNR=101
H10N1  ASCENSION HYDR138.83 154  T      T       16 12 37.8
             baz=203,slow=75,SNR=91
H10N2  ASCENSION HYDR138.84 154  T      T       16 12 31.4
             baz=203,slow=75,SNR=90
FINES  FINESS Array B   145.11 340  PKPbc  PKPbc   13 36 52.5 -0.6
             comp=Z,8.4nm,0.7s,baz=53,slow=4.3,SNR=23
FINES  FINESS Array B   145.11 340         PKPbc   13 36 52.2 -0.9
NB2    NORSAR Subarra   148.68 352  PKP    PKPbc   13 37 03.2 -0.2
             comp=Z,0.8nm,0.7s,baz=10,slow=2.8
NOA    NORSAR Array B   148.68 352  PKPbc  PKPdf   13 37 00.7 +1.1
             comp=Z,3.4nm,1.1s,baz=16,slow=4.3,SNR=4.8
AKASG  Malin Array Be   151.33 323  PKPbc  PKPbc   13 37 09.6 -0.5
             comp=Z,4.8nm,0.7s,baz=45,slow=2.9,SNR=7.7
AKASG  Malin Array Be   151.33 323         PKiKP   13 37 10.0 -0.6
BRTR   Keskin Array B   152.72 299  PKPbc  PKiKP   13 37 14.1 +0.1
             comp=Z,1.3nm,0.8s,baz=70,slow=5.4,SNR=7.1
BRTR   Keskin Array B   152.72 299         PKiKP   13 37 13.7 -0.4
TORD   Torodi Ar. Bea   162.93 178  PKPab  PKPab   13 38 09.7 +0.8
             comp=Z,1.7nm,0.8s,baz=176,slow=2.6,SNR=6.6
TORD   Torodi Ar. Bea   162.93 178         PKPab   13 38 08.3 -0.6
```

IDC 31 13:18:19.7±2.0**,13.°81S**×**166.°38E,h0**^{km}**,mb3.5**/3**, mbtmp3.6**/4**,ML3.6**/1**,Error ellipse: s-maj=52.3km s-min=36.0km az=124.0,Vanuatu Islands**

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Code   Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s     ISC
DZM    Mont Dzumac        8.22 180  Pn     Pn      13 20 20.3 -0.1
             0.7nm,0.3s,baz=180,slow=20,SNR=8.6
DZM                                 Sn     Sn      13 21 50.1 -4.1
             baz=71,slow=21
             1.8nm,0.3s
WRA    Warramunga Arr    31.23 254  P      P       13 24 41.3  0.0
             0.4nm,0.8s,baz=85,slow=8.9,SNR=2.0
             0.4nm,0.8s
ASAR   Alice Springs     32.21 247  P      P       13 24 49.9 -0.1
             0.4nm,0.6s,baz=75,slow=9.2,SNR=15
             0.4nm,0.6s
ILAR   Eielson Array     85.92  18  P      P       13 31 01.3  0.0
             0.2nm,0.5s,baz=238,slow=5.0,SNR=2.7
             0.2nm,0.5s
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*IDC **31** 13:38:48.2±0.6,28.°76N×142.°68E,h0^{km},mb4.1/16, mbtmp4.2/20,ML3.7/4,MS3.5/14,Error ellipse: s-maj=20.2km s-min=13.4km az=93.0*

*BJI **31** 13:38:49.6±0.0,28.°87N×142.°39E,h10^{km},mb4.5/44, mB4.6/26,Ms3.9/13,Ms7 3.7/13*

*NEIC **31** 13:38:49.6±1.5,28.°80N±0.°06×142.°8E±0.°1,h10^{km}±1^{km}, mb4.8/37,Error ellipse: s-maj=18.4km s-min=10.0km az=89.0*

*JMA **31** 13:38:50.5±0.1,28°N±1°×14°1E±°,h148^{km},MV3.8/23, NEAR CHICHIJIMA ISLAND*

ISC 31 13:38:52.2±0.5**,28.°78N**±0.°04×**142.°64E**±0.°08**,h27**^{km}**,n116,** σ**1**^{s}**27**/111**,mb4.7**/41**,MS3.7**/14**,21C-5D,Fault plane solution: NP1:**ϕ$_s$133.79160°,δ58.13491°,λ-11.08533°. **NP2:**ϕ$_s$229.69690°**,**δ80.60184°**,**λ-147.64908°. **Principal axes:** T Plg14.9413°, Azm357.8859°**;** N Plg56.4545°, Azm244.1529°**;** P Plg29.2593°, Azm96.4839°**; Fault plane solution: NP1:**ϕ$_s$259.80179°**,**δ74.93701°, λ-89.74403°. **NP2:**ϕ$_s$78.81693°**,**δ15.06512°**,**λ-90.95102°. **Principal axes:** T Plg29.9366°, Azm349.5929°**;** N Plg0.2472°, Azm79.7353°**;** P Plg60.0622°, Azm170.1645°**; Bonin Islands region**

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Code   Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s     ISC
CBIJ   Chichi jima        1.73 194  P      Pn      13 39 19.7 -0.9
CBIJ                                S      Sn      13 39 41.6 -0.1
JCJ    Chichijima         1.73 194  Pn     Pn      13 39 19.3 -1.2
             19nm,0.3s,baz=288,slow=22,SNR=7.8
JCJ                                 Sn     Sn      13 39 39.4 -2.3
             69nm,0.3s,baz=78,slow=23,SNR=16
JCJ    Chichijima         1.73 194  Pn     Pn      13 39 18.7 -1.8
JHH2   Haha-jima-NKT2     2.18 191  P      Pn      13 39 23.7 -3.0
JHJ    Hachijo jima 2     4.97 331  Pn     Pn      13 40 05.7 +0.6
             8.5nm,0.3s,baz=231,slow=16,SNR=1.8
JHJ                                 Sn     Sn      13 41 01.2 -0.5
             18nm,0.3s,baz=55,slow=23,SNR=5.0
JHJ                                 LR     LR      13 41 57.5
             comp=Z,303nm,18.6s,baz=253,slow=38
             36nm,0.3s
JMKN   Mikurajimanish     5.72 334  P      Pn      13 40 14.6 -0.8
JMKN                                S      Sn      13 41 20.2  0.0
BSO3   Boso 3             6.27 344  P      Pn      13 40 24.8 +2.1
BSO4   Boso 4             6.49 343  P      Pn      13 40 27.4 +1.5
JOD2   Odawara 2          7.13 336  P      Pn      13 40 34.2 -0.6
JOD2                                S      Sn      13 41 54.1 -0.8
JHU    Hanno              7.60 339  P      Pn      13 40 40.4 -0.9
JHU                                 S      Sn      13 42 07.2 +0.8
JYT    Yasato             7.71 345  Pn     Pn      13 40 41.6 -1.0
JRY    Ryogami san        7.88 337  P      Pn      13 40 44.4 -0.7
JRY                                 S      Sn      13 42 13.0 -0.3
JAG    Ashikaga           8.08 341  P      Pn      13 40 45.6 -2.2
JAG                                 S      Sn      13 42 17.2 -1.0
INU    Inuyama            8.10 325  Pn     Pn      13 40 47.1 -1.0
JGF    Kuroka             8.14 328  Pn     Pn      13 40 47.5 -1.1
MJAR   Matsushiro Arr     8.59 335  Pn     Pn      13 40 53.7 -1.1
             0.6nm,0.3s,baz=157,slow=11,SNR=50
             10nm,0.6s
MJAR   Matsushiro Arr     8.59 335  Pn     Pn      13 40 53.0 -1.8
MAJO   Matsushiro         8.59 335  Pn     Pn      13 40 53.1 -1.7
MJB9   Matsu-Tunnel       8.60 335         Pn      13 40 53.0 -1.9
JMN    Monobe             8.97 306  Pn     Pn      13 40 59.0 -1.1
JMM    Marumori           9.19 351         Pn      13 40 59.3 -3.7
JSD    Sado               9.93 340  Pn     Pn      13 41 10.0 -3.1
JTM    Tenmabayashi      12.05 354  Pn     Pn      13 41 37.9 -4.2
JOW    Kunigami          12.87 265  LR     LR      13 46 28.2
             comp=Z,138nm,20.1s,baz=153,slow=36
ERM    Erimo             13.21   2  Pn     Pn      13 41 54.4 -3.6
KSRS   Korea Array       15.05 309  Pn     Pn      13 42 24.3 +1.3
             0.5nm,0.3s,baz=112,slow=12,SNR=25
KSRS                                LR     LR      13 48 20.9
             comp=Z,97nm,18.6s,baz=110,slow=38
             8.4nm,0.8s
KSAR   Wonju Array Be    15.07 309  Pn     Pn      13 42 24.7 +1.4
KS19   Wonju Array Si    15.11 309  Pn     Pn      13 42 24.6 +0.8
SEHB   SEOHWA            15.27 312         Pn      13 42 27.3 +1.4
SEHB                                IAmb   IAmb    13 42 28.9
             comp=Z,33nm,1.5s
ASAJ   Asahikawa         15.30 360  Pn     Pn      13 42 25.9 -0.4
             comp=Z,0.4nm,0.3s,baz=155,slow=21,SNR=2.2
ASAJ                                LR     LR      13 49 30.2
             comp=Z,116nm,21.1s,baz=170,slow=42
             comp=Z,7.0nm,0.9s
YOJ    Yonaguni jima     18.07 261         P       13 43 03.2 +1.6
YOJ                                 IAmb   IAmb    13 43 25.9
             comp=Z,37nm,1.1s
MDJ    Mudanjiang        18.91 330  P      Pn      13 43 11.8 +0.3
MDJ                                 S      S       13 46 44.5 +0.5
MDJ                                 sS     sS      13 46 48.5 -5.0
MDJ                                 PcS    PcS     13 51 15.0 +2.0
MDJ                                 pmax   pmax
             comp=Z,14nm,1.4s
MDJ                                 pmax   pmax
             comp=Z,57nm,4.0s
MDJ                                 LR     LR
             comp=Z,190nm,12.0s
MDJ                                 LR     LR
             comp=Z,150nm,12.1s
MDJ                                 LR     LR
             comp=Z,140nm,15.7s
YHNB   Yeheng            19.43 263  P      Pn      13 43 17.2 -0.8
YULB   Yu-li             19.90 259  P      Pn      13 43 22.7 -0.8
YULB                                IAmb   IAmb    13 43 26.3
             comp=Z,41nm,1.4s
SSLB   Suanglung         20.07 261  P      Pn      13 43 24.6 -0.8
CN2    Changchun         20.35 322 eP      P       13 43 24.0 -2.5
CN2                                 pmax   pmax
             comp=Z,10.0nm,0.5s
CN2                                 LR     LR
             comp=Z,200nm,16.0s
CN2                                 LR     LR
             comp=Z,200nm,16.0s
CN2                                 LR     LR
             comp=Z,200nm,17.0s
TPUB   Ta-pu             20.51 260  P      Pn      13 43 29.5 -1.1
TPUB                                IAmb   IAmb    13 43 50.9
             comp=Z,53nm,1.5s
BNX    BinXian           20.76 329 ⇑P      P       13 43 31.0 +0.1
BNX                                 pmax   pmax
             comp=Z,53nm,0.9s
BNX                                 pmax   pmax
             comp=Z,310nm,6.5s
NJ2    Nanjing           20.76 285 ⇑P      P       13 43 30.3 -0.7
NJ2                                 pmax   pmax
             comp=Z,18nm,0.8s
H11N2  WAKE ISLAND Hy    23.84 107  T      T       14 09 16.4
             baz=296,slow=74,SNR=3.2
H11N1  WAKE ISLAND Hy    23.84 107  T      T       14 09 20.7
             baz=296,slow=74,SNR=4.2
H11N3  WAKE ISLAND Hy    23.86 107  T      T       14 09 13.0
             baz=296,slow=74,SNR=7.2
WHN    Wuhan             24.62 281 ⇑P      P       13 44 11.3 +0.8
HHC    Hu-ho-hao-te      28.06 304 eP      P       13 44 44.5 +3.0
HHC                                 pmax   pmax
             comp=Z,30nm,1.0s
BTO    Baotou            29.14 303 eP      P       13 44 52.0 +0.9
BTO                                 LR     LR
             comp=Z,460nm,12.6s
BTO                                 LR     LR
             comp=Z,530nm,15.2s
GYA    Guiyang           31.89 275 ⇑P      P       13 45 14.5 -1.1
GYA                                 pmax   pmax
             comp=Z,11nm,0.8s
SHEM   Shemya Is, Ala    33.32  35  LR     LR      13 57 04.3
             comp=Z,47nm,19.8s,baz=284,slow=33
LZH    Lanzhou           33.38 293 eP      P       13 45 29.8 +1.2
LZH                                 pP     sP      13 45 36.0 -2.0
LZH                                 sP     pwP     13 45 38.8 -2.1
LZH                                 pmax   pmax
             comp=Z,13nm,1.3s
ULN    Ulaanbaatar       33.41 315  P      P       13 45 28.1 -0.6
SONM   Songino Array     33.81 314  P      P       13 45 32.4 +0.3
             comp=Z,3.6nm,0.9s,baz=116,slow=8.7,SNR=17
             comp=Z,3.6nm,0.9s
SONM   Songino Array     33.81 314  P      P       13 45 31.4 -0.7
PZH    PanZhiHua         36.18 276  P      P       13 45 55.0 +2.2
PZH                                 pmax   pmax
             comp=Z,10.0nm,0.6s
PZH                                 pmax   pmax
             comp=Z,140nm,6.8s
GTA    Gaotai            36.71 298 eP      P       13 45 56.5 -0.7
GTA                                 sP     pwP     13 46 07.3 -3.4
GTA                                 pmax   pmax
             comp=Z,3.0nm,1.2s
GTA                                 pmax   pmax
             comp=Z,41nm,5.8s
GTA                                 LR     LR
             comp=Z,82nm,16.7s
GTA                                 LR     LR
             comp=Z,83nm,17.8s
GTA                                 LR     LR
             comp=Z,98nm,18.5s
KAPI   Kappang           40.18 217  LR     LR      14 05 29.8
             comp=Z,45nm,18.1s,baz=346,slow=40
GOMU   GeErMu            40.68 293  P      P       13 46 30.5 -0.4
GOMU                                pP     pP      13 46 33.8 -3.8
GOMU                                sP     sP      13 46 37.5 -2.9
GOMU                                S      S       13 52 37.0 -2.7
GOMU                                pmax   pmax
             comp=Z,7.0nm,0.9s
GOMU                                pmax   pmax
             comp=Z,110nm,5.2s
GOMU                                LR     LR
             comp=Z,140nm,15.3s
GOMU                                LR     LR
             comp=Z,120nm,15.3s
GOMU                                LR     LR
             comp=Z,92nm,15.1s
CMAR   Chiang Mai Arr    41.14 265  P      P       13 46 34.6 +0.2
             comp=Z,0.4nm,0.3s,baz=55,slow=8.5,SNR=6.5
CMAR                                LR     LR      14 04 59.4
             comp=Z,45nm,19.9s,baz=225,slow=38
             comp=Z,0.4nm,0.3s
MTN    Manton Dam        42.85 197  P      P       13 46 47.4 -0.9
MTN                                 IAmb   IAmb    13 47 11.3
             comp=Z,16nm,1.4s
WMQ    Urumqi            45.94 304 eP      P       13 47 14.3 +1.5
KULM   Kulim             46.09 248  P      P       13 47 14.5 +0.2
KULM                                IAmb   IAmb    13 47 39.3
             comp=Z,16nm,1.3s
WB0    Warramunga Arr    48.92 190  P      P       13 47 35.1 -0.9
WB0                                 IAmb   IAmb    13 47 36.8
             comp=Z,8.8nm,0.8s
WR0    Warramunga Arr    49.09 190  P      P       13 47 36.6 -0.8
WR0                                 IAmb   IAmb    13 47 37.7
             comp=Z,12nm,1.1s
WRAB   Tennant Creek     49.09 190  P      P       13 47 36.6 -0.7
WRAB                                IAmb   IAmb    13 47 37.7
             comp=Z,12nm,0.8s
WB2    Warramunga Arr    49.10 190  P      P       13 47 36.7 -0.7
WB2                                 IAmb   IAmb    13 47 37.8
             comp=Z,12nm,0.8s
WRA    Warramunga Arr    49.10 190  P      P       13 47 36.9 -0.5
             comp=Z,7.7nm,0.8s,baz=12,slow=8.7,SNR=51
             comp=Z,7.7nm,0.8s
RAMN   Ramite            49.19 282 eP      P       13 47 37.8 -0.7
             comp=Z,30nm,0.7s
JIRN   Jiri              49.35 283 eP      P       13 47 39.6 -0.3
             comp=Z,62nm,0.8s
GUN    Gumba             49.55 283 eP      P       13 47 40.9 -0.5
             comp=Z,46nm,0.8s
MK31   Makanchi Array    49.73 309  P      P       13 47 41.6 -0.5
MKAR   Makanchi Array    49.73 309  P      P       13 47 42.6 +0.5
             comp=Z,3.1nm,0.7s,baz=89,slow=9.7,SNR=26
             comp=Z,3.1nm,0.7s
MKAR   Makanchi Array    49.73 309  P      P       13 47 41.6 -0.5
MAKZ   Makanchi          49.95 309  P      P       13 47 43.4 -0.4
DANN   Dangsing          51.24 285 eP      P       13 47 53.9 -0.2
             comp=Z,69nm,1.0s
PYUN   Piuthan           51.96 285 eP      P       13 47 59.1 -0.3
             comp=Z,62nm,0.5s
KURK   Kurchatov         52.11 314  P      P       13 47 59.8  0.0
KURK                                IAmb   IAmb    13 48 01.2
             comp=Z,21nm,1.1s
KDAK   Kodiak Island     52.78  37  P      P       13 48 04.4 -0.3
             comp=Z,3.8nm,0.7s,baz=278,slow=7.1,SNR=4.6
KDAK                                LR     LR      14 09 24.9
             comp=Z,83nm,20.4s,baz=237,slow=35
             comp=Z,3.8nm,0.7s
ASAR   Alice Springs     52.82 190  P      P       13 48 04.7 -0.7
             comp=Z,0.5nm,0.5s,baz=16,slow=9.2,SNR=11
             comp=Z,0.5nm,0.5s
ASAR   Alice Springs     52.82 190  P      P       13 48 04.5 -0.9
J20K   Nowinta River     52.85  29  P      P       13 48 04.3 -0.8
IMAR   Indian Mountai    53.36  27  P      P       13 48 08.0 -0.9
KSH    Kashi             55.08 300  P      P       13 48 26.0 +4.0
KSH                                 pmax   pmax
             comp=Z,6.0nm,0.7s
TOLK   Toolik Lake Re    55.44  24  P      P       13 48 24.3 +0.2
TOLK                                IAmb   IAmb    13 48 46.0
             comp=Z,8.3nm,1.4s
AAK    Ala-Archa         55.64 304  LR     LR      14 13 11.4
             comp=Z,80nm,18.4s,baz=128,slow=37
ILAR   Eielson Array     56.05  29  P      P       13 48 28.2 -0.1
             comp=Z,0.7nm,0.8s,baz=256,slow=5.1,SNR=5.9
             comp=Z,0.7nm,0.8s
BRVK   Borovoye          57.15 317  P      P       13 48 37.0 +0.5
BRVK                                IAmb   IAmb    13 48 37.8
             comp=Z,6.1nm,0.8s
KK31   Karatay Array     58.44 305  P      P       13 48 46.0 +0.3
KK31                                IAmb   IAmb    13 48 47.3
             comp=Z,8.6nm,0.9s
KKAR   Karatay Array     58.44 305  P      P       13 48 45.6 -0.1
NIL    Nilore            58.54 294  P      P       13 48 47.1 +0.6
GAR    Garm              59.48 300  P      P       13 48 53.2 +0.1
GAR                                 IAmb   IAmb    13 48 56.5
             comp=Z,9.6nm,0.9s
STKA   Stephens Creek    60.33 181  P      P       13 48 59.9 +1.2
             comp=Z,0.5nm,0.4s,baz=354,slow=9.2,SNR=1.3
             comp=Z,0.5nm,0.4s
STKA   Stephens Creek    60.33 181  IAmb   IAmb    13 49 05.6
             comp=Z,1.5nm,1.4s
CHGR   Chuyangaron       60.44 300  P      P       13 48 59.5 -0.1
FORT   Forrest           60.84 194  P      P       13 49 01.6 -0.5
FORT                                IAmb   IAmb    13 49 21.7
             comp=Z,6.9nm,0.8s
INK    Inuvik            61.33  25  P      P       13 49 05.6 +0.5
             comp=Z,1.9nm,0.6s,baz=304,slow=7.3,SNR=9.2
             comp=Z,1.9nm,0.6s
INK    Inuvik            61.33  25  P      P       13 49 05.4 +0.3
INK                                 IAmb   IAmb    13 49 08.1
             comp=Z,8.2nm,1.4s
ARU    Arti              63.35 322  P      P       13 49 17.9 -0.8
ARU                                 IAmb   IAmb    13 49 19.7
             comp=Z,14nm,1.2s
ABKAR  Akbulak array     64.22 314  P      P       13 49 24.7  0.0
SPITS  Spitsbergen Ar    68.80 350  P      P       13 49 54.8 +1.3
             comp=Z,6.2nm,0.9s,baz=76,slow=12,SNR=2.3
             comp=Z,6.2nm,0.9s
YKA    Yellowknife Ar    70.47  29  P      P       13 50 03.9 -0.1
             comp=Z,0.8nm,0.7s,baz=290,slow=6.0,SNR=6.7
             comp=Z,0.8nm,0.7s
RAR    Rarotonga         74.53 125  LR     LR      14 17 48.6
             comp=Z,45nm,19.1s,baz=304,slow=31
YBH    Yreka Blue Hor    74.67  51  LR     LR      14 17 14.5
             comp=Z,31nm,20.3s,baz=270,slow=31
FINES  FINESS Array B    76.62 334  P      P       13 50 40.2 +0.1
             comp=Z,1.6nm,0.8s,baz=74,slow=5.1,SNR=4.5
             comp=Z,1.6nm,0.8s
FINES  FINESS Array B    76.62 334  P      P       13 50 39.9 -0.3
NVAR   Mina Array Bea    79.16  52  P      P       13 50 56.3 +1.2
             comp=Z,0.8nm,0.8s,baz=266,slow=6.2,SNR=6.0
             comp=Z,0.8nm,0.8s
ELK    Elko              80.13  49  LR     LR      14 21 19.3
             comp=Z,59nm,19.4s,baz=258,slow=32
NACGM  Naroch            80.22 328 eP      P       13 51 01.3 +1.1
AKASG  Malin Array Be    81.50 324  P      P       13 51 07.9 +0.8
             comp=Z,0.7nm,0.4s,baz=77,slow=5.7,SNR=4.0
             comp=Z,0.7nm,0.4s
NC405  NORSAR Array S    81.98 338  P      P       13 51 09.3 -0.2
NB201  NORSAR Array S    82.17 338  P      P       13 51 10.1 -0.3
NC204  NORSAR Array S    82.17 339  P      P       13 51 10.3 -0.2
NB2    NORSAR Subarra    82.20 338  P      P       13 51 10.4 -0.3
             comp=Z,0.7nm,0.6s,baz=41,slow=5.1
NOA    NORSAR Array B    82.20 338  P      P       13 51 10.3 -0.3
             comp=Z,1.3nm,0.6s,baz=42,slow=5.2,SNR=4.9
             comp=Z,1.3nm,0.6s
PDAR   Pinedale Array    82.73  45  LR     LR      14 24 22.8
             comp=Z,28nm,21.7s,baz=268,slow=33
RAYN   Ar Rayn           84.84 294  P      P       13 51 25.9 +1.0
BRTR   Keskin Array B    85.16 313  P      P       13 51 27.1 +0.8
             comp=Z,1.9nm,0.7s,baz=97,slow=4.4,SNR=9.2
             comp=Z,1.9nm,0.7s
BRTR   Keskin Array B    85.16 313  P      P       13 51 26.6 +0.3
ANMO   Albuquerque       89.09  50  LR     LR      14 31 44.0
             comp=Z,33nm,18.6s,baz=247,slow=36
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*NEIC **31** 13:45:21.4±1.8,15.°94N±0.°04×94.°18W±0.°03,h64^{km}±12^{km}, mb4.1/5,Md4.2/56(MEX) Error ellipse: s-maj=6.6km s-min=4.6km az=172.0*

*MEX **31** 13:45:21.3±0.8,15.°87N×94.°28W,h83^{km}±15^{km},MD4.2*

ISC 31 13:45:20.6±0.8**,15.°87N**±0.°05×**94.°30W**±0.°03**,h67**^{km}±12^{km}**, n61,**σ**1**^{s}**93**/100**,Near coast of Oaxaca**

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Code   Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s     ISC
PCIG                      1.05  99         Pn      13 45 39.5  0.0
PCIG                                       Sn      13 45 54.0 +0.3
PCIG                      1.05  99 i P     Pn      13 45 39.5  0.0
PCIG                               i S     Sn      13 45 54.0 +0.3
CMIG   Matias Romero      1.34 335         Pn      13 45 43.6 +0.2
CMIG                                       Sn      13 46 00.8 +0.3
CMIG   Matias Romero      1.34 335 i P     Pn      13 45 43.6 +0.2
CMIG                               i S     Sn      13 46 00.8 +0.3
TGIG                      1.45  51         Pn      13 45 43.9 -0.9
TGIG                                       Sn      13 46 00.3 -2.7
TGIG                      1.45  51 i P     Pn      13 45 43.9 -0.9
TGIG                               eS      Sn      13 46 00.3 -2.7
UXUV   UXUV               1.45   6 eP      Pn      13 45 45.1 +0.2
UXUV                               i S     Sn      13 46 02.2 -0.9
TGBT   Tuxtla Gutierr     1.47  52         Pn      13 45 43.8 -1.3
TGBT                                       Sn      13 46 00.6 -2.9
TGBT   Tuxtla Gutierr     1.47  52 i P     Pn      13 45 43.8 -1.3
TGBT                               eS      Sn      13 46 00.6 -2.9
CCIG   Comitan            2.12  78         Pn      13 45 53.1 -0.8
CCIG                                       Sn      13 46 16.2 -3.1
CCIG   Comitan            2.12  78 eP      Pn      13 45 53.1 -0.8
CCIG                               eS      Sn      13 46 16.2 -3.1
PATR   El Naranjo         2.12 110 eP      Pn      13 45 54.0 -0.1
PATR                               eS      Sn      13 46 19.1 -0.5
PAVE   Pavencul           2.15 108 eP      Pn      13 45 54.6 +0.2
PAVE                               eS      Sn      13 46 19.8 -0.4
THIG                      2.18 116         Pn      13 45 52.4 -2.3
THIG                                       Sn      13 46 19.3 -1.2
THIG                      2.18 116 eP      Pn      13 45 52.4 -2.3
THIG                               eS      Sn      13 46 19.3 -1.2
CHUJ   Union Juarez       2.24 110 eP      Pn      13 45 55.7 -0.1
CHUJ                               eS      Sn      13 46 22.1 -0.4
NEUV   Arroyo Zacate      2.33 322 eP      Pn      13 45 56.5 -0.2
NEUV                               eS      Sn      13 46 22.9 -1.5
VHO    Vista Hermosa      2.63 297 eP      Pn      13 46 02.8 +1.9
VHO                                eS      Sn      13 46 32.8 +0.9
PEIG   Puerto Escondi     2.75 273 i P     Pn      13 46 02.0 -0.4
PEIG                               eS      Sn      13 46 32.8 -1.7
YOIG   Yosondua           3.27 288 eP      Pn      13 46 10.9 +1.1
YOIG                               eS      Sn      13 46 46.4 -1.3
TOIG   Toxpalan           3.46 310 eP      Pn      13 46 13.4 +1.3
TOIG                               eS      Sn      13 46 52.0  0.0
TXIG   Tlaxiaco           3.60 293 i P     Pn      13 46 16.1 +1.8
TXIG                               eS      Sn      13 46 53.6 -2.2
PNIG   Pinotepa           3.72 279         Pn      13 46 15.8 +0.1
PNIG                                       Sn      13 46 54.8 -3.5
PNIG   Pinotepa           3.72 279 i P     Pn      13 46 15.8 +0.1
PNIG                               eS      Sn      13 46 54.8 -3.5
HLIG   Huajuapan de L     3.89 301 eP      Pn      13 46 20.2 +2.1
HLIG                               eS      Sn      13 47 01.1 -1.5
FTIG   Fresnillo de T     4.20 299 eP      Pn      13 46 24.5 +2.2
FTIG                               eS      Sn      13 47 09.9 -0.3
JAUV   Jalcomulco         4.22 326 eP      Pn      13 46 21.6 -1.0
JAUV                               eS      Sn      13 47 06.5 -4.1
MGIG   Malinaltepec       4.38 289 eP      Pn      13 46 26.4 +1.6
MGIG                               eS      Sn      13 47 12.8 -1.8
TLIG   Tlapa              4.43 293         Pn      13 46 27.3 +1.9
TLIG                                       Sn      13 47 12.2 -3.6
TLIG   Tlapa              4.43 293 eP      Pn      13 46 27.3 +1.9
TLIG                               i S     Sn      13 47 12.2 -3.6
CRIG   Cruz Grande        4.72 281         Pn      13 46 29.7 +0.3
CRIG                                       Sn      13 47 18.6 -4.3
CRIG   Cruz Grande        4.72 281 eP      Pn      13 46 29.7 +0.3
CRIG                               eS      Sn      13 47 18.6 -4.3
PPM    Popocatepetl       5.22 308 eP      Pn      13 46 40.4 +3.8
PPM                                eS      Sn      13 47 32.8 -2.9
DAIG   Los Arroyos        5.27 283         Pn      13 46 37.5 +0.7
DAIG                                       Sn      13 47 33.0 -3.2
DAIG   Los Arroyos        5.27 283 eP      Pn      13 46 37.5 +0.7
DAIG                               eS      Sn      13 47 33.0 -3.2
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YAIG	**Yautepec**	5.44	304		Pn	13 46 42.1	+2.8
YAIG					Sn	13 47 37.2	-3.6
YAIG	**Yautepec**	5.44	304	*e*P	Pn	13 46 42.1	+2.8
YAIG				*e*S	Sn	13 47 37.2	-3.6
PLIG	**Platanillo**	5.58	298		Pn	13 46 44.0	+2.9
PLIG					Sn	13 47 41.9	-2.0
PLIG	**Platanillo**	5.58	298	*e*P	Pn	13 46 44.0	+2.9
PLIG				*e*S	Sn	13 47 41.9	-2.0
MOIG	**Morelia**	7.58	301		Pn	13 47 10.6	+1.9
CRIN	**San Cristobal**	7.70	113	Pn	Pn	13 47 09.7	-0.5
BOAB	**BOACO BROADBAN**	9.03	111	Pn	Pn	13 47 27.2	-1.2
ACON	**Acoyapa**	9.66	112	Pn	Pn	13 47 34.7	-2.3
HZTE	**Horizontes, Gu**	9.89	120	Pn	Pn	13 47 40.8	+0.7
ORTG	**Ortega, Santa**	10.20	121		Pn	13 47 44.7	+0.3
DUNO	**Dulce Nombre,**	10.33	123	Pn	Pn	13 47 46.5	+0.5
JTS	**Las Juntas de**	10.65	120		Pn	13 47 49.9	-0.6
JACO	**JACO, Garabito**	11.24	122	Pn	Pn	13 47 58.7	+0.2
RIMA	**Rio Macho**	11.84	120		Pn	13 48 06.2	-0.6
SRBA	**San Rafael, Bu**	12.54	120		Pn	13 48 15.0	-1.4
DRK0	**Durika**	12.62	120		Pn	13 48 17.3	-0.2
833A	**Chaparral WMA,**	13.26	340	Pn	Pn	13 48 27.6	+1.6
735A	**Kenedy**	13.33	347	Pn	Pn	13 48 28.5	+1.6
BRU2	**Volcan**	13.33	120	Pn	Pn	13 48 26.4	-0.8
LCCY	**Blossom Villag**	14.05	72	Pn	Pn	13 48 35.8	-0.7
HKT	**Hockley**	14.09	355	P	P	13 48 42.0	-0.6
WHTX	**Lake Whitney,**	16.31	350		Pn	13 49 06.2	+0.8
WHTX				IAmb	IAmb	13 49 25.1	
	comp=Z,7.6nm,0.6s						
PV15	**Paradox Valley**	25.64	334	P	P	13 50 45.6	+1.3
RDMU	**Red Mountain**	27.96	335	P	P	13 51 05.3	+0.2
RDMU				IAmb	IAmb	13 51 33.2	
	comp=Z,5.2nm,1.2s						
PB12	**IPOC Station P**	41.60	145	P	P	13 53 03.2	+0.8
PB16	**IPOC Station P**	41.84	143	P	P	13 53 05.0	+0.1
PB16				IAmb	IAmb	13 53 32.6	
	comp=Z,4.4nm,1.1s						

IDC ***31*** *13:47:01.4±1.0, 52°.92N×160°.49E, h0*^{km}*, mb3.6/6, mbtmp3.7/7, ML4.3/1, Error ellipse: s-maj=30.5km s-min=28.4km az=134.0*

KRSC ***31*** *13:47:02.8±1.5, 52°.73N×160°.80E, h21*^{km}*±21*^{km}*, ML4.0*

MOS ***31*** *13:47:04.3±0.8, 52°.72N×160°.83E, h30*^{km}*, mb4.6/4, Error ellipse: s-maj=8.7km s-min=6.7km az=126.7*

NEIC ***31*** *13:47:05.8±1.8, 53°.0N±0°.2×160°.70E±0°.09, h30*^{km}*±4*^{km}*, mb4.3/10, Error ellipse: s-maj=23.8km s-min=7.4km az=176.0*

ISC 31 13:47:02.7±1.4, **52°.81N**±0°.04×**160°.77E**±0°.03, **h12**^{km}±9^{km}, **n84**, σ**1**^{s}**.02**/121, **mb4.0**/12, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.53	303	PN	Pn	13 47 15.4	-0.7
SPN				S	Sb	13 47 22.7	+1.1
SPN	**Mys Shipunski**	0.53	303	*e*P	Pn	13 47 15.4	-0.7
SPN				*e*S	Sb	13 47 22.7	+1.1
NLC	**Nalytchevo**	0.93	293	PN	Pn	13 47 21.4	-0.1
NLC				S	Sb	13 47 33.6	+0.6
NLC	**Nalytchevo**	0.93	293	*e*P	Pn	13 47 21.4	-0.1
NLC				*e*S	Sb	13 47 33.6	+0.6
SDLR	**Sedlovina**	1.23	293	PN	Pg	13 47 26.1	-0.2
SDLR				S	Sb	13 47 41.1	-0.6
SDLR	**Sedlovina**	1.23	293	*e*P	Pg	13 47 26.1	-0.2
SDLR				*e*S	Sb	13 47 41.1	-0.6
DALK	**Dalny**	1.24	281	PN	Pg	13 47 26.0	-0.5
DALK				S	Sb	13 47 41.8	-0.1
DALK	**Dalny**	1.24	281	*e*P	Pg	13 47 26.0	-0.5
DALK				*e*S	Sb	13 47 41.8	-0.1
UGLR	**Uglovaya**	1.24	289	PN	Pg	13 47 26.2	-0.3
UGLR	**Uglovaya**	1.24	289	*e*P	Pg	13 47 26.2	-0.3
SMAR	**Somma**	1.27	292	PN	Pg	13 47 26.6	-0.5
SMAR				S	Sb	13 47 43.0	0.0
SMAR	**Somma**	1.27	292	*e*P	Pg	13 47 26.6	-0.5
SMAR				*e*S	Sb	13 47 43.0	0.0
PET	**Petropavlovsk**	1.30	280		Pb	13 47 26.6	-0.3
PET				Sn	Sb	13 47 42.8	-0.8
PET	**Petropavlovsk**	1.30	280	PN	Pg	13 47 26.9	-0.7
PET				S	Sb	13 47 43.8	+0.2
PET	**Petropavlovsk**	1.30	280	*e*P	Pg	13 47 26.9	-0.7
PET				*e*S	Sb	13 47 43.8	+0.2
AVH	**Avacha**	1.31	291	PN	Pg	13 47 27.7	-0.1
AVH	**Avacha**	1.31	291	*e*P	Pg	13 47 27.7	-0.1
KRER	**Koryakskii**	1.31	293	PN	Pg	13 47 27.7	-0.2
KRER	**Koryakskii**	1.31	293	*e*P	Pg	13 47 27.7	-0.2
KOK	**Koryaka**	1.37	291	PN	Pg	13 47 28.6	-0.5
KOK				S	Sg	13 47 47.2	+0.3
KOK	**Koryaka**	1.37	291	*e*P	Pg	13 47 28.6	-0.5
KOK				*e*S	Sg	13 47 47.2	+0.3
KRX	**Arik**	1.39	294	PN	Pb	13 47 28.6	0.0
KRX				S	Sb	13 47 46.9	+0.5
KRX	**Arik**	1.39	294	*e*P	Pb	13 47 28.6	0.0
KRX				*e*S	Sb	13 47 46.9	+0.5
RUS	**Russkaya**	1.43	255	PN	Pb	13 47 28.6	-0.6
RUS				S	Sn	13 47 46.5	-0.5
RUS	**Russkaya**	1.43	255	*e*P	Pb	13 47 28.6	-0.6
RUS				*e*S	Sn	13 47 46.5	-0.5
KII	**Karymskiy**	1.46	328	PN	Pg	13 47 30.5	-0.2
KII				S	Sg	13 47 50.9	+1.3
KII	**Karymskiy**	1.46	328	*e*P	Pg	13 47 30.5	-0.2
KII				*e*S	Sg	13 47 50.9	+1.3
KRMR	**Karymshinskiy**	1.60	272	PN	Pn	13 47 30.8	+0.1
KRMR				S	Sn	13 47 51.7	+0.4
KRMR	**Karymshinskiy**	1.60	272	*e*P	Pn	13 47 30.8	+0.1
KRMR				*e*S	Sn	13 47 51.7	+0.4
MTVR	**Mutnovka**	1.61	259	PN	Pb	13 47 31.6	-0.8
MTVR				S	Sb	13 47 51.9	-0.8
MTVR	**Mutnovka**	1.61	259	*e*P	Pb	13 47 31.6	-0.8
MTVR				*e*S	Sb	13 47 51.9	-0.8
GRL	**Gorelyy**	1.66	262	PN	Pb	13 47 32.6	-0.7
GRL				S	Sn	13 47 52.9	-0.1
GRL	**Gorelyy**	1.66	262	*e*P	Pb	13 47 32.6	-0.7
GRL				*e*S	Sn	13 47 52.9	-0.1
ASAK	**Asacha**	1.80	257	PN	Pb	13 47 34.9	-0.7
ASAK				S	Sb	13 47 58.6	+0.4
ASAK	**Asacha**	1.80	257	*e*P	Pb	13 47 34.9	-0.7
ASAK				*e*S	Sb	13 47 58.6	+0.4
MKZ	**Mys Kozlova**	1.84	18	PN	Pb	13 47 35.5	-0.6
MKZ				S	Sn	13 47 57.2	+0.1
MKZ	**Mys Kozlova**	1.84	18	*e*P	Pb	13 47 35.5	-0.6
MKZ				*e*S	Sn	13 47 57.2	+0.1
GNL	**Ganaly**	1.91	299	PN	Pb	13 47 37.6	+0.1
GNL				S	Sb	13 48 02.2	+0.8
GNL	**Ganaly**	1.91	299	*e*P	Pb	13 47 37.6	+0.1
GNL				*e*S	Sb	13 48 02.2	+0.8
KDTR	**Khodutka, Kamc**	1.94	240	PN	Pb	13 47 36.0	-1.8
KDTR				S	Sn	13 47 59.2	-0.3
KDTR	**Khodutka, Kamc**	1.94	240	*e*P	Pb	13 47 36.0	-1.8
KDTR				*e*S	Sn	13 47 59.2	-0.3
APC	**Apacha**	2.19	274	PN	Pb	13 47 41.1	-1.1
APC				S	Sb	13 48 09.1	-0.2
APC	**Apacha**	2.19	274	*e*P	Pb	13 47 41.1	-1.1
APC				*e*S	Sb	13 48 09.1	-0.2
TUMD	**Tumrok D**	2.40	355	*e*P	Pb	13 47 44.5	-1.3
TUMD				*e*S	Sb	13 48 14.4	-1.0
TUMR	**Tumrok**	2.50	352	PN	Pb	13 47 46.8	-0.7
TUMR				S	Sb	13 48 17.4	-0.9
TUMR	**Tumrok**	2.50	352	*e*P	Pb	13 47 46.8	-0.7
TUMR				*e*S	Sb	13 48 17.4	-0.9
MIPR	**Malaya Ipel'ka**	2.51	259	PN	Pb	13 47 45.6	-2.0
MIPR	**Malaya Ipel'ka**	2.51	259	*e*P	Pb	13 47 45.6	-2.0
KMNR	**Kamenistaya**	2.96	354	PN	Pb	13 47 54.1	-1.3
KMNR	**Kamenistaya**	2.96	354	*e*P	Pb	13 47 54.1	-1.3
ESO	**Esso**	3.34	340	PN	Pb	13 48 00.0	-1.8
ESO	**Esso**	3.34	340	*e*P	Pb	13 48 00.0	-1.8
SKR	**Severo-Kuril's**	3.59	235	*e*S	Sn	13 48 39.5	-0.9
BKI	**Bering**	3.89	50	PN	Pn	13 48 03.6	+1.4
BKI	**Bering**	3.89	50	*e*P	Pn	13 48 03.6	+1.4
SHEM	**Shemya Is, Ala**	8.09	85	Pn	Pn	13 49 01.6	+1.9
	4.2nm,0.3s,baz=132,slow=7.9,SNR=7.7						
SHEM				Sn	Sn	13 50 26.8	-4.2
	1.3nm,0.3s,baz=275,slow=18,SNR=1.6						
	12nm,0.3s						
SMY	**Shemya**	8.09	85	Pn	Pn	13 49 01.3	+1.6
SMY	**Shemya**	8.09	85	PN	Pn	13 49 01.3	+1.6
JKA	**Kamikawa-asahi**	14.83	241	Pn	Pn	13 50 33.1	+1.1
ASAJ	**Asahikawa**	14.83	241	P	Pn	13 50 33.1	+1.1
H11N2	**WAKE ISLAND Hy**	33.36	169	T	T	14 29 02.6	
	baz=353,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	33.38	169	T	T	14 29 05.4	
	baz=353,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	33.38	169	T	T	14 29 02.5	
	baz=353,slow=76,SNR=38						
HYT	**Haines Junctio**	33.52	51	P	P	13 53 40.1	-1.7
HYT				IAmb	IAmb	13 53 46.0	
	comp=Z,6.6nm,1.2s						
BESE	**Bessie Mountai**	35.47	54	P	P	13 53 57.8	-0.7
BESE				IAmb	IAmb	13 54 23.7	
	comp=Z,11nm,1.1s						
EUNU	**Eureka**	42.12	14	P	P	13 54 54.8	+0.7
EUNU				IAmb	IAmb	13 55 03.4	
	comp=Z,4.9nm,1.3s						
RES	**Resolute Bay**	43.43	22	P	P	13 55 04.5	-0.1
RES				IAmb	IAmb	13 55 14.2	
	comp=Z,5.2nm,1.2s						
RES	**Resolute Bay**	43.43	22	P	P	13 55 04.5	-0.1
RES				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KBS	**Kingsbay**	47.21	352	P	P	13 55 35.9	+1.4
KBS				IAmb	IAmb	13 55 53.1	
	comp=Z,13nm,1.2s						
KBS	**Kingsbay**	47.21	352	P	P	13 55 35.9	+1.4
KBS				pmax	pmax		
	comp=Z,13nm,1.3s						
SPITS	**Spitsbergen Ar**	47.48	351	P	P	13 55 35.4	-1.3
SPITS				pmax	pmax		
	comp=Z,23nm,1.3s						
MK31	**Makanchi Array**	48.64	296	P	P	13 55 44.4	-1.7
MK31	**Makanchi Array**	48.64	296	P	P	13 55 44.4	-1.7
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	48.64	296	P	P	13 55 44.0	-2.1
	comp=Z,0.3nm,0.6s,baz=58,slow=8.1,SNR=4.0						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	48.64	296	P	P	13 55 44.5	-1.6
MKAR	**Makanchi Array**	48.64	296	P	P	13 55 44.5	-1.6
PDAR	**Pinedale Array**	57.30	61	P	P	13 56 51.2	+0.9
	comp=Z,0.2nm,0.4s,baz=291,slow=7.5,SNR=2.1						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	60.54	337	P	P	13 57 12.4	+0.2
	comp=Z,1.0nm,0.5s,baz=38,slow=10,SNR=7.1						
	comp=Z,1.0nm,0.5s						
N47A	**Urbana**	70.47	48	P	P	13 58 16.0	-0.7
WRA	**Warramunga Arr**	76.00	206	P	P	13 58 49.7	+0.3
	comp=Z,0.5nm,0.9s,baz=22,slow=6.3,SNR=2.8						
	comp=Z,0.5nm,0.9s						
AS31	**Alice Springs**	79.67	205	P	P	13 59 10.7	+0.9
ASAR	**Alice Springs**	79.67	205	P	P	13 59 10.8	+0.9
	comp=Z,0.3nm,0.8s,baz=15,slow=4.8,SNR=6.0						
	comp=Z,0.3nm,0.8s						
STKA	**Stephens Creek**	85.98	196	P	P	13 59 44.5	+2.2
	comp=Z,0.7nm,0.5s,baz=0.0,slow=14,SNR=2.8						
	comp=Z,0.7nm,0.5s						
STKA	**Stephens Creek**	85.98	196	IAmb	IAmb	13 59 55.8	
	comp=Z,1.5nm,1.5s						

ISU ***31*** *14:06:30, 39°.91N×71°.93E, h9*^{km}

KRNET ***31*** *14:06:30.9±0.1, 39°.86N×71°.80E, h14*^{km}*, mb3.2*

NNC ***31*** *14:06:34.6±0.9, 40°.04N×71°.88E, h0*^{km}*, mb3.8, mpv3.4, Error ellipse: s-maj=7.3km s-min=3.6km az=11.0*

SOME ***31*** *14:06:36.1, 40°.05N×71°.92E, h10*^{km}

ISC 31 14:06:31.3±0.8, **39°.85N**±0°.02×**71°.82E**±0°.02, **h10**^{km}, **n45**, σ**2**^{s}**.22**/76, **30C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAK	**Shakhimardan**	0.12	329	P	Pg	14 06 33.9	-0.5
SHAK				S	Sg	14 06 36.3	-0.3
DRK	**Karamyk**	0.37	182	⇑*i*P	Pg	14 06 38.2	-0.6
	baz=79						
DRK				⇑*i*S	Sg	14 06 43.6	-0.1
	baz=79						
CHMI	**Chimion**	0.47	331	P	Pg	14 06 40.1	-0.5
CHMI				S	Sb	14 06 47.6	-1.3
FRG	**Fergana**	0.52	357	P	Pg	14 06 41.2	-0.3
FRG				S	Sg	14 06 48.5	+0.1
BTK	**Batken**	0.80	285	⇓*i*P	Pg	14 06 45.6	-1.1
	baz=85						
BTK				⇓*i*S	Sb	14 06 56.7	-1.5
	baz=85						
BTK	**Batken**	0.80	285	P	Pg	14 06 45.3	-1.4
MINT	**Mingtut**	0.89	314	P	Pb	14 06 48.2	-0.7
MINT				S	Sn	14 07 02.1	-0.9
OHH	**Osh**	1.00	47	⇑*i*P	Pg	14 06 49.8	-0.8
	baz=48						
OHH				⇑*i*S	Sb	14 07 03.8	-0.2
	baz=48						
OHH	**Osh**	1.00	47	P	Pg	14 06 49.5	-1.1
CHDK	**Chadak**	1.38	324	P	Pg	14 07 17.0	+19
GAR	**Garm**	1.44	234	⇑*i*P	Pb	14 06 57.6	-0.8
	baz=34						
GAR				⇑*i*S	Sg	14 07 17.2	-0.5
	baz=34						
TRKS	**Terek-Say**	1.75	343	⇑*i*P	Pn	14 07 02.0	0.0
	baz=44						
TRKS				⇑*i*S	Sb	14 07 24.6	-1.3
	baz=44						
ARK	**Arkit**	1.95	3	⇑*i*P	Pb	14 07 06.7	-0.3
	baz=4.0						
ARK				⇑*i*S	Sg	14 07 32.7	-1.2
	baz=4.0						
CHMG	**Chimgan**	2.18	322	P	Pb	14 07 11.3	+0.3
CHRV	**Charvak**	2.28	322	P	Pb	14 07 12.9	+0.2
CHRV				S	Sg	14 07 44.1	-0.6
CHGR	**Chuyangaron**	2.39	241	⇑*i*P	Pb	14 07 12.6	-1.8
	baz=40						
CHGR				⇑*i*S	Sb	14 07 43.0	-1.0
	baz=40						
IUG	**Iuzhnay**	2.66	330	*e*P	Pg	14 07 22.2	-0.2
	429nm,0.3s						
IUG				*e*S	Sg	14 07 55.3	-1.6
	97nm,0.5s						
IUG	**Iuzhnay**	2.66	330	Pg	Pg	14 07 20.5	-1.9
	1µm,0.4s						
IUG				Lg	Lg	14 07 55.3	
	97nm,0.5s						
ARLS	**Aral**	2.76	43	⇑*i*P	Pb	14 07 18.1	-2.8
	baz=43						
ARLS				⇑*i*S	Sb	14 07 52.5	-2.4
	baz=43						
CHM	**Chimkent**	2.98	327	*e*P	Pg	14 07 29.4	+1.0
	108nm,0.2s						
CHM				*e*S	Sg	14 08 07.4	+0.3
	359nm,0.3s						
MRKS	**Merke**	3.08	20	*e*P	Pg	14 07 29.8	-0.5
	3.0nm,0.5s						
MRKS				*e*S	Sg	14 08 08.6	-1.7
	32nm,0.7s						
MRKS	**Merke**	3.08	20	Pg	Pb	14 07 27.5	+1.3
	5.4nm,0.4s						
MRKS				Lg	Lg	14 08 07.2	
	32nm,0.7s						
UCH	**Uchtor**	3.13	40	⇑*e*P	Pn	14 07 23.3	+2.2
	baz=40						
UCH				⇑*i*S	Sn	14 08 01.8	+3.0
	baz=40						
KK31	**Karatay Array**	3.39	344	⇓Pn	Pn	14 07 26.9	+2.5
	1.1nm,0.4s,baz=16,slow=52,SNR=26						
KK31				⇓Pg	Pg	14 07 33.3	-3.0
	1.9nm,0.3s,baz=166,slow=15,SNR=21						
KK31				⇓Sn	Sn	14 08 06.8	+2.1
	1.5nm,0.2s						
KK31				⇑Lg	Lg	14 08 16.8	
	6.6nm,0.3s,baz=159,slow=30,SNR=10						
KKAR	**Karatay Array**	3.39	344	⇑*i*P	Pn	14 07 26.4	+2.0
	baz=44						
KKAR				⇑*i*S	Sn	14 08 07.2	+2.5
	baz=44						
AAK	**Ala-Archa**	3.44	35	⇑*i*P	Pn	14 07 27.4	+2.3
	baz=35						
AAK				⇑*i*S	Sn	14 08 08.8	+2.8
	baz=35						
BRLS	**Borolday**	3.51	335	*e*P	Pg	14 07 35.6	-2.9
	2.0nm,0.3s						
BRLS				*e*S	Sb	14 08 18.2	+2.0
	25nm,0.3s						
BRLS	**Borolday**	3.51	335	Pg	Pb	14 07 32.9	-0.7
BRLS				Lg	Lg	14 08 16.3	
KBK	**Karagaybulak**	3.66	39	⇑*i*P	Pn	14 07 30.5	+2.3
	baz=39						
KBK				⇑*i*S	Sn	14 08 14.3	+2.8
	baz=39						
CHMS	**Chumysh**	3.84	34	⇑Pn	Pn	14 07 33.1	+2.6
	5.2nm,0.4s						
CHMS				⇓Lg	Lg	14 08 30.1	
	8.2nm,0.6s						
USP	**Ospenovka**	3.96	30	⇑*i*P	Pn	14 07 34.6	+2.4
	baz=30						
USP				⇑*i*S	Sn	14 08 21.2	+2.5
	baz=30						
ULHL	**Ulahol**	4.11	53	⇑*e*P	Pn	14 07 37.0	+2.6
	baz=53						
ULHL				⇑*e*S	Sn	14 08 25.2	+2.5
	baz=53						
SGDS	**Sogindy**	4.17	29	*e*P	Pg	14 07 48.4	-2.8
	3.3nm,0.6s						
SGDS				*e*S	Sg	14 08 40.5	-4.7
	8.7nm,0.7s						
SGDS	**Sogindy**	4.17	29	Pg	Pb	14 07 47.0	+2.2
	3.2nm,0.3s						
SGDS				Lg	Lg	14 08 40.4	
	8.7nm,0.7s						
TKM2	**Tokmak 2**	4.18	42	⇓Pn	Pn	14 07 37.0	+1.6
	1.9nm,0.6s						
TKM2				⇑Pg	Pb	14 07 47.9	+2.8
	3.2nm,0.5s						
TKM2				⇑Lg	Lg	14 08 40.7	
	4.1nm,0.5s						
KST	**Kastek**	4.46	43	*e*P	Pg	14 07 55.5	-1.2
	1.4nm,0.3s						
KST				*e*S	Sg	14 08 52.7	-1.7
	10nm,0.7s						
KST	**Kastek**	4.46	43	Pg	Pg	14 07 52.9	-3.7
	2.7nm,0.3s						
KST				Lg	Lg	14 08 50.9	
	10nm,0.7s						
KRBS	**Karabastau**	4.80	36	*e*P	Pg	14 07 60.0	-3.3
	1.9nm,0.3s						
KRBS				*e*S	Sg	14 09 00.2	-5.3
	5.4nm,0.7s						
KRBS	**Karabastau**	4.80	36	Pg	Pb	14 07 58.2	+2.6
	1.8nm,0.4s						
KRBS				Lg	Lg	14 09 00.2	
	5.4nm,0.7s						
TNSS	**Tian-Shan**	5.00	49	*e*P	Pg	14 08 05.4	-1.7
	1.2nm,0.5s						
TNSS				*e*S	Sg	14 09 09.6	-2.2
	2.3nm,0.8s						
TNSS	**Tian-Shan**	5.00	49	Pg	Pg	14 08 03.9	-3.1
	2.3nm,0.3s						
TNSS				Lg	Lg	14 09 09.6	
	2.3nm,0.8s						
MDOK	**Medeo**	5.13	48	*e*P	Pg	14 08 07.3	-2.3
	1.6nm,0.3s						
MDOK				*e*S	Sg	14 09 13.1	-3.1
	5.6nm,0.7s						
MDOK	**Medeo**	5.13	48	Pg	Pb	14 08 05.0	+3.7
	2.5nm,0.4s						
MDOK				Lg	Lg	14 09 11.3	
	5.6nm,0.7s						
KTBS	**Karatobe**	5.30	42	*e*P	Pg	14 08 10.1	-2.7
	1.1nm,0.4s						
KTBS				*e*S	Sg	14 09 17.4	-4.0
	13nm,0.8s						
KTBS	**Karatobe**	5.30	42	Pg	Pg	14 08 08.3	-4.5
	0.9nm,0.3s						
KTBS				Lg	Lg	14 09 17.3	
	13nm,0.6s						

DJA ***31*** *14:19:01.7±0.1, 8°S±2°×12°0E±°, h167*^{km}*±2*^{km}*, M4.2/29, mb4.5/29, mB4.8/8, MLv4.4/25, Mw(mB)4.0/8*

IDC ***31*** *14:19:02.0±1.4, 8°.24S×119°.80E, h180*^{km}*±13*^{km}*, mb3.8/5, mbtmp4.5/10, Error ellipse: s-maj=26.1km s-min=8.6km az=56.0*

NEIC ***31*** *14:19:02.5±2.3, 8°.22S±0°.08×119°.82E±0°.08, h183*^{km}*±8*^{km}*, mb4.4/26, Error ellipse: s-maj=13.3km s-min=9.7km az=48.0*

ISC 31 14:19:00.7±0.4, **8°.34S**±0°.04×**119°.76E**±0°.05, **h172**^{km}, **n104**, σ**1**^{s}**.38**/108, **mb4.4**/17, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	1.35	196	P	Pn	14 19 31.4	+0.8
WBSI				S	Sn	14 19 53.8	0.0
EDFI	**Ende, Flores**	1.95	102	P	Pn	14 19 37.7	+1.0
PLAI	**Plampang**	2.02	256	P	Pn	14 19 38.5	+1.0
PLAI	**Plampang**	2.02	256	P	Pn	14 19 38.8	+1.3
BASI	**Baing, Sumba**	2.04	157	P	Pn	14 19 39.0	+1.4
BSSI	**Bau Bau, Buton**	2.29	18	P	Pn	14 19 41.3	+0.7
MMRI	**Maumere**	2.46	97	Pn	Pn	14 19 43.5	+1.0
MMRI	**Maumere**	2.46	97	P	Pn	14 19 44.4	+1.9
MMRI	**Maumere**	2.46	97	P	Pn	14 19 44.3	+1.8
BKSI	**Bulukumba**	3.02	7	P	Pn	14 19 49.8	+0.6
KAPI	**Kappang**	3.30	360	P	Pn	14 19 53.6	+0.9
	36nm,0.4s,baz=179,slow=8.1,SNR=31						
KAPI				S	Sn	14 20 33.8	+0.5
	32nm,0.7s,baz=22,slow=17,SNR=7.6						
KAPI	**Kappang**	3.30	360	P	Pn	14 19 53.8	+1.1
BNSI	**Bone**	3.92	5	P	Pn	14 20 02.2	+1.6
BBSI	**Bau Bau**	3.97	45	P	Pn	14 20 02.9	+1.7
BATI	**Baumata**	4.27	116	P	Pn	14 20 07.2	+2.1
	173nm,0.3s,baz=315,slow=0.6,SNR=62						
BATI				S	Sn	14 20 56.4	+0.9
	150nm,0.3s,baz=17,slow=2.1,SNR=7.9						
BATI	**Baumata**	4.27	116	P	Pn	14 20 07.3	+2.2
SPSI	**Sidrap Palu**	4.34	0	P	Pn	14 20 07.4	+1.4
SRBI	**Singaraja**	4.51	273	P	Pn	14 20 08.7	+0.6
DNP	**Denpasar**	4.52	265	P	Pn	14 20 09.9	+1.7
IGBI	**Denpasar**	4.59	264	P	Pn	14 20 09.2	0.0
SOEI	**Soe**	4.67	108	Pn	Pn	14 20 11.6	+1.3
SOEI	**Soe**	4.67	108	P	Pn	14 20 11.8	+1.5
SOEI	**Soe**	4.67	108	P	Pn	14 20 12.1	+1.8
TTSI	**Tana Toraja**	5.26	1	P	Pn	14 20 20.2	+2.3
	0.1nm39nm,0.9s						
ABJI	**Asem Bagus**	5.50	275	P	Pn	14 20 22.8	+1.7
	0.4nm86nm,0.7s						
JAGI	**Jajag, Banyuwa**	5.55	268	Pn	Pn	14 20 19.4	-2.3
JAGI	**Jajag, Banyuwa**	5.55	268	P	Pn	14 20 22.6	+0.8
JAGI	**Jajag, Banyuwa**	5.55	268	P	Pn	14 20 22.7	+0.9
KMMI	**Kalianget**	5.89	282	P	Pn	14 20 27.3	+1.2
	0.3nm73nm,1.1s						
BLJI	**Banyuglugur**	6.14	275	P	Pn	14 20 31.2	+1.8
	0.3nm85nm,1.0s						
GMJI	**Gumukmas**	6.25	270	P	Pn	14 20 30.6	-0.4
	0.3nm61nm,1.1s						
GRJI	**Gresik**	7.36	281	P	Pn	14 20 47.7	+2.1
	0.5nm1µm154nm,0.8s						
PWJI	**Pagerwojo**	7.89	272	P	Pn	14 20 53.8	+1.3
PCJI	**Pacitan**	8.50	270	P	Pn	14 21 01.4	+0.7
	140nm,0.8s						
WOJI	**Wonogiri, Jawa**	8.77	273	P	Pn	14 21 04.3	+0.1
	42nm,0.8s						
SANI	**Sanana**	8.80	45	P	Pn	14 21 06.0	+1.4
	312nm26nm,1.2s						
MRSI	**Marisa**	9.02	14	P	Pn	14 21 08.5	+1.0
	14nm,1.2s						
UGM	**Wanagama**	9.16	272	Pn	Pn	14 21 08.3	-1.1
UGM	**Wanagama**	9.16	272	P	Pn	14 21 08.3	-1.1
	156nm,1.7s						
UGM	**Wanagama**	9.16	272	P	Pn	14 21 09.5	+0.1
SMRI	**Semarang**	9.33	277		Pn	14 21 13.2	+1.6
SMRI	**Semarang**	9.33	277	P	Pn	14 21 13.4	+1.8
	130nm,1.0s						
TOLI2	**Tolitoli**	9.44	6	Pn	Pn	14 21 13.8	+0.7
LBMI	**Labuha**	10.86	46	P	P	14 21 36.1	-3.2
	379nm16nm,0.6s						
SAUI	**Saumlaki**	11.43	89	Pn	Pn	14 21 39.3	+0.3
SAUI	**Saumlaki**	11.43	89	P	Pn	14 21 39.1	+0.1
	362nm,1.2s						
SAUI	**Saumlaki**	11.43	89	P	Pn	14 21 40.0	+1.0
KNRA	**Kununurra**	11.43	131	Pn	Pn	14 21 38.9	-0.1
MTN	**Manton Dam**	12.04	113	Pn	Pn	14 21 46.7	-0.2
LEM	**Lembang**	12.13	276	P	Pn	14 21 49.4	+1.1
	17nm,0.4s,baz=2.7,slow=11,SNR=4.6						
CNJI	**Cibinong**	12.56	274	P	Pn	14 21 51.4	-2.2
	71nm,1.4s						
MBWA	**Marble Bar**	12.75	180	Pn	Pn	14 21 56.6	+0.7
PSA00	**Pilbara Seismi**	13.16	180	Pn	Pn	14 22 01.5	+0.3
MYLDM	**Lahad Datu**	13.48	355		P	14 22 07.9	-0.8
FAKI	**Fak Fak**	13.54	67	Pn	Pn	14 22 04.8	-1.2
FAKI	**Fak Fak**	13.54	67	P	Pn	14 22 04.5	-1.5
	628nm33nm,0.7s						
FAKI	**Fak Fak**	13.54	67	P	Pn	14 22 05.0	-1.0
KSM	**Kuching**	13.56	316	Pn	Pn	14 22 07.0	+0.8
SWI	**Sorong**	13.65	58	P	Pn	14 22 07.3	-0.1
	23nm,0.6s						
SIJI	**Sorong**	13.65	58	P	Pn	14 22 07.5	+0.1
	13nm,0.5s,baz=171,slow=22,SNR=17						

SIJI				S	**Sn**	**14 24 39.9**	**+0.7**
	1.7nm,0.4s,baz=163,slow=21,SNR=2.2						
XMIS	**Christmas Isla**	**14.09**	**260**	Pn	**P**	**14 22 13.9**	**-1.5**
KMPI	**Kaimana, Papua**	**14.62**	**72**	P	**Pn**	**14 22 18.9**	**-0.6**
	76nm,0.7s						
GIRL	**Giralia**	**15.19**	**200**	Pn	**P**	**14 22 27.1**	**-0.4**
KASI	**Kota Agung**	**15.41**	**279**	P	**P**	**14 22 30.2**	**+0.2**
	19nm,0.5s						
WB0	**Warramunga Arr**	**18.16**	**130**	P	**Pn**	**14 23 01.0**	**-1.3**
WB0				IAmb	IAmb	14 23 04.0	
	comp=Z,7.5nm,0.7s						
WRA	**Warramunga Arr**	**18.23**	**131**	P	**Pn**	**14 23 02.4**	**-0.7**
	comp=Z,6.2nm,0.8s,baz=309,slow=12,SNR=130						
WRA				S	**S**	**14 26 17.4**	**-3.3**
	comp=Z,10nm,0.7s,baz=307,slow=24,SNR=11						
WRA	**Warramunga Arr**	**18.23**	**131**	P	**Pn**	**14 23 01.5**	**-1.5**
WRAB	**Tennant Creek**	**18.23**	**131**	P	**Pn**	**14 23 02.2**	**-0.8**
WRAB				IAmb	IAmb	14 23 04.4	
	comp=Z,8.3nm,0.7s						
WB2	**Warramunga Arr**	**18.24**	**131**	P	**Pn**	**14 23 02.3**	**-0.8**
WB2				IAmb	IAmb	14 23 04.4	
	comp=Z,9.3nm,0.6s						
WR0	**Warramunga Arr**	**18.39**	**130**	P	**Pn**	**14 23 04.1**	**-0.8**
WR0				IAmb	IAmb	14 23 06.6	
	comp=Z,17nm,0.6s						
AS31	**Alice Springs**	**20.39**	**140**	P	**P**	**14 23 25.2**	**+0.8**
AS31				IAmb	IAmb	14 23 29.1	
	comp=Z,5.7nm,0.4s						
ASAR	**Alice Springs**	**20.39**	**140**	P	Pn	14 23 25.9	-2.9
	comp=Z,6.2nm,0.4s,baz=314,slow=9.1,SNR=71						
ASAR				S	**S**	**14 27 02.1**	**-1.4**
	comp=Z,4.0nm,0.9s,baz=310,slow=19,SNR=15						
	comp=Z,6.2nm,0.4s						
ASAR	**Alice Springs**	**20.39**	**140**	P	Pn	14 23 25.6	-3.1
IPM	**Ipoh**	**22.61**	**304**	P	**P**	**14 23 47.3**	**+0.1**
IPM				IAmb	IAmb	14 23 48.8	
	comp=Z,15nm,0.5s						
KULM	**Kulim**	**23.38**	**305**	P	**P**	**14 23 54.8**	**+0.7**
KULM				IAmb	IAmb	14 24 19.7	
	comp=Z,15nm,1.3s						
COEN	**Coen**	**23.63**	**106**	P	**P**	**14 23 56.9**	**+0.5**
FORT	**Forrest**	**23.64**	**162**	P	**P**	**14 23 58.1**	**+1.8**
FORT				IAmb	IAmb	14 24 25.2	
	comp=Z,8.0nm,0.7s						
BBOO	**Buckleboo**	**28.65**	**150**	P	**P**	**14 24 42.9**	**+1.6**
BBOO				IAmb	IAmb	14 25 00.1	
	comp=Z,28nm,1.4s						
QIZ	**Qiongzhong**	**28.90**	**340**	P	**P**	**14 24 44.9**	**+1.4**
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**14 25 04.1**	**+2.1**
	comp=Z,6.7nm,0.5s,baz=319,slow=9.0,SNR=24						
	comp=Z,6.7nm,0.5s						
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**14 25 04.1**	**+2.1**
CMAR	**Chiang Mai Arr**	**33.63**	**322**	P	**P**	**14 25 25.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=153,slow=7.7,SNR=3.5						
	comp=Z,0.4nm,0.6s						
PZH	**PanZhiHua**	**38.80**	**334**	P	**P**	**14 26 10.5**	**+1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,4.8s						
ENH	**Enshi**	**39.63**	**346**	P	**P**	**14 26 15.2**	**-0.6**
ENH				IAmb	IAmb	14 26 15.7	
	comp=Z,4.7nm,0.5s						
LZH	**Lanzhou**	**46.66**	**342**	*e*P	**P**	**14 27 15.0**	**+2.9**
LZH				pP	pP	14 27 18.8	-30
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
HHC	**Hu-ho-hao-te**	**49.52**	**352**	*e*P	**P**	**14 27 37.5**	**+3.5**
HHC				pmax	pmax		
	comp=Z,31nm,0.8s						
HHC				pmax	pmax		
	comp=Z,90nm,4.3s						
GTA	**Gaotai**	**50.98**	**340**	*e*P	**P**	**14 27 45.5**	**+0.5**
GTA				sP	pP	14 27 56.5	-26
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**57.16**	**349**	P	**P**	**14 28 29.7**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=170,slow=8.9,SNR=8.1						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**57.16**	**349**	P	**P**	**14 28 29.5**	**-0.1**
BKZ	**Black Stump Fm**	**59.16**	**131**	P	**P**	**14 28 45.3**	**+1.7**
WMQ	**Urumqi**	**59.49**	**334**	*e*P	**P**	**14 28 47.5**	**+1.8**
KSH	**Kashi**	**62.53**	**323**	P	**P**	**14 29 06.3**	**-0.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KDJ	**Kajisay**	**63.53**	**326**	P	**P**	**14 29 12.7**	**-0.3**
KBL	**Kabul**	**64.16**	**315**	P	**P**	**14 29 15.8**	**-1.5**
KBL				IAmb	IAmb	14 29 31.6	
	comp=Z,2.6nm,0.7s						
MK31	**Makanchi Array**	**64.22**	**332**	P	**P**	**14 29 15.8**	**-1.4**
MK31				IAmb	IAmb	14 29 16.9	
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**64.22**	**332**	P	**P**	**14 29 16.4**	**-0.8**
	comp=Z,4.0nm,0.5s,baz=144,slow=7.6,SNR=52						
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	**64.22**	**332**	P	**P**	**14 29 15.9**	**-1.3**
MAKZ	**Makanchi**	**64.37**	**332**	P	**P**	**14 29 17.0**	**-1.2**
MAKZ				IAmb	IAmb	14 29 17.4	
	comp=Z,2.5nm,0.8s						
DRK	**Karamyk**	**65.06**	**321**	P	**P**	**14 29 22.7**	**-0.4**
KURK	**Kurchatov**	**68.74**	**333**	P	**P**	**14 29 43.9**	**-1.8**
SMY	**Shemya**	**76.32**	**31**	P	**P**	**14 30 28.7**	**-1.8**
ABKAR	**Akbulak array**	**77.46**	**325**	P	**P**	**14 30 34.9**	**-2.0**
KMBO	**Kilima Mbogo**	**82.43**	**270**	P	**P**	**14 31 03.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**119.09**	**280**	PKP	**PKiKP**	**14 37 29.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=122,slow=0.8,SNR=2.6						

IDC 31 14:35:56.2±3.2**, 0°.98S**×**136°.70E, h0**^{km}**, mb3.3**/2**,**
mbtmp3.4/3**, ML3.5**/1**, Error ellipse: s-maj=125.2km**
s-min=29.7km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.99**	**187**	P	P	14 40 19.4	-0.2
	0.1nm,0.3s,baz=8.6,slow=11,SNR=15						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**22.71**	**187**	P	P	14 40 59.8	-0.1
	0.9nm,0.6s,baz=19,slow=11,SNR=17						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**67.20**	**323**	P	P	14 46 52.5	+0.1
	0.1nm,0.3s,baz=121,slow=8.8,SNR=1.7						
	0.1nm,0.3s						

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*IDC **31** 15:09:24.4±2.6, 4°.23N×97°.19E, h165^{km}±14^{km}, mb3.1/5,*
mbtmp3.6/7, Error ellipse: s-maj=71.2km s-min=14.6km
az=61.0

ISC 31 15:09:21.5±1.3**, 4°.0N**±0°.2×**96°.7E**±0°.2**, h150**^{km}**, n7,**
σ**1**^{s}**43**/11**, mb3.4**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.56**	**118**	P	**Pn**	**15 10 05.6**	**+2.1**
	8.8nm,0.3s,baz=322,slow=10,SNR=11						
PSI				S	**Sn**	**15 10 35.0**	**-0.9**
	33nm,0.5s,baz=106,slow=15,SNR=18						
CMAR	**Chiang Mai Arr**	**14.54**	**9**	P	**Pn**	**15 12 40.7**	**+0.4**
	1.9nm,0.6s,baz=195,slow=11,SNR=18						
WRA	**Warramunga Arr**	**44.01**	**124**	P	**P**	**15 17 13.4**	**-1.1**
	0.7nm,0.6s,baz=308,slow=9.4,SNR=14						
WRA				PcP	**PcP**	**15 18 57.7**	**+0.2**
	0.5nm,0.7s,baz=317,slow=2.6,SNR=5.9						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**44.41**	**346**	P	**P**	**15 17 17.4**	**+0.2**
	0.2nm,0.3s,baz=166,slow=8.2,SNR=4.1						
	0.2nm,0.3s						
SONM	**Songino Array**	**44.47**	**9**	P	**P**	**15 17 16.3**	**-1.5**
	0.4nm,0.4s,baz=190,slow=7.6,SNR=3.8						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**45.54**	**129**	P	**P**	**15 17 26.0**	**-0.6**
	0.2nm,0.3s,baz=301,slow=7.6,SNR=16						
ASAR				PcP	**PcP**	**15 19 03.0**	**+0.2**
	0.2nm,0.7s,baz=330,slow=3.5,SNR=1.6						
ASAR				ScP	**ScP**	**15 22 39.3**	**-2.4**
	0.5nm,0.7s,baz=312,slow=4.3,SNR=10						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**77.28**	**332**	P	**P**	**15 21 00.2**	**+1.1**
	0.3nm,0.3s,baz=97,slow=4.5,SNR=1.7						
	0.3nm,0.3s						

IDC 31 15:24:49.6±4.0**, 30°.07S**×**178°.33W, h0**^{km}**, mb3.4**/2**,**
mbtmp3.4/2**, Error ellipse: s-maj=106.7km**
s-min=19.2km az=132.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.89**	**24**	Pn	Pn	15 25 10.6	+1.2
	60nm,0.3s,baz=70,slow=16,SNR=2.0						
RAO				Sn	Sn	15 25 22.3	-0.6
	453nm,0.3s,baz=154,slow=23,SNR=14						
ASAR	**Alice Springs**	**42.84**	**267**	P	P	15 32 49.6	-0.2
	0.1nm,0.5s,baz=103,slow=7.5,SNR=4.8						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**43.80**	**272**	P	P	15 32 57.5	0.0
	0.4nm,0.4s,baz=110,slow=8.2,SNR=18						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**144.74**	**340**	PKP	PKPab	15 44 25.8	-0.7
	0.5nm,0.6s,baz=31,slow=3.2,SNR=4.5						

IDC 31 15:29:50.6±2.4**, 6°.66S**×**129°.13E, h0**^{km}**, mb3.3**/1**,**
mbtmp3.4/3**, ML3.7**/2**, Error ellipse: s-maj=145.8km**
s-min=33.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.14**	**160**	Pn	Pn	15 33 12.3	-0.1
	0.3nm,0.3s,baz=342,slow=13,SNR=14						
WRA				Sn	Sn	15 35 38.1	-12
	0.4nm,0.3s,baz=336,slow=22,SNR=6.6						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.52**	**165**	P	Pn	15 33 56.6	+0.1
	0.2nm,0.3s,baz=344,slow=9.5,SNR=24						
ASAR				S	Sn	15 37 03.9	-8.5
	0.2nm,0.7s,baz=352,slow=23,SNR=2.7						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	15 40 48.4	0.0
	0.1nm,0.3s,baz=124,slow=7.7,SNR=2.4						
	0.1nm,0.3s						

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*DDA **31** 15:34:34.3±0.0, 35°.72N×29°.69E, h34^{km}±1^{km}, ML2.6,*
Hypocentre not reviewed by the ISC
*ISK **31** 15:34:34.8, 35°.79N×29°.71E, h25^{km}, ML2.5/13*
*NIC **31** 15:34:36.7±0.0, 35°.74N×29°.72E, h36^{km}±30^{km}, Ml3.0/4*

ISC 31 15:34:36.1±1.2**, 35°.82N**±0°.05×**29°.71E**±0°.03**, h29**^{km}±11^{km}**,**
n24, σ**0**^{s}**43**/33**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.42**	**348**	PG	**Pb**	**15 34 44.9**	**-0.6**
AKAS				SG	**Sb**	**15 34 51.9**	**+0.1**
AKAS	**Kas**	**0.42**	**348**	P		15 34 44.9	
AKAS				S		15 34 53.7	
AKAS				*i* AML		15 34 55.0	
	comp=Z,405nm,0.6s						
AKAS				*i* AML		15 34 56.0	
	comp=N,928nm,0.6s						
AKAS				*i* AML		15 34 56.0	
	comp=E,558nm,0.5s						
DEMR	**Demre-Antalya**	**0.44**	**20**	PG	**Pb**	**15 34 45.2**	**-0.5**
DEMR				SG	**Sb**	**15 34 53.2**	**+1.0**
AKUM	**Antalya-Kumluc**	**0.71**	**45**	P		15 34 50.3	
AKUM				S		15 35 01.5	
AKUM				*i* AML		15 35 02.0	
	comp=E,160nm,0.4s						
ELL	**Elmali**	**0.94**	**10**	PG	**Pn**	**15 34 53.5**	**0.0**
FETY	**Fethiye**	**0.96**	**328**	PG	**Pn**	**15 34 53.5**	**-0.2**
FETY				SG	**Sn**	**15 35 06.7**	**+0.3**
FETY	**Fethiye**	**0.96**	**328**	P		15 34 54.3	
FETY				S		15 35 08.6	
CAME	**Cameli-Denizli**	**1.17**	**344**	PN	**Pn**	**15 34 56.6**	**-0.1**
KORT	**Korkueli**	**1.29**	**23**	P		15 34 58.2	
KORT				S		15 35 19.0	
KORT				*i* AML		15 35 32.0	
	comp=E,98nm,0.5s						
DALY	**Dalyan (Mula)**	**1.31**	**320**	PN	**Pn**	**15 34 58.6**	**+0.1**
ARG	**Arkhangelos**	**1.35**	**288**	PN	**Pn**	**15 34 58.7**	**-0.2**
GOLH	**Golhisar**	**1.42**	**355**	P		15 35 01.7	
GOLH				S		15 35 24.9	
GOLH				*i* AML		15 35 29.0	
	comp=E,69nm,0.6s						
TURN	**Turunc**	**1.52**	**309**	PN	**Pn**	**15 35 01.5**	**+0.1**
TURN	**Turunc**	**1.52**	**309**	P		15 35 02.7	
TURN				S		15 35 20.6	
BUCA	**Burdur, Bucak-**	**1.65**	**24**	P		15 35 05.9	
BUCA				S		15 35 28.3	
APMY	**Acipayam-Deniz**	**1.68**	**349**	PN	**Pn**	**15 35 04.0**	**+0.3**
YER	**Yerkesik**	**1.75**	**319**	PN	**Pn**	**15 35 04.8**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.77**	**339**	P		15 35 07.4	
TAVA				S		15 35 26.7	
MULA	**Mugla, Merkez-**	**1.82**	**322**	P		15 35 08.3	
MULA				S		15 35 30.2	
KEPZ	**Antalya-Kepez**	**1.87**	**54**	P		15 35 06.9	
KEPZ				S		15 35 29.7	
BRDR	**BURDUR-Merkez**	**1.89**	**8**	P		15 35 10.4	
BRDR				S		15 35 36.7	
SUTC	**Sutluce-Ispart**	**1.95**	**32**	PN	**Pn**	**15 35 07.9**	**+0.5**
DAT	**Datca**	**1.95**	**298**	PN	**Pn**	**15 35 07.6**	**+0.2**
DAT				SN	**Sn**	**15 35 31.3**	**+0.4**
DAT	**Datca**	**1.95**	**298**	P		15 35 08.7	
DAT				S		15 35 29.3	
KARP	**Karpathos**	**2.10**	**263**	PN	**Pn**	**15 35 09.3**	**0.0**
KARP				SN	**Sn**	**15 35 34.3**	**-0.1**
KARP	**Karpathos**	**2.10**	**263**	P	**Pn**	**15 35 09.8**	**+0.5**
KARP				S	**Sn**	**15 35 34.8**	**+0.3**
KARP				AML	AML	15 35 35.2	
	0.1nm,0.4s						
KARP				AML	AML	15 35 35.2	
	0.1nm,0.4s						
KARP				AML	AML	15 35 35.5	
	0.2nm,0.5s						
KARP				AML	AML	15 35 35.5	
	0.2nm,0.5s						
GAZI	**Gazipasa**	**2.15**	**78**	PN	**Pn**	**15 35 09.9**	**-0.1**
NIS1	**Nisyros Isl.**	**2.19**	**292**	PN	**Pn**	**15 35 10.9**	**+0.3**
AKMS	**Akamas**	**2.29**	**110**	P	**Pn**	**15 35 12.0**	**+0.1**
AKMS				AML	AML	15 35 37.4	
	0.2nm,0.6s						
AKMS				AML	AML	15 35 39.7	
	0.2nm,0.2s						
BODT	**Bodrum**	**2.30**	**303**	PN	**Pn**	**15 35 11.8**	**-0.3**
BODT				SN	**Sn**	**15 35 38.4**	**-1.0**
SEDI	**Konya, Seydise**	**2.31**	**45**	P		15 35 14.8	
SEDI				S		15 35 42.6	
AYDN	**Tasoluk**	**2.36**	**322**	P		15 35 15.7	
AYDN				S		15 35 48.1	
AYDN				*i* AML		15 35 51.0	
	comp=E,26nm,0.4s						
ALFC	**Alefka**	**2.44**	**105**	P	**Pn**	**15 35 14.1**	**0.0**
ALFC				S	**Sn**	**15 35 43.0**	**0.0**
ALFC				AML	AML	15 35 43.1	
	0.2nm,0.4s						
ALFC				AML	AML	15 35 43.1	
	0.2nm,0.4s						
ALFC				AML	AML	15 35 47.4	
	0.3nm,0.2s						
ALFC				AML	AML	15 35 47.4	
	0.3nm,0.2s						
NATA	**Nata**	**2.56**	**113**	P	**Pn**	**15 35 16.2**	**+0.6**
OSC1	**CSNet OBS 1**	**2.65**	**150**	P	**Pn**	**15 35 16.5**	**-0.3**
YVAC	**Isparta, Yalva**	**2.73**	**26**	P		15 35 20.8	
YVAC				S		15 35 52.1	
DOGA	**KONYA_Doganhis**	**2.77**	**34**	P		15 35 21.8	
DOGA				S		15 35 53.4	
DOGA				*i* AML		15 35 58.0	
	comp=E,21nm,0.8s						
DOGA				*i* AML		15 35 59.0	
	comp=N,22nm,0.6s						
DOGA				*i* AML		15 36 00.0	
	comp=Z,17nm,0.3s						
SZAC	**Souni**	**2.80**	**111**	P	**Pn**	**15 35 19.4**	**+0.4**
SZAC				S	**Sn**	**15 35 51.5**	**-0.3**
SZAC				AML	AML	15 35 53.7	
	0.3nm,0.4s						
SZAC				AML	AML	15 35 53.7	
	0.3nm,0.4s						
SZAC				AML	AML	15 35 55.2	
	0.2nm,0.4s						
SZAC				AML	AML	15 35 55.2	
	0.2nm,0.4s						
ZKR	**Zakros**	**2.94**	**257**	P	**Pn**	**15 35 21.6**	**+0.7**
ASGA	**Asgata**	**3.07**	**109**	P	**Pn**	**15 35 22.8**	**+0.1**
KDHN	**Kadinhani**	**3.31**	**35**	P		15 35 27.9	
KDHN				S		15 36 04.0	

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*VAO **31** 15:48:04.9±1.8, 0°.97N×80°.79W, h10^{km}, mb4.5*
*IDC **31** 15:48:09.4±1.0, 0°.54N×80°.18W, h0^{km}, mb3.9/9,*
mbtmp3.9/10, MS3.6/26, Error ellipse: s-maj=41.2km
s-min=16.5km az=60.0
*IGQ **31** 15:48:11±1.0, 0°N±4°×8°0W±°, h4^{km}*
*NEIC **31** 15:48:12.0±1.9, 0°.53N±0°.09×80°.17W±0°.10, h10^{km}±1^{km},*
mb4.4/12, Error ellipse: s-maj=18.8km s-min=11.0km
az=231.0

ISC 31 15:48:10.8±0.5**, 0°.44N**±0°.03×**80°.34W**±0°.06**, h10**^{km}**, n137,**
σ**1**^{s}**40**/113**, mb4.2**/13**, MS3.6**/23**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.71**	**169**	P	**Pg**	**15 48 23.0**	**-1.6**
JAMA				S	**Sg**	**15 48 33.0**	**-0.9**
MAG1	**Magdalena**	**0.76**	**132**	P	**Pg**	**15 48 26.0**	**+0.5**
AMA1	**Acelerografo,**	**0.79**	**51**	P	**Pn**	**15 48 28.0**	**0.0**
CABP	**Cabo Pasado**	**0.83**	**186**	P	**Pg**	**15 48 25.0**	**-1.8**
CABP				S	**Sg**	**15 48 37.0**	**-0.6**
FLF1	**Flavio Alfaro-**	**0.94**	**148**	P	**Pg**	**15 48 29.0**	**+0.1**
APR2	**Miler**	**1.42**	**105**	P	**Pn**	**15 48 36.0**	**-0.8**
CHIS	**Cerro-Chispas-**	**1.53**	**195**	P	Pn	15 48 28.0	-10
PAC1	**Pacto, Paraso**	**1.56**	**96**	P	**Pn**	**15 48 38.0**	**-0.7**
APR1	**Acelerografo,**	**1.79**	**106**	P	**Pn**	**15 48 41.0**	**-1.2**
HPAL	**Hacienda Las P**	**1.81**	**111**	P	**Pn**	**15 48 42.0**	**-0.4**
PINO	**Pino**	**1.83**	**109**	P	**Pn**	**15 48 42.0**	**-0.9**
TERV	**Terraza Guagua**	**1.84**	**109**	P	**Pn**	**15 48 43.0**	**0.0**
GGPC	**Guagua Pichinc**	**1.85**	**109**	P	**Pn**	**15 48 43.0**	**-0.1**
JUA2	**San Juan 2**	**1.85**	**111**	P	**Pn**	**15 48 43.0**	**-0.1**
YANA	**Yana**	**1.85**	**107**	P	**Pn**	**15 48 43.0**	**-0.1**
OTAV	**Otavalo**	**1.90**	**96**	Pn	**Pn**	**15 48 44.0**	**+0.3**
OTAV	**Otavalo**	**1.90**	**96**	*e*P	**Pn**	**15 48 43.7**	**0.0**
OTAV	**Otavalo**	**1.90**	**96**	*e*P	**Pn**	**15 48 44.7**	**+1.0**
CUSE	**Cuicocha Este**	**1.94**	**94**	P	**Pn**	**15 48 45.0**	**+0.7**
ILLI	**Illinizas Sur**	**1.98**	**125**	P	**Pn**	**15 48 44.0**	**-0.8**
CUIC	**Cuicocha-Domo**	**1.98**	**94**	P	**Pb**	**15 48 46.0**	**-1.3**
CUSW	**Cuicocha Oeste**	**1.99**	**94**	P	**Pn**	**15 48 46.0**	**+1.0**
COTA	**Cotacachi**	**2.00**	**93**	P	**Pn**	**15 48 42.0**	**-3.2**
ALIT	**Ecuador-Imbabu**	**2.01**	**80**	P	**Pn**	**15 48 45.0**	**+0.1**
PAST	**Pastocalle**	**2.04**	**124**	P	**Pn**	**15 48 45.0**	**-0.6**
URCU	**Urcuqui**	**2.08**	**90**	P	**Pn**	**15 48 47.0**	**+0.8**
TUMC	**Tumaco**	**2.12**	**50**	Pn	**Pn**	**15 48 45.9**	**-0.4**
TUMC	**Tumaco**	**2.12**	**50**	P	**Pn**	**15 48 47.0**	**+0.7**
CAMI	**Rancho Maria**	**2.15**	**121**	P	**Pn**	**15 48 48.0**	**+0.9**
NAS2	**Nasa**	**2.16**	**120**	P	**Pn**	**15 48 48.0**	**+0.6**
BNAS	**Cotopaxi Volca**	**2.16**	**121**	P	**Pn**	**15 48 48.0**	**+0.6**
SLOR	**San Lorenzo -**	**2.18**	**122**	P	**Pn**	**15 48 48.0**	**+0.4**
BREF	**Cotopaxi Volca**	**2.20**	**120**	P	**Pn**	**15 48 48.0**	**0.0**
BMOR	**Cotopaxi Volca**	**2.21**	**122**	P	**Pn**	**15 48 48.0**	**-0.1**
BVC2	**Cotopaxi Volca**	**2.21**	**120**	P	**Pn**	**15 48 49.0**	**+0.8**
VC1	**Cotopaxi 1**	**2.21**	**119**	P	**Pn**	**15 48 49.0**	**+0.9**
BRRN	**Barrancas-Volc**	**2.23**	**123**	P	**Pn**	**15 48 49.0**	**+0.8**
BTAM	**Cotopaxi Volca**	**2.24**	**120**	P	**Pn**	**15 48 49.0**	**+0.6**
YAHU	**Yahuarcocha**	**2.27**	**92**	P	**Pb**	**15 48 51.0**	**-1.1**
TAMB	**Tambo**	**2.27**	**120**	P	**Pn**	**15 48 50.0**	**+1.1**
ANTG	**Antisana-Guama**	**2.29**	**114**	P	**Pn**	**15 48 50.0**	**+0.9**
VCES	**Cotopaxi**	**2.30**	**122**	P	**Pn**	**15 48 50.0**	**+0.7**
CHMA	**Chilma**	**2.31**	**80**	P	**Pn**	**15 48 49.0**	**-0.3**
ANTI	**Antisana**	**2.35**	**112**	P	**Pn**	**15 48 52.0**	**+2.0**
LNGL	**El Angel-Carch**	**2.35**	**83**	P	**Pn**	**15 48 50.0**	**0.0**
ANTS	**Antisana-Sarah**	**2.36**	**113**	P	**Pn**	**15 48 52.0**	**+1.8**
ANGU	**Angureal**	**2.36**	**100**	P	**Pb**	**15 48 53.0**	**-0.9**
CAYR	**Refugio Cayamb**	**2.37**	**100**	P	**Pn**	**15 48 52.0**	**+1.6**
CAYA	**Cayambe**	**2.38**	**99**	P	**Pb**	**15 48 53.0**	**-1.1**
ECEN	**Cerro Negro**	**2.40**	**81**	P	**Pn**	**15 48 52.0**	**+1.3**
CHL1	**Volc¡n Chiles**	**2.42**	**82**	P	**Pn**	**15 48 52.0**	**+1.1**
CHSH	**Refugio Sur-Vo**	**2.42**	**143**	P	**Pn**	**15 48 51.0**	**0.0**
CHL2	**Volc¡n Chiles**	**2.45**	**82**	P	**Pn**	**15 48 52.0**	**+0.7**
PORT	**Chimborazo Vol**	**2.46**	**140**	P	**Pn**	**15 48 51.0**	**-0.5**
TAMH	**Tambohuasha Ch**	**2.51**	**142**	P	**Pn**	**15 48 52.0**	**-0.2**
CMBC	**Cumbal**	**2.56**	**79**	*e*P	**Pn**	**15 48 53.3**	**+0.5**
JUI6	**Juive**	**2.63**	**135**	P	**Pn**	**15 48 54.0**	**+0.3**
RETU	**Refugio**	**2.67**	**135**	P	**Pn**	**15 48 55.0**	**+0.6**
BMAS	**Trigal station**	**2.68**	**136**	P	**Pn**	**15 48 55.0**	**+0.6**
ARRY	**Arrayan**	**2.70**	**136**	P	**Pn**	**15 48 55.0**	**+0.3**
BPAT	**Tungurahua Vol**	**2.71**	**135**	P	**Pn**	**15 48 56.0**	**+1.1**
BONI	**La Bonita**	**2.81**	**90**	P	**Pb**	**15 48 59.0**	**-2.3**
GCUF	**Volcan Galeras**	**3.09**	**75**	*e*P	**Pn**	**15 49 02.6**	**+2.4**
GR1C	**Gorgona, Isla**	**3.34**	**40**	*e*P	**Pg**	**15 49 13.6**	**-1.4**
SOTA	**Rioblanco**	**4.09**	**66**	*e*P	**Pn**	**15 49 15.7**	**+1.8**
POPC	**Popayan, Colom**	**4.21**	**60**	*e*P	**Pb**	**15 49 21.2**	**-4.1**
PCON	**Cinco Dias**	**4.36**	**65**	*e*P	**Pn**	**15 49 20.2**	**+2.5**
FLOC	**Florencia**	**4.82**	**76**	*e*P	**Pb**	**15 49 33.6**	**-1.8**
MARP	**Paez Belalcaza**	**4.99**	**61**	*e*P	**Pb**	**15 49 34.6**	**-3.9**
GARC	**Garzon, Huila**	**5.15**	**70**	*e*P	**Pn**	**15 49 29.8**	**+1.6**
YOTC	**Yotoco, Valle**	**5.32**	**49**	*e*P	Pn	15 49 36.5	+6.0
ORTC	**Ortega, Tolima**	**6.14**	**56**	*e*P	Pn	15 49 49.0	+7.2
ANIL	**Santa Ana**	**6.36**	**51**	*e*P	**Pn**	**15 49 48.4**	**+3.4**
MACC	**Macarena, Meta**	**6.71**	**75**	*e*P	**Pn**	**15 49 50.9**	**+1.5**
ROSC	**El Rosal**	**7.43**	**54**	Pn	**Pn**	**15 50 02.4**	**+2.6**
	2.6nm,0.3s,baz=159,slow=21,SNR=2.0						
ROSC				Sn	**Sn**	**15 51 25.7**	**+1.3**
	1.2nm,0.3s,baz=101,slow=23,SNR=1.3						
ROSC	**El Rosal**	**7.43**	**54**	Pn	**Pn**	**15 49 57.5**	**-2.3**
NORC	**Norcasia**	**7.46**	**47**	*e*P	Pb	15 50 12.1	-8.5
VILC	**Villavicencio,**	**7.58**	**61**	*e*P	**Pn**	**15 50 04.1**	**+2.6**
ATAH	**Atahualpa**	**7.77**	**166**	Pn	**Pn**	**15 50 06.7**	**+2.2**
	1.6nm,0.3s,baz=8.6,slow=9.4,SNR=2.2						
ATAH				Sn	**Sn**	**15 51 37.0**	**+4.2**
	0.3nm,0.3s,baz=62,slow=14,SNR=1.8						
ATAH				LR	LR	15 53 27.8	
	comp=Z,659nm,18.5s,baz=343,slow=41						
CHIC	**Chingaza**	**7.80**	**58**	*e*P	Pn	15 50 14.0	+9.1
PTBC	**PUERTO BERRIO,**	**8.44**	**44**	*e*P	Pn	15 50 20.7	+7.5
DRK0	**Durika**	**9.23**	**342**	Pn	**Pn**	**15 50 25.4**	**+1.2**
JTS	**Las Juntas de**	**10.81**	**335**	Pn	**Pn**	**15 50 49.0**	**+3.2**
	0.5nm,0.3s,baz=24,slow=22,SNR=1.5						
JTS				LR	LR	15 53 39.3	
	comp=Z,90nm,20.4s,baz=224,slow=31						
SDV	**Santo Domingo**	**12.80**	**49**	LR	LR	15 56 57.9	
	comp=Z,148nm,19.0s,baz=210,slow=42						
ETMB	**Extrema**	**17.36**	**126**	*e*P	**P**	**15 52 16.9**	**+2.1**
LPAZ	**La Paz**	**20.53**	**145**	P	**P**	**15 52 49.7**	**-0.5**
	3.1nm,0.7s,baz=342,slow=12,SNR=11						
LPAZ				LR	LR	16 02 40.7	
	comp=Z,249nm,21.6s,baz=320,slow=42						
	3.1nm,0.7s						
LPAZ	**La Paz**	**20.53**	**145**	*e*P	**P**	**15 52 50.5**	**+0.4**
CMIG	**Matias Romero**	**21.88**	**320**	LR	LR	15 59 59.3	
	comp=Z,143nm,18.9s,baz=168,slow=32						
SJG	**San Juan**	**22.42**	**38**	LR	LR	16 03 48.4	
	comp=Z,108nm,18.5s,baz=74,slow=42						
VILB	**Vilhena**	**24.00**	**124**	*e*P	**P**	**15 53 26.3**	**+0.3**
SIV	**San Ignacio**	**25.07**	**131**	P	**P**	**15 53 35.3**	**-0.4**
	1.0nm,0.6s,baz=302,slow=8.4,SNR=5.3						
SIV				LR	LR	16 03 54.8	
	comp=Z,137nm,18.4s,baz=313,slow=38						
	1.0nm,0.6s						
LVC	**Limon Verde**	**25.47**	**155**	P	**P**	**15 53 40.0**	**+0.3**
	8.2nm,1.1s,baz=3.8,slow=15,SNR=3.1						
LVC				LR	LR	16 05 00.8	
	comp=Z,187nm,19.2s,baz=320,slow=40						
	8.2nm,1.1s						
LVC	**Limon Verde**	**25.47**	**155**	IAmb	IAmb	15 53 47.2	
	comp=Z,12nm,1.1s						
LVC	**Limon Verde**	**25.47**	**155**	*e*P	**P**	**15 53 40.2**	**+0.5**
MALB	**Monte Alegre**	**26.17**	**95**	*e*P	**P**	**15 53 45.5**	**-0.3**
PTLB	**Pontes e Lacer**	**26.23**	**128**	*e*P	**P**	**15 53 46.0**	**-0.2**
PDRB	**Porto dos Gac**	**26.33**	**118**	*e*P	**P**	**15 53 47.3**	**+0.1**
CLDB	**Colider**	**26.86**	**115**	*e*P	**P**	**15 53 51.0**	**-1.0**
MDP	**Montagnes des**	**28.04**	**80**	LR	LR	16 06 23.6	
	comp=Z,64nm,20.9s,baz=236,slow=39						
SNDB	**Serra Nova Dou**	**31.37**	**114**	*e*P	**P**	**15 54 30.7**	**-1.4**
CPUP	**Villa Florida**	**34.65**	**142**	LR	LR	16 11 36.3	
	comp=Z,187nm,18.0s,baz=314,slow=41						
TKL	**Tuckaleechee C**	**35.18**	**355**	LR	LR	16 08 42.5	
	comp=Z,120nm,19.4s,baz=174,slow=35						
BDFB	**Brasilia**	**35.70**	**118**	P	**P**	**15 55 09.2**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=217,slow=10,SNR=3.1						
	comp=Z,1.9nm,0.4s						
IPMB	**Ipameri, GO**	**36.52**	**122**	*e*P	**P**	**15 55 15.7**	**-1.2**
SDBA	**SAO DESIDERIO**	**37.41**	**111**	*e*P	**P**	**15 55 23.6**	**-0.9**
ANMO	**Albuquerque**	**42.10**	**327**	LR	LR	16 12 43.8	
	comp=Z,48nm,20.9s,baz=138,slow=35						
ANMO	**Albuquerque**	**42.10**	**327**	P	**P**	**15 56 05.1**	**+1.7**
ANMO				IAmb	IAmb	15 56 10.9	
	comp=Z,3.9nm,0.8s						
SDCO	**Great Sand Dun**	**43.77**	**331**	P	**P**	**15 56 17.2**	**+0.1**
SDCO				IAmb	IAmb	15 56 33.9	
	comp=Z,9.3nm,1.5s						
SADO	**Sadowa**	**44.15**	**1**	LR	LR	16 14 17.9	
	comp=Z,39nm,19.7s,baz=296,slow=36						
RCBR	**Riachuelo**	**44.80**	**99**	LR	LR	16 14 36.7	

	comp=Z,83nm,18.8s,baz=18,slow=36						
PV13	**Radium Mtn., P**	**45.77**	**328**	P	**P**	**15 56 34.2**	**+1.2**
PV13				IAmb	IAmb	15 56 48.9	
	comp=Z,3.9nm,0.8s						
PDAR	**Pinedale Array**	**49.62**	**332**	LR	LR	16 18 37.9	
	comp=Z,50nm,20.5s,baz=134,slow=37						
ELK	**Elko**	**51.09**	**326**	LR	LR	16 19 53.8	
	comp=Z,66nm,18.8s,baz=144,slow=37						
NV11	**Mina Array Sit**	**51.31**	**322**	P	**P**	**15 57 16.7**	**+1.2**
NVAR	**Mina Array Bea**	**51.40**	**322**	P	**P**	**15 57 17.2**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=129,slow=8.6,SNR=10						
NVAR				LR	LR	16 18 14.7	
	comp=Z,82nm,18.5s,baz=88,slow=35						
	comp=Z,1.8nm,0.8s						
NVAR	**Mina Array Bea**	**51.40**	**322**	P	**P**	**15 57 17.0**	**+0.7**
MDPB	**Devils Postpil**	**51.40**	**321**	P	**P**	**15 57 17.3**	**+0.9**
MDPB				IAmb	IAmb	15 57 19.4	
	comp=Z,2.3nm,0.7s						
YBH	**Yreka Blue Hor**	**56.08**	**323**	LR	LR	16 24 28.1	
	comp=Z,27nm,18.7s,baz=141,slow=39						
NEW	**Newport**	**57.26**	**332**	LR	LR	16 23 49.7	
	comp=Z,24nm,18.2s,baz=146,slow=37						
EDM	**Edmonton**	**59.31**	**338**	P	**P**	**15 58 12.8**	**-0.1**
YKA	**Yellowknife Ar**	**67.02**	**344**	P	**P**	**15 59 03.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=137,slow=6.3,SNR=6.5						
	comp=Z,0.4nm,0.7s						
DLBC	**Dease Lake**	**69.71**	**335**	LR	LR	16 31 33.3	
	comp=Z,50nm,18.2s,baz=202,slow=37						
RES	**Resolute Bay**	**74.66**	**356**	LR	LR	16 33 33.8	
	comp=Z,51nm,18.6s,baz=86,slow=36						
DBIC	**Dimbokro**	**75.53**	**83**	LR	LR	16 31 01.1	
	comp=Z,50nm,18.3s,baz=178,slow=34						
INK	**Inuvik**	**76.71**	**342**	P	**P**	**16 00 03.8**	**+2.0**
INK				IAmb	IAmb	16 00 08.5	
	comp=Z,3.5nm,0.9s						
MDT	**Midelt**	**77.78**	**57**	LR	LR	16 34 32.5	
	comp=Z,27nm,18.2s,baz=138,slow=36						
ESDC	**Sonseca Array**	**79.24**	**50**	P	**P**	**16 00 16.8**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=262,slow=6.1,SNR=8.9						
	comp=Z,1.4nm,1.0s						
ILAR	**Eielson Array**	**79.78**	**336**	P	**P**	**16 00 18.8**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=108,slow=5.8,SNR=3.3						
	comp=Z,0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.14**	**77**	P	**P**	**16 00 31.6**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=282,slow=6.6,SNR=5.3						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.14**	**77**	IAmb	IAmb	16 00 36.6	
	comp=Z,1.3nm,1.1s						
IMAR	**Indian Mountai**	**82.89**	**337**	P	**P**	**16 00 35.0**	**-0.5**
DAVOX	**Davos/Dischmat**	**89.83**	**43**	LR	LR	16 41 38.4	
	comp=Z,24nm,18.1s,baz=276,slow=36						
TSUM	**Tsumeb**	**97.63**	**109**	LR	LR	16 45 53.4	
	comp=Z,71nm,18.1s,baz=142,slow=36						
SUR	**Sutherland**	**99.66**	**123**	LR	LR	16 45 21.7	
	comp=Z,101nm,18.1s,baz=142,slow=34						
ASAR	**Alice Springs**	**139.55**	**233**	PKP	**PKPdf**	**16 07 38.2**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=123,slow=2.6,SNR=2.7						
WRA	**Warramunga Arr**	**140.92**	**238**	PKP	**PKPdf**	**16 07 40.7**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=95,slow=2.8,SNR=7.4						
PZH	**PanZhiHua**	**153.14**	**356**	PKPbc	**PKPdf**	**16 08 00.5**	**-2.0**

IDC 31 16:00:23.5±3.9**, 5°.37S**×**151°.21E, h0^{km}, mb3.1**/2**, mbtmp3.2**/2**, Error ellipse: s-maj=154.3km s-min=51.4km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.89**	**227**	P	P	16 05 18.8	+0.4
	0.5nm,0.6s,baz=52,slow=10,SNR=3.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**24.68**	**221**	P	P	16 05 46.2	-0.2
	0.4nm,0.6s,baz=58,slow=9.2,SNR=12						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.96**	**287**	PKPbc	PKPbc	16 20 14.0	-0.6
	0.4nm,0.6s,baz=63,slow=2.1,SNR=5.4						

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*MAN **31** 16:29:46.7, 13°.10N×120°.45E, h32^{km}, mb5.5, ML4.5, MS4.8, Hypocentre not reviewed by the ISC*

MAN INTENSITY IV - MAMBURAO & STA. CRUZ OCCIDENTAL MINDORO; INTENSITY III - PUERTO GALERA & CALAPAN ORIENTAL MINDORO.

*GCMT **31** 16:29:47.1±0.4, 13°.16N±0°.02×120°.49E±0°.03, h31^{km}±2^{km}, MW4.8/62, Moment Tensor Solution. s19,c22; s62,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.17; $M_{\theta\theta}$0.93±.11; $M_{\phi\phi}$-0.78±.12; $M_{r\theta}$0.20±.13; $M_{\theta\phi}$-1.56±.07; $M_{\phi r}$-0.79±.16; Best double couple: $M_0$1.95900×10^{16} NP1:ϕ_s76.00000°, δ65.00000°, λ-177.00000°. NP2: ϕ_s345.00000°, δ88.00000°, λ-25.00000°. Principal axes: T 2.0100, Plg15.0000°, Azm33.0000°; N -0.1030, Plg65.0000°, Azm160.0000°; P -1.9080, Plg19.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **31** 16:29:48.8±0.0, 13°.35N×120°.63E, h59^{km}, mb4.5/56, mB4.6/30, Ms4.1/32, Ms7 3.8/28*

*DJA **31** 16:29:48.3±0.4, 13°N±4°×12°1E±°, h10^{km}, M4.6/24, mB5.2/8, mb4.5/24, Mw(mB)4.6/8*

*NEIC **31** 16:29:50.1±1.4, 13°.19N±0°.06×120°.58E±0°.09, h69^{km}±6^{km}, mb4.7/115, Error ellipse: s-maj=13.1km s-min=9.1km az=101.0*

*IDC **31** 16:29:50.3±0.9, 13°.23N×120°.70E, h73^{km}±7^{km}, mb4.1/25, mbtmp4.4/27, MS3.7/31, Error ellipse: s-maj=16.5km s-min=9.8km az=72.0*

ISC 31 16:29:48.4±0.5**, 13°.12N**±0°.02×**120°.51E**±0°.03**, h56**^{km}±5^{km}**, n287, σ1^{s}.45**/300**, mb4.7**/102**, MS3.8**/37**, 31C-20D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.58**	**48**	⇑*e*P	**Pn**	**16 29 59.4**	**-1.7**
PGP				*i*S	**Sn**	**16 30 08.6**	**-1.6**
LUBP	**Lubang**	**0.67**	**338**	⇓*e*P	**Pn**	**16 30 00.2**	**-1.8**
LUBP				*e*S	**Sn**	**16 30 10.0**	**-1.9**
TGY	**Tagaytay City**	**1.07**	**23**	P	**Pn**	**16 30 07.7**	**+0.4**
	44µm,0.4s,baz=215,slow=3.7,SNR=1109						
TGY				S	**Sn**	**16 30 21.6**	**+0.4**
	21µm,0.4s,baz=132,slow=21,SNR=11						
TGY	**Tagaytay City**	**1.07**	**23**	⇑*e*P	**Pn**	**16 30 07.4**	**+0.1**
MACP	**Maragondon, Ca**	**1.16**	**10**	⇑*e*P	**Pn**	**16 30 07.5**	**-0.9**
MACP				*e*S	**Sn**	**16 30 23.8**	**+0.5**
BOAC	**Boac**	**1.35**	**75**	⇑*e*P	**Pn**	**16 30 10.5**	**-0.4**
BOAC				*e*S	**Sn**	**16 30 31.4**	**+3.7**
LQP	**Lukban**	**1.41**	**45**	⇑*i*P	**Pn**	**16 30 11.7**	**-0.3**
LQP				*e*S	**Sn**	**16 30 24.9**	**-4.8**
QVP	**Quezon City--P**	**1.57**	**18**	⇓*e*P	**Pn**	**16 30 14.1**	**+0.1**
QVP				*e*S	**Sn**	**16 30 35.1**	**+1.7**
ENPP	**El Nido**	**2.17**	**209**	⇑*e*P	**Pn**	**16 30 20.5**	**-1.7**
ENPP				*e*S	**Sn**	**16 30 44.4**	**-3.6**
JCNP	**Jose Panganiba**	**2.43**	**61**	⇑*e*P	**Pn**	**16 30 25.5**	**-0.2**
JCNP				*e*S	**Sn**	**16 30 54.2**	**0.0**
PCPH	**Palayan**	**2.50**	**13**	⇑*e*P	**Pn**	**16 30 25.8**	**-0.8**
PCPH				*e*S	**Sn**	**16 30 56.0**	**+0.1**
JAP	**San Jose, Anti**	**2.74**	**149**	⇓*i*P	**Pn**	**16 30 29.6**	**-0.4**
JAP				*e*S	**Sn**	**16 30 58.2**	**-3.7**
BALP	**Baler**	**2.81**	**22**	⇑*e*P	**Pn**	**16 30 31.3**	**+0.4**
BALP				*e*S	**Sn**	**16 31 09.9**	**+6.4**
SMPP	**San Manuel, Pa**	**3.02**	**3**	⇑*e*P	**Pn**	**16 30 33.0**	**-0.8**
SMPP				*e*S	**Sn**	**16 31 08.5**	**-0.4**
GUIM	**Jordan**	**3.21**	**140**	⇑*e*P	**Pn**	**16 30 36.0**	**-0.3**
GUIM				*e*S	**Sn**	**16 31 14.0**	**+0.7**
BOLP	**Bolinao**	**3.30**	**350**	⇑*e*P	**Pn**	**16 30 37.1**	**-0.5**
PVCP	**Virac**	**3.58**	**82**	⇑*e*P	**Pn**	**16 30 42.8**	**+1.3**
PPR	**Puerto Princes**	**3.75**	**208**	⇓*e*P	**Pn**	**16 30 43.0**	**-0.8**
PPR				*e*S	**Sn**	**16 31 27.0**	**+0.4**
CNOP	**Candoni, Negro**	**3.88**	**147**	⇑*e*P	**Pn**	**16 30 44.6**	**-0.9**
CNOP				*e*S	**Sn**	**16 31 28.1**	**-1.7**
SAMP	**Sagada Mountai**	**3.96**	**5**	⇑*e*P	**Pn**	**16 30 47.1**	**+0.4**
CAUP	**Cauayan**	**4.01**	**18**	⇓*e*P	**Pn**	**16 30 48.7**	**+1.3**
LLP	**Lapu-Lapu**	**4.38**	**129**	⇓*i*P	**Pn**	**16 30 53.0**	**+0.5**
LLP				*i*S	**Sn**	**16 31 39.8**	**-2.4**
SNPH	**Sibulan**	**4.61**	**144**	⇓*i*P	**Pn**	**16 30 56.2**	**+0.6**
SNPH				*i*S	**Sn**	**16 31 47.5**	**-0.4**
TBP	**Tagbilaran**	**4.73**	**136**	⇓*i*P	**Pn**	**16 30 58.3**	**+1.0**
TBP				*i*S	Sn	16 32 05.8	+15
BATP	**Bataraza**	**5.05**	**212**	⇓*e*P	**Pn**	**16 30 59.6**	**-2.0**
BATP				*e*S	**Sn**	**16 31 55.8**	**-2.9**
MSLP	**Maasin**	**5.19**	**124**	⇓*e*P	**Pn**	**16 31 04.9**	**+1.4**
PAGZ	**Pagadian**	**5.95**	**151**	⇓*e*P	**Pn**	**16 31 15.6**	**+1.6**
PAGZ				*e*S	**Sn**	**16 32 23.5**	**+2.7**
ZCP	**Zamboanga City**	**6.33**	**166**	⇓*i*P	**Pn**	**16 31 18.5**	**-0.7**
ZCP				*i*S	**Sn**	**16 32 25.9**	**-4.4**
CTBH	**Cotabato--PC H**	**6.92**	**148**	⇑*e*P	**Pn**	**16 31 28.1**	**+0.9**
CTBH				*i*S	**Sn**	**16 32 40.2**	**-4.3**
BIPH	**Bislig**	**7.56**	**130**	⇓*e*P	**Pn**	**16 31 37.0**	**+1.0**
MYLDM	**Lahad Datu**	**8.13**	**194**	Pn	**Pn**	**16 31 45.2**	**+1.4**
YULB	**Yu-li**	**10.25**	**4**		**Pn**	**16 32 13.3**	**+0.5**
SGSI	**Sangihe**	**10.60**	**152**	P	**Pn**	**16 32 17.8**	**+0.1**
	43nm,0.8s						
YOJ	**Yonaguni jima**	**11.53**	**11**	Pn	**Pn**	**16 32 30.0**	**-0.3**
QIZ	**Qiongzhong**	**11.81**	**301**	Pn	**Pn**	**16 32 33.0**	**-1.2**
QIZ	**Qiongzhong**	**11.81**	**301**	P	**Pn**	**16 32 33.5**	**-0.7**
QIZ				S	**Sn**	**16 34 49.0**	**+4.4**
QIZ				pmax	pmax		
	comp=Z,25nm,0.7s						
QIZ				LR	LR		
	comp=N,270nm,11.9s						
QIZ				LR	LR		
	comp=E,200nm,15.9s						
QIZ				LR	LR		
	comp=Z,310nm,19.1s						
TOLI2	**Tolitoli**	**11.93**	**179**	Pn	**Pn**	**16 32 35.3**	**-0.6**
MRSI	**Marisa**	**12.64**	**173**	P	**Pn**	**16 32 45.1**	**-0.4**
	13nm,1.0s						
GTOI	**Gorontalo**	**12.64**	**168**	P	**Pn**	**16 32 44.9**	**-0.7**
	8.2nm,1.5s						
MPSI	**Mapaga**	**12.71**	**183**	P	**Pn**	**16 32 47.0**	**+0.5**
	12nm,0.4s						
APSI	**Ampana**	**13.98**	**175**	P	**Pn**	**16 33 05.9**	**+2.1**
	273nm21nm,1.1s						
TNTI	**Ternate**	**14.02**	**150**		**Pn**	**16 33 01.8**	**-2.5**
TNTI	**Ternate**	**14.02**	**150**	P	**Pn**	**16 33 04.8**	**+0.5**
	594nm40nm,1.3s						
LUWI	**Luwuk**	**14.24**	**171**	P	**P**	**16 33 14.1**	**+1.1**
LUWI	**Luwuk**	**14.24**	**171**	P	**Pn**	**16 33 08.6**	**+1.4**
	893nm85nm,1.3s						
LBMI	**Labuha**	**15.32**	**153**	P	**Pn**	**16 33 21.1**	**-0.2**
	367nm29nm,1.2s						
KSM	**Kuching**	**15.36**	**222**	Pn	**Pn**	**16 33 21.9**	**+0.1**
KSM				IAmb	IAmb	16 33 24.0	
	comp=Z,30nm,0.7s						
JOW	**Kunigami**	**15.47**	**27**	P	**Pn**	**16 33 23.1**	**0.0**
	comp=Z,47nm,0.9s,baz=212,slow=11,SNR=10.0						
JOW				LR	LR	16 40 19.5	
	comp=Z,188nm,18.4s,baz=167,slow=41						
JOW	**Kunigami**	**15.47**	**27**	Pn	**Pn**	**16 33 21.3**	**-1.8**
JOW				IAmb	IAmb	16 33 28.8	
	comp=Z,48nm,0.9s						
STKI	**Sintang**	**15.76**	**215**	P	**P**	**16 33 31.5**	**+1.7**
	comp=Z,9.8nm,1.0s						
SANI	**Sanana**	**16.02**	**160**	P	**Pn**	**16 33 28.5**	**-1.7**
	comp=Z,19nm,1.1s						
BBKI	**Banjar Baru**	**17.40**	**199**	P	**P**	**16 33 50.3**	**+2.2**
	comp=Z,20nm,0.8s						
SWI	**Sorong**	**17.51**	**142**	P	**P**	**16 33 49.9**	**+0.7**
	comp=Z,18nm,1.2s						
SIJI	**Sorong**	**17.52**	**142**	P	**P**	**16 33 50.2**	**+0.8**
	comp=Z,6.2nm,0.7s,baz=327,slow=14,SNR=6.1						
SIJI				LR	LR	16 40 07.0	
	comp=Z,179nm,21.7s,baz=248,slow=35						
SSE	**Sheshan**	**17.91**	**2**	P	**P**	**16 33 50.8**	**-2.7**
SSE				S	**Sn**	**16 37 08.8**	**-3.6**
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,61nm,9.4s						
SSE				LR	LR		
	comp=Z,89nm,22.2s						
SSE				LR	LR		
	comp=Z,70nm,18.2s						
PBKI	**Pangkalan Bun**	**18.00**	**210**	P	**Pn**	**16 33 58.0**	**+3.2**
	comp=Z,1µmcomp=Z,29nm,0.9s						
KAPI	**Kappang**	**18.03**	**182**	LR	LR	16 42 29.8	
	comp=Z,117nm,18.0s,baz=352,slow=42						
MSAI	**Masohi**	**18.37**	**152**	P	**Pn**	**16 34 01.3**	**+2.0**
	comp=Z,9.4nm,0.7s						
GYA	**Guiyang**	**18.57**	**318**	⇑P	**Pn**	**16 34 03.5**	**+1.7**
GYA				pP	pP	16 34 13.5	+0.9
GYA				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2	**Nanjing**	**18.91**	**356**	*e*P	**P**	**16 34 02.3**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FAKI	**Fak Fak**	**19.74**	**143**	P	**P**	**16 34 13.4**	**-0.3**
FAKI				IAmb	IAmb	16 34 18.4	
	comp=Z,32nm,0.8s						
FAKI	**Fak Fak**	**19.74**	**143**	P	**Pn**	**16 34 17.6**	**+2.0**
	comp=Z,47nm,0.9s						
ENH	**Enshi**	**19.88**	**331**	P	**P**	**16 34 14.8**	**-0.4**
TPI	**Tanjungpandan**	**20.28**	**220**	P	Pn	16 34 24.3	+2.2
	comp=Z,11nm,1.2s						
JSU	**Suzuyama**	**20.46**	**25**	P	**P**	**16 34 21.0**	**-0.5**
JSU				IAmb	IAmb	16 34 25.2	
	comp=Z,26nm,0.9s						
DSRI	**Dabo**	**20.78**	**231**	P	Pn	16 34 30.2	+2.2
PPBI	**Pangkal Pinang**	**20.83**	**224**	P	Pn	16 34 28.6	+0.1
IPM	**Ipoh**	**21.06**	**248**	P	**P**	**16 34 28.7**	**+0.6**
KMMI	**Kalianget**	**21.06**	**198**	P	**P**	**16 34 31.0**	**+3.0**
	comp=Z,50nm,0.9s						
KULM	**Kulim**	**21.07**	**250**	P	**P**	**16 34 29.1**	**+0.9**
CM31	**Chiang Mai Arr**	**21.41**	**287**	P	**P**	**16 34 33.0**	**+1.2**
CM31				IAmb	IAmb	16 34 35.5	
	comp=Z,64nm,1.1s						
CMAR	**Chiang Mai Arr**	**21.41**	**287**	P	**P**	**16 34 34.2**	**+2.4**
	comp=Z,25nm,0.9s,baz=98,slow=8.7,SNR=126						
CMAR				PcP	**PcP**	**16 38 34.7**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=50,slow=0.9,SNR=5.4						
	comp=Z,25nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.41**	**287**	P	**P**	**16 34 33.4**	**+1.6**
CHTO	**Chiang Mai**	**21.48**	**288**	P	**P**	**16 34 32.5**	**-0.1**
EDFI	**Ende, Flores**	**21.75**	**177**	P	**P**	**16 34 39.7**	**+4.2**
JNU	**Nakatsue**	**22.05**	**24**	P	**P**	**16 34 37.4**	**-1.2**
	comp=Z,11nm,0.9s,baz=212,slow=9.8,SNR=3.8						
	comp=Z,11nm,0.9s						
JNU	**Nakatsue**	**22.05**	**24**	P	**P**	**16 34 37.2**	**-1.3**
PZH	**PanZhiHua**	**22.07**	**310**	P	**P**	**16 34 41.5**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,4.0s						
LYN	**LuoYang**	**22.55**	**342**	⇑P	**P**	**16 34 43.5**	**-0.4**
LYN				pmax	pmax		
	comp=Z,30nm,0.7s						
LYN				pmax	pmax		
	comp=Z,170nm,7.8s						
LYN				LR	LR		
	comp=Z,350nm,17.8s						
LYN				LR	LR		
	comp=Z,230nm,18.6s						
LYN				LR	LR		
	comp=Z,500nm,19.0s						
SOEI	**Soe**	**23.03**	**170**	P	**P**	**16 34 48.4**	**-0.7**
SOEI				IAmb	IAmb	16 35 13.4	
	comp=Z,52nm,1.1s						
XAN	**Xi'an**	**23.34**	**335**	P	**P**	**16 34 51.5**	**-0.4**
XAN				S	**S**	**16 38 53.8**	**-6.8**
XAN				pmax	pmax		
	comp=Z,16nm,0.6s						
XAN				pmax	pmax		
	comp=Z,100nm,8.5s						
XAN				LR	LR		
	comp=Z,330nm,15.1s						
XAN				LR	LR		
	comp=Z,240nm,14.4s						
XAN				LR	LR		
	comp=Z,310nm,14.4s						
BATI	**Baumata**	**23.38**	**172**	P	**P**	**16 34 53.4**	**+1.0**
	comp=Z,42nm,0.6s,baz=56,slow=0.4,SNR=9.4						
	comp=Z,42nm,0.6s						
LEM	**Lembang**	**23.59**	**214**	LR	LR	16 45 00.1	
	comp=Z,200nm,21.1s,baz=280,slow=38						
PSI	**Prapat**	**23.68**	**246**	P	**P**	**16 34 56.6**	**+1.3**
	comp=Z,1.9nm,0.3s,baz=356,slow=4.1,SNR=5.9						
PSI				LR	LR	16 43 54.4	
	comp=Z,139nm,19.8s,baz=92,slow=35						
	comp=Z,1.9nm,0.3s						
GUMO	**Guam**	**23.71**	**86**	LR	LR	16 42 38.2	
	comp=Z,160nm,21.1s,baz=262,slow=33						
RPSI	**Rantau Prapat**	**23.73**	**246**	P	**P**	**16 34 56.6**	**+1.0**
JHS	**Saijyo**	**24.59**	**26**	P	**P**	**16 35 03.1**	**-0.3**
JHS				IAmb	IAmb	16 35 05.0	
	comp=Z,17nm,0.8s						
JCJ	**Chichijima**	**24.60**	**52**	LR	LR	16 43 37.3	
	comp=Z,192nm,21.2s,baz=274,slow=34						
JCJ	**Chichijima**	**24.60**	**52**	P	**P**	**16 35 02.6**	**-0.8**
HNS	**HongShan**	**24.73**	**349**	⇑P	**P**	**16 35 04.0**	**-0.5**
HNS				*e*S	**S**	**16 39 21.0**	**-1.7**
HNS				pmax	pmax		
	comp=Z,18nm,0.8s						
HNS				LR	LR		
	comp=Z,280nm,17.6s						
HNS				LR	LR		
	comp=Z,180nm,14.9s						
HNS				LR	LR		
	comp=Z,400nm,18.2s						
KSRS	**Korea Array**	**25.13**	**14**	P	**P**	**16 35 07.1**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=192,slow=9.9,SNR=4.7						
KSRS				LR	LR	16 46 40.9	
	comp=Z,164nm,18.8s,baz=200,slow=40						
	comp=Z,1.4nm,0.8s						
GSI	**Gunungsitoli**	**25.56**	**245**	P	**P**	**16 35 13.1**	**+0.8**
GSI				IAmb	IAmb	16 35 25.3	
	comp=Z,22nm,1.0s						
JHJ	**Hachijo jima 2**	**26.57**	**38**	LR	LR	16 44 14.3	
	comp=Z,96nm,19.4s,baz=68,slow=33						
BJI	**Beijing**	**27.09**	**353**	P	**P**	**16 35 25.0**	**-0.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,79nm,3.7s						
BJI				LR	LR		
	comp=Z,150nm,16.3s						
BJI				LR	LR		
	comp=Z,94nm,15.0s						
MJAR	**Matsushiro Arr**	**28.22**	**31**	P	**P**	**16 35 33.7**	**-2.4**
	comp=Z,2.5nm,1.0s,baz=226,slow=7.8,SNR=2.7						
	comp=Z,2.5nm,1.0s						
HHC	**Hu-ho-hao-te**	**28.72**	**346**	*e*P	**P**	**16 35 42.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,34nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,5.7s						
HHC				LR	LR		
	comp=Z,370nm,16.5s						
HHC				LR	LR		
	comp=Z,320nm,16.5s						
HHC				LR	LR		
	comp=Z,370nm,16.7s						
BTO	**Baotou**	**28.89**	**343**	*e*P	**P**	**16 35 45.5**	**+3.5**
BTO				LR	LR		
	comp=Z,940nm,19.3s						
BTO				LR	LR		
	comp=Z,580nm,18.1s						
GTA	**Gaotai**	**31.94**	**329**	⇓P	**P**	**16 36 10.0**	**+1.0**
GTA				pP	pP	16 36 23.0	+0.6
GTA				sP	pwP	16 36 27.3	+1.8
GTA				S	**S**	**16 41 19.3**	**+2.9**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,52nm,5.5s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,16.4s						
GTA				LR	LR		
	comp=Z,170nm,18.5s						
GOMU	**GeErMu**	**32.57**	**319**	P	**P**	**16 36 19.0**	**+4.1**
GOMU				S	**S**	**16 41 26.3**	**-0.6**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GOMU				LR	LR		
	comp=Z,80nm,13.3s						
GOMU				LR	LR		
	comp=Z,120nm,13.6s						
GOMU				LR	LR		
	comp=Z,120nm,13.3s						
TAPN	**Taplejung**	**33.75**	**300**	*e*P	**P**	**16 36 26.0**	**+0.8**
MBWA	**Marble Bar**	**34.07**	**181**	P	**P**	**16 36 28.7**	**+1.2**
MBWA				IAmb	IAmb	16 36 44.9	
	comp=Z,6.5nm,0.8s						
RAMN	**Ramite**	**34.57**	**299**	*e*P	**P**	**16 36 33.2**	**+0.9**
	comp=Z,70nm,0.9s						
JIRN	**Jiri**	**35.13**	**300**	*e*P	**P**	**16 36 38.3**	**+1.1**
	comp=Z,87nm,0.9s						
WB0	**Warramunga Arr**	**35.42**	**157**	P	**P**	**16 36 38.7**	**-0.5**
WB0				IAmb	IAmb	16 37 04.2	
	comp=Z,12nm,0.7s						
GUN	**Gumba**	**35.47**	**300**	*e*P	**P**	**16 36 41.0**	**+0.9**
	comp=Z,102nm,0.9s						
WRAB	**Tennant Creek**	**35.55**	**157**	P	**P**	**16 36 39.8**	**-0.6**
WRA	**Warramunga Arr**	**35.56**	**157**	P	**P**	**16 36 40.2**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=334,slow=9.8,SNR=84						
	comp=Z,3.7nm,0.6s						
WRA	**Warramunga Arr**	**35.56**	**157**	P	**P**	**16 36 40.2**	**-0.3**
WB2	**Warramunga Arr**	**35.56**	**157**	P	**P**	**16 36 40.2**	**-0.3**
WR0	**Warramunga Arr**	**35.65**	**157**	P	**P**	**16 36 40.9**	**-0.4**
WR0				IAmb	IAmb	16 37 06.3	
	comp=Z,11nm,0.8s						
PKI	**Pulchoki**	**35.77**	**299**	*e*P	**P**	**16 36 43.2**	**+0.5**
	comp=Z,54nm,0.9s						
PKIN	**Phulchoki**	**35.78**	**299**	*e*P	**P**	**16 36 43.2**	**+0.5**
	comp=Z,44nm,0.8s						
ASAJ	**Asahikawa**	**36.23**	**27**	LR	LR	16 53 45.4	
	comp=Z,95nm,19.0s,baz=194,slow=40						
ULN	**Ulaanbaatar**	**36.42**	**345**	P	**P**	**16 36 46.1**	**-1.7**
ULN				IAmb	IAmb	16 36 48.9	
	comp=Z,7.5nm,0.7s						
SONM	**Songino Array**	**36.56**	**344**	P	**P**	**16 36 48.6**	**-0.3**
	comp=Z,15nm,0.6s,baz=161,slow=10,SNR=72						
SONM				PcP	**PcP**	**16 39 11.3**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=173,slow=3.2,SNR=2.9						
SONM				LR	LR	16 53 16.8	
	comp=Z,145nm,19.2s,baz=152,slow=38						
	comp=Z,15nm,0.6s						
SONM	**Songino Array**	**36.56**	**344**	P	**P**	**16 36 47.7**	**-1.3**
DANN	**Dangsing**	**37.39**	**300**	*e*P	**P**	**16 36 56.8**	**+0.4**
PYUN	**Piuthan**	**37.97**	**299**	*e*P	**P**	**16 37 02.0**	**+0.7**
	comp=Z,59nm,1.0s						
AS31	**Alice Springs**	**38.83**	**160**	P	**P**	**16 37 08.6**	**+0.3**
ASAR	**Alice Springs**	**38.83**	**160**	P	**P**	**16 37 08.8**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=341,slow=7.1,SNR=247						
	comp=Z,6.2nm,0.6s						
ASAR	**Alice Springs**	**38.83**	**160**	P	**P**	**16 37 08.5**	**+0.3**
PALK	**Pallekele**	**39.57**	**266**	LR	LR	16 51 50.9	
	comp=Z,115nm,20.0s,baz=225,slow=33						
WMQ	**Urumqi**	**41.56**	**324**	*e*P	**P**	**16 37 32.5**	**+1.8**
WMQ				LR	LR		
	comp=Z,190nm,19.5s						
WMQ				LR	LR		
	comp=Z,98nm,22.7s						
CTA	**Charters Tower**	**41.60**	**142**	P	**P**	**16 37 32.2**	**+1.1**
	comp=Z,17nm,1.2s,baz=342,slow=6.4,SNR=3.6						
	comp=Z,17nm,1.2s						
CTAO	**Charters Tower**	**41.60**	**142**	P	**P**	**16 37 30.8**	**-0.3**
CTAO				IAmb	IAmb	16 37 36.6	
	comp=Z,20nm,1.2s						
FORT	**Forrest**	**44.24**	**171**	P	**P**	**16 37 53.0**	**+0.6**
FORT				IAmb	IAmb	16 38 05.9	
	comp=Z,16nm,0.8s						
NWAO	**Narrogin (SRO)**	**45.89**	**184**	P	**P**	**16 38 07.0**	**+1.6**
MK31	**Makanchi Array**	**46.39**	**324**	P	**P**	**16 38 10.1**	**+0.8**
MK31				IAmb	IAmb	16 38 11.2	
	comp=Z,8.2nm,1.0s						
MKAR	**Makanchi Array**	**46.39**	**324**	P	**P**	**16 38 10.3**	**+1.0**
	comp=Z,3.1nm,0.4s,baz=124,slow=9.1,SNR=54						
MKAR				PcP	**PcP**	**16 39 44.4**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=128,slow=4.1,SNR=2.2						
MKAR				LR	LR	16 58 54.7	
	comp=Z,134nm,20.1s,baz=116,slow=38						
	comp=Z,3.1nm,0.4s						
MKAR	**Makanchi Array**	**46.39**	**324**	P	**P**	**16 38 10.0**	**+0.7**
MAKZ	**Makanchi**	**46.58**	**324**	P	**P**	**16 38 11.3**	**+0.5**
MAKZ				IAmb	IAmb	16 38 12.8	
	comp=Z,14nm,1.2s						
KSH	**Kashi**	**47.15**	**312**	P	**P**	**16 38 19.8**	**+4.3**
KSH				pP	pwP	16 38 34.0	+1.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KDJ	**Kajisay**	**47.32**	**316**	P	**P**	**16 38 17.6**	**+0.8**
KDJ				IAmb	IAmb	16 38 35.5	
	comp=Z,5.2nm,0.8s						
NIL	**Nilore**	**47.47**	**304**	P	**P**	**16 38 16.9**	**-1.1**
KAAM	**Kaadhehdhoo**	**48.70**	**259**	P	**P**	**16 38 28.2**	**+0.6**
STKA	**Stephens Creek**	**49.09**	**156**	P	**P**	**16 38 30.9**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=316,slow=15,SNR=4.0						
	comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**49.09**	**156**	P	**P**	**16 38 30.1**	**-0.2**
YAK	**Yakutsk**	**49.29**	**6**	P	**P**	**16 38 30.1**	**-1.2**
YAK				IAmb	IAmb	16 38 31.4	
	comp=Z,10nm,0.8s						
AAK	**Ala-Archa**	**49.35**	**316**	LR	LR	17 02 40.6	
	comp=Z,116nm,19.8s,baz=110,slow=40						
ZALV	**Zalesovo Beam**	**49.49**	**333**	LR	LR	17 00 32.2	

	comp=Z,97nm,19.6s,baz=135,slow=37						
PETK	Petropavlovsk-	49.62	29	LR	LR	17 03 14.6	
	comp=Z,40nm,18.3s,baz=223,slow=40						
PET	Petropavlovsk	50.02	29	P	P	16 38 36.5	-0.6
DRK	Karamyk	50.18	311	P	P	16 38 39.2	+0.2
DRK				IAmb	IAmb	16 38 59.0	
	comp=Z,7.0nm,0.8s						
KURK	Kurchatov	50.57	327	P	P	16 38 42.1	+0.8
CHGR	Chuyangaron	51.93	309	P	P	16 38 52.9	+1.1
KK31	Karatay Array	52.25	315	P	P	16 38 54.6	+0.5
KK31				IAmb	IAmb	16 39 11.9	
	comp=Z,6.1nm,0.9s						
KKAR	Karatay Array	52.25	315	P	P	16 38 54.5	+0.4
CAN	Canberra	55.22	152	P	P	16 39 15.1	-0.7
BRVK	Borovoye	56.22	326	P	P	16 39 22.9	+0.2
DZM	Mont Dzumac	57.03	127	P	P	16 39 29.1	+0.1
	comp=Z,4.7nm,0.6s,baz=280,slow=15,SNR=6.0						
DZM				LR	LR	17 04 07.2	
	comp=Z,64nm,19.1s,baz=224,slow=36						
	comp=Z,4.7nm,0.6s						
DZM	Mont Dzumac	57.03	127	P	P	16 39 29.1	+0.1
SHEM	Shemya Is, Ala	57.95	35	LR	LR	17 00 47.4	
	comp=Z,32nm,21.9s,baz=313,slow=32						
TIXI	Tiksi	58.72	3	P	P	16 39 37.7	-2.3
GEYT	Alibeck	60.33	306	P	P	16 39 53.2	+1.5
	comp=Z,4.5nm,0.7s,baz=142,slow=7.4,SNR=8.3						
	comp=Z,4.5nm,0.7s						
GEYT	Alibeck	60.33	306	P	P	16 39 52.2	+0.5
GEYT				IAmb	IAmb	16 40 11.9	
	comp=Z,5.5nm,0.8s						
GYA0B	ALIBECK ARRAY	60.33	306	P	P	16 39 52.7	+1.0
ABKAR	Akbulak array	61.05	319	P	P	16 39 56.6	+0.2
BILL	Bilibino	62.32	18	P	P	16 40 03.4	-1.2
AKTO	Aktyubinsk	62.54	320	LR	LR	17 09 07.6	
	comp=Z,56nm,18.1s,baz=101,slow=38						
ARU	Arti	63.77	327	P	P	16 40 13.5	-0.9
KIRV	Kirov	69.06	328	LR	LR	17 13 53.4	
	comp=Z,59nm,18.7s,baz=90,slow=38						
TNA	Tin City	70.54	25	P	P	16 40 55.8	-1.3
TNA				IAmb	IAmb	16 41 05.3	
	comp=Z,14nm,1.5s						
ANM	Nome	71.43	26	P	P	16 41 02.8	+0.2
ANM				IAmb	IAmb	16 41 23.2	
	comp=Z,11nm,1.2s						
KBZ	Khabaz	72.13	312	LR	LR	17 16 12.3	
	comp=Z,45nm,19.9s,baz=127,slow=38						
RPZ	Rata Peaks	72.92	144	LR	LR	17 14 55.0	
	comp=Z,57nm,18.0s,baz=267,slow=37						
TUWZ	Tuamarina	73.27	141	P	P	16 41 13.4	-0.5
BKZ	Black Stump Fm	73.63	138	P	P	16 41 15.1	-1.0
BKZ				IAmb	IAmb	16 41 17.0	
	comp=Z,16nm,1.0s						
KLMR	Klimovskoe	74.26	330	*e*P	P	16 41 17.3	-2.1
KLMR				AMP		16 41 19.4	
	comp=Z,17nm,1.2s						
KLMR				*e*PP	PP	16 44 01.6	-3.9
TTA	Tatalina	75.46	28	P	P	16 41 26.1	-0.3
L19K	White Mountain	76.01	29	P	P	16 41 29.6	+0.1
J20K	Nowinta River	76.27	27	P	P	16 41 30.5	-0.4
K20K	Telida	76.33	28	P	P	16 41 31.2	-0.1
K20K				IAmb	IAmb	16 41 41.9	
	comp=Z,8.4nm,1.4s						
IMAR	Indian Mountai	76.39	25	P	P	16 41 31.0	-0.5
H21K	Melozitna Rive	76.79	25	P	P	16 41 33.4	-0.4
M20K	Styx River	76.83	29	P	P	16 41 34.3	+0.1
M20K				IAmb	IAmb	16 41 34.5	
	comp=Z,18nm,1.5s						
I21K	Tanana	77.16	26	P	P	16 41 35.7	-0.1
I21K				IAmb	IAmb	16 41 36.8	
	comp=Z,5.7nm,0.9s						
PPLA	Purkeypile	77.21	28	P	P	16 41 35.7	-0.7
PPLA				IAmb	IAmb	16 42 00.0	
	comp=Z,13nm,1.4s						
CAST	Castle Rocks	77.22	27	P	P	16 41 35.8	-0.6
CAST				IAmb	IAmb	16 41 55.8	
	comp=Z,11nm,0.8s						
KDAK	Kodiak Island	77.38	33	LR	LR	17 19 54.1	
	comp=Z,19nm,18.7s,baz=58,slow=39						
BPAW	Bear Paw Mtn.	77.66	27	P	P	16 41 38.3	-0.5
BPAW				IAmb	IAmb	16 41 39.2	
	comp=Z,8.7nm,0.7s						
MLY	Manley	77.69	26	P	P	16 41 38.4	-0.5
MLY				IAmb	IAmb	16 41 39.4	
	comp=Z,5.3nm,0.6s						
KTH	Kantishna Hill	77.73	27	P	P	16 41 39.0	-0.3
TOLK	Toolik Lake Re	77.86	22	P	P	16 41 39.3	-0.5
TOLK				IAmb	IAmb	16 41 56.6	
	comp=Z,10nm,1.4s						
H23K	Yukon River	78.12	25	P	P	16 41 41.1	-0.2
H23K				IAmb	IAmb	16 41 42.2	
	comp=Z,3.8nm,0.7s						
I23K	Minto, Yukon-K	78.27	26	P	P	16 41 41.9	-0.1
NEA2	Nenana	78.45	26	P	P	16 41 42.3	-0.7
MCK	McKinley	78.60	27	P	P	16 41 41.9	-2.0
MCK				IAmb	IAmb	16 41 43.5	
	comp=Z,9.4nm,0.6s						
RND	Reindeer	78.67	27	P	P	16 41 42.9	-1.5
RND				IAmb	IAmb	16 42 02.9	
	comp=Z,8.6nm,1.0s						
MDM	Murphy Dome	78.76	26	P	P	16 41 44.0	-0.9
BZK	Bozkurt	78.78	311	P	P	16 41 45.2	-0.1
H24K	Noodor Dome	78.80	25	P	P	16 41 44.6	-0.5
WRH	Wood River Hil	78.88	26	P	P	16 41 44.7	-0.7
CCB	Clear Creek Bu	78.98	26	P	P	16 41 44.7	-1.2
KEV	Kevo	79.01	339	P	P	16 41 45.8	-0.2
SML	Sawmill	79.10	29	P	P	16 41 45.6	-1.2
SML				IAmb	IAmb	16 42 05.1	
	comp=Z,16nm,1.1s						
ILAR	Eielson Array	79.36	26	P	P	16 41 46.1	-1.9
	comp=Z,0.9nm,0.7s,baz=257,slow=3.8,SNR=7.1						
ILAR				LR	LR	17 21 32.8	
	comp=Z,29nm,18.1s,baz=338,slow=39						
	comp=Z,0.9nm,0.7s						
BRTR	Keskin Array B	79.36	308	P	P	16 41 48.6	-0.2
	comp=Z,1.4nm,0.8s,baz=100,slow=5.4,SNR=4.6						
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	79.36	308	P	P	16 41 48.3	-0.5
DHY	Denali Highway	79.38	28	P	P	16 41 47.2	-1.2
HDA	Harding Lake	79.38	26	P	P	16 41 46.4	-1.8
ARCES	ARCESS Array B	79.56	339	P	P	16 41 48.7	-0.3
	comp=Z,2.0nm,0.5s,baz=87,slow=6.5,SNR=4.5						
ARCES				LR	LR	17 20 53.0	
	comp=Z,59nm,18.6s,baz=84,slow=38						
SCM	Sheep Creek Mo	79.57	29	P	P	16 41 48.4	-0.9
SCM				IAmb	IAmb	16 42 08.4	
	comp=Z,9.7nm,0.9s						
BMAR	Burnt Mountain	79.88	23	P	P	16 41 50.8	-0.1
J25K	Salcha River,	80.02	26	P	P	16 41 49.8	-2.0
M24K	Tolsona, Glenn	80.07	28	P	P	16 41 51.3	-0.8
SPB2	Spitsbergen Ar	80.12	348	P	P	16 41 51.4	-0.6
SPB2				IAmb	IAmb	16 41 52.8	
	comp=Z,16nm,0.9s						
SPITS	Spitsbergen Ar	80.12	348	LR	LR	17 22 58.9	
	comp=Z,88nm,18.6s,baz=32,slow=40						
PAX	Paxson	80.25	28	P	P	16 41 52.9	-0.1
KLU	Klutina	80.29	29	P	P	16 41 52.8	-0.4
KLU				IAmb	IAmb	16 41 55.3	
	comp=Z,8.6nm,1.3s						
RIDG	Independent Ri	80.40	27	P	P	16 41 52.5	-1.3
RIDG				IAmb	IAmb	16 42 12.5	
	comp=Z,8.3nm,0.8s						
FIA1	FINESS Array S	80.70	331	P	P	16 41 55.2	-0.1
FIA1				IAmb	IAmb	16 42 08.5	
	comp=Z,11nm,1.2s						
FINES	FINESS Array B	80.70	331	P	P	16 41 55.4	0.0
	comp=Z,1.9nm,0.5s,baz=61,slow=5.5,SNR=21						
FINES				LR	LR	17 21 28.7	
	comp=Z,46nm,18.3s,baz=57,slow=38						
	comp=Z,1.9nm,0.5s						
FINES	FINESS Array B	80.70	331	P	P	16 41 55.5	+0.2
SCRK	Sand Creek	80.73	26	P	P	16 41 54.4	-1.2
AKASG	Malin Array Be	80.78	320	P	P	16 41 55.8	-0.2
	comp=Z,2.5nm,0.8s,baz=64,slow=5.9,SNR=11						
	comp=Z,2.5nm,0.8s						
AKASG	Malin Array Be	80.78	320	IAmb	IAmb	16 41 56.5	
	comp=Z,6.1nm,1.5s						
J26L	Joseph Creek	80.81	26	P	P	16 41 54.9	-1.1
M26K	Nabesna, AK	81.48	28	P	P	16 41 59.6	0.0
M26K				IAmb	IAmb	16 42 18.5	
	comp=Z,8.4nm,1.4s						
NACGM	Naroch	81.52	324	⇓*e*P	P	16 42 00.0	+0.2
	baz=79						
EGAK	Eagle	81.77	25	P	P	16 42 00.6	-0.3
EGAK				IAmb	IAmb	16 42 01.0	
	comp=Z,4.4nm,0.8s						
SORM	Soroca	81.79	317	⇓P	P	16 42 01.0	-0.4
L27K	Beaver Creek,	81.86	27	P	P	16 42 01.5	0.0
BCAR	Beaver Creek A	81.88	27	P	P	16 42 01.9	+0.3
TLCR		82.01	314	⇑P	P	16 42 03.3	+0.7
TPGR	Topolog	82.34	314	⇑P	P	16 42 04.5	+0.1
CFR	Carcaliu	82.48	315	⇓P	P	16 42 05.4	+0.4
CTGM	Chitina Glacie	82.57	29	P	P	16 42 04.7	-0.7
CTGM				IAmb	IAmb	16 42 25.5	
	comp=Z,8.5nm,0.8s						
I29M	Ogilvie Camp,	82.79	24	P	P	16 42 05.8	-0.5
I29M				IAmb	IAmb	16 42 26.5	
	comp=Z,10nm,1.4s						
TESR	Tescani	83.24	316	⇓P	P	16 42 09.6	+0.6
VRI	Vrincioaia	83.31	315	⇑P	P	16 42 10.9	+1.5
PLOR	Plostina	83.37	315	⇑P	P	16 42 11.2	+1.4
BIZ	Bicaz	83.51	317	⇓P	P	16 42 11.1	+0.7
KMBO	Kilima Mbogo	83.69	267	P	P	16 42 13.5	+1.3
	comp=Z,3.2nm,0.8s,baz=58,slow=8.4,SNR=7.0						
	comp=Z,3.2nm,0.8s						
INK	Inuvik	83.70	21	P	P	16 42 09.9	-0.9
	comp=Z,3.7nm,0.8s,baz=266,slow=5.4,SNR=7.8						
INK				LR	LR	17 24 16.0	
	comp=Z,37nm,18.1s,baz=217,slow=39						
	comp=Z,3.7nm,0.8s						
INK	Inuvik	83.70	21	IAmb	IAmb	16 42 10.7	
	comp=Z,5.2nm,0.8s						
MLR	Muntele Rosu	83.93	315	⇑P	P	16 42 14.1	+1.3
MLR	Muntele Rosu	83.93	315	P	P	16 42 12.7	0.0
MLR				IAmb	IAmb	16 42 14.2	
	comp=Z,10.0nm,0.8s						
BURAR	Bucovina Array	83.96	317	⇑P	P	16 42 13.9	+1.2
BURAR	Bucovina Array	83.96	317	P	P	16 42 12.7	-0.1
BUR08	Bucovina Ar. S	83.96	317	P	P	16 42 12.7	-0.1
BUR08				IAmb	IAmb	16 42 14.2	
	comp=Z,8.9nm,0.9s						
DOPR	Dopca	84.21	316	⇑P	P	16 42 14.4	+0.4
VOIR		84.56	315	⇑P	P	16 42 16.3	+0.5
A36M	Sachs Harbour	84.85	17	P	P	16 42 15.5	-1.1
A36M				IAmb	IAmb	16 42 19.4	
	comp=Z,11nm,0.9s						
ALN	Alexandroupoli	84.86	311	P	P	16 42 17.4	+0.1
ALN				IAmb	IAmb	16 42 18.0	
	comp=Z,8.3nm,0.9s						
N31M	Braeburn, Yuko	85.01	28	P	P	16 42 17.7	0.0
N31M				IAmb	IAmb	16 42 37.7	
	comp=Z,8.5nm,1.1s						
KARP	Karpathos	85.17	305	P	P	16 42 19.5	+0.4
RDO	Rodhopi	85.18	311	P	P	16 42 18.3	-0.6
RDO				IAmb	IAmb	16 42 19.5	
	comp=Z,7.5nm,0.9s						
M31M	Drury Creek, Y	85.40	27	P	P	16 42 19.4	-0.2
M31M				IAmb	IAmb	16 42 20.2	
	comp=Z,5.9nm,0.8s						
LOT	Lotru	85.43	315	⇑P	P	16 42 21.3	+1.1
KOLS	Kolonicke sedl	85.56	319	*e*P	P	16 42 23.2	+2.5
DRGR		85.81	317	⇑P	P	16 42 23.2	+1.1
EUNU	Eureka	85.93	5	P	P	16 42 21.4	-0.6
CRVS	Cervenica-Dubn	86.08	319	*e*P	P	16 42 24.2	+0.9
C36M	Paulatuk	86.42	19	P	P	16 42 23.7	-0.8
VTS	Vitosha	86.50	313	⇓P	P	16 42 25.8	+0.1
VTS	Vitosha	86.50	313	P	P	16 42 25.7	+0.1
VTS				IAmb	IAmb	16 42 27.9	
	comp=Z,8.1nm,1.2s						
MDVR	Moldovita	87.01	315	⇑P	P	16 42 28.8	+0.8
IDI	Anoyia	87.04	305	P	P	16 42 28.4	+0.1
IDI				IAmb	IAmb	16 42 36.9	
	comp=Z,12nm,1.4s						
NC405	NORSAR Array S	87.44	333	P	P	16 42 29.0	-0.6
NB2	NORSAR Subarra	87.69	333	P	P	16 42 29.5	-1.4
	comp=Z,5.0nm,1.2s,baz=72,slow=4.3						
NB2	NORSAR Subarra	87.69	333	P	P	16 42 29.5	-1.4
	baz=72,slow=4.3						
NOA	NORSAR Array B	87.69	333	P	P	16 42 29.4	-1.4
	comp=Z,0.4nm,0.5s,baz=67,slow=4.7,SNR=4.6						
NOA				LR	LR	17 24 24.9	
	comp=Z,41nm,21.5s,baz=85,slow=37						
	comp=Z,0.4nm,0.5s						
NC204	NORSAR Array S	87.80	333	P	P	16 42 30.8	-0.7
ITM	Ithomi	88.88	308	P	P	16 42 36.1	-0.8
PDG	Podgorica	89.38	313	⇑P	P	16 42 39.5	+0.3
RES	Resolute Bay	89.64	9	P	P	16 42 38.3	-1.4
	comp=Z,2.6nm,0.6s,baz=284,slow=7.2,SNR=8.9						
RES				LR	LR	17 28 15.0	
	comp=Z,26nm,18.8s,baz=46,slow=39						
	comp=Z,2.6nm,0.6s						
RES	Resolute Bay	89.64	9	P	P	16 42 38.5	-1.2
RES				IAmb	IAmb	16 42 39.5	
	comp=Z,3.3nm,0.7s						
MBAR	Mbarara	89.91	269	LR	LR	17 21 02.0	
	comp=Z,41nm,18.8s,baz=84,slow=34						
CONA	Conrad Observa	89.93	319	*e*P	P	16 42 42.5	+0.7
	comp=Z,3.6nm,1.3s						
ARSA	Arzberg	90.38	319	*e*P	P	16 42 44.4	+0.6
	comp=Z,1.5nm,0.6s						
SOKA	Soboth	90.89	318	*e*P	P	16 42 46.5	+0.2
	comp=Z,5.5nm,1.1s						
GEC2	GERESS Array S	90.96	321	P	P	16 42 46.3	-0.3
GEC2				IAmb	IAmb	16 42 48.2	
	comp=Z,3.2nm,1.0s						
GERES	GERESS Array B	90.96	321	P	P	16 42 46.6	+0.1
	comp=Z,1.3nm,0.8s,baz=64,slow=6.1,SNR=12						
	comp=Z,1.3nm,0.8s						
MOA	Molln	90.97	320	*e*P	P	16 42 47.0	+0.5
	comp=Z,8.3nm,1.1s						
OBKA	Obir	91.26	318	*e*P	P	16 42 47.4	-0.6
	comp=Z,4.6nm,1.1s						
OBKA				*e*P	pP	16 43 04.8	+1.4
	comp=Z,2.8nm,0.8s						
KBA	Koelnbreinsper	91.83	319	*e*P	P	16 42 50.2	-0.5
	comp=Z,4.6nm,1.2s						
WTTA	Wattenberg	92.84	320	*e*P	P	16 42 55.3	-0.1
	comp=Z,9.6nm,1.0s						
WTTA				*e*P	pwP	16 43 13.2	-0.5
	comp=Z,7.7nm,0.8s						
WATA	Walderalm	92.85	320	*e*P	P	16 42 55.0	-0.4
	comp=Z,2.0nm,0.5s						
SQTA	Sankt Quirin	93.12	320	*e*P	P	16 42 56.7	0.0
	comp=Z,9.0nm,0.8s						
SQTA				*e*P	pP	16 43 12.2	+0.2
	comp=Z,4.5nm,0.7s						
MOTA	Moosalm	93.14	320	*e*P	P	16 42 56.8	0.0
	comp=Z,5.4nm,1.1s						
MOTA				*e*P	pP	16 43 13.6	+1.4
	comp=Z,5.0nm,0.7s						
RETA	Reutte	93.30	320	*e*P	P	16 42 57.4	+0.1
	comp=Z,3.2nm,1.0s						
YKA	Yellowknife Ar	93.38	22	P	P	16 42 55.9	-1.4
	comp=Z,1.8nm,0.6s,baz=308,slow=4.3,SNR=26						
	comp=Z,1.8nm,0.6s						
VNDA	Vanda	93.50	172	P	P	16 42 57.0	-0.4
	comp=Z,0.9nm,0.7s,baz=333,slow=4.2,SNR=5.7						
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	93.50	172	IAmb	IAmb	16 43 14.2	
	comp=Z,3.6nm,1.4s						
FETA	Feichten	93.50	320	*e*P	P	16 42 58.3	-0.1
	comp=Z,3.6nm,0.8s						
FETA				*e*P	pP	16 43 14.1	+0.3
	comp=Z,7.1nm,1.1s						
TORD	Torodi Ar. Bea	113.98	291	PKP	PKiKP	16 48 22.1	0.0
	comp=Z,0.5nm,0.7s,baz=25,slow=2.1,SNR=3.1						
TXAR	Lajitas Array	120.02	45	PKP	PKiKP	16 48 33.6	-0.1
	baz=193,slow=1.2						

TAP 31 16:32:03.4,24°.14N×121°.67E,h12^{km},ML2.0,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ETL	Fush Village	0.05	292	*e*P	Pg	16 32 06.3	+0.5
	baz=291						
ETL				S	Sg	16 32 07.7	+0.1
	baz=291						
NACB	Ninganchiao	0.08	295	P	Pg	16 32 06.3	+0.3
	baz=295						
NACB				S	Sg	16 32 08.2	+0.2
	baz=295						
TWD	Chiawan	0.09	230	P	Pg	16 32 06.3	+0.2
	baz=228						
TWD				S	Sg	16 32 08.3	+0.1
	baz=228						
HWA	Hwalien	0.17	201	*e*P	Pb	16 32 08.2	-0.3
	baz=199						
ETLH	Xiulin Townshi	0.19	291	P	Pg	16 32 08.2	+0.5
	baz=291						
ETLH				S	Sg	16 32 11.3	+0.7
	baz=291						
ETM	Tongmen	0.24	224	P	Pg	16 32 08.8	+0.4
	baz=225						
ETM				S	Sg	16 32 12.3	+0.4
	baz=225						
TEYL	Yanliau Villag	0.28	194	*e*P	Pb	16 32 10.3	0.0
	baz=201						
ENA	Nanau	0.29	12	P	Pg	16 32 09.6	+0.2
	baz=13						
ENA				S	Sg	16 32 13.7	+0.2
	baz=13						
EWUT	Wuta	0.32	17	*e*P	Pg	16 32 10.0	+0.1
	baz=16						
EWUT				*e*S	Sg	16 32 14.4	+0.2
	baz=16						
WHF	Hehuan Shan	0.37	271	*e*P	Pg	16 32 11.5	+0.5
	baz=271						
NNSB	Datong	0.39	317	P	Pb	16 32 12.0	-0.4
	baz=317						
NNSB				*e*S	Sb	16 32 17.7	-0.7
	baz=317						
ESL	Shilin	0.39	214	*e*P	Pg	16 32 11.6	+0.3
	baz=214						
NNS	Nan Shan	0.41	317	*e*P	Pg	16 32 11.6	0.0
	baz=317						
NNS				*e*S	Sg	16 32 17.9	+0.9
	baz=317						
FUSS	Fushou	0.41	285	*e*P	Pb	16 32 12.3	-0.4
	baz=285						
FUSS				*e*S	Sb	16 32 18.8	-0.1
	baz=285						
LATG	Datong	0.42	341	*e*P	Pb	16 32 12.2	-0.5
	baz=340						
LATG				*e*S	Sb	16 32 18.5	-0.6
	baz=340						
CHGB	Renai	0.46	260	*e*P	Pb	16 32 13.5	-0.2
	baz=255						
CHGB				*e*S	Sb	16 32 19.9	-0.6
	baz=255						
TDCB	Techi	0.48	284	*e*P	Pb	16 32 14.0	0.0
	baz=284						
TDCB				*e*S	Sb	16 32 20.7	-0.3
	baz=284						
OWD	Renai	0.49	248	*e*P	Pb	16 32 13.6	-0.5
	baz=249						
OWD				*e*S	Sg	16 32 20.1	+0.4
	baz=249						
NDS	Dongshan	0.49	4	*e*P	Pb	16 32 13.6	-0.4
	baz=3.0						
NDS				*e*S	Sg	16 32 20.1	+0.4
	baz=3.0						
TWC	Suao	0.49	19	*e*P	Pb	16 32 14.0	0.0
	baz=13						
TWC				*e*S	Sb	16 32 20.5	-0.7
	baz=13						
ENTT	Nioudou	0.51	349	*e*P	Pb	16 32 13.9	-0.3
	baz=348						
ENTT				*e*S	Sg	16 32 20.8	+0.6
	baz=348						
EGFH	Guangfu	0.52	206	*e*P	Pb	16 32 14.6	+0.1
	baz=212						
EGFH				*e*S	Sb	16 32 21.7	-0.2
	baz=212						
WUSB	Renai	0.53	254	P	Pb	16 32 14.7	0.0
	baz=249						
WUSB				*e*S	Sg	16 32 21.6	+0.7
	baz=249						
TWE	Neicheng	0.58	359	*e*P	Pb	16 32 15.5	0.0
	baz=360						
TWE				*e*S	Sg	16 32 23.0	+0.6
	baz=360						
YHNB	Yeheng	0.59	333	*e*P	Pb	16 32 15.8	+0.1
	baz=333						
NSK	Sanguang	0.61	332	*e*P	Pb	16 32 16.0	0.0
	baz=331						
NSK				*e*S	Sb	16 32 24.6	+0.1
	baz=331						
VWDT	VWDT	0.62	232	*e*P	Pb	16 32 15.9	-0.2
	baz=232						
VWDT				*e*S	Sb	16 32 25.4	+0.6
	baz=232						
FUSB	Fushanzhiwuyua	0.62	353	*e*P	Pb	16 32 16.2	-0.1
	baz=352						
FUSB				*e*S	Sb	16 32 24.4	-0.6
	baz=352						
NWLT	Wulai	0.65	346	*e*P	Pb	16 32 16.8	0.0
	baz=334						
NWLT				*e*S	Sg	16 32 25.2	+0.4
	baz=334						
HGSD	Ruisui	0.68	200	*e*P	Pn	16 32 18.6	-0.3
	baz=213						
WCS	Beigang Elemen	0.70	263	*e*P	Pb	16 32 17.9	+0.4
	baz=264						
NFF	Wufeng Townshi	0.70	314	*e*P	Pb	16 32 18.1	+0.4
	baz=305						
NFF				*e*S	Sn	16 32 28.9	-1.2
	baz=305						
SSLB	Suanglung	0.75	242	Pn	Pb	16 32 18.3	0.0
SSLB	Suanglung	0.75	242	P	Pb	16 32 18.3	0.0
	baz=251						
SSLB				*e*S	Sb	16 32 28.1	-0.4
	baz=251						
SMLT	Sun Moon Lake	0.75	250	*e*P	Pb	16 32 19.1	+0.6
	baz=251						
SMLT				*e*S	Sb	16 32 29.0	+0.3
	baz=251						
LIOB	Emei	0.78	310	*e*P	Pb	16 32 19.6	+0.6
	baz=310						
NSTT	Nanjuang	0.79	309	*e*P	Pn	16 32 19.9	-0.4
	baz=309						
YULB	Yu-li	0.82	205	*e*P	Pn	16 32 20.2	-0.6
	baz=205						
TIPB	Shuangxi	0.84	9	P	Pb	16 32 20.0	+0.1
	baz=1.0						
TIPB				*e*S	Sg	16 32 30.9	+0.2
	baz=1.0						

IDC ***31*** *16:34:54.6±2.2,63°.66N×149°.83W,h98^{km}±16^{km},mb3.1/2, mbtmp3.7/5,Error ellipse: s-maj=43.0km s-min=11.6km az=119.0*

ANF ***31*** *16:34:56.7±0.2,63°.71N×149°.42W,h116^{km}±2^{km},ML3.6/71, ML3.6/70,Error ellipse: s-maj=1.6km s-min=1.4km az=157.0*

AEIC ***31*** *16:34:56±1.0,63°.71N±0°.04×149°.42W±0°.08,h118^{km}±4^{km}, ML3.2,ML3.4/166(NEIC),Error ellipse: s-maj=5.2km s-min=5.1km az=103.0*

NEIC ***31*** *16:34:56.2±0.9,63°.72N±0°.03×149°.42W±0°.08, h124^{km}±3^{km},Error ellipse: s-maj=5.3km s-min=4.7km az=122.0*

ISC 31 16:34:56.4±0.8,63°.71N±0°.03×149°.45W±0°.03, h125^{km}±5^{km},n286,σ0^{s}.71/284,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MCK	McKinley	0.23	84		Pn	16 35 13.8	+0.1
MCK					Sn	16 35 26.2	-0.6
MCK	McKinley	0.23	84	P	Pn	16 35 13.8	+0.1
	baz=263,SNR=220						
MCK				S	Sn	16 35 26.5	-0.3
	baz=263						
RND	Reindeer	0.41	139		Pn	16 35 14.2	-0.3
RND	Reindeer	0.41	139		Sn	16 35 27.4	-0.7
RND	Reindeer	0.41	139	IAML		16 35 14.5	
	comp=N,102nm,2.0s						
TRF	Thorofare Moun	0.46	236		Pn	16 35 15.0	+0.1
TRF	Thorofare Moun	0.46	236		Sn	16 35 28.8	0.0
TRF	Thorofare Moun	0.46	236	IAML		16 35 16.1	
	comp=N,181nm,0.2s						
TRF				IAML		16 35 16.2	
	comp=E,162nm,0.2s						
TRF	Thorofare Moun	0.46	236	P	Pn	16 35 15.0	+0.1
	baz=56,SNR=136						
TRF				S	Sn	16 35 28.5	-0.3
	baz=56						
KTH	Kantishna Hill	0.68	257		Pn	16 35 16.2	0.0
KTH					Sn	16 35 30.7	-0.4
KTH	Kantishna Hill	0.68	257	IAML		16 35 31.7	
	comp=E,950nm,1.1s						
BPAW	Bear Paw Mtn.	0.79	301		Pn	16 35 16.8	-0.1
BPAW					Sn	16 35 31.7	-0.8
BPAW	Bear Paw Mtn.	0.79	301	P	Pn	16 35 16.9	0.0
	baz=119,SNR=322						
BPAW				S	Sn	16 35 31.7	-0.8
	baz=119						
NEA2	Nenana	0.90	10		Pn	16 35 17.6	-0.3
NEA2					Sn	16 35 32.8	-1.4
NEA2	Nenana	0.90	10	P	Pn	16 35 17.6	-0.3

	baz=190,SNR=144						
NEA2				S	Sn	16 35 33.0	-1.2
	baz=190						
WRH	Wood River Hil	0.97	37		Pn	16 35 18.2	-0.3
WRH					Sn	16 35 34.5	-0.8
WAT1	Susitna Watana	0.97	155		Pn	16 35 18.2	-0.4
WAT1	Susitna Watana	0.97	155	P	Pn	16 35 18.2	-0.4
	baz=336						
WAT1				S	Sn	16 35 34.5	-0.9
	baz=336						
DHY	Denali Highway	1.13	123		Pn	16 35 20.2	0.0
DHY	Denali Highway	1.13	123	IAML		16 35 39.5	
	comp=E,1µm,0.6s						
DHY				IAML		16 35 40.1	
	comp=N,1µm,0.6s						
DHY	Denali Highway	1.13	123	P	Pn	16 35 20.3	0.0
	baz=305,SNR=247						
DHY				S	Sn	16 35 38.3	0.0
	baz=305						
CCB	Clear Creek Bu	1.18	37		Pn	16 35 20.4	-0.2
CCB					Sn	16 35 37.9	-1.1
CAST	Castle Rocks	1.22	257		Pn	16 35 20.9	-0.1
CAST					Sn	16 35 39.1	-0.6
CAST	Castle Rocks	1.22	257	P	Pn	16 35 20.9	-0.1
	baz=75,SNR=20						
CAST				S	Sn	16 35 39.1	-0.6
	baz=75						
CHUM	Lake Minchumin	1.28	279		Pn	16 35 21.9	+0.2
CHUM					Sn	16 35 40.6	-0.3
CHUM	Lake Minchumin	1.28	279	P	Pn	16 35 21.9	+0.2
	baz=97,SNR=111						
CHUM				S	Sn	16 35 40.5	-0.5
	baz=97						
HDA	Harding Lake	1.30	56		Pn	16 35 21.7	-0.2
HDA	Harding Lake	1.30	56	IAML		16 35 40.9	
	comp=E,580nm,0.6s						
HDA				IAML		16 35 41.5	
	comp=N,857nm,0.7s						
HDA	Harding Lake	1.30	56	P	Pn	16 35 21.7	-0.2
	baz=238,SNR=222						
HDA				S	Sn	16 35 40.2	-1.1
	baz=238						
HDA				S	Sn	16 35 40.2	-1.1
	baz=238						
TCOL	CIGO, UAF Yank	1.36	30		Pn	16 35 22.5	+0.1
TCOL					Sn	16 35 41.6	-0.7
TCOL	CIGO, UAF Yank	1.36	30	IAML		16 35 42.1	
	comp=E,936nm,0.7s						
TCOL				IAML		16 35 47.5	
	comp=N,993nm,0.5s						
TCOL	CIGO, UAF Yank	1.36	30	P	Pn	16 35 22.5	+0.1
	baz=211,SNR=15						
TCOL				S	Sn	16 35 41.3	-1.0
	baz=211						
COLA	College	1.36	30		Pn	16 35 22.4	0.0
COLA	College	1.36	30	IAML		16 35 42.1	
	comp=N,1µm,0.6s						
COLA				IAML		16 35 47.8	
	comp=N,1µm,0.5s						
COLA	College	1.36	30	P	Pn	16 35 22.5	0.0
	baz=211						
COLA				S	Sn	16 35 41.4	-1.0
	baz=211						
MDM	Murphy Dome	1.36	22		Pn	16 35 22.6	+0.1
MDM	Murphy Dome	1.36	22	IAML		16 35 42.3	
	comp=E,293nm,1.0s						
CUT	Chulitna	1.36	196		Pn	16 35 22.7	+0.1
CUT	Chulitna	1.36	196	P	Pn	16 35 22.6	+0.1
	baz=16,SNR=10.0						
CUT				S	Sn	16 35 42.3	-0.2
	baz=16						
WAT6	Susitna Watana	1.37	145		Pn	16 35 22.7	-0.1
WAT6	Susitna Watana	1.37	145	P	Pn	16 35 22.8	-0.1
	baz=327,SNR=61						
PS08	TAPS Pump Stn8	1.42	53		Pn	16 35 23.0	-0.2
MLY	Manley	1.44	338		Pn	16 35 23.4	-0.1
MLY	Manley	1.44	338	P	Pn	16 35 23.4	-0.1
	baz=156,SNR=77						
MLY				S	Sn	16 35 43.1	-1.0
	baz=156						
I23K	Minto, Yukon-K	1.44	1		Pn	16 35 23.6	+0.2
I23K	Minto, Yukon-K	1.44	1	P	Pn	16 35 23.6	+0.2
	baz=181,SNR=71						
I23K				S	Sn	16 35 43.2	-0.8
	baz=181						
PPLA	Purkeypile	1.48	238		Pn	16 35 24.2	+0.2
PPLA	Purkeypile	1.48	238	P	Pn	16 35 24.3	+0.2
	baz=56,SNR=83						
PPLA				S	Sn	16 35 45.4	+0.3
	baz=56						
IL31		1.54	45		Pn	16 35 24.2	-0.3
ILAR	Eielson Array	1.54	45	P	Pn	16 35 24.2	-0.3
	comp=E,43nm,0.3s,baz=228,slow=12,SNR=522						
ILAR				S	Sn	16 35 45.1	-1.0
	comp=E,43nm,0.7s,baz=216,slow=20,SNR=15						
ILAR				LR	LR	16 36 09.6	
	comp=E,57nm,19.1s,baz=44,slow=44						
ILAR	Eielson Array	1.54	45		Pn	16 35 24.1	-0.5
K24K	Donnelly Dome	1.63	85		Pn	16 35 25.7	+0.1
K24K	Donnelly Dome	1.63	85	P	Pn	16 35 25.8	+0.1
	baz=268,SNR=60						
POKR	Poker Plat Res	1.66	31		Pn	16 35 26.0	0.0
POKR	Poker Plat Res	1.66	31	P	Pn	16 35 26.0	0.0
	baz=212,SNR=9.9						
POKR				S	Sn	16 35 47.4	-1.1
	baz=212						
PS10	TAPS Pump St10	1.67	98		Pn	16 35 26.9	+0.8
PS07	TAPS Pump Stn7	1.68	17		Pn	16 35 26.4	+0.2
I21K	Tanana	1.84	324		Pn	16 35 28.1	+0.1
I21K	Tanana	1.84	324	P	Pn	16 35 28.1	+0.1
	baz=142,SNR=44						
I21K				S	Sn	16 35 51.6	-0.7
	baz=142						
PAX	Paxson	1.94	111		Pn	16 35 29.3	-0.1
PAX	Paxson	1.94	111	P	Pn	16 35 29.2	-0.2
	baz=294,SNR=146						
GHO	Glory Hole Cre	1.96	173		Pn	16 35 29.7	0.0
GHO	Glory Hole Cre	1.96	173	IAML		16 36 01.1	
	comp=N,546nm,0.5s						
GHO				IAML		16 36 02.9	
	comp=E,547nm,0.4s						
SML	Sawmill	1.98	164		Pn	16 35 29.6	-0.3
SML	Sawmill	1.98	164	IAML		16 36 02.3	
	comp=N,577nm,0.4s						
SML				IAML		16 36 02.8	
	comp=E,391nm,0.6s						
SML	Sawmill	1.98	164	P	Pn	16 35 29.6	-0.3
	baz=346,SNR=33						
SML				S	Sn	16 35 54.8	-0.6
	baz=346						
M22K	Willow	1.99	189		Pn	16 35 29.5	-0.4
M22K	Willow	1.99	189	P	Pn	16 35 29.8	0.0
	baz=9.0,SNR=15						
M22K				S	Sn	16 35 55.4	-0.1
	baz=9.0						
J25K	Salcha River,	2.00	61		Pn	16 35 29.9	-0.2
J25K	Salcha River,	2.00	61	IAML		16 35 56.2	
	comp=N,251nm,0.5s						
J25K				IAML		16 35 59.4	
	comp=E,273nm,0.5s						
J25K	Salcha River,	2.00	61	P	Pn	16 35 29.9	-0.2
	baz=245,SNR=61						
J25K				S	Sn	16 35 54.4	-1.6
	baz=245						
RIDG	Independent Ri	2.05	87		Pn	16 35 30.6	-0.1
RIDG	Independent Ri	2.05	87	IAML		16 35 59.9	
	comp=N,417nm,0.8s						
RIDG	Independent Ri	2.05	87	P	Pn	16 35 30.6	-0.1
	baz=271,SNR=256						
RIDG				S	Sn	16 35 55.8	-1.2
	baz=271						
M23K	Glacier View	2.08	157		Pn	16 35 30.9	-0.2
M23K	Glacier View	2.08	157	P	Pn	16 35 30.7	-0.4
	baz=339,SNR=47						
K20K	Telida	2.10	262		Pn	16 35 31.3	0.0
K20K	Telida	2.10	262	P	Pn	16 35 31.3	0.0
	baz=78,SNR=38						
SCM	Sheep Creek Mo	2.12	152		Pn	16 35 31.5	-0.1
SCM	Sheep Creek Mo	2.12	152	IAML		16 36 04.3	
	comp=E,514nm,0.7s						
SCM	Sheep Creek Mo	2.12	152	P	Pn	16 35 31.2	-0.5
	baz=334,SNR=26						
H23K	Yukon River	2.12	359		Pn	16 35 31.8	+0.2
H23K	Yukon River	2.12	359	P	Pn	16 35 31.8	+0.2
	baz=178,SNR=53						
H23K				S	Sn	16 35 57.7	-0.9
	baz=178						
J20K	Nowinta River	2.13	285		Pn	16 35 31.6	0.0
J20K	Nowinta River	2.13	285	P	Pn	16 35 31.6	0.0
	baz=101,SNR=141						
PMR	Palmer	2.13	176		Pn	16 35 31.2	-0.5
PMR				IAML		16 36 05.0	
	comp=E,467nm,0.5s						
PMR				IAML		16 36 05.4	
	comp=N,277nm,0.4s						
PMR	Palmer	2.13	176	P	Pn	16 35 31.3	-0.4
	baz=356,SNR=46						
PS06	TAPS Pump Stn6	2.16	357		Pn	16 35 32.2	+0.2
M24K	Tolsona, Glenn	2.20	136		Pn	16 35 32.6	+0.1
M24K	Tolsona, Glenn	2.20	136	IAML		16 36 09.0	
	comp=E,442nm,0.4s						
M24K	Tolsona, Glenn	2.20	136	P	Pn	16 35 32.5	-0.1
	baz=319,SNR=36						
H24K	Noodor Dome	2.24	17		Pn	16 35 33.2	+0.2
H24K	Noodor Dome	2.24	17	IAML		16 36 00.8	
	comp=N,117nm,0.9s						
H24K				IAML		16 36 01.8	
	comp=E,116nm,1.1s						
H24K	Noodor Dome	2.24	17	P	Pn	16 35 33.2	+0.2
	baz=198,SNR=91						
KNK	Knik Glacier	2.35	168		Pn	16 35 34.4	-0.1
KNK	Knik Glacier	2.35	168	P	Pn	16 35 34.2	-0.3
	baz=350,SNR=90						
HARP	HAARP	2.36	122		Pn	16 35 34.3	-0.2
HARP	HAARP	2.36	122	P	Pn	16 35 34.2	-0.3
	baz=306,SNR=66						
L20K	Farewell, AK	2.37	240		Pn	16 35 34.7	+0.1
L20K	Farewell, AK	2.37	240	P	Pn	16 35 34.9	+0.2
	baz=57,SNR=71						
DOT	Dot Lake	2.40	89		Pn	16 35 34.6	-0.4
H21K	Melozitna Rive	2.43	325		Pn	16 35 35.2	-0.1
H21K	Melozitna Rive	2.43	325	P	Pn	16 35 35.2	-0.1
	baz=142,SNR=30						
SCRK	Sand Creek	2.43	81		Pn	16 35 35.2	-0.4
SCRK	Sand Creek	2.43	81	IAML		16 36 06.9	
	comp=E,226nm,0.6s						
SCRK				IAML		16 36 07.0	
	comp=N,282nm,0.9s						
SCRK	Sand Creek	2.43	81	P	Pn	16 35 35.2	-0.4
	baz=266,SNR=187						
PS11	TAPS Pump St11	2.45	130		Pn	16 35 35.6	0.0
STLK	Strandline Lak	2.48	207		Pn	16 35 35.9	-0.2
M20K	Styx River	2.50	224		Pn	16 35 35.9	-0.4
M20K	Styx River	2.50	224	IAML		16 36 12.9	
	comp=E,137nm,0.5s						
M20K				IAML		16 36 14.8	
	comp=N,117nm,0.5s						
M20K	Styx River	2.50	224	P	Pn	16 35 36.0	-0.3
	baz=41,SNR=48						
RC01	Rabbit Creek A	2.63	183		Pn	16 35 37.4	-0.7
RC01	Rabbit Creek A	2.63	183	P	Pn	16 35 37.8	-0.2
	baz=3.1,SNR=48						
MENT	Mentasta	2.70	104		Pn	16 35 38.8	-0.1
MENT	Mentasta	2.70	104	IAML		16 36 16.4	
	comp=N,143nm,0.6s						
MENT				IAML		16 36 25.4	
	comp=E,176nm,0.5s						
J26L	Joseph Creek	2.70	70		Pn	16 35 39.0	0.0
J26L	Joseph Creek	2.70	70	IAML		16 36 13.6	
	comp=N,188nm,0.5s						
J26L	Joseph Creek	2.70	70	P	Pn	16 35 39.0	0.0
	baz=255,SNR=155						
SPCG	Spurr Capps Gl	2.71	207		Pn	16 35 39.1	0.0
KLU	Klutina	2.76	142		Pn	16 35 39.0	-0.7
KLU	Klutina	2.76	142	IAML		16 36 21.6	
	comp=N,204nm,0.4s						
KLU				IAML		16 36 23.5	
	comp=E,194nm,0.6s						
KLU	Klutina	2.76	142	P	Pn	16 35 39.0	-0.7
	baz=326,SNR=10						
CKN	Chakachatna No	2.80	208		Pn	16 35 41.1	+0.8
SPBG	Spurr Blockage	2.81	210		Pn	16 35 41.5	+1.2
SPU	Mount Spurr	2.81	207		Pn	16 35 40.1	-0.3
L26K	Log Cabin Wild	2.83	101		Pn	16 35 39.1	-1.5
L26K				IAML		16 36 21.3	
	comp=N,188nm,0.3s						
L26K				IAML		16 36 27.8	
	comp=E,169nm,0.3s						
CKL	Chakachamna La	2.86	209		Pn	16 35 41.7	+0.7
M19K	Big River Lodg	2.91	234		Pn	16 35 41.4	-0.1
M19K	Big River Lodg	2.91	234	IAML		16 36 16.8	
	comp=E,60nm,0.9s						
M19K				IAML		16 36 17.2	
	comp=N,78nm,0.7s						
M19K	Big River Lodg	2.91	234	P	Pn	16 35 41.3	-0.3
	baz=49						
L19K	White Mountain	2.91	241		Pn	16 35 41.5	-0.1
L19K	White Mountain	2.91	241	IAML		16 36 23.0	
	comp=N,57nm,0.8s						
L19K	White Mountain	2.91	241	P	Pn	16 35 41.5	-0.1
	baz=56,SNR=34						
IM03		2.93	323		Pn	16 35 41.7	-0.1
IMAR	Indian Mountai	2.93	323	Pn	Pn	16 35 41.2	-0.6
JPK	Jack Peak	2.98	152		Pn	16 35 41.6	-0.9
GLI	Glacier Island	3.05	158		Pn	16 35 42.5	-0.9
GLI	Glacier Island	3.05	158	P	Pn	16 35 42.4	-1.0
	baz=340,SNR=6.4						
CAPN	Captain Cook N	3.06	196		Pn	16 35 45.6	+2.1
CAPN	Captain Cook N	3.06	196	P	Pn	16 35 45.8	+2.3
	baz=15,SNR=7.3						
TTA	Tatalina	3.06	258		Pn	16 35 43.4	-0.3
TTA	Tatalina	3.06	258	P	Pn	16 35 43.4	-0.3
	baz=72,SNR=27						
TT01	Tatalina	3.08	258		Pn	16 35 43.5	-0.2
N25K	Chitina, Valde	3.08	131		Pn	16 35 42.9	-0.9
N25K				IAML		16 36 21.9	
	comp=E,78nm,0.6s						
N25K				IAML		16 36 22.6	
	comp=N,127nm,0.7s						
N25K	Chitina, Valde	3.08	131	P	Pn	16 35 42.9	-0.9
	baz=316						
DIV	Divide	3.10	145		Pn	16 35 42.8	-1.4
M26K	Nabesna, AK	3.22	111		Pn	16 35 45.4	-0.3
M26K	Nabesna, AK	3.22	111	IAML		16 36 43.2	
	comp=E,86nm,0.4s						
M26K				IAML		16 36 43.8	
	comp=N,126nm,0.5s						
M26K	Nabesna, AK	3.22	111	P	Pn	16 35 45.2	-0.4
	baz=297,SNR=12						
SLKM	Skilak Lake	3.23	187		Pn	16 35 46.0	+0.1
O22K	Cooper Landing	3.24	182		Pn	16 35 46.0	+0.1
O22K	Cooper Landing	3.24	182	P	Pn	16 35 46.2	+0.3
	baz=2.4						
K27K	Chicken	3.28	81		Pn	16 35 45.9	-0.5
K27K	Chicken	3.28	81	IAML		16 36 26.9	
	comp=N,139nm,1.0s						
K27K				IAML		16 36 27.7	
	comp=E,93nm,0.6s						
K27K	Chicken	3.28	81	P	Pn	16 35 45.6	-0.8
	baz=268						
FID	Port Fidalgo	3.28	154		Pn	16 35 45.7	-0.7
GCSA	Galena City Sc	3.41	291		Pn	16 35 48.1	+0.1
GCSA	Galena City Sc	3.41	291	P	Pn	16 35 47.9	-0.1
	baz=104						
GLB	Gilahina Butte	3.46	129		Pn	16 35 48.5	-0.3
GLB	Gilahina Butte	3.46	129	IAML		16 36 30.9	
	comp=E,60nm,0.4s						
GLB				IAML		16 36 31.0	
	comp=N,68nm,0.4s						
DFR	Drift River	3.48	207		Pn	16 35 49.8	+0.7
L27K	Beaver Creek,	3.49	97		Pn	16 35 48.4	-0.8
L27K	Beaver Creek,	3.49	97	IAML		16 36 31.6	
	comp=N,46nm,0.7s						
L27K	Beaver Creek,	3.49	97	P	Pn	16 35 48.5	-0.8
	baz=284,SNR=68						
RDJH	Redoubt Jeurge	3.50	208		Pn	16 35 50.6	+1.1
BC03		3.51	97		Pn	16 35 48.7	-0.7
BCAR	Beaver Creek A	3.51	97	Pn	Pn	16 35 48.4	-1.0
COLD	Coldfoot	3.55	355		Pn	16 35 50.0	+0.2
COLD	Coldfoot	3.55	355	P	Pn	16 35 49.6	-0.3
	baz=174,SNR=13						
NCT	North Crescent	3.56	209		Pn	16 35 50.9	+0.7
BMRM	Bremner River	3.56	138		Pn	16 35 49.1	-1.1
BMRM	Bremner River	3.56	138	P	Pn	16 35 49.1	-1.1
	baz=323,SNR=10.0						
HIN	Hinchinbrook I	3.60	156		Pn	16 35 49.8	-0.9
RDWB	Redoubt West	3.61	208		Pn	16 35 51.4	+0.5
RSO	Redoubt South	3.61	207		Pn	16 35 51.2	+0.2
EYAK	Cordova Ski Ar	3.62	150		Pn	16 35 50.5	-0.3
EYAK	Cordova Ski Ar	3.62	150	P	Pn	16 35 50.1	-0.7
	baz=333,SNR=5.6						
SEW	Seward	3.62	180		Pn	16 35 51.2	+0.4
SEW	Seward	3.62	180	P	Pn	16 35 50.5	-0.4
	baz=0.2						
RED	Redoubt Volcan	3.66	207		Pn	16 35 52.0	+0.5
M27K	Edge Creek, AK	3.71	108		Pn	16 35 52.1	0.0
M27K	Edge Creek, AK	3.71	108	IAML		16 36 59.3	
	comp=N,40nm,1.1s						
M27K	Edge Creek, AK	3.71	108	P	Pn	16 35 52.0	-0.1
	baz=295,SNR=11						
VRDI	Verde Repeater	3.73	129		Pn	16 35 52.0	-0.6
VRDI	Verde Repeater	3.73	129	IAML		16 36 37.3	
	comp=N,42nm,0.6s						
VRDI				IAML		16 37 04.4	
	comp=E,30nm,1.0s						
N19K	Bonanza Creek	3.74	221		Pn	16 35 52.9	+0.3
N19K	Bonanza Creek	3.74	221	IAML		16 36 56.0	
	comp=E,31nm,0.5s						
N19K				IAML		16 36 58.0	
	comp=N,40nm,1.1s						
N19K	Bonanza Creek	3.74	221	P	Pn	16 35 52.7	+0.1
	baz=37,SNR=7.9						
EGAK	Eagle	3.77	70		Pn	16 35 52.7	-0.2
EGAK	Eagle	3.77	70	IAML		16 36 37.0	
	comp=N,96nm,0.8s						
EGAK	Eagle	3.77	70	P	Pn	16 35 52.5	-0.4
	baz=257,SNR=29						
MCARA	McCarthy VSAT	3.78	125		Pn	16 35 53.6	+0.6
MCARA	McCarthy VSAT	3.78	125	IAML		16 37 01.6	
	comp=E,82nm,0.7s						
MCARA				IAML		16 37 12.8	
	comp=N,86nm,0.8s						
MCARA	McCarthy VSAT	3.78	125	P	Pn	16 35 53.4	+0.3
	baz=311						
SVW2	Sparrevohn	3.88	230		Pn	16 35 53.9	-0.4
SVW2				IAML		16 37 05.5	
	comp=N,33nm,0.5s						
O20K	Slope Mountain	3.94	204		Pn	16 35 55.8	+0.6
O20K	Slope Mountain	3.94	204	P	Pn	16 35 55.4	+0.1
	baz=21						
BRLK	Bradley Lake	4.02	190	Pn	Pn	16 35 56.2	0.0
BRSE	Bradley Lake S	4.03	189		Pn	16 35 56.3	-0.1
BRSE	Bradley Lake S	4.03	189	P	Pn	16 35 56.2	-0.1
	baz=8.4,SNR=5.8						
PTPK	Patty Peak	4.11	125		Pn	16 35 57.5	-0.1
BVCY	Beaver Creek	4.12	105		Pn	16 35 57.0	-0.5
BVCY	Beaver Creek	4.12	105	P	Pn	16 35 56.9	-0.7
	baz=292						
HMT	Hamilton	4.17	142	Pn	Pn	16 35 57.4	-0.9
HOM	Homer	4.20	195		Pn	16 35 58.6	0.0
HOM	Homer	4.20	195	P	Pn	16 35 58.5	0.0
	baz=14						
BM03	Burnt Mountain	4.23	26		Pn	16 35 58.9	-0.2
BMAR	Burnt Mountain	4.25	26	Pn	Pn	16 35 58.8	-0.4
BALM	Baldy	4.26	126		Pn	16 35 58.8	-0.7
N18K	Kilae Creek	4.28	228		Pn	16 35 59.5	-0.2
N18K	Kilae Creek	4.28	228	IAML		16 37 12.0	
	comp=N,22nm,0.8s						
N18K	Kilae Creek	4.28	228	P	Pn	16 35 59.5	-0.2
	baz=42,SNR=7.0						
CNPM	China Poot	4.29	192		Pn	16 35 59.5	-0.2
TGL	Tana Glacier	4.29	131		Pn	16 35 58.6	-1.2
TGL	Tana Glacier	4.29	131	IAML		16 36 48.4	
	comp=E,57nm,0.5s						
TGL				IAML		16 37 12.1	
	comp=N,62nm,0.6s						
NICHA	Nichawak Mount	4.34	141		Pn	16 35 60.0	-0.5
KHIT	Khitrov Hills	4.39	136		Pn	16 36 00.5	-0.6
YUK2	White River	4.40	112		Pn	16 36 01.6	+0.2
DAWY	Dawson	4.46	81		Pn	16 36 01.2	-0.9
DAWY				IAML		16 37 08.6	
	comp=N,43nm,0.9s						
DAWY				IAML		16 37 10.4	
	comp=E,34nm,0.8s						
DAWY	Dawson	4.46	81	P	Pn	16 36 01.4	-0.6
	baz=270,SNR=13						
BARN	Barnard Glacie	4.49	123		Pn	16 36 02.6	-0.1
BARN				IAML		16 37 25.8	
	comp=N,24nm,0.8s						
BARN				IAML		16 37 37.6	
	comp=E,18nm,1.2s						
WAX	Waxell Ridge	4.51	134		Pn	16 36 01.9	-0.9
SUCK	Suckling Hills	4.53	141	Pn	Pn	16 36 02.5	-0.6
ISLE	Juniper Island	4.56	130	Pn	Pn	16 36 02.0	-1.5
ISLE				IAML		16 37 16.2	
	comp=E,44nm,0.9s						
ISLE				IAML		16 37 22.2	
	comp=N,42nm,0.8s						
YUK3	Moose Creek	4.57	111		Pn	16 36 03.6	0.0
YUK3	Moose Creek	4.57	111	P	Pn	16 36 03.3	-0.3
	baz=299						
BGLC	Bering Glacier	4.63	138	P	Pn	16 36 04.8	+0.5
	baz=324						
CTGM	Chitina Glacie	4.68	122	Pn	Pn	16 36 04.4	-0.7
CTGM				IAML		16 37 44.5	
	comp=N,18nm,1.5s						
GRNC	Granite Creek	4.68	126	Pn	Pn	16 36 03.7	-1.5
GRNC				IAML		16 37 24.6	
	comp=E,25nm,0.3s						
GRNC				IAML		16 37 24.8	
	comp=N,31nm,0.5s						
SNH	Sunshine Point	4.72	136		Pn	16 36 05.0	-0.6
SNH	Sunshine Point	4.72	136	IAML		16 37 00.3	
	comp=E,59nm,1.6s						
O18K	Koktuh Hills	4.74	218		Pn	16 36 05.8	0.0
O18K	Koktuh Hills	4.74	218	IAML		16 37 03.7	
	comp=N,20nm,1.0s						
O18K				IAML		16 37 38.4	
	comp=E,18nm,2.1s						
O18K	Koktuh Hills	4.74	218	P	Pn	16 36 05.9	+0.1
	baz=33						
AU22	Augustine Moun	4.74	205		Pn	16 36 06.0	+0.3
LOGN	Logan Glacier	4.89	122	Pn	Pn	16 36 07.2	-0.8
LOGN				IAML		16 37 37.3	
	comp=N,14nm,1.3s						
LOGN				IAML		16 37 46.1	
	comp=E,15nm,0.9s						
YAH	Yahtse	4.94	129		Pn	16 36 08.0	-0.7
YAH	Yahtse	4.94	129	IAML		16 37 34.0	
	comp=N,36nm,0.8s						
YAH				IAML		16 37 38.2	
	comp=E,25nm,0.8s						
TOLK	Toolik Lake Re	4.95	359		Pn	16 36 08.3	-0.3
TOLK				IAML		16 37 35.7	
	comp=N,14nm,1.1s						
TOLK	Toolik Lake Re	4.95	359	P	Pn	16 36 09.5	+0.9
	baz=179,SNR=9.3						
MESA	MESA	5.01	132	Pn	Pn	16 36 08.7	-0.9
MESA				IAML		16 37 07.3	
	comp=E,46nm,0.6s						
MESA	MESA	5.01	132	P	Pn	16 36 08.7	-0.9
	baz=318						
I29M	Ogilvie Camp,	5.08	66		Pn	16 36 09.3	-1.1
I29M				IAML		16 37 08.2	
	comp=E,27nm,1.2s						
I29M				IAML		16 37 41.8	
	comp=N,24nm,0.7s						
I29M	Ogilvie Camp,	5.08	66	P	Pn	16 36 10.0	-0.4
	baz=256						
TABL	Table Mountain	5.10	126		Pn	16 36 09.7	-1.1
TABL				IAML		16 37 56.9	
	comp=E,20nm,1.3s						
TABL				IAML		16 38 22.1	
	comp=N,18nm,2.6s						
YUK8	Steele Glacier	5.11	114	P	Pn	16 36 10.7	-0.2
	baz=303						
P18K	Big Mountain,	5.14	215		Pn	16 36 11.0	-0.2
P18K				IAML		16 38 12.1	
	comp=E,17nm,3.6s						
P18K				IAML		16 38 19.3	
	comp=N,19nm,2.6s						
P18K	Big Mountain,	5.14	215	P	Pn	16 36 11.5	+0.3
	baz=30						
Q19K	Cape Douglas,	5.21	205	Pn	Pn	16 36 11.8	-0.3
Q19K	Cape Douglas,	5.21	205	P	Pn	16 36 11.4	-0.7
	baz=21						
Q20K	Shuyak Island	5.31	197	P	Pn	16 36 12.9	-0.5
	baz=14						
YUK4	Talbot Arm	5.53	111	P	Pn	16 36 15.5	-1.1
	baz=299						
PCA	Pinnacle	5.66	126	Pn	Pn	16 36 15.9	-2.3
PINM	Pinnacle	5.66	126	P	Pn	16 36 17.4	-0.8
	baz=314						
M30M	Minto, Yukon	5.85	96		Pn	16 36 19.8	-0.9
M30M	Minto, Yukon	5.85	96	P	Pn	16 36 20.0	-0.7
	baz=287						
YUK6	Outpost Mounta	5.86	113	P	Pn	16 36 20.8	-0.3

	baz=303						
BCPM	Bancas Point	5.98	125		Pn	16 36 21.8	-0.7
N30M	Aishikik Lake	6.14	106		Pn	16 36 24.5	-0.1
N30M	Aishikik Lake	6.14	106	P	Pn	16 36 24.1	-0.6
	baz=297						
KDAK	Kodiak Island	6.14	196	P	Pn	16 36 22.4	-2.3
	comp=N,4.7nm,0.3s,baz=52,slow=9.6,SNR=28						
KDAK				S	Sn	16 37 28.5	-5.1
	comp=N,12nm,0.3s,baz=104,slow=23,SNR=10						
KDAK	Kodiak Island	6.14	196	Pn	Pn	16 36 23.3	-1.3
KDAK	Kodiak Island	6.14	196	P	Pn	16 36 25.1	+0.5
	baz=13						
PNL	Peninsula	6.26	126		Pn	16 36 25.9	-0.5
PNL	Peninsula	6.26	126	P	Pn	16 36 25.8	-0.5
	baz=315						
HYT	Haines Junctio	6.28	112	P	Pn	16 36 26.4	-0.2
	baz=303						
N31M	Braeburn, Yuko	6.69	103	Pn	Pn	16 36 31.9	-0.1
N31M	Braeburn, Yuko	6.69	103	P	Pn	16 36 32.4	+0.3
	baz=295						
O30N	Mendenhall	6.90	109	P	Pn	16 36 35.0	+0.1
	baz=301						
ANM	Nome	7.02	284	Pn	Pn	16 36 36.6	+0.2
ANM	Nome	7.02	284	P	Pn	16 36 36.8	+0.4
	baz=90						
M31M	Drury Creek, Y	7.03	96	Pn	Pn	16 36 36.4	-0.2
M31M	Drury Creek, Y	7.03	96	P	Pn	16 36 36.2	-0.4
	baz=289						
FARO	Faro, Yukon	7.48	94	P	Pn	16 36 44.3	+1.6
	baz=288						
INK	Inuvik	7.94	48	P	Pn	16 36 49.4	+0.6
	comp=N,18nm,0.7s,baz=232,slow=16,SNR=42						
INK	Inuvik	7.94	48	Pn	Pn	16 36 48.5	-0.3
INK	Inuvik	7.94	48	P	Pn	16 36 49.1	+0.3
	baz=242,SNR=16						
TNA	Tin City	8.14	291	P	Pn	16 36 51.6	+0.1
	baz=95						
P33M	Teslin, Yukon	8.57	107	P	Pn	16 36 57.6	+0.1
	baz=301						
C36M	Paulatuk	11.51	50	Pn	Pn	16 37 35.8	-0.8
C36M	Paulatuk	11.51	50	P	Pn	16 37 35.9	-0.8
	baz=253						
YKA	Yellowknife Ar	15.70	79	P	P	16 38 32.4	+0.8
	comp=N,0.3nm,0.4s,baz=291,slow=12,SNR=6.3						
RES	Resolute Bay	21.28	37	P	P	16 39 33.6	+1.3
	comp=N,1.8nm,0.6s,baz=251,slow=11,SNR=7.1						
	comp=N,1.8nm,0.6s						
RES	Resolute Bay	21.28	37	P	P	16 39 32.2	-0.1
EUNU	Eureka	23.53	23	P	P	16 39 53.5	-1.2
NVAR	Mina Array Bea	31.40	129	P	P	16 41 07.4	+2.0
	comp=N,0.2nm,0.6s,baz=307,slow=6.6,SNR=2.8						
	comp=N,0.2nm,0.6s						

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*NEIC **31** 16:37:43.1±2.6, 3°.2N±0°.1×122°.5E±0°.2, h519^{km}±13^{km}, mb4.2/13, Error ellipse: s-maj=25.4km s-min=17.0km az=47.0*

*IDC **31** 16:37:44.5±2.1, 3°.20N×122°.71E, h551^{km}±26^{km}, mb3.0/4, mbtmp4.1/6, Error ellipse: s-maj=37.4km s-min=14.3km az=61.0*

ISC 31 16:37:44.1±0.8, 3°.2N±0°.1×122°.6E±0°.1, h552^{km}, n27, σ1^{s}.07/30, mb4.2/9, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	2.71	221	P	P	16 38 54.8	-2.8
MYLDM	Lahad Datu	4.50	296	P	P	16 39 09.4	-0.6
BKB	Balikpapan	7.17	232	P	P	16 39 33.4	-0.4
KAPI	Kappang	8.60	199	P	P	16 39 47.8	-0.2
SIJI	Sorong	9.60	115	P	P	16 39 57.4	-0.8
	2.0nm,0.5s,baz=276,slow=7.5,SNR=4.8						
FAKI	Fak Fak	11.43	122	P	P	16 40 16.2	-0.7
KSM	Kuching	12.35	262	P	P	16 40 24.0	-2.4
SOEI	Soe	12.96	172	P	P	16 40 32.4	-0.4
JAGI	Jajag, Banyuwa	14.28	216	P	P	16 40 46.1	-0.2
LEM	Lembang	17.91	236	P	P	16 41 23.3	+1.9
	13nm,0.4s,baz=89,slow=17,SNR=3.8						
MTN	Manton Dam	18.06	152	P	P	16 41 22.8	+0.2
MTN				IAmb	IAmb	16 41 46.2	
	comp=Z,11nm,1.2s						
MYKOM	Kota Tinggi	18.73	266	P	P	16 41 29.3	+0.6
MYKOM				IAmb	IAmb	16 41 31.2	
	comp=Z,5.5nm,0.8s						
KNRA	Kununurra	19.72	162	P	P	16 41 37.4	-0.3
WB0	Warramunga Arr	25.60	153	P	P	16 42 29.0	-1.3
WRAB	Tennant Creek	25.73	154	P	P	16 42 30.4	-0.9
WRAB				IAmb	IAmb	16 42 30.4	
	comp=Z,8.7nm,1.3s						
WRA	Warramunga Arr	25.73	154	P	P	16 42 30.4	-0.9
	comp=Z,2.9nm,0.5s,baz=333,slow=9.8,SNR=54						
WRA				PcP	PcP	16 45 43.1	+0.4
	comp=Z,0.2nm,0.5s,baz=346,slow=2.1,SNR=1.5						
	comp=Z,2.9nm,0.5s						
WRA	Warramunga Arr	25.73	154	IAmb	IAmb	16 42 32.2	
	comp=Z,0.3nm,1.4s						
WB2	Warramunga Arr	25.74	154	P	P	16 42 30.4	-1.1
WB2				IAmb	IAmb	16 42 31.1	
	comp=Z,4.5nm,0.6s						
WR0	Warramunga Arr	25.84	153	P	P	16 42 31.2	-1.1
WR0				IAmb	IAmb	16 42 50.2	
	comp=Z,8.8nm,1.4s						
AS31	Alice Springs	28.89	158	P	P	16 42 58.6	-0.4
ASAR	Alice Springs	28.89	158	P	P	16 42 58.9	-0.1
	comp=Z,1.2nm,0.5s,baz=348,slow=14,SNR=37						
ASAR				PcP	PcP	16 45 51.1	+0.5
	comp=Z,0.2nm,0.5s,baz=347,slow=2.4,SNR=2.1						
ASAR				S	S	16 47 11.1	+0.1
	comp=Z,0.3nm,0.9s,baz=349,slow=19,SNR=4.2						
	comp=Z,1.2nm,0.5s						
FORT	Forrest	34.17	172	P	P	16 43 44.1	+0.2
FORT				IAmb	IAmb	16 43 44.2	
	comp=Z,8.7nm,0.8s						
BBOO	Buckleboo	38.01	161	P	P	16 44 15.8	+0.2
BBOO				IAmb	IAmb	16 44 16.2	
	comp=Z,8.4nm,1.1s						
STKA	Stephens Creek	39.28	154	P	P	16 44 26.8	+0.9
	comp=Z,1.3nm,0.3s,baz=338,slow=11,SNR=4.3						
	comp=Z,1.3nm,0.3s						
CAN	Canberra	45.63	149	P	P	16 45 17.4	+1.8
MKAR	Makanchi Array	55.70	327	P	P	16 46 29.6	+1.0
	comp=Z,0.2nm,0.5s,baz=132,slow=7.8,SNR=4.7						
MKAR				PcP	PcP	16 47 19.6	-0.2
	comp=Z,0.6nm,0.6s,baz=132,slow=4.2,SNR=5.3						
	comp=Z,0.2nm,0.5s						
TORD	Torodi Ar. Bea	119.10	287	PKP	PKPdf	16 55 31.7	+0.1
	comp=Z,0.2nm,0.3s,baz=80,slow=1.8,SNR=2.1						

KRSC 31 16:49:06.5±1.1, 56°.14N×162°.83E, h32^{km}±11^{km}, ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.07	354	*e*P	Pb	16 49 13.2	+1.4
KBG	Krutoberegovo	0.13	328	*e*P	Pn	16 49 12.9	+0.5
KBG				*e*S	Sb	16 49 16.9	+0.7
SMKR	Semkarok	0.88	301	*e*P	Pn	16 49 22.4	-0.3
BDR	Baidarnaya	1.00	296	*e*P	Pn	16 49 24.4	0.0
BDR				*e*S	Sn	16 49 37.6	+0.2
SRKR	Sorokina	1.06	300	*e*P	Pn	16 49 25.1	-0.1
SRKR				*e*S	Sn	16 49 38.6	-0.2
ZLN	Zelenaya	1.14	265	*e*P	Pb	16 49 27.5	-0.2
ZLN				*e*S	Sb	16 49 43.1	+0.8
CIRR	Tsirk	1.17	270	*e*P	Pb	16 49 28.0	-0.1
CIRR				*e*S	Sb	16 49 42.3	-0.7
LGNR	Loginova	1.20	268	*e*P	Pb	16 49 28.7	-0.1
LGNR				*e*S	Sb	16 49 44.1	0.0
KLY	Klyuchi	1.23	279	*e*P	Pn	16 49 26.5	-0.9
KLY				*e*S	Sn	16 49 40.4	-2.5
KRSR	Krestovskiy	1.27	274	*e*P	Pb	16 49 29.2	-0.6
KRSR				*e*S	Sb	16 49 45.2	-0.6
BZWR	Bezymyannyi-We	1.32	263	*e*P	Pb	16 49 30.3	-0.5
BZWR				*e*S	Sb	16 49 47.6	+0.2
KIRR	Kirishev	1.41	263	*e*P	Pb	16 49 31.5	-0.7
KIRR				*e*S	Sb	16 49 50.1	+0.2
KPT	Kopyto	1.48	264	*e*P	Pb	16 49 32.6	-0.7
KPT				*e*S	Sb	16 49 53.4	+1.7
KMNR	Kamenistaya	1.51	256	*e*P	Pb	16 49 33.5	-0.4
KMNR				*e*S	Sb	16 49 53.7	+1.0
KOZ	Kozyrevsk	1.66	268	*e*P	Pb	16 49 35.8	-0.6
KOZ				*e*S	Sb	16 49 56.8	-0.1
TUMD	Tumrok D	1.67	237	*e*P	Pb	16 49 36.0	-0.5
TUMD				*e*S	Sb	16 49 56.8	-0.3
MKZ	Mys Kozlova	1.71	202	*e*P	Pb	16 49 37.1	-0.1
MKZ				*e*S	Sb	16 49 57.8	-0.4
TUMR	Tumrok	1.75	242	*e*P	Pb	16 49 37.6	-0.3
TUMR				*e*S	Sb	16 49 59.3	-0.2
BKI	Bering	2.01	117	*e*P	Pb	16 49 41.6	-0.7
BKI				*e*S	Sb	16 50 06.0	-0.9
ESO	Esso	2.33	266	*e*P	Pb	16 49 47.5	-0.2
KII	Karymskiy	2.87	224	*e*P	Pb	16 49 53.7	-3.3
PALN	Palana	3.33	334	*e*P	Pb	16 50 01.6	-3.2
SPN	Mys Shipunski	3.46	209	*e*P	Pn	16 50 00.7	+2.6
SPN				*e*S	Sn	16 50 38.8	+0.9
NLC	Nalytchevo	3.60	216	*e*P	Pn	16 50 03.9	+3.9
NLC				*e*S	Sn	16 50 44.5	+3.2
SDLR	Sedlovina	3.67	220	*e*P	Pn	16 50 04.8	+3.7
KRX	Arik	3.69	223	*e*P	Pn	16 50 05.5	+4.1
KRER	Koryakskii	3.70	221	*e*P	Pn	16 50 06.0	+4.4
KRER				*e*S	Sn	16 50 49.4	+5.3
SMAR	Somma	3.71	221	*e*P	Pn	16 50 05.7	+3.9
SMAR				*e*S	Sn	16 50 48.0	+3.5
AVH	Avacha	3.73	221	*e*P	Pn	16 50 06.5	+4.6
AVH				*e*S	Sn	16 50 50.6	+5.8
GNL	Ganaly	3.74	231	*e*P	Pn	16 50 05.8	+3.8
UGLR	Uglovaya	3.75	220	*e*P	Pn	16 50 06.0	+3.9
UGLR				*e*S	Sn	16 50 48.9	+3.7
KOK	Koryaka	3.75	222	*e*P	Pn	16 50 06.3	+4.1
DALK	Dalny	3.92	219	*e*P	Pn	16 50 08.1	+3.8
DALK				*e*S	Sn	16 50 51.5	+2.3
PET	Petropavlovsk	3.96	220	*e*P	Pn	16 50 09.2	+4.3
PET				*e*S	Sn	16 50 53.9	+3.7
KRMR	Karymshinskiy	4.30	222	*e*P	Pn	16 50 14.3	+4.6
KRMR				*e*S	Sn	16 51 05.5	+6.8
RUS	Russkaya	4.50	216	*e*P	Pn	16 50 15.8	+3.5
GRL	Gorelyy	4.55	220	*e*P	Pn	16 50 18.4	+5.3
GRL				*e*S	Sn	16 51 11.2	+6.3
MTVR	Mutnovka	4.56	219	*e*P	Pn	16 50 18.0	+4.6
MTVR				*e*S	Sn	16 51 09.7	+4.3
APC	Apacha	4.62	228	*e*P	Pn	16 50 18.0	+4.1
TILK	Tilichiki	4.66	21	*e*P	Pn	16 50 18.2	+3.7
ASAK	Asacha	4.75	220	*e*P	Pn	16 50 20.6	+4.8
ASAK				*e*S	Sn	16 51 15.7	+5.9
KDTR	Khodutka, Kamc	5.17	215	*e*P	Pn	16 50 25.3	+3.8
KMSK	Kamenskaya	6.58	14	*e*P	Pn	16 50 44.9	+4.1

JMA 31 17:05:31.6±0.2, 25°N±2°×14°1E±°, h160^{km}, MV4.1/15, IOTO ISLANDS REGION, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	1.50	35	P	Pn	17 06 02.1	+0.2
JHH2				S	Sn	17 06 25.2	0.0
CBIJ	Chichi jima	1.90	27	P	Pn	17 06 06.6	+0.5
CBIJ				S	Sn	17 06 33.4	+0.5
BSO3	Boso 3	9.39	356	P	Pn	17 07 43.2	+0.2
JAG	Ashikaga	11.09	353	P	Pn	17 08 03.9	-1.8
JHO	Hitachi	11.19	357	P	Pn	17 08 06.5	-0.5

NOU 31 17:19:42.2, 37°.19S×176°.78E, h277^{km}, MLv4.0/6, North Island, New Zealand, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	1.10	166	P	Pn	17 20 20.4	-0.1
BKZ	Black Stump Fm	1.98	186	P	Pn	17 20 27.2	+0.4
OUZ	Omahuta	3.24	306	P	Pn	17 20 39.0	+0.1
BFZ	Birch Farm	3.51	187	P	Pn	17 20 41.9	+0.2
QRZ	Quartz Range	4.91	221	P	Pn	17 20 57.6	-0.1
KHZ	Kahutara	5.79	205	P	Pn	17 21 08.1	0.0
	45nm,1.7s						

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*SFS **31** 17:26:35.0, 35°.49N×3°.75W, ML2.8, ALBORAN SUR*

*MDD **31** 17:26:35.7±0.4, 35°.49N×3°.75W, h0^{km}, mb_Lg2.8/11, Error ellipse: s-maj=3.1km s-min=2.7km az=4.0*

*CNRM **31** 17:26:38.0, 35°.33N×3°.74W, h24^{km}, ml2.6*

ISC 31 17:26:35.4±1.0, 35°.47N±0°.02×3°.74W±0°.02, h14^{km}±9^{km}, n35, σ1^{s}.43/57, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.30	213	P	Pb	17 26 42.8	+0.3
PALE				S	Sb	17 26 47.7	+0.4
PVLZ	Peæn de	0.54	237	P	Pg	17 26 46.1	+0.1
PVLZ				S	Sg	17 26 53.3	0.0
GOG	Mont Gurugu	0.66	112	P	Pb	17 26 49.6	+0.9
GOG				S	Sb	17 26 58.9	+1.1
EMEL	Melilla	0.66	104	Pg	Pg	17 26 47.5	-0.8
EMEL				Sg	Sg	17 26 58.0	+0.9
WMELI	Melilla	0.66	103	P	Pb	17 26 49.7	+1.0
WMELI				S	Sb	17 26 58.4	+0.6
EALB	Alboran	0.74	51	Pg	Pg	17 26 48.5	-1.4
EALB				Sg	Sg	17 26 59.4	-0.2
EALB				*i* Vmb_Lg		17 27 04.2	
CHAS	Isla Isabel II	1.11	104	P	Pb	17 26 55.6	-0.8
CHAS				S	Sb	17 27 09.8	-0.9
TAF	Taforalt	1.27	121	P	Pn	17 26 58.5	-0.3
SMIR	Smir Dam	1.35	280	P	Pn	17 26 59.9	+0.1
CHEFC	Chefchaouen	1.35	255	P	Pg	17 27 02.6	+1.1
EMIJ	Mijas	1.38	323	Pg	Pn	17 26 59.0	-1.3
EMIJ				Sg	Sg	17 27 19.0	-0.8
EMIJ				*i* Vmb_Lg		17 27 22.2	
CEU	Ceuta	1.40	288	P	Pn	17 26 58.3	-2.1
CEU				S	Sn	17 27 13.2	-5.5
ECEU	Ceuta	1.40	288	Pg	Pn	17 27 00.2	-0.3
ECEU				*i* Vmb_Lg		17 27 18.0	
ECEU				Sg	Sn	17 27 18.8	0.0
ELGU	Los Guajares,	1.40	4	Pg	Pb	17 27 01.4	0.0
ELGU				Sg	Sn	17 27 18.5	-0.4
ELGU				*i* Vmb_Lg		17 27 22.3	
JBK	JBK	1.49	139	P	Pn	17 27 02.2	+0.3
JBK				S	Sn	17 27 19.1	-2.2
EBER	Berja	1.59	26	Pg	Pb	17 27 04.2	-0.4
EBER				Sg	Sb	17 27 25.0	+0.4
EBER				*i* Vmb_Lg		17 27 37.3	
EGOR	Sierra Gorda,	1.67	350	Pn	Pn	17 27 04.7	+0.4
EGOR				Sg	Sb	17 27 26.9	0.0
EGOR				*i* Vmb_Lg		17 27 35.1	
LCRM	LCR	2.00	208	P	Pb	17 27 12.0	+0.3
LCRM				S	Sn	17 27 34.3	+0.4
IFR	Ifrane	2.26	211	P	Pn	17 27 11.0	-1.4
IFR				S	Sn	17 27 38.2	-2.0
EQES	Quesada	2.39	13	Pn	Pn	17 27 15.7	+1.4
EQES				Sn	Sn	17 27 45.0	+1.5
EQES				*i* Vmb_Lg		17 27 48.3	
MD31	MD31	2.73	198	P	Pn	17 27 20.8	+2.0
MDT	Midelt	2.74	195	P	Pb	17 27 22.6	-1.7
EADA	Adamuz	2.78	346	Pn	Pn	17 27 20.9	+1.4
EADA				Sn	Sn	17 27 52.9	0.0
EADA				*i* Vmb_Lg		17 28 08.0	
ECAB	El Cabril	2.93	333	Pn	Pn	17 27 21.9	+0.3
ECAB				Sn	Sn	17 27 56.2	-0.4
ECAB				*i* Vmb_Lg		17 28 14.7	
ZHG	ZHG	3.13	231	P	Pn	17 27 27.7	+3.3
EMIN	Mina Concepcio	3.29	315	Pn	Pn	17 27 26.6	+0.1
EMIN				Sn	Sn	17 28 05.1	-0.4
ETOB	Tobarra	3.62	28	Pn	Pn	17 27 32.4	+1.2
ETOB				Sn	Sn	17 28 12.9	-0.9
ETOB				*i* Vmb_Lg		17 28 18.8	
EGRO	El Granado	3.65	305	Pn	Pn	17 27 31.7	+0.2
EGRO				Sn	Sn	17 28 13.7	-0.7
EGRO				*i* Vmb_Lg		17 29 42.4	
PVAQ	Vaqueiros	3.74	302	*e*Pn	Pn	17 27 33.0	+0.3
PBAR	Barrancos	3.78	317	*e*Pn	Pn	17 27 35.9	+2.6
PBDV	Barranco-do-Ve	3.82	299	*e*Pn	Pn	17 27 34.6	+0.8
EVO	Evora	4.59	313	*e*Pn	Pn	17 27 45.6	+1.3
PNCL	Nicolau / Gran	4.66	306	*e*Pn	Pn	17 27 46.1	+0.8
PMRV	Marv??o	4.91	325	*e*Pn	Pn	17 27 52.3	+3.6
OUZM	OUZ	5.20	210	P	Pn	17 27 54.0	+1.0

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*IDC **31** 17:26:53.2±0.8, 60°.85S×24°.16W, h0^{km}, mb3.9/7, mbtmp3.9/7, ML5.2/2, MS3.1/3, Error ellipse: s-maj=26.7km s-min=21.3km az=81.0*

*NEIC **31** 17:26:57.0±1.1, 60°.90S±0°.07×23°.8W±0°.1, h34^{km}±4^{km}, mb4.9/40, Error ellipse: s-maj=11.4km s-min=7.3km az=133.0*

ISC 31 17:26:53.5±0.5, 60°.86S±0°.08×23°.81W±0°.08, h10^{km}, n54, σ1^{s}.10/53, mb4.8/21, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	9.46	309	Pn	Pn	17 29 12.0	+2.3
ORCD	Orcadas	10.22	262	Pn	Pn	17 29 20.5	+0.5
VNA1	Neumayer--Stat	11.67	154	P	Pn	17 29 40.3	+0.5
VNA1				S	Sn	17 31 38.7	-11
VNA3	Neumayer Olymp	11.85	157	P	Pn	17 29 42.4	+0.1
VNA3				S	Sn	17 31 39.8	-15
VNA2	Neumayer--Watz	12.06	154	P	Pn	17 29 44.8	-0.4
	baz=315,slow=16						
VNA2				S	Sn	17 31 49.2	-10
SNAA	Sanae	13.63	151	P	Pn	17 30 06.9	+0.2
SNAA				S	Sn	17 32 24.1	-14
SNAA	Sanae	13.63	151	Pn	Pn	17 30 06.9	+0.2
	13nm,0.3s,baz=314,slow=14,SNR=559						
SNAA				Sn	Sn	17 32 23.7	-14
	0.5nm,0.3s,baz=23,slow=21,SNR=1.9						
SNAA				LR	LR	17 34 10.2	
	comp=Z,120nm,20.4s,baz=278,slow=32						
SNAA	Sanae	13.63	151		Pn	17 30 06.6	0.0
TROLL	Troll, Antarti	15.17	148	P	Pn	17 30 26.7	-0.9
TROLL				S	Sn	17 33 00.5	-15
BELA	Belgrano 2	17.45	188	P	P	17 30 57.7	-0.2
PMSA	Palmer Station	18.55	240	P	Pn	17 31 10.2	0.0
	7.4nm,0.3s,baz=87,slow=9.3,SNR=25						
PMSA				LR	LR	17 36 55.9	
	comp=Z,36nm,20.3s,baz=100,slow=33						
EFI	East Falkland	20.89	281		P	17 31 34.8	-0.8
EFI				IAmb	IAmb	17 31 49.0	
	comp=Z,57nm,1.4s						
DSPA	Despedida	24.50	266		P	17 32 12.5	-0.1
MG03	Isla Dawson	25.64	265		P	17 32 22.9	0.0
MG03				IAmb	IAmb	17 32 33.3	
	comp=Z,89nm,1.9s						
QSPA	South Pole Qui	29.37	180	P	P	17 32 58.3	+1.9
	comp=Z,0.8nm,0.7s,baz=218,slow=3.8,SNR=5.7						
	comp=Z,0.8nm,0.7s						
TRQA	Tornquist	32.96	296	P	P	17 33 27.8	-0.3
MAW	Mawson	35.28	139	P	P	17 33 44.8	-3.1
ITQB	Itaqui	38.05	310	P	P	17 34 10.4	-1.4
BO04	La Punta	40.21	290	P	P	17 34 30.0	0.0
BO04				IAmb	IAmb	17 34 49.3	
	comp=Z,28nm,1.7s						
MT09	Talagante	40.56	290	P	P	17 34 32.5	-0.5
SUR	Sutherland	40.58	66	P	P	17 34 33.0	-0.2
SUR				IAmb	IAmb	17 35 12.2	
	comp=Z,42nm,1.7s						
MT02	Curacav	41.06	290	P	P	17 34 36.6	-0.3
MT02				IAmb	IAmb	17 35 28.4	
	comp=Z,29nm,1.8s						
VA03	San Esteban	41.21	291	P	P	17 34 36.2	-2.1
ROC1	El Roble	41.24	291	P	P	17 34 37.4	-1.3
ROC1				IAmb	IAmb	17 34 42.6	
	comp=Z,35nm,1.6s						
CPUP	Villa Florida	41.33	311	P	P	17 34 38.8	-0.4
	comp=Z,5.3nm,1.0s,baz=160,slow=7.2,SNR=5.6						
CPUP				LR	LR	17 52 13.0	
	comp=Z,32nm,18.4s,baz=182,slow=37						
	comp=Z,5.3nm,1.0s						
CPUP	Villa Florida	41.33	311	P	P	17 34 39.2	0.0
CPUP				IAmb	IAmb	17 34 43.5	
	comp=Z,24nm,1.6s						
VNDA	Vanda	41.82	182	P	P	17 34 44.1	+1.5
	comp=Z,0.6nm,0.6s,baz=166,slow=4.7,SNR=2.8						
	comp=Z,0.6nm,0.6s						
CO01	Juntas del Tor	43.36	294	P	P	17 34 55.9	-0.2
CO01				IAmb	IAmb	17 35 17.2	
	comp=Z,29nm,1.9s						
GO04	Tololo Observa	43.51	293	P	P	17 34 55.7	-1.5
GO04				IAmb	IAmb	17 35 29.6	
	comp=Z,46nm,1.8s						
AC02	Maricunga	45.65	297	P	P	17 35 14.3	-0.3
AC02				IAmb	IAmb	17 35 15.4	
	comp=Z,18nm,1.6s						
BOSA	Boshof	45.78	68	P	P	17 35 17.8	+2.6
	comp=Z,1.3nm,0.8s,baz=204,slow=9.1,SNR=4.0						
	comp=Z,1.3nm,0.8s						
BOSA	Boshof	45.78	68	P	P	17 35 15.6	+0.4
BOSA				IAmb	IAmb	17 36 48.2	
	comp=Z,22nm,1.6s						
GO02	Mina Guanaco	47.31	298	P	P	17 35 27.2	-0.2
CASY	Casey	48.77	157	P	P	17 35 37.5	-0.3
CASY				IAmb	IAmb	17 36 46.9	
	comp=Z,12nm,1.0s						
LBTB	Lobatse	49.03	66	P	P	17 35 40.4	-0.2
LBTB				IAmb	IAmb	17 36 02.9	
	comp=Z,30nm,1.9s						
PB06	IPOC Station P	49.46	299	P	P	17 35 42.2	-1.6
PB06				IAmb	IAmb	17 37 15.5	
	comp=Z,14nm,0.8s						
PB04	IPOC Station P	50.03	299	P	P	17 35 48.7	+0.4
PB09	IPOC Station P	50.12	300	P	P	17 35 47.8	-1.2
PB07	IPOC Station P	50.46	300	P	P	17 35 51.8	+0.3
PB01	IPOC Station P	50.89	301	P	P	17 35 54.9	+0.2
PB01				IAmb	IAmb	17 35 56.0	
	comp=Z,47nm,1.8s						
PB08	IPOC Station P	51.56	301	P	P	17 36 00.1	+0.1
PB08				IAmb	IAmb	17 36 33.3	
	comp=Z,21nm,1.6s						
PB11	IPOC Station P	52.11	301	P	P	17 36 03.6	-0.2
PB11				IAmb	IAmb	17 36 35.6	
	comp=Z,25nm,1.4s						
ASCN	Ascension	53.29	12	P	P	17 36 10.6	-1.7
PB16	IPOC Station P	53.32	302	P	P	17 36 13.3	0.0
LPAZ	La Paz	54.59	305	P	P	17 36 22.4	-0.2
	comp=Z,0.9nm,0.4s,baz=179,slow=4.8,SNR=4.2						
	comp=Z,0.9nm,0.4s						
LPAZ	La Paz	54.59	305	IAmb	IAmb	17 36 23.4	
	comp=Z,12nm,1.7s						
TOA0	Torodi Ar. Sit	76.52	26	P	P	17 38 45.4	+1.9
TORD	Torodi Ar. Bea	76.52	26	P	P	17 38 45.5	+2.1
	comp=Z,1.4nm,0.6s,baz=203,slow=6.3,SNR=9.0						
	comp=Z,1.4nm,0.6s						
PLWZ	Palliser	76.74	195	P	P	17 38 45.8	+1.2
BSWZ	Blackbirch Sta	76.76	194	P	P	17 38 44.4	-0.3
PAYG	Puerto Ayora	78.14	290	P	P	17 38 51.2	-1.5
MORW	Morawa	84.61	145	P	P	17 39 26.5	-0.5
ASAR	Alice Springs	93.85	160	P	P	17 40 11.8	+0.8
	comp=Z,0.2nm,0.6s,baz=176,slow=5.0,SNR=4.8						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	127.83	28	PKP	PKiKP	17 45 58.7	+0.5
	comp=Z,1.5nm,0.8s,baz=228,slow=2.3,SNR=3.6						

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*JMA **31** 17:31:02.9±0.2, 24°.0N±0°.6×12°2E±°, h7^{km}±2^{km}, MV3.0/9, TAIWAN REGION*

*TAP **31** 17:31:05.2, 24°.15N×121°.67E, h11^{km}, ML3.6, B*

ISC 31 17:31:05.3±0.8, 24°.12N±0°.01×121°.69E±0°.02, h13^{km}±4^{km}, n85, σ0^{s}.74/162, 41D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.07	300⇓	*i*P	Pg	17 31 07.5	-0.4
	baz=278						
ETL				S	Sg	17 31 09.3	-0.7
	baz=278						
TWD	Chiawan	0.10	245⇓	*i*P	Pg	17 31 08.0	-0.2
	baz=221						
TWD				*i* S	Sg	17 31 10.0	-0.2
	baz=221						
NACB	Ninganchiao	0.10	300⇓	*i*P	Pg	17 31 07.9	-0.4
	baz=287						
NACB				*i* S	Sg	17 31 09.8	-0.7
	baz=287						
HWA	Hwalien	0.17	210	*i* P	Pg	17 31 09.6	+0.5
	baz=197						
HWA				*e*S	Sg	17 31 13.0	+1.2
	baz=197						
EHP	Heping Village	0.19	13	*i* P	Pg	17 31 09.2	-0.4
	baz=24						
EHP				*i* S	Sg	17 31 12.1	-0.4
	baz=24						
ETLH	Xiulin Townshi	0.21	294⇓	*i*P	Pg	17 31 09.7	-0.2
	baz=287						
ETLH				*i* S	Sg	17 31 12.9	-0.3
	baz=287						
ETM	Tongmen	0.24	230⇓	*i*P	Pg	17 31 10.3	-0.1
	baz=221						
ETM				*e*S	Sg	17 31 14.0	+0.1
	baz=221						
TEYL	Yanliau Villag	0.27	199	*e*P	Pg	17 31 11.3	+0.5
	baz=195						
TEYL				*e*S	Sg	17 31 16.0	+1.4
	baz=195						
ENA	Nanau	0.31	8⇓	*i*P	Pg	17 31 11.2	-0.5
	baz=14						
ENA				*i* S	Sg	17 31 15.3	-0.6
	baz=14						

EWUT	Wuta baz=18	0.33	13	⇓iP	Pg	17 31 11.5	-0.5
EWUT	baz=18			S	Sg	17 31 15.8	-0.8
ESL	Shilin baz=212	0.39	218	⇓iP	Pb	17 31 12.9	-1.1
ESL	baz=212			S	Sb	17 31 18.2	-1.7
WHF	Hehuan Shan baz=269	0.39	274	⇓iP	Pb	17 31 13.1	-1.2
WHF	baz=269			eS	Sb	17 31 18.6	-1.8
NNSB	Datong baz=316	0.42	317	⇓iP	Pg	17 31 13.5	-0.1
NNSB	baz=316			S	Sg	17 31 19.3	0.0
FUSS	Fushou baz=284	0.43	287	⇓iP	Pb	17 31 14.0	-0.9
FUSS	baz=284			eS	Sb	17 31 20.0	-1.4
NNS	Nan Shan baz=317	0.43	317	⇓iP	Pg	17 31 13.7	-0.2
NNS	baz=317			eS	Sg	17 31 19.6	-0.1
TEGC	Jichi Village baz=194	0.43	199	eP	Pb	17 31 15.2	+0.5
LATG	Datong baz=341	0.44	340	⇓iP	Pg	17 31 13.7	-0.3
LATG	baz=341			S	Sg	17 31 19.8	-0.2
CHGB	Renai baz=259	0.48	263	⇓iP	Pb	17 31 15.0	-0.7
CHGB	baz=259			eS	Sb	17 31 21.5	-1.2
TWT	Tachien baz=282	0.49	286	eP	Pb	17 31 15.4	-0.4
TWT	baz=282			eS	Sb	17 31 22.7	-0.4
OWD	Renai baz=247	0.50	251	⇓iP	Pb	17 31 15.2	-0.9
OWD	baz=247			eS	Sb	17 31 21.7	-1.7
TDCB	Techi baz=282	0.51	285	⇓iP	Pb	17 31 15.6	-0.6
TDCB	baz=282			eS	Sb	17 31 22.5	-1.0
TWC	Suao baz=21	0.51	16	⇓iP	Pg	17 31 14.8	-0.4
TWC	baz=21			S	Sg	17 31 21.4	-0.6
NDT	Datong Townshi baz=342	0.51	341	⇓iP	Pg	17 31 14.8	-0.5
NDT	baz=342			eS	Sg	17 31 21.9	-0.2
NDS	Dongshan baz=5.0	0.51	2	⇓iP	Pg	17 31 15.0	-0.3
NDS	baz=5.0			S	Sg	17 31 21.6	-0.5
EGFH	Guangfu baz=205	0.51	208	⇓iP	Pb	17 31 15.4	-0.7
EGFH	baz=205			eS	Sb	17 31 23.7	+0.2
ENTT	Nioudou baz=349	0.53	347	⇓iP	Pg	17 31 15.5	-0.1
ENTT	baz=349			S	Sg	17 31 22.7	0.0
WUSB	Renai baz=253	0.54	256	⇓iP	Pb	17 31 16.2	-0.5
WUSB	baz=253			S	Sb	17 31 23.2	-1.3
TWE	Neicheng baz=1.0	0.60	358	⇓iP	Pg	17 31 16.8	-0.1
TWE	baz=1.0			eS	Sg	17 31 24.6	-0.3
YHNB	Yeheng baz=332	0.62	332	⇓iP	Pg	17 31 17.2	-0.2
YHNB	baz=332			eS	Sg	17 31 25.5	-0.1
VWDT	VWDT baz=231	0.62	234	⇓iP	Pb	17 31 17.6	-0.4
VWDT	baz=231			eS	Sb	17 31 26.5	-0.2
NSK	Sanguang baz=332	0.63	331	P	Pg	17 31 17.4	-0.2
NSK	baz=332			eS	Sg	17 31 25.7	-0.3
FUSB	Fushanzhiwuyua baz=353	0.64	351	⇓iP	Pg	17 31 17.7	-0.1
FUSB	baz=353			eS	Sg	17 31 26.0	-0.4
ILA	Ilan baz=7.0	0.64	4	⇓P	Pg	17 31 17.9	0.0
ILA	baz=7.0			eS	Sg	17 31 26.4	+0.1
HGSD	Ruisui baz=199	0.67	202	eP	Pb	17 31 19.1	+0.2
HGSD	baz=199			eS	Sn	17 31 32.1	+1.2
NWLT	Wulai baz=346	0.68	345	⇓iP	Pg	17 31 18.2	-0.2
NWLT	baz=346			S	Sg	17 31 26.7	-0.7
WPL	Puli Township baz=258	0.68	261	⇓eP	Pb	17 31 18.9	-0.2
WPL	baz=258			eS	Sb	17 31 27.9	-0.5
EHY	Hungye baz=206	0.70	209	eP	Pg	17 31 18.4	-0.5
EHY	baz=206			eS	Sb	17 31 29.2	+0.3
WHP	Taichung City baz=281	0.70	283	eP	Pb	17 31 19.3	-0.1
WHP	baz=281			eS	Sb	17 31 29.2	+0.2
DPDB	Guoxing baz=260	0.71	263	⇓eP	Pb	17 31 19.4	-0.1
DPDB	baz=260			eS	Sb	17 31 29.0	-0.2
WCS	Beigang Elemen baz=262	0.72	265	⇓eP	Pb	17 31 19.5	-0.2
WCS	baz=262			eS	Sb	17 31 29.2	-0.2
NFF	Wufeng Townshi baz=313	0.73	314	⇓iP	Pb	17 31 19.5	-0.5
NFF	baz=313			eS	Sb	17 31 29.3	-0.6
NTC	Toucheng baz=12	0.74	10	⇓iP	Pg	17 31 19.3	-0.3
NTC	baz=12			S	Sg	17 31 28.4	-1.0
EGS	baz=20	0.75	17	eP	Pg	17 31 19.9	+0.1
EGS	baz=20			eS	Sg	17 31 30.2	+0.4
SSLB	Suanglung baz=241	0.75	244	⇓iP	Pb	17 31 19.9	-0.4
SSLB	baz=241			eS	Sb	17 31 29.7	-0.8
SMLT	Sun Moon Lake baz=249	0.76	252	⇓iP	Pb	17 31 20.2	-0.2
SMLT	baz=249			S	Sb	17 31 30.4	-0.4
TYC	Yuchr baz=251	0.80	254	⇓eP	Pb	17 31 20.6	-0.3
TYC	baz=251			eS	Sb	17 31 30.9	-0.8
LIOB	Emei baz=309	0.81	310	⇓iP	Pb	17 31 21.4	+0.1
LIOB	baz=309			eS	Sb	17 31 32.2	+0.1
NSTT	Nanjuang baz=308	0.81	309	⇓eP	Pb	17 31 21.0	-0.2
NSTT	baz=308			eS	Sb	17 31 31.5	-0.6
YULB	Yu-li baz=204	0.81	207	eP	Pg	17 31 19.9	-1.0
YULB	baz=204			eS	Sb	17 31 31.3	-0.8
NJD	Zhudong baz=318	0.82	318	eP	Pb	17 31 22.3	+0.8
EYUL	Yuli baz=202	0.84	204	eP	Pb	17 31 21.8	0.0
EYUL	baz=202			eS	Sb	17 31 34.3	+1.3
TWF1	Yuli baz=203	0.85	205	eP	Pb	17 31 22.0	+0.1
NHDH	Xindian Distri baz=351	0.85	350	eP	Pg	17 31 21.8	0.0
NHDH	baz=351			eS	Sg	17 31 32.7	-0.2
TIPB	Shuangxi baz=10.0	0.85	8	⇓P	Pg	17 31 21.5	-0.4
TIPB	baz=10.0			eS	Sg	17 31 32.1	-1.0
TWA	Mucha baz=355	0.86	353	eP	Pg	17 31 21.8	-0.2
TWA	baz=355			eS	Sg	17 31 32.9	-0.3
TWQ1	Liyutan baz=283	0.87	285	eP	Pb	17 31 22.9	+0.6
TWQ1	baz=283			eS	Sn	17 31 37.7	+1.9
TATO	Taipei baz=349	0.87	348	⇓eP	Pg	17 31 21.9	-0.2
TATO	baz=349			eS	Sg	17 31 33.0	-0.5
NSY	Sanyi baz=288	0.90	289	eP	Pn	17 31 23.9	+0.3
NSY	baz=288			eS	Sn	17 31 36.8	+0.3
WWF	Wufeng baz=263	0.91	265	eP	Pn	17 31 24.8	+1.0
WWF	baz=263			eS	Sn	17 31 38.9	+2.1
NMLH	Miaoli baz=295	0.92	297	eP	Pn	17 31 24.3	+0.3
NMLH	baz=295			eS	Sn	17 31 37.3	+0.2
TWB1	Santiao Chiao baz=19	0.92	17	eP	Pg	17 31 22.9	-0.3
TWB1	baz=19			eS	Sg	17 31 34.2	-0.9
YUS	Yu-Shan baz=225	0.93	227	eP	Pb	17 31 23.2	-0.2
YUS	baz=225			eS	Sb	17 31 36.3	+0.4
TAP1	Taipei baz=351	0.93	350	eP	Pb	17 31 23.7	+0.5
TAP1	baz=351			eS	Sg	17 31 35.5	+0.2
SBCB	Hsinchu baz=316	0.93	316	eP	Pn	17 31 24.6	+0.5
TAP	Taipei baz=351	0.93	349	eP	Pb	17 31 23.6	+0.4
TAP	baz=351			eS	Sg	17 31 35.8	+0.3
TCU	Taichung baz=270	0.93	272	eP	Pn	17 31 25.1	+1.1
TCU	baz=270			eS	Sn	17 31 38.5	+1.2
WJS	Zhushan baz=249	0.93	252	eP	Pn	17 31 24.0	-0.1
WJS	baz=249			eS	Sn	17 31 37.3	0.0
NWF	Wu-fen Shan baz=6.0	0.95	5	eP	Pg	17 31 23.7	+0.1
NWF	baz=6.0			eS	Sg	17 31 35.3	-0.7
WFSB	Wu-fen Shan baz=6.0	0.95	5	eP	Pg	17 31 23.6	0.0
WFSB	baz=6.0			eS	Sg	17 31 35.4	-0.7
SXI1	Grass Mountain baz=11	0.98	10	⇓eP	Pg	17 31 24.1	-0.2
SXI1	baz=11			eS	Sg	17 31 36.2	-0.9
FULB	Fuli baz=200	0.99	202	eP	Pb	17 31 24.2	-0.1
TWS1	Kuangyinshan baz=347	1.01	346	eP	Pb	17 31 25.2	+0.6
TWS1	baz=347			eS	Sb	17 31 39.2	+1.5
ALS	Alishan baz=231	1.02	233	eP	Pb	17 31 25.1	+0.2
ALS	baz=231			eS	Sn	17 31 39.7	-0.1
TNOU	National Taiwa baz=5.0	1.03	4	eP	Pg	17 31 25.0	-0.1
YM01	YM01 baz=355	1.03	354	eP	Pg	17 31 25.0	-0.1
YM01	baz=355			eS	Sg	17 31 39.0	+0.5
CHKT	Chengkung baz=195	1.06	197	eP	Pg	17 31 24.9	-0.8
CHKT	baz=195			eS	Sn	17 31 41.2	+0.7
ELDTW	Lidau baz=212	1.12	214	eP	Pg	17 31 25.2	-1.6
ELDTW	baz=212			eS	Sb	17 31 41.5	+0.5
JYNG	Yonagunijimaku	1.19	74	P	Pg	17 31 27.4	-0.7
JYNG				S	Sg	17 31 44.9	+1.2
EDH	Donghe baz=196	1.20	197	eP	Pg	17 31 26.6	-1.7
EDH	baz=196			eS	Sb	17 31 43.7	+0.5
YOJ	Yonaguni jima baz=75	1.25	74	i P	Pg	17 31 28.0	-1.3
YOJ	baz=75			eS	Sg	17 31 43.2	-2.4
YOJ	Yonaguni jima	1.25	74	P	Pg	17 31 28.1	-1.3
IRIF	Iriomote-Funau	1.87	83	P	Pn	17 31 36.9	-0.1
JKRS	Kuro-shima	2.12	86	P	Pn	17 31 41.0	+0.6
JKRS				S	Sn	17 32 08.8	+2.3
JIJ	Ishigaki jima	2.25	83	P	Pn	17 31 41.9	-0.3
JIJ				S	Sn	17 32 11.1	+1.3
JISG	Ishigakijimahi	2.43	78	P	Pn	17 31 44.6	-0.1
JISG				S	Sn	17 32 14.3	0.0

MOS ***31*** *17:35:12.5±1.2, 36°.45N×3°.57E, h11^{km}, mb4.8/15, Error ellipse: s-maj=7.7km s-min=3.7km az=62.6*

IDC ***31*** *17:35:12.6±0.4, 36°.42N×3°.48E, h0^{km}, mb4.4/35, mbtmp4.4/45, ML4.1/9, MS3.9/52, Error ellipse: s-maj=11.1km s-min=9.9km az=149.0*

CRAAG ***31*** *17:35:12.5, 36°.35N×3°.43E, Ml4.5*

BJI ***31*** *17:35:13.0±0.0, 36°.30N×3°.50E, h15^{km}, mb4.7/34, mB4.8/18, Ms4.6/2, Ms7 4.3/2*

MDD ***31*** *17:35:13.5±0.5, 36°.23N×3°.55E, h1^{km}±6^{km}, Mb5.1/40, M_mb4.6/40, Error ellipse: s-maj=8.4km s-min=2.4km az=142.0*

LDG ***31*** *17:35:13.2±0.2, 36°.32N×3°.63E, h10^{km}, Ml4.1/44, Error ellipse: s-maj=5.5km s-min=5.0km az=179.0*

NEIC ***31*** *17:35:14.9±1.8, 36°.48N±0°.07×3°.50E±0°.06, h13^{km}±3^{km}, mb4.8/174, Error ellipse: s-maj=10.6km s-min=7.1km az=182.0*

MED_RC ***31*** *17:35:14.0±0.5, 36°.32N×3°.42E, h10^{km}, MW4.5/21, Moment Tensor Solution.Mantle waves: s21,c30; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.72±.02; $M_{\theta\theta}$-0.24±.02; $M_{\phi\phi}$-0.47±.02; $M_{r\theta}$-0.25±.07; $M_{\theta\phi}$-0.42±.01; $M_{\phi r}$-0.25±.07; Best double couple: $M_0$0.84000×10^{16} NP1:ϕ_s221.00000°, δ58.00000°, λ94.00000°. NP2:ϕ_s34.00000°, δ33.00000°, λ84.00000°. Principal axes: T 0.8000, Plg77.0000°, Azm143.0000°; N 0.0800, Plg3.0000°, Azm39.0000°; P -0.8800, Plg13.0000°, Azm308.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

IGIL ***31*** *17:35:16.4, 36°.33N×3°.52E, h15^{km}*

CNRM ***31*** *17:35:18.1, 36°.31N×3°.18E, h17^{km}, ml4.7*

ISC 31 17:35:13.8±0.7, **36°.51N**±0°.04×**3°.53E**±0°.03, **h8**^{km}±4^{km}, **n720**, σ**2^s.26**/692, **mb4.8**/136, **MS3.9**/49, **62C-23D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.36	192	P	Pg	17 35 17.9	-3.0
AKET	Djebel Ketaf	0.54	149	P	Pg	17 35 22.6	-1.7
SET	Setif	1.54	101	P	Pg	17 35 45.0	+1.7
DFRA	Djebel Bou Aff	1.89	88	P	Pn	17 35 47.0	+0.6
CTEI	Djebel Teioual	2.36	100	P	Pn	17 35 55.5	+2.6
OKGL	Djebel Kef Gue	2.38	259	P	Pn	17 35 54.0	+0.9
CASM	Ain Smara	2.40	95	P	Pg	17 36 05.7	+6.0
OJGS	Djebel Guires	2.47	247	P	Pn	17 35 53.0	-1.4
CKFL	Kef-Lekhel	2.57	92	P	Pb	17 36 01.0	+0.8
OJBR	Djebel Berber	2.75	251	P	Pn	17 35 57.0	-1.1
EIBI	Ibiza	3.05	326	Pn	Pn	17 36 04.2	+2.0
EIBI	8µm,SNR=43			⇑iVmb_V		17 36 07.0	
EIBI				Sn	Sn	17 36 39.7	+0.8
CMAH	Djebel Manchou	3.13	87	P	Pn	17 36 03.7	+0.3
ABSA	Djebel Ababsia	3.19	93	P	Pn	17 36 04.3	0.0
ODJA	Bouhanifia	3.21	250	P	Pg	17 36 20.0	+4.6
ETOS	Mallorca	3.30	350	Pn	Pn	17 36 07.7	+2.0
ETOS	6µm,SNR=38			⇑iVmb_V		17 36 10.4	
ETOS				Sn	Sn	17 36 45.9	+0.8
USTO	Oran	3.40	258	P	Pn	17 36 10.0	+3.0
MAHO	Mahon	3.43	9	P	Pn	17 36 08.1	+0.7
MAHO				S	Sn	17 36 45.9	-2.2
EBEN2	Beniarda presa	3.66	307	Pn	Pn	17 36 12.5	+1.8
EBEN2	5µm,SNR=14			⇑iVmb_V		17 36 15.8	
EBEN2				Sn	Sn	17 36 56.3	+2.2
OTSS	Djebel Tessala	3.72	252	P	Pn	17 36 12.0	+0.4
CART	Cartagena	3.78	288	P	Pn	17 36 12.4	+0.1
CART				S	Sn	17 36 55.0	-2.0
CART	Cartagena	3.78	288	Pn	Pn	17 36 12.0	-0.3
CART				Sn	Sn	17 36 53.6	-3.4
CART	Cartagena	3.78	288	P	Pn	17 36 12.6	+0.3
AFON	Font Roja 1µm,SNR=12	3.88	305	⇑iVmb_V		17 36 24.0	
AFON				Sn	Sn	17 37 01.4	+1.7
EMUR	La Murta 1µm,SNR=18	4.04	291	⇑iVmb_V		17 36 19.9	
EMUR				Sn	Sn	17 37 03.4	0.0
ECOL	Islas Columbre	4.06	327	Sn	Sn	17 37 03.2	-0.5
EZAR	Zarzadilla de	4.39	290	Sn	Sn	17 37 11.8	-0.3
ETOB	Tobarra 3µm,SNR=62	4.56	299	⇑iVmb_V		17 36 27.5	
ETOB				Sn	Sn	17 37 16.5	+0.2
ENIJ	Nijar	4.63	277	Pn	Pn	17 36 22.7	-1.4
ENIJ	947nm,SNR=16			⇑iVmb_V		17 36 31.5	
ENIJ				Sn	Sn	17 37 17.5	-0.5
ECHE	Chera	4.70	312	Pn	Pn	17 36 26.6	+1.7
ECHE	4µm,SNR=24			⇑iVmb_V		17 36 29.9	
ECHE				Sn	Sn	17 37 19.5	-0.1
KEST	Kesra 12nm,0.3s,baz=316,slow=2.1,SNR=75	4.77	98	Pn	Pn	17 36 26.6	+0.7
KEST	8.4nm,0.3s,baz=36,slow=19,SNR=6.4 119nm,0.7s			Sn	Sn	17 37 20.6	-0.8
KEST	Kesra	4.77	98	Pn	Pn	17 36 26.5	+0.5
KEST				Sn	Sn	17 37 20.1	-1.4
EMOS	Mosqueruela	4.97	322	Pn	Pn	17 36 31.2	+2.4
EMOS	2µm,SNR=19			⇑iVmb_V		17 36 33.3	
EMOS				Sn	Sn	17 37 25.8	-0.7
CHAS	Isla Isabel II	5.02	256	P	Pn	17 36 28.2	-1.2
CHAS				S	Sn	17 37 24.0	-3.5
ERTA	Horta de San J 2µm,SNR=15	5.09	332	⇑iVmb_V		17 36 42.7	
ERTA				Sn	Sn	17 37 31.5	+2.1
TAF	Taforalt	5.13	252	P	Pn	17 36 29.5	-1.4
EBER	Berja 566nm,SNR=15	5.18	276	⇑iVmb_V		17 36 39.6	
EBER				Sn	Sn	17 37 29.4	-2.2
EPOB	Poblet 523nm,SNR=4.7	5.20	339	⇑iVmb_V		17 36 37.0	
EPOB				Sn	Sn	17 37 35.2	+3.2
EALB	Alboran	5.34	266	Pn	Pn	17 36 32.1	-1.6
EALB	502nm,SNR=2.5			⇑iVmb_V		17 36 38.6	
EALB				Sn	Sn	17 37 31.4	-4.0
WMELI	Melilla	5.40	259	P	Pn	17 36 36.6	+2.1
WMELI				S	Sn	17 37 34.8	-1.9
EQES	Quesada	5.43	286	Pn	Pn	17 36 37.4	+2.3
EQES	3µm,SNR=75			⇑iVmb_V		17 36 40.7	
EQES				Sn	Sn	17 37 37.3	-0.5
JBK	JBK	5.43	248	P	Pn	17 36 34.1	-1.1
GOG	Mont Gurugu	5.46	258	P	Pn	17 36 35.4	0.0
VSL	Villasalto	5.49	55	Pn	Pn	17 36 36.8	+0.9
VSL				Sn	Sn	17 37 37.0	-2.1
EMIR	Miracle	5.62	344	Pn	Pn	17 36 41.3	+3.8
EMIR	7µm,SNR=30			⇑iVmb_V		17 36 43.7	
EMIR				Sn	Sn	17 37 43.7	+1.4
EQUE	Quentar	5.63	279	Pn	Pn	17 36 37.4	-0.5
EQUE	731nm,SNR=14			⇑iVmb_V		17 36 44.0	
EQUE				Sn	Sn	17 37 45.6	+2.8
TDRA	Tendrara	5.74	235	P	Pn	17 36 38.0	-1.4
ELGU	Los Guajares, 779nm,SNR=23	5.77	276	⇑iVmb_V		17 36 46.1	
ELGU				Sn	Sn	17 37 43.0	-3.0
FIGM	Figuig	5.90	224	P	Pn	17 36 40.3	-1.3
EJON	La Jonquera	5.95	355	Pn	Pn	17 36 45.2	+3.1
EJON	1µm,SNR=9.7			⇑iVmb_V		17 36 47.0	
EJON				Sn	Sn	17 37 54.0	+3.6
ESAC	San Caprasio	6.06	330	Pn	Pn	17 36 46.5	+2.8
ESAC	1µm,SNR=5.2			⇑iVmb_V		17 36 56.0	
ETOR	Torete	6.13	316	Pn	Pn	17 36 49.1	+4.5
ETOR	1µm,SNR=25			⇑iVmb_V		17 36 51.6	
ETOR				Sn	Sn	17 38 00.2	+5.1
EGOR	Sierra Gorda,	6.16	278	Pn	Pn	17 36 46.6	+1.5
EGOR	570nm,SNR=18			⇑iVmb_V		17 36 52.6	
EGOR				Sn	Sn	17 37 55.6	-0.2
PVLZ	Peæn de	6.50	260	P	Pn	17 36 49.7	0.0
PVLZ				S	Sn	17 38 00.3	-3.7
UCM	Universidad Co	6.53	308	P	Pn	17 36 53.0	+2.9
UCM				S	Sn	17 38 02.0	-2.8
ECHI	Chisagues Biel	6.66	338	Pn	Pn	17 36 54.8	+2.8
ECHI	264nm,SNR=4.2			⇑iVmb_V		17 37 00.7	
ECHI				Sn	Sn	17 38 13.8	+5.6
EADA	Adamuz	6.67	287	Pn	Pn	17 36 52.1	+0.1
EADA	293nm,SNR=9.4			⇑iVmb_V		17 36 54.7	
EADA				Sn	Sn	17 38 06.7	-1.5
EMIJ	Mijas	6.69	273	Pn	Pn	17 36 50.2	-2.0
EMIJ	160nm,SNR=4.4			⇑iVmb_V		17 36 51.9	
EMIJ				Sn	Sn	17 38 02.4	-6.3
ESBB	Sonseca Array	6.70	300		Pn	17 36 53.7	+1.2
ESDC	Sonseca Array 4.4nm,0.3s,baz=108,slow=14,SNR=184 29nm,0.5s	6.70	300	Pn	Pn	17 36 53.5	+1.0
ESDC	Sonseca Array	6.70	300	Pn	Pn	17 36 53.0	+0.5
ESDC	Sonseca Array	6.70	300	Pn	Pn	17 36 54.0	+1.5
ESDC	680nm,SNR=18			⇑iVmb_V		17 37 02.3	
ESDC				Sn	Sn	17 38 10.5	+1.5
MTLF	Montolieu	6.89	352	eP	Pn	17 36 58.4	+3.3
MTLF	21nm,0.5s			eSn	Sn	17 38 08.7	-5.0
PAB	San Pablo	6.92	298	Pn	Pn	17 36 56.1	+0.7
PAB	San Pablo	6.92	298	P	Pn	17 36 56.2	+0.7
PAB	San Pablo	6.92	298	Pn	Pn	17 36 56.4	+0.9
PAB	407nm,SNR=14			⇑iVmb_V		17 37 04.8	
PAB				Sn	Sn	17 38 09.3	-5.1
PAB	San Pablo	6.92	298	P	Pn	17 36 56.6	+1.1
EPF	Esparros	6.96	340	eP	Pn	17 37 00.4	+4.4
EPF	93nm,0.8s			eSn	Sn	17 38 10.1	-5.2
ETSF	Etsaut	7.12	335	eP	Pn	17 37 02.1	+4.0
ETSF	20nm,0.5s			eSn	Sn	17 38 13.7	-5.5
LMR	La Mourre	7.19	18	ePn	Pn	17 37 00.7	+1.7
LMR	45nm,0.6s			eSn	Sn	17 38 15.8	-5.0
CEU	Ceuta	7.23	268	P	Pn	17 36 57.9	-1.7
CEU				S	Sn	17 38 14.3	-7.5
EJIF	Jimena Fronter	7.25	272	Pn	Pn	17 37 03.1	+3.1
SMIR	Smir Dam	7.26	266	P	Pn	17 36 58.3	-1.8
GUD	Guadarrama	7.30	307	Pn	Pn	17 37 02.5	+1.7
GUD	376nm,SNR=14			⇑iVmb_V		17 37 05.5	
GUD				Sn	Sn	17 38 25.9	+2.1
PGF	Pioggiola	7.36	33	ePn	Pn	17 37 03.1	+1.6
PGF	32nm,0.3s			eSn	Sn	17 38 21.9	-3.3
EORO	Oroz-Betelu	7.38	331	Pn	Pn	17 37 04.8	+3.0
EORO	419nm,SNR=4.2			⇑iVmb_V		17 37 10.8	
EORO				Sn	Sn	17 38 27.4	+1.6
SJPF	Ste Jean	7.54	332	eP	Pn	17 37 08.3	+4.4

SJPF				eSn	Sn	17 38 23.9	-5.7
	33nm,0.5s						
LASF	Ste Croix	7.56	2	eP	Pn	17 37 06.9	+2.7
LASF				eSn	Sn	17 38 26.6	-3.4
	119nm,0.8s						
SMRF	Simiane la Rot	7.62	11	ePn	Pn	17 37 08.2	+3.2
SMRF				eSn	Sn	17 38 26.2	-5.3
	13nm,0.5s						
MDT	Midelt	7.65	244	Pn	Pn	17 37 04.1	-1.5
	0.9nm,0.3s,baz=88,slow=14,SNR=42						
MDT				Lg	Lg	17 39 13.4	
	2.6nm,0.3s,baz=311,slow=21,SNR=5.6						
MDT				LR	LR	17 40 18.0	
	comp=Z,1µm,19.2s,baz=64,slow=40						
	33nm,0.8s						
MDT	Midelt	7.65	244	P	Pn	17 37 05.0	-0.6
IFR	Ifrane	7.71	250	P	Pn	17 37 06.0	-0.4
MD31	MD31	7.74	244	P	Pn	17 37 06.2	-0.5
EALK	Alkurruntz	7.74	332	Pn	Pn	17 37 09.7	+3.0
CLTB	Caltabellotta	7.81	79		Pn	17 37 09.1	+1.3
SBF	Sospel	7.92	21	ePn	Pn	17 37 10.7	+1.5
SBF				eSn	Sn	17 38 33.4	-5.7
	48nm,0.4s						
EMIN	Mina Concepcio	8.25	282	Pn	Pn	17 37 14.0	+0.4
EMIN				⇑iVmb_V		17 37 17.1	
	295nm,SNR=7.4						
EMIN				Sn	Sn	17 38 45.7	-1.3
EPLA	Plasencia	8.35	298	Pn	Pn	17 37 16.5	+1.4
VIVF	Saint-Julien-l	8.38	6	eP	Pn	17 37 17.8	+2.3
VIVF				eSn	Sn	17 38 44.2	-6.0
	34nm,0.6s						
CASP	Castiglione de	8.44	40	Pn	Pn	17 37 17.1	+0.9
CAF	Calviac	8.48	353	eP	Pn	17 37 21.4	+4.6
CAF				eSn	Sn	17 38 46.5	-6.2
	21nm,0.7s						
MBDF	Montbardon	8.57	16	eP	Pn	17 37 21.3	+3.2
MBDF				eSn	Sn	17 38 49.1	-5.9
	23nm,0.7s						
ELAN	Lanestosa	8.58	324	Pn	Pn	17 37 21.6	+3.3
ELAN				⇑iVmb_V		17 37 24.6	
	990nm,SNR=4.3						
ORIF	Oris-en-Rattie	8.58	11	eP	Pn	17 37 22.0	+3.7
ORIF				eSn	Sn	17 38 49.0	-6.3
	19nm,0.8s						
PBAR	Barrancos	8.58	284	eP	Pn	17 37 19.3	+1.1
	33nm,1.2s						
EBAD	Badajoz	8.66	288	Pn	Pn	17 37 20.1	+0.8
EBAD				⇑iVmb_V		17 37 27.4	
	287nm,SNR=6.5						
LFF	La Frestale	8.68	347	eP	Pn	17 37 23.6	+4.1
LFF				eSn	Sn	17 38 51.2	-6.3
	52nm,0.8s						
RAFF	Raffo Rosso	8.71	82	Pn	Pn	17 37 21.0	+1.1
VAE	Valguarnera	8.76	80	Pn	Pn	17 37 20.4	-0.2
	3.0nm,0.4s,baz=303,slow=16,SNR=1.6						
SSB	Saint Sauveur	8.79	5	Pn	Pn	17 37 22.6	+1.5
SSB	Saint Sauveur	8.79	5	P	Pn	17 37 22.6	+1.5
BNI	Bardonecchia	8.86	15	Pn	Pn	17 37 24.6	+2.6
BNI	Bardonecchia	8.86	15	P	Pn	17 37 24.7	+2.6
EGRO	El Granado	8.87	280	Pn	Pn	17 37 22.3	+0.1
EGRO				⇑iVmb_V		17 37 24.6	
	385nm,SNR=5.9						
RJF	Les Rejaudoux	8.91	351	eP	Pn	17 37 26.8	+4.0
RJF				eSn	Sn	17 38 57.3	-6.0
	18nm,0.7s						
MSSA	Maissana	9.03	28	Pn	Pn	17 37 26.3	+1.9
PVAQ	Vaqueiros	9.05	279	eP	Pn	17 37 24.5	-0.2
	50nm,1.8s						
PVAQ				eLR	LR	17 39 48.0	
	807nm,18.0s						
PVAQ	Vaqueiros	9.05	279		Pn	17 37 24.4	-0.2
PVAQ	Vaqueiros	9.05	279	P	Pn	17 37 25.0	+0.4
PMRV	Marv??o	9.11	292	eP	Pn	17 37 28.7	+3.3
	180nm,1.3s						
PMRV				eLR	LR	17 39 35.0	
	668nm,18.0s						
PESTR	Estremoz	9.13	288	eP	Pn	17 37 26.1	+0.4
	39nm,1.3s						
PESTR	Estremoz	9.13	288	Pn	Pn	17 37 25.9	+0.2
PESTR	Estremoz	9.13	288	P	Pn	17 37 26.2	+0.5
OSSC	Osservatorio P	9.16	38		Pn	17 37 27.5	+1.3
PBEJ	Beja	9.21	283	eP	Pn	17 37 27.0	+0.1
	71nm,1.8s						
PBDV	Barranco-do-Ve	9.22	278	eP	Pn	17 37 26.9	-0.1
	52nm,1.4s						
VLC	Villacollemand	9.25	32	Pn	Pn	17 37 29.4	+1.9
PCBR	Castelo Branco	9.29	294	eP	Pn	17 37 29.9	+2.1
	144nm,1.3s						
LPG	La Plagne	9.30	14	eP	Pn	17 37 32.7	+4.4
LPG				eSn	Sn	17 39 07.0	-6.2
	11nm,0.5s						
LPL	La Plagne	9.31	14	eP	Pn	17 37 32.5	+4.1
LPL				eSn	Sn	17 39 07.2	-6.2
	22nm,0.7s						
PCVE	Castro Verde	9.32	280	eP	Pn	17 37 28.7	+0.4
	70nm,2.0s						
EVO	Evora	9.39	286	eP	Pn	17 37 30.5	+1.2
	61nm,1.1s						
MVO	Moncorvo	9.46	303	eP	Pn	17 37 32.3	+2.0
	101nm,0.9s						
MVO				eLR	LR	17 39 55.1	
	1µm,18.0s						
MESJ	Messejana	9.47	282	eP	Pn	17 37 28.4	-2.1
MESJ				IAMs_20	IAMs_20	17 40 58.7	
	comp=Z,1µm,13.4s						
MESJ	Messejana	9.47	282	eP	Pn	17 37 30.1	-0.3
	comp=Z,68nm,1.1s						
MTE	Manteigas	9.52	297	eP	Pn	17 37 34.1	+3.0
	comp=Z,28nm,0.8s						
MTE				eLR	LR	17 40 01.3	
	comp=Z,1µm,16.0s						
MTE	Manteigas	9.52	297	Pn	Pn	17 37 32.2	+1.1
EARI	Arriondas	9.54	318	Pn	Pn	17 37 34.0	+2.6
EARI				⇑iVmb_V		17 37 37.6	
	comp=Z,2µm,SNR=10						
AVE	Averroes	9.54	254	P	Pn	17 37 32.9	+1.5
PBRG	Braganca	9.57	307	eP	Pn	17 37 34.0	+2.2
	comp=Z,63nm,0.9s						
AQU	L'Aquila	9.60	50	Pn	Pn	17 37 33.0	+0.8
AQU	L'Aquila	9.60	50	P	Pn	17 37 33.0	+0.8
ECAL	Calabor	9.63	307	Pn	Pn	17 37 34.3	+1.6
ECAL				⇑iVmb_V		17 37 36.4	
	comp=Z,1µm,SNR=19						
MURB	Monte Urbino	9.65	43	Pn	Pn	17 37 34.7	+1.8
PMTG	Montargil	9.65	289	eP	Pn	17 37 34.2	+1.3
	comp=Z,47nm,1.2s						
ZCCA	Zocca	9.66	34	Pn	Pn	17 37 32.3	-0.7
NRCA	Norcia	9.71	47		Pn	17 37 34.5	+0.8
PNCL	Nicolau / Gran	9.74	283	eP	Pn	17 37 34.4	+0.3
	comp=Z,48nm,1.1s						
MORF	Marmelete	9.79	278	eP	Pn	17 37 32.4	-2.4
MORF				IAMs_20	IAMs_20	17 41 24.5	
	comp=E,1µm,20.3s						
TCF	Toulx Ste Croi	9.82	355	eP	Pn	17 37 39.6	+4.4
TCF				eSn	Sn	17 39 18.3	-7.2
	comp=E,19nm,0.8s						
PTEO	Sao Teotonio	9.86	280	eP	Pn	17 37 36.1	+0.4
	comp=E,85nm,1.7s						
PVIS	Viseu	9.88	299	eP	Pn	17 37 37.6	+1.6
	comp=E,47nm,0.9s						
PFVI	Vila Bisbo	9.93	277	eP	Pn	17 37 37.3	+0.5
	comp=E,101nm,1.6s						
PFVI	Vila Bisbo	9.93	277	Pn	Pn	17 37 37.2	+0.5
ZGR	Zagora	9.96	233	P	Pn	17 37 36.7	-0.5
PVRL	Vila Real	9.97	302	eP	Pn	17 37 39.5	+2.2
	comp=E,73nm,0.7s						
BGF	Bois d'Agland	10.05	357	eP	Pn	17 37 41.8	+3.5
BGF				eSn	Sn	17 39 24.2	-7.0
	comp=E,34nm,0.8s						
POLO	Lamas de Olo	10.07	302	eP	Pn	17 37 41.1	+2.4
	comp=E,33nm,0.7s						
COI	Coimbra	10.08	295	eP	Pn	17 37 42.0	+3.3
	comp=E,100nm,0.9s						
COI	Coimbra	10.08	295	Pn	Pn	17 37 39.7	+1.0
COI	Coimbra	10.08	295	P	Pn	17 37 39.7	+1.0
PCAS	Casmilo, Conde	10.10	294	eP	Pn	17 37 41.2	+2.2
	comp=E,77nm,1.3s						
SMF	Signal de Mont	10.13	1	eP	Pn	17 37 42.9	+3.5
SMF				eSn	Sn	17 39 26.1	-7.0
	comp=E,55nm,1.1s						
PSBE	So Bento	10.18	291	eP	Pn	17 37 43.8	+3.7
	comp=E,56nm,1.5s						
SENIN	Lac Senin/Sane	10.24	15	Pn	Pn	17 37 43.0	+1.9
SENIN	Lac Senin/Sane	10.24	15	Pn	Pn	17 37 44.5	+3.4
CUC	Castrocucco	10.26	67	Pn	Pn	17 37 41.9	+0.6
CABF	La Chapelle	10.27	10	eP	Pn	17 37 44.8	+3.4
CABF				eSn	Sn	17 39 29.4	-7.3
	comp=E,45nm,1.2s						
AVF	Avril sur Loir	10.27	359	eP	Pn	17 37 45.1	+3.8
AVF				eSn	Sn	17 39 29.1	-7.5
	comp=E,12nm,0.8s						
PCAB	Cabril	10.37	304	eP	Pn	17 37 45.4	+2.6
	comp=E,49nm,0.9s						
PMAFR	Mafra	10.44	287	eP	Pn	17 37 44.5	+0.8
	comp=E,112nm,1.7s						
MFF	Saint Martin d	10.45	346	eP	Pn	17 37 46.6	+2.8
MFF				eSn	Sn	17 39 33.3	-7.7
	comp=E,20nm,0.7s						
ELOB	Lobios	10.46	304	Pn	Pn	17 37 45.8	+1.7
ELOB				⇑iVmb_V		17 37 48.1	
	comp=E,480nm,SNR=5.9						
SALO	Salr	10.51	28	Pn	Pn	17 37 47.8	+3.1
SSF	Saint Saulge	10.54	360	eP	Pn	17 37 48.8	+3.8
SSF				eSn	Sn	17 39 36.0	-7.2
	comp=E,9.2nm,0.7s						
BRANT	Les Verrieres	10.64	11	Pn	Pn	17 37 49.8	+3.3
PGAV	Gavieira, Arco	10.65	304	eP	Pn	17 37 49.3	+2.7
	comp=E,45nm,1.8s						
PGAV				eLR	LR	17 40 28.1	
	comp=E,954nm,18.0s						
LOR	Lormes	10.75	1	eP	Pn	17 37 52.6	+4.7
	baz=181						
LOR				eSn	Sn	17 39 41.2	-7.2
	comp=E,6.4nm,0.6s,baz=180						
TEOL	Teolo	10.76	32	Pn	Pn	17 37 48.9	+0.8
HYF	Humbligny	10.77	357	eP	Pn	17 37 52.8	+4.6
TIP	Timpagrande	10.79	72	Pn	Pn	17 37 49.2	+0.7
SGRT	San Giovanni R	10.83	57	Pn	Pn	17 37 50.1	+1.0
TUE	Stuetta	10.86	22	Pn	Pn	17 37 50.8	+1.2
DAVOX	Davos/Dischmat	11.30	23	Pn	Pn	17 37 57.0	+1.4
	comp=E,0.2nm,0.3s,baz=183,slow=21,SNR=1.9						
DAVOX				LR	LR	17 41 53.6	
	comp=E,201nm,19.7s,baz=262,slow=35						
	comp=E,1.0nm,0.3s						
CTI	Castel Tesino	11.31	30		Pn	17 37 57.7	+2.1
CTI	Castel Tesino	11.31	30	P	Pn	17 37 57.7	+2.1
CLF	Chambon-Foret	11.54	356	Pn	Pn	17 38 02.4	+3.7
HINF	Hinteralfeld	11.56	11	eP	Pn	17 38 01.8	+2.8
HINF				eSn	Sn	17 40 00.5	-7.7
	comp=E,2.6nm,0.5s						
HAU	Haudompre	11.67	9	eP	Pn	17 38 03.3	+2.8
HAU				eSn	Sn	17 40 03.5	-7.5
	comp=E,5.0nm,0.5s						
SFTF	Sexfontaines	11.74	5	eP	Pn	17 38 05.2	+3.8
	baz=184						
SFTF				eSn	Sn	17 40 04.7	-7.8
	comp=E,27nm,1.0s						
DAVA	Damuels	11.75	22	ePn	Pn	17 38 07.3	+5.5
	comp=E,2.6nm,0.4s						
FETA	Feichten	11.79	25	ePn	Pn	17 38 08.5	+6.3
	comp=E,4.3nm,0.8s						
STAL	STALIGIAL	11.92	32	Pn	Pn	17 38 06.6	+2.7
ECH	Echery	12.00	12	Pn	Pn	17 38 05.7	+0.7
ECH	Echery	12.00	12	P	Pn	17 38 05.7	+0.7
MEZF	Maizieres J'vi	12.03	5	eP	Pn	17 38 09.8	+4.4
	baz=184						
MEZF				eSn	Sn	17 40 11.5	-8.2
	comp=E,7.6nm,0.6s						
SQTA	Sankt Quirin	12.12	26	ePn	Pn	17 38 11.6	+4.8
	comp=E,2.6nm,0.4s						
PAGF	Fort de Pagny	12.14	7	eP	Pn	17 38 11.7	+4.8
	baz=187						
PAGF				eSn	Sn	17 40 14.2	-8.2
	comp=E,9.5nm,0.7s						
SAVF	Savonnieres en	12.15	5	eP	Pn	17 38 11.7	+4.7
	baz=184						
SAVF				eSn	Sn	17 40 14.4	-8.2
	comp=E,6.9nm,0.5s						
MOTA	Moosalm	12.20	25	ePn	Pn	17 38 14.3	+6.5
CDF	Champ du Feu	12.21	12	eP	Pn	17 38 10.9	+3.0
CDF				eSn	Sn	17 40 16.2	-7.9
	comp=E,4.2nm,0.6s						
ABTA	Abfaltersbach	12.22	30	ePn	Pn	17 38 13.2	+5.0
	comp=E,6.9nm,0.9s						
GRR	Gorron	12.30	346	eP	Pn	17 38 11.7	+2.6
GRR				eSn	Sn	17 40 17.7	-8.6
	comp=E,19nm,0.8s						
WTTA	Wattenberg	12.31	27	ePn	Pn	17 38 15.7	+6.3
	comp=E,7.1nm,0.6s						
BFO	Black Forest	12.33	15	Pn	Pn	17 38 10.3	+0.8
BFO	Black Forest	12.33	15	P	Pn	17 38 10.3	+0.8
WATA	Walderalm	12.35	26	ePn	Pn	17 38 15.3	+5.4
	comp=E,2.0nm,0.3s						
LDF	La Druitiere	12.37	349	eP	Pn	17 38 12.5	+2.5
LDF				eSn	Sn	17 40 19.3	-8.6
	comp=E,15nm,0.8s						
QUIF	Quistinic	12.42	339	eP	Pn	17 38 13.9	+3.1
QUIF				eSn	Sn	17 40 20.7	-8.6
	comp=E,9.2nm,0.6s						
SGMF	Saint Gilles	12.56	341	eP	Pn	17 38 16.5	+3.9
SGMF				eSn	Sn	17 40 23.9	-8.8
	comp=E,31nm,0.9s						
FLN	La Foliniere	12.59	348	eP	Pn	17 38 16.3	+3.2
	baz=167						
FLN				eSn	Sn	17 40 24.7	-8.7
	comp=E,7.3nm,0.7s						
KBA	Koelnbreinsper	12.83	32	i Pn	Pn	17 38 21.5	+5.0
	SNR=6.3						
ROSF	Rostrenen	12.83	339	eP	Pn	17 38 20.1	+3.7
ROSF				eSn	Sn	17 40 30.2	-9.1
	comp=E,7.4nm,0.6s						
OBKA	Obir	12.94	36	ePn	Pn	17 38 20.9	+2.9
	comp=E,7.5nm,1.0s						
KEK	Kerkira	13.20	71	Pn	Pn	17 38 21.3	-0.1
WLF	Walferdange	13.28	7		Pn	17 38 24.1	+1.6
WLF	Walferdange	13.28	7	P	Pn	17 38 24.1	+1.6
WLF	Walferdange	13.28	7	dPn	Pn	17 38 22.3	-0.2
WLF				dPnPn	PnPn	17 38 29.7	-0.6
SOKA	Soboth	13.30	37	i Pn	Pn	17 38 27.0	+4.2
	comp=E,5.7nm,1.0s,SNR=5.1						
PDG	Podgorica	13.50	59	Pn	Pn	17 38 26.4	+1.0
BAIF	Baives	13.55	2	eP	Pn	17 38 30.4	+4.3
BAIF				eSn	Sn	17 40 47.8	-9.0
	comp=E,2.6nm,0.4s						
DOU	Dourbes	13.60	3	dP	Pn	17 38 30.5	+3.7
	comp=Z,31nm,0.9s						
GIVF	Givet	13.62	4	eP	Pn	17 38 31.0	+4.0
GIVF				eSn	Sn	17 40 49.3	-9.1
	comp=Z,1.9nm,0.2s						
RCHB	Rochefort	13.69	5	dP	P	17 38 32.8	-4.1
	comp=Z,23nm,1.0s						
BMRD	Maredsous	13.81	3	dP	Pn	17 38 33.3	+3.6
	comp=Z,18nm,0.9s						
MOA	Molln	13.83	32	ePn	P	17 38 35.6	-2.8
	comp=Z,5.3nm,0.6s						
BGES	Gesves	13.91	4	dP	Pn	17 38 34.8	+3.7
	comp=Z,32nm,0.9s						
ARSA	Arzberg	13.94	36	i Pn	Pn	17 38 35.3	+3.8
	comp=Z,8.5nm,0.8s,SNR=7.5						
BHOU	Houvegnez	13.95	7	dP	Pn	17 38 34.3	+2.7
BCLA	Clavier	13.96	5	dP	P	17 38 36.1	-3.8
	comp=Z,20nm,1.0s						
SNF	Seneffe	14.00	2	dP	Pn	17 38 35.5	+3.2
	comp=Z,61nm,0.6s						
SNF				dPbPb	PbPb	17 39 17.8	-0.1
KBN	Korca	14.11	68	Pn	Pn	17 38 35.3	+1.4
KBN	Korca	14.11	68	P	Pn	17 38 35.3	+1.4
BTNL	Ternell	14.19	7	dP	P	17 38 39.0	-3.4
MEM	Membach	14.20	6	dP	Pn	17 38 37.2	+2.2
	comp=Z,13nm,0.9s						
GRFO	Grafenberg	14.31	21	Pn	Pn	17 38 37.3	+0.8
GRFO	Grafenberg	14.31	21	P	Pn	17 38 37.3	+0.8
GRA1	Grafenberg Arr	14.31	21		Pn	17 38 37.6	+1.1
GRF	Grafenberg Arr	14.31	21	P	Pn	17 38 37.6	+1.1
GEC2	GERESS Array S	14.40	28		Pn	17 38 39.5	+1.7
GERES	GERESS Array B	14.40	28	Pn	Pn	17 38 40.2	+2.3
	comp=Z,0.1nm,0.3s,baz=201,slow=11,SNR=55						
GERES				PcP	PcP	17 43 54.3	+0.5
	comp=Z,0.5nm,0.5s,baz=270,slow=1.2,SNR=5.2						
GERES				LR	LR	17 44 27.6	
	comp=Z,99nm,18.4s,baz=254,slow=38						
	comp=Z,9.1nm,0.9s						
GERES	GERESS Array B	14.40	28	Pn	Pn	17 38 39.3	+1.4
FNA	Florina	14.58	68		Pn	17 38 41.0	+0.7
FNA	Florina	14.58	68	P	Pn	17 38 41.0	+0.7
KHC	Kasperske Hory	14.59	27	Pn	Pn	17 38 40.5	+0.2
KHC	Kasperske Hory	14.59	27	eP	Pn	17 38 41.8	+1.4
KHC				MLR	MLR		
	comp=Z,200nm,9.1s						
KHC	Kasperske Hory	14.59	27	eP	Pn	17 38 41.8	+1.4
KHC				epP	P	17 38 49.6	+2.7
KHC				AMS	AMS	17 47 10.0	
	comp=Z,200nm,9.1s						
CONA	Conrad Observa	14.59	35	i Pn	Pn	17 38 43.7	+3.2
	comp=Z,11nm,1.4s,SNR=9.6						
CKRC	Cesky Krumlov	14.61	29	eP	Pn	17 38 43.9	+3.2
RONA	Rosalia, Austr	14.63	36	i Pn	P	17 38 44.5	-2.9
	SNR=10						
DIVS	Divibare	14.65	54		Pn	17 38 41.1	-0.2
ITM	Ithomi	14.75	82	Pn	Pn	17 38 44.5	+1.9
FRGS	Fruska Gora	15.02	50	⇑P	P	17 38 51.4	-0.4
NKC	Novy Kostel	15.15	22	AMS	AMS	17 44 10.0	
	comp=Z,200nm,20.8s						
LIT	Litokhoron	15.30	71	Pn	Pn	17 38 49.6	-0.4
LIT	Litokhoron	15.30	71	P	Pn	17 38 49.7	-0.4
LIT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZST	Bratislava	15.36	36	eP	P	17 38 58.3	+2.8
ZST	Bratislava	15.36	36	eP	P	17 38 58.3	+2.8
TREC	Trest	15.46	31	AMS	AMS	17 46 30.0	
	comp=Z,200nm,11.0s						
MODS	Modra-Piesok	15.57	36	eP	P	17 38 59.9	+2.1
MODS				pmax	pmax		
	comp=Z,62nm,1.2s						
MODS	Modra-Piesok	15.57	36	eP	P	17 38 59.9	+2.1
BOVS	Bovan	15.61	57	⇑P	P	17 38 57.4	-0.8
PRU	Pruhonice	15.65	27	eP	P	17 39 00.9	+2.3
PRU				MLR	MLR		
	comp=Z,200nm,11.4s						
PRU	Pruhonice	15.65	27	eP	P	17 39 00.9	+2.3
PRU				AMS	AMS	17 47 40.0	
	comp=Z,200nm,11.4s						
KRUC	Moravsky	15.67	33	ePN	P	17 38 57.1	-1.8
SMOL	Smolenice	15.74	36	eP	P	17 39 01.5	+1.8
SMOL				pmax	pmax		
	comp=Z,11nm,1.4s						
SMOL	Smolenice	15.74	36	eP	P	17 39 01.5	+1.8
VRAC	Vranov	15.94	33	⇑P	P	17 39 04.1	+2.2
VRAC	Vranov	15.94	33	Pn	P	17 39 00.8	-1.1
	comp=Z,0.2nm,0.3s,baz=222,slow=11,SNR=10						
VRAC				LR	LR	17 45 17.2	
	comp=Z,143nm,18.4s,baz=224,slow=38						
	comp=Z,12nm,1.0s						
VRAC	Vranov	15.94	33	ePN	P	17 39 00.9	-1.0
MDVR	Moldovita	16.06	53	⇓P	P	17 39 04.0	+0.7
KKB	Krupnik	16.06	65	i P	P	17 39 02.6	-0.7
JAVC	Velka Javorina	16.10	36	ePN	P	17 39 04.3	+0.6
PVCC	Panska Ves	16.11	26	AMS	AMS	17 45 50.0	
	comp=Z,200nm,12.4s						
BRG	Berggiesshubel	16.18	24	eP	P	17 39 05.2	+0.6
BRG				Amp		17 39 10.4	
	comp=Z,13nm,1.2s						
BRG				Amp		17 45 40.0	
	comp=Z,0.2nm,14.5s						
BRG				Amp		17 45 45.0	
	comp=N,0.3nm,12.7s						
BRG				Amp		17 45 46.0	
	comp=E,0.5nm,12.3s						
BRG	Berggiesshubel	16.18	24	eP	P	17 39 05.1	+0.6
BRG				pmax	pmax		
	comp=Z,13nm,1.2s						
BRG				MLR	MLR		
	comp=Z,200nm,14.5s						
BRG				MLR	MLR		
	comp=N,280nm,12.7s						
BRG				MLR	MLR		
	comp=E,450nm,12.3s						
KOLL	Kolacno	16.26	37	eP	P	17 39 06.8	+1.4
CLL	Collm	16.27	22		Pn	17 39 02.1	-0.3
CLL	Collm	16.27	22	i P	P	17 39 04.9	-0.5
CLL				pmax	pmax		
	comp=Z,11nm,1.5s						
CLL	Collm	16.27	22	i P	P	17 39 04.9	-0.5
	comp=Z,11nm,1.5s						
CLL				i pP	pP	17 39 07.1	-0.9
CLL				i sP	sP	17 39 08.6	-0.5
	comp=Z,25nm,1.3s						
CLL				esPP		17 39 18.0	
CLL				eS	S	17 42 13.0	-2.8
CLL				LmV		17 44 00.0	
	comp=Z,100nm,21.4s						
VTS	Vitosha	16.36	62		Pn	17 39 02.7	-1.0
VTS	Vitosha	16.36	62	P	Pn	17 39 02.7	-1.0
VTS				pmax	pmax		
	comp=Z,11nm,1.3s						
VTS	Vitosha	16.36	62	i P	P	17 39 05.7	-1.0
BZS	Buzias	16.36	51	⇓P	P	17 39 08.3	+1.7
VYHS	Vyhne	16.41	38	eP	P	17 39 08.1	+0.9
VYHS				pmax	pmax		
	comp=Z,34nm,2.3s						
VYHS	Vyhne	16.41	38	eP	P	17 39 08.1	+0.9
MMB	Musomiste	16.48	66	i P	P	17 39 07.4	-0.5
MAUC	Maruska	16.53	35	eP	P	17 39 10.4	+1.9
MAUC				AMS	AMS	17 46 00.0	
	comp=Z,300nm,15.9s						
PSZ	Piszkesteto	16.60	42	⇓P	P	17 39 11.6	+2.3
PSZ	Piszkesteto	16.60	42	Pn	Pn	17 39 07.9	+1.2
PSZ	Piszkesteto	16.60	42	P	Pn	17 39 07.9	+1.2
PSZ				pmax	pmax		
	comp=Z,26nm,1.2s						
KRLC	Kraliky	16.60	31	eP	P	17 39 10.0	+0.8
KRLC				MLR	MLR		
	comp=Z,200nm,10.9s						
KRLC	Kraliky	16.60	31	eP	P	17 39 10.0	+0.8
KRLC				AMS	AMS	17 47 40.0	
	comp=Z,200nm,10.9s						
DPC	Dobruska-Polom	16.62	30	eP	P	17 39 10.2	+0.7
DPC				MLR	MLR		
	comp=Z,200nm,9.7s						
DPC	Dobruska-Polom	16.62	30	eP	P	17 39 10.2	+0.7
DPC				AMS	AMS	17 47 40.0	
	comp=Z,200nm,9.7s						
UPC	Upice	16.63	29	eP	P	17 39 12.5	+3.0
UPC				MLR	MLR		
	comp=Z,100nm,10.5s						
UPC	Upice	16.63	29	eP	P	17 39 12.5	+3.0
UPC				AMS	AMS	17 47 40.0	
	comp=Z,100nm,10.5s						
SIRR	Siria	16.70	49	⇓P	P	17 39 12.6	+2.3
MORC	Moravsky Berou	16.70	33	⇓P	P	17 39 13.2	+2.8
MORC	Moravsky Berou	16.70	33	Pn	Pn	17 39 07.5	-0.5
MORC	Moravsky Berou	16.70	33	P	Pn	17 39 07.5	-0.5
MORC				pmax	pmax		
	comp=Z,21nm,1.1s						
MORC	Moravsky Berou	16.70	33	ePN	P	17 39 10.1	-0.3
OSTC	Ostas	16.75	29	eP	P	17 39 13.0	+2.2
OSTC				AMS	AMS	17 47 30.0	
	comp=Z,200nm,8.6s						
MPEP	Malo Peshtene	16.92	60	i P	P	17 39 13.8	+1.1
GZR	Gura Zlata	17.00	53	⇓P	P	17 39 15.8	+2.1
OKC	Ostrava-Krasne	17.02	34	eP	P	17 39 16.1	+2.3
OKC				MLR	MLR		
	comp=Z,200nm,12.3s						
OKC	Ostrava-Krasne	17.02	34	eP	P	17 39 16.1	+2.3
OKC				AMS	AMS	17 47 20.0	
	comp=Z,200nm,12.3s						
LANS	Liptovska Anna	17.16	38	eP	P	17 39 18.7	+3.2
LANS				pmax	pmax		
	comp=Z,15nm,1.2s						
LANS	Liptovska Anna	17.16	38	eP	P	17 39 18.7	+3.2
IDI	Anoyia	17.35	88	⇑P	Pn	17 39 16.3	+0.1
IDI	Anoyia	17.35	88	P	P	17 39 17.8	+0.2
	comp=Z,1.0nm,0.3s,baz=292,slow=11,SNR=11						
	comp=Z,45nm,1.1s						
IDI	Anoyia	17.35	88		Pn	17 39 16.4	+0.1
PMOZ	Porto Moniz, M	17.44	264	eLR	LR	17 44 45.3	
	comp=Z,219nm,18.0s						
PMOZ	Porto Moniz, M	17.44	264	P	Pn	17 39 17.9	+0.4
DRGR		17.59	48	⇑P	P	17 39 23.5	+3.3
APE	Apeiranthos	17.63	82	⇑P	P	17 39 21.0	+0.3
APE	Apeiranthos	17.63	82	i P	Pn	17 39 20.5	+0.8
SANT	Santorini	17.64	84	P	P	17 39 21.6	+0.8
SANT				IAmb	IAmb	17 40 01.5	
	comp=Z,137nm,1.9s						
LOT	Lotru	17.66	53	⇑P	P	17 39 24.5	+3.4
RDO	Rodhopi	17.75	68		Pn	17 39 20.5	-0.5
CRVS	Cervenica-Dubn	18.02	41	eP	P	17 39 29.4	+4.5
CRVS				pmax	pmax		
	comp=Z,62nm,1.5s						
CRVS	Cervenica-Dubn	18.02	41	eP	P	17 39 29.3	+4.4
ALN	Alexandroupoli	18.09	69	P	Pn	17 39 25.8	+0.4
ALN	Alexandroupoli	18.09	69	P	Pn	17 39 25.8	+0.4
ALN				pmax	pmax		
	comp=Z,19nm,1.1s						

UZH	Uzhgorod	18.31	43	eP	P	17 39 29.6	+1.5
UZH				eS	Sn	17 42 51.6	-0.9
UZH				MLR	MLR		
	comp=N,130nm,22.0s						
UZH				MLR	MLR		
	comp=E,100nm,22.0s						
UZH				MLR	MLR		
	comp=Z,3.0nm,22.0s						
KOLS	Kolonicke sedl	18.48	42	eP	Pn	17 39 34.8	+4.8
KOLS				pmax	pmax		
	comp=Z,12nm,0.7s						
KOLS	Kolonicke sedl	18.48	42	eP	Pn	17 39 34.8	+4.8
DOPR	Dopca	18.91	53	⇓P	Pn	17 39 38.1	+2.8
MLR	Muntele Rosu	19.10	55	⇑P	Pn	17 39 39.5	+1.8
MLR	Muntele Rosu	19.10	55	P	Pn	17 39 39.3	+1.7
	comp=Z,0.1nm,0.3s,baz=235,slow=6.0,SNR=14						
MLR				LR	LR	17 47 51.4	
	comp=Z,117nm,20.2s,baz=244,slow=40						
	comp=Z,24nm,1.0s						
MLR	Muntele Rosu	19.10	55	P	P	17 39 35.5	-1.4
KARP	Karpathos	19.13	86	P	P	17 39 35.8	-1.4
KARP				IAmb	IAmb	17 39 48.0	
	comp=Z,44nm,0.9s						
ISR	Istrita	19.37	57	⇑P	Pn	17 39 42.5	+1.6
EKA	Eskdalemuir Ar	19.37	348	P	Pn	17 39 41.3	+0.5
	baz=171,slow=11						
EKA				LR	LR	17 46 45.8	
	comp=Z,259nm,19.4s,baz=173,slow=36						
	comp=Z,6.6nm,0.9s						
COVR	Voineasa-Covas	19.39	54	⇑P	Pn	17 39 42.8	+1.7
BALB	Balikesir	19.40	73	P	Pn	17 39 41.4	+0.1
BURAR	Bucovina Array	19.48	49	⇓P	Pn	17 39 44.8	+2.6
BURAR	Bucovina Array	19.48	49	P	P	17 39 40.9	-0.2
BUR08	Bucovina Ar. S	19.49	48	P	P	17 39 41.9	+0.8
PLOR	Plostina	19.68	55	⇑P	Pn	17 39 45.8	+1.2
BIZ	Bicaz	19.74	51	⇑P	Pn	17 39 47.5	+2.2
VRI	Vrincioaia	19.74	55	⇑P	Pn	17 39 46.7	+1.4
TESR	Tescani	19.92	53	⇓P	Pn	17 39 48.9	+1.5
LVV	L'vov	19.93	42	eP	Pn	17 39 48.6	+1.2
ICOR	Ion Corvin	19.96	60	⇑P	Pn	17 39 48.9	+1.1
HARR	Harsova	20.19	59	⇑P	Pn	17 39 50.4	-0.2
GHRR		20.25	54	⇑P	Pn	17 39 52.7	+1.4
TIRR	Tirgusor	20.47	60	⇓P	Pn	17 39 53.7	-0.1
TIRR	Tirgusor	20.47	60	P	P	17 39 50.7	-1.0
TIRR				IAmb	IAmb	17 39 59.0	
	comp=Z,35nm,1.1s						
TIRR	Tirgusor	20.47	60	P	P	17 39 50.7	-1.0
TIRR				pmax	pmax		
	comp=Z,35nm,1.1s						
TPGR	Topolog	20.57	58	⇑P	Pn	17 39 54.4	-0.6
VASR	Vaslui	20.70	53	⇑P	Pn	17 39 56.7	+0.1
TLCR		20.93	58	⇑P	Pn	17 39 58.8	-0.4
AKAS	Kas	20.98	83	P	P	17 39 56.9	-0.6
AKAS				IAmb	IAmb	17 40 11.0	
	comp=Z,51nm,1.2s						
ELL	Elmali	21.15	81	P	P	17 39 59.4	+0.1
ELL				IAmb	IAmb	17 40 07.3	
	comp=Z,39nm,0.9s						
ELL	Elmali	21.15	81	P	P	17 39 59.4	+0.1
ELL				pmax	pmax		
	comp=Z,39nm,0.9s						
BORA	Eskisehir	21.39	73	P	P	17 40 01.0	-0.8
MILM	Milestii Mici	21.46	53	eP	P	17 40 02.0	-0.3
	comp=Z,120nm,2.4s						
MILM	Milestii Mici	21.46	53	eP	P	17 40 02.0	-0.3
MILM				e		17 40 28.0	
MILM				i PPP	PPP	17 40 40.0	
MILM				eS	S	17 43 59.0	-1.4
MILM				pmax	pmax		
	comp=Z,120nm,2.4s						
MILM				MLR	MLR		
	comp=Z,100nm,20.0s						
ISP	Isparta	21.52	78	P	P	17 40 01.7	-1.6
ISP	Isparta	21.52	78	P	P	17 40 01.7	-1.6
ISP				pmax	pmax		
	comp=Z,12nm,0.7s						
SORM	Soroca	21.61	50	⇑P	P	17 40 06.4	+2.4
MDUB	Mudurnu	21.97	71	P	P	17 40 06.4	-1.7
SUW	Suwalki	22.18	32	P	P	17 40 09.3	-0.7
SUW	Suwalki	22.18	32	P	P	17 40 09.3	-0.7
SUW				pmax	pmax		
	comp=Z,92nm,1.0s						
SUW	Suwalki	22.18	32	eP	P	17 40 10.7	+0.7
KOWA	Kowa	22.94	199	P	P	17 40 16.1	-2.3
PBUR	Paburge	23.16	27	eP	P	17 40 22.6	+2.3
AKASG	Malin Array Be	23.24	44	P	P	17 40 20.4	-0.8
	comp=Z,15nm,0.9s,baz=245,slow=9.6,SNR=26						
AKASG				LR	LR	17 49 56.2	
	comp=Z,64nm,20.3s,baz=194,slow=38						
	comp=Z,15nm,0.9s						
AKASG	Malin Array Be	23.24	44	P	P	17 40 19.5	-1.7
AKBB	Malin Array Si	23.24	44	P	P	17 40 19.3	-1.9
AKBB				IAmb	IAmb	17 40 23.1	
	comp=Z,32nm,1.1s						
AKBB	Malin Array Si	23.24	44	ceP	P	17 40 20.0	-1.2
TOA0	Torodi Ar. Sit	23.32	185	P	P	17 40 20.2	-2.2
TOA0				IAmb	IAmb	17 40 22.8	
	comp=Z,43nm,1.2s						
TORD	Torodi Ar. Bea	23.32	185	P	P	17 40 20.3	-2.0
	comp=Z,21nm,0.9s,baz=0.3,slow=9.9,SNR=61						
TORD				PcP	PcP	17 44 09.7	+0.2
	comp=Z,0.9nm,0.8s,baz=349,slow=2.3,SNR=4.5						
TORD				LR	LR	17 48 46.0	
	comp=Z,226nm,18.1s,baz=325,slow=35						
	comp=Z,21nm,0.9s						
TORD	Torodi Ar. Bea	23.32	185	P	P	17 40 20.2	-2.2
TORD				IAmb	IAmb	17 40 23.5	
	comp=Z,27nm,1.1s						
PABE	Paberze	23.55	30	P	P	17 40 24.4	+0.2
PABE	Paberze	23.55	30	eP	P	17 40 26.0	+1.7
BR131	Keskin Array S	23.85	73	P	P	17 40 26.6	-1.0
BR131	Keskin Array S	23.85	73	P	P	17 40 26.6	-1.0
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	23.85	73	P	P	17 40 28.4	+0.9
	comp=Z,1.1nm,0.7s,baz=276,slow=11,SNR=2.4						
BRTR				PcP	PcP	17 44 11.6	+1.1
	comp=Z,2.0nm,0.9s,baz=234,slow=4.3,SNR=4.4						
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	23.85	73	P	P	17 40 27.5	0.0
ILGA	Ilgaz	23.90	70	P	P	17 40 27.6	-0.5
ILGA				IAmb	IAmb	17 40 33.7	
	comp=Z,29nm,1.1s						
CSS	Mathiatis	24.20	85	P	P	17 40 28.4	-2.3
CSS				IAmb	IAmb	17 40 53.3	
	comp=Z,26nm,1.1s						
NACGM	Naroch	24.34	34	eP	P	17 40 33.1	+1.3
IIGN	Ignalina	24.38	32	eP	P	17 40 35.1	+3.0
HFS	Hagfors	24.53	12	P	P	17 40 34.0	+0.6
	comp=Z,8.8nm,0.8s,baz=194,slow=11,SNR=14						
HFS				LR	LR	17 50 23.5	
	comp=Z,191nm,18.9s,baz=205,slow=37						
	comp=Z,8.8nm,0.8s						
NC602	NORSAR Array S	24.78	9	P	P	17 40 34.8	-0.8
NAO01	NORSAR Array S	24.80	9	P	P	17 40 34.9	-1.0
NBO00	NORSAR Array S	24.97	8	P	P	17 40 34.5	-2.9
NB2	NORSAR Subarra	25.03	9	P	P	17 40 38.9	+0.9
	comp=Z,21nm,2.0s,baz=191,slow=9.3						
NOA	NORSAR Array B	25.03	9	P	P	17 40 38.6	+0.6
	comp=Z,2.0nm,0.9s,baz=204,slow=8.4,SNR=6.7						
NOA				LR	LR	17 50 57.9	
	comp=Z,114nm,18.0s,baz=185,slow=38						
	comp=Z,2.0nm,0.9s						
UPP	Uppsala	25.07	17	eP	P	17 40 39.6	+1.3
NC303	NORSAR Array S	25.23	9	P	P	17 40 38.2	-1.5
NC303				IAmb	IAmb	17 40 45.1	
	comp=Z,29nm,1.3s						
BNN	Bunyan	25.61	75	P	P	17 40 42.4	-1.3
TOKA	Tokat	26.00	71	P	P	17 40 47.5	+0.4
TOKA				IAmb	IAmb	17 40 53.4	
	comp=Z,20nm,0.9s						
VSU	Vasula	26.72	27	i P	P	17 40 53.1	-0.2
VSU				pmax	pmax		
	comp=Z,58nm,0.9s						
VSU	Vasula	26.72	27	eP	P	17 40 54.6	+1.3
EIL	Elat	27.11	95	P	P	17 40 57.4	+0.3
	comp=Z,3.5nm,1.0s,baz=359,slow=19,SNR=2.0						
	comp=Z,3.5nm,1.0s						
RAF	Rauma	27.12	20	eP	P	17 40 57.9	+1.1
FINES	FINESS Array B	28.71	23	P	P	17 41 11.9	+0.8
	comp=Z,2.8nm,0.8s,baz=167,slow=9.0,SNR=7.2						
	comp=Z,2.8nm,0.8s						
FINES	FINESS Array B	28.71	23	P	P	17 41 10.9	-0.1
OBN	Obninsk	29.20	40	LR	LR	17 53 04.4	
	comp=Z,16nm,22.0s,baz=138,slow=37						
OBN	Obninsk	29.20	40	eP	P	17 41 13.9	-1.5
OBN				eS	S	17 46 06.4	-1.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,63nm,15.0s						
LPSR	Galich'ya Gora	29.54	46	eP	P	17 41 17.8	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	Kislovodsk	30.58	64	eP	P	17 41 25.7	-2.2
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,15.0s						
DBIC	Dimbokro	30.68	197	P	P	17 41 27.8	-1.1
	comp=Z,9.5nm,1.2s,baz=50,slow=7.9,SNR=3.3						
DBIC				LR	LR	17 55 34.7	
	comp=Z,102nm,20.4s,baz=27,slow=40						
	comp=Z,9.5nm,1.2s						
DBIC	Dimbokro	30.68	197	IAmb	IAmb	17 41 32.5	
	comp=Z,50nm,1.6s						
VRH	Novokhopyorsk	30.81	49	eP	P	17 41 28.6	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BORG	Borgarnes	31.93	340	LR	LR	17 54 05.3	
	comp=Z,218nm,18.9s,baz=161,slow=35						
JMIC	Jan Mayen	35.12	353	LR	LR	17 56 54.7	
	comp=Z,68nm,18.3s,baz=86,slow=37						
ARCES	ARCESS Array B	35.18	13	P	P	17 42 08.3	+0.5
	comp=Z,3.2nm,0.6s,baz=201,slow=6.7,SNR=7.9						
ARCES				PcP	PcP	17 44 37.8	-0.8
	comp=Z,16nm,0.3s,baz=197,slow=2.8,SNR=3.9						
ARCES				LR	LR	17 56 43.1	
	comp=Z,98nm,18.8s,baz=196,slow=37						
PRGR	Permogore	36.29	33	eP	P	17 42 18.0	+0.7
KIRV	Kirov	37.02	39	P	P	17 42 23.7	+0.2
	comp=Z,6.0nm,0.6s,baz=269,slow=4.1,SNR=3.9						
	comp=Z,6.0nm,0.6s						
RAYN	Ar Rayn	38.29	98	P	P	17 42 33.8	-1.0
RAYN	Ar Rayn	38.29	98	P	P	17 42 33.8	-1.0
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKTO	Aktyubinsk	41.00	53	P	P	17 42 56.5	-0.5
	comp=Z,1.5nm,0.8s,baz=279,slow=12,SNR=4.8						
AKTO				PcP	PcP	17 44 57.7	+0.7
	comp=Z,0.9nm,0.6s,baz=244,slow=12,SNR=3.6						
	comp=Z,1.5nm,0.8s						
ARU	Arti	41.49	43	PcP	PcP	17 44 58.9	+0.5
	comp=Z,2.7nm,0.6s,baz=307,slow=5.1,SNR=2.7						
ARU	Arti	41.49	43	P	P	17 43 00.8	-0.2
ARU	Arti	41.49	43	c iP	P	17 43 01.1	+0.2
ARU						17 44 38.3	
ARU						17 44 56.6	
ARU				S	S	17 49 20.1	+3.8
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
SUMG	Summit	41.82	342	P	P	17 43 04.5	+0.6
SUMG	Summit	41.82	342	P	P	17 43 04.5	+0.6
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ABKAR	Akbulak array	42.30	54	P	P	17 43 07.2	-0.5
ABKAR				PcP	PcP	17 45 01.0	-0.3
ABKAR	Akbulak array	42.30	54	P	P	17 43 07.1	-0.6
ABKAR				IAmb	IAmb	17 43 09.3	
	comp=Z,2.3nm,0.9s						
ABKAR					PcP	17 45 00.9	-0.3
SVE	Sverdlovsk	42.66	43	eP	P	17 43 11.0	+0.5
SVE				pmax	pmax		
	comp=Z,14nm,1.0s						
SFJD	Kangerlussuaq	43.10	332	P	P	17 43 13.0	-0.9
	comp=Z,7.8nm,0.8s,baz=80,slow=5.5,SNR=5.2						
SFJD				LR	LR	17 58 48.8	
	comp=Z,135nm,21.3s,baz=112,slow=33						
	comp=Z,7.8nm,0.8s						
SFJD	Kangerlussuaq	43.10	332	IAmb	IAmb	17 43 15.1	
	comp=Z,18nm,1.1s						
ATD	Arta Tunnel	43.23	115	LR	LR	18 03 18.2	
	comp=Z,157nm,19.5s,baz=338,slow=39						
MBAR	Mbarara	44.74	140	P	P	17 43 28.2	+0.3
	comp=Z,2.2nm,0.2s,baz=292,slow=8.5,SNR=6.4						
MBAR				LR	LR	18 02 47.8	
	comp=Z,213nm,21.1s,baz=316,slow=37						
	comp=Z,2.2nm,0.2s						
MBAR	Mbarara	44.74	140	P	P	17 43 27.4	-0.5
MBAR	Mbarara	44.74	140	c iP	P	17 43 28.9	+1.0
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	48.37	48	i P	P	17 43 55.3	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO	Kilima Mbogo	48.82	132	P	P	17 43 59.9	-0.1
	comp=Z,1.1nm,0.3s,baz=310,slow=6.1,SNR=4.4						
KMBO				LR	LR	18 07 30.6	
	comp=Z,119nm,18.5s,baz=272,slow=40						
	comp=Z,1.1nm,0.3s						
KMBO	Kilima Mbogo	48.82	132	i P	P	17 44 01.1	+1.2
WSAR	Wadi Sarin	48.97	90	P	P	17 44 01.8	+1.0
	comp=Z,9.2nm,0.9s,baz=285,slow=8.7,SNR=3.8						
WSAR				LR	LR	18 09 52.0	
	comp=Z,125nm,18.6s,baz=298,slow=42						
	comp=Z,9.2nm,0.9s						
FRB	Frobisher Bay	50.15	327	P	P	17 44 09.0	-0.1
	comp=Z,5.2nm,0.9s,baz=117,slow=1.7,SNR=4.6						
FRB				LR	LR	18 03 06.1	
	comp=Z,150nm,19.0s,baz=104,slow=33						
	comp=Z,5.2nm,0.9s						
SCHQ	Schefferville	50.22	315	P	P	17 44 09.7	-0.3
	comp=Z,7.7nm,0.8s,baz=76,slow=7.1,SNR=8.6						
SCHQ				LR	LR	18 01 42.5	
	comp=Z,168nm,21.7s,baz=86,slow=32						
	comp=Z,7.7nm,0.8s						
SCHQ	Schefferville	50.22	315	P	P	17 44 09.8	-0.2
SCHQ				IAmb	IAmb	17 44 11.1	
	comp=Z,11nm,0.9s						
KK31	Karatay Array	50.65	61	P	P	17 44 12.8	-0.5
KK31	Karatay Array	50.65	61	P	P	17 44 12.9	-0.5
KK31				pmax	pmax		
	comp=Z,48nm,0.9s						
KKAR	Karatay Array	50.65	61	P	P	17 44 11.9	-1.4
KKAR	Karatay Array	50.65	61	P	P	17 44 11.9	-1.4
KKAR				pmax	pmax		
	comp=Z,48nm,0.9s						
BATG	Bathurst New B	51.31	305	P	P	17 44 17.6	-0.6
KURBB	Kurchatov Arra	53.88	50	P	P	17 44 37.3	+0.1
	comp=Z,3.4nm,0.8s,baz=290,slow=8.1,SNR=17						
KURBB				PcP	PcP	17 45 44.0	+1.4
	comp=Z,4.5nm,1.0s,baz=288,slow=5.2,SNR=10						
	comp=Z,3.4nm,0.8s						
KURK	Kurchatov	53.91	49	P	P	17 44 36.7	-0.7
KURK				IAmb	IAmb	17 44 41.4	
	comp=Z,7.8nm,0.9s						
KURK					PcP	17 45 40.6	-2.2
KURK	Kurchatov	53.91	49	P	P	17 44 37.3	-0.1
KURK						17 45 44.1	
NRIK	Noril'sk	54.29	26	P	P	17 44 41.7	+1.8
NRIK				IAmb	IAmb	17 44 43.4	
	comp=Z,10.0nm,1.1s						
NRIK	Noril'sk	54.29	26	P	P	17 44 41.7	+1.8
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WVL	Waterville	54.49	303	P	P	17 44 40.6	-1.1
G62A	West of Eustis	54.87	304	P	P	17 44 45.5	+0.9
RCBR	Riachuelo	55.99	230	LR	LR	18 06 58.7	
	comp=Z,102nm,18.1s,baz=154,slow=34						
LBNH	Lisbon	56.13	303	P	P	17 44 52.0	-1.6
	baz=70						
HRV	Adam Dziewonsk	56.49	301	P	P	17 44 54.7	-1.5
	baz=69						
LSZ	Lusaka	56.53	151	LR	LR	18 10 58.7	
	comp=Z,372nm,19.6s,baz=334,slow=38						
ZALV	Zalesovo Beam	56.63	44	P	P	17 44 57.0	0.0
	comp=Z,1.2nm,0.5s,baz=290,slow=6.1,SNR=6.6						
	comp=Z,1.2nm,0.5s						
ZALV	Zalesovo Beam	56.63	44	P	P	17 44 57.0	0.0
TSUM	Tsumeb	56.98	164	LR	LR	18 09 48.1	
	comp=Z,198nm,18.4s,baz=338,slow=36						
L61B	Northampton	57.28	301	P	P	17 45 01.4	-0.4
L61B	Northampton	57.28	301	P	P	17 45 01.6	-0.2
	baz=68						
RES	Resolute Bay	57.34	342	LR	LR	18 08 11.4	
	comp=Z,108nm,19.9s,baz=77,slow=34						
MK31	Makanchi Array	57.43	53	P	P	17 45 02.6	-0.2
MK31	Makanchi Array	57.43	53	P	P	17 45 02.6	-0.2
MK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	57.43	53	P	P	17 45 03.1	+0.3
	comp=Z,1.8nm,0.7s,baz=286,slow=6.5,SNR=15						
MKAR				PcP	PcP	17 45 57.1	+0.6
	comp=Z,2.5nm,0.8s,baz=283,slow=4.5,SNR=7.3						
	comp=Z,1.8nm,0.7s						
MKAR	Makanchi Array	57.43	53	P	P	17 45 02.4	-0.5
MKAR				PcP	PcP	17 45 55.8	-0.8
MKAR	Makanchi Array	57.43	53		PcP	17 45 57.4	+0.8
LONY	Lake Ozonia	57.78	304	P	P	17 45 04.5	-0.8
	baz=69						
PAL	Palisades	58.68	300	P	P	17 45 10.9	-0.7
	baz=67						
SADO	Sadowa	60.73	306	LR	LR	18 09 02.9	
	comp=Z,167nm,20.2s,baz=133,slow=33						
SSPA	Standing Stone	61.59	301	P	P	17 45 31.3	-0.3
	baz=65						
WMQ	Urumqi	62.09	55	eP	P	17 45 38.0	+3.0
SJG	San Juan	63.32	273	LR	LR	18 07 28.4	
	comp=Z,37nm,21.7s,baz=92,slow=31						
LBTB	Lobatse	64.64	158	LR	LR	18 17 33.0	
	comp=Z,165nm,18.3s,baz=339,slow=39						
P52A	Corning	64.95	302	P	P	17 45 52.6	-1.3
	baz=62						
TIXI	Tiksi	65.52	16	P	P	17 45 58.2	+1.2
TIXI				IAmb	IAmb	17 45 59.8	
	comp=Z,6.8nm,0.9s						
TIXI	Tiksi	65.52	16	ceP	P	17 45 58.5	+1.5
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
EYMN	Ely	66.98	313	P	P	17 46 06.0	-0.8
	baz=61						
BOSA	Boshof	67.93	159	P	P	17 46 11.7	-1.3
	comp=Z,2.7nm,0.9s,baz=15,slow=2.3,SNR=3.2						
BOSA				LR	LR	18 15 25.6	
	comp=Z,139nm,19.5s,baz=2.0,slow=36						
	comp=Z,2.7nm,0.9s						
TKL	Tuckaleechee C	68.00	299	LR	LR	18 15 53.7	
	comp=Z,98nm,18.1s,baz=102,slow=36						
ULM	Lac du Bonnet	68.31	317	P	P	17 46 15.1	-0.1
	comp=Z,15nm,0.8s,baz=83,slow=5.5,SNR=11						
ULM				LR	LR	18 13 15.6	
	comp=Z,124nm,18.5s,baz=68,slow=33						
	comp=Z,15nm,0.8s						
ULM	Lac du Bonnet	68.31	317	P	P	17 46 14.9	-0.2
ZAK	Zakamensk	68.42	43	eP	P	17 46 17.2	+1.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.9s						
F36A	Milaca	69.23	312	P	P	17 46 20.5	-0.5
F36A				IAmb	IAmb	17 46 21.2	
	comp=Z,6.4nm,1.1s						
AGMN	Agassiz Nation	69.32	315	P	P	17 46 20.9	-0.6
AGMN				IAmb	IAmb	17 46 22.6	
	comp=Z,6.5nm,0.8s						
AGMN	Agassiz Nation	69.32	315	P	P	17 46 21.1	-0.4
	baz=58						
YKA	Yellowknife Ar	69.62	334	P	P	17 46 24.1	+1.0
	comp=Z,9.3nm,0.9s,baz=53,slow=6.2,SNR=55						
YKA				LR	LR	18 15 06.1	
	comp=Z,68nm,18.1s,baz=355,slow=34						
	comp=Z,9.3nm,0.9s						
YKA	Yellowknife Ar	69.62	334	P	P	17 46 23.3	+0.2
SUR	Sutherland	70.42	165	LR	LR	18 18 56.2	
	comp=Z,149nm,18.3s,baz=338,slow=37						
INK	Inuvik	70.69	344	LR	LR	18 17 48.4	
	comp=Z,87nm,18.9s,baz=48,slow=36						
INK	Inuvik	70.69	344	P	P	17 46 29.3	-0.2
	baz=36						
F33A	5 Mile Ranch,	70.88	313	IAmb	IAmb	17 46 31.7	
	comp=Z,5.6nm,0.8s						
BDFB	Brasilia	71.10	233	P	P	17 46 32.8	-0.1
	comp=Z,3.2nm,0.5s,baz=64,slow=2.2,SNR=8.1						
	comp=Z,3.2nm,0.5s						
BDFB	Brasilia	71.10	233	P	P	17 46 32.1	-0.8
BDFB				IAmb	IAmb	17 46 35.5	
	comp=Z,9.7nm,1.0s						
SONM	Songino Array	71.52	44	P	P	17 46 36.2	+1.1
	comp=Z,3.5nm,0.9s,baz=293,slow=6.2,SNR=13						
	comp=Z,3.5nm,0.9s						
SONM	Songino Array	71.52	44	P	P	17 46 35.1	0.0
MDND	Maddock	71.67	316	P	P	17 46 35.4	-0.4
MDND	Maddock	71.67	316	P	P	17 46 35.1	-0.7
	baz=56						
ULN	Ulaanbaatar	71.87	44	P	P	17 46 37.9	+0.7
ULN	Ulaanbaatar	71.87	44	ceP	P	17 46 38.0	+0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CCM	Cathedral Cave	71.90	304	P	P	17 46 36.6	-0.8
	baz=58						
GTA	Gaotai	72.16	54	eP	P	17 46 40.5	+1.4
GTA				sP	sP	17 46 48.0	+4.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ECSD	EROS Data Cent	72.23	311	IAmb	IAmb	17 46 40.1	
	comp=Z,7.5nm,0.9s						
ECSD	EROS Data Cent	72.23	311	P	P	17 46 38.0	-1.3
	baz=56,SNR=6.3						
OXF	Oxford	72.55	300	P	P	17 46 39.1	-2.2
	baz=57						
YAK	Yakutsk	72.64	24	P	P	17 46 41.9	+0.5
YAK				IAmb	IAmb	17 46 43.2	
	comp=Z,13nm,1.1s						
YAK	Yakutsk	72.64	24	ceP	P	17 46 41.9	+0.5
YAK				pmax	pmax		
	comp=Z,20nm,1.7s						
TOLK	Toolik Lake Re	73.26	350	P	P	17 46 46.0	+0.9
TOLK				IAmb	IAmb	17 46 49.8	
	comp=Z,6.8nm,1.0s						
TOLK	Toolik Lake Re	73.26	350	P	P	17 46 44.2	-0.8
	baz=22						
U40A	Yellville	73.90	303	P	P	17 46 49.2	-0.2
	baz=56						
I29M	Ogilvie Camp,	74.20	344	P	P	17 46 50.4	-0.2
	baz=31						
BGNE	Belgrade	74.48	310	P	P	17 46 52.8	+0.1
	baz=55						
COLD	Coldfoot	74.67	350	P	P	17 46 53.2	0.0
	baz=22						
MMPY	Sheldon Lake,	74.76	340	P	P	17 46 52.9	-1.0
	baz=36						
X40A	Basin Creek Fa	74.92	302	P	P	17 46 54.7	-0.6
	baz=56						
BILL	Bilibino	74.96	7	P	P	17 46 55.6	+0.7
BILL				IAmb	IAmb	17 46 59.7	
	comp=Z,17nm,1.8s						
BILL	Bilibino	74.96	7	eP	P	17 46 55.4	+0.5
BILL				pmax	pmax		
	comp=Z,13nm,2.5s						
W39A	Magazine	75.17	303	P	P	17 46 55.3	-1.4
	baz=56						
EGAK	Eagle	75.31	345	P	P	17 46 56.5	-0.5
	baz=29						
MIAR	Mount Ida	75.40	302	P	P	17 46 58.2	+0.2
	baz=56						
DAWY	Dawson	75.56	344	IAmb	IAmb	17 47 02.9	
	comp=Z,7.8nm,1.1s						
DAWY	Dawson	75.56	344	P	P	17 46 58.6	+0.1
	baz=30						
H24K	Noodor Dome	75.60	348	P	P	17 46 58.4	-0.3
	baz=24						
FARO	Faro, Yukon	75.64	341	P	P	17 46 58.9	-0.1
	baz=35						
H23K	Yukon River	75.88	349	IAmb	IAmb	17 47 03.8	
	comp=Z,9.8nm,1.3s						
H23K	Yukon River	75.88	349	P	P	17 47 00.4	+0.2
	baz=22,SNR=6.3						
M31M	Drury Creek, Y	75.94	341	P	P	17 47 01.1	+0.5
	baz=34						
LAO	LASA Array	75.98	318	P	P	17 47 02.3	+1.0
	baz=51						
J26L	Joseph Creek	76.04	346	P	P	17 47 01.0	-0.3
	baz=27						
K27K	Chicken	76.16	345	P	P	17 47 00.3	-1.5
	baz=28						
POKR	Poker Plat Res	76.19	348	P	P	17 47 02.2	+0.2
	baz=24						
M30M	Minto, Yukon	76.23	342	P	P	17 47 01.9	-0.5
	baz=32						
J25K	Salcha River,	76.28	347	P	P	17 47 03.2	+0.6
	baz=25						
RSSD	Black Hills	76.36	315	P	P	17 47 02.1	-1.5
RSSD				IAmb	IAmb	17 47 05.9	
	comp=Z,6.0nm,0.8s						
RSSD	Black Hills	76.36	315	P	P	17 47 02.1	-1.5
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RSSD	Black Hills	76.36	315	P	P	17 47 03.2	-0.5
	baz=52						
ILAR	Eielson Array	76.41	347	P	P	17 47 05.3	+2.1
	comp=Z,2.7nm,1.1s,baz=4.8,slow=4.4,SNR=8.0						

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ILAR                                LR     LR      18 24 06.1
      comp=Z,46nm,18.2s,baz=52,slow=38
      comp=Z,2.7nm,1.1s
I23K  Minto, Yukon-K     76.48 349  P      P       17 47 03.8 +0.2
      baz=22
H21K  Melozitna Rive     76.51 350  IAmb   IAmb    17 47 09.0
      comp=Z,6.0nm,1.0s
H21K  Melozitna Rive     76.51 350  P      P       17 47 03.6 -0.3
      baz=19,SNR=6.2
X37A  Clayton            76.59 303  P      P       17 47 04.8 -0.1
X37A                                IAmb   IAmb    17 47 06.2
      comp=Z,10nm,1.1s
SCRK  Sand Creek         76.59 346  P      P       17 47 05.9 +1.4
SCRK  Sand Creek         76.59 346  P      P       17 47 04.1 -0.4
      baz=26
LZH   Lanzhou            76.67  55 eP      P       17 47 03.5 -2.0
LZH                                 pmax   pmax
      comp=Z,20nm,1.3s
HDA   Harding Lake       76.75 347  IAmb   IAmb    17 47 11.7
      comp=Z,6.7nm,1.0s
HDA   Harding Lake       76.75 347  P      P       17 47 05.4 +0.2
      baz=24
MLY   Manley             76.80 349  IAmb   IAmb    17 47 10.1
      comp=Z,14nm,1.6s
MLY   Manley             76.80 349  P      P       17 47 05.6  0.0
      baz=21
I21K  Tanana             76.85 350  P      P       17 47 05.5 -0.2
I21K                                IAmb   IAmb    17 47 09.2
      comp=Z,12nm,1.2s
I21K  Tanana             76.85 350  P      P       17 47 05.9 +0.2
      baz=20,SNR=5.5
N31M  Braeburn, Yuko     76.90 341  P      P       17 47 04.8 -1.4
      baz=33
NEA2  Nenana             76.95 348  P      P       17 47 05.9 -0.4
      baz=22
L27K  Beaver Creek,      76.97 345  P      P       17 47 05.9 -0.6
      baz=28
RIDG  Independent Ri     76.97 346  IAmb   IAmb    17 47 15.6
      comp=Z,12nm,1.2s
RIDG  Independent Ri     76.97 346  P      P       17 47 06.0 -0.6
      baz=26
CBKS  Cedar Bluff        76.98 309  P      P       17 47 05.9 -1.2
      baz=54
EGMT  Eagleton           76.98 321  P      P       17 47 06.6 -0.3
      baz=49
K24K  Donnelly Dome      77.09 347  P      P       17 47 07.1 -0.1
      baz=25
OGNE  Ogallala           77.12 312  P      P       17 47 06.7 -1.1
      baz=53
P33M  Teslin, Yukon      77.16 339  P      P       17 47 06.8 -0.9
      baz=35
N30M  Aishikik Lake      77.26 342  P      P       17 47 07.7 -0.5
      baz=32
BVCY  Beaver Creek       77.33 344  P      P       17 47 08.6 +0.1
      baz=29
M27K  Edge Creek, AK     77.60 344  P      P       17 47 09.3 -0.9
      baz=28
BPAW  Bear Paw Mtn.      77.71 349  P      P       17 47 09.6 -1.0
      baz=21
YUK4  Talbot Arm         77.74 342  P      P       17 47 09.1 -1.9
      baz=30
DLBC  Dease Lake         77.77 337  LR     LR      18 20 25.5
      comp=Z,117nm,18.7s,baz=106,slow=35
YUK3  Moose Creek        77.80 343  P      P       17 47 10.7 -0.7
      baz=29
M26K  Nabesna, AK        77.80 345  P      P       17 47 11.0 -0.3
      baz=27
BTO   Baotou             77.88  48 eP      P       17 47 12.3 +0.2
HYT   Haines Junctio     77.91 342  P      P       17 47 11.2 -0.7
      baz=31
YUK6  Outpost Mounta     78.02 342  P      P       17 47 12.3 -0.4
      baz=30
TNA   Tin City           78.04 356  P      P       17 47 12.1 -0.2
      baz=7.0
DHY   Denali Highway     78.06 347  IAmb   IAmb    17 47 20.6
      comp=Z,11nm,1.0s
DHY   Denali Highway     78.06 347  P      P       17 47 12.1 -0.6
      baz=24,SNR=5.9
YUK8  Steele Glacier     78.06 343  P      P       17 47 11.4 -1.6
      baz=30
J20K  Nowinta River      78.10 350  P      P       17 47 12.1 -0.6
      baz=18
CHUM  Lake Minchumin     78.12 349  P      P       17 47 12.9 +0.1
      baz=20
KTH   Kantishna Hill     78.22 349  P      P       17 47 14.5 +1.0
KTH                                 IAmb   IAmb    17 47 17.6
      comp=Z,6.6nm,0.9s
WALA  Waterton Lakes     78.35 323  P      P       17 47 14.7 +0.1
WALA                                IAmb   IAmb    17 47 16.3
      comp=Z,11nm,1.1s
CAST  Castle Rocks       78.52 349  P      P       17 47 14.8 -0.3
      baz=20
WAT6  Susitna Watana     78.58 347  P      P       17 47 15.8 +0.2
      baz=23
RLMT  Red Lodge          78.62 318  P      P       17 47 15.3 -0.9
      baz=49
HHC   Hu-ho-hao-te       78.65  47 eP      P       17 47 15.5 -0.9
HHC                                 pmax   pmax
      comp=Z,31nm,0.9s
HHC                                 pmax   pmax
      comp=Z,170nm,5.1s
K22A  Casper             78.69 315  IAmb   IAmb    17 47 18.1
      comp=Z,12nm,0.9s
K22A  Casper             78.69 315  P      P       17 47 16.5 -0.2
      baz=50,SNR=6.8
WMOK  Wichita Mounta     78.78 305  P      P       17 47 16.7 -0.4
      baz=53
K20K  Telida             78.87 350  P      P       17 47 18.2 +1.1
K20K  Telida             78.87 350  P      P       17 47 16.6 -0.4
      baz=18,SNR=7.5
ANM   Nome               78.88 355  P      P       17 47 16.4 -0.6
      baz=9.1
PHWY  Pilot Hill         78.93 313  P      P       17 47 18.8 +0.6
PPLA  Purkeypile         79.03 349  P      P       17 47 17.6 -0.5
      baz=20
KLU   Klutina            79.23 346  P      P       17 47 18.3 -0.8
      baz=25
JTMT  Jette              79.43 323  P      P       17 47 20.3 -0.2
JTMT                                IAmb   IAmb    17 47 21.8
      comp=Z,11nm,1.3s
N23A  Red Feather La     79.47 313  IAmb   IAmb    17 47 23.5
      comp=Z,14nm,1.1s
N23A  Red Feather La     79.47 313  P      P       17 47 20.3 -0.8
      baz=50,SNR=6.6
TTA   Tatalina           79.55 351  P      P       17 47 20.4 -0.4
      baz=17
BOZ   Bozeman (W)        79.55 320  IAmb   IAmb    17 47 24.0
      comp=Z,8.9nm,0.9s
BOZ   Bozeman (W)        79.55 320  P      P       17 47 21.1 -0.2
      baz=48,SNR=16
MESA  MESA               79.55 343  P      P       17 47 20.1 -0.9
      baz=28
L20K  Farewell, AK       79.68 350  P      P       17 47 21.3 -0.2
      baz=18
RWWY  Rawlins            79.70 315  P      P       17 47 22.5 +0.2
RWWY                                IAmb   IAmb    17 47 24.5
      comp=Z,15nm,1.1s
KNK   Knik Glacier       79.79 347  P      P       17 47 22.4 +0.3
      baz=23
YHL   Hebgen Lake        79.82 319  IAmb   IAmb    17 47 30.3
      comp=Z,12nm,1.3s
MSO   Missoula           79.89 322  P      P       17 47 23.0  0.0
      baz=46
ISCO  Idaho Springs      79.97 312  P      P       17 47 24.1 +0.2
ISCO                                IAmb   IAmb    17 47 26.1
      comp=Z,10.0nm,1.2s
ISCO  Idaho Springs      79.97 312  P      P       17 47 24.1 +0.2
ISCO                                pmax   pmax
      comp=Z,10.0nm,1.2s
ISCO  Idaho Springs      79.97 312  P      P       17 47 23.5 -0.4
      baz=50,SNR=7.3
GAMB  Gambell            79.98 358  P      P       17 47 22.9 -0.1
      baz=3.9
SIV   San Ignacio        80.21 242  LR     LR      18 22 23.7
      comp=Z,55nm,18.4s,baz=112,slow=35
DLMT  Dillon             80.21 320  P      P       17 47 24.6 -0.3
DLMT                                IAmb   IAmb    17 47 27.9
      comp=Z,15nm,1.2s
Q24A  Divide             80.22 311  P      P       17 47 25.0 -0.3
      baz=51
M19K  Big River Lodg     80.31 350  P      P       17 47 24.8 -0.1
      baz=18
BW06  Boulder Array      80.32 317  P      P       17 47 25.9 +0.2
BW06                                IAmb   IAmb    17 47 27.0
      comp=Z,10.0nm,1.1s
BW06  Boulder Array      80.32 317  P      P       17 47 24.9 -0.8
      baz=49,SNR=14
PD31  Pinedale Array     80.32 317  P      P       17 47 25.1 -0.5
PD31                                IAmb   IAmb    17 47 27.0
      comp=Z,9.7nm,1.1s
PDAR  Pinedale Array     80.32 317  P      P       17 47 25.9 +0.3
      comp=Z,6.8nm,0.9s,baz=64,slow=6.8,SNR=33
PDAR                                LR     LR      18 20 24.7
      comp=Z,109nm,18.9s,baz=58,slow=34
      comp=Z,6.8nm,0.9s
NEW   Newport            80.43 324  P      P       17 47 26.3 +0.5
      comp=Z,6.3nm,0.9s,baz=358,slow=4.9,SNR=5.8
NEW                                 LR     LR      18 20 52.2
      comp=Z,56nm,18.4s,baz=30,slow=34
      comp=Z,6.3nm,0.9s
NEW   Newport            80.43 324  P      P       17 47 25.3 -0.5
      baz=45
MA2   Magadan            80.49  16  LR     LR      18 25 40.2
      comp=Z,38nm,19.4s,slow=38
MA2   Magadan            80.49  16ceP      P       17 47 27.6 +1.7
MA2                                 pmax   pmax
      comp=Z,12nm,1.3s
TPAW  Teton Pass         80.60 318  P      P       17 47 27.2 +0.1
TPAW                                IAmb   IAmb    17 47 29.8
      comp=Z,11nm,1.1s
ABTX  Abilene, Hawle     80.63 304  P      P       17 47 27.1 -0.1
      baz=53
REDW  Red Top Meadow     80.64 318  IAmb   IAmb    17 47 29.7
      comp=Z,11nm,1.2s
MCMT  McKenzie Canyo     80.71 320  P      P       17 47 28.2 +0.5
PZH   PanZhiHua          80.80  64  P      P       17 47 28.8 +0.5
PZH                                 pmax   pmax
      comp=Z,10.0nm,0.9s
PZH                                 pmax   pmax
      comp=Z,110nm,7.9s
AHID  Auburn Hatcher     81.17 317  IAmb   IAmb    17 47 32.2
      comp=Z,9.2nm,0.9s
SMCO  Snowmass           81.18 313  P      P       17 47 30.7 +0.2
SDCO  Great Sand Dun     81.21 311  P      P       17 47 30.4 -0.1
      baz=50
XAN   Xi'an              81.22  54  P      P       17 47 31.5 +1.2
XAN                                 pP     PcP     17 47 38.0 +1.4
XAN                                 sP     sP      17 47 41.3 +7.0
XAN                                 pmax   pmax
      comp=Z,11nm,1.0s
RDMU  Red Mountain       81.78 315  P      P       17 47 33.7 +0.3
BJI   Beijing            81.86  46  P      P       17 47 35.8 +2.3
BJI                                 pmax   pmax
      comp=Z,6.0nm,0.8s
BJI                                 pmax   pmax
      comp=Z,57nm,4.0s
S22A  4UR Ranch, Cre     82.02 311  P      P       17 47 35.6 +0.8
      baz=50
JCT   Junction City      82.04 302  P      P       17 47 35.0 +0.3
      baz=52
F10A  Beach Ranch, E     82.11 323  IAmb   IAmb    17 47 36.7
      comp=Z,12nm,1.1s
BBB   Bella Bella        82.11 332  LR     LR      18 22 39.5
      comp=Z,65nm,18.5s,baz=14,slow=35
HWUT  Hardware Ranch     82.21 317  IAmb   IAmb    17 47 37.5
      comp=Z,6.2nm,0.9s
HLID  Hailey             82.39 320  P      P       17 47 37.0 +0.4
      baz=46,SNR=6.3
PV07  Paradox Valley     82.65 313  P      P       17 47 38.1 +0.1
PV07                                IAmb   IAmb    17 47 39.8
      comp=Z,7.0nm,1.0s
JTS   Las Juntas de      82.76 277  LR     LR      18 20 36.8
      comp=Z,52nm,18.3s,baz=116,slow=33
P18A  Preston Nutter     82.79 315  IAmb   IAmb    17 47 42.1
      comp=Z,10nm,1.1s
JLU   Jordanelle         82.82 316  IAmb   IAmb    17 47 40.7
      comp=Z,4.4nm,0.8s
PV23  Carpenter Ridg     82.86 313  IAmb   IAmb    17 47 41.1
      comp=Z,9.6nm,1.0s
PV11  David Mesa, Pa     82.88 313  P      P       17 47 38.9 -0.2
PV13  Radium Mtn., P     82.94 313  IAmb   IAmb    17 47 41.4
      comp=Z,7.6nm,0.9s
BMO   Blue Mountains     82.96 322  IAmb   IAmb    17 47 41.0
      comp=Z,8.4nm,1.1s
833A  Chaparral WMA,     83.07 300  P      P       17 47 41.8 +1.7
      baz=52
KLR   Kul'dur            83.07  31 iP      P       17 47 39.7  0.0
KLR                                 pmax   pmax
      comp=Z,10.0nm,2.4s
P17A  Butcher Ranch,     83.18 315  IAmb   IAmb    17 47 42.4
      comp=Z,10nm,1.3s
CHTO  Chiang Mai         83.23  72  P      P       17 47 41.2 +0.2
CHTO                                IAmb   IAmb    17 47 44.8
      comp=Z,8.3nm,1.1s
CHTO  Chiang Mai         83.23  72  P      P       17 47 41.2 +0.2
CHTO                                pmax   pmax
      comp=Z,8.0nm,1.1s
MFID  Camas Ranch        83.23 320  IAmb   IAmb    17 47 43.4
      comp=Z,7.7nm,1.1s
SRU   San Rafael Swe     83.30 314  IAmb   IAmb    17 47 53.9
      comp=Z,5.9nm,0.9s
MVCO  Mesa Verde         83.37 312  IAmb   IAmb    17 47 44.2
      comp=Z,9.4nm,1.2s
MVCO  Mesa Verde         83.37 312  P      P       17 47 42.6 +0.9
      baz=49
CMAR  Chiang Mai Arr     83.43  72  P      P       17 47 43.1 +1.0
      comp=Z,2.6nm,0.9s,baz=307,slow=7.8,SNR=15
      comp=Z,2.6nm,0.9s
BGU   Big Grassy Mou     83.48 317  P      P       17 47 42.9 +0.7
BGU                                 IAmb   IAmb    17 47 44.4
      comp=Z,8.9nm,1.1s
ANMO  Albuquerque        83.60 309  P      P       17 47 44.5 +1.5
      comp=Z,2.2nm,1.0s,baz=67,slow=5.1,SNR=4.6
ANMO                                LR     LR      18 22 15.7
      comp=Z,84nm,19.2s,baz=48,slow=34
      comp=Z,2.2nm,1.0s
ANMO  Albuquerque        83.60 309  P      P       17 47 43.9 +1.0
      baz=50
NLU   North Lily Min     83.61 316  IAmb   IAmb    17 47 44.9
      comp=Z,8.0nm,1.3s
D03D  Eldon              83.68 327  P      P       17 47 44.1 +1.2
      baz=40,SNR=5.7
Q16A  Castle Valley      83.80 315  P      P       17 47 44.1 +0.2
DUG   Dugway, Tooele     83.86 316  IAmb   IAmb    17 47 46.2
      comp=Z,7.2nm,1.1s
DUG   Dugway, Tooele     83.86 316  P      P       17 47 44.7 +0.6
      baz=46
KDAK  Kodiak Island      83.94 347  LR     LR      18 28 03.0
      comp=Z,70nm,18.4s,baz=49,slow=38
F05D  White Salmon       84.19 325  P      P       17 47 46.4 +0.8
      baz=42
BNM   Barren Site        84.22 309  P      P       17 47 47.0 +0.9
CN2   Changchun          84.25  38 eP      P       17 47 47.5 +1.7
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.6s
GYA   Guiyang            84.35  61 ⇓P      P       17 47 48.5 +1.7
GYA                                 pmax   pmax
      comp=Z,13nm,0.7s
J08A  Circle Bar Ran     84.62 322  IAmb   IAmb    17 47 50.5
      comp=Z,6.2nm,1.0s
CPUP  Villa Florida      84.80 232  P      P       17 47 49.0 +0.3
      comp=Z,17nm,1.0s,baz=57,slow=4.2,SNR=18
      comp=Z,17nm,1.0s
CPUP  Villa Florida      84.80 232  P      P       17 47 48.9 +0.3
CPUP  Villa Florida      84.80 232  P      P       17 47 49.0 +0.3
ELK   Elko               84.81 318  P      P       17 47 50.8 +1.7
      comp=Z,6.1nm,1.0s,baz=50,slow=7.4,SNR=16
ELK                                 LR     LR      18 22 50.5
      comp=Z,136nm,19.9s,baz=59,slow=34
      comp=Z,6.1nm,1.0s
ELK   Elko               84.81 318  IAmb   IAmb    17 47 52.0
      comp=Z,7.3nm,1.0s
MTPU  Mount Pierson      84.98 314  P      P       17 47 50.9 +0.8
MNTX  Cornudas Mount     85.00 306  IAmb   IAmb    17 47 51.4
      comp=Z,4.6nm,1.1s
MNTX  Cornudas Mount     85.00 306  P      P       17 47 50.6 +0.7
      baz=50
PKCU  Pink Cliffs        85.46 314  IAmb   IAmb    17 47 54.4
      comp=Z,8.2nm,1.0s
LPAZ  La Paz             85.51 246  P      P       17 47 52.4 -0.8
      comp=Z,2.2nm,0.7s,baz=44,slow=9.6,SNR=8.4
LPAZ                                LR     LR      18 25 29.9
      comp=Z,25nm,18.5s,baz=55,slow=35
      comp=Z,2.2nm,0.7s
LPAZ  La Paz             85.51 246  P      P       17 47 52.3 -1.0
G03D  McMinnville, O     85.53 325  P      P       17 47 52.4 +0.2
      baz=40
SZCU  Shurtz Canyon      85.81 315  IAmb   IAmb    17 47 56.3
      comp=Z,8.0nm,1.0s
CCUT  Cedar City         85.99 315  P      P       17 47 54.7 -0.3
CCUT                                IAmb   IAmb    17 47 57.5
      comp=Z,7.3nm,1.0s
121A  Cookes Peak, D     86.01 308  IAmb   IAmb    17 47 57.8
      comp=Z,9.0nm,1.1s
121A  Cookes Peak, D     86.01 308  P      P       17 47 55.5 +0.4
      baz=49
J05D  Fort Rock, OR      86.03 323  P      P       17 47 55.4 +0.4
      baz=42
U15A  North Rim          86.15 313  IAmb   IAmb    17 47 57.6
      comp=Z,6.8nm,0.9s
WUAZ  Wupatki            86.23 312  IAmb   IAmb    17 47 58.8
      comp=Z,14nm,1.6s
WUAZ  Wupatki            86.23 312  P      P       17 47 57.7 +1.6
      baz=47
J04D  Umpqua Nationa     86.48 323  P      P       17 47 56.9 -0.4
      baz=41
CMIG  Matias Romero      86.55 289  LR     LR      18 21 47.1
      comp=Z,50nm,21.2s,baz=18,slow=32
R11A  Troy Canyon, C     86.69 317  IAmb   IAmb    17 48 01.0
      comp=Z,6.2nm,1.1s
R11A  Troy Canyon, C     86.69 317  P      P       17 47 58.6 +0.3
      baz=45
PRN   Pahroc Range       87.05 316  IAmb   IAmb    17 48 05.1
      comp=Z,6.8nm,1.1s
K02D  Willamette Mer     87.64 324  P      P       17 48 01.7 -1.1
      baz=40
PAHR  Pah Rah Range      87.75 320  P      P       17 48 03.4  0.0
PAHR                                IAmb   IAmb    17 48 05.9
      comp=Z,3.7nm,1.0s
YBH   Yreka Blue Hor     87.92 323  LR     LR      18 24 33.1
      comp=Z,88nm,21.4s,baz=57,slow=34
TUC   Tucson             88.04 309  P      P       17 48 05.2 +0.3
TUC                                 IAmb   IAmb    17 48 08.2
      comp=Z,4.3nm,1.1s
TUC   Tucson             88.04 309  P      P       17 48 05.2 +0.3
TUC                                 pmax   pmax
      comp=Z,4.0nm,1.1s
TUC   Tucson             88.04 309  P      P       17 48 06.2 +1.3
      baz=47
RYN   Ryan               88.09 318  IAmb   IAmb    17 48 31.7
      comp=Z,3.3nm,0.8s
NVAR  Mina Array Bea     88.11 318  P      P       17 48 05.8 +0.6
      comp=Z,0.3nm,0.5s,baz=64,slow=6.1,SNR=2.9
NVAR                                LR     LR      18 25 05.2
      comp=Z,128nm,19.6s,baz=74,slow=34
      comp=Z,0.3nm,0.5s
YERR  Yerington          88.21 319  P      P       17 48 06.3 +0.6
FALS  False Pass         88.31 352  P      P       17 48 07.0 +1.5
      baz=10
LCH   Last Change Ra     88.62 317  P      P       17 48 08.1 +0.5
PDMCI Parker Dam,Lak     88.71 313  P      P       17 48 08.5 +0.6
      baz=46
GWY   Greenwater Val     88.83 316  P      P       17 48 09.7 +1.0
GWY                                 IAmb   IAmb    17 48 11.6
      comp=Z,6.5nm,0.9s
TUQ   Turquoise Moun     88.95 315  P      P       17 48 09.6 +0.4
      baz=44
QSM   Queen of Sheba     89.10 316  IAmb   IAmb    17 48 13.6
      comp=Z,6.4nm,1.2s
GMRC  Granite Mounta     89.26 314  P      P       17 48 11.5 +0.9
      baz=45
IRM   Iron Mountain      89.40 313  P      P       17 48 12.2 +1.0
      baz=45
CWC   Cottonwood Cre     89.44 317  P      P       17 48 12.4 +0.9
      baz=43
214A  Organ Pipe Nat     89.53 310  P      P       17 48 12.9 +1.1
      baz=46
GSC   Goldstone, Bar     89.55 315  P      P       17 48 12.8 +0.9
      baz=44
HEC   Hector,Ludlow      89.61 314  P      P       17 48 13.5 +1.3
      baz=44
BC3   Big Chuckawall     89.94 313  P      P       17 48 15.1 +1.3
      baz=45
BELC  Belle Mtn. Jos     90.01 314  P      P       17 48 14.2 +0.1
      baz=44
KSRS  Korea Array        90.19  41  P      P       17 48 14.7 -0.1
      comp=Z,1.4nm,0.9s,baz=320,slow=3.2,SNR=3.6
      comp=Z,1.4nm,0.9s
ISA   Isabella, Lake     90.22 316  P      P       17 48 15.2 +0.2
ISA                                 IAmb   IAmb    17 48 17.6
      comp=Z,5.2nm,1.1s
ISA   Isabella, Lake     90.22 316  P      P       17 48 15.2 +0.2
ISA                                 pmax   pmax
      comp=Z,5.0nm,1.1s
ISA   Isabella, Lake     90.22 316  P      P       17 48 15.9 +0.8
      baz=43
EDW2  Edwards Air Fo     90.52 316  P      P       17 48 16.8 +0.4
      baz=43
PFO   Pinyon Flats O     90.56 314  P      P       17 48 16.2 -0.5
      comp=Z,3.3nm,0.8s,baz=333,slow=1.1,SNR=3.1
PFO                                 LR     LR      18 27 40.2
      comp=Z,42nm,18.4s,baz=154,slow=35
      comp=Z,3.3nm,0.8s
PFO   Pinyon Flats O     90.56 314  P      P       17 48 15.9 -0.8
PFO                                 IAmb   IAmb    17 48 19.2
      comp=Z,7.4nm,1.1s
PFO   Pinyon Flats O     90.56 314  P      P       17 48 17.1 +0.4
      baz=44
TPFO  Pinon Flats        90.56 314  P      P       17 48 17.5 +0.8
      baz=44
MONP2 Monument Peak      91.05 313  P      P       17 48 19.1  0.0
      baz=44
LPIG  La Paz             93.27 303  LR     LR      18 28 59.1
      comp=Z,99nm,18.2s,baz=36,slow=35
MJAR  Matsushiro Arr     96.03  35  LR     LR      18 37 34.0
      comp=Z,32nm,18.7s,baz=234,slow=39
WRA   Warramunga Arr    134.12  83  PKP    PKPdf   17 54 31.8 -0.4
      comp=Z,2.1nm,0.3s,baz=303,slow=4.7,SNR=137
ASAR  Alice Springs     135.64  88  PKP    PKPdf   17 54 34.8 -0.2
      comp=Z,1.8nm,1.0s,baz=348,slow=1.6,SNR=4.7
STKA  Stephens Creek    145.20  95  PKPbc  PKPbc   17 54 52.0 +0.4
      comp=Z,13nm,0.9s,baz=312,slow=5.4,SNR=19
STKA  Stephens Creek    145.20  95         PKPab   17 54 52.2 +0.5
STKA  Stephens Creek    145.20  95  PKIKP  PKPab   17 54 52.2 +0.5
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*IDC **31** 17:42:40.4±2.9, 35°.73N×69°.79E, h95^{km}±25^{km}, mb3.8/20, mbtmp4.2/25, Error ellipse: s-maj=18.4km s-min=12.6km az=179.0*

*NNC **31** 17:42:40.6±3.5, 36°.40N×69°.45E, h0^{km}, mb4.8, mpv4.8, Error ellipse: s-maj=35.0km s-min=15.5km az=157.0*

*NEIC **31** 17:42:41.3±2.0, 35°.82N±0°.01×69°.73E±0°.07, h107^{km}±6^{km}, mb4.6/48, Error ellipse: s-maj=8.1km s-min=1.8km az=94.0*

*SOME **31** 17:42:47.7, 37°.52N×71°.33E, h5^{km}, MS3.5*

ISC 31 17:42:40.3±0.4, **35°.85N**±0°.04×**69°.77E**±0°.04, **h100**^{km}**, n142,** σ**1**^{s}**.97**/155, **mb4.5**/41, **6C-8D, Hindu Kush region**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time      Res
                                      Op     ISC        h  m  s   ISC
KBL   Kabul               1.44 205           Pn      17 43 06.8 +0.8
KBL                                   Sn     Sn      17 43 25.5 +0.1
CEP   Cherat              2.68 138   ⇓P      Pn      17 43 22.4 +0.4
CEP                                   S      Sn      17 43 54.0 +0.1
CHGR  Chuyangaron         2.84 350           Pn      17 43 25.8 +1.8
GAR   Garm                3.17   8           Pn      17 43 30.8 +2.4
THW   Thamme Wali         3.46 151    P      Pn      17 43 31.7 -0.5
NIL   Nilore              3.61 126    Pn     Pn      17 43 33.5 -0.7
CHCP  Chirah Chowk        3.62 126    P      Pn      17 43 34.5 +0.2
DRK   Karamyk             3.96  23           Pn      17 43 41.9 +2.7
TAS   Tashkent            5.48 356    Pn     Pn      17 44 01.3 +1.9
TAS   Tashkent            5.48 356    P      Pn      17 44 01.3 +1.9
KSH   Kashi               6.13  52    Pn     Pn      17 44 06.8 -1.6
KSH                                   Sn     Sn      17 45 11.0 -6.2
KSH                                   pmax   pmax
      comp=Z,18nm,0.6s
KSH                                   smax   smax
      comp=N,250nm,0.7s
KSH                                   smax   smax
      comp=E,180nm,0.5s
IUG   Iuzhnay             6.29   2   eP      Pn      17 44 13.7 +3.1
      comp=E,2μm,0.2s
IUG                                  eS      Sn      17 45 20.6 -0.3
      comp=E,692nm,0.5s
HRA   Herat               6.34 259    Pn     Pn      17 44 12.7 +1.3
CHM   Chimkent            6.46 359   eP      Pn      17 44 16.3 +3.6
      comp=E,134nm,0.3s
CHM                                  eS      Sn      17 45 25.3 +0.3
      comp=E,682nm,0.5s
AML   Almayashu           6.97  25    P      Pn      17 44 21.3 +1.2
      SNR=190
BHK   Bhakra              7.09 127   ex      x       17 44 17.2
BRLS  Borolday            7.17   0   eP      Pn      17 44 21.8 -0.7
      comp=E,13nm,0.3s
BRLS                                 eS      Sn      17 45 34.4 -7.9
      comp=E,92nm,0.8s
KK31  Karatay Array       7.26   4           Pn      17 44 24.8 +1.1
KK31  Karatay Array       7.26   4   ⇓P      Pn      17 44 21.9 -1.8
      comp=E,12nm,0.3s,baz=201,slow=12,SNR=286
KK31                                  S      Sn      17 45 41.4 -3.2
      comp=E,22nm,0.4s,baz=198,slow=22,SNR=10.0
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KKAR	**Karatay Array**	**7.26**	**4**	Pn	**Pn**	**17 44 24.2**	**+0.5**
KKAR	**Karatay Array**	**7.26**	**4**		**Pn**	**17 44 24.7**	**+1.0**
UCH	**Uchtor**	**7.36**	**29**	P	**Pn**	**17 44 26.5**	**+1.1**
	SNR=151						
MRKS	**Merke**	**7.39**	**20**	*e*P	Pn	17 44 30.5	+5.0
	comp=E,29nm,0.4s						
MRKS				*e*S	**Sn**	**17 45 50.2**	**+2.5**
	comp=E,93nm,0.5s						
EKS2	**Erkin-Say**	**7.48**	**23**	P	**Pn**	**17 44 28.5**	**+1.8**
	SNR=42						
AAK	**Ala-Archa**	**7.70**	**27**	P	**Pn**	**17 44 31.4**	**+1.5**
	SNR=90						
AAK	**Ala-Archa**	**7.70**	**27**	P	**Pn**	**17 44 31.5**	**+1.7**
	comp=E,79nm,0.5s,baz=207,slow=8.2,SNR=189						
AAK				S	**Sn**	**17 45 54.5**	**-1.0**
	comp=E,61nm,0.6s,baz=360,slow=21,SNR=21						
AAK	**Ala-Archa**	**7.70**	**27**	Pn	**Pn**	**17 44 31.2**	**+1.4**
AAK	**Ala-Archa**	**7.70**	**27**	P	**Pn**	**17 44 31.5**	**+1.7**
SMLA	**Simla**	**7.77**	**125**	*e*P	**Pn**	**17 44 29.4**	**-1.2**
SMLA				IAML		17 46 21.0	
	comp=E,69nm,0.5s						
SMLA				IAML		17 46 21.6	
	comp=N,75nm,0.4s						
KBK	**Karagaybulak**	**7.89**	**29**	P	**Pn**	**17 44 34.0**	**+1.6**
	SNR=73						
FRU1	**Bishkek**	**7.90**	**27**	Pn	**Pn**	**17 44 34.5**	**+2.1**
FRU1	**Bishkek**	**7.90**	**27**	P	**Pn**	**17 44 34.5**	**+2.1**
CHMS	**Chumysh**	**8.11**	**27**	P	**Pn**	**17 44 36.5**	**+1.3**
	SNR=66						
CHMS	**Chumysh**	**8.11**	**27**	⇑P	**Pn**	**17 44 36.4**	**+1.1**
	comp=N,58nm,0.3s						
CHMS				⇓S	**Sn**	**17 46 04.3**	**-0.9**
	comp=N,162nm,0.9s						
ULHL	**Ulahol**	**8.13**	**36**	P	**Pn**	**17 44 37.7**	**+2.1**
	SNR=20						
TKM2	**Tokmak 2**	**8.38**	**31**	P	**Pn**	**17 44 39.9**	**+0.9**
	SNR=60						
TKM2	**Tokmak 2**	**8.38**	**31**	⇑P	**Pn**	**17 44 39.8**	**+0.8**
	comp=N,16nm,0.3s						
TKM2				⇑S	**Sn**	**17 46 10.1**	**-1.8**
	comp=N,26nm,0.5s						
SGDS	**Sogindy**	**8.46**	**25**	*e*P	**Pn**	**17 44 42.7**	**+2.6**
	comp=N,57nm,0.5s						
SGDS				*e*S	**Sn**	**17 46 11.8**	**-2.1**
	comp=N,59nm,0.7s						
KDJ	**Kajisay**	**8.52**	**40**	Pn	**Pn**	**17 44 41.0**	**0.0**
KST	**Kastek**	**8.63**	**32**	*e*P	**Pn**	**17 44 44.7**	**+2.3**
	comp=N,26nm,0.3s						
KST				*e*S	**Sn**	**17 46 14.9**	**-3.1**
	comp=N,61nm,1.1s						
MTBS	**Maitube**	**8.90**	**33**	*e*P	**Pn**	**17 44 49.9**	**+3.9**
	comp=N,24nm,0.6s						
MTBS				*e*S	**Sn**	**17 46 24.8**	**+0.2**
	comp=N,32nm,0.4s						
TNSS	**Tian-Shan**	**9.07**	**36**	*e*P	**Pn**	**17 44 53.0**	**+4.4**
	comp=N,4.2nm,0.6s						
TNSS				*e*S	**Sn**	**17 46 30.2**	**+1.1**
	comp=N,8.1nm,0.8s						
MDOK	**Medeo**	**9.21**	**35**	*e*P	**Pn**	**17 44 54.6**	**+4.3**
	comp=N,13nm,0.5s						
MDOK				*e*S	**Sn**	**17 46 33.0**	**+0.8**
	comp=N,14nm,0.7s						
MDOK	**Medeo**	**9.21**	**35**	⇓P	**Pn**	**17 44 49.3**	**-1.0**
	comp=N,8.1nm,0.5s						
MDOK				S	**Sn**	**17 46 31.5**	**-0.7**
	comp=N,12nm,0.7s						
GEYT	**Alibeck**	**9.56**	**286**	P	**Pn**	**17 44 55.1**	**+0.1**
	comp=N,16nm,0.4s,baz=114,slow=10,SNR=40						
GEYT				S	**Sn**	**17 46 37.7**	**-2.9**
	comp=N,6.0nm,0.2s,baz=117,slow=18,SNR=3.6						
GEYT	**Alibeck**	**9.56**	**286**	Pn	**Pn**	**17 44 54.7**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**9.56**	**286**	Pn	**Pn**	**17 44 54.3**	**-0.7**
GYA0B					**Sn**	**17 46 40.5**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**9.56**	**286**	⇑P	**Pn**	**17 44 54.8**	**-0.2**
GYA0B				⇑S	**Sn**	**17 46 37.5**	**-3.0**
OTUK	**Ortayu**	**12.53**	**8**	⇓P	**Pn**	**17 45 33.2**	**-1.7**
	comp=N,8.1nm,0.6s						
JHNI	**Jhansi**	**12.80**	**142**	*e*P	**Pn**	**17 45 39.6**	**+1.0**
JHNI				*e*S	Sn	17 47 47.6	-12
PYUN	**Piuthan**	**13.62**	**121**	*e*P	Pn	17 45 44.9	-4.5
	comp=N,39nm,0.4s						
DANN	**Dangsing**	**14.01**	**118**	*e*P	Pn	17 45 50.0	-4.6
	comp=N,18nm,0.3s						
MAKZ	**Makanchi**	**14.26**	**36**	P	**Pn**	**17 45 56.4**	**-1.1**
MK31	**Makanchi Array**	**14.40**	**37**	P	**Pn**	**17 45 57.0**	**-2.3**
MKAR	**Makanchi Array**	**14.40**	**37**	P	**Pn**	**17 45 60.0**	**+0.7**
	comp=N,5.0nm,0.8s,baz=226,slow=12,SNR=4.8						
GKN	**Gorkha**	**14.84**	**118**	*e*P	Pn	17 46 00.9	-4.3
	comp=N,26nm,0.4s						
AB31	**Akbulak array**	**15.21**	**335**	⇓P	**Pn**	**17 46 08.9**	**-0.5**
	comp=N,1.8nm,0.3s,baz=155,slow=13,SNR=175						
AB31				⇑S	**Sn**	**17 48 51.1**	**-6.1**
	comp=N,4.9nm,0.6s,baz=136,slow=26,SNR=5.6						
ABKAR	**Akbulak array**	**15.21**	**335**	P	**Pn**	**17 46 08.5**	**-0.9**
ABKAR	**Akbulak array**	**15.21**	**335**		**Pn**	**17 46 07.9**	**-1.6**
DMN	**Daman**	**15.41**	**118**	*e*P	**Pn**	**17 46 08.5**	**-3.9**
	comp=N,36nm,0.7s						
PKIN	**Phulchoki**	**15.64**	**117**	*e*P	**Pn**	**17 46 10.9**	**-4.4**
	comp=N,37nm,0.5s						
PKI	**Pulchoki**	**15.65**	**117**	*e*P	**Pn**	**17 46 11.0**	**-4.5**
	comp=N,67nm,0.7s						
GUN	**Gumba**	**15.80**	**116**	*e*P	**Pn**	**17 46 13.6**	**-3.8**
	comp=N,37nm,0.7s						
KURBB	**Kurchatov Arra**	**16.07**	**21**	P	**Pn**	**17 46 19.9**	**-0.3**
	comp=N,8.5nm,0.7s,baz=209,slow=11,SNR=22						
JIRN	**Jiri**	**16.16**	**116**	*e*P	**Pn**	**17 46 18.3**	**-3.7**
	comp=N,47nm,0.5s						
KURK	**Kurchatov**	**16.18**	**21**		**Pn**	**17 46 22.8**	**+1.3**
RAMN	**Ramite**	**16.87**	**117**	*e*P	**Pn**	**17 46 26.6**	**-3.9**
	comp=N,27nm,0.6s						
AKTO	**Aktyubinsk**	**16.88**	**333**	P	**Pn**	**17 46 31.2**	**+1.1**
	comp=N,8.5nm,0.5s,baz=130,slow=11,SNR=29						
AKTO				S	**Sn**	**17 49 28.4**	**-9.1**
	comp=N,5.2nm,0.8s,baz=219,slow=20,SNR=4.5						
AKTO	**Aktyubinsk**	**16.88**	**333**	⇓P	**Pn**	**17 46 30.8**	**+0.6**
	comp=N,5.6nm,0.5s						
AKTO				⇓S	**Sn**	**17 49 33.6**	**-4.0**
	comp=N,5.9nm,0.7s						
BRVK	**Borovoye**	**17.21**	**1**	P	**Pn**	**17 46 34.6**	**+0.4**
BRVK				IAmb	IAmb	17 46 37.5	
	comp=Z,12nm,0.4s						
DHUB	**DHUBRI**	**19.89**	**114**	*e*x	x	17 46 40.2	
DHUB				IAmb	IAmb	17 46 42.1	
	comp=Z,65nm,1.5s						
GNI	**Garni**	**20.16**	**290**	P	**P**	**17 47 07.4**	**+0.7**
	comp=Z,7.3nm,0.7s,baz=22,slow=16,SNR=1.4						
	comp=Z,7.3nm,0.7s						
ZAA0	**Zalesovo Array**	**20.92**	**25**	P	**P**	**17 47 15.5**	**+0.9**
ZAA0				IAmb	IAmb	17 47 19.3	
	comp=Z,16nm,0.6s						
ZALV	**Zalesovo Beam**	**20.92**	**25**	P	**P**	**17 47 15.9**	**+1.3**
	comp=Z,11nm,0.4s,baz=212,slow=10,SNR=84						
	comp=Z,11nm,0.4s						
ZALV	**Zalesovo Beam**	**20.92**	**25**	P	**P**	**17 47 15.5**	**+0.9**
TEZP	**TEZPUR**	**21.70**	**109**	*e*x	x	17 46 51.2	
TEZP				IAmb	IAmb	17 46 53.4	
	comp=Z,20nm,1.0s						
TEZP				*i* x	x	17 47 24.7	
ARU	**Arti**	**21.94**	**343**	P	**P**	**17 47 26.2**	**+0.7**
KBZ	**Khabaz**	**22.03**	**299**	P	**P**	**17 47 28.9**	**+2.5**
	comp=Z,2.3nm,0.8s,baz=116,slow=12,SNR=6.1						
	comp=Z,2.3nm,0.8s						
KOHI	**KOHIMA**	**23.17**	**109**	*e*x	x	17 47 00.1	
KOHI				IAmb	IAmb	17 47 02.2	
	comp=Z,17nm,1.3s						
KOHI				*i* x	x	17 47 22.2	
AZL	**Aizawl**	**23.20**	**115**	*e*x	x	17 47 01.1	
AZL				IAmb	IAmb	17 47 03.0	
	comp=Z,18nm,1.0s						
KIRV	**Kirov**	**26.41**	**336**	P	**P**	**17 48 09.6**	**+2.4**
	comp=Z,9.8nm,0.4s,baz=186,slow=2.2,SNR=5.6						
	comp=Z,9.8nm,0.4s						
BRTR	**Keskin Array B**	**28.69**	**289**	P	**P**	**17 48 30.2**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=106,slow=6.8,SNR=2.4						
	comp=Z,0.7nm,0.6s						
BRTR	**Keskin Array B**	**28.69**	**289**	P	**P**	**17 48 27.7**	**-0.3**
SONM	**Songino Array**	**29.52**	**55**	P	**P**	**17 48 37.0**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=261,slow=10.0,SNR=2.2						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**32.59**	**310**	P	**P**	**17 49 03.0**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=93,slow=5.7,SNR=5.7						
	comp=Z,0.5nm,0.4s						
MLR	**Muntele Rosu**	**34.23**	**300**	P	**P**	**17 49 18.4**	**+1.9**
	comp=Z,3.4nm,0.8s,baz=194,slow=18,SNR=4.8						
	comp=Z,3.4nm,0.8s						
MLR	**Muntele Rosu**	**34.23**	**300**	P	**P**	**17 49 16.2**	**-0.3**
BURAR	**Bucovina Array**	**34.81**	**304**	P	**P**	**17 49 22.2**	**+0.8**
BUR08	**Bucovina Ar. S**	**34.82**	**304**	P	**P**	**17 49 22.6**	**+1.1**
NRIK	**Noril'sk**	**34.95**	**11**	P	**P**	**17 49 24.6**	**+2.4**
	comp=Z,5.1nm,0.5s,baz=196,slow=5.0,SNR=8.3						
	comp=Z,5.1nm,0.5s						
NRIK	**Noril'sk**	**34.95**	**11**	P	**P**	**17 49 22.9**	**+0.7**
NRIK				IAmb	IAmb	17 49 25.3	
	comp=Z,6.5nm,0.8s						
KAAM	**Kaadhehdhoo**	**35.31**	**174**	P	**P**	**17 49 24.2**	**-1.6**
FIA1	**FINESS Array S**	**37.47**	**327**	P	**P**	**17 49 43.1**	**-0.7**
FIA1				IAmb	IAmb	17 50 59.8	
	comp=Z,11nm,1.3s						
FINES	**FINESS Array B**	**37.47**	**327**	P	**P**	**17 49 46.0**	**+2.3**
	comp=Z,1.5nm,0.7s,baz=122,slow=8.3,SNR=7.8						
	comp=Z,1.5nm,0.7s						
FINES	**FINESS Array B**	**37.47**	**327**	P	**P**	**17 49 42.6**	**-1.1**
KEV	**Kevo**	**41.04**	**339**	P	**P**	**17 50 13.8**	**+0.5**
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**17 50 17.4**	**+1.3**
	comp=Z,30nm,0.4s,baz=106,slow=8.6,SNR=23						
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**17 50 16.7**	**+0.7**
HFS	**Hagfors**	**42.97**	**322**	P	**P**	**17 50 30.3**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=100,slow=13,SNR=13						
	comp=Z,1.4nm,0.5s						
NC405	**NORSAR Array S**	**44.07**	**324**	P	**P**	**17 50 36.8**	**-1.2**
NC405				IAmb	IAmb	17 51 39.7	
	comp=Z,27nm,1.4s						
NC602	**NORSAR Array S**	**44.11**	**323**	P	**P**	**17 50 37.1**	**-1.2**
NC303	**NORSAR Array S**	**44.25**	**324**	P	**P**	**17 50 38.2**	**-1.2**
NC303				IAmb	IAmb	17 52 06.9	
	comp=Z,33nm,1.8s						
NB201	**NORSAR Array S**	**44.27**	**324**	P	**P**	**17 50 38.1**	**-1.5**
NB2	**NORSAR Subarra**	**44.30**	**324**	P	**P**	**17 50 40.4**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=98,slow=8.6						
NOA	**NORSAR Array B**	**44.30**	**324**	P	**P**	**17 50 40.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=99,slow=7.9,SNR=4.7						
	comp=Z,0.5nm,0.4s						
NBO00	**NORSAR Array S**	**44.51**	**323**	P	**P**	**17 50 40.3**	**-1.2**
NC204	**NORSAR Array S**	**44.55**	**324**	P	**P**	**17 50 41.7**	**-0.1**
YAK	**Yakutsk**	**45.07**	**35**	P	**P**	**17 50 45.9**	**0.0**
YAK				IAmb	IAmb	17 51 28.7	
	comp=Z,5.0nm,0.5s						
KSRS	**Korea Array**	**46.03**	**70**	P	**P**	**17 50 54.5**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=274,slow=7.2,SNR=5.0						
	comp=Z,0.5nm,0.5s						
TIXI	**Tiksi**	**46.75**	**22**	P	**P**	**17 51 00.1**	**+1.2**
SPB2	**Spitsbergen Ar**	**47.89**	**347**	P	**P**	**17 51 08.2**	**+0.5**
JHJ2	**Mitsune**	**56.65**	**71**	P	**P**	**17 52 12.5**	**-0.7**
ESDC	**Sonseca Array**	**56.88**	**298**	P	**P**	**17 52 15.3**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=62,slow=7.8,SNR=5.1						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**56.88**	**298**	P	**P**	**17 52 14.8**	**+0.1**
SMRI	**Semarang**	**57.28**	**130**	P	**P**	**17 52 18.0**	**+0.3**
TOLI2	**Tolitoli**	**58.52**	**114**	P	**P**	**17 52 27.3**	**+0.9**
TOLI2				IAmb	IAmb	17 54 05.0	
	comp=Z,8.3nm,1.1s						
TOA0	**Torodi Ar. Sit**	**64.70**	**268**	P	**P**	**17 53 07.3**	**-0.8**
TOA0				IAmb	IAmb	17 55 11.3	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**64.70**	**268**	P	**P**	**17 53 08.1**	**0.0**
	comp=Z,2.3nm,0.6s,baz=44,slow=6.0,SNR=11						
	comp=Z,2.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**64.70**	**268**	P	**P**	**17 53 07.7**	**-0.3**
SOEI	**Soe**	**68.48**	**120**	P	**P**	**17 53 30.6**	**-1.5**
SOEI				IAmb	IAmb	17 54 25.8	
	comp=Z,19nm,1.0s						
TOLK	**Toolik Lake Re**	**71.80**	**14**	P	**P**	**17 53 52.7**	**+1.2**
TOLK				IAmb	IAmb	17 54 31.7	
	comp=Z,20nm,1.8s						
IMAR	**Indian Mountai**	**73.09**	**17**	P	**P**	**17 53 59.5**	**+0.3**
LBTB	**Lobatse**	**73.53**	**221**	P	**P**	**17 54 03.1**	**+0.7**
LBTB				IAmb	IAmb	17 56 22.3	
	comp=Z,30nm,1.8s						
BMAR	**Burnt Mountain**	**73.80**	**13**	P	**P**	**17 54 04.0**	**+0.7**
H23K	**Yukon River**	**74.19**	**16**	P	**P**	**17 54 05.3**	**-0.3**
H23K				IAmb	IAmb	17 56 15.2	
	comp=Z,12nm,1.6s						
J20K	**Nowinta River**	**74.46**	**18**	P	**P**	**17 54 07.8**	**+0.6**
J20K				IAmb	IAmb	17 55 41.2	
	comp=Z,22nm,1.9s						
H24K	**Noodor Dome**	**74.54**	**15**	P	**P**	**17 54 09.5**	**+1.8**
H24K				IAmb	IAmb	17 54 59.0	
	comp=Z,16nm,1.9s						
C36M	**Paulatuk**	**74.61**	**5**	P	**P**	**17 54 07.3**	**-0.6**
C36M				IAmb	IAmb	17 54 10.3	
	comp=Z,10nm,1.3s						
INK	**Inuvik**	**74.70**	**9**	P	**P**	**17 54 09.0**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=2.7,slow=5.0,SNR=3.8						
	comp=Z,1.4nm,0.6s						
K20K	**Telida**	**75.15**	**19**	P	**P**	**17 54 11.6**	**+0.4**
K20K				IAmb	IAmb	17 55 47.2	
	comp=Z,15nm,1.6s						
BPAW	**Bear Paw Mtn.**	**75.31**	**17**	P	**P**	**17 54 11.6**	**-0.5**
BPAW				IAmb	IAmb	17 54 57.2	
	comp=Z,20nm,2.0s						
KNRA	**Kununurra**	**75.73**	**122**	P	**P**	**17 54 14.4**	**-0.8**
KNRA				IAmb	IAmb	17 55 55.4	
	comp=Z,46nm,1.9s						
SVW2	**Sparrevohn**	**76.57**	**21**	P	**P**	**17 54 21.5**	**+2.1**
SVW2				IAmb	IAmb	17 56 54.3	
	comp=Z,12nm,1.2s						
BOSA	**Boshof**	**76.61**	**219**	P	**P**	**17 54 20.8**	**+0.8**
	comp=Z,3.0nm,1.0s,baz=5.6,slow=3.2,SNR=5.8						
	comp=Z,3.0nm,1.0s						
BOSA	**Boshof**	**76.61**	**219**	P	**P**	**17 54 19.2**	**-0.9**
BOSA				IAmb	IAmb	17 57 09.6	
	comp=Z,40nm,1.9s						
SCRK	**Sand Creek**	**76.98**	**15**	P	**P**	**17 54 22.0**	**+0.3**
SCRK				IAmb	IAmb	17 55 26.4	
	comp=Z,17nm,2.0s						
RIDG	**Independent Ri**	**77.01**	**15**	P	**P**	**17 54 21.6**	**-0.2**
RIDG				IAmb	IAmb	17 56 43.9	
	comp=Z,22nm,1.6s						
M24K	**Tolsona, Glenn**	**78.15**	**16**	P	**P**	**17 54 28.9**	**+0.6**
YKA	**Yellowknife Ar**	**81.93**	**2**	P	**P**	**17 54 49.0**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=346,slow=5.5,SNR=6.6						
	comp=Z,0.8nm,0.8s						
WRA	**Warramunga Arr**	**82.50**	**121**	P	**P**	**17 54 52.1**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=326,slow=4.8,SNR=7.8						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**82.50**	**121**	P	**P**	**17 54 51.9**	**-0.2**
ASAR	**Alice Springs**	**84.71**	**124**	P	**P**	**17 55 03.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=308,slow=5.0,SNR=18						
	comp=Z,1.6nm,0.7s						

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*NEIC **31** 17:58:53.8±2.6, 31°.21S±0°.06×177°.3W±0°.2, h17^{km}±8^{km}, mb4.6/6, Error ellipse: s-maj=25.6km s-min=6.9km az=102.0*

*IDC **31** 17:58:53.9±3.1, 31°.20S×177°.63W, h0^{km}, mb3.8/2, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=72.7km s-min=31.1km az=112.0*

ISC 31 17:58:54.3±1.3**, 31°.13S**±0°.06×**177°.5W**±0°.2**, h27^{km}, n18, σ2^{s}.46**/20**, mb4.4**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.91**	**349**	Pn	**Pb**	**17 59 27.9**	**-0.5**
	31nm,0.3s,baz=263,slow=23,SNR=1.6						
RAO				Sn	**Sb**	**17 59 50.0**	**-1.7**
	71nm,0.3s,baz=260,slow=23,SNR=2.3						
RAO	**Raoul Island**	**1.91**	**349**		**Pb**	**17 59 27.0**	**-1.3**
URZ	**Urewera**	**8.37**	**210**	Pn	**Pn**	**18 00 52.9**	**-1.0**
	0.2nm,0.3s,baz=121,slow=24,SNR=1.4						
URZ				Sn	**Sn**	**18 02 25.4**	**-2.1**
	0.8nm,0.3s,baz=298,slow=23,SNR=1.9						
	6.7nm,0.9s						
URZ	**Urewera**	**8.37**	**210**	Pn	**Pn**	**18 00 53.6**	**-0.2**
BKZ	**Black Stump Fm**	**9.39**	**210**	Pn	**Pn**	**18 01 08.5**	**+0.6**
LTZ	**Lake Taylor**	**14.20**	**212**	Pn	**Pn**	**18 02 14.0**	**+0.5**
OXZ	**Oxford**	**14.73**	**211**	Pn	**Pn**	**18 02 17.0**	**-3.7**
MQZ	**McQueen's Vall**	**14.77**	**209**	Pn	**Pn**	**18 02 17.7**	**-3.6**
RPZ	**Rata Peaks**	**15.48**	**213**	Pn	**Pn**	**18 02 26.0**	**-4.7**
RPZ				IAmb	IAmb	18 02 53.0	
	comp=Z,58nm,1.5s						
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**18 06 58.8**	**+3.3**
	comp=Z,0.3nm,0.4s,baz=104,slow=7.4,SNR=4.9						
	comp=Z,0.3nm,0.4s						
WR0	**Warramunga Arr**	**44.37**	**273**	P	**P**	**18 07 05.5**	**+3.0**
WR0				IAmb	IAmb	18 07 41.7	
	comp=Z,8.5nm,1.6s						
WB2	**Warramunga Arr**	**44.53**	**273**	P	**P**	**18 07 06.7**	**+2.8**
WB2				IAmb	IAmb	18 07 19.7	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**44.55**	**273**	P	**P**	**18 07 06.9**	**+2.9**
	comp=Z,0.7nm,0.3s,baz=112,slow=7.9,SNR=7.2						
	comp=Z,0.7nm,0.3s						
WB0	**Warramunga Arr**	**44.57**	**273**	P	**P**	**18 07 06.8**	**+2.6**
WB0				IAmb	IAmb	18 07 32.7	
	comp=Z,13nm,1.6s						
QSPA	**South Pole Qui**	**58.98**	**180**	P	**P**	**18 08 52.0**	**+0.8**
MAW	**Mawson**	**71.77**	**201**	P	**P**	**18 10 14.0**	**+0.2**
FINES	**FINESS Array B**	**145.97**	**340**	PKPbc	**PKiKP**	**18 18 34.3**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=46,slow=5.5,SNR=7.3						
FINES	**FINESS Array B**	**145.97**	**340**		**PKiKP**	**18 18 34.1**	**0.0**

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*IDC **31** 18:02:32.7±24.0, 14°.25S×165°.92E, h0^{km}, mb4.4/3, mbtmp4.5/4, ML4.4/1, Error ellipse: s-maj=423.6km s-min=46.9km az=51.0*

*NEIC **31** 18:02:36.2±2.7, 14°.32S±0°.08×167°.4E±0°.1, h109^{km}±8^{km}, mb4.4/24, Error ellipse: s-maj=15.5km s-min=11.5km az=79.0*

*NOU **31** 18:02:40.3, 15°.97S×168°.52E, h140^{km}, MLv4.4/6, Vanuatu Islands*

ISC 31 18:02:34.3±0.7**, 14°.36S**±0°.06×**167°.38E**±0°.09**, h100^{km}, n36, σ1^{s}.91**/39**, mb4.4**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.44**	**167**	P	Pn	18 03 12.4	-14
LIFNC	**LIFOU**	**6.38**	**181**	Pn	**Pn**	**18 04 07.0**	**+1.1**
LIFNC				Sn	Sn	18 05 10.3	-7.0
KOUNC	**Koumac, New Ca**	**6.83**	**205**	Pn	**Pn**	**18 04 11.3**	**-0.5**
KOUNC				Sn	**Sn**	**18 05 27.2**	**-0.9**
MARNC	**Mare, Loyalty**	**7.11**	**175**		**Pn**	**18 04 16.7**	**+1.0**
MARNC				Sn	**Sn**	**18 05 30.7**	**-4.3**
DZM	**Mont Dzumac**	**7.72**	**186**	Pn	**Pn**	**18 04 27.0**	**+2.8**
	5.8nm,0.3s,baz=114,slow=21,SNR=41						
DZM				Sn	**Sn**	**18 05 50.3**	**+0.2**
	6.4nm,0.3s,baz=132,slow=22,SNR=6.6						
	14nm,0.3s						
DZM	**Mont Dzumac**	**7.72**	**186**		**Pn**	**18 04 27.0**	**+2.8**
DZM				Sn	**Sn**	**18 05 45.7**	**-4.3**
PINNC	**Pines Island,**	**8.21**	**180**	Pn	**Pn**	**18 04 33.3**	**+2.6**
HNR	**Honiara**	**8.77**	**303**	Pn	**Pn**	**18 04 40.0**	**+1.7**
EIDS	**Eidsvold**	**18.82**	**232**		**P**	**18 06 47.8**	**+1.6**
EIDS				IAmb	IAmb	18 06 51.2	
	comp=Z,16nm,0.7s						
PMG	**Port Moresby**	**20.38**	**282**	P	**P**	**18 07 01.9**	**-1.5**
PMG				IAmb	IAmb	18 07 19.1	
	comp=Z,34nm,1.3s						
CTAO	**Charters Tower**	**20.96**	**251**	P	**P**	**18 07 07.1**	**-2.4**
CTAO				IAmb	IAmb	18 07 10.1	
	comp=Z,18nm,1.2s						
ARMA	**Armidale**	**21.58**	**220**	P	**P**	**18 07 14.1**	**-2.0**
ARMA				IAmb	IAmb	18 07 21.4	
	comp=Z,24nm,1.6s						
COEN	**Coen**	**23.47**	**268**	P	**P**	**18 07 37.0**	**+1.7**
COEN				IAmb	IAmb	18 07 37.5	
	comp=Z,15nm,1.3s						
STKA	**Stephens Creek**	**29.31**	**229**	P	**P**	**18 08 29.8**	**+2.2**
	comp=Z,4.1nm,0.4s,baz=59,slow=8.2,SNR=12						
	comp=Z,4.1nm,0.4s						
STKA	**Stephens Creek**	**29.31**	**229**	P	**P**	**18 08 26.1**	**-1.5**
WB0	**Warramunga Arr**	**31.95**	**256**	P	**P**	**18 08 50.3**	**-0.7**
WRA	**Warramunga Arr**	**32.02**	**255**	P	**P**	**18 08 49.4**	**-2.2**
	comp=Z,1.2nm,0.5s,baz=89,slow=9.3,SNR=5.5						
	comp=Z,1.2nm,0.5s						
AS31	**Alice Springs**	**32.90**	**249**	P	**P**	**18 09 00.4**	**+1.1**
ASAR	**Alice Springs**	**32.90**	**249**	P	**P**	**18 08 56.6**	**-2.7**
	comp=Z,2.5nm,0.4s,baz=77,slow=8.7,SNR=48						
	comp=Z,2.5nm,0.4s						
ASAR	**Alice Springs**	**32.90**	**249**	P	**P**	**18 08 59.8**	**+0.5**
BBOO	**Buckleboo**	**33.89**	**232**	P	**P**	**18 09 08.2**	**+0.5**
KNRA	**Kununurra**	**37.29**	**263**	P	**P**	**18 09 37.2**	**+0.2**
KNRA				IAmb	IAmb	18 09 40.2	
	comp=Z,8.3nm,1.1s						
JOHN	**Johnston Islan**	**38.40**	**37**	P	**P**	**18 09 43.8**	**-2.4**
XMAS	**Kiritimati**	**38.47**	**68**	P	**P**	**18 09 46.5**	**-0.4**
FORT	**Forrest**	**39.58**	**239**	P	**P**	**18 09 57.7**	**+1.8**
PSA00	**Pilbara Seismi**	**45.64**	**254**	P	**P**	**18 10 44.1**	**-1.1**
MBWA	**Marble Bar**	**45.74**	**254**	P	**P**	**18 10 44.6**	**-1.4**
MBWA				IAmb	IAmb	18 10 49.5	
	comp=Z,6.5nm,0.8s						
TOLI2	**Tolitoli**	**48.62**	**285**	P	**P**	**18 11 06.6**	**-1.8**
TOLI2				IAmb	IAmb	18 11 10.1	
	comp=Z,8.3nm,1.2s						
GIRL	**Giralia**	**50.85**	**252**	P	**P**	**18 11 26.1**	**+0.8**
VNDA	**Vanda**	**63.23**	**181**	P	**P**	**18 12 52.8**	**+1.2**
VNDA				IAmb	IAmb	18 13 05.9	
	comp=Z,5.7nm,1.6s						
SBA	**Scott Base**	**63.50**	**180**	P	**P**	**18 12 54.5**	**+1.1**
KSAR	**Wonju Array Be**	**63.51**	**326**	P	**P**	**18 12 55.9**	**+1.8**
KS19	**Wonju Array Si**	**63.56**	**326**	P	**P**	**18 12 54.9**	**+0.5**
CASY	**Casey**	**63.91**	**202**	P	**P**	**18 12 57.6**	**+1.3**
QSPA	**South Pole Qui**	**75.67**	**180**	P	**P**	**18 14 09.8**	**+1.3**
QSPA				IAmb	IAmb	18 14 10.8	
	comp=Z,9.9nm,1.5s						
KDAK	**Kodiak Island**	**79.08**	**21**	P	**P**	**18 14 26.9**	**-0.5**

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*BYKL **31** 18:20:36.8±0.1, 55°.45N×111°.72E*

*MOS **31** 18:20:36.2±2.0, 55°.41N×111°.80E, h9^{km}, mb3.6/1, Error ellipse: s-maj=13.6km s-min=8.2km az=75.1*

*IDC **31** 18:20:37.0±1.4, 55°.50N×112°.34E, h0^{km}, mb3.4/3, mbtmp3.5/6, ML3.0/3, MS3.3/1, Error ellipse: s-maj=29.8km s-min=23.4km az=166.0*

ISC 31 18:20:36.1±0.6**, 55°.56N**±0°.02×**111°.80E**±0°.02**, h10^{km}, n57, σ2^{s}.59**/106**, 7C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.47**	**315**	⇑*i*Pg	**Pb**	**18 20 46.4**	**-0.1**
KMO				*e*Sg	**Sb**	**18 20 53.6**	**0.0**
KMO				Pmax			
	2μm,0.3s						
KMO				Smax			
	3μm,0.9s						
KMO	**Kumora**	**0.47**	**315**	⇑*i*PG	**Pb**	**18 20 46.4**	**-0.1**
KMO				*e*		18 20 52.6	
KMO				pmax	pmax		
	comp=Z,1μm,0.2s						
KMO				smax	smax		
	comp=E,3μm,0.6s						
YOA	**Uoyan**	**0.58**	**356**	⇑*i*Pg	**Pn**	**18 20 49.4**	**-1.0**
YOA				*e*Sg	**Sn**	**18 20 59.1**	**-0.9**
YOA				Pmax			
	comp=E,2μm,0.3s						
YOA				Smax			
	comp=E,9μm,0.6s						
YOA	**Uoyan**	**0.58**	**356**	⇑*i*PG	**Pn**	**18 20 49.4**	**-1.0**
YOA				*i*		18 20 59.5	
YOA				pmax	pmax		
	comp=Z,764nm,0.2s						
YOA				smax	smax		
	comp=E,9μm,0.5s						
YLYR	**Ulyunkhan**	**0.77**	**208**	⇑*i*Pg	**Pg**	**18 20 49.3**	**-1.7**
YLYR				*e*Sg	**Sg**	**18 20 58.6**	**-2.5**
YLYR				Pmax			
	comp=E,91nm,0.2s						
YLYR				Smax			
	comp=E,1μm,0.2s						
YLYR	**Ulyunkhan**	**0.77**	**208**	*e*PG	**Pg**	**18 20 49.3**	**-1.7**
YLYR				*e*		18 20 58.0	
YLYR				pmax	pmax		
	comp=Z,57nm,0.1s						
YLYR				smax	smax		
	comp=E,1μm,0.2s						
UKT	**Uakit**	**1.04**	**93**	⇑*i*Pg	**Pb**	**18 20 56.3**	**0.0**
UKT				*e*Sg	**Sn**	**18 21 10.8**	**-0.7**
UKT				*e*Sb	**Sb**	**18 21 14.4**	**+4.4**
UKT				Pmax			
	comp=E,385nm,0.4s						
UKT				max			
	comp=E,2μm,0.3s						
UKT	**Uakit**	**1.04**	**93**	⇑*i*PG	**Pb**	**18 20 56.3**	**0.0**
UKT				*e*		18 21 10.7	
UKT				pmax	pmax		
	comp=Z,376nm,0.4s						
UKT				smax	smax		
	comp=E,2μm,0.2s						
SVKR	**Severomuysk**	**1.14**	**60**	*e*Pg	**Pn**	**18 20 59.7**	**+1.5**
SVKR				*e*Pb	**Pg**	**18 21 00.3**	**+2.3**
SVKR				*e*Sg	**Sn**	**18 21 16.0**	**+2.1**
SVKR				max			
	comp=E,273nm,0.2s						
SVKR				Smax			
	comp=E,4μm,0.6s						
SVKR	**Severomuysk**	**1.14**	**60**	*e*PG	**Pn**	**18 20 59.9**	**+1.7**
SVKR				*e*		18 21 16.6	

SVKR				pmax	pmax		
	comp=Z,189nm,0.1s						
SVKR				smax	smax		
	comp=N,4µm,0.6s						
NIZ	**Nizh Angarsk**	**1.30**	**281**	*e*Pg	**Pn**	**18 20 59.6**	**-0.7**
NIZ				*e*Sg	**Sb**	**18 21 17.4**	**+0.1**
NIZ				*e*Sb	**Sg**	**18 21 20.3**	**+2.5**
NIZ				Pmax			
	comp=N,361nm,0.6s						
NIZ				max			
	comp=N,3µm,0.3s						
NIZ	**Nizh Angarsk**	**1.30**	**281**	*e*PG	**Pn**	**18 20 59.7**	**-0.6**
NIZ				*e*		18 21 17.8	
NIZ				pmax	pmax		
	comp=Z,127nm,0.5s						
NIZ				smax	smax		
	comp=N,3µm,0.4s						
SYVR	**Suvo**	**2.17**	**210**	*e*Pn	**Pn**	**18 21 11.6**	**-0.7**
SYVR				*e*Pg	**Pb**	**18 21 14.5**	**-1.0**
SYVR				*e*		18 21 19.0	
SYVR				*e*Sn	**Sn**	**18 21 37.6**	**-1.6**
SYVR				*e*Sg	**Sb**	**18 21 41.6**	**-0.8**
SYVR				max			
	comp=N,278nm,0.7s						
SYVR				Smax			
	comp=N,375nm,0.6s						
NLYR	**Nelyaty**	**2.38**	**65**	*e*Pn	**Pn**	**18 21 16.8**	**+1.6**
NLYR				*e*Pg	**Pg**	**18 21 20.6**	**-1.1**
NLYR				*e*PgPg	**PnPn**	**18 21 26.9**	**+4.6**
NLYR				*e*Sg	**Sg**	**18 21 53.1**	**+0.5**
NLYR				max			
	comp=N,90nm,0.7s						
NLYR				Smax			
	comp=N,457nm,0.8s						
BOD	**Bodaibo**	**2.57**	**27**	*e*PN	**Pg**	**18 21 24.6**	**-0.8**
BOD				*e*S	**Sb**	**18 21 51.1**	**-2.8**
BOD				*e*		18 21 57.7	
BOD				pmax	pmax		
	comp=Z,30nm,0.3s						
BOD				smax	smax		
	comp=E,353nm,0.8s						
MXMB	**Maximikha**	**2.91**	**219**	*e*Pn	**Pn**	**18 21 21.7**	**-0.7**
MXMB				*e*Pg	**Pb**	**18 21 27.4**	**-0.6**
MXMB				*e*PgPg	**Pg**	**18 21 31.4**	**-0.4**
MXMB				*e*		18 21 35.4	
MXMB				*e*Sn	**Sn**	**18 21 56.6**	**-0.8**
MXMB				*e*Sg	**Sb**	**18 22 04.0**	**+0.3**
OGRR	**Ongureny**	**3.11**	**234**	*e*	**Pn**	**18 21 26.9**	**+1.8**
OGRR				*e*Pg	**Pb**	**18 21 30.7**	**-0.7**
OGRR				*e*PgPg	**Pg**	**18 21 34.7**	**-0.9**
OGRR				*e*Sn	**Sn**	**18 22 00.7**	**-1.6**
OGRR				*e*Sg	**Sb**	**18 22 11.2**	**+1.9**
OGRR				*e*SgSg	**Sg**	**18 22 15.8**	**0.0**
OGRR				max			
	comp=E,38nm,0.4s						
OGRR				max			
	comp=E,177nm,0.4s						
OGRR	**Ongureny**	**3.11**	**234**	*e*PN	**Pn**	**18 21 26.9**	**+1.8**
OGRR				*e*		18 21 32.8	
OGRR				*e*		18 22 11.4	
OGRR				pmax	pmax		
	comp=Z,45nm,1.1s						
OGRR				smax	smax		
	comp=E,192nm,1.4s						
KELR	**Kotokel**	**3.55**	**219**	*e*Pg	**Pb**	**18 21 37.8**	**-1.2**
KELR				*e*Sg	**Sb**	**18 22 23.8**	**+1.6**
CIT	**Chita**	**3.69**	**163**	*e*Pg	**Pb**	**18 21 41.2**	**-0.2**
CIT				*e*Sg	**Sb**	**18 22 27.9**	**+1.7**
CIT				Pmax			
	comp=E,65nm,0.3s						
CIT				Smax			
	comp=E,239nm,0.2s						
CIT	**Chita**	**3.69**	**163**	*e*PN	**Pn**	**18 21 30.8**	**-2.4**
CIT				*e*		18 21 40.6	
CIT				*e*S	**Sn**	**18 22 15.4**	**-1.4**
CIT				*e*		18 22 29.9	
CIT				pmax	pmax		
	comp=Z,73nm,1.2s						
CIT				smax	smax		
	comp=E,282nm,1.2s						
CRS	**Chara**	**3.85**	**67**	*e*Pn	**Pn**	**18 21 37.3**	**+1.9**
CRS				*e*Pg	**Pg**	**18 21 47.3**	**-2.6**
CRS				*e*		18 21 53.3	
CRS				*e*Sg	**Sg**	**18 22 38.4**	**-1.3**
CRS				*e*		18 22 48.4	
CRS				max			
	comp=E,57nm,0.8s						
CRS				Smax			
	comp=E,332nm,1.6s						
CRS	**Chara**	**3.85**	**67**	*e*PN	**Pg**	**18 21 47.7**	**-2.2**
CRS				*e*		18 22 38.6	
CRS				pmax	pmax		
	comp=Z,44nm,0.9s						
CRS				smax	smax		
	comp=E,245nm,1.0s						
TRG	**Tyrgan**	**4.26**	**231**	*e*Pn	**Pn**	**18 21 40.5**	**-0.5**
TRG				*e*Pg	**Pb**	**18 21 51.0**	**0.0**
TRG				*e*		18 21 55.6	
TRG				*e*Sn	**Sn**	**18 22 28.9**	**-1.8**
TRG				*e*Sg	**Sb**	**18 22 44.7**	**+2.3**
TRG				*e*		18 22 52.2	
TRG				max			
	comp=E,15nm,0.8s						
TRG				max			
	comp=E,108nm,0.5s						
TRG	**Tyrgan**	**4.26**	**231**	*e*PN	**Pn**	**18 21 40.9**	**-0.1**
TRG				*e*		18 21 51.3	
TRG				*e*S	**Sn**	**18 22 28.3**	**-2.4**
TRG				*e*		18 22 43.9	
TRG				pmax	pmax		
	comp=Z,15nm,0.7s						
TRG				smax	smax		
	comp=E,108nm,0.5s						
UUDB	**Ulan-Yde**	**4.44**	**215**	*e*Pg	**Pb**	**18 21 54.1**	**0.0**
UUDB				*e*		18 22 00.5	
UUDB				*e*Sg	**Sb**	**18 22 50.9**	**+3.3**
UUDB				*e*		18 22 54.6	
UUDB				max			
	comp=E,52nm,0.8s						
UUDB				max			
	comp=E,139nm,1.2s						
FFNB	**Fofonovo**	**4.61**	**222**	*e*Sg	**Sb**	**18 22 56.5**	**+3.9**
KAB	**Kabansk**	**4.65**	**223**	*e*Sg	**Sb**	**18 22 58.0**	**+4.3**
KAB				Smax			
	comp=E,315nm,1.2s						
STDB	**Stepnoy Dvoret**	**4.67**	**226**	*e*Pg	**Pb**	**18 21 58.4**	**+0.3**
STDB				*e*		18 22 06.8	
STDB				*e*Sg	**Sb**	**18 22 59.2**	**+4.8**
KHNR	**Khani**	**4.76**	**70**	*e*Pn	**Pn**	**18 21 50.2**	**+2.3**
KHNR				*e*Pg	**Pg**	**18 22 03.9**	**-3.4**
KHNR				*e*Sn	**Sn**	**18 22 43.8**	**+0.6**
KHNR				*e*Sg	**Sg**	**18 23 06.8**	**-2.1**
TUP	**Tupik**	**4.83**	**100**	*e*Pn	**Pn**	**18 21 49.2**	**+0.4**
TUP				*e*		18 21 53.5	
TUP				*e*Pg	**Pb**	**18 22 03.1**	**+2.3**
TUP				*e*		18 22 42.3	
TUP				*e*Sg	**Sg**	**18 23 07.6**	**-3.5**
TUP				Pmax			
	comp=E,23nm,0.6s						
TUP				Smax			
	comp=E,215nm,0.9s						
TUP	**Tupik**	**4.83**	**100**	*e*PN	**Pn**	**18 21 49.2**	**+0.4**
TUP				*e*		18 22 03.1	
TUP				*e*S	**Sn**	**18 22 46.3**	**+1.5**
TUP				*e*		18 23 07.9	
TUP				pmax	pmax		
	comp=Z,23nm,0.7s						
TUP				smax	smax		
	comp=N,216nm,0.9s						
BGT	**Bolshoye Golou**	**5.17**	**230**	*e*Pg	**Pb**	**18 22 07.6**	**+1.1**
BGT				*e*Sg	**Sb**	**18 23 13.1**	**+4.5**
BGT				Pmax			
	comp=N,32nm,0.5s						
BGT				Smax			
	comp=N,67nm,0.6s						
LSTR	**Listvyanka**	**5.55**	**231**	*e*Pn	**Pn**	**18 21 58.6**	**0.0**
LSTR				*e*Pg	**Pb**	**18 22 13.9**	**+1.0**
LSTR				*e*Sn	**Sn**	**18 22 58.4**	**-4.0**
LSTR				*e*		18 23 21.9	
LSTR				*e*Sg	**Sb**	**18 23 24.6**	**+5.1**
LSTR				Pmax			
	comp=N,9.0nm,0.7s						
LSTR				Smax			
	comp=N,52nm,1.4s						
IRK	**Irkutsk**	**5.55**	**236**	*e*Pg	**Pb**	**18 22 14.7**	**+1.7**
IRK				*e*Sg	**Sb**	**18 23 25.8**	**+6.2**
IRK				Pmax			
	comp=N,58nm,0.1s						
IRK				Smax			
	comp=N,196nm,0.6s						
YKLR	**Yuktali**	**5.62**	**75**	*e*Sg	**Sg**	**18 23 33.3**	**-2.9**
IVK	**Ivanovka**	**5.78**	**232**	*e*Sg	**Sb**	**18 23 32.0**	**+5.8**
IVK				*e*		18 23 36.6	
IVK				max			
	comp=N,50nm,1.0s						
KPC	**Khapcheranga**	**5.87**	**176**	*e*Pn	**Pn**	**18 22 03.1**	**-0.1**
KPC				*e*Pg	**Pb**	**18 22 20.8**	**+2.2**
KPC				*e*Sn	**Sn**	**18 23 07.4**	**-3.2**
KPC				*e*Sg	**Sb**	**18 23 35.7**	**+6.8**
KPC				Pmax			
	comp=N,9.0nm,0.9s						
KPC				Smax			
	comp=N,104nm,1.0s						
TLY	**Talaya**	**6.21**	**235**	*e*Pn	**Pn**	**18 22 08.2**	**+0.4**
TLY				*e*Sg	**Sb**	**18 23 44.8**	**+6.2**
TLY				*e*		18 23 50.8	
TLY				Pmax			
	comp=N,10.0nm,0.6s						
TLY				Smax			
	comp=N,42nm,0.7s						
ARS	**Arshan**	**6.65**	**241**	*e*Pn	**Pn**	**18 22 15.7**	**+1.9**
ARS				*e*Sg	**Sb**	**18 23 58.1**	**+6.9**
ARS				max			
	comp=N,16nm,0.6s						
ARS				Smax			
	comp=N,229nm,0.8s						
ZAK	**Zakamensk**	**7.30**	**228**	*e*Sg	Sb	18 24 20.3	+10
ZAK				Smax			
	comp=N,45nm,0.9s						
ZAK	**Zakamensk**	**7.30**	**228**	*e*PG	**Pg**	**18 22 56.8**	**+1.1**
ZAK				*e*		18 24 17.1	
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAK				smax	smax		
	comp=N,45nm,0.9s						
IENR	**Iengra**	**7.38**	**79**	*e*Sg	**Sg**	**18 24 27.5**	**-5.1**
CLNS	**Chul'man**	**7.42**	**75**	*e*Pg	Pb	18 22 50.8	+6.0
CLNS				*e*		18 23 59.3	
CLNS				*e*Sg	**Sg**	**18 24 28.7**	**-5.2**
MOY	**Mondy**	**7.51**	**243**	*e*Pn	**Pn**	**18 22 25.4**	**-0.3**
MOY				*e*		18 22 32.6	
MOY				*e*		18 22 39.3	
MOY				*e*Sn	**Sn**	**18 23 47.7**	**-3.3**
MOY				*e*		18 24 24.3	
MOY				*e*Sg	Sb	18 24 26.9	+11
MOY				max			
	comp=N,21nm,0.5s						
MOY				Smax			
	comp=N,110nm,1.6s						
MOY	**Mondy**	**7.51**	**243**	*e*PN	**Pn**	**18 22 26.6**	**+0.9**
MOY				*e*		18 22 50.1	
MOY				*e*S	**Sn**	**18 23 47.7**	**-3.3**
MOY				*e*		18 24 26.0	
MOY				pmax	pmax		
	comp=Z,12nm,0.5s						
MOY				smax	smax		
	comp=E,111nm,1.6s						
ORL	**Orlik**	**7.68**	**252**	*e*Pn	**Pn**	**18 22 27.6**	**-0.4**
ORL				max		18 22 44.9	
	comp=E,16nm,1.1s						
ORL				*e*Sn	**Sn**	**18 23 50.4**	**-4.6**
ORL				*e*Sg	Sg	18 24 32.4	-10
ORL				Smax			
	comp=E,73nm,1.3s						
ORL	**Orlik**	**7.68**	**252**	*e*PN	**Pn**	**18 22 28.3**	**+0.3**
ORL				*e*		18 22 53.6	
ORL				*e*S	**Sn**	**18 23 50.4**	**-4.6**
ORL				*e*		18 24 32.5	
ORL				pmax	pmax		
	comp=Z,18nm,1.0s						
ORL				smax	smax		
	comp=N,72nm,1.4s						
SONM	**Songino Array**	**8.43**	**206**	Pn	Pn	18 22 43.2	+4.9
	comp=N,0.3nm,0.3s,baz=24,slow=13,SNR=3.6						
SONM				Pg	Pg	18 23 11.9	-5.4
	comp=N,0.4nm,0.3s,baz=23,slow=16,SNR=7.3						
SONM				Lg	Lg	18 25 00.5	
	comp=N,0.9nm,0.3s,baz=21,slow=25,SNR=15						
	comp=N,0.4nm,0.3s						
KNGR	**Kungurtug, Tuv**	**9.91**	**246**	*e*Sg	Sg	18 25 40.2	
YAK	**Yakutsk**	**11.29**	**48**	Lg	Lg	18 26 23.9	
	comp=N,0.1nm,0.3s,baz=343,slow=16,SNR=2.0						
KLR	**Kul'dur**	**13.70**	**109**	Pn	**Pn**	**18 23 48.0**	**-2.2**
	comp=N,0.1nm,0.3s,baz=310,slow=9.6,SNR=4.2						
KLR				Lg	Lg	18 27 41.8	
	comp=N,0.1nm,0.3s,baz=214,slow=13,SNR=3.3						
	comp=N,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**15.62**	**275**	Pn	**P**	**18 24 20.4**	**+0.1**
	comp=N,0.1nm,0.3s,baz=72,slow=14,SNR=5.2						
ZALV				Lg	Lg	18 28 54.9	
	comp=N,0.1nm,0.3s,baz=107,slow=27,SNR=1.9						
	comp=N,0.9nm,0.6s						
MKAR	**Makanchi Array**	**20.34**	**257**	P	Pn	18 25 16.6	+2.2
	comp=N,0.4nm,0.7s,baz=56,slow=9.1,SNR=4.7						
	comp=N,0.4nm,0.7s						
FINES	**FINESS Array B**	**42.09**	**314**	P	P	18 28 33.3	+5.6
	comp=N,1.0nm,0.7s,baz=55,slow=11,SNR=4.7						
	comp=N,1.0nm,0.7s						
ILAR	**Eielson Array**	**45.91**	**36**	P	**P**	**18 28 59.1**	**+0.8**
	comp=N,0.6nm,0.9s,baz=303,slow=5.8,SNR=4.4						
	comp=N,0.6nm,0.9s						
AKASG	**Malin Array Be**	**47.02**	**300**	LR	LR	18 52 55.1	
	comp=N,30nm,18.3s,baz=16,slow=41						

IDC 31 18:42:52.7±5.4**, 13°.00S**×**75°.27W, h0^{km}, mb3.8**/2**,**
mbtmp4.0/3**, ML4.4**/1**, MS3.1**/4**, Error ellipse:**
s-maj=232.4km s-min=32.4km az=34.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.64**	**116**	Pn	Pn	18 44 47.0	+1.0
	2.8nm,0.3s,baz=289,slow=8.0,SNR=44						
LPAZ				LR	LR	18 48 16.8	
	comp=Z,91nm,20.9s,baz=306,slow=42						
	12nm,0.4s						
SIV	**San Ignacio**	**14.07**	**104**	LR	LR	18 52 16.8	
	comp=Z,154nm,20.3s,baz=292,slow=40						
CPUP	**Villa Florida**	**21.44**	**131**	LR	LR	18 56 38.5	
	comp=Z,41nm,18.7s,baz=258,slow=38						
MDP	**Montagnes des**	**28.79**	**53**	LR	LR	19 02 02.0	
	comp=Z,43nm,20.6s,baz=244,slow=40						
TXAR	**Lajitas Array**	**50.23**	**327**	P	P	18 51 51.5	+0.7
	0.3nm,0.7s,baz=148,slow=10,SNR=4.4						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.58**	**74**	P	P	18 55 07.7	-0.1
	1.6nm,0.7s,baz=259,slow=4.6,SNR=7.8						
	1.6nm,0.7s						
SONM	**Songino Array**	**145.25**	**358**	PKPbc	PKPbc	19 02 30.5	-1.8
	0.4nm,0.6s,baz=350,slow=2.3,SNR=4.5						

*JMA **31** 18:58:26.5±0.1, 23°.8N±0°.7×121°.7E±0°.7, h38^{km}±1^{km},*
MV2.7/9, TAIWAN REGION
*TAP **31** 18:58:27.2, 23°.88N×121°.67E, h47^{km}, ML3.1, C*
ISC 31 18:58:27.6±1.2**, 23°.87N**±0°.02×**121°.69E**±0°.02**, h42**^{km}±5^{km}**,**
n109, σ**0^{s}.85**/190**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.09**	**267**	*i* P	**Pn**	**18 58 35.0**	**+0.6**
	baz=287						
TEYL				*e*S	**Sn**	**18 58 40.1**	**+1.0**
	baz=287						
HWA	**Hwalien**	**0.13**	**322**	*e*P	**Pn**	**18 58 35.1**	**+0.5**
	baz=331						
HWA				S	**Sn**	**18 58 40.4**	**+1.0**
	baz=331						
TWD	**Chiawan**	**0.23**	**337**	*i* P	**Pn**	**18 58 35.4**	**+0.2**
	baz=329						
TWD				*e*S	**Sn**	**18 58 41.6**	**+1.0**
	baz=329						
ESL	**Shilin**	**0.25**	**256**	P	**Pn**	**18 58 35.2**	**-0.3**
	baz=261						
ESL				*e*S	**Sn**	**18 58 40.8**	**-0.2**
	baz=261						
ETL	**Fush Village**	**0.29**	**347**	*i* P	**Pn**	**18 58 36.0**	**+0.1**
	baz=337						
ETL				*e*S	**Sn**	**18 58 42.4**	**+0.6**
	baz=337						
NACB	**Ninganchiao**	**0.31**	**343**	*i* P	**Pn**	**18 58 35.8**	**-0.4**
	baz=335						
NACB				*i* S	**Sn**	**18 58 42.1**	**-0.1**
	baz=335						
EGFH	**Guangfu**	**0.32**	**230**	*e*P	**Pn**	**18 58 36.0**	**-0.1**
	baz=235						
EGFH				*e*S	**Sn**	**18 58 42.8**	**+0.6**
	baz=235						
ETLH	**Xiulin Townshi**	**0.39**	**330**	*i* P	**Pn**	**18 58 36.5**	**-0.5**
	baz=323						
ETLH				*e*S	**Sn**	**18 58 42.9**	**-0.8**
	baz=323						
HGSD	**Ruisui**	**0.45**	**213**	*e*P	**Pn**	**18 58 38.1**	**+0.4**
	baz=221						
HGSD				*e*S	**Sn**	**18 58 46.1**	**+1.2**
	baz=221						
WHF	**Hehuan Shan**	**0.48**	**305**	P	**Pn**	**18 58 38.0**	**-0.6**
	baz=302						
WHF				*e*S	**Sn**	**18 58 45.5**	**-0.7**
	baz=302						
OWD	**Renai**	**0.48**	**280**	*i* P	**Pn**	**18 58 38.2**	**-0.1**
	baz=279						
OWD				*e*S	**Sn**	**18 58 45.5**	**-0.4**
	baz=279						
EHY	**Hungye**	**0.50**	**223**	P	**Pn**	**18 58 37.7**	**-0.7**
	baz=219						
EHY				*e*S	**Sn**	**18 58 45.1**	**-0.9**
	baz=219						
CHGB	**Renai**	**0.51**	**292**	*i* P	**Pn**	**18 58 38.6**	**-0.1**
	baz=294						
CHGB				S	**Sn**	**18 58 46.7**	**0.0**
	baz=294						
VWDT	**VWDT**	**0.52**	**257**	*e*P	**Pn**	**18 58 38.7**	**+0.1**
	baz=252						
VWDT				*e*S	**Sn**	**18 58 45.7**	**-0.8**
	baz=252						
WUSB	**Renai**	**0.54**	**283**	*i* P	**Pn**	**18 58 39.0**	**0.0**
	baz=282						
WUSB				S	**Sn**	**18 58 47.0**	**-0.2**
	baz=282						
ENA	**Nanau**	**0.56**	**4**	*e*P	**Pn**	**18 58 38.8**	**-0.3**
	baz=14						
ENA				*e*S	**Sn**	**18 58 47.7**	**+0.3**
	baz=14						
FUSS	**Fushou**	**0.56**	**312**	P	**Pn**	**18 58 39.2**	**-0.2**
	baz=317						
FUSS				*e*S	**Sn**	**18 58 47.7**	**0.0**
	baz=317						
EWUT	**Wuta**	**0.58**	**8**	P	**Pn**	**18 58 39.2**	**-0.2**
	baz=17						
EWUT				*e*S	**Sn**	**18 58 48.1**	**+0.3**
	baz=17						
YULB	**Yu-li**	**0.60**	**217**	*e*P	**Pn**	**18 58 38.8**	**-1.0**
	baz=222						
YULB				*e*S	**Sn**	**18 58 47.6**	**-0.8**
	baz=222						
TWT	**Tachien**	**0.61**	**309**	*e*P	**Pn**	**18 58 40.3**	**+0.3**
	baz=308						
TWT				*e*S	**Sn**	**18 58 48.9**	**+0.1**
	baz=308						
TDCB	**Techi**	**0.62**	**308**	*i* P	**Pn**	**18 58 40.0**	**-0.2**
	baz=308						
TDCB				S	**Sn**	**18 58 48.7**	**-0.3**
	baz=308						
NNSB	**Datong**	**0.62**	**333**	*e*P	**Pn**	**18 58 39.6**	**-0.6**
	baz=333						
NNSB				*e*S	**Sn**	**18 58 48.2**	**-0.8**
	baz=333						
EYUL	**Yuli**	**0.63**	**213**	*e*P	**Pn**	**18 58 40.0**	**-0.1**
	baz=220						
NNS	**Nan Shan**	**0.64**	**333**	*e*P	**Pn**	**18 58 39.8**	**-0.6**
	baz=333						
NNS				*e*S	**Sn**	**18 58 48.9**	**-0.5**
	baz=333						
LATG	**Datong**	**0.68**	**347**	*e*P	**Pn**	**18 58 40.1**	**-0.8**
	baz=338						
LATG				*e*S	**Sn**	**18 58 50.5**	**+0.1**
	baz=338						
SSLB	**Suanglung**	**0.68**	**263**	P	**Pn**	**18 58 40.3**	**-0.5**
	baz=263						
SSLB				*e*S	**Sn**	**18 58 49.8**	**-0.6**
	baz=263						
SMLT	**Sun Moon Lake**	**0.73**	**271**	P	**Pn**	**18 58 41.3**	**-0.2**
	baz=270						
SMLT				*e*S	**Sn**	**18 58 51.7**	**+0.1**
	baz=270						
WCS	**Beigang Elemen**	**0.74**	**285**	*e*P	**Pn**	**18 58 41.7**	**+0.1**
	baz=284						
WCS				*e*S	**Sn**	**18 58 51.6**	**0.0**
	baz=284						
TWC	**Suao**	**0.75**	**11**	*e*P	**Pn**	**18 58 41.9**	**+0.2**
	baz=23						
TWC				*e*S	**Sn**	**18 58 52.6**	**+0.8**
	baz=23						
NDS	**Dongshan**	**0.76**	**2**	*e*P	**Pn**	**18 58 42.7**	**+0.9**
	baz=351						
NDS				*e*S	**Sn**	**18 58 52.4**	**+0.2**
	baz=351						
FULB	**Fuli**	**0.76**	**209**	*e*P	**Pn**	**18 58 41.8**	**-0.2**
	baz=216						
FULB				*e*S	**Sn**	**18 58 53.5**	**+1.2**
	baz=216						
TYC	**Yuchr**	**0.77**	**273**	P	**Pn**	**18 58 42.0**	**+0.1**
	baz=274						
TYC				*e*S	**Sn**	**18 58 52.0**	**-0.3**
	baz=274						
ENTT	**Nioudou**	**0.77**	**351**	*e*P	**Pn**	**18 58 41.7**	**-0.4**
	baz=353						
YUS	**Yu-Shan**	**0.78**	**241**	P	**Pn**	**18 58 42.7**	**+0.1**
	baz=240						
YUS				*e*S	**Sn**	**18 58 53.2**	**-0.2**
	baz=240						
WHP	**Taichung City**	**0.79**	**301**	*e*P	**Pn**	**18 58 43.1**	**+0.7**
	baz=302						
WHP				*e*S	**Sn**	**18 58 53.1**	**-0.1**
	baz=302						
TWE	**Neicheng**	**0.84**	**358**	*e*P	**Pn**	**18 58 42.9**	**-0.2**
	baz=350						
TWE				*e*S	**Sn**	**18 58 54.7**	**+0.5**
	baz=350						
YHNB	**Yeheng**	**0.84**	**340**	P	**Pn**	**18 58 42.9**	**-0.2**
	baz=338						
YHNB				*e*S	**Sn**	**18 58 53.6**	**-0.8**
	baz=338						
NSK	**Sanguang**	**0.86**	**339**	*e*P	**Pn**	**18 58 43.0**	**-0.3**
	baz=338						
NSK				*e*S	**Sn**	**18 58 54.0**	**-0.7**
	baz=338						
WJS	**Zhushan**	**0.89**	**267**	*e*P	**Pn**	**18 58 44.2**	**+0.6**
	baz=267						
WJS				*e*S	**Sn**	**18 58 57.3**	**+2.0**
	baz=267						
FUSB	**Fushanzhiwuyua**	**0.89**	**354**	*e*P	**Pn**	**18 58 43.1**	**-0.6**
	baz=352						
FUSB				*e*S	**Sn**	**18 58 56.2**	**+0.7**
	baz=352						
ALS	**Alishan**	**0.89**	**246**	*e*P	**Pn**	**18 58 44.6**	**+0.6**
	baz=241						
ALS				*e*S	**Sn**	**18 58 56.6**	**+0.7**
	baz=241						
NWLT	**Wulai**	**0.92**	**349**	*e*P	**Pn**	**18 58 43.8**	**-0.3**
	baz=342						
NWLT				*e*S	**Sn**	**18 58 55.5**	**-0.6**
	baz=342						
ELDTW	**Lidau**	**0.92**	**223**	*e*P	**Pn**	**18 58 43.4**	**-0.8**
	baz=218						
ELDTW				*e*S	**Sn**	**18 58 55.5**	**-0.8**
	baz=218						
NFF	**Wufeng Townshi**	**0.92**	**325**	*e*P	**Pn**	**18 58 44.6**	**+0.4**
	baz=329						
NFF				*e*S	**Sn**	**18 58 57.2**	**+0.9**
	baz=329						
WNT	**Mingjian**	**0.92**	**271**	*e*P	**Pn**	**18 58 45.0**	**+0.9**
	baz=270						
WNT				*e*S	**Sn**	**18 58 57.8**	**+1.6**
	baz=270						
EDH	**Donghe**	**0.96**	**202**	P	**Pn**	**18 58 44.2**	**-0.5**
	baz=197						
EDH				*e*S	**Sn**	**18 58 57.4**	**+0.2**
	baz=197						
TWQ1	**Liyutan**	**0.96**	**300**	*e*P	**Pn**	**18 58 45.0**	**+0.3**
	baz=299						
TWQ1				*e*S	**Sn**	**18 58 58.3**	**+1.1**
	baz=299						
CHN5	**Tsauling**	**0.97**	**254**	*e*P	**Pn**	**18 58 45.0**	**+0.1**
	baz=254						
CHN5				*e*S	**Sn**	**18 58 58.7**	**+1.2**
	baz=254						

TCU	Taichung	0.97	287	*e*P	Pn	18 58 45.3	+0.6
	baz=286						
TCU				*e*S	Sn	18 58 59.1	+1.7
	baz=286						
NSTT	Nanjuang	0.98	320	*e*P	Pn	18 58 45.3	+0.4
	baz=308						
NSTT				*e*S	Sn	18 58 58.4	+0.6
	baz=308						
NTC	Toucheng	0.99	7	*e*P	Pn	18 58 45.6	+0.7
	baz=353						
NTC				*e*S	Sn	18 58 58.1	+0.4
	baz=353						
LIOB	Emei	0.99	321	*e*P	Pn	18 58 45.6	+0.6
	baz=307						
LIOB				*e*S	Sn	18 58 58.3	+0.5
	baz=307						
EGS		0.99	13	*e*P	Pn	18 58 46.5	+1.5
	baz=23						
EGS				*e*S	Sn	18 58 59.5	+1.7
	baz=23						
NSY	Sanyi	1.01	303	*e*P	Pn	18 58 45.6	+0.3
	baz=302						
NSY				*e*S	Sn	18 59 00.0	+1.7
	baz=302						
NMLH	Miaoli	1.06	309	*e*P	Pn	18 58 45.9	-0.1
	baz=308						
NMLH				*e*S	Sn	18 58 59.8	+0.3
	baz=308						
WCHH	Zhanghua	1.06	281	*e*P	Pn	18 58 46.7	+0.8
	baz=292						
WCHH				*e*S	Sn	18 59 01.9	+2.4
	baz=292						
WDJ	Dajia District	1.07	296	*e*P	Pn	18 58 45.8	-0.3
	baz=296						
WDJ				*e*S	Sn	18 59 00.4	+0.5
	baz=296						
WDLH	Douliu	1.07	260	P	Pn	18 58 46.5	+0.4
	baz=261						
WDLH				*e*S	Sn	18 59 01.3	+1.4
	baz=261						
LONT	Longtian	1.09	208	*e*P	Pn	18 58 45.0	-1.4
	baz=194						
LONT				*e*S	Sn	18 58 59.2	-1.1
	baz=194						
STYH	Taoyuan	1.09	231	P	Pn	18 58 46.9	+0.5
	baz=231						
STYH				S	Sn	18 59 00.7	+0.3
	baz=231						
NHDH	Xindian Distri	1.10	352	*e*P	Pn	18 58 46.2	-0.3
	baz=349						
NHDH				*e*S	Sn	18 59 01.5	+1.0
	baz=349						
TIPB	Shuangxi	1.10	6	*e*P	Pn	18 58 46.8	+0.2
	baz=355						
TIPB				*e*S	Sn	18 59 01.3	+0.7
	baz=355						
TWA	Mucha	1.11	355	*e*P	Pn	18 58 47.0	+0.3
	baz=345						
TWA				*e*S	Sn	18 59 01.4	+0.7
	baz=345						
SBCB	Hsinchu	1.12	325	*e*P	Pn	18 58 46.7	-0.1
	baz=338						
TPUB	Ta-pu	1.13	240	*e*P	Pn	18 58 47.2	+0.2
	baz=241						
TPUB				*e*S	Sn	18 59 02.4	+1.1
	baz=241						
WTP	Ta-pu	1.17	238	*e*P	Pn	18 58 48.2	+0.7
	baz=239						
WTP				*e*S	Sn	18 59 03.8	+1.4
	baz=239						
TWGBT	Beinan	1.19	208	*e*P	Pn	18 58 47.3	-0.5
	baz=196						
TWG	Pinlang	1.19	209	*e*P	Pn	18 58 47.2	-0.6
	baz=195						
TWG				*e*S	Sn	18 59 01.1	-1.7
	baz=195						
NWF	Wu-fen Shan	1.20	4	*e*P	Pn	18 58 48.8	+0.8
	baz=353						
WRL	Guolierlin Hig	1.21	272	*e*P	Pn	18 58 47.8	-0.1
	baz=282						
WRL				*e*S	Sn	18 59 04.7	+1.6
	baz=282						
WTK	Tuku	1.21	262	*e*P	Pn	18 58 48.4	+0.4
	baz=262						
WTK				*e*S	Sn	18 59 02.6	-0.6
	baz=262						
LDUT	Ludao	1.21	190	*e*P	Pn	18 58 47.0	-1.0
	baz=179						
LDUT				*e*S	Sn	18 59 01.3	-1.9
	baz=179						
CHY	Chiayi	1.22	252	*e*P	Pn	18 58 49.0	+0.8
	baz=253						
CHY				*e*S	Sn	18 59 04.9	+1.4
	baz=253						
SXI1	Grass Mountain	1.23	8	*e*P	Pn	18 58 48.7	+0.3
	baz=354						
TWS1	Kuangyinshan	1.25	348	*e*P	Pn	18 58 48.1	-0.4
	baz=348						
TWK	Hsinying	1.26	242	*e*P	Pn	18 58 49.1	+0.3
	baz=242						
TWK				*e*S	Sn	18 59 04.9	+0.4
	baz=242						
CHN1	Nanshi	1.27	238	*e*P	Pn	18 58 49.7	+0.8
	baz=239						
CHN1				*e*S	Sn	18 59 05.5	+0.8
	baz=239						
YM01	YM01	1.27	355	*e*P	Pn	18 58 49.2	+0.3
	baz=354						
SNST	Tainan City	1.28	240	*e*P	Pn	18 58 50.1	+1.2
	baz=241						
SNST				*e*S	Sn	18 59 06.8	+1.9
	baz=241						
JYNG	Yonagunijimaku	1.28	63	P	Pn	18 58 48.9	-0.1
JYNG				S	Sn	18 59 05.7	+0.7
YOJ	Yonaguni jima	1.34	64	*e*P	Pn	18 58 49.5	-0.2
	baz=68						
YOJ				*e*S	Sn	18 59 06.1	-0.3
	baz=68						
YOJ	Yonaguni jima	1.34	64	P	Pn	18 58 49.8	0.0
YOJ				S	Sn	18 59 06.8	+0.4
WSF	Szhu	1.37	260	*e*P	Pn	18 58 50.8	+0.6
	baz=261						
WSF				*e*S	Sn	18 59 09.3	+2.2
	baz=261						
WSL	Shuilin Townsh	1.39	256	*e*P	Pn	18 58 50.9	+0.4
	baz=256						
ICHU	Yijhu	1.39	249	*e*P	Pn	18 58 50.2	-0.3
	baz=250						
ICHU				*e*S	Sn	18 59 09.1	+1.4
	baz=250						
ECL	Taimali	1.44	208	*e*P	Pn	18 58 51.2	0.0
	baz=198						
CHN8	Yiju	1.46	249	*e*P	Pn	18 58 51.0	-0.4
	baz=249						
SCST	Cishan	1.48	229	*e*P	Pn	18 58 52.5	+0.8
	baz=229						
SSD	Sandimen	1.49	221	*e*P	Pn	18 58 52.4	+0.5
	baz=223						
SSD				*e*S	Sn	18 59 10.5	+0.4
	baz=223						
TSMG	Majia	1.51	220	*e*P	Pn	18 58 53.6	+1.5
	baz=220						
MASBT	Mashibuluo	1.59	218	*e*P	Pn	18 58 53.8	+0.6
	baz=202						
MASBT				*e*S	Sn	18 59 14.3	+1.8
	baz=202						
EAST	Anshuo	1.67	208	*e*P	Pn	18 58 55.2	+0.7
	baz=198						
SSPT	Xinbi	1.73	217	*e*P	Pn	18 58 57.5	+2.4
	baz=205						
SCZT	Fangliau	1.79	214	*e*P	Pn	18 58 56.6	+0.6
	baz=214						
IRIF	Iriomote-Funau	1.92	76	P	Pn	18 58 58.0	+0.2
IRIF				S	Sn	18 59 21.0	+0.4
HATJ	Hateruma jima	1.94	84	P	Pn	18 58 58.4	+0.4
WDGT	Dungji	1.96	252	*e*P	Pn	18 58 58.0	-0.4
	baz=252						
PHUB	P'eng-hu	1.98	260	*e*P	Pn	18 58 58.0	-0.6
	baz=271						
PNG	Penghu	1.98	262	*e*P	Pn	18 58 57.7	-0.9
	baz=261						
JKRS	Kuro-shima	2.15	80	P	Pn	18 59 01.5	+0.6
JKRS				S	Sn	18 59 26.9	+0.5
VCHM	Qimei	2.18	253	*e*P	Pn	18 59 00.9	-0.5
	baz=253						
JIJ	Ishigaki jima	2.29	77	P	Pn	18 59 02.6	-0.2
JIJ				S	Sn	18 59 28.8	-1.1
VWUC	VWUC	2.33	299	*e*P	Pn	18 59 01.9	-1.5
	baz=298						
PTMZ	Houxiangcun	2.62	297	*e*P	Pn	18 59 05.6	-1.7
	baz=296						
MATB	Ma-tsu	2.77	325	*e*P	Pn	18 59 08.0	-1.4
	baz=323						
KNM	Kinmen	3.03	281	*e*P	Pn	18 59 12.8	-0.2
	baz=280						
KNMB	Chin-men Tao	3.08	282	*e*P	Pn	18 59 11.8	-1.9
	baz=281						
AXDP	Jialang	3.55	288	*e*P	Pn	18 59 18.2	-1.9
	baz=287						
SXFK	Yanhouchang	4.45	305	*e*P	Pn	18 59 30.4	-2.1
	baz=304						

CRAAG ***31*** *19:03:35.2, 36°.33N×3°.47E, Ml3.5*

MDD ***31*** *19:03:38.6±1.3, 36°.33N×3°.53E, h15^{km}±30^{km}, Mb3.9/6, M_mb3.3/6, Error ellipse: s-maj=31.7km s-min=7.1km az=134.0*

ISC 31 19:03:36.9±1.4**, 36°.35N**±0°.05×**3°.40E**±0°.06**, h10**^{km}±12^{km}**, n11, σ1^{s}.47**/16**, 5C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.20	172	P	Pg	19 03 40.3	-0.8
ABMS	Boumerdes	0.40	9	P	Pg	19 03 44.8	0.0
ABA	Alger-Bouzarea	0.54	326	P	Pg	19 03 47.4	0.0
DFRA	Djebel Bou Aff	2.00	84	P	Pg	19 04 16.2	+0.9
EIBI	Ibiza	3.13	329	Pn	Pn	19 04 27.3	+0.9
EIBI				⇑*i*Vmb_V		19 04 29.8	
	234nm,SNR=1.4						
EIBI				Sn	Sn	19 05 02.1	-1.7
ETOS	Mallorca	3.44	352	Pn	Pn	19 04 29.7	-1.0
ETOS				⇑*i*Vmb_V		19 04 33.1	
	186nm,SNR=1.2						
ETOS				Sn	Sn	19 05 10.1	-1.5
ECOL	Islas Columbre	4.14	330	Pn	Pn	19 04 40.8	+0.6
ECOL				Sn	Sn	19 05 28.4	-0.3
EZAR	Zarzadilla de	4.35	292	Pn	Pn	19 04 44.7	+1.4
ETOB	Tobarra	4.55	302	Pn	Pn	19 04 47.0	+1.0
ETOB				⇑*i*Vmb_V		19 04 50.6	
	63nm,SNR=1.0						
ETOB				Sn	Sn	19 05 38.4	-0.7
ECHE	Chera	4.73	314	Pn	Pn	19 04 50.6	+2.1
ECHE				⇑*i*Vmb_V		19 04 53.0	
	157nm,SNR=1.5						
EMOS	Mosqueruela	5.03	324	Pn	Pn	19 04 54.6	+1.9
EMOS				⇑*i*Vmb_V		19 04 54.7	
	121nm,SNR=1.4						
EMOS				Sn	Sn	19 05 48.6	-2.3

JMA ***31*** *19:06:50.4±0.2, 28°N±1°×14°1E±°, h275^{km}, MV3.8/12, W OFF OGASAWARA*

IDC ***31*** *19:06:50.0±1.2, 27°.76N×141°.08E, h292^{km}±25^{km}, mb3.1/2, mbtmp3.6/3, Error ellipse: s-maj=120.2km s-min=19.4km az=80.0*

ISC 31 19:06:49.7±1.0**, 27°.9N**±0°.1×**141°.5E**±0°.4**, h300**^{km}**, n10, σ1^{s}.27**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.03	141	P	Pn	19 07 30.6	+0.3
JCJ	Chichijima	1.03	141	P	Pn	19 07 30.7	+0.4
	baz=308,slow=17						
JHH2	Haha-jima-NKT2	1.41	153	P	Pn	19 07 32.5	+0.1
JHH2				S	S	19 08 05.6	-0.7
JHJ	Hachijo jima 2	5.40	345	P	Pn	19 08 12.3	+0.4
	baz=60,slow=20						
JOD2	Odawara 2	7.62	345	*e*P	Pn	19 08 39.6	+1.0
JAG	Ashikaga	8.67	349	*e*P	Pn	19 08 51.8	+0.3
JHO	Hitachi	8.72	355	*e*P	Pn	19 08 54.0	+2.0
JHO				*e*S	S	19 10 28.9	-2.6
MJAR	Matsushiro Arr	9.05	343	P	Pn	19 08 56.2	+0.2
	0.7nm,0.6s,baz=123,slow=13,SNR=2.0						
WRA	Warramunga Arr	48.05	189	P	P	19 14 59.0	-0.6
	0.3nm,0.3s,baz=6.9,slow=8.1,SNR=8.2						
	0.3nm,0.3s						
FINES	FINESS Array B	76.94	334	P	P	19 18 10.3	+1.2
	0.4nm,0.5s,baz=72,slow=4.5,SNR=4.4						
	0.4nm,0.5s						

IDC 31 19:09:37.4±1.9**, 28°.58N×100°.17E, h0**^{km}**, mb3.2**/3**, mbtmp3.2**/3**, MS2.9**/1**, Error ellipse: s-maj=483.1km s-min=29.2km az=56.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	22.95	327	P	P	19 14 43.1	-0.2
	0.3nm,0.6s,baz=126,slow=11,SNR=4.7						
	0.3nm,0.6s						
KVAR	Kislovodsk Arr	47.88	305	LR	LR	19 44 22.5	
	comp=Z,13nm,19.4s,baz=4.0,slow=44						
WRA	Warramunga Arr	58.45	142	P	P	19 19 34.8	-0.6
	0.6nm,0.9s,baz=328,slow=8.9,SNR=4.7						
	0.6nm,0.9s						
ASAR	Alice Springs	61.27	145	P	P	19 19 55.4	+0.7
	0.1nm,0.6s,baz=318,slow=6.8,SNR=1.6						
	0.1nm,0.6s						

IDC ***31*** *19:16:43.9±1.6, 34°.14S×178°.66W, h0^{km}, mb4.3/3, mbtmp4.3/4, ML4.3/1, MS3.5/2, Error ellipse: s-maj=58.7km s-min=28.2km az=137.0*

NEIC ***31*** *19:16:49.5±2.0, 34°.26S±0°.09×178°.7W±0°.1, h35^{km}±5^{km}, mb4.8/18, Error ellipse: s-maj=16.4km s-min=12.8km az=100.0*

ISC 31 19:16:49.4±0.7**, 34°.21S**±0°.09×**178°.7W**±0°.1**, h37**^{km}**, n34, σ1^{s}.33**/34**, mb4.5**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.13	215	Pn	Pn	19 17 48.4	-1.5
URZ	Urewera	5.27	219	Pn	Pn	19 18 06.7	+1.1
	9.8nm,0.3s,baz=264,slow=4.4,SNR=68						
URZ				Sn	Sn	19 19 06.4	+1.4
	8.7nm,0.3s,baz=126,slow=24,SNR=2.9						
	40nm,0.4s						
BKZ	Black Stump Fm	6.27	217	Pn	Pn	19 18 19.1	-0.2
HIZ	Hauiti	6.74	229	Pn	Pn	19 18 28.1	+2.4
OXZ	Oxford	11.62	216	Pn	Pn	19 19 30.6	-1.9
RPZ	Rata Peaks	12.38	217	Pn	Pn	19 19 40.5	-2.6
WKZ	Wanaka	14.20	218	Pn	Pn	19 20 08.0	+0.1
PINNC	Pines Island,	16.77	310		P	19 20 43.9	+0.7
PINNC				IAmb	IAmb	19 21 33.0	
	comp=Z,43nm,1.2s						
DZM	Mont Dzumac	17.80	309	Pn	Pn	19 20 51.4	-3.0
LIFNC	LIFOU	18.26	314		P	19 20 57.9	-1.9
LIFNC				IAmb	IAmb	19 21 33.0	
	comp=Z,159nm,1.2s						
KNTN	Kanton	31.95	13	P	P	19 23 12.0	+0.3
STKA	Stephens Creek	33.22	263	P	P	19 23 23.0	+0.2
CTAO	Charters Tower	34.02	285	P	P	19 23 31.2	+1.3
CTAO				IAmb	IAmb	19 23 58.3	
	comp=Z,42nm,1.6s						
AS31	Alice Springs	42.46	271	P	P	19 24 40.8	-0.1
ASAR	Alice Springs	42.46	271	P	P	19 24 41.2	+0.3
	comp=Z,3.6nm,0.7s,baz=112,slow=7.4,SNR=62						
ASAR				PcP	PcP	19 26 33.0	-0.5
	comp=Z,0.4nm,0.8s,baz=122,slow=4.0,SNR=2.6						
	comp=Z,3.6nm,0.7s						
WR0	Warramunga Arr	43.62	277	P	P	19 24 50.0	-0.3
WB2	Warramunga Arr	43.78	277	P	P	19 24 51.3	-0.3
WB2				IAmb	IAmb	19 24 52.1	
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	43.79	276	P	P	19 24 51.4	-0.3
	comp=Z,4.1nm,0.7s,baz=118,slow=7.5,SNR=45						
	comp=Z,4.1nm,0.7s						
WB0	Warramunga Arr	43.83	277	P	P	19 24 51.3	-0.7
WB0				IAmb	IAmb	19 24 52.6	
	comp=Z,7.9nm,1.1s						
PATS	Pohnpei	46.26	328	P	P	19 25 12.1	+0.9
MTN	Manton Dam	50.10	283	P	P	19 25 40.1	-0.9
MTN				IAmb	IAmb	19 27 37.1	
	comp=Z,28nm,1.6s						
KNRA	Kununurra	50.51	278	P	P	19 25 44.0	-0.2
KNRA				IAmb	IAmb	19 26 29.4	
	comp=Z,7.6nm,1.1s						
QSPA	South Pole Qui	55.91	180	P	P	19 26 24.8	+1.4
QSPA				IAmb	IAmb	19 27 06.3	
	comp=Z,8.0nm,1.4s						
HLK	Haleakala	58.69	25	P	P	19 26 45.2	+1.7
GUMO	Guam	58.82	318	LR	LR	19 50 47.0	
	comp=Z,17nm,18.0s,baz=130,slow=35						
TOLI2	Tolitoli	66.61	289	P	P	19 27 35.4	-0.9
TOLI2				IAmb	IAmb	19 27 50.5	
	comp=Z,12nm,1.3s						
GO05	Huala	82.92	128	P	P	19 29 08.8	-1.7
GO05				IAmb	IAmb	19 29 17.5	
	comp=Z,46nm,1.6s						
PETK	Petropavlovsk-	89.35	346	P	P	19 29 42.3	+0.9
	comp=Z,0.7nm,0.6s,baz=126,slow=7.5,SNR=4.1						
	comp=Z,0.7nm,0.6s						
ATAH	Atahualpa	94.48	102	LR	LR	20 08 54.0	
	comp=Z,34nm,18.1s,baz=329,slow=33						
MKAR	Makanchi Array	119.72	309	PKP	PKPdf	19 35 34.2	-0.9
	comp=Z,0.4nm,0.7s,baz=159,slow=1.2,SNR=3.6						
FINES	FINESS Array B	148.47	337	PKPbc	PKiKP	19 36 31.4	-1.3
	comp=Z,4.3nm,0.7s,baz=45,slow=3.1,SNR=23						
NB2	NORSAR Subarra	152.40	350	PKP	PKiKP	19 36 42.8	+1.8
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.40	350	PKPbc	PKiKP	19 36 40.4	-0.6
	comp=Z,0.8nm,0.7s,baz=13,slow=4.1,SNR=4.8						
AKASG	Malin Array Be	153.84	318	PKPbc	PKiKP	19 36 44.6	+0.4
	comp=Z,0.9nm,0.7s,baz=58,slow=2.8,SNR=4.1						

NNC 31 19:22:51.5±14.0**, 37°.04N×70°.30E, h0**^{km}**, mb4.3, mpv4.0, 3C-2D, Error ellipse: s-maj=120.3km s-min=108.6km az=40.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.72	26	P	Pn	19 24 19.0	+0.9
	SNR=103						
KK31	Karatay Array	6.06	1	⇑Pn	Pn	19 24 24.8	+2.4
	0.9nm,0.2s,baz=182,slow=14,SNR=95						
KK31				⇑Sn	Sn	19 25 34.9	+2.5
	24nm,0.8s,baz=190,slow=22,SNR=6.5						
UCH	Uchtor	6.12	31	P	Pn	19 24 23.6	+0.1
	SNR=45						
EKS2	Erkin-Say	6.22	24	P	Pn	19 24 25.5	+0.8
	SNR=9.6						
AAK	Ala-Archa	6.46	29	P	Pn	19 24 28.2	+0.2
	SNR=12						
KBK	Karagaybulak	6.65	31	P	Pn	19 24 30.6	0.0
	SNR=14						
CHMS	Chumysh	6.86	28	P	Pn	19 24 33.2	-0.2
	SNR=10						
CHMS	Chumysh	6.86	28	⇓Pn	Pn	19 24 32.9	-0.5
	6.5nm,0.5s						
CHMS				⇑Sn	Sn	19 25 50.9	-1.3
	4.7nm,0.5s						
ULHL	Ulahol	6.93	40	P	Pn	19 24 32.7	-1.8
	SNR=7.3						
USP	Ospenovka	7.00	26	P	Pn	19 24 34.8	-0.6
	SNR=8.3						
TKM2	Tokmak 2	7.14	33	P	Pn	19 24 36.1	-1.3
	SNR=48						
TKM2	Tokmak 2	7.14	33	⇓Pn	Pn	19 24 36.2	-1.3
	11nm,0.4s						

TRN ***31*** *19:38:47.5, 18°.14N×63°.69W, h158^{km}, M2.1(RSPR)*

NEIC ***31*** *19:38:48.5±1.3, 18°.0N±0°.1×63°.80W±0°.05, h172^{km}±5^{km}, ML2.7/37, Md3.5/13(RSPR), Error ellipse: s-maj=17.2km s-min=6.7km az=192.0*

RSPR ***31*** *19:38:50.5, 18°.46N×63°.98W, h171^{km}±2^{km}, MD3.5/6*

ISC 31 19:38:47.3±2.0**, 18°.1N**±0°.1×**63°.74W**±0°.05**, h172**^{km}±14^{km}**, n49, σ1^{s}.08**/65**, 6C-5D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.63	91	Pn	Pn	19 39 13.0	+1.2
SMRT				Sn	Sn	19 39 30.9	+0.3
SJVI	Gifft Hill Sch	1.02	286	⇑*e*P	Pn	19 39 15.3	+1.0
SJVI	Gifft Hill Sch	1.02	286	*e*S	Sn	19 39 33.4	-1.7
SJVI	Gifft Hill Sch	1.02	286		Pn	19 39 15.3	+1.0
SJVI					Sn	19 39 33.4	-1.7
CDVI	St. Croix	1.02	253	Pn	Pn	19 39 15.1	+0.7
CDVI				IAML		19 39 32.9	
	comp=N,185nm,0.8s						
CDVI				Sn	Sn	19 39 33.0	-2.1
CDVI				IAML		19 39 35.4	
	comp=E,232nm,0.6s						
STVI	Saint Thomas	1.19	284	⇓*e*P	Pn	19 39 17.2	+1.5
STVI	Saint Thomas	1.19	284		Pn	19 39 17.2	+1.5
STVI					Sn	19 39 36.9	-0.7
STVI	Saint Thomas	1.19	284	IAML		19 39 38.9	
	comp=N,75nm,0.2s						
STVI	Saint Thomas	1.19	284	⇓*e*P	Pn	19 39 17.2	+1.5
STVI				*e*S	Sn	19 39 36.9	-0.7
CUPR	Culebra, Puert	1.49	280	⇓*e*P	Pn	19 39 19.5	+1.1
CUPR	Culebra, Puert	1.49	280	*e*S	Sn	19 39 42.3	-0.1
CUPR	Culebra, Puert	1.49	280		Pn	19 39 19.5	+1.1
CUPR	Culebra, Puert	1.49	280		Sn	19 39 41.3	-1.2
MTP	Monte Pirata	1.73	272	⇑*e*P	Pn	19 39 21.6	+0.8
MTP	Monte Pirata	1.73	272		Pn	19 39 21.6	+0.8
MTP	Monte Pirata	1.73	272	IAML		19 39 49.2	
	comp=E,41nm,0.2s						
MTP	Monte Pirata	1.73	272		Sn	19 39 47.0	+0.2
MTP	Monte Pirata	1.73	272	⇑*e*P	Pn	19 39 21.6	+0.8
MTP				*e*S	Sn	19 39 47.0	+0.2
ANWB	Willy Bob	1.90	102	Pn	Pn	19 39 24.1	+1.4
ANWB				Sn	Sn	19 39 47.9	-2.2
ANWB				IAML		19 39 50.6	
	comp=E,72nm,1.4s						
ANWB				IAML		19 40 15.1	
	comp=E,66nm,1.1s						
ANWB	Willy Bob	1.90	102	*e*P	Pn	19 39 22.6	0.0
ANWB				*e*S	Sn	19 39 49.2	-0.9
HUMP	Col San Antoni	2.01	273	⇑*e*P	Pn	19 39 24.9	+1.0
HUMP	Col San Antoni	2.01	273		Pn	19 39 24.9	+1.0
HUMP					Sn	19 39 52.3	+0.1
HUMP	Col San Antoni	2.01	273	⇑*e*P	Pn	19 39 24.9	+1.0
HUMP				*e*S	Sn	19 39 52.3	+0.1
CBYP	Canovanas	2.02	276	⇓*e*P	Pn	19 39 25.3	+1.2
CBYP	Canovanas	2.02	276		Pn	19 39 25.1	+1.0
CBYP				Sn	Sn	19 39 51.5	-1.1
CBYP				IAML		19 39 54.1	
	comp=E,100nm,0.2s						
CBYP				IAML		19 40 09.5	
	comp=N,78nm,0.1s						
CBYP	Canovanas	2.02	276	⇓*e*P	Pn	19 39 25.3	+1.2
BPA	Boggy Peak	2.06	119	*e*P	Pn	19 39 24.6	+0.1
BPA				*e*S	Sn	19 39 52.1	-1.2
ANBD	Bethesda, Anti	2.14	118	*e*P	Pn	19 39 25.4	+0.2
ANBD				*e*S	Sn	19 39 52.6	-2.1
PDPR	Patillas Dam,	2.17	269	Pn	Pn	19 39 26.1	+0.4
GCPR	Guaynabo City	2.24	277	Pn	Pn	19 39 26.2	-0.3
SJG	San Juan	2.29	272	Pn	Pn	19 39 28.1	+1.0
SJG				IAML		19 39 51.5	
	comp=N,36nm,0.1s						
SJG				IAML		19 40 22.1	
	comp=N,43nm,0.2s						
ABD	La Joyeuse, An	2.67	126	*e*P	Pn	19 39 31.7	+0.2
ABD				*e*S	Sn	19 40 05.0	-0.8
EMPR	Esperanza - Ma	2.68	279	Pn	Pn	19 39 32.6	+0.9
CELP	Cerrillos	2.70	271	Pn	Pn	19 39 32.3	+0.4
CELP				IAML		19 40 07.8	
	comp=N,19nm,1.5s						
OBIP	Obispado Ponce	2.73	270	Pn	Pn	19 39 32.3	+0.1
OBIP				IAML		19 39 49.1	
	comp=N,17nm,1.8s						
CBE	Ff, Capester	2.84	134	Pn	Pn	19 39 35.0	+1.3
CBE	Ff, Capester	2.84	134	*e*P	Pn	19 39 35.0	+1.3
CBE				*e*S	Sn	19 40 09.3	-0.4
AOPR	Arecibo Observ	2.88	276	⇑*e*P	Pn	19 39 35.1	+1.0
AOPR	Arecibo Observ	2.88	276		Pn	19 39 35.1	+1.0
AOPR					Sn	19 40 08.9	-1.6
AOPR	Arecibo Observ	2.88	276	IAML		19 40 11.8	
	comp=E,74nm,0.3s						
AOPR				IAML		19 40 18.6	
	comp=N,30nm,0.8s						
AOPR	Arecibo Observ	2.88	276	*e*P	Pn	19 39 35.3	+1.2
AOPR				*e*S	Sn	19 40 08.3	-2.2
TDBA	Terre de Bas,	2.98	137	Pn	Pn	19 39 36.0	+0.7
GDSD	La Dsirade Is	3.09	124	Pn	Pn	19 39 37.3	+0.6
GDSD				IAML		19 41 34.4	
	comp=E,58nm,3.5s						
MLPR	Magueyes Islan	3.15	269	Pn	Pn	19 39 37.2	-0.1
MLPR				IAML		19 40 02.3	
	comp=N,22nm,2.5s						
MLPR				IAML		19 40 39.6	
	comp=E,17nm,2.5s						
MAGL	Barre de l'ile	3.15	131	*e*P	Pn	19 39 38.4	+0.9
MAGL				*e*S	Sn	19 40 15.8	-0.7

CRPR	Cabo Rojo, PR	3.21	270	Pn	Pn	19 39 38.2	+0.1
CRPR				IAML		19 39 59.5	
	comp=E,20nm,2.7s						
CRPR				IAML		19 40 28.5	
	comp=N,28nm,2.1s						
AGPR	Aguadilla, PR	3.23	278	Pn	Pn	19 39 38.9	+0.5
DSLB	Salisbury	3.42	139	*e*P	Pn	19 39 42.1	+1.2
DSLB				*e*S	Sn	19 40 22.7	0.0
SDDR	Presa de Saban	7.22	278	Pn	Pn	19 40 31.0	+0.6

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*KRSC **31** 20:08:30.4±0.9, 56.°08N×161.°06E, h150^{km}±7^{km}, ML3.8*
*IDC **31** 20:08:33.6±2.4, 55.°96N×160.°79E, h171^{km}±36^{km}, mb3.1/7, mbtmp3.5/8, MS2.8/1, Error ellipse: s-maj=35.5km s-min=21.6km az=7.0*
ISC 31 20:08:32.0±0.8**, 56.°06N**±0.°05×**161.°03E**±0.°05**, h147**^{km}±5^{km}**, n44,** σ**0^s.85**/53**, mb3.4**/6**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.14	251	*e*P	Pn	20 08 52.1	+0.2
LGNR	Loginova	0.19	276	*e*P	Pn	20 08 52.3	+0.1
BZGR	Bezymyannyi-Gr	0.22	237	*e*P	Pn	20 08 52.1	0.0
BZGR				*e*S	Sn	20 09 08.1	+0.8
KRSR	Krestovskiy	0.30	301	*e*P	Pn	20 08 51.7	-0.6
KRSR				*e*S	Sn	20 09 07.2	-0.6
BZWR	Bezymyannyi-We	0.32	252	*e*P	Pn	20 08 52.1	-0.3
BZWR				*e*S	Sn	20 09 08.1	+0.2
KLY	Klyuchi	0.33	320	*e*P	Pn	20 08 51.7	-0.5
KLY				*e*S	Sn	20 09 07.4	-0.3
KIRR	Kirishev	0.40	255	*e*P	Pn	20 08 52.1	-0.6
KIRR				*e*S	Sn	20 09 08.2	-0.3
KPT	Kopyto	0.46	258	*e*P	Pn	20 08 52.3	-0.6
KPT				*e*S	Sn	20 09 08.7	-0.1
BDR	Baidarnaya	0.52	11	*e*P	Pn	20 08 52.8	-0.4
KMNR	Kamenistaya	0.54	236	*i* P	Pn	20 08 53.1	-0.2
SMKR	Semkarok	0.57	25	*e*P	Pn	20 08 53.3	-0.2
SMKR				*e*S	Sn	20 09 10.7	+0.8
SRKR	Sorokina	0.60	7	*e*P	Pn	20 08 53.0	-0.6
TUMR	Tumrok	0.93	213	*i* P	Pn	20 08 56.5	+0.5
TUMD	Tumrok D	0.93	203	*e*P	Pn	20 08 55.9	0.0
KBG	Krutoberegovo	0.96	78	*e*P	Pn	20 08 55.8	-0.2
KBG				*e*S	Sn	20 09 15.0	+0.6
KBTR	Krutoberegovo	1.01	81	*i* P	Pn	20 08 56.3	-0.2
KBTR				*e*S	Sn	20 09 15.4	+0.2
ESO	Esso	1.32	265	*e*P	Pn	20 09 00.3	+0.9
ESO				*e*S	Sn	20 09 21.5	+1.1
MKZ	Mys Kozlova	1.56	165	*i* P	Pn	20 09 01.6	-0.3
MKZ				*e*S	Sn	20 09 25.2	+0.4
KII	Karymskiy	2.23	205	*e*P	Pn	20 09 09.8	+0.1
BKI	Bering	2.93	105	*e*P	Pn	20 09 18.8	+0.6
BKI				*e*S	Sn	20 09 54.0	0.0
GNL	Ganaly	2.97	218	*e*P	Pn	20 09 19.0	+0.1
SPN	Mys Shipunski	3.03	192	*e*P	Pn	20 09 17.6	-1.9
SPN				*e*S	Sn	20 09 53.7	-2.6
SDLR	Sedlovina	3.06	205	*e*P	Pn	20 09 20.7	+0.7
PALN	Palana	3.09	350	*e*P	Pn	20 09 19.5	-0.7
SMAR	Somma	3.09	206	*e*P	Pn	20 09 21.3	+0.8
AVH	Avacha	3.10	206	*e*P	Pn	20 09 22.2	+1.6
KOK	Koryaka	3.10	208	*e*P	Pn	20 09 22.0	+1.4
UGLR	Uglovaya	3.13	205	*e*P	Pn	20 09 21.8	+0.8
PETK	Petropavlovsk-	3.54	215	P	Pn	20 09 26.4	+0.3
	3.0nm,0.6s,baz=85,slow=12,SNR=25						
PETK				S	Sn	20 10 07.9	-0.2
	1.2nm,0.5s,baz=99,slow=19,SNR=1.3						
APC	Apacha	3.87	217	*e*P	Pn	20 09 31.6	+1.2
RUS	Russkaya	3.92	203	*e*P	Pn	20 09 30.2	-0.9
ASAK	Asacha	4.12	208	*e*P	Pn	20 09 34.0	+0.2
YAK	Yakutsk	17.07	303	LR	LR	20 18 35.5	
	comp=Z,33nm,20.9s,baz=272,slow=35						
TIXI	Tiksi	20.66	331	P	P	20 13 01.2	+1.5
	2.7nm,0.7s,baz=270,slow=23,SNR=8.8 2.7nm,0.7s						
ILAR	Eielson Array	26.40	50	P	P	20 13 54.5	+0.2
	0.4nm,0.5s,baz=262,slow=7.1,SNR=5.6 0.4nm,0.5s						
H11N2	WAKE ISLAND Hy	36.54	171	T	T	20 53 15.2	
	baz=355,slow=76,SNR=3.3						
H11N3	WAKE ISLAND Hy	36.56	171	T	T	20 53 15.8	
	baz=355,slow=76,SNR=3.4						
H11N1	WAKE ISLAND Hy	36.56	171	T	T	20 53 16.4	
	baz=355,slow=76,SNR=3.7						
H02S1	DAWSON INLET T	37.26	66	T	T	20 55 14.3	
	SNR=59						
YKA	Yellowknife Ar	40.64	45	P	P	20 15 57.4	+0.4
	0.6nm,0.5s,baz=302,slow=7.9,SNR=4.6 0.6nm,0.5s						
MKAR	Makanchi Array	47.41	294	P	P	20 16 49.8	-1.3
	0.2nm,0.5s,baz=39,slow=5.5,SNR=2.2 0.2nm,0.5s						
FINES	FINESS Array B	57.61	336	P	P	20 18 04.6	-1.3
	0.4nm,0.4s,baz=35,slow=10,SNR=8.3 0.4nm,0.4s						
NOA	NORSAR Array B	60.84	344	P	P	20 18 27.1	-1.0
	0.3nm,0.4s,baz=20,slow=7.1,SNR=2.0 0.3nm,0.4s						
TXAR	Lajitas Array	69.01	69	P	P	20 19 22.8	+1.3
	0.3nm,0.6s,baz=308,slow=6.1,SNR=4.0 0.3nm,0.6s						

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*CRAAG **31** 20:09:00.9, 36.°35N×3.°51E, Ml3.5*
*MDD **31** 20:09:02.4±1.0, 36.°22N×3.°57E, h0^{km}, Mb4.0/9, M_mb3.3/9, Error ellipse: s-maj=9.4km s-min=5.3km az=140.0*
*CNRM **31** 20:09:06.0, 36.°40N×3.°03E, h0^{km}, ml2.9*
ISC 31 20:09:03.7±1.0**, 36.°32N**±0.°04×**3.°50E**±0.°05**, h18**^{km}**, n19,** σ**1^s.53**/26**, 7C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.17	195	P	Pb	20 09 06.8	-1.2
AKET	Djebel Ketaf	0.42	131	P	Pg	20 09 11.6	-0.8
ABA	Alger-Bouzarea	0.60	322	P	Pg	20 09 13.9	-1.8
DFRA	Djebel Bou Aff	1.93	83	P	Pb	20 09 39.3	+0.8
EIBI	Ibiza	3.19	328	P	Pn	20 09 53.1	+0.1
EIBI				⇑*i*Vmb_V		20 09 59.8	
	292nm,SNR=2.1						
EIBI				S	Sn	20 10 28.9	-1.7
ETOS	Mallorca	3.48	351	P	Pn	20 09 56.4	-0.6
ETOS				⇑*i*Vmb_V		20 09 58.7	
	228nm,SNR=1.8						
ETOS				S	Sn	20 10 36.3	-1.4
CART	Cartagena	3.81	291	P	Pn	20 10 00.6	-0.9
EMUR	La Murta	4.08	293	P	Pn	20 10 06.2	+1.0
EMUR				⇑*i*Vmb_V		20 10 13.7	
	105nm,SNR=2.0						
ECOL	Islas Columbre	4.20	329	P	Pn	20 10 06.2	-0.6
ECOL				S	Sn	20 10 54.6	-0.8
ETOB	Tobarra	4.63	302	P	Pn	20 10 14.5	+1.6
ETOB				⇑*i*Vmb_V		20 10 17.7	
	142nm,SNR=2.9						
ETOB				S	Sn	20 11 07.5	+1.3
ECHE	Chera	4.80	314	P	Pn	20 10 16.3	+1.1
ECHE				⇑*i*Vmb_V		20 10 18.9	
	201nm,SNR=1.3						
ECHE				S	Sn	20 11 11.3	+0.9
TAF	Taforalt	5.05	254	P	Pn	20 10 18.6	0.0
EMOS	Mosqueruela	5.10	323	P	Pn	20 10 20.1	+0.7
EMOS				⇑*i*Vmb_V		20 10 27.2	
	124nm,SNR=1.6						
EMOS				S	Sn	20 11 17.7	-0.1
EBER	Berja	5.17	278	P	Pn	20 10 22.7	+2.3
EBER				⇑*i*Vmb_V		20 10 26.3	
	54nm,SNR=1.5						
EBER				S	Sn	20 11 22.4	+2.8
JBK	JBK	5.34	250	P	Pn	20 10 23.3	+0.6
EPOB	Poblet	5.36	340	P	Pn	20 10 25.8	+2.9
FIGM	Figuig	5.74	225	P	Pn	20 10 29.9	+1.7
ETOR	Torete	6.25	318	P	Pn	20 10 37.8	+2.7
MD31	MD31	7.63	246	P	Pn	20 10 54.6	+0.5

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*CRAAG **31** 20:17:12.2, 36.°34N×3.°44E, Ml3.0*
*MDD **31** 20:17:14.8±1.3, 36.°41N×3.°46E, h0^{km}, Mb3.4/5, M_mb2.6/5, Error ellipse: s-maj=12.2km s-min=6.0km az=140.0*
ISC 31 20:17:13.5±1.1**, 36.°38N**±0.°06×**3.°53E**±0.°07**, h18**^{km}**, n11,** σ**1^s.30**/17**, 5C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.23	198	P	Pb	20 17 17.2	-1.9
AKET	Djebel Ketaf	0.44	139	P	Pg	20 17 22.8	+0.3
ABA	Alger-Bouzarea	0.58	317	P	Pg	20 17 24.4	-0.7
EIBI	Ibiza	3.16	327	P	Pn	20 18 03.2	+0.8
EIBI				⇑*i*Vmb_V		20 18 08.3	
	195nm,SNR=1.4						
EIBI				S	Sn	20 18 38.9	-0.9
ETOS	Mallorca	3.43	351	P	Pn	20 18 07.6	+1.5
ETOS				⇑*i*Vmb_V		20 18 15.8	
	48nm,SNR=1.8						
ETOS				S	Sn	20 18 46.1	-0.3
EMUR	La Murta	4.08	292	P	Pn	20 18 15.7	+0.6
EMUR				⇑*i*Vmb_V		20 18 17.5	
	26nm,SNR=1.2						
ECOL	Islas Columbre	4.17	328	P	Pn	20 18 17.2	+0.9
ECOL				S	Sn	20 19 03.2	-1.3
EZAR	Zarzadilla de	4.43	291	P	Pn	20 18 21.3	+1.3
EZAR				S	Sn	20 19 11.2	0.0
ETOB	Tobarra	4.63	301	P	Pn	20 18 23.7	+1.1
ETOB				⇑*i*Vmb_V		20 18 28.7	
	39nm,SNR=2.9						
ETOB				S	Sn	20 19 16.6	+0.7
ECHE	Chera	4.79	313	P	Pn	20 18 26.5	+1.7
ECHE				⇑*i*Vmb_V		20 18 29.6	
	41nm,SNR=1.7						
EQES	Quesada	5.46	287	P	Pn	20 18 36.5	+2.3
EQES				S	Sn	20 19 37.9	+1.3

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*IDC **31** 20:18:46.3±1.4, 41.°50N×117.°23W, h0^{km}, mb2.6/1, mbtmp2.5/3, ML2.9/2, MS2.5/1, Error ellipse: s-maj=11.9km s-min=7.1km az=159.0*
*NEIC **31** 20:18:49.2±1.7, 41.°23N±0.°03×117.°23W±0.°06, h0^{km}±2^{km}, ML2.4/64, Error ellipse: s-maj=8.0km s-min=5.5km az=88.0*
ISC 31 20:18:48.1±1.0**, 41.°22N**±0.°03×**117.°22W**±0.°04**, h0**^{km}**, n36,** σ**1^s.39**/37**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMN	Battle Mountai	0.79	180		Pb	20 19 05.2	+0.4
ELK	Elko	1.57	107	Pn	Pn	20 19 17.7	+0.2
	2.2nm,0.3s,baz=291,slow=11,SNR=38						
ELK				Pg	Pb	20 19 18.9	+0.7
	2.2nm,0.3s,baz=301,slow=18,SNR=32						
ELK				Lg	Lg	20 19 39.0	
	3.2nm,0.3s,baz=181,slow=19,SNR=13						
ELK	Elko	1.57	107		Pn	20 19 17.4	-0.1
WVOR	Wild Horse Val	1.61	319	Pn	Pb	20 19 19.7	+0.8
PAHR	Pah Rah Range	2.24	228		Pn	20 19 27.2	+0.6
PAHR				IAML		20 20 13.6	
	comp=E,21nm,1.1s						
KVN	Kaiserville	2.27	198	Pn	Pn	20 19 28.4	+1.3
KVN				IAML		20 20 09.5	
	comp=E,16nm,0.7s						
J08A	Circle Bar Ran	2.33	337	Pn	Pn	20 19 30.4	+2.5
MOD	Modoc Plateau	2.42	287		Pn	20 19 30.0	+1.0
MOD				IAML		20 20 12.3	
	comp=E,20nm,0.9s						
MOD				IAML		20 20 22.4	
	comp=N,17nm,1.0s						
MFID	Camas Ranch	2.42	25	Pn	Pn	20 19 30.8	+1.7
MFID				IAML		20 20 14.5	
	comp=N,20nm,0.7s						
MFID				IAML		20 20 17.2	
	comp=N,20nm,0.9s						
VCNR	Virginia City	2.68	225		Pn	20 19 33.2	+0.5
VCNR				IAML		20 20 22.5	
	comp=N,20nm,0.7s						
YERR	Yerington	2.72	215		Pn	20 19 33.9	+0.6
YERR				IAML		20 20 26.1	
	comp=E,20nm,0.8s						
YERR				IAML		20 20 35.6	
	comp=N,18nm,0.8s						
BEKR	Beckworth	2.75	242	Pn	Pn	20 19 34.5	+0.8
BEKR				IAML		20 20 32.4	
	comp=E,10nm,0.8s						
RYN	Ryan	2.78	202		Pn	20 19 34.4	+0.4
RYN				IAML		20 20 23.0	
	comp=E,18nm,0.6s						
RYN				IAML		20 20 24.6	
	comp=N,16nm,0.7s						
PNTR	Pine Nut	2.81	221		Pn	20 19 33.8	-0.7
NV11	Mina Array Sit	2.88	195		Pn	20 19 36.6	+1.2
NV11				IAML		20 20 28.9	
	comp=E,9.7nm,1.3s						
NVAR	Mina Array Bea	2.91	197	Pn	Pn	20 19 37.3	+1.4
	comp=E,0.4nm,0.3s,baz=13,slow=12,SNR=8.9						
NVAR				Pg	Pg	20 19 44.7	+0.7
	comp=E,1.0nm,0.3s,baz=17,slow=16,SNR=12						
NVAR				Lg	Lg	20 20 25.4	
	comp=E,2.8nm,0.3s,baz=18,slow=29,SNR=14 comp=E,1.8nm,0.7s						
NVAR	Mina Array Bea	2.91	197		Pn	20 19 36.4	+0.5
HLID	Hailey	3.13	41	Pn	Pn	20 19 38.5	-0.4
HLID				IAML		20 20 35.1	
	comp=E,8.1nm,0.9s						
K05A	Summer Lake	3.13	300		Pn	20 19 38.1	-0.7
K05A				IAML		20 20 11.3	
	comp=E,8.8nm,3.8s						
K05A				IAML		20 20 44.1	
	comp=N,9.8nm,2.8s						
LHV	Little Huntoon	3.13	199		Pn	20 19 39.2	+0.6
R11A	Troy Canyon, C	3.13	156		Pn	20 19 40.5	+1.6
TPH	Tonopah	3.14	180		Pn	20 19 40.6	+1.5
BGU	Big Grassy Mou	3.18	94		Pn	20 19 40.1	+0.5
BGU				IAML		20 20 39.5	
	comp=E,8.6nm,0.9s						
I07A	Izee	3.32	330		Pn	20 19 41.7	+0.2
I07A				IAML		20 20 40.2	
	comp=N,7.9nm,1.0s						
I07A				IAML		20 20 45.8	
	comp=E,12nm,1.0s						
HVU	Hansel Valley	3.38	79		Pn	20 19 44.3	+2.0
DUG	Dugway, Tooele	3.50	106		Pn	20 19 45.8	+1.9
DUG				IAML		20 20 46.7	
	comp=E,8.4nm,0.8s						
DUG				IAML		20 21 03.7	
	comp=E,7.1nm,0.8s						
BMO	Blue Mountains	3.63	359		Pn	20 19 47.3	+1.6
BMO				IAML		20 20 52.5	
	comp=E,5.6nm,2.1s						
PSUT	Pine Spring	3.73	135		Pn	20 19 48.0	+0.9
PSUT				IAML		20 20 55.6	
	comp=E,9.1nm,0.7s						
PLID	Pearl Lake	3.97	13	Pn	Pn	20 19 52.6	+2.2
PLID				IAML		20 21 08.5	
	comp=E,4.1nm,1.7s						
LCH	Last Change Ra	4.00	185		Pn	20 19 52.0	+1.2
LCH				IAML		20 20 43.3	
	comp=N,4.1nm,4.5s						
LCH				IAML		20 21 01.9	
	comp=E,4.9nm,0.8s						
PRN	Pahroc Range	4.16	156		Pn	20 19 53.2	+0.1
PRN				IAML		20 21 40.6	
	comp=N,6.4nm,1.3s						
TPNV	Topopah Spring	4.33	170		Pn	20 19 55.7	+0.3
MCMT	McKenzie Canyo	4.82	40	Pn	Pn	20 20 03.2	+1.0
PDAR	Pinedale Array	5.91	72	Pn	Pn	20 20 16.0	-1.2
	comp=N,0.1nm,0.3s,baz=265,slow=7.2,SNR=1.4 comp=N,0.1nm,0.3s						
NEW	Newport	7.04	1	LR	LR	20 23 34.4	
	comp=N,45nm,21.6s,baz=312,slow=43						
YKA	Yellowknife Ar	21.36	3	P	P	20 23 32.2	-4.5
	comp=N,0.2nm,0.6s,baz=190,slow=9.4,SNR=1.9 comp=N,0.2nm,0.6s						

DJA 31 20:26:53.1±0.4**, 9°S**±6°×**11°9E**±°**, h155**^{km}±5^{km}**, M3.7**/11**, mb3.9**/3**, MLv3.6**/11**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.95	254	P	Pn	20 27 18.8	+0.9
PLAI				S	Sn	20 27 37.6	+0.7
WBSI	Waikabubak, Su	1.26	147	P	Pn	20 27 21.1	+0.3
WBSI				S	Sn	20 27 41.9	-0.1
BASI	Baing, Sumba	2.47	132	P	Pn	20 27 34.9	+0.8
EDFI	Ende, Flores	2.96	94	P	Pn	20 27 40.0	-0.3
BSSI	Bau Bau, Buton	3.00	36	P	Pn	20 27 41.1	+0.5
MMRI	Maumere	3.50	91	P	Pn	20 27 46.7	-0.3
IGBI	Denpasar	3.52	266	P	Pn	20 27 48.2	+0.9
JAGI	Jajag, Banyuwa	4.50	271	P	Pn	20 27 59.6	-0.4
BATI	Baumata	5.16	109	P	Pn	20 28 08.8	0.0
	0.1nm17nm,1.1s						
GMJI	Gumukmas	5.21	273	P	Pn	20 28 08.8	-0.6
	0.2nm29nm,1.7s						
SOEI	Soe	5.62	103	P	Pn	20 28 14.5	-0.5

IDC 31 20:41:24.5±5.0**, 6.°28S**×**129.°25E, h363**^{km}±59^{km}**, mb2.8**/2**, mbtmp4.0**/4**, Error ellipse: s-maj=89.0km s-min=18.3km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.45	160	P	P	20 44 32.1	-0.6
	2.5nm,0.4s,baz=339,slow=12,SNR=74						
WRA				S	S	20 47 05.6	-3.0
	0.5nm,0.7s,baz=343,slow=21,SNR=2.8						
ASAR	Alice Springs	17.86	166	P	P	20 45 08.8	-0.6
	7.6nm,0.4s,baz=346,slow=12,SNR=155						
ASAR				S	S	20 48 17.0	+1.2
	1.2nm,0.9s,baz=346,slow=19,SNR=9.1						
STKA	Stephens Creek	27.96	157	P	P	20 46 43.9	+0.7
	0.8nm,0.4s,baz=315,slow=6.7,SNR=6.7 0.8nm,0.4s						
MKAR	Makanchi Array	67.22	327	P	P	20 51 40.6	-0.2
	0.1nm,0.3s,baz=118,slow=9.0,SNR=2.0 0.1nm,0.3s						

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*MOS **31** 20:51:19.8±0.9, 55.°53N×158.°56W, h32^{km}, mb5.8/62, MS5.1/87, Error ellipse: s-maj=6.2km s-min=3.7km az=91.9*
*NEIC **31** 20:51:22.8, 55.°52N×158.°58W, h44^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.79; $M_{\theta\theta}$2.50; $M_{\phi\phi}$0.29; $M_{r\theta}$-0.87; $M_{\theta\phi}$4.08; $M_{\phi r}$1.96; Fault plane solution: $M_0$5.32000×10^{17} NP1:ϕ_s197.50000°, δ63.04000°, λ-142.44000°. NP2:ϕ_s88.28000°, δ57.08000°, λ-32.69000°. Principal axes: T 5.6521, Plg4.0000°, Azm322.0000°; N -0.7448, Plg45.0000°, Azm228.0000°; P -4.9073, Plg45.0000°, Azm55.0000°;*
*NEIC **31** 20:51:22.3, 55.°48N×158.°58W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.59; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$1.89; $M_{r\theta}$-0.91; $M_{\theta\phi}$1.15; $M_{\phi r}$0.71; Fault plane solution: $M_0$2.40000×10^{17} NP1:ϕ_s173.37000°, δ58.62000°, λ-131.76000°. NP2:ϕ_s53.12000°, δ50.44000°, λ-42.48000°. Principal axes: T 2.4113, Plg5.0000°, Azm292.0000°; N -0.0187, Plg35.0000°, Azm198.0000°; P -2.3926, Plg55.0000°, Azm28.0000°;*
*BJI **31** 20:51:22.4±0.0, 55.°59N×159.°21W, h41^{km}, mb5.4/87, mB5.4/72, Ms5.6/95, Ms7 5.5/90*
*NEIC **31** 20:51:22.1±1.4, 55.°40N±0.°02×158.°51W±0.°06, h38^{km}±3^{km}, mb5.7/777, ML5.9/20, Ms_20 5.2/289, Mwb5.8/79, Mwr5.5/20, Mww5.7, ML5.8(AEIC), Error ellipse: s-maj=5.3km s-min=3.1km az=102.0*
*AEIC **31** 20:51:23±3.0, 55.°36N±0.°05×158.°44W±0.°06, h26^{km}±1^{km}, Error ellipse: s-maj=7.4km s-min=3.9km az=159.0*
*IDC **31** 20:51:23.2±1.8, 55.°59N×158.°65W, h40^{km}±15^{km}, mb5.1/38, mbtmp5.4/44, ML5.2/6, MS5.0/98, Error ellipse: s-maj=13.6km s-min=8.2km az=1.0*
*NEIC **31** 20:51:25, 55.°40N×158.°36W, h36^{km}, Moment Tensor Solution. Duration: 6^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.43; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$1.44; $M_{r\theta}$-1.89; $M_{\theta\phi}$3.59; $M_{\phi r}$1.48; Fault plane solution: $M_0$4.55000×10^{17} NP1: ϕ_s180.00000°, δ65.00000°, λ-153.00000°. NP2: ϕ_s78.00000°, δ66.00000°, λ-27.00000°. Principal axes: T 4.3788, Plg1.0000°, Azm129.0000°; N 0.3301, Plg54.0000°, Azm220.0000°; P -4.7089, Plg36.0000°, Azm39.0000°;*
*GCMT **31** 20:51:25.1±0.1, 55.°55N±0.°01×158.°44W±0.°01, h46^{km}, MW5.8/161, Moment Tensor Solution. s141, c289; s161, c339; Duration: 1^s.8 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.16±.05; $M_{\theta\theta}$0.79±.05; $M_{\phi\phi}$1.37±.05; $M_{r\theta}$-1.19±.05; $M_{\theta\phi}$4.14±.04; $M_{\phi r}$2.33±.05; Best double couple: $M_0$5.24700×10^{17} NP1:ϕ_s81.00000°, δ57.00000°, λ-26.00000°. NP2:ϕ_s186.00000°, δ69.00000°, λ-144.00000°. Principal axes: T 5.3460, Plg7.0000°, Azm311.0000°; N -0.2010, Plg49.0000°, Azm212.0000°; P -5.1490, Plg40.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 20:51:22.2±0.2**, 55.°52N**±0.°03×**158.°61W**±0.°02**, h39**^{km}±1^{km}**, h39**^{km}**:pP-P, n2528,** σ**1^s.52**/2817**, mb5.7**/641**, MS5.2**/314**, 115C-800D, Fault plane solution: NP1:**ϕ_s74.07384°, δ54.75055°, λ-46.56732°. **NP2:**ϕ_s195.44069°, δ53.62732°, λ-134.21045°. **Principal axes:** T Plg0.6441°, Azm134.9848°**;** N Plg34.1559°, Azm225.4218°**;** P Plg55.8363°, Azm44.0357°**; Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNHG	Veniaminof 1	0.77	336		Pn	20 51 39.5	+2.9
CHNA	Chernabura Isl	0.89	219	P	Pn	20 51 38.2	0.0
	baz=45,SNR=1000						
CNBA	Chernabura Isl	0.90	219	Pn	Pn	20 51 38.1	-0.2
CNBA					Sn	20 51 48.9	-1.2
VNFG	Fog Glacier, M	0.93	326		Pn	20 51 42.4	+3.5
SDPT	Sand Point	1.08	262		Pn	20 51 42.3	+1.5
SDPT					Sn	20 51 56.9	+2.4
SDPT				IAML		20 51 59.4	
	comp=E,365µm,1.0s						
SDPT				IAML		20 51 59.8	
	comp=N,264µm,1.4s						
SDPT	Sand Point	1.08	262	P	Pn	20 51 42.4	+1.6
	baz=85,SNR=569						
ANPB	Aniakchak Plen	1.30	8		Pn	20 51 46.7	+2.8
ANNW	Aniakchak Nort	1.47	8		Pn	20 51 49.7	+3.5
CHIR	Chirikof Islan	1.72	79		Pn	20 51 50.0	+0.4
CHIR	Chirikof Islan	1.72	79		Sn	20 52 11.6	+1.3
CHIR	Chirikof Islan	1.72	79	IAML		20 52 20.5	
	comp=E,423µm,1.5s						
CHIR				IAML		20 52 20.6	
	comp=N,508µm,0.9s						
CHIR	Chirikof Islan	1.72	79	P	Pn	20 51 50.0	+0.4
	baz=258,SNR=729						
PVV	Pavlof Volcano	1.82	267		Pn	20 51 53.1	+2.1
PS4A	Pavlof South-4	1.86	266		Pn	20 51 53.6	+2.1
HAG	Hague Volcano	1.89	265		Pn	20 51 54.6	+2.6
HAG	Hague Volcano	1.89	265	P	Pn	20 51 54.6	+2.6
BLHA	Black Hill	1.97	277		Pn	20 51 56.1	+3.1
PLBL	Peulik Blue Cr	2.40	24		Pn	20 52 04.0	+5.1
BALA	Baldy Mountain	2.41	264		Pn	20 52 02.4	+3.3
PLK1	Peulik 1	2.54	25		Pn	20 52 05.9	+5.0
PLK5	Peulik 5	2.66	20		Pn	20 52 07.6	+5.1
SII	Sitkinak Islan	2.69	65	Pn	Pn	20 52 03.7	+0.7
SII				IAML		20 52 51.8	
	comp=N,81µm,1.1s						
SII	Sitkinak Islan	2.69	65		Sn	20 52 37.1	+2.8
SII	Sitkinak Islan	2.69	65	P	Pn	20 52 03.7	+0.7
	baz=247,SNR=379						
SII	Sitkinak Islan	2.69	65	P	Pn	20 52 03.9	+0.9
FALS	False Pass	2.84	258	Pn	Pn	20 52 07.2	+2.3
FALS	False Pass	2.84	258		Sn	20 52 41.5	+3.7
FALS	False Pass	2.84	258	P	Pn	20 52 07.4	+2.5
	baz=76,SNR=161						
FALS	False Pass	2.84	258	P	Pn	20 52 06.9	+2.0
ISLZ	Isanotski Laza	3.04	257		Pn	20 52 10.1	+2.4
ISLZ					Sn	20 52 47.6	+4.8
ISNN	Isanotski Nort	3.04	259		Pn	20 52 10.8	+2.9
BRPK	Brown Peak	3.08	256		Pn	20 52 10.8	+2.5
SSLN	Shishaldin Nor	3.17	259		Pn	20 52 12.6	+3.0
SSLW	Shishaldin Wes	3.25	259		Pn	20 52 13.8	+3.1
KBM	Katmai Bkd Mtn	3.33	33		Pn	20 52 13.1	+1.3
WTUG	Tugumak	3.38	261		Pn	20 52 15.1	+2.6
OHAK	Old Harbor	3.42	58	Pn	Pn	20 52 13.3	+0.4
OHAK				IAML		20 53 19.0	
	comp=N,21µm,1.2s						
OHAK				IAML		20 53 20.8	
	comp=E,23µm,1.3s						
OHAK	Old Harbor	3.42	58	P	Pn	20 52 13.4	+0.5
	baz=241,SNR=334						
P16K	Nushagak River	3.54	5	P	Pn	20 52 17.9	+3.4
	baz=185						
WESN	West Dahl Nort	3.57	257		Pn	20 52 18.2	+3.2
WESE	West Dahl East	3.60	255		Pn	20 52 18.4	+2.9
WEBT	Westdahl Beart	3.65	258		Pn	20 52 19.1	+2.9
WECS	Westdahl Cape	3.69	257		Pn	20 52 19.9	+3.2
KDAK	Kodiak Island	4.02	53	P	Pn	20 52 21.7	+0.4
	comp=E,251nm,0.3s,baz=241,slow=7.4,SNR=1924						
KDAK				S	Sn	20 53 04.7	-2.3

	comp=E,4µm,0.5s,baz=269,slow=5.2,SNR=4.6						
KDAK				LR	LR	20 54 13.7	
	comp=E,60µm,20.0s,baz=240,slow=43						
	comp=E,578nm,0.3s						
KDAK	Kodiak Island	4.02	53	Pn	Pn	20 52 21.8	+0.6
KDAK				IAML		20 53 49.9	
	comp=E,9µm,1.0s						
KDAK	Kodiak Island	4.02	53		LR	20 53 10.8	
KDAK	Kodiak Island	4.02	53	P	Pn	20 52 21.8	+0.6
	baz=237						
O16K	Kokwok River B	4.09	4	P	Pn	20 52 25.0	+2.8
	baz=183						
P18K	Big Mountain,	4.29	24		Pn	20 52 27.5	+2.6
P18K	Big Mountain,	4.29	24	P	Pn	20 52 27.7	+2.8
	baz=206						
AKSA	Akutan Strait	4.33	254		Pn	20 52 28.2	+2.7
AKSA					Sn	20 53 18.9	+4.3
AKSA	Akutan Strait	4.33	254		Pn	20 52 28.1	+2.6
Q19K	Cape Douglas,	4.35	36		Pn	20 52 27.4	+1.6
Q19K				IAML		20 53 39.8	
	comp=E,21µm,0.9s						
Q19K				IAML		20 53 54.9	
	comp=N,21µm,1.2s						
Q19K	Cape Douglas,	4.35	36	P	Pn	20 52 27.7	+1.9
	baz=219,SNR=306						
AKUT	Akutan	4.37	254	Pn	Pn	20 52 28.2	+2.3
AKGG	Akutan Green G	4.47	256		Pn	20 52 29.9	+2.6
AKBBA	Akutan Broad B	4.47	254		Pn	20 52 29.6	+2.2
Q20K	Shuyak Island	4.59	45	P	Pn	20 52 30.3	+1.2
	baz=229,SNR=56						
O18K	Koktuh Hills	4.71	21		Pn	20 52 33.7	+3.0
O18K				IAML		20 54 03.5	
	comp=E,4µm,1.0s						
O18K	Koktuh Hills	4.71	21	P	Pn	20 52 33.8	+3.1
	baz=203						
AUCH	Augustine Cone	4.75	34		Pn	20 52 34.0	+2.7
AUH	Augustine H	4.76	34		Pn	20 52 33.9	+2.6
AUQ	Augustine Qik'	4.76	34		Pn	20 52 33.9	+2.5
AUL	Augustine Lava	4.77	34		Pn	20 52 34.2	+2.6
AU2	Augustine Isla	4.78	34		Pn	20 52 34.4	+2.8
AU22	Augustine Moun	4.79	34		Pn	20 52 34.5	+2.8
UNV	Unalaska Valle	4.88	253	Pn	Pn	20 52 34.6	+1.6
UNV	Unalaska Valle	4.88	253		Sn	20 53 32.5	+4.4
UNV	Unalaska Valle	4.88	253	P	Pn	20 52 34.5	+1.5
	baz=68,SNR=38						
MTBL	Makushin Table	4.93	255		Pn	20 52 36.7	+3.0
MNAT	Makushin Natee	4.96	254		Pn	20 52 35.8	+1.7
N16K	Nishlik Lake	4.97	359	P	Pn	20 52 37.5	+3.2
	baz=178						
MSW	Makushin Switc	5.00	255		Pn	20 52 36.5	+1.7
OPT	Oil Point	5.05	33		Pn	20 52 38.1	+2.7
MGOD	Makushin Gods	5.10	254		Pn	20 52 38.7	+2.6
N18K	Kilae Creek	5.37	14		Pn	20 52 42.2	+2.4
N18K	Kilae Creek	5.37	14	P	Pn	20 52 42.5	+2.7
	baz=196,SNR=205						
O20K	Slope Mountain	5.58	33		Pn	20 52 45.1	+2.4
O20K	Slope Mountain	5.58	33	P	Pn	20 52 45.1	+2.4
	baz=217,SNR=141						
HOM	Homer	5.59	39		Pn	20 52 44.0	+1.3
HOM	Homer	5.59	39	P	Pn	20 52 44.3	+1.6
	baz=224,SNR=20						
CNPM	China Poot	5.65	42		Pn	20 52 44.4	+0.8
N19K	Bonanza Creek	5.74	21		Pn	20 52 47.8	+3.0
N19K	Bonanza Creek	5.74	21	P	Pn	20 52 48.2	+3.4
	baz=203,SNR=363						
RED	Redoubt Volcan	5.81	30		Pn	20 52 48.3	+2.5
SVW2	Sparrevohn	5.81	15	Pn	Pn	20 52 48.3	+2.5
OKFG	Magazine Ridge	5.82	253		Pn	20 52 48.5	+2.6
RDWB	Redoubt West	5.85	29		Pn	20 52 48.7	+2.3
RSO	Redoubt South	5.85	30		Pn	20 52 48.9	+2.4
NCT	North Crescent	5.88	28		Pn	20 52 49.3	+2.4
BRLK	Bradley Lake	5.94	41		Pn	20 52 47.8	+0.3
RDJH	Redoubt Jeurge	5.94	29		Pn	20 52 50.1	+2.4
DFR	Drift River	5.98	29		Pn	20 52 50.2	+2.1
BRSE	Bradley Lake S	5.98	42		Pn	20 52 48.5	+0.5
BRSE	Bradley Lake S	5.98	42	P	Pn	20 52 48.4	+0.3
	baz=227,SNR=133						
OKSO	Okmok South	5.98	253		Pn	20 52 49.0	+0.8
NIKH	Nikolski High	6.53	251		Pn	20 52 57.4	+1.8
NIKH	Nikolski High	6.53	251	P	Pn	20 52 57.2	+1.6
	baz=64,SNR=9.8						
CAPN	Captain Cook N	6.57	34		Pn	20 52 55.8	-0.4
CAPN	Captain Cook N	6.57	34	P	Pn	20 52 57.6	+1.4
	baz=219						
SPWE	Spurr West	6.58	26		Pn	20 53 00.0	+3.5
SPBG	Spurr Blockage	6.62	27		Pn	20 53 00.1	+3.1
SPU	Mount Spurr	6.64	29	Pn	Pn	20 52 58.9	+1.7
CKN	Chakachatna No	6.64	28		Pn	20 53 00.3	+3.2
SPIA	Saint Paul Isl	6.68	289	Pn	Pn	20 53 00.4	+2.8
SPIA	Saint Paul Isl	6.68	289	P	Pn	20 53 00.5	+2.8
	baz=100,SNR=30						
SLKM	Skilak Lake	6.69	38		Pn	20 52 59.1	+1.2
SEW	Seward	6.71	43		Pn	20 52 58.0	0.0
SEW	Seward	6.71	43	P	Pn	20 52 57.7	-0.3
	baz=230,SNR=48						
SPCG	Spurr Capps Gl	6.74	28		Pn	20 53 00.7	+2.1
M19K	Big River Lodg	6.77	17		Pn	20 53 01.0	+2.2
M19K	Big River Lodg	6.77	17	P	Pn	20 53 01.8	+3.0
	baz=200						
O22K	Cooper Landing	6.85	40		Pn	20 53 00.8	+0.7
O22K	Cooper Landing	6.85	40	P	Pn	20 53 00.1	0.0
	baz=227,SNR=27						
L19K	White Mountain	6.96	15		Pn	20 53 03.5	+2.0
L19K	White Mountain	6.96	15	P	Pn	20 53 04.2	+2.7
	baz=197,SNR=405						
STLK	Strandline Lak	6.96	28		Pn	20 53 03.8	+2.2
M20K	Styx River	6.99	22		Pn	20 53 03.9	+1.9
M20K	Styx River	6.99	22	P	Pn	20 53 05.4	+3.4
	baz=206						
FIS	Fire Island	7.16	35		Pn	20 53 05.3	+1.1
SUA	Susitna One	7.24	31		Pn	20 53 05.8	+0.3
SUA	Susitna One	7.24	31	P	Pn	20 53 06.6	+1.2
	baz=217						
RC01	Rabbit Creek A	7.28	36		Pn	20 53 06.0	+0.2
RC01	Rabbit Creek A	7.28	36	P	Pn	20 53 06.3	+0.4
	baz=223,SNR=79						
L20K	Farewell, AK	7.39	17		Pn	20 53 10.4	+2.9
L20K	Farewell, AK	7.39	17	P	Pn	20 53 10.3	+2.9
	baz=201,SNR=558						
SKT	Skwentna	7.45	27		Pn	20 53 08.9	+0.7
SKT	Skwentna	7.45	27	P	Pn	20 53 10.0	+1.8
	baz=212						
P23K	Montague Islan	7.48	49	P	Pn	20 53 09.3	+0.6
	baz=237						
TT01	Tatalina	7.53	9		Pn	20 53 11.8	+2.5
TTA	Tatalina	7.55	9		Pn	20 53 11.8	+2.2
TTA	Tatalina	7.55	9	P	Pn	20 53 11.8	+2.2
TTA	Tatalina	7.55	9	P	Pn	20 53 12.0	+2.3
	baz=191,SNR=296						
M22K	Willow	7.65	32		Pn	20 53 11.2	+0.3
M22K	Willow	7.65	32	P	Pn	20 53 11.4	+0.4
	baz=218,SNR=54						
Q23K	Middleton Isla	7.68	54		Pn	20 53 11.6	+0.3
Q23K	Middleton Isla	7.68	54	P	Pn	20 53 11.6	+0.3
	baz=244,SNR=7.9						
MID	Middleton Isla	7.68	54		Pn	20 53 11.6	+0.2
MID	Middleton Isla	7.68	54	P	Pn	20 53 11.6	+0.2
PMR	Palmer	7.84	35		Pn	20 53 13.4	-0.2
PMR	Palmer	7.84	35	P	Pn	20 53 13.4	-0.2
PMR	Palmer	7.84	35	P	Pn	20 53 13.1	-0.5
	baz=223,SNR=52						
KNK	Knik Glacier	7.94	38		Pn	20 53 14.4	-0.6
KNK	Knik Glacier	7.94	38	P	Pn	20 53 14.5	-0.6
	baz=226,SNR=75						
GHO	Glory Hole Cre	8.04	35		Pn	20 53 15.8	-0.6
HIN	Hinchinbrook I	8.08	48		Pn	20 53 16.7	-0.1
PPLA	Purkeypile	8.09	21		Pn	20 53 19.1	+1.9
PPLA	Purkeypile	8.09	21	P	Pn	20 53 19.7	+2.5
	baz=206,SNR=252						
GLI	Glacier Island	8.11	44		Pn	20 53 16.3	-0.9
GLI	Glacier Island	8.11	44	P	Pn	20 53 16.8	-0.4
	baz=233,SNR=49						
CUT	Chulitna	8.13	29		Pn	20 53 17.8	+0.3
CUT	Chulitna	8.13	29	P	Pn	20 53 18.5	+1.0
	baz=215,SNR=42						
K20K	Telida	8.19	15		Pn	20 53 20.0	+1.6
K20K	Telida	8.19	15	P	Pn	20 53 20.6	+2.3
	baz=198,SNR=190						
SML	Sawmill	8.26	36	Pn	Pn	20 53 19.0	-0.4
SML	Sawmill	8.26	36	P	Pn	20 53 19.1	-0.4
	baz=224,SNR=93						
FID	Port Fidalgo	8.28	46		Pn	20 53 18.1	-1.5
JPK	Jack Peak	8.41	44		Pn	20 53 21.8	+0.4
M23K	Glacier View	8.46	38		Pn	20 53 22.8	+0.7
M23K	Glacier View	8.46	38	P	Pn	20 53 21.6	-0.5
	baz=226,SNR=197						
EYAK	Cordova Ski Ar	8.47	48		Pn	20 53 22.1	-0.1
EYAK	Cordova Ski Ar	8.47	48	P	Pn	20 53 21.9	-0.3
	baz=238,SNR=93						
VMT	TAPS Tl Valdez	8.51	44		Pn	20 53 23.4	+0.6
CAST	Castle Rocks	8.58	20		Pn	20 53 25.3	+1.5
CAST	Castle Rocks	8.58	20	P	Pn	20 53 26.0	+2.2
	baz=205,SNR=231						
SCM	Sheep Creek Mo	8.63	38		Pn	20 53 24.3	-0.1
SCM	Sheep Creek Mo	8.63	38	P	Pn	20 53 24.3	-0.1
SCM	Sheep Creek Mo	8.63	38	P	Pn	20 53 24.2	-0.2
	baz=227,SNR=228						
DIV	Divide	8.78	45		Pn	20 53 26.2	-0.3
KLU	Klutina	8.93	43		Pn	20 53 28.2	-0.3
KLU	Klutina	8.93	43	P	Pn	20 53 28.5	-0.1
	baz=233,SNR=476						
KTH	Kantishna Hill	8.94	23		Pn	20 53 29.2	+0.5
WAT1	Susitna Watana	8.95	31		Pn	20 53 29.4	+0.6
WAT1	Susitna Watana	8.95	31	P	Pn	20 53 28.4	-0.5
	baz=219						
CHUM	Lake Minchumin	8.96	18		Pn	20 53 31.7	+2.8
CHUM	Lake Minchumin	8.96	18	P	Pn	20 53 30.5	+1.6
	baz=203,SNR=271						
J20K	Nowinta River	8.96	13		Pn	20 53 30.4	+1.4
J20K	Nowinta River	8.96	13	P	Pn	20 53 30.7	+1.8
	baz=196,SNR=158						
TRF	Thorofare Moun	9.00	25		Pn	20 53 30.1	+0.5
TRF	Thorofare Moun	9.00	25	P	Pn	20 53 29.8	+0.2
	baz=211,SNR=316						
WAT6	Susitna Watana	9.01	34		Pn	20 53 29.2	-0.6
WAT6	Susitna Watana	9.01	34	P	Pn	20 53 29.0	-0.8
	baz=223,SNR=96						
HMT	Hamilton	9.02	52		Pn	20 53 29.1	-0.7
NICHA	Nichawak Mount	9.11	53		Pn	20 53 31.2	+0.2
SUCK	Suckling Hills	9.13	54		Pn	20 53 30.9	-0.4
BMRM	Bremner River	9.17	48		Pn	20 53 31.2	-0.7
BMRM	Bremner River	9.17	48	P	Pn	20 53 31.0	-0.9
	baz=239,SNR=89						
M24K	Tolsona, Glenn	9.22	39		Pn	20 53 32.4	-0.1
M24K	Tolsona, Glenn	9.22	39	P	Pn	20 53 32.9	+0.4
	baz=229,SNR=170						
PS12	TAPS Pump St12	9.22	44		Pn	20 53 32.9	+0.3
GCSA	Galena City Sc	9.29	5		Pn	20 53 35.8	+2.3
GCSA	Galena City Sc	9.29	5	P	Pn	20 53 36.2	+2.8
	baz=186,SNR=104						
RND	Reindeer	9.32	28		Pn	20 53 33.6	-0.4
RND	Reindeer	9.32	28	P	Pn	20 53 33.6	-0.4
BGLC	Bering Glacier	9.38	54	P	Pn	20 53 35.6	+1.0
	baz=247						
BPAW	Bear Paw Mtn.	9.41	21		Pn	20 53 34.8	-0.4
BPAW	Bear Paw Mtn.	9.41	21	P	Pn	20 53 35.5	+0.4
	baz=207,SNR=94						
GRIN	Grindle Hills	9.42	53		Pn	20 53 35.6	+0.3
PS11	TAPS Pump St11	9.46	41		Pn	20 53 37.0	+1.4
DHY	Denali Highway	9.49	33		Pn	20 53 35.6	-0.7
DHY	Denali Highway	9.49	33	P	Pn	20 53 35.5	-0.9
	baz=222,SNR=120						
N25K	Chitina, Valde	9.51	44		Pn	20 53 36.3	-0.3
N25K	Chitina, Valde	9.51	44	P	Pn	20 53 36.2	-0.3
	baz=236,SNR=83						
KHIT	Khitrov Hills	9.52	53		Pn	20 53 36.5	-0.2
MCK	McKinley	9.57	27		Pn	20 53 37.8	+0.5
MCK	McKinley	9.57	27	P	Pn	20 53 37.8	+0.5
MCK	McKinley	9.57	27	P	Pn	20 53 37.0	-0.3
	baz=215,SNR=153						
SNH	Sunshine Point	9.61	54		Pn	20 53 37.6	-0.2
KOSE	Korovin Southe	9.64	257		Pn	20 53 38.5	+0.2
ANM	Nome	9.67	342		Pn	20 53 40.8	+2.2
ANM	Nome	9.67	342	P	Pn	20 53 40.8	+2.2
ANM	Nome	9.67	342	P	Pn	20 53 40.7	+2.0
	baz=156,SNR=67						
WAX	Waxell Ridge	9.71	53		Pn	20 53 38.5	-0.7
CYK	Cape Yakataga	9.73	55		Pn	20 53 39.7	+0.2
KOKL	Mount Kliuchef	9.74	257		Pn	20 53 40.4	+0.8
GLB	Gilahina Butte	9.74	46		Pn	20 53 39.1	-0.7
HARP	HAARP	9.77	40		Pn	20 53 40.9	+0.9
HARP	HAARP	9.77	40	P	Pn	20 53 41.1	+1.1
	baz=231,SNR=106						
ATKA	Atka Island	9.79	257		Pn	20 53 41.2	+1.0
ATKA	Atka Island	9.79	257	P	Pn	20 53 42.1	+1.9
VRDI	Verde Repeater	9.79	48		Pn	20 53 39.8	-0.6
TGL	Tana Glacier	9.84	51		Pn	20 53 39.9	-1.2
ISLE	Juniper Island	10.00	53		Pn	20 53 42.3	-1.0
MESA	MESA	10.02	55		Pn	20 53 41.7	-1.9
MESA	MESA	10.02	55	P	Pn	20 53 44.0	+0.4
	baz=249,SNR=39						
PAX	Paxson	10.03	37		Pn	20 53 43.6	-0.1
PAX	Paxson	10.03	37	P	Pn	20 53 43.6	-0.1
PAX	Paxson	10.03	37	P	Pn	20 53 43.6	-0.1
	baz=227,SNR=391						
MCARA	McCarthy VSAT	10.04	48		Pn	20 53 43.6	-0.2
MCARA	McCarthy VSAT	10.04	48	P	Pn	20 53 43.0	-0.7
	baz=241,SNR=34						
BAGL	Bagley Icefiel	10.07	54		Pn	20 53 43.8	-0.2
BALM	Baldy	10.18	50		Pn	20 53 45.6	0.0
YAH	Yahtse	10.18	55		Pn	20 53 45.2	-0.6
I21K	Tanana	10.22	16		Pn	20 53 47.5	+1.4
I21K	Tanana	10.22	16	P	Pn	20 53 48.1	+2.0
	baz=201,SNR=198						
I21K				S	Sn	20 55 39.7	+0.4
	baz=201						
NEA2	Nenana	10.26	24		Pn	20 53 45.9	-0.7
NEA2	Nenana	10.26	24	P	Pn	20 53 46.0	-0.6
	baz=212,SNR=138						
MLY	Manley	10.30	19		Pn	20 53 46.9	-0.3
MLY	Manley	10.30	19	P	Pn	20 53 46.9	-0.3
	baz=205,SNR=198						
MLY				S	Sn	20 55 39.2	-2.0
	baz=205						
GRNC	Granite Creek	10.31	53		Pn	20 53 47.2	-0.5
WRH	Wood River Hil	10.39	26		Pn	20 53 47.2	-1.3
TABL	Table Mountain	10.49	55		Pn	20 53 49.3	-0.7
BARN	Barnard Glacie	10.49	51		Pn	20 53 49.5	-0.5
K24K	Donnelly Dome	10.52	33	P	Pn	20 53 50.2	0.0
	baz=223,SNR=215						
H21K	Melozitna Rive	10.55	13		Pn	20 53 52.9	+2.2
H21K	Melozitna Rive	10.55	13	P	Pn	20 53 52.9	+2.2
	baz=198,SNR=576						
GAMB	Gambell	10.58	327		Pn	20 53 52.6	+1.6
GAMB	Gambell	10.58	327	P	Pn	20 53 51.8	+0.8
	baz=136,SNR=26						
M26K	Nabesna, AK	10.59	43		Pn	20 53 51.5	+0.3
M26K	Nabesna, AK	10.59	43	P	Pn	20 53 51.3	+0.1
	baz=236,SNR=118						
CTG	Chitna Glacier	10.59	52	P	Pn	20 53 50.7	-0.7
	baz=246,SNR=108						
CTGM	Chitina Glacie	10.60	52		Pn	20 53 51.7	+0.2
CCB	Clear Creek Bu	10.61	26		Pn	20 53 50.2	-1.2
MENT	Mentasta	10.63	40		Pn	20 53 52.6	+0.9
HDA	Harding Lake	10.64	28		Pn	20 53 50.8	-1.1
HDA	Harding Lake	10.64	28	P	Pn	20 53 50.6	-1.2
	baz=218,SNR=407						
I23K	Minto, Yukon-K	10.67	22		Pn	20 53 52.1	-0.2
I23K	Minto, Yukon-K	10.67	22	P	Pn	20 53 51.4	-0.9
	baz=209,SNR=157						
I23K				S	Sn	20 55 53.8	+3.5
	baz=209						
LOGN	Logan Glacier	10.69	53		Pn	20 53 51.9	-0.8
IMAR	Indian Mountai	10.76	11		Pn	20 53 52.8	-0.7
MDM	Murphy Dome	10.76	24		Pn	20 53 52.2	-1.4
RIDG	Independent Ri	10.77	35		Pn	20 53 52.2	-1.4
RIDG	Independent Ri	10.77	35	P	Pn	20 53 53.1	-0.6
	baz=226,SNR=140						
TCOL	CIGO, UAF Yank	10.78	25		Pn	20 53 53.5	-0.2
TCOL	CIGO, UAF Yank	10.78	25	P	Pn	20 53 52.3	-1.4
	baz=214,SNR=12						
COLA	College	10.78	25		Pn	20 53 53.5	-0.2
COLA	College	10.78	25	P	Pn	20 53 53.5	-0.2
COLA	College	10.78	25	P	Pn	20 53 52.3	-1.4
	baz=214						
PCA	Pinnacle	10.79	57		Pn	20 53 52.8	-1.3
PINM	Pinnacle	10.80	57	P	Pn	20 53 54.6	+0.5
	baz=252,SNR=85						
PINM				S	Sn	20 55 51.3	-2.2
	baz=252						
L26K	Log Cabin Wild	10.81	40		Pn	20 53 55.4	+1.1
L26K	Log Cabin Wild	10.81	40	P	Pn	20 53 54.2	-0.1
	baz=232,SNR=147						
GSTR	Great Sitkin T	10.87	259		Pn	20 53 55.9	+0.8
YKU2	Yakutat	10.93	61	Pn	Pn	20 53 54.5	-1.3
IL31		10.94	27		Pn	20 53 54.1	-1.8
ILAR	Eielson Array	10.94	27	P	Pn	20 53 54.4	-1.6
	comp=E,8.7nm,0.3s,baz=219,slow=13,SNR=492						
ILAR				S	Sn	20 55 48.9	-7.9
	comp=E,22nm,0.6s,baz=226,slow=10.0,SNR=1.1						
ILAR				LR	LR	20 58 30.3	
	comp=E,11µm,20.6s,baz=214,slow=39						
ILAR				ScP	ScP	21 03 21.6	0.0
	comp=E,1.3nm,0.6s,baz=270,slow=2.9,SNR=4.4						
	comp=E,76nm,0.5s						
ILAR	Eielson Array	10.94	27		Pn	20 53 54.6	-1.4
ILAR	Eielson Array	10.94	27	P	Pn	20 53 54.6	-1.4
DOT	Dot Lake	10.96	36		Pn	20 53 55.9	-0.4
M27K	Edge Creek, AK	11.00	45		Pn	20 53 56.6	-0.4
M27K	Edge Creek, AK	11.00	45	P	Pn	20 53 57.0	+0.1
	baz=238,SNR=54						
TNA	Tin City	11.05	339		Pn	20 53 58.8	+1.4
TNA	Tin City	11.05	339	P	Pn	20 53 59.8	+2.4
	baz=151,SNR=103						
TNA				S	Sn	20 56 00.7	+1.3
	baz=151						
BCPM	Bancas Point	11.05	59		Pn	20 53 56.1	-1.4
POKR	Poker Plat Res	11.08	25		Pn	20 53 56.3	-1.6
POKR	Poker Plat Res	11.08	25	P	Pn	20 53 56.1	-1.9
	baz=215,SNR=76						
PNL	Peninsula	11.10	60	P	Pn	20 53 58.3	+0.1
	baz=256,SNR=110						
SCRK	Sand Creek	11.21	35		Pn	20 53 58.1	-1.6
SCRK	Sand Creek	11.21	35	P	Pn	20 53 58.9	-0.8
	baz=227,SNR=102						
J25K	Salcha River,	11.23	30		Pn	20 53 58.6	-1.4
J25K	Salcha River,	11.23	30	P	Pn	20 53 58.6	-1.4
	baz=222,SNR=204						
H23K	Yukon River	11.23	19		Pn	20 53 58.5	-1.4
H23K	Yukon River	11.23	19	P	Pn	20 53 58.6	-1.4
	baz=207,SNR=166						
ADK	Adak	11.31	259		Pn	20 54 01.3	+0.3
ADK	Adak	11.31	259	P	Pn	20 54 01.3	+0.3
ADK	Adak	11.31	259	P	Pn	20 54 03.5	+2.4
YUK3	Moose Creek	11.31	49	P	Pn	20 54 01.5	+0.2
	baz=244,SNR=158						
L27K	Beaver Creek,	11.40	42		Pn	20 54 02.0	-0.3
L27K	Beaver Creek,	11.40	42	P	Pn	20 54 02.5	+0.2
	baz=236,SNR=177						
BCAR	Beaver Creek A	11.42	42	Pn	Pn	20 54 02.5	0.0
YUK8	Steele Glacier	11.42	52	P	Pn	20 54 03.8	+1.0
	baz=248,SNR=180						
BVCY	Beaver Creek	11.44	46	P	Pn	20 54 03.4	+0.5
	baz=240,SNR=16						
KIWB	Kanaga Island	11.58	259		Pn	20 54 04.6	-0.2
H24K	Noodor Dome	11.58	22	P	Pn	20 54 02.4	-2.4
	baz=211,SNR=86						
J26L	Joseph Creek	11.70	34	P	Pn	20 54 05.6	-0.9
	baz=226,SNR=121						
K27K	Chicken	11.88	37		Pn	20 54 08.2	-0.7
K27K	Chicken	11.88	37	P	Pn	20 54 08.7	-0.2
	baz=231						
YUK6	Outpost Mounta	11.95	55	P	Pn	20 54 10.5	+0.6
	baz=252,SNR=46						
YUK4	Talbot Arm	11.95	53	P	Pn	20 54 11.5	+1.6
	baz=249,SNR=70						
HYT	Haines Junctio	12.31	56	Pn	Pn	20 54 14.1	-0.7
HYT	Haines Junctio	12.31	56	P	Pn	20 54 14.2	-0.7
	baz=253,SNR=30						
COLD	Coldfoot	12.40	15	Pn	Pn	20 54 15.4	-0.5
COLD	Coldfoot	12.40	15	P	Pn	20 54 15.6	-0.3
	baz=202,SNR=14						
COLD				S	Sn	20 56 31.2	-1.3
	baz=202						
PLBC	Pleasant Camp	12.57	63	P	Pn	20 54 18.9	+0.6
	baz=261,SNR=149						
PLBC				S	Sn	20 56 37.3	+0.5
	baz=261						
EGAK	Eagle	12.66	36	P	Pn	20 54 18.4	-1.0
	baz=231,SNR=68						
N30M	Aishikik Lake	12.69	53	P	Pn	20 54 19.8	-0.2
	baz=251,SNR=71						
N30M				S	Sn	20 56 35.4	-4.4
	baz=251						
RDOG	Red Dog Mine	12.73	353		Pn	20 54 21.2	+0.7
RDOG	Red Dog Mine	12.73	353	P	Pn	20 54 21.1	+0.7
	baz=169,SNR=198						
RDOG				S	Sn	20 56 47.0	+6.3
	baz=169						
DAWY	Dawson	12.87	41		Pn	20 54 21.7	-0.6
DAWY	Dawson	12.87	41	P	Pn	20 54 22.6	+0.3
	baz=237,SNR=35						
O30N	Mendenhall	12.97	57	P	Pn	20 54 24.1	+0.4
	baz=256,SNR=44						
SIT	Sitka	13.01	74	Pn	Pn	20 54 23.2	-1.0
SIT	Sitka	13.01	74	P	Pn	20 54 23.2	-1.0
SIT	Sitka	13.01	74	P	Pn	20 54 23.1	-1.0
	baz=273,SNR=13						
SKAG	Skagway	13.10	63		Pn	20 54 25.4	-0.1
SKAG	Skagway	13.10	63	P	Pn	20 54 26.4	+0.9
	baz=262,SNR=89						
SKAG				S	Sn	20 56 54.0	+4.4
	baz=262						
M30M	Minto, Yukon	13.21	49	Pn	Pn	20 54 27.2	+0.2
M30M	Minto, Yukon	13.21	49	P	Pn	20 54 27.1	0.0
	baz=247,SNR=47						
BESE	Bessie Mountai	13.26	67	Pn	Pn	20 54 27.4	-0.4
N31M	Braeburn, Yuko	13.30	54	Pn	Pn	20 54 28.0	-0.2
N31M	Braeburn, Yuko	13.30	54	P	Pn	20 54 28.4	+0.2
	baz=253,SNR=105						
JIS	Juneau Island	13.50	68		Pn	20 54 29.8	-1.0
J29M	Klondike Camp	13.51	40		Pn	20 54 31.8	+0.7
J29M	Klondike Camp	13.51	40	P	Pn	20 54 30.2	-0.9
	baz=238,SNR=12						
BMAR	Burnt Mountain	13.64	23	Pn	Pn	20 54 26.8	-6.1
TOLK	Toolik Lake Re	13.80	14		Pn	20 54 33.5	-1.6
TOLK	Toolik Lake Re	13.80	14	P	Pn	20 54 33.5	-1.6
	baz=202,SNR=49						
TOLK				S	S	20 57 21.7	-6.1
	baz=202						
I29M	Ogilvie Camp,	13.98	37		Pn	20 54 37.0	-0.5
I29M	Ogilvie Camp,	13.98	37	P	Pn	20 54 35.7	-1.8
	baz=234,SNR=62						
M31M	Drury Creek, Y	14.14	52		Pn	20 54 39.3	-0.3
M31M	Drury Creek, Y	14.14	52	P	Pn	20 54 39.7	+0.1
	baz=252,SNR=38						
CRAG	Craig	14.42	80	Pn	Pn	20 54 42.7	-0.8
CRAG	Craig	14.42	80	P	Pn	20 54 43.4	0.0
	baz=280						
CRAG				S	Sn	20 57 24.9	+3.1
	baz=280						
P33M	Teslin, Yukon	14.46	61	Pn	Pn	20 54 43.7	-0.3
P33M	Teslin, Yukon	14.46	61	P	Pn	20 54 44.0	0.0
	baz=262,SNR=79						
FARO	Faro, Yukon	14.62	52	P	Pn	20 54 46.2	+0.1
	baz=254,SNR=104						
WRAK	Wrangell Islan	14.70	76	P	Pn	20 54 47.4	+0.2
	baz=277,SNR=16						
WRAK				S	Sn	20 57 28.8	+0.1
	baz=277						
S34M	Telegraph Cree	15.23	70	P	Pn	20 54 54.9	+0.8
	baz=272,SNR=63						
S34M				S	Sn	20 57 43.1	+1.6
	baz=272						
DIB	Dawson Inlet,	15.38	88		Pn	20 54 54.9	-1.2
MMPY	Sheldon Lake,	15.65	52	P	Pn	20 55 01.0	+1.3
	baz=255,SNR=306						
T35M	Bob Quinn	15.78	73	P	Pn	20 55 02.8	+1.5
	baz=276,SNR=116						
T35M				S	Sn	20 57 56.0	+1.1
	baz=276						
DLBC	Dease Lake	15.79	68	P	Pn	20 55 03.0	+1.5
	comp=E,6.7nm,0.3s,baz=267,slow=12,SNR=53						
DLBC				LR	LR	21 00 43.2	
	comp=E,7µm,18.1s,baz=282,slow=36						
	comp=E,34nm,0.4s						
DLBC	Dease Lake	15.79	68		Pn	20 55 03.0	+1.5
DLBC	Dease Lake	15.79	68	P	Pn	20 55 03.0	+1.5
	baz=271,SNR=108						
A21K	Barrow	15.89	2	P	Pn	20 55 03.0	+0.5
A21K	Barrow	15.89	2	P	Pn	20 55 02.5	0.0
	baz=184						
A21K				S	Sn	20 58 01.1	+3.9
	baz=184						
SHEM	Shemya Is, Ala	16.20	271	P	Pn	20 55 07.0	+0.4
	comp=E,10nm,0.3s,baz=77,slow=2.1,SNR=7.4						
SHEM				LR	LR	21 01 16.2	
	comp=E,12µm,21.1s,baz=68,slow=37						
	comp=E,168nm,1.0s						
SMY	Shemya	16.20	271		Pn	20 55 05.8	-0.8
SMY	Shemya	16.20	271	P	Pn	20 55 05.8	-0.8
SMY				pmax	pmax		
	comp=Z,201nm,0.9s						
RUBB	Prince Rupert	16.30	82	P	Pn	20 55 06.9	-1.0

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HG4B  Hotspring         16.43  90              Pn        20 55 09.6 +0.1
WTLY  Watson Lake, Y    16.45  62   P          P         20 55 12.1 -0.1
      baz=267
GRNB  Grenville Isla    16.60  84              Pn        20 55 12.2 +0.4
TGTN  Hyland Airport    16.83  57   P          P         20 55 16.4  0.0
      baz=262,SNR=137
INK   Inuvik            17.24  32   P          Pn        20 55 18.9 -0.7
      comp=Z,20nm,0.3s,baz=225,slow=15,SNR=68
INK                                 LR         LR        21 03 05.4
      comp=Z,9µm,19.1s,baz=217,slow=41
      comp=Z,134nm,0.5s
INK   Inuvik            17.24  32   IAmb       IAmb      20 55 24.5
      comp=Z,334nm,0.5s
INK   Inuvik            17.24  32   P          Pn        20 55 18.0 -1.6
      baz=234,SNR=191
INK                                 S          Sn        20 58 32.3 +2.4
      baz=234
BBB   Bella Bella       18.22  88   P          Pn        20 55 32.1 +0.4
      comp=Z,0.7nm,0.3s,baz=299,slow=13,SNR=16
BBB                                 LR         LR        21 01 24.4
      comp=Z,8µm,18.9s,baz=295,slow=33
      comp=Z,60nm,1.0s
BBB   Bella Bella       18.22  88   P          P         20 55 30.2 -1.5
WRGLY Wrigley           19.27  52   P          Pn        20 55 44.3 -0.1
      baz=262,SNR=23
BILL  Bilibino          20.43 322   P          P         20 55 55.8 +0.1
BILL                                IAMs_20    IAMs_20   21 04 25.7
      comp=Z,11µm,20.0s
BILL  Bilibino          20.43 322⇓ iP          P         20 55 56.3 +0.6
BILL                               i                     20 56 14.1
BILL                               iS          S         20 59 41.6 -0.3
BILL                                pmax       pmax
      comp=Z,159nm,1.2s
BILL                                MLR        MLR
      comp=Z,11µm,16.0s
CBB   Campbell River    20.71  91   P          P         20 55 58.3 -0.5
C36M  Paulatuk          20.73  35   P          P         20 55 58.5 -0.4
C36M  Paulatuk          20.73  35   P          P         20 55 58.9  0.0
      baz=245,SNR=850
C36M                                S          S         20 59 46.0 -1.8
      baz=245
A36M  Sachs Harbour     21.64  28   P          P         20 56 07.4 -1.2
A36M                                IAmb       IAmb      20 56 59.1
      comp=Z,367nm,0.8s
A36M  Sachs Harbour     21.64  28   P          P         20 56 07.9 -0.7
      baz=238,SNR=105
A36M                                S          S         21 00 00.9 -4.8
      baz=238
C03A  Quillayute Air    22.22  96   IAmb       IAmb      20 56 43.9
      comp=Z,436nm,1.4s
LLLB  Lillooet          22.42  87   P          P         20 56 19.1 +1.8
LLLB                                IAmb       IAmb      20 56 21.9
      comp=Z,342nm,1.2s
B04A  Port Angeles      22.77  94   P          P         20 56 22.7 +1.8
B04A                                IAmb       IAmb      20 56 25.7
      comp=Z,188nm,1.0s
NLWA  Neilton Lookou    22.92  96   IAmb       IAmb      20 56 28.1
      comp=Z,282nm,1.1s
NLWA                                IAMs_20    IAMs_20   21 03 35.6
      comp=Z,6µm,18.0s
WISH  Wishkah           23.13  97   IAmb       IAmb      20 56 50.0
      comp=Z,280nm,1.1s
D03D  Eldon             23.28  95   P          P         20 56 28.6 +2.4
      baz=303,SNR=66
D03D                                S          S         21 00 40.7 +5.2
      baz=303
YKA   Yellowknife Ar    23.30  55   P          P         20 56 26.1 -0.1
      comp=Z,24nm,0.7s,baz=276,slow=9.0,SNR=148
YKA                                 ScP        ScP       21 03 46.1 -0.5
      comp=Z,4.3nm,0.9s,baz=278,slow=2.0,SNR=4.0
YKA                                 LR         LR        21 06 06.7
      comp=Z,6µm,20.2s,baz=268,slow=38
YKA                                 P3KPbc               21 29 52.4
      comp=Z,0.7nm,0.8s,baz=93,slow=4.8,SNR=4.9
      comp=Z,24nm,0.7s
YKA   Yellowknife Ar    23.30  55   P          P         20 56 25.9 -0.3
E03A  Lebam             23.57  98   IAmb       IAmb      20 56 59.5
      comp=Z,290nm,1.2s
D04E  Lakebay           23.66  96   P          P         20 56 32.9 +3.1
      baz=304,SNR=9.7
D04E                                S          S         21 00 49.5 +8.0
      baz=304
D05A  Enumclaw          24.10  95   IAmb       IAmb      20 57 03.3
      comp=Z,353nm,1.3s
E04D  Cinebar           24.13  97   IAmb       IAmb      20 56 38.6
      comp=Z,508nm,1.3s
E04D  Cinebar           24.13  97   P          P         20 56 36.9 +2.8
      baz=305,SNR=90
E04D                                S          S         21 00 53.8 +4.8
      baz=305
F04D  Rainier, OR       24.15  98   P          P         20 56 36.6 +2.2
      baz=306
F04D                                S          S         21 00 56.2 +6.8
      baz=306
G03D  McMinnville, O    24.53 100   P          P         20 56 39.5 +1.7
G03D                                IAmb       IAmb      20 57 10.5
      comp=Z,314nm,1.4s
G03D                                IAMs_20    IAMs_20   21 03 43.2
      comp=Z,8µm,21.0s
G03D  McMinnville, O    24.53 100   P          P         20 56 39.9 +2.1
      baz=308,SNR=9.0
G03D                                S          S         21 00 59.7 +4.1
      baz=308
F04A  Amboy             24.57  98   IAmb       IAmb      20 56 41.9
      comp=Z,270nm,1.4s
PET   Petropavlovsk     24.79 282   P          P         20 56 39.8 -0.3
PET                                 IAmb       IAmb      20 56 45.3
      comp=Z,134nm,0.7s
PET                                 IAMs_20    IAMs_20   21 06 07.4
      comp=Z,7µm,22.0s
PET   Petropavlovsk     24.79 282α iP          P         20 56 39.0 -1.1
PET                               e                      20 57 18.2
PET                               eS           S         21 00 56.0 -3.6
PET                                 pmax       pmax
      comp=Z,700nm,9.0s
PET                                 pmax       pmax
      comp=Z,269nm,0.8s
PET                                 MLR        MLR
      comp=Z,8µm,19.0s
PET                                 MLR        MLR
      comp=Z,6µm,17.0s
LTY   Liberty           24.81  93   IAmb       IAmb      20 56 56.3
      comp=Z,203nm,1.2s
I02E  Swisshome, OR     24.90 103   IAmb       IAmb      20 56 59.9
      comp=Z,211nm,1.2s
I02E                                IAMs_20    IAMs_20   21 04 01.7
      comp=Z,7µm,19.0s
I02E  Swisshome, OR     24.90 103   P          P         20 56 43.4 +2.3
      baz=310,SNR=12
I02E                                S          S         21 01 02.3 +0.9
      baz=310
COR   Corvallis         24.90 101   P          P         20 56 43.0 +1.9
COR                                 IAmb       IAmb      20 57 00.1
      comp=Z,178nm,1.1s
COR   Corvallis         24.90 101   IAMs_20    IAMs_20   21 04 12.8
      comp=Z,8µm,19.0s
COR   Corvallis         24.90 101   P          P         20 56 43.0 +1.9
COR                                 pmax       pmax
      comp=Z,178nm,1.1s
COR                                 MLR        MLR
      comp=Z,8µm,19.0s
B08A  Colville Reser    24.98  90   P          P         20 56 43.4 +1.6
B08A                                IAmb       IAmb      20 56 45.4
      comp=Z,444nm,1.6s
F05D  White Salmon      25.14  97   IAmb       IAmb      20 57 10.7
      comp=Z,484nm,2.0s
F05D                                IAMs_20    IAMs_20   21 04 48.4
      comp=Z,6µm,19.0s
F05D  White Salmon      25.14  97   P          P         20 56 45.5 +2.1
      baz=306,SNR=20
F05D                                S          S         21 01 10.3 +4.9
      baz=306
H04D  Lebanon           25.25 101   IAmb       IAmb      20 57 19.8
      comp=Z,189nm,1.1s
H04D                                IAMs_20    IAMs_20   21 04 15.2
      comp=Z,6µm,20.0s
H04D  Lebanon           25.25 101   P          P         20 56 46.2 +1.9
      baz=309,SNR=22
H04D                                S          S         21 01 10.6 +3.5
      baz=309
PEA0B Petropavlovsk-    25.29 283   P          P         20 56 44.4 -0.2
PEA0B                               IAmb       IAmb      20 56 59.4
      comp=Z,213nm,0.9s
PEA0B Petropavlovsk-    25.29 283   P          P         20 56 44.4 -0.2
PEA0B                               pmax       pmax
      comp=Z,213nm,1.0s
PETK  Petropavlovsk-    25.29 283   P          P         20 56 44.3 -0.3
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      comp=Z,138nm,0.8s,baz=86,slow=11,SNR=79
PETK                                LR         LR        21 06 36.4
      comp=Z,5µm,21.9s,baz=83,slow=36
      comp=Z,138nm,0.8s
BUCK  Buck Mountain     25.32 102   P          P         20 56 46.3 +1.2
HOOD  Mount Hood Mea    25.37  98   IAmb       IAmb      20 56 49.3
      comp=Z,330nm,1.1s
KEBM  Edson Butte       25.43 105   P          P         20 56 47.9 +1.8
I03D  Drain, OR         25.44 103   P          P         20 56 47.8 +1.8
      baz=310,SNR=7.3
I03D                                S          S         21 01 16.0 +6.0
      baz=310
H04A  Detroit Lake      25.46 100   IAmb       IAmb      20 57 04.0
      comp=Z,185nm,1.0s
J01E  Myrtle Point      25.46 104   IAMs_20    IAMs_20   21 03 55.7
      comp=Z,11µm,22.0s
J01E  Myrtle Point      25.46 104   P          P         20 56 48.6 +2.3
      baz=311,SNR=8.7
J01E                                S          S         21 01 17.0 +6.5
      baz=311
SEY   Seymchan          25.57 307   P          P         20 56 47.0 +0.1
      comp=Z,67nm,0.8s,baz=99,slow=8.2,SNR=96
SEY                                 LR         LR        21 07 56.8
      comp=Z,12µm,19.5s,baz=86,slow=39
      comp=Z,67nm,0.8s
G05D  Wamic, OR         25.61  98   P          P         20 56 50.1 +2.5
      baz=307
E07A  Sunnyside         25.66  94   IAmb       IAmb      20 56 51.8
      comp=Z,251nm,1.4s
DBO   Dodson Butte      25.87 104   P          P         20 56 48.4 -1.6
C09A  Chrisman Ranch    25.87  90   IAmb       IAmb      20 56 53.3
      comp=Z,318nm,1.6s
I04A  Tendick Farm,     25.89 102   P          P         20 56 51.8 +1.5
      baz=310,SNR=20
I04A                                S          S         21 01 23.0 +5.6
      baz=310
D08A  Wollman Farm,     25.91  92   IAmb       IAmb      20 56 55.1
      comp=Z,252nm,1.4s
K02D  Willamette Mer    25.92 105   P          P         20 56 52.2 +1.7
      baz=312,SNR=16
K02D                                S          S         21 01 24.0 +6.1
      baz=312
HAWA  Hanford           25.94  94   P          P         20 56 52.3 +1.8
HAWA                                IAmb       IAmb      20 56 54.2
      comp=Z,396nm,1.4s
HAWA                                IAMs_20    IAMs_20   21 05 07.5
      comp=Z,6µm,19.0s
F07A  Phinny Hill Vi    26.00  95   IAmb       IAmb      20 57 20.0
      comp=Z,312nm,1.3s
EDM   Edmonton          26.11  76              P         20 56 52.9 +0.8
EDM   Edmonton          26.11  76   P          P         20 56 52.9 +0.8
EDM                                 pmax       pmax
      comp=Z,975nm,1.5s
I05D  Terrebonne, OR    26.15 100   P          P         20 56 54.7 +2.2
      baz=308,SNR=9.0
I05D                                S          S         21 01 26.8 +5.3
      baz=308
E08A  Dider Farm, El    26.15  94   IAmb       IAmb      20 56 55.9
      comp=Z,264nm,1.4s
NEW   Newport           26.28  89   P          P         20 56 55.5 +1.8
      comp=Z,101nm,1.0s,baz=303,slow=7.7,SNR=112
NEW                                 LR         LR        21 05 45.0
      comp=Z,7µm,21.1s,baz=296,slow=33
      comp=Z,101nm,1.0s
NEW   Newport           26.28  89   IAMs_20    IAMs_20   21 05 34.0
      comp=Z,7µm,21.0s
NEW   Newport           26.28  89   P          P         20 56 55.3 +1.6
      baz=302,SNR=94
NEW                                 S          S         21 01 26.4 +2.9
      baz=302
L02F  Cave Junction     26.36 106   P          P         20 56 55.7 +1.4
      baz=313,SNR=6.8
L02F                                S          S         21 01 28.7 +4.1
      baz=313
HUMO  Hull Mountain     26.37 104   IAMs_20    IAMs_20   21 04 36.6
      comp=Z,10µm,22.0s
KSXB  Camp Six Broad    26.39 107   P          P         20 56 55.4 +0.6
J04D  Umpqua Nationa    26.42 102   P          P         20 56 55.7 +0.5
J04D                                IAmb       IAmb      20 57 15.5
      comp=Z,163nm,0.9s
J04D                                           PcP       21 00 20.3 +0.7
J04D                                IAMs_20    IAMs_20   21 05 01.1
      comp=Z,8µm,20.0s
J04D  Umpqua Nationa    26.42 102   P          P         20 56 55.9 +0.7
      baz=310,SNR=17
J04D                                S          S         21 01 30.7 +4.7
      baz=310
E09A  Wood Farm, Sta    26.66  93   IAmb       IAmb      20 57 00.2
      comp=Z,491nm,1.5s
KRPM  Rodgers           26.77 108   P          P         20 56 57.8 -0.4
J05D  Fort Rock, OR     26.88 101   P          P         20 57 01.7 +2.4
      baz=310,SNR=38
J05D                                S          S         21 01 38.4 +5.3
      baz=310
MA2   Magadan           26.91 300   P          P         20 57 00.6 +1.4
      comp=Z,27nm,0.8s,baz=81,slow=13,SNR=12
MA2                                 LR         LR        21 09 16.8
      comp=Z,5µm,18.1s,baz=88,slow=40
      comp=Z,27nm,0.8s
MA2   Magadan           26.91 300   P          P         20 56 58.8 -0.4
MA2                                 IAMs_20    IAMs_20   21 09 05.7
      comp=Z,5µm,18.0s
MA2   Magadan           26.91 300   P          P         20 57 02.9 +3.7
L04D  Klamath Falls     26.99 104   IAMs_20    IAMs_20   21 05 08.0
      comp=Z,8µm,21.0s
L04D  Klamath Falls     26.99 104   P          P         20 57 02.3 +2.1
      baz=312,SNR=15
L04D                                S          S         21 01 38.9 +4.1
      baz=312
K04D  Chiloquin, OR     27.02 103   P          P         20 57 02.6 +2.1
      baz=311
K04D                                S          S         21 01 40.3 +5.0
      baz=311
YBH   Yreka Blue Hor    27.09 105   P          P         20 57 03.1 +2.1
      comp=Z,10nm,1.0s,baz=354,slow=4.9,SNR=13
YBH                                 LR         LR        21 05 21.9
      comp=Z,15µm,21.9s,baz=310,slow=31
      comp=Z,10nm,1.0s
SKR   Severo-Kuril's    27.22 279  eP          P         20 56 59.0 -3.0
SKR                                eS          S         21 01 34.6 -3.4
SKR                                 pmax       pmax
      comp=Z,100nm,7.6s
SKR                                 pmax       pmax
      comp=Z,300nm,7.1s
SKR                                 pmax       pmax
      comp=Z,66nm,0.7s
SKR                                 MLR        MLR
      comp=Z,3µm,20.0s
SKR                                 MLR        MLR
      comp=Z,2µm,20.0s
KMPM  Mount Pierce      27.24 109   P          P         20 57 00.7 -1.8
KMRM  Mail Ridge        27.60 109   P          P         20 57 07.4 +1.7
WALA  Waterton Lakes    27.69  85   P          P         20 57 05.8 -0.7
BMO   Blue Mountains    28.11  95   IAMs_20    IAMs_20   21 06 35.9
      comp=Z,6µm,19.0s
JTMT  Jette             28.17  87   IAmb       IAmb      20 57 13.8
      comp=Z,337nm,1.3s
MOD   Modoc Plateau     28.30 103   P          P         20 57 13.1 +1.1
MOD                                 IAMs_20    IAMs_20   21 06 12.9
      comp=Z,6µm,20.0s
PLID  Pearl Lake        28.71  93   P          P         20 57 14.9 -0.8
PLID                                IAMs_20    IAMs_20   21 07 01.3
      comp=Z,5µm,20.0s
HOPS  Hopland Field     28.82 110   IAMs_20    IAMs_20   21 05 29.9
      comp=Z,6µm,22.0s
MSO   Missoula          28.87  89   P          P         20 57 17.1 +0.2
MSO   Missoula          28.87  89   P          P         20 57 18.0 +1.1
      baz=304,SNR=30
MSO                                 S          S         21 02 05.9 +1.5
      baz=304
WVOR  Wild Horse Val    28.88 100   IAMs_20    IAMs_20   21 06 47.3
      comp=Z,6µm,20.0s
ORV   Oroville          29.27 107   P          P         20 57 20.8 +0.4
ORV                                 IAMs_20    IAMs_20   21 06 14.4
      comp=Z,7µm,20.0s
ORV   Oroville          29.27 107   P          P         20 57 20.8 +0.4
ORV                                 pmax       pmax
      comp=Z,32nm,1.0s
ORV                                 MLR        MLR
      comp=Z,7µm,20.0s
MCCM  Marconi Confer    29.55 111   IAMs_20    IAMs_20   21 06 05.1
      comp=Z,7µm,20.0s
BEKR  Beckworth         29.67 106   P          P         20 57 22.5 -1.7
MFID  Camas Ranch       29.84  96   IAmb       IAmb      20 57 28.6
      comp=Z,141nm,1.2s
MFID                                IAMs_20    IAMs_20   21 07 08.5
      comp=Z,5µm,22.0s
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HRY   Holter Researc    30.14  87   P          P         20 57 28.4 +0.2
LRM   Limekiln Ridge    30.29  89   P          P         20 57 29.8  0.0
PAHR  Pah Rah Range     30.32 105   P          P         20 57 30.0 +0.1
HLID  Hailey            30.54  94   IAmb       IAmb      20 57 35.2
      comp=Z,132nm,1.4s
HLID                                IAMs_20    IAMs_20   21 08 22.3
      comp=Z,6µm,18.0s
HLID  Hailey            30.54  94   P          P         20 57 33.4 +1.5
      baz=309,SNR=93
HLID                                S          S         21 02 35.1 +4.3
      baz=309
EGMT  Eagleton          30.59  83   P          P         20 57 31.9 -0.2
EGMT                                IAMs_20    IAMs_20   21 08 48.0
      comp=Z,6µm,19.0s
EGMT  Eagleton          30.59  83   P          P         20 57 33.0 +0.9
      baz=303
PNTR  Pine Nut          30.63 106   IAmb       IAmb      20 58 02.1
      comp=Z,118nm,0.8s
MCMT  McKenzie Canyo    30.66  91   P          P         20 57 34.4 +1.4
RES   Resolute Bay      30.69  28   P          P         20 57 32.9 +0.3
      comp=Z,28nm,0.6s,baz=258,slow=11,SNR=81
RES                                 LR         LR        21 12 19.3
      comp=Z,3µm,19.2s,baz=256,slow=41
      comp=Z,28nm,0.6s
RES   Resolute Bay      30.69  28   P          P         20 57 32.5 -0.1
RES                                 IAmb       IAmb      20 57 34.5
      comp=Z,218nm,1.8s
BOZ   Bozeman (W)       30.89  89   P          P         20 57 34.4 -0.5
BOZ   Bozeman (W)       30.89  89   P          P         20 57 34.4 -0.5
BOZ                                 pmax       pmax
      comp=Z,102nm,1.5s
BOZ                                 MLR        MLR
      comp=Z,2µm,19.0s
BOZ   Bozeman (W)       30.89  89   P          P         20 57 36.0 +1.1
      baz=306,SNR=50
BOZ                                 S          S         21 02 38.1 +1.9
      baz=306
SAO   San Andreas Ge    31.34 111              P         20 57 39.6 +1.0
SAO   San Andreas Ge    31.34 111   P          P         20 57 39.7 +1.0
SAO                                 pmax       pmax
      comp=Z,31nm,1.2s
SAO                                 MLR        MLR
      comp=Z,9µm,20.0s
YHL   Hebgen Lake       31.59  90   P          P         20 57 42.6 +1.4
BBGB  Big Mountain B    31.69 111   IAmb       IAmb      20 58 14.8
      comp=Z,188nm,1.0s
NVAR  Mina Array Bea    31.81 105   P          P         20 57 44.8 +1.7
      comp=Z,12nm,0.7s,baz=306,slow=8.6,SNR=68
NVAR                                PcP        PcP       21 00 34.0 +0.7
      comp=Z,8.5nm,0.6s,baz=293,slow=3.1,SNR=5.3
NVAR                                LR         LR        21 08 16.8
      comp=Z,11µm,21.4s,baz=314,slow=32
NVAR                                P3KPbc               21 29 14.2
      comp=Z,0.2nm,0.3s,baz=178,slow=2.0,SNR=4.4
      comp=Z,12nm,0.7s
LHV   Little Huntoon    31.83 106   IAmb       IAmb      20 58 19.4
      comp=Z,120nm,1.3s
GCMT  Greycliff         31.89  87   P          P         20 57 41.8 -1.9
NV11  Mina Array Sit    31.89 105   P          P         20 57 44.7 +0.9
ELK   Elko              31.91  99   LR         LR        21 09 14.1
      comp=Z,6µm,19.0s,baz=300,slow=34
ELK   Elko              31.91  99   IAMs_20    IAMs_20   21 08 54.4
      comp=Z,6µm,19.0s
OMMB  Old Mammoth Mi    32.02 107   P          P         20 57 46.4 +1.3
YFT   Old Faithful      32.03  90   IAmb       IAmb      20 57 50.6
      comp=Z,110nm,0.9s
PMPB  Monarch Peak      32.09 111   P          P         20 57 47.1 +1.7
MLAC  Mammoth, Mammo32.10 107       P          P         20 57 48.0 +2.3
      baz=317
MLAC                                S          S         21 03 02.3 +7.0
      baz=317
YPP   Pitchstone Pla    32.16  90   P          P         20 57 47.8 +1.7
LKWY  Lake              32.21  89   IAmb       IAmb      20 57 50.8
      comp=Z,92nm,0.8s
H17A  Grant Village     32.21  90   P          P         20 57 49.5 +2.9
      baz=307,SNR=60
H17A                                S          S         21 03 05.2 +8.2
      baz=307
MOOW  Moose Ponds       32.51  91   P          P         20 57 50.7 +1.5
RLMT  Red Lodge         32.52  88   IAmb       IAmb      20 57 52.7
      comp=Z,207nm,1.3s
RLMT  Red Lodge         32.52  88   P          P         20 57 51.1 +1.9
      baz=307,SNR=61
RLMT                                S          S         21 03 04.5 +2.9
      baz=307
TPAW  Teton Pass        32.55  91   IAmb       IAmb      20 57 53.5
      comp=Z,263nm,1.9s
HVU   Hansel Valley     32.61  95   IAmb       IAmb      20 57 53.5
      comp=Z,255nm,1.4s
TPH   Tonopah           32.66 105   P          P         20 57 50.5  0.0
TPH                                 IAmb       IAmb      20 58 19.6
      comp=Z,164nm,0.9s
TPH   Tonopah           32.66 105   P          P         20 57 50.5  0.0
TPH                                 pmax       pmax
      comp=Z,164nm,0.9s
REDW  Red Top Meadow    32.69  92   IAmb       IAmb      20 58 33.9
      comp=Z,140nm,1.5s
VOG   Valley Oaks Go    32.77 109   P          P         20 57 52.8 +1.5
      baz=318
VOG                                 S          S         21 03 10.0 +4.8
      baz=318
TIN   Tinemaha, Big     32.85 107   P          P         20 57 53.7 +1.6
      baz=317
TIN                                 S          S         21 03 12.5 +5.8
      baz=317
AHID  Auburn Hatcher    32.93  93   P          P         20 57 53.8 +0.9
BGU   Big Grassy Mou    33.03  97   P          P         20 57 53.0 -0.8
BGU                                 IAmb       IAmb      20 57 57.1
      comp=Z,148nm,1.5s
SMMC  Simmler           33.20 111   P          P         20 57 57.5 +2.4
      baz=320,SNR=11
SMMC                                S          S         21 03 16.4 +4.4
      baz=320
VES   Vestal, Richgr    33.29 110   P          P         20 57 57.3 +1.5
      baz=319,SNR=6.4
VES                                 S          S         21 03 17.5 +4.2
      baz=319
LAO   LASA Array        33.33  83   IAmb       IAmb      20 57 58.6
      comp=Z,130nm,1.3s
LAO                                 IAMs_20    IAMs_20   21 10 07.4
      comp=Z,5µm,20.0s
LAO   LASA Array        33.33  83   P          P         20 57 57.9 +1.8
      baz=305
LAO   LASA Array        33.33  83   P          P         20 57 57.5 +1.4
      baz=305
LAO                                 S          S         21 03 15.6 +1.7
      baz=305
GRAC  Grapevine Rang    33.36 106   P          P         20 57 58.8 +2.3
      baz=317
GRAC                                S          S         21 03 19.9 +5.4
      baz=317
R11A  Troy Canyon, C    33.37 103   IAmb       IAmb      20 57 59.9
      comp=Z,112nm,1.3s
R11A  Troy Canyon, C    33.37 103   P          P         20 57 58.3 +1.6
      baz=315,SNR=53
R11A                                S          S         21 03 18.1 +3.2
      baz=315
CWC   Cottonwood Cre    33.38 108   P          P         20 57 58.2 +1.4
      baz=318
CWC                                 S          S         21 03 20.9 +5.8
      baz=318
HWUT  Hardware Ranch    33.41  95   P          P         20 57 56.5 -0.6
HWUT                                IAmb       IAmb      20 58 00.5
      comp=Z,66nm,0.9s
HWUT                                IAMs_20    IAMs_20   21 09 57.2
      comp=Z,5µm,20.0s
TIXI  Tiksi             33.46 327   LR         LR        21 13 38.2
      comp=Z,6µm,18.8s,baz=181,slow=40
TIXI  Tiksi             33.46 327   P          P         20 57 57.3 +0.5
TIXI                                IAMs_20    IAMs_20   21 13 27.6
      comp=Z,6µm,19.0s
TIXI  Tiksi             33.46 327   P          P         20 57 57.3 +0.5
TIXI                                pmax       pmax
      comp=Z,45nm,0.9s
TIXI                                MLR        MLR
      comp=Z,6µm,19.0s
TIXI  Tiksi             33.46 327   P          P         20 57 57.2 +0.3
TIXI                                ScP        ScP       21 04 18.3 +0.3
DGMT  Dagmar            33.47  79   P          P         20 57 57.1 -0.2
DGMT                                IAmb       IAmb      20 57 58.9
      comp=Z,107nm,1.2s
DGMT  Dagmar            33.47  79   IAMs_20    IAMs_20   21 11 24.1
      comp=Z,5µm,18.0s
DGMT  Dagmar            33.47  79   P          P         20 57 58.3 +1.0
      baz=303,SNR=12
DGMT  Dagmar            33.47  79   P          P         20 57 58.1 +0.9
      baz=303,SNR=12
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DGMT				S	**S**	**21 03 17.1**	**+1.2**
	baz=303						
PKM	**Mcpherson Peak**	**33.62**	**112**	P	**P**	**20 58 00.1**	**+1.2**
	baz=320,SNR=12						
PKM				S	**S**	**21 03 22.7**	**+3.8**
	baz=320						
DUG	**Dugway, Tooele**	**33.64**	**98**	P	**P**	**20 58 00.7**	**+1.7**
	baz=313,SNR=71						
DUG				S	**S**	**21 03 22.6**	**+3.5**
	baz=313						
ISA	**Isabella, Lake**	**33.75**	**109**	P	**P**	**20 58 00.9**	**+1.0**
	baz=319,SNR=14						
ISA				S	**S**	**21 03 23.0**	**+2.4**
	baz=319						
S11A	**Rachel**	**33.78**	**104**	P	**P**	**20 58 01.8**	**+1.5**
S11A				IAmb	IAmb	20 58 35.0	
	comp=Z,125nm,1.2s						
BCW	**Bitter Crk WRg**	**33.79**	**111**	IAmb	IAmb	20 58 36.2	
	comp=Z,219nm,1.6s						
BW06	**Boulder Array**	**33.80**	**91**	P	**P**	**20 58 00.7**	**+0.2**
BW06	**Boulder Array**	**33.80**	**91**	P	**P**	**20 58 01.7**	**+1.2**
	baz=309,SNR=28						
BW06				S	**S**	**21 03 22.8**	**+1.1**
	baz=309						
PD31	**Pinedale Array**	**33.80**	**91**	P	**P**	**20 58 00.0**	**-0.5**
PDAR	**Pinedale Array**	**33.80**	**91**	P	**P**	**20 58 01.8**	**+1.3**
	comp=Z,30nm,0.6s,baz=308,slow=5.0,SNR=315						
PDAR				LR	LR	21 10 53.2	
	comp=Z,2µm,18.4s,baz=310,slow=35						
PDAR				P3KPbc		21 29 10.1	
	comp=Z,0.3nm,0.4s,baz=103,slow=6.7,SNR=4.4						
	comp=Z,30nm,0.6s						
PDAR	**Pinedale Array**	**33.80**	**91**	P	**P**	**20 58 00.6**	**+0.1**
FCC	**Fort Churchill**	**33.95**	**57**	P	**P**	**20 58 01.8**	**+0.5**
FCC	**Fort Churchill**	**33.95**	**57**	P	**P**	**20 58 01.8**	**+0.5**
FCC				pmax	pmax		
	comp=Z,157nm,0.9s						
ARVC	**Arvin**	**33.96**	**110**	P	**P**	**20 58 02.8**	**+1.1**
	baz=319						
ARVC				S	**S**	**21 03 28.2**	**+4.4**
	baz=319						
TPNV	**Topopah Spring**	**34.01**	**105**	IAmb	IAmb	20 58 27.9	
	comp=Z,98nm,0.9s						
TPNV	**Topopah Spring**	**34.01**	**105**	P	**P**	**20 58 04.3**	**+2.0**
	baz=317,SNR=58						
TPNV				S	**S**	**21 03 30.0**	**+5.2**
	baz=317						
SBC	**Santa Barbara**	**34.02**	**112**	P	**P**	**20 58 02.9**	**+0.8**
	baz=320						
SBC				S	**S**	**21 03 29.0**	**+4.5**
	baz=320						
FURC	**Furnace Creek,**	**34.02**	**106**	P	**P**	**20 58 04.2**	**+2.0**
	baz=317,SNR=5.1						
FURC				S	**S**	**21 03 27.5**	**+2.9**
	baz=317						
KIP	**Kipapa**	**34.05**	**179**	IAMs_20	IAMs_20	21 07 42.6	
	comp=Z,4µm,22.0s						
JLU	**Jordanelle**	**34.14**	**96**	IAmb	IAmb	20 58 06.5	
	comp=Z,127nm,1.3s						
LRMC	**Laurel Mtn Rad**	**34.31**	**108**	P	**P**	**20 58 06.3**	**+1.4**
	baz=319,SNR=34						
LRMC				S	**S**	**21 03 32.3**	**+2.8**
	baz=319						
GWY	**Greenwater Val**	**34.34**	**107**	P	**P**	**20 58 05.2**	**+0.1**
GWY				IAmb	IAmb	20 58 28.1	
	comp=Z,74nm,1.1s						
PRN	**Pahroc Range**	**34.34**	**103**	IAmb	IAmb	20 58 38.3	
	comp=Z,117nm,1.0s						
SCZ2	**Santa Cruz Isl**	**34.40**	**112**	P	**P**	**20 58 06.6**	**+1.1**
	baz=321						
SCZ2				S	**S**	**21 03 35.3**	**+4.7**
	baz=321						
OSI	**Osito Audit: C**	**34.41**	**111**	P	**P**	**20 58 06.7**	**+1.1**
	baz=320						
OSI				S	**S**	**21 03 32.8**	**+2.0**
	baz=320						
NKL	**Nikolayevsk**	**34.49**	**292**	*e*P	**P**	**20 58 02.9**	**-3.1**
NKL				*e*S	**S**	**21 03 25.7**	**-5.8**
NKL				pmax	pmax		
	comp=N,1.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,20nm,1.1s						
NKL				pmax	pmax		
	comp=Z,69nm,4.2s						
NKL				smax	smax		
	comp=E,3.0nm,5.3s						
NKL				smax	smax		
	comp=N,40nm,2.0s						
TYV	**Tymovskoe**	**34.58**	**287**	*e*P	**P**	**20 58 08.1**	**+1.3**
TYV				*e*S	**S**	**21 03 37.1**	**+4.1**
TYV				pmax	pmax		
	comp=Z,21nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.1s						
TYV				smax	smax		
	comp=N,400nm,7.9s						
TYV				smax	smax		
	comp=E,700nm,7.9s						
TYV				MLR	MLR		
	comp=Z,4µm,23.0s						
TYV				MLR	MLR		
	comp=N,2µm,22.0s						
TYV				MLR	MLR		
	comp=E,4µm,22.0s						
EDW2	**Edwards Air Fo**	**34.60**	**110**	P	**P**	**20 58 07.9**	**+0.6**
	baz=319,SNR=8.7						
EDW2				S	**S**	**21 03 36.2**	**+2.6**
	baz=319						
SHOC	**Shoshone, Teco**	**34.76**	**106**	P	**P**	**20 58 08.3**	**-0.3**
	baz=318,SNR=8.2						
SHOC				S	**S**	**21 03 42.0**	**+5.9**
	baz=318						
KUR	**Kuril'sk**	**34.82**	**276***c*	*i*P	**P**	**20 58 08.0**	**-0.9**
KUR				*e*		20 59 24.8	
KUR				PPP	PPP	20 59 38.6	
KUR				*e*S	**S**	**21 03 37.9**	**+1.1**
KUR				MLR	MLR		
	comp=Z,1µm,17.0s						
DECC	**Green Verdugo**	**34.89**	**111**	P	**P**	**20 58 09.9**	**+0.2**
	baz=320						
DECC				S	**S**	**21 03 42.5**	**+4.3**
	baz=320						
GSC	**Goldstone, Bar**	**34.92**	**108**	P	**P**	**20 58 10.1**	**+0.1**
GSC	**Goldstone, Bar**	**34.92**	**108**	P	**P**	**20 58 10.1**	**+0.1**
GSC				pmax	pmax		
	comp=Z,73nm,1.3s						
GSC	**Goldstone, Bar**	**34.92**	**108**	P	**P**	**20 58 11.5**	**+1.5**
	baz=319,SNR=16						
GSC				S	**S**	**21 03 41.9**	**+3.2**
	baz=319						
TCRU	**Three Creeks R**	**34.94**	**99**	IAmb	IAmb	20 58 33.8	
	comp=Z,72nm,0.9s						
SNCC	**San Nicolas Is**	**35.04**	**113**	P	**P**	**20 58 09.7**	**-1.3**
SNCC				IAmb	IAmb	20 58 39.9	
	comp=Z,99nm,1.0s						
SNCC	**San Nicolas Is**	**35.04**	**113**	P	**P**	**20 58 12.8**	**+1.8**
	baz=321						
RRX	**Edison Barstow**	**35.14**	**108**	P	**P**	**20 58 12.9**	**+1.1**
	baz=319						
RRX				S	**S**	**21 03 46.4**	**+4.5**
	baz=319						
TMUT	**Trail Mountain**	**35.16**	**97**	IAmb	IAmb	20 58 15.7	
	comp=Z,202nm,1.4s						
CCUT	**Cedar City**	**35.17**	**102**	IAmb	IAmb	20 58 15.8	
	comp=Z,99nm,1.3s						
BFSC	**Mount Baldy Ra**	**35.26**	**110**	P	**P**	**20 58 14.5**	**+1.5**
	baz=320,SNR=13						
BFSC				S	**S**	**21 03 47.2**	**+3.1**
	baz=320						
TUQ	**Turquoise Moun**	**35.30**	**107**	P	**P**	**20 58 14.5**	**+1.1**
	baz=318						
TUQ				S	**S**	**21 03 48.5**	**+3.9**
	baz=318						
P17A	**Butcher Ranch,**	**35.30**	**97**	P	**P**	**20 58 13.5**	**+0.1**
FMP	**Fort Macarthur**	**35.33**	**111**	P	**P**	**20 58 14.2**	**+0.8**
	baz=320						
FMP				S	**S**	**21 03 49.6**	**+4.8**
	baz=320						
P18A	**Preston Nutter**	**35.48**	**96**	IAmb	IAmb	20 58 18.4	
	comp=Z,168nm,1.4s						
CIS	**Catalina Islan**	**35.50**	**112**	P	**P**	**20 58 16.0**	**+1.0**
	baz=321						
CIS				S	**S**	**21 03 50.0**	**+2.4**
	baz=321						
HPAH	**Hawaii Prepara**	**35.50**	**175**	IAmb	IAmb	20 58 36.0	
	comp=Z,142nm,1.0s						
HEC	**Hector,Ludlow**	**35.53**	**108**	P	**P**	**20 58 16.3**	**+1.0**
	baz=319,SNR=7.1						
HEC				S	**S**	**21 03 51.6**	**+3.6**
	baz=319						
K22A	**Casper**	**35.60**	**89**	P	**P**	**20 58 16.1**	**+0.2**
K22A				IAmb	IAmb	20 58 18.4	
	comp=Z,160nm,1.2s						
K22A	**Casper**	**35.60**	**89**	P	**P**	**20 58 16.9**	**+1.0**
	baz=310,SNR=15						
K22A	**Casper**	**35.60**	**89**	P	**P**	**20 58 16.9**	**+1.0**
	baz=310,SNR=15						
K22A				S	**S**	**21 03 49.7**	**+0.5**
	baz=310						
LCMT	**Little Creek M**	**35.62**	**102**	IAmb	IAmb	20 58 19.7	
	comp=Z,196nm,1.8s						
BBRC	**Big Bear Solar**	**35.64**	**109**	P	**P**	**20 58 17.9**	**+1.5**
	baz=320						
BBRC				S	**S**	**21 03 54.8**	**+4.7**
	baz=320						
SCI2	**San Clemente I**	**35.76**	**112**	P	**P**	**20 58 18.8**	**+1.6**
	baz=321						
SCI2				S	**S**	**21 03 54.8**	**+3.4**
	baz=321						
RWWY	**Rawlins**	**35.83**	**91**	P	**P**	**20 58 18.2**	**+0.1**
PKCU	**Pink Cliffs**	**35.84**	**101**	P	**P**	**20 58 19.5**	**+1.3**
PKCU				IAmb	IAmb	20 58 21.9	
	comp=Z,232nm,1.4s						
ELS	**Elsinore Mount**	**35.84**	**110**	P	**P**	**20 58 18.1**	**+0.2**
UGL	**Uglegorsk**	**35.85**	**285**	*e*P	P	20 58 11.8	-6.0
UGL				*e*S	S	21 03 43.6	-8.9
UGL				pmax	pmax		
	comp=Z,170nm,0.9s						
UGL				pmax	pmax		
	comp=Z,510nm,2.0s						
UGL				smax	smax		
	comp=E,570nm,3.0s						
UGL				smax	smax		
	comp=N,980nm,8.0s						
UGL				MLR	MLR		
	comp=E,4µm,19.0s						
UGL				MLR	MLR		
	comp=N,1µm,18.0s						
UGL				MLR	MLR		
	comp=Z,4µm,20.0s						
GMRC	**Granite Mounta**	**35.93**	**107**	P	**P**	**20 58 20.3**	**+1.5**
	baz=319,SNR=21						
GMRC				S	**S**	**21 03 57.2**	**+3.0**
	baz=319						
HMH	**Humu‘ula Sheep**	**35.94**	**175**		**P**	**20 58 18.1**	**-1.0**
HMH				IAmb	IAmb	20 58 40.5	
	comp=Z,202nm,1.3s						
YAK	**Yakutsk**	**35.95**	**310**	LR	LR	21 14 03.5	
	comp=Z,4µm,21.4s,baz=80,slow=38						
YAK	**Yakutsk**	**35.95**	**310**	P	**P**	**20 58 17.7**	**-0.7**
YAK				IAmb	IAmb	20 58 53.9	
	comp=Z,128nm,0.8s						
YAK				IAMs_20	IAMs_20	21 14 02.3	
	comp=Z,4µm,20.0s						
YAK	**Yakutsk**	**35.95**	**310***c*	*i*P	**P**	**20 58 17.7**	**-0.7**
YAK				*e**PP	**pP**	**20 58 26.5**	**-2.9**
YAK				*e*		20 59 43.0	
YAK				*e*		21 00 44.8	
YAK				*e*S	**S**	**21 03 53.4**	**-0.3**
YAK				*e**SS	**sS**	**21 04 12.6**	**+0.7**
YAK				*e*		21 08 31.0	
YAK				pmax	pmax		
	comp=Z,88nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,25nm,0.9s						
YAK				pmax	pmax		
	comp=Z,333nm,3.5s						
YAK				pmax	pmax		
	comp=N,133nm,2.3s						
YAK				pmax	pmax		
	comp=E,106nm,2.6s						
YAK				smax	smax		
	comp=E,350nm,4.2s						
YAK				smax	smax		
	comp=N,101nm,2.3s						
YAK				MLR	MLR		
	comp=Z,5µm,24.0s						
YAK				MLR	MLR		
	comp=N,4µm,22.0s						
YAK				MLR	MLR		
	comp=E,3µm,20.0s						
YAK	**Yakutsk**	**35.95**	**310**	P	**P**	**20 58 17.8**	**-0.7**
YAK				ScP	**ScP**	**21 04 27.8**	**+0.7**
MURC	**Murrieta**	**36.00**	**110**	P	**P**	**20 58 20.6**	**+1.3**
	baz=320						
MURC				S	**S**	**21 03 58.3**	**+3.1**
	baz=320						
MLOA	**Mauna Loa Obse**	**36.00**	**175**	P	**P**	**20 58 20.3**	**+0.5**
RSSD	**Black Hills**	**36.09**	**85**	P	**P**	**20 58 20.2**	**0.0**
RSSD				IAmb	IAmb	20 58 22.1	
	comp=Z,78nm,0.8s						
RSSD	**Black Hills**	**36.09**	**85**	P	**P**	**20 58 20.2**	**0.0**
RSSD				pmax	pmax		
	comp=Z,78nm,0.8s						
RSSD				MLR	MLR		
	comp=Z,6µm,20.0s						
RSSD	**Black Hills**	**36.09**	**85**	P	**P**	**20 58 21.5**	**+1.3**
	baz=308,SNR=62						
RSSD	**Black Hills**	**36.09**	**85**	P	**P**	**20 58 21.3**	**+1.1**
	baz=308						
RSSD				S	**S**	**21 03 57.9**	**+1.1**
	baz=308						
RSSD	**Black Hills**	**36.09**	**85**	P	**P**	**20 58 21.5**	**+1.3**
RSSD				sP	**sP**	**20 58 33.5**	**-2.4**
ALE	**Alert**	**36.17**	**13**	P	**P**	**20 58 20.2**	**+0.1**
ALE				pP	**pP**	**20 58 29.4**	**-1.8**
ALE				sP	**sP**	**20 58 33.2**	**-2.6**
O20A	**White River Ci**	**36.27**	**94**	P	**P**	**20 58 22.0**	**+0.2**
O20A	**White River Ci**	**36.27**	**94**	P	**P**	**20 58 23.0**	**+1.2**
	baz=312,SNR=92						
O20A				S	**S**	**21 04 01.0**	**+1.4**
	baz=312						
BELC	**Belle Mtn. Jos**	**36.34**	**108**	P	**P**	**20 58 23.3**	**+1.0**
	baz=320,SNR=21						
BELC				S	**S**	**21 04 02.2**	**+1.7**
	baz=320						
MDND	**Maddock**	**36.37**	**77**	P	**P**	**20 58 22.7**	**+0.5**
MDND	**Maddock**	**36.37**	**77**	P	**P**	**20 58 23.7**	**+1.4**
	baz=305,SNR=63						
MDND	**Maddock**	**36.37**	**77**	P	**P**	**20 58 23.6**	**+1.4**
	baz=305,SNR=63						
MDND				S	**S**	**21 04 02.0**	**+1.4**
	baz=305						
PFO	**Pinyon Flats O**	**36.38**	**109**	LR	LR	21 10 47.9	
	comp=Z,9µm,19.8s,baz=320,slow=32						
PFO	**Pinyon Flats O**	**36.38**	**109**	P	**P**	**20 58 23.2**	**+0.6**
PFO	**Pinyon Flats O**	**36.38**	**109**	P	**P**	**20 58 23.2**	**+0.6**
PFO				pmax	pmax		
	comp=Z,40nm,1.1s						
PFO				MLR	MLR		
	comp=Z,9µm,20.0s						
PFO	**Pinyon Flats O**	**36.38**	**109**	P	**P**	**20 58 23.7**	**+1.1**
	baz=320,SNR=13						
PFO				S	**S**	**21 04 03.8**	**+2.5**
	baz=320						
PFO	**Pinyon Flats O**	**36.38**	**109**	P	**P**	**20 58 24.0**	**+1.3**
PFO				pP	**pP**	**20 58 32.6**	**-1.0**
PFO				sP	**sP**	**20 58 38.1**	**-0.3**
TPFO	**Pinon Flats**	**36.39**	**109**	P	**P**	**20 58 23.8**	**+1.1**
	baz=320,SNR=15						
TPFO				S	**S**	**21 04 04.6**	**+3.2**
	baz=320						
E28A	**Huff**	**36.50**	**79**	P	**P**	**20 58 24.1**	**+0.7**
E28A	**Huff**	**36.50**	**79**	P	**P**	**20 58 24.8**	**+1.4**
	baz=306,SNR=21						
NEE2	**Needles Airpor**	**36.51**	**106**	P	**P**	**20 58 24.9**	**+1.3**
	baz=318						
NEE2				S	**S**	**21 04 07.0**	**+4.1**
	baz=318						
U15A	**North Rim**	**36.57**	**102**	IAmb	IAmb	20 58 27.9	
	comp=Z,96nm,1.4s						
109C	**Camp Elliot, M**	**36.59**	**111**	IAMs_20	IAMs_20	21 09 43.6	
	comp=Z,5µm,21.0s						
109C	**Camp Elliot, M**	**36.59**	**111**	P	**P**	**20 58 26.0**	**+1.7**
	baz=321						
109C				S	**S**	**21 04 08.6**	**+4.4**
	baz=321						
YSS	**Yuzh-Sakhalins**	**36.68**	**282**	P	**P**	**20 58 25.6**	**+0.7**
YSS				IAmb	IAmb	20 58 43.0	
	comp=Z,250nm,1.8s						
YSS				IAMs_20	IAMs_20	21 14 24.6	
	comp=Z,3µm,21.0s						
YSS	**Yuzh-Sakhalins**	**36.68**	**282**	*e*P	**P**	**20 58 23.9**	**-0.9**
YSS				*e*S	**S**	**21 04 03.2**	**-2.0**
YSS				pmax	pmax		
	comp=Z,60nm,1.3s						
YSS				pmax	pmax		
	comp=Z,500nm,3.3s						
YSS				MLR	MLR		
	comp=N,2µm,20.0s						
YSS				MLR	MLR		
	comp=Z,4µm,20.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
IRM	**Iron Mountain**	**36.68**	**107**	P	**P**	**20 58 26.7**	**+1.7**
	baz=319,SNR=28						
IRM				S	**S**	**21 04 09.2**	**+3.6**
	baz=319						
TULEG	**Thule**	**36.85**	**23**	P	**P**	**20 58 26.0**	**-0.1**
TULEG				IAmb	IAmb	20 58 28.0	
	comp=Z,149nm,1.3s						
TULEG				IAMs_20	IAMs_20	21 15 21.4	
	comp=Z,4µm,21.0s						
TULEG	**Thule**	**36.85**	**23**⇓	*i*P	**P**	**20 58 26.2**	**+0.2**
TULEG				IAmb	IAmb	20 58 27.6	
	comp=Z,211nm,1.5s						
BC3	**Big Chuckawall**	**36.89**	**108**	P	**P**	**20 58 27.9**	**+0.9**
	baz=320,SNR=13						
MONP2	**Monument Peak**	**36.96**	**110**	P	**P**	**20 58 28.5**	**+0.9**
	baz=321,SNR=10						
MONP2				S	**S**	**21 04 11.6**	**+1.5**
	baz=321						
PV23	**Carpenter Ridg**	**36.98**	**96**	P	**P**	**20 58 27.1**	**-0.8**
PV10	**Paradox Valley**	**37.02**	**96**	P	**P**	**20 58 29.0**	**+0.8**
PV10				IAmb	IAmb	20 58 31.3	
	comp=Z,76nm,0.9s						
ULM	**Lac du Bonnet**	**37.07**	**71**	P	**P**	**20 58 28.8**	**+0.7**
	comp=Z,94nm,0.9s,baz=302,slow=8.8,SNR=58						
ULM				LR	LR	21 13 38.6	
	comp=Z,4µm,18.9s,baz=302,slow=36						
	comp=Z,94nm,0.9s						
ULM	**Lac du Bonnet**	**37.07**	**71**	P	**P**	**20 58 28.3**	**+0.2**
N23A	**Red Feather La**	**37.07**	**91**	P	**P**	**20 58 29.0**	**+0.4**
N23A				IAmb	IAmb	20 58 31.5	
	comp=Z,180nm,1.6s						
N23A	**Red Feather La**	**37.07**	**91**	P	**P**	**20 58 29.6**	**+1.0**
	baz=311,SNR=36						
N23A				S	**S**	**21 04 13.7**	**+1.8**
	baz=311						
PHWY	**Pilot Hill**	**37.08**	**90**	P	**P**	**20 58 27.7**	**-1.0**
PDMCI	**Parker Dam,Lak**	**37.12**	**106**	P	**P**	**20 58 29.9**	**+1.2**
	baz=319,SNR=10						
PDMCI				S	**S**	**21 04 15.8**	**+3.7**
	baz=319						
PV11	**David Mesa, Pa**	**37.17**	**96**	P	**P**	**20 58 29.8**	**+0.4**
PV11				IAmb	IAmb	20 58 57.7	
	comp=Z,99nm,0.8s						
PV07	**Paradox Valley**	**37.20**	**96**	P	**P**	**20 58 30.2**	**+0.6**
PV07				IAmb	IAmb	20 58 32.3	
	comp=Z,257nm,1.6s						
SWSC	**Sam W. Stewart**	**37.25**	**109**	P	**P**	**20 58 30.8**	**+1.0**
	baz=320,SNR=7.5						
SWSC				S	**S**	**21 04 18.5**	**+4.4**
	baz=320						
IKP	**In-Ko-Pah, Jac**	**37.31**	**110**	P	**P**	**20 58 32.1**	**+1.6**
	baz=321,SNR=6.4						
IKP				S	**S**	**21 04 18.3**	**+3.0**
	baz=321						
BLYC	**Blythe**	**37.33**	**107**	P	**P**	**20 58 31.5**	**+1.0**
BLYC				IAmb	IAmb	20 58 33.8	
	comp=Z,119nm,1.2s						
PV15	**Paradox Valley**	**37.36**	**96**	P	**P**	**20 58 31.4**	**+0.3**
PV15				IAmb	IAmb	20 59 03.2	
	comp=Z,110nm,0.8s						
CCX	**Cicese**	**37.62**	**111**	P	**P**	**20 58 33.9**	**+0.9**
SMCO	**Snowmass**	**37.64**	**94**	P	**P**	**20 58 34.1**	**+0.5**
SMCO				IAmb	IAmb	20 58 36.5	
	comp=Z,115nm,1.6s						
SMCO				IAMs_20	IAMs_20	21 12 27.1	
	comp=Z,4µm,19.0s						
GLA	**Glamis**	**37.69**	**108**	P	**P**	**20 58 34.9**	**+1.3**
	baz=320,SNR=6.1						
GLA				S	**S**	**21 04 23.7**	**+2.7**
	baz=320						
WUAZ	**Wupatki**	**37.75**	**102**	IAMs_20	IAMs_20	21 11 49.2	
	comp=Z,5µm,21.0s						
WUAZ	**Wupatki**	**37.75**	**102**	P	**P**	**20 58 36.1**	**+1.8**
	baz=317,SNR=53						
WUAZ				S	**S**	**21 04 25.2**	**+3.1**
	baz=317						
GRNR	**Gornyy**	**37.98**	**291**⇑	*i*P	**P**	**20 58 35.1**	**-0.8**
GRNR				*e*S	**S**	**21 04 24.5**	**-0.4**
GRNR				pmax	pmax		
	comp=N,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=E,6.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GRNR				smax	smax		
	comp=E,1.0nm,0.5s						
GRNR				MLR	MLR		
	comp=E,1µm,19.0s						
GRNR				MLR	MLR		
	comp=N,2µm,17.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,18.0s						
ISCO	**Idaho Springs**	**37.99**	**92**	P	**P**	**20 58 36.9**	**+0.4**
ISCO	**Idaho Springs**	**37.99**	**92**	P	**P**	**20 58 36.9**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,25nm,0.9s						
ISCO				MLR	MLR		
	comp=Z,2µm,19.0s						
ISCO	**Idaho Springs**	**37.99**	**92**	P	**P**	**20 58 37.6**	**+1.2**
	baz=312,SNR=16						
ISCO				S	**S**	**21 04 27.8**	**+1.9**
	baz=312						
ISCO	**Idaho Springs**	**37.99**	**92**	P	**P**	**20 58 37.7**	**+1.2**
	baz=312,SNR=16						
ISCO				S	**S**	**21 04 28.1**	**+2.2**
	baz=312						
MVCO	**Mesa Verde**	**38.14**	**97**	P	**P**	**20 58 37.8**	**+0.2**
MVCO				IAmb	IAmb	20 58 57.0	
	comp=Z,66nm,0.8s						
MVCO	**Mesa Verde**	**38.14**	**97**	P	**P**	**20 58 38.6**	**+1.0**
	baz=315,SNR=37						
MVCO				S	**S**	**21 04 31.1**	**+2.9**
	baz=315						
AGMN	**Agassiz Nation**	**38.17**	**74**	P	**P**	**20 58 37.5**	**+0.1**
AGMN				IAMs_20	IAMs_20	21 14 53.5	
	comp=Z,2µm,18.0s						
AGMN	**Agassiz Nation**	**38.17**	**74**	P	**P**	**20 58 38.0**	**+0.5**
	baz=305,SNR=51						
AGMN				S	**S**	**21 04 26.1**	**-1.8**
	baz=305						
AGMN	**Agassiz Nation**	**38.17**	**74**	P	**P**	**20 58 37.9**	**+0.4**
	baz=305,SNR=51						
AGMN				S	**S**	**21 04 26.1**	**-1.8**
	baz=305						
D32A	**Dogwood Acres,**	**38.21**	**76**	P	**P**	**20 58 37.5**	**-0.4**
D32A				IAmb	IAmb	20 58 39.5	
	comp=Z,116nm,1.1s						
D32B	**Dogwood Acres,**	**38.21**	**76**	P	**P**	**20 58 38.1**	**+0.3**
	baz=306						
JKA	**Kamikawa-asahi**	**38.48**	**278**	P	**P**	**20 58 40.4**	**+0.3**
JKA				IAmb	IAmb	20 58 43.9	
	comp=Z,250nm,1.4s						
ASAJ	**Asahikawa**	**38.48**	**278**	LR	LR	21 13 59.4	
	comp=Z,2µm,21.9s,baz=68,slow=35						
ASAJ	**Asahikawa**	**38.48**	**278**	P	**P**	**20 58 40.4**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,250nm,1.4s						
X16A	**Lo Mia Camp, P**	**38.52**	**103**	IAmb	IAmb	20 58 44.4	
	comp=Z,124nm,1.3s						
S22A	**4UR Ranch, Cre**	**38.71**	**95**	P	**P**	**20 58 44.2**	**+1.7**
	baz=314,SNR=40						
S22A				S	**S**	**21 04 40.9**	**+4.1**
	baz=314						
SUSD	**Miller**	**38.76**	**81**	P	**P**	**20 58 41.9**	**-0.6**
SUSD	**Miller**	**38.76**	**81**	P	**P**	**20 58 43.2**	**+0.7**
	baz=308,SNR=12						
SUSD	**Miller**	**38.76**	**81**	P	**P**	**20 58 43.0**	**+0.5**
	baz=308,SNR=12						
SUSD				S	**S**	**21 04 37.4**	**+0.5**
	baz=308						
Q24A	**Divide**	**38.82**	**92**	IAmb	IAmb	20 58 46.5	
	comp=Z,137nm,1.5s						
Q24A	**Divide**	**38.82**	**92**	P	**P**	**20 58 44.9**	**+1.5**

	baz=313,SNR=16						
Q24A				S	S	21 04 41.0	+2.5
	baz=313						
W18A	Petrified Fore	38.95	101	P	P	20 58 45.9	+1.5
	baz=317,SNR=30						
W18A				S	S	21 04 43.4	+3.1
	baz=317						
OGNE	Ogallala	39.26	87	P	P	20 58 46.9	+0.1
OGNE	Ogallala	39.26	87	P	P	20 58 48.4	+1.5
	baz=311,SNR=12						
OGNE	Ogallala	39.26	87	P	P	20 58 48.1	+1.3
	baz=311,SNR=12						
OGNE				S	S	21 04 44.6	0.0
	baz=311						
X18A	Snowflake	39.26	102	P	P	20 58 47.8	+0.7
X18A				IAmb	IAmb	20 58 50.3	
	comp=Z,170nm,1.4s						
B35A	Bob, Littlefor	39.30	72	P	P	20 58 46.5	-0.4
B35A				IAmb	IAmb	20 58 47.9	
	comp=Z,96nm,0.8s						
B35A	Bob, Littlefor	39.30	72	P	P	20 58 47.2	+0.3
	baz=306,SNR=44						
F33A	5 Mile Ranch,	39.39	77	P	P	20 58 47.2	-0.5
F33A				IAmb	IAmb	20 58 48.5	
	comp=Z,156nm,1.5s						
F33A	5 Mile Ranch,	39.39	77	P	P	20 58 47.9	+0.2
	baz=307,SNR=12						
SDCO	Great Sand Dun	39.46	94	IAmb	IAmb	20 58 51.7	
	comp=Z,140nm,1.4s						
SDCO				IAMs_20	IAMs_20	21 14 05.4	
	comp=Z,5µm,18.0s						
SDCO	Great Sand Dun	39.46	94	P	P	20 58 50.4	+1.6
	baz=314,SNR=100						
SDCO	Great Sand Dun	39.46	94	P	P	20 58 50.3	+1.6
	baz=314,SNR=100						
SDCO				S	S	21 04 52.3	+4.2
	baz=314						
ERM	Erimo	39.50	275	P	P	20 58 48.4	-0.2
ERM				IAmb	IAmb	20 58 53.1	
	comp=Z,137nm,0.9s						
ERM	Erimo	39.50	275	IAMs_20	IAMs_20	21 18 19.3	
	comp=Z,3µm,20.0s						
ERM	Erimo	39.50	275	*ce*P	P	20 58 49.3	+0.6
ERM				pmax	pmax		
	comp=Z,228nm,1.3s						
ERM	Erimo	39.50	275	P	P	20 58 50.7	+2.0
JOHN	Johnston Islan	39.61	197	IAMs_20	IAMs_20	21 10 32.3	
	comp=Z,3µm,22.0s						
214A	Organ Pipe Nat	39.62	107	P	P	20 58 51.3	+1.4
	baz=320,SNR=27						
214A				S	S	21 04 53.9	+3.9
	baz=320						
JEW	Eniwo	39.93	277	P	P	20 58 52.2	0.0
JEW				IAmb	IAmb	20 59 06.6	
	comp=Z,120nm,0.9s						
K31A	O'Neill	40.02	83	P	P	20 58 52.7	-0.4
K31A				IAmb	IAmb	20 58 55.4	
	comp=Z,270nm,1.4s						
K31A	O'Neill	40.02	83	P	P	20 58 53.7	+0.7
	baz=310						
KSCO	Kaye Shedlock'	40.22	90	P	P	20 58 56.5	+1.6
	baz=313,SNR=21						
KSCO	Kaye Shedlock'	40.22	90	P	P	20 58 56.3	+1.4
	baz=313,SNR=21						
KSCO				S	S	21 05 01.1	+2.0
	baz=313						
TUC	Tucson	40.46	105	P	P	20 58 57.9	+1.0
TUC	Tucson	40.46	105	IAMs_20	IAMs_20	21 14 00.1	
	comp=Z,3µm,20.0s						
TUC	Tucson	40.46	105	P	P	20 58 57.9	+1.0
TUC				pmax	pmax		
	comp=Z,102nm,1.5s						
TUC				MLR	MLR		
	comp=Z,3µm,20.0s						
TUC	Tucson	40.46	105	P	P	20 58 58.6	+1.7
	baz=320						
TUC				S	S	21 05 07.5	+4.8
	baz=320						
TUC	Tucson	40.46	105	P	P	20 58 58.6	+1.7
T25A	Trinidad	40.51	94	IAmb	IAmb	20 59 00.3	
	comp=Z,201nm,1.3s						
T25A	Trinidad	40.51	94	P	P	20 58 58.7	+1.3
	baz=315,SNR=62						
T25A				S	S	21 05 07.6	+4.1
	baz=315						
ECSD	EROS Data Cent	40.52	80	P	P	20 58 56.5	-0.6
ECSD	EROS Data Cent	40.52	80	P	P	20 58 57.0	-0.1
	baz=309,SNR=45						
ECSD	EROS Data Cent	40.52	80	P	P	20 58 56.7	-0.4
	baz=309,SNR=45						
ECSD				S	S	21 05 01.9	-1.3
	baz=309						
EYMN	Ely	40.75	72	P	P	20 58 58.8	-0.2
EYMN	Ely	40.75	72	IAMs_20	IAMs_20	21 15 46.7	
	comp=Z,4µm,18.0s						
EYMN	Ely	40.75	72	P	P	20 58 59.6	+0.6
	baz=307,SNR=41						
EYMN				S	S	21 05 04.3	-2.2
	baz=307						
EYMN	Ely	40.75	72	P	P	20 58 59.5	+0.6
	baz=307,SNR=41						
EYMN				S	S	21 05 05.2	-1.3
	baz=307						
F36A	Milaca	40.90	75	P	P	20 59 00.2	-0.1
F36A				IAmb	IAmb	20 59 02.0	
	comp=Z,280nm,1.6s						
F36A	Milaca	40.90	75	P	P	20 59 00.6	+0.3
	baz=308,SNR=43						
ANMO	Albuquerque	40.92	98	LR	LR	21 15 03.8	
	comp=Z,4µm,18.6s,baz=302,slow=35						
ANMO	Albuquerque	40.92	98	P	P	20 59 00.1	-0.7
ANMO	Albuquerque	40.92	98	IAMs_20	IAMs_20	21 14 43.8	
	comp=Z,4µm,18.0s						
ANMO	Albuquerque	40.92	98	*ce*P	P	20 59 01.5	+0.8
ANMO				pmax	pmax		
	comp=Z,47nm,1.3s						
ANMO	Albuquerque	40.92	98	P	P	20 59 02.0	+1.2
	baz=317,SNR=33						
ANMO	Albuquerque	40.92	98	P	P	20 59 01.6	+0.9
	baz=317						
ANMO				S	S	21 05 12.2	+2.5
	baz=317						
ANMO	Albuquerque	40.92	98	P	P	20 59 01.9	+1.2
ANMO				pP	pP	20 59 11.7	-0.1
ANMO				sP	sP	20 59 15.6	-0.9
ANMO				x	x	21 01 01.4	
ZEA	Zeya	41.06	300	*e*P	P	20 59 00.8	-0.7
ZEA				*e*		21 00 35.4	
ZEA				pmax	pmax		
	comp=E,100nm,5.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.7s						
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,200nm,5.6s						
ZEA				pmax	pmax		
	comp=N,100nm,4.9s						
ZEA				pmax	pmax		
	comp=Z,300nm,7.2s						
ZEA				MLR	MLR		
	comp=E,1µm,13.0s						
ZEA				MLR	MLR		
	comp=N,1µm,17.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,17.0s						
BGNE	Belgrade	41.16	84	P	P	20 59 02.9	+0.5
BGNE	Belgrade	41.16	84	P	P	20 59 03.3	+0.8
	baz=311,SNR=21						
BGNE				S	S	21 05 12.6	-0.2
	baz=311						
BGNE	Belgrade	41.16	84	P	P	20 59 03.4	+0.9
	baz=311,SNR=21						
BGNE				S	S	21 05 12.8	0.0
	baz=311						
Y22D	IRIS PASSCAL I	41.29	99	IAMs_20	IAMs_20	21 14 30.8	
	comp=Z,4µm,20.0s						
Y22D	IRIS PASSCAL I	41.29	99	P	P	20 59 05.9	+2.2
	baz=318						
Y22D	IRIS PASSCAL I	41.29	99	P	P	20 59 05.7	+1.9
	baz=318						
Y22D				S	S	21 05 20.1	+5.0
	baz=318						
KLR	Kul'dur	41.34	291	LR	LR	21 16 32.5	
	comp=Z,3µm,21.4s,baz=58,slow=36						
KLR	Kul'dur	41.34	291	*ce*P	P	20 59 03.3	-0.5
KLR				pmax	pmax		
	comp=Z,68nm,1.8s						
KLR				MLR	MLR		
	comp=Z,3µm,20.0s						
Y22A	Socorro	41.37	99	P	P	20 59 06.5	+2.1
	baz=318,SNR=33						
JTM	Tenmabayashi	41.49	275	P	P	20 59 04.2	-1.0
UPNV	Upernavik	41.52	26	⇓*i*P	P	20 59 05.8	+0.8
UPNV				IAmb	IAmb	20 59 06.2	
	comp=Z,132nm,0.7s						
E38A	The Farm, Brul	41.53	73	P	P	20 59 05.4	0.0
E38A				IAmb	IAmb	20 59 06.3	
	comp=Z,163nm,0.8s						
E38A	The Farm, Brul	41.53	73	P	P	20 59 05.5	+0.1
	baz=308,SNR=16						
NOR	Nord	41.60	8	⇓*i*P	P	20 59 06.2	+0.6
NOR				IAmb	IAmb	20 59 06.7	
	comp=Z,41nm,0.9s						
SPMN	Marine on St.	41.70	76	P	P	20 59 06.6	-0.2
SPMN				IAmb	IAmb	20 59 08.7	
	comp=Z,360nm,1.6s						
SPMN	Marine on St.	41.70	76	P	P	20 59 07.5	+0.7
	baz=309,SNR=10						
SPMN	Marine on St.	41.70	76	P	P	20 59 07.1	+0.4
	baz=309						
SPMN				S	S	21 05 19.7	-0.9
	baz=309						
L34A	Svendsen Farm,	41.79	82	P	P	20 59 07.4	-0.2
L34A	Svendsen Farm,	41.79	82	P	P	20 59 08.0	+0.4
	baz=311,SNR=9.2						
121A	Cookes Peak, D	41.95	102	IAmb	IAmb	20 59 12.5	
	comp=Z,202nm,1.5s						
121A	Cookes Peak, D	41.95	102	P	P	20 59 11.2	+1.9
	baz=319,SNR=49						
121A	Cookes Peak, D	41.95	102	P	P	20 59 11.0	+1.8
	baz=319,SNR=49						
N33A	J Bar K, Exete	42.00	84	P	P	20 59 09.0	-0.3
N33B	J Bar K, Exete	42.00	84	P	P	20 59 09.7	+0.3
	baz=312,SNR=9.6						
CBKS	Cedar Bluff	42.00	88	P	P	20 59 09.2	-0.2
CBKS				IAmb	IAmb	20 59 12.1	
	comp=Z,324nm,1.3s						
CBKS	Cedar Bluff	42.00	88	P	P	20 59 09.2	-0.2
CBKS				pmax	pmax		
	comp=Z,324nm,1.3s						
CBKS				MLR	MLR		
	comp=Z,2µm,22.0s						
CBKS	Cedar Bluff	42.00	88	P	P	20 59 10.8	+1.4
	baz=313,SNR=23						
CBKS				S	S	21 05 27.0	+1.6
	baz=313						
CBKS	Cedar Bluff	42.00	88	P	P	20 59 10.6	+1.2
	baz=313,SNR=23						
CBKS				S	S	21 05 27.5	+2.2
	baz=313						
I37A	Lemond, Waseca	42.13	78	P	P	20 59 10.2	-0.1
I37B	Waseca	42.13	78	P	P	20 59 11.1	+0.7
	baz=310,SNR=40						
FRB	Frobisher Bay	42.57	41	LR	LR	21 18 12.9	
	comp=Z,7µm,19.1s,baz=300,slow=38						
R32A	Long Quarter,	42.85	88	P	P	20 59 16.0	-0.3
R32A	Long Quarter,	42.85	88	P	P	20 59 17.2	+0.9
	baz=314,SNR=9.7						
R32A				S	S	21 05 39.3	+1.4
	baz=314						
D41A	Chassel	42.86	71	P	P	20 59 16.4	+0.2
D41A				IAmb	IAmb	20 59 17.6	
	comp=Z,137nm,1.1s						
D41A	Chassel	42.86	71	P	P	20 59 17.1	+0.8
	baz=308,SNR=8.2						
N35A	Tabor	42.94	83	P	P	20 59 16.6	-0.4
N35A	Tabor	42.94	83	P	P	20 59 17.9	+0.9
	baz=312,SNR=26						
NUUG	Nuugaatsiaq	42.98	27	⇓*i*P	P	20 59 17.5	+0.6
NUUG				IAmb	IAmb	20 59 18.6	
	comp=Z,300nm,1.5s						
G40A	Rib Lake	43.10	74	P	P	20 59 18.2	0.0
G40A				IAmb	IAmb	20 59 19.1	
	comp=Z,95nm,0.8s						
G40A	Rib Lake	43.10	74	P	P	20 59 18.6	+0.4
	baz=309,SNR=52						
COWI	Conover	43.15	72	P	P	20 59 18.4	-0.2
COWI				IAMs_20	IAMs_20	21 17 21.3	
	comp=Z,3µm,18.0s						
COWI	Conover	43.15	72	P	P	20 59 18.6	0.0
	baz=309						
KIDD	KIDD Seismic O	43.24	101	P	P	20 59 21.2	+1.6
	baz=319,SNR=8.0						
K38A	Parkersburg	43.37	79	P	P	20 59 20.3	0.0
K38A				IAmb	IAmb	20 59 21.1	
	comp=Z,98nm,1.0s						
K38A	Parkersburg	43.37	79	P	P	20 59 20.6	+0.2
	baz=311,SNR=14						
K38A				S	S	21 05 43.7	-1.5
	baz=311						
KSU1	Kansas State U	43.58	85	P	P	20 59 21.8	-0.3
KSU1				IAmb	IAmb	20 59 23.7	
	comp=Z,115nm,1.2s						
KSU1	Kansas State U	43.58	85	IAMs_20	IAMs_20	21 16 25.9	
	comp=Z,4µm,20.0s						
KSU1	Kansas State U	43.58	85	P	P	20 59 22.2	+0.1
	baz=313,SNR=7.5						
KSU1				S	S	21 05 46.5	-1.9
	baz=313						
KSU1	Kansas State U	43.58	85	P	P	20 59 22.2	+0.1
	baz=313,SNR=7.5						
KSU1				S	S	21 05 47.3	-1.1
	baz=313						
SCIA	State Center	43.60	80	P	P	20 59 22.8	+0.5
	baz=311,SNR=7.2						
SCIA	State Center	43.60	80	P	P	20 59 22.4	+0.1
	baz=311,SNR=7.2						
SCIA				S	S	21 05 47.4	-1.3
	baz=311						
AMTX	Amarillo	43.66	94	P	P	20 59 22.5	-0.5
AMTX				IAMs_20	IAMs_20	21 16 40.6	
	comp=Z,4µm,19.0s						
AMTX	Amarillo	43.66	94	P	P	20 59 24.0	+1.0
	baz=316,SNR=18						
AMTX	Amarillo	43.66	94	P	P	20 59 23.6	+0.6
	baz=316						
AMTX				S	S	21 05 51.9	+1.9
	baz=316						
MSTX	Muleshoe	43.71	96	P	P	20 59 23.2	-0.1
MSTX	Muleshoe	43.71	96	P	P	20 59 24.2	+0.9
	baz=317,SNR=10						
MSTX	Muleshoe	43.71	96	P	P	20 59 24.0	+0.6
	baz=317,SNR=10						
I40A	Norwalk	43.75	76	P	P	20 59 23.5	0.0
I40A	Norwalk	43.75	76	P	P	20 59 23.9	+0.4
	baz=310,SNR=71						
I40A				S	S	21 05 49.3	-1.5
	baz=310						
F42A	Maple Grove Fa	43.91	72	P	P	20 59 25.1	+0.4
F42A	Maple Grove Fa	43.91	72	P	P	20 59 25.7	+1.0
	baz=309,SNR=16						
MNTX	Cornudas Mount	43.92	100	P	P	20 59 25.1	+0.1
MNTX	Cornudas Mount	43.92	100	P	P	20 59 26.6	+1.6
	baz=319,SNR=65						
MNTX	Cornudas Mount	43.92	100	P	P	20 59 26.4	+1.4
	baz=319,SNR=65						
MNTX				S	S	21 05 59.3	+5.7
	baz=319						
E43A	Lone Tree Farm	44.13	71	P	P	20 59 26.4	-0.1
E43A				IAmb	IAmb	20 59 27.6	
	comp=Z,156nm,0.8s						
E43A	Lone Tree Farm	44.13	71	P	P	20 59 27.1	+0.7
	baz=309,SNR=48						
USA0B	Ussuriysk Arra	44.33	286	*i* P	P	20 59 29.2	+1.2
USRK	Ussuriysk Ar.	44.33	286	P	P	20 59 27.8	-0.3
	comp=Z,4.7nm,0.5s,baz=52,slow=8.7,SNR=16						
USRK				LR	LR	21 19 26.6	
	comp=Z,3µm,19.9s,baz=47,slow=38						
	comp=Z,4.7nm,0.5s						
USRK	Ussuriysk Ar.	44.33	286	P	P	20 59 28.1	+0.1
USRK	Ussuriysk Ar.	44.33	286	P	P	20 59 28.1	+0.1
N38A	Joes South For	44.34	81	P	P	20 59 27.9	-0.3
N38A				IAmb	IAmb	20 59 29.5	
	comp=Z,152nm,0.9s						
N38A	Joes South For	44.34	81	P	P	20 59 28.4	+0.3
	baz=312,SNR=19						
N38A				S	S	21 05 58.6	-0.8
	baz=312						
JFWS	Jewell Farm	44.59	77	P	P	20 59 29.1	-1.1
JFWS	Jewell Farm	44.59	77	IAMs_20	IAMs_20	21 17 25.6	
	comp=Z,3µm,20.0s						
JFWS	Jewell Farm	44.59	77	P	P	20 59 29.1	-1.1
JFWS				pmax	pmax		
	comp=Z,128nm,0.6s						
JFWS	Jewell Farm	44.59	77	P	P	20 59 29.9	-0.4
	baz=311,SNR=52						
JFWS	Jewell Farm	44.59	77	P	P	20 59 29.8	-0.4
	baz=311,SNR=52						
JFWS				S	S	21 06 01.6	-1.5
	baz=311						
L40A	Anamosa	44.62	78	P	P	20 59 29.3	-1.1
L40A				IAmb	IAmb	20 59 30.6	
	comp=Z,98nm,0.9s						
L40A	Anamosa	44.62	78	P	P	20 59 30.1	-0.3
	baz=312,SNR=26						
I42A	Draeger Farm,	44.69	75	P	P	20 59 30.7	-0.2
I42A				IAmb	IAmb	20 59 31.8	
	comp=Z,137nm,0.7s						
I42A	Draeger Farm,	44.69	75	P	P	20 59 31.3	+0.4
	baz=311,SNR=35						
I42A				S	S	21 06 02.4	-2.1
	baz=311						
BOD	Bodaibo	44.87	311	*e*P	P	20 59 31.7	-0.5
BOD				pmax	pmax		
	comp=Z,82nm,1.1s						
H43A	Windswept, Lux	44.94	73	P	P	20 59 32.7	-0.2
H43A	Windswept, Lux	44.94	73	P	P	20 59 33.3	+0.4
	baz=310,SNR=28						
H43A				S	S	21 06 06.7	-1.3
	baz=310						
JSD	Sado	44.95	274	P	P	20 59 32.8	-0.3
JSD				IAmb	IAmb	20 59 38.2	
	comp=Z,98nm,0.8s						
P38A	Dawn	44.96	82	P	P	20 59 32.9	-0.3
P38A				IAmb	IAmb	21 00 02.0	
	comp=Z,124nm,0.8s						
P38A	Dawn	44.96	82	P	P	20 59 33.3	+0.1
	baz=313,SNR=23						
P38A				S	S	21 06 06.3	-2.2
	baz=313						
ILULI	Ilulissat	44.98	29	*i* P	P	20 59 33.2	+0.3
ILULI				IAmb	IAmb	20 59 33.6	
	comp=Z,61nm,1.1s						
VLA	Vladivostok	45.09	284	*i* P	P	20 59 35.3	+1.2
VLA				pmax	pmax		
	comp=Z,27nm,0.6s						
JYT	Yasato	45.13	271	P	P	20 59 34.9	+0.4
JYT				IAmb	IAmb	20 59 54.6	
	comp=Z,158nm,1.1s						
T35A	Sooner Cattle	45.15	87		P	20 59 34.5	-0.2
T35A				IAmb	IAmb	20 59 53.2	
	comp=Z,86nm,1.1s						
T35B	Sooner Cattle	45.15	87	P	P	20 59 34.9	+0.2
	baz=315,SNR=13						
T35B				S	S	21 06 10.4	-1.0
	baz=315						
MDJ	Mudanjiang	45.36	288	P	P	20 59 35.6	-0.6
MDJ	Mudanjiang	45.36	288	P	P	20 59 36.0	-0.3
MDJ				pP	pP	20 59 46.5	-1.0
MDJ				sP	sP	20 59 52.5	+0.4
MDJ				ScP	ScP	21 05 05.0	+0.7
MDJ				PcS	PcS	21 05 07.5	-1.5
MDJ				S	S	21 06 16.0	+1.8
MDJ				sS	sS	21 06 33.3	+0.5
MDJ				ScS	ScS	21 09 29.8	+0.7
MDJ				pmax	pmax		
	comp=Z,13nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,290nm,7.1s						
MDJ				LR	LR		
	comp=Z,3µm,21.8s						
MDJ				LR	LR		
	comp=Z,3µm,24.3s						
MDJ				LR	LR		
	comp=Z,5µm,24.3s						
WMOK	Wichita Mounta	45.41	91	P	P	20 59 36.8	-0.1
WMOK				IAmb	IAmb	20 59 58.2	
	comp=Z,111nm,1.1s						
WMOK	Wichita Mounta	45.41	91	P	P	20 59 36.8	-0.1
WMOK				pmax	pmax		
	comp=Z,111nm,1.2s						
WMOK				MLR	MLR		
	comp=Z,2µm,21.0s						
WMOK	Wichita Mounta	45.41	91	P	P	20 59 37.3	+0.5
	baz=316,SNR=60						
WMOK	Wichita Mounta	45.41	91	P	P	20 59 37.5	+0.7
	baz=316,SNR=60						
WMOK				S	S	21 06 16.2	+0.9
	baz=316						
L42A	Oliver, Polo	45.52	77	P	P	20 59 36.3	-1.2
L42A				IAmb	IAmb	20 59 38.1	
	comp=Z,233nm,1.5s						
L42A	Oliver, Polo	45.52	77	P	P	20 59 37.0	-0.6
	baz=312,SNR=16						
DAG	Danmarks Havn	45.56	12	⇓*i*P	P	20 59 37.6	+0.2
DAG				IAmb	IAmb	20 59 40.2	
	comp=Z,95nm,0.9s						
E46A	Sault Ste Mari	45.58	69	P	P	20 59 38.0	0.0
E46A	Sault Ste Mari	45.58	69	P	P	20 59 38.4	+0.5
	baz=310,SNR=51						
OKCFA	Oklahoma City	45.68	90		P	20 59 38.5	-0.4
OKCFA				IAmb	IAmb	21 00 00.1	
	comp=Z,67nm,0.7s						
KBS	Kingsbay	45.69	3	P	P	20 59 39.1	+0.7
KBS				IAmb	IAmb	20 59 41.3	
	comp=Z,233nm,1.6s						
KBS	Kingsbay	45.69	3	IAMs_20	IAMs_20	21 18 20.3	
	comp=Z,3µm,19.0s						
KBS	Kingsbay	45.69	3	*ce*P	P	20 59 39.4	+1.0
KBS				pmax	pmax		
	comp=Z,112nm,1.3s						
KBS				MLR	MLR		
	comp=Z,2µm,19.0s						
KBS	Kingsbay	45.69	3	*i* P	P	20 59 39.9	+1.4
KBS	Kingsbay	45.69	3	⇓*i*P	P	20 59 39.8	+1.4
KBS	Kingsbay	45.69	3	P	P	20 59 39.9	+1.4
KBS				sP	sP	20 59 53.1	-1.2
KBS				ScP	ScP	21 05 06.4	+1.3
G45A	Suttons Bay	45.71	71	P	P	20 59 38.5	-0.5
G45A	Suttons Bay	45.71	71	P	P	20 59 39.3	+0.2
	baz=310,SNR=6.9						
G45A				P	P	20 59 39.3	+0.2
	baz=310,SNR=6.9						
SUMG	Summit	45.71	21	P	P	20 59 39.8	+0.7
SUMG				IAmb	IAmb	20 59 40.9	
	comp=Z,144nm,0.9s						
SUMG	Summit	45.71	21	P	P	20 59 39.8	+0.7
SUMG				pmax	pmax		
	comp=Z,144nm,0.9s						
SUMG				MLR	MLR		
	comp=Z,2µm,22.0s						
SUMG	Summit	45.71	21	⇓*i*P	P	20 59 40.2	+1.1
SUMG				IAmb	IAmb	20 59 40.7	
	comp=Z,176nm,1.0s						
N41A	Harden Midland	45.73	79	P	P	20 59 38.6	-0.6
N41A				IAmb	IAmb	20 59 39.5	
	comp=Z,126nm,0.9s						
N41A	Harden Midland	45.73	79	P	P	20 59 39.0	-0.2
	baz=313,SNR=13						
K43A	Burlington	45.79	75	P	P	20 59 39.0	-0.6
K43A	Burlington	45.79	75	P	P	20 59 39.4	-0.3
	baz=312,SNR=18						
K43A				S	S	21 06 18.3	-2.0
	baz=312						
BNX	BinXian	45.81	290	⇓P	P	20 59 40.0	+0.2
BNX				pP	pP	20 59 50.5	-0.5
BNX				sP	sP	20 59 54.8	-0.9
BNX				PP	PP	21 01 26.0	-1.3
BNX				S	S	21 06 18.0	-2.6
BNX				sS	sS	21 06 32.5	-6.7
BNX				pmax	pmax		
	comp=Z,30nm,0.7s						
BNX				LR	LR		
	comp=Z,3µm,16.2s						
BNX				LR	LR		
	comp=Z,3µm,14.3s						
BNX				LR	LR		
	comp=Z,8µm,26.0s						
FNO	Franklin	45.83	90		P	20 59 39.5	-0.5
FNO				IAmb	IAmb	20 59 41.2	
	comp=Z,80nm,0.9s						
MSHR	Mys Shultsa	45.85	284	*ce*P	P	20 59 40.6	+0.5
MSHR				pmax	pmax		
	comp=Z,96nm,1.7s						
P40A	Paris	45.86	81	P	P	20 59 39.6	-0.7
P40A				IAmb	IAmb	20 59 40.6	
	comp=Z,106nm,0.7s						

P40A	**Paris**	**45.86**	**81**	P	**P**	**20 59 40.1**	**-0.1**
	baz=313,SNR=68						
P40A				S	**S**	**21 06 19.1**	**-2.3**
	baz=313						
MAJO	**Matsushiro**	**46.03**	**273**	P	**P**	**20 59 41.8**	**+0.1**
MAJO				IAmb	IAmb	20 59 45.7	
	comp=Z,159nm,1.2s						
MAJO	**Matsushiro**	**46.03**	**273**	P	**P**	**20 59 41.8**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,159nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s						
MAJO	**Matsushiro**	**46.03**	**273**	P	**P**	**20 59 43.6**	**+1.9**
MAJO	**Matsushiro**	**46.03**	**273**	P	**P**	**20 59 42.8**	**+1.1**
MJAR	**Matsushiro Arr**	**46.03**	**273**	P	**P**	**20 59 42.4**	**+0.7**
	comp=Z,16nm,0.5s,baz=322,slow=13,SNR=48						
MJAR				LR	LR	21 19 25.2	
	comp=Z,2μm,20.7s,baz=56,slow=37						
	comp=Z,16nm,0.5s						
MJAR	**Matsushiro Arr**	**46.03**	**273**	P	**P**	**20 59 42.0**	**+0.4**
MJB9	**Matsu-Tunnel**	**46.03**	**273**	P	**P**	**20 59 41.9**	**+0.2**
MJB9				IAmb	IAmb	20 59 45.6	
	comp=Z,173nm,1.2s						
X34A	**Smith Ranch, M**	**46.05**	**91**		**P**	**20 59 41.4**	**-0.5**
X34A				IAmb	IAmb	20 59 44.3	
	comp=Z,98nm,1.3s						
I45A	**Fountain**	**46.05**	**73**	P	**P**	**20 59 40.8**	**-1.0**
I45A	**Fountain**	**46.05**	**73**	P	**P**	**20 59 41.9**	**+0.1**
	baz=311,SNR=5.2						
I45A				P	**P**	**20 59 41.9**	**+0.1**
	baz=311,SNR=5.2						
TUL1	**Leonard**	**46.27**	**88**		**P**	**20 59 43.1**	**-0.5**
TUL1				IAmb	IAmb	20 59 44.4	
	comp=Z,81nm,0.9s						
TUL1	**Leonard**	**46.27**	**88**	P	**P**	**20 59 43.5**	**-0.1**
	baz=316,SNR=13						
TUL1				S	**S**	**21 06 26.8**	**-0.6**
	baz=316						
TUL1	**Leonard**	**46.27**	**88**	P	**P**	**20 59 43.6**	**-0.1**
	baz=316,SNR=13						
TUL1				S	**S**	**21 06 27.7**	**+0.2**
	baz=316						
L44A	**Lake County Fo**	**46.37**	**76**	P	**P**	**20 59 43.7**	**-0.5**
L44A				IAMs_20	IAMs_20	21 18 30.6	
	comp=Z,2μm,21.0s						
L44A	**Lake County Fo**	**46.37**	**76**	P	**P**	**20 59 44.0**	**-0.3**
	baz=312,SNR=5.9						
L44A	**Lake County Fo**	**46.37**	**76**	P	**P**	**20 59 43.8**	**-0.5**
	baz=312,SNR=5.9						
L44A				S	**S**	**21 06 26.3**	**-2.4**
	baz=312						
S39A	**Bolivar**	**46.42**	**84**	P	**P**	**20 59 43.0**	**-1.7**
S39A	**Bolivar**	**46.42**	**84**	P	**P**	**20 59 43.3**	**-1.4**
	baz=314,SNR=19						
ABTX	**Abilene, Hawle**	**46.47**	**94**	P	**P**	**20 59 44.3**	**-0.9**
ABTX	**Abilene, Hawle**	**46.47**	**94**	P	**P**	**20 59 45.5**	**+0.3**
	baz=318,SNR=17						
ABTX	**Abilene, Hawle**	**46.47**	**94**	P	**P**	**20 59 45.8**	**+0.6**
	baz=318,SNR=17						
ABTX				S	**S**	**21 06 30.8**	**+0.4**
	baz=318						
SPA0	**Spitsbergen Ar**	**46.52**	**1**	*e*P	**P**	**20 59 45.2**	**+0.2**
SPITS	**Spitsbergen Ar**	**46.52**	**1**	LR	LR	21 20 08.6	
	comp=Z,2μm,18.5s,baz=329,slow=37						
SPITS	**Spitsbergen Ar**	**46.52**	**1**	P	**P**	**20 59 45.3**	**+0.2**
SPITS				pmax	pmax		
	comp=Z,127nm,1.3s						
SPB2	**Spitsbergen Ar**	**46.53**	**1**	P	**P**	**20 59 45.1**	**0.0**
SPB2				IAmb	IAmb	21 00 02.1	
	comp=Z,75nm,1.1s						
NRIK	**Noril'sk**	**46.57**	**333**	P	**P**	**20 59 45.9**	**+0.4**
	comp=Z,30nm,0.6s,baz=52,slow=7.3,SNR=68						
NRIK				LR	LR	21 22 31.2	
	comp=Z,3μm,19.3s,baz=56,slow=40						
	comp=Z,30nm,0.6s						
NRIK	**Noril'sk**	**46.57**	**333**	P	**P**	**20 59 46.0**	**+0.5**
NRIK	**Noril'sk**	**46.57**	**333**	P	**P**	**20 59 46.0**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,56nm,1.0s						
SFJD	**Kangerlussuaq**	**46.58**	**31**	LR	LR	21 22 01.4	
	comp=Z,2μm,18.6s,baz=313,slow=40						
SFJD	**Kangerlussuaq**	**46.58**	**31**	P	**P**	**20 59 45.9**	**+0.4**
SFJD	**Kangerlussuaq**	**46.58**	**31**	P	**P**	**20 59 45.9**	**+0.4**
SFJD				pmax	pmax		
	comp=Z,535nm,1.8s						
SFJD				MLR	MLR		
	comp=Z,2μm,19.0s						
SFJD	**Kangerlussuaq**	**46.58**	**31**	⇓*i*P	**P**	**20 59 46.6**	**+1.1**
SFJD				IAmb	IAmb	20 59 47.5	
	comp=Z,116nm,1.0s						
SFJD	**Kangerlussuaq**	**46.58**	**31**	P	**P**	**20 59 46.6**	**+1.1**
SFJD				pP	**pP**	**20 59 56.0**	**-0.7**
SFJD				sP	**sP**	**21 00 00.3**	**-1.1**
R40A	**Maddies Statio**	**46.59**	**83**	P	**P**	**20 59 44.8**	**-1.3**
R40A				IAmb	IAmb	21 00 12.6	
	comp=Z,45nm,0.6s						
R40A	**Maddies Statio**	**46.59**	**83**	P	**P**	**20 59 45.1**	**-0.9**
	baz=314,SNR=33						
TX31	**Lajitas Ar. Si**	**46.67**	**101**	P	**P**	**20 59 47.3**	**+0.4**
TX31	**Lajitas Ar. Si**	**46.67**	**101**	P	**P**	**20 59 47.8**	**+0.9**
	baz=320						
TX32	**Lajitas Array**	**46.67**	**101**	P	**P**	**20 59 46.7**	**-0.2**
TX32				IAmb	IAmb	21 00 05.1	
	comp=Z,288nm,1.9s						
TXAR	**Lajitas Array**	**46.67**	**101**	P	**P**	**20 59 47.9**	**+1.0**
	comp=Z,21nm,0.7s,baz=311,slow=5.6,SNR=223						
TXAR				PcP	**PcP**	**21 01 20.6**	**+0.6**
	comp=Z,9.4nm,0.6s,baz=283,slow=1.7,SNR=4.6						
TXAR				LR	LR	21 17 50.8	
	comp=Z,6μm,20.8s,baz=314,slow=34						
	comp=Z,21nm,0.7s						
HDIL	**Hopedale**	**46.70**	**78**	P	**P**	**20 59 46.6**	**-0.2**
	baz=313,SNR=63						
HDIL	**Hopedale**	**46.70**	**78**	P	**P**	**20 59 46.5**	**-0.4**
	baz=313,SNR=63						
HDIL				S	**S**	**21 06 29.7**	**-3.8**
	baz=313						
M44A	**Midewin, Midew**	**46.83**	**77**	P	**P**	**20 59 47.1**	**-0.7**
M44A	**Midewin, Midew**	**46.83**	**77**	P	**P**	**20 59 47.8**	**-0.1**
	baz=313,SNR=10.0						
HHAR	**Hobbs**	**47.06**	**86**	P	**P**	**20 59 48.6**	**-1.1**
HHAR	**Hobbs**	**47.06**	**86**	P	**P**	**20 59 48.8**	**-0.9**
	baz=315						
LPIG	**La Paz**	**47.18**	**112**	LR	LR	21 17 21.9	
	comp=Z,2μm,18.8s,baz=328,slow=33						
JGF	**Kuroka**	**47.19**	**273**	P	**P**	**20 59 50.8**	**0.0**
JGF				IAmb	IAmb	21 00 14.3	
	comp=Z,136nm,1.4s						
P43A	**Skaggs, Pawnee**	**47.20**	**79**	P	**P**	**20 59 50.1**	**-0.7**
P43A	**Skaggs, Pawnee**	**47.20**	**79**	P	**P**	**20 59 50.8**	**0.0**
	baz=314,SNR=32						
P43A				S	**S**	**21 06 38.4**	**-2.3**
	baz=314						
Z35A	**Perchaven, San**	**47.31**	**91**	P	**P**	**20 59 50.9**	**-0.8**
Z35A				IAmb	IAmb	21 00 09.0	
	comp=Z,102nm,1.0s						
Z35A	**Perchaven, San**	**47.31**	**91**	P	**P**	**20 59 52.0**	**+0.3**
	baz=317,SNR=6.0						
CCM	**Cathedral Cave**	**47.34**	**82**	P	**P**	**20 59 50.1**	**-1.7**
CCM				IAmb	IAmb	20 59 52.4	
	comp=Z,149nm,1.6s						
CCM	**Cathedral Cave**	**47.34**	**82**	P	**P**	**20 59 50.1**	**-1.7**
CCM				pmax	pmax		
	comp=Z,149nm,1.6s						
CCM				MLR	MLR		
	comp=Z,5μm,20.0s						
CCM	**Cathedral Cave**	**47.34**	**82**	P	**P**	**20 59 50.9**	**-1.0**
	baz=314,SNR=26						
CCM				S	**S**	**21 06 38.8**	**-3.8**
	baz=314						
CCM	**Cathedral Cave**	**47.34**	**82**	P	**P**	**20 59 50.7**	**-1.1**
	baz=314						
CCM				S	**S**	**21 06 38.8**	**-3.8**
	baz=314						
CCM	**Cathedral Cave**	**47.34**	**82**	P	**P**	**20 59 50.8**	**-1.0**
J47A	**Sunmer**	**47.35**	**73**	P	**P**	**20 59 51.3**	**-0.6**
J47A				IAmb	IAmb	20 59 52.6	
	comp=Z,89nm,0.9s						
J47A	**Sunmer**	**47.35**	**73**	P	**P**	**20 59 51.9**	**0.0**
	baz=312						
J47A				P	**P**	**20 59 51.9**	**0.0**
	baz=312						
L46A	**Eue Claire**	**47.37**	**75**	P	**P**	**20 59 51.2**	**-0.9**
L46A	**Eue Claire**	**47.37**	**75**	P	**P**	**20 59 52.0**	**0.0**
	baz=313,SNR=12						
L46A				P	**P**	**20 59 52.0**	**0.0**
	baz=313,SNR=12						
MGMO	**Mountain Grove**	**47.39**	**84**	P	**P**	**20 59 50.4**	**-1.9**
MGMO				IAmb	IAmb	20 59 52.4	
	comp=Z,73nm,1.2s						
O44A	**Mansfield**	**47.44**	**78**	P	**P**	**20 59 52.0**	**-0.6**
O44A	**Mansfield**	**47.44**	**78**	P	**P**	**20 59 51.9**	**-0.6**
	baz=313,SNR=17						
X37A	**Clayton**	**47.46**	**89**		**P**	**20 59 51.9**	**-0.9**
X37A				IAmb	IAmb	20 59 54.1	
	comp=Z,87nm,0.9s						
X37A	**Clayton**	**47.46**	**89**	P	**P**	**20 59 53.5**	**+0.6**
	baz=316,SNR=35						
DBG	**Daneborg**	**47.48**	**14**	⇓*i*P	**P**	**20 59 52.8**	**+0.2**
DBG				IAmb	IAmb	21 00 03.8	
	comp=Z,47nm,1.0s						
HIA	**Hailar**	**47.50**	**298**	P	**P**	**20 59 52.4**	**-0.6**
HIA	**Hailar**	**47.50**	**298**	IAMs_20	IAMs_20	21 23 05.7	
	comp=Z,2μm,18.0s						
HIA	**Hailar**	**47.50**	**298**	P	**P**	**20 59 52.4**	**-0.6**
HIA				pmax	pmax		
	comp=Z,64nm,1.6s						
HIA				MLR	MLR		
	comp=Z,2μm,18.0s						
SLM	**Saint Louis**	**47.50**	**81**	P	**P**	**20 59 52.3**	**-0.8**
SLM				IAmb	IAmb	20 59 54.2	
	comp=Z,163nm,1.2s						
SLM	**Saint Louis**	**47.50**	**81**	P	**P**	**20 59 52.3**	**-0.8**
SLM				pmax	pmax		
	comp=Z,163nm,1.2s						
SLM	**Saint Louis**	**47.50**	**81**	P	**P**	**20 59 52.7**	**-0.4**
	baz=314						
INU	**Inuyama**	**47.56**	**273**	P	**P**	**20 59 53.0**	**-0.6**
INU	**Inuyama**	**47.56**	**273**	P	**P**	**20 59 56.3**	**+2.7**
	comp=Z,44nm,1.2s						
JHJ2	**Mitsune**	**47.59**	**268**	P	**P**	**20 59 52.9**	**-1.0**
JHJ2	**Mitsune**	**47.59**	**268**	P	**P**	**20 59 57.5**	**+3.6**
JHJ	**Hachijo jima 2**	**47.60**	**269**	LR	LR	21 18 21.2	
	comp=Z,1μm,21.6s,baz=76,slow=34						
U40A	**Yellville**	**47.62**	**85**	P	**P**	**20 59 52.8**	**-1.4**
U40A				IAmb	IAmb	20 59 54.5	
	comp=Z,87nm,1.3s						
U40A				IAMs_20	IAMs_20	21 18 51.9	
	comp=Z,3μm,20.0s						
U40A	**Yellville**	**47.62**	**85**	P	**P**	**20 59 53.1**	**-1.0**
	baz=315,SNR=29						
U40A				P	**P**	**20 59 53.1**	**-1.0**
	baz=315,SNR=29						
U40A	**Yellville**	**47.62**	**85**	P	**P**	**20 59 53.0**	**-1.1**
	baz=315,SNR=29						
U40A				S	**S**	**21 06 43.3**	**-3.4**
	baz=315						
HSPB	**Hornsund (broa**	**47.69**	**2**	⇓*i*P	**P**	**20 59 54.5**	**+0.5**
SLBS	**Sierra La Lagu**	**47.71**	**111**	P	**P**	**20 59 53.3**	**-1.7**
SLBS				IAmb	IAmb	20 59 57.0	
	comp=Z,90nm,1.4s						
SLBS	**Sierra La Lagu**	**47.71**	**111**	P	**P**	**20 59 56.4**	**+1.4**
FVM	**French Village**	**47.85**	**82**	P	**P**	**20 59 54.8**	**-1.0**
FVM	**French Village**	**47.85**	**82**	P	**P**	**20 59 54.8**	**-1.0**
FVM				pmax	pmax		
	comp=Z,279nm,1.5s						
FVM	**French Village**	**47.85**	**82**	P	**P**	**20 59 55.4**	**-0.4**
	baz=315,SNR=36						
FVM				S	**S**	**21 06 43.3**	**-6.6**
	baz=315						
W39A	**Magazine**	**47.93**	**87**	P	**P**	**20 59 56.1**	**-0.4**
W39A				IAmb	IAmb	21 00 21.5	
	comp=Z,97nm,0.9s						
W39A				IAMs_20	IAMs_20	21 18 47.9	
	comp=Z,2μm,20.0s						
W39A	**Magazine**	**47.93**	**87**	P	**P**	**20 59 56.3**	**-0.2**
	baz=316,SNR=48						
W39A				S	**S**	**21 06 49.7**	**-1.3**
	baz=316						
W39A	**Magazine**	**47.93**	**87**	P	**P**	**20 59 56.3**	**-0.2**
	baz=316,SNR=48						
W39A				S	**S**	**21 06 49.4**	**-1.6**
	baz=316						
I49A	**Point Hope**	**47.96**	**71**	P	**P**	**20 59 56.6**	**0.0**
I49A	**Point Hope**	**47.96**	**71**	P	**P**	**20 59 56.6**	**0.0**
	baz=312,SNR=5.5						
I49A				P	**P**	**20 59 56.6**	**0.0**
	baz=312,SNR=5.5						
JCT	**Junction City**	**47.98**	**96**	P	**P**	**20 59 56.3**	**-0.7**
JCT				IAMs_20	IAMs_20	21 19 13.8	
	comp=Z,3μm,20.0s						
JCT	**Junction City**	**47.98**	**96**	P	**P**	**20 59 56.3**	**-0.7**
JCT				pmax	pmax		
	comp=Z,122nm,0.8s						
JCT				MLR	MLR		
	comp=Z,3μm,20.0s						
JCT	**Junction City**	**47.98**	**96**	P	**P**	**20 59 57.4**	**+0.4**
	baz=319,SNR=30						
JCT	**Junction City**	**47.98**	**96**	P	**P**	**20 59 57.3**	**+0.4**
	baz=319,SNR=30						
JCT				S	**S**	**21 06 52.3**	**+0.3**
	baz=319						
Q44A	**Meyer Farm, Va**	**47.99**	**80**	P	**P**	**20 59 56.0**	**-1.0**
Q44A				IAmb	IAmb	20 59 57.3	
	comp=Z,102nm,0.9s						
Q44A	**Meyer Farm, Va**	**47.99**	**80**	P	**P**	**20 59 56.6**	**-0.3**
	baz=314,SNR=20						
Q44A				S	**S**	**21 06 50.3**	**-1.6**
	baz=314						
VLDQ	**Val d'Or**	**48.00**	**63**	P	**P**	**20 59 54.7**	**-2.1**
ICESG	**Greenland Ices**	**48.02**	**25**	⇓*i*P	**P**	**20 59 57.8**	**+0.6**
ICESG				IAmb	IAmb	20 59 58.7	
	comp=Z,634nm,1.4s						
SFIN	**Lafayette**	**48.04**	**77**	P	**P**	**20 59 57.0**	**-0.3**
SFIN	**Lafayette**	**48.04**	**77**	P	**P**	**20 59 57.5**	**+0.2**
	baz=314,SNR=41						
SFIN				S	**S**	**21 06 50.8**	**-1.8**
	baz=314						
SFIN	**Lafayette**	**48.04**	**77**	P	**P**	**20 59 57.5**	**+0.2**
	baz=314,SNR=41						
SFIN				S	**S**	**21 06 50.5**	**-2.1**
	baz=314						
CN2	**Changchun**	**48.14**	**289**	*e*P	**P**	**20 59 58.3**	**+0.3**
CN2				pP	pP	21 00 11.0	+1.7
CN2				sP	sP	21 00 16.0	+2.1
CN2				PP	**PP**	**21 01 49.5**	**-0.6**
CN2				S	**S**	**21 06 51.5**	**-2.3**
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
CN2				pmax	pmax		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,21.0s						
CN2				LR	LR		
	comp=Z,3μm,21.0s						
CN2				LR	LR		
	comp=Z,3μm,20.0s						
NUUK	**Nuuk**	**48.15**	**34**	⇓*i*P	**P**	**20 59 58.9**	**+1.1**
NUUK				IAmb	IAmb	20 59 59.6	
	comp=Z,113nm,0.9s						
WHTX	**Lake Whitney,**	**48.18**	**93**	P	**P**	**20 59 57.8**	**-0.6**
WHTX	**Lake Whitney,**	**48.18**	**93**	P	**P**	**20 59 59.2**	**+0.8**
	baz=318,SNR=10						
WHTX				S	**S**	**21 06 55.6**	**+0.9**
	baz=318						
WHTX	**Lake Whitney,**	**48.18**	**93**	P	**P**	**20 59 59.0**	**+0.6**
	baz=318,SNR=10						
WHTX				S	**S**	**21 06 55.6**	**+0.9**
	baz=318						
DY2G	**Dye2**	**48.20**	**30**	⇓*i*P	**P**	**20 59 58.7**	**+0.3**
DY2G				IAmb	IAmb	21 00 00.0	
	comp=Z,671nm,1.9s						
HOPEN	**Hopen**	**48.22**	**359**	*e*P	**P**	**20 59 59.3**	**+1.2**
FCAR	**Ozark Folk Cen**	**48.37**	**85**	P	**P**	**20 59 58.1**	**-1.7**
FCAR				IAmb	IAmb	20 59 60.0	
	comp=Z,73nm,1.0s						
L48A	**N Adams**	**48.44**	**74**	P	**P**	**20 59 59.3**	**-1.0**
L48A	**N Adams**	**48.44**	**74**	P	**P**	**21 00 00.2**	**-0.1**
	baz=313,SNR=14						
L48A				P	**P**	**21 00 00.2**	**-0.1**
	baz=313,SNR=14						
N47A	**Urbana**	**48.47**	**75**	P	**P**	**20 59 59.8**	**-0.8**
N47A	**Urbana**	**48.47**	**75**	P	**P**	**21 00 00.1**	**-0.5**
	baz=313,SNR=54						
N47A				P	**P**	**21 00 00.1**	**-0.5**
	baz=313,SNR=54						
P46A	**Rosedale**	**48.51**	**78**	P	**P**	**21 00 00.6**	**-0.3**
P46A	**Rosedale**	**48.51**	**78**	P	**P**	**21 00 01.0**	**+0.1**
	baz=314,SNR=27						
MIAR	**Mount Ida**	**48.51**	**87**	P	**P**	**21 00 00.3**	**-0.7**
MIAR				IAmb	IAmb	21 00 02.4	
	comp=Z,151nm,1.2s						
MIAR	**Mount Ida**	**48.51**	**87**	P	**P**	**21 00 00.3**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,151nm,1.3s						
MIAR				MLR	MLR		
	comp=Z,2μm,21.0s						
MIAR	**Mount Ida**	**48.51**	**87**	P	**P**	**21 00 01.0**	**0.0**
	baz=316,SNR=55						
MIAR	**Mount Ida**	**48.51**	**87**	P	**P**	**21 00 01.1**	**+0.2**
	baz=316,SNR=55						
MIAR				S	**S**	**21 06 58.0**	**-1.3**
	baz=316						
AAM	**Ann Arbor**	**48.62**	**73**	P	**P**	**21 00 01.1**	**-0.6**
AAM				IAmb	IAmb	21 00 02.2	
	comp=Z,41nm,0.8s						
AAM				IAMs_20	IAMs_20	21 21 31.0	
	comp=Z,3μm,18.0s						
AAM	**Ann Arbor**	**48.62**	**73**	P	**P**	**21 00 01.1**	**-0.6**
AAM				pmax	pmax		
	comp=Z,41nm,0.8s						
AAM				MLR	MLR		
	comp=Z,3μm,18.0s						
AAM	**Ann Arbor**	**48.62**	**73**	P	**P**	**21 00 01.4**	**-0.3**
	baz=313						
AAM	**Ann Arbor**	**48.62**	**73**	P	**P**	**21 00 01.5**	**-0.1**
	baz=313						
AAM				S	**S**	**21 07 00.0**	**-0.6**
	baz=313						
SCHQ	**Schefferville**	**48.65**	**50**	P	**P**	**21 00 01.7**	**-0.1**
	comp=Z,52nm,0.5s,baz=315,slow=7.9,SNR=30						
SCHQ				LR	LR	21 21 44.6	
	comp=Z,5μm,18.7s,baz=314,slow=38						
	comp=Z,52nm,0.5s						
Z38A	**Mt. Pleasant**	**48.65**	**90**	P	**P**	**21 00 00.9**	**-1.1**
Z38A				IAmb	IAmb	21 00 03.0	
	comp=Z,50nm,0.9s						
Z38A	**Mt. Pleasant**	**48.65**	**90**	P	**P**	**21 00 02.3**	**+0.2**
	baz=317						
PBMO	**Poplar Bluff**	**48.70**	**83**	P	**P**	**21 00 00.9**	**-1.4**
PBMO				IAmb	IAmb	21 00 20.6	
	comp=Z,58nm,0.9s						
PBMO	**Poplar Bluff**	**48.70**	**83**	P	**P**	**21 00 01.3**	**-1.1**
	baz=315,SNR=14						
CIT	**Chita**	**48.70**	**305**	*e*P	**P**	**21 00 03.4**	**+1.1**
CIT				*e*		21 00 13.9	
CIT				*e*		21 01 24.3	
CIT				pmax	pmax		
	comp=Z,123nm,1.3s						
WHAR	**Wooly Hollow**	**48.71**	**86**	P	**P**	**21 00 00.6**	**-1.9**
S44A	**Carbondale**	**48.71**	**81**	P	**P**	**21 00 01.3**	**-1.1**
S44A	**Carbondale**	**48.71**	**81**	P	**P**	**21 00 02.1**	**-0.3**
	baz=315,SNR=39						
S44A				S	**S**	**21 07 01.0**	**-1.0**
	baz=315						
LCAR	**Lake Charles**	**48.79**	**84**	P	**P**	**21 00 01.4**	**-1.7**
LCAR				IAmb	IAmb	21 00 03.0	
	comp=Z,71nm,1.2s						
LCAR	**Lake Charles**	**48.79**	**84**	P	**P**	**21 00 01.4**	**-1.7**
	baz=316,SNR=38						
W41B	**Gary Mavity, V**	**48.81**	**86**	P	**P**	**21 00 01.6**	**-1.6**
W41B	**Gary Mavity, V**	**48.81**	**86**	P	**P**	**21 00 02.4**	**-0.9**
	baz=316,SNR=17						
W41B				S	**S**	**21 07 01.0**	**-2.5**
	baz=316						
W41B	**Gary Mavity, V**	**48.81**	**86**	P	**P**	**21 00 02.3**	**-0.9**
	baz=316,SNR=17						
W41B				S	**S**	**21 07 02.2**	**-1.4**
	baz=316						
K50A	**Casco**	**48.85**	**72**	P	**P**	**21 00 02.8**	**-0.7**
K50A				IAmb	IAmb	21 00 04.0	
	comp=Z,74nm,0.9s						
K50A	**Casco**	**48.85**	**72**	P	**P**	**21 00 03.3**	**-0.2**
	baz=313						
K50A				P	**P**	**21 00 03.3**	**-0.2**
	baz=313						
X40A	**Basin Creek Fa**	**48.98**	**87**	P	**P**	**21 00 03.4**	**-1.1**
X40A				IAMs_20	IAMs_20	21 19 43.8	
	comp=Z,2μm,20.0s						
X40A	**Basin Creek Fa**	**48.98**	**87**	P	**P**	**21 00 03.8**	**-0.8**
	baz=317,SNR=8.9						
X40A				P	**P**	**21 00 03.8**	**-0.8**
	baz=317,SNR=8.9						
X40A				S	**S**	**21 07 03.7**	**-2.2**
	baz=317						
X40A				S	**S**	**21 07 03.7**	**-2.2**
	baz=317						
X40A	**Basin Creek Fa**	**48.98**	**87**	P	**P**	**21 00 03.5**	**-1.1**
	baz=317,SNR=8.9						
X40A				S	**S**	**21 07 04.2**	**-1.7**
	baz=317						
435B	**Jarrell**	**49.01**	**94**	P	**P**	**21 00 04.7**	**-0.1**
435B				IAmb	IAmb	21 00 31.7	
	comp=Z,65nm,0.8s						
435B	**Jarrell**	**49.01**	**94**	P	**P**	**21 00 05.4**	**+0.6**
	baz=319						
435B	**Jarrell**	**49.01**	**94**	P	**P**	**21 00 05.5**	**+0.7**
	baz=319						
435B				S	**S**	**21 07 07.2**	**+0.8**
	baz=319						
UALR	**University of**	**49.05**	**86**	P	**P**	**21 00 04.2**	**-0.9**
PARMO	**Parma**	**49.16**	**82**	P	**P**	**21 00 05.0**	**-0.9**
BLO	**Bloomington**	**49.20**	**78**	P	**P**	**21 00 05.6**	**-0.6**
BLO				IAmb	IAmb	21 00 06.5	
	comp=Z,125nm,1.0s						
BLO	**Bloomington**	**49.20**	**78**	P	**P**	**21 00 05.6**	**-0.6**
BLO				pmax	pmax		
	comp=Z,125nm,1.0s						
O48B	**Farmland**	**49.20**	**76**	P	**P**	**21 00 05.3**	**-0.9**
	baz=314,SNR=68						
O48B	**Farmland**	**49.20**	**76**	P	**P**	**21 00 05.1**	**-1.1**
	baz=314,SNR=68						
O48B				S	**S**	**21 07 04.5**	**-4.3**
	baz=314						
N49A	**Columbus Grove**	**49.27**	**74**	P	**P**	**21 00 06.0**	**-0.8**
N49A	**Columbus Grove**	**49.27**	**74**	P	**P**	**21 00 06.2**	**-0.6**
	baz=314,SNR=38						
N49A				P	**P**	**21 00 06.2**	**-0.6**
	baz=314,SNR=38						
N49A				S	**S**	**21 07 05.0**	**-4.9**
	baz=314						
N49A				S	**S**	**21 07 05.0**	**-4.9**
	baz=314						
SADO	**Sadowa**	**49.35**	**67**	LR	LR	21 20 31.8	
	comp=Z,1μm,19.1s,baz=336,slow=35						
SADO	**Sadowa**	**49.35**	**67**	P	**P**	**21 00 06.6**	**-0.7**
SADO				IAmb	IAmb	21 00 07.6	
	comp=Z,61nm,0.8s						
WLAR	**White Oak Lake**	**49.40**	**88**	P	**P**	**21 00 07.3**	**-0.5**
HBAR	**Harrisburg**	**49.44**	**84**	P	**P**	**21 00 07.3**	**-0.7**
HBAR				IAmb	IAmb	21 00 25.7	
	comp=Z,100nm,0.8s						
PEBM	**Pemiscott Bayo**	**49.49**	**83**	P	**P**	**21 00 07.6**	**-0.8**
T45A	**Paducah**	**49.53**	**81**	P	**P**	**21 00 07.7**	**-1.0**
T45B	**Paducah**	**49.53**	**81**	P	**P**	**21 00 08.7**	**-0.1**
	baz=315,SNR=5.1						
M50A	**Fremont**	**49.56**	**73**	P	**P**	**21 00 07.0**	**-2.0**
M50A	**Fremont**	**49.56**	**73**	P	**P**	**21 00 08.3**	**-0.7**
	baz=314						
M50A				P	**P**	**21 00 08.3**	**-0.7**
	baz=314						
P48A	**Milroy**	**49.61**	**77**	P	**P**	**21 00 07.9**	**-1.4**
P48A	**Milroy**	**49.61**	**77**	P	**P**	**21 00 08.2**	**-1.1**
	baz=314,SNR=23						
P48A				P	**P**	**21 00 08.2**	**-1.1**
	baz=314,SNR=23						
P48A				S	**S**	**21 07 11.5**	**-3.0**
	baz=314						
P48A				S	**S**	**21 07 11.5**	**-3.0**
	baz=314						
HHU	**Hamhung**	**49.65**	**284**	P	**P**	**21 00 10.1**	**+0.4**
O49A	**Covington**	**49.70**	**75**	P	**P**	**21 00 08.6**	**-1.4**
O49A				IAmb	IAmb	21 00 09.7	
	comp=Z,55nm,0.8s						
O49A	**Covington**	**49.70**	**75**	P	**P**	**21 00 09.2**	**-0.8**
	baz=314,SNR=13						
O49A				P	**P**	**21 00 09.2**	**-0.8**
	baz=314,SNR=13						
LNXT	**Lenox**	**49.71**	**83**	P	**P**	**21 00 09.7**	**-0.3**
	baz=316						
833A	**Chaparral WMA,**	**49.85**	**98**	P	**P**	**21 00 10.6**	**-0.6**
833A				IAmb	IAmb	21 00 13.4	
	comp=Z,124nm,1.4s						
833A	**Chaparral WMA,**	**49.85**	**98**	P	**P**	**21 00 11.8**	**+0.5**
	baz=320,SNR=8.0						
833A	**Chaparral WMA,**	**49.85**	**98**	P	**P**	**21 00 11.6**	**+0.4**
	baz=320,SNR=8.0						
833A				S	**S**	**21 07 17.8**	**-0.4**
	baz=320						
Z41A	**Richland Creek**	**49.89**	**88**	P	**P**	**21 00 11.2**	**-0.3**

```
      baz=317
Z41A                                 P         P         21 00 11.2 -0.3
      baz=317
Z41A  Richland Creek     49.89  88   P         P         21 00 11.4 -0.1
      baz=317
Z41A                                 S         S         21 07 18.9 +0.3
      baz=317
NATX  Nacogdoches        49.94  91   P         P         21 00 11.5 -0.4
NATX  Nacogdoches        49.94  91   P         P         21 00 12.6 +0.7
      baz=318,SNR=11
NATX  Nacogdoches        49.94  91   P         P         21 00 12.5 +0.7
      baz=318,SNR=11
NATX                                 S         S         21 07 19.7 +0.4
      baz=318
P49A  Miami Univ. Ec     49.95  76   P         P         21 00 10.2 -1.6
P49A                                 IAMs_20   IAMs_20   21 21 19.2
      comp=Z,3µm,20.0s
P49A  Miami Univ. Ec     49.95  76   P         P         21 00 10.8 -1.0
      baz=314,SNR=34
P49A  Miami Univ. Ec     49.95  76   P         P         21 00 10.8 -1.0
      baz=314,SNR=34
P49A                                 S         S         21 07 16.2 -3.2
      baz=314
CCAR  Cane Creek         49.99  86   P         P         21 00 11.6 -0.7
CCAR  Cane Creek         49.99  86   P         P         21 00 12.8 +0.5
      baz=317,SNR=6.8
JHS   Saijyo             50.02 276   P         P         21 00 12.8 +0.2
JHS                                  IAmb      IAmb      21 00 38.2
      comp=Z,117nm,1.4s
N51A  Ashland            50.27  73   P         P         21 00 13.3 -1.0
N51A                                 IAmb      IAmb      21 00 14.9
      comp=Z,160nm,1.4s
N51A  Ashland            50.27  73   P         P         21 00 13.5 -0.8
      baz=314,SNR=11
N51A                                 P         P         21 00 13.5 -0.8
      baz=314,SNR=11
DELO  Deloro Mine        50.32  67   P         P         21 00 14.2 -0.4
DELO                                 IAmb      IAmb      21 00 16.1
      comp=Z,143nm,1.4s
735A  Kenedy             50.34  96   P         P         21 00 16.2 +1.3
      baz=320
M52A  Chesterland        50.38  72   P         P         21 00 14.4 -0.8
M52A                                 IAmb      IAmb      21 00 15.4
      comp=Z,74nm,0.8s
M52A  Chesterland        50.38  72   P         P         21 00 14.7 -0.5
      baz=314,SNR=8.9
M52A                                 P         P         21 00 14.7 -0.5
      baz=314,SNR=8.9
ACSO  Alum Creek Sta     50.41  74   P         P         21 00 14.4 -1.0
ACSO                                 IAmb      IAmb      21 00 15.5
      comp=Z,64nm,0.8s
ACSO                                 IAMs_20   IAMs_20   21 21 09.5
      comp=Z,3µm,20.0s
ACSO  Alum Creek Sta     50.41  74   P         P         21 00 15.1 -0.3
      baz=314,SNR=14
ACSO  Alum Creek Sta     50.41  74   P         P         21 00 14.5 -1.0
      baz=314,SNR=14
ACSO                                 S         S         21 07 23.0 -2.8
      baz=314
T47A  Sharon Grove       50.41  80   P         P         21 00 15.3 -0.2
T47A  Sharon Grove       50.41  80   P         P         21 00 15.3 -0.2
      baz=316,SNR=26
T47A                                 S         S         21 07 23.1 -2.8
      baz=316
SEHB  SEOHWA             50.42 282   P         P         21 00 16.0 +0.5
SEHB                                 IAmb      IAmb      21 00 19.9
      comp=Z,124nm,1.1s
SCO   Scoresbysund       50.53  17   P         P         21 00 17.2 +1.4
SCO                                  IAmb      IAmb      21 00 18.2
      comp=Z,88nm,1.1s
SCO                                  IAMs_20   IAMs_20   21 23 47.8
      comp=Z,3µm,20.0s
SCO   Scoresbysund       50.53  17   P         P         21 00 17.2 +1.4
SCO                                  pmax      pmax
      comp=Z,88nm,1.1s
SCO                                  MLR       MLR
      comp=Z,3µm,20.0s
SCO   Scoresbysund       50.53  17⇓i P         P         21 00 16.6 +0.8
SCO                                  IAmb      IAmb      21 00 18.6
      comp=Z,88nm,1.1s
W45A  Hickory Valley     50.56  83   P         P         21 00 17.0 +0.4
W45A  Hickory Valley     50.56  83   P         P         21 00 16.1 -0.4
      baz=316
R49A  Shelbyville        50.57  78   P         P         21 00 15.9 -0.6
R49A                                 IAmb      IAmb      21 00 19.0
      comp=Z,111nm,1.6s
R49A  Shelbyville        50.57  78   P         P         21 00 16.0 -0.6
      baz=315,SNR=6.7
R49A                                 P         P         21 00 16.0 -0.6
      baz=315,SNR=6.7
R49A                                 S         S         21 07 25.4 -2.6
      baz=315
R49A                                 S         S         21 07 25.4 -2.6
      baz=315
SOEG  Soedalen           50.61  23 i P         P         21 00 17.1 +0.6
SOEG                                 IAmb      IAmb      21 00 17.6
      comp=Z,164nm,0.9s
WVT   Waverly            50.62  81   P         P         21 00 16.9 -0.1
WVT                                  IAmb      IAmb      21 00 17.7
      comp=Z,110nm,0.8s
WVT   Waverly            50.62  81   P         P         21 00 16.9 -0.1
WVT                                  pmax      pmax
      comp=Z,109nm,0.8s
WVT                                  MLR       MLR
      comp=Z,5µm,21.0s
WVT   Waverly            50.62  81   P         P         21 00 17.0 -0.1
      baz=316,SNR=95
WVT                                  S         S         21 07 24.5 -4.2
      baz=316
WVT   Waverly            50.62  81   P         P         21 00 17.0 -0.1
      baz=316
WVT                                  S         S         21 07 28.0 -0.7
      baz=316
WVT   Waverly            50.62  81 ⇓ P         P         21 00 17.1  0.0
HKT   Hockley            50.63  93   IAmb      IAmb      21 00 19.6
      comp=Z,159nm,1.5s
HKT   Hockley            50.63  93di P         P         21 00 17.9 +0.9
HKT                                  pmax      pmax
      comp=Z,126nm,1.5s
HKT   Hockley            50.63  93   P         P         21 00 17.9 +0.9
      baz=319
HKT   Hockley            50.63  93   P         P         21 00 17.9 +0.9
HKT                                  sP        sP        21 00 33.0 +0.1
J54A  Appleton           50.64  68   P         P         21 00 17.3 +0.2
J54A  Appleton           50.64  68   P         P         21 00 17.3 +0.2
      baz=314,SNR=22
J54A                                 P         P         21 00 17.3 +0.2
      baz=314,SNR=22
ERPA  Erie               50.72  70   P         P         21 00 17.7  0.0
      baz=314,SNR=20
ERPA  Erie               50.72  70   P         P         21 00 17.6  0.0
      baz=314,SNR=20
TRQ   Mont Tremblant     50.73  63   P         P         21 00 17.3 -0.5
JCJ   Chichijima         50.79 261   LR        LR        21 18 45.6
      comp=Z,1µm,20.5s,baz=36,slow=32
JCJ   Chichijima         50.79 261   P         P         21 00 19.1 +0.7
JCJ   Chichijima         50.79 261   P         P         21 00 20.8 +2.4
MEDO  Medina             50.81  68   P         P         21 00 18.8 +0.4
MEDO                                 IAmb      IAmb      21 00 19.2
      comp=Z,102nm,0.8s
M53A  WI Miller and      50.82  72   P         P         21 00 18.3 -0.2
M53A                                 IAmb      IAmb      21 00 18.8
      comp=Z,101nm,0.8s
M53A  WI Miller and      50.82  72   P         P         21 00 18.0 -0.5
      baz=314,SNR=22
ISOG  Isortoq, Green     50.88  28 e P         P         21 00 18.5  0.0
ISOG                                 IAmb      IAmb      21 00 18.8
      comp=Z,327nm,1.7s
P51A  Williamsport       50.90  75   P         P         21 00 18.3 -0.8
P51A                                 IAmb      IAmb      21 00 19.7
      comp=Z,85nm,1.0s
P51A  Williamsport       50.90  75   P         P         21 00 18.2 -0.8
      baz=315,SNR=9.8
P51A                                 P         P         21 00 18.2 -0.8
      baz=315,SNR=9.8
OXF   Oxford             50.90  84   P         P         21 00 18.9 -0.2
OXF   Oxford             50.90  84   P         P         21 00 18.9 -0.2
OXF                                  pmax      pmax
      comp=Z,468nm,1.3s
OXF                                  MLR       MLR
      comp=Z,4µm,19.0s
OXF   Oxford             50.90  84   P         P         21 00 19.0 -0.2
      baz=317,SNR=45
OXF   Oxford             50.90  84   P         P         21 00 18.7 -0.4
      baz=317,SNR=45
OXF                                  S         S         21 07 31.7 -1.0
      baz=317
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ALLY  Alegheny Colle     50.96  71   P         P         21 00 19.5  0.0
ALLY  Alegheny Colle     50.96  71   P         P         21 00 19.6  0.0
      baz=314,SNR=15
R50A  Paris              51.04  77   P         P         21 00 19.9 -0.3
R50A                                 IAmb      IAmb      21 00 40.3
      comp=Z,110nm,0.8s
R50A  Paris              51.04  77   P         P         21 00 19.7 -0.5
      baz=315,SNR=39
R50A                                 P         P         21 00 19.7 -0.5
      baz=315,SNR=39
R50A                                 S         S         21 07 31.9 -2.7
      baz=315
R50A                                 S         S         21 07 31.9 -2.7
      baz=315
PECO  Prince Edward      51.05  67   P         P         21 00 20.2 +0.1
PECO                                 IAmb      IAmb      21 00 20.8
      comp=Z,128nm,1.3s
Q51A  Peebles            51.06  76   P         P         21 00 20.1 -0.2
Q51A  Peebles            51.06  76   P         P         21 00 19.9 -0.4
      baz=315,SNR=52
Q51A                                 P         P         21 00 19.9 -0.4
      baz=315,SNR=52
Q51A                                 S         S         21 07 32.5 -2.3
      baz=315
Q51A                                 S         S         21 07 32.5 -2.3
      baz=315
J55A  Hilton             51.08  68   P         P         21 00 20.4  0.0
J55A  Hilton             51.08  68   P         P         21 00 20.4  0.0
      baz=314,SNR=24
J55A                                 P         P         21 00 20.4  0.0
      baz=314,SNR=24
143A  Socs Landing,      51.09  87   P         P         21 00 21.9 +1.3
143A  Socs Landing,      51.09  87   P         P         21 00 20.9 +0.3
      baz=318
O52A  Adamsville         51.12  74   P         P         21 00 19.8 -1.0
O52A  Adamsville         51.12  74   P         P         21 00 19.8 -1.0
      baz=315,SNR=26
O52A                                 P         P         21 00 19.8 -1.0
      baz=315,SNR=26
KS19  Wonju Array Si     51.18 282   P         P         21 00 22.4 +1.2
KS19                                 IAmb      IAmb      21 00 25.1
      comp=Z,99nm,1.3s
N53A  Lisbon             51.18  72   P         P         21 00 20.5 -0.7
N53A                                 IAmb      IAmb      21 00 21.2
      comp=Z,82nm,0.9s
N53A  Lisbon             51.18  72   P         P         21 00 20.5 -0.7
      baz=314,SNR=26
N53A                                 P         P         21 00 20.5 -0.7
      baz=314,SNR=26
KSRS  Korea Array        51.18 282   P         P         21 00 22.2 +1.0
      comp=Z,51nm,0.9s,baz=51,slow=6.5,SNR=72
KSRS                                 LR        LR        21 21 58.5
      comp=Z,1µm,21.3s,baz=55,slow=36
      comp=Z,51nm,0.9s
ANGG  Ammassalik, Gr     51.18  27   P         P         21 00 20.2 -0.6
ANGG  Ammassalik, Gr     51.18  27   IAmb      IAmb      21 00 21.5
      comp=Z,368nm,1.8s
SUJ   Sinuiju            51.20 287   P         P         21 00 21.6 +0.3
KSAR  Wonju Array Be     51.21 282   P         P         21 00 21.8 +0.4
KSAR  Wonju Array Be     51.21 282   P         P         21 00 21.8 +0.4
PYAG  Pyongyang          51.24 285   P         P         21 00 22.6 +0.9
PYAG                                 pP        pP        21 00 33.8 +0.8
PYAG                                 S         S         21 07 39.9 +2.6
PYAG                                 AmB
      comp=Z,106nm,0.6s
PYAG                                 AMS       AMS
      comp=N,624nm,4.2s
PYAG                                 AMS       AMS
      comp=E,695nm,4.7s
PYAG                                 AMS       AMS
      comp=Z,618nm,4.2s
WVNY  West Valley, N     51.26  69   P         P         21 00 21.8 +0.1
WVNY  West Valley, N     51.26  69   P         P         21 00 21.6 -0.2
      baz=314,SNR=31
Y45A  Yeager Farm, C     51.30  85   P         P         21 00 22.1  0.0
Y45A                                 IAmb      IAmb      21 00 23.4
      comp=Z,146nm,1.1s
Y45A  Yeager Farm, C     51.30  85   P         P         21 00 22.0 -0.1
      baz=317,SNR=8.9
P52A  Corning            51.30  74   P         P         21 00 21.0 -1.0
P52A                                 IAmb      IAmb      21 00 22.4
      comp=Z,132nm,1.4s
P52A                                 IAMs_20   IAMs_20   21 22 12.0
      comp=Z,3µm,18.0s
P52A  Corning            51.30  74   P         P         21 00 20.9 -1.2
      baz=315,SNR=13
PLAL  Pickwick Lake      51.31  83   P         P         21 00 22.1 -0.2
O53A  New Philadelph     51.37  73   P         P         21 00 21.9 -0.7
O53A                                 IAmb      IAmb      21 00 22.4
      comp=Z,58nm,0.8s
O53A  New Philadelph     51.37  73   P         P         21 00 21.6 -1.0
      baz=315,SNR=24
O53A                                 S         S         21 07 35.7 -3.3
      baz=315
MMNY  Mt. Morris Dam     51.40  68   P         P         21 00 21.3 -1.5
IVI   Ivigtut            51.42  35   P         P         21 00 23.1 +0.4
IVI                                  IAmb      IAmb      21 00 24.1
      comp=Z,111nm,1.0s
IVI   Ivigtut            51.42  35 i P         P         21 00 22.9 +0.2
IVI                                  IAmb      IAmb      21 00 23.9
      comp=Z,115nm,1.0s
IVI   Ivigtut            51.42  35   P         P         21 00 23.3 +0.6
IVI                                  x         x         21 00 30.0
IVI                                  pP        pP        21 00 35.6 +1.7
IVI                                  sP        sP        21 00 39.9 +1.2
V48A  Smith Brothers     51.47  81   P         P         21 00 23.2 -0.2
V48A                                 IAmb      IAmb      21 00 26.3
      comp=Z,153nm,1.6s
V48A  Smith Brothers     51.47  81   P         P         21 00 23.2 -0.2
      baz=316,SNR=15
V48A                                 S         S         21 07 39.5 -1.0
      baz=316
CLTN  Cedars of Leba     51.49  80   P         P         21 00 23.8 +0.2
U49A  Red Boiling Sp     51.50  80   P         P         21 00 23.4 -0.2
U49A                                 IAmb      IAmb      21 00 23.9
      comp=Z,153nm,1.7s
U49A  Red Boiling Sp     51.50  80   P         P         21 00 23.2 -0.4
      baz=316,SNR=16
U49A                                 S         S         21 07 40.0 -0.9
      baz=316
441A  DeRidder           51.53  90   IAmb      IAmb      21 00 25.7
      comp=Z,77nm,0.8s
342B  Flagon Creek P     51.55  89   P         P         21 00 24.6 +0.5
      baz=318
KSCHJ Chungju            51.57 281   P         P         21 00 24.2 +0.1
KSCHJ                                IAmb      IAmb      21 00 27.6
      comp=Z,114nm,1.3s
J56A  Wolcott            51.58  67   P         P         21 00 23.9 -0.2
J56A                                 IAmb      IAmb      21 00 25.4
      comp=Z,189nm,1.5s
J56A  Wolcott            51.58  67   P         P         21 00 23.9 -0.2
      baz=314,SNR=16
J56A                                 P         P         21 00 23.9 -0.2
      baz=314,SNR=16
T50A  Nancy              51.66  78   P         P         21 00 24.5 -0.3
T50A                                 IAmb      IAmb      21 00 25.2
      comp=Z,64nm,1.1s
T50A  Nancy              51.66  78   P         P         21 00 24.2 -0.6
      baz=316
T50A                                 P         P         21 00 24.2 -0.6
      baz=316
T50A                                 S         S         21 07 40.4 -2.7
      baz=316
T50A                                 S         S         21 07 40.4 -2.7
      baz=316
Q52A  Bidwell            51.70  75   P         P         21 00 24.2 -0.8
Q52A                                 IAmb      IAmb      21 00 25.5
      comp=Z,68nm,0.9s
Q52A  Bidwell            51.70  75   P         P         21 00 24.1 -1.0
      baz=315,SNR=14
Q52A                                 P         P         21 00 24.1 -1.0
      baz=315,SNR=14
MNTQ  Montreal, Queb     51.70  63   P         P         21 00 24.1 -0.9
MNTQ                                 IAmb      IAmb      21 00 24.6
      comp=Z,55nm,0.8s
BMNY  Brushton-Moira     51.71  64   P         P         21 00 24.3 -0.8
      baz=314,SNR=20
WCNY  West Carthage      51.72  66   P         P         21 00 25.2 +0.1
      baz=314,SNR=86
P53A  Whipple            51.81  74   P         P         21 00 25.2 -0.6
P53A  Whipple            51.81  74   P         P         21 00 25.3 -0.6
      baz=315,SNR=18
P53A                                 P         P         21 00 25.3 -0.6
      baz=315,SNR=18
LONY  Lake Ozonia        51.83  65   P         P         21 00 25.4 -0.6
LONY                                 IAmb      IAmb      21 00 26.8
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      comp=Z,261nm,1.9s
LONY                                 IAMs_20   IAMs_20   21 22 25.8
      comp=Z,3µm,19.0s
LONY  Lake Ozonia        51.83  65   P         P         21 00 25.3 -0.7
      baz=314,SNR=18
LONY                                 S         S         21 07 44.9 -0.4
      baz=314
M55A  Ridgway            51.83  70   P         P         21 00 26.1  0.0
M55A  Ridgway            51.83  70   P         P         21 00 26.1  0.0
      baz=315,SNR=55
M55A                                 P         P         21 00 26.1  0.0
      baz=315,SNR=55
O54A  Avella             51.87  72   P         P         21 00 25.8 -0.5
O54A  Avella             51.87  72   P         P         21 00 25.8 -0.5
      baz=315,SNR=36
O54A                                 P         P         21 00 25.8 -0.5
      baz=315,SNR=36
INCN  Inchon             51.88 283   P         P         21 00 26.6 +0.2
INCN                                 IAmb      IAmb      21 00 29.7
      comp=Z,124nm,1.2s
INCN  Inchon             51.88 283   P         P         21 00 26.6 +0.2
INCN                                 pmax      pmax
      comp=Z,124nm,1.3s
INCN                                 MLR       MLR
      comp=Z,900nm,20.0s
S51A  Beattyville        51.91  77   P         P         21 00 26.2 -0.4
S51A                                 IAmb      IAmb      21 00 26.8
      comp=Z,75nm,0.9s
S51A  Beattyville        51.91  77   P         P         21 00 26.3 -0.4
      baz=316,SNR=25
S51A                                 P         P         21 00 26.3 -0.4
      baz=316,SNR=25
S51A                                 S         S         21 07 42.0 -4.5
      baz=316
S51A                                 S         S         21 07 42.0 -4.5
      baz=316
LMQ   La Malbaie         51.93  59   P         P         21 00 26.0 -0.7
LMQ                                  IAmb      IAmb      21 00 27.5
      comp=Z,209nm,1.6s
J57A  Williamstown       51.94  67   P         P         21 00 26.8  0.0
J57A  Williamstown       51.94  67   P         P         21 00 26.8  0.0
      baz=314,SNR=28
J57A                                 P         P         21 00 26.8  0.0
      baz=314,SNR=28
VBMS  Vicksburg          51.95  87   P         P         21 00 28.0 +0.9
VBMS                                 IAMs_20   IAMs_20   21 26 22.6
      comp=Z,2µm,20.0s
VBMS  Vicksburg          51.95  87   P         P         21 00 27.4 +0.4
      baz=318
VBMS  Vicksburg          51.95  87   P         P         21 00 27.2 +0.2
      baz=318
VBMS                                 S         S         21 07 48.1 +1.0
      baz=318
HJU   Haeju              51.98 284   P         P         21 00 27.9 +0.7
L56A  Greenwood          52.00  69   P         P         21 00 27.3  0.0
L56A  Greenwood          52.00  69   P         P         21 00 27.5 +0.1
      baz=314,SNR=60
L56A                                 P         P         21 00 27.5 +0.1
      baz=314,SNR=60
JMIC  Jan Mayen          52.01  12   LR        LR        21 23 15.4
      comp=Z,2µm,20.4s,baz=334,slow=37
JMIC  Jan Mayen          52.01  12 e P         P         21 00 27.8 +0.9
K57A  Scipio Center      52.14  68   P         P         21 00 28.2 -0.1
K57A  Scipio Center      52.14  68   P         P         21 00 28.0 -0.3
      baz=314,SNR=17
FRNY  Flat Rock          52.19  64   P         P         21 00 27.7 -0.9
FRNY                                 IAmb      IAmb      21 00 29.0
      comp=Z,178nm,1.6s
FRNY  Flat Rock          52.19  64   P         P         21 00 27.7 -0.9
      baz=314,SNR=17
TJN   Taejon             52.26 281   P         P         21 00 29.7 +0.4
TJN   Taejon             52.26 281   P         P         21 00 29.7 +0.4
TJN                                  pmax      pmax
      comp=Z,631nm,1.2s
TJN   Taejon             52.26 281   P         P         21 00 33.0 +3.7
      comp=Z,467nm,1.2s
X48A  Hartselle          52.28  82   P         P         21 00 28.8 -0.7
X48A                                 IAmb      IAmb      21 00 29.3
      comp=Z,49nm,0.8s
X48A  Hartselle          52.28  82   P         P         21 00 28.7 -0.7
      baz=317,SNR=17
X48A                                 S         S         21 07 49.4 -2.2
      baz=317
R53A  Hurricane          52.32  75   P         P         21 00 29.3 -0.3
R53A                                 IAmb      IAmb      21 00 30.7
      comp=Z,104nm,1.0s
R53A  Hurricane          52.32  75   P         P         21 00 29.4 -0.3
      baz=316,SNR=22
R53A                                 P         P         21 00 29.4 -0.3
      baz=316,SNR=22
J58A  Remsen             52.34  66   P         P         21 00 30.0 +0.2
J58A  Remsen             52.34  66   P         P         21 00 30.1 +0.2
      baz=314,SNR=65
J58A                                 P         P         21 00 30.1 +0.2
      baz=314,SNR=65
SWET  Sewanee            52.35  81   P         P         21 00 29.2 -0.8
SWET                                 IAmb      IAmb      21 00 29.8
      comp=Z,181nm,1.7s
NRS   Narsarsuaq         52.35  34   P         P         21 00 30.0 +0.4
NRS                                  IAmb      IAmb      21 00 39.6
      comp=Z,63nm,0.9s
NRS   Narsarsuaq         52.35  34   P         P         21 00 30.0 +0.4
NRS                                  pmax      pmax
      comp=Z,63nm,0.9s
NRS                                  MLR       MLR
      comp=Z,3µm,18.0s
NRS   Narsarsuaq         52.35  34⇓i P         P         21 00 29.9 +0.4
NRS                                  IAmb      IAmb      21 00 39.4
      comp=Z,65nm,0.9s
344A  Westbrook Farm     52.40  88   P         P         21 00 31.2 +0.8
344A  Westbrook Farm     52.40  88   P         P         21 00 31.0 +0.7
      baz=318,SNR=13
ZAIG  Zacatecas          52.43 105   P         P         21 00 31.4 +0.4
NCB   Newcomb            52.46  65   P         P         21 00 30.5 -0.2
NCB   Newcomb            52.46  65   P         P         21 00 30.6 -0.2
      baz=314,SNR=32
JTU   Tsushima           52.47 278   P         P         21 00 31.3 +0.5
JTU                                  IAmb      IAmb      21 00 56.9
      comp=Z,84nm,0.8s
Q54A  Coxs Mills         52.47  74   P         P         21 00 30.2 -0.6
Q54A                                 IAmb      IAmb      21 00 30.7
      comp=Z,45nm,0.7s
Q54A  Coxs Mills         52.47  74   P         P         21 00 30.2 -0.6
      baz=316,SNR=21
Q54A                                 P         P         21 00 30.2 -0.6
      baz=316,SNR=21
146A  Union              52.47  85   P         P         21 00 30.3 -0.6
146A  Union              52.47  85   P         P         21 00 30.9  0.0
      baz=318,SNR=6.8
MCWV  Mont Chateau       52.52  73   P         P         21 00 30.8 -0.4
MCWV                                 IAmb      IAmb      21 00 31.3
      comp=Z,83nm,0.8s
MCWV  Mont Chateau       52.52  73   P         P         21 00 30.8 -0.4
      baz=315,SNR=9.8
MCWV  Mont Chateau       52.52  73   P         P         21 00 30.5 -0.7
      baz=315,SNR=9.8
MCWV                                 S         S         21 07 54.3 -0.6
      baz=315
Z47A  Carrollton         52.62  84   P         P         21 00 31.6 -0.4
Z47A  Carrollton         52.62  84   P         P         21 00 31.7 -0.3
      baz=318,SNR=12
JNU   Nakatsue           52.66 276   P         P         21 00 33.3 +1.0
JNU   Nakatsue           52.66 276   P         P         21 00 35.4 +3.1
J59A  Piesco             52.67  66   P         P         21 00 32.1 -0.1
J59A  Piesco             52.67  66   P         P         21 00 32.2 -0.1
      baz=315,SNR=31
J59A                                 P         P         21 00 32.2 -0.1
      baz=315,SNR=31
W50A  Signal Mountai     52.71  80   P         P         21 00 32.1 -0.5
W50A                                 IAmb      IAmb      21 00 32.9
      comp=Z,94nm,1.1s
W50A  Signal Mountai     52.71  80   P         P         21 00 32.2 -0.5
      baz=317,SNR=32
W50A                                 S         S         21 07 56.3 -1.3
      baz=317
TZTN  Tazewell           52.72  78   P         P         21 00 32.4 -0.3
TZTN                                 IAmb      IAmb      21 00 50.8
      comp=Z,164nm,1.4s
TZTN  Tazewell           52.72  78   P         P         21 00 32.5 -0.2
      baz=316,SNR=19
TZTN                                 S         S         21 07 56.0 -1.7
      baz=316
TZTN  Tazewell           52.72  78   P         P         21 00 32.2 -0.5
      baz=316,SNR=19
TZTN                                 S         S         21 07 56.6 -1.1
      baz=316
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IRK   Irkutsk            52.75 310 eP       P        21 00 31.2 -1.5
IRK                                eS       S        21 07 55.1 -2.5
IRK                                pmax     pmax
      comp=Z,104nm,1.0s
BINY  Binghamton         52.79  68 P        P        21 00 33.3 +0.2
BINY                               IAmb     IAmb     21 00 33.9
      comp=Z,99nm,0.9s
BINY                               IAMs_20  IAMs_20  21 22 08.4
      comp=Z,2µm,22.0s
BINY  Binghamton         52.79  68 P        P        21 00 33.4 +0.2
      baz=315,SNR=28
BINY  Binghamton         52.79  68 P        P        21 00 33.2  0.0
      baz=315,SNR=28
BINY                               S        S        21 07 58.4 -0.1
      baz=315
M57A  Sunshine Farm,     52.80  69 P        P        21 00 33.1 -0.1
M57A                               IAmb     IAmb     21 00 34.5
      comp=Z,59nm,0.8s
M57A  Sunshine Farm,     52.80  69 P        P        21 00 33.2  0.0
      baz=315,SNR=24
M57A                               P        P        21 00 33.2  0.0
      baz=315,SNR=24
V51A  Loudon             52.81  79 P        P        21 00 32.8 -0.5
V51A  Loudon             52.81  79 P        P        21 00 32.9 -0.5
      baz=317,SNR=10
V51A                               S        S        21 07 57.4 -1.5
      baz=317
D62A  Allapoint, All     52.88  59 P        P        21 00 33.3 -0.4
D62A                               IAmb     IAmb     21 00 34.8
      comp=Z,201nm,1.4s
D62A  Allapoint, All     52.88  59 P        P        21 00 33.5 -0.3
      baz=314,SNR=26
D62A                               P        P        21 00 33.5 -0.3
      baz=314,SNR=26
SSPA  Standing Stone     52.89  70 P        P        21 00 33.3 -0.5
SSPA  Standing Stone     52.89  70 P        P        21 00 33.5 -0.3
      baz=315,SNR=47
SSPA  Standing Stone     52.89  70 P        P        21 00 33.5 -0.3
      baz=315
SSPA                               S        S        21 07 59.5 -0.3
      baz=315
SSPA  Standing Stone     52.89  70 P        P        21 00 33.5 -0.3
SSPA                               sP       sP       21 00 48.8 -1.0
NAWB  Namwon             52.94 280 P        P        21 00 34.4 +0.1
NAWB                               IAmb     IAmb     21 00 59.7
      comp=Z,51nm,0.9s
VT1   Waterbury          52.96  64 P        P        21 00 34.1 -0.3
VT1                                IAmb     IAmb     21 00 34.6
      comp=Z,65nm,1.0s
CPCT  Cooper Cave        52.97  80 P        P        21 00 33.9 -0.7
XLT   XiLinHaoTe         52.99 296⇑iP       P        21 00 36.5 +1.8
XLT                                pP       sP       21 00 49.3 -1.4
XLT                                sP       pP       21 00 53.5 +7.4
XLT                                ScP      ScP      21 05 37.0  0.0
XLT                                S        S        21 08 02.5 +1.2
XLT                                sS       pS       21 08 13.8 -0.9
XLT                                ScS      ScS      21 10 20.3 -0.5
XLT                                pmax     pmax
      comp=Z,77nm,1.0s
XLT                                pmax     pmax
      comp=Z,630nm,4.5s
XLT                                LR       LR
      comp=Z,3µm,16.3s
XLT                                LR       LR
      comp=Z,4µm,17.2s
FPAL  Fort Paine         53.02  81 P        P        21 00 34.2 -0.8
FPAL                               IAmb     IAmb     21 00 35.0
      comp=Z,75nm,0.8s
S54A  Dingess, Beckl     53.05  75 P        P        21 00 34.6 -0.6
S54A                               IAmb     IAmb     21 00 35.3
      comp=Z,60nm,1.1s
S54A  Dingess, Beckl     53.05  75 P        P        21 00 34.6 -0.6
      baz=316,SNR=13
S54A                               P        P        21 00 34.6 -0.6
      baz=316,SNR=13
S54A                               S        S        21 07 57.6 -4.6
      baz=316
S54A                               S        S        21 07 57.6 -4.6
      baz=316
Y49A  Blount Mountai     53.07  82 P        P        21 00 34.5 -0.9
Y49A                               IAmb     IAmb     21 00 35.0
      comp=Z,55nm,0.8s
Y49A  Blount Mountai     53.07  82 P        P        21 00 34.2 -1.1
      baz=317,SNR=22
Y49A                               S        S        21 07 59.7 -2.8
      baz=317
MCVT  Middlebury Col     53.11  64 P        P        21 00 34.8 -0.6
      baz=315,SNR=8.1
ACCN  Adirondack Com     53.16  65 P        P        21 00 35.9  0.0
ACCN                               IAmb     IAmb     21 00 37.3
      comp=Z,82nm,0.8s
ACCN  Adirondack Com     53.16  65 P        P        21 00 35.7 -0.2
      baz=315,SNR=32
346A  Big Creek Wild     53.17  87 P        P        21 00 36.1 +0.1
      baz=318
346A                               S        S        21 08 03.7 -0.1
      baz=318
V52A  Sevierville        53.20  79 P        P        21 00 35.8 -0.5
V52A                               IAmb     IAmb     21 00 37.3
      comp=Z,236nm,1.7s
V52A  Sevierville        53.20  79 P        P        21 00 35.9 -0.3
      baz=317,SNR=23
V52A                               S        S        21 08 02.3 -2.0
      baz=317
TKL   Tuckaleechee C     53.23  79 LR       LR       21 23 04.7
      comp=Z,4µm,18.8s,baz=328,slow=36
TKL   Tuckaleechee C     53.23  79 P        P        21 00 35.7 -0.8
TKL                                IAmb     IAmb     21 00 37.2
      comp=Z,123nm,1.4s
TKL   Tuckaleechee C     53.23  79 P        P        21 00 35.7 -0.8
TKL                                pmax     pmax
      comp=Z,123nm,1.4s
TKL   Tuckaleechee C     53.23  79 P        P        21 00 35.9 -0.6
      baz=317,SNR=17
TKL                                S        S        21 08 02.5 -2.2
      baz=317
HCNY  Howe Caverns       53.27  66 P        P        21 00 36.8 +0.1
      baz=315,SNR=96
L59A  Walton             53.29  67 P        P        21 00 37.0 +0.1
L59A                               IAmb     IAmb     21 00 37.8
      comp=Z,87nm,0.8s
L59A  Walton             53.29  67 P        P        21 00 37.1 +0.3
      baz=315,SNR=23
L59A                               P        P        21 00 37.1 +0.3
      baz=315,SNR=23
XMAS  Kiritimati         53.32 179 P        P        21 00 37.1 -0.1
XMAS                               IAmb     IAmb     21 00 52.7
      comp=Z,95nm,1.0s
Q56A  Snyder Ridge,      53.32  73 P        P        21 00 36.5 -0.7
Q56A  Snyder Ridge,      53.32  73 P        P        21 00 36.2 -0.9
      baz=316
Q56A                               P        P        21 00 36.2 -0.9
      baz=316
LRAL  Lakeview Retre     53.34  84 P        P        21 00 36.1 -1.2
LRAL                               IAMs_20  IAMs_20  21 22 18.3
      comp=Z,3µm,20.0s
LRAL  Lakeview Retre     53.34  84 P        P        21 00 36.1 -1.2
      baz=318,SNR=12
LRAL  Lakeview Retre     53.34  84 P        P        21 00 36.1 -1.2
      baz=318,SNR=12
LRAL                               S        S        21 08 03.9 -2.3
      baz=318
R55A  Marlinton          53.36  74 P        P        21 00 37.1 -0.3
R55A                               IAmb     IAmb     21 00 38.6
      comp=Z,241nm,1.8s
R55A  Marlinton          53.36  74 P        P        21 00 37.2 -0.3
      baz=316,SNR=13
R55A                               P        P        21 00 37.2 -0.3
      baz=316,SNR=13
KSPA  Keystone Colle     53.36  68 P        P        21 00 37.3  0.0
KSPA                               IAmb     IAmb     21 00 37.9
      comp=Z,64nm,1.0s
KSPA  Keystone Colle     53.36  68 P        P        21 00 37.3  0.0
      baz=315,SNR=15
N58A  Sunbury            53.37  69 P        P        21 00 37.2 -0.2
N58A  Sunbury            53.37  69 P        P        21 00 37.0 -0.4
      baz=315,SNR=25
N58A                               P        P        21 00 37.0 -0.4
      baz=315,SNR=25
X51A  Calhoun            53.43  81 P        P        21 00 37.3 -0.6
X51A                               IAmb     IAmb     21 00 38.7
      comp=Z,86nm,1.1s
X51A  Calhoun            53.43  81 P        P        21 00 37.0 -0.9
      baz=317,SNR=12
X51A                               P        P        21 00 37.0 -0.9
      baz=317,SNR=12
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X51A                               S        S        21 08 05.5 -1.8
      baz=317
X51A                               S        S        21 08 05.5 -1.8
      baz=317
LBNH  Lisbon             53.45  63 P        P        21 00 37.6 -0.3
LBNH                               IAmb     IAmb     21 00 59.5
      comp=Z,53nm,0.9s
LBNH                               IAMs_20  IAMs_20  21 23 25.7
      comp=Z,3µm,20.0s
LBNH  Lisbon             53.45  63 P        P        21 00 37.7 -0.3
LBNH                               pmax     pmax
      comp=Z,53nm,0.9s
LBNH                               MLR      MLR
      comp=Z,3µm,20.0s
LBNH  Lisbon             53.45  63 P        P        21 00 37.8 -0.3
      baz=315,SNR=11
LBNH  Lisbon             53.45  63 P        P        21 00 37.3 -0.7
      baz=315,SNR=11
G62A  West of Eustis     53.46  62 P        P        21 00 37.8 -0.2
G62A  West of Eustis     53.46  62 P        P        21 00 37.9 -0.2
      baz=315,SNR=18
G62A                               P        P        21 00 37.9 -0.2
      baz=315,SNR=18
W52A  Murphy             53.56  79 P        P        21 00 38.4 -0.5
W52A                               IAmb     IAmb     21 00 39.7
      comp=Z,199nm,1.5s
W52A  Murphy             53.56  79 P        P        21 00 38.4 -0.5
      baz=317,SNR=5.3
H62A  Milan              53.60  63 P        P        21 00 38.7 -0.4
H62A                               IAmb     IAmb     21 00 39.4
      comp=Z,70nm,0.8s
H62A  Milan              53.60  63 P        P        21 00 38.9 -0.2
      baz=315,SNR=17
H62A                               P        P        21 00 38.9 -0.2
      baz=315,SNR=17
DL2   Dalian             53.60 287 P        P        21 00 36.5 -2.6
DL2                                esP      pP       21 00 51.8 +1.3
DL2                                S        S        21 08 03.3 -6.2
DL2                                pmax     pmax
      comp=Z,55nm,1.0s
DL2                                pmax     pmax
      comp=Z,300nm,4.7s
DL2                                LR       LR
      comp=Z,1µm,22.2s
DL2                                LR       LR
      comp=Z,3µm,20.6s
DL2                                LR       LR
      comp=Z,4µm,23.1s
TRY   Troy               53.62  66 P        P        21 00 39.4 +0.1
TRY                                IAmb     IAmb     21 00 40.0
      comp=Z,57nm,0.9s
TRY   Troy               53.62  66 P        P        21 00 39.3 +0.1
      baz=315,SNR=11
P57A  Homestead Farm     53.64  71 P        P        21 00 39.0 -0.4
P57A  Homestead Farm     53.64  71 P        P        21 00 39.1 -0.3
      baz=316,SNR=30
P57A                               P        P        21 00 39.1 -0.3
      baz=316,SNR=30
HNH   Hanover            53.65  64 P        P        21 00 39.5  0.0
HNH                                IAmb     IAmb     21 00 40.0
      comp=Z,49nm,0.9s
HNH   Hanover            53.65  64 P        P        21 00 39.4  0.0
      baz=315,SNR=13
E63A  Oxbow              53.65  59 P        P        21 00 38.2 -1.2
      baz=315,SNR=15
E63A                               P        P        21 00 38.2 -1.2
      baz=315,SNR=15
PQI   Presque Isle       53.67  59 P        P        21 00 38.6 -0.9
KWAJ  Kwajalein Atol     53.68 223 IAMs_20  IAMs_20  21 19 14.4
      comp=Z,2µm,21.0s
U54A  Nelsons Funny      53.70  77 P        P        21 00 39.9  0.0
U54A                               IAmb     IAmb     21 00 41.2
      comp=Z,101nm,1.1s
U54A  Nelsons Funny      53.70  77 P        P        21 00 40.0  0.0
      baz=317,SNR=19
U54A                               P        P        21 00 40.0  0.0
      baz=317,SNR=19
J61A  Chester            53.76  64 P        P        21 00 40.3 +0.1
J61A  Chester            53.76  64 P        P        21 00 40.4 +0.2
      baz=315,SNR=23
J61A                               P        P        21 00 40.4 +0.2
      baz=315,SNR=23
V53A  Saluda             53.76  78 P        P        21 00 40.1 -0.4
V53A  Saluda             53.76  78 P        P        21 00 40.0 -0.4
      baz=317,SNR=42
V53A                               P        P        21 00 40.0 -0.4
      baz=317,SNR=42
PAGS  Pennsylvania G     53.80  70 P        P        21 00 39.6 -1.0
PAGS                               IAmb     IAmb     21 00 40.7
      comp=Z,90nm,0.8s
F63A  Nahmakanta, Br     53.83  60 P        P        21 00 40.0 -0.7
F63A                               IAmb     IAmb     21 00 40.7
      comp=Z,51nm,0.8s
F63A  Nahmakanta, Br     53.83  60 P        P        21 00 40.0 -0.7
      baz=315,SNR=14
F63A                               P        P        21 00 40.0 -0.7
      baz=315,SNR=14
BLA   Blacksburg         53.97  75 P        P        21 00 41.5 -0.4
BLA                                IAmb     IAmb     21 00 42.2
      comp=Z,63nm,0.9s
BLA                                IAMs_20  IAMs_20  21 22 02.7
      comp=Z,2µm,22.0s
BLA   Blacksburg         53.97  75 P        P        21 00 41.5 -0.4
BLA                                pmax     pmax
      comp=Z,63nm,1.0s
BLA                                MLR      MLR
      comp=Z,2µm,22.0s
BLA   Blacksburg         53.97  75 P        P        21 00 41.6 -0.4
      baz=316,SNR=11
BLA   Blacksburg         53.97  75 P        P        21 00 41.3 -0.6
      baz=316,SNR=11
BLA                                S        S        21 08 13.1 -1.5
      baz=316
I62A  Tamworth           54.01  63 P        P        21 00 42.0 -0.1
PKME  Peaks-Kenny Pk     54.05  61 P        P        21 00 41.7 -0.6
PKME                               IAmb     IAmb     21 01 04.2
      comp=Z,72nm,1.1s
PKME  Peaks-Kenny Pk     54.05  61 P        P        21 00 41.9 -0.4
      baz=315,SNR=8.5
PKME  Peaks-Kenny Pk     54.05  61 P        P        21 00 41.5 -0.8
      baz=315,SNR=8.5
NPNY  Mohonk Preserv     54.07  67 P        P        21 00 42.4 -0.1
      baz=316,SNR=33
F64A  Sherman            54.08  60 P        P        21 00 41.2 -1.3
F64A                               IAmb     IAmb     21 00 43.3
      comp=Z,138nm,1.2s
F64A  Sherman            54.08  60 P        P        21 00 42.0 -0.6
      baz=315,SNR=17
F64A                               P        P        21 00 42.0 -0.6
      baz=315,SNR=17
JSU   Suzuyama           54.10 275 P        P        21 00 43.3 +0.4
JSU                                IAmb     IAmb     21 01 09.3
      comp=Z,63nm,1.1s
HAMF  Hammerfest         54.12 359 eP       P        21 00 42.1 -0.4
FFD   Franklin Falls     54.13  64 P        P        21 00 43.3 +0.4
FFD                                IAmb     IAmb     21 00 43.5
      comp=Z,49nm,0.9s
MVL   Millersville       54.16  70 P        P        21 00 42.9 -0.3
Z51A  Franklin           54.16  82 P        P        21 00 42.1 -1.2
Z51A                               IAmb     IAmb     21 00 42.7
      comp=Z,45nm,0.8s
Z51A  Franklin           54.16  82 P        P        21 00 42.0 -1.2
      baz=318,SNR=11
BATG  Bathurst New B     54.18  57 P        P        21 00 43.0 -0.2
BG3   Lake Jocassee      54.19  79 P        P        21 00 43.1 -0.4
BG3                                IAmb     IAmb     21 00 44.5
      comp=Z,133nm,1.4s
CASEE Lake Jocassee      54.19  79 P        P        21 00 42.9 -0.6
      baz=317,SNR=20
LUPA  Lehigh Univers     54.25  69 P        P        21 00 43.9  0.0
LUPA                               IAmb     IAmb     21 00 44.5
      comp=Z,100nm,0.9s
I63A  Otisfield          54.27  63 P        P        21 00 43.9  0.0
I63A                               IAmb     IAmb     21 00 45.3
      comp=Z,171nm,1.4s
I63A  Otisfield          54.27  63 P        P        21 00 43.6 -0.3
      baz=316,SNR=14
I63A                               P        P        21 00 43.6 -0.3
      baz=316,SNR=14
ODNJ  Ogdensburg         54.31  68 P        P        21 00 44.1 -0.2
ODNJ                               IAmb     IAmb     21 00 44.7
      comp=Z,64nm,1.0s
ODNJ  Ogdensburg         54.31  68 P        P        21 00 44.1 -0.2
      baz=316,SNR=17
SDMD  Soldier's Deli     54.32  71 P        P        21 00 43.9 -0.5
SDMD  Soldier's Deli     54.32  71 P        P        21 00 43.8 -0.5
      baz=316,SNR=11
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L61B  Northampton        54.34  65 P        P        21 00 44.5  0.0
L61B                               IAmb     IAmb     21 00 45.0
      comp=Z,125nm,1.7s
L61B  Northampton        54.34  65 P        P        21 00 44.6 +0.1
      baz=316,SNR=5.2
L61B  Northampton        54.34  65 P        P        21 00 43.8 -0.6
      baz=316,SNR=5.2
L61B                               S        S        21 08 18.6 -0.8
      baz=316
WVL   Waterville         54.36  62 P        P        21 00 44.0 -0.6
WVL                                IAmb     IAmb     21 00 44.6
      comp=Z,71nm,1.1s
WVL                                IAMs_20  IAMs_20  21 25 32.8
      comp=Z,2µm,19.0s
WVL   Waterville         54.36  62 P        P        21 00 43.6 -0.9
      baz=316,SNR=9.3
S57A  Dark Hollow, R     54.37  74 P        P        21 00 44.6 -0.2
S57A                               IAmb     IAmb     21 00 45.9
      comp=Z,146nm,1.6s
S57A  Dark Hollow, R     54.37  74 P        P        21 00 44.4 -0.4
      baz=316,SNR=17
S57A                               P        P        21 00 44.4 -0.4
      baz=316,SNR=17
BRNY  Black Rk. Fore     54.38  67 P        P        21 00 44.9 +0.1
      baz=316,SNR=25
Y52A  Lilburn            54.39  81 P        P        21 00 44.3 -0.7
Y52A                               IAmb     IAmb     21 00 44.8
      comp=Z,55nm,1.1s
Y52A  Lilburn            54.39  81 P        P        21 00 44.1 -0.8
      baz=318,SNR=13
Y52A                               P        P        21 00 44.1 -0.8
      baz=318,SNR=13
K62A  Royalston          54.41  65 P        P        21 00 44.6 -0.4
K62A                               IAmb     IAmb     21 00 45.8
      comp=Z,91nm,0.8s
K62A  Royalston          54.41  65 P        P        21 00 45.3 +0.3
      baz=316,SNR=27
K62A                               P        P        21 00 45.3 +0.3
      baz=316,SNR=27
KSCT  Kent School, K     54.44  66 P        P        21 00 45.4 +0.2
TRNY  Table Rock, Ra     54.47  67 P        P        21 00 45.3 -0.1
TRNY                               IAmb     IAmb     21 00 45.9
      comp=Z,50nm,0.9s
ZAK   Zakamensk          54.51 309 eP       P        21 00 46.1 +0.3
ZAK                                pmax     pmax
      comp=Z,57nm,1.2s
ZAK                                pmax     pmax
      comp=Z,20nm,1.7s
V55A  Taylorsville       54.52  77 P        P        21 00 45.5 -0.4
V55A                               IAmb     IAmb     21 01 18.4
      comp=Z,56nm,0.9s
V55A  Taylorsville       54.52  77 P        P        21 00 45.6 -0.3
      baz=317,SNR=15
V55A                               P        P        21 00 45.6 -0.3
      baz=317,SNR=15
250A  Grady              54.54  84 P        P        21 00 46.0  0.0
250A  Grady              54.54  84 P        P        21 00 45.0 -1.1
      baz=318
MOY   Mondy              54.58 311 eP       P        21 00 47.4 +1.2
MOY                                pmax     pmax
      comp=Z,30nm,1.8s
ULN   Ulaanbaatar        54.61 305 P        P        21 00 47.2 +0.6
ULN                                IAmb     IAmb     21 00 50.1
      comp=Z,68nm,1.1s
ULN   Ulaanbaatar        54.61 305 P        P        21 00 47.2 +0.6
ULN                                pmax     pmax
      comp=Z,68nm,1.1s
ULN                                MLR      MLR
      comp=Z,5µm,19.0s
ULN   Ulaanbaatar        54.61 305 P        P        21 00 47.1 +0.6
WUPA  West Chester U     54.61  69 P        P        21 00 46.1 -0.4
U56A  King               54.62  76 P        P        21 00 46.2 -0.4
U56A                               IAmb     IAmb     21 00 46.9
      comp=Z,62nm,0.9s
U56A  King               54.62  76 P        P        21 00 46.3 -0.3
      baz=317,SNR=11
U56A                               P        P        21 00 46.3 -0.3
      baz=317,SNR=11
BRNJ  Basking Ridge      54.62  68 P        P        21 00 46.5  0.0
BRNJ                               IAmb     IAmb     21 00 47.1
      comp=Z,71nm,0.8s
BRNJ  Basking Ridge      54.62  68 P        P        21 00 46.6 +0.1
      baz=316,SNR=11
QUA2  Belchertown        54.63  65 P        P        21 00 46.9 +0.4
QUA2  Belchertown        54.63  65 P        P        21 00 46.2 -0.4
      baz=316,SNR=10
TUPA  Temple Univers     54.66  69 P        P        21 00 46.6 -0.2
      baz=316,SNR=16
GEDE  Greenville         54.68  70 P        P        21 00 46.5 -0.5
      baz=316,SNR=5.8
BRAL  Brewton            54.70  85 P        P        21 00 46.9 -0.3
BRAL  Brewton            54.70  85 P        P        21 00 46.8 -0.4
      baz=319
BRAL                               S        S        21 08 21.6 -2.9
      baz=319
PAL   Palisades          54.73  67 P        P        21 00 47.2 -0.1
PAL                                IAmb     IAmb     21 00 47.9
      comp=Z,69nm,1.1s
PAL                                IAMs_20  IAMs_20  21 25 08.8
      comp=Z,2µm,19.0s
PAL   Palisades          54.73  67 P        P        21 00 47.2 -0.1
PAL                                pmax     pmax
      comp=Z,69nm,1.1s
PAL                                MLR      MLR
      comp=Z,2µm,19.0s
PAL   Palisades          54.73  67 P        P        21 00 47.2 -0.1
      baz=316,SNR=8.2
PAL   Palisades          54.73  67 P        P        21 00 47.3 -0.1
      baz=316,SNR=8.2
PAL                                S        S        21 08 24.8 +0.1
      baz=316
T57A  Hurt               54.76  74 P        P        21 00 47.2 -0.4
T57A  Hurt               54.76  74 P        P        21 00 46.6 -1.0
      baz=317,SNR=9.8
T57A                               P        P        21 00 46.6 -1.0
      baz=317,SNR=9.8
PANJ  Princeton          54.77  68 P        P        21 00 47.3 -0.3
      baz=316,SNR=6.0
UNH   University of      54.81  64 P        P        21 00 47.3 -0.5
      baz=316,SNR=6.1
R58B  Mineral            54.81  73 P        P        21 00 47.7 -0.3
R58B                               IAmb     IAmb     21 00 49.2
      comp=Z,67nm,1.0s
R58B  Mineral            54.81  73 P        P        21 00 47.8 -0.1
      baz=317,SNR=17
R58B                               P        P        21 00 47.8 -0.1
      baz=317,SNR=17
FOR   Fordham            54.85  67 P        P        21 00 48.2  0.0
      baz=316,SNR=7.9
CPNY  Central Park       54.86  68 P        P        21 00 48.8 +0.5
CPNY                               IAmb     IAmb     21 00 49.0
      comp=Z,84nm,1.1s
HRV   Adam Dziewonsk     54.87  65 P        P        21 00 48.3  0.0
HRV                                IAmb     IAmb     21 00 48.9
      comp=Z,49nm,0.9s
HRV   Adam Dziewonsk     54.87  65 P        P        21 00 48.3  0.0
HRV                                pmax     pmax
      comp=Z,49nm,1.0s
HRV                                MLR      MLR
      comp=Z,4µm,19.0s
HRV   Adam Dziewonsk     54.87  65 P        P        21 00 48.0 -0.3
      baz=316
HRV   Adam Dziewonsk     54.87  65 P        P        21 00 48.3  0.0
      baz=316
HRV   Adam Dziewonsk     54.87  65 P        P        21 00 48.3  0.0
152A  Waverly Hall       54.90  82 P        P        21 00 47.1 -1.6
152A  Waverly Hall       54.90  82 P        P        21 00 47.1 -1.6
      baz=318,SNR=8.2
CBN   Corbin Frederi     54.91  72 IAMs_20  IAMs_20  21 25 56.5
      comp=Z,3µm,21.0s
CBN   Corbin Frederi     54.91  72 P        P        21 00 48.1 -0.5
      baz=317
SONM  Songino Array      54.94 305 P        P        21 00 49.4 +0.6
      comp=Z,92nm,1.0s,baz=48,slow=6.4,SNR=156
SONM                               LR       LR       21 26 06.3
      comp=Z,5µm,18.6s,baz=44,slow=38
SONM                               PKPPKP   P'P'df   21 30 59.8 -2.4
      comp=Z,0.6nm,0.8s,baz=187,slow=2.5,SNR=3.6
      comp=Z,92nm,1.0s
SONM  Songino Array      54.94 305 P        P        21 00 49.5 +0.6
SONM                               IAmb     IAmb     21 00 53.0
      comp=Z,92nm,1.0s
PAULI Pauline            54.94  78 P        P        21 00 48.2 -0.7
PAULI Pauline            54.94  78 P        P        21 00 48.0 -0.9
      baz=318,SNR=9.2
G65A  Princeton          54.94  60 P        P        21 00 48.2 -0.6
G65A                               IAmb     IAmb     21 00 48.8
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	comp=Z,82nm,1.1s						
G65A	**Princeton**	54.94	60	P	P	21 00 47.9	-0.9
	baz=316,SNR=8.7						
G65A				P	P	21 00 47.9	-0.9
	baz=316,SNR=8.7						
KEV	**Kevo**	54.96	358	P	P	21 00 48.0	-0.5
KEV				IAmb	IAmb	21 00 51.3	
	comp=Z,72nm,0.9s						
KEV	**Kevo**	54.96	358	P	P	21 00 48.0	-0.5
KEV				pmax	pmax		
	comp=Z,72nm,0.9s						
KEV				MLR	MLR		
	comp=Z,900nm,20.0s						
KEV	**Kevo**	54.96	358	P	P	21 00 48.6	0.0
KMSC	**Kings Mountain**	54.97	77	P	P	21 00 48.5	-0.7
KMSC	**Kings Mountain**	54.97	77	P	P	21 00 48.3	-0.9
	baz=317,SNR=13						
KMSC	**Kings Mountain**	54.97	77	P	P	21 00 48.3	-0.9
	baz=317,SNR=13						
KMSC				S	S	21 08 25.3	-2.8
	baz=317						
JSRW	**J. Sargeant Re**	55.01	73	P	P	21 00 48.9	-0.4
N62A	**Caumsett State**	55.02	67	P	P	21 00 49.9	+0.5
N62A	**Caumsett State**	55.02	67	P	P	21 00 49.3	0.0
	baz=316						
N62A				P	P	21 00 49.3	0.0
	baz=316						
YLE	**Yale**	55.02	66	P	P	21 00 49.9	+0.5
YLE				IAmb	IAmb	21 00 50.0	
	comp=Z,114nm,1.0s						
YLE				IAMs_20	IAMs_20	21 24 47.4	
	comp=Z,3µm,19.0s						
UCCT	**U. Connecticut**	55.04	66	P	P	21 00 49.8	+0.3
UCCT				IAmb	IAmb	21 00 51.3	
	comp=Z,75nm,0.8s						
GOGA	**Godfrey**	55.05	81	P	P	21 00 48.1	-1.7
GOGA	**Godfrey**	55.05	81	P	P	21 00 48.1	-1.7
GOGA				pmax	pmax		
	comp=Z,42nm,1.0s						
GOGA				MLR	MLR		
	comp=Z,5µm,20.0s						
GOGA	**Godfrey**	55.05	81	P	P	21 00 48.3	-1.4
	baz=318,SNR=15						
GOGA	**Godfrey**	55.05	81	P	P	21 00 48.5	-1.3
	baz=318,SNR=15						
GOGA				S	S	21 08 25.2	-4.0
	baz=318						
WES	**Weston**	55.08	64	P	P	21 00 48.8	-1.0
WES				IAmb	IAmb	21 00 49.4	
	comp=Z,85nm,0.8s						
WES	**Weston**	55.08	64	P	P	21 00 48.8	-1.0
WES				pmax	pmax		
	comp=Z,85nm,0.8s						
WES				MLR	MLR		
	comp=Z,4µm,19.0s						
WES	**Weston**	55.08	64	P	P	21 00 48.6	-1.2
	baz=316,SNR=14						
HODGE	**Hodges**	55.12	79	P	P	21 00 49.5	-0.8
HODGE				IAmb	IAmb	21 00 50.0	
	comp=Z,55nm,0.8s						
HODGE	**Hodges**	55.12	79	P	P	21 00 49.3	-1.0
	baz=318,SNR=25						
TRO	**Tromso**	55.14	1	⇓*i*P	P	21 00 50.3	+0.5
BCX	**Boston College**	55.20	64	P	P	21 00 50.8	+0.2
BCX				IAmb	IAmb	21 00 51.1	
	comp=Z,64nm,1.1s						
ARA0	**ARCESS Array S**	55.21	358	⇓*i*P	P	21 00 50.2	-0.2
ARCES	**ARCESS Array B**	55.21	358	P	P	21 00 50.3	-0.1
	comp=Z,44nm,0.7s,baz=29,slow=5.5,SNR=39						
ARCES				LR	LR	21 26 01.2	
	comp=Z,768nm,19.4s,baz=357,slow=38						
	comp=Z,44nm,0.7s						
ARCES	**ARCESS Array B**	55.21	358	IAmb	IAmb	21 01 38.0	
	comp=Z,106nm,0.9s						
JETT	**Jettan, Norway**	55.23	0	⇓*i*P	P	21 00 51.2	+0.7
BRYW	**Bryant College**	55.31	65	P	P	21 00 51.4	-0.1
BRYW				IAmb	IAmb	21 00 52.0	
	comp=Z,60nm,0.8s						
EMMW	**East Machias**	55.35	60	P	P	21 00 50.4	-1.3
EMMW				IAMs_20	IAMs_20	21 26 23.0	
	comp=Z,3µm,19.0s						
EMMW	**East Machias**	55.35	60	P	P	21 00 50.9	-0.8
	baz=316,SNR=5.9						
GGN	**Saint George**	55.36	59	P	P	21 00 51.0	-0.7
GGN				IAmb	IAmb	21 00 51.6	
	comp=Z,58nm,0.8s						
M63A	**Gales Ferry**	55.42	66	P	P	21 00 52.4	+0.2
M63A	**Gales Ferry**	55.42	66	P	P	21 00 52.1	-0.1
	baz=316,SNR=20						
M63A				P	P	21 00 52.1	-0.1
	baz=316,SNR=20						
JSC	**Jenkinsville**	55.65	78	P	P	21 00 53.2	-0.8
JSC	**Jenkinsville**	55.65	78	P	P	21 00 53.2	-0.8
JSC				pmax	pmax		
	comp=Z,47nm,0.9s						
JSC	**Jenkinsville**	55.65	78	P	P	21 00 52.8	-1.2
	baz=318,SNR=18						
L64A	**Middleborough**	55.66	65	P	P	21 00 53.3	-0.6
	baz=316						
L64A				P	P	21 00 53.3	-0.6
	baz=316						
352A	**Blakely**	55.67	83	P	P	21 00 53.3	-0.9
352A				IAmb	IAmb	21 00 53.5	
	comp=Z,81nm,1.1s						
352A	**Blakely**	55.67	83	P	P	21 00 53.0	-1.2
	baz=319						
BORG	**Borgarnes**	55.68	21	LR	LR	21 27 00.8	
	comp=Z,1µm,20.3s,baz=330,slow=38						
BORG	**Borgarnes**	55.68	21	P	P	21 00 54.7	+0.9
BORG	**Borgarnes**	55.68	21	IAMs_20	IAMs_20	21 25 45.0	
	comp=Z,2µm,21.0s						
BORG	**Borgarnes**	55.68	21	P	P	21 00 54.7	+0.9
BORG				pmax	pmax		
	comp=Z,212nm,1.3s						
BORG				MLR	MLR		
	comp=Z,2µm,21.0s						
BORG	**Borgarnes**	55.68	21	P	P	21 00 54.5	+0.8
BORG				pP	pP	21 01 06.6	+1.3
BJI	**Beijing**	55.70	292	P	P	21 00 56.0	+1.7
BJI				pP	pP	21 01 04.3	-1.5
BJI				PcP	PcP	21 01 54.8	+1.5
BJI				S	S	21 08 40.0	+2.3
BJI				ScS	ScS	21 10 39.8	-0.1
BJI				pmax	pmax		
	comp=Z,17nm,1.1s						
BJI				pmax	pmax		
	comp=Z,280nm,5.9s						
BJI				LR	LR		
	comp=Z,2µm,19.0s						
BJI				LR	LR		
	comp=Z,2µm,20.0s						
BJI				LR	LR		
	comp=Z,3µm,19.8s						
W57A	**Gilead**	55.71	76	P	P	21 00 53.5	-0.9
W57A	**Gilead**	55.71	76	P	P	21 00 53.6	-0.9
	baz=318,SNR=10						
W57A				P	P	21 00 53.6	-0.9
	baz=318,SNR=10						
T59A	**Double "B" Far**	55.71	73	P	P	21 00 54.3	-0.2
T59A				IAmb	IAmb	21 00 54.8	
	comp=Z,78nm,0.8s						
T59A	**Double "B" Far**	55.71	73	P	P	21 00 54.2	-0.2
	baz=317,SNR=27						
T59A				P	P	21 00 54.2	-0.2
	baz=317,SNR=27						
V58A	**Windy Hill, Pi**	55.72	75	P	P	21 00 54.1	-0.4
V58A				IAmb	IAmb	21 00 54.7	
	comp=Z,85nm,1.0s						
V58A	**Windy Hill, Pi**	55.72	75	P	P	21 00 54.1	-0.4
	baz=317,SNR=18						
V58A				P	P	21 00 54.1	-0.4
	baz=317,SNR=18						
BJT	**Baijiatuau**	55.72	292	P	P	21 00 54.2	-0.3
BJT	**Baijiatuau**	55.72	292	IAMs_20	IAMs_20	21 26 20.5	
	comp=Z,3µm,20.0s						
BJT	**Baijiatuau**	55.72	292	P	P	21 00 54.2	-0.3
BJT				pmax	pmax		
	comp=Z,14nm,0.7s						
BJT				MLR	MLR		
	comp=Z,3µm,20.0s						
KTK1	**Kautokeino**	55.77	359	⇓*i*P	P	21 00 54.3	-0.1
LMN	**Caledonia Moun**	55.81	57	P	P	21 00 54.6	-0.4
BIRD	**Birdtown, Kers**	55.82	77	P	P	21 00 54.8	-0.4
BIRD	**Birdtown, Kers**	55.82	77	P	P	21 00 54.6	-0.6
	baz=318,SNR=6.3						
154A	**Montrose**	55.85	81	P	P	21 00 54.4	-1.1
154A				IAmb	IAmb	21 00 55.0	
	comp=Z,99nm,1.1s						
154A	**Montrose**	55.85	81	P	P	21 00 53.7	-1.8
	baz=318						
451A	**Vernon**	55.85	85	P	P	21 00 55.3	-0.2
451A	**Vernon**	55.85	85	P	P	21 00 54.7	-0.8
	baz=319,SNR=6.3						
T60A	**Surry**	56.03	73	P	P	21 00 56.5	-0.2
T60A	**Surry**	56.03	73	P	P	21 00 56.2	-0.5
	baz=317,SNR=6.3						
T60A				P	P	21 00 56.2	-0.5
	baz=317,SNR=6.3						
U59A	**Littleton**	56.03	74	P	P	21 00 56.6	-0.1
U59A				IAmb	IAmb	21 00 57.1	
	comp=Z,53nm,0.8s						
U59A	**Littleton**	56.03	74	P	P	21 00 56.6	-0.1
	baz=317,SNR=12						
U59A				P	P	21 00 56.6	-0.1
	baz=317,SNR=12						
HAW	**Hawthorne Fire**	56.13	79	P	P	21 00 56.5	-1.0
	baz=318,SNR=11						
Y57A	**Sumter**	56.32	78	P	P	21 00 58.5	-0.3
Y57A				IAmb	IAmb	21 00 58.6	
	comp=Z,81nm,1.1s						
Y57A	**Sumter**	56.32	78	P	P	21 00 58.3	-0.6
	baz=318						
Y57A				P	P	21 00 58.3	-0.6
	baz=318						
TIGA	**Tifton**	56.45	82	P	P	21 00 58.2	-1.6
TIGA				IAmb	IAmb	21 00 58.8	
	comp=Z,123nm,1.4s						
TIGA	**Tifton**	56.45	82	P	P	21 00 58.1	-1.8
	baz=319						
LVZ	**Lovozero**	56.50	354	P	P	21 00 58.9	-0.8
LVZ				IAmb	IAmb	21 01 01.1	
	comp=Z,114nm,1.0s						
LVZ				IAMs_20	IAMs_20	21 24 26.0	
	comp=Z,2µm,21.0s						
LVZ	**Lovozero**	56.50	354	P	P	21 00 58.9	-0.8
LVZ				pmax	pmax		
	comp=Z,114nm,1.0s						
LVZ				MLR	MLR		
	comp=Z,2µm,21.0s						
LVZ	**Lovozero**	56.50	354	P	P	21 00 59.9	+0.2
LVZ				pP	pP	21 01 10.4	-0.8
LVZ				sP	sP	21 01 14.0	-1.8
X58A	**Rowland**	56.51	76	P	P	21 01 00.0	-0.1
	baz=318						
X58A				P	P	21 01 00.0	-0.1
	baz=318						
LOF	**Lofoten**	56.52	4	⇓*i*P	P	21 00 59.7	-0.1
DRLN	**Deer Lake**	56.66	50	P	P	21 01 00.6	-0.4
DRLN				IAmb	IAmb	21 01 01.1	
	comp=Z,87nm,0.9s						
255A	**Hazlehurst**	56.72	81	P	P	21 01 00.2	-1.4
255A				IAmb	IAmb	21 01 01.6	
	comp=Z,217nm,1.7s						
STEI	**Steigen**	56.78	3	⇓*i*P	P	21 01 01.7	+0.1
CNNC	**Cliffs of the**	56.80	75	P	P	21 01 02.0	-0.2
CNNC	**Cliffs of the**	56.80	75	P	P	21 01 02.0	-0.2
	baz=318						
CNNC	**Cliffs of the**	56.80	75	P	P	21 01 01.4	-0.8
	baz=318						
Y58A	**Scranton**	56.81	77	P	P	21 01 02.2	-0.1
Y58A				IAmb	IAmb	21 01 31.9	
	comp=Z,81nm,0.8s						
KNGR	**Kungurtug, Tuv**	56.84	312	*c i*P	P	21 01 04.3	+1.9
KNGR				pmax	pmax		
	comp=Z,163nm,1.0s						
553A	**Crawfordville**	56.92	84	P	P	21 01 02.5	-0.6
553A	**Crawfordville**	56.92	84	P	P	21 01 01.4	-1.7
	baz=319,SNR=19						
V61A	**Roper**	57.11	74	P	P	21 01 02.8	-1.6
	baz=318						
V61A				P	P	21 01 02.8	-1.6
	baz=318						
NHSC	**New Hope**	57.12	78	P	P	21 01 03.7	-0.8
NHSC	**New Hope**	57.12	78	P	P	21 01 03.7	-0.8
	baz=318						
NHSC				S	S	21 08 55.8	-0.8
	baz=318						
FAUS	**Fauske**	57.33	3	⇓*i*P	P	21 01 05.7	+0.2
HHC	**Hu-ho-hao-te**	57.50	296	*e*P	P	21 01 08.8	+1.5
HHC				S	S	21 09 00.8	-1.0
HHC				ScS	ScS	21 10 52.3	-1.0
HHC				SS	SS	21 12 49.8	-1.5
HHC				pmax	pmax		
	comp=Z,75nm,1.0s						
HHC				pmax	pmax		
	comp=Z,790nm,5.7s						
HHC				LR	LR		
	comp=Z,3µm,16.5s						
HHC				LR	LR		
	comp=Z,4µm,15.2s						
HHC				LR	LR		
	comp=Z,6µm,16.5s						
TIA	**Tai'an**	58.01	288	P	P	21 01 11.8	+1.0
TIA				pP	pP	21 01 21.5	-0.8
TIA				S	S	21 09 08.3	0.0
TIA				SS	SS	21 12 57.5	-1.8
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
TIA				pmax	pmax		
	comp=Z,120nm,4.4s						
TIA				LR	LR		
	comp=Z,1µm,19.9s						
TIA				LR	LR		
	comp=Z,3µm,22.1s						
TIA				LR	LR		
	comp=Z,4µm,20.7s						
KONS	**Konsvik**	58.14	4	*e*P	P	21 01 11.5	+0.3
STOK	**Stokkvaagen**	58.30	4	*e*P	P	21 01 13.5	+1.2
HNS	**HongShan**	58.42	291	⇑P	P	21 01 14.8	+1.2
HNS				pP	pP	21 01 25.3	+0.2
HNS				S	S	21 09 13.3	-0.3
HNS				sS	sS	21 09 34.0	+1.2
HNS				ScS	ScS	21 10 58.0	-1.8
HNS				pmax	pmax		
	comp=Z,140nm,1.1s						
HNS				LR	LR		
	comp=Z,2µm,20.8s						
HNS				LR	LR		
	comp=Z,3µm,19.4s						
HNS				LR	LR		
	comp=Z,3µm,21.4s						
BTO	**Baotou**	58.47	297	*e*P	P	21 01 14.5	+0.5
BTO				S	S	21 09 12.0	-2.4
BTO				LR	LR		
	comp=Z,7µm,16.9s						
BTO				LR	LR		
	comp=Z,9µm,18.4s						
MOR8	**Moi Rana**	58.52	3	⇓*i*P	P	21 01 13.0	-0.8
656A	**Willston**	58.61	83	P	P	21 01 14.1	-0.9
656A				IAmb	IAmb	21 01 15.6	
	comp=Z,147nm,1.6s						
656A	**Willston**	58.61	83	P	P	21 01 14.0	-0.9
	baz=320,SNR=5.6						
TARA	**Tarawa**	58.73	214	P	P	21 01 15.0	-0.9
TARA	**Tarawa**	58.73	214	IAMs_20	IAMs_20	21 20 42.0	
	comp=Z,3µm,21.0s						
TLIG	**Tlapa**	58.83	105	P	P	21 01 17.2	+0.5
TLIG				IAmb	IAmb	21 01 50.2	
	comp=Z,54nm,1.1s						
JOW	**Kunigami**	58.88	273	P	P	21 01 18.2	+1.3
	comp=Z,16nm,0.4s,baz=39,slow=13,SNR=9.0						
JOW				LR	LR	21 24 30.9	
	comp=Z,548nm,21.1s,baz=104,slow=34						
	comp=Z,16nm,0.4s						
JOW	**Kunigami**	58.88	273	P	P	21 01 17.4	+0.5
JOW				IAmb	IAmb	21 01 33.0	
	comp=Z,120nm,1.2s						
JOW	**Kunigami**	58.88	273	P	P	21 01 19.4	+2.5
ZAA0	**Zalesovo Array**	59.13	322	P	P	21 01 18.4	+0.1
ZAA0				IAmb	IAmb	21 01 21.6	
	comp=Z,54nm,0.9s						
ZALV	**Zalesovo Beam**	59.13	322	P	P	21 01 19.0	+0.7
	comp=Z,56nm,0.9s,baz=33,slow=6.3,SNR=95						
ZALV				LR	LR	21 28 56.4	
	comp=Z,5µm,18.7s,baz=34,slow=38						
ZALV				PKP2bc		21 30 59.4	
	comp=Z,0.9nm,0.6s,baz=217,slow=7.1,SNR=4.7						
	comp=Z,56nm,0.9s						
ZALV	**Zalesovo Beam**	59.13	322	P	P	21 01 18.5	+0.3
ZALV	**Zalesovo Beam**	59.13	322	*i* P	P	21 01 19.0	+0.7
ZALV				pmax	pmax		
	comp=Z,56nm,0.9s						
PATS	**Pohnpei**	59.35	232	P	P	21 01 20.2	0.0
PATS				IAMs_20	IAMs_20	21 20 51.1	
	comp=Z,2µm,22.0s						
TIY	**Taiyuan**	59.38	293	P	P	21 01 22.3	+1.9
TIY				S	S	21 09 28.8	+2.5
TIY				SS	SS	21 13 20.3	-0.6
TIY				pmax	pmax		
	comp=Z,26nm,1.4s						
TIY				LR	LR		
	comp=Z,2µm,17.9s						
TIY				LR	LR		
	comp=Z,1µm,18.5s						
TIY				LR	LR		
	comp=Z,2µm,21.3s						
SSE	**Sheshan**	59.62	282	P	P	21 01 22.5	+0.5
SSE				S	S	21 09 30.5	+1.3
SSE				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,280nm,4.2s						
SSE				LR	LR		
	comp=Z,310nm,21.6s						
SSE				LR	LR		
	comp=Z,270nm,22.7s						
NSS	**Namsos**	60.06	5	⇓*i*P	P	21 01 24.9	+0.4
NJ2	**Nanjing**	60.19	284	⇑P	P	21 01 26.8	+0.9
NJ2				pP	pP	21 01 37.0	-0.4
NJ2				sP	sP	21 01 39.3	-2.7
NJ2				S	S	21 09 37.0	+0.5
NJ2				sS	sS	21 09 58.5	+2.7
NJ2				ScS	SKKSac	21 11 08.5	-4.4
NJ2				pmax	pmax		
	comp=Z,47nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,21.6s						
NJ2				LR	LR		
	comp=Z,2µm,21.1s						
NJ2				LR	LR		
	comp=Z,2µm,22.1s						
GUMO	**Guam**	60.19	249	LR	LR	21 24 18.0	
	comp=Z,837nm,21.1s,baz=40,slow=33						
GUMO	**Guam**	60.19	249	P	P	21 01 24.0	-2.1
GUMO	**Guam**	60.19	249	P	P	21 01 24.0	-2.1
GUMO				pmax	pmax		
	comp=Z,152nm,1.3s						
GUMO				MLR	MLR		
	comp=Z,900nm,20.0s						
GUMO	**Guam**	60.19	249	P	P	21 01 29.2	+3.1
DWPF	**Disney Wildern**	60.20	83	P	P	21 01 24.4	-1.6
DWPF				IAmb	IAmb	21 01 26.6	
	comp=Z,88nm,1.2s						
DWPF	**Disney Wildern**	60.20	83	IAMs_20	IAMs_20	21 26 25.8	
	comp=Z,2µm,19.0s						
DWPF	**Disney Wildern**	60.20	83	P	P	21 01 24.1	-1.9
	baz=320						
TBLU	**Trondheim**	61.24	6	⇓*i*P	P	21 01 32.1	-0.5
CMIG	**Matias Romero**	61.25	102	LR	LR	21 26 41.4	
	comp=Z,2µm,21.2s,baz=317,slow=35						
PRGR	**Permogore**	61.63	347	⇓*i*P	P	21 01 35.6	+0.4
PRGR				*e*S	S	21 09 55.2	+1.1
MOL	**Molde**	61.75	7	⇓*i*P	P	21 01 36.8	+0.9
LYN	**LuoYang**	61.76	290	⇑P	P	21 01 37.3	+0.8
LYN				pP	pP	21 01 46.3	-1.8
LYN				sP	sP	21 01 50.5	-2.2
LYN				S	S	21 09 54.8	-1.7
LYN				SS	SS	21 13 54.8	-3.2
LYN				pmax	pmax		
	comp=Z,120nm,0.9s						
LYN				pmax	pmax		
	comp=Z,370nm,6.8s						
LYN				LR	LR		
	comp=Z,3µm,19.4s						
LYN				LR	LR		
	comp=Z,4µm,21.2s						
LYN				LR	LR		
	comp=Z,3µm,22.3s						
AKN	**Aaknes**	62.10	8	⇓*i*P	P	21 01 39.6	+1.2
JMJ	**Miyako jima 2**	62.13	274	P	P	21 01 42.6	+3.5
	comp=Z,1µm,0.7s						
061Z	**Ochoppi**	62.22	84	P	P	21 01 39.8	+0.1
DOMB	**Dombas**	62.38	7	⇓*i*P	P	21 01 40.6	+0.3
FOO	**Floro**	62.51	9	⇓*i*P	P	21 01 41.1	0.0
SUE	**Sulen**	63.02	9	⇓*i*P	P	21 01 44.7	+0.2
HYA	**Hoyanger**	63.04	8	*e*P	P	21 01 45.3	+0.7
NC204	**NORSAR Array S**	63.24	6	P	P	21 01 45.7	-0.3
LRW	**Lerwick**	63.30	12	*e*P	P	21 01 47.3	+0.9
LRW				IAmb	IAmb	21 01 48.1	
	comp=Z,125nm,0.7s						
FIA1	**FINESS Array S**	63.32	357	P	P	21 01 46.6	+0.1
FIA0	**FINESS Array S**	63.32	357	P	P	21 01 46.3	-0.2
FIA0	**FINESS Array S**	63.32	357	P	P	21 01 46.3	-0.2
FINES	**FINESS Array B**	63.32	357	P	P	21 01 46.6	+0.1
	comp=Z,60nm,0.8s,baz=2.8,slow=8.3,SNR=137						
FINES				LR	LR	21 29 35.6	
	comp=Z,696nm,21.7s,baz=10.0,slow=36						
FINES				PKPPKP	P'P'df	21 30 43.2	-7.0
	comp=Z,3.1nm,1.0s,baz=119,slow=6.7,SNR=4.5						
	comp=Z,60nm,0.8s						
NC303	**NORSAR Array S**	63.33	5	P	P	21 01 47.1	+0.6
SOR	**Soroa**	63.43	88	P	P	21 01 47.4	-0.4
SOR				IAmb	IAmb	21 01 48.3	
	comp=Z,96nm,1.4s						
SOR	**Soroa**	63.43	88	P	P	21 01 47.4	-0.4
SOR				pmax	pmax		
	comp=Z,96nm,1.4s						
NC405	**NORSAR Array S**	63.46	5	P	P	21 01 48.1	+0.6
NBO00	**NORSAR Array S**	63.49	6	P	P	21 01 48.1	+0.5
NB201	**NORSAR Array S**	63.50	5	P	P	21 01 48.5	+0.7
NB2	**NORSAR Subarra**	63.50	6	P	P	21 01 48.2	+0.5
	comp=Z,166nm,1.2s,baz=353,slow=6.9						
NB2	**NORSAR Subarra**	63.50	6	P	P	21 01 48.2	+0.5
	baz=353,slow=6.9						
NOA	**NORSAR Array B**	63.50	6	P	P	21 01 48.3	+0.5
	comp=Z,34nm,0.9s,baz=353,slow=6.7,SNR=101						
NOA				PKPPKP		21 30 50.9	
	comp=Z,0.7nm,0.8s,baz=147,slow=2.6,SNR=3.2						
	comp=Z,34nm,0.9s						
SVE	**Sverdlovsk**	63.58	337	*ce*P	P	21 01 49.0	+0.7
SVE				*e*S	S	21 10 18.2	-0.5
SVE				*e*		21 17 21.1	
SVE				pmax	pmax		
	comp=Z,127nm,1.1s						
ASK	**Askoy**	63.63	9	⇓*i*P	P	21 01 49.4	+0.9
SEM	**Semipalatinsk**	63.64	322	*de*P	P	21 01 48.9	-0.2
SEM				*e*S	S	21 10 19.5	-0.7
SEM	**Semipalatinsk**	63.64	322	⇓*e*P	P	21 01 48.9	-0.2
	baz=322						
SEM				*e*S	S	21 10 19.6	-0.7
	baz=322						
SEM				LR	LR	21 30 13.2	
	baz=322						
SKAR	**Skarslia**	63.68	7	⇓*i*P	P	21 01 49.6	+0.7
NAO01	**NORSAR Array S**	63.68	6	P	P	21 01 49.3	+0.4
YOJ	**Yonaguni jima**	63.70	275	P	P	21 01 49.3	-0.2
YOJ	**Yonaguni jima**	63.70	275	P	P	21 01 49.3	-0.2
YOJ				pmax	pmax		
	comp=Z,140nm,1.0s						
YOJ	**Yonaguni jima**	63.70	275	P	P	21 01 51.2	+1.7
BER	**Bergen**	63.74	9	⇓*i*P	P	21 01 50.2	+1.0
RAF	**Rauma**	63.80	360	*e*P	P	21 01 50.2	+0.6
WHN	**Wuhan**	63.81	286	⇓P	P	21 01 52.0	+1.8
WHN				S	S	21 10 22.8	+0.5
WHN				pmax	pmax		
	comp=Z,150nm,1.2s						
WHN				LR	LR		
	comp=Z,4µm,18.8s						
WHN				LR	LR		
	comp=Z,760nm,11.9s						
WHN				LR	LR		
	comp=Z,6µm,25.8s						
WHN				LR	LR		
	comp=Z,6µm,25.8s						
NC602	**NORSAR Array S**	63.82	5	P	P	21 01 50.3	+0.4
NC602	**NORSAR Array S**	63.82	5	⇓*i*P	P	21 01 50.0	+0.1
KURK	**Kurchatov**	63.94	323	P	P	21 01 51.0	+0.2
KURK				IAmb	IAmb	21 01 54.1	
	comp=Z,67nm,0.9s						
KURK	**Kurchatov**	63.94	323	*ce*P	P	21 01 51.1	+0.3
KURK				pmax	pmax		
	comp=Z,107nm,1.2s						
KURK	**Kurchatov**	63.94	323	P	P	21 01 51.5	+0.7
KURK				pP	pP	21 02 03.0	+0.6
XAN	**Xi'an**	64.03	293	P	P	21 01 52.8	+1.2

XAN				pP	pP	21 01 59.3	-4.0
XAN				S	S	21 10 24.3	-0.7
XAN				ScS	SKKSac	21 11 40.0	-2.1
XAN				pmax	pmax		
	comp=Z,120nm,0.9s						
XAN				pmax	pmax		
	comp=Z,490nm,4.0s						
XAN				LR	LR		
	comp=Z,2µm,14.4s						
XAN				LR	LR		
	comp=Z,3µm,17.2s						
XAN				LR	LR		
	comp=Z,4µm,19.9s						
XAN	Xi'an	64.03	293	P	P	21 01 52.6	+1.0
XAN				pP	pP	21 02 03.1	-0.2
KIRV	Kirov	64.04	344	LR	LR	21 35 00.2	
	comp=Z,2µm,18.2s,baz=12,slow=41						
KIRV	Kirov	64.04	344	ceP	P	21 01 50.3	-0.9
KURBB	Kurchatov Arra	64.05	323	PKPPKP		21 30 45.8	
	comp=Z,1.2nm,1.1s,baz=224,slow=2.8,SNR=5.0						
KURBB				LR	LR	21 33 10.5	
	comp=Z,1µm,18.6s,baz=18,slow=39						
TATO	Taipei	64.16	277	IAMs_20	IAMs_20	21 27 46.0	
	comp=Z,1µm,22.0s						
PETF	Flores	64.20	98	P	P	21 01 52.8	-0.1
PETF				IAmb	IAmb	21 01 54.3	
	comp=Z,132nm,1.5s						
ODD1	Odda	64.31	8	eP	P	21 01 54.0	+0.9
ARU	Arti	64.39	338	LR	LR	21 32 02.8	
	comp=Z,2µm,21.9s,baz=20,slow=38						
ARU	Arti	64.39	338	P	P	21 01 53.2	-0.4
ARU				IAMs_20	IAMs_20	21 32 44.0	
	comp=Z,2µm,20.0s						
ARU	Arti	64.39	338	d iP	P	21 01 53.6	0.0
ARU						21 02 24.9	
ARU						21 04 13.8	
ARU				S	S	21 10 29.0	+0.2
ARU						21 11 39.4	
ARU				SS	SS	21 14 35.4	-2.6
ARU				SSS	SSS	21 17 24.3	
ARU				pmax	pmax		
	comp=Z,148nm,1.3s						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s						
ARU	Arti	64.39	338	P	P	21 01 53.8	+0.1
ZSN	Zaisan	64.42	318	d iP	P	21 01 55.1	+1.1
ZSN				i S	S	21 10 31.5	+2.0
ZSN				pmax	pmax		
	comp=Z,54nm,1.1s						
ZSN	Zaisan	64.42	318	⇓iP	P	21 01 55.2	+1.1
	comp=Z,54nm,1.1s,baz=318						
ZSN				i S	S	21 10 31.5	+2.0
	baz=318						
GTA	Gaotai	64.42	303	⇑P	P	21 01 55.5	+1.2
GTA				S	S	21 10 29.5	-0.5
GTA				sS	sS	21 10 51.0	+1.5
GTA				SS	SS	21 14 38.0	-1.6
GTA				pmax	pmax		
	comp=Z,57nm,1.4s						
GTA				pmax	pmax		
	comp=Z,360nm,6.2s						
GTA				LR	LR		
	comp=Z,2µm,17.8s						
GTA				LR	LR		
	comp=Z,2µm,19.6s						
GTA				LR	LR		
	comp=Z,5µm,18.2s						
LEWI	Lewis, Hebride	64.42	16	eP	P	21 01 54.8	+1.0
LEWI				IAmb	IAmb	21 01 55.3	
	comp=Z,102nm,0.9s						
YHNB	Yeheng	64.46	277	P	P	21 01 53.2	-1.4
YHNB				IAMs_20	IAMs_20	21 29 42.1	
	comp=Z,1µm,21.0s						
YHNB	Yeheng	64.46	277	P	P	21 01 58.6	+4.0
BRVK	Borovoye	64.52	330	P	P	21 01 54.4	-0.2
BRVK				IAmb	IAmb	21 01 57.8	
	comp=Z,56nm,0.8s						
BRVK	Borovoye	64.52	330	ceP	P	21 01 54.5	0.0
BRVK				pmax	pmax		
	comp=Z,76nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,3µm,22.0s						
BRVK	Borovoye	64.52	330	P	P	21 01 55.3	+0.8
BRVK				pP	pP	21 02 05.3	-0.9
HFS	Hagfors	64.53	4	LR	LR	21 29 46.7	
	comp=Z,564nm,21.5s,baz=354,slow=36						
BIGH	Upper Bighouse	64.53	14	eP	P	21 01 55.3	+0.9
BIGH				IAmb	IAmb	21 01 56.6	
	comp=Z,301nm,1.6s						
OSL	Oslo	64.57	6	⇓iP	P	21 01 55.5	+0.8
AAL	Aland	64.64	1	eP	P	21 01 55.2	0.0
LINV	Loch Inver, As	64.68	15	eP	P	21 01 56.2	+0.8
LINV				IAmb	IAmb	21 01 57.0	
	comp=Z,70nm,0.8s						
NACB	Ninganchiao	64.72	276	P	P	21 01 55.3	-0.9
NACB				IAmb	IAmb	21 02 20.4	
	comp=Z,60nm,1.0s						
BLS5	Blasjo	64.78	8	⇓iP	P	21 01 56.9	+0.8
MLA1	Latheron	64.79	14	eP	P	21 01 57.1	+1.0
KONO	Kongsberg	64.79	7	P	P	21 01 56.8	+0.6
KONO	Kongsberg	64.79	7	P	P	21 01 56.8	+0.6
KONO				pmax	pmax		
	comp=Z,303nm,1.7s						
KONO				MLR	MLR		
	comp=Z,1µm,20.0s						
KONO	Kongsberg	64.79	7	⇓iP	P	21 01 57.2	+1.1
KONO	Kongsberg	64.79	7	P	P	21 01 57.2	+1.1
PUL	Pulkovo	64.83	355	ceP	P	21 01 56.8	+0.4
PUL				pmax	pmax		
	comp=Z,118nm,0.5s						
KMY	Karmoy	64.89	9	eP	P	21 01 57.3	+0.5
LZH	Lanzhou	65.05	298	⇑P	P	21 02 00.0	+1.6
LZH				pP	pP	21 02 09.8	-0.3
LZH				sP	sP	21 02 15.0	+0.4
LZH				S	S	21 10 33.0	-4.8
LZH				sS	sS	21 10 57.0	-0.3
LZH				pmax	pmax		
	comp=Z,130nm,1.3s						
LZH				pmax	pmax		
	comp=Z,520nm,6.6s						
LZH				LR	LR		
	comp=Z,3µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
LZH				LR	LR		
	comp=Z,4µm,18.0s						
KAC	Achnashellach	65.29	15	eP	P	21 02 00.3	+0.9
KPL	Plockton	65.39	16	eP	P	21 02 00.9	+0.8
KPL				IAmb	IAmb	21 02 01.5	
	comp=Z,70nm,0.9s						
SSLB	Suanglung	65.39	276	P	P	21 02 01.5	+0.9
SSLB				IAmb	IAmb	21 02 15.8	
	comp=Z,101nm,1.0s						
SSLB	Suanglung	65.39	276	P	P	21 02 03.2	+2.6
MCD	Coleburn Disti	65.50	14	eP	P	21 02 02.0	+1.2
YULB	Yu-li	65.50	276	P	P	21 02 03.1	+1.7
YULB				IAmb	IAmb	21 02 25.1	
	comp=Z,99nm,1.3s						
QZH	Quanzhou	65.81	279	⇑iP	P	21 02 04.0	+0.7
QZH				pP	pP	21 02 14.0	-1.0
QZH				S	S	21 10 47.8	+0.8
QZH				ScS	SKSac	21 11 56.0	+0.2
QZH				pmax	pmax		
	comp=Z,250nm,4.2s						
QZH				LR	LR		
	comp=Z,560nm,20.1s						
QZH				LR	LR		
	comp=Z,410nm,14.7s						
QZH				LR	LR		
	comp=Z,940nm,21.6s						
SNART	Snartemo	65.92	8	⇓iP	P	21 02 04.6	+1.1
MK31	Makanchi Array	65.94	319	P	P	21 02 04.1	+0.2
MK31				IAmb	IAmb	21 02 18.9	
	comp=Z,80nm,1.6s						
MK31	Makanchi Array	65.94	319	P	P	21 02 04.1	+0.2
MK31				pmax	pmax		
	comp=Z,80nm,1.6s						
MKAR	Makanchi Array	65.94	319	P	P	21 02 04.0	+0.2
	comp=Z,16nm,0.6s,baz=43,slow=4.7,SNR=102						
MKAR				PKPPKP	P'P'df	21 30 39.2	-5.8
	comp=Z,0.8nm,0.9s,baz=241,slow=1.2,SNR=6.2						
MKAR				LR	LR	21 33 07.4	
	comp=Z,5µm,18.1s,baz=27,slow=38						
	comp=Z,16nm,0.6s						
MKAR	Makanchi Array	65.94	319	P	P	21 02 03.8	-0.1
MKAR	Makanchi Array	65.94	319	P	P	21 02 03.8	-0.1
TPUB	Ta-pu	65.95	276	IAmb	IAmb	21 02 23.0	
	comp=Z,36nm,0.7s						
TPUB				IAMs_20	IAMs_20	21 30 43.7	
	comp=Z,1µm,21.0s						
TPUB	Ta-pu	65.95	276	P	P	21 02 07.2	+2.9
TAOE	Nuku Hiva Isla	65.97	160	P	P	21 02 03.5	-0.9
TAOE				IAmb	IAmb	21 02 34.5	
	comp=Z,45nm,0.7s						
MAKZ	Makanchi	66.05	319	P	P	21 02 04.5	0.0
MAKZ				IAmb	IAmb	21 02 31.5	
	comp=Z,67nm,1.1s						
MAKZ	Makanchi	66.05	319	P	P	21 02 04.5	0.0
MAKZ				pmax	pmax		
	comp=Z,67nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,5µm,19.0s						
MAKZ	Makanchi	66.05	319	P	P	21 02 04.8	+0.2
TWG	Pinlang	66.08	276	P	P	21 02 04.6	-0.5
TWG				IAmb	IAmb	21 02 11.5	
	comp=Z,43nm,0.4s						
HOMB	Homborsund	66.09	7	⇓iP	P	21 02 05.5	+1.0
MTSE	Matsula	66.10	359	eP	P	21 02 05.0	+0.4
DRUM	Mains of Drumt	66.26	14	eP	P	21 02 06.6	+0.9
DRUM				IAmb	IAmb	21 02 07.1	
	comp=Z,282nm,0.6s						
VIKU	Vikbolandet	66.27	3	eP	P	21 02 06.3	+0.6
VSU	Vasula	66.29	357	d iP	P	21 02 05.7	-0.1
VSU				pmax	pmax		
	comp=Z,345nm,0.9s						
VSU	Vasula	66.29	357	eP	P	21 02 06.4	+0.6
WMQ	Urumqi	66.29	314	⇑iP	P	21 02 07.5	+1.3
WMQ				pP	pP	21 02 18.0	+0.1
WMQ				S	S	21 10 53.8	+1.3
WMQ				ScS	SKSac	21 11 58.3	-0.8
WMQ				pmax	pmax		
	comp=Z,36nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,400nm,4.1s						
WMQ				LR	LR		
	comp=Z,3µm,20.1s						
WMQ				LR	LR		
	comp=Z,2µm,25.3s						
WMQ				LR	LR		
	comp=Z,3µm,24.3s						
KNMB	Chin-men Tao	66.30	279	IAMs_20	IAMs_20	21 31 03.9	
	comp=Z,1µm,21.0s						
CNSH	ChangSha	66.42	286	⇓P	P	21 02 05.5	-1.7
CNSH				S	S	21 10 51.8	-2.6
CNSH				pmax	pmax		
	comp=Z,50nm,1.1s						
CNSH				LR	LR		
	comp=Z,1µm,18.9s						
CNSH				LR	LR		
	comp=Z,1µm,22.1s						
CNSH				LR	LR		
	comp=Z,2µm,20.0s						
LAWE	Loch Awe, Argy	66.46	16	eP	P	21 02 07.9	+0.9
LAWE				IAmb	IAmb	21 02 08.5	
	comp=Z,85nm,0.9s						
INVG	Invergeldie, C	66.51	15	eP	P	21 02 08.1	+0.8
INVG				IAmb	IAmb	21 02 08.7	
	comp=Z,66nm,0.9s						
BRZS	Berezniki	66.51	327	d iP	P	21 02 07.8	+0.4
BRZS				pmax	pmax		
	comp=Z,34nm,1.0s						
BRZS	Berezniki	66.51	327	⇓iP	P	21 02 07.9	+0.5
	comp=Z,34nm,1.0s,baz=327						
EDU	Dundee	66.54	14	eP	P	21 02 08.3	+0.8
ENH	Enshi	66.66	290	P	P	21 02 09.1	+0.4
ENH				IAmb	IAmb	21 02 11.9	
	comp=Z,110nm,1.1s						
ENH	Enshi	66.66	290	P	P	21 02 09.9	+1.2
EAB	Aberfoyle	66.69	15	eP	P	21 02 09.3	+0.8
PGBU	Glenifferbraes	67.04	16	eP	P	21 02 11.1	+0.4
PGBU				IAmb	IAmb	21 02 12.1	
	comp=Z,92nm,0.9s						
EDI	Edinburgh	67.12	15	eP	P	21 02 12.2	+1.0
EDI				IAmb	IAmb	21 02 12.7	
	comp=Z,96nm,1.0s						
SNET	Serv Nac Est T	67.17	99	IAMs_20	IAMs_20	21 28 42.1	
	comp=Z,1µm,20.0s						
SLIT	Slitere, Latvi	67.20	359	eP	P	21 02 11.9	+0.3
EBL	Broad Law	67.29	15	eP	P	21 02 13.4	+1.1
GOET	G??ttrup	67.37	7	i P	P	21 02 14.3	+1.6
CLGH	Cloghs, Cushen	67.48	17	eP	P	21 02 14.3	+0.8
CLGH				IAmb	IAmb	21 02 15.7	
	comp=Z,88nm,1.2s						
EKA	Eskdalemuir Ar	67.70	15	LR	LR	21 31 06.2	
	comp=Z,1µm,21.9s,baz=352,slow=35						
ESK	Eskdalemuir	67.71	15	eP	P	21 02 15.7	+0.8
ESK				IAmb	IAmb	21 02 16.4	
	comp=Z,75nm,0.9s						
ESK	Eskdalemuir	67.71	15	P	P	21 02 15.6	+0.8
ESK				IAmb	IAmb	21 02 38.8	
	comp=Z,101nm,1.1s						
ESK	Eskdalemuir	67.71	15	IAMs_20	IAMs_20	21 32 22.0	
	comp=Z,1µm,20.0s						
ESK	Eskdalemuir	67.71	15	P	P	21 02 15.6	+0.7
ESK				pmax	pmax		
	comp=Z,101nm,1.1s						
ESK				MLR	MLR		
	comp=Z,1µm,20.0s						
ESK	Eskdalemuir	67.71	15	P	P	21 02 16.0	+1.1
NEWG	New Galloway	67.75	16	eP	P	21 02 15.8	+0.7
NEWG				IAmb	IAmb	21 02 16.4	
	comp=Z,72nm,1.0s						
GAL1	Galloway	67.91	16	eP	P	21 02 16.5	+0.3
GAL1				IAmb	IAmb	21 02 17.5	
	comp=Z,85nm,0.9s						
MUD	Monsted U'grnd	67.94	7	⇓iP	P	21 02 17.4	+1.1
MUD				IAmb	IAmb	21 02 18.1	
	comp=Z,78nm,0.9s						
TGUH	Tegucigalpa,Un	67.97	97	P	P	21 02 17.9	+0.7
TGUH				IAMs_20	IAMs_20	21 30 03.4	
	comp=Z,2µm,21.0s						
DEL	Delary	68.20	4	eP	P	21 02 18.4	+0.4
MOS	Moscow	68.31	350	eP	P	21 02 15.9	-2.8
MOS				e		21 02 33.4	
MOS				eS	S	21 11 11.3	-4.9
MOS				e		21 11 34.9	
MOS				pmax	pmax		
	comp=Z,189nm,1.5s						
MOS				pmax	pmax		
	comp=Z,500nm,2.1s						
MOS				MLR	MLR		
	comp=Z,1µm,21.0s						
EDMD	Edmundbyers	68.36	14	eP	P	21 02 19.9	+0.9
EDMD				IAmb	IAmb	21 02 21.1	
	comp=Z,286nm,1.6s						
IOMK	Kirk Michael	68.52	16	eP	P	21 02 20.7	+0.7
WIM	Isle of Man	68.61	16	eP	P	21 02 21.0	+0.4
PBUR	Paburge	68.81	360	eP	P	21 02 22.2	+0.4
TDK	Taldyqorghan	68.90	320	eP	P	21 02 23.6	+1.0
TDK				pmax	pmax		
	comp=Z,79nm,1.2s						
TDK				MLR	MLR		
	comp=Z,5µm,19.0s						
TDK	Taldyqorghan	68.90	320	eP	P	21 02 23.6	+1.0
	comp=Z,79nm,1.2s,baz=320						
TDK				LR	LR	21 33 00.5	
	comp=Z,5µm,19.1s,baz=320						
COP	Copenhagen	68.91	5	i P	P	21 02 22.6	+0.2
COP				IAmb	IAmb	21 02 23.7	
	comp=Z,252nm,1.3s						
OBN	Obninsk	69.03	351	⇑P	P	21 02 23.4	+0.3
OBN	Obninsk	69.03	351	LR	LR	21 37 24.0	
	comp=Z,228nm,20.0s,baz=14,slow=40						
OBN	Obninsk	69.03	351	P	P	21 02 22.9	-0.3
OBN				IAMs_20	IAMs_20	21 35 32.2	
	comp=Z,1µm,21.0s						
OBN	Obninsk	69.03	351	ceP	P	21 02 22.8	-0.3
OBN				i		21 02 39.6	
OBN				e		21 04 54.2	
OBN				eS	S	21 11 18.4	-6.3
OBN				eSS	SS	21 15 59.2	+10
OBN				pmax	pmax		
	comp=Z,201nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,22.0s						
OBN	Obninsk	69.03	351	P	P	21 02 23.1	-0.1
CD2	Chengdu	69.17	294	P	P	21 02 26.3	+1.8
CD2				pP	pP	21 02 37.0	+0.7
CD2				sP	sP	21 02 44.0	+3.2
CD2				S	S	21 11 27.3	-0.1
CD2				sS	sS	21 11 49.5	+2.5
CD2				SS	SS	21 15 55.5	+2.1
CD2				pmax	pmax		
	comp=Z,220nm,0.8s						
CD2				pmax	pmax		
	comp=Z,370nm,4.3s						
CD2				LR	LR		
	comp=Z,2µm,19.0s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
ISAL	Salakas	69.20	357	eP	P	21 02 24.9	+0.7
PABE	Paberze	69.31	358	P	P	21 02 24.9	0.0
PABE				IAMs_20	IAMs_20	21 33 06.6	
	comp=Z,1µm,21.0s						
PABE	Paberze	69.31	358	eP	P	21 02 25.6	+0.7
GOMU	GeErMu	69.36	304	P	P	21 02 27.0	+1.0
GOMU				S	S	21 11 24.5	-5.6
GOMU				pmax	pmax		
	comp=Z,19nm,1.4s						
GOMU				pmax	pmax		
	comp=Z,260nm,3.9s						
GOMU				LR	LR		
	comp=Z,1µm,19.2s						
GOMU				LR	LR		
	comp=Z,2µm,19.1s						
GOMU				LR	LR		
	comp=Z,1µm,19.8s						
IIGN	Ignalina	69.42	357	eP	P	21 02 26.4	+0.8
IDID	Didziasalis	69.44	357	eP	P	21 02 26.4	+0.7
MATN	Matagalpa	69.64	97	P	P	21 02 26.2	-1.4
MATN				IAmb	IAmb	21 02 27.2	
	comp=Z,77nm,0.8s						
YLL	Llanberis	69.67	16	eP	P	21 02 27.4	+0.3
LBWR	Ladybower, Pea	69.78	15	eP	P	21 02 28.5	+0.7
LBWR				IAmb	IAmb	21 02 29.3	
	comp=Z,119nm,1.1s						
NACGM	Naroch	69.85	357	eP	P	21 02 28.6	+0.4
AFI	Afiamalu	70.05	194	LR	LR	21 26 03.6	
	comp=Z,1µm,21.9s,baz=14,slow=30						
AFI	Afiamalu	70.05	194	IAMs_20	IAMs_20	21 25 52.9	
	comp=Z,2µm,22.0s						
FOEL	Foel Wylfa	70.06	16	eP	P	21 02 30.7	+1.1
FOEL				IAmb	IAmb	21 02 31.2	
	comp=Z,146nm,1.0s						
KPKS	Kokpek	70.11	319	d iP	P	21 02 31.3	+1.1
KPKS				i S	S	21 11 39.7	+1.5
KPKS				pmax	pmax		
	comp=Z,36nm,1.1s						
KPKS	Kokpek	70.11	319	⇓iP	P	21 02 31.3	+1.1
	comp=Z,36nm,1.1s,baz=319						
KPKS				i S	S	21 11 39.7	+1.5
	baz=319						
MTDJ	Mount Denham	70.15	87	P	P	21 02 30.5	-0.2
MTDJ				IAMs_20	IAMs_20	21 33 46.6	
	comp=Z,1µm,19.0s						
GTBY	Guantanamo Bay	70.17	84	P	P	21 02 30.7	0.0
GTBY				IAMs_20	IAMs_20	21 32 23.0	
	comp=Z,2µm,22.0s						
BOAB	BOACO BROADBAN	70.18	97	P	P	21 02 29.8	-1.0
MNK	Minsk	70.21	356	i P	P	21 02 30.4	0.0
MNK				i		21 02 46.3	
MNK				i		21 05 03.4	
MNK				i PPP	PPP	21 06 47.8	
MNK				i S	S	21 11 37.2	-1.5
MNK				i		21 12 12.5	
MNK				i SS	SS	21 16 10.6	+2.7
MNK				pmax	pmax		
	comp=Z,80nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,49nm,1.0s						
MNK				MLR	MLR		
	comp=Z,585nm,20.0s						
MNK				MLR	MLR		
	comp=E,105nm,20.0s						
MNK				MLR	MLR		
	comp=N,732nm,20.0s						
MNK	Minsk	70.21	356	i P	P	21 02 30.4	0.0
	comp=E,1.0nm,1.0s						
MNK				i P	P	21 02 30.4	0.0
	comp=N,49nm,1.0s						
MNK				i P	P	21 02 30.4	0.0
	comp=Z,80nm,1.0s,baz=3.9						
MNK				i PcP	sP	21 02 46.3	-0.4
MNK				i PP	PP	21 05 03.5	-1.9
MNK				i PPP	PPP	21 06 47.8	
MNK				i S	S	21 11 37.2	-1.5
MNK				i SS	SS	21 16 10.6	+2.7
MNK				i SSS	SSS	21 19 33.3	
MNK				i LQ	LQ	21 28 28.4	
MNK				i LR	LR	21 32 55.9	
MNK				i LRM	MLR	21 36 13.6	
	comp=Z,585nm,19.5s						
MNK				i LRM	MLR	21 36 26.1	
	comp=E,105nm,19.5s						
MNK				i LRM	MLR	21 37 09.7	
	comp=N,732nm,19.7s						
UZB	Uzynbulak	70.26	319	eP	P	21 02 31.9	+0.7
UZB				i S	S	21 11 41.3	+1.3
UZB				pmax	pmax		
	comp=Z,32nm,1.5s						
UZB	Uzynbulak	70.26	319	eP	P	21 02 31.1	-0.1
	comp=Z,32nm,1.5s,baz=319						
UZB				i S	S	21 11 41.4	+1.3
	baz=319						
BTLS	Baital	70.39	323	d iP	P	21 02 32.5	+0.8
BTLS	Baital	70.39	323	⇓iP	P	21 02 32.6	+0.8
	baz=323						
CHKK	Chushkaly	70.40	321	i P	P	21 02 32.0	+0.2
CHKK	Chushkaly	70.40	321	i P	P	21 02 32.0	+0.2
	baz=321						
HKPS	Hong Kong Po S	70.41	281	IAMs_20	IAMs_20	21 31 46.9	
	comp=Z,1µm,22.0s						
ZHN	Zhinishke	70.46	319	eP	P	21 02 33.5	+1.2
ZHN	Zhinishke	70.46	319	eP	P	21 02 33.6	+1.2
	baz=319						
HLM1	Long Mynd	70.47	15	eP	P	21 02 32.6	+0.5
HLM1				IAmb	IAmb	21 02 33.6	
	comp=Z,110nm,1.4s						
SATY	Saty	70.57	319	eP	P	21 02 34.0	+1.0
SATY				i S	S	21 11 45.1	+1.5
SATY	Saty	70.57	319	eP	P	21 02 34.1	+1.0
	baz=319						
SATY				i S	S	21 11 45.1	+1.5
	baz=319						
KUU	Kurty	70.60	321	d iP	P	21 02 33.1	+0.1
KUU				i S	S	21 11 44.2	+0.5
KUU				pmax	pmax		
	comp=Z,36nm,1.1s						
KUU				MLR	MLR		
	comp=Z,3µm,17.0s						
KUU	Kurty	70.60	321	⇓iP	P	21 02 33.2	+0.1
	comp=Z,36nm,1.1s,baz=321						
KUU				i S	S	21 11 44.2	+0.5
	baz=321						
KUU				LR	LR	21 34 01.3	
	comp=Z,3µm,17.3s,baz=321						
ABKAR	Akbulak array	70.73	334	P	P	21 02 34.4	+0.7
ABKAR				IAmb	IAmb	21 02 57.0	
	comp=Z,61nm,0.9s						
ABKAR	Akbulak array	70.73	334	P	P	21 02 34.5	+0.7
WACR	West Acre	70.76	13	eP	P	21 02 34.4	+0.6
WACR				IAmb	IAmb	21 02 35.6	
	comp=Z,412nm,1.0s						
SUW	Suwalki	70.82	359	i P	P	21 02 34.1	-0.1
SUW				eL	L	21 34 02.3	
	comp=Z,1µm,23.5s						
SUW	Suwalki	70.82	359	P	P	21 02 34.2	0.0
SUW	Suwalki	70.82	359	P	P	21 02 34.2	0.0
SUW				pmax	pmax		
	comp=Z,232nm,1.2s						
SUW				MLR	MLR		
	comp=Z,1µm,21.0s						
SUW	Suwalki	70.82	359	eP	P	21 02 34.0	-0.2
ACON	Acoyapa	70.84	97	P	P	21 02 34.0	-0.8
ACON				IAmb	IAmb	21 02 35.1	
	comp=Z,66nm,1.1s						
MCH1	Michaelchurch	70.96	16	eP	P	21 02 35.9	+0.9
MCH1				IAmb	IAmb	21 02 36.5	
	comp=Z,97nm,1.2s						
MDOK	Medeo	70.98	320	i P	P	21 02 36.4	+0.9
MDOK				i S	S	21 11 49.7	+1.4
MDOK				MLR	MLR		
	comp=Z,2µm,19.0s						

MDOK	**Medeo**	**70.98**	**320**	*i* P	**P**	**21 02 36.5**	**+0.9**
	baz=320						
MDOK				*i* S	**S**	**21 11 49.8**	**+1.4**
	baz=320						
MDOK				LR	LR	21 34 24.3	
	comp=Z,2µm,19.4s,baz=320						
AAA	**Alma-Ata**	**70.99**	**320**	*e*P	**P**	**21 02 36.7**	**+1.2**
	comp=Z,81nm,1.3s,baz=320						
TNSS	**Tian-Shan**	**71.12**	**320**	*e*P	**P**	**21 02 37.6**	**+0.9**
TNSS	**Tian-Shan**	**71.12**	**320**	*e*P	**P**	**21 02 37.7**	**+0.9**
	baz=320						
MONM	**Monmouth**	**71.14**	**16**	*e*P	**P**	**21 02 37.0**	**+0.9**
MONM				IAmb	IAmb	21 02 37.6	
	comp=Z,121nm,1.3s						
GYA	**Guiyang**	**71.19**	**289**	⇑*i*P	**P**	**21 02 38.3**	**+1.3**
GYA				pP	pP	21 02 50.5	+1.7
GYA				S	**S**	**21 11 51.3**	**+0.2**
GYA				sS	sS	21 12 10.5	-0.3
GYA				pmax	pmax		
	comp=Z,78nm,1.4s						
GYA				pmax	pmax		
	comp=Z,470nm,4.0s						
GYA				LR	LR		
	comp=Z,1µm,22.7s						
GYA				LR	LR		
	comp=Z,1µm,23.0s						
GYA				LR	LR		
	comp=Z,2µm,24.7s						
LPSR	**Galich'ya Gora**	**71.27**	**349**	*e*P	**P**	**21 02 36.3**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,80nm,1.3s						
LPSR				MLR	MLR		
	comp=Z,1µm,19.0s						
STRD	**Stroud**	**71.30**	**15**	*e*P	**P**	**21 02 37.8**	**+0.7**
STRD				IAmb	IAmb	21 02 39.3	
	comp=Z,461nm,1.7s						
GKP	**Gorka Klasztor**	**71.52**	**3**	*e*P	**P**	**21 02 39.2**	**+0.8**
GKP				*e*L	L	21 34 01.4	
	comp=Z,935nm,20.9s						
GKP	**Gorka Klasztor**	**71.52**	**3**	*e*P	**P**	**21 02 39.4**	**+1.0**
SGDS	**Sogindy**	**71.59**	**322**	*d* *i*P	**P**	**21 02 40.3**	**+1.2**
SGDS				*i* S	**S**	**21 11 57.1**	**+1.9**
SGDS	**Sogindy**	**71.59**	**322**	⇓*i*P	**P**	**21 02 40.3**	**+1.2**
	baz=322						
SGDS				*i* S	**S**	**21 11 57.2**	**+1.9**
	baz=322						
TKM2	**Tokmak 2**	**71.71**	**321**	P	**P**	**21 02 40.8**	**+0.7**
	SNR=57						
USP	**Ospenovka**	**71.80**	**322**	P	**P**	**21 02 41.5**	**+1.2**
	SNR=36						
KDJ	**Kajisay**	**71.83**	**320**	P	**P**	**21 02 41.9**	**+1.2**
KDJ				IAmb	IAmb	21 02 56.0	
	comp=Z,164nm,1.6s						
KDJ	**Kajisay**	**71.83**	**320**	P	**P**	**21 02 41.9**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,164nm,1.6s						
CHMS	**Chumysh**	**71.94**	**322**	P	**P**	**21 02 42.6**	**+1.4**
	SNR=46						
ORTG	**Ortega, Santa**	**71.99**	**98**	P	**P**	**21 02 39.7**	**-2.2**
KRVT	**Keravat (AS076**	**72.06**	**233**	LR	LR	21 30 04.7	
	comp=Z,620nm,20.5s,baz=176,slow=32						
ULHL	**Ulahol**	**72.07**	**320**	P	**P**	**21 02 43.4**	**+1.2**
	SNR=40						
VORR	**Voronezh**	**72.15**	**348**	*e*P	**P**	**21 02 42.7**	**+0.5**
VORR				pmax	pmax		
	comp=Z,50nm,0.6s						
KBK	**Karagaybulak**	**72.17**	**321**	P	**P**	**21 02 44.3**	**+1.5**
	SNR=56						
DUNO	**Dulce Nombre,**	**72.20**	**98**	P	**P**	**21 02 42.5**	**-0.6**
DUNO				IAmb	IAmb	21 02 43.1	
	comp=Z,103nm,1.2s						
VRH	**Novokhopyorsk**	**72.31**	**347**	*e*P	**P**	**21 02 42.5**	**-0.7**
VRH				pmax	pmax		
	comp=Z,50nm,1.5s						
VRH				MLR	MLR		
	comp=Z,2µm,22.0s						
JTS	**Las Juntas de**	**72.33**	**98**	LR	LR	21 37 44.3	
	comp=Z,639nm,19.2s,baz=26,slow=38						
JTS	**Las Juntas de**	**72.33**	**98**	P	**P**	**21 02 42.5**	**-1.4**
JTS	**Las Juntas de**	**72.33**	**98**	P	**P**	**21 02 42.5**	**-1.4**
JTS				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**72.35**	**322**	P	**P**	**21 02 45.2**	**+1.4**
	SNR=40						
AAK	**Ala-Archa**	**72.35**	**322**	LR	LR	21 37 10.7	
	comp=Z,7µm,18.2s,baz=26,slow=38						
AAK	**Ala-Archa**	**72.35**	**322**	P	**P**	**21 02 44.5**	**+0.7**
AAK				IAmb	IAmb	21 03 02.7	
	comp=Z,71nm,1.1s						
AAK	**Ala-Archa**	**72.35**	**322**	*c* *e*P	**P**	**21 02 45.0**	**+1.2**
AAK				pmax	pmax		
	comp=Z,68nm,1.3s						
AAK	**Ala-Archa**	**72.35**	**322**	*i* P	**P**	**21 02 45.2**	**+1.4**
	SNR=47						
EKS2	**Erkin-Say**	**72.58**	**322**	P	**P**	**21 02 46.6**	**+1.5**
	SNR=66						
VSR	**Storozhevoye**	**72.61**	**348**	*e*P	**P**	**21 02 44.5**	**-0.5**
VSR				pmax	pmax		
	comp=Z,130nm,1.5s						
VSR				MLR	MLR		
	comp=Z,730nm,19.0s						
UCH	**Uchtor**	**72.70**	**322**	P	**P**	**21 02 47.7**	**+1.4**
	SNR=16						
LQP	**Lukban**	**72.75**	**270**	⇑*e*P	**P**	**21 02 48.7**	**+2.1**
VORD	**Divnogorie**	**72.84**	**348**	*e*P	**P**	**21 02 46.3**	**0.0**
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
BEL	**Belsk**	**73.01**	**0**	*e*P	**P**	**21 02 48.4**	**+1.1**
BEL				*e*L	L	21 38 43.5	
	comp=Z,1µm,20.2s						
HDC	**Heredia**	**73.04**	**97**	IAMs_20	IAMs_20	21 34 49.9	
	comp=Z,1µm,20.0s						
AML	**Almayashu**	**73.08**	**322**	P	**P**	**21 02 50.1**	**+1.7**
	SNR=63						
AML	**Almayashu**	**73.08**	**322**	*i* P	**P**	**21 02 50.1**	**+1.7**
	SNR=64						
SDDR	**Presa de Saban**	**73.08**	**81**	P	**P**	**21 02 48.2**	**-0.1**
SDDR				IAmb	IAmb	21 02 48.9	
	comp=Z,72nm,0.7s						
SDDR				IAMs_20	IAMs_20	21 33 39.9	
	comp=Z,2µm,22.0s						
TGY	**Tagaytay City**	**73.10**	**270**	P	**P**	**21 02 49.9**	**+1.4**
	comp=Z,528nm,1.1s,baz=302,slow=4.9,SNR=14						
TGY				LR	LR	21 32 06.1	
	comp=Z,530nm,21.7s,baz=27,slow=33						
PPT	**Papeete**	**73.20**	**171**	LR	LR	21 28 01.4	
	comp=Z,473nm,20.8s,baz=356,slow=30						
BEBN	**Eben Emael**	**73.25**	**10**	*d*P	**P**	**21 02 49.6**	**+0.8**
KK31	**Karatay Array**	**73.29**	**325**	P	**P**	**21 02 50.0**	**+0.8**
KK31				IAmb	IAmb	21 03 04.1	
	comp=Z,145nm,1.3s						
KK31	**Karatay Array**	**73.29**	**325**	P	**P**	**21 02 50.0**	**+0.8**
KK31				pmax	pmax		
	comp=Z,145nm,1.3s						
KKAR	**Karatay Array**	**73.29**	**325**	P	**P**	**21 02 50.0**	**+0.8**
KKAR				IAmb	IAmb	21 03 04.1	
	comp=Z,145nm,1.3s						
KKAR	**Karatay Array**	**73.29**	**325**	P	**P**	**21 02 49.3**	**0.0**
KKAR	**Karatay Array**	**73.29**	**325**	P	**P**	**21 02 50.0**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,145nm,1.3s						
CLL	**Collm**	**73.31**	**5**	P	**P**	**21 02 49.6**	**+0.4**
CLL	**Collm**	**73.31**	**5**	⇓*i*P	**P**	**21 02 49.7**	**+0.6**
CLL				*e*S	**S**	**21 12 14.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,61nm,1.0s						
CLL				MLR	MLR		
	comp=Z,700nm,21.8s						
CLL	**Collm**	**73.31**	**5**	⇓*i*P	**P**	**21 02 49.7**	**+0.6**
	comp=Z,61nm,1.0s						
CLL				*i* x	x	21 02 52.1	
	comp=Z,36nm,0.8s						
CLL				*e*PcP	**sP**	**21 03 04.0**	**-1.5**
CLL				*e*PP	**PP**	**21 05 30.0**	**-1.9**
CLL				*e*S	**S**	**21 12 14.0**	**-0.5**
CLL				*e*(sS)		21 12 36.0	
CLL				*e*PS	**PnS**	**21 12 52.0**	**+2.2**
CLL				*e*PPS	PPS	21 12 59.0	
CLL				*e*(SS)		21 16 36.0	
CLL				*e*SSS	SSS	21 20 06.0	
CLL				*e*x	x	21 21 06.0	
CLL				*e*SSSS		21 22 00.0	
CLL				Lm	MLR	21 36 00.0	
	comp=N,700nm,21.4s						
CLL				Lm	MLR	21 36 00.0	
	comp=E,700nm,21.8s						
CLL				Lm	MLR	21 36 00.0	
	comp=Z,700nm,21.8s						
HNR	**Honiara**	**73.34**	**223**	LR	LR	21 29 11.7	
	comp=Z,1µm,21.7s,baz=14,slow=31						
HNR	**Honiara**	**73.34**	**223**	IAMs_20	IAMs_20	21 28 16.6	
	comp=Z,2µm,22.0s						
RIMA	**Rio Macho**	**73.38**	**97**	P	**P**	**21 02 48.7**	**-1.5**
SNF	**Seneffe**	**73.38**	**11**	*d*P	**P**	**21 02 50.5**	**+0.9**
	comp=Z,34nm,1.1s						
BSTI	**Sart Tilman**	**73.44**	**10**	*d*P	**P**	**21 02 51.1**	**+1.2**
	comp=Z,11nm,0.7s						
MEM	**Membach**	**73.46**	**10**	*d*P	**P**	**21 02 51.0**	**+1.0**
	comp=Z,25nm,1.1s						
BTNL	**Ternell**	**73.50**	**10**	*d*P	**P**	**21 02 51.1**	**+0.8**
	comp=Z,24nm,1.2s						
PGP	**Puerto Galera**	**73.58**	**270**	⇑*e*P	**P**	**21 02 51.9**	**+0.7**
BCLA	**Clavier**	**73.58**	**11**	*d*P	**P**	**21 02 51.5**	**+0.8**
BGES	**Gesves**	**73.59**	**11**	*d*P	**P**	**21 02 51.2**	**+0.4**
	comp=Z,17nm,0.9s						
BMRD	**Maredsous**	**73.64**	**11**	*d*P	**P**	**21 02 51.9**	**+0.9**
	comp=Z,34nm,1.3s						
BHOU	**Houvegnez**	**73.72**	**10**	*d*P	**P**	**21 02 52.0**	**+0.5**
BHOU				*d*pP	**pP**	**21 03 04.1**	**+0.7**
PZH	**PanZhiHua**	**73.76**	**293**	P	**P**	**21 02 53.3**	**+1.0**
PZH				pP	**pP**	**21 03 05.5**	**+1.3**
PZH				PcP	**sP**	**21 03 09.5**	**+0.8**
PZH				S	**SKiKP**	**21 12 18.5**	**+0.5**
PZH				sS	**pS**	**21 12 37.5**	**+2.3**
PZH				ScS	**SKSac**	**21 12 56.8**	**+0.7**
PZH				SS	**SS**	**21 17 02.5**	**-1.5**
PZH				pmax	pmax		
	comp=Z,110nm,1.0s						
PZH				pmax	pmax		
	comp=Z,400nm,4.9s						
PZH				LR	LR		
	comp=Z,1µm,21.2s						
PZH				LR	LR		
	comp=Z,2µm,22.0s						
PZH				LR	LR		
	comp=Z,1µm,16.5s						
BRG	**Berggiesshubel**	**73.79**	**5**	⇓*i*P	**P**	**21 02 52.9**	**+0.9**
BRG				Amp		21 02 54.2	
	comp=Z,74nm,1.2s						
BRG				*e*x	x	21 03 08.3	
BRG				Amp		21 03 09.3	
	comp=Z,82nm,1.3s						
BRG	**Berggiesshubel**	**73.79**	**5**	S	**S**	**21 12 21.0**	**+1.1**
BRG				Amp		21 38 23.0	
	comp=N,0.5nm,20.9s						
BRG				Amp		21 38 26.0	
	comp=Z,0.8nm,22.6s						
BRG				Amp		21 38 31.0	
	comp=E,0.4nm,19.2s						
BRG	**Berggiesshubel**	**73.79**	**5**	⇓*i*P	**P**	**21 02 52.8**	**+0.9**
BRG				*e*		21 03 08.3	
BRG				S	**S**	**21 12 21.0**	**+1.1**
BRG				pmax	pmax		
	comp=Z,74nm,1.2s						
BRG				pmax	pmax		
	comp=Z,82nm,1.3s						
BRG				smax	smax		
	comp=N,510nm,20.9s						
BRG				MLR	MLR		
	comp=Z,760nm,22.6s						
BRG				MLR	MLR		
	comp=E,420nm,19.2s						
PEZE	**Perez Zeledon,**	**73.79**	**97**	P	**P**	**21 02 53.4**	**+0.8**
JSA	**Saint Aubin**	**73.81**	**16**	*e*P	**P**	**21 02 52.4**	**+0.3**
JSA				IAmb	IAmb	21 02 53.8	
	comp=Z,61nm,0.8s						
DOU	**Dourbes**	**73.82**	**11**	*d*P	**P**	**21 02 53.1**	**+1.0**
	comp=Z,21nm,1.2s						
RCHB	**Rochefort**	**73.83**	**11**	*d*P	**P**	**21 02 52.7**	**+0.5**
	comp=Z,20nm,1.3s						
KSP	**Ksiaz**	**73.92**	**3**	*e*P	**P**	**21 02 53.5**	**+0.7**
KSP				*e*L	L	21 34 11.4	
	comp=Z,844nm,24.1s						
AKASG	**Malin Array Be**	**73.94**	**355**	P	**P**	**21 02 52.8**	**0.0**
	comp=Z,31nm,0.4s,baz=8.7,slow=6.0,SNR=185						
AKASG				LR	LR	21 39 08.9	
	comp=Z,1µm,19.4s,baz=8.5,slow=39						
	comp=Z,31nm,0.4s						
AKASG	**Malin Array Be**	**73.94**	**355**	P	**P**	**21 02 52.7**	**-0.1**
AKASG				IAmb	IAmb	21 02 53.4	
	comp=Z,71nm,0.7s						
AKBB	**Malin Array Si**	**73.94**	**355**	P	**P**	**21 02 53.0**	**+0.2**
AKBB	**Malin Array Si**	**73.94**	**355**	P	**P**	**21 02 53.0**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,97nm,0.6s						
BANI	**BANI**	**74.07**	**81**	P	**P**	**21 02 54.9**	**+0.7**
SRBA	**San Rafael, Bu**	**74.09**	**97**	P	**P**	**21 02 53.6**	**-0.8**
SRBA				IAmb	IAmb	21 02 55.2	
	comp=Z,134nm,1.9s						
DRK0	**Durika**	**74.14**	**97**	P	**P**	**21 02 55.5**	**+0.8**
PVCC	**Panska Ves**	**74.17**	**5**	*e*P	**P**	**21 02 54.9**	**+0.7**
PVCC				*e*S	**SKiKP**	**21 12 15.6**	**-2.3**
PVCC				MLR	MLR		
	comp=Z,800nm,17.8s						
PVCC	**Panska Ves**	**74.17**	**5**	*e*P	**P**	**21 02 54.9**	**+0.7**
PVCC				*e*x	x	21 12 15.6	
PVCC				AMS	AMS	21 41 30.0	
	comp=Z,800nm,17.8s						
OSTC	**Ostas**	**74.20**	**3**	*e*P	**P**	**21 02 54.9**	**+0.5**
OSTC				*e*x	x	21 12 16.1	
OSTC				AMS	AMS	21 32 20.0	
	comp=Z,900nm,24.3s						
UPC	**Upice**	**74.24**	**4**	*e*P	**P**	**21 02 55.0**	**+0.4**
UPC				MLR	MLR		
	comp=Z,700nm,17.5s						
UPC	**Upice**	**74.24**	**4**	*e*P	**P**	**21 02 55.0**	**+0.4**
UPC				*e*S	**SKiKP**	**21 12 13.1**	**-4.9**
UPC				AMS	AMS	21 32 30.0	
	comp=Z,700nm,17.5s						
DR12	**Loma Pena Alta**	**74.30**	**80**	P	**P**	**21 02 55.8**	**+0.3**
IUG	**Iuzhnay**	**74.31**	**325**	*d* *i*P	**P**	**21 02 56.6**	**+1.3**
IUG				*i* S	**S**	**21 12 27.8**	**+1.6**
IUG				*i* S	**S**	**21 12 28.4**	**+2.1**
IUG	**Iuzhnay**	**74.31**	**325**	⇓*i*P	**P**	**21 02 56.6**	**+1.3**
	baz=324						
IUG				*i* S	**S**	**21 12 27.9**	**+1.6**
	baz=324						
IUG				*i* S	**S**	**21 12 28.4**	**+2.1**
	baz=324						
KMI	**Kunming**	**74.35**	**291**	⇑P	**P**	**21 02 56.5**	**+0.6**
KMI				pP	PcP	21 03 09.8	-0.7
KMI				sP	sP	21 03 14.3	+2.0
KMI				S	**S**	**21 12 25.0**	**-2.4**
KMI				sS	sS	21 12 47.0	-0.2
KMI				pmax	pmax		
	comp=Z,27nm,1.6s						
KMI				pmax	pmax		
	comp=Z,310nm,5.3s						
KMI				LR	LR		
	comp=Z,2µm,21.6s						
KMI				LR	LR		
	comp=Z,2µm,21.2s						
KMI				LR	LR		
	comp=Z,3µm,24.2s						
NKC	**Novy Kostel**	**74.35**	**6**	*e*P	**P**	**21 02 56.0**	**+0.7**
NKC				*e*S	**SKiKP**	**21 12 20.6**	**+2.4**
NKC				MLR	MLR		
	comp=Z,900nm,20.6s						
NKC	**Novy Kostel**	**74.35**	**6**	*e*P	**P**	**21 02 56.0**	**+0.7**
NKC				*e*x	x	21 12 20.6	
NKC				AMS	AMS	21 37 20.0	
	comp=Z,900nm,20.6s						
DPC	**Dobruska-Polom**	**74.41**	**3**	*e*P	**P**	**21 02 56.5**	**+0.8**
DPC				*e*S	**S**	**21 12 25.1**	**-1.9**
DPC				MLR	MLR		
	comp=Z,800nm,25.0s						
DPC	**Dobruska-Polom**	**74.41**	**3**	*e*P	**P**	**21 02 56.5**	**+0.8**
DPC				*e*S	**S**	**21 12 25.1**	**-1.9**
DPC				AMS	AMS	21 32 30.0	
	comp=Z,800nm,25.0s						
WLF	**Walferdange**	**74.41**	**10**	P	**P**	**21 02 56.8**	**+1.2**
WLF				IAmb	IAmb	21 02 58.4	
	comp=Z,76nm,1.2s						
WLF				IAMs_20	IAMs_20	21 38 55.4	
	comp=Z,1µm,20.0s						
WLF	**Walferdange**	**74.41**	**10**	P	**P**	**21 02 56.8**	**+1.2**
WLF				pmax	pmax		
	comp=Z,76nm,1.2s						
WLF				MLR	MLR		
	comp=Z,1µm,20.0s						
WLF	**Walferdange**	**74.41**	**10**	*d*P	**P**	**21 02 56.8**	**+1.2**
	comp=Z,32nm,0.9s						
KSH	**Kashi**	**74.55**	**319**	P	P	21 03 01.5	+4.7
KSH				sP	sP	21 03 15.0	+1.9
KSH				S	**S**	**21 12 37.0**	**+7.9**
KSH				pmax	pmax		
	comp=Z,71nm,1.4s						
KSH				LR	LR		
	comp=Z,4µm,20.6s						
KSH				LR	LR		
	comp=Z,4µm,18.2s						
KSH				LR	LR		
	comp=Z,8µm,20.6s						
KRLC	**Kraliky**	**74.70**	**3**	*e*P	**P**	**21 02 58.1**	**+0.7**
KRLC				*e*S	**SKiKP**	**21 12 23.7**	**+4.9**
KRLC				MLR	MLR		
	comp=Z,700nm,24.6s						
KRLC	**Kraliky**	**74.70**	**3**	*e*P	**P**	**21 02 58.1**	**+0.7**
KRLC				*e*x	x	21 12 23.7	
KRLC				AMS	AMS	21 34 10.0	
	comp=Z,700nm,24.6s						
PRU	**Pruhonice**	**74.70**	**5**	*e*P	**P**	**21 02 57.9**	**+0.6**
PRU				*e*S	**SKiKP**	**21 12 20.6**	**+1.9**
PRU				MLR	MLR		
	comp=Z,900nm,18.8s						
PRU	**Pruhonice**	**74.70**	**5**	*e*P	**P**	**21 02 57.9**	**+0.6**
PRU				*e*x	x	21 12 20.6	
PRU				AMS	AMS	21 42 00.0	
	comp=Z,900nm,18.8s						
GRA1	**Grafenberg Arr**	**74.81**	**7**	P	**P**	**21 02 59.2**	**+1.3**
GRA1				IAmb	IAmb	21 03 18.8	
	comp=Z,61nm,1.0s						
GRF	**Grafenberg Arr**	**74.81**	**7**	P	**P**	**21 02 59.3**	**+1.3**
GRF				pmax	pmax		
	comp=Z,61nm,1.0s						
GRF				MLR	MLR		
	comp=Z,800nm,22.0s						
GRFO	**Grafenberg**	**74.81**	**7**	P	**P**	**21 02 58.4**	**+0.5**
GRFO				IAmb	IAmb	21 03 18.8	
	comp=Z,65nm,1.0s						
GRFO	**Grafenberg**	**74.81**	**7**	P	**P**	**21 02 58.4**	**+0.5**
GRFO				pmax	pmax		
	comp=Z,65nm,1.0s						
GRFO				MLR	MLR		
	comp=Z,800nm,22.0s						
OKC	**Ostrava-Krasne**	**74.97**	**2**	*e*P	**P**	**21 02 59.5**	**+0.6**
OKC				*e*S	**SKiKP**	**21 12 24.6**	**+5.5**
OKC				MLR	MLR		
	comp=Z,800nm,21.9s						
OKC	**Ostrava-Krasne**	**74.97**	**2**	*e*P	**P**	**21 02 59.5**	**+0.6**
OKC				*e*x	x	21 12 24.6	
OKC				AMS	AMS	21 34 20.0	
	comp=Z,800nm,21.9s						
LVV	**L'vov**	**75.00**	**358**	*c* *i*P	**P**	**21 02 59.6**	**+0.6**
LVV				*e*S	**S**	**21 12 33.6**	**0.0**
LVV				pmax	pmax		
	comp=Z,200nm,1.5s						
TBP	**Tagbilaran**	**75.01**	**265**	⇑*i*P	**P**	**21 03 00.1**	**+0.5**
MORC	**Moravsky Berou**	**75.02**	**3**	⇑P	**P**	**21 02 59.6**	**+0.4**
MORC	**Moravsky Berou**	**75.02**	**3**	P	**P**	**21 02 59.9**	**+0.7**
MORC	**Moravsky Berou**	**75.02**	**3**	P	**P**	**21 02 59.9**	**+0.7**
MORC				pmax	pmax		
	comp=Z,32nm,0.9s						
MORC	**Moravsky Berou**	**75.02**	**3**	⇓*i*P	**P**	**21 03 00.0**	**+0.7**
MORC				*e*S	**S**	**21 12 33.9**	**0.0**
QIZ	**Qiongzhong**	**75.40**	**282**	P	**P**	**21 03 02.7**	**+0.9**
QIZ	**Qiongzhong**	**75.40**	**282**	P	**P**	**21 03 03.0**	**+1.2**
QIZ				pP	**pP**	**21 03 12.0**	**-1.6**
QIZ				S	**S**	**21 12 42.0**	**+3.2**
QIZ				SS	**SS**	**21 17 26.3**	**-2.7**
QIZ				pmax	pmax		
	comp=Z,31nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,260nm,5.4s						
QIZ				LR	LR		
	comp=Z,830nm,15.9s						
QIZ				LR	LR		
	comp=Z,750nm,19.1s						
QIZ				LR	LR		
	comp=Z,710nm,23.1s						
NIE	**Niedzica**	**75.43**	**1**	*i* P	**P**	**21 03 02.8**	**+1.3**
NIE				*e*PcP	**PcP**	**21 03 15.9**	**+1.4**
NIE				*e*L	L	21 36 07.9	
	comp=Z,613nm,23.1s						
STHS	**Stebnicka Huta**	**75.43**	**0**	*e*P	P	21 03 06.2	+4.7
STHS	**Stebnicka Huta**	**75.43**	**0**	*e*P	P	21 03 06.2	+4.7
TREC	**Trest**	**75.44**	**4**	AMS	AMS	21 33 10.0	
	comp=Z,800nm,22.2s						
MAUC	**Maruska**	**75.44**	**2**	*e*P	**P**	**21 03 02.4**	**+0.8**
MAUC				*e*S	**SKiKP**	**21 12 29.6**	**+10**
MAUC				AMS	AMS	21 34 40.0	
	comp=Z,1µm,18.4s						
VRAC	**Vranov**	**75.46**	**3**	⇓P	**P**	**21 03 02.8**	**+1.1**
VRAC	**Vranov**	**75.46**	**3**	⇓*i*P	**P**	**21 03 02.8**	**+1.1**
VRAC				*e*S	**S**	**21 12 37.9**	**-0.8**
KHC	**Kasperske Hory**	**75.51**	**5**	P	**P**	**21 03 03.3**	**+1.3**
KHC	**Kasperske Hory**	**75.51**	**5**	*e*P	**P**	**21 03 03.0**	**+1.0**
KHC				*e*		21 03 18.5	
KHC				*e*S	**S**	**21 12 33.0**	**-6.3**
KHC				MLR	MLR		
	comp=Z,700nm,20.1s						
KHC	**Kasperske Hory**	**75.51**	**5**	*e*P	**P**	**21 03 03.0**	**+1.0**
KHC				*e*x	x	21 03 18.5	
KHC				*e*x	x	21 12 33.0	
KHC				AMS	AMS	21 38 50.0	
	comp=Z,700nm,20.1s						
CLF	**Chambon-Foret**	**75.58**	**13**	P	**P**	**21 03 03.8**	**+1.5**
CLF				IAMs_20	IAMs_20	21 40 20.2	
	comp=Z,1µm,21.0s						
MSVF	**Nonsavu**	**75.60**	**203**	LR	LR	21 29 13.6	
	comp=Z,799nm,21.9s,baz=10,slow=30						
MSVF	**Nonsavu**	**75.60**	**203**	P	**P**	**21 03 03.8**	**+1.0**
MSVF	**Nonsavu**	**75.60**	**203**	IAMs_20	IAMs_20	21 28 29.8	
	comp=Z,1µm,22.0s						
MSVF	**Nonsavu**	**75.60**	**203**	*i* P	**P**	**21 03 04.3**	**+1.5**
MSVF				pmax	pmax		
	comp=Z,23nm,1.1s						
LANS	**Liptovska Anna**	**75.69**	**1**	*e*P	**P**	**21 03 05.0**	**+2.0**
LANS				pmax	pmax		
	comp=Z,73nm,1.6s						
LANS	**Liptovska Anna**	**75.69**	**1**	*e*P	**P**	**21 03 05.0**	**+2.0**
KRUC	**Moravsky**	**75.70**	**3**	⇓*i*P	**P**	**21 03 03.9**	**+0.8**
KRUC				*e*S	**S**	**21 12 40.2**	**-1.1**
GEC2	**GERESS Array S**	**75.80**	**5**	P	**P**	**21 03 04.7**	**+0.9**
GERES	**GERESS Array B**	**75.80**	**5**	P	**P**	**21 03 04.6**	**+0.9**
	comp=Z,14nm,0.7s,baz=6.9,slow=4.4,SNR=122						
GERES				PKPPKP		21 30 26.6	
	comp=Z,0.4nm,0.7s,baz=282,slow=1.2,SNR=4.1						
	comp=Z,14nm,0.7s						
GERES	**GERESS Array B**	**75.80**	**5**	P	**P**	**21 03 04.0**	**+0.2**
AGPR	**Aguadilla, PR**	**75.83**	**78**	P	**P**	**21 03 04.8**	**+0.6**
CKRC	**Cesky Krumlov**	**75.86**	**5**	*e*P	**P**	**21 03 04.5**	**+0.5**
CKRC				*e*S	S	21 12 34.7	-8.4
KOLS	**Kolonicke sedl**	**75.91**	**359**	*e*P	**P**	**21 03 05.8**	**+1.5**
KOLS	**Kolonicke sedl**	**75.91**	**359**	*e*P	**P**	**21 03 05.8**	**+1.5**
BFO	**Black Forest**	**75.94**	**9**	P	**P**	**21 03 04.3**	**-0.1**
BFO				IAmb	IAmb	21 03 06.9	
	comp=Z,111nm,1.8s						
BFO				IAMs_20	IAMs_20	21 43 20.9	
	comp=Z,872nm,18.0s						
BFO	**Black Forest**	**75.94**	**9**	P	**P**	**21 03 04.3**	**-0.1**
BFO				pmax	pmax		
	comp=Z,111nm,1.8s						
BFO				MLR	MLR		
	comp=Z,900nm,18.0s						
JAVC	**Velka Javorina**	**75.94**	**3**	⇓*i*P	**P**	**21 03 06.5**	**+2.0**
JAVC				*e*S	**S**	**21 12 44.7**	**+0.6**
ECH	**Echery**	**75.94**	**10**	P	**P**	**21 03 05.2**	**+0.7**
ECH	**Echery**	**75.94**	**10**	P	**P**	**21 03 05.2**	**+0.7**
ECH				pmax	pmax		
	comp=Z,40nm,1.0s						
ECH				MLR	MLR		
	comp=Z,700nm,20.0s						
CRVS	**Cervenica-Dubn**	**75.95**	**360**	*e*P	**P**	**21 03 05.6**	**+1.1**
CRVS				pmax	pmax		
	comp=Z,275nm,1.9s						
CRVS	**Cervenica-Dubn**	**75.95**	**360**	*e*P	**P**	**21 03 05.6**	**+1.1**
JAY	**Jayapura**	**75.98**	**244**	P	**P**	**21 03 05.9**	**+0.8**
	comp=Z,21nm,1.6s						
DRK	**Karamyk**	**76.09**	**322**	P	**P**	**21 03 07.0**	**+1.1**
DRK				IAmb	IAmb	21 03 21.2	
	comp=Z,126nm,1.2s						
AOPR	**Arecibo Observ**	**76.12**	**78**	P	**P**	**21 03 05.6**	**-0.4**
AOPR				IAmb	IAmb	21 03 39.0	
	comp=Z,53nm,0.8s						

BCIP	**Isla Barro Col**	**76.14**	**94**	IAMs_20	IAMs_20	21 36 25.0	
	comp=Z,1µm,20.0s						
DAV	**Davao City (W)**	**76.18**	**262**	P	**P**	**21 03 08.5**	**+2.3**
	comp=Z,96nm,0.3s,baz=84,slow=9.1,SNR=3.7						
DAV				LR	LR	21 31 36.9	
	comp=Z,860nm,21.6s,baz=36,slow=32						
	comp=Z,96nm,0.3s						
DAV	**Davao City (W)**	**76.18**	**262**	IAMs_20	IAMs_20	21 31 15.0	
	comp=Z,1µm,21.0s						
CRPR	**Cabo Rojo, PR**	**76.20**	**78**	P	**P**	**21 03 06.4**	**+0.1**
UZH	**Uzhgorod**	**76.22**	**359**	d *i*P	**P**	**21 03 05.3**	**-0.7**
UZH				*i*		21 03 12.0	
UZH				e*PP	**PcP**	**21 03 18.7**	**+0.8**
UZH				*e*		21 03 22.6	
UZH				*e*		21 05 55.5	
UZH				*i* S	**S**	**21 12 42.0**	**-4.9**
UZH				*e*PS	**PnS**	**21 13 22.0**	**-5.4**
UZH				*e*SSS	SSS	21 20 58.0	
KOLL	**Kolacno**	**76.24**	**2**	*e*P	**P**	**21 03 07.6**	**+1.5**
SMOL	**Smolenice**	**76.28**	**3**	*e*P	**P**	**21 03 08.0**	**+1.6**
SMOL				pmax	pmax		
	comp=Z,27nm,1.0s						
SMOL	**Smolenice**	**76.28**	**3**	*e*P	**P**	**21 03 08.0**	**+1.6**
GENI	**Genyem**	**76.32**	**244**	P	**P**	**21 03 08.0**	**+1.0**
	comp=Z,2µmcomp=Z,103nm,1.4s						
VYHS	**Vyhne**	**76.33**	**2**	*e*P	**P**	**21 03 07.6**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,43nm,1.3s						
VYHS	**Vyhne**	**76.33**	**2**	*e*P	**P**	**21 03 07.6**	**+0.9**
KECS	**Kecovo**	**76.36**	**1**	*e*P	**P**	**21 03 07.9**	**+1.1**
KECS				pmax	pmax		
	comp=Z,46nm,0.8s						
KECS	**Kecovo**	**76.36**	**1**	*e*P	**P**	**21 03 07.9**	**+1.1**
MODS	**Modra-Piesok**	**76.42**	**3**	*e*P	**P**	**21 03 08.6**	**+1.4**
MODS				pmax	pmax		
	comp=Z,226nm,1.4s						
MODS	**Modra-Piesok**	**76.42**	**3**	*e*P	**P**	**21 03 08.6**	**+1.4**
RAR	**Rarotonga**	**76.43**	**181**	LR	LR	21 29 10.5	
	comp=Z,485nm,21.2s,baz=357,slow=30						
CELP	**Cerrillos**	**76.44**	**78**	P	**P**	**21 03 07.9**	**+0.3**
CELP				IAmb	IAmb	21 03 08.9	
	comp=Z,65nm,0.8s						
LSA	**Lhasa**	**76.45**	**303**	P	**P**	**21 03 09.0**	**+0.8**
LSA				IAmb	IAmb	21 03 12.8	
	comp=Z,81nm,0.9s						
LSA	**Lhasa**	**76.45**	**303**	P	**P**	**21 03 09.0**	**+0.8**
OBIP	**Obispado Ponce**	**76.45**	**78**	P	**P**	**21 03 08.3**	**+0.5**
GCPR	**Guaynabo City**	**76.52**	**77**	P	**P**	**21 03 07.9**	**-0.3**
DRBR	**Darabani**	**76.55**	**356**	⇑P	**P**	**21 03 07.8**	**-0.1**
SORM	**Soroca**	**76.55**	**355**	⇓P	**P**	**21 03 08.1**	**+0.2**
SMPI	**Sarmi**	**76.56**	**246**	P	**P**	**21 03 09.4**	**+1.1**
	comp=Z,884nmcomp=Z,28nm,0.8s						
ZST	**Bratislava**	**76.59**	**3**	*e*P	**P**	**21 03 09.8**	**+1.7**
ZST				pmax	pmax		
	comp=Z,173nm,1.1s						
ZST	**Bratislava**	**76.59**	**3**	*e*P	**P**	**21 03 09.8**	**+1.7**
ICMP	**Isla Caja de M**	**76.62**	**78**	P	**P**	**21 03 09.3**	**+0.6**
ICMP				IAmb	IAmb	21 03 09.9	
	comp=Z,112nm,0.9s						
SJG	**San Juan**	**76.65**	**78**	P	**P**	**21 03 08.1**	**-0.8**
SJG	**San Juan**	**76.65**	**78**	IAMs_20	IAMs_20	21 39 56.5	
	comp=Z,2µm,20.0s						
SJG	**San Juan**	**76.65**	**78**	P	**P**	**21 03 08.1**	**-0.8**
SJG				pmax	pmax		
	comp=Z,308nm,1.8s						
SJG				MLR	MLR		
	comp=Z,2µm,20.0s						
SJG	**San Juan**	**76.65**	**78**	*e*P	**P**	**21 03 06.9**	**-1.9**
HUMP	**Col San Antoni**	**76.79**	**77**	P	**P**	**21 03 09.9**	**+0.3**
HUMP				IAmb	IAmb	21 03 11.5	
	comp=Z,120nm,1.5s						
PDPR	**Patillas Dam,**	**76.79**	**78**	P	**P**	**21 03 09.4**	**-0.3**
PDPR				IAmb	IAmb	21 03 10.8	
	comp=Z,179nm,1.6s						
CONA	**Conrad Observa**	**76.82**	**4**	*i* P	**P**	**21 03 10.9**	**+1.3**
	comp=Z,44nm,1.0s,SNR=34						
MOA	**Molln**	**76.83**	**5**	*i* P	**P**	**21 03 10.3**	**+0.8**
	comp=Z,39nm,1.6s,SNR=10						
PSZ	**Piszkesteto**	**76.92**	**1**	⇑P	**P**	**21 03 11.2**	**+1.1**
PSZ	**Piszkesteto**	**76.92**	**1**	P	**P**	**21 03 10.9**	**+0.8**
PSZ				IAmb	IAmb	21 03 12.3	
	comp=Z,53nm,1.0s						
PSZ	**Piszkesteto**	**76.92**	**1**	P	**P**	**21 03 10.9**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,53nm,1.0s						
PSZ				MLR	MLR		
	comp=Z,800nm,21.0s						
PSZ	**Piszkesteto**	**76.92**	**1**	P	**P**	**21 03 10.9**	**+0.8**
PSZ	**Piszkesteto**	**76.92**	**1**	P	**P**	**21 03 11.4**	**+1.3**
BIOA	**Bad Ischl, Aus**	**76.95**	**5**	*i* P	**P**	**21 03 11.0**	**+0.8**
	comp=Z,53nm,1.7s,SNR=11						
RETA	**Reutte**	**76.97**	**7**	*i* P	**P**	**21 03 11.3**	**+0.9**
	comp=Z,47nm,1.5s,SNR=13						
SRO	**Srobarova**	**77.00**	**2**	*e*P	**P**	**21 03 12.1**	**+1.7**
SRO				pmax	pmax		
	comp=Z,78nm,1.6s						
SRO	**Srobarova**	**77.00**	**2**	*e*P	**P**	**21 03 12.1**	**+1.7**
GAR	**Garm**	**77.03**	**323**	P	**P**	**21 03 11.9**	**+0.9**
CACAO	**El Cacao, Vera**	**77.05**	**96**	*e*P	**P**	**21 03 09.0**	**-2.2**
RONA	**Rosalia, Austr**	**77.06**	**4**	*i* P	**P**	**21 03 11.7**	**+0.9**
	comp=Z,58nm,1.9s,SNR=16						
SOP	**Sopron**	**77.09**	**3**	P	**P**	**21 03 12.2**	**+1.3**
SOP	**Sopron**	**77.09**	**3**	P	**P**	**21 03 12.3**	**+1.4**
DAVA	**Damuels**	**77.11**	**8**	*e*P	**P**	**21 03 11.9**	**+0.7**
	comp=Z,14nm,1.1s						
STVI	**Saint Thomas**	**77.12**	**76**	P	**P**	**21 03 11.5**	**0.0**
MOTA	**Moosalm**	**77.14**	**7**	*i* P	**P**	**21 03 12.3**	**+0.9**
	comp=Z,30nm,0.9s,SNR=21						
BUR08	**Bucovina Ar. S**	**77.16**	**357**	P	**P**	**21 03 11.8**	**+0.4**
BMR	**Baia Mare**	**77.16**	**359**	⇓P	**P**	**21 03 12.5**	**+1.2**
WATA	**Walderalm**	**77.18**	**7**	*i* P	**P**	**21 03 12.8**	**+1.2**
	comp=Z,91nm,1.3s,SNR=21						
BURAR	**Bucovina Array**	**77.18**	**357**	⇓P	**P**	**21 03 12.5**	**+0.9**
BURAR	**Bucovina Array**	**77.18**	**357**	P	**P**	**21 03 12.5**	**+0.9**
WTTA	**Wattenberg**	**77.26**	**7**	*i* P	**P**	**21 03 13.3**	**+1.2**
	comp=Z,76nm,1.2s,SNR=14						
SQTA	**Sankt Quirin**	**77.27**	**7**	*i* P	**P**	**21 03 13.4**	**+1.3**
	comp=Z,114nm,1.4s,SNR=26						
ITAN	**ITANAGAR**	**77.32**	**300**	*e*P	**P**	**21 03 13.2**	**+0.6**
BUD	**Budapest**	**77.35**	**2**	P	**P**	**21 03 13.9**	**+1.5**
BUD	**Budapest**	**77.35**	**2**	P	**P**	**21 03 13.8**	**+1.5**
EGYH	**Egyhazaskeszo**	**77.38**	**3**	P	**P**	**21 03 14.7**	**+2.2**
EGYH	**Egyhazaskeszo**	**77.38**	**3**	P	**P**	**21 03 14.1**	**+1.6**
FETA	**Feichten**	**77.44**	**7**	*i* P	**P**	**21 03 14.4**	**+1.3**
	comp=Z,50nm,1.1s,SNR=16						
CSKK	**Cskako**	**77.45**	**2**	P	**P**	**21 03 14.5**	**+1.6**
CSKK	**Cskako**	**77.45**	**2**	P	**P**	**21 03 14.6**	**+1.6**
LTVH	**Ltavrtes, Hu**	**77.46**	**360**	⇓P	**P**	**21 03 14.5**	**+1.5**
LTVH	**Ltavrtes, Hu**	**77.46**	**360**	P	**P**	**21 03 14.7**	**+1.7**
LTVH	**Ltavrtes, Hu**	**77.46**	**360**	P	**P**	**21 03 14.7**	**+1.7**
ARSA	**Arzberg**	**77.48**	**4**	*i* P	**P**	**21 03 14.7**	**+1.5**
	comp=Z,40nm,1.2s,SNR=17						
IAS	**Iasi**	**77.53**	**356**	⇑P	**P**	**21 03 13.8**	**+0.4**
BSZH	**Besenyszg**	**77.55**	**1**	⇑P	**P**	**21 03 15.2**	**+1.8**
BSZH	**Besenyszg**	**77.55**	**1**	P	**P**	**21 03 16.7**	**+3.3**
KBA	**Koelnbreinsper**	**77.55**	**6**	*i* P	**P**	**21 03 15.2**	**+1.5**
	comp=Z,116nm,1.4s,SNR=29						
MOKO	**MOKOCHONG**	**77.61**	**298**	*e*P	**P**	**21 03 15.3**	**+0.9**
MOKO				IAmb	IAmb	21 03 17.8	
	comp=Z,356nm,1.2s						
DAVOX	**Davos/Dischmat**	**77.61**	**8**	LR	LR	21 37 56.8	
	comp=Z,317nm,20.6s,baz=2.5,slow=36						
MPLH	**Magyarpolny**	**77.63**	**3**	P	**P**	**21 03 14.5**	**+0.5**
MPLH	**Magyarpolny**	**77.63**	**3**	P	**P**	**21 03 15.2**	**+1.3**
KIS	**Kishinev**	**77.66**	**355**	⇓*i*P	**P**	**21 03 14.0**	**-0.1**
	comp=Z,260nm,2.2s						
KIS	**Kishinev**	**77.66**	**355**	*e*PcP	**PcP**	**21 03 24.0**	**-0.2**
KIS				*e*S	**S**	**21 13 00.0**	**-2.7**
	comp=Z,380nm,5.1s						
KIS				*e*L	L	21 37 15.0	
KIS				LQM		21 39 31.0	
	comp=Z,600nm,20.0s						
KIS				LRM	MLR	21 45 18.0	
	comp=Z,400nm,17.0s						
KIS	**Kishinev**	**77.66**	**355**	d *i*P	**P**	**21 03 14.0**	**-0.1**
KIS				*e*		21 03 24.0	
KIS				*e*S	**S**	**21 13 00.0**	**-2.7**
KIS				pmax	pmax		
	comp=Z,260nm,2.2s						
KIS				smax	smax		
	comp=E,380nm,5.1s						
MESR	**Meseseni**	**77.69**	**359**	⇑P	**P**	**21 03 16.2**	**+1.9**
ARCR	**ARCALIA**	**77.73**	**358**	⇑P	**P**	**21 03 16.5**	**+1.9**
CHGR	**Chuyangaron**	**77.73**	**324**	P	**P**	**21 03 15.7**	**+0.9**
CHGR	**Chuyangaron**	**77.73**	**324**	P	**P**	**21 03 15.7**	**+0.9**
CHGR				pmax	pmax		
	comp=Z,615nm,1.4s						
MILM	**Milestii Mici**	**77.74**	**355**	⇓*i*P	**P**	**21 03 14.3**	**-0.3**
	comp=Z,500nm,2.1s						
MILM	**Milestii Mici**	**77.74**	**355**	*e*PcP	**PcP**	**21 03 24.0**	**-0.5**
MILM				⇓*i*S	**S**	**21 13 00.5**	**-3.1**
	comp=Z,660nm,6.6s						
MILM				*e*ScS	SKSac	21 13 15.0	-10
MILM				*e*L	L	21 32 01.0	
MILM				*e*LQ	LQ	21 37 48.0	
	comp=Z,1µm,20.0s						
MILM				LRM	MLR	21 45 14.0	
	comp=Z,1µm,17.0s						
MILM	**Milestii Mici**	**77.74**	**355**	⇑P	**P**	**21 03 14.5**	**0.0**
MILM	**Milestii Mici**	**77.74**	**355**	*i* P	**P**	**21 03 14.0**	**-0.6**
MILM				*e*		21 03 24.0	
MILM				*i* S	**S**	**21 13 00.5**	**-3.1**
MILM				*e*		21 13 15.0	
MILM				pmax	pmax		
	comp=N,180nm,2.1s						
MILM				pmax	pmax		
	comp=Z,500nm,2.1s						
MILM				smax	smax		
	comp=E,660nm,6.6s						
SRPI	**Serui, Papua**	**77.75**	**248**	P	**P**	**21 03 16.8**	**+1.8**
SENIN	**Lac Senin/Sane**	**77.79**	**10**	P	**P**	**21 03 16.3**	**+1.1**
ABTA	**Abfaltersbach**	**77.83**	**6**	*i* P	**P**	**21 03 16.2**	**+1.0**
	comp=E,53nm,1.2s,SNR=12						
BIZ	**Bicaz**	**77.83**	**357**	⇓P	**P**	**21 03 16.3**	**+1.2**
TUE	**Stuetta**	**77.87**	**8**	P	**P**	**21 03 16.8**	**+1.2**
TUE				IAmb	IAmb	21 03 40.0	
	comp=Z,229nm,2.0s						
TUE				IAMs_20	IAMs_20	21 43 53.0	
	comp=Z,1µm,20.0s						
MYKA	**Terra Mystica**	**78.01**	**5**	*i* P	**P**	**21 03 17.0**	**+0.8**
	comp=Z,25nm,1.0s,SNR=6.8						
SOKA	**Soboth**	**78.03**	**4**	*i* P	**P**	**21 03 17.4**	**+1.1**
	comp=Z,107nm,1.4s,SNR=36						
DRGR		**78.05**	**359**	⇓P	**P**	**21 03 17.0**	**+0.5**
VASR	**Vaslui**	**78.06**	**355**	⇓P	**P**	**21 03 17.1**	**+0.7**
PURM	**Purcari**	**78.07**	**354**	⇓P	**P**	**21 03 16.9**	**+0.5**
PERS	**Pernice**	**78.08**	**4**	*i* P	**P**	**21 03 17.5**	**+1.0**
CJR	**Cluj-Napoca**	**78.12**	**358**	⇑P	**P**	**21 03 18.2**	**+1.5**
GOF	**Gofitskoye**	**78.13**	**345**	⇑*e*P	**P**	**21 03 18.0**	**+1.2**
GOF				*e*S	**S**	**21 13 06.9**	**-1.0**
GOF				pmax	pmax		
	comp=Z,362nm,0.8s						
GOF				smax	smax		
	comp=N,49nm,1.1s						
GOF				smax	smax		
	comp=E,38nm,1.6s						
WAMI	**Wamena**	**78.17**	**245**	P	**P**	**21 03 20.3**	**+3.0**
	comp=E,72nm,1.1s						
OBKA	**Obir**	**78.18**	**5**	*i* P	**P**	**21 03 18.4**	**+1.2**
	comp=E,99nm,0.8s,SNR=22						
SJCC	**San Jacinto, C**	**78.20**	**90**	P	**P**	**21 03 17.2**	**-0.4**
SJCC				IAmb	IAmb	21 03 18.7	
	comp=Z,166nm,1.6s						
SJCC	**San Jacinto, C**	**78.20**	**90**	*e*P	**P**	**21 03 14.8**	**-2.8**
LEOM	**Leova**	**78.21**	**355**	⇓P	**P**	**21 03 18.1**	**+1.0**
TEZP	**TEZPUR**	**78.22**	**300**	*e*P	**P**	**21 03 17.6**	**0.0**
TEZP				IAmb	IAmb	21 03 19.6	
	comp=Z,42nm,1.2s						
TESR	**Tescani**	**78.24**	**356**	⇑P	**P**	**21 03 17.6**	**+0.2**
BEHE	**Becsehely**	**78.31**	**3**	⇓*i*P	**P**	**21 03 19.1**	**+1.4**
KOHI	**KOHIMA**	**78.31**	**298**	*e*P	**P**	**21 03 18.8**	**+0.6**
KOHI				IAmb	IAmb	21 03 21.0	
	comp=Z,89nm,1.2s						
SMRT	**St. Maarten**	**78.40**	**75**	IAMs_20	IAMs_20	21 42 35.7	
	comp=Z,1µm,22.0s						
BIR	**Birlad**	**78.45**	**356**	⇑P	**P**	**21 03 19.9**	**+1.4**
CTI	**Castel Tesino**	**78.47**	**7**	P	**P**	**21 03 19.4**	**+0.7**
CTI	**Castel Tesino**	**78.47**	**7**	P	**P**	**21 03 19.5**	**+0.7**
URIC	**Uribia, Colomb**	**78.54**	**86**	P	**P**	**21 03 18.2**	**-1.3**
SSB	**Saint Sauveur**	**78.56**	**12**	P	**P**	**21 03 20.3**	**+1.0**
SSB	**Saint Sauveur**	**78.56**	**12**	IAMs_20	IAMs_20	21 42 36.3	
	comp=Z,908nm,19.0s						
SSB	**Saint Sauveur**	**78.56**	**12**	P	**P**	**21 03 20.3**	**+1.0**
SSB				pmax	pmax		
	comp=Z,60nm,1.5s						
SSB				MLR	MLR		
	comp=Z,900nm,19.0s						
SIRR	**Siria**	**78.58**	**360**	⇑P	**P**	**21 03 20.8**	**+1.5**
MORH	**Mrgy, Hungar**	**78.61**	**2**	⇓P	**P**	**21 03 20.0**	**+0.7**
MORH	**Mrgy, Hungar**	**78.61**	**2**	⇓*i*P	**P**	**21 03 19.9**	**+0.5**
MORH	**Mrgy, Hungar**	**78.61**	**2**	P	**P**	**21 03 20.1**	**+0.7**
MORH	**Mrgy, Hungar**	**78.61**	**2**	P	**P**	**21 03 20.0**	**+0.7**
LJU	**Ljubljana**	**78.64**	**5**	⇓*i*P	**P**	**21 03 19.7**	**+0.1**
LJU	**Ljubljana**	**78.64**	**5**	*i* P	**P**	**21 03 20.0**	**+0.4**
GHRR		**78.66**	**356**	⇓P	**P**	**21 03 21.4**	**+1.7**
MDB	**Medias**	**78.68**	**358**	⇓P	**P**	**21 03 21.2**	**+1.4**
KOVH	**Kovagotottos**	**78.72**	**2**	P	**P**	**21 03 20.9**	**+0.9**
KOVH	**Kovagotottos**	**78.72**	**2**	P	**P**	**21 03 21.2**	**+1.2**
PMG	**Port Moresby**	**78.79**	**235**	LR	LR	21 32 37.2	
	comp=Z,718nm,22.0s,baz=39,slow=31						
PMG	**Port Moresby**	**78.79**	**235**	P	**P**	**21 03 18.9**	**-1.8**
PMG	**Port Moresby**	**78.79**	**235**	*i* P	**P**	**21 03 20.6**	**-0.1**
PMG				pmax	pmax		
	comp=Z,40nm,1.2s						
VARL	**Varlezi**	**78.80**	**355**	⇑P	**P**	**21 03 21.6**	**+1.2**
SALO	**Salr**	**78.81**	**8**	P	**P**	**21 03 20.8**	**+0.2**
SALO				IAmb	IAmb	21 03 47.3	
	comp=Z,99nm,1.4s						
DOPR	**Dopca**	**78.83**	**357**	⇓P	**P**	**21 03 22.5**	**+1.9**
VLDR	**Vladesti**	**78.85**	**355**	⇓P	**P**	**21 03 21.9**	**+1.2**
PANC	**Panciu**	**78.86**	**356**	⇓P	**P**	**21 03 22.1**	**+1.3**
VRI	**Vrincioaia**	**78.88**	**356**	⇓P	**P**	**21 03 21.9**	**+1.0**
CRES	**Cresnjev**	**78.90**	**4**	⇓*i*P	**P**	**21 03 21.0**	**0.0**
SEUS	**St. Eustatius**	**78.90**	**75**	IAMs_20	IAMs_20	21 32 16.0	
	comp=Z,1µm,22.0s						
PLOR	**Plostina**	**78.90**	**356**	⇓P	**P**	**21 03 22.1**	**+1.0**
COVR	**Voineasa-Covas**	**78.92**	**357**	⇓P	**P**	**21 03 22.9**	**+1.7**
CEY	**Cerknica**	**78.94**	**5**	⇓*i*P	**P**	**21 03 21.5**	**+0.2**
ODBI	**Odobesti**	**78.97**	**356**	⇑P	**P**	**21 03 22.2**	**+0.8**
SGSI	**Sangihe**	**78.98**	**260**	P	**P**	**21 03 21.6**	**-0.3**
	comp=Z,1µmcomp=Z,126nm,0.8s						
SCTR	**Scanteiesti**	**79.02**	**355**	⇓P	**P**	**21 03 22.9**	**+1.2**
BNI	**Bardonecchia**	**79.03**	**11**	P	**P**	**21 03 23.1**	**+1.2**
BNI				IAMs_20	IAMs_20	21 42 34.5	
	comp=Z,1µm,21.0s						
BNI	**Bardonecchia**	**79.03**	**11**	P	**P**	**21 03 23.1**	**+1.2**
BNI				pmax	pmax		
	comp=Z,20nm,0.8s						
BNI				MLR	MLR		
	comp=Z,1µm,21.0s						
TATR	**Tatarca**	**79.09**	**355**	⇑P	**P**	**21 03 23.4**	**+1.4**
SKDS	**Skadanscina**	**79.11**	**5**	⇓*i*P	P	21 03 37.0	+15
GUWA	**GUWAHATI**	**79.11**	**301**	*e*P	**P**	**21 03 22.0**	**-0.5**
GUWA				IAmb	IAmb	21 03 24.5	
	comp=Z,46nm,0.8s						
SLCR	**Slobozia Conac**	**79.12**	**355**	⇓P	**P**	**21 03 23.6**	**+1.4**
TUDR		**79.12**	**356**	⇓P	**P**	**21 03 23.0**	**+0.9**
ANN	**Anapa**	**79.13**	**348**	*e*P	**P**	**21 03 22.1**	**-0.2**
ANN				*e*S	**S**	**21 13 16.6**	**-1.9**
ANN				*e*		21 13 36.4	
ANN				pmax	pmax		
	comp=N,46nm,1.1s						
ANN				pmax	pmax		
	comp=Z,79nm,1.1s						
ANN				pmax	pmax		
	comp=E,18nm,0.7s						
ANN				MLR	MLR		
	comp=N,3µm,25.0s						
ANN				MLR	MLR		
	comp=Z,1µm,25.0s						
TEOL	**Teolo**	**79.16**	**7**	P	**P**	**21 03 23.3**	**+0.9**
TEOL				IAmb	IAmb	21 03 47.9	
	comp=Z,81nm,0.8s						
IZVR	**Izvoarele**	**79.16**	**355**	⇓P	**P**	**21 03 23.8**	**+1.4**
BISRR	**Bisoca**	**79.20**	**356**	⇑P	**P**	**21 03 24.3**	**+1.5**
SCHL	**Schela**	**79.20**	**355**	⇑P	**P**	**21 03 24.2**	**+1.5**
BOJS	**Bojanci**	**79.21**	**4**	*i* P	**P**	**21 03 23.4**	**+0.7**
BZS	**Buzias**	**79.23**	**360**	⇓P	**P**	**21 03 23.8**	**+0.9**
KVAR	**Kislovodsk Arr**	**79.26**	**345**	LR	LR	21 43 59.1	
	comp=Z,522nm,18.0s,baz=264,slow=40						
KIV	**Kislovodsk**	**79.26**	**345**	⇑P	**P**	**21 03 24.6**	**+1.4**
KIV	**Kislovodsk**	**79.26**	**345**	P	**P**	**21 03 23.8**	**+0.6**
KIV				IAmb	IAmb	21 03 27.6	
	comp=Z,77nm,1.0s						
KIV				IAMs_20	IAMs_20	21 44 20.2	
	comp=Z,881nm,19.0s						
KIV	**Kislovodsk**	**79.26**	**345**	*e*P	**P**	**21 03 23.2**	**0.0**
KIV				*e*S	**S**	**21 13 20.9**	**+0.7**
KIV				*e*SS	**SS**	**21 18 28.0**	**+2.2**
KIV				*e*SSS	SSS	21 21 54.6	
KIV				pmax	pmax		
	comp=Z,79nm,1.0s						
KIV				pmax	pmax		
	comp=Z,47nm,3.7s						
KIV	**Kislovodsk**	**79.26**	**345**	*i* P	**P**	**21 03 24.3**	**+1.2**
	SNR=25						
MLR	**Muntele Rosu**	**79.29**	**357**	⇑P	**P**	**21 03 24.1**	**+0.8**
MLR	**Muntele Rosu**	**79.29**	**357**	P	**P**	**21 03 24.1**	**+0.8**
MLR				IAmb	IAmb	21 03 41.0	
	comp=Z,169nm,1.6s						
MLR	**Muntele Rosu**	**79.29**	**357**	P	**P**	**21 03 24.1**	**+0.8**
MLR				pmax	pmax		
	comp=Z,169nm,1.6s						
SIM	**Simferopol'**	**79.32**	**351**	*e*P	**P**	**21 03 23.0**	**-0.3**
SIM				*e*S	**S**	**21 13 19.5**	**-1.1**
SIM				pmax	pmax		
	comp=Z,58nm,0.9s						
NEHR	**Nehoiu**	**79.34**	**356**	⇑P	**P**	**21 03 24.4**	**+1.0**
GRER		**79.36**	**356**	⇑P	**P**	**21 03 24.4**	**+0.9**
VOIR		**79.37**	**357**	⇓P	**P**	**21 03 24.8**	**+1.1**
LOT	**Lotru**	**79.38**	**358**	⇓P	**P**	**21 03 24.0**	**+0.2**
ANWB	**Willy Bob**	**79.41**	**74**	IAMs_20	IAMs_20	21 43 09.6	
	comp=Z,996nm,20.0s						
MAK	**Makhachkala**	**79.41**	**341**	*e*P	**P**	**21 03 22.7**	**-1.1**
MAK				*e*		21 06 25.8	
MAK				*e*PPP	PPP	21 08 09.7	
MAK				*e*S	**S**	**21 13 21.1**	**-0.5**
MAK				*e*SSS	SSS	21 21 50.7	
MAK				pmax	pmax		
	comp=Z,347nm,1.7s						
GZR	**Gura Zlata**	**79.45**	**359**	⇑P	**P**	**21 03 25.4**	**+1.3**
KBZ	**Khabaz**	**79.45**	**344**	P	**P**	**21 03 25.4**	**+1.3**
	comp=Z,61nm,0.8s,baz=359,slow=1.1,SNR=49						
KBZ				LR	LR	21 44 04.1	
	comp=Z,846nm,18.8s,baz=1.0,slow=40						
	comp=Z,61nm,0.8s						
BANR	**Banloc**	**79.47**	**0**	⇓P	**P**	**21 03 25.9**	**+1.8**
TLCR		**79.47**	**355**	⇑P	**P**	**21 03 25.1**	**+1.0**
SHA1	**Shidzhatmaz**	**79.48**	**344**	*i* P	**P**	**21 03 25.6**	**+1.1**
GROC	**Groznyy**	**79.49**	**342**	*e*P	**P**	**21 03 24.9**	**+0.6**
GROC				*e*		21 03 33.2	
GROC				*e*S	**S**	**21 13 20.3**	**-2.1**
GROC				pmax	pmax		
	comp=Z,13nm,0.5s						
CFR	**Carcaliu**	**79.51**	**355**	⇑P	**P**	**21 03 24.8**	**+0.5**
SHL	**Shillong**	**79.54**	**300**	P	**P**	**21 03 26.3**	**+1.2**
SHL				IAmb	IAmb	21 03 39.3	
	comp=Z,227nm,1.9s						
SHL	**Shillong**	**79.54**	**300**	P	**P**	**21 03 26.3**	**+1.2**
SHL				pmax	pmax		
	comp=Z,227nm,1.9s						
SHL	**Shillong**	**79.54**	**300**	*e*P	**P**	**21 03 25.7**	**+0.6**
SHL				IAmb	IAmb	21 03 28.1	
	comp=Z,23nm,0.5s						
SWI	**Sorong**	**79.58**	**253**	P	**P**	**21 03 25.5**	**+0.4**
	comp=Z,2µmcomp=Z,1µmcomp=Z,82nm,1.1s						
SIJI	**Sorong**	**79.58**	**253**	P	**P**	**21 03 26.1**	**+0.9**
	comp=Z,59nm,0.8s,baz=22,slow=6.3,SNR=31						
SIJI				LR	LR	21 34 24.5	
	comp=Z,568nm,20.8s,baz=34,slow=32						
	comp=Z,59nm,0.8s						
PRMA	**PARMA**	**79.65**	**8**	P	**P**	**21 03 27.7**	**+2.6**
PRMA				IAmb	IAmb	21 03 28.8	
	comp=Z,208nm,1.4s						
GTK	**Tadong**	**79.66**	**304**	*e*P	**P**	**21 03 26.5**	**+0.9**
PGAV	**Gavieira, Arco**	**79.66**	**22**	*e*P	**P**	**21 03 26.2**	**+0.8**
	comp=Z,72nm,2.1s						
PGAV	**Gavieira, Arco**	**79.66**	**22**	*e*PP	PP	21 06 33.0	+7.3
PGAV				*e*S	**S**	**21 13 27.7**	**+3.2**
PGAV	**Gavieira, Arco**	**79.66**	**22**	*e*LQ	LQ	21 25 24.1	
PGAV				*e*LR	LR	21 30 19.2	
	comp=Z,1µm,20.0s						
FRGS	**Fruska Gora**	**79.68**	**1**	⇓P	**P**	**21 03 26.2**	**+0.9**
FRGS	**Fruska Gora**	**79.68**	**1**	⇓*i*P	**P**	**21 03 25.9**	**+0.6**
SECR		**79.74**	**357**	⇑P	**P**	**21 03 26.5**	**+0.8**
UREC	**San Jos de Ur**	**79.74**	**91**	*e*P	**P**	**21 03 23.3**	**-2.8**
TPGR	**Topolog**	**79.82**	**355**	⇑P	**P**	**21 03 26.4**	**+0.3**
PGOR	**Pogoanele**	**79.83**	**356**	⇑P	**P**	**21 03 27.4**	**+1.3**
STFAR	**Stefanesti-Arg**	**79.94**	**357**	⇓P	**P**	**21 03 27.7**	**+1.0**
DBBC	**Dabeiba**	**79.95**	**92**	*e*P	**P**	**21 03 25.1**	**-2.1**
PCAB	**Cabril**	**79.96**	**22**	*e*P	**P**	**21 03 28.4**	**+1.5**
	comp=Z,65nm,1.3s						
HERR	**Herculane**	**79.97**	**359**	⇑P	**P**	**21 03 27.2**	**+0.4**
HARR	**Harsova**	**80.01**	**355**	⇑P	**P**	**21 03 28.2**	**+1.1**
BLY	**Banja Luka**	**80.04**	**3**	⇓*i*P	**P**	**21 03 27.6**	**+0.4**
SOC	**Sochi**	**80.05**	**347**	*e*P	**P**	**21 03 26.0**	**-1.3**
SOC				*e*		21 06 27.6	
SOC				*e*PPP	PPP	21 08 15.6	
SOC				*e*S	**S**	**21 13 27.8**	**-0.5**
SOC				*e*SS	**SS**	**21 18 39.8**	**+2.4**
SOC				*e*SSS	SSS	21 22 03.0	
SOC				pmax	pmax		
	comp=Z,87nm,0.9s						
SOC				MLR	MLR		
	comp=Z,889nm,15.0s						
BLJ	**Bijeljina**	**80.05**	**2**	*e*P	**P**	**21 03 27.5**	**+0.2**
TAPN	**Taplejung**	**80.05**	**304**	*e*P	**P**	**21 03 28.7**	**+0.7**
	comp=Z,360nm,1.0s						
MDVR	**Moldovita**	**80.07**	**360**	⇓P	**P**	**21 03 28.2**	**+0.7**
DHUB	**DHUBRI**	**80.08**	**302**	*e*P	**P**	**21 03 27.3**	**-0.4**
ZCCA	**Zocca**	**80.11**	**8**	IAmb	IAmb	21 03 51.6	
	comp=Z,118nm,1.4s						
PBRG	**Braganca**	**80.14**	**21**	*e*P	**P**	**21 03 29.3**	**+1.4**
	comp=Z,52nm,2.0s						
TLBR	**Topalu**	**80.15**	**355**	⇓P	**P**	**21 03 28.2**	**+0.4**
SRE	**Strehaia**	**80.18**	**359**	⇑P	**P**	**21 03 29.4**	**+1.4**
DJES	**Djerdap**	**80.18**	**359**	⇓P	**P**	**21 03 28.9**	**+0.8**
ZEI	**Tsey**	**80.21**	**343**	*e*P	**P**	**21 03 26.9**	**-1.6**
ZEI				pmax	pmax		
	comp=Z,46nm,1.0s						
TIRR	**Tirgusor**	**80.22**	**355**	⇓P	**P**	**21 03 28.9**	**+0.7**
TIRR	**Tirgusor**	**80.22**	**355**	⇓P	**P**	**21 03 28.9**	**+0.7**
TIRR	**Tirgusor**	**80.22**	**355**	P	**P**	**21 03 28.9**	**+0.7**
TIRR	**Tirgusor**	**80.22**	**355**	P	**P**	**21 03 28.9**	**+0.7**
TIRR				pmax	pmax		
	comp=Z,118nm,0.8s						
TIRR				MLR	MLR		
	comp=Z,3µm,19.0s						
VLC	**Villacollemand**	**80.25**	**8**	IAMs_20	IAMs_20	21 43 25.0	
	comp=Z,1µm,21.0s						
LEHL	**Lehliu**	**80.27**	**356**	⇑P	**P**	**21 03 28.9**	**+0.4**
HUMR	**Humele**	**80.28**	**357**	⇑P	**P**	**21 03 28.9**	**+0.4**
TEKS	**Tekeris**	**80.29**	**1**	*e*P	**P**	**21 03 29.1**	**+0.5**
POLO	**Lamas de Olo**	**80.33**	**22**	*e*P	**P**	**21 03 30.2**	**+1.2**
	comp=Z,32nm,1.3s						
TNTI	**Ternate**	**80.36**	**257**	P	**P**	**21 03 29.1**	**-0.2**
TNTI	**Ternate**	**80.36**	**257**	P	**P**	**21 03 30.1**	**+0.8**
	comp=Z,725nmcomp=Z,42nm,1.4s						
MGRS	**Mrkonjic Grad**	**80.37**	**3**	⇓*i*P	**P**	**21 03 30.3**	**+1.3**
PTO	**Porto**	**80.38**	**23**	*e*P	**P**	**21 03 30.7**	**+1.6**
	comp=Z,85nm,1.5s						
GUN	**Gumba**	**80.43**	**306**	*e*P	**P**	**21 03 30.8**	**+0.7**
	comp=Z,118nm,0.5s						
PVRL	**Vila Real**	**80.44**	**22**	*e*P	**P**	**21 03 30.9**	**+1.4**
	comp=Z,68nm,1.4s						
MFTR	**Murfatlar**	**80.49**	**355**	⇓P	**P**	**21 03 30.7**	**+1.1**
JIRN	**Jiri**	**80.50**	**306**	*e*P	**P**	**21 03 31.5**	**+1.0**
	comp=Z,331nm,0.5s						
ABD	**La Joyeuse, An**	**80.55**	**75**	IAMs_20	IAMs_20	21 39 05.7	
	comp=Z,1µm,20.0s						
SGRR	**Singureni**	**80.55**	**357**	⇑P	**P**	**21 03 30.1**	**+0.2**
PUNG	**Punghina**	**80.56**	**359**	⇓P	**P**	**21 03 30.3**	**+0.3**
CHVG	**Ch'k'valeri**	**80.56**	**345**	⇑P	**P**	**21 03 31.7**	**+1.6**
ICOR	**Ion Corvin**	**80.58**	**355**	⇓P	**P**	**21 03 31.7**	**+1.6**
OCAC	**Ocana**	**80.60**	**89**	P	**P**	**21 03 30.1**	**-0.7**
COPA	**Copaceanca**	**80.66**	**357**	⇑P	**P**	**21 03 30.9**	**+0.3**
AZL	**Aizawl**	**80.67**	**298**	*e*P	**P**	**21 03 31.7**	**+0.7**
AZL				IAmb	IAmb	21 03 35.3	
	comp=Z,71nm,0.8s						
MVO	**Moncorvo**	**80.69**	**21**	*e*P	**P**	**21 03 32.3**	**+1.4**
	comp=Z,71nm,1.2s						
MVO	**Moncorvo**	**80.69**	**21**	*e*PP	PP	21 06 35.4	+1.2
MVO				*e*S	**S**	**21 13 38.5**	**+3.2**
MVO	**Moncorvo**	**80.69**	**21**	*e*LQ	LQ	21 25 44.8	
MVO				*e*LR	LR	21 28 25.6	
SRKY	**Kupres RS**	**80.72**	**3**	⇓*i*P	**P**	**21 03 31.9**	**+0.9**
DIVS	**Divibare**	**80.75**	**1**	P	**P**	**21 03 31.5**	**+0.3**
DIVS				IAMs_20	IAMs_20	21 39 24.9	
	comp=Z,920nm,22.0s						
DIVS	**Divibare**	**80.75**	**1**	⇓*i*P	**P**	**21 03 31.7**	**+0.5**
NIL	**Nilore**	**80.75**	**318**	P	**P**	**21 03 31.0**	**-0.3**
NIL	**Nilore**	**80.75**	**318**	P	**P**	**21 03 31.0**	**-0.3**

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NIL                                pmax     pmax
      comp=Z,507nm,1.5s
NIL                                MLR      MLR
      comp=Z,5µm,20.0s
FAKI  Fak Fak           80.76 251  P        P        21 03 31.2 -0.2
FAKI                               IAmb     IAmb     21 03 46.4
      comp=Z,107nm,1.1s
FAKI  Fak Fak           80.76 251  P        P        21 03 31.4 -0.1
      comp=Z,1µmcomp=Z,89nm,1.4s
BAIL  Bailesti          80.82 359 ⇑P        P        21 03 32.4 +1.0
VLAD  Vladila           80.82 358 ⇑P        P        21 03 32.2 +0.8
RAMN  Ramite            80.91 305 eP        P        21 03 33.1 +0.6
      comp=Z,266nm,0.6s
GDSD  La Dsirade Is     80.91  75  P        P        21 03 32.0 -0.4
GDSD                               IAmb     IAmb     21 03 32.7
      comp=Z,145nm,1.1s
GDSD                               IAMs_20  IAMs_20  21 43 22.3
      comp=Z,1µm,21.0s
GKN   Gorkha            80.92 307 eP        P        21 03 32.9 +0.5
      comp=Z,259nm,1.1s
PKI   Pulchoki          80.94 306 eP        P        21 03 33.0 +0.3
      comp=Z,83nm,0.5s
PKIN  Phulchoki         80.94 306 eP        P        21 03 33.1 +0.4
      comp=Z,81nm,0.5s
PVIS  Viseu             80.94  22 eP        P        21 03 33.2 +1.0
      comp=Z,78nm,1.5s
OSSC  Osservatorio P    80.95   7  P        P        21 03 33.0 +0.8
BBLS  Lazi&#263;i       80.97   1⇓iP        P        21 03 33.7 +1.4
TDBA  Terre de Bas,     80.98  75  IAMs_20  IAMs_20  21 46 20.0
      comp=Z,1µm,20.0s
PSN   Preselentsi       81.00 355 i P       P        21 03 33.4 +1.0
CBOC  Ciudad Bolivar    81.00  93 eP        P        21 03 27.2 -5.8
HELC  Santa Helena      81.01  92 eP        P        21 03 30.9 -2.4
DANN  Dangsing          81.02 308 eP        P        21 03 34.0 +0.9
      comp=Z,566nm,0.9s
DMN   Daman             81.04 306 eP        P        21 03 33.9 +0.7
      comp=Z,93nm,0.5s
RAZG  Razgrad           81.19 356 ⇓P        P        21 03 33.8 +0.4
RUDO  Rudo              81.22   1 eP        P        21 03 33.9 +0.3
BLKB  Belogradchik      81.22 359 ⇑P        P        21 03 34.2 +0.5
BRRC  Barranca, Sant    81.30  90 eP        P        21 03 27.2 -7.2
BRRC                              eP        P        21 03 29.3 -5.1
MURB  Monte Urbino      81.30   7  P        P        21 03 35.1 +1.0
MURB                               IAmb     IAmb     21 03 38.4
      comp=Z,132nm,1.2s
COI   Coimbra           81.31  23 eP        P        21 03 35.2 +1.1
      comp=Z,102nm,1.4s
COI   Coimbra           81.31  23  P        P        21 03 36.0 +1.9
COI   Coimbra           81.31  23  P        P        21 03 36.0 +1.9
COI                                pmax     pmax
      comp=Z,52nm,1.0s
COI                                MLR      MLR
      comp=Z,2µm,19.0s
MTE   Manteigas         81.32  22 eP        P        21 03 35.8 +1.6
      comp=Z,114nm,1.3s
MTE   Manteigas         81.32  22 ePP       PP       21 06 41.6 +2.2
MTE                               eS        S        21 13 44.1 +2.3
MTE   Manteigas         81.32  22 eLQ       LQ       21 25 51.1
MTE                               eLR       LR       21 30 37.4
      comp=Z,1µm,20.0s
MTE   Manteigas         81.32  22  P        P        21 03 35.6 +1.4
MTE                                IAmb     IAmb     21 03 36.4
      comp=Z,55nm,0.9s
MTE                                IAMs_20  IAMs_20  21 42 38.0
      comp=Z,1µm,18.0s
PTBC  PUERTO BERRIO,    81.34  91 eP        P        21 03 31.6 -3.1
LIFNC LIFOU             81.36 212  IAMs_20  IAMs_20  21 31 58.5
      comp=Z,908nm,20.0s
SMLA  Simla             81.44 314 eP        P        21 03 35.6 +0.7
SMLA                               IAmb     IAmb     21 03 38.9
      comp=Z,122nm,0.6s
PCAS  Casmilo, Conde    81.44  23 eP        P        21 03 35.8 +1.0
      comp=Z,82nm,1.9s
LBMI  Labuha            81.45 256  P        P        21 03 35.5 +0.4
      comp=Z,881nmcomp=Z,40nm,0.8s
MPEP  Malo Peshtene     81.47 358 i P       P        21 03 35.5 +0.6
KBL   Kabul             81.49 322  P        P        21 03 34.4 -1.0
KBL                                IAmb     IAmb     21 03 49.0
      comp=Z,69nm,1.2s
KBL   Kabul             81.49 322  P        P        21 03 34.4 -1.0
KBL                                pmax     pmax
      comp=Z,69nm,1.2s
PLE   Pljevlja          81.50   1⇓iP        P        21 03 36.3 +1.1
SZH   Strazhica         81.51 357 i P       P        21 03 35.1  0.0
CHTO  Chiang Mai        81.51 291  P        P        21 03 35.0 -0.5
CHTO  Chiang Mai        81.51 291  IAMs_20  IAMs_20  21 39 02.5
      comp=Z,1µm,22.0s
CHTO  Chiang Mai        81.51 291  P        P        21 03 35.0 -0.5
CHTO                               pmax     pmax
      comp=Z,45nm,1.1s
CHTO                               MLR      MLR
      comp=Z,1µm,22.0s
PYUN  Piuthan           81.58 308 eP        P        21 03 36.3 +0.3
      comp=Z,106nm,0.5s
SJES  Sjenica           81.58   1⇓iP        P        21 03 36.8 +1.2
SDV   Santo Domingo     81.60  87  LR       LR       21 41 57.4
      comp=Z,1µm,18.9s,baz=349,slow=37
SDV   Santo Domingo     81.60  87  P        P        21 03 35.0 -1.2
SDV                                IAmb     IAmb     21 03 36.8
      comp=Z,73nm,1.4s
SDV   Santo Domingo     81.60  87  IAMs_20  IAMs_20  21 41 17.0
      comp=Z,1µm,20.0s
SDV   Santo Domingo     81.60  87 eP        P        21 03 35.7 -0.6
AKH   Akhalkalaki       81.62 343 ⇑P        P        21 03 37.8 +1.8
UPM   Unac-Piva         81.62   2 eP        P        21 03 36.3 +0.3
UPM   Unac-Piva         81.62   2⇓iP        P        21 03 36.5 +0.5
BATM  Batumi            81.71 345 ⇑P        P        21 03 37.1 +0.8
MYLDM Lahad Datu        81.73 267  P        P        21 03 38.1 +1.5
MYLDM                              IAmb     IAmb     21 04 47.1
      comp=Z,59nm,1.1s
NRCA  Norcia            81.76   6  P        P        21 03 38.1 +1.5
NRCA                               IAmb     IAmb     21 03 39.2
      comp=Z,88nm,1.4s
GEYT  Alibeck           81.77 331  P        P        21 03 37.6 +1.0
      comp=Z,36nm,0.9s,baz=259,slow=15,SNR=28
GEYT                               LR       LR       21 44 46.6
      comp=Z,3µm,18.7s,baz=38,slow=39
      comp=Z,36nm,0.9s
GEYT  Alibeck           81.77 331  P        P        21 03 37.3 +0.6
GYA0B ALIBECK ARRAY     81.77 331  P        P        21 03 38.4 +1.7
GYA0B                              IAmb     IAmb     21 04 07.4
      comp=Z,66nm,0.9s
DDI   Dehra Dun         81.78 313 eP        P        21 03 38.1 +1.3
CM31  Chiang Mai Arr    81.81 291  P        P        21 03 38.0 +0.9
CMAR  Chiang Mai Arr    81.81 291  P        P        21 03 37.6 +0.5
      comp=Z,61nm,0.9s,baz=19,slow=4.7,SNR=117
CMAR                               PKKPbc   PKKPbc   21 22 06.8 +2.0
      comp=Z,0.9nm,0.8s,baz=227,slow=4.1,SNR=6.2
CMAR                               LR       LR       21 40 06.3
      comp=Z,640nm,21.9s,baz=40,slow=36
      comp=Z,61nm,0.9s
PCBR  Castelo Branco    81.87  22 eP        P        21 03 38.0 +0.9
      comp=Z,82nm,1.7s
PSBE  So Bento          81.89  23 eP        P        21 03 38.4 +1.2
      comp=Z,121nm,1.8s
NORC  Norcasia          81.90  92 eP        P        21 03 35.9 -1.7
BRY   Bratogost         81.92   2 eP        P        21 03 37.8 +0.3
BRY   Bratogost         81.92   2⇓iP        P        21 03 37.8 +0.3
STON  Ston              81.93   3⇓iP        P        21 03 37.2 -0.1
IVA   Berane            81.97   1⇓iP        P        21 03 38.2 +0.5
KOME  Kolasin           81.99   1⇓iP        P        21 03 38.4 +0.6
NKY   Niksic            82.02   2⇓iP        P        21 03 38.4 +0.5
BARC  Barichara         82.02  90 eP        P        21 03 33.3 -5.2
NKME  Niksic            82.06   2⇓iP        P        21 03 38.5 +0.4
KOUNC Koumac, New Ca    82.07 215  P        P        21 03 38.2 +0.1
TREB  Trebinje          82.10   2 eP        P        21 03 38.4 +0.2
FDF   Fort de France    82.16  76  IAMs_20  IAMs_20  21 44 58.4
      comp=Z,2µm,20.0s
VTS   Vitosha           82.22 359 ⇑P        P        21 03 39.3 +0.2
VTS   Vitosha           82.22 359  P        P        21 03 39.1  0.0
VTS                                IAmb     IAmb     21 03 40.9
      comp=Z,156nm,2.0s
VTS   Vitosha           82.22 359  P        P        21 03 39.1  0.0
VTS                                pmax     pmax
      comp=Z,156nm,2.0s
VTS   Vitosha           82.22 359 i P       P        21 03 39.0  0.0
PVY   Plav              82.25   1⇓iP        P        21 03 39.7 +0.5
AQU   L'Aquila          82.26   6  P        P        21 03 40.7 +1.6
AQU   L'Aquila          82.26   6  P        P        21 03 40.7 +1.6
AQU                                pmax     pmax
      comp=Z,36nm,0.9s
AQU                                MLR      MLR
      comp=Z,800nm,22.0s
CEME  Cevo              82.28   2⇓iP        P        21 03 39.7 +0.4
PMRV  Marv??o           82.28  22 eP        P        21 03 40.2 +0.9
      comp=Z,96nm,1.6s
PMRV  Marv??o           82.28  22 ePP       PP       21 06 47.7 +0.4
PMRV                              eS        S        21 13 52.4 +0.7
PMRV  Marv??o           82.28  22 eLR       LR       21 31 19.8
      comp=Z,1µm,18.0s
BZK   Bozkurt           82.30 351 ⇑P        P        21 03 39.7 +0.5
BZK   Bozkurt           82.30 351  P        P        21 03 39.5 +0.3
PMAFR Mafra             82.32  24 eP        P        21 03 40.2 +0.8
      comp=Z,191nm,1.6s
YOTC  Yotoco, Valle     82.35  94 eP        P        21 03 35.4 -4.7
HCY   Herceg Novi       82.37   2 eP        P        21 03 39.6 -0.1
HCY   Herceg Novi       82.37   2⇓iP        P        21 03 39.9 +0.2
BIM   Bigot             82.38  76  IAMs_20  IAMs_20  21 42 50.2
      comp=Z,2µm,21.0s
PDG   Podgorica         82.40   2 ⇑P        P        21 03 40.2 +0.4
PDG   Podgorica         82.40   2  P        P        21 03 40.3 +0.5
PDG                                IAmb     IAmb     21 03 41.6
      comp=Z,201nm,1.7s
PDG                                IAMs_20  IAMs_20  21 42 57.8
      comp=Z,854nm,21.0s
PDG   Podgorica         82.40   2⇓iP        P        21 03 40.2 +0.4
TTG   Podgorica         82.40   2⇓iP        P        21 03 40.4 +0.6
KMSI  Cibinong          82.41 260  P        P        21 03 40.6 +0.4
      comp=Z,3µmcomp=Z,105nm,0.7s
PMTG  Montargil         82.44  23 eP        P        21 03 41.1 +1.0
      comp=Z,72nm,1.8s
KARS  Kars              82.45 344  P        P        21 03 42.5 +2.2
KARS  Kars              82.45 344  P        P        21 03 42.5 +2.2
KARS                               pmax     pmax
      comp=Z,342nm,1.4s
ANIL  Santa Ana         82.47  93 eP        P        21 03 35.3 -5.6
DIKM  Dikmen            82.48 350 ⇓P        P        21 03 41.6 +1.3
BUM   Brajici-Budva     82.53   2⇓iP        P        21 03 40.9 +0.3
PMST  Lisbon--Monsan    82.55  24 eP        P        21 03 41.7 +1.1
      comp=Z,134nm,2.0s
LIS   Lisbon            82.58  24 eP        P        21 03 41.4 +0.6
LIS                               eS        S        21 13 55.7 +1.1
LIS                                IAMs_20  IAMs_20  21 42 40.2
      comp=Z,1µm,14.8s
LIS   Lisbon            82.58  24 eP        P        21 03 41.3 +0.6
LIS                               eS        S        21 13 55.7 +1.1
PACT  Alcochete         82.60  23 eP        P        21 03 41.5 +0.6
      comp=Z,273nm,1.6s
GNI   Garni             82.64 342  LR       LR       21 44 44.4
      comp=Z,2µm,22.0s,baz=18,slow=39
GNI   Garni             82.64 342  P        P        21 03 42.6 +1.4
GNI   Garni             82.64 342 i P       P        21 03 42.7 +1.4
GNI                                pmax     pmax
      comp=Z,102nm,1.5s
DRME  Dracevica, Mon    82.64   2⇓iP        P        21 03 41.6 +0.5
DRME  Dracevica, Mon    82.64   2⇓iP        P        21 03 41.8 +0.7
RUSC  La Rusia          82.64  90 eP        P        21 03 40.6 -1.4
ESBB  Sonseca Array     82.74  19  P        P        21 03 43.0 +1.3
ESDC  Sonseca Array     82.74  19  P        P        21 03 42.9 +1.2
      comp=Z,35nm,1.0s,baz=341,slow=5.0,SNR=179
ESDC                               PKKPbc   PKKPbc   21 22 03.5 +0.6
      comp=Z,0.5nm,0.9s,baz=326,slow=31,SNR=4.7
ESDC                               PKPPKP   P'P'df   21 30 13.8 -1.8
      comp=Z,0.5nm,0.8s,baz=211,slow=1.7,SNR=4.1
ESDC                               LR       LR       21 40 35.2
      comp=Z,683nm,21.9s,baz=342,slow=36
      comp=Z,35nm,1.0s
ESDC  Sonseca Array     82.74  19  P        P        21 03 42.7 +1.1
PESTR Estremoz          82.78  22 eP        P        21 03 42.8 +0.9
      comp=Z,128nm,1.4s
PESTR Estremoz          82.78  22  P        P        21 03 42.6 +0.8
PESTR Estremoz          82.78  22  P        P        21 03 43.2 +1.3
PAB   San Pablo         82.79  20  P        P        21 03 43.1 +1.2
PAB                                IAmb     IAmb     21 03 44.8
      comp=Z,187nm,1.9s
PAB   San Pablo         82.79  20  IAMs_20  IAMs_20  21 41 04.9
      comp=Z,981nm,21.0s
PAB   San Pablo         82.79  20  P        P        21 03 43.1 +1.2
PAB                                pmax     pmax
      comp=Z,187nm,1.9s
PAB                                MLR      MLR
      comp=Z,1µm,21.0s
PAB   San Pablo         82.79  20  P        P        21 03 43.2 +1.2
ROSC  El Rosal          82.80  92  P        P        21 03 43.8 +1.0
      comp=Z,10nm,0.5s,baz=36,slow=7.8,SNR=8.2
ROSC                               LR       LR       21 44 16.9
      comp=Z,367nm,19.1s,baz=11,slow=38
      comp=Z,10nm,0.5s
ROSC  El Rosal          82.80  92  IAmb     IAmb     21 04 16.9
      comp=Z,154nm,2.0s
ROSC  El Rosal          82.80  92 eP        P        21 03 40.6 -2.1
DZM   Mont Dzumac       82.81 212  LR       LR       21 34 28.6
      comp=Z,1µm,20.8s,baz=22,slow=31
ULC   Ulcinj            82.87   2⇓iP        P        21 03 42.6 +0.3
GTOI  Gorontalo         82.90 261  P        P        21 03 42.4 -0.3
      comp=Z,314nmcomp=Z,17nm,1.2s
MSAI  Masohi            82.91 254  P        P        21 03 46.7 +3.9
      comp=Z,7.8nm,0.6s
TAMC  Tame, Arauca      82.94  89 eP        P        21 03 41.6 -1.5
KKB   Krupnik           82.97 359 i P       P        21 03 44.2 +1.4
EVO   Evora             83.01  23 eP        P        21 03 44.1 +1.1
      comp=Z,101nm,1.5s
BAUV  El Baul           83.02  84  P        P        21 03 42.5 -0.9
RZN   Rozhen            83.12 357 i P       P        21 03 45.0 +1.2
PHP   Peshkopia         83.16   1  P        P        21 03 44.3 +0.5
ILGA  Ilgaz             83.22 351  P        P        21 03 46.2 +1.8
MMB   Musomiste         83.24 358 i P       P        21 03 41.9 -2.3
PNCL  Nicolau / Gran    83.29  23 eP        P        21 03 45.9 +1.4
      comp=Z,144nm,1.4s
POPC  Popayan, Colom    83.34  95 eP        P        21 03 43.6 -1.8
PRAC  Prado             83.40  93 eP        P        21 03 44.1 -1.3
KOPT  Kop Dagi          83.44 345  P        P        21 03 47.8 +2.2
KOPT                               IAmb     IAmb     21 04 22.6
      comp=Z,57nm,1.1s
SANI  Sanana            83.45 257  P        P        21 03 44.6 -1.0
      comp=Z,946nmcomp=Z,82nm,1.3s
NVR   Nevrokopi         83.48 358  P        P        21 03 46.6 +1.2
TIR   Tirane            83.49   1 ⇓P        P        21 03 46.2 +0.8
TIR   Tirane            83.49   1  P        P        21 03 46.1 +0.6
TIR   Tirane            83.49   1  P        P        21 03 46.5 +1.0
TIR                                IAmb     IAmb     21 04 09.3
      comp=Z,174nm,1.7s
TIR                                IAMs_20  IAMs_20  21 41 29.6
      comp=Z,1µm,21.0s
TIR   Tirane            83.49   1  P        P        21 03 46.5 +1.0
TIR                                pmax     pmax
      comp=Z,174nm,1.7s
TIR                                MLR      MLR
      comp=Z,1µm,21.0s
PBEJ  Beja              83.52  23 eP        P        21 03 46.6 +0.9
      comp=Z,94nm,1.7s
PBAR  Barrancos         83.56  22 eP        P        21 03 46.8 +0.9
      comp=Z,184nm,1.5s
AAI   Ambon             83.60 254  P        P        21 03 47.1 +0.8
      comp=Z,1µmcomp=Z,87nm,0.8s
MESJ  Messejana         83.62  23 eP        P        21 03 46.8 +0.6
MESJ                              eSKSac    SKSac    21 14 06.1 +0.6
MESJ                               IAMs_20  IAMs_20  21 44 36.2
      comp=Z,1µm,18.3s
MESJ  Messejana         83.62  23 eP        P        21 03 46.9 +0.6
      comp=Z,61nm,1.4s
MESJ  Messejana         83.62  23 eP        P        21 03 46.8 +0.6
MESJ                              e                  21 14 06.1
MRSI  Marisa            83.63 262  P        P        21 03 47.0 +0.5
      comp=Z,1µmcomp=Z,79nm,1.3s
RDO   Rodhopi           83.64 357  P        P        21 03 47.4 +1.3
RDO   Rodhopi           83.64 357  P        P        21 03 47.5 +1.3
PAOL  Paolisi           83.64   5  P        P        21 03 47.3 +1.0
PAOL                               IAmb     IAmb     21 04 03.5
      comp=Z,140nm,1.7s
TOKA  Tokat             83.66 348  P        P        21 03 48.6 +2.1
TOKA                               IAmb     IAmb     21 03 49.8
      comp=Z,100nm,1.6s
KNT   Kendrikon         83.68 359  P        P        21 03 47.6 +1.1
SOTA  Rioblanco         83.71  95 eP        P        21 03 47.8 +0.2
SRS   Serrai            83.71 358  P        P        21 03 47.4 +0.8
TOLI2 Tolitoli          83.76 263  P        P        21 03 46.4 -0.8
TOLI2                              IAmb     IAmb     21 04 02.2
      comp=Z,30nm,0.7s
PTEO  Sao Teotonio      83.79  24 eP        P        21 03 47.5 +0.4
      comp=Z,142nm,1.9s
KAVA  Kavala            83.81 358  P        P        21 03 48.0 +0.9
ALN   Alexandroupoli    83.87 356  P        P        21 03 48.2 +0.9
ALN   Alexandroupoli    83.87 356  P        P        21 03 48.3 +0.9
ALN                                IAmb     IAmb     21 03 49.6
      comp=Z,118nm,1.3s
ALN   Alexandroupoli    83.87 356  P        P        21 03 48.3 +0.9
ALN                                pmax     pmax
      comp=Z,119nm,1.3s
HRA   Herat             83.87 327  P        P        21 03 48.7 +0.9
HRA                                IAmb     IAmb     21 04 04.1
      comp=Z,112nm,1.5s
PTCN  Pitcairn Islan    83.89 154  P        P        21 03 46.3 -1.2
GRG   Griva             83.89 359  P        P        21 03 48.7 +1.1
BOK   Bokaro            83.93 304 eP        P        21 03 48.8 +0.8
BOK                                IAmb     IAmb     21 04 02.9
      comp=Z,324nm,2.0s
KOKK  Kokkinochori,     84.00 358  P        P        21 03 48.8 +0.7
GRGR  Grenville         84.01  77  IAMs_20  IAMs_20  21 42 14.4
      comp=Z,1µm,21.0s
MDUB  Mudurnu           84.01 352  P        P        21 03 49.6 +1.3
SOH   Sokhos            84.01 359  P        P        21 03 48.9 +0.7
ENEZ  Enez              84.03 356  P        P        21 03 48.9 +0.7
MORF  Marmelete         84.04  24 eP        P        21 03 49.0 +0.5
MORF                              eSKSac    SKSac    21 14 08.9 +0.6
MORF                               IAMs_20  IAMs_20  21 42 40.0
      comp=Z,1µm,17.5s
MORF  Marmelete         84.04  24 eP        P        21 03 49.6 +1.2
      comp=Z,136nm,1.9s
MORF  Marmelete         84.04  24 eP        P        21 03 48.9 +0.5
MORF                              e                  21 14 08.9
GCUF  Volcan Galeras    84.04  97 eP        P        21 03 46.9 -2.3
FNA   Florina           84.06   0  P        P        21 03 48.9 +0.4
FNA   Florina           84.06   0  P        P        21 03 49.0 +0.6
FNA                                IAmb     IAmb     21 03 50.6
      comp=Z,130nm,1.5s
FNA   Florina           84.06   0  P        P        21 03 49.1 +0.6
FNA                                pmax     pmax
      comp=Z,130nm,1.5s
MATE  Matera            84.11   4 ⇑P        P        21 03 48.9 +0.3
PVAQ  Vaqueiros         84.15  23 eP        P        21 03 50.0 +1.1
      comp=Z,155nm,1.7s
PVAQ  Vaqueiros         84.15  23 ePP       PP       21 07 04.2 +1.6
PVAQ                              eS        S        21 14 12.2 +1.5
PVAQ  Vaqueiros         84.15  23 eLR       LR       21 32 06.3
      comp=Z,1µm,18.0s
PVAQ  Vaqueiros         84.15  23  P        P        21 03 49.3 +0.4
PVAQ  Vaqueiros         84.15  23  P        P        21 03 50.4 +1.5
PFVI  Vila Bisbo        84.16  24 eP        P        21 03 49.6 +0.6
      comp=Z,148nm,1.4s
PFVI  Vila Bisbo        84.16  24  P        P        21 03 49.9 +0.9
PFVI                               IAmb     IAmb     21 03 50.9
      comp=Z,86nm,0.9s
THAS  Thassos island    84.20 357  P        P        21 03 49.0 -0.1
THE   Thessaloniki      84.21 359  P        P        21 03 48.8 -0.3
KBN   Korca             84.22   0  P        P        21 03 49.9 +0.6
KBN   Korca             84.22   0  P        P        21 03 50.7 +1.4
KBN                                IAmb     IAmb     21 04 51.6
      comp=Z,42nm,1.0s
KBN   Korca             84.22   0  P        P        21 03 50.7 +1.4
KBN                                pmax     pmax
      comp=Z,42nm,1.0s
OTAV  Otavalo           84.23  98  P        P        21 03 50.5 +0.3
OTAV  Otavalo           84.23  98  P        P        21 03 50.5 +0.3
OTAV                               pmax     pmax
      comp=Z,27nm,1.1s
OTAV  Otavalo           84.23  98 eP        P        21 03 50.6 +0.5
OTAV  Otavalo           84.23  98 eP        P        21 03 50.4 +0.3
HORT  Hortiatis         84.24 359  P        P        21 03 49.6 +0.2
PBDV  Barranco-do-Ve    84.26  23 eP        P        21 03 50.0 +0.5
      comp=Z,153nm,2.2s
GARC  Garzon, Huila     84.30  94 eP        P        21 03 48.4 -1.9
SMTH  Samothraki Isl    84.31 357  P        P        21 03 50.0 +0.3
VLO   Vlora             84.36   1  P        P        21 03 50.7 +0.8
VLO   Vlora             84.36   1  P        P        21 03 52.1 +2.2
VLO   Vlora             84.36   1  P        P        21 03 52.1 +2.2
VLO                                pmax     pmax
      comp=Z,373nm,1.7s
LUWI  Luwuk             84.41 260  P        P        21 03 50.3 -0.2
LUWI                               IAMs_20  IAMs_20  21 37 36.5
      comp=Z,812nm,21.0s
LUWI  Luwuk             84.41 260  P        P        21 03 51.2 +0.7
      comp=Z,7µmcomp=Z,188nm,1.3s
NEST  Nestorio          84.43   0  P        P        21 03 51.0 +0.6
PLG   Polygyros         84.46 358  P        P        21 03 50.6 +0.1
ANTO  Ankara            84.48 351  P        P        21 03 51.6 +1.0
ANTO                               IAMs_20  IAMs_20  21 48 08.1
      comp=Z,744nm,20.0s
ANTO  Ankara            84.48 351  P        P        21 03 51.6 +1.0
ANTO                               pmax     pmax
      comp=Z,125nm,1.2s
ANTO                               MLR      MLR
      comp=Z,700nm,20.0s
OUR   Ouranopolis       84.49 358  P        P        21 03 51.0 +0.5
BR231 Keskin MP Arra    84.51 351  P        P        21 03 52.6 +1.8
KZN   Kozani            84.54 360  P        P        21 03 51.1 +0.2
BR131 Keskin Array S    84.55 351  P        P        21 03 52.1 +1.1
BR131 Keskin Array S    84.55 351  P        P        21 03 52.2 +1.1
BR131                              pmax     pmax
      comp=Z,230nm,1.7s
BRTR  Keskin Array B    84.55 351  P        P        21 03 51.9 +0.8
      comp=Z,30nm,0.9s,baz=29,slow=2.8,SNR=73
BRTR                               PKKPbc   PKKPbc   21 22 00.3 +1.5
      comp=Z,1.3nm,0.8s,baz=145,slow=4.5,SNR=3.8
BRTR                               PKPPKP            21 30 16.6
      comp=Z,2.1nm,1.0s,baz=204,slow=2.7,SNR=5.4
BRTR                               LR       LR       21 44 57.9
      comp=Z,541nm,22.0s,baz=15,slow=38
      comp=Z,30nm,0.9s
BRTR  Keskin Array B    84.55 351  P        P        21 03 52.0 +0.9
BRTR  Keskin Array B    84.55 351 i P       P        21 03 52.2 +1.1
BRTR                               pmax     pmax
      comp=Z,31nm,0.9s
GURO  Guroymak-BITLI    84.65 344  P        P        21 03 53.5 +1.9
GURO                               IAmb     IAmb     21 04 16.4
      comp=Z,72nm,1.6s
BORA  Eskisehir         84.65 353  P        P        21 03 52.7 +1.2
LSK   Leskovik          84.69   1  P        P        21 03 52.8 +1.1
GEVA  Gevas             84.72 343  P        P        21 03 54.1 +2.1
CUC   Castrocucco       84.73   4  P        P        21 03 52.2 +0.3
CUC                                IAmb     IAmb     21 04 08.8
      comp=Z,57nm,1.2s
LIT   Litokhoron        84.74 359  P        P        21 03 52.2 +0.3
LIT   Litokhoron        84.74 359  P        P        21 03 52.4 +0.5
LIT                                IAmb     IAmb     21 03 53.8
      comp=Z,106nm,1.4s
LIT   Litokhoron        84.74 359  P        P        21 03 52.4 +0.5
LIT                                pmax     pmax
      comp=Z,106nm,1.4s
SCTE  Santa Cesarea     84.74   2  P        P        21 03 53.4 +1.5
SCTE                               IAmb     IAmb     21 04 09.3
      comp=Z,93nm,1.0s
VSL   Villasalto        84.80   9  P        P        21 03 53.1 +1.0
KPRO  Kipourio          84.89   0  P        P        21 03 53.1 +0.4
LIA   Limnos Island     84.89 357  P        P        21 03 53.1 +0.5
MPSI  Mapaga            84.90 263  P        P        21 03 53.1 +0.2
      comp=Z,868nmcomp=Z,73nm,0.9s
PAIG  Paliouri          84.90 358  P        P        21 03 52.6  0.0
APSI  Ampana            84.94 261  P        P        21 03 52.7 -0.4
      comp=Z,745nmcomp=Z,77nm,1.1s
SRN   Sarande           84.96   1  P        P        21 03 53.5 +0.6
BALB  Balikesir         85.05 355  P        P        21 03 54.5 +1.1
BALB                               IAmb     IAmb     21 04 19.9
      comp=Z,62nm,1.0s
KEK   Kerkira           85.12   1  P        P        21 03 54.4 +0.6
KEK   Kerkira           85.12   1  P        P        21 03 55.0 +1.2
BNN   Bunyan            85.19 349  P        P        21 03 55.9 +1.6
JAN   Janina            85.19   0  P        P        21 03 54.3 +0.1
THL   Klokotos Trika    85.28 360  P        P        21 03 54.5  0.0
CART  Cartagena         85.30  18  IAMs_20  IAMs_20  21 42 28.4
      comp=Z,960nm,20.0s
IGT   Igoumenitsa       85.31   1  P        P        21 03 55.4 +0.7
XOR   Xorichti          85.47 359  P        P        21 03 55.3 -0.2
PRK   Paraskevi         85.51 356  P        P        21 03 56.9 +1.2
NEO   Neokhori          85.53 359  P        P        21 03 55.9 +0.1
SIGR  SIGRI             85.56 357  P        P        21 03 56.1 +0.2
TIP   Timpagrande       85.58   4 ⇓P        P        21 03 57.0 +0.8
TIP   Timpagrande       85.58   4  P        P        21 03 57.0 +0.8
TIP                                IAmb     IAmb     21 04 14.7
      comp=Z,49nm,1.0s
TIP                                IAMs_20  IAMs_20  21 46 33.9
      comp=Z,858nm,21.0s
JHNI  Jhansi            85.82 310 eP        P        21 03 56.7 -0.8
MAKR  Makrakomi, Fth    85.83 359  P        P        21 03 57.7 +0.3
EVR   Evrytania         85.93 360  P        P        21 03 58.8 +0.9
PMOZ  Porto Moniz, M    86.02  32 eP        P        21 03 59.8 +1.3
      comp=Z,98nm,1.9s
PMOZ  Porto Moniz, M    86.02  32 ePP       PP       21 07 14.2 -3.8
PMOZ                              eS        S        21 14 30.9 +1.4
PMOZ  Porto Moniz, M    86.02  32 eLR       LR       21 33 07.8
      comp=Z,757nm,18.0s
PMPST Porto Santo, M    86.03  31 eP        P        21 03 59.7 +1.3
RAO   Raoul Island      86.04 197  LR       LR       21 36 46.7
      comp=Z,360nm,21.2s,baz=26,slow=32
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MARD	Mardin	86.05	345	P	P	21 04 00.6	+2.0
PMPS	Porto Santo	86.05	31	*e*P	P	21 03 59.5	+1.0
	comp=Z,180nm,1.8s						
LKD2	Lefkada island	86.06	1	P	P	21 03 57.9	-0.6
KULA	Kula-Manisa	86.12	354	P	P	21 03 59.4	+0.5
NYDR	Nydri-Lefkada	86.13	1	P	P	21 03 59.0	+0.2
ATAL	Atalanti	86.14	359	P	P	21 03 58.0	-0.9
KYMI	Kymi, Euboea I	86.18	358	P	P	21 03 58.8	-0.3
LKR	Lokris	86.19	359	P	P	21 03 57.6	-1.5
PMAR	Madeira	86.19	32	*e*P	P	21 04 01.2	+1.8
	comp=Z,166nm,1.4s						
EVGI	Lefkada island	86.22	1	P	P	21 03 59.6	+0.3
PVO	Paravola	86.23	360	P	P	21 04 00.2	+0.9
ANX	Ano Chora	86.25	360	P	P	21 04 00.1	+0.6
SMIR	Smir Dam	86.31	22	P	P	21 04 01.3	+1.6
BLCB	Balcova	86.33	356	P	P	21 04 00.0	+0.2
CHOS	Chios island	86.37	356	P	P	21 04 00.1	0.0
FSK	Fiskardo	86.38	1	P	P	21 04 00.6	+0.6
EFP	Efpalio	86.42	360	P	P	21 04 01.0	+0.8
SERG	Sergoula	86.43	359	P	P	21 04 00.8	+0.5
CEL	Celeste	86.47	4	IAmb	IAmb	21 04 40.6	
	comp=Z,28nm,0.8s						
KEF4	Livadi, Kephal	86.58	1	P	P	21 04 01.3	+0.3
LAKA	Lakka	86.60	360	P	P	21 04 01.4	+0.2
VLS	Valsamata	86.67	1	P	P	21 04 01.8	+0.3
VILL	Villia	86.67	358	P	P	21 04 01.0	-0.5
ISP	Isparta	86.69	353	P	P	21 04 02.4	+0.7
ISP	Isparta	86.69	353	P	P	21 04 02.4	+0.7
ISP				pmax	pmax		
	comp=Z,320nm,1.7s						
ISP				MLR	MLR		
	comp=Z,800nm,22.0s						
PSDA	Pessada-Kefalo	86.73	1	P	P	21 04 02.0	+0.3
DION	Dionisos Attik	86.74	358	P	P	21 04 00.9	-0.9
PTL	Penteli	86.77	358	P	P	21 04 01.7	-0.3
KARY	Karystos	86.78	358	P	P	21 04 01.6	-0.4
RLS	Riolos of Patr	86.79	360	P	P	21 04 03.1	+1.1
KLV	Kalavryta, Ach	86.80	359	P	P	21 04 01.7	-0.5
THAL	Thalero	86.80	359	P	P	21 04 01.9	-0.2
ATHU	Athens Univers	86.86	358	P	P	21 04 01.6	-0.8
CHEFC	Chefchaouen	86.88	22	P	P	21 04 04.0	+1.3
DRO	Drossia	86.89	360	P	P	21 04 03.2	+0.6
GUR	Goura	86.90	359	P	P	21 04 02.9	+0.2
VLY	Voula,Athens	86.97	358	P	P	21 04 01.9	-1.0
CLTB	Caltabellotta	87.00	6	P	P	21 04 03.1	-0.1
CLTB				IAmb	IAmb	21 04 19.8	
	comp=Z,88nm,1.3s						
SMG	Samos	87.02	356	P	P	21 04 02.8	-0.4
VAE	Valguarnera	87.17	6	LR	LR	21 45 20.8	
	comp=Z,474nm,19.1s,baz=12,slow=37						
EPID	Epidavros	87.22	359	P	P	21 04 03.4	-0.8
KRND	KRANIDI	87.45	359	P	P	21 04 03.9	-1.3
YER	Yerkesik	87.52	354	P	P	21 04 06.3	+0.6
BODT	Bodrum	87.64	355	P	P	21 04 05.6	-0.6
ITM	Ithomi	87.66	360	P	P	21 04 06.4	+0.1
ITM	Ithomi	87.66	360	P	P	21 04 06.4	+0.1
TTSI	Tana Toraja	87.72	261	P	P	21 04 07.4	+0.6
	comp=Z,740nmcomp=Z,65nm,1.1s						
AKLM	AKL	87.75	21	P	P	21 04 06.0	-0.9
ELL	Elmali	87.81	353	P	P	21 04 07.9	+0.8
ELL	Elmali	87.81	353	P	P	21 04 07.9	+0.8
ELL				pmax	pmax		
	comp=Z,181nm,1.2s						
PYL	PYLOS	87.95	360	P	P	21 04 06.3	-1.3
DAT	Datca	87.96	355	P	P	21 04 07.0	-0.9
NIS1	Nisyros Isl.	88.11	355	P	P	21 04 07.7	-0.7
VLI	Veliai	88.11	359	P	P	21 04 07.3	-1.1
MHLO	Agia Marina, M	88.12	358	P	P	21 04 07.3	-1.1
JBK	JBK	88.18	20	P	P	21 04 09.1	0.0
BHPL	Bhopal	88.25	310	*e*P	P	21 04 09.1	-0.3
BHPL				IAmb	IAmb	21 04 11.4	
	comp=Z,66nm,0.3s						
AKAS	Kas	88.34	353	P	P	21 04 10.5	+0.8
SANT	Santorini	88.40	357	P	P	21 04 07.7	-2.2
SANT	Santorini	88.40	357	IAmb	IAmb	21 04 23.9	
	comp=Z,70nm,1.3s						
ARG	Arkhangelos	88.44	355	P	P	21 04 09.2	-0.8
ARG	Arkhangelos	88.44	355	P	P	21 04 10.4	+0.4
ARG	Arkhangelos	88.44	355	P	P	21 04 10.4	+0.4
ARG				pmax	pmax		
	comp=Z,165nm,1.0s						
SPSI	Sidrap Palu	88.50	261	P	P	21 04 11.5	+1.0
	comp=Z,672nmcomp=Z,43nm,1.2s						
KEST	Kesra	88.53	10	P	P	21 04 11.0	+0.5
	comp=Z,7.1nm,0.7s,baz=338,slow=5.2,SNR=9.4						
KEST				LR	LR	21 49 39.4	
	comp=Z,500nm,18.1s,baz=339,slow=40						
	comp=Z,7.1nm,0.7s						
KTHR	Kythira	88.57	359	P	P	21 04 11.0	+0.4
KTHA	Kythira Island	88.57	359	P	P	21 04 10.8	+0.2
CTA	Charters Tower	88.59	230	LR	LR	21 39 08.0	
	comp=Z,472nm,20.4s,baz=28,slow=32						
CTAO	Charters Tower	88.59	230	P	P	21 04 10.8	+0.1
CTAO				IAmb	IAmb	21 04 37.8	
	comp=Z,42nm,1.0s						
CTAO	Charters Tower	88.59	230	P	P	21 04 10.8	+0.1
CTAO				pmax	pmax		
	comp=Z,42nm,1.0s						
BNSI	Bone	88.67	260	P	P	21 04 11.4	+0.1
	comp=Z,743nmcomp=Z,56nm,1.0s						
MTKI	Muara Teweh, K	88.78	267	P	P	21 04 12.2	+0.4
	comp=Z,24nm,1.1s						
ANKY	Antikythira Is	88.96	358	P	P	21 04 12.5	+0.1
KARP	Karpathos	89.16	355	P	P	21 04 11.2	-2.2
KARP	Karpathos	89.16	355	P	P	21 04 13.4	0.0
MDT	Midelt	89.24	22	LR	LR	21 46 45.7	
	comp=Z,598nm,18.0s,baz=360,slow=37						
MDT	Midelt	89.24	22	P	P	21 04 15.5	+1.6
CSS	Mathiatis	89.30	350	P	P	21 04 14.5	+0.5
IMMV	Iera Moni Meta	89.35	358	P	P	21 04 13.7	-0.6
KAPI	Kappang	89.37	260	P	P	21 04 14.9	+0.4
	comp=Z,23nm,1.1s,baz=131,slow=1.4,SNR=9.3						
KAPI				LR	LR	21 41 06.6	
	comp=Z,308nm,20.9s,baz=19,slow=33						
	comp=Z,23nm,1.1s						
KAPI	Kappang	89.37	260	P	P	21 04 14.5	0.0
DGPR	DIGLIPUR	89.37	292	*e*P	P	21 04 16.7	+2.1
DGPR				IAmb	IAmb	21 04 18.2	
	comp=Z,65nm,0.9s						
KSM	Kuching	89.41	272	P	P	21 04 14.6	-0.2
KSM				IAmb	IAmb	21 04 29.4	
	comp=Z,33nm,1.1s						
BKSI	Bulukumba	89.42	260	P	P	21 04 15.4	+0.6
	comp=Z,638nmcomp=Z,39nm,0.8s						
IDI	Anoyia	89.50	357	LR	LR	21 45 52.4	
	comp=Z,390nm,21.9s,baz=358,slow=37						
IDI	Anoyia	89.50	357	P	P	21 04 14.0	-1.1
IDI	Anoyia	89.50	357	P	P	21 04 14.0	-1.1
IDI				IAmb	IAmb	21 04 48.0	
	comp=Z,37nm,1.0s						
NPS	Neapolis	89.50	357	P	P	21 04 14.6	-0.4
SRIT	Nakonsritamara	89.58	285	P	P	21 04 16.2	+0.5
SRIT				IAmb	IAmb	21 04 31.0	
	comp=Z,47nm,0.9s						
ZKR	Zakros	89.63	356	P	P	21 04 14.5	-1.1
BSSI	Bau Bau, Buton	89.89	259	P	P	21 04 20.8	+3.8
	comp=Z,42nm,0.8s						
STKI	Sintang	89.90	270	P	P	21 04 17.1	0.0
	comp=Z,3µmcomp=Z,25nm,1.1s						
GVDS	Gavdos	89.97	358	P	P	21 04 17.1	-0.1
GVD	Gavdhos	89.97	358	P	P	21 04 17.2	0.0
GOLM	Goulmima	90.24	22	P	P	21 04 20.1	+1.4
ATAH	Atahualpa	90.32	102	LR	LR	21 42 35.9	
	comp=Z,448nm,18.6s,baz=341,slow=34						
FIGM	Figuig	90.56	19	P	P	21 04 21.0	+0.8
PBA	Port Blair	90.75	292	*e*P	P	21 04 22.8	+1.8
SOEI	Soe	90.78	254	P	P	21 04 24.4	+3.2
	comp=Z,46nm,0.9s						
MMAI	Mount Meron Ar	91.00	348	LR	LR	21 49 21.4	
	comp=Z,316nm,20.3s,baz=171,slow=38						
EDFI	Ende, Flores	91.36	257	P	P	21 04 25.0	+1.0
	comp=Z,7.2nm,1.1s						
BATI	Baumata	91.48	254	P	P	21 04 25.0	+0.6
	comp=Z,34nm,1.1s,baz=286,slow=17,SNR=2.6						
BATI				LR	LR	21 41 51.4	
	comp=Z,290nm,21.3s,baz=52,slow=33						
	comp=Z,34nm,1.1s						
BATI	Baumata	91.48	254	P	P	21 04 27.2	+2.8
	comp=Z,22nm,0.9s						
ZGR	Zagora	91.62	23	P	P	21 04 26.0	+0.9
ASF	Jabal al Asfar	91.65	347	LR	LR	21 48 05.3	
	comp=Z,353nm,21.9s,baz=11,slow=37						
KULM	Kulim	91.73	282	P	P	21 04 26.7	+1.0
KULM				IAMs_20	IAMs_20	21 42 27.9	
	comp=Z,810nm,21.0s						
PBKI	Pangkalan Bun	92.05	268	P	P	21 04 27.9	+0.8
	comp=Z,73nm,1.1s						
IPM	Ipoh	92.19	281	P	P	21 04 28.3	+0.5
IPM				IAmb	IAmb	21 04 43.6	
	comp=Z,24nm,0.7s						
IPM				IAMs_20	IAMs_20	21 42 47.1	
	comp=Z,860nm,20.0s						
RPN	Rapa Nui	92.43	137	LR	LR	21 36 52.3	
	comp=Z,826nm,20.6s,baz=314,slow=30						
BOAV	Boa Vista	92.62	82	*e*P	P	21 04 29.5	-0.3
HYBB	Hyderabad (bro	92.85	307	*e*P	P	21 04 31.1	+0.3
HYBB				*e*PP	PP	21 08 12.7	-0.1
HYBB				*e*SKSac	SKSac	21 14 58.5	-3.1
HYB	Hyderabad	92.85	307	*e*P	P	21 04 32.4	+1.6
HYB				IAmb	IAmb	21 04 34.8	
	comp=Z,18nm,0.9s						
SHME	Shamm	93.50	329	P	P	21 04 36.0	+2.4
CZSB	Cruzeiro do Su	93.99	98	*e*P	P	21 04 36.3	+0.3
WRAB	Tennant Creek	94.02	240	P	P	21 04 35.4	-0.5
WRAB				IAmb	IAmb	21 04 50.1	
	comp=Z,21nm,1.1s						
WRAB	Tennant Creek	94.02	240	IAMs_20	IAMs_20	21 41 04.6	
	comp=Z,1µm,19.0s						
WRAB	Tennant Creek	94.02	240	P	P	21 04 35.4	-0.5
WRAB				pmax	pmax		
	comp=Z,21nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,1µm,19.0s						
WRA	Warramunga Arr	94.03	240	P	P	21 04 35.5	-0.4
	comp=Z,5.6nm,0.9s,baz=42,slow=5.3,SNR=26						
WRA				LR	LR	21 42 02.0	
	comp=Z,747nm,21.7s,baz=15,slow=32						
	comp=Z,5.6nm,0.9s						
EIL	Elat	94.36	348	LR	LR	21 54 27.4	
	comp=Z,289nm,18.1s,baz=360,slow=40						
TPI	Tanjungpandan	94.38	272	P	P	21 04 37.0	-0.8
	comp=Z,11nm,1.2s						
NAZ	Nazwa, Dubai	94.64	329	P	P	21 04 41.2	+2.3
HATD	Hatta, Dubai	94.66	329	P	P	21 04 39.2	+0.2
PSI	Prapat	94.74	282	LR	LR	21 48 48.2	
	comp=Z,331nm,20.2s,baz=359,slow=36						
MDP	Montagnes des	94.77	74	LR	LR	21 46 53.4	
	comp=Z,1µm,21.9s,baz=334,slow=35						
ASHO	Ashiyiah	94.81	329	P	P	21 04 39.3	-0.4
FAQ	Al Faqa, Dubai	94.89	329	P	P	21 04 39.7	-0.4
ASUD	Al Ashush, Dub	95.08	329	P	P	21 04 41.1	+0.2
NNA	Nana	95.17	104	LR	LR	21 45 09.4	
	comp=Z,235nm,18.3s,baz=340,slow=34						
WSAR	Wadi Sarin	95.38	326	LR	LR	21 54 44.7	
	comp=Z,1µm,19.5s,baz=52,slow=40						
ALNE	Al Ain	95.49	329	P	P	21 04 42.6	-0.2
URZ	Urewera	95.69	199	LR	LR	21 41 33.8	
	comp=Z,488nm,20.8s,baz=31,slow=31						
PMBI	Palembang	96.15	274	IAMs_20	IAMs_20	21 41 51.7	
	comp=Z,685nm,19.0s						
MZR	Muzera	97.14	330	P	P	21 04 50.2	-0.1
ASAR	Alice Springs	97.39	239	P	P	21 04 51.0	-0.3
	comp=Z,1.8nm,0.8s,baz=33,slow=4.8,SNR=12						
ASAR				PKKP	PKKPbc	21 21 27.9	+0.7
	comp=Z,0.8nm,0.8s,baz=196,slow=2.5,SNR=5.8						
ASAR				LR	LR	21 42 52.3	
	comp=Z,901nm,21.7s,baz=28,slow=32						
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	97.39	239	P	P	21 04 50.5	-0.8
LEM	Lembang	97.72	269	LR	LR	21 46 29.2	
	comp=Z,372nm,19.9s,baz=14,slow=34						
RAYN	Ar Rayn	98.63	338	P	P	21 04 56.5	-0.5
RAYN	Ar Rayn	98.63	338	IAMs_20	IAMs_20	21 58 35.1	
	comp=Z,921nm,20.0s						
RAYN	Ar Rayn	98.63	338	P	P	21 04 56.6	-0.5
RAYN	Ar Rayn	98.63	338	*i* P	P	21 04 57.3	+0.3
	SNR=12						
ETMB	Extrema	99.37	94	*e*P	Pdif	21 04 58.4	-1.9
MCPB	Macapa, AP	99.62	76	*e*P	Pdif	21 05 00.6	-0.9
SAML	Samuel	100.38	91	IAMs_20	IAMs_20	21 51 13.5	
	comp=Z,1µm,22.0s						
TORD	Torodi Ar. Bea	109.61	20	PKKPbc	PKKPbc	21 20 50.4	0.0
	comp=Z,1.0nm,0.8s,baz=172,slow=2.6,SNR=6.6						
ATD	Arta Tunnel	110.82	337	IAMs_20	IAMs_20	22 05 41.1	
	comp=Z,691nm,19.0s						
FURI	Furi	114.22	341	IAMs_20	IAMs_20	22 08 44.0	
	comp=Z,721nm,21.0s						
DBIC	Dimbokro	114.31	29	PKKPab	PKKPab	21 20 48.0	+2.2
	comp=Z,6.1nm,1.1s,baz=178,slow=4.7,SNR=4.3						
CPUP	Villa Florida	117.56	97	PKP	PKPdf	21 10 01.7	-1.7
	comp=Z,1.9nm,0.7s,baz=310,slow=5.9,SNR=3.9						
CPUP				PKKPab	PKKPab	21 20 29.9	+1.9
	comp=Z,1.1nm,0.3s,baz=132,slow=6.2,SNR=4.4						
LODK	Lodwar	120.14	344	IAMs_20	IAMs_20	22 12 38.9	
	comp=Z,570nm,18.0s						
ITQB	Itaqui	120.52	99	*e*P	PKPdf	21 10 08.9	-0.1
NAN01	Guarapari, ES	120.59	77	*e*P	PKPdf	21 10 08.5	-1.0
SJMB	Sao Joao De Ma	120.69	78	*e*P	PKPdf	21 10 08.8	-0.9
VAO	Valinhos	120.86	86	*e*P	PKPdf	21 10 09.7	-0.3
ITAB	Concordia	121.20	93	*e*P	PKiKP	21 10 11.4	+0.9
TIJ01	Guaruva-PR	121.51	89	*e*P	PKiKP	21 10 11.4	+0.1
RIB01	Linhares ES	121.62	78	*e*P	PKPdf	21 10 10.5	-0.9
PARB	Paraibuna	121.88	85	*e*P	PKiKP	21 10 13.0	+1.0
VAS01	Vassouras-RJ	122.28	83	*e*P	PKPdf	21 10 12.6	0.0
ESAR	Angra dos Reis	122.30	84	*e*P	PKiKP	21 10 12.8	0.0
MAN01	Angra dos Reis	122.45	83	*e*P	PKPdf	21 10 12.9	-0.1
DUB01	Friburgo-RJ	122.72	81	*e*P	PKPdf	21 10 13.0	-0.5
CPSB	Cacapava Do Su	122.87	97	*e*P	PKiKP	21 10 13.6	-0.1
PLTB	Pedras Altas	123.80	98	*e*P	PKiKP	21 10 15.6	0.0
TRQA	Tornquist	123.83	109	*e*P	PKiKP	21 10 16.1	+0.7
TER01	Tubaro-SC	123.90	92	*e*P	PKiKP	21 10 16.4	+0.6
KMBO	Kilima Mbogo	124.26	341	PKP	PKiKP	21 10 18.2	+0.8
	comp=Z,8.5nm,0.7s,baz=19,slow=3.7,SNR=25						
KMBO	Kilima Mbogo	124.26	341	IAMs_20	IAMs_20	22 15 22.3	
	comp=Z,629nm,19.0s						
KMBO	Kilima Mbogo	124.26	341	*i* P	PKiKP	21 10 17.9	+0.5
	SNR=12						
KIBK	Kibwezi	125.29	339	IAMs_20	IAMs_20	22 10 55.1	
	comp=Z,664nm,22.0s						
GO10	Punta Arenas	129.95	128		PKiKP	21 10 27.1	0.0
VNDA	Vanda	135.03	191	PKP	PKiKP	21 10 36.1	-0.6
	comp=Z,1.1nm,0.8s,baz=296,slow=4.4,SNR=4.1						
VNDA				SKPab	SKPbc	21 14 01.7	-0.6
	comp=Z,2.4nm,0.9s,baz=4.2,slow=4.5,SNR=5.7						
VNDA	Vanda	135.03	191	SKPbc	SKPbc	21 14 02.2	0.0
EFI	East Falkland	135.11	120	PKPdf	PKPdf	21 10 35.2	-0.7
EFI	East Falkland	135.11	120	PKIKP	PKPdf	21 10 35.3	-0.7
EFI				MLR	MLR		
	comp=Z,800nm,22.0s						
PMSA	Palmer Station	139.69	139	*e*P	PKPdf	21 10 44.3	+0.3
TSUM	Tsumeb	143.63	6	PKPdf	PKPab	21 10 49.8	+0.5
BLWY	Bulawayo	144.26	348	*i* P	PKPbc	21 10 53.0	+0.9
BLWY	Bulawayo	144.26	348	*i* P	PKPbc	21 10 53.0	+0.9
MATP	Matopo	144.55	348	PKP	PKPab	21 10 53.4	+0.6
MATP	Matopo	144.55	348	*i* P	PKPbc	21 10 53.7	+0.7
MATP	Matopo	144.55	348	*i* P	PKPbc	21 10 53.7	+0.7
ORCD	Orcadas	146.05	126	PKPdf	PKPdf	21 10 53.5	-1.8
MOPA	Mopani	147.19	343	*i* P	PKPdf	21 10 59.9	+1.3
MOPA	Mopani	147.19	343	*i* P	PKPdf	21 10 59.9	+1.3
HOPE	Hope Point	147.52	112		PKPdf	21 10 57.3	-0.8
HOPE	Hope Point	147.52	112	PKIKP	PKPdf	21 10 57.3	-0.8
LBTB	Lobatse	149.37	352	PKPbc	PKPbc	21 11 07.5	+0.9
LBTB	Lobatse	149.37	352	PKPdf	PKPdf	21 11 02.2	-0.1
LBTB	Lobatse	149.37	352	*i* P	PKPdf	21 11 04.5	+2.3
LBTB	Lobatse	149.37	352	*i* P	PKPdf	21 11 04.5	+2.3
BELA	Belgrano 2	150.59	159		PKPbc	21 11 06.2	-1.8
BOSA	Boshof	152.97	353	PKP	PKPdf	21 11 07.0	-0.7
	comp=Z,8.6nm,1.0s,baz=337,slow=0.6,SNR=7.2						
BOSA				PKPbc	PKPbc	21 11 15.3	+0.4
	comp=Z,14nm,0.4s,baz=19,slow=2.1,SNR=62						
BOSA	Boshof	152.97	353	PKPdf	PKPdf	21 11 06.3	-1.4
BOSA	Boshof	152.97	353	*i* P	PKPdf	21 11 10.9	+3.2
BOSA	Boshof	152.97	353	*i* P	PKPdf	21 11 10.9	+3.2
MAW	Mawson	157.37	221	PKP	PKPdf	21 11 11.7	-0.5
	comp=Z,3.6nm,1.0s,baz=77,slow=5.6,SNR=3.9						
MAW				PKPab	PKPab	21 11 43.3	-0.7
	comp=Z,15nm,1.0s,baz=102,slow=3.1,SNR=8.0						
MAW	Mawson	157.37	221	PKPdf	PKPdf	21 11 11.7	-0.5
MAW					PKPab	21 11 44.3	+0.4
VNA3	Neumayer Olymp	159.38	152	P	PKPdf	21 11 10.1	-4.5
VNA1	Neumayer--Stat	160.09	151	PKPab	PKPab	21 11 54.2	-1.4
VNA2	Neumayer--Watz	160.17	152	P	PKPdf	21 11 12.5	-3.0
	baz=319,slow=3.6						
VNA2	Neumayer--Watz	160.17	152	PKPab	PKPab	21 11 54.7	-1.4
SNAA	Sanae	160.80	157	PKPab	PKPab	21 11 57.4	-1.4
SNAA	Sanae	160.80	157	PKPdf	PKPdf	21 11 16.8	+0.5
TROLL	Troll, Antarti	161.63	161	PKPab	PKPab	21 12 01.5	-1.1

CNRM 31 21:02:41.0,35°.40N×3°.72W,h23^{km},ml1.1,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.25	225	P	Pb	21 02 46.6	-0.6
PALE				S	Sb	21 02 50.9	-0.5
GOG	Mont Gurugu	0.62	106	P	Pb	21 02 53.1	-0.1
GOG				S	Sb	21 03 02.3	+0.8
AKLM	AKL	0.89	188	P	Pn	21 02 59.0	+0.8
JBK	JBK	1.42	138	P	Pn	21 03 05.3	-0.4
JBK				S	Sn	21 03 22.7	-1.0

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*SOF **31** 21:14:05.8,40°.77N×28°.63E,h10^{km},MD3.5*

*DDA **31** 21:14:10.3±0.0,40°.86N×28°.20E,h20^{km},ML3.2, Hypocentre not reviewed by the ISC*

*THE **31** 21:14:10.7,40°.99N×28°.18E,h1^{km}±2^{km},ML2.7/4,Error ellipse: s-maj=3.6km s-min=1.2km az=70.0*

*ISK **31** 21:14:10.2,40°.86N×28°.22E,h13^{km},ML3.3/26*

ISC 31 21:14:10.6±1.0,**40°.86N**±0°.02×**28°.23E**±0°.02,**h14^{km}**±10^{km}, **n63,**σ1^{s}.**31**/78,**15C-11D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELBA	Catalca	0.32	28	P		21 14 17.5	
ELBA				S		21 14 22.1	
SLVT	Silivri	0.37	358	PG	Pg	21 14 18.1	+0.1
SLVT				SG	Sb	21 14 24.3	-0.3
AVCI	Avcilar-stanb	0.40	70	PG	Pb	21 14 19.2	-0.2
AVCI				SG	Sb	21 14 25.2	-0.2
CTKS	Kestanelik-??a	0.43	29	PG	Pg	21 14 19.2	+0.1
CTKS				SG	Sg	21 14 25.4	+0.5
CRLT	Corlu	0.46	306	PG	Pb	21 14 20.2	-0.3
BGKT	Bogazkoy	0.52	52	PG	Pg	21 14 20.8	0.0
TKR	Tekirdag	0.54	284	PG	Pg	21 14 20.9	-0.3
MRMT	Marmara Adasi	0.55	242	PG	Pg	21 14 20.7	-0.7
ARMT	Armutlu	0.56	121	PG	Pb	21 14 21.9	-0.4
EDC	Edincik	0.58	209	PG	Pg	21 14 21.7	-0.3
ESNK	Esenk¶y	0.61	112	P		21 14 22.6	
CTYL	Yalikoy Yolu	0.61	4	PG	Pg	21 14 22.5	-0.1
ISK	Istanbul-Kandi	0.66	72	P	Pb	21 14 23.6	-0.3
ISK	Istanbul-Kandi	0.66	72	PG	Pg	21 14 23.3	-0.1
KAVV	Kandilli-Istan	0.66	72	PG	Pg	21 14 23.5	+0.1
GZKV	Gazikoy-Tekird	0.69	261	PG	Pb	21 14 24.9	+0.4
MDNY	Mudanya-Bursa	0.70	134	PG	Pb	21 14 24.5	-0.1
MAR3	Marsite Statio	0.72	261	PG	Pg	21 14 24.2	-0.4
KLYT	Kilyos	0.73	57	PG	Pb	21 14 24.9	-0.2
MAR6	Marsite Statio	0.75	258	PG	Pb	21 14 25.1	-0.3
TRML	Termal-Yalova	0.76	109	PG	Pb	21 14 25.5	-0.1
VIZE	Kirklareli, Vi	0.78	338	P		21 14 25.4	
VIZE				S		21 14 35.8	
VIZE				*i* AML		21 14 38.0	
	comp=E,1µm,0.5s						
VIZE				*i* AML		21 14 38.0	
	comp=Z,682nm,0.2s						
VIZE				*i* AML		21 14 39.0	
	comp=N,1µm,0.1s						
KNL	Balıkesir	0.80	223	P		21 14 26.0	
KNL				S		21 14 38.2	
SART	Tekirdag	0.82	258	P		21 14 25.9	
SART				S		21 14 36.9	
GEMT	Gemlik	0.84	120	PG	Pb	21 14 27.0	0.0
KRBG	Karabiga-Canak	0.85	237	PG	Pg	21 14 26.5	-0.5
GONE	Gonen-Balikesi	0.91	207	PG	Pb	21 14 28.2	0.0
YLV	Yalova	0.92	108	PG	Pb	21 14 28.5	+0.2
PHSR	Pinarhisar	0.94	325	PG	Pn	21 14 29.2	-0.2
IGD	Bursa	0.95	129	P		21 14 28.8	
IGD				S		21 14 41.8	
ORLT	Orhaneli	0.96	148	PG	Pn	21 14 29.8	+0.1
ULDT	Uludag	1.00	136	P		21 14 29.9	
STBT	Saitabat	1.05	133	P		21 14 30.7	
STBT				S		21 14 44.3	
IZI	Iznik	1.08	119	PN	Pg	21 14 31.0	-0.4
SILT	Sile	1.11	74	PN	Pn	21 14 31.9	+0.2
ARMN	Kirklareli, Me	1.17	329	P		21 14 32.4	
ARMN				S		21 14 46.8	
KESN	Edirne-Kesan	1.18	269	P		21 14 32.3	
KESN				S		21 14 47.6	
KESN				*i* AML		21 14 49.0	
	comp=N,419nm,0.5s						
KESN				*i* AML		21 14 50.0	
	comp=E,713nm,0.3s						
BALY	Balya	1.21	203	P		21 14 32.9	
BALY				S		21 14 49.5	
UKOP	Uzunkopru-Edir	1.24	283	PN	Pn	21 14 33.1	-0.4
BALB	Balikesir	1.25	193	PN	Pb	21 14 33.8	-0.1
KIRK	Kırklareli	1.25	317	P		21 14 33.6	
KIRK				S		21 14 49.5	
DURS	Dursunbey	1.27	172	P		21 14 34.3	
DURS				S		21 14 50.6	
DURS				*i* AML		21 14 54.0	
	comp=N,337nm,0.3s						
ERIK	Erikli-Kesan	1.32	262	PN	Pb	21 14 34.7	-0.4
GELI	Tayfur-Gelibol	1.42	251	PN	Pb	21 14 36.3	-0.5
BILE	Bilecik/Merkez	1.44	119	P		21 14 37.6	
BILE				S		21 14 56.6	
EDRB	Edirne	1.49	312	P	Pn	21 14 36.7	-0.2
EDRB	Edirne	1.49	312	PN	Pn	21 14 36.8	-0.2
KAND	Kocaeli-Kandir	1.50	80	P		21 14 37.9	
KAND				S		21 14 57.4	
KAND				*i* AML		21 14 59.0	
	comp=Z,248nm,0.3s						
KAND				*i* AML		21 15 00.0	
	comp=N,276nm,0.4s						
STEP	BALIKESIR_Sava	1.53	195	P		21 14 39.5	
STEP				S		21 14 59.1	
STEP				*i* AML		21 15 06.0	
	comp=E,252nm,0.7s						
CAVK	Edirne/Enez-Ca	1.58	264	P		21 14 39.1	
CAVK				S		21 14 58.3	
CAVK				*i* AML		21 15 03.0	
	comp=E,234nm,0.4s						
ENEZ	Enez	1.58	266	P	Pn	21 14 38.2	0.0
ENEZ				S	Sb	21 14 59.4	-0.1
KAYN	Sakarya, Kayna	1.60	86	P		21 14 39.5	
KAYN				S		21 15 00.4	
GEYV	SAKARYA_Geyve	1.61	103	P		21 14 39.6	
GEYV				S		21 15 02.2	
BUHA	Balikesir, Bur	1.62	213	P		21 14 40.6	
BUHA				S		21 15 01.8	
ALN	Alexandroupoli	1.66	272	P	Pn	21 14 38.8	-0.5
ALN				S	Sb	21 15 01.7	0.0
	168nm,0.4s						
AUBOZ	BOZOYUK	1.67	124	P		21 14 42.0	
AUBOZ				S		21 15 02.6	
BAYC	CANAKKALE_Bayr	1.71	230	P		21 14 41.2	
BAYC				S		21 15 04.7	
ECEA	Canakkale, Ece	1.77	243	P		21 14 43.0	
ECEA				S		21 15 04.9	
EZN	Ezine	1.79	235	P	Pb	21 14 43.3	+0.2
EZN				S	Sg	21 15 07.0	-1.0
DEMI	Demirci	1.85	168	P		21 14 42.4	
DEMI				S		21 15 05.0	
ANDZ	Kutahya, Merke	1.86	136	P		21 14 45.9	
ANDZ				S		21 15 09.0	
GOKA	anakkale-Gk	1.89	250	P		21 14 44.7	
GOKA				S		21 15 06.9	
AYVA	Ayvalik	1.95	218	P		21 14 43.9	
AYVA				S		21 15 12.4	
BOZC	Bozcaada	1.95	239	P		21 14 45.6	
BOZC				S		21 15 10.3	
BORA	Eskisehir	1.96	119	P		21 14 45.2	
BORA				S		21 15 11.8	
GDZ	Gediz	2.01	151	P		21 14 46.8	
GDZ				S		21 15 15.3	
JMB	Yambol	2.02	323	P	Pb	21 14 46.1	-1.1
RDO	Rodhopi	2.06	279	P	Pn	21 14 44.9	+0.1
RDO				S	Sn	21 15 10.5	+0.3
	132nm,0.3s						
ZEDA	zmir-Bergama	2.09	205	P		21 14 45.0	
ZEDA				S		21 15 15.8	
SMTH	Samothraki Isl	2.09	260	P	Pn	21 14 44.7	-0.6
SMTH				S	Sb	21 15 12.8	-1.4
	100nm,0.5s						
KOCA	Canakkale, Ayv	2.10	230	P		21 14 49.3	
KOCA				S		21 15 16.9	
BTAS	Taskesti	2.12	97	P		21 14 49.6	
BTAS				S		21 15 18.0	
PRK	Paraskevi	2.21	224	P	Pn	21 14 48.1	+1.3

KDZ	Kurdzhali	2.26	291	P	Pb	21 14 51.3	0.0
SIGR	SIGRI	2.46	229	P	Pn	21 14 51.6	+1.3
LIA	Limnos Island	2.52	249	P	Pn	21 14 51.4	+0.3
LIA				S	Sb	21 15 24.7	-1.8
	72nm,0.5s						
RZN	Rozhen	2.77	288	P	Pn	21 14 55.1	+0.3
MFTR	Murfatlar	3.32	2	⇓P	Pn	21 15 02.7	+0.6
MFTR				⇓S	Sb	21 15 50.9	+1.4
MMB	Musomiste	3.47	284	P	Pb	21 15 14.0	+2.1
TIRR	Tirgusor	3.60	2	⇓P	Pn	21 15 07.0	+1.0
TIRR				⇑S	Sb	21 15 56.9	-0.5
TLBR	Topalu	3.68	358	⇓S	Sb	21 16 01.2	+1.2
COPA	Copaceanca	3.96	327	⇑P	Pb	21 15 18.0	-2.1
COPA				⇑S	Sg	21 16 17.0	-0.6
TPGR	Topolog	4.00	2	⇑P	Pn	21 15 11.5	+0.1
TPGR				⇑S	Sb	21 16 05.6	-3.3
VTS	Vitosha	4.13	297	⇓P	Pb	21 15 23.1	0.0
VTS				⇑S	Sg	21 16 26.3	+3.1
VTS	Vitosha	4.13	297	P	Pn	21 15 18.0	+4.6
MPEP	Malo Peshtene	4.17	308	P	Pn	21 15 14.0	+0.2
VLAD	Vladila	4.22	319	⇓P	Pb	21 15 23.1	-1.6
VLAD				⇑S	Sg	21 16 26.5	+0.3
CFR	Carcaliu	4.32	359	⇓P	Pn	21 15 16.5	+0.7
CFR				⇑S	Sb	21 16 14.8	-3.3
TLCR		4.34	5	⇓P	Pn	21 15 14.6	-1.5
MLR	Muntele Rosu	4.92	341	⇑P	Pn	21 15 28.2	+3.9
MLR				⇑S	Sb	21 16 36.8	+1.1
PLOR	Plostina	5.12	348	⇓P	Pn	21 15 29.3	+2.4
PLOR				⇓S	Sb	21 16 39.1	-2.2
VRI	Vrincioaia	5.12	348	⇑P	Pn	21 15 29.1	+2.2
VRI				⇓S	Sb	21 16 38.7	-2.7
HERR	Herculane	5.86	315	⇑P	Pn	21 15 44.4	+7.3
GZR	Gura Zlata	6.04	320	⇑P	Pn	21 15 46.8	+7.3
BZS	Buzias	6.78	317	⇑P	Pn	21 15 56.5	+6.9
MORH	Mrgy, Hungar	8.78	311	⇑P	Pn	21 16 25.0	+8.0

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*NEIC **31** 22:00:45.1±1.7, 12.°10N±0.°02×86.°22W±0.°02, h10^{km}±2^{km}, ML3.7/46, Error ellipse: s-maj=4.0km s-min=3.2km az=90.0*

*INET **31** 22:00:45.3±1.0, 12.°07N×86.°22W, h4^{km}, MW4.3*

*SNET **31** 22:00:48.9±1.5, 12.°30N×86.°06W, h23^{km}±526^{km}, ML3.9*

*UCR **31** 22:00:48.9±1.4, 12.°31N×86.°03W, h25^{km}±537^{km}, ML3.6, mb3.7(NEIC)*

ISC 31 22:00:44.6±0.8**, 12.°02N**±0.°03×**86.°16W**±0.°03**, h16**^{km}±5^{km}**, n54, σ1^s.91**/65**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASN	Masaya	0.04	165	*e*P	Pg	22 00 48.0	+0.4
MASN				*e*S	Sg	22 00 50.4	+0.9
WILN	Americas 2	0.14	349	*e*P	Pg	22 00 47.8	-0.7
WILN				*e*S	Sg	22 00 50.2	-0.8
CRUN	El Crucero	0.14	254	*e*P	Pb	22 00 49.1	+0.2
TISN	Laguna Tiscapa	0.16	318	*e*P	Pb	22 00 49.0	-0.2
APYN	Apoyeque	0.28	319	*e*P	Pg	22 00 50.1	-0.5
COPN	Copaltepe	0.45	290	*e*P	Pb	22 00 53.1	-1.0
BOAB	BOACO BROADBAN	0.64	49	Pg	Pb	22 00 57.6	+0.2
BOAB					Sb	22 01 06.9	+0.7
BOAB				IAML		22 01 14.0	
	comp=E,7μm,0.7s						
CNGN	Cerro Negro	0.71	312	Pg	Pg	22 00 57.3	-1.1
CNGN					Sg	22 01 06.1	-1.8
CNGN				IAML		22 01 10.7	
	comp=E,6μm,0.5s						
CNGN				IAML		22 01 15.0	
	comp=N,4μm,0.7s						
CNGN	Cerro Negro	0.71	312	*e*P	Pb	22 00 58.1	-0.5
BRAN	Las Pilas	0.72	345	*e*P	Pg	22 00 50.5	-8.1
TELN	Telica	0.87	312	*e*P	Pn	22 01 01.4	-0.9
MATN	Matagalpa	0.93	14	Pg	Pg	22 01 00.7	-1.9
MATN					Sg	22 01 13.4	-1.6
MATN				IAML		22 01 21.8	
	comp=N,3μm,0.4s						
MATN	Matagalpa	0.93	14	*e*P	Pg	22 01 00.8	-1.9
ACON	Acoyapa	0.97	93		Pn	22 01 03.8	+0.3
ACON				IAML		22 01 25.7	
	comp=E,3μm,0.6s						
ACON				IAML		22 01 27.7	
	comp=N,2μm,0.9s						
ACON	Acoyapa	0.97	93	*e*P	Pn	22 01 03.7	+0.3
CRIN	San Cristobal	1.10	308	Pg	Pb	22 01 04.4	-0.9
CRIN				Sn	Sb	22 01 19.2	-0.2
CRIN	San Cristobal	1.10	308	*e*P	Pb	22 01 04.6	-0.7
HZTE	Horizontes, Gu	1.41	157		Pg	22 01 11.4	-0.4
HZTE				IAML		22 01 48.9	
	comp=N,2μm,0.8s						
HZTE				IAML		22 01 50.8	
	comp=E,1μm,2.3s						
RCON	San Juan de Ri	1.45	0	*e*P	Pn	22 01 10.7	+0.4
ORTG	Ortega, Santa	1.79	157	Pn	Pg	22 01 17.6	-1.4
ORTG				IAML		22 01 52.5	
	comp=E,322nm,1.0s						
ESPN	Las Esperanzas	1.83	84	Pn	Pb	22 01 16.6	-1.1
DUNO	Dulce Nombre,	2.04	161		Pg	22 01 21.9	-1.8
DUNO				IAML		22 01 55.2	
	comp=E,402nm,0.8s						
DUNO				IAML		22 01 55.3	
	comp=N,450nm,0.8s						
CNCH	Conchagua	2.06	308	*e*P	Pb	22 01 20.2	-1.4
CNCH				*e*S	Sb	22 01 46.9	-0.1
CNCH				IAML		22 01 56.8	
	comp=Z,2μm,0.4s						
CNCH	Conchagua	2.06	308	*e*P	Pb	22 01 20.2	-1.4
CNCH				*e*S	Sb	22 01 46.9	-0.1
CNCH				IAML		22 01 56.8	
	comp=Z,2μm,0.4s						
JTS	Las Juntas de	2.09	145		Pb	22 01 21.3	-0.8
LCND	La Caada	2.12	307	*e*P	Pb	22 01 21.5	-1.1
LCND				*e*S	Sb	22 01 48.0	-0.6
LCND				IAML		22 01 57.6	
	comp=Z,473nm,0.4s						
LCND	La Caada	2.12	307	*e*P	Pb	22 01 21.5	-1.1
LCND				*e*S	Sb	22 01 48.0	-0.6
LCND				IAML		22 01 57.6	
	comp=Z,473nm,0.4s						
TGUH	Tegucigalpa,Un	2.29	332	Pn	Pn	22 01 21.7	-0.2
TGUH				IAML		22 01 59.4	
	comp=Z,952nm,1.2s						
TGUH	Tegucigalpa,Un	2.29	332	*e*P	Pn	22 01 22.7	+0.8
TGUH	Tegucigalpa,Un	2.29	332	*e*P	Pn	22 01 22.7	+0.8
PACA	Pacayal	2.55	305	*e*P	Pb	22 01 29.2	-0.9
PACA				IAML		22 02 11.6	
	comp=Z,3μm,0.5s						
PACA	Pacayal	2.55	305	*e*P	Pb	22 01 29.2	-0.9
PACA				IAML		22 02 11.6	
	comp=Z,3μm,0.5s						
JACO	JACO, Garabito	2.77	148		Pb	22 01 32.1	-1.6
JACO				IAML		22 02 45.4	
	comp=E,122nm,1.2s						
HDC	Heredia	2.84	135	Pn	Pb	22 01 32.0	-3.0
HDC				IAML		22 02 35.3	
	comp=N,139nm,0.8s						
HDC				IAML		22 03 20.2	
	comp=E,148nm,1.7s						
CVTR	Volcan Turrial	3.08	130	Pn	Pn	22 01 35.2	+2.2
CVTR				IAML		22 02 40.4	
	comp=N,227nm,0.9s						
CVTR				IAML		22 02 42.3	
	comp=E,396nm,0.6s						
RIMA	Rio Macho	3.18	135		Pn	22 01 35.7	+1.5
PAVA	Las Pavas	3.19	302	*e*P	Pb	22 01 38.2	-2.7
PAVA	Las Pavas	3.19	302	*e*P	Pb	22 01 38.2	-2.7
SJTE	Alcalda de S	3.20	300	*e*P	Pb	22 01 37.3	-3.8
SJTE				IAML		22 02 23.6	
	comp=Z,96nm,0.6s						
SJTE	Alcalda de S	3.20	300	*e*P	Pb	22 01 37.3	-3.8
SJTE				IAML		22 02 23.6	
	comp=Z,96nm,0.6s						
LFRS	El Faro	3.25	300	*e*P	Pb	22 01 38.7	-3.2
LFRS				*e*S	Sn	22 02 16.4	+3.1
LFRS	El Faro	3.25	300	*e*P	Pb	22 01 38.7	-3.2
LFRS				*e*S	Sn	22 02 16.4	+3.1
BATAN	Batan	3.34	125	Pn	Pn	22 01 37.8	+1.7
SNET	Serv Nac Est T	3.42	299	Pn	Pn	22 01 37.4	0.0
PEZE	Perez Zeledon,	3.58	137		Pb	22 01 43.3	-4.3
PEZE				IAML		22 02 48.1	
	comp=N,156nm,1.1s						
PEZE				IAML		22 02 50.8	
	comp=E,104nm,1.2s						
SRBA	San Rafael, Bu	3.91	135		Pn	22 01 46.0	+1.9
SRBA				IAML		22 03 01.3	
	comp=E,43nm,0.7s						
DRK0	Durika	3.97	133		Pn	22 01 47.4	+2.5
NUBE	Las Nubes	3.99	298	*e*P	Pn	22 01 49.0	+3.8
NUBE				IAML		22 02 43.6	
	comp=Z,76nm,0.4s						
NUBE	Las Nubes	3.99	298	*e*P	Pn	22 01 49.0	+3.8
NUBE				IAML		22 02 43.6	
	comp=Z,76nm,0.4s						
BRU2	Volcan	4.68	133		Pn	22 01 57.0	+2.3
BRU2				IAML		22 03 48.1	
	comp=E,97nm,1.4s						
BRU2				IAML		22 03 49.3	
	comp=N,98nm,1.3s						
PRVC	Isla de Provid	4.87	73	Pn	Pn	22 02 00.4	+3.2
PRVC				IAML		22 03 30.2	
	comp=N,23nm,0.8s						
BCIP	Isla Barro Col	6.83	114	Pn	Pn	22 02 26.6	+2.4
SJCC	San Jacinto, C	10.99	100	Pn	Pn	22 03 22.4	+1.1
URIC	Uribia, Colomb	13.87	90	Pn	Pn	22 04 01.2	+0.6

ISC 31 22:02:38.6±1.0**, 45.°28N**±0.°03×**14.°50E**±0.°03**, h10**^{km}±7^{km}**, n14, σ0^s.68**/26**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	Rijeka	0.04	347	*e*Pg	Pg	22 02 40.7	+0.1
RIY				Sg	Sg	22 02 41.7	-0.3
KNDS	Knezji Dol	0.26	342	*i* Pg	Pg	22 02 44.6	+0.7
KNDS				*i* Sg	Sb	22 02 49.6	-0.4
GBRS	Gornja Briga	0.33	41	*i* Pg	Pg	22 02 45.9	+0.7
GBRS				*i* Sg	Sb	22 02 51.1	-1.0
GBRS				IAML		22 02 54.0	
	comp=Z,4.6nm,0.1s						
SMRN	Sveta Marina	0.34	225	*e*Pg	Pg	22 02 45.5	+0.1
SMRN				Sg	Sg	22 02 50.4	+0.3
A250A	Rusevo Krmpots	0.35	124	*e*Pg	Pg	22 02 45.4	-0.2
A250A				Sg	Sg	22 02 50.8	+0.5
SKDS	Skadanscina	0.43	308	*i* Pg	Pg	22 02 47.5	+0.4
SKDS				*i* Sg	Sb	22 02 54.7	-0.2
SKDS				IAML		22 02 55.2	
	comp=Z,1.6nm,0.1s						
CEY	Cerknica	0.46	354	*i* Pg	Pb	22 02 48.7	-0.1
VISS	Visnje	0.57	25	*i* Pg	Pg	22 02 50.0	+0.2
BOJS	Bojanci	0.58	67	*i* Pg	Pg	22 02 50.1	+0.3
BOJS				*i* Sg	Sb	22 02 58.2	-0.8
BOJS				IAML		22 03 01.9	
	comp=Z,1.0nm,0.1s						
OZLJ	Ozalj	0.76	64	*e*Pg	Pg	22 02 54.1	+0.8
OZLJ				Sg	Sb	22 03 03.2	-1.1
VIRC	Vir	1.07	158	*e*Pg	Pg	22 02 59.6	+0.5
VIRC				Sg	Sg	22 03 13.9	+1.0
UDBI	Udbina	1.17	129	*e*Pg	Pb	22 03 00.8	-0.3
UDBI				Sg	Sg	22 03 18.1	+1.7
DUGI	Dugi Otok	1.35	163	*e*Pg	Pg	22 03 04.9	+0.4
DUGI				Sg	Sg	22 03 22.3	+0.3
ZIRJ	Zirje	1.82	153	*e*Pn	Pb	22 03 11.7	-0.3
ZIRJ				Sn	Sg	22 03 36.5	-0.6

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*TUL **31** 22:20:15.1±0.5, 36.°49N±0.°02×99.°11W±0.°03, h4^{km}±4^{km}, ML2.8, mb_Lg2.6/48(NEIC), Error ellipse: s-maj=3.5km s-min=2.2km az=70.0*

NEIC 31 22:20:16.0±0.6**, 36.°49N**±0.°02×**99.°10W**±0.°03**, h5**^{km}±5^{km}**, Error ellipse: s-maj=3.7km s-min=2.3km az=118.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.13	144	Pg	Pg	22 20 18.5	-0.1
OKCFA	Oklahoma City	1.71	128	Pn	Pn	22 20 46.3	-0.3
WMOK	Wichita Mounta	1.76	171		Pn	22 20 46.5	-0.7
FNO	Franklin	1.84	131		Pn	22 20 48.6	+0.2
R32A	Long Quarter,	1.96	9	Pn	Pn	22 20 50.4	+0.4
T35A	Sooner Cattle	2.12	78	Pn	Pn	22 20 52.4	+0.2
T35A				IAmb_Lg		22 21 25.1	
	comp=Z,24nm,1.1s						
X34A	Smith Ranch, M	2.15	151		Pn	22 20 53.2	+0.7
X34A				IAmb_Lg		22 21 26.3	
	comp=Z,20nm,0.7s						
CBKS	Cedar Bluff	2.38	348	Pn	Pn	22 20 57.0	+1.3
AMTX	Amarillo	2.64	234	Pn	Pn	22 20 59.5	+0.1
TUL1	Leonard	2.73	101	IAmb_Lg		22 21 42.3	
	comp=Z,16nm,0.9s						
X37A	Clayton	3.58	121		Pn	22 21 11.1	-1.1
X37A				IAmb_Lg		22 22 17.9	
	comp=Z,19nm,0.7s						
KSCO	Kaye Shedlock’	3.77	313	IAmb_Lg		22 22 16.8	
	comp=Z,8.6nm,0.7s						
ABTX	Abilene, Hawle	3.88	187	Pn	Pn	22 21 15.9	-0.5
N33A	J Bar K, Exete	4.44	16	IAmb_Lg		22 22 36.5	
	comp=Z,14nm,0.7s						
W39A	Magazine	4.50	105	Pn	Pn	22 21 25.7	+0.7
W39A				IAmb_Lg		22 22 46.1	
	comp=Z,14nm,0.8s						
WHTX	Lake Whitney,	4.68	163	IAmb_Lg		22 22 52.0	
	comp=Z,13nm,0.9s						
S39A	Bolivar	4.77	74	Pn	Pn	22 21 27.6	-1.1
MIAR	Mount Ida	4.90	112	Pn	Pn	22 21 29.4	-1.0
MIAR				IAmb_Lg		22 23 02.4	
	comp=Z,11nm,0.8s						
OGNE	Ogallala	5.01	334	Pn	Pn	22 21 31.0	-1.0
U40A	Yellville	5.04	90	IAmb_Lg		22 23 00.0	
	comp=Z,8.9nm,0.8s						
SDCO	Great Sand Dun	5.27	286		Pn	22 21 33.7	-2.0
SDCO				IAmb_Lg		22 23 11.8	
	comp=Z,9.0nm,1.3s						
Q24A	Divide	5.40	299	IAmb_Lg		22 23 06.4	
	comp=Z,10nm,0.8s						
X40A	Basin Creek Fa	5.49	109	IAmb_Lg		22 23 10.7	
	comp=Z,11nm,1.1s						
WHAR	Wooly Hollow	5.66	100	IAmb_Lg		22 23 18.9	
	comp=Z,10nm,0.9s						
FCAR	Ozark Folk Cen	5.67	94	IAmb_Lg		22 23 15.1	
	comp=Z,6.0nm,0.7s						
JCT	Junction City	6.02	186	IAmb_Lg		22 23 40.7	
	comp=Z,9.0nm,0.7s						
ISCO	Idaho Springs	6.11	305	IAmb_Lg		22 23 31.2	
	comp=Z,5.9nm,0.9s						
N38A	Joes South For	6.29	45	IAmb_Lg		22 23 38.3	
	comp=Z,9.8nm,0.8s						
CCM	Cathedral Cave	6.46	74	IAmb_Lg		22 23 43.9	
	comp=Z,4.8nm,0.7s						
PBMO	Poplar Bluff	6.98	85	IAmb_Lg		22 24 02.6	
	comp=Z,6.8nm,0.7s						
MNTX	Cornudas Mount	7.07	229	IAmb_Lg		22 24 10.2	
	comp=Z,4.6nm,1.3s						
FVM	French Village	7.08	75	IAmb_Lg		22 23 59.1	
	comp=Z,5.8nm,0.8s						
S44A	Carbondale	7.96	78	IAmb_Lg		22 24 30.5	
	comp=Z,6.6nm,0.9s						
RWWY	Rawlins	8.17	312	IAmb_Lg		22 24 46.8	
	comp=Z,4.1nm,0.8s						

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*CRAAG **31** 22:44:58.8, 36.°39N×3.°50E, Ml2.9*

*MDD **31** 22:45:02.4±1.9, 36.°40N×3.°43E, h0^{km}, Mb3.8/4, M_mb3.0/4, Error ellipse: s-maj=17.0km s-min=6.8km az=137.0*

ISC 31 22:45:01.4±1.2**, 36.°34N**±0.°06×**3.°50E**±0.°08**, h18**^{km}**, n8, σ1^s.44**/11**, 4C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.19	195	P	Pg	22 45 05.0	-1.3
AKET	Djebel Ketaf	0.43	133	P	Pg	22 45 09.8	-0.4
ABA	Alger-Bouzarea	0.59	321	P	Pg	22 45 12.1	-1.1
EIBI	Ibiza	3.18	328	P	Pn	22 45 51.7	+1.1
EIBI				⇑*i*Vmb_V		22 46 00.3	
	125nm,SNR=1.5						
EIBI				S	Sn	22 46 26.7	-1.3
ETOS	Mallorca	3.47	351	P	Pn	22 45 55.4	+0.9
ETOS				⇑*i*Vmb_V		22 46 02.3	
	136nm,SNR=0.9						
ETOS				S	Sn	22 46 34.0	-1.0
EZAR	Zarzadilla de	4.42	292	P	Pn	22 46 07.3	-0.4
ETOB	Tobarra	4.62	301	P	Pn	22 46 12.7	+2.2
ETOB				⇑*i*Vmb_V		22 46 16.9	
	91nm,SNR=1.9						
ETOB				S	Sn	22 47 05.5	+1.7
ECHE	Chera	4.79	314	P	Pn	22 46 13.6	+0.8
ECHE				⇑*i*Vmb_V		22 46 20.1	
	139nm,SNR=1.3						

IDC 31 23:00:53.5±2.9**, 34.°04S**×**178.°87W, h0**^{km}**, mb3.7**/2**, mbtmp3.8**/3**, ML3.8**/1**, Error ellipse: s-maj=70.5km s-min=35.8km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.31	217	Pn	Pn	23 02 14.3	+0.3
	3.4nm,0.3s,baz=120,slow=23,SNR=37						
URZ				Sn	Sn	23 03 15.7	-0.3
	2.3nm,0.3s,baz=126,slow=24,SNR=2.3						
	7.4nm,0.3s						
ASAR	Alice Springs	42.31	271	P	P	23 08 49.3	+0.1
	0.8nm,0.6s,baz=110,slow=7.3,SNR=9.8						
	0.8nm,0.6s						
WRA	Warramunga Arr	43.63	276	P	P	23 08 59.6	-0.3
	0.5nm,0.5s,baz=118,slow=7.7,SNR=10						
	0.5nm,0.5s						
FINES	FINESS Array B	148.26	337	PKPbc	PKPbc	23 20 40.0	-0.7
	1.4nm,1.0s,baz=19,slow=5.9,SNR=8.3						

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*NCEDC **31** 23:03:31.8±2.1, 38.°81N±0.°03×122.°82W±0.°05, h2^{km}±7^{km}, ML3.2/50, ML3.0/72(NEIC), Error ellipse: s-maj=6.7km s-min=2.7km az=65.0*

*NEIC **31** 23:03:32.3±1.6, 38.°80N±0.°02×122.°77W±0.°02, h5^{km}±5^{km}, Error ellipse: s-maj=3.1km s-min=2.0km az=218.0*

*IDC **31** 23:03:34.2±3.0, 38.°90N×122.°70W, h0^{km}, mbtmp3.4/4, ML2.9/5, Error ellipse: s-maj=36.3km s-min=10.0km az=45.0*

ISC 31 23:03:32.2±0.9**, 38.°78N**±0.°02×**122.°86W**±0.°03**, h10**^{km}**, n71, σ1^s.15**/70**, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	Geysers	0.06	56		Pg	23 03 32.5	-1.9
GPMM	Pine Mountain	0.10	315		Pg	23 03 34.4	-0.5
GCRM	Castle Rock Sp	0.11	92		Pg	23 03 33.8	-1.2
GSGM	Seigler Mounta	0.14	51		Pg	23 03 34.6	-0.9
HOPS	Hopland Field	0.28	322		Sg	23 03 37.8	-3.7
HOPS	Hopland Field	0.28	322	Pg	Pg	23 03 37.6	-0.1
HOPS	Hopland Field	0.28	322	IAML		23 03 43.9	
	comp=N,6μm,0.8s						
HOPS				IAML		23 03 44.6	
	comp=E,5μm,0.5s						
MNRC	McLaughlin Min	0.34	72		Pg	23 03 38.6	-0.3
FTR	Fort Ross	0.35	224		Pb	23 03 40.2	-0.3
CVS	Carmenet Viney	0.53	144		Pg	23 03 42.6	+0.1
MCCM	Marconi Confer	0.63	182	Pg	Pb	23 03 45.3	0.0
MCCM				IAML		23 04 01.4	
	comp=N,995nm,0.9s						
MCCM				IAML		23 04 02.8	
	comp=E,1μm,0.8s						
GNAM	Navarro Ridge	0.74	305		Pb	23 03 47.1	0.0
GASB	Alder Springs	0.88	7		Pb	23 03 49.4	-0.3
HERB	Hercules	0.89	148		Pb	23 03 49.7	-0.1
SUTB	Sutter Butte	0.95	61		Pg	23 03 48.6	-1.8
BRK	Berkeley--Havi	1.01	152		Pb	23 03 51.6	-0.2
BL67	Building 67, L	1.02	152		Pb	23 03 51.9	0.0
VAK	Adit at Lawren	1.02	152		Pb	23 03 51.7	-0.1
BKS	Berkeley--Byer	1.02	151		Pb	23 03 51.8	-0.2
KCPM	Cahto Peak	1.07	328	Pg	Pg	23 03 52.1	-0.7
FARB	Farallon Islan	1.08	186		Pb	23 03 52.2	-0.8
SMCB	Saint Mary’s C	1.10	148		Pg	23 03 53.1	-0.2
BDM	Black Diamond	1.13	136		Pb	23 03 52.6	-1.2
KBSM	Bell Springs	1.28	334		Pg	23 03 57.6	+0.9
ORV	Oroville	1.31	53		Pn	23 03 54.1	-2.4
ORV	Oroville	1.31	53		Pn	23 03 54.6	-2.0
ORV				IAML		23 04 04.3	
	comp=N,42nm,1.0s						
ORV				IAML		23 04 23.9	
	comp=E,41nm,0.8s						
WENL	Wente Vineyard	1.44	143		Pn	23 03 57.9	-0.4
JRSC	Jasper Ridge	1.45	160		Pn	23 03 57.3	-1.2
KMRM	Mail Ridge	1.59	336		Pb	23 04 01.0	-0.7
KMRM				IAML		23 04 08.3	
	comp=N,303nm,0.8s						
COSM	Mount Oso	1.72	137		Pn	23 04 01.7	-0.6
MHC	Mount Hamilton	1.72	146		Pn	23 04 01.9	-0.4
CMPM	Mikes Peak	1.86	139		Pn	23 04 04.1	-0.1
KMPM	Mount Pierce	1.91	330	Pn	Pn	23 04 05.1	+0.3
KMPM				IAML		23 04 17.7	
	comp=N,130nm,1.0s						
KMPM				IAML		23 04 49.0	
	comp=E,142nm,1.6s						
GHS	Gilroy Hot Spr	2.01	146		Pn	23 04 05.6	-0.7
CMB	Columbia Colle	2.08	110		Pn	23 04 06.5	-0.6
CMB	Columbia Colle	2.08	110	Pn	Pn	23 04 06.3	-0.8
CMB	Columbia Colle	2.08	110	IAML		23 04 36.7	
	comp=N,82nm,0.7s						
CMB				IAML		23 04 36.7	
	comp=E,86nm,0.7s						
EMB	Emerald Bay	2.16	84	Pn	Pn	23 04 08.0	-0.4
EMB				IAML		23 04 30.7	
	comp=E,148nm,0.7s						
BEKR	Beckworth	2.22	60	Pn	Pn	23 04 08.9	-0.3
BEKR				IAML		23 04 47.3	
	comp=E,73nm,0.8s						
MPK	Martis Peak	2.26	76	Pn	Pn	23 04 10.1	+0.3
SAO	San Andreas Ge	2.30	151	Pn	Pn	23 04 08.9	-1.2
VCNR	Virginia City	2.55	77	Pn	Pn	23 04 14.7	+1.0
VCNR				IAML		23 04 33.9	
	comp=E,88nm,0.7s						
VCNR				IAML		23 05 01.2	
	comp=N,72nm,0.8s						
PNTR	Pine Nut	2.56	82	Pn	Pn	23 04 14.3	+0.4
HAST	Hastings Reser	2.60	156		Pn	23 04 12.0	-2.3
BBGB	Big Mountain B	2.62	146	Pn	Pn	23 04 14.6	-0.1
BBGB				IAML		23 05 24.7	
	comp=E,109nm,1.0s						
YERR	Yerington	2.83	85	Pn	Pn	23 04 17.7	+0.1
YERR				IAML		23 05 03.1	
	comp=N,80nm,0.8s						
PAHR	Pah Rah Range	2.85	70	Pn	Pn	23 04 17.6	-0.2
PAHR				IAML		23 05 24.0	
	comp=N,42nm,1.6s						
YBH	Yreka Blue Hor	2.96	2	Pn	Pn	23 04 20.8	+1.6
	comp=N,0.2nm,0.3s,baz=245,slow=11,SNR=5.2						
YBH				Pg	Pb	23 04 25.8	+0.8
	comp=N,0.8nm,0.3s,baz=188,slow=7.8,SNR=6.6						
YBH				Lg	Lg	23 04 53.4	
	comp=N,0.5nm,0.3s,baz=170,slow=9.2,SNR=5.0						
YBH	Yreka Blue Hor	2.96	2	Pn	Pn	23 04 19.8	+0.6
PMPB	Monarch Peak	3.03	147	Pn	Pn	23 04 20.6	+0.3
PMPB				IAML		23 05 25.6	
	comp=E,60nm,0.9s						
PMPB				IAML		23 05 29.3	
	comp=N,53nm,1.1s						
KSXB	Camp Six Broad	3.15	346	Pn	Pn	23 04 23.1	+1.2
MDPB	Devils Postpil	3.19	110	Pn	Pn	23 04 22.9	+0.3
MDPB				IAML		23 05 13.0	
	comp=E,52nm,0.9s						
MDPB				IAML		23 05 13.1	
	comp=N,60nm,0.7s						
OMMB	Old Mammoth Mi	3.25	110	Pn	Pn	23 04 24.6	+1.1
OMMB				IAML		23 05 12.3	
	comp=E,32nm,1.1s						
OMMB				IAML		23 05 13.4	
	comp=N,34nm,1.5s						
RYN	Ryan	3.39	91	Pn	Pn	23 04 25.1	-0.3
RYN				IAML		23 05 25.6	
	comp=E,40nm,1.2s						
RYN				IAML		23 05 31.2	
	comp=N,27nm,1.0s						
LHV	Little Huntoon	3.45	97	Pn	Pn	23 04 26.6	+0.6
NVAR	Mina Array Bea	3.58	94	Pn	Pn	23 04 28.6	+0.7
	comp=N,0.6nm,0.3s,baz=270,slow=15,SNR=26						
NVAR				Pg	Pb	23 04 36.1	+0.3
	comp=N,3.0nm,0.3s,baz=274,slow=15,SNR=50						
NVAR				Lg	Lg	23 05 20.9	
	comp=N,1.1nm,0.3s,baz=277,slow=31,SNR=0.9						
	comp=N,2.8nm,0.6s						
NVAR	Mina Array Bea	3.58	94	Pn	Pn	23 04 28.1	+0.1
KBO	Bosley Butte	3.59	343	Pn	Pn	23 04 26.9	-1.1
MOD	Modoc Plateau	3.68	31	Pn	Pn	23 04 29.4	+0.1
PAGB	Antelope Grade	3.68	145	Pn	Pn	23 04 29.0	-0.2
PAGB				IAML		23 05 38.0	
	comp=N,18nm,3.9s						
PAGB				IAML		23 06 11.0	
	comp=E,24nm,3.3s						
NV11	Mina Array Sit	3.70	94	Pn	Pn	23 04 29.7	+0.2
NV11				IAML		23 05 33.8	
	comp=N,36nm,2.0s						
NV11				IAML		23 05 40.4	

	comp=E,32nm,2.2s						
KVN	Kaiserville	3.72	84	Pn	Pn	23 04 29.4	-0.5
KVN				IAML		23 05 40.8	
	comp=E,18nm,0.9s						
HUMO	Hull Mountain	3.83	359	Pn	Pn	23 04 31.3	+0.1
LCH	Last Change Ra	4.39	109	Pn	Pn	23 04 40.3	+1.3
LCH				IAML		23 05 55.3	
	comp=E,12nm,1.1s						
ISA	Isabella, Lake	4.68	130	Pn	Pn	23 04 43.9	+1.0
ISA				IAML		23 05 55.6	
	comp=N,8.9nm,0.9s						
ISA				IAML		23 05 57.7	
	comp=E,9.1nm,1.1s						
CCAC	Calif City Air	5.30	132	Pn	Pn	23 04 53.8	+2.4
ELK	Elko	6.19	69	Pn	Pn	23 05 05.2	+1.4
	comp=E,0.1nm,0.3s,baz=244,slow=11,SNR=11						
	comp=E,2.6nm,0.9s						
ELK	Elko	6.19	69	Pn	Pn	23 05 04.8	+1.0
MSU	Marysvale	8.36	88	Pn	Pn	23 05 36.4	+2.8
PDAR	Pinedale Array	10.84	64	Pn	Pn	23 06 12.7	+5.1
	baz=251,slow=14,SNR=12						
	comp=E,1.9nm,0.9s						
TXAR	Lajitas Array	18.45	115	P	Pn	23 07 51.5	+3.4
	baz=293,slow=11,SNR=12						
	comp=E,1.3nm,0.9s						

CRAAG ***31*** *23:05:06.3, 36°.33N×3°.43E, Ml3.4*
MDD ***31*** *23:05:08.0±1.2, 36°.37N×3°.50E, h0^{km}, Mb3.8/7, M_mb3.1/7, Error ellipse: s-maj=10.0km s-min=6.1km az=139.0*
ISC 31 23:05:07.6±1.1**, 36°.38N**±0°.05×**3°.55E**±0°.07**, h18**^{km}**, n13,** σ**1^{s}.56**/22**, 7C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.24	201	P	Pb	23 05 11.2	-2.1
AKET	Djebel Ketaf	0.43	141	P	Pg	23 05 16.7	+0.2
ABA	Alger-Bouzarea	0.59	316	P	Pg	23 05 18.6	-0.7
EIBI	Ibiza	3.17	327	P	Pn	23 05 57.8	+1.3
EIBI				⇑iVmb_V		23 06 02.0	
	178nm,SNR=2.1						
EIBI				S	Sn	23 06 32.6	-1.2
ETOS	Mallorca	3.43	351	P	Pn	23 06 01.9	+1.7
ETOS				⇑iVmb_V		23 06 05.1	
	178nm,SNR=1.3						
ETOS				S	Sn	23 06 39.7	-0.7
AFON	Font Roja	3.97	306	P	Pn	23 06 09.6	+1.9
AFON				⇑iVmb_V		23 06 11.5	
	132nm,SNR=1.5						
EMUR	La Murta	4.09	292	P	Pn	23 06 10.0	+0.7
EMUR				⇑iVmb_V		23 06 15.4	
	77nm,SNR=1.6						
EMUR				S	Sn	23 06 56.7	-0.1
ECOL	Islas Columbre	4.17	328	P	Pn	23 06 11.4	+1.1
ECOL				S	Sn	23 06 56.9	-1.8
EZAR	Zarzadilla de	4.45	291	P	Pn	23 06 14.9	+0.7
EZAR				S	Sn	23 07 05.6	+0.1
ETOB	Tobarra	4.64	301	P	Pn	23 06 18.2	+1.4
ETOB				⇑iVmb_V		23 06 24.5	
	66nm,SNR=1.3						
ETOB				S	Sn	23 07 09.4	-0.8
ECHE	Chera	4.79	313	P	Pn	23 06 20.5	+1.6
ECHE				⇑iVmb_V		23 06 25.6	
	131nm,SNR=1.5						
ECHE				S	Sn	23 07 14.8	+0.8
EMOS	Mosqueruela	5.08	323	P	Pn	23 06 24.6	+1.7
EMOS				⇑iVmb_V		23 06 24.9	
	121nm,SNR=1.6						
EMOS				S	Sn	23 07 21.0	-0.2
EQES	Quesada	5.48	287	P	Pn	23 06 32.5	+4.1
EQES				S	Sn	23 07 31.4	+0.5

NEIC ***31*** *23:13:11.3±1.8, 55°.37N±0°.04×158°.37W±0°.07, h15^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=5.3km az=209.0*
AEIC 31 23:13:12±1.7**, 55°.37N**±0°.07×**158°.34W**±0°.09**, h21**^{km}±7^{km}**, ML3.3, ML3.4**/18(NEIC)**, Error ellipse: s-maj=11.0km s-min=6.7km az=165.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.90	233		Pb	23 13 28.6	-0.4
VNHG	Veniaminof 1	0.97	332		Pb	23 13 29.6	-0.6
VNFG	Fog Glacier, M	1.15	324		Pn	23 13 32.6	-0.2
SDPT	Sand Point	1.22	270	Pn	Pn	23 13 32.9	-0.9
SDPT				IAML		23 13 50.5	
	comp=N,933nm,0.7s						
SDPT				IAML		23 13 50.9	
	comp=E,816nm,0.5s						
ANPB	Aniakchak Plen	1.44	1		Pn	23 13 36.8	0.0
CHIR	Chirikof Islan	1.61	72	Pn	Pn	23 13 39.4	+0.3
CHIR				IAML		23 14 10.1	
	comp=N,556nm,1.2s						
PS4A	Pavlof South-4	2.01	271		Pn	23 13 44.4	-0.2
HAG	Hague Volcano	2.04	270		Pn	23 13 46.1	+1.1
BALA	Baldy Mountain	2.55	268		Pn	23 13 52.5	+0.5
PLK1	Peulik 1	2.62	21		Pn	23 13 55.1	+2.1
SII	Sitkinak Islan	2.62	61	Pn	Pn	23 13 53.3	+0.3
SII				IAML		23 14 41.3	
	comp=N,225nm,0.7s						
FALS	False Pass	2.96	262	Pn	Pn	23 13 58.1	+0.5
ISLZ	Isanotski Laza	3.16	260		Pn	23 14 01.0	+0.5
SSLN	Shishaldin Nor	3.30	263		Pn	23 14 03.2	+0.9
OHAK	Old Harbor	3.37	54	Pn	Pn	23 14 02.8	-0.5
OHAK				IAML		23 15 03.5	
	comp=N,93nm,0.8s						
KDAK	Kodiak Island	4.00	50		Pn	23 14 11.5	-0.5
KDAK	Kodiak Island	4.00	50	IAML		23 15 17.0	
	comp=N,54nm,3.2s						
KDAK				IAML		23 15 26.9	
	comp=N,54nm,1.6s						
P18K	Big Mountain,	4.37	21	Pn	Pn	23 14 17.3	+0.2
P18K				IAML		23 15 04.5	
	comp=E,22nm,3.3s						
Q19K	Cape Douglas,	4.39	34		Pn	23 14 18.2	+0.9
O18K	Koktuh Hills	4.80	19		Pn	23 14 23.2	+0.2
O18K				IAML		23 15 09.8	
	comp=N,18nm,4.3s						
O18K				IAML		23 15 58.3	
	comp=E,19nm,1.9s						
UNV	Unalaska Valle	4.99	256	Pn	Pn	23 14 26.3	+0.8
N18K	Kilae Creek	5.48	13	Pn	Pn	23 14 33.4	+1.1
CNPM	China Poot	5.66	40	Pn	Pn	23 14 34.1	-0.7
N19K	Bonanza Creek	5.83	19	Pn	Pn	23 14 37.8	+0.6
RSO	Redoubt South	5.91	28	Pn	Pn	23 14 38.4	+0.1
SVW2	Sparrevohn	5.93	13	Pn	Pn	23 14 38.3	-0.1
BRLK	Bradley Lake	5.96	39	Pn	Pn	23 14 36.8	-2.0
BRSE	Bradley Lake S	5.99	40		Pn	23 14 38.5	-0.8
SEW	Seward	6.72	41	Pn	Pn	23 14 50.0	+0.7
M19K	Big River Lodg	6.87	16	Pn	Pn	23 14 51.8	+0.4
M20K	Styx River	7.07	20	Pn	Pn	23 14 56.1	+1.8
SUA	Susitna One	7.29	30	Pn	Pn	23 14 56.9	-0.4
SKT	Skwentna	7.52	25	Pn	Pn	23 15 00.8	+0.6
TTA	Tatalina	7.68	8	Pn	Pn	23 15 02.0	-0.5
HIN	Hinchinbrook I	8.07	47	Pn	Pn	23 15 07.8	+0.1
GHO	Glory Hole Cre	8.08	34	Pn	Pn	23 15 07.8	-0.3
PPLA	Purkeypile	8.18	20	Pn	Pn	23 15 11.6	+2.1
FID	Port Fidalgo	8.28	45	Pn	Pn	23 15 10.3	-0.3
SML	Sawmill	8.30	35	Pn	Pn	23 15 11.2	+0.3
K20K	Telida	8.30	13	Pn	Pn	23 15 11.2	+0.2
EYAK	Cordova Ski Ar	8.46	47	Pn	Pn	23 15 12.8	-0.4
SCM	Sheep Creek Mo	8.65	37	Pn	Pn	23 15 16.0	+0.2
KLU	Klutina	8.94	42	Pn	Pn	23 15 19.7	-0.1
HMT	Hamilton	9.00	51	Pn	Pn	23 15 20.7	+0.2
TRF	Thorofare Moun	9.08	24	Pn	Pn	23 15 21.3	-0.4
J20K	Nowinta River	9.08	12	Pn	Pn	23 15 21.6	-0.1
M24K	Tolsona, Glenn	9.24	38	Pn	Pn	23 15 24.6	+0.7
BPAW	Bear Paw Mtn.	9.51	20	Pn	Pn	23 15 26.1	-1.3
DHY	Denali Highway	9.54	31	Pn	Pn	23 15 26.7	-1.3
GLB	Gilahina Butte	9.74	45	Pn	Pn	23 15 30.6	-0.2
VRDI	Verde Repeater	9.78	47	Pn	Pn	23 15 30.9	-0.4
PAX	Paxson	10.07	36	Pn	Pn	23 15 34.8	-0.4
YAH	Yahtse	10.15	54	Pn	Pn	23 15 35.1	-1.3
GRNC	Granite Creek	10.29	52	Pn	Pn	23 15 37.4	-0.9
NEA2	Nenana	10.34	23	Pn	Pn	23 15 36.4	-2.4
MLY	Manley	10.39	18	Pn	Pn	23 15 39.5	-0.2
TABL	Table Mountain	10.45	54	Pn	Pn	23 15 40.8	+0.2
WRH	Wood River Hil	10.46	25	Pn	Pn	23 15 37.6	-2.9
H21K	Melozitna Rive	10.67	12	Pn	Pn	23 15 42.8	-0.6
CCB	Clear Creek Bu	10.68	25	Pn	Pn	23 15 41.0	-2.4
HDA	Harding Lake	10.70	28	Pn	Pn	23 15 42.5	-1.3
PCA	Pinnacle	10.75	56	Pn	Pn	23 15 44.5	-0.1
RIDG	Independent Ri	10.81	34	Pn	Pn	23 15 44.4	-0.9
MDM	Murphy Dome	10.84	23	Pn	Pn	23 15 43.4	-2.4
IMAR	Indian Mountai	10.88	10	Pn	Pn	23 15 46.7	+0.5
SCRK	Sand Creek	11.25	34	Pn	Pn	23 15 50.5	-0.8
J25K	Salcha River,	11.29	30	Pn	Pn	23 15 49.7	-2.3
H23K	Yukon River	11.33	19	Pn	Pn	23 15 53.1	+0.7
L27K	Beaver Creek,	11.41	41	Pn	Pn	23 15 54.1	+0.5
BCAR	Beaver Creek A	11.43	41	Pn	Pn	23 15 53.6	-0.3
J26L	Joseph Creek	11.74	33	Pn	Pn	23 15 57.4	-0.8
BMAR	Burnt Mountain	13.73	23	Pn	Pn	23 16 24.9	-0.2
I29M	Ogilvie Camp,	14.01	36	P	P	23 16 38.1	+1.4
P33M	Teslin, Yukon	14.40	60	P	P	23 16 42.9	+1.8
MCMT	McKenzie Canyo	30.50	91	P	P	23 19 25.2	+1.7

IDC 31 23:27:23.5±3.2**, 33°.95S**×**178°.99W, h0**^{km}**, mb3.6**/2**, mbtmp3.7**/3**, ML3.7**/1**, Error ellipse: s-maj=74.6km s-min=46.6km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.33	215	Pn	Pn	23 28 44.0	-0.3
	2.4nm,0.3s,baz=302,slow=22,SNR=17						
URZ				Sn	Sn	23 29 45.1	-1.3
	1.9nm,0.3s,baz=121,slow=23,SNR=2.8						
	5.5nm,0.2s						
ASAR	Alice Springs	42.21	271	P	P	23 35 18.4	0.0
	0.7nm,0.7s,baz=108,slow=7.6,SNR=6.6						
	0.7nm,0.7s						
WRA	Warramunga Arr	43.52	276	P	P	23 35 28.8	-0.2
	0.5nm,0.5s,baz=117,slow=7.5,SNR=8.6						
	0.5nm,0.5s						
FINES	FINESS Array B	148.14	337	PKPbc	PKPbc	23 47 09.8	-0.6
	0.6nm,0.5s,baz=46,slow=4.0,SNR=4.1						

HEL ***31*** *23:39:10.3, 67°.79N×20°.70E, h0^{km}, ML1.4, Explosion*
UPP 31 23:39:07.1±0.0**, 67°.82N**×**20°.21E, h0**^{km}**, ML1.9, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	20	P	Pg	23 39 10.0	+0.2
KUA				S	Sg	23 39 11.9	+0.3
KUA	Kurravaara	0.14	20	iP	Pg	23 39 10.0	+0.2
KUA				iS	Sg	23 39 11.9	+0.3
RATU	Laukkuluspa	0.23	270	P	Pg	23 39 11.7	+0.1
RATU	Laukkuluspa	0.23	270	iP	Pg	23 39 11.7	+0.1
KOVU	Salmi	0.40	358	P	Pg	23 39 14.8	0.0
KOVU	Salmi	0.40	358	iP	Pg	23 39 14.8	0.0
NIKU	Nikkaluokta	0.45	276	P	Pg	23 39 15.6	-0.1
NIKU	Nikkaluokta	0.45	276	iP	Pg	23 39 15.6	-0.1
LANU	Lannavaara	0.71	71	P	Pg	23 39 20.5	-0.2
LANU	Lannavaara	0.71	71	eP	Pg	23 39 20.3	-0.3
DUNU	Dundret	0.72	169	P	Pg	23 39 20.5	-0.3
DUNU	Dundret	0.72	169	iP	Pg	23 39 20.5	-0.3
MASU	Masugnsbyn	0.78	117	P	Pg	23 39 21.8	-0.2
MASU	Masugnsbyn	0.78	117	iP	Pg	23 39 21.8	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	23 39 22.1	-0.1
SALU	Saltoluokta	0.79	236	iP	Pg	23 39 22.1	-0.1
KIF	Kilpisjarvi	1.21	10	eP	Pg	23 39 29.3	-0.9
KIF	Kilpisjarvi	1.21	10	ePB	Pg	23 39 30.3	+0.1
KIF				MSG		23 39 48.4	
	comp=Z,7.1nm,0.2s						
KIF				eSN	Sn	23 39 52.8	+4.6
PAJU	Pajala	1.38	124	P	Pg	23 39 32.3	-1.2
PAJU	Pajala	1.38	124	eP	Pg	23 39 32.0	-1.5
HEF	Hetta	1.42	64	eP	Pn	23 39 32.5	-1.6
HEF	Hetta	1.42	64	ePG	Pn	23 39 33.2	-1.0
HEF				e		23 39 46.3	
HEF				MSG		23 39 48.7	
	comp=Z,1.4nm,0.2s						
ERTU	Ertsjaerv	1.49	148	P	Pn	23 39 34.1	-0.9
ERTU	Ertsjaerv	1.49	148	eP	Pn	23 39 34.3	-0.8
KLF	Kolari	1.56	111	ePG	Pn	23 39 35.6	-0.5
KTK1	Kautokeino	1.64	42	ePN	Pb	23 39 38.1	0.0
HARU	Harads	1.69	169	P	Pn	23 39 37.8	0.0
HARU	Harads	1.69	169	eP	Pn	23 39 37.8	0.0
TOF	Tornio	2.39	135	ePB	Pn	23 39 49.0	+1.7
TOF				MSG		23 40 16.4	
	comp=Z,1.3nm,0.2s						
SGF	Sodankyl	2.45	96	ePB	Pb	23 39 50.2	-1.7
RNF	Rovaniemi	2.57	116	ePB	Pn	23 39 51.8	+2.0
ARA0	ARCESS Array S	2.59	46	eP	Pn	23 39 51.5	+1.3
	baz=226						
ARA0				eSG	Sb	23 40 27.2	+0.5
KEV	Kevo	3.14	49	ePG	Pb	23 40 05.3	+1.6
KEV				MSG		23 40 39.2	
	comp=Z,1.0nm,0.2s						
KEV				eSG	Sb	23 40 43.3	+0.8

UPP 31 23:39:45.9±0.2**, 67°.83N**×**20°.24E, h0**^{km}**, ML1.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	17	P	Pg	23 39 48.7	+0.3
KUA				S	Sg	23 39 50.5	+0.4
RATU	Laukkuluspa	0.24	269	P	Pg	23 39 50.7	+0.1
NIKU	Nikkaluokta	0.46	275	P	Pg	23 39 54.8	+0.1
SALU	Saltoluokta	0.80	237	P	Pg	23 40 01.0	-0.2

AUST ***31*** *23:46:11.4±0.8, 33°.93S×139°.23E, h0^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=4.3km az=40.0*
NOU ***31*** *23:46:12.6, 33°.85S×139°.39E, h0^{km}, MLv4.2/13, Near Coast of South Australia*
IDC ***31*** *23:46:16.8±5.8, 33°.25S×139°.10E, h0^{km}, mbtmp3.5/3, ML3.5/3, Error ellipse: s-maj=62.4km s-min=21.4km az=2.0*
ISC 31 23:46:11.9±1.3**, 33°.89S**±0°.04×**139°.28E**±0°.04**, h13**^{km}±10^{km}**, n30,** σ**1^{s}.96**/42**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	0.55	327	P	Pg	23 46 22.5	-0.1
	baz=0.5,SNR=1000						
HTT				S	Sg	23 46 28.5	-1.4
	baz=0.5						
HTT	Hallett	0.55	327	P	Pg	23 46 23.0	+0.3
AUJCS	Jamestown Cent	0.89	321	P	Pg	23 46 29.0	-0.1
	baz=0.9						
AUJCS				S	Sg	23 46 40.0	-0.7
	baz=0.9						
GHSS	Government Hou	1.17	209	P	Pn	23 46 36.7	+2.7
NAPP	Napperby	1.18	306	P	Pg	23 46 34.9	+0.2
AURMK	Renmark High S	1.24	103	P	Pn	23 46 36.8	+1.8
	baz=1.3						
AURMK				S	Sn	23 46 53.3	+1.8
	baz=1.3						
TWOA	Tennyson Woods	1.28	207	P	Pb	23 46 37.7	+1.9
PTPS	Port Pirie	1.29	303	P	Pb	23 46 39.2	+3.1
WHYH	Whyalla	1.67	300	P	Pn	23 46 43.2	+2.4
STKA	Stephens Creek	2.80	45	Pn	Pn	23 46 59.0	+2.6
	6.0nm,0.3s,baz=210,slow=12,SNR=36						
STKA				Pg	Pb	23 47 02.1	+0.4
	11nm,0.3s,baz=216,slow=15,SNR=37						
STKA				Sn	Sn	23 47 33.0	+3.0
	18nm,0.3s,baz=256,slow=10,SNR=7.1						
STKA				Lg	Lg	23 47 36.4	
	37nm,0.3s,baz=282,slow=20,SNR=8.2						
	14nm,0.3s						
STKA	Stephens Creek	2.80	45	P	Pn	23 46 58.8	+2.4
	baz=2.9,SNR=39						
STKA				S	Sb	23 47 35.0	-0.9
	baz=2.9,SNR=4.8						
BBOO	Buckleboo	2.91	291	P	Pn	23 46 59.3	+1.4
	baz=2.9,SNR=81						
BBOO				S	Sn	23 47 35.0	+2.3
	baz=2.9,SNR=5.6						
BBOO	Buckleboo	2.91	291	P	Pn	23 47 00.8	+2.9
AUCAS	Cummins Area S	2.98	262	P	Pn	23 46 58.6	-0.3
	baz=2.9						
ARPS	Mount Arapiles	3.55	145	P	Pn	23 47 07.2	+0.5
	baz=3.6,SNR=33						
ARPS				S	Sn	23 47 50.4	+1.8
	baz=3.6						
ARPS	Mount Arapiles	3.55	145	P	Pn	23 47 08.1	+1.4
LCRK	Leigh Creek	3.55	345	P	Pn	23 47 08.8	+2.0
	baz=3.6,SNR=34						
LCRK				S	Sn	23 47 49.6	+1.0
	baz=3.6,SNR=5.5						
LCRK	Leigh Creek	3.55	345	P	Pn	23 47 09.4	+2.6
MULG	Mulgathing	5.71	308	P	Pn	23 47 37.4	+0.9
	baz=5.7,SNR=12						
MULG				S	Sn	23 48 41.4	-0.5
	baz=5.7						
MULG	Mulgathing	5.71	308	P	Pn	23 47 37.6	+1.2
CMSA	Cobar Meteorol	5.89	68	P	Pn	23 47 38.9	0.0
	baz=5.9						
CMSA	Cobar Meteorol	5.89	68	P	Pn	23 47 39.8	+0.9
TOO	Toolangi	6.24	128	P	Pn	23 47 44.7	+1.0
	baz=6.3,SNR=15						
TOO	Toolangi	6.24	128	P	Pn	23 47 44.7	+1.0
INKA	Innaminka	6.26	12	P	Pn	23 47 46.3	+2.4
	baz=6.3,SNR=7.9						
INKA	Innaminka	6.26	12	P	Pn	23 47 46.3	+2.4
OOD	Oodnadatta	6.82	332	P	Pn	23 47 53.7	+2.0
	baz=6.8,SNR=5.7						
OOD				S	Sn	23 49 07.7	-1.4
	baz=6.8						
FORT	Forrest	9.99	285	P	Pn	23 48 35.9	+0.8
	baz=9.9						
FORT				S	Sn	23 50 22.7	-4.4
	baz=9.9						
ASAR	Alice Springs	11.22	334	Pn	Pn	23 48 50.8	-1.4
	0.4nm,0.3s,baz=169,slow=9.3,SNR=17						
ASAR				Sn	Sn	23 50 50.0	-7.6
	0.9nm,0.3s,baz=158,slow=23,SNR=14						
	0.6nm,0.5s						
WRA	Warramunga Arr	14.57	341	Pn	Pn	23 49 34.6	-3.3
	0.3nm,0.3s,baz=156,slow=13,SNR=17						
WRA				Sn	Sn	23 52 11.4	-8.0
	0.3nm,0.3s,baz=165,slow=24,SNR=5.9						
	1.9nm,0.7s						

MOS ***31*** *23:56:43.9±0.8, 37°.32N×136°.90E, h245^{km}, mb4.2/8, Error ellipse: s-maj=20.5km s-min=8.7km az=127.2*
IDC ***31*** *23:56:46.7±0.5, 37°.32N×137°.03E, h262^{km}±6^{km}, mb3.7/19, mbtmp4.4/24, Error ellipse: s-maj=16.4km s-min=8.5km az=64.0*
NEIC ***31*** *23:56:47±1.3, 37°.27N±0°.07×137°.01E±0°.10, h265^{km}±7^{km}, mb4.2/42, Error ellipse: s-maj=11.7km s-min=9.8km az=109.0*
JMA ***31*** *23:56:47.5±0.1, 37°.3N±0°.5×137°.1E±0°.8, h266^{km}±1^{km}, MV3.8/38, NOTO PENINSULA REGION*
NIED ***31*** *23:56:47.5, 37°.26N×137°.11E, h266^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.99; $M_{\theta\theta}$2.08; $M_{\phi\phi}$-1.09; $M_{r\theta}$-0.75; $M_{\theta\phi}$-0.06; $M_{\phi r}$-1.21; Fault plane solution: $M_0$2.30000×10^{15} NP1: ϕ_s307.00000°, δ48.00000°, λ-26.00000°. NP2: ϕ_s55.00000°, δ71.00000°, λ-134.00000°.*
ISC 31 23:56:46.6±0.5**, 37°.37N**±0°.05×**137°.11E**±0°.05**, h265**^{km}±5^{km}**, n172,** σ**1^{s}.25**/195**, mb4.1**/49**, 1C-16D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSZ	Suzu	0.22	68	⇓P	Pn	23 57 21.8	+1.2
JSZ				⇓eS	S	23 57 47.6	+0.3
JHG	Hegura jima	0.50	343	P	Pn	23 57 22.8	+1.6
JHG				S	S	23 57 49.8	+1.3
JJH	Hakui	0.51	211	⇓P	Pn	23 57 22.2	+0.9
JJH				⇓eS	S	23 57 49.2	+0.7
JSD	Sado	1.13	53	Pn	Pn	23 57 25.4	+1.5
JSD	Sado	1.13	53	⇓iP	Pn	23 57 25.4	+1.5
JSD				⇓S	S	23 57 54.5	+1.1
MJB9	Matsu-Tunnel	1.20	133		Pn	23 57 25.1	+0.7
MAJO	Matsushiro	1.20	133		Pn	23 57 25.1	+0.7
MAJO	Matsushiro	1.20	133	P	Pn	23 57 25.1	+0.7
MAT	Matsushiro	1.20	133	P	Pn	23 57 25.1	+0.7
MJAR	Matsushiro Arr	1.21	133	P	Pn	23 57 24.4	0.0
	268nm,0.7s,baz=318,slow=6.4,SNR=277						
MJAR				S	S	23 57 55.4	+1.1
	12nm,0.5s,baz=159,slow=25,SNR=0.6						
MJAR	Matsushiro Arr	1.21	133		Pn	23 57 24.1	-0.4
JKG	Kaga	1.25	210	eP	Pn	23 57 25.0	+0.3
JKG				eS	S	23 57 54.5	-0.3
JGF	Kuroka	1.77	174		Pn	23 57 28.9	+0.3
JYTA	Yamagatataniai	1.80	190	⇓P	Pn	23 57 29.1	+0.4
JYTA				⇓S	S	23 58 01.5	-0.5
JNS	Sasagawa	1.81	75	⇓P	Pn	23 57 30.1	+1.4
JRY	Ryogami san	1.97	133	⇓P	Pn	23 57 30.1	0.0
JAW	Awa shima	2.01	57	eP	Pn	23 57 32.1	+1.8
JAW				eS	S	23 58 07.1	+2.1
INU	Inuyama	2.02	182	Pn	Pn	23 57 29.9	-0.6
JAG	Ashikaga	2.10	116	iP	Pn	23 57 31.3	0.0
JAG				eS	S	23 58 05.9	-0.6
JYN	Shimob	2.19	148	⇓iP	Pn	23 57 32.4	+0.2
JYN				⇓S	S	23 58 08.5	+0.2
JWT	Wachi	2.50	214	iP	Pn	23 57 34.4	-0.5
JWT				S	S	23 58 10.3	-3.0
JFT	Otama	2.57	86	⇓P	Pn	23 57 37.0	+1.3
JOD2	Odawara 2	2.64	142	P	Pn	23 57 36.8	+0.4
JOD2				eS	S	23 58 15.1	-0.8
JYT	Yasato	2.72	114	Pn	Pn	23 57 36.5	-0.7
JMM	Marumori	2.97	79	Pn	Pn	23 57 41.2	+1.6
JIE	Ise	2.99	186	P	Pn	23 57 40.2	+0.2
JIE				S	S	23 58 20.6	-1.7
JYK	Kaneyama	2.99	58	⇓P	Pn	23 57 41.8	+1.9
JYK				⇓S	S	23 58 23.4	+1.2
JWY	Kouya	3.38	202	P	Pn	23 57 44.1	-0.1
JHS	Saijyo	4.00	235	Pn	Pn	23 57 51.1	-0.1
JTM	Tenmabayashi	4.60	41	Pn	Pn	23 58 00.3	+2.3
JHJ	Hachijo jima 2	4.77	152	P	Pn	23 58 00.3	+0.1
	44nm,0.3s,baz=83,slow=22,SNR=7.7						
JHJ				S	S	23 58 56.6	-2.3
	143nm,0.3s,baz=234,slow=23,SNR=6.6						
JHJ2	Mitsune	4.79	152	Pn	Pn	23 57 59.5	-0.9
JEW	Eniwo	6.40	30	Pn	Pn	23 58 20.6	+0.8
ERM	Erimo	6.58	43	Pn	Pn	23 58 22.0	-0.1
ERM	Erimo	6.58	43	P	Pn	23 58 22.0	-0.1
MSHR	Mys Shultsa	6.93	321	ceP	Pn	23 58 25.8	-0.6
MSHR				pmax	pmax		
	comp=Z,14nm,1.7s						
VLA	Vladivostok	7.00	327	iP	Pn	23 58 27.5	+0.2
SEHB	SEOHWA	7.07	280	Pn	Pn	23 58 29.9	+1.5
KSRS	Korea Array	7.31	273	P	Pn	23 58 32.4	+1.1
	comp=Z,6.1nm,0.6s,baz=100,slow=14,SNR=18						
KSCHJ	Chungju	7.32	269	Pn	Pn	23 58 33.2	+1.8
USA0B	Ussuriysk Arra	7.85	332	Pn	Pn	23 58 39.8	+1.8
USA0B	Ussuriysk Arra	7.85	332	P	Pn	23 58 39.8	+1.8
USRK	Ussuriysk Ar.	7.85	332	P	Pn	23 58 39.6	+1.6
	comp=Z,24nm,0.8s,baz=150,slow=12,SNR=27						
USRK	Ussuriysk Ar.	7.85	332	Pn	Pn	23 58 39.1	+1.1
TJN	Taejon	7.88	266	Pn	Pn	23 58 37.7	-0.7
TJN	Taejon	7.88	266	iP	Pn	23 58 39.0	+0.6
ASAJ	Asahikawa	7.92	30	P	Pn	23 58 38.6	-0.2
	comp=Z,90nm,0.3s,baz=216,slow=10,SNR=80						
JKA	Kamikawa-asahi	7.92	30	Pn	Pn	23 58 37.3	-1.6
JSU	Suzuyama	8.02	225	Pn	Pn	23 58 39.1	-1.2
NMR	Nemuro--Hokkai	8.90	45	eP	Pn	23 58 49.2	-1.9
NMR				eS	S	00 00 23.7	-8.2
GLVR	Golovnino	9.02	43	eP	Pn	23 58 51.9	-0.7
GLVR				eS	S	00 00 27.7	-7.0
RUSJ	Misakicho	9.13	40	eP	Pn	23 58 54.3	+0.3
RUSJ				eS	S	00 00 31.8	-5.4
YUK	Yuzh-Kuril'sk	9.40	42	eP	Pn	23 58 57.1	-0.3
YUK				eS	S	00 00 36.2	-7.4
YUK				pmax	pmax		
	comp=Z,304nm,0.8s						
YUK				pmax	pmax		
	comp=N,50nm,0.4s						
YSS	Yuzh-Sakhalins	10.45	22	Pn	Pn	23 59 10.3	-0.2
YSS	Yuzh-Sakhalins	10.45	22	⇓iP	Pn	23 59 10.3	-0.2
YSS				pmax	pmax		
	comp=Z,230nm,0.3s						
YSS				pmax	pmax		
	comp=Z,100nm,2.3s						
CN2	Changchun	10.95	310	eP	Pn	23 59 16.8	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JCJ	Chichijima	11.10	156	P	Pn	23 59 13.6	-5.3
	comp=Z,39nm,0.4s,baz=280,slow=22,SNR=6.8						
JCJ				S	S	00 01 06.3	-17
	comp=Z,60nm,0.3s,baz=280,slow=20,SNR=8.6						
UGL	Uglegorsk	12.25	16	eP	Pn	23 59 32.5	-0.2
UGL				pmax	pmax		
	comp=Z,80nm,0.8s						
KLR	Kul'dur	12.48	344	P	Pn	23 59 35.9	+0.3
	comp=Z,8.3nm,0.5s,baz=163,slow=9.8,SNR=29						
TYV	Tymovskoe	14.06	15	eP	P	23 59 55.6	+0.6
TYV				eS	S	00 02 25.6	-4.4

TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				pmax	pmax		
	comp=Z,16nm,1.0s						
TYV				smax	smax		
	comp=N,100nm,4.1s						
TYV				smax	smax		
	comp=E,100nm,4.1s						
BJT	**Baijiatuau**	**16.56**	**286**		**P**	**00 00 21.2**	**-1.4**
BJT				IAmb	IAmb	00 00 26.2	
	comp=Z,15nm,0.7s						
BJT	**Baijiatuau**	**16.56**	**286**	P	**P**	**00 00 21.2**	**-1.4**
BJT				pmax	pmax		
	comp=Z,15nm,0.7s						
ENH	**Enshi**	**23.96**	**261**	P	**P**	**00 01 36.0**	**-1.3**
ULN	**Ulaanbaatar**	**24.34**	**305**	P	**P**	**00 01 40.4**	**-0.3**
ULN	**Ulaanbaatar**	**24.34**	**305**	P	**P**	**00 01 40.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GUMO	**Guam**	**24.67**	**162**	P	**P**	**00 01 45.3**	**+1.6**
	comp=Z,63nm,0.5s,baz=152,slow=3.9,SNR=5.3						
SONM	**Songino Array**	**24.76**	**305**	P	**P**	**00 01 43.9**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=106,slow=9.2,SNR=12						
	comp=Z,3.1nm,0.6s						
SONM	**Songino Array**	**24.76**	**305**	P	**P**	**00 01 43.1**	**-1.3**
ZAA0	**Zalesovo Array**	**39.15**	**312**	P	**P**	**00 03 48.1**	**-0.6**
ZALV	**Zalesovo Beam**	**39.15**	**312**	P	**P**	**00 03 48.4**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=96,slow=8.0,SNR=8.3						
ZALV				PcP	**PcP**	**00 05 52.4**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=103,slow=4.3,SNR=6.3						
	comp=Z,2.2nm,0.3s						
MK31	**Makanchi Array**	**41.02**	**301**	P	**P**	**00 04 03.5**	**-0.7**
MK31	**Makanchi Array**	**41.02**	**301**	P	**P**	**00 04 03.5**	**-0.7**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**41.02**	**301**	P	**P**	**00 04 03.5**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=84,slow=12,SNR=22						
MKAR				PcP	**PcP**	**00 05 58.7**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=77,slow=6.0,SNR=6.0						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**41.02**	**301**	P	**P**	**00 04 03.8**	**-0.3**
MAKZ	**Makanchi**	**41.23**	**301**	P	**P**	**00 04 05.5**	**-0.4**
MAKZ	**Makanchi**	**41.23**	**301**	P	**P**	**00 04 05.5**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	**Noril'sk**	**41.55**	**336**	P	**P**	**00 04 08.7**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=114,slow=6.8,SNR=4.8						
NRIK				PcP	**PcP**	**00 06 00.7**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=148,slow=1.4,SNR=4.8						
	comp=Z,3.1nm,0.5s						
NRIK	**Noril'sk**	**41.55**	**336**	P	**P**	**00 04 08.4**	**+0.3**
NRIK				IAmb	IAmb	00 04 09.2	
	comp=Z,9.7nm,1.4s						
TAPN	**Taplejung**	**42.49**	**271**	*e*P	**P**	**00 04 16.3**	**-0.4**
KURK	**Kurchatov**	**43.01**	**307**	P	**P**	**00 04 19.7**	**-0.4**
KURK				IAmb	IAmb	00 04 20.7	
	comp=Z,8.5nm,0.8s						
KURK	**Kurchatov**	**43.01**	**307**	P	**P**	**00 04 20.3**	**+0.2**
KURK						00 06 05.1	
KURBB	**Kurchatov Arra**	**43.08**	**307**	P	**P**	**00 04 20.3**	**-0.3**
	comp=Z,3.8nm,0.3s,baz=75,slow=7.2,SNR=102						
KURBB				PcP	**PcP**	**00 06 05.0**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=97,slow=3.4,SNR=7.2						
	comp=Z,3.8nm,0.3s						
RAMN	**Ramite**	**43.56**	**271**	*e*P	**P**	**00 04 24.4**	**-0.7**
JIRN	**Jiri**	**43.57**	**272**	*e*P	**P**	**00 04 25.4**	**+0.1**
GUN	**Gumba**	**43.70**	**273**	*e*P	**P**	**00 04 26.3**	**-0.1**
PKI	**Pulchoki**	**44.23**	**273**	*e*P	**P**	**00 04 29.8**	**-0.7**
KKN	**Kakani**	**44.23**	**273**	*e*P	**P**	**00 04 30.2**	**-0.2**
PKIN	**Phulchoki**	**44.23**	**273**	*e*P	**P**	**00 04 29.6**	**-0.9**
GKN	**Gorkha**	**44.65**	**274**	*e*P	**P**	**00 04 33.1**	**-0.5**
DANN	**Dangsing**	**45.20**	**275**	*e*P	**P**	**00 04 37.7**	**-0.4**
KDJ	**Kajisay**	**45.51**	**296**	P	**P**	**00 04 40.2**	**0.0**
KDJ				IAmb	IAmb	00 04 41.2	
	comp=Z,6.0nm,0.7s						
KDJ	**Kajisay**	**45.51**	**296**	P	**P**	**00 04 40.2**	**0.0**
KDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KOLN	**Koldanda**	**45.58**	**274**	*e*P	**P**	**00 04 40.7**	**-0.2**
PYUN	**Piuthan**	**45.92**	**275**	*e*P	**P**	**00 04 43.4**	**-0.2**
TKM2	**Tokmak 2**	**46.43**	**297**	P	**P**	**00 04 48.2**	**+0.8**
	SNR=13						
KBK	**Karagaybulak**	**46.96**	**297**	P	**P**	**00 04 52.1**	**+0.7**
	SNR=10						
USP	**Ospenovka**	**47.12**	**298**	P	**P**	**00 04 52.4**	**-0.1**
	SNR=7.9						
AAK	**Ala-Archa**	**47.29**	**297**	P	**P**	**00 04 54.2**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=106,slow=8.9,SNR=7.8						
	comp=Z,1.9nm,0.4s						
AAK	**Ala-Archa**	**47.29**	**297**	P	**P**	**00 04 53.8**	**-0.1**
UCH	**Uchtor**	**47.39**	**296**	P	**P**	**00 04 56.2**	**+1.1**
	SNR=5.4						
BRVK	**Borovoye**	**47.85**	**312**	P	**P**	**00 04 58.0**	**+0.2**
BRVK				IAmb	IAmb	00 04 59.5	
	comp=Z,8.5nm,0.4s						
BRVK	**Borovoye**	**47.85**	**312**	P	**P**	**00 04 58.0**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AML	**Almayashu**	**48.00**	**296**	P	**P**	**00 05 00.6**	**+1.0**
	SNR=6.3						
KKAR	**Karatay Array**	**49.97**	**299**	P	**P**	**00 05 14.2**	**+0.2**
KKAR	**Karatay Array**	**49.97**	**299**	P	**P**	**00 05 14.2**	**+0.2**
ILAR	**Eielson Array**	**51.05**	**32**	P	**P**	**00 05 22.6**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=8.1,slow=16,SNR=4.1						
GAR	**Garm**	**51.44**	**294**	P	**P**	**00 05 25.2**	**+0.1**
GAR				IAmb	IAmb	00 05 26.1	
	comp=Z,6.1nm,0.8s						
CHGR	**Chuyangaron**	**52.40**	**294**	P	**P**	**00 05 31.9**	**-0.3**
CHGR	**Chuyangaron**	**52.40**	**294**	P	**P**	**00 05 31.9**	**-0.3**
CHGR				pmax	pmax		
	comp=Z,18nm,0.8s						
K27K	**Chicken**	**53.23**	**33**	P	**P**	**00 05 39.9**	**+2.2**
ARU	**Arti**	**53.82**	**318**	P	**P**	**00 05 42.1**	**+0.1**
	comp=Z,5.5nm,0.4s,baz=86,slow=4.4,SNR=20						
	comp=Z,5.5nm,0.4s						
ARU	**Arti**	**53.82**	**318**	P	**P**	**00 05 42.0**	**-0.1**
ARU				IAmb	IAmb	00 05 42.8	
	comp=Z,7.1nm,0.7s						
ABKAR	**Akbulak array**	**55.08**	**309**	P	**P**	**00 05 51.0**	**-0.2**
AKTO	**Aktyubinsk**	**55.87**	**311**	P	**P**	**00 05 57.7**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=78,slow=14,SNR=8.3						
	comp=Z,1.3nm,0.4s						
WB0	**Warramunga Arr**	**56.88**	**183**	P	**P**	**00 06 03.7**	**-0.5**
WB0				IAmb	IAmb	00 06 03.9	
	comp=Z,9.5nm,1.2s						
WB2	**Warramunga Arr**	**57.06**	**183**	P	**P**	**00 06 04.8**	**-0.7**
WB2				IAmb	IAmb	00 06 14.5	
	comp=Z,9.1nm,1.3s						
WRA	**Warramunga Arr**	**57.06**	**183**	P	**P**	**00 06 05.2**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=359,slow=7.6,SNR=53						
	comp=Z,2.0nm,0.5s						
WR0	**Warramunga Arr**	**57.07**	**183**	P	**P**	**00 06 05.4**	**-0.1**
WR0				IAmb	IAmb	00 06 05.6	
	comp=Z,10nm,1.2s						
KIRV	**Kirov**	**57.89**	**322**	P	**P**	**00 06 11.1**	**+0.4**
	comp=Z,13nm,0.6s,baz=72,slow=1.1,SNR=4.9						
	comp=Z,13nm,0.6s						
HRA	**Herat**	**59.22**	**292**	P	**P**	**00 06 21.0**	**+0.4**
HRA				IAmb	IAmb	00 06 21.7	
	comp=Z,5.2nm,0.8s						
EUNU	**Eureka**	**60.35**	**8**	P	**P**	**00 06 28.6**	**+1.2**
EUNU				IAmb	IAmb	00 06 44.7	
	comp=Z,6.2nm,1.4s						
GEYT	**Alibeck**	**60.65**	**297**	P	**P**	**00 06 30.0**	**0.0**
	comp=Z,3.3nm,0.7s,baz=248,slow=11,SNR=7.7						
	comp=Z,3.3nm,0.7s						
GEYT	**Alibeck**	**60.65**	**297**	P	**P**	**00 06 30.4**	**+0.4**
GEYT				IAmb	IAmb	00 06 35.1	
	comp=Z,3.1nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**60.65**	**297**	P	**P**	**00 06 30.3**	**+0.2**
GYA0B				IAmb	IAmb	00 06 35.1	
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**60.78**	**183**	P	**P**	**00 06 31.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=18,slow=13,SNR=9.4						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**60.78**	**183**	P	**P**	**00 06 30.9**	**0.0**
ARCES	**ARCESS Array B**	**62.45**	**338**	P	**P**	**00 06 42.0**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=49,slow=11,SNR=2.4						
RES	**Resolute Bay**	**63.11**	**14**	P	**P**	**00 06 46.6**	**+1.0**
RES	**Resolute Bay**	**63.11**	**14**	P	**P**	**00 06 46.6**	**+1.0**
RES				pmax	pmax		
	comp=Z,3.0nm,1.3s						
DAG	**Danmarks Havn**	**65.12**	**354**	*e*P	**P**	**00 06 58.6**	**0.0**
DAG				*e*S		00 08 10.4	
FIA1	**FINESS Array S**	**66.88**	**331**	P	**P**	**00 07 10.3**	**+0.3**
FIA1				IAmb	IAmb	00 07 17.2	
	comp=Z,6.7nm,1.1s						
FINES	**FINESS Array B**	**66.88**	**331**	P	**P**	**00 07 10.3**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=68,slow=5.8,SNR=40						
FINES				PcP	**PcP**	**00 07 36.3**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=67,slow=4.2,SNR=5.6						
	comp=Z,2.4nm,0.4s						
KBZ	**Khabaz**	**68.05**	**309**	P	**P**	**00 07 17.6**	**0.0**
	comp=Z,3.5nm,0.9s,baz=105,slow=3.3,SNR=7.1						
	comp=Z,3.5nm,0.9s						
SUMG	**Summit**	**70.31**	**359**	P	**P**	**00 07 33.3**	**+1.8**
SUMG				IAmb	IAmb	00 07 33.9	
	comp=Z,4.7nm,0.5s						
SUMG	**Summit**	**70.31**	**359**	P	**P**	**00 07 33.3**	**+1.8**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SUMG	**Summit**	**70.31**	**359**	*i* P	**P**	**00 07 33.0**	**+1.5**
PABE	**Paberze**	**71.41**	**326**	P	**P**	**00 07 38.3**	**+0.4**
AKASG	**Malin Array Be**	**71.89**	**320**	P	**P**	**00 07 40.6**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=47,slow=6.6,SNR=15						
	comp=Z,1.9nm,0.3s						
AKASG	**Malin Array Be**	**71.89**	**320**	P	**P**	**00 07 41.2**	**+0.4**
AKASG	**Malin Array Be**	**71.89**	**320**	P	**P**	**00 07 41.2**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKBB	**Malin Array Si**	**71.89**	**320**	P	**P**	**00 07 40.5**	**-0.3**
AKBB				IAmb	IAmb	00 07 41.3	
	comp=Z,4.5nm,0.7s						
NC204	**NORSAR Array S**	**72.48**	**336**	P	**P**	**00 07 44.6**	**+0.5**
NOA	**NORSAR Array B**	**72.51**	**336**	P	**P**	**00 07 44.7**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=42,slow=5.9,SNR=13						
	comp=Z,0.9nm,0.3s						
BZK	**Bozkurt**	**74.47**	**311**	P	**P**	**00 07 55.9**	**0.0**
BUR08	**Bucovina Ar. S**	**75.87**	**320**	P	**P**	**00 08 04.3**	**+0.3**
BUR08				IAmb	IAmb	00 08 05.3	
	comp=Z,3.5nm,1.1s						
BURAR	**Bucovina Array**	**75.88**	**320**	P	**P**	**00 08 04.3**	**+0.2**
BRTR	**Keskin Array B**	**76.02**	**309**	P	**P**	**00 08 05.6**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=152,slow=4.0,SNR=5.3						
	comp=Z,1.2nm,0.5s						
RAYN	**Ar Rayn**	**77.33**	**290**	P	**P**	**00 08 12.2**	**-0.3**
RAYN				IAmb	IAmb	00 08 13.0	
	comp=Z,1.8nm,0.6s						
RAYN	**Ar Rayn**	**77.33**	**290**	P	**P**	**00 08 12.2**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DPC	**Dobruska-Polom**	**78.30**	**326**	*e*P	**P**	**00 08 18.4**	**+1.0**
ELL	**Elmali**	**80.17**	**309**	P	**P**	**00 08 27.8**	**0.0**
ELL	**Elmali**	**80.17**	**309**	P	**P**	**00 08 27.8**	**0.0**
ELL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
RONA	**Rosalia, Austr**	**80.22**	**324**	*e*P	**P**	**00 08 28.8**	**+1.1**
	comp=Z,5.1nm,1.2s						
CONA	**Conrad Observa**	**80.25**	**324**	*e*P	**P**	**00 08 29.2**	**+1.2**
CKRC	**Cesky Krumlov**	**80.31**	**326**	*e*P	**P**	**00 08 28.5**	**+0.3**
KHC	**Kasperske Hory**	**80.41**	**326**	P	**P**	**00 08 29.6**	**+0.8**
KHC				IAmb	IAmb	00 08 30.3	
	comp=Z,3.1nm,0.9s						
KHC	**Kasperske Hory**	**80.41**	**326**	P	**P**	**00 08 29.6**	**+0.8**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	**Kasperske Hory**	**80.41**	**326**	*e*P	**P**	**00 08 29.5**	**+0.8**
GERES	**GERESS Array B**	**80.57**	**326**	P	**P**	**00 08 30.1**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=42,slow=6.1,SNR=12						
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**80.57**	**326**	P	**P**	**00 08 29.9**	**+0.2**
ARSA	**Arzberg**	**80.90**	**324**	*e*P	**P**	**00 08 31.1**	**-0.3**
SOKA	**Soboth**	**81.55**	**324**	*e*P	**P**	**00 08 34.8**	**0.0**
ARG	**Arkhangelos**	**81.61**	**309**	P	**P**	**00 08 35.5**	**+0.2**
ARG	**Arkhangelos**	**81.61**	**309**	P	**P**	**00 08 35.5**	**+0.2**
ARG				pmax	pmax		
	comp=Z,24nm,1.3s						
PDG	**Podgorica**	**82.49**	**319**	P	**P**	**00 08 40.0**	**+0.3**
PDG				IAmb	IAmb	00 08 45.5	
	comp=Z,8.3nm,1.1s						
SQTA	**Sankt Quirin**	**82.89**	**326**	*e*P	**P**	**00 08 40.6**	**-1.2**
	comp=Z,4.8nm,1.1s						
DAVA	**Damuels**	**83.42**	**327**	*e*P	**P**	**00 08 45.1**	**+0.5**
	comp=Z,9.8nm,1.4s						
KEK	**Kerkira**	**84.11**	**316**	P	**P**	**00 08 48.2**	**+0.2**
IDI	**Anoyia**	**84.20**	**310**	P	**P**	**00 08 47.2**	**-1.4**
ITM	**Ithomi**	**84.67**	**313**	P	**P**	**00 08 50.2**	**-0.7**
TXAR	**Lajitas Array**	**92.58**	**50**	P	**P**	**00 09 30.5**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=280,slow=3.3,SNR=3.6						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**114.59**	**311**	PKP	**PKiKP**	**00 14 55.3**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=28,slow=2.1,SNR=2.4						

ISC Computed Locations for May 2016

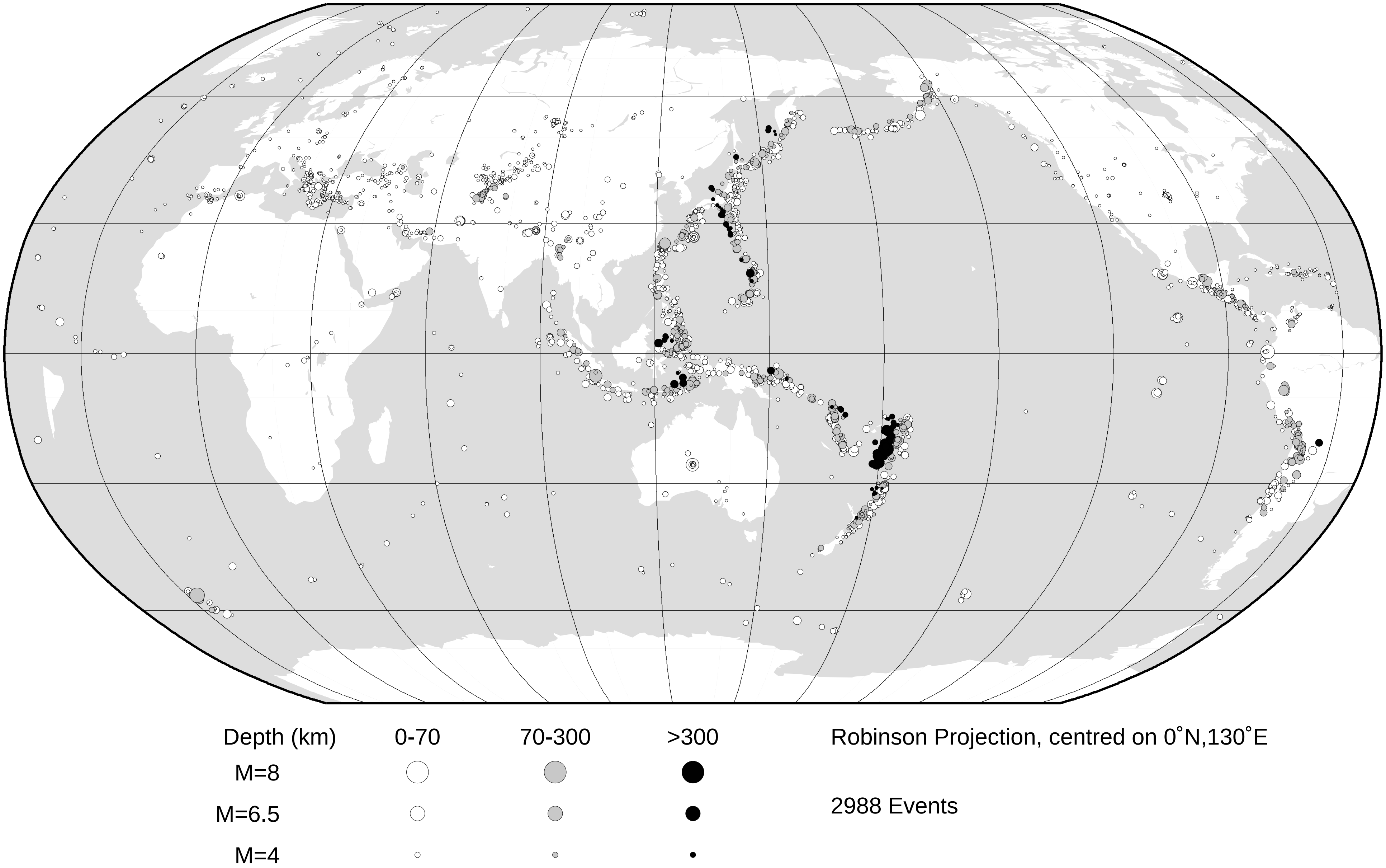

Robinson Projection, centred on 0˚N,130˚E

2988 Events